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**Scientific and Technical
Information Branch**

Summary

An experimental and theoretical study was conducted to investigate the supersonic aerodynamic characteristics of delta and double-delta wings. Testing was conducted in the Langley Unitary Plan Wind Tunnel at Mach numbers of 1.60, 1.90, and 2.16. Supersonic data were obtained on six uncambered, blunt-leading-edge wings mounted on a generic low-fineness-ratio fuselage. Measured longitudinal aerodynamic characteristics showed that the wing planform is as important as its aspect ratio in determining the supersonic aerodynamic characteristics. The double-delta wings exhibited lower zero-lift drag values than the delta wings having the same aspect ratio, whereas delta wings provided lower drag due to lift than the double-delta wings. Deflections of the trailing-edge flaps for pitch control revealed that the induced aerodynamic forces were only a function of the flap planform and were independent of wing planform. The supporting theoretical analysis showed that the Supersonic Design and Analysis System (SDAS) did not consistently predict all the longitudinal aerodynamic characteristics of the low-sweep, low-fineness-ratio wing-body configurations under investigation. The drag-due-to-lift and lift characteristics were reasonably well predicted; however, zero-lift drag and pitching-moment computations were inconsistent with experimental data. Theoretical computations also overpredicted the effectiveness of trailing-edge flaps for pitch control.

Introduction

The next generation of tactical aircraft will be required to have high levels of aerodynamic efficiency at both the cruise and maneuver conditions at Mach numbers above and below 1.0. The ability to satisfy the broad aerodynamic requirements associated with subsonic and supersonic flight is strongly dependent upon the selection of the proper lifting surface. In the design of a wing, the aircraft designer typically employs preliminary aerodynamic analysis methods to assist in the selection of airfoil shape, wing aspect ratio, wing planform, and control-surface arrangement. For supersonic speeds, methods based upon linear theory or slender-body theory are the primary preliminary design and analysis tools. However, their application has traditionally been to high-fineness-ratio configurations that have highly swept, thin, sharp-leading-edge wings for which the small perturbation assumptions of the theories are not violated. Selected application of linear theory methods to configurations with lower fineness ratios, representative of tactical aircraft, has produced mixed results. The purpose of this study is to experimentally investigate the effects of aspect ratio and wing planform on the longitudinal supersonic aerodynamic characteristics of delta and double-delta wings and to determine the capability of the linear theory prediction techniques to predict these effects.

The effect of wing planform discussed in this paper refers to a comparison between delta wing and double-delta wing data for a given aspect ratio. The effect of aspect ratio discussed in this paper refers to a comparison of the three aspect ratios for a given wing planform.

The present investigation is part of a cooperative wing design study between the National Aeronautics and Space Administration and the General Dynamics Corporation. The wind-tunnel model geometry consisted of a generic low-fineness-ratio body and six interchangeable uncambered, blunt-leading-edge wings (three clipped delta wings and three clipped double-delta wings) with aspect ratios of 1.75, 2.11, and 2.50. All wings were configured with a part-span trailing-edge flap which consisted of approximately 18 percent of the wing reference area. Experimental testing was conducted in the Langley Unitary Plan Wind Tunnel at Mach numbers of 1.60, 1.90, and 2.16. This paper contains the results of the supersonic tests with supporting theoretical analysis.

Symbols

AR	aspect ratio, b^2/S
b	wing reference span, in.
c	wing chord, in.
$\bar{c}$	wing mean aerodynamic chord, in.
C_A	corrected axial-force coefficient, $C_{A,\text{unc}} - C_{A,c}$, $\frac{\text{Axial force}}{qS}$
C_D	corrected drag coefficient, $C_{D,\text{unc}} - C_{D,c}$, $\frac{\text{Drag}}{qS}$
ΔC_D	change in drag coefficient, $C_D - C_{D,o}$
$C_{D,o}$	zero-lift drag coefficient
$\Delta C_{D,o}$	change in zero-lift drag coefficient due to trailing-edge flap deflection, $C_{D,o}\vert_{\delta_{\text{TE}}\neq 0} - C_{D,o}\vert_{\delta_{\text{TE}}=0}$
C_l	rolling-moment coefficient, $\frac{\text{Rolling moment}}{qSb}$
C_L	lift coefficient, $\frac{\text{Lift}}{qS}$
$dC_L/d\alpha$	lift-curve slope at $\alpha = 0°$
ΔC_L	change in lift coefficient due to trailing-edge flap deflection at $\alpha = 0°$, $C_L\vert_{\delta_{\text{TE}}\neq 0} - C_L\vert_{\delta_{\text{TE}}=0}$

C_m	pitching-moment coefficient, $\frac{\text{Pitching moment}}{qS\bar{c}}$
dC_m/dC_L	longitudinal stability at $\alpha = 0°$
$C_{m,o}$	zero-lift pitching-moment coefficient
$\Delta C_{m,o}$	change in zero-lift pitching-moment coefficient due to trailing-edge flap deflection, $C_{m,o}\|_{\delta_{TE} \neq 0} - C_{m,o}\|_{\delta_{TE}=0}$
C_n	yawing-moment coefficient, $\frac{\text{Yawing moment}}{qSb}$
C_N	normal-force coefficient, $\frac{\text{Normal force}}{qS}$
C_Y	side-force coefficient, $\frac{\text{Side force}}{qS}$
FS	fuselage station
L/D	lift-drag ratio
M	free-stream Mach number
M_N	component of free-stream Mach number normal to wing leading edge, $M \cos \Lambda_{LE}(1 + \sin^2 \alpha \tan^2 \Lambda_{LE})^{1/2}$
q	dynamic pressure, psf
R	Reynolds number, per foot
S	wing reference area, ft^2
x	longitudinal distance from nose of fuselage, in.
y	spanwise distance from model center-line, in.
α	angle of attack, deg
β	$= \sqrt{M^2 - 1}$; also angle of sideslip, deg
δ	flap deflection angle, deg
λ	taper ratio, $c_t/c_{r,p}$
Λ	sweep angle, deg
Subscripts:	
B	leading-edge break
c	chamber
LE	leading edge
max	maximum
r, e	exposed root chord
r, p	projected root chord
TE	trailing edge
t	tip
unc	uncorrected

Apparatus and Tests

Wind Tunnel

The investigation was conducted in the low Mach number test section of the Langley Unitary Plan Wind Tunnel, which is a variable-pressure, continuous-flow facility (ref. 1). The test section is approximately 7.0 ft long and 4.0 ft square. The asymmetric sliding-block nozzle leading to the test section permits continuous variation in free-stream Mach number from about 1.5 to 2.9. Experimental force and moment results were obtained for all six wing planforms at Mach numbers of 1.60, 1.90, and 2.16, at a Reynolds number of about 2×10^6 per foot, at angles of attack from $-5°$ to $20°$, and with control-surface deflections of $0°$, $-10°$, and $-20°$. A detailed description of the test conditions and a tabulation of the force and moment data are presented in the appendix.

Model Description

The six wings tested, three with clipped delta planforms and three with clipped double-delta planforms, had equal reference areas and were designed with a 3.5-percent-thick NACA 64A airfoil. The wing planforms each had a trailing-edge sweep of $-20°$ and a tip chord of 2.97 in. Each delta wing was matched with a double-delta wing of equal aspect ratio and trailing-edge flap geometry. The double-delta wings designed for this study had a leading-edge break at 70 percent span and had a 23° sweep angle on the outboard panel. The trailing-edge flap for each wing comprised approximately 18 percent of the wing reference area and extended to 88 percent of the span. For testing, the six wings were mounted on a generic low-fineness-ratio fuselage.

Computer-generated solid-model graphics of each wing-body geometry are shown in figures 1 through 6. A sketch of the generic low-fineness-ratio fuselage is presented in figure 7, and sketches of the six wing planforms are contained in figure 8. The geometric characteristics of the six wing planforms are given in table I. Table II contains listings of the wave-drag input geometry (ref. 2) of the six wing planforms and the host generic fuselage.

Experimental Results

The objective of this test was to experimentally determine the effect of wing planform and aspect ratio on the supersonic aerodynamic characteristics of the six wings. Test results are presented over the Mach number range for all configurations. All

moment data have been referenced to 35 percent of the mean aerodynamic chord for each configuration.

Since an infinite number of geometric configurations may be obtained in defining a double-delta wing planform, the results of the planform comparison presented in this paper are intended only to represent the aerodynamic options associated with the double-delta wing planforms of this study. The effect of wing planform discussed refers to a comparison between delta wing and double-delta wing data for a given aspect ratio. The effect of aspect ratio discussed refers to a comparison of the three aspect ratios for a given wing planform.

Longitudinal Aerodynamic Characteristics

The effect of wing planform on the longitudinal aerodynamic characteristics at $M = 1.60$ for aspect ratios of 1.75, 2.11, and 2.50 are presented in figures 9, 10, and 11, respectively. For a given aspect ratio, the double-delta planform consistently has lower drag than the delta planform at low lift conditions ($0 < C_L < 0.2$); at the higher lift conditions ($0.2 < C_L < 0.4$), the delta planform has the lowest drag. The crossover in the drag data for the two wing planforms results from the difference between zero-lift wave-drag and drag-due-to-lift characteristics of the two planforms. For a given aspect ratio, the more highly swept double-delta planform has more efficient zero-lift wave-drag characteristics but less efficient drag-due-to-lift characteristics than the delta planform. Further study of the drag data shows that as aspect ratio is increased, the crossover in the data occurs at higher lift. The lift and pitching-moment data of figures 9, 10, and 11 also indicate that increasing aspect ratio results in a merging of the data for the delta wing and double-delta wing planforms.

The experimental results presented in figures 9, 10, and 11 have been replotted in figures 12 and 13 in order to look at the effect of aspect ratio on the delta wing and double-delta wing planforms, respectively. The delta wing data presented in figure 12 show that for low to moderate lift ($C_L < 0.3$), increasing aspect ratio degrades the aerodynamic performance and increases the lift-curve slope but does not affect the longitudinal static stability level. The reduced aerodynamic efficiency because of increased aspect ratio is due to an increase in the zero-lift wave drag. The double-delta wing data presented in figure 13 show results similar to those of the delta wings except that a change in the longitudinal static margin is observed.

A summary of the basic longitudinal aerodynamic characteristics of all wings tested at all Mach numbers is presented in figures 14 and 15. The longitudinal aerodynamic performance data, summarized in figure 14, show that the double-delta wings outperform the delta wings (i.e., have lower zero-lift drag and have higher lift-drag ratio) for all Mach numbers. The data show that both wing planforms experience a nearly linear increase in zero-lift drag with increasing aspect ratio. The data also show that the double-delta wings have lower drag than the delta wings and have large decreases in zero-lift drag with increased Mach number. The drag-due-to-lift data of figure 14 show several interesting characteristics. The delta wing data show little effect of aspect ratio, whereas the double-delta data decrease nonlinearly. The decreasing drag-due-to-lift characteristics of the double-delta wings and the nonvarying characteristics of the delta wings result in a merging of the data at an aspect ratio of 2.50. In addition, the data also show that all wings are affected in a similar fashion by increases in Mach number. The merging of the drag-due-to-lift data with increasing aspect ratio results from all wings approaching the condition of having a supersonic wing leading edge ($M_N > 1.0$). For the delta wings, only the AR = 1.75 wing planform has a subsonic leading-edge condition, which occurs at $M = 1.60$. For the double-delta wings, the leading edge of the outboard panel is operating at $M_N > 1.0$ for all Mach numbers tested. The flow condition of the inboard panel leading edge is subsonic for the AR = 1.75 wing at all test Mach numbers. For the AR = 2.11 wing at $M > 1.90$ and for the AR = 2.50 wing at all test Mach numbers, the inboard panel is operating at $M_N > 1.0$. Experimental correlations (ref. 3) for delta wings have shown that for a given Mach number, increasing wing aspect ratio (i.e., decreasing wing sweep Λ_{LE}) results in an increase in lift-curve slope for $\beta \cot \Lambda_{LE}$ values less than 0.7. For values of $\beta \cot \Lambda_{LE}$ greater than 0.7, the variation in lift-curve slope levels off to a constant value. For flat wings, the drag-due-to-lift characteristics are directly related to the wing lift-curve slope. As a result, flat wings with supersonic or nearly supersonic leading edges would have similar values of the drag-due-to-lift parameter.

The overall aerodynamic efficiency $((L/D)_{max})$ of a given wing planform is a function of its zero-lift drag and drag-due-to-lift characteristics. The maximum lift-drag ratio data presented in figure 14 show that the double-delta wing planforms outperform the delta wing planforms at all conditions except for the AR = 1.75 delta wing, which has a subsonic wing leading edge at $M = 1.60$. The aerodynamic performance data summarized in figure 14 represent the aerodynamics at low to moderate lift (i.e., cruise range) and indicate the importance of a subsonic wing leading edge in obtaining low levels of

zero-lift drag and good overall aerodynamic efficiency at supersonic speeds.

A summary of the pitching-moment and lifting characteristics of all six wings is presented in figure 15. The pitching-moment data show that changes in aspect ratio and Mach number affect the stability level of the double-delta wing planforms to a higher degree than they affect the stability level of the delta wing planforms. The large variation in longitudinal stability for the double-delta wings is probably due to interference between the wing inboard and outboard panels. The lifting characteristics presented on the right-hand side of figure 15 support the drag-due-to-lift results of figure 14. These data show that increasing aspect ratio and decreasing Mach number increase the lift-curve slope. The characteristic merging of the lift-curve slopes as aspect ratio is increased is also evident. For the AR = 1.75 delta and double-delta wings, the data show large differences in the measured lift-curve slope. As the Mach number is increased, the lift-curve slope of the delta and double-delta wings begin to merge, characteristic of supersonic leading-edge wings.

Longitudinal Aerodynamic Control

Aircraft which are required to fly across the Mach number range will typically be statically stable at supersonic speeds and have neutral stability or slight instability at subsonic speeds. To provide the necessary pitch control for stable flight at supersonic speeds, a trailing-edge-up deflection is required. Aerodynamic forces and moments associated with longitudinal pitch control were investigated by deflecting a single part-span trailing-edge flap on each wing. For a given aspect ratio, the matched delta and double-delta wings had the same flap planforms. Experimental results were obtained for trailing-edge flap deflections of $0°$, $-10°$, and $-20°$. The data have been referenced to the $0.35\bar{c}$ location for all wings and no attempt was made to provide a comparison of the trimmed performance characteristics. Instead the pitch-control data are presented in a fashion which allows for evaluation of the longitudinal aerodynamic characteristics based on trailing-edge deflection.

Presented in figures 16 through 21 are the pitch-control aerodynamic characteristics for all wings at $M = 1.60$. The experimental results show that pitch-control deflections produce significant increases in drag and pitching moment and reduce the level of lift for a given angle of attack. A survey of the data in figures 16 through 21 indicates that all wings experience similar changes in lift, drag, and pitching moment. The resulting effect is a significant reduction in the aerodynamic performance of all wings.

To provide a more detailed look at the pitch-control aerodynamic effects, the incremental changes in lift, zero-lift drag, and zero-lift pitching moment, referenced to the undeflected case, are summarized in figure 22. The data clearly show that the incremental forces and moment due to trailing-edge flap deflection are not affected by wing planform and were only slightly affected by aspect ratio. For $-20°$ of pitch-control deflection, all aerodynamic characteristics show a slight nonlinear variation with aspect ratio. Separated flow and the near-field interaction of the wing and fuselage could be the cause of these nonlinear variations. The lift and pitching-moment data show a nearly linear incremental change due to trailing-edge flap deflections; in other words, a doubling of the flap deflection results in a doubling of the resultant lift force and pitching moment. However, for the drag data, the linear incremental change is not evident; a change in the flap deflection from $-10°$ to $-20°$ produces a 270-percent increase in the zero-lift drag. This extreme drag penalty is the predominate cause of the large drag increases and reduced aerodynamic efficiency observed in figures 21 and 22.

Theoretical Investigation

A theoretical investigation was conducted on the six study wings to evaluate the capability of the Supersonic Design and Analysis System (SDAS) to predict the supersonic aerodynamic characteristics of a parametric set of low-fineness-ratio configurations which had low-sweep, blunt-leading-edge wings. The SDAS code is a series of computational methods which are based upon linear or slender-body theory (ref. 4). The system of codes selected for analysis computes the inviscid zero-lift drag (wave drag) based upon the method of reference 5, computes the inviscid lift, pitching moment, and induced drag with the method of reference 6, and determines the viscous effects with the method of reference 7.

An initial theoretical study was conducted to determine the effect that geometric modeling of the lifting surface has on the computational capability of the method of reference 6. Three geometric representations were selected for analysis; these were the generic body with zero-thickness wing, wing-body planform representation, and a wing-only solution (figs. 23, 24, and 25).

Presented in figures 26 through 31 are representative comparisons of the computed longitudinal aerodynamic characteristics for all six wings with the three models at $M = 1.60$. Comparison of the theoretical predictions with the experimental results shows that the drag due to lift and the lift-curve slope are not consistently predicted by any of the

models investigated. In particular, the representation of the generic body with zero-thickness wing results in an overprediction of the drag and lift characteristics. The results for the wing-body planform representation and wing-only representation are very similar to one another. These models also result in an overprediction of the drag and lift characteristics, but to a lower and higher degree, respectively, than the generic body with zero-thickness wing. In addition, the pitching-moment results from all three models are similar. It was concluded from this study that the generic body with zero-thickness wing would be used for all subsequent theoretical analysis because it was more closely representative of the actual geometry.

Summaries of the predicted and measured performance results for the delta and double-delta wing planforms are presented respectively in figures 32 and 33. The delta wing and double-delta wing results indicate a general incapability of the SDAS code to predict the zero-lift drag for low-fineness-ratio configurations. These results were not completely unexpected; the far-field wave-drag code (ref. 4) is a technique based on slender-body theory, which assumes small disturbances and high-fineness-ratio configurations. The drag due to lift and the maximum lift-drag ratio for the delta and double-delta wings show similar results. The effect of aspect ratio and Mach number on the drag-due-to-lift characteristics is predicted by the SDAS code; however, the impact of the code's incapability to predict the zero-lift drag becomes evident in review of the maximum lift-to-drag ratio results, in which the predicted results vary erratically with changes in aspect ratio and Mach number.

Summaries of the predicted and measured lift and pitching-moment characteristics for the delta and double-delta wings are presented respectively in figures 34 and 35. The effect of varying aspect ratio and Mach number on the lift-curve slope for both the delta and double-delta wings is predicted by the SDAS code. However, the effect of varying aspect ratio and Mach number on the level of longitudinal stability is not predicted with any consistency. For the delta wings, the predicted results show incorrect levels and trends with changes in aspect ratio and Mach number. For the double-delta wings, the theoretical method does a reasonable job of predicting the trends associated with changes in aspect ratio and Mach number but incorrectly predicts the level of longitudinal stability in all cases. As expected with linear theory, the predicted stability level for a given wing shows no variation with Mach number once the wing leading edge becomes supersonic, a contradiction of the experimental work.

To complete the evaluation of the SDAS code, the capability of the theoretical method to predict the pitch-control aerodynamics was investigated. The predicted and measured incremental aerodynamics due to trailing-edge flap deflections are presented in figure 36 for the delta wings and in figure 37 for the double-delta wings. As with the basic longitudinal aerodynamics presented above, the analytic modeling selected was the generic body with zero-thickness wing. Comparing the predicted and measured results for the delta and double-delta wings reveals similar results. The SDAS code consistently overpredicts all the aerodynamics due to flap deflections. However, the trends associated with increasing Mach number and aspect ratio are predicted for all cases. For the lift and pitching-moment characteristics, the SDAS code does predict the proper linear incremental change due to flap deflection. Similar results are shown for the zero-lift drag data. The SDAS code does predict that a 270-percent increase in the zero-lift drag would occur when the flap deflection is increased from $-10°$ to $-20°$. The overprediction of the pitch-control aerodynamics by the SDAS code for both flap deflection angles could be attributed to wing-thickness and boundary-layer effects, which would reduce the deflection angle and the resultant flap loading.

The results presented in figures 32 through 37 show that the SDAS code does not consistently predict all the longitudinal aerodynamic characteristics of the low-sweep, low-fineness-ratio wing-body configurations under investigation. The zero-lift drag results are inconsistent with the experimental data. These results clearly emphasize the importance of having an adequate zero-lift drag prediction technique in order to perform preliminary design studies which would look at the effects of wing planform, aspect ratio, and various other aerodynamic parameters.

Concluding Remarks

An experimental and theoretical study was conducted to investigate the supersonic aerodynamic characteristics of delta and double-delta wings. Testing was conducted in the Langley Unitary Plan Wind Tunnel at Mach numbers of 1.60, 1.90, and 2.16. Supersonic data were obtained on six uncambered, blunt-leading-edge wings mounted on a generic low-fineness-ratio fuselage. Measured longitudinal aerodynamic characteristics showed that the wing planform was as important as aspect ratio in determining the supersonic aerodynamic characteristics. The double-delta wings exhibited lower zero-lift drag values than the delta wings having the same aspect ratio, whereas delta wings provided lower drag due to

lift than the double-delta wings. Deflections of the trailing-edge flaps for pitch control revealed that the induced aerodynamic forces were only a function of the control-surface planform and were independent of wing planform. The supporting theoretical analysis showed that the Supersonic Design and Analysis System (SDAS) did not consistently predict all the longitudinal aerodynamic characteristics of the low-sweep, low-fineness-ratio wing-body configurations under investigation. The drag-due-to-lift and lift characteristics were reasonably well predicted; however, zero-lift drag and pitching-moment computations were inconsistent with experimental data. Theoretical computations also overpredicted the effectiveness of trailing-edge flaps for pitch control.

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TABLE I. GEOMETRIC CHARACTERISTICS OF WING PLANFORMS

Characteristic	Wing 1	Wing 2	Wing 3	Wing 4	Wing 5	Wing 6
Area, S, ft^2	2.379	2.379	2.379	2.379	2.379	2.379
Span, b, in.	24.488	24.488	26.878	26.878	29.268	29.268
Mean aerodynamic chord, $\bar{c}$, in.	19.355	16.910	16.934	15.271	14.933	13.902
Leading edge of $\bar{c}$:						
x, in.	14.477	17.896	16.366	18.677	17.886	19.319
y, in.	3.963	4.508	4.518	4.994	5.113	5.488
Projected root chord, $c_{r,p}$, in.	30.396	25.059	26.436	22.570	23.056	20.488
Projected root chord leading edge:						
x, in.	4.878	11.388	8.509	13.195	11.624	14.731
y, in.	0	0	0	0	0	0
Exposed root chord, $c_{r,e}$, in.	26.902	22.856	23.802	20.788	21.074	19.024
Exposed root chord leading edge:						
x, in.	7.928	13.147	10.698	14.533	13.162	15.750
y, in.	1.219	1.219	1.219	1.219	1.219	1.219
Break chord, c_B, in.	5.830		6.114		6.397	
Break chord leading edge:						
x, in.	26.324		25.407		24.554	
y, in.	8.571		9.407		10.224	
Tip chord, c_t, in.	2.927	2.927	2.927	2.927	2.927	2.927
Tip chord leading edge:						
x, in.	27.891	29.064	27.127	27.947	26.427	26.965
y, in.	12.244	12.244	13.439	13.439	14.634	14.634
Leading-edge sweep, Λ_{LE}:						
Inboard, deg	68.22	55.28	60.90	47.67	51.62	39.90
Outboard, deg	23.10		23.10		23.10	
Trailing-edge sweep, Λ_{TE}, deg	−20	−20	−20	−20	−20	−20
Aspect ratio, AR	1.750	1.750	2.1083	2.1083	2.500	2.500
Taper ratio, λ	0.0963	0.1168	0.1107	0.1297	0.1273	0.1428
Airfoil	64A0035	64A0035	64A0035	64A0035	64A0035	64A0035
Trailing-edge flap, percent span	88	88	88	88	88	88
Trailing-edge flap root chord, in.	2.801	2.801	2.777	2.777	2.391	2.391
Trailing-edge flap tip chord, in.	1.049	1.049	1.044	1.044	0.992	0.992

TABLE II. NUMERICAL DESCRIPTION OF WIND-TUNNEL MODELS

```
NASA/GD HYBRID FLAP STUDY  WING 1 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     3 16  1 17 15                                     GEOM 3
342.65 16.934 21.251                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
 7.928 1.219  0.244  26.902                                            GEOM 6A
26.324  8.571 0.244  5.830                                             GEOM 6B
27.891 12.244 0.244  2.927                                             GEOM 6C
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8C1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8C2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                     GEOM 10B

NASA/GD HYBRID FLAP STUDY  WING 2 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     2 16  1 17 15                                     GEOM 3
342.65 16.910 23.814                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
13.146 1.219  0.244  22.856                                            GEOM 6A
29.063 12.244 0.244  2.927                                             GEOM 6B
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                     GEOM 10B

NASA/GD HYBRID FLAP STUDY  WING 3 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     3 16  1 17 15                                     GEOM 3
342.65 16.934 22.293                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
10.698 1.219  0.244  23.802                                            GEOM 6A
25.407  9.407 0.244  6.114                                             GEOM 6B
27.127 13.439 0.244  2.927                                             GEOM 6C
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8C1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8C2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                     GEOM 10B
```

TABLE II. Continued

```
NASA/GD HYBRID FLAP STUDY  WING 4 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     2 16  1 17 15                                     GEOM 3
342.65 15.271 24.021                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
14.533 1.219  0.244  20.788                                            GEOM 6A
27.947 13.439 0.244  2.927                                             GEOM 6B
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                       GEOM 10B

NASA/GD HYBRID FLAP STUDY  WING 5 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     3 16  1 17 15                                     GEOM 3
342.65 14.933 23.112                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
13.162 1.219  0.244  21.074                                            GEOM 6A
24.554 10.244 0.244  6.397                                             GEOM 6B
26.427 14.634 0.244  2.927                                             GEOM 6C
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8C1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8C2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                       GEOM 10B

NASA/GD HYBRID FLAP STUDY  WING 6 WITH FUSELAGE                          GEOM 2
  1 -1  1  0  0  0     2 16  1 17 15                                     GEOM 3
342.65 13.902 24.185                                                     GEOM 4
0.0    .50    .75    1.25   2.50   5.0    10.0   20.0   30.0   40.0    GEOM 5A
50.0   60.0   70.0   80.0   90.0   100.0                                GEOM 5B
15.750 1.219  0.244  19.024                                            GEOM 6A
26.965 14.634 0.244  2.927                                             GEOM 6B
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8A1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8A2
0.0    .280   .341   .429   .591   .814   1.120  1.496  1.693  1.750   GEOM 8B1
1.641  1.409  1.094  .735   .372   .013                                GEOM 8B2
0.000  1.220  2.439  3.659  4.878  6.098  7.317  9.756  12.195 14.634  GEOM 10A
17.073 19.512 26.829 34.146 37.000                                       GEOM 10B
```

TABLE II. Concluded

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	GEOM 14
0.000	0.000	0.000	0.000	0.000	0.000	0.000				
-.725	-.725	-.725	-.725	-.725	-.725	-.725	-.725	-.725	-.725	GEOM 15 1
-.725	-.725	-.725	-.725	-.725	-.725	-.725				
0.000	.235	.404	.512	.561	.570	.571	.540	.509	.449	GEOM 14 2
.340	.279	.230	.191	.121	.070	0.000				
-1.115	-1.071	-.989	-.880	-.770	-.719	-.661	-.582	-.503	-.424	GEOM 15 2
-.345	-.306	-.286	-.276	-.257	-.256	-.258				
0.000	.321	.617	.813	.881	.889	.879	.847	.767	.676	GEOM 14 3
.565	.496	.396	.287	.187	.088	0.000				
-1.240	-1.188	-1.056	-.874	-.675	-.566	-.477	-.359	-.220	-.102	GEOM 15 3
-.004	.055	.094	.132	.151	.159	.169				
0.000	.384	.720	.986	1.044	1.054	1.043	1.003	.943	.833	GEOM 14 4
.693	.594	.495	.365	.255	.147	0.000				
-1.260	-1.229	-1.068	-.739	-.510	-.342	-.272	-.134	.005	.143	GEOM 15 4
.282	.341	.389	.439	.467	.497	.496				
0.000	.446	.764	.961	1.087	1.125	1.094	1.013	.902	.761	GEOM 14 5
.602	.513	.422	.303	.233	.134	0.000				
-1.273	-1.200	-1.008	-.778	-.479	-.230	-.032	.196	.365	.523	GEOM 15 5
.651	.690	.719	.758	.777	.787	.796				
0.000	.416	.713	.980	1.117	1.165	1.174	1.153	1.072	.950	GEOM 14 6
.750	.651	.531	.391	.272	.172	0.000				
-1.243	-1.180	-1.029	-.789	-.540	-.330	-.013	.187	.425	.642	GEOM 15 6
.841	.909	.968	1.027	1.046	1.065	1.066				
0.000	.475	.829	1.045	1.153	1.191	1.176	1.192	1.120	.910	GEOM 14 7
.692	.593	.483	.384	.236	.108	0.000				
-1.216	-1.142	-1.001	-.801	-.632	-.483	.011	.436	.702	.958	GEOM 15 7
1.094	1.142	1.171	1.199	1.218	1.227	1.233				
0.000	.381	.854	1.030	1.168	1.219	1.219	1.219	1.144	.995	GEOM 14 8
.855	.667	.567	.400	.290	.172	0.000				
-1.206	-1.191	-1.096	-.995	-.874	-.726	-.002	.759	.924	1.030	GEOM 15 8
1.108	1.165	1.203	1.231	1.249	1.257	1.264				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 9
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 9
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 10
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 10
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 11
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 11
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 12
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 12
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 13
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 13
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 14
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 14
1.102	1.140	1.168	1.187	1.214	1.222	1.220				
0.000	.491	.857	1.074	1.201	1.219	1.219	1.219	1.170	.950	GEOM 14 15
.810	.660	.532	.422	.273	.143	0.000				
-1.216	-1.184	-1.081	-.969	-.848	-.729	.005	.764	.898	1.034	GEOM 15 15
1.102	1.140	1.168	1.187	1.214	1.222	1.220				

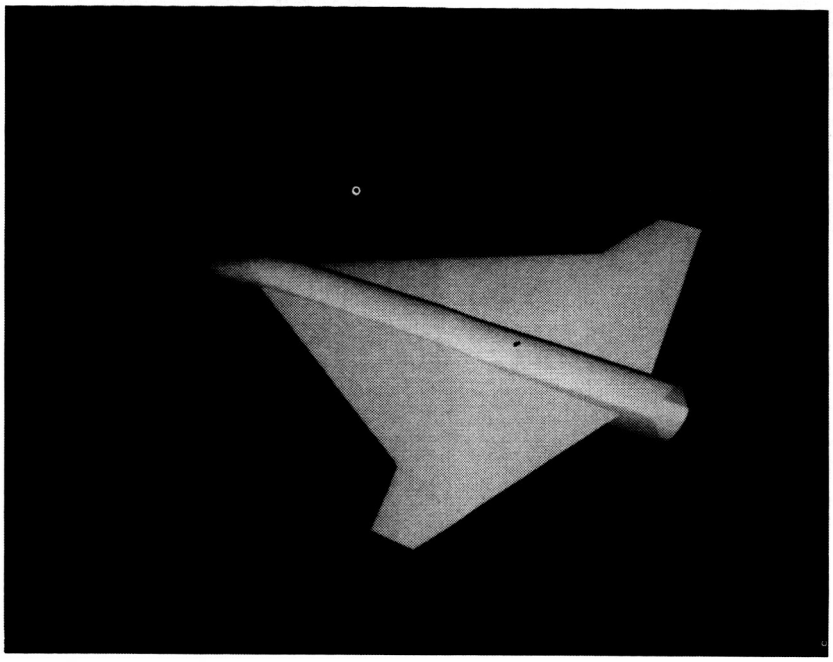

Figure 1. Computer graphic of wing 1. AR = 1.75.

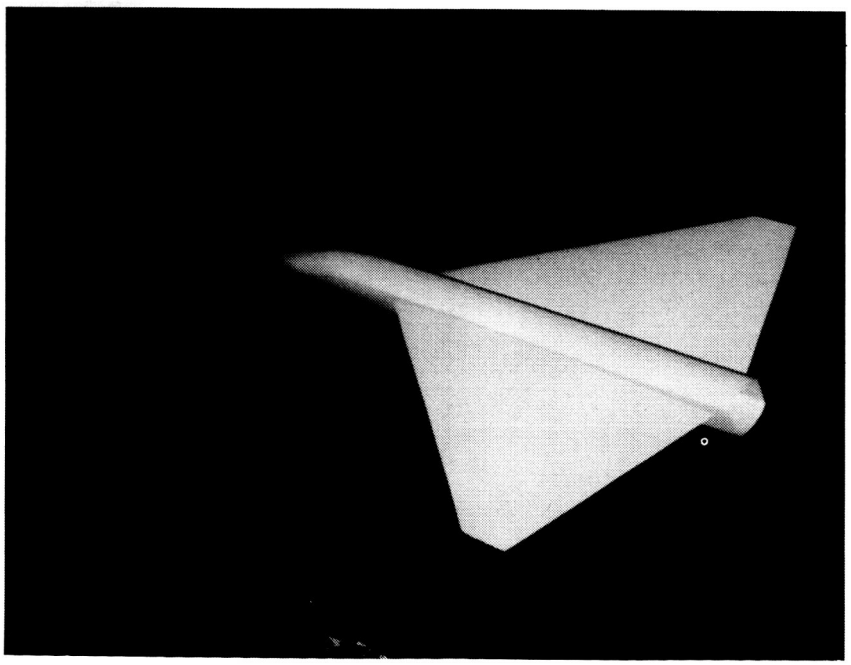

Figure 2. Computer graphic of wing 2. AR = 1.75.

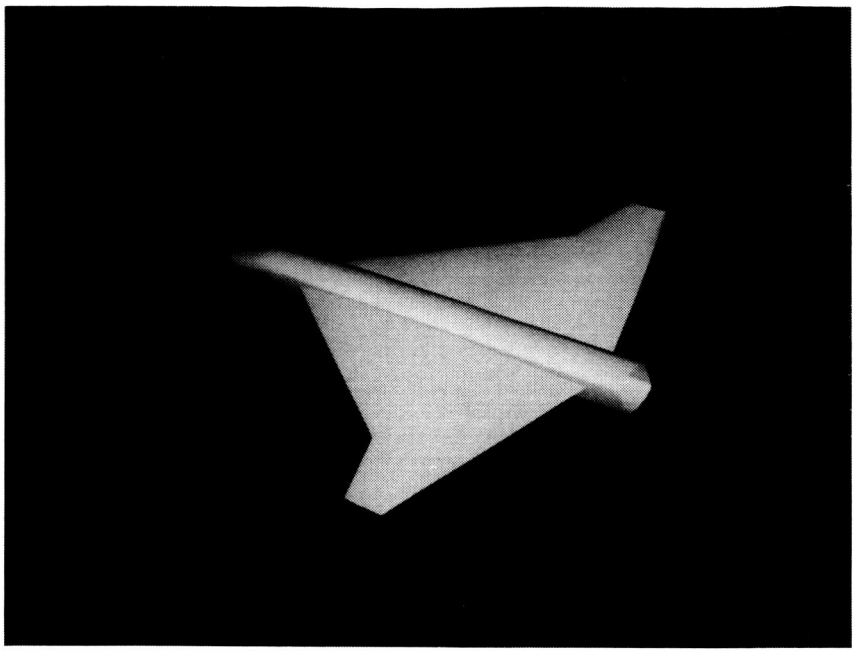

Figure 3. Computer graphic of wing 3. A = 2.11.

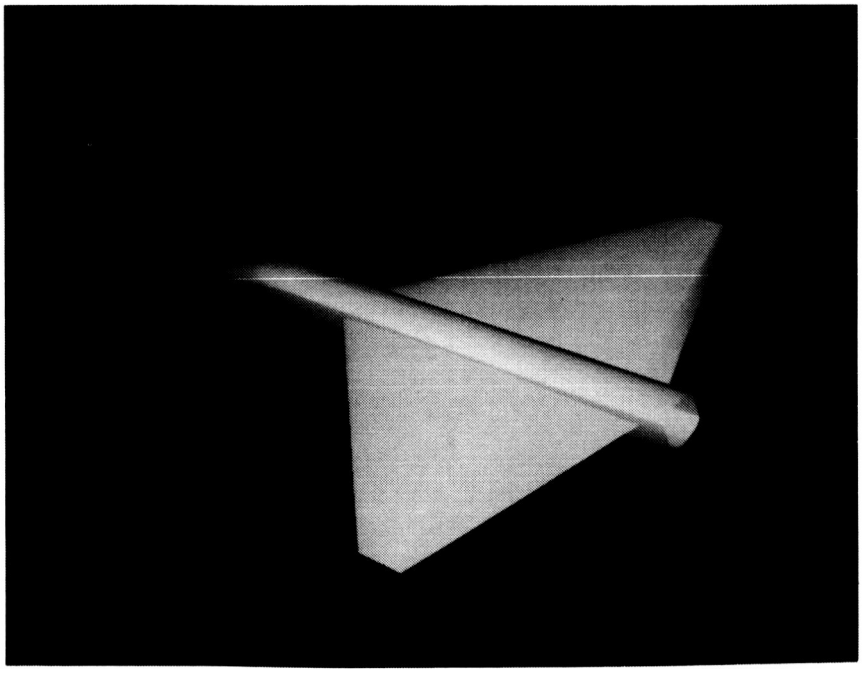

Figure 4. Computer graphic of wing 4. AR = 2.11.

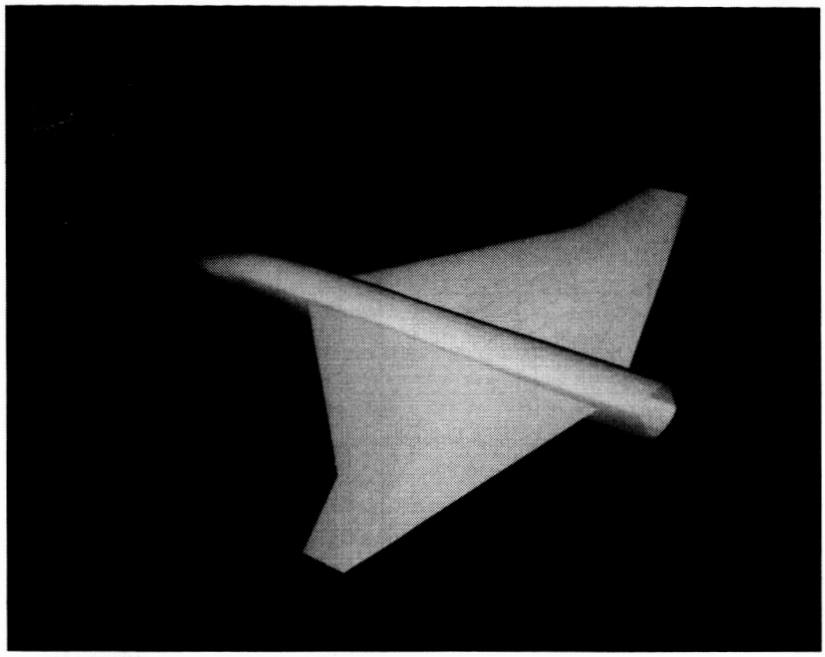

Figure 5. Computer graphic of wing 5. AR = 2.50.

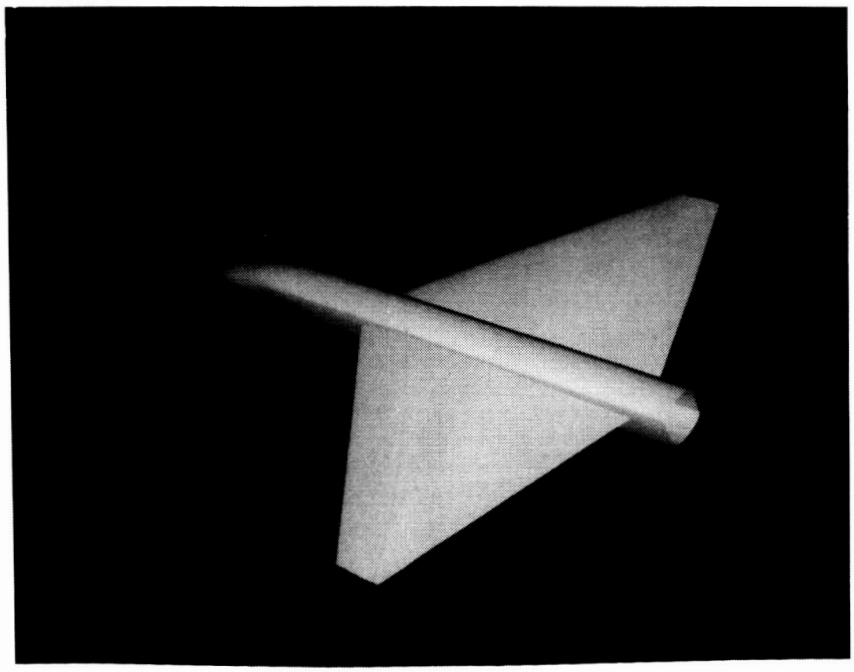

Figure 6. Computer graphic of wing 6. AR = 2.50.

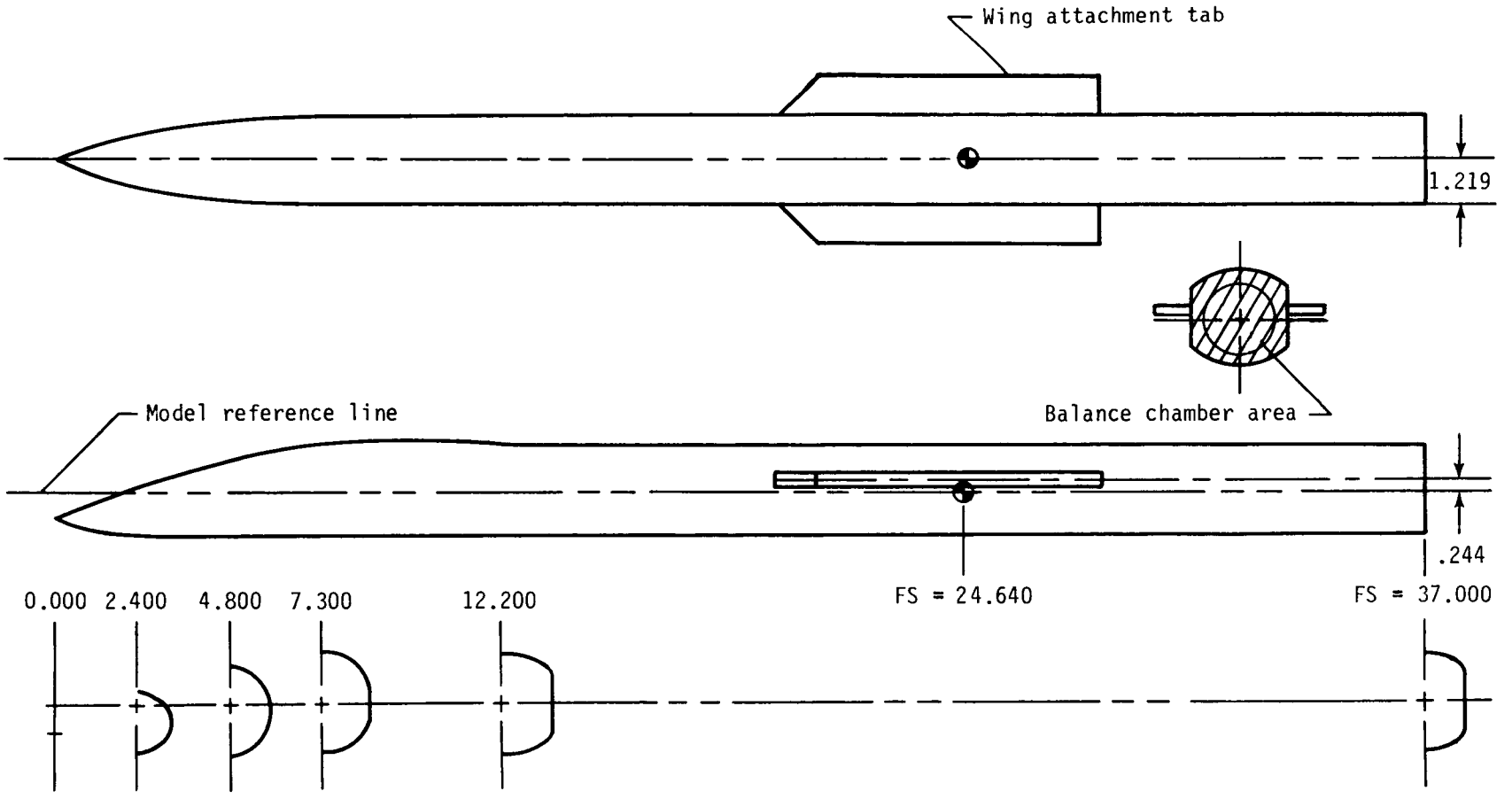

Figure 7. Sketch of fuselage geometry. (Model constructed with zero base area.) All linear dimensions are in inches.

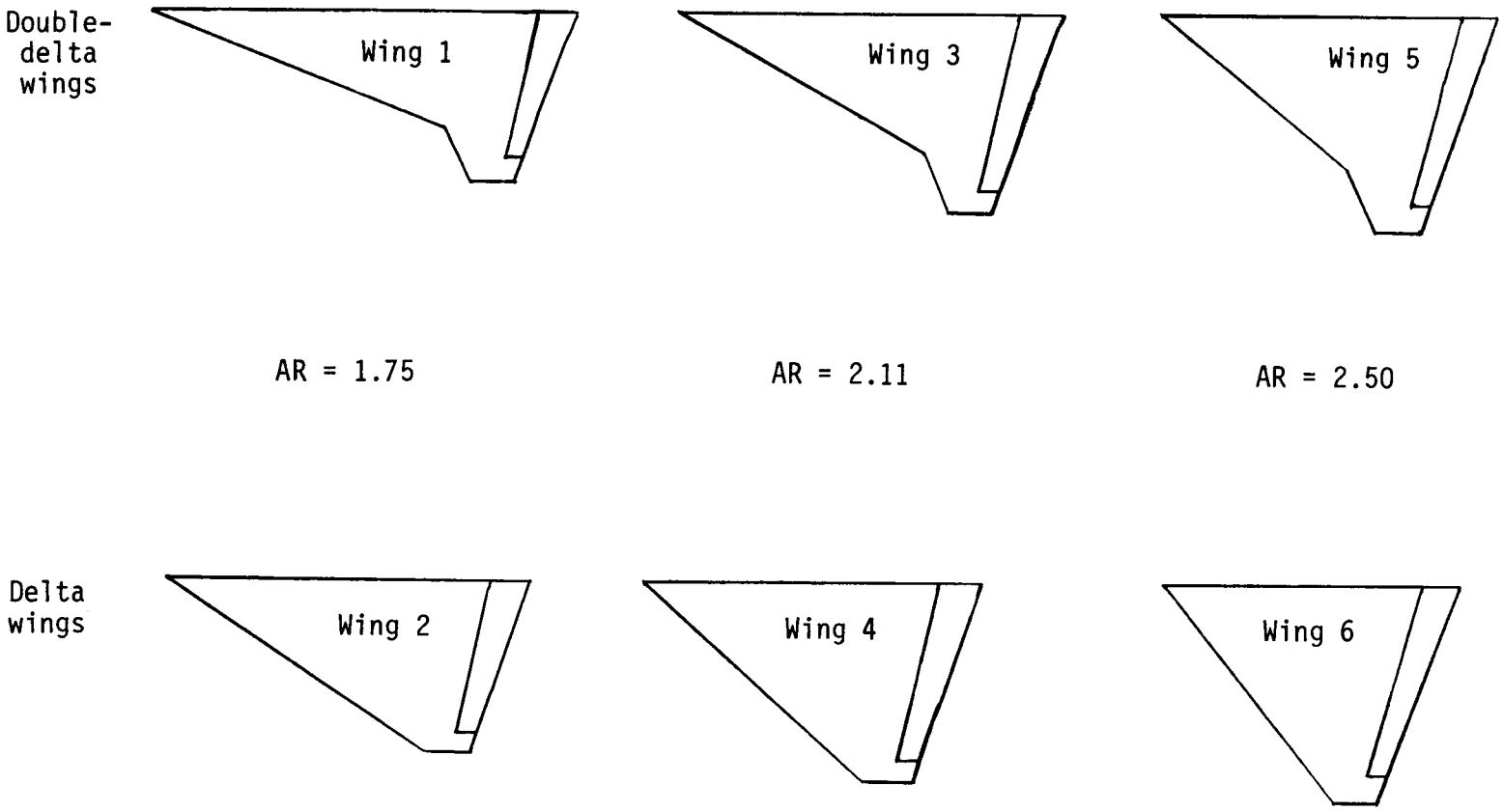

Figure 8. Sketches of the six wing planforms.

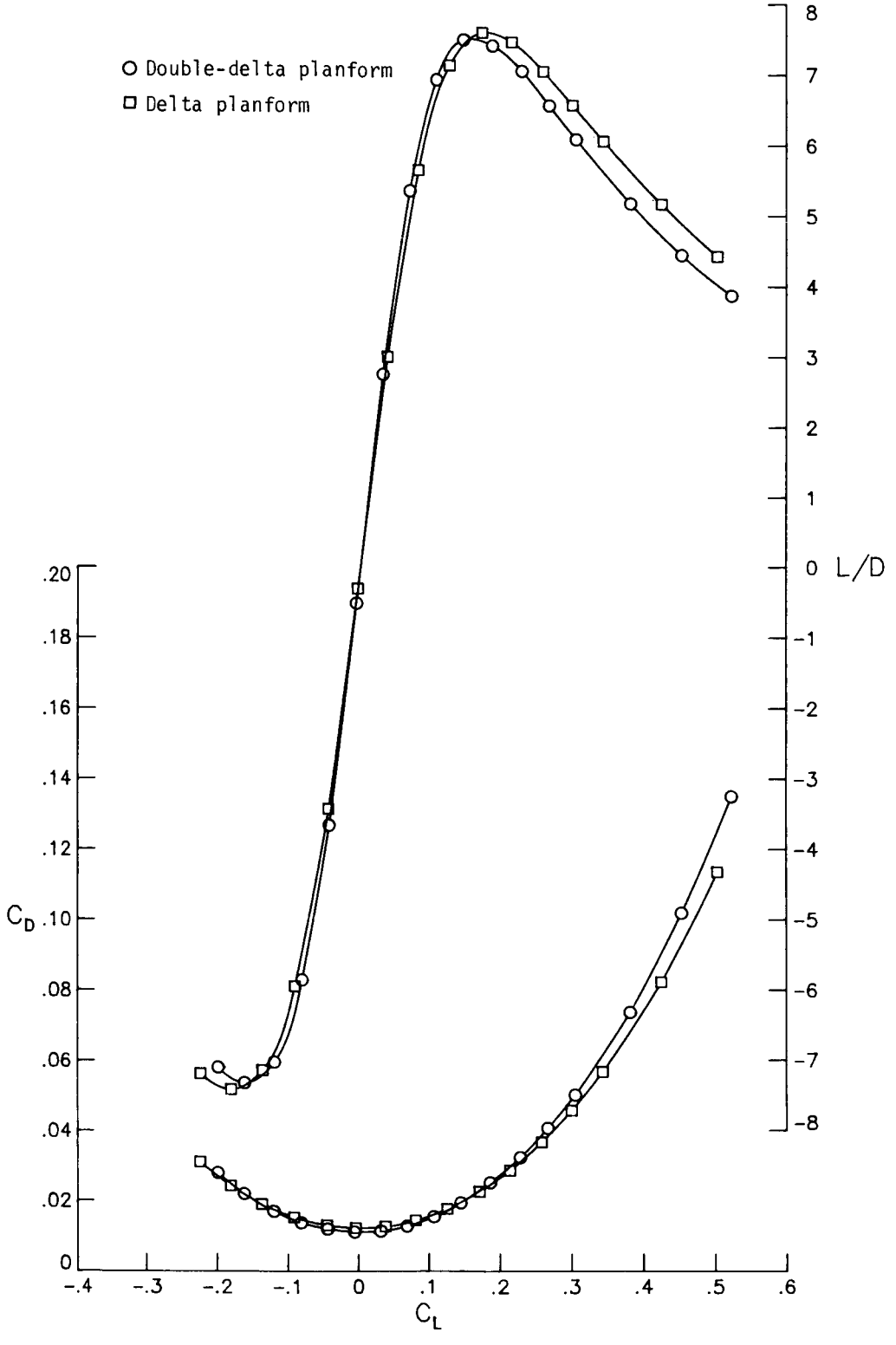

Figure 9. Effect of wing planform on longitudinal aerodynamic characteristics at $M = 1.60$ for AR = 1.75 wings.

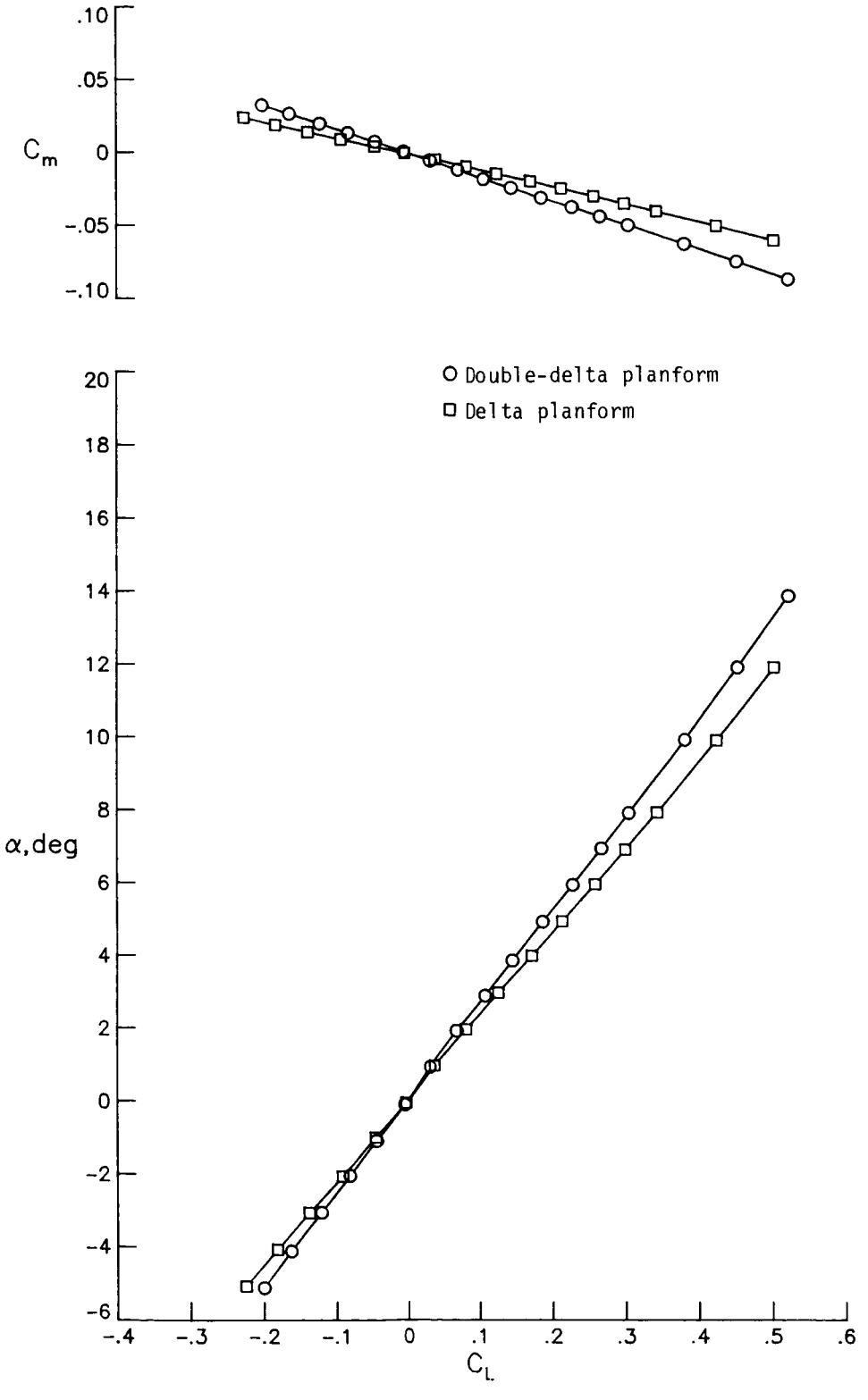

Figure 9. Concluded.

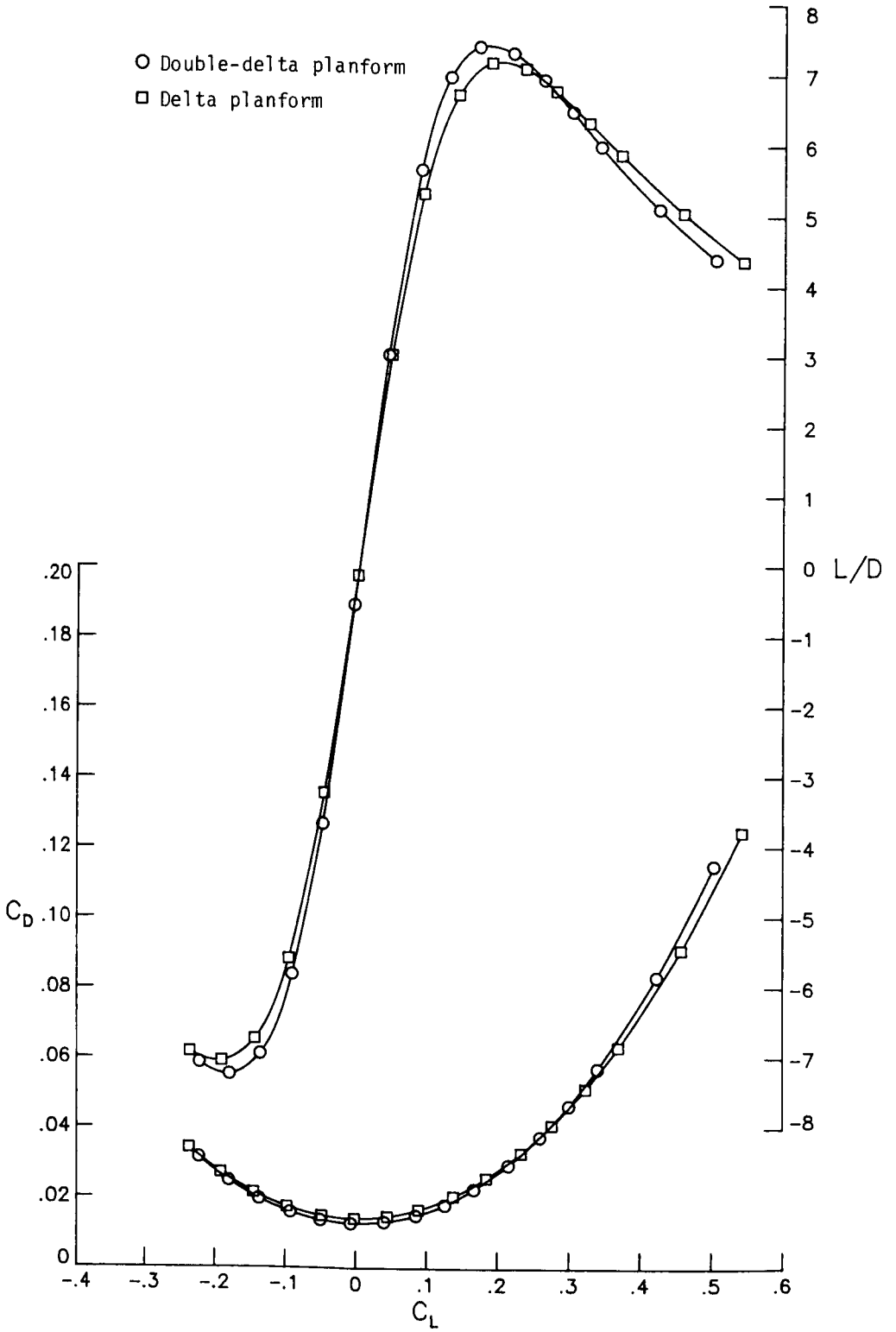

Figure 10. Effect of wing planform on longitudinal aerodynamic characteristics at $M = 1.60$ for AR = 2.11 wings.

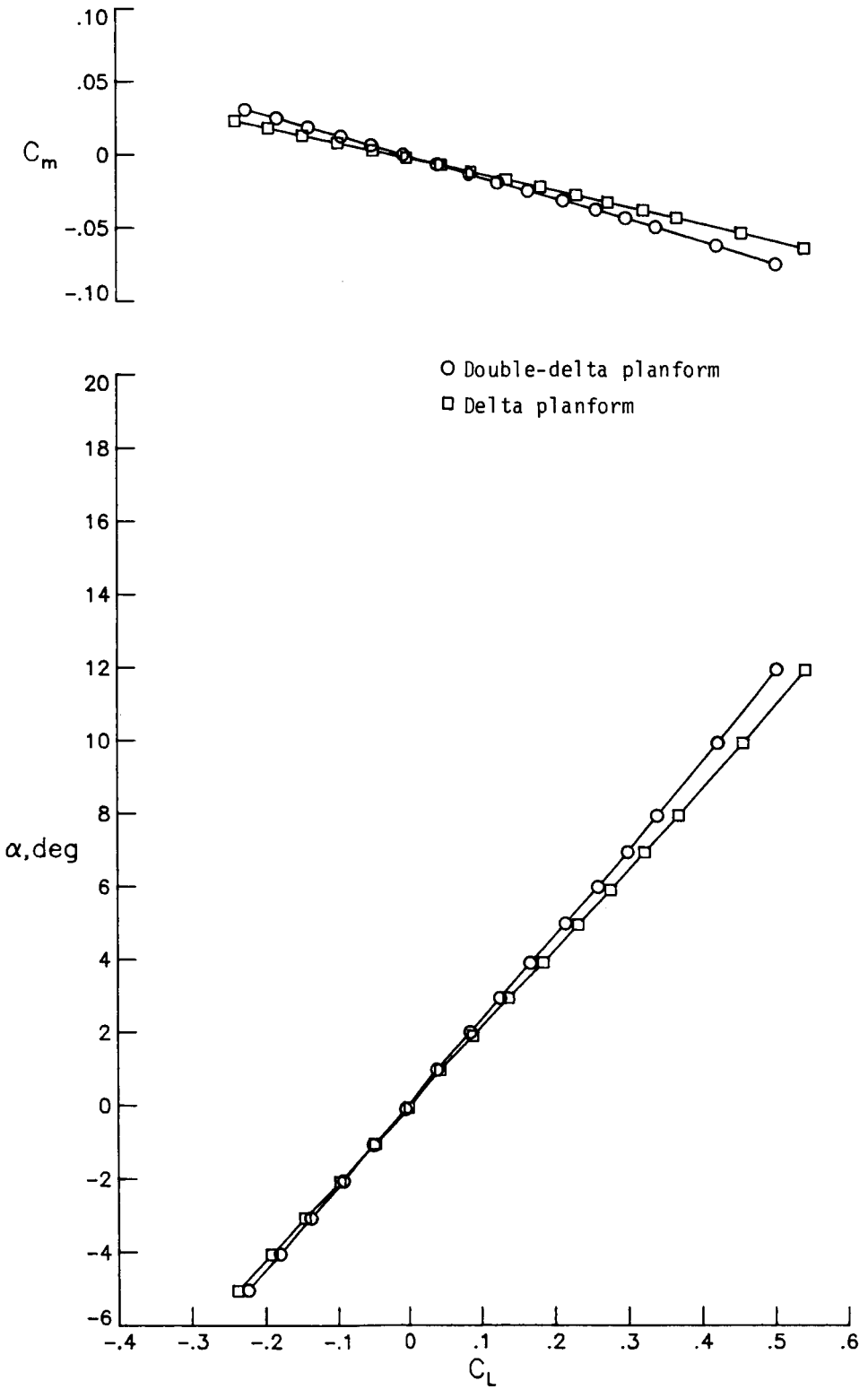

Figure 10. Concluded.

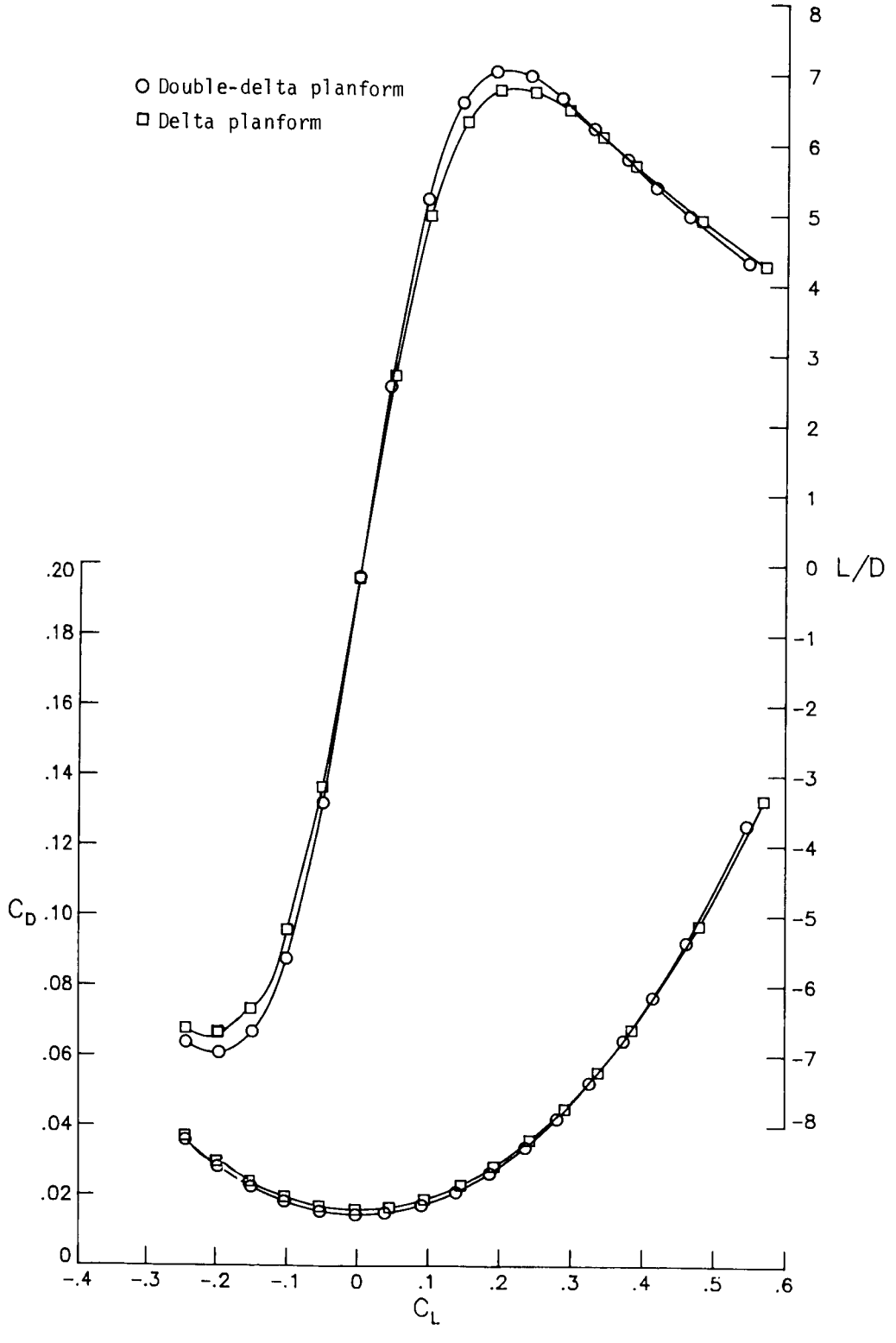

Figure 11. Effect of wing planform on longitudinal aerodynamic characteristics at $M = 1.60$ for AR = 2.50 wings.

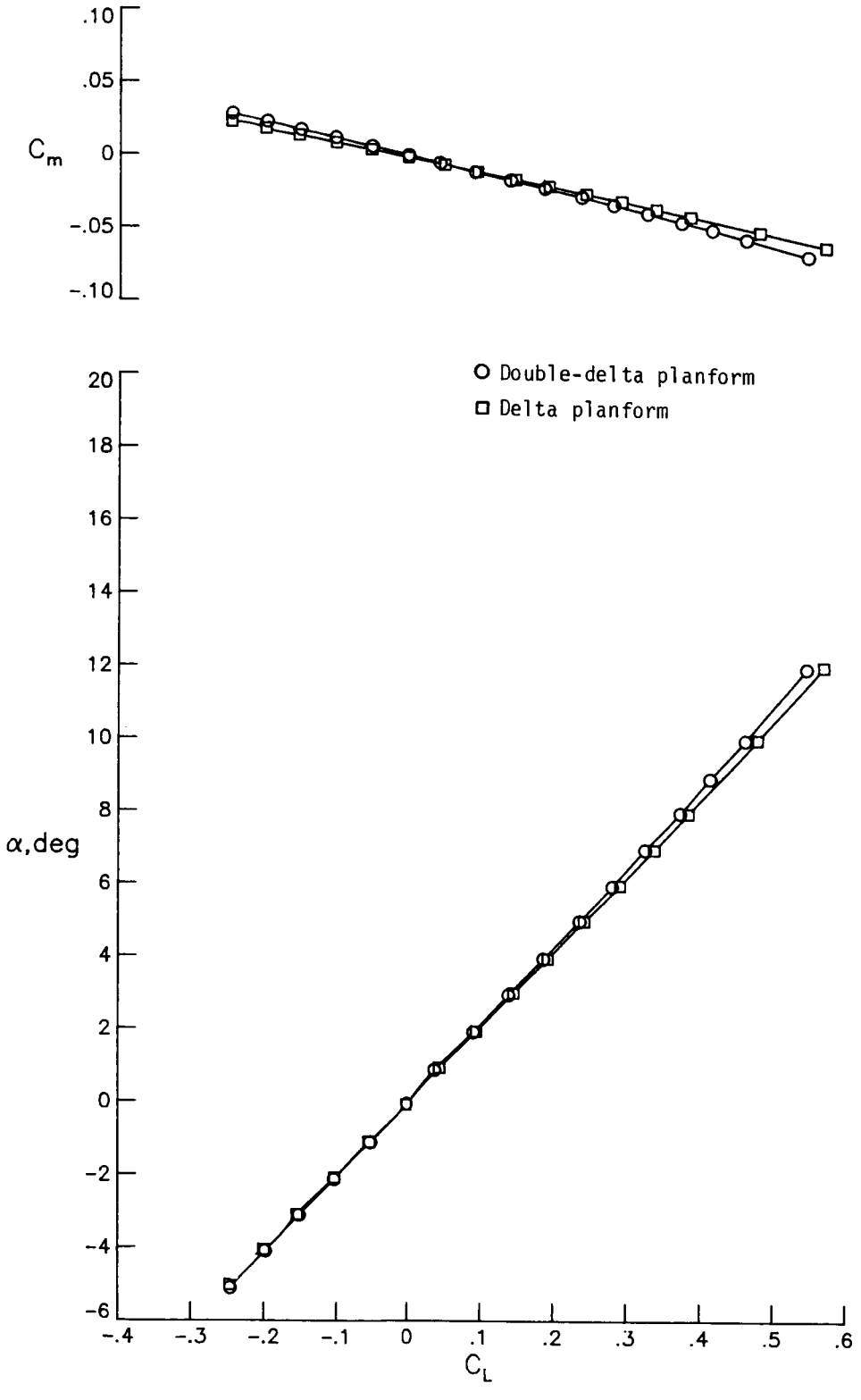

Figure 11. Concluded.

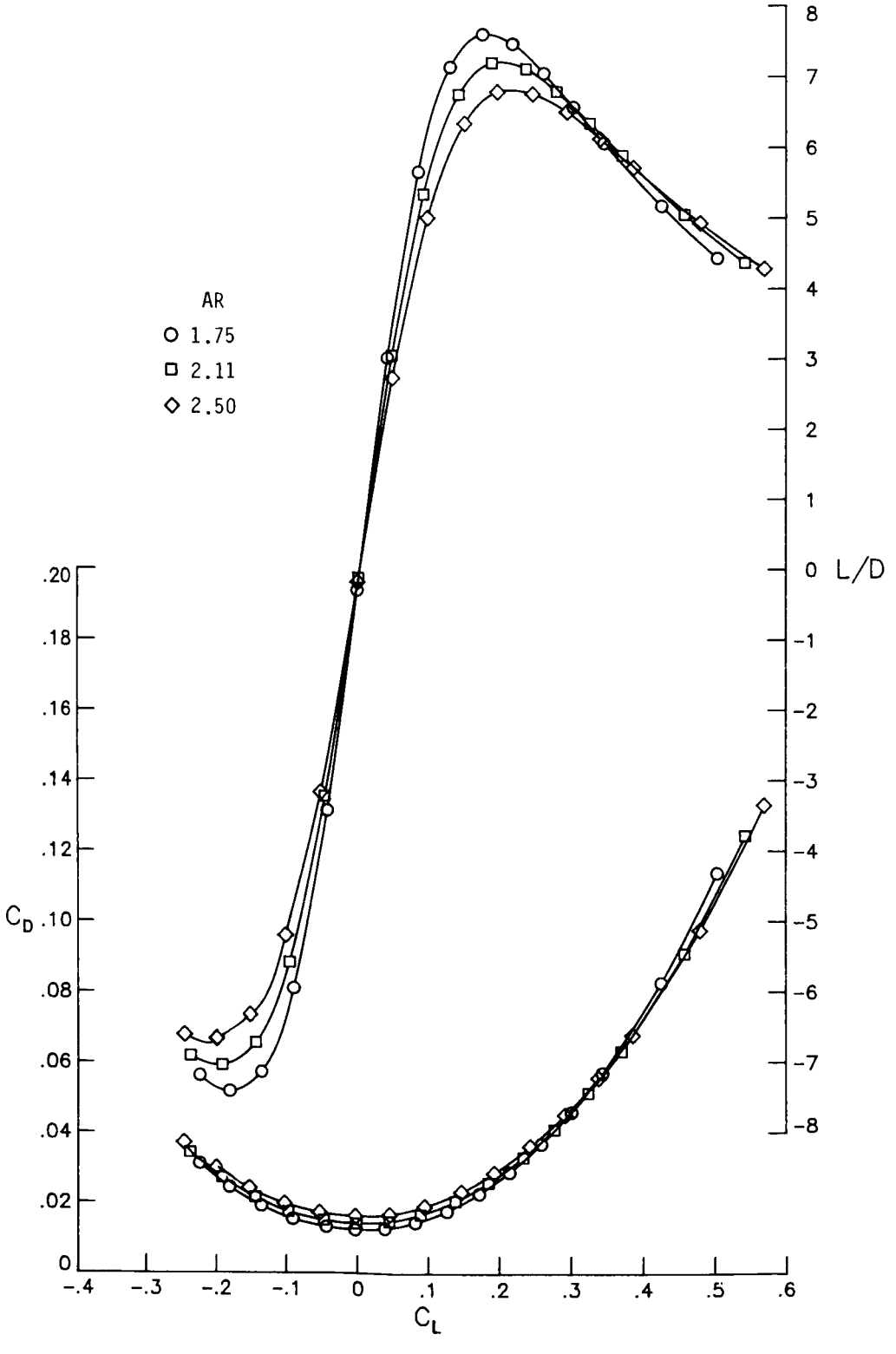

Figure 12. Effect of aspect ratio on longitudinal aerodynamic characteristics of delta wings at $M = 1.60$.

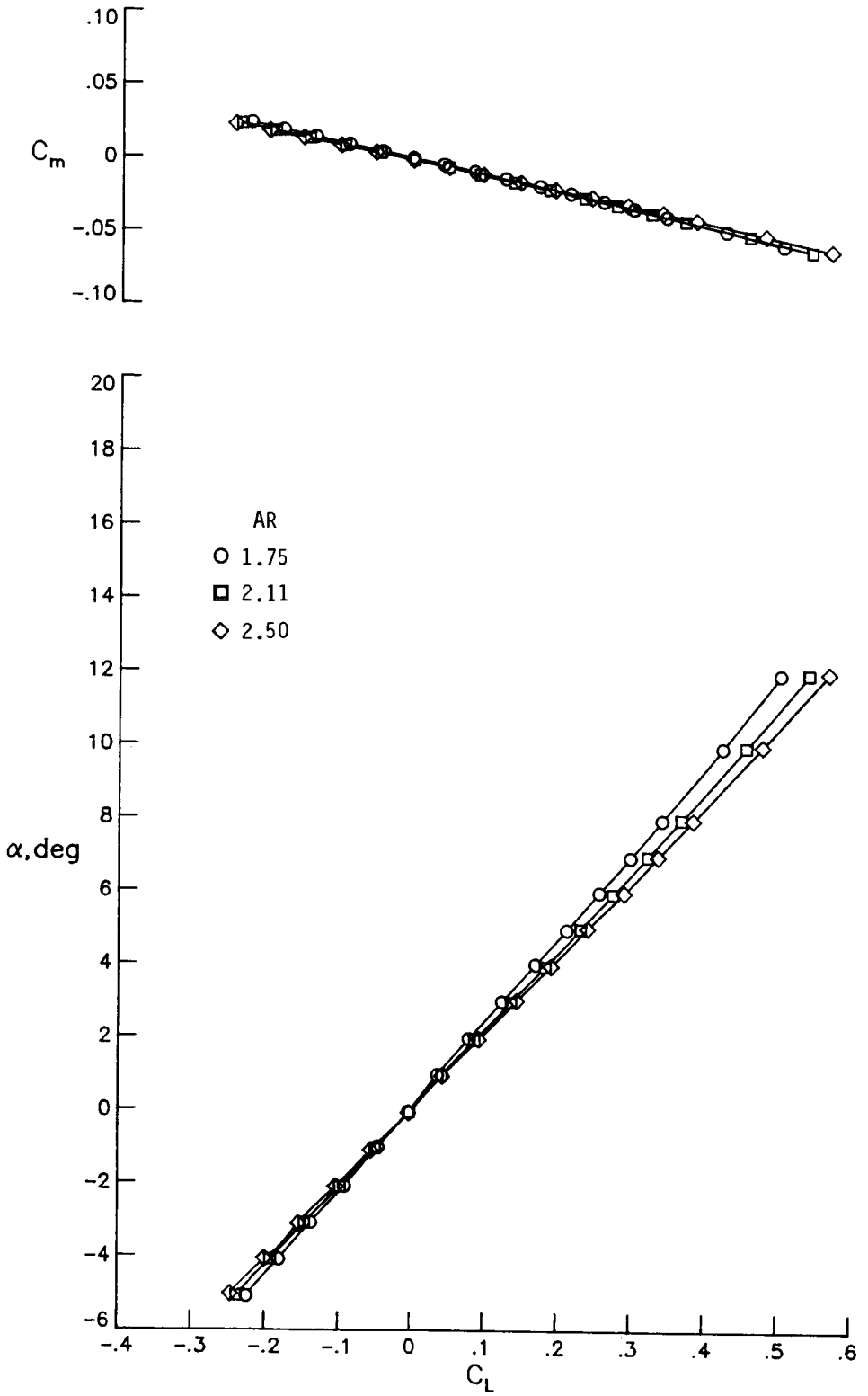

Figure 12. Concluded.

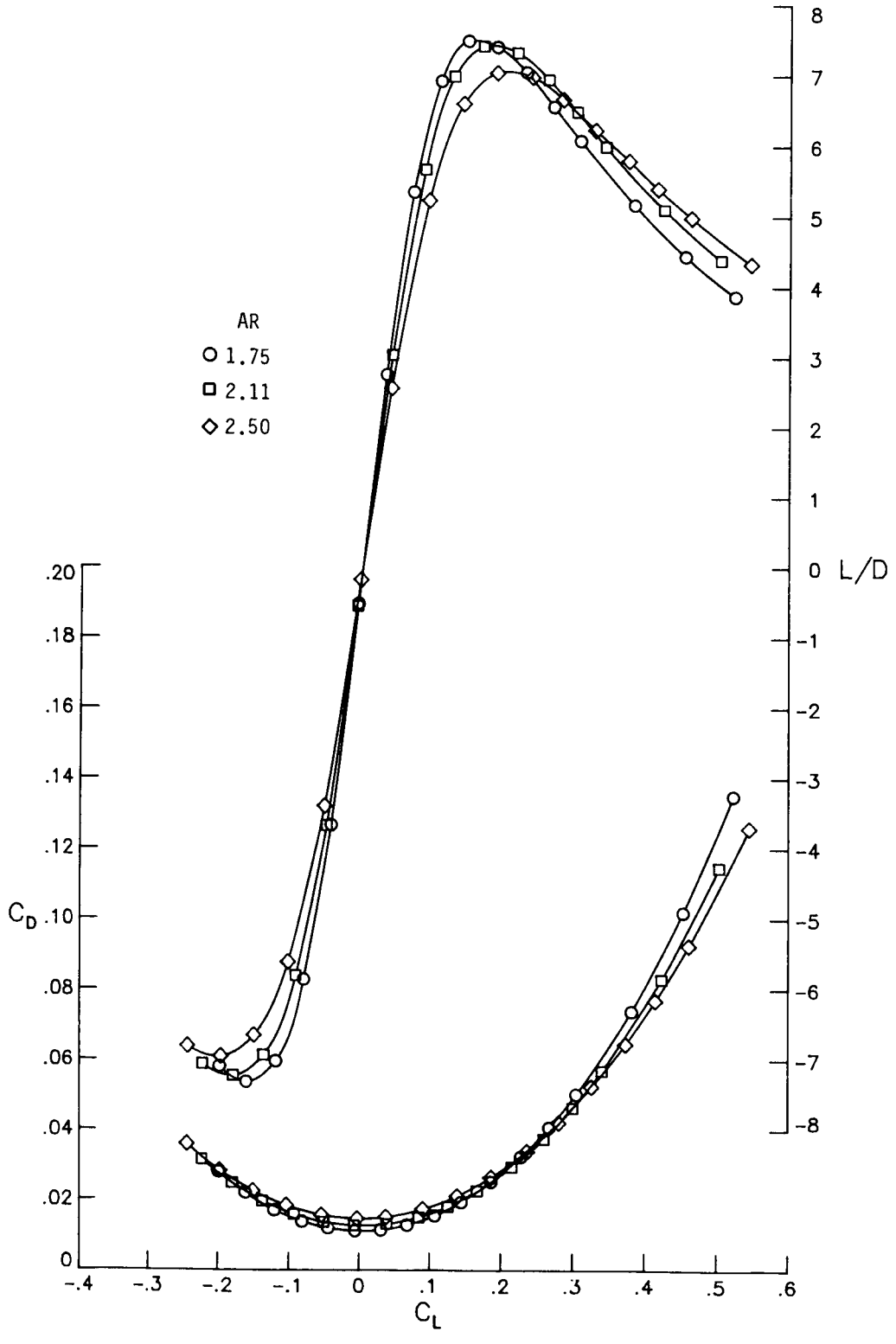

Figure 13. Effect of aspect ratio on longitudinal aerodynamic characteristics of double-delta wings at $M = 1.60$.

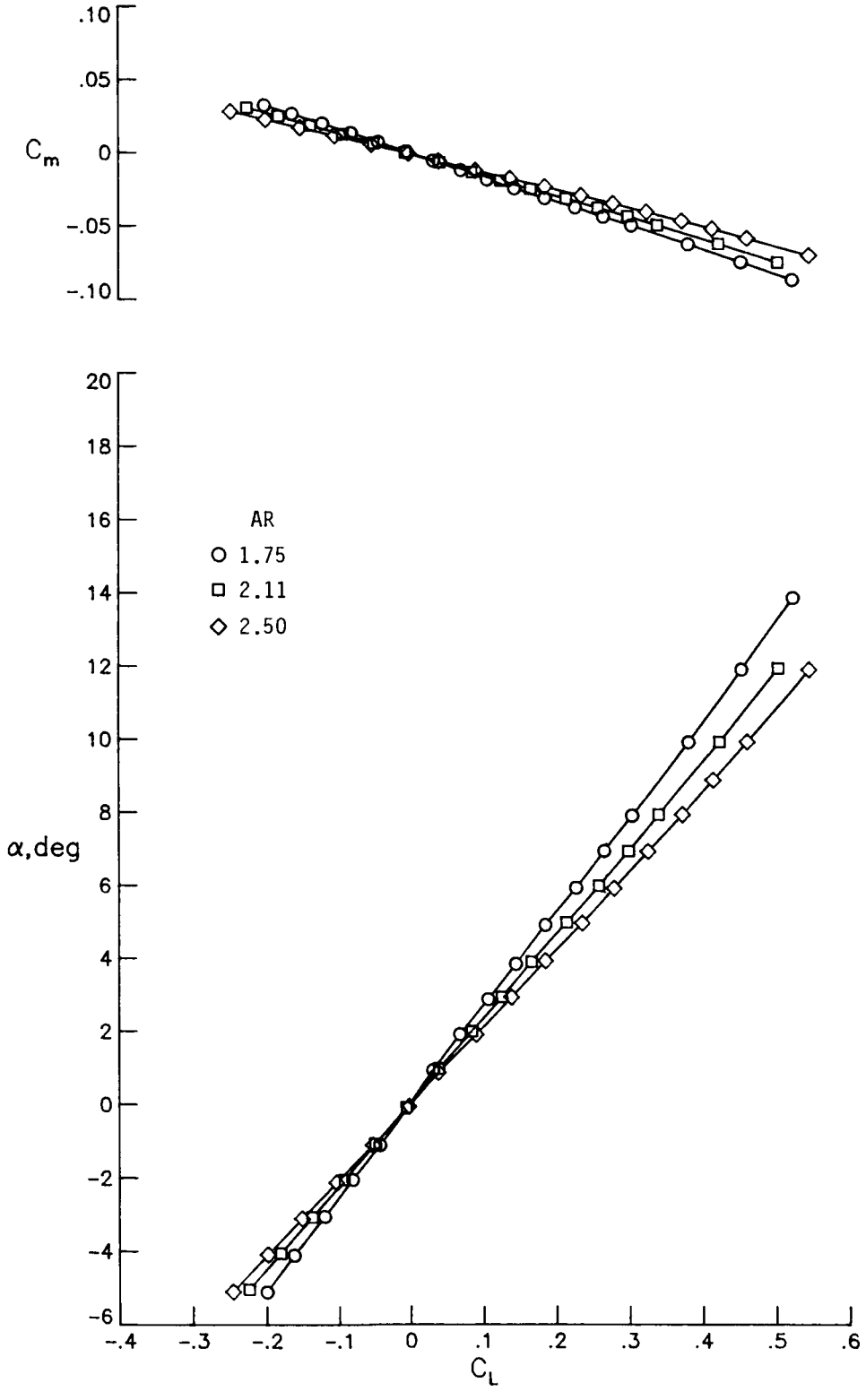

Figure 13. Concluded.

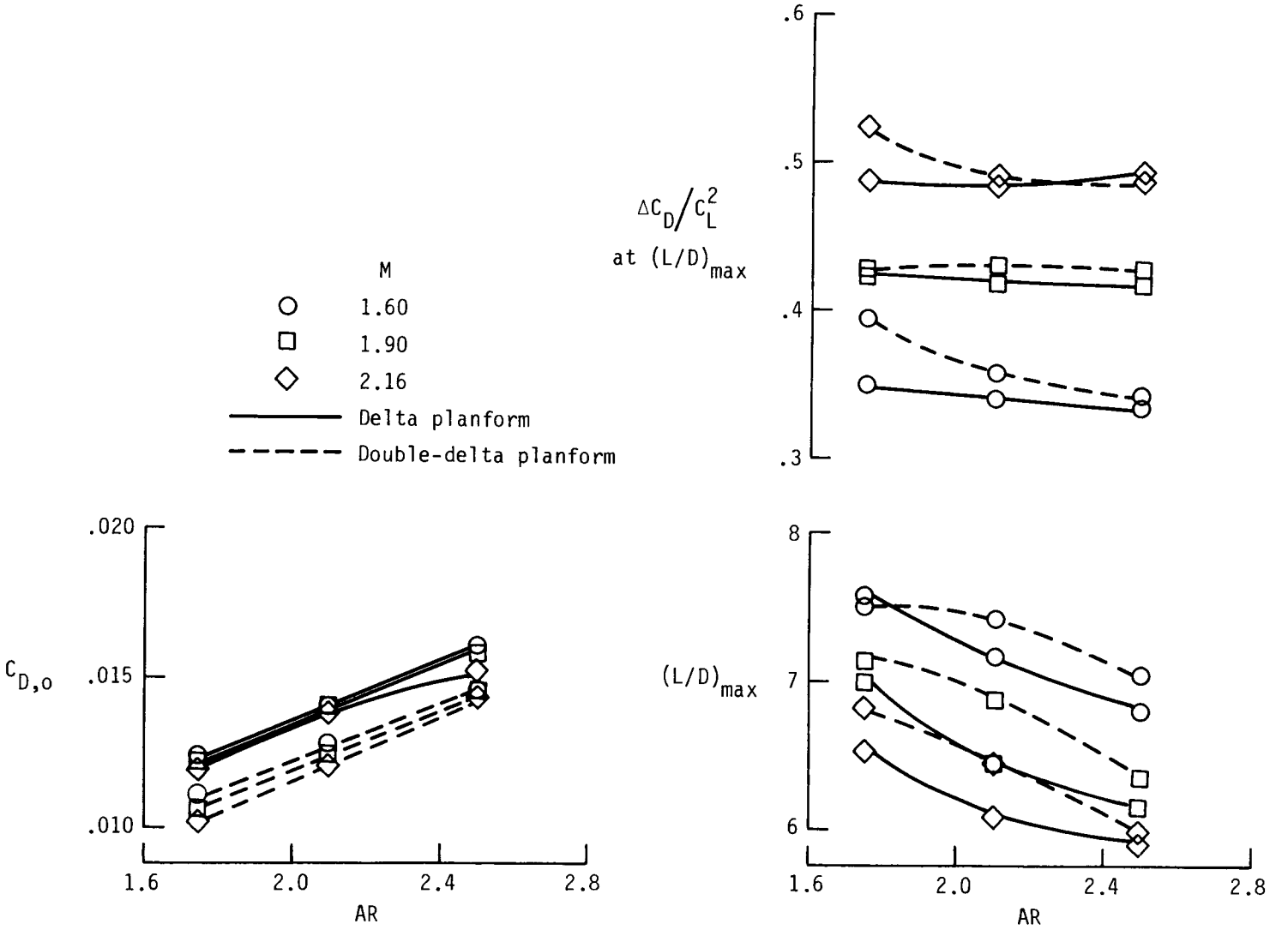

Figure 14. Effect of aspect ratio, wing planform, and Mach number on longitudinal aerodynamic performance.

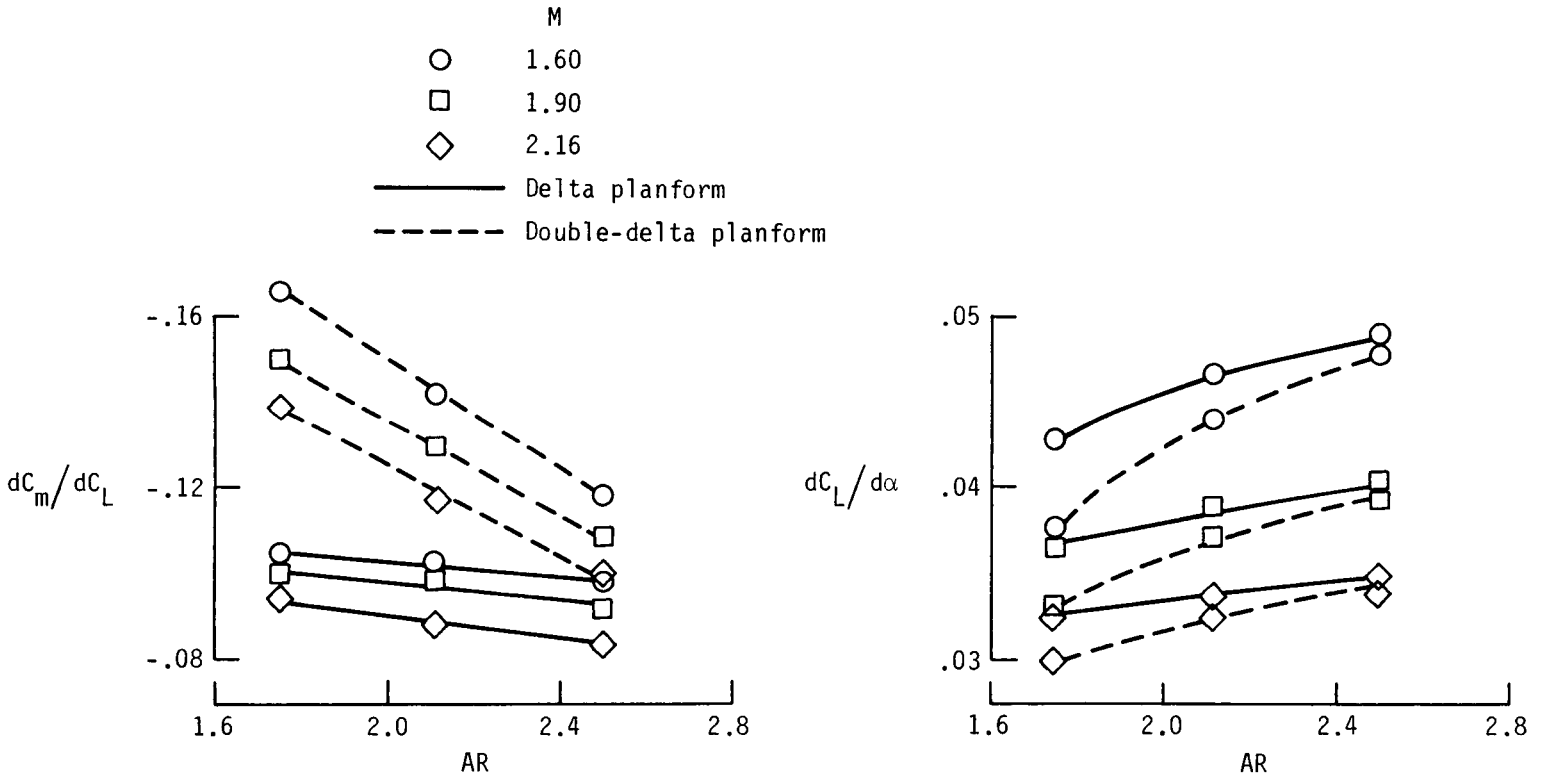

Figure 15. Effect of aspect ratio, wing planform, and Mach number on lift and pitching-moment characteristics.

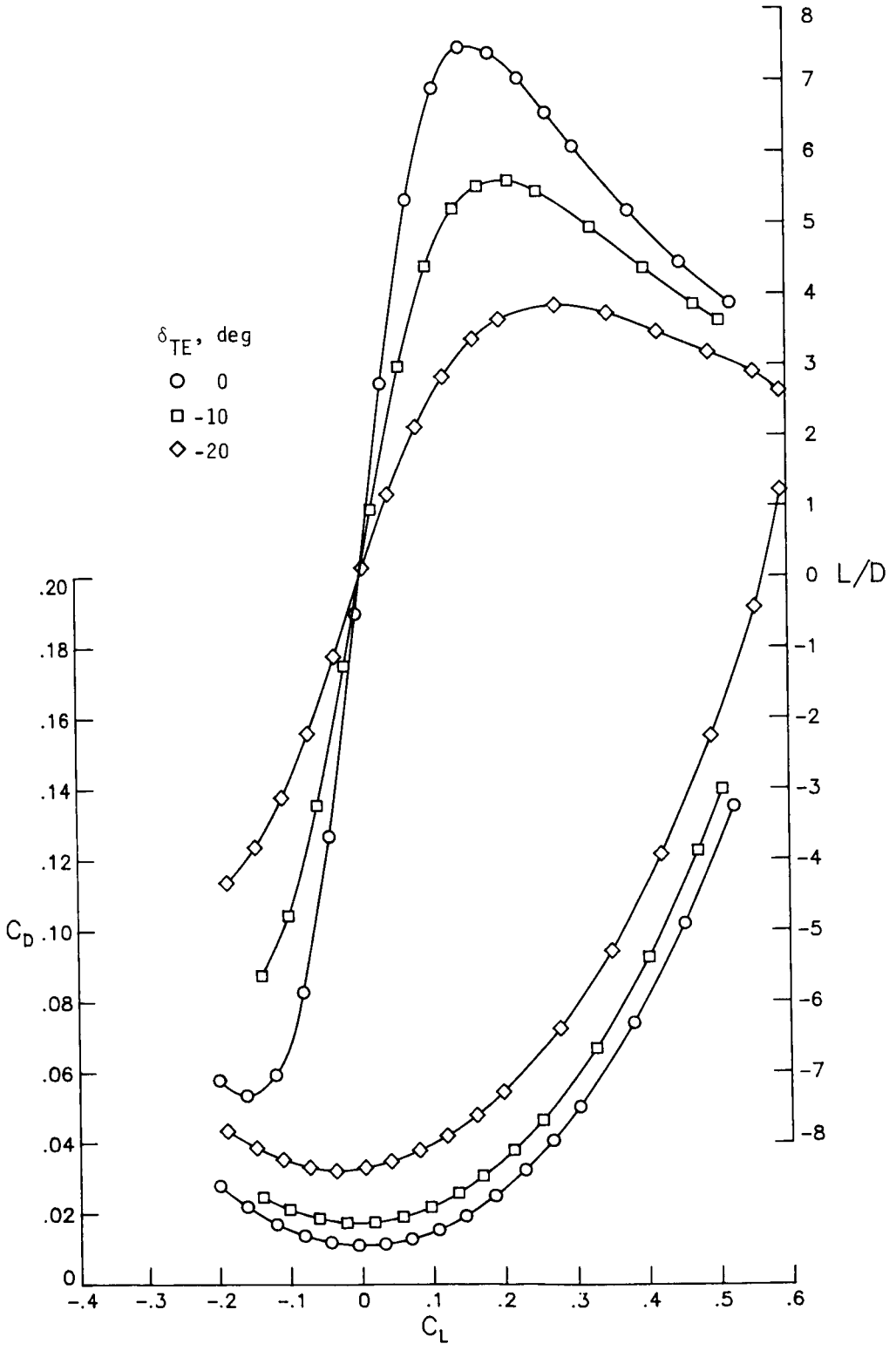

Figure 16. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 1.75 double-delta wing at $M = 1.60$.

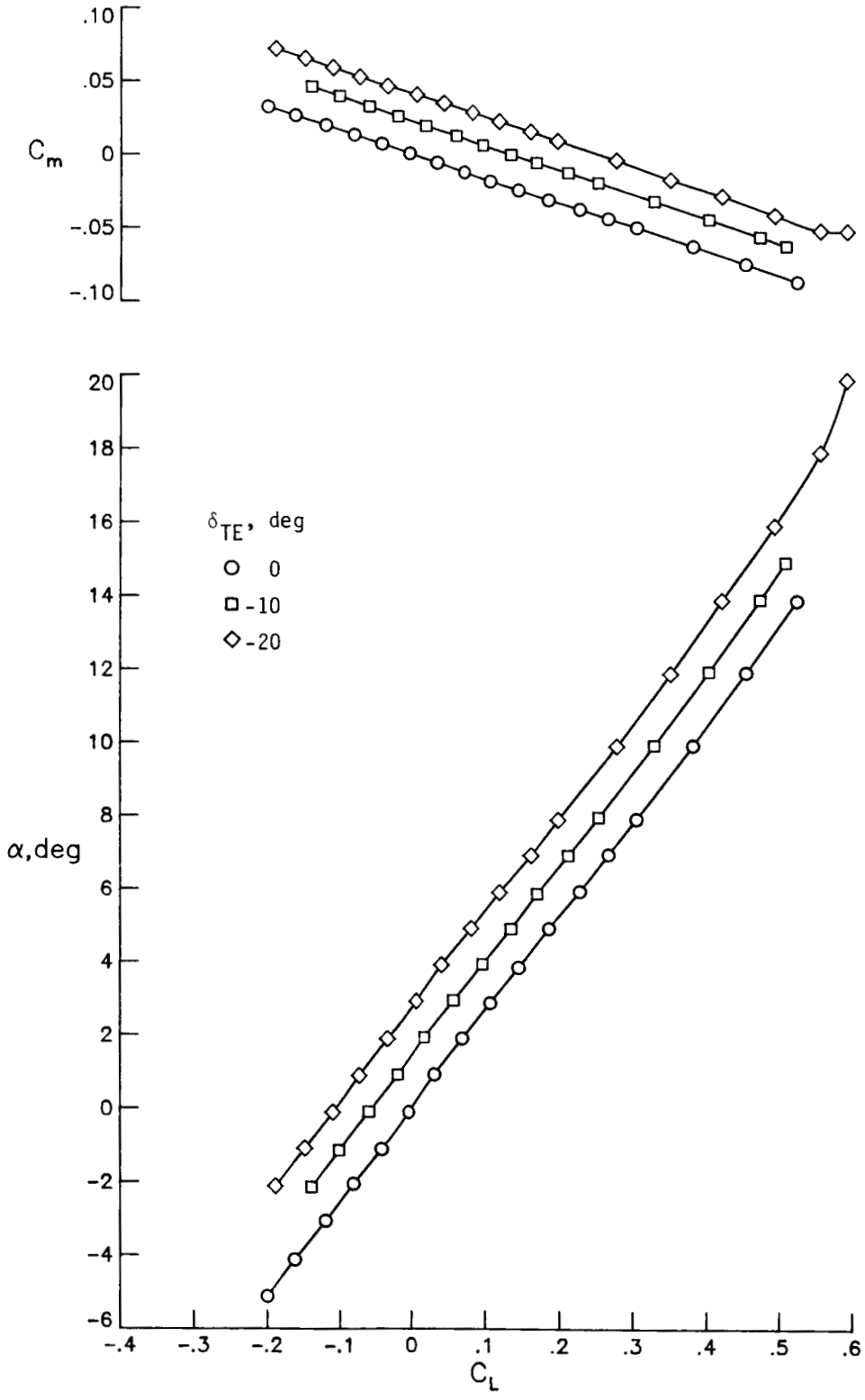

Figure 16. Concluded.

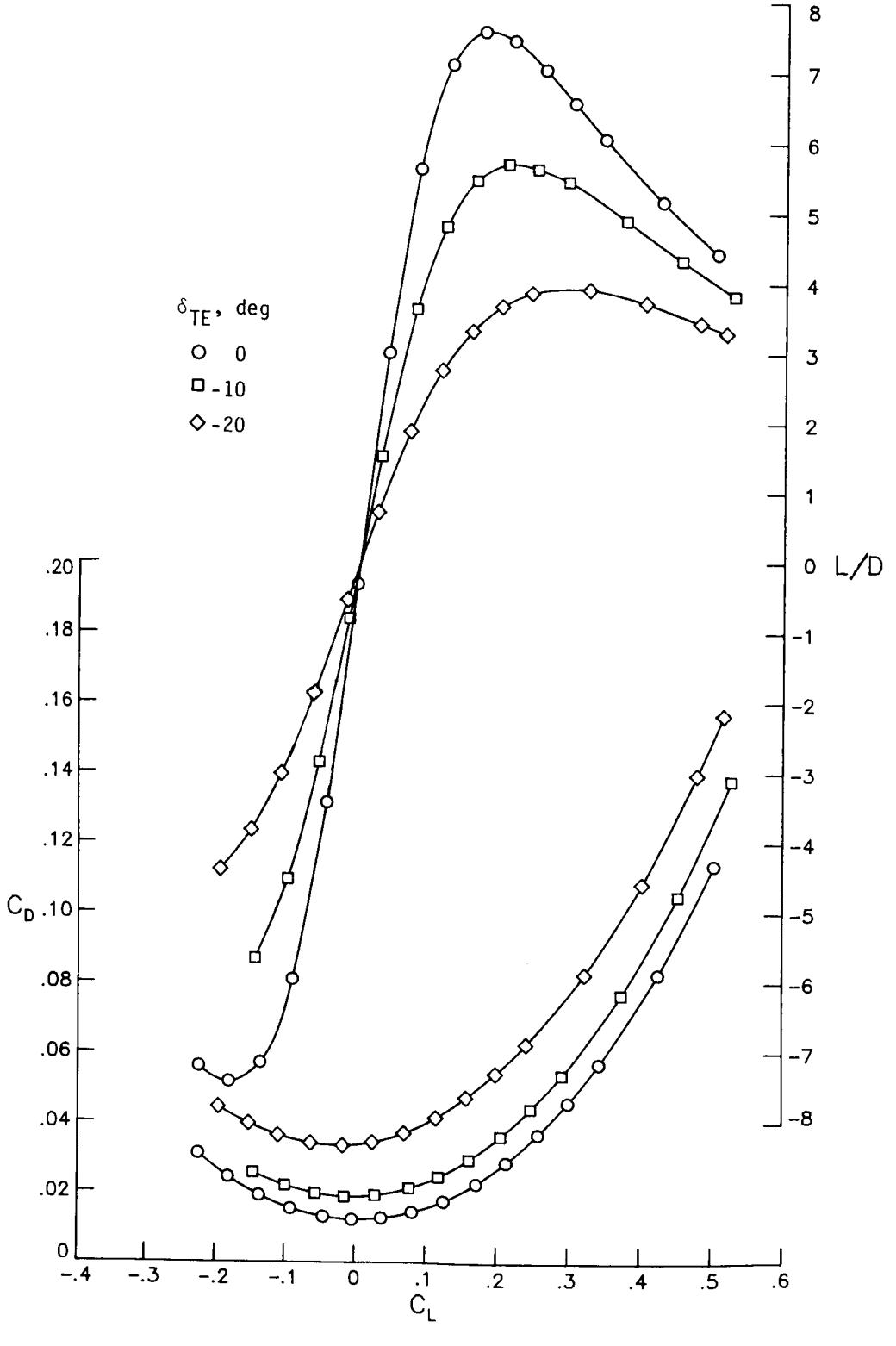

Figure 17. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 1.75 delta wing at $M = 1.60$.

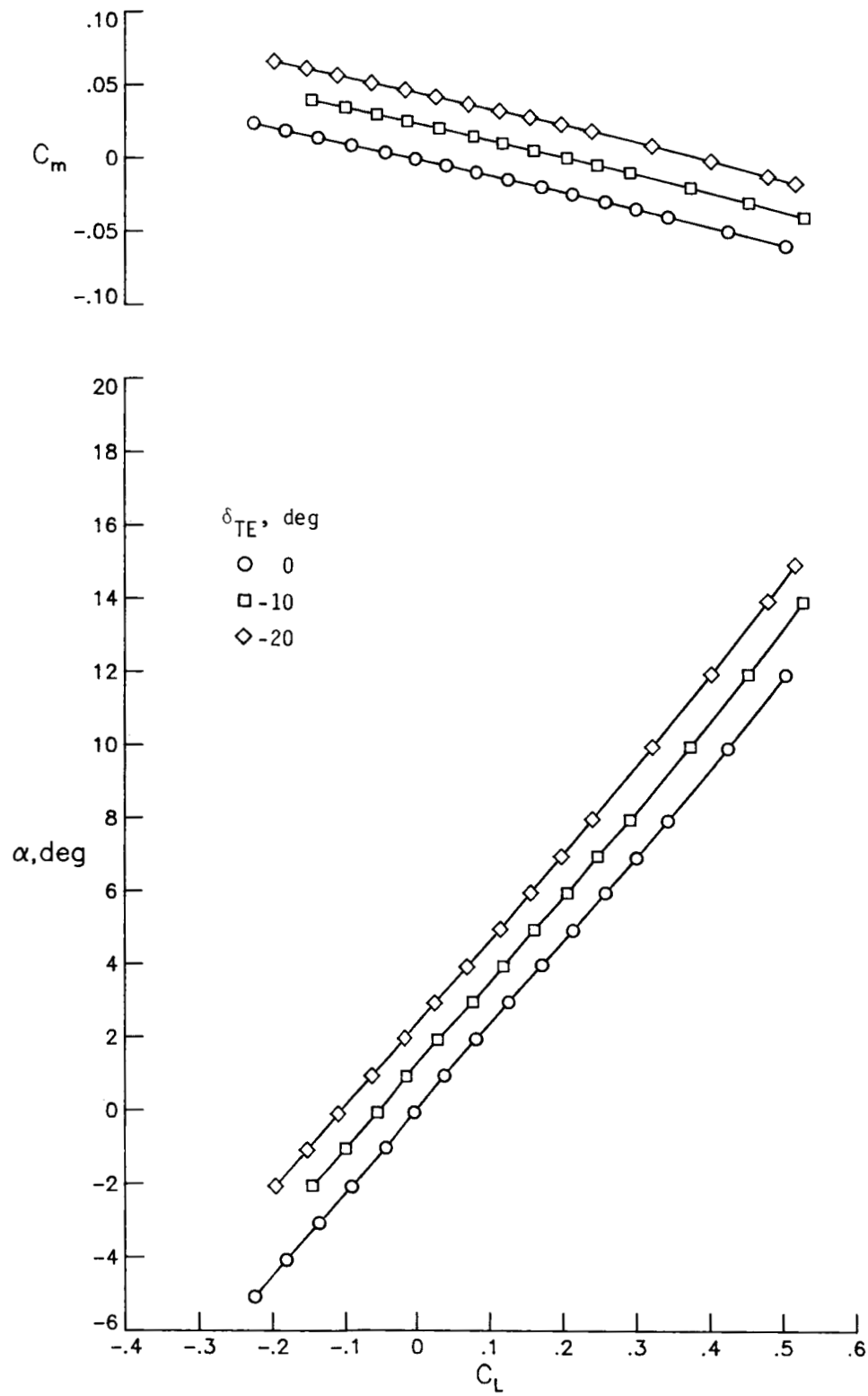

Figure 17. Concluded.

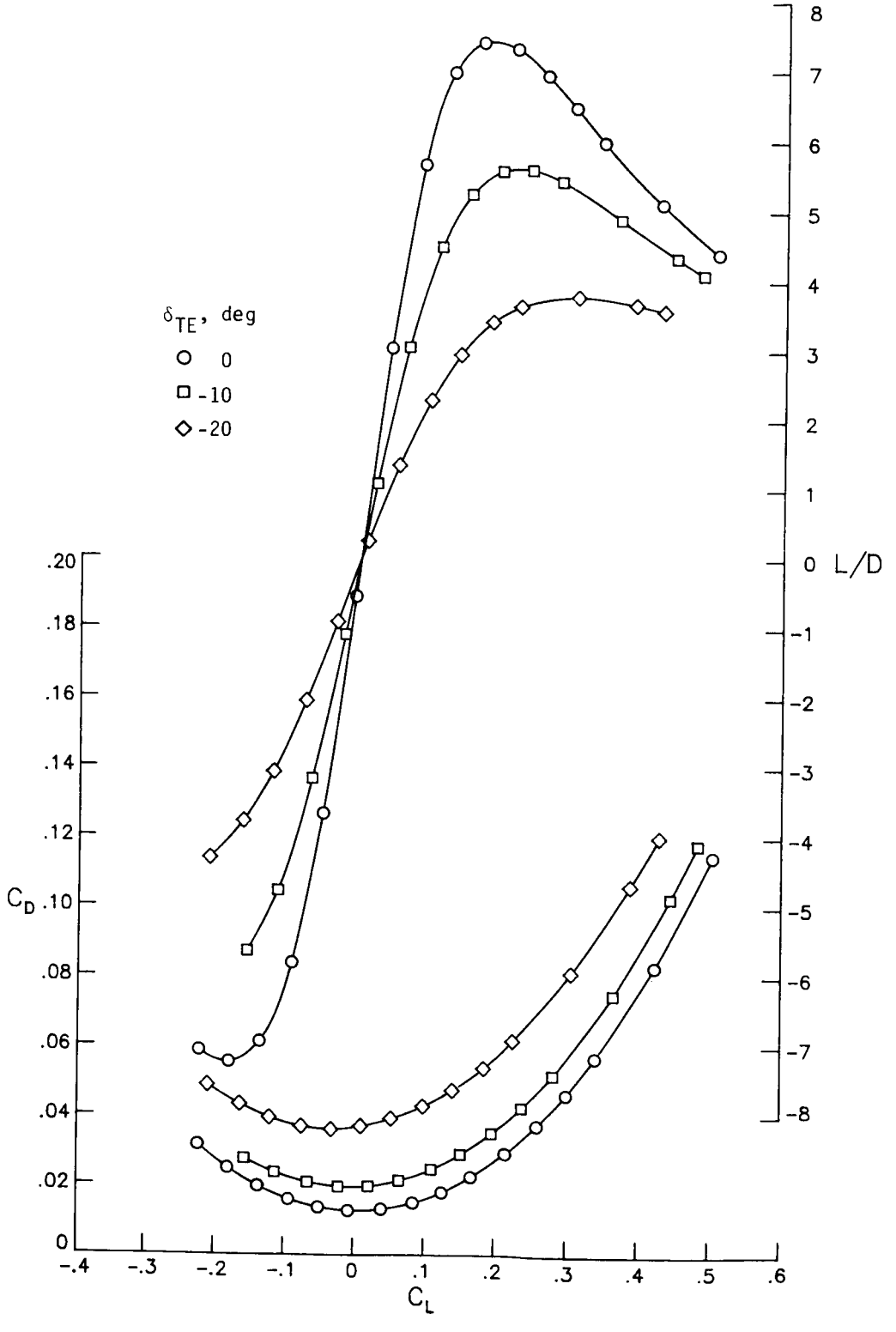

Figure 18. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 2.11 double-delta wing at $M = 1.60$.

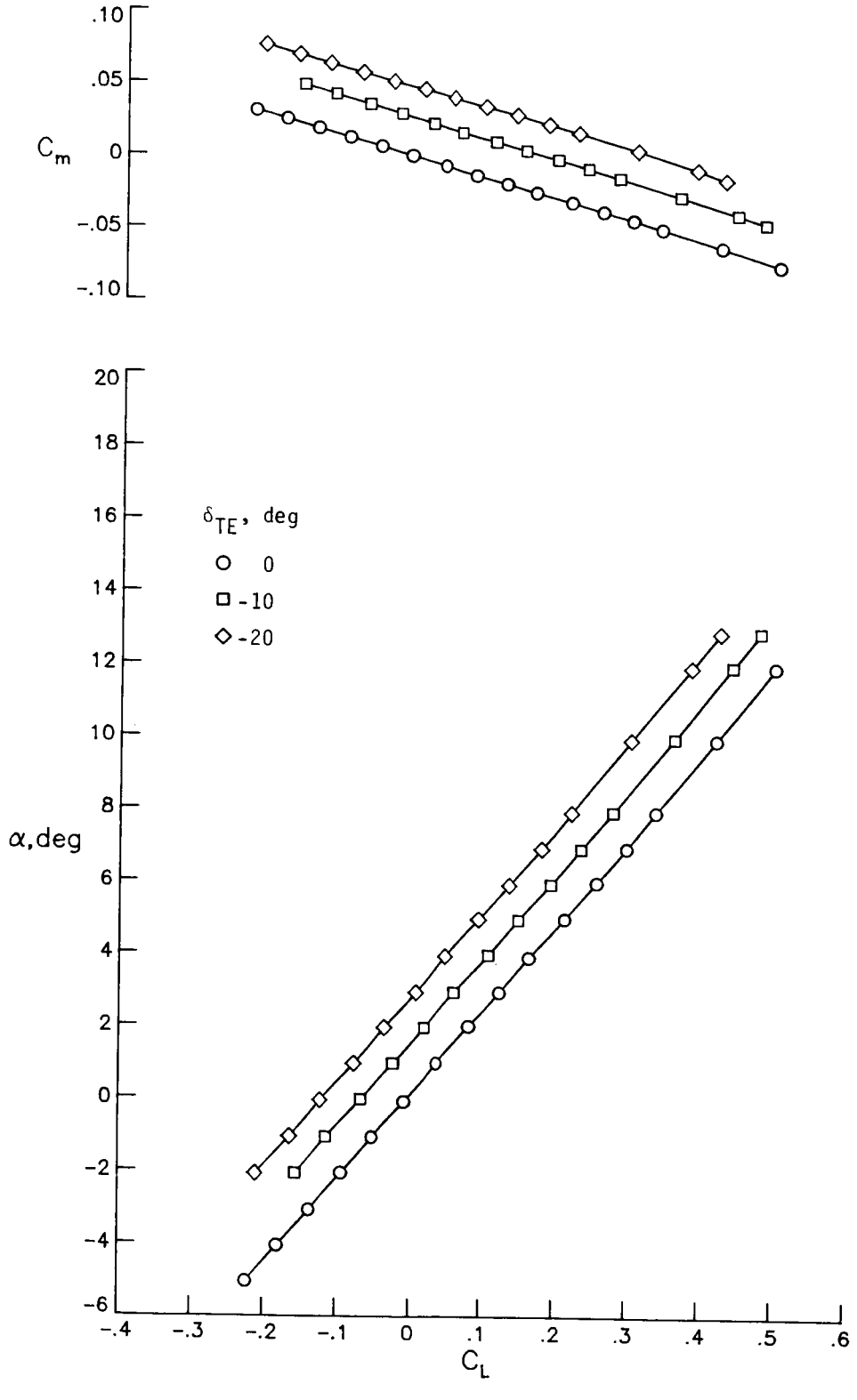

Figure 18. Concluded.

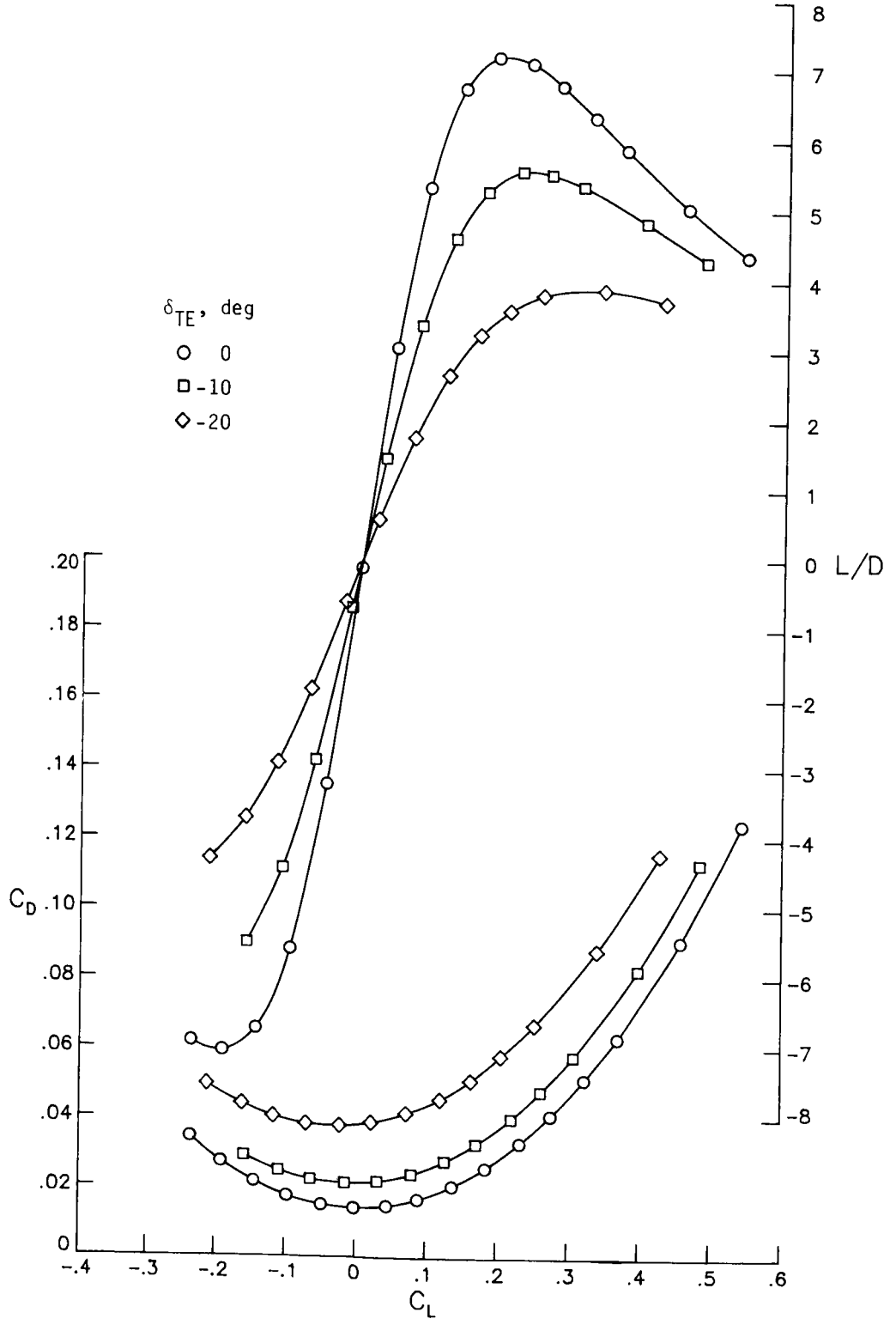

Figure 19. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 2.11 delta wing at $M = 1.60$.

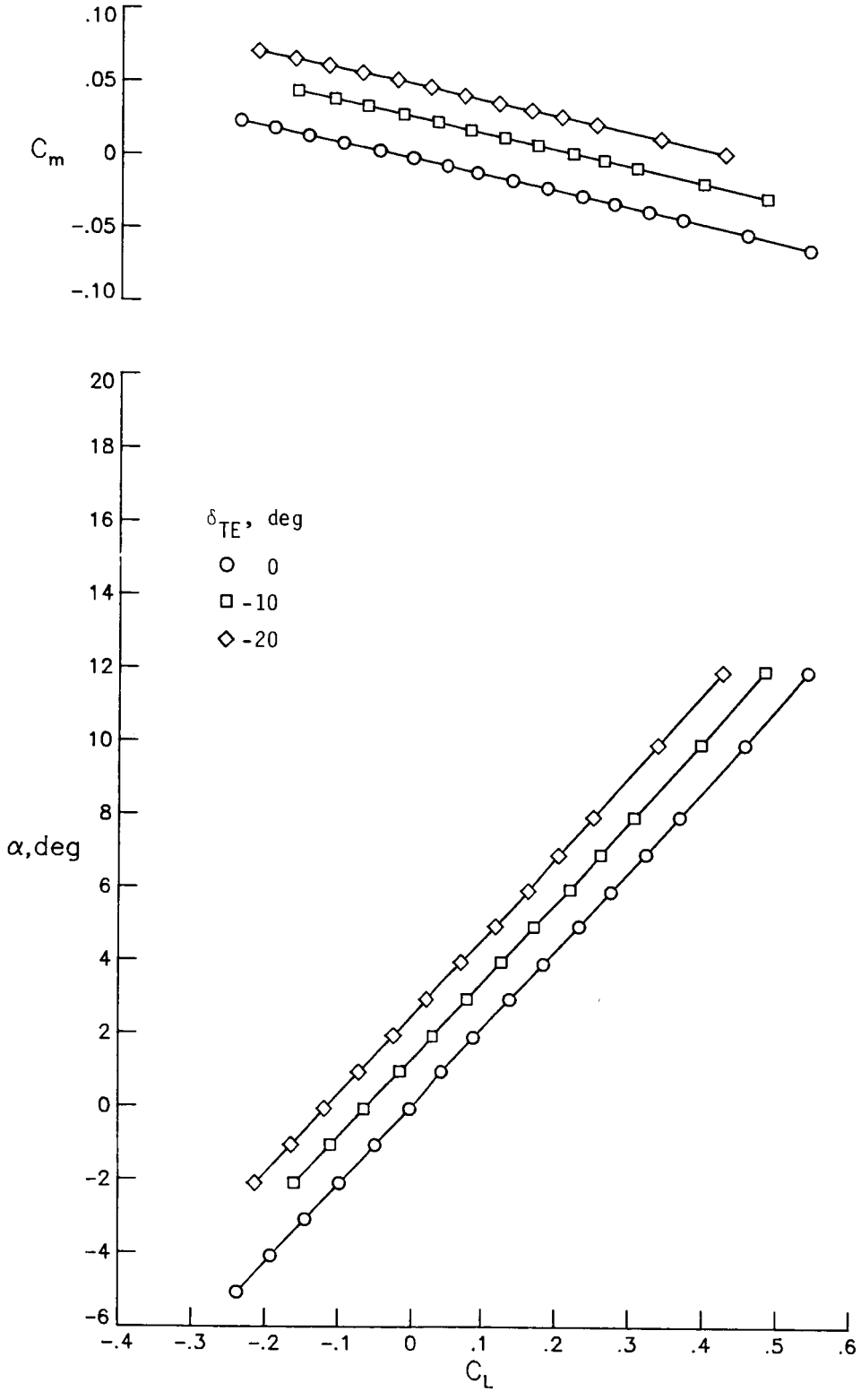

Figure 19. Concluded.

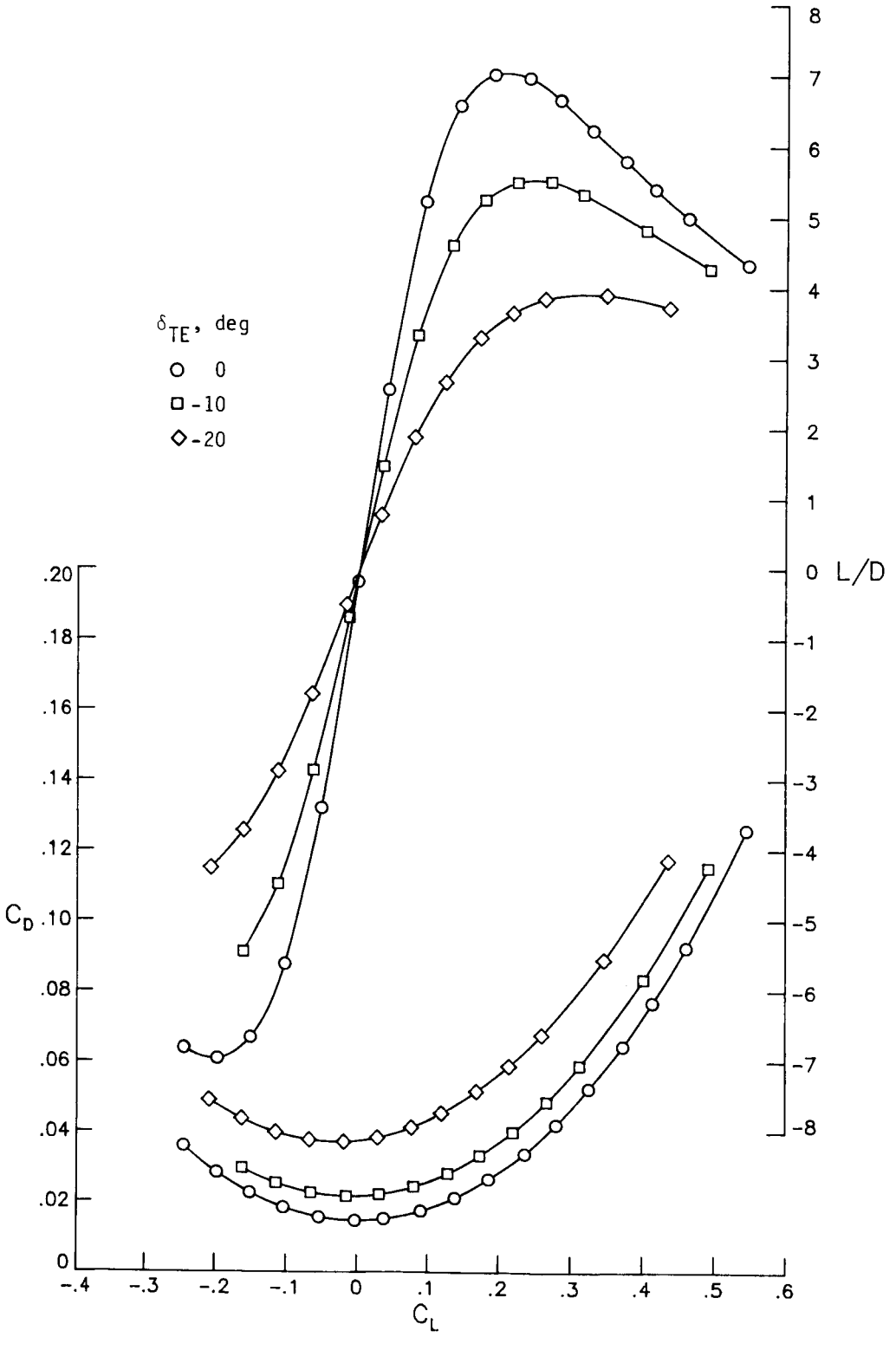

Figure 20. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 2.50 double-delta wing at $M = 1.60$.

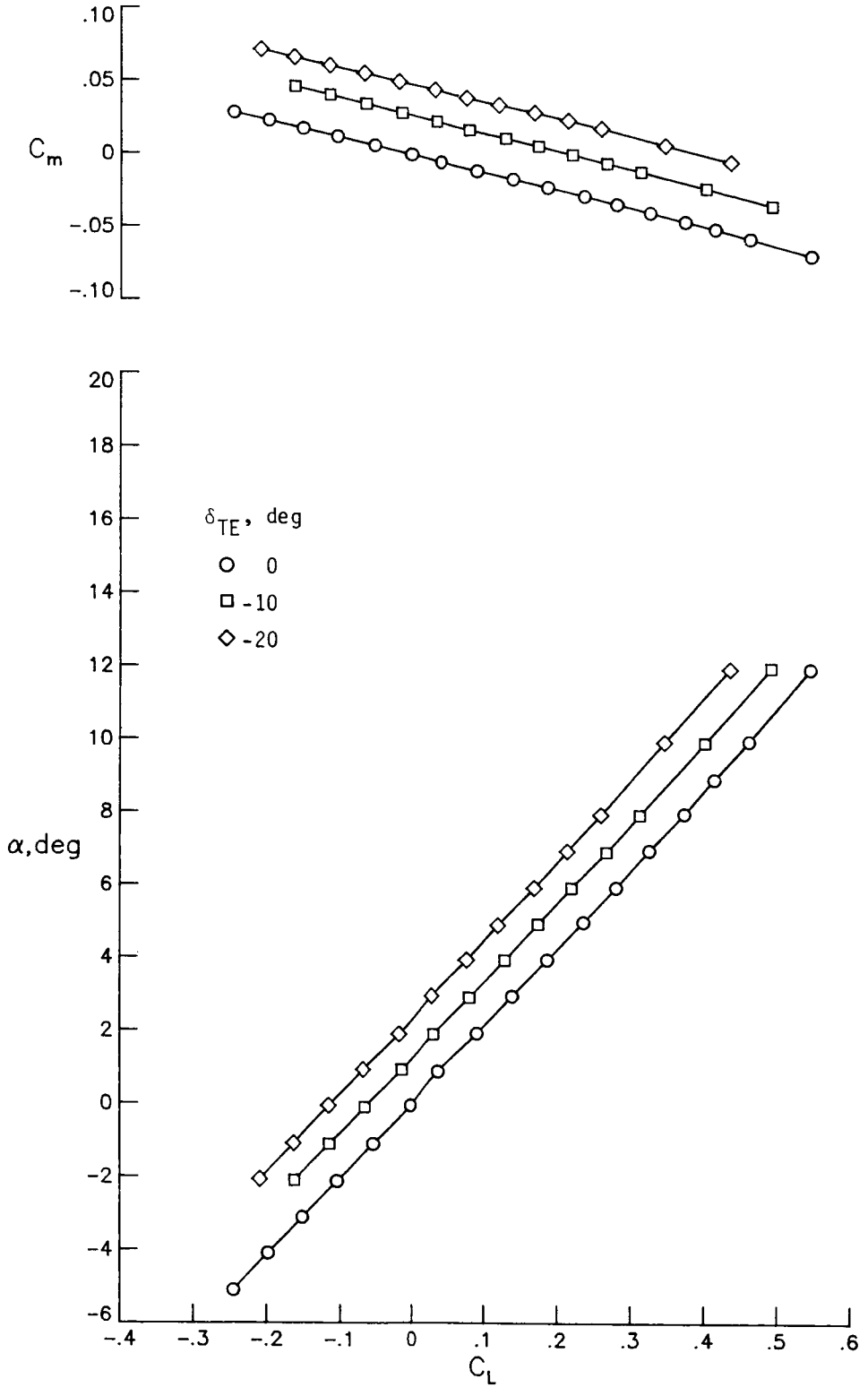

Figure 20. Concluded.

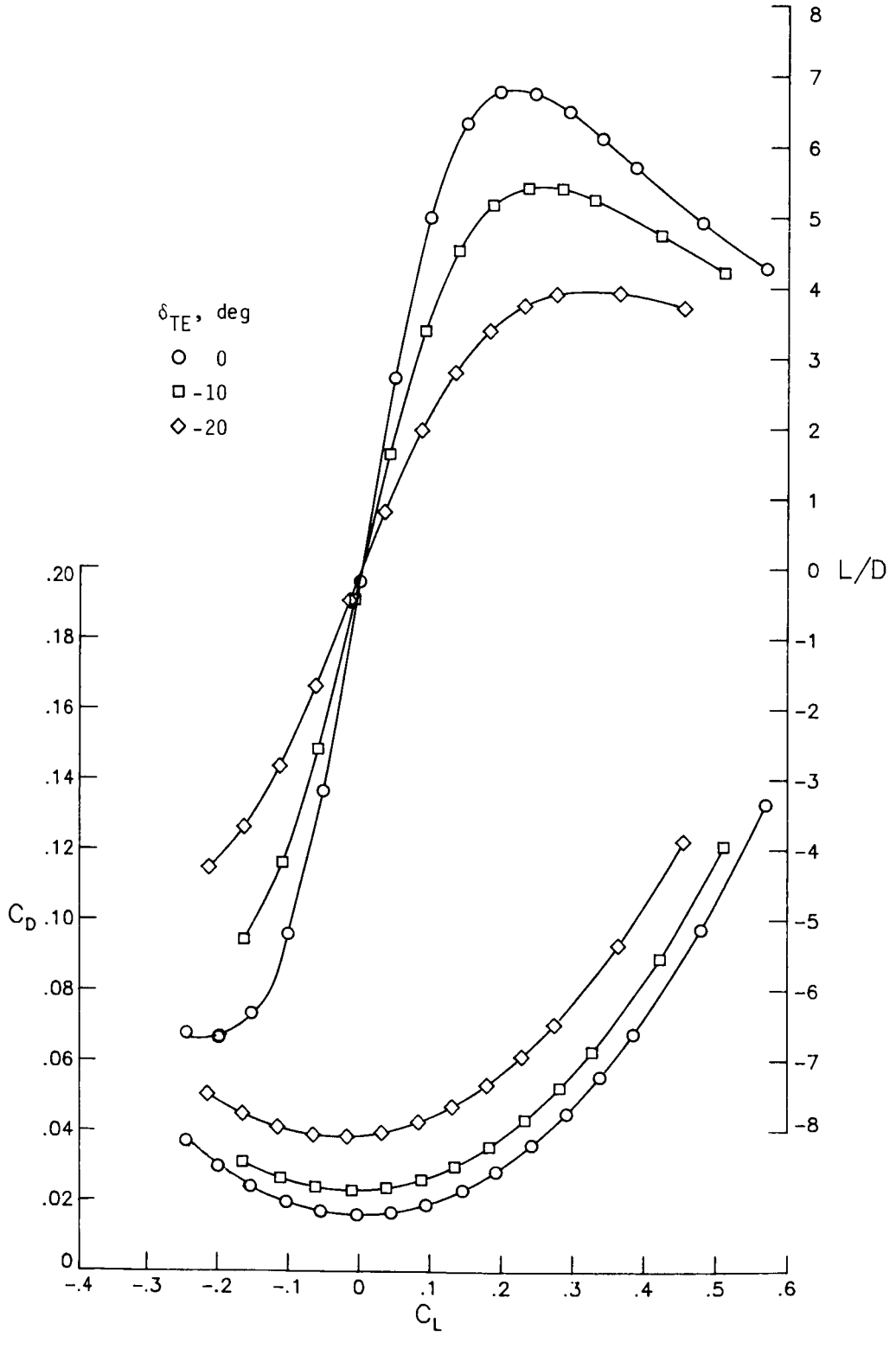

Figure 21. Effect of pitch-control deflections on longitudinal aerodynamic characteristics of AR = 2.50 delta wing at $M = 1.60$.

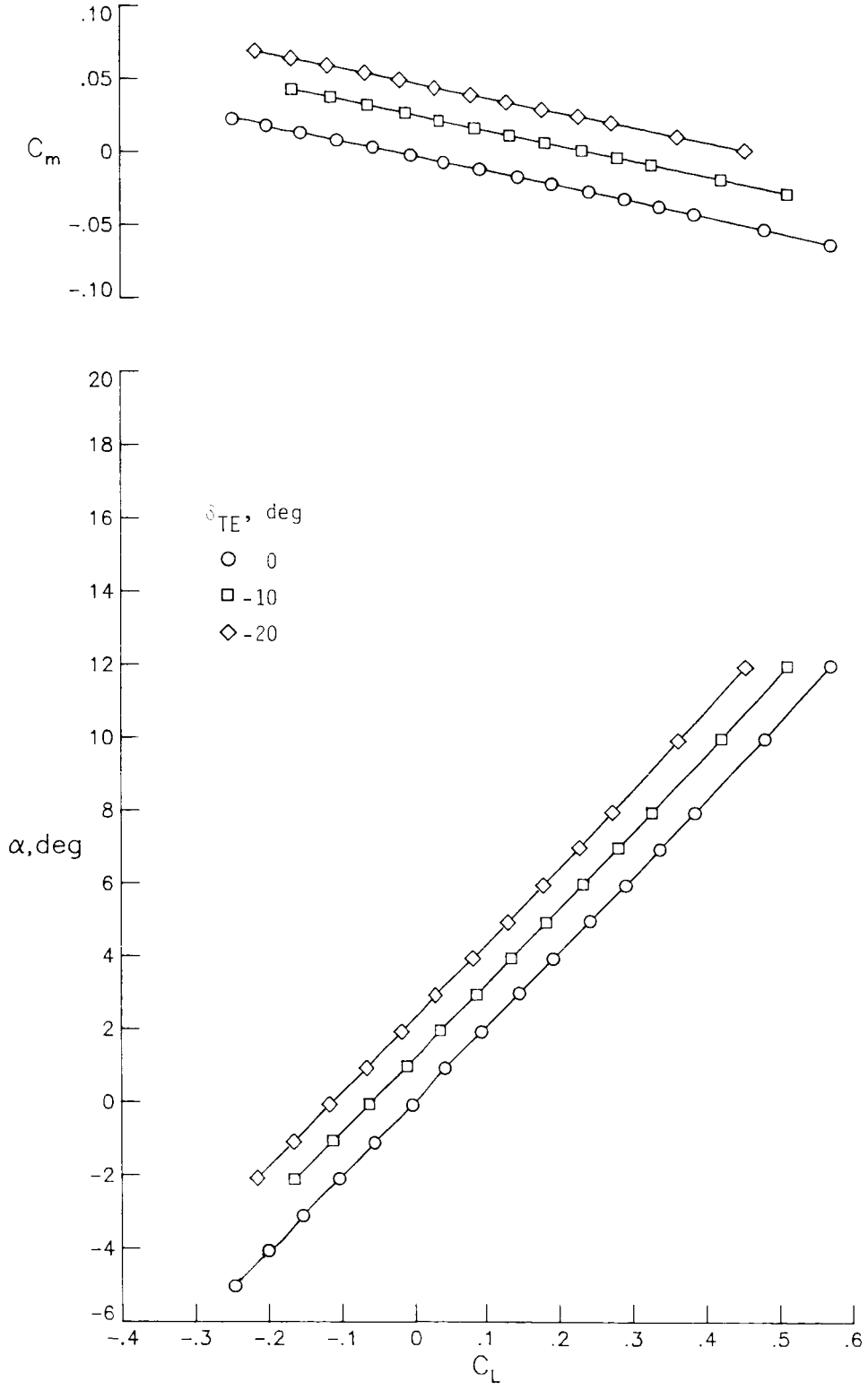

Figure 21. Concluded.

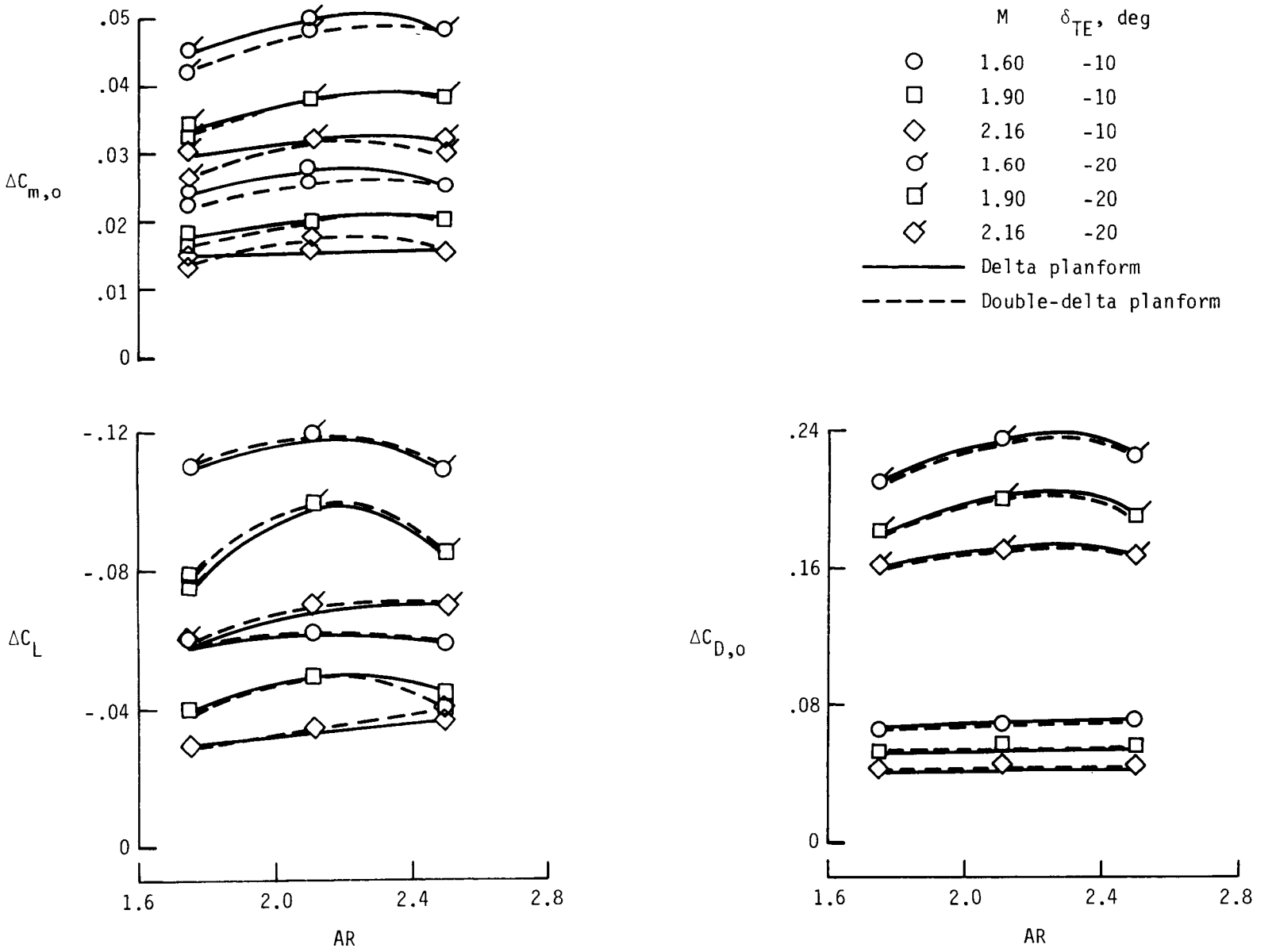

Figure 22. Effect of aspect ratio, wing planform, and Mach number on incremental aerodynamic characteristics due to trailing-edge flap deflection.

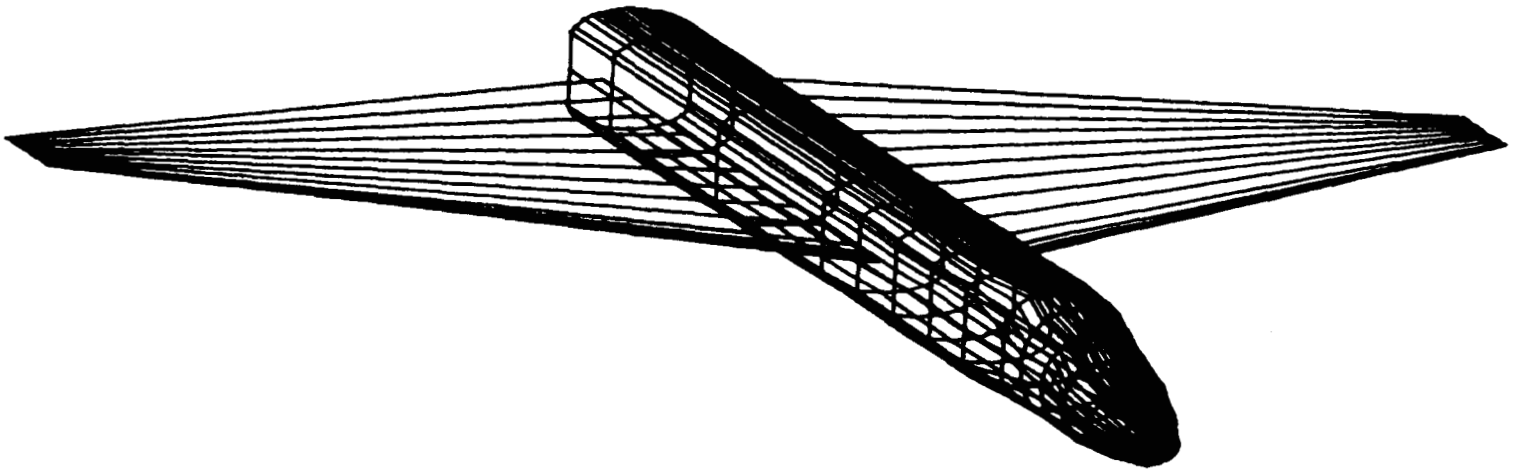

Figure 23. Analytic model of generic body with zero-thickness wing.

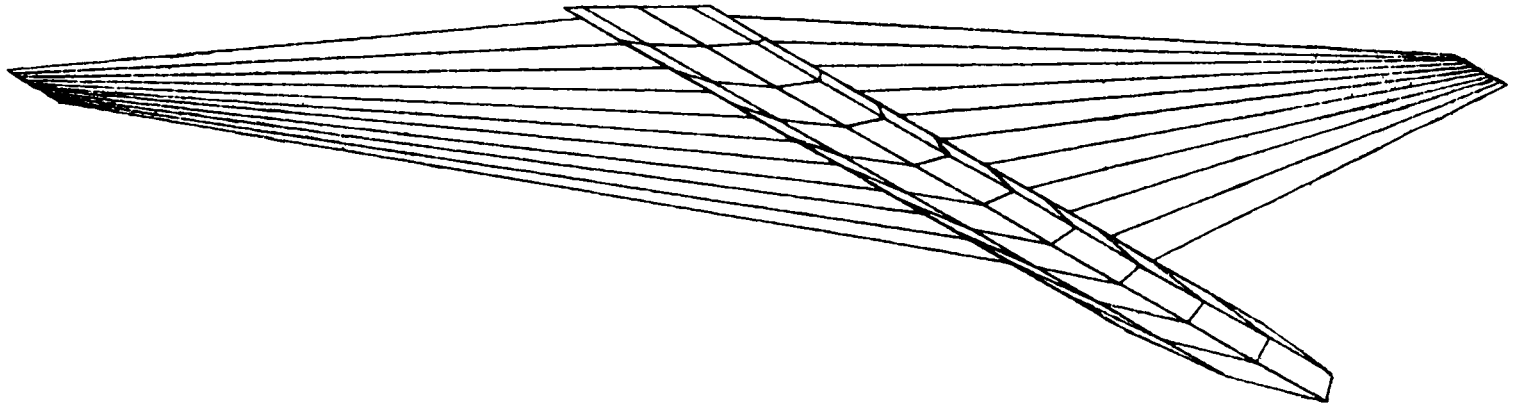

Figure 24. Analytic model of wing-body planform.

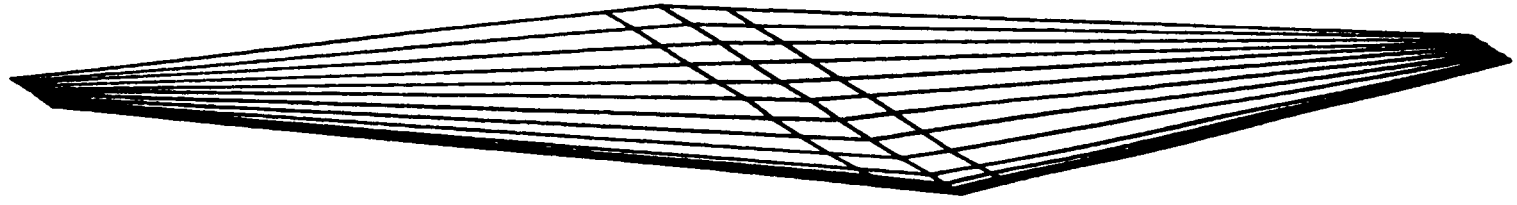

Figure 25. Analytic model of wing only.

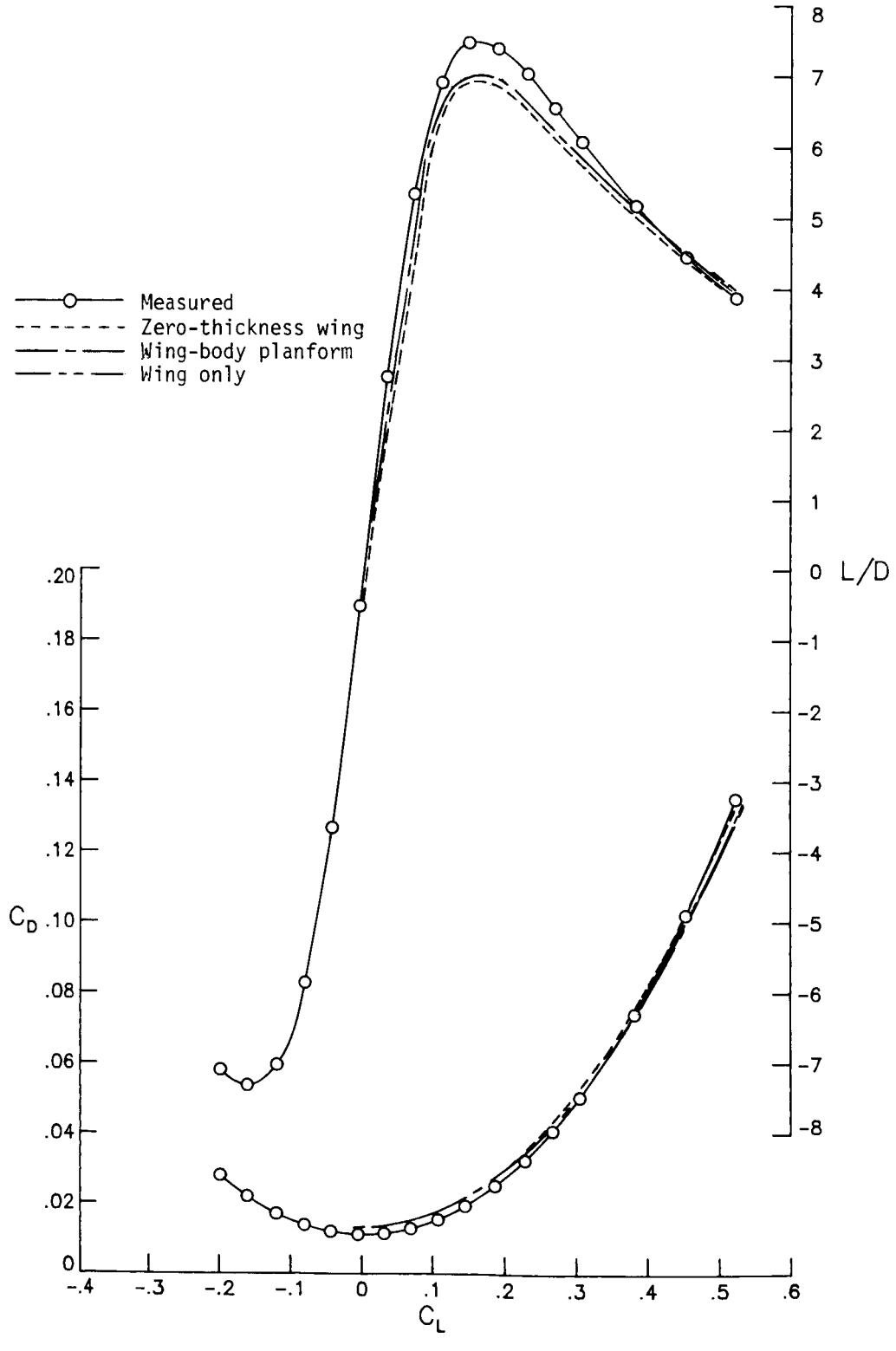

Figure 26. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 1.75 double-delta wing at $M = 1.60$.

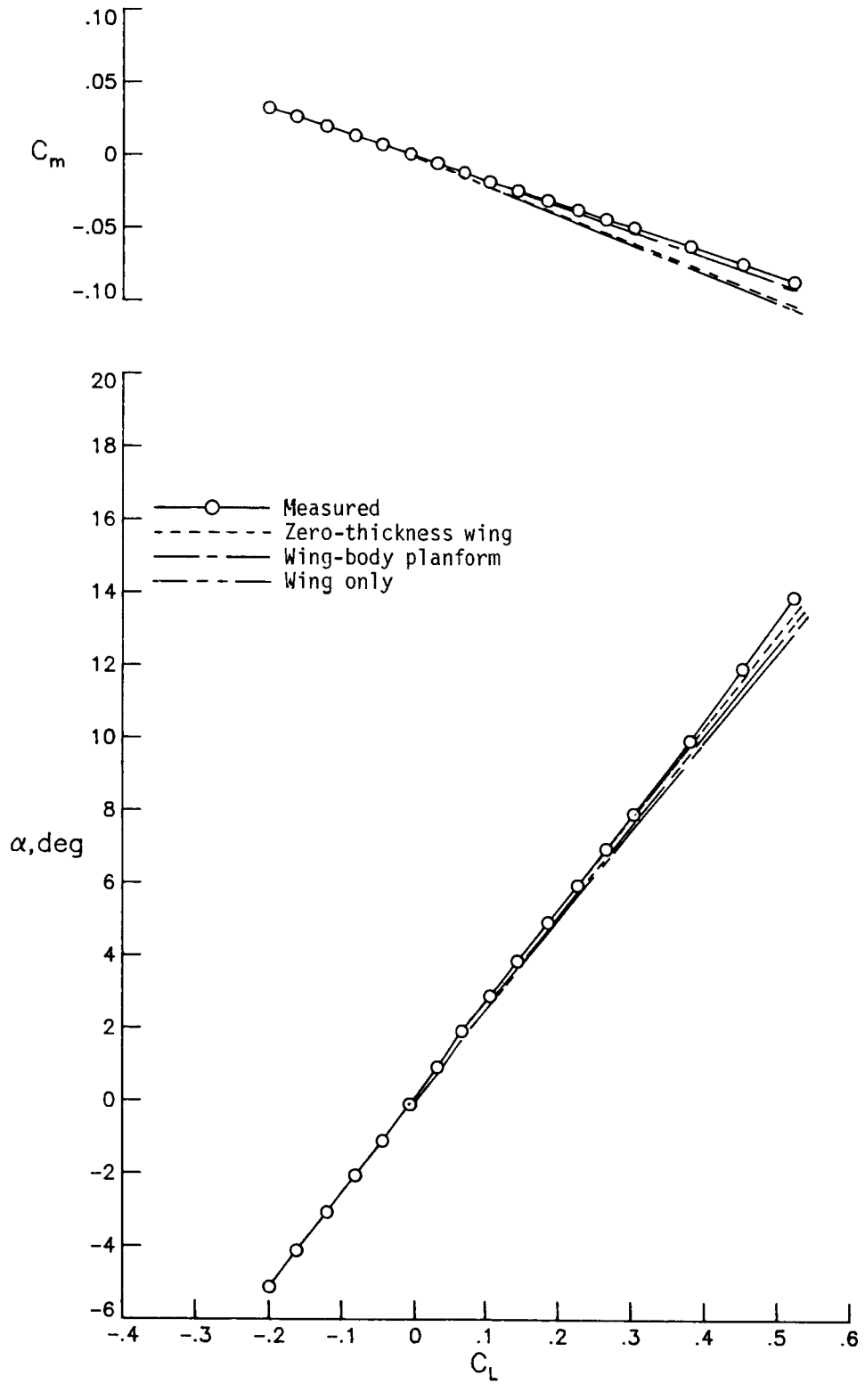

Figure 26. Concluded.

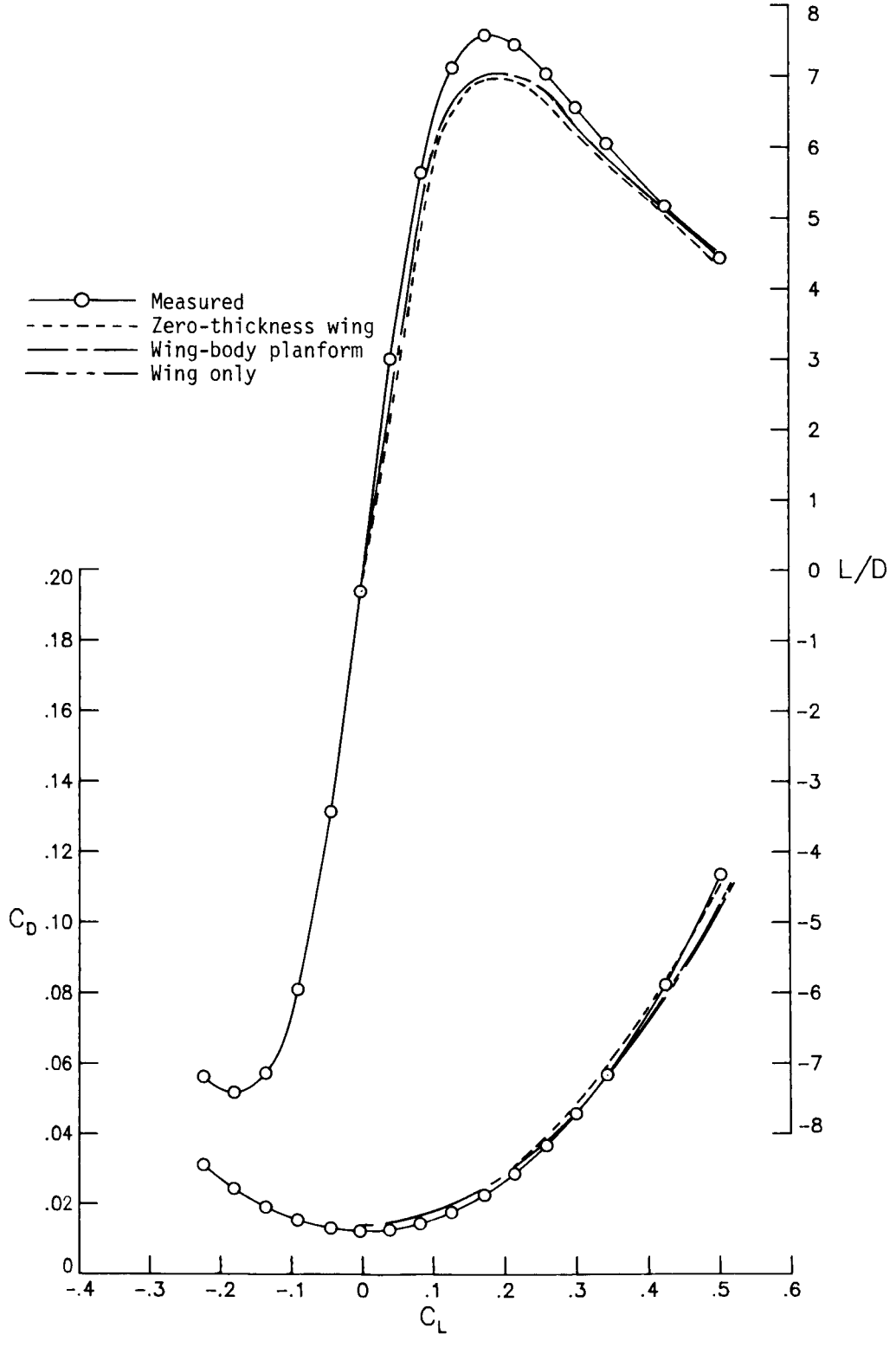

Figure 27. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 1.75 delta wing at $M = 1.60$.

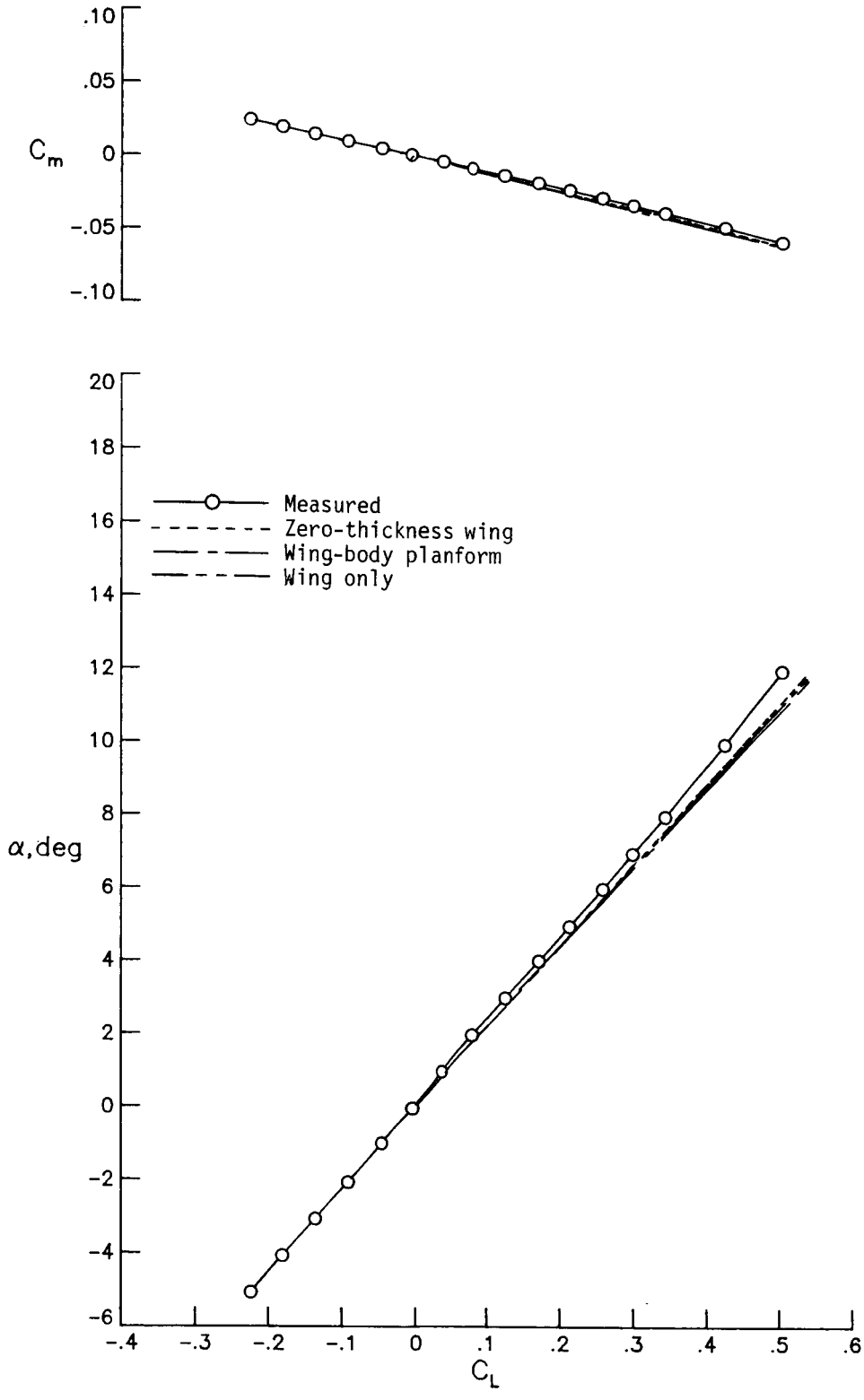

Figure 27. Concluded.

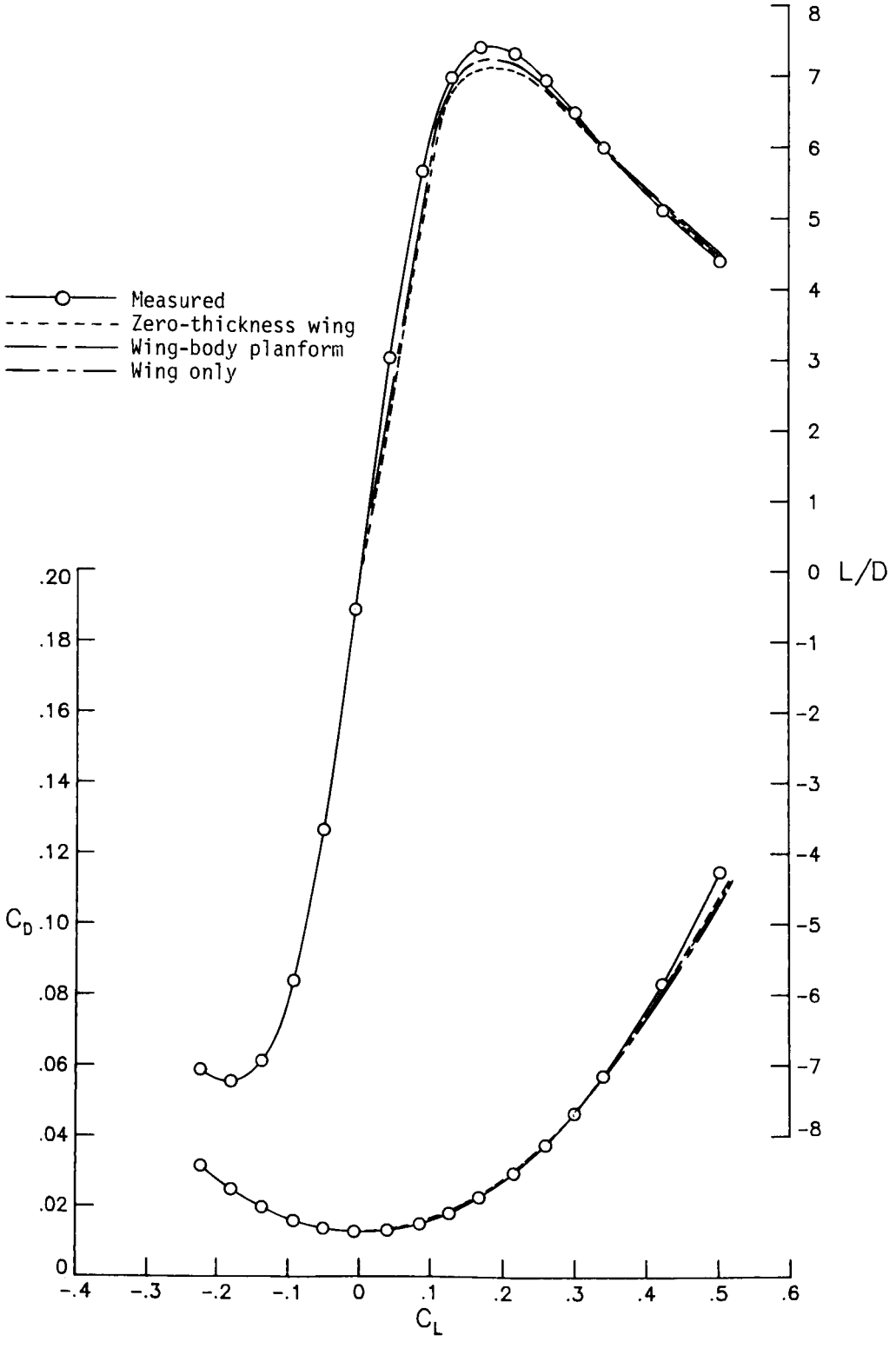

Figure 28. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 2.11 double-delta wing at $M = 1.60$.

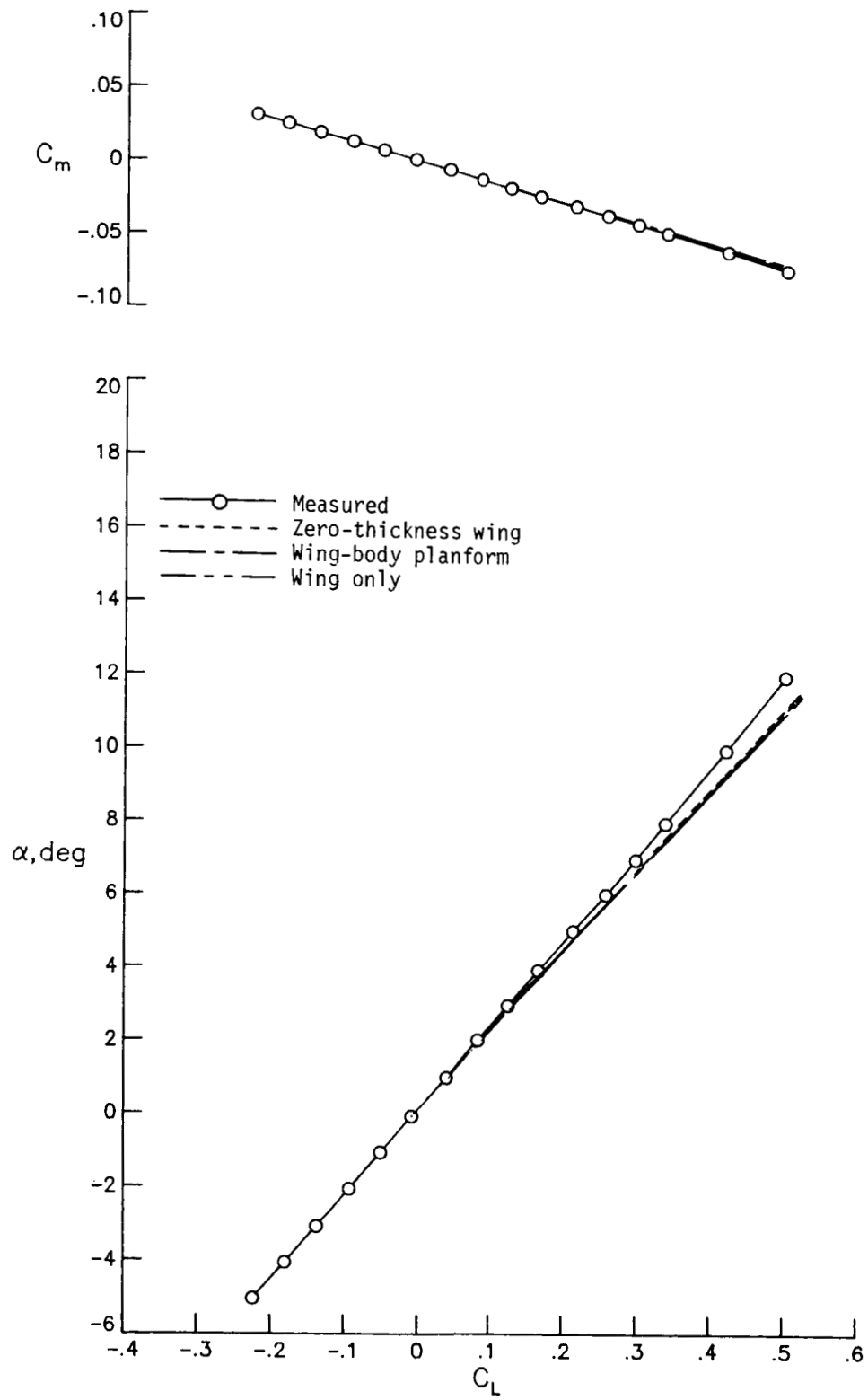

Figure 28. Concluded.

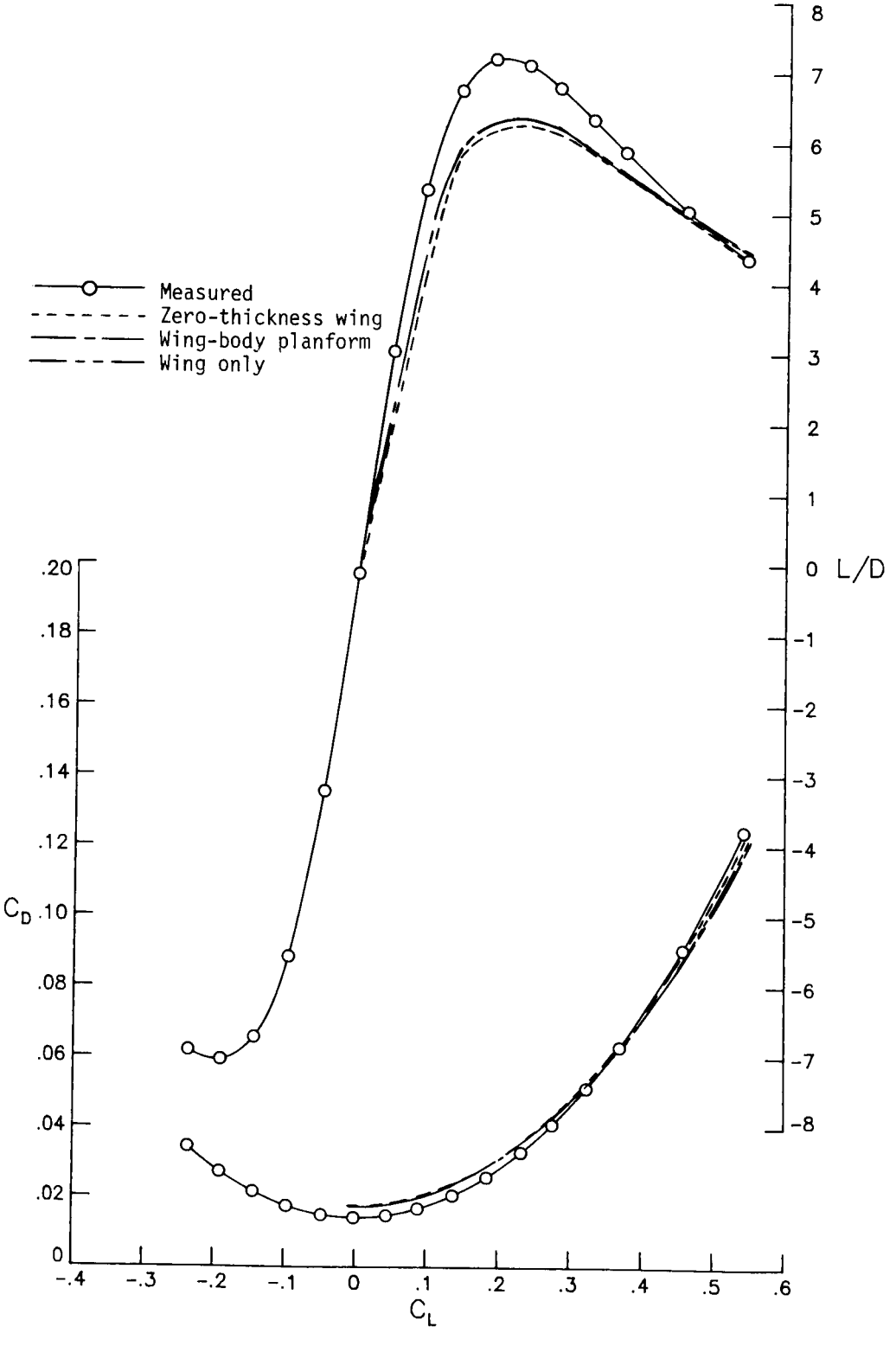

Figure 29. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 2.11 delta wing at $M = 1.60$.

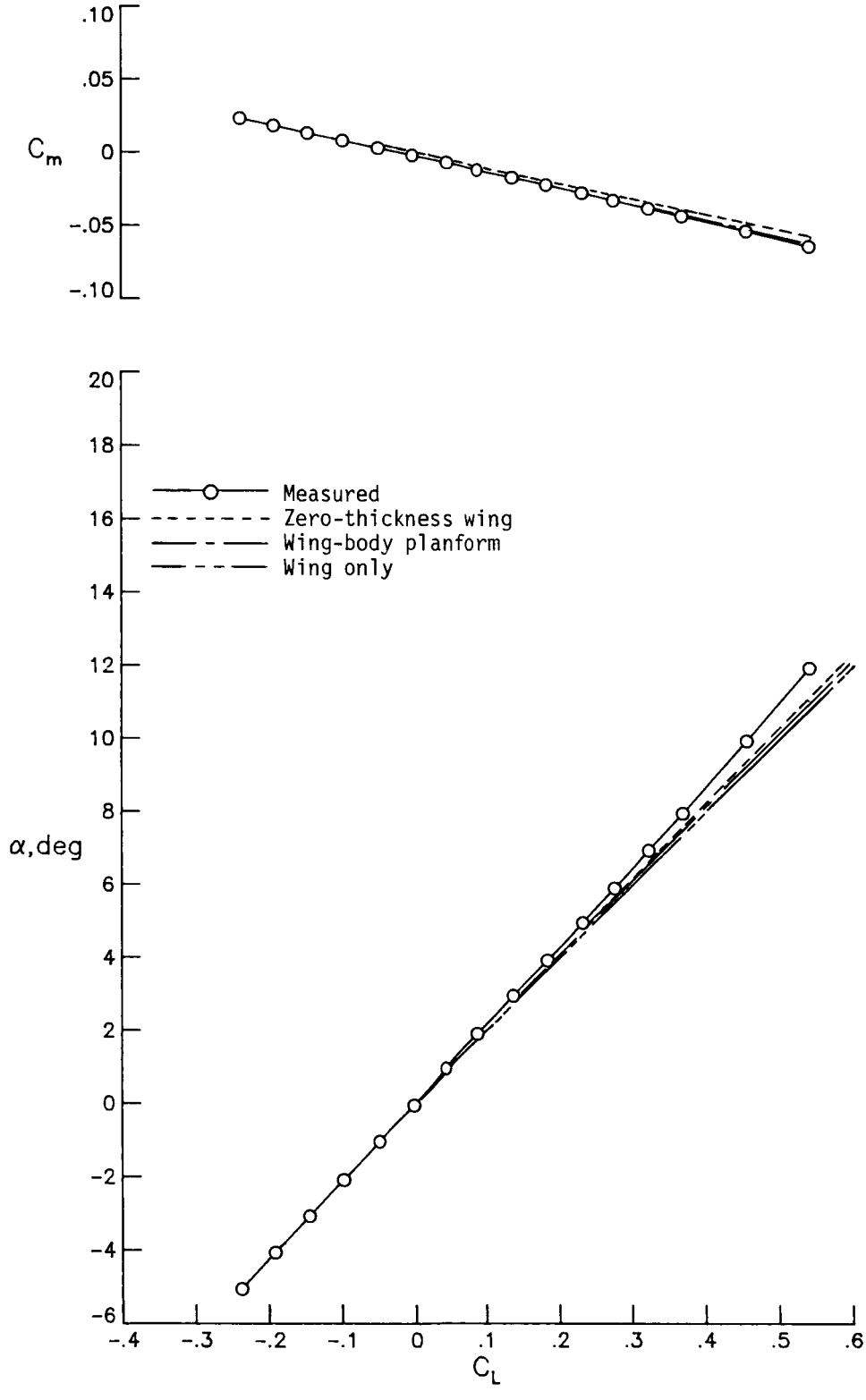

Figure 29. Concluded.

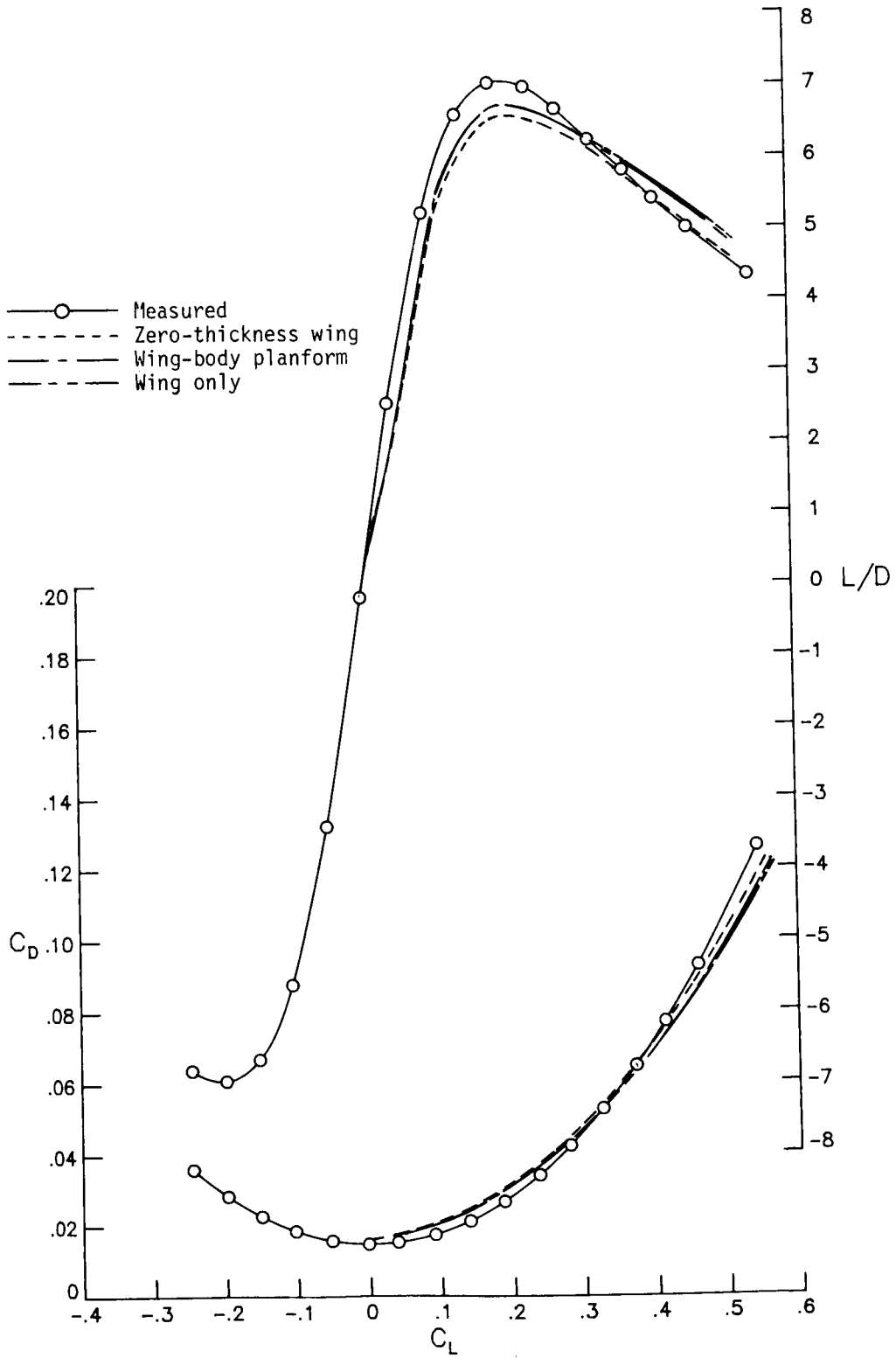

Figure 30. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 2.50 double-delta wing at $M = 1.60$.

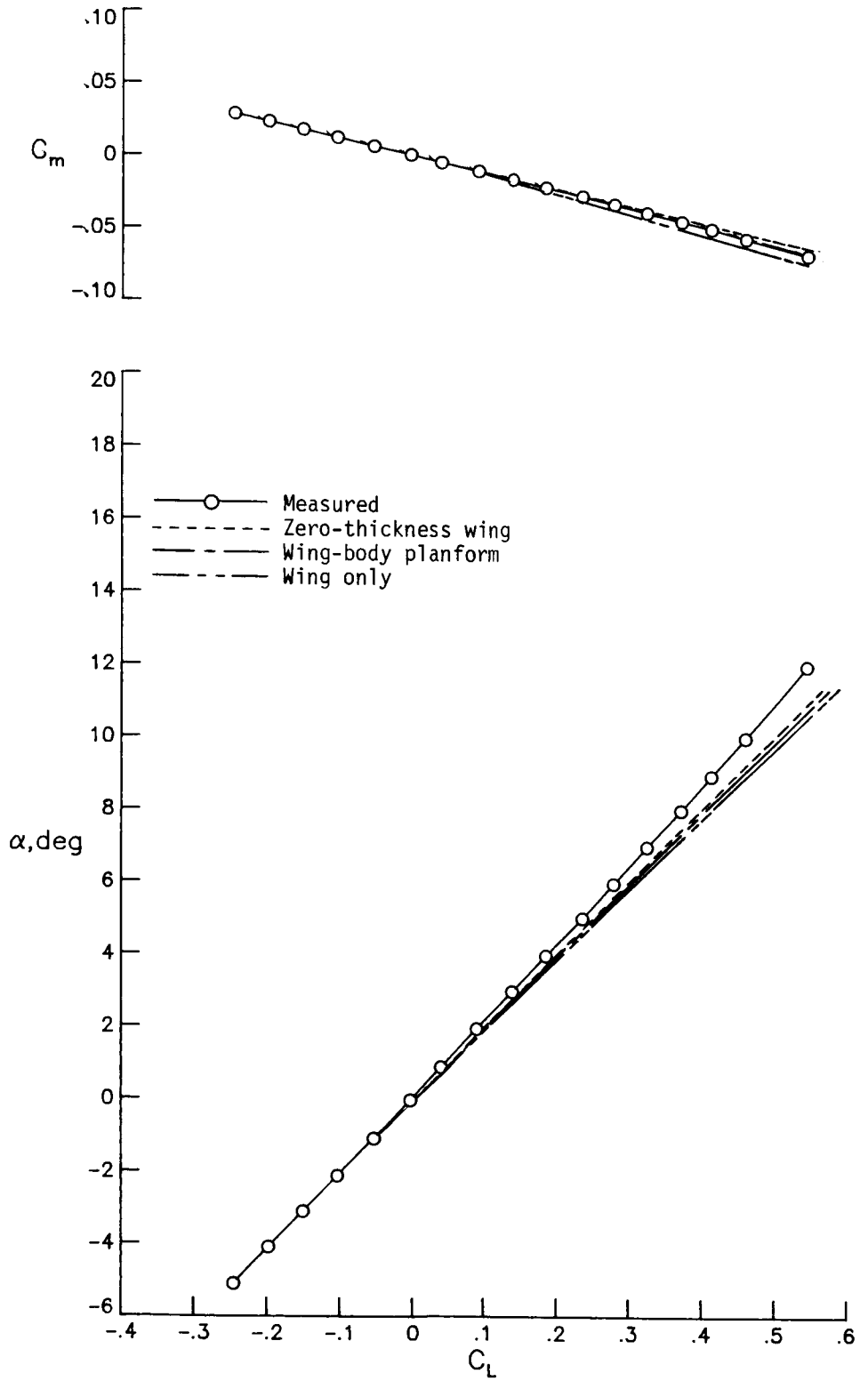

Figure 30. Concluded.

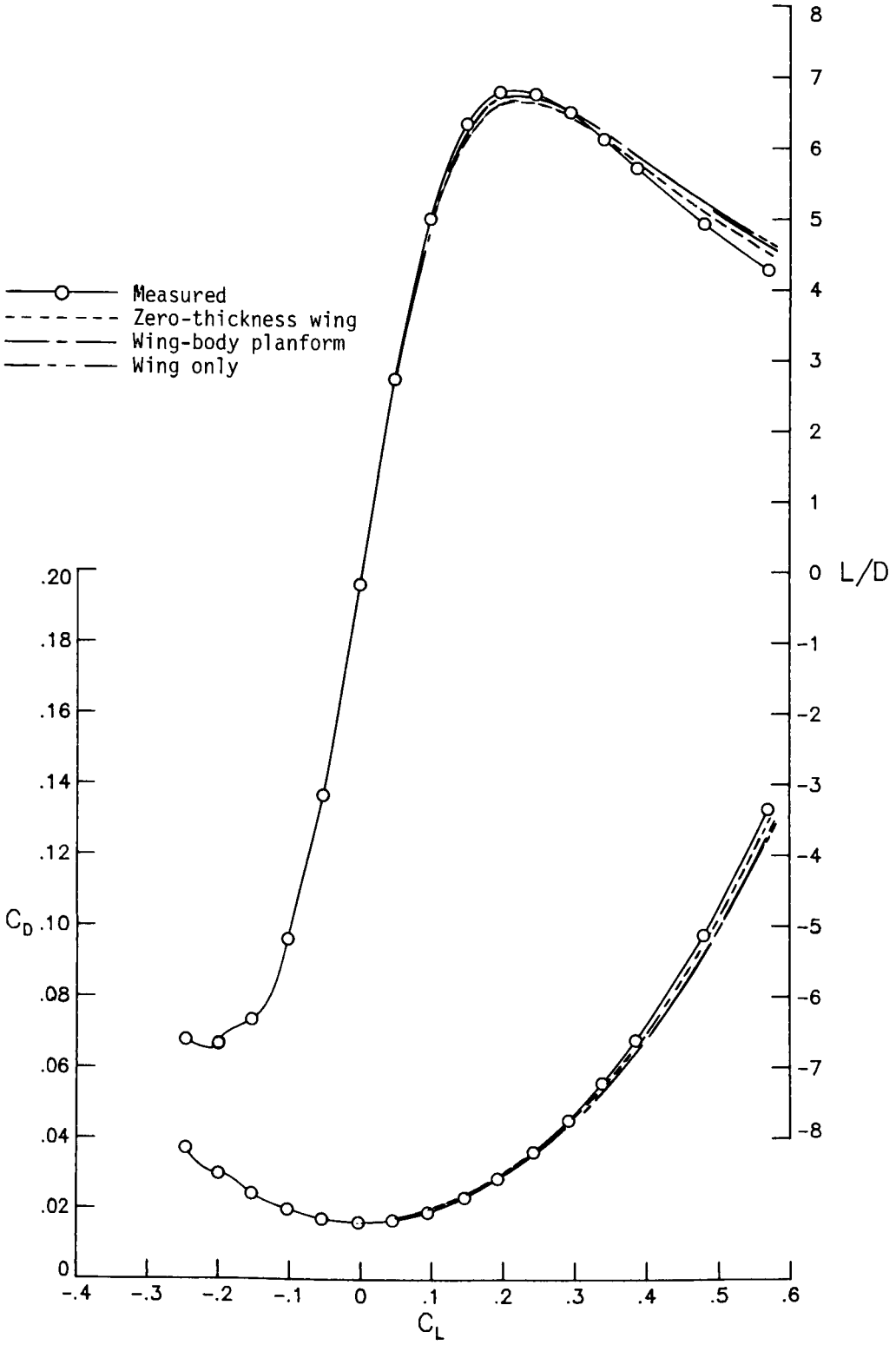

Figure 31. Effect of geometric modeling on predicted longitudinal aerodynamic characteristics of AR = 2.50 delta wing at $M = 1.60$.

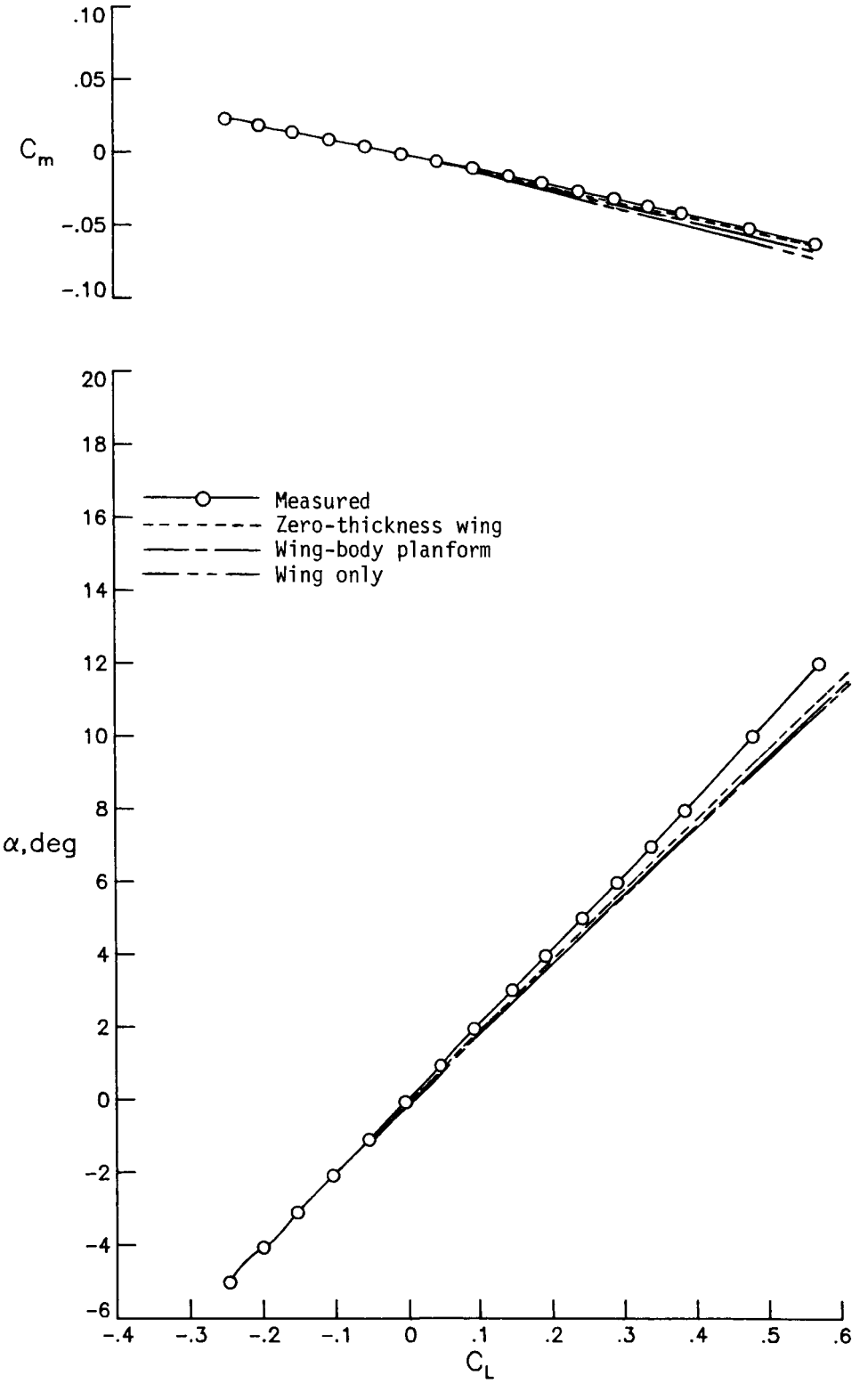

Figure 31. Concluded.

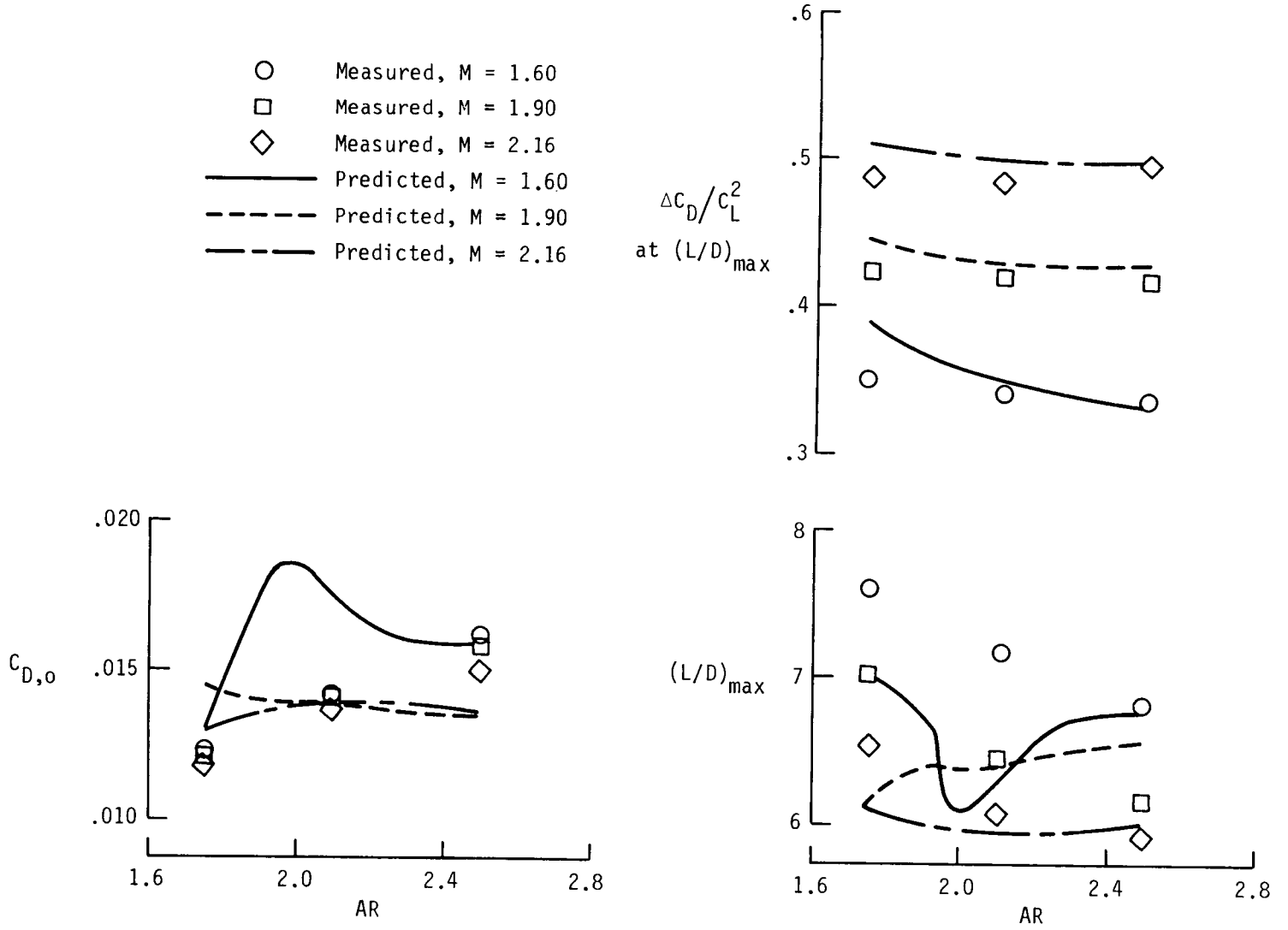

Figure 32. Effect of aspect ratio and Mach number on predicted and measured aerodynamic performance of delta wings.

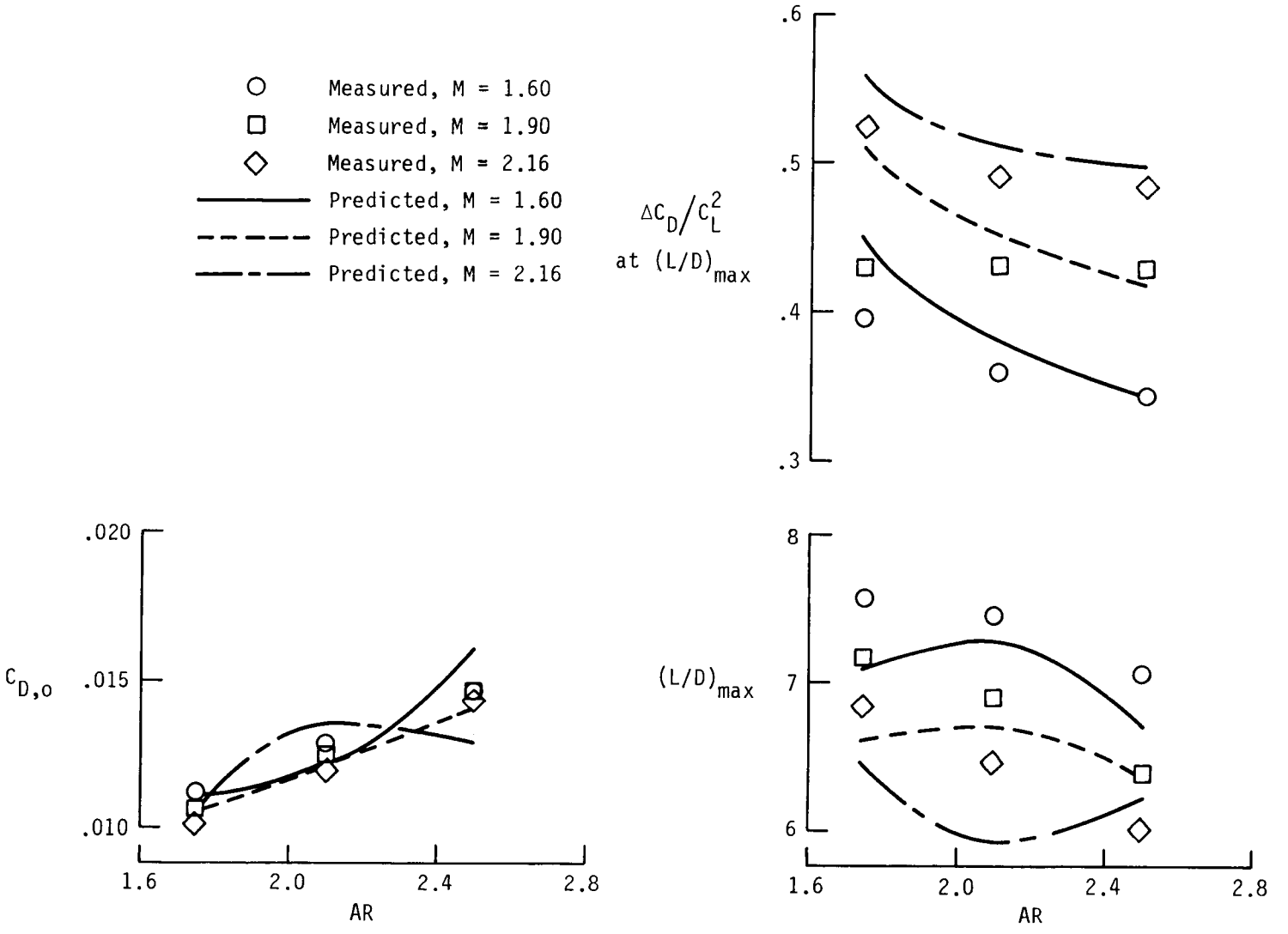

Figure 33. Effect of aspect ratio and Mach number on predicted and measured aerodynamic performance of double-delta wings.

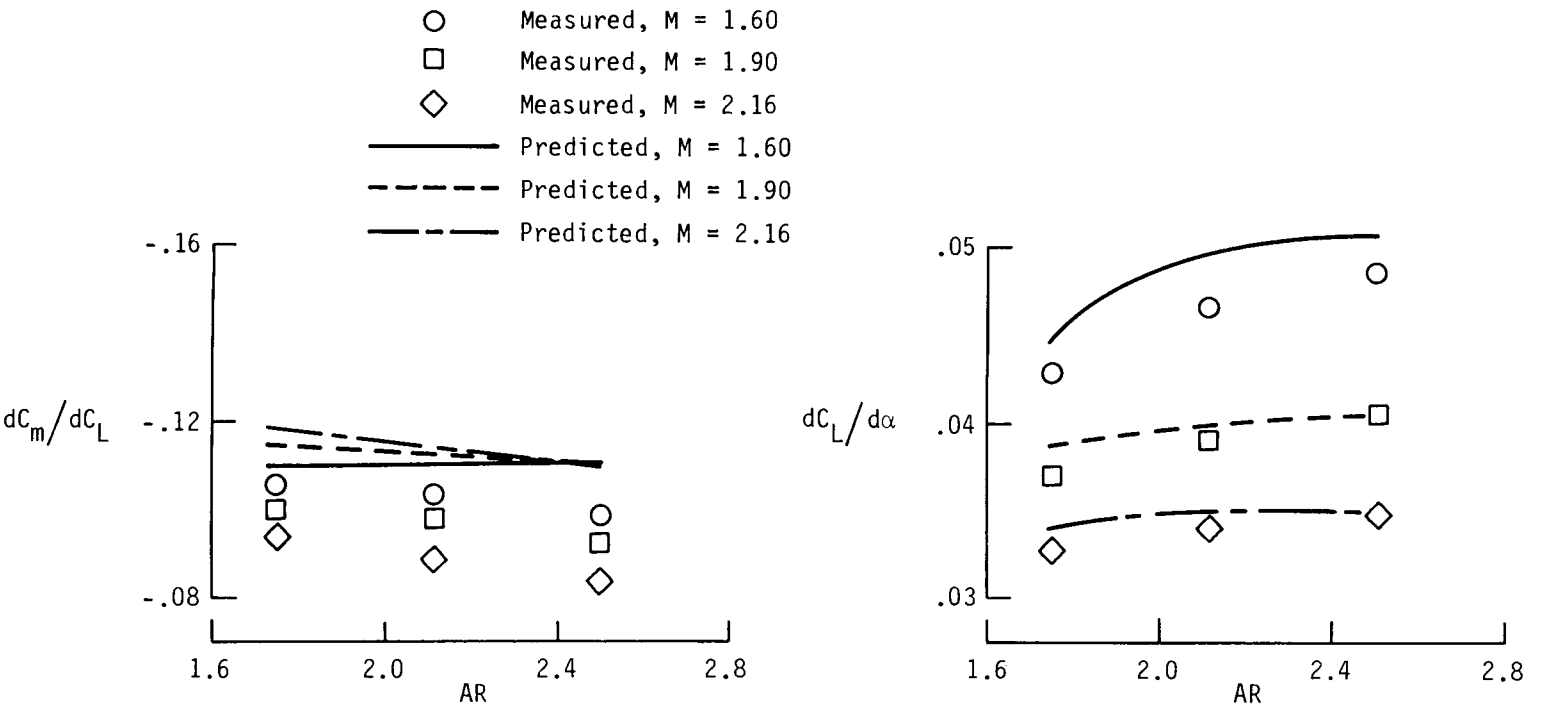

Figure 34. Effect of aspect ratio and Mach number on predicted and measured lift and pitching-moment characteristics of delta wings.

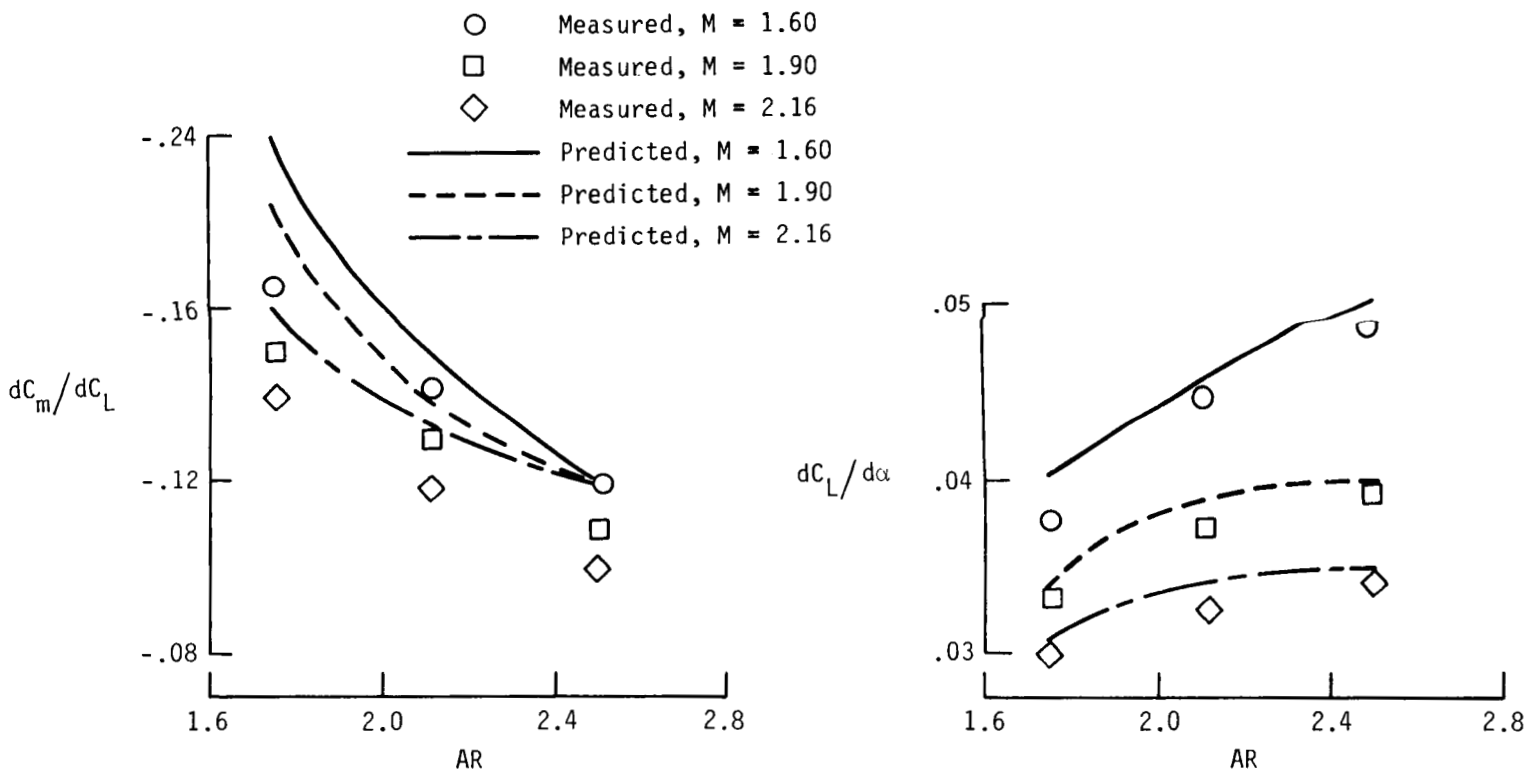

Figure 35. Effect of aspect ratio and Mach number on predicted and measured lift and pitching-moment characteristics of double-delta wings.

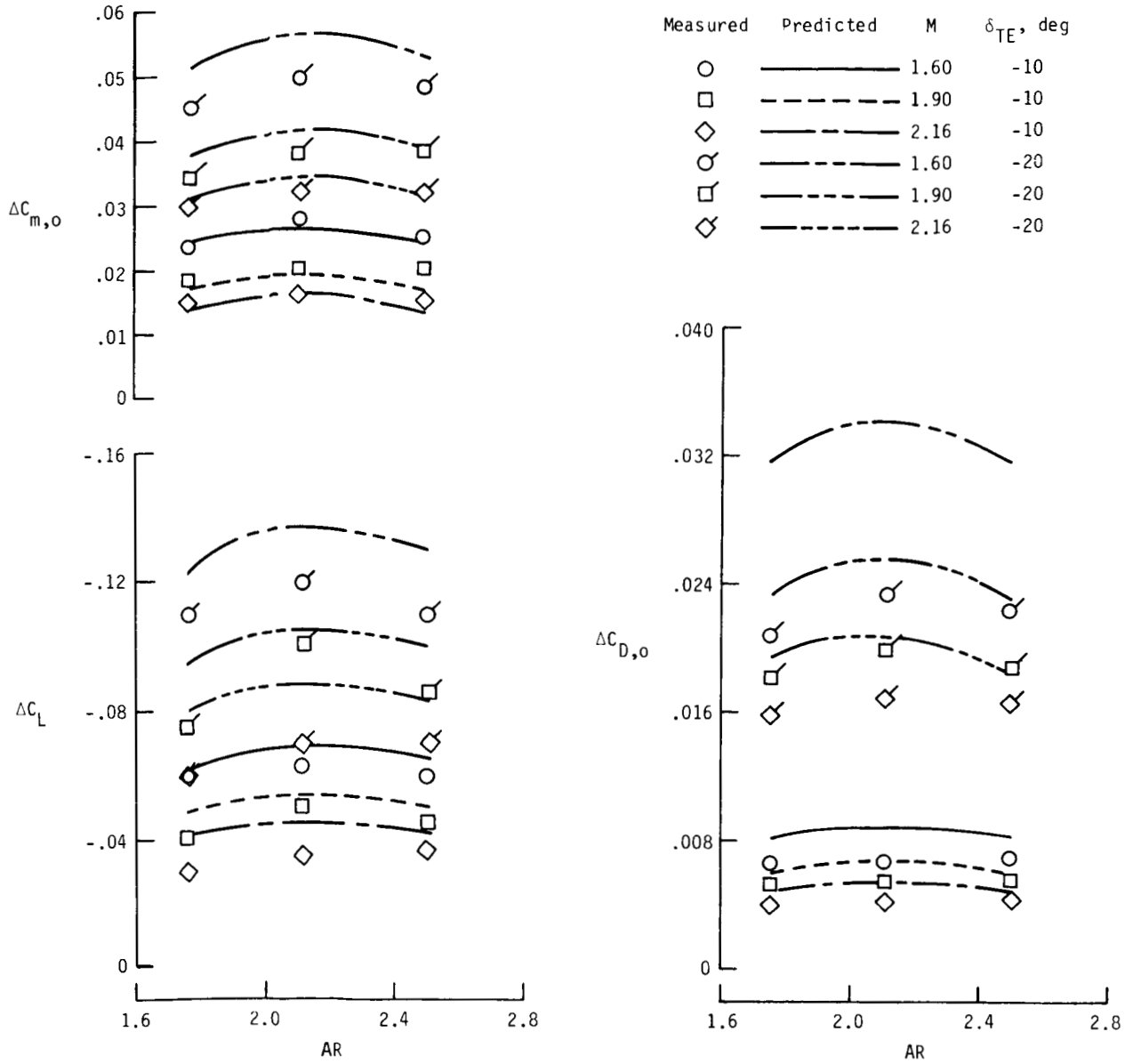

Figure 36. Effect of aspect ratio and Mach number on predicted and measured incremental aerodynamics of delta wings due to trailing-edge flap deflections.

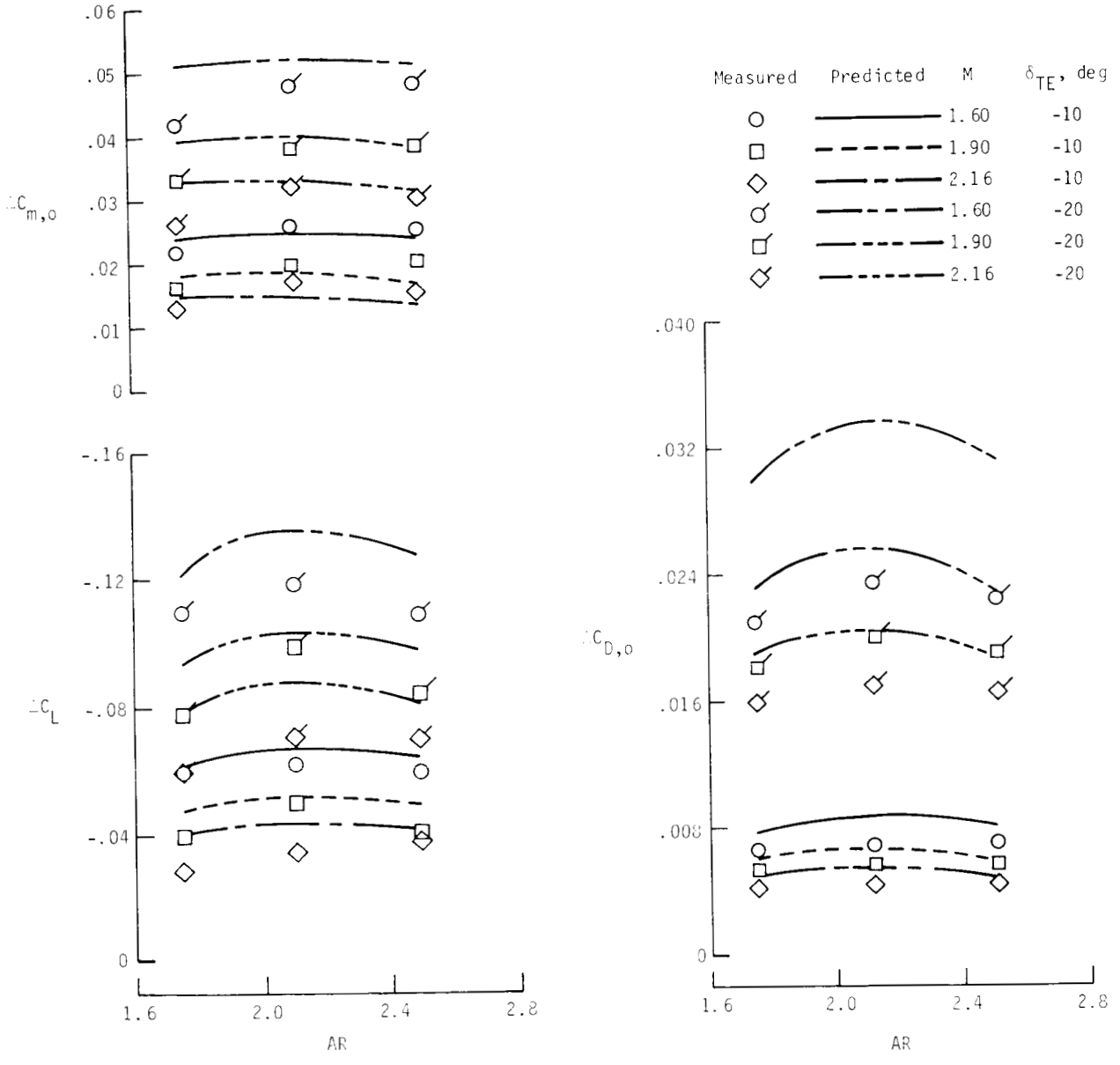

Figure 37. Effect of aspect ratio and Mach number on predicted and measured incremental aerodynamics of double-delta wings due to trailing-edge flap deflections.

Appendix

Test Description

The wind-tunnel test program was conducted in test section 1 of the Langley Unitary Plan Wind Tunnel (ref. 1) at Mach numbers of 1.60, 1.90, and 2.16. The tests were conducted under the following conditions:

Mach number	Stagnation pressure, lb/ft^2	Stagnation temperature, °F	Reynolds number, per foot
1.60	1079	125	2×10^6
1.90	1201	125	2×10^6
2.16	1349	125	2×10^6

The dew point was maintained sufficiently low to prevent condensation effects in the tunnel. Strips of No. 60 sand grit were applied aft of the leading edge of all wings as shown in the sketches of figure A1 and 1.2 in. aft of the fuselage nose to induce boundary-layer transition. The grit size and locations were selected according to the method of reference 8 to ensure fully turbulent flow over the model. Forces and moments on the model were measured by means of a six-component electrical strain-gauge balance, which was contained within the model and connected through a supporting sting to the permanent model actuating system in the wind tunnel.

Balance chamber pressure was measured throughout the test with a pressure transducer mounted external to the model and connected to pressure tubing located in the balance cavity. Force and moment data were corrected to free-stream static pressure at the balance chamber. All angles of attack have been adjusted for tunnel flow misalignment and sting deflections.

Table AI contains a listing of the symbols corresponding to the headings which appear in the tabulated data. Table AII is an index to the tabulated data, which are presented in table AIII.

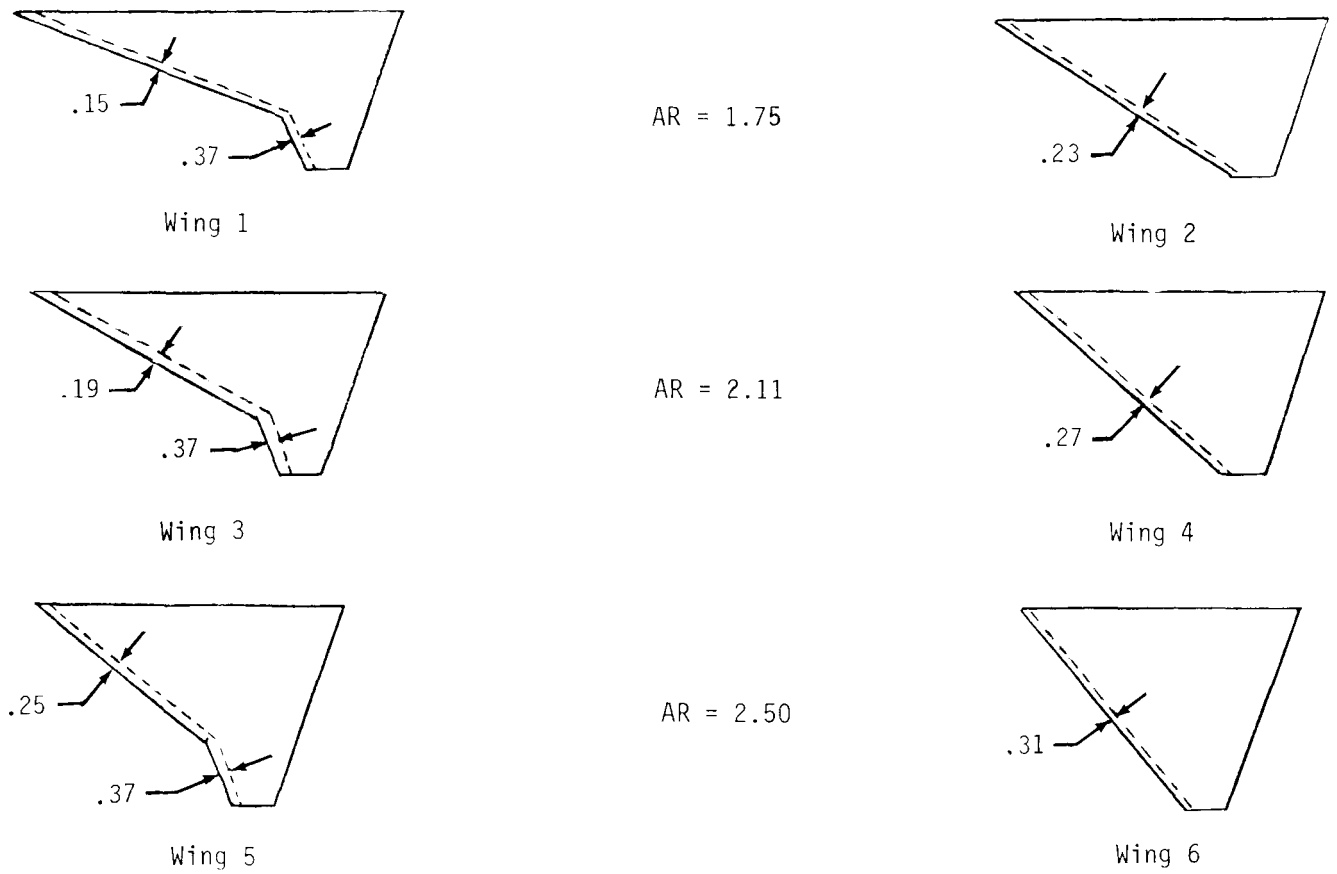

Figure A1. Location of wing leading-edge transition grit. All linear dimensions are in inches.

TABLE AI. TABULATED DATA SYMBOLS

Tabulated data heading	Definition
Both axes:	
ALPHA	α
BETA	β
CM	C_m
CY	C_Y
MACH	M
Body axis:	
CL	C_A
CAC	$C_{A,c}$
CA UNC	$C_{A,\mathrm{unc}}$
CLB	C_l
CN	C_N
CNB	C_n
R/FT	$R \times 10^{-6}$
Stability axis:	
CD	C_D
CDC	$C_{D,c}$
CD UNC	$C_{D,\mathrm{unc}}$
CL	C_L
CLS	C_l
CNS	C_n
L/D	L/D

TABLE AII. INDEX TO TABULATED DATA

Page	Run	Configuration	δ_{TE}, deg	Mach number
65	149	Wing 1	0	1.60
66	152		0	1.90
67	153		0	2.16
68	155		−10	1.60
69	156		−10	1.90
70	157		−10	2.16
71	158		−20	1.60
72	159		−20	1.90
73	160		−20	2.16
74	94	Wing 2	0	1.60
75	98		0	1.90
76	101		0	2.16
77	102		−10	1.60
78	103		−10	1.90
79	104		−10	2.16
80	105		−20	1.60
81	106		−20	1.90
82	107		−20	2.16
83	51	Wing 3	0	1.60
84	54		0	1.90
85	55		0	2.16
86	57		−10	1.60
87	58		−10	1.90
88	59		−10	2.16
89	60		−20	1.60
90	61		−20	1.90
91	62		−20	2.16
92	66	Wing 4	0	1.60
93	69		0	1.90
94	70		0	2.16
95	72		−10	1.60
96	73		−10	1.90
97	74		−10	2.16
98	75		−20	1.60
99	76		−20	1.90
100	77		−20	2.16
101	15	Wing 5	0	1.60
102	18		0	1.90
103	19		0	2.16
104	21		−10	1.60
105	22		−10	1.90
106	23		−10	2.16
107	26		−20	1.60
108	24		−20	1.90
109	25		−20	2.16
110	36	Wing 6	0	1.60
111	39		0	1.90
112	40		0	2.16
113	42		−10	1.60
114	43		−10	1.90
115	44		−10	2.16
116	45		−20	1.60
117	46		−20	1.90
118	47		−20	2.16

TABLE AIII. FORCE AND MOMENT DATA

UPWT PROJECT 1476 RUN 149 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.994	.00	-5.11	-.2012	.0102	.0326	-.0004	.0000	-.0002	.0025	.0127
1.997	.00	-4.11	-.1630	.0105	.0266	-.0004	.0000	-.0002	.0025	.0129
2.000	.00	-3.04	-.1211	.0107	.0200	-.0005	.0000	-.0005	.0024	.0132
2.003	.00	-2.04	-.0818	.0110	.0136	-.0006	.0001	-.0004	.0024	.0134
2.007	.00	-1.09	-.0443	.0112	.0075	-.0006	.0000	-.0003	.0024	.0136
2.006	.00	-.09	-.0058	.0112	.0011	-.0005	.0001	-.0004	.0024	.0136
2.005	.00	.94	.0316	.0109	-.0052	-.0007	.0001	-.0003	.0024	.0133
2.002	.00	1.92	.0691	.0106	-.0114	-.0007	.0000	-.0002	.0023	.0129
1.999	-.00	2.89	.1077	.0101	-.0176	-.0007	.0001	-.0001	.0024	.0124
1.996	-.00	3.85	.1459	.0096	-.0237	-.0005	.0001	-.0000	.0024	.0121
1.996	-.00	4.92	.1876	.0091	-.0304	-.0006	.0000	.0001	.0025	.0117
1.999	-.00	5.94	.2299	.0087	-.0367	-.0006	.0000	.0002	.0025	.0112
2.003	-.00	6.95	.2695	.0082	-.0431	-.0005	.0000	.0003	.0025	.0107
2.006	-.00	7.92	.3087	.0078	-.0490	-.0004	-.0000	.0005	.0025	.0103
2.008	-.01	9.94	.3883	.0069	-.0617	-.0006	-.0000	.0006	.0025	.0095
2.008	-.01	11.94	.4643	.0061	-.0737	-.0005	-.0001	.0010	.0026	.0087
2.006	-.01	13.90	.5401	.0055	-.0858	-.0007	-.0001	.0012	.0028	.0083
2.006	.00	-.08	-.0058	.0112	.0011	-.0005	.0001	-.0004	.0024	.0136

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-7.0948	.00	-5.11	-.1995	.0281	.0326	-.0004	-.0000	-.0002	.0025	.0306
-7.3146	.00	-4.11	-.1618	.0221	.0266	-.0004	-.0000	-.0002	.0024	.0246
-7.0224	.00	-3.04	-.1203	.0171	.0200	-.0005	.0000	-.0005	.0024	.0196
-5.8601	.00	-2.04	-.0813	.0139	.0136	-.0006	.0000	-.0004	.0024	.0163
-3.6634	.00	-1.09	-.0441	.0120	.0075	-.0006	.0000	-.0003	.0024	.0144
-.5132	.00	-.09	-.0057	.0112	.0011	-.0005	.0001	-.0004	.0024	.0136
2.7452	.00	.94	.0315	.0115	-.0052	-.0007	.0001	-.0003	.0024	.0138
5.3390	.00	1.92	.0687	.0129	-.0114	-.0007	.0001	-.0002	.0023	.0152
6.9061	-.00	2.89	.1071	.0155	-.0176	-.0007	.0001	-.0001	.0024	.0179
7.4691	-.00	3.85	.1449	.0194	-.0237	-.0005	.0001	-.0000	.0024	.0218
7.3856	-.00	4.92	.1861	.0252	-.0304	-.0006	.0001	.0001	.0025	.0277
7.0298	-.00	5.94	.2278	.0324	-.0367	-.0006	.0001	.0002	.0025	.0349
6.5423	-.00	6.95	.2666	.0407	-.0431	-.0005	.0001	.0003	.0025	.0433
6.0664	-.00	7.92	.3046	.0502	-.0490	-.0004	.0000	.0005	.0025	.0527
5.1629	-.01	9.94	.3813	.0738	-.0617	-.0006	.0001	.0006	.0025	.0763
4.4410	-.01	11.94	.4530	.1020	-.0737	-.0005	.0001	.0010	.0026	.1046
3.8723	-.01	13.90	.5230	.1351	-.0858	-.0007	.0001	.0012	.0027	.1378
-.5173	.00	-.08	-.0058	.0112	.0011	-.0005	.0001	-.0004	.0024	.0136

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 152 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.17	-.1744	.0101	.0250	-.0002	.0001	-.0003	.0025	.0126
2.000	.00	-4.19	-.1419	.0102	.0204	-.0004	.0000	-.0003	.0024	.0126
2.000	.00	-3.21	-.1082	.0103	.0156	-.0003	.0000	-.0003	.0024	.0127
2.000	.00	-2.23	-.0751	.0104	.0107	-.0003	.0000	-.0003	.0024	.0128
2.000	.00	-1.23	-.0419	.0106	.0059	-.0004	.0000	-.0004	.0023	.0130
1.999	.00	-.22	-.0077	.0106	.0008	-.0004	.0000	-.0003	.0023	.0129
2.000	.00	.76	.0238	.0104	-.0040	-.0004	.0001	-.0003	.0023	.0127
1.999	.00	1.80	.0588	.0101	-.0094	-.0005	.0001	-.0003	.0023	.0124
1.999	-.00	2.80	.0934	.0098	-.0145	-.0005	.0001	-.0002	.0023	.0121
1.999	-.00	3.82	.1286	.0094	-.0197	-.0004	.0001	-.0001	.0024	.0118
1.999	-.00	4.84	.1628	.0091	-.0249	-.0004	.0001	-.0000	.0025	.0115
1.999	-.00	5.80	.1951	.0088	-.0297	-.0005	.0001	-.0000	.0025	.0112
1.999	-.00	6.81	.2288	.0085	-.0348	-.0005	.0001	.0001	.0025	.0110
1.999	-.00	7.85	.2632	.0083	-.0400	-.0004	.0000	.0003	.0024	.0107
1.999	-.01	9.83	.3283	.0077	-.0499	-.0005	.0001	.0005	.0024	.0101
2.000	-.01	11.84	.3940	.0072	-.0599	-.0005	.0000	.0006	.0024	.0096
2.000	-.01	13.82	.4566	.0067	-.0701	-.0006	.0000	.0008	.0025	.0091
2.001	-.01	15.80	.5193	.0061	-.0800	-.0005	-.0001	.0011	.0025	.0087
2.002	-.01	16.84	.5510	.0058	-.0846	-.0006	-.0001	.0010	.0026	.0083
2.002	.00	-.22	-.0066	.0106	.0006	-.0005	.0001	-.0004	.0023	.0130

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.6951	.00	-5.17	-.1728	.0258	.0250	-.0002	.0000	-.0003	.0025	.0283
-6.8473	.00	-4.19	-.1407	.0206	.0204	-.0004	.0000	-.0003	.0024	.0230
-6.5711	.00	-3.21	-.1074	.0163	.0156	-.0003	.0000	-.0003	.0024	.0187
-5.5827	.00	-2.23	-.0746	.0134	.0107	-.0003	.0000	-.0003	.0024	.0157
-3.6181	.00	-1.23	-.0417	.0115	.0059	-.0004	.0000	-.0004	.0023	.0139
-.7179	.00	-.22	-.0077	.0107	.0008	-.0004	.0000	-.0003	.0023	.0130
2.2008	.00	.76	.0236	.0107	-.0040	-.0004	.0001	-.0003	.0023	.0131
4.8948	.00	1.80	.0565	.0119	-.0094	-.0005	.0001	-.0003	.0023	.0143
6.4836	-.00	2.80	.0928	.0143	-.0145	-.0005	.0001	-.0002	.0023	.0167
7.1111	-.00	3.82	.1277	.0180	-.0197	-.0004	.0001	-.0001	.0024	.0204
7.0961	-.00	4.84	.1615	.0228	-.0249	-.0003	.0001	-.0000	.0024	.0252
6.7926	-.00	5.80	.1932	.0284	-.0297	-.0005	.0001	-.0000	.0024	.0309
6.3501	-.00	6.81	.2262	.0356	-.0348	-.0005	.0001	.0001	.0024	.0381
5.8822	-.00	7.85	.2596	.0441	-.0400	-.0004	.0001	.0003	.0024	.0466
5.0606	-.01	9.83	.3222	.0637	-.0499	-.0005	.0001	.0005	.0024	.0660
4.3745	-.01	11.84	.3842	.0878	-.0599	-.0005	.0001	.0006	.0023	.0902
3.8248	-.01	13.82	.4418	.1155	-.0701	-.0005	.0001	.0008	.0024	.1179
3.3615	-.01	15.80	.4980	.1473	-.0800	-.0005	.0001	.0011	.0025	.1497
3.1840	-.01	16.84	.5257	.1651	-.0846	-.0005	.0001	.0010	.0025	.1676
-.6124	.00	-.22	-.0065	.0107	.0006	-.0005	.0001	-.0004	.0023	.0130

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 153 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-5.18	-.1568	.0101	.0200	-.0002	.0000	-.0003	.0023	.0124
1.999	.00	-4.22	-.1276	.0101	.0161	-.0002	.0000	-.0003	.0023	.0123
1.999	.00	-3.20	-.0970	.0101	.0120	-.0002	.0000	-.0003	.0022	.0123
2.000	.00	-2.19	-.0662	.0101	.0079	-.0002	.0000	-.0003	.0022	.0124
2.000	.00	-1.17	-.0355	.0102	.0037	-.0002	.0000	-.0003	.0022	.0125
2.000	.00	-.20	-.0062	.0102	-.0003	-.0003	.0000	-.0003	.0022	.0124
2.001	.00	.79	.0241	.0101	-.0045	-.0002	.0001	-.0003	.0022	.0123
2.000	.00	1.78	.0534	.0098	-.0087	-.0003	.0001	-.0003	.0022	.0120
1.999	-.00	2.78	.0840	.0096	-.0131	-.0003	.0001	-.0002	.0022	.0118
1.999	-.00	3.77	.1142	.0093	-.0173	-.0003	.0001	-.0001	.0023	.0116
1.999	-.00	4.77	.1447	.0091	-.0217	-.0002	.0001	.0000	.0023	.0114
1.999	-.00	5.77	.1749	.0089	-.0260	-.0002	.0001	.0002	.0023	.0112
1.999	-.00	6.77	.2045	.0087	-.0303	-.0002	.0000	.0001	.0023	.0109
1.999	-.00	7.80	.2347	.0085	-.0348	-.0003	.0000	.0002	.0022	.0107
1.998	-.00	9.82	.2944	.0081	-.0438	-.0002	.0000	.0004	.0022	.0103
1.999	-.00	11.80	.3514	.0077	-.0525	-.0003	.0000	.0005	.0022	.0099
1.999	-.01	13.76	.4085	.0073	-.0613	-.0004	.0000	.0006	.0023	.0096
1.999	-.01	15.80	.4669	.0068	-.0706	-.0004	.0000	.0007	.0023	.0092
1.998	-.01	17.78	.5250	.0063	-.0796	-.0005	-.0001	.0009	.0023	.0087
1.999	-.01	18.82	.5558	.0060	-.0846	-.0004	-.0001	.0010	.0023	.0084
2.000	.00	-.21	-.0049	.0103	-.0005	-.0002	.0001	-.0002	.0022	.0125

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.4169	.00	-5.18	-.1553	.0242	.0200	-.0002	.0000	-.0003	.0023	.0265
-6.5105	.00	-4.22	-.1265	.0194	.0161	-.0002	-.0000	-.0003	.0023	.0217
-6.2147	.00	-3.20	-.0963	.0155	.0120	-.0002	.0000	-.0003	.0022	.0177
-5.1916	.00	-2.19	-.0657	.0127	.0079	-.0002	.0000	-.0003	.0022	.0149
-3.2198	.00	-1.17	-.0353	.0110	.0037	-.0002	.0000	-.0003	.0022	.0132
-.6021	.00	-.20	-.0062	.0103	-.0003	-.0003	.0000	-.0003	.0022	.0125
2.2990	.00	.79	.0239	.0104	-.0045	-.0002	.0001	-.0003	.0022	.0126
4.6340	.00	1.78	.0531	.0115	-.0087	-.0003	.0001	-.0003	.0022	.0137
6.1063	-.00	2.78	.0834	.0137	-.0131	-.0002	.0001	-.0002	.0022	.0159
6.7369	-.00	3.77	.1134	.0168	-.0173	-.0003	.0001	-.0001	.0023	.0191
6.7908	-.00	4.77	.1434	.0211	-.0217	-.0002	.0001	.0000	.0023	.0234
6.5534	-.00	5.77	.1731	.0264	-.0260	-.0002	.0001	.0002	.0023	.0287
6.1799	-.00	6.77	.2021	.0327	-.0303	-.0002	.0001	.0001	.0022	.0349
5.7479	-.00	7.80	.2314	.0403	-.0348	-.0003	.0001	.0002	.0022	.0425
4.9603	-.00	9.82	.2887	.0582	-.0438	-.0002	.0001	.0004	.0022	.0604
4.3115	-.00	11.80	.3424	.0794	-.0525	-.0002	.0001	.0005	.0021	.0816
3.7874	-.01	13.76	.3950	.1043	-.0613	-.0004	.0001	.0006	.0022	.1065
3.3464	-.01	15.80	.4474	.1337	-.0706	-.0004	.0001	.0007	.0022	.1359
2.9941	-.01	17.78	.4980	.1663	-.0796	-.0004	.0001	.0009	.0022	.1685
2.8323	-.01	18.82	.5241	.1851	-.0846	-.0004	.0001	.0010	.0022	.1873
-.4708	.00	-.21	-.0049	.0103	-.0005	-.0002	.0001	-.0002	.0022	.0125

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 155 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.002	.00	-2.13	-.1402	.0196	.0463	-.0001	.0000	-.0002	.0033	.0229
2.003	.00	-1.13	-.1023	.0193	.0399	.0000	.0000	-.0001	.0033	.0226
2.003	.00	-.08	-.0607	.0187	.0329	-.0001	.0000	-.0002	.0033	.0220
2.004	.00	.93	-.0218	.0179	.0262	-.0001	.0000	-.0001	.0032	.0212
2.003	.00	1.94	.0174	.0171	.0198	.0002	.0000	-.0001	.0032	.0203
2.003	.00	2.96	.0579	.0162	.0134	-.0001	.0000	-.0000	.0032	.0194
2.003	-.00	3.94	.0977	.0152	.0069	-.0000	.0000	.0001	.0032	.0184
2.003	-.00	4.91	.1367	.0143	.0006	-.0001	-.0000	.0002	.0032	.0174
2.003	-.00	5.87	.1722	.0133	-.0050	-.0000	-.0000	.0002	.0032	.0164
2.002	-.00	6.92	.2154	.0121	-.0118	.0001	-.0000	.0003	.0032	.0153
2.001	-.00	7.96	.2571	.0110	-.0187	-.0000	-.0000	.0004	.0032	.0142
2.000	-.00	9.94	.3353	.0089	-.0312	.0002	-.0001	.0006	.0032	.0121
2.000	-.01	11.95	.4132	.0070	-.0434	.0001	-.0001	.0009	.0032	.0102
2.000	-.01	13.93	.4878	.0053	-.0553	.0000	-.0001	.0010	.0032	.0085
2.002	-.01	14.94	.5263	.0044	-.0615	.0001	-.0002	.0011	.0033	.0077
2.004	.00	-.09	-.0613	.0188	.0330	.0001	.0001	-.0000	.0033	.0220

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.6248	.00	-2.13	-.1394	.0248	.0463	-.0001	.0000	-.0002	.0033	.0281
-4.7830	.00	-1.13	-.1019	.0213	.0399	.0000	.0000	-.0001	.0033	.0246
-3.2249	.00	-.08	-.0607	.0188	.0329	-.0001	.0000	-.0002	.0033	.0221
-1.2544	.00	.93	-.0221	.0176	.0262	-.0001	.0000	-.0001	.0032	.0208
.9534	.00	1.94	.0168	.0176	.0198	.0002	.0000	-.0001	.0032	.0209
2.9764	.00	2.96	.0570	.0191	.0134	-.0001	.0000	-.0000	.0032	.0223
4.4007	-.00	3.94	.0964	.0219	.0069	-.0000	.0000	.0001	.0032	.0251
5.2074	-.00	4.91	.1349	.0259	.0006	-.0001	-.0000	.0002	.0032	.0291
5.5175	-.00	5.87	.1699	.0308	-.0050	-.0000	-.0000	.0002	.0032	.0339
5.5925	-.00	6.92	.2123	.0360	-.0118	.0001	-.0000	.0003	.0031	.0411
5.4414	-.00	7.96	.2531	.0465	-.0187	-.0000	-.0000	.0004	.0031	.0496
4.9316	-.00	9.94	.3287	.0667	-.0312	.0002	-.0001	.0006	.0031	.0698
4.3579	-.01	11.95	.4028	.0924	-.0434	.0001	-.0001	.0009	.0031	.0955
3.8539	-.01	13.93	.4722	.1225	-.0553	-.0000	-.0001	.0010	.0031	.1257
3.6261	-.01	14.94	.5074	.1399	-.0615	.0001	-.0002	.0011	.0032	.1431
-3.2472	.00	-.09	-.0613	.0189	.0330	.0001	.0001	-.0000	.0033	.0221

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 156 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-2.20	-.1133	.0174	.0342	.0000	.0000	-.0002	.0030	.0203
1.999	.00	-1.18	-.0793	.0170	.0290	.0001	-.0000	-.0000	.0030	.0200
1.998	.00	-.19	-.0462	.0166	.0239	-.0000	-.0000	-.0000	.0030	.0195
1.998	.00	.84	-.0119	.0159	.0186	-.0000	.0000	-.0001	.0030	.0189
1.998	.00	1.84	.0228	.0151	.0135	.0000	-.0000	-.0001	.0030	.0181
1.998	.00	2.80	.0554	.0144	.0084	.0001	.0000	-.0001	.0030	.0174
2.000	-.00	3.81	.0902	.0136	.0031	.0000	.0000	-.0000	.0030	.0167
2.001	-.00	4.82	.1239	.0129	-.0021	.0000	.0000	-.0000	.0030	.0159
2.002	-.00	5.81	.1566	.0121	-.0070	.0000	.0000	-.0000	.0030	.0151
2.003	-.00	6.80	.1898	.0113	-.0120	.0000	.0000	-.0001	.0030	.0143
2.003	-.00	7.78	.2223	.0105	-.0172	.0001	.0000	.0001	.0030	.0136
2.003	-.00	9.82	.2896	.0089	-.0277	-.0001	.0000	.0000	.0030	.0120
2.003	-.00	11.81	.3533	.0074	-.0377	.0001	-.0000	.0002	.0030	.0104
2.001	-.00	13.85	.4201	.0059	-.0481	-.0000	-.0000	.0002	.0030	.0089
1.998	-.00	15.79	.4816	.0045	-.0578	-.0001	-.0001	.0002	.0029	.0075
1.996	-.00	17.76	.5412	.0030	-.0665	-.0001	-.0001	.0002	.0028	.0059
1.998	.00	-.18	-.0459	.0166	.0239	.0000	.0000	-.0001	.0030	.0196

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.1886	.00	-2.20	-.1126	.0217	.0342	.0000	.0000	-.0002	.0030	.0247
-4.2293	.00	-1.18	-.0789	.0187	.0290	.0001	-.0000	-.0000	.0030	.0216
-2.7603	.00	-.19	-.0462	.0167	.0239	-.0000	-.0000	-.0000	.0030	.0197
-.7737	.00	.84	-.0122	.0157	.0186	-.0000	.0000	-.0001	.0030	.0187
1.4031	.00	1.84	.0223	.0159	.0135	.0000	-.0000	-.0001	.0030	.0189
3.1941	.00	2.80	.0547	.0171	.0084	.0001	.0000	-.0001	.0030	.0201
4.5440	-.00	3.81	.0891	.0196	.0031	.0000	.0000	-.0000	.0030	.0226
5.2691	-.00	4.82	.1224	.0232	-.0021	.0001	.0000	-.0000	.0030	.0263
5.5476	-.00	5.81	.1545	.0279	-.0070	.0000	.0000	-.0000	.0030	.0309
5.5623	-.00	6.80	.1871	.0336	-.0120	.0000	.0000	-.0001	.0030	.0367
5.3990	-.00	7.78	.2188	.0405	-.0172	.0001	.0000	.0001	.0030	.0435
4.8782	-.00	9.82	.2839	.0562	-.0277	-.0001	.0000	.0000	.0030	.0612
4.3274	-.00	11.81	.3443	.0796	-.0377	.0001	-.0000	.0002	.0029	.0825
3.8231	-.00	13.85	.4065	.1063	-.0481	-.0000	-.0000	.0002	.0029	.1092
3.4146	-.00	15.79	.4622	.1354	-.0578	-.0001	-.0000	.0002	.0028	.1382
3.0626	-.00	17.76	.5145	.1680	-.0665	-.0001	-.0001	.0002	.0027	.1707
-2.7413	.00	-.18	-.0459	.0167	.0239	.0000	.0000	-.0001	.0030	.0197

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 157 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.00	-2.17	-.0988	.0160	.0270	.0002	-.0000	-.0001	.0027	.0186
2.001	.00	-1.19	-.0690	.0156	.0228	.0001	-.0000	-.0000	.0027	.0183
1.999	.00	-.22	-.0396	.0152	.0187	.0001	-.0000	-.0001	.0027	.0179
1.998	.00	.82	-.0073	.0146	.0139	.0001	-.0000	-.0001	.0027	.0173
1.998	.00	1.78	.0219	.0140	.0099	.0000	-.0000	-.0001	.0027	.0167
1.998	-.00	2.79	.0525	.0134	.0053	.0002	-.0000	.0000	.0027	.0160
1.998	-.00	3.79	.0836	.0127	.0009	.0002	.0000	-.0001	.0027	.0154
1.998	.00	4.77	.1130	.0121	-.0033	.0001	.0000	-.0001	.0027	.0148
1.999	-.00	5.78	.1432	.0114	-.0079	.0002	.0000	.0000	.0027	.0141
2.000	-.00	6.80	.1736	.0107	-.0123	.0002	-.0000	.0001	.0027	.0134
2.000	-.00	7.79	.2035	.0101	-.0170	.0002	-.0000	.0001	.0027	.0128
1.999	-.00	9.76	.2612	.0088	-.0258	.0002	-.0000	.0001	.0027	.0115
1.999	-.00	11.78	.3207	.0076	-.0347	.0002	.0000	.0001	.0026	.0102
1.999	-.00	13.78	.3780	.0064	-.0436	.0002	-.0000	.0001	.0026	.0090
1.997	-.00	15.78	.4359	.0051	-.0525	.0001	-.0000	.0002	.0026	.0077
1.998	-.00	17.80	.4945	.0038	-.0613	.0000	-.0000	.0001	.0026	.0064
2.000	-.00	19.79	.5525	.0025	-.0703	-.0000	-.0001	.0000	.0026	.0051
2.000	.00	-.24	-.0390	.0152	.0185	.0001	-.0000	-.0002	.0027	.0179

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.9845	.00	-2.17	-.0981	.0197	.0270	.0002	-.0000	-.0001	.0027	.0223
-4.0324	.00	-1.19	-.0687	.0170	.0228	.0001	-.0000	-.0000	.0027	.0197
-2.5752	.00	-.22	-.0395	.0154	.0187	.0001	-.0000	-.0001	.0027	.0180
-.5168	.00	.82	-.0075	.0145	.0139	.0001	-.0000	-.0001	.0027	.0172
1.4644	.00	1.78	.0215	.0147	.0099	.0000	-.0000	-.0001	.0027	.0173
3.2554	-.00	2.79	.0518	.0159	.0053	.0002	-.0000	.0000	.0026	.0186
4.5282	-.00	3.79	.0825	.0182	.0009	.0002	.0000	-.0001	.0027	.0209
5.2026	.00	4.77	.1116	.0215	-.0033	.0001	.0000	-.0001	.0027	.0241
5.4880	-.00	5.78	.1414	.0258	-.0079	.0002	-.0000	.0000	.0027	.0285
5.4893	-.00	6.80	.1711	.0312	-.0123	.0002	-.0000	.0001	.0027	.0339
5.3342	-.00	7.79	.2002	.0375	-.0170	.0002	-.0000	.0001	.0027	.0402
4.8318	-.00	9.76	.2559	.0530	-.0258	.0002	-.0001	.0001	.0026	.0556
4.2867	-.00	11.78	.3124	.0729	-.0347	.0002	-.0000	.0001	.0026	.0755
3.8002	-.00	13.78	.3656	.0962	-.0436	.0002	-.0001	.0001	.0026	.0988
3.3870	-.00	15.78	.4181	.1234	-.0525	.0001	-.0000	.0002	.0025	.1260
3.0336	-.00	17.80	.4696	.1548	-.0613	.0000	-.0001	.0001	.0025	.1573
2.7393	-.00	19.79	.5190	.1895	-.0703	-.0000	-.0001	.0000	.0024	.1919
-2.5275	.00	-.24	-.0389	.0154	.0185	.0001	-.0000	-.0002	.0027	.0181

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 158 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

P/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.499	.00	-2.10	-.1902	.0368	.0721	.0001	.0001	-.0005	.0039	.0407
1.497	.00	-1.07	-.1490	.0361	.0655	.0000	.0001	-.0004	.0039	.0400
1.498	.00	-.10	-.1107	.0353	.0592	-.0001	.0001	-.0003	.0039	.0392
1.500	.00	.90	-.0730	.0345	.0529	.0001	.0001	-.0002	.0039	.0384
1.497	.00	1.91	-.0350	.0335	.0468	-.0000	.0000	-.0001	.0039	.0374
1.501	.00	2.94	.0061	.0329	.0411	.0002	.0000	-.0000	.0039	.0368
1.506	-.00	3.93	.0431	.0320	.0355	.0001	-.0000	.0001	.0039	.0360
1.509	-.00	4.92	.0837	.0310	.0294	.0001	-.0001	.0003	.0040	.0350
1.509	-.00	5.91	.1233	.0297	.0232	.0001	-.0001	.0005	.0040	.0337
1.509	-.00	6.93	.1664	.0281	.0164	.0002	-.0001	.0006	.0041	.0322
1.506	-.00	7.90	.2042	.0267	.0099	.0000	-.0001	.0006	.0041	.0308
1.501	-.00	9.91	.2861	.0234	-.0033	-.0000	-.0001	.0008	.0040	.0274
1.498	-.00	11.90	.3629	.0199	-.0165	.0000	-.0002	.0012	.0040	.0239
1.500	-.01	13.90	.4377	.0169	-.0276	.0000	-.0003	.0014	.0041	.0210
1.510	-.01	15.93	.5158	.0139	-.0405	.0002	-.0003	.0016	.0042	.0182
1.510	-.01	17.92	.5868	.0113	-.0510	.0000	-.0004	.0019	.0040	.0153
1.502	-.01	19.89	.6324	.0099	-.0513	.0001	-.0005	.0023	.0041	.0141
1.501	.00	-.10	-.1111	.0353	.0592	-.0002	.0001	-.0002	.0039	.0392

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.3156	.00	-2.10	-.1887	.0437	.0721	.0001	.0001	-.0005	.0039	.0476
-3.8141	.00	-1.07	-.1483	.0389	.0655	.0000	.0001	-.0004	.0039	.0428
-3.1136	.00	-.10	-.1106	.0355	.0592	-.0001	.0001	-.0003	.0039	.0394
-2.2072	.00	.90	-.0735	.0333	.0529	.0001	.0001	-.0002	.0039	.0372
-1.1175	.00	1.91	-.0361	.0323	.0468	-.0000	.0000	-.0001	.0039	.0362
.1334	.00	2.94	.0044	.0332	.0411	.0002	-.0000	-.0000	.0039	.0371
1.1694	-.00	3.93	.0408	.0349	.0355	.0001	-.0000	.0001	.0039	.0388
2.1220	-.00	4.92	.0808	.0381	.0294	.0001	-.0001	.0003	.0040	.0420
2.8344	-.00	5.91	.1196	.0422	.0232	.0001	-.0001	.0005	.0040	.0462
3.3707	-.00	6.93	.1618	.0480	.0164	.0001	-.0001	.0006	.0040	.0520
3.6442	-.00	7.90	.1986	.0545	.0099	-.0000	-.0001	.0006	.0041	.0586
3.8421	-.00	9.91	.2778	.0723	-.0033	-.0000	-.0001	.0008	.0039	.0763
3.7249	-.00	11.90	.3510	.0942	-.0165	-.0000	-.0002	.0012	.0039	.0982
3.4616	-.01	13.90	.4208	.1216	-.0276	-.0000	-.0003	.0014	.0040	.1256
3.1753	-.01	15.93	.4922	.1550	-.0405	.0001	-.0003	.0016	.0041	.1591
2.8998	-.01	17.92	.5548	.1913	-.0510	-.0001	-.0004	.0019	.0038	.1952
2.6335	-.01	19.89	.5913	.2245	-.0513	-.0001	-.0005	.0023	.0039	.2284
-3.1247	.00	-.10	-.1111	.0355	.0592	-.0002	.0001	-.0002	.0039	.0394

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 159 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.00	-2.20	-.1530	.0325	.0556	.0001	.0000	-.0004	.0033	.0358
1.999	.00	-1.20	-.1191	.0319	.0505	-.0001	.0000	-.0003	.0033	.0352
1.998	.00	-.21	-.0859	.0311	.0453	-.0001	.0000	-.0002	.0034	.0344
1.997	.00	.82	-.0520	.0302	.0402	.0000	-.0000	-.0001	.0034	.0336
1.998	.00	1.80	-.0178	.0293	.0352	.0000	-.0000	-.0000	.0035	.0328
2.001	.00	2.79	.0162	.0285	.0300	.0000	-.0001	.0000	.0035	.0319
2.002	.00	3.80	.0521	.0274	.0249	-.0000	-.0000	.0001	.0035	.0310
2.005	-.00	4.80	.0863	.0264	.0196	-.0000	-.0000	.0001	.0035	.0299
2.006	-.00	5.81	.1211	.0254	.0144	-.0001	-.0001	.0002	.0035	.0289
2.004	-.00	6.81	.1557	.0241	.0092	.0001	-.0001	.0003	.0036	.0277
2.001	-.00	7.80	.1890	.0227	.0036	.0000	-.0001	.0003	.0036	.0263
1.998	-.00	9.80	.2558	.0196	-.0075	.0002	-.0001	.0006	.0036	.0232
1.996	-.00	11.81	.3227	.0167	-.0183	.0000	-.0001	.0006	.0037	.0203
1.999	-.00	13.80	.3862	.0142	-.0283	-.0000	-.0001	.0008	.0037	.0180
2.002	-.00	15.82	.4504	.0117	-.0385	-.0000	-.0002	.0008	.0036	.0153
2.002	-.01	17.79	.5091	.0092	-.0471	.0000	-.0002	.0010	.0034	.0126
2.001	-.01	18.81	.5424	.0079	-.0523	.0000	-.0003	.0011	.0034	.0113
1.999	.00	-.21	-.0843	.0311	.0452	.0000	.0000	-.0002	.0034	.0345

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.9498	.00	-2.20	-.1517	.0384	.0556	.0001	.0000	-.0004	.0033	.0417
-3.4453	.00	-1.20	-.1184	.0344	.0505	-.0001	.0000	-.0003	.0033	.0377
-2.7328	.00	-.21	-.0858	.0314	.0453	-.0001	.0000	-.0002	.0034	.0348
-1.7813	.00	.82	-.0525	.0295	.0402	.0000	-.0000	-.0001	.0034	.0329
-.6521	.00	1.80	-.0188	.0288	.0352	.0000	-.0000	-.0000	.0035	.0322
.5080	.00	2.79	.0148	.0292	.0300	-.0000	-.0001	.0000	.0035	.0327
1.6253	.00	3.80	.0501	.0308	.0249	-.0000	-.0000	.0001	.0035	.0343
2.4997	-.00	4.80	.0837	.0335	.0196	-.0000	-.0000	.0001	.0035	.0370
3.1453	-.00	5.81	.1179	.0375	.0144	-.0001	-.0000	.0002	.0035	.0410
3.5817	-.00	6.81	.1518	.0424	.0092	.0001	-.0001	.0003	.0035	.0459
3.8260	-.00	7.80	.1841	.0481	.0036	-.0000	-.0001	.0003	.0036	.0517
3.9572	-.00	9.80	.2487	.0629	-.0075	.0002	-.0001	.0006	.0036	.0664
3.7922	-.00	11.81	.3125	.0824	-.0183	-.0000	-.0001	.0006	.0036	.0860
3.5068	-.00	13.80	.3716	.1060	-.0283	-.0001	-.0001	.0008	.0036	.1096
3.2107	-.00	15.82	.4302	.1340	-.0385	-.0001	-.0002	.0008	.0035	.1375
2.9322	-.01	17.79	.4819	.1644	-.0471	-.0000	-.0002	.0010	.0033	.1676
2.8007	-.01	18.81	.5109	.1824	-.0523	-.0001	-.0003	.0011	.0032	.1856
-2.6801	.00	-.21	-.0842	.0314	.0452	.0000	.0000	-.0002	.0034	.0348

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 160 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.997	.00	-2.21	-.1326	.0300	.0455	-.0001	.0000	-.0004	.0029	.0330
2.001	.00	-1.21	-.1017	.0292	.0411	.0000	.0000	-.0003	.0030	.0322
2.001	.00	-.20	-.0703	.0285	.0366	.0000	-.0000	-.0002	.0030	.0315
2.001	.00	.80	-.0386	.0276	.0320	-.0000	-.0000	-.0002	.0030	.0306
2.000	.00	1.81	-.0076	.0266	.0276	.0001	-.0000	-.0001	.0030	.0296
2.000	.00	2.81	.0235	.0255	.0231	.0001	-.0000	-.0001	.0030	.0285
2.000	.00	3.80	.0540	.0245	.0186	.0001	-.0000	-.0001	.0031	.0275
2.000	.00	4.78	.0846	.0234	.0141	.0001	-.0000	-.0000	.0031	.0265
2.000	.00	5.79	.1154	.0223	.0095	.0001	-.0000	.0001	.0031	.0254
2.000	.00	6.80	.1465	.0212	.0047	.0002	-.0001	.0001	.0031	.0243
1.999	.00	7.79	.1762	.0199	-.0001	.0002	-.0001	.0002	.0031	.0230
2.000	-.00	9.80	.2358	.0174	-.0096	.0001	-.0001	.0004	.0031	.0204
1.999	-.00	11.79	.2951	.0149	-.0190	.0002	-.0001	.0004	.0031	.0179
1.999	-.00	13.80	.3530	.0126	-.0281	.0001	-.0001	.0005	.0031	.0157
1.999	-.00	15.80	.4109	.0105	-.0371	.0001	-.0001	.0005	.0031	.0136
1.999	-.00	17.81	.4686	.0084	-.0460	.0002	-.0002	.0004	.0030	.0114
2.000	-.00	19.80	.5264	.0062	-.0548	.0001	-.0002	.0007	.0030	.0092
2.000	.00	-.20	-.0695	.0265	.0364	.0001	-.0000	-.0002	.0030	.0315

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.7390	.00	-2.21	-.1313	.0351	.0455	-.0001	-.0000	-.0004	.0029	.0381
-3.2195	.00	-1.21	-.1010	.0314	.0411	.0000	.0000	-.0003	.0030	.0343
-2.4438	.00	-.20	-.0702	.0287	.0366	.0000	-.0000	-.0002	.0030	.0317
-1.4397	.00	.80	-.0390	.0271	.0320	-.0000	-.0000	-.0002	.0030	.0301
-.3180	.00	1.81	-.0084	.0264	.0276	.0001	-.0000	-.0001	.0030	.0294
.8348	.00	2.81	.0222	.0266	.0231	.0001	-.0000	-.0001	.0030	.0297
1.8660	.00	3.80	.0522	.0280	.0186	.0001	-.0000	-.0001	.0031	.0310
2.7125	.00	4.78	.0824	.0304	.0141	.0001	-.0000	-.0000	.0031	.0335
3.3271	.00	5.79	.1126	.0338	.0095	.0001	-.0001	.0001	.0031	.0369
3.7250	.00	6.80	.1430	.0384	.0047	.0001	-.0001	.0001	.0031	.0415
3.9393	.00	7.79	.1719	.0436	-.0001	.0002	-.0001	.0002	.0031	.0467
4.0097	-.00	9.80	.2294	.0572	-.0096	.0001	-.0001	.0004	.0030	.0603
3.8178	-.00	11.79	.2858	.0749	-.0190	.0002	-.0002	.0004	.0030	.0779
3.5222	-.00	13.80	.3398	.0965	-.0281	.0001	-.0001	.0005	.0030	.0995
3.2165	-.00	15.80	.3925	.1220	-.0371	.0001	-.0001	.0005	.0030	.1250
2.9321	-.00	17.81	.4436	.1513	-.0460	.0001	-.0002	.0004	.0029	.1542
2.6781	-.00	19.80	.4931	.1841	-.0548	.0000	-.0002	.0007	.0028	.1870
-2.4160	.00	-.20	-.0694	.0287	.0364	.0001	-.0000	-.0002	.0030	.0317

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 94 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.003	.00	-5.07	-.2262	.0113	.0239	-.0003	.0000	-.0008	.0028	.0141
2.003	.00	-4.06	-.1823	.0116	.0189	-.0004	.0000	-.0007	.0028	.0143
2.002	.00	-3.06	-.1375	.0116	.0141	-.0003	.0000	-.0006	.0027	.0146
2.001	.00	-2.06	-.0920	.0121	.0091	-.0005	.0000	-.0004	.0027	.0148
2.000	.00	-1.00	-.0451	.0123	.0043	-.0004	.0000	-.0003	.0026	.0149
1.998	.00	-.04	-.0038	.0123	-.0001	-.0005	-.0000	-.0003	.0026	.0149
1.998	.00	.96	.0383	.0121	-.0045	-.0004	.0000	-.0001	.0026	.0147
1.999	-.00	1.96	.0817	.0116	-.0090	-.0005	.0000	.0001	.0026	.0143
2.000	-.00	2.97	.1264	.0111	-.0140	-.0006	.0000	.0003	.0027	.0138
2.001	-.00	3.99	.1725	.0107	-.0190	-.0005	.0000	.0005	.0027	.0134
2.002	-.00	4.93	.2151	.0102	-.0240	-.0005	.0001	.0008	.0027	.0129
2.003	-.01	5.96	.2604	.0098	-.0292	-.0002	.0000	.0009	.0027	.0124
2.002	-.01	6.92	.3030	.0093	-.0343	-.0004	.0000	.0013	.0027	.0120
2.001	-.01	7.94	.3478	.0089	-.0396	-.0003	-.0000	.0014	.0026	.0115
1.999	-.01	9.92	.4327	.0079	-.0494	-.0006	-.0000	.0019	.0025	.0105
1.998	-.01	11.94	.5158	.0071	-.0592	-.0006	-.0001	.0025	.0024	.0095
2.003	.00	-.03	-.0022	.0123	.0000	-.0005	-.0000	-.0002	.0026	.0149

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-7.1842	.00	-5.07	-.2244	.0312	.0239	-.0003	-.0000	-.0008	.0028	.0340
-7.4077	.00	-4.06	-.1811	.0244	.0189	-.0004	-.0000	-.0007	.0028	.0272
-7.1378	.00	-3.06	-.1366	.0191	.0141	-.0003	.0000	-.0006	.0027	.0219
-5.9526	.00	-2.06	-.0915	.0154	.0091	-.0005	.0000	-.0004	.0027	.0180
-3.4304	.00	-1.00	-.0449	.0131	.0043	-.0004	.0000	-.0003	.0026	.0157
-.3083	.00	-.04	-.0038	.0123	-.0001	-.0005	-.0000	-.0003	.0026	.0149
2.9932	.00	.96	.0381	.0127	-.0045	-.0004	.0000	-.0001	.0026	.0153
5.6298	-.00	1.96	.0813	.0144	-.0090	-.0005	.0000	.0001	.0026	.0171
7.1075	-.00	2.97	.1256	.0177	-.0140	-.0006	.0001	.0003	.0027	.0203
7.5704	-.00	3.99	.1714	.0226	-.0190	-.0005	.0001	.0005	.0027	.0253
7.4377	-.00	4.93	.2134	.0287	-.0240	-.0005	.0001	.0008	.0027	.0314
7.0251	-.01	5.96	.2580	.0367	-.0292	-.0002	.0001	.0009	.0027	.0394
6.5487	-.01	6.92	.2997	.0458	-.0343	-.0004	.0001	.0013	.0026	.0484
6.0411	-.01	7.94	.3432	.0568	-.0396	-.0003	.0000	.0014	.0026	.0594
5.1570	-.01	9.92	.4249	.0824	-.0494	-.0006	.0001	.0019	.0025	.0849
4.4287	-.01	11.94	.5031	.1136	-.0592	-.0006	.0000	.0025	.0024	.1160
-.1744	.00	-.03	-.0022	.0123	.0000	-.0005	-.0000	-.0002	.0026	.0149

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 98 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-5.16	-.1917	.0115	.0186	-.0003	-.0000	-.0007	.0028	.0144
1.999	.00	-4.18	-.1554	.0117	.0149	-.0001	-.0000	-.0007	.0028	.0144
1.998	.00	-3.14	-.1164	.0119	.0108	-.0001	-.0000	-.0005	.0027	.0146
1.999	.00	-2.18	-.0816	.0120	.0073	-.0002	.0000	-.0004	.0027	.0146
2.000	.00	-1.16	-.0433	.0121	.0035	-.0003	.0000	-.0003	.0026	.0147
1.999	.00	-.17	-.0059	.0121	-.0002	-.0004	.0000	-.0002	.0026	.0146
1.998	-.00	.85	.0298	.0119	-.0038	-.0003	.0000	-.0000	.0026	.0145
1.998	-.00	1.85	.0675	.0116	-.0076	-.0003	.0000	.0001	.0026	.0142
2.000	-.00	2.84	.1044	.0113	-.0115	-.0004	.0000	.0003	.0026	.0139
2.001	-.00	3.82	.1411	.0110	-.0153	-.0005	.0000	.0004	.0026	.0136
2.000	-.00	4.82	.1789	.0106	-.0194	-.0005	.0000	.0007	.0027	.0133
2.000	-.00	5.84	.2166	.0102	-.0236	-.0004	.0000	.0009	.0027	.0129
1.999	-.00	6.85	.2520	.0098	-.0277	-.0003	-.0000	.0010	.0027	.0125
1.999	-.01	7.83	.2878	.0095	-.0316	-.0003	-.0000	.0013	.0026	.0121
1.999	-.01	9.82	.3586	.0089	-.0394	-.0004	.0001	.0016	.0025	.0114
2.000	-.01	11.83	.4311	.0082	-.0477	-.0003	-.0000	.0022	.0025	.0108
1.999	-.01	13.84	.4994	.0077	-.0556	-.0004	-.0001	.0026	.0026	.0103
1.999	-.01	14.87	.5351	.0075	-.0598	-.0005	-.0001	.0029	.0025	.0100
2.000	.00	-.16	-.0040	.0121	-.0003	-.0003	.0000	-.0002	.0026	.0146

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.6148	.00	-5.16	-.1899	.0287	.0186	-.0003	-.0000	-.0007	.0028	.0315
-6.7153	.00	-4.18	-.1541	.0230	.0149	-.0001	-.0000	-.0007	.0028	.0257
-6.3450	.00	-3.14	-.1155	.0182	.0108	-.0001	-.0000	-.0005	.0027	.0209
-5.3703	.00	-2.18	-.0810	.0151	.0073	-.0002	.0000	-.0004	.0027	.0177
-3.3168	.00	-1.16	-.0430	.0130	.0035	-.0003	.0000	-.0003	.0026	.0156
-.4890	.00	-.17	-.0059	.0121	-.0002	-.0004	.0000	-.0002	.0026	.0146
2.3983	-.00	.85	.0296	.0124	-.0038	-.0003	.0000	-.0000	.0026	.0149
4.8574	-.00	1.85	.0670	.0138	-.0076	-.0003	.0000	.0001	.0026	.0164
6.2976	-.00	2.84	.1037	.0165	-.0115	-.0004	.0000	.0003	.0026	.0191
6.8870	-.00	3.82	.1401	.0203	-.0153	-.0005	.0001	.0004	.0026	.0230
6.9297	-.00	4.82	.1773	.0256	-.0194	-.0005	.0001	.0007	.0027	.0282
6.6480	-.00	5.84	.2144	.0322	-.0236	-.0004	.0001	.0009	.0027	.0349
6.2554	-.00	6.85	.2490	.0398	-.0277	-.0003	-.0000	.0010	.0026	.0424
5.8319	-.01	7.83	.2838	.0467	-.0316	-.0003	.0000	.0013	.0026	.0513
5.0336	-.01	9.82	.3518	.0699	-.0394	-.0004	.0001	.0016	.0025	.0724
4.3557	-.01	11.83	.4202	.0965	-.0477	-.0003	.0001	.0022	.0025	.0990
3.8043	-.01	13.84	.4831	.1270	-.0556	-.0005	.0000	.0026	.0025	.1295
3.5655	-.01	14.87	.5152	.1445	-.0598	-.0005	.0000	.0029	.0025	.1470
-.3277	.00	-.16	-.0040	.0121	-.0003	-.0003	.0000	-.0002	.0026	.0146

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 101 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-5.19	-.1696	.0117	.0144	-.0002	-.0000	-.0007	.0026	.0143
2.000	.00	-4.21	-.1374	.0118	.0114	-.0001	.0000	-.0006	.0025	.0144
2.000	.00	-3.21	-.1043	.0119	.0083	-.0001	-.0000	-.0005	.0025	.0144
1.999	.00	-2.20	-.0703	.0120	.0052	-.0001	-.0000	-.0003	.0025	.0144
1.998	.00	-1.18	-.0374	.0120	.0021	-.0001	-.0000	-.0003	.0024	.0145
2.000	.00	-.21	-.0049	.0120	-.0008	-.0002	-.0000	-.0003	.0024	.0144
1.999	.00	.82	.0276	.0119	-.0038	-.0002	.0000	-.0002	.0024	.0143
1.998	.00	1.79	.0592	.0117	-.0069	-.0002	.0000	-.0002	.0024	.0141
1.998	.00	2.79	.0923	.0114	-.0101	-.0002	.0000	-.0001	.0024	.0138
2.000	-.00	3.82	.1267	.0111	-.0134	-.0003	.0000	.0001	.0024	.0136
2.001	-.00	4.78	.1574	.0108	-.0167	-.0002	.0001	.0001	.0024	.0133
2.000	-.00	5.79	.1914	.0105	-.0201	-.0002	.0001	.0003	.0025	.0130
1.999	-.00	6.79	.2233	.0102	-.0234	-.0001	.0001	.0003	.0024	.0127
1.999	-.00	7.81	.2554	.0099	-.0267	-.0001	.0001	.0005	.0024	.0123
1.999	-.00	9.82	.3190	.0094	-.0335	-.0002	.0000	.0008	.0024	.0117
2.000	-.01	11.77	.3803	.0089	-.0403	-.0001	.0000	.0011	.0024	.0113
2.000	-.01	13.81	.4442	.0084	-.0474	-.0002	.0000	.0013	.0024	.0108
1.999	-.01	15.78	.5061	.0079	-.0547	-.0003	.0000	.0017	.0024	.0102
2.000	-.01	17.82	.5714	.0072	-.0627	-.0003	-.0000	.0020	.0024	.0096
1.998	.00	-.17	-.0025	.0121	-.0010	-.0002	-.0000	-.0004	.0024	.0145

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.2114	.00	-5.19	-.1679	.0270	.0144	-.0002	-.0000	-.0007	.0026	.0296
-6.2251	.00	-4.21	-.1362	.0219	.0114	-.0001	-.0000	-.0006	.0025	.0244
-5.8312	.00	-3.21	-.1035	.0177	.0083	-.0001	-.0000	-.0005	.0025	.0202
-4.7545	.00	-2.20	-.0698	.0147	.0052	-.0001	-.0000	-.0003	.0025	.0171
-2.9006	.00	-1.18	-.0372	.0128	.0021	-.0001	-.0000	-.0003	.0024	.0152
-.4015	.00	-.21	-.0048	.0120	-.0008	-.0002	-.0000	-.0003	.0024	.0144
2.2350	.00	.82	.0274	.0123	-.0038	-.0002	.0000	-.0002	.0024	.0147
4.3580	.00	1.79	.0568	.0135	-.0069	-.0002	.0000	-.0002	.0024	.0159
5.7726	.00	2.79	.0916	.0159	-.0101	-.0002	.0000	-.0001	.0024	.0183
6.4345	-.00	3.82	.1256	.0195	-.0134	-.0003	.0001	.0001	.0024	.0220
6.5258	-.00	4.78	.1560	.0239	-.0167	-.0002	.0001	.0001	.0024	.0263
6.3605	-.00	5.79	.1893	.0298	-.0201	-.0002	.0001	.0003	.0024	.0322
6.0335	-.00	6.79	.2206	.0366	-.0234	-.0001	.0001	.0003	.0024	.0390
5.6515	-.00	7.81	.2517	.0445	-.0267	-.0001	.0001	.0005	.0024	.0469
4.9140	-.00	9.82	.3127	.0636	-.0335	-.0002	.0001	.0008	.0023	.0660
4.2920	-.01	11.77	.3705	.0863	-.0403	-.0001	.0001	.0011	.0023	.0887
3.7615	-.01	13.81	.4294	.1142	-.0474	-.0002	.0001	.0013	.0023	.1165
3.3398	-.01	15.78	.4849	.1452	-.0547	-.0003	.0001	.0017	.0023	.1475
2.9803	-.01	17.82	.5418	.1818	-.0627	-.0003	.0001	.0020	.0023	.1841
-.2022	.00	-.17	-.0024	.0121	-.0010	-.0002	-.0000	-.0004	.0024	.0145

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 102 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.003	.00	-2.04	-.1461	.0205	.0399	.0000	.0001	-.0009	.0035	.0240
2.004	.00	-1.03	-.0997	.0202	.0350	-.0000	.0002	-.0005	.0035	.0237
2.005	-.00	-.04	-.0563	.0197	.0303	-.0000	.0001	-.0004	.0035	.0232
2.005	-.00	.94	-.0147	.0190	.0257	-.0003	.0001	-.0001	.0035	.0225
2.005	-.00	1.94	.0297	.0182	.0209	-.0002	.0001	-.0000	.0035	.0217
2.003	-.00	2.97	.0782	.0173	.0156	-.0001	.0001	.0004	.0034	.0207
2.002	-.00	3.95	.1197	.0164	.0108	.0001	.0001	.0006	.0034	.0198
2.002	-.01	4.94	.1631	.0155	.0058	-.0000	.0001	.0009	.0034	.0189
2.002	-.01	5.95	.2083	.0146	.0008	-.0001	.0001	.0011	.0034	.0181
2.002	-.01	6.96	.2510	.0137	-.0041	.0001	.0000	.0014	.0034	.0172
2.004	-.01	7.96	.2960	.0127	-.0094	.0001	.0000	.0017	.0035	.0161
2.004	-.01	9.97	.3813	.0106	-.0196	.0000	.0000	.0022	.0034	.0141
2.005	-.01	11.95	.4645	.0087	-.0297	.0000	-.0001	.0027	.0033	.0120
2.005	-.02	13.93	.5452	.0068	-.0399	.0001	-.0001	.0033	.0033	.0101
2.004	-.00	-.04	-.0550	.0197	.0302	-.0000	.0001	-.0003	.0035	.0232

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.6572	.00	-2.04	-.1453	.0257	.0399	.0000	.0001	-.0009	.0035	.0292
-4.5264	.00	-1.03	-.0993	.0219	.0350	-.0000	.0002	-.0005	.0035	.0255
-2.8530	-.00	-.04	-.0563	.0197	.0303	-.0000	.0001	-.0004	.0035	.0232
-.7984	-.00	.94	-.0150	.0188	.0257	-.0003	.0001	-.0001	.0035	.0223
1.5132	-.00	1.94	.0291	.0192	.0209	-.0002	.0001	-.0000	.0035	.0227
3.6219	-.00	2.97	.0772	.0213	.0156	-.0001	.0001	.0004	.0034	.0247
4.8003	-.00	3.95	.1183	.0246	.0108	.0001	.0001	.0006	.0034	.0280
5.4610	-.01	4.94	.1612	.0295	.0058	-.0000	.0001	.0009	.0034	.0329
5.6907	-.01	5.95	.2057	.0361	.0008	-.0001	.0001	.0011	.0034	.0396
5.6196	-.01	6.96	.2475	.0440	-.0041	.0001	.0000	.0014	.0034	.0475
5.4387	-.01	7.96	.2914	.0536	-.0094	.0001	.0000	.0017	.0034	.0570
4.8842	-.01	9.97	.3737	.0765	-.0196	.0000	.0000	.0022	.0034	.0799
4.3237	-.01	11.95	.4527	.1047	-.0297	-.0000	-.0001	.0027	.0033	.1080
3.8269	-.02	13.93	.5276	.1379	-.0399	.0001	-.0001	.0033	.0032	.1411
-2.7846	-.00	-.04	-.0550	.0198	.0302	-.0000	.0001	-.0003	.0035	.0233

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 103 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-2.17	-.1197	.0188	.0299	-.0001	.0001	-.0008	.0031	.0220
1.999	.00	-1.16	-.0814	.0184	.0261	-.0001	.0001	-.0005	.0031	.0215
2.000	.00	-.16	-.0441	.0160	.0222	-.0000	.0001	-.0004	.0031	.0211
2.000	-.00	.85	-.0058	.0174	.0183	-.0001	.0001	-.0002	.0031	.0204
2.002	-.00	1.85	.0312	.0167	.0144	-.0001	.0001	-.0000	.0031	.0198
2.003	-.00	2.83	.0689	.0160	.0104	-.0001	.0001	.0002	.0030	.0191
2.003	-.00	3.83	.1051	.0152	.0066	-.0001	.0001	.0004	.0030	.0183
2.001	-.00	4.84	.1415	.0144	.0026	-.0001	.0001	.0006	.0030	.0175
2.001	-.01	5.84	.1785	.0137	-.0015	-.0001	.0001	.0009	.0030	.0167
2.000	-.01	6.84	.2140	.0128	-.0056	-.0001	.0001	.0012	.0030	.0158
2.000	-.01	7.84	.2506	.0120	-.0097	-.0001	.0001	.0015	.0030	.0151
2.000	-.01	9.82	.3214	.0105	-.0176	-.0001	-.0000	.0018	.0030	.0135
2.001	-.01	11.85	.3936	.0089	-.0259	-.0000	-.0000	.0023	.0029	.0118
2.003	-.01	13.84	.4625	.0074	-.0338	-.0000	-.0001	.0026	.0029	.0103
2.002	-.01	15.84	.5320	.0059	-.0422	.0001	-.0001	.0030	.0028	.0087
2.002	.00	-.14	-.0422	.0180	.0221	-.0001	.0001	-.0005	.0031	.0210

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.0976	.00	-2.17	-.1189	.0233	.0299	-.0001	.0001	-.0008	.0031	.0265
-4.0370	.00	-1.16	-.0810	.0201	.0261	-.0001	.0001	-.0005	.0031	.0232
-2.4384	.00	-.16	-.0441	.0181	.0222	-.0000	.0001	-.0004	.0031	.0212
-.3521	-.00	.85	-.0061	.0173	.0183	-.0000	.0001	-.0002	.0031	.0204
1.7289	-.00	1.85	.0306	.0177	.0144	-.0001	.0001	-.0000	.0031	.0208
3.5069	-.00	2.83	.0681	.0194	.0104	-.0001	.0001	.0002	.0030	.0224
4.6702	-.00	3.83	.1038	.0222	.0066	-.0000	.0001	.0004	.0030	.0252
5.3108	-.00	4.84	.1398	.0263	.0026	-.0001	.0001	.0006	.0030	.0293
5.5443	-.01	5.84	.1762	.0318	-.0015	-.0001	.0001	.0009	.0030	.0348
5.5220	-.01	6.84	.2109	.0382	-.0056	-.0001	.0001	.0012	.0030	.0412
5.3500	-.01	7.84	.2466	.0461	-.0097	-.0001	.0001	.0015	.0030	.0491
4.8374	-.01	9.82	.3149	.0651	-.0176	-.0001	.0000	.0018	.0030	.0681
4.2843	-.01	11.85	.3834	.0895	-.0259	-.0000	-.0000	.0023	.0029	.0924
3.7958	-.01	13.84	.4473	.1179	-.0338	-.0000	-.0001	.0026	.0028	.1207
3.3808	-.01	15.84	.5102	.1509	-.0422	.0001	-.0001	.0030	.0027	.1536
-2.3356	.00	-.14	-.0422	.0181	.0221	-.0001	.0001	-.0005	.0031	.0212

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 104 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.005	.00	-2.18	-.1002	.0177	.0230	.0001	.0001	-.0007	.0028	.0204
2.002	.00	-1.18	-.0665	.0173	.0199	.0001	.0001	-.0005	.0028	.0200
2.001	.00	-.19	-.0333	.0168	.0168	.0000	.0001	-.0004	.0027	.0196
2.001	-.00	.82	-.0004	.0163	.0137	.0001	.0001	-.0001	.0027	.0190
2.002	.00	1.83	.0331	.0157	.0104	.0000	.0000	-.0001	.0027	.0184
2.003	-.00	2.81	.0652	.0151	.0073	-.0000	.0000	.0000	.0027	.0178
2.002	-.00	3.81	.0975	.0144	.0040	.0000	.0001	.0003	.0027	.0171
2.002	-.00	4.80	.1291	.0137	.0007	.0001	.0000	.0005	.0027	.0164
2.001	-.00	5.81	.1622	.0129	-.0027	.0001	.0000	.0007	.0027	.0156
2.001	-.00	6.79	.1940	.0122	-.0061	.0001	.0000	.0008	.0027	.0150
2.001	-.00	7.82	.2266	.0115	-.0096	.0002	-.0000	.0009	.0027	.0142
2.001	-.01	9.81	.2901	.0101	-.0164	.0001	-.0000	.0014	.0027	.0128
2.002	-.01	11.79	.3520	.0088	-.0232	.0001	-.0000	.0018	.0026	.0114
2.002	-.01	13.81	.4146	.0075	-.0300	.0001	-.0000	.0021	.0025	.0101
2.003	-.01	15.79	.4763	.0062	-.0370	.0002	-.0001	.0024	.0025	.0087
2.002	-.01	17.82	.5399	.0048	-.0444	.0001	-.0001	.0026	.0025	.0073
2.002	-.01	18.80	.5708	.0041	-.0479	.0002	-.0002	.0029	.0024	.0065
2.002	.00	-.19	-.0330	.0168	.0168	-.0000	.0001	-.0004	.0027	.0196

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.6358	.00	-2.18	-.0995	.0215	.0230	.0001	.0001	-.0007	.0028	.0242
-3.5458	.00	-1.18	-.0661	.0166	.0199	.0001	.0001	-.0005	.0027	.0214
-1.9650	.00	-.19	-.0333	.0169	.0168	.0000	.0001	-.0004	.0027	.0197
-.0399	-.00	.82	-.0007	.0163	.0137	.0001	.0001	-.0001	.0027	.0190
1.9473	.00	1.83	.0326	.0167	.0104	.0000	.0000	-.0001	.0027	.0194
3.5256	-.00	2.81	.0644	.0183	.0073	-.0000	.0000	.0000	.0027	.0209
4.6238	-.00	3.81	.0963	.0208	.0040	.0000	.0001	.0003	.0027	.0235
5.2164	-.00	4.80	.1275	.0244	.0007	.0001	.0000	.0005	.0027	.0271
5.4648	-.00	5.81	.1601	.0293	-.0027	.0001	.0000	.0007	.0027	.0320
5.4464	-.00	6.79	.1911	.0351	-.0061	.0001	-.0000	.0008	.0027	.0378
5.2792	-.00	7.82	.2230	.0422	-.0096	.0002	-.0000	.0009	.0027	.0449
4.7875	-.01	9.81	.2842	.0594	-.0164	.0001	-.0000	.0014	.0026	.0620
4.2556	-.01	11.79	.3427	.0805	-.0232	.0001	-.0001	.0018	.0026	.0831
3.7711	-.01	13.81	.4038	.1063	-.0300	.0001	-.0001	.0021	.0025	.1088
3.3667	-.01	15.79	.4566	.1356	-.0370	.0001	-.0001	.0024	.0024	.1380
3.0176	-.01	17.82	.5125	.1698	-.0444	.0000	-.0002	.0026	.0023	.1722
2.8704	-.01	18.80	.5390	.1878	-.0479	.0001	-.0002	.0029	.0023	.1901
-1.9441	.00	-.19	-.0330	.0170	.0168	-.0000	.0001	-.0004	.0027	.0197

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 105 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

P/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.009	.00	-2.05	-.1972	.0376	.0661	-.0001	.0002	-.0011	.0044	.0419
2.007	.00	-1.07	-.1530	.0370	.0614	-.0003	.0002	-.0009	.0043	.0413
1.999	.00	-.08	-.1100	.0363	.0568	.0000	.0002	-.0007	.0042	.0405
2.003	-.00	.96	-.0631	.0352	.0517	-.0002	.0001	-.0004	.0042	.0394
2.001	-.00	1.99	-.0167	.0341	.0470	-.0001	.0001	.0000	.0042	.0383
2.003	-.00	2.95	.0263	.0331	.0423	-.0001	.0001	.0003	.0042	.0372
2.007	-.01	3.94	.0716	.0322	.0375	-.0000	.0001	.0005	.0042	.0364
2.012	-.01	4.96	.1172	.0315	.0329	-.0002	.0002	.0008	.0042	.0358
2.011	-.01	5.96	.1603	.0308	.0285	.0001	.0002	.0012	.0043	.0351
2.008	-.01	6.96	.2029	.0297	.0238	.0002	.0000	.0014	.0044	.0340
2.009	-.01	7.98	.2467	.0284	.0190	.0000	.0001	.0017	.0044	.0328
2.007	-.01	9.97	.3313	.0254	.0090	.0001	.0001	.0024	.0044	.0298
2.005	-.02	11.96	.4157	.0225	-.0012	.0002	.0000	.0029	.0043	.0268
2.002	-.02	13.96	.4987	.0197	-.0117	.0002	.0000	.0037	.0042	.0239
2.005	-.02	14.95	.5391	.0181	-.0166	.0000	-.0000	.0037	.0041	.0222
2.011	-.00	-.03	-.1051	.0362	.0564	-.0001	.0002	-.0005	.0042	.0404

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.3891	.00	-2.05	-.1958	.0446	.0661	-.0001	.0002	-.0011	.0044	.0490
-3.8237	.00	-1.07	-.1523	.0398	.0614	-.0003	.0002	-.0009	.0043	.0441
-3.0134	.00	-.08	-.1100	.0364	.0568	.0000	.0002	-.0007	.0042	.0406
-1.8647	-.00	.96	-.0637	.0342	.0517	-.0002	.0001	-.0004	.0042	.0384
-.5330	-.00	1.99	-.0178	.0335	.0470	-.0001	.0001	.0000	.0042	.0377
.7159	-.00	2.95	.0246	.0344	.0423	-.0000	.0001	.0003	.0042	.0385
1.8706	-.01	3.94	.0693	.0370	.0375	-.0000	.0001	.0005	.0042	.0412
2.7445	-.01	4.96	.1141	.0416	.0329	-.0002	.0002	.0008	.0042	.0458
3.3032	-.01	5.96	.1562	.0473	.0285	.0001	.0001	.0012	.0043	.0515
3.6600	-.01	6.96	.1978	.0540	.0238	.0002	.0000	.0014	.0043	.0584
3.8532	-.01	7.98	.2403	.0624	.0190	.0000	.0000	.0017	.0044	.0668
3.9085	-.01	9.97	.3219	.0824	.0090	.0001	.0000	.0024	.0044	.0867
3.7179	-.02	11.96	.4021	.1081	-.0012	.0002	-.0000	.0029	.0042	.1123
3.4369	-.02	13.96	.4792	.1394	-.0117	.0002	-.0000	.0037	.0040	.1435
3.2976	-.02	14.95	.5162	.1565	-.0166	.0000	-.0000	.0037	.0040	.1605
-2.8974	-.00	-.03	-.1050	.0363	.0564	-.0001	.0002	-.0005	.0042	.0404

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 106 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.009	.00	-2.14	-.1578	.0340	.0511	.0001	.0002	-.0009	.0035	.0375
2.004	.00	-1.19	-.1220	.0333	.0474	-.0001	.0002	-.0008	.0035	.0368
2.000	-.00	-.15	-.0826	.0325	.0434	.0000	.0002	-.0005	.0035	.0360
1.999	-.00	.84	-.0452	.0315	.0395	-.0002	.0001	-.0003	.0035	.0351
2.000	-.00	1.84	-.0080	.0306	.0356	-.0001	.0001	.0000	.0035	.0341
2.001	-.00	2.84	.0303	.0296	.0316	-.0001	.0001	.0002	.0036	.0332
2.002	-.00	3.85	.0676	.0288	.0277	-.0001	.0001	.0004	.0036	.0324
2.003	-.01	4.86	.1061	.0281	.0238	-.0000	.0001	.0008	.0036	.0317
2.005	-.01	5.84	.1421	.0272	.0201	.0001	.0001	.0011	.0037	.0309
2.004	-.01	6.84	.1769	.0257	.0159	.0002	.0000	.0013	.0037	.0294
2.003	-.01	7.84	.2136	.0245	.0119	.0001	-.0000	.0016	.0037	.0282
2.002	-.01	9.85	.2854	.0220	.0037	.0000	.0000	.0021	.0037	.0256
2.001	-.01	11.83	.3559	.0194	-.0049	-.0001	.0000	.0026	.0036	.0230
2.001	-.02	13.85	.4273	.0167	-.0134	.0001	-.0000	.0030	.0036	.0203
2.001	-.02	15.87	.4993	.0138	-.0225	.0001	-.0001	.0034	.0035	.0173
2.003	-.02	17.82	.5655	.0108	-.0308	.0003	-.0002	.0039	.0034	.0143
2.005	-.00	-.16	-.0815	.0325	.0433	.0002	.0001	-.0004	.0035	.0360

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.9265	.00	-2.14	-.1564	.0398	.0511	.0001	.0002	-.0009	.0035	.0434
-3.3849	.00	-1.19	-.1213	.0358	.0474	-.0001	.0002	-.0008	.0035	.0393
-2.5256	-.00	-.15	-.0825	.0327	.0434	.0000	.0002	-.0005	.0035	.0362
-1.4772	-.00	.84	-.0456	.0309	.0395	-.0002	.0001	-.0003	.0035	.0344
-.2962	-.00	1.84	-.0090	.0303	.0356	-.0001	.0001	.0000	.0035	.0339
.9251	-.00	2.84	.0288	.0311	.0316	-.0001	.0001	.0002	.0035	.0347
1.9709	-.00	3.85	.0655	.0332	.0277	-.0001	.0001	.0004	.0036	.0368
2.7941	-.01	4.86	.1033	.0370	.0238	-.0000	.0001	.0008	.0036	.0406
3.3376	-.01	5.84	.1386	.0415	.0201	.0001	.0001	.0011	.0036	.0452
3.7051	-.01	6.84	.1726	.0466	.0159	.0002	-.0000	.0013	.0036	.0502
3.8983	-.01	7.84	.2083	.0534	.0119	.0001	-.0000	.0016	.0036	.0571
3.9359	-.01	9.85	.2774	.0705	.0037	.0000	.0000	.0021	.0036	.0741
3.7444	-.01	11.83	.3444	.0920	-.0048	-.0001	.0000	.0026	.0035	.0955
3.4651	-.02	13.85	.4109	.1186	-.0134	.0001	-.0001	.0030	.0035	.1220
3.1812	-.02	15.87	.4765	.1498	-.0225	.0000	-.0002	.0034	.0034	.1532
2.9180	-.02	17.82	.5351	.1834	-.0308	.0003	-.0002	.0039	.0033	.1867
-2.4901	-.00	-.16	-.0814	.0327	.0433	.0002	.0001	-.0004	.0035	.0362

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 107 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.997	.00	-2.20	-.1349	.0317	.0420	.0002	.0001	-.0009	.0030	.0347
1.998	.00	-1.18	-.1007	.0309	.0387	.0002	.0001	-.0006	.0030	.0339
2.001	-.00	-.20	-.0678	.0306	.0354	.0001	.0001	-.0004	.0030	.0331
2.002	-.00	.84	-.0332	.0290	.0319	-.0000	.0001	-.0003	.0030	.0320
2.003	-.00	1.82	-.0002	.0280	.0287	.0001	.0001	-.0001	.0031	.0311
2.002	-.00	2.80	.0324	.0271	.0253	.0002	.0001	.0002	.0031	.0301
2.001	-.00	3.82	.0667	.0261	.0218	.0001	.0000	.0004	.0031	.0292
2.001	-.01	4.82	.1001	.0252	.0184	.0002	.0001	.0007	.0031	.0283
2.000	-.01	5.81	.1319	.0243	.0151	.0003	.0001	.0009	.0031	.0274
2.000	-.01	6.83	.1645	.0230	.0116	.0003	.0000	.0012	.0032	.0262
2.000	-.01	7.80	.1953	.0217	.0079	.0003	.0000	.0014	.0032	.0248
2.001	-.01	9.84	.2615	.0190	.0004	.0003	-.0000	.0018	.0032	.0222
2.001	-.01	11.80	.3233	.0167	-.0067	.0002	-.0000	.0021	.0032	.0199
2.001	-.01	13.82	.3876	.0143	-.0140	.0002	-.0000	.0024	.0031	.0175
2.001	-.01	15.79	.4487	.0122	-.0210	.0002	-.0001	.0027	.0031	.0153
2.001	-.02	17.81	.5113	.0099	-.0286	.0002	-.0001	.0032	.0030	.0129
2.001	-.01	19.81	.5753	.0072	-.0358	.0003	-.0002	.0033	.0029	.0101
2.003	-.00	-.17	-.0666	.0300	.0353	.0001	.0001	-.0003	.0030	.0330

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.6277	.00	-2.20	-.1336	.0368	.0420	.0002	.0001	-.0009	.0030	.0398
-3.0356	.00	-1.18	-.1000	.0330	.0387	.0002	.0001	-.0006	.0030	.0360
-2.2378	-.00	-.20	-.0677	.0303	.0354	.0001	.0001	-.0004	.0030	.0333
-1.1779	-.00	.84	-.0336	.0285	.0319	-.0000	.0001	-.0003	.0030	.0316
-.0381	-.00	1.82	-.0011	.0280	.0287	.0001	.0001	-.0001	.0031	.0311
1.0863	-.00	2.80	.0311	.0286	.0253	.0002	.0001	.0002	.0031	.0317
2.1268	-.00	3.82	.0648	.0305	.0218	.0001	.0000	.0004	.0031	.0336
2.9108	-.01	4.82	.0977	.0336	.0184	.0002	.0001	.0007	.0031	.0366
3.4311	-.01	5.81	.1288	.0375	.0151	.0003	.0000	.0009	.0031	.0406
3.7876	-.01	6.83	.1606	.0424	.0116	.0003	.0000	.0012	.0031	.0455
3.9720	-.01	7.80	.1905	.0480	.0079	.0003	-.0000	.0014	.0031	.0511
4.0100	-.01	9.84	.2544	.0635	.0004	.0003	-.0001	.0018	.0031	.0666
3.7959	-.01	11.80	.3130	.0825	-.0067	.0002	-.0000	.0021	.0031	.0856
3.5009	-.01	13.82	.3729	.1065	-.0140	.0001	-.0001	.0024	.0031	.1096
3.1996	-.01	15.79	.4284	.1339	-.0210	.0002	-.0002	.0027	.0030	.1369
2.9182	-.02	17.81	.4838	.1658	-.0286	.0002	-.0002	.0032	.0029	.1687
2.6719	-.01	19.81	.5389	.2017	-.0358	.0002	-.0003	.0033	.0028	.2044
-2.2027	-.00	-.17	-.0665	.0302	.0353	.0001	.0001	-.0003	.0030	.0332

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 51 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.04	-.2254	.0119	.0309	-.0004	-.0001	.0000	.0025	.0144
2.000	.00	-4.05	-.1816	.0122	.0251	-.0004	-.0000	-.0000	.0025	.0146
2.000	.00	-3.06	-.1380	.0124	.0188	-.0007	-.0001	-.0001	.0024	.0149
2.001	.00	-2.04	-.0932	.0126	.0126	-.0005	-.0000	-.0001	.0024	.0151
2.001	.00	-1.06	-.0505	.0128	.0066	-.0003	-.0000	-.0002	.0024	.0152
2.000	.00	-.08	-.0070	.0128	.0003	-.0006	.0000	-.0002	.0024	.0151
2.000	.00	.98	.0400	.0125	-.0062	-.0007	.0000	-.0002	.0024	.0149
2.000	.00	2.01	.0855	.0120	-.0127	-.0006	.0001	-.0002	.0024	.0144
2.000	-.00	2.95	.1267	.0116	-.0184	-.0005	.0001	-.0002	.0024	.0140
2.000	-.00	3.91	.1681	.0111	-.0241	-.0006	.0001	-.0003	.0025	.0136
2.000	-.00	4.99	.2168	.0106	-.0307	-.0007	.0001	-.0003	.0026	.0132
2.000	-.00	5.99	.2618	.0102	-.0370	-.0003	.0001	-.0003	.0026	.0128
2.000	-.00	6.95	.3033	.0097	-.0429	-.0005	.0001	-.0003	.0026	.0123
2.000	-.00	7.95	.3449	.0093	-.0489	-.0004	.0001	-.0002	.0026	.0119
2.001	-.00	9.95	.4309	.0086	-.0614	-.0002	.0001	-.0002	.0026	.0112
2.001	-.00	11.97	.5160	.0078	-.0740	-.0003	.0001	.0000	.0026	.0105
2.002	.00	-.06	-.0051	.0128	.0003	-.0006	.0000	-.0001	.0024	.0152

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-7.0603	.00	-5.04	-.2234	.0316	.0309	-.0004	-.0001	.0000	.0025	.0342
-7.2259	.00	-4.05	-.1803	.0250	.0251	-.0004	-.0001	-.0000	.0025	.0274
-6.9360	.00	-3.06	-.1371	.0198	.0188	-.0007	-.0001	-.0001	.0024	.0222
-5.8078	.00	-2.04	-.0926	.0160	.0126	-.0005	-.0001	-.0001	.0024	.0184
-3.6701	.00	-1.06	-.0503	.0137	.0066	-.0003	-.0000	-.0002	.0024	.0161
-.5491	.00	-.08	-.0070	.0128	.0003	-.0006	.0000	-.0002	.0024	.0152
3.0228	.00	.98	.0398	.0132	-.0062	-.0007	.0000	-.0002	.0024	.0155
5.6560	.00	2.01	.0850	.0150	-.0127	-.0006	.0001	-.0002	.0024	.0174
6.9683	-.00	2.95	.1259	.0181	-.0184	-.0005	.0001	-.0002	.0024	.0205
7.3954	-.00	3.91	.1670	.0226	-.0241	-.0006	.0001	-.0003	.0025	.0251
7.3053	-.00	4.99	.2151	.0294	-.0307	-.0006	.0001	-.0003	.0025	.0320
6.9280	-.00	5.99	.2593	.0374	-.0370	-.0003	.0001	-.0003	.0026	.0400
6.4753	-.00	6.95	.2999	.0463	-.0429	-.0005	.0001	-.0003	.0026	.0489
5.9833	-.00	7.95	.3403	.0569	-.0489	-.0004	.0002	-.0002	.0026	.0595
5.0980	-.00	9.95	.4230	.0830	-.0614	-.0002	.0001	-.0002	.0026	.0855
4.3870	-.00	11.97	.5032	.1147	-.0740	-.0003	.0001	.0000	.0026	.1173
-.3970	.00	-.06	-.0051	.0128	.0003	-.0006	.0000	-.0001	.0024	.0152

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 54 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.13	-.1920	.0121	.0236	-.0003	-.0001	.0002	.0025	.0145
2.000	.00	-4.13	-.1549	.0121	.0188	-.0004	-.0001	.0001	.0024	.0145
1.999	.00	-3.13	-.1180	.0122	.0143	-.0001	-.0000	.0000	.0023	.0146
2.000	.00	-2.16	-.0820	.0123	.0098	-.0002	-.0000	-.0000	.0023	.0146
2.000	.00	-1.16	-.0437	.0124	.0049	-.0003	-.0000	-.0001	.0023	.0147
2.000	.00	-.14	-.0060	.0123	.0001	-.0003	-.0000	-.0001	.0023	.0146
2.000	.00	.85	.0308	.0121	-.0046	-.0002	-.0000	-.0003	.0023	.0144
2.000	.00	1.89	.0686	.0119	-.0096	-.0002	.0000	-.0002	.0023	.0142
2.000	.00	2.88	.1070	.0115	-.0144	-.0003	.0000	-.0002	.0023	.0138
2.000	.00	3.88	.1430	.0112	-.0192	-.0005	.0001	-.0003	.0024	.0136
2.000	.00	4.91	.1826	.0110	-.0244	-.0003	.0001	-.0005	.0024	.0134
2.000	.00	5.86	.2163	.0107	-.0288	-.0004	.0001	-.0005	.0024	.0131
2.000	.00	6.91	.2552	.0105	-.0342	-.0004	.0001	-.0006	.0024	.0129
2.000	.00	7.87	.2892	.0102	-.0389	-.0003	.0001	-.0006	.0024	.0126
1.999	.00	9.85	.3591	.0096	-.0486	-.0004	.0001	-.0006	.0024	.0120
1.999	.00	11.85	.4295	.0091	-.0585	-.0004	.0001	-.0006	.0024	.0115
1.999	-.00	13.86	.4993	.0086	-.0688	-.0003	.0001	-.0005	.0024	.0110
1.999	-.00	15.87	.5679	.0080	-.0790	-.0002	.0001	-.0005	.0025	.0105
2.000	.00	-.14	-.0042	.0124	-.0002	-.0004	-.0000	-.0002	.0023	.0147

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.5123	.00	-5.13	-.1901	.0292	.0236	-.0003	-.0001	.0002	.0025	.0317
-6.6099	.00	-4.13	-.1536	.0232	.0188	-.0003	-.0001	.0001	.0024	.0256
-6.2819	.00	-3.13	-.1171	.0186	.0143	-.0001	-.0001	.0000	.0023	.0210
-5.2958	.00	-2.16	-.0815	.0154	.0098	-.0002	-.0001	-.0000	.0023	.0177
-3.2837	.00	-1.16	-.0435	.0132	.0049	-.0003	-.0000	-.0001	.0023	.0156
-.4805	.00	-.14	-.0059	.0123	.0001	-.0003	-.0000	-.0001	.0023	.0146
2.4303	.00	.85	.0306	.0126	-.0046	-.0002	-.0000	-.0003	.0023	.0149
4.8310	.00	1.89	.0682	.0141	-.0096	-.0002	.0000	-.0002	.0023	.0164
6.2978	.00	2.88	.1062	.0169	-.0144	-.0003	.0001	-.0002	.0023	.0192
6.8010	.00	3.88	.1419	.0209	-.0192	-.0005	.0001	-.0003	.0024	.0232
6.8117	.00	4.91	.1810	.0266	-.0244	-.0003	.0001	-.0005	.0024	.0289
6.5340	.00	5.86	.2141	.0328	-.0288	-.0004	.0001	-.0005	.0024	.0352
6.1346	.00	6.91	.2521	.0411	-.0342	-.0004	.0002	-.0006	.0024	.0435
5.7329	.00	7.87	.2851	.0497	-.0389	-.0003	.0001	-.0006	.0024	.0521
4.9651	.00	9.85	.3522	.0709	-.0486	-.0003	.0002	-.0006	.0024	.0733
4.3090	.00	11.85	.4184	.0971	-.0585	-.0004	.0002	-.0006	.0024	.0995
3.7743	-.00	13.86	.4827	.1279	-.0688	-.0003	.0002	-.0005	.0024	.1303
3.3384	-.00	15.87	.5440	.1630	-.0790	-.0001	.0001	-.0005	.0024	.1654
-.3404	.00	-.14	-.0042	.0124	-.0002	-.0004	-.0000	-.0002	.0023	.0147

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 55 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.19	-.1715	.0122	.0180	-.0002	-.0001	.0001	.0023	.0145
2.001	.00	-4.16	-.1372	.0121	.0141	-.0001	-.0001	.0000	.0023	.0144
2.000	.00	-3.16	-.1051	.0121	.0105	-.0001	-.0001	-.0000	.0022	.0143
2.000	.00	-2.16	-.0718	.0122	.0067	-.0002	-.0001	.0000	.0022	.0144
2.000	.00	-1.19	-.0389	.0122	.0029	-.0002	-.0000	-.0001	.0022	.0144
2.000	.00	-.14	-.0052	.0121	-.0010	-.0002	-.0000	-.0001	.0022	.0143
2.000	.00	.84	.0268	.0120	-.0048	-.0002	-.0000	-.0002	.0022	.0142
2.000	.00	1.84	.0595	.0118	-.0086	-.0002	.0000	-.0002	.0022	.0140
2.000	.00	2.88	.0940	.0115	-.0129	-.0002	.0000	-.0002	.0022	.0137
2.000	.00	3.85	.1260	.0112	-.0167	-.0002	.0000	-.0003	.0022	.0134
2.000	.00	4.86	.1591	.0111	-.0208	-.0002	.0000	-.0004	.0022	.0133
2.000	.00	5.82	.1901	.0109	-.0248	-.0002	.0001	-.0004	.0022	.0131
2.000	.00	6.84	.2225	.0107	-.0290	-.0003	.0001	-.0006	.0022	.0129
2.000	.00	7.83	.2541	.0106	-.0331	-.0002	.0001	-.0006	.0022	.0128
1.999	.00	9.83	.3177	.0102	-.0417	-.0002	.0001	-.0005	.0022	.0124
1.999	.00	11.83	.3801	.0098	-.0503	-.0002	.0001	-.0006	.0022	.0120
1.999	.00	13.86	.4433	.0093	-.0592	-.0002	.0001	-.0006	.0022	.0115
1.999	.00	15.86	.5066	.0088	-.0685	-.0001	.0001	-.0006	.0023	.0111
2.000	-.00	17.86	.5693	.0082	-.0778	-.0002	.0001	-.0005	.0023	.0105
2.001	-.00	18.84	.6013	.0079	-.0826	-.0002	.0001	-.0005	.0024	.0103
2.000	.00	-.12	-.0026	.0122	-.0011	-.0002	-.0000	-.0001	.0022	.0144

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.1415	.00	-5.19	-.1697	.0276	.0180	-.0002	-.0001	.0001	.0023	.0300
-6.1759	.00	-4.16	-.1360	.0220	.0141	-.0001	-.0001	.0000	.0023	.0243
-5.8317	.00	-3.16	-.1042	.0179	.0105	-.0001	-.0001	-.0000	.0022	.0201
-4.7935	.00	-2.16	-.0713	.0149	.0067	-.0002	-.0001	.0000	.0022	.0171
-2.9727	.00	-1.19	-.0387	.0130	.0029	-.0002	-.0001	-.0001	.0022	.0152
-.4246	.00	-.14	-.0052	.0122	-.0010	-.0002	-.0000	-.0001	.0022	.0144
2.1461	.00	.84	.0266	.0124	-.0048	-.0002	-.0000	-.0002	.0022	.0146
4.3054	.00	1.84	.0591	.0137	-.0086	-.0002	.0000	-.0002	.0022	.0159
5.7599	.00	2.88	.0933	.0162	-.0129	-.0002	.0000	-.0002	.0022	.0184
6.3555	.00	3.85	.1249	.0197	-.0167	-.0002	.0000	-.0003	.0022	.0219
6.4334	.00	4.86	.1576	.0245	-.0208	-.0002	.0001	-.0004	.0022	.0267
6.2414	.00	5.82	.1880	.0301	-.0248	-.0002	.0001	-.0004	.0022	.0323
5.9161	.00	6.84	.2197	.0371	-.0290	-.0003	.0001	-.0006	.0022	.0393
5.5538	.00	7.83	.2503	.0451	-.0331	-.0002	.0001	-.0006	.0022	.0472
4.8413	.00	9.83	.3113	.0643	-.0417	-.0002	.0001	-.0005	.0022	.0665
4.2294	.00	11.83	.3701	.0875	-.0503	-.0002	.0001	-.0006	.0022	.0897
3.7151	.00	13.86	.4281	.1152	-.0592	-.0002	.0001	-.0006	.0022	.1174
3.3017	.00	15.86	.4849	.1469	-.0685	-.0001	.0001	-.0006	.0022	.1491
2.9566	-.00	17.86	.5394	.1824	-.0778	-.0001	.0001	-.0005	.0022	.1846
2.8104	-.00	18.84	.5666	.2016	-.0826	-.0002	.0001	-.0005	.0022	.2038
-.2151	.00	-.12	-.0026	.0122	-.0011	-.0002	-.0000	-.0001	.0022	.0144

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 57 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.002	.00	-2.06	-.1572	.0220	.0486	-.0004	.0000	-.0004	.0033	.0253
2.004	.00	-1.06	-.1136	.0216	.0423	-.0002	.0000	-.0004	.0033	.0249
2.005	.00	-.02	-.0663	.0209	.0355	-.0005	-.0000	-.0003	.0032	.0241
2.001	.00	.97	-.0212	.0200	.0291	-.0003	.0000	-.0003	.0032	.0232
1.999	.00	1.96	.0218	.0190	.0227	-.0004	.0001	-.0004	.0032	.0223
1.997	.00	2.94	.0659	.0180	.0168	-.0003	.0001	-.0005	.0032	.0213
1.997	.00	3.97	.1120	.0170	.0106	-.0001	.0001	-.0005	.0033	.0202
1.999	.00	4.95	.1540	.0158	.0047	.0001	.0001	-.0005	.0033	.0191
2.001	.00	5.94	.1984	.0147	-.0013	-.0003	.0001	-.0006	.0033	.0180
2.001	.00	6.93	.2412	.0136	-.0074	-.0001	.0001	-.0007	.0033	.0169
2.002	.00	7.95	.2855	.0125	-.0138	-.0002	.0001	-.0006	.0033	.0157
2.002	.00	9.99	.3725	.0104	-.0265	.0002	.0001	-.0005	.0032	.0135
2.003	.00	11.99	.4560	.0081	-.0387	-.0002	.0001	-.0005	.0032	.0113
2.003	-.00	12.93	.4967	.0071	-.0450	-.0001	.0001	-.0004	.0032	.0103
2.003	.00	-.02	-.0641	.0209	.0352	-.0004	.0000	-.0002	.0032	.0241

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.6467	.00	-2.06	-.1563	.0277	.0486	-.0004	-.0000	-.0004	.0033	.0310
-4.7780	.00	-1.06	-.1132	.0237	.0423	-.0002	.0000	-.0004	.0033	.0270
-3.1688	.00	-.02	-.0663	.0209	.0355	-.0005	-.0000	-.0003	.0032	.0242
-1.0985	.00	.97	-.0216	.0196	.0291	-.0003	.0000	-.0003	.0032	.0229
1.0668	.00	1.96	.0211	.0198	.0227	-.0004	.0001	-.0004	.0032	.0230
3.0332	.00	2.94	.0649	.0214	.0168	-.0003	.0001	-.0005	.0032	.0246
4.4771	.00	3.97	.1105	.0247	.0106	-.0001	.0001	-.0005	.0033	.0279
5.2319	.00	4.95	.1521	.0291	.0047	.0001	.0001	-.0005	.0033	.0323
5.5659	.00	5.94	.1958	.0352	-.0013	-.0002	.0001	-.0006	.0033	.0384
5.5827	.00	6.93	.2378	.0426	-.0074	-.0001	.0001	-.0007	.0033	.0459
5.4234	.00	7.95	.2810	.0518	-.0138	-.0001	.0001	-.0006	.0032	.0551
4.8789	.00	9.99	.3650	.0748	-.0265	.0002	.0000	-.0005	.0031	.0780
4.3282	.00	11.99	.4444	.1027	-.0387	-.0002	.0002	-.0005	.0031	.1058
4.0881	-.00	12.93	.4825	.1180	-.0450	-.0001	.0001	-.0004	.0031	.1211
-3.0701	.00	-.02	-.0641	.0209	.0352	-.0004	.0000	-.0002	.0032	.0241

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 58 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-2.16	-.1275	.0199	.0361	-.0001	-.0000	-.0001	.0030	.0229
1.999	.00	-1.16	-.0894	.0194	.0313	-.0000	-.0000	-.0000	.0030	.0224
1.999	.00	-.15	-.0525	.0188	.0264	-.0001	-.0000	-.0002	.0030	.0218
1.998	.00	.84	-.0145	.0181	.0216	-.0000	-.0000	-.0002	.0030	.0211
1.998	.00	1.84	.0231	.0173	.0166	-.0001	.0000	-.0002	.0030	.0203
1.998	.00	2.87	.0614	.0165	.0116	-.0001	.0000	-.0003	.0030	.0194
1.998	.00	3.88	.0993	.0156	.0066	-.0001	.0000	-.0004	.0030	.0186
2.000	.00	4.83	.1340	.0149	.0021	-.0001	.0001	-.0004	.0030	.0179
2.002	.00	5.86	.1718	.0140	-.0029	-.0002	.0001	-.0004	.0030	.0171
2.002	.00	6.82	.2069	.0132	-.0076	-.0003	.0001	-.0005	.0031	.0163
2.000	.00	7.84	.2434	.0124	-.0127	-.0001	.0001	-.0005	.0031	.0155
1.999	.00	9.88	.3151	.0106	-.0226	-.0002	.0001	-.0005	.0031	.0137
1.998	.00	11.87	.3851	.0069	-.0327	-.0001	.0001	-.0005	.0031	.0120
1.998	.00	13.89	.4558	.0072	-.0428	-.0001	.0001	-.0004	.0030	.0102
1.998	-.00	15.89	.5231	.0056	-.0527	-.0001	.0001	-.0004	.0030	.0085
2.000	-.00	16.84	.5562	.0048	-.0575	.0001	.0001	-.0003	.0029	.0077
2.002	.00	-.13	-.0505	.0188	.0263	-.0002	-.0000	-.0001	.0030	.0218

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.1320	.00	-2.16	-.1267	.0247	.0361	-.0001	-.0000	-.0001	.0030	.0277
-4.1998	.00	-1.16	-.0890	.0212	.0313	-.0000	-.0000	-.0000	.0030	.0242
-2.7709	.00	-.15	-.0524	.0189	.0264	-.0001	-.0000	-.0002	.0030	.0219
-.8254	.00	.84	-.0148	.0179	.0216	-.0000	-.0000	-.0002	.0030	.0209
1.2515	.00	1.84	.0226	.0180	.0166	-.0001	.0000	-.0002	.0030	.0210
3.1005	.00	2.87	.0605	.0195	.0116	-.0001	.0000	-.0003	.0030	.0225
4.3910	.00	3.88	.0980	.0223	.0066	-.0001	.0001	-.0004	.0030	.0253
5.0677	.00	4.83	.1323	.0261	.0021	-.0001	.0001	-.0004	.0030	.0291
5.3782	.00	5.86	.1695	.0315	-.0029	-.0002	.0001	-.0004	.0030	.0345
5.4098	.00	6.82	.2039	.0377	-.0076	-.0003	.0001	-.0005	.0031	.0407
5.2653	.00	7.84	.2394	.0455	-.0127	-.0001	.0001	-.0005	.0031	.0485
4.7804	.00	9.88	.3086	.0645	-.0226	-.0001	.0001	-.0005	.0030	.0676
4.2622	.00	11.87	.3750	.0880	-.0327	-.0001	.0001	-.0005	.0030	.0910
3.7867	.00	13.89	.4407	.1164	-.0428	-.0001	.0001	-.0004	.0029	.1193
3.3762	-.00	15.89	.5016	.1486	-.0527	-.0001	.0001	-.0004	.0028	.1514
3.2041	-.00	16.84	.5309	.1657	-.0575	.0001	.0000	-.0003	.0028	.1685
-2.6654	.00	-.13	-.0504	.0189	.0263	-.0002	-.0000	-.0001	.0030	.0219

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 59 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.998	.00	-2.13	-.1061	.0184	.0278	-.0001	-.0001	-.0002	.0027	.0211
1.997	.00	-1.11	-.0727	.0179	.0240	-.0001	-.0000	-.0001	.0027	.0206
2.000	.00	-.18	-.0413	.0174	.0202	-.0000	-.0000	-.0001	.0027	.0201
2.000	.00	.85	-.0072	.0168	.0161	-.0001	-.0000	-.0002	.0027	.0195
2.000	.00	1.83	.0255	.0161	.0121	.0001	-.0000	-.0001	.0027	.0188
2.000	.00	2.82	.0580	.0154	.0081	-.0000	-.0000	-.0003	.0027	.0181
2.000	.00	3.87	.0922	.0146	.0039	-.0001	-.0000	-.0002	.0027	.0173
2.000	.00	4.84	.1232	.0140	.0000	-.0001	.0000	-.0003	.0027	.0167
1.999	.00	5.82	.1546	.0133	-.0041	.0000	.0000	-.0003	.0028	.0161
1.999	.00	6.83	.1867	.0126	-.0083	-.0001	.0000	-.0003	.0028	.0154
1.999	.00	7.86	.2201	.0119	-.0126	-.0000	.0000	-.0003	.0028	.0147
1.999	.00	9.87	.2836	.0106	-.0212	.0000	.0000	-.0005	.0028	.0133
1.999	.00	11.83	.3447	.0093	-.0294	.0001	.0000	-.0004	.0028	.0120
1.998	.00	13.82	.4057	.0078	-.0380	.0001	.0001	-.0004	.0027	.0105
1.999	-.00	15.82	.4679	.0063	-.0466	.0001	.0001	-.0003	.0027	.0091
2.001	-.00	17.88	.5326	.0048	-.0559	.0001	.0001	-.0003	.0027	.0074
1.999	.00	18.84	.5625	.0040	-.0604	.0002	.0000	-.0004	.0026	.0066
2.000	.00	-.15	-.0401	.0174	.0200	-.0001	-.0000	-.0002	.0027	.0201

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.7195	.00	-2.13	-.1054	.0223	.0278	-.0001	-.0001	-.0002	.0027	.0250
-3.7371	.00	-1.11	-.0723	.0194	.0240	-.0001	-.0001	-.0001	.0027	.0220
-2.3534	.00	-.18	-.0413	.0175	.0202	-.0000	-.0000	-.0001	.0027	.0202
-.4491	.00	.85	-.0075	.0167	.0161	-.0001	-.0000	-.0002	.0027	.0194
1.4788	.00	1.83	.0250	.0169	.0121	.0001	-.0000	-.0001	.0027	.0196
3.1397	.00	2.82	.0572	.0182	.0081	-.0000	-.0000	-.0003	.0027	.0209
4.3745	.00	3.87	.0911	.0208	.0039	-.0001	-.0000	-.0002	.0027	.0235
5.0032	.00	4.84	.1216	.0243	.0000	-.0001	.0000	-.0003	.0027	.0270
5.2752	.00	5.82	.1525	.0289	-.0041	.0000	.0000	-.0003	.0027	.0316
5.2966	.00	6.83	.1839	.0347	-.0083	-.0001	.0000	-.0003	.0028	.0375
5.1635	.00	7.86	.2164	.0419	-.0126	-.0000	.0000	-.0003	.0028	.0447
4.7046	.00	9.87	.2776	.0590	-.0212	.0001	.0000	-.0005	.0027	.0618
4.2064	.00	11.83	.3354	.0797	-.0294	.0001	.0000	-.0004	.0027	.0824
3.7544	.00	13.82	.3921	.1044	-.0380	.0001	.0000	-.0004	.0027	.1071
3.3548	-.00	15.82	.4484	.1337	-.0466	.0001	.0000	-.0003	.0026	.1363
3.0072	-.00	17.88	.5054	.1681	-.0559	.0002	.0000	-.0003	.0025	.1706
2.8635	.00	18.84	.5310	.1854	-.0604	.0002	-.0000	-.0004	.0025	.1879
-2.2874	.00	-.15	-.0401	.0175	.0200	-.0001	-.0000	-.0002	.0027	.0202

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 60 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.495	.00	-2.07	-.2122	.0412	.0760	-.0002	-.0000	-.0003	.0037	.0448
1.498	.00	-1.05	-.1646	.0403	.0694	-.0001	.0000	-.0002	.0037	.0440
1.498	.00	-.05	-.1214	.0394	.0633	-.0002	.0000	-.0001	.0036	.0430
1.499	.00	.97	-.0753	.0383	.0571	-.0002	.0000	-.0002	.0037	.0419
1.500	.00	1.96	-.0318	.0372	.0512	.0000	.0000	-.0001	.0037	.0409
1.500	.00	2.93	.0109	.0366	.0460	-.0003	.0000	.0000	.0038	.0403
1.501	.00	3.94	.0549	.0356	.0406	-.0002	.0000	.0000	.0038	.0394
1.501	.00	4.96	.1006	.0343	.0346	-.0002	.0000	-.0000	.0039	.0382
1.500	-.00	5.91	.1432	.0329	.0291	-.0002	.0000	-.0000	.0040	.0369
1.499	.00	6.93	.1886	.0314	.0229	-.0002	.0000	-.0002	.0041	.0355
1.498	-.00	7.93	.2305	.0303	.0172	-.0001	.0001	.0001	.0041	.0344
1.498	-.00	9.95	.3150	.0271	.0052	-.0002	.0000	.0003	.0041	.0312
1.498	-.00	11.95	.4013	.0235	-.0078	-.0001	.0000	.0006	.0039	.0274
1.499	-.00	12.92	.4437	.0215	-.0148	-.0000	-.0001	.0005	.0039	.0253
1.500	.00	-.03	-.1194	.0394	.0631	-.0002	.0000	-.0002	.0036	.0430

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.3125	.00	-2.07	-.2106	.0488	.0760	-.0002	-.0000	-.0003	.0037	.0525
-3.7827	.00	-1.05	-.1639	.0433	.0694	-.0001	.0000	-.0002	.0037	.0470
-3.0733	.00	-.05	-.1214	.0395	.0633	-.0002	.0000	-.0001	.0036	.0431
-2.0510	.00	.97	-.0759	.0370	.0571	-.0002	.0000	-.0002	.0037	.0407
-.9162	.00	1.96	-.0331	.0361	.0512	.0000	.0000	-.0001	.0037	.0398
.2433	.00	2.93	.0090	.0371	.0460	-.0003	.0000	.0000	.0038	.0408
1.3318	.00	3.94	.0523	.0393	.0406	-.0002	.0000	.0000	.0038	.0431
2.2681	.00	4.96	.0972	.0429	.0346	-.0002	.0001	-.0000	.0039	.0468
2.9280	-.00	5.91	.1391	.0475	.0291	-.0002	.0001	-.0000	.0040	.0515
3.4044	.00	6.93	.1835	.0539	.0229	-.0002	.0001	-.0002	.0041	.0580
3.6269	-.00	7.93	.2241	.0618	.0172	-.0001	.0001	.0001	.0041	.0659
3.7655	-.00	9.95	.3056	.0812	.0052	-.0002	.0000	.0003	.0040	.0852
3.6539	-.00	11.95	.3877	.1061	-.0078	-.0001	.0000	.0006	.0038	.1100
3.5608	-.00	12.92	.4277	.1201	-.0148	-.0000	-.0000	.0005	.0038	.1239
-3.0281	.00	-.03	-.1194	.0394	.0631	-.0002	.0000	-.0002	.0036	.0431

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 61 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.00	-2.18	-.1697	.0368	.0586	.0001	-.0000	-.0003	.0031	.0399
1.998	.00	-1.16	-.1318	.0359	.0536	-.0001	-.0000	-.0003	.0031	.0391
1.997	.00	-.13	-.0930	.0349	.0486	-.0002	.0000	-.0003	.0032	.0381
1.999	.00	.83	-.0553	.0338	.0438	-.0002	.0000	-.0002	.0033	.0371
2.001	.00	1.85	-.0169	.0327	.0389	-.0002	.0000	-.0002	.0033	.0360
2.003	.00	2.84	.0200	.0318	.0345	-.0002	.0000	-.0000	.0033	.0351
2.004	.00	3.83	.0573	.0307	.0296	-.0002	-.0000	-.0001	.0034	.0342
2.003	.00	4.84	.0952	.0298	.0250	-.0003	.0000	-.0001	.0035	.0333
2.002	.00	5.86	.1325	.0286	.0199	-.0002	-.0000	-.0001	.0035	.0321
2.002	-.00	6.85	.1689	.0274	.0151	-.0003	.0001	-.0001	.0036	.0310
2.002	-.00	7.85	.2043	.0262	.0104	-.0002	.0000	.0001	.0036	.0298
2.002	-.00	9.86	.2754	.0233	.0004	-.0003	.0000	.0002	.0036	.0269
2.002	-.00	11.87	.3470	.0201	-.0106	-.0002	.0000	.0006	.0035	.0236
2.002	-.00	13.86	.4173	.0171	-.0211	-.0001	-.0000	.0006	.0035	.0206
2.002	-.01	15.87	.4862	.0140	-.0314	-.0001	-.0000	.0008	.0034	.0174
2.004	-.01	16.88	.5211	.0124	-.0365	-.0001	-.0001	.0009	.0034	.0158
2.003	.00	-.14	-.0917	.0349	.0486	-.0002	-.0000	-.0002	.0032	.0381

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.8905	.00	-2.18	-.1682	.0432	.0586	.0001	-.0000	-.0003	.0031	.0464
-3.3977	.00	-1.16	-.1310	.0386	.0536	-.0001	-.0000	-.0003	.0031	.0417
-2.6481	.00	-.13	-.0929	.0351	.0486	-.0002	.0000	-.0003	.0032	.0383
-1.6891	.00	.83	-.0558	.0330	.0438	-.0002	.0000	-.0002	.0033	.0363
-.5595	.00	1.85	-.0180	.0321	.0389	-.0002	.0000	-.0002	.0033	.0354
.5617	.00	2.84	.0184	.0327	.0345	-.0002	.0000	-.0000	.0033	.0361
1.5964	.00	3.83	.0551	.0345	.0296	-.0002	.0000	-.0001	.0034	.0379
2.4472	.00	4.84	.0924	.0377	.0250	-.0003	.0000	-.0001	.0035	.0412
3.0719	.00	5.86	.1289	.0420	.0199	-.0002	.0000	-.0001	.0035	.0455
3.4724	-.00	6.85	.1644	.0474	.0151	-.0003	.0001	-.0001	.0035	.0509
3.6898	-.00	7.85	.1988	.0539	.0104	-.0002	.0000	.0001	.0035	.0574
3.8120	-.00	9.86	.2673	.0701	.0004	-.0003	.0001	.0002	.0035	.0737
3.6848	-.00	11.87	.3354	.0910	-.0106	-.0002	.0000	.0006	.0034	.0945
3.4406	-.00	13.86	.4011	.1166	-.0211	-.0001	-.0000	.0006	.0034	.1200
3.1686	-.01	15.87	.4639	.1464	-.0314	-.0001	.0000	.0008	.0033	.1497
3.0331	-.01	16.88	.4950	.1632	-.0365	-.0001	-.0001	.0009	.0033	.1665
-2.6054	.00	-.14	-.0916	.0351	.0486	-.0002	-.0000	-.0002	.0032	.0384

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 62 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.004	.00	-2.14	-.1438	.0341	.0481	.0001	.0000	-.0003	.0028	.0369
2.004	.00	-1.13	-.1095	.0331	.0439	.0000	.0000	-.0002	.0028	.0359
2.002	.00	-.13	-.0758	.0321	.0398	-.0001	-.0000	-.0001	.0028	.0349
2.001	.00	.84	-.0430	.0310	.0356	-.0000	-.0000	-.0002	.0029	.0339
2.001	.00	1.85	-.0094	.0299	.0315	-.0000	-.0000	-.0000	.0030	.0328
2.000	.00	2.85	.0239	.0290	.0275	-.0000	-.0000	.0001	.0030	.0320
2.001	.00	3.86	.0573	.0260	.0235	-.0001	.0000	.0000	.0030	.0310
2.001	.00	4.85	.0907	.0268	.0191	-.0001	-.0000	.0000	.0030	.0298
2.002	.00	5.85	.1230	.0255	.0148	-.0000	-.0000	.0000	.0030	.0285
2.003	.00	6.87	.1567	.0242	.0101	-.0001	-.0000	.0001	.0030	.0272
2.003	-.00	7.85	.1878	.0230	.0059	-.0000	-.0001	.0002	.0030	.0260
2.002	-.00	9.85	.2513	.0206	-.0028	.0000	-.0000	.0003	.0030	.0236
2.001	-.00	11.89	.3148	.0181	-.0117	-.0001	-.0000	.0003	.0030	.0211
2.000	-.00	13.87	.3771	.0154	-.0208	.0001	-.0001	.0005	.0030	.0184
2.000	-.00	15.87	.4394	.0129	-.0296	-.0000	-.0001	.0006	.0030	.0159
2.001	-.00	17.86	.5012	.0104	-.0384	-.0001	-.0001	.0006	.0030	.0134
2.002	-.00	18.87	.5327	.0090	-.0433	-.0000	-.0001	.0007	.0030	.0120
2.003	.00	-.16	-.0754	.0321	.0397	-.0000	-.0000	-.0002	.0029	.0349

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.6103	.00	-2.14	-.1425	.0395	.0481	.0001	.0000	-.0003	.0028	.0422
-3.0874	.00	-1.13	-.1088	.0352	.0439	.0000	.0000	-.0002	.0028	.0380
-2.3486	.00	-.13	-.0757	.0322	.0398	-.0001	-.0000	-.0001	.0028	.0351
-1.4307	.00	.84	-.0434	.0303	.0356	-.0000	-.0000	-.0002	.0029	.0332
-.3508	.00	1.85	-.0104	.0296	.0315	-.0000	-.0000	-.0000	.0030	.0325
.7436	.00	2.85	.0224	.0302	.0275	-.0000	.0000	.0001	.0030	.0331
1.7406	.00	3.86	.0553	.0318	.0235	-.0001	.0000	.0000	.0030	.0348
2.5607	.00	4.85	.0881	.0344	.0191	-.0001	.0000	.0000	.0030	.0374
3.1554	.00	5.85	.1197	.0379	.0148	-.0001	-.0000	.0000	.0030	.0409
3.5733	.00	6.87	.1527	.0427	.0101	-.0001	-.0000	.0001	.0030	.0457
3.7756	-.00	7.85	.1829	.0485	.0059	-.0000	-.0000	.0002	.0030	.0514
3.8530	-.00	9.85	.2440	.0633	-.0028	.0000	-.0000	.0003	.0030	.0663
3.6840	-.00	11.89	.3043	.0826	-.0117	-.0001	-.0000	.0003	.0029	.0855
3.4393	-.00	13.87	.3624	.1054	-.0208	.0000	-.0001	.0005	.0029	.1083
3.1612	-.00	15.87	.4191	.1326	-.0296	-.0000	-.0001	.0006	.0029	.1355
2.8953	-.00	17.86	.4739	.1637	-.0384	-.0001	-.0000	.0006	.0029	.1665
2.7715	-.00	18.87	.5012	.1808	-.0433	-.0000	-.0001	.0007	.0029	.1837
-2.3350	.00	-.16	-.0754	.0323	.0397	-.0000	-.0000	-.0002	.0029	.0351

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 66 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/ET	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.02	-5.06	-.2397	.0133	.0232	-.0003	-.0000	-.0005	.0026	.0160
2.003	.02	-4.06	-.1932	.0136	.0182	-.0003	-.0000	-.0004	.0026	.0162
2.003	.02	-3.06	-.1459	.0138	.0131	-.0004	-.0000	-.0004	.0026	.0163
2.005	.02	-2.08	-.0981	.0139	.0081	-.0003	-.0000	-.0004	.0026	.0165
2.004	.02	-1.03	-.0485	.0141	.0030	-.0001	-.0000	-.0002	.0025	.0166
2.002	.02	-.05	-.0019	.0141	-.0018	-.0004	-.0000	-.0003	.0025	.0166
2.003	.02	.97	.0446	.0140	-.0064	-.0005	-.0000	-.0001	.0025	.0165
1.995	.02	1.91	.0893	.0137	-.0112	-.0004	-.0000	.0000	.0025	.0163
1.999	.02	2.95	.1386	.0134	-.0164	.0000	.0000	.0003	.0025	.0159
2.002	.02	3.92	.1858	.0131	-.0215	-.0005	.0000	.0004	.0025	.0156
2.004	.02	4.95	.2347	.0126	-.0270	-.0002	.0000	.0005	.0026	.0152
2.004	.01	5.90	.2790	.0122	-.0321	-.0003	.0000	.0007	.0026	.0147
2.002	.01	6.94	.3272	.0117	-.0374	-.0001	-.0000	.0009	.0026	.0143
2.000	.01	7.96	.3745	.0112	-.0427	-.0002	-.0000	.0010	.0026	.0138
1.996	.01	9.95	.4661	.0103	-.0528	-.0002	-.0000	.0014	.0026	.0129
1.996	.01	11.95	.5563	.0093	-.0632	-.0004	-.0000	.0019	.0026	.0119
2.001	.02	-.05	-.0007	.0142	-.0017	-.0004	-.0000	-.0001	.0025	.0166

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.9062	.02	-5.06	-.2376	.0344	.0232	-.0003	-.0000	-.0005	.0026	.0370
-7.0386	.02	-4.06	-.1918	.0272	.0182	-.0003	-.0000	-.0004	.0026	.0298
-6.7253	.02	-3.06	-.1449	.0215	.0131	-.0004	-.0000	-.0004	.0025	.0241
-5.5848	.02	-2.08	-.0975	.0175	.0081	-.0003	-.0001	-.0004	.0026	.0200
-3.2286	.02	-1.03	-.0483	.0149	.0030	-.0001	-.0000	-.0002	.0025	.0175
-.1346	.02	-.05	-.0019	.0141	-.0018	-.0004	-.0000	-.0003	.0025	.0166
3.0247	.02	.97	.0446	.0147	-.0064	-.0005	-.0000	-.0001	.0025	.0172
5.3140	.02	1.91	.0893	.0167	-.0112	-.0004	-.0000	.0000	.0025	.0192
6.7190	.02	2.95	.1378	.0205	-.0164	.0000	.0000	.0003	.0025	.0230
7.1685	.02	3.92	.1845	.0257	-.0215	-.0005	.0000	.0004	.0025	.0283
7.0842	.02	4.95	.2328	.0329	-.0270	-.0002	.0000	.0005	.0025	.0354
6.7682	.01	5.90	.2762	.0408	-.0321	-.0003	.0000	.0007	.0025	.0434
6.3210	.01	6.94	.3234	.0512	-.0374	-.0001	.0000	.0009	.0026	.0537
5.8669	.01	7.96	.3694	.0630	-.0427	-.0002	-.0000	.0010	.0026	.0655
5.0418	.01	9.95	.4573	.0907	-.0528	-.0002	.0000	.0014	.0026	.0933
4.3637	.01	11.95	.5423	.1243	-.0632	-.0004	.0001	.0019	.0026	.1269
-.0492	.02	-.05	-.0007	.0142	-.0017	-.0004	-.0000	-.0001	.0025	.0166

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 69 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.02	-5.19	-.2014	.0139	.0177	-.0003	-.0000	-.0004	.0026	.0165
2.001	.02	-4.18	-.1616	.0140	.0139	-.0002	-.0000	-.0003	.0026	.0165
2.000	.02	-3.21	-.1250	.0141	.0102	-.0002	-.0000	-.0004	.0025	.0166
2.000	.02	-2.18	-.0838	.0141	.0062	-.0001	-.0000	-.0003	.0025	.0166
1.999	.02	-1.14	-.0436	.0141	.0023	.0000	-.0000	-.0002	.0025	.0166
1.999	.02	-.15	-.0040	.0141	-.0015	-.0000	-.0000	-.0001	.0024	.0166
1.999	.02	.86	.0347	.0140	-.0052	-.0002	-.0000	-.0001	.0024	.0165
2.000	.02	1.84	.0728	.0139	-.0090	-.0001	-.0000	.0001	.0025	.0163
2.000	.02	2.81	.1109	.0137	-.0128	-.0002	-.0000	.0002	.0025	.0162
2.001	.02	3.84	.1513	.0135	-.0169	-.0003	.0000	.0002	.0025	.0160
2.000	.02	4.82	.1893	.0132	-.0208	-.0002	.0000	.0003	.0025	.0157
2.000	.02	5.80	.2277	.0129	-.0248	-.0004	.0000	.0004	.0024	.0154
2.000	.02	6.80	.2661	.0125	-.0287	-.0004	.0000	.0006	.0024	.0150
1.999	.02	7.82	.3048	.0121	-.0328	-.0003	.0000	.0006	.0025	.0146
1.999	.01	9.81	.3805	.0113	-.0406	-.0003	.0000	.0009	.0024	.0138
1.999	.01	11.81	.4544	.0105	-.0484	-.0004	.0000	.0013	.0023	.0128
2.001	.01	13.83	.5301	.0098	-.0566	-.0002	.0000	.0017	.0023	.0121
2.001	.02	-.12	-.0009	.0142	-.0017	-.0002	-.0000	-.0001	.0024	.0166

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.2237	.02	-5.19	-.1993	.0320	.0177	-.0003	-.0001	-.0004	.0026	.0346
-6.2306	.02	-4.18	-.1602	.0257	.0139	-.0002	-.0001	-.0003	.0026	.0283
-5.8974	.02	-3.21	-.1240	.0210	.0102	-.0002	-.0000	-.0004	.0025	.0236
-4.8217	.02	-2.18	-.0832	.0173	.0062	-.0001	-.0000	-.0003	.0025	.0198
-2.8882	.02	-1.14	-.0433	.0150	.0023	.0000	-.0000	-.0002	.0025	.0175
-.2770	.02	-.15	-.0039	.0141	-.0015	-.0000	-.0000	-.0001	.0024	.0166
2.3640	.02	.86	.0344	.0146	-.0052	-.0002	-.0000	-.0001	.0024	.0170
4.4608	.02	1.84	.0724	.0162	-.0090	-.0001	-.0000	.0001	.0025	.0187
5.7495	.02	2.81	.1101	.0192	-.0128	-.0002	-.0000	.0002	.0025	.0216
6.3622	.02	3.84	.1501	.0236	-.0169	-.0003	.0000	.0002	.0025	.0261
6.4507	.02	4.82	.1876	.0291	-.0208	-.0002	.0000	.0003	.0025	.0315
6.2781	.02	5.80	.2252	.0359	-.0248	-.0004	.0001	.0004	.0024	.0383
5.9762	.02	6.80	.2628	.0440	-.0287	-.0004	.0001	.0006	.0024	.0464
5.6152	.02	7.82	.3003	.0535	-.0328	-.0003	.0000	.0006	.0024	.0559
4.9059	.01	9.81	.3730	.0760	-.0406	-.0003	.0001	.0009	.0024	.0784
4.2872	.01	11.81	.4426	.1032	-.0484	-.0004	.0001	.0013	.0023	.1055
3.7606	.01	13.83	.5123	.1362	-.0566	-.0002	.0001	.0017	.0022	.1385
-.0604	.02	-.12	-.0009	.0142	-.0017	-.0002	-.0000	-.0001	.0024	.0166

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 70 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.02	-5.21	-.1785	.0140	.0134	-.0000	-.0000	-.0004	.0024	.0164
2.000	.02	-4.20	-.1433	.0140	.0104	-.0000	-.0000	-.0004	.0024	.0164
2.000	.02	-3.19	-.1091	.0140	.0073	-.0001	-.0000	-.0003	.0024	.0164
1.999	.02	-2.20	-.0747	.0140	.0042	.0000	-.0000	-.0003	.0023	.0163
2.000	.02	-1.21	-.0400	.0140	.0012	-.0001	-.0000	-.0002	.0023	.0163
2.001	.02	-.22	-.0065	.0139	-.0018	.0000	-.0000	-.0001	.0023	.0162
2.001	.02	.81	.0287	.0138	-.0049	-.0002	-.0000	-.0001	.0023	.0161
2.001	.02	1.79	.0627	.0137	-.0080	-.0000	-.0000	.0000	.0023	.0160
2.000	.02	2.81	.0983	.0136	-.0113	-.0001	-.0000	.0002	.0023	.0159
2.000	.02	3.79	.1315	.0135	-.0145	-.0001	-.0000	.0003	.0022	.0157
2.001	.02	4.80	.1671	.0133	-.0178	-.0001	.0000	.0005	.0022	.0155
2.001	.02	5.80	.2009	.0130	-.0210	-.0001	-.0000	.0004	.0022	.0153
2.002	.02	6.78	.2337	.0128	-.0242	-.0001	.0000	.0006	.0022	.0150
2.001	.02	7.82	.2694	.0125	-.0276	-.0001	-.0000	.0006	.0022	.0147
2.000	.02	9.80	.3364	.0119	-.0341	-.0001	-.0000	.0007	.0022	.0141
2.000	.01	11.77	.4019	.0113	-.0406	-.0000	-.0000	.0011	.0022	.0135
2.001	.01	13.79	.4692	.0107	-.0474	-.0001	-.0000	.0012	.0022	.0129
2.001	.01	15.80	.5351	.0100	-.0546	-.0002	-.0000	.0014	.0022	.0123
2.001	.01	16.82	.5700	.0097	-.0585	-.0001	-.0000	.0016	.0023	.0119
2.000	.02	-.19	-.0033	.0139	-.0019	-.0001	-.0000	-.0001	.0023	.0162

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.8592	.02	-5.21	-.1765	.0301	.0134	-.0000	-.0000	-.0004	.0024	.0325
-5.8001	.02	-4.20	-.1419	.0245	.0104	-.0000	-.0000	-.0004	.0024	.0268
-5.3812	.02	-3.19	-.1081	.0201	.0073	-.0001	-.0000	-.0003	.0024	.0224
-4.3906	.02	-2.20	-.0741	.0169	.0042	.0000	-.0000	-.0003	.0023	.0192
-2.6824	.02	-1.21	-.0397	.0148	.0012	-.0001	-.0001	-.0002	.0023	.0171
-.4601	.02	-.22	-.0064	.0139	-.0018	.0000	-.0000	-.0001	.0023	.0162
2.0032	.02	.81	.0285	.0142	-.0049	-.0002	-.0000	-.0001	.0023	.0165
3.9668	.02	1.79	.0622	.0157	-.0080	-.0000	-.0000	.0000	.0023	.0179
5.2948	.02	2.81	.0975	.0184	-.0113	-.0001	-.0000	.0002	.0022	.0207
5.8654	.02	3.79	.1303	.0221	-.0145	-.0001	-.0000	.0003	.0022	.0244
6.0798	.02	4.80	.1654	.0272	-.0178	-.0001	.0000	.0005	.0022	.0294
5.9724	.02	5.80	.1986	.0332	-.0210	-.0001	.0000	.0004	.0022	.0355
5.7232	.02	6.78	.2306	.0403	-.0242	-.0001	.0000	.0006	.0022	.0425
5.4133	.02	7.82	.2652	.0490	-.0276	-.0001	-.0000	.0006	.0022	.0512
4.7786	.02	9.80	.3295	.0690	-.0341	-.0001	-.0000	.0007	.0022	.0711
4.2034	.01	11.77	.3912	.0931	-.0406	-.0000	-.0000	.0011	.0022	.0952
3.7073	.01	13.79	.4531	.1222	-.0474	-.0001	-.0000	.0012	.0022	.1244
3.2977	.01	15.80	.5122	.1553	-.0546	-.0001	.0000	.0014	.0022	.1575
3.1162	.01	16.82	.5429	.1742	-.0585	-.0001	.0000	.0016	.0022	.1764
-.2344	.02	-.19	-.0033	.0139	-.0019	-.0001	-.0000	-.0001	.0023	.0162

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 72 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.998	.02	-2.07	-.1604	.0232	.0436	-.0004	-.0000	-.0005	.0037	.0269
1.998	.02	-1.03	-.1099	.0227	.0383	-.0004	-.0000	-.0003	.0036	.0263
1.999	.02	-.05	-.0642	.0222	.0335	-.0003	-.0000	-.0002	.0035	.025
2.001	.02	.98	-.0145	.0215	.0280	-.0001	-.0000	-.0001	.0035	.024
2.003	.02	1.94	.0318	.0207	.0232	-.0003	.0000	-.0000	.0034	.0241
2.003	.02	2.96	.0810	.0197	.0178	-.0003	.0000	.0001	.0034	.0231
2.001	.02	3.97	.1283	.0188	.0127	-.0000	.0000	.0002	.0034	.0222
2.001	.02	4.94	.1734	.0177	.0077	-.0002	-.0000	.0004	.0035	.0212
1.999	.02	5.96	.2235	.0166	.0023	-.0003	.0000	.0004	.0036	.0202
1.998	.01	6.93	.2659	.0157	-.0024	-.0002	.0000	.0006	.0036	.0193
1.997	.01	7.95	.3126	.0146	-.0076	-.0003	.0000	.0007	.0036	.0182
1.998	.01	9.97	.4060	.0123	-.0180	-.0001	.0000	.0010	.0036	.0159
1.999	.01	11.98	.4969	.0100	-.0280	-.0001	.0000	.0013	.0036	.0136
2.003	.02	-.06	-.0624	.0222	.0332	-.0001	-.0000	-.0002	.0035	.0257

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.4985	.02	-2.07	-.1595	.0290	.0436	-.0003	-.0000	-.0005	.0037	.0327
-4.4300	.02	-1.03	-.1095	.0247	.0383	-.0004	-.0000	-.0003	.0036	.0283
-2.8848	.02	-.05	-.0641	.0222	.0335	-.0003	-.0000	-.0002	.0035	.0258
-.7026	.02	.98	-.0149	.0212	.0280	-.0001	-.0000	-.0001	.0035	.0247
1.4321	.02	1.94	.0311	.0217	.0232	-.0003	.0000	-.0000	.0034	.0251
3.3445	.02	2.96	.0798	.0239	.0178	-.0003	.0000	.0001	.0034	.0273
4.5887	.02	3.97	.1267	.0276	.0127	-.0000	.0000	.0002	.0034	.0310
5.2529	.02	4.94	.1713	.0326	.0077	-.0002	.0000	.0004	.0035	.0361
5.5458	.02	5.96	.2205	.0398	.0023	-.0003	.0001	.0004	.0035	.0433
5.5030	.01	6.93	.2621	.0476	-.0024	-.0002	.0001	.0006	.0036	.0512
5.3363	.01	7.95	.3076	.0576	-.0076	-.0003	.0001	.0007	.0036	.0613
4.8268	.01	9.97	.3978	.0824	-.0180	-.0001	.0001	.0010	.0036	.0860
4.2845	.01	11.98	.4840	.1130	-.0280	-.0001	.0000	.0013	.0035	.1165
-2.8085	.02	-.06	-.0624	.0222	.0332	-.0001	-.0000	-.0002	.0035	.0257

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 73 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.02	-2.18	-.1287	.0215	.0322	-.0001	-.0000	-.0003	.0032	.0247
1.999	.02	-1.17	-.0885	.0210	.0282	-.0000	.0000	-.0002	.0032	.0241
1.999	.02	-.18	-.0500	.0204	.0243	-.0002	-.0000	-.0002	.0031	.0236
1.999	.02	.81	-.0102	.0198	.0204	-.0000	-.0000	.0000	.0031	.0229
1.999	.02	1.81	.0286	.0192	.0165	-.0003	-.0000	.0001	.0031	.0223
1.998	.02	2.81	.0685	.0185	.0124	-.0002	-.0000	.0002	.0031	.0216
1.998	.02	3.83	.1084	.0177	.0085	-.0002	-.0000	.0003	.0031	.0208
1.998	.02	4.81	.1450	.0169	.0046	-.0004	.0000	.0005	.0031	.0201
2.000	.02	5.81	.1845	.0161	.0007	-.0003	.0000	.0006	.0032	.0193
2.000	.01	6.81	.2229	.0152	-.0034	-.0004	.0000	.0007	.0032	.0184
2.000	.01	7.79	.2603	.0142	-.0073	-.0003	.0000	.0009	.0032	.0175
1.999	.01	9.81	.3369	.0122	-.0152	-.0002	.0000	.0012	.0032	.0154
1.999	.01	11.84	.4118	.0102	-.0234	-.0002	-.0000	.0014	.0031	.0133
1.999	.01	13.86	.4882	.0085	-.0311	-.0002	.0000	.0017	.0031	.0116
2.000	.02	-.20	-.0489	.0204	.0242	-.0002	-.0000	-.0000	.0031	.0236

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.8434	.02	-2.18	-.1278	.0264	.0322	-.0001	-.0000	-.0003	.0032	.0296
-3.8674	.02	-1.17	-.0881	.0228	.0282	-.0000	.0000	-.0002	.0031	.0259
-2.4268	.02	-.18	-.0500	.0206	.0243	-.0002	-.0000	-.0002	.0031	.0237
-.5306	.02	.81	-.0104	.0197	.0204	-.0000	-.0000	.0000	.0031	.0228
1.3954	.02	1.81	.0280	.0201	.0165	-.0003	-.0000	.0001	.0031	.0232
3.0943	.02	2.81	.0675	.0218	.0124	-.0002	-.0000	.0002	.0031	.0249
4.2967	.02	3.83	.1070	.0249	.0085	-.0002	-.0000	.0003	.0031	.0280
4.9305	.02	4.81	.1431	.0290	.0046	-.0003	.0001	.0005	.0031	.0322
5.2504	.02	5.81	.1820	.0347	.0007	-.0003	.0000	.0006	.0032	.0378
5.2928	.01	6.81	.2195	.0415	-.0034	-.0004	.0001	.0007	.0032	.0447
5.1869	.01	7.79	.2559	.0493	-.0073	-.0003	.0001	.0009	.0032	.0526
4.7478	.01	9.81	.3298	.0695	-.0152	-.0002	.0001	.0012	.0031	.0726
4.2427	.01	11.84	.4010	.0945	-.0234	-.0002	.0000	.0014	.0030	.0976
3.7682	.01	13.86	.4719	.1252	-.0311	-.0002	.0001	.0017	.0030	.1282
-2.3719	.02	-.20	-.0489	.0206	.0242	-.0002	-.0000	-.0000	.0031	.0237

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 74 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.02	-2.19	-.1105	.0202	.0250	-.0001	-.0000	-.0002	.0029	.0230
1.999	.02	-1.21	-.0763	.0196	.0219	-.0002	-.0000	-.0002	.0028	.0224
2.001	.02	-.19	-.0401	.0190	.0186	-.0001	-.0001	-.0000	.0028	.0218
2.001	.02	.78	-.0066	.0165	.0156	-.0001	-.0000	.0001	.0028	.0213
2.000	.02	1.80	.0290	.0179	.0122	.0000	-.0001	.0002	.0028	.0207
2.000	.02	2.78	.0622	.0174	.0090	.0000	-.0001	.0002	.0028	.0201
2.000	.02	3.79	.0967	.0167	.0058	-.0000	-.0000	.0004	.0028	.0195
2.000	.02	4.81	.1320	.0161	.0025	.0000	-.0000	.0005	.0028	.0188
2.000	.02	5.81	.1653	.0154	-.0006	.0000	-.0000	.0005	.0028	.0182
2.001	.02	6.79	.1994	.0146	-.0039	-.0000	-.0000	.0006	.0028	.0175
2.000	.02	7.78	.2331	.0136	-.0072	-.0001	-.0000	.0007	.0028	.0167
2.000	.01	9.81	.3012	.0122	-.0138	-.0001	-.0000	.0010	.0028	.0150
1.999	.01	11.77	.3660	.0106	-.0201	-.0001	.0000	.0012	.0028	.0134
1.999	.01	13.78	.4333	.0090	-.0267	-.0001	-.0000	.0014	.0027	.0118
2.000	.01	15.79	.4990	.0074	-.0335	-.0001	.0000	.0014	.0027	.0102
2.002	.01	16.82	.5334	.0066	-.0370	-.0000	-.0000	.0015	.0027	.0093
2.000	.02	-.19	-.0397	.0190	.0187	-.0001	-.0000	-.0001	.0028	.0218

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.4961	.02	-2.19	-.1096	.0244	.0250	-.0001	-.0000	-.0002	.0029	.0272
-3.5738	.02	-1.21	-.0758	.0212	.0219	-.0002	-.0000	-.0002	.0028	.0240
-2.0892	.02	-.19	-.0400	.0192	.0186	-.0001	-.0001	-.0000	.0028	.0220
-.3742	.02	.78	-.0069	.0184	.0156	-.0001	-.0000	.0001	.0028	.0212
1.5096	.02	1.80	.0284	.0188	.0122	.0000	-.0001	.0002	.0028	.0216
3.0131	.02	2.78	.0613	.0203	.0090	.0000	-.0001	.0002	.0027	.0231
4.1285	.02	3.79	.0954	.0231	.0058	-.0000	-.0000	.0004	.0028	.0259
4.8103	.02	4.81	.1302	.0271	.0025	.0000	-.0000	.0005	.0028	.0298
5.0895	.02	5.81	.1629	.0320	-.0006	.0000	-.0000	.0005	.0028	.0348
5.1499	.02	6.79	.1963	.0381	-.0039	-.0000	-.0000	.0006	.0028	.0409
5.0592	.02	7.78	.2290	.0453	-.0072	-.0001	-.0000	.0007	.0028	.0481
4.6525	.01	9.81	.2947	.0634	-.0138	-.0001	.0000	.0010	.0027	.0661
4.1858	.01	11.77	.3561	.0851	-.0201	-.0001	.0000	.0012	.0027	.0878
3.7393	.01	13.78	.4187	.1120	-.0267	-.0001	.0000	.0014	.0027	.1146
3.3446	.01	15.79	.4781	.1430	-.0335	-.0001	.0000	.0014	.0026	.1456
3.1657	.01	16.82	.5087	.1607	-.0370	-.0000	-.0000	.0015	.0026	.1633
-2.0692	.02	-.19	-.0397	.0192	.0187	-.0001	-.0000	-.0001	.0028	.0220

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 75 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.500	.02	-2.09	-.2148	.0418	.0707	-.0002	.0001	-.0009	.0042	.0460
1.499	.02	-1.04	-.1641	.0410	.0655	-.0002	.0001	-.0006	.0041	.0451
1.499	.02	-.05	-.1180	.0403	.0609	-.0003	.0001	-.0004	.0041	.0444
1.499	.02	.95	-.0708	.0394	.0561	-.0004	.0001	-.0002	.0041	.0436
1.498	.02	1.95	-.0220	.0385	.0514	-.0001	.0000	-.0002	.0042	.0426
1.498	.02	2.95	.0234	.0374	.0467	-.0002	-.0000	-.0001	.0042	.0416
1.498	.02	3.96	.0741	.0362	.0413	-.0003	.0000	.0002	.0041	.0403
1.500	.02	4.95	.1227	.0348	.0361	-.0001	.0001	.0004	.0041	.0389
1.501	.02	5.92	.1674	.0336	.0315	-.0003	.0001	.0006	.0042	.0378
1.500	.01	6.91	.2104	.0325	.0272	-.0001	.0002	.0009	.0043	.0368
1.499	.01	7.95	.2589	.0311	.0219	.0000	.0002	.0011	.0044	.0355
1.498	.01	9.94	.3496	.0280	.0122	-.0002	.0001	.0014	.0045	.0325
1.498	.01	11.94	.4413	.0247	.0022	-.0001	.0001	.0017	.0045	.0292
1.499	.02	-.05	-.1155	.0403	.0609	-.0003	.0001	-.0004	.0041	.0444

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.2999	.02	-2.09	-.2132	.0496	.0707	-.0002	.0000	-.0009	.0042	.0538
-3.7145	.02	-1.04	-.1633	.0440	.0655	-.0002	.0001	-.0006	.0041	.0481
-2.9228	.02	-.05	-.1180	.0404	.0609	-.0003	.0001	-.0004	.0041	.0445
-1.8677	.02	.95	-.0714	.0382	.0561	-.0004	.0001	-.0002	.0041	.0424
-.6178	.02	1.95	-.0233	.0377	.0514	-.0001	.0000	-.0002	.0042	.0419
.5560	.02	2.95	.0214	.0386	.0467	-.0002	.0000	-.0001	.0041	.0427
1.7308	.02	3.96	.0714	.0412	.0413	-.0003	.0000	.0002	.0041	.0454
2.6372	.02	4.95	.1193	.0452	.0361	-.0001	.0001	.0004	.0041	.0494
3.2170	.02	5.92	.1630	.0507	.0315	-.0003	.0002	.0006	.0042	.0548
3.5600	.01	6.91	.2049	.0576	.0272	-.0001	.0002	.0009	.0042	.0618
3.7854	.01	7.95	.2521	.0666	.0219	.0001	.0002	.0011	.0043	.0709
3.8598	.01	9.94	.3395	.0860	.0122	-.0002	.0001	.0014	.0044	.0924
3.6948	.01	11.94	.4267	.1155	.0022	-.0000	.0001	.0017	.0044	.1199
-2.8591	.02	-.05	-.1154	.0404	.0609	-.0003	.0001	-.0004	.0041	.0445

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 76 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.02	-2.20	-.1721	.0380	.0546	.0000	.0001	-.0008	.0035	.0414
1.999	.02	-1.19	-.1314	.0371	.0506	-.0003	.0001	-.0008	.0035	.0406
2.002	.02	-.17	-.0921	.0362	.0468	-.0002	.0001	-.0006	.0036	.0398
2.003	.02	.86	-.0498	.0352	.0426	-.0003	.0001	-.0003	.0036	.0387
2.002	.02	1.83	-.0127	.0342	.0389	-.0004	.0001	-.0002	.0036	.0378
2.000	.02	2.86	.0297	.0330	.0346	-.0004	.0000	.0000	.0036	.0366
1.999	.02	3.78	.0658	.0319	.0308	-.0004	.0000	.0002	.0037	.0356
2.000	.02	4.82	.1069	.0307	.0265	-.0002	.0000	.0003	.0037	.0344
2.001	.02	5.85	.1464	.0296	.0227	-.0002	-.0000	.0006	.0037	.0333
2.002	.01	6.86	.1847	.0284	.0190	-.0003	.0000	.0008	.0038	.0322
2.002	.01	7.84	.2209	.0271	.0153	-.0002	.0001	.0009	.0038	.0309
2.002	.01	9.84	.2975	.0245	.0075	-.0003	.0001	.0013	.0038	.0283
2.001	.01	11.83	.3726	.0212	-.0008	-.0004	.0001	.0017	.0037	.0249
2.000	.01	13.84	.4485	.0184	-.0089	-.0003	.0001	.0020	.0036	.0221
2.001	.02	-.16	-.0896	.0362	.0466	-.0002	.0001	-.0005	.0036	.0398

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.8296	.02	-2.20	-.1706	.0445	.0546	.0000	.0001	-.0008	.0035	.0480
-3.2845	.02	-1.19	-.1307	.0398	.0506	-.0003	.0001	-.0008	.0035	.0433
-2.5225	.02	-.17	-.0920	.0365	.0468	-.0002	.0001	-.0006	.0036	.0400
-1.4642	.02	.86	-.0504	.0344	.0426	-.0003	.0001	-.0003	.0036	.0380
-.4076	.02	1.83	-.0138	.0337	.0389	-.0004	.0001	-.0002	.0036	.0373
.8149	.02	2.86	.0280	.0344	.0346	-.0004	.0000	.0000	.0036	.0380
1.7550	.02	3.78	.0635	.0362	.0308	-.0004	.0000	.0002	.0036	.0399
2.6260	.02	4.82	.1040	.0396	.0265	-.0002	.0001	.0003	.0037	.0433
3.2161	.02	5.85	.1426	.0444	.0227	-.0002	.0000	.0006	.0037	.0481
3.5828	.01	6.86	.1800	.0502	.0190	-.0002	.0001	.0008	.0038	.0540
3.7742	.01	7.84	.2152	.0570	.0153	-.0002	.0001	.0009	.0038	.0608
3.8522	.01	9.84	.2889	.0750	.0075	-.0003	.0001	.0013	.0037	.0787
3.7104	.01	11.83	.3603	.0971	-.0008	-.0003	.0001	.0017	.0036	.1007
3.4425	.01	13.84	.4310	.1252	-.0089	-.0003	.0001	.0020	.0035	.1287
-2.4588	.02	-.16	-.0895	.0364	.0466	-.0002	.0001	-.0005	.0036	.0400

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 77 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.02	-5.21	-.2542	.0362	.0556	-.0000	.0001	-.0012	.0030	.0412
2.001	.02	-4.21	-.2191	.0373	.0520	-.0001	.0000	-.0009	.0030	.0403
2.001	.02	-3.24	-.1851	.0364	.0487	-.0002	.0000	-.0008	.0030	.0394
1.999	.02	-2.19	-.1481	.0353	.0452	.0000	.0000	-.0007	.0031	.0384
1.999	.02	-1.23	-.1151	.0344	.0420	-.0001	.0001	-.0007	.0031	.0374
1.998	.02	-.19	-.0771	.0333	.0385	-.0002	.0001	-.0005	.0031	.0364
1.999	.02	.84	-.0412	.0323	.0350	-.0001	.0000	-.0003	.0031	.0354
1.998	.02	1.79	-.0074	.0313	.0317	-.0001	.0000	-.0001	.0031	.0344
1.999	.02	2.81	.0284	.0302	.0282	-.0001	.0000	.0001	.0031	.0333
2.000	.02	3.87	.0667	.0290	.0244	-.0001	-.0000	.0001	.0032	.0321
1.999	.02	4.82	.0993	.0280	.0212	-.0001	.0000	.0004	.0032	.0312
1.998	.02	5.81	.1331	.0270	.0180	.0000	.0000	.0005	.0032	.0302
1.997	.01	6.85	.1681	.0259	.0148	-.0001	.0000	.0008	.0032	.0292
1.998	.01	7.82	.2011	.0248	.0116	-.0000	.0000	.0009	.0032	.0280
1.999	.01	9.79	.2685	.0222	.0048	-.0001	.0000	.0011	.0032	.0255
1.999	.01	11.76	.3349	.0194	-.0023	-.0000	.0000	.0015	.0032	.0226
2.000	.01	13.78	.4028	.0165	-.0093	-.0001	.0000	.0016	.0032	.0197
1.999	.01	15.82	.4706	.0138	-.0164	-.0000	-.0000	.0019	.0032	.0170
1.998	.01	16.79	.5021	.0126	-.0197	-.0000	-.0000	.0018	.0032	.0158
1.998	.02	-.19	-.0760	.0333	.0384	-.0001	.0000	-.0004	.0031	.0364

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.0820	.02	-5.21	-.2497	.0612	.0556	-.0000	.0001	-.0012	.0029	.0641
-4.0520	.02	-4.21	-.2158	.0532	.0520	-.0001	.0000	-.0009	.0030	.0562
-3.9103	.02	-3.24	-.1828	.0467	.0487	-.0002	.0000	-.0008	.0030	.0498
-3.5796	.02	-2.19	-.1467	.0410	.0452	.0000	.0000	-.0007	.0030	.0440
-3.1031	.02	-1.23	-.1143	.0368	.0420	-.0001	.0001	-.0007	.0031	.0399
-2.2926	.02	-.19	-.0770	.0336	.0385	-.0002	.0001	-.0005	.0031	.0367
-1.3173	.02	.84	-.0417	.0317	.0350	-.0001	.0000	-.0003	.0031	.0348
-.2681	.02	1.79	-.0083	.0310	.0317	-.0001	.0000	-.0001	.0031	.0341
.8519	.02	2.81	.0269	.0315	.0282	-.0001	.0000	.0001	.0031	.0347
1.9348	.02	3.87	.0646	.0334	.0244	-.0001	-.0000	.0001	.0032	.0365
2.6653	.02	4.82	.0966	.0362	.0212	-.0001	.0000	.0004	.0032	.0394
3.2155	.02	5.81	.1296	.0403	.0180	.0000	.0000	.0005	.0032	.0435
3.5781	.01	6.85	.1638	.0458	.0148	-.0001	.0000	.0008	.0032	.0490
3.7760	.01	7.82	.1959	.0519	.0116	-.0000	.0000	.0009	.0032	.0551
3.8585	.01	9.79	.2608	.0676	.0048	-.0001	.0000	.0011	.0032	.0708
3.7119	.01	11.76	.3240	.0873	-.0023	-.0000	.0000	.0015	.0031	.0904
3.4584	.01	13.78	.3873	.1120	-.0093	-.0001	.0000	.0016	.0031	.1151
3.1705	.01	15.82	.4490	.1416	-.0164	-.0000	-.0000	.0019	.0031	.1447
3.0358	.01	16.79	.4771	.1571	-.0197	-.0000	-.0000	.0018	.0030	.1602
-2.2607	.02	-.19	-.0759	.0336	.0384	-.0001	.0000	-.0004	.0031	.0366

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 15 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	-.00	-5.10	-.2477	.0141	.0282	-.0002	-.0000	.0005	.0027	.0168
2.002	-.00	-4.09	-.1995	.0143	.0227	-.0002	-.0000	.0004	.0026	.0169
2.005	-.00	-3.10	-.1519	.0145	.0172	-.0003	-.0000	.0003	.0025	.0170
2.005	-.00	-2.12	-.1044	.0146	.0117	-.0000	-.0000	.0002	.0025	.0171
2.003	-.00	-1.10	-.0536	.0147	.0057	-.0002	-.0000	.0001	.0025	.0172
2.001	.00	-.04	-.0026	.0147	-.0002	-.0004	-.0000	-.0002	.0025	.0171
2.000	.00	.88	.0389	.0146	-.0053	-.0005	.0000	-.0002	.0025	.0170
2.000	.00	1.92	.0911	.0143	-.0114	-.0004	.0000	-.0003	.0025	.0168
2.002	.00	2.94	.1400	.0140	-.0170	-.0002	.0001	-.0003	.0025	.0165
2.003	.00	3.93	.1877	.0137	-.0226	-.0003	.0001	-.0005	.0026	.0163
2.004	.00	4.97	.2382	.0133	-.0286	-.0004	.0001	-.0005	.0026	.0159
2.004	.00	5.92	.2830	.0130	-.0341	-.0001	.0001	-.0006	.0027	.0157
2.001	.00	6.94	.3297	.0126	-.0399	-.0003	.0001	-.0008	.0027	.0154
1.998	.00	7.95	.3785	.0122	-.0459	-.0002	.0001	-.0008	.0028	.0150
2.001	.00	8.90	.4213	.0118	-.0511	-.0003	.0001	-.0008	.0029	.0147
2.004	.00	9.96	.4704	.0114	-.0576	-.0002	.0001	-.0010	.0029	.0143
2.000	.00	11.93	.5597	.0104	-.0691	-.0001	.0001	-.0010	.0030	.0134
2.003	-.00	-.10	-.0048	.0147	-.0001	-.0004	.0000	.0001	.0025	.0172

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.8052	-.00	-5.10	-.2455	.0361	.0282	-.0002	-.0001	.0005	.0027	.0387
-6.9533	-.00	-4.09	-.1980	.0285	.0227	-.0002	-.0001	.0004	.0026	.0310
-6.6546	-.00	-3.10	-.1509	.0227	.0172	-.0003	-.0000	.0003	.0025	.0252
-5.6139	-.00	-2.12	-.1038	.0185	.0117	-.0000	-.0000	.0002	.0025	.0210
-3.3955	-.00	-1.10	-.0533	.0157	.0057	-.0002	-.0000	.0001	.0025	.0182
-.1770	.00	-.04	-.0026	.0147	-.0002	-.0004	-.0000	-.0002	.0025	.0171
2.5514	.00	.88	.0387	.0152	-.0053	-.0005	.0000	-.0002	.0025	.0176
5.2186	.00	1.92	.0906	.0174	-.0114	-.0004	.0000	-.0003	.0025	.0198
6.5825	.00	2.94	.1391	.0211	-.0170	-.0002	.0001	-.0003	.0025	.0236
7.0216	.00	3.93	.1863	.0265	-.0226	-.0003	.0001	-.0005	.0026	.0291
6.9628	.00	4.97	.2361	.0339	-.0286	-.0004	.0001	-.0005	.0026	.0365
6.6501	.00	5.92	.2801	.0421	-.0341	-.0001	.0001	-.0006	.0027	.0448
6.2189	.00	6.94	.3258	.0524	-.0399	-.0003	.0001	-.0008	.0027	.0551
5.7891	.00	7.95	.3732	.0645	-.0459	-.0002	.0001	-.0008	.0028	.0672
5.3915	.00	8.90	.4144	.0769	-.0511	-.0003	.0001	-.0008	.0028	.0797
4.9860	.00	9.96	.4613	.0925	-.0576	-.0002	.0001	-.0010	.0029	.0954
4.3316	.00	11.93	.5454	.1259	-.0691	-.0001	.0001	-.0010	.0030	.1289
-.3266	-.00	-.10	-.0048	.0147	-.0001	-.0004	.0000	.0001	.0025	.0172

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 18 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	-.00	-5.04	-.1999	.0144	.0205	-.0001	-.0000	.0004	.0025	.0169
2.000	-.00	-4.04	-.1602	.0145	.0162	-.0000	-.0000	.0002	.0024	.0169
2.001	.00	-3.08	-.1232	.0145	.0123	-.0003	-.0000	.0001	.0024	.0169
2.001	.00	-2.05	-.0821	.0146	.0078	-.0001	-.0000	.0001	.0024	.0170
2.003	.00	-1.06	-.0418	.0146	.0036	-.0001	-.0000	.0000	.0024	.0170
2.002	.00	-.08	-.0023	.0146	-.0006	-.0002	.0000	-.0001	.0024	.0169
2.001	.00	.93	.0362	.0144	-.0049	-.0001	.0000	-.0002	.0024	.0168
2.001	.00	1.97	.0774	.0143	-.0093	-.0002	.0000	-.0003	.0024	.0167
2.000	.00	2.96	.1163	.0141	-.0134	-.0001	.0000	-.0004	.0024	.0165
2.000	.00	3.95	.1560	.0139	-.0180	-.0003	.0001	-.0005	.0024	.0163
2.000	.00	4.95	.1947	.0137	-.0224	-.0000	.0001	-.0005	.0024	.0162
2.001	.00	6.00	.2362	.0135	-.0271	-.0002	.0001	-.0006	.0025	.0159
2.003	.00	6.95	.2732	.0132	-.0314	-.0002	.0001	-.0007	.0025	.0157
2.004	.00	7.97	.3123	.0130	-.0359	-.0002	.0001	-.0007	.0025	.0155
2.002	.00	9.97	.3890	.0124	-.0449	-.0003	.0001	-.0009	.0026	.0150
2.001	.00	11.93	.4623	.0118	-.0539	-.0005	.0002	-.0010	.0027	.0145
1.999	.00	13.97	.5388	.0111	-.0634	-.0003	.0002	-.0012	.0027	.0138
2.003	.00	-.07	-.0018	.0146	-.0006	-.0003	.0000	-.0001	.0024	.0170

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.1992	-.00	-5.04	-.1979	.0319	.0205	-.0001	-.0000	.0004	.0025	.0345
-6.1766	-.00	-4.04	-.1588	.0257	.0162	-.0000	-.0000	.0002	.0024	.0281
-5.7902	.00	-3.08	-.1222	.0211	.0123	-.0003	-.0000	.0001	.0024	.0235
-4.6575	.00	-2.05	-.0816	.0175	.0078	-.0001	-.0000	.0001	.0024	.0199
-2.6999	.00	-1.06	-.0415	.0154	.0036	-.0001	-.0000	.0000	.0024	.0178
-.1539	.00	-.08	-.0022	.0146	-.0006	-.0002	.0000	-.0001	.0024	.0170
2.3950	.00	.93	.0360	.0150	-.0049	-.0001	.0000	-.0002	.0024	.0174
4.5403	.00	1.97	.0769	.0169	-.0093	-.0002	.0000	-.0003	.0024	.0193
5.7460	.00	2.96	.1154	.0201	-.0134	-.0001	.0000	-.0004	.0024	.0225
6.2828	.00	3.95	.1547	.0246	-.0180	-.0003	.0001	-.0005	.0024	.0270
6.3236	.00	4.95	.1928	.0305	-.0224	-.0000	.0001	-.0005	.0024	.0329
6.1307	.00	6.00	.2335	.0381	-.0271	-.0002	.0001	-.0006	.0024	.0405
5.8361	.00	6.95	.2696	.0462	-.0314	-.0002	.0001	-.0007	.0025	.0487
5.4728	.00	7.97	.3075	.0562	-.0359	-.0002	.0001	-.0007	.0025	.0587
4.7881	.00	9.97	.3810	.0796	-.0449	-.0003	.0002	-.0009	.0026	.0821
4.1975	.00	11.93	.4498	.1072	-.0539	-.0004	.0003	-.0010	.0026	.1098
3.6923	.00	13.97	.5201	.1409	-.0634	-.0003	.0003	-.0012	.0026	.1435
-.1237	.00	-.07	-.0018	.0146	-.0006	-.0003	.0000	-.0001	.0024	.0170

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 19 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	-.00	-5.10	-.1769	.0145	.0153	-.0001	-.0000	.0003	.0024	.0169
2.000	-.00	-4.12	-.1421	.0145	.0120	-.0001	-.0000	.0002	.0023	.0168
2.001	-.00	-3.11	-.1071	.0145	.0087	-.0001	-.0000	.0001	.0023	.0168
2.001	.00	-2.11	-.0723	.0145	.0053	-.0001	-.0000	.0000	.0023	.0167
2.001	.00	-1.12	-.0378	.0145	.0020	-.0001	-.0000	.0000	.0023	.0168
2.000	.00	-.09	-.0024	.0144	-.0015	-.0001	-.0000	-.0001	.0023	.0167
2.000	.00	.93	.0321	.0143	-.0049	-.0001	.0000	-.0002	.0023	.0166
2.000	.00	1.91	.0660	.0141	-.0083	.0000	.0000	-.0003	.0023	.0164
2.000	.00	2.96	.1031	.0140	-.0120	-.0001	.0000	-.0003	.0023	.0162
1.999	.00	3.93	.1362	.0138	-.0156	-.0000	.0001	-.0003	.0023	.0161
2.000	.00	4.92	.1707	.0137	-.0193	-.0001	.0000	-.0005	.0023	.0159
2.000	.00	5.91	.2049	.0135	-.0229	-.0001	.0001	-.0005	.0023	.0158
2.000	.00	6.89	.2391	.0133	-.0267	-.0000	.0001	-.0005	.0023	.0156
1.999	.00	7.91	.2733	.0132	-.0306	-.0001	.0001	-.0006	.0023	.0155
1.999	.00	9.91	.3410	.0128	-.0381	-.0000	.0001	-.0008	.0024	.0152
1.999	.00	11.90	.4093	.0124	-.0460	.0000	.0002	-.0010	.0024	.0148
2.001	.00	13.91	.4762	.0119	-.0539	-.0001	.0002	-.0011	.0025	.0143
2.001	.00	15.90	.5435	.0113	-.0622	.0002	.0002	-.0012	.0025	.0137
2.000	.00	16.89	.5777	.0109	-.0665	.0000	.0002	-.0013	.0025	.0134
2.000	.00	-.07	-.0001	.0145	-.0017	-.0001	.0000	-.0001	.0023	.0167

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.8025	-.00	-5.10	-.1749	.0301	.0153	-.0001	-.0000	.0003	.0024	.0326
-5.7069	-.00	-4.12	-.1407	.0247	.0120	-.0001	-.0000	.0002	.0023	.0270
-5.2385	-.00	-3.11	-.1062	.0203	.0087	-.0001	-.0000	.0001	.0023	.0225
-4.1934	.00	-2.11	-.0717	.0171	.0053	-.0001	-.0000	.0000	.0023	.0194
-2.4661	.00	-1.12	-.0375	.0152	.0020	-.0001	-.0000	.0000	.0023	.0175
-.1653	.00	-.09	-.0024	.0144	-.0015	-.0001	-.0000	-.0001	.0023	.0167
2.1520	.00	.93	.0319	.0148	-.0049	-.0001	.0000	-.0002	.0023	.0171
4.0222	.00	1.91	.0655	.0163	-.0083	.0000	.0000	-.0003	.0023	.0186
5.3004	.00	2.96	.1022	.0193	-.0120	-.0001	.0000	-.0003	.0023	.0215
5.8351	.00	3.93	.1349	.0231	-.0156	-.0000	.0001	-.0003	.0023	.0254
5.9731	.00	4.92	.1688	.0283	-.0193	-.0001	.0000	-.0005	.0023	.0305
5.8636	.00	5.91	.2025	.0345	-.0229	-.0001	.0001	-.0005	.0023	.0368
5.6264	.00	6.89	.2357	.0419	-.0267	-.0000	.0001	-.0005	.0023	.0442
5.3087	.00	7.91	.2689	.0507	-.0306	-.0001	.0001	-.0006	.0023	.0530
4.6828	.00	9.91	.3337	.0713	-.0381	.0000	.0001	-.0008	.0024	.0736
4.1222	.00	11.90	.3980	.0965	-.0460	.0001	.0002	-.0010	.0024	.0989
3.6469	.00	13.91	.4594	.1260	-.0539	.0000	.0002	-.0011	.0024	.1284
3.2531	.00	15.90	.5196	.1597	-.0622	.0003	.0002	-.0012	.0024	.1621
3.0826	.00	16.89	.5496	.1783	-.0665	.0001	.0002	-.0013	.0024	.1807
-.0042	.00	-.07	-.0001	.0145	-.0017	-.0001	.0000	-.0001	.0023	.0167

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 21 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.003	.00	-2.09	-.1629	.0238	.0459	-.0001	.0000	-.0001	.0031	.0269
2.002	.00	-1.10	-.1145	.0232	.0402	-.0001	.0000	.0000	.0030	.0263
2.002	-.00	-.10	-.0649	.0226	.0341	-.0001	.0000	.0001	.0030	.0256
2.001	-.00	.93	-.0145	.0218	.0281	.0000	.0000	.0001	.0030	.0249
2.001	-.00	1.90	.0330	.0210	.0225	-.0002	.0000	.0000	.0030	.0241
2.002	-.00	2.90	.0816	.0201	.0167	.0001	.0000	.0001	.0031	.0232
2.002	-.00	3.93	.1306	.0192	.0110	-.0001	.0000	.0001	.0031	.0223
2.002	-.00	4.91	.1762	.0182	.0056	.0000	.0000	.0001	.0032	.0214
2.003	-.00	5.91	.2226	.0172	-.0002	-.0004	.0001	.0002	.0032	.0205
2.003	-.00	6.90	.2710	.0162	-.0061	.0001	.0000	.0000	.0033	.0195
2.003	-.00	7.92	.3181	.0153	-.0118	.0000	.0000	.0001	.0033	.0185
2.002	-.00	9.91	.4101	.0131	-.0232	-.0001	-.0000	.0001	.0033	.0164
2.001	-.00	11.96	.5051	.0108	-.0352	-.0000	.0000	.0002	.0033	.0141
2.005	.00	-.08	-.0630	.0226	.0341	-.0001	.0000	.0000	.0030	.0257

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.4413	.00	-2.09	-.1620	.0298	.0459	-.0001	.0000	-.0001	.0031	.0328
-4.4809	.00	-1.10	-.1140	.0254	.0402	-.0001	.0000	.0000	.0030	.0285
-2.8601	-.00	-.10	-.0649	.0227	.0341	-.0001	.0000	.0001	.0030	.0257
-.6876	-.00	.93	-.0149	.0216	.0281	.0000	.0000	.0001	.0030	.0246
1.4586	-.00	1.90	.0323	.0221	.0225	-.0002	.0000	.0000	.0030	.0252
3.3170	-.00	2.90	.0805	.0243	.0167	.0001	.0000	.0001	.0031	.0273
4.5983	-.00	3.93	.1290	.0281	.0110	-.0001	.0001	.0001	.0031	.0312
5.2403	-.00	4.91	.1740	.0332	.0056	.0000	.0000	.0001	.0032	.0364
5.4842	-.00	5.91	.2197	.0401	-.0002	-.0004	.0001	.0002	.0032	.0433
5.4930	-.00	6.90	.2671	.0486	-.0061	.0001	-.0000	.0000	.0032	.0519
5.3120	-.00	7.92	.3130	.0589	-.0118	.0000	.0000	.0001	.0032	.0622
4.8128	-.00	9.91	.4017	.0835	-.0232	-.0001	.0000	.0001	.0032	.0867
4.2698	-.00	11.96	.4919	.1152	-.0352	-.0000	.0000	.0002	.0032	.1184
-2.7706	.00	-.08	-.0629	.0227	.0341	-.0001	.0000	.0000	.0030	.0257

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 22 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	-.00	-2.21	-.1296	.0220	.0337	.0000	.0000	-.0000	.0029	.0249
2.000	-.00	-1.21	-.0894	.0214	.0292	.0000	.0000	.0001	.0029	.0243
2.000	-.00	-.17	-.0480	.0208	.0246	.0001	.0000	.0001	.0029	.0237
2.001	-.00	.80	-.0094	.0202	.0203	.0001	.0000	.0001	.0029	.0231
2.001	-.00	1.84	.0332	.0195	.0156	-.0000	.0000	.0002	.0029	.0223
2.002	-.00	2.80	.0715	.0188	.0113	.0001	.0000	.0003	.0029	.0217
2.002	-.00	3.82	.1119	.0181	.0069	.0000	.0000	.0003	.0029	.0210
2.001	-.00	4.79	.1489	.0174	.0026	-.0000	.0000	.0003	.0030	.0203
2.000	-.00	5.81	.1889	.0166	-.0019	-.0001	.0000	.0004	.0030	.0197
1.999	-.00	6.82	.2277	.0158	-.0064	-.0001	.0000	.0004	.0031	.0189
2.000	-.00	7.81	.2663	.0150	-.0109	.0001	-.0000	.0004	.0031	.0181
2.001	-.00	9.77	.3404	.0134	-.0198	-.0002	.0001	.0005	.0031	.0165
2.001	-.00	11.83	.4189	.0117	-.0292	-.0000	.0000	.0005	.0031	.0147
2.002	-.01	13.79	.4915	.0100	-.0380	-.0002	.0001	.0005	.0030	.0130
1.999	-.00	-.19	-.0477	.0209	.0246	.0000	.0000	.0001	.0029	.0237

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.7744	-.00	-2.21	-.1287	.0269	.0337	.0000	.0000	-.0000	.0029	.0298
-3.8092	-.00	-1.21	-.0889	.0233	.0292	.0000	.0000	.0001	.0029	.0262
-2.2842	-.00	-.17	-.0479	.0210	.0246	.0001	.0000	.0001	.0029	.0239
-.4815	-.00	.80	-.0097	.0201	.0203	.0001	.0000	.0001	.0029	.0229
1.5851	-.00	1.84	.0325	.0205	.0156	-.0000	.0000	.0002	.0029	.0234
3.1590	-.00	2.80	.0705	.0223	.0113	.0001	.0000	.0003	.0029	.0252
4.3334	-.00	3.82	.1105	.0255	.0069	.0000	.0000	.0003	.0029	.0284
4.9412	-.00	4.79	.1469	.0297	.0026	-.0000	.0000	.0003	.0030	.0327
5.2220	-.00	5.81	.1863	.0357	-.0019	-.0001	.0000	.0004	.0030	.0387
5.2460	-.00	6.82	.2242	.0427	-.0064	-.0001	.0000	.0004	.0030	.0458
5.1260	-.00	7.81	.2618	.0511	-.0109	.0001	-.0000	.0004	.0030	.0541
4.6971	-.00	9.77	.3332	.0709	-.0198	-.0002	.0001	.0005	.0031	.0740
4.1905	-.00	11.83	.4076	.0973	-.0292	-.0000	.0000	.0005	.0030	.1003
3.7435	-.01	13.79	.4749	.1269	-.0380	-.0001	.0001	.0005	.0030	.1298
-2.2680	-.00	-.19	-.0477	.0210	.0246	.0000	.0000	.0001	.0029	.0239

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 23 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	-.00	-2.10	-.1100	.0207	.0262	.0001	.0000	.0000	.0026	.0233
2.001	-.00	-1.05	-.0723	.0202	.0225	.0001	.0000	.0000	.0026	.0228
2.003	-.00	-.07	-.0380	.0196	.0192	.0001	.0000	.0001	.0026	.0222
2.004	-.00	.92	-.0038	.0190	.0156	.0000	.0000	.0001	.0026	.0216
2.001	-.00	1.90	.0303	.0184	.0120	.0001	.0000	.0002	.0026	.0211
2.001	-.00	2.88	.0648	.0178	.0084	-.0000	.0000	.0002	.0027	.0205
2.002	-.00	3.90	.0993	.0172	.0048	-.0000	.0000	.0002	.0027	.0199
2.003	-.00	4.93	.1345	.0165	.0011	.0001	-.0000	.0002	.0027	.0193
2.003	-.00	5.93	.1691	.0159	-.0026	.0000	.0000	.0002	.0028	.0187
2.002	-.00	6.90	.2032	.0153	-.0064	-.0000	.0000	.0002	.0028	.0180
2.002	-.00	7.92	.2377	.0146	-.0102	.0000	.0000	.0002	.0028	.0173
2.000	-.00	9.92	.3057	.0132	-.0180	.0002	.0000	.0002	.0028	.0160
1.999	-.00	11.90	.3725	.0119	-.0255	.0000	.0000	.0002	.0028	.0147
2.000	-.00	13.92	.4398	.0105	-.0330	.0000	.0000	.0002	.0028	.0132
2.003	-.00	15.93	.5066	.0090	-.0408	.0002	.0000	.0001	.0027	.0117
2.003	-.00	16.94	.5402	.0082	-.0449	.0000	.0001	.0003	.0027	.0109
2.001	-.00	17.91	.5723	.0073	-.0489	.0001	.0001	.0002	.0027	.0101
2.001	.00	-.07	-.0378	.0196	.0190	.0001	-.0000	-.0000	.0026	.0223

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.4131	-.00	-2.10	-.1092	.0247	.0262	.0001	.0000	.0000	.0026	.0273
-3.3432	-.00	-1.05	-.0719	.0215	.0225	.0001	.0000	.0000	.0026	.0241
-1.9337	-.00	-.07	-.0380	.0197	.0192	.0001	.0000	.0001	.0026	.0223
-.2170	-.00	.92	-.0041	.0190	.0156	.0000	.0000	.0001	.0026	.0216
1.5305	-.00	1.90	.0297	.0184	.0120	.0001	-.0000	.0002	.0026	.0220
3.0334	-.00	2.88	.0638	.0210	.0084	.0000	.0000	.0002	.0027	.0237
4.0995	-.00	3.90	.0979	.0239	.0048	-.0000	.0000	.0002	.0027	.0266
4.7265	-.00	4.93	.1325	.0280	.0011	.0001	-.0000	.0002	.0027	.0308
5.0030	-.00	5.93	.1665	.0333	-.0026	.0000	.0000	.0002	.0027	.0360
5.0507	-.00	6.90	.1999	.0396	-.0064	.0000	.0000	.0002	.0028	.0423
4.9487	-.00	7.92	.2335	.0472	-.0102	.0000	.0000	.0002	.0028	.0499
4.5465	-.00	9.92	.2988	.0657	-.0180	.0001	-.0000	.0002	.0028	.0685
4.0927	-.00	11.90	.3621	.0865	-.0255	.0000	.0000	.0002	.0027	.0912
3.6584	-.00	13.92	.4244	.1160	-.0330	.0001	.0000	.0002	.0027	.1187
3.2818	-.00	15.93	.4847	.1477	-.0408	.0002	-.0000	.0001	.0026	.1503
3.1128	-.00	16.94	.5144	.1652	-.0449	.0001	.0001	.0003	.0026	.1679
2.9641	-.00	17.91	.5423	.1830	-.0489	.0001	.0000	.0002	.0026	.1856
-1.9177	.00	-.07	-.0378	.0197	.0190	.0001	-.0000	-.0000	.0026	.0223

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 26 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.502	.00	-2.06	-.2105	.0416	.0713	.0001	-.0000	.0000	.0035	.0451
1.502	.00	-1.08	-.1638	.0408	.0659	.0001	-.0000	.0000	.0036	.0443
1.501	.00	-.05	-.1148	.0398	.0602	-.0002	.0000	-.0000	.0036	.0434
1.499	.00	.93	-.0665	.0389	.0550	-.0000	.0000	.0001	.0036	.0425
1.498	.00	1.91	-.0176	.0378	.0494	.0001	.0000	-.0000	.0036	.0413
1.496	.00	2.95	.0314	.0366	.0442	-.0000	.0000	-.0001	.0035	.0403
1.496	.00	3.93	.0795	.0356	.0386	-.0000	.0000	-.0001	.0035	.0393
1.497	.00	4.88	.1231	.0348	.0338	-.0000	.0000	-.0002	.0036	.0384
1.499	.00	5.91	.1731	.0338	.0286	-.0002	.0001	-.0003	.0037	.0375
1.500	-.00	6.92	.2195	.0326	.0232	-.0001	.0001	-.0003	.0039	.0365
1.501	.00	7.92	.2664	.0312	.0178	.0002	.0000	-.0002	.0040	.0352
1.500	-.00	9.93	.3566	.0279	.0063	.0001	.0001	-.0002	.0041	.0320
1.498	-.00	11.93	.4504	.0246	-.0052	.0000	.0001	-.0001	.0041	.0287
1.499	.00	-.05	-.1128	.0398	.0603	-.0000	-.0000	-.0000	.0036	.0434

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.2507	.00	-2.06	-.2089	.0491	.0713	.0001	-.0000	.0000	.0035	.0527
-3.7166	.00	-1.08	-.1630	.0438	.0659	.0001	-.0000	.0000	.0036	.0474
-2.8765	.00	-.05	-.1148	.0399	.0602	-.0002	.0000	-.0000	.0036	.0435
-1.7757	.00	.93	-.0671	.0378	.0550	-.0000	.0000	.0001	.0036	.0414
-.5061	.00	1.91	-.0189	.0372	.0494	.0001	.0000	-.0000	.0036	.0407
.7689	.00	2.95	.0295	.0363	.0442	-.0000	.0000	-.0001	.0035	.0419
1.8700	.00	3.93	.0769	.0411	.0386	-.0000	.0000	-.0001	.0035	.0446
2.6495	.00	4.88	.1197	.0452	.0338	-.0000	.0000	-.0002	.0036	.0487
3.2809	.00	5.91	.1687	.0514	.0286	-.0002	.0001	-.0003	.0037	.0551
3.6365	-.00	6.92	.2139	.0588	.0232	-.0000	.0001	-.0003	.0039	.0627
3.8392	.00	7.92	.2596	.0676	.0178	.0002	.0000	-.0002	.0040	.0716
3.8934	-.00	9.93	.3465	.0890	.0063	.0001	.0001	-.0002	.0040	.0930
3.7164	-.00	11.93	.4355	.1172	-.0052	.0001	.0001	-.0001	.0040	.1212
-2.8244	.00	-.05	-.1128	.0399	.0603	-.0000	-.0000	-.0000	.0036	.0435

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 24 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

P/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-2.19	-.1697	.0379	.0551	.0002	.0001	-.0004	.0031	.0410
1.999	.00	-1.21	-.1319	.0370	.0510	.0000	.0000	-.0003	.0031	.0401
2.002	.00	-.21	-.0913	.0360	.0467	.0002	.0000	-.0002	.0031	.0391
2.004	.00	.85	-.0476	.0349	.0420	.0000	.0000	-.0003	.0031	.0380
2.004	.00	1.79	-.0106	.0339	.0378	.0001	.0001	-.0002	.0031	.0370
2.003	.00	2.80	.0309	.0328	.0333	-.0000	.0001	-.0002	.0032	.0360
2.001	-.00	3.79	.0715	.0317	.0288	.0002	.0001	-.0001	.0033	.0350
2.000	-.00	4.83	.1121	.0306	.0244	.0001	.0001	-.0000	.0034	.0342
1.999	.00	5.78	.1492	.0301	.0206	-.0000	.0000	-.0002	.0035	.0336
1.999	.00	6.80	.1872	.0291	.0165	.0000	-.0000	-.0001	.0035	.0326
2.000	-.00	7.82	.2264	.0277	.0120	.0001	-.0000	.0001	.0035	.0313
2.003	-.00	9.82	.3030	.0249	.0028	-.0001	.0001	.0001	.0036	.0285
2.004	-.00	11.83	.3792	.0222	-.0064	-.0000	.0001	.0001	.0035	.0258
2.002	-.00	13.85	.4557	.0193	-.0157	-.0001	.0001	-.0000	.0035	.0228
2.000	.00	-.23	-.0904	.0360	.0465	.0002	.0000	-.0003	.0031	.0391

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.7948	.00	-2.19	-.1682	.0443	.0551	.0002	.0001	-.0004	.0031	.0474
-3.2944	.00	-1.21	-.1311	.0398	.0510	.0000	.0000	-.0003	.0031	.0429
-2.5078	.00	-.21	-.0912	.0364	.0467	.0002	.0000	-.0002	.0031	.0394
-1.4083	.00	.85	-.0481	.0342	.0420	.0000	.0000	-.0003	.0031	.0373
-.3479	.00	1.79	-.0117	.0335	.0378	.0001	.0001	-.0002	.0031	.0367
.8535	.00	2.80	.0292	.0343	.0333	-.0000	.0001	-.0002	.0032	.0375
1.9026	-.00	3.79	.0692	.0364	.0288	.0002	.0000	-.0001	.0033	.0397
2.7201	-.00	4.83	.1091	.0401	.0244	.0001	.0001	-.0000	.0034	.0435
3.2324	.00	5.78	.1454	.0450	.0206	-.0000	.0000	-.0002	.0034	.0484
3.5718	.00	6.80	.1824	.0511	.0165	.0000	-.0000	-.0001	.0035	.0546
3.7836	-.00	7.82	.2206	.0583	.0120	.0001	-.0000	.0001	.0035	.0618
3.8607	-.00	9.82	.2943	.0762	.0028	-.0001	.0001	.0001	.0035	.0798
3.6860	-.00	11.83	.3666	.0995	-.0064	-.0000	.0001	.0001	.0035	.1029
3.4243	-.00	13.85	.4378	.1279	-.0157	-.0001	.0001	-.0000	.0034	.1312
-2.4824	.00	-.23	-.0902	.0363	.0465	.0002	.0000	-.0003	.0031	.0394

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 25 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.999	.00	-2.12	-.1465	.0354	.0456	.0001	.0001	-.0004	.0027	.0382
1.999	.00	-1.10	-.1105	.0345	.0420	.0001	.0001	-.0003	.0027	.0372
2.001	.00	-.11	-.0748	.0334	.0384	.0001	.0001	-.0003	.0028	.0361
2.003	.00	.90	-.0394	.0323	.0346	.0001	.0001	-.0002	.0028	.0352
2.003	.00	1.92	-.0032	.0312	.0309	.0002	.0001	-.0002	.0029	.0341
2.002	.00	2.92	.0323	.0302	.0271	.0001	.0000	-.0001	.0029	.0331
2.001	-.00	3.88	.0653	.0292	.0235	.0001	.0001	-.0001	.0030	.0322
2.000	.00	4.91	.1025	.0283	.0196	.0001	.0001	-.0002	.0030	.0313
2.000	-.00	5.91	.1368	.0276	.0162	.0002	.0000	-.0000	.0030	.0306
2.001	.00	6.88	.1687	.0266	.0127	.0002	.0000	-.0002	.0031	.0296
2.002	-.00	7.91	.2044	.0253	.0086	.0001	-.0000	-.0000	.0031	.0284
2.003	-.00	9.95	.2739	.0229	.0005	.0001	.0000	-.0000	.0031	.0259
2.002	-.00	11.95	.3423	.0202	-.0076	.0002	.0000	-.0000	.0030	.0232
2.001	-.00	13.96	.4098	.0176	-.0156	.0002	.0001	.0000	.0030	.0206
2.002	-.00	15.93	.4754	.0152	-.0232	.0002	.0001	-.0002	.0031	.0183
2.001	-.00	16.90	.5069	.0140	-.0270	.0001	.0001	-.0002	.0031	.0171
2.000	.00	-.08	-.0731	.0334	.0381	.0001	.0001	-.0003	.0028	.0361

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.5513	.00	-2.12	-.1451	.0408	.0456	.0001	.0001	-.0004	.0027	.0436
-3.0029	.00	-1.10	-.1099	.0366	.0420	.0001	.0001	-.0003	.0027	.0393
-2.2314	.00	-.11	-.0748	.0335	.0384	.0001	.0001	-.0003	.0028	.0363
-1.2581	.00	.90	-.0399	.0317	.0346	.0001	.0001	-.0002	.0028	.0345
-.1371	.00	1.92	-.0043	.0311	.0309	.0002	.0000	-.0002	.0029	.0339
.9659	.00	2.92	.0307	.0318	.0271	.0001	.0000	-.0001	.0029	.0347
1.8813	-.00	3.88	.0632	.0336	.0235	.0001	.0000	-.0001	.0029	.0365
2.6978	.00	4.91	.0997	.0370	.0196	.0001	.0000	-.0002	.0030	.0399
3.2051	-.00	5.91	.1332	.0416	.0162	.0002	-.0000	-.0000	.0030	.0446
3.5267	.00	6.88	.1643	.0466	.0127	.0002	-.0000	-.0002	.0030	.0496
3.7415	-.00	7.91	.1990	.0532	.0086	.0001	-.0000	-.0000	.0030	.0562
3.8054	-.00	9.95	.2659	.0699	.0005	.0001	-.0000	-.0000	.0030	.0729
3.6492	-.00	11.95	.3307	.0906	-.0076	.0002	-.0000	-.0000	.0030	.0936
3.3935	-.00	13.96	.3935	.1159	-.0156	.0002	.0000	.0000	.0029	.1189
3.1223	-.00	15.93	.4530	.1451	-.0232	.0002	-.0000	-.0002	.0029	.1480
2.9921	-.00	16.90	.4809	.1607	-.0270	.0001	.0000	-.0002	.0030	.1637
-2.1821	.00	-.08	-.0730	.0335	.0381	.0001	.0001	-.0003	.0028	.0362

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 36 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.998	.00	-5.01	-.2483	.0156	.0227	-.0003	-.0001	.0002	.0027	.0183
1.999	.00	-4.05	-.2016	.0156	.0182	-.0002	-.0001	.0002	.0026	.0184
2.000	.00	-4.05	-.2012	.0156	.0181	-.0003	-.0001	.0001	.0026	.0184
2.002	.00	-3.09	-.1544	.0159	.0133	-.0005	-.0001	.0001	.0026	.0185
2.001	.00	-2.08	-.1037	.0161	.0082	-.0005	-.0001	.0000	.0026	.0186
2.001	.00	-1.09	-.0546	.0161	.0035	-.0005	-.0000	-.0001	.0026	.0186
2.002	.00	-.07	-.0032	.0161	-.0018	-.0003	-.0000	-.0001	.0025	.0187
2.001	.00	.94	.0455	.0160	-.0065	-.0004	-.0000	-.0001	.0025	.0185
2.002	-.00	1.94	.0952	.0158	-.0111	-.0004	.0000	-.0000	.0026	.0184
2.002	-.00	2.99	.1470	.0155	-.0165	-.0007	.0000	.0000	.0026	.0181
2.002	-.00	3.94	.1939	.0152	-.0213	-.0007	.0000	.0001	.0027	.0179
2.002	-.00	4.97	.2446	.0149	-.0266	-.0007	.0000	.0003	.0027	.0176
2.001	-.00	5.95	.2943	.0145	-.0317	-.0005	.0000	.0003	.0027	.0173
2.000	-.00	6.94	.3422	.0141	-.0370	-.0006	.0000	.0004	.0028	.0169
2.000	-.00	7.94	.3906	.0137	-.0421	-.0007	.0001	.0004	.0029	.0166
2.000	-.00	9.98	.4887	.0128	-.0526	-.0007	-.0000	.0004	.0030	.0158
2.002	-.00	11.98	.5846	.0119	-.0628	-.0003	.0000	.0006	.0030	.0149
2.004	.00	-.08	-.0017	.0161	-.0017	-.0006	-.0000	-.0001	.0025	.0187

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-6.6085	.00	-5.01	-.2469	.0372	.0227	-.0003	-.0001	.0002	.0027	.0399
-6.6707	.00	-4.05	-.1999	.0300	.0182	-.0002	-.0001	.0002	.0026	.0326
-6.6584	.00	-4.05	-.1996	.0300	.0181	-.0003	-.0001	.0001	.0026	.0326
-6.3294	.00	-3.09	-.1533	.0242	.0133	-.0005	-.0001	.0001	.0026	.0268
-5.2036	.00	-2.08	-.1031	.0198	.0082	-.0005	-.0001	.0000	.0026	.0224
-3.1728	.00	-1.09	-.0543	.0171	.0035	-.0005	-.0001	-.0001	.0026	.0197
-.1945	.00	-.07	-.0031	.0161	-.0018	-.0003	-.0000	-.0001	.0025	.0187
2.7040	.00	.94	.0452	.0167	-.0065	-.0004	-.0000	-.0001	.0025	.0193
4.9805	-.00	1.94	.0946	.0190	-.0111	-.0004	.0000	-.0000	.0026	.0216
6.3096	-.00	2.99	.1460	.0231	-.0165	-.0007	.0001	.0000	.0026	.0258
6.7585	-.00	3.94	.1924	.0285	-.0213	-.0007	.0001	.0001	.0027	.0311
6.7313	-.00	4.97	.2424	.0360	-.0266	-.0007	.0001	.0003	.0027	.0387
6.4796	-.00	5.95	.2912	.0449	-.0317	-.0005	.0001	.0003	.0027	.0477
6.1014	-.00	6.94	.3380	.0554	-.0370	-.0006	.0001	.0004	.0028	.0582
5.6961	-.00	7.94	.3849	.0676	-.0421	-.0007	.0001	.0004	.0028	.0704
4.9229	-.00	9.98	.4791	.0973	-.0526	-.0007	.0001	.0004	.0029	.1002
4.2823	-.00	11.98	.5694	.1330	-.0628	-.0003	.0001	.0006	.0029	.1359
-.1035	.00	-.08	-.0017	.0161	-.0017	-.0006	-.0000	-.0001	.0025	.0187

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 39 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.17	-.2088	.0158	.0171	-.0000	-.0001	.0001	.0026	.0185
2.001	.00	-4.20	-.1698	.0159	.0135	.0000	-.0001	.0001	.0026	.0184
2.001	.00	-3.22	-.1303	.0159	.0099	-.0001	-.0001	.0001	.0025	.0184
2.001	.00	-2.24	-.0911	.0159	.0062	-.0001	-.0001	.0000	.0025	.0184
2.000	.00	-1.20	-.0483	.0158	.0023	-.0002	-.0001	-.0000	.0025	.0183
2.000	.00	-.21	-.0077	.0158	-.0014	-.0003	-.0001	-.0001	.0024	.0182
1.999	.00	.84	.0348	.0157	-.0053	-.0002	-.0001	-.0001	.0024	.0182
1.999	.00	1.85	.0760	.0156	-.0091	-.0002	-.0000	-.0001	.0025	.0181
1.998	-.00	2.86	.1172	.0155	-.0130	-.0004	-.0000	-.0000	.0025	.0180
1.998	-.00	3.85	.1572	.0154	-.0168	-.0004	-.0000	-.0000	.0025	.0178
1.998	-.00	4.82	.1970	.0152	-.0206	-.0005	.0000	.0000	.0025	.0177
1.999	-.00	5.82	.2377	.0150	-.0245	-.0004	-.0000	.0001	.0025	.0175
1.999	-.00	6.81	.2776	.0148	-.0284	-.0003	-.0000	.0000	.0025	.0173
2.000	-.00	7.79	.3165	.0145	-.0323	-.0005	.0000	.0001	.0026	.0171
2.001	-.00	9.84	.3984	.0138	-.0401	-.0003	-.0000	.0000	.0026	.0164
2.000	-.00	11.80	.4751	.0130	-.0475	-.0004	.0000	.0003	.0026	.0156
1.999	-.00	13.80	.5523	.0122	-.0553	-.0003	.0000	.0002	.0026	.0149
2.000	.00	-.16	-.0038	.0158	-.0018	-.0003	-.0001	-.0001	.0024	.0183

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.9684	.00	-5.17	-.2065	.0346	.0171	-.0000	-.0001	.0001	.0026	.0372
-5.9518	.00	-4.20	-.1682	.0263	.0135	.0000	-.0001	.0001	.0026	.0308
-5.5653	.00	-3.22	-.1292	.0232	.0099	-.0001	-.0001	.0001	.0025	.0257
-4.6493	.00	-2.24	-.0904	.0194	.0062	-.0001	-.0001	.0000	.0025	.0219
-2.8456	.00	-1.20	-.0479	.0168	.0023	-.0002	-.0001	-.0000	.0025	.0193
-.4835	.00	-.21	-.0077	.0158	-.0014	-.0003	-.0001	-.0001	.0024	.0183
2.1303	.00	.84	.0346	.0162	-.0053	-.0002	-.0001	-.0001	.0024	.0187
4.1770	.00	1.85	.0754	.0181	-.0091	-.0002	-.0000	-.0001	.0025	.0205
5.4537	-.00	2.86	.1163	.0213	-.0130	-.0004	.0000	-.0000	.0025	.0238
6.0194	-.00	3.85	.1559	.0259	-.0168	-.0004	.0000	-.0000	.0025	.0284
6.1478	-.00	4.82	.1950	.0317	-.0206	-.0005	.0000	.0000	.0025	.0342
6.0176	-.00	5.82	.2350	.0390	-.0245	-.0004	.0000	.0001	.0025	.0415
5.7529	-.00	6.81	.2739	.0476	-.0284	-.0003	.0000	.0000	.0025	.0501
5.4369	-.00	7.79	.3116	.0573	-.0323	-.0005	.0001	.0001	.0025	.0598
4.7766	-.00	9.84	.3901	.0817	-.0401	-.0003	.0000	.0000	.0025	.0842
4.2058	-.00	11.80	.4624	.1099	-.0475	-.0004	.0001	.0003	.0025	.1124
3.7141	-.00	13.80	.5334	.1436	-.0553	-.0003	.0001	.0002	.0025	.1462
-.2374	.00	-.16	-.0038	.0158	-.0018	-.0003	-.0001	-.0001	.0024	.0183

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 40 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-5.11	-.1820	.0155	.0120	.0000	-.0001	.0001	.0025	.0180
2.000	.00	-4.08	-.1448	.0155	.0093	-.0001	-.0001	.0001	.0024	.0179
1.999	.00	-3.11	-.1103	.0154	.0065	-.0000	-.0001	-.0000	.0023	.0178
2.000	.00	-2.11	-.0745	.0154	.0035	-.0001	-.0001	.0000	.0023	.0177
2.000	.00	-1.08	-.0379	.0153	.0005	-.0001	-.0001	.0000	.0023	.0176
2.001	.00	-.09	-.0026	.0152	-.0024	.0000	-.0001	-.0000	.0023	.0175
2.001	.00	.91	.0317	.0151	-.0053	-.0002	-.0001	-.0001	.0023	.0174
2.002	.00	1.90	.0664	.0150	-.0083	-.0002	-.0001	-.0001	.0023	.0173
2.001	-.00	2.93	.1036	.0149	-.0115	-.0001	-.0000	.0000	.0023	.0172
2.000	.00	3.94	.1401	.0149	-.0147	-.0001	-.0000	-.0001	.0023	.0171
1.999	.00	4.91	.1741	.0146	-.0178	-.0002	-.0000	-.0001	.0023	.0171
2.000	-.00	5.93	.2110	.0147	-.0210	-.0003	.0000	-.0001	.0023	.0170
2.000	-.00	6.90	.2453	.0145	-.0241	-.0002	-.0000	-.0001	.0023	.0168
2.000	-.00	7.88	.2802	.0144	-.0272	-.0002	-.0000	-.0000	.0023	.0167
2.001	-.00	9.90	.3516	.0139	-.0335	-.0003	-.0000	.0000	.0023	.0162
2.001	-.00	11.89	.4216	.0134	-.0399	-.0002	.0000	-.0001	.0023	.0157
2.002	-.00	13.89	.4917	.0128	-.0464	-.0002	.0001	.0001	.0024	.0152
2.001	-.00	15.93	.5634	.0122	-.0534	-.0003	.0001	.0000	.0024	.0145
2.000	-.00	16.95	.5991	.0118	-.0569	-.0002	.0001	.0000	.0024	.0142
2.002	.00	-.08	-.0007	.0152	-.0025	-.0002	-.0001	-.0000	.0023	.0175

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.6776	.00	-5.11	-.1799	.0317	.0120	.0000	-.0001	.0001	.0024	.0341
-5.5626	.00	-4.08	-.1433	.0258	.0093	-.0001	-.0001	.0001	.0024	.0281
-5.1097	.00	-3.11	-.1093	.0214	.0065	-.0000	-.0001	-.0000	.0023	.0237
-4.0786	.00	-2.11	-.0739	.0181	.0035	-.0001	-.0001	.0000	.0023	.0204
-2.3492	.00	-1.08	-.0376	.0160	.0005	-.0001	-.0001	.0000	.0023	.0183
-.1668	.00	-.09	-.0025	.0152	-.0024	.0000	-.0001	-.0000	.0023	.0175
2.0100	.00	.91	.0314	.0156	-.0053	-.0002	-.0001	-.0001	.0023	.0179
3.8250	.00	1.90	.0658	.0172	-.0083	-.0002	-.0001	-.0001	.0023	.0195
5.0853	-.00	2.93	.1027	.0202	-.0115	-.0001	-.0000	.0000	.0023	.0225
5.6759	.00	3.94	.1388	.0244	-.0147	-.0001	-.0000	-.0001	.0023	.0267
5.8148	.00	4.91	.1722	.0296	-.0178	-.0002	.0000	-.0001	.0023	.0319
5.7252	-.00	5.93	.2084	.0364	-.0210	-.0003	.0000	-.0001	.0023	.0387
5.5108	-.00	6.90	.2418	.0439	-.0241	-.0002	-.0000	-.0001	.0023	.0462
5.2348	-.00	7.88	.2756	.0527	-.0272	-.0002	.0000	-.0000	.0023	.0549
4.6381	-.00	9.90	.3440	.0742	-.0335	-.0003	.0000	.0000	.0022	.0764
4.0959	-.00	11.89	.4098	.1000	-.0399	-.0002	.0001	-.0001	.0023	.1023
3.6335	-.00	13.89	.4742	.1305	-.0464	-.0002	.0001	.0001	.0023	.1328
3.2366	-.00	15.93	.5364	.1664	-.0534	-.0002	.0001	.0000	.0023	.1686
3.0627	-.00	16.95	.5696	.1860	-.0569	-.0002	.0001	.0000	.0023	.1883
-.0457	.00	-.08	-.0007	.0152	-.0025	-.0002	-.0001	-.0000	.0023	.0175

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 42 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.997	.00	-2.09	-.1658	.0252	.0430	-.0005	.0001	-.0004	.0034	.0285
1.993	.00	-1.04	-.1119	.0246	.0378	-.0005	.0001	-.0003	.0033	.0279
1.995	.00	-.05	-.0618	.0239	.0325	-.0003	.0001	-.0003	.0033	.0272
1.996	.00	.99	-.0100	.0232	.0271	-.0004	.0001	-.0002	.0033	.0265
2.000	-.00	1.97	.0391	.0224	.0221	-.0005	.0001	-.0003	.0033	.0257
2.002	-.00	2.95	.0893	.0215	.0169	-.0005	.0001	-.0001	.0033	.0248
2.002	-.00	3.95	.1368	.0206	.0119	-.0006	.0001	.0000	.0033	.0239
2.001	-.00	4.92	.1854	.0196	.0069	-.0009	.0001	.0001	.0034	.0230
1.998	-.00	5.98	.2362	.0186	.0015	-.0006	.0001	.0003	.0034	.0221
1.995	-.00	6.98	.2858	.0176	-.0034	-.0008	.0001	.0004	.0035	.0211
1.993	-.00	7.95	.3325	.0167	-.0082	-.0004	.0001	.0004	.0035	.0202
1.997	-.00	9.98	.4305	.0146	-.0184	-.0007	.0000	.0005	.0036	.0181
1.999	-.01	11.97	.5246	.0124	-.0281	-.0005	.0000	.0009	.0036	.0161
2.003	-.00	-.06	-.0605	.0239	.0324	-.0005	.0001	-.0002	.0033	.0273

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-5.2821	.00	-2.09	-.1648	.0312	.0430	-.0005	.0000	-.0004	.0034	.0346
-4.1891	.00	-1.04	-.1114	.0266	.0378	-.0005	.0000	-.0003	.0033	.0299
-2.5754	.00	-.05	-.0618	.0240	.0325	-.0003	.0001	-.0003	.0033	.0273
-.4504	.00	.99	-.0104	.0230	.0271	-.0004	.0001	-.0002	.0033	.0263
1.6142	-.00	1.97	.0383	.0237	.0221	-.0005	.0001	-.0003	.0033	.0270
3.3754	-.00	2.95	.0881	.0261	.0169	-.0005	.0001	-.0001	.0033	.0294
4.5122	-.00	3.95	.1350	.0299	.0119	-.0006	.0002	.0000	.0033	.0332
5.1569	-.00	4.92	.1830	.0355	.0069	-.0008	.0002	.0001	.0034	.0388
5.3965	-.00	5.98	.2329	.0432	.0015	-.0006	.0001	.0003	.0034	.0466
5.3878	-.00	6.98	.2815	.0523	-.0034	-.0008	.0002	.0004	.0035	.0557
5.2318	-.00	7.95	.3270	.0625	-.0082	-.0004	.0001	.0004	.0035	.0660
4.7391	-.00	9.98	.4215	.0889	-.0184	-.0006	.0001	.0005	.0035	.0925
4.2217	-.01	11.97	.5106	.1209	-.0281	-.0005	.0001	.0009	.0036	.1245
-2.5196	-.00	-.06	-.0605	.0240	.0324	-.0005	.0001	-.0002	.0033	.0273

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 43 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.00	-2.19	-.1343	.0233	.0321	.0001	.0000	-.0003	.0029	.0262
1.999	.00	-1.15	-.0917	.0226	.0281	-.0002	.0000	-.0002	.0029	.0256
1.999	-.00	-.18	-.0511	.0221	.0242	-.0002	.0000	-.0001	.0029	.0250
1.999	.00	.81	-.0109	.0215	.0203	-.0002	.0000	-.0002	.0029	.0244
2.000	-.00	1.87	.0328	.0208	.0162	-.0002	.0000	-.0000	.0029	.0238
2.000	-.00	2.85	.0734	.0202	.0120	-.0004	.0001	.0000	.0030	.0231
2.002	-.00	3.85	.1128	.0195	.0083	-.0003	.0000	.0002	.0030	.0225
2.003	-.00	4.82	.1519	.0188	.0044	-.0003	.0000	.0003	.0030	.0219
2.003	-.00	5.85	.1938	.0181	.0005	-.0003	.0001	.0004	.0031	.0212
2.003	-.00	6.84	.2331	.0173	-.0032	-.0004	.0000	.0005	.0032	.0205
2.002	-.00	7.85	.2735	.0165	-.0072	-.0004	.0000	.0007	.0032	.0197
2.000	-.00	9.81	.3514	.0148	-.0147	-.0004	-.0000	.0008	.0032	.0179
2.000	-.01	11.86	.4319	.0128	-.0224	-.0005	.0000	.0011	.0031	.0159
2.000	-.01	13.86	.5106	.0109	-.0300	-.0005	.0000	.0011	.0031	.0140
2.003	.00	-.18	-.0507	.0221	.0240	-.0003	.0000	-.0002	.0029	.0250

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.6966	.00	-2.19	-.1333	.0284	.0321	.0001	.0000	-.0003	.0029	.0313
-3.7248	.00	-1.15	-.0912	.0245	.0281	-.0002	.0000	-.0002	.0029	.0274
-2.2949	-.00	-.18	-.0510	.0222	.0242	-.0002	.0000	-.0001	.0029	.0251
-.5272	.00	.81	-.0112	.0213	.0203	-.0002	.0000	-.0002	.0029	.0242
1.4661	-.00	1.87	.0321	.0219	.0162	-.0002	.0001	-.0000	.0029	.0248
3.0363	-.00	2.85	.0723	.0238	.0120	-.0004	.0001	.0000	.0030	.0268
4.1153	-.00	3.85	.1113	.0270	.0083	-.0003	.0001	.0002	.0030	.0300
4.7525	-.00	4.82	.1498	.0315	.0044	-.0003	.0001	.0003	.0030	.0346
5.0638	-.00	5.85	.1910	.0377	.0005	-.0003	.0001	.0004	.0031	.0408
5.1060	-.00	6.84	.2294	.0449	-.0032	-.0004	.0001	.0005	.0031	.0481
5.0022	-.00	7.85	.2687	.0537	-.0072	-.0004	.0001	.0007	.0031	.0569
4.6179	-.00	9.81	.3437	.0744	-.0147	-.0004	.0001	.0008	.0031	.0775
4.1488	-.01	11.86	.4201	.1013	-.0224	-.0005	.0001	.0011	.0031	.1043
3.7101	-.01	13.86	.4931	.1329	-.0300	-.0005	.0001	.0011	.0030	.1359
-2.2764	.00	-.18	-.0506	.0222	.0240	-.0003	.0000	-.0002	.0029	.0252

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 44 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.000	.00	-2.11	-.1095	.0214	.0241	-.0000	.0000	-.0002	.0026	.0241
1.999	.00	-1.12	-.0741	.0209	.0211	.0000	.0000	-.0001	.0027	.0235
1.998	.00	-.07	-.0363	.0203	.0179	-.0000	-.0000	-.0001	.0027	.0230
1.999	-.00	.95	.0001	.0197	.0146	-.0001	-.0000	.0000	.0027	.0224
2.000	-.00	1.94	.0354	.0191	.0114	-.0001	-.0000	.0001	.0027	.0218
2.001	-.00	2.93	.0706	.0186	.0083	-.0001	-.0000	.0001	.0027	.0212
2.002	-.00	3.95	.1062	.0180	.0050	-.0001	.0000	.0002	.0027	.0207
2.002	-.00	4.88	.1394	.0175	.0021	-.0002	.0000	.0004	.0028	.0202
2.001	-.00	5.93	.1767	.0168	-.0012	-.0001	.0000	.0005	.0028	.0196
2.001	-.00	6.90	.2110	.0162	-.0044	-.0002	.0000	.0005	.0028	.0190
2.000	-.00	7.90	.2469	.0156	-.0075	-.0002	.0000	.0006	.0028	.0184
2.000	-.00	9.90	.3174	.0142	-.0138	-.0002	-.0000	.0007	.0028	.0170
2.000	-.00	11.87	.3855	.0128	-.0197	-.0003	.0000	.0008	.0028	.0156
1.999	-.01	13.90	.4568	.0112	-.0260	-.0002	.0000	.0011	.0028	.0140
2.000	-.01	15.90	.5260	.0096	-.0324	-.0002	-.0000	.0010	.0028	.0124
2.000	-.01	16.95	.5624	.0087	-.0359	-.0002	.0000	.0013	.0028	.0115
2.000	.00	-.12	-.0379	.0203	.0180	-.0001	-.0000	-.0001	.0027	.0230

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.2658	.00	-2.11	-.1086	.0255	.0241	-.0000	.0000	-.0002	.0026	.0281
-3.3047	.00	-1.12	-.0737	.0223	.0211	.0000	.0000	-.0001	.0027	.0250
-1.7835	.00	-.07	-.0362	.0203	.0179	-.0000	-.0000	-.0001	.0027	.0230
-.0121	-.00	.95	-.0002	.0197	.0146	-.0001	-.0000	.0000	.0027	.0224
1.7125	-.00	1.94	.0348	.0203	.0114	-.0001	-.0000	.0001	.0027	.0230
3.1405	-.00	2.93	.0695	.0221	.0083	-.0001	-.0000	.0001	.0027	.0248
4.1456	-.00	3.95	.1047	.0252	.0050	-.0001	.0000	.0002	.0027	.0279
4.6956	-.00	4.88	.1374	.0293	.0021	-.0002	.0000	.0004	.0027	.0320
4.9713	-.00	5.93	.1740	.0350	-.0012	-.0001	.0000	.0005	.0028	.0378
5.0065	-.00	6.90	.2075	.0414	-.0044	-.0002	.0000	.0005	.0028	.0442
4.9105	-.00	7.90	.2424	.0494	-.0075	-.0002	.0000	.0006	.0028	.0521
4.5252	-.00	9.90	.3102	.0685	-.0138	-.0002	-.0000	.0007	.0027	.0713
4.0813	-.00	11.87	.3746	.0918	-.0197	-.0002	.0001	.0008	.0027	.0945
3.6536	-.01	13.90	.4407	.1206	-.0260	-.0002	.0000	.0011	.0027	.1233
3.2820	-.01	15.90	.5033	.1533	-.0324	-.0002	.0001	.0010	.0027	.1560
3.1069	-.01	16.95	.5354	.1723	-.0359	-.0002	.0001	.0013	.0026	.1750
-1.8596	.00	-.12	-.0379	.0204	.0180	-.0001	-.0000	-.0001	.0027	.0231

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 45 MACH 1.60

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
1.496	.00	-2.06	-.2170	.0427	.0693	.0000	.0001	-.0006	.0037	.0465
1.492	.00	-1.07	-.1664	.0419	.0642	.0002	.0001	-.0004	.0037	.0456
1.494	.00	-.05	-.1159	.0410	.0593	-.0003	.0002	-.0005	.0037	.0447
1.494	-.00	.94	-.0648	.0400	.0544	-.0001	.0002	-.0005	.0037	.0437
1.499	-.00	1.94	-.0166	.0390	.0496	-.0002	.0002	-.0004	.0037	.0427
1.501	-.00	2.94	.0332	.0378	.0445	-.0002	.0003	-.0004	.0038	.0416
1.501	-.00	3.94	.0859	.0367	.0395	-.0003	.0003	-.0002	.0038	.0405
1.499	-.00	4.93	.1342	.0356	.0346	-.0000	.0003	-.0001	.0039	.0394
1.498	-.00	5.95	.1838	.0342	.0295	-.0003	.0002	-.0002	.0040	.0381
1.498	-.00	6.99	.2338	.0329	.0249	-.0005	.0002	-.0001	.0041	.0369
1.499	-.00	7.96	.2807	.0316	.0204	-.0002	.0001	.0001	.0041	.0357
1.497	-.00	9.93	.3737	.0287	.0109	-.0003	.0001	.0004	.0043	.0331
1.496	-.00	11.94	.4697	.0257	.0015	-.0001	.0001	.0007	.0045	.0301
1.498	-.00	-.03	-.1128	.0410	.0591	-.0002	.0002	-.0003	.0037	.0447

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-4.2617	.00	-2.06	-.2153	.0505	.0693	.0000	.0001	-.0006	.0037	.0542
-3.6829	.00	-1.07	-.1656	.0450	.0642	.0002	.0001	-.0004	.0037	.0487
-2.8175	.00	-.05	-.1159	.0411	.0593	-.0003	.0002	-.0005	.0037	.0448
-1.6801	-.00	.94	-.0654	.0389	.0544	-.0001	.0002	-.0005	.0037	.0426
-.4646	-.00	1.94	-.0179	.0384	.0496	-.0002	.0002	-.0004	.0037	.0421
.7914	-.00	2.94	.0312	.0395	.0445	-.0002	.0003	-.0004	.0038	.0432
1.9548	-.00	3.94	.0831	.0425	.0395	-.0003	.0003	-.0002	.0038	.0463
2.7825	-.00	4.93	.1307	.0470	.0346	.0000	.0003	-.0001	.0038	.0508
3.3796	-.00	5.95	.1792	.0530	.0295	-.0002	.0002	-.0002	.0039	.0570
3.7351	-.00	6.99	.2281	.0611	.0249	-.0005	.0002	-.0001	.0040	.0651
3.9004	-.00	7.96	.2737	.0702	.0204	-.0002	.0001	.0001	.0041	.0743
3.9165	-.00	9.93	.3632	.0927	.0109	-.0002	.0002	.0004	.0043	.0970
3.7138	-.00	11.94	.4542	.1223	.0015	-.0000	.0001	.0007	.0044	.1267
-2.7474	-.00	-.03	-.1128	.0411	.0591	-.0002	.0002	-.0003	.0037	.0448

TABLE AIII. Continued

UPWT PROJECT 1476 RUN 46 MACH 1.90

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.004	.00	-2.20	-.1722	.0385	.0528	-.0001	.0001	-.0008	.0032	.0418
2.007	.00	-1.19	-.1318	.0376	.0489	.0001	.0001	-.0005	.0033	.0409
2.008	.00	-.19	-.0895	.0366	.0451	.0001	.0001	-.0004	.0034	.0399
2.008	-.00	.79	-.0491	.0356	.0413	.0001	.0001	-.0003	.0034	.0390
2.006	-.00	1.83	-.0051	.0346	.0372	-.0001	.0001	-.0001	.0034	.0381
2.005	-.00	2.79	.0335	.0337	.0333	-.0001	.0002	-.0000	.0034	.0371
2.005	-.00	3.80	.0769	.0325	.0291	-.0001	.0002	.0000	.0035	.0360
2.005	-.00	4.80	.1174	.0314	.0252	-.0003	.0001	.0001	.0035	.0349
2.006	-.00	5.82	.1578	.0302	.0214	-.0002	.0001	.0002	.0036	.0338
2.006	-.01	6.79	.1955	.0291	.0178	-.0003	.0002	.0004	.0036	.0327
2.007	-.00	7.85	.2381	.0280	.0140	-.0002	.0001	.0005	.0037	.0316
2.007	-.00	9.81	.3157	.0258	.0069	-.0003	.0000	.0006	.0037	.0295
2.006	-.01	11.84	.3958	.0232	-.0004	-.0005	.0000	.0008	.0037	.0268
2.004	-.01	13.84	.4734	.0202	-.0078	-.0004	.0001	.0010	.0037	.0239
2.004	-.00	-.15	-.0867	.0366	.0449	.0000	.0001	-.0003	.0033	.0399

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.7812	.00	-2.20	-.1706	.0451	.0528	-.0001	.0001	-.0008	.0032	.0483
-3.2473	.00	-1.19	-.1310	.0403	.0489	.0001	.0001	-.0005	.0033	.0436
-2.4218	.00	-.19	-.0893	.0369	.0451	.0001	.0001	-.0004	.0034	.0402
-1.4182	-.00	.79	-.0496	.0350	.0413	.0001	.0001	-.0003	.0034	.0384
-.1803	-.00	1.83	-.0062	.0345	.0372	-.0001	.0001	-.0001	.0034	.0379
.9029	-.00	2.79	.0318	.0352	.0333	-.0001	.0002	-.0000	.0034	.0387
1.9873	-.00	3.80	.0746	.0375	.0291	-.0000	.0002	.0000	.0035	.0410
2.7819	-.00	4.80	.1143	.0411	.0252	-.0003	.0002	.0001	.0035	.0446
3.3433	-.00	5.82	.1539	.0460	.0214	-.0002	.0002	.0002	.0036	.0496
3.6660	-.01	6.79	.1907	.0520	.0178	-.0003	.0002	.0004	.0036	.0556
3.8519	-.00	7.85	.2321	.0602	.0140	-.0002	.0002	.0005	.0036	.0639
3.8725	-.00	9.81	.3067	.0792	.0069	-.0003	.0001	.0006	.0037	.0829
3.6833	-.01	11.84	.3826	.1039	-.0004	-.0005	.0001	.0008	.0036	.1075
3.4223	-.01	13.84	.4548	.1329	-.0078	-.0004	.0002	.0010	.0036	.1365
-2.3542	-.00	-.15	-.0866	.0368	.0449	.0000	.0001	-.0003	.0033	.0401

TABLE AIII. Concluded

UPWT PROJECT 1476 RUN 47 MACH 2.16

BODY AXIS AXIAL FORCE CORRECTED FOR CHAMBER

R/FT	BETA	ALPHA	CN	CA	CM	CLB	CNB	CY	CAC	CA UNC
2.001	.00	-2.12	-.1465	.0356	.0432	.0001	.0001	-.0005	.0029	.0385
2.006	.00	-1.07	-.1082	.0345	.0399	.0001	.0001	-.0004	.0029	.0374
2.004	-.00	-.08	-.0721	.0335	.0367	.0003	.0001	-.0002	.0030	.0365
2.001	-.00	.90	-.0363	.0325	.0335	.0001	.0001	-.0001	.0030	.0355
2.000	-.00	1.92	.0004	.0315	.0301	.0002	.0001	-.0000	.0030	.0345
2.000	-.00	2.91	.0358	.0305	.0269	.0000	.0001	-.0001	.0030	.0335
2.003	-.00	3.89	.0721	.0295	.0234	-.0000	.0001	-.0000	.0030	.0325
2.004	-.00	4.90	.1084	.0285	.0201	-.0001	.0001	.0001	.0031	.0315
2.003	-.00	5.91	.1433	.0275	.0170	-.0001	.0001	.0003	.0031	.0306
2.003	-.00	6.93	.1795	.0265	.0138	-.0001	.0001	.0003	.0032	.0297
2.001	-.00	7.92	.2152	.0255	.0107	-.0001	.0000	.0004	.0032	.0287
2.000	-.00	9.88	.2843	.0234	.0046	-.0002	-.0000	.0003	.0032	.0266
2.000	-.00	11.90	.3558	.0212	-.0016	-.0001	.0000	.0006	.0032	.0244
2.000	-.00	13.91	.4258	.0185	-.0082	-.0001	.0001	.0007	.0032	.0217
2.001	-.00	15.90	.4949	.0158	-.0148	-.0001	.0000	.0006	.0032	.0190
2.003	-.01	16.90	.5299	.0145	-.0179	-.0002	.0000	.0007	.0032	.0177
2.000	.00	-.06	-.0707	.0335	.0367	.0001	.0000	-.0002	.0030	.0364

STABILITY AXIS DRAG CORRECTED FOR CHAMBER

L/D	BETA	ALPHA	CL	CD	CM	CLS	CNS	CY	CDC	CD UNC
-3.5367	.00	-2.12	-.1451	.0410	.0432	.0001	.0001	-.0005	.0029	.0439
-2.9404	.00	-1.07	-.1075	.0366	.0399	.0001	.0001	-.0004	.0029	.0395
-2.1408	-.00	-.08	-.0720	.0336	.0367	.0003	.0001	-.0002	.0030	.0366
-1.1519	-.00	.90	-.0368	.0320	.0335	.0001	.0000	-.0001	.0030	.0349
-.0202	-.00	1.92	-.0006	.0315	.0301	.0002	.0001	-.0000	.0030	.0345
1.0620	-.00	2.91	.0342	.0322	.0269	.0000	.0001	-.0001	.0030	.0352
2.0405	-.00	3.89	.0699	.0343	.0234	-.0000	.0001	-.0000	.0030	.0373
2.8074	-.00	4.90	.1056	.0376	.0201	-.0000	.0001	.0001	.0031	.0407
3.3178	-.00	5.91	.1397	.0421	.0170	-.0000	.0001	.0003	.0031	.0452
3.6479	-.00	6.93	.1750	.0480	.0138	-.0000	.0001	.0003	.0031	.0511
3.8157	-.00	7.92	.2097	.0549	.0107	-.0001	.0001	.0004	.0031	.0581
3.8432	-.00	9.88	.2761	.0718	.0046	-.0002	.0000	.0003	.0031	.0750
3.6503	-.00	11.90	.3438	.0942	-.0016	-.0001	.0000	.0006	.0031	.0973
3.3963	-.00	13.91	.4088	.1204	-.0082	-.0001	.0001	.0007	.0031	.1235
3.1281	-.00	15.90	.4717	.1508	-.0148	-.0001	.0000	.0006	.0031	.1538
2.9931	-.01	16.90	.5028	.1680	-.0179	-.0002	.0001	.0007	.0030	.1710
-2.1060	.00	-.06	-.0707	.0336	.0367	.0001	.0000	-.0002	.0030	.0365

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16. Abstract

An experimental and theoretical study was conducted to investigate the supersonic aerodynamic characteristics of delta and double-delta wings. Testing was conducted in the Langley Unitary Plan Wind Tunnel at Mach numbers of 1.60, 1.90, and 2.16. The double-delta wings exhibited lower zero-lift drag values than the delta wings having the same aspect ratio, whereas delta wings provided the lower drag due to lift. Deflections of the trailing-edge flaps for pitch control revealed that the induced aerodynamic forces were only a function of the flap planform and were independent of wing planform. The supporting theoretical analysis showed that the Supersonic Design and Analysis System (SDAS) did not consistently predict all the longitudinal aerodynamic characteristics of the low-sweep, low-fineness-ratio wing-body configurations under investigation.

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