NASA Technical Paper 1805

Low-Speed Aerodynamic Performance of an Aspect-Ratio-10 Supercritical-Wing Transport Model Equipped With a Full-Span Slat and Part-Span and Full-Span Double-Slotted Flaps

Harry L. Morgan, Jr.

APRIL 1981

NASA

FEDD DOCUMENT

Note that this document bears the label "FEDD," an acronym for "FOR EARLY DOMESTIC DISSEMINATION." The FEDD label is affixed to documents that may contain information having high commercial potential.

The FEDD concept was developed as a result of the desire to maintain U.S. leadership in world trade markets and encourage a favorable balance of trade. Since the availability of tax-supported U.S. technology to foreign business interests could represent an unearned benefit, research results that may have high commercial potential are being distributed to U.S. industry in advance of general release.

The recipient of this report must treat the information it contains according to the conditions of the FEDD label on the front cover.

NASA Technical Paper 1805

Low-Speed Aerodynamic Performance of an Aspect-Ratio-10 Supercritical-Wing Transport Model Equipped With a Full-Span Slat and Part-Span and Full-Span Double-Slotted Flaps

Harry L. Morgan, Jr.
Langley Research Center
Hampton, Virginia

National Aeronautics
and Space Administration

**Scientific and Technical
Information Branch**

1981

SUMMARY

An investigation was conducted in the Langley 4- by 7-Meter Tunnel to determine the static longitudinal and lateral-directional aerodynamic characteristics of an advanced aspect-ratio-10 supercritical-wing transport model equipped with a full-span leading-edge slat as well as part-span and full-span trailing-edge flaps. This wide-body transport model was also equipped with spoiler and aileron roll-control surfaces, flow-through nacelles, landing gear, and movable horizontal tails. Six basic wing configurations were tested during this investigation and consisted of (1) cruise (slats and flaps nested), (2) climb (slats deflected and flaps nested), (3) part-span flap, (4) full-span flap, (5) full-span flap with low-speed ailerons, and (6) full-span flap with high-speed ailerons. Each of the four flapped wing configurations was tested with the leading-edge slat and the trailing-edge flaps deflected to settings representative of both take-off and landing conditions. The tests were conducted at free-stream conditions corresponding to Reynolds numbers (based on the mean geometric chord) of 0.97 to 1.63×10^6 and corresponding Mach numbers of 0.12 to 0.20, through an angle-of-attack range of -4° to 24° and a sideslip-angle range of -10° to 5°. The part- and full-span wing configurations were also tested in ground proximity.

The longitudinal test results show that all the wing configurations tested exhibited wing-tip stall behavior followed by a reduction in longitudinal stability. With either take-off or landing flap settings and at a given untrimmed lift coefficient, the three full-span flap configurations produced more negative pitching-moment coefficients than the part-span flap configurations and, therefore, incurred higher trim drag penalties. A comparative analysis of the trimmed performance characteristics of the four flapped wing configurations tested indicates that the configuration with full-span flaps and low-speed ailerons had slightly better trimmed performance than the other three flapped configurations. The lateral test results show that the lateral-directional stability of each flapped wing configuration with landing flap settings was slightly less than the stability of the corresponding configuration with take-off flap settings. For the full-span flap wing configuration with either take-off or landing flap settings, large deflections of the left outboard roll-control spoilers produced changes in rolling-moment coefficient as great as those produced by differential deflections of the low-speed ailerons for the corresponding part-span flap wing configurations. Large deflections of the roll-control spoilers also resulted in an unfavorable loss of lift, a positive shift in pitching moment, and an increase in negative yawing moment.

INTRODUCTION

The rapid worldwide increase in the consumption and price of crude oil in recent years has generated a renewed interest by many government and private research organizations in ways of improving the energy efficiency of vehicles that use fuels distilled from crude oil. In particular, NASA has been actively

involved in an aeronautical research project to improve the energy efficiency of modern wide-body jet transport aircraft. The Aircraft Energy Efficiency (ACEE) project was formulated to stimulate research efforts by both industry and NASA. One element of the ACEE project is the Energy Efficient Transport (EET) program which is concerned primarily with the development of advanced aerodynamic and active-controls technology for application to derivative or next-generation transport aircraft. One part of the EET program has been the aerodynamic development, by NASA Langley Research Center (LaRC) personnel, of advanced supercritical wings with greater section thickness-chord ratios, higher aspect ratios, higher cruise lift coefficients, and lower sweepback than the conventional wings on current transports. These advanced supercritical wings have been tested extensively in the LaRC wind tunnels to determine their high-speed cruise performance characteristics (refs. 1 and 2). Because of their high cruise lift coefficients and high aspect ratios, these wings could be smaller and more fuel efficient than conventional wings, provided the low-speed, high-lift performance requirements could be met.

To determine the low-speed performance characteristics of a representative high-aspect-ratio supercritical wing, a 3.66-m (12-ft) span low-speed jet transport model was fabricated and tested in the Langley 4- by 7-Meter Tunnel as reported in reference 3. This model was equipped with a conventionally sized part-span, double-slotted trailing-edge flap system, full-span leading-edge slat, low- and high-speed ailerons, spoilers, and interchangeable aspect-ratio-12 and aspect-ratio-10 wing tips. The present investigation was conducted to determine the low-speed performance characteristics of the aspect-ratio-10 version of this model equipped with both a part-span and full-span, double-slotted trailing-edge flap system. The model tested was a 3.23-m (10.59-ft) span model of an advanced long-range, wide-body jet transport with cruise wing and fuselage dimensions similar to those of the NASA SCW-2c supercritical wing model tested in the Langley 8-Foot Transonic Pressure Tunnel and reported in references 1 and 2. This wing had an aspect ratio of 10, a 27° quarter-chord sweep, and streamwise supercritical airfoil sections that varied in maximum thickness-chord ratio from approximately 0.15 at the wing root to 0.107 at the wing tip.

The basic high-lift flap system consisted of both part-span and full-span double-slotted trailing-edge flaps and a full-span leading-edge slat. The trailing-edge flap consisted of an advanced design large vane and small aft flap combination, as opposed to the more conventional combination of small vane and large flap. Also, as part of the EET program, a similarly designed large vane and small aft flap combination was tested extensively by the Douglas Aircraft Company and is reported in reference 4. The part-span flap configuration was also equipped with inboard high-speed ailerons, outboard low-speed ailerons, and spoilers at the inboard and outboard flap locations. The full-span flap configuration was obtained by replacing the high- and low-speed aileron segments with double-slotted flap segments equipped with spoilers. Both part- and full-span flap configurations were also equipped with two wing-mounted flow-through nacelles, landing gear, fixed vertical tail, and movable horizontal tails.

Two additional high-lift flap configurations were tested during this investigation. The first was obtained by replacing the inboard high-speed aileron segment of the part-span flap system with a double-slotted flap segment and was designated as the full-span flap with low-speed ailerons wing configuration.

The second was obtained by replacing the outboard low-speed aileron segment of the part-span flap system with a double-slotted flap segment and was designated as the full-span flap with high-speed ailerons wing configuration. Each of the four flapped wing configurations was tested with the flap elements set at a moderate deflection to represent take-off conditions and at a high deflection to represent landing conditions. Each of the four flapped wing configurations was tested with the full-span leading-edge slat fully deflected; the part-span and full-span flap wing configurations were also tested with the slat nested. In addition to the four flapped wing configurations, a cruise wing configuration (slats and flaps nested) and a climb wing configuration (slats fully deflected and flaps nested) were also tested. A total of 10 wing configurations were tested: (1) cruise, (2) climb, (3, 4) part-span flap take-off and landing, (5, 6) full-span flap take-off and landing, (7, 8) full-span flap with low-speed ailerons take-off and landing, and (9, 10) full-span flap with high-speed ailerons take-off and landing.

The cruise, climb, part-span take-off, and part-span landing flap wing configurations were also tested during a previous investigation reported in reference 3. As pointed out in the discussion section of that report, a thorough check of the vane and flap positioning after completion of the tunnel tests revealed an error of 0.6 cm (0.25 in.) in the lateral displacement of the left wing inboard flap system. This error in lateral displacement was corrected prior to this investigation, and selected tests of the part-span flap wing configuration with both take-off and landing flap settings were repeated.

This investigation was conducted in the Langley 4- by 7-Meter Tunnel at free-stream conditions corresponding to Reynolds numbers (based on the mean geometric chord) of 0.97 to 1.63 $\times 10^6$ and corresponding Mach numbers of 0.12 to 0.20, through an angle-of-attack range of -4° to 24° and a sideslip-angle range of -10° to 5°. The part- and full-span, take-off and landing flap wing configurations were also tested in proximity of the tunnel floor to simulate ground effects. The model was instrumented with a six-component strain-gage balance to measure aerodynamic forces and moments and with chordwise surface static-pressure taps at three spanwise stations to determine representative wing and flap loads. The pressure data obtained during this investigation are presented in graphic and tabular form in reference 5. This report presents and discusses the static longitudinal and lateral-directional aerodynamic data obtained during this investigation.

SYMBOLS AND ABBREVIATIONS

The longitudinal forces and moments presented in this report are referenced to the stability-axis system and the lateral forces and moments to the body-axis system. The moment data are referred to a moment center located on the model center line (intersection of the wing reference plane and model symmetry plane) at the 1.64-m (5.39-ft) body station, which is 46.72 cm (18.39 in.) longitudinally aft of the wing root leading edge. The longitudinal location of the moment center corresponds to the quarter-chord point location of the mean geometric chord of the trapezoidal wing planform (planform without trailing-edge extension) which extends from the model center line to the wing tip. The aerodynamic coefficient data are based on the trapezoidal wing planform which has a reference

area of 1.04 m^2 (11.21 ft^2), a reference span of 3.23 m (10.59 ft), and a reference mean geometric chord of 34.14 cm (13.44 in.).

All measurements and calculations were made in U.S. Customary Units. Values presented herein are given in the International System of Units (SI), with the equivalent values in U.S. Customary Units given parenthetically.

A aspect ratio, $\frac{b^2}{S}$

b wing span, m (ft)

c local streamwise wing chord, cm (in.)

$\bar{c}$ reference mean geometric chord, cm (in.)

C_D drag coefficient, $\frac{\text{Drag}}{qS}$ (CD in computer-generated tables)

C_L lift coefficient, $\frac{\text{Lift}}{qS}$ (CL in computer-generated tables)

C_l rolling-moment coefficient, $\frac{\text{Rolling moment}}{qSb}$ (CRM in computer-generated tables)

C_{l_β} effective dihedral parameter based on increment of C_l between $\beta = -10^\circ$ and 5°; $\frac{\partial C_l}{\partial \beta}$; 1/deg

C_m pitching-moment coefficient, $\frac{\text{Pitching moment}}{q\bar{S}\bar{c}}$ (CPM in computer-generated tables)

C_n yawing-moment coefficient, $\frac{\text{Yawing moment}}{qSb}$ (CYM in computer-generated tables)

C_{n_β} directional stability parameter based on increment of C_n between $\beta = -10^\circ$ and 5°; $\frac{\partial C_n}{\partial \beta}$; 1/deg

C_Y side-force coefficient, $\frac{\text{Side force}}{qS}$ (CSF in computer-generated tables)

C_{Y_β} side-force parameter based on increment of C_Y between $\beta = -10^\circ$ and 5°; $\frac{\partial C_Y}{\partial \beta}$; 1/deg

$\frac{\partial C_m}{\partial C_L}$ longitudinal stability parameter (CMCL in computer-generated tables)

e wing efficiency factor, $C_D = C_{D,o} + \frac{C_L^2}{\pi Ae}$, where $C_{D,o}$ is drag coefficient at zero lift

h/b height-to-span ratio of model moment reference center above floor, m (ft) (H/B in computer-generated tables)

i_t incidence of horizontal tail, positive for leading edge up, deg (ISUBT in computer-generated tables)

L/D lift-drag ratio (L/D in computer-generated tables)

M free-stream Mach number (MACH in computer-generated tables)

q free-stream dynamic pressure, kPa (lb/ft^2) (Q in computer-generated tables)

$R_{\bar{c}}$ free-stream Reynolds number based on $\bar{c}$

S wing reference area, m^2 (ft^2)

t/c wing thickness-chord ratio

α angle of attack of model reference center line, positive nose up, deg (ALPHA in computer-generated tables)

β angle of sideslip of model reference center line, positive nose left, deg (BETA in computer-generated tables)

δ_a aileron deflection angle, positive for trailing edge down, deg

δ_f flap deflection angle, positive for trailing edge down, deg

δ_s slat deflection angle, positive for trailing edge down, deg

δ_{sp} spoiler deflection angle, positive for trailing edge up, deg

δ_v vane deflection angle, positive for trailing edge down, deg

η nondimensional wing semispan location

Subscripts:

corr corrected

ℓ left

max maximum

r right

Abbreviations:

L.E. leading edge

T.E. trailing edge

W.R.P. wing reference plane

MODEL DESCRIPTION

The high-lift research model tested during this investigation had a 3.23-m (10.59-ft) span and was representative of an advanced long-range, wide-body jet transport with cruise wing and fuselage dimensions scaled from those of the NASA SCW-2c high-aspect-ratio supercritical model developed at the NASA Langley Research Center and reported in reference 1. The wing was fabricated with removable leading- and trailing-edge segments. The cruise wing segments could be removed easily and replaced with a leading-edge slat and trailing-edge spoiler/flap and aileron segments. Although many wing configurations were possible, six basic wing configurations were tested during this investigation: (1) cruise (slats and flaps nested), (2) climb (slats deflected and flaps nested), (3) part-span flaps, (4) full-span flaps, (5) full-span flaps with low-speed ailerons, and (6) full-span flaps with high-speed ailerons. Each of the four flapped wing configurations was tested with the full-span leading-edge slat and the trailing-edge flap segments deflected to settings representative of both take-off and landing conditions. A detailed wing planform layout of the basic control and flap surfaces is presented in figure 1(a); a sketch of the six basic wing configurations tested is presented in figure 1(b). Photographs of the model installed in the Langley 4- by 7-Meter Tunnel are shown in figure 2. The pertinent model geometric characteristics are summarized in table I. Detailed wing and flap component surface coordinates are given in references 5 and 6.

The model was fabricated with aluminum wings, a glass fiber fuselage, and an empennage for minimal deflections at the design conditions of a maximum tunnel dynamic pressure of 2.87 kPa (60.0 lb/ft^2) and a maximum wing lift coefficient of 3.0. The empennage consisted of movable horizontal tails without elevators and a fixed vertical fin without a rudder. The horizontal tails were mounted on the model with a geared, pivoting bracket that allowed for incidence

angles from -15° to 15° in 5° increments. The model was also equipped with two wing-mounted, flow-through nacelles with scaled external dimensions similar to those of a typical high-bypass ratio (approximately 6) turbofan engine used on current wide-body jets. The model was also equipped with simulated landing gear and doors attached to the wing and fuselage underside near the nose.

The basic cruise wing was designed with an aspect-ratio-10 trapezoidal planform which extended from the model center line to the wing tip and had 27° quarter-chord sweep. The wing had an inboard trailing-edge extension that started at the $\eta = 0.434$ wing semispan station and increased the chord at the center line by 40 percent. The wing had streamwise supercritical sections with maximum thickness-chord ratios of 0.144 at the side-of-body semispan location ($\eta = 0.109$), 0.120 at the trailing-edge break station ($\eta = 0.434$), and 0.107 at the wing tip ($\eta = 1.0$). The wing was mounted on the fuselage with a 5° dihedral angle and a -1° incidence angle at the wing center line.

Control and Flap Systems

The leading-edge slat, trailing-edge flap, and spoiler and aileron control surface areas were sized and positioned spanwise on the basis of a comparative analysis of several existing designs for lower aspect-ratio-6 to aspect-ratio-8 transport wings. The trailing-edge flap had a double-slotted flap that consisted of an advanced design large vane and small aft flap combination in comparison with the more conventional small vane and large aft flap combinations. Advanced designs similar to this combination have recently been under development by several aircraft manufacturers (ref. 4) and have experimentally achieved maximum two-dimensional lift coefficients approaching those achieved by the more complex triple-slotted flap systems. The structural loads produced by this flap combination are less severe than those of the conventional combinations because a greater percentage of the total vane/flap loads are generated by the more closely coupled large vane component.

For the part-span flap configuration, a simple-hinged, high-speed aileron segment was positioned outboard of the break station, and a simple-hinged, low-speed aileron segment was positioned outboard of the outboard flap segment. The left and right high-speed ailerons could be deflected from -30° to 50°, and the left and right low-speed ailerons, from -30° to 30°. Both left and right inboard flap segments were equipped with ground spoilers, and both left and right outboard flap segments were equipped with flight spoilers. The left and right ground and flight spoilers could be deflected to either 45° or 60°, which are primarily ground lift-loss and speed-break deflections. The left outboard flight spoiler could also be deflected from 0° to 20° in 4° increments, which are primarily flight roll-control deflections.

To obtain the three full-span flap configurations tested, the left and right high- and/or low-speed aileron segments of the part-span flap configuration were replaced with properly contoured double-slotted flap segments equipped with flight spoilers. Both left and right flight spoilers could be deflected either 45° or 60°, and the left flight spoilers could also be deflected from 0° to 20° in 4° increments. The flight spoilers of the flap segment used to replace the left low-speed aileron segment will be called "roll-control spoilers."

Slat and Flap Settings

The slat, vane, and flap components were set at deflections representative of either climb, take-off, or landing wing configurations, and the corresponding gaps and overlaps were then optimized for maximum lift using the theoretical two-dimensional, multicomponent airfoil analysis program described in reference 7. A sketch of the deflection, gap, and overlap definition employed during this investigation is presented in figure 3. The deflections and overlaps are defined relative to the longest chord of the particular components. The longest chord is defined as the distance from the midpoint of the trailing-edge base of the component to the forward-most leading-edge coordinate. The overlap is defined as the distance from the lower surface trailing-edge coordinate of the forward component along its longest chord to a point at which a perpendicular dropped from that chord intersects the forward-most coordinate on the leading edge of the aft component. The gap is defined as the shortest distance from the lower surface trailing-edge coordinate of the forward component to the upper surface of the aft component.

The component geometries of the flapped wing sections at the trailing-edge break station (η = 0.434) were used to perform the theoretical two-dimensional gap and overlap optimizations. The results of the optimizations are summarized in the following table:

Wing configuration	Component	Deflection, deg	Gap/c	Overlap/c
Climb	Slat	-50	0.02	0.02
Take-off	Slat	-50	0.02	0.02
	Vane	15	.015	.04
	Flap	15	.01	.01
Landing	Slat	-50	0.02	0.02
	Vane	30	.02	.03
	Flap	30	.01	.005

These two-dimensional deflections, gaps, and overlaps were incorporated into the actual three-dimensional wing using positioning jigs located at the edges of the leading-edge slat and trailing-edge flap segments. For each wing configuration, the trailing-edge vane and flap component deflections, gaps, and overlaps at the trailing-edge break station were set initially, and the deflections of the positioning jigs for the inboard and outboard segments were then individually adjusted in the streamwise direction to maintain the proper gaps and overlaps. The change in deflections for the inboard and outboard segments was necessary because of the geometric twist of the wing. The trailing-edge vane and flap components were also translated slightly in an attempt to keep their pressure taps in the same streamwise plane as that of the main wing taps. The gaps and overlaps of the inboard vane and flap components were set at constant values along the segment span and were based on the local cruise wing

chord at the trailing-edge break station. The gaps and overlaps of the outboard vane and flap components were set at constant percentage values based on the local chord.

The trailing-edge vane/flap brackets were attached in planes parallel to the wing symmetry plane. The leading-edge slat was positioned in a similar manner except that the inboard and outboard segments were adjusted in planes perpendicular to the leading-edge of the cruise wing. The gap and overlap were set at constant percentage values based on the local chord of the wing without the trailing-edge extension (trapezoidal planform). The leading-edge slat brackets were attached in planes perpendicular to the wing leading edge. No attempts were made to account for the deflection of either slat or flap brackets under aerodynamic loading.

Wing Pressure Taps

The pressure data obtained during this investigation are presented in both graphic and tabular form in reference 5. As illustrated in figure 1(b), the wing was instrumented with chordwise rows of surface static-pressure taps at three spanwise stations labeled A, B, and C and located at η = 0.266, 0.624, and 0.907, respectively. Stations A and B each had 70 pressure taps for both part- and full-span flap wing configurations. Station C had 47 taps for the part-span flap wing configuration and 49 for the full-span flap wing configuration. Several component combinations were possible at each of the three stations and are illustrated in figure 4. For the part-span flap wing configurations, all the combinations presented in figure 4 were possible at stations A and B; however, only combinations using components A, E, and F were possible at station C. All component combinations presented in figure 4 were possible at all three stations for the full-span flap wing configurations.

TESTS AND CORRECTIONS

The tests were conducted in the Langley 4- by 7-Meter Tunnel, which has a test section of 4.42 m (14.50 ft) by 6.63 m (21.75 ft). These tests were conducted at free-stream dynamic pressures from 0.96 to 2.87 kPa (20.0 to 60.0 lb/ft^2). Corresponding Reynolds numbers, based on the reference mean geometric chord of 34.14 cm (13.44 in.), were 0.97 to 1.63 $\times$ 10^6 and corresponding Mach numbers were 0.12 to 0.20. The model was tested through an angle-of-attack range of -4° to 24° and a sideslip-angle range of -10° to 5°.

The aerodynamic forces and moments were measured by a six-component strain-gage balance mounted inside the fuselage. The angle of attack was set by the pitch drive of the model support system and measured by an electronic inclinometer mounted inside the forward portion of the fuselage. The sideslip angle was set by the yaw drive of the model support system and was measured by an electronic counter mounted on the yaw-drive gearing system. The wing surface static pressures were measured by either 17.24- or 34.47-kPa (2.5 or 5.0 lb/in^2) differential pressure transducers and six 48-port scanning valves. Fuselage chamber and base pressures were measured by 6.89-kPa (1.0 lb/in^2) differential pressure transducers.

Boundary-layer transition strips were located 2.54 cm (1.0 in.) normal to the leading edge on both upper and lower surfaces of the cruise wing configuration only, on the horizontal and vertical tails, and on the outer surfaces of the flow-through nacelles. The transition roughness was sized according to reference 8 and required a commercial No. 60 abrasive grit sparsely applied.

Wind-tunnel jet-boundary corrections were computed according to references 9, 10, and 11, and the averaged values were applied to the force and moment data. The corrections were applied as follows:

$$C_{D,corr} = C_D + J_1 C_L^2$$

$$C_{m,corr} = C_m + J_3 C_L \text{ (for tail-on data)}$$

$$\alpha_{corr} = \alpha + J_2 C_L$$

where $J_1 = 0.0045$, $J_2 = 0.2581$, and $J_3 = 0.011$. Wing, body, and wake solid blockage corrections were also applied to the data and were determined according to reference 12. Drag corrections due to model chamber and base pressures referenced to free-stream static pressure were also applied to the data. No corrections for tunnel flow angularity were made to the data because no provisions were made to test the model in the inverted position. However, flow angularity measurements, made during several previous investigations on similar models positioned at the same approximate location in the tunnel, showed that a 0.1° to 0.2° up-flow correction was required.

PRESENTATION OF RESULTS

Although numerous test variables and wing configurations were possible for this high-lift research model, only combinations representative of the more significant configurations were tested during this investigation. The test results from a prior investigation as presented in reference 3 show the effects of (1) an increase in aspect ratio to 12, (2) nacelles on/off, (3) transition strips on/off, (4) spoiler deflection on longitudinal lift loss, and (5) high-speed aileron deflection on lateral-directional characteristics for the cruise, climb, and part-span flap wing configurations. The particular longitudinal and lateral-directional test variables and wing-configuration combinations tested during this investigation are presented in the following table:

Text variable	Figure index for wing configurations of -									
	Cruise	Climb	Part-span flap		Full-span flap		Full-span flap with low-speed aileron		Full-span flap with high-speed aileron	
			Take-off	Landing	Take-off	Landing	Take-off	Landing	Take-off	Landing
Longitudinal data:										
Reynolds number (summary, fig. 11)	5	6	7(a)	7(b)	8(a)	8(b)	9(a)	9(b)	10(a)	10(b)
Horizontal-tail deflection (summary, fig. 18)	12	13	14(a), (b)	14(c), (d)	15(a), (b)	15(c), (d)	16(a), (b)	16(c), (d)	17(a), (b)	17(c), (d)
Landing gear on/off	--	--	19(a)	19(b)	19(c)	19(d)	19(e)	19(f)	19(g)	19(h)
Slat deflection/nested	--	--	20(a)	20(a)	20(b)	20(b)	----------	----------	----------	----------
Ground effects	--	--	21(a)	21(b), (c)	21(d)	21(e)	----------	----------	----------	----------
Lateral data:										
Sideslip angle	22	23	24(a), (b)	24(c), (d)	25(a), (b)	25(c), (d)	26(a), (b)	26(c), (d)	----------	27(a), (b)
Low-speed aileron deflection (roll control)	--	--	28(a) to (d)	28(e) to (h)	----------	----------	----------	----------	----------	----------
Spoiler deflection (roll control)	--	--	----------	----------	29(a) to (c)	29(d) to (i)	----------	----------	----------	----------

Unless otherwise stated on the data figure, the nacelles were on, and the horizontal tails were off for all wing configurations tested. In addition, unless otherwise stated, the gear was off for the cruise and climb wing configurations and was on for the flapped wing configurations. Listed on each figure are the run numbers corresponding to the data plotted. The tabulated longitudinal stability-axis and lateral body-axis data for all the runs presented in this report are given in appendix A. The trim longitudinal stability-axis data obtained by interpolation of the test data for various horizontal-tail deflections are given in appendix B.

DISCUSSION OF RESULTS

The discussion of the test results is divided into two main sections: (1) the static longitudinal aerodynamic characteristics of the model and (2) the static lateral-directional aerodynamic characteristics.

The stall angle of attack is defined as the wing angle of attack at which the flow separates near the wing tip. This separation results in a sudden loss of total lift and noticeable positive shift in pitching moment due to the loss of loading aft of the moment center. The maximum lift does not always occur at the wing-tip stall angle because the flow may remain attached to the inboard slat and flap surfaces, thereby producing additional lift at angles greater than the wing-tip stall angle of attack. However, the usable range of lift is generally limited to that at the wing-tip stall angle because of the adverse effects of tip flow separation on the control effectiveness of the outboard low-speed aileron or spoiler roll-control surfaces. Analysis of the wing pressure data presented in reference 5 showed that all the wing configurations tested exhibited wing-tip stall behavior. In general, the flow separates near the tip initially because of the inability of the highly three-dimensional boundary layer to remain attached in the presence of the large static pressure gradients that develop at the higher angles of attack. These gradients are due to the combined effects of the tip vortex roll-up and the high locally induced angles of attack, which are a function of the spanwise load distribution on the wing. Based on potential flow theory, the spanwise load distribution is a direct function of the planform shape, spanwise twist distribution, and local chordwise camber distribution. The stall angle of the cruise wing configuration tested during this investigation could be increased by increasing the wing twist or by drooping the wing leading edge (increased camber) near the wing tip to reduce the local induced angles of attack. However, at the design flight conditions ($M \approx 0.80$), an increase in twist or leading-edge droop could possibly cause the formation of local shocks, with a corresponding undesirable reduction in the drag-rise Mach number.

The spanwise load distribution of a wing equipped with a high-lift system is primarily a function of the location, size, and deflection of the various system components. For good low-speed performance characteristics, it is generally desirable to size and deflect the various components so that a large percentage of the total wing load is produced by the inboard segment of the wing; in order to reduce the structural bending moment at the root and reduce the outboard induced angles of attack. Usually, inboard component surface areas and deflections that are proportionally as great, if not greater, than those of

the outboard components are required. In contrast, the wing tested during this investigation had proportionally smaller inboard vane and flap surface areas in comparison with the outboard areas because of the combined effects of high aspect ratio, low sweep, spanwise location of the trailing-edge break, and the desired location of the wing wheel well cavities. In spite of the proportionally smaller vane and flap surface areas inboard, the outboard induced angles of attack could possibly be reduced by a gradual or segmented increase in the spanwise deflection of the leading-edge slat. Although desirable, such deflections are difficult to obtain mechanically and are generally not considered practical. The leading-edge slat was deflected spanwise a constant -50°, a nominal deflection based on a preliminary analysis of similar currently operational high-lift systems.

Few reliable three-dimensional analytical design methods are currently available to determine the optimum shape, gap, overlap, and deflection of the various components of a particular high-lift system therefore, experimental investigation remains the only reliable method. Conversations with researchers in industry who also flight test full-scale aircraft indicate that the positioning of slat, vane, and flap components for optimum performance is greatly affected by Reynolds number. In addition, performance trends evident from wind-tunnel tests at low Reynolds number conditions do not always remain the same at high Reynolds number flight test conditions. The advent of wind tunnels with higher Reynolds number capabilities, such as the National Transonic Facility under construction at LaRC, will provide a unique opportunity to perform more definitive high-lift model-scale tests.

Longitudinal Characteristics

Effects of Reynolds number.- The effects of a small change in Reynolds number on the untrimmed (horizontal tail off) longitudinal aerodynamic characteristics of the cruise, climb, part-span flap alone, full-span flap alone, full-span flap with low-speed ailerons, and full-span flap with high-speed ailerons wing configurations are presented in figures 5, 6, 7, 8, 9, and 10, respectively. The variation in Reynolds number, based on the reference mean geometric chord, was small and ranged in value from 0.97 to 1.63×10^{6}. This small variation had the expected negligible effect on the aerodynamic characteristics of all the wing configurations tested at angles of attack below the stall angle.

The cruise and climb (slat deflected and flaps nested) wing configurations demonstrated the typical linear increase in lift and pitching moment with an increase in the angle of attack below the stall angle. The remaining wing configurations (with both slat and flaps deflected) demonstrated a nonlinear increase in lift and pitching moment with an increase in the angle of attack below the stall angle. Analysis of the wing pressure data presented in reference 5 showed that this nonlinear behavior was due primarily to the fact that the aerodynamic loading on the vane/flap combination and rear portion of the main section remained almost constant as the angle of attack increased, whereas the aerodynamic loading on the slat and forward portion of the main section increased nonlinearly.

Also, as shown in figure 5, the small increase in Reynolds number obtained during this investigation produced no change in stall angle and a small increase in maximum lift after stall for the cruise wing configurations both with nacelles on and off. As shown in figures 6 to 10, however, a small increase in Reynolds number produced the unexpected result of an overall reduction in both stall angle and maximum obtainable lift coefficient after stall for the climb and for all the flapped wing configurations tested. The development of asymmetric flow patterns between the right and left wings resulting from very small differences in the positions of the right and left high-lift system components could have caused this unexpected behavior. The gaps, overlaps, and deflections of all the components were checked very carefully after this investigation and were found to be within engineering specifications. The left wing was instrumented with surface static-pressure taps which could have resulted in asymmetric component deflections under aerodynamic loading; however, an analysis of the lateral data obtained showed no discernible pattern as to whether the right or left wing stalled first. The development of asymmetric or larger separated flow regions near the wing tips due to change in Reynolds number could also have possibly caused this unexpected behavior. The Reynolds number at the wing tips, based on the tip chord, ranged from 0.53 to 0.89×10^6. Even at these low Reynolds numbers, the existence of sizable regions of laminar flow is doubtful because of the large pressure gradients that developed on the upper surface of the leading-edge slat and because of the highly turbulent flow through the slat/main slot exit plane.

Very little is known about the effects of either dynamic model oscillations or high crossflow velocity components on the mechanisms of turbulent boundary-layer separation at these low Reynolds numbers. The model had a rather large flexible wing and was mounted on a highly cantilevered model support system which resulted in large model and wing-tip dynamic oscillations near and after the stall angle of attack. During this investigation, no flow-visualization studies were made to determine the exact regions of separated flow; therefore, no definitive explanation can be given for the unexpected trend in stall angle and maximum obtainable lift coefficient for the climb and flapped wing configurations.

The effects of nacelles on the longitudinal aerodynamic characteristics of the cruise wing configuration are presented in figure 5(c). At the higher angles of attack, these data show that adding nacelles resulted in a slight increase in C_L and C_D and in a very slight positive shift in C_m. Adding nacelles can often cause an increase in C_L, because the nacelles themselves produce a lift increment and increase the local wing loads due to an increase in the local induced angles of attack. At the higher angles of attack, the relatively large increase in C_D was possibly caused by the formation of separated flow regions on the nacelles. Such formations could possibly be eliminated by proper positioning of vortex generators. At the lower angles of attack, the increase in C_D was much smaller as a result of the added thrusting force produced by the toe-in of the nacelle pylon.

Untrimmed characteristics.- Summary plots showing comparisons of the untrimmed longitudinal aerodynamic characteristics of all the wing configurations tested are presented in figure 11 for $R_c = 1.63 \times 10^6$. The leading-edge slat was deflected a constant -50° for the climb configuration and all the

flapped wing configurations. This constant deflection produced essentially a constant spanwise leading-edge camber difference between the cruise and climb wing configurations. As shown in figure 11(a), for the climb configuration, this constant camber difference resulted in approximately equal slopes for the angle-of-attack and C_m versus C_L curves for the cruise and climb wing configurations. An approximate 2.5^o positive shift also occurred in the angle of attack of zero lift. At a given C_L through a range of 0.5 to 1.2, C_D was 0.02 higher and C_m was identical for the climb, in comparison with the cruise wing configurations. For this same range of C_L, an analysis of C_D versus C_L^2 plots showed that both configurations had approximately the same value of 0.70 for the wing efficiency factor e. $\left(C_D = C_{D,o} + \frac{C_L^2}{\pi Ae}\right.$, where $C_{D,o}$ is the drag coefficient at zero lift.$\left.\right)$ The cruise wing configuration had an untrimmed maximum L/D of 16.52 at $C_L = 0.68$; the climb wing configuration had an untrimmed maximum L/D of 11.72 at $C_L = 0.90$.

As shown in figure 11(a), C_D for the full-span, take-off flap wing configuration at a given C_L through a range of 1.2 to 2.2 was approximately 0.01 less than C_D for the part-span, take-off flap wing configuration. A slightly lower C_D was expected for the full-span flap configuration in comparison with that for the part-span flap configurations as a result of the smoother and more nearly elliptic spanwise load distribution. Analysis of C_D versus C_L^2 plots through the C_L range of 1.2 to 2.2 showed that both take-off configurations had approximately the same e value of 0.85. This represents a 0.15-increase in the e value compared to the cruise and climb wing configurations. In general, a high-lift system will improve the flow quality, in that flow separation is reduced and additional leading-edge suction is recovered so that the wing efficiency is higher in the high-lift case than that of the clean-wing case. (Also, see ref. 13.) The part-span, take-off flap wing configurations had an untrimmed maximum L/D of 9.61 at $C_L = 1.49$, and the full-span, take-off flap configuration had an untrimmed maximum L/D of 10.20 at a slightly higher C_L of 1.55.

As also shown in figure 11(a), the part- and full-span, landing flap wing configurations at a given C_L had almost identical C_D values through a C_L range of 1.0 to 2.6. As for the corresponding take-off configurations, a reduction in C_D was expected for the full-span, landing flap wing configurations compared with the part-span wing configurations. Without detailed flow visualization and more detailed spanwise pressure distribution data, no definitive explanation can be given for the lack of reduction in C_D. Perhaps the full-span, landing flap wing configuration had a region of separated flow which tended to increase the drag of the model. However, such a region is not readily apparent from an analysis of the limited wing pressure distribution data taken during this investigation. An analysis of C_D versus C_L^2 plots showed that both landing configurations had an e value of approximatley 0.89, which represents a further increase of 0.04 compared with the value for the take-off configurations. Both landing configurations had an approximate untrimmed maximum L/D of 7.55 at an approximate C_L of 2.0. The part-span, landing and full-span, take-off flap-wing configurations had nearly identical C_m versus C_L curves for a C_L range of 0.7 to 2.5, which implies that both config-

urations incur the same trim drag penalties. (Trim drag is defined as the drag increment due to the horizontal-tail lift required to trim the aircraft.)

Comparisons of the untrimmed longitudinal aerodynamic characteristics of the four take-off and landing flap wing configurations are presented in figures 11(b) and 11(c), respectively. For the take-off flap configurations at a given C_L through a range of 0.2 to 2.1, the full-span flap and full-span flap with low-speed ailerons wing configurations had slightly lower C_D and, therefore, higher L/D values than the corresponding values for the part-span flap and full-span flap with high-speed ailerons wing configurations. The full-span flap with high-speed ailerons wing configuration produced slightly higher negative C_m than the full-span flap with low-speed ailerons wing configuration. This result was expected because of the reduced loading near the tips of the wing equipped with outboard low-speed ailerons. For the landing flap configurations tested at a given C_L through a range of 0.7 to 2.6, all the configurations tested had approximately the same C_D and L/D values. The trends in the C_m characteristics for the landing flap wing configurations were similar to those observed for the take-off flap wing configurations. For both the take-off and landing flap wing configurations, the three full-span flap wing configurations produced more negative C_m than the part-span flap wing configuration; this result implies higher trim drag penalties for the full-span flap wing configurations. These higher trim drag penalties could easily offset any improvements in L/D obtained using full-span flaps.

For this model, the overall trim drag penalties might be reduced by moving the moment reference center (usually the same as the aircraft center-of-gravity location) further aft to reduce the negative C_m. However, moving the center-of-gravity location aft without a corresponding aft movement of the rear-wheel location can adversely offset the nose-wheel steering forces. In general, a more desirable way of reducing the overall negative C_m value is to design the wing and flap system so that the maximum lift will be generated by the inboard segment of the wing. This method will reduce the negative C_m value by moving the wing center-of-pressure location (the point through which the wing resultant force acts) forward toward the model moment reference center. This approach will require large-percent-chord, highly deflected flaps inboard to produce lift and highly deflected leading-edge devices outboard to increase the stall angle and the maximum obtainable lift. As previously discussed, higher inboard loading will also have the added advantage of reduced structural root bending moments and of lower induced angles of attack outboard.

Trimmed characteristics.- The effect of horizontal-tail deflection on the longitudinal aerodynamic characteristics of the 10 wing configurations investigated are presented in figures 12 to 17. The longitudinal trim characteristics ($C_m = 0$), determined by interpolating the experimental data curves to obtain data at incremental tail incidences, are also presented for each configuration. The maximum trim C_L is defined as the highest value of C_L obtained prior to neutral stability of the model ($\partial C_m/\partial C_L \approx 0$). The angle of attack for neutral stability occurred several degrees prior to the wing-tip stall angle of attack for each configuration tested.

The tail-off performance data presented in figures 12 to 17 show that the cruise and landing flap wing configurations had a larger positive shift in C_m

after the stall angle than did the climb and take-off flap wing configurations. This probably indicates that the cruise and landing flap wing configurations had larger regions of separated flow near the wing tips and, consequently, had more forward center-of-pressure locations than those for the corresponding climb and take-off flap wing configurations.

The tail-on performance data showed that the cruise and landing flap wing configurations had a slight unfavorable positive shift (nose-up) in C_m and that the climb and take-off flap wing configurations had a slight favorable negative shift (nose-down) in C_m after the angle for neutral stability. In general, the two best approaches to reduce and possibly to eliminate this unfavorable pitch-up are (1) to increase the horizontal-tail effectiveness and (2) to reduce the separated flow region near the wing tips. Greater horizontal-tail effectiveness can be achieved by increasing the surface area of the current low-tail arrangement, which may incur additional cruise drag penalties, or by increasing the tail moment-arm length with the use of a high T-tail arrangement. The high T-tail would also be in a region of higher local flow than that for the current low-tail arrangement, which would require a smaller tail surface area to trim the model and, therefore, would incur less trim drag penalty. Neither of these two approaches will eliminate the unfavorable tip flow-separation region which adversely affects the roll-control effectiveness of the low-speed ailerons. Perhaps a better approach is to reduce and possibly to eliminate the region of separated flow near the tips by increasing the outboard slat and inboard flap effectiveness. As peviously discussed, this approach could result in the more favorable condition of flow separation near the wing-body juncture. However, initial inboard flow separation would adversely affect the horizontal-tail effectiveness of a high T-tail arrangement at the higher angles of attack, especially near stall.

Summary comparisons of the trim performance for the wing configurations tested are presented in figure 18. A tabulated summary of the trim drag penalties and the maximum trimmed C_L and L/D performance values for each wing configuration tested is presented in table II. The maximum trimmed performance data for the cruise, climb, and part-span, take-off and landing flap wing configurations compare favorably with the performance data obtained during a previous investigation as reported in reference 3. The trimmed maximum L/D values for the cruise and climb wing configurations were only slightly lower than their corresponding untrimmed values; however, the value of C_L at which the maximum L/D occurred was approximately 0.14 higher. As previously discussed, the full-span, take-off flap wing configuration had slightly better untrimmed performance (lower C_D and higher L/D at a given C_L) than the part-span, take-off wing configuration. However, as shown in figure 18(a) and given in table II, the trimmed data show that the part-span, take-off flap wing configuration had slightly better trimmed performance than the full-span, take-off flap configurations, and that the part-span, landing flap configuration had considerably better trimmed performance than the full-span, landing flap configuration. The loss in the performance of the full-span flap configurations was due to the high trim penalties incurred in the form of horizontal-tail drag and downloads. The trim drag penalty for the full-span, take-off flap configuration was twice as great as that for the part-span, take-off flap configuration and was nearly 3 times as great for the corresponding landing flap configurations.

Comparisons of the trimmed longitudinal aerodynamic characteristics of the four take-off and the four landing flap wing configurations are presented in figures 18(b) and 18(c), respectively. The differences between the trimmed take-off flap performance characteristics of the four flapped wing configurations tested were very small. The average trimmed maximum L/D was 9.2 at an average C_L of 1.53. However, the trimmed landing flap performance characteristics of the part-span flap and full-span flap with low-speed ailerons wing configurations were almost identical and were considerably better than the performance of the full-span flap and full-span flap with high-speed ailerons wing configurations. This result was expected because of an increase in negative C_m caused by the aft movement of the wing center-of-pressure location as more of the outboard portion of the wing was loaded.

The full-span flap with high-speed ailerons wing configuration with both take-off and landing flap settings had slightly lower maximum C_L values than the corresponding part-span flap wing configurations. In addition, the full-span flap with low-speed ailerons wing configuration with both take-off and landing flap settings had slightly higher maximum C_L values than the corresponding part-span flap wing configurations. The full-span, take-off flap wing configuration had a higher maximum C_L value than the other take-off wing configurations; however, the full-span, landing flap wing configuration had a lower maximum C_L value than the part-span flap configuration and only a slightly higher value than the full-span flap with high-speed ailerons wing configuration. Comparative analysis of the trimmed performance characteristics of the four take-off and four landing flap wing configurations suggests that the full-span flap with low-speed ailerons wing configuration had slightly better trimmed performance characteristics than the other three configurations. In addition, the trim performance of the full-span flap wing configuration was slightly worse than even that of the part-span flap configuration because of high trim drag penalties. These test results further reinforce the generally accepted philosophy for the design of high-lift systems: the more total lift generated by the inboard portion of the wing, the better the overall performance of the system.

Effect of landing gear.- The effects of the landing gear on the longitudinal aerodynamic characteristics of the take-off and landing flap wing configurations tested are presented in figure 19. These data show that at a given C_L, adding the landing gear had negligible effect on C_m but resulted in an average increase in C_D of 0.014 for the take-off flap wing configurations and a slightly smaller average increase of 0.010 for the landing flap wing configurations. At a given angle of attack, adding the landing gear resulted in an approximate C_L loss of 0.03 for the take-off flap wing configurations and a loss of 0.06 for the landing flap wing configurations. These lift losses were expected because of the interaction of gear-generated low-energy wakes with the high-energy flow through the main/vane and vane/flap slots. In general, this interaction reduces the energy of the flow through the slots and thereby reduces the lift increment generated by the inboard flap system.

Effect of leading-edge slats.- The effects of the leading-edge slat deflection on the longitudinal aerodynamic characteristics of the part- and full-span flap wing configurations with both take-off and landing flap settings are presented in figure 20. These data show the tremendous effects of deflecting the

leading-edge slat on the maximum stall angle and on the maximum C_L capability of the take-off and landing flap wing configurations. Nesting the slat resulted in an approximate 18.5-percent reduction in the maximum obtainable C_L and an approximate reduction in C_D of 0.010 at a given C_L. The wing pressure data presented in reference 5 show that the inboard leading-edge slat segment (between fuselage side-of-body and trailing-edge break stations) carried less load than the outboard slat segment at a given angle of attack. This was due in part to the fact that the thickness and camber distributions of the inboard slat were greater than those of the outboard slat and in part to the fact that both inboard and outboard slats were deflected the same amount. These combined factors resulted in higher effective leading-edge camber inboard than outboard. However, for this high-aspect-ratio wing configuration, less leading-edge camber is needed inboard because of the small percent chord of the inboard flap system. The effective camber can be reduced and possibly higher overall maximum C_L values can be obtained by decreasing the inboard slat deflection or by replacing the slat with a properly contoured variable-camber Krueger (VCK) leading-edge device such as that used by Douglas and reported in reference 4.

Effect of ground height.- The effects of ground height on the longitudinal aerodynamic characteristics of the part- and full-span flap wing configurations with both take-off and landing flap settings are presented in figure 21. The horizontal tails were on during these ground proximity tests. The data show the expected increase in C_L, reduction in C_D, and positive shift in C_m with a decrease in ground height. These changes in performance occur because the cushioning effect of the ground suppresses the formation of the wing vortex, with a resulting decrease in wing downwash and increase in lift-curve slope. Both part- and full-span flap wing configurations had an approximate increase in C_L of 0.08. The take-off flap wing configurations had an approximate reduction in C_D of 0.02 and a negative shift in C_m of 0.06. However, the landing flap wing configurations had a greater reduction in C_D of 0.04 and negative shift in C_m of 0.08. The negative shift in C_m will probably require greater horizontal-tail incidence angles to trim the model, which will, in turn, increase the overall drag due to the increase in trim drag.

The effects of ground height on the longitudinal aerodynamic characteristics of the part-span, landing flap wing configuration with the ground and flight spoilers deflected 45° and 60° are presented in figure 21(c). These data show an approximate increase in C_L of 0.11, an increase in C_D of 0.02, and a positive shift in C_m of 0.06. The increase in C_D and the positive shift in C_m were unexpected and opposite to the trends observed for the same configuration with the spoilers undeflected. These data also show that deflecting the ground and flight spoilers 45° resulted in an approximate net loss in C_L of 1.2; in addition, increasing the deflection to 60° resulted in an additional loss of 0.3 in C_L.

Lateral-Directional Characteristics

Effect of sideslip angle.- The effects of sideslip angle on the lateral-directional aerodynamic characteristics of all the wing configurations investigated, except the full-span flap with high-speed aileron wing configuration with take-off flap settings, are presented in figures 22 to 27. The static lateral-

directional stability derivatives are presented for each configuration tested for angles of attack below stall and were computed from the lateral body-axis data obtained at sideslip angles from -10° to 5°. The horizontal and vertical tails were on during all runs to determine the effect of sideslip. The cruise wing configuration had a geometric dihedral angle of 5°; the horizontal tails had a geometric dihedral angle of 10°. These dihedral angles resulted in stable lateral-directional characteristics for each configuration tested.

As shown in figures 22(b) and 23(b), the climb wing configuration had less lateral-directional stability than the cruise wing configuration. The effective dihedral parameter C_{l_β} showed an approximate 0.001 positive shift. This reduction in lateral stability is believed to have resulted primarily from a decrease in geometric dihedral which was caused by deflecting the leading-edge slats spanwise at a constant angle of -50°.

The effective dihedral parameter C_{l_β} decreased rapidly from approximately -0.002 at -4° to approximately -0.006 at 10° angle of attack for all of the take-off and landing flap wing configurations tested, indicating an increase in lateral stability with increased angle of attack. At a given angle of attack, the value of C_{l_β} for each landing flap wing configuration was only slightly more negative than the value for the corresponding take-off flap wing configuration. At a given C_L, therefore, the value of C_{l_β} for each take-off flap wing configuration was much more negative than the value for the corresponding landing flap wing configuration. The landing flap wing configuration was expected to have slightly less lateral-directional stability than the corresponding take-off flap wing configuration because of the inboard shift in wing loading as the flap deflection was increased. The directional-stability parameter C_{n_β}, which is governed primarily by the vertical tail area and location, ranged in value from 0.002 to 0.004 for each wing configuration tested. The side-force parameter C_{Y_β}, which is governed primarily by the fuselage shape, had an average value of -0.02 for each wing configuration tested. These values of both the directional-stability and side-force parameters are typical for this type of wide-body transport.

Effect of low-speed aileron deflection.- The effects of low-speed aileron deflections on the lateral-directional aerodynamic characteristics of the part-span flap wing configuration with both take-off and landing flap settings are presented in figure 28. These data show that negative left-aileron-only deflections produced approximately twice the rolling moment as positive deflections for the take-off flap wing configuration and nearly 3 times as much for the landing flap wing configuration. The higher negative left-aileron-only deflections produced more negative C_l for the landing flap wing configuration than for the take-off flap wing configuration. Unexpectedly, however, the higher positive left-aileron-only deflections produced slightly more positive C_l for the take-off flap wing configurations than for the landing flap wing configuration. Differential deflections of the right and left ailerons produced the

expected additive results for both take-off and landing flap wing configurations. None of the data presented for the various flap and low-speed aileron wing combinations tested show significant effects on the longitudinal and lateral aerodynamic coefficients other than C_l.

Effect of spoiler deflection.- The effects of the left outboard roll-control spoiler deflection on the longitudinal and lateral aerodynamic characteristics of the full-span flap wing configuration with both take-off and landing flap settings are presented in figures 29(a) to 29(f). The combined effects of the left outboard flight and roll-control spoiler deflections on the aerodynamic characteristics of the full-span landing flap wing configuration are presented in figures 29(g) to 29(i). A summary figure showing the change in the aerodynamic coefficients C_m, C_L, and C_l with increased spoiler deflection is also presented for each configuration tested. These summary figures show that large deflections of the left outboard roll-control spoiler for the full-span flap configuration produced changes in C_l as great as those produced by differential low-speed aileron deflections for the corresponding part-span flap configuration. However, the large spoiler deflections also unloaded the outboard segment of the wing, which resulted in an expected loss of C_L and a positive shift in C_m. During actual flight application, this loss in C_L and shift in C_m could adversely affect the handling qualities of the aircraft, especially in ground proximity.

The negative C_l produced by the roll-control spoiler deflections above 10° was greater for the take-off than for the landing flap wing configuration. As shown in figures 29(f) and 29(i), the negative C_l produced by the combined flight and roll-control spoiler deflections was approximately 3 times greater than the negative C_l produced by roll-control spoiler deflections only. Accordingly, the change in C_L was also approximately 3 times greater, and the change in C_m was approximately twice as great. The data presented in these figures also show an almost linear increase in negative C_n with angle of attack for the various spoiler deflections tested. This result was expected due to the increase in drag of the left wing caused by the separated flow generated by the deflected left spoiler.

SUMMARY OF RESULTS

An investigation was conducted in the Langley 4- by 7-Meter Tunnel to determine the static longitudinal and lateral-directional aerodynamic characteristics of an advanced aspect-ratio-10 supercritical-wing transport model equipped with a full-span leading-edge slat and part-span and full-span double-slotted trailing-edge flaps. This wide-body transport model was also equipped with spoiler and aileron roll-control surfaces, flow-through nacelles, landing gear, and movable horizontal tails. The following six basic wing configurations were tested during this investigation: (1) cruise (slats and flaps nested), (2) climb (slats deflected and flaps nested), (3) part-span flap, (4) full-span flap, (5) full-span flap with low-speed ailerons, and (6) full-span with high-speed ailerons. Each of the four flapped wing configurations was tested with the leading-edge slats and the trailing-edge flaps deflected to settings representative of both take-off and landing conditions. The results of this investigation are summarized as follows:

1. The small variation in test Reynolds number from 0.97 to 1.63 × 10^6 had negligible effect on the aerodynamic characteristics of all the wing configurations tested at angles of attack below the stall angle.

2. All the wing configurations tested exhibited wing-tip-stall behavior followed by a reduction in longitudinal stability.

3. For the take-off flap configurations at a given untrimmed lift coefficient C_L through a range of 0.2 to 2.1, the full-span flap and full-span flap with low-speed ailerons wing configurations had slightly lower drag coefficient C_D and, therefore, higher values of lift-drag ratio L/D values than the corresponding values for the part-span flap and full-span flap with high-speed ailerons wing configurations. For the landing flap configurations at a given untrimmed C_L through a range of 0.7 to 2.6, the four flapped wing configurations had approximately the same C_D and L/D values. For both take-off and landing flap configurations at a given untrimmed C_L, the three full-span flap wing configurations produced more negative pitching-moment coefficient C_m than the part-span flap wing configuration and, therefore, incurred higher trim drag penalties.

4. Because of trim drag penalties, the difference between the trimmed performance characteristics of the four flapped wing configurations with take-off flap setting was small and the average trimmed maximum L/D was 9.2 at an average C_L of 1.53. With landing flap settings, the trimmed performances of the part-span flap and full-span flap with low-speed ailerons wing configurations were almost identical and were considerably better than the performances of the full-span flap and full-span flap with high-speed ailerons wing configurations. A comparative analysis of the trimmed performance of the four flapped wing configurations suggests that the full-span flap with low-speed ailerons wing configuration had slightly better trimmed performance than the other three flap configurations.

5. Adding the landing gear at a given angle of attack resulted in an approximate C_L loss of 0.03 for the flapped wing configurations with take-off flap settings and a C_L loss of 0.06, with landing flap settings.

6. For the part- and full-span flap wing configurations with either take-off or landing flap settings, nesting the leading-edge slat resulted in an approximate 18.5-percent reduction in the maximum obtainable C_L and an approximate 0.010 reduction in C_D at a given C_L.

7. Ground-proximity tests of the part- and full-span flap wing configurations with either take-off or landing flap settings showed the expected trend of an increase in C_L, reduction in C_D, and positive shift in C_m with a decrease in ground height.

8. The climb wing configuration had less lateral-directional stability than the cruise wing configuration. The lateral-directional stability of each flapped wing configuration with landing flap settings was slightly less than the stability of the corresponding configuration with take-off flap settings.

9. For the part-span wing configuration, negative left-aileron-only deflections produced approximately twice the rolling-moment coefficient C_l as positive deflections for the configuration with take-off flap settings, and nearly 3 times as much with landing flap settings.

10. For the full-span flap wing configuration with either take-off or landing flap settings, large deflections of the left outboard roll-control spoiler produced changes in C_l as great as those produced by differential low-speed aileron deflections for the corresponding part-span flap wing configurations. Large deflections of the roll-control spoilers also resulted in an unfavorable loss of C_L, a positive shift in C_m, and an increase in negative C_n.

Langley Research Center
National Aeronautics and Space Administration
Hampton, VA 23665
January 30, 1981

APPENDIX A

LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA

The force and moment data, presented graphically in figures 5 to 29, are presented in tabular form in this appendix. The longitudinal data C_L, C_D, C_m, and L/D (CL, CD, CPM, and L/D, respectively, in tabular form) are referenced to the stability-axis system; the lateral data C_l, C_n, and C_Y (CRM, CYM, and CSF, respectively, in tabular form) are referenced to the body-axis system. These data were obtained during Test 198 conducted in the Langley 4- by 7-Meter Tunnel.

APPENDIX A

RUN NUMBER 1 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.116	.96 (19.99)	.00	-4.04	-.1458	.0270	-.1402	.0020	.0010	-.0030	-5.39	.427
.117	.96 (20.15)	.00	-1.95	.0846	.0247	-.1258	.0034	.0008	-.0039	3.42	.475
.117	.96 (20.13)	.00	.07	.2620	.0264	-.1145	.0019	.0008	-.0032	9.92	.522
.117	.96 (20.15)	.00	2.13	.4807	.0299	-.0865	.0036	.0011	-.0049	16.10	.570
.117	.96 (20.13)	.00	4.16	.6659	.0374	-.0611	.0005	.0010	-.0069	17.82	.618
.117	.96 (20.14)	.00	6.23	.8554	.0462	-.0312	.0021	.0014	-.0067	18.53	.629
.117	.96 (20.14)	.00	8.25	1.0087	.0618	-.0015	.0007	.0008	-.0093	16.32	.630
.117	.96 (20.07)	.00	10.30	1.1778	.0751	.0486	.0019	.0012	-.0076	15.69	.629
.116	.96 (19.99)	.01	12.28	1.1724	.1600	.1442	.0005	.0001	-.0082	7.33	.630
.116	.96 (19.99)	.02	14.29	1.2084	.2056	.2082	-.0008	.0004	-.0127	5.88	.630
.118	.97 (20.34)	-.00	16.31	1.1136	.3040	.1599	.0192	.0043	-.0066	3.66	.630
.117	.97 (20.25)	-.00	18.30	1.1124	.3547	.1765	.0191	.0029	-.0027	3.14	.629
.117	.97 (20.20)	.00	20.22	1.0822	.3940	.1857	.0174	.0029	-.0045	2.75	.630
.117	.97 (20.16)	.01	22.23	1.0684	.4382	.1994	.0154	.0034	-.0075	2.44	.630
.118	.97 (20.36)	.04	24.27	1.0728	.4919	.2479	.0026	-.0022	-.0119	2.18	.630

RUN NUMBER 2 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.92 (40.20)	.00	-4.02	-.1293	.0271	-.1407	.0009	.0009	-.0040	-4.78	.428
.166	1.93 (40.35)	.00	-1.96	.0771	.0243	-.1280	.0018	.0005	-.0025	3.17	.475
.166	1.92 (40.13)	.00	.08	.2720	.0255	-.1117	.0006	.0002	-.0007	10.66	.521
.166	1.92 (40.18)	-.00	2.15	.4822	.0294	-.0897	.0025	.0010	-.0027	16.42	.569
.166	1.92 (40.10)	.00	4.18	.6714	.0371	-.0641	.0008	.0007	-.0028	18.09	.616
.166	1.93 (40.32)	.00	6.22	.8601	.0478	-.0355	.0006	.0010	-.0059	17.98	.630
.166	1.93 (40.30)	.01	8.28	1.0412	.0612	-.0046	-.0002	.0004	-.0048	17.00	.630
.166	1.93 (40.26)	.00	10.30	1.2056	.0751	.0364	.0014	.0012	-.0081	16.05	.630
.166	1.92 (40.08)	-.01	12.28	1.2314	.1493	.1343	.0097	.0051	-.0100	8.25	.629
.166	1.94 (40.43)	-.01	14.29	1.2847	.1900	.2015	.0112	.0053	-.0097	6.76	.630
.166	1.93 (40.28)	.02	16.31	1.2891	.2444	.2632	-.0022	-.0008	-.0072	5.27	.629
.166	1.93 (40.36)	.01	18.30	1.1644	.3573	.1516	.0048	.0011	-.0081	3.26	.629

RUN NUMBER 3 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.09)	.00	-4.04	-.1239	.0260	-.1365	.0031	.0003	.0018	-4.77	.427
.204	2.88 (60.23)	.00	-2.00	.0778	.0232	-.1256	.0024	.0005	-.0007	3.35	.473
.204	2.88 (60.13)	.00	.06	.2841	.0245	-.1077	.0022	.0003	-.0006	11.58	.519
.204	2.88 (60.22)	-.00	2.15	.4869	.0288	-.0880	.0029	.0007	-.0008	16.92	.566
.204	2.88 (60.09)	-.00	4.18	.6830	.0363	-.0615	.0013	.0010	-.0025	18.79	.612
.204	2.87 (59.89)	.00	6.24	.8750	.0467	-.0339	.0009	.0009	-.0039	18.73	.658
.204	2.88 (60.17)	.00	8.26	1.0516	.0601	-.0018	.0003	.0010	-.0056	17.50	.685
.204	2.88 (60.21)	-.01	10.30	1.2168	.0755	.0390	.0003	.0008	-.0060	16.11	.685
.204	2.89 (60.33)	-.03	12.28	1.2499	.1465	.1357	.0115	.0070	-.0105	8.53	.685
.205	2.90 (60.53)	.01	14.28	1.2582	.2060	.2044	-.0012	-.0001	-.0054	6.11	.685
.205	2.90 (60.49)	.01	16.22	1.2775	.2711	.2001	-.0010	-.0012	.0053	4.71	.685
.205	2.89 (60.45)	.00	18.21	1.1793	.3568	.1509	.0029	.0003	-.0099	3.31	.685
.205	2.90 (60.52)	.01	20.22	1.1498	.3966	.1750	.0043	-.0029	-.0041	2.90	.685
.205	2.90 (60.55)	.02	22.25	1.0987	.4390	.1707	.0016	-.0014	-.0075	2.50	.684
.204	2.88 (60.24)	.03	24.19	1.1165	.4888	.1958	.0013	-.0016	-.0070	2.28	.685

RUN NUMBER 4 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.97 (20.25)	.00	-1.97	.0656	.0244	-.1368	.0020	.0017	-.0119	2.69	.474
.117	.97 (20.17)	.00	.07	.2592	.0284	-.1144	.0006	.0010	-.0095	9.13	.522
.117	.97 (20.19)	.00	2.14	.4706	.0351	-.0831	.0018	.0012	-.0100	13.40	.571
.117	.97 (20.21)	.00	4.18	.6664	.0472	-.0539	.0009	.0011	-.0084	14.13	.618
.117	.97 (20.18)	.00	6.24	.8637	.0611	-.0186	.0005	.0012	-.0124	14.13	.667
.117	.97 (20.20)	.01	8.23	1.0364	.0791	.0185	-.0005	.0013	-.0178	13.11	.685
.117	.97 (20.21)	.01	10.29	1.1899	.1026	.0602	-.0008	.0009	-.0179	11.59	.685
.117	.97 (20.16)	.01	12.29	1.2425	.1789	.1621	.0025	.0019	-.0145	6.94	.684
.117	.96 (20.14)	.01	14.30	1.3001	.2283	.2330	.0029	.0018	-.0153	5.69	.685
.117	.96 (20.11)	.01	16.30	1.1591	.3472	.1227	.0027	.0012	-.0153	3.34	.684
.117	.96 (20.08)	.02	18.26	1.1117	.3969	.1296	.0018	.0001	-.0131	2.80	.685
.117	.96 (20.04)	.02	20.23	1.0992	.4485	.1446	.0024	-.0010	-.0146	2.45	.685
.116	.96 (19.97)	.03	22.21	1.1099	.5024	.1562	.0015	-.0012	-.0154	2.21	.685
.116	.95 (19.88)	.04	24.21	1.1364	.5615	.1818	.0012	-.0013	-.0170	2.02	.684

APPENDIX A

RUN NUMBER 5 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.92 (40.13)	.00	-1.99	.0611	.0249	-.1401	.0026	.0009	-.0051	2.46	.474
.166	1.93 (40.25)	.00	.09	.2661	.0270	-.1121	.0006	.0010	-.0086	9.86	.522
.166	1.92 (40.14)	.00	2.10	.4641	.0337	-.0880	.0013	.0011	-.0058	13.75	.568
.166	1.92 (40.13)	.00	4.15	.6691	.0427	-.0547	.0010	.0013	-.0062	15.68	.615
.166	1.92 (40.12)	.00	6.25	.8856	.0544	-.0180	.0018	.0018	-.0077	16.28	.663
.166	1.92 (40.14)	.00	8.23	1.0568	.0710	.0215	-.0004	.0011	-.0101	14.88	.685
.166	1.92 (40.19)	.01	10.31	1.2181	.0923	.0608	.0000	.0008	-.0090	13.19	.685
.166	1.92 (40.07)	.02	12.33	1.3044	.1545	.1524	-.0070	-.0035	-.0064	8.44	.684
.166	1.92 (40.02)	.03	14.37	1.3502	.2185	.2109	-.0060	-.0004	-.0141	6.18	.684
.166	1.93 (40.24)	.04	16.36	1.4145	.2659	.2732	-.0081	-.0009	-.0157	5.32	.684
.166	1.93 (40.27)	.02	18.25	1.1596	.3836	.1440	.0011	-.0005	-.0105	3.02	.685
.166	1.93 (40.35)	.03	20.24	1.1179	.4286	.1566	.0003	-.0015	-.0100	2.61	.685
.166	1.93 (40.28)	.04	22.21	1.1387	.4833	.1766	-.0002	-.0011	-.0104	2.36	.685
.166	1.94 (40.43)	.05	24.29	1.1605	.5432	.1953	-.0006	-.0014	-.0118	2.14	.684

RUN NUMBER 6 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.15)	.00	-1.99	.0630	.0250	-.1404	.0024	.0010	-.0057	2.52	.474
.204	2.88 (60.18)	-.00	.10	.2750	.0269	-.1153	.0024	.0009	-.0058	10.23	.521
.204	2.89 (60.30)	-.00	2.11	.4769	.0321	-.0888	.0021	.0010	-.0050	14.87	.567
.204	2.88 (60.21)	-.00	4.14	.6776	.0409	-.0557	.0017	.0014	-.0066	16.58	.613
.204	2.88 (60.22)	-.00	6.17	.8748	.0529	-.0206	.0015	.0016	-.0080	16.52	.658
.204	2.88 (60.20)	.00	8.22	1.0575	.0691	.0160	.0004	.0014	-.0103	15.29	.685
.204	2.88 (60.12)	.00	10.31	1.2350	.0886	.0599	.0002	.0012	-.0090	13.95	.685
.204	2.88 (60.23)	.02	12.32	1.3325	.1460	.1471	-.0023	-.0005	-.0095	9.13	.684
.204	2.89 (60.34)	.00	14.35	1.3881	.2081	.2075	.0029	.0037	-.0157	6.67	.685
.204	2.89 (60.34)	.04	16.34	1.4106	.2611	.2792	-.0069	.0006	-.0193	5.40	.685
.204	2.89 (60.32)	.08	18.25	1.2206	.3799	.1497	-.0064	-.0001	-.0169	3.21	.684
.205	2.90 (60.59)	.03	20.25	1.1578	.4211	.1718	.0039	-.0029	-.0090	2.75	.684
.205	2.90 (60.53)	.04	22.21	1.1318	.4722	.1776	.0007	-.0022	-.0097	2.40	.684
.205	2.90 (60.55)	.05	24.31	1.1628	.5340	.1994	-.0001	-.0032	-.0093	2.18	.684

RUN NUMBER 7 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.33)	-.00	-2.06	-.2725	.0914	.8383	.0033	.0011	-.0047	-2.98	.468
.204	2.89 (60.33)	.00	.02	-.0446	.0740	.8152	.0020	.0011	-.0077	-.60	.515
.204	2.89 (60.35)	.00	2.03	.1801	.0609	.7913	.0016	.0015	-.0073	2.95	.560
.204	2.88 (60.08)	.00	4.09	.4113	.0520	.7389	.0021	.0022	-.0073	7.92	.606
.204	2.88 (60.07)	.00	6.11	.6319	.0554	.6814	.0014	.0011	-.0067	11.41	.652
.204	2.88 (60.17)	.01	8.21	.8535	.0659	.6412	.0023	.0018	-.0097	12.96	.684
.204	2.88 (60.25)	.01	10.32	1.0664	.0789	.6165	.0014	.0015	-.0111	13.52	.685
.204	2.89 (60.29)	-.01	12.26	1.1964	.1139	.6178	.0102	.0091	-.0161	10.50	.684
.204	2.88 (60.25)	.01	14.26	1.2468	.1870	.6518	.0032	.0033	-.0149	6.67	.685
.204	2.89 (60.36)	.05	16.26	1.2876	.2355	.6842	-.0067	-.0003	-.0150	5.47	.685
.205	2.90 (60.61)	.05	18.24	1.1876	.3614	.3077	-.0013	.0015	-.0135	3.29	.685
.204	2.89 (60.41)	.04	20.19	1.1919	.4071	.1253	.0039	-.0048	-.0058	2.93	.685
.205	2.91 (60.68)	.04	22.28	1.2331	.4616	.0358	.0048	-.0072	-.0082	2.67	.684
.205	2.91 (60.79)	.06	24.24	1.2521	.5261	-.0568	.0003	-.0025	-.0107	2.38	.685

RUN NUMBER 8 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.22)	-.00	-2.00	-.1959	.0443	.5913	.0022	.0007	-.0047	-4.43	.471
.204	2.88 (60.07)	-.00	.01	.0545	.0383	.5293	.0027	.0010	-.0073	1.43	.516
.204	2.88 (60.18)	.00	2.07	.2926	.0372	.4701	.0022	.0010	-.0076	7.87	.562
.204	2.88 (60.15)	.00	4.11	.5279	.0407	.4165	.0022	.0013	-.0054	12.98	.608
.204	2.89 (60.34)	.01	6.14	.7409	.0497	.3733	.0013	.0013	-.0067	14.89	.654
.204	2.89 (60.29)	.01	8.23	.9619	.0630	.3325	.0014	.0016	-.0104	15.26	.685
.204	2.88 (60.17)	.01	10.28	1.1519	.0813	.3026	.0017	.0017	-.0114	14.16	.684
.204	2.88 (60.17)	.02	12.29	1.2696	.1357	.3272	-.0018	-.0000	-.0124	9.36	.685
.204	2.89 (60.43)	.01	14.36	1.3451	.1968	.3451	.0040	.0039	-.0165	6.83	.684
.204	2.89 (60.35)	.05	16.36	1.3898	.2503	.3823	-.0078	-.0005	-.0146	5.55	.685
.204	2.87 (60.03)	.04	18.30	1.2820	.3767	.0262	.0005	.0012	-.0135	3.40	.685
.204	2.89 (60.44)	.03	20.29	1.2641	.4267	-.1952	.0020	-.0020	-.0064	2.96	.684
.204	2.89 (60.45)	.04	22.26	1.2785	.4816	-.3085	.0006	-.0013	-.0109	2.65	.685
.205	2.92 (61.04)	.06	24.26	1.3453	.5539	-.3665	.0000	-.0015	-.0091	2.43	.684

APPENDIX A

RUN NUMBER 9 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.12)	-.00	-2.01	-.0810	.0327	.2779	.0019	.0010	-.0070	-2.48	.472
.204	2.88 (60.24)	-.00	.04	.1496	.0303	.2192	.0036	.0007	-.0050	4.94	.518
.204	2.89 (60.33)	.00	2.09	.3957	.0319	.1621	.0036	.0008	-.0052	12.42	.564
.204	2.89 (60.31)	.00	4.14	.6244	.0389	.1159	.0018	.0014	-.0091	16.05	.610
.204	2.88 (60.24)	.00	6.21	.8466	.0506	.0791	.0014	.0015	-.0094	16.74	.657
.204	2.89 (60.27)	.01	8.30	1.0620	.0666	.0474	.0015	.0016	-.0113	15.94	.685
.204	2.89 (60.27)	.01	10.29	1.2569	.0851	.0234	.0008	.0012	-.0113	14.77	.685
.204	2.88 (60.24)	-.01	12.32	1.4047	.1280	.0281	.0115	.0101	-.0174	10.97	.685
.203	2.87 (59.93)	.01	14.34	1.4291	.2093	.0681	.0037	.0043	-.0185	6.83	.684
.205	2.90 (60.54)	.04	16.35	1.4835	.2648	.0989	-.0064	.0002	-.0163	5.60	.684
.204	2.89 (60.30)	.03	18.25	1.3493	.3901	-.2655	-.0009	.0024	-.0166	3.46	.684
.205	2.90 (60.57)	.03	20.30	1.3450	.4554	-.5249	.0017	-.0010	-.0100	2.95	.685
.204	2.90 (60.50)	.04	22.26	1.3689	.5225	-.6086	-.0001	-.0005	-.0133	2.62	.685
.205	2.90 (60.60)	.05	24.30	1.4219	.5959	-.6470	.0001	-.0012	-.0133	2.39	.684

RUN NUMBER 10 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.16)	.00	-1.97	.0206	.0286	-.0156	.0020	.0008	-.0068	.72	.473
.204	2.89 (60.45)	.00	.04	.2487	.0290	-.0695	.0033	.0007	-.0063	8.56	.519
.204	2.88 (60.25)	.00	2.14	.4980	.0345	-.1259	.0015	.0010	-.0079	14.42	.566
.204	2.88 (60.15)	.00	4.17	.7226	.0447	-.1754	.0024	.0016	-.0086	16.17	.612
.204	2.88 (60.08)	.00	6.30	.9453	.0602	-.2172	.0004	.0013	-.0106	15.70	.661
.204	2.88 (60.19)	.01	8.30	1.1512	.0789	-.2551	-.0004	.0011	-.0129	14.59	.684
.204	2.88 (60.15)	.01	10.31	1.3438	.1017	-.2779	.0004	.0009	-.0100	13.21	.684
.204	2.88 (60.14)	-.01	12.37	1.5003	.1469	-.2695	.0117	.0100	-.0173	10.22	.685
.204	2.89 (60.26)	.00	14.41	1.5296	.2312	-.2339	.0040	.0041	-.0169	6.62	.683
.204	2.89 (60.29)	.04	16.38	1.5748	.2889	-.2110	-.0073	-.0005	-.0147	5.45	.684
.204	2.89 (60.35)	.05	18.34	1.4489	.4282	-.5769	-.0015	.0014	-.0150	3.38	.685
.205	2.91 (60.69)	.04	20.27	1.4289	.4993	-.7897	.0022	-.0010	-.0126	2.86	.684
.205	2.91 (60.75)	.06	22.32	1.4605	.5766	-.8470	.0004	-.0007	-.0153	2.53	.685
.205	2.92 (60.96)	.07	24.36	1.4866	.6482	-.8728	-.0007	-.0009	-.0152	2.29	.685

RUN NUMBER 11 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.20)	-.00	-2.03	.1189	.0328	-.3259	.0025	.0007	-.0047	3.63	.474
.204	2.89 (60.36)	.00	.13	.3683	.0370	-.3878	.0019	.0010	-.0082	9.94	.523
.204	2.89 (60.30)	.00	2.16	.5957	.0453	-.4462	.0014	.0012	-.0080	13.16	.569
.204	2.88 (60.23)	.00	4.26	.8313	.0589	-.4981	.0003	.0014	-.0085	14.12	.616
.204	2.89 (60.36)	.01	6.28	1.0527	.0758	-.5409	.0001	.0013	-.0099	13.89	.661
.204	2.89 (60.26)	.01	8.31	1.2603	.0980	-.5742	-.0008	.0008	-.0104	12.87	.684
.204	2.89 (60.39)	.01	10.33	1.4465	.1239	-.5882	.0002	.0011	-.0115	11.67	.685
.204	2.88 (60.17)	.02	12.45	1.5501	.1930	-.5560	-.0022	-.0005	-.0097	8.03	.684
.204	2.88 (60.07)	.01	14.37	1.6233	.2589	-.5552	.0038	.0039	-.0203	6.27	.685
.204	2.88 (60.12)	.05	16.43	1.6766	.3250	-.5470	-.0081	-.0004	-.0172	5.16	.684
.205	2.90 (60.56)	.03	18.28	1.5002	.4775	-.9057	.0017	.0014	-.0152	3.14	.684
.205	2.91 (60.76)	.03	20.37	1.4885	.5549	-1.0180	.0019	-.0002	-.0138	2.68	.685
.205	2.90 (60.60)	.04	22.36	1.4946	.6259	-1.0516	.0004	.0002	-.0165	2.39	.685
.205	2.90 (60.62)	.06	24.42	1.5303	.7049	-1.0551	-.0009	-.0008	-.0157	2.17	.684

RUN NUMBER 12 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.88 (60.17)	-.00	-1.92	.2297	.0421	-.6474	.0019	.0009	-.0072	5.45	.478
.204	2.88 (60.21)	.00	.13	.4661	.0486	-.7095	.0019	.0006	-.0061	9.60	.524
.204	2.88 (60.17)	.00	2.22	.7058	.0603	-.7726	.0027	.0011	-.0051	11.70	.571
.204	2.88 (60.10)	.00	4.24	.9198	.0777	-.8165	.0007	.0011	-.0075	11.84	.617
.204	2.88 (60.17)	.00	6.31	1.1530	.0993	-.8606	.0003	-.0004	-.0067	11.61	.663
.204	2.89 (60.31)	.00	8.35	1.3528	.1335	-.8777	.0007	.0020	-.0116	10.13	.684
.204	2.89 (60.44)	.01	10.37	1.5283	.1677	-.8762	-.0005	.0016	-.0128	9.11	.684
.204	2.90 (60.49)	-.01	12.46	1.6797	.2144	-.8779	.0121	.0110	-.0210	7.83	.685
.204	2.88 (60.22)	.00	14.39	1.6918	.3028	-.8347	.0042	.0051	-.0201	5.59	.685
.204	2.89 (60.35)	.04	16.42	1.7415	.3734	-.8182	-.0065	.0013	-.0218	4.66	.685
.205	2.90 (60.60)	.04	18.33	1.5792	.5321	-1.0837	-.0030	.0019	-.0170	2.97	.685
.205	2.91 (60.76)	.02	20.37	1.5451	.6081	-1.1847	.0052	-.0017	-.0118	2.54	.685
.205	2.91 (60.84)	.05	22.34	1.5177	.6787	-1.1993	-.0008	.0007	-.0167	2.24	.685
.205	2.91 (60.81)	.06	24.36	1.5482	.7530	-1.1831	-.0010	-.0002	-.0168	2.06	.684

APPENDIX A

RUN NUMBER 13 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.87 (60.03)	-10.06	-1.98	.0487	.0080	-.0962	.0263	-.0276	.2031	6.10	.474
.204	2.89 (60.27)	-10.07	.05	.2741	.0094	-.1524	.0281	-.0250	.1965	29.30	.520
.204	2.89 (60.28)	-10.08	2.11	.5050	.0145	-.2019	.0319	-.0225	.1936	34.84	.567
.204	2.89 (60.42)	-10.09	4.22	.7396	.0254	-.2552	.0346	-.0214	.1930	29.17	.614
.204	2.89 (60.39)	-10.10	6.26	.9567	.0405	-.3109	.0365	-.0205	.1940	23.62	.661
.204	2.88 (60.10)	-10.12	8.31	1.1793	.0591	-.3604	.0389	-.0192	.1967	19.96	.685
.204	2.88 (60.12)	-10.14	10.34	1.3678	.0850	-.3916	.0390	-.0181	.1978	16.09	.685
.204	2.88 (60.10)	-10.12	12.33	1.4356	.1529	-.3528	.0185	-.0233	.1959	9.39	.684
.204	2.87 (60.00)	-10.14	14.35	1.5232	.2289	-.3736	.0254	-.0144	.1812	6.65	.685
.204	2.88 (60.16)	-10.11	16.33	1.5437	.3098	-.4377	.0108	-.0196	.1879	4.98	.685
.204	2.88 (60.21)	-10.12	18.42	1.6161	.3794	-.4802	.0149	-.0174	.1857	4.26	.684
.204	2.89 (60.40)	-10.08	20.31	1.5109	.4949	-.6947	.0016	-.0122	.1605	3.05	.684
.204	2.88 (60.19)	-10.06	22.37	1.5212	.5725	-.8059	-.0008	-.0067	.1413	2.66	.687
.204	2.89 (60.32)	-10.05	24.38	1.5313	.6481	-.8511	-.0005	-.0045	.1277	2.36	.685

RUN NUMBER 14 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.60)	-4.98	-2.01	.0120	.0239	-.0250	.0139	-.0129	.0968	.50	.473
.204	2.90 (60.52)	-4.99	.06	.2503	.0241	-.0824	.0164	-.0119	.0959	10.40	.519
.204	2.89 (60.46)	-5.00	2.19	.4951	.0300	-.1379	.0170	-.0103	.0910	16.51	.568
.204	2.89 (60.40)	-5.01	4.16	.7212	.0398	-.1957	.0191	-.0089	.0905	18.12	.612
.204	2.89 (60.27)	-5.02	6.29	.9519	.0557	-.2472	.0197	-.0085	.0892	17.10	.660
.204	2.89 (60.28)	-5.02	8.29	1.1609	.0744	-.2902	.0208	-.0096	.0944	15.59	.706
.204	2.88 (60.19)	-5.03	10.28	1.3564	.0971	-.3223	.0214	-.0094	.0937	13.97	.703
.204	2.87 (60.00)	-5.02	12.46	1.4599	.1627	-.2912	.0076	-.0145	.0971	8.98	.682
.203	2.87 (59.94)	-5.02	14.39	1.5551	.2224	-.2854	.0088	-.0095	.0879	6.99	.685
.203	2.85 (59.52)	-4.99	16.34	1.5041	.3240	-.3601	.0004	-.0137	.0785	4.64	.687
.204	2.89 (60.29)	-5.02	18.40	1.5507	.3853	-.3684	.0117	-.0100	.0791	4.02	.688
.205	2.90 (60.60)	-4.97	20.33	1.4862	.5050	-.7203	-.0014	-.0086	.0779	2.94	.685
.204	2.90 (60.53)	-4.98	22.34	1.4484	.5679	-.8570	.0022	-.0112	.0781	2.55	.685
.205	2.91 (60.82)	-4.96	24.41	1.4929	.6488	-.8849	.0009	-.0086	.0746	2.30	.688

RUN NUMBER 15 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.76)	.03	-1.98	.0092	.0284	-.0015	.0016	.0010	-.0041	.32	.473
.205	2.91 (60.78)	.03	.09	.2508	.0287	-.0560	.0023	.0009	-.0052	8.75	.519
.205	2.91 (60.69)	.03	2.20	.4869	.0345	-.1131	.0023	.0010	-.0020	14.12	.567
.204	2.90 (60.50)	.03	4.22	.7255	.0441	-.1595	.0023	.0017	-.0051	16.46	.613
.204	2.89 (60.43)	.02	6.40	.9571	.0596	-.2049	.0011	.0017	-.0065	16.06	.662
.204	2.89 (60.30)	.03	8.37	1.1609	.0778	-.2429	.0003	.0017	-.0103	14.92	.686
.204	2.88 (60.21)	.03	10.31	1.3400	.0997	-.2667	.0001	.0015	-.0105	13.44	.684
.204	2.88 (60.19)	.01	12.45	1.4897	.1473	-.2588	.0114	.0106	-.0182	10.12	.686
.203	2.87 (59.92)	.02	14.45	1.5270	.2297	-.2282	.0044	.0045	-.0174	6.65	.686
.203	2.86 (59.83)	.06	16.43	1.5673	.2875	-.2024	-.0068	.0000	-.0158	5.45	.687
.203	2.87 (59.88)	.05	18.29	1.4495	.4253	-.5578	-.0015	.0019	-.0137	3.41	.685
.204	2.89 (60.45)	.05	20.25	1.4204	.4956	-.7826	.0020	-.0011	-.0097	2.87	.688
.205	2.90 (60.58)	.07	22.37	1.4300	.5688	-.8418	-.0005	.0002	-.0154	2.51	.684
.205	2.90 (60.67)	.08	24.47	1.4825	.6494	-.8633	-.0003	-.0009	-.0141	2.28	.685

RUN NUMBER 16 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.86 (59.70)	5.00	-1.98	.0182	.0232	-.0289	-.0111	.0141	-.1033	.79	.473
.203	2.87 (59.92)	5.00	.17	.2735	.0237	-.0898	-.0117	.0130	-.1023	11.52	.522
.204	2.87 (60.04)	5.01	2.22	.5014	.0294	-.1412	-.0156	.0115	-.0974	17.08	.568
.204	2.88 (60.17)	5.01	4.18	.7273	.0392	-.1960	-.0149	.0112	-.0990	18.54	.613
.204	2.90 (60.49)	5.02	6.37	.9647	.0551	-.2561	-.0171	.0117	-.1039	17.50	.662
.204	2.89 (60.45)	5.04	8.42	1.1670	.0755	-.3000	-.0202	.0117	-.1088	15.46	.682
.204	2.90 (60.53)	5.05	10.40	1.3674	.0972	-.3384	-.0212	.0121	-.1127	14.06	.687
.204	2.89 (60.36)	5.05	12.41	1.5388	.1278	-.3583	-.0196	.0114	-.1137	12.04	.686
.204	2.88 (60.06)	5.05	14.42	1.5677	.2101	-.2921	-.0136	.0105	-.1106	7.46	.686
.203	2.86 (59.73)	5.08	16.41	1.4968	.3235	-.3751	-.0183	.0106	-.1074	4.63	.683
.204	2.88 (60.22)	5.11	18.44	1.5629	.3871	-.4641	-.0255	.0089	-.1067	4.04	.685
.204	2.89 (60.30)	5.11	20.33	1.5159	.5075	-.7562	-.0139	.0088	-.1075	2.99	.687
.204	2.89 (60.32)	5.14	22.30	1.5213	.5773	-.8593	-.0108	.0046	-.1023	2.64	.686
.205	2.91 (60.69)	5.11	24.33	1.4979	.6469	-.8894	-.0015	.0060	-.0979	2.32	.686

APPENDIX A

RUN NUMBER 17 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.96 (20.13)	-.00	-2.01	-.0569	.1032	-.1658	.0006	.0008	-.0071	-.55	.474
.117	.97 (20.16)	.00	.04	.0907	.0799	-.1093	.0006	.0005	-.0063	1.13	.523
.117	.96 (20.15)	.00	2.09	.2634	.0645	-.0808	-.0007	.0004	-.0063	4.08	.571
.117	.97 (20.16)	.01	4.11	.4695	.0609	-.0719	.0009	.0006	-.0080	7.71	.618
.117	.97 (20.16)	.01	6.20	.6910	.0665	-.0282	.0003	.0004	-.0085	10.40	.668
.117	.97 (20.17)	.02	8.24	.8720	.0791	.0088	-.0002	.0003	-.0099	11.03	.685
.117	.97 (20.16)	.03	10.27	1.0602	.0916	.0461	-.0024	-.0008	-.0099	11.58	.685
.117	.96 (20.11)	.03	12.29	1.2343	.1108	.0828	-.0025	-.0013	-.0079	11.14	.685
.116	.96 (20.02)	.04	14.34	1.4061	.1361	.1247	-.0016	-.0017	-.0068	10.33	.685
.117	.97 (20.21)	.05	16.37	1.5684	.1622	.1744	-.0015	-.0014	-.0114	9.67	.685
.117	.97 (20.20)	.06	18.38	1.6976	.1935	.2112	-.0010	-.0012	-.0089	8.77	.685
.117	.96 (20.11)	.05	20.40	1.6837	.2669	.1668	.0086	.0002	-.0139	6.31	.684
.117	.96 (20.05)	.06	22.39	1.7347	.3284	.2194	.0054	-.0034	-.0165	5.28	.685
.116	.96 (19.98)	.09	24.43	1.8204	.3952	.2562	-.0022	-.0054	-.0146	4.61	.685

RUN NUMBER 18 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.92 (40.12)	-.00	-2.00	-.0541	.1012	-.1631	-.0016	.0010	-.0084	-.53	.475
.166	1.92 (40.16)	.00	.06	.1067	.0771	-.1227	.0022	.0004	-.0033	1.38	.523
.166	1.93 (40.22)	.00	2.13	.3099	.0613	-.0957	.0022	.0008	-.0059	5.05	.570
.166	1.92 (40.19)	.01	4.18	.5166	.0600	-.0730	.0011	.0008	-.0052	8.60	.617
.166	1.92 (40.11)	.01	6.19	.7050	.0665	-.0341	-.0010	.0002	-.0078	10.59	.664
.166	1.93 (40.27)	.02	8.20	.8927	.0763	.0023	-.0009	.0000	-.0079	11.70	.684
.166	1.93 (40.24)	.02	10.25	1.0806	.0916	.0383	-.0004	-.0005	-.0064	11.80	.689
.166	1.92 (40.19)	.03	12.28	1.2624	.1098	.0810	-.0022	-.0015	-.0047	11.50	.684
.166	1.92 (40.10)	.04	14.37	1.4406	.1360	.1231	-.0014	-.0015	-.0044	10.59	.685
.166	1.93 (40.21)	.05	16.42	1.5950	.1655	.1725	-.0041	-.0031	-.0062	9.64	.685
.166	1.93 (40.22)	.06	18.44	1.7057	.1987	.2105	-.0044	-.0026	-.0059	8.58	.684
.166	1.93 (40.39)	.04	20.46	1.6913	.2706	.1643	.0074	-.0009	-.0098	6.25	.685
.166	1.93 (40.23)	.05	22.39	1.7537	.3298	.2180	.0066	-.0033	-.0166	5.32	.684
.166	1.93 (40.34)	.08	24.41	1.8263	.3839	.2795	-.0019	-.0078	-.0125	4.76	.684

RUN NUMBER 19 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.40)	-.00	-2.02	-.0590	.0989	-.1677	-.0018	.0007	-.0070	-.60	.475
.204	2.89 (60.28)	.00	.03	.1154	.0747	-.1283	.0016	.0006	-.0049	1.54	.522
.204	2.89 (60.43)	.00	2.06	.3222	.0592	-.1084	.0010	.0005	-.0047	5.44	.567
.204	2.89 (60.30)	.00	4.16	.5290	.0579	-.0738	.0010	.0007	-.0050	9.13	.615
.204	2.89 (60.39)	.01	6.19	.7222	.0638	-.0347	.0010	.0010	-.0073	11.32	.660
.204	2.89 (60.30)	.02	8.26	.8966	.0765	.0023	-.0008	.0001	-.0081	11.72	.685
.204	2.89 (60.36)	.02	10.27	1.0753	.0930	.0408	-.0022	-.0011	-.0055	11.56	.685
.204	2.89 (60.27)	.03	12.35	1.2528	.1124	.0795	-.0024	-.0017	-.0043	11.14	.685
.204	2.89 (60.38)	.03	14.35	1.4060	.1372	.1176	-.0004	-.0008	-.0071	10.25	.684
.204	2.89 (60.41)	.00	16.36	1.4452	.1762	.1226	.0109	.0039	-.0186	8.20	.684
.204	2.89 (60.33)	.01	18.38	1.5699	.2239	.1401	.0093	-.0005	-.0176	7.01	.684
.204	2.89 (60.44)	.03	20.40	1.6552	.2746	.1557	.0059	-.0046	-.0094	6.03	.685
.204	2.89 (60.27)	.04	22.44	1.7280	.3325	.2315	.0051	-.0056	-.0131	5.20	.685

RUN NUMBER 20 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.52)	-.00	-4.06	-.5219	.2162	.8283	-.0014	.0008	-.0054	-2.41	.425
.205	2.90 (60.54)	-.00	-2.08	-.3792	.1684	.8192	-.0010	.0010	-.0078	-2.25	.469
.204	2.90 (60.48)	.00	-.03	-.1956	.1219	.8267	.0024	.0003	-.0039	-1.60	.516
.204	2.89 (60.37)	.00	2.02	.0155	.0919	.8027	.0020	.0008	-.0042	.17	.562
.204	2.88 (60.17)	.00	4.05	.2559	.0719	.7514	.0028	.0024	-.0077	3.56	.608
.204	2.88 (60.16)	.01	6.13	.4789	.0697	.6932	.0019	.0006	-.0039	6.87	.655
.204	2.88 (60.12)	.01	8.16	.6834	.0772	.6485	.0010	.0004	-.0051	8.85	.698
.204	2.88 (60.14)	.02	10.22	.8929	.0899	.6017	-.0009	-.0001	-.0083	9.93	.685
.204	2.88 (60.10)	.03	12.26	1.1150	.1065	.5372	-.0018	-.0009	-.0066	10.47	.685
.204	2.87 (60.04)	.03	14.31	1.3287	.1306	.4903	-.0011	-.0004	-.0068	10.17	.684
.204	2.87 (60.01)	.05	16.34	1.5084	.1580	.4650	-.0036	-.0018	-.0073	9.55	.685
.203	2.87 (59.94)	.06	18.41	1.6533	.1967	.4212	-.0057	-.0024	-.0063	8.40	.685
.204	2.88 (60.16)	.05	20.38	1.7400	.2511	.3459	-.0013	.0028	-.0027	6.93	.685
.204	2.87 (59.95)	.10	24.49	1.9038	.3774	.2403	-.0090	.0002	.0067	5.04	.683

APPENDIX A

RUN NUMBER 21 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.52)	-.01	-4.11	-.4577	.1580	.6137	-.0019	.0018	-.0097	-2.90	.424
.204	2.89 (60.39)	-.00	-2.04	-.2961	.1175	.5587	.0004	.0008	-.0065	-2.52	.472
.204	2.89 (60.39)	.00	-.01	-.0980	.0870	.5218	.0017	.0005	-.0068	-1.13	.518
.204	2.89 (60.33)	.00	2.03	.1402	.0652	.4681	.0042	.0005	-.0036	2.15	.564
.204	2.88 (60.15)	.01	4.07	.3628	.0611	.4124	.0018	.0008	-.0069	5.94	.610
.204	2.88 (60.20)	.01	6.14	.5838	.0650	.3605	.0017	.0007	-.0062	8.98	.657
.204	2.88 (60.16)	.02	8.20	.7955	.0754	.3167	-.0006	.0003	-.0084	10.55	.685
.204	2.88 (60.13)	.02	10.25	1.0125	.0918	.2700	-.0016	-.0002	-.0094	11.03	.685
.204	2.87 (60.04)	.04	12.28	1.2359	.1106	.2162	-.0021	-.0005	-.0069	11.17	.685
.203	2.86 (59.81)	.04	14.38	1.4496	.1391	.1777	-.0037	-.0011	-.0084	10.42	.685
.204	2.89 (60.32)	.05	16.38	1.6125	.1669	.1618	-.0050	-.0021	-.0058	9.66	.685
.204	2.88 (60.20)	.07	18.42	1.7529	.2080	.1241	-.0075	-.0030	-.0066	8.43	.684
.204	2.89 (60.32)	.06	20.44	1.8460	.2638	.0370	-.0042	.0005	-.0020	7.00	.685
.204	2.90 (60.49)	.07	22.46	1.9185	.3290	-.0127	-.0030	.0040	-.0059	5.83	.685

RUN NUMBER 22 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.43)	-.00	-4.08	-.3559	.1422	.3099	.0000	.0007	-.0035	-2.50	.426
.204	2.89 (60.39)	-.00	-2.04	-.1941	.1071	.2738	-.0008	.0008	-.0070	-1.81	.472
.204	2.89 (60.44)	.00	.01	.0018	.0786	.2329	.0024	.0006	-.0037	.02	.519
.205	2.90 (60.55)	.00	2.06	.2278	.0609	.1791	.0025	.0006	-.0051	3.74	.566
.204	2.88 (60.23)	.00	4.12	.4650	.0590	.1205	.0017	.0006	-.0043	7.88	.612
.204	2.89 (60.37)	.01	6.16	.6748	.0662	.0763	-.0011	.0001	-.0059	10.19	.658
.204	2.89 (60.32)	.02	8.24	.8944	.0791	.0309	-.0005	.0003	-.0081	11.30	.685
.204	2.89 (60.26)	.02	10.28	1.1099	.0976	-.0145	-.0023	-.0005	-.0066	11.37	.685
.204	2.87 (60.01)	.03	12.34	1.3198	.1207	-.0627	-.0035	-.0008	-.0085	10.93	.685
.204	2.88 (60.24)	.04	14.38	1.5214	.1492	-.0907	-.0035	-.0010	-.0069	10.20	.685
.204	2.87 (59.99)	.05	16.42	1.6926	.1813	-.0947	-.0058	-.0021	-.0071	9.34	.685
.204	2.87 (60.04)	.07	18.44	1.8293	.2239	-.1321	-.0079	-.0030	-.0068	8.17	.685
.204	2.89 (60.33)	.07	20.48	1.9195	.2841	-.2577	-.0054	-.0007	-.0022	6.76	.684
.204	2.88 (60.21)	.08	22.46	1.9910	.3532	-.3263	-.0047	.0006	-.0027	5.64	.684

RUN NUMBER 23 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.40)	-.00	-4.06	-.2462	.1342	-.0366	.0021	.0011	-.0042	-1.83	.428
.204	2.89 (60.27)	-.00	-2.03	-.0871	.1024	-.0711	.0017	.0009	-.0050	-.85	.474
.204	2.88 (60.22)	.00	.03	.1076	.0766	-.1054	.0027	.0004	-.0048	1.40	.521
.204	2.88 (60.16)	.00	2.09	.3533	.0627	-.1634	.0040	.0007	-.0040	5.64	.568
.204	2.88 (60.19)	.00	4.14	.5698	.0652	-.2100	.0021	.0009	-.0062	8.73	.614
.204	2.88 (60.09)	.01	6.18	.7783	.0758	-.2519	.0005	.0005	-.0060	10.27	.661
.204	2.88 (60.18)	.02	8.23	.9947	.0913	-.2928	-.0002	.0003	-.0088	10.90	.684
.204	2.88 (60.22)	.03	10.29	1.2089	.1133	-.3370	-.0023	-.0006	-.0084	10.67	.684
.204	2.88 (60.24)	.03	12.34	1.4162	.1375	-.3737	-.0028	-.0007	-.0070	10.30	.684
.204	2.88 (60.19)	.04	14.39	1.5976	.1708	-.4006	-.0040	-.0013	-.0085	9.35	.684
.204	2.88 (60.05)	.05	16.42	1.7760	.2054	-.4121	-.0058	-.0024	-.0069	8.65	.684
.204	2.89 (60.33)	.07	18.47	1.9286	.2537	-.4746	-.0086	-.0041	-.0089	7.60	.685
.204	2.89 (60.27)	.07	20.45	2.0111	.3273	-.6139	-.0068	-.0028	-.0011	6.14	.685
.205	2.89 (60.44)	.08	22.48	2.0866	.4126	-.6908	-.0051	.0013	-.0031	5.06	.685

RUN NUMBER 24 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.50)	-.01	-4.03	-.1250	.1323	-.3783	-.0004	.0006	-.0053	-.94	.431
.205	2.89 (60.43)	-.00	-1.98	.0349	.1042	-.4053	-.0026	.0006	-.0080	.33	.478
.204	2.89 (60.37)	-.00	.05	.2266	.0833	-.4432	.0005	.0007	-.0087	2.72	.525
.204	2.88 (60.19)	.00	2.13	.4673	.0723	-.4962	.0026	.0008	-.0060	6.46	.572
.204	2.88 (60.24)	.01	4.16	.6744	.0783	-.5410	-.0003	.0004	-.0048	8.61	.618
.204	2.88 (60.25)	.01	6.22	.9005	.0913	-.5874	-.0006	.0004	-.0079	9.87	.664
.204	2.89 (60.32)	.02	8.28	1.1084	.1107	-.6289	-.0010	.0002	-.0075	10.01	.685
.204	2.88 (60.10)	.02	10.32	1.3190	.1349	-.6602	-.0027	-.0002	-.0078	9.78	.684
.204	2.88 (60.17)	.03	12.38	1.5091	.1635	-.6832	-.0042	-.0011	-.0081	9.23	.685
.204	2.87 (60.02)	.04	14.42	1.7003	.2011	-.7190	-.0044	-.0021	-.0081	8.45	.684
.204	2.88 (60.10)	.05	16.48	1.8757	.2483	-.7500	-.0067	-.0026	-.0068	7.56	.684
.204	2.88 (60.24)	.07	18.50	2.0130	.3091	-.8187	-.0096	-.0043	-.0070	6.51	.684
.204	2.89 (60.31)	.08	20.49	2.0962	.3904	-.9146	-.0089	-.0034	-.0003	5.37	.685
.205	2.90 (60.55)	.09	22.52	2.1520	.4765	-.9488	-.0056	.0006	-.0035	4.52	.685

APPENDIX A

RUN NUMBER 25 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.41)	-.01	-3.99	-.0106	.1374	-.7106	-.0013	.0007	-.0083	-.08	.433
.205	2.89 (60.46)	-.00	-1.95	.1450	.1126	-.7385	-.0025	-.0000	-.0067	1.29	.479
.204	2.88 (60.24)	-.00	.09	.3359	.0957	-.7792	.0014	.0001	-.0058	3.51	.526
.205	2.89 (60.40)	.00	2.15	.5663	.0890	-.8268	.0010	-.0003	-.0032	6.37	.573
.204	2.87 (59.93)	.01	4.18	.7831	.0984	-.8763	-.0004	-.0008	-.0036	7.96	.619
.205	2.90 (60.48)	.01	6.25	1.0045	.1155	-.9246	-.0019	-.0005	-.0072	8.70	.666
.204	2.88 (60.17)	.02	8.28	1.2098	.1395	-.9453	-.0017	-.0010	-.0062	8.67	.684
.204	2.87 (60.04)	.03	10.35	1.4065	.1710	-.9586	-.0039	-.0006	-.0089	8.22	.685
.204	2.86 (59.82)	.04	12.37	1.5722	.2071	-.9364	-.0047	-.0010	-.0090	7.59	.684
.205	2.89 (60.38)	.05	14.43	1.7427	.2516	-.9327	-.0053	-.0015	-.0096	6.93	.685
.204	2.88 (60.23)	.06	16.45	1.9030	.2999	-.9346	-.0069	-.0030	-.0058	6.35	.685
.204	2.89 (60.36)	.08	18.48	2.0285	.3680	-1.0020	-.0101	-.0036	-.0071	5.51	.685
.205	2.90 (60.57)	.08	20.49	2.1074	.4522	-1.0656	-.0065	-.0006	-.0037	4.66	.685
.205	2.89 (60.44)	.10	22.47	2.1744	.5349	-1.1073	-.0086	-.0003	-.0047	4.06	.686

RUN NUMBER 26 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.33)	-9.98	-4.22	-.2383	.1132	-.0760	.0217	-.0298	.2079	-2.11	.425
.205	2.90 (60.47)	-9.99	-1.98	-.0738	.0808	-.1330	.0198	-.0294	.2044	-.91	.476
.205	2.89 (60.45)	-9.99	.06	.1288	.0557	-.1777	.0158	-.0271	.1901	2.31	.523
.204	2.89 (60.35)	-9.99	2.09	.3538	.0433	-.2372	.0212	-.0247	.1878	8.17	.569
.204	2.88 (60.24)	-10.01	4.14	.5803	.0446	-.2893	.0238	-.0237	.1892	13.00	.616
.204	2.88 (60.18)	-10.01	6.20	.7987	.0558	-.3412	.0258	-.0235	.1944	14.31	.662
.204	2.87 (59.97)	-10.02	8.25	1.0152	.0730	-.3937	.0264	-.0225	.1958	13.90	.685
.204	2.88 (60.21)	-10.04	10.31	1.2322	.0971	-.4327	.0255	-.0215	.2003	12.68	.684
.205	2.89 (60.44)	-10.05	12.38	1.4396	.1256	-.4824	.0248	-.0208	.2002	11.46	.685
.204	2.89 (60.26)	-10.06	14.41	1.6298	.1585	-.5170	.0253	-.0203	.2002	10.28	.685
.204	2.88 (60.10)	-10.05	16.47	1.7838	.2006	-.5203	.0193	-.0256	.2089	8.89	.684
.205	2.89 (60.40)	-10.05	18.45	1.8923	.2487	-.5238	.0187	-.0267	.2129	7.61	.684
.205	2.90 (60.59)	-10.06	20.43	1.9485	.3183	-.5866	.0218	-.0267	.2089	6.12	.684
.205	2.90 (60.66)	-10.08	22.49	2.0321	.4072	-.6841	.0291	-.0304	.1901	4.99	.685

RUN NUMBER 27 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.35)	-4.97	-4.05	-.2483	.1270	-.0278	.0120	-.0149	.1060	-1.96	.428
.205	2.89 (60.35)	-4.97	-1.99	-.0865	.0967	-.0728	.0081	-.0141	.1023	-.89	.476
.204	2.88 (60.24)	-4.98	.02	.1021	.0714	-.1053	.0109	-.0129	.0970	1.43	.522
.204	2.89 (60.31)	-4.99	2.09	.3415	.0584	-.1676	.0114	-.0115	.0929	5.85	.569
.204	2.88 (60.25)	-4.99	4.16	.5697	.0612	-.2227	.0116	-.0105	.0911	9.31	.616
.204	2.88 (60.17)	-5.00	6.20	.7896	.0706	-.2754	.0140	-.0102	.0938	11.19	.662
.204	2.88 (60.07)	-5.00	8.26	.9878	.0879	-.3164	.0127	-.0114	.0961	11.24	.684
.204	2.88 (60.16)	-5.01	10.34	1.2117	.1096	-.3573	.0111	-.0126	.0984	11.06	.684
.204	2.87 (60.02)	-5.01	12.30	1.4062	.1329	-.4007	.0133	-.0124	.1001	10.58	.684
.204	2.88 (60.05)	-5.02	14.46	1.5910	.1668	-.4384	.0135	-.0124	.0989	9.54	.685
.204	2.89 (60.34)	-5.01	16.41	1.7622	.2026	-.4769	.0105	-.0152	.1038	8.70	.683
.204	2.89 (60.27)	-5.01	18.47	1.9134	.2508	-.5326	.0113	-.0170	.1067	7.63	.685
.204	2.88 (60.22)	-5.01	20.45	1.9903	.3175	-.5848	.0100	-.0186	.1098	6.27	.685
.205	2.89 (60.40)	-4.99	22.51	2.0698	.4064	-.6918	.0067	-.0227	.1037	5.09	.684

RUN NUMBER 28 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.33)	.00	-4.05	-.2567	.1301	-.0096	-.0002	.0004	.0020	-1.97	.428
.204	2.89 (60.35)	.00	-2.01	-.0964	.1009	-.0422	-.0003	.0003	.0003	-.96	.475
.205	2.90 (60.47)	-.00	.04	.0913	.0782	-.0772	.0002	.0000	.0009	1.17	.522
.204	2.89 (60.31)	-.00	2.08	.3302	.0625	-.1294	.0037	.0005	.0046	5.28	.568
.204	2.89 (60.28)	-.00	4.14	.5649	.0643	-.1863	.0010	.0003	.0023	8.79	.615
.204	2.88 (60.21)	-.00	6.19	.7815	.0743	-.2296	-.0006	.0007	-.0033	10.52	.661
.204	2.89 (60.26)	.00	8.21	.9868	.0894	-.2719	-.0019	.0003	-.0020	11.04	.685
.204	2.89 (60.30)	.01	10.34	1.2096	.1120	-.3174	-.0032	.0001	-.0049	10.80	.685
.204	2.88 (60.17)	.02	12.40	1.3948	.1386	-.3623	-.0054	-.0014	-.0029	10.06	.684
.204	2.87 (59.98)	.03	14.39	1.5860	.1692	-.3948	-.0055	-.0014	-.0057	9.37	.684
.204	2.88 (60.09)	.04	16.41	1.7633	.2037	-.4154	-.0068	-.0021	-.0045	8.65	.685
.204	2.88 (60.19)	.06	18.42	1.8984	.2561	-.4879	-.0107	-.0053	.0017	7.41	.684
.205	2.89 (60.41)	.06	20.49	2.0031	.3296	-.6030	-.0098	-.0037	.0040	6.08	.685
.205	2.89 (60.36)	.06	22.49	2.0749	.4088	-.6657	-.0082	-.0018	.0031	5.08	.684

APPENDIX A

RUN NUMBER 29 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.28)	4.99	-4.02	-.2359	.1234	-.0297	-.0130	.0145	-.1007	-1.91	.430
.204	2.89 (60.33)	5.00	-2.01	-.0680	.0938	-.0738	-.0107	.0146	-.0982	-.73	.475
.205	2.89 (60.36)	5.00	.07	.1275	.0707	-.1114	-.0083	.0132	-.0924	1.80	.523
.204	2.89 (60.31)	5.00	2.12	.3396	.0579	-.1622	-.0083	.0124	-.0915	5.87	.570
.205	2.89 (60.41)	5.01	4.14	.5784	.0595	-.2222	-.0120	.0118	-.0914	9.72	.615
.205	2.89 (60.42)	5.02	6.25	.7982	.0706	-.2806	-.0151	.0117	-.0970	11.30	.663
.204	2.89 (60.32)	5.03	8.31	1.0186	.0871	-.3332	-.0169	.0118	-.1016	11.69	.685
.205	2.89 (60.37)	5.05	10.29	1.2252	.1070	-.3779	-.0184	.0118	-.1059	11.45	.684
.204	2.88 (60.11)	5.06	12.32	1.4146	.1314	-.4037	-.0202	.0112	-.1057	10.77	.684
.204	2.88 (60.20)	5.08	14.38	1.5928	.1643	-.4340	-.0230	.0102	-.1061	9.69	.684
.204	2.89 (60.30)	5.11	16.47	1.7874	.2011	-.4626	-.0274	.0073	-.1053	8.89	.684
.204	2.87 (60.03)	5.13	18.43	1.9080	.2605	-.5476	-.0313	.0063	-.0973	7.32	.684
.205	2.89 (60.37)	5.19	20.43	1.9850	.3313	-.5983	-.0271	.0111	-.1095	5.99	.685
.205	2.89 (60.37)	5.20	22.48	2.0641	.4122	-.6544	-.0232	.0150	-.1090	5.01	.684

RUN NUMBER 30 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.97 (20.20)	-.01	-3.95	.1394	.1373	-.2877	.0014	.0020	-.0155	1.02	.426
.117	.97 (20.24)	-.01	-1.90	.4105	.1193	-.3080	-.0013	.0017	-.0164	3.44	.473
.117	.97 (20.21)	.00	.22	.7553	.1111	-.3676	.0037	.0009	-.0059	6.80	.521
.117	.97 (20.16)	.01	2.29	1.0552	.1197	-.3698	.0014	.0011	-.0107	8.81	.569
.117	.97 (20.16)	.02	4.36	1.2867	.1348	-.3466	-.0004	.0009	-.0090	9.55	.617
.117	.97 (20.17)	.03	6.41	1.5047	.1549	-.3186	-.0025	.0005	-.0146	9.72	.666
.117	.97 (20.17)	.03	8.41	1.6904	.1796	-.2854	-.0016	.0005	-.0107	9.41	.685
.117	.96 (20.14)	.04	10.52	1.9109	.2034	-.2396	-.0022	.0004	-.0142	9.40	.684
.117	.96 (20.13)	.04	12.53	2.0673	.2406	-.2084	-.0019	.0003	-.0077	8.59	.685
.117	.96 (20.06)	.06	14.55	2.2527	.2713	-.1544	-.0031	.0004	-.0135	8.30	.685
.117	.96 (20.09)	.06	16.60	2.3457	.3029	-.0974	-.0006	.0004	-.0149	7.74	.685
.117	.96 (20.09)	.06	18.55	2.3581	.3402	-.0565	.0031	.0005	-.0143	6.93	.685
.117	.96 (20.12)	.07	20.58	2.3274	.4341	-.0509	.0044	-.0045	-.0178	5.36	.684
.117	.96 (20.14)	.08	22.53	2.3409	.5131	-.0486	.0012	-.0014	-.0109	4.56	.685

RUN NUMBER 31 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.92 (40.06)	-.01	-3.98	.1456	.1374	-.2945	-.0000	.0003	-.0074	1.06	.425
.166	1.92 (40.09)	-.00	-1.89	.4547	.1160	-.3337	.0069	.0012	-.0047	3.92	.472
.166	1.92 (40.09)	-.00	.18	.7884	.1108	-.3768	.0018	.0010	-.0069	7.12	.518
.166	1.92 (40.08)	.01	2.31	1.0690	.1190	-.3732	.0003	.0009	-.0079	8.98	.566
.166	1.92 (40.02)	.01	4.30	1.2835	.1355	-.3585	-.0015	.0007	-.0067	9.48	.612
.166	1.91 (39.96)	.02	6.41	1.5161	.1549	-.3234	-.0022	.0007	-.0099	9.79	.659
.166	1.93 (40.25)	.02	8.52	1.7156	.1804	-.2884	-.0030	-.0000	-.0084	9.51	.685
.166	1.92 (40.11)	.04	10.47	1.9133	.2052	-.2525	-.0034	-.0003	-.0100	9.32	.684
.166	1.92 (40.07)	.04	12.51	2.1017	.2360	-.2050	-.0015	.0003	-.0076	8.91	.684
.166	1.92 (40.16)	.05	14.60	2.2537	.2734	-.1598	-.0037	-.0007	-.0092	8.24	.682
.166	1.92 (40.12)	.03	16.55	2.2654	.3268	-.1583	.0089	.0030	-.0269	6.93	.685
.166	1.93 (40.22)	.05	18.57	2.3341	.3718	-.1010	.0057	-.0011	-.0235	6.28	.685
.166	1.92 (40.18)	.09	20.53	2.3228	.4311	-.0797	-.0035	-.0110	-.0118	5.39	.685
.166	1.91 (39.95)	.09	22.57	2.3516	.5159	-.0552	-.0016	-.0036	-.0082	4.56	.685

RUN NUMBER 32 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.28)	-.01	-3.93	.1598	.1356	-.3007	.0004	.0007	-.0087	1.18	.427
.205	2.88 (60.19)	-.00	-1.85	.4881	.1140	-.3488	.0042	.0011	-.0072	4.28	.472
.205	2.89 (60.30)	.00	.23	.8102	.1111	-.3843	.0002	.0010	-.0076	7.29	.517
.204	2.88 (60.25)	.00	2.31	1.0695	.1188	-.3744	-.0003	.0009	-.0073	9.00	.563
.204	2.88 (60.14)	.01	4.36	1.2924	.1347	-.3539	-.0016	.0012	-.0082	9.60	.607
.205	2.89 (60.28)	.02	6.37	1.4940	.1555	-.3232	-.0022	.0009	-.0083	9.61	.652
.205	2.89 (60.44)	.03	8.44	1.7043	.1790	-.2878	-.0036	.0001	-.0094	9.52	.684
.205	2.89 (60.31)	.04	10.48	1.9029	.2055	-.2487	-.0041	-.0001	-.0098	9.26	.684
.205	2.89 (60.28)	.05	12.52	2.0963	.2362	-.2066	-.0041	.0000	-.0098	8.87	.685
.204	2.88 (60.20)	.06	14.55	2.2520	.2728	-.1576	-.0039	.0003	-.0126	8.26	.685
.205	2.89 (60.44)	.01	16.54	2.2302	.3326	-.1735	.0131	.0045	-.0353	6.71	.684
.205	2.89 (60.42)	.03	18.59	2.3164	.3721	-.1256	.0086	-.0006	-.0215	6.23	.685
.205	2.90 (60.59)	.10	20.53	2.3196	.4260	-.0888	-.0065	-.0094	-.0084	5.45	.685
.205	2.89 (60.38)	.12	22.60	2.3877	.5065	-.0568	-.0078	-.0067	-.0085	4.71	.685

APPENDIX A

RUN NUMBER 33 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.32)	-.01	-3.95	.1300	.1244	-.2953	.0005	.0016	-.0128	1.04	.427
.205	2.89 (60.39)	-.00	-1.89	.4681	.1014	-.3462	.0064	.0017	-.0082	4.62	.471
.205	2.89 (60.26)	.00	.23	.8264	.0983	-.3913	.0020	.0016	-.0111	8.41	.516
.204	2.88 (60.16)	.00	2.28	1.0908	.1064	-.3824	.0007	.0014	-.0109	10.25	.561
.204	2.88 (60.24)	.01	4.33	1.3141	.1235	-.3600	-.0023	.0012	-.0103	10.64	.606
.204	2.88 (60.13)	.02	6.44	1.5299	.1473	-.3292	-.0021	.0011	-.0124	10.39	.653
.205	2.89 (60.44)	.03	8.44	1.7195	.1729	-.2936	-.0050	-.0006	-.0114	9.94	.684
.205	2.90 (60.47)	.04	10.44	1.9236	.1989	-.2560	-.0037	.0002	-.0132	9.67	.684
.205	2.89 (60.39)	.04	12.53	2.1131	.2329	-.2115	-.0042	-.0001	-.0139	9.07	.685
.204	2.88 (60.12)	.05	14.53	2.2710	.2678	-.1613	-.0035	.0008	-.0176	8.48	.685
.205	2.89 (60.44)	.02	16.61	2.2845	.3277	-.1693	.0114	.0034	-.0360	6.97	.685
.205	2.89 (60.34)	.03	18.56	2.3650	.3655	-.1175	.0094	-.0003	-.0264	6.47	.685
.204	2.88 (60.19)	.08	20.55	2.3567	.4381	-.1255	-.0038	-.0042	-.0062	5.38	.685
.205	2.89 (60.41)	.08	22.60	2.3962	.5115	-.0481	.0002	-.0012	-.0101	4.68	.685

RUN NUMBER 35 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.46)	-.01	-4.03	-.1464	.1806	.5959	-.0017	-.0000	-.0125	-.81	.421
.205	2.89 (60.31)	-.00	-1.95	.1819	.1434	.5015	.0060	.0003	-.0099	1.27	.466
.205	2.89 (60.38)	.00	.16	.5521	.1202	.3560	.0006	.0010	-.0114	4.59	.512
.205	2.88 (60.25)	.01	2.18	.8243	.1233	.2796	-.0018	.0004	-.0123	6.68	.556
.205	2.89 (60.30)	.01	4.35	1.1115	.1341	.2098	-.0010	.0012	-.0117	8.29	.604
.204	2.88 (60.09)	.02	6.33	1.3331	.1524	.1550	-.0024	.0008	-.0118	8.75	.649
.204	2.88 (60.07)	.02	8.37	1.5761	.1742	.0912	-.0018	.0010	-.0125	9.05	.685
.204	2.88 (60.06)	.04	10.50	1.8080	.2013	.0401	-.0042	.0000	-.0129	8.98	.684
.205	2.89 (60.27)	.04	12.49	2.0103	.2318	.0135	-.0044	-.0002	-.0113	8.67	.685
.204	2.88 (60.17)	.05	14.53	2.1851	.2694	-.0133	-.0029	.0015	-.0188	8.11	.685
.205	2.89 (60.27)	.02	16.52	2.2381	.3300	-.1647	.0096	.0026	-.0336	6.78	.685
.205	2.88 (60.25)	.04	18.50	2.3353	.3765	-.2179	.0064	-.0012	-.0246	6.20	.685
.205	2.89 (60.35)	.11	20.55	2.3520	.4567	-.3138	-.0069	-.0064	-.0098	5.15	.685
.205	2.90 (60.55)	.11	22.54	2.4464	.5247	-.3177	-.0037	-.0051	-.0161	4.66	.684

RUN NUMBER 36 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.92 (60.96)	-.01	-4.04	-.2238	.2345	.7810	.0002	.0001	-.0089	-.95	.420
.206	2.92 (60.92)	-.00	-1.98	.0963	.1962	.7057	.0051	.0008	-.0078	.49	.464
.206	2.91 (60.80)	-.00	.12	.4633	.1724	.6105	.0002	.0003	-.0092	2.69	.509
.205	2.90 (60.57)	.00	2.17	.7427	.1623	.5688	.0002	.0001	-.0064	4.58	.554
.205	2.89 (60.45)	.01	4.27	.9979	.1606	.5392	.0004	.0010	-.0093	6.21	.601
.205	2.90 (60.51)	.01	6.32	1.2141	.1679	.5075	-.0008	.0009	-.0125	7.23	.647
.205	2.89 (60.41)	.02	8.36	1.4582	.1763	.4328	-.0024	.0004	-.0115	8.27	.685
.205	2.89 (60.39)	.03	10.44	1.6940	.1983	.3803	-.0029	.0002	-.0110	8.54	.684
.205	2.89 (60.36)	.04	12.49	1.9041	.2267	.3459	-.0036	.0004	-.0136	8.40	.684
.205	2.88 (60.09)	.05	14.52	2.0774	.2627	.3169	-.0044	.0004	-.0167	7.91	.685
.205	2.89 (60.37)	.02	16.53	2.1474	.3203	.1205	.0077	.0036	-.0366	6.70	.684
.205	2.89 (60.36)	.04	18.54	2.2594	.3608	.0526	.0043	-.0010	-.0246	6.26	.685
.205	2.90 (60.54)	.07	20.58	2.2929	.4420	-.0773	-.0024	-.0029	-.0067	5.19	.685
.205	2.90 (60.57)	.09	22.54	2.3744	.5072	-.0715	-.0037	-.0050	-.0136	4.68	.685

RUN NUMBER 37 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.34)	-.01	-4.01	-.0748	.1519	.3300	-.0002	.0009	-.0132	-.49	.423
.205	2.90 (60.57)	-.00	-1.90	.2820	.1227	.2115	.0047	.0011	-.0102	2.30	.468
.205	2.90 (60.47)	.00	.19	.6413	.1144	.0883	-.0004	.0009	-.0126	5.61	.513
.205	2.89 (60.39)	.00	2.24	.9267	.1194	.0095	.0007	.0013	-.0122	7.76	.559
.205	2.88 (60.09)	.01	4.30	1.1917	.1326	-.0588	-.0009	.0016	-.0118	8.99	.605
.205	2.88 (60.20)	.02	6.35	1.4306	.1532	-.1108	-.0014	.0015	-.0151	9.34	.650
.205	2.89 (60.27)	.03	8.44	1.6649	.1785	-.1667	-.0031	.0006	-.0142	9.33	.685
.205	2.89 (60.45)	.03	10.50	1.8904	.2078	-.2115	-.0038	.0003	-.0142	9.10	.685
.205	2.89 (60.27)	.04	12.52	2.0936	.2412	-.2328	-.0028	.0013	-.0173	8.68	.685
.205	2.88 (60.21)	.05	14.59	2.2645	.2814	-.2469	-.0035	.0009	-.0170	8.05	.684
.206	2.91 (60.70)	.02	16.56	2.2939	.3435	-.3863	.0105	.0036	-.0358	6.68	.684
.205	2.90 (60.61)	.04	18.61	2.3944	.3901	-.4398	.0056	-.0004	-.0284	6.14	.685
.206	2.91 (60.72)	.07	20.56	2.4294	.4705	-.5093	-.0005	-.0018	-.0098	5.16	.685
.205	2.90 (60.50)	.07	22.62	2.5103	.5461	-.5125	-.0018	-.0047	-.0140	4.60	.685

APPENDIX A

RUN NUMBER 38 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.86 (59.77)	-.01	-3.98	.0269	.1440	.0392	-.0019	.0013	-.0158	.19	.424
.205	2.89 (60.34)	-.00	-1.89	.3891	.1177	-.0823	.0030	.0012	-.0105	3.31	.469
.205	2.88 (60.19)	-.00	.18	.7343	.1130	-.1971	-.0001	.0010	-.0115	6.50	.515
.205	2.88 (60.23)	.00	2.25	1.0247	.1207	-.2756	-.0007	.0008	-.0111	8.49	.560
.205	2.89 (60.35)	.01	4.32	1.2735	.1385	-.3363	-.0021	.0012	-.0117	9.19	.606
.205	2.88 (60.22)	.02	6.41	1.5266	.1613	-.3901	-.0033	.0010	-.0148	9.46	.653
.205	2.89 (60.42)	.02	8.47	1.7553	.1894	-.4473	-.0033	.0006	-.0128	9.27	.684
.205	2.88 (60.24)	.03	10.51	1.9743	.2220	-.4917	-.0042	.0003	-.0132	8.89	.685
.205	2.88 (60.24)	.04	12.52	2.1719	.2583	-.5097	-.0040	.0004	-.0147	8.41	.684
.205	2.89 (60.41)	.04	14.59	2.3406	.3009	-.5160	-.0029	.0010	-.0167	7.78	.684
.205	2.89 (60.28)	.03	16.57	2.3615	.3657	-.6299	.0106	.0038	-.0402	6.46	.684
.205	2.90 (60.46)	.04	18.59	2.4529	.4128	-.6489	.0061	-.0001	-.0295	5.94	.684
.206	2.91 (60.74)	.09	20.58	2.4530	.5058	-.7034	-.0078	-.0076	-.0078	4.85	.684
.205	2.90 (60.58)	.07	22.61	2.5673	.5826	-.7429	-.0014	-.0028	-.0153	4.41	.684

RUN NUMBER 39 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.79)	-.01	-3.97	.1226	.1415	-.2630	-.0021	.0010	-.0133	.87	.426
.205	2.90 (60.61)	-.00	-1.88	.4593	.1212	-.3822	.0048	.0021	-.0147	3.79	.472
.205	2.89 (60.43)	-.00	.21	.8161	.1191	-.5041	.0004	.0010	-.0117	6.85	.517
.205	2.89 (60.44)	.00	2.31	1.1217	.1300	-.5933	.0001	.0014	-.0119	8.63	.563
.205	2.89 (60.34)	.01	4.38	1.3707	.1517	-.6553	-.0015	.0016	-.0122	9.04	.609
.205	2.89 (60.32)	.01	6.39	1.5909	.1789	-.7049	-.0031	.0009	-.0136	8.89	.654
.205	2.89 (60.31)	.02	8.48	1.8415	.2085	-.7598	-.0023	.0009	-.0135	8.83	.684
.205	2.88 (60.20)	.03	10.54	2.0430	.2440	-.7927	-.0033	.0006	-.0138	8.37	.679
.205	2.89 (60.36)	.03	12.55	2.2513	.2806	-.8068	-.0017	.0015	-.0166	8.02	.685
.205	2.89 (60.38)	.04	14.57	2.3972	.3262	-.8029	-.0013	.0022	-.0213	7.35	.684
.205	2.89 (60.46)	.03	16.59	2.4374	.3924	-.8509	.0099	.0061	-.0416	6.21	.683
.205	2.89 (60.44)	.04	18.58	2.5035	.4445	-.8589	.0048	.0010	-.0322	5.63	.684
.204	2.87 (60.03)	.09	20.65	2.5092	.5523	-.9273	-.0071	-.0072	-.0096	4.54	.684
.206	2.92 (61.01)	.08	22.59	2.6113	.6278	-.9576	.0008	-.0019	-.0187	4.16	.684

RUN NUMBER 40 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.68)	-.01	-3.93	.2319	.1489	-.5866	-.0017	.0004	-.0125	1.56	.429
.205	2.90 (60.51)	-.00	-1.80	.5890	.1319	-.7087	.0002	.0007	-.0104	4.47	.475
.205	2.89 (60.26)	-.00	.23	.9500	.1330	-.8321	-.0030	.0010	-.0119	7.14	.519
.205	2.89 (60.27)	.00	2.32	1.2459	.1473	-.9176	-.0014	.0007	-.0093	8.46	.565
.205	2.88 (60.16)	.01	4.38	1.4796	.1723	-.9757	-.0028	.0015	-.0139	8.59	.611
.205	2.89 (60.29)	.01	6.44	1.7157	.2005	-1.0168	-.0032	.0007	-.0121	8.56	.656
.205	2.90 (60.64)	.02	8.52	1.9274	.2367	-1.0549	-.0042	-.0006	-.0093	8.14	.684
.205	2.88 (60.19)	.03	10.54	2.1492	.2678	-1.0733	-.0034	.0012	-.0165	8.02	.685
.205	2.90 (60.47)	.03	12.62	2.3309	.3163	-1.0780	-.0029	.0012	-.0169	7.37	.684
.205	2.90 (60.49)	.04	14.64	2.4808	.3654	-1.0612	-.0027	.0025	-.0208	6.79	.684
.205	2.88 (60.21)	.03	16.68	2.5013	.4348	-1.0462	.0088	.0062	-.0402	5.75	.677
.205	2.89 (60.28)	.05	18.57	2.5357	.4925	-1.0343	.0019	-.0008	-.0261	5.15	.685
.205	2.90 (60.53)	.07	20.58	2.5612	.5908	-1.1269	.0003	-.0010	-.0113	4.34	.684
.206	2.91 (60.72)	.08	22.62	2.6487	.6795	-1.1407	.0005	-.0014	-.0165	3.90	.685

RUN NUMBER 42 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.201	2.77 (57.95)	.00	.21	.7940	.1034	-.2120	.0009	.0009	.0073	7.68	.019
.201	2.77 (57.86)	.00	.22	.7998	.1031	-.2159	-.0001	.0002	.0083	7.76	.023
.201	2.77 (57.81)	.00	.21	.7806	.1066	-.2067	-.0014	.0008	.0042	7.32	.074
.201	2.78 (58.02)	-.00	.19	.7560	.1093	-.1983	-.0023	.0017	-.0038	6.92	.123
.201	2.77 (57.89)	-.00	.18	.7398	.1106	-.1909	-.0009	.0014	-.0064	6.69	.172
.200	2.76 (57.74)	-.00	.18	.7456	.1107	-.1904	.0013	.0009	-.0045	6.74	.225
.201	2.78 (58.09)	-.00	.18	.7349	.1118	-.1870	-.0017	.0006	-.0088	6.57	.321
.201	2.77 (57.88)	-.00	.18	.7346	.1119	-.1862	-.0006	.0010	-.0110	6.57	.422
.201	2.77 (57.85)	-.00	.17	.7155	.1131	-.1817	-.0018	.0009	-.0103	6.33	.515

APPENDIX A

RUN NUMBER 43 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.201	2.78 (58.00)	.00	2.30	1.1048	.1060	-.3180	.0029	.0004	.0102	10.42	.019
.201	2.78 (58.04)	.00	2.30	1.1008	.1063	-.3144	.0010	.0003	.0105	10.35	.022
.201	2.77 (57.81)	.00	2.28	1.0745	.1117	-.2989	.0015	.0008	.0073	9.62	.073
.200	2.76 (57.71)	.00	2.26	1.0458	.1145	-.2872	-.0022	.0007	-.0021	9.14	.122
.201	2.77 (57.83)	.00	2.26	1.0322	.1165	-.2778	-.0016	.0009	-.0048	8.86	.171
.201	2.77 (57.89)	.00	2.26	1.0220	.1179	-.2724	.0002	.0009	-.0058	8.67	.222
.200	2.76 (57.72)	.00	2.25	1.0124	.1192	-.2641	-.0038	.0006	-.0116	8.49	.321
.201	2.77 (57.89)	.00	2.27	1.0109	.1200	-.2614	-.0024	.0008	-.0098	8.43	.420
.201	2.77 (57.84)	.00	2.27	1.0113	.1200	-.2643	-.0021	.0011	-.0105	8.43	.561

RUN NUMBER 44 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.200	2.76 (57.72)	.01	4.33	1.3239	.1251	-.3779	-.0010	.0006	.0036	10.58	.071
.200	2.77 (57.79)	.01	4.32	1.2958	.1297	-.3570	-.0005	.0005	.0008	9.99	.119
.201	2.77 (57.82)	.01	4.33	1.2948	.1310	-.3496	.0001	.0013	-.0048	9.88	.169
.200	2.76 (57.61)	.01	4.31	1.2738	.1332	-.3378	-.0030	.0004	-.0080	9.57	.221
.201	2.78 (58.14)	.01	4.33	1.2670	.1351	-.3290	-.0019	.0008	-.0090	9.38	.318
.201	2.78 (58.05)	.01	4.33	1.2579	.1368	-.3226	-.0050	.0003	-.0128	9.20	.418
.201	2.77 (57.92)	.01	4.35	1.2775	.1366	-.3300	-.0039	.0014	-.0139	9.35	.604

RUN NUMBER 47 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.202	2.80 (58.53)	.01	6.38	1.5389	.1509	-.4217	-.0011	.0002	.0020	10.20	.118
.203	2.84 (59.26)	.02	6.39	1.5296	.1527	-.4037	-.0040	.0006	-.0054	10.02	.168
.204	2.85 (59.55)	.01	6.38	1.5145	.1551	-.3956	-.0030	.0006	-.0082	9.76	.218
.203	2.84 (59.23)	.02	6.38	1.4931	.1584	-.3801	-.0038	.0003	-.0104	9.43	.317
.204	2.87 (59.86)	.02	6.40	1.4954	.1599	-.3745	-.0052	-.0001	-.0109	9.36	.419
.204	2.87 (59.94)	.02	6.42	1.5145	.1599	-.3790	-.0044	.0007	-.0107	9.47	.602

RUN NUMBER 48 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.210	3.02 (63.14)	-10.05	-3.99	.0746	.1135	-.1037	.0089	-.0303	.2397	.66	.425
.205	2.90 (60.54)	-10.05	-1.88	.4059	.0939	-.2183	.0147	-.0282	.2213	4.32	.471
.205	2.90 (60.54)	-10.05	.20	.7302	.0867	-.3064	.0255	-.0263	.2162	8.42	.517
.205	2.90 (60.50)	-10.06	2.29	1.0169	.0974	-.3544	.0300	-.0230	.1995	10.44	.562
.205	2.89 (60.41)	-10.07	4.35	1.2797	.1136	-.4127	.0337	-.0208	.1956	11.27	.608
.205	2.88 (60.18)	-10.07	6.41	1.5168	.1387	-.4724	.0360	-.0208	.1969	10.94	.654
.205	2.89 (60.31)	-10.09	8.42	1.7509	.1672	-.5242	.0380	-.0207	.1991	10.47	.685
.205	2.87 (60.04)	-10.10	10.52	1.9938	.2012	-.5747	.0416	-.0194	.1991	9.91	.685
.206	2.90 (60.57)	-10.11	12.52	2.1913	.2381	-.6039	.0461	-.0177	.1949	9.20	.685
.205	2.89 (60.32)	-10.13	14.61	2.3575	.2793	-.6093	.0492	-.0176	.1980	8.44	.685
.205	2.89 (60.43)	-10.21	16.62	2.4405	.3274	-.5718	.0625	-.0132	.2007	7.45	.685
.205	2.90 (60.50)	-10.24	18.54	2.4542	.3870	-.5255	.0564	-.0170	.2034	6.34	.685
.206	2.90 (60.58)	-10.25	20.58	2.4260	.4695	-.5004	.0506	-.0231	.2052	5.17	.684
.206	2.90 (60.59)	-10.27	22.56	2.5041	.5366	-.5217	.0561	-.0217	.2059	4.67	.684

APPENDIX A

RUN NUMBER 49 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.32)	-4.95	-3.96	.0521	.1353	-.0100	.0054	-.0162	.1258	.38	.425
.205	2.88 (60.23)	-4.96	-1.87	.3867	.1101	-.1006	.0045	-.0133	.1107	3.51	.471
.205	2.89 (60.37)	-4.97	.19	.7341	.1054	-.2150	.0128	-.0117	.1065	6.97	.516
.205	2.88 (60.17)	-4.98	2.25	1.0096	.1135	-.2921	.0147	-.0104	.1035	8.90	.561
.205	2.89 (60.32)	-5.00	4.38	1.2692	.1303	-.3629	.0152	-.0089	.0973	9.74	.608
.205	2.88 (60.23)	-5.01	6.42	1.5091	.1532	-.4172	.0163	-.0083	.0935	9.85	.654
.205	2.89 (60.42)	-5.02	8.52	1.7504	.1827	-.4708	.0161	-.0100	.0971	9.58	.685
.205	2.89 (60.35)	-5.03	10.52	1.9718	.2147	-.5159	.0178	-.0100	.0978	9.18	.684
.205	2.89 (60.30)	-5.04	12.57	2.1822	.2504	-.5476	.0211	-.0094	.0975	8.71	.684
.206	2.91 (60.78)	-5.06	14.60	2.3099	.2929	-.5357	.0256	-.0086	.0951	7.89	.685
.205	2.88 (60.18)	-5.08	16.60	2.4250	.3343	-.5197	.0309	-.0069	.0927	7.25	.685
.205	2.89 (60.44)	-5.12	18.62	2.4795	.3871	-.5067	.0405	-.0049	.0942	6.41	.685
.205	2.90 (60.51)	-5.12	20.57	2.5525	.4690	-.5558	.0407	-.0102	.0803	5.44	.684
.206	2.91 (60.76)	-5.18	22.61	2.6091	.5421	-.5788	.0555	-.0028	.0775	4.81	.684

RUN NUMBER 50 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.40)	.01	-3.96	.0277	.1419	.0447	-.0012	.0004	-.0015	.20	.425
.205	2.89 (60.28)	.01	-1.90	.3681	.1189	-.0749	-.0010	.0015	-.0032	3.10	.469
.205	2.89 (60.32)	.00	.16	.7086	.1123	-.1857	-.0020	.0009	-.0015	6.31	.514
.205	2.90 (60.50)	-.01	2.24	.9975	.1198	-.2663	-.0026	.0010	-.0014	8.32	.560
.205	2.89 (60.38)	-.01	4.37	1.2749	.1360	-.3347	-.0036	.0016	-.0010	9.38	.607
.205	2.89 (60.31)	-.01	6.41	1.5069	.1587	-.3864	-.0061	.0012	-.0049	9.49	.653
.205	2.89 (60.26)	-.01	8.42	1.7337	.1848	-.4379	-.0050	.0011	-.0058	9.38	.684
.205	2.89 (60.45)	-.01	10.52	1.9550	.2179	-.4788	-.0045	.0013	-.0054	8.97	.684
.205	2.89 (60.36)	-.01	12.50	2.1469	.2542	-.4912	-.0042	.0012	-.0052	8.44	.685
.205	2.88 (60.25)	-.01	14.53	2.2899	.2991	-.4985	-.0036	.0026	-.0098	7.66	.685
.205	2.88 (60.14)	.03	16.44	2.2814	.3480	-.5714	-.0067	.0005	-.0004	6.56	.684
.205	2.90 (60.47)	.05	18.58	2.3418	.4251	-.6436	.0015	.0072	.0017	5.51	.684
.205	2.88 (60.25)	.08	20.55	2.4128	.5027	-.6881	-.0018	-.0003	-.0079	4.80	.684

RUN NUMBER 51 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.88 (60.25)	5.01	-3.97	.0533	.1336	-.0039	-.0033	.0181	-.1390	.40	.425
.205	2.90 (60.49)	5.01	-1.87	.4112	.1108	-.1211	-.0081	.0152	-.1183	3.71	.470
.206	2.90 (60.53)	5.02	.17	.7137	.1055	-.2181	-.0169	.0129	-.1145	6.77	.516
.205	2.89 (60.28)	5.03	2.28	1.0111	.1133	-.2966	-.0211	.0110	-.1064	8.92	.563
.205	2.88 (60.21)	5.04	4.32	1.2552	.1289	-.3650	-.0237	.0105	-.1037	9.74	.607
.205	2.88 (60.17)	5.06	6.36	1.4829	.1523	-.4325	-.0251	.0108	-.1066	9.73	.654
.205	2.89 (60.46)	5.08	8.42	1.7122	.1808	-.4910	-.0288	.0104	-.1091	9.47	.684
.205	2.89 (60.39)	5.10	10.49	1.9187	.2132	-.5303	-.0323	.0103	-.1115	9.00	.684
.205	2.88 (60.23)	5.14	12.49	2.0193	.2593	-.5613	-.0455	.0063	-.0988	7.79	.684
.205	2.88 (60.18)	5.19	14.57	2.1681	.3096	-.5913	-.0466	.0074	-.1019	7.00	.685
.205	2.89 (60.27)	5.21	16.56	2.2626	.3660	-.6321	-.0351	.0153	-.1156	6.18	.685
.205	2.90 (60.47)	5.21	18.52	2.3422	.4222	-.6695	-.0243	.0215	-.1168	5.55	.684
.206	2.90 (60.59)	5.25	20.57	2.4491	.5041	-.7545	-.0303	.0088	-.1076	4.86	.685

RUN NUMBER 52 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.29)	-.03	-4.00	-.0136	.1504	.0903	-.0150	-.0010	-.0174	-.09	.425
.205	2.89 (60.35)	-.02	-1.91	.3346	.1269	-.0229	-.0183	-.0003	-.0205	2.64	.470
.205	2.89 (60.43)	.00	.18	.6861	.1202	-.1396	-.0198	-.0019	-.0162	5.71	.515
.205	2.89 (60.43)	.02	2.28	.9626	.1280	-.2137	-.0209	-.0025	-.0161	7.52	.562
.205	2.89 (60.38)	.04	4.32	1.2272	.1433	-.2806	-.0225	-.0029	-.0155	8.56	.607
.205	2.88 (60.15)	.06	6.39	1.4672	.1651	-.3342	-.0229	-.0032	-.0161	8.89	.653
.205	2.89 (60.29)	.08	8.44	1.6846	.1906	-.3968	-.0246	-.0044	-.0129	8.84	.684
.205	2.88 (60.25)	.11	10.46	1.8556	.2241	-.4777	-.0291	-.0065	-.0057	8.28	.685
.206	2.90 (60.51)	.14	12.48	1.9899	.2631	-.5154	-.0370	-.0104	.0057	7.56	.685
.205	2.89 (60.34)	.17	14.52	2.1025	.3106	-.5534	-.0384	-.0105	.0075	6.77	.684
.205	2.89 (60.42)	.17	16.51	2.1268	.3784	-.6390	-.0245	-.0081	-.0063	5.62	.685
.205	2.89 (60.28)	.17	18.53	2.2615	.4425	-.6702	-.0192	-.0054	-.0071	5.11	.684
.206	2.91 (60.77)	.17	20.60	2.4069	.5057	-.7000	-.0100	-.0041	-.0116	4.76	.683
.206	2.90 (60.52)	.17	22.66	2.5271	.5777	-.7335	-.0033	-.0006	-.0216	4.37	.684

APPENDIX A

RUN NUMBER 53 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.31)	-.03	-3.98	-.0011	.1479	.0743	-.0106	.0007	-.0189	-.01	.425
.205	2.88 (60.24)	-.01	-1.90	.3438	.1239	-.0426	-.0068	.0007	-.0162	2.77	.470
.205	2.89 (60.35)	.00	.18	.6929	.1170	-.1532	-.0116	-.0001	-.0164	5.92	.515
.205	2.88 (60.12)	.02	2.26	.9881	.1241	-.2347	-.0128	-.0008	-.0139	7.96	.561
.205	2.89 (60.28)	.03	4.31	1.2339	.1409	-.2973	-.0145	-.0007	-.0136	8.76	.606
.205	2.88 (60.17)	.05	6.40	1.4805	.1627	-.3545	-.0148	-.0009	-.0150	9.10	.653
.205	2.89 (60.28)	.07	8.43	1.6894	.1898	-.4097	-.0174	-.0026	-.0114	8.90	.684
.205	2.89 (60.26)	.09	10.41	1.8442	.2221	-.4985	-.0218	-.0043	-.0029	8.30	.685
.206	2.90 (60.48)	.13	12.43	1.9504	.2669	-.5470	-.0326	-.0086	.0104	7.31	.685
.205	2.89 (60.28)	.15	14.52	2.0973	.3133	-.5850	-.0318	-.0078	.0088	6.70	.684
.205	2.89 (60.29)	.15	16.58	2.1467	.3840	-.6644	-.0177	-.0048	-.0067	5.59	.684
.205	2.89 (60.42)	.15	18.50	2.3004	.4417	-.7006	-.0093	-.0026	-.0106	5.21	.685
.205	2.89 (60.39)	.14	20.54	2.4359	.5010	-.7228	.0003	.0001	-.0163	4.86	.684
.206	2.90 (60.51)	.15	22.58	2.5178	.5850	-.7627	-.0012	.0006	-.0169	4.30	.684

RUN NUMBER 54 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.41)	-.03	-3.98	.0053	.1462	.0654	-.0077	.0011	-.0219	.04	.425
.205	2.89 (60.26)	-.01	-1.88	.3784	.1208	-.0657	-.0028	.0017	-.0161	3.13	.470
.205	2.89 (60.29)	.00	.23	.7236	.1145	-.1751	-.0061	.0006	-.0144	6.32	.516
.205	2.89 (60.45)	.01	2.25	.9906	.1230	-.2501	-.0069	.0002	-.0116	8.05	.561
.205	2.89 (60.28)	.03	4.36	1.2637	.1388	-.3185	-.0076	.0008	-.0132	9.11	.607
.205	2.89 (60.36)	.04	6.37	1.4719	.1633	-.3675	-.0102	-.0002	-.0137	9.01	.652
.205	2.89 (60.35)	.06	8.50	1.7088	.1891	-.4389	-.0118	-.0010	-.0095	9.04	.684
.205	2.89 (60.44)	.08	10.49	1.8834	.2240	-.5146	-.0152	-.0025	-.0055	8.41	.685
.205	2.89 (60.33)	.10	12.49	2.0451	.2616	-.5500	-.0171	-.0031	-.0014	7.82	.685
.205	2.88 (60.19)	.12	14.53	2.1582	.3054	-.5779	-.0190	-.0036	.0007	7.07	.685
.205	2.88 (60.25)	.14	16.50	2.1429	.3772	-.6824	-.0133	-.0043	-.0056	5.68	.684
.206	2.90 (60.55)	.14	18.52	2.3047	.4387	-.7115	-.0063	-.0019	-.0065	5.25	.685
.205	2.89 (60.40)	.13	20.62	2.4334	.5055	-.7294	.0030	.0025	-.0095	4.81	.685
.205	2.89 (60.43)	.12	22.59	2.5292	.5805	-.7492	.0020	.0033	-.0110	4.36	.684

RUN NUMBER 55 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.88)	-.02	-3.98	.0110	.1464	.0473	-.0007	.0010	-.0146	.08	.425
.205	2.89 (60.34)	-.01	-1.91	.3850	.1197	-.0820	.0031	.0018	-.0128	3.22	.469
.205	2.88 (60.16)	-.00	.15	.7242	.1136	-.1921	.0030	.0009	-.0089	6.38	.514
.205	2.89 (60.33)	.01	2.34	1.0282	.1217	-.2789	.0027	.0012	-.0082	8.45	.562
.205	2.88 (60.19)	.02	4.36	1.2781	.1383	-.3423	.0005	.0013	-.0086	9.24	.607
.205	2.88 (60.22)	.03	6.41	1.5129	.1615	-.3973	-.0005	.0010	-.0098	9.37	.653
.205	2.89 (60.33)	.04	8.43	1.7204	.1889	-.4627	-.0021	-.0001	-.0049	9.11	.684
.205	2.89 (60.31)	.06	10.51	1.9277	.2218	-.5150	-.0038	-.0005	-.0040	8.69	.683
.205	2.89 (60.41)	.08	12.52	2.0506	.2627	-.5785	-.0098	-.0025	.0053	7.81	.685
.205	2.88 (60.21)	.11	14.61	2.1690	.3104	-.6052	-.0141	-.0035	.0060	6.99	.684
.205	2.89 (60.38)	.12	16.50	2.2128	.3665	-.6612	-.0097	-.0026	.0070	6.04	.685
.205	2.89 (60.45)	.10	18.58	2.3245	.4434	-.7411	.0025	.0022	-.0076	5.24	.685
.206	2.90 (60.48)	.12	20.60	2.4248	.5111	-.7403	-.0005	-.0035	-.0061	4.74	.685
.206	2.91 (60.75)	.12	22.60	2.5325	.5849	-.7811	.0045	.0009	-.0156	4.33	.685

RUN NUMBER 56 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.38)	-.01	-3.97	.0409	.1427	.0370	.0037	.0012	-.0141	.29	.425
.205	2.89 (60.39)	-.01	-1.89	.3933	.1188	-.0915	.0077	.0015	-.0080	3.31	.469
.205	2.89 (60.33)	-.00	.17	.7459	.1135	-.2086	.0075	.0008	-.0071	6.57	.514
.205	2.88 (60.19)	.01	2.32	1.0418	.1218	-.2938	.0086	.0011	-.0039	8.56	.561
.205	2.88 (60.21)	.01	4.33	1.2870	.1387	-.3562	.0072	.0017	-.0072	9.28	.606
.205	2.89 (60.33)	.02	6.40	1.5209	.1632	-.4081	.0051	.0008	-.0054	9.32	.652
.205	2.89 (60.46)	.03	8.44	1.7287	.1906	-.4691	.0033	.0001	-.0037	9.07	.691
.205	2.89 (60.31)	.05	10.54	1.8886	.2286	-.5706	-.0045	-.0024	.0063	8.26	.684
.205	2.89 (60.36)	.06	12.51	2.0363	.2665	-.5977	-.0087	-.0042	.0117	7.64	.685
.205	2.89 (60.30)	.08	14.51	2.1521	.3118	-.6256	-.0088	-.0029	.0083	6.90	.684
.205	2.89 (60.38)	.09	16.51	2.1775	.3824	-.7189	-.0018	-.0030	-.0035	5.69	.685
.205	2.89 (60.30)	.07	18.56	2.3345	.4447	-.7447	.0073	.0016	-.0070	5.25	.684
.205	2.89 (60.37)	.10	20.62	2.4232	.5183	-.7603	.0019	-.0043	-.0061	4.68	.686
.205	2.89 (60.40)	.09	22.63	2.5406	.5907	-.7840	.0091	.0003	-.0112	4.30	.685

APPENDIX A

RUN NUMBER 57 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.53)	-.01	-3.97	.0458	.1421	.0314	.0026	.0007	-.0120	.32	.425
.206	2.90 (60.54)	-.00	-1.90	.3922	.1198	-.0966	.0101	.0014	-.0078	3.27	.469
.205	2.89 (60.44)	-.00	.19	.7544	.1149	-.2235	.0078	.0001	-.0053	6.57	.515
.205	2.88 (60.25)	.00	2.30	1.0529	.1226	-.3056	.0105	.0007	-.0020	8.59	.561
.205	2.88 (60.08)	.01	4.35	1.3125	.1399	-.3705	.0087	.0012	-.0032	9.38	.606
.205	2.88 (60.19)	.01	6.38	1.5354	.1640	-.4240	.0066	.0003	-.0031	9.37	.652
.205	2.89 (60.31)	.02	8.51	1.7501	.1936	-.4965	.0029	-.0011	.0010	9.04	.685
.205	2.88 (60.25)	.03	10.47	1.9294	.2272	-.5590	-.0003	-.0018	.0046	8.49	.685
.205	2.89 (60.43)	.05	12.54	2.0906	.2665	-.5824	-.0065	-.0042	.0128	7.85	.685
.205	2.89 (60.26)	.09	14.54	2.1968	.3156	-.6019	-.0115	-.0051	.0132	6.96	.685
.205	2.89 (60.29)	.11	16.52	2.2720	.3727	-.6324	-.0071	-.0036	.0159	6.10	.685
.205	2.89 (60.33)	.06	18.54	2.3733	.4368	-.6573	.0086	.0052	.0136	5.43	.684
.206	2.90 (60.53)	.05	20.63	2.4980	.4981	-.6585	.0127	.0082	.0147	5.01	.685
.206	2.90 (60.51)	.01	22.56	2.5765	.5666	-.7527	.0175	.0123	.0004	4.55	.684

RUN NUMBER 58 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.44)	-.00	-3.99	.0205	.1441	.0420	.0004	-.0001	-.0107	.14	.424
.205	2.88 (60.20)	.00	-1.89	.4060	.1198	-.1049	.0107	.0004	-.0069	3.39	.469
.205	2.88 (60.25)	-.00	.24	.7931	.1140	-.2361	.0107	-.0005	-.0053	6.96	.516
.205	2.88 (60.14)	-.00	2.32	1.0508	.1246	-.3107	.0118	-.0000	-.0035	8.44	.562
.205	2.88 (60.05)	-.00	4.36	1.3210	.1405	-.3752	.0073	-.0003	-.0043	9.40	.606
.205	2.87 (60.01)	-.00	6.40	1.5574	.1643	-.4299	.0074	-.0003	-.0032	9.48	.652
.205	2.87 (59.97)	.01	8.43	1.7394	.1952	-.5054	.0021	-.0019	-.0021	8.91	.685
.204	2.86 (59.77)	.02	10.46	1.9429	.2280	-.5682	-.0024	-.0037	.0045	8.52	.685
.205	2.88 (60.19)	.04	12.56	2.1074	.2693	-.5900	-.0077	-.0053	.0098	7.83	.685
.205	2.88 (60.06)	.08	14.65	2.2330	.3165	-.6039	-.0137	-.0078	.0151	7.06	.685
.205	2.88 (60.15)	.10	16.55	2.3377	.3695	-.6331	-.0158	-.0105	.0208	6.33	.685
.205	2.87 (59.94)	.07	18.56	2.4267	.4284	-.6468	.0003	-.0022	.0151	5.66	.685
.205	2.88 (60.25)	.07	20.61	2.4958	.5052	-.7566	.0041	-.0028	.0004	4.94	.685
.206	2.90 (60.54)	.06	22.65	2.6269	.5840	-.7862	.0097	.0023	-.0085	4.50	.685

RUN NUMBER 59 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.35)	-.00	-3.97	.0017	.1490	.0751	.0151	.0020	-.0027	.01	.425
.206	2.90 (60.47)	.00	-1.86	.3736	.1272	-.0617	.0263	.0031	-.0010	2.94	.470
.205	2.89 (60.29)	-.00	.21	.7184	.1223	-.1689	.0311	.0024	.0019	5.88	.515
.205	2.88 (60.16)	-.01	2.24	.9929	.1301	-.2417	.0327	.0029	.0061	7.63	.560
.206	2.90 (60.59)	-.01	4.31	1.2405	.1475	-.3033	.0301	.0038	.0020	8.41	.606
.206	2.90 (60.61)	-.01	6.36	1.4805	.1690	-.3567	.0285	.0039	.0017	8.76	.652
.206	2.90 (60.55)	-.02	8.44	1.6891	.1990	-.4245	.0267	.0039	.0041	8.49	.684
.206	2.90 (60.54)	-.01	10.47	1.8901	.2326	-.4871	.0229	.0033	.0055	8.13	.684
.205	2.89 (60.44)	-.01	12.51	2.0680	.2705	-.5180	.0182	.0017	.0124	7.64	.684
.205	2.89 (60.45)	.01	14.59	2.2001	.3160	-.5330	.0104	-.0014	.0181	6.96	.684
.206	2.90 (60.58)	.03	16.56	2.2977	.3717	-.5836	.0019	-.0054	.0300	6.18	.684
.206	2.90 (60.48)	.02	18.59	2.4274	.4319	-.6102	.0073	-.0009	.0205	5.62	.685
.205	2.89 (60.33)	.00	20.58	2.4886	.5075	-.7084	.0173	.0016	.0019	4.90	.685
.205	2.88 (60.24)	.00	22.59	2.6140	.5800	-.7370	.0189	.0038	-.0029	4.51	.684

RUN NUMBER 60 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.88 (60.17)	.00	-4.00	.0126	.1467	.0585	.0110	.0012	-.0088	.09	.425
.205	2.88 (60.08)	.00	-1.92	.3757	.1224	-.0714	.0190	.0017	-.0031	3.07	.469
.205	2.88 (60.23)	-.00	.21	.7099	.1190	-.1769	.0194	.0005	-.0003	5.97	.516
.205	2.88 (60.21)	-.00	2.28	.9928	.1266	-.2500	.0195	.0006	.0021	7.84	.562
.205	2.88 (60.10)	-.01	4.30	1.2416	.1428	-.3115	.0183	.0012	.0020	8.70	.606
.205	2.88 (60.14)	-.01	6.44	1.4924	.1652	-.3663	.0171	.0014	.0003	9.04	.654
.205	2.87 (60.01)	-.01	8.46	1.7087	.1910	-.4332	.0148	.0002	.0046	8.95	.685
.205	2.88 (60.10)	.00	10.48	1.8555	.2290	-.5229	.0039	-.0032	.0128	8.10	.684
.205	2.88 (60.13)	.02	12.51	2.0187	.2688	-.5434	-.0003	-.0044	.0155	7.51	.684
.205	2.88 (60.14)	.04	14.54	2.1495	.3193	-.5734	-.0087	-.0080	.0269	6.73	.685
.205	2.87 (60.05)	.05	16.57	2.3126	.3696	-.5845	-.0089	-.0066	.0210	6.26	.685
.204	2.86 (59.78)	.05	18.58	2.4354	.4276	-.6264	-.0040	-.0036	.0177	5.70	.684
.204	2.86 (59.81)	.01	20.59	2.4848	.4952	-.6910	.0138	.0024	-.0006	5.02	.685
.204	2.86 (59.72)	.01	22.62	2.6060	.5724	-.7415	.0168	.0035	-.0083	4.55	.684

APPENDIX A

RUN NUMBER 61 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.88 (60.15)	.00	-3.96	.0282	.1443	.0460	.0067	.0012	-.0128	.20	.425
.206	2.90 (60.53)	.00	-1.84	.3889	.1198	-.0848	.0122	.0009	-.0046	3.25	.471
.205	2.89 (60.46)	-.00	.23	.7494	.1138	-.1974	.0140	.0008	-.0031	6.58	.516
.205	2.89 (60.42)	-.00	2.24	1.0076	.1229	-.2709	.0134	.0006	-.0005	8.20	.561
.205	2.88 (60.25)	-.01	4.36	1.2872	.1401	-.3403	.0136	.0015	-.0025	9.19	.607
.205	2.88 (60.18)	-.01	6.38	1.5172	.1620	-.3928	.0128	.0016	-.0030	9.37	.652
.205	2.87 (60.04)	-.00	8.43	1.7239	.1906	-.4663	.0085	.0001	.0004	9.05	.685
.205	2.89 (60.39)	.00	10.48	1.9307	.2231	-.5294	.0060	-.0007	.0055	8.65	.685
.205	2.89 (60.32)	.02	12.49	2.0750	.2629	-.5653	-.0036	-.0042	.0137	7.89	.685
.205	2.89 (60.44)	.08	14.55	2.1953	.3111	-.5753	-.0156	-.0082	.0160	7.06	.684
.205	2.89 (60.40)	.10	16.58	2.3356	.3625	-.6056	-.0174	-.0097	.0218	6.44	.684
.205	2.89 (60.27)	.10	18.58	2.4585	.4174	-.6171	-.0099	-.0041	.0170	5.89	.685
.205	2.89 (60.40)	.05	20.61	2.5573	.4773	-.5870	.0047	.0043	.0154	5.36	.684
.206	2.90 (60.52)	.04	22.65	2.6318	.5638	-.7270	.0080	.0070	-.0013	4.67	.685

RUN NUMBER 62 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.96 (20.14)	-.01	-3.95	.2045	.1339	-.3215	.0015	.0018	-.0144	1.53	.426
.118	.97 (20.18)	-.00	-1.83	.5387	.1163	-.3567	.0011	.0015	-.0119	4.63	.474
.118	.97 (20.22)	.00	.28	.9261	.1110	-.4194	.0023	.0016	-.0125	8.34	.522
.118	.97 (20.21)	.00	2.29	1.1878	.1256	-.4248	-.0002	.0006	-.0101	9.46	.569
.118	.97 (20.20)	.01	4.38	1.4358	.1427	-.3962	-.0019	.0005	-.0101	10.06	.618
.118	.97 (20.20)	.02	6.42	1.6444	.1667	-.3706	-.0020	.0004	-.0129	9.86	.665
.117	.97 (20.16)	.03	8.46	1.8406	.1939	-.3353	-.0034	-.0008	-.0146	9.49	.684
.117	.96 (20.08)	.03	10.52	2.0469	.2205	-.2940	-.0034	-.0006	-.0106	9.28	.684
.117	.96 (20.11)	.04	12.52	2.2312	.2518	-.2492	-.0022	.0002	-.0110	8.86	.685
.117	.96 (20.10)	.05	14.56	2.3678	.2903	-.1957	-.0050	-.0016	-.0114	8.16	.685
.117	.96 (20.06)	.06	16.62	2.4940	.3182	-.1244	-.0023	-.0014	-.0068	7.84	.684
.117	.96 (20.13)	.07	18.67	2.5546	.3670	-.0509	-.0055	-.0058	-.0075	6.96	.685
.117	.96 (20.07)	.07	20.59	2.5866	.4187	.0284	.0003	-.0035	-.0078	6.18	.685
.117	.96 (20.00)	.06	22.64	2.4953	.5015	.0417	.0129	.0109	-.0006	4.98	.685

RUN NUMBER 63 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.167	1.94 (40.44)	-.01	-3.95	.1961	.1352	-.3196	-.0006	.0009	-.0136	1.45	.427
.166	1.91 (39.99)	-.00	-1.88	.5733	.1145	-.3797	.0057	.0011	-.0090	5.01	.472
.166	1.92 (40.02)	-.00	.24	.9460	.1114	-.4307	.0015	.0008	-.0094	8.49	.518
.166	1.91 (39.89)	.00	2.32	1.2103	.1246	-.4265	-.0006	.0004	-.0086	9.72	.565
.166	1.91 (39.96)	.01	4.35	1.4403	.1422	-.4033	-.0014	.0004	-.0089	10.13	.611
.166	1.91 (39.85)	.02	6.47	1.6601	.1660	-.3751	-.0029	-.0004	-.0074	10.00	.660
.167	1.93 (40.22)	.03	8.45	1.8509	.1908	-.3403	-.0036	-.0008	-.0090	9.70	.684
.167	1.93 (40.29)	.04	10.58	2.0640	.2192	-.2997	-.0034	-.0010	-.0056	9.42	.685
.167	1.92 (40.17)	.05	12.57	2.2366	.2547	-.2537	-.0052	-.0025	-.0036	8.78	.684
.167	1.92 (40.17)	.06	14.62	2.3880	.2904	-.1997	-.0068	-.0025	-.0048	8.22	.684
.166	1.92 (40.07)	.07	16.68	2.4907	.3253	-.1342	-.0058	-.0042	.0015	7.66	.686
.167	1.93 (40.23)	.09	18.62	2.4952	.3672	-.1028	-.0138	-.0063	.0109	6.79	.686
.166	1.92 (40.11)	.11	20.62	2.4809	.4334	-.0476	-.0112	-.0044	.0032	5.72	.685
.166	1.91 (39.96)	.06	22.62	2.4424	.5205	-.0276	.0120	.0080	-.0081	4.69	.685

RUN NUMBER 64 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.55)	-.01	-3.92	.2238	.1326	-.3285	-.0004	.0004	-.0113	1.69	.427
.205	2.89 (60.35)	-.00	-1.81	.6140	.1118	-.4035	.0047	.0012	-.0094	5.51	.472
.205	2.89 (60.28)	.00	.29	.9558	.1123	-.4352	.0000	.0005	-.0089	8.51	.517
.205	2.89 (60.26)	.00	2.30	1.2277	.1230	-.4375	.0022	.0011	-.0071	9.98	.560
.205	2.88 (60.11)	.01	4.40	1.4417	.1429	-.4072	-.0014	.0007	-.0077	10.09	.606
.205	2.88 (60.11)	.02	6.40	1.6431	.1646	-.3771	-.0011	.0005	-.0070	9.98	.650
.205	2.88 (60.25)	.03	8.45	1.8307	.1912	-.3413	-.0035	-.0010	-.0046	9.58	.684
.205	2.88 (60.22)	.04	10.50	2.0227	.2186	-.3030	-.0050	-.0018	-.0039	9.25	.685
.205	2.89 (60.30)	.05	12.50	2.1971	.2514	-.2545	-.0051	-.0016	-.0058	8.74	.685
.205	2.88 (60.22)	.05	14.52	2.2540	.2907	-.2177	.0008	.0020	-.0196	7.75	.684
.205	2.90 (60.47)	.07	16.58	2.4012	.3208	-.1442	-.0039	-.0027	-.0073	7.48	.685
.205	2.89 (60.26)	.10	18.60	2.4036	.3664	-.1159	-.0059	-.0031	.0026	6.56	.684
.205	2.89 (60.32)	.13	20.61	2.3980	.4370	-.0990	-.0091	-.0075	-.0053	5.49	.684
.205	2.90 (60.47)	.06	22.58	2.4508	.5151	-.0319	.0074	.0040	-.0084	4.76	.684

APPENDIX A

RUN NUMBER 65 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.66)	-.01	-3.96	.1936	.1222	-.3216	-.0023	.0019	-.0183	1.58	.427
.205	2.89 (60.36)	-.00	-1.82	.6105	.0992	-.4082	.0062	.0016	-.0089	6.16	.472
.205	2.89 (60.33)	.00	.27	.9735	.0997	-.4427	.0015	.0008	-.0094	9.76	.516
.205	2.89 (60.35)	.00	2.28	1.2288	.1126	-.4433	.0011	.0010	-.0063	10.91	.559
.205	2.88 (60.18)	.01	4.43	1.4439	.1350	-.4120	-.0007	.0009	-.0085	10.70	.607
.205	2.88 (60.19)	.01	6.42	1.6670	.1552	-.3737	-.0007	.0010	-.0079	10.74	.650
.205	2.90 (60.49)	.02	8.54	1.8767	.1828	-.3370	-.0023	.0000	-.0072	10.26	.685
.205	2.89 (60.46)	.03	10.52	2.0658	.2119	-.2997	-.0045	-.0010	-.0054	9.75	.684
.205	2.89 (60.33)	.04	12.54	2.2520	.2467	-.2544	-.0062	-.0021	-.0042	9.13	.684
.205	2.89 (60.32)	.05	14.61	2.4173	.2833	-.1950	-.0085	-.0030	-.0016	8.53	.685
.205	2.89 (60.32)	.06	16.70	2.5331	.3191	-.1311	-.0061	-.0037	.0002	7.94	.685
.205	2.89 (60.34)	.07	18.63	2.6396	.3573	-.0688	-.0049	-.0023	.0006	7.39	.684
.205	2.89 (60.36)	.10	20.68	2.5318	.4353	-.0110	-.0067	-.0023	.0078	5.82	.684
.205	2.89 (60.37)	.06	22.55	2.4776	.4990	-.0155	.0109	.0047	-.0111	4.96	.685

RUN NUMBER 66 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.89 (60.42)	-.01	-4.01	-.1529	.2312	.7618	-.0025	.0002	-.0155	-.66	.420
.205	2.89 (60.41)	-.00	-1.89	.2640	.1888	.6429	.0042	-.0000	-.0078	1.40	.464
.205	2.88 (60.18)	.00	.19	.6026	.1727	.5702	.0039	-.0005	-.0044	3.49	.509
.205	2.88 (60.16)	.00	2.20	.8902	.1664	.5233	.0017	-.0002	-.0074	5.35	.552
.205	2.88 (60.24)	.01	4.31	1.1270	.1698	.4894	.0003	-.0002	-.0058	6.64	.599
.205	2.88 (60.16)	.01	6.33	1.3720	.1754	.4427	.0003	-.0002	-.0080	7.82	.644
.205	2.88 (60.22)	.02	8.43	1.6068	.1893	.3633	-.0017	-.0001	-.0100	8.49	.684
.205	2.89 (60.35)	.03	10.45	1.8267	.2119	.2991	-.0028	-.0007	-.0055	8.62	.685
.205	2.89 (60.34)	.04	12.51	2.0499	.2412	.2729	-.0045	-.0016	-.0060	8.50	.684
.205	2.88 (60.24)	.06	14.53	2.2252	.2755	.2441	-.0071	-.0023	-.0058	8.08	.685
.205	2.87 (60.01)	.05	16.56	2.3621	.3087	.2149	-.0013	-.0023	-.0053	7.65	.685
.205	2.88 (60.12)	.02	18.59	2.4069	.3528	.1645	.0121	.0045	-.0043	6.82	.685
.205	2.89 (60.29)	.11	20.56	2.4219	.4354	-.0645	-.0095	-.0082	-.0070	5.56	.685
.205	2.87 (60.04)	.06	22.61	2.4704	.5093	-.0727	.0080	.0019	-.0132	4.85	.684

RUN NUMBER 67 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.51)	-.01	-4.04	-.0859	.1791	.5779	-.0005	-.0002	-.0074	-.48	.420
.205	2.89 (60.38)	-.00	-1.89	.3037	.1414	.4544	.0027	.0005	-.0106	2.15	.465
.205	2.88 (60.22)	.00	.18	.6844	.1243	.3241	.0011	.0018	-.0115	5.50	.510
.205	2.88 (60.24)	.00	2.27	.9935	.1274	.2206	.0015	.0005	-.0043	7.80	.555
.205	2.89 (60.29)	.01	4.36	1.2555	.1417	.1527	-.0006	.0008	-.0092	8.86	.602
.205	2.88 (60.21)	.01	6.40	1.4881	.1624	.0865	-.0018	.0001	-.0095	9.17	.648
.205	2.89 (60.43)	.02	8.42	1.7239	.1852	.0186	-.0023	-.0000	-.0090	9.31	.684
.205	2.89 (60.38)	.03	10.53	1.9484	.2146	-.0322	-.0042	-.0008	-.0076	9.08	.685
.205	2.89 (60.32)	.04	12.51	2.1629	.2461	-.0538	-.0043	-.0010	-.0065	8.79	.684
.205	2.88 (60.24)	.06	14.56	2.3316	.2851	-.0736	-.0066	-.0019	-.0069	8.18	.685
.205	2.88 (60.22)	.06	16.57	2.4542	.3208	-.1100	-.0017	-.0017	-.0094	7.65	.685
.205	2.89 (60.39)	.03	18.56	2.4928	.3698	-.1995	.0067	.0019	-.0123	6.74	.684
.205	2.87 (59.96)	.05	20.57	2.5200	.4469	-.3361	.0047	.0026	-.0081	5.64	.685
.204	2.86 (59.72)	.07	22.64	2.5631	.5389	-.3666	.0011	.0025	-.0089	4.76	.684

RUN NUMBER 68 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.66)	-.01	-3.98	.0154	.1463	.2699	-.0013	.0010	-.0158	.11	.423
.206	2.90 (60.54)	-.00	-1.91	.4036	.1200	.1298	.0029	.0012	-.0131	3.36	.467
.205	2.89 (60.40)	-.00	.20	.8055	.1138	.0024	.0008	.0006	-.0109	7.08	.512
.205	2.89 (60.32)	.00	2.28	1.1015	.1239	-.0884	-.0012	.0005	-.0121	8.89	.558
.205	2.89 (60.35)	.01	4.36	1.3669	.1400	-.1553	.0001	.0008	-.0090	9.76	.604
.205	2.89 (60.31)	.01	6.40	1.5972	.1631	-.2086	-.0017	.0004	-.0095	9.79	.650
.205	2.88 (60.19)	.02	8.48	1.8274	.1906	-.2629	-.0031	-.0003	-.0077	9.59	.685
.205	2.88 (60.12)	.03	10.49	2.0400	.2215	-.3112	-.0053	-.0003	-.0085	9.21	.685
.205	2.87 (59.98)	.04	12.55	2.2589	.2574	-.3366	-.0069	-.0014	-.0072	8.78	.684
.205	2.87 (59.98)	.05	14.63	2.4766	.3021	-.3557	-.0099	-.0028	-.0055	8.03	.685
.204	2.87 (59.85)	.05	16.62	2.5579	.3380	-.4042	-.0051	-.0032	-.0071	7.57	.685
.204	2.86 (59.83)	.05	18.70	2.6062	.3973	-.4993	-.0005	-.0004	-.0194	6.56	.685
.204	2.86 (59.81)	.11	20.60	2.6136	.4712	-.5679	-.0181	-.0118	-.0054	5.55	.684
.205	2.88 (60.07)	.09	22.67	2.6912	.5578	-.6016	-.0031	-.0018	-.0155	4.83	.684

APPENDIX A

RUN NUMBER 69 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.88 (60.15)	-.01	-3.93	.1252	.1369	-.0205	-.0005	.0008	-.0113	.91	.425
.205	2.88 (60.24)	-.00	-1.85	.5316	.1138	-.1690	.0069	.0015	-.0089	4.67	.469
.205	2.88 (60.24)	.00	.26	.9146	.1125	-.2855	.0019	.0009	-.0099	8.13	.514
.205	2.88 (60.18)	.00	2.30	1.2040	.1245	-.3724	-.0004	.0005	-.0093	9.67	.559
.205	2.88 (60.11)	.01	4.43	1.4582	.1461	-.4368	-.0018	.0012	-.0115	9.98	.607
.205	2.88 (60.13)	.01	6.65	1.7070	.1746	-.4997	-.0023	.0006	-.0085	9.78	.655
.205	2.87 (60.03)	.02	8.49	1.9230	.1999	-.5506	-.0039	.0001	-.0069	9.62	.685
.205	2.87 (59.96)	.03	10.54	2.1381	.2340	-.5976	-.0062	-.0005	-.0059	9.14	.685
.204	2.87 (59.91)	.04	12.60	2.3541	.2743	-.6258	-.0076	-.0017	-.0023	8.58	.685
.205	2.88 (60.16)	.05	14.65	2.5177	.3204	-.6433	-.0106	-.0030	-.0032	7.86	.684
.205	2.88 (60.09)	.05	16.65	2.6365	.3594	-.6724	-.0051	-.0027	-.0057	7.34	.684
.205	2.87 (59.95)	.05	18.65	2.6683	.4199	-.7324	-.0003	.0000	-.0173	6.35	.685
.204	2.85 (59.60)	.11	20.65	2.6661	.5055	-.7800	-.0175	-.0112	-.0022	5.27	.684
.204	2.85 (59.58)	.09	22.65	2.7481	.5950	-.8160	-.0041	-.0020	-.0164	4.62	.685

RUN NUMBER 70 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.75)	-.01	-3.92	.2066	.1373	-.3136	-.0013	.0012	-.0146	1.50	.426
.205	2.89 (60.45)	-.00	-1.82	.6428	.1142	-.4629	.0046	.0012	-.0106	5.63	.471
.205	2.89 (60.37)	-.00	.23	.9944	.1176	-.5738	.0005	.0005	-.0105	8.46	.515
.205	2.88 (60.18)	.00	2.37	1.3048	.1334	-.6725	-.0005	.0006	-.0081	9.78	.562
.205	2.88 (60.09)	.01	4.41	1.5464	.1575	-.7337	-.0026	.0006	-.0086	9.82	.607
.205	2.88 (60.09)	.01	6.43	1.7772	.1856	-.7886	-.0045	-.0003	-.0077	9.58	.653
.205	2.88 (60.23)	.02	8.48	1.9946	.2186	-.8339	-.0069	-.0012	-.0054	9.13	.685
.205	2.88 (60.05)	.03	10.55	2.2170	.2546	-.8744	-.0067	-.0005	-.0067	8.71	.684
.205	2.87 (60.01)	.04	12.65	2.4337	.2991	-.8998	-.0083	-.0016	-.0056	8.14	.685
.205	2.88 (60.21)	.05	14.61	2.5958	.3416	-.9044	-.0093	-.0017	-.0056	7.60	.685
.205	2.89 (60.33)	.05	16.62	2.6923	.3872	-.8960	-.0049	-.0026	-.0035	6.95	.684
.205	2.88 (60.16)	.05	18.69	2.6867	.4564	-.9272	.0004	.0008	-.0185	5.89	.685
.205	2.87 (59.99)	.11	20.66	2.6874	.5437	-.9607	-.0135	-.0083	-.0072	4.94	.685
.204	2.87 (59.92)	.07	22.71	2.7591	.6373	-.9829	.0044	.0021	-.0167	4.33	.685

RUN NUMBER 71 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.78)	-.01	-3.91	.3201	.1435	-.6352	-.0023	.0013	-.0185	2.23	.428
.206	2.90 (60.67)	-.00	-1.81	.7538	.1243	-.7902	.0053	.0010	-.0089	6.06	.472
.206	2.90 (60.67)	-.00	.27	1.1080	.1321	-.9070	-.0008	.0000	-.0077	8.39	.518
.205	2.89 (60.35)	.00	2.40	1.4039	.1521	-.9989	-.0011	.0005	-.0079	9.23	.564
.205	2.89 (60.33)	.01	4.41	1.6350	.1787	-1.0521	-.0039	-.0002	-.0068	9.15	.609
.205	2.89 (60.29)	.02	6.57	1.8820	.2104	-1.0977	-.0048	-.0004	-.0067	8.95	.657
.205	2.88 (60.22)	.02	8.53	2.0935	.2430	-1.1315	-.0067	-.0008	-.0072	8.62	.685
.205	2.88 (60.15)	.03	10.55	2.3002	.2831	-1.1588	-.0085	-.0022	-.0041	8.12	.685
.205	2.89 (60.28)	.04	12.64	2.5043	.3379	-1.1697	-.0080	-.0002	-.0081	7.41	.684
.206	2.90 (60.65)	.05	14.64	2.6465	.3881	-1.1424	-.0097	-.0018	-.0037	6.82	.685
.205	2.90 (60.48)	.05	16.68	2.7263	.4307	-1.0744	-.0045	-.0032	.0001	6.33	.685
.205	2.89 (60.42)	.06	18.72	2.6797	.5026	-1.0848	.0017	.0007	-.0161	5.33	.684
.205	2.90 (60.49)	.09	20.62	2.6876	.5888	-1.1082	-.0094	-.0074	-.0060	4.56	.685
.205	2.89 (60.31)	.04	22.72	2.7367	.6991	-1.1589	.0098	.0067	-.0126	3.91	.685

RUN NUMBER 72 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.88 (60.10)	-10.01	-3.98	.1462	.1107	-.1656	.0121	-.0326	.2563	1.32	.425
.205	2.88 (60.19)	-10.01	-1.79	.5722	.0880	-.2893	.0203	-.0290	.2315	6.50	.472
.205	2.89 (60.42)	-10.02	.28	.9034	.0898	-.3533	.0299	-.0247	.2116	10.06	.517
.205	2.88 (60.19)	-10.03	2.30	1.1836	.1021	-.4125	.0363	-.0219	.2019	11.60	.561
.205	2.88 (60.15)	-10.04	4.36	1.4243	.1230	-.4691	.0375	-.0204	.1966	11.58	.607
.205	2.89 (60.28)	-10.05	6.42	1.6561	.1502	-.5341	.0381	-.0209	.2003	11.02	.653
.205	2.88 (60.23)	-10.07	8.50	1.9094	.1811	-.6005	.0414	-.0208	.2028	10.54	.700
.205	2.89 (60.33)	-10.08	10.55	2.1200	.2167	-.6546	.0436	-.0199	.2014	9.78	.684
.205	2.88 (60.24)	-10.10	12.55	2.3006	.2545	-.6886	.0440	-.0195	.2010	9.04	.685
.205	2.88 (60.07)	-10.11	14.63	2.4705	.2956	-.6697	.0439	-.0207	.2025	8.36	.685
.205	2.88 (60.19)	-10.14	16.57	2.5300	.3460	-.6503	.0558	-.0181	.1941	7.31	.685
.205	2.88 (60.16)	-10.26	18.60	2.5593	.4090	-.6371	.0740	-.0139	.1965	6.26	.684
.205	2.89 (60.45)	-10.35	20.65	2.6116	.4775	-.6595	.0896	-.0071	.1906	5.47	.685
.205	2.90 (60.48)	-10.43	22.68	2.6986	.5486	-.6634	.1063	.0042	.1777	4.92	.685

APPENDIX A

RUN NUMBER 73 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.90 (60.66)	-4.97	-4.00	.1119	.1337	-.0334	.0100	-.0157	.1267	.84	.424
.206	2.90 (60.63)	-4.98	-1.83	.5416	.1083	-.1779	.0139	-.0138	.1163	5.00	.471
.205	2.89 (60.26)	-5.00	.27	.9165	.1069	-.2896	.0165	-.0118	.1092	8.57	.515
.205	2.89 (60.26)	-5.02	2.27	1.1799	.1202	-.3675	.0171	-.0106	.1048	9.82	.560
.205	2.89 (60.29)	-5.03	4.44	1.4385	.1402	-.4389	.0185	-.0091	.0979	10.26	.608
.205	2.87 (60.03)	-5.05	6.47	1.6788	.1650	-.5041	.0175	-.0097	.0994	10.18	.653
.205	2.89 (60.33)	-5.06	8.51	1.9137	.1954	-.5731	.0179	-.0111	.1061	9.79	.685
.205	2.88 (60.18)	-5.07	10.54	2.1167	.2313	-.6245	.0165	-.0124	.1086	9.15	.684
.205	2.89 (60.41)	-5.08	12.57	2.3093	.2692	-.6607	.0192	-.0121	.1071	8.58	.684
.205	2.88 (60.24)	-5.09	14.58	2.4703	.3053	-.6788	.0181	-.0134	.1063	8.09	.684
.205	2.88 (60.17)	-5.11	16.64	2.5695	.3485	-.6559	.0213	-.0135	.1006	7.37	.685
.205	2.88 (60.12)	-5.14	18.63	2.6119	.4155	-.6710	.0345	-.0103	.0913	6.29	.685
.205	2.87 (60.01)	-5.18	20.65	2.6565	.4826	-.7268	.0413	-.0079	.0919	5.50	.685
.205	2.87 (60.00)	-5.22	22.67	2.6250	.5699	-.7300	.0517	-.0046	.0861	4.61	.684

RUN NUMBER 74 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.91 (60.80)	.02	-3.94	.1132	.1388	.0010	-.0004	.0007	-.0034	.82	.425
.206	2.90 (60.66)	.02	-1.86	.5115	.1153	-.1499	.0051	.0006	-.0004	4.44	.469
.206	2.90 (60.64)	.01	.18	.8620	.1148	-.2570	-.0012	.0002	-.0057	7.51	.513
.205	2.90 (60.47)	.00	2.31	1.1896	.1254	-.3519	-.0002	.0006	-.0033	9.49	.560
.205	2.89 (60.39)	-.00	4.37	1.4433	.1445	-.4178	.0003	.0015	-.0040	9.99	.605
.205	2.88 (60.21)	-.00	6.44	1.6758	.1703	-.4773	-.0030	-.0001	-.0018	9.84	.651
.205	2.88 (60.11)	-.01	8.46	1.8916	.1996	-.5356	-.0045	-.0003	-.0015	9.48	.685
.205	2.88 (60.10)	-.00	10.52	2.1103	.2336	-.5812	-.0079	-.0014	-.0014	9.04	.685
.205	2.87 (60.01)	-.00	12.66	2.3288	.2755	-.6097	-.0068	-.0015	-.0001	8.45	.684
.204	2.86 (59.78)	.00	14.59	2.4766	.3170	-.6372	-.0110	-.0026	.0001	7.81	.685
.205	2.88 (60.11)	.02	16.62	2.5396	.3566	-.6952	-.0081	-.0044	.0018	7.12	.684
.205	2.88 (60.25)	.01	18.71	2.5248	.4235	-.7277	.0023	.0007	-.0103	5.96	.684
.205	2.89 (60.27)	.06	20.62	2.6090	.5058	-.7714	-.0106	-.0085	-.0090	5.16	.685
.205	2.88 (60.06)	.03	22.64	2.7017	.5935	-.8245	-.0032	-.0011	-.0064	4.55	.685

RUN NUMBER 75 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.49)	5.01	-3.96	.1528	.1291	-.0449	-.0102	.0169	-.1326	1.18	.424
.205	2.88 (60.22)	5.01	-1.91	.5105	.1102	-.1801	-.0118	.0148	-.1220	4.63	.469
.206	2.90 (60.58)	5.01	-1.88	.5496	.1072	-.1821	-.0136	.0144	-.1212	5.13	.469
.206	2.90 (60.52)	5.01	.23	.8858	.1068	-.2882	-.0175	.0122	-.1161	8.29	.515
.206	2.90 (60.53)	5.01	2.30	1.1724	.1190	-.3718	-.0200	.0100	-.1049	9.85	.560
.206	2.90 (60.56)	5.02	4.41	1.4248	.1388	-.4506	-.0220	.0091	-.0991	10.27	.607
.206	2.90 (60.53)	5.03	6.37	1.6458	.1631	-.5246	-.0246	.0087	-.0984	10.09	.651
.205	2.90 (60.48)	5.05	8.44	1.8855	.1949	-.5723	-.0283	.0096	-.1081	9.68	.685
.205	2.89 (60.39)	5.06	10.54	2.1056	.2290	-.6145	-.0311	.0098	-.1089	9.20	.685
.205	2.89 (60.33)	5.07	12.58	2.3001	.2688	-.6512	-.0342	.0089	-.1071	8.56	.685
.205	2.89 (60.33)	5.10	14.63	2.4519	.3096	-.6760	-.0371	.0085	-.1091	7.92	.685
.206	2.90 (60.52)	5.17	16.64	2.5326	.3587	-.6644	-.0420	.0071	-.1130	7.06	.684
.205	2.89 (60.40)	5.20	18.61	2.5820	.4090	-.7090	-.0352	.0106	-.1222	6.31	.685
.205	2.89 (60.41)	5.24	20.67	2.6117	.4909	-.6983	-.0234	.0146	-.1213	5.32	.685
.205	2.88 (60.18)	5.36	22.66	2.5788	.5712	-.6733	-.0491	.0067	-.1157	4.51	.685

RUN NUMBER 76 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.116	.96 (20.15)	-.02	-3.95	.1724	.1366	-.3149	.0030	.0013	-.0141	1.26	.426
.116	.97 (20.23)	-.01	-1.84	.5806	.1156	-.4214	.0031	.0015	-.0145	5.02	.473
.116	.96 (20.12)	.00	.28	1.0084	.1176	-.5417	.0020	.0009	-.0134	8.57	.521
.116	.96 (20.13)	.01	2.34	1.2954	.1340	-.5541	-.0013	.0006	-.0118	9.67	.569
.116	.96 (20.15)	.03	4.41	1.5405	.1562	-.5333	-.0009	.0009	-.0141	9.86	.618
.116	.96 (20.13)	.04	6.44	1.7613	.1776	-.5031	-.0002	.0010	-.0145	9.92	.665
.116	.97 (20.23)	.05	8.47	1.9516	.2076	-.4703	-.0011	.0001	-.0121	9.40	.685
.117	.97 (20.25)	.07	10.52	2.1482	.2353	-.4244	-.0028	-.0004	-.0141	9.13	.685
.116	.96 (20.10)	.08	12.62	2.3461	.2679	-.3755	-.0013	.0003	-.0112	8.76	.684
.116	.96 (20.04)	.09	14.61	2.4733	.3042	-.3204	-.0006	-.0009	-.0083	8.13	.685
.116	.96 (20.05)	.09	16.62	2.5592	.3328	-.2388	.0046	.0006	-.0058	7.69	.684
.116	.96 (20.06)	.08	18.64	2.6030	.3747	-.1621	.0166	.0054	-.0066	6.95	.685
.116	.97 (20.19)	.09	20.62	2.6395	.4221	-.0874	.0197	.0072	-.0123	6.25	.684
.116	.96 (20.13)	.11	22.59	2.5391	.5161	-.0930	.0187	.0112	.0049	4.92	.685

APPENDIX A

RUN NUMBER 77 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.165	1.92 (40.18)	-.02	-3.95	.1858	.1365	-.3251	.0008	.0004	-.0084	1.36	.426
.165	1.93 (40.23)	-.01	-1.84	.6222	.1146	-.4511	.0093	.0003	-.0057	5.43	.472
.165	1.92 (40.15)	.00	.32	1.0480	.1179	-.5494	.0018	.0008	-.0104	8.89	.519
.165	1.93 (40.26)	.01	2.38	1.3291	.1323	-.5579	-.0002	.0007	-.0094	10.04	.566
.165	1.93 (40.22)	.02	4.38	1.5556	.1530	-.5357	-.0010	.0008	-.0097	10.17	.611
.165	1.92 (40.14)	.03	6.47	1.7763	.1781	-.5035	-.0013	.0004	-.0096	9.97	.659
.165	1.93 (40.23)	.04	8.56	1.9743	.2071	-.4735	-.0003	.0003	-.0081	9.53	.685
.165	1.92 (40.17)	.05	10.54	2.1659	.2365	-.4337	-.0014	-.0005	-.0076	9.16	.684
.165	1.92 (40.08)	.06	12.63	2.3508	.2709	-.3798	-.0018	-.0008	-.0071	8.68	.685
.165	1.93 (40.26)	.08	14.64	2.4917	.3050	-.3234	-.0012	-.0013	-.0051	8.17	.685
.165	1.92 (40.16)	.08	16.62	2.5659	.3391	-.2477	.0054	.0009	-.0058	7.57	.685
.165	1.92 (40.20)	.05	18.66	2.5980	.3843	-.1747	.0234	.0096	-.0121	6.76	.685
.165	1.94 (40.43)	.04	20.63	2.6623	.4323	-.0997	.0295	.0137	-.0126	6.16	.685
.165	1.93 (40.31)	-.01	22.61	2.6121	.5070	-.0974	.0236	.0139	.0070	5.15	.685

RUN NUMBER 78 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.52)	-.01	-3.94	.2266	.1330	-.3427	.0069	.0002	.0002	1.70	.425
.203	2.88 (60.17)	-.01	-1.81	.7080	.1121	-.4956	.0066	.0011	-.0019	6.32	.470
.203	2.88 (60.20)	-.01	.26	1.0512	.1177	-.5530	.0013	.0007	-.0024	8.93	.515
.203	2.88 (60.09)	-.01	2.37	1.3343	.1324	-.5663	-.0009	.0004	-.0006	10.08	.561
.203	2.90 (60.55)	-.00	4.39	1.5541	.1524	-.5402	-.0004	.0010	-.0023	10.20	.605
.203	2.89 (60.44)	-.00	6.45	1.7558	.1778	-.5087	-.0023	-.0002	.0000	9.88	.651
.203	2.88 (60.18)	.00	8.48	1.9572	.2048	-.4757	-.0009	-.0000	.0017	9.56	.686
.203	2.89 (60.29)	.01	10.56	2.1520	.2344	-.4338	-.0017	-.0007	.0039	9.18	.685
.203	2.89 (60.26)	.02	12.55	2.3416	.2674	-.3872	-.0031	-.0007	.0011	8.76	.686
.203	2.90 (60.51)	.02	14.62	2.4941	.3040	-.3279	-.0037	-.0015	.0045	8.20	.685
.203	2.89 (60.39)	.02	16.62	2.5749	.3348	-.2490	.0024	-.0003	.0034	7.69	.685
.203	2.89 (60.29)	-.01	18.63	2.5819	.3824	-.1888	.0153	.0061	.0034	6.75	.685
.203	2.87 (60.04)	-.06	20.58	2.5593	.4424	-.1649	.0145	.0084	.0163	5.79	.685
.203	2.90 (60.53)	-.02	22.60	2.5497	.5260	-.0923	.0070	.0061	.0211	4.85	.685

RUN NUMBER 79 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.37)	.01	-3.98	.1856	.1193	-.3312	.0067	.0014	-.0105	1.56	.425
.203	2.89 (60.33)	.01	-1.81	.6931	.0964	-.4923	.0073	.0011	-.0069	7.19	.470
.203	2.88 (60.18)	-.00	.28	1.0679	.1012	-.5604	.0027	.0010	-.0073	10.55	.514
.203	2.88 (60.15)	-.00	2.33	1.3318	.1180	-.5699	.0000	.0008	-.0066	11.28	.559
.203	2.87 (60.01)	-.01	4.43	1.5713	.1387	-.5416	-.0005	.0007	-.0064	11.33	.605
.203	2.90 (60.55)	-.01	6.48	1.7856	.1636	-.5078	-.0008	.0005	-.0075	10.91	.651
.203	2.89 (60.30)	-.01	8.52	1.9831	.1932	-.4740	-.0017	-.0003	-.0061	10.26	.685
.203	2.89 (60.29)	-.01	10.57	2.1771	.2240	-.4328	-.0026	-.0014	-.0024	9.72	.685
.203	2.89 (60.28)	-.01	12.61	2.3518	.2594	-.3854	-.0053	-.0021	-.0025	9.07	.685
.203	2.88 (60.24)	-.01	14.62	2.4986	.2946	-.3321	-.0053	-.0028	-.0002	8.48	.685
.203	2.88 (60.15)	-.01	16.62	2.5640	.3292	-.2668	-.0024	-.0024	-.0002	7.79	.685
.203	2.90 (60.52)	-.01	18.64	2.5614	.3751	-.2112	.0037	.0012	-.0002	6.83	.685
.203	2.88 (60.17)	-.03	20.65	2.6300	.4292	-.1589	.0088	.0058	-.0017	6.13	.684
.202	2.87 (59.98)	-.09	22.61	2.6213	.5076	-.1210	.0200	.0172	.0018	5.16	.684

RUN NUMBER 80 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.42)	.01	-4.06	-.1614	.2306	.7449	.0035	.0007	-.0151	-.70	.418
.203	2.89 (60.44)	.01	-1.94	.2923	.1907	.5642	.0053	.0002	-.0086	1.53	.463
.203	2.89 (60.30)	.00	.16	.7055	.1747	.4405	.0023	.0004	-.0089	4.04	.507
.203	2.89 (60.40)	-.00	2.28	1.0004	.1724	.3756	.0020	.0007	-.0077	5.80	.553
.204	2.90 (60.59)	-.01	4.34	1.2617	.1754	.3302	.0017	.0010	-.0070	7.19	.599
.203	2.90 (60.49)	-.01	6.39	1.4939	.1863	.2728	.0021	.0014	-.0063	8.02	.646
.203	2.89 (60.34)	-.01	8.46	1.7348	.2028	.1806	.0001	.0003	-.0085	8.55	.684
.203	2.90 (60.46)	-.01	10.49	1.9584	.2288	.1262	-.0010	.0000	-.0061	8.56	.684
.203	2.89 (60.35)	-.01	12.54	2.1751	.2621	.1032	-.0030	-.0006	-.0056	8.30	.686
.203	2.88 (60.15)	-.01	14.52	2.3537	.2961	.0727	-.0032	-.0011	-.0045	7.95	.685
.203	2.88 (60.14)	-.02	16.56	2.4720	.3254	.0548	.0036	.0002	-.0055	7.60	.685
.203	2.89 (60.28)	-.07	18.59	2.4994	.3750	.0122	.0196	.0086	-.0090	6.67	.685
.203	2.88 (60.20)	-.07	20.63	2.5218	.4379	-.1070	.0173	.0097	-.0017	5.76	.685
.203	2.89 (60.30)	-.06	22.55	2.5587	.5242	-.1832	.0133	.0081	-.0071	4.88	.685

APPENDIX A

RUN NUMBER 81 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.41)	.01	-4.02	-.0889	.1825	.5798	.0037	.0013	-.0170	-.49	.419
.204	2.90 (60.62)	.01	-1.87	.3680	.1433	.3835	.0051	.0010	-.0116	2.57	.464
.203	2.89 (60.30)	-.00	.22	.7949	.1310	.2104	.0033	.0019	-.0102	6.07	.509
.203	2.89 (60.35)	-.00	2.29	1.0989	.1373	.0940	.0006	.0002	-.0067	8.00	.555
.203	2.89 (60.32)	-.01	4.37	1.3624	.1537	.0198	.0014	.0008	-.0070	8.87	.602
.203	2.88 (60.14)	-.01	6.39	1.6072	.1745	-.0519	-.0009	.0001	-.0081	9.21	.647
.203	2.89 (60.33)	-.01	8.50	1.8466	.2004	-.1206	-.0005	.0003	-.0070	9.21	.684
.203	2.88 (60.15)	-.01	10.54	2.0704	.2304	-.1707	-.0005	.0002	-.0051	8.99	.685
.203	2.89 (60.46)	-.01	12.56	2.2767	.2667	-.1936	-.0031	-.0005	-.0062	8.54	.685
.203	2.88 (60.22)	-.00	14.60	2.4589	.3024	-.2179	-.0031	-.0008	-.0056	8.13	.684
.203	2.88 (60.21)	-.02	16.59	2.5593	.3366	-.2279	.0042	.0002	-.0057	7.60	.685
.203	2.89 (60.39)	-.05	18.55	2.5299	.3898	-.2866	.0141	.0063	-.0043	6.49	.686
.203	2.89 (60.34)	-.04	20.65	2.5900	.4571	-.4205	.0106	.0055	-.0103	5.67	.685
.203	2.90 (60.47)	-.02	22.63	2.6212	.5472	-.3940	.0069	.0028	-.0108	4.79	.684

RUN NUMBER 82 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.63)	.00	-3.98	.0092	.1481	.2700	.0060	.0008	-.0126	.06	.421
.203	2.90 (60.47)	.00	-1.90	.4768	.1223	.0479	.0077	.0010	-.0115	3.90	.465
.203	2.89 (60.29)	-.00	.25	.9091	.1204	-.1146	.0023	.0006	-.0104	7.55	.512
.203	2.88 (60.17)	-.00	2.33	1.2318	.1312	-.2185	.0038	.0012	-.0098	9.39	.557
.203	2.89 (60.44)	-.00	4.41	1.4661	.1529	-.2826	.0009	.0008	-.0088	9.59	.603
.203	2.88 (60.25)	.00	6.46	1.7042	.1774	-.3455	.0007	.0004	-.0061	9.60	.650
.203	2.89 (60.26)	.00	8.48	1.9370	.2042	-.4035	.0004	.0008	-.0063	9.49	.684
.203	2.88 (60.19)	.00	10.55	2.1537	.2375	-.4531	-.0016	.0004	-.0057	9.07	.685
.203	2.88 (60.09)	.01	12.61	2.3664	.2767	-.4779	-.0032	-.0001	-.0063	8.55	.685
.202	2.87 (59.98)	.01	14.61	2.5417	.3152	-.5050	-.0032	-.0011	-.0048	8.06	.685
.203	2.89 (60.41)	.01	16.64	2.6222	.3535	-.5546	.0016	-.0000	-.0079	7.42	.684
.203	2.89 (60.43)	.00	18.61	2.5905	.4074	-.5812	.0079	.0034	-.0054	6.36	.685
.203	2.88 (60.14)	-.03	20.63	2.6669	.4798	-.6932	.0094	.0050	-.0132	5.56	.683
.203	2.87 (60.04)	-.08	22.64	2.7355	.5631	-.7053	.0175	.0130	-.0039	4.86	.685

RUN NUMBER 83 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.202	2.87 (59.95)	.01	-3.98	.1075	.1395	-.0151	.0030	.0016	-.0183	.77	.423
.203	2.90 (60.47)	.01	-1.89	.5751	.1175	-.2368	.0049	.0012	-.0125	4.89	.467
.203	2.90 (60.48)	.00	.25	.9999	.1188	-.3971	.0008	.0007	-.0113	8.41	.513
.203	2.88 (60.18)	-.00	2.35	1.3140	.1334	-.5037	.0013	.0008	-.0077	9.85	.559
.203	2.88 (60.21)	-.01	4.42	1.5662	.1558	-.5722	.0008	.0015	-.0098	10.05	.605
.203	2.88 (60.18)	-.01	6.45	1.7975	.1831	-.6330	-.0014	.0004	-.0071	9.82	.651
.203	2.88 (60.19)	-.01	8.58	2.0389	.2154	-.6948	-.0022	.0001	-.0062	9.46	.685
.203	2.88 (60.19)	-.00	10.56	2.2510	.2506	-.7412	-.0033	.0004	-.0075	8.98	.685
.203	2.88 (60.11)	.00	12.66	2.4717	.2924	-.7729	-.0059	-.0009	-.0049	8.45	.684
.203	2.89 (60.27)	.00	14.67	2.6445	.3340	-.8045	-.0046	-.0006	-.0067	7.92	.683
.203	2.88 (60.18)	.00	16.66	2.7151	.3773	-.8484	-.0030	-.0002	-.0100	7.20	.685
.203	2.88 (60.24)	-.00	18.58	2.7110	.4385	-.8824	.0021	.0019	-.0163	6.18	.691
.203	2.88 (60.05)	.02	20.67	2.8153	.5163	-.9354	-.0041	-.0013	-.0080	5.45	.685
.204	2.91 (60.74)	.01	22.69	2.7937	.6326	-.9195	.0017	.0049	-.0091	4.42	.684

RUN NUMBER 84 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.28)	.01	-3.93	.2158	.1372	-.3292	.0050	.0012	-.0160	1.57	.425
.203	2.90 (60.48)	.01	-1.79	.7042	.1181	-.5585	.0071	.0013	-.0114	5.96	.471
.203	2.89 (60.39)	-.00	.31	1.1131	.1232	-.7061	.0020	.0006	-.0098	9.03	.516
.203	2.89 (60.33)	-.00	2.38	1.4029	.1435	-.8062	.0001	.0007	-.0083	9.78	.561
.203	2.88 (60.17)	-.01	4.47	1.6732	.1682	-.8803	.0001	.0012	-.0085	9.95	.607
.203	2.88 (60.16)	-.01	6.54	1.9201	.1979	-.9362	-.0016	.0008	-.0092	9.70	.654
.203	2.88 (60.14)	-.01	8.59	2.1517	.2325	-.9912	-.0014	.0007	-.0080	9.25	.701
.203	2.90 (60.49)	-.00	10.60	2.3592	.2711	-1.0270	-.0043	.0000	-.0073	8.70	.686
.203	2.89 (60.29)	.00	12.68	2.5781	.3158	-1.0588	-.0057	-.0004	-.0082	8.16	.684
.203	2.88 (60.21)	.00	14.66	2.7325	.3594	-1.0710	-.0049	-.0006	-.0081	7.60	.684
.203	2.88 (60.13)	-.01	16.56	2.8070	.4006	-1.0623	.0003	.0007	-.0142	7.01	.683
.203	2.90 (60.56)	-.03	18.81	2.8400	.4750	-1.0406	.0083	.0064	-.0296	5.98	.684
.203	2.89 (60.42)	-.01	20.78	2.8379	.5623	-1.1394	.0001	.0024	-.0151	5.05	.683
.203	2.89 (60.46)	-.07	22.75	2.8923	.6685	-1.1366	.0164	.0190	-.0182	4.33	.685

APPENDIX A

RUN NUMBER 86 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.26)	.01	-3.90	.3473	.1436	-.6958	.0061	.0006	-.0129	2.42	.428
.203	2.89 (60.30)	.00	-1.71	.8802	.1265	-.9414	.0044	.0007	-.0108	6.96	.473
.203	2.88 (60.23)	-.00	.34	1.2392	.1389	-1.0762	.0030	.0008	-.0091	8.92	.518
.203	2.87 (60.04)	-.00	2.44	1.5343	.1615	-1.1719	.0002	.0004	-.0079	9.50	.565
.203	2.89 (60.41)	-.01	4.50	1.7831	.1899	-1.2263	.0013	.0006	-.0048	9.39	.610
.203	2.89 (60.40)	-.01	6.53	2.0031	.2248	-1.2678	-.0023	-.0005	-.0048	8.91	.656
.203	2.89 (60.29)	-.01	8.59	2.2372	.2620	-1.3163	-.0032	-.0016	-.0040	8.54	.685
.203	2.88 (60.15)	-.01	10.65	2.4438	.3130	-1.3388	-.0048	-.0002	-.0067	7.81	.710
.203	2.89 (60.44)	-.00	12.62	2.6408	.3612	-1.3337	-.0051	-.0003	-.0074	7.31	.685
.203	2.89 (60.32)	-.00	14.69	2.7891	.4123	-1.2978	-.0056	-.0010	-.0070	6.76	.686
.203	2.89 (60.34)	-.01	16.72	2.8400	.4560	-1.2111	.0001	.0006	-.0129	6.23	.685
.203	2.88 (60.12)	-.01	18.77	2.8097	.5276	-1.2087	.0045	.0027	-.0176	5.33	.695
.203	2.89 (60.39)	.03	20.77	2.8718	.6156	-1.3001	.0004	.0018	-.0149	4.66	.686
.204	2.91 (60.72)	.06	22.70	2.8702	.7321	-1.2509	.0004	.0071	-.0155	3.92	.685

RUN NUMBER 87 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.52)	-9.99	-3.95	.1694	.1107	-.2007	.0052	-.0321	.2496	1.53	.425
.204	2.90 (60.59)	-9.99	-1.80	.6475	.0906	-.4029	.0260	-.0293	.2332	7.15	.471
.203	2.89 (60.43)	-10.00	.27	1.0186	.0943	-.4848	.0375	-.0241	.2094	10.80	.516
.203	2.88 (60.12)	-10.02	2.37	1.3173	.1094	-.5616	.0445	-.0209	.2015	12.04	.562
.203	2.89 (60.26)	-10.03	4.42	1.5706	.1320	-.6284	.0475	-.0195	.1996	11.90	.607
.203	2.88 (60.20)	-10.05	6.48	1.8162	.1610	-.6972	.0481	-.0201	.2020	11.28	.654
.203	2.88 (60.21)	-10.07	8.54	2.0657	.1952	-.7656	.0505	-.0203	.2057	10.58	.686
.203	2.89 (60.30)	-10.09	10.61	2.2831	.2326	-.8165	.0527	-.0189	.2038	9.82	.688
.203	2.89 (60.29)	-10.11	12.59	2.4570	.2726	-.8423	.0511	-.0196	.2030	9.01	.687
.203	2.88 (60.14)	-10.13	14.62	2.6314	.3142	-.8360	.0547	-.0195	.2034	8.37	.686
.203	2.89 (60.33)	-10.18	16.64	2.6760	.3741	-.8238	.0697	-.0168	.1955	7.15	.692
.203	2.89 (60.43)	-10.23	18.70	2.7697	.4337	-.8626	.0755	-.0165	.1916	6.39	.687
.204	2.90 (60.57)	-10.34	20.65	2.7950	.4958	-.8344	.0883	-.0134	.1962	5.64	.685
.204	2.91 (60.69)	-10.43	22.65	2.8110	.5713	-.7904	.1104	.0025	.1783	4.92	.688

RUN NUMBER 88 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.37)	-4.96	-3.92	.1369	.1322	-.0667	.0079	-.0152	.1210	1.04	.425
.203	2.89 (60.29)	-4.97	-1.77	.6498	.1093	-.3077	.0173	-.0141	.1159	5.95	.471
.203	2.89 (60.31)	-4.99	.27	1.0187	.1124	-.4315	.0200	-.0120	.1099	9.06	.515
.203	2.88 (60.22)	-5.01	2.36	1.3295	.1269	-.5282	.0222	-.0095	.1016	10.47	.561
.203	2.88 (60.12)	-5.03	4.43	1.5850	.1483	-.6028	.0247	-.0085	.0977	10.69	.607
.203	2.88 (60.17)	-5.04	6.45	1.8050	.1787	-.6647	.0240	-.0090	.0989	10.10	.653
.203	2.88 (60.16)	-5.06	8.51	2.0526	.2111	-.7372	.0234	-.0111	.1072	9.72	.700
.203	2.89 (60.32)	-5.07	10.56	2.2695	.2470	-.7906	.0234	-.0116	.1078	9.19	.688
.203	2.88 (60.11)	-5.09	12.61	2.4582	.2872	-.8218	.0246	-.0118	.1059	8.56	.688
.203	2.88 (60.18)	-5.10	14.61	2.5981	.3276	-.8265	.0260	-.0125	.1024	7.93	.684
.203	2.88 (60.22)	-5.14	16.66	2.6803	.3771	-.8193	.0372	-.0092	.0932	7.11	.687
.203	2.89 (60.36)	-5.18	18.70	2.7557	.4461	-.8545	.0480	-.0054	.0855	6.18	.686
.203	2.88 (60.20)	-5.18	20.76	2.9134	.5097	-.8901	.0427	-.0074	.0787	5.72	.688
.203	2.89 (60.33)	-5.22	22.71	2.9085	.5825	-.8807	.0521	-.0066	.0806	4.99	.689

RUN NUMBER 89 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.31)	.03	-3.95	.1231	.1379	-.0275	.0054	.0010	-.0078	.89	.423
.203	2.88 (60.16)	.01	-.67	.8587	.1145	-.3573	.0030	.0010	-.0062	7.50	.493
.203	2.88 (60.18)	.01	.30	1.0238	.1182	-.4132	.0015	.0008	-.0052	8.66	.514
.203	2.88 (60.16)	.00	2.39	1.3291	.1335	-.5141	.0028	.0009	-.0013	9.95	.560
.202	2.87 (59.99)	-.00	4.40	1.5705	.1556	-.5777	-.0009	.0010	-.0047	10.09	.605
.203	2.90 (60.56)	-.01	6.45	1.7985	.1834	-.6370	-.0020	.0002	-.0024	9.80	.651
.203	2.89 (60.42)	-.02	8.54	2.0389	.2150	-.7017	-.0009	.0011	-.0038	9.48	.698
.203	2.89 (60.42)	-.02	10.53	2.2529	.2495	-.7452	-.0034	-.0002	-.0005	9.03	.685
.203	2.89 (60.36)	-.02	12.59	2.4622	.2925	-.7733	-.0045	-.0001	-.0028	8.42	.686
.203	2.88 (60.21)	-.02	14.65	2.6371	.3342	-.8109	-.0048	-.0010	-.0033	7.89	.688
.203	2.89 (60.34)	-.03	16.69	2.7088	.3787	-.8502	-.0013	.0002	-.0084	7.15	.690
.203	2.88 (60.21)	-.03	18.49	2.6902	.4374	-.8744	.0040	.0025	-.0110	6.15	.686
.204	2.90 (60.62)	-.00	20.76	2.8044	.5285	-.9591	-.0005	.0003	-.0129	5.31	.689
.204	2.90 (60.62)	-.06	22.69	2.8415	.6146	-.9285	.0170	.0134	-.0196	4.62	.686

APPENDIX A

RUN NUMBER 90 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.49)	5.02	-3.95	.1711	.1283	-.0710	-.0027	.0170	-.1366	1.33	.423
.203	2.90 (60.49)	5.03	-1.83	.6579	.1069	-.3073	-.0062	.0153	-.1271	6.16	.469
.203	2.89 (60.45)	5.03	.27	1.0120	.1110	-.4349	-.0185	.0125	-.1225	9.12	.515
.203	2.89 (60.36)	5.04	2.38	1.3046	.1269	-.5301	-.0229	.0102	-.1125	10.28	.561
.203	2.89 (60.41)	5.05	4.39	1.5467	.1485	-.6098	-.0253	.0096	-.1082	10.42	.607
.203	2.89 (60.31)	5.06	6.40	1.7727	.1760	-.6821	-.0284	.0095	-.1103	10.07	.653
.203	2.88 (60.18)	5.08	8.50	2.0270	.2100	-.7348	-.0300	.0107	-.1177	9.65	.699
.203	2.89 (60.27)	5.10	10.53	2.2428	.2444	-.7786	-.0327	.0107	-.1171	9.18	.687
.203	2.88 (60.22)	5.11	12.58	2.4483	.2855	-.8166	-.0325	.0115	-.1186	8.58	.686
.203	2.88 (60.10)	5.13	14.71	2.5984	.3316	-.8314	-.0358	.0110	-.1183	7.84	.683
.203	2.89 (60.36)	5.17	16.65	2.6636	.3783	-.8376	-.0455	.0070	-.1157	7.04	.680
.203	2.88 (60.23)	5.20	18.64	2.7626	.4304	-.8275	-.0440	.0080	-.1127	6.42	.687
.203	2.89 (60.41)	5.19	20.63	2.7626	.5230	-.7914	-.0166	.0297	-.1177	5.28	.690
.203	2.90 (60.50)	5.40	22.64	2.6595	.6190	-.8299	-.0530	.0048	-.1192	4.30	.684

RUN NUMBER 91 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.199	2.77 (57.80)	.00	.31	1.0745	.1056	-.4406	.0059	.0014	.0067	10.17	.019
.203	2.89 (60.46)	.00	.32	1.0689	.1076	-.4384	.0065	.0012	.0091	9.93	.024
.203	2.87 (60.01)	.00	.28	1.0456	.1116	-.4284	.0045	.0017	.0022	9.37	.074
.203	2.89 (60.40)	.00	.29	1.0299	.1146	-.4205	.0031	.0012	-.0022	8.99	.123
.203	2.88 (60.25)	.00	.29	1.0292	.1153	-.4135	.0026	.0017	-.0060	8.92	.172
.203	2.88 (60.19)	.00	.27	1.0079	.1173	-.4073	.0010	.0008	-.0068	8.59	.225
.203	2.88 (60.07)	.00	.27	.9931	.1194	-.3976	.0027	.0010	-.0086	8.32	.322
.203	2.89 (60.29)	.00	.27	1.0004	.1188	-.3986	.0031	.0016	-.0119	8.42	.422
.203	2.89 (60.29)	.00	.26	.9952	.1195	-.3964	.0018	.0013	-.0129	8.33	.513

RUN NUMBER 92 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.64)	.01	2.37	1.3605	.1173	-.5495	.0064	.0015	.0068	11.60	.018
.203	2.89 (60.44)	.01	2.36	1.3623	.1182	-.5509	.0036	.0004	.0084	11.53	.022
.203	2.88 (60.07)	.01	2.36	1.3516	.1232	-.5413	.0049	.0018	.0014	10.97	.073
.203	2.88 (60.15)	.01	2.34	1.3272	.1269	-.5226	.0025	.0011	.0012	10.46	.122
.203	2.89 (60.29)	.01	2.35	1.3282	.1284	-.5180	.0025	.0016	-.0046	10.34	.171
.203	2.89 (60.34)	.01	2.34	1.3096	.1305	-.5087	.0009	.0009	-.0060	10.03	.222
.203	2.89 (60.44)	.01	2.34	1.3007	.1330	-.5002	.0015	.0006	-.0076	9.78	.321
.203	2.89 (60.40)	.01	2.33	1.2880	.1343	-.4914	-.0006	.0010	-.0115	9.59	.419
.203	2.89 (60.33)	.01	2.35	1.3099	.1334	-.5023	.0002	.0012	-.0092	9.82	.559

RUN NUMBER 93 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.52)	.02	4.41	1.5958	.1423	-.6198	.0044	.0007	.0064	11.21	.071
.203	2.89 (60.39)	.02	4.40	1.5742	.1465	-.6018	.0020	.0008	.0008	10.74	.118
.203	2.87 (60.02)	.02	4.40	1.5644	.1494	-.5833	.0017	.0009	-.0015	10.47	.169
.203	2.88 (60.23)	.02	4.40	1.5496	.1528	-.5735	.0006	.0010	-.0040	10.14	.221
.203	2.88 (60.08)	.02	4.39	1.5455	.1545	-.5669	-.0016	.0008	-.0074	10.00	.317
.203	2.90 (60.51)	.02	4.41	1.5408	.1564	-.5623	-.0001	.0006	-.0089	9.85	.418
.203	2.89 (60.43)	.02	4.41	1.5461	.1577	-.5645	-.0016	.0012	-.0108	9.80	.604

APPENDIX A

RUN NUMBER 94 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.35)	.03	6.44	1.7957	.1716	-.6715	.0011	-.0000	.0050	10.46	.119
.203	2.88 (60.17)	.03	6.43	1.7743	.1762	-.6501	.0003	-.0004	.0053	10.07	.168
.202	2.87 (59.97)	.03	6.45	1.7759	.1785	-.6419	-.0004	-.0009	.0003	9.95	.217
.203	2.89 (60.32)	.03	6.46	1.7758	.1798	-.6296	-.0008	-.0003	-.0026	9.87	.317
.203	2.88 (60.22)	.03	6.46	1.7709	.1823	-.6225	-.0006	-.0000	-.0044	9.71	.419
.203	2.89 (60.43)	.03	6.44	1.7880	.1822	-.6283	-.0011	.0006	-.0057	9.81	.602

RUN NUMBER 95 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.47)	-.02	-3.99	.0792	.1414	-.0009	-.0034	.0011	-.0201	.56	.423
.203	2.88 (60.05)	-.01	-1.82	.6000	.1152	-.2528	-.0027	.0014	-.0180	5.21	.469
.203	2.89 (60.33)	.00	.28	.9964	.1184	-.4054	-.0043	.0010	-.0163	8.41	.515
.203	2.89 (60.38)	.01	2.39	1.3158	.1330	-.5113	-.0038	.0009	-.0140	9.89	.560
.203	2.89 (60.42)	.02	4.43	1.5589	.1558	-.5737	-.0034	.0012	-.0113	10.00	.606
.203	2.89 (60.33)	.04	6.45	1.8023	.1818	-.6340	-.0053	.0002	-.0093	9.92	.651
.203	2.88 (60.19)	.05	8.54	2.0349	.2140	-.6909	-.0065	-.0003	-.0097	9.51	.692
.203	2.88 (60.12)	.07	10.62	2.2595	.2519	-.7386	-.0076	-.0009	-.0076	8.97	.685
.203	2.88 (60.25)	.08	12.59	2.4791	.2910	-.7706	-.0081	-.0006	-.0076	8.52	.686
.203	2.89 (60.27)	.09	14.63	2.6470	.3334	-.7795	-.0051	-.0008	-.0054	7.94	.687
.203	2.89 (60.29)	.09	16.65	2.7517	.3762	-.7577	.0001	-.0001	-.0072	7.31	.686
.203	2.89 (60.33)	.05	18.67	2.8155	.4247	-.7190	.0131	.0061	-.0092	6.63	.685
.203	2.89 (60.28)	-.04	20.65	2.8127	.5016	-.8000	.0101	.0059	.0142	5.61	.686
.203	2.89 (60.34)	-.12	22.63	2.8623	.5886	-.8715	.0222	.0158	.0154	4.86	.688

RUN NUMBER 96 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.42)	.00	-3.96	.0869	.1409	.0058	-.0074	.0011	-.0189	.62	.424
.203	2.88 (60.24)	.00	-1.85	.5539	.1168	-.2271	-.0083	.0020	-.0201	4.74	.469
.203	2.89 (60.30)	-.00	.30	.9846	.1176	-.3928	-.0075	.0015	-.0185	8.38	.515
.203	2.89 (60.31)	-.00	2.38	1.2837	.1335	-.4973	-.0082	.0009	-.0167	9.61	.561
.203	2.88 (60.11)	-.00	4.42	1.5373	.1557	-.5634	-.0090	.0010	-.0143	9.88	.606
.203	2.89 (60.40)	-.00	6.47	1.7851	.1813	-.6262	-.0102	.0002	-.0134	9.85	.652
.203	2.89 (60.30)	.00	8.52	2.0034	.2141	-.6793	-.0115	-.0005	-.0136	9.36	.683
.203	2.88 (60.21)	.01	10.54	2.2203	.2510	-.7252	-.0124	-.0006	-.0139	8.84	.686
.203	2.88 (60.05)	.01	12.64	2.4580	.2911	-.7599	-.0121	-.0007	-.0135	8.44	.687
.203	2.89 (60.35)	.01	14.68	2.6273	.3342	-.7672	-.0097	-.0010	-.0125	7.86	.686
.203	2.90 (60.54)	.00	16.71	2.7354	.3773	-.7472	-.0033	-.0005	-.0123	7.25	.689
.203	2.89 (60.40)	-.05	18.66	2.7699	.4292	-.7215	.0169	.0079	-.0150	6.45	.688
.204	2.91 (60.68)	-.07	20.65	2.7757	.5031	-.8011	.0154	.0093	-.0014	5.52	.686
.203	2.89 (60.40)	-.13	22.60	2.8490	.5894	-.8837	.0266	.0192	-.0006	4.83	.689

RUN NUMBER 97 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.61)	-.00	-3.99	.0401	.1475	.0227	-.0152	.0002	-.0189	.27	.423
.203	2.90 (60.55)	-.00	-1.86	.5251	.1179	-.1927	-.0249	.0010	-.0255	4.45	.468
.203	2.89 (60.39)	.00	.27	.9478	.1183	-.3698	-.0172	.0007	-.0182	8.01	.514
.203	2.89 (60.27)	.00	2.33	1.2400	.1339	-.4699	-.0195	-.0000	-.0186	9.26	.560
.203	2.88 (60.23)	.00	4.37	1.5044	.1544	-.5384	-.0180	.0003	-.0178	9.74	.605
.203	2.89 (60.36)	.01	6.44	1.7385	.1816	-.5919	-.0196	-.0005	-.0193	9.57	.651
.203	2.89 (60.37)	.01	8.51	1.9763	.2126	-.6564	-.0207	-.0017	-.0158	9.30	.698
.203	2.88 (60.24)	.02	10.54	2.1968	.2473	-.7026	-.0204	-.0017	-.0150	8.88	.685
.203	2.89 (60.39)	.03	12.63	2.4252	.2880	-.7349	-.0205	-.0025	-.0133	8.42	.684
.203	2.88 (60.07)	.03	14.69	2.5964	.3317	-.7419	-.0166	-.0025	-.0119	7.83	.684
.203	2.89 (60.32)	.02	16.71	2.7113	.3755	-.7284	-.0103	-.0021	-.0142	7.22	.685
.203	2.89 (60.37)	-.05	18.69	2.7418	.4267	-.6900	.0134	.0087	-.0183	6.43	.685
.203	2.89 (60.35)	-.05	20.67	2.7594	.5000	-.7862	.0085	.0074	-.0023	5.52	.686
.204	2.90 (60.60)	-.10	22.70	2.8292	.5925	-.8908	.0204	.0166	-.0030	4.78	.685

APPENDIX A

RUN NUMBER 98 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.32)	-.00	-4.01	.0091	.1518	.0446	-.0205	-.0007	-.0243	.06	.423
.203	2.88 (60.19)	-.00	-1.88	.4506	.1244	-.1520	-.0294	-.0001	-.0245	3.62	.469
.204	2.90 (60.58)	.00	.27	.8944	.1216	-.3397	-.0253	.0001	-.0295	7.35	.515
.203	2.89 (60.46)	.01	2.30	1.2036	.1348	-.4467	-.0293	-.0013	-.0289	8.93	.560
.203	2.88 (60.25)	.03	4.38	1.4601	.1570	-.5138	-.0274	-.0014	-.0245	9.30	.606
.203	2.88 (60.19)	.04	6.40	1.6990	.1818	-.5712	-.0302	-.0024	-.0256	9.35	.651
.203	2.89 (60.28)	.06	8.49	1.9271	.2124	-.6265	-.0307	-.0036	-.0229	9.07	.685
.203	2.89 (60.35)	.08	10.50	2.1448	.2448	-.6744	-.0322	-.0039	-.0244	8.76	.685
.203	2.89 (60.34)	.10	12.62	2.3685	.2865	-.7067	-.0317	-.0046	-.0231	8.27	.684
.203	2.89 (60.30)	.11	14.60	2.5355	.3289	-.7187	-.0288	-.0055	-.0197	7.71	.685
.203	2.88 (60.21)	.11	16.68	2.6686	.3696	-.7088	-.0178	-.0032	-.0235	7.22	.685
.203	2.89 (60.29)	.05	18.62	2.6868	.4251	-.6767	.0042	.0066	-.0278	6.32	.685
.203	2.89 (60.29)	-.00	20.64	2.6982	.4961	-.7578	.0024	.0064	-.0074	5.44	.685
.203	2.89 (60.35)	-.08	22.66	2.7729	.5924	-.9215	.0160	.0142	-.0170	4.68	.684

RUN NUMBER 99 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.44)	-.01	-3.95	.0071	.1526	.0579	-.0257	-.0008	-.0209	.05	.424
.203	2.89 (60.40)	-.01	-1.87	.4049	.1291	-.1226	-.0427	-.0007	-.0311	3.14	.469
.203	2.89 (60.45)	.00	.22	.8333	.1241	-.3066	-.0419	-.0017	-.0253	6.72	.514
.203	2.89 (60.46)	.01	2.31	1.1534	.1365	-.4134	-.0422	-.0023	-.0240	8.45	.560
.203	2.89 (60.26)	.03	4.40	1.4200	.1565	-.4876	-.0399	-.0026	-.0225	9.07	.606
.203	2.88 (60.24)	.05	6.41	1.6489	.1808	-.5442	-.0435	-.0046	-.0208	9.12	.652
.203	2.88 (60.11)	.06	8.46	1.8717	.2108	-.5999	-.0453	-.0062	-.0181	8.88	.685
.203	2.89 (60.45)	.09	10.52	2.1130	.2411	-.6522	-.0469	-.0070	-.0182	8.76	.684
.203	2.89 (60.30)	.11	12.57	2.3200	.2832	-.6835	-.0468	-.0080	-.0157	8.19	.684
.203	2.88 (60.23)	.12	14.62	2.5242	.3228	-.7131	-.0443	-.0094	-.0138	7.82	.684
.203	2.89 (60.42)	.13	16.68	2.6551	.3662	-.7132	-.0372	-.0093	-.0137	7.25	.685
.203	2.89 (60.27)	.15	18.70	2.7803	.4171	-.7345	-.0337	-.0081	-.0155	6.67	.685
.203	2.88 (60.07)	.20	20.62	2.7259	.4958	-.8589	-.0254	-.0056	-.0217	5.50	.684
.203	2.90 (60.57)	.13	22.68	2.7606	.6016	-.8887	.0017	.0113	-.0312	4.59	.684

RUN NUMBER 100 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.116	.96 (20.12)	-.02	-3.86	.5420	.1758	-.4394	.0001	.0012	-.0136	3.08	.424
.116	.96 (20.07)	-.01	-1.70	1.0296	.1824	-.5699	.0019	.0008	-.0082	5.65	.472
.116	.96 (20.06)	.00	.38	1.4172	.2031	-.6013	-.0057	.0006	-.0136	6.98	.519
.116	.96 (20.04)	.01	2.42	1.6267	.2256	-.5764	-.0055	.0007	-.0122	7.21	.568
.116	.96 (20.07)	.02	4.45	1.8408	.2482	-.5431	-.0062	.0005	-.0082	7.42	.615
.116	.96 (20.15)	.04	6.50	2.0191	.2739	-.4939	-.0076	-.0006	-.0071	7.37	.664
.116	.96 (20.09)	.05	8.55	2.1939	.2983	-.4465	-.0097	-.0019	-.0072	7.35	.684
.116	.96 (20.07)	.06	10.57	2.3666	.3224	-.3939	-.0084	-.0012	-.0064	7.34	.684
.116	.96 (20.05)	.08	12.61	2.5084	.3573	-.3417	-.0094	-.0021	-.0057	7.02	.684
.116	.96 (20.02)	.08	14.65	2.6310	.3816	-.2657	-.0074	-.0029	-.0029	6.89	.685
.116	.96 (20.03)	.09	16.63	2.7079	.4072	-.1841	-.0053	-.0019	-.0041	6.65	.685
.116	.96 (20.04)	.10	18.65	2.7605	.4494	-.1079	-.0013	-.0011	-.0063	6.14	.684
.116	.96 (20.11)	.11	20.63	2.6963	.5069	-.0136	-.0029	-.0024	-.0089	5.32	.684
.116	.96 (20.04)	.12	22.62	2.6533	.5607	.0297	-.0017	-.0005	-.0151	4.73	.685

RUN NUMBER 101 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.165	1.93 (40.32)	-.02	-3.84	.5843	.1759	-.4524	-.0035	.0007	-.0097	3.32	.424
.165	1.93 (40.31)	-.01	-1.71	1.0531	.1850	-.5811	-.0036	.0006	-.0100	5.69	.469
.165	1.93 (40.28)	.00	.37	1.4020	.2047	-.6040	-.0055	.0008	-.0109	6.85	.515
.165	1.93 (40.23)	.01	2.45	1.6463	.2246	-.5839	-.0081	.0006	-.0088	7.33	.562
.165	1.92 (40.18)	.02	4.49	1.8427	.2475	-.5446	-.0089	-.0000	-.0059	7.45	.609
.165	1.93 (40.22)	.03	6.52	2.0330	.2710	-.4976	-.0111	-.0011	-.0015	7.50	.655
.165	1.92 (40.18)	.05	8.57	2.2034	.2981	-.4522	-.0112	-.0024	.0005	7.39	.685
.165	1.92 (40.17)	.06	10.63	2.3739	.3228	-.3962	-.0122	-.0028	.0014	7.35	.685
.165	1.92 (40.19)	.08	12.63	2.5303	.3538	-.3382	-.0121	-.0025	-.0001	7.15	.685
.165	1.92 (40.18)	.09	14.66	2.6529	.3858	-.2725	-.0089	-.0033	.0003	6.88	.685
.165	1.92 (40.12)	.10	16.65	2.7452	.4133	-.1954	-.0082	-.0031	.0012	6.64	.684
.165	1.92 (40.18)	.11	18.68	2.8270	.4551	-.1134	-.0041	-.0019	-.0009	6.21	.685
.165	1.93 (40.21)	.14	20.69	2.7170	.5103	-.0186	-.0125	-.0062	-.0004	5.32	.685
.165	1.92 (40.08)	.17	22.59	2.5918	.5696	.0839	-.0126	-.0075	-.0038	4.55	.684

APPENDIX A

RUN NUMBER 102 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.33)	-.02	-3.82	.6334	.1782	-.4899	-.0023	.0013	-.0117	3.56	.422
.203	2.88 (60.08)	-.01	-1.70	1.1417	.1886	-.6058	-.0062	.0010	-.0094	6.05	.465
.203	2.90 (60.47)	.00	.37	1.4043	.2033	-.6057	-.0091	.0004	-.0080	6.91	.509
.203	2.90 (60.47)	.01	2.44	1.6224	.2221	-.5795	-.0083	.0003	-.0050	7.31	.555
.203	2.89 (60.37)	.02	4.48	1.8232	.2437	-.5393	-.0109	-.0004	-.0035	7.48	.601
.203	2.89 (60.31)	.04	6.52	2.0153	.2644	-.4881	-.0142	-.0019	.0006	7.62	.647
.203	2.89 (60.39)	.06	8.53	2.1725	.2920	-.4454	-.0166	-.0037	.0053	7.44	.685
.203	2.90 (60.53)	.07	10.59	2.3463	.3214	-.3943	-.0167	-.0034	.0021	7.30	.685
.203	2.89 (60.29)	.08	12.62	2.5153	.3521	-.3356	-.0136	-.0038	.0034	7.14	.684
.203	2.89 (60.34)	.10	14.64	2.6121	.3793	-.2679	-.0107	-.0043	.0042	6.89	.684
.203	2.89 (60.40)	.12	16.57	2.5192	.4065	-.2373	-.0096	-.0030	-.0040	6.20	.685
.203	2.90 (60.48)	.14	18.62	2.5396	.4660	-.2139	-.0123	-.0030	.0045	5.45	.685
.203	2.90 (60.49)	.18	20.65	2.5544	.5472	-.1858	-.0166	-.0088	-.0016	4.67	.685
.203	2.90 (60.49)	.10	22.66	2.5415	.6082	-.1179	.0002	.0001	-.0031	4.18	.685

RUN NUMBER 103 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.57)	-.00	-3.80	.7054	.1652	-.5281	.0048	.0003	-.0059	4.27	.422
.203	2.88 (60.20)	-.00	-1.68	1.1938	.1830	-.6370	-.0008	.0002	-.0076	6.52	.465
.203	2.89 (60.29)	.00	.41	1.5070	.1994	-.6432	.0002	.0011	-.0097	7.56	.509
.203	2.89 (60.31)	.00	2.47	1.7122	.2201	-.6121	-.0013	.0014	-.0099	7.78	.554
.203	2.89 (60.41)	.01	4.54	1.9100	.2435	-.5667	-.0043	.0010	-.0094	7.84	.601
.203	2.89 (60.26)	.02	6.55	2.0811	.2706	-.5197	-.0065	.0001	-.0082	7.69	.646
.203	2.89 (60.43)	.03	8.61	2.2670	.2918	-.4601	-.0081	-.0012	-.0050	7.77	.684
.203	2.89 (60.43)	.04	11.65	2.5166	.3397	-.3826	-.0102	-.0014	-.0065	7.41	.685
.203	2.89 (60.32)	.05	12.64	2.5834	.3546	-.3504	-.0099	-.0021	-.0021	7.29	.685
.203	2.90 (60.47)	.05	14.65	2.6849	.3816	-.2725	-.0087	-.0027	-.0012	7.04	.685
.203	2.89 (60.30)	.10	16.68	2.6436	.4115	-.2266	-.0166	-.0076	.0128	6.42	.684
.203	2.88 (60.11)	.15	18.67	2.6785	.4470	-.1621	-.0155	-.0056	.0077	5.99	.685
.203	2.89 (60.37)	.14	20.60	2.6105	.5276	-.1077	-.0037	-.0017	.0043	4.95	.686
.203	2.90 (60.48)	.06	22.63	2.5857	.5927	-.0590	.0118	.0102	-.0025	4.36	.685

RUN NUMBER 104 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.45)	-.01	-3.94	.2134	.2746	.6501	.0070	.0005	-.0088	.78	.415
.203	2.90 (60.51)	-.00	-1.77	.7877	.2700	.4961	.0034	.0010	-.0102	2.92	.457
.203	2.89 (60.38)	-.00	.26	1.0818	.2678	.4329	.0048	.0011	-.0091	4.04	.501
.204	2.91 (60.70)	.01	2.35	1.3328	.2692	.4048	.0019	.0015	-.0090	4.95	.547
.203	2.90 (60.56)	.01	4.42	1.5402	.2776	.3925	-.0017	.0014	-.0088	5.55	.594
.203	2.89 (60.44)	.03	6.45	1.7530	.2854	.3769	-.0054	.0013	-.0123	6.14	.640
.203	2.89 (60.45)	.05	8.52	1.9440	.2974	.3370	-.0087	.0002	-.0066	6.54	.685
.203	2.89 (60.30)	.05	10.53	2.1453	.3116	.3028	-.0092	.0000	-.0054	6.89	.685
.203	2.88 (60.18)	.07	12.54	2.3124	.3389	.2589	-.0097	-.0027	.0010	6.82	.685
.203	2.90 (60.48)	.08	14.58	2.4681	.3654	.2187	-.0090	-.0026	-.0012	6.76	.685
.203	2.89 (60.45)	.08	16.60	2.5236	.3987	.1818	-.0020	-.0003	-.0035	6.33	.685
.203	2.88 (60.23)	.11	18.68	2.5781	.4402	.0659	-.0093	-.0031	.0009	5.86	.685
.204	2.91 (60.76)	.10	20.67	2.5302	.5226	.0121	-.0034	-.0003	.0038	4.84	.685
.203	2.89 (60.37)	.04	22.50	2.5082	.5958	-.1036	.0103	.0060	-.0115	4.21	.685

RUN NUMBER 105 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.52)	-.00	-3.94	.2443	.2322	.4953	.0072	.0005	-.0092	1.05	.415
.203	2.88 (60.14)	-.00	-1.75	.8530	.2270	.2969	.0033	.0012	-.0100	3.76	.458
.203	2.90 (60.52)	-.00	.29	1.1437	.2279	.2282	.0040	.0011	-.0100	5.02	.502
.204	2.90 (60.66)	.00	2.37	1.4059	.2279	.1814	.0007	.0037	-.0130	6.17	.549
.203	2.89 (60.26)	.01	4.43	1.6273	.2400	.1185	-.0015	.0009	-.0090	6.78	.596
.203	2.88 (60.09)	.02	6.45	1.8402	.2599	.0571	-.0044	-.0001	-.0045	7.08	.642
.203	2.88 (60.07)	.03	8.50	2.0306	.2845	-.0034	-.0074	-.0013	-.0012	7.14	.684
.204	2.90 (60.58)	.04	10.58	2.2397	.3108	-.0368	-.0090	-.0014	-.0034	7.21	.684
.203	2.89 (60.43)	.05	12.62	2.4123	.3410	-.0625	-.0105	-.0021	-.0023	7.07	.685
.203	2.89 (60.39)	.05	14.66	2.5360	.3757	-.1005	-.0086	-.0020	-.0044	6.75	.683
.203	2.89 (60.36)	.05	16.63	2.5834	.4069	-.1685	-.0020	-.0004	-.0159	6.35	.685
.203	2.89 (60.29)	.05	18.62	2.6218	.4679	-.2747	.0014	.0020	-.0235	5.60	.685
.203	2.87 (60.02)	.11	20.61	2.6254	.5511	-.3782	-.0169	-.0089	-.0051	4.76	.684
.203	2.89 (60.39)	-.05	22.61	2.5589	.6150	-.2944	.0166	.0090	-.0070	4.16	.684

APPENDIX A

RUN NUMBER 106 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.47)	.01	-3.87	.3838	.1845	.2257	.0065	.0006	-.0133	2.08	.418
.203	2.89 (60.35)	.00	-1.75	.9565	.1906	.0120	.0034	.0011	-.0096	5.02	.459
.203	2.88 (60.17)	-.00	.35	1.2730	.2029	-.0874	.0040	.0011	-.0093	6.27	.506
.203	2.89 (60.40)	-.00	2.36	1.4970	.2212	-.1375	-.0010	.0010	-.0096	6.77	.551
.203	2.89 (60.28)	-.00	4.43	1.7407	.2394	-.1875	-.0025	.0009	-.0068	7.27	.597
.203	2.88 (60.23)	.00	6.49	1.9514	.2648	-.2399	-.0070	-.0005	-.0055	7.37	.644
.203	2.90 (60.50)	.01	8.57	2.1538	.2922	-.2951	-.0087	-.0008	-.0045	7.37	.685
.203	2.89 (60.35)	.01	10.59	2.3505	.3210	-.3277	-.0115	-.0016	-.0048	7.32	.685
.203	2.89 (60.26)	.02	12.61	2.5195	.3571	-.3370	-.0127	-.0019	-.0034	7.06	.685
.203	2.90 (60.54)	.02	14.63	2.6559	.3888	-.3534	-.0109	-.0023	-.0014	6.83	.685
.203	2.89 (60.40)	.03	16.67	2.7390	.4279	-.3689	-.0126	-.0027	-.0005	6.40	.684
.203	2.88 (60.24)	.08	18.68	2.7744	.4725	-.3888	-.0209	-.0063	.0111	5.87	.685
.203	2.90 (60.51)	.14	20.66	2.7333	.5537	-.3980	-.0117	-.0015	.0024	4.94	.685

RUN NUMBER 107 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.50)	.01	-3.89	.4594	.1768	-.0727	.0099	.0007	-.0101	2.60	.419
.203	2.89 (60.43)	.00	-1.72	1.0418	.1866	-.2780	.0013	.0012	-.0135	5.58	.463
.203	2.89 (60.45)	-.00	.37	1.3723	.2004	-.3769	.0023	.0012	-.0137	6.85	.508
.203	2.89 (60.29)	-.00	2.42	1.6034	.2211	-.4268	.0001	.0017	-.0124	7.25	.554
.203	2.89 (60.42)	-.00	4.47	1.8251	.2455	-.4688	-.0034	.0017	-.0134	7.43	.599
.203	2.89 (60.33)	.00	6.54	2.0580	.2728	-.5146	-.0060	.0014	-.0147	7.54	.646
.203	2.89 (60.29)	.01	8.61	2.2835	.3016	-.5634	-.0087	.0004	-.0122	7.57	.685
.203	2.88 (60.25)	.01	10.60	2.4682	.3351	-.6055	-.0102	.0000	-.0125	7.37	.684
.203	2.88 (60.17)	.02	12.63	2.6296	.3746	-.6213	-.0104	-.0002	-.0134	7.02	.685
.203	2.89 (60.40)	-.00	14.59	2.6473	.4106	-.6769	.0051	.0040	-.0368	6.45	.685
.203	2.90 (60.51)	-.02	16.71	2.7149	.4723	-.6858	.0139	.0050	-.0532	5.75	.684
.203	2.90 (60.50)	-.01	18.68	2.8296	.5251	-.6929	.0129	.0038	-.0578	5.39	.685
.203	2.89 (60.40)	.13	20.75	2.7513	.6021	-.6232	-.0037	-.0077	-.0497	4.57	.685

RUN NUMBER 108 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.58)	-.01	-3.86	.5708	.1755	-.3530	.0053	.0013	-.0120	3.25	.421
.203	2.88 (60.23)	-.00	-1.68	1.1669	.1869	-.5622	.0020	.0016	-.0123	6.24	.464
.203	2.89 (60.26)	-.00	.37	1.4544	.2062	-.6541	.0022	.0014	-.0120	7.05	.508
.203	2.89 (60.39)	.01	2.48	1.7057	.2288	-.7118	-.0027	.0016	-.0126	7.46	.555
.203	2.89 (60.36)	.01	4.52	1.9280	.2570	-.7572	-.0052	.0017	-.0137	7.50	.601
.203	2.89 (60.40)	.02	6.61	2.1652	.2857	-.8035	-.0070	.0012	-.0126	7.58	.648
.203	2.89 (60.38)	.03	8.61	2.3707	.3187	-.8475	-.0082	.0007	-.0107	7.44	.684
.203	2.89 (60.29)	.04	10.63	2.5579	.3565	-.8881	-.0114	-.0008	-.0102	7.18	.685
.203	2.88 (60.17)	.05	12.70	2.7259	.3952	-.8950	-.0100	.0004	-.0130	6.90	.684
.203	2.89 (60.44)	.06	14.71	2.8440	.4318	-.8762	-.0077	.0004	-.0190	6.59	.685
.203	2.89 (60.40)	.02	16.60	2.7568	.4788	-.8871	.0155	.0090	-.0518	5.76	.684
.203	2.90 (60.51)	.03	18.72	2.8980	.5540	-.8975	.0117	.0067	-.0589	5.23	.685
.203	2.89 (60.39)	.15	20.67	2.8368	.6231	-.8225	-.0097	-.0090	-.0425	4.55	.685

RUN NUMBER 109 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.47)	-.01	-3.83	.6254	.1786	-.5072	.0049	.0018	-.0189	3.50	.422
.203	2.88 (60.18)	-.01	-1.70	1.1990	.1920	-.7132	.0048	.0021	-.0143	6.24	.464
.203	2.89 (60.43)	.00	.41	1.5053	.2131	-.8097	.0034	.0023	-.0188	7.06	.510
.204	2.90 (60.62)	.01	2.45	1.7509	.2373	-.8715	.0008	.0026	-.0185	7.38	.555
.203	2.90 (60.49)	.02	4.51	1.9781	.2662	-.9172	-.0018	.0029	-.0197	7.43	.602
.203	2.89 (60.44)	.03	6.58	2.1974	.2996	-.9612	-.0030	.0029	-.0197	7.33	.649
.203	2.90 (60.48)	.04	8.64	2.4099	.3323	-.9981	-.0051	.0017	-.0160	7.25	.685
.203	2.89 (60.42)	.05	10.63	2.6017	.3670	-1.0337	-.0058	.0023	-.0182	7.09	.685
.203	2.89 (60.39)	.06	12.69	2.7613	.4142	-1.0437	-.0084	.0009	-.0166	6.67	.685
.203	2.90 (60.52)	.07	14.73	2.8802	.4469	-1.0301	-.0034	.0012	-.0226	6.45	.685
.203	2.89 (60.40)	.04	16.72	2.8229	.5114	-1.0202	.0148	.0091	-.0589	5.52	.684
.203	2.89 (60.28)	.06	18.75	2.9299	.5710	-1.0148	.0132	.0075	-.0623	5.13	.685

APPENDIX A

RUN NUMBER 110 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.54)	-.01	-3.79	.7885	.1961	-.9932	.0034	.0017	-.0156	4.02	.425
.203	2.89 (60.30)	-.01	-1.67	1.3448	.2156	-1.1873	.0004	.0012	-.0148	6.24	.467
.203	2.89 (60.34)	.00	.46	1.6581	.2415	-1.2870	-.0006	.0006	-.0146	6.87	.513
.203	2.89 (60.37)	.01	2.49	1.8939	.2693	-1.3325	-.0018	.0004	-.0115	7.03	.558
.203	2.88 (60.23)	.01	4.58	2.1206	.3033	-1.3672	-.0035	.0006	-.0123	6.99	.605
.203	2.88 (60.25)	.02	6.62	2.3297	.3447	-1.3716	-.0059	.0011	-.0124	6.76	.652
.204	2.90 (60.64)	.04	8.62	2.5159	.3838	-1.3683	-.0088	.0003	-.0116	6.56	.685
.203	2.90 (60.47)	.05	10.69	2.6739	.4303	-1.3467	-.0087	.0017	-.0182	6.21	.685
.204	2.90 (60.58)	.06	12.70	2.8122	.4708	-1.3244	-.0071	.0022	-.0220	5.97	.685
.203	2.89 (60.46)	-.00	14.57	2.7105	.5128	-1.2822	.0213	.0121	-.0565	5.29	.686
.204	2.90 (60.61)	.00	16.72	2.8584	.5662	-1.1876	.0137	.0093	-.0585	5.05	.685
.204	2.90 (60.58)	.02	18.72	2.9701	.6225	-1.1592	.0092	.0091	-.0610	4.77	.685

RUN NUMBER 111 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.55)	-10.00	-3.89	.5046	.1454	-.2940	.0031	-.0356	.2633	3.47	.420
.203	2.89 (60.40)	-9.99	-1.75	1.0194	.1521	-.3549	.0273	-.0281	.2222	6.70	.463
.203	2.88 (60.15)	-10.00	.35	1.3683	.1711	-.4139	.0366	-.0258	.2094	8.00	.508
.203	2.89 (60.39)	-10.01	2.40	1.6069	.1900	-.4576	.0369	-.0242	.2040	8.46	.553
.203	2.89 (60.38)	-10.02	4.49	1.8338	.2145	-.4975	.0382	-.0226	.1989	8.55	.600
.203	2.89 (60.37)	-10.03	6.54	2.0396	.2430	-.5452	.0376	-.0226	.1988	8.40	.647
.203	2.90 (60.49)	-10.04	8.62	2.2655	.2769	-.5944	.0400	-.0231	.2019	8.18	.685
.203	2.90 (60.53)	-10.06	10.60	2.4437	.3102	-.6274	.0416	-.0230	.2012	7.88	.685
.203	2.89 (60.35)	-10.07	12.65	2.6065	.3488	-.6525	.0444	-.0220	.1986	7.47	.685
.203	2.89 (60.33)	-10.09	14.67	2.7551	.3892	-.6538	.0486	-.0230	.1986	7.08	.684
.203	2.89 (60.43)	-10.11	16.66	2.7299	.4431	-.6120	.0570	-.0228	.1832	6.16	.685
.203	2.88 (60.25)	-10.23	18.65	2.7239	.4890	-.5047	.0645	-.0215	.1989	5.57	.685

RUN NUMBER 112 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.53)	-4.99	-3.90	.4519	.1680	-.1064	.0054	-.0185	.1390	2.69	.420
.203	2.89 (60.32)	-5.00	-1.72	1.0530	.1780	-.2761	.0141	-.0130	.1117	5.92	.463
.203	2.88 (60.07)	-5.01	.34	1.3748	.1933	-.3645	.0192	-.0118	.1066	7.11	.507
.203	2.89 (60.37)	-5.02	2.44	1.5915	.2112	-.4087	.0138	-.0112	.1004	7.54	.554
.203	2.89 (60.27)	-5.04	4.51	1.8155	.2310	-.4544	.0146	-.0104	.0981	7.86	.601
.203	2.88 (60.22)	-5.05	6.56	2.0410	.2616	-.5001	.0155	-.0097	.0947	7.80	.647
.203	2.88 (60.20)	-5.06	8.63	2.2709	.2922	-.5413	.0147	-.0113	.0965	7.77	.684
.203	2.88 (60.25)	-5.07	10.62	2.4717	.3264	-.5791	.0176	-.0121	.0986	7.57	.685
.203	2.88 (60.19)	-5.08	12.67	2.6539	.3648	-.6032	.0191	-.0129	.0980	7.27	.684
.203	2.88 (60.24)	-5.09	14.64	2.7727	.4009	-.6116	.0189	-.0139	.0976	6.92	.685
.203	2.89 (60.38)	-5.13	16.69	2.7460	.4606	-.6345	.0337	-.0119	.0771	5.96	.685
.203	2.89 (60.32)	-5.13	18.68	2.8159	.5132	-.6272	.0306	-.0155	.0773	5.49	.685

RUN NUMBER 113 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.55)	.02	-3.86	.4842	.1760	-.0490	.0047	.0012	-.0021	2.75	.418
.203	2.90 (60.50)	.01	-1.72	1.0345	.1867	-.2400	.0007	.0009	-.0029	5.54	.462
.203	2.89 (60.36)	.00	.35	1.3605	.2007	-.3366	.0021	.0015	-.0046	6.78	.506
.203	2.88 (60.21)	-.01	2.44	1.6173	.2201	-.3943	-.0013	.0017	-.0049	7.35	.553
.203	2.88 (60.16)	-.01	4.47	1.8461	.2422	-.4377	-.0037	.0016	-.0040	7.62	.599
.203	2.88 (60.22)	-.02	6.52	2.0592	.2711	-.4806	-.0067	.0016	-.0075	7.60	.645
.203	2.89 (60.32)	-.02	8.61	2.2727	.3026	-.5268	-.0089	.0004	-.0046	7.51	.685
.203	2.89 (60.42)	-.02	10.61	2.4702	.3346	-.5688	-.0114	-.0006	-.0040	7.38	.685
.203	2.89 (60.43)	-.02	12.68	2.6378	.3723	-.5843	-.0109	.0000	-.0052	7.08	.685
.203	2.89 (60.41)	-.02	14.70	2.7826	.4052	-.5690	-.0095	-.0017	-.0046	6.87	.684
.203	2.89 (60.34)	-.02	16.68	2.8745	.4450	-.5593	-.0081	-.0018	-.0126	6.46	.685
.203	2.90 (60.50)	-.06	18.77	2.8507	.5156	-.6476	.0079	.0038	-.0440	5.53	.685

APPENDIX A

RUN NUMBER 114 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.92 (61.02)	5.01	-3.87	.4750	.1663	-.0701	-.0022	.0169	-.1223	2.86	.419
.203	2.89 (60.46)	5.00	-1.79	1.0033	.1762	-.2726	-.0201	.0141	-.1139	5.69	.461
.203	2.90 (60.55)	5.00	.34	1.3420	.1914	-.3622	-.0218	.0134	-.1078	7.01	.507
.203	2.90 (60.49)	5.00	2.41	1.5809	.2104	-.4196	-.0257	.0127	-.1036	7.51	.553
.204	2.90 (60.61)	5.01	4.49	1.8059	.2339	-.4652	-.0285	.0129	-.1084	7.72	.600
.203	2.90 (60.57)	5.01	6.53	2.0394	.2617	-.5119	-.0313	.0131	-.1105	7.79	.646
.203	2.90 (60.52)	5.02	8.60	2.2624	.2920	-.5552	-.0337	.0131	-.1139	7.75	.684
.203	2.90 (60.48)	5.03	10.62	2.4561	.3291	-.5916	-.0367	.0122	-.1148	7.46	.685
.203	2.89 (60.36)	5.04	12.63	2.6420	.3674	-.6112	-.0356	.0129	-.1188	7.19	.684
.203	2.89 (60.35)	5.05	14.70	2.7968	.4047	-.6121	-.0336	.0147	-.1238	6.91	.684
.203	2.88 (60.23)	5.05	16.68	2.8790	.4443	-.6061	-.0300	.0164	-.1293	6.48	.685
.203	2.88 (60.18)	5.15	18.66	2.8425	.4878	-.6173	-.0372	.0104	-.1292	5.83	.684

RUN NUMBER 115 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.199	2.77 (57.90)	.00	1.05	1.5214	.1715	-.4333	.0046	.0021	.0079	8.87	.019
.199	2.77 (57.84)	.00	1.06	1.5111	.1747	-.4264	.0024	.0020	.0073	8.65	.024
.199	2.77 (57.79)	.00	1.05	1.4956	.1872	-.4052	.0020	.0023	.0025	7.99	.074
.198	2.76 (57.60)	.00	1.05	1.4813	.1935	-.3884	-.0017	.0024	-.0034	7.66	.123
.198	2.74 (57.31)	.00	1.04	1.4725	.1979	-.3799	-.0023	.0013	-.0036	7.44	.171
.199	2.77 (57.90)	.00	1.05	1.4753	.2012	-.3736	-.0006	.0014	-.0091	7.33	.225
.199	2.78 (57.99)	.00	1.04	1.4479	.2058	-.3584	-.0014	.0014	-.0136	7.03	.321
.199	2.78 (58.01)	-.01	1.06	1.4495	.2078	-.3555	-.0013	.0011	-.0152	6.98	.422
.199	2.78 (58.03)	-.01	1.06	1.4520	.2084	-.3577	-.0004	.0019	-.0143	6.97	.523

RUN NUMBER 116 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.200	2.80 (58.55)	-.01	2.33	1.6469	.1793	-.4751	.0014	.0017	.0061	9.19	.018
.200	2.80 (58.49)	-.01	2.35	1.6523	.1808	-.4771	.0026	.0009	.0104	9.14	.022
.200	2.79 (58.33)	-.00	2.35	1.6434	.1950	-.4453	-.0018	.0011	.0028	8.43	.073
.199	2.79 (58.18)	-.01	2.35	1.6252	.2039	-.4221	.0006	.0017	-.0022	7.97	.122
.199	2.77 (57.81)	-.00	2.34	1.6182	.2089	-.4092	-.0020	.0020	-.0043	7.75	.171
.198	2.75 (57.40)	-.00	2.34	1.6098	.2117	-.3984	-.0015	.0017	-.0096	7.60	.223
.198	2.74 (57.22)	-.00	2.33	1.5915	.2173	-.3842	-.0016	.0014	-.0110	7.32	.321
.197	2.72 (56.90)	-.00	2.33	1.5986	.2178	-.3797	-.0011	.0015	-.0123	7.34	.420
.198	2.74 (57.19)	-.00	2.34	1.5927	.2217	-.3851	-.0024	.0016	-.0130	7.18	.552

RUN NUMBER 117 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.202	2.85 (59.62)	.00	4.46	1.8633	.2136	-.5143	-.0002	.0010	.0012	8.72	.070
.202	2.85 (59.42)	.00	4.47	1.8600	.2225	-.4855	-.0015	.0016	-.0017	8.36	.119
.201	2.84 (59.22)	.00	4.47	1.8439	.2303	-.4651	-.0023	.0017	-.0082	8.01	.168
.199	2.78 (58.17)	.00	4.46	1.8372	.2342	-.4513	-.0013	.0015	-.0077	7.85	.221
.198	2.76 (57.64)	.00	4.43	1.8053	.2417	-.4317	-.0038	.0009	-.0108	7.47	.318
.198	2.75 (57.52)	.00	4.45	1.8070	.2440	-.4206	-.0040	.0012	-.0140	7.41	.418
.199	2.78 (58.05)	.00	4.48	1.8283	.2468	-.4298	-.0034	.0016	-.0126	7.41	.599

APPENDIX A

RUN NUMBER 118 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.201	2.84 (59.31)	.01	6.51	2.0599	.2435	-.5359	-.0013	.0010	-.0022	8.46	.119
.199	2.78 (58.05)	.01	6.49	2.0411	.2547	-.5073	-.0018	.0013	-.0062	8.01	.169
.198	2.76 (57.65)	.01	6.49	2.0344	.2601	-.4945	-.0043	.0005	-.0085	7.82	.218
.198	2.75 (57.47)	.01	6.49	2.0280	.2655	-.4779	-.0059	.0002	-.0111	7.64	.317
.199	2.78 (58.01)	.01	6.50	2.0210	.2718	-.4633	-.0060	.0002	-.0130	7.44	.419
.199	2.78 (58.01)	.01	6.54	2.0458	.2734	-.4712	-.0055	.0008	-.0129	7.48	.602

RUN NUMBER 119 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.90 (60.51)	-.02	-3.86	.4384	.1872	.0078	-.0174	-.0010	-.0192	2.34	.419
.203	2.88 (60.23)	-.01	-1.73	.9989	.1958	-.1805	-.0208	-.0016	-.0209	5.10	.462
.203	2.88 (60.25)	.00	.34	1.3082	.2116	-.2744	-.0241	-.0028	-.0224	6.18	.507
.203	2.88 (60.24)	.01	2.40	1.5454	.2305	-.3226	-.0266	-.0034	-.0219	6.70	.553
.203	2.89 (60.30)	.03	4.47	1.7799	.2533	-.3717	-.0267	-.0032	-.0224	7.03	.599
.203	2.88 (60.24)	.05	6.51	1.9906	.2816	-.4117	-.0285	-.0049	-.0190	7.07	.645
.203	2.89 (60.40)	.06	8.59	2.2098	.3085	-.4520	-.0295	-.0062	-.0182	7.16	.685
.203	2.89 (60.28)	.08	10.59	2.3930	.3412	-.4896	-.0299	-.0065	-.0162	7.01	.685
.203	2.88 (60.20)	.10	12.63	2.5778	.3767	-.5116	-.0317	-.0076	-.0141	6.84	.685
.203	2.89 (60.41)	.11	14.65	2.7229	.4097	-.4994	-.0271	-.0079	-.0148	6.65	.685
.203	2.89 (60.30)	.11	16.67	2.7901	.4466	-.4639	-.0161	-.0055	-.0216	6.25	.685
.203	2.89 (60.28)	.09	18.73	2.8675	.4950	-.4406	-.0068	-.0009	-.0233	5.79	.685

RUN NUMBER 120 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.46)	-.02	-3.88	.4443	.1833	-.0093	-.0171	-.0001	-.0202	2.42	.419
.203	2.88 (60.24)	-.01	-1.73	1.0073	.1915	-.2012	-.0155	-.0002	-.0219	5.26	.462
.203	2.89 (60.39)	.00	.37	1.3215	.2070	-.2929	-.0172	-.0012	-.0214	6.38	.507
.203	2.89 (60.39)	.01	2.44	1.5643	.2265	-.3447	-.0184	-.0007	-.0210	6.91	.554
.204	2.90 (60.61)	.03	4.44	1.7774	.2514	-.3909	-.0221	-.0014	-.0199	7.07	.599
.203	2.90 (60.53)	.04	6.51	2.0171	.2747	-.4326	-.0226	-.0021	-.0207	7.34	.645
.203	2.90 (60.49)	.06	8.57	2.2195	.3067	-.4718	-.0216	-.0029	-.0190	7.24	.684
.203	2.89 (60.44)	.07	10.61	2.4187	.3351	-.5130	-.0217	-.0035	-.0160	7.22	.685
.203	2.90 (60.51)	.09	12.67	2.5980	.3734	-.5350	-.0244	-.0040	-.0152	6.96	.685
.203	2.89 (60.36)	.10	14.67	2.7404	.4059	-.5196	-.0190	-.0047	-.0147	6.75	.685
.203	2.89 (60.31)	.09	16.68	2.8047	.4449	-.4846	-.0078	-.0026	-.0206	6.30	.685
.203	2.90 (60.55)	.06	18.65	2.8771	.4889	-.4553	.0018	.0018	-.0208	5.89	.684

RUN NUMBER 121 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.32)	-.01	-3.89	.4595	.1792	-.0244	-.0036	.0010	-.0147	2.56	.418
.203	2.89 (60.28)	-.01	-1.71	1.0349	.1885	-.2277	-.0077	.0010	-.0181	5.49	.462
.203	2.89 (60.37)	.00	.39	1.3594	.2027	-.3220	-.0063	.0013	-.0201	6.71	.507
.203	2.88 (60.09)	.01	2.43	1.5916	.2220	-.3730	-.0109	.0009	-.0186	7.17	.553
.204	2.90 (60.60)	.02	4.38	1.7990	.2448	-.4170	-.0135	.0003	-.0177	7.35	.597
.204	2.90 (60.65)	.03	6.52	2.0417	.2719	-.4584	-.0137	.0002	-.0163	7.51	.645
.204	2.90 (60.64)	.04	8.62	2.2520	.3044	-.4992	-.0141	-.0007	-.0165	7.40	.684
.203	2.90 (60.49)	.05	10.64	2.4436	.3339	-.5362	-.0146	-.0017	-.0120	7.32	.685
.203	2.89 (60.31)	.06	12.66	2.6160	.3739	-.5604	-.0163	-.0017	-.0112	7.00	.685
.203	2.89 (60.39)	.07	14.70	2.7636	.4049	-.5382	-.0114	-.0028	-.0095	6.82	.685
.203	2.88 (60.19)	.05	16.68	2.8195	.4415	-.5034	.0016	.0024	-.0212	6.39	.684
.203	2.88 (60.21)	.02	18.66	2.8926	.4863	-.4780	.0095	.0070	-.0247	5.95	.685

APPENDIX A

RUN NUMBER 122 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.66)	-.00	-3.85	.5019	.1761	-.0686	.0048	.0011	-.0085	2.85	.419
.204	2.90 (60.64)	.00	-1.71	1.0904	.1838	-.2756	.0097	.0014	-.0092	5.93	.461
.203	2.89 (60.45)	.00	.35	1.3706	.2017	-.3598	.0067	.0011	-.0115	6.79	.506
.203	2.89 (60.44)	.00	2.43	1.6250	.2208	-.4138	.0063	.0020	-.0119	7.36	.553
.203	2.89 (60.46)	.00	4.49	1.8559	.2455	-.4642	.0040	.0017	-.0097	7.56	.599
.203	2.90 (60.56)	.01	6.54	2.0686	.2744	-.5001	-.0000	.0012	-.0118	7.54	.646
.204	2.90 (60.64)	.01	8.56	2.2769	.3025	-.5376	-.0008	.0002	-.0097	7.53	.683
.203	2.89 (60.45)	.02	10.60	2.4735	.3335	-.5733	-.0008	.0004	-.0086	7.42	.685
.203	2.89 (60.26)	.02	12.68	2.6418	.3776	-.5923	-.0043	-.0002	-.0080	7.00	.685
.203	2.89 (60.27)	.02	14.65	2.7855	.4100	-.5759	-.0011	-.0008	-.0082	6.79	.685
.203	2.88 (60.15)	.01	16.65	2.8348	.4460	-.5317	.0085	.0028	-.0179	6.36	.685
.203	2.88 (60.11)	.01	18.68	2.9110	.4944	-.4983	.0126	.0034	-.0181	5.89	.683

RUN NUMBER 123 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.43)	.00	-3.85	.4982	.1773	-.0688	.0057	.0006	-.0091	2.81	.419
.203	2.90 (60.50)	.00	-1.69	1.0940	.1853	-.2843	.0099	.0002	-.0045	5.90	.462
.203	2.88 (60.18)	-.00	.41	1.3928	.2033	-.3713	.0085	.0004	-.0083	6.85	.508
.203	2.88 (60.24)	-.00	2.41	1.6249	.2227	-.4208	.0059	.0004	-.0063	7.30	.553
.204	2.91 (60.70)	-.00	4.47	1.8549	.2471	-.4695	.0046	.0007	-.0083	7.51	.599
.204	2.91 (60.78)	.00	6.53	2.0779	.2755	-.5094	.0027	.0004	-.0081	7.54	.645
.203	2.90 (60.47)	.01	8.61	2.2954	.3049	-.5459	.0011	-.0004	-.0084	7.53	.684
.203	2.89 (60.44)	.01	10.60	2.4772	.3370	-.5781	-.0003	-.0007	-.0060	7.35	.685
.203	2.89 (60.30)	.02	12.68	2.6540	.3766	-.5937	-.0043	-.0010	-.0064	7.05	.685
.203	2.88 (60.14)	.02	14.67	2.7869	.4114	-.5752	-.0007	-.0018	-.0058	6.77	.685
.203	2.88 (60.24)	-.00	16.68	2.8360	.4500	-.5341	.0106	.0015	-.0139	6.30	.685
.203	2.88 (60.21)	-.01	18.64	2.9201	.4927	-.5069	.0124	.0016	-.0150	5.93	.685

RUN NUMBER 124 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.91 (60.69)	.00	-3.84	.5056	.1776	-.0694	.0085	.0002	-.0074	2.85	.419
.204	2.91 (60.70)	.00	-1.58	1.1045	.1883	-.2880	.0096	-.0003	-.0081	5.86	.464
.204	2.90 (60.59)	-.00	.42	1.3984	.2045	-.3706	.0091	-.0003	-.0087	6.84	.508
.203	2.90 (60.47)	-.00	2.42	1.6317	.2240	-.4253	.0066	-.0006	-.0037	7.28	.552
.204	2.90 (60.60)	-.00	4.49	1.8541	.2500	-.4692	.0048	-.0004	-.0032	7.42	.599
.203	2.90 (60.55)	-.00	6.53	2.0766	.2772	-.5105	.0029	-.0004	-.0077	7.49	.645
.204	2.90 (60.58)	-.00	8.56	2.2888	.3063	-.5475	.0018	-.0008	-.0093	7.47	.686
.203	2.89 (60.44)	.00	10.61	2.4770	.3393	-.5812	.0012	-.0011	-.0073	7.30	.685
.203	2.89 (60.28)	.01	12.64	2.6482	.3789	-.5976	-.0017	-.0013	-.0085	6.99	.687
.203	2.88 (60.17)	.01	14.65	2.7869	.4134	-.5795	.0003	-.0025	-.0081	6.74	.686
.203	2.88 (60.18)	-.01	16.68	2.8367	.4530	-.5351	.0108	-.0008	-.0132	6.26	.684
.203	2.89 (60.29)	-.03	18.70	2.9014	.5024	-.5059	.0178	.0024	-.0172	5.77	.684

RUN NUMBER 125 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.43)	.02	-3.86	.4481	.1880	-.0070	.0262	.0021	.0018	2.38	.419
.203	2.88 (60.25)	.01	-1.74	1.0182	.1996	-.2077	.0325	.0033	.0010	5.10	.461
.203	2.88 (60.16)	.00	.34	1.3399	.2148	-.3045	.0303	.0049	-.0044	6.24	.507
.203	2.89 (60.28)	-.01	2.39	1.5812	.2362	-.3551	.0278	.0053	-.0010	6.69	.552
.203	2.88 (60.20)	-.02	4.46	1.8080	.2596	-.4037	.0262	.0061	-.0031	6.96	.599
.203	2.88 (60.22)	-.03	6.52	2.0320	.2859	-.4447	.0246	.0058	-.0052	7.11	.645
.203	2.89 (60.32)	-.03	8.59	2.2429	.3161	-.4840	.0217	.0046	-.0029	7.10	.685
.203	2.89 (60.32)	-.04	10.58	2.4317	.3470	-.5233	.0219	.0052	-.0037	7.01	.685
.203	2.88 (60.24)	-.04	12.66	2.6134	.3867	-.5429	.0186	.0040	.0001	6.76	.685
.203	2.89 (60.33)	-.05	14.68	2.7665	.4205	-.5329	.0169	.0028	-.0009	6.58	.685
.203	2.88 (60.13)	-.05	16.70	2.8813	.4650	-.5109	.0163	.0023	-.0047	6.20	.685
.203	2.90 (60.51)	-.05	18.73	2.9816	.5114	-.4877	.0160	.0026	-.0054	5.83	.685

APPENDIX A

RUN NUMBER 126 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.50)	.02	-3.86	.4569	.1819	-.0302	.0203	.0012	.0005	2.51	.419
.204	2.87 (59.98)	.01	-1.72	1.0253	.1931	-.2245	.0231	.0020	-.0024	5.31	.462
.204	2.89 (60.38)	-.00	.35	1.3479	.2092	-.3263	.0208	.0025	-.0043	6.44	.507
.204	2.88 (60.11)	-.01	2.42	1.5956	.2282	-.3826	.0183	.0033	-.0050	6.99	.553
.204	2.88 (60.16)	-.02	4.45	1.8211	.2517	-.4315	.0181	.0038	-.0037	7.23	.598
.204	2.88 (60.25)	-.03	6.52	2.0443	.2793	-.4701	.0152	.0033	-.0061	7.32	.645
.204	2.88 (60.19)	-.04	8.63	2.2659	.3090	-.5107	.0128	.0022	-.0041	7.33	.685
.204	2.88 (60.23)	-.04	10.66	2.4438	.3439	-.5437	.0095	.0014	-.0038	7.11	.685
.204	2.88 (60.14)	-.04	12.68	2.6233	.3819	-.5641	.0066	.0002	-.0015	6.87	.685
.204	2.88 (60.07)	-.05	14.68	2.7780	.4143	-.5544	.0079	.0011	-.0053	6.71	.685
.204	2.89 (60.32)	-.05	16.70	2.9003	.4538	-.5339	.0080	.0019	-.0106	6.39	.685
.204	2.89 (60.46)	-.05	18.76	2.9936	.5055	-.5081	.0070	.0002	-.0086	5.92	.684

RUN NUMBER 127 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.38)	-.05	-3.88	.4655	.1794	-.0360	.0102	.0014	-.0082	2.59	.418
.204	2.88 (60.22)	-.06	-1.72	1.0346	.1885	-.2386	.0151	.0015	-.0057	5.49	.462
.205	2.90 (60.56)	-.07	.35	1.3458	.2046	-.3390	.0131	.0011	-.0063	6.58	.507
.204	2.89 (60.34)	-.08	2.41	1.6167	.2216	-.3982	.0116	.0016	-.0039	7.29	.552
.204	2.89 (60.39)	-.09	4.51	1.8300	.2478	-.4399	.0079	.0016	-.0057	7.39	.600
.205	2.90 (60.67)	-.09	6.50	2.0465	.2735	-.4780	.0068	.0013	-.0059	7.48	.644
.205	2.90 (60.57)	-.10	8.57	2.2487	.3064	-.5136	.0056	.0008	-.0066	7.34	.685
.205	2.91 (60.70)	-.10	10.62	2.4533	.3368	-.5541	.0047	.0007	-.0063	7.29	.685
.205	2.90 (60.54)	-.09	12.68	2.6376	.3769	-.5775	-.0012	-.0016	-.0054	7.00	.685
.204	2.89 (60.27)	-.03	14.70	2.7890	.4127	-.5652	.0025	.0014	-.0115	6.76	.684
.204	2.88 (60.15)	-.04	16.70	2.8899	.4500	-.5522	.0037	-.0003	-.0112	6.42	.684
.204	2.88 (60.10)	-.03	18.70	2.9409	.5017	-.5899	.0031	-.0016	-.0237	5.86	.685

RUN NUMBER 129 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.57)	-.00	.08	.1916	.2441	-.1034	.0029	.0008	.0080	.79	.019
.205	2.90 (60.57)	-.00	.07	.1833	.2446	-.1084	.0020	.0010	.0081	.75	.024
.204	2.89 (60.30)	.00	.01	.1256	.2462	-.1290	.0014	.0018	-.0023	.51	.073
.205	2.90 (60.54)	-.00	.04	.1073	.2451	-.1425	.0024	.0024	-.0059	.44	.122
.205	2.90 (60.54)	-.00	.03	.0972	.2432	-.1512	.0017	.0022	-.0089	.40	.172
.204	2.89 (60.35)	.00	.02	.0958	.2433	-.1598	.0022	.0019	-.0095	.39	.225
.204	2.89 (60.33)	.00	.01	.0865	.2417	-.1600	.0010	.0019	-.0117	.36	.322
.204	2.89 (60.37)	.00	.01	.0883	.2427	-.1660	.0015	.0019	-.0145	.36	.422
.204	2.90 (60.52)	.00	.00	.0830	.2412	-.1635	.0008	.0016	-.0131	.34	.522

RUN NUMBER 130 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.92 (60.90)	.00	.00	.0207	.2780	-.0660	.0022	.0004	.0047	.07	.019
.205	2.91 (60.86)	.00	-.00	.0239	.2774	-.0784	.0017	.0006	.0096	.09	.024
.205	2.90 (60.66)	.00	-.06	-.0388	.2737	-.1032	.0016	.0003	.0041	-.14	.074
.205	2.90 (60.56)	.00	-.09	-.0700	.2708	-.1147	.0010	-.0001	-.0025	-.26	.123
.204	2.89 (60.42)	.00	-.11	-.0786	.2677	-.1251	.0027	-.0010	-.0044	-.29	.172
.204	2.89 (60.34)	.00	-.12	-.0912	.2662	-.1348	.0003	-.0007	-.0098	-.34	.225
.205	2.90 (60.51)	-.00	-.01	-.0773	.2638	-.1433	.0030	-.0013	-.0077	-.29	.322
.204	2.88 (60.20)	-.00	-.02	-.0792	.2638	-.1456	.0003	-.0004	-.0129	-.30	.422
.205	2.90 (60.59)	-.00	-.02	-.0805	.2627	-.1491	.0020	-.0011	-.0098	-.31	.525

APPENDIX A

RUN NUMBER 131 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.96 (20.05)	.01	-3.82	.6822	.1709	-.4986	-.0032	.0018	-.0210	3.99	.425
.117	.96 (20.02)	.00	-1.71	1.1723	.1823	-.6155	-.0031	.0023	-.0163	6.43	.471
.117	.96 (20.06)	.00	.39	1.5255	.2092	-.6520	-.0061	.0009	-.0131	7.29	.519
.117	.96 (20.08)	-.00	2.46	1.7630	.2307	-.6198	-.0097	.0007	-.0168	7.64	.567
.117	.96 (20.13)	-.01	4.48	1.9511	.2559	-.5799	-.0080	.0011	-.0120	7.63	.615
.117	.96 (20.09)	-.01	6.55	2.1419	.2823	-.5315	-.0083	.0004	-.0115	7.59	.664
.117	.96 (20.10)	-.01	8.61	2.3053	.3096	-.4813	-.0097	-.0007	-.0123	7.45	.684
.117	.97 (20.17)	-.01	10.62	2.4666	.3370	-.4200	-.0105	-.0016	-.0111	7.32	.684
.117	.96 (20.13)	.00	12.66	2.6123	.3697	-.3684	-.0096	-.0021	-.0112	7.07	.684
.117	.96 (20.06)	.01	14.70	2.7128	.3980	-.2944	-.0083	-.0023	-.0132	6.82	.685
.117	.96 (20.08)	.00	16.71	2.7938	.4307	-.2107	-.0043	-.0002	-.0165	6.49	.685
.117	.96 (20.05)	.00	18.68	2.8283	.4801	-.1164	-.0105	-.0079	-.0136	5.89	.684
.117	.96 (20.01)	.01	20.64	2.7325	.5306	-.0464	-.0050	-.0008	-.0198	5.15	.684
.116	.96 (19.98)	.04	22.63	2.6993	.5918	.0384	-.0158	-.0082	-.0223	4.56	.685

RUN NUMBER 132 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.93 (40.28)	.00	-3.82	.6414	.1745	-.4918	-.0079	.0019	-.0220	3.68	.424
.166	1.92 (40.09)	.00	-1.68	1.1677	.1851	-.6217	-.0090	.0013	-.0174	6.31	.469
.166	1.92 (40.08)	-.00	.42	1.5256	.2075	-.6516	-.0101	.0009	-.0155	7.35	.515
.166	1.92 (40.09)	-.00	2.45	1.7464	.2296	-.6244	-.0097	.0008	-.0118	7.61	.561
.166	1.92 (40.13)	-.00	4.50	1.9446	.2541	-.5841	-.0101	.0006	-.0103	7.65	.607
.166	1.92 (40.14)	.00	6.56	2.1295	.2830	-.5365	-.0134	-.0010	-.0090	7.53	.654
.166	1.92 (40.15)	.00	8.58	2.3014	.3099	-.4854	-.0144	-.0016	-.0108	7.43	.685
.166	1.92 (40.12)	.01	10.63	2.4736	.3361	-.4278	-.0135	-.0019	-.0109	7.36	.685
.166	1.93 (40.26)	.01	12.67	2.6344	.3722	-.3696	-.0101	-.0009	-.0128	7.08	.684
.166	1.92 (40.16)	.01	14.68	2.7459	.4016	-.2978	-.0098	-.0027	-.0118	6.84	.684
.166	1.94 (40.42)	.01	16.69	2.8475	.4341	-.2249	-.0080	-.0007	-.0132	6.56	.685
.166	1.93 (40.25)	.01	18.71	2.9083	.4752	-.1408	-.0031	-.0001	-.0126	6.12	.685
.166	1.93 (40.21)	.07	20.67	2.7428	.5300	-.0486	-.0022	-.0026	-.0199	5.18	.684
.166	1.93 (40.39)	.05	22.65	2.6384	.5984	.0412	.0066	.0032	-.0171	4.41	.685

RUN NUMBER 133 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.36)	.01	-3.80	.7461	.1744	-.5388	-.0107	.0013	-.0171	4.28	.421
.204	2.88 (60.24)	.01	-1.61	1.2385	.1871	-.6409	-.0077	.0014	-.0136	6.62	.465
.204	2.89 (60.26)	.01	.42	1.5254	.2085	-.6519	-.0092	.0012	-.0149	7.32	.508
.204	2.89 (60.36)	.00	2.43	1.7251	.2313	-.6277	-.0099	.0006	-.0109	7.46	.553
.204	2.89 (60.33)	.02	4.53	1.9356	.2549	-.5800	-.0112	.0003	-.0108	7.59	.599
.204	2.89 (60.36)	.01	6.53	2.1230	.2815	-.5369	-.0128	-.0004	-.0112	7.54	.645
.205	2.89 (60.41)	.03	8.55	2.2996	.3078	-.4853	-.0138	-.0011	-.0109	7.47	.685
.204	2.89 (60.29)	.03	10.71	2.4763	.3359	-.4186	-.0119	-.0001	-.0136	7.37	.684
.204	2.89 (60.27)	.03	12.68	2.5932	.3683	-.3651	-.0110	.0001	-.0215	7.04	.685
.204	2.88 (60.17)	.02	14.69	2.6301	.3947	-.3002	-.0039	.0032	-.0377	6.66	.685
.204	2.88 (60.06)	.00	16.63	2.6301	.4496	-.2881	.0100	.0060	-.0529	5.85	.685
.204	2.88 (60.17)	.01	18.67	2.7406	.4976	-.2252	.0065	.0029	-.0509	5.51	.685

RUN NUMBER 134 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.39)	-.01	-3.85	.6142	.1558	-.4983	.0041	.0010	-.0067	3.94	.423
.204	2.89 (60.28)	-.01	-1.63	1.2877	.1781	-.6633	-.0010	.0002	-.0058	7.23	.464
.204	2.88 (60.23)	.00	.43	1.5790	.2018	-.6732	-.0030	-.0000	-.0042	7.82	.508
.204	2.88 (60.15)	.01	2.48	1.7954	.2230	-.6408	-.0027	.0006	-.0060	8.05	.553
.205	2.89 (60.44)	.01	4.53	1.9960	.2488	-.6034	-.0024	.0014	-.0084	8.02	.598
.205	2.90 (60.63)	.02	6.57	2.1860	.2785	-.5485	-.0086	-.0008	-.0055	7.85	.644
.204	2.89 (60.33)	.03	8.65	2.3801	.3075	-.4965	-.0087	-.0009	-.0064	7.74	.685
.205	2.89 (60.43)	.03	10.62	2.5507	.3365	-.4434	-.0083	-.0013	-.0075	7.58	.685
.205	2.89 (60.43)	.04	12.66	2.6750	.3706	-.3861	-.0044	.0017	-.0194	7.22	.685
.205	2.90 (60.49)	.03	14.66	2.6618	.3924	-.3209	.0050	.0050	-.0395	6.78	.685
.205	2.90 (60.59)	.04	16.68	2.7288	.4363	-.2711	.0075	.0046	-.0419	6.25	.685
.205	2.89 (60.43)	.05	18.65	2.8115	.4895	-.2237	.0085	.0033	-.0463	5.74	.685

APPENDIX A

RUN NUMBER 135 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.74)	-.01	-3.91	.3422	.2726	.6053	.0032	.0011	-.0073	1.25	.414
.205	2.90 (60.55)	-.01	-1.79	.8586	.2703	.4765	.0016	.0015	-.0054	3.18	.455
.205	2.90 (60.52)	-.01	.32	1.1786	.2774	.4142	-.0038	.0014	-.0137	4.25	.501
.205	2.90 (60.53)	-.00	2.38	1.4197	.2826	.3841	-.0056	.0015	-.0148	5.02	.546
.204	2.89 (60.39)	.00	4.45	1.6421	.2932	.3665	-.0041	.0021	-.0125	5.60	.593
.205	2.90 (60.51)	.01	6.51	1.8637	.3059	.3526	-.0047	.0018	-.0110	6.09	.639
.205	2.89 (60.46)	.03	8.56	2.0594	.3228	.3354	-.0072	.0011	-.0134	6.38	.685
.204	2.89 (60.36)	.04	10.67	2.2642	.3410	.2908	-.0068	.0021	-.0141	6.64	.685
.204	2.89 (60.30)	.05	12.61	2.4450	.3669	.2436	-.0069	.0007	-.0147	6.66	.685
.205	2.89 (60.42)	.06	14.66	2.5648	.3947	.2380	-.0055	-.0009	-.0151	6.50	.685
.204	2.89 (60.34)	.03	16.69	2.6211	.4274	.1997	.0080	.0041	-.0193	6.13	.685
.204	2.89 (60.26)	.01	18.70	2.7393	.4686	.1752	.0089	.0053	-.0166	5.85	.685

RUN NUMBER 136 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.68)	-.00	-3.88	.4151	.2297	.4303	.0006	.0015	-.0088	1.81	.415
.204	2.89 (60.40)	-.00	-1.72	.9378	.2288	.2842	-.0018	.0018	-.0110	4.10	.457
.205	2.89 (60.42)	-.00	.33	1.2682	.2347	.2060	-.0036	.0018	-.0099	5.40	.502
.204	2.89 (60.26)	.00	2.41	1.5159	.2436	.1669	-.0024	.0029	-.0103	6.22	.548
.204	2.88 (60.25)	.01	4.45	1.7380	.2581	.1109	-.0039	.0025	-.0103	6.73	.594
.204	2.88 (60.20)	.01	6.48	1.9542	.2807	.0548	-.0048	.0006	-.0088	6.96	.640
.204	2.88 (60.07)	.02	8.57	2.1722	.3081	.0072	-.0068	-.0002	-.0105	7.05	.684
.204	2.89 (60.26)	.03	10.64	2.3695	.3382	-.0433	-.0079	-.0003	-.0110	7.01	.685
.204	2.89 (60.28)	.03	12.64	2.5432	.3712	-.0676	-.0059	.0008	-.0141	6.85	.685
.205	2.89 (60.42)	.04	14.68	2.6522	.4000	-.0720	-.0057	-.0009	-.0150	6.63	.685
.205	2.89 (60.44)	.02	16.64	2.6876	.4373	-.1459	.0033	.0011	-.0254	6.15	.685
.204	2.89 (60.30)	.01	18.70	2.7641	.5011	-.2499	.0116	.0037	-.0409	5.52	.685

RUN NUMBER 137 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.59)	-.01	-3.89	.5058	.1835	.1706	.0019	.0007	-.0051	2.76	.416
.204	2.89 (60.30)	-.01	-1.71	1.0360	.1906	.0006	-.0011	-.0000	-.0026	5.44	.459
.205	2.90 (60.55)	.00	.38	1.3655	.2094	-.0968	-.0039	.0004	-.0081	6.52	.504
.205	2.90 (60.55)	.01	2.43	1.6020	.2299	-.1519	-.0039	.0006	-.0050	6.97	.550
.204	2.89 (60.36)	.01	4.50	1.8409	.2536	-.2008	-.0057	.0004	-.0056	7.26	.597
.204	2.88 (60.22)	.02	6.55	2.0605	.2823	-.2430	-.0067	.0001	-.0078	7.30	.643
.205	2.90 (60.53)	.03	8.62	2.2736	.3133	-.2886	-.0080	-.0009	-.0052	7.26	.684
.205	2.90 (60.55)	.04	10.60	2.4647	.3437	-.3281	-.0093	-.0012	-.0054	7.17	.685
.205	2.89 (60.43)	.05	12.68	2.6412	.3813	-.3511	-.0060	.0005	-.0081	6.93	.685
.205	2.90 (60.46)	.06	14.67	2.7380	.4136	-.3402	-.0075	-.0021	-.0076	6.62	.685
.205	2.89 (60.45)	.04	16.69	2.7859	.4514	-.3332	.0048	.0029	-.0166	6.17	.684
.204	2.89 (60.31)	.04	18.68	2.8945	.4928	-.3237	.0072	.0047	-.0160	5.87	.685

RUN NUMBER 138 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.50)	-.01	-3.82	.6189	.1757	-.1202	-.0011	.0012	-.0099	3.52	.418
.205	2.89 (60.46)	-.00	-1.67	1.1460	.1863	-.2860	.0006	.0003	-.0029	6.15	.462
.205	2.90 (60.56)	.00	.38	1.4633	.2081	-.3845	-.0032	.0003	-.0041	7.03	.506
.205	2.90 (60.53)	.00	2.46	1.7040	.2311	-.4342	-.0037	.0009	-.0066	7.37	.552
.205	2.90 (60.47)	.01	4.50	1.9348	.2579	-.4831	-.0057	.0007	-.0084	7.50	.598
.205	2.90 (60.51)	.02	6.54	2.1474	.2916	-.5241	-.0073	.0001	-.0073	7.36	.644
.204	2.89 (60.31)	.03	8.61	2.3736	.3212	-.5735	-.0102	-.0012	-.0042	7.39	.685
.204	2.89 (60.28)	.04	10.61	2.5561	.3590	-.6144	-.0111	-.0012	-.0058	7.12	.685
.204	2.89 (60.30)	.04	12.71	2.7400	.3963	-.6380	-.0084	.0006	-.0099	6.91	.684
.204	2.88 (60.08)	.05	14.71	2.8463	.4324	-.6206	-.0102	-.0020	-.0076	6.58	.685
.204	2.88 (60.09)	.07	16.74	2.9770	.4746	-.6160	-.0104	-.0012	-.0108	6.27	.684
.204	2.87 (59.99)	.08	18.77	3.0411	.5221	-.6043	-.0104	-.0017	-.0105	5.83	.684

APPENDIX A

RUN NUMBER 139 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.29)	-.01	-3.81	.7509	.1741	-.4598	-.0053	.0012	-.0127	4.31	.420
.204	2.88 (60.17)	-.01	-1.67	1.2649	.1881	-.6185	-.0056	-.0000	-.0056	6.73	.463
.204	2.88 (60.16)	.00	.41	1.5954	.2128	-.7151	-.0076	.0000	-.0072	7.50	.507
.204	2.88 (60.12)	.01	2.46	1.8172	.2405	-.7645	-.0085	-.0002	-.0067	7.56	.553
.204	2.87 (60.02)	.01	4.52	2.0364	.2733	-.8121	-.0086	.0001	-.0070	7.45	.599
.204	2.88 (60.15)	.02	6.63	2.2748	.3057	-.8549	-.0088	.0003	-.0073	7.44	.647
.204	2.88 (60.10)	.03	8.61	2.4660	.3431	-.8944	-.0106	-.0003	-.0088	7.19	.685
.204	2.88 (60.09)	.04	10.66	2.6540	.3801	-.9339	-.0100	-.0001	-.0089	6.98	.684
.204	2.88 (60.19)	.05	12.70	2.8376	.4222	-.9612	-.0115	-.0008	-.0105	6.72	.685
.204	2.88 (60.24)	.06	14.73	2.9447	.4608	-.9362	-.0128	-.0031	-.0105	6.39	.684
.204	2.89 (60.41)	.08	16.77	3.0728	.5039	-.9171	-.0133	-.0032	-.0099	6.10	.685
.204	2.89 (60.35)	.14	18.63	3.1084	.5442	-.8486	-.0167	-.0054	-.0134	5.71	.684

RUN NUMBER 140 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.36)	-.01	-3.77	.8761	.1785	-.7555	-.0023	.0012	-.0095	4.91	.422
.204	2.89 (60.29)	-.01	-1.64	1.3661	.1958	-.9067	-.0081	-.0000	-.0063	6.98	.464
.204	2.89 (60.34)	-.00	.42	1.6694	.2256	-.9986	-.0096	-.0000	-.0083	7.40	.509
.204	2.88 (60.18)	.01	2.51	1.9147	.2561	-1.0542	-.0098	.0003	-.0091	7.48	.555
.204	2.88 (60.13)	.02	4.56	2.1444	.2885	-1.0952	-.0103	.0006	-.0109	7.43	.602
.205	2.89 (60.46)	.03	6.63	2.3534	.3262	-1.1257	-.0091	.0006	-.0089	7.21	.648
.205	2.90 (60.51)	.04	8.61	2.5482	.3613	-1.1551	-.0104	.0007	-.0105	7.05	.685
.204	2.89 (60.34)	.05	10.69	2.7303	.4018	-1.1828	-.0109	-.0001	-.0101	6.79	.685
.204	2.89 (60.42)	.07	12.73	2.9069	.4448	-1.2017	-.0117	-.0016	-.0103	6.53	.685
.204	2.89 (60.34)	.08	14.75	3.0029	.4885	-1.1634	-.0124	-.0016	-.0147	6.15	.684
.204	2.89 (60.27)	.10	16.78	3.1111	.5418	-1.1176	-.0123	-.0014	-.0157	5.74	.685
.204	2.89 (60.31)	.10	18.71	3.1378	.5782	-.9998	-.0115	-.0011	-.0124	5.43	.685

RUN NUMBER 141 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.59)	-.01	-3.76	.9268	.1947	-1.0574	-.0050	.0011	-.0082	4.76	.424
.205	2.90 (60.53)	-.01	-1.58	1.4857	.2136	-1.2343	-.0068	.0005	-.0072	6.95	.467
.205	2.90 (60.50)	-.00	.45	1.7795	.2464	-1.3164	-.0109	-.0010	-.0069	7.22	.511
.204	2.89 (60.26)	.01	2.50	1.9991	.2799	-1.3536	-.0113	-.0014	-.0034	7.14	.556
.205	2.90 (60.54)	.02	4.61	2.2272	.3145	-1.3717	-.0086	-.0008	-.0014	7.08	.603
.204	2.89 (60.42)	.03	6.64	2.4244	.3544	-1.3809	-.0105	-.0034	.0006	6.84	.650
.204	2.89 (60.36)	.04	8.63	2.6033	.4004	-1.3895	-.0121	-.0022	-.0017	6.50	.685
.204	2.88 (60.21)	.05	10.74	2.7737	.4476	-1.3785	-.0123	-.0025	-.0035	6.20	.685
.204	2.88 (60.21)	.06	12.73	2.9414	.4889	-1.3577	-.0117	-.0017	-.0082	6.02	.685
.204	2.88 (60.24)	.08	14.77	3.0202	.5339	-1.2727	-.0123	-.0021	-.0116	5.66	.685
.204	2.89 (60.30)	.09	16.80	3.1251	.5787	-1.1958	-.0130	-.0026	-.0133	5.40	.685
.204	2.89 (60.28)	.06	18.65	3.0185	.6317	-1.1594	.0028	.0074	-.0473	4.78	.686

RUN NUMBER 142 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.58)	-10.03	-3.85	.6412	.1391	-.3318	.0078	-.0357	.2715	4.61	.419
.205	2.89 (60.45)	-10.03	-1.72	1.1275	.1512	-.4101	.0186	-.0296	.2366	7.46	.462
.204	2.89 (60.29)	-10.03	.38	1.4944	.1764	-.4500	.0282	-.0257	.2133	8.47	.506
.204	2.88 (60.11)	-10.04	2.45	1.7305	.2002	-.4933	.0315	-.0239	.2058	8.64	.552
.204	2.87 (59.98)	-10.05	4.52	1.9526	.2298	-.5394	.0319	-.0230	.2027	8.50	.599
.204	2.87 (59.99)	-10.05	6.58	2.1738	.2645	-.5911	.0304	-.0232	.2020	8.22	.646
.204	2.88 (60.24)	-10.06	8.60	2.3825	.2985	-.6359	.0333	-.0237	.2054	7.98	.685
.204	2.89 (60.30)	-10.08	10.67	2.5589	.3361	-.6677	.0368	-.0233	.2036	7.61	.685
.204	2.88 (60.17)	-10.09	12.68	2.7266	.3738	-.6897	.0389	-.0232	.2015	7.29	.684
.204	2.89 (60.28)	-10.10	14.70	2.8312	.4164	-.6736	.0423	-.0249	.2067	6.80	.684
.204	2.89 (60.30)	-10.10	16.68	2.8572	.4585	-.6566	.0365	-.0295	.2081	6.23	.684
.204	2.88 (60.18)	-10.24	18.64	2.6972	.5101	-.5518	.0569	-.0260	.2255	5.29	.684

APPENDIX A

RUN NUMBER 143 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.39)	-5.00	-3.88	.5676	.1651	-.1769	.0028	-.0190	.1487	3.44	.419
.204	2.89 (60.37)	-5.01	-1.67	1.1683	.1803	-.3166	.0102	-.0133	.1160	6.48	.462
.204	2.89 (60.41)	-5.02	.39	1.5061	.1986	-.3988	.0121	-.0115	.1076	7.58	.506
.204	2.89 (60.43)	-5.03	2.43	1.7240	.2203	-.4472	.0138	-.0107	.1032	7.83	.551
.204	2.89 (60.36)	-5.05	4.53	1.9445	.2503	-.5001	.0156	-.0103	.1001	7.77	.599
.204	2.89 (60.39)	-5.06	6.55	2.1817	.2792	-.5519	.0134	-.0109	.0977	7.82	.644
.204	2.89 (60.28)	-5.07	8.70	2.3914	.3161	-.5951	.0134	-.0123	.1015	7.56	.685
.204	2.89 (60.32)	-5.08	10.66	2.5677	.3515	-.6313	.0139	-.0130	.1007	7.31	.684
.204	2.88 (60.25)	-5.09	12.66	2.7225	.3856	-.6526	.0155	-.0134	.0997	7.06	.684
.204	2.88 (60.19)	-5.10	14.69	2.8103	.4277	-.6636	.0173	-.0155	.0959	6.57	.685
.204	2.88 (60.17)	-5.12	16.68	2.8461	.4720	-.6542	.0230	-.0154	.0961	6.03	.685
.204	2.89 (60.35)	-5.14	18.68	2.8627	.5372	-.6538	.0248	-.0162	.0870	5.33	.685

RUN NUMBER 144 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.40)	5.00	-3.87	.6295	.1686	-.1414	-.0106	.0172	-.1187	3.73	.417
.204	2.89 (60.36)	4.99	-1.70	1.1762	.1787	-.3183	-.0205	.0139	-.1116	6.58	.461
.204	2.89 (60.34)	4.99	.39	1.4825	.1961	-.4026	-.0258	.0118	-.1051	7.56	.506
.204	2.89 (60.41)	5.00	2.44	1.6933	.2211	-.4469	-.0280	.0107	-.0980	7.66	.552
.204	2.89 (60.33)	5.00	4.47	1.9026	.2505	-.4923	-.0289	.0109	-.1016	7.59	.598
.205	2.89 (60.46)	5.01	6.54	2.1282	.2785	-.5359	-.0328	.0107	-.1038	7.64	.645
.204	2.89 (60.43)	5.02	8.60	2.3518	.3138	-.5813	-.0348	.0106	-.1041	7.49	.684
.204	2.89 (60.38)	5.03	10.60	2.5353	.3487	-.6138	-.0313	.0123	-.1083	7.27	.685
.204	2.88 (60.25)	5.04	12.66	2.7254	.3865	-.6469	-.0343	.0114	-.1096	7.05	.684
.204	2.88 (60.18)	5.06	14.68	2.8528	.4256	-.6534	-.0391	.0107	-.1102	6.70	.685
.204	2.88 (60.14)	5.10	16.72	2.9348	.4658	-.6566	-.0506	.0091	-.1087	6.30	.685
.203	2.87 (59.85)	5.21	18.69	2.9335	.5267	-.6357	-.0620	.0015	-.1007	5.57	.685

RUN NUMBER 145 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.97 (20.29)	-.01	-3.78	.8090	.1786	-.6420	.0041	.0003	-.0140	4.53	.425
.117	.97 (20.35)	-.01	-1.64	1.4202	.2004	-.8320	.0004	.0006	-.0030	7.09	.471
.117	.97 (20.29)	.00	.45	1.7529	.2274	-.8461	-.0064	.0000	-.0075	7.71	.519
.117	.97 (20.26)	.01	2.50	1.9418	.2597	-.8216	-.0045	-.0004	-.0032	7.48	.567
.117	.97 (20.25)	.01	4.54	2.1481	.2857	-.7761	-.0042	.0002	-.0054	7.52	.614
.117	.97 (20.24)	.02	6.60	2.3433	.3112	-.7268	-.0031	.0008	-.0049	7.53	.663
.117	.97 (20.24)	.03	8.63	2.5022	.3418	-.6766	-.0033	.0001	-.0035	7.32	.684
.117	.97 (20.25)	.03	10.64	2.6461	.3738	-.6147	-.0049	-.0011	-.0047	7.08	.684
.117	.97 (20.26)	.04	12.68	2.7813	.4063	-.5556	-.0067	-.0027	-.0049	6.84	.684
.117	.97 (20.21)	.05	14.70	2.8567	.4364	-.4685	-.0049	-.0021	-.0087	6.55	.684
.117	.97 (20.20)	.06	16.70	2.9026	.4651	-.3747	.0007	.0019	-.0203	6.24	.684
.117	.97 (20.22)	.06	18.67	2.8694	.5358	-.3644	.0089	.0029	-.0420	5.36	.685
.117	.96 (20.11)	.09	20.70	2.8361	.5990	-.2604	-.0053	-.0054	-.0370	4.73	.685
.116	.96 (19.99)	.10	22.68	2.7811	.6624	-.1610	-.0073	-.0070	-.0360	4.20	.684
.117	.96 (20.15)	.13	24.66	2.6167	.7296	-.0444	-.0128	-.0159	-.0227	3.59	.685

RUN NUMBER 146 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.93 (40.31)	.02	-3.79	.8640	.1770	-.6634	.0111	-.0012	.0026	4.88	.422
.166	1.92 (40.17)	.02	-1.63	1.4398	.2021	-.8447	-.0041	-.0008	-.0006	7.13	.467
.166	1.92 (40.20)	.02	.47	1.7500	.2290	-.8495	-.0062	-.0008	.0004	7.64	.513
.166	1.92 (40.18)	.03	2.50	1.9597	.2572	-.8251	-.0017	-.0003	.0021	7.62	.559
.166	1.92 (40.17)	.03	4.57	2.1567	.2859	-.7814	-.0040	-.0005	.0015	7.54	.606
.166	1.92 (40.13)	.04	6.58	2.3412	.3135	-.7258	-.0070	-.0010	-.0013	7.47	.653
.166	1.92 (40.03)	.05	8.66	2.4991	.3472	-.6760	-.0070	-.0015	.0009	7.20	.685
.166	1.93 (40.30)	.05	10.69	2.6604	.3763	-.6156	-.0051	-.0016	-.0015	7.07	.684
.166	1.93 (40.21)	.06	12.71	2.7939	.4044	-.5471	-.0029	-.0006	-.0048	6.91	.684
.166	1.92 (40.17)	.06	14.69	2.8646	.4403	-.4784	-.0016	-.0009	-.0082	6.51	.684
.166	1.92 (40.19)	.06	16.70	2.9086	.4733	-.4063	.0072	.0037	-.0276	6.15	.685
.166	1.92 (40.15)	.06	18.71	2.9189	.5397	-.3804	.0114	.0042	-.0436	5.41	.685
.165	1.91 (39.94)	.13	20.68	2.8793	.5958	-.3104	-.0110	-.0091	-.0336	4.83	.685

APPENDIX A

RUN NUMBER 147 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.40)	.02	-3.75	.9997	.1801	-.7353	.0104	.0002	.0021	5.55	.419
.205	2.89 (60.41)	.02	-1.60	1.4626	.2047	-.8417	.0035	-.0000	.0014	7.14	.462
.204	2.89 (60.43)	.02	.45	1.7340	.2307	-.8466	-.0017	-.0001	-.0003	7.52	.507
.204	2.89 (60.43)	.02	2.51	1.9390	.2572	-.8119	-.0020	-.0001	.0011	7.54	.553
.205	2.89 (60.33)	.03	4.55	2.1376	.2849	-.7718	-.0031	-.0000	-.0002	7.50	.598
.204	2.88 (60.22)	.04	6.60	2.3316	.3121	-.7190	-.0045	-.0000	-.0002	7.47	.644
.204	2.88 (60.24)	.04	8.63	2.4958	.3440	-.6714	-.0048	-.0005	-.0031	7.25	.685
.204	2.89 (60.29)	.05	10.63	2.6477	.3752	-.6151	-.0032	-.0002	-.0046	7.06	.685
.204	2.89 (60.30)	.05	12.66	2.7555	.4069	-.5517	-.0002	.0011	-.0108	6.77	.684
.204	2.89 (60.38)	.06	14.71	2.8680	.4400	-.4644	-.0019	-.0001	-.0094	6.52	.685
.204	2.89 (60.40)	.04	16.67	2.8010	.4931	-.4453	.0114	.0053	-.0397	5.68	.685
.205	2.90 (60.52)	.09	18.66	2.7792	.5393	-.4094	-.0031	-.0019	-.0183	5.15	.685

RUN NUMBER 148 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.28)	-.00	-3.77	.9368	.1696	-.7143	.0030	-.0006	.0039	5.52	.420
.204	2.87 (60.02)	-.00	-1.57	1.5091	.1990	-.8609	.0028	.0002	-.0010	7.58	.462
.204	2.88 (60.10)	-.00	.45	1.7735	.2254	-.8634	-.0003	-.0001	-.0021	7.87	.506
.204	2.87 (60.02)	.00	2.55	1.9869	.2520	-.8247	-.0026	-.0003	-.0013	7.89	.553
.204	2.88 (60.08)	.01	4.57	2.1748	.2818	-.7861	-.0014	.0002	-.0008	7.72	.598
.203	2.87 (59.92)	.01	6.60	2.3737	.3084	-.7303	-.0013	.0007	-.0050	7.70	.643
.205	2.91 (60.70)	.02	8.66	2.5491	.3438	-.6858	-.0027	.0002	-.0034	7.42	.683
.205	2.91 (60.79)	.02	10.69	2.7073	.3788	-.6278	-.0027	.0003	-.0063	7.15	.685
.205	2.91 (60.79)	.03	12.69	2.8370	.4119	-.5643	-.0020	-.0009	-.0037	6.89	.684
.205	2.91 (60.81)	.04	14.70	2.9317	.4384	-.4722	-.0031	-.0012	-.0011	6.69	.685
.204	2.89 (60.33)	.06	16.74	3.0267	.4740	-.3841	-.0095	-.0039	.0003	6.39	.685
.204	2.88 (60.21)	.08	18.62	3.0594	.5120	-.2917	-.0114	-.0029	-.0044	5.98	.685

RUN NUMBER 149 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.87 (60.02)	-.00	-3.92	.4553	.2813	.4937	.0086	.0004	-.0065	1.62	.412
.204	2.89 (60.46)	-.00	-1.70	1.0784	.2880	.2865	.0064	.0015	-.0063	3.74	.455
.204	2.90 (60.55)	-.00	.35	1.3882	.2956	.2198	.0025	.0018	-.0067	4.70	.499
.205	2.90 (60.57)	.00	2.40	1.5917	.3057	.1923	-.0018	.0013	-.0063	5.21	.545
.205	2.90 (60.58)	.01	4.46	1.8262	.3152	.1794	-.0023	.0015	-.0044	5.79	.591
.204	2.89 (60.38)	.01	6.49	2.0246	.3320	.1648	-.0038	.0016	-.0056	6.10	.637
.204	2.90 (60.49)	.03	8.60	2.2341	.3489	.1436	-.0051	.0015	-.0079	6.40	.685
.204	2.89 (60.35)	.03	10.58	2.4251	.3670	.1025	-.0036	.0021	-.0090	6.61	.685
.204	2.89 (60.30)	.04	12.63	2.5905	.3935	.0664	-.0034	-.0007	-.0039	6.58	.685
.204	2.88 (60.23)	.04	14.66	2.7201	.4218	.0722	-.0026	-.0010	-.0049	6.45	.685
.204	2.89 (60.32)	.07	16.72	2.8507	.4631	.0668	-.0090	-.0033	-.0068	6.16	.684

RUN NUMBER 150 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.48)	.00	-3.86	.5927	.2331	.2634	.0090	-.0000	.0006	2.54	.413
.204	2.89 (60.39)	.00	-1.70	1.1557	.2418	.0810	.0082	.0008	.0025	4.78	.456
.204	2.89 (60.29)	.00	.39	1.4472	.2554	.0024	.0006	.0007	-.0014	5.67	.502
.204	2.89 (60.40)	.00	2.45	1.6734	.2667	-.0403	-.0013	.0009	-.0004	6.27	.548
.204	2.89 (60.33)	.01	4.51	1.9249	.2785	-.1065	-.0023	.0007	.0027	6.91	.594
.204	2.88 (60.25)	.01	6.56	2.1391	.3048	-.1532	-.0032	.0002	.0018	7.02	.641
.204	2.88 (60.24)	.02	8.64	2.3428	.3349	-.1972	-.0056	-.0003	.0012	7.00	.683
.204	2.88 (60.12)	.02	10.63	2.5295	.3667	-.2361	-.0039	-.0006	.0031	6.90	.684
.204	2.88 (60.12)	.03	12.67	2.6923	.3987	-.2585	-.0034	-.0008	.0024	6.75	.685
.204	2.88 (60.18)	.03	14.69	2.8109	.4360	-.2449	-.0038	-.0027	.0025	6.45	.685
.204	2.87 (60.02)	.06	16.74	2.9403	.4741	-.2409	-.0106	-.0046	.0021	6.20	.685

APPENDIX A

RUN NUMBER 151 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.37)	.01	-3.78	.7297	.1910	-.0324	.0099	.0003	.0028	3.82	.416
.205	2.90 (60.60)	.00	-1.63	1.2833	.2076	-.2300	.0052	.0002	.0012	6.18	.458
.205	2.90 (60.63)	-.00	.41	1.5681	.2303	-.3158	.0000	.0001	.0015	6.81	.503
.204	2.90 (60.56)	-.00	2.46	1.7895	.2530	-.3710	-.0016	-.0000	.0032	7.07	.549
.204	2.89 (60.27)	.00	4.50	2.0144	.2804	-.4165	-.0027	.0001	.0049	7.19	.595
.204	2.88 (60.21)	.00	6.60	2.2498	.3081	-.4602	-.0037	.0001	.0031	7.30	.642
.204	2.89 (60.37)	.01	8.62	2.4452	.3413	-.5034	-.0063	-.0013	.0038	7.16	.685
.204	2.88 (60.20)	.01	10.65	2.6418	.3748	-.5392	-.0041	-.0006	.0020	7.05	.685
.204	2.88 (60.23)	.01	12.70	2.7954	.4117	-.5516	-.0034	-.0005	.0016	6.79	.684
.204	2.88 (60.21)	.01	14.79	2.9378	.4477	-.5374	-.0016	-.0009	-.0008	6.56	.684
.204	2.88 (60.20)	.02	16.78	3.0739	.4931	-.5225	-.0030	-.0007	-.0032	6.23	.685
.203	2.87 (59.97)	.07	18.84	3.1094	.5344	-.4908	-.0074	.0002	-.0097	5.82	.684

RUN NUMBER 152 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.32)	.01	-3.78	.8209	.1834	-.3172	.0086	.0012	-.0013	4.48	.417
.204	2.89 (60.39)	.00	-1.62	1.3546	.2042	-.5085	.0093	.0012	.0017	6.64	.460
.204	2.89 (60.42)	-.00	.47	1.6832	.2302	-.6118	.0059	.0011	.0001	7.31	.505
.204	2.89 (60.27)	-.00	2.51	1.9130	.2550	-.6629	.0041	.0010	.0026	7.50	.551
.204	2.88 (60.20)	-.00	4.52	2.1252	.2860	-.7065	.0022	.0014	.0018	7.43	.596
.204	2.89 (60.27)	-.00	6.58	2.3515	.3165	-.7492	.0018	.0016	.0013	7.43	.643
.204	2.88 (60.18)	.00	8.62	2.5535	.3524	-.7949	-.0024	-.0002	.0018	7.25	.685
.204	2.89 (60.31)	.00	10.74	2.7437	.3905	-.8295	-.0015	-.0000	.0034	7.03	.684
.204	2.88 (60.23)	.00	12.74	2.9006	.4301	-.8412	.0007	.0009	.0008	6.74	.685
.204	2.89 (60.27)	.00	14.80	3.0315	.4658	-.8178	.0002	.0008	-.0012	6.51	.685
.204	2.88 (60.09)	.02	16.77	3.1541	.5122	-.7870	-.0049	-.0016	-.0038	6.16	.684

RUN NUMBER 153 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.29)	.01	-3.76	.9257	.1825	-.6086	.0112	.0000	-.0012	5.07	.419
.204	2.89 (60.31)	.00	-1.63	1.4523	.2059	-.8015	.0039	.0004	-.0014	7.05	.461
.204	2.89 (60.44)	.00	.45	1.7679	.2347	-.8968	.0046	.0009	-.0037	7.53	.506
.204	2.89 (60.35)	-.00	2.56	2.0197	.2627	-.9564	.0027	.0012	-.0021	7.69	.553
.204	2.89 (60.46)	-.00	4.56	2.2209	.2967	-1.0030	-.0003	.0006	-.0030	7.48	.598
.204	2.89 (60.41)	-.00	6.60	2.4297	.3332	-1.0398	.0000	.0011	-.0026	7.29	.645
.204	2.89 (60.30)	.00	8.67	2.6453	.3689	-1.0863	-.0013	.0008	-.0008	7.17	.684
.204	2.89 (60.40)	.00	10.68	2.8238	.4089	-1.1145	-.0024	.0007	-.0029	6.91	.684
.204	2.90 (60.48)	.00	12.78	2.9900	.4509	-1.1236	.0015	.0016	-.0029	6.63	.685
.204	2.89 (60.42)	.01	14.81	3.0962	.4929	-1.0830	-.0004	.0005	-.0059	6.28	.685
.204	2.88 (60.20)	.03	16.82	3.2061	.5410	-1.0353	-.0076	-.0016	-.0082	5.93	.685

RUN NUMBER 154 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.38)	.00	-3.75	1.0415	.1893	-.9261	.0051	.0005	-.0035	5.50	.420
.204	2.88 (60.15)	.00	-1.59	1.5800	.2153	-1.1207	.0017	.0002	-.0008	7.34	.463
.204	2.90 (60.53)	-.00	.49	1.8900	.2488	-1.2120	.0019	.0007	-.0039	7.60	.508
.204	2.90 (60.48)	-.00	2.55	2.1031	.2836	-1.2685	.0007	.0008	-.0014	7.42	.554
.204	2.89 (60.38)	-.00	4.59	2.3227	.3196	-1.3062	-.0014	.0014	-.0038	7.27	.600
.204	2.89 (60.29)	.00	6.66	2.5423	.3569	-1.3355	-.0030	.0013	-.0048	7.12	.647
.204	2.89 (60.32)	.00	8.71	2.7357	.3977	-1.3654	-.0042	.0009	-.0033	6.88	.684
.204	2.88 (60.13)	.00	10.78	2.9242	.4380	-1.3936	-.0043	.0006	-.0020	6.68	.685
.204	2.89 (60.25)	.01	12.77	3.0832	.4809	-1.4071	-.0032	-.0015	-.0004	6.41	.684
.204	2.90 (60.51)	.01	14.79	3.1937	.5256	-1.3629	-.0051	-.0030	-.0025	6.08	.684
.204	2.90 (60.47)	.03	16.81	3.2757	.5785	-1.2795	-.0136	-.0042	-.0027	5.66	.685

APPENDIX A

RUN NUMBER 155 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.45)	-10.01	-3.78	.8973	.1457	-.5358	.0254	-.0350	.2776	6.16	.419
.204	2.89 (60.32)	-10.02	-1.65	1.3956	.1678	-.6237	.0426	-.0283	.2401	8.32	.462
.204	2.88 (60.20)	-10.04	.47	1.7111	.1948	-.6584	.0501	-.0241	.2185	8.79	.507
.204	2.88 (60.19)	-10.06	2.51	1.9325	.2214	-.7152	.0518	-.0238	.2181	8.73	.553
.204	2.88 (60.14)	-10.08	4.58	2.1647	.2520	-.7612	.0533	-.0223	.2133	8.59	.599
.204	2.90 (60.53)	-10.10	6.59	2.3886	.2866	-.8155	.0516	-.0226	.2123	8.33	.645
.204	2.89 (60.39)	-10.12	8.68	2.5935	.3248	-.8533	.0546	-.0230	.2149	7.98	.685
.204	2.89 (60.38)	-10.14	10.70	2.7542	.3601	-.8744	.0557	-.0224	.2113	7.65	.685
.204	2.89 (60.39)	-10.16	12.72	2.9034	.4005	-.8772	.0538	-.0233	.2108	7.25	.685
.204	2.89 (60.44)	-10.18	14.74	3.0104	.4401	-.8644	.0574	-.0240	.2125	6.84	.685
.204	2.89 (60.45)	-10.23	16.74	3.0588	.4771	-.8413	.0587	-.0251	.2185	6.41	.684

RUN NUMBER 156 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.37)	-4.97	-3.82	.8243	.1718	-.3746	.0224	-.0177	.1476	4.80	.417
.204	2.88 (60.20)	-4.98	-1.63	1.3655	.1971	-.5248	.0227	-.0135	.1188	6.93	.461
.204	2.89 (60.36)	-5.00	.46	1.7024	.2190	-.6117	.0264	-.0108	.1085	7.77	.505
.204	2.88 (60.12)	-5.02	2.50	1.9263	.2431	-.6620	.0286	-.0092	.1020	7.92	.551
.204	2.88 (60.14)	-5.03	4.53	2.1468	.2734	-.7139	.0272	-.0097	.1016	7.85	.597
.204	2.88 (60.23)	-5.05	6.67	2.3694	.3099	-.7584	.0268	-.0098	.1010	7.65	.646
.204	2.89 (60.30)	-5.07	8.64	2.5681	.3439	-.7974	.0279	-.0104	.1011	7.47	.685
.204	2.89 (60.43)	-5.08	10.77	2.7633	.3803	-.8309	.0275	-.0126	.1045	7.27	.682
.204	2.88 (60.16)	-5.09	12.74	2.9119	.4164	-.8428	.0280	-.0125	.1052	6.99	.684
.204	2.88 (60.22)	-5.11	14.81	3.0493	.4622	-.8559	.0304	-.0141	.1067	6.60	.685
.204	2.88 (60.24)	-5.12	16.80	3.1554	.4991	-.8491	.0308	-.0144	.1077	6.32	.685

RUN NUMBER 157 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.85)	5.03	-3.88	.7024	.1746	-.2579	-.0037	.0159	-.1233	4.02	.416
.204	2.89 (60.28)	5.02	-1.67	1.3289	.1973	-.5253	-.0209	.0144	-.1132	6.74	.460
.204	2.90 (60.51)	5.02	.46	1.6358	.2217	-.6078	-.0227	.0126	-.1059	7.38	.506
.204	2.89 (60.35)	5.02	2.48	1.8685	.2466	-.6543	-.0228	.0123	-.1002	7.58	.551
.204	2.89 (60.28)	5.02	4.54	2.0880	.2756	-.7058	-.0250	.0121	-.1024	7.58	.598
.204	2.89 (60.33)	5.03	6.58	2.3041	.3078	-.7519	-.0271	.0126	-.1058	7.49	.644
.204	2.89 (60.37)	5.03	8.68	2.5139	.3439	-.7920	-.0271	.0135	-.1096	7.31	.685
.204	2.89 (60.44)	5.04	10.70	2.6975	.3813	-.8216	-.0291	.0142	-.1119	7.07	.685
.204	2.89 (60.36)	5.05	12.73	2.8702	.4179	-.8491	-.0329	.0140	-.1122	6.87	.684
.204	2.89 (60.33)	5.07	14.76	2.9781	.4557	-.8505	-.0379	.0133	-.1083	6.54	.685
.204	2.89 (60.26)	5.08	16.84	3.0520	.5010	-.8088	-.0386	.0147	-.1098	6.09	.685

RUN NUMBER 158 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.64)	.01	-3.81	.7634	.1832	-.2641	-.0001	.0010	-.0064	4.17	.417
.204	2.89 (60.33)	.00	-1.66	1.3394	.2018	-.4758	-.0001	.0019	-.0070	6.64	.459
.204	2.90 (60.49)	.00	.42	1.6438	.2296	-.5602	-.0081	.0014	-.0097	7.16	.504
.204	2.89 (60.35)	-.00	2.50	1.8901	.2548	-.6165	-.0079	.0012	-.0074	7.42	.551
.204	2.89 (60.28)	-.00	4.52	2.1050	.2845	-.6664	-.0076	.0017	-.0082	7.40	.596
.204	2.88 (60.22)	-.00	6.59	2.3265	.3186	-.7136	-.0075	.0016	-.0075	7.30	.643
.204	2.88 (60.24)	-.00	8.64	2.5369	.3509	-.7659	-.0062	.0013	-.0059	7.23	.685
.204	2.88 (60.17)	-.01	10.72	2.7228	.3863	-.7976	-.0067	-.0000	-.0030	7.05	.685
.204	2.88 (60.11)	-.01	12.73	2.8766	.4269	-.8157	-.0068	-.0004	-.0022	6.74	.684
.203	2.87 (59.98)	-.01	14.77	3.0008	.4608	-.8013	-.0083	-.0016	-.0045	6.51	.684
.204	2.88 (60.23)	-.00	16.77	3.1275	.5071	-.7924	-.0099	-.0012	-.0077	6.17	.685

APPENDIX A

RUN NUMBER 159 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.31)	.01	-3.80	.7705	.1835	-.2581	.0039	.0005	-.0050	4.20	.417
.204	2.89 (60.35)	.00	-1.67	1.3200	.2028	-.4575	-.0044	.0018	-.0084	6.51	.459
.204	2.89 (60.42)	-.00	.43	1.6228	.2314	-.5477	-.0100	.0010	-.0094	7.01	.505
.204	2.89 (60.40)	-.00	2.47	1.8625	.2549	-.6059	-.0100	.0018	-.0118	7.31	.550
.204	2.89 (60.31)	-.00	4.22	2.0751	.2780	-.6492	-.0094	.0016	-.0104	7.46	.596
.204	2.89 (60.29)	.00	6.59	2.3040	.3172	-.6967	-.0113	.0010	-.0081	7.26	.643
.204	2.89 (60.43)	.00	8.64	2.5100	.3488	-.7418	-.0106	.0009	-.0067	7.20	.683
.204	2.89 (60.36)	.01	10.70	2.6856	.3870	-.7742	-.0111	-.0002	-.0041	6.94	.685
.204	2.89 (60.31)	.01	12.76	2.8533	.4255	-.7946	-.0122	-.0004	-.0066	6.71	.684
.204	2.88 (60.25)	.02	14.76	2.9644	.4598	-.7787	-.0140	-.0027	-.0040	6.45	.684
.204	2.88 (60.21)	.04	16.81	3.0300	.5040	-.7695	-.0198	-.0043	.0003	6.01	.684

RUN NUMBER 160 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.44)	.01	-3.80	.7552	.1845	-.2455	-.0011	.0001	-.0099	4.09	.418
.204	2.88 (60.14)	-.00	-1.69	1.2928	.2034	-.4456	-.0105	.0020	-.0126	6.36	.459
.204	2.89 (60.36)	-.00	.39	1.6129	.2304	-.5373	-.0151	.0012	-.0143	7.00	.504
.204	2.89 (60.27)	.00	2.47	1.8540	.2551	-.5903	-.0142	.0010	-.0106	7.27	.550
.204	2.89 (60.29)	.00	4.51	2.0667	.2850	-.6381	-.0144	.0008	-.0086	7.25	.596
.204	2.89 (60.37)	.01	6.56	2.2899	.3149	-.6777	-.0151	.0003	-.0103	7.27	.643
.204	2.88 (60.21)	.01	8.64	2.4926	.3504	-.7251	-.0154	-.0005	-.0092	7.11	.685
.204	2.89 (60.29)	.02	10.65	2.6749	.3854	-.7586	-.0140	.0000	-.0092	6.94	.684
.204	2.89 (60.40)	.03	12.76	2.8489	.4264	-.7833	-.0158	-.0017	-.0074	6.68	.685
.204	2.89 (60.36)	.03	14.75	2.9531	.4628	-.7646	-.0156	-.0023	-.0106	6.38	.685
.204	2.89 (60.40)	.05	16.76	2.9763	.5030	-.7084	-.0076	-.0013	-.0156	5.92	.685

RUN NUMBER 161 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.70)	-.00	-3.81	.7113	.1857	-.2249	-.0044	.0002	-.0097	3.83	.418
.204	2.89 (60.35)	-.01	-1.61	1.2834	.2062	-.4330	-.0172	.0015	-.0155	6.22	.461
.204	2.89 (60.37)	.00	.42	1.6078	.2310	-.5276	-.0155	.0016	-.0130	6.96	.505
.204	2.89 (60.38)	.01	2.48	1.8410	.2560	-.5828	-.0183	.0005	-.0124	7.19	.551
.204	2.88 (60.25)	.01	4.54	2.0659	.2846	-.6283	-.0176	.0004	-.0100	7.26	.597
.204	2.88 (60.19)	.02	6.56	2.2797	.3158	-.6703	-.0176	.0002	-.0096	7.22	.643
.204	2.89 (60.31)	.03	8.64	2.4735	.3522	-.7157	-.0185	-.0010	-.0088	7.02	.685
.204	2.88 (60.20)	.04	10.69	2.6655	.3842	-.7503	-.0181	-.0018	-.0071	6.94	.685
.204	2.89 (60.28)	.05	12.74	2.8350	.4253	-.7711	-.0188	-.0023	-.0068	6.67	.685
.204	2.89 (60.40)	.06	14.75	2.9272	.4585	-.7603	-.0184	-.0036	-.0054	6.38	.685
.204	2.89 (60.44)	.06	16.76	2.9269	.5028	-.7237	-.0112	-.0022	-.0049	5.82	.685

RUN NUMBER 162 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.48)	-.00	-3.78	.7430	.1860	-.2384	-.0005	-.0009	-.0055	3.99	.418
.204	2.88 (60.21)	-.01	-1.67	1.2814	.2054	-.4235	-.0149	.0014	-.0141	6.24	.460
.204	2.89 (60.37)	-.00	.41	1.5999	.2305	-.5180	-.0191	.0011	-.0151	6.94	.504
.204	2.89 (60.33)	.01	2.49	1.8320	.2560	-.5726	-.0204	.0002	-.0115	7.16	.551
.204	2.90 (60.49)	.02	4.52	2.0572	.2828	-.6219	-.0203	.0006	-.0143	7.28	.597
.204	2.89 (60.42)	.03	6.58	2.2724	.3161	-.6654	-.0221	-.0010	-.0116	7.19	.644
.204	2.89 (60.27)	.04	8.62	2.4639	.3502	-.7053	-.0216	-.0012	-.0099	7.04	.684
.204	2.88 (60.07)	.05	10.67	2.6607	.3825	-.7443	-.0200	-.0011	-.0078	6.96	.685
.203	2.86 (59.80)	.07	12.67	2.8089	.4233	-.7627	-.0229	-.0027	-.0052	6.64	.685
.203	2.87 (59.96)	.08	14.69	2.8965	.4588	-.7625	-.0238	-.0059	.0015	6.31	.684
.203	2.87 (59.86)	.10	16.80	2.8864	.5057	-.7269	-.0166	-.0048	-.0033	5.71	.685

APPENDIX A

RUN NUMBER 163 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.45)	-.04	-3.85	.5033	.1976	-.0699	-.0540	.0004	-.0324	2.55	.419
.204	2.88 (60.21)	-.03	-1.73	1.0393	.2164	-.2765	-.0774	-.0008	-.0336	4.80	.462
.204	2.88 (60.17)	-.00	.34	1.3780	.2386	-.3882	-.0772	-.0028	-.0311	5.78	.507
.204	2.90 (60.47)	.03	2.42	1.6081	.2627	-.4360	-.0764	-.0047	-.0261	6.12	.553
.204	2.89 (60.42)	.06	4.45	1.8428	.2859	-.4793	-.0768	-.0051	-.0248	6.45	.598
.204	2.89 (60.29)	.09	6.52	2.0568	.3159	-.5178	-.0788	-.0077	-.0212	6.51	.645
.204	2.89 (60.29)	.12	8.55	2.2549	.3464	-.5614	-.0791	-.0099	-.0176	6.51	.685
.205	2.90 (60.66)	.16	10.62	2.4436	.3816	-.6003	-.0773	-.0114	-.0161	6.40	.685
.204	2.89 (60.27)	.19	12.63	2.6269	.4158	-.6322	-.0776	-.0144	-.0126	6.32	.686
.204	2.89 (60.33)	.22	14.69	2.7442	.4513	-.6504	-.0722	-.0168	-.0035	6.08	.685
.204	2.89 (60.27)	.26	16.78	2.8491	.4993	-.6824	-.0741	-.0208	.0081	5.71	.685

RUN NUMBER 164 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.59)	-.04	-3.82	.5504	.1940	-.0926	-.0439	.0022	-.0357	2.84	.419
.204	2.88 (60.19)	-.02	-1.71	1.1057	.2113	-.3062	-.0617	.0015	-.0351	5.23	.461
.204	2.88 (60.14)	-.00	.36	1.4418	.2333	-.4105	-.0627	-.0004	-.0328	6.18	.506
.204	2.89 (60.37)	.03	2.41	1.6561	.2568	-.4476	-.0650	-.0015	-.0306	6.45	.552
.204	2.89 (60.41)	.05	4.47	1.8832	.2822	-.4925	-.0654	-.0030	-.0264	6.67	.598
.204	2.90 (60.53)	.08	6.58	2.0961	.3136	-.5326	-.0661	-.0051	-.0234	6.68	.646
.204	2.89 (60.44)	.12	8.57	2.2851	.3441	-.5784	-.0683	-.0077	-.0185	6.64	.685
.204	2.89 (60.39)	.14	10.60	2.4841	.3762	-.6229	-.0659	-.0086	-.0153	6.60	.684
.204	2.89 (60.39)	.18	12.64	2.6631	.4132	-.6507	-.0676	-.0108	-.0132	6.45	.685
.204	2.88 (60.22)	.20	14.70	2.7719	.4497	-.6840	-.0638	-.0142	-.0003	6.16	.684
.204	2.89 (60.37)	.23	16.71	2.8812	.4934	-.7049	-.0635	-.0164	.0085	5.84	.685

RUN NUMBER 165 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.41)	-.04	-3.73	.6241	.1913	-.1406	-.0419	.0028	-.0338	3.26	.422
.204	2.89 (60.33)	-.02	-1.66	1.1942	.2070	-.3534	-.0490	.0021	-.0306	5.77	.463
.204	2.89 (60.42)	.00	.48	1.5009	.2321	-.4479	-.0535	.0003	-.0307	6.47	.510
.204	2.89 (60.34)	.02	2.43	1.7128	.2541	-.4841	-.0554	-.0007	-.0292	6.74	.553
.204	2.89 (60.35)	.05	4.54	1.9391	.2819	-.5258	-.0568	-.0023	-.0238	6.88	.601
.204	2.89 (60.42)	.08	6.57	2.1577	.3103	-.5705	-.0582	-.0038	-.0227	6.95	.647
.204	2.90 (60.48)	.10	8.61	2.3478	.3445	-.6133	-.0574	-.0051	-.0202	6.82	.684
.204	2.89 (60.29)	.13	10.71	2.5472	.3773	-.6476	-.0544	-.0056	-.0186	6.75	.685
.204	2.89 (60.44)	.15	12.75	2.7271	.4152	-.6727	-.0553	-.0085	-.0140	6.57	.685
.204	2.89 (60.43)	.17	14.68	2.8614	.4491	-.6719	-.0506	-.0105	-.0125	6.37	.685
.204	2.89 (60.44)	.19	16.73	3.0179	.4965	-.6734	-.0443	-.0095	-.0136	6.08	.684
.204	2.89 (60.38)	.19	18.76	3.1104	.5473	-.6659	-.0332	-.0078	-.0137	5.68	.686

RUN NUMBER 166 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.43)	-.03	-3.82	.6635	.1864	-.1801	-.0292	.0032	-.0301	3.56	.420
.204	2.89 (60.27)	-.02	-1.67	1.2332	.2033	-.3928	-.0334	.0026	-.0272	6.07	.462
.204	2.88 (60.22)	.00	.46	1.5613	.2265	-.4958	-.0336	.0014	-.0236	6.89	.508
.204	2.89 (60.32)	.02	2.47	1.7727	.2520	-.5376	-.0361	.0009	-.0233	7.03	.554
.204	2.89 (60.30)	.04	4.48	1.9831	.2778	-.5814	-.0383	.0003	-.0214	7.14	.599
.204	2.89 (60.37)	.06	6.59	2.2142	.3064	-.6226	-.0385	-.0008	-.0192	7.23	.646
.204	2.89 (60.26)	.08	8.58	2.4161	.3405	-.6648	-.0387	-.0021	-.0170	7.10	.685
.204	2.89 (60.29)	.10	10.70	2.6095	.3768	-.6993	-.0378	-.0029	-.0170	6.93	.684
.204	2.89 (60.39)	.12	12.70	2.7785	.4158	-.7204	-.0396	-.0055	-.0122	6.68	.685
.204	2.88 (60.22)	.14	14.77	2.9243	.4495	-.7184	-.0333	-.0064	-.0092	6.51	.685
.204	2.90 (60.50)	.15	16.74	3.0621	.4969	-.7229	-.0274	-.0051	-.0108	6.16	.685
.204	2.89 (60.40)	.15	18.77	3.1321	.5439	-.7146	-.0206	-.0039	-.0147	5.76	.684

APPENDIX A

RUN NUMBER 167 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.68)	-.02	-3.81	.7095	.1830	-.2206	-.0145	.0030	-.0262	3.88	.419
.204	2.88 (60.25)	-.01	-1.64	1.2942	.2020	-.4421	-.0148	.0029	-.0208	6.41	.462
.204	2.88 (60.13)	-.00	.39	1.5947	.2263	-.5397	-.0178	.0016	-.0197	7.05	.506
.203	2.87 (59.94)	.01	2.49	1.8375	.2495	-.5905	-.0177	.0016	-.0175	7.36	.553
.204	2.89 (60.36)	.03	4.54	2.0650	.2768	-.6354	-.0195	.0012	-.0166	7.46	.599
.204	2.89 (60.35)	.04	6.56	2.2682	.3081	-.6720	-.0168	.0017	-.0155	7.36	.645
.204	2.89 (60.27)	.05	8.61	2.4643	.3433	-.7152	-.0195	.0005	-.0159	7.18	.684
.204	2.88 (60.20)	.07	10.71	2.6823	.3802	-.7547	-.0176	.0000	-.0134	7.06	.684
.204	2.88 (60.20)	.09	12.70	2.8389	.4197	-.7732	-.0206	-.0020	-.0113	6.76	.684
.204	2.88 (60.09)	.10	14.78	2.9685	.4556	-.7641	-.0164	-.0029	-.0082	6.52	.683
.205	2.90 (60.59)	.10	16.79	3.1001	.4994	-.7821	-.0102	-.0016	-.0164	6.21	.683
.204	2.90 (60.51)	.08	18.70	3.1125	.5559	-.8355	.0008	.0034	-.0332	5.60	.684

RUN NUMBER 168 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.48)	.01	-3.78	.8463	.1822	-.3094	.0173	.0013	-.0055	4.64	.418
.204	2.88 (60.21)	.00	-1.64	1.3620	.2021	-.4914	.0066	.0024	-.0053	6.74	.461
.204	2.89 (60.45)	-.00	.43	1.6796	.2276	-.5922	.0056	.0024	-.0069	7.38	.505
.204	2.89 (60.29)	-.00	2.47	1.9077	.2521	-.6395	.0067	.0026	-.0001	7.57	.551
.204	2.89 (60.33)	-.00	4.58	2.1408	.2822	-.6844	.0041	.0030	-.0055	7.59	.599
.204	2.90 (60.48)	-.00	6.60	2.3543	.3145	-.7278	.0029	.0034	-.0066	7.49	.645
.204	2.89 (60.30)	-.00	8.68	2.5579	.3488	-.7696	.0024	.0026	-.0044	7.33	.684
.204	2.88 (60.22)	.00	10.78	2.7565	.3867	-.8041	.0002	.0019	-.0034	7.13	.683
.204	2.89 (60.30)	.00	12.71	2.9083	.4256	-.8204	-.0006	.0017	-.0029	6.83	.684
.204	2.90 (60.47)	.01	14.74	3.0239	.4612	-.7994	-.0028	.0006	-.0031	6.56	.684
.204	2.89 (60.32)	.02	16.79	3.1505	.5069	-.7800	-.0042	.0003	-.0031	6.22	.685

RUN NUMBER 169 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198.

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.210	3.04 (63.58)	-.00	.44	1.7094	.1900	-.6406	.0117	.0026	.0169	9.00	.018
.210	3.04 (63.55)	.00	.44	1.7014	.1925	-.6409	.0118	.0027	.0158	8.84	.024
.205	2.90 (60.60)	.00	.40	1.6889	.2058	-.6299	.0093	.0027	.0098	8.21	.074
.204	2.89 (60.46)	.00	.40	1.6923	.2113	-.6184	.0088	.0035	.0044	8.01	.123
.204	2.88 (60.09)	.00	.41	1.6794	.2164	-.6103	.0068	.0032	-.0016	7.76	.171
.203	2.87 (59.85)	.00	.43	1.6711	.2210	-.6031	.0066	.0030	-.0021	7.56	.225
.204	2.89 (60.34)	-.00	.44	1.6725	.2234	-.5945	.0088	.0029	-.0042	7.49	.321
.204	2.90 (60.54)	-.00	.44	1.6585	.2272	-.5882	.0048	.0027	-.0080	7.30	.422
.204	2.90 (60.53)	-.00	.45	1.6704	.2273	-.5923	.0065	.0024	-.0043	7.35	.505

RUN NUMBER 170 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.56)	-.00	2.44	1.8988	.2051	-.7007	.0090	.0031	.0091	9.26	.018
.204	2.89 (60.36)	-.00	2.44	1.9048	.2079	-.7037	.0092	.0030	.0109	9.16	.023
.204	2.87 (60.03)	-.00	2.44	1.9099	.2222	-.6933	.0092	.0025	.0111	8.59	.073
.203	2.87 (59.93)	-.00	2.45	1.9010	.2327	-.6684	.0061	.0023	.0068	8.17	.122
.204	2.87 (60.02)	-.00	2.45	1.8996	.2380	-.6563	.0071	.0027	.0025	7.98	.171
.203	2.87 (59.84)	-.00	2.45	1.8785	.2439	-.6426	.0042	.0020	-.0012	7.70	.222
.203	2.85 (59.55)	-.00	2.45	1.8762	.2487	-.6355	.0032	.0022	-.0046	7.54	.321
.202	2.84 (59.40)	-.00	2.46	1.8901	.2489	-.6301	.0057	.0028	-.0056	7.59	.419
.203	2.85 (59.43)	-.00	2.47	1.8801	.2531	-.6329	.0037	.0024	-.0044	7.43	.551

APPENDIX A

RUN NUMBER 171 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.67)	-.01	4.48	2.1085	.2434	-.7477	.0069	.0031	.0076	8.66	.071
.204	2.89 (60.40)	-.01	4.48	2.1132	.2541	-.7270	.0065	.0029	.0050	8.32	.118
.204	2.89 (60.27)	-.01	4.50	2.1059	.2623	-.7088	.0053	.0030	-.0006	8.03	.169
.203	2.87 (59.92)	-.01	4.49	2.0945	.2694	-.6951	.0035	.0023	-.0013	7.78	.221
.202	2.84 (59.37)	-.01	4.49	2.0929	.2750	-.6812	.0052	.0020	-.0032	7.61	.318
.205	2.91 (60.71)	-.01	4.53	2.0998	.2790	-.6730	.0042	.0018	-.0036	7.53	.418
.204	2.89 (60.28)	-.01	4.55	2.1227	.2800	-.6829	.0041	.0024	-.0034	7.58	.597

RUN NUMBER 172 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.206	2.95 (61.51)	-.01	6.54	2.3149	.2805	-.7793	.0050	.0017	.0078	8.25	.118
.204	2.90 (60.54)	-.01	6.53	2.3074	.2883	-.7552	.0055	.0027	.0014	8.00	.169
.204	2.89 (60.26)	-.01	6.53	2.2961	.2973	-.7408	.0044	.0027	.0001	7.72	.218
.203	2.86 (59.80)	-.01	6.62	2.3013	.3057	-.7223	.0038	.0025	-.0025	7.53	.317
.203	2.87 (59.96)	-.01	6.64	2.3044	.3106	-.7131	.0022	.0017	-.0033	7.42	.419
.204	2.89 (60.46)	-.00	6.68	2.3369	.3138	-.7252	.0016	.0024	-.0068	7.45	.602

RUN NUMBER 179 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.97 (20.21)	.01	-3.83	.6133	.1752	-.4884	-.0025	.0019	-.0121	3.50	.426
.117	.97 (20.16)	.01	-1.67	1.2374	.1964	-.7561	.0042	.0022	-.0094	6.30	.473
.117	.96 (20.10)	-.00	.41	1.6011	.2236	-.7922	-.0003	.0023	-.0139	7.16	.521
.116	.96 (20.06)	-.00	2.49	1.8267	.2482	-.7643	.0005	.0025	-.0109	7.36	.570
.117	.96 (20.08)	-.01	4.52	2.0150	.2752	-.7256	-.0012	.0029	-.0118	7.32	.617
.117	.97 (20.19)	-.01	6.57	2.2146	.3008	-.6779	-.0020	.0028	-.0137	7.36	.666
.117	.97 (20.16)	-.01	8.66	2.3956	.3247	-.6179	-.0046	.0011	-.0112	7.38	.685
.117	.96 (20.13)	-.01	10.65	2.5475	.3546	-.5589	-.0056	.0004	-.0101	7.18	.685
.117	.96 (20.13)	-.02	12.74	2.6830	.3926	-.4988	-.0054	.0006	-.0124	6.83	.681
.116	.96 (20.06)	-.02	14.76	2.7888	.4191	-.4170	-.0042	-.0009	-.0103	6.65	.684
.117	.97 (20.23)	-.02	16.70	2.8524	.4474	-.3250	-.0036	-.0005	-.0104	6.37	.684
.117	.96 (20.11)	-.01	18.81	2.9072	.4910	-.2457	-.0045	-.0009	-.0119	5.92	.686
.117	.96 (20.11)	-.01	20.69	2.8309	.5404	-.1407	-.0017	.0008	-.0195	5.24	.683
.117	.96 (20.13)	.01	22.69	2.7321	.6109	-.0477	-.0210	-.0141	-.0152	4.47	.683

RUN NUMBER 180 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.93 (40.34)	.01	-3.77	.6655	.1757	-.5330	.0030	.0006	-.0098	3.79	.426
.165	1.92 (40.09)	.01	-1.65	1.2798	.1982	-.7690	.0009	.0022	-.0141	6.46	.470
.166	1.93 (40.33)	-.00	.45	1.6190	.2226	-.7960	.0014	.0026	-.0139	7.27	.517
.166	1.92 (40.14)	-.00	2.51	1.8284	.2473	-.7685	-.0019	.0024	-.0151	7.39	.564
.166	1.92 (40.20)	-.01	4.53	2.0301	.2718	-.7266	-.0022	.0029	-.0135	7.47	.610
.166	1.93 (40.29)	-.01	6.68	2.2278	.3009	-.6755	-.0046	.0022	-.0131	7.40	.659
.166	1.93 (40.31)	-.01	8.59	2.3828	.3273	-.6247	-.0064	.0002	-.0094	7.28	.688
.166	1.93 (40.30)	-.01	10.74	2.5570	.3571	-.5567	-.0069	.0003	-.0097	7.16	.684
.166	1.92 (40.18)	-.01	12.63	2.6950	.3896	-.5008	-.0094	-.0009	-.0080	6.92	.685
.166	1.92 (40.19)	-.01	14.68	2.8022	.4223	-.4257	-.0072	-.0020	-.0064	6.64	.684
.166	1.92 (40.17)	-.01	16.74	2.8999	.4529	-.3379	-.0048	-.0009	-.0073	6.40	.681
.166	1.93 (40.24)	-.01	18.78	2.9815	.4918	-.2474	-.0058	-.0012	-.0081	6.06	.686
.166	1.93 (40.23)	.00	20.80	2.8209	.5438	-.1615	-.0052	-.0003	-.0169	5.19	.685

APPENDIX A

RUN NUMBER 181 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.56)	.01	-3.89	.7178	.1794	-.5913	.0049	.0021	-.0181	4.00	.422
.204	2.89 (60.32)	.01	-1.66	1.3272	.2031	-.7863	.0027	.0027	-.0148	6.53	.465
.204	2.89 (60.27)	.00	.38	1.6033	.2224	-.7951	.0006	.0032	-.0174	7.21	.509
.204	2.89 (60.38)	-.00	2.53	1.8087	.2479	-.7628	-.0035	.0028	-.0156	7.30	.557
.204	2.89 (60.31)	-.01	4.55	2.0179	.2705	-.7148	-.0051	.0028	-.0158	7.46	.602
.204	2.89 (60.30)	-.00	6.55	2.1973	.2984	-.6700	-.0077	.0024	-.0162	7.36	.647
.204	2.89 (60.26)	-.00	8.57	2.3713	.3252	-.6143	-.0092	.0008	-.0130	7.29	.685
.204	2.89 (60.31)	-.00	10.61	2.5332	.3546	-.5555	-.0104	-.0002	-.0099	7.14	.683
.204	2.88 (60.22)	.01	12.68	2.6824	.3886	-.4899	-.0145	-.0017	-.0078	6.90	.686
.204	2.89 (60.26)	.01	14.67	2.7906	.4180	-.4046	-.0143	-.0025	-.0070	6.68	.686
.204	2.89 (60.32)	.02	16.69	2.8831	.4480	-.3167	-.0145	-.0035	-.0051	6.44	.689
.204	2.89 (60.36)	.06	18.49	2.8329	.4928	-.3018	-.0270	-.0082	.0226	5.75	.688

RUN NUMBER 182 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.35)	.01	-3.80	.7833	.1650	-.6196	.0090	.0007	-.0069	4.75	.423
.204	2.89 (60.30)	.00	-1.64	1.3354	.1896	-.7945	.0025	.0029	-.0165	7.04	.466
.204	2.88 (60.10)	-.00	.42	1.6236	.2120	-.8080	.0015	.0038	-.0181	7.66	.510
.204	2.88 (60.15)	-.00	2.61	1.8492	.2363	-.7660	-.0022	.0035	-.0189	7.83	.558
.204	2.89 (60.40)	-.00	4.51	2.0350	.2614	-.7257	-.0041	.0036	-.0181	7.78	.601
.204	2.90 (60.54)	-.00	6.56	2.2317	.2918	-.6781	-.0065	.0032	-.0195	7.65	.647
.204	2.89 (60.33)	.00	8.58	2.4136	.3208	-.6249	-.0085	.0016	-.0169	7.52	.679
.204	2.89 (60.38)	.00	10.61	2.5822	.3537	-.5675	-.0091	.0011	-.0162	7.30	.685
.204	2.88 (60.20)	.01	12.66	2.7285	.3898	-.5027	-.0147	-.0016	-.0087	7.00	.683
.204	2.89 (60.39)	.02	14.69	2.8331	.4178	-.4107	-.0173	-.0036	-.0047	6.78	.686
.204	2.89 (60.28)	.04	16.72	2.9189	.4493	-.3161	-.0207	-.0059	-.0001	6.50	.685
.204	2.89 (60.26)	.05	18.71	2.9546	.4918	-.2402	-.0233	-.0074	.0077	6.01	.687

RUN NUMBER 183 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.47)	.01	-3.89	.2925	.2762	.5693	.0130	-.0001	-.0094	1.06	.417
.204	2.89 (60.46)	.00	-1.73	.9449	.2824	.3222	.0044	.0023	-.0132	3.35	.458
.204	2.89 (60.36)	.00	.31	1.2394	.2869	.2445	.0022	.0020	-.0124	4.32	.503
.205	2.90 (60.53)	-.00	2.40	1.4954	.2912	.2206	-.0022	.0026	-.0188	5.14	.549
.204	2.89 (60.35)	-.00	4.45	1.7076	.3035	.2063	-.0036	.0024	-.0147	5.63	.595
.204	2.89 (60.40)	.00	6.47	1.9171	.3174	.1976	-.0067	.0016	-.0157	6.04	.773
.204	2.90 (60.48)	.00	8.56	2.1351	.3290	.1843	-.0082	.0010	-.0140	6.49	.688
.204	2.89 (60.29)	.01	10.56	2.3212	.3442	.1312	-.0106	-.0003	-.0112	6.74	.683
.204	2.88 (60.25)	.02	12.63	2.4987	.3740	.1103	-.0143	-.0015	-.0081	6.68	.687
.204	2.89 (60.45)	.03	14.66	2.6257	.4036	.1219	-.0165	-.0030	-.0067	6.51	.684
.204	2.89 (60.29)	.05	16.71	2.7306	.4364	.1242	-.0208	-.0044	-.0065	6.26	.685
.204	2.89 (60.35)	.08	18.70	2.7488	.4890	-.0263	-.0314	-.0075	.0153	5.62	.693

RUN NUMBER 184 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.46)	.01	-3.92	.3318	.2328	.4084	.0108	.0006	-.0137	1.42	.418
.204	2.89 (60.32)	.00	-1.76	1.0058	.2392	.1294	.0038	.0024	-.0141	4.21	.459
.205	2.90 (60.57)	-.00	.34	1.3160	.2449	.0463	-.0000	.0028	-.0185	5.37	.505
.205	2.90 (60.54)	-.00	2.39	1.5660	.2483	-.0048	-.0004	.0061	-.0265	6.31	.550
.204	2.89 (60.36)	-.00	4.69	1.8372	.2683	-.0694	-.0034	.0036	-.0181	6.85	.602
.204	2.88 (60.14)	.00	6.51	2.0242	.2920	-.1033	-.0072	.0022	-.0187	6.93	.644
.204	2.88 (60.17)	.00	8.54	2.2393	.3167	-.1453	-.0090	.0009	-.0152	7.07	.690
.204	2.89 (60.31)	.01	10.65	2.4290	.3471	-.1849	-.0089	.0010	-.0135	7.00	.687
.204	2.89 (60.32)	.02	12.63	2.5914	.3810	-.1997	-.0140	-.0016	-.0075	6.80	.685
.204	2.89 (60.33)	.03	14.69	2.7219	.4114	-.1801	-.0166	-.0029	-.0068	6.62	.686
.204	2.89 (60.40)	.05	16.75	2.7812	.4489	-.1970	-.0239	-.0065	.0017	6.20	.688
.204	2.89 (60.26)	.09	18.67	2.7961	.5157	-.3291	-.0368	-.0075	.0240	5.42	.687

APPENDIX A

RUN NUMBER 185 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.53)	.01	-3.88	.4841	.1880	.1218	.0105	.0018	-.0174	2.58	.419
.204	2.89 (60.36)	.00	-1.56	1.1355	.2055	-.1655	.0049	.0030	-.0147	5.53	.465
.204	2.89 (60.27)	.00	.36	1.4076	.2223	-.2555	-.0012	.0031	-.0197	6.33	.507
.204	2.89 (60.35)	.00	2.44	1.6630	.2425	-.3119	-.0016	.0036	-.0191	6.86	.553
.204	2.90 (60.46)	.00	4.49	1.8824	.2679	-.3544	-.0037	.0030	-.0170	7.03	.577
.204	2.88 (60.25)	.00	6.64	2.1367	.2926	-.4002	-.0055	.0032	-.0182	7.30	.614
.204	2.89 (60.41)	.01	8.59	2.3229	.3205	-.4347	-.0078	.0014	-.0138	7.25	.647
.204	2.89 (60.45)	.02	10.68	2.5052	.3575	-.4668	-.0091	.0004	-.0099	7.01	.662
.204	2.89 (60.46)	.03	12.71	2.6728	.3931	-.4810	-.0137	-.0019	-.0048	6.80	.654
.204	2.89 (60.32)	.04	14.67	2.7860	.4234	-.4506	-.0168	-.0028	-.0051	6.58	.646
.204	2.89 (60.46)	.07	16.64	2.8545	.4580	-.4279	-.0249	-.0064	-.0007	6.23	.675
.204	2.89 (60.28)	.11	18.85	2.8652	.5337	-.5463	-.0364	-.0083	.0234	5.37	.679

RUN NUMBER 186 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.37)	.01	-3.84	.5652	.1802	-.1860	.0136	.0011	-.0148	3.14	.421
.204	2.89 (60.37)	-.00	-1.66	1.2068	.2014	-.4671	-.0025	.0025	-.0174	5.99	.464
.204	2.89 (60.33)	.00	.40	1.5243	.2195	-.5672	-.0028	.0033	-.0226	6.95	.509
.204	2.89 (60.33)	.00	2.45	1.7690	.2424	-.6188	-.0046	.0029	-.0187	7.30	.554
.204	2.88 (60.18)	.00	4.68	2.0122	.2735	-.6641	-.0076	.0025	-.0192	7.36	.605
.204	2.89 (60.36)	.01	6.51	2.2129	.2990	-.7031	-.0095	.0019	-.0172	7.40	.626
.204	2.89 (60.29)	.02	8.91	2.4487	.3379	-.7497	-.0110	.0007	-.0136	7.25	.648
.205	2.90 (60.52)	.02	10.64	2.6064	.3674	-.7794	-.0131	.0005	-.0134	7.09	.658
.204	2.88 (60.25)	.03	12.78	2.7859	.4111	-.7997	-.0161	-.0017	-.0085	6.78	.652
.204	2.89 (60.41)	.04	14.80	2.9033	.4470	-.7664	-.0162	-.0024	-.0075	6.50	.669
.204	2.89 (60.31)	.06	16.70	2.9612	.4805	-.7642	-.0215	-.0038	.0013	6.16	.675
.205	2.90 (60.61)	.11	18.78	2.9566	.5563	-.7995	-.0372	-.0093	.0264	5.31	.670

RUN NUMBER 187 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.56)	.01	-3.81	.7097	.1803	-.4937	.0139	.0009	-.0113	3.94	.423
.204	2.89 (60.28)	.00	-1.67	1.3083	.2030	-.7468	.0003	.0030	-.0166	6.45	.465
.204	2.88 (60.24)	-.00	.47	1.6325	.2248	-.8514	-.0017	.0035	-.0212	7.26	.511
.204	2.89 (60.46)	.00	2.55	1.8734	.2512	-.9062	-.0034	.0027	-.0151	7.46	.557
.204	2.89 (60.38)	.00	4.50	2.0899	.2805	-.9508	-.0064	.0021	-.0156	7.45	.602
.205	2.90 (60.53)	.01	6.62	2.3233	.3147	-.9980	-.0089	.0020	-.0183	7.38	.650
.204	2.89 (60.44)	.01	8.66	2.5270	.3497	-1.0374	-.0086	.0010	-.0114	7.23	.685
.204	2.89 (60.35)	.02	10.73	2.7114	.3896	-1.0686	-.0108	.0009	-.0124	6.96	.685
.204	2.89 (60.30)	.03	12.69	2.8780	.4284	-1.0723	-.0143	-.0007	-.0099	6.72	.686
.204	2.89 (60.26)	.03	14.79	2.9891	.4679	-1.0146	-.0150	-.0027	-.0052	6.39	.685
.204	2.88 (60.16)	.07	16.77	3.0386	.5121	-.9538	-.0239	-.0067	-.0045	5.93	.685
.204	2.89 (60.45)	.10	18.79	3.0168	.5936	-1.0268	-.0343	-.0102	.0330	5.08	.685

RUN NUMBER 188 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.31)	.00	-3.78	.8130	.1848	-.7993	.0116	.0008	-.0099	4.40	.425
.204	2.89 (60.42)	-.00	-1.62	1.3996	.2129	-1.0583	-.0040	.0023	-.0168	6.57	.468
.204	2.89 (60.28)	-.00	.43	1.7099	.2379	-1.1621	-.0023	.0028	-.0183	7.19	.512
.204	2.89 (60.32)	.00	2.52	1.9646	.2662	-1.2231	-.0042	.0026	-.0148	7.38	.558
.205	2.90 (60.61)	.01	4.55	2.2014	.2983	-1.2680	-.0057	.0028	-.0182	7.38	.604
.204	2.89 (60.42)	.01	6.67	2.4277	.3361	-1.3053	-.0075	.0022	-.0141	7.22	.652
.204	2.89 (60.40)	.02	8.68	2.6158	.3731	-1.3316	-.0103	.0009	-.0138	7.01	.671
.204	2.89 (60.34)	.02	10.70	2.7955	.4138	-1.3522	-.0105	.0010	-.0117	6.76	.692
.204	2.88 (60.21)	.04	12.74	2.9583	.4583	-1.3470	-.0138	-.0017	-.0071	6.45	.690
.204	2.88 (60.15)	.04	14.80	3.0631	.5019	-1.2784	-.0119	-.0024	-.0056	6.10	.699
.204	2.88 (60.22)	.06	16.72	3.1030	.5424	-1.2115	-.0158	-.0055	.0082	5.72	.678
.203	2.86 (59.75)	.09	18.95	3.0860	.6361	-1.2391	-.0288	-.0095	.0390	4.85	.704

APPENDIX A

RUN NUMBER 189 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.31)	.00	-3.78	.9296	.2005	-1.1326	.0101	-.0002	-.0083	4.64	.426
.204	2.88 (60.23)	-.00	-1.57	1.5468	.2292	-1.3959	-.0031	.0020	-.0146	6.75	.470
.204	2.89 (60.37)	.00	.49	1.8215	.2594	-1.4856	-.0038	.0024	-.0178	7.02	.515
.205	2.91 (60.85)	.00	2.56	2.0779	.2894	-1.5357	-.0047	.0021	-.0147	7.18	.560
.204	2.89 (60.43)	.01	4.61	2.2935	.3276	-1.5656	-.0071	.0009	-.0124	7.00	.607
.205	2.90 (60.57)	.01	6.66	2.4979	.3705	-1.5657	-.0089	.0020	-.0159	6.74	.653
.204	2.89 (60.28)	.02	8.65	2.6697	.4118	-1.5459	-.0094	.0012	-.0120	6.48	.684
.204	2.88 (60.23)	.03	10.72	2.8302	.4591	-1.5292	-.0118	.0004	-.0107	6.16	.685
.204	2.89 (60.27)	.04	12.73	2.9836	.5013	-1.4966	-.0150	-.0022	-.0038	5.95	.684
.204	2.88 (60.22)	.04	14.82	3.0676	.5434	-1.3852	-.0144	-.0040	.0055	5.65	.683
.205	2.91 (60.68)	.09	16.71	3.0245	.5838	-1.3236	-.0313	-.0122	.0275	5.18	.685

RUN NUMBER 190 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.44)	-10.01	-3.82	.6961	.1534	-.3789	.0211	-.0311	.2397	4.54	.421
.204	2.89 (60.41)	-10.01	-1.69	1.1637	.1673	-.5461	.0346	-.0276	.2230	6.96	.466
.204	2.89 (60.26)	-10.02	.35	1.5130	.1901	-.6168	.0462	-.0252	.2128	7.96	.510
.204	2.89 (60.36)	-10.03	2.46	1.7576	.2127	-.6677	.0475	-.0239	.2087	8.26	.687
.204	2.88 (60.22)	-10.04	4.50	1.9779	.2414	-.7099	.0480	-.0231	.2047	8.19	.603
.204	2.90 (60.48)	-10.06	6.59	2.2056	.2724	-.7631	.0483	-.0234	.2072	8.10	.650
.204	2.89 (60.33)	-10.07	8.58	2.4093	.3058	-.7984	.0483	-.0236	.2073	7.88	.685
.205	2.90 (60.60)	-10.08	10.66	2.5937	.3426	-.8265	.0488	-.0235	.2074	7.57	.685
.204	2.89 (60.45)	-10.08	12.69	2.7471	.3843	-.8310	.0458	-.0255	.2109	7.15	.685
.205	2.90 (60.53)	-10.08	14.69	2.8091	.4316	-.8254	.0355	-.0322	.2229	6.51	.684
.204	2.89 (60.35)	-10.09	16.73	2.8798	.4718	-.8210	.0361	-.0361	.2331	6.10	.684

RUN NUMBER 191 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.65)	.02	-3.88	.5232	.1806	-.1357	.0076	.0015	-.0069	2.90	.420
.204	2.90 (60.47)	.01	-1.68	1.2022	.2002	-.4487	.0016	.0030	-.0078	6.00	.464
.204	2.89 (60.43)	-.00	.41	1.5145	.2193	-.5465	-.0022	.0030	-.0096	6.91	.509
.204	2.89 (60.27)	-.00	2.43	1.7606	.2426	-.6014	-.0041	.0027	-.0100	7.26	.554
.204	2.88 (60.18)	-.01	4.53	1.9935	.2710	-.6485	-.0061	.0026	-.0108	7.36	.601
.204	2.88 (60.18)	-.01	6.55	2.2120	.2989	-.6935	-.0076	.0023	-.0092	7.40	.647
.204	2.88 (60.14)	-.00	8.65	2.4233	.3296	-.7459	-.0110	-.0002	-.0028	7.35	.684
.204	2.88 (60.20)	-.00	10.65	2.6011	.3650	-.7824	-.0116	-.0005	.0000	7.13	.684
.204	2.89 (60.34)	.00	12.68	2.7527	.4053	-.8063	-.0150	-.0021	.0061	6.79	.685
.204	2.89 (60.41)	.01	14.71	2.8381	.4415	-.8129	-.0183	-.0047	.0144	6.43	.685
.205	2.91 (60.77)	.07	16.75	2.8121	.5045	-.8336	-.0287	-.0085	.0348	5.57	.685
.204	2.88 (60.25)	.06	18.68	2.9241	.5556	-.8205	-.0224	-.0030	.0286	5.26	.684

RUN NUMBER 192 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.44)	5.03	-3.90	.5362	.1716	-.1509	.0094	.0158	-.1184	3.13	.419
.204	2.90 (60.50)	5.02	-1.69	1.2187	.1917	-.4782	-.0214	.0160	-.1193	6.36	.464
.204	2.89 (60.34)	5.02	.42	1.5481	.2112	-.5815	-.0272	.0152	-.1137	7.33	.510
.204	2.89 (60.43)	5.03	2.42	1.7515	.2341	-.6319	-.0328	.0145	-.1121	7.48	.555
.205	2.90 (60.51)	5.03	4.50	1.9743	.2589	-.6771	-.0337	.0143	-.1119	7.63	.602
.204	2.89 (60.32)	5.04	6.53	2.1950	.2884	-.7226	-.0391	.0132	-.1133	7.61	.648
.205	2.90 (60.52)	5.05	8.62	2.4048	.3217	-.7671	-.0397	.0137	-.1148	7.47	.684
.204	2.90 (60.47)	5.06	10.64	2.5898	.3559	-.7994	-.0395	.0135	-.1154	7.28	.685
.204	2.88 (60.23)	5.08	12.71	2.7181	.3974	-.8348	-.0441	.0121	-.1066	6.84	.684
.204	2.88 (60.15)	5.11	14.66	2.7697	.4379	-.8275	-.0524	.0091	-.0970	6.33	.684
.204	2.87 (60.01)	5.17	16.72	2.8120	.4974	-.8348	-.0600	.0081	-.0903	5.65	.685
.203	2.86 (59.71)	5.22	18.72	2.8572	.5499	-.8239	-.0504	.0144	-.1048	5.20	.685

APPENDIX A

RUN NUMBER 193 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.60)	-.01	-3.60	1.5111	.1854	-.9055	.0017	.0013	-.0095	8.15	.416
.204	2.89 (60.42)	-.01	-1.53	1.6917	.2077	-.9729	.0007	.0012	-.0097	8.15	.462
.204	2.89 (60.37)	.00	.49	1.8628	.2299	-.8319	-.0010	.0013	-.0118	8.10	.507
.204	2.89 (60.33)	.01	2.53	2.0521	.2559	-.7960	-.0005	.0014	-.0108	8.02	.553
.204	2.89 (60.36)	.01	4.59	2.2410	.2860	-.7545	.0002	.0019	-.0126	7.83	.599
.204	2.88 (60.24)	-.03	6.61	2.3248	.3397	-.6263	.0296	.0114	-.0045	6.84	.646
.204	2.88 (60.14)	.01	8.54	2.1503	.4295	-.3918	-.0020	.0013	-.0082	5.01	.685

RUN NUMBER 194 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.50)	-.00	-3.71	1.1609	.1638	-.6658	-.0007	.0026	-.0142	7.09	.419
.204	2.89 (60.35)	-.00	-1.63	1.3505	.1777	-.6306	-.0032	.0020	-.0149	7.60	.465
.204	2.90 (60.53)	-.00	.38	1.5379	.1943	-.5977	-.0044	.0018	-.0167	7.92	.509
.204	2.90 (60.51)	.00	2.46	1.7444	.2133	-.5604	-.0040	.0022	-.0196	8.18	.555
.204	2.90 (60.50)	.01	4.49	1.9325	.2373	-.5231	-.0044	.0021	-.0187	8.14	.601
.204	2.89 (60.40)	.01	6.54	2.1291	.2644	-.4791	-.0037	.0017	-.0162	8.05	.647
.205	2.91 (60.76)	.02	8.49	2.0363	.3534	-.2789	-.0021	.0026	-.0167	5.76	.685

RUN NUMBER 195 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.51)	-.00	-3.88	.5441	.0761	-.4357	.0000	.0010	-.0120	7.15	.424
.204	2.89 (60.35)	-.00	-1.79	.7787	.0824	-.4127	.0028	.0012	-.0113	9.45	.470
.204	2.89 (60.36)	.00	.27	1.0000	.0932	-.3904	.0017	.0009	-.0123	10.73	.516
.203	2.87 (60.03)	.00	2.32	1.2120	.1082	-.3651	.0001	.0005	-.0090	11.20	.562
.204	2.88 (60.25)	.00	4.40	1.4334	.1258	-.3358	.0009	.0010	-.0110	11.39	.608
.204	2.88 (60.22)	.01	6.41	1.6443	.1458	-.3014	-.0002	.0009	-.0131	11.28	.653
.204	2.88 (60.09)	.01	8.44	1.8354	.1710	-.2689	-.0003	.0005	-.0112	10.73	.685
.203	2.87 (60.04)	.02	10.41	1.7607	.2621	-.1003	-.0021	.0014	-.0143	6.72	.685
.204	2.88 (60.22)	.01	12.42	1.7797	.3236	-.0168	.0040	.0025	-.0125	5.50	.685
.204	2.90 (60.54)	.01	14.47	1.8152	.3770	.0549	.0064	.0026	-.0110	4.81	.685

RUN NUMBER 196 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.91 (60.86)	-.00	-3.78	.8044	.0798	-.6042	.0051	.0016	-.0097	10.08	.424
.204	2.88 (60.22)	-.00	-1.73	1.0239	.0916	-.5836	.0042	.0018	-.0118	11.17	.469
.204	2.90 (60.49)	.00	.32	1.2417	.1066	-.5601	.0043	.0017	-.0124	11.64	.515
.204	2.89 (60.41)	.00	2.39	1.4545	.1258	-.5347	.0036	.0017	-.0125	11.56	.560
.204	2.89 (60.33)	.00	4.44	1.6755	.1466	-.5074	.0040	.0022	-.0116	11.43	.605
.204	2.88 (60.13)	.00	6.49	1.8864	.1721	-.4778	.0037	.0025	-.0141	10.96	.651
.204	2.89 (60.26)	-.01	8.50	1.9807	.2276	-.3664	.0211	.0103	-.0167	8.70	.698
.204	2.89 (60.33)	.02	10.48	1.8869	.3097	-.2003	-.0037	.0002	-.0122	6.09	.684
.204	2.90 (60.63)	.01	13.79	1.8965	.4013	-.0484	.0088	.0031	-.0120	4.73	.692
.204	2.89 (60.45)	.02	14.39	1.8435	.4378	-.0758	.0037	-.0009	.0023	4.21	.684

APPENDIX A

RUN NUMBER 198 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.117	.97 (20.21)	-.01	-3.96	.1387	.1378	-.2764	.0015	.0017	-.0117	1.01	.428
.117	.97 (20.25)	-.01	-1.89	.4347	.1203	-.3311	.0029	.0010	-.0067	3.61	.475
.117	.97 (20.18)	-.00	.22	.8708	.1162	-.4711	-.0001	-.0001	-.0069	7.49	.523
.117	.97 (20.18)	.01	2.31	1.1729	.1286	-.4830	.0016	.0008	-.0080	9.12	.571
.116	.97 (20.16)	.02	4.35	1.3902	.1481	-.4602	-.0015	-.0005	-.0028	9.39	.619
.116	.96 (20.10)	.02	6.39	1.6122	.1707	-.4377	.0019	.0007	-.0046	9.44	.667
.116	.97 (20.16)	.03	8.45	1.8090	.1966	-.3958	-.0022	-.0010	-.0045	9.20	.685
.116	.96 (20.13)	.04	10.49	1.9876	.2248	-.3557	-.0036	-.0015	-.0043	8.84	.685
.116	.96 (20.09)	.06	12.55	2.1722	.2571	-.3010	-.0081	-.0030	-.0047	8.45	.685
.116	.96 (20.10)	.07	14.56	2.2868	.2961	-.2470	-.0129	-.0053	.0008	7.72	.685
.116	.96 (20.03)	.09	16.56	2.3550	.3330	-.1818	-.0242	-.0116	.0098	7.07	.685
.116	.96 (20.04)	.12	18.63	2.3475	.3952	-.1520	-.0388	-.0157	.0200	5.94	.684
.116	.96 (20.06)	.14	20.58	2.3320	.4557	-.1273	-.0409	-.0193	.0192	5.12	.684
.116	.95 (19.90)	.15	22.58	2.3507	.5317	-.1000	-.0392	-.0210	.0016	4.42	.685

RUN NUMBER 199 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.166	1.93 (40.38)	-.01	-3.93	.1615	.1365	-.2931	.0021	.0004	-.0048	1.18	.429
.166	1.93 (40.36)	-.00	-1.84	.4861	.1196	-.3701	.0065	-.0009	-.0009	4.06	.475
.166	1.93 (40.36)	.00	.26	.9050	.1175	-.4801	.0002	-.0003	-.0059	7.70	.522
.165	1.92 (40.20)	.01	2.31	1.1618	.1315	-.4852	-.0000	-.0002	-.0025	8.83	.568
.165	1.92 (40.14)	.01	4.39	1.4027	.1491	-.4629	-.0017	-.0004	-.0040	9.41	.615
.165	1.92 (40.13)	.02	6.40	1.6064	.1729	-.4346	-.0034	-.0010	-.0036	9.29	.661
.165	1.92 (40.00)	.04	8.48	1.7991	.1998	-.3980	-.0067	-.0025	-.0046	9.00	.683
.165	1.91 (39.95)	.05	10.58	1.9774	.2301	-.3578	-.0099	-.0041	.0015	8.59	.684
.165	1.92 (40.07)	.07	12.56	2.1271	.2632	-.3100	-.0170	-.0070	.0046	8.08	.686
.165	1.92 (40.16)	.10	14.61	2.2218	.3048	-.2694	-.0293	-.0130	.0188	7.29	.684
.165	1.92 (40.04)	.13	16.60	2.2757	.3541	-.2273	-.0410	-.0182	.0264	6.43	.685
.165	1.93 (40.27)	.16	18.63	2.3241	.4059	-.1640	-.0446	-.0201	.0294	5.73	.684
.165	1.93 (40.26)	.18	20.55	2.3064	.4651	-.1428	-.0445	-.0212	.0174	4.96	.686

RUN NUMBER 200 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.38)	-.01	-3.95	.1641	.1387	-.3122	.0039	-.0000	-.0029	1.18	.429
.203	2.89 (60.35)	-.00	-1.79	.5867	.1171	-.4371	.0013	.0004	-.0062	5.01	.475
.204	2.89 (60.37)	.00	.27	.9208	.1191	-.4906	.0014	.0001	-.0046	7.73	.519
.203	2.89 (60.30)	.01	2.29	1.1738	.1305	-.4886	.0006	.0001	-.0044	8.99	.564
.203	2.89 (60.29)	.01	4.38	1.3994	.1505	-.4680	-.0021	-.0003	-.0025	9.30	.610
.203	2.89 (60.28)	.02	6.40	1.5936	.1742	-.4397	-.0055	-.0012	-.0045	9.15	.655
.204	2.89 (60.44)	.03	8.47	1.8024	.1976	-.4005	-.0069	-.0017	-.0031	9.12	.693
.203	2.89 (60.31)	.05	10.51	1.9806	.2251	-.3537	-.0115	-.0033	-.0009	8.80	.685
.203	2.88 (60.24)	.06	12.55	2.1486	.2570	-.3165	-.0131	-.0044	.0034	8.36	.685
.203	2.89 (60.36)	.12	14.51	2.1418	.3108	-.3252	-.0328	-.0139	.0293	6.89	.684
.203	2.89 (60.32)	.14	16.55	2.2385	.3526	-.2785	-.0354	-.0136	.0319	6.35	.684
.203	2.88 (60.22)	.20	18.55	2.2554	.4029	-.1867	-.0471	-.0196	.0299	5.60	.685

RUN NUMBER 201 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.88 (60.24)	-.01	-4.00	.1243	.1212	-.3013	.0059	.0003	-.0024	1.03	.428
.203	2.89 (60.29)	-.01	-1.88	.5574	.0991	-.4340	.0031	.0013	-.0086	5.62	.473
.203	2.88 (60.25)	-.00	.23	.9463	.0991	-.4970	.0042	.0010	-.0062	9.55	.518
.203	2.88 (60.21)	.01	2.32	1.1963	.1134	-.5014	.0010	.0010	-.0064	10.55	.564
.203	2.88 (60.21)	.01	4.37	1.4322	.1330	-.4788	.0007	.0009	-.0055	10.77	.608
.203	2.88 (60.19)	.02	6.45	1.6645	.1559	-.4440	.0010	.0016	-.0082	10.68	.655
.203	2.88 (60.17)	.03	8.51	1.8688	.1849	-.4138	-.0022	.0004	-.0076	10.11	.685
.203	2.88 (60.14)	.04	10.49	2.0428	.2159	-.3737	-.0064	-.0022	-.0009	9.46	.684
.203	2.88 (60.24)	.06	12.55	2.1957	.2519	-.3333	-.0107	-.0043	.0048	8.72	.685
.204	2.90 (60.48)	.11	14.58	2.2023	.3064	-.3387	-.0296	-.0122	.0256	7.19	.685
.204	2.90 (60.48)	.13	16.59	2.3004	.3480	-.2890	-.0321	-.0122	.0283	6.61	.685
.203	2.89 (60.33)	.15	18.56	2.3663	.3904	-.2400	-.0296	-.0101	.0271	6.06	.688

APPENDIX A

RUN NUMBER 202 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.89 (60.45)	-.01	-4.06	-.1954	.2318	.7678	.0053	.0010	-.0092	-.84	.421
.204	2.90 (60.47)	-.00	-1.99	.1748	.1949	.6247	.0094	.0010	-.0056	.90	.465
.203	2.89 (60.39)	-.00	.13	.5898	.1733	.4926	.0045	.0009	-.0064	3.40	.510
.203	2.88 (60.23)	.01	2.22	.8626	.1685	.4455	.0020	.0009	-.0076	5.12	.556
.203	2.89 (60.37)	.01	4.29	1.1134	.1711	.4061	.0028	.0014	-.0054	6.51	.603
.203	2.89 (60.32)	.02	6.35	1.3571	.1779	.3674	.0010	.0009	-.0070	7.63	.649
.203	2.89 (60.29)	.03	8.47	1.6016	.1924	.2802	.0002	.0003	-.0052	8.33	.685
.203	2.88 (60.11)	.04	10.41	1.8070	.2166	.2236	-.0023	-.0007	-.0042	8.34	.684
.203	2.88 (60.10)	.05	12.49	2.0176	.2456	.1829	-.0045	-.0021	-.0018	8.21	.685
.203	2.88 (60.06)	.08	14.47	2.1401	.2861	.1048	-.0124	-.0061	.0096	7.48	.686
.203	2.87 (60.04)	.12	16.56	2.1962	.3365	-.0215	-.0223	-.0087	.0236	6.53	.685
.203	2.87 (59.84)	.12	18.58	2.2792	.3810	-.0599	-.0187	-.0053	.0204	5.98	.685

RUN NUMBER 203 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.88 (60.25)	-.01	-4.03	-.1412	.1834	.6009	.0052	-.0002	-.0049	-.77	.422
.204	2.90 (60.47)	-.00	-1.89	.2767	.1418	.4174	.0042	.0005	-.0079	1.95	.468
.204	2.89 (60.42)	-.00	.16	.6482	.1270	.2585	.0038	.0003	-.0072	5.11	.513
.203	2.89 (60.37)	.01	2.24	.9537	.1319	.1666	.0009	-.0000	-.0053	7.23	.558
.203	2.89 (60.39)	.01	4.31	1.2093	.1469	.0978	.0016	.0009	-.0065	8.23	.605
.203	2.88 (60.16)	.02	6.40	1.4614	.1675	.0377	-.0008	.0002	-.0075	8.73	.652
.203	2.88 (60.16)	.03	8.41	1.6894	.1918	-.0248	-.0019	-.0002	-.0065	8.81	.684
.203	2.89 (60.35)	.04	10.51	1.8972	.2218	-.0819	-.0047	-.0016	-.0039	8.55	.684
.203	2.89 (60.27)	.05	12.54	2.0941	.2545	-.1146	-.0079	-.0031	-.0013	8.23	.684
.203	2.88 (60.09)	.08	14.53	2.2263	.2941	-.1308	-.0166	-.0073	.0050	7.57	.684
.203	2.89 (60.31)	.12	16.60	2.2558	.3478	-.2639	-.0263	-.0099	.0225	6.49	.684
.203	2.88 (60.21)	.12	18.54	2.3314	.3932	-.3012	-.0222	-.0071	.0205	5.93	.685

RUN NUMBER 204 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.31)	-.00	-1.81	.4072	.1224	-.1165	.0066	.0013	-.0063	3.33	.472
.203	2.89 (60.35)	-.00	-1.89	.3802	.1224	-.1272	.0051	.0004	-.0043	3.11	.469
.203	2.88 (60.17)	-.00	.19	.7559	.1191	-.0155	.0024	.0006	-.0074	6.34	.515
.203	2.88 (60.13)	.00	2.29	1.0597	.1270	-.1095	.0021	.0006	-.0054	8.34	.561
.203	2.88 (60.22)	.01	4.37	1.3208	.1440	-.1774	.0026	.0013	-.0065	9.17	.607
.203	2.89 (60.35)	.01	6.37	1.5524	-.1673	-.2291	.0012	.0014	-.0097	9.28	.652
.203	2.88 (60.25)	.02	8.48	1.7887	.1956	-.2865	-.0012	.0005	-.0078	9.14	.684
.203	2.88 (60.13)	.04	10.55	1.9849	.2289	-.3271	-.0058	-.0020	-.0028	8.67	.685
.203	2.89 (60.29)	.05	12.54	2.1680	.2645	-.3587	-.0086	-.0029	-.0007	8.20	.684
.203	2.88 (60.16)	.07	14.57	2.3204	.3033	-.3672	-.0145	-.0060	.0069	7.65	.685
.203	2.89 (60.27)	.11	16.57	2.3308	.3578	-.4882	-.0271	-.0102	.0241	6.51	.685
.203	2.88 (60.07)	.12	18.56	2.3926	.4117	-.5368	-.0224	-.0069	.0208	5.81	.685

RUN NUMBER 205 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.30)	-.00	-4.00	.0226	.1428	.0692	.0056	.0003	-.0057	.16	.425
.203	2.88 (60.24)	-.00	-1.87	.4682	.1194	-.1393	.0035	.0012	-.0090	3.92	.471
.203	2.89 (60.27)	-.00	.20	.8400	.1182	-.2791	.0030	.0004	-.0063	7.11	.516
.203	2.88 (60.19)	.00	2.31	1.1487	.1287	-.3678	.0023	.0008	-.0074	8.92	.563
.203	2.88 (60.12)	.01	4.35	1.3892	.1492	-.4293	.0016	.0012	-.0062	9.31	.608
.203	2.89 (60.35)	.02	6.42	1.6370	.1739	-.4847	-.0014	.0007	-.0094	9.42	.654
.203	2.88 (60.18)	.02	8.52	1.8734	.2037	-.5406	-.0029	.0001	-.0066	9.19	.685
.203	2.88 (60.17)	.03	10.54	2.0692	.2375	-.5866	-.0056	-.0011	-.0043	8.71	.685
.203	2.88 (60.18)	.04	12.55	2.2576	.2753	-.6076	-.0079	-.0021	-.0023	8.20	.684
.203	2.89 (60.37)	.07	14.61	2.3976	.3173	-.6106	-.0150	-.0053	.0048	7.56	.685
.203	2.89 (60.26)	.11	16.57	2.3881	.3776	-.7034	-.0293	-.0117	.0237	6.32	.685
.204	2.89 (60.45)	.12	18.61	2.4534	.4371	-.7510	-.0259	-.0101	.0226	5.61	.684

APPENDIX A

RUN NUMBER 206 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.34)	-.00	-3.96	.1510	.1381	-.2598	.0064	.0007	-.0083	1.09	.427
.203	2.89 (60.31)	-.00	-1.85	.5832	.1203	-.4657	.0024	.0014	-.0102	4.85	.473
.203	2.88 (60.09)	-.00	.24	.9583	.1222	-.6043	.0038	.0005	-.0067	7.84	.518
.203	2.89 (60.28)	.00	2.30	1.2424	.1368	-.6943	.0004	.0009	-.0079	9.08	.564
.203	2.88 (60.12)	.01	4.35	1.4902	.1608	-.7574	-.0012	.0008	-.0076	9.27	.610
.203	2.88 (60.13)	.02	6.46	1.7429	.1892	-.8136	-.0031	.0004	-.0084	9.21	.657
.203	2.88 (60.22)	.03	8.48	1.9575	.2230	-.8555	-.0080	-.0016	-.0055	8.78	.685
.203	2.89 (60.35)	.04	10.58	2.1556	.2606	-.8910	-.0096	-.0015	-.0064	8.27	.684
.203	2.88 (60.11)	.05	12.65	2.3485	.3025	-.9036	-.0130	-.0034	-.0024	7.76	.684
.203	2.88 (60.22)	.08	14.63	2.4813	.3463	-.8875	-.0211	-.0067	.0025	7.16	.685
.203	2.89 (60.26)	.13	16.60	2.4734	.4115	-.9701	-.0365	-.0159	.0278	6.01	.684
.204	2.90 (60.63)	.15	18.60	2.5173	.4733	-1.0120	-.0352	-.0167	.0282	5.32	.685

RUN NUMBER 207 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.203	2.89 (60.36)	-.01	-3.95	.2433	.1448	-.5684	.0055	.0005	-.0060	1.68	.429
.204	2.90 (60.54)	-.00	-1.86	.6809	.1288	-.7731	.0033	.0013	-.0088	5.29	.474
.203	2.89 (60.36)	.00	.28	1.0633	.1338	-.9208	.0015	.0005	-.0070	7.94	.520
.203	2.88 (60.19)	.00	2.39	1.3603	.1530	-1.0163	-.0008	.0004	-.0039	8.89	.567
.203	2.88 (60.22)	.01	4.45	1.6020	.1805	-1.0694	-.0042	.0003	-.0074	8.88	.613
.203	2.89 (60.27)	.02	6.44	1.8204	.2104	-1.1064	-.0072	-.0005	-.0081	8.65	.657
.203	2.89 (60.29)	.03	8.51	2.0440	.2436	-1.1299	-.0096	-.0008	-.0087	8.39	.685
.203	2.88 (60.16)	.05	10.60	2.2371	.2832	-1.1490	-.0123	-.0023	-.0065	7.90	.684
.203	2.89 (60.36)	.06	12.62	2.4146	.3298	-1.1587	-.0159	-.0049	-.0009	7.32	.684
.203	2.88 (60.11)	.09	14.61	2.5387	.3779	-1.1346	-.0249	-.0103	.0072	6.72	.684
.203	2.89 (60.34)	.15	16.62	2.5165	.4491	-1.1747	-.0422	-.0199	.0315	5.60	.685
.204	2.89 (60.45)	.20	18.68	2.5322	.5216	-1.2025	-.0422	-.0191	.0258	4.85	.684

RUN NUMBER 208 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.204	2.90 (60.47)	-.01	-3.87	.3670	.1546	-.8833	.0073	.0006	-.0065	2.37	.432
.203	2.89 (60.40)	-.01	-1.81	.8073	.1415	-1.0875	.0029	.0010	-.0079	5.71	.476
.203	2.88 (60.21)	.00	.32	1.1716	.1527	-1.2257	-.0001	.0007	-.0098	7.68	.523
.203	2.88 (60.10)	.01	2.43	1.4552	.1763	-1.3135	-.0025	-.0009	-.0064	8.26	.570
.203	2.89 (60.35)	.02	4.43	1.6868	.2066	-1.3455	-.0025	-.0021	-.0020	8.16	.614
.203	2.88 (60.24)	.03	6.47	1.9067	.2411	-1.3443	-.0081	-.0055	.0020	7.91	.659
.203	2.89 (60.26)	.04	8.58	2.0931	.2890	-1.3348	-.0116	-.0040	-.0007	7.24	.685
.203	2.88 (60.18)	.06	10.60	2.2650	.3265	-1.3421	-.0153	-.0037	-.0018	6.94	.685
.203	2.88 (60.16)	.08	12.64	2.4223	.3718	-1.3081	-.0224	-.0072	.0049	6.52	.685
.203	2.88 (60.13)	.12	14.68	2.5209	.4253	-1.2479	-.0335	-.0134	.0153	5.93	.685
.203	2.88 (60.16)	.18	16.62	2.4984	.5040	-1.3221	-.0491	-.0217	.0358	4.96	.684
.204	2.90 (60.49)	.22	18.60	2.5173	.5758	-1.3382	-.0531	-.0238	.0330	4.37	.685

RUN NUMBER 209 LONGITUDINAL STABILITY-AXIS AND LATERAL BODY-AXIS DATA TEST NUMBER 198

MACH	Q,KPA (PSF)	BETA,DEG	ALPHA,DEG	CL	CD	CPM	CRM	CYM	CSF	L/D	H/B
.205	2.90 (60.52)	-4.98	-3.79	.5941	.1724	-.2448	.0133	-.0171	.1373	3.45	.423
.204	2.89 (60.31)	-4.99	-1.70	1.2210	.1926	-.4741	.0212	-.0115	.1098	6.34	.464
.204	2.89 (60.34)	-5.00	.41	1.5363	.2127	-.5659	.0223	-.0111	.1071	7.22	.510
.204	2.88 (60.18)	-5.01	2.43	1.7497	.2322	-.6187	.0203	-.0108	.1049	7.54	.686
.204	2.88 (60.20)	-5.02	4.51	1.9743	.2590	-.6673	.0206	-.0106	.1017	7.62	.602
.204	2.89 (60.34)	-5.04	6.57	2.2075	.2887	-.7148	.0200	-.0101	.0994	7.65	.648
.204	2.89 (60.33)	-5.04	8.69	2.4167	.3256	-.7536	.0177	-.0117	.1000	7.42	.817
.204	2.89 (60.44)	-5.05	10.61	2.5993	.3600	-.7792	.0172	-.0134	.1037	7.22	.685
.204	2.88 (60.20)	-5.06	12.71	2.7560	.4000	-.7908	.0155	-.0150	.1071	6.89	.684
.204	2.88 (60.22)	-5.04	14.71	2.8130	.4345	-.8189	.0038	-.0199	.1189	6.47	.684
.205	2.90 (60.54)	-5.02	16.72	2.8526	.4810	-.7881	-.0018	-.0267	.1268	5.93	.685

APPENDIX B

LONGITUDINAL TRIM PERFORMANCE DATA

The longitudinal trim performance data, presented graphically in figures 12 to 18, are presented in tabular form in this appendix.

TRIM PERFORMANCE DATA FOR CRUISE WING CONFIGURATION

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-1.789	-.350	.0337	.0287	1.176	-.2435
-1.681	-.400	.0448	.0287	1.562	-.2430
-1.464	-.500	.0669	.0286	2.338	-.2418
-1.249	-.600	.0890	.0286	3.115	-.2407
-1.034	-.700	.1113	.0286	3.889	-.2396
-.820	-.800	.1336	.0287	4.658	-.2384
-.606	-.900	.1560	.0288	5.420	-.2372
-.394	-1.000	.1785	.0289	6.170	-.2359
-.182	-1.100	.2011	.0291	6.909	-.2346
.029	-1.200	.2238	.0293	7.634	-.2332
.239	-1.300	.2467	.0296	8.342	-.2320
.448	-1.400	.2696	.0299	9.032	-.2308
.657	-1.500	.2926	.0302	9.700	-.2297
.866	-1.600	.3158	.0305	10.349	-.2287
1.075	-1.700	.3390	.0309	10.974	-.2277
1.286	-1.800	.3623	.0313	11.571	-.2268
1.498	-1.900	.3857	.0318	12.140	-.2258
1.711	-2.000	.4092	.0323	12.676	-.2249
1.928	-2.100	.4328	.0328	13.183	-.2239
2.148	-2.200	.4565	.0334	13.652	-.2228
2.372	-2.300	.4804	.0341	14.085	-.2211
2.601	-2.400	.5046	.0349	14.479	-.2189
2.836	-2.500	.5291	.0357	14.838	-.2161
3.077	-2.600	.5541	.0366	15.159	-.2127
3.325	-2.700	.5795	.0375	15.442	-.2086
3.582	-2.800	.6057	.0386	15.690	-.2036
3.847	-2.900	.6326	.0398	15.906	-.1979
4.124	-3.000	.6605	.0411	16.090	-.1915
4.411	-3.100	.6895	.0425	16.239	-.1852
4.709	-3.200	.7196	.0440	16.358	-.1794
5.019	-3.300	.7508	.0457	16.442	-.1739
5.340	-3.400	.7830	.0475	16.488	-.1690
5.671	-3.500	.8163	.0495	16.498	-.1650
6.012	-3.600	.8505	.0516	16.469	-.1617
6.361	-3.700	.8854	.0540	16.402	-.1590
6.720	-3.800	.9212	.0565	16.304	-.1564
7.089	-3.900	.9577	.0592	16.174	-.1542
7.467	-4.000	.9948	.0621	16.025	-.1532
7.851	-4.100	1.0322	.0650	15.873	-.1539
8.235	-4.200	1.0694	.0680	15.727	-.1553
8.626	-4.300	1.1069	.0710	15.583	-.1523
9.037	-4.400	1.1460	.0743	15.417	-.1436
9.498	-4.500	1.1894	.0783	15.192	-.1216
10.164	-4.600	1.2521	.0849	14.742	-.0614
10.277	-4.610	1.2627	.0862	14.647	-.0500
11.000	-4.627	1.3282	.0962	13.803	.0190

APPENDIX B

TRIM PERFORMANCE DATA FOR CLIMB WING CONFIGURATION

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.392	-.700	-.2122	.1241	-1.710	-.2308
-2.163	-1.000	-.1197	.1053	-1.137	-.1896
-1.279	-1.200	-.0467	.0929	-.503	-.1732
-.487	-1.400	.0248	.0829	.299	-.1906
.144	-1.600	.0869	.0759	1.145	-.2180
.672	-1.800	.1422	.0709	2.007	-.2347
1.158	-2.000	.1945	.0669	2.906	-.2426
2.112	-2.400	.2970	.0617	4.814	-.2417
3.119	-2.800	.4017	.0601	6.690	-.2338
3.644	-3.000	.4551	.0604	7.532	-.2293
4.190	-3.200	.5095	.0614	8.296	-.2230
4.770	-3.400	.5655	.0630	8.983	-.2142
5.388	-3.600	.6243	.0651	9.590	-.2033
6.043	-3.800	.6867	.0678	10.123	-.1914
6.725	-4.000	.7534	.0712	10.589	-.1795
7.445	-4.200	.8255	.0752	10.974	-.1652
8.245	-4.400	.9070	.0806	11.250	-.1437
9.160	-4.600	1.0007	.0880	11.372	-.1369
9.615	-4.700	1.0468	.0920	11.376	-.1503
10.021	-4.800	1.0873	.0957	11.363	-.1759
10.692	-5.000	1.1527	.1019	11.312	-.2207
11.185	-5.200	1.1993	.1069	11.224	-.2375
11.670	-5.400	1.2451	.1119	11.126	-.2306
12.203	-5.600	1.2963	.1179	10.998	-.1967
12.856	-5.800	1.3601	.1259	10.803	-.1549
13.712	-6.000	1.4433	.1375	10.498	-.1241
14.671	-6.200	1.5306	.1509	10.140	-.1392
15.548	-6.400	1.6023	.1634	9.804	-.1733
16.324	-6.600	1.6607	.1753	9.474	-.2086
16.985	-6.800	1.7071	.1866	9.151	-.2683
17.518	-7.000	1.7417	.1966	8.859	-.3605
17.939	-7.200	1.7663	.2052	8.607	-.4859
18.284	-7.400	1.7842	.2127	8.387	-.6242
18.581	-7.600	1.7979	.2195	8.191	-.7547
18.849	-7.800	1.8090	.2258	8.010	-.8816
19.096	-8.000	1.8182	.2319	7.842	-1.0055
19.330	-8.200	1.8261	.2377	7.683	-1.1100
19.555	-8.400	1.8331	.2434	7.530	-1.1900
19.776	-8.600	1.8396	.2492	7.383	-1.2432
19.997	-8.800	1.8458	.2550	7.239	-1.2667
20.220	-9.000	1.8519	.2610	7.096	-1.2701
20.449	-9.200	1.8580	.2672	6.955	-1.2653
20.683	-9.400	1.8642	.2736	6.813	-1.2514
20.925	-9.600	1.8705	.2804	6.672	-1.2273
21.177	-9.800	1.8770	.2875	6.529	-1.1971
21.439	-10.000	1.8838	.2950	6.385	-1.1770
21.738	-10.200	1.8904	.3043	6.213	-1.1495
22.055	-10.400	1.8975	.3142	6.039	-1.1341
22.220	-10.500	1.9011	.3195	5.951	-1.1249
22.391	-10.600	1.9049	.3250	5.862	-1.1102

APPENDIX B

TRIM PERFORMANCE DATA FOR PART-SPAN FLAP WING CONFIGURATION WITH TAKE-OFF FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.517	.200	.1118	.1362	.821	-.3338
-3.310	0.000	.1445	.1331	1.086	-.3337
-2.904	-.400	.2063	.1281	1.611	-.3345
-2.700	-.600	.2371	.1259	1.884	-.3353
-2.294	-1.000	.2985	.1221	2.445	-.3382
-1.893	-1.400	.3590	.1191	3.014	-.3427
-1.696	-1.600	.3889	.1179	3.298	-.3445
-1.306	-2.000	.4483	.1161	3.861	-.3457
-.915	-2.400	.5076	.1149	4.417	-.3438
-.717	-2.600	.5374	.1145	4.694	-.3411
-.311	-3.000	.5980	.1140	5.247	-.3314
.128	-3.400	.6614	.1139	5.807	-.3132
.368	-3.600	.6948	.1141	6.092	-.3022
.902	-4.000	.7657	.1149	6.666	-.2793
1.518	-4.400	.8429	.1166	7.232	-.2607
1.850	-4.600	.8831	.1178	7.498	-.2582
2.517	-5.000	.9628	.1207	7.977	-.2630
3.144	-5.400	1.0374	.1245	8.335	-.2619
3.463	-5.600	1.0753	.1266	8.496	-.2583
4.140	-6.000	1.1545	.1316	8.776	-.2416
4.910	-6.400	1.2404	.1382	8.976	-.2248
5.331	-6.600	1.2852	.1422	9.035	-.2211
6.174	-7.000	1.3724	.1510	9.088	-.2345
6.938	-7.400	1.4520	.1593	9.115	-.2503
7.296	-7.600	1.4897	.1632	9.126	-.2548
7.990	-8.000	1.5640	.1710	9.147	-.2546
8.341	-8.200	1.6014	.1750	9.151	-.2507
8.701	-8.400	1.6394	.1792	9.149	-.2443
9.079	-8.600	1.6787	.1837	9.138	-.2345
9.942	-9.000	1.7657	.1946	9.074	-.1919
11.243	-9.400	1.8934	.2134	8.874	-.1156
12.083	-9.600	1.9751	.2262	8.730	-.1339
13.123	-10.000	2.0745	.2414	8.593	-.2531
14.000	-10.400	2.1433	.2565	8.356	-.5090
14.333	-10.600	2.1608	.2638	8.190	-.7380
14.875	-11.000	2.1778	.2779	7.837	-1.4712
15.308	-11.400	2.1819	.2908	7.504	-2.6454
15.501	-11.600	2.1821	.2967	7.355	-2.9950
15.865	-12.000	2.1821	.3076	7.094	-2.6489
16.231	-12.400	2.1848	.3176	6.879	-1.7168
16.427	-12.600	2.1880	.3224	6.787	-1.3656
16.876	-13.000	2.2009	.3320	6.629	-.7934
17.524	-13.400	2.2316	.3433	6.501	-.4435
17.906	-13.600	2.2509	.3500	6.432	-.5377
18.485	-14.000	2.2719	.3628	6.262	-1.1884
18.708	-14.200	2.2766	.3689	6.172	-1.6840
18.903	-14.400	2.2790	.3747	6.083	-2.3874
19.077	-14.600	2.2799	.3802	5.996	-3.4190
19.234	-14.800	2.2798	.3856	5.912	-4.6531
19.382	-15.000	2.2790	.3909	5.830	-5.9361

APPENDIX B

TRIM PERFORMANCE DATA FOR PART-SPAN FLAP WING CONFIGURATION WITH LANDING FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.591	-1.800	.5257	.1805	2.913	-.3700
-3.488	-2.000	.5547	.1811	3.063	-.3697
-3.278	-2.400	.6125	.1823	3.360	-.3689
-3.169	-2.600	.6414	.1829	3.507	-.3683
-2.945	-3.000	.6992	.1841	3.797	-.3669
-2.711	-3.400	.7569	.1854	4.082	-.3650
-2.589	-3.600	.7858	.1861	4.223	-.3638
-2.332	-4.000	.8437	.1874	4.502	-.3607
-2.054	-4.400	.9020	.1889	4.776	-.3563
-1.905	-4.600	.9314	.1897	4.911	-.3534
-1.578	-5.000	.9909	.1914	5.178	-.3457
-1.194	-5.400	1.0513	.1959	5.367	-.3273
-.967	-5.600	1.0835	.1983	5.465	-.3151
-.405	-6.000	1.1547	.2036	5.673	-.2810
.371	-6.400	1.2415	.2100	5.912	-.2336
.857	-6.600	1.2937	.2137	6.054	-.2117
1.950	-7.000	1.4122	.2213	6.380	-.2018
2.969	-7.400	1.5227	.2281	6.674	-.2333
3.428	-7.600	1.5708	.2314	6.787	-.2499
4.297	-8.000	1.6581	.2386	6.950	-.2639
5.150	-8.400	1.7407	.2468	7.054	-.2667
5.573	-8.600	1.7808	.2512	7.091	-.2732
6.381	-9.000	1.8546	.2599	7.135	-.3083
7.144	-9.400	1.9187	.2685	7.145	-.3373
7.523	-9.600	1.9490	.2729	7.141	-.3329
8.361	-10.000	2.0175	.2828	7.135	-.2569
9.842	-10.400	2.1595	.3016	7.160	-.1363
10.873	-10.600	2.2564	.3149	7.166	-.1423
11.846	-10.800	2.3362	.3287	7.108	-.1762
12.713	-11.000	2.4006	.3422	7.015	-.2035
14.334	-11.400	2.5026	.3681	6.799	-.2729
15.266	-11.600	2.5361	.3819	6.641	-.5069
16.440	-12.000	2.5560	.4003	6.385	-1.5734
17.051	-12.400	2.5657	.4114	6.236	-1.8466
17.289	-12.600	2.5701	.4160	6.179	-1.9163
17.714	-13.000	2.5782	.4243	6.076	-2.1468
17.918	-13.200	2.5817	.4285	6.025	-2.3663
18.125	-13.400	2.5847	.4331	5.969	-2.7453
18.338	-13.600	2.5869	.4380	5.906	-3.2789

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WING CONFIGURATION WITH TAKE-OFF FLAP SETTING

ALPHA,DEG	ISHBT,DEG	CL	CD	L/D	CMCL
-3.528	-1.200	.1882	.1346	1.399	-.5024
-3.328	-1.600	.2261	.1324	1.708	-.4933
-3.122	-2.000	.2649	.1303	2.033	-.4840
-3.017	-2.200	.2847	.1293	2.202	-.4792
-2.802	-2.600	.3249	.1274	2.551	-.4692
-2.580	-3.000	.3661	.1256	2.916	-.4582
-2.467	-3.200	.3872	.1248	3.104	-.4524
-2.234	-3.600	.4304	.1232	3.493	-.4399
-1.992	-4.000	.4752	.1219	3.897	-.4263
-1.868	-4.200	.4982	.1214	4.105	-.4193
-1.611	-4.600	.5455	.1205	4.528	-.4059
-1.343	-5.000	.5947	.1199	4.962	-.3930
-1.179	-5.200	.6247	.1201	5.200	-.3865
-.839	-5.600	.6861	.1209	5.677	-.3756
-.485	-6.000	.7487	.1218	6.148	-.3683
-.302	-6.200	.7803	.1223	6.379	-.3660
.076	-6.600	.8432	.1236	6.825	-.3640
.474	-7.000	.9054	.1250	7.242	-.3632
.683	-7.200	.9363	.1259	7.437	-.3625
1.126	-7.600	.9975	.1280	7.793	-.3594
1.613	-8.000	1.0588	.1307	8.099	-.3490
1.877	-8.200	1.0902	.1324	8.232	-.3388
2.464	-8.600	1.1570	.1367	8.463	-.3087
3.136	-9.000	1.2315	.1423	8.657	-.2772
3.500	-9.200	1.2719	.1455	8.742	-.2675
4.237	-9.600	1.3543	.1523	8.890	-.2714
4.938	-10.000	1.4327	.1591	9.004	-.2870
5.299	-10.200	1.4726	.1634	9.011	-.2925
5.664	-10.400	1.5120	.1677	9.014	-.2968
6.030	-10.600	1.5510	.1721	9.013	-.3011
6.757	-11.000	1.6266	.1807	9.003	-.3120
7.111	-11.200	1.6628	.1849	8.995	-.3176
7.795	-11.600	1.7322	.1930	8.976	-.3198
8.482	-12.000	1.8014	.2013	8.948	-.3005
8.846	-12.200	1.8380	.2059	8.926	-.2820
9.696	-12.600	1.9233	.2173	8.849	-.2184
11.063	-13.000	2.0622	.2382	8.657	-.1091
12.223	-13.200	2.1790	.2580	8.447	-.1090
13.891	-13.600	2.3294	.2874	8.105	-.1723
16.360	-14.000	2.4828	.3239	7.666	-.2240
17.381	-14.200	2.4997	.3452	7.242	-2.1996
17.918	-14.400	2.5003	.3585	6.975	-7.0034
18.286	-14.600	2.5004	.3678	6.798	-7.3666
18.583	-14.800	2.5007	.3754	6.662	-7.0861
18.842	-15.000	2.5012	.3820	6.548	-6.9008

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WING CONFIGURATION WITH LANDING FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.557	-6.000	.7766	.2006	3.872	-.3610
-3.452	-6.200	.8045	.2028	3.966	-.3584
-3.344	-6.400	.8327	.2051	4.060	-.3558
-3.232	-6.600	.8612	.2073	4.154	-.3531
-3.115	-6.800	.8902	.2096	4.247	-.3503
-2.994	-7.000	.9195	.2119	4.339	-.3474
-2.868	-7.200	.9493	.2142	4.432	-.3444
-2.737	-7.400	.9796	.2166	4.523	-.3412
-2.599	-7.600	1.0103	.2189	4.615	-.3379
-2.455	-7.800	1.0415	.2213	4.706	-.3343
-2.301	-8.000	1.0733	.2238	4.797	-.3304
-2.138	-8.200	1.1057	.2263	4.886	-.3263
-1.964	-8.400	1.1387	.2289	4.976	-.3216
-1.774	-8.600	1.1724	.2315	5.064	-.3163
-1.567	-8.800	1.2070	.2343	5.151	-.3101
-1.338	-9.000	1.2426	.2373	5.237	-.3026
-1.081	-9.200	1.2795	.2404	5.322	-.2930
-.786	-9.400	1.3182	.2438	5.407	-.2801
-.441	-9.600	1.3595	.2475	5.493	-.2613
-.024	-9.800	1.4054	.2516	5.586	-.2334
.499	-10.000	1.4595	.2561	5.699	-.1978
.933	-10.200	1.5039	.2604	5.777	-.1775
1.413	-10.400	1.5526	.2647	5.866	-.1706
1.885	-10.600	1.6007	.2687	5.957	-.1826
2.310	-10.800	1.6452	.2723	6.042	-.1998
2.702	-11.000	1.6876	.2756	6.123	-.2103
3.080	-11.200	1.7296	.2788	6.204	-.2159
3.461	-11.400	1.7730	.2821	6.284	-.2139
3.871	-11.600	1.8196	.2859	6.366	-.2045
4.344	-11.800	1.8719	.2906	6.442	-.1892
4.918	-12.000	1.9320	.2970	6.505	-.1712
5.645	-12.200	2.0023	.3062	6.540	-.1535
6.503	-12.400	2.0818	.3174	6.558	-.1458
7.400	-12.600	2.1655	.3286	6.591	-.1495
8.249	-12.800	2.2457	.3386	6.632	-.1689
9.007	-13.000	2.3164	.3476	6.665	-.1955
9.354	-13.100	2.3482	.3517	6.677	-.2088
9.685	-13.200	2.3780	.3557	6.686	-.2200
10.005	-13.300	2.4063	.3596	6.693	-.2294
10.320	-13.400	2.4335	.3634	6.696	-.2364
10.632	-13.500	2.4598	.3674	6.696	-.2404
10.949	-13.600	2.4857	.3714	6.693	-.2408
11.276	-13.700	2.5118	.3757	6.685	-.2346
11.633	-13.800	2.5392	.3806	6.672	-.2138
12.073	-13.900	2.5716	.3866	6.651	-.1642

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WITH LOW-SPEED AILERONS WING CONFIGURATION WITH TAKE-OFF FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.598	-.800	.1740	.1330	1.308	-.3878
-3.444	-1.000	.1999	.1311	1.525	-.3825
-3.125	-1.400	.2530	.1274	1.985	-.3720
-2.960	-1.600	.2802	.1257	2.229	-.3668
-2.620	-2.000	.3361	.1225	2.744	-.3557
-2.269	-2.400	.3943	.1197	3.293	-.3439
-2.089	-2.600	.4243	.1185	3.580	-.3377
-1.723	-3.000	.4861	.1164	4.175	-.3262
-1.350	-3.400	.5501	.1149	4.788	-.3177
-1.161	-3.600	.5826	.1143	5.097	-.3146
-.777	-4.000	.6485	.1135	5.714	-.3103
-.382	-4.400	.7147	.1132	6.313	-.3093
-.179	-4.600	.7478	.1133	6.601	-.3101
.245	-5.000	.8131	.1139	7.138	-.3135
.757	-5.400	.8844	.1160	7.622	-.3171
1.028	-5.600	.9196	.1174	7.835	-.3171
1.604	-6.000	.9904	.1206	8.211	-.3089
2.230	-6.400	1.0648	.1245	8.551	-.2859
2.567	-6.600	1.1047	.1268	8.716	-.2728
3.299	-7.000	1.1909	.1319	9.026	-.2495
4.106	-7.400	1.2829	.1385	9.261	-.2447
4.525	-7.600	1.3283	.1424	9.325	-.2496
5.356	-8.000	1.4145	.1510	9.366	-.2651
6.145	-8.400	1.4943	.1597	9.355	-.2752
6.519	-8.600	1.5327	.1639	9.351	-.2777
7.237	-9.000	1.6076	.1719	9.354	-.2795
7.938	-9.400	1.6811	.1798	9.350	-.2788
8.296	-9.600	1.7177	.1840	9.335	-.2761
9.063	-10.000	1.7934	.1936	9.263	-.2560
10.208	-10.400	1.9046	.2098	9.079	-.1789
11.030	-10.600	1.9902	.2218	8.974	-.1161
13.680	-11.000	2.2430	.2668	8.408	-.1352
15.632	-11.400	2.3785	.3011	7.901	-.2598
16.305	-11.600	2.4129	.3123	7.727	-.4462
17.286	-12.000	2.4404	.3298	7.400	-1.4495
17.943	-12.400	2.4449	.3435	7.117	-3.9121
18.188	-12.600	2.4444	.3494	6.996	-5.4481
18.587	-13.000	2.4415	.3600	6.781	-8.6317
18.910	-13.400	2.4371	.3698	6.591	-11.6010
19.051	-13.600	2.4347	.3744	6.503	-12.8892
19.307	-14.000	2.4294	.3833	6.338	-14.8051
19.425	-14.200	2.4266	.3877	6.260	-15.3604
19.539	-14.400	2.4237	.3920	6.184	-15.6016
19.650	-14.600	2.4208	.3963	6.109	-15.5031
19.759	-14.800	2.4179	.4006	6.036	-15.0540
19.867	-15.000	2.4150	.4049	5.964	-14.2626

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WITH LOW-SPEED AILERONS WING CONFIGURATION WITH LANDING FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.516	-2.600	.6569	.1802	3.646	-.3188
-3.386	-2.800	.6887	.1807	3.810	-.3190
-3.253	-3.000	.7203	.1813	3.973	-.3191
-3.116	-3.200	.7520	.1819	4.133	-.3191
-2.977	-3.400	.7836	.1826	4.291	-.3189
-2.834	-3.600	.8152	.1833	4.446	-.3186
-2.688	-3.800	.8468	.1841	4.599	-.3183
-2.537	-4.000	.8784	.1850	4.749	-.3178
-2.381	-4.200	.9101	.1859	4.895	-.3172
-2.220	-4.400	.9418	.1869	5.038	-.3164
-2.054	-4.600	.9736	.1881	5.177	-.3153
-1.880	-4.800	1.0056	.1893	5.312	-.3139
-1.698	-5.000	1.0378	.1907	5.442	-.3120
-1.507	-5.200	1.0706	.1935	5.532	-.3080
-1.304	-5.400	1.1042	.1965	5.620	-.3033
-1.086	-5.600	1.1386	.1996	5.706	-.2979
-.851	-5.800	1.1741	.2028	5.790	-.2913
-.595	-6.000	1.2109	.2061	5.874	-.2829
-.313	-6.200	1.2495	.2097	5.959	-.2717
.004	-6.400	1.2906	.2135	6.047	-.2565
.369	-6.600	1.3355	.2174	6.142	-.2372
.798	-6.800	1.3856	.2218	6.248	-.2155
1.309	-7.000	1.4425	.2265	6.368	-.1951
1.891	-7.200	1.5048	.2317	6.495	-.1906
2.468	-7.400	1.5659	.2368	6.613	-.2043
3.003	-7.600	1.6224	.2417	6.713	-.2221
3.494	-7.800	1.6741	.2463	6.796	-.2374
3.960	-8.000	1.7226	.2510	6.862	-.2454
4.419	-8.200	1.7694	.2559	6.915	-.2480
4.876	-8.400	1.8153	.2610	6.955	-.2477
5.338	-8.600	1.8609	.2665	6.983	-.2440
5.807	-8.800	1.9070	.2723	7.004	-.2371
6.291	-9.000	1.9545	.2784	7.020	-.2268
6.795	-9.200	2.0040	.2849	7.034	-.2165
7.322	-9.400	2.0558	.2918	7.045	-.2092
7.859	-9.600	2.1079	.2988	7.054	-.2157
8.373	-9.800	2.1566	.3056	7.056	-.2350
8.857	-10.000	2.2008	.3120	7.053	-.2561
9.379	-10.200	2.2466	.3197	7.028	-.2694
9.913	-10.400	2.2926	.3275	7.001	-.2591
10.499	-10.600	2.3432	.3363	6.968	-.2287
11.187	-10.800	2.4032	.3472	6.922	-.1848
12.088	-11.000	2.4797	.3618	6.853	-.1376
12.258	-11.030	2.4933	.3645	6.840	-.1292
12.445	-11.060	2.5078	.3674	6.826	-.1197
12.734	-11.100	2.5292	.3717	6.804	-.1044
13.224	-11.150	2.5624	.3787	6.766	-.0759
13.518	-11.170	2.5801	.3827	6.742	-.0598
13.994	-11.190	2.6048	.3892	6.693	-.0381
14.509	-11.200	2.6256	.3964	6.624	-.0187

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WITH HIGH-SPEED AILERONS WING CONFIGURATION WITH TAKE-OFF FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-1.227	1.400	.5360	.1195	4.487	-.3916
-1.078	1.200	.5600	.1192	4.696	-.3867
-.436	.400	.6595	.1188	5.550	-.3661
-.263	.200	.6853	.1189	5.766	-.3604
.011	-.200	.7250	.1192	6.085	-.3514
.108	-.400	.7386	.1194	6.187	-.3481
.307	-.800	.7661	.1199	6.390	-.3408
.513	-1.200	.7942	.1205	6.592	-.3325
.841	-1.800	.8381	.1216	6.893	-.3184
1.073	-2.200	.8686	.1225	7.091	-.3083
1.449	-2.800	.9168	.1242	7.381	-.2935
1.717	-3.200	.9505	.1256	7.566	-.2854
2.145	-3.800	1.0028	.1282	7.825	-.2783
2.445	-4.200	1.0385	.1301	7.980	-.2752
2.915	-4.800	1.0929	.1336	8.182	-.2712
3.240	-5.200	1.1296	.1362	8.296	-.2685
3.748	-5.800	1.1856	.1405	8.439	-.2600
4.103	-6.200	1.2244	.1437	8.519	-.2505
4.666	-6.800	1.2856	.1491	8.620	-.2370
5.056	-7.200	1.3281	.1531	8.676	-.2306
5.650	-7.800	1.3929	.1593	8.744	-.2304
6.036	-8.200	1.4351	.1635	8.779	-.2379
6.588	-8.800	1.4949	.1696	8.813	-.2527
6.940	-9.200	1.5326	.1737	8.825	-.2628
7.450	-9.800	1.5860	.1797	8.826	-.2771
8.010	-10.200	1.6430	.1867	8.798	-.2923
9.202	-10.800	1.7557	.2024	8.675	-.2905
10.115	-11.200	1.8388	.2151	8.549	-.2410
12.027	-11.800	2.0209	.2431	8.313	-.1620
13.385	-12.200	2.1288	.2665	7.988	-.3250
14.339	-12.800	2.1716	.2860	7.594	-1.1189
14.735	-13.200	2.1791	.2947	7.394	-1.7843
15.223	-13.800	2.1822	.3058	7.135	-2.8180
15.523	-14.200	2.1826	.3127	6.980	-3.0804
15.983	-14.800	2.1840	.3230	6.761	-2.5705

APPENDIX B

TRIM PERFORMANCE DATA FOR FULL-SPAN FLAP WITH HIGH-SPEED AILERONS WING CONFIGURATION WITH LANDING FLAP SETTING

ALPHA,DEG	ISUBT,DEG	CL	CD	L/D	CMCL
-3.577	-3.800	.6073	.1883	3.224	-.4597
-3.500	-4.000	.6308	.1892	3.334	-.4582
-3.421	-4.200	.6545	.1901	3.444	-.4567
-3.340	-4.400	.6783	.1909	3.553	-.4551
-3.258	-4.600	.7021	.1918	3.661	-.4534
-3.173	-4.800	.7261	.1927	3.769	-.4517
-3.087	-5.000	.7502	.1935	3.876	-.4499
-3.007	-5.200	.7703	.1958	3.935	-.4469
-2.925	-5.400	.7906	.1980	3.994	-.4437
-2.842	-5.600	.8113	.2002	4.052	-.4404
-2.756	-5.800	.8321	.2024	4.111	-.4369
-2.668	-6.000	.8533	.2046	4.171	-.4331
-2.577	-6.200	.8748	.2068	4.231	-.4290
-2.483	-6.400	.8966	.2089	4.291	-.4245
-2.386	-6.600	.9188	.2111	4.352	-.4196
-2.284	-6.800	.9414	.2133	4.414	-.4141
-2.177	-7.000	.9644	.2154	4.477	-.4079
-2.064	-7.200	.9881	.2176	4.541	-.4008
-1.943	-7.400	1.0123	.2197	4.607	-.3924
-1.813	-7.600	1.0374	.2219	4.675	-.3827
-1.672	-7.800	1.0634	.2241	4.745	-.3712
-1.516	-8.000	1.0906	.2263	4.819	-.3575
-1.340	-8.200	1.1194	.2286	4.897	-.3408
-1.138	-8.400	1.1502	.2309	4.981	-.3199
-.897	-8.600	1.1841	.2333	5.075	-.2929
-.598	-8.800	1.2226	.2359	5.183	-.2595
-.215	-9.000	1.2677	.2385	5.315	-.2245
.254	-9.200	1.3204	.2410	5.479	-.2030
.767	-9.400	1.3780	.2430	5.670	-.1954
1.279	-9.600	1.4362	.2446	5.872	-.2011
1.764	-9.800	1.4921	.2460	6.066	-.2118
2.219	-10.000	1.5446	.2476	6.238	-.2254
2.542	-10.200	1.5815	.2507	6.308	-.2278
2.875	-10.400	1.6191	.2542	6.368	-.2289
3.225	-10.600	1.6578	.2583	6.417	-.2281
3.600	-10.800	1.6983	.2631	6.456	-.2217
4.019	-11.000	1.7423	.2686	6.487	-.2075
4.513	-11.200	1.7924	.2752	6.513	-.1847
5.133	-11.400	1.8537	.2835	6.538	-.1516
5.956	-11.600	1.9341	.2942	6.575	-.1245
6.897	-11.800	2.0286	.3052	6.648	-.1224
7.792	-12.000	2.1200	.3145	6.740	-.1488
8.528	-12.200	2.1914	.3220	6.806	-.2003
9.136	-12.400	2.2458	.3283	6.840	-.2507
9.674	-12.600	2.2908	.3341	6.856	-.2727
10.216	-12.800	2.3350	.3405	6.858	-.2513
10.852	-13.000	2.3872	.3488	6.844	-.1926
12.025	-13.200	2.4842	.3667	6.774	-.0575
13.000	-13.208	2.5583	.3821	6.695	.0473

REFERENCES

1. Bartlett, Dennis W.: Wind-Tunnel Investigation of Several High-Aspect-Ratio Supercritical Wing Configurations on a Wide-Body-Type Fuselage. NASA TM X-71996, 1977.

2. Bartlett, Dennis W.; and Patterson, James C., Jr.: NASA Supercritical-Wing Technology. NASA TM-78731, 1978.

3. Morgan, Harry L., Jr.; and Paulson, John W., Jr.: Low-Speed Aerodynamic Performance of a High-Aspect-Ratio Supercritical-Wing Transport Model Equipped With Full-Span Slat and Part-Span Double-Slotted Flaps. NASA TP-1580, 1979.

4. Oliver, Wayne R.: Results of Design Studies and Wind Tunnel Tests of an Advanced High Lift System for an Energy-Efficient Transport. NASA CR-159389, 1980.

5. Howard, Jenny M.; and Morgan, Harry L., Jr.: Pressure Distribution Data From Tests of Aspect-Ratio-10 EET High-Lift Research Model Equipped With Part- and Full-Span Flaps. NASA TM-80082, 1979.

6. Morgan, Harry L., Jr.: Model Geometry Description and Pressure Distribution Data From Tests of EET High-Lift Research Model Equipped With Full-Span Slat and Part-Span Flaps. NASA TM-80048, 1979.

7. Stevens, W. A.; Goradia, S. H.; and Braden, J. A.: Mathematical Model for Two-Dimensional Multi-Component Airfoils in Viscous Flow. NASA CR-1843, 1971.

8. Braslow, Albert L.; and Knox, Eugene C.: Simplified Method for Determination of Critical Height of Distributed Roughness Particles for Boundary-Layer Transition at Mach Numbers From 0 to 5. NACA TN-4363, 1958.

9. Gillis, Clarence L.; Polhamus, Edward C.; and Gray, Joseph L., Jr.: Charts for Determining Jet-Boundary Corrections for Complete Models in 7- by 10-Foot Closed Rectangular Wind Tunnels. NACA WR L-123, 1945. (Formerly NACA ARR L5G31.)

10. Pope, Alan; and Harper, John J.: Low-Speed Wind Tunnel Testing. John Wiley & Sons, Inc., c.1966.

11. Tulinius, J.: Unified Subsonic, Transonic, and Supersonic NAR Vortex Lattice. TFD-72-523, Los Angeles Div., North American Rockwell, Apr. 27, 1972.

12. Herriot, John G.: Blockage Corrections for Three-Dimensional-Flow Closed-Throat Wind Tunnels, With Consideration of the Effect of Compressibility. NACA Rep., 995, 1950. (Supersedes NACA RM A7B28.)

13. Callaghan, J. G.: Aerodynamic Prediction Methods for Aircraft at Low Speeds With Mechanical High Lift Devices. Prediction Methods for Aircraft Aerodynamic Characteristics, AGARD-LS-67, May 1974, pp. 2-1 - 2-52.

TABLE I.- MODEL GEOMETRIC CHARACTERISTICS

Fuselage:	
Length, m (ft)	3.02 (9.91)
Maximum diameter, cm (in.)	35.05 (13.8)
Supercritical wing:[a]	
Area (trapezoidal reference), m^2 (ft^2)	1.04 (11.21)
Area (wetted), m^2 (ft^2)	0.96 (10.31)
Span, m (ft)	3.23 (10.59)
Quarter-chord sweep, deg	27
Aspect ratio	10
Taper ratio (trapezoidal reference)	0.412
Reference geometric chord, cm (in.)	34.14 (13.44)
Dihedral, deg	5
Root incidence, deg	-1
Body station of wing leading edge at root, m (ft)	1.18 (3.86)
Body station of moment reference center, m (ft)	1.64 (5.39)
Side-of-body airfoil (η = 0.109) -	
Chord, cm (in.)	56.23 (22.14)
$(t/c)_{max}$	0.144
Twist, deg	2.5
Trailing-edge break airfoil (η = 0.434) -	
Chord, cm (in.)	34.04 (13.4)
$(t/c)_{max}$	0.12
Twist, deg	0.5
Tip airfoil (η = 1.0) -	
Chord, cm (in.)	18.82 (7.41)
$(t/c)_{max}$	0.107
Twist, deg	-0.7
Horizontal tail:[a]	
Area, m^2 (ft^2)	0.42 (4.5)
Span, m (ft)	1.26 (4.14)
Aspect ratio	3.78
Quarter-chord sweep, deg	35
Dihedral, deg	10
Taper ratio	0.36
Mean geometric chord, cm (in.)	35.56 (14.0)
Body station of tail leading edge at root, m (ft)	2.45 (8.03)
Body station of one-quarter of mean geometric chord, m (ft)	2.76 (9.05)
Root airfoil (symmetric at fuselage center line) -	
Chord, cm (in.)	48.77 (19.2)
$(t/c)_{max}$	0.095
Tip airfoil (symmetric) -	
Chord, cm (in.)	17.88 (7.0)
$(t/c)_{max}$	0.085
Vertical tail:	
Area, m (ft^2)	0.19 (2.1)
Height, cm (in.)	58.47 (23.0)
Quarter-chord sweep	40
Mean geometric chord, cm (in.)	35.05 (13.8)
Height of root chord above model center line, cm (in.)	14.02 (5.52)
Body station of tail leading edge at root, m (ft)	2.42 (7.9)
Body station of moment reference center (one-quarter chord), m (ft)	2.74 (9.0)
Root airfoil (NACA 0012) -	
Chord, cm (in.)	48.13 (18.9)
$(t/c)_{max}$	0.12
Tip airfoil (NACA 0012) -	
Chord, cm (in.)	16.84 (6.6)
$(t/c)_{max}$	0.12

[a]Dihedral not included in span and area dimensions.

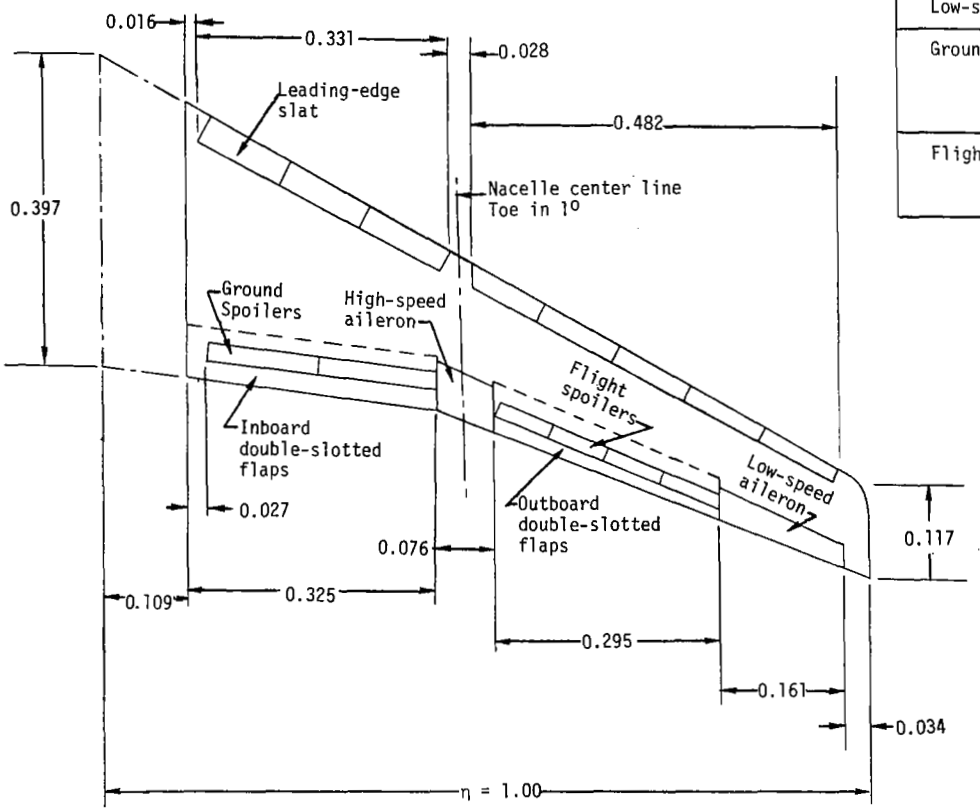
TABLE II.- SUMMARY OF TRIM PERFORMANCE CHARACTERISTICS

Configuration (a)	Trim penalties		Maximum performance		
	C_L range	$C_{D_{trim}} - C_{D_{tail\text{-}off}}$	C_L at $(L/D)_{max}$	$(L/D)_{max}$	$C_{L,max}$
Cruise	0.4 to 0.9	0.0020	0.82	16.5	1.33
Climb	0.6 to 1.2	.0040	1.05	11.4	1.90
P.S. flap/take-off	1.0 to 2.1	.0076	1.60	9.2	2.28
P.S. flap/landing	1.2 to 2.2	.0130	1.92	7.1	2.59
F.S. full-span flap/take-off	1.2 to 2.4	.0158	1.51	9.0	2.50
F.S. flap/landing	1.4 to 2.4	.0360	2.46	6.7	2.57
F.S. flap with L.S. ailerons/take-off	1.2 to 2.1	.0094	1.42	9.4	2.44
F.S. flap with L.S. ailerons/landing	1.4 to 2.4	.0190	2.16	7.1	2.63
F.S. flap with H.S. ailerons/take-off	1.2 to 2.1	.0104	1.59	8.8	2.18
F.S. flap with H.S. ailerons/landing	1.6 to 2.4	.0280	2.34	6.9	2.56

[a]Abbreviations:

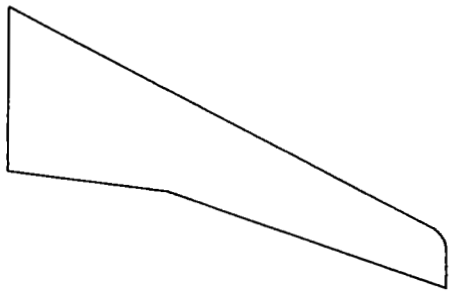
F.S. full-span
H.S. high-speed
L.S. low-speed
P.S. part-span

Leading-edge Slat	15.5% c
Inboard double-slotted flap	Constant chord 30% c at η = 0.434
Outboard double-slotted flap	30% c
High-speed aileron	30% c
Low-speed aileron	30% c
Ground Spoilers	Constant chord L.E. 78.5% c T.E. 90% c at η = 0.434
Flight Spoilers	11.5% c L.E. 78.5% c T.E. 90% c

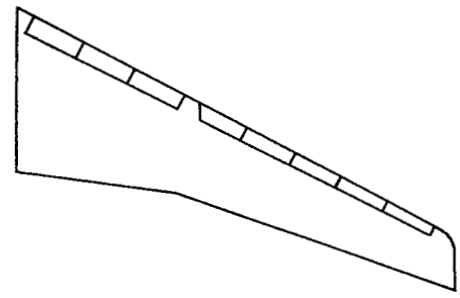


(a) Planform details of part-span flap configuration. (All measurements nondimensionalized by semispan.)

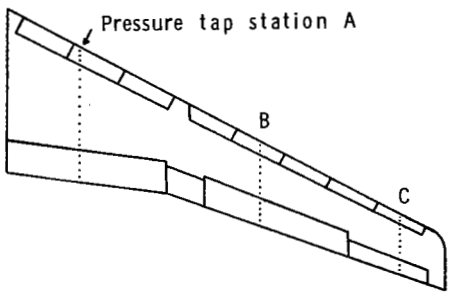
Figure 1.- Details of control and flap surfaces on wing configurations tested.



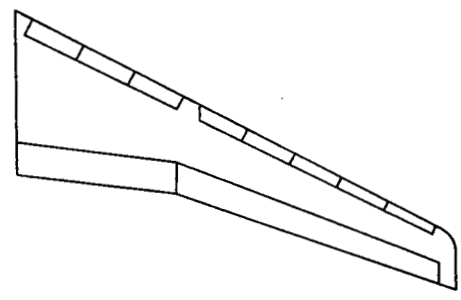
(1) Cruise



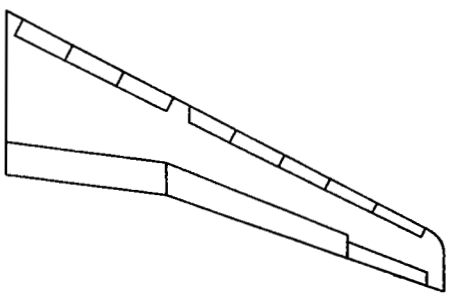
(2) Climb



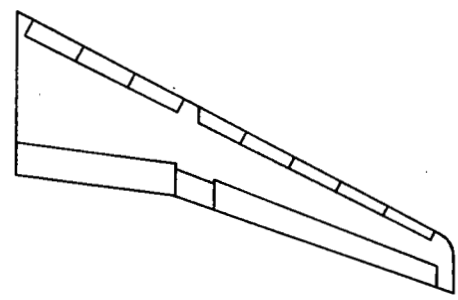
(3) Part-Span Flap



(4) Full-Span Flap



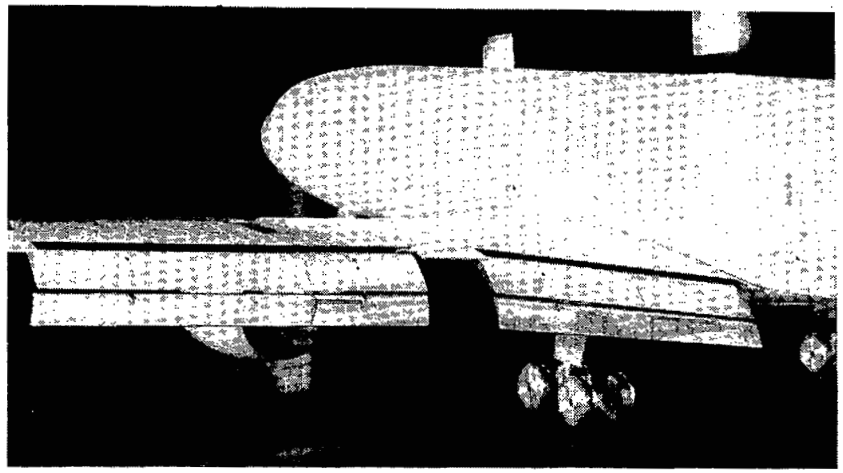
(5) Full-Span Flap with Low-Speed Ailerons



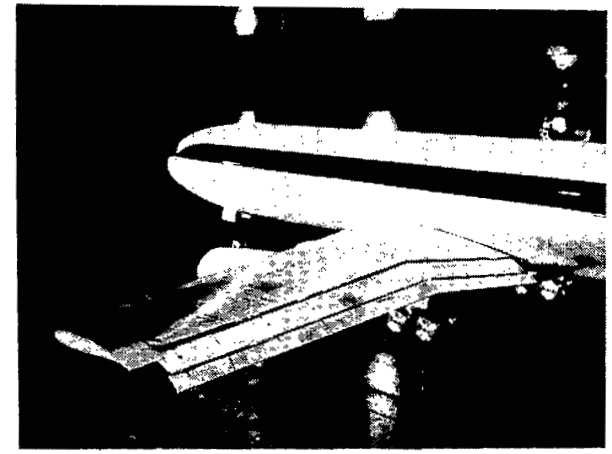
(6) Full-Span Flap with High-Speed Ailerons

(b) Wing configurations tested.

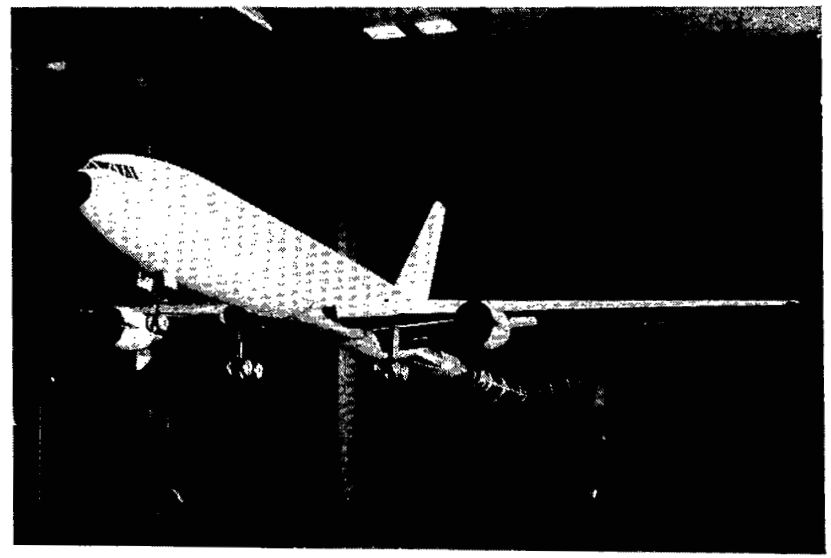
Figure 1.- Concluded.



PART-SPAN FLAPS



FULL-SPAN FLAPS



L-81-103

Figure 2.- High-lift research model installed in Langley 4- by 7-Meter Tunnel.

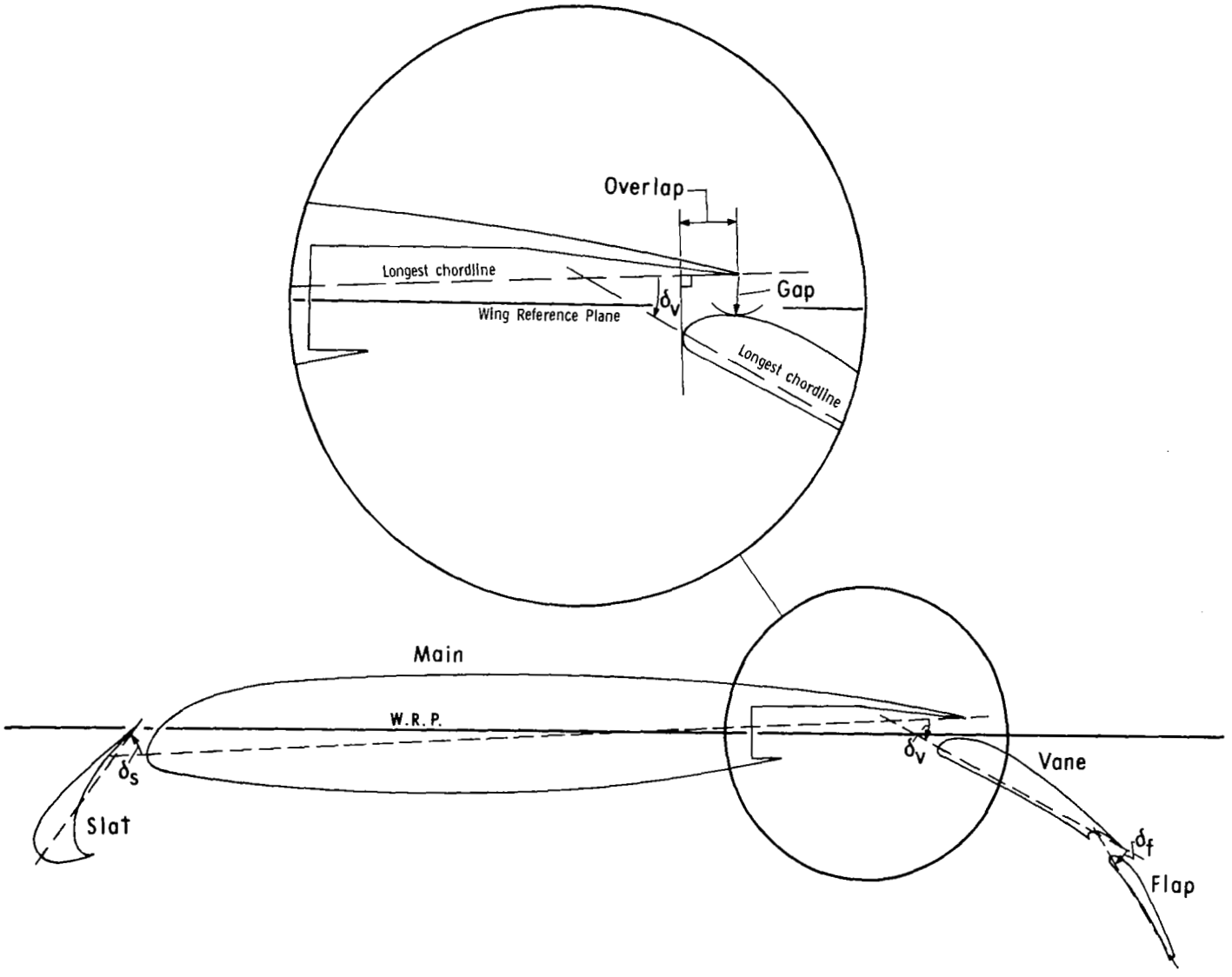


Figure 3.- Definition of gap, overlap, and deflection for slat, vane, and flap.

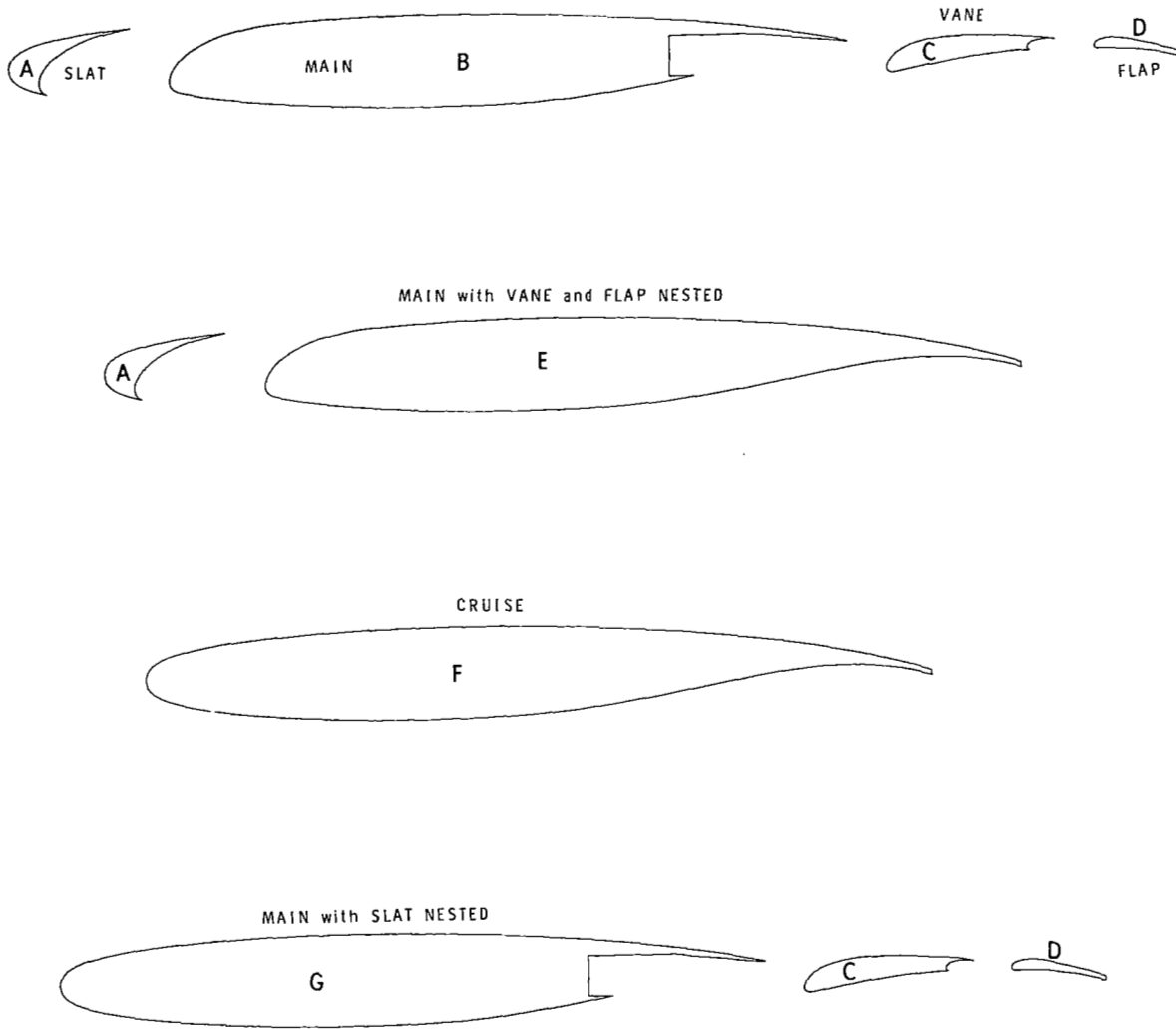
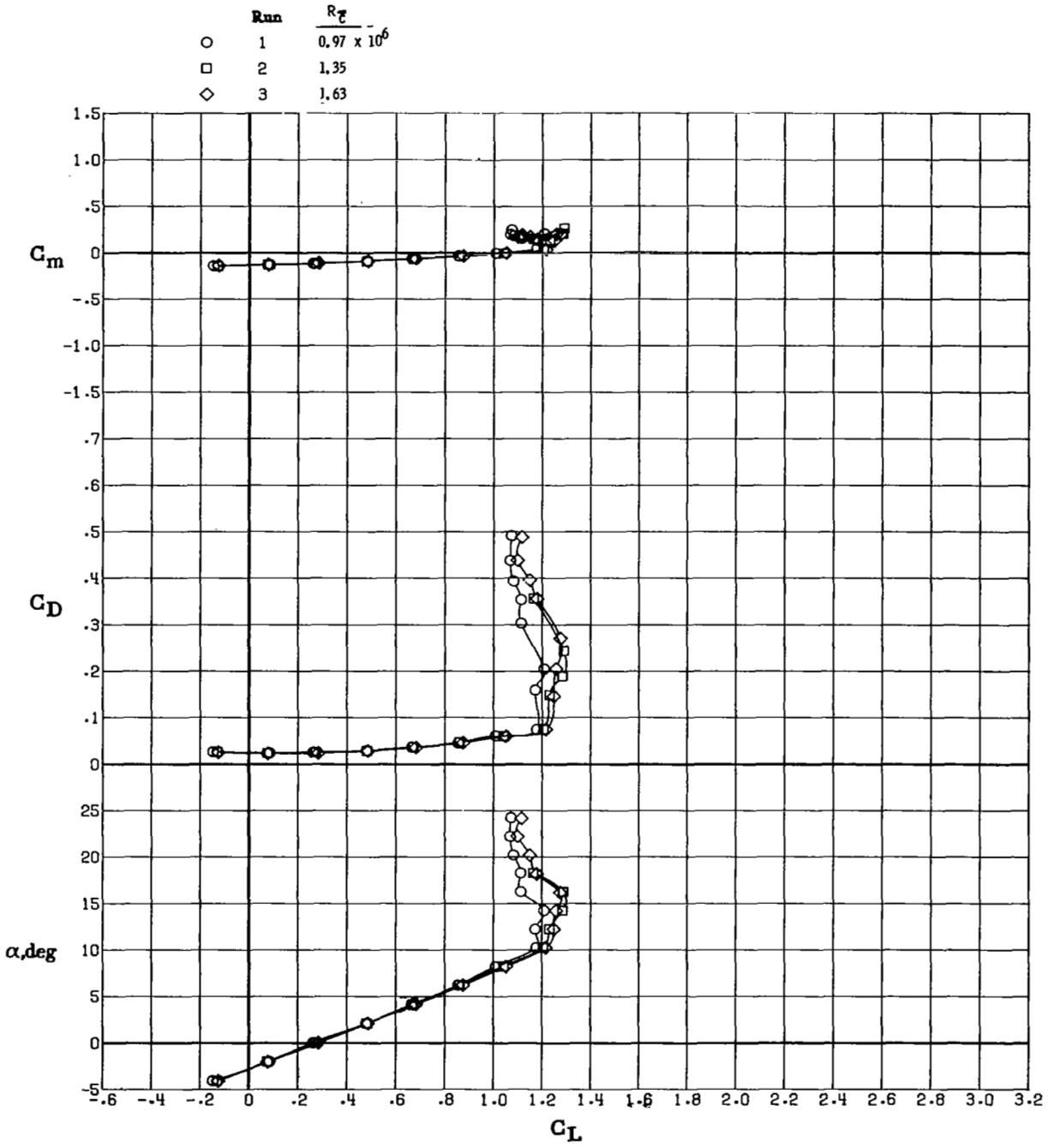
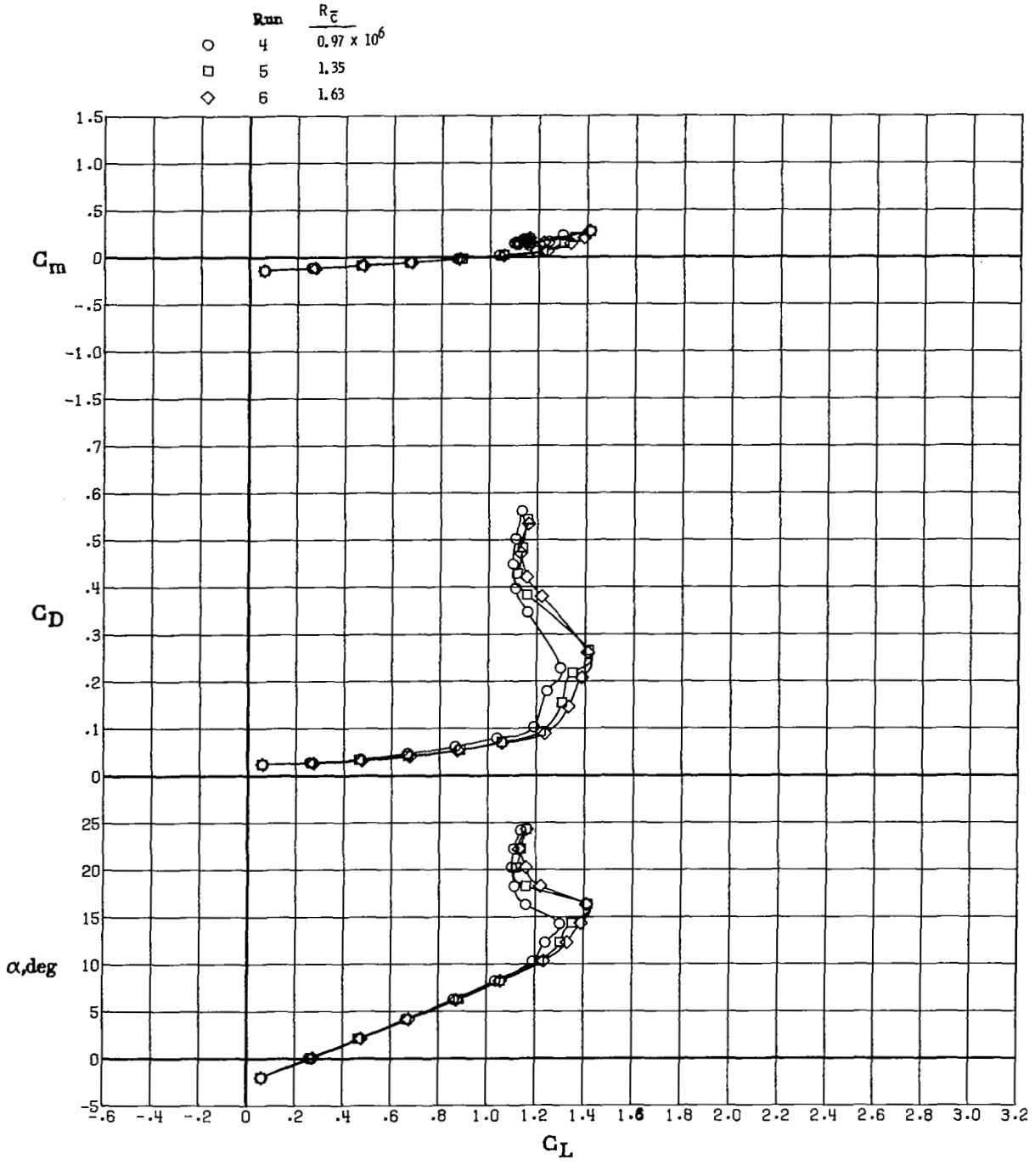


Figure 4.- Chordwise component combinations and labels for wing static pressure taps.



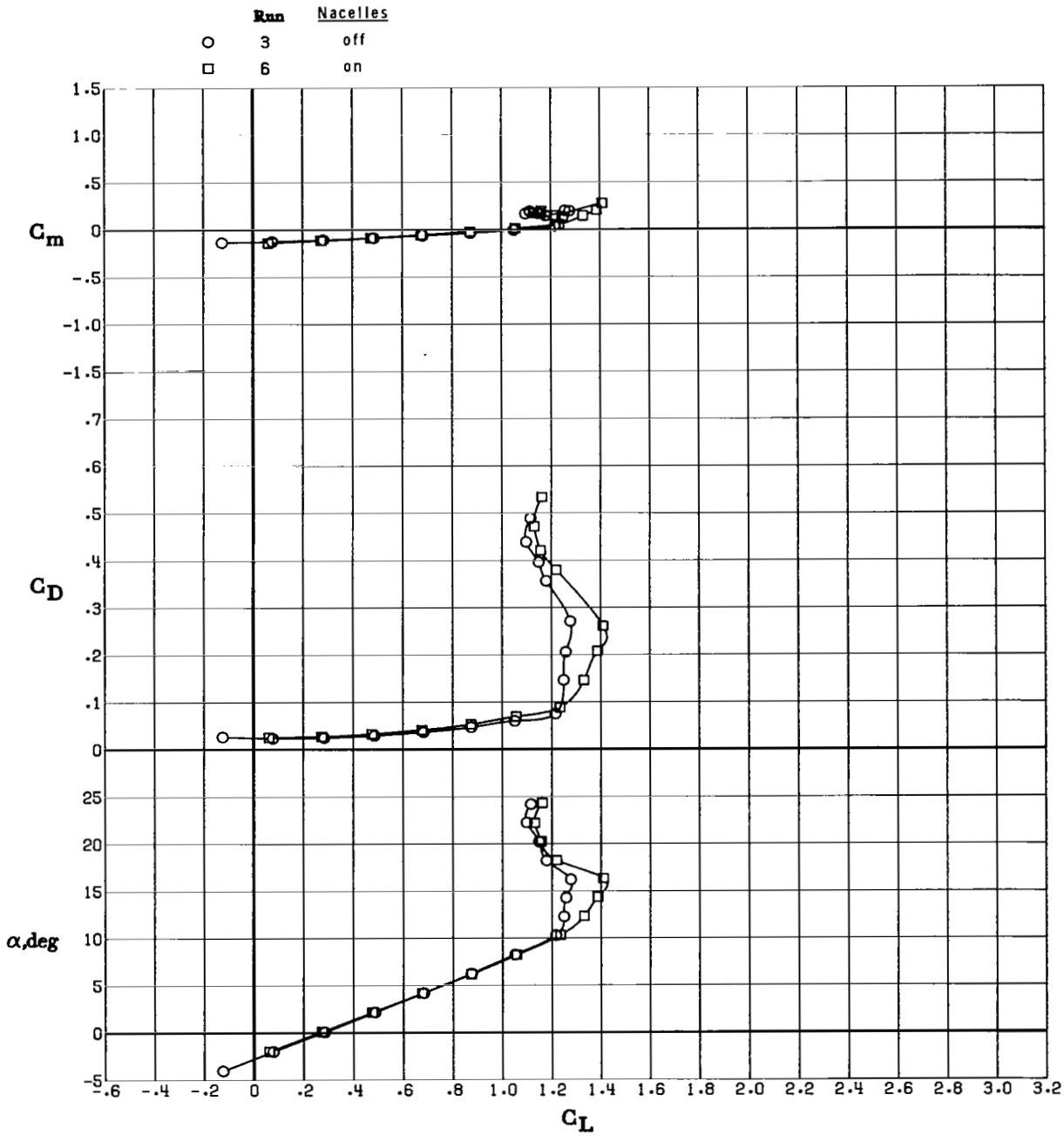
(a) Nacelles off.

Figure 5.- Effect of Reynolds number on longitudinal aerodynamic characteristics of cruise wing configuration.



(b) Nacelles on.

Figure 5.- Continued.



(c) Nacelles on/off ($R_{\bar{c}} = 1.63 \times 10^6$).

Figure 5.- Concluded.

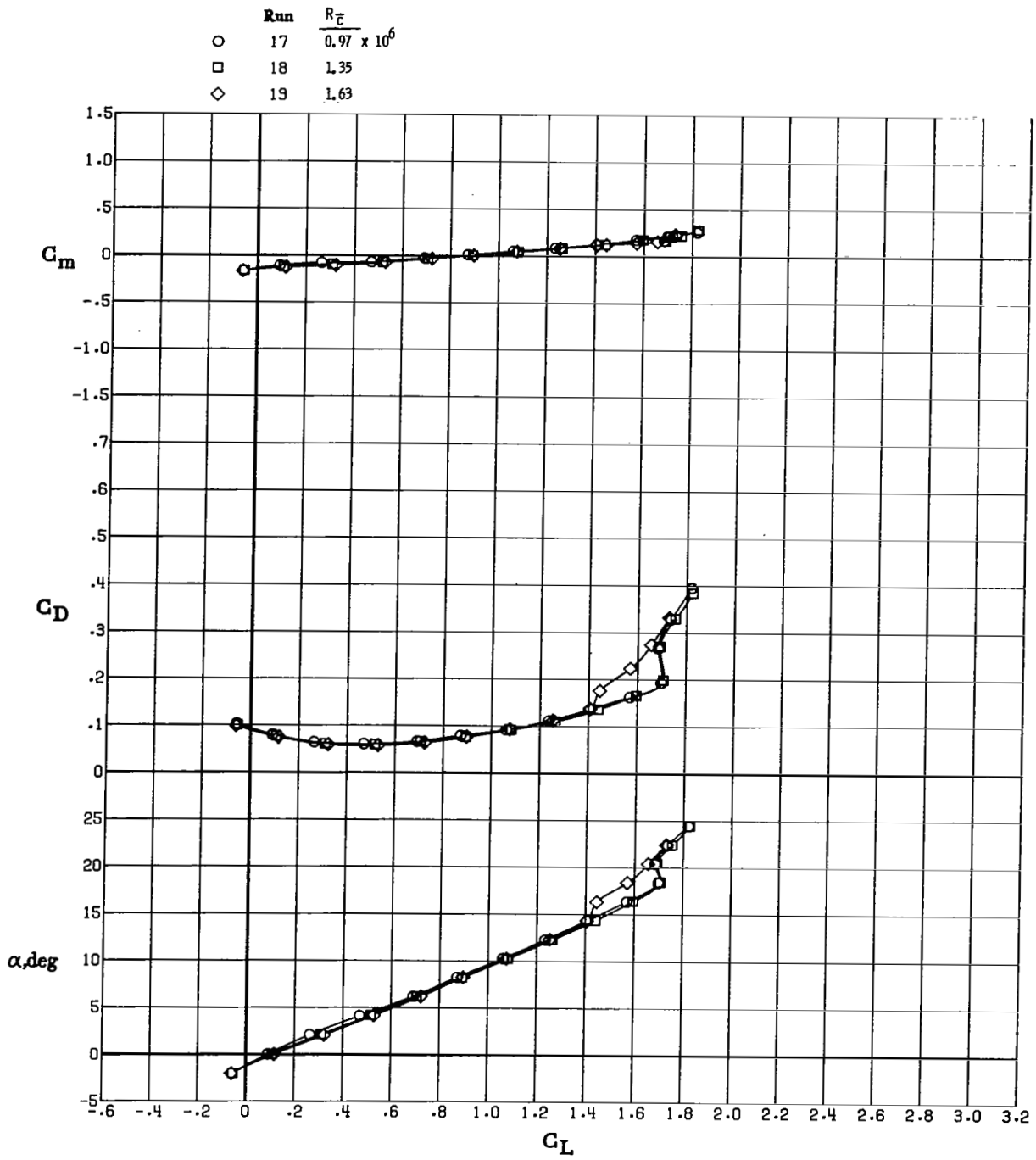
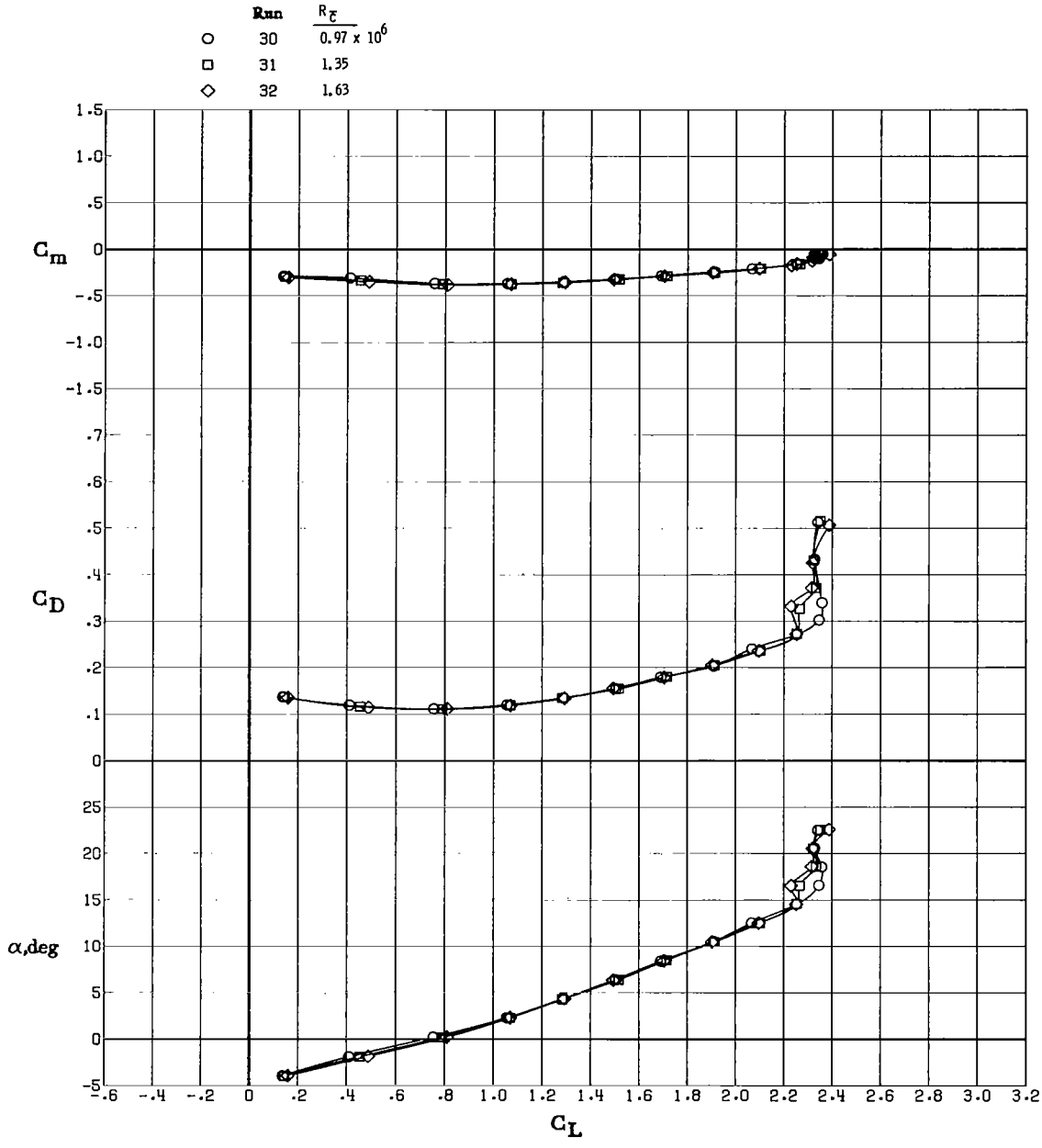
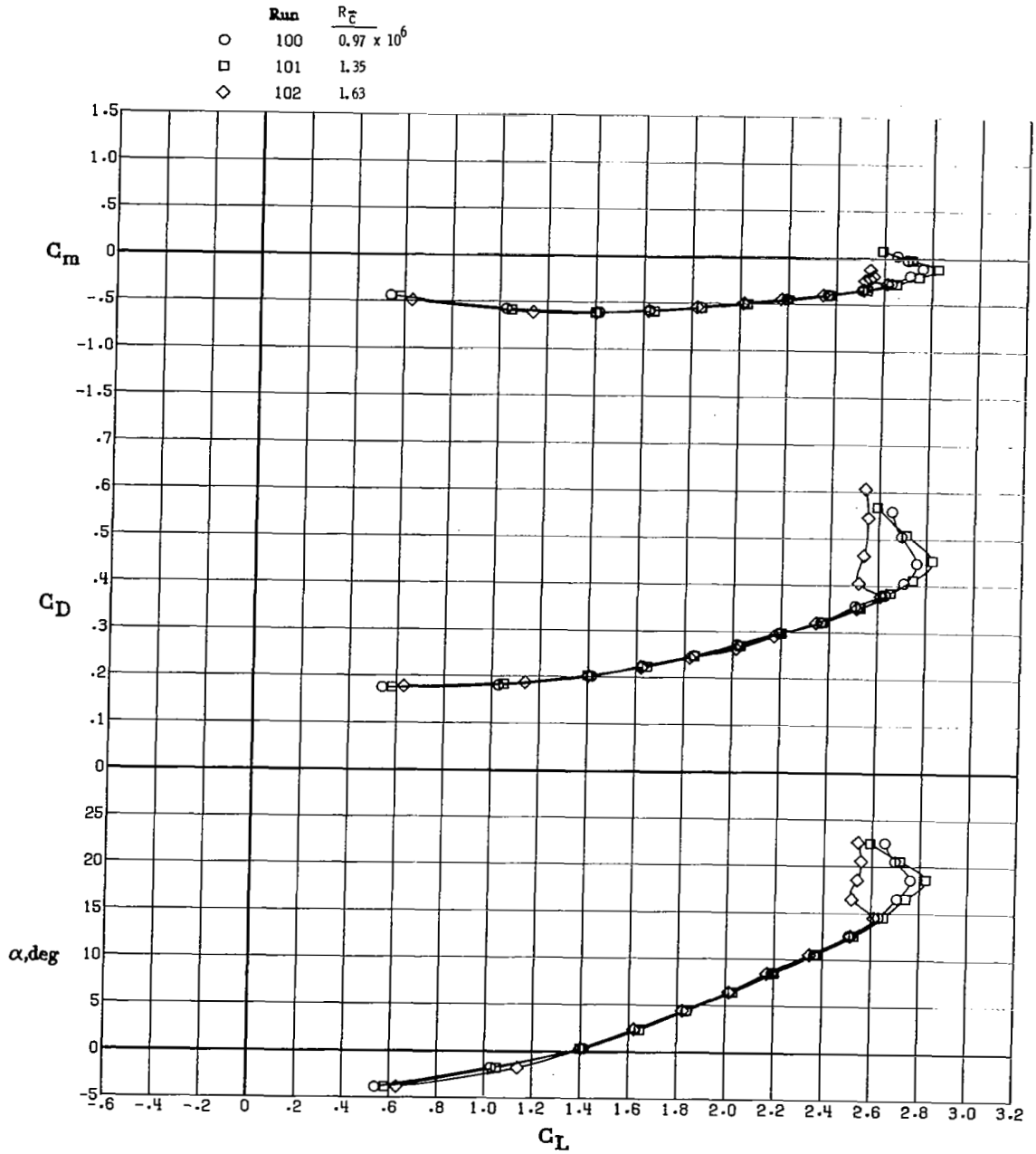


Figure 6.- Effect of Reynolds number on longitudinal aerodynamic characteristics of climb wing configuration.



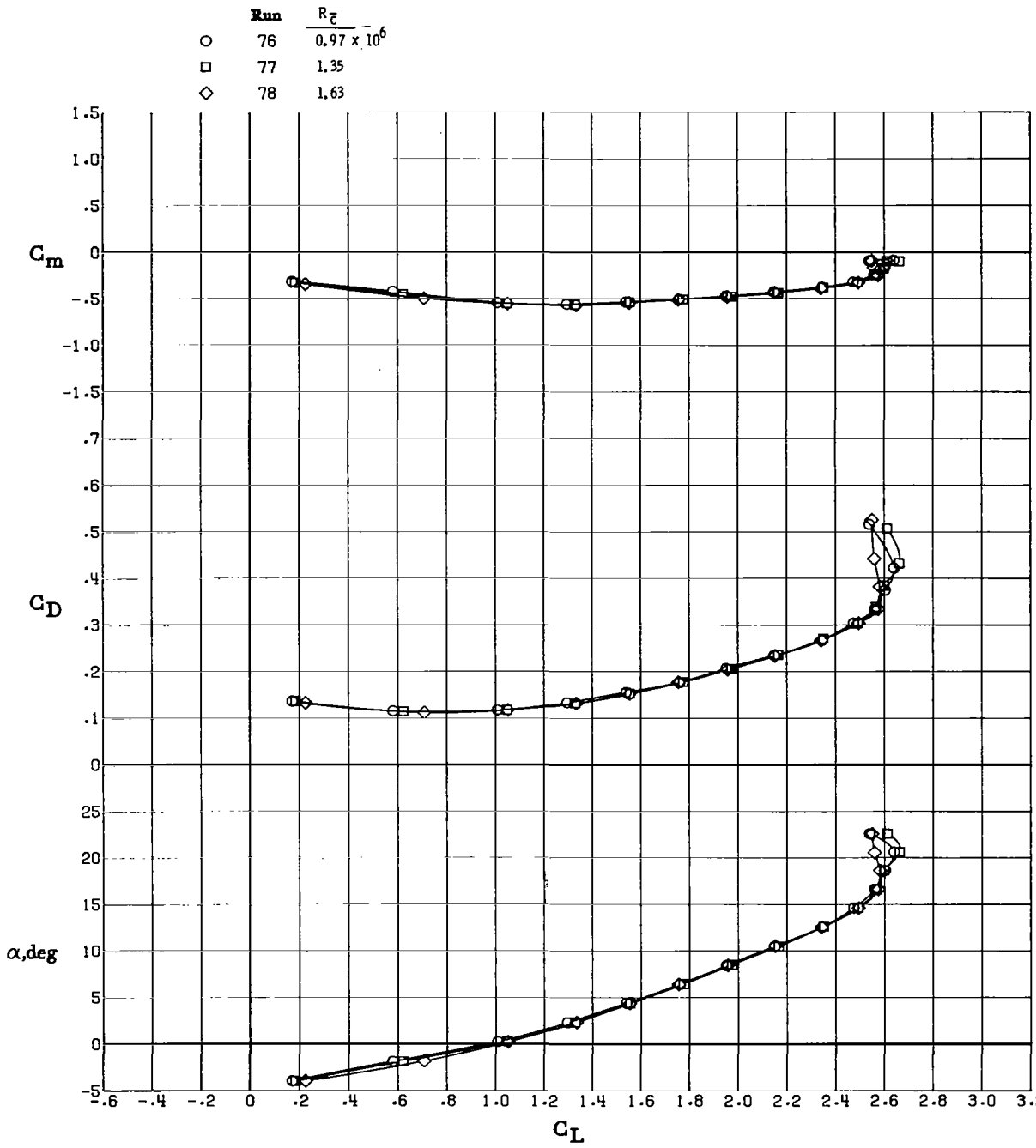
(a) Take-off flap setting.

Figure 7.- Effect of Reynolds number on longitudinal aerodynamic characteristics of part-span flap wing configuration.



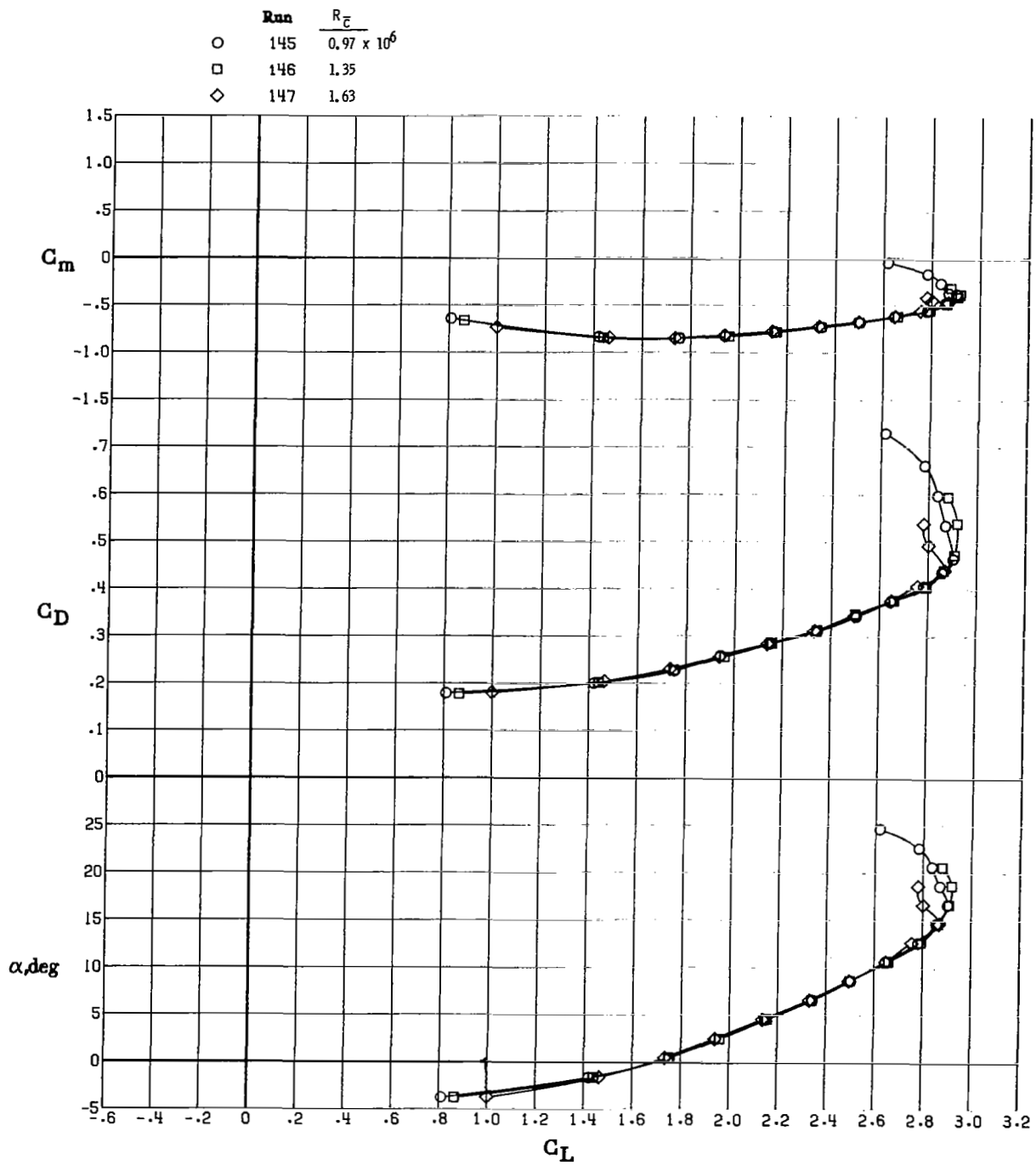
(b) Landing flap setting.

Figure 7.- Concluded.



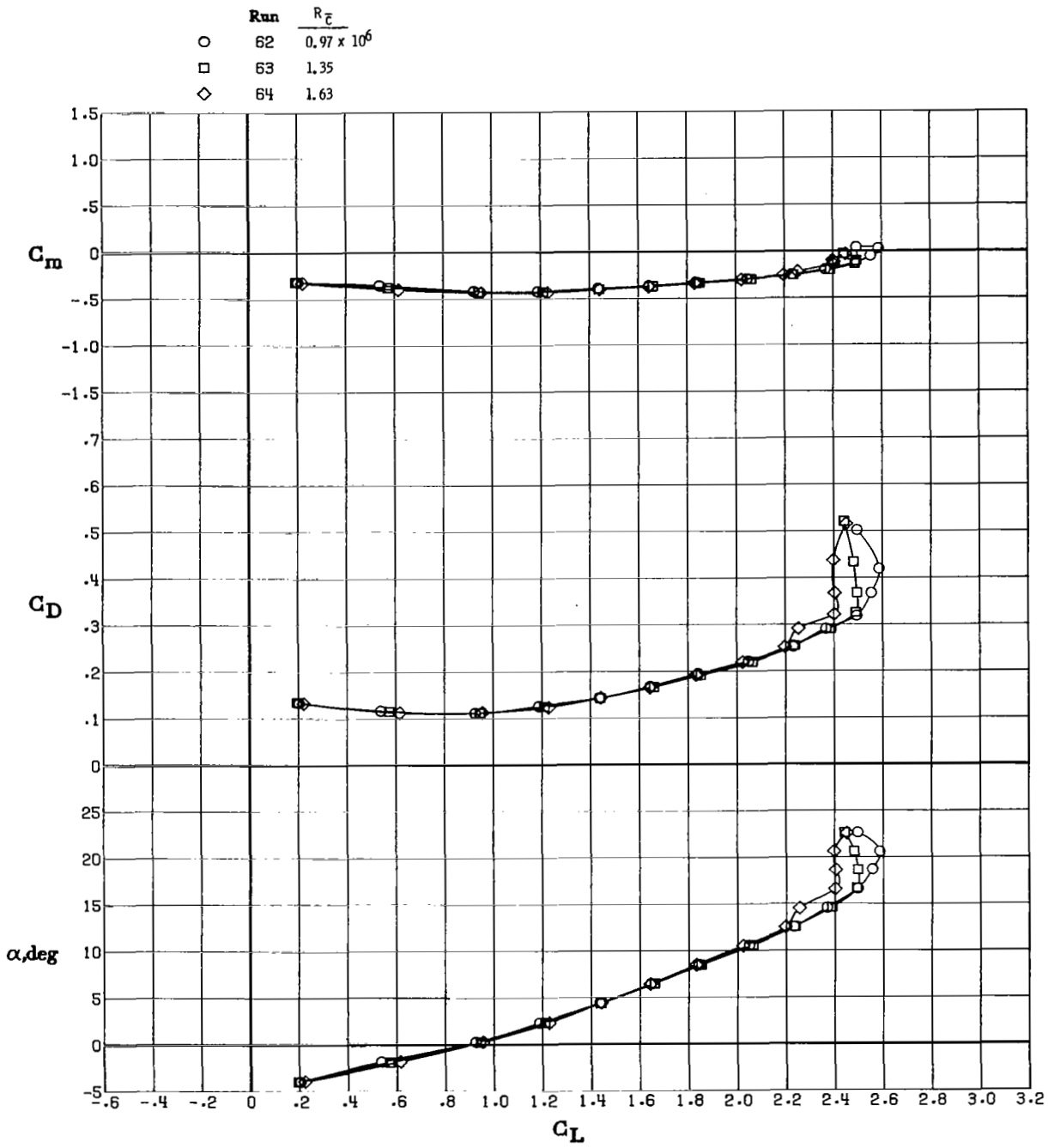
(a) Take-off flap setting.

Figure 8.- Effect of Reynolds number on longitudinal aerodynamic characteristics of full-span flap wing configuration.



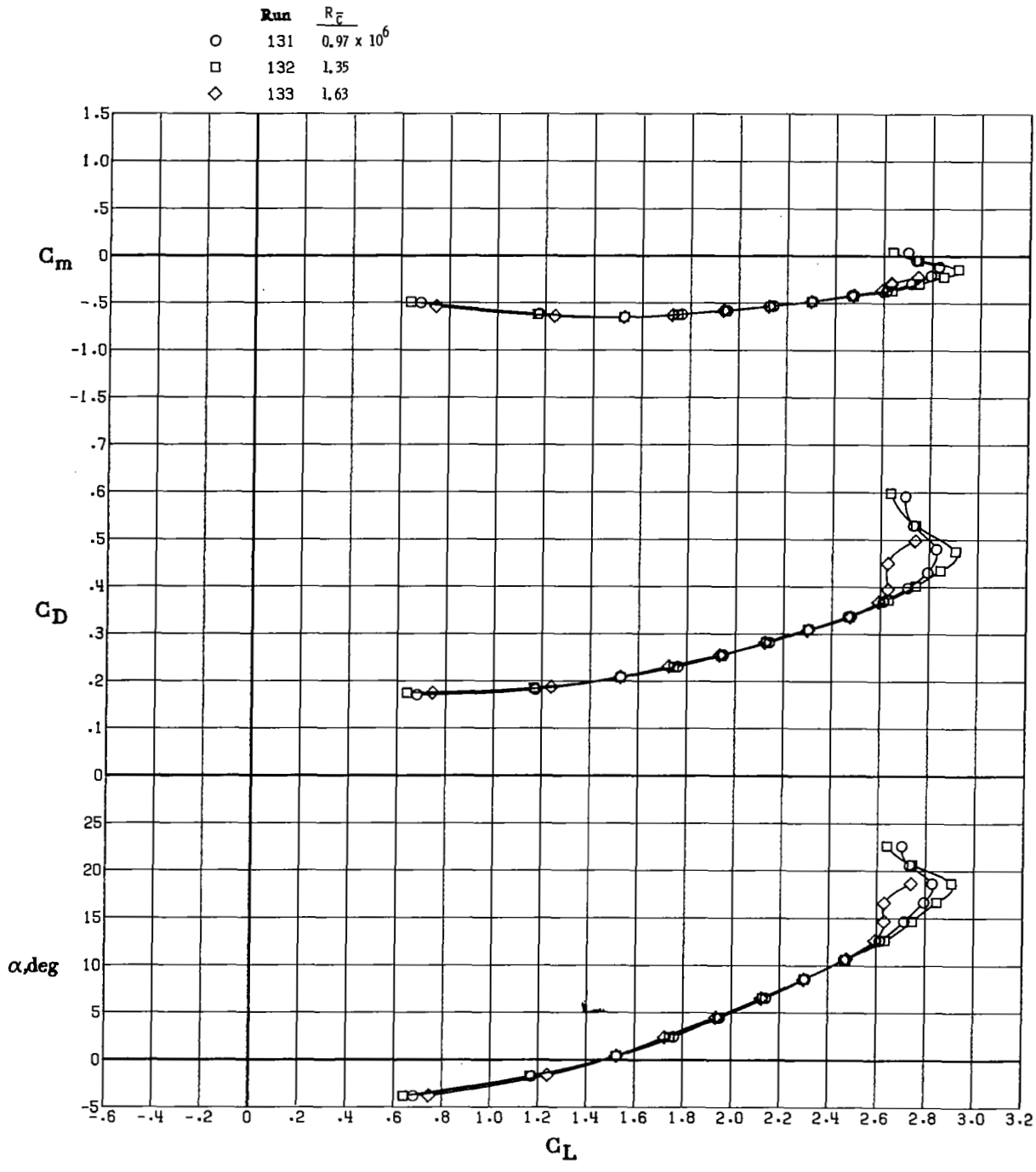
(b) Landing flap setting.

Figure 8.- Concluded.



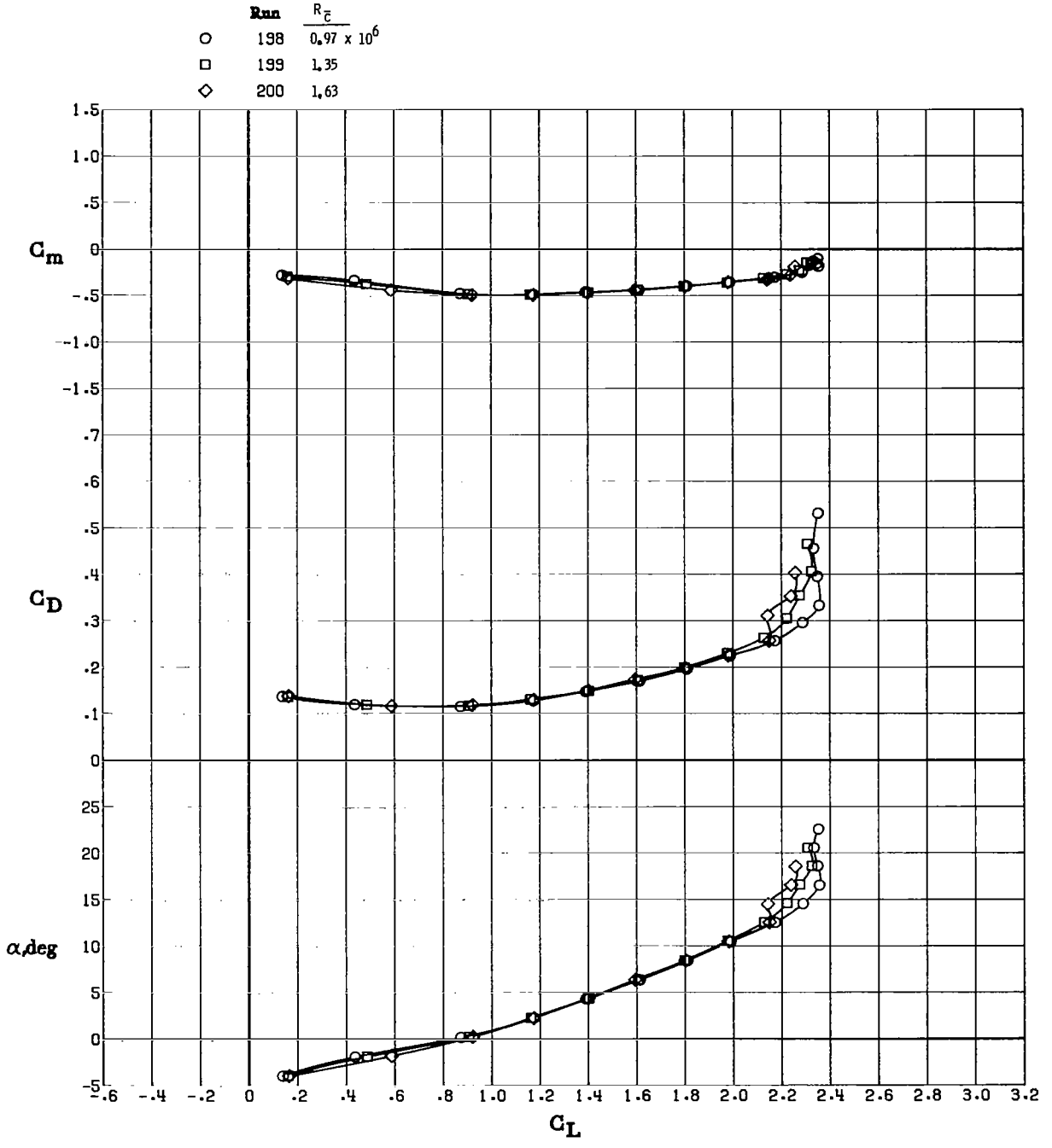
(a) Take-off flap setting.

Figure 9.- Effect of Reynolds number on longitudinal aerodynamic characteristics of full-span flap with low-speed ailerons wing configuration.



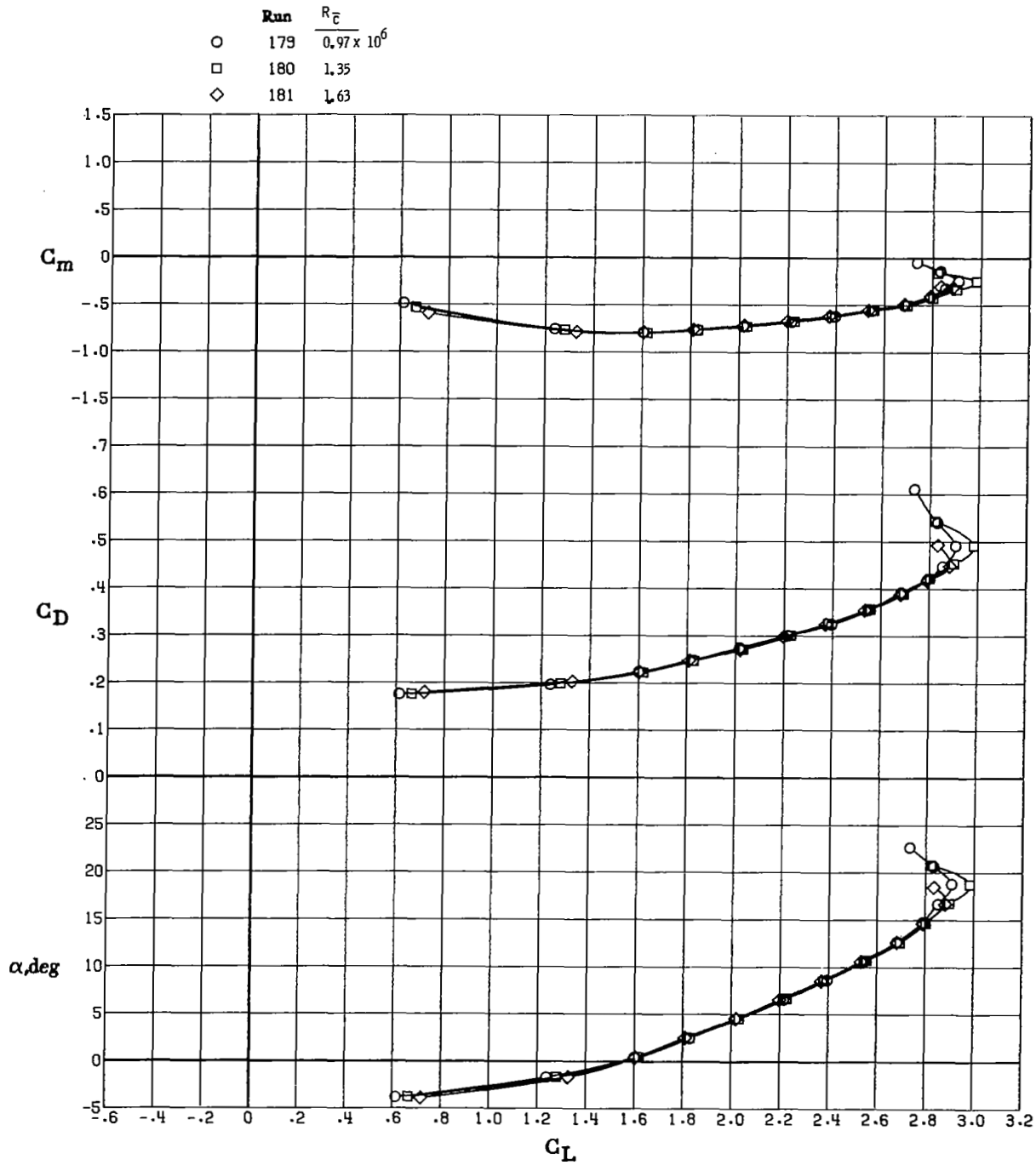
(b) Landing flap setting.

Figure 9.- Concluded.



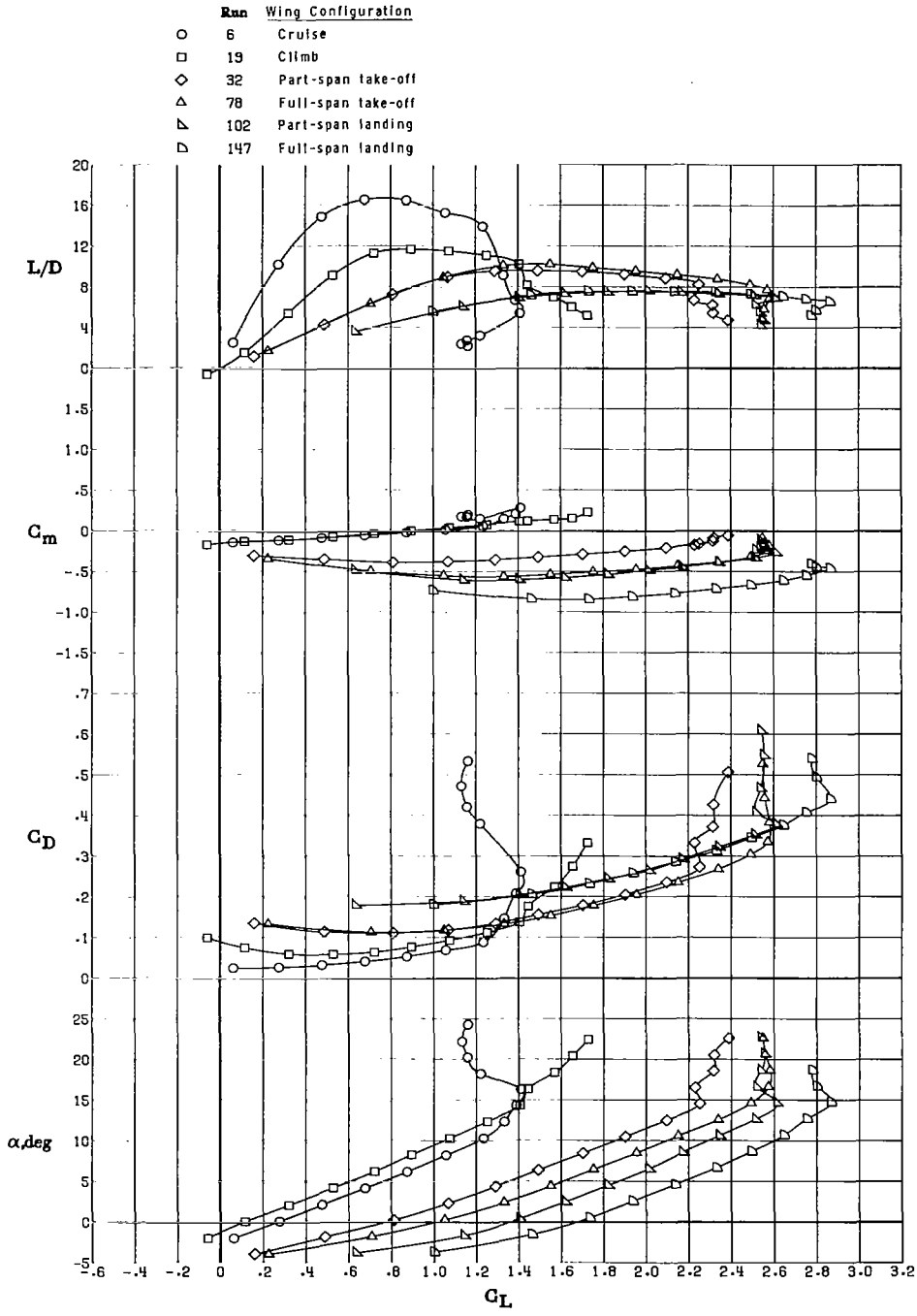
(a) Take-off flap setting.

Figure 10.- Effect of Reynolds number on longitudinal aerodynamic characteristics of full-span flap with high-speed ailerons wing configuration.



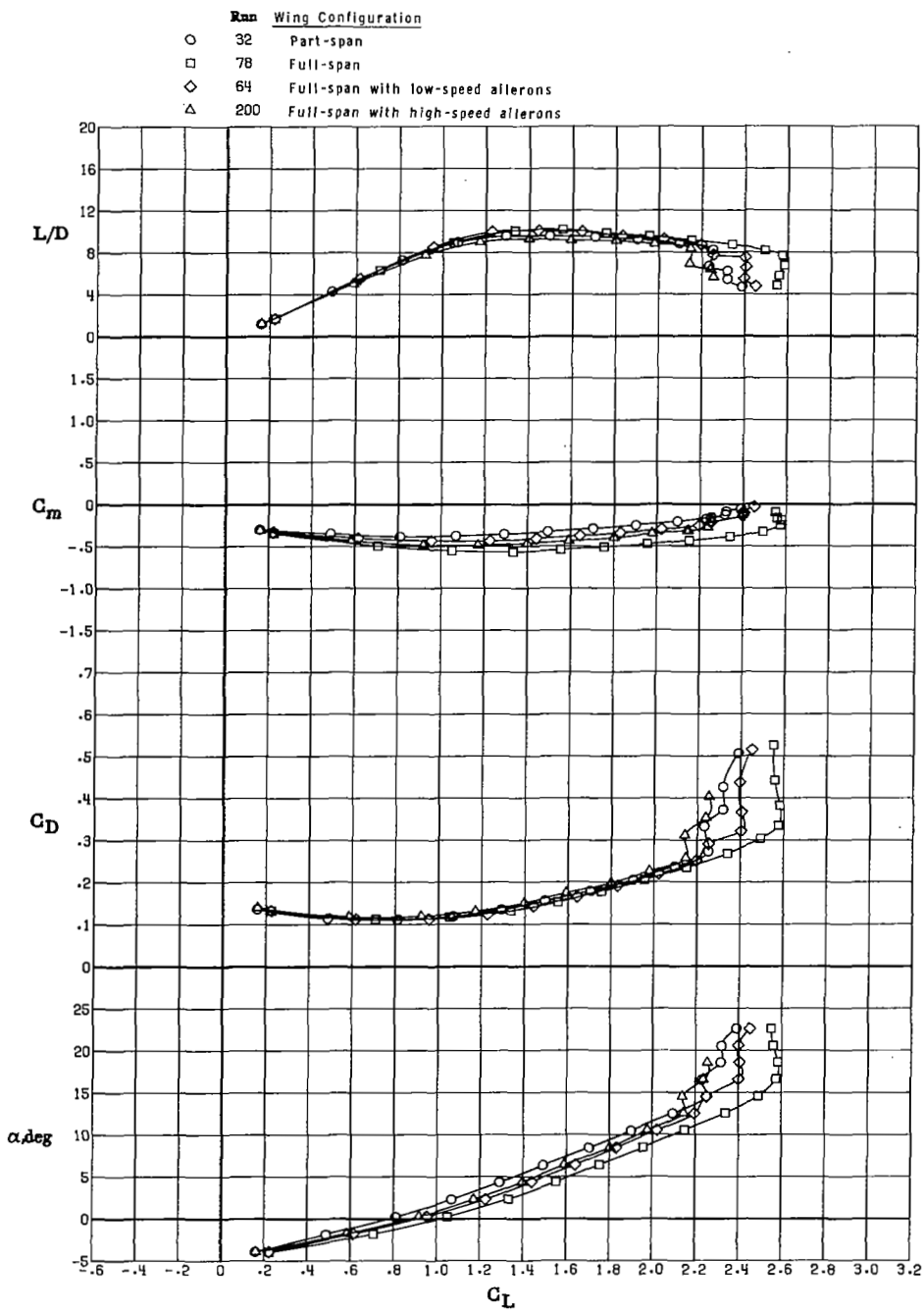
(b) Landing flap setting.

Figure 10.- Concluded.



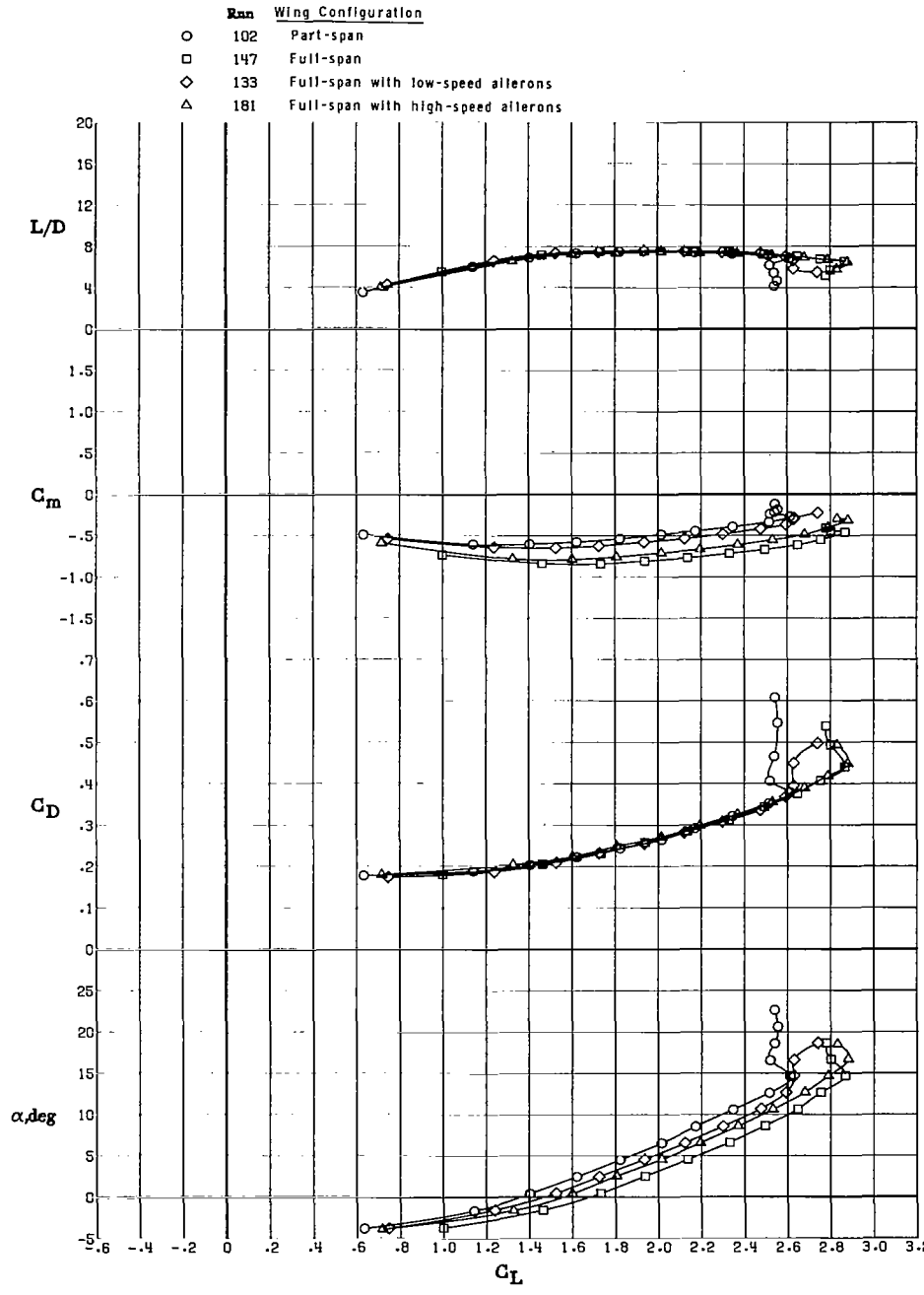
(a) Cruise, climb, part-span flap, and full-span flap wing configurations.

Figure 11.- Comparison of untrimmed (tail-off) performance characteristics of all wing configurations tested. $R_{\bar{c}} = 1.63 \times 10^6$.



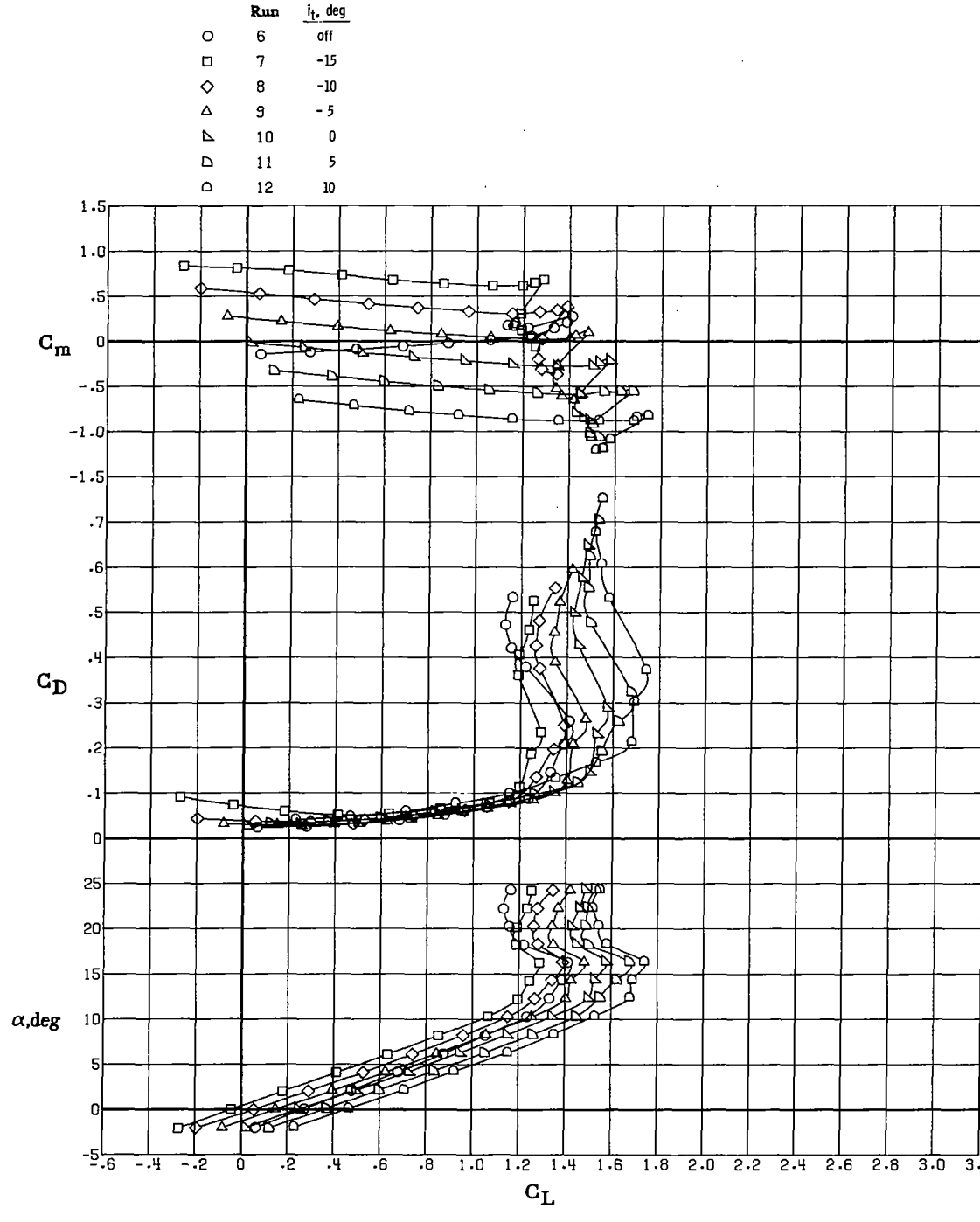
(b) Take-off flap wing configurations.

Figure 11.- Continued.



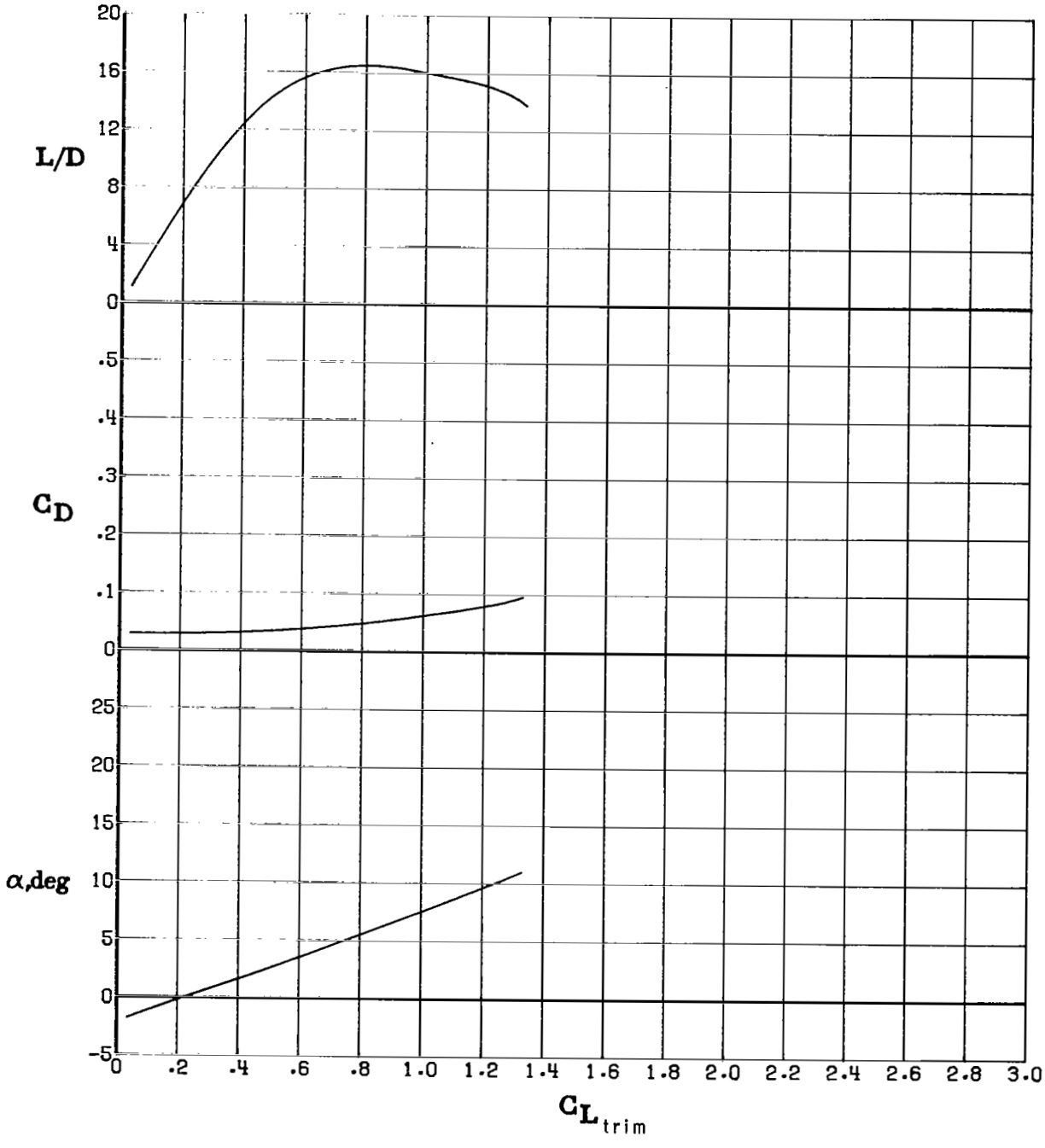
(c) Landing flap wing configurations.

Figure 11.- Concluded.



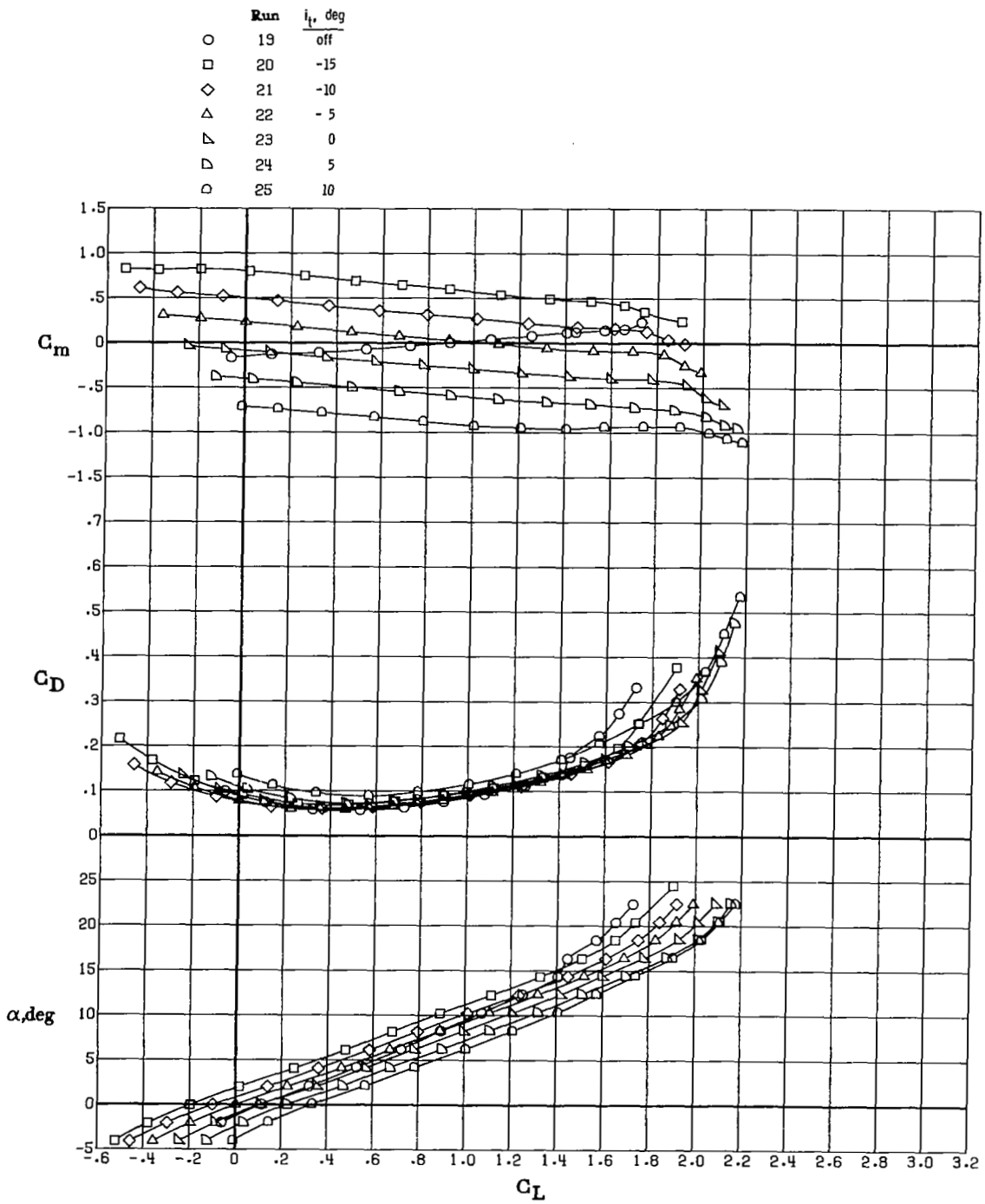
(a) Cruise wing configuration.

Figure 12.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of cruise wing configuration. $R_{\bar{c}} = 1.63 \times 10^6$.



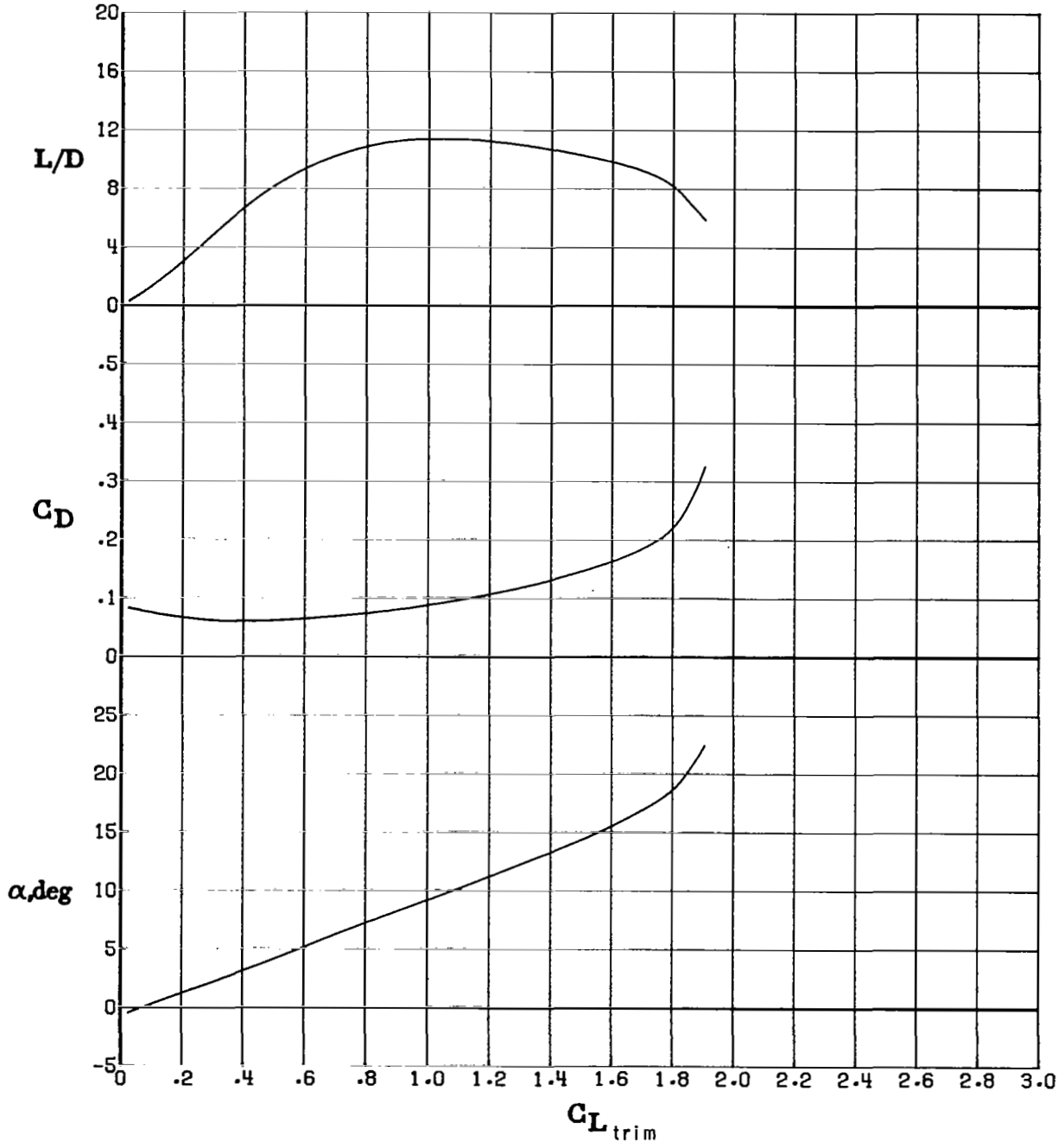
(b) Trim performance of cruise wing configuration.

Figure 12.- Concluded.



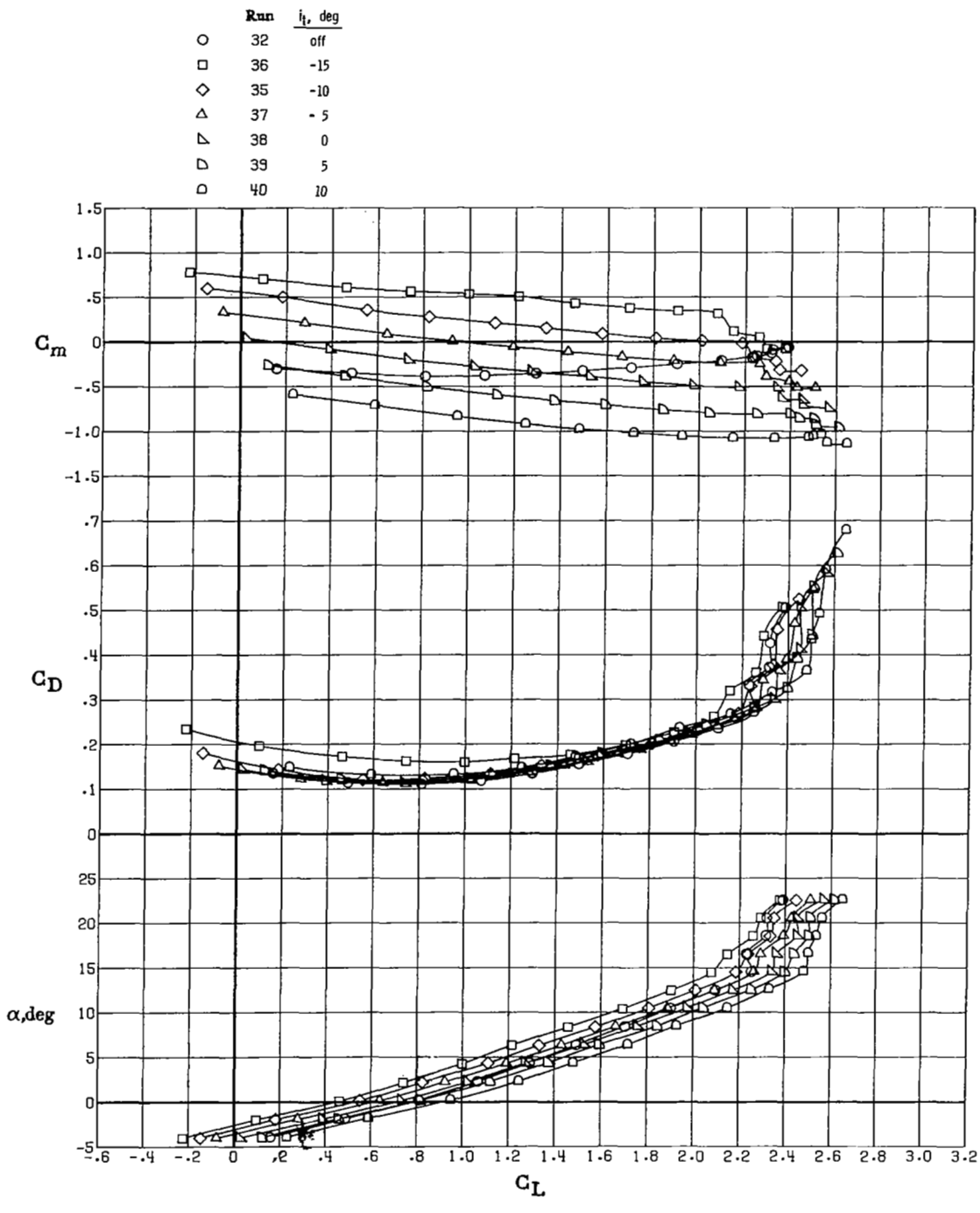
(a) Climb wing configuration.

Figure 13.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of climb wing configuration. $R_{\bar{c}} = 1.63 \times 10^6$.



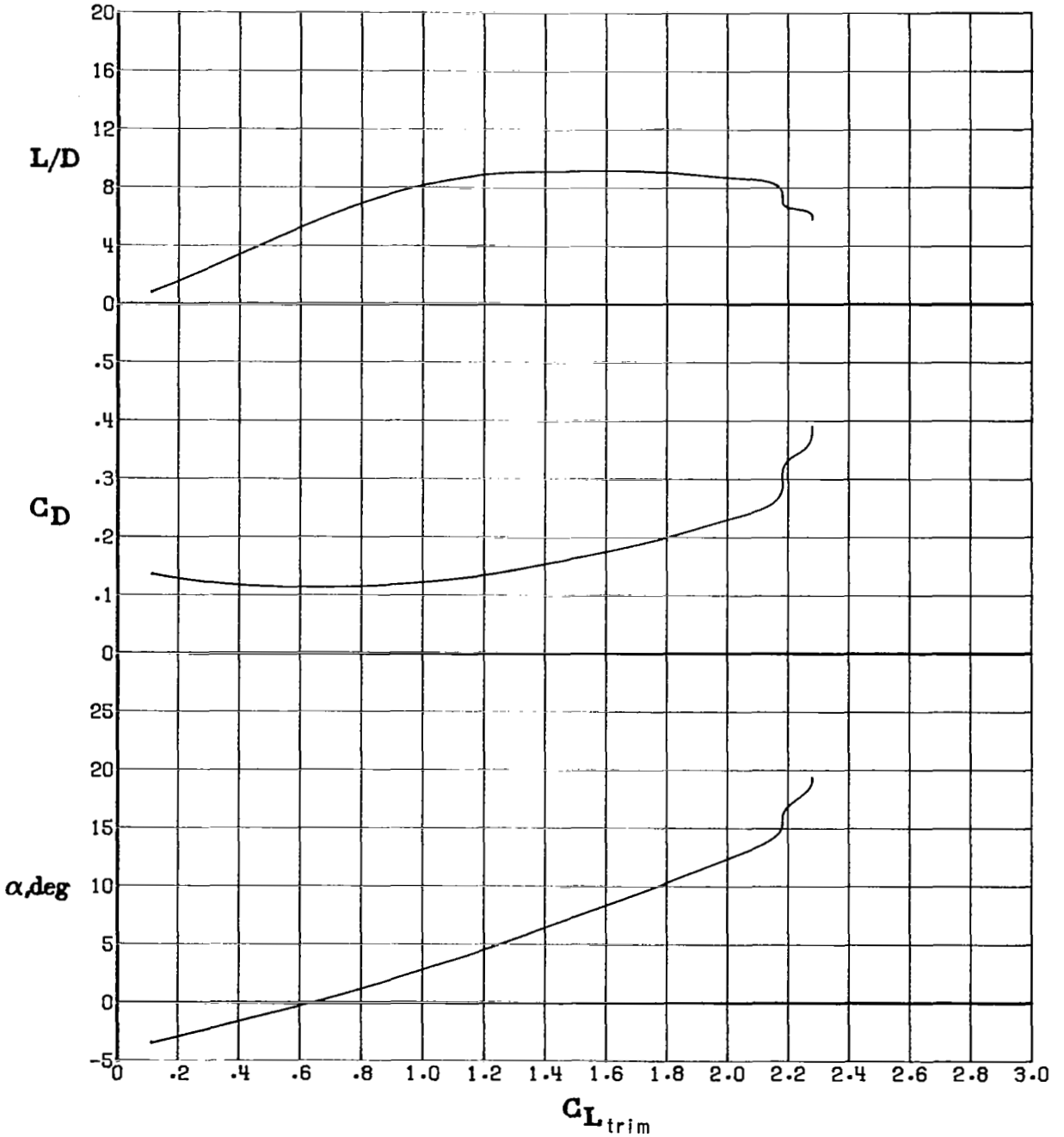
(b) Trim performance of climb wing configuration.

Figure 13.- Concluded.



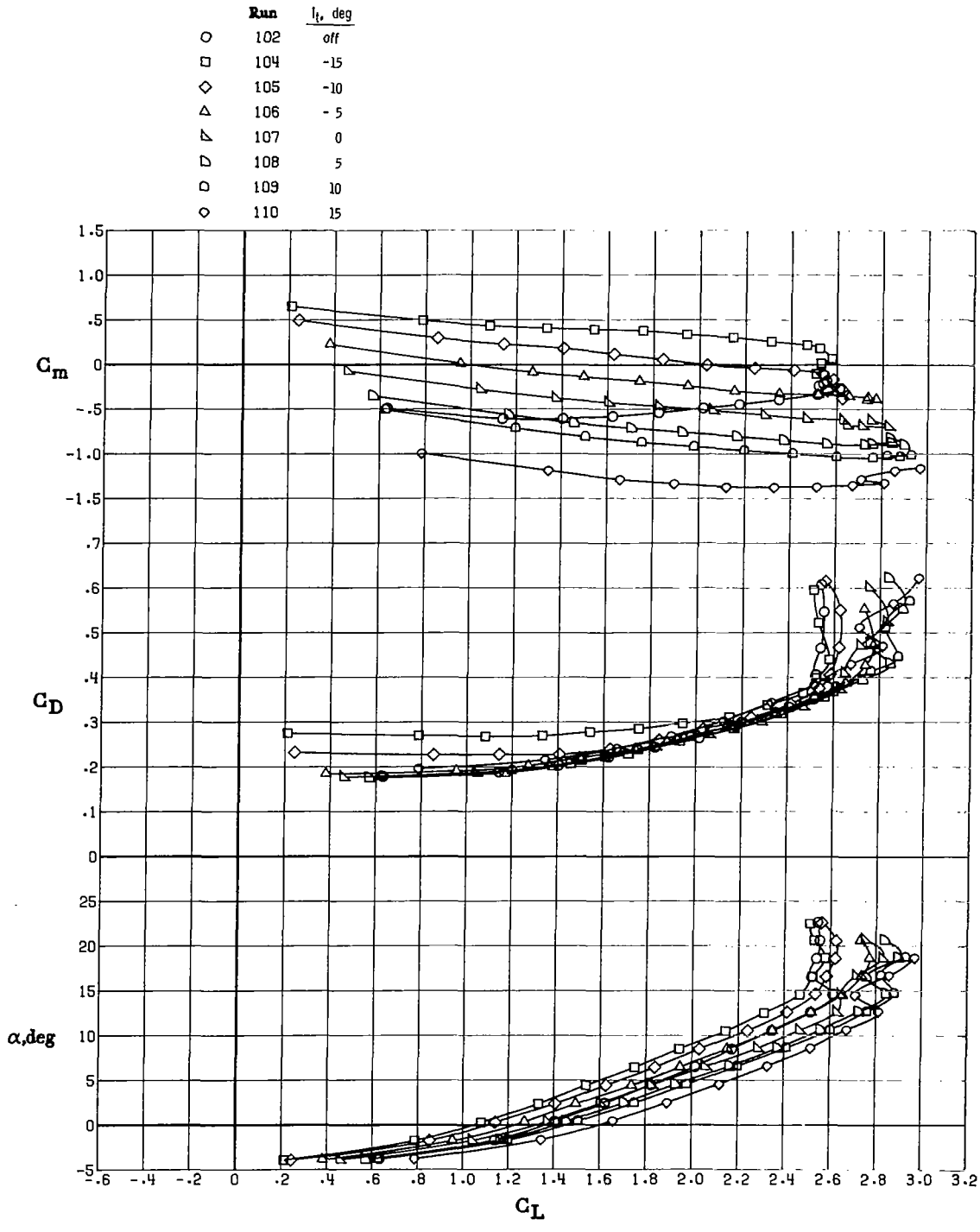
(a) Part-span, take-off flap wing configuration.

Figure 14.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of part-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



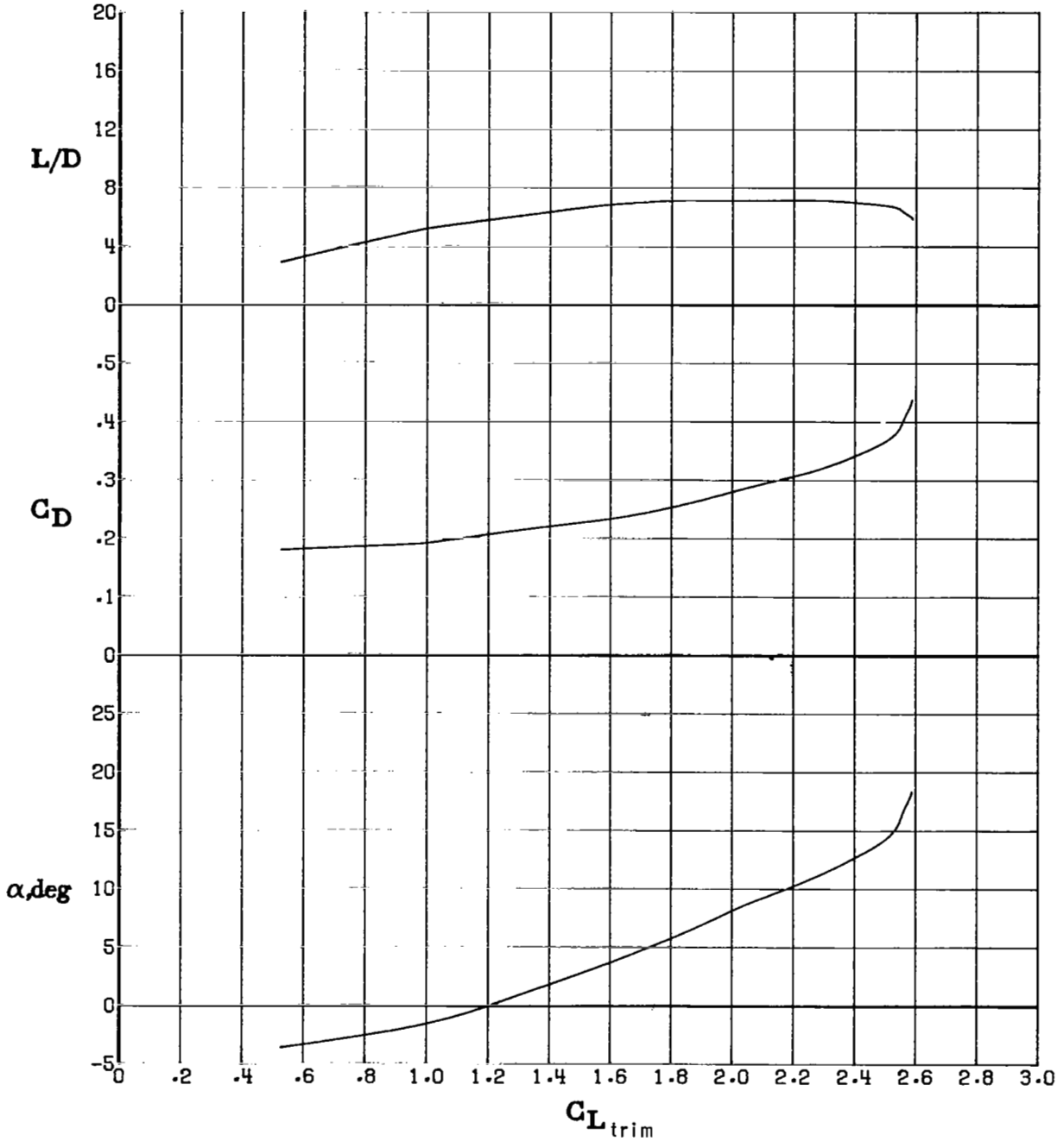
(b) Trim performance of part-span, take-off flap wing configuration.

Figure 14.- Continued.



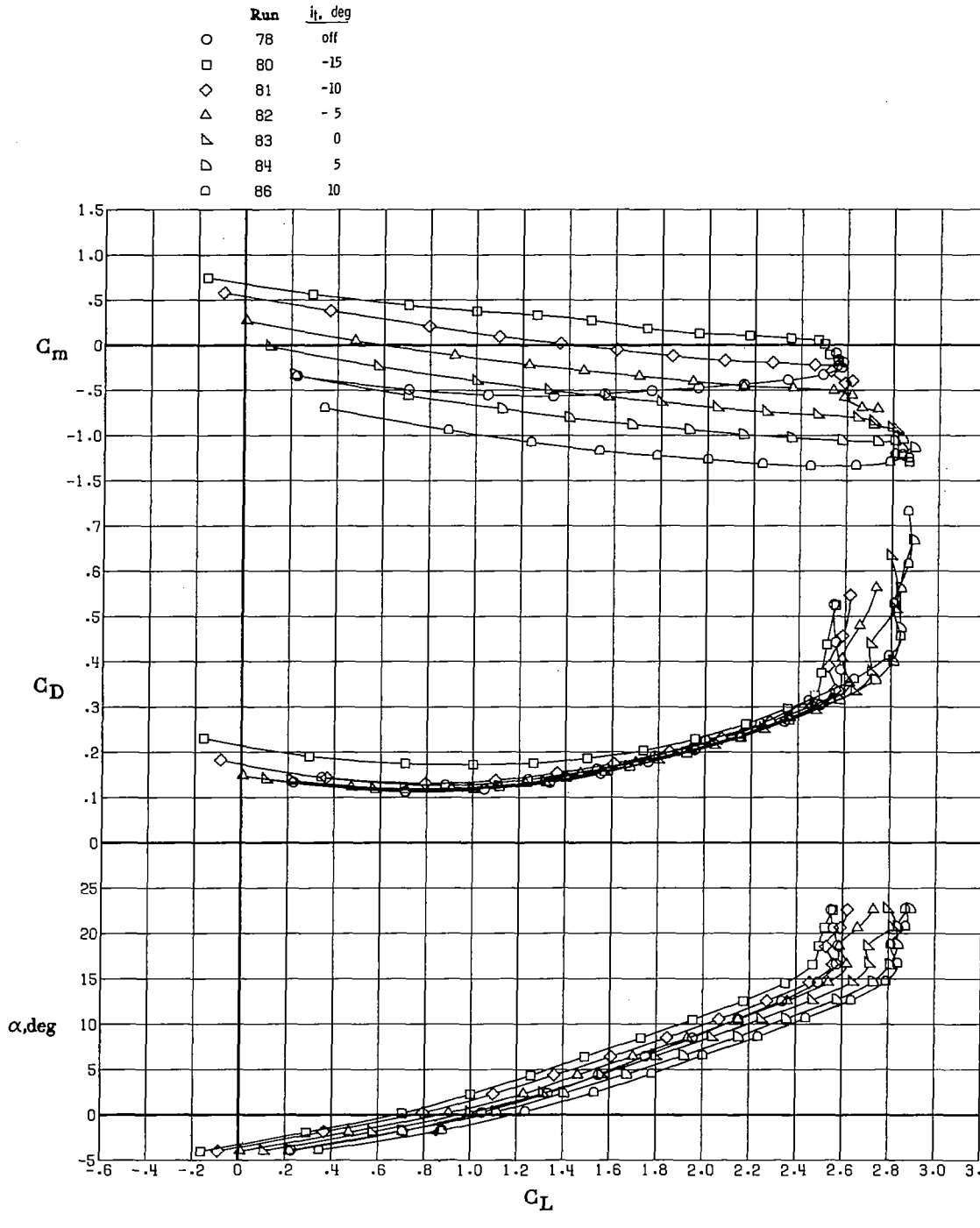
(c) Part-span, landing flap wing configuration.

Figure 14.- Continued.



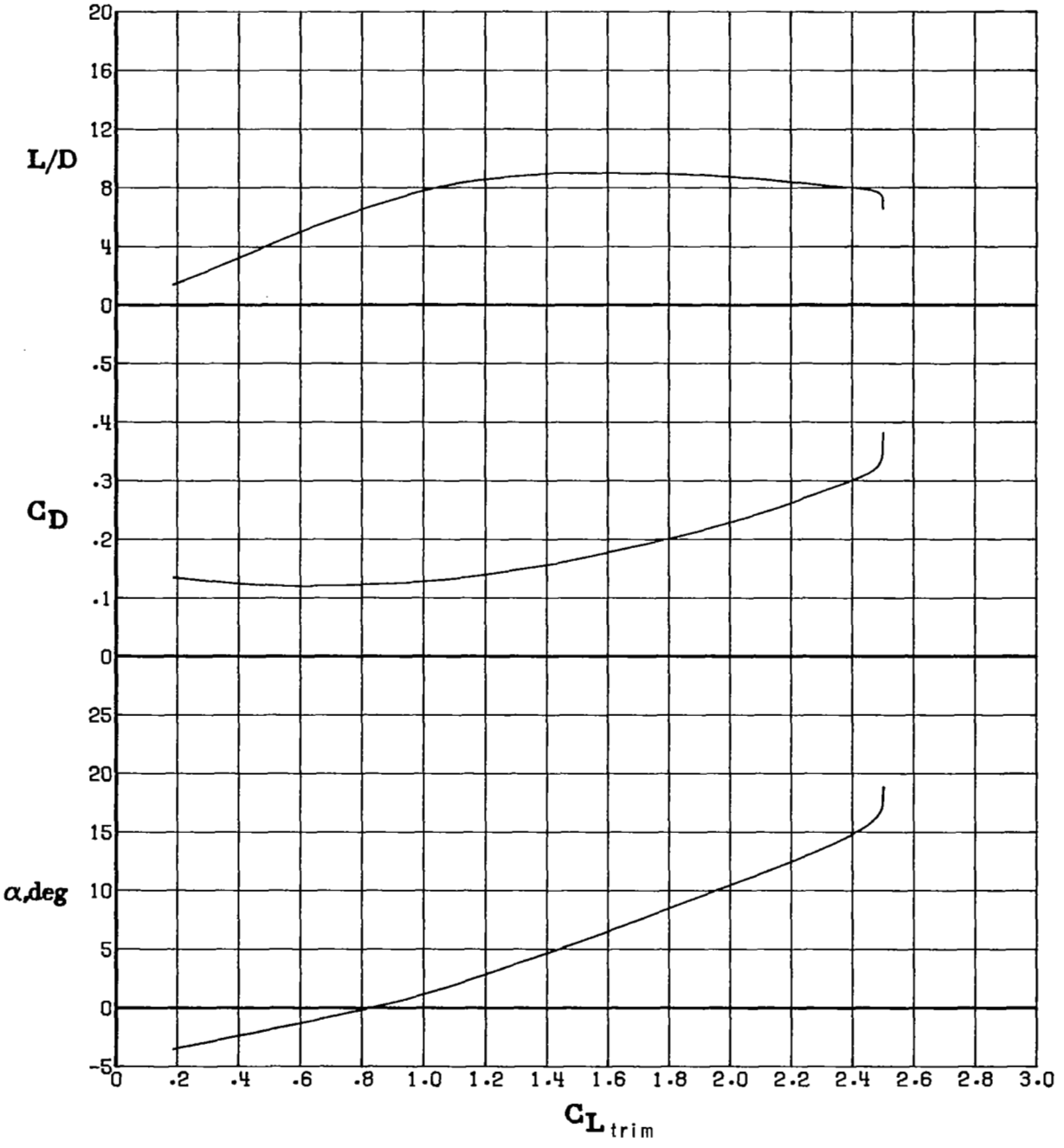
(d) Trim performance of part-span, landing flap wing configuration.

Figure 14.- Concluded.



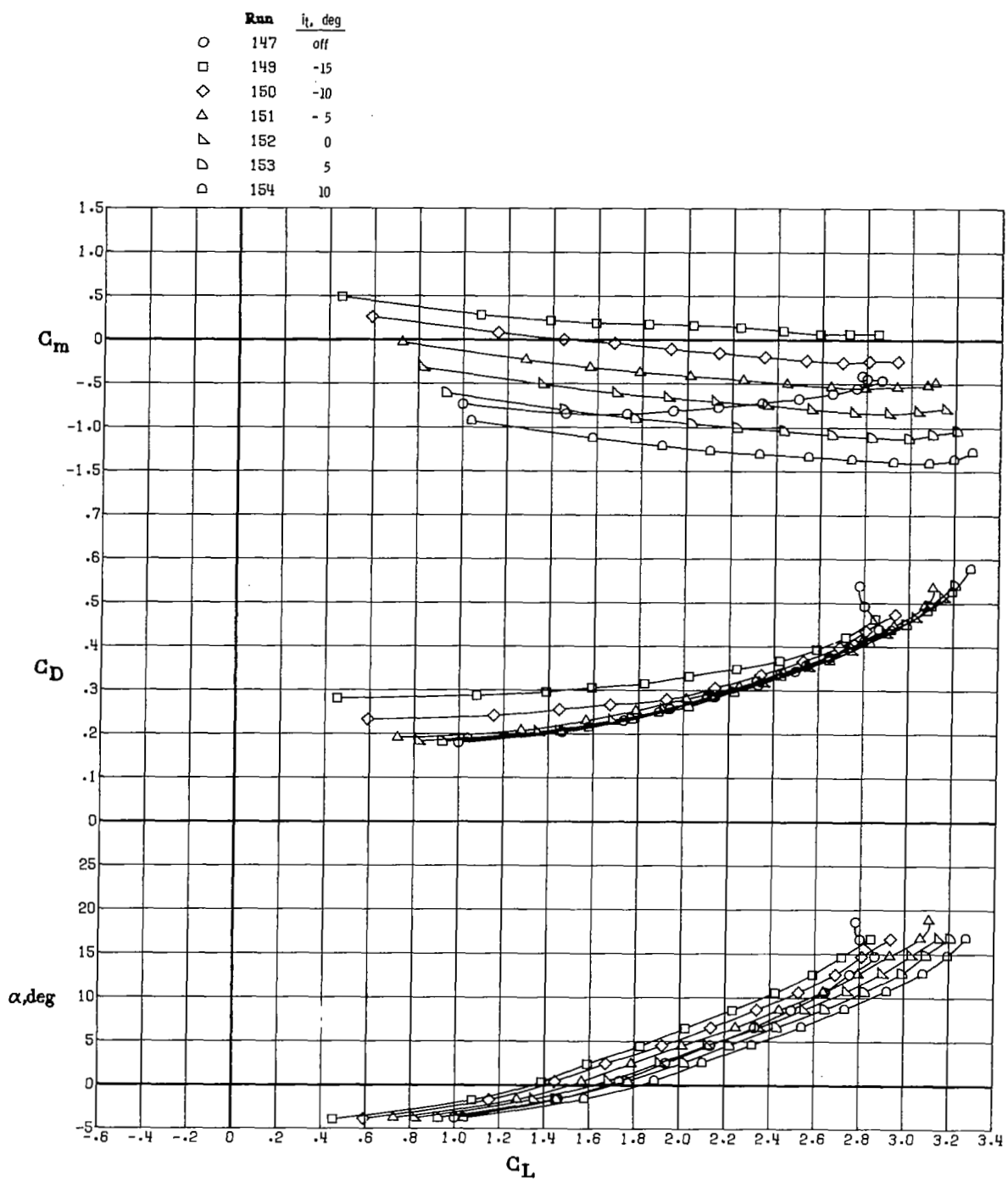
(a) Full-span, take-off wing configuration.

Figure 15.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of full-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



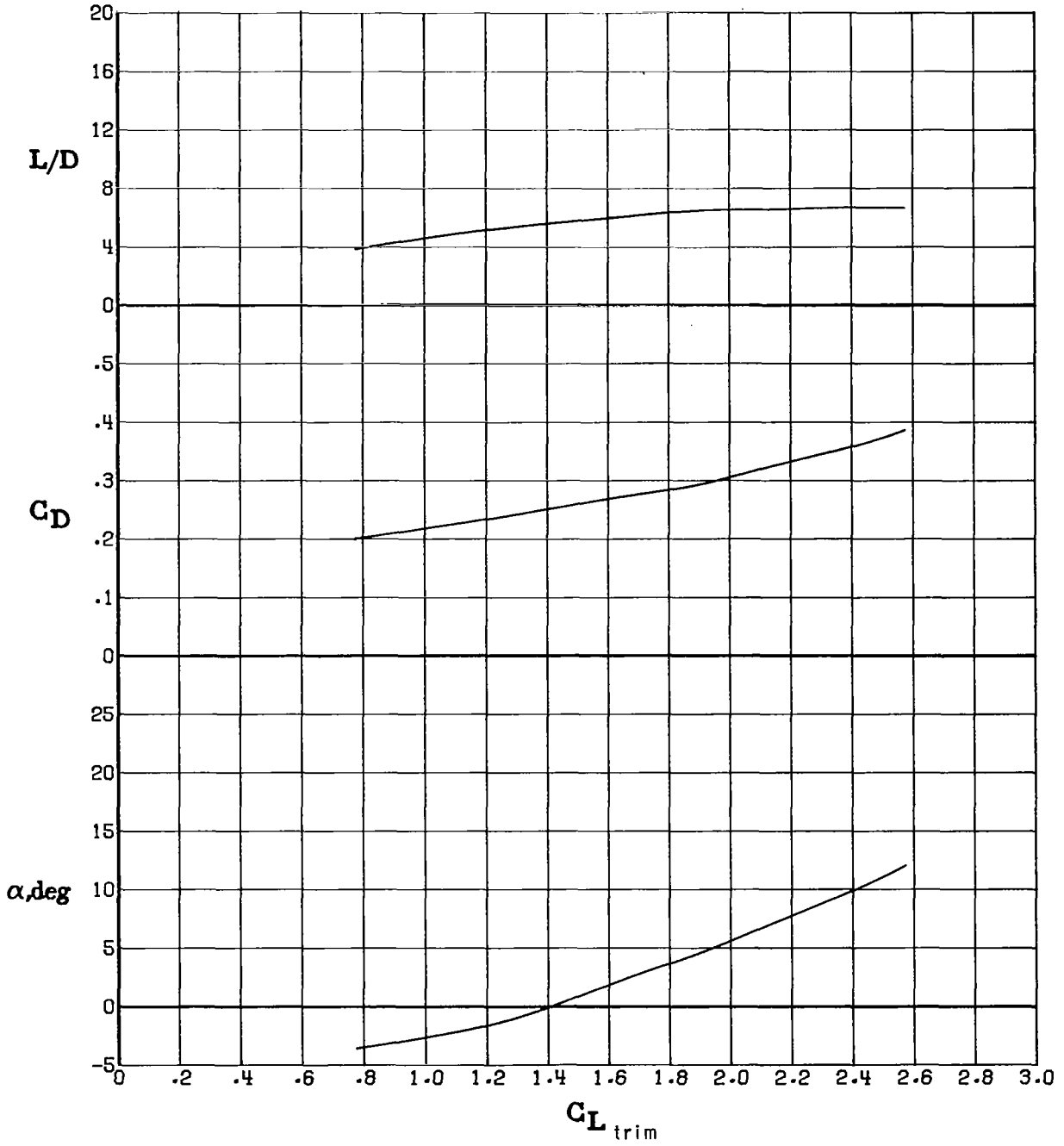
(b) Trim performance of full-span, take-off wing configuration.

Figure 15.- Continued.



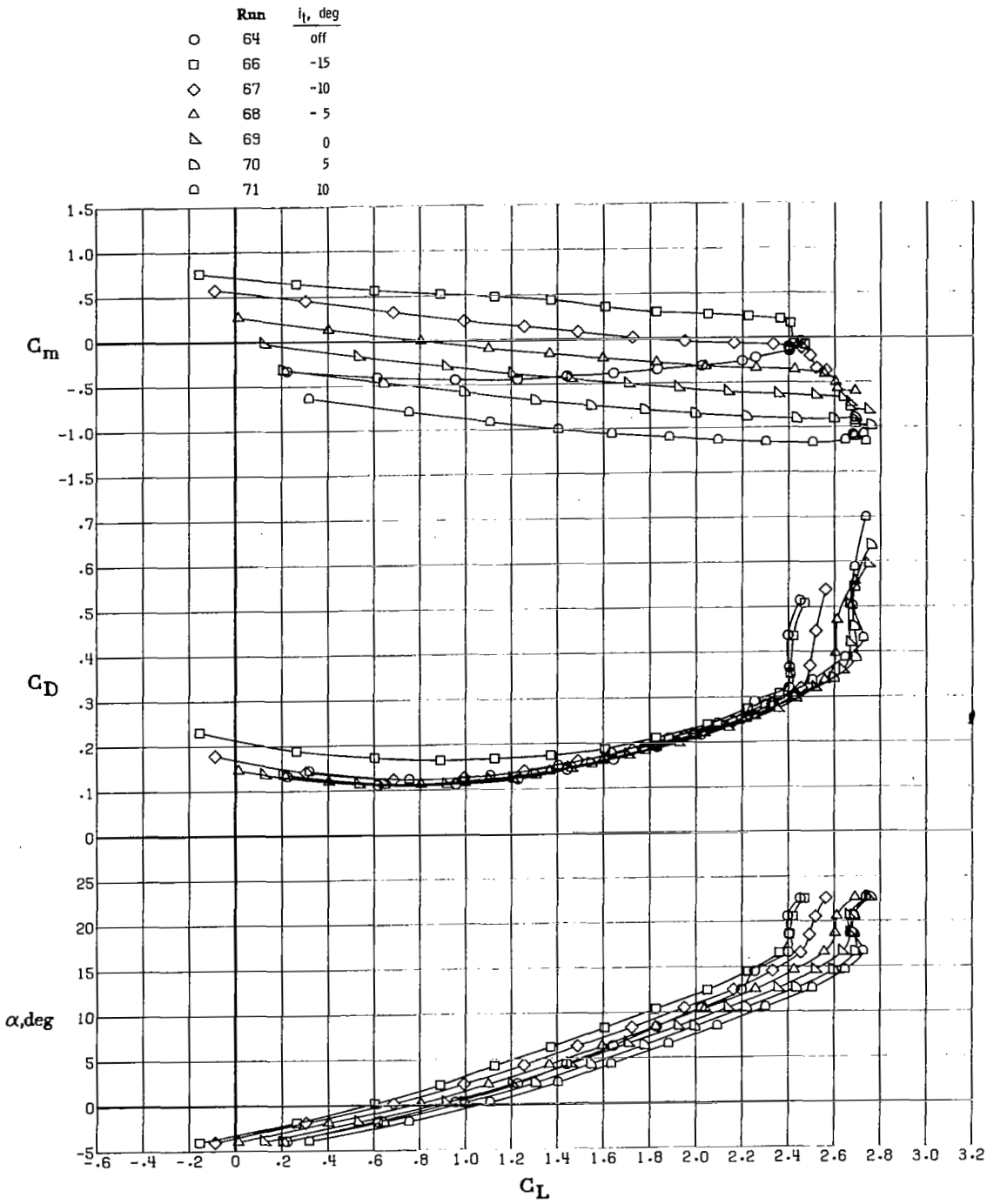
(c) Full-span, landing flap wing configuration.

Figure 15.- Continued.



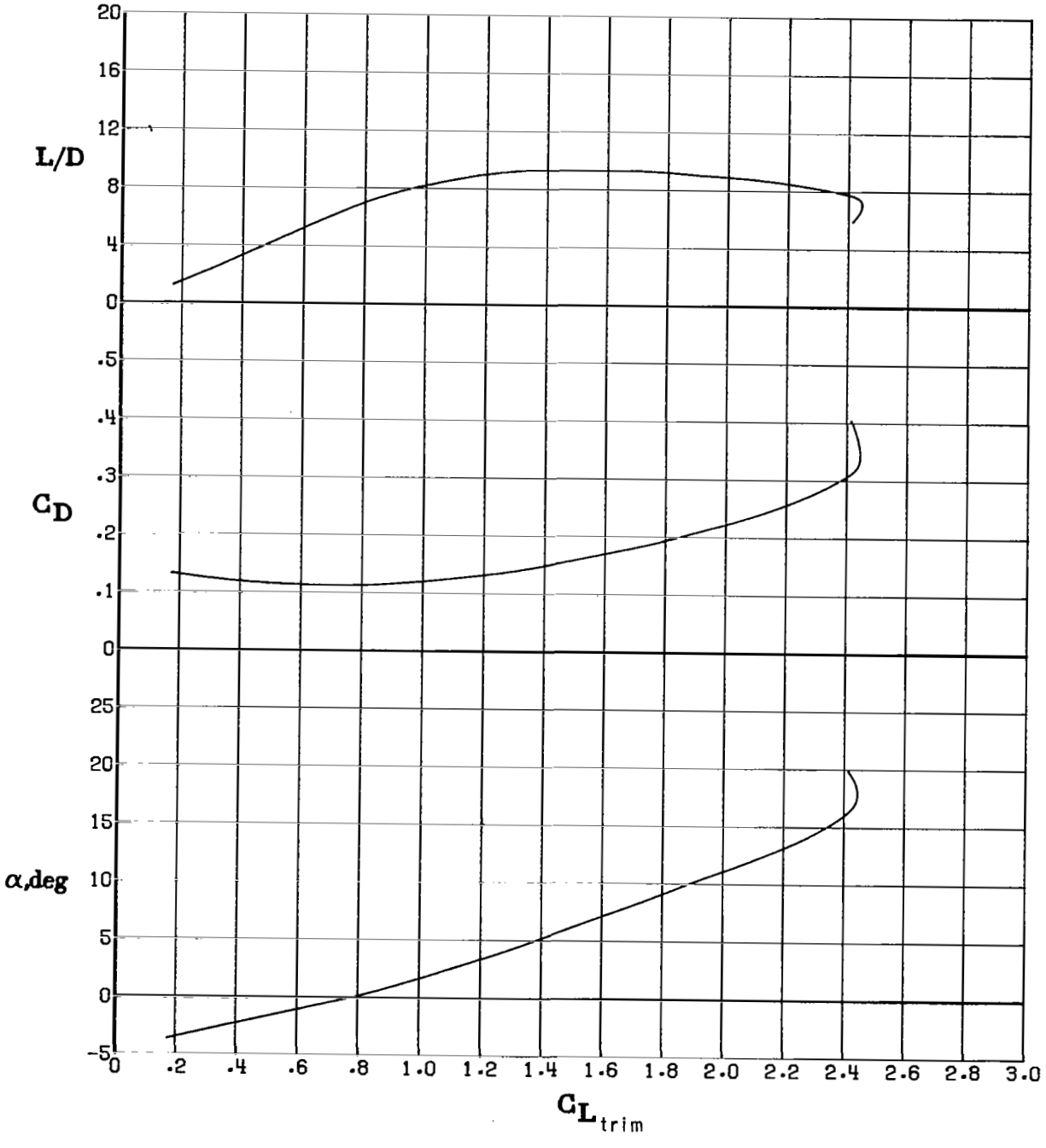
(d) Trim performance of full-span, landing flap wing configuration.

Figure 15.- Concluded.



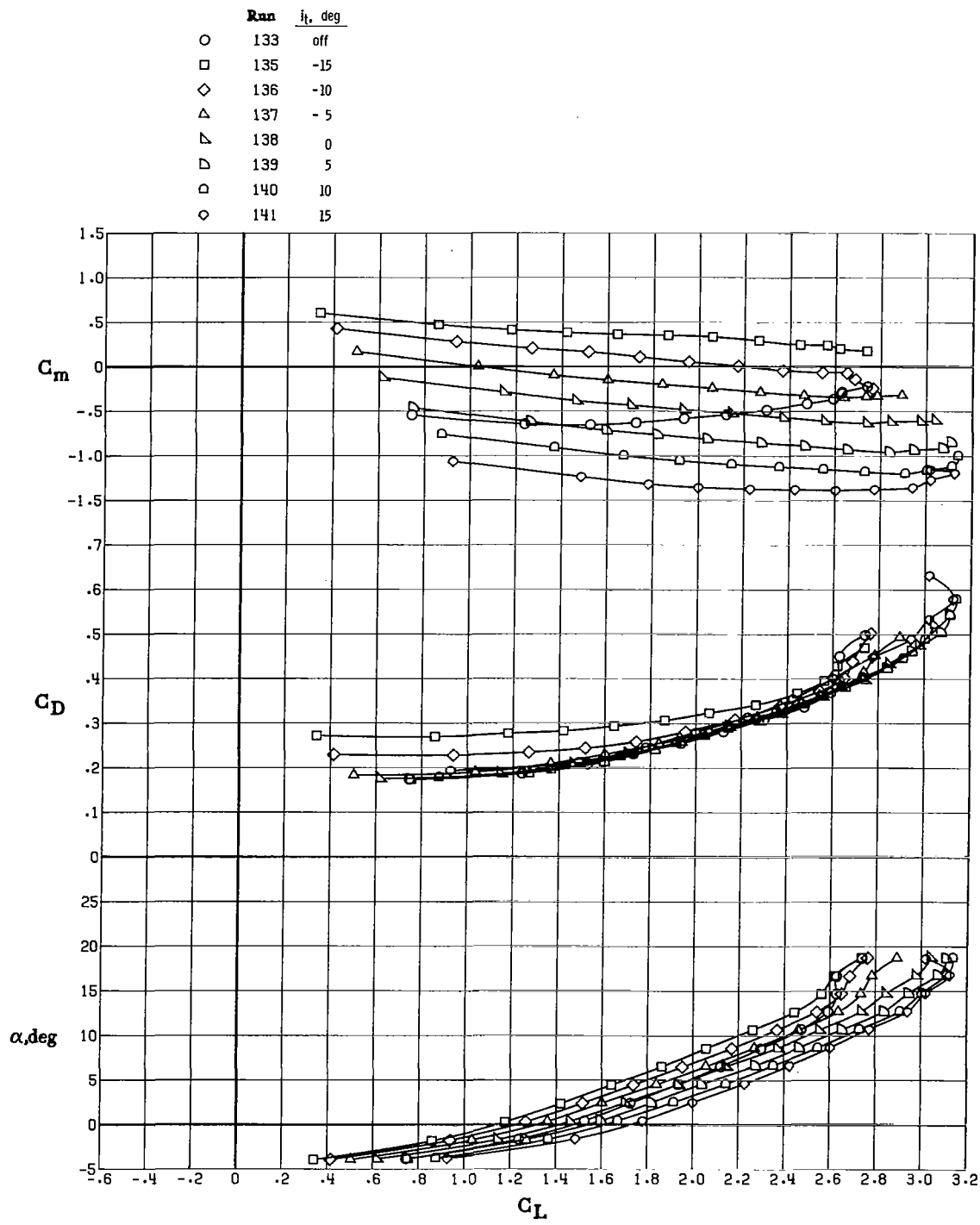
(a) Full-flap with low-speed ailerons wing configuration with take-off flap setting.

Figure 16.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of full-span flap with low-speed ailerons wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



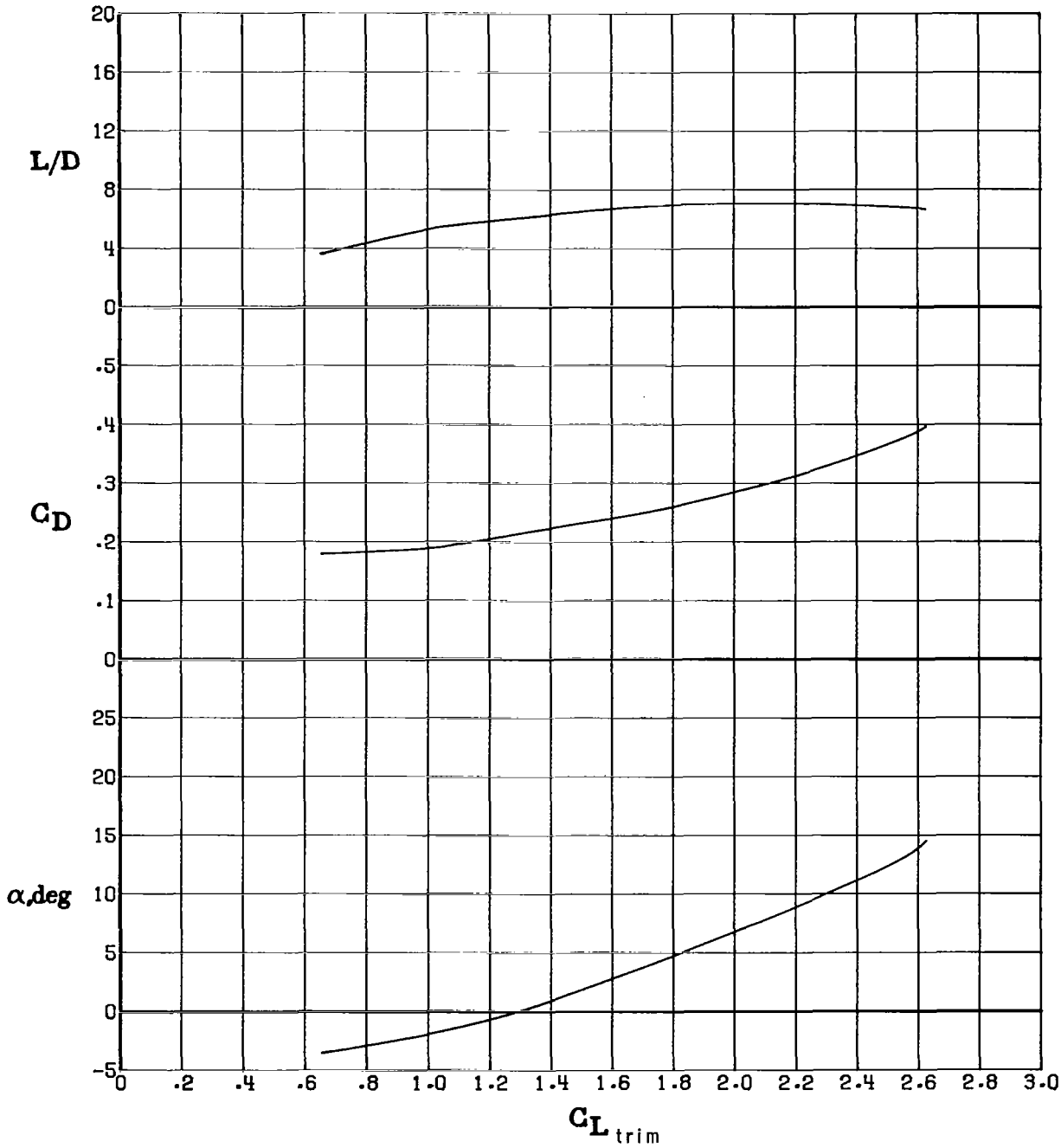
(b) Trim performance of full-span flap with low-speed ailerons wing configuration with take-off flap setting.

Figure 16.- Continued.



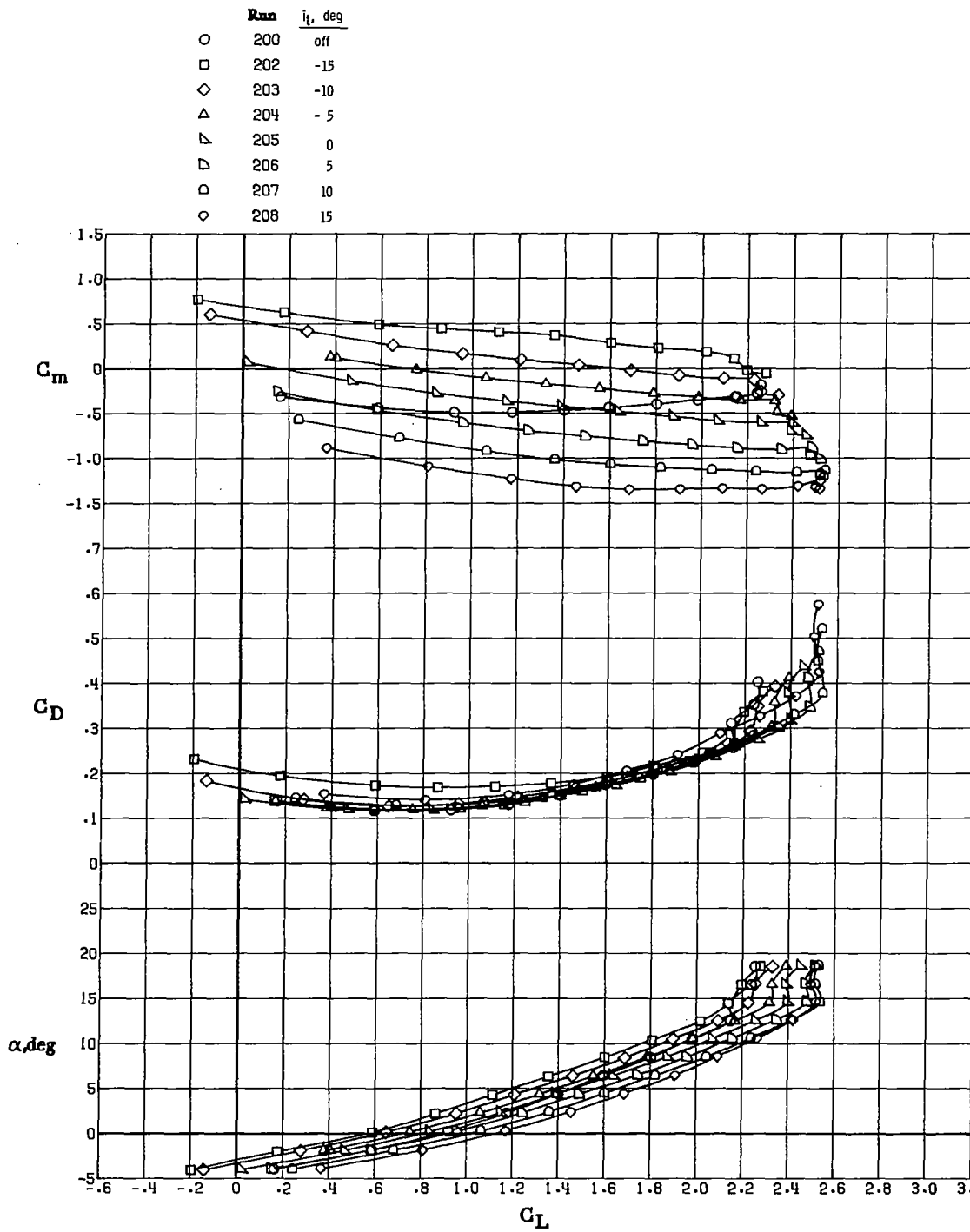
(c) Full-span flap with low-speed ailerons wing configuration with landing flap setting.

Figure 16.- Continued.



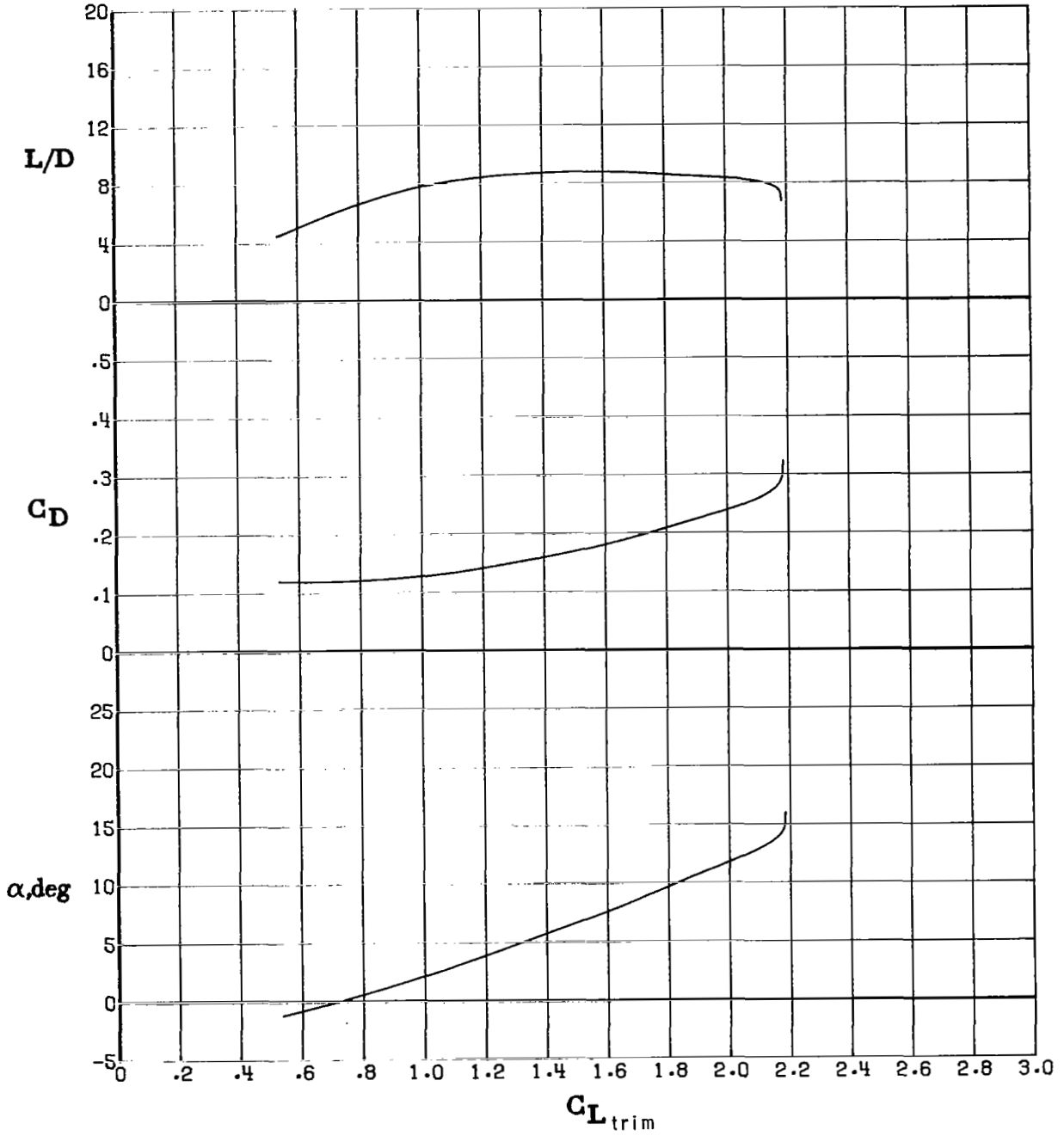
(d) Trim performance of full-span flap with low-speed ailerons wing configuration with landing flap setting.

Figure 16.- Concluded.



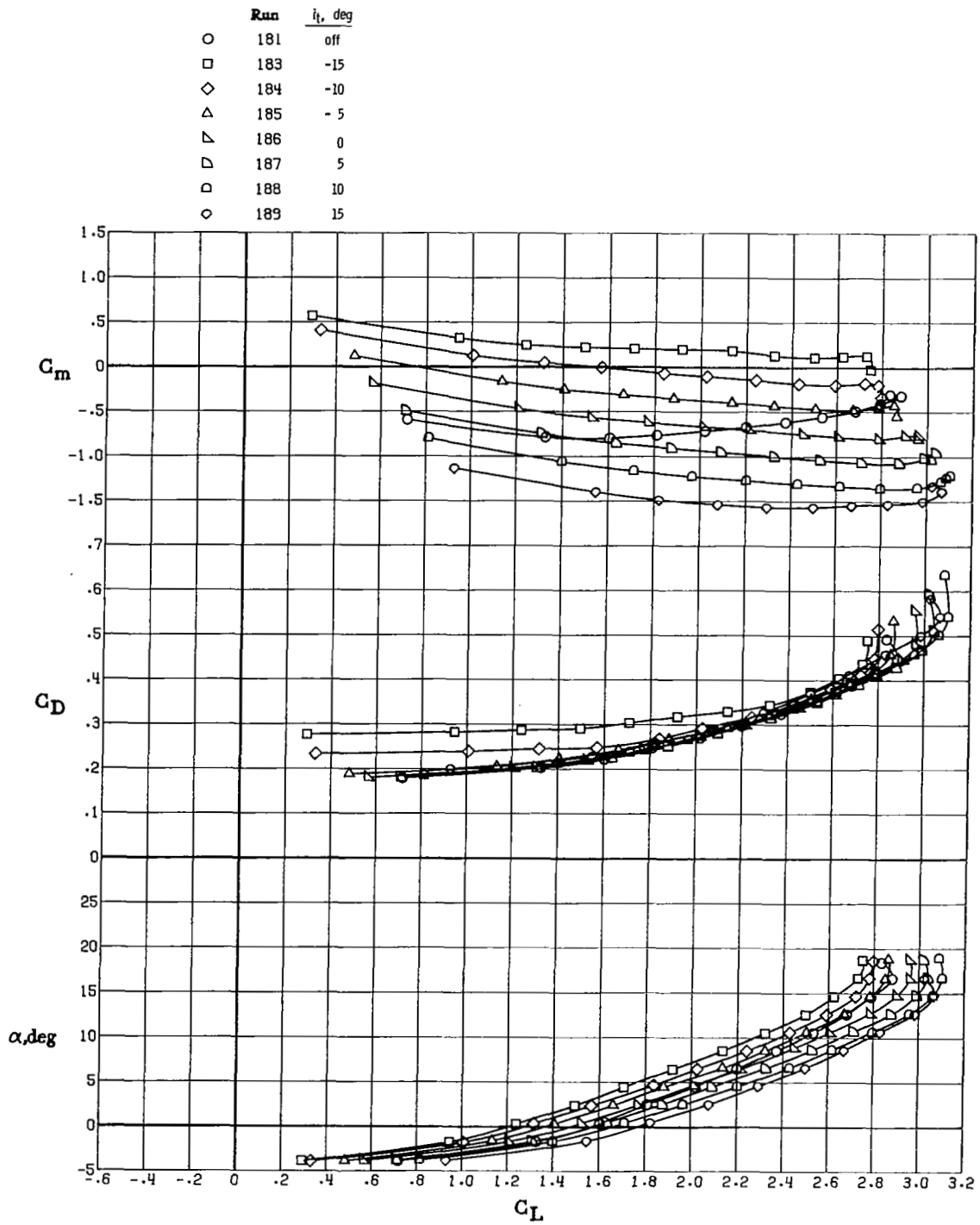
(a) Full-span flap with high-speed ailerons wing configuration with take-off flap setting.

Figure 17.- Effect of horizontal-tail deflection on longitudinal aerodynamic characteristics of full-span flap with high-speed ailerons wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



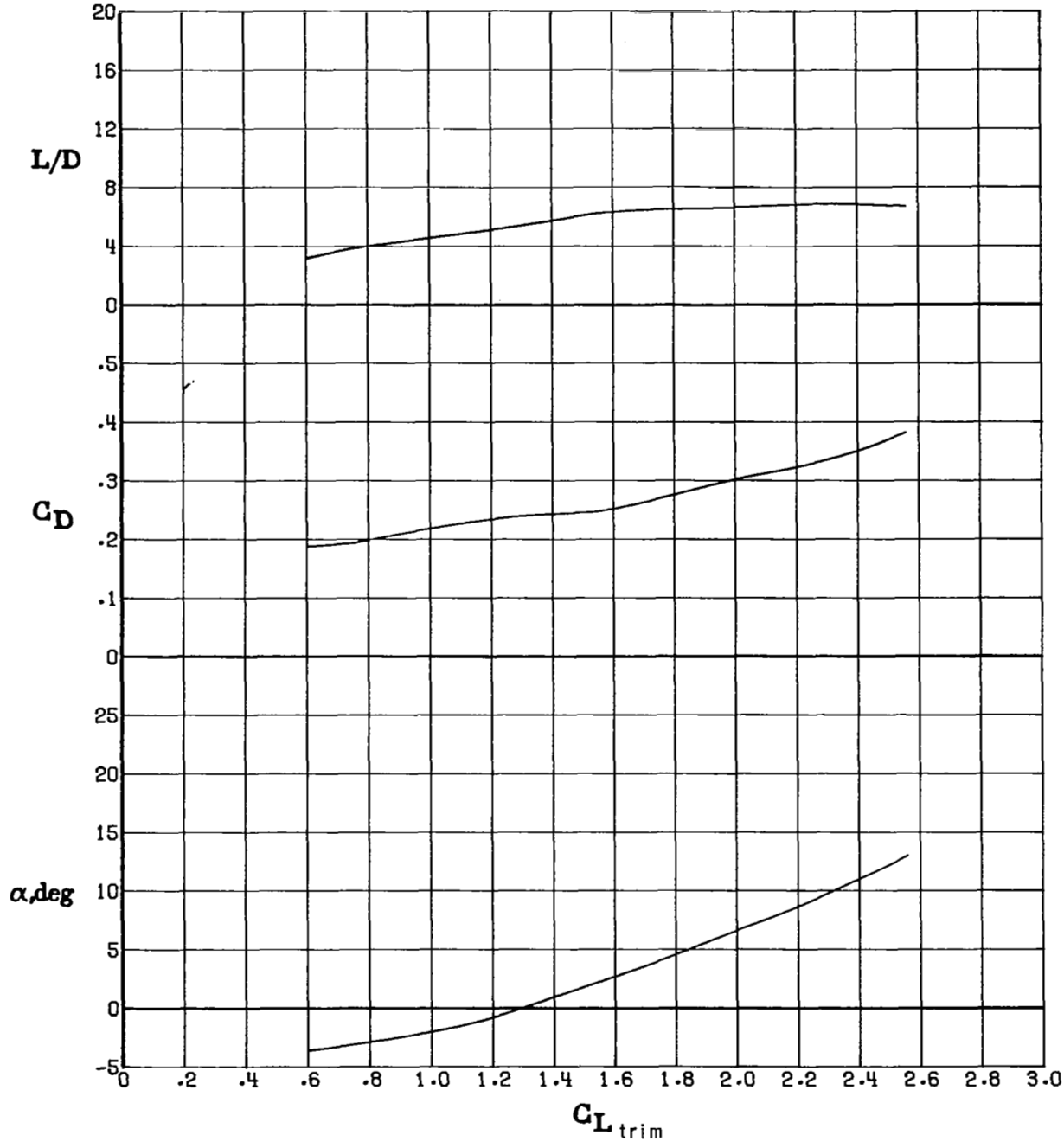
(b) Trim performance of full-span flap with high-speed ailerons wing configuration with take-off flap setting.

Figure 17.- Continued.



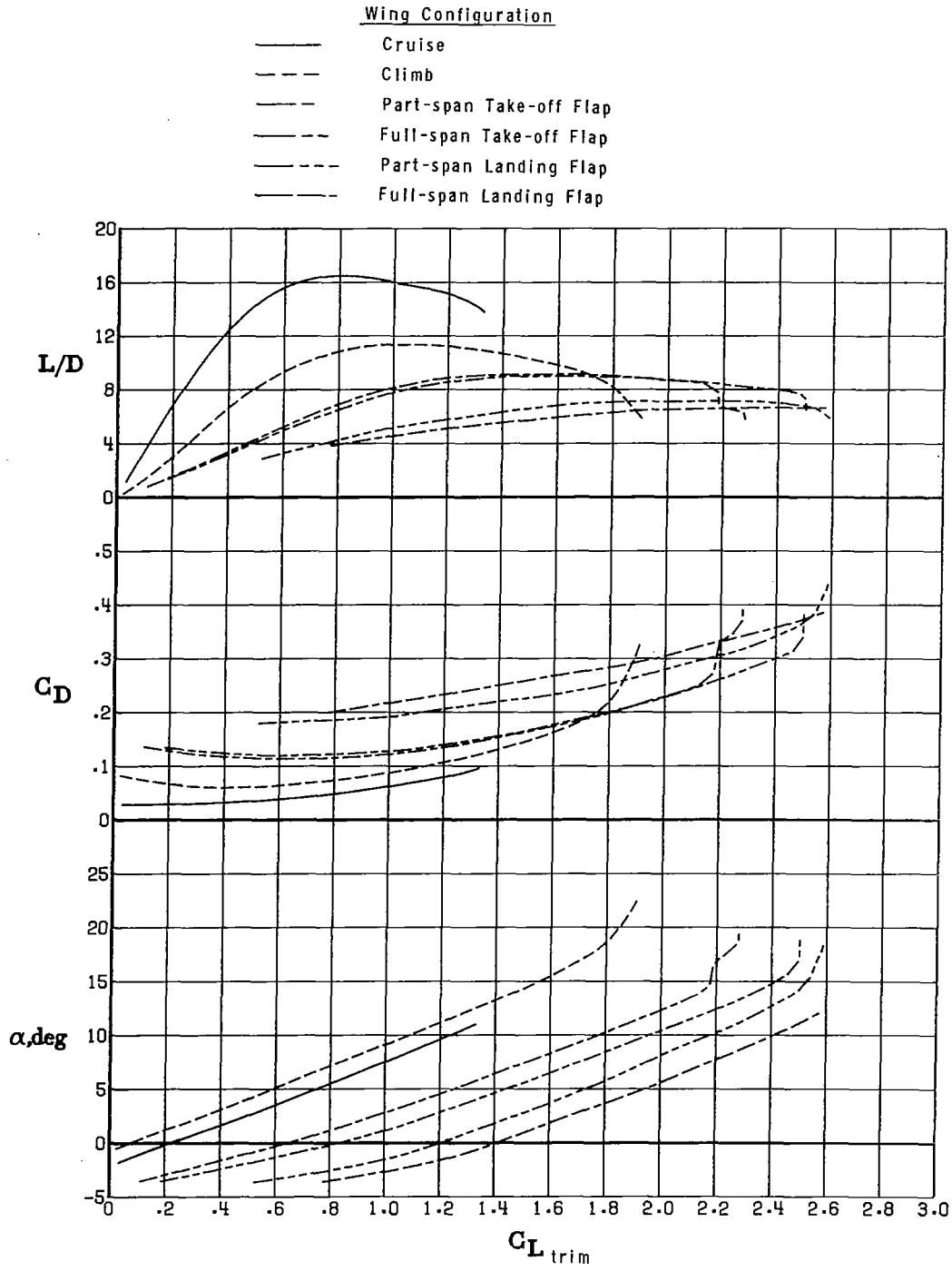
(c) Full-span flap with high-speed ailerons wing configuration with landing flap setting.

Figure 17.- Continued.



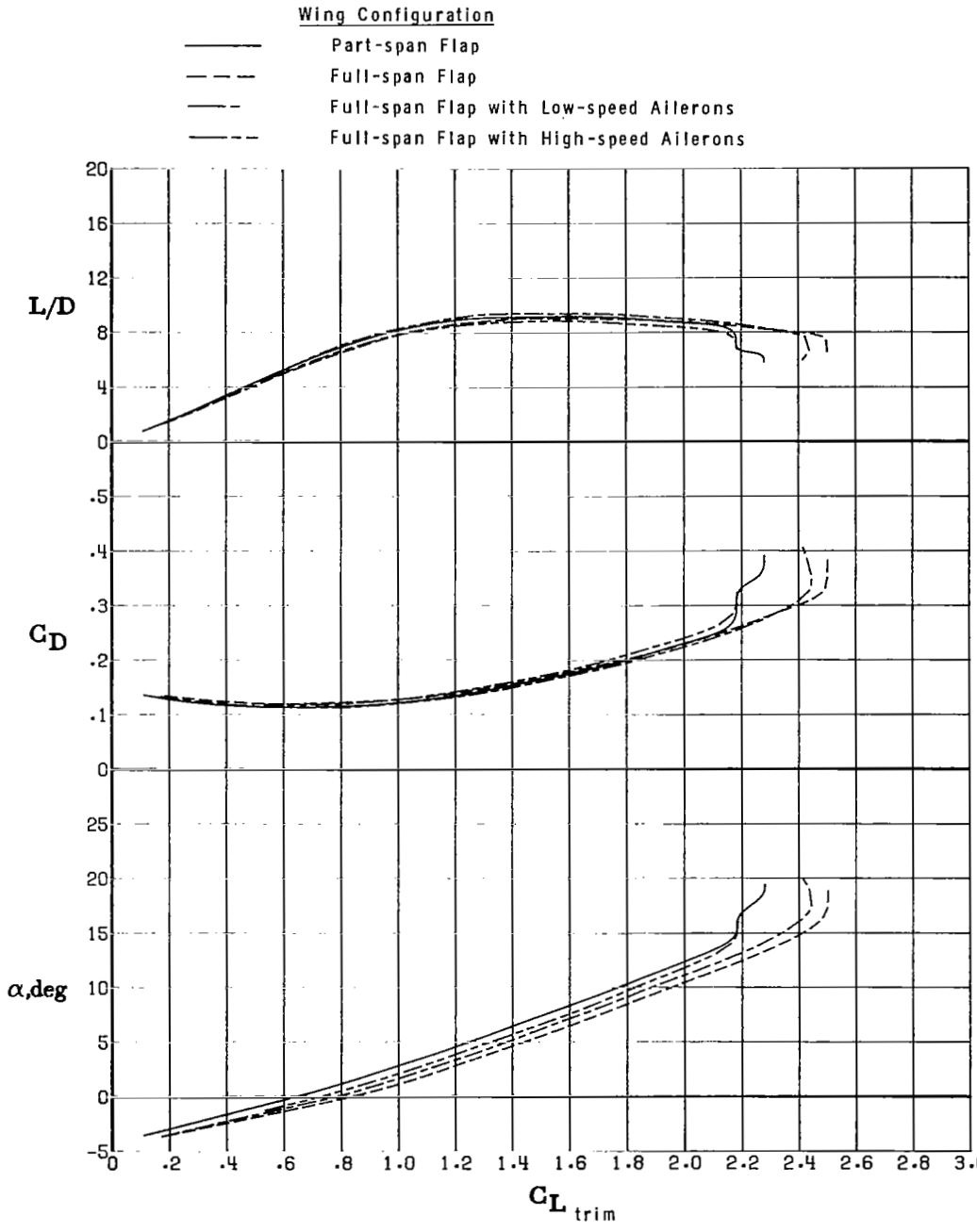
(d) Trim performance of full-span flap with high-speed ailerons wing configuration with landing flap setting.

Figure 17.- Concluded.



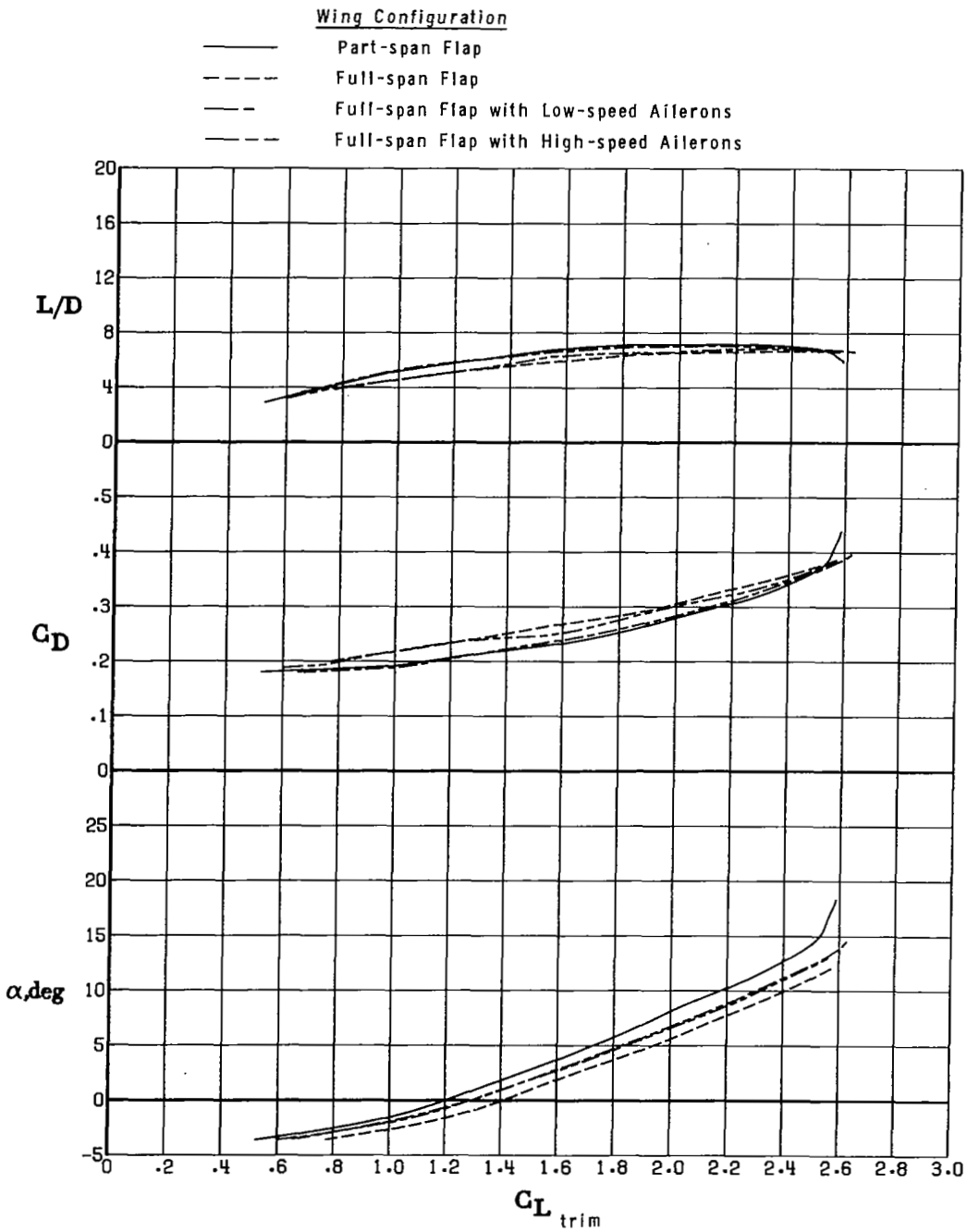
(a) Cruise, climb, part-span flap, and full-span flap configurations.

Figure 18.- Summary of trimmed longitudinal aerodynamic characteristics of the wing configurations tested. $R_{\bar{c}} = 1.63 \times 10^6$.



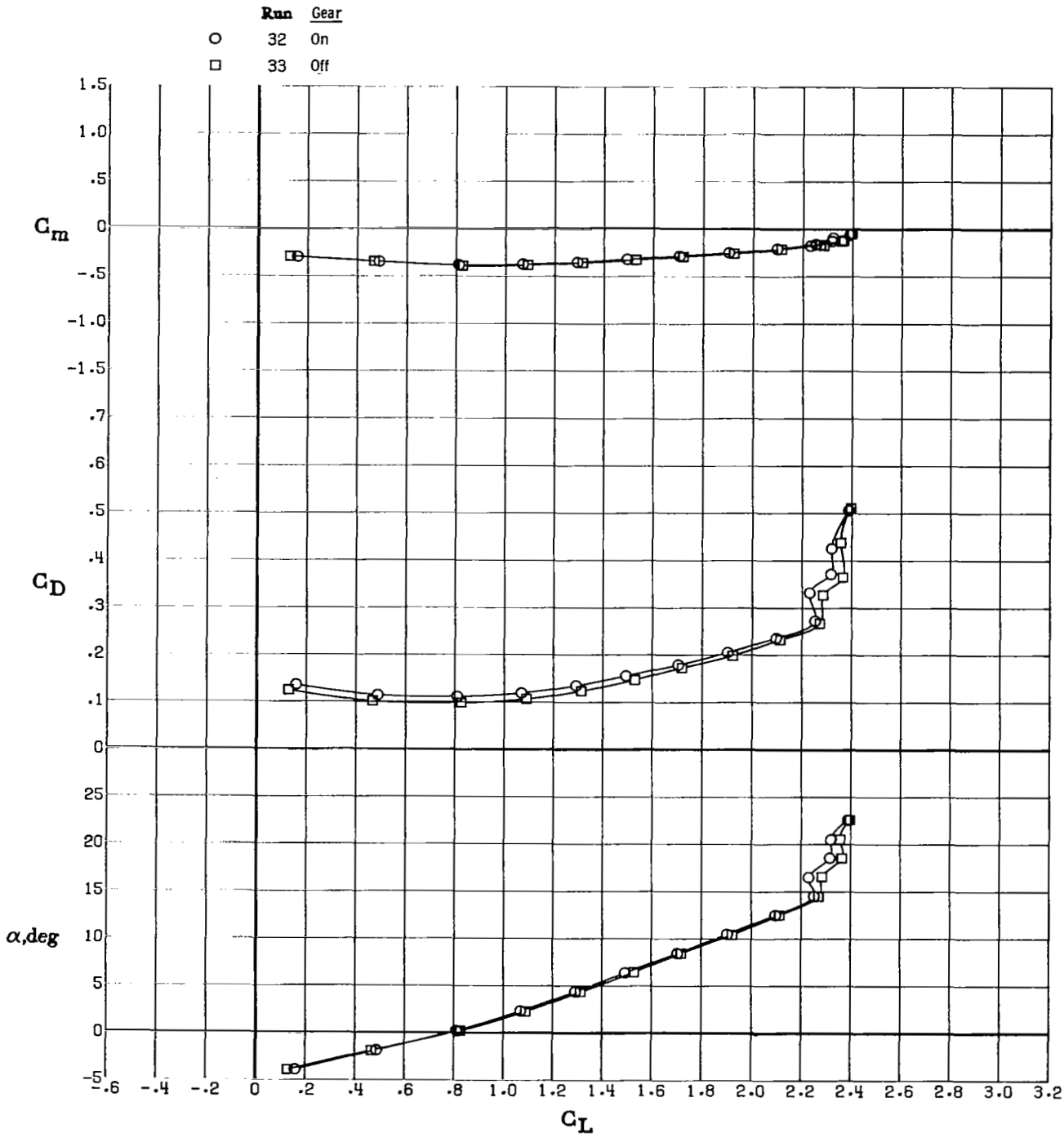
(b) Take-off flap configurations.

Figure 18.- Continued.



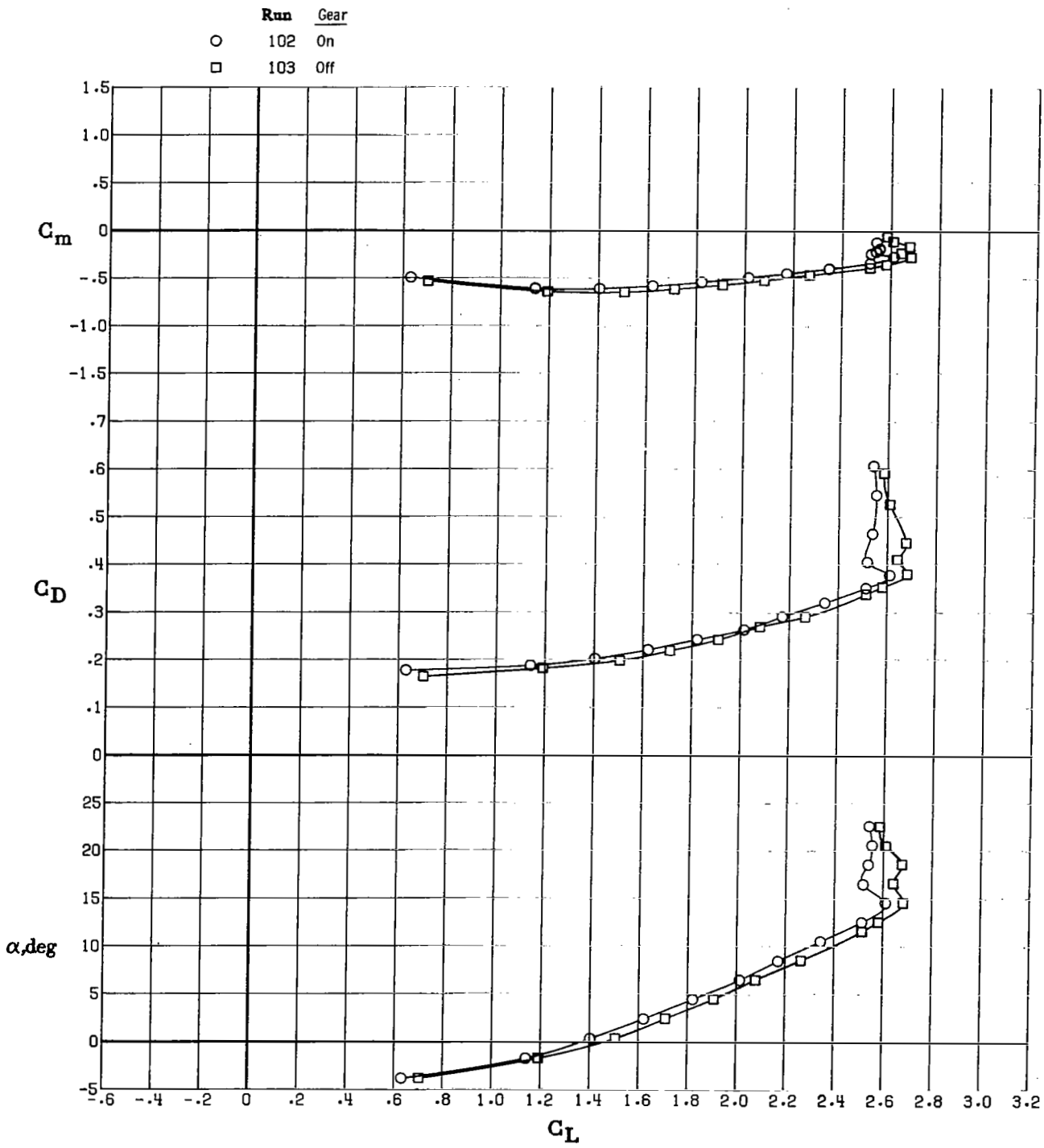
(c) Landing flap configurations.

Figure 18.- Concluded.



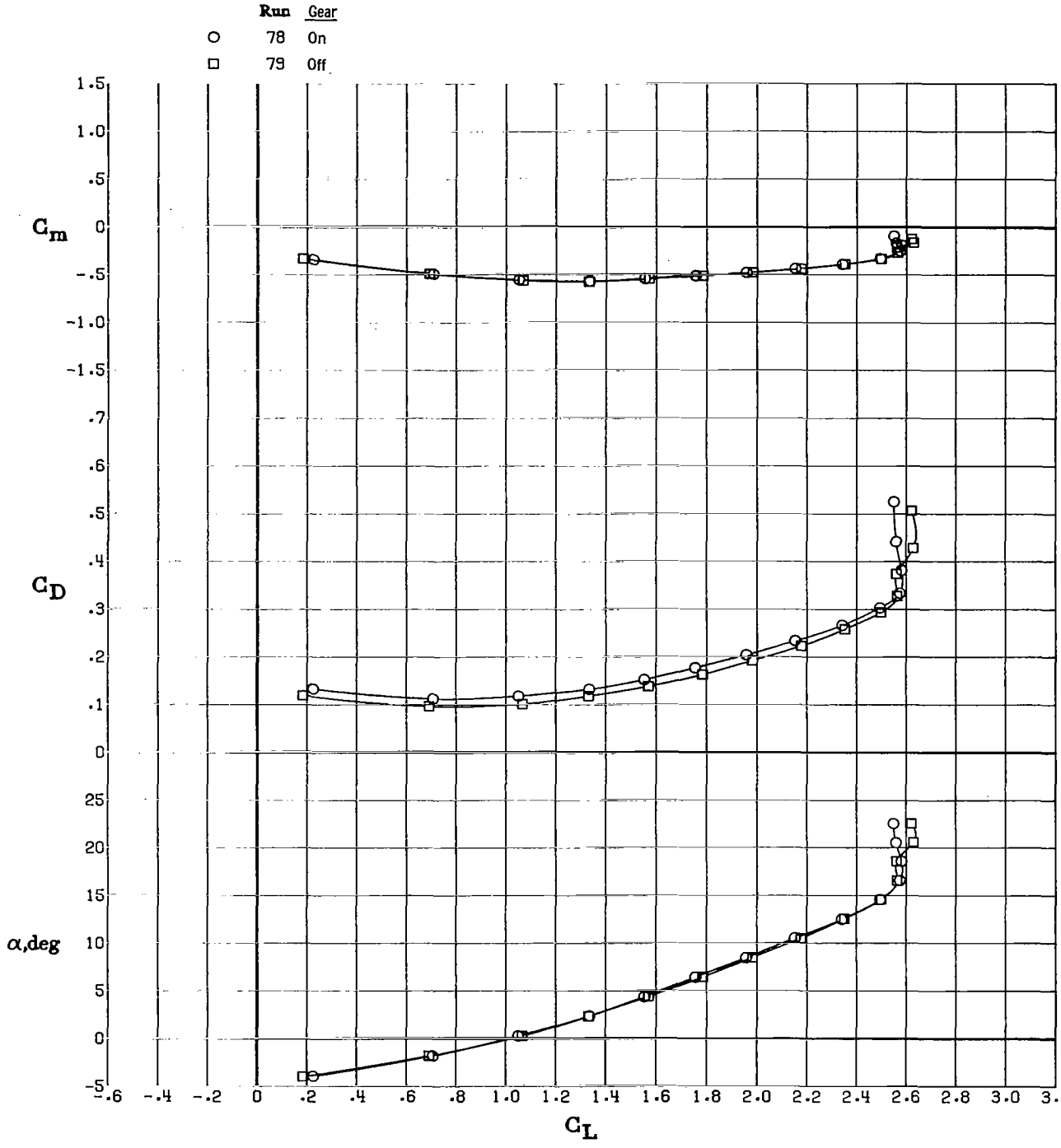
(a) Part-span flap wing configuration with take-off flap setting.

Figure 19.- Effect of landing gear on longitudinal aerodynamic characteristics of part-span and full-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



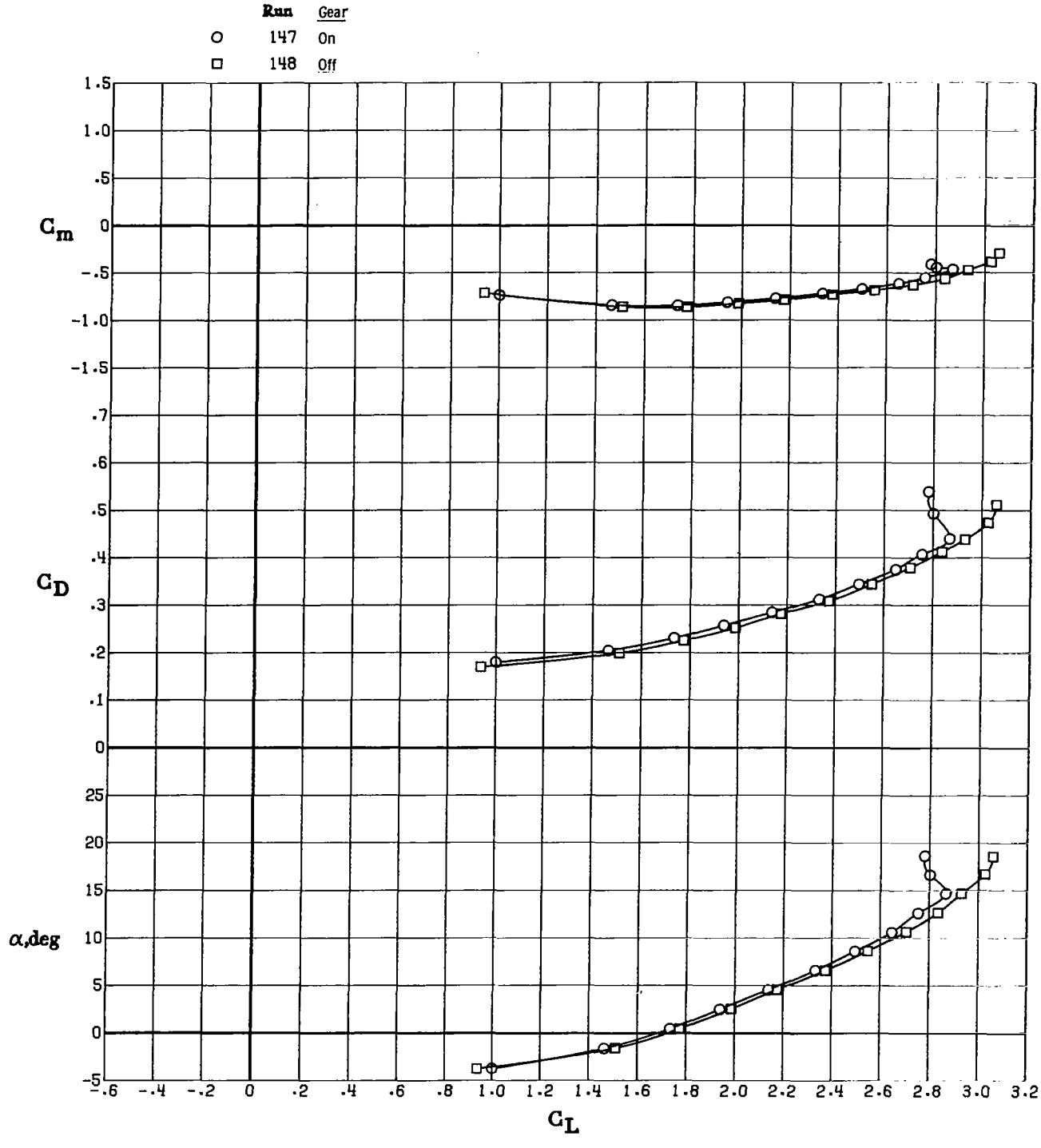
(b) Part-span flap wing configuration with landing flap setting.

Figure 19.- Continued.



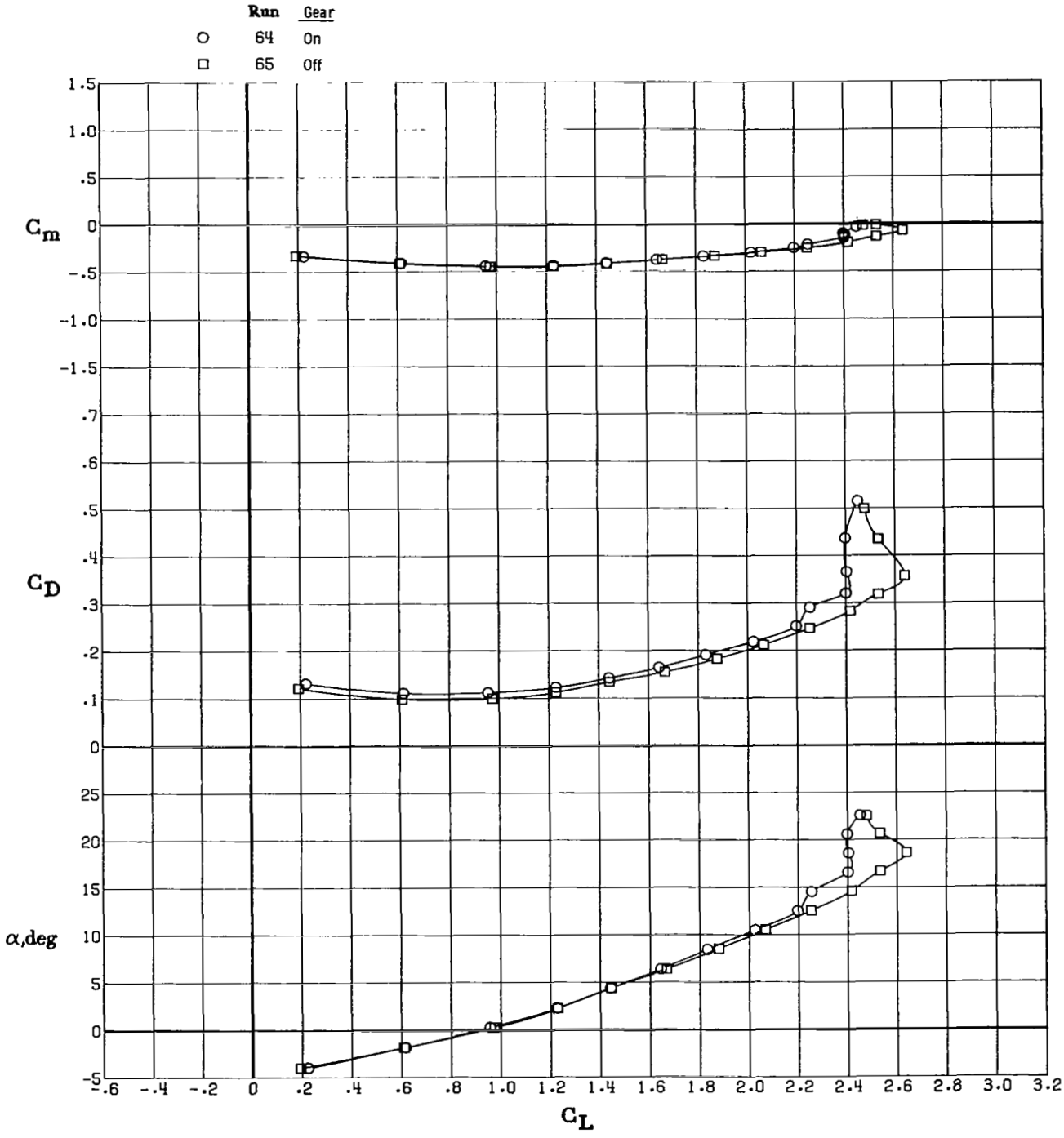
(c) Full-span flap wing configuration with take-off flap setting.

Figure 19.- Continued.



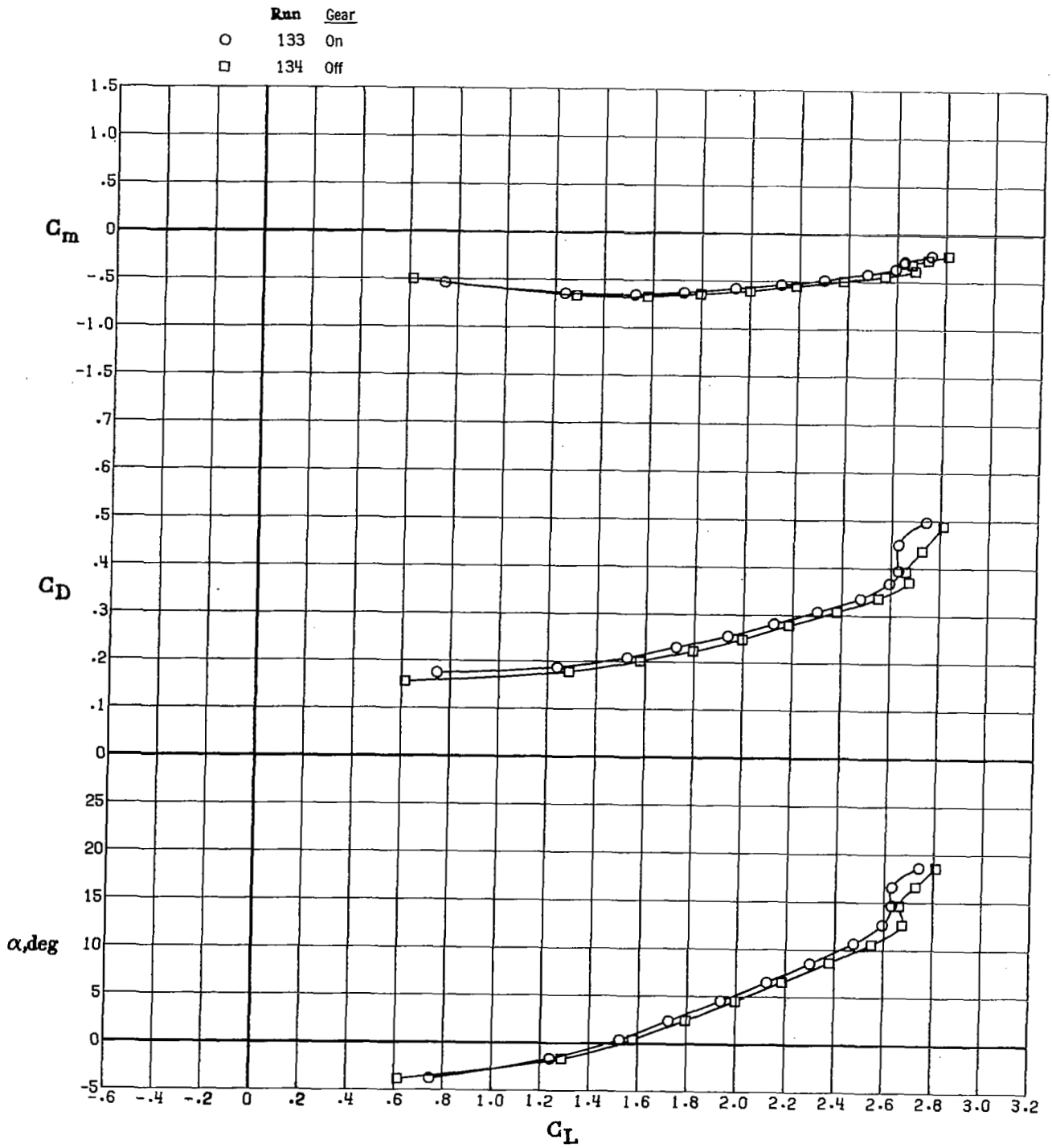
(d) Full-span flap wing configuration with landing flap setting.

Figure 19.- Continued.



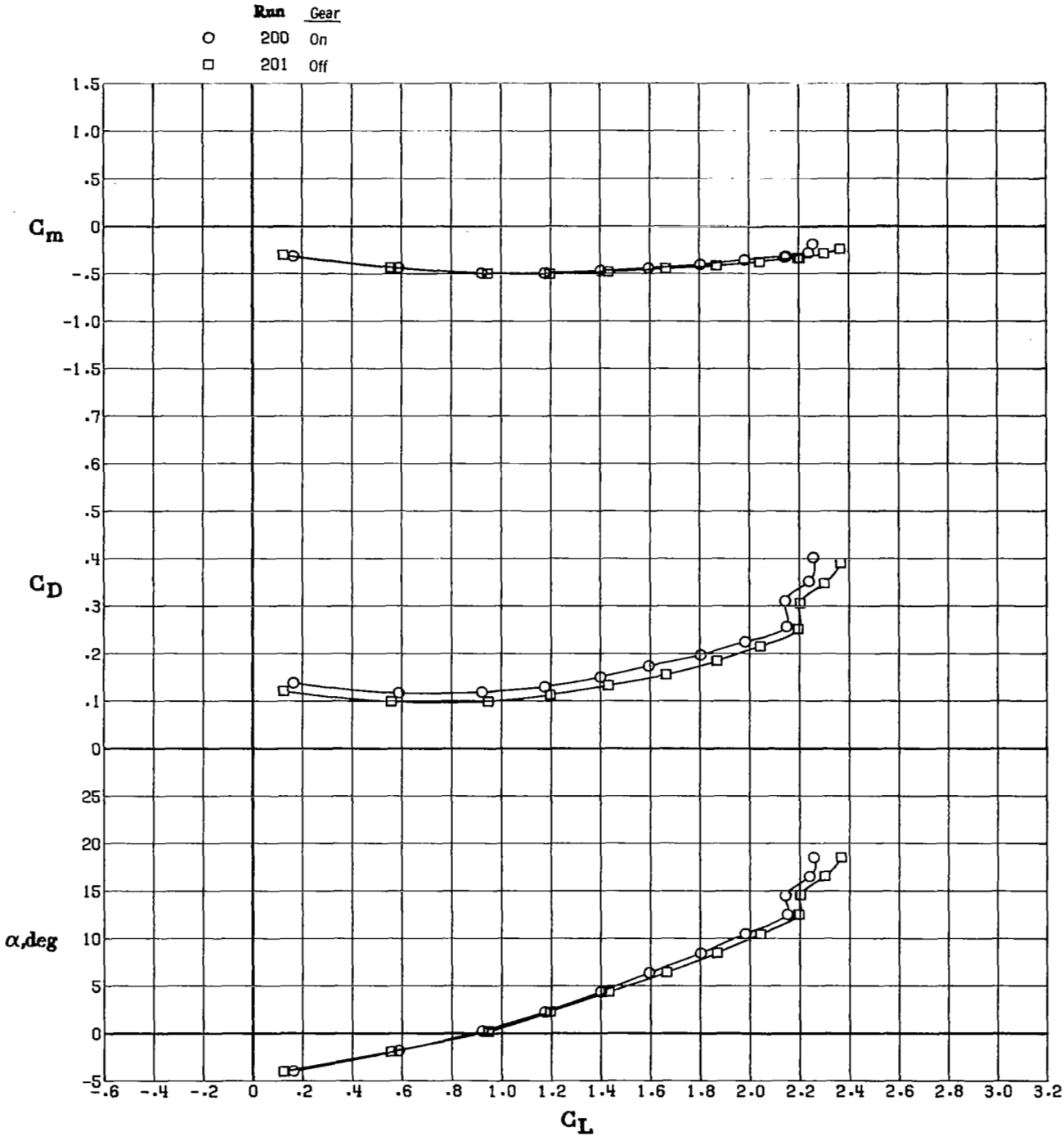
(e) Full-span flap with low-speed ailerons wing configuration with take-off flap setting.

Figure 19.- Continued.



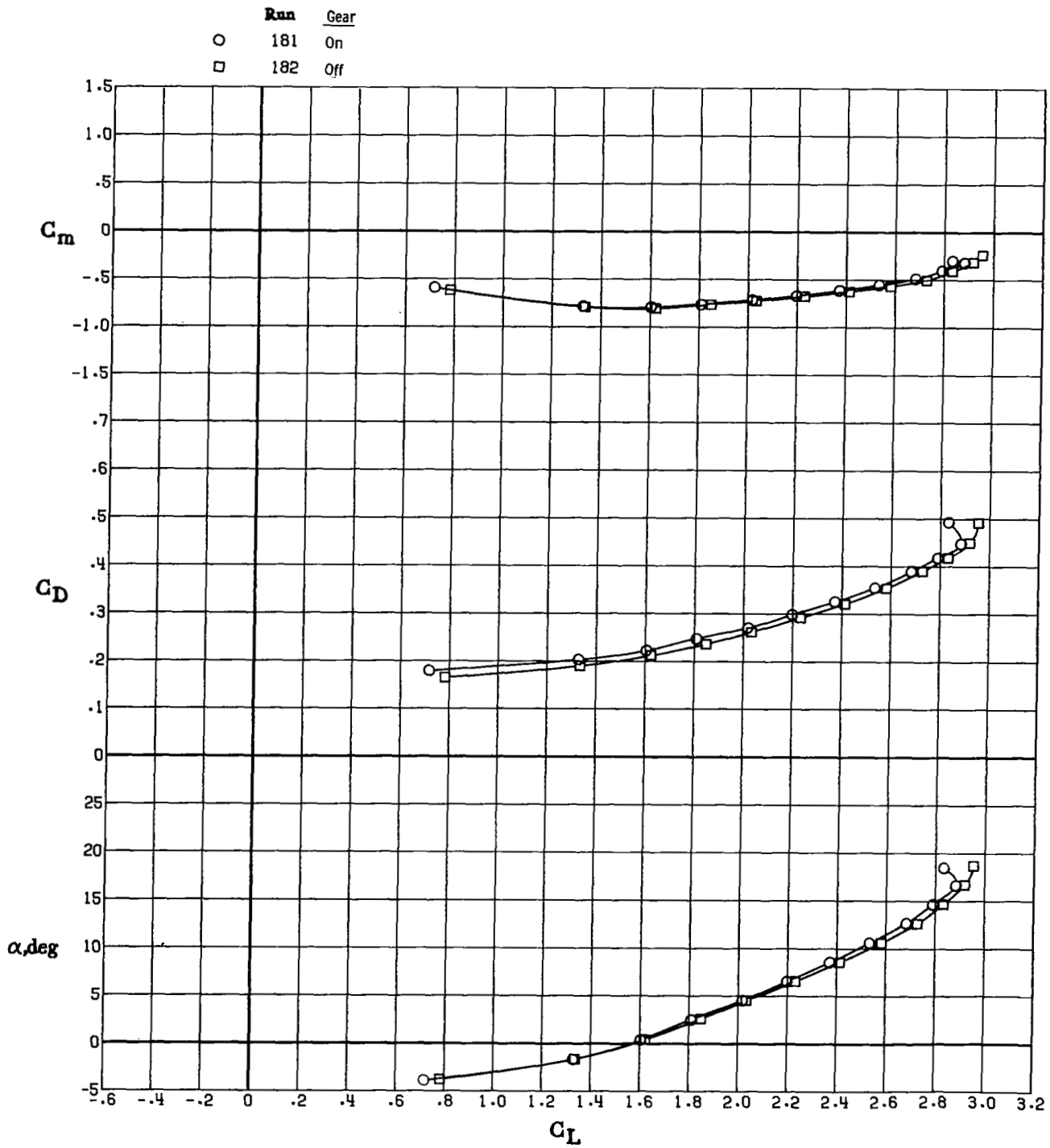
(f) Full-span flap with low-speed ailerons wing configuration with landing flap setting.

Figure 19.- Continued.



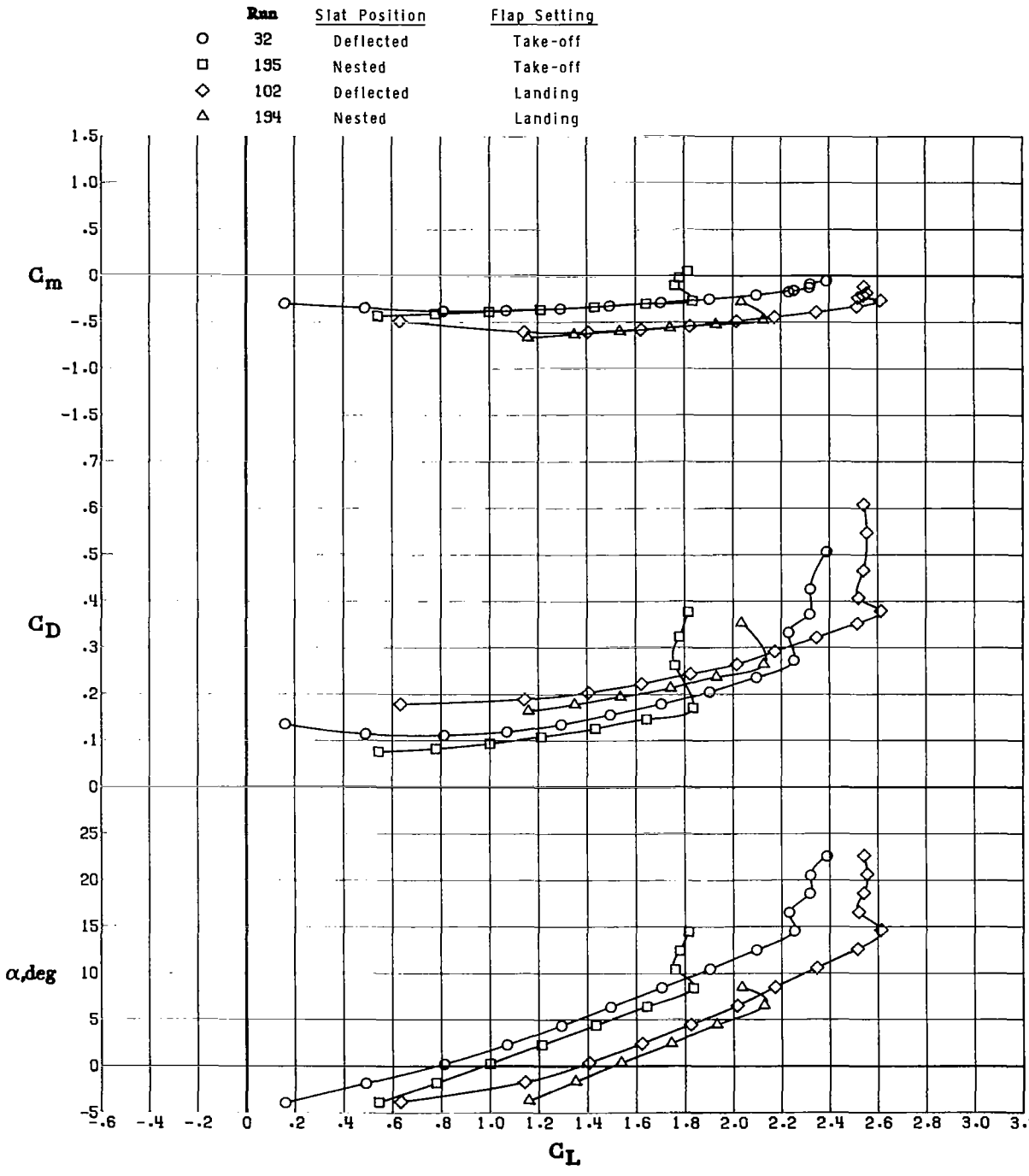
(g) Full-span flap with high-speed ailerons wing configuration with take-off flap setting.

Figure 19.- Continued.



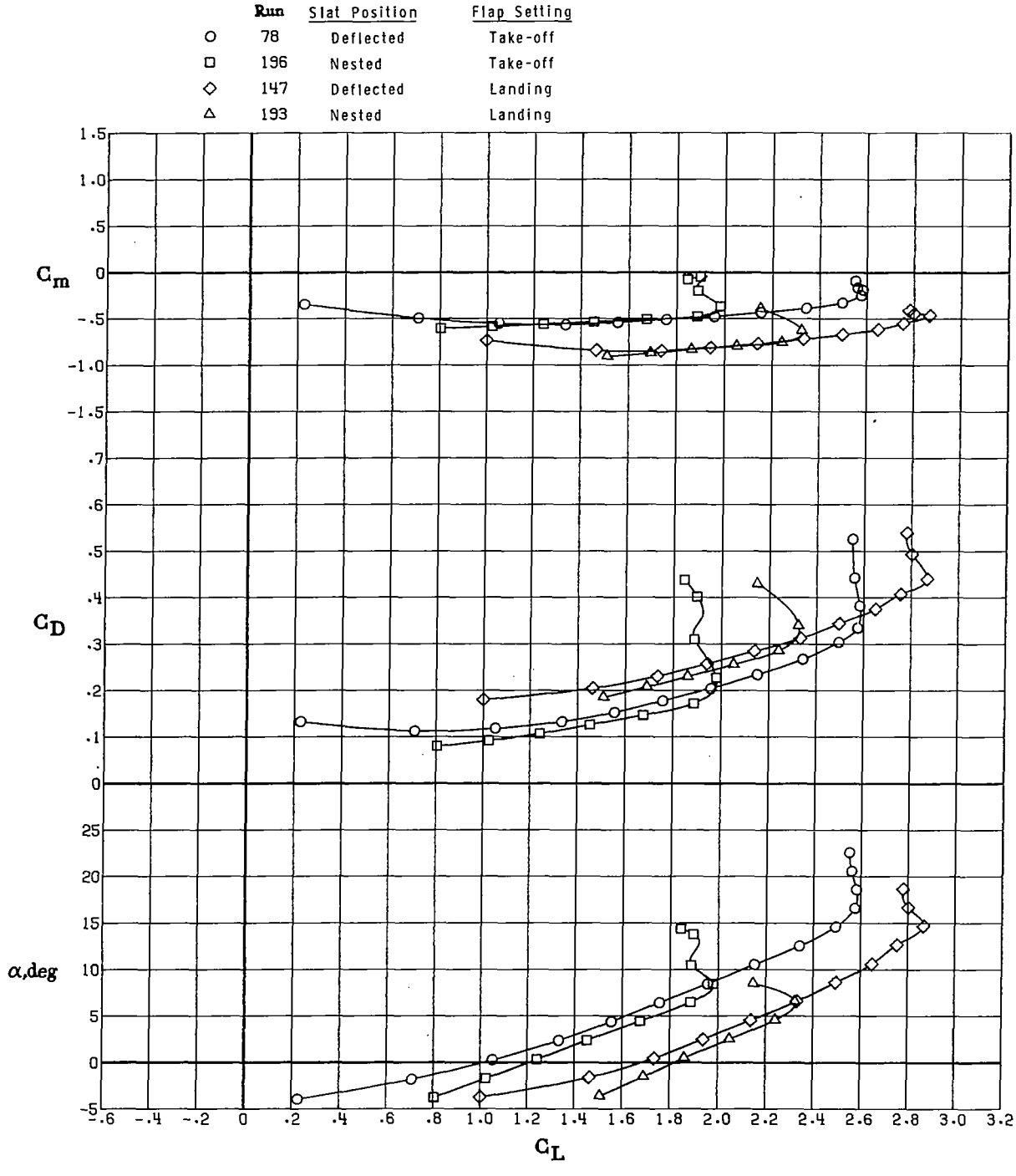
(h) Full-span flap with high-speed ailerons wing configuration with landing flap setting.

Figure 19.- Concluded.



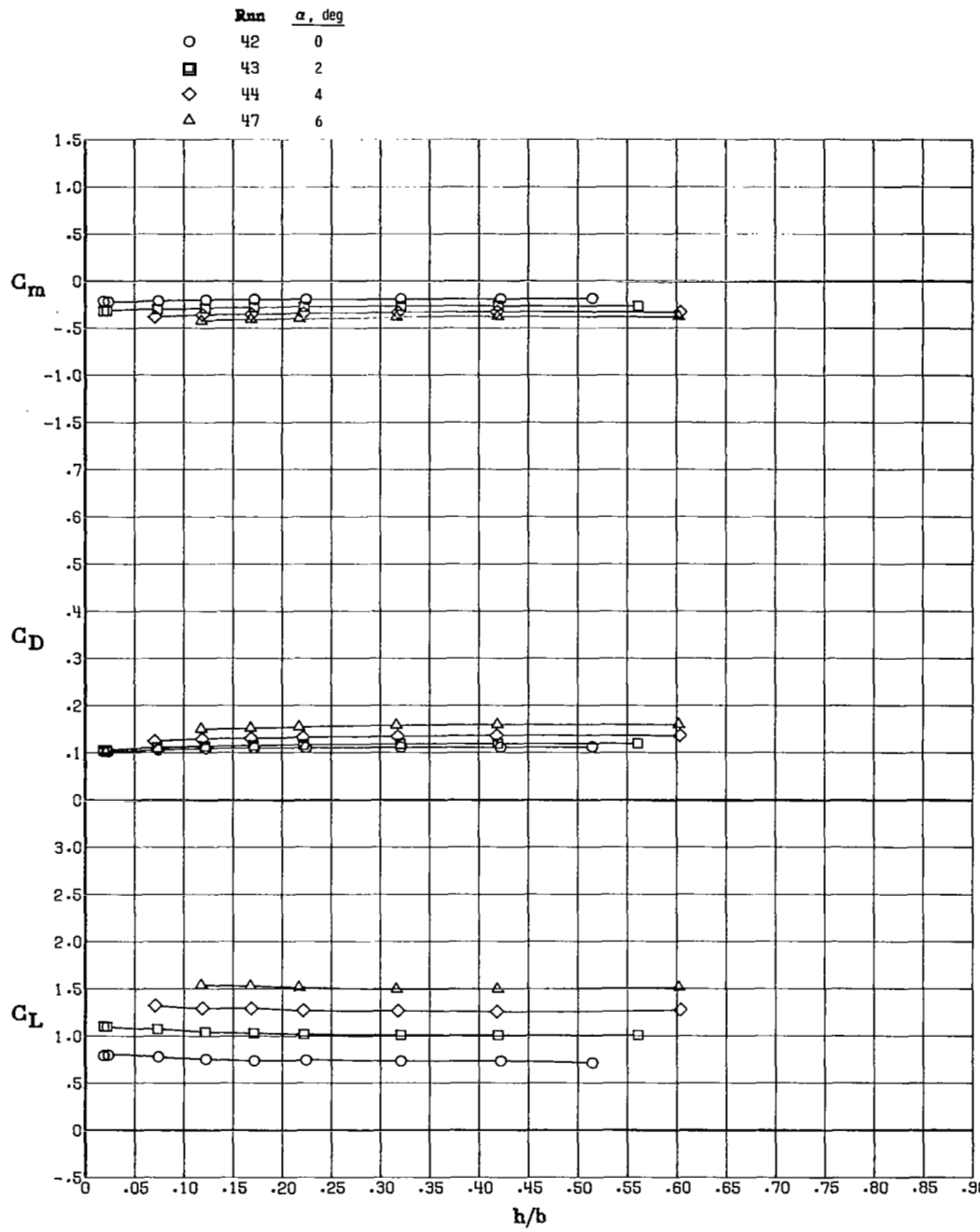
(a) Part-span flap wing configuration with take-off and landing flap settings.

Figure 20.- Effect of leading-edge slat deflection on longitudinal aerodynamic characteristics of part-span and full-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$.



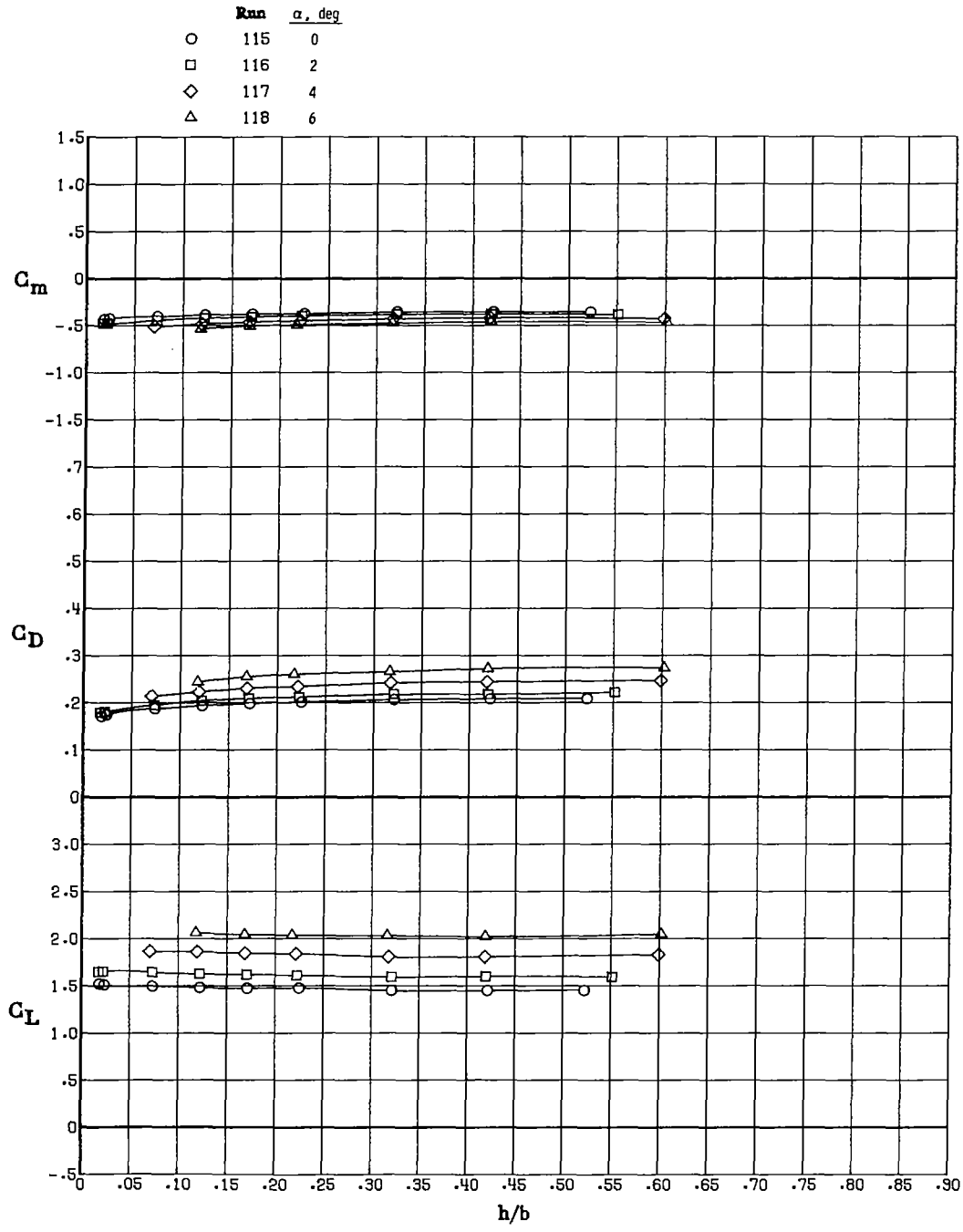
(b) Full-span wing configuration with take-off and landing flap settings.

Figure 20.- Concluded.



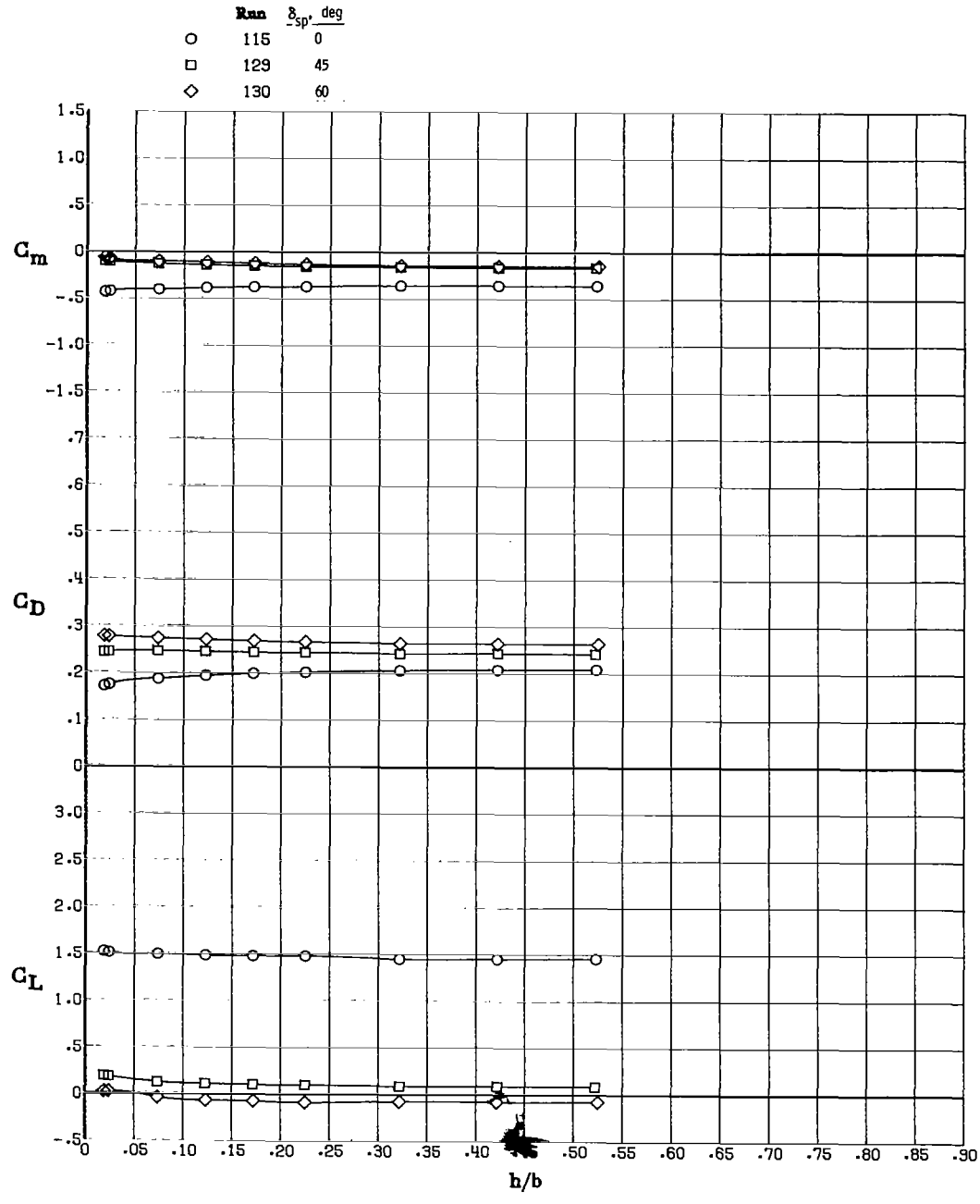
(a) Part-span flap wing configuration with take-off flap setting.

Figure 21.- Effect of ground height on longitudinal aerodynamic characteristics of part-span and full-span wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$, $i_t = 0^o$.



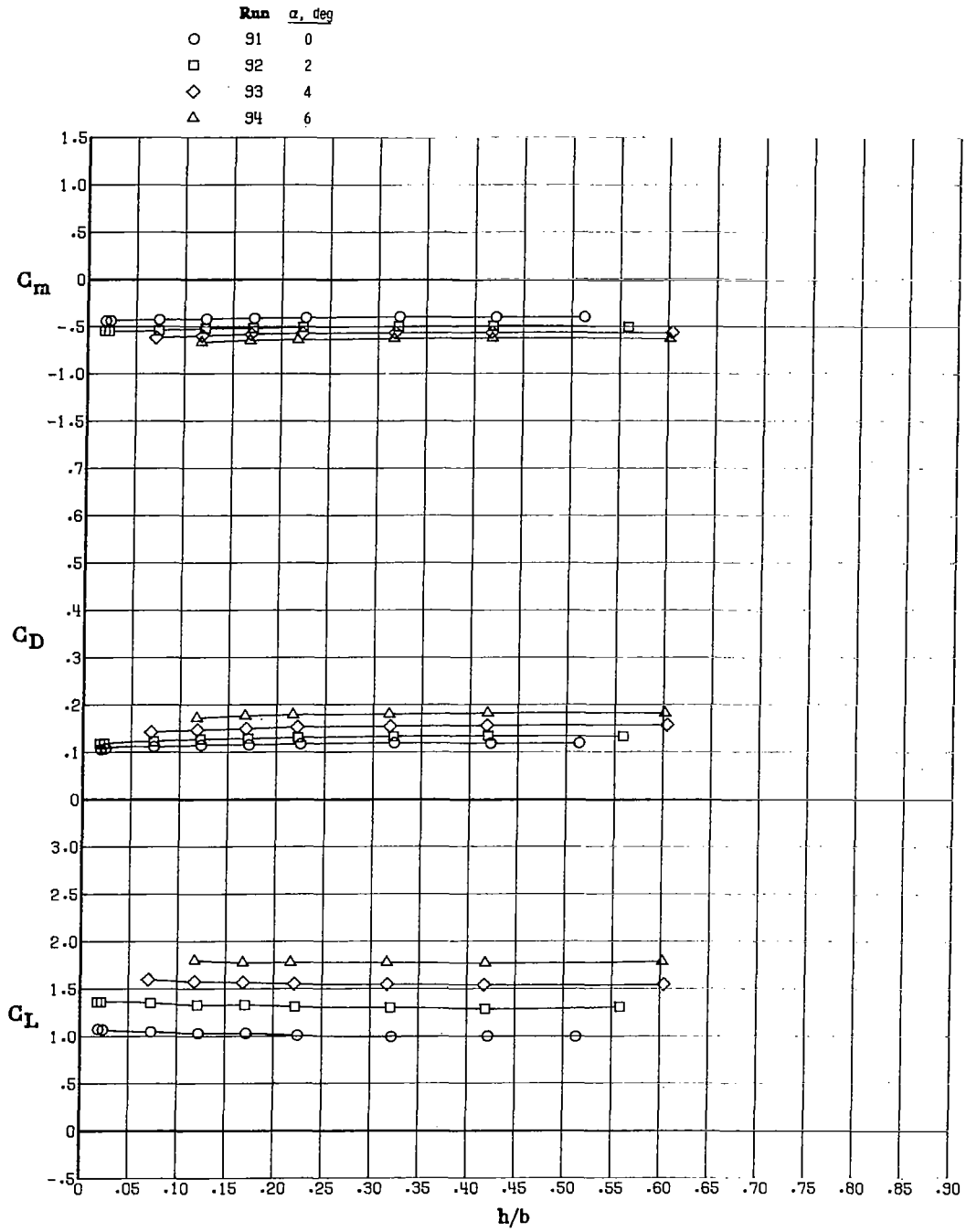
(b) Part-span flap wing configuration with landing flap setting.

Figure 21.- Continued.



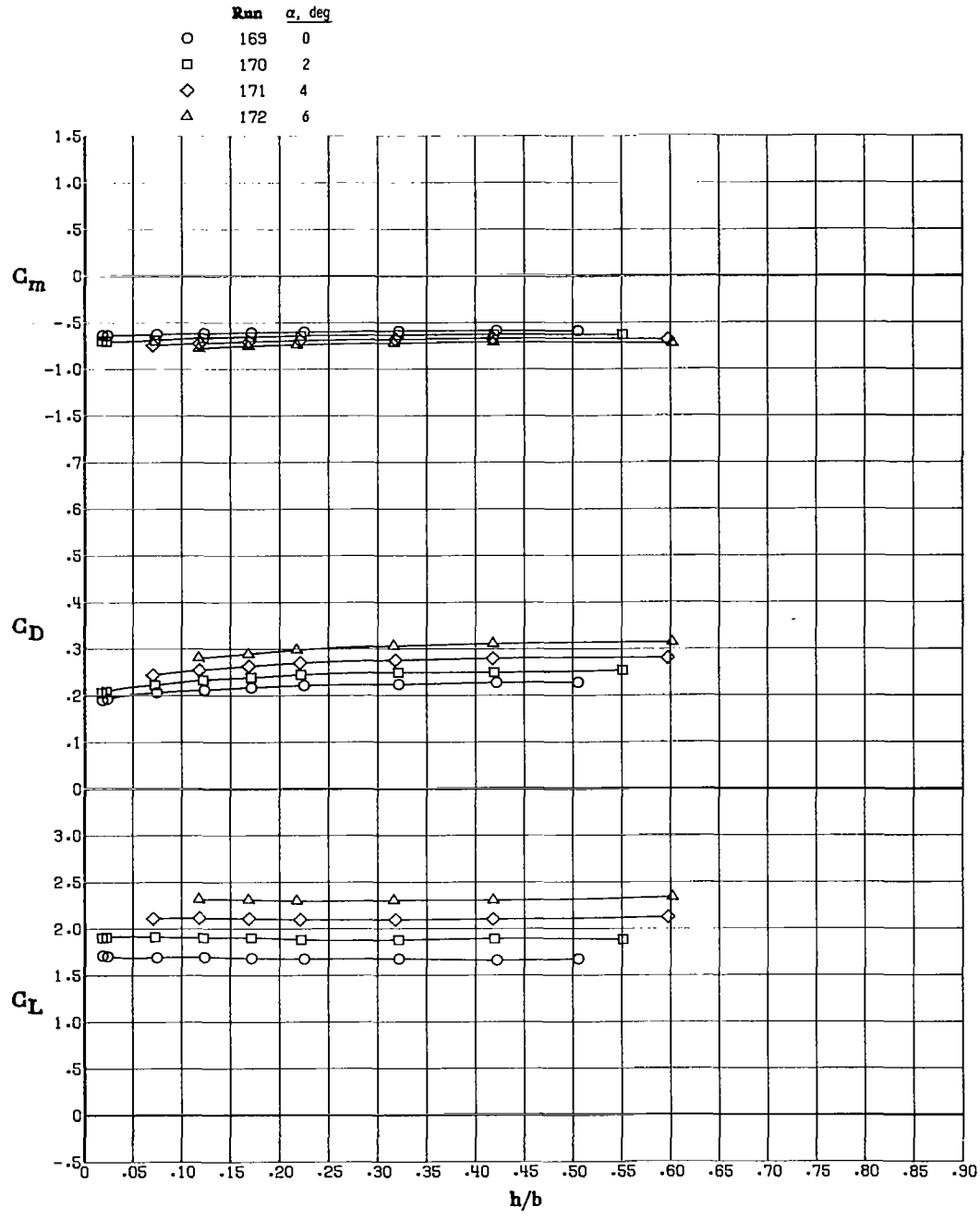
(c) Part-span wing configuration with landing flap setting and with ground and flight spoilers deflected. $\alpha = 0^{o}$.

Figure 21.- Continued.



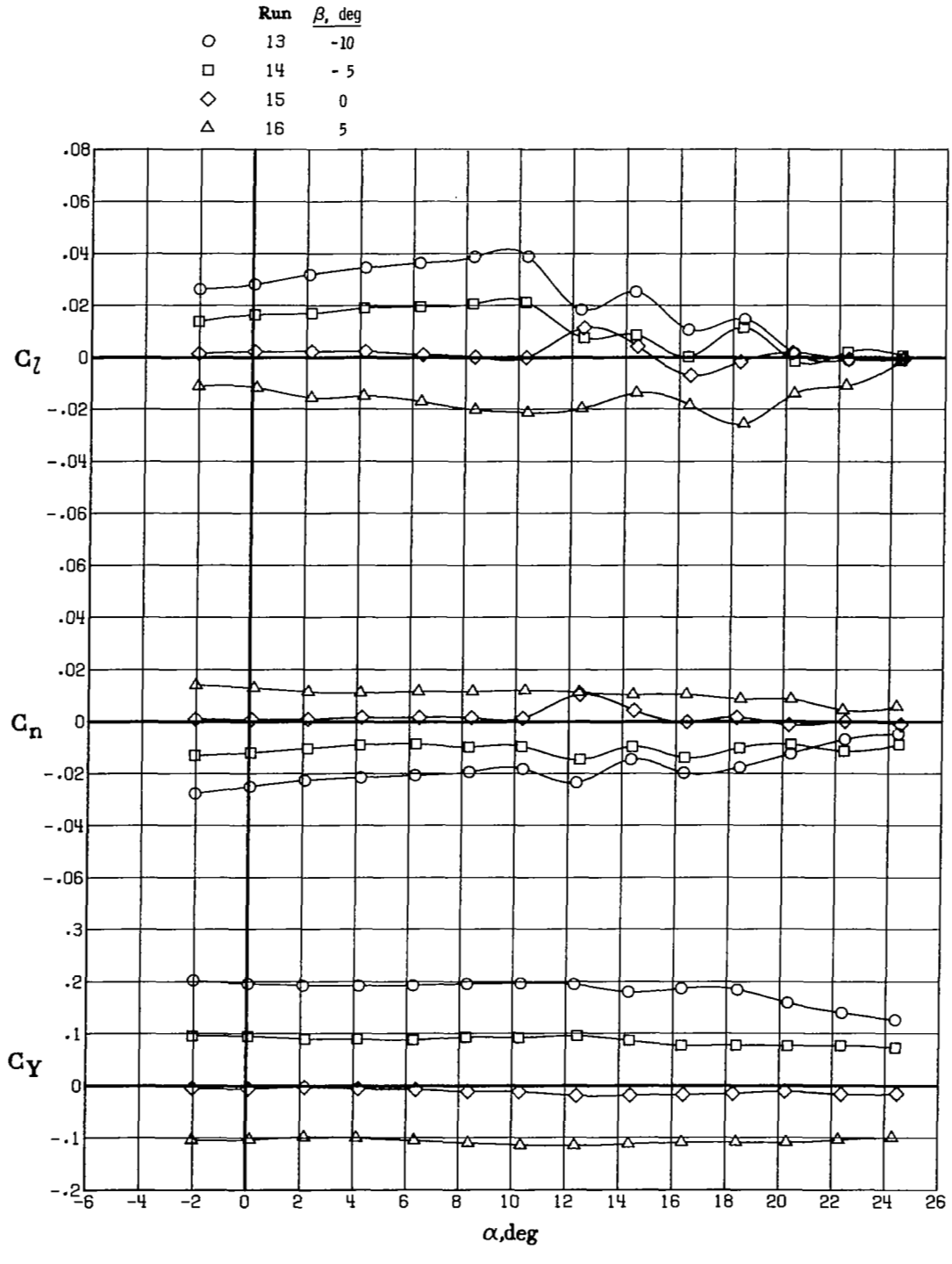
(d) Full-span flap wing configuration with take-off flap setting.

Figure 21.- Continued.



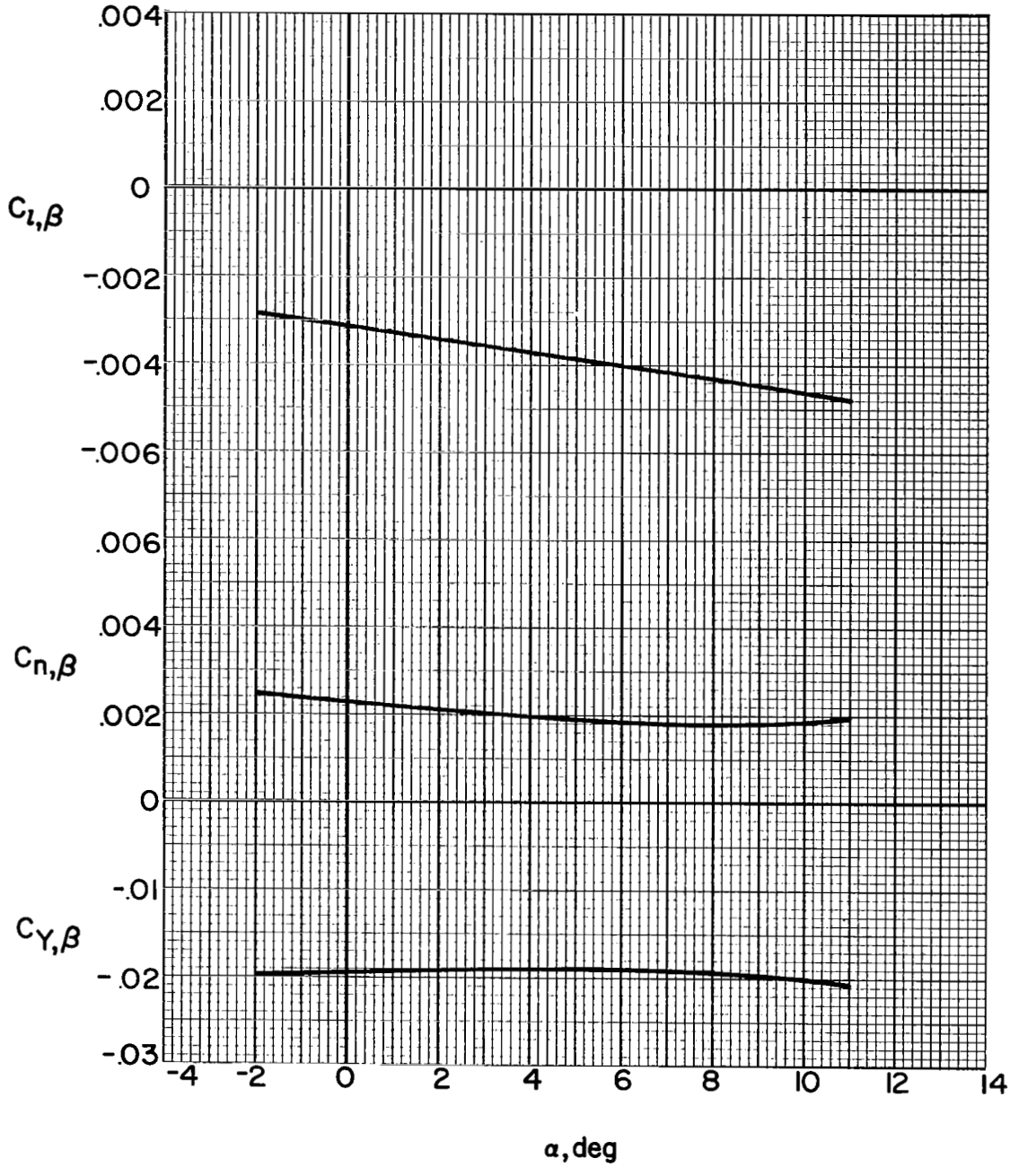
(e) Full-span flap wing configuration with landing flap setting.

Figure 21.- Concluded.



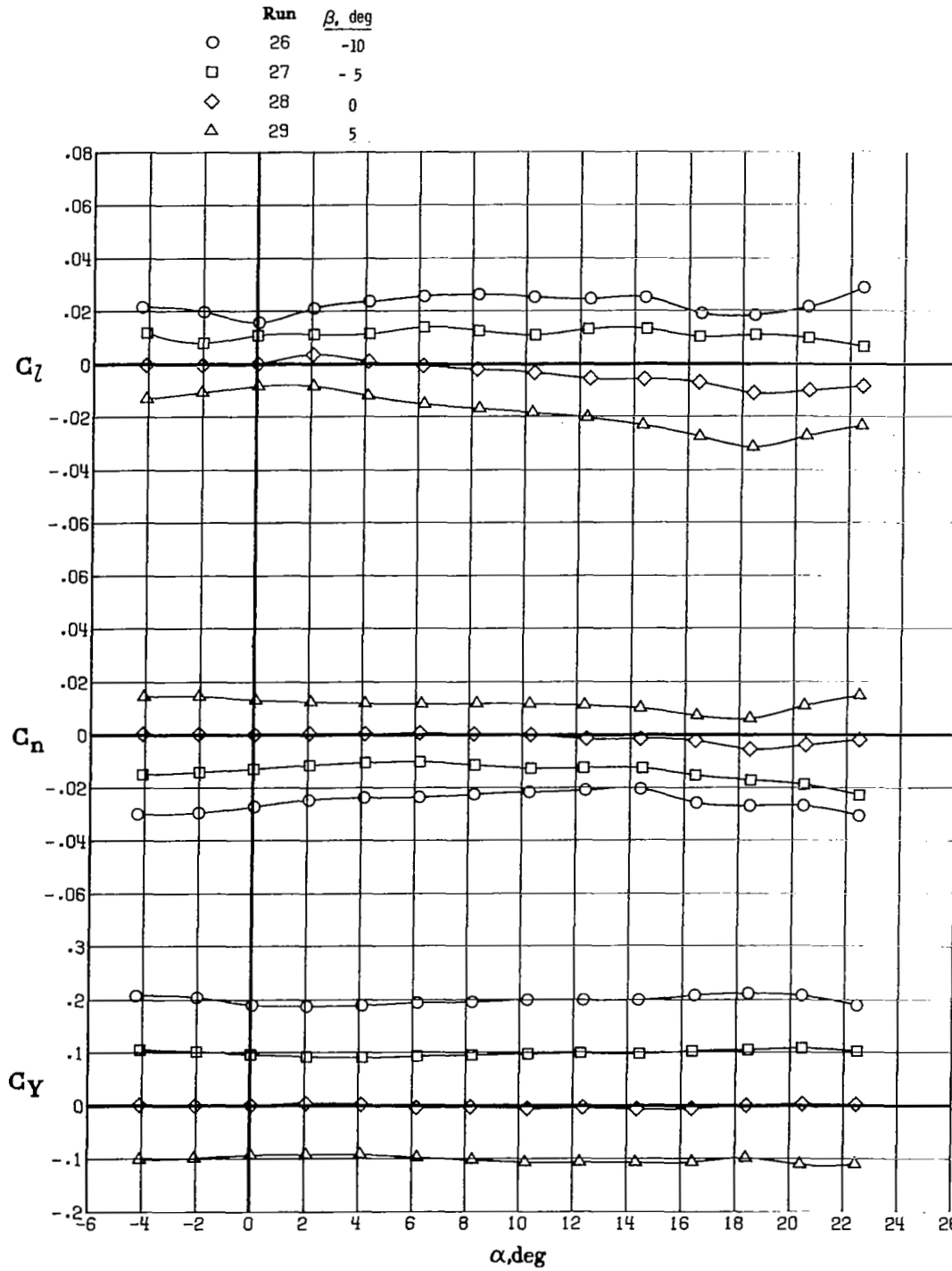
(a) Lateral data for cruise wing configuration.

Figure 22.- Effect of sideslip angle on lateral aerodynamic characteristics of cruise wing configuration. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



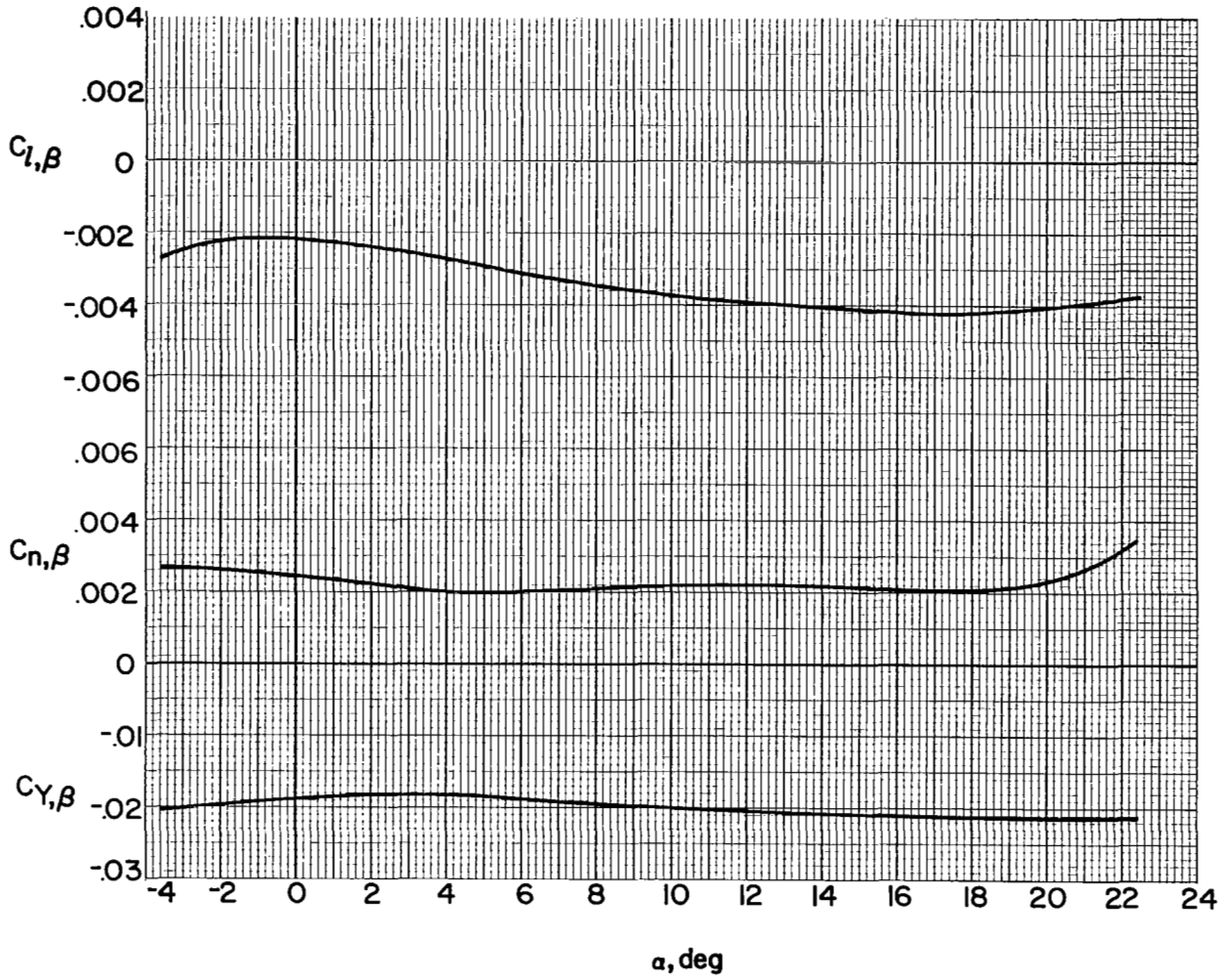
(b) Lateral-directional stability derivatives for cruise wing configuration.

Figure 22.- Concluded.



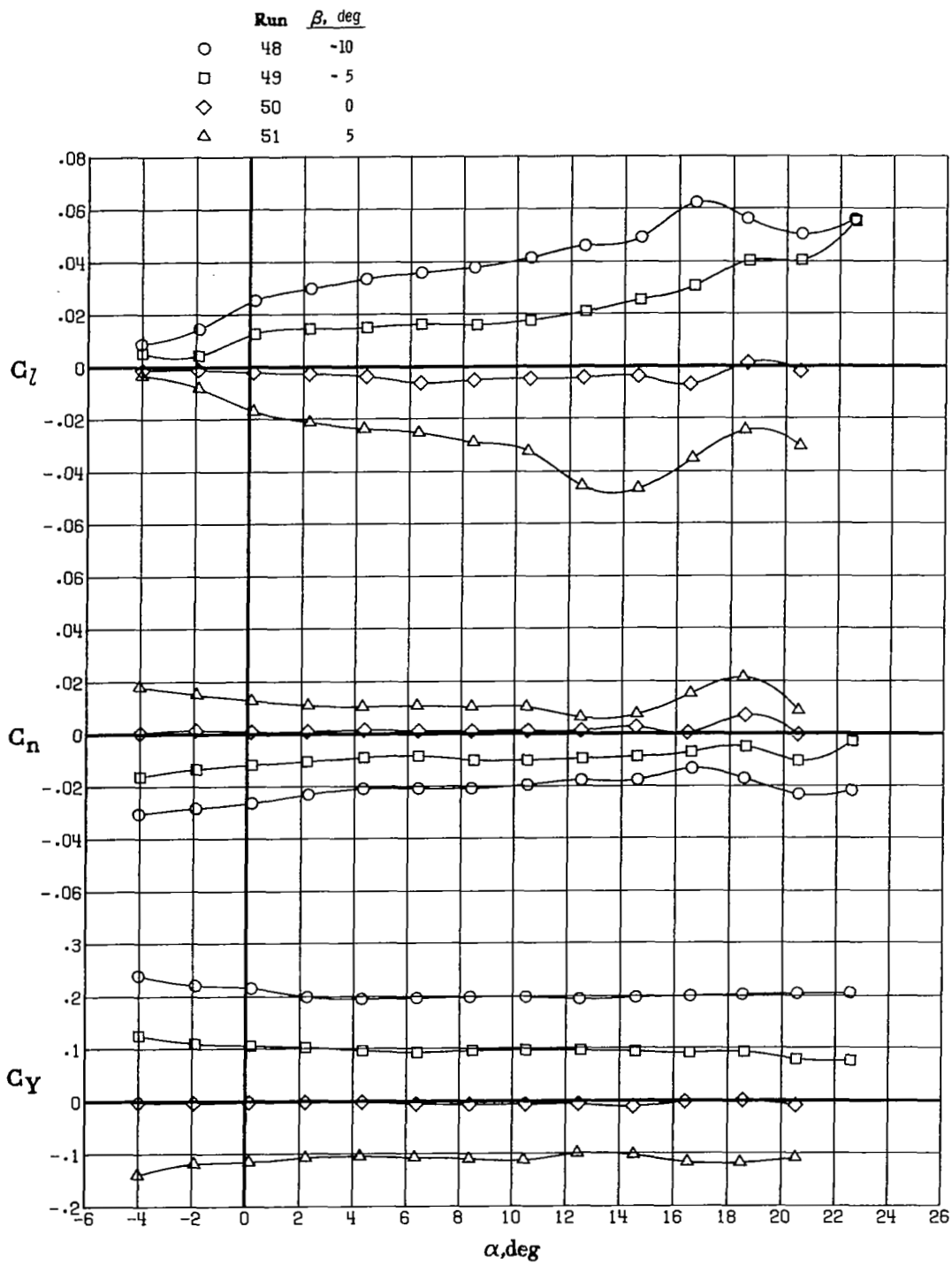
(a) Lateral data for climb wing configuration.

Figure 23.- Effect of sideslip angle on lateral aerodynamic characteristics of climb wing configuration. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



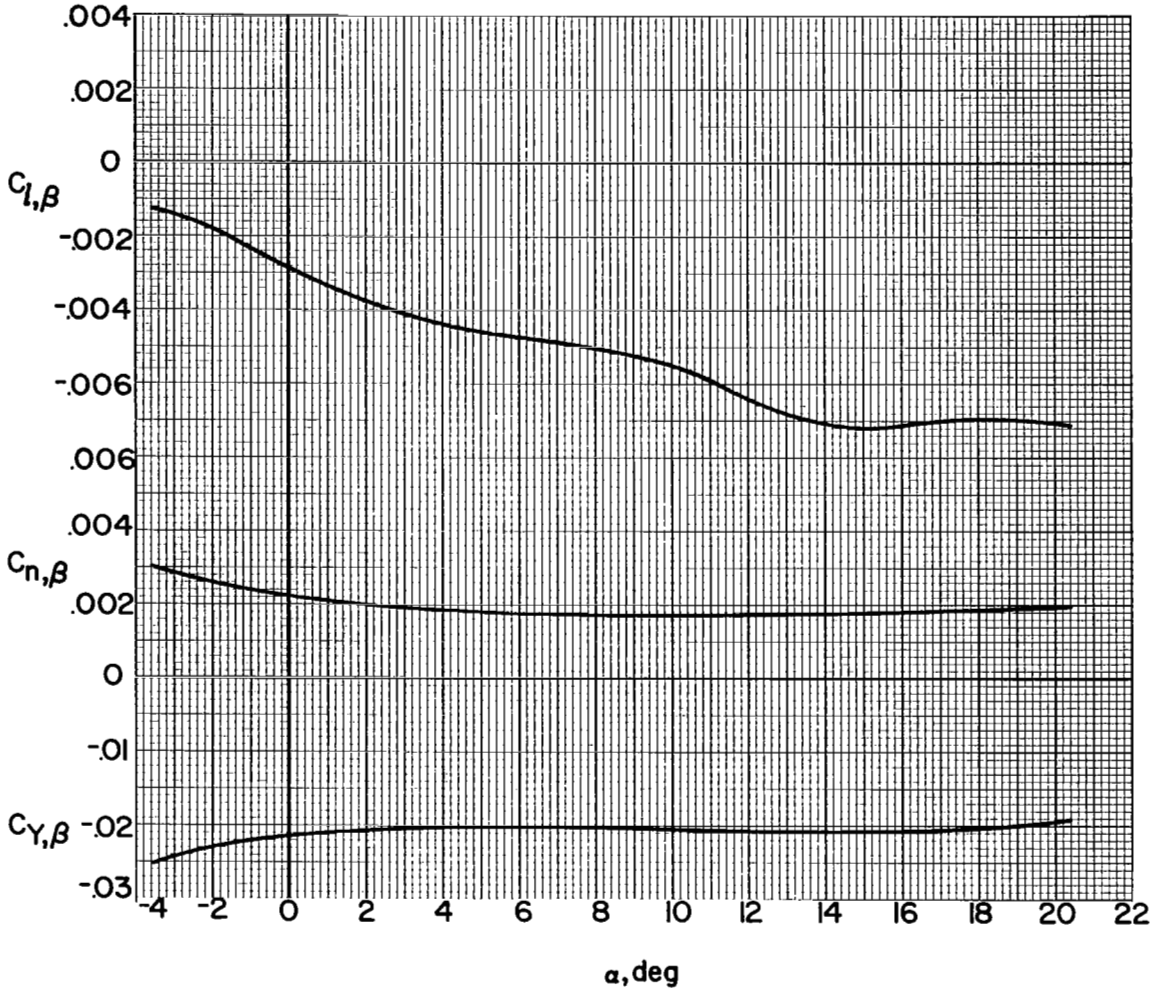
(b) Lateral-directional stability derivatives for climb wing configuration.

Figure 23.- Concluded.



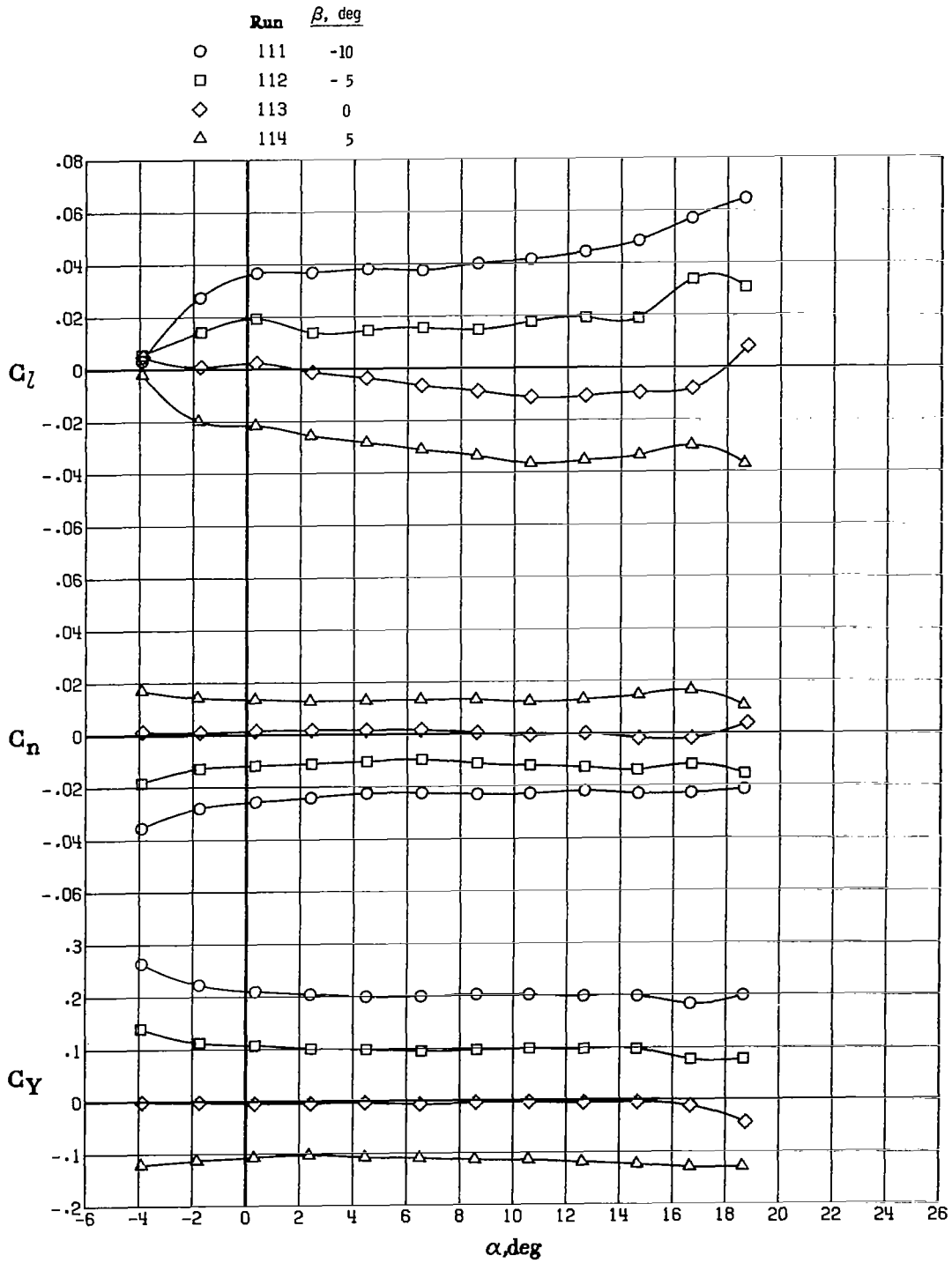
(a) Lateral data for part-span flap wing configuration with take-off flap setting.

Figure 24.- Effect of sideslip angle on lateral-directional aerodynamic characteristics of part-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



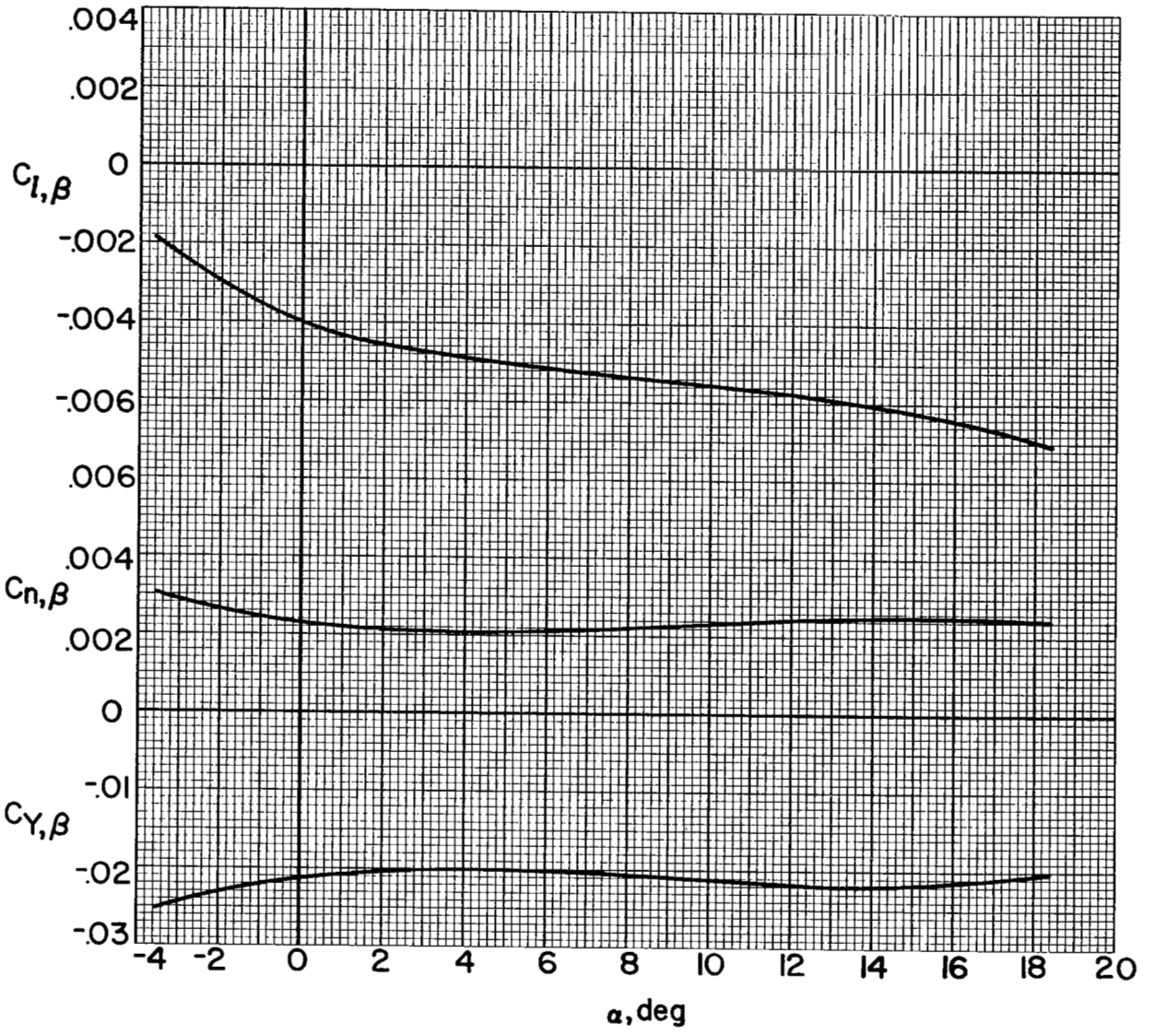
(b) Lateral-directional stability derivatives for part-span flap wing configuration with take-off flap setting.

Figure 24.- Continued.



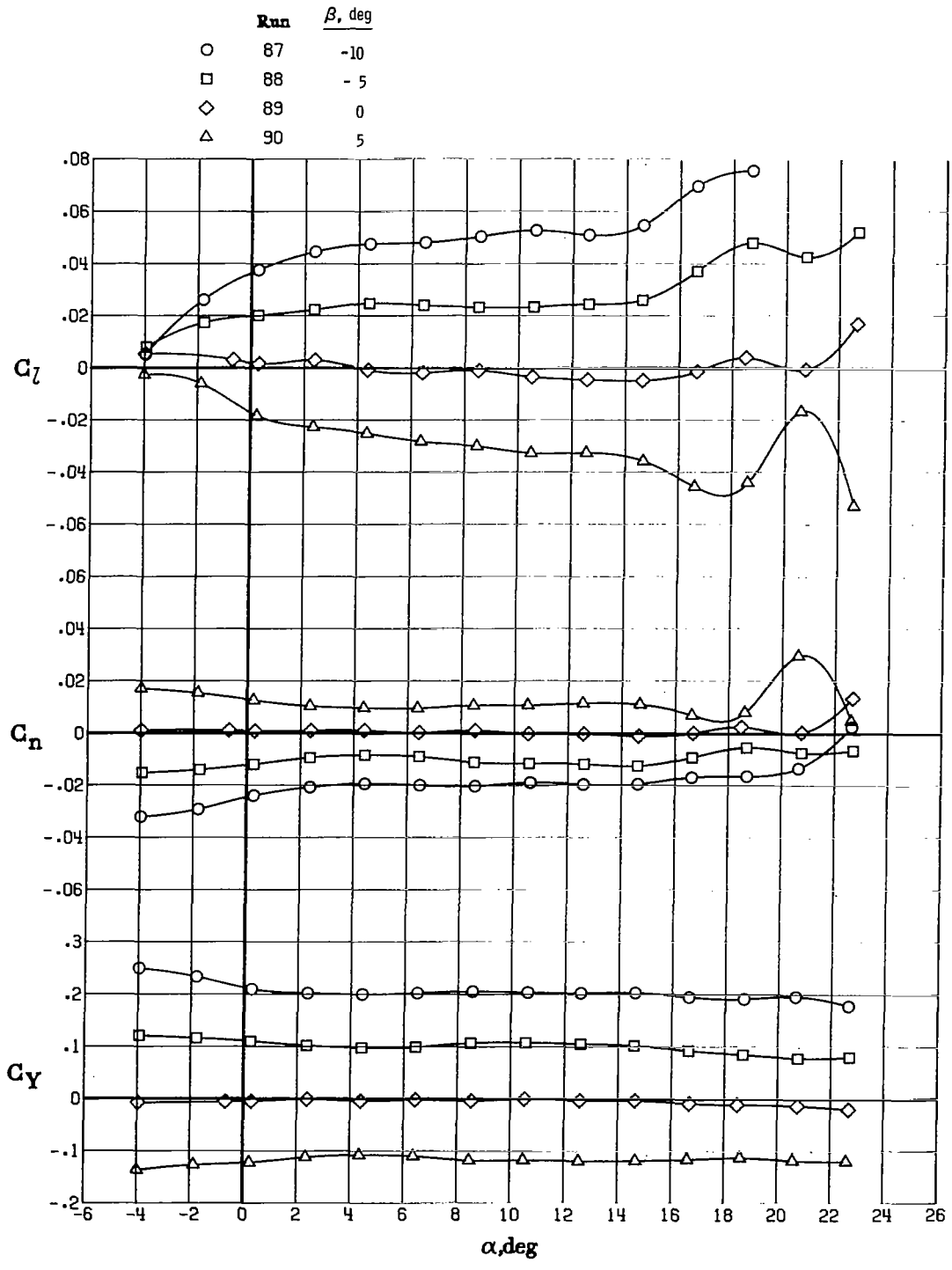
(c) Lateral data for part-span flap configuration with landing flap setting.

Figure 24.- Continued.



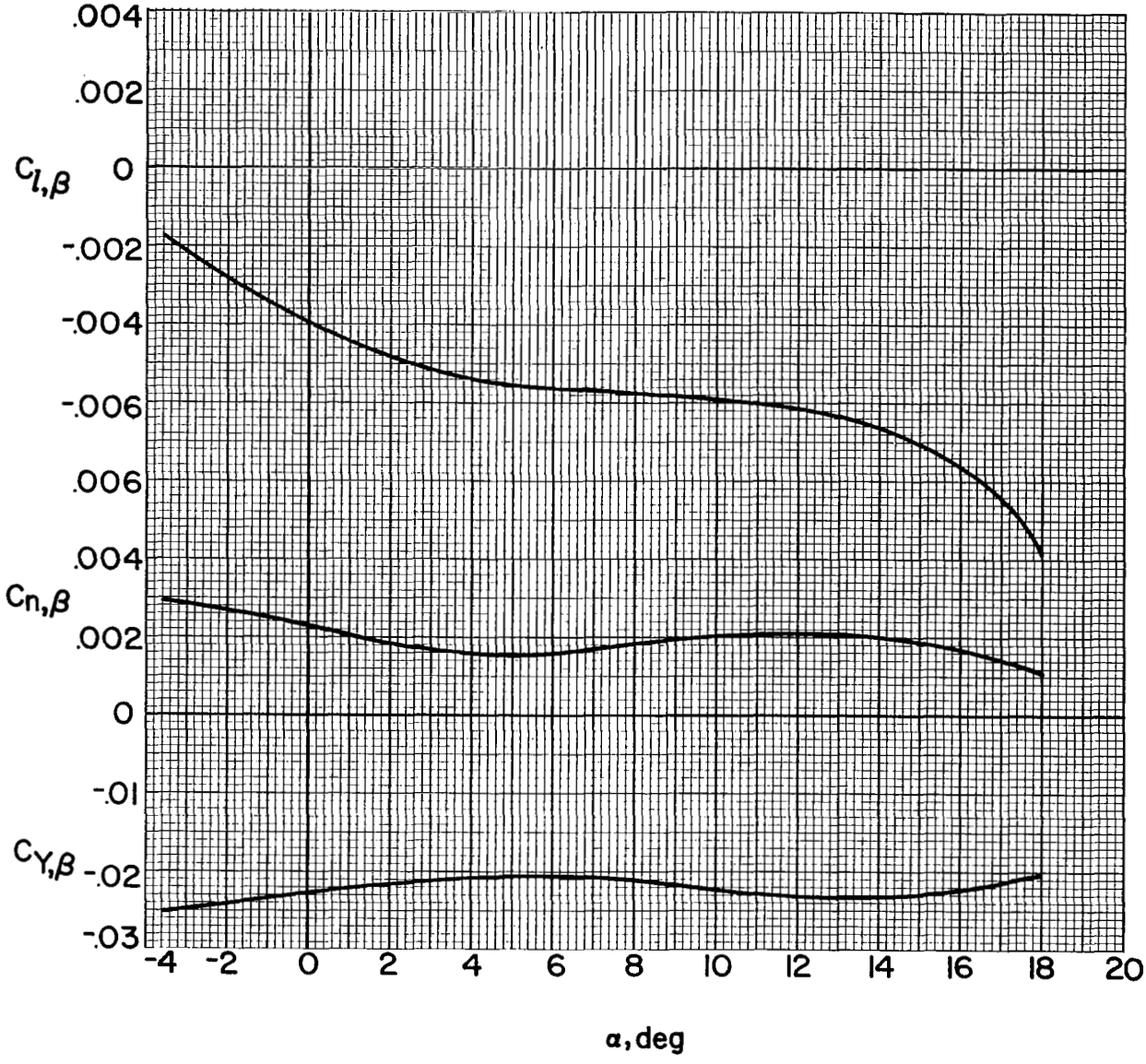
(d) Lateral-directional stability derivatives for part-span flap wing configuration with landing flap setting.

Figure 24.- Concluded.



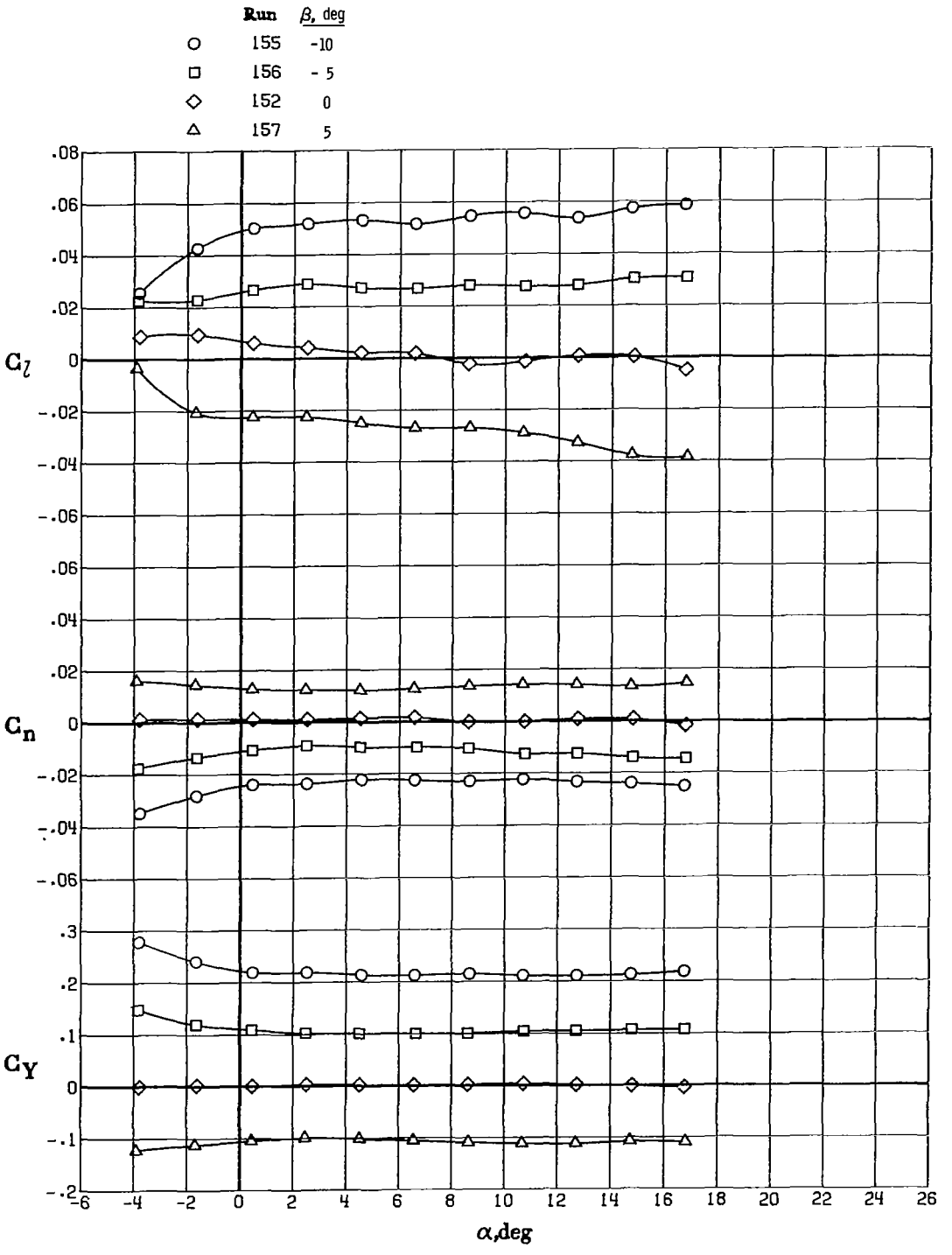
(a) Lateral data for full-span flap wing configuration with take-off flap setting.

Figure 25.- Effect of sideslip angle on lateral aerodynamic characteristics of full-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



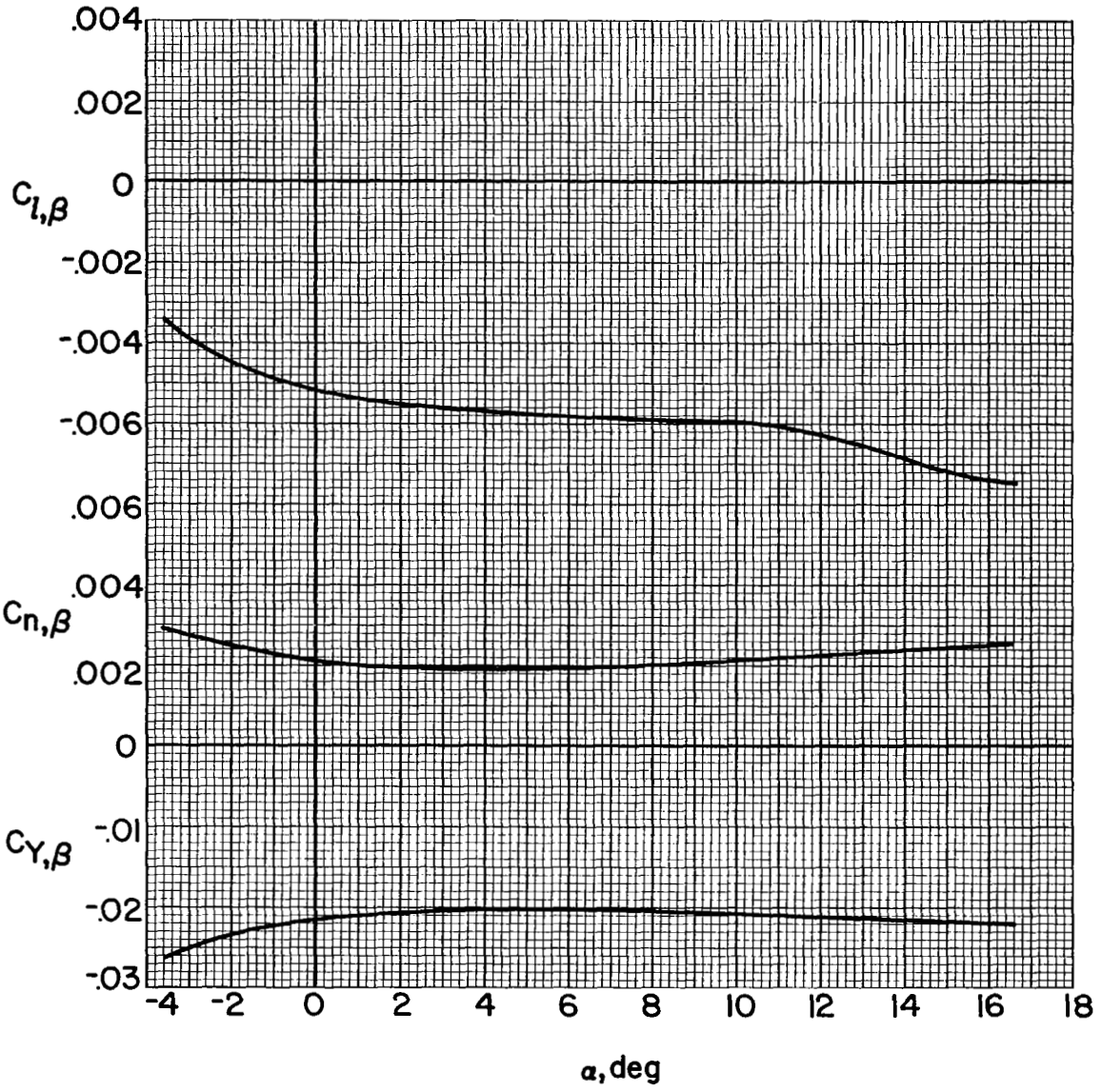
(b) Lateral-directional stability derivatives for full-span flap wing configuration with take-off flap setting.

Figure 25.- Continued.



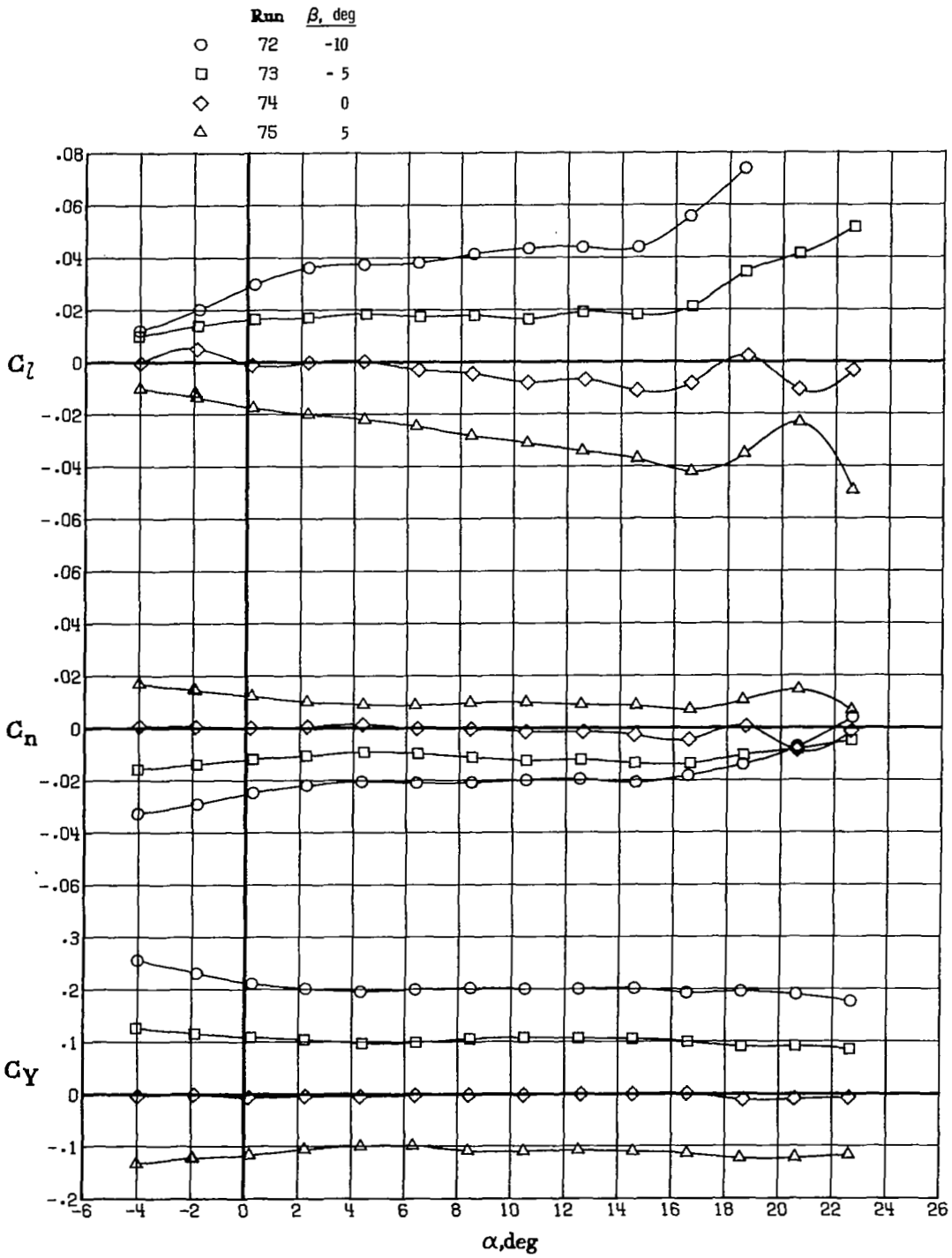
(c) Lateral data for full-span flap wing configuration with landing flap setting.

Figure 25.- Continued.



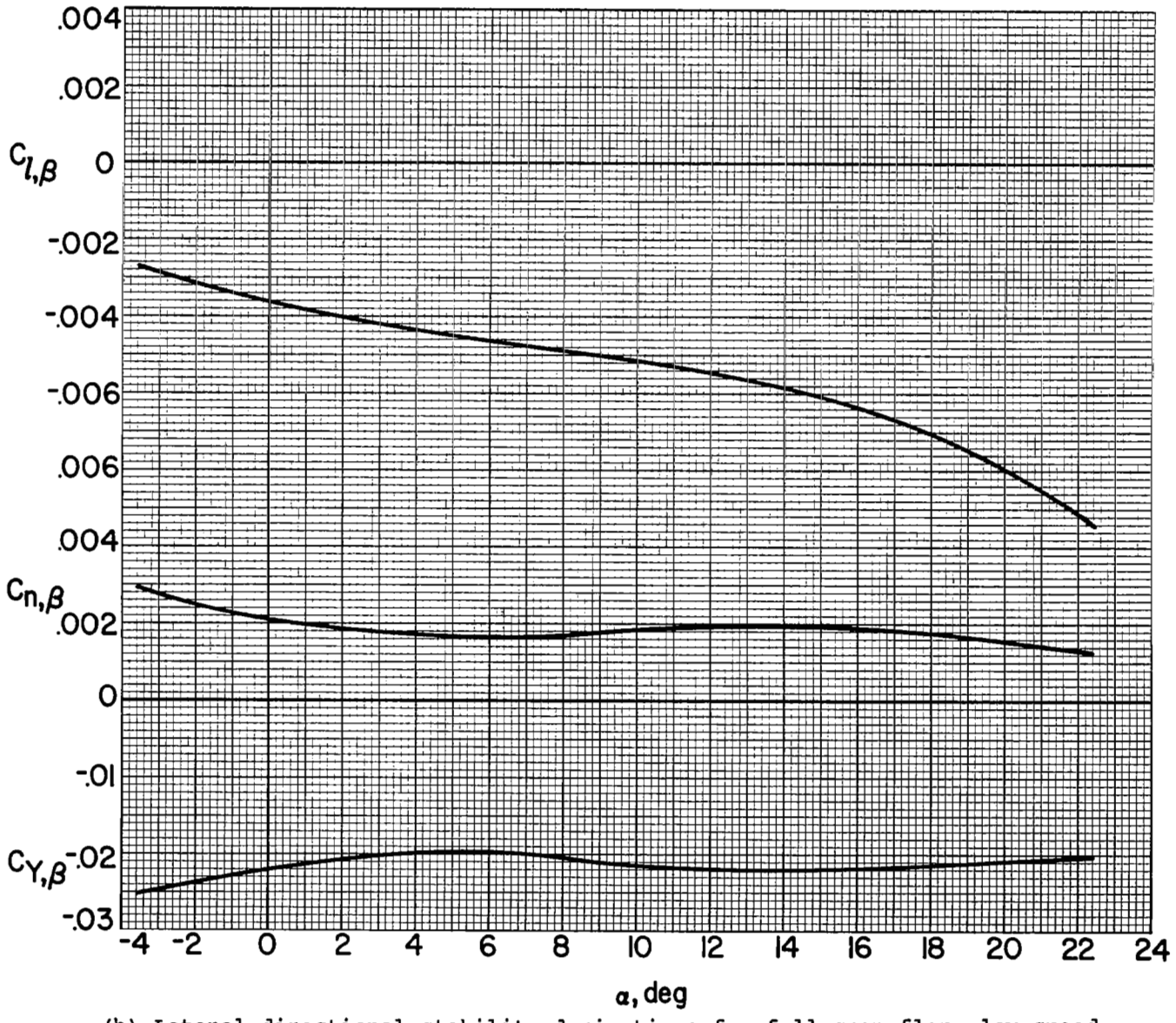
(d) Lateral-directional stability derivatives for full-span flap wing configuration with landing flap setting.

Figure 25.- Concluded.



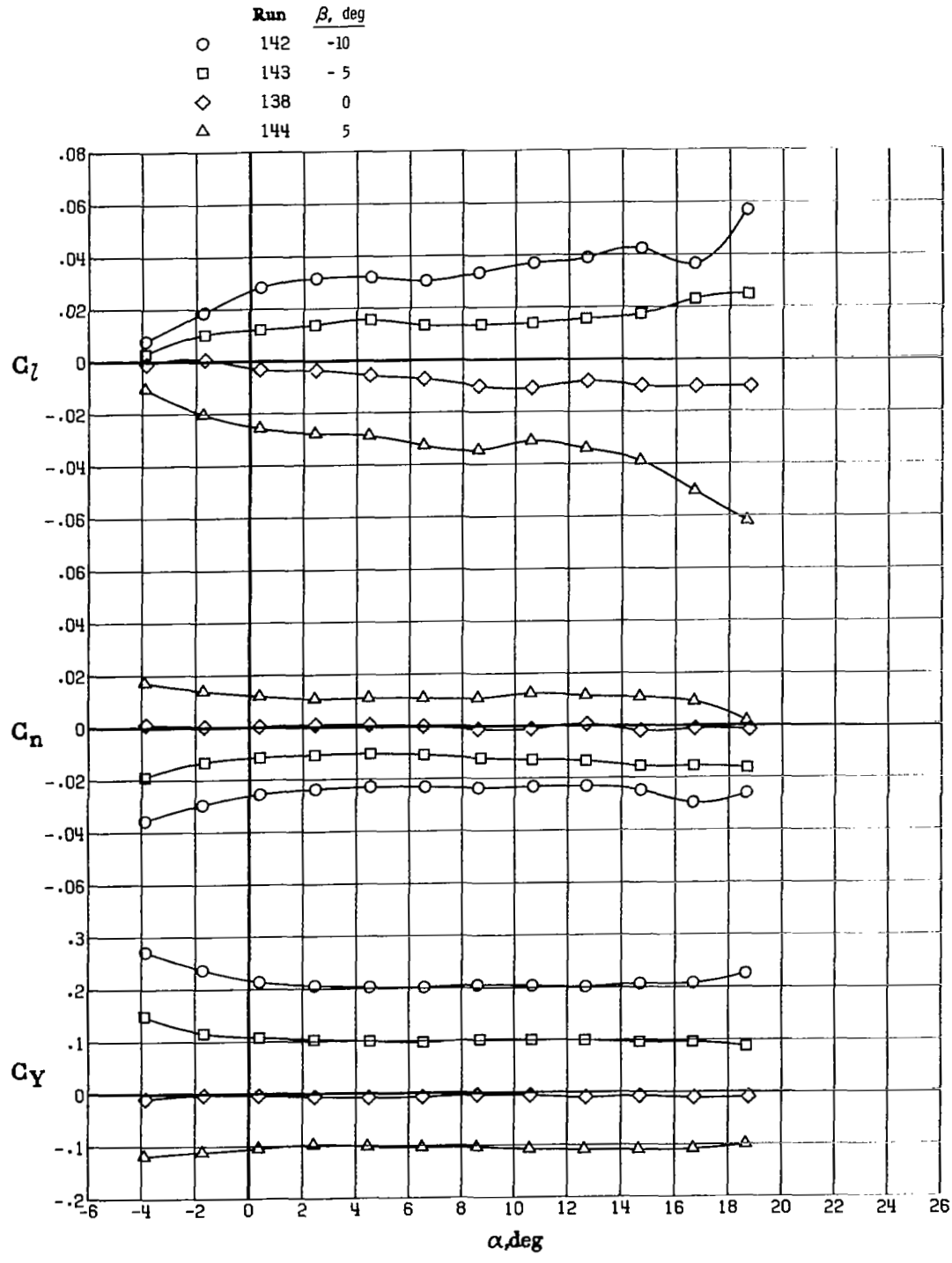
(a) Lateral data for full-span flap low-speed ailerons wing configuration with take-off flap setting.

Figure 26.- Effect of sideslip angle on lateral aerodynamic characteristics of full-span flap with low-speed ailerons wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$



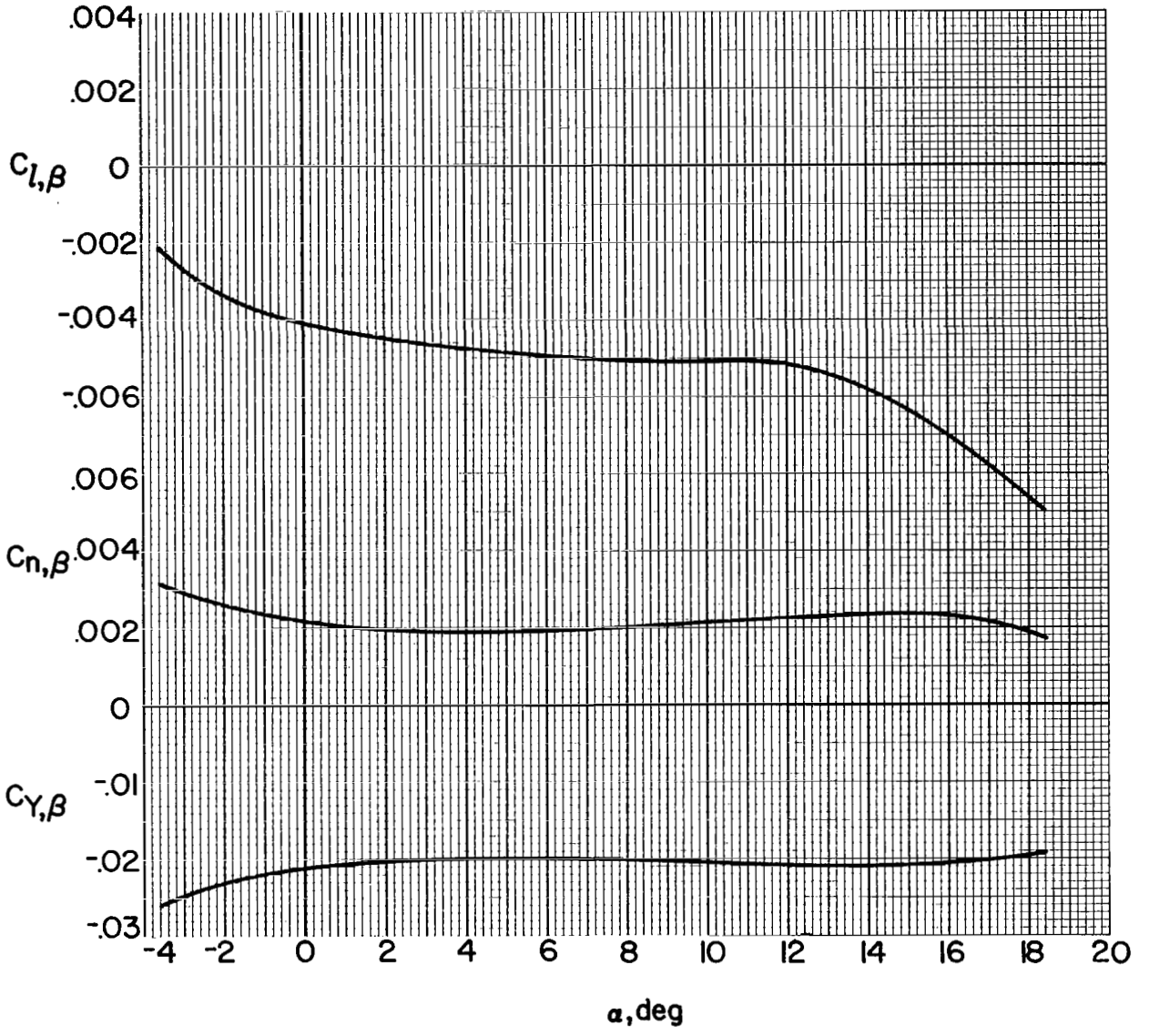
(b) Lateral-directional stability derivatives for full-span flap, low-speed ailerons wing configuration with take-off flap setting.

Figure 26.- Continued.



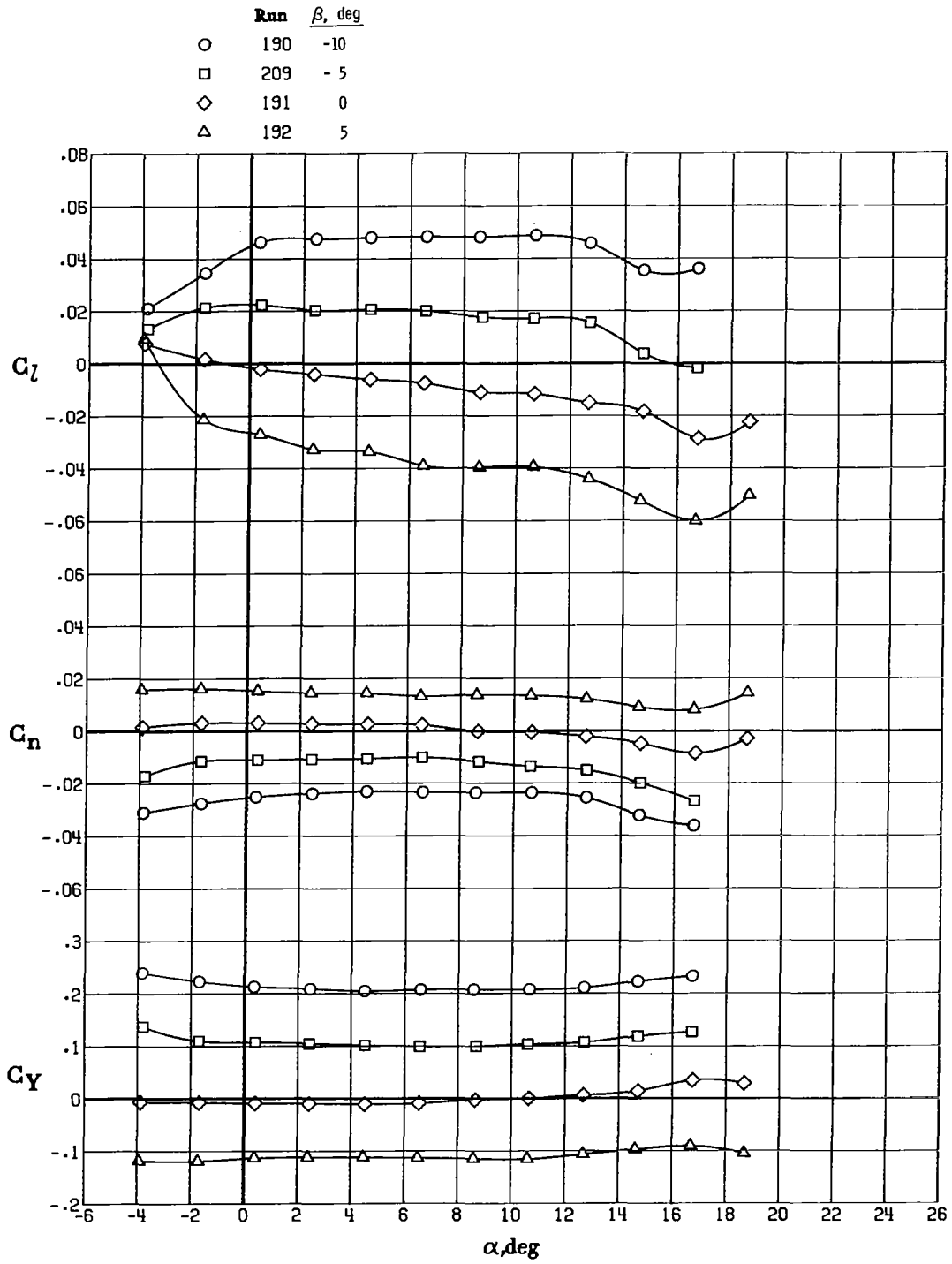
(c) Lateral data for full-span flap, low-speed ailerons wing configuration with landing flap setting.

Figure 26.- Continued.



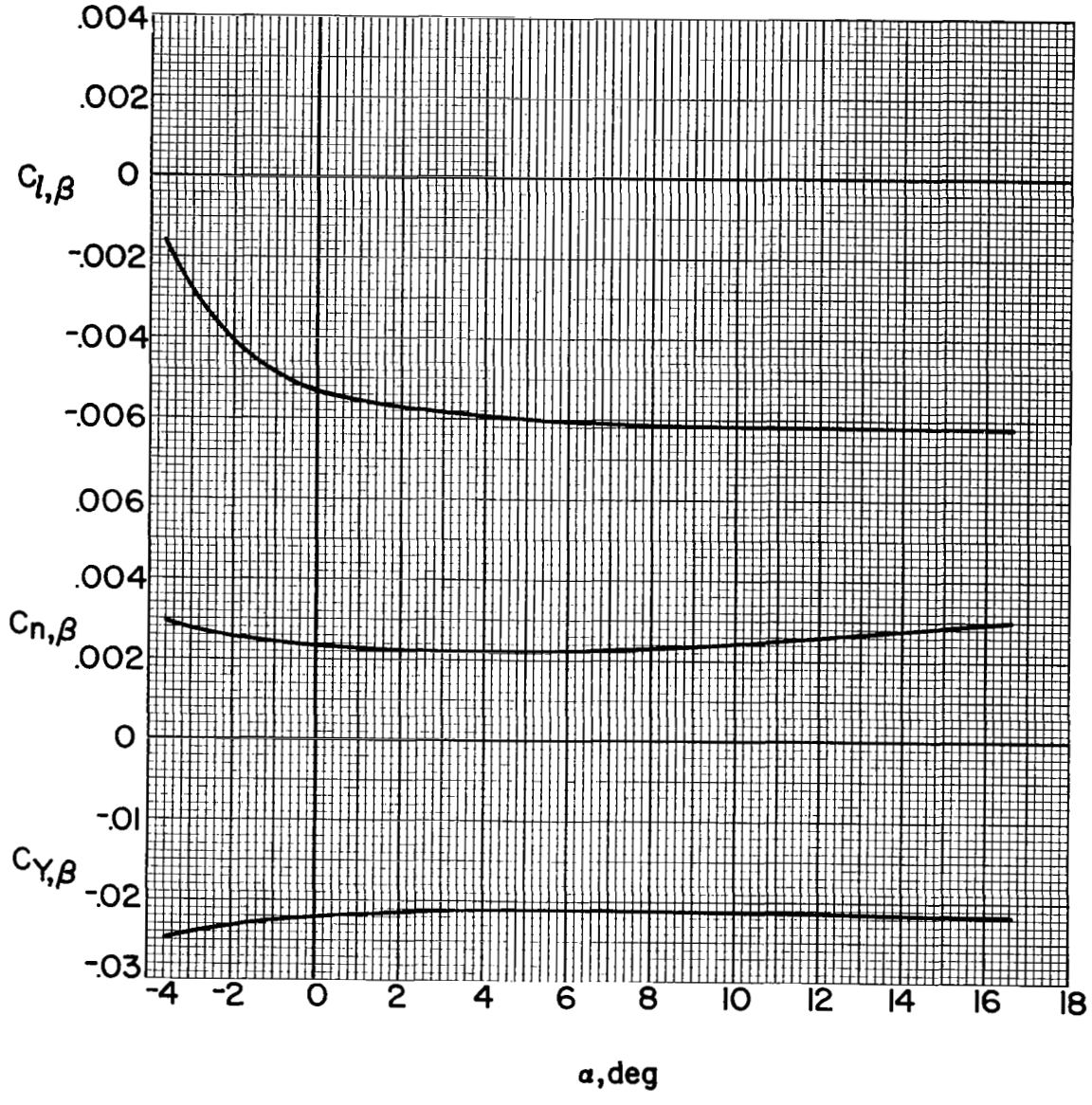
(d) Lateral-directional stability derivatives for full-span flap, low-speed ailerons wing configuration with landing flap setting.

Figure 26.- Concluded.



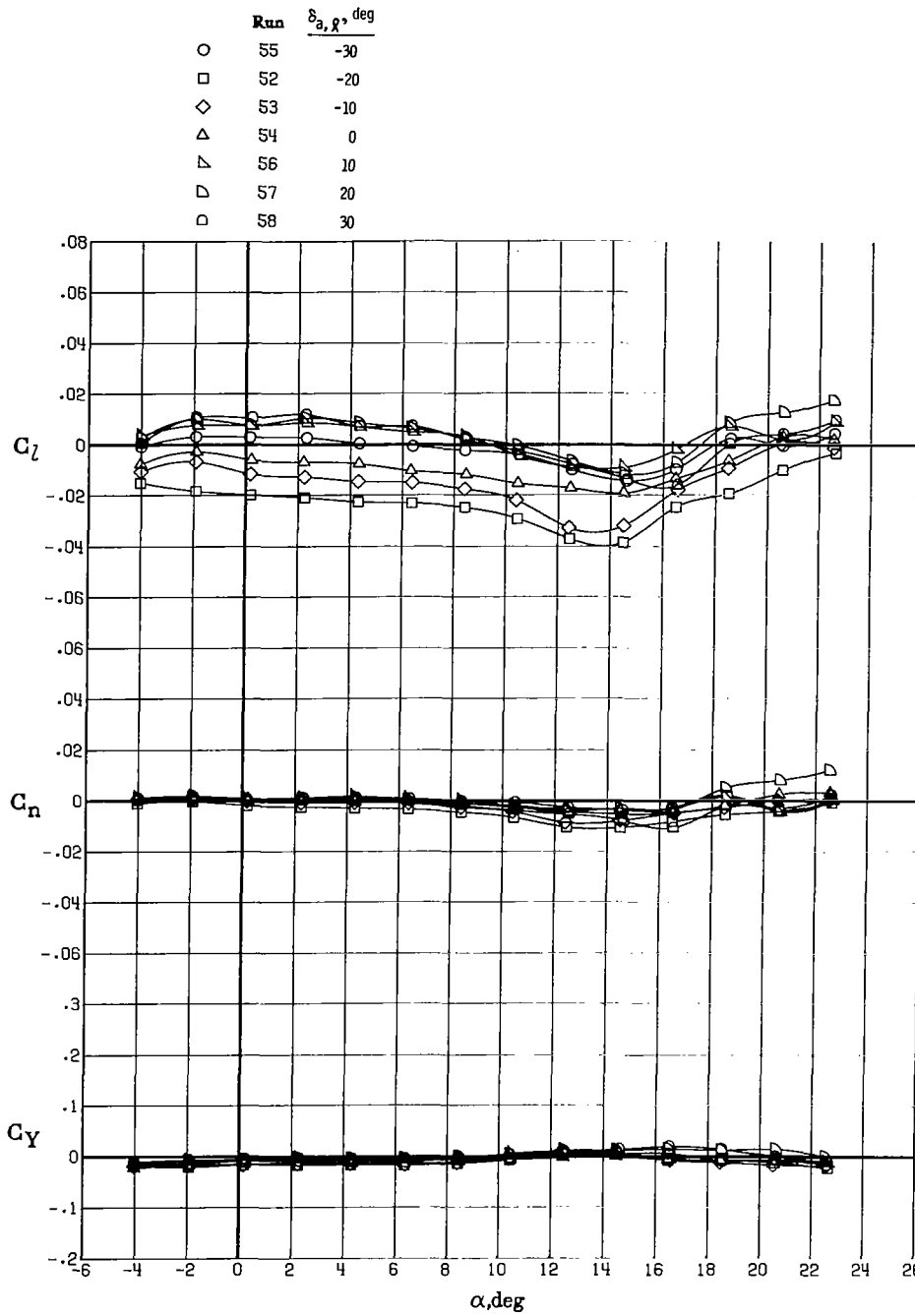
(a) Lateral data for full-span flap, high-speed ailerons wing configuration with landing flap setting.

Figure 27.- Effect of sideslip angle on lateral-directional aerodynamic characteristics of full-span flap with high-speed ailerons wing configuration with landing flap setting. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



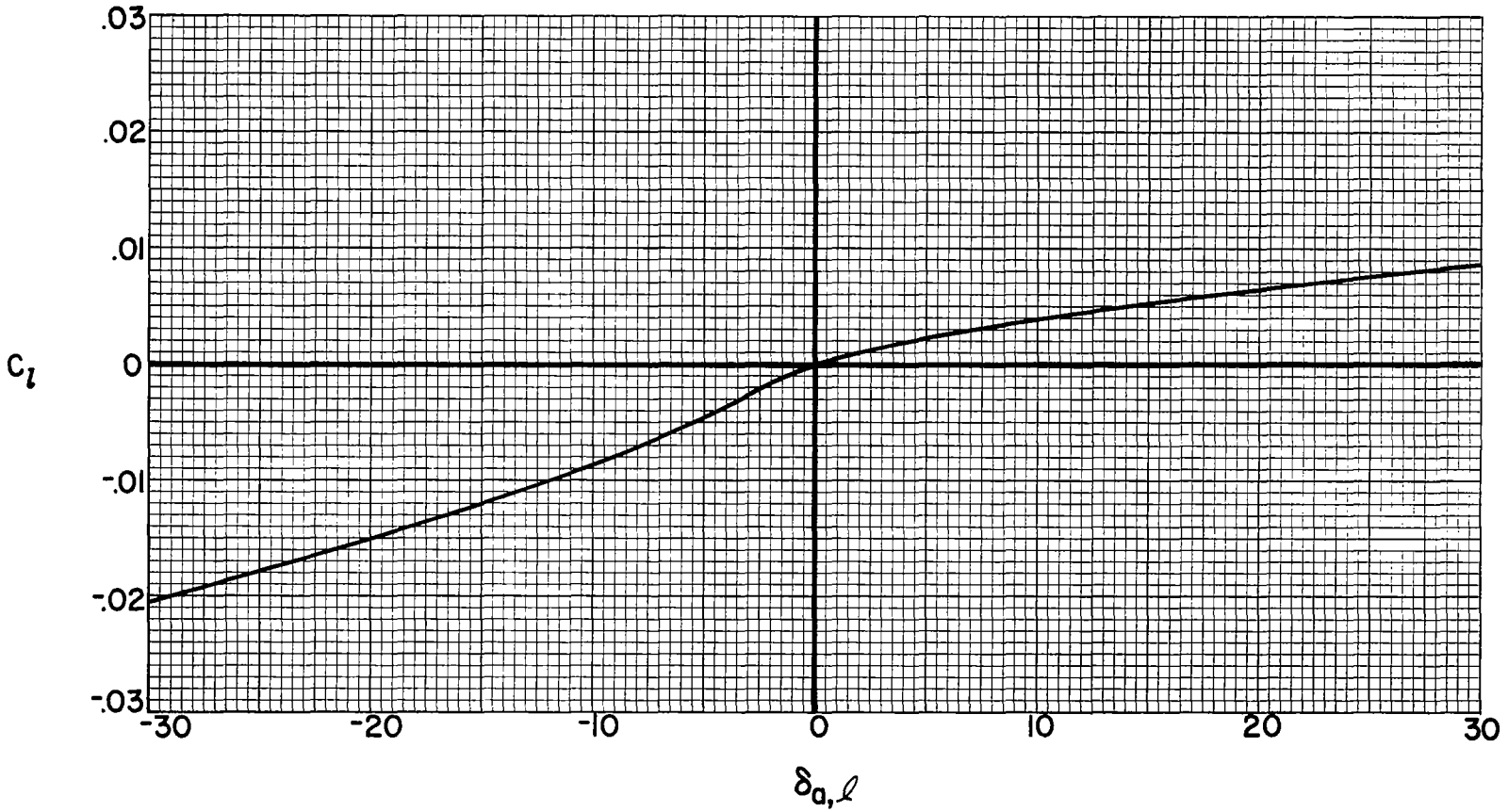
(b) Lateral-directional stability derivatives for full-span flap with high-speed ailerons wing configuration with landing flap setting.

Figure 27.- Concluded.



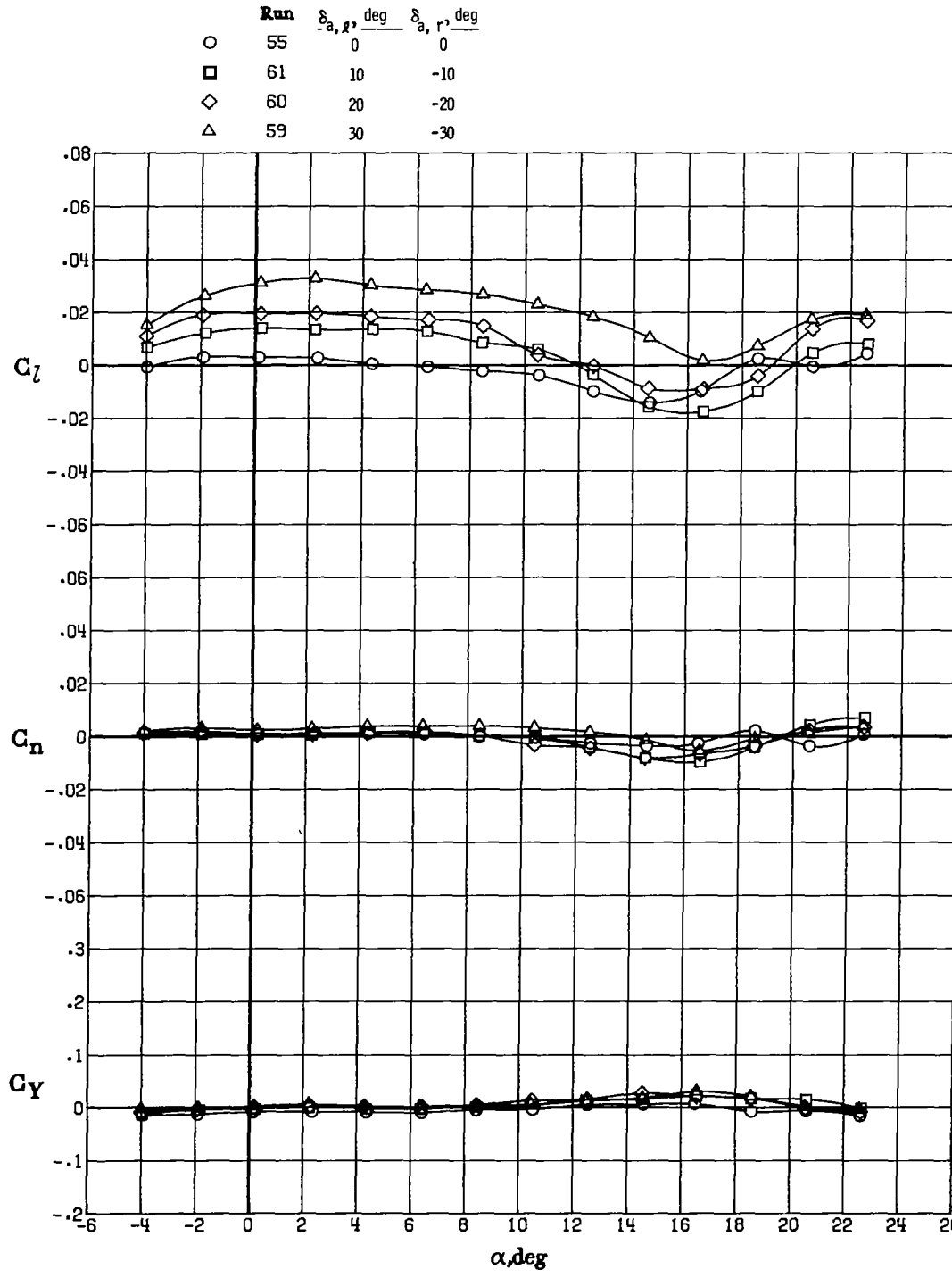
(a) Lateral data for part-span flap wing configuration with take-off flap setting and with left aileron deflected.

Figure 28.- Effect of low-speed aileron deflection on lateral aerodynamic characteristics of part-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



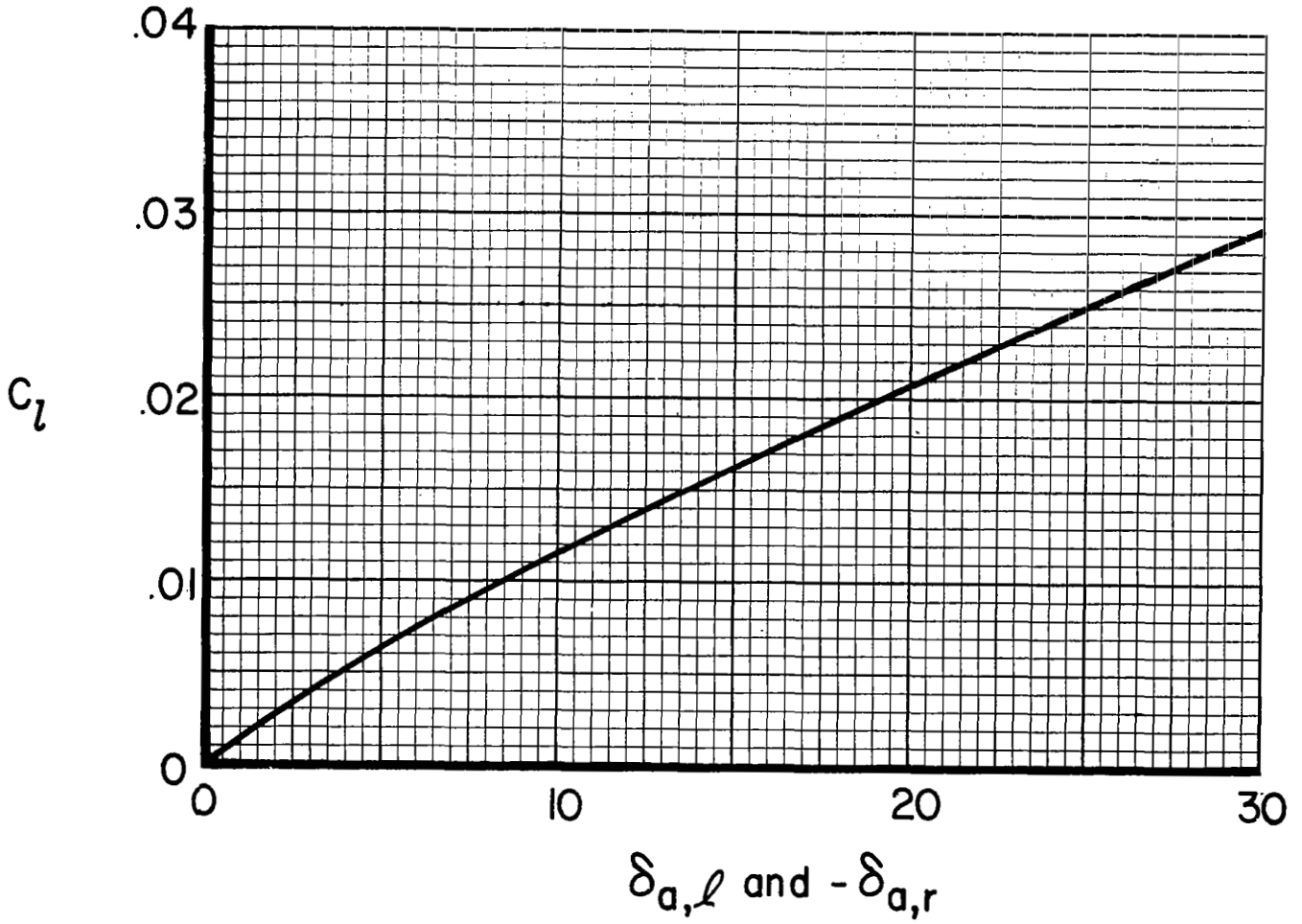
(b) Rolling-moment coefficient versus left aileron deflection for angle-of-attack range of -2° to 12°.

Figure 28.- Continued.



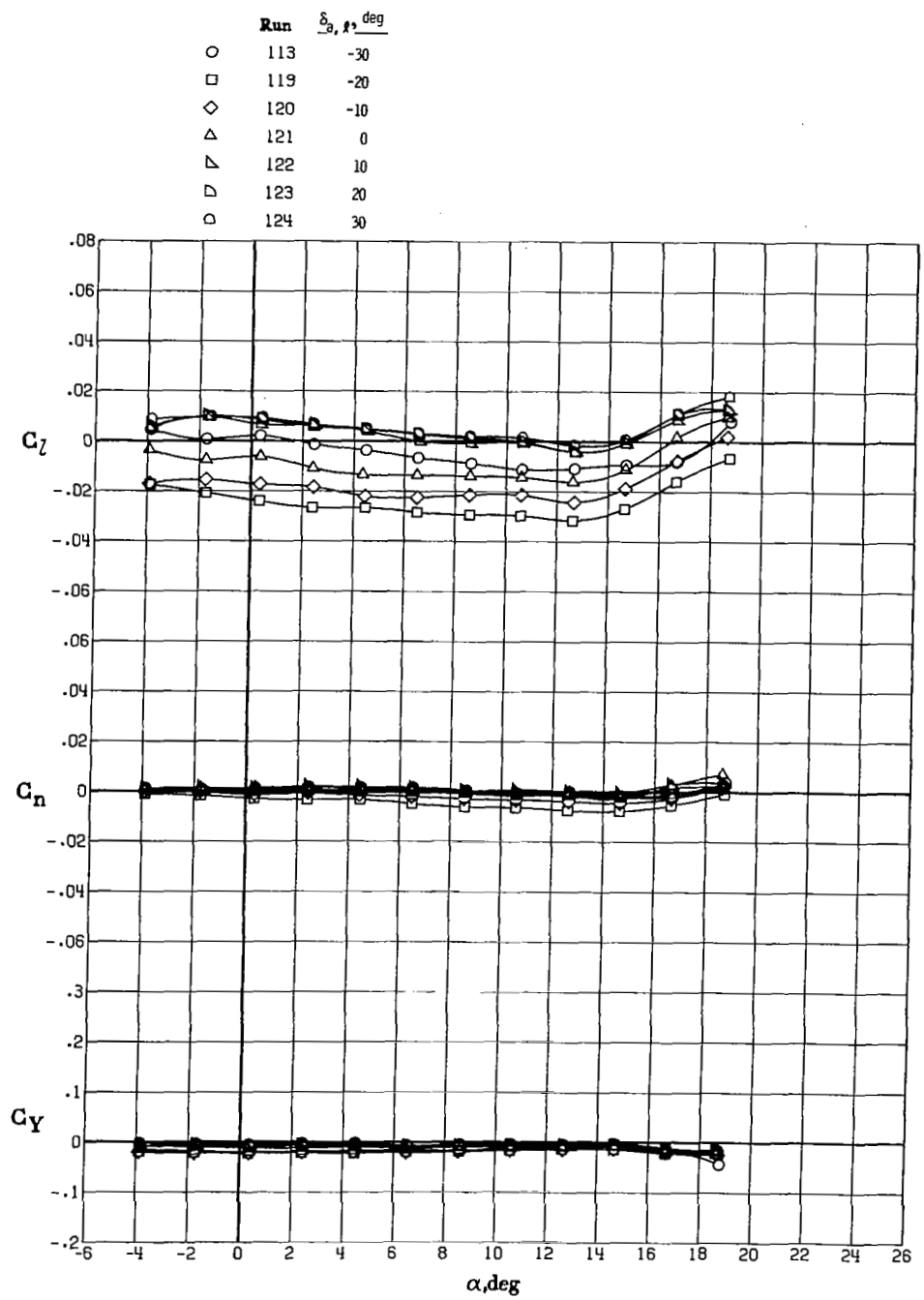
(c) Lateral data for part-span flap wing configuration with take-off flap setting and with differential deflections of the left and right ailerons.

Figure 28.- Continued.



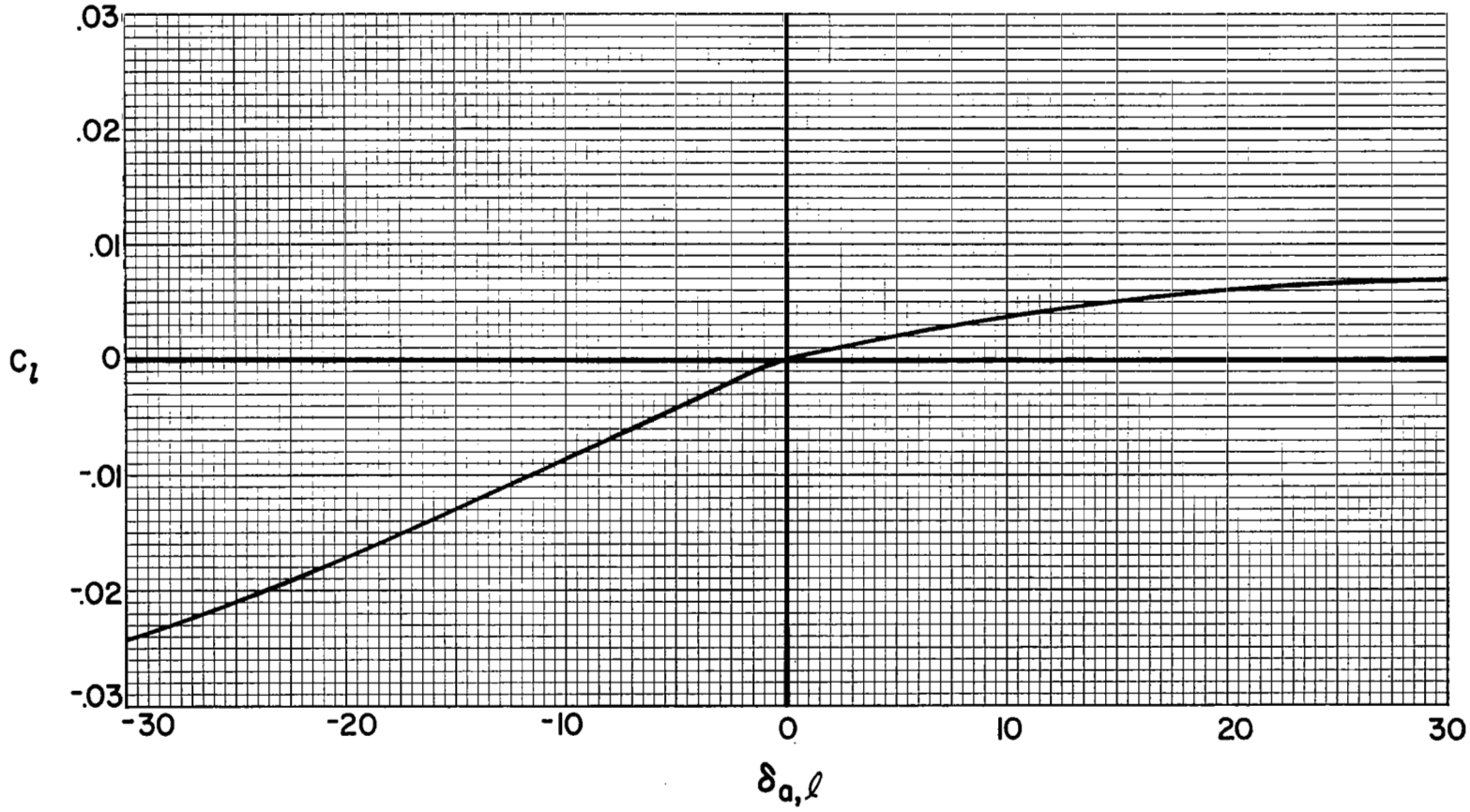
(d) Rolling-moment coefficient versus differential deflections of left and right ailerons for angle-of-attack range of -2° to 12°.

Figure 28.- Continued.



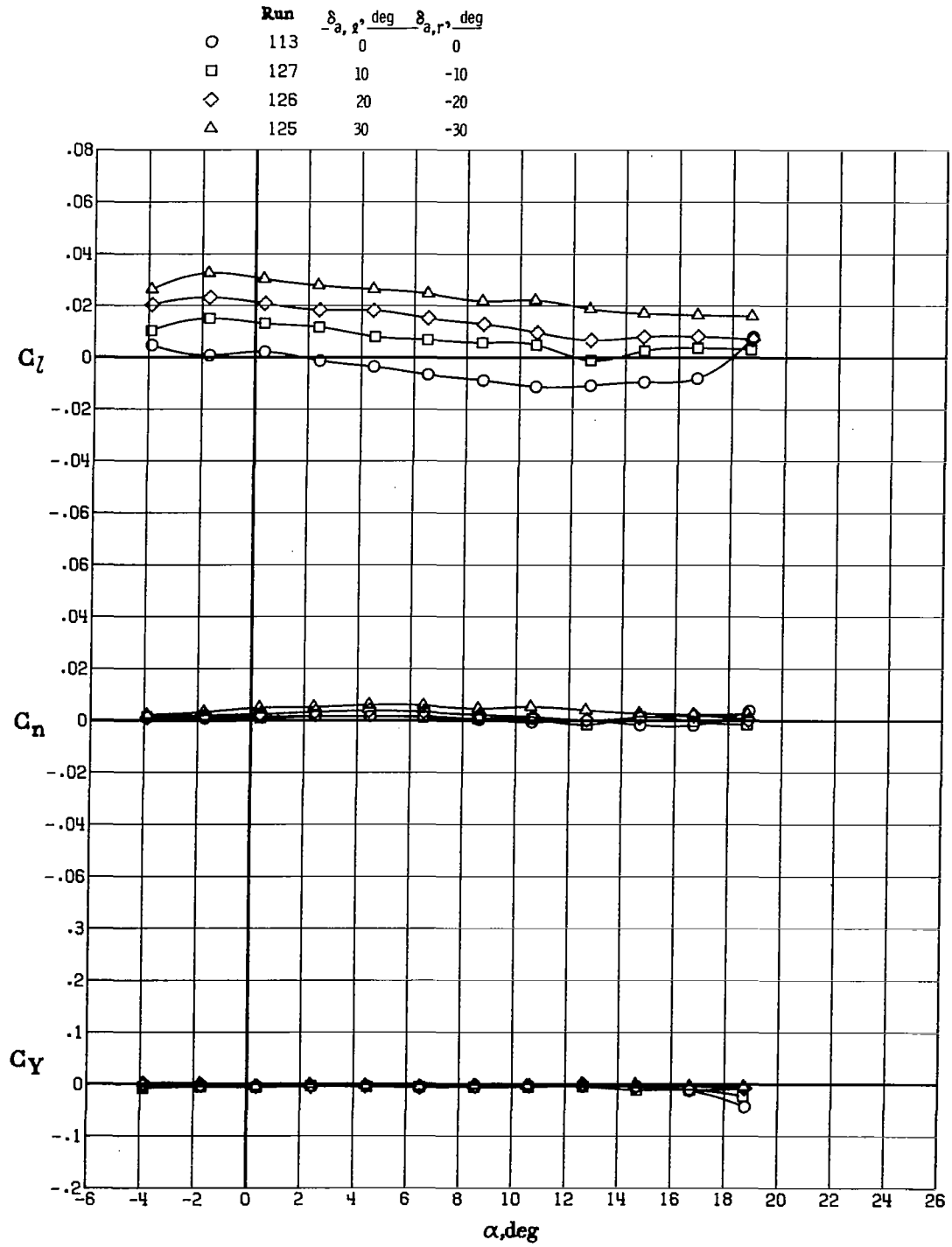
(e) Lateral data for part-span wing configuration with landing flap setting and with left aileron deflected.

Figure 28.- Continued.



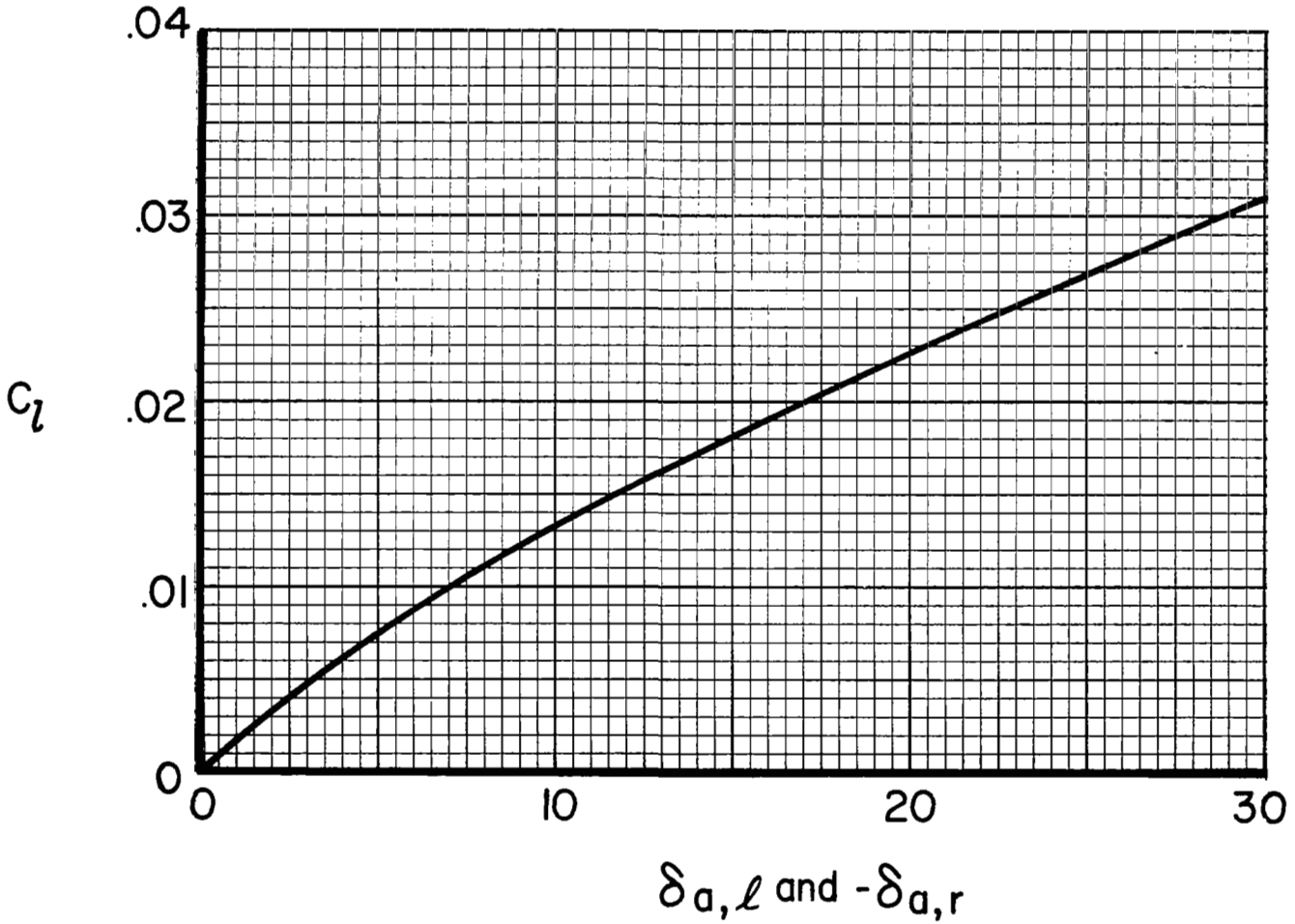
(f) Rolling-moment coefficient versus left aileron deflection for angle-of-attack range of -2° to 12°.

Figure 28.- Continued.



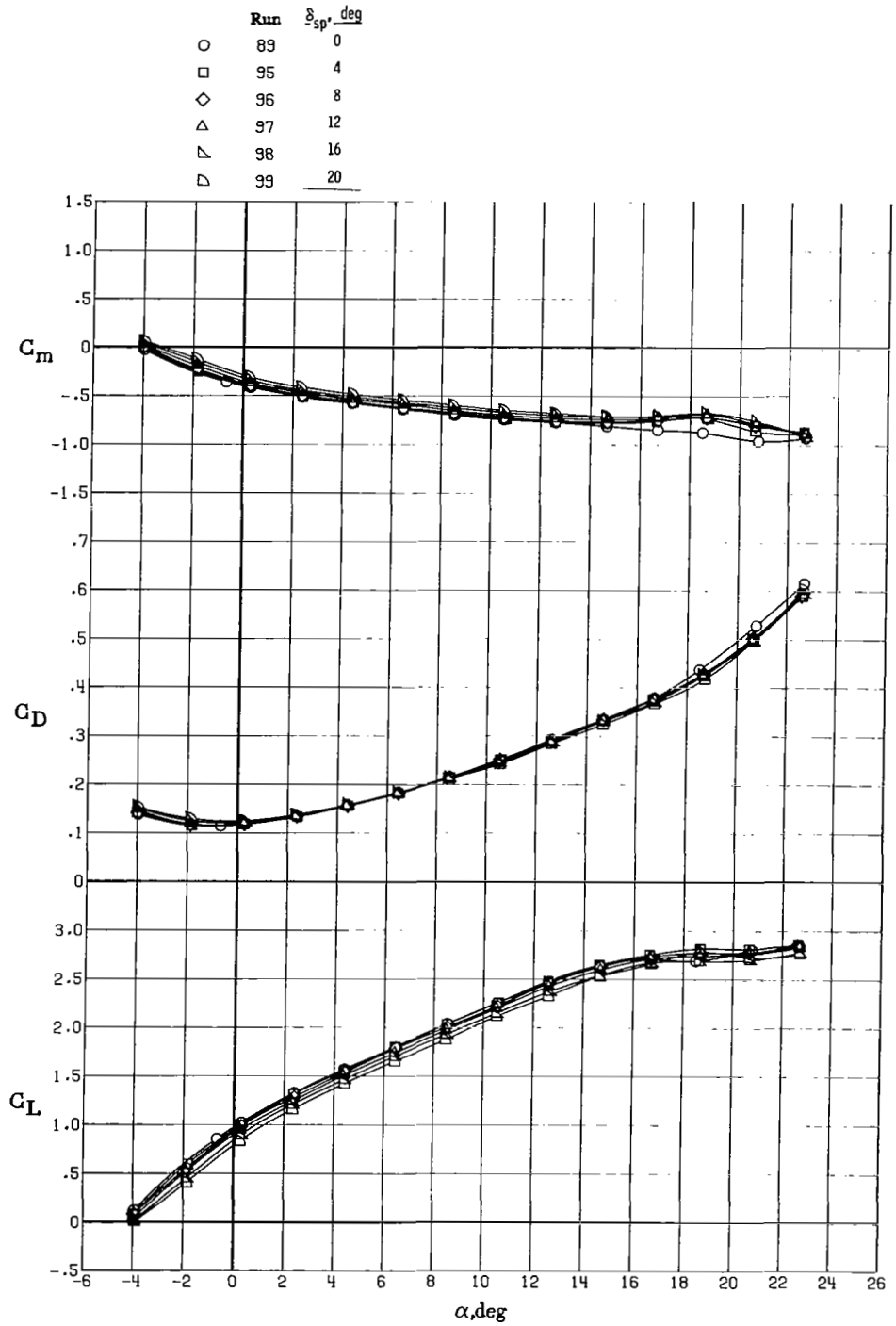
(g) Lateral data for part-span flap wing configuration with landing flap setting and with differential deflections of left and right ailerons.

Figure 28.- Continued.



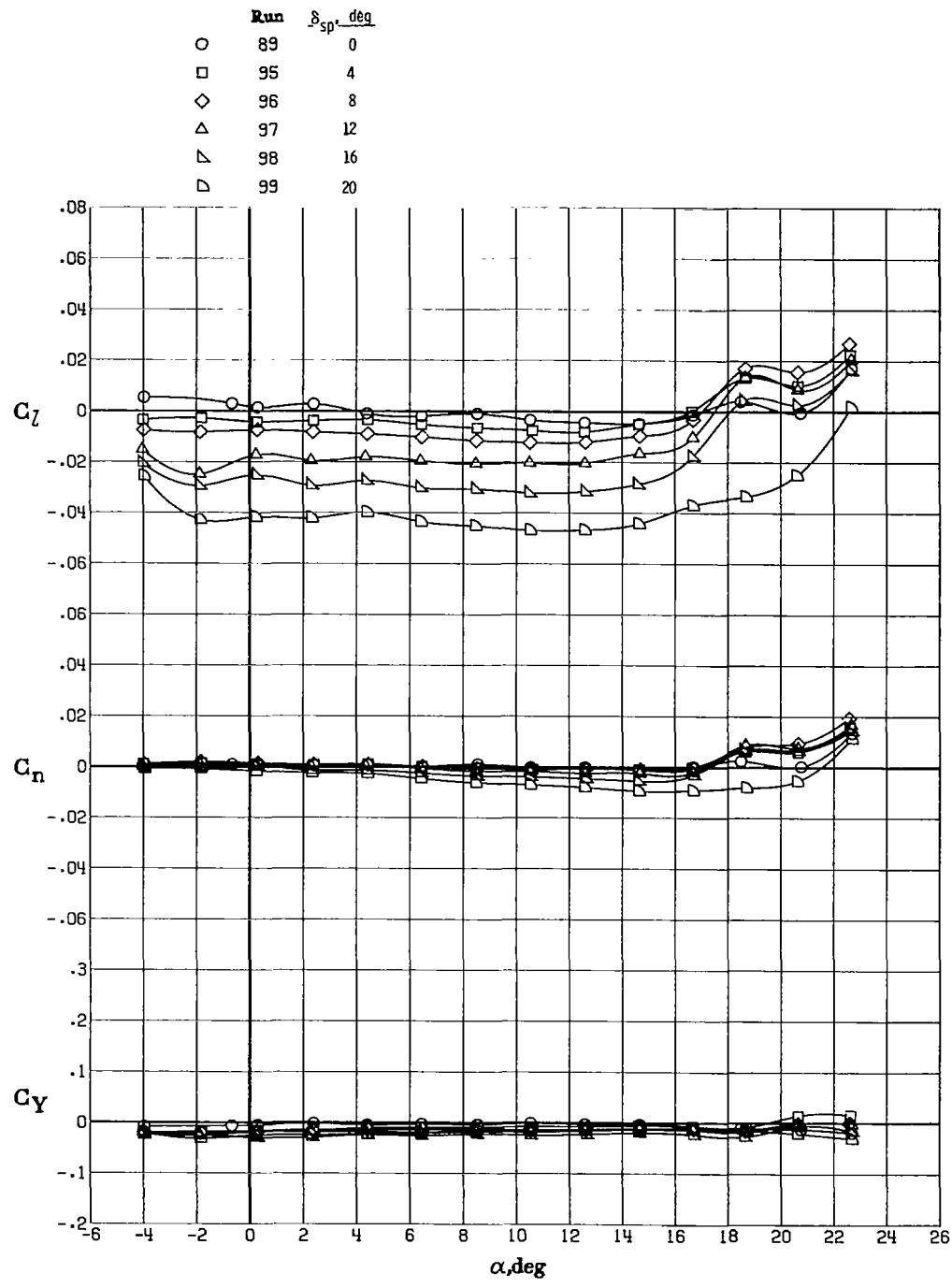
(h) Rolling-moment coefficient versus differential deflections of left and right ailerons for angle-of-attack range of -2° to 12°.

Figure 28.- Concluded.



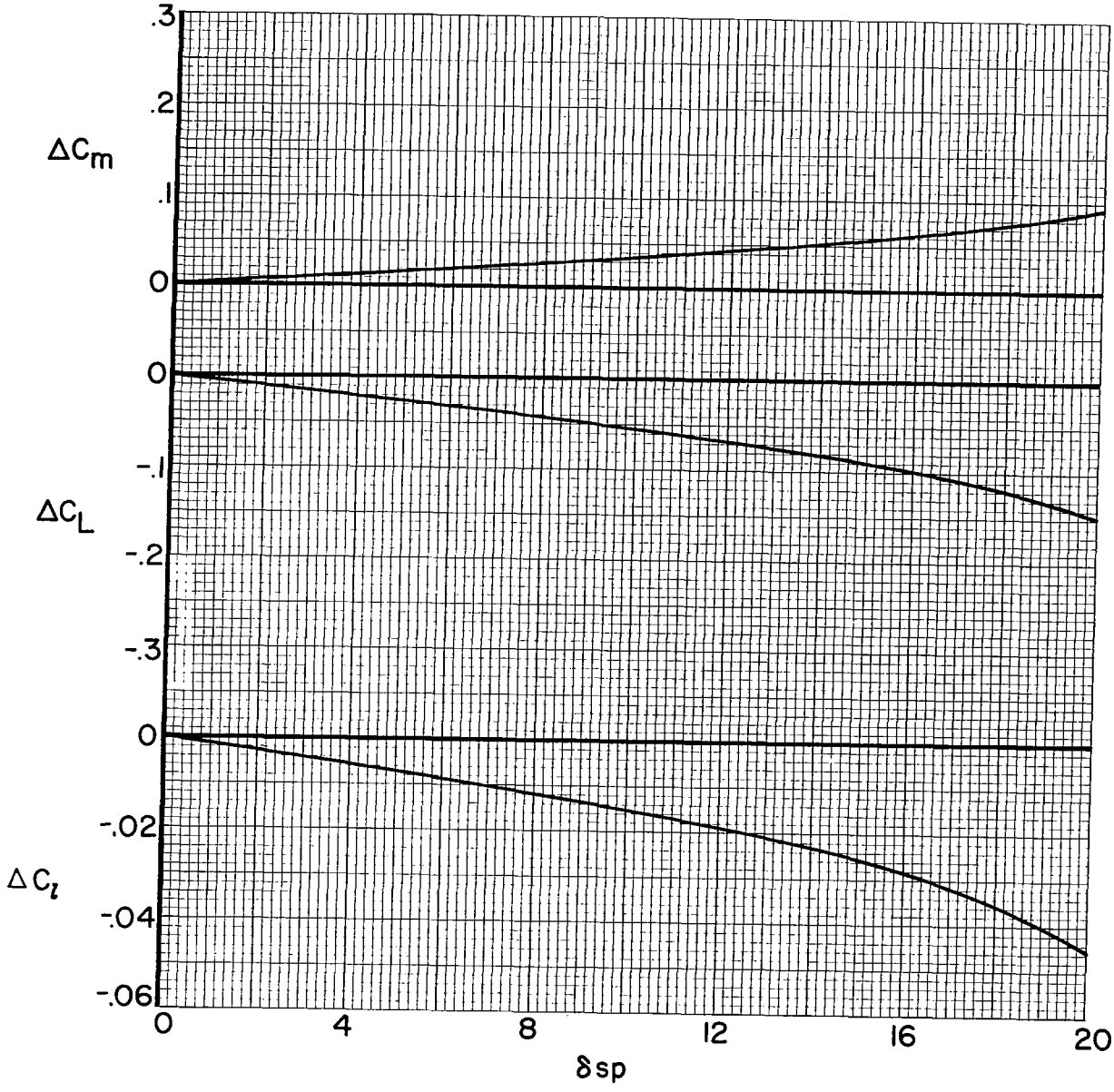
(a) Longitudinal data for full-span flap wing configuration with take-off flap setting and with left outboard roll-control spoiler deflected.

Figure 29.- Effect of left outboard spoiler deflections on longitudinal and lateral aerodynamic characteristics of full-span flap wing configurations. $R_{\bar{c}} = 1.63 \times 10^6$; $i_t = 0^o$.



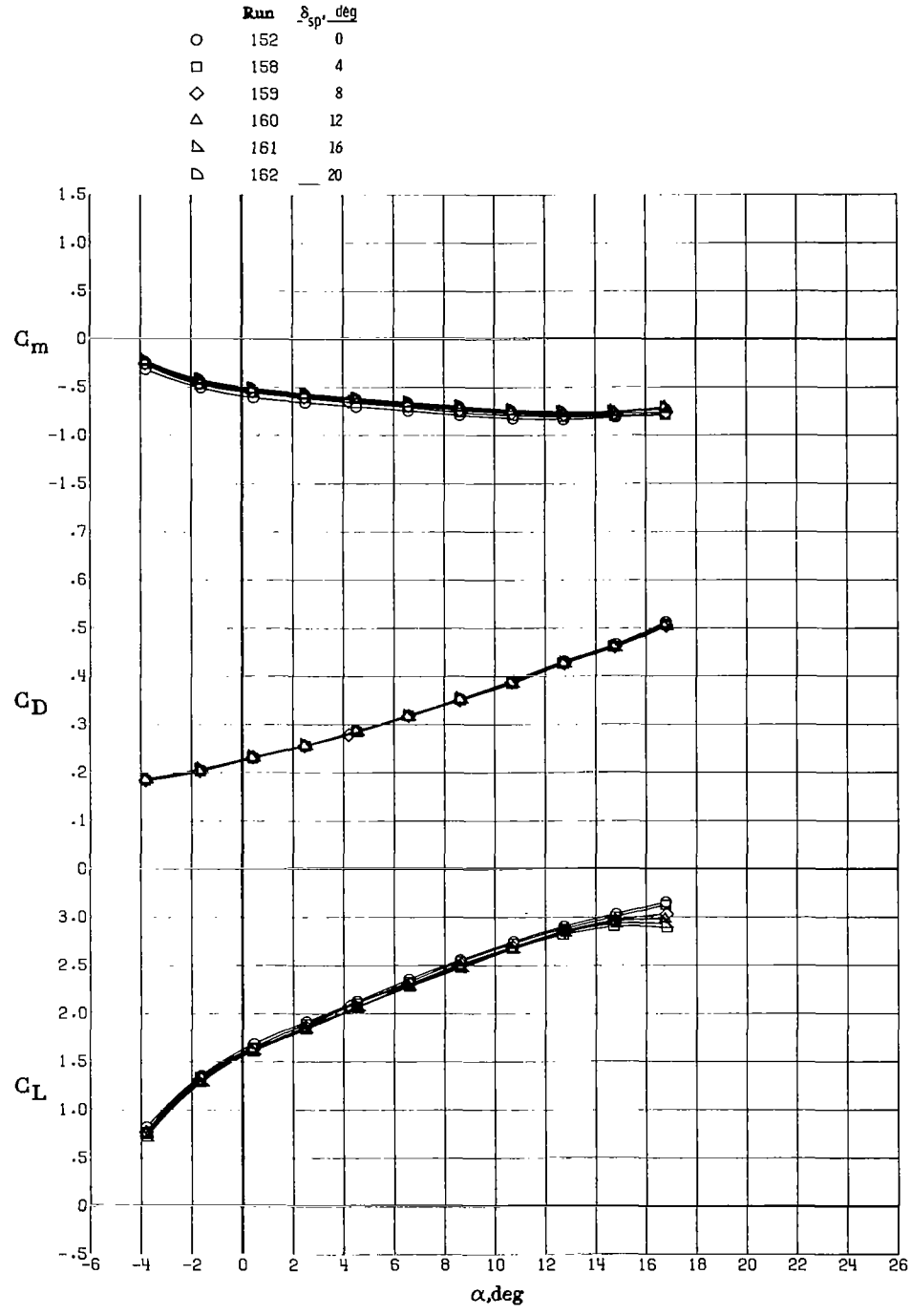
(b) Lateral data for full-span wing configuration with take-off flap setting and with left outboard roll-control spoiler deflected.

Figure 29.- Continued.



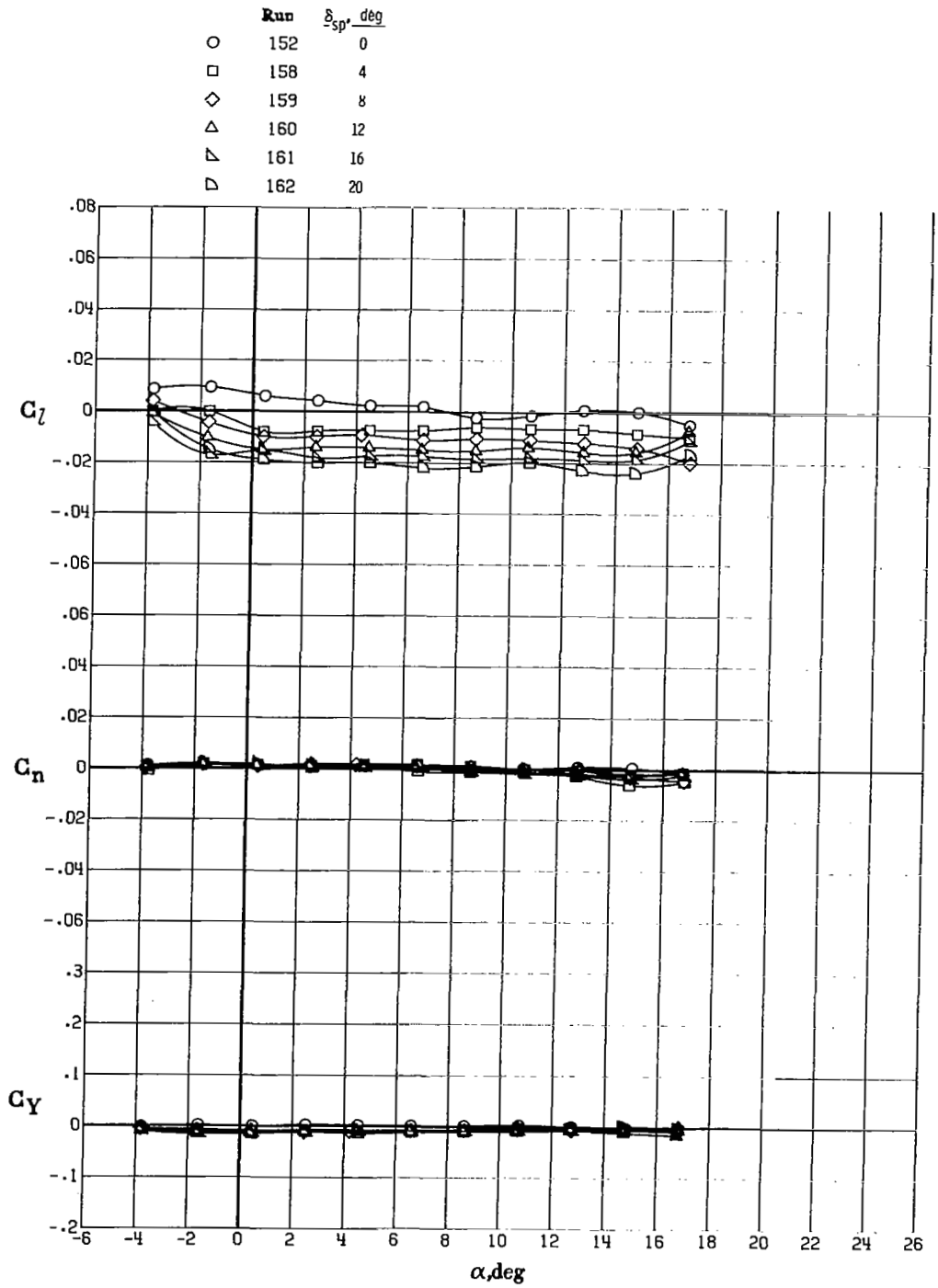
(c) Change in pitching-moment, lift, and rolling-moment coefficients versus left roll-control spoiler deflection for angle-of-attack range of -2° to 12°.

Figure 29.- Continued.



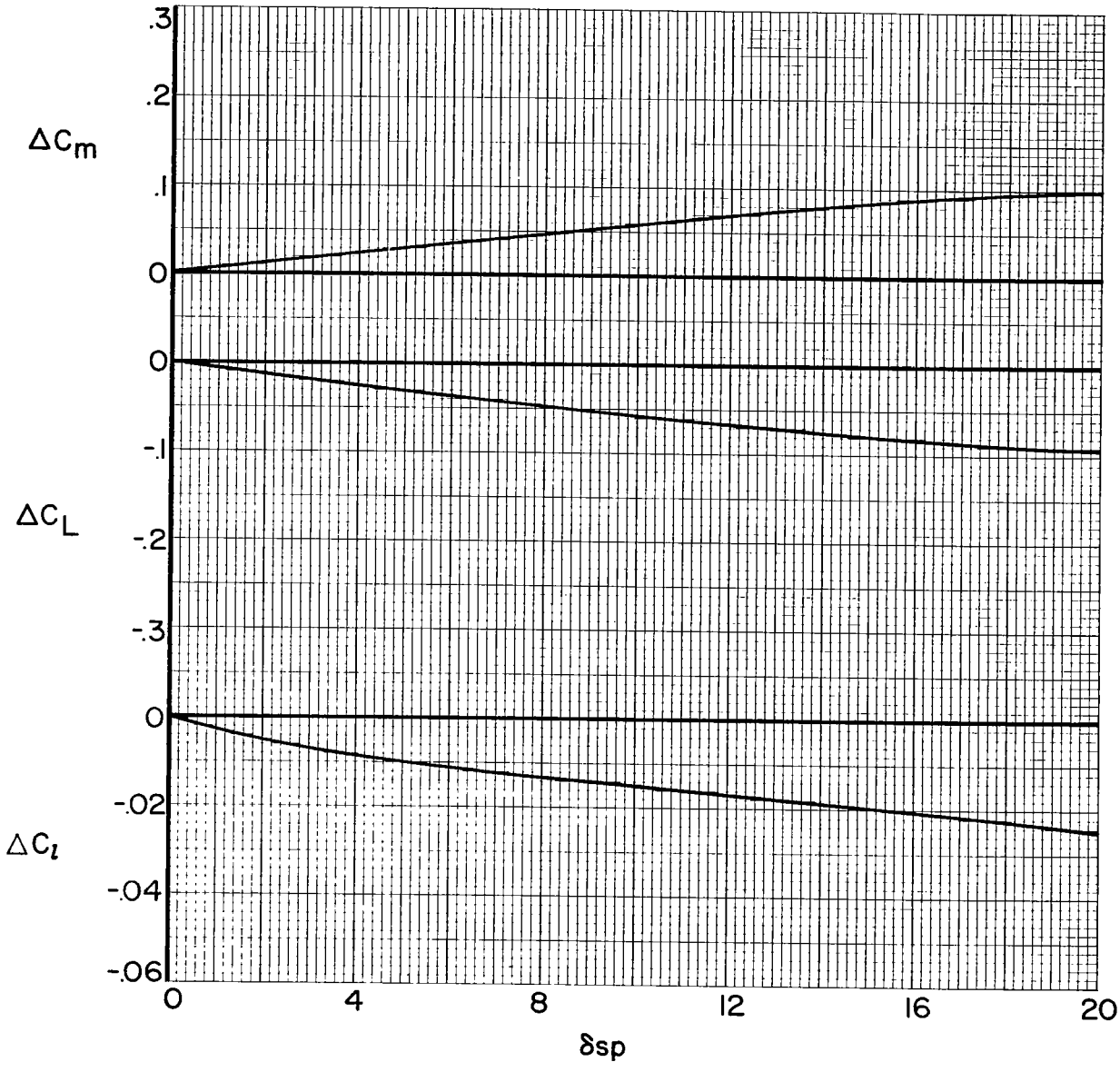
(d) Longitudinal data for full-span flap wing configuration with landing flap setting and with left outboard roll-control spoiler deflected.

Figure 29.- Continued.



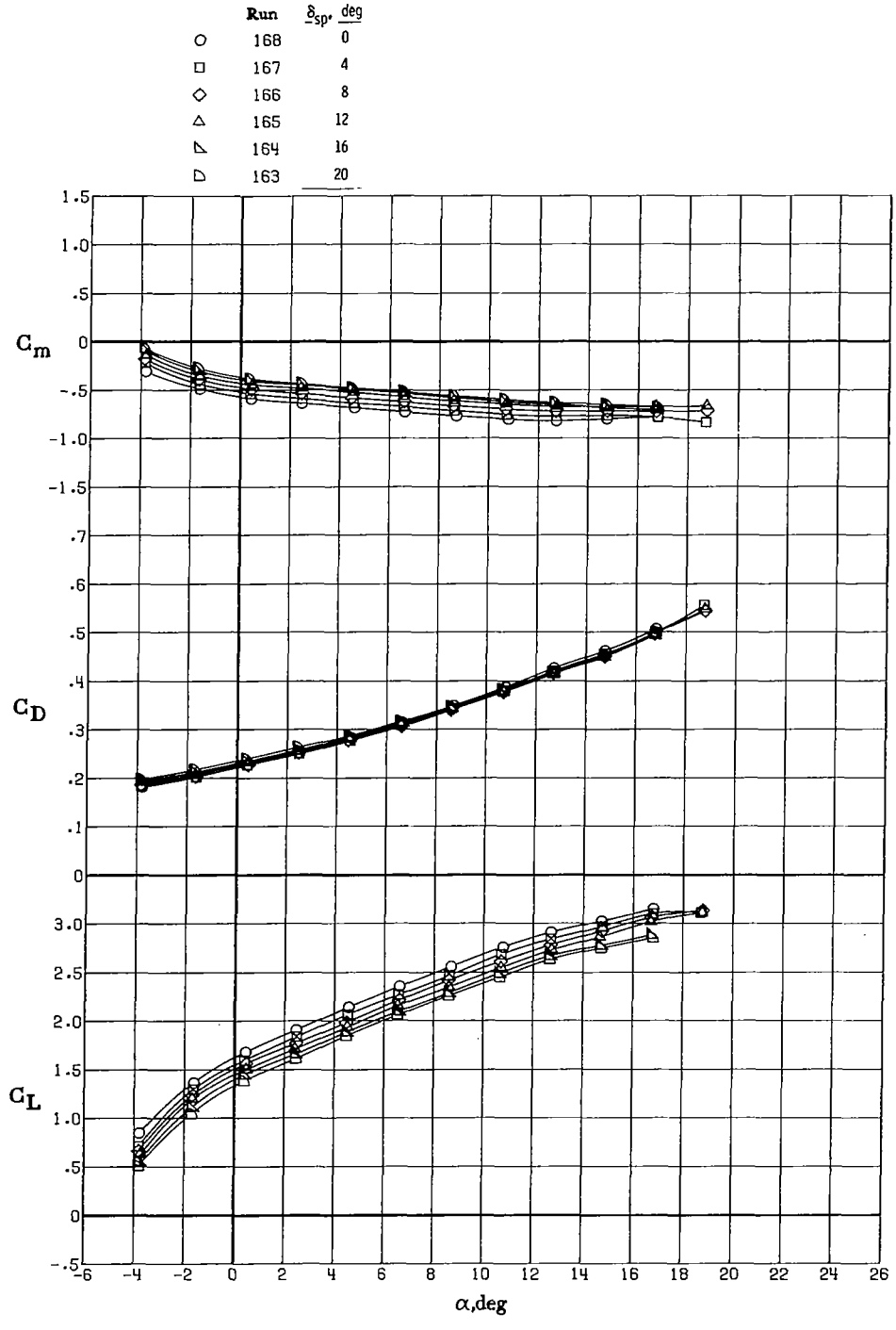
(e) Lateral data for full-span flap wing configuration with landing flap setting and with left outboard roll-control spoiler deflected.

Figure 29.- Continued.



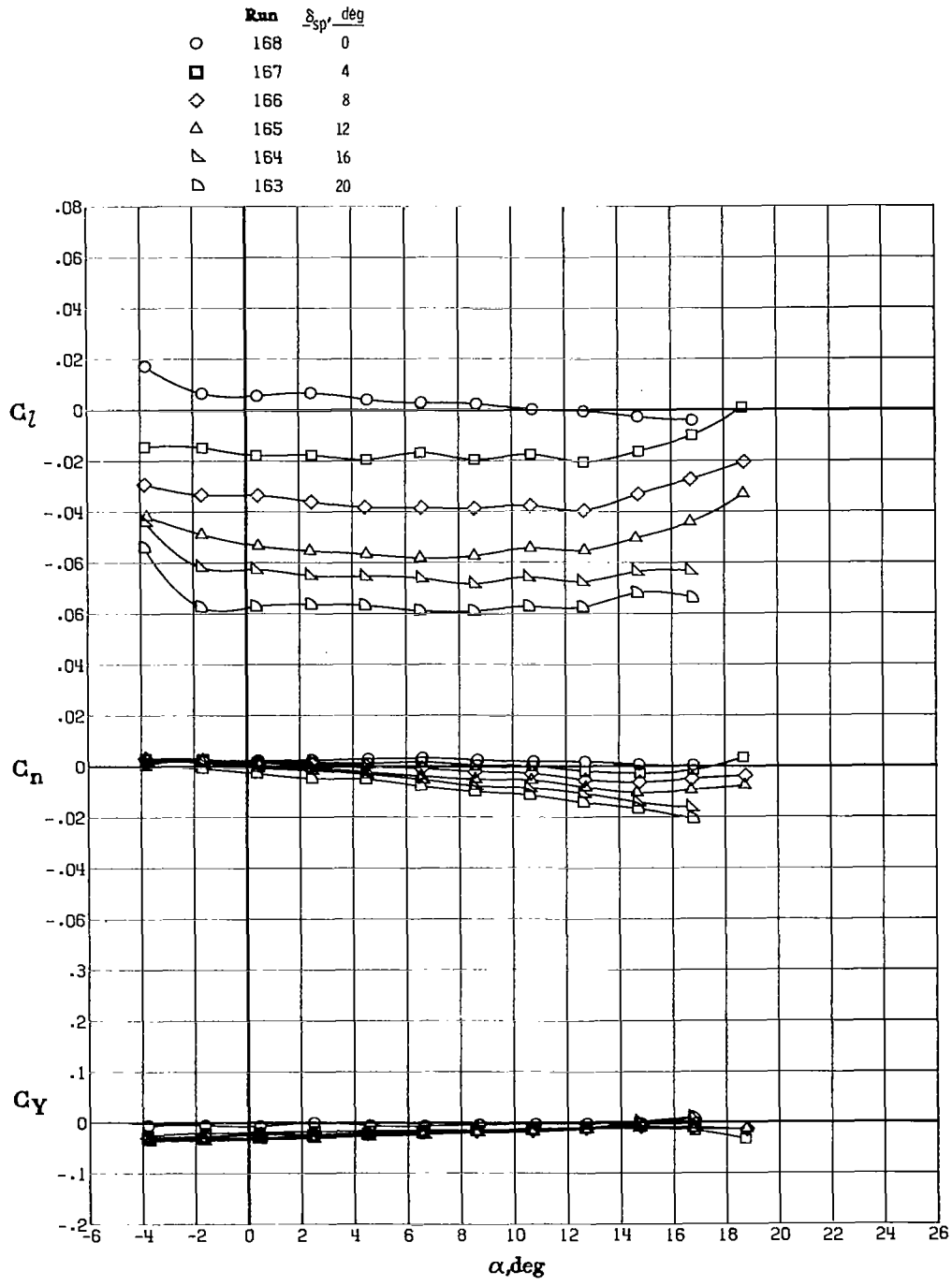
(f) Change in pitching-moment, lift, and rolling-moment coefficients versus left roll-control spoiler deflection for angle-of-attack range of -2° to 15°.

Figure 29.- Continued.



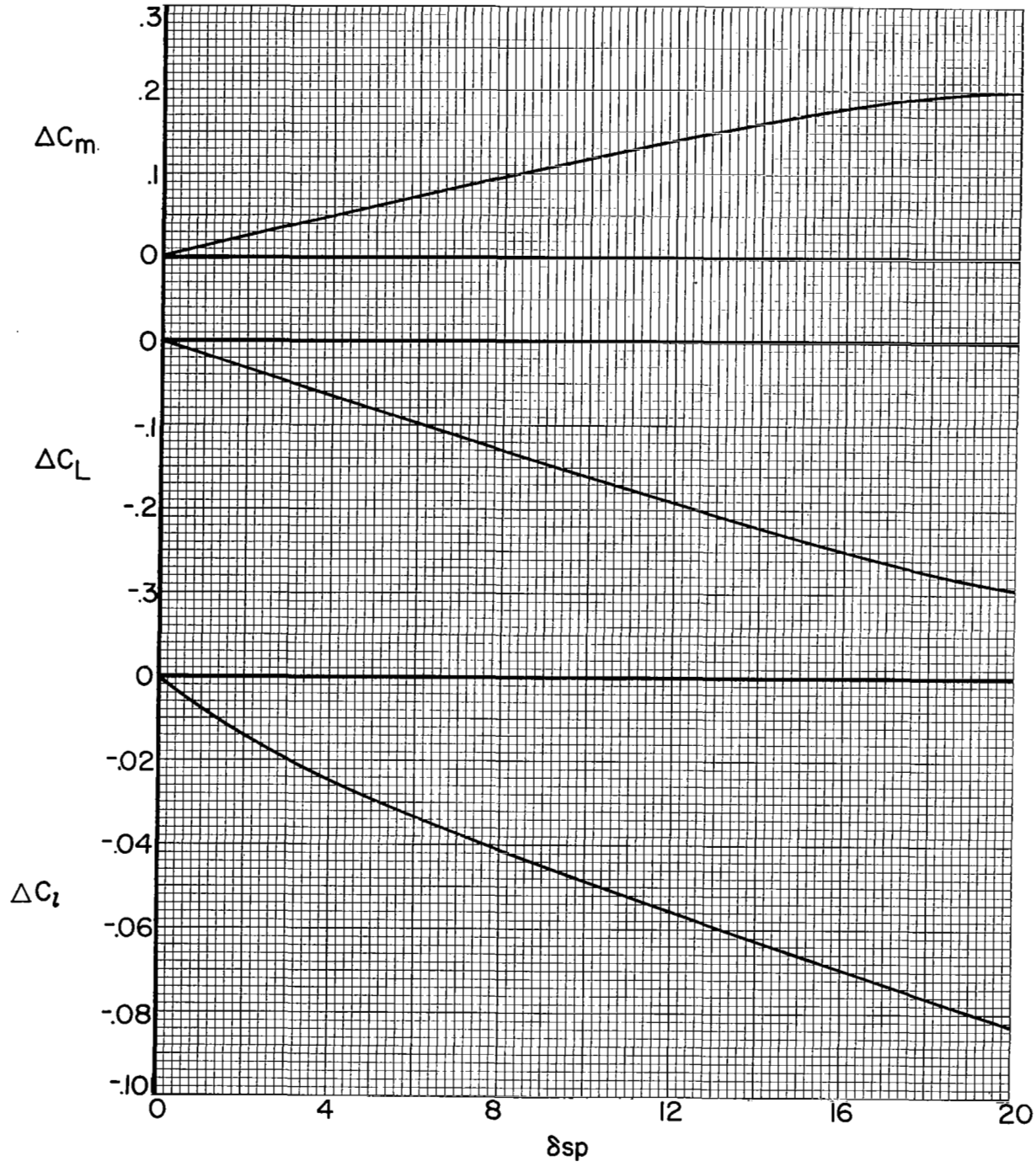
(g) Longitudinal data for full-span flap wing configuration with landing flap setting and with left outboard flight and roll-control spoilers deflected.

Figure 29.- Continued.



(h) Lateral data for full-span flap wing configuration with landing flap setting and with left outboard flight and roll-control spoilers deflected.

Figure 29.- Continued.



(i) Change in pitching-moment, lift, and rolling-moment coefficients versus left flight and roll-control spoiler deflection for angle-of-attack range of -2° to 15°.

Figure 29.- Concluded.

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA TP-1805		

4. Title and Subtitle	5. Report Date
LOW-SPEED AERODYNAMIC PERFORMANCE OF AN ASPECT-RATIO-10 SUPERCRITICAL-WING TRANSPORT MODEL EQUIPPED WITH A FULL-SPAN SLAT AND PART-SPAN AND FULL-SPAN DOUBLE-SLOTTED FLAPS	April 1981
	6. Performing Organization Code: 534-02-13-03
	8. Performing Organization Report No.: L-13825
7. Author(s): Harry L. Morgan, Jr.	10. Work Unit No.
9. Performing Organization Name and Address: NASA Langley Research Center, Hampton, VA 23665	11. Contract or Grant No.
	13. Type of Report and Period Covered: Technical Paper
12. Sponsoring Agency Name and Address: National Aeronautics and Space Administration, Washington, DC 20546	14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

An investigation was conducted in the Langley 4- by 7-Meter Tunnel to determine the static longitudinal and lateral-directional aerodynamic characteristics of an advanced aspect-ratio-10 supercritical-wing transport model equipped with a full-span leading-edge slat as well as part-span and full-span trailing-edge flaps. This wide-body transport model was also equipped with spoiler and aileron roll-control surfaces, flow-through nacelles, landing gear, and movable horizontal tails. Six basic wing configurations were tested: (1) cruise (slats and flaps nested), (2) climb (slats deflected and flaps nested), (3) part-span flap, (4) full-span flap, (5) full-span flap with low-speed ailerons, and (6) full-span flap with high-speed ailerons. Each of the four flapped wing configurations was tested with leading-edge slat and trailing-edge flaps deflected to settings representative of both take-off and landing conditions. Tests were conducted at free-stream conditions corresponding to Reynolds number of 0.97 to 1.63 $\times 10^6$ and corresponding Mach numbers of 0.12 to 0.20, through an angle-of-attack range of -4° to 24°, and a sideslip-angle range of -10° to 5°. The part- and full-span wing configurations were also tested in ground proximity.

17. Key Words (Suggested by Author(s))	18. Distribution Statement
High-aspect-ratio transport Supercritical wing High-lift flaps Low-speed performance Ground effects	FEDD Distribution Subject Category 02

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	180	

Available: NASA's Industrial Applications Center

NASA-Langley, 1981