

**NASA TECHNICAL
MEMORANDUM**

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**LOW-SPEED WIND-TUNNEL INVESTIGATION OF THE LONGITUDINAL
CHARACTERISTICS OF A LARGE-SCALE VARIABLE WING-SWEEP
FIGHTER MODEL IN THE HIGH-LIFT CONFIGURATION**

William T. Eckert and Ralph L. Maki

**Ames Research Center
and
U.S. Army Air Mobility R&D Laboratory
Moffett Field, Calif. 94035**

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NOTATION

Model dimensions and test data measurements were made in the U.S. Customary Units and equivalent information in the International System of Units (SI) was determined by using the appropriate conversion factors for those measurements presented in the text and in the figures.

b	span of wing
BETA	sideslip angle, deg
C	chord length of wing
\bar{C}	mean aerodynamic chord
C_D , CD	drag coefficient, D/qS
C_L , CL	lift coefficient, L/qS
C_M , CM	pitching-moment coefficient, $M/qS\bar{C}_w$
CN	yawing-moment coefficient, N/qSb
CR	rolling-moment coefficient, R/qSb
CY	side-force coefficient, Y/qS
D	drag
DLC	direct lift control (spoilers)
i_t , IT	horizontal tail incidence angle relative to fuselage centerline, deg
L	lift
M	pitching moment
N	yawing moment
PT	data point number
q, Q	free stream dynamic pressure, (lb/sq ft in tables)

R	rolling moment
R_N	Reynolds number
S	wing area
y	spanwise distance normal to fuselage centerline
Y	side force
α , ALPHA	wing angle of attack, deg
δ	surface deflection angle, deg
η	fraction of semispan, $y/b/2$

Subscripts

f	trailing-edge flaps
L	leading-edge slats
MOD	modified (blunted slat leading edge)
SB	speed brakes
SF	split flaps
t	horizontal tail
u	uncorrected
w	wing

Examples of Flap and DLC Deflection

- δ_f 35 trailing-edge flaps uniformly deflected to 35°
- δ_f 45/45/35 trailing-edge flaps deflected:
 inboard panels to 45°
 middle panels to 45°
 outboard panels to 35°
- δ_{DLC} -4.5 DLC uniformly in the stowed position
- δ_{DLC} 5 DLC middle panels deflected to 5° (neutral) with
 inboard and outboard panels at -4.5° (stowed)

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SUMMARY

The low-speed characteristics of a large-scale model of the U.S. Navy/Grumman F-14A aircraft were studied in tests conducted in the Ames Research Center 40- by 80-Foot Wind Tunnel. The primary purpose of the program was the determination of lift and stability levels and landing approach attitude of the aircraft in its high-lift configuration.

Tests were conducted at wing angles of attack between -2° and 30° with zero yaw. Data were taken at Reynolds numbers ranging from 3.48×10^6 to 9.64×10^6 based on a wing mean aerodynamic chord of 2.24 m (7.36 ft). The model configuration was changed as required to show the effects of glove slat, wing slat leading-edge radius, cold flow ducting, flap deflection, direct lift control (spoilers), horizontal tail, speed brake, landing gear and missiles.

INTRODUCTION

Carrier-based operations place stringent requirements on aircraft low-speed lift and stability levels to maintain acceptable approach speeds with adequate stability and maneuvering margins. The variable-sweep wing used in the F-14A design provides the advantages of low sweep and high aspect ratio to aid in meeting these low-speed requirements. However, the vortex flows arising from the highly swept fixed inboard wing area and the projecting sharp-edged nacelle inlets cannot be handled by existing low-speed theory. Further, the broad fuselage planform and close-coupled tails result in a vehicle configuration different from past experience. Thus, the effects of scale and of Reynolds number appeared subject to question in interpreting small-scale test results. To aid in the U.S. Navy/Grumman F-14A development program, therefore, the NASA built a 3/4-scale model of the vehicle for studies at low speeds in the Ames Research Center 40- by 80-Foot Wind Tunnel.

An extensive series of tests have been completed with the unpowered 3/4-scale model. This report presents the longitudinal characteristics extracted from the results of five separate test series. Most of the studies were made with the model in the high-lift configuration, i.e., with slats and flaps deflected. Vehicle design changes made during the course of these studies were incorporated into the model, and the effects are shown. Included are longitudinal control effectiveness (tail incidence and spoiler DLC), and the effects of stability improvement devices, speed brakes, landing gear, and external stores. The lateral-directional characteristics will be presented in a succeeding report.

MODEL DESCRIPTION

The F-14A model in the basic high-lift configuration installed in the NASA-Ames 40- by 80-Foot Wind Tunnel, is shown in figure 1. A three-view drawing and further model details are presented in figures 2 and 3. Dimensional data are given in table I.

Wing

The wing was formed by straight-line-element contouring of NACA 64A2XX series airfoil control sections from the fuselage centerline to 0.25 semispan, and again from there to the tip. The pertinent control sections, those defining the exposed wing area, were 9.5 percent thick at the pivot and 7.0 percent thick with added camber at the tip. Negative dihedral was introduced at the 0.25 station. The wing was fixed in the 20° sweep position.

The two-segment leading-edge slats were deflected uniformly for all high-lift configuration studies, and were retracted to form the clean wing (cruise configuration). Early in the test program (prior to run 3 of test 1) the slats were re-contoured with a larger leading-edge radius (see figure 3(a)); this contour was retained for all subsequent testing.

The trailing-edge flaps were unusual in that a single-slotted system was constructed with a fixed internal pivot. Spoilers extending to the shroud line were drooped 4.5° to optimize the slot gap at the design flap deflection of 35°. Tests with flap deflections other than 35° were made with no attempt to change the gaps and overhangs resulting from the fixed-pivot system. The one exception was for the undeflected flap case where the spoilers were set at 0°. With flaps undeflected, sheet metal covers were fitted to simulate the F-14A aircraft mechanism for closure of the wing lower surface slot openings with undeflected flaps. The flap actuator fairings installed for most tests were shaped to simulate the fairings which cover the flap actuators on the actual aircraft.

The wing was fitted with upper-surface spoilers which spanned the trailing-edge flaps, with a hinge line at 59 percent chord. With flaps deflected, all spoiler segments were drooped ($\delta_{DLC} = -4.5^\circ$) to provide a proper slot gap. This spoiler setting is referred to as the "stowed" condition. The spoiler segments inboard and outboard of the extreme flap actuator fairings were constrained to either 0° or -4.5° settings. Only the five segments between the several actuator fairings were used as spoilers, with settings from -4.5° to +20° provided. The spoilers were deflected symmetrically on the left and right wing panels as direct-lift-control (DLC) devices. A spoiler setting of +5° is referred to as the "neutral" configuration, about which setting $\pm\delta_{DLC}$ would be available. A foam rubber seal was installed below the spoilers aft of the hinge line (see figure 3(a)) to prevent leakage between the flap slot and the upper-surface flows at spoiler deflections from 0° to -4.5°. The seal was broken for settings greater than 0°.

The F-14A has a swing-out device designed for the highly-swept fixed-wing (glove) leading edge just inboard and forward of the variable-sweep panel root. This glove slat is a section of glove leading-edge pivoting on a fixed hinge which is tilted 11° from the vertical to provide reduced sweep and added deflection in this region of strong leading-edge vortex flow. For the subject model, a cambered plate with rounded leading-edge was attached to each glove to simulate the airplane glove slats (figure 3(b)).

To allow the wing to sweep to the 68° position on the F-14A aircraft a portion of the inboard end of the inboard flap panels must be tucked into the fuselage. In order to provide clearance a fuselage cavity was introduced in the side of the fuselage at the inboard flap zero-deflection position.

Engine Ducting

The two-dimensional engine inlets were located close to the fuselage with the upper-surface leading-edges (inlet lips) forward of the glove leading-edge, and were faired directly into the upper glove surface. The inlet capture area was 0.381 sq. m (4.1 sq ft) for each duct. The model was ducted for cold flow which exited through the exhaust nozzles at the rear of the fuselage. The nozzle exit area was 0.530 sq m (5.7 sq ft) for each duct. The inlet mass flow ratio admitted by the duct system was about 0.6.

Tails

Existing model tail panels with four-percent-thick biconvex sections were modified for use on this model. The F-14A planforms were correctly represented, and the leading edges were rounded to about 0.25 percent C radii to more closely match the actual aircraft sections. The vertical tails were canted outward 5° . The horizontal tails were pivoted about an axis perpendicular to the fuselage centerline. For some tests split flaps were mounted on the aft inboard corner of the upper surfaces (figure 3(e)).

Miscellaneous Equipment

Nose- and nacelle-mounted landing gear (figure 3(c) and (d)) were removable. The forward set of stores was modeled by a dog-leg pylon and a simulated missile attached under each wing at the wing/glove juncture (figure 3(b)). Speedbrakes were deflectable from upper and lower surfaces at the aft of the fuselage between the engine exhausts (figure 3(e)).

To facilitate the comparison of 3/4-scale data with 1/10-scale results, flap and slat bracket blockages were increased in some test runs to match as closely as possible the bracketry used in the small-scale testing.

Model Geometry Revisions

Several model modifications were made during the course of the test program to parallel design changes and to increase the accuracy of the simulation of the airplane. Examples of the former are the addition of the glove slats, the change of wing-slat deflection angle and the increase in slat leading-edge radius. Changes to improve the modeling accuracy included reworking the trailing-edge flap covers and the cover-to-spoiler seals during Test 1; and, between Tests 1 and 2, improving the slat contours at several areas, and making a small correction to the trailing-edge trim line.

The horizontal tail mounting system was strengthened between Tests 3 and 4. This required a slight recontouring of the empennage area to enclose the revised hardware in the tail booms and necessitated spacing the horizontal tail panels outward by about one percent span of the tail.

TEST PROCEDURE

Wing angle of attack was varied between nominal values of -2° and 30° at constant forward speed for selected model configurations. Data were taken at Reynolds numbers ranging from 3.48×10^6 to 9.64×10^6 , based on a wing mean aerodynamic chord of 2.24 m (7.36 ft), corresponding to nominal dynamic pressures of from 335 to 2394 N/sq m (7 to 50 lb/sq ft). The majority of the data were obtained at a dynamic pressure of about 1648 N/sq m (34.4 lb/sq ft) and a Reynolds number of 8.0×10^6 .

DATA REDUCTION

The force and pitching-moment coefficients presented in the tabulations and figures which follow are referenced to the wind axis system. The moment center was located at 16.2 percent wing mean aerodynamic chord.

Corrections

Standard corrections for wind-tunnel wall effects and strut tares were applied to the data as follows:

$$\alpha = \alpha_u + 0.604 C_{L_u}$$

$$C_D = C_{D_u} + 0.0106 C_{L_u}^2 - 0.0024$$

$$C_M = C_{M_u} + 0.0080 C_{L_u} - 0.0011$$

Moment corrections due to tunnel wall effects were applied to tail-on data only. The following tail-off correction was used:

$$C_M = C_{M_u} - 0.0011$$

Accuracy of Data

The data are accurate within the following limits which include errors due to data acquisition and reduction as well as the errors of the force measurement system itself.

Lift, N (lb) ± 44.4 (± 10.0)

Drag, N (lb) ± 13.3 (± 3.0)

Pitching moment, N-m (ft-lb)	± 217 (± 160)
Dynamic pressure, N/sq m (lb/sq ft)	± 9.6 (± 0.2)
Angle of attack, deg	± 0.1
Flap and tail deflections, deg	± 1

RESULTS

The basic force and moment data for all test conditions are presented in coefficient form in Parts B of tables II through VI. Parts A of the same tables are tabulation schedules showing the appropriate configuration arrangements for the tabulated data presented.

Standard Configuration

The basic model was configured to match as closely as possible the high-lift landing geometry of the F-14A aircraft. The plotted summary data (figures 4 through 15) assume the following standard configuration details, only the deviations from which will be noted:

$\delta_L = 17^\circ \text{ MOD}$, $\delta_f = 35^\circ$, $i_t = 0^\circ$, and $\delta_{\text{DLC}} = -4.5^\circ$;
glove slats and flap actuator fairings installed;
and without landing gear, pylons, missiles,
speed brakes, or tail split flaps.

Summary Figures

Selected longitudinal data showing the effects of various configuration changes are plotted in figures 4 through 15. A plotting schedule describing the model geometries for which data are shown in the summary plots is contained in table VII.

Due to the configuration-design updates (described in Model Geometry Revisions) made during this test program, the data from different wind-tunnel entries cannot be compared indiscriminately. The longitudinal data for the basic high-lift configuration were obtained with some differences in model detail and the results from the various tests are not in complete agreement as to exact slopes, non-linearities and magnitudes (see figure 4). For this reason the significance of the data lies in the incremental differences in the force and pitching-moment coefficients which resulted from the various model hardware exchanges within a given test. Taking into account all pertinent variables, the data most representative of the F-14A flight aircraft (and therefore the data to which incremental effects should be added) is that of Test 3, run 13, as shown in figure 5.

The effect of Reynolds number variation is presented in figure 6. Figure 7 shows the effect of adding the glove slat, and figure 8 shows the effect of increasing the leading-edge radius of the wing slat. The effect of cold-flow ducting is given in figure 9. Flap effectiveness, horizontal tail effectiveness and direct lift control effects are presented in figures 10, 11, and 12, respectively. Figure 13 shows the effect of upper and lower speed brake deflection. The effects of landing gear, missiles and missile pylons are given in figure 14. Figure 15 shows the effect of sealing the fuselage cavity at the root of the wing flaps.

TABLE I - MODEL DIMENSIONS

Fuselage overall length, m (ft)	14.11	(46.28)	
Glove			
Sweep angle, deg		68	
Pivot point location, m (ft) from nose	8.21	(26.95)	
Thickness at pivot ($\eta = 0.278$), m (ft)	0.33	(1.09)	
percent chord		10.2	
Wing			
Area, sq m (sq ft)	29.52	(317.8)	
Span, m (ft)	14.66	(48.10)	
Chord length, m (ft)			
mean aerodynamic ($\eta = 0.398$)	2.24	(7.36)	
root	3.19	(10.45)	
tip	0.84	(2.77)	
Leading-edge sweep angle, deg.		20	
Aspect ratio	7.28		
Taper ratio.	0.265		
Incidence angle of root chord relative to fuselage centerline, deg			
		-0.5	
Thickness-to-chord ratio ($\eta = 0.25$).			
	0.096		
($\eta = 1.0$)			
	0.070		
Dihedral from $\eta = 0.25$, deg.			
		-1.83	
Pivot location, spanwise, η			
	0.278		
Leading-edge slats			
	η	slat chord (% c)	gap at δ_L 17MOD (% c)
inboard	0.335	14.3	2.5
outboard	0.922	21.0	2.0
Trailing-edge flaps			
Chord, percent wing chord.			
			30
η inboard.			
	0.233		
η outboard			
	0.924		
Gap, percent wing chord			
			1.5
Overlap, percent wing chord.			
			2.0
Tail length ($\bar{c}_w/4$ to $\bar{c}_t/4$), m (ft)	4.13	(13.56)	

TABLE I - (Concluded)

Horizontal tails		
Number of panels.		2
Projected area per panel, sq m (sq ft).	3.71	(39.93)
Span (tip-to-tip) prior to Test 4, m (ft)	7.74	(24.50)
Chord length, m (ft)		
mean aerodynamic.	1.91	(6.28)
root (exposed)	2.68	(8.80)
tip	0.60	(1.98)
Leading-edge sweep angle, deg		50,5
Aspect ratio (per panel).	1.26	
Taper ratio	0.213	
Incidence pivot point location,		
percent tail root chord		52,5
Dihedral, deg		-3,5
Split flap area, sq m (sq ft)	0.21	(2.21)
Vertical tails		
Number of panels.		2
Projected area per panel, sq m (sq ft).	3.10	(33.34)
Height, m (ft)	1.95	(6.41)
Chord length, m (ft)		
mean aerodynamic.	1.70	(5.57)
root (exposed)	2.34	(7.69)
tip	1.14	(3.75)
Leading-edge sweep angle, deg		43
Outward cant from vertical, deg		5
Ventral fins		
Number of panels		2
Projected area per panel, sq m (sq ft).	0.55	(5.96)
Height, m (ft).	0.38	(1.25)
Length, m (ft).	2.52	(8.28)

TABLE II - PART A - TEST 1 TABULATION SCHEDULE

Run	q	α Range	Wing					Tail			Comments
			δf	δDLC	δL	Glove Slat	Flap Actuator Fairings	i _t	δ _{SB}	δ _{SF}	
1	51	-2→24	0	0	0	Off	Off	0	Off	Off	Clean Configuration
2	34.5	↓	35	-4.5	16°20'						
3		-2→30	↓		16°20' MOD						
4		↓	40/35/35								
5		↓	40/40/35			↓					
6		-2→25	↓			On					
7		-2→28	35								Fuselage Cavity Sealed
8		↓						↓			Horiz. Tail Root Gap Sealed
9		-2→26						-5			
10		↓						-10			
11		0						Variable			
12		10						↓			
13		-2→28						0		↓	Exhaust Nozzles Plugged
14		↓								45	
15		↓							↓	Off	
16		↓		↓					60		
17		-2→26		5					↓		
18		↓						↓	Off		
19	↓	↓	↓	↓	↓	↓	↓	5	↓	↓	

TABLE II - PART A - CONCLUDED.

Run	q	α Range	Wing					Tail			Comments
			δ_F	δ_{DLC}	δ_L	Glove Slat	Flap Actuator Fairings	i_t	δ_{SB}	δ_{SF}	
20	34.5	-2→26	35	5	16°20' MOD	On	Off	-5	Off	Off	
21		0						Variable			
22		10						↓		↓	
23		-2→26						0		45	
24				↓				Off		Off	
25				-4.5				↓			
26			↓				On				
27	↓	↓	25	↓	↓	↓	Off	↓	↓	↓	

TABLE II - PART B - TEST 1 DATA.

RUN 1										
PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-2.60	0.0	0.0	50.14	-0.1660	0.0378	0.1014	0.0016	-0.0017	-0.0015
2	-0.46	0.0	0.0	50.13	0.0689	0.0329	0.0816	0.0014	-0.0017	-0.0008
3	3.81	0.0	0.0	50.06	0.5068	0.0442	0.0457	0.0011	-0.0017	-0.0010
4	8.07	0.0	0.0	50.10	0.9490	0.0836	0.0138	0.0006	-0.0015	-0.0012
5	12.30	0.0	0.0	50.13	1.3308	0.1597	-0.0384	-0.0030	-0.0014	0.0020
6	16.40	0.0	0.0	50.04	1.4891	0.3633	-0.1058	0.0008	-0.0020	-0.0001
7	20.52	0.0	0.0	50.07	1.6905	0.5818	-0.1434	0.0047	-0.0021	-0.0071
8	22.57	0.0	0.0	50.07	1.7636	0.6942	-0.1370	0.0006	0.0010	-0.0025
9	24.61	0.0	0.0	49.94	1.8325	0.8093	-0.1798	0.0074	-0.0005	-0.0027

RUN 2										
PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.00	0.7806	0.1259	-0.0426	0.0090	-0.0028	-0.0024
2	0.60	0.0	0.0	33.99	0.9987	0.1364	-0.0705	0.0094	-0.0026	0.0072
3	4.87	0.0	0.0	33.96	1.4366	0.1773	-0.1155	0.0091	-0.0025	-0.0271
4	9.10	0.0	0.0	34.02	1.8238	0.2438	-0.1527	0.0088	-0.0028	-0.0043
5	11.19	0.0	0.0	33.89	1.9699	0.2884	-0.1592	0.0067	-0.0023	-0.0024
6	12.23	0.0	0.0	33.88	2.0429	0.3170	-0.1595	0.0070	-0.0014	-0.0017
7	13.27	0.0	0.0	34.00	2.1075	0.3468	-0.1645	0.0077	-0.0016	-0.0006
8	15.35	0.0	0.0	34.05	2.2334	0.4082	-0.2115	0.0055	-0.0016	0.0
9	17.42	0.0	0.0	33.88	2.3494	0.4891	-0.2230	0.0089	-0.0022	0.0296
10	19.47	0.0	0.0	33.76	2.4312	0.5931	-0.2163	0.0082	-0.0010	-0.0052
11	21.50	0.0	0.0	33.91	2.4808	0.7203	-0.2655	0.0056	-0.0007	-0.0064
12	22.51	0.0	0.0	34.03	2.4984	0.7909	-0.3175	0.0048	-0.0010	-0.0028
13	23.52	0.0	0.0	33.90	2.5235	0.8595	-0.3643	0.0051	-0.0007	-0.0389
14	24.52	0.0	0.0	33.93	2.5212	0.9229	-0.3238	-0.0003	0.0	0.0086
15	25.51	0.0	0.0	33.93	2.4919	1.0004	-0.3351	0.0026	0.0011	0.0030

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 3

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	33.90	0.7710	0.1262	-0.0381	0.0078	-0.0027	-0.0016
2	0.60	0.0	0.0	33.94	0.9917	0.1356	-0.0655	0.0082	-0.0029	-0.0035
3	4.86	0.0	0.0	33.93	1.4295	0.1754	-0.1088	0.0084	-0.0026	-0.0016
4	9.10	0.0	0.0	33.99	1.8149	0.2431	-0.1433	0.0087	-0.0020	0.0001
5	13.26	0.0	0.0	33.91	2.0903	0.3422	-0.1543	0.0076	-0.0013	-0.0023
6	15.34	0.0	0.0	33.97	2.2183	0.4055	-0.2013	0.0062	-0.0019	0.0042
7	17.42	0.0	0.0	33.79	2.3438	0.4873	-0.2154	0.0104	-0.0022	-0.0074
8	19.48	0.0	0.0	33.74	2.4438	0.5849	-0.2203	0.0062	-0.0009	-0.0090
9	21.50	0.0	0.0	33.86	2.4869	0.7128	-0.2804	0.0091	-0.0011	-0.0107
10	23.51	0.0	0.0	33.87	2.4962	0.8541	-0.3520	0.0204	-0.0032	-0.0547
11	24.52	0.0	0.0	33.95	2.5118	0.9218	-0.3233	0.0226	-0.0055	-0.0616
12	25.52	0.0	0.0	33.81	2.5087	0.9909	-0.3505	0.0230	-0.0058	-0.0301
13	27.51	0.0	0.0	33.65	2.5011	1.1358	-0.3500	0.0264	-0.0040	-0.0270
14	29.51	0.0	0.0	33.74	2.4969	1.2825	-0.3911	0.0370	-0.0025	-0.0182
15	31.50	0.0	0.0	33.89	2.4837	1.4335	-0.4412	0.0261	-0.0021	-0.0476

RUN 4

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	33.90	0.8042	0.1335	-0.0266	0.0111	-0.0027	-0.0017
2	0.62	0.0	0.0	33.89	1.0238	0.1432	-0.0500	0.0098	-0.0024	-0.0014
3	4.87	0.0	0.0	33.97	1.4414	0.1823	-0.1093	0.0099	-0.0025	-0.0010
4	9.11	0.0	0.0	33.70	1.8427	0.2485	-0.1403	0.0089	-0.0023	-0.0005
5	13.26	0.0	0.0	33.79	2.0943	0.3453	-0.1593	0.0063	-0.0017	0.0044
6	15.34	0.0	0.0	33.87	2.2157	0.4088	-0.1979	0.0071	-0.0014	0.0032
7	17.41	0.0	0.0	33.89	2.3398	0.4910	-0.2079	0.0112	-0.0020	0.0011
8	19.47	0.0	0.0	33.99	2.4377	0.5905	-0.2160	0.0063	-0.0005	-0.0090
9	21.50	0.0	0.0	33.75	2.4849	0.7171	-0.2587	0.0092	-0.0011	-0.0112
10	23.50	0.0	0.0	33.84	2.4862	0.8565	-0.3312	0.0229	-0.0032	-0.0319
11	24.52	0.0	0.0	33.80	2.5196	0.9277	-0.3094	0.0229	-0.0049	-0.0330
12	25.51	0.0	0.0	33.77	2.4998	0.9902	-0.3129	0.0199	-0.0052	-0.0262
13	27.51	0.0	0.0	33.86	2.4957	1.1390	-0.3285	0.0238	-0.0042	-0.0603
14	29.50	0.0	0.0	34.09	2.4869	1.2818	-0.3897	0.0329	-0.0042	-0.0482
15	31.49	0.0	0.0	33.61	2.4717	1.4347	-0.4281	0.0328	-0.0021	-0.0213

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 5

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	34.00	0.7991	0.1419	-0.0241	0.0100	-0.0028	-0.0020
2	0.61	0.0	0.0	34.03	1.0055	0.1508	-0.0463	0.0087	-0.0023	0.0001
3	4.86	0.0	0.0	33.94	1.4219	0.1894	-0.0872	0.0076	-0.0026	0.0029
4	9.09	0.0	0.0	33.91	1.8043	0.2519	-0.1204	0.0075	-0.0024	-0.0219
5	11.19	0.0	0.0	33.91	1.9696	0.2982	-0.1348	0.0070	-0.0023	0.0145
6	12.23	0.0	0.0	33.82	2.0445	0.3269	-0.1399	0.0078	-0.0019	-0.0230
7	13.27	0.0	0.0	33.91	2.0991	0.3554	-0.1587	0.0082	-0.0020	0.0026
8	15.35	0.0	0.0	34.03	2.2324	0.4186	-0.1982	0.0077	-0.0017	-0.0147
9	17.42	0.0	0.0	34.07	2.3558	0.5001	-0.2074	0.0106	-0.0023	-0.0084
10	19.49	0.0	0.0	33.97	2.4612	0.6016	-0.2125	0.0055	-0.0012	-0.0346
11	21.51	0.0	0.0	33.89	2.5059	0.7251	-0.2742	0.0056	-0.0006	-0.0072
12	22.52	0.0	0.0	33.93	2.5084	0.7966	-0.2962	0.0134	-0.0012	-0.0394
13	23.52	0.0	0.0	33.92	2.5115	0.8696	-0.3258	0.0151	-0.0034	-0.0149
14	24.53	0.0	0.0	34.15	2.5296	0.9355	-0.3168	0.0149	-0.0036	-0.0300
15	25.51	0.0	0.0	34.16	2.5072	1.0017	-0.3076	0.0134	-0.0027	-0.0411
16	26.52	0.0	0.0	33.81	2.5196	1.0779	-0.3337	0.0159	-0.0024	-0.0116
17	27.52	0.0	0.0	34.19	2.5202	1.1500	-0.3523	0.0102	-0.0038	-0.0209

RUN 6

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.50	0.0	0.0	33.81	0.8214	0.1444	-0.0200	0.0058	-0.0021	0.0005
2	0.62	0.0	0.0	33.96	1.0342	0.1546	-0.0407	0.0062	-0.0019	0.0028
3	2.75	0.0	0.0	33.83	1.2454	0.1703	-0.0630	0.0066	-0.0022	0.0032
4	4.87	0.0	0.0	33.87	1.4425	0.1929	-0.0731	0.0067	-0.0024	0.0029
5	6.99	0.0	0.0	33.89	1.6390	0.2224	-0.0804	0.0087	-0.0024	-0.0175
6	9.10	0.0	0.0	33.90	1.8207	0.2574	-0.0751	0.0092	-0.0023	0.0008
7	11.21	0.0	0.0	33.69	2.0050	0.3003	-0.0847	0.0072	-0.0017	-0.0201
8	12.26	0.0	0.0	33.97	2.0870	0.3265	-0.0987	0.0098	-0.0019	0.0008
9	13.31	0.0	0.0	33.96	2.1726	0.3544	-0.1315	0.0102	-0.0021	-0.0051
10	15.40	0.0	0.0	33.98	2.3244	0.4160	-0.1484	0.0084	-0.0017	0.0012
11	17.47	0.0	0.0	33.96	2.4395	0.4927	-0.1692	0.0115	-0.0027	-0.0070
12	19.53	0.0	0.0	33.77	2.5320	0.5895	-0.1736	0.0105	-0.0027	-0.0449
13	21.55	0.0	0.0	33.78	2.5618	0.6980	-0.1790	0.0102	-0.0019	-0.0154
14	22.54	0.0	0.0	33.61	2.5525	0.7639	-0.2098	0.0188	-0.0029	-0.0715
15	24.55	0.0	0.0	33.89	2.5657	0.8969	-0.2482	0.0182	-0.0052	-0.0282
16	26.54	0.0	0.0	33.97	2.5509	1.0440	-0.2670	0.0190	-0.0033	-0.0211

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 7

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	33.86	0.8128	0.1308	-0.0334	0.0126	-0.0030	-0.0027
2	0.63	0.0	0.0	33.92	1.0369	0.1416	-0.0593	0.0105	-0.0024	-0.0416
3	4.88	0.0	0.0	33.90	1.4633	0.1844	-0.0955	0.0108	-0.0023	-0.0028
4	9.12	0.0	0.0	33.78	1.8603	0.2516	-0.1130	0.0110	-0.0021	-0.0016
5	13.31	0.0	0.0	33.77	2.1715	0.3466	-0.1367	0.0116	-0.0018	-0.0011
6	15.40	0.0	0.0	33.84	2.3097	0.4053	-0.1552	0.0096	-0.0020	-0.0048
7	17.47	0.0	0.0	33.84	2.4275	0.4795	-0.1807	0.0111	-0.0029	-0.0106
8	19.52	0.0	0.0	33.74	2.5231	0.5777	-0.1785	0.0109	-0.0021	-0.0071
9	21.56	0.0	0.0	33.83	2.5781	0.6866	-0.1987	0.0103	-0.0014	-0.0100
10	23.54	0.0	0.0	33.68	2.5518	0.8137	-0.2655	0.0230	-0.0039	-0.0448
11	25.55	0.0	0.0	33.75	2.5735	0.9482	-0.2860	0.0227	-0.0047	-0.0356
12	27.55	0.0	0.0	33.78	2.5743	1.0998	-0.3084	0.0207	-0.0034	-0.0160
13	29.54	0.0	0.0	33.71	2.5532	1.2555	-0.3522	0.0285	-0.0046	-0.0230

RUN 8

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.54	0.0	0.0	34.03	0.7562	0.1264	-0.0400	0.0134	-0.0029	-0.0051
2	0.59	0.0	0.0	33.57	0.9758	0.1353	-0.0807	0.0117	-0.0026	-0.0068
3	-1.54	0.0	0.0	33.94	0.7559	0.1266	-0.0372	0.0122	-0.0029	-0.0040
4	0.59	0.0	0.0	33.89	0.9825	0.1363	-0.0720	0.0119	-0.0026	-0.0038
5	2.73	0.0	0.0	34.06	1.2104	0.1538	-0.0925	0.0107	-0.0026	-0.0037
6	4.86	0.0	0.0	33.97	1.4231	0.1779	-0.1058	0.0113	-0.0024	-0.0038
7	6.97	0.0	0.0	33.99	1.6007	0.2084	-0.1866	0.0106	-0.0020	-0.0031
8	9.09	0.0	0.0	33.98	1.8096	0.2449	-0.1320	0.0094	-0.0015	-0.0065
9	11.20	0.0	0.0	34.01	1.9882	0.2888	-0.1401	0.0083	-0.0014	-0.0035
10	13.29	0.0	0.0	33.92	2.1342	0.3404	-0.1575	0.0093	-0.0014	-0.0016
11	15.38	0.0	0.0	33.80	2.2783	0.3990	-0.1833	0.0080	-0.0011	-0.0046
12	19.52	0.0	0.0	33.94	2.5089	0.5792	-0.2023	0.0108	-0.0018	-0.0260
13	21.55	0.0	0.0	33.87	2.5651	0.6788	-0.2044	0.0111	-0.0011	-0.0314
14	23.54	0.0	0.0	34.16	2.5417	0.8158	-0.2732	0.0216	-0.0048	-0.0279
15	25.55	0.0	0.0	34.01	2.5634	0.9520	-0.2852	0.0190	-0.0068	-0.0271
16	27.55	0.0	0.0	33.88	2.5583	1.1011	-0.3084	0.0181	-0.0044	-0.0301
17	29.53	0.0	0.0	33.80	2.5372	1.2534	-0.3413	0.0270	-0.0041	-0.0237

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 9

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.59	0.0	-5.0	33.84	0.6866	0.1459	0.0783	0.0089	-0.0022	-0.0021
2	0.54	0.0	-5.0	34.03	0.8999	0.1507	0.0538	0.0105	-0.0023	-0.0013
3	2.68	0.0	-5.0	34.03	1.1323	0.1633	0.0358	0.0086	-0.0021	-0.0059
4	4.82	0.0	-5.0	33.97	1.3574	0.1847	0.0083	0.0087	-0.0017	-0.0312
5	6.93	0.0	-5.0	33.77	1.5372	0.2113	-0.0415	0.0082	-0.0018	0.0005
6	9.06	0.0	-5.0	33.87	1.7512	0.2434	-0.0261	0.0098	-0.0021	0.0005
7	11.17	0.0	-5.0	33.73	1.9328	0.2832	-0.0497	0.0054	-0.0013	0.0020
8	12.22	0.0	-5.0	33.96	2.0147	0.3053	-0.0527	0.0079	-0.0014	0.0011
9	13.26	0.0	-5.0	33.88	2.0822	0.3305	-0.0701	0.0068	-0.0011	-0.0009
10	15.35	0.0	-5.0	33.73	2.2262	0.3855	-0.0877	0.0065	-0.0021	0.0025
11	17.41	0.0	-5.0	33.72	2.3327	0.4572	-0.0892	0.0043	-0.0007	0.0138
12	19.47	0.0	-5.0	33.82	2.4389	0.5478	-0.0893	0.0100	-0.0014	-0.0059
13	21.51	0.0	-5.0	33.87	2.5045	0.6475	-0.1058	0.0081	-0.0008	-0.0456
14	23.51	0.0	-5.0	33.80	2.4963	0.7800	-0.1632	0.0228	-0.0040	-0.0193
15	25.52	0.0	-5.0	34.11	2.5108	0.9099	-0.2183	0.0225	-0.0072	-0.0143
16	27.52	0.0	-5.0	33.93	2.5154	1.0563	-0.2423	0.0225	-0.0049	-0.0240

RUN 10

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.64	0.0	-10.0	34.00	0.6016	0.1726	0.1813	0.0088	-0.0018	-0.0011
2	0.49	0.0	-10.0	33.97	0.8195	0.1729	0.1585	0.0089	-0.0018	-0.0003
3	2.63	0.0	-10.0	34.06	1.0442	0.1805	0.1413	0.0069	-0.0013	0.0013
4	4.76	0.0	-10.0	34.16	1.2509	0.1971	0.1269	0.0078	-0.0012	0.0018
5	6.87	0.0	-10.0	34.04	1.4419	0.2181	0.0758	0.0059	-0.0010	0.0021
6	8.99	0.0	-10.0	34.01	1.6419	0.2455	0.0999	0.0071	-0.0013	-0.0016
7	11.11	0.0	-10.0	33.94	1.8295	0.2790	0.0717	0.0075	-0.0015	-0.0237
8	12.16	0.0	-10.0	34.02	1.9190	0.2987	0.0602	0.0073	-0.0013	0.0022
9	13.20	0.0	-10.0	33.88	1.9905	0.3210	0.0389	0.0072	-0.0012	0.0004
10	15.29	0.0	-10.0	33.85	2.1428	0.3705	0.0104	0.0061	-0.0017	0.0113
11	17.36	0.0	-10.0	33.79	2.2472	0.4379	0.0171	0.0058	-0.0014	0.0016
12	19.42	0.0	-10.0	34.00	2.3451	0.5211	0.0198	0.0091	-0.0015	-0.0032
13	21.46	0.0	-10.0	33.92	2.4116	0.6148	-0.0004	0.0089	-0.0007	-0.0054
14	23.46	0.0	-10.0	33.98	2.4102	0.7377	-0.0609	0.0206	-0.0041	-0.0214
15	25.46	0.0	-10.0	34.00	2.4203	0.8596	-0.1296	0.0225	-0.0058	-0.0355
16	27.47	0.0	-10.0	33.96	2.4315	1.0015	-0.1309	0.0148	-0.0055	-0.0269

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 11

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	0.72	0.0	10.0	34.03	1.1955	0.1426	-0.3589	0.0127	-0.0029	-0.0016
2	0.67	0.0	5.0	33.95	1.1030	0.1350	-0.2275	0.0106	-0.0023	0.0071
3	0.60	0.0	0.0	33.86	1.0016	0.1374	-0.0877	0.0100	-0.0020	-0.0022
4	0.54	0.0	-5.0	33.92	0.8947	0.1505	0.0632	0.0095	-0.0018	-0.0003
5	0.50	0.0	-10.0	33.84	0.8229	0.1715	0.1551	0.0105	-0.0019	-0.0004
6	0.46	0.0	-15.0	34.02	0.7574	0.2000	0.2431	0.0094	-0.0016	-0.0011
7	0.43	0.0	-20.0	33.95	0.7056	0.2322	0.2977	0.0100	-0.0020	-0.0020

RUN 12

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	11.29	0.0	10.0	34.05	2.1394	0.3326	-0.3730	0.0075	-0.0017	0.0012
2	11.25	0.0	5.0	34.03	2.0620	0.3054	-0.2395	0.0091	-0.0019	0.0005
3	11.20	0.0	0.0	34.00	1.9907	0.2902	-0.1436	0.0082	-0.0018	-0.0190
4	11.16	0.0	-5.0	34.01	1.9212	0.2793	-0.0443	0.0090	-0.0017	-0.0197
5	11.11	0.0	-10.0	33.85	1.8355	0.2770	0.0659	0.0090	-0.0019	0.0014
6	11.06	0.0	-15.0	33.84	1.7580	0.2834	0.1674	0.0095	-0.0016	0.0026
7	11.02	0.0	-20.0	34.01	1.6911	0.2959	0.2366	0.0073	-0.0013	0.0118

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 13

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	33.77	0.7895	0.1335	-0.0525	0.0098	-0.0027	-0.0023
2	0.61	0.0	0.0	33.85	1.0150	0.1442	-0.0797	0.0091	-0.0023	-0.0012
3	2.75	0.0	0.0	33.92	1.2383	0.1627	-0.1020	0.0093	-0.0022	-0.0004
4	4.88	0.0	0.0	33.79	1.4568	0.1900	-0.1199	0.0085	-0.0021	0.0005
5	7.00	0.0	0.0	33.76	1.6570	0.2217	-0.1317	0.0095	-0.0021	0.0007
6	9.10	0.0	0.0	33.66	1.8277	0.2560	-0.1465	0.0084	-0.0017	0.0017
7	11.19	0.0	0.0	33.81	1.9783	0.2987	-0.1561	0.0056	-0.0012	0.0028
8	13.28	0.0	0.0	33.79	2.1121	0.3475	-0.1843	0.0083	-0.0020	0.0013
9	15.37	0.0	0.0	33.67	2.2671	0.4137	-0.2030	0.0069	-0.0017	0.0016
10	17.45	0.0	0.0	33.78	2.3937	0.4938	-0.2133	0.0113	-0.0029	-0.0085
11	19.51	0.0	0.0	33.75	2.5002	0.5929	-0.2025	0.0102	-0.0016	-0.0025
12	21.54	0.0	0.0	33.77	2.5507	0.6950	-0.2073	0.0122	-0.0015	-0.0118
13	23.52	0.0	0.0	33.67	2.5248	0.8216	-0.2693	0.0212	-0.0049	-0.0285
14	25.54	0.0	0.0	33.64	2.5434	0.9541	-0.2703	0.0180	-0.0059	-0.0265
15	27.53	0.0	0.0	33.82	2.5323	1.0976	-0.2807	0.0165	-0.0054	-0.0216
16	29.52	0.0	0.0	33.72	2.5133	1.2543	-0.3349	0.0220	-0.0051	-0.0193

RUN 14

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.57	0.0	0.0	34.01	0.7046	0.1374	0.0572	0.0096	-0.0026	-0.0014
2	0.56	0.0	0.0	33.81	0.9293	0.1451	0.0233	0.0101	-0.0022	-0.0007
3	2.70	0.0	0.0	33.82	1.1621	0.1603	-0.0042	0.0077	-0.0019	0.0005
4	4.83	0.0	0.0	33.93	1.3752	0.1835	-0.0363	0.0076	-0.0015	0.0014
5	6.96	0.0	0.0	33.90	1.5846	0.2121	-0.0829	0.0076	-0.0018	0.0008
6	9.08	0.0	0.0	33.86	1.7854	0.2465	-0.0830	0.0072	-0.0015	0.0010
7	11.19	0.0	0.0	33.75	1.9670	0.2907	-0.1029	0.0073	-0.0016	0.0022
8	13.28	0.0	0.0	33.68	2.1213	0.3421	-0.1334	0.0079	-0.0010	0.0023
9	15.36	0.0	0.0	33.89	2.2599	0.3987	-0.1534	0.0066	-0.0014	0.0004
10	17.43	0.0	0.0	33.76	2.3689	0.4810	-0.1500	0.0062	-0.0009	0.0026
11	19.49	0.0	0.0	33.77	2.4750	0.5742	-0.1525	0.0087	-0.0011	-0.0017
12	21.52	0.0	0.0	33.91	2.5236	0.6776	-0.1483	0.0112	-0.0011	-0.0120
13	23.52	0.0	0.0	33.85	2.5210	0.8122	-0.2399	0.0211	-0.0039	-0.0286
14	25.53	0.0	0.0	33.86	2.5337	0.9491	-0.2557	0.0166	-0.0058	-0.0245
15	27.53	0.0	0.0	33.63	2.5372	1.0916	-0.2770	0.0165	-0.0042	-0.0217
16	29.53	0.0	0.0	33.88	2.5301	1.2527	-0.3128	0.0246	-0.0044	-0.0200
17	6.95	0.0	0.0	33.76	1.5672	0.2110	-0.1241	0.0077	-0.0017	0.0015

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 15

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	33.80	0.7771	0.1273	-0.0571	0.0085	-0.0019	-0.0022
2	0.60	0.0	0.0	33.85	0.9967	0.1371	-0.0856	0.0103	-0.0021	-0.0029
3	2.74	0.0	0.0	33.84	1.2224	0.1551	-0.1115	0.0082	-0.0021	-0.0025
4	4.87	0.0	0.0	33.98	1.4411	0.1808	-0.1196	0.0090	-0.0019	-0.0022
5	6.99	0.0	0.0	33.85	1.6326	0.2119	-0.1578	0.0086	-0.0016	-0.0016
6	9.10	0.0	0.0	33.88	1.8215	0.2471	-0.1409	0.0071	-0.0013	-0.0005
7	11.20	0.0	0.0	33.88	1.9944	0.2906	-0.1456	0.0071	-0.0013	-0.0004
8	12.25	0.0	0.0	33.80	2.0656	0.3142	-0.1458	0.0051	-0.0002	0.0006
9	13.29	0.0	0.0	33.75	2.1320	0.3408	-0.1585	0.0071	-0.0007	-0.0005
10	15.38	0.0	0.0	33.83	2.2772	0.3999	-0.1785	0.0075	-0.0012	-0.0020
11	17.45	0.0	0.0	33.82	2.4089	0.4780	-0.1998	0.0106	-0.0020	-0.0081
12	19.51	0.0	0.0	34.12	2.5060	0.5787	-0.1988	0.0089	-0.0011	-0.0037
13	21.55	0.0	0.0	34.03	2.5629	0.6807	-0.2049	0.0097	-0.0007	-0.0102
14	23.54	0.0	0.0	33.85	2.5530	0.8140	-0.2537	0.0224	-0.0032	-0.0284
15	25.55	0.0	0.0	33.82	2.5605	0.9459	-0.2748	0.0203	-0.0055	-0.0294
16	27.55	0.0	0.0	33.96	2.5587	1.1006	-0.3094	0.0164	-0.0040	-0.0240
17	29.54	0.0	0.0	33.86	2.5429	1.2523	-0.3358	0.0259	-0.0033	-0.0231
18	2.74	0.0	0.0	58.62	1.2285	0.1540	-0.1066	0.0083	-0.0019	-0.0030

RUN 16

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.56	0.0	0.0	33.66	0.7312	0.1788	-0.0383	0.0122	-0.0030	-0.0044
2	0.57	0.0	0.0	33.89	0.9470	0.1875	-0.0690	0.0127	-0.0029	-0.0038
3	2.70	0.0	0.0	33.93	1.1634	0.2045	-0.0831	0.0122	-0.0029	-0.0040
4	4.83	0.0	0.0	33.77	1.3711	0.2249	-0.0882	0.0100	-0.0024	-0.0029
5	6.95	0.0	0.0	33.88	1.5734	0.2522	-0.0908	0.0106	-0.0023	-0.0021
6	9.06	0.0	0.0	33.77	1.7554	0.2845	-0.0967	0.0078	-0.0015	-0.0015
7	11.17	0.0	0.0	33.75	1.9335	0.3273	-0.1091	0.0052	-0.0007	0.0012
8	13.25	0.0	0.0	33.95	2.0737	0.3756	-0.1133	0.0047	-0.0003	0.0012
9	15.34	0.0	0.0	33.78	2.2216	0.4341	-0.1234	0.0053	-0.0003	0.0005
10	17.40	0.0	0.0	33.78	2.3238	0.5095	-0.1221	0.0063	-0.0002	0.0003
11	19.46	0.0	0.0	33.84	2.4231	0.6008	-0.1231	0.0101	-0.0013	-0.0045
12	21.51	0.0	0.0	33.76	2.5022	0.7089	-0.1146	0.0081	-0.0008	-0.0092
13	23.50	0.0	0.0	33.85	2.4778	0.8386	-0.1629	0.0261	-0.0044	-0.0305
14	25.50	0.0	0.0	33.70	2.4841	0.9653	-0.1664	0.0192	-0.0056	-0.0362
15	27.49	0.0	0.0	33.92	2.4612	1.1159	-0.1706	0.0256	-0.0051	-0.0258
16	29.46	0.0	0.0	33.30	2.4140	1.2654	-0.1635	0.0327	-0.0045	-0.0243
17	12.21	0.0	0.0	33.70	2.0067	0.3491	-0.1035	0.0047	-0.0001	0.0009

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 17

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.78	0.0	0.0	33.91	0.3610	0.1800	0.0689	0.0084	-0.0024	-0.0034
2	0.33	0.0	0.0	33.83	0.5511	0.1831	0.0581	0.0104	-0.0023	-0.0025
3	2.45	0.0	0.0	33.87	0.7482	0.1915	0.0576	0.0114	-0.0024	-0.0031
4	4.57	0.0	0.0	34.08	0.9402	0.2057	0.0665	0.0093	-0.0023	-0.0027
5	6.69	0.0	0.0	34.00	1.1393	0.2267	0.0651	0.0092	-0.0016	-0.0028
6	8.81	0.0	0.0	33.94	1.3386	0.2531	0.0405	0.0054	-0.0005	0.0006
7	10.94	0.0	0.0	33.91	1.5515	0.2903	0.0342	0.0045	0.0001	0.0014
8	11.99	0.0	0.0	33.95	1.6430	0.3138	0.0294	0.0040	-0.0002	0.0014
9	13.06	0.0	0.0	33.92	1.7479	0.3390	0.0204	0.0046	-0.0002	0.0018
10	15.16	0.0	0.0	33.97	1.9281	0.3942	-0.0058	0.0037	-0.0004	0.0031
11	17.28	0.0	0.0	34.07	2.1118	0.4662	-0.0271	0.0087	-0.0015	0.0024
12	19.38	0.0	0.0	33.87	2.2802	0.5683	-0.0563	0.0152	-0.0046	-0.0027
13	21.44	0.0	0.0	33.89	2.3828	0.6803	-0.0590	0.0073	-0.0011	-0.0013
14	23.46	0.0	0.0	34.01	2.4213	0.8116	-0.1267	0.0203	-0.0039	-0.0112
15	25.47	0.0	0.0	33.95	2.4335	0.9384	-0.1627	0.0102	-0.0061	-0.0214
16	27.48	0.0	0.0	34.02	2.4487	1.0808	-0.1858	0.0281	-0.0073	-0.0250

RUN 18

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.76	0.0	0.0	33.93	0.3998	0.1269	0.0481	0.0075	-0.0018	-0.0024
2	0.36	0.0	0.0	33.94	0.5966	0.1312	0.0268	0.0078	-0.0017	-0.0016
3	2.48	0.0	0.0	33.82	0.7961	0.1411	0.0289	0.0081	-0.0019	-0.0020
4	4.60	0.0	0.0	34.07	1.0015	0.1584	0.0239	0.0087	-0.0017	-0.0008
5	6.73	0.0	0.0	33.91	1.2020	0.1828	0.0155	0.0112	-0.0016	-0.0013
6	8.85	0.0	0.0	33.85	1.4025	0.2119	-0.0006	0.0084	-0.0016	-0.0005
7	10.97	0.0	0.0	33.82	1.5995	0.2513	-0.0004	0.0069	-0.0010	0.0010
8	12.03	0.0	0.0	33.86	1.6986	0.2748	-0.0114	0.0068	-0.0010	0.0022
9	13.08	0.0	0.0	33.75	1.7949	0.3012	-0.0208	0.0068	-0.0004	0.0029
10	15.20	0.0	0.0	33.84	1.9835	0.3591	-0.0594	0.0080	-0.0014	0.0020
11	17.32	0.0	0.0	33.87	2.1848	0.4365	-0.1019	0.0088	-0.0016	0.0031
12	19.42	0.0	0.0	33.87	2.3560	0.5410	-0.1348	0.0145	-0.0042	-0.0025
13	21.48	0.0	0.0	33.90	2.4508	0.6547	-0.1540	0.0067	-0.0005	-0.0017
14	23.50	0.0	0.0	33.92	2.4915	0.7854	-0.2188	0.0139	-0.0032	-0.0096
15	25.53	0.0	0.0	33.98	2.5313	0.9179	-0.2725	0.0211	-0.0056	-0.0225
16	27.54	0.0	0.0	33.96	2.5526	1.0667	-0.3151	0.0219	-0.0050	-0.0237

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 19										
PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.71	0.0	5.0	33.97	0.4837	0.1206	-0.0739	0.0064	-0.0010	-0.0001
2	0.41	0.0	5.0	33.95	0.6808	0.1282	-0.0840	0.0063	-0.0011	-0.0008
3	2.53	0.0	5.0	33.86	0.8842	0.1422	-0.0905	0.0080	-0.0015	-0.0009
4	4.66	0.0	5.0	33.81	1.0897	0.1635	-0.0924	0.0081	-0.0017	-0.0004
5	6.78	0.0	5.0	34.54	1.2935	0.1919	-0.0997	0.0093	-0.0013	0.0004
6	8.90	0.0	5.0	34.02	1.4855	0.2255	-0.1068	0.0082	-0.0012	0.0013
7	11.02	0.0	5.0	33.83	1.6816	0.2685	-0.1185	0.0063	-0.0011	0.0023
8	12.07	0.0	5.0	33.90	1.7782	0.2932	-0.1316	0.0066	-0.0008	0.0028
9	13.13	0.0	5.0	33.79	1.8766	0.3243	-0.1374	0.0081	-0.0010	0.0030
10	15.25	0.0	5.0	33.85	2.0641	0.3862	-0.1782	0.0071	-0.0014	0.0049
11	17.37	0.0	5.0	34.76	2.2701	0.4761	-0.2204	0.0095	-0.0035	0.0021
12	19.46	0.0	5.0	34.25	2.4221	0.5866	-0.2444	0.0086	-0.0017	0.0017
13	21.53	0.0	5.0	33.82	2.5285	0.6945	-0.2446	0.0076	-0.0008	-0.0018
14	23.53	0.0	5.0	34.26	2.5371	0.8250	-0.2921	0.0154	-0.0041	-0.0127
15	25.56	0.0	5.0	33.54	2.5814	0.9596	-0.3135	0.0191	-0.0057	-0.0226
16	27.56	0.0	5.0	33.94	2.5907	1.1116	-0.3249	0.0194	-0.0061	-0.0222

RUN 20										
PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.81	0.0	-5.0	34.19	0.3140	0.1451	0.1720	0.0075	-0.0014	-0.0017
2	0.31	0.0	-5.0	33.82	0.5130	0.1443	0.1552	0.0073	-0.0014	-0.0022
3	2.43	0.0	-5.0	34.04	0.7147	0.1498	0.1479	0.0079	-0.0013	-0.0012
4	4.55	0.0	-5.0	34.00	0.9185	0.1626	0.1399	0.0059	-0.0010	-0.0002
5	6.67	0.0	-5.0	33.45	1.1175	0.1835	0.1417	0.0065	-0.0010	0.0
6	8.79	0.0	-5.0	33.97	1.3125	0.2078	0.1304	0.0072	-0.0007	0.0011
7	10.92	0.0	-5.0	33.91	1.5149	0.2422	0.1171	0.0066	-0.0007	0.0015
8	11.97	0.0	-5.0	33.89	1.6123	0.2630	0.1088	0.0078	-0.0010	0.0019
9	13.04	0.0	-5.0	33.90	1.7195	0.2877	0.0935	0.0065	-0.0005	0.0024
10	15.15	0.0	-5.0	33.72	1.9015	0.3391	0.0559	0.0067	-0.0009	0.0029
11	17.27	0.0	-5.0	34.10	2.1074	0.4120	0.0170	0.0068	-0.0017	0.0048
12	19.37	0.0	-5.0	34.01	2.2712	0.5065	-0.0130	0.0129	-0.0040	-0.0037
13	21.43	0.0	-5.0	34.14	2.3632	0.6138	-0.0436	0.0058	-0.0002	-0.0006
14	23.46	0.0	-5.0	34.04	2.4219	0.7390	-0.1193	0.0150	-0.0023	-0.0076
15	25.49	0.0	-5.0	33.70	2.4602	0.8729	-0.2128	0.0195	-0.0060	-0.0204
16	27.50	0.0	-5.0	33.77	2.4905	1.0130	-0.2318	0.0182	-0.0069	-0.0224

TABLE II - PART B - TEST I DATA - CONTINUED.

RHM 21

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	0.46	0.0	10.0	34.00	0.7639	0.1338	-0.2040	0.0088	-0.0016	-0.0018
2	0.42	0.0	5.0	33.99	0.6878	0.1275	-0.0872	0.0070	-0.0009	-0.0005
3	0.36	0.0	0.0	34.30	0.5961	0.1307	0.0329	0.0083	-0.0016	-0.0012
4	0.30	0.0	-5.0	33.80	0.5025	0.1646	0.1596	0.0071	-0.0009	-0.0007
5	0.27	0.0	-10.0	33.84	0.4434	0.1650	0.2492	0.0063	-0.0006	-0.0013
6	0.25	0.0	-15.0	33.87	0.4166	0.1877	0.3048	0.0063	-0.0008	-0.0009
7	0.24	0.0	-20.0	34.08	0.3989	0.2157	0.3366	0.0062	-0.0006	-0.0016

RHM 22

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	11.06	0.0	10.0	33.88	1.7568	0.2929	-0.2467	0.0067	-0.0006	0.0016
2	11.01	0.0	5.0	34.12	1.6744	0.2682	-0.1185	0.0056	-0.0008	0.0016
3	10.96	0.0	0.0	34.03	1.5927	0.2506	0.0008	0.0059	-0.0006	0.0023
4	10.91	0.0	-5.0	34.01	1.5142	0.2404	0.1182	0.0054	-0.0006	0.0013
5	10.87	0.0	-10.0	34.01	1.4411	0.2403	0.2158	0.0068	-0.0005	0.0018
6	10.83	0.0	-15.0	33.76	1.3724	0.2491	0.3054	0.0066	-0.0005	0.0009
7	10.80	0.0	-20.0	34.07	1.3324	0.2653	0.3667	0.0076	-0.0011	0.0008

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 23

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.80	0.0	0.0	33.99	0.3283	0.1381	0.1624	0.0069	-0.0012	-0.0010
2	0.32	0.0	0.0	33.82	0.5308	0.1391	0.1435	0.0070	-0.0010	-0.0013
3	2.44	0.0	0.0	33.96	0.7268	0.1466	0.1356	0.0064	-0.0012	-0.0009
4	4.57	0.0	0.0	34.06	0.9404	0.1616	0.1234	0.0057	-0.0009	0.0001
5	6.69	0.0	0.0	34.10	1.1470	0.1835	0.1081	0.0078	-0.0011	-0.0001
6	8.82	0.0	0.0	33.81	1.3512	0.2120	0.0884	0.0083	-0.0011	0.0010
7	10.94	0.0	0.0	33.91	1.5600	0.2509	0.0650	0.0062	-0.0008	0.0012
8	12.01	0.0	0.0	33.88	1.6646	0.2733	0.0390	0.0057	-0.0005	0.0017
9	13.07	0.0	0.0	33.85	1.7765	0.3023	0.0134	0.0067	-0.0003	0.0029
10	15.19	0.0	0.0	33.93	1.9701	0.3588	0.0336	0.0069	-0.0011	0.0037
11	17.31	0.0	0.0	33.90	2.1642	0.4354	-0.0669	0.0072	-0.0020	0.0052
12	19.40	0.0	0.0	33.89	2.3183	0.5370	-0.0870	0.0142	-0.0045	-0.0027
13	21.46	0.0	0.0	34.11	2.4187	0.6505	-0.1122	0.0082	-0.0007	-0.0010
14	23.49	0.0	0.0	33.85	2.4668	0.7805	-0.1786	0.0158	-0.0045	-0.0098
15	25.51	0.0	0.0	33.79	2.5022	0.9135	-0.2516	0.0157	-0.0057	-0.0211
16	27.53	0.0	0.0	33.87	2.5353	1.0672	-0.2913	0.0182	-0.0071	-0.0211

RUN 24

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.64	0.0	0.0	33.88	0.5937	0.1243	-0.2190	0.0102	-0.0022	-0.0019
2	0.46	0.0	0.0	33.84	0.7604	0.1340	-0.1968	0.0104	-0.0018	-0.0018
3	2.57	0.0	0.0	34.23	0.9454	0.1474	-0.1685	0.0092	-0.0019	-0.0017
4	4.68	0.0	0.0	34.13	1.1199	0.1677	-0.1414	0.0093	-0.0014	-0.0001
5	6.78	0.0	0.0	33.96	1.2971	0.1934	-0.1000	0.0081	-0.0011	0.0012
6	8.88	0.0	0.0	33.91	1.4532	0.2205	-0.0749	0.0078	-0.0008	0.0009
7	10.97	0.0	0.0	34.08	1.6102	0.2531	-0.0255	0.0081	-0.0011	0.0009
8	12.02	0.0	0.0	33.94	1.6901	0.2726	-0.0043	0.0051	-0.0004	0.0005
9	13.06	0.0	0.0	34.23	1.7499	0.2924	0.0260	0.0087	-0.0006	0.0014
10	15.14	0.0	0.0	33.86	1.8869	0.3351	0.0502	0.0064	-0.0009	0.0017
11	17.23	0.0	0.0	34.02	2.0315	0.3948	0.0881	0.0075	-0.0013	0.0024
12	19.30	0.0	0.0	34.00	2.1450	0.4740	0.1281	0.0118	-0.0036	-0.0025
13	21.32	0.0	0.0	34.04	2.1908	0.5678	0.1571	0.0067	-0.0001	-0.0018
14	23.33	0.0	0.0	34.06	2.1965	0.6623	0.1556	0.0120	0.0	-0.0081
15	25.33	0.0	0.0	34.02	2.2004	0.7737	0.1566	0.0170	-0.0043	-0.0191
16	27.34	0.0	0.0	33.86	2.2167	0.8899	0.1564	0.0202	-0.0062	-0.0280

TABLE II - PART B - TEST 1 DATA - CONTINUED.

RUN 25

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.40	0.0	0.0	33.96	0.9907	0.1241	-0.3503	0.0110	-0.0024	-0.0041
2	0.70	0.0	0.0	33.85	1.1672	0.1399	-0.3223	0.0120	-0.0025	-0.0047
3	2.82	0.0	0.0	33.83	1.3591	0.1620	-0.2982	0.0111	-0.0025	-0.0044
4	4.93	0.0	0.0	33.92	1.5407	0.1887	-0.2667	0.0094	-0.0018	-0.0032
5	7.03	0.0	0.0	33.96	1.7062	0.2188	-0.2333	0.0104	-0.0018	-0.0024
6	9.12	0.0	0.0	33.93	1.8496	0.2503	-0.1935	0.0102	-0.0017	-0.0024
7	11.20	0.0	0.0	34.13	1.9797	0.2886	-0.1472	0.0089	-0.0018	-0.0015
8	12.23	0.0	0.0	34.09	2.0347	0.3065	-0.1168	0.0079	-0.0011	-0.0006
9	13.25	0.0	0.0	34.06	2.0774	0.3272	-0.0925	0.0074	-0.0011	-0.0002
10	15.32	0.0	0.0	33.97	2.1802	0.3749	-0.0552	0.0078	-0.0014	-0.0010
11	17.35	0.0	0.0	34.01	2.2427	0.4305	0.0082	0.0118	-0.0027	-0.0080
12	19.38	0.0	0.0	33.93	2.2884	0.5076	0.0778	0.0084	-0.0013	-0.0010
13	21.39	0.0	0.0	33.97	2.3062	0.5914	0.1071	0.0042	0.0006	-0.0046
14	23.36	0.0	0.0	34.06	2.2558	0.6881	0.1297	0.0187	-0.0001	-0.0276
15	25.36	0.0	0.0	34.03	2.2586	0.7993	0.1337	0.0212	-0.0039	-0.0351
16	27.35	0.0	0.0	33.88	2.2296	0.9142	0.1621	0.0172	-0.0028	-0.0219

RUN 26

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.43	0.0	0.0	33.99	0.9453	0.1237	-0.3400	0.0115	-0.0026	-0.0021
2	0.68	0.0	0.0	33.83	1.1217	0.1395	-0.3064	0.0114	-0.0024	-0.0024
3	2.78	0.0	0.0	33.85	1.2923	0.1597	-0.2760	0.0095	-0.0023	-0.0015
4	4.89	0.0	0.0	33.88	1.4776	0.1857	-0.2529	0.0101	-0.0021	-0.0017
5	6.99	0.0	0.0	33.81	1.6378	0.2148	-0.2330	0.0091	-0.0017	-0.0011
6	9.08	0.0	0.0	34.02	1.7879	0.2442	-0.1716	0.0103	-0.0023	-0.0014
7	11.16	0.0	0.0	33.96	1.9200	0.2809	-0.1239	0.0065	-0.0012	0.0003
8	12.19	0.0	0.0	34.00	1.9765	0.3000	-0.0991	0.0077	-0.0012	0.0
9	13.22	0.0	0.0	33.99	2.0203	0.3223	-0.0682	0.0086	-0.0010	-0.0008
10	15.29	0.0	0.0	33.85	2.1369	0.3672	-0.0386	0.0086	-0.0020	-0.0006
11	17.33	0.0	0.0	33.78	2.2068	0.4291	0.0235	0.0065	-0.0010	0.0001
12	19.37	0.0	0.0	33.82	2.2688	0.5041	0.0900	0.0076	-0.0006	-0.0023
13	21.39	0.0	0.0	34.08	2.2942	0.5880	0.1163	0.0066	0.0006	-0.0064
14	23.37	0.0	0.0	34.04	2.2616	0.6888	0.1437	0.0194	-0.0019	-0.0258
15	25.36	0.0	0.0	34.02	2.2509	0.7990	0.1386	0.0245	-0.0040	-0.0304
16	27.34	0.0	0.0	33.90	2.2114	0.9129	0.1730	0.0150	-0.0035	-0.0245

TABLE II - PART B - TEST 1 DATA - CONCLUDED.

RUN 27										
PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.56	0.0	0.0	33.77	0.7250	0.0839	-0.2694	0.0113	-0.0025	-0.0045
2	0.56	0.0	0.0	33.81	0.9261	0.0959	-0.2554	0.0114	-0.0026	-0.0054
3	2.68	0.0	0.0	33.88	1.1233	0.1136	-0.2292	0.0095	-0.0018	-0.0033
4	4.80	0.0	0.0	33.78	1.3181	0.1379	-0.2046	0.0094	-0.0019	-0.0034
5	6.91	0.0	0.0	34.31	1.5083	0.1665	-0.1806	0.0100	-0.0015	-0.0036
6	9.00	0.0	0.0	34.03	1.6592	0.1978	-0.1593	0.0086	-0.0013	-0.0018
7	11.10	0.0	0.0	33.85	1.8199	0.2343	-0.0966	0.0089	-0.0017	-0.0029
8	12.14	0.0	0.0	33.68	1.8832	0.2536	-0.0784	0.0081	-0.0013	-0.0017
9	13.17	0.0	0.0	34.04	1.9382	0.2747	-0.0459	0.0077	-0.0004	-0.0011
10	15.24	0.0	0.0	33.90	2.0518	0.3211	-0.0161	0.0091	-0.0016	-0.0019
11	17.29	0.0	0.0	33.97	2.1414	0.3795	0.0348	0.0113	-0.0022	-0.0068
12	19.33	0.0	0.0	33.84	2.1945	0.4538	0.1099	0.0085	-0.0011	-0.0009
13	21.35	0.0	0.0	33.93	2.2362	0.5335	0.1377	0.0068	0.0006	-0.0056
14	23.35	0.0	0.0	34.36	2.2351	0.6295	0.1395	0.0124	0.0005	-0.0122
15	25.35	0.0	0.0	33.65	2.2302	0.7410	0.1507	0.0227	-0.0029	-0.0304
16	27.33	0.0	0.0	33.79	2.1978	0.8486	0.1691	0.0170	-0.0031	-0.0236

TABLE III - PART A - TEST 2 TABULATION SCHEDULE

Run	q	α Range	Wing					Tail			Comments
			δ_f	δ_{DLC}	δ_L	Glove Slat	Flap Actuator Fairings	i_t	δ_{SB}	δ_{SF}	
1	34.5	-2→26	35	-4.5	17°MOD	On	On	0	Off	Off	Sim. 1/10 scale Bracket Blockage
2	↓	-2→24	↓	↓	↓	↓	↓	↓	↓	↓	1/10 scale blkge., Nozzles Plugged
3	↓	-2→26	↓	↓	↓	↓	Off	↓	↓	↓	
4	51	↓	↓	↓	↓	↓	↓	↓	↓	↓	
5	34.5	↓	↓	↓	↓	↓	On	↓	↓	↓	
6	↓	↓	↓	5	↓	↓	↓	↓	↓	↓	
7	↓	↓	↓	↓	↓	↓	↓	↓	↓	45	
8	↓	↓	↓	↓	↓	↓	↓	5	↓	↓	
9	↓	↓	↓	↓	↓	↓	↓	-5	↓	↓	
10	↓	↓	↓	20	↓	↓	↓	0	↓	Off	
11	↓	↓	↓	0	↓	↓	↓	↓	↓	↓	
12	↓	↓	↓	-4.5	↓	↓	↓	-5	↓	↓	
13	↓	↓	↓	↓	↓	↓	↓	Off	↓	↓	Horizontal Tails Off

TABLE III - PART B - TEST 2 DATA.

RUN 1										
PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	34.00	0.7945	0.1329	-0.0658	0.0087	-0.0026	-0.0060
2	0.61	0.0	0.0	33.93	1.0143	0.1441	-0.0903	0.0095	-0.0025	-0.0071
3	2.73	0.0	0.0	33.92	1.2136	0.1630	-0.0972	0.0102	-0.0022	-0.0059
4	4.85	0.0	0.0	34.01	1.4094	0.1874	-0.0886	0.0120	-0.0021	-0.0061
5	6.98	0.0	0.0	33.85	1.6293	0.2219	-0.1011	0.0087	-0.0018	-0.0030
6	9.10	0.0	0.0	33.86	1.8164	0.2582	-0.0929	0.0090	-0.0018	-0.0024
7	11.23	0.0	0.0	33.99	2.0336	0.3113	-0.0989	0.0083	-0.0008	-0.0031
8	12.28	0.0	0.0	33.97	2.1173	0.3379	-0.1071	0.0097	-0.0010	-0.0021
9	13.34	0.0	0.0	34.06	2.2105	0.3680	-0.1196	0.0121	-0.0014	-0.0018
10	15.43	0.0	0.0	33.94	2.3751	0.4409	-0.1328	0.0075	-0.0010	0.0061
11	17.51	0.0	0.0	33.84	2.5054	0.5278	-0.1507	0.0110	-0.0015	0.0001
12	19.57	0.0	0.0	33.96	2.6033	0.6223	-0.1557	0.0113	-0.0019	0.0001
13	21.61	0.0	0.0	33.92	2.6577	0.7398	-0.2135	0.0103	-0.0008	-0.0049
14	23.60	0.0	0.0	33.98	2.6562	0.8776	-0.2923	0.0056	0.0024	0.0138
15	25.64	0.0	0.0	33.88	2.7076	1.0222	-0.3435	0.0019	0.0027	0.0188
16	27.63	0.0	0.0	33.84	2.7046	1.1672	-0.3720	0.0004	-0.0005	0.0019

RUN 2										
PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.49	0.0	0.0	33.94	0.8362	0.1374	-0.0318	0.0116	-0.0034	-0.0079
2	0.63	0.0	0.0	34.02	1.0489	0.1505	-0.0399	0.0114	-0.0031	-0.0079
3	2.76	0.0	0.0	34.00	1.2628	0.1709	-0.0581	0.0133	-0.0030	-0.0082
4	4.89	0.0	0.0	34.12	1.4749	0.1985	-0.0728	0.0149	-0.0029	-0.0083
5	7.00	0.0	0.0	34.08	1.6602	0.2307	-0.0784	0.0147	-0.0023	-0.0076
6	9.11	0.0	0.0	34.09	1.8450	0.2685	-0.0873	0.0126	-0.0020	-0.0041
7	11.21	0.0	0.0	34.21	2.0017	0.3137	-0.1396	0.0111	-0.0014	-0.0028
8	12.27	0.0	0.0	34.10	2.0961	0.3424	-0.1456	0.0106	-0.0013	-0.0033
9	13.32	0.0	0.0	34.19	2.1861	0.3765	-0.1498	0.0131	-0.0015	-0.0033
10	15.42	0.0	0.0	34.01	2.3461	0.4497	-0.1762	0.0134	-0.0021	-0.0026
11	17.49	0.0	0.0	33.98	2.4626	0.5435	-0.1653	0.0141	-0.0023	-0.0009
12	19.54	0.0	0.0	34.24	2.5539	0.6358	-0.1790	0.0135	-0.0020	-0.0026
13	21.58	0.0	0.0	34.05	2.6169	0.7487	-0.2250	0.0152	-0.0026	-0.0016
14	23.62	0.0	0.0	33.99	2.6866	0.8776	-0.3162	0.0122	-0.0028	-0.0045
15	25.61	0.0	0.0	33.91	2.6726	1.0188	-0.3553	0.0098	0.0025	0.0084

TABLE III - PART B - TEST 2 DATA - CONTINUED.

RUN 3

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	33.98	0.7907	0.1338	-0.0689	0.0070	-0.0024	-0.0013
2	0.61	0.0	0.0	34.17	1.0045	0.1440	-0.0821	0.0080	-0.0022	-0.0006
3	2.74	0.0	0.0	34.23	1.2192	0.1626	-0.1063	0.0076	-0.0020	-0.0020
4	4.86	0.0	0.0	34.27	1.4259	0.1886	-0.1017	0.0098	-0.0025	-0.0021
5	6.98	0.0	0.0	34.17	1.6216	0.2207	-0.1092	0.0112	-0.0019	-0.0017
6	9.09	0.0	0.0	34.15	1.8119	0.2580	-0.1067	0.0085	-0.0017	-0.0003
7	11.21	0.0	0.0	34.36	2.0090	0.3066	-0.0987	0.0100	-0.0019	-0.0014
8	12.28	0.0	0.0	34.09	2.1198	0.3367	-0.1018	0.0092	-0.0015	0.0007
9	13.34	0.0	0.0	34.04	2.2138	0.3661	-0.1143	0.0124	-0.0024	-0.0006
10	15.44	0.0	0.0	34.03	2.3772	0.4379	-0.1305	0.0147	-0.0036	-0.0031
11	17.50	0.0	0.0	33.99	2.4885	0.5236	-0.1538	0.0114	-0.0028	0.0036
12	19.57	0.0	0.0	34.14	2.5952	0.6222	-0.1482	0.0128	-0.0034	0.0045
13	21.60	0.0	0.0	34.01	2.6511	0.7408	-0.2171	0.0090	-0.0020	0.0
14	23.63	0.0	0.0	34.00	2.7038	0.8726	-0.3238	0.0129	-0.0013	-0.0013
15	25.64	0.0	0.0	34.05	2.7226	1.0193	-0.3514	0.0018	0.0021	0.0181
16	27.63	0.0	0.0	34.02	2.7001	1.1592	-0.3920	0.0114	-0.0003	-0.0014

RUN 4

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	49.83	0.7880	0.1324	-0.0738	0.0079	-0.0024	-0.0009
2	0.60	0.0	0.0	50.27	1.0016	0.1432	-0.0909	0.0090	-0.0024	-0.0015
3	2.73	0.0	0.0	50.38	1.2161	0.1610	-0.1018	0.0089	-0.0021	-0.0018
4	4.85	0.0	0.0	50.20	1.4124	0.1859	-0.1051	0.0094	-0.0019	-0.0018
5	6.97	0.0	0.0	50.28	1.6109	0.2187	-0.1054	0.0111	-0.0018	-0.0021
6	9.09	0.0	0.0	50.29	1.8014	0.2557	-0.1081	0.0109	-0.0016	-0.0027
7	11.21	0.0	0.0	50.15	2.0111	0.3061	-0.0965	0.0089	-0.0012	-0.0011
8	12.28	0.0	0.0	50.36	2.1200	0.3346	-0.1021	0.0116	-0.0019	-0.0007
9	13.33	0.0	0.0	50.28	2.2048	0.3645	-0.1249	0.0124	-0.0018	-0.0006
10	15.43	0.0	0.0	50.22	2.3627	0.4407	-0.1284	0.0096	-0.0019	-0.0016
11	17.51	0.0	0.0	50.15	2.4986	0.5270	-0.1542	0.0089	-0.0018	0.0032
12	19.58	0.0	0.0	49.58	2.6079	0.6275	-0.1536	0.0108	-0.0023	0.0034
13	21.60	0.0	0.0	49.89	2.6444	0.7378	-0.2119	0.0104	-0.0006	-0.0030
14	23.61	0.0	0.0	50.11	2.6640	0.8752	-0.3006	0.0110	-0.0003	0.0067
15	25.62	0.0	0.0	49.54	2.6890	1.0271	-0.3431	0.0030	0.0025	0.0123

TABLE III - PART B - TEST 2 DATA - CONTINUED.

RUN 5

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.00	0.7796	0.1325	-0.0573	0.0086	-0.0030	-0.0055
2	0.60	0.0	0.0	34.06	0.9985	0.1435	-0.0673	0.0097	-0.0027	-0.0041
3	2.73	0.0	0.0	33.83	1.2115	0.1621	-0.0763	0.0119	-0.0026	-0.0039
4	4.86	0.0	0.0	34.00	1.4214	0.1863	-0.0802	0.0121	-0.0028	-0.0044
5	6.97	0.0	0.0	33.89	1.6106	0.2176	-0.0962	0.0142	-0.0026	-0.0056
6	9.10	0.0	0.0	33.84	1.8188	0.2570	-0.0993	0.0120	-0.0018	-0.0065
7	11.23	0.0	0.0	34.02	2.0283	0.3066	-0.0982	0.0100	-0.0017	-0.0024
8	12.28	0.0	0.0	33.89	2.1191	0.2221	-0.3840	0.0109	-0.0013	-0.0027
9	13.33	0.0	0.0	33.96	2.2088	0.3640	-0.1205	0.0130	-0.0018	-0.0019
10	15.43	0.0	0.0	33.84	2.3653	0.4334	-0.1387	0.0149	-0.0030	-0.0025
11	17.50	0.0	0.0	33.92	2.4898	0.5240	-0.1538	0.0114	-0.0023	0.0009
12	19.56	0.0	0.0	33.94	2.5851	0.6203	-0.1595	0.0105	-0.0027	0.0062
13	21.59	0.0	0.0	33.82	2.6387	0.7340	-0.2251	0.0077	-0.0010	-0.0017
14	23.64	0.0	0.0	33.72	2.7076	0.8728	-0.3124	0.0145	-0.0017	-0.0036
15	25.63	0.0	0.0	33.99	2.7052	1.0116	-0.3601	0.0026	0.0019	0.0197
16	27.62	0.0	0.0	33.80	2.6862	1.1553	-0.3759	0.0142	-0.0009	-0.0011

RUN 6

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.71	0.0	0.0	34.09	0.4753	0.1336	0.0385	0.0077	-0.0024	0.0007
2	0.41	0.0	0.0	34.20	0.6764	0.1387	0.0206	0.0075	-0.0023	0.0009
3	2.53	0.0	0.0	33.89	0.8819	0.1512	0.0242	0.0082	-0.0022	0.0006
4	4.66	0.0	0.0	33.84	1.0872	0.1702	0.0203	0.0089	-0.0021	0.0015
5	6.78	0.0	0.0	33.95	1.2982	0.1970	0.0211	0.0108	-0.0021	0.0005
6	8.90	0.0	0.0	34.05	1.4950	0.2309	0.0128	0.0092	-0.0017	0.0016
7	11.03	0.0	0.0	34.11	1.7069	0.2754	0.0046	0.0070	-0.0014	0.0030
8	12.09	0.0	0.0	34.06	1.8043	0.3001	0.0003	0.0089	-0.0014	0.0028
9	13.16	0.0	0.0	34.39	1.9188	0.3327	-0.0222	0.0118	-0.0013	0.0033
10	15.28	0.0	0.0	33.76	2.1154	0.3984	-0.0429	0.0119	-0.0029	0.0024
11	17.40	0.0	0.0	34.03	2.3136	0.4841	-0.0946	0.0123	-0.0027	0.0038
12	19.47	0.0	0.0	34.04	2.4337	0.5914	-0.0987	0.0109	-0.0019	0.0011
13	21.51	0.0	0.0	34.00	2.5072	0.7077	-0.1612	0.0111	-0.0005	-0.0043
14	23.54	0.0	0.0	33.76	2.5522	0.8278	-0.2590	0.0170	-0.0012	-0.0034
15	25.59	0.0	0.0	34.10	2.6329	0.9599	-0.3362	0.0065	-0.0035	-0.0038
16	27.61	0.0	0.0	34.36	2.6702	1.1190	-0.3582	0.0045	-0.0018	-0.0006

TABLE III - PART B - TEST 2 DATA - CONTINUED.

RUN 7

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.75	0.0	0.0	33.49	0.4102	0.1435	0.1477	0.0083	-0.0026	0.0014
2	0.37	0.0	0.0	33.83	0.6108	0.1456	0.1217	0.0068	-0.0021	0.0010
3	2.50	0.0	0.0	33.95	0.8212	0.1559	0.1237	0.0078	-0.0019	0.0023
4	4.62	0.0	0.0	34.15	1.0240	0.1729	0.1203	0.0085	-0.0020	0.0004
5	6.75	0.0	0.0	33.92	1.2353	0.1966	0.1019	0.0100	-0.0021	0.0017
6	8.87	0.0	0.0	33.79	1.4430	0.2298	0.0944	0.0091	-0.0018	0.0021
7	11.01	0.0	0.0	33.88	1.6697	0.2734	0.0667	0.0091	-0.0015	0.0033
8	12.07	0.0	0.0	33.98	1.7747	0.2998	0.0397	0.0098	-0.0015	0.0021
9	13.15	0.0	0.0	34.23	1.9006	0.3332	0.0127	0.0092	-0.0012	0.0034
10	15.27	0.0	0.0	34.20	2.0962	0.3973	-0.0181	0.0118	-0.0026	0.0037
11	17.38	0.0	0.0	34.21	2.2852	0.4813	-0.0550	0.0103	-0.0018	0.0047
12	19.46	0.0	0.0	33.81	2.4138	0.5935	-0.0525	0.0101	-0.0016	0.0020
13	21.50	0.0	0.0	33.91	2.4834	0.7038	-0.1233	0.0072	0.0001	-0.0025
14	23.54	0.0	0.0	33.93	2.5428	0.8296	-0.2329	0.0136	-0.0016	-0.0023
15	25.59	0.0	0.0	34.04	2.6253	0.9614	-0.3032	0.0113	-0.0033	-0.0038
16	27.60	0.0	0.0	34.13	2.6561	1.1182	-0.3451	0.0045	-0.0003	0.0026

RUN 8

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.70	0.0	5.0	34.22	0.4921	0.1323	0.0296	0.0087	-0.0032	-0.0002
2	0.42	0.0	5.0	33.80	0.6944	0.1397	0.0136	0.0086	-0.0027	0.0004
3	2.55	0.0	5.0	34.09	0.9055	0.1538	0.0150	0.0099	-0.0027	0.0006
4	4.67	0.0	5.0	34.17	1.1106	0.1740	0.0047	0.0110	-0.0024	0.0006
5	6.80	0.0	5.0	33.87	1.3271	0.2048	-0.0063	0.0113	-0.0025	0.0009
6	8.93	0.0	5.0	33.78	1.5342	0.2418	-0.0243	0.0098	-0.0017	0.0018
7	11.06	0.0	5.0	34.21	1.7545	0.2910	-0.0516	0.0095	-0.0017	0.0019
8	12.12	0.0	5.0	33.44	1.8621	0.3188	-0.0775	0.0098	-0.0015	0.0011
9	13.19	0.0	5.0	33.77	1.9707	0.3525	-0.1042	0.0129	-0.0017	0.0019
10	15.31	0.0	5.0	34.03	2.1662	0.4235	-0.1467	0.0141	-0.0030	0.0021
11	17.43	0.0	5.0	34.25	2.3600	0.5184	-0.2012	0.0127	-0.0025	0.0034
12	19.50	0.0	5.0	34.03	2.4913	0.6336	-0.1794	0.0112	-0.0018	0.0026
13	21.54	0.0	5.0	34.31	2.5517	0.7522	-0.2210	0.0103	0.0	-0.0034
14	23.57	0.0	5.0	33.99	2.5949	0.8698	-0.2866	0.0127	-0.0011	-0.0035
15	25.60	0.0	5.0	34.26	2.6536	1.0116	-0.3342	0.0042	0.0	0.0059
16	27.62	0.0	5.0	33.63	2.6892	1.1626	-0.3592	0.0069	-0.0018	0.0001

TABLE III - PART B - TEST 2 DATA - CONTINUED.

RUM 9

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.80	0.0	-5.0	34.08	0.3263	0.1601	0.2577	0.0081	-0.0027	0.0006
2	0.31	0.0	-5.0	34.06	0.5187	0.1603	0.2267	0.0076	-0.0024	0.0003
3	2.44	0.0	-5.0	34.20	0.7309	0.1657	0.2273	0.0085	-0.0024	0.0015
4	4.57	0.0	-5.0	34.17	0.9456	0.1789	0.2207	0.0082	-0.0019	0.0013
5	6.70	0.0	-5.0	34.10	1.1507	0.1990	0.2003	0.0094	-0.0020	0.0008
6	8.82	0.0	-5.0	34.09	1.3579	0.2262	0.1966	0.0092	-0.0019	0.0026
7	10.96	0.0	-5.0	33.93	1.5852	0.2638	0.1719	0.0094	-0.0014	0.0019
8	12.03	0.0	-5.0	33.98	1.6999	0.2879	0.1457	0.0089	-0.0014	0.0014
9	13.10	0.0	-5.0	33.98	1.8204	0.3176	0.1179	0.0105	-0.0012	0.0030
10	15.22	0.0	-5.0	33.89	2.0176	0.3762	0.0847	0.0133	-0.0028	0.0029
11	17.33	0.0	-5.0	33.75	2.2076	0.4560	0.0602	0.0101	-0.0021	0.0037
12	19.41	0.0	-5.0	34.00	2.3285	0.5586	0.0489	0.0128	-0.0019	0.0021
13	21.44	0.0	-5.0	33.90	2.3871	0.6656	-0.0335	0.0094	0.0006	-0.0027
14	23.48	0.0	-5.0	33.91	2.4556	0.7866	-0.1456	0.0121	-0.0015	-0.0014
15	25.52	0.0	-5.0	34.00	2.5184	0.9189	-0.1798	0.0090	-0.0036	-0.0018
16	27.57	0.0	-5.0	34.20	2.6004	1.0659	-0.2980	0.0038	0.0004	0.0028

RUM 10

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.81	0.0	0.0	34.01	0.3097	0.1580	0.0922	0.0067	-0.0011	0.0041
2	0.30	0.0	0.0	34.04	0.4899	0.1606	0.0845	0.0085	-0.0013	0.0027
3	2.42	0.0	0.0	34.06	0.6887	0.1685	0.0616	0.0052	-0.0008	0.0038
4	4.54	0.0	0.0	34.08	0.8970	0.1875	0.0693	0.0083	-0.0007	0.0037
5	6.66	0.0	0.0	33.96	1.0999	0.2108	0.0624	0.0101	-0.0011	0.0032
6	8.79	0.0	0.0	34.15	1.3158	0.2433	0.0486	0.0081	-0.0007	0.0051
7	10.92	0.0	0.0	33.92	1.5157	0.2840	0.0412	0.0085	-0.0008	0.0041
8	11.98	0.0	0.0	33.83	1.6213	0.3099	0.0324	0.0063	0.0001	0.0071
9	13.05	0.0	0.0	33.89	1.7387	0.3410	0.0145	0.0118	-0.0007	0.0053
10	15.17	0.0	0.0	33.65	1.9386	0.4016	-0.0032	0.0103	-0.0009	0.0039
11	17.29	0.0	0.0	33.77	2.1354	0.4814	-0.0393	0.0106	-0.0012	0.0056
12	19.40	0.0	0.0	33.99	2.3209	0.5803	-0.0675	0.0108	-0.0012	0.0068
13	21.46	0.0	0.0	34.07	2.4164	0.6822	-0.1032	0.0134	0.0007	0.0001
14	23.44	0.0	0.0	34.06	2.3889	0.8086	-0.1085	0.0136	0.0	0.0016
15	25.53	0.0	0.0	33.16	2.5335	0.9457	-0.2526	0.0115	-0.0030	-0.0017
16	27.5	0.0	0.0	32.89	2.5953	1.1037	-0.3153	0.0200	-0.0013	-0.0020

TABLE III - PART B - TEST 2 DATA - CONTINUED.

RUN 11

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.61	0.0	0.0	34.00	0.6417	0.1297	0.0002	0.0096	-0.0030	-0.0024
2	0.50	0.0	0.0	34.02	0.8326	0.1378	-0.0324	0.0104	-0.0031	-0.0013
3	2.64	0.0	0.0	34.21	1.0535	0.1518	-0.0273	0.0115	-0.0031	-0.0012
4	4.76	0.0	0.0	34.02	1.2612	0.1755	-0.0280	0.0123	-0.0030	-0.0011
5	6.88	0.0	0.0	34.10	1.4643	0.2032	-0.0280	0.0127	-0.0027	-0.0018
6	9.00	0.0	0.0	33.90	1.6543	0.2390	-0.0341	0.0130	-0.0027	-0.0017
7	11.13	0.0	0.0	33.87	1.8666	0.2859	-0.0436	0.0130	-0.0023	-0.0043
8	12.19	0.0	0.0	33.80	1.9632	0.3123	-0.0541	0.0116	-0.0013	-0.0041
9	13.25	0.0	0.0	33.82	2.0732	0.3461	-0.0687	0.0119	-0.0007	-0.0038
10	15.38	0.0	0.0	33.86	2.2777	0.4177	-0.1076	0.0176	-0.0019	-0.0079
11	17.46	0.0	0.0	33.90	2.4225	0.5152	-0.1771	0.0120	-0.0016	-0.0017
12	19.55	0.0	0.0	33.89	2.5640	0.6141	-0.1527	0.0123	-0.0015	-0.0033
13	21.57	0.0	0.0	34.22	2.6040	0.7282	-0.2205	0.0098	0.0003	-0.0078
14	23.61	0.0	0.0	33.88	2.6631	0.8608	-0.3158	0.0170	-0.0003	-0.0087
15	25.64	0.0	0.0	34.18	2.7178	0.9966	-0.3669	0.0069	0.0	0.0006
16	27.65	0.0	0.0	33.91	2.7262	1.1426	-0.3952	0.0028	0.0021	0.0070

RUN 12

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.59	0.0	-5.0	34.00	0.6737	0.1483	0.0711	0.0100	-0.0032	-0.0072
2	0.52	0.0	-5.0	34.17	0.8683	0.1541	0.0703	0.0104	-0.0030	-0.0052
3	2.66	0.0	-5.0	33.78	1.0946	0.1665	0.0458	0.0099	-0.0026	-0.0034
4	4.78	0.0	-5.0	33.91	1.2947	0.1852	0.0257	0.0081	-0.0023	-0.0033
5	6.91	0.0	-5.0	33.85	1.5107	0.2148	0.0202	0.0112	-0.0020	-0.0028
6	9.03	0.0	-5.0	33.78	1.7078	0.2477	0.0094	0.0121	-0.0022	-0.0019
7	11.16	0.0	-5.0	33.77	1.9131	0.2927	0.0075	0.0115	-0.0019	-0.0054
8	12.22	0.0	-5.0	33.96	2.0168	0.3199	-0.0068	0.0083	-0.0008	-0.0015
9	13.28	0.0	-5.0	33.82	2.1229	0.3494	-0.0092	0.0128	-0.0014	-0.0025
10	15.38	0.0	-5.0	33.87	2.2854	0.4105	-0.0234	0.0114	-0.0019	-0.0004
11	17.44	0.0	-5.0	33.77	2.3842	0.4911	-0.0437	0.0134	-0.0023	-0.0003
12	19.50	0.0	-5.0	33.90	2.4874	0.5789	-0.0333	0.0108	-0.0025	0.0043
13	21.54	0.0	-5.0	33.87	2.5467	0.6966	-0.1396	0.0077	-0.0003	-0.0005
14	23.59	0.0	-5.0	34.04	2.6277	0.8273	-0.2447	0.0136	-0.0011	-0.0064
15	25.60	0.0	-5.0	34.06	2.6455	0.9671	-0.2858	0.0004	0.0006	0.0165
16	27.59	0.0	-5.0	34.10	2.6387	1.1036	-0.3220	0.0073	0.0002	0.0012

TABLE III - PART B - TEST 2 DATA - CONCLUDED.

RUN 13

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.43	0.0	0.0	33.89	0.9486	0.1318	-0.3246	0.0109	-0.0030	-0.2656
2	0.68	0.0	0.0	33.99	1.1278	0.1469	-0.2842	0.0125	-0.0031	-0.2657
3	2.79	0.0	0.0	33.81	1.3140	0.1683	-0.2537	0.0125	-0.0029	-0.2676
4	4.90	0.0	0.0	33.88	1.4900	0.1940	-0.2239	0.0113	-0.0023	-0.0576
5	7.00	0.0	0.0	33.86	1.6496	0.2243	-0.1837	0.0133	-0.0025	-0.0054
6	9.10	0.0	0.0	33.97	1.8162	0.2586	-0.1463	0.0121	-0.0020	-0.0040
7	11.19	0.0	0.0	33.89	1.9703	0.3001	-0.0955	0.0105	-0.0014	-0.0047
8	12.25	0.0	0.0	34.10	2.0648	0.3263	-0.0748	0.0096	-0.0006	0.0001
9	13.29	0.0	0.0	33.91	2.1421	0.3527	-0.0494	0.0140	-0.0019	-0.0017
10	15.35	0.0	0.0	33.89	2.2420	0.4038	-0.0015	0.0133	-0.0021	-0.0019
11	17.39	0.0	0.0	34.02	2.2936	0.4693	0.0654	0.0107	-0.0013	0.0004
12	19.42	0.0	0.0	34.01	2.3465	0.5422	0.1307	0.0077	-0.0019	0.0058
13	21.42	0.0	0.0	33.99	2.3495	0.6327	0.1230	0.0056	0.0007	-0.0024
14	23.42	0.0	0.0	34.01	2.3564	0.7356	0.1036	0.0141	-0.0003	-0.0055
15	25.45	0.0	0.0	33.87	2.4062	0.8461	0.0892	0.0074	-0.0014	-0.0071
16	27.42	0.0	0.0	34.06	2.5474	0.9647	0.1042	-0.0007	0.0030	0.0107

TABLE IV - PART A - TEST 3 TABULATION SCHEDULE

Run	q	α Range	Wing					Tail			Comments
			δ_f	δ_{DLC}	δ_L	Glove Slat	Flap Actuator Fairings	i_t	δ_{SB}	δ_{SF}	
1	34.5	-2→28	35	-4.5	17° MOD	On	On	0	Off	Off	
2								-5			
3						↓		-10			
4						Off		0			
5				↓				-5			
6				5		↓		0			
7						On		↓			
8								-5			
9	↓			↓				5			
10	7			-4.5				0			
11	11										
12	20	↓									
13	34.5	-2→24									
14	51	-2→2						↓			
15	34.5	-2→28				↓		-5			
16	↓	↓	↓	↓	↓	Off	↓	0	↓	↓	

TABLE IV - PART B - TEST 3 DATA.

RUN 1

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.15	0.7857	0.1339	-0.0379	0.0026	-0.0041	-0.0041
2	0.60	0.0	0.0	34.00	0.9899	0.1448	-0.0640	0.0038	-0.0037	-0.0049
3	2.74	0.0	0.0	33.98	1.2172	0.1635	-0.0712	0.0035	-0.0035	-0.0041
4	4.87	0.0	0.0	33.98	1.4324	0.1889	-0.0762	0.0035	-0.0033	-0.0045
5	6.99	0.0	0.0	33.94	1.6408	0.2213	-0.0788	0.0055	-0.0026	-0.0052
6	9.10	0.0	0.0	34.01	1.8271	0.2548	-0.0744	0.0048	-0.0030	-0.0057
7	11.23	0.0	0.0	34.03	2.0360	0.3009	-0.0723	0.0025	-0.0024	-0.0046
8	13.33	0.0	0.0	34.10	2.2023	0.3518	-0.0879	0.0038	-0.0028	-0.0020
9	15.43	0.0	0.0	33.93	2.3707	0.4186	-0.1118	0.0045	-0.0030	-0.0016
10	17.52	0.0	0.0	33.89	2.5119	0.5147	-0.1062	0.0008	-0.0023	-0.0001
11	19.56	0.0	0.0	34.18	2.5908	0.6209	-0.1667	0.0004	-0.0015	-0.0036
12	21.63	0.0	0.0	34.02	2.6997	0.7478	-0.2178	0.0019	-0.0014	-0.0044
13	23.69	0.0	0.0	33.86	2.7922	0.8658	-0.2403	0.0023	-0.0011	-0.0027
14	25.69	0.0	0.0	34.04	2.7967	1.0096	-0.2359	-0.0028	0.0035	0.0181
15	27.68	0.0	0.0	33.99	2.7859	1.1661	-0.2467	0.0070	0.0	-0.0034
16	29.65	0.0	0.0	33.88	2.7345	1.3576	-0.3014	-0.0092	0.0038	0.0068

RUN 2

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.60	0.0	-5.0	33.92	0.6646	0.1492	0.0987	0.0049	-0.0023	-0.0054
2	0.54	0.0	-5.0	33.94	0.8883	0.1556	0.0847	0.0046	-0.0018	-0.0052
3	2.67	0.0	-5.0	34.03	1.1138	0.1680	0.0727	0.0055	-0.0015	-0.0050
4	4.80	0.0	-5.0	33.89	1.3319	0.1892	0.0537	0.0051	-0.0013	-0.0050
5	6.92	0.0	-5.0	34.02	1.5232	0.2142	0.0492	0.0056	-0.0012	-0.0031
6	9.05	0.0	-5.0	34.01	1.7335	0.2477	0.0375	0.0065	-0.0011	-0.0049
7	11.18	0.0	-5.0	34.00	1.9455	0.2874	0.0222	0.0028	-0.0006	-0.0028
8	13.28	0.0	-5.0	33.90	2.1232	0.3347	0.0048	0.0081	-0.0017	-0.0048
9	15.39	0.0	-5.0	33.97	2.2986	0.3971	-0.0045	0.0037	-0.0015	-0.0012
10	17.46	0.0	-5.0	34.21	2.4117	0.4796	0.0135	0.0014	-0.0013	-0.0017
11	19.51	0.0	-5.0	34.12	2.5021	0.5848	-0.0621	0.0019	-0.0007	-0.0043
12	21.57	0.0	-5.0	33.88	2.6017	0.7013	-0.1178	0.0005	-0.0002	-0.0046
13	23.64	0.0	-5.0	33.93	2.7159	0.8224	-0.1607	0.0079	-0.0004	-0.0053
14	25.64	0.0	-5.0	33.92	2.7152	0.9613	-0.1678	-0.0035	0.0038	0.0162
15	27.64	0.0	-5.0	34.10	2.7230	1.1132	-0.1815	0.0039	-0.0007	-0.0028
16	29.62	0.0	-5.0	34.00	2.6787	1.2927	-0.2095	-0.0074	-0.0001	0.0080

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 3

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.65	0.0	-10.0	34.07	0.5860	0.1710	0.1962	0.0082	-0.0028	-0.0071
2	0.48	0.0	-10.0	33.97	0.7913	0.1726	0.1830	0.0065	-0.0022	-0.0052
3	2.62	0.0	-10.0	33.95	1.0210	0.1834	0.1830	0.0038	-0.0012	-0.0045
4	4.76	0.0	-10.0	34.00	1.2514	0.1994	0.1899	0.0041	-0.0008	-0.0041
5	6.87	0.0	-10.0	34.03	1.4468	0.2201	0.1675	0.0048	-0.0010	-0.0046
6	9.00	0.0	-10.0	33.70	1.6503	0.2489	0.1553	0.0051	-0.0009	-0.0053
7	11.12	0.0	-10.0	34.00	1.8624	0.2833	0.1418	0.0049	-0.0006	-0.0043
8	13.24	0.0	-10.0	34.18	2.0488	0.3262	0.1087	0.0046	-0.0020	-0.0026
9	15.35	0.0	-10.0	34.00	2.2273	0.3837	0.0881	0.0042	-0.0019	-0.0023
10	17.42	0.0	-10.0	34.02	2.3433	0.4644	0.0874	0.0031	-0.0007	-0.0006
11	19.47	0.0	-10.0	33.99	2.4273	0.5576	0.0525	0.0001	0.0001	-0.0031
12	21.53	0.0	-10.0	34.05	2.5250	0.6691	-0.0003	0.0	0.0011	-0.0056
13	23.58	0.0	-10.0	34.13	2.6231	0.7814	-0.0583	0.0084	0.0001	-0.0054
14	25.60	0.0	-10.0	34.18	2.6425	0.9192	-0.0655	-0.0023	0.0047	0.0144
15	27.60	0.0	-10.0	33.96	2.6490	1.0613	-0.0686	0.0060	0.0008	-0.0031
16	29.59	0.0	-10.0	34.08	2.6277	1.2323	-0.1130	-0.0057	0.0016	0.0090

RUN 4

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.20	0.7724	0.1306	-0.0379	0.0050	-0.0018	-0.0060
2	0.59	0.0	0.0	34.05	0.9833	0.1395	-0.0533	-0.0005	-0.0018	-0.0009
3	2.73	0.0	0.0	34.02	1.2048	0.1583	-0.0680	0.0057	-0.0013	-0.0055
4	4.86	0.0	0.0	34.03	1.4171	0.1823	-0.0768	0.0047	-0.0010	-0.0049
5	6.98	0.0	0.0	34.01	1.6176	0.2113	-0.0851	0.0036	-0.0007	-0.0047
6	9.09	0.0	0.0	34.18	1.8065	0.2466	-0.0818	0.0037	-0.0005	-0.0037
7	11.20	0.0	0.0	34.03	1.9950	0.2938	-0.0842	0.0016	-0.0003	-0.0022
8	13.29	0.0	0.0	33.81	2.1371	0.3535	-0.1259	-0.0034	-0.0010	-0.0002
9	15.39	0.0	0.0	34.02	2.3048	0.4307	-0.1593	0.0024	-0.0005	-0.0029
10	17.46	0.0	0.0	33.98	2.4140	0.5215	-0.1968	0.0049	-0.0012	-0.0125
11	19.50	0.0	0.0	34.07	2.4788	0.6447	-0.2444	0.0001	0.0004	-0.0050
12	21.58	0.0	0.0	34.01	2.6230	0.7854	-0.2928	0.0057	0.0004	-0.0060
13	23.65	0.0	0.0	34.22	2.7303	0.9073	-0.3158	0.0026	0.0001	-0.0036
14	25.66	0.0	0.0	33.92	2.7420	1.0397	-0.3015	-0.0113	0.0041	0.0171
15	27.68	0.0	0.0	34.30	2.7803	1.1854	-0.3031	-0.0018	0.0037	-0.0040
16	29.64	0.0	0.0	34.03	2.7103	1.3562	-0.3277	-0.0020	0.0026	0.0001

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 5

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.59	0.0	-5.0	33.96	0.6714	0.1451	0.1057	0.0084	-0.0024	-0.0078
2	0.53	0.0	-5.0	33.94	0.8766	0.1502	0.0781	0.0045	-0.0017	-0.0051
3	2.67	0.0	-5.0	33.94	1.1067	0.1629	0.0609	0.0071	-0.0021	-0.0059
4	4.79	0.0	-5.0	33.97	1.3110	0.1818	0.0599	0.0059	-0.0018	-0.0048
5	6.92	0.0	-5.0	33.99	1.5153	0.2075	0.0449	0.0065	-0.0017	-0.0040
6	9.04	0.0	-5.0	34.08	1.7293	0.2418	0.0313	0.0072	-0.0016	-0.0063
7	11.16	0.0	-5.0	34.01	1.9199	0.2819	0.0096	0.0049	-0.0017	-0.0036
8	13.24	0.0	-5.0	33.96	2.0586	0.3365	0.0270	0.0009	-0.0010	-0.0020
9	15.33	0.0	-5.0	34.54	2.2099	0.4068	-0.0564	0.0049	-0.0014	-0.0035
10	17.40	0.0	-5.0	33.92	2.3235	0.4892	0.0830	0.0045	-0.0017	-0.0150
11	19.45	0.0	-5.0	33.78	2.4021	0.5943	-0.1123	-0.0020	0.0001	-0.0100
12	21.54	0.0	-5.0	33.91	2.5433	0.7406	-0.2046	0.0057	-0.0002	-0.0042
13	23.60	0.0	-5.0	34.24	2.6457	0.8588	-0.2338	0.0069	-0.0005	-0.0043
14	25.62	0.0	-5.0	34.09	2.6893	0.9914	-0.2349	0.0070	0.0014	0.0131
15	27.65	0.0	-5.0	34.16	2.7372	1.1254	-0.2411	-0.0041	0.0035	0.0137
16	29.63	0.0	-5.0	33.81	2.6934	1.2936	-0.2578	-0.0059	0.0005	0.0050

RUN 6

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
3	-1.71	0.0	0.0	33.99	0.4771	0.1303	0.0653	0.0012	-0.0010	0.0009
4	0.41	0.0	0.0	34.07	0.6733	0.1356	0.0495	0.0041	-0.0016	-0.0007
5	2.53	0.0	0.0	34.09	0.8761	0.1475	0.0484	0.0035	-0.0014	-0.0013
6	4.65	0.0	0.0	34.31	1.0811	0.1661	0.0458	0.0043	-0.0014	-0.0018
7	6.78	0.0	0.0	34.26	1.2867	0.1888	0.0434	0.0019	-0.0011	0.0001
8	8.90	0.0	0.0	34.13	1.4873	0.2165	0.0423	-0.0027	-0.0013	0.0037
9	11.03	0.0	0.0	34.06	1.7063	0.2626	0.0171	-0.0001	-0.0008	0.0014
10	13.13	0.0	0.0	33.90	1.8731	0.3093	-0.0117	-0.0008	-0.0007	0.0020
11	15.26	0.0	0.0	33.78	2.0800	0.3881	-0.0294	-0.0008	-0.0017	0.0034
12	17.37	0.0	0.0	33.93	2.2635	0.4813	-0.1080	0.0021	-0.0013	0.0003
13	19.41	0.0	0.0	33.86	2.3264	0.5930	-0.1782	0.0079	-0.0033	-0.0111
14	21.47	0.0	0.0	33.79	2.4381	0.7324	-0.2292	0.0052	-0.0006	-0.0042
15	23.54	0.0	0.0	33.79	2.5574	0.8528	-0.2569	0.0040	0.0001	-0.0019
16	25.62	0.0	0.0	34.12	2.6849	0.9836	-0.2661	0.0032	-0.0009	-0.0026
17	27.65	0.0	0.0	33.88	2.7378	1.1334	-0.2815	-0.0021	0.0020	0.0048
18	29.66	0.0	0.0	34.19	2.7440	1.3153	-0.3121	-0.0005	-0.0009	0.0041

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 7

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.71	0.0	0.0	33.98	0.4785	0.1344	0.0700	0.0005	-0.0042	0.0007
2	0.41	0.0	0.0	34.00	0.6799	0.1391	0.0475	0.0027	-0.0012	-0.0002
3	2.54	0.0	0.0	34.00	0.8895	0.1514	0.0610	0.0024	-0.0008	0.0001
4	4.66	0.0	0.0	33.90	1.0983	0.1714	0.0490	0.0030	-0.0010	-0.0003
5	6.79	0.0	0.0	33.86	1.2997	0.1962	0.0501	0.0020	-0.0008	0.0019
6	8.91	0.0	0.0	33.88	1.5071	0.2276	0.0452	0.0054	-0.0015	0.0
7	11.03	0.0	0.0	33.85	1.7118	0.2654	0.0334	0.0022	-0.0009	0.0015
8	13.16	0.0	0.0	34.13	1.9158	0.3167	0.0116	0.0012	-0.0006	0.0021
9	15.28	0.0	0.0	33.86	2.1181	0.3844	-0.0156	0.0005	-0.0009	0.0025
10	17.41	0.0	0.0	33.97	2.3362	0.4770	-0.0563	0.0029	-0.0010	0.0027
11	19.47	0.0	0.0	33.87	2.4338	0.5940	-0.0984	-0.0019	0.0	-0.0031
12	21.52	0.0	0.0	33.93	2.5165	0.7015	-0.1376	-0.0006	0.0011	-0.0026
13	23.60	0.0	0.0	33.77	2.6447	0.8225	-0.1855	0.0019	0.0003	-0.0033
14	25.65	0.0	0.0	33.89	2.7252	0.9678	-0.2007	0.0023	0.0001	0.0044
15	27.68	0.0	0.0	33.86	2.7759	1.1232	-0.2355	0.0046	0.0004	0.0028
16	29.65	0.0	0.0	34.02	2.7260	1.3262	-0.2675	-0.0107	0.0	0.0075

RUN 8

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.76	0.0	-5.0	33.88	0.3898	0.1475	0.1819	0.0019	-0.0046	-0.0008
2	0.36	0.0	-5.0	33.81	0.5924	0.1498	0.1697	-0.0001	-0.0038	0.0012
3	2.48	0.0	-5.0	33.94	0.7963	0.1577	0.1685	-0.0011	-0.0034	0.0012
4	4.61	0.0	-5.0	33.94	1.0082	0.1729	0.1704	-0.0010	-0.0034	0.0003
5	6.73	0.0	-5.0	33.96	1.2142	0.1946	0.1682	-0.0014	-0.0033	0.0020
6	8.86	0.0	-5.0	33.88	1.4176	0.2204	0.1665	0.0	-0.0031	0.0014
7	11.00	0.0	-5.0	33.92	1.6475	0.2577	0.1560	-0.0014	-0.0027	0.0033
8	13.11	0.0	-5.0	34.02	1.8332	0.2987	0.1278	0.0006	-0.0031	0.0021
9	15.23	0.0	-5.0	33.82	2.0309	0.3611	0.0952	-0.0023	-0.0035	0.0050
10	17.36	0.0	-5.0	33.88	2.2510	0.4456	0.0643	-0.0031	-0.0030	0.0045
11	19.41	0.0	-5.0	34.00	2.3360	0.5533	0.0197	-0.0030	-0.0020	0.0006
12	21.47	0.0	-5.0	33.94	2.4382	0.6637	-0.0384	-0.0009	-0.0010	-0.0026
13	23.54	0.0	-5.0	34.07	2.5478	0.7790	-0.0921	0.0019	-0.0007	-0.0010
14	25.59	0.0	-5.0	33.86	2.6402	0.9190	-0.1452	-0.0014	0.0	-0.0027
15	27.55	0.0	-5.0	33.80	2.5729	1.0743	-0.0178	0.0007	-0.0002	0.0059
16	29.62	0.0	-5.0	33.95	2.6756	1.2576	-0.2078	-0.0055	-0.0001	-0.0028

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 9

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.67	0.0	5.0	34.17	0.5481	0.1272	-0.0516	0.0038	-0.0020	-0.0016
2	0.45	0.0	5.0	34.01	0.7437	0.1365	-0.0630	0.0032	-0.0016	-0.0014
3	2.57	0.0	5.0	33.98	0.9449	0.1516	-0.0622	0.0030	-0.0016	-0.0013
4	4.70	0.0	5.0	33.89	1.1647	0.1743	-0.0623	0.0051	-0.0017	-0.0011
5	6.83	0.0	5.0	34.05	1.3703	0.2041	-0.0630	0.0052	-0.0015	-0.0007
6	8.96	0.0	5.0	34.11	1.5893	0.2412	-0.0695	0.0033	-0.0006	0.0002
7	11.07	0.0	5.0	34.03	1.7754	0.2831	-0.0781	0.0035	-0.0011	0.0017
8	13.20	0.0	5.0	33.93	1.9832	0.3400	-0.1043	0.0023	-0.0005	0.0021
9	15.32	0.0	5.0	34.12	2.1802	0.4106	-0.1423	0.0026	-0.0014	0.0026
10	17.44	0.0	5.0	34.02	2.3835	0.5040	-0.1875	0.0005	-0.0009	0.0026
11	19.50	0.0	5.0	34.19	2.4835	0.6230	-0.1976	0.0013	-0.0005	-0.0030
12	21.55	0.0	5.0	34.14	2.5717	0.7369	-0.2439	0.0020	0.0003	-0.0037
13	23.62	0.0	5.0	34.15	2.6743	0.8557	-0.2564	0.0002	0.0009	-0.0028
14	25.65	0.0	5.0	34.12	2.7356	1.0007	-0.2719	0.0083	0.0002	0.0010
15	27.68	0.0	5.0	34.13	2.7760	1.1676	-0.2775	0.0037	0.0002	0.0003
16	29.66	0.0	5.0	34.22	2.7472	1.3675	-0.3121	-0.0032	0.0025	-0.0008

RUN 10

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	7.10	0.7978	0.1396	-0.0254	0.0055	-0.0012	0.0027
2	0.61	0.0	0.0	7.10	1.0043	0.1514	-0.0635	0.0039	-0.0007	0.0009
3	2.74	0.0	0.0	7.09	1.2228	0.1698	-0.0847	0.0053	-0.0016	-0.0008
4	4.87	0.0	0.0	7.07	1.4375	0.1954	-0.0829	0.0056	-0.0015	-0.0006
5	6.99	0.0	0.0	7.07	1.6421	0.2273	-0.0827	0.0041	-0.0016	-0.0002
6	9.11	0.0	0.0	7.05	1.8296	0.2644	-0.0870	0.0032	-0.0016	-0.0009
7	11.22	0.0	0.0	7.05	2.0207	0.3098	-0.0813	0.0061	-0.0020	0.0001
8	13.33	0.0	0.0	7.05	2.1988	0.3662	-0.1105	0.0038	-0.0022	0.0012
9	15.44	0.0	0.0	7.05	2.3845	0.4396	-0.1311	0.0073	-0.0031	-0.0001
10	17.52	0.0	0.0	7.05	2.5175	0.5372	-0.1611	0.0062	-0.0019	-0.0009
11	19.59	0.0	0.0	7.02	2.6245	0.6294	-0.1795	0.0076	-0.0015	-0.0037
12	21.63	0.0	0.0	7.02	2.6940	0.7495	-0.2178	0.0035	0.0002	-0.0023
13	23.64	0.0	0.0	6.97	2.7106	0.8700	-0.3156	0.0118	0.0017	-0.0027
14	25.68	0.0	0.0	6.97	2.7861	1.0117	-0.4067	0.0032	-0.0007	0.0009
15	27.58	0.0	0.0	6.87	2.6086	1.1474	-0.4195	-0.0661	0.0124	0.0614
16	29.54	0.0	0.0	6.80	2.5531	1.4042	-0.4260	-0.0086	-0.0004	-0.0026

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 11

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	11.09	0.7790	0.1384	-0.0392	0.0078	-0.0021	-0.0015
2	0.60	0.0	0.0	11.12	1.0015	0.1490	-0.0543	0.0040	-0.0014	-0.0010
3	2.74	0.0	0.0	11.09	1.2287	0.1664	-0.0734	0.0054	-0.0018	-0.0016
4	4.87	0.0	0.0	11.07	1.4393	0.1926	-0.0894	0.0047	-0.0018	-0.0003
5	6.99	0.0	0.0	11.07	1.6315	0.2234	-0.0861	0.0043	-0.0019	-0.0003
6	9.10	0.0	0.0	11.07	1.8211	0.2609	-0.0948	0.0054	-0.0022	-0.0009
7	11.21	0.0	0.0	11.03	1.9989	0.3040	-0.0849	0.0026	-0.0023	0.0009
8	13.30	0.0	0.0	10.97	2.1510	0.3561	-0.1056	0.0020	-0.0020	0.0019
9	15.41	0.0	0.0	10.96	2.3402	0.4299	-0.1342	0.0049	-0.0020	-0.0012
10	17.47	0.0	0.0	10.92	2.4378	0.5178	-0.1455	0.0047	-0.0019	-0.0012
11	19.56	0.0	0.0	10.93	2.5839	0.6177	-0.1759	0.0069	-0.0015	-0.0035
12	21.58	0.0	0.0	10.87	2.6126	0.7317	-0.2390	0.0003	0.0010	-0.0050
13	23.65	0.0	0.0	10.84	2.7263	0.8738	-0.3292	0.0128	0.0001	-0.0088
14	25.73	0.0	0.0	10.91	2.8637	1.0371	-0.4173	0.0028	-0.0007	-0.0012
15	27.64	0.0	0.0	10.86	2.7210	1.1665	-0.4234	-0.0447	0.0089	0.0358
16	29.59	0.0	0.0	10.87	2.6299	1.3585	-0.4348	-0.0072	-0.0027	-0.0102

RUN 12

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	19.96	0.7776	0.1352	-0.0332	0.0034	-0.0019	-0.0004
2	0.59	0.0	0.0	20.06	0.9777	0.1454	-0.0554	0.0048	-0.0019	-0.0012
3	2.72	0.0	0.0	19.91	1.1943	0.1606	-0.0646	0.0009	-0.0010	0.0006
4	4.85	0.0	0.0	19.84	1.4111	0.1871	-0.0803	0.0023	-0.0013	0.0019
5	6.97	0.0	0.0	19.73	1.6029	0.2200	-0.0892	0.0012	-0.0010	0.0033
6	9.10	0.0	0.0	19.88	1.8221	0.2612	-0.0956	0.0029	-0.0019	0.0019
7	11.19	0.0	0.0	20.01	1.9686	0.2990	-0.0866	0.0044	-0.0020	0.0034
8	13.31	0.0	0.0	19.72	2.1711	0.3594	-0.1153	0.0046	-0.0023	0.0026
9	15.44	0.0	0.0	19.82	2.3872	0.4381	-0.1430	0.0063	-0.0021	0.0
10	17.50	0.0	0.0	19.93	2.4867	0.5177	-0.1601	0.0123	-0.0040	-0.0103
11	19.57	0.0	0.0	19.72	2.6050	0.6250	-0.1692	0.0060	-0.0012	-0.0039
12	21.63	0.0	0.0	20.19	2.7056	0.7578	-0.2405	0.0	0.0009	-0.0043
13	23.64	0.0	0.0	19.97	2.7134	0.8752	-0.3425	0.0104	0.0005	-0.0034
14	25.69	0.0	0.0	19.81	2.7969	1.0245	-0.3944	-0.0040	0.0013	0.0054
15	27.68	0.0	0.0	19.79	2.7829	1.1580	-0.4144	-0.0109	0.0039	0.0128
16	29.63	0.0	0.0	19.79	2.7012	1.3376	-0.4353	-0.0149	-0.0031	-0.0047

TABLE IV - PART B - TEST 3 DATA - CONTINUED.

RUN 13

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.09	0.7710	0.1335	-0.0436	0.0024	-0.0020	-0.0022
2	0.59	0.0	0.0	34.15	0.9754	0.1443	-0.0650	0.0032	-0.0019	-0.0002
3	2.72	0.0	0.0	34.13	1.1901	0.1612	-0.0790	0.0038	-0.0013	0.0014
4	4.84	0.0	0.0	34.11	1.3904	0.1861	-0.0838	0.0030	-0.0018	0.0003
5	6.96	0.0	0.0	34.02	1.5913	0.2175	-0.0795	0.0028	-0.0016	0.0010
6	9.08	0.0	0.0	33.97	1.7952	0.2548	-0.0839	0.0018	-0.0014	0.0058
7	11.21	0.0	0.0	33.95	2.0026	0.3037	-0.0844	0.0019	-0.0023	0.0043
8	13.31	0.0	0.0	33.99	2.1698	0.3588	-0.1118	0.0019	-0.0021	0.0052
9	15.44	0.0	0.0	33.95	2.3783	0.4368	-0.1475	0.0033	-0.0020	0.0005
10	17.50	0.0	0.0	34.01	2.4764	0.5221	-0.1628	0.0033	-0.0015	-0.0006
11	19.58	0.0	0.0	33.89	2.6094	0.6233	-0.1811	0.0025	-0.0010	0.0004
12	21.62	0.0	0.0	33.94	2.6773	0.7471	-0.2424	-0.0025	0.0015	-0.0050
13	23.66	0.0	0.0	34.17	2.7406	0.8841	-0.3329	0.0083	0.0007	-0.0027
14	25.65	0.0	0.0	34.15	2.7353	1.0261	-0.3851	-0.0044	0.0015	-0.0168

RUN 14

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.54	0.0	0.0	49.74	0.7651	0.1331	-0.0440	0.0033	-0.0017	0.0007
2	0.59	0.0	0.0	50.18	0.9784	0.1439	-0.0560	0.0021	-0.0014	0.0017
3	2.72	0.0	0.0	49.96	1.1936	0.1613	-0.0639	0.0015	-0.0013	0.0033

TABLE IV - PART B - TEST 3 DATA - CONCLUDED.

RUN 15

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.60	0.0	-5.0	33.92	0.6639	0.1504	0.0916	0.0055	-0.0026	-0.0019
2	0.52	0.0	-5.0	33.93	0.8687	0.1570	0.0829	0.0042	-0.0026	-0.0005
3	2.66	0.0	-5.0	33.97	1.1008	0.1702	0.0673	0.0037	-0.0021	0.0018
4	4.79	0.0	-5.0	33.87	1.3028	0.1911	0.0608	0.0025	-0.0019	0.0025
5	6.91	0.0	-5.0	33.91	1.5111	0.2174	0.0510	0.0032	-0.0019	0.0036
6	9.04	0.0	-5.0	33.94	1.7146	0.2503	0.0368	0.0021	-0.0025	0.0036
7	11.16	0.0	-5.0	33.82	1.9266	0.2942	0.0215	0.0027	-0.0020	0.0044
8	13.27	0.0	-5.0	34.07	2.1049	0.3465	-0.0062	0.0041	-0.0026	0.0038
9	15.37	0.0	-5.0	33.97	2.2624	0.4111	-0.0285	0.0059	-0.0025	-0.0050
10	17.44	0.0	-5.0	33.92	2.3838	0.4979	-0.0412	0.0064	-0.0018	-0.0077
11	19.49	0.0	-5.0	33.85	2.4702	0.5940	-0.0451	0.0098	-0.0034	-0.0163
12	21.55	0.0	-5.0	33.84	2.5645	0.7051	-0.1371	0.0017	0.0006	-0.0094
13	23.59	0.0	-5.0	33.87	2.6364	0.8406	-0.2591	0.0112	0.0002	-0.0078
14	25.56	0.0	-5.0	33.79	2.5887	0.9782	-0.2752	0.0064	0.0	0.0007
15	27.60	0.0	-5.0	33.95	2.6429	1.1219	-0.3465	0.0105	0.0	-0.0016
16	29.59	0.0	-5.0	33.86	2.6264	1.2750	-0.3961	0.0002	-0.0004	0.0039

RUN 16

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.54	0.0	0.0	33.74	0.7587	0.1308	-0.0419	0.0063	0.0	-0.0028
2	0.59	0.0	0.0	33.89	0.9730	0.1424	-0.0605	0.0062	0.0005	-0.0012
3	2.71	0.0	0.0	33.98	1.1761	0.1590	-0.0673	0.0072	0.0002	-0.0028
4	4.83	0.0	0.0	33.96	1.3806	0.1825	-0.0788	0.0047	0.0006	-0.0022
5	6.96	0.0	0.0	33.90	1.5926	0.2129	-0.0968	0.0061	0.0002	0.0005
6	9.08	0.0	0.0	34.11	1.7886	0.2510	-0.1074	0.0055	0.0	0.0006
7	11.17	0.0	0.0	34.01	1.9407	0.2965	-0.1090	0.0033	-0.0002	0.0008
8	13.29	0.0	0.0	34.06	2.1408	0.3637	-0.1429	0.0050	0.0007	-0.0015
9	15.38	0.0	0.0	33.98	2.2855	0.4372	-0.1830	0.0045	0.0001	-0.0004
10	17.46	0.0	0.0	34.05	2.4199	0.5397	-0.2085	0.0026	0.0019	-0.0022
11	19.54	0.0	0.0	34.08	2.5421	0.6480	-0.2388	0.0001	0.0026	-0.0046
12	21.58	0.0	0.0	34.02	2.6159	0.7931	-0.3336	0.0047	0.0026	-0.0067
13	23.63	0.0	0.0	34.03	2.6918	0.9288	-0.3926	0.0081	0.0024	-0.0042
14	25.63	0.0	0.0	33.89	2.7011	1.0525	-0.4207	-0.0025	0.0042	0.0119
15	27.62	0.0	0.0	33.94	2.6769	1.1915	-0.4243	0.0131	0.0040	-0.0013
16	29.60	0.0	0.0	34.00	2.6549	1.3407	-0.4542	-0.0081	-0.0012	0.0043

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TABLE V - PART A - TEST 4 TABULATION SCHEDULE.

Run	q	α Range	WING					TAIL	ATTACHMENTS			Comments
			δ_f	δ_{DLC}	δ_L	Glove Slat	Flap Actuator Fairings	i_t	Gear	Pylons	Missiles	
1	34.5	-2→28	35	5	17°MOD	On	On	0	On	On	On	
2								-5				
3								5				
4				-4.5				0				
5								-5				
6								-10	↓			
7								0	Off			↓
8										↓		Off
9									↓	Off		
10									On			
11									Main			Nose gear off
12	↓	↓	↓	↓	↓	↓	↓	↓	Off	↓	↓	Main gear doors open.

TABLE V - PART B - TEST 4 DATA.

RUN 1

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.71	0.0	0.0	34.05	0.4726	0.1605	0.0176	0.0035	-0.0018	0.0013
2	0.41	0.0	0.0	34.18	0.6765	0.1656	0.0089	0.0025	-0.0016	0.0014
3	2.53	0.0	0.0	34.11	0.8757	0.1784	0.0084	-0.0006	-0.0004	0.0041
4	4.65	0.0	0.0	34.16	1.0737	0.1963	0.0044	0.0011	-0.0006	0.0025
5	6.77	0.0	0.0	34.24	1.2745	0.2217	0.0011	0.0012	-0.0002	0.0034
6	8.89	0.0	0.0	34.24	1.4685	0.2534	-0.0061	0.0009	-0.0004	0.0029
7	11.01	0.0	0.0	34.07	1.6666	0.2927	-0.0198	-0.0005	0.0002	0.0032
8	13.12	0.0	0.0	34.08	1.8602	0.3474	-0.0321	-0.0034	0.0007	0.0057
9	15.23	0.0	0.0	34.04	2.0303	0.4108	-0.0479	-0.0009	0.0	0.0053
10	11.00	0.0	0.0	34.09	1.6639	0.2934	-0.0164	0.0023	-0.0003	0.0030
11	13.12	0.0	0.0	34.10	1.8598	0.3461	-0.0299	-0.0020	0.0002	0.0043
12	15.23	0.0	0.0	34.19	2.0310	0.4106	-0.0499	0.0014	-0.0001	0.0039
13	13.12	0.0	0.0	34.08	1.8545	0.3453	-0.0367	-0.0024	0.0002	0.0046
14	15.23	0.0	0.0	34.14	2.0348	0.4111	-0.0516	0.0	-0.0001	0.0057
15	17.33	0.0	0.0	34.02	2.1938	0.4918	-0.0659	-0.0005	-0.0004	0.0078
16	19.38	0.0	0.0	34.18	2.2866	0.5950	-0.0765	-0.0054	-0.0003	0.0057
17	21.41	0.0	0.0	34.09	2.3369	0.7218	-0.1807	-0.0060	0.0007	0.0045
18	23.46	0.0	0.0	33.97	2.4215	0.8488	-0.2761	-0.0116	0.0005	0.0057
19	25.51	0.0	0.0	34.21	2.4995	0.9662	-0.2934	-0.0156	0.0010	0.0137
20	27.54	0.0	0.0	34.40	2.5534	1.1121	-0.3373	-0.0172	0.0038	0.0157
21	29.53	0.0	0.0	34.03	2.5355	1.2707	-0.3606	-0.0243	-0.0043	0.0099

RUN 2

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.76	0.0	-5.0	33.87	0.3987	0.1732	0.1471	0.0038	-0.0016	0.0005
2	0.36	0.0	-5.0	34.02	0.6006	0.1749	0.1408	0.0036	-0.0013	0.0022
3	2.49	0.0	-5.0	34.04	0.8043	0.1832	0.1391	0.0008	-0.0010	0.0030
4	4.61	0.0	-5.0	34.30	1.0041	0.1978	0.1394	0.0001	-0.0005	0.0039
5	6.73	0.0	-5.0	34.22	1.2062	0.2190	0.1336	0.0015	-0.0006	0.0030
6	8.85	0.0	-5.0	34.02	1.4058	0.2466	0.1164	0.0031	-0.0005	0.0020
7	10.97	0.0	-5.0	34.21	1.5981	0.2825	0.1013	0.0018	-0.0002	0.0022
8	13.08	0.0	-5.0	34.23	1.7957	0.3309	0.0855	0.0002	-0.0001	0.0032
9	15.20	0.0	-5.0	34.16	1.9846	0.3955	0.0563	0.0015	-0.0002	0.0059
10	17.30	0.0	-5.0	33.98	2.1443	0.4718	0.0390	-0.0003	-0.0007	0.0063
11	19.35	0.0	-5.0	34.13	2.2343	0.5740	0.0312	-0.0020	0.0001	0.0048
12	21.38	0.0	-5.0	34.16	2.2862	0.6893	-0.0773	-0.0055	0.0011	0.0052
13	23.43	0.0	-5.0	34.01	2.3701	0.8124	-0.1840	-0.0105	0.0008	0.0056
14	25.48	0.0	-5.0	34.05	2.4542	0.9322	-0.2176	-0.0147	0.0013	0.0118
15	27.52	0.0	-5.0	34.27	2.5101	1.0695	-0.2791	-0.0218	0.0041	0.0151
16	29.51	0.0	-5.0	33.91	2.4948	1.2251	-0.3143	-0.0175	-0.0018	0.0046

TABLE V - PART B - TEST 4 DATA - CONTINUED.

RUN 3

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.66	0.0	5.0	33.88	0.5634	0.1544	-0.0781	0.0007	-0.0006	0.0029
2	0.46	0.0	5.0	33.96	0.7591	0.1637	-0.0813	0.0028	-0.0007	0.0025
3	2.58	0.0	5.0	33.95	0.9597	0.1799	-0.0814	0.0019	-0.0007	0.0020
4	4.70	0.0	5.0	34.10	1.1653	0.2018	-0.0779	0.0015	-0.0004	0.0021
5	6.82	0.0	5.0	34.00	1.3639	0.2308	-0.0801	0.0013	-0.0001	0.0028
6	8.94	0.0	5.0	33.94	1.5581	0.2664	-0.0867	0.0029	0.0002	0.0026
7	11.05	0.0	5.0	33.88	1.7414	0.3084	-0.0905	0.0003	0.0010	0.0029
8	13.16	0.0	5.0	33.89	1.9252	0.3635	-0.1052	-0.0010	0.0006	0.0040
9	15.28	0.0	5.0	34.03	2.1127	0.4368	-0.1214	0.0005	0.0005	0.0053
10	17.37	0.0	5.0	34.23	2.2615	0.5219	-0.1364	-0.0007	-0.0004	0.0068
11	19.42	0.0	5.0	33.90	2.3582	0.6334	-0.1363	-0.0043	0.0008	0.0064
12	21.45	0.0	5.0	34.09	2.4054	0.7529	-0.1980	-0.0059	0.0016	0.0048
13	23.50	0.0	5.0	34.16	2.4755	0.8804	-0.2729	-0.0120	0.0009	0.0066
14	25.54	0.0	5.0	33.91	2.5538	1.0101	-0.2985	-0.0137	0.0037	0.0154
15	27.57	0.0	5.0	33.96	2.6015	1.1540	-0.3278	-0.0237	0.0046	0.0192
16	29.56	0.0	5.0	34.10	2.5836	1.3138	-0.3747	-0.0180	-0.0008	0.0073

RUN 4

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.12	0.7847	0.1599	-0.0617	0.0059	-0.0019	-0.0004
2	0.60	0.0	0.0	34.12	1.0005	0.1711	-0.0835	0.0052	-0.0016	-0.0004
3	2.73	0.0	0.0	34.10	1.2010	0.1892	-0.0902	0.0059	-0.0017	-0.0009
4	4.83	0.0	0.0	34.08	1.3739	0.2111	-0.0856	0.0023	-0.0008	0.0028
5	6.95	0.0	0.0	34.19	1.5749	0.2400	-0.0872	0.0027	-0.0013	0.0011
6	9.06	0.0	0.0	34.11	1.7531	0.2754	-0.0741	0.0026	-0.0009	0.0051
7	11.19	0.0	0.0	33.93	1.9663	0.3226	-0.0832	0.0010	-0.0002	0.0008
8	13.28	0.0	0.0	34.25	2.1222	0.3790	-0.1009	-0.0011	-0.0002	0.0030
9	15.37	0.0	0.0	34.05	2.2632	0.4500	-0.1207	-0.0009	-0.0002	0.0057
10	17.42	0.0	0.0	34.67	2.3516	0.5356	-0.1067	-0.0024	0.0	0.0082
11	19.48	0.0	0.0	33.74	2.4477	0.6363	-0.1233	-0.0057	0.0010	0.0039
12	21.51	0.0	0.0	33.94	2.4919	0.7639	-0.2148	-0.0055	0.0002	0.0079
13	23.55	0.0	0.0	34.28	2.5681	0.8925	-0.2811	-0.0112	0.0003	0.0107
14	25.57	0.0	0.0	34.21	2.6066	1.0246	-0.2973	-0.0300	0.0048	0.0278
15	27.57	0.0	0.0	34.19	2.6039	1.1673	-0.3052	-0.0255	0.0031	0.0124
16	29.55	0.0	0.0	34.03	2.5598	1.3158	-0.3537	-0.0248	-0.0001	0.0071

TABLE V - PART B - TEST 4 DATA - CONTINUED.

RUN 5

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.58	0.0	-5.0	34.15	0.6915	0.1751	0.0631	0.0063	-0.0018	0.0002
2	0.55	0.0	-5.0	34.15	0.9033	0.1801	0.0334	0.0072	-0.0022	0.0004
3	2.67	0.0	-5.0	34.26	1.1103	0.1934	0.0192	0.0055	-0.0016	0.0006
4	4.79	0.0	-5.0	34.09	1.3132	0.2124	0.0074	0.0024	-0.0010	0.0018
5	6.91	0.0	-5.0	33.92	1.5095	0.2395	-0.0004	0.0031	-0.0011	0.0012
6	9.02	0.0	-5.0	34.24	1.6921	0.2707	0.0099	0.0016	-0.0009	0.0049
7	11.15	0.0	-5.0	34.29	1.8973	0.3144	-0.0067	0.0053	-0.0010	0.0005
8	13.25	0.0	-5.0	34.11	2.0639	0.3681	-0.0201	0.0012	-0.0004	0.0026
9	15.33	0.0	-5.0	33.85	2.2069	0.4331	-0.0374	0.0023	-0.0008	0.0056
10	17.39	0.0	-5.0	33.87	2.3087	0.5139	-0.0294	-0.0053	0.0010	0.0131
11	19.43	0.0	-5.0	34.03	2.3659	0.5987	-0.0316	-0.0019	0.0004	0.0044
12	21.46	0.0	-5.0	34.17	2.4194	0.7272	-0.1562	-0.0054	0.0006	0.0083
13	23.52	0.0	-5.0	33.98	2.5148	0.8570	-0.2226	-0.0079	-0.0004	0.0080
14	25.55	0.0	-5.0	33.88	2.5704	0.9847	-0.2792	-0.0249	0.0006	0.0191
15	27.54	0.0	-5.0	34.11	2.5511	1.1320	-0.2929	-0.0303	0.0006	0.0088
16	29.52	0.0	-5.0	33.94	2.5106	1.2710	-0.3280	-0.0221	-0.0013	0.0063

RUN 6

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.62	0.0	-10.0	34.38	0.6230	0.1950	0.1634	0.0079	-0.0026	-0.0035
2	0.50	0.0	-10.0	34.48	0.8321	0.1954	0.1445	0.0055	-0.0016	-0.0014
3	2.63	0.0	-10.0	34.10	1.0359	0.2037	0.1314	0.0053	-0.0015	-0.0004
4	4.74	0.0	-10.0	34.16	1.2173	0.2181	0.1239	0.0040	-0.0013	0.0027
5	6.85	0.0	-10.0	34.02	1.4141	0.2396	0.1133	0.0009	-0.0009	0.0023
6	8.98	0.0	-10.0	34.13	1.6185	0.2687	0.1030	0.0026	-0.0010	0.0033
7	11.10	0.0	-10.0	34.14	1.8143	0.3072	0.0929	0.0019	-0.0005	0.0056
8	13.21	0.0	-10.0	33.97	1.9980	0.3582	0.0635	0.0018	-0.0006	0.0017
9	15.30	0.0	-10.0	34.00	2.1484	0.4225	0.0448	0.0	-0.0003	0.0057
10	17.35	0.0	-10.0	34.00	2.2428	0.4964	0.0490	-0.0063	-0.0017	0.0145
11	19.40	0.0	-10.0	34.14	2.3139	0.5886	0.0374	-0.0051	0.0014	0.0031
12	21.43	0.0	-10.0	34.27	2.3666	0.7093	-0.0620	-0.0028	0.0020	0.0037
13	23.48	0.0	-10.0	34.05	2.4547	0.8279	-0.1545	-0.0073	0.0	0.0060
14	25.50	0.0	-10.0	33.80	2.4845	0.9505	-0.1892	-0.0277	0.0027	0.0253
15	27.51	0.0	-10.0	33.93	2.4932	1.0862	-0.2314	-0.0313	0.0004	0.0112
16	29.48	0.0	-10.0	34.20	2.4585	1.2213	-0.2661	-0.0134	-0.0011	0.0028

TABLE V - PART B - TEST 4 DATA - CONTINUED.

RUN 7

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.53	0.0	0.0	34.22	0.7786	0.1330	-0.0823	0.0050	-0.0021	-0.0010
2	0.60	0.0	0.0	34.00	1.0010	0.1463	-0.0959	0.0031	-0.0016	0.0
3	2.71	0.0	0.0	34.07	1.1822	0.1646	-0.0972	0.0009	-0.0013	0.0032
4	4.84	0.0	0.0	34.02	1.3843	0.1890	-0.0974	-0.0001	-0.0010	0.0043
5	6.95	0.0	0.0	34.16	1.5745	0.2215	-0.0991	0.0003	-0.0012	0.0048
6	9.06	0.0	0.0	34.04	1.7572	0.2588	-0.0780	-0.0013	-0.0009	0.0078
7	11.18	0.0	0.0	34.07	1.9532	0.3055	-0.0865	-0.0017	0.0	0.0049
8	13.29	0.0	0.0	34.07	2.1298	0.3641	-0.0925	-0.0021	-0.0002	0.0047
9	15.38	0.0	0.0	34.12	2.2787	0.4365	-0.1126	-0.0025	-0.0001	0.0089
10	17.42	0.0	0.0	34.12	2.3537	0.5316	-0.1083	-0.0090	0.0005	0.0108
11	19.48	0.0	0.0	33.99	2.4448	0.6193	-0.1142	-0.0090	0.0004	0.0086
12	21.50	0.0	0.0	34.09	2.4916	0.7483	-0.2048	-0.0076	-0.0002	0.0085
13	23.56	0.0	0.0	34.09	2.5856	0.8814	-0.2509	-0.0145	0.0003	0.0118
14	25.58	0.0	0.0	34.19	2.6110	1.0229	-0.2963	-0.0384	0.0064	0.0309
15	27.57	0.0	0.0	34.12	2.6064	1.1675	-0.3259	-0.0351	0.0010	0.0123
16	29.55	0.0	0.0	34.14	2.5616	1.3113	-0.3475	-0.0326	-0.0035	0.0083

RUN 8

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	34.33	0.7953	0.1329	-0.0807	0.0017	-0.0014	0.0016
2	0.61	0.0	0.0	34.12	1.0045	0.1450	-0.0954	0.0015	-0.0011	0.0016
3	2.73	0.0	0.0	34.09	1.2107	0.1638	-0.1022	0.0017	-0.0013	0.0010
4	4.85	0.0	0.0	34.11	1.4001	0.1903	-0.0950	-0.0009	-0.0006	0.0032
5	6.97	0.0	0.0	34.26	1.6055	0.2228	-0.0987	0.0018	-0.0011	0.0015
6	9.08	0.0	0.0	34.01	1.7957	0.2600	-0.0885	-0.0006	-0.0005	0.0036
7	11.20	0.0	0.0	34.17	1.9839	0.3065	-0.0830	-0.0007	-0.0002	0.0045
8	13.28	0.0	0.0	33.90	2.1229	0.3590	-0.0995	-0.0024	-0.0001	0.0055
9	15.38	0.0	0.0	33.69	2.2813	0.4316	-0.1216	-0.0026	-0.0002	0.0075
10	17.44	0.0	0.0	34.10	2.3861	0.5217	-0.1221	-0.0077	0.0003	0.0107
11	19.51	0.0	0.0	34.29	2.4987	0.6286	-0.1262	-0.0104	0.0002	0.0114
12	21.53	0.0	0.0	34.07	2.5357	0.7517	-0.1995	-0.0137	0.0005	0.0159
13	23.55	0.0	0.0	34.43	2.5736	0.8930	-0.2508	-0.0301	0.0046	0.0337
14	25.59	0.0	0.0	34.00	2.6383	1.0236	-0.2961	-0.0306	0.0067	0.0356
15	27.58	0.0	0.0	33.74	2.6129	1.1621	-0.3168	-0.0401	0.0022	0.0191
16	29.54	0.0	0.0	33.94	2.5468	1.3216	-0.3550	-0.0164	0.0017	0.0059

TABLE V - PART B - TEST 4 DATA - CONTINUED.

RUN 9

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	34.26	0.8193	0.1333	-0.0769	0.0024	-0.0017	0.0007
2	0.62	0.0	0.0	34.04	1.0264	0.1454	-0.0954	0.0012	-0.0013	0.0010
3	2.74	0.0	0.0	34.30	1.2181	0.1636	-0.0932	-0.0012	-0.0008	0.0049
4	4.85	0.0	0.0	34.13	1.4155	0.1884	-0.0956	-0.0012	-0.0010	0.0050
5	6.98	0.0	0.0	34.04	1.6154	0.2201	-0.0915	-0.0004	-0.0011	0.0047
6	9.09	0.0	0.0	34.20	1.8014	0.2573	-0.0850	-0.0017	-0.0010	0.0066
7	11.19	0.0	0.0	34.05	1.9738	0.2998	-0.0855	-0.0020	-0.0008	0.0068
8	13.31	0.0	0.0	33.94	2.1669	0.3577	-0.1067	0.0004	-0.0005	0.0041
9	15.41	0.0	0.0	34.04	2.3425	0.4291	-0.1244	-0.0005	-0.0009	0.0051
10	17.46	0.0	0.0	34.06	2.4212	0.5128	-0.1227	-0.0037	-0.0003	0.0078
11	19.53	0.0	0.0	34.06	2.5332	0.6175	-0.1267	-0.0077	0.0	0.0137
12	21.55	0.0	0.0	34.22	2.5584	0.7458	-0.1946	-0.0127	0.0034	0.0168
13	23.56	0.0	0.0	34.24	2.5781	0.8829	-0.2770	-0.0179	0.0060	0.0278
14	25.61	0.0	0.0	34.13	2.6660	1.0293	-0.3403	-0.0234	0.0065	0.0296
15	27.58	0.0	0.0	34.14	2.6161	1.1807	-0.3833	-0.0230	0.0008	0.0071
16	29.56	0.0	0.0	33.97	2.5892	1.3334	-0.4198	-0.0151	0.0004	0.0020

RUN 10

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	34.01	0.8092	0.1545	-0.0852	0.0038	-0.0013	0.0014
2	0.62	0.0	0.0	34.02	1.0253	0.1666	-0.1059	0.0043	-0.0014	0.0
3	2.74	0.0	0.0	34.04	1.2296	0.1847	-0.1149	0.0029	-0.0011	0.0011
4	4.85	0.0	0.0	34.07	1.4049	0.2063	-0.1093	0.0011	-0.0008	0.0053
5	6.97	0.0	0.0	34.02	1.5997	0.2357	-0.0989	0.0012	-0.0005	0.0058
6	9.09	0.0	0.0	34.07	1.8036	0.2726	-0.1094	0.0013	-0.0006	0.0024
7	11.19	0.0	0.0	34.03	1.9659	0.3149	-0.1082	0.0006	-0.0001	0.0048
8	13.30	0.0	0.0	33.96	2.1506	0.3691	-0.1207	-0.0015	0.0002	0.0048
9	15.39	0.0	0.0	33.92	2.3018	0.4372	-0.1344	-0.0016	-0.0003	0.0067
10	17.45	0.0	0.0	33.95	2.4060	0.5230	-0.1399	-0.0050	0.0002	0.0088
11	19.51	0.0	0.0	34.04	2.4966	0.6232	-0.1337	-0.0064	0.0004	0.0154
12	21.53	0.0	0.0	34.03	2.5327	0.7492	-0.2025	-0.0106	0.0039	0.0144
13	23.54	0.0	0.0	33.96	2.5470	0.8857	-0.2772	-0.0133	0.0062	0.0272
14	25.59	0.0	0.0	34.05	2.6344	1.0230	-0.3314	-0.0259	0.0061	0.0301
15	27.59	0.0	0.0	33.96	2.6295	1.1762	-0.3858	-0.0305	0.0036	0.0149
16	29.56	0.0	0.0	33.93	2.5847	1.3370	-0.3989	-0.0251	-0.0016	0.0

TABLE V - PART B - TEST 4 DATA - CONCLUDED.

RUN 11

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	34.02	0.8054	0.1504	-0.0785	0.0034	-0.0014	0.0022
2	0.61	0.0	0.0	34.08	1.0154	0.1602	-0.0943	0.0031	-0.0015	0.0019
3	2.74	0.0	0.0	34.07	1.2268	0.1789	-0.1024	0.0031	-0.0012	0.0019
4	4.85	0.0	0.0	34.08	1.4054	0.2012	-0.0931	0.0005	-0.0010	0.0055
5	6.97	0.0	0.0	34.12	1.5981	0.2312	-0.0902	-0.0003	-0.0005	0.0072
6	9.08	0.0	0.0	34.10	1.7809	0.2652	-0.0868	0.0004	-0.0010	0.0073
7	11.18	0.0	0.0	34.01	1.9542	0.3061	-0.0877	-0.0016	-0.0004	0.0090
8	13.31	0.0	0.0	34.17	2.1648	0.3657	-0.1150	-0.0015	0.0	0.0042
9	15.40	0.0	0.0	34.15	2.3162	0.4344	-0.1302	-0.0009	-0.0007	0.0063
10	17.45	0.0	0.0	34.16	2.4079	0.5209	-0.1317	-0.0025	-0.0006	0.0079
11	19.50	0.0	0.0	34.19	2.4766	0.6178	-0.1199	-0.0096	0.0012	0.0191
12	21.52	0.0	0.0	34.06	2.5216	0.7574	-0.1938	-0.0116	0.0062	0.0197
13	23.54	0.0	0.0	34.12	2.5548	0.8847	-0.2655	-0.0158	0.0067	0.0282
14	25.58	0.0	0.0	33.96	2.6219	1.0208	-0.3327	-0.0312	0.0052	0.0319
15	27.59	0.0	0.0	34.02	2.6271	1.1712	-0.3684	-0.0279	0.0050	0.0155
16	29.56	0.0	0.0	33.98	2.5838	1.3306	-0.4005	-0.0241	-0.0002	0.0031

RUN 12

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.51	0.0	0.0	33.96	0.8131	0.1366	-0.0769	0.0005	-0.0013	0.0016
2	0.62	0.0	0.0	33.93	1.0343	0.1481	-0.0926	0.0018	-0.0014	0.0010
3	2.75	0.0	0.0	34.00	1.2343	0.1675	-0.0940	0.0001	-0.0011	0.0021
4	4.85	0.0	0.0	34.03	1.4129	0.1913	-0.0931	-0.0019	-0.0010	0.0056
5	6.97	0.0	0.0	34.02	1.6096	0.2224	-0.0847	-0.0021	-0.0005	0.0066
6	9.08	0.0	0.0	34.08	1.7822	0.2555	-0.0854	-0.0027	-0.0005	0.0082
7	11.18	0.0	0.0	34.01	1.9611	0.2987	-0.0884	-0.0019	-0.0006	0.0072
8	13.31	0.0	0.0	33.90	2.1635	0.3570	-0.1038	-0.0025	0.0	0.0057
9	15.40	0.0	0.0	33.79	2.3104	0.4254	-0.1194	-0.0026	-0.0005	0.0078
10	17.47	0.0	0.0	34.19	2.4337	0.5190	-0.1267	-0.0063	-0.0002	0.0094
11	19.52	0.0	0.0	34.24	2.5096	0.6161	-0.1186	-0.0077	0.0004	0.0164
12	21.54	0.0	0.0	33.96	2.5419	0.7531	-0.1917	-0.0191	0.0063	0.0234
13	23.56	0.0	0.0	33.86	2.5799	0.8845	-0.2739	-0.0220	0.0059	0.0296
14	25.60	0.0	0.0	33.97	2.6564	1.0266	-0.3435	-0.0310	0.0052	0.0321
15	27.60	0.0	0.0	34.02	2.6448	1.1726	-0.3663	-0.0351	0.0036	0.0135
16	29.58	0.0	0.0	33.88	2.6096	1.3374	-0.4094	-0.0263	-0.0011	0.0030

TABLE VI - PART A - TEST 5 TABULATION SCHEDULE.

Run	q	α Range	WING					TAIL			Comments
			δ_f	δ_{DLC}	δ_L	Glove Slat	Flap Actuator Fairings	i_t	δ_{SB}	δ_{SF}	
1	34.5	-2—28	35	5	17°MOD	On	On	0	Off	Off	
2	↓	↓	↓	↓	↓	↓	↓	↓	60	↓	
3	↓	↓	↓	-4.5	↓	↓	↓	↓	↓	↓	
4	↓	↓	↓	↓	↓	↓	↓	↓	Off	↓	

TABLE VI - PART B - TEST 5 DATA.

RUN 1

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.70	0.0	0.0	34.17	0.4890	0.1380	0.0469	0.0076	-0.0023	0.0004
2	0.42	0.0	0.0	34.17	0.6908	0.1420	0.0351	0.0073	-0.0019	0.0012
3	2.55	0.0	0.0	34.16	0.9057	0.1554	0.0232	0.0082	-0.0016	0.0017
4	4.67	0.0	0.0	34.31	1.1018	0.1749	0.0310	0.0081	-0.0016	0.0019
5	6.78	0.0	0.0	34.24	1.2939	0.1990	0.0339	0.0087	-0.0013	0.0024
6	8.89	0.0	0.0	34.14	1.4805	0.2298	0.0269	0.0081	-0.0011	0.0026
7	11.02	0.0	0.0	34.11	1.6815	0.2699	0.0139	0.0075	-0.0010	0.0009
8	13.13	0.0	0.0	34.11	1.8777	0.3214	0.0032	0.0075	-0.0008	0.0019
9	15.25	0.0	0.0	34.08	2.0678	0.3846	-0.0298	0.0066	-0.0009	0.0014
10	17.36	0.0	0.0	34.07	2.2574	0.4666	-0.0623	0.0062	-0.0012	0.0016
11	19.44	0.0	0.0	34.12	2.3851	0.5749	-0.0741	0.0045	-0.0004	0.0012
12	21.49	0.0	0.0	34.22	2.4684	0.6922	-0.1278	0.0021	0.0018	-0.0021
13	23.52	0.0	0.0	34.05	2.5231	0.8233	-0.2341	0.0079	0.0027	0.0002
14	25.56	0.0	0.0	33.95	2.5786	0.9664	-0.2996	-0.0051	0.0041	0.0098
15	27.59	0.0	0.0	33.67	2.6326	1.1050	-0.3504	-0.0115	0.0030	0.0088
16	29.57	0.0	0.0	33.89	2.6074	1.2675	-0.3896	-0.0026	-0.0021	-0.0011

RUN 2

PT	ALPHA	BETA	IT	O	CL	CD	CM	CY	CN	CR
1	-1.72	0.0	0.0	33.91	0.4684	0.1876	0.0435	0.0132	-0.0030	0.0004
2	0.41	0.0	0.0	34.02	0.6784	0.1933	0.0207	0.0115	-0.0027	0.0005
3	2.53	0.0	0.0	34.01	0.8803	0.2045	0.0212	0.0117	-0.0024	0.0009
4	4.65	0.0	0.0	33.94	1.0818	0.2206	0.0225	0.0107	-0.0018	0.0019
5	6.76	0.0	0.0	34.25	1.2637	0.2414	0.0303	0.0111	-0.0017	0.0018
6	8.88	0.0	0.0	34.17	1.4528	0.2703	0.0281	0.0111	-0.0019	0.0021
7	11.00	0.0	0.0	34.12	1.6515	0.3108	0.0241	0.0076	-0.0007	0.0019
8	13.11	0.0	0.0	34.06	1.8324	0.3561	0.0120	0.0075	-0.0008	0.0018
9	15.22	0.0	0.0	34.05	2.0259	0.4193	-0.0017	0.0054	-0.0004	0.0025
10	17.33	0.0	0.0	34.17	2.2068	0.4995	-0.0130	0.0079	-0.0011	0.0014
11	19.39	0.0	0.0	34.20	2.3081	0.5993	-0.0050	0.0068	-0.0002	0.0012
12	21.43	0.0	0.0	34.21	2.3698	0.7094	-0.0298	0.0068	0.0013	-0.0032
13	23.47	0.0	0.0	34.03	2.4316	0.8371	-0.1224	0.0232	0.0002	-0.0020
14	21.44	0.0	0.0	34.10	2.3771	0.7090	-0.0302	0.0071	0.0007	-0.0027
15	23.46	0.0	0.0	34.18	2.4220	0.8348	-0.1199	0.0164	0.0016	0.0
16	25.50	0.0	0.0	34.15	2.4830	0.9823	-0.1939	-0.0011	0.0029	0.0091
17	27.52	0.0	0.0	34.21	2.5169	1.1101	-0.2431	-0.0049	0.0023	0.0093
18	29.52	0.0	0.0	33.99	2.5165	1.2661	-0.2847	-0.0064	-0.0010	0.0003

TABLE VI - PART B - TEST 5 DATA - CONCLUDED.

RUN 3

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.54	0.0	0.0	34.12	0.7694	0.1874	-0.0559	0.0146	-0.0033	-0.0057
2	0.59	0.0	0.0	34.04	0.9688	0.1962	-0.0741	0.0112	-0.0026	-0.0022
3	2.71	0.0	0.0	34.20	1.1747	0.2131	-0.0834	0.0118	-0.0023	-0.0015
4	4.82	0.0	0.0	34.07	1.3625	0.2319	-0.0826	0.0122	-0.0029	-0.0022
5	6.94	0.0	0.0	34.12	1.5494	0.2587	-0.0692	0.0122	-0.0025	-0.0016
6	9.05	0.0	0.0	34.01	1.7313	0.2910	-0.0661	0.0100	-0.0020	-0.0003
7	11.15	0.0	0.0	34.04	1.9056	0.3323	-0.0571	0.0070	-0.0013	0.0010
8	13.27	0.0	0.0	34.12	2.1022	0.3870	-0.0695	0.0086	-0.0002	-0.0040
9	15.36	0.0	0.0	34.00	2.2495	0.4474	-0.0713	0.0081	-0.0003	-0.0005
10	17.43	0.0	0.0	34.28	2.3643	0.5402	-0.0622	0.0083	-0.0016	-0.0005
11	19.48	0.0	0.0	33.81	2.4512	0.6238	-0.0452	0.0061	-0.0007	0.0
12	21.52	0.0	0.0	33.81	2.5098	0.7419	-0.0832	0.0057	0.0003	-0.0002
13	23.56	0.0	0.0	34.47	2.5803	0.8807	-0.1886	0.0167	-0.0003	-0.0009
14	25.58	0.0	0.0	33.99	2.6205	1.0067	-0.2602	0.0021	-0.0003	-0.0006
15	27.57	0.0	0.0	34.19	2.5915	1.1575	-0.2649	-0.0189	0.0038	0.0200
16	29.51	0.0	0.0	34.43	2.5050	1.3091	-0.2782	-0.0008	-0.0009	-0.0016

RUN 4

PT	ALPHA	BETA	IT	Q	CL	CD	CM	CY	CN	CR
1	-1.52	0.0	0.0	34.05	0.7985	0.1372	-0.0575	0.0114	-0.0027	-0.0035
2	0.60	0.0	0.0	34.12	0.9960	0.1478	-0.0755	0.0110	-0.0023	-0.0011
3	2.72	0.0	0.0	34.26	1.1891	0.1639	-0.0844	0.0096	-0.0019	-0.0019
4	4.84	0.0	0.0	34.23	1.3869	0.1884	-0.0829	0.0101	-0.0019	-0.0014
5	6.94	0.0	0.0	34.15	1.5629	0.2170	-0.0836	0.0097	-0.0015	-0.0008
6	9.06	0.0	0.0	34.02	1.7508	0.2524	-0.0842	0.0095	-0.0017	-0.0004
7	11.18	0.0	0.0	34.10	1.9540	0.2981	-0.0773	0.0078	-0.0015	0.0012
8	13.30	0.0	0.0	34.12	2.1504	0.3521	-0.0949	0.0064	-0.0004	-0.0019
9	15.39	0.0	0.0	34.06	2.3065	0.4158	-0.1117	0.0059	-0.0005	-0.0002
10	17.47	0.0	0.0	34.24	2.4395	0.5133	-0.1227	0.0047	-0.0015	-0.0016
11	19.53	0.0	0.0	34.06	2.5339	0.6029	-0.1262	0.0023	-0.0006	0.0030
12	21.57	0.0	0.0	34.09	2.5913	0.7249	-0.1922	-0.0013	0.0015	-0.0004
13	23.59	0.0	0.0	34.17	2.6312	0.8705	-0.3034	0.0059	0.0022	0.0054
14	25.61	0.0	0.0	33.94	2.6576	1.0100	-0.3423	-0.0203	0.0044	0.0307
15	27.63	0.0	0.0	34.31	2.6971	1.1473	-0.3872	-0.0207	0.0043	0.0221
16	29.58	0.0	0.0	34.35	2.6220	1.3011	-0.3991	-0.0093	-0.0001	-0.0028

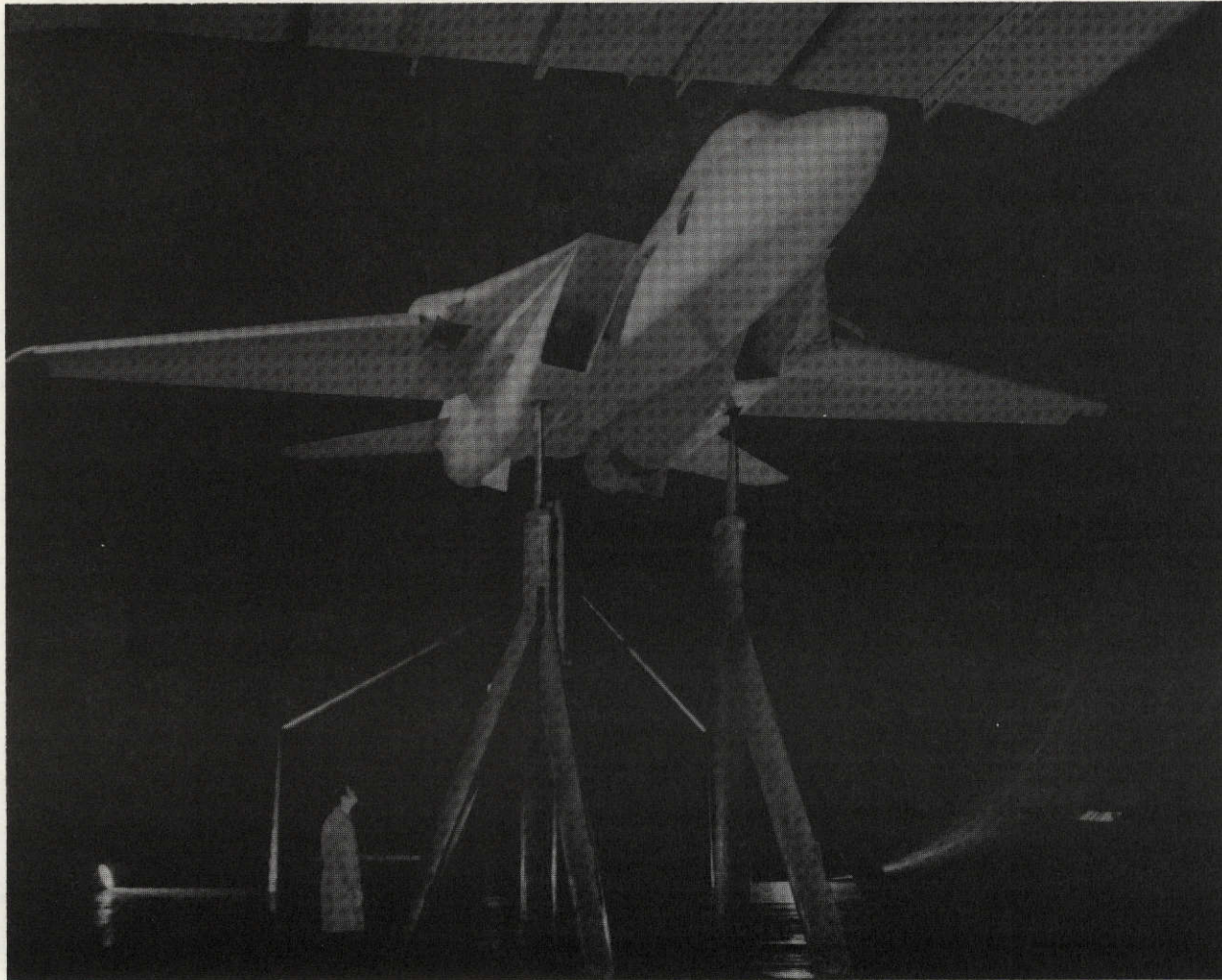
TABLE VII - SUMMARY PLOT SCHEDULE.

Figure	Effect Shown	Test	Run	CONFIGURATION										Comments
				δ_f	δ_{DLC}	δ_L	Flap Actuator Pairings	Glove Slat	i_c	δ_{SB}	δ_{SF}	Gear	Missiles	
4	Standard Configuration	5	4	35	-4.5	17° MOD	On	On	0	Off	Off	Off	Off	
		4	9	↓	↓	↓	↓	↓	↓	↓	↓	↓		
		3	13	↓	↓	↓	↓	↓	↓	↓	↓	↓		
		2	5	↓	↓	16°20' MOD	↓	↓	↓	↓	↓	↓		
5	Base Data	3	13	35	-4.5	17° MOD	On	On	0	Off	Off	Off	Off	
		↓	7	↓	5	↓	↓	↓	↓	↓	↓	↓		
6(a)	Reynolds Number	3	10	35	-4.5	17° MOD	On	On	0	Off	Off	Off	Off	
		↓	11	↓	↓	↓	↓	↓	↓	↓	↓	↓		
		↓	12	↓	↓	↓	↓	↓	↓	↓	↓	↓		
		↓	13	↓	↓	↓	↓	↓	↓	↓	↓	↓		
6(b)	Reynolds Number	2	3	35	-4.5	17° MOD	Off	On	0	Off	Off	Off	Off	
		↓	4	↓	↓	↓	↓	↓	↓	↓	↓	↓		
7	Glove Slat	3	13	35	-4.5	17° MOD	On	On	0	Off	Off	Off	Off	
		↓	16	↓	↓	↓	Off	Off	↓	↓	↓	↓		
8	Wing Slat Leading-Edge Radius	1	2	35	-4.5	16°20' MOD	Off	Off	0	Off	Off	Off	Off	
		↓	3	↓	↓	16°20' MOD	↓	↓	↓	↓	↓	↓		
9	Cold-Flow Ducting	1	15	35	-4.5	16°20' MOD	On	On	0	Off	Off	Off	Off	Nozzles Plugged
		↓	13	↓	↓	↓	↓	↓	↓	↓	↓	↓		
10(a)	Uniform Flap Deflection	1	15	35	-4.5	16°20' MOD	Off	On	0	Off	Off	Off	Off	
		↓	27	25	↓	↓	↓	On	Off	↓	↓	↓		
		↓	3	35	↓	0	↓	Off	0	↓	↓	↓		
		↓	1	0	0	0	↓	↓	↓	↓	↓	↓		
10(b)	Non-Uniform Flap Deflection	1	3	35	-4.5	16°20' MOD	Off	Off	0	Off	Off	Off	Off	
		↓	4	40/35/35	↓	↓	↓	↓	↓	↓	↓	↓		
		↓	5	40/40/35	↓	↓	↓	↓	↓	↓	↓	↓		
11(a)	Horizontal Tail Incidence	1	18	35	5	16°20' MOD	Off	On	0	Off	Off	Off	Off	
		↓	20	↓	↓	↓	↓	↓	-5	↓	↓	↓		
		↓	19	↓	↓	↓	↓	↓	5	↓	↓	↓		
		↓	21	↓	↓	↓	↓	↓	Variable	↓	↓	↓		
		↓	22	↓	↓	↓	↓	↓	↓	↓	↓	↓		
		↓	24	↓	↓	↓	↓	↓	Off	↓	↓	↓		

TABLE VII - CONCLUDED.

Figure	Effect Shown	Test	Run	CONFIGURATION										Comments
				δ_f	δ_{DLC}	δ_L	Flap Actuator Fairings	Glove Slat	i_t	δ_{SB}	δ_{SF}	Gear	Missiles	
11(b)	Split Flaps	2 ↓	6 7 9 8	35 ↓	5 ↓	17° MOD ↓	On ↓	On ↓	0 5 -5 5	Off ↓	Off 45 ↓ Off	Off ↓	Off ↓	
11(c)	Horizontal Tail Root Seal	1 ↓	15 8	35 ↓	-4.5 ↓	16°20' MOD ↓	Off ↓	On ↓	0 ↓	Off ↓	Off ↓	Off ↓	Off ↓	Tail Gap Sealed
12	Direct Lift Control (Spoilers)	2 ↓	5 11 6 10	35 ↓	-4.5 0 5 20	17° MOD ↓	On ↓	On ↓	0 ↓	Off ↓	Off ↓	Off ↓	Off ↓	
13	Speed Brake	1 ↓	15 16 18 17	35 ↓	-4.5 ↓ 5 ↓	16°20' MOD ↓	Off ↓	On ↓	0 ↓	Off 60 ↓ Off 60	Off ↓	Off ↓	Off ↓	
14(a)	Gear and Missiles	4 ↓	9 4	35 ↓	-4.5 ↓	17° MOD ↓	On ↓	On ↓	0 ↓	Off ↓	Off ↓	Off On	Off On	
14(b)	Landing Gear	4 ↓	9 11 10	35 ↓	-4.5 ↓	17° MOD ↓	On ↓	On ↓	0 ↓	Off ↓	Off ↓	Off Main On	Off ↓	Nose Gear Off
14(c)	Missiles and Pylons	4 ↓	9 7 8	35 ↓	-4.5 ↓	17° MOD ↓	On ↓	On ↓	0 ↓	Off ↓	Off ↓	Off ↓	Off On Pylons	Pylons Only On
15	Fuselage Cavity	1 ↓	15 7	35 ↓	-4.5 ↓	16°20' MOD ↓	Off ↓	On ↓	0 ↓	Off ↓	Off ↓	Off ↓	Off ↓	Cavity Sealed

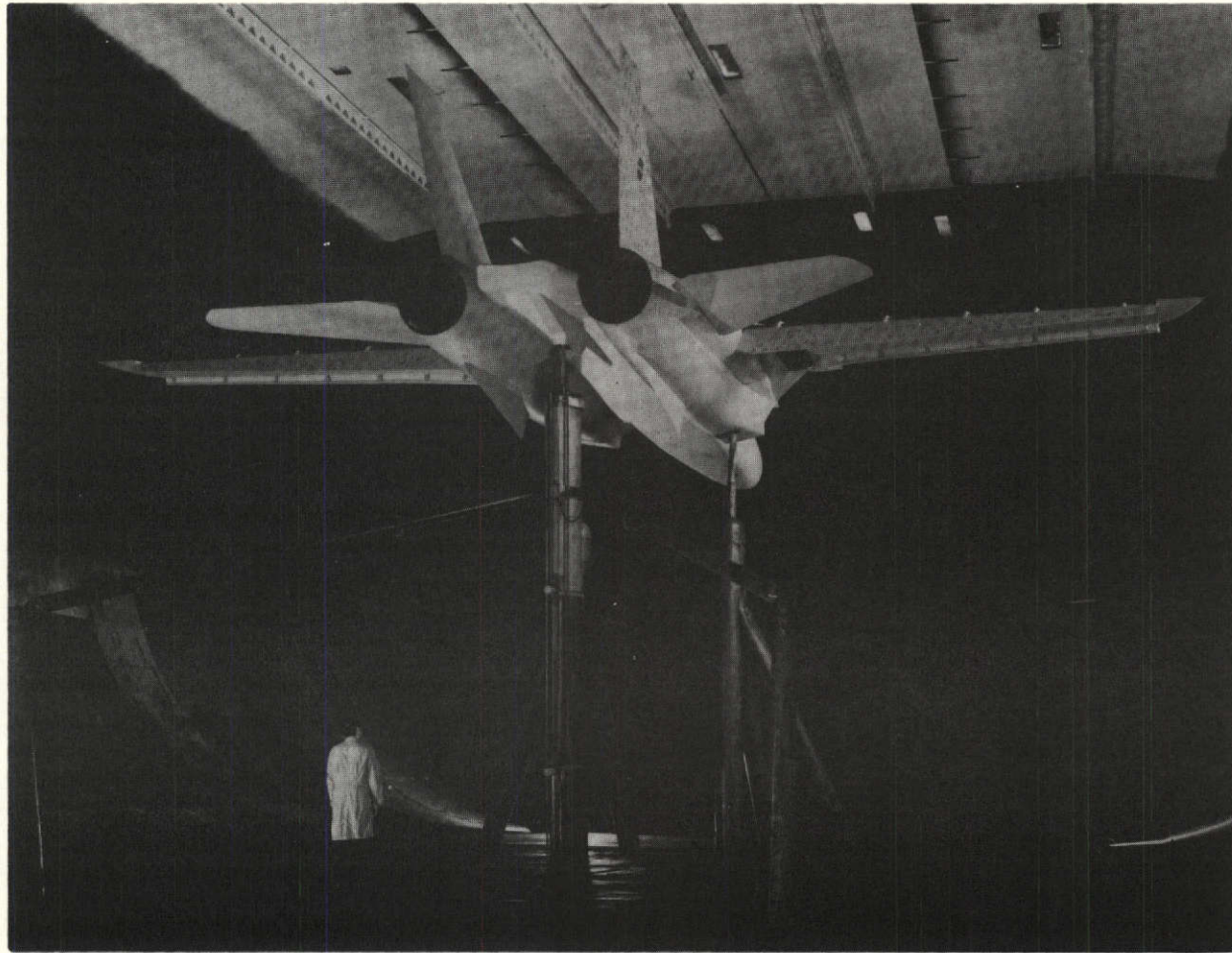
A70-3683



(a) Three - quarter front view.

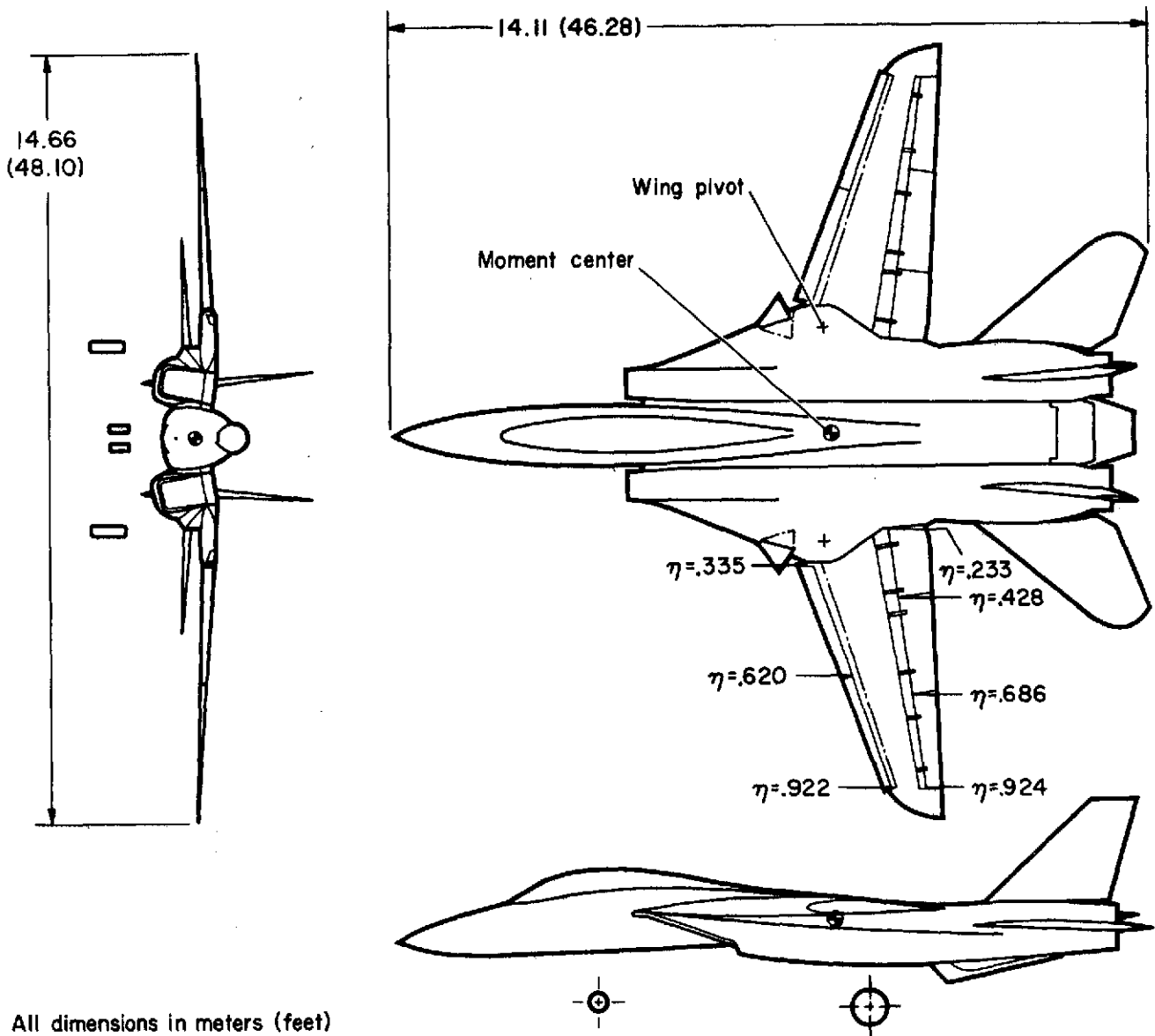
Figure 1.- Model installed in the Ames 40- by 80-Foot
Wind Tunnel

A70-3684



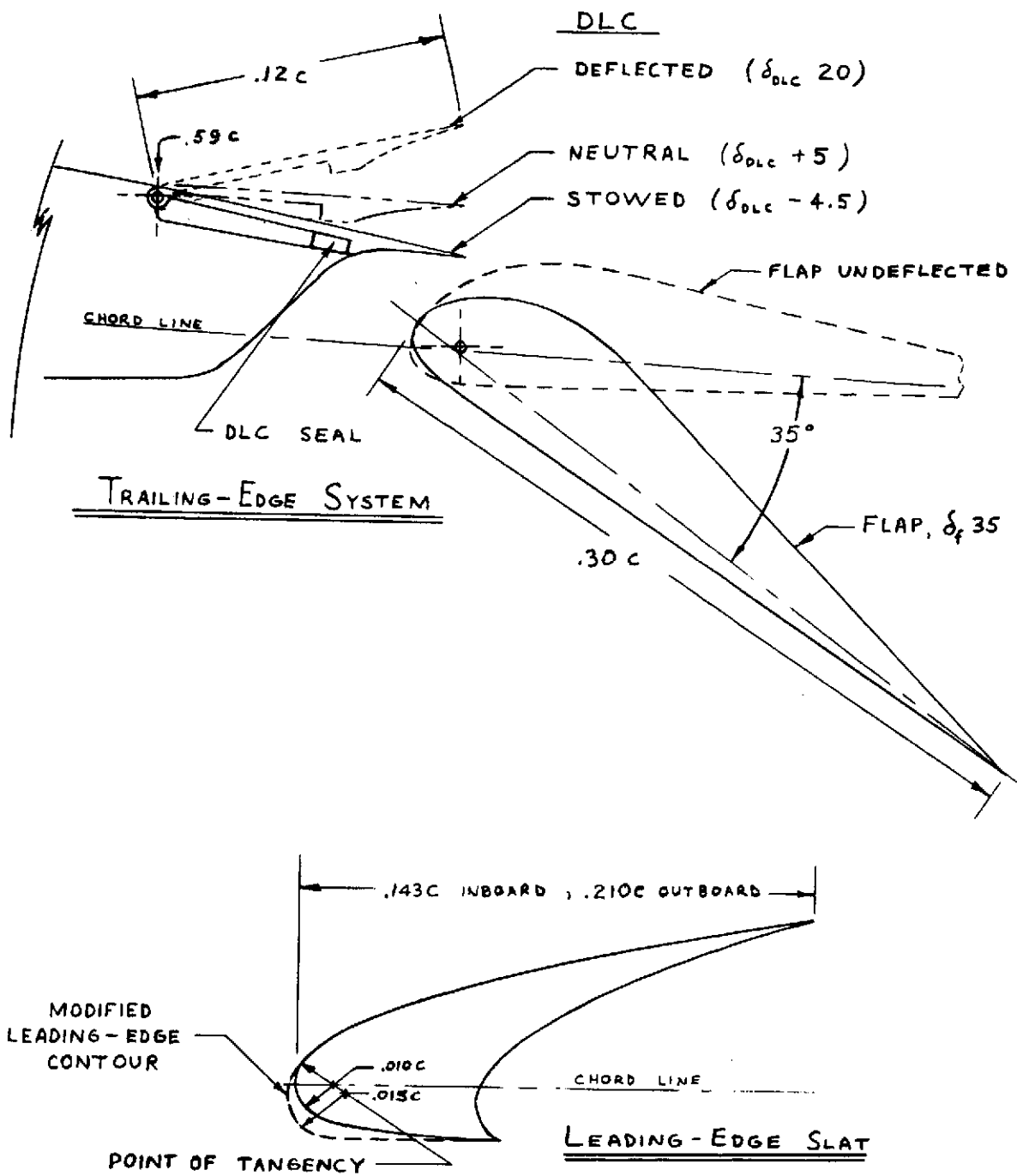
(b) Three - quarter rear view.

Figure 1.- Concluded.



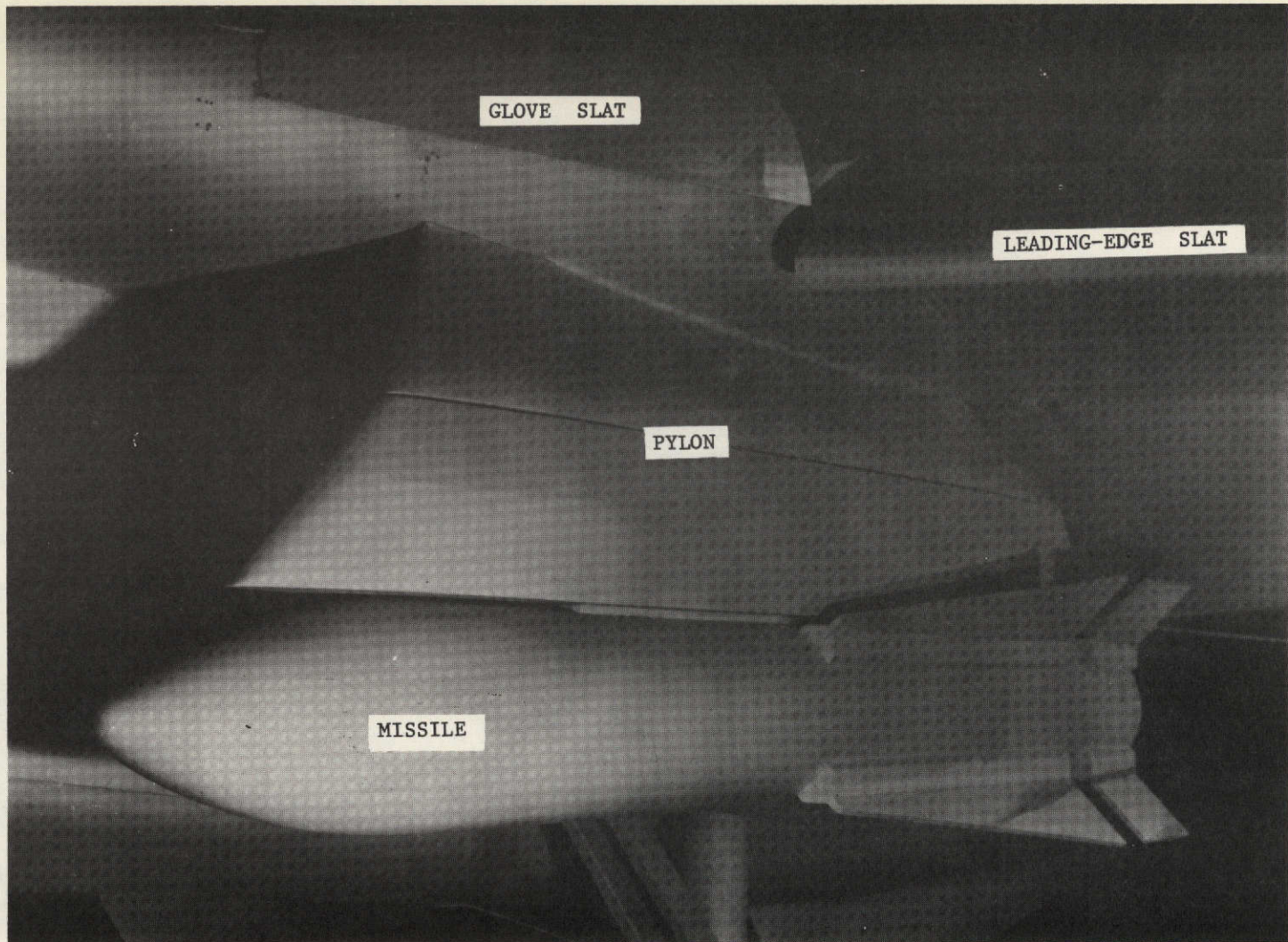
All dimensions in meters (feet)

Figure 2.- Model Geometry.



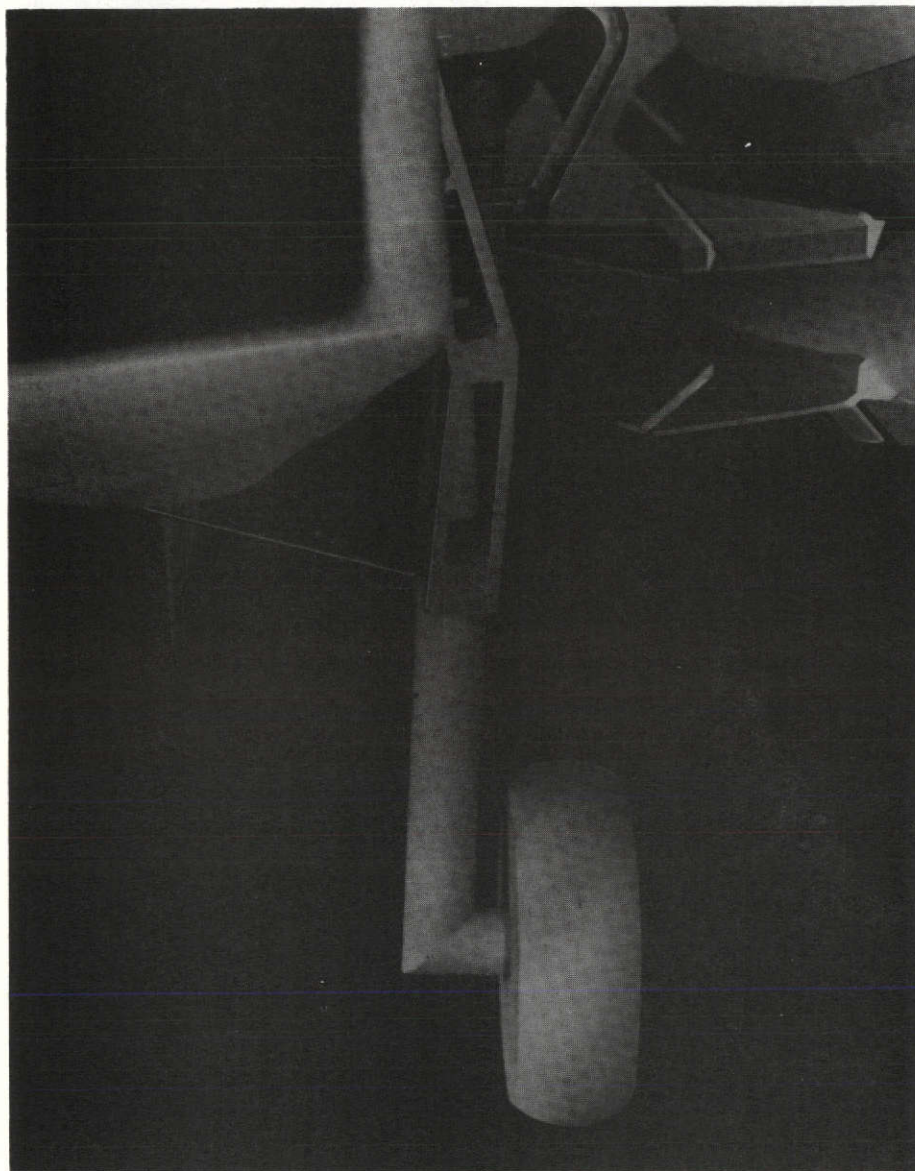
(a) Leading - and trailing - edge systems.

Figure 3.- Model Component details.



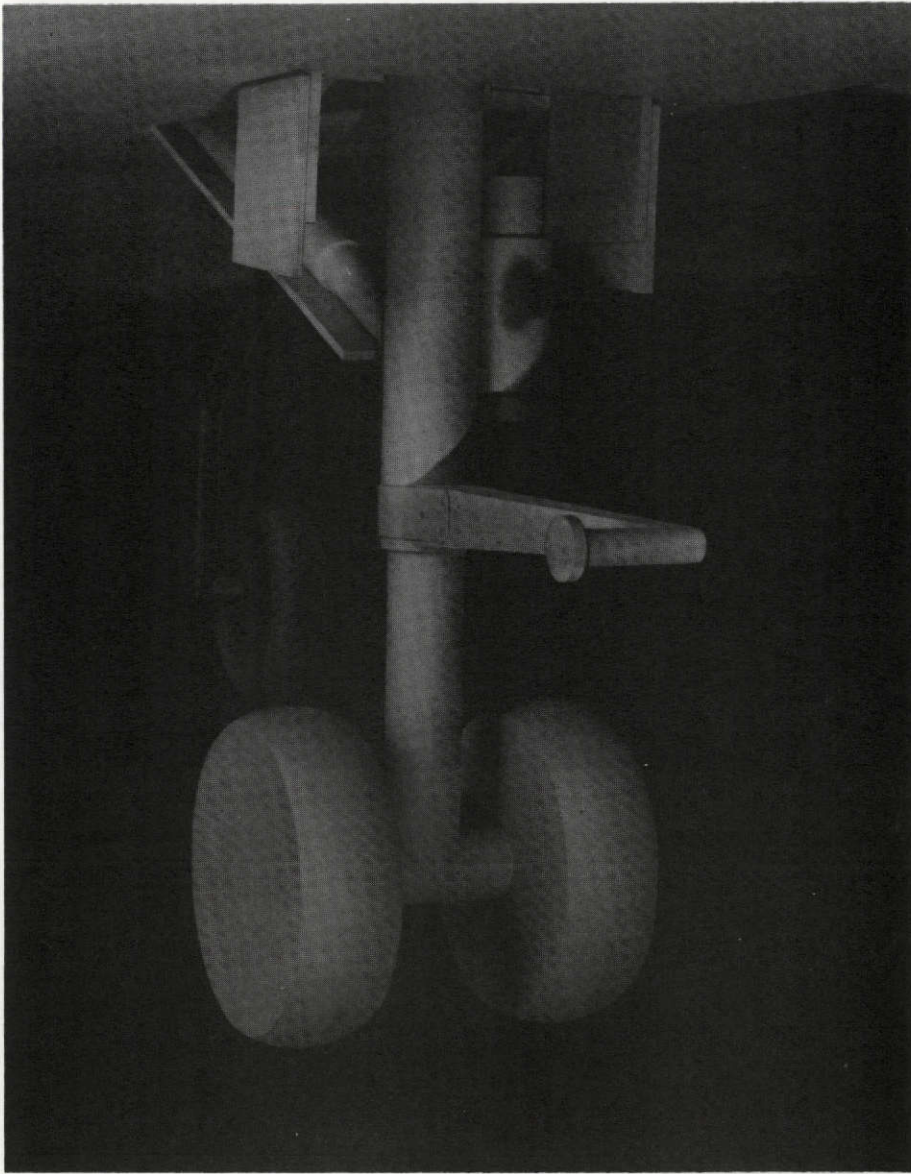
(b) Apparatus at the wing/glove juncture.

Figure 3.- Continued.



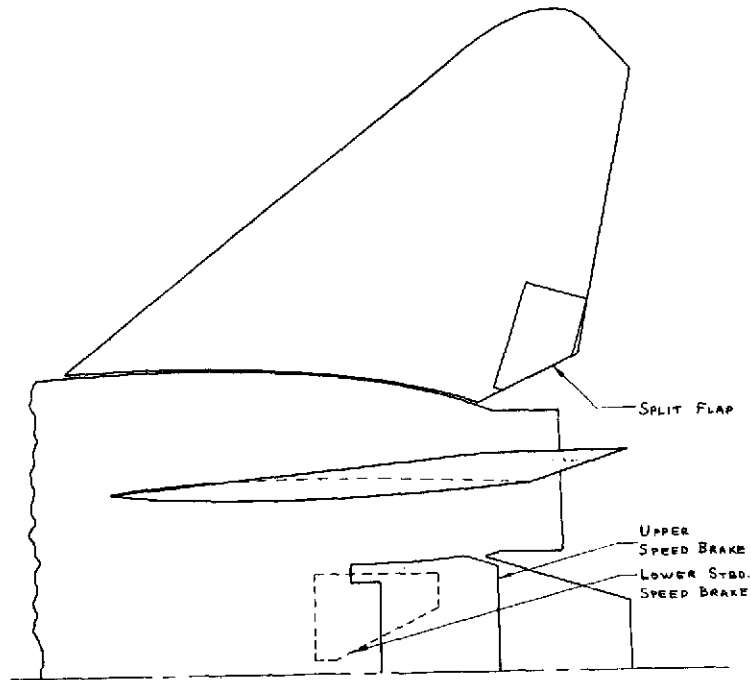
(c) Main landing gear.

Figure 3.- Continued.

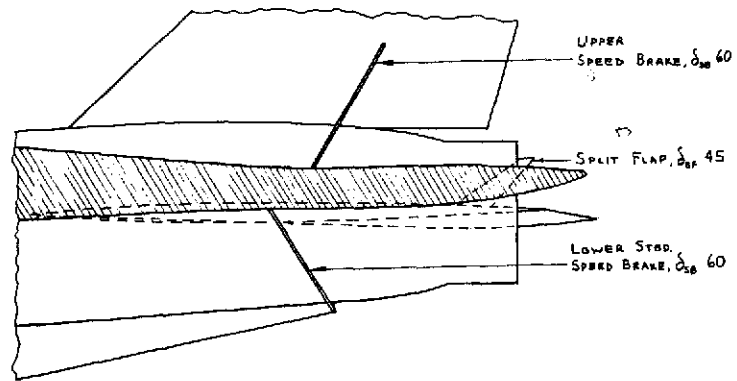


(d) Nose landing gear.

Figure 3.- Continued.



TOP VIEW - SURFACES UNDEFLECTED



SIDE VIEW - SURFACES DEFLECTED

(e) Speed brake and split flap locations

Figure 3.- Concluded.

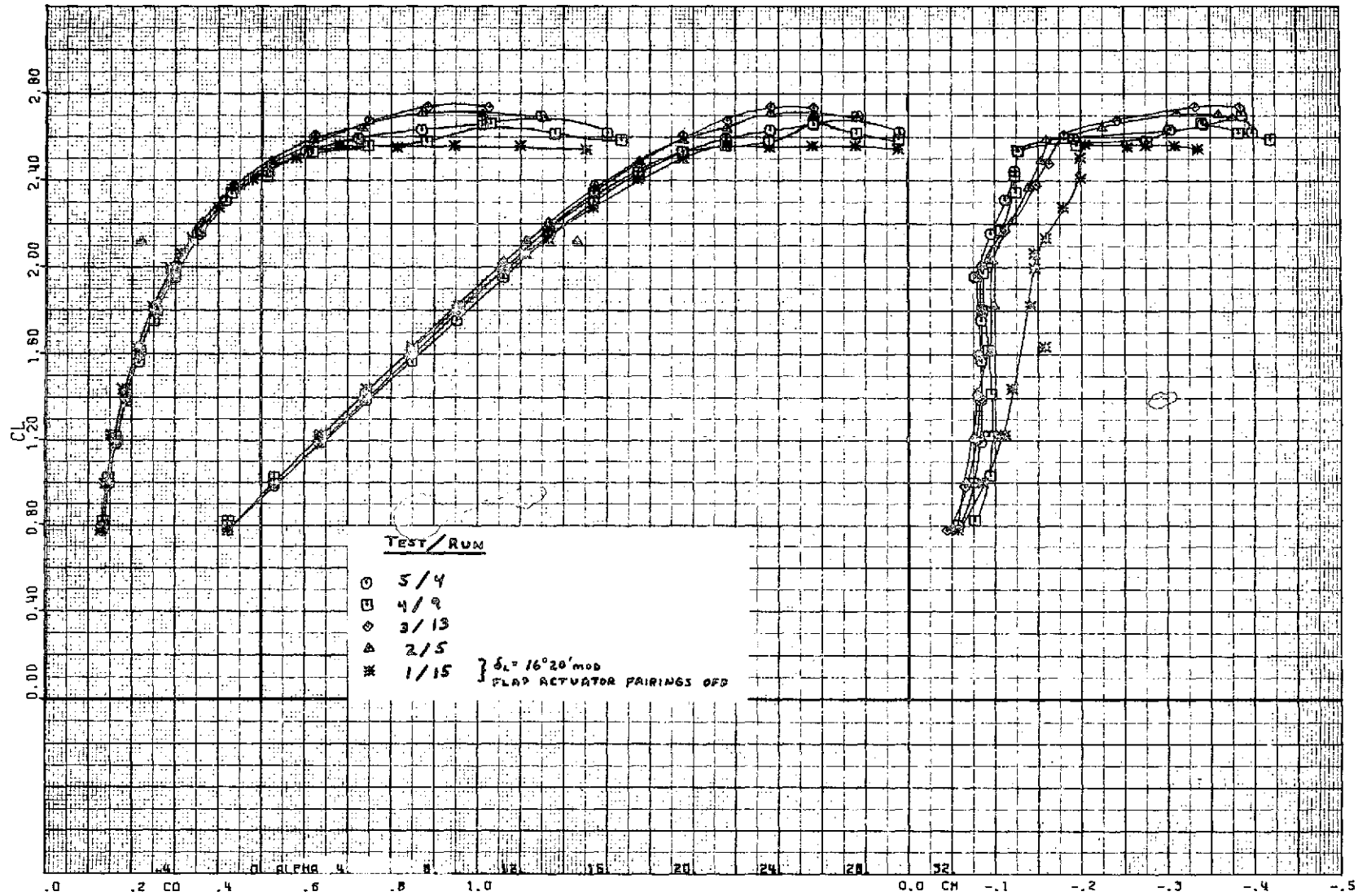


Figure 4.- Comparison of Standard high-lift configuration as measured in various tests.

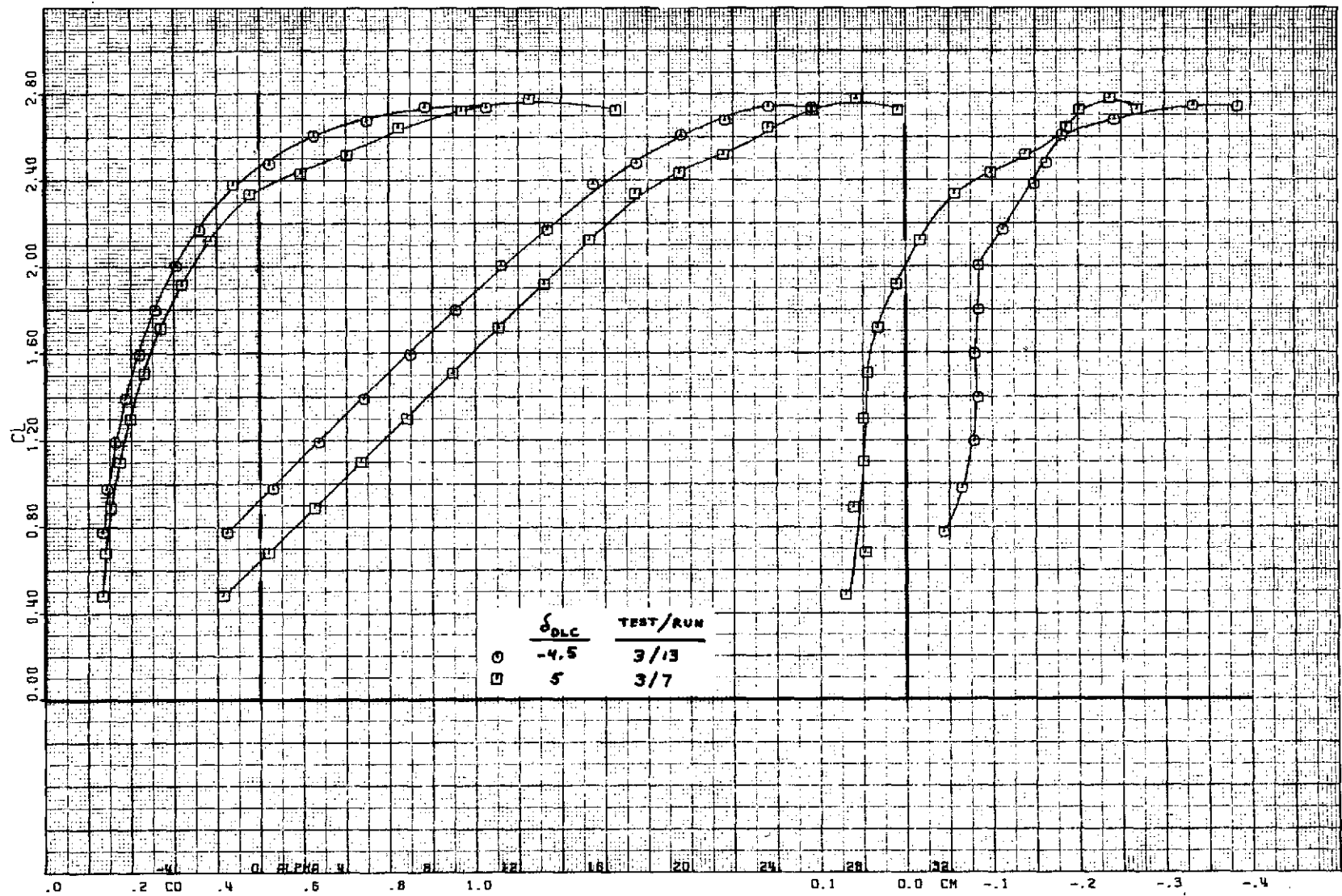
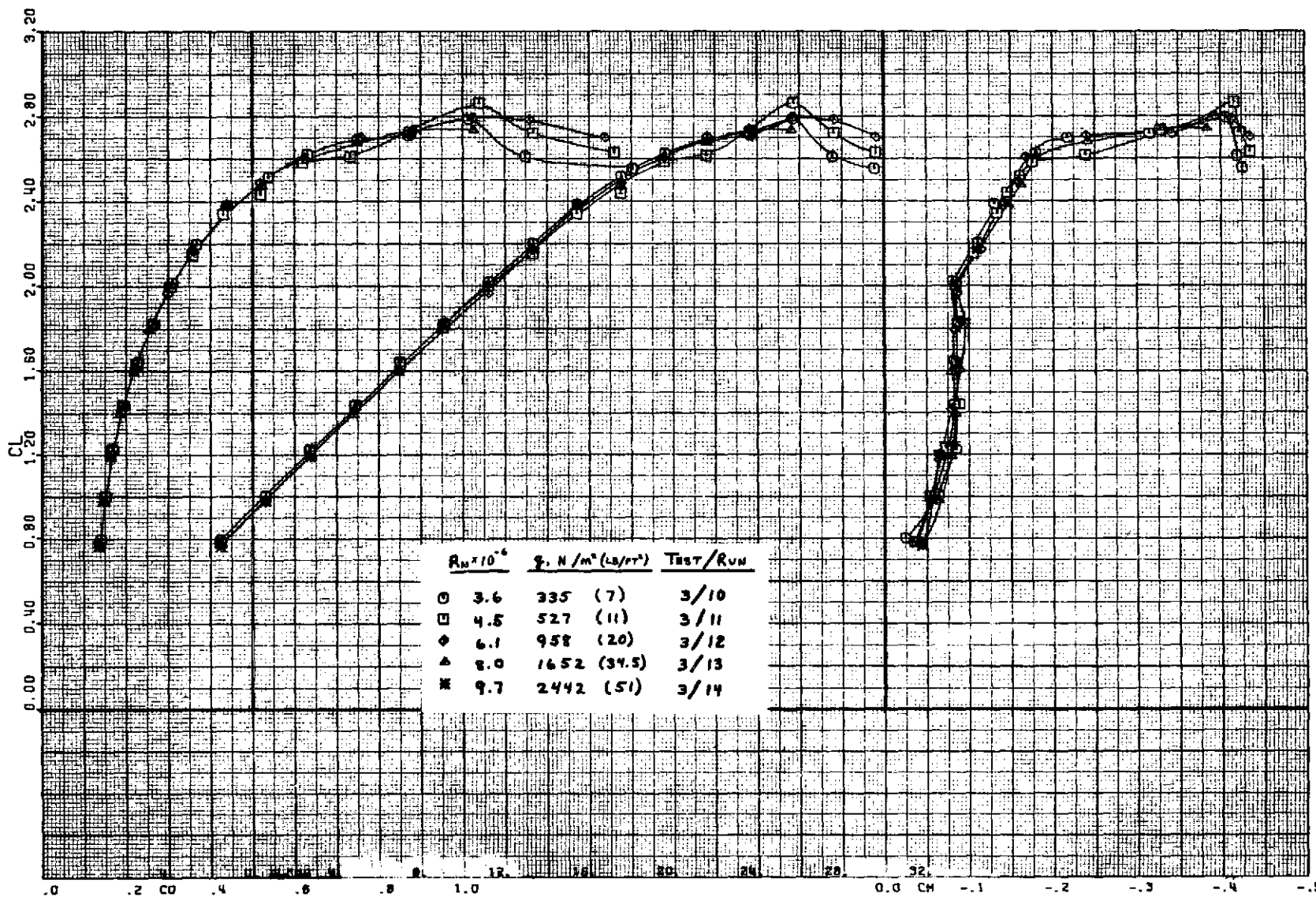
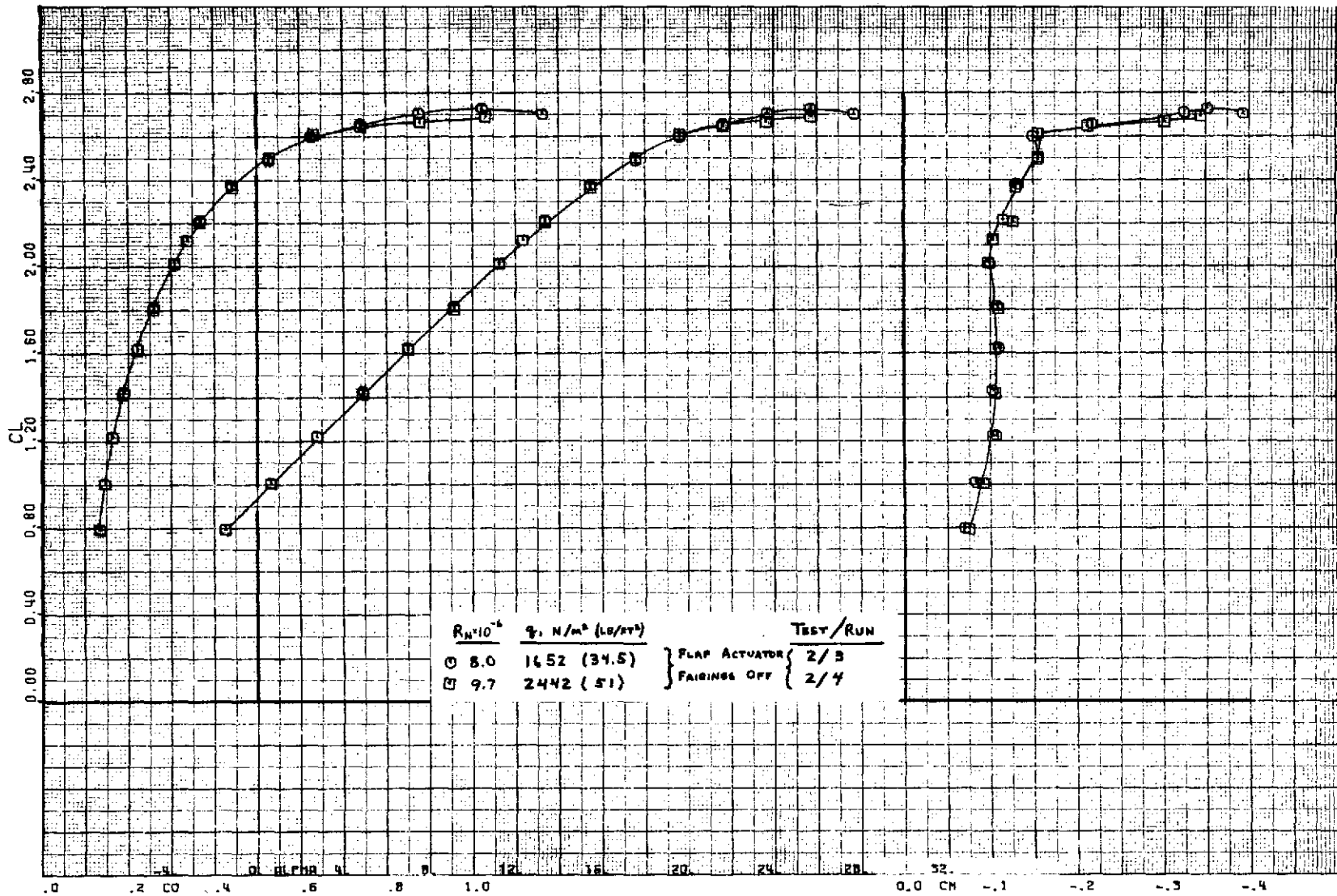


Figure 5.- Base reference data.



(a) Results of test 3.

Figure 6.- Effect of Reynolds number.



(b) Results of test 2.

Figure 6.- Concluded.

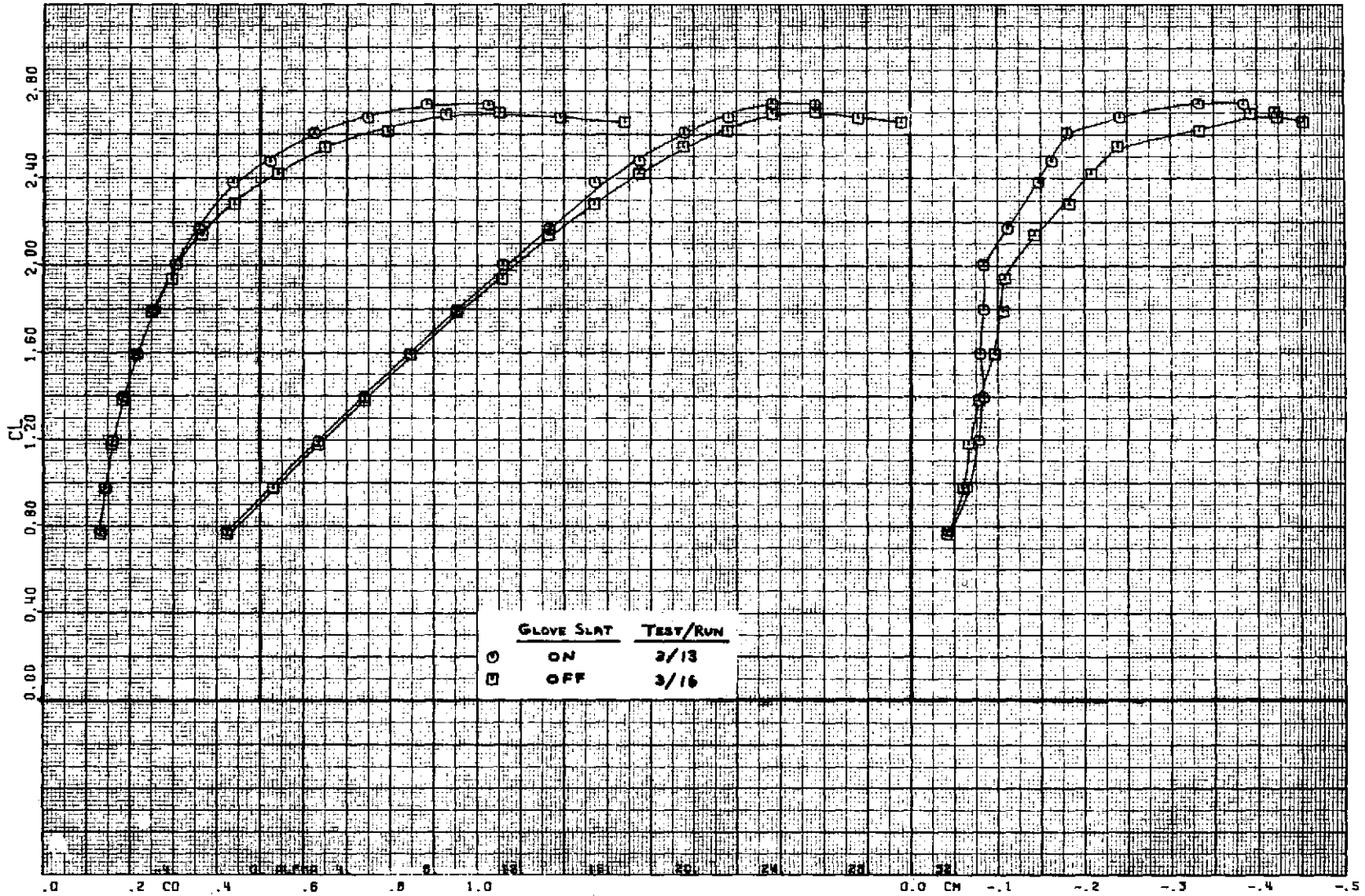


Figure 7.- Effect of glove slat.

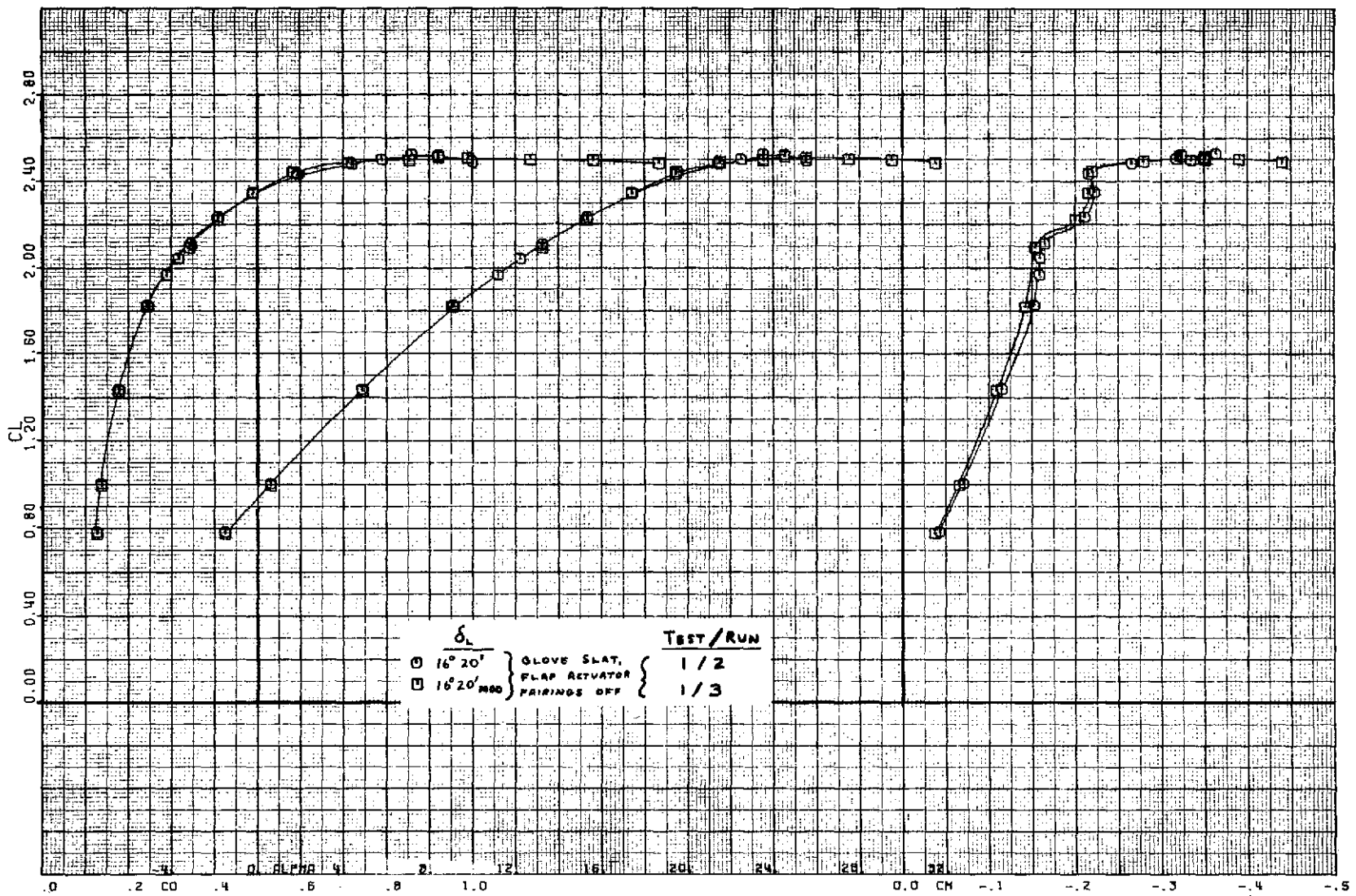


Figure 8.- Effect of wing slat leading-edge radius.

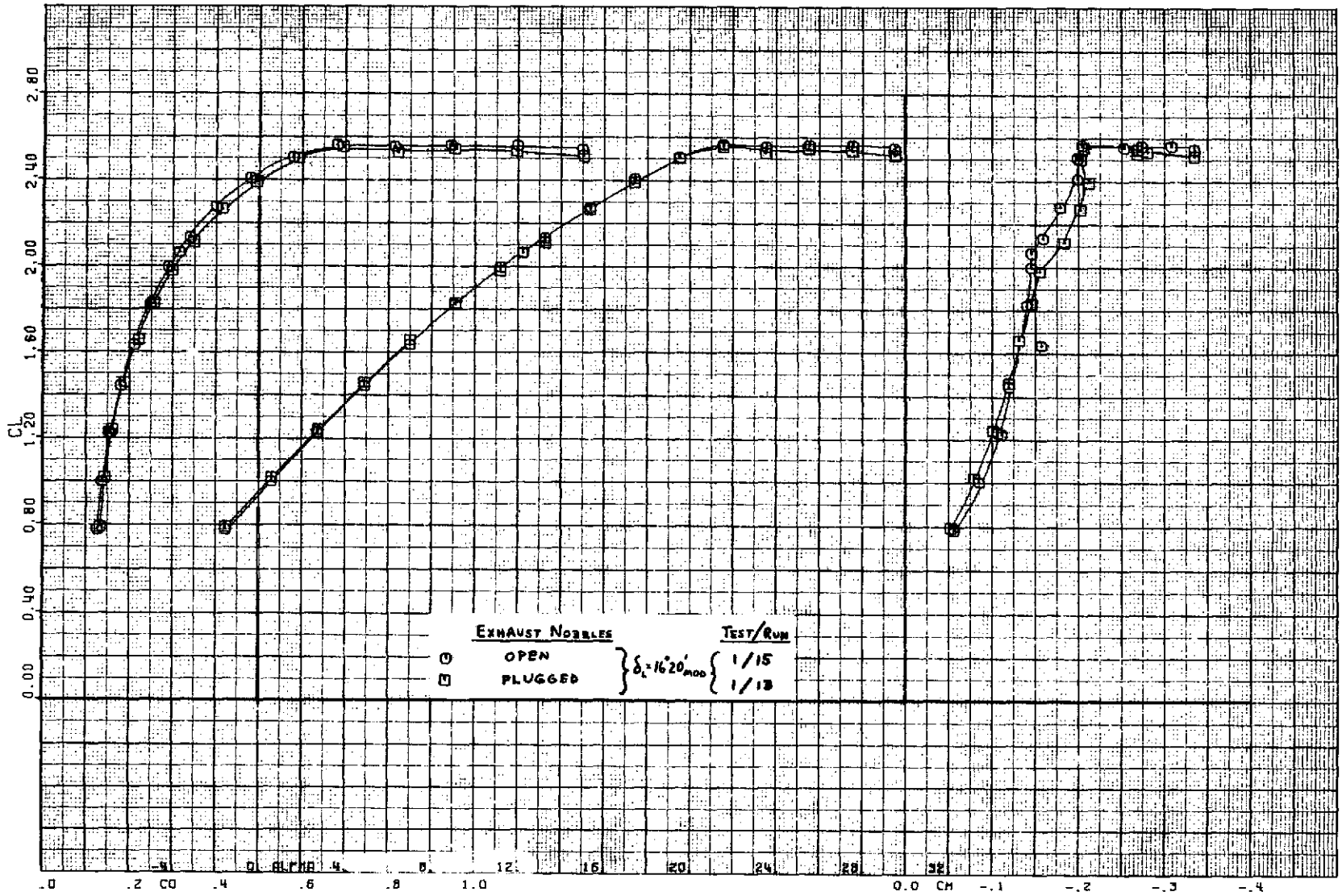
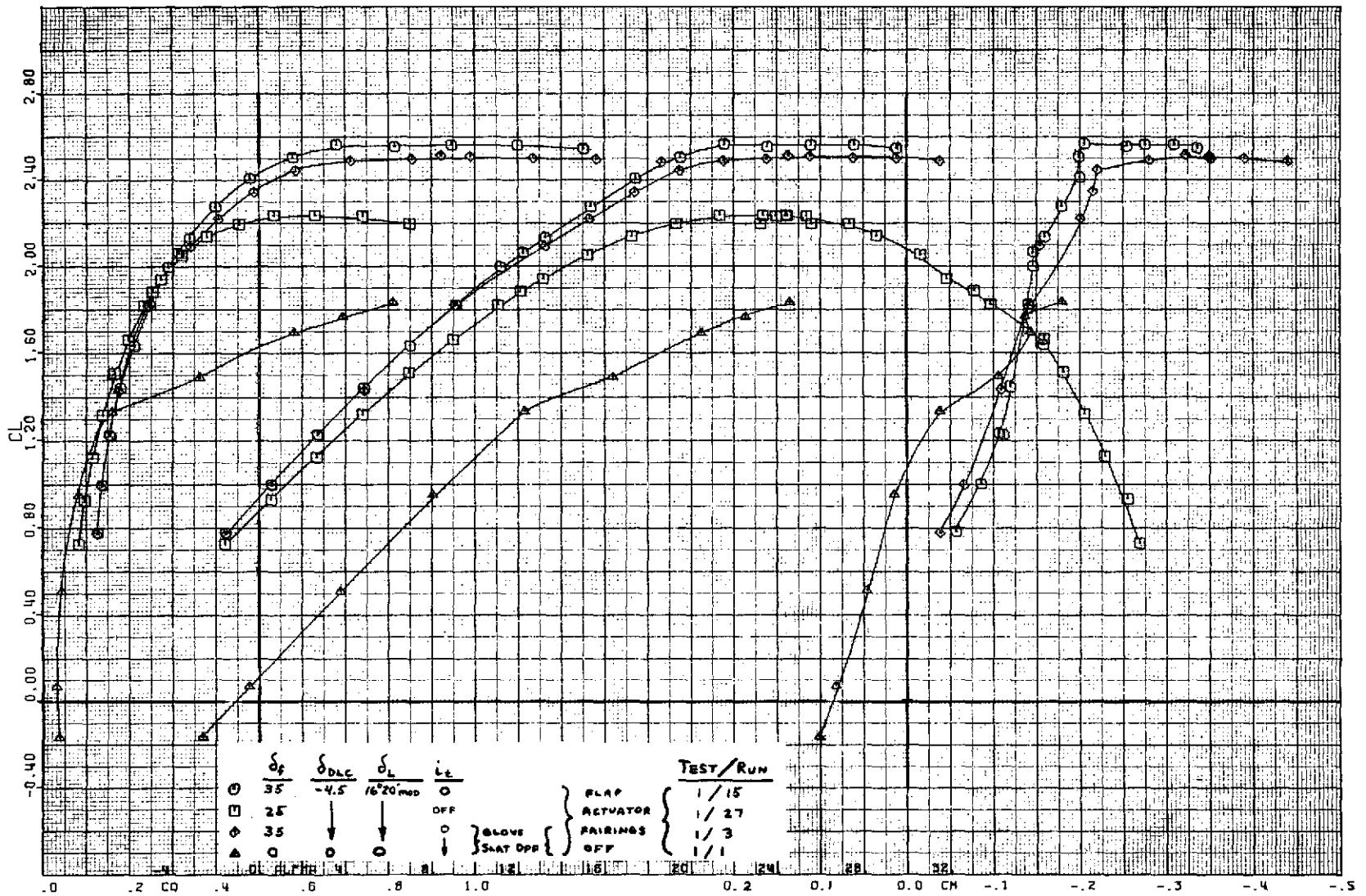
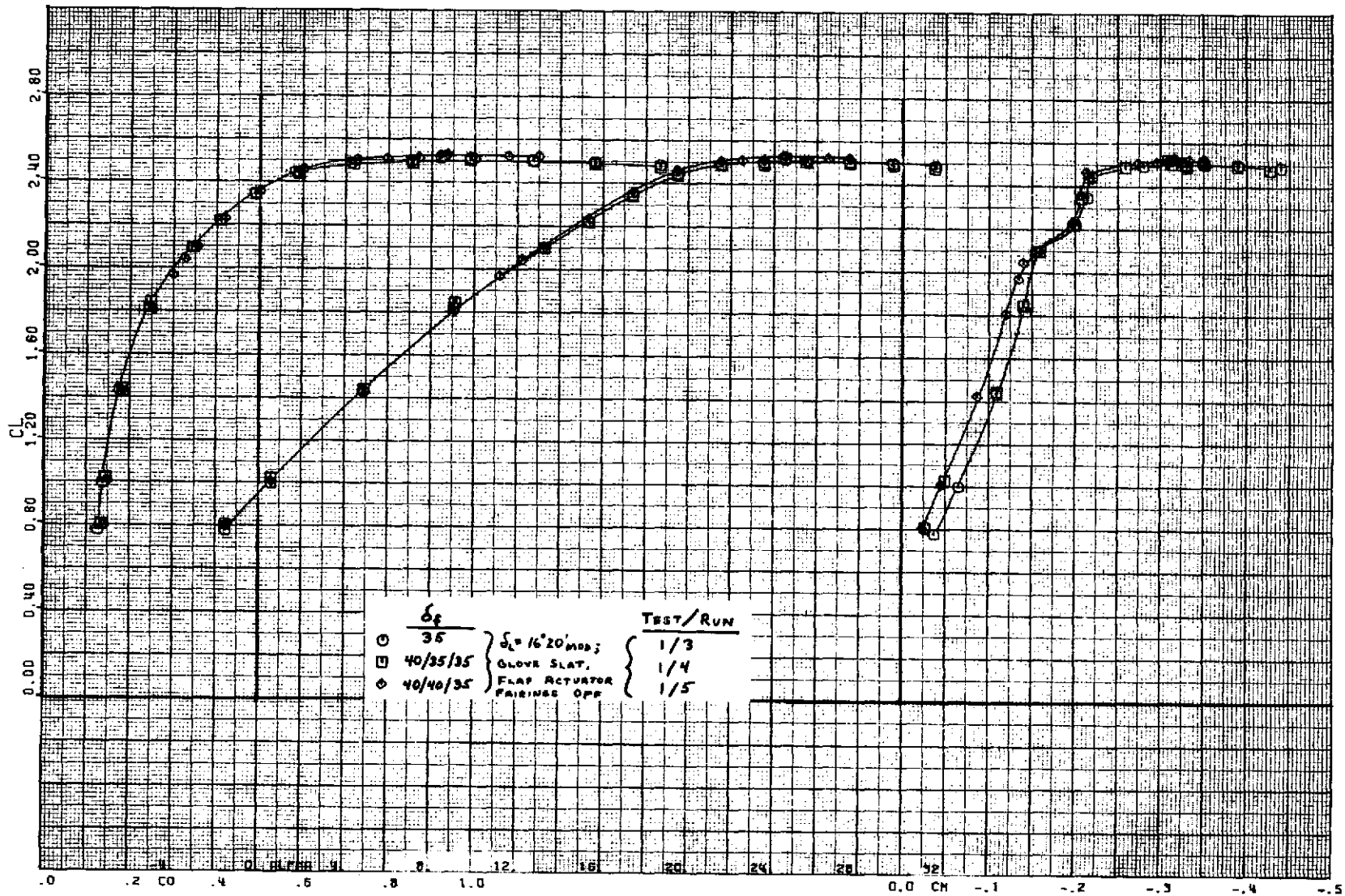


Figure 9.- Effect of cold-flow ducting.



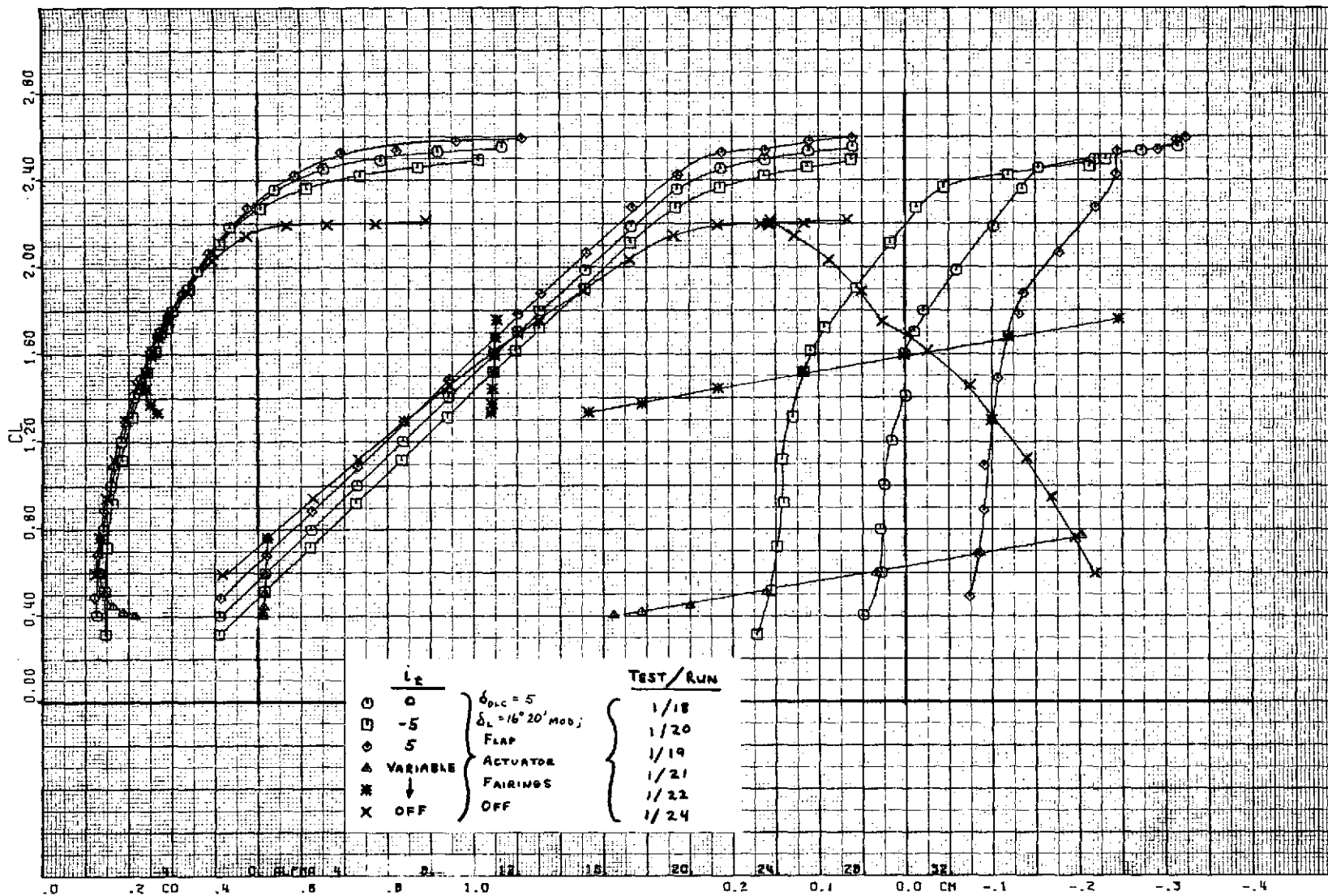
(a) Uniform deflection.

Figure 10.- Effect of flap deflection.



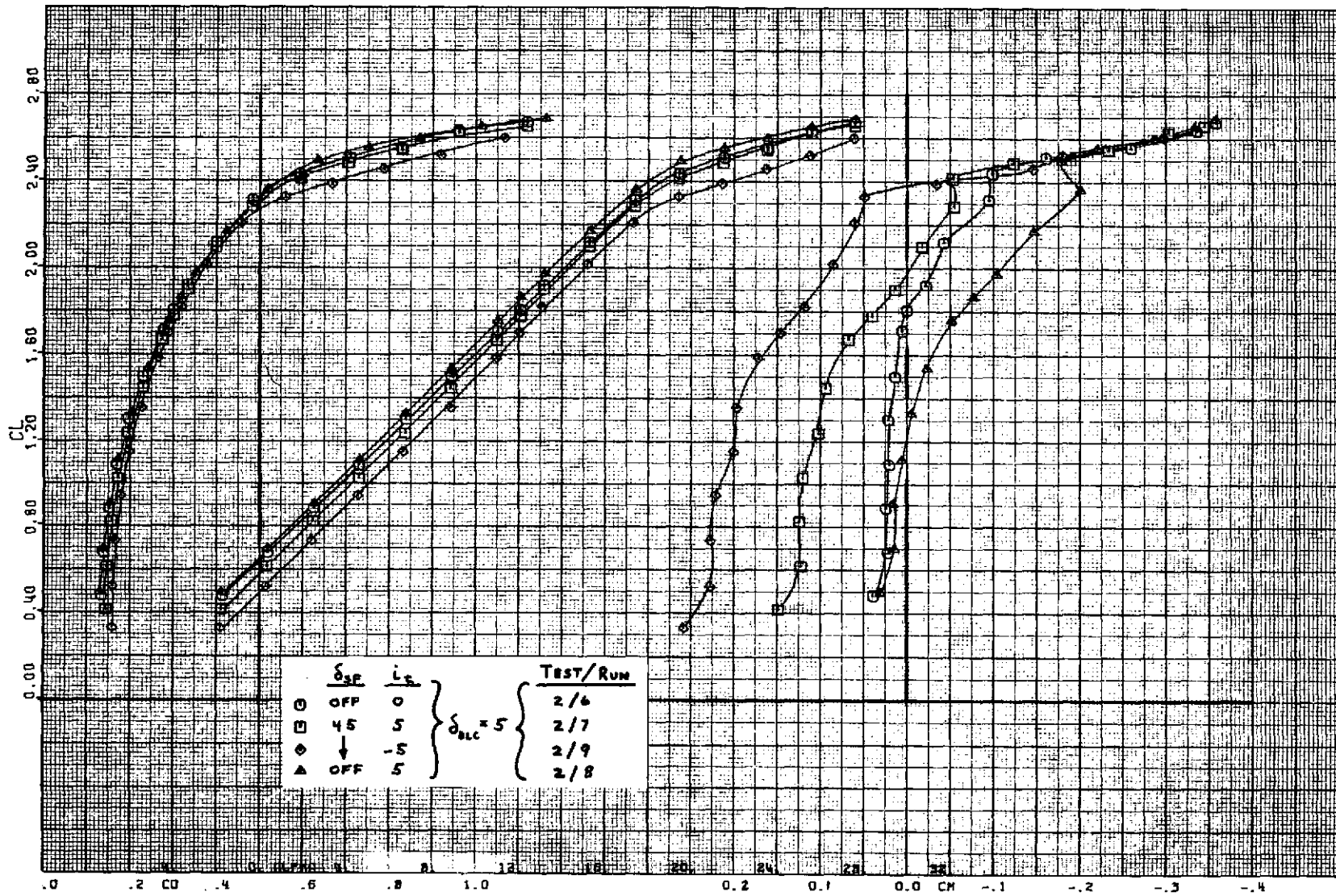
(b) Non-uniform deflection.

Figure 10.- Concluded.



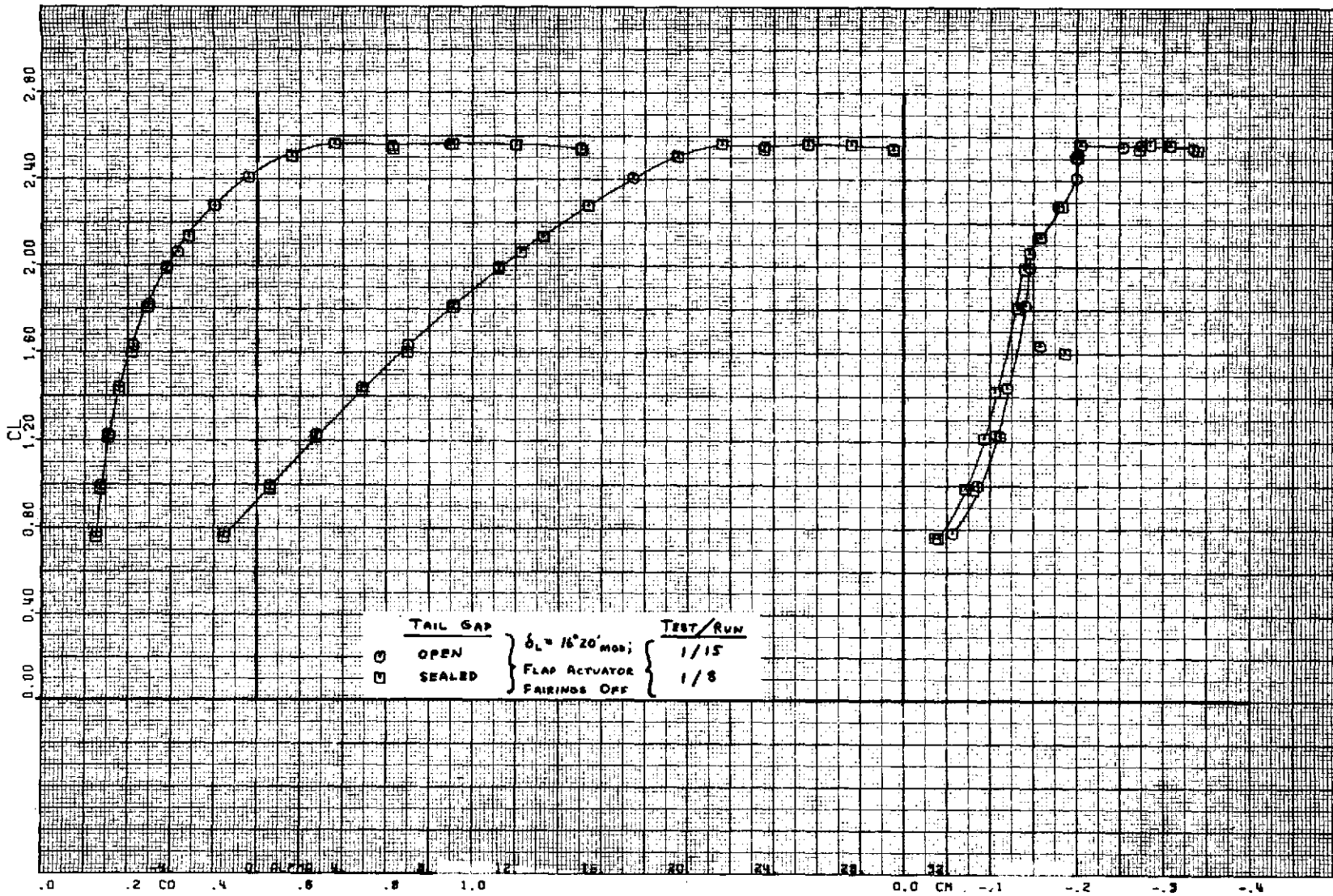
(a) Tail incidence.

Figure 11.- Effect of horizontal tail.



(b) Split flaps.

Figure 11.- Continued.



(c) Tail root seal.

Figure 11.- Concluded.



Figure 12.- Effect of direct lift control (spoilers).

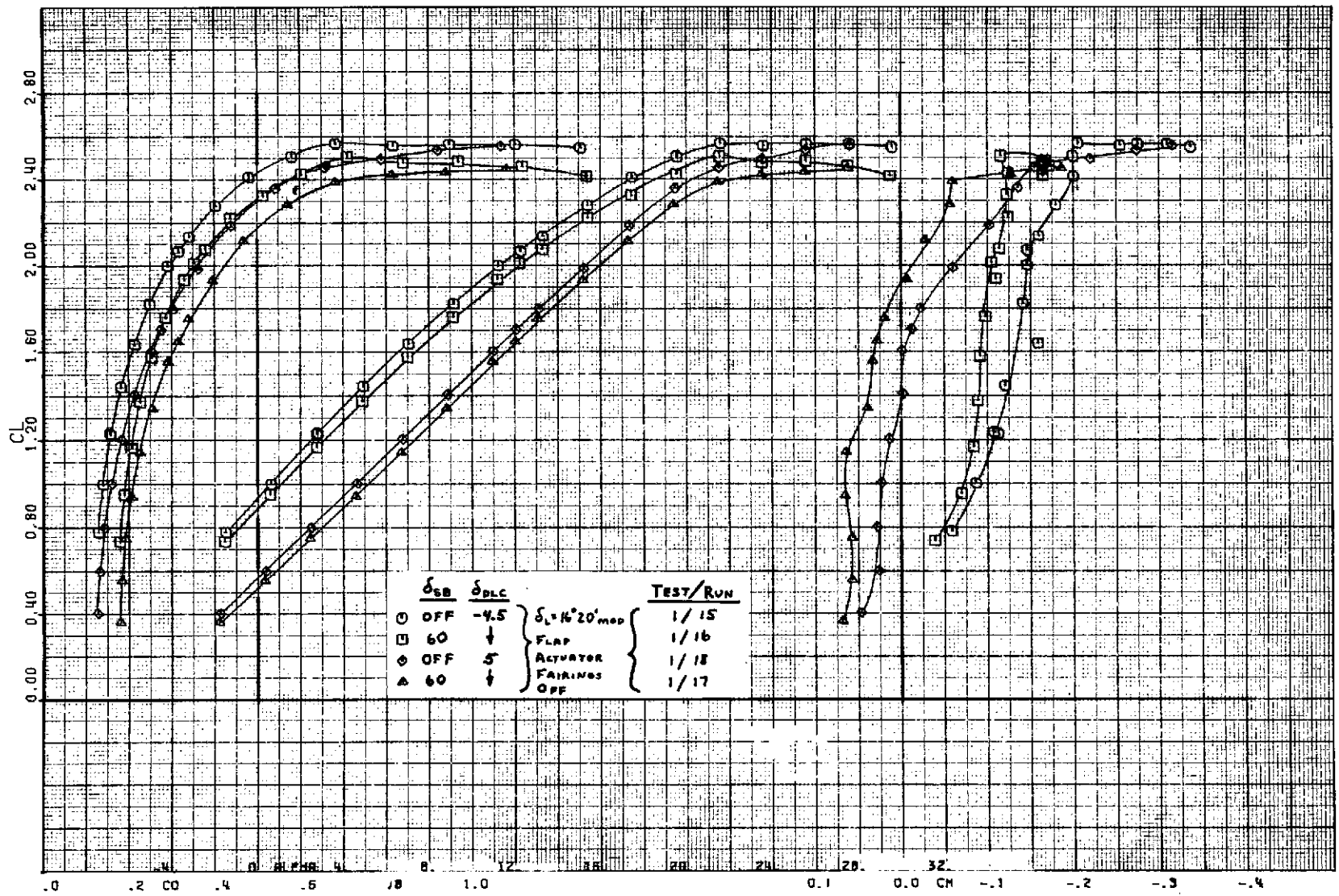
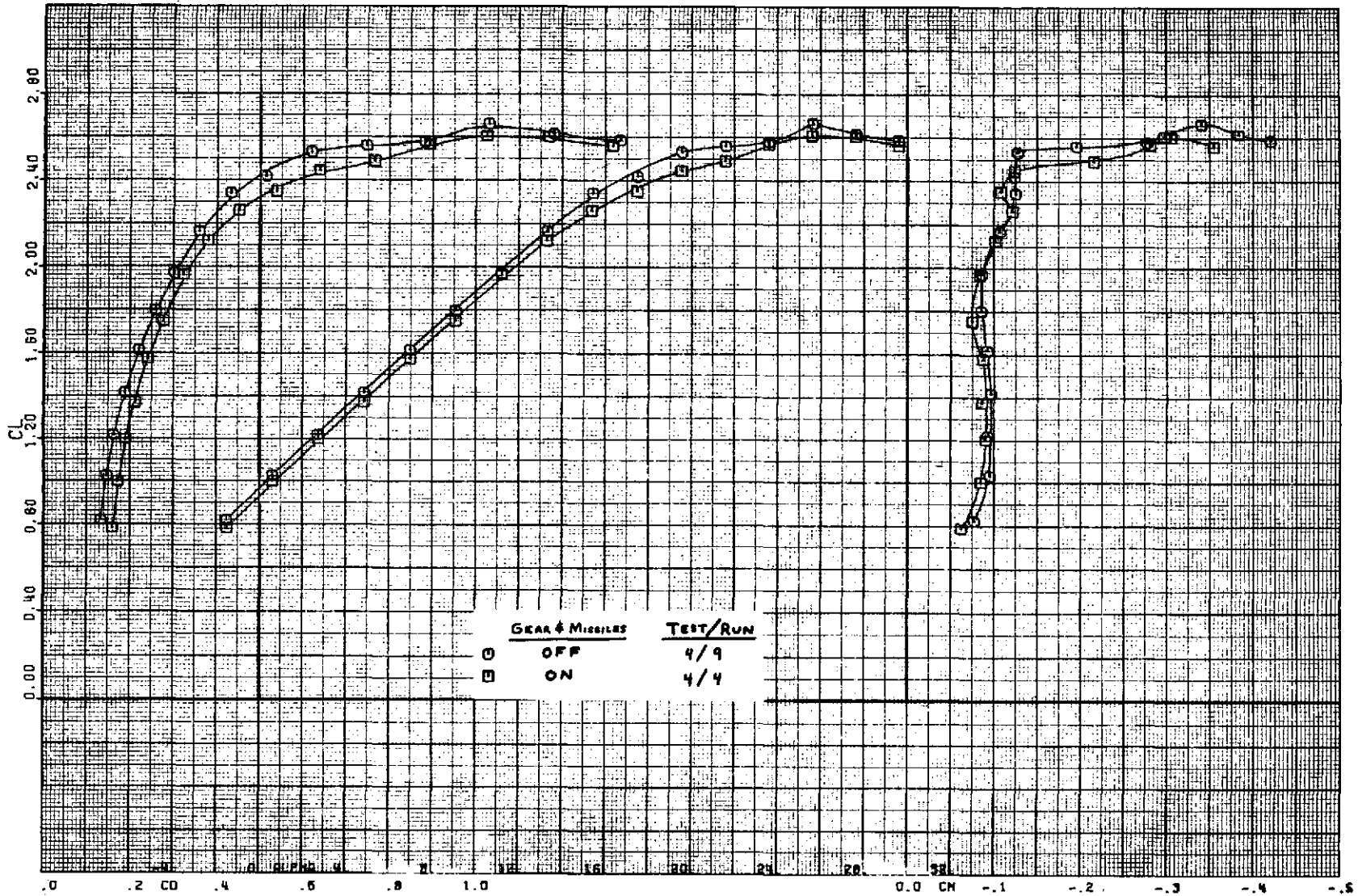
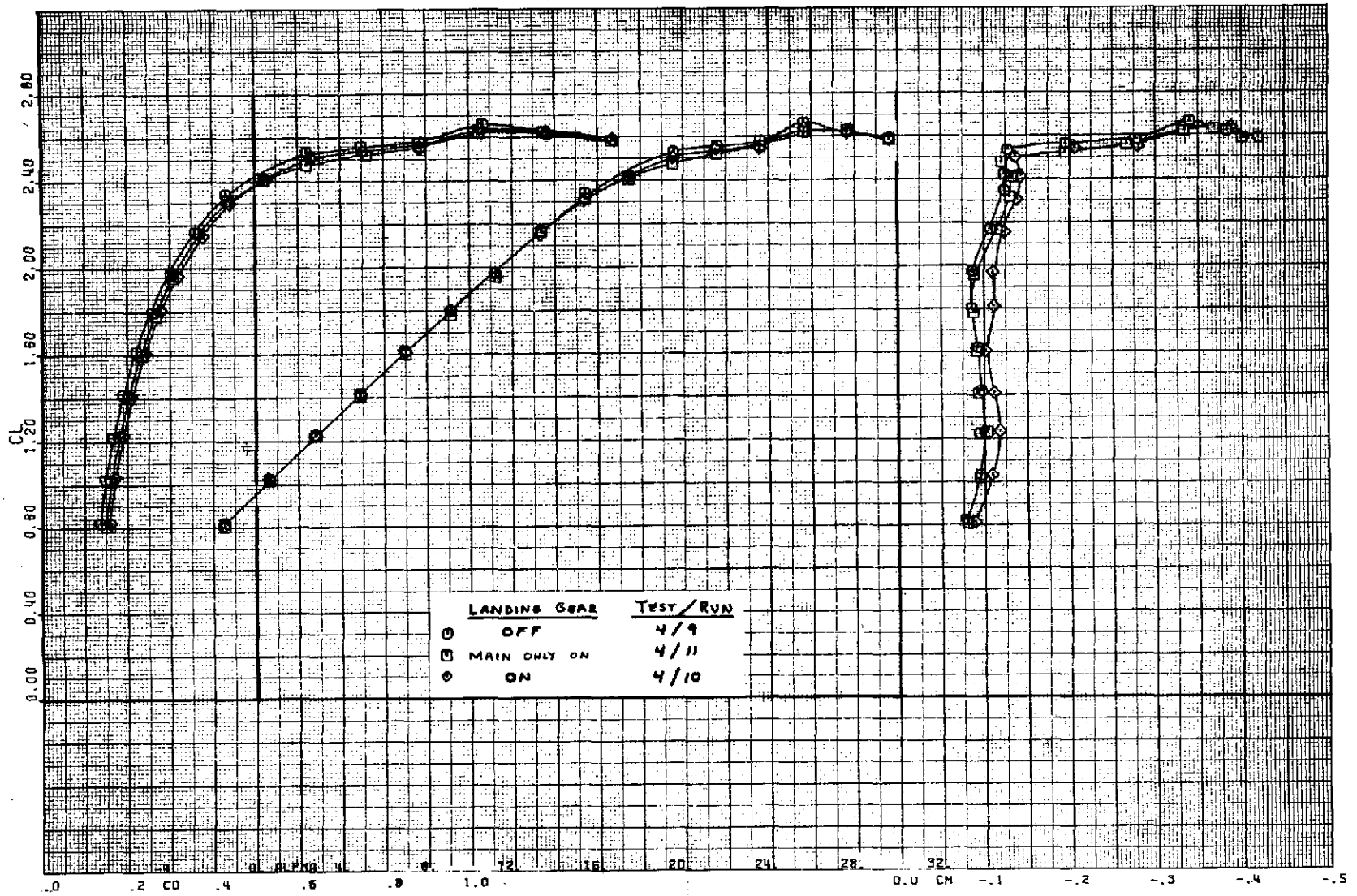


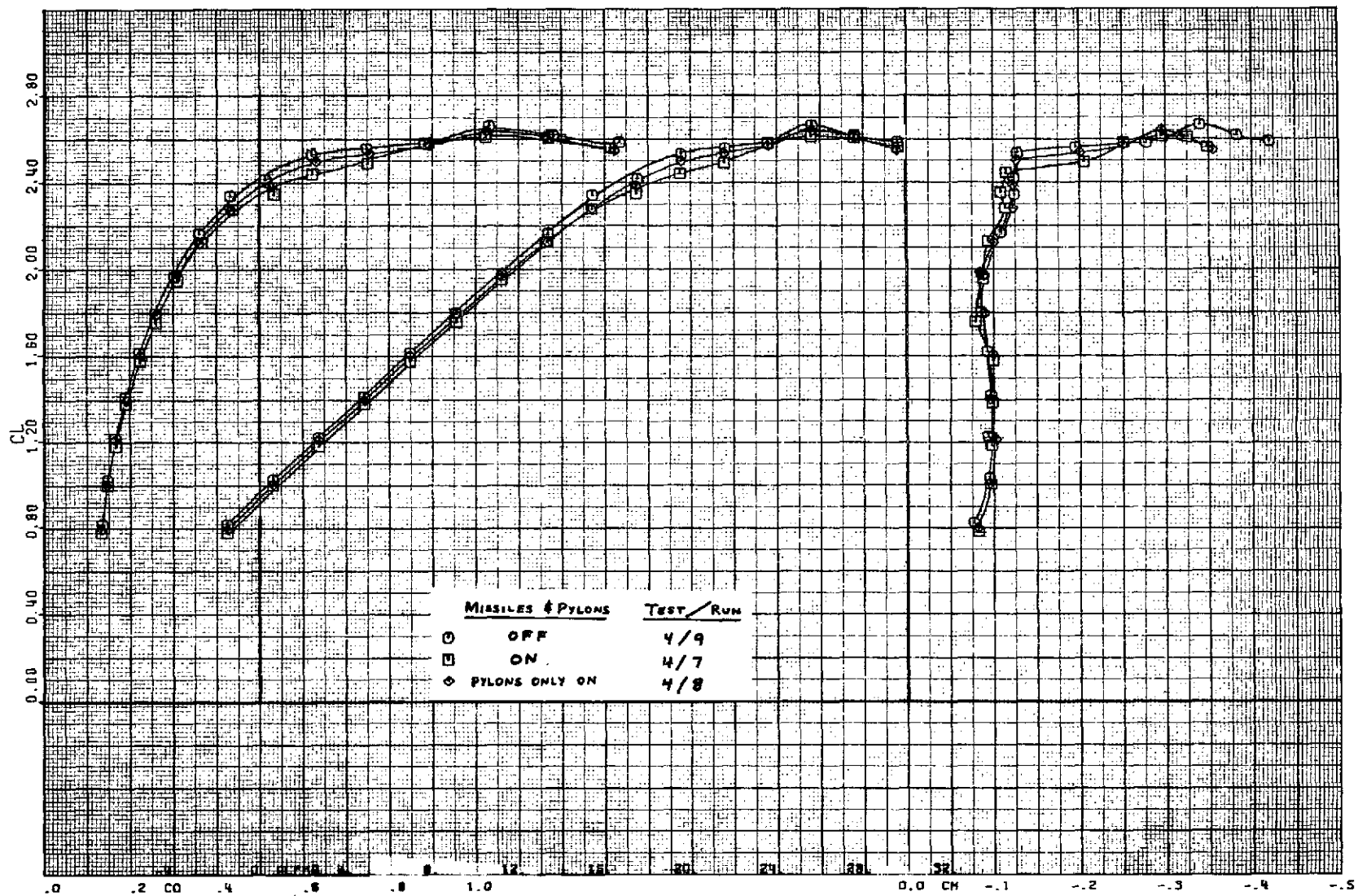
Figure 13.- Effect of speed brake.



(a) Landing gear and missiles.

Figure 14.- Effect of external hardware.





(c) Missiles and pylons.

Figure 14.- Concluded.

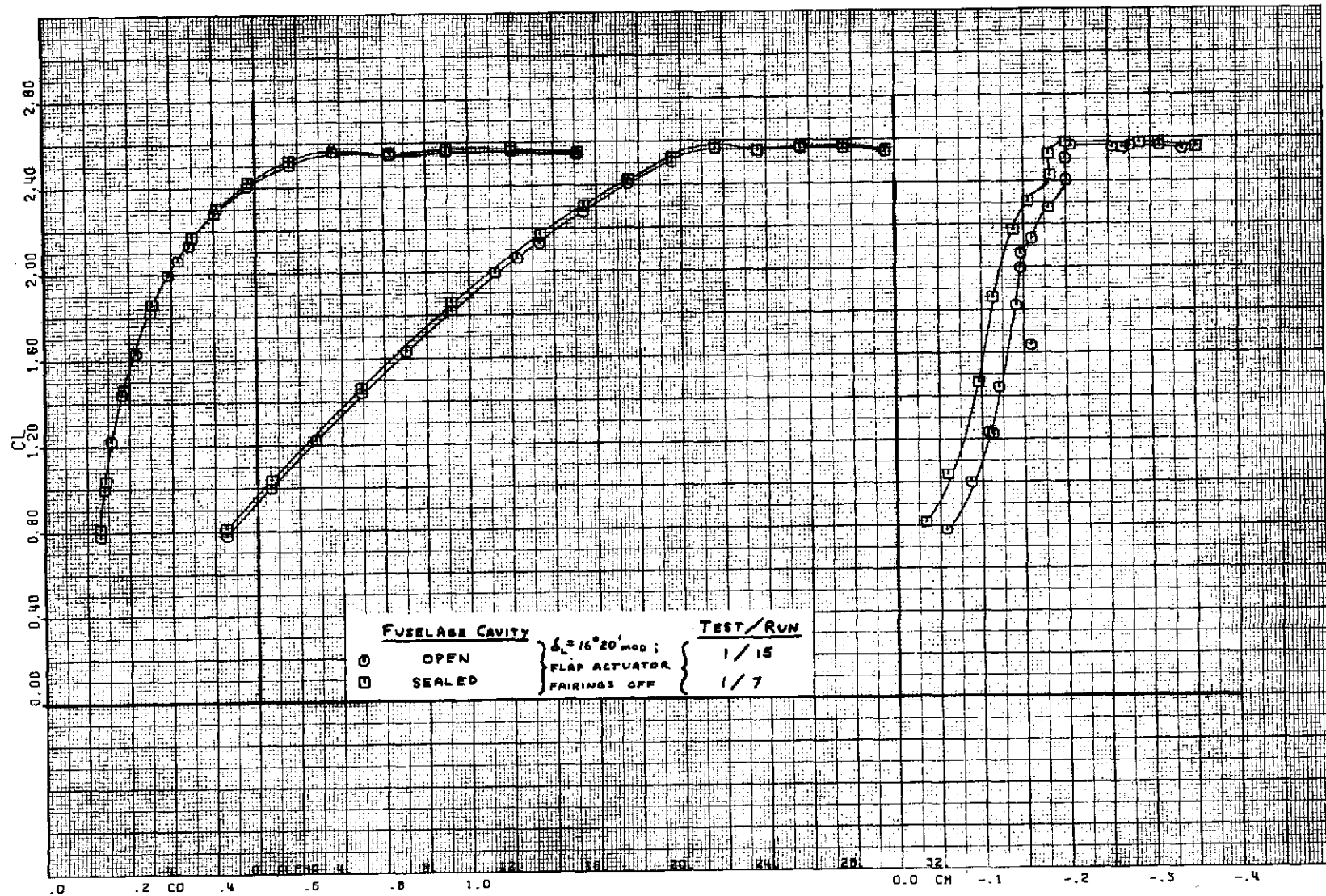


Figure 15.- Effect of fuselage cavity.