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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

(NASA-CR-147644) TRANSONIC STABILITY AND CONTROL CHARACTERISTICS OF A 0.015 SCALE MODEL 69-0 OF THE SPACE SHUTTLE ORBITER WITH FOREBODY RSI MODIFICATION IN THE NASA/LaRC 8 FOOT TPT (LA72) (Chrysler Corp.) 155 p G3/16

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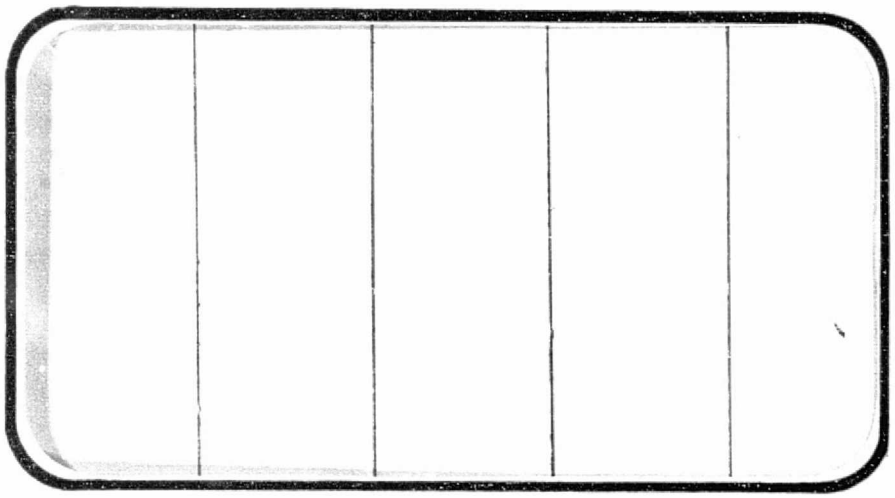

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

October 1976

DMS-DR-2309
NASA CR-147,644

TRANSONIC STABILITY AND CONTROL CHARACTERISTICS OF A 0.015 SCALE MODEL 69-0 OF THE SPACE SHUTTLE ORBITER WITH FOREBODY RSI MODIFICATION IN THE NASA/LaRC 8-FOOT TPT (LA72)

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	LaRC 8 Foot TPT 740
NASA Series Number:	LA72
Model Number:	69-0
Test Dates:	March 26 through 31, 1976
Occupancy Hours:	72

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Chrysler Corporation Space Division assumes no responsibility for the data presented other than display characteristics.

TRANSONIC STABILITY AND CONTROL CHARACTERISTICS OF A 0.015 SCALE MODEL 69-O OF THE SPACE SHUTTLE ORBITER WITH FOREBODY RSI MODIFICATION IN THE NASA/LaRC 8-FOOT TPT (LA72)

ABSTRACT

Tests were conducted in the NASA/LaRC 8 Foot Transonic Wind Tunnel from March 26 through 31, 1976. The model was a Langley built 0.015 scale SSV Orbiter with forebody modifications to simulate slight reductions in the reusable surface insulation (RSI) thickness.

Six component aerodynamic force and moment data were obtained at Mach numbers from 0.35 to 1.20 over an angle of attack range from -2° to 20° at sideslip angles of 0° and 5°.

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COEFFICIENTS SCHEDULE:

(A) C_L, C_D, C_A, L/D, C_m versus α

C_m versus C_N

C_Y, C_n(BODY), C_ℓ(BODY) versus α

(B) C_{Y_β}, C_{n_β}(BODY), C_{ℓ_β}(BODY) versus α

NOMENCLATURE
General

SYMBOL	MNEMONIC	DEFINITION
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2, psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$
		Reference & C.G. Definitions
A_b		base area; m^2, ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

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NOMENCLATURE (Continued)

Body-Axis System

SYMBOL	MNEMONIC	DEFINITION
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CIM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
		Stability-Axis System
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CIM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift to forebody drag ratio; C_L/C_{D_f}

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NOMENCLATURE (Concluded)
ADDITIONS TO STANDARD LIST

SYMBOL	MNEMONIC	DEFINITION
A_{SC}		sting cavity area: sq. ft.
C_{Y_β}	DCY/DB	side force coefficient derivative with respect to sideslip angle: $\partial CY/\partial\beta$, per degree
C_{n_β}	DCYNDB	yawing moment coefficient derivative with respect to sideslip angle: $\partial C_n/\partial\beta$, per degree
C_{ℓ_β}	DCBLDB	rolling moment coefficient derivative with respect to sideslip angle: $\partial C_\ell/\partial\beta$, per degree
δ_{BF}	BDFLAP	body flap deflection angle; degrees
δ_e	ELEVON	elevon deflection angle; degrees
$\Delta\beta$	DBETA	incremental sideslip angle; degrees
$C_{p_{b1}}$	CPB1	base pressure coefficient at location #1
$C_{p_{b2}}$	CPB2	base pressure coefficient at location #2
$C_{p_{b3}}$	CPB3	base pressure coefficient at location #3
C_{p_c}	CPC	balance cavity pressure coefficient

INTRODUCTION

The National Aeronautics and Space Administration is conducting studies to determine if any adverse aerodynamic effects would be produced by slight reductions in the thickness of the reusable surface insulation (RSI) located along the sides of the Space Shuttle Orbiter fuselage forebody. The reductions of interest (a maximum of 2 inches full scale) would allow weight savings in the nose region while still providing sufficient thermal protective margins for anticipated missions. The potential aerodynamic issues which need evaluation are: the forward pitch control boundary at $M \approx 5.0$ and the longitudinal and lateral-directional stability characteristics at $0.2 \leq M \leq 5.0$

To obtain data over the required speed range, tests have also been conducted in the LaRC Low Turbulence Pressure Tunnel (LA73) to obtain subsonic data and in both legs of the LaRC Unitary Plan Wind Tunnel (LA71 A/B) to obtain supersonic data. The model used throughout these tests was a Langley built 0.015 scale SSV Orbiter with forebody modifications to simulate slight reductions in the reusable surface insulation (RSI) thickness.

In order to determine the transonic aerodynamic effects of the aforementioned forebody RSI thickness reductions, tests were run in the Langley 8-ft Transonic Pressure Tunnel at Mach numbers from 0.35 to 1.20. The test angle of attack range was from -2° to 20° at sideslip angles of 0° and 5°.

The purpose of the present report is to release data obtained during the transonic phase of the testing.

CONFIGURATIONS INVESTIGATED

The test model was a 0.015 scale model of the Space Shuttle Orbiter constructed at the Langley Research Center from Rockwell-furnished model 49-0 line details. The model designation is 69-0.

For this test the Orbiter Forebody contours were modified (See Figure 2) to simulate a reduction in the thermal protective shield area.

The configuration is summarized as follows:

W_1VS_oEF = Baseline = $WC_9E_{43}F_8M_{16}N_{28}R_5V_8S_o$

Component	Definition
B_1	Fuselage per Rockwell Lines VL70-000140A and VL70-000140B (Model SS-A00147)
B_6	B_1 with reduced RSI thickness
B_7	B_1 with reduced RSI thickness and "cheeks" added.
C_9	Canopy per Rockwell Lines VL70-000140A and VL70-000143B (Model drawing SS-A00147)
E_{26}	Elevons per Rockwell Lines VL70-000200 (Model drawing SS-A00148)
F_8	Body flap per Rockwell Lines VL70-000145 (Model drawing SS-A00147)
M_{16}	OMS/RCS pods per Rockwell Lines VL70-0084010 (Model drawing SS A00147)
N_{28}	OMS engine nozzle per Rockwell Lines VL70-000145 (Model drawing SS-A00147)
R_5	Rudder per Rockwell Lines VL70-000146A (Model drawing SS-A00148)
S_o	Wing fillet per Rockwell V70-30-906-01 (Basic control drawing)
V_8	Vertical tail per Rockwell Lines VL70-000146A (Model drawing SS-A00148)

CONFIGURATIONS INVESTIGATED (Concluded)

Component	Definition
W	Wing per Rockwell V70-30-906-01 (Basic Control drawing)

A complete description of model dimensional data is given in Table III.

TEST CONDITIONS

The tunnel conditions existing during the test are summarized in Table I and the configurations tested are shown in Table II. The model was sting supported, and the aerodynamic forces and moments were measured by an internally mounted six-component strain gage balance. Model angle of attack was varied from about -2° to 20° for angles of sideslip of 0° and 5°. Angles of attack and sideslip have been corrected for the effects of sting deflection under load.

TEST FACILITY DESCRIPTION

NASA/Langley Research Center 8-foot Transonic Pressure Tunnel is an air-medium facility capable of attaining continuously variable Mach numbers from 0.20 to 1.30. It is a single-return, closed-circuit tunnel, having controlled stagnation temperature, total pressure, and dew-point temperature. The test section is 7.1 square feet. Reynolds numbers are variable from 0.30×10^6/foot to 7.00×10^6/foot, depending on Mach number and tunnel total-pressure limitations. Models are supported in the test section by a sting-sector system, but wall-mounting is possible. Schlieren photography is available for flow and shock-wave studies.

DATA REDUCTION

LaRC 839 six-component strain gage balance was used to measure model forces and moments. All final data were presented along a set of body and stability axes (Figure 1) through the nominal center of gravity located at F.S. 1076.7 and FRL 375.0 Drag data presented represent gross drag in that no corrections to free-stream conditions in the base regions have been made. Model data were converted to standard NASA coefficients using the following constants:

Reference Area	$S_{ref} = 0.605$ ft.^{2}
Reference Length	$\ell_{ref} = 7.122$ in.
Reference Span	$b_{ref} = 14.05$ in.
Total base area excluding sting cavity	$A_b = 0.0615$ ft.^{2}
Sting cavity area	$A_{sc} = 0.03409$ ft.^{2}

TEST : LaRC 8' TPT 740 (LA72) | DATE : 8-20-76

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
.35	2.06×10^6	1.15	120
.8	3.77×10^6	4.40	120
.9	3.97×10^6	4.93	120
.98	4.07×10^6	5.31	120
1.20	3.16×10^6	4.59	120

BALANCE UTILIZED: LaRC 839

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	800 lb.	±4.0 lb.	
SF	200 lb.	±1.0 lb.	
AF	60 lb.	±0.3 lb.	
PM	1600 in-lb	±8.0 in-lb	
RM	400 in-lb	±2.0 in-lb	
YM	400 in-lb	±2.0 in-lb	

COMMENTS:

TABLE II

TEST : LaRC 8' TPT 740 (LA72) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE : 4-9-76

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES δe	PARAMETERS/VALUES δBF	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	PARAMETERS/VALUES	MACH NUMBERS .35	MACH NUMBERS .8	MACH NUMBERS .9	MACH NUMBERS .98	MACH NUMBERS 1.2
RJD00 1	B_1WVS_0EF	A	0	0	-11.7°																	5	4	3	2	1
2	↓		5	↓	↓																	10	9	8	7	6
3	B_7WVS_0EF		0																			20	19	18	17	16
4	↓		5																			15	14	13	12	11
5	B_6WVS_0EF		0																			24	23	22	25	21
6	↓	↓	5	↓	↓																	30	29	28	27	26

(R) BETA | CN | CA | CLM | CL | CD | CY | CYN | CBL | L/D | MACH | ALPHA | 10

(A) Q(PSF) | CPB1 | CPB2 | CPB3 | CPC | RN/L | | | | | MACH | ALPHA | 6

TYPE OF DATA α OR β SCHEDULES — COEFFICIENT SCHEDULES — IDVAR (1) — IDVAR (2) — NCV

A) α = -2 to 20°

TABLE III.

MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY B_1

GENERAL DESCRIPTION : Configuration 140A/B Orbiter Fuselage

NOTE: B_1 is identical to B_{24} except underside of fuselage has been refaired to accept W

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147, RELEASE 12

DRAWING NUMBER : VL70-000143B, -000200, 000205, -006089, -000145, -000140A, 000140B

DIMENSIONS :	FULL SCALE	MODEL SCALE
* Length (OML: Fwd Sta. X_o=235)-In.	1293.3	19.400
* Length (IML: Fwd Sta. X_o=238)-In.	1290.3	19.355
* Max Width(@ X = 1528.3) - In.	264.0	3.960
Max Depth(@ X_o= 1464) - In.	250.0	3.750
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional	340.88	0.077
Planform		
Wetted		
Base		

TABLE III.
MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY $^{B}6$

GENERAL DESCRIPTION : Configuration 140A/B Orbiter Fuselage

NOTE: Identical to $^{B}1$ except for reduced RSI thickness on forebody

(See Fig.2)

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147, RELEASE 12

DRAWING NUMBER : VL70-000143B, -000200, 000205, -006089, -000145, -000140A, 000140B

DIMENSIONS :	FULL SCALE	MODEL SCALE
* Length (OML: Fwd Sta. X_o=235)-In.	1293.3	19.400
* Length (IML: Fwd Sta. X_o=238)-In.	1290.3	19.355
* Max Width (@ X = 1528.3) - In.	264.0	3.960
Max Depth (@ X_o= 1464) - In.	250.0	3.750
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional	340.88	0.077
Planform		
Wetted		
Base		

TABLE III.
MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY B_7

GENERAL DESCRIPTION : Configuration 140A/B Orbiter Fuselage

NOTE: Identical to B_1 except for reduced RSI thickness and the addition of "cheeks" (See Fig. 2)

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147, RELEASE 12

DRAWING NUMBER : VL70-000143B, -000200, 000205, -006089, -000145, -000140A, 000140B

DIMENSIONS :	FULL SCALE	MODEL SCALE
* Length (OML: Fwd Sta. X_o=235)-In.	1293.3	19.400
* Length(IML: Fwd Sta. X_o=238)-In.	1290.3	19.355
* Max Width (@ X = 1528.3) - In.	264.0	3.960
Max Depth (@ X_o= 1464) - In.	250.0	3.750
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional	340.88	0.077
Planform		
Wetted		
Base		

TABLE III–Continued
MODEL DIMENSIONAL DATA

MODEL COMPONENT : CANOPY - C_9

GENERAL DESCRIPTION : Configuration 3A, Canopy used with Fuselage B_{26}.

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147 , RELEASE 12

DRAWING NUMBER : VL70-000143A/B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o = 434.643 to 587)	143.357	2.150
Max Width (@ X_o = 513.127)	152.412	2.286
Max Depth (@ X_o = 485.0)	25.000	0.375
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III - Continued
MODEL DIMENSIONAL DATA

MODEL COMPONENT: ELEVON - E_{26}

GENERAL DESCRIPTION: Configuration 140 A/B Orbiter Elevon

NOTE: VL70-000200 data for (1) of (2) sides. Identical to E_{25} except airfoil thickness.

Model Scale: 0.015 Model Drawings No. SS-A00148

DRAWING NUMBER VL70-000140B VL70-000200

DIMENSIONS	FULL SCALE	MODEL SCALE
Area	210.0	0.0473
Span (equivalent)	349.2	5.238
Inb'd equivalent chord	118.004	1.770
Outb'd equivalent chord	55.1922	0.828
Ratio movable surface chord/ total surface chord		—
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.4004	0.4004
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Trailing Edge	10.056	10.056
Hingeline	0.00	0.00
Area Moment (Normal to hinge line)	1587.25	0.00536

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TABLE III–Continued
MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY FLAP -F8

GENERAL DESCRIPTION : Configuration 140A/B Orbiter Body Flap.
Hingeline located at X_o = 1528.3, Z_o = 284.3

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147, RELEASE 12

DRAWING NUMBER : VL-000140A, VL70-000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_0 = 1520 To X_o = 1613)	93.000	1.395
Max Width (In.)	262.00	3.930
Max Depth (X_o = 1520) - In.	23.000	0.345
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional		
Planform	150.525	0.0339
Wetted		
Base	41.84722	0.00941

TABLE III-Continued

MODEL DIMENSIONAL DATA

MODEL COMPONENT : OMS Pod (M_{16})

GENERAL DESCRIPTION : Configuration 140D Orbiter OMS Pod

MODEL SCALE: 0.015 MODEL DRAWING NO: SS-A00147

DRAWING NUMBER : VL70-000140D
VL70-008410

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta X_o=1310.5)-In.	258.5	3.878
Max Width (@ X_o = 1511) - In.	136.8	2.052
Max Depth (@ X_o = 1511) - In.	74.7	1.121
Fineness Ratio	2.484	2.484
Area - Ft.^{2}		
Max. Cross-Sectional	58.864	0.0132
Planform		
Wetted		
Base		

TABLE III - MODEL DIMENSIONAL DATA-Continued

MODEL COMPONENT: OMS NOZZLES - N28

GENERAL DESCRIPTION: Configuration 140A/B Orbiter OMS Nozzles

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147 RELEASE 5 (Contour)

DRAWING NUMBER: VL70-000145, (location)

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NUMBER		
Length- In.		
Gimbal Point to Exit Plane		
Throat to Exit Plane		
Diameter - In.		
Exit		
Throat		
Inlet		
Area - ft^2		
Exit		
Throat		
Gimbal Point (Station) - In.		
Left Nozzle		
X_o	1518.0	22.770
Y_o	-88.0	-1.320
Z_o	490.2	7.380
Right Nozzle		
X	1518.0	22.770
Y	+88.0	+1.320
Z	492.0	7.380
Null Position - Deg.		
Left Nozzle		
Pitch	$15^o49'$	$15^o49'$
Yaw	$12^o17'$	$12^o17'$
Right Nozzle		
Pitch	$15^o49'$	$15^o49'$
Yaw	$12^o17'$	$12^o17'$

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TABLE III-Continued

MODEL DIMENSIONAL DATA

MODEL COMPONENT RUDDER - R_5

GENERAL DESCRIPTION 2A, 3, 3A, and 140A/B Configurations

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00148

DRAWING NUMBER VL70-000146A, VL70-000095, V170-000139

DIMENSIONS	FULL SCALE	MODEL SCALE
*Area Ft^2	100.15	0.0225
Span (equivalent) - In.	201.0	3.015
Inb'd equivalent chord - In.	91.585	1.3738
Outb'd equivalent chord - In.	50.833	0.7625
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83	34.83
Trailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Normal to hinge line)	610.92	0.002
Mean Aerodynamic Chord, - In.	73.2	1.098

TABLE III (Continued)

MODEL DIMENSIONAL DATA - Continued

MODEL COMPONENT : VERTICAL - V8

GENERAL DESCRIPTION : Configuration 140A/B Orbiter Vertical Tail

MODEL SCALE: 0.015 DRAWING NUMBER: SS-A00148, RELEASE 6

DRAWING NUMBER VL70-000146A

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2 Planform	413.253	0.093
Span (Theo) - In.	315.720	4.736
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
*Trailing Edge	26.2	26.2
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.500	4.028
Tip (Theo) WP	108.470	1.627
MAC	199.808	2.997
Fus. Sta. of .25 MAC	1463.50	21.953
W.P. of .25 MAC	635.522	9.533
B.L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle - Deg.	10.00	10.00
Trailing Wedge Angle - Deg.	14.920	14.920
Leading Edge Radius	2.00	0.030
Void Area	13.17	0.030
Blanketed Area	0.00	0.00

TABLE III (Concluded)

MODEL COMPONENT: WING-W

GENERAL DESCRIPTION. Configuration 4

NOTE: Identical to W_{114} except airfoil thickness.

Dihedral angle is along trailing edge of wing.

MODEL SCALE: 0.015 MODEL DRAWING: SS-AC0148

DRAWING NUMBER: V70-30-906-01 (Basic Control Drawing)

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) Ft^2		
Planform	2690.00	0.605
Wetted		
Span (equivalent) (Theo) In.	936.68	14.050
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees	+3.000	+3.000
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	-10.056	-10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Wing Sta. 0.0) (Theo) B.P.0.0.	689.24	10.339
Tip, (equivalent) (Theo) B.P.	137.85	2.068
MAC	474.81	7.122
Fus. Sta. of .25 MAC	1136.83	17.052
W.P. of .25 MAC	290.58	4.359
B.L. of .25 MAC	182.13	2.732
Airfoil Section		
Root		
Tip		
EXPOSED DATA		
Area Ft^2	1751.50	0.394
Span, (equivalent) (Theo) In. BP103	720.68	10.810
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	8.431
Tip 1.00 $\frac{b}{2}$	137.85	2.068
MAC	392.83	5.892
Fus. Sta. of .25 MAC	1185.98	17.790
W.P. of .25 MAC	294.30	4.415
B.L. of .25 MAC	251.77	3.777

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

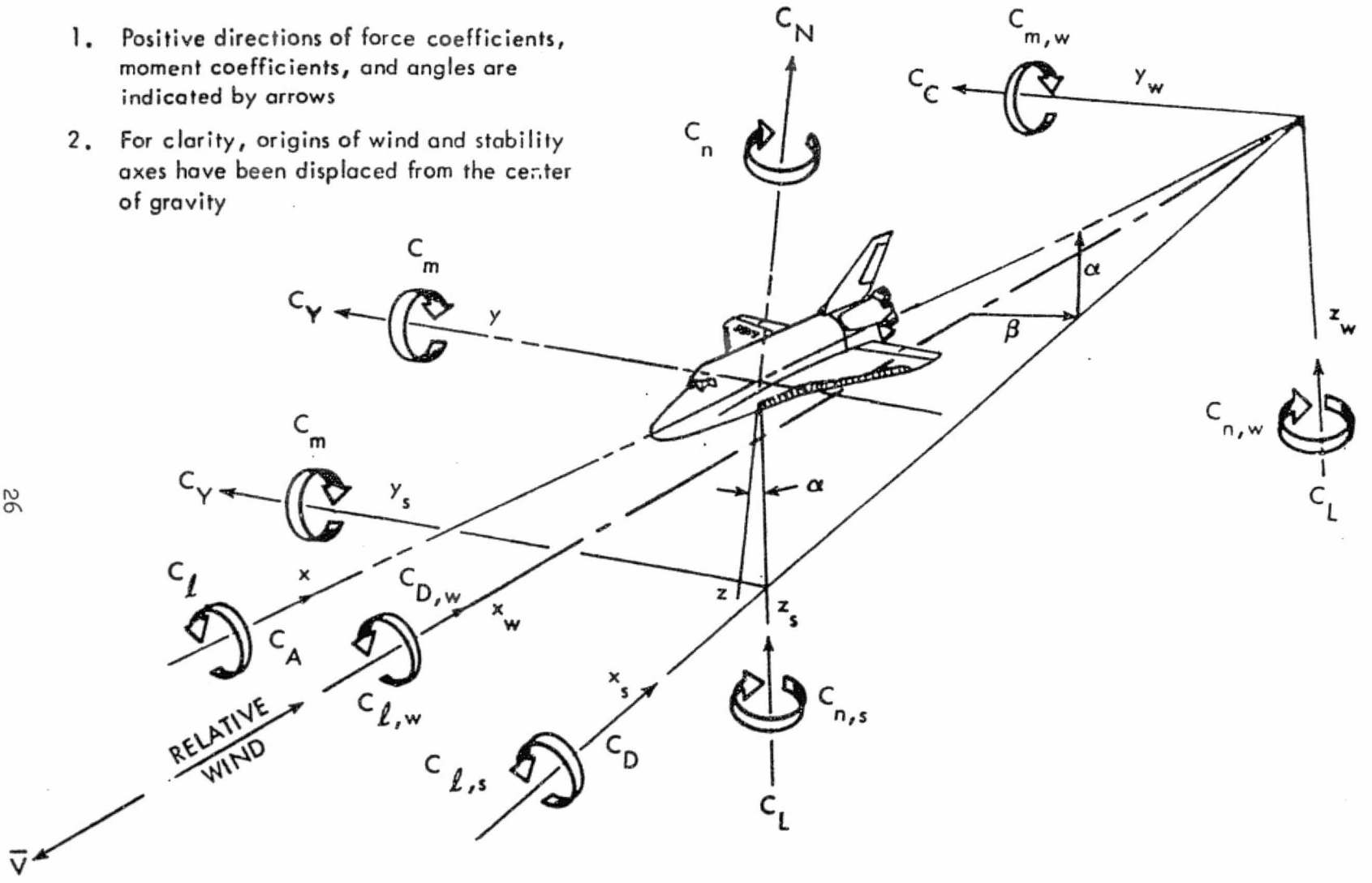
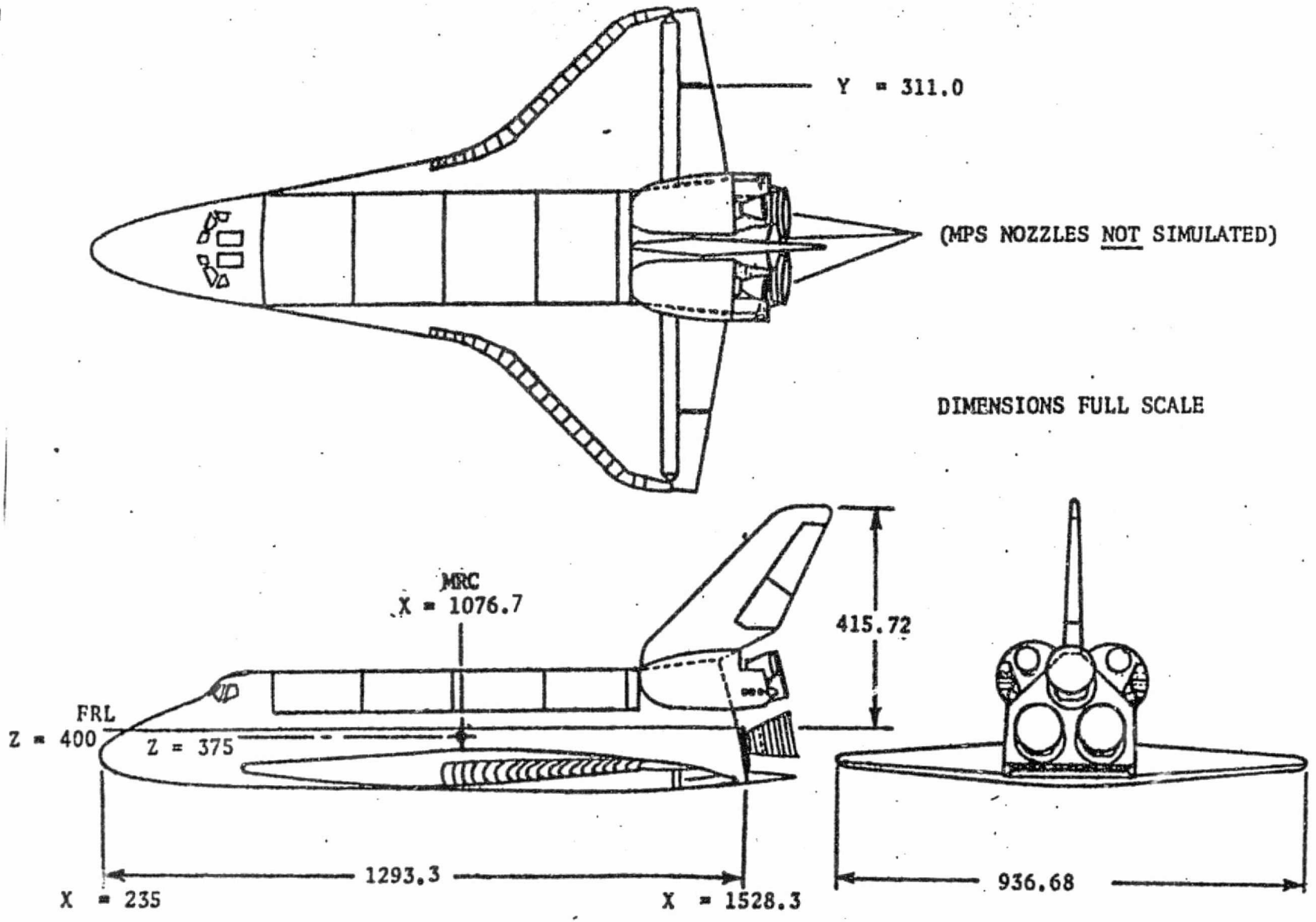
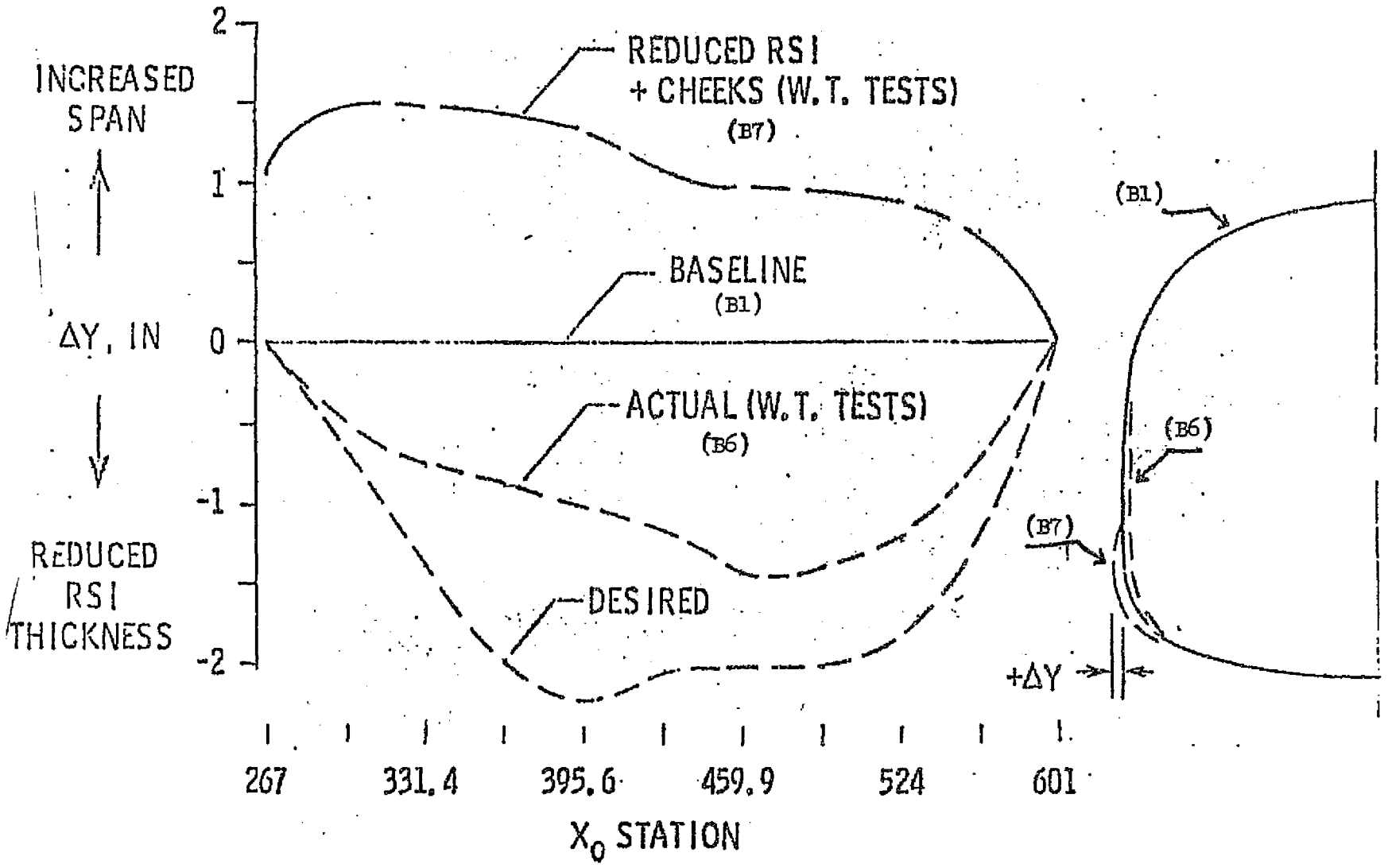


Figure 1. - Axis Systems.



a. Shuttle Orbiter General Arrangement

Figure 2. - Model Sketches



b. Orbiter Forebody RSI Modification

Figure 2. - Model Sketches

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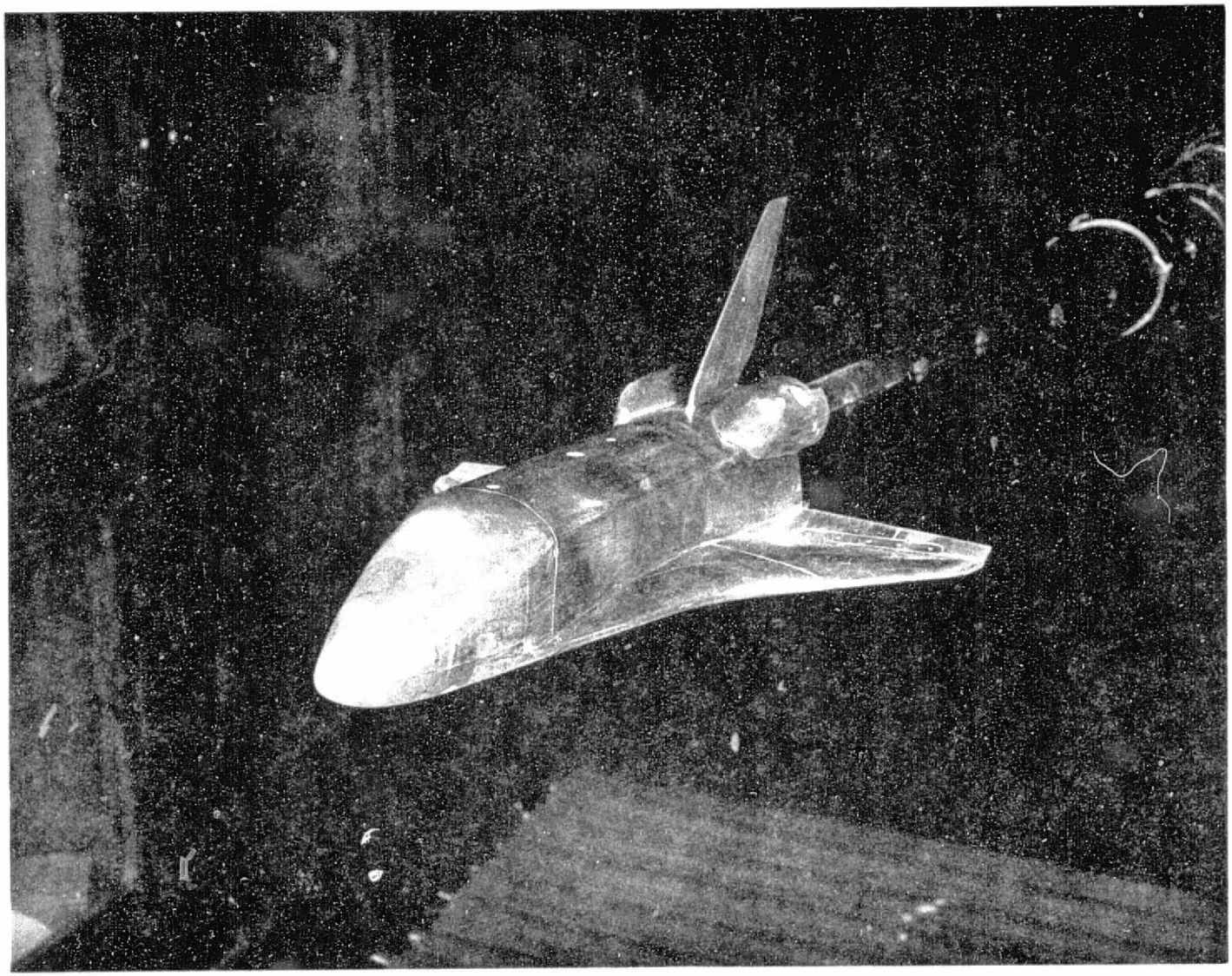
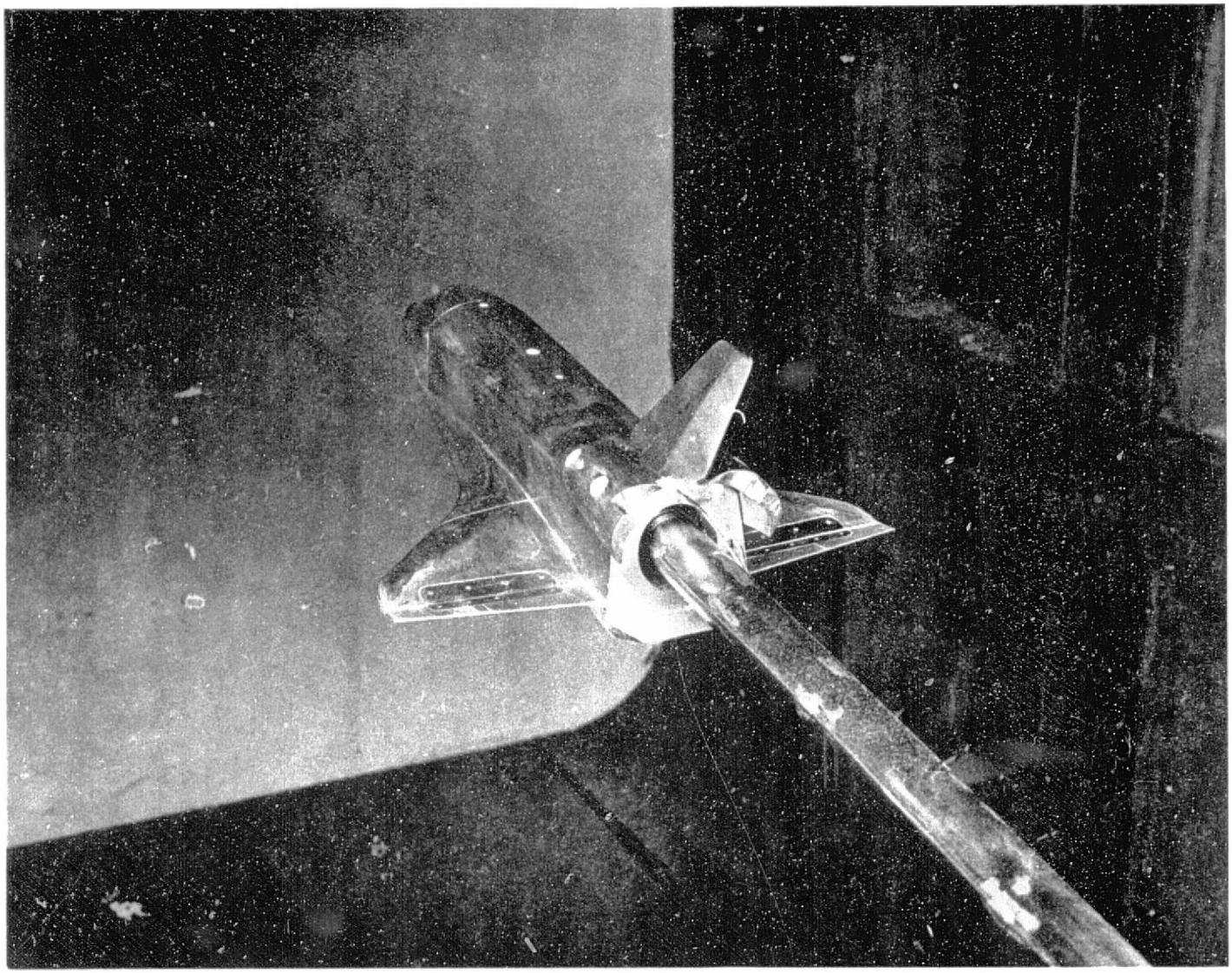
OF POOR QUALITY



a. Orbiter Configuration, Front, 3/4 View

Figure 3. Model Photographs



b. Orbiter Configuration, Rear, 3/4 View

Figure 3. Concluded

DATA FIGURES

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

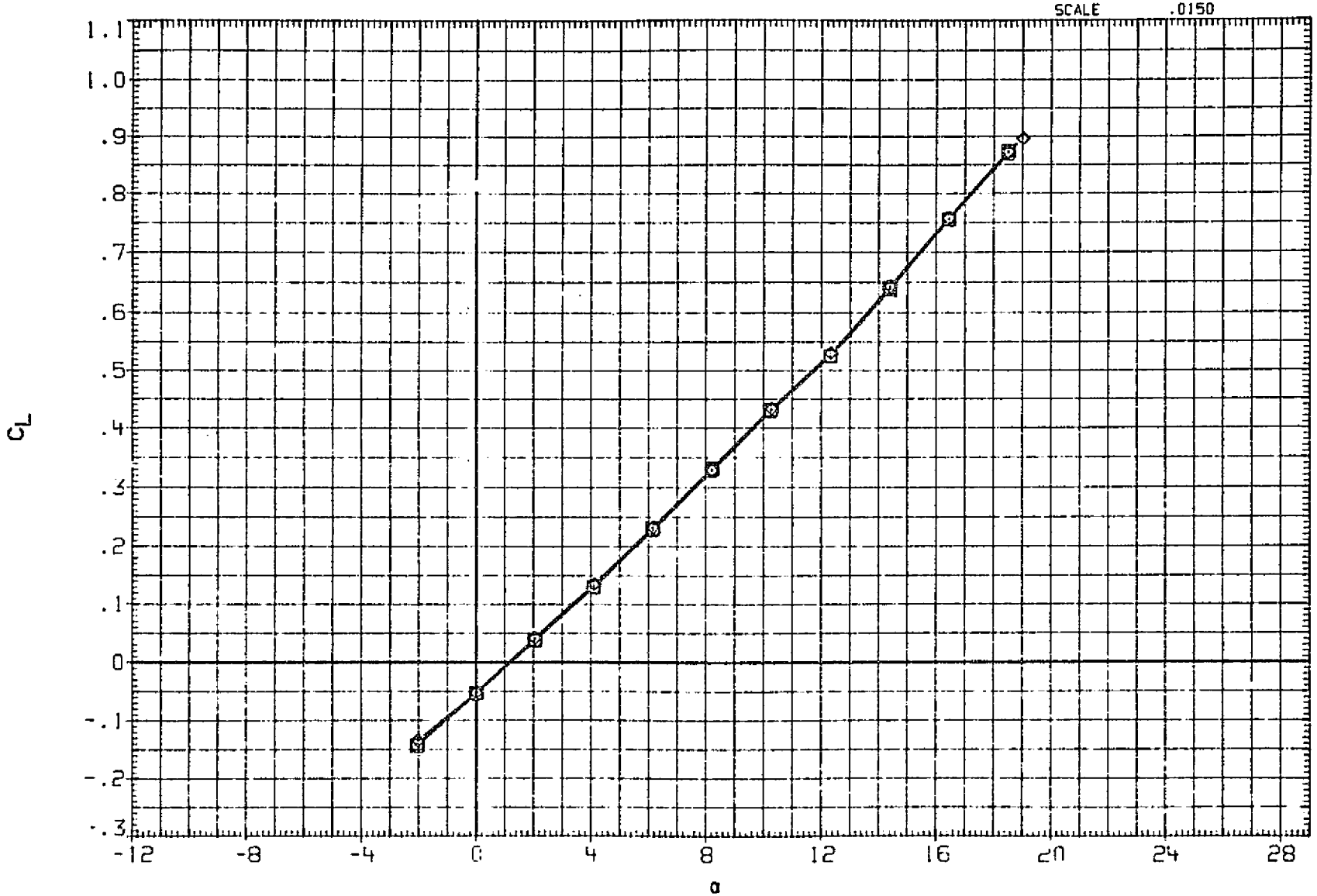


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A,MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

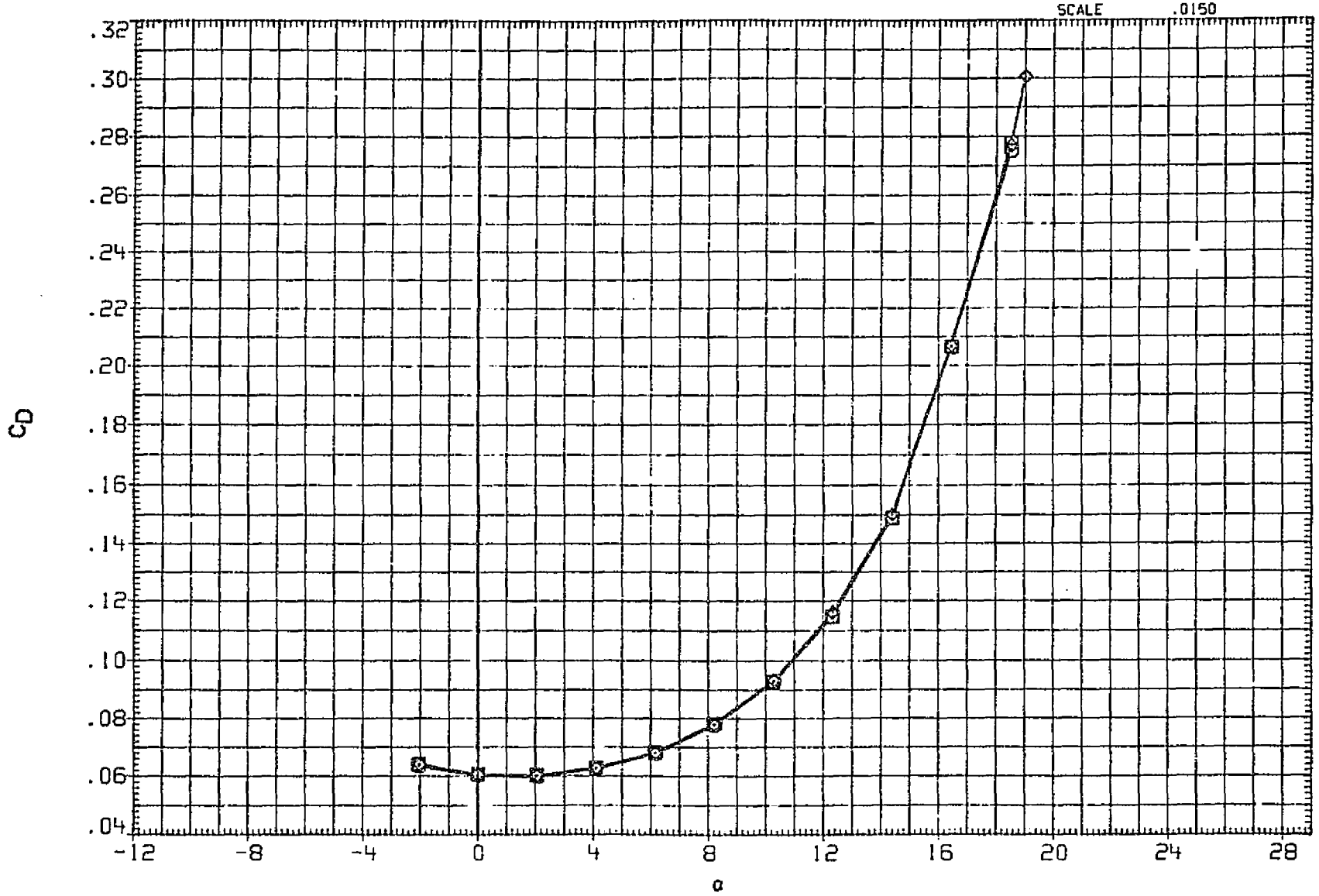


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

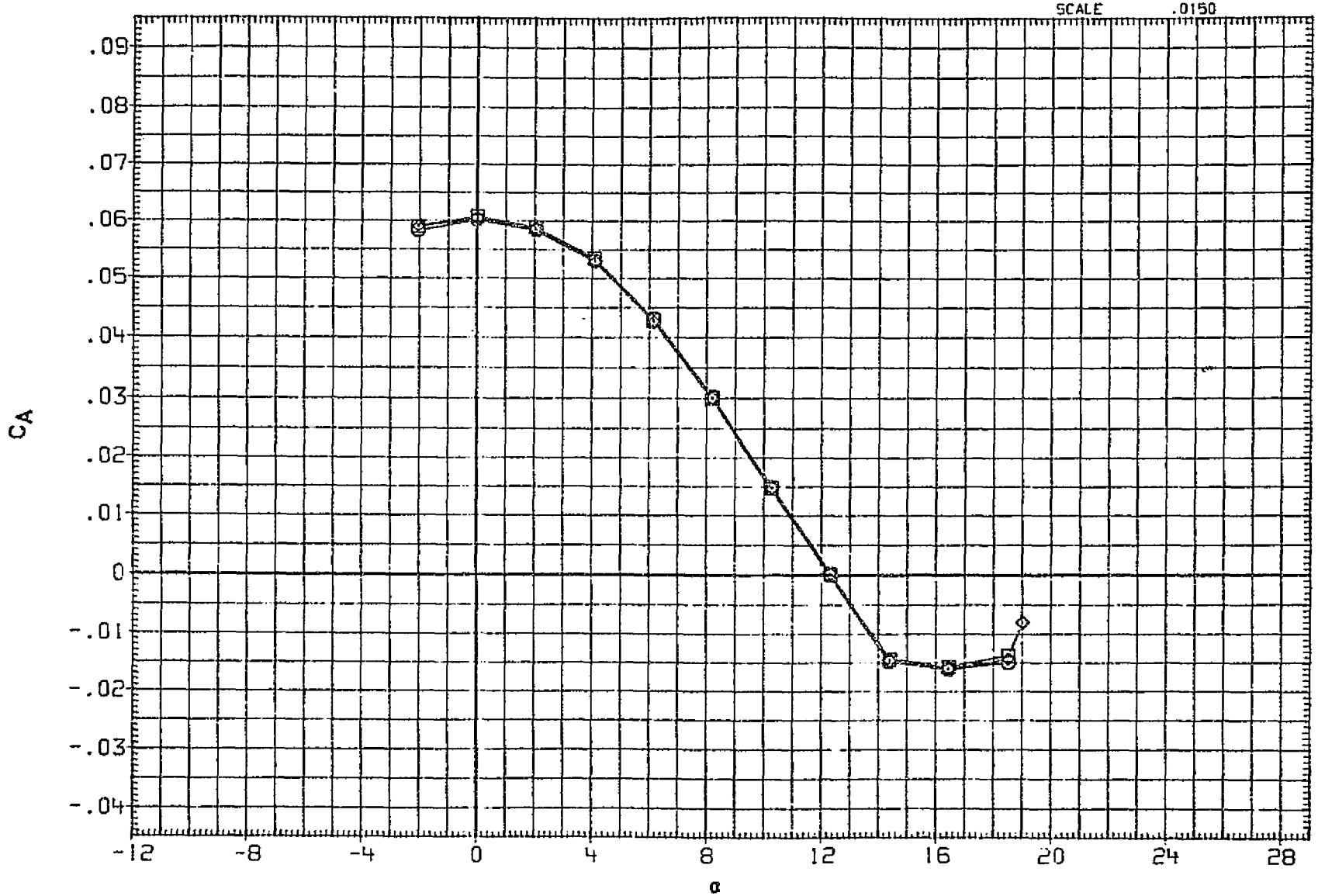


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

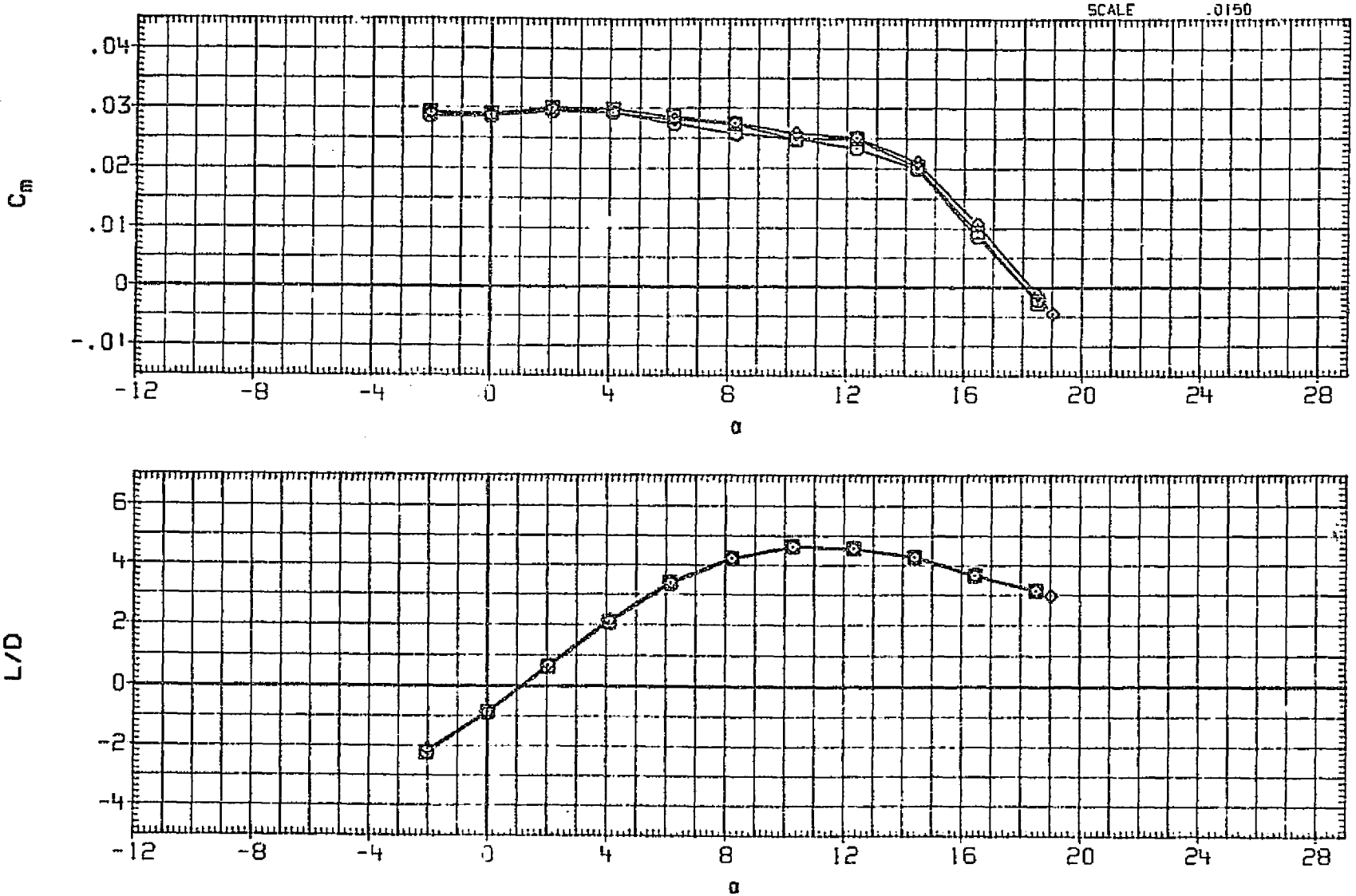


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC BFT TPT 740(LA72) B1WV50EF	.000	-11.700
(RJD005)	□	LARC BFT TPT 740(LA72) B6WV50EF	.000	-11.700
(RJD003)	◇	LARC BFT TPT 740(LA72) B7WV50EF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

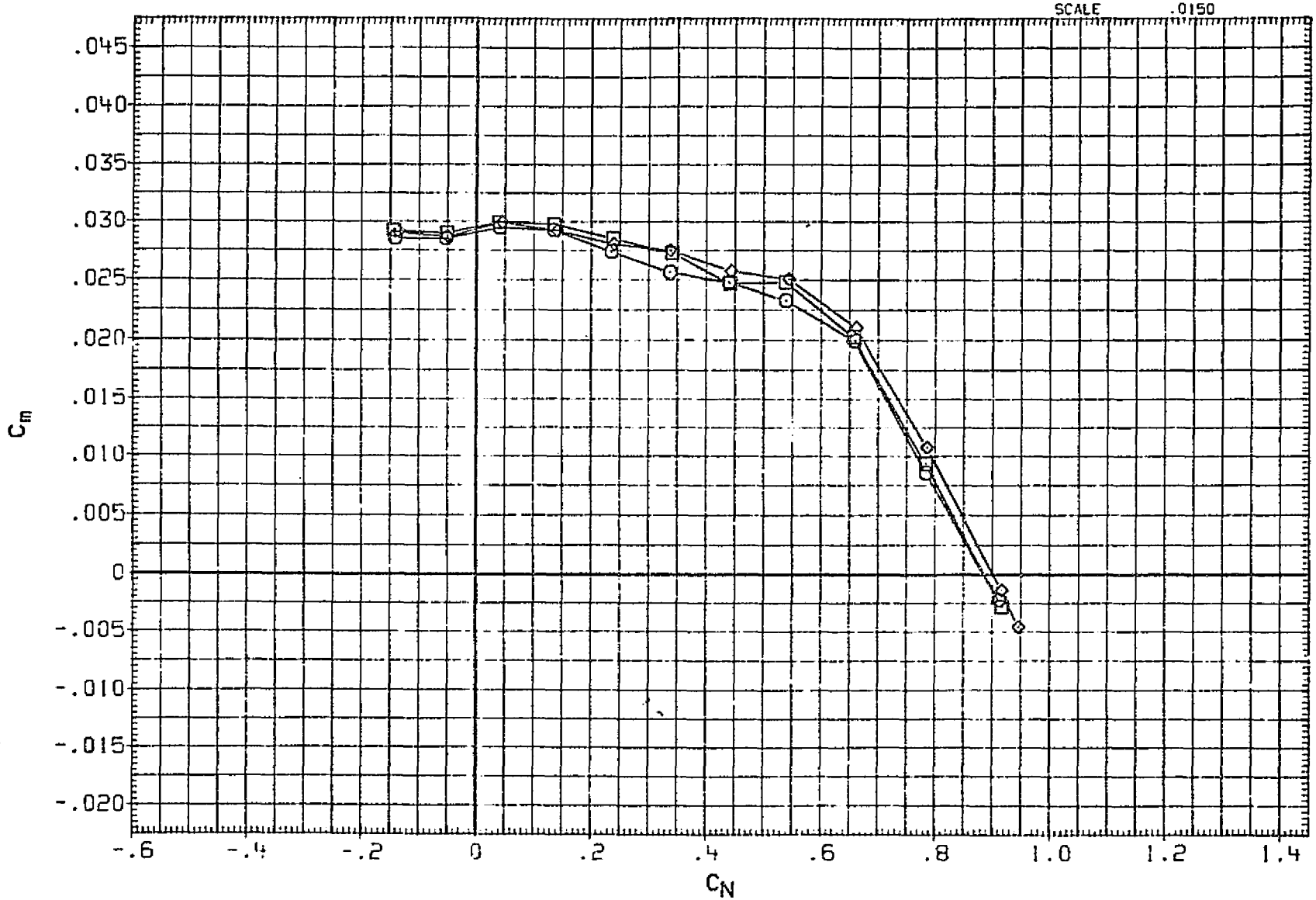


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
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YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

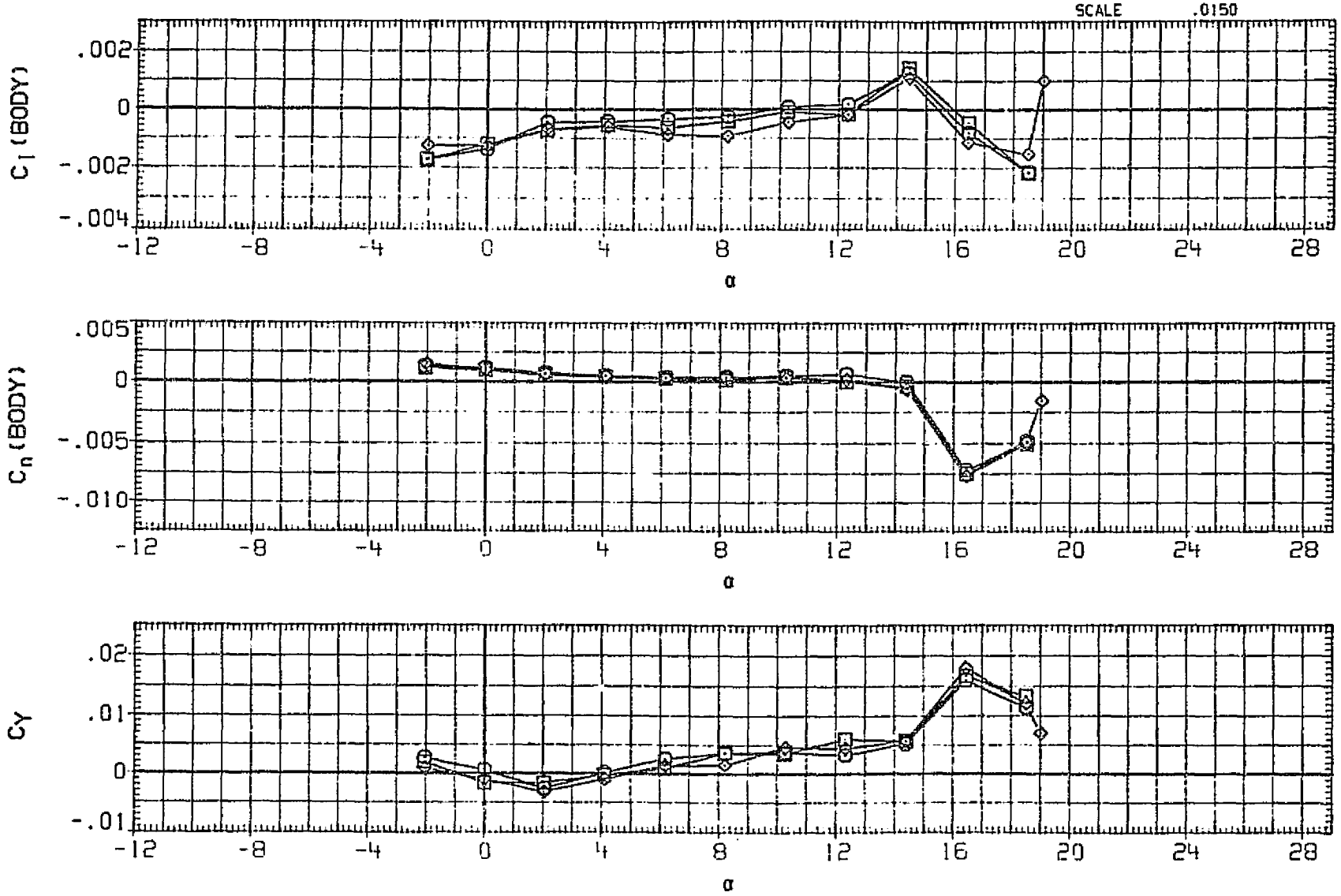

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

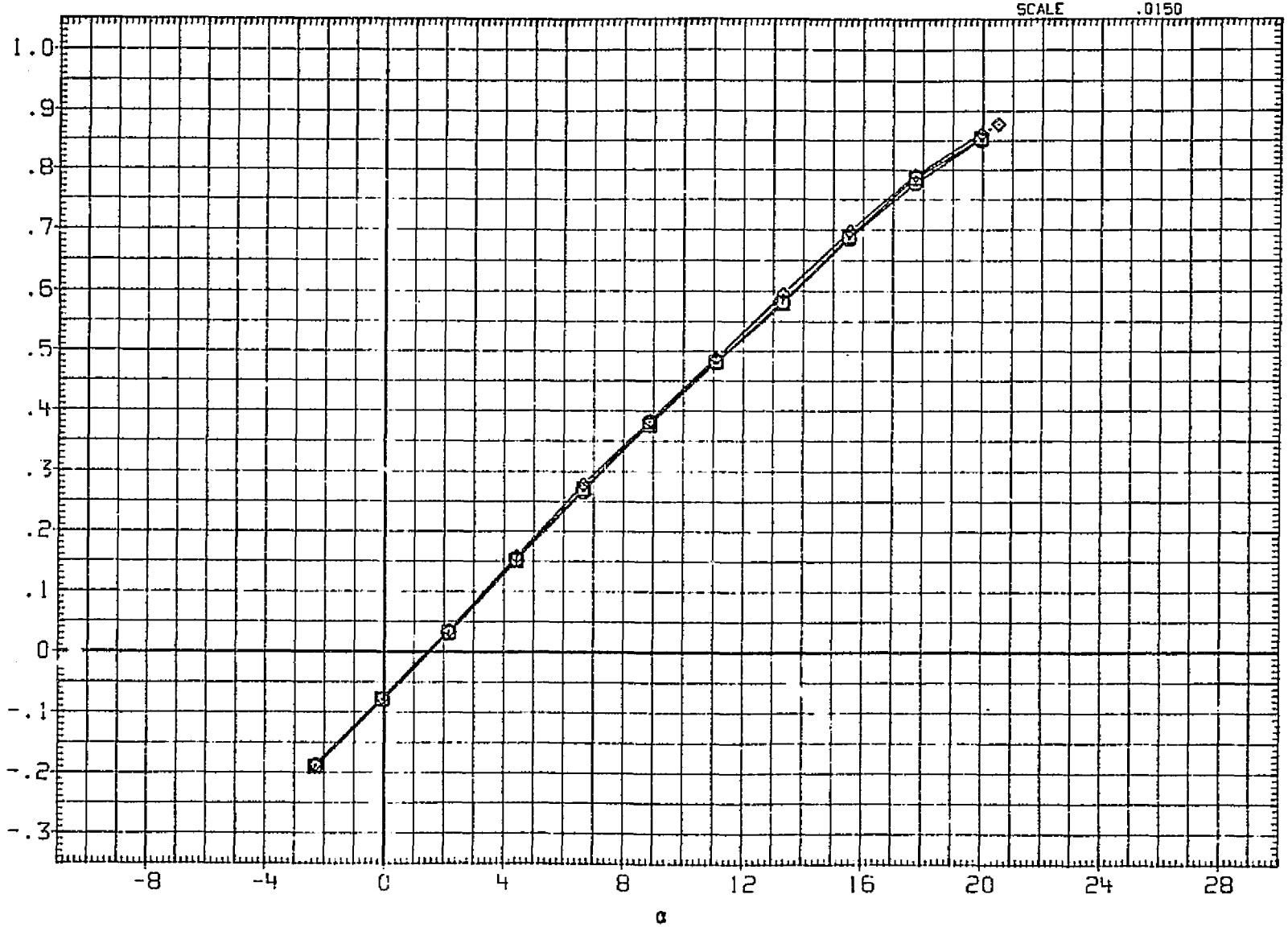

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

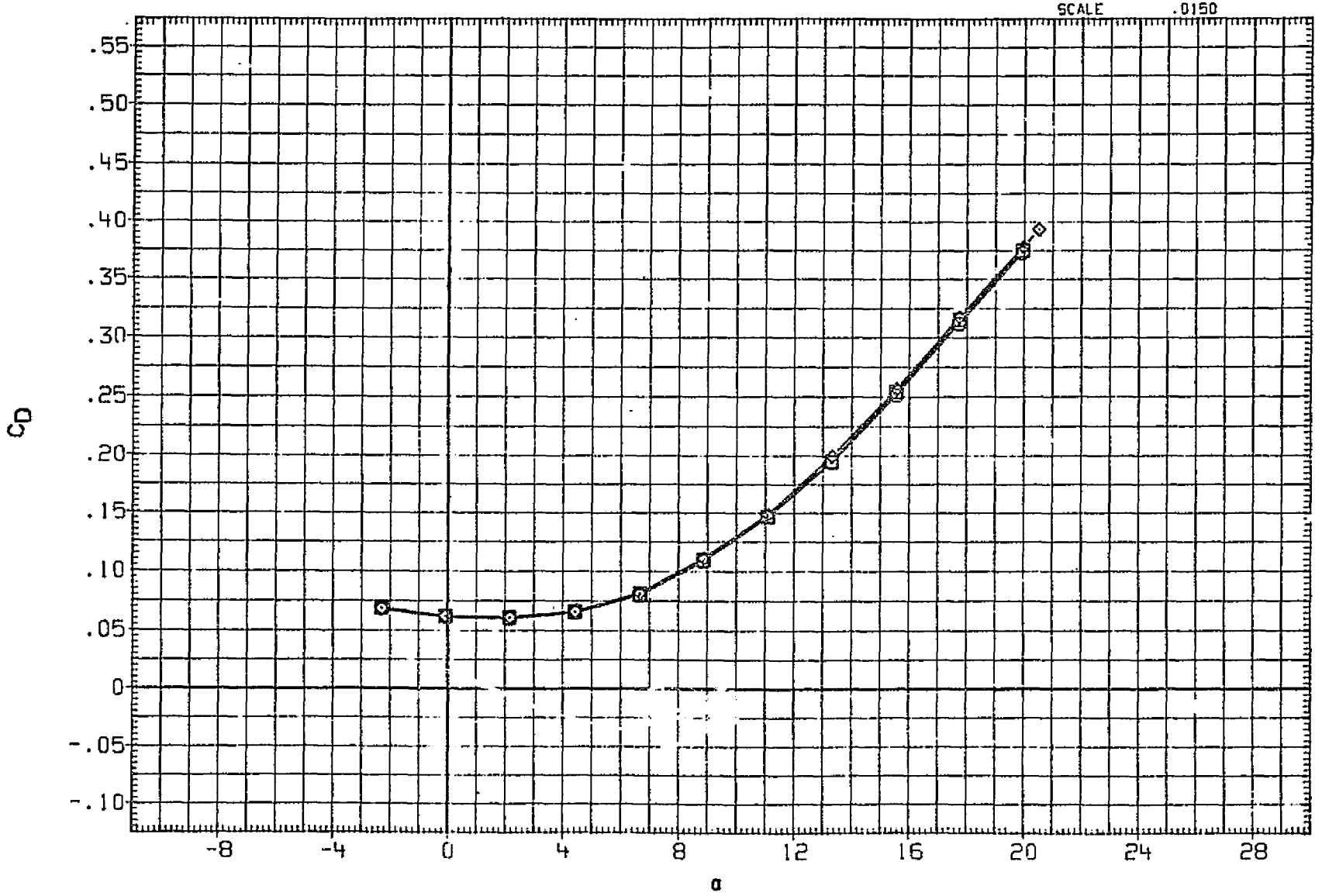

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

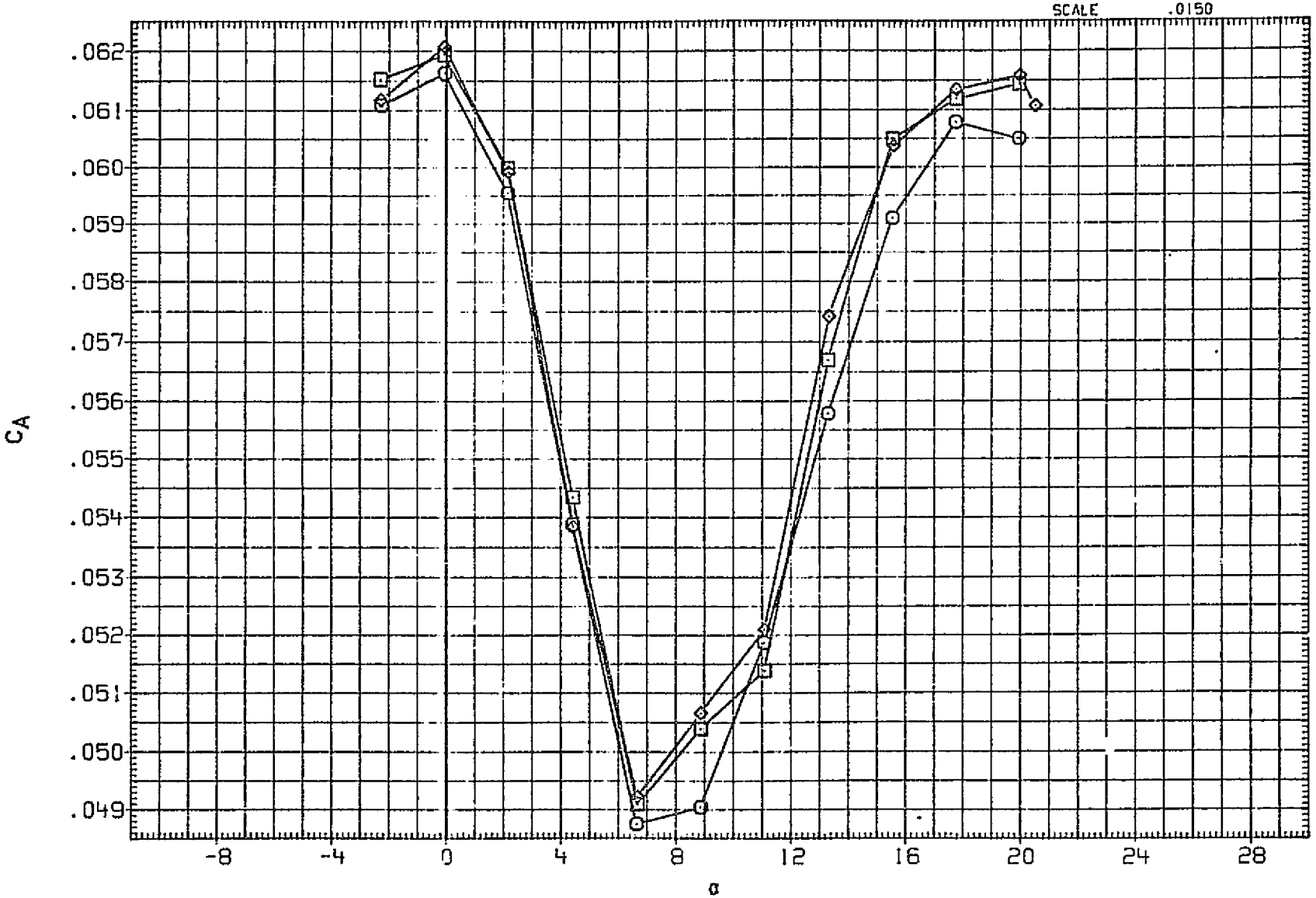

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
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BRFF	936.6800	INCHES
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YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

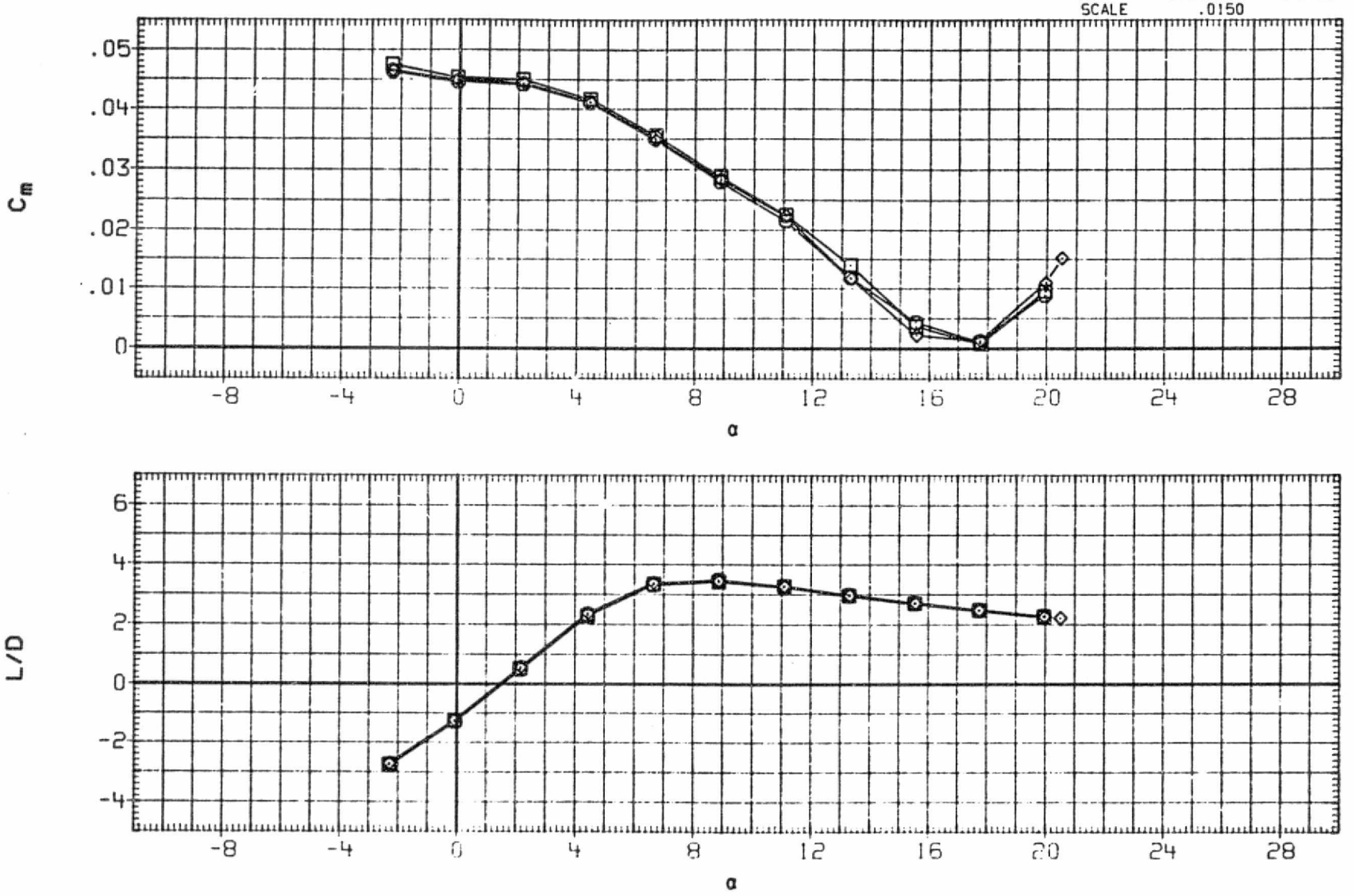

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
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YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

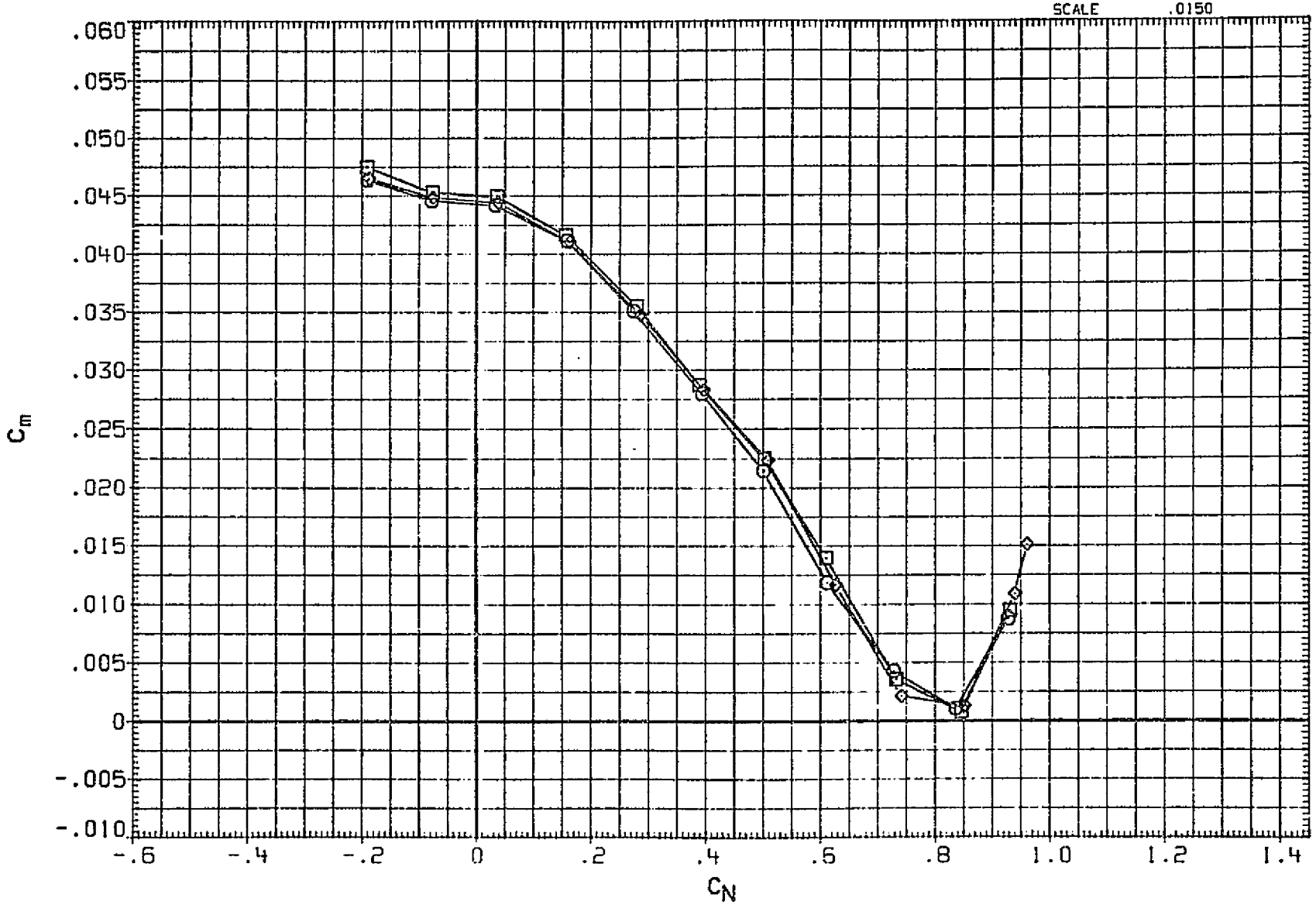

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
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YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

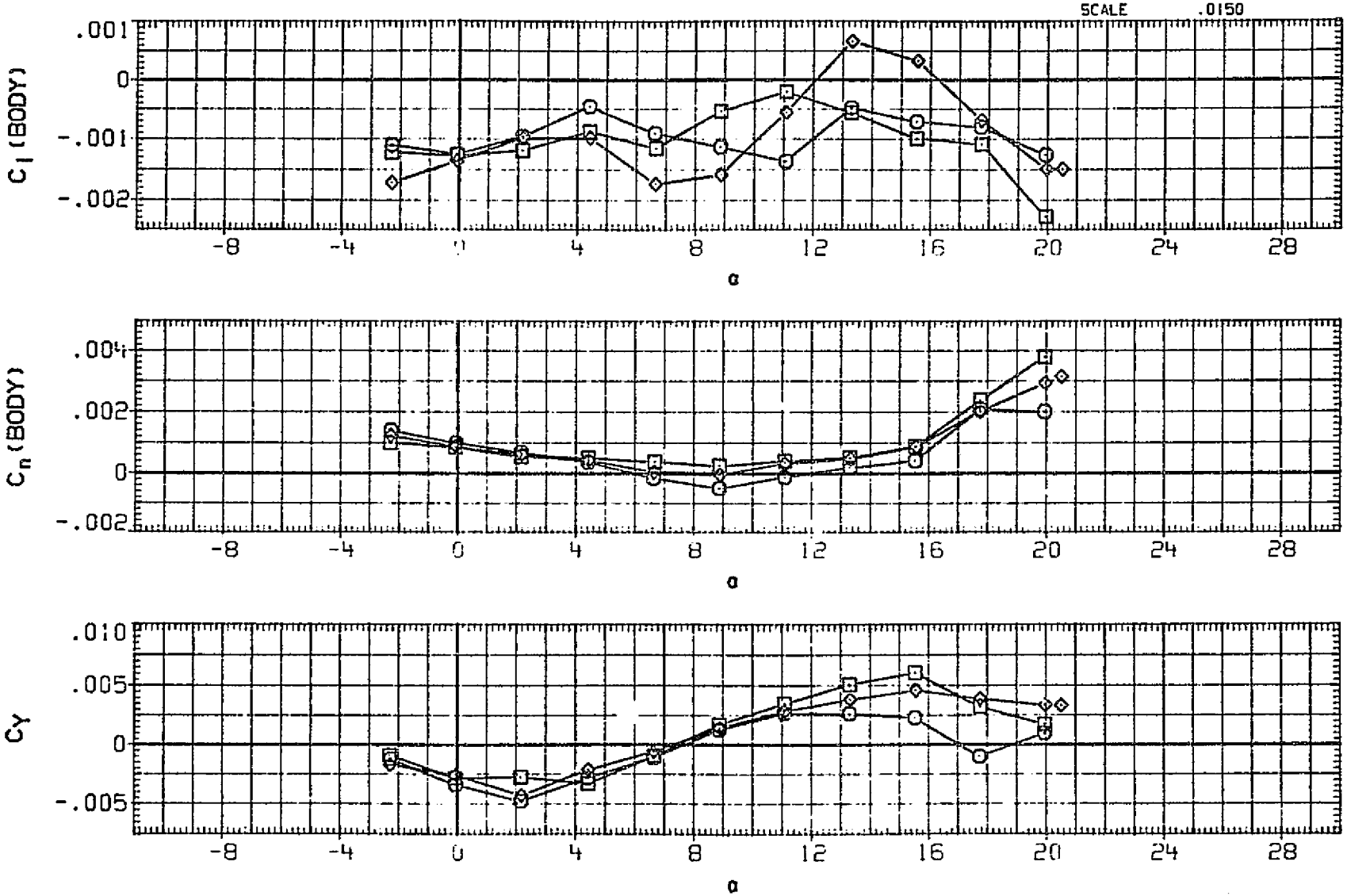

FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8800	INCHES
BREF	936.6800	INCHES
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YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

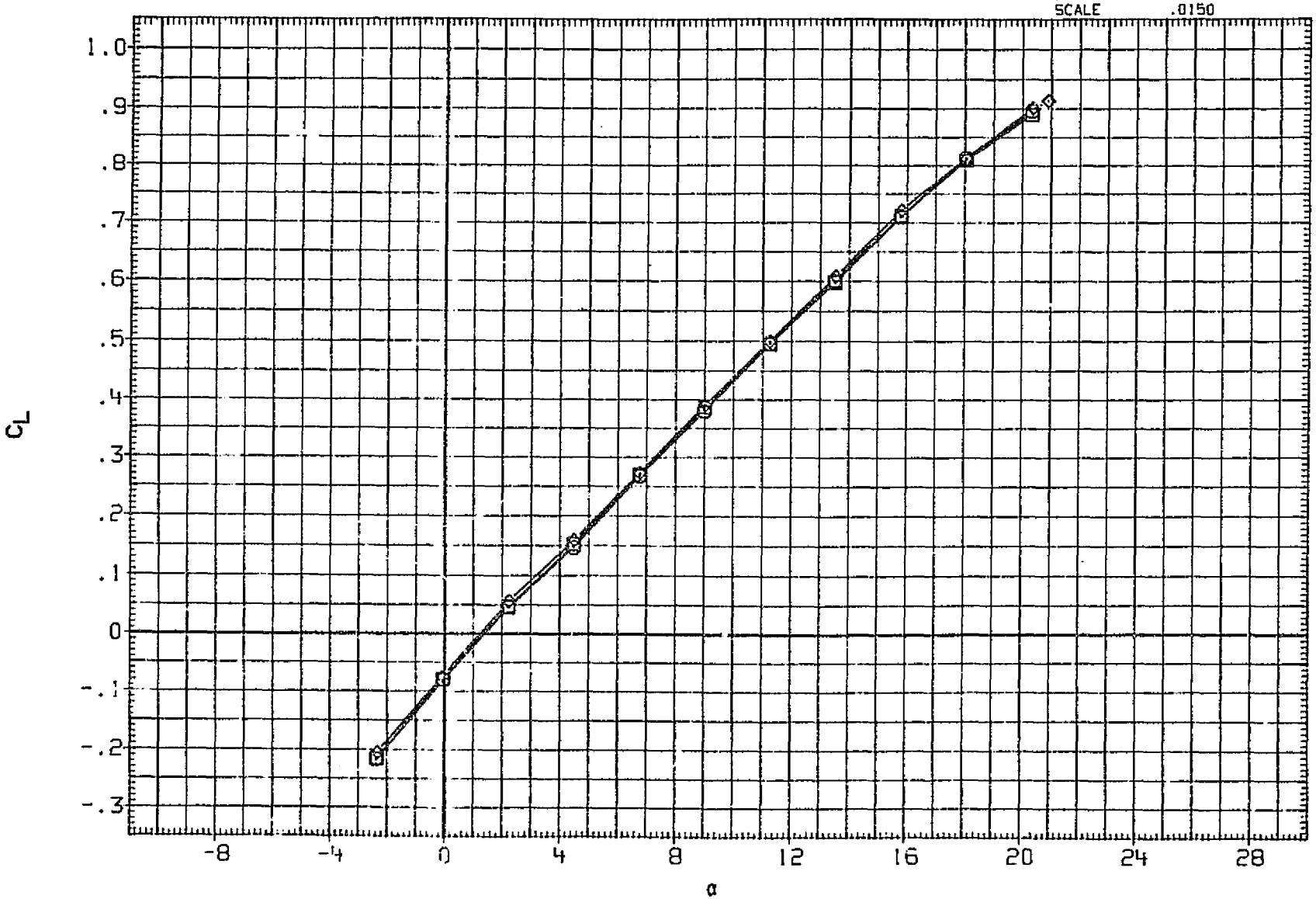


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BRFF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

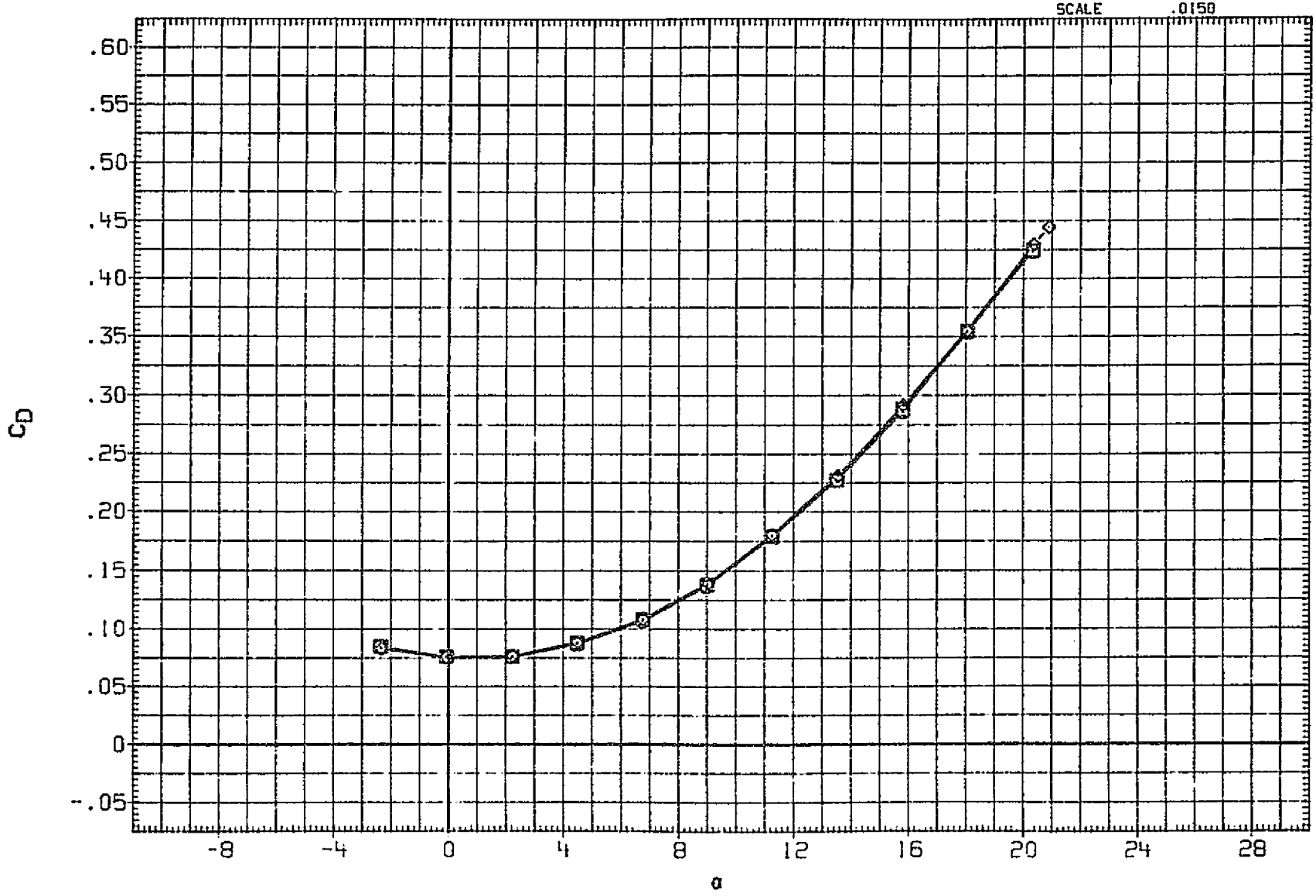


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

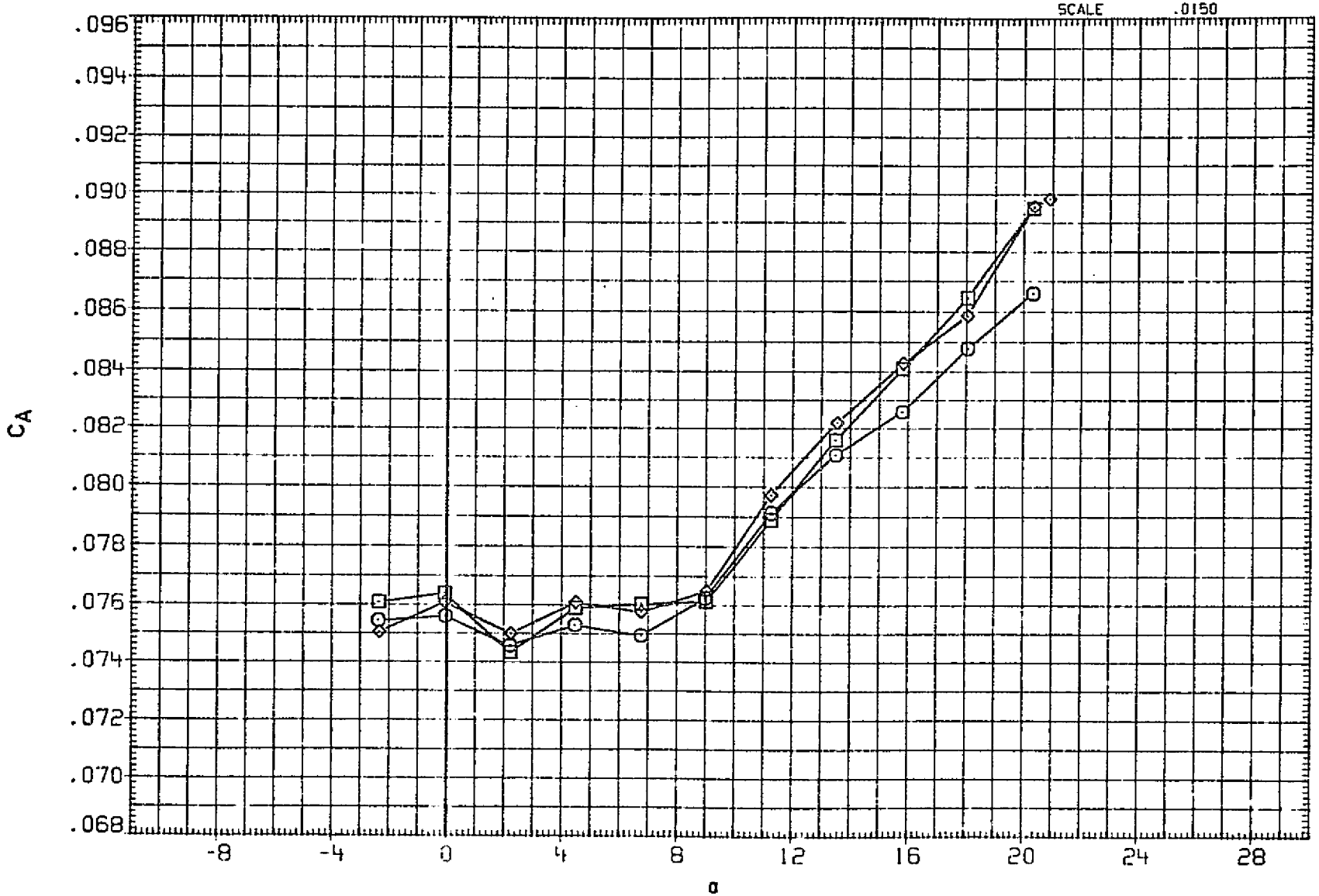


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

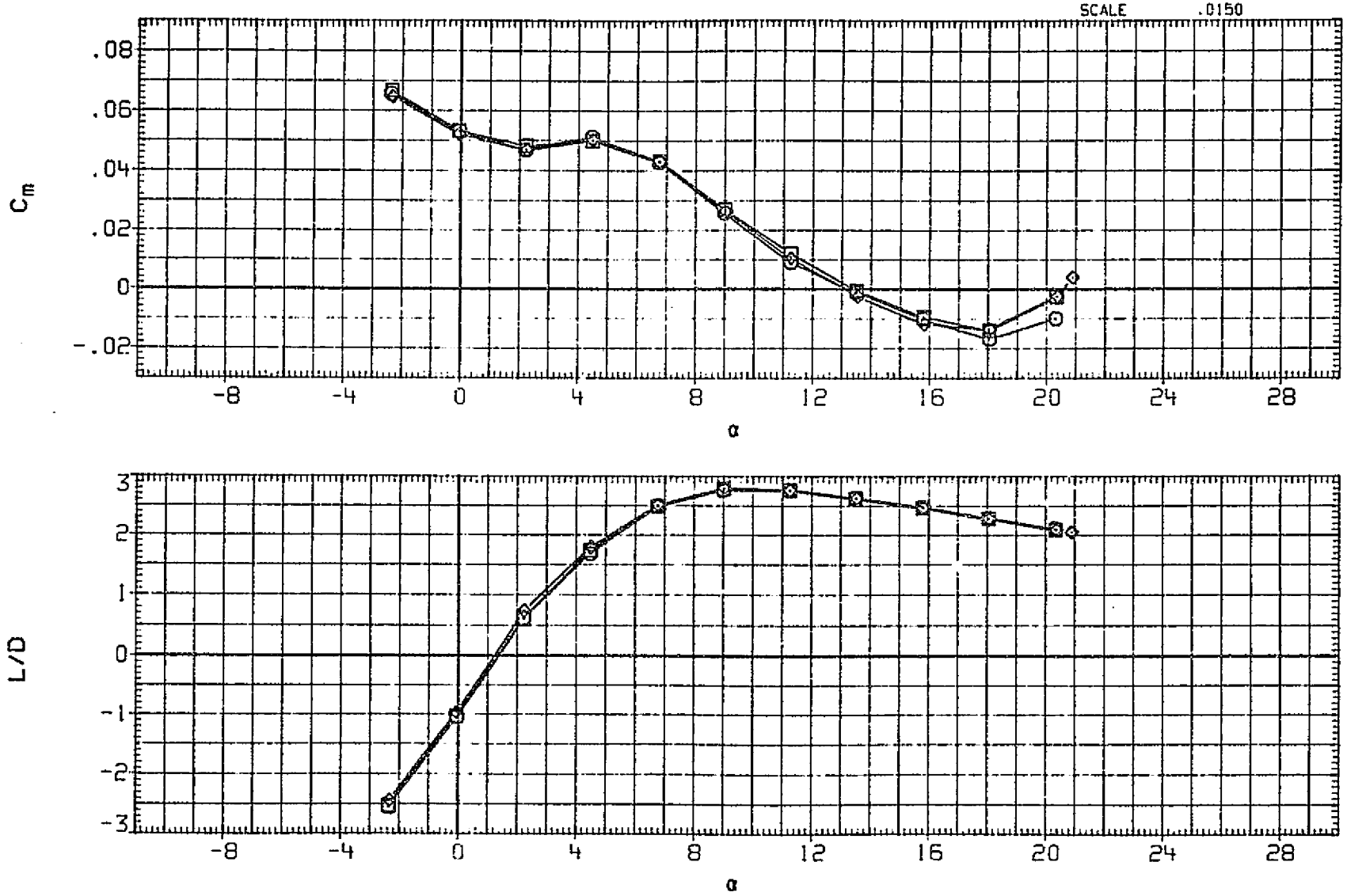


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

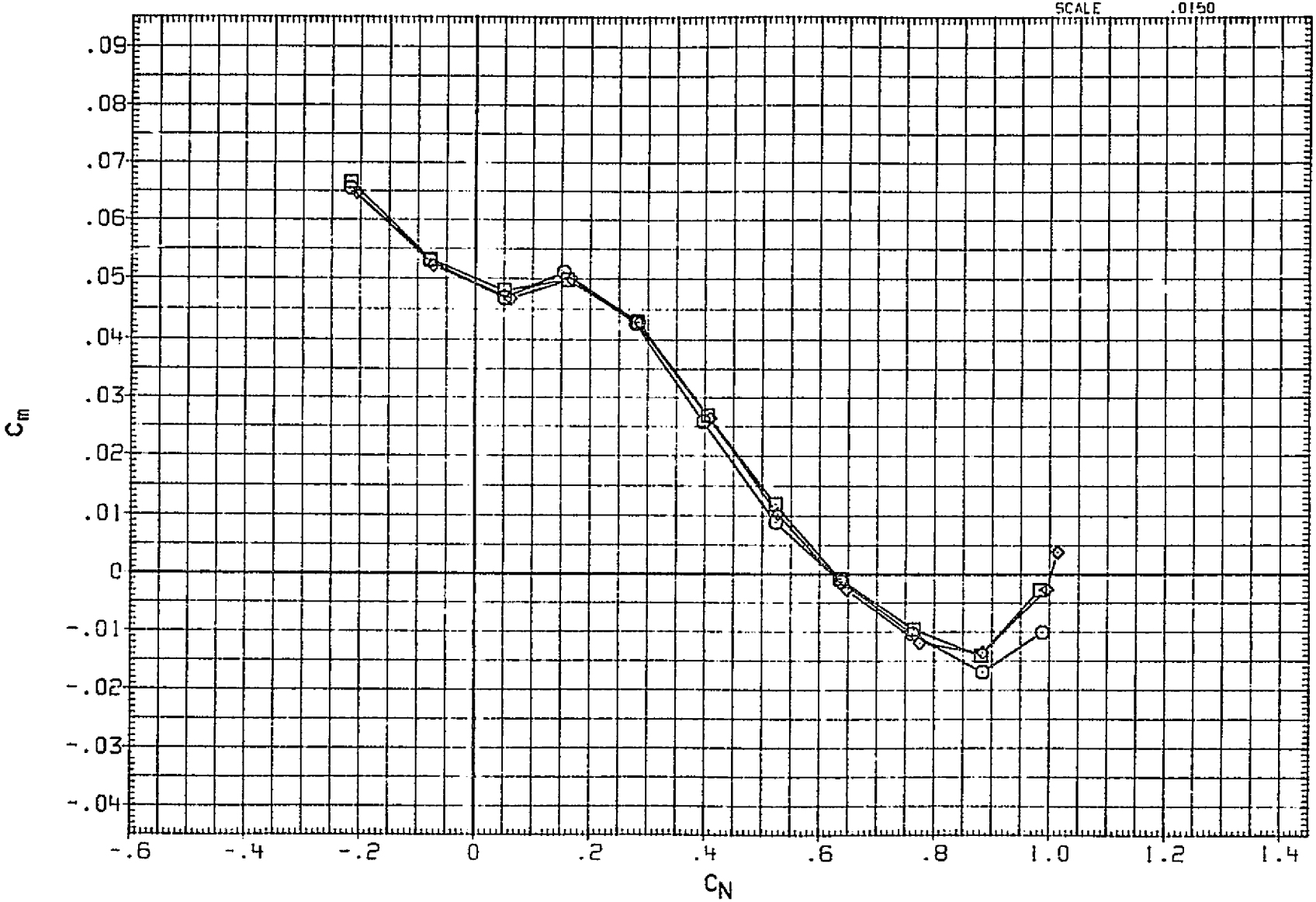


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WV50EF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WV50EF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WV50EF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

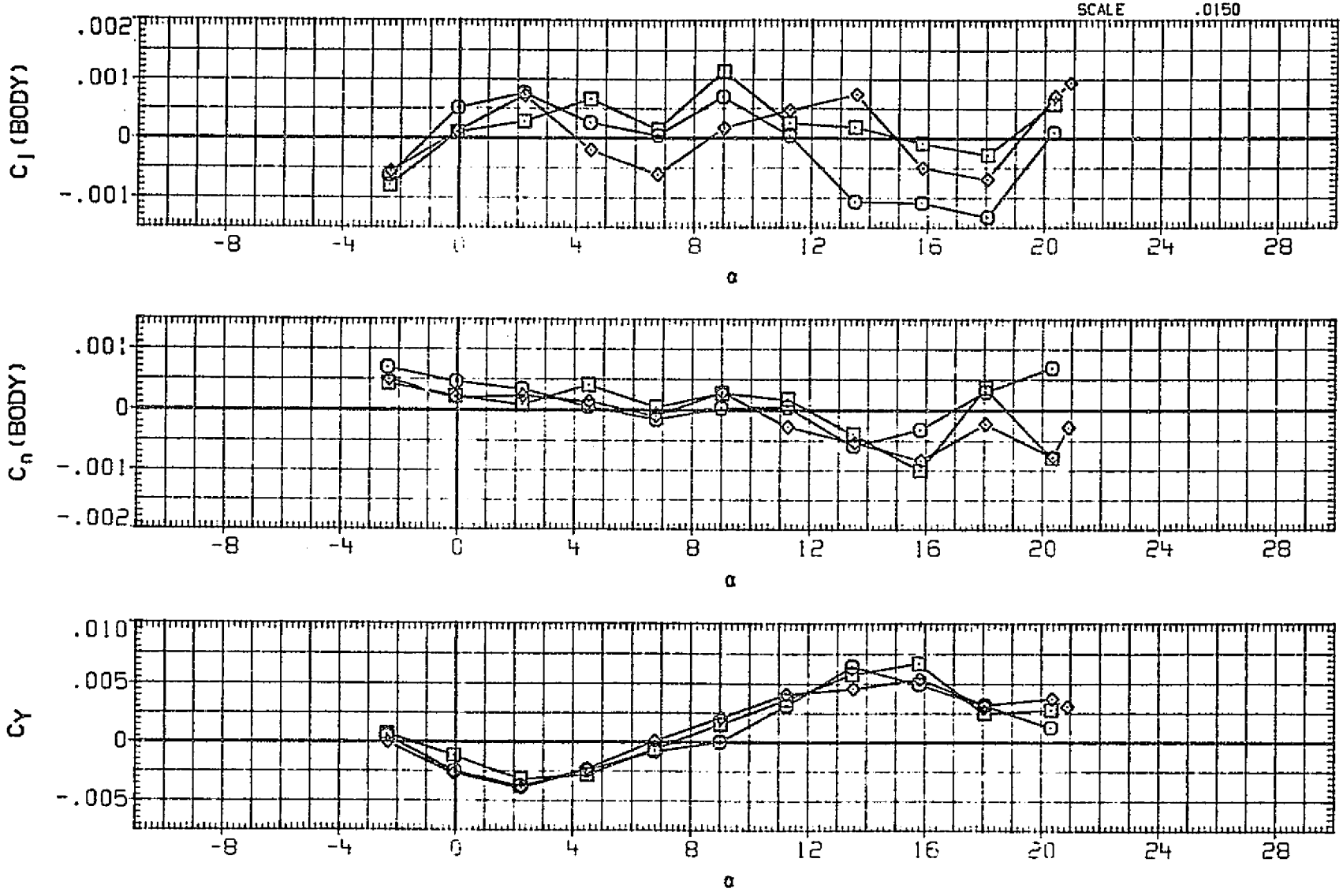


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

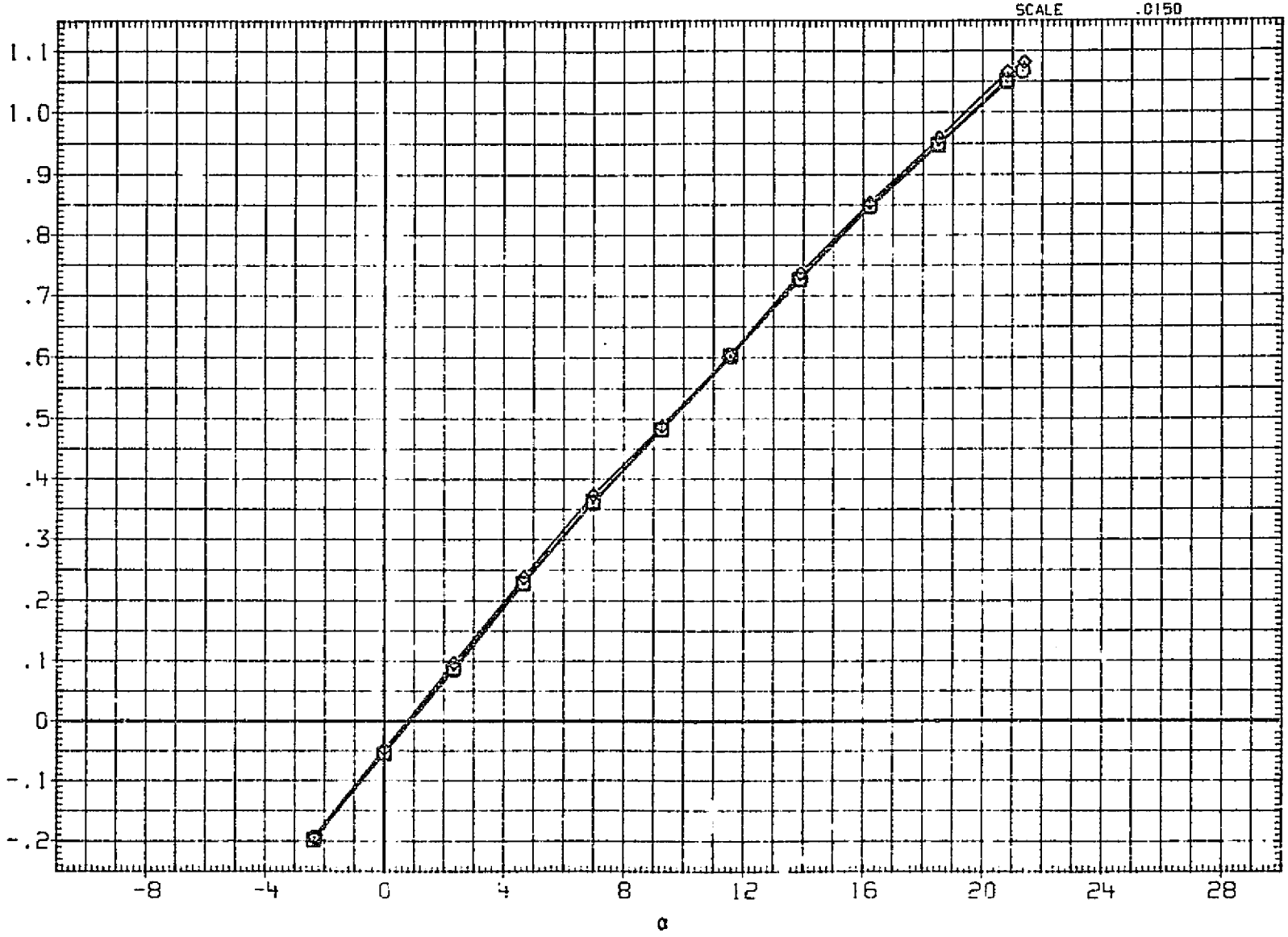


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

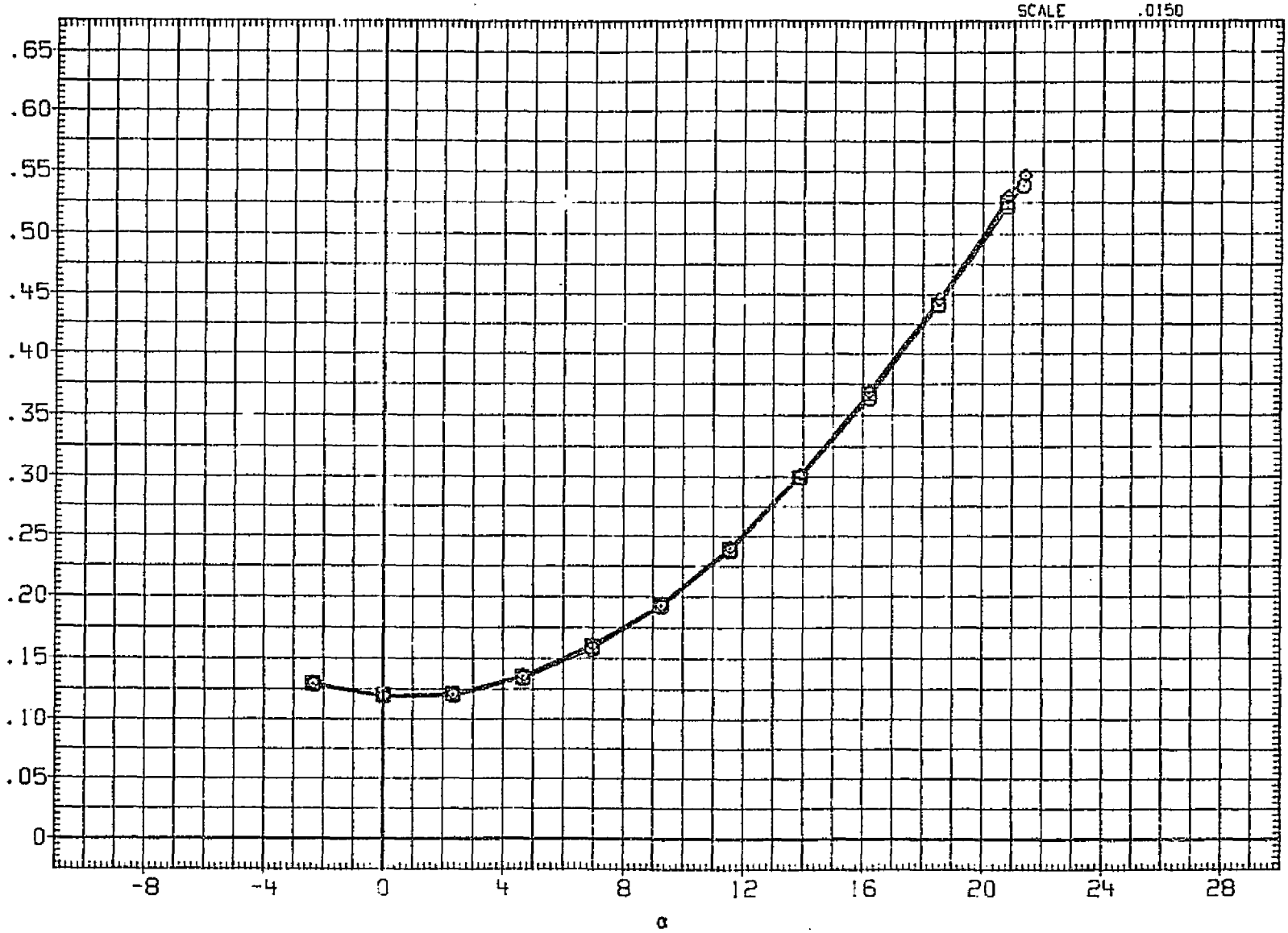


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

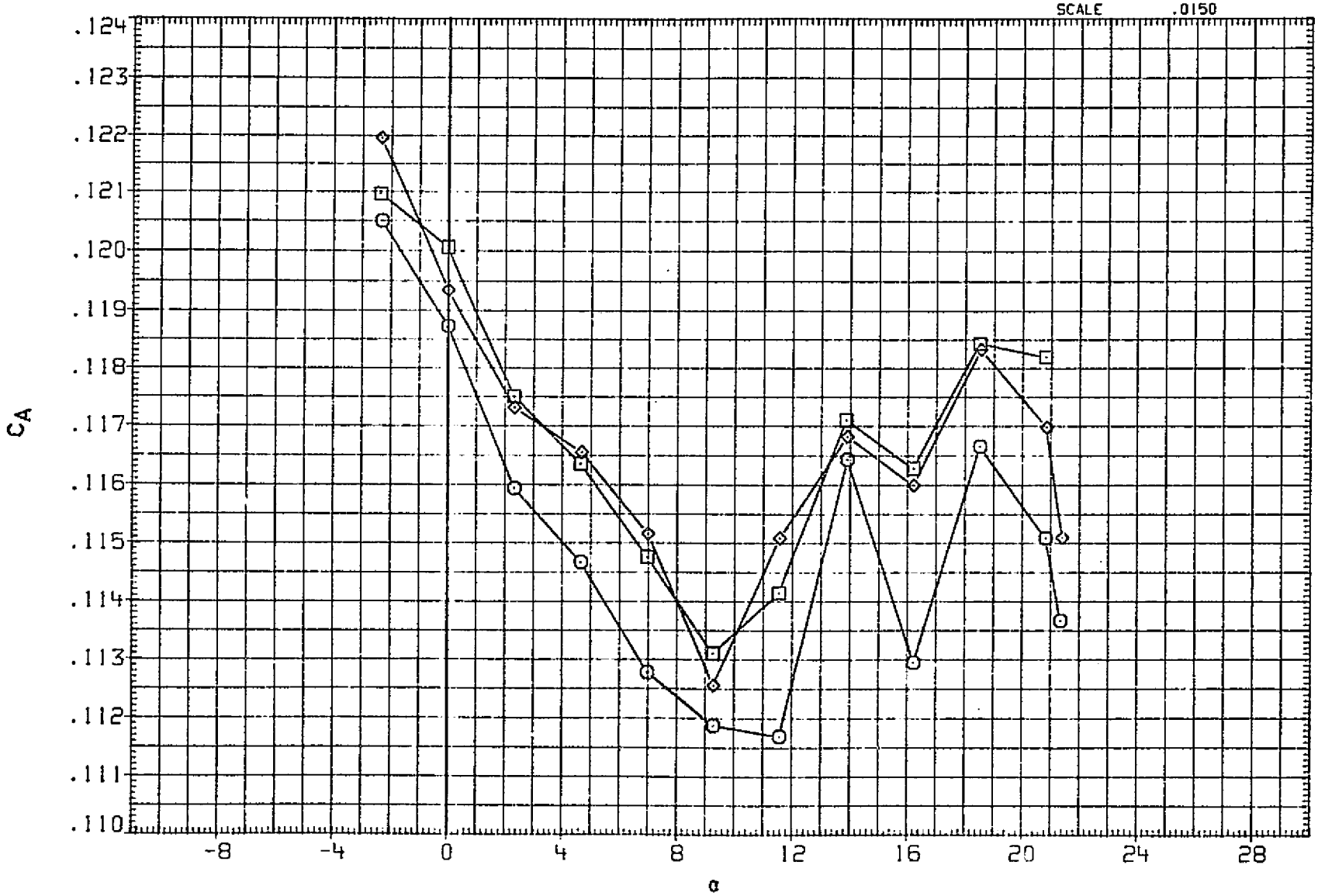


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

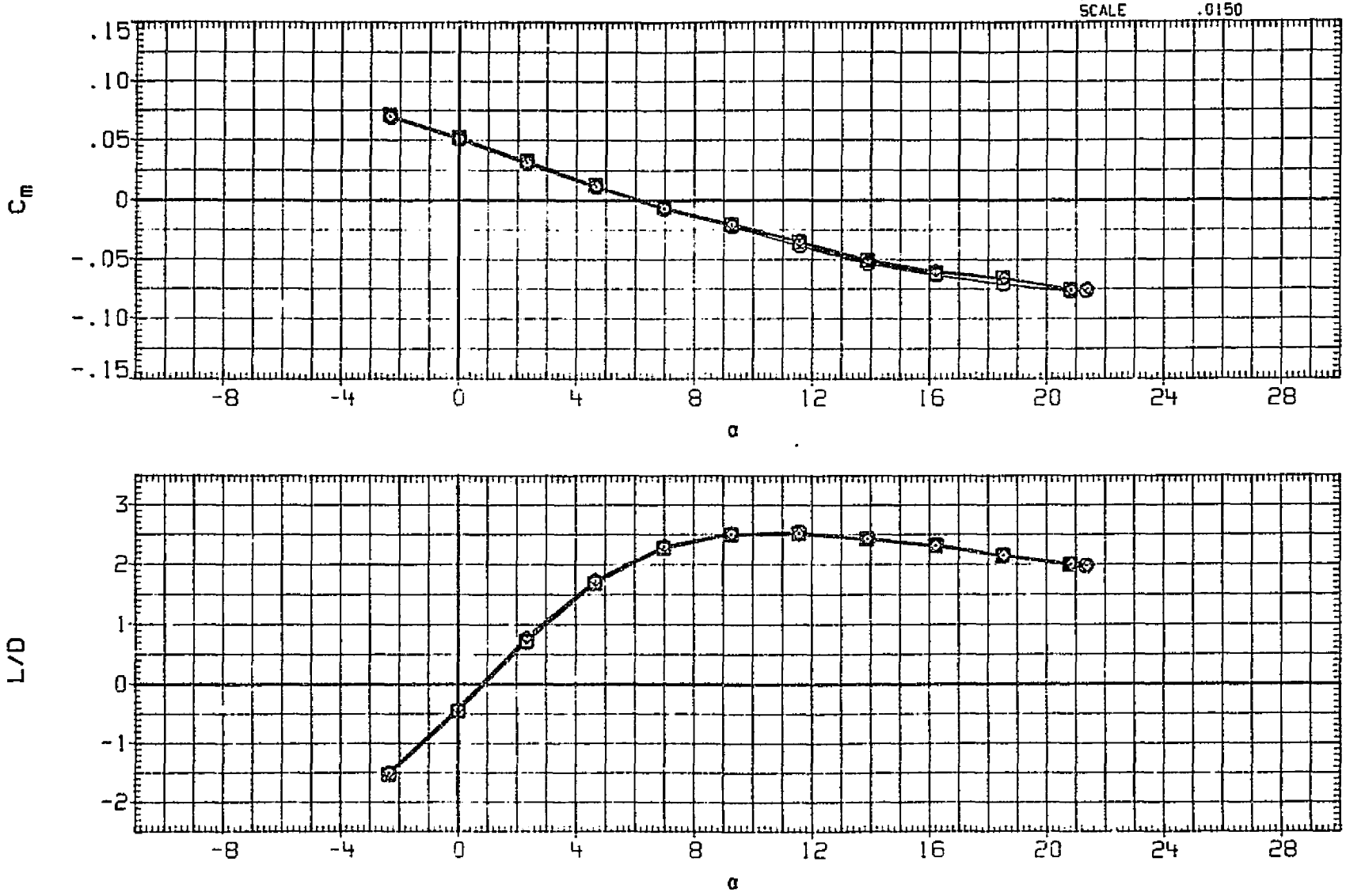


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

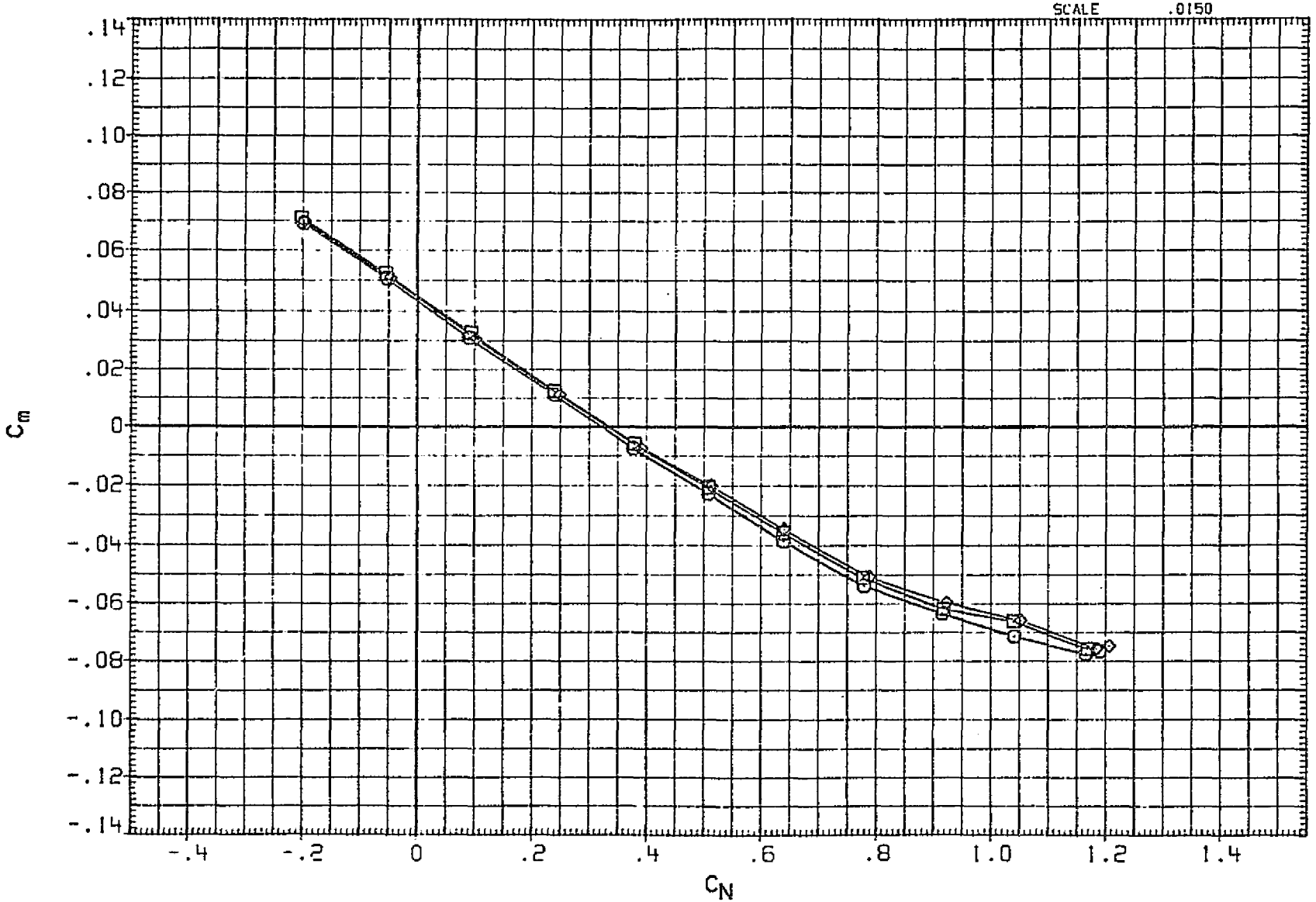


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

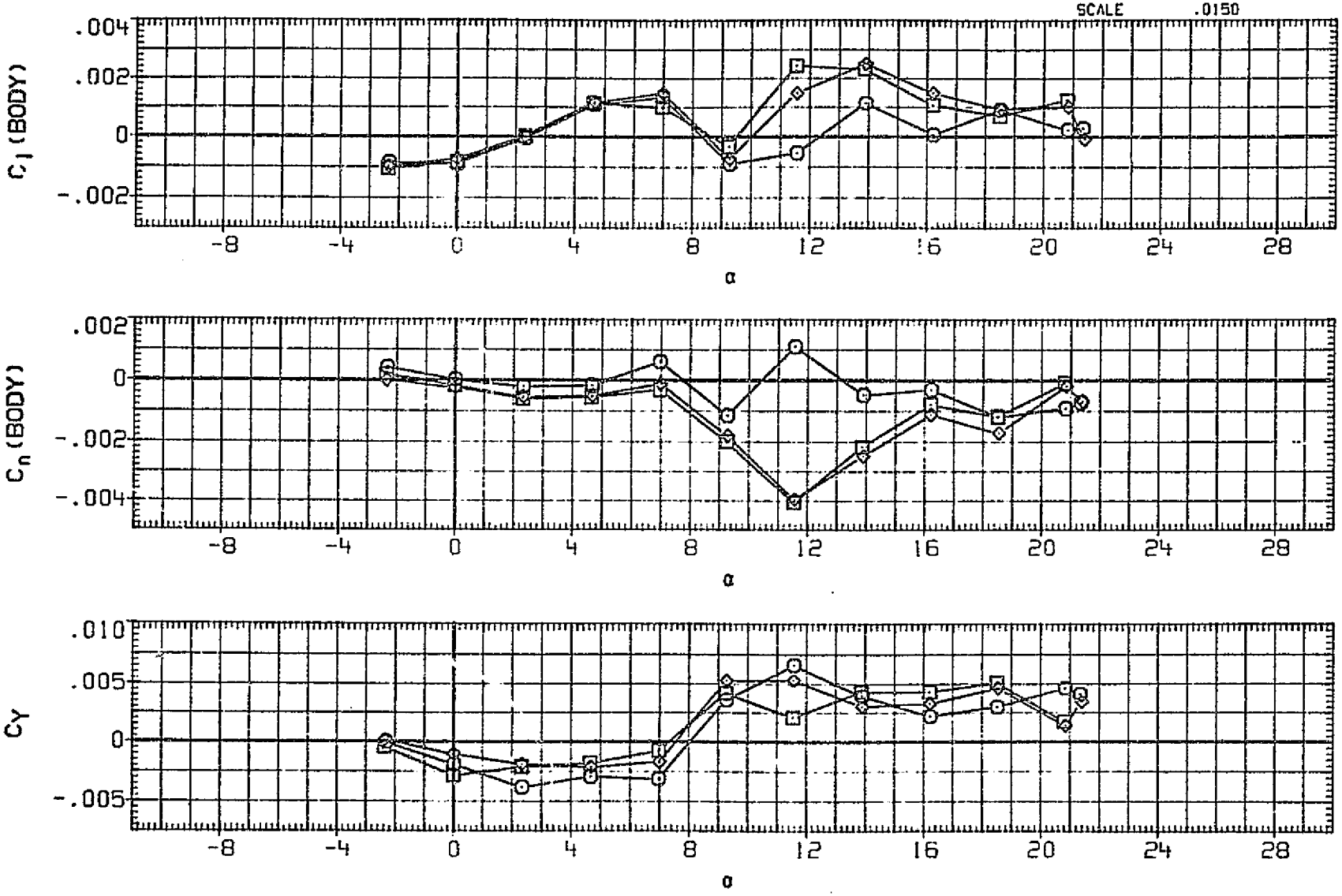


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

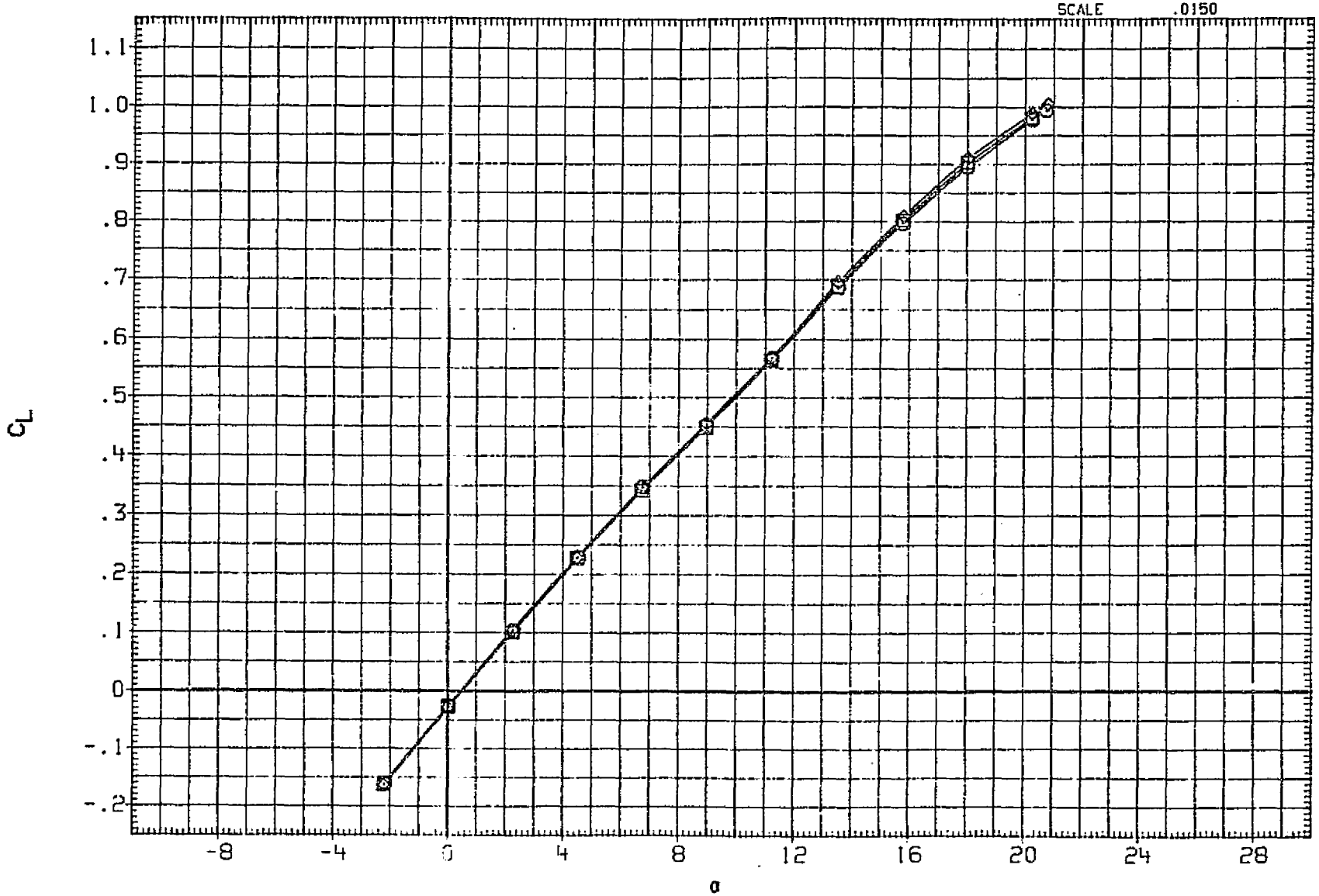


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

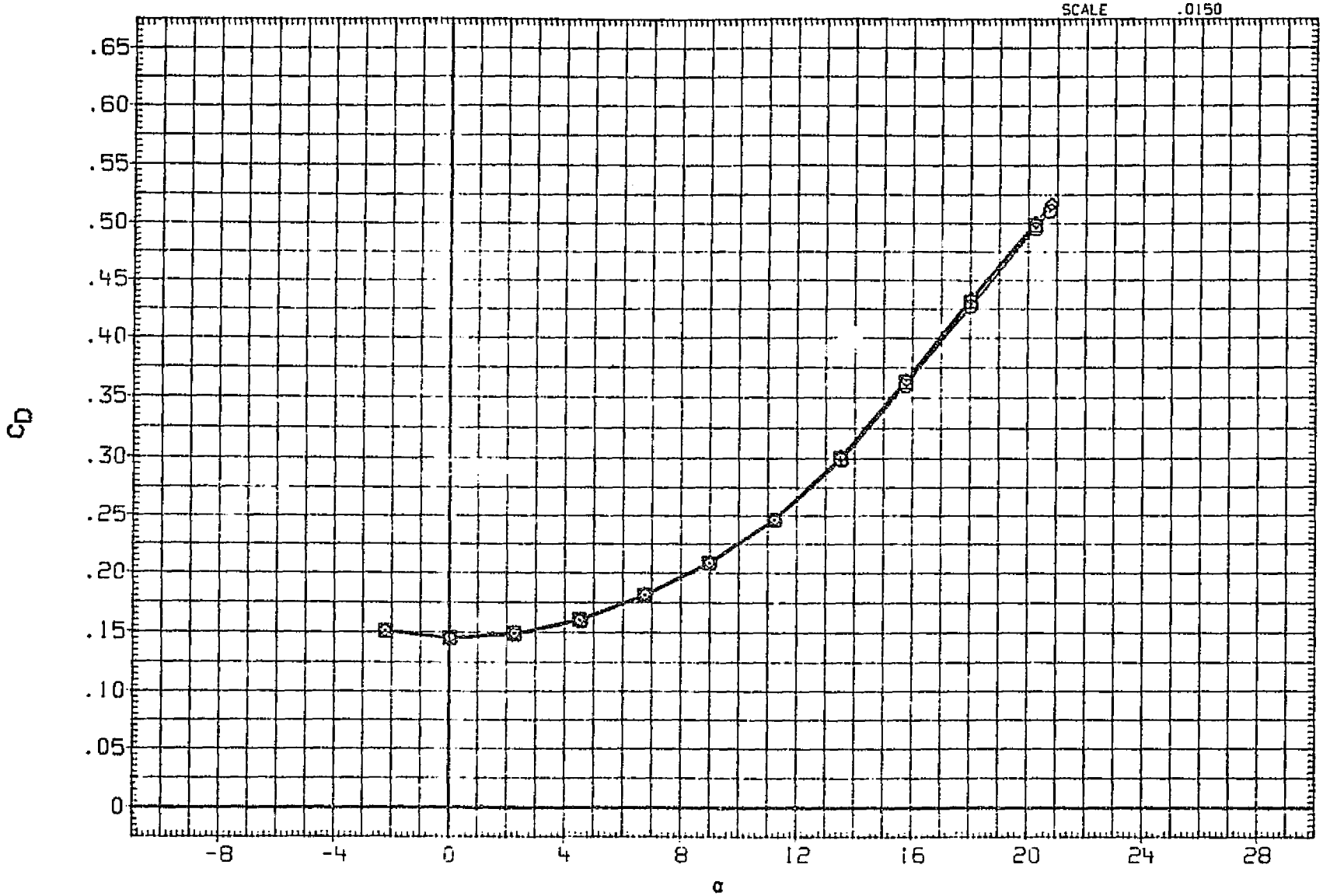


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

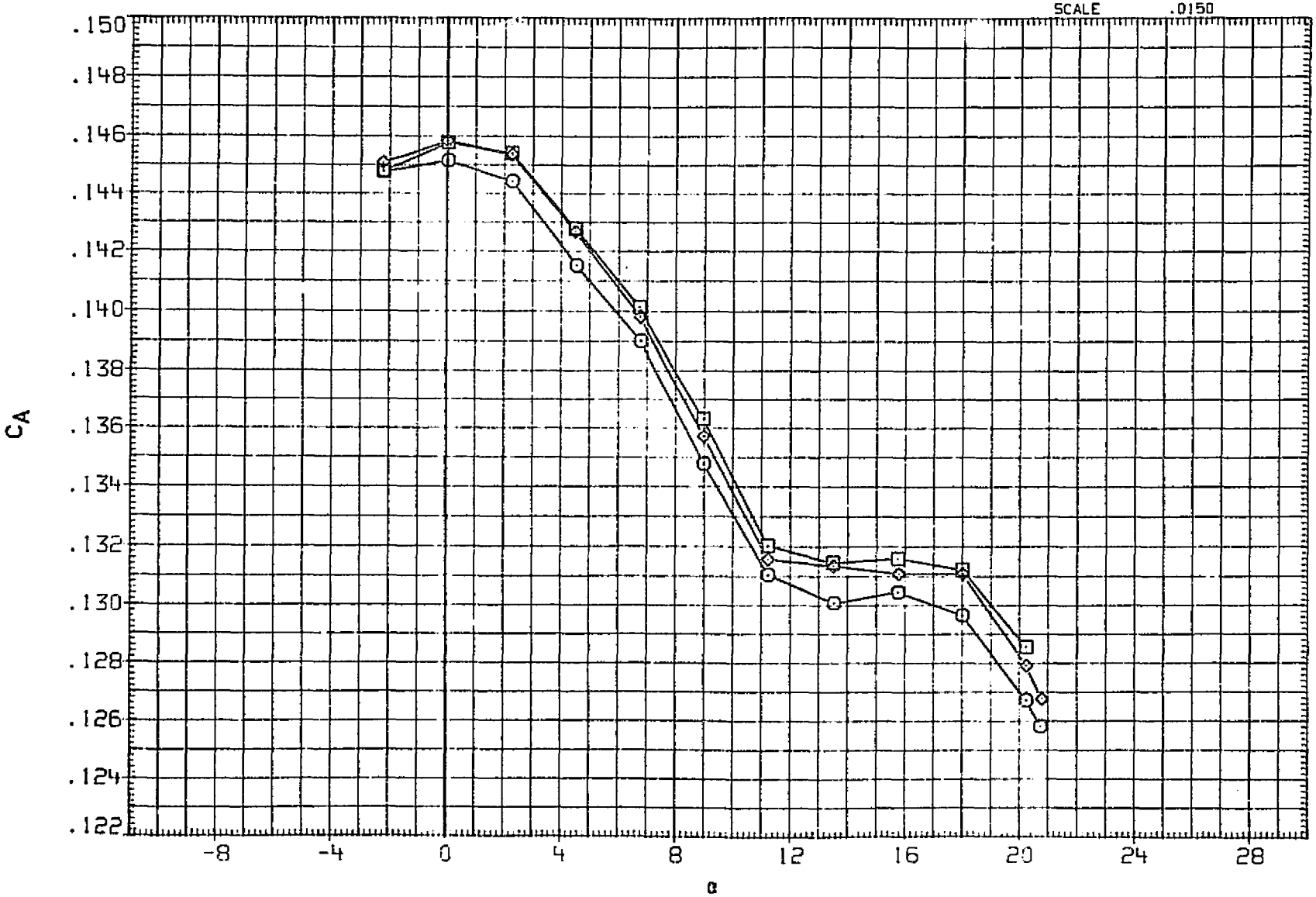


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

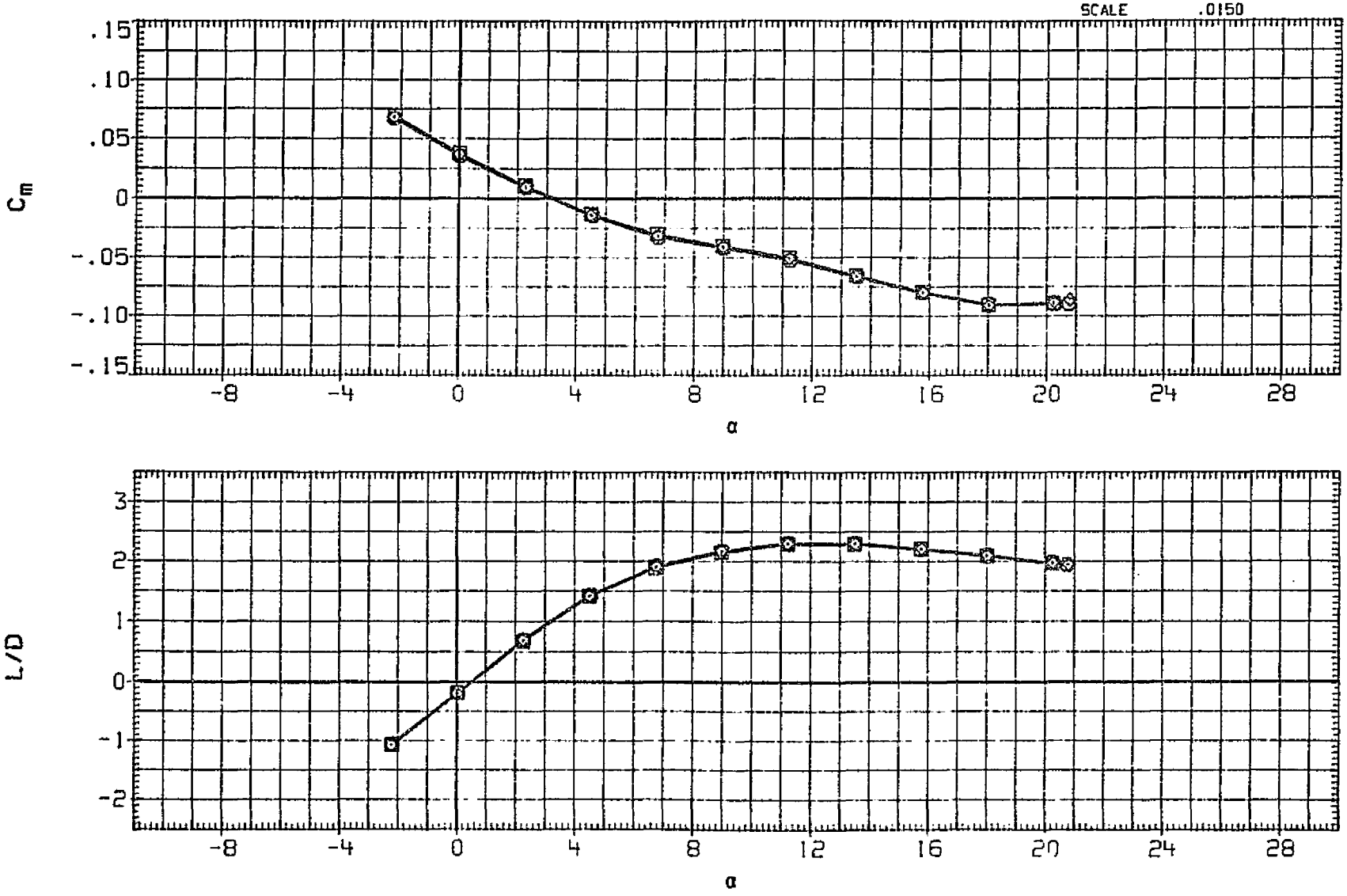


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

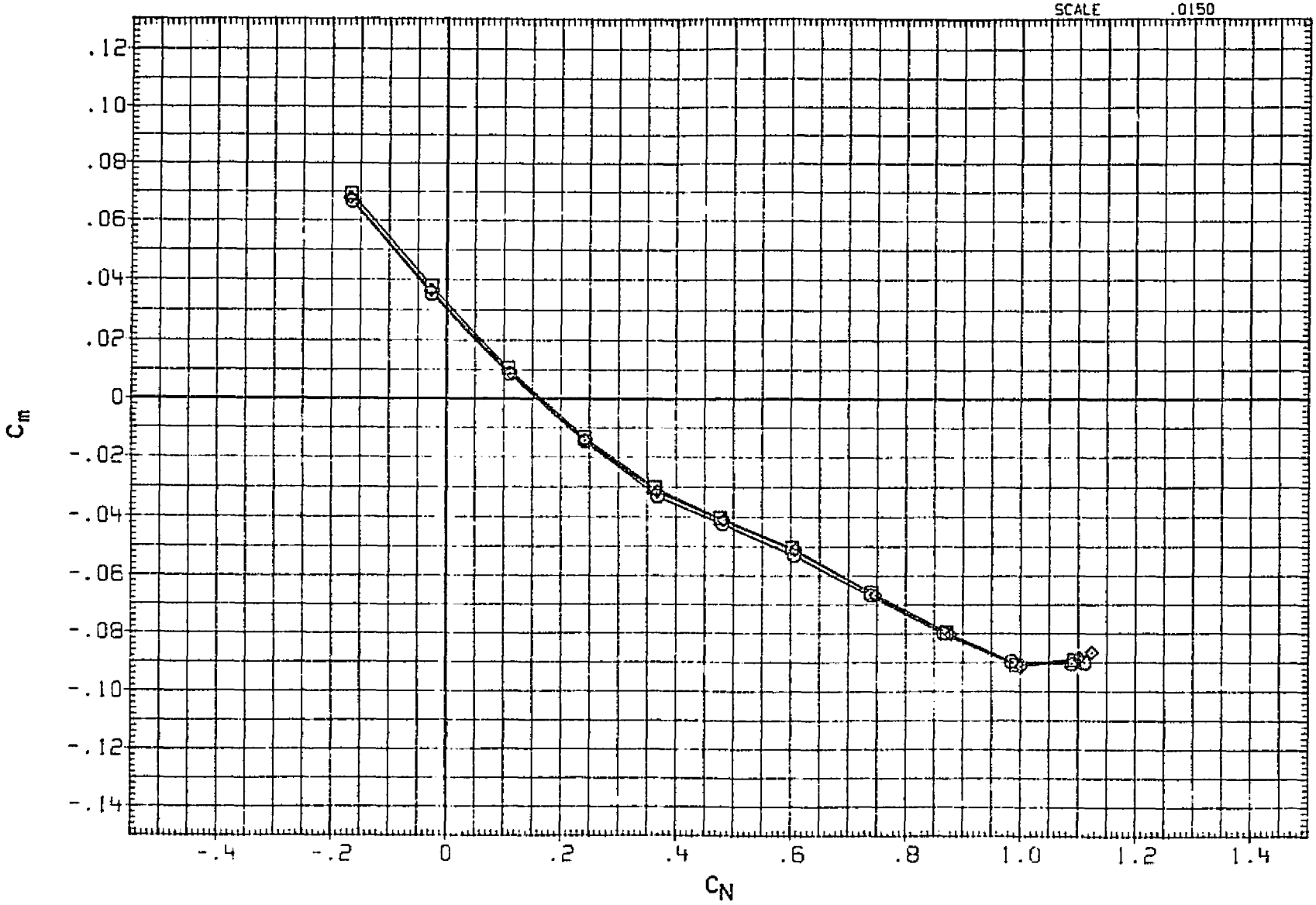


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1073.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

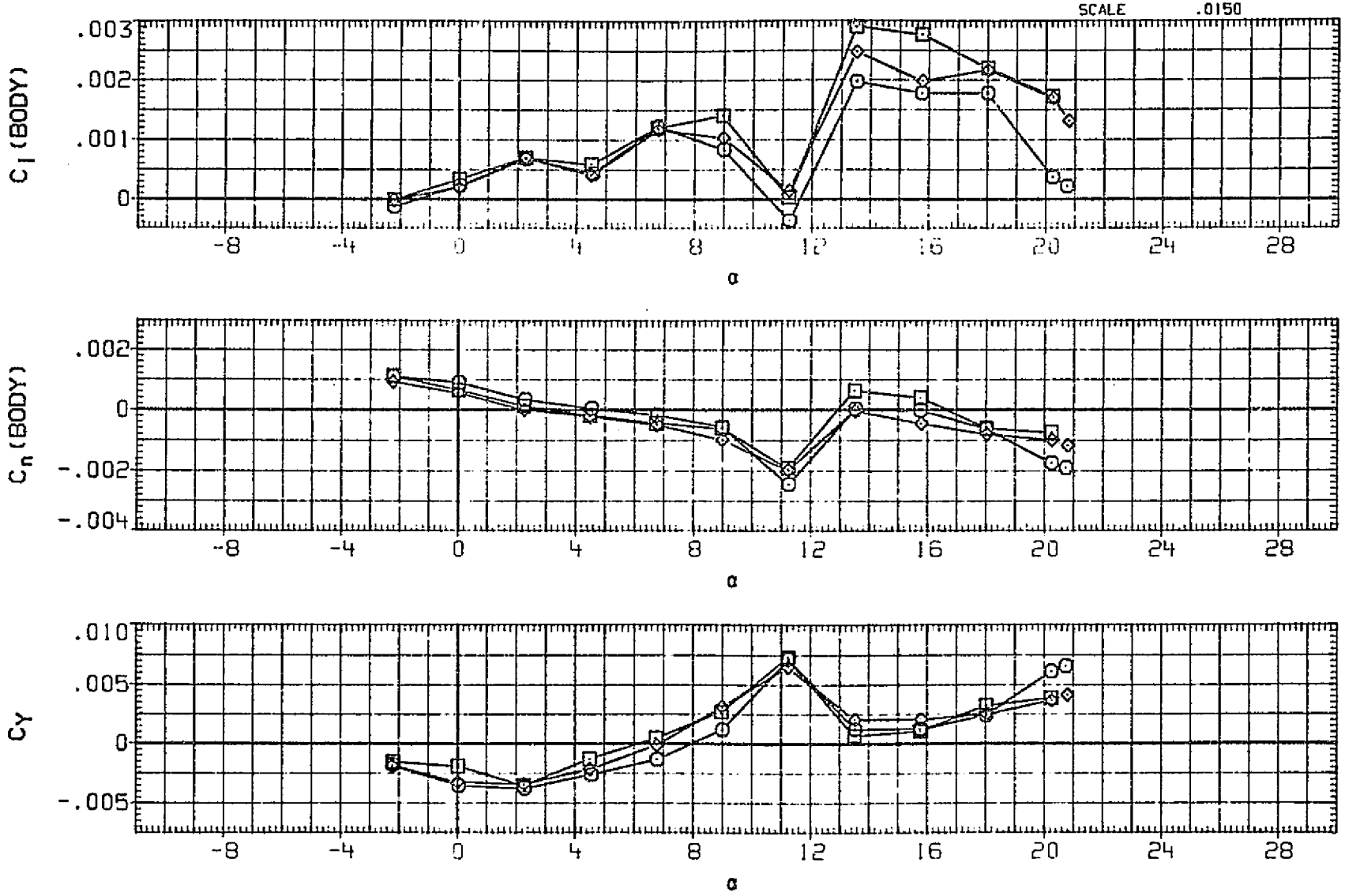


FIGURE 4. COMPARISON OF B1,B6 AND B7 FOREBODIES AT ZERO DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

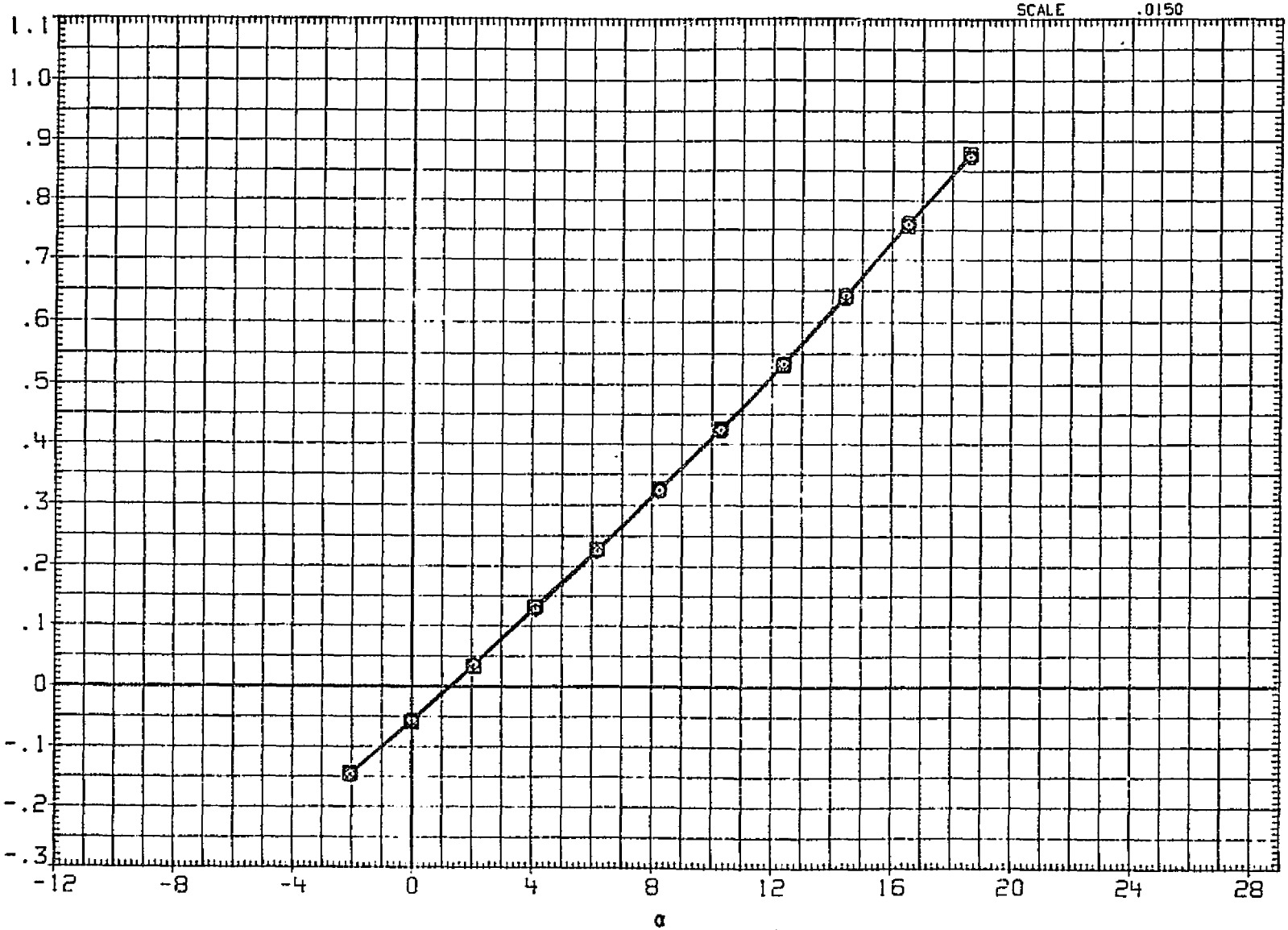


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

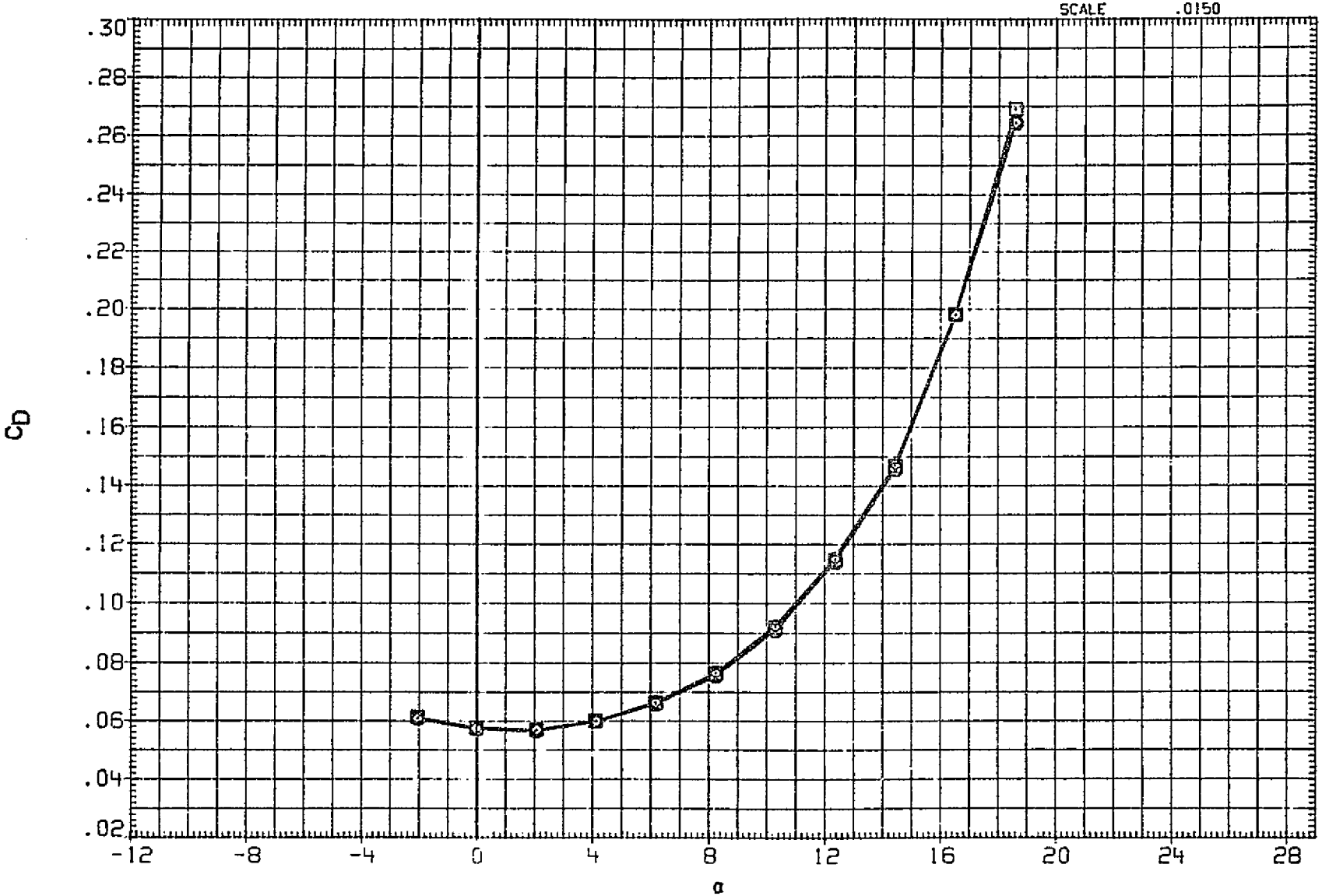


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

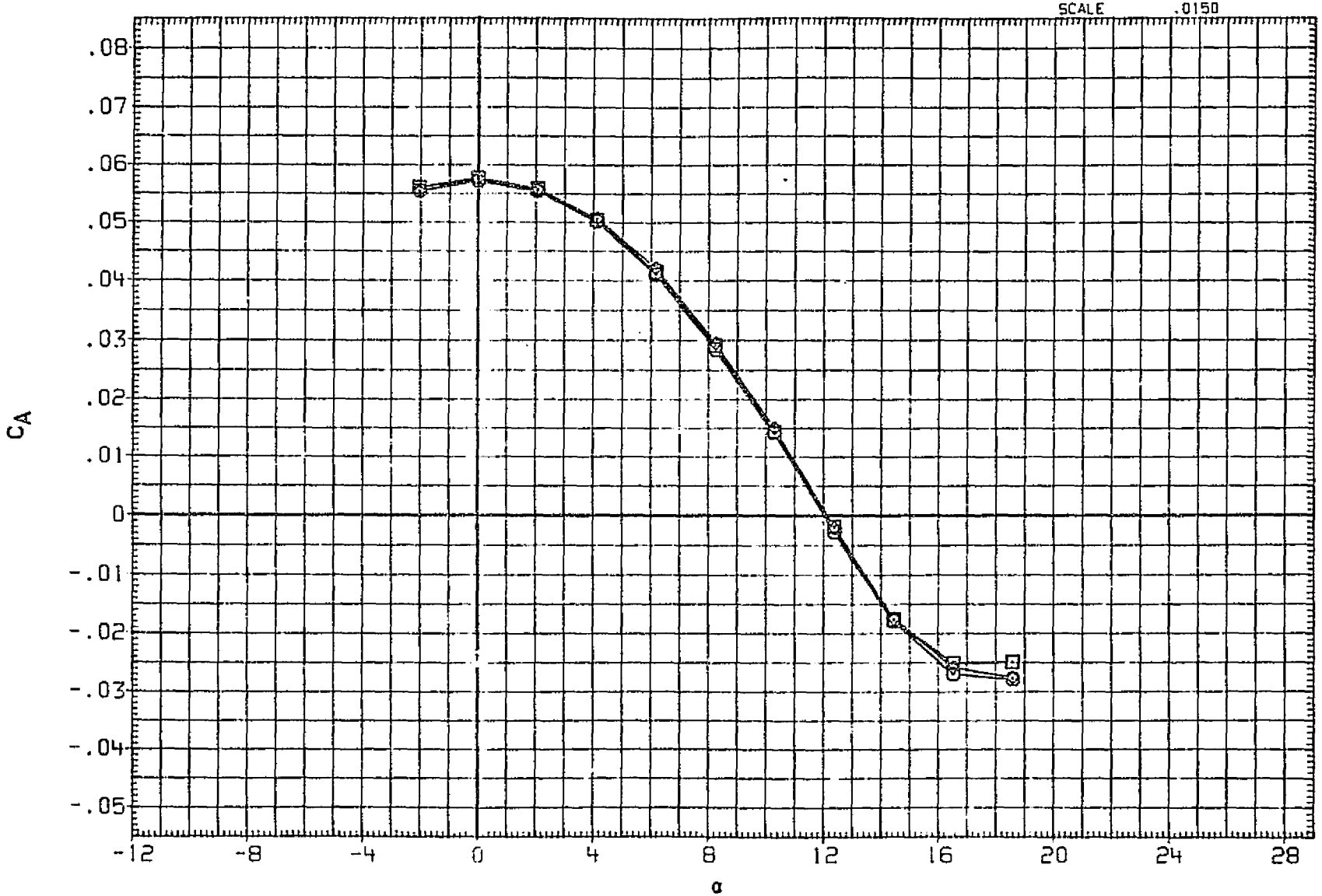


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A) MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

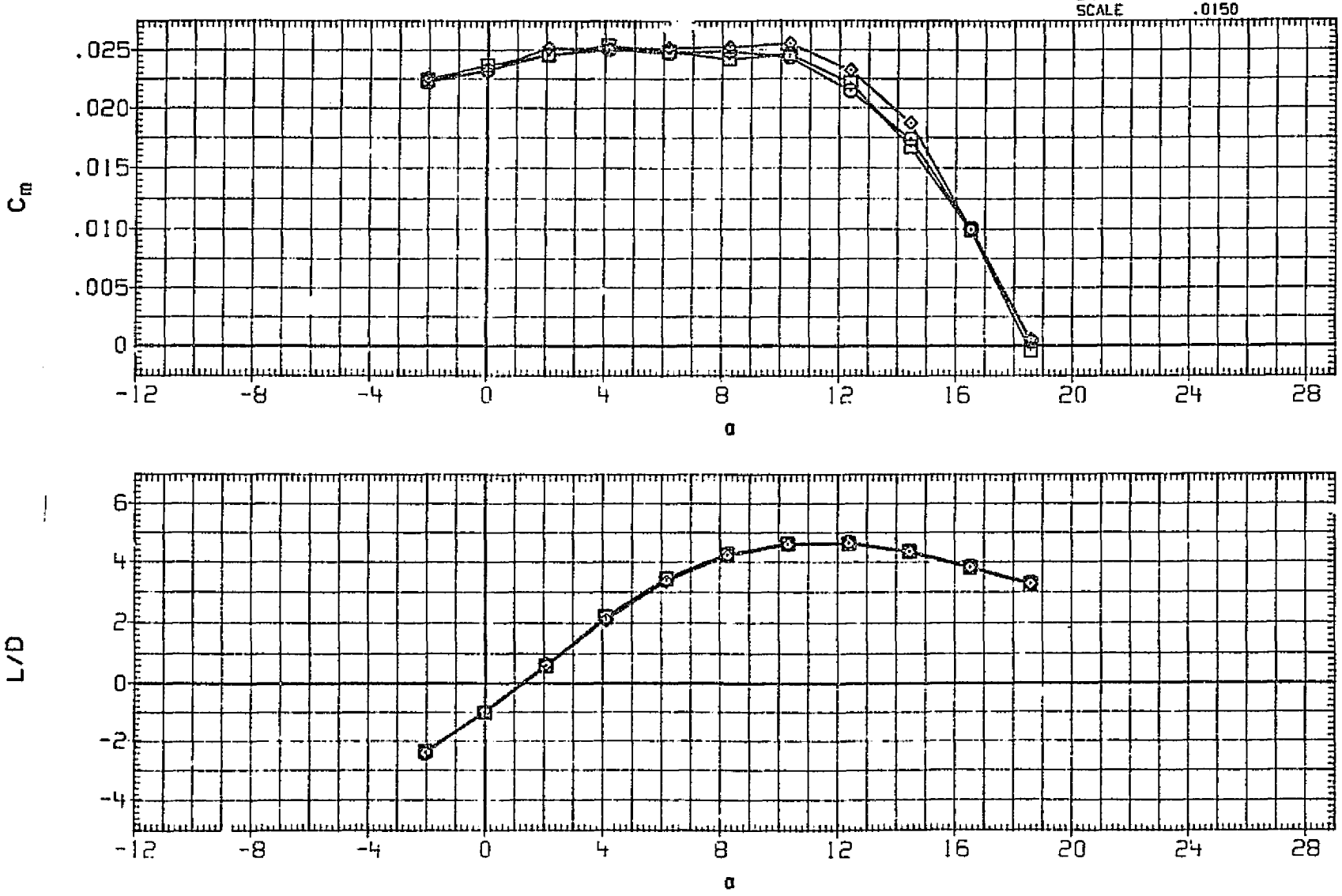


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

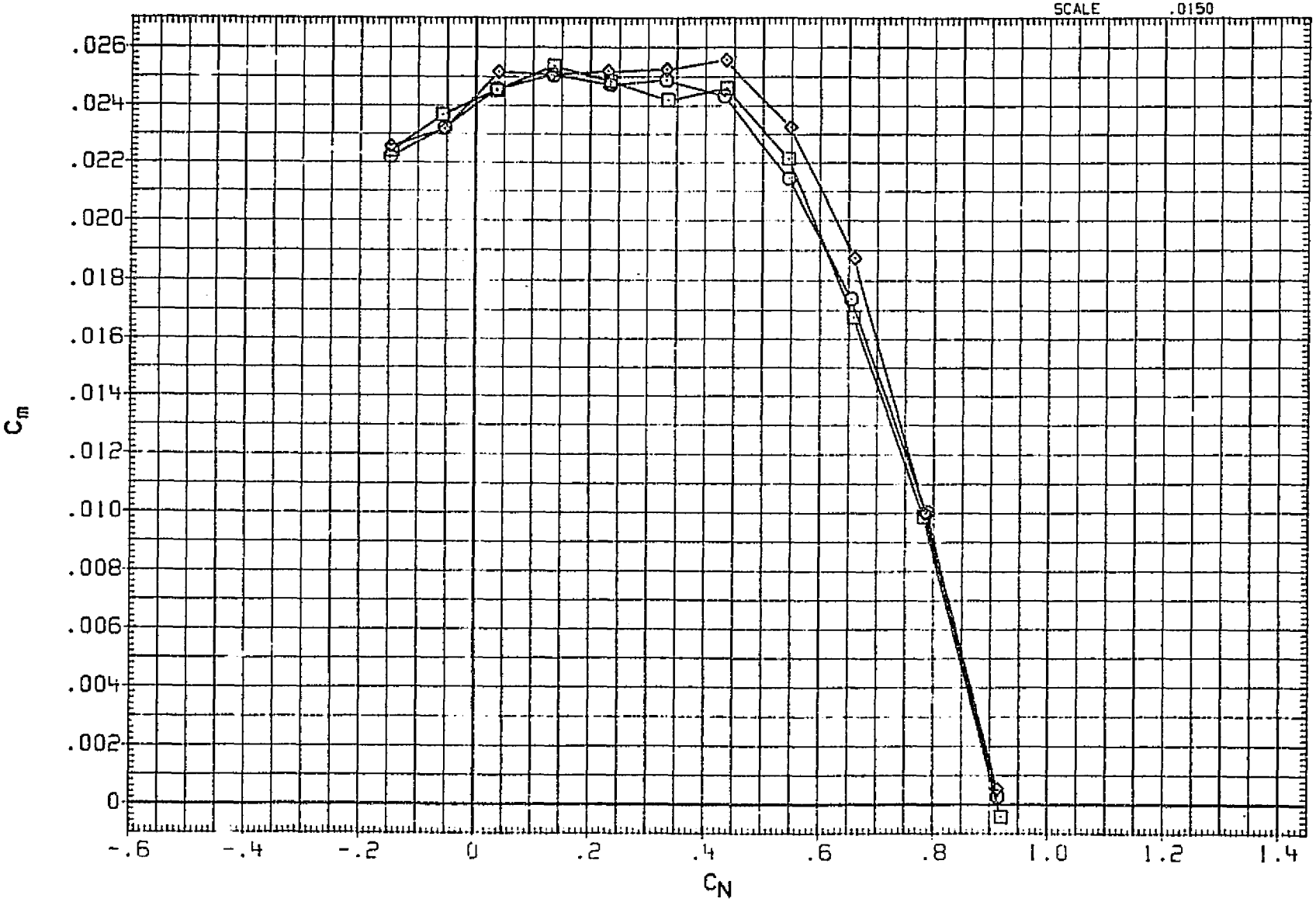


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A) MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

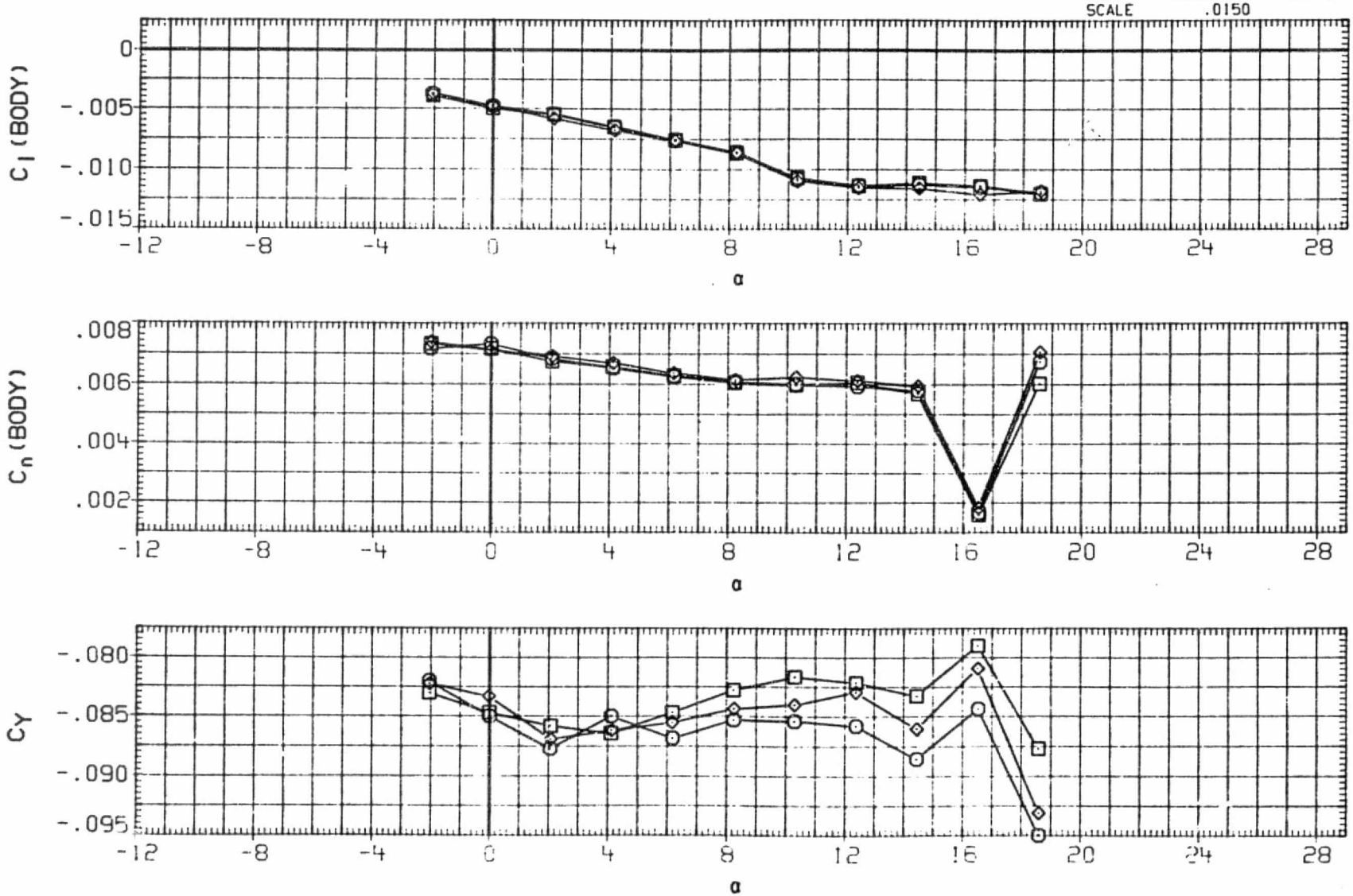


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(A)MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

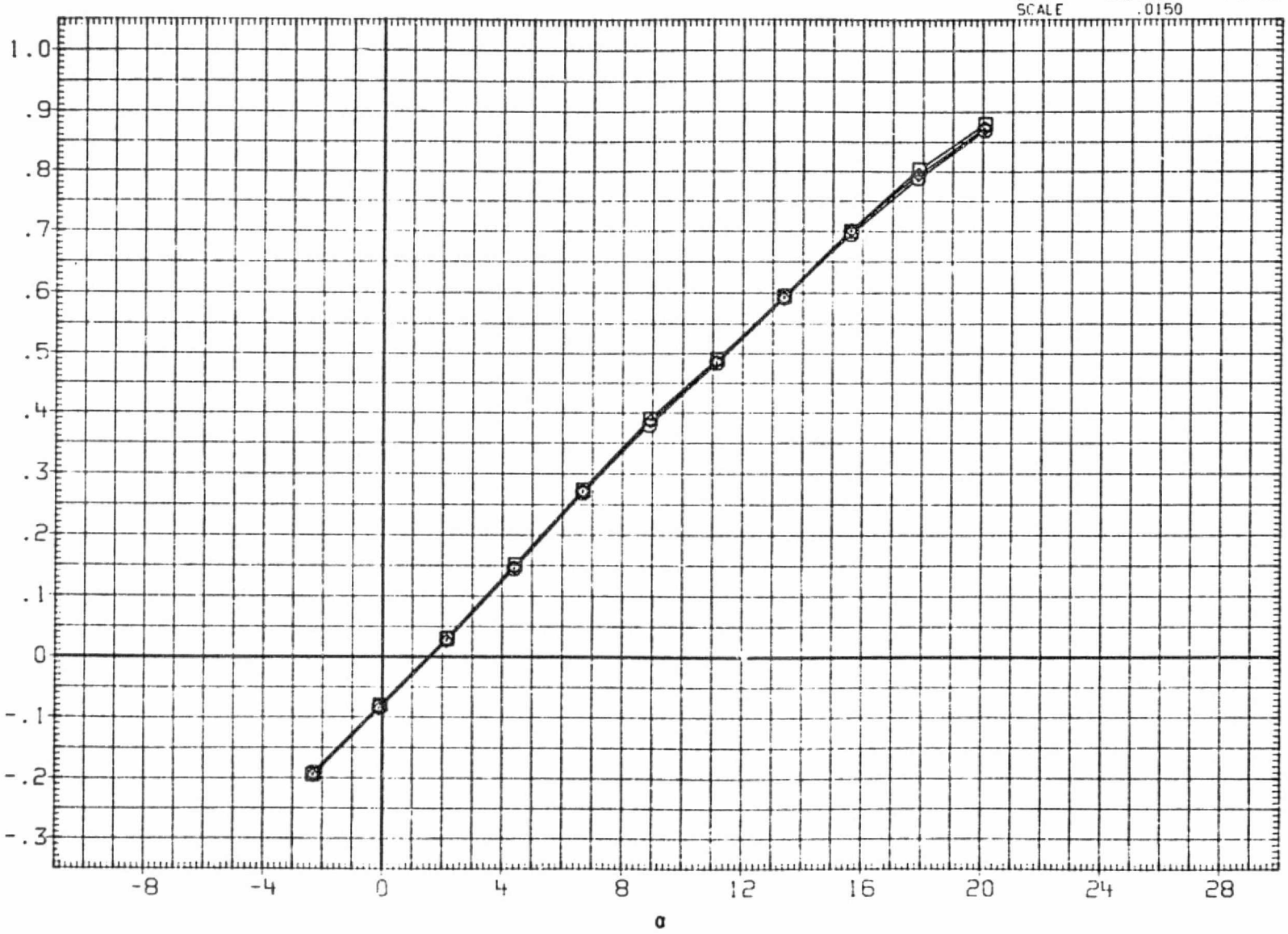


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

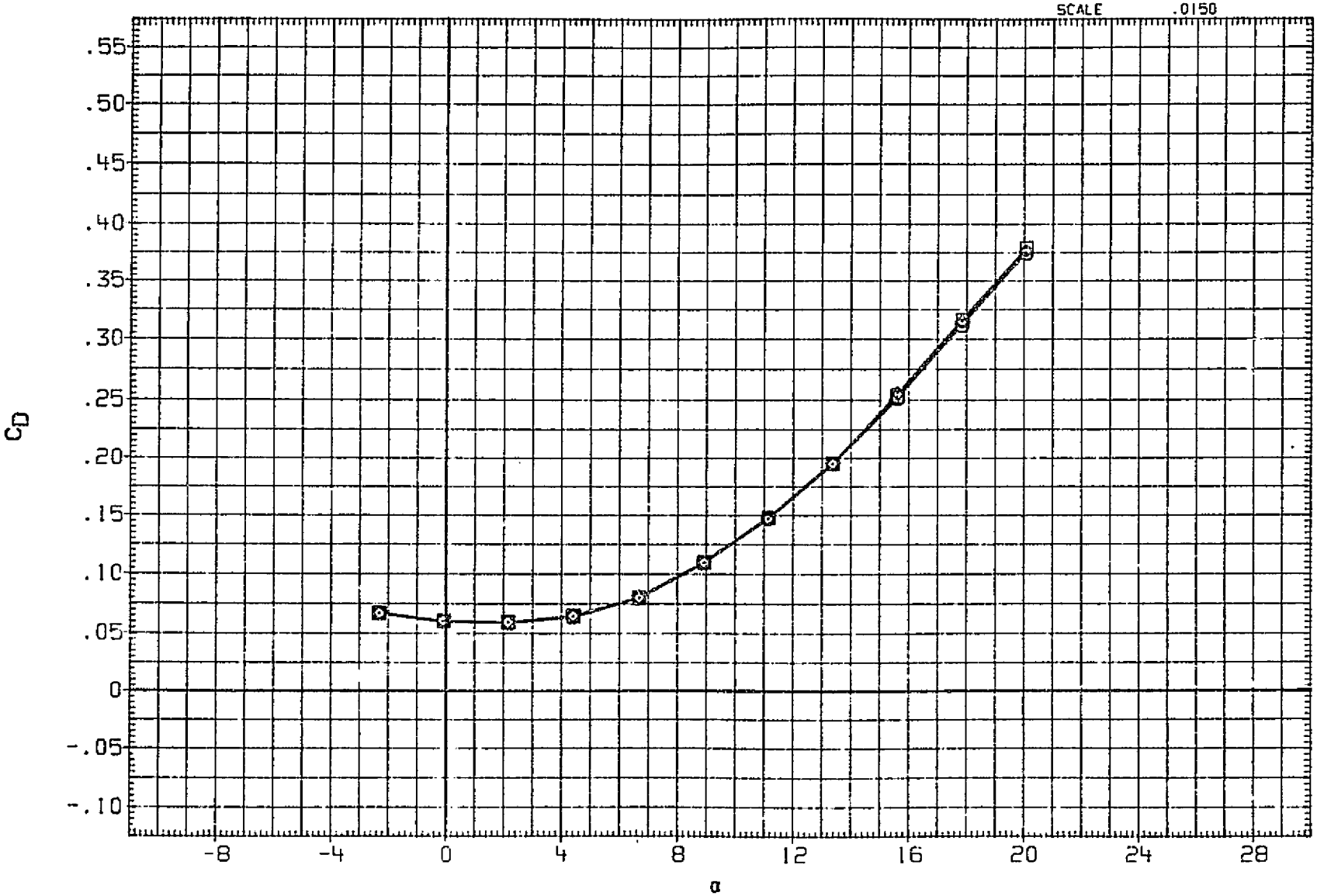


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

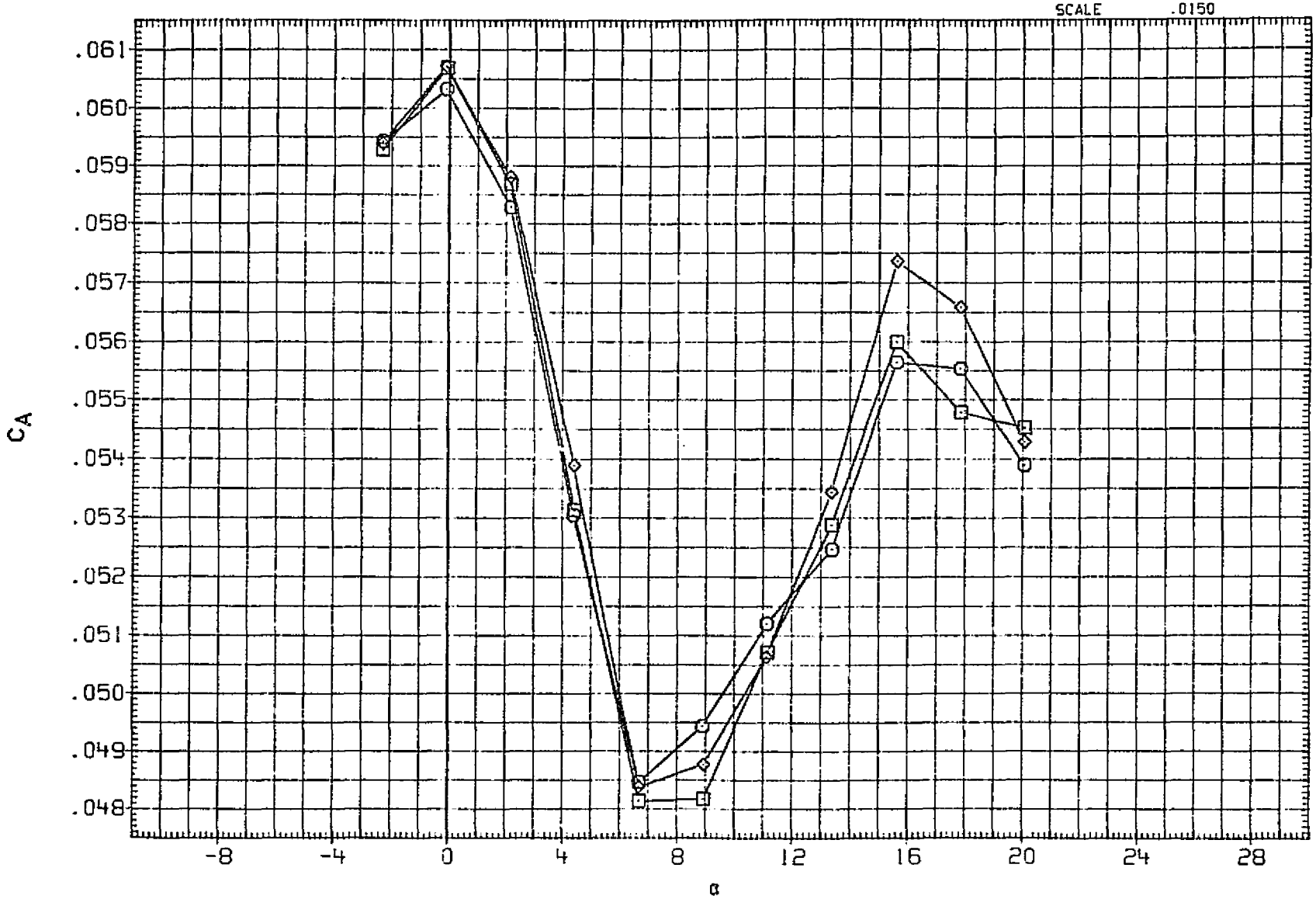


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

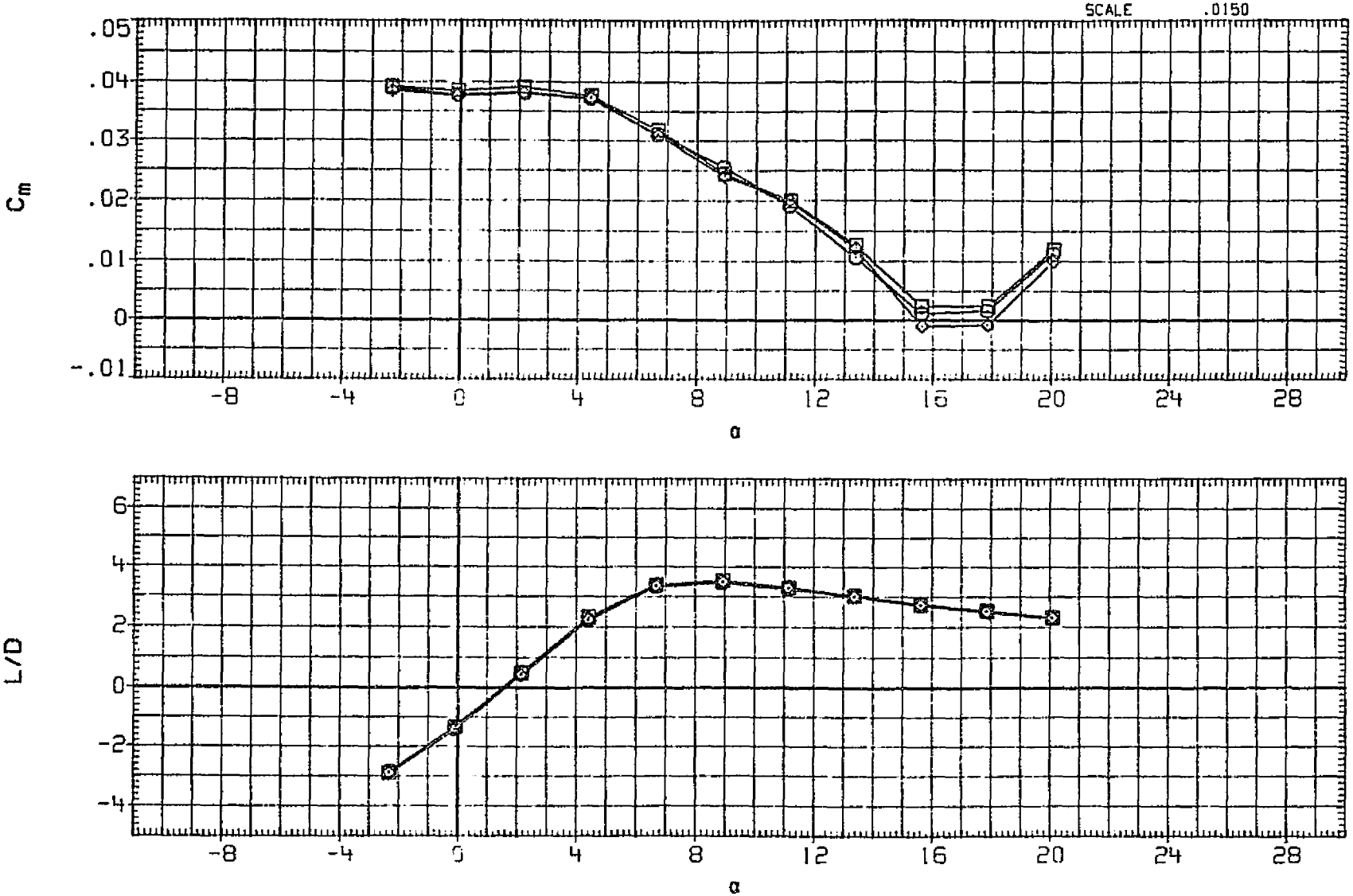


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	0150	

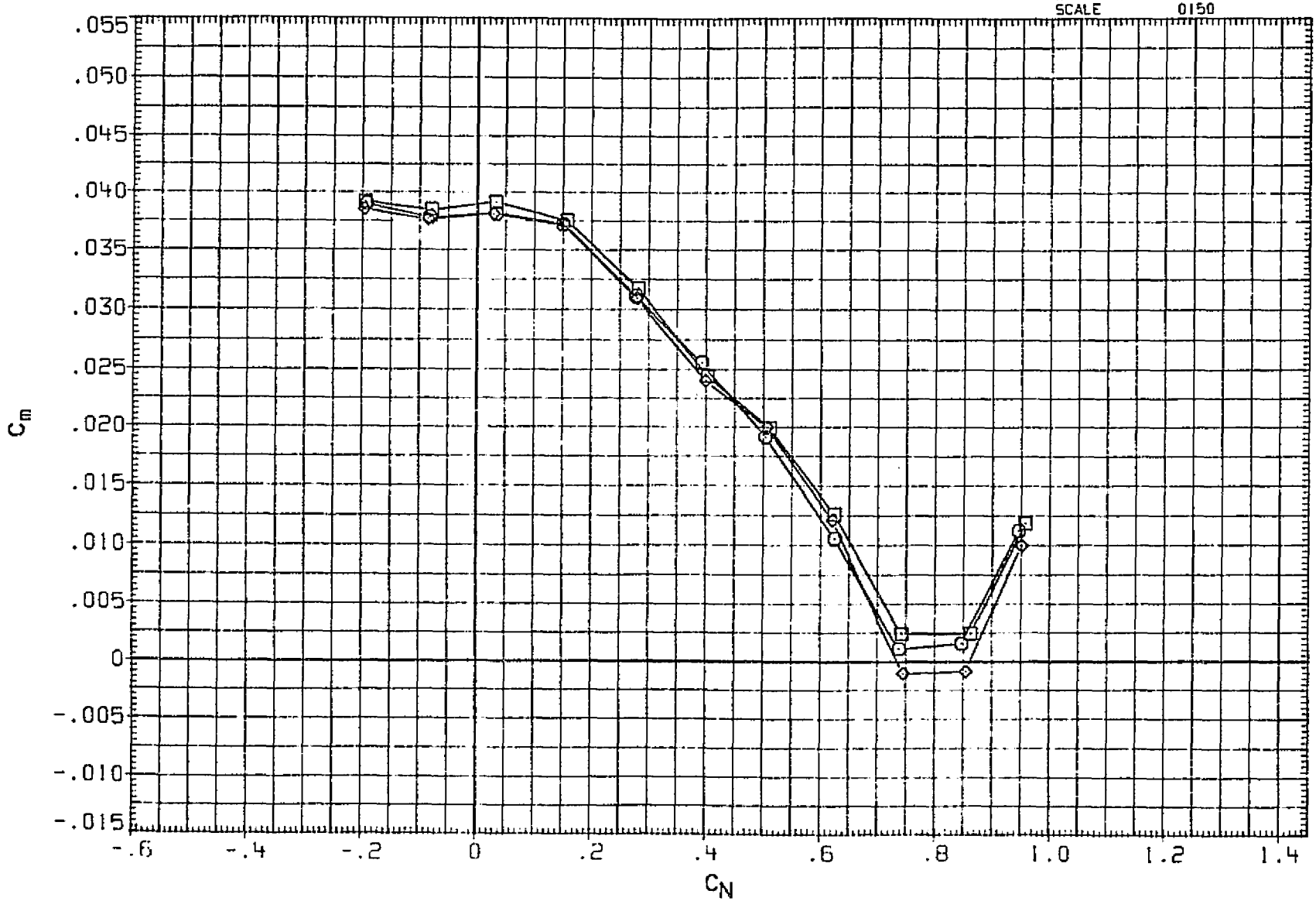


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

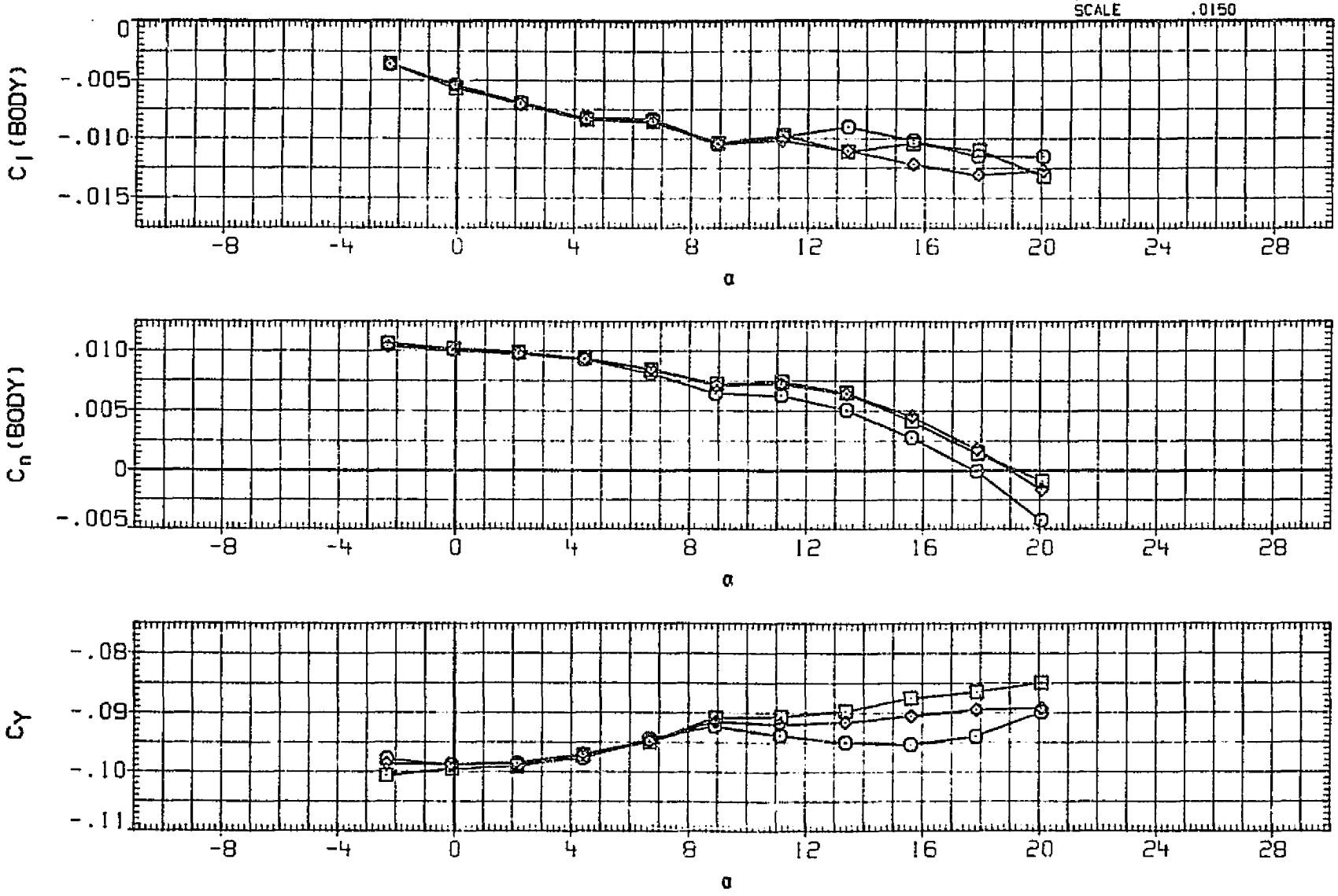


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

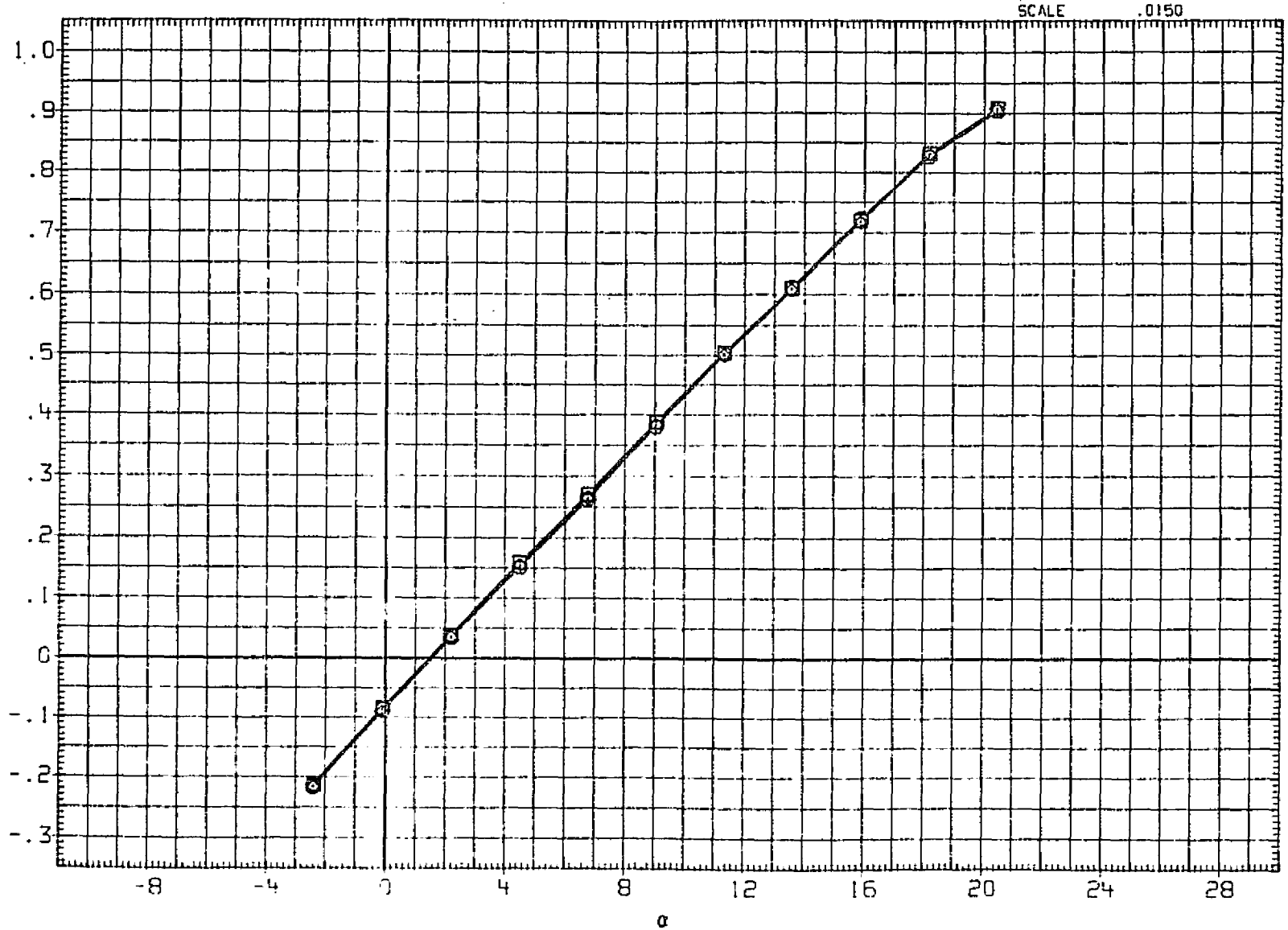


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

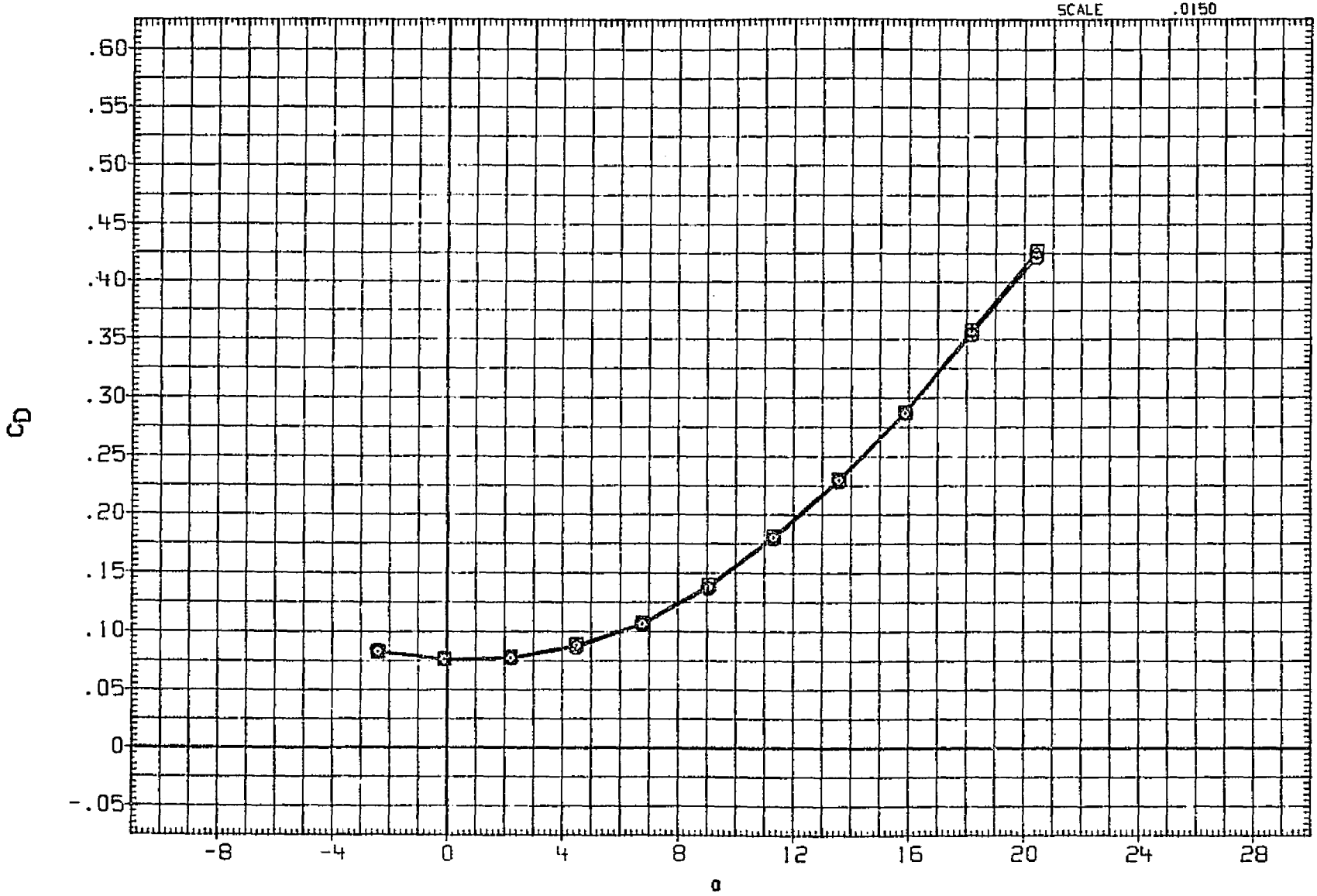


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

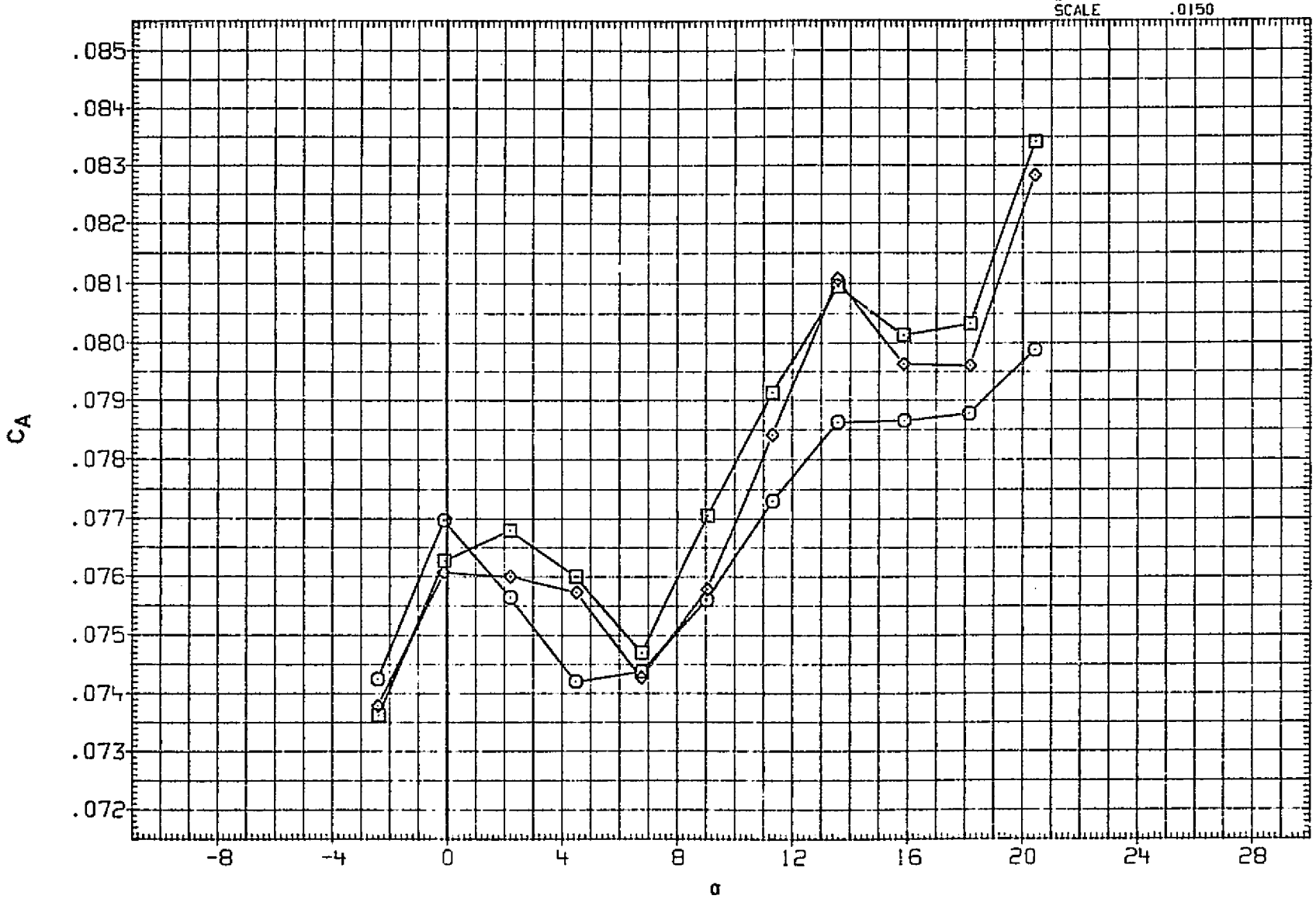


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

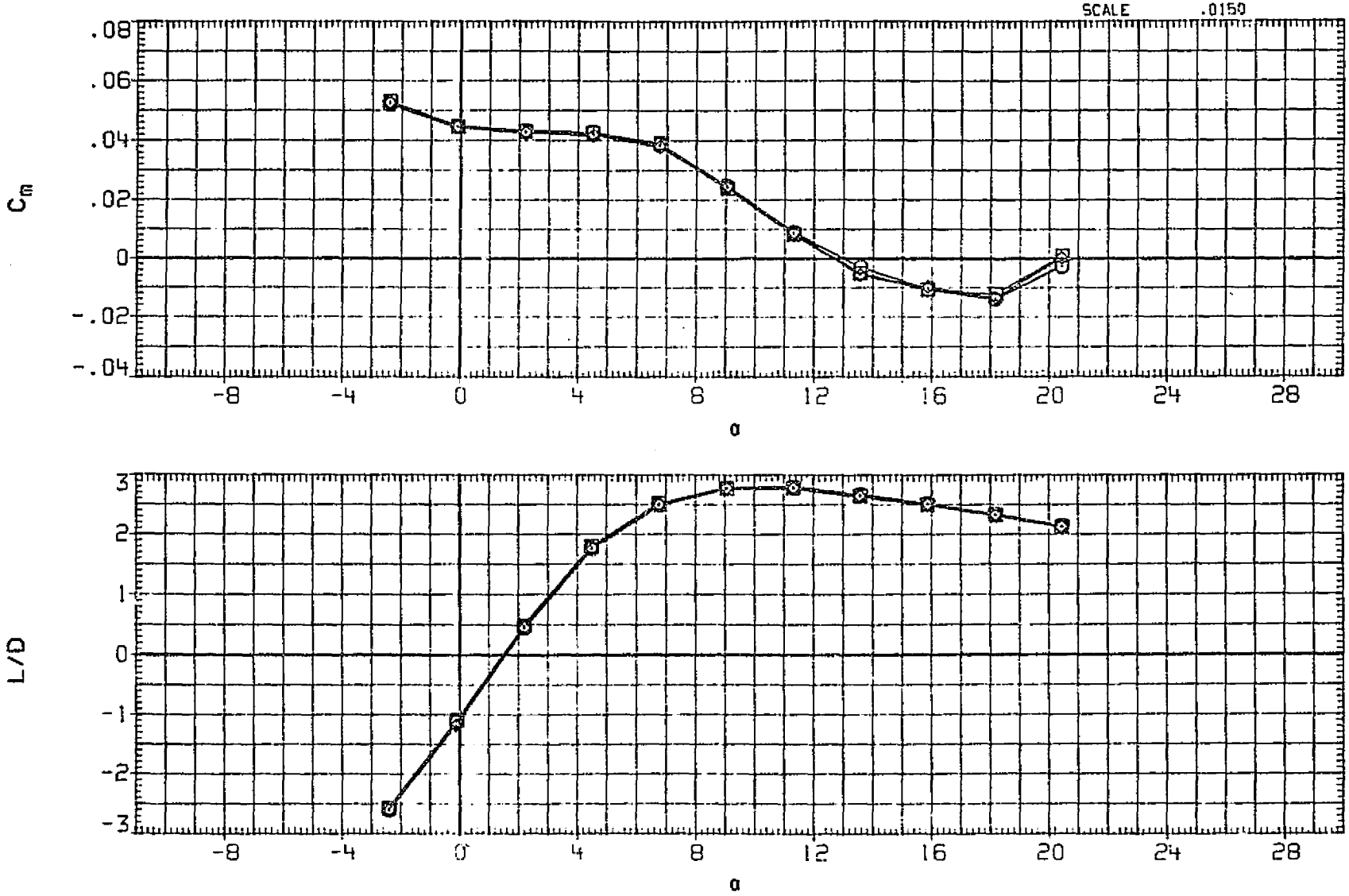


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

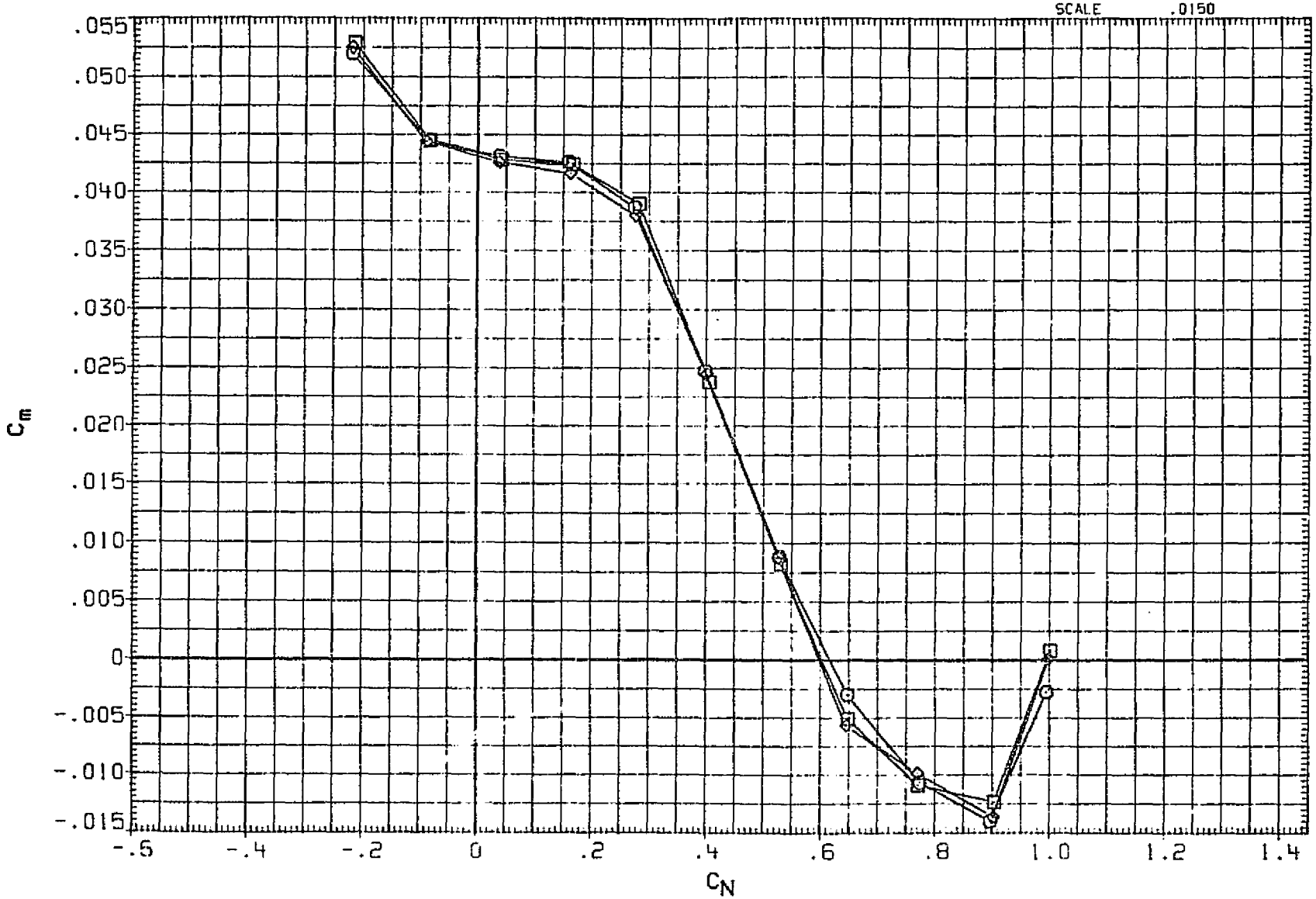


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

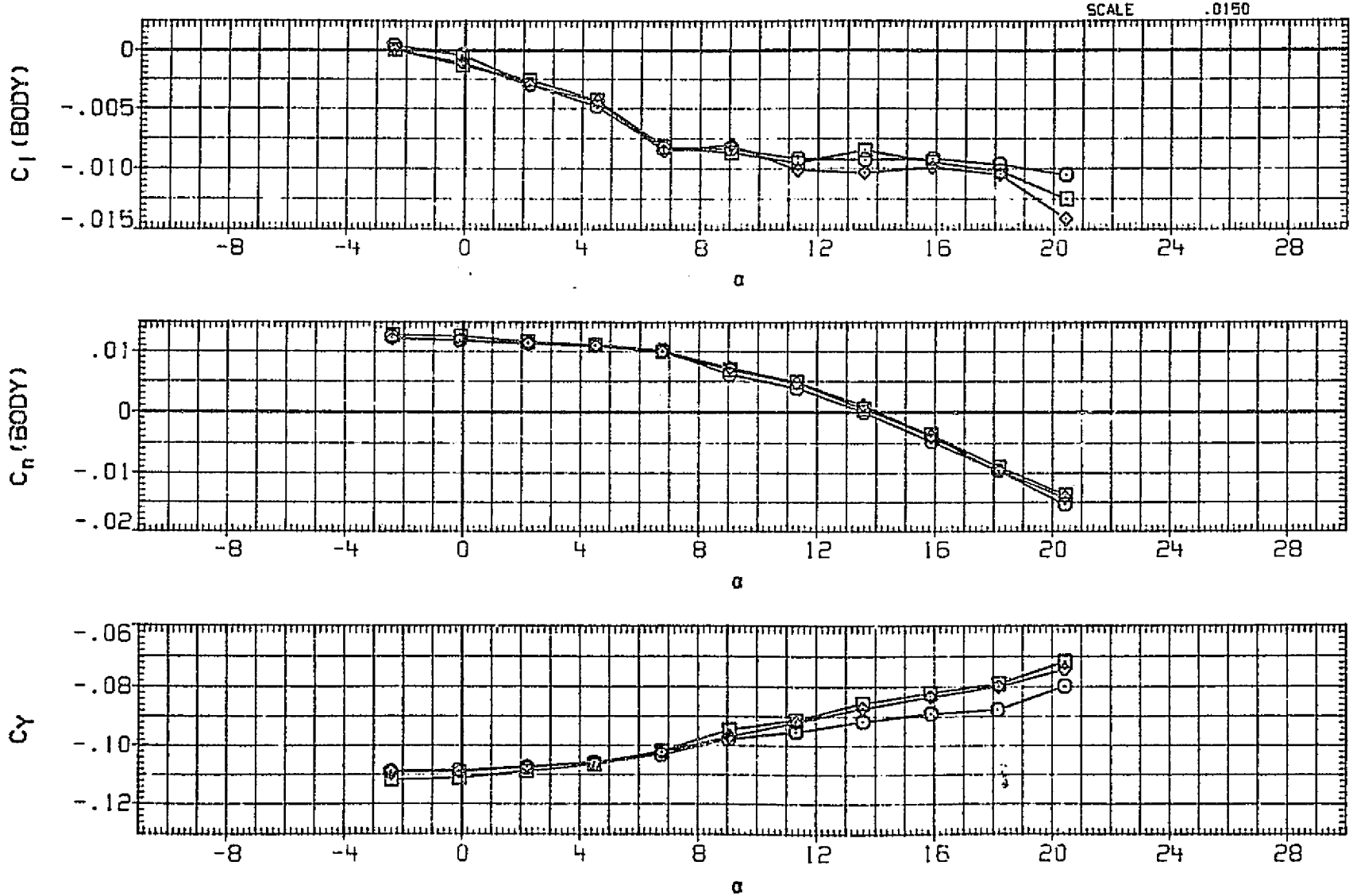


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

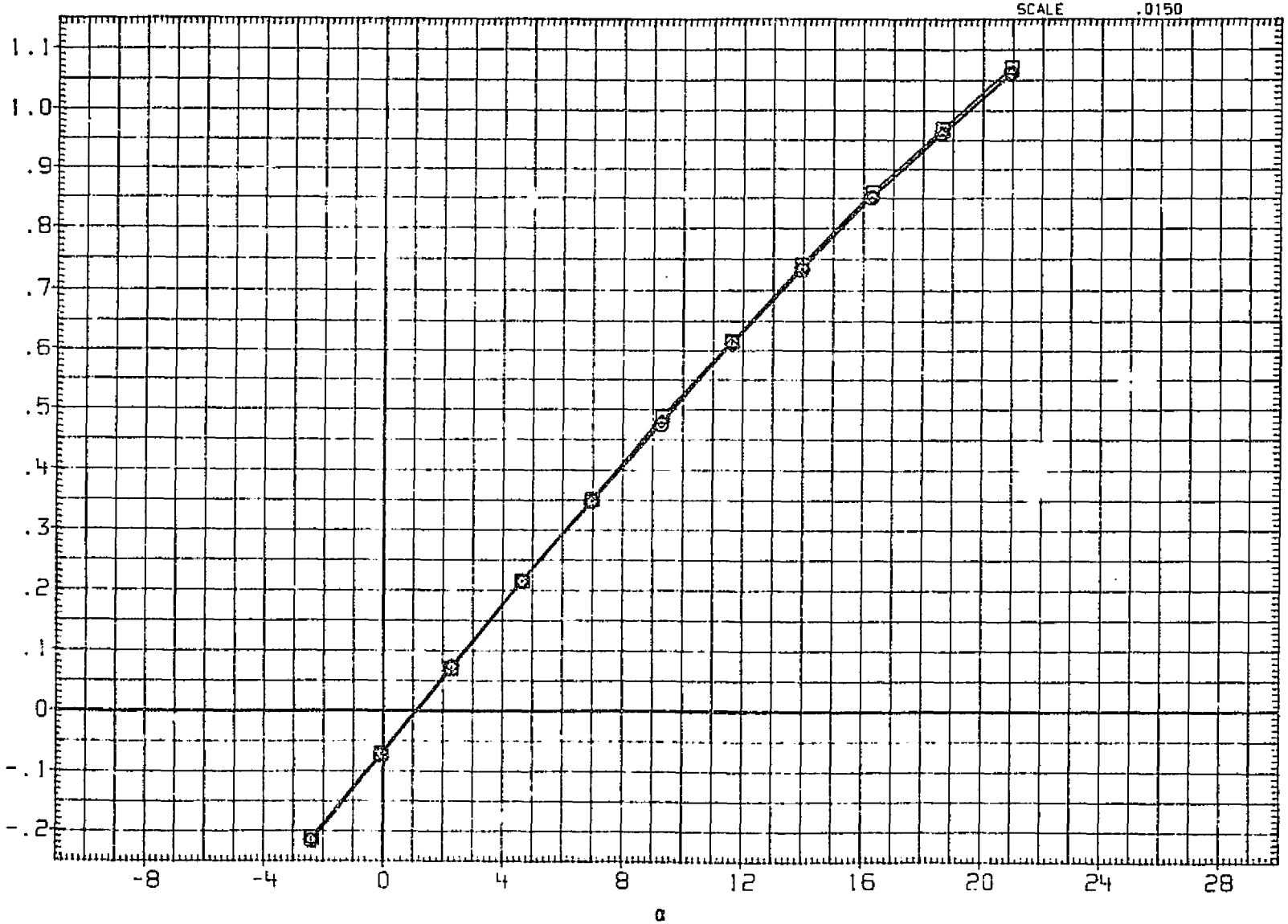


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D)MACH .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

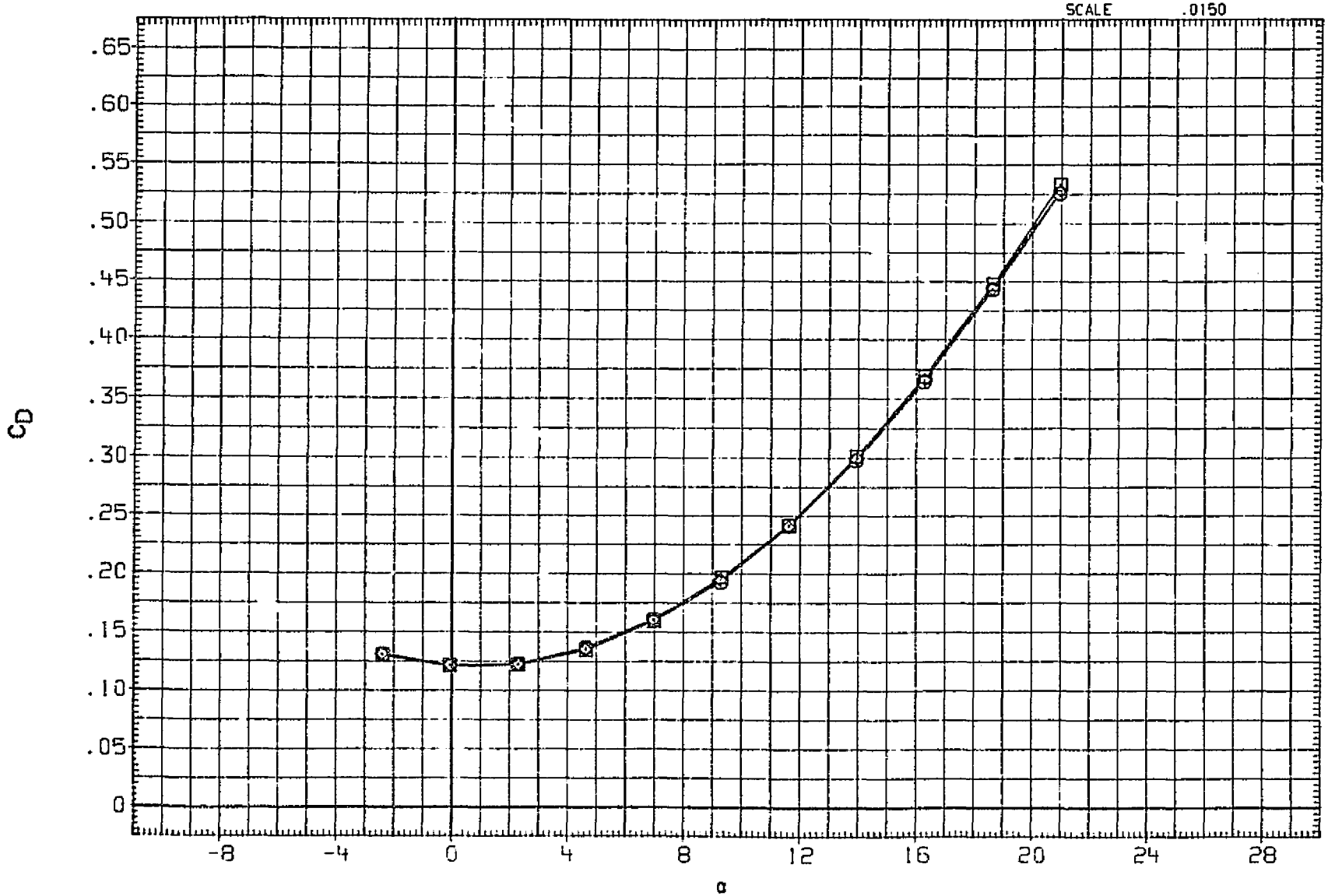


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D) MACH - .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

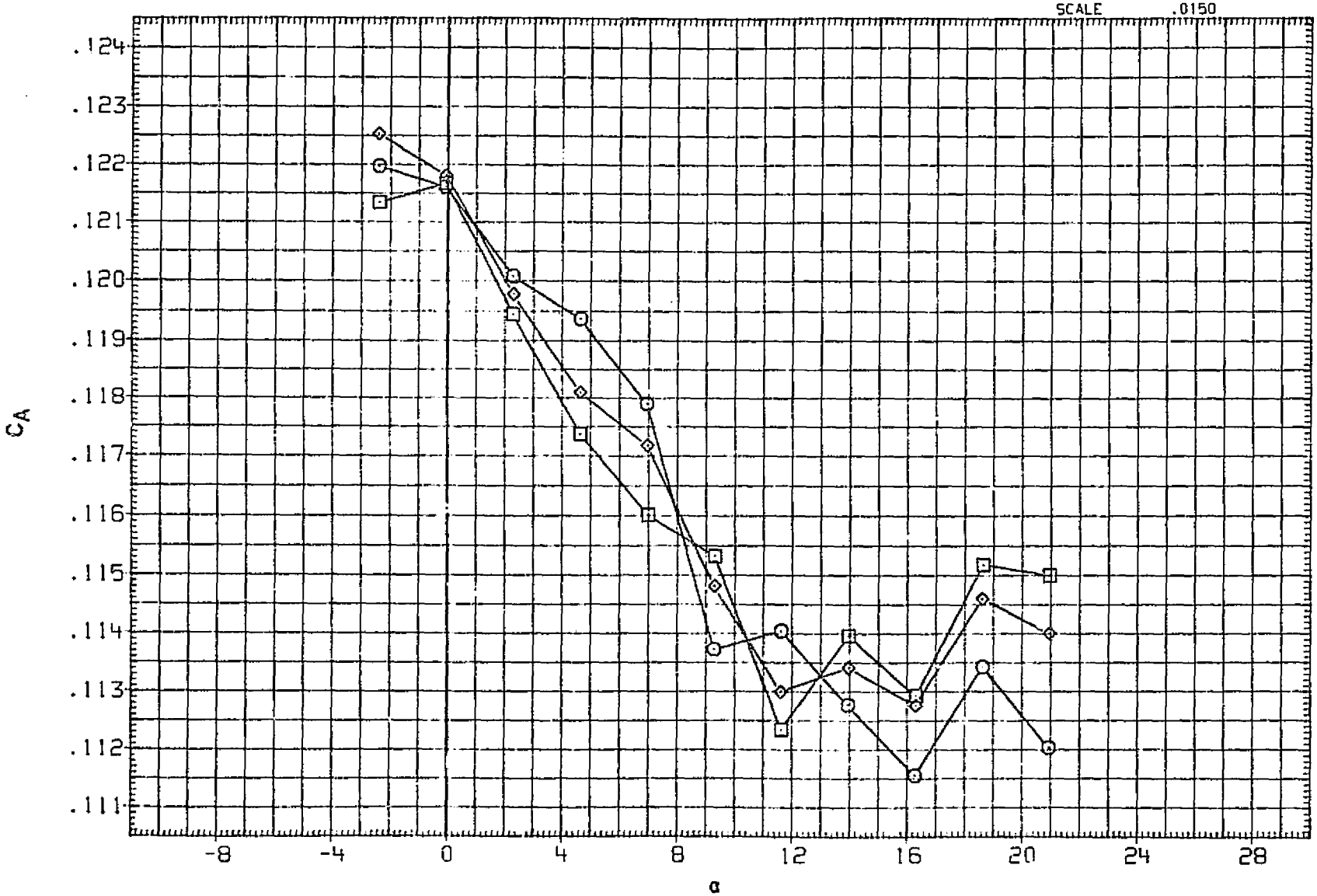


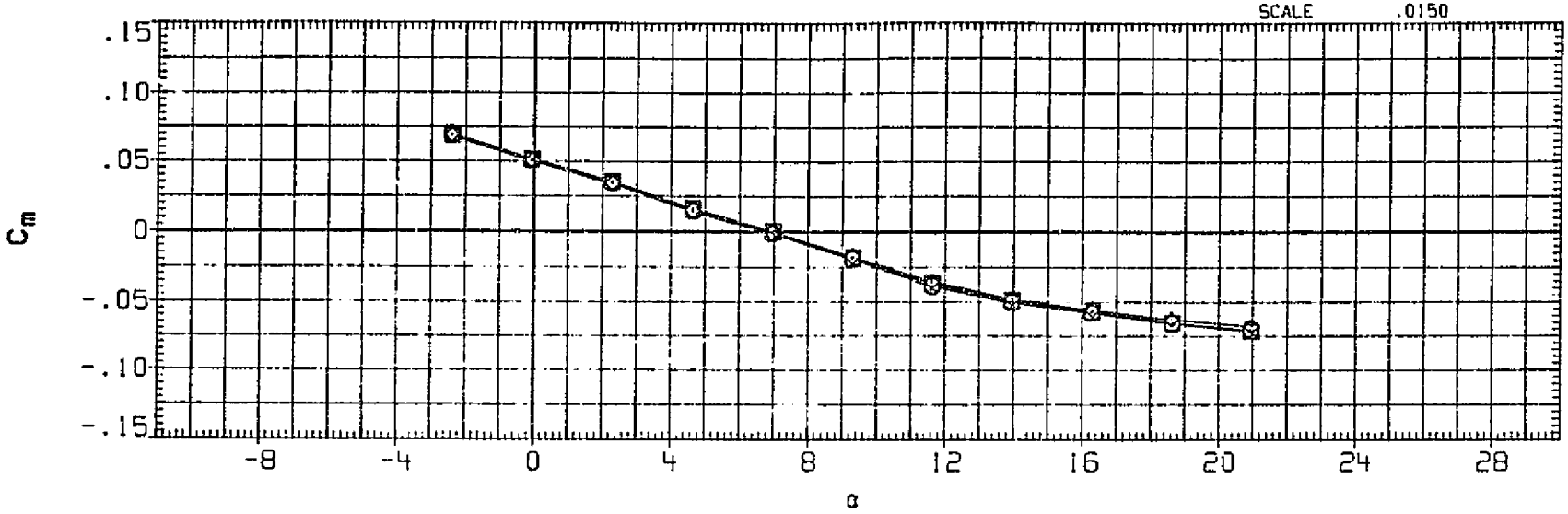
FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D)MACH .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	



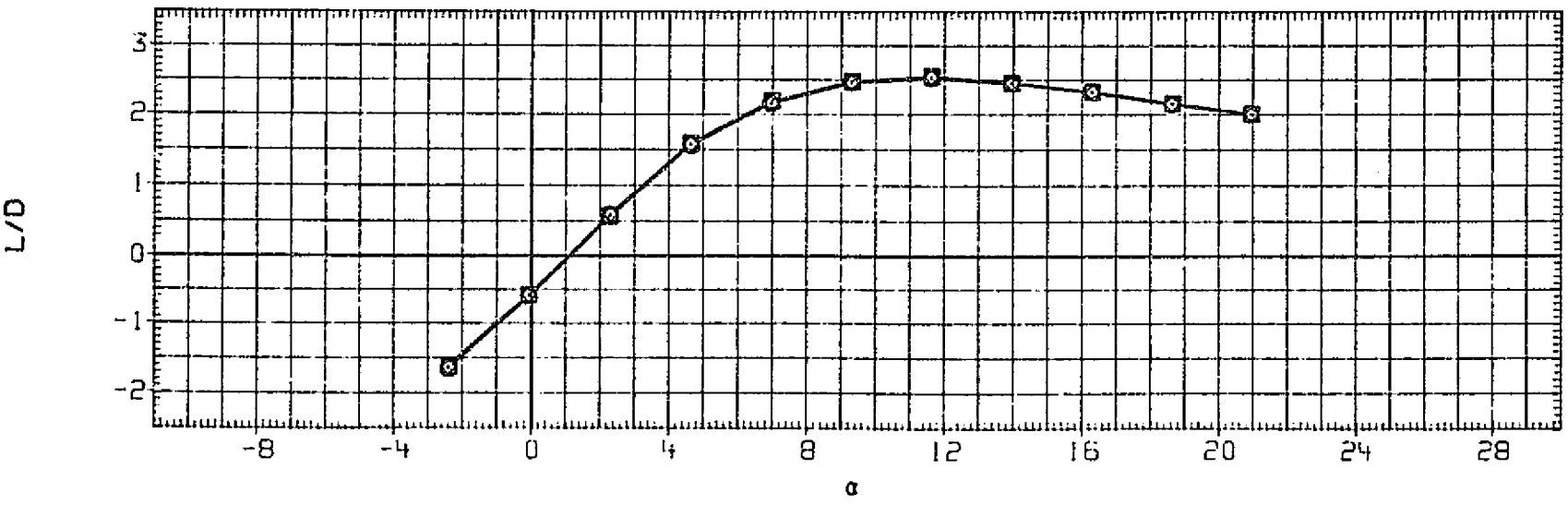


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

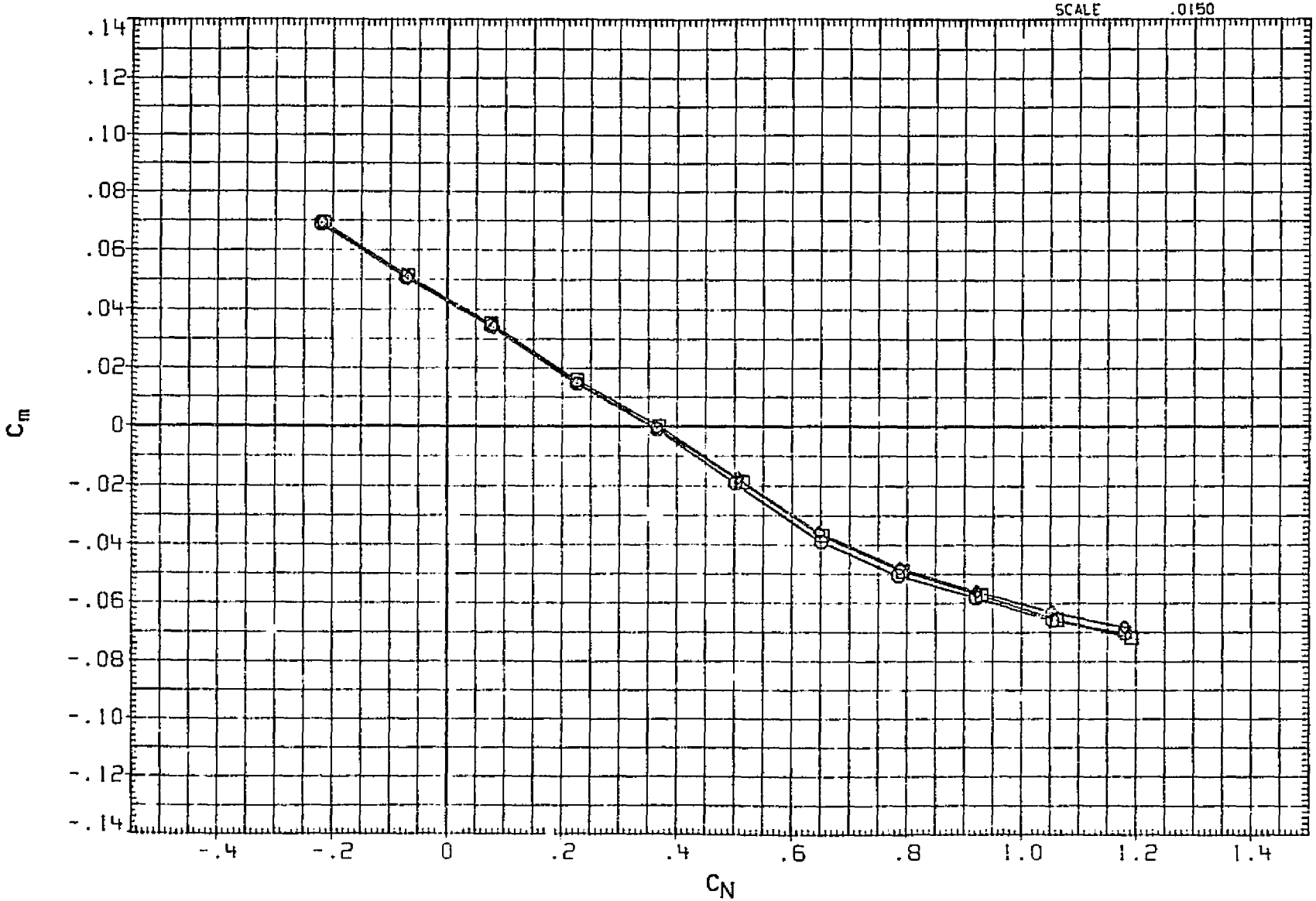


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

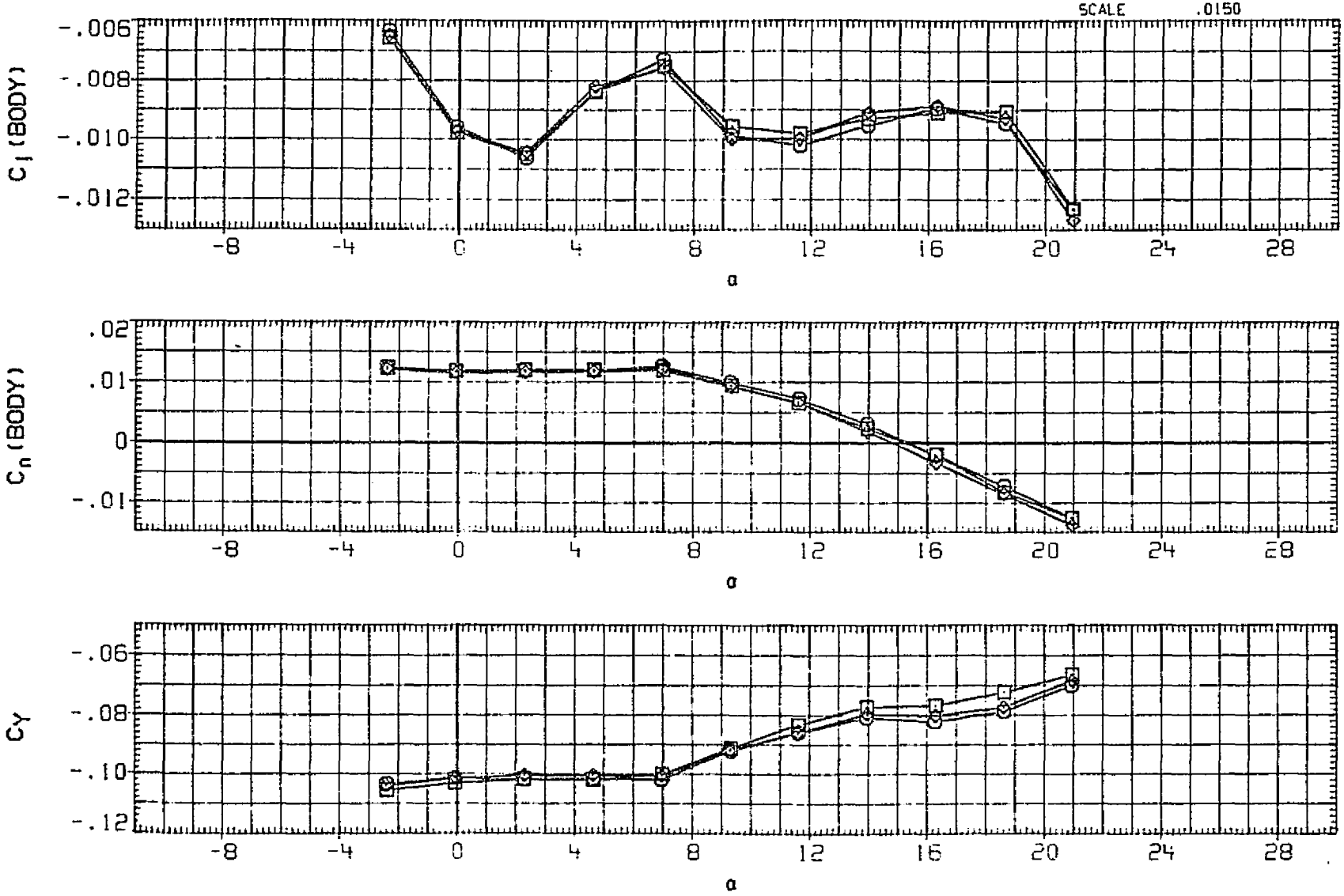


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(D) MACH .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC BFT IPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC BFT IPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC BFT IPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

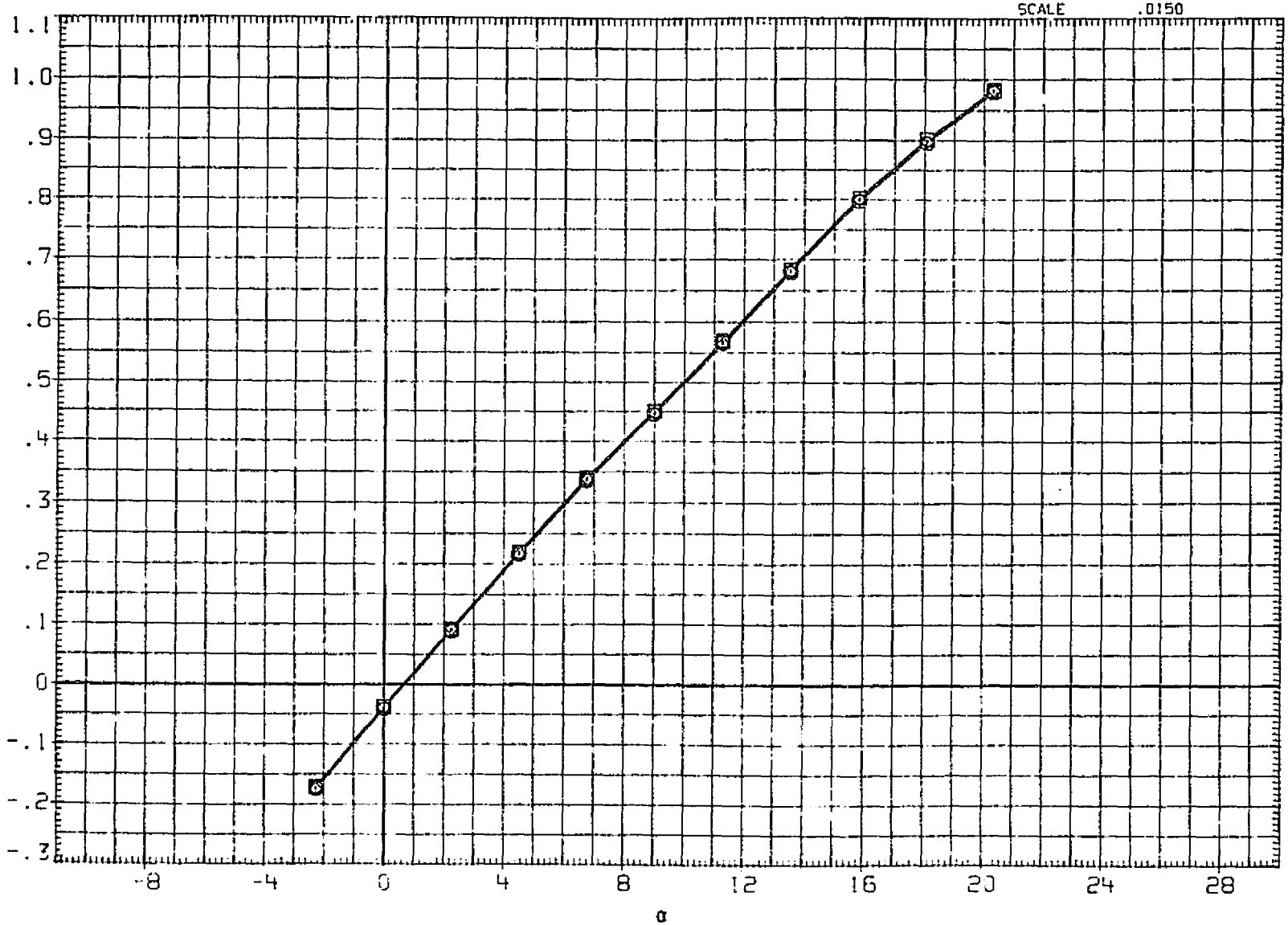


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

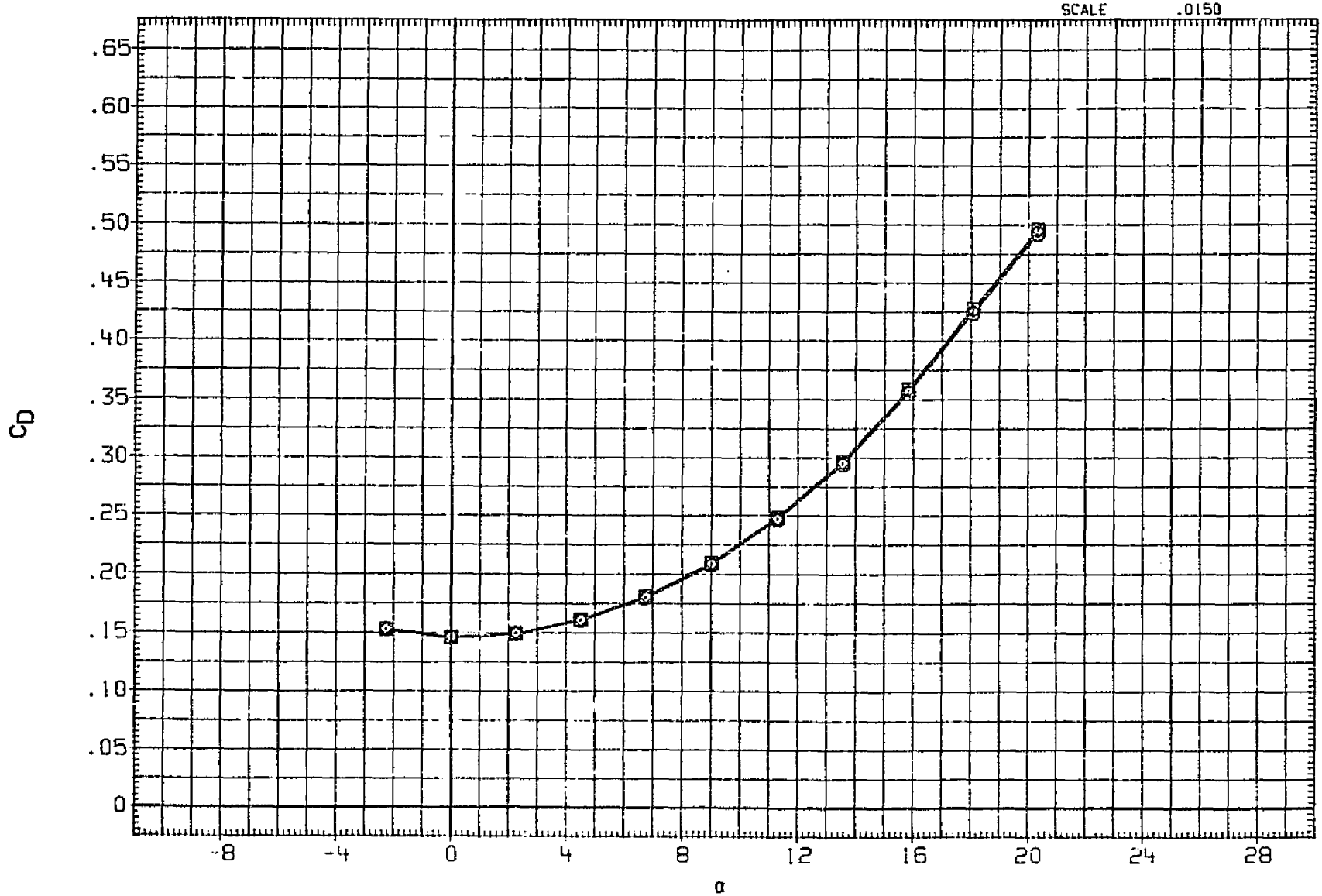


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

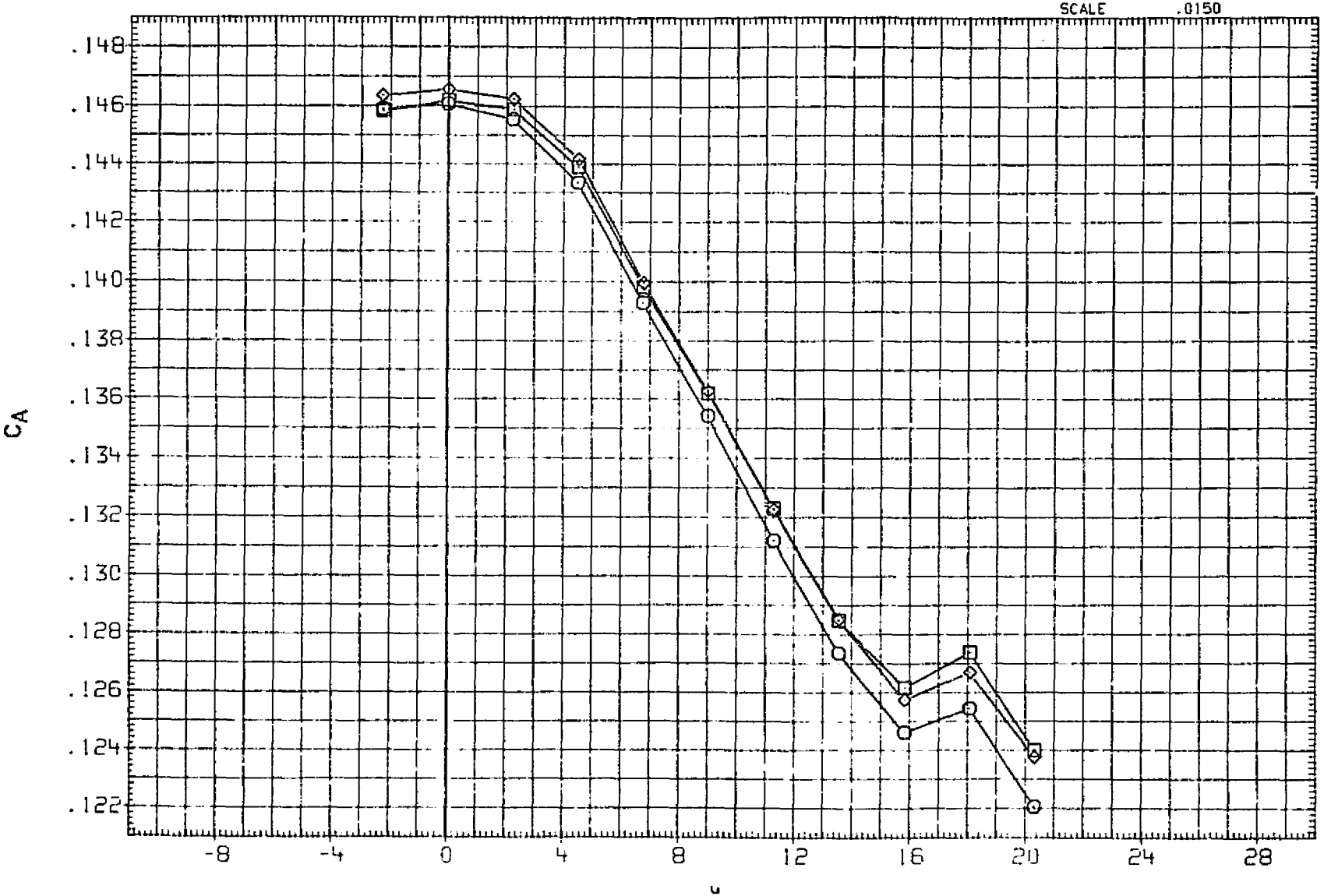


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH · 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

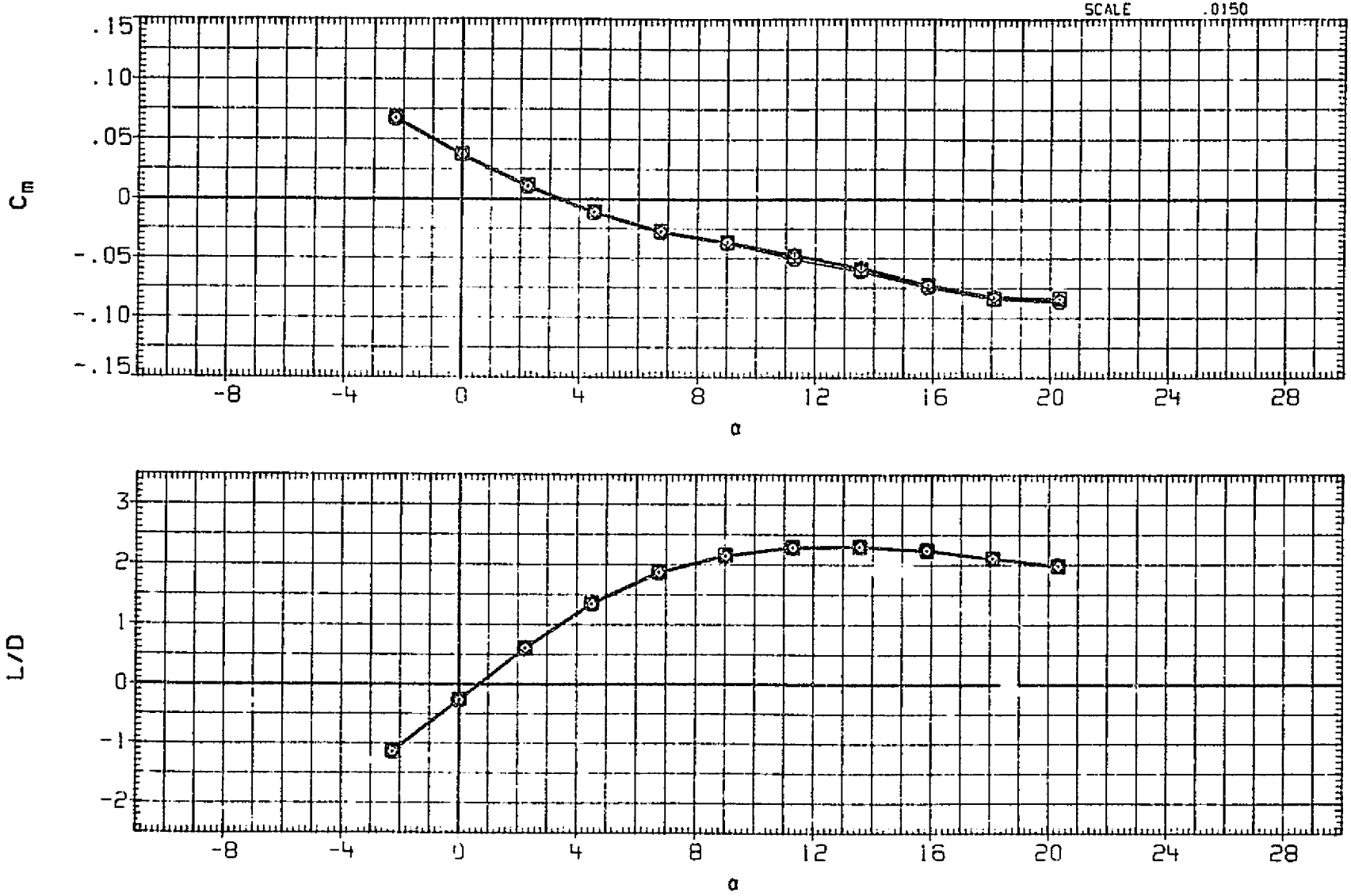


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1075.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

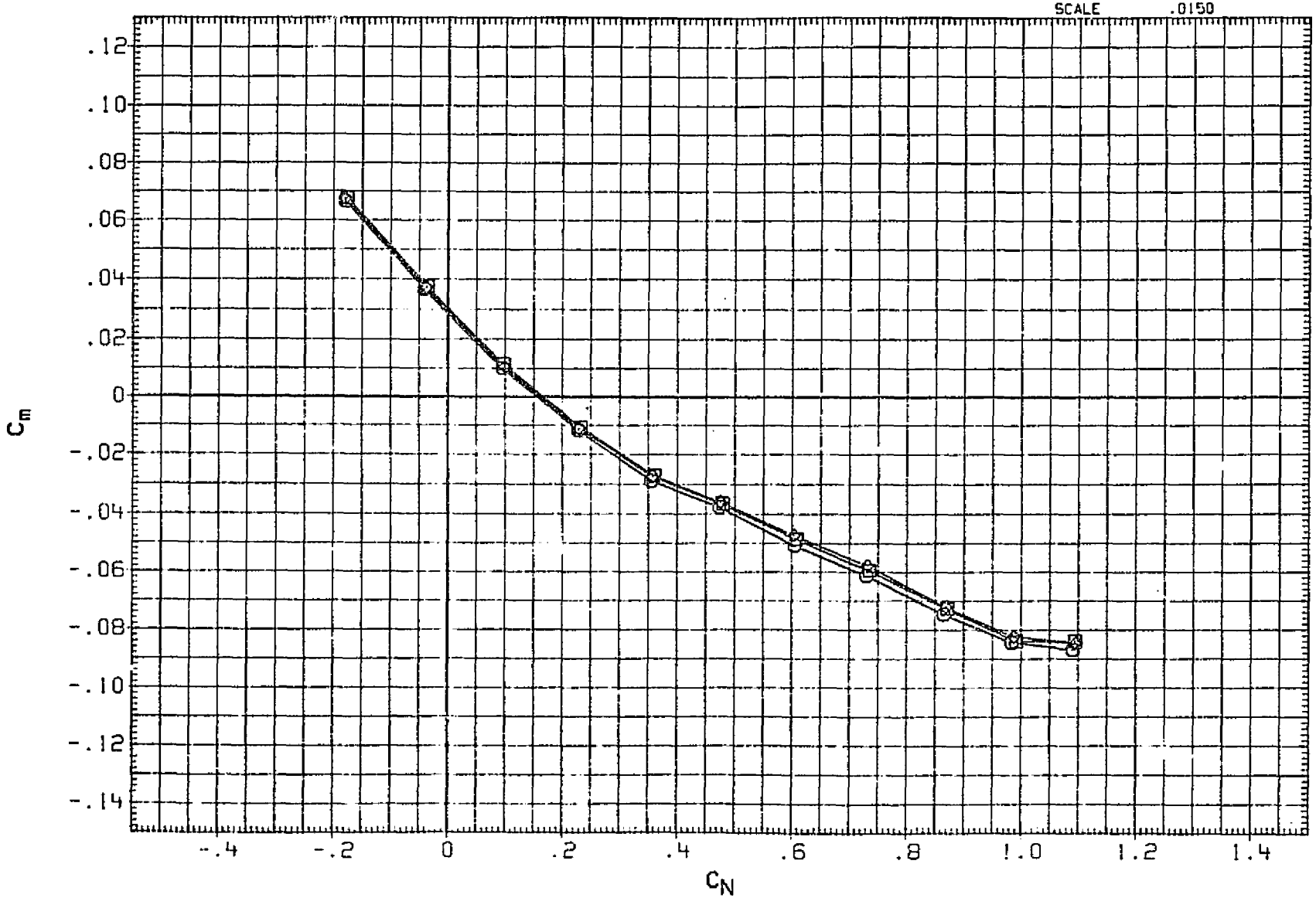


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP
(RJD002)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700
(RJD006)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700
(RJD004)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

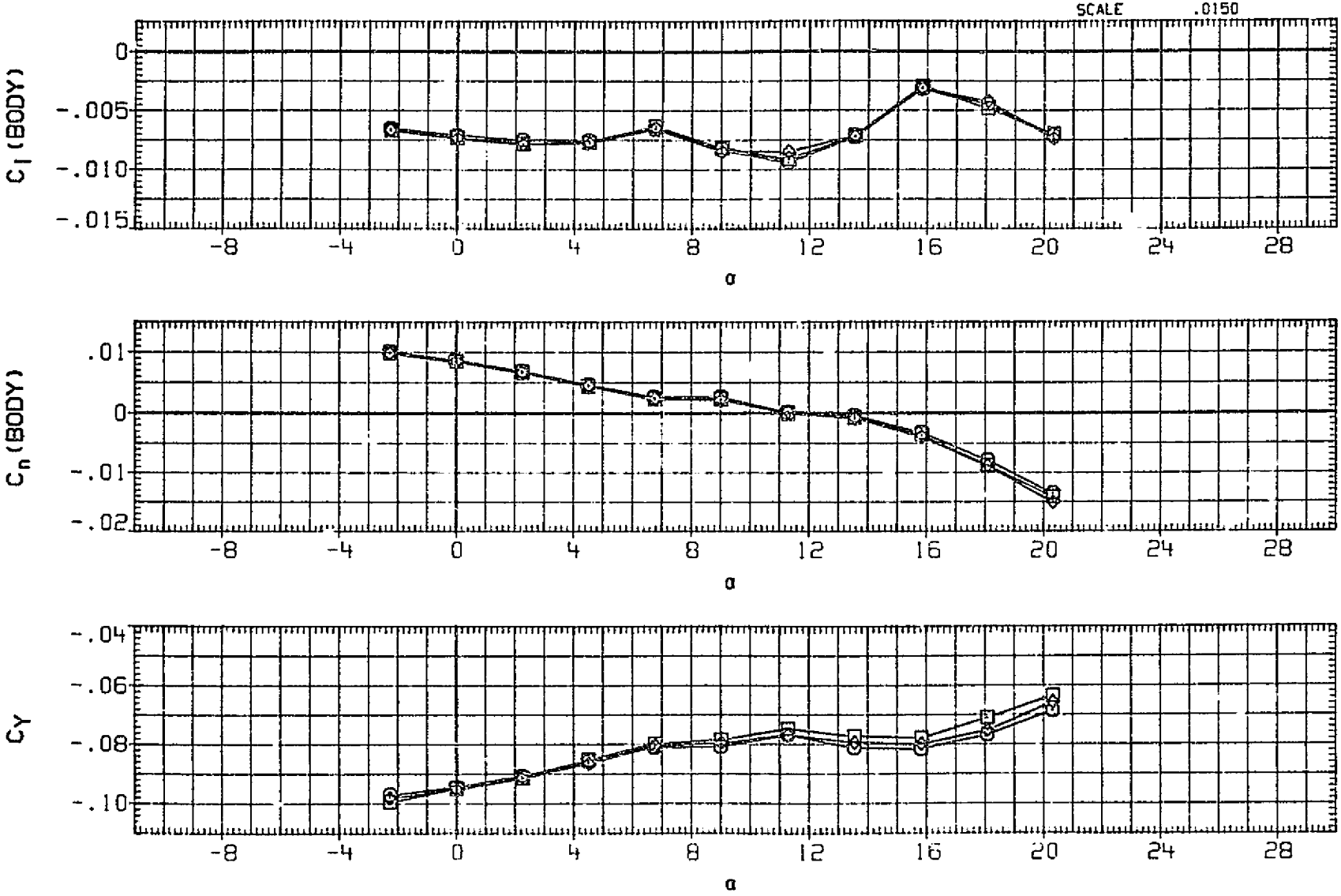


FIGURE 5. COMPARISON OF B1,B6 AND B7 FOREBODIES AT FIVE DEGREES SIDESLIP

(E)MACH = 1.20

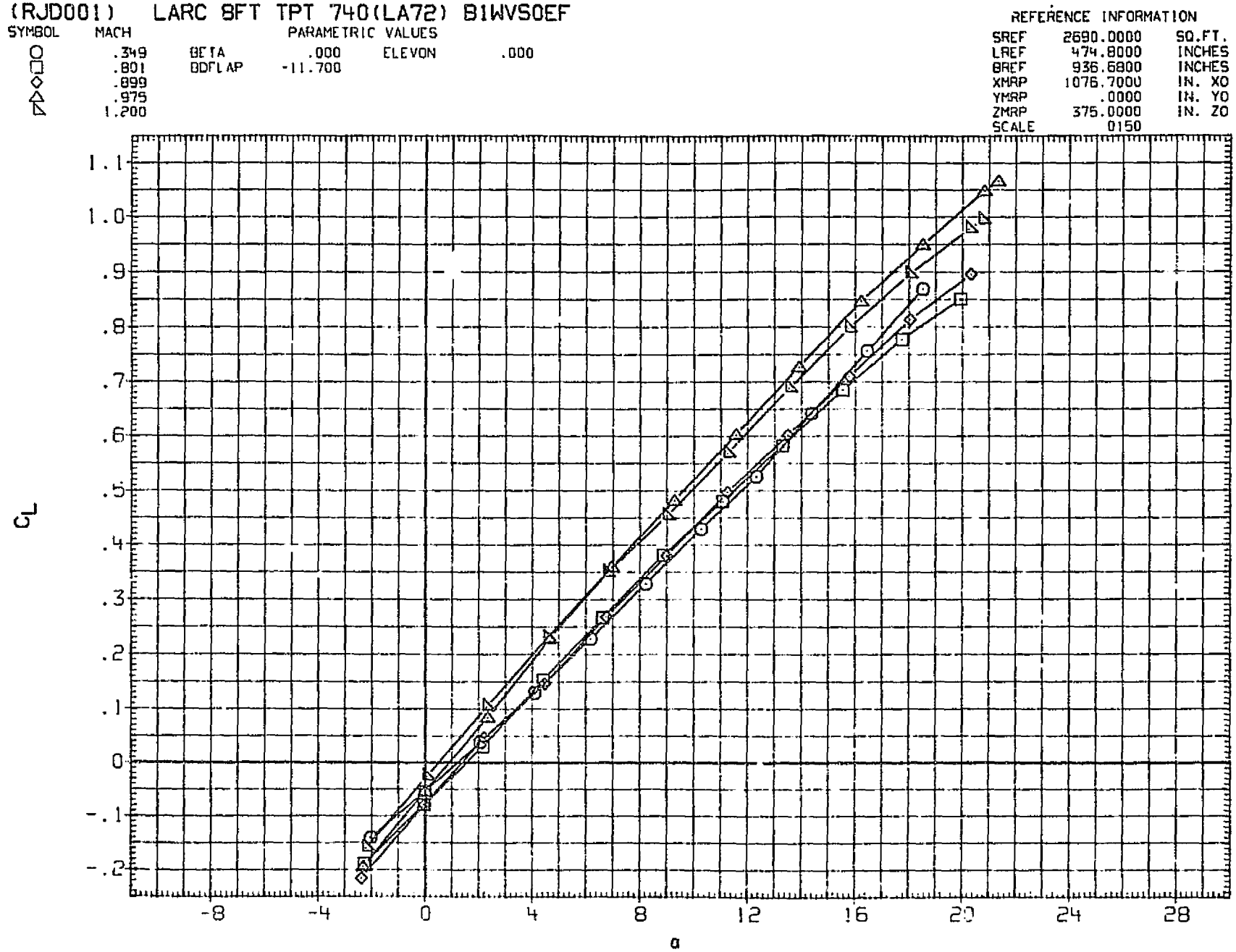


FIGURE 6. EFFECT OF MACH NUMBER ON B1 FOREBODY AT ZERO DEGREES SIDESLIP

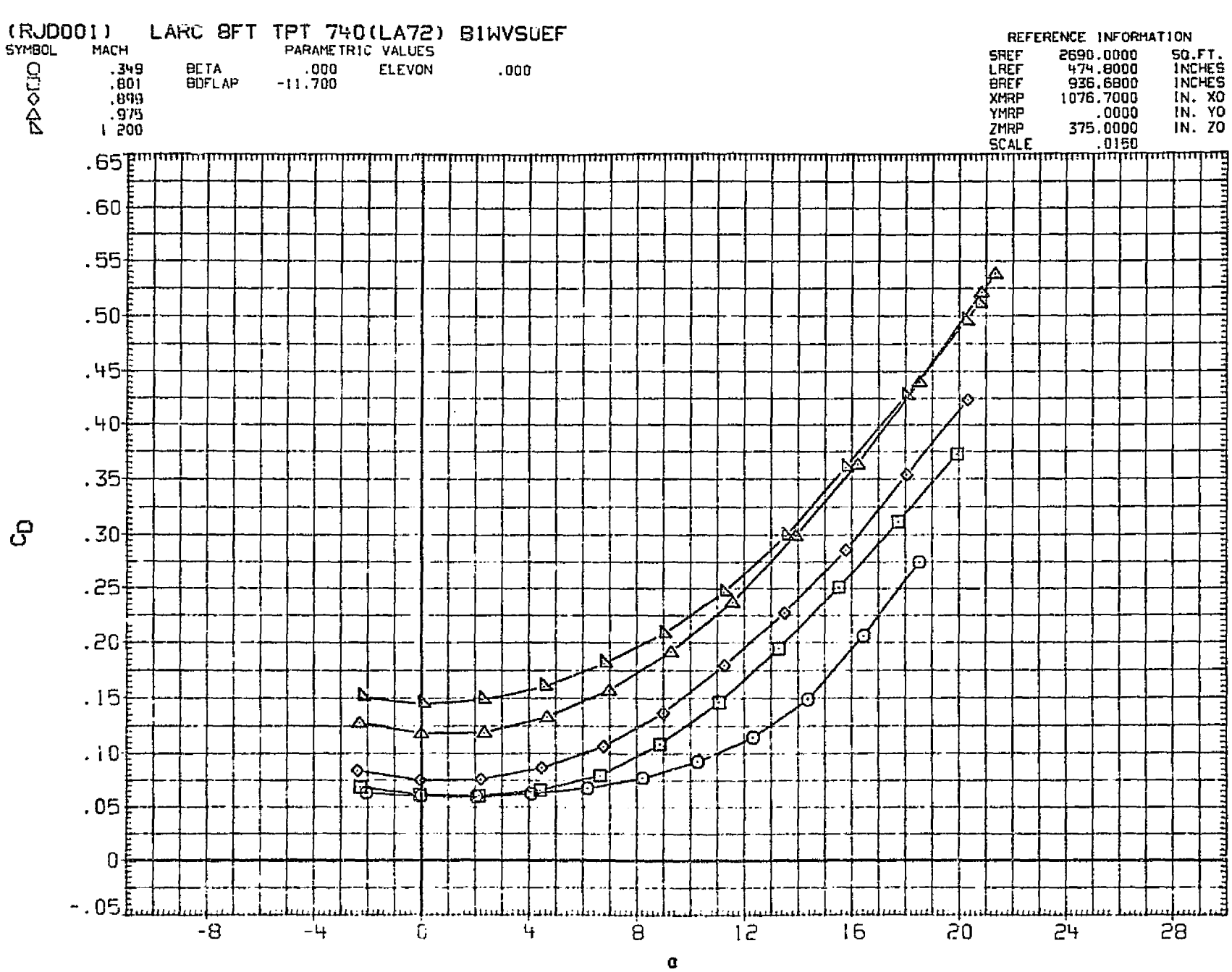


FIGURE 6. EFFECT OF MACH NUMBER ON B1 FOREBODY AT ZERO DEGREES SIDESLIP

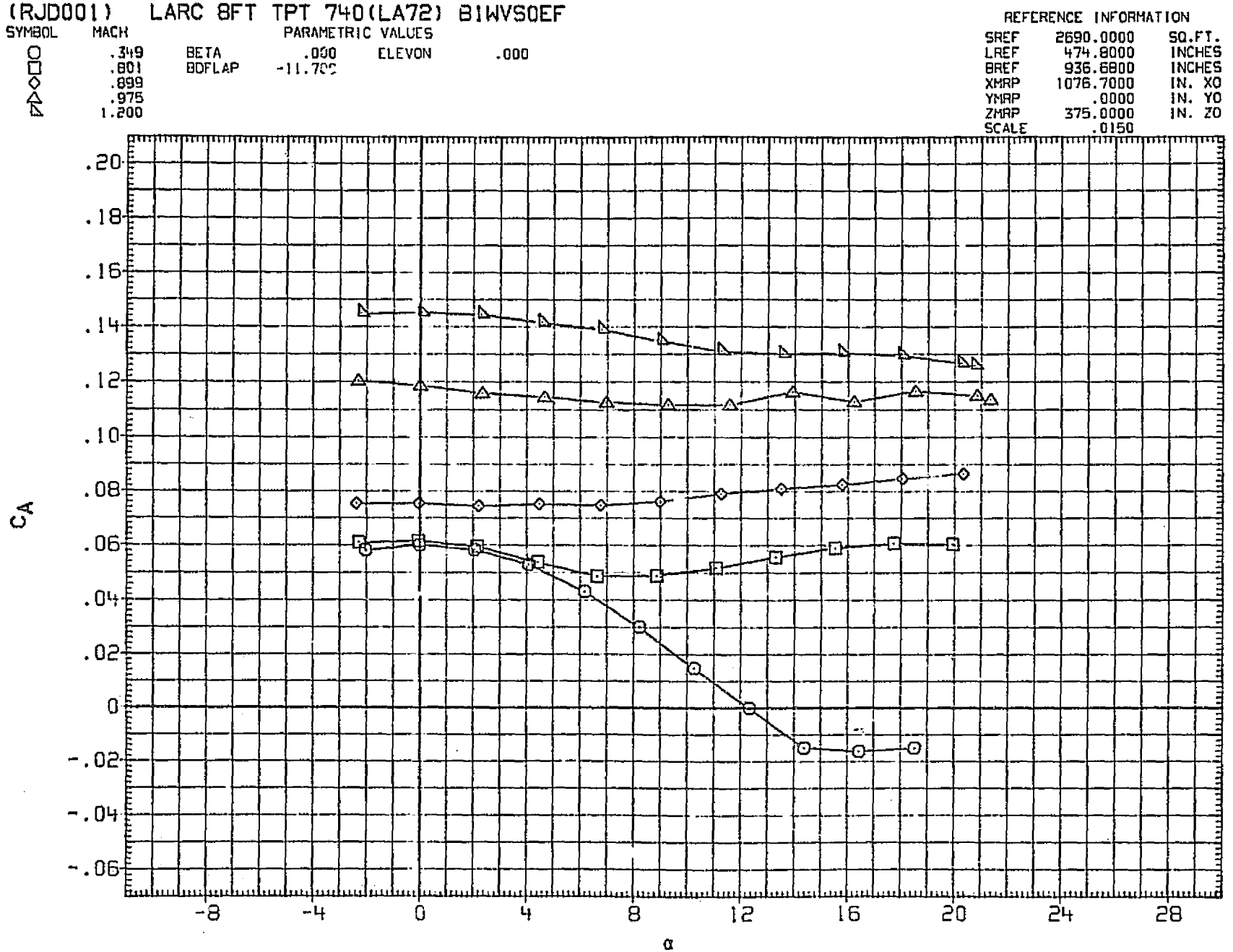


FIGURE 6. EFFECT OF MACH NUMBER ON B1 FOREBODY AT ZERO DEGREES SIDESLIP

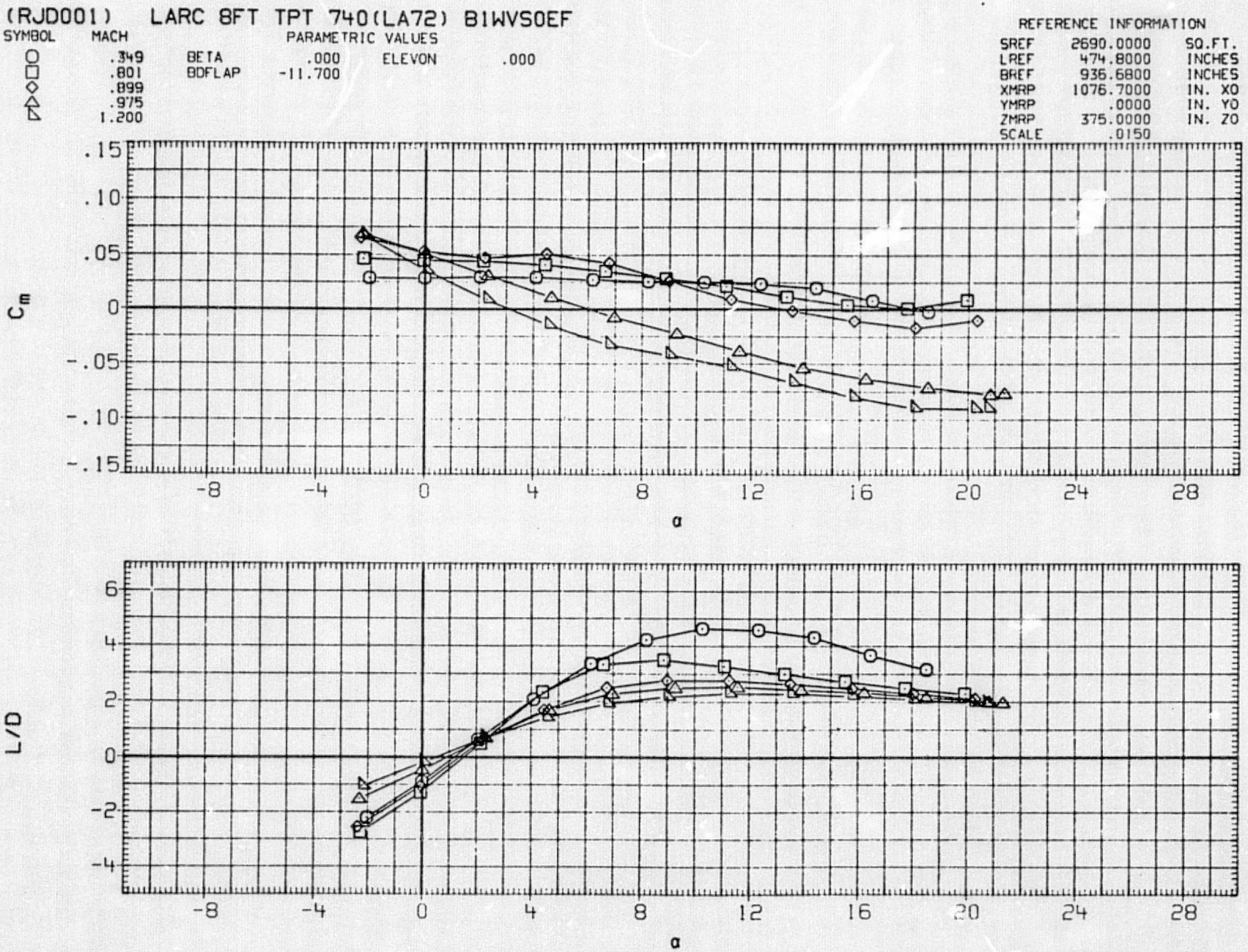


FIGURE 6. EFFECT OF MACH NUMBER ON [illegible] FOREBODY AT ZERO DEGREES SIDESLIP

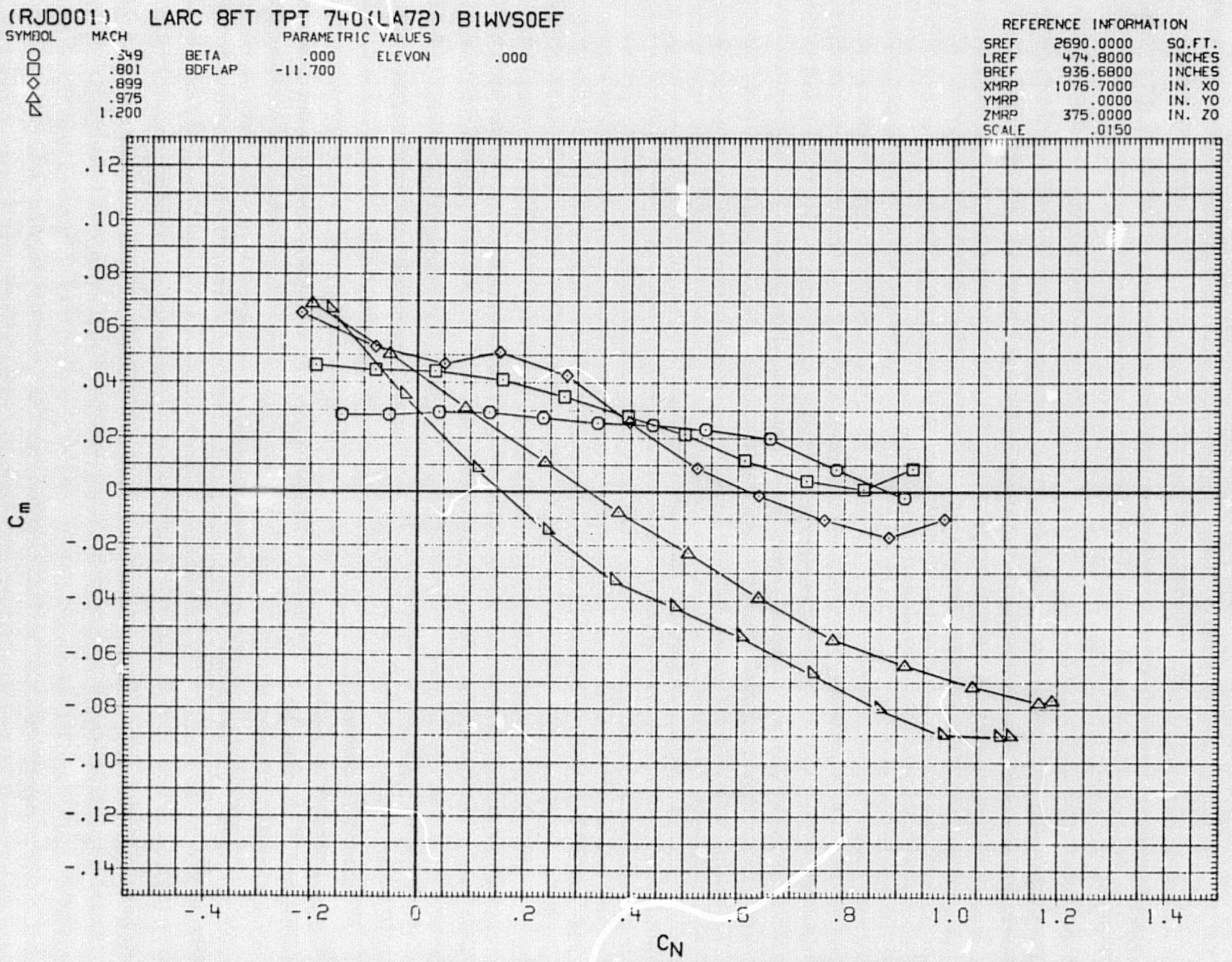


FIGURE 6. EFFECT OF MACH NUMBER ON B1 FOREBODY AT ZERO DEGREES SIDESLIP

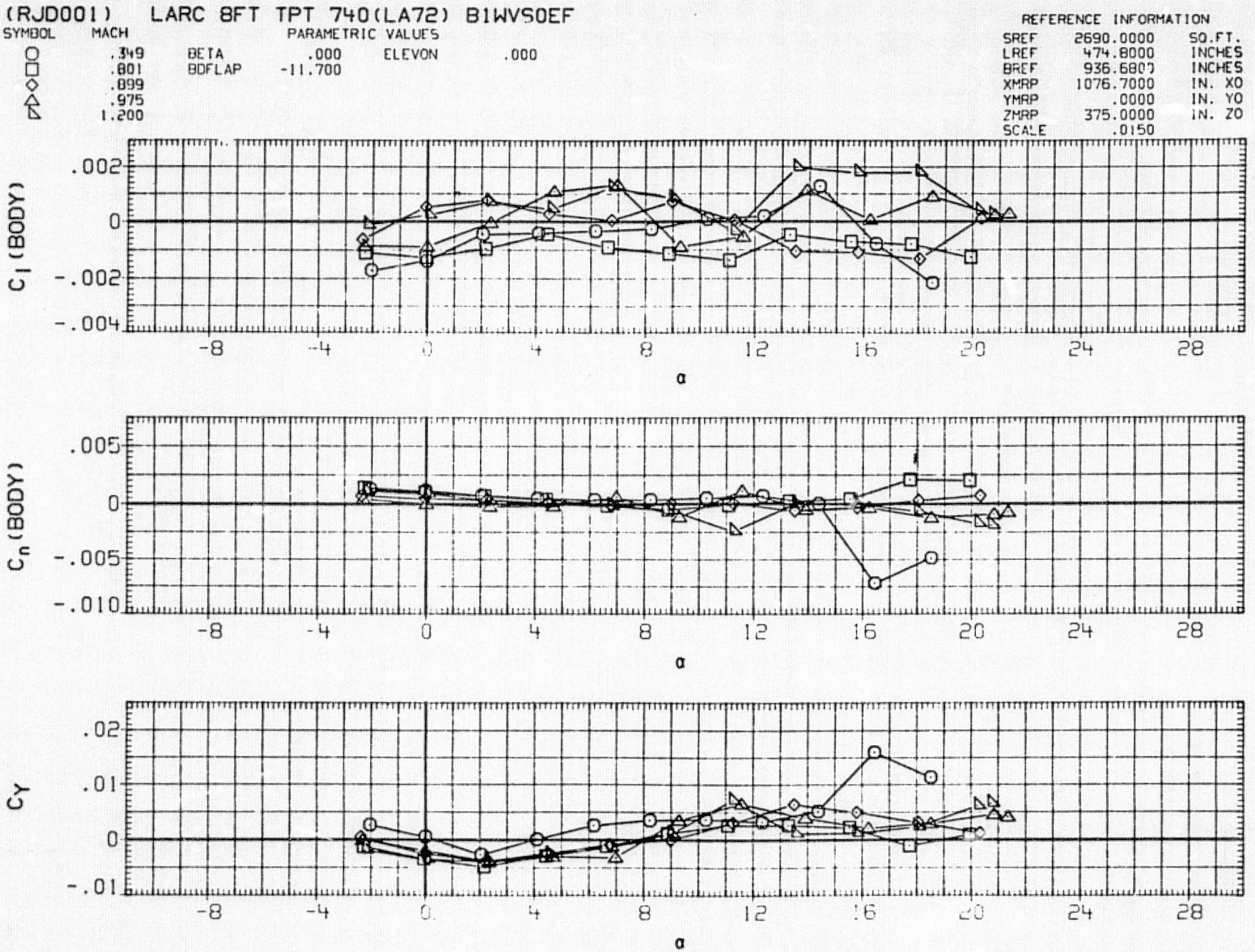


FIGURE 6. EFFECT OF MACH NUMBER ON B1 FOREBODY AT ZERO DEGREES SIDESLIP

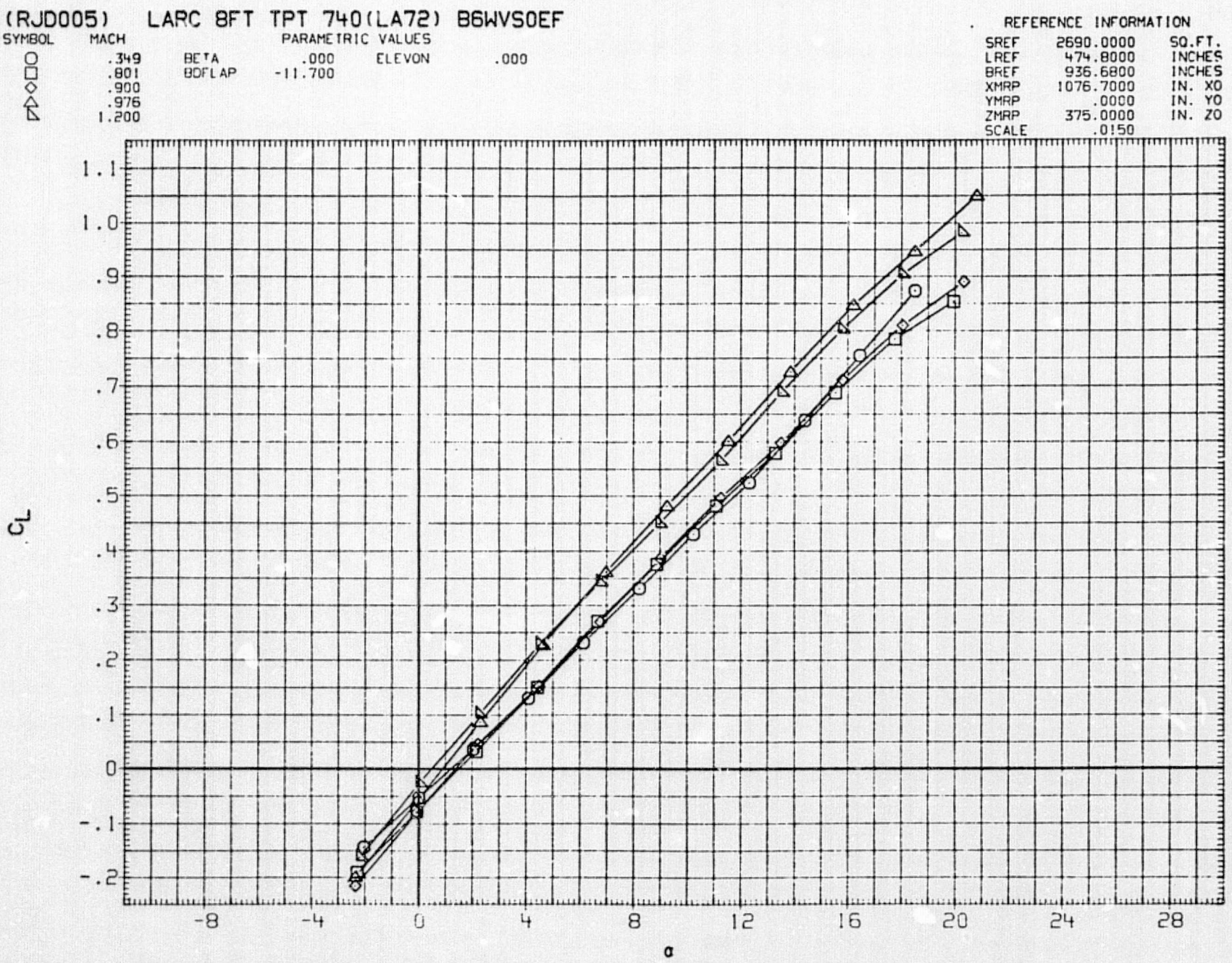


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

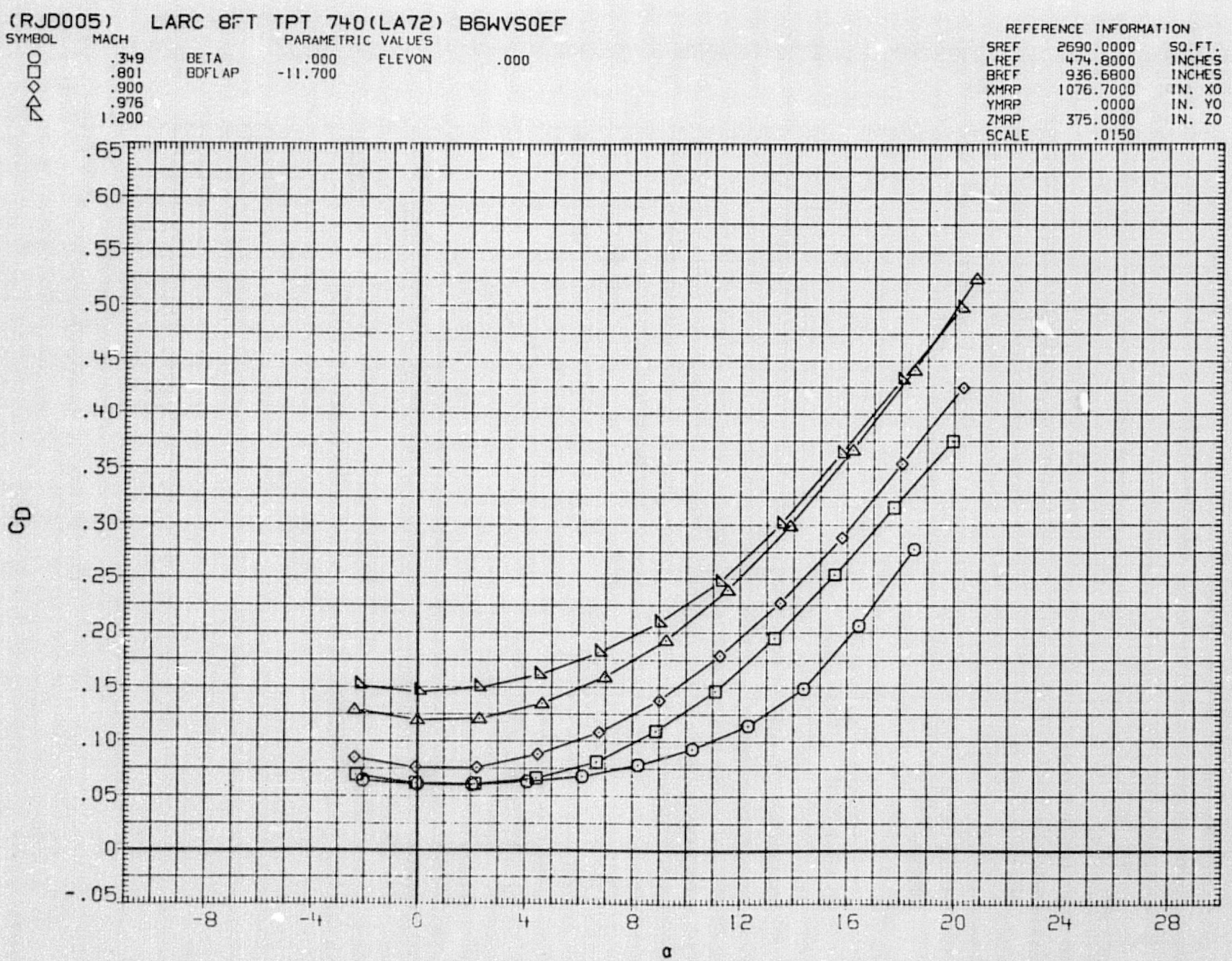


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

(RJD005) LARC 8FT TPT 740(LA72) B6WVS0EF

SYMBOL	MACH
○	.349
□	.801
◇	.900
△	.976
◁	1.200

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
BDFLAP	-11.700		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

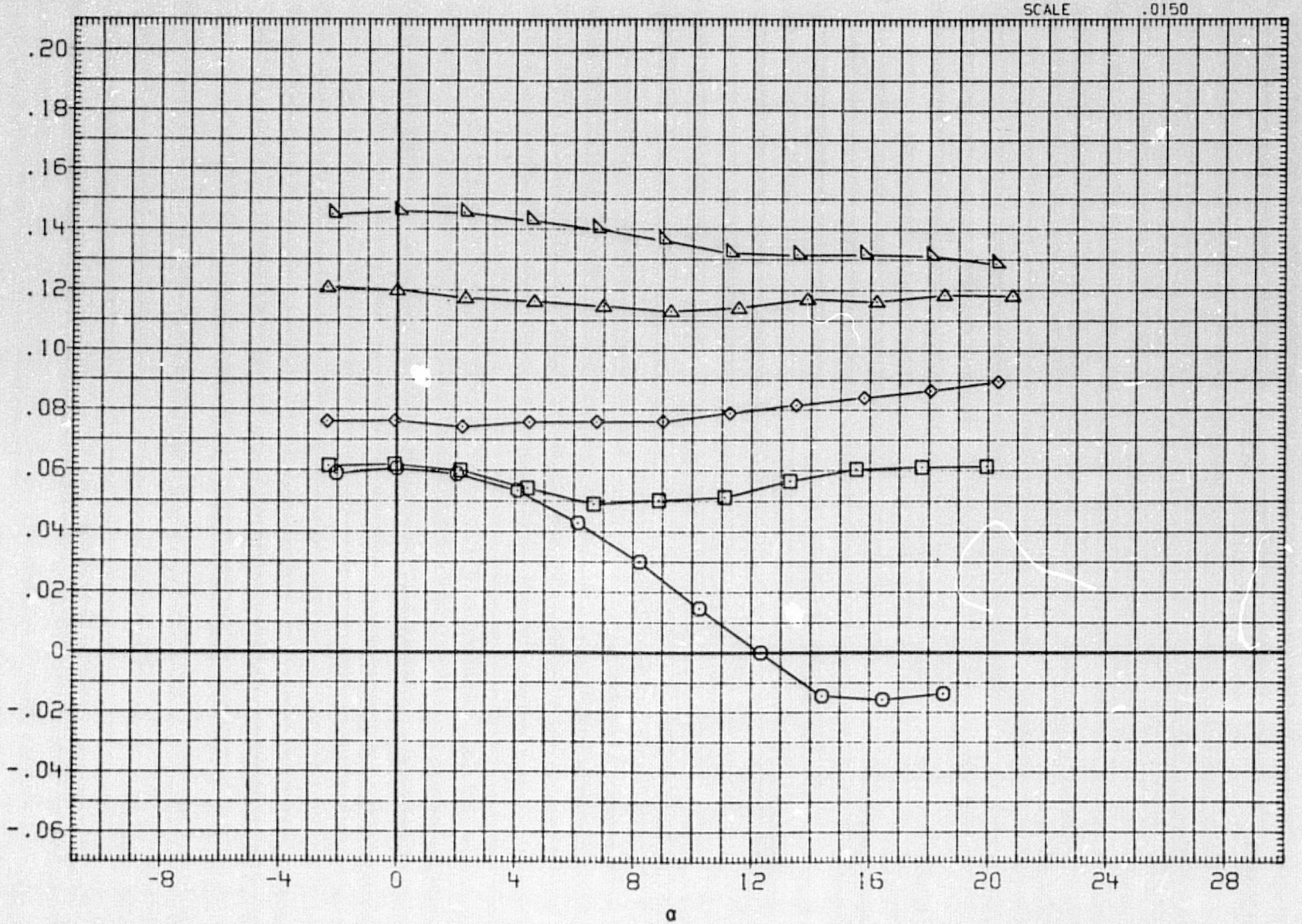


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

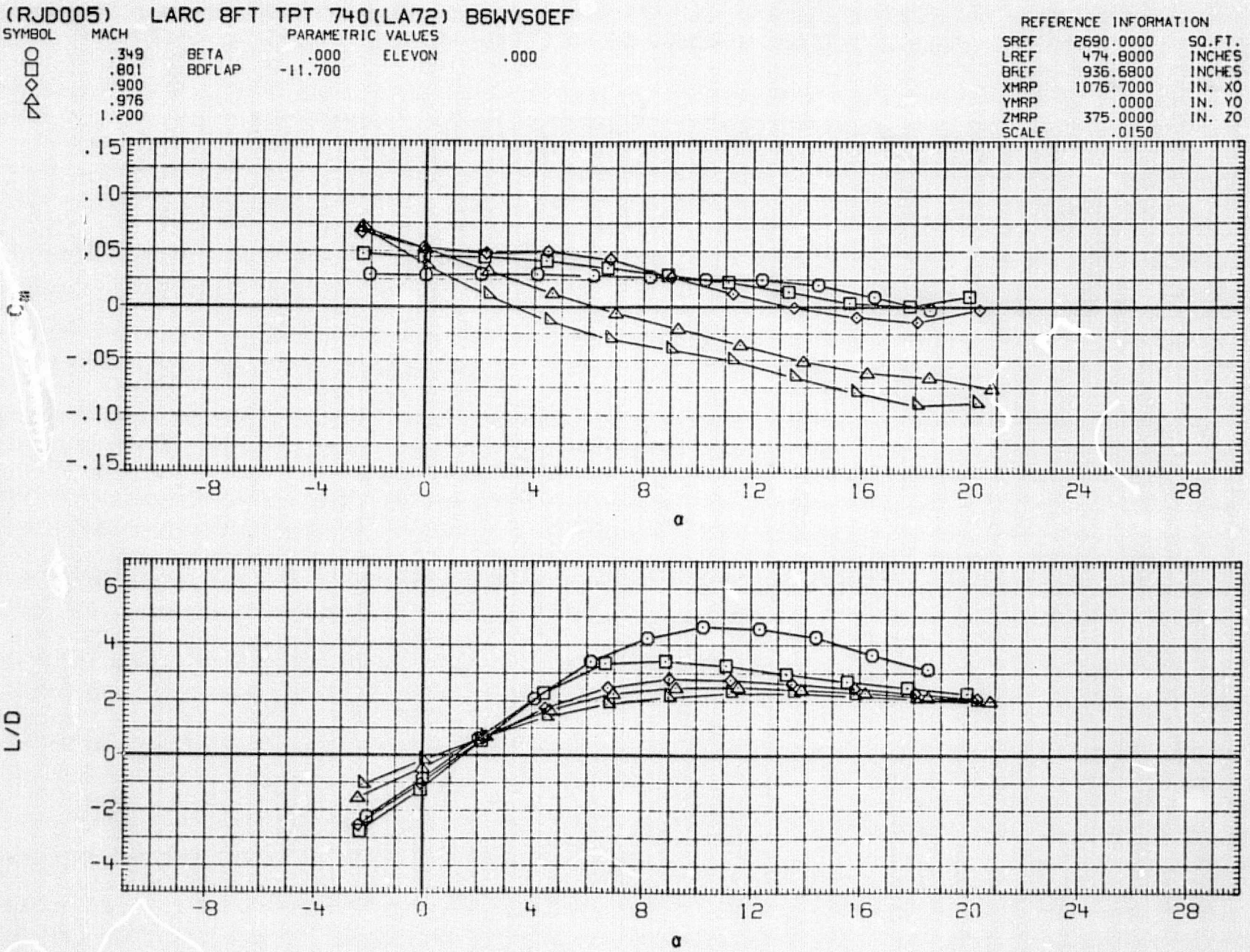


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

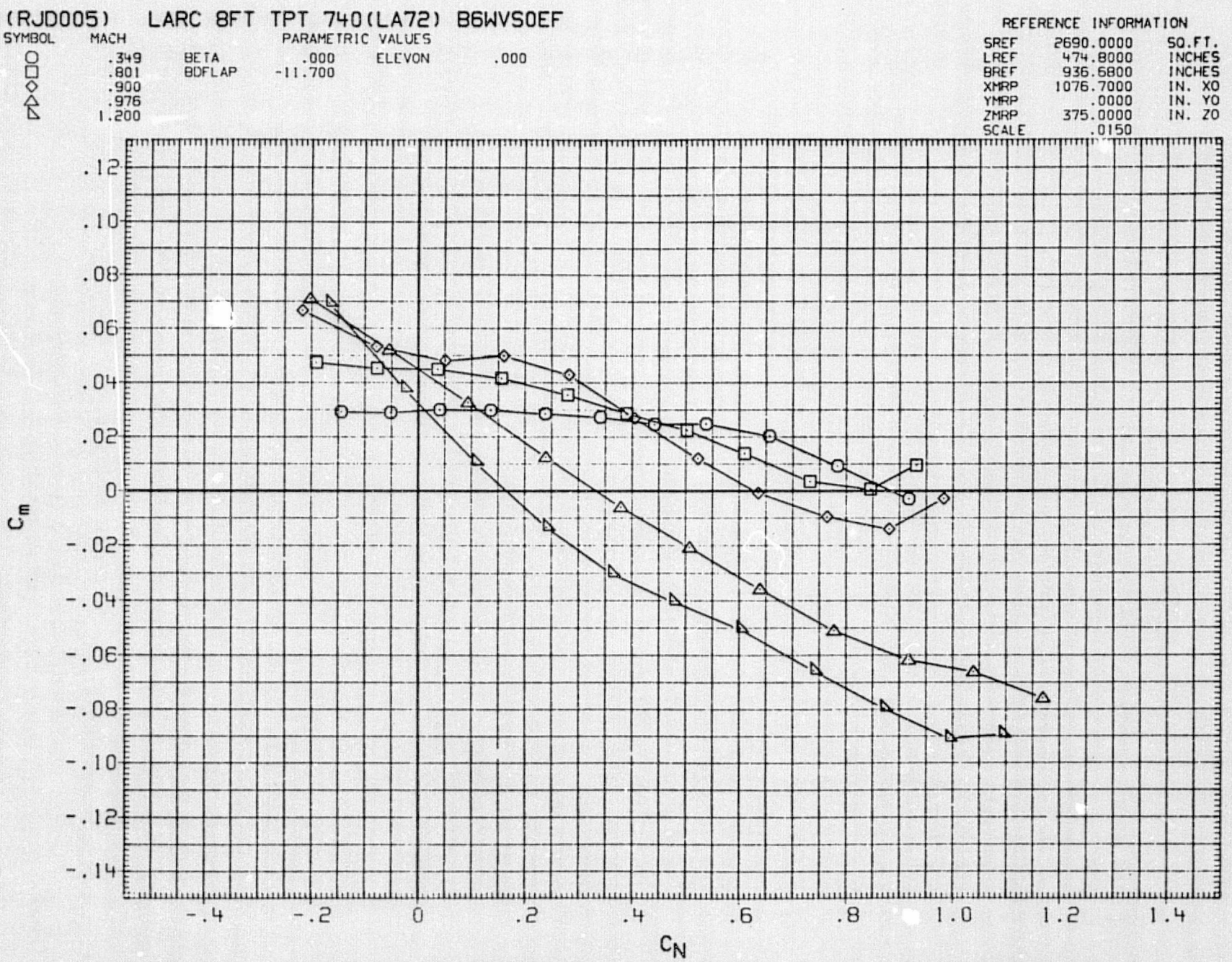


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

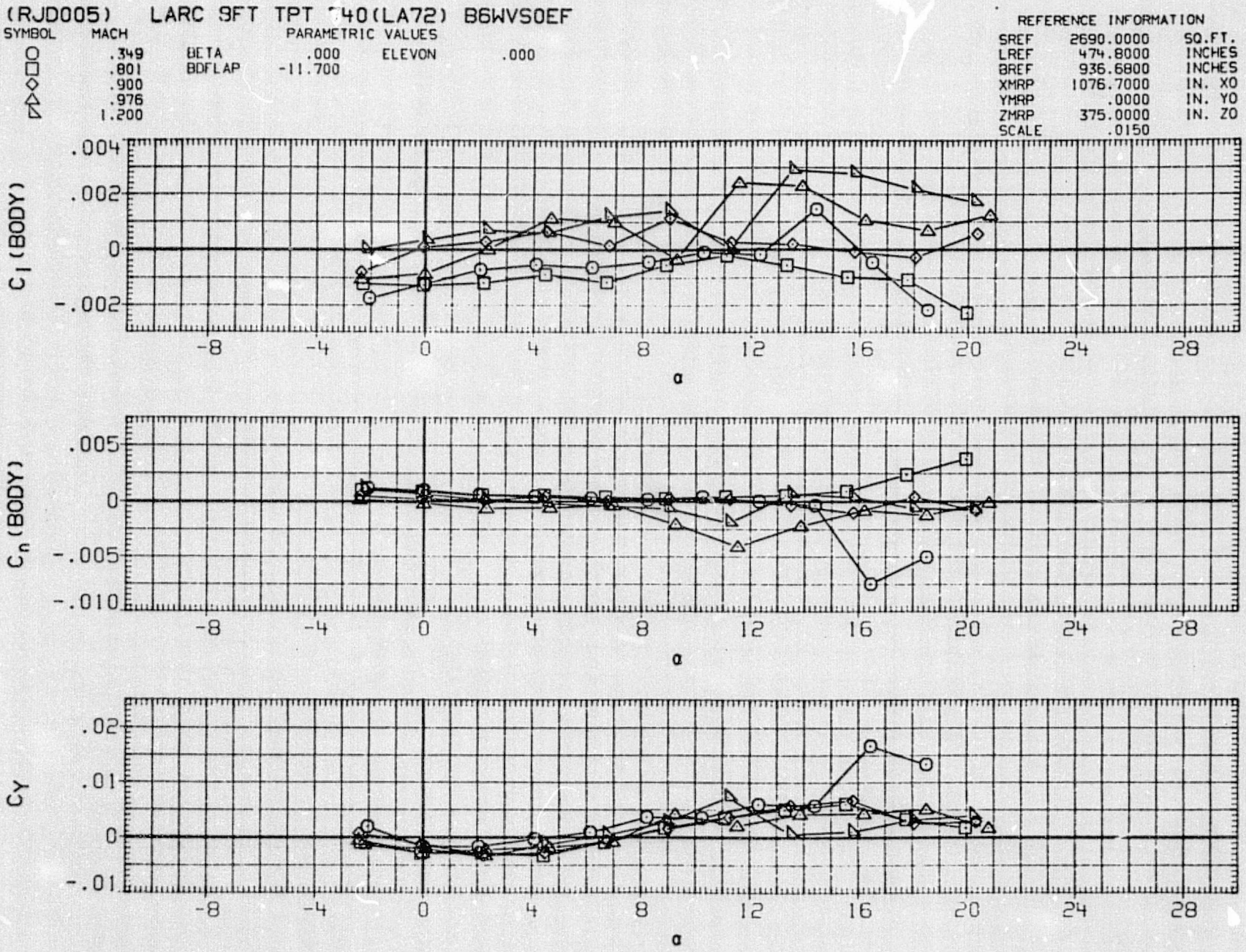


FIGURE 7. EFFECT OF MACH NUMBER ON B6 FOREBODY AT ZERO DEGREES SIDESLIP

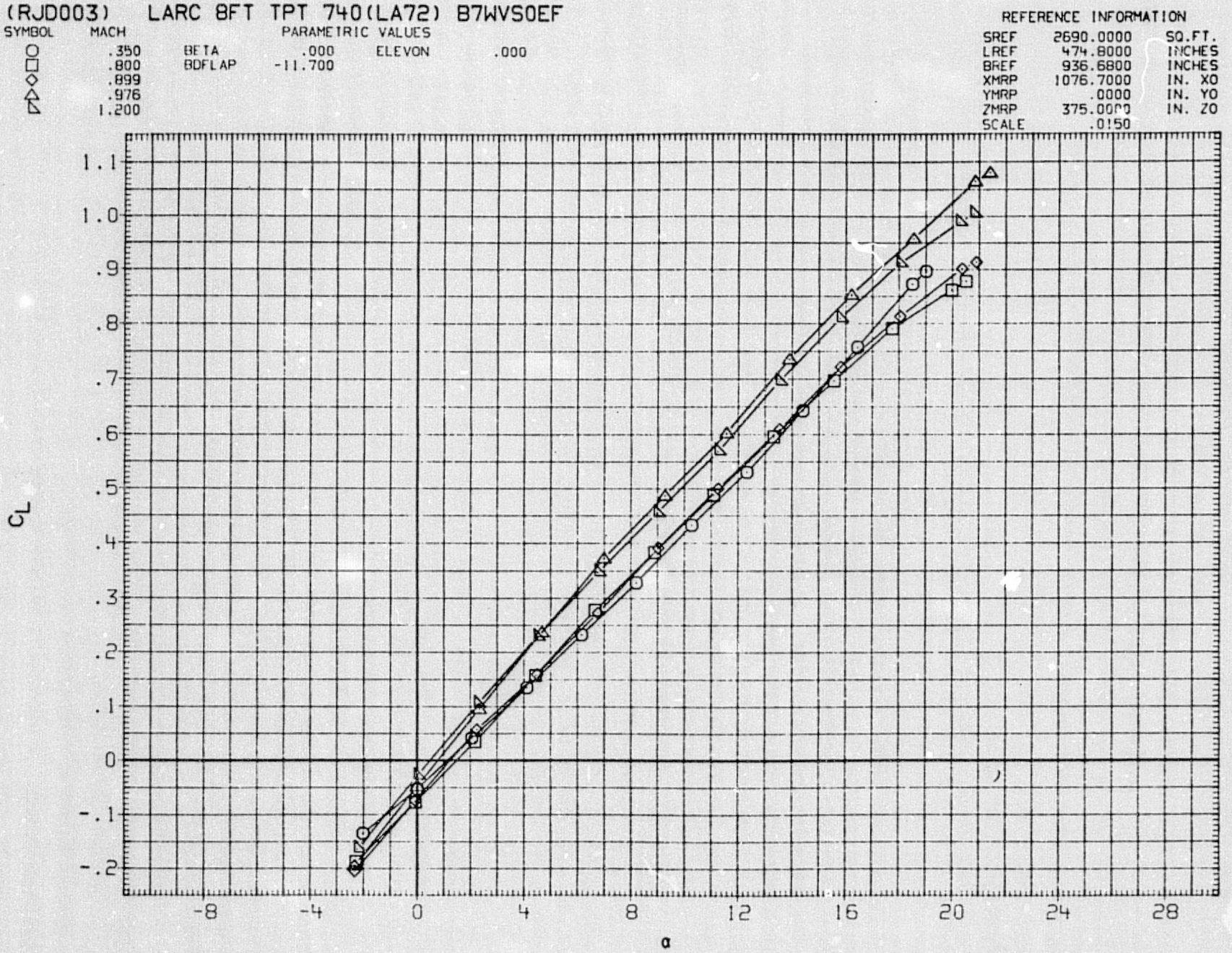


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

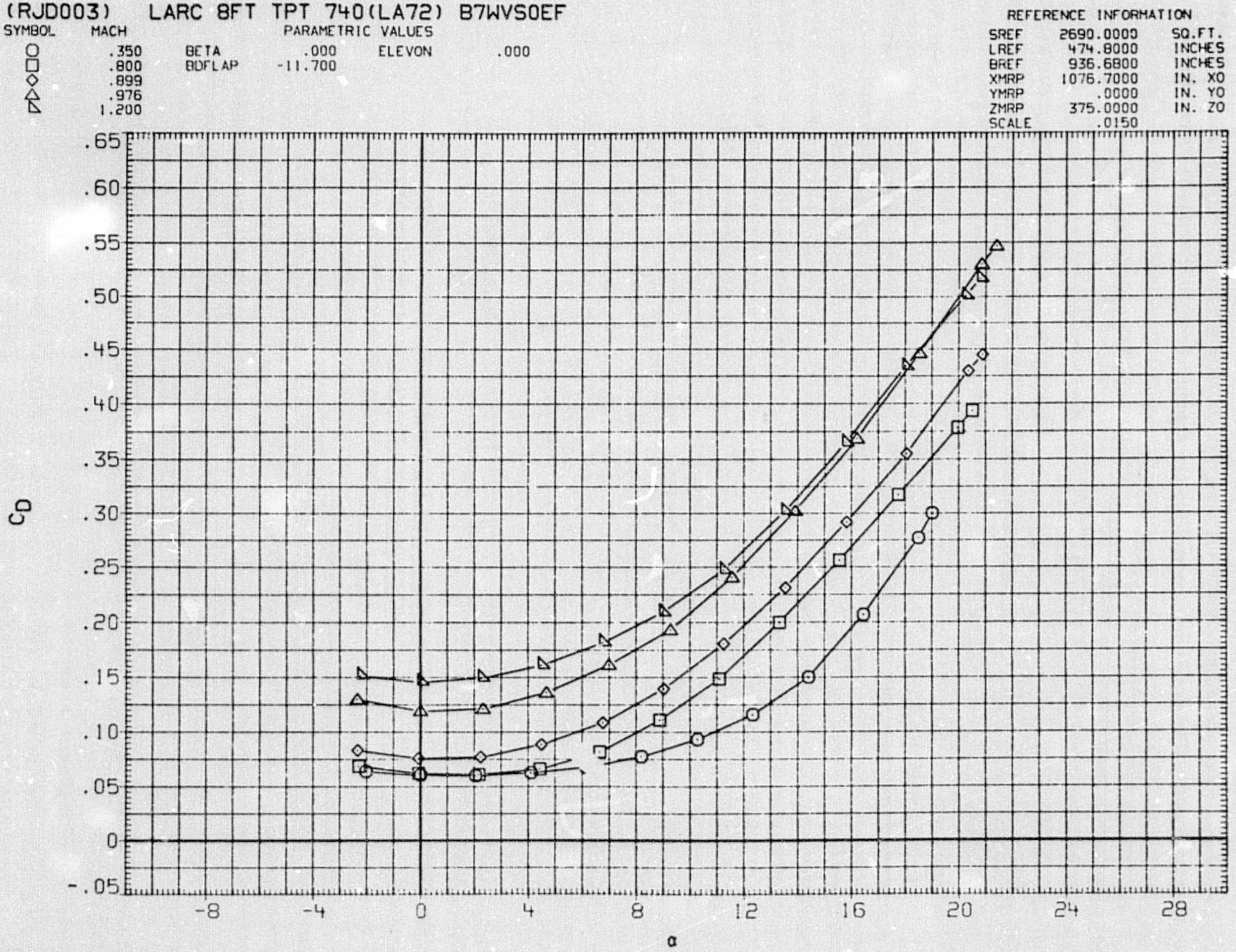


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

(RJD003) LARC 8FT TPT 740(LA72) B7WVS0EF

SYMBOL	MACH
○	.350
□	.800
◇	.899
△	.976
▷	1.200

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
BDFLAP	-11.700		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

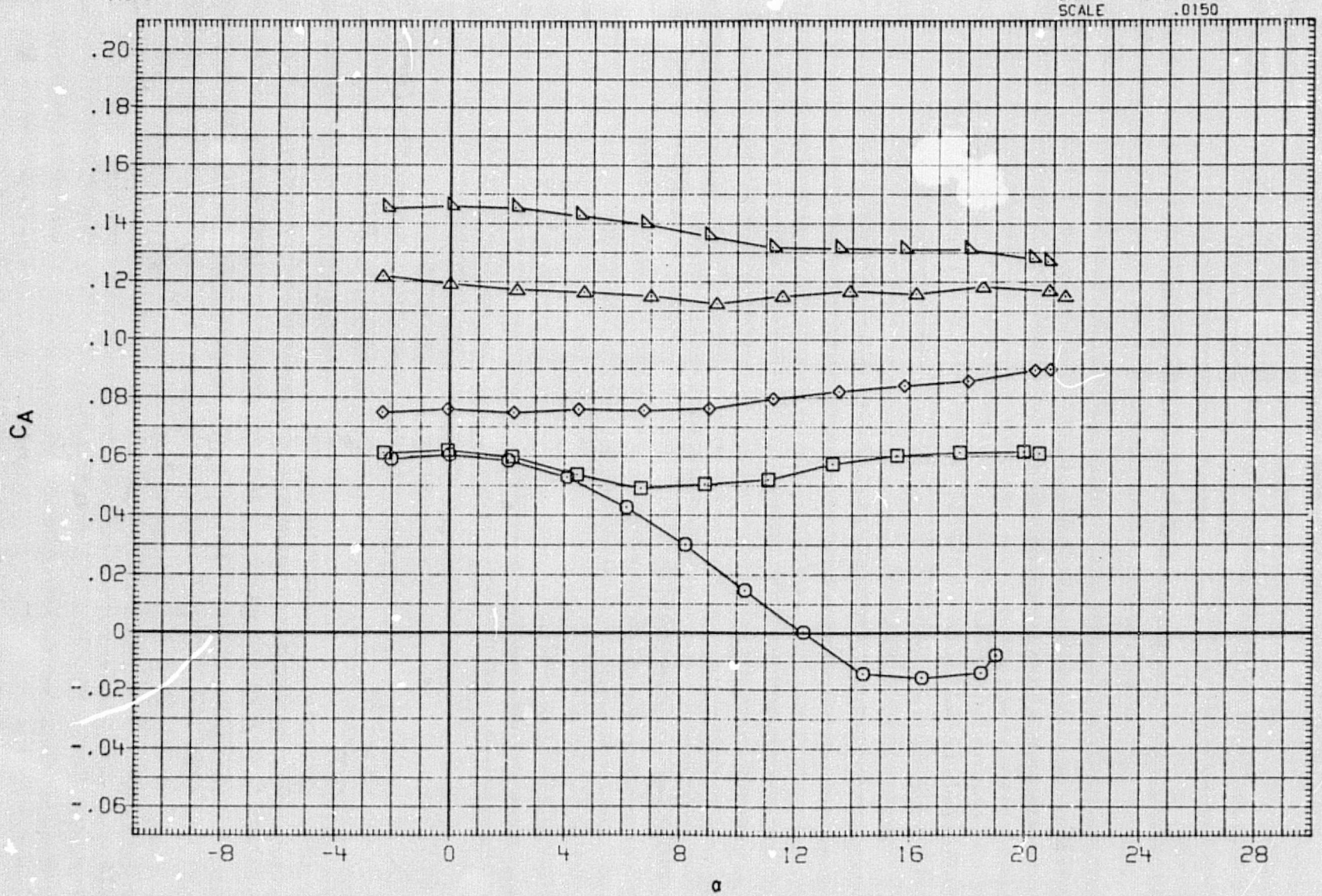


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

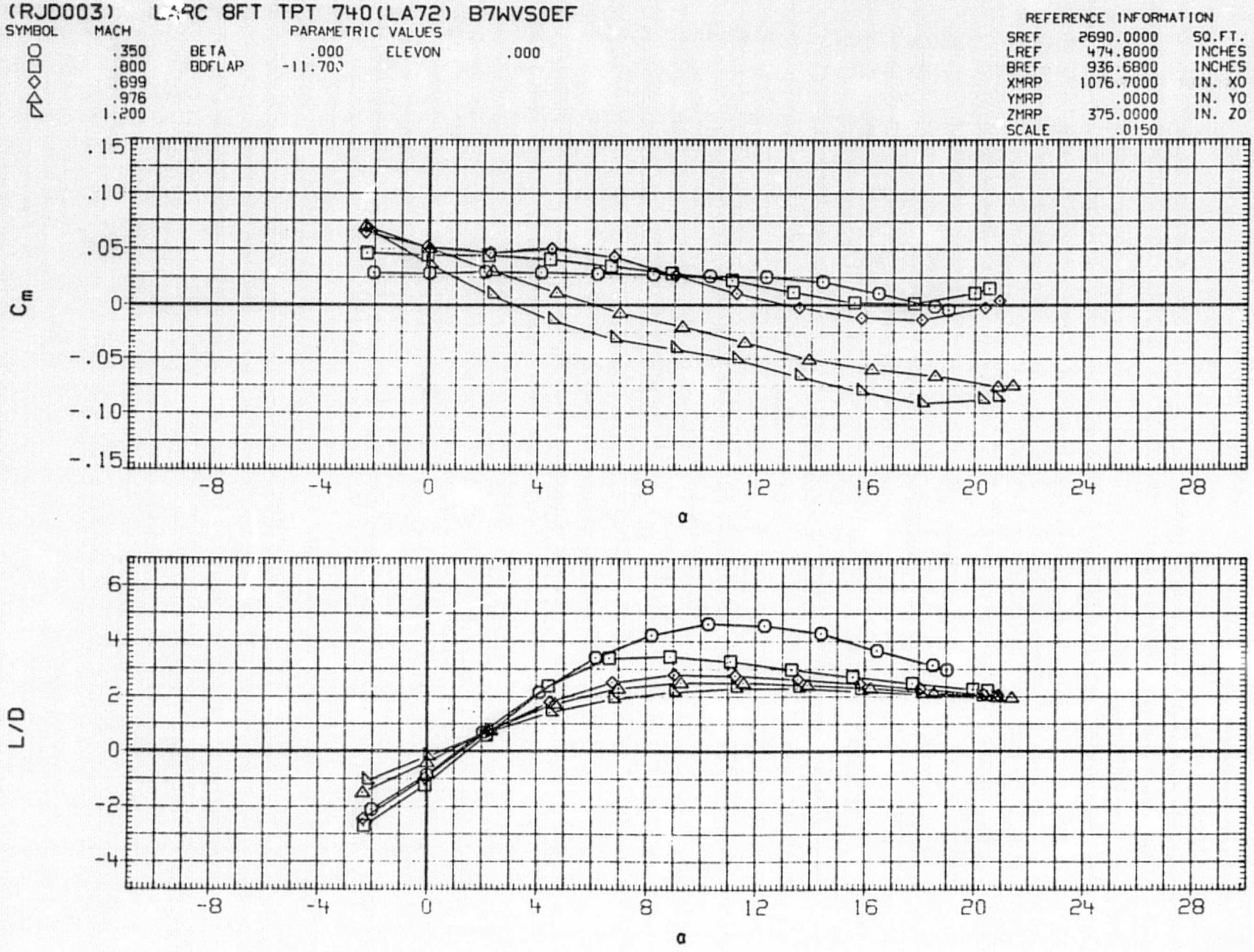


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

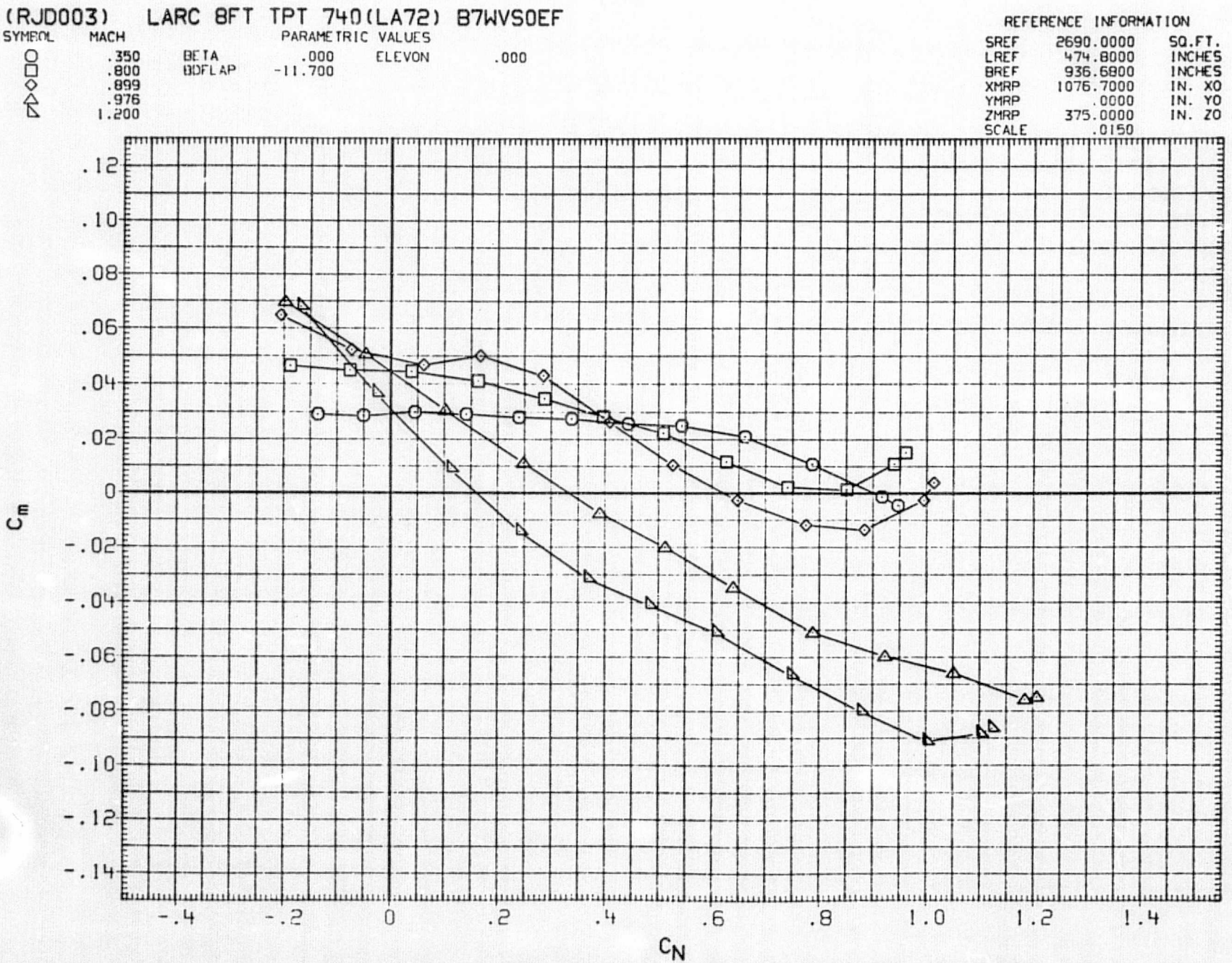


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

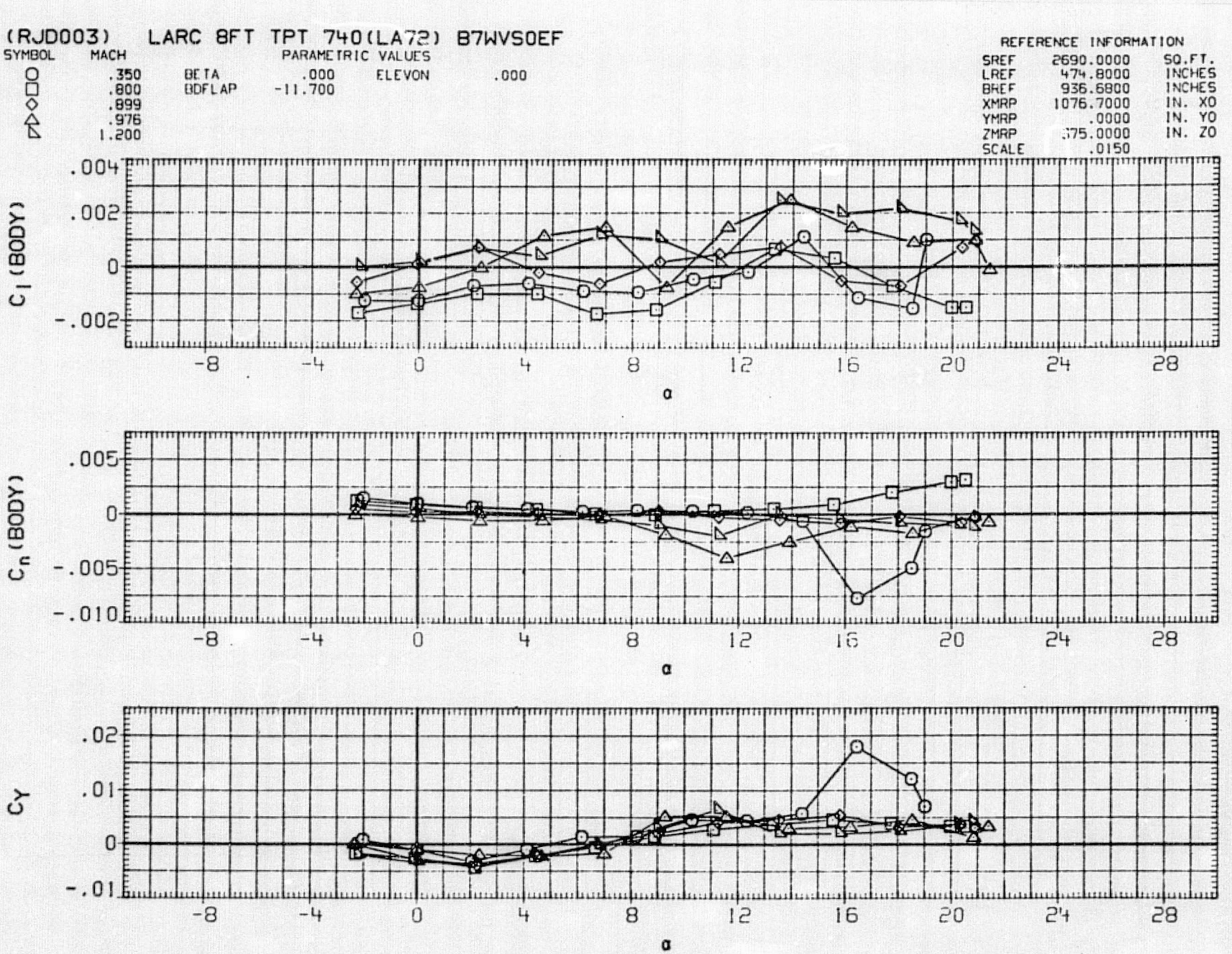


FIGURE 8. EFFECT OF MACH NUMBER ON B7 FOREBODY AT ZERO DEGREES SIDESLIP

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP	DBETA
(CJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700	-5.000
(CJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700	-5.000
(CJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700	-5.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

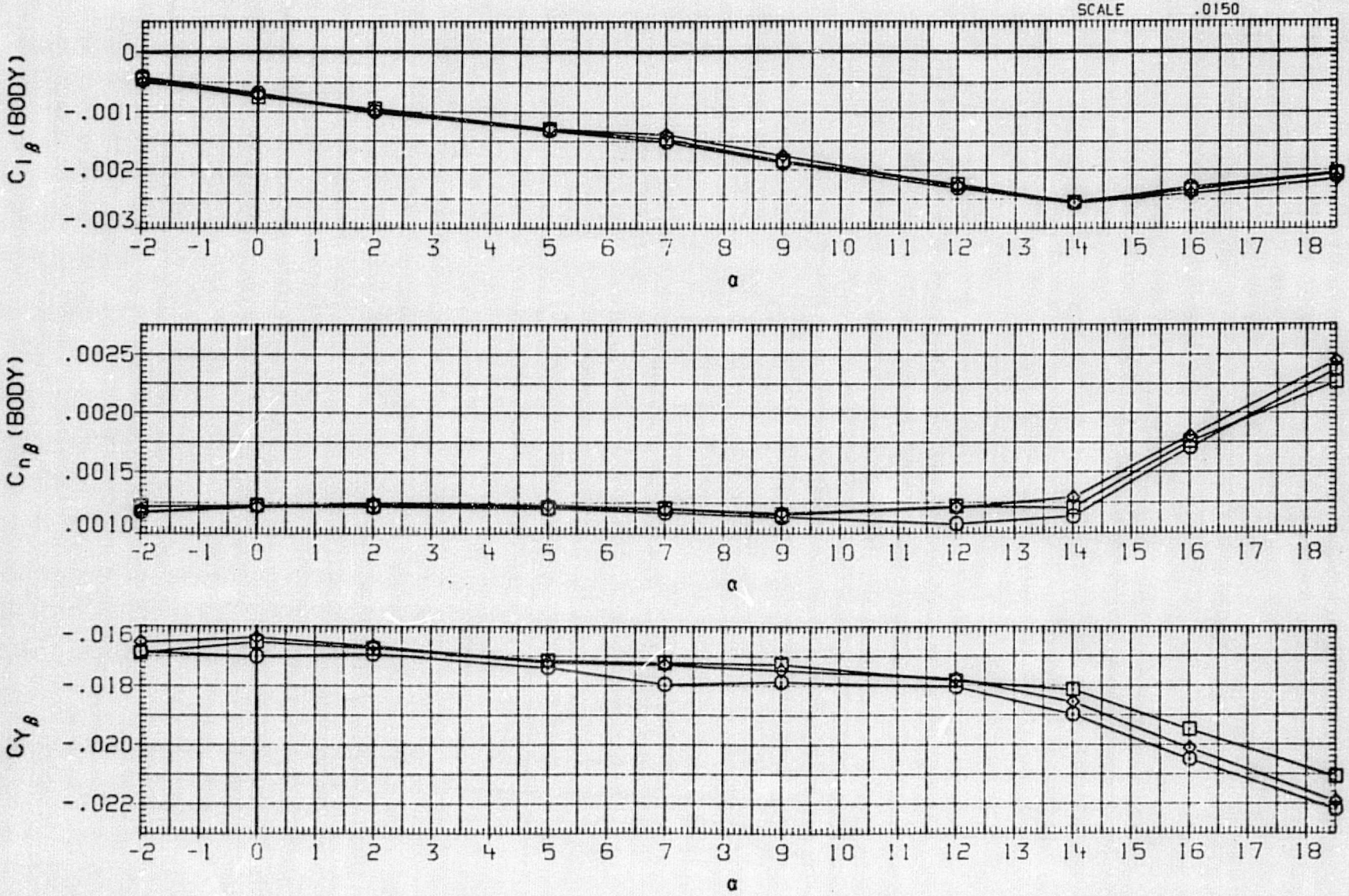


FIGURE 9. LATERAL-DIRECTIONAL DERIVATIVES OF B1,B6 AND B7 FOREBODIES AT CONSTANT MACH NUMBER

(A) MACH = .35

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP	DBETA
(CJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700	-5.000
(CJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700	-5.000
(CJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700	-5.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

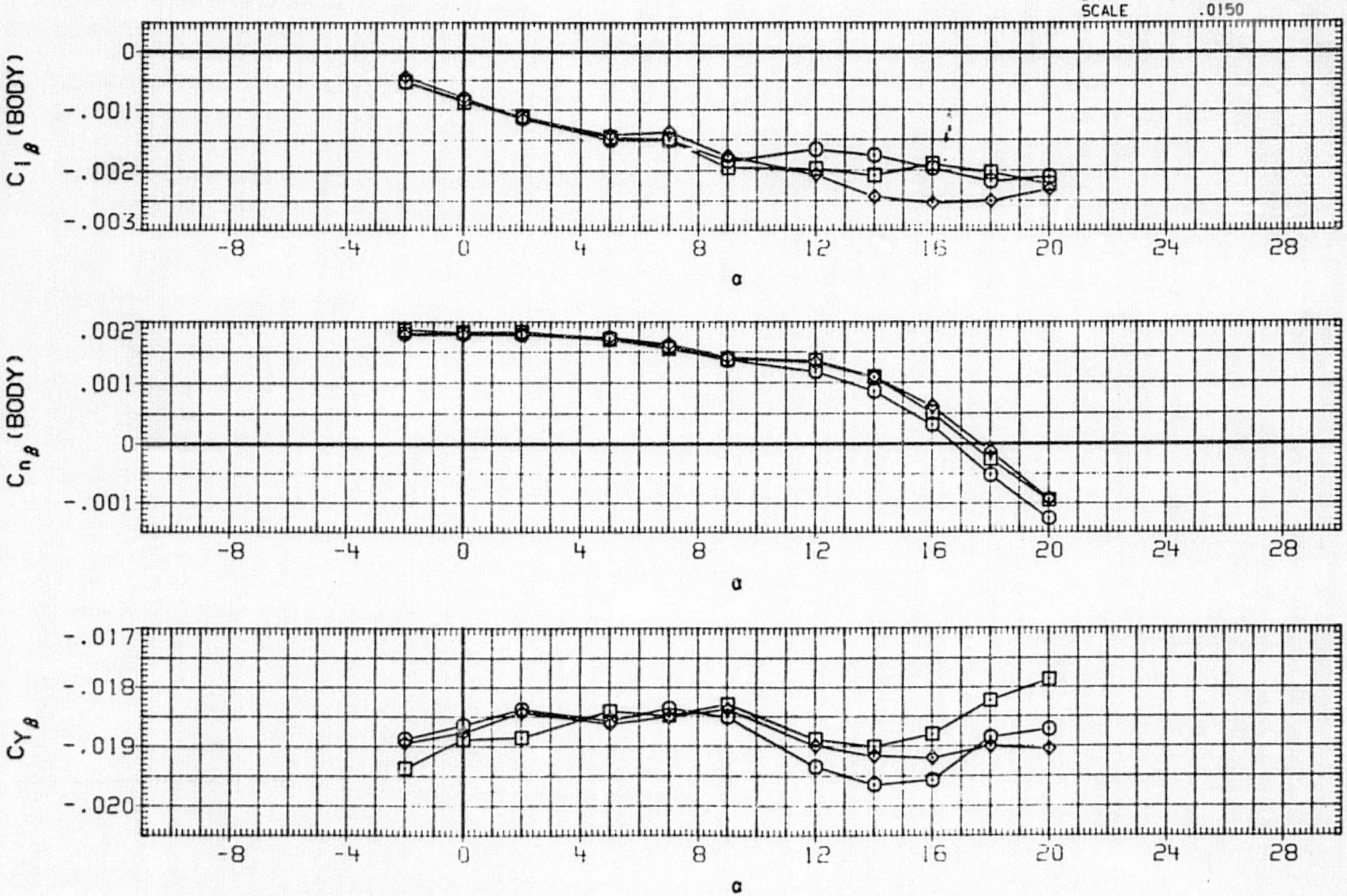


FIGURE 9. LATERAL-DIRECTIONAL DERIVATIVES OF B1,B6 AND B7 FOREBODIES AT CONSTANT MACH NUMBER

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP	DBETA
(CJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700	-5.000
(CJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700	-5.000
(CJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700	-5.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

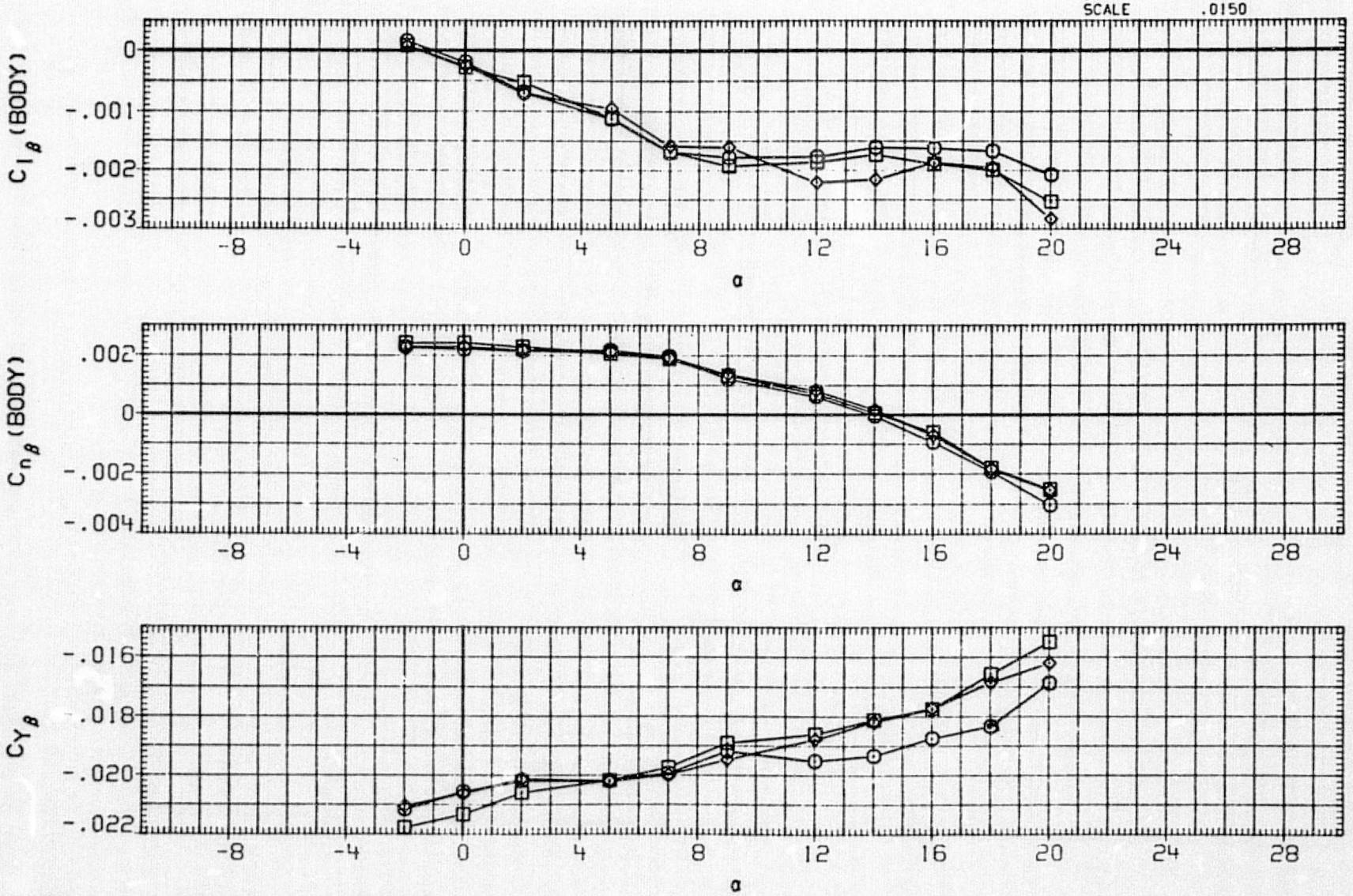


FIGURE 9. LATERAL-DIRECTIONAL DERIVATIVES OF B1,B6 AND B7 FOREBODIES AT CONSTANT MACH NUMBER

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP	DBETA
(CJD001)	○	LARC 8FT TPT 740(LA72) B1WVSOEF	.000	-11.700	-5.000
(CJD005)	□	LARC 8FT TPT 740(LA72) B6WVSOEF	.000	-11.700	-5.000
(CJD003)	◇	LARC 8FT TPT 740(LA72) B7WVSOEF	.000	-11.700	-5.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

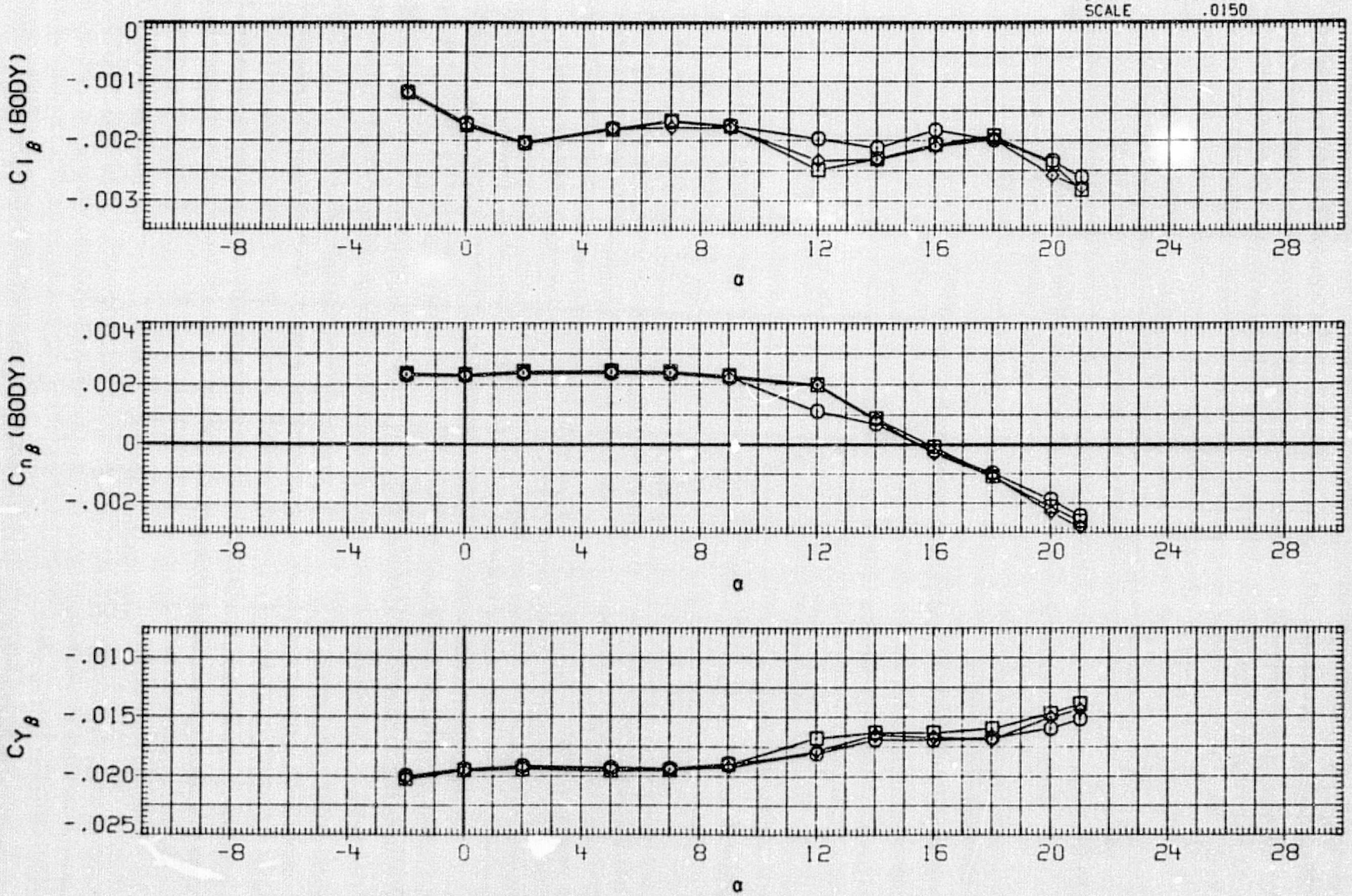


FIGURE 9. LATERAL-DIRECTIONAL DERIVATIVES OF B1, B6 AND B7 FOREBODIES AT CONSTANT MACH NUMBER

(D) MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	BDFLAP	DBETA
(CJD001)	○	LARC 8FT TPT 740(LA72) B1WVS0EF	.000	-11.700	-5.000
(CJD005)	□	LARC 8FT TPT 740(LA72) B6WVS0EF	.000	-11.700	-5.000
(CJD003)	◇	LARC 8FT TPT 740(LA72) B7WVS0EF	.000	-11.700	-5.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	INCHES
BREF	936.6800	INCHES
XMRP	1076.7000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0150	

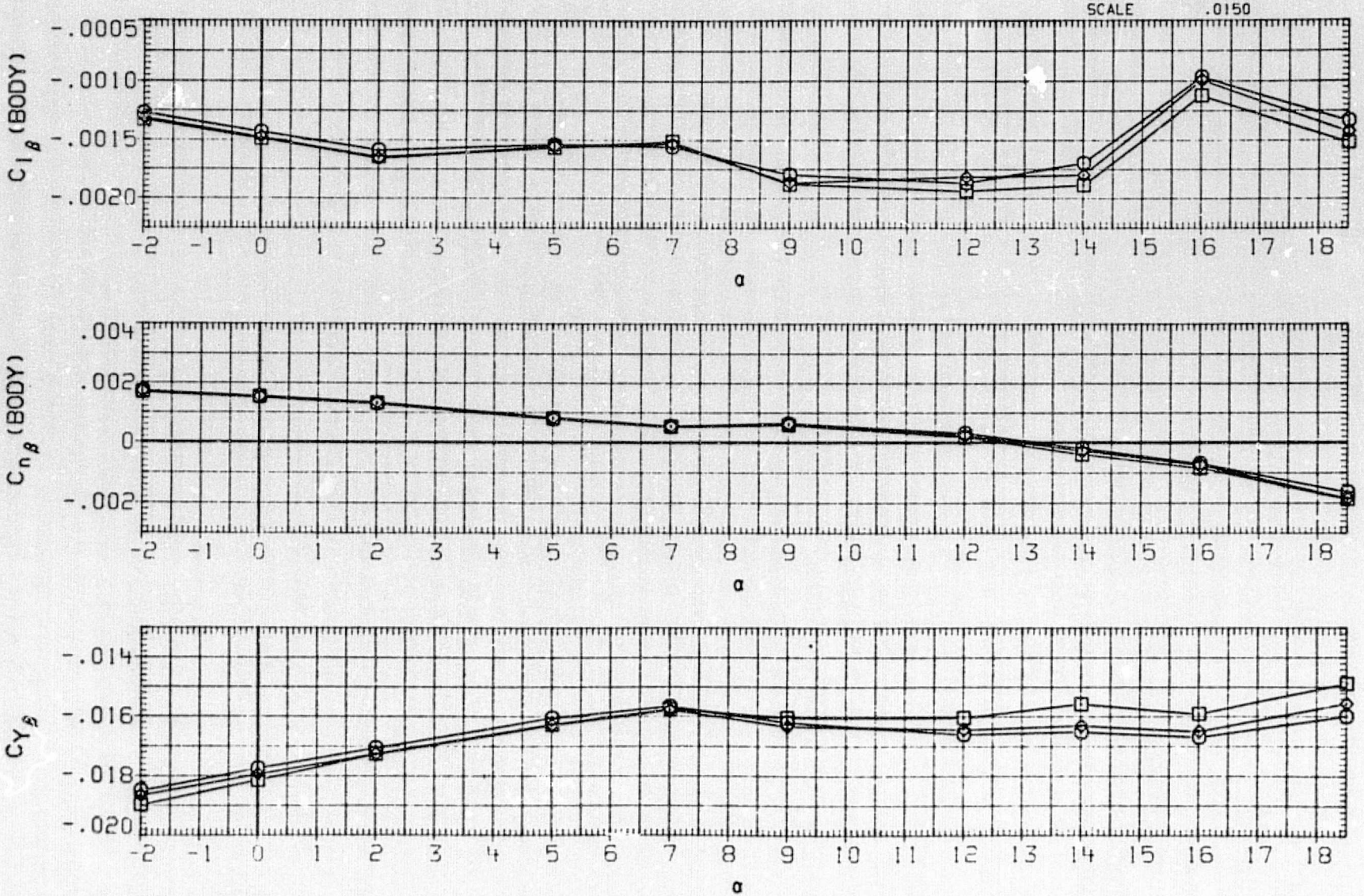


FIGURE 9. LATERAL-DIRECTIONAL DERIVATIVES OF B1,B6 AND B7 FOREBODIES AT CONSTANT MACH NUMBER

(E)MACH = 1.20

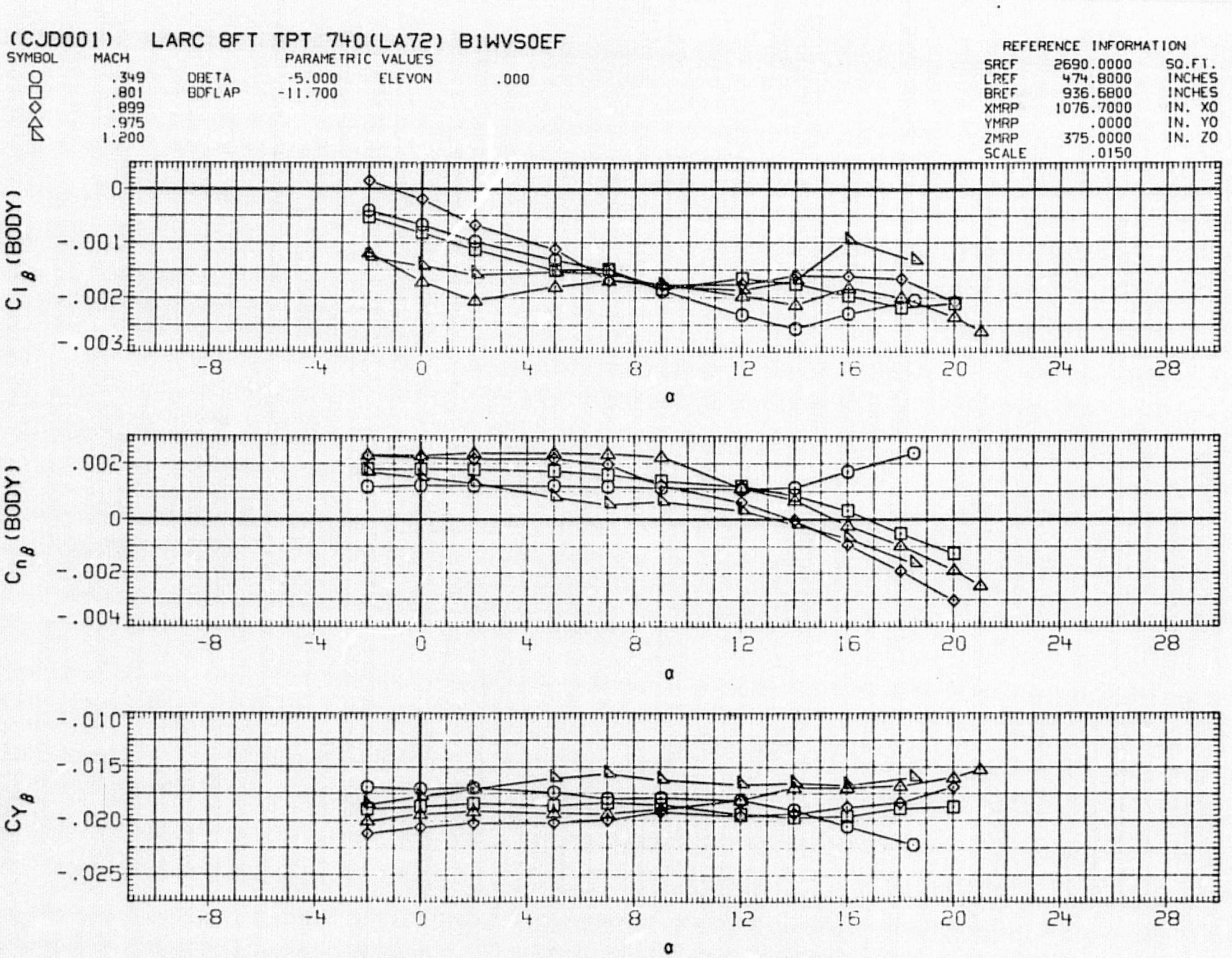


FIGURE 10. EFFECT OF MACH NUMBER ON B1 FOREBODY LATERAL-DIRECTIONAL DERIVATIVES

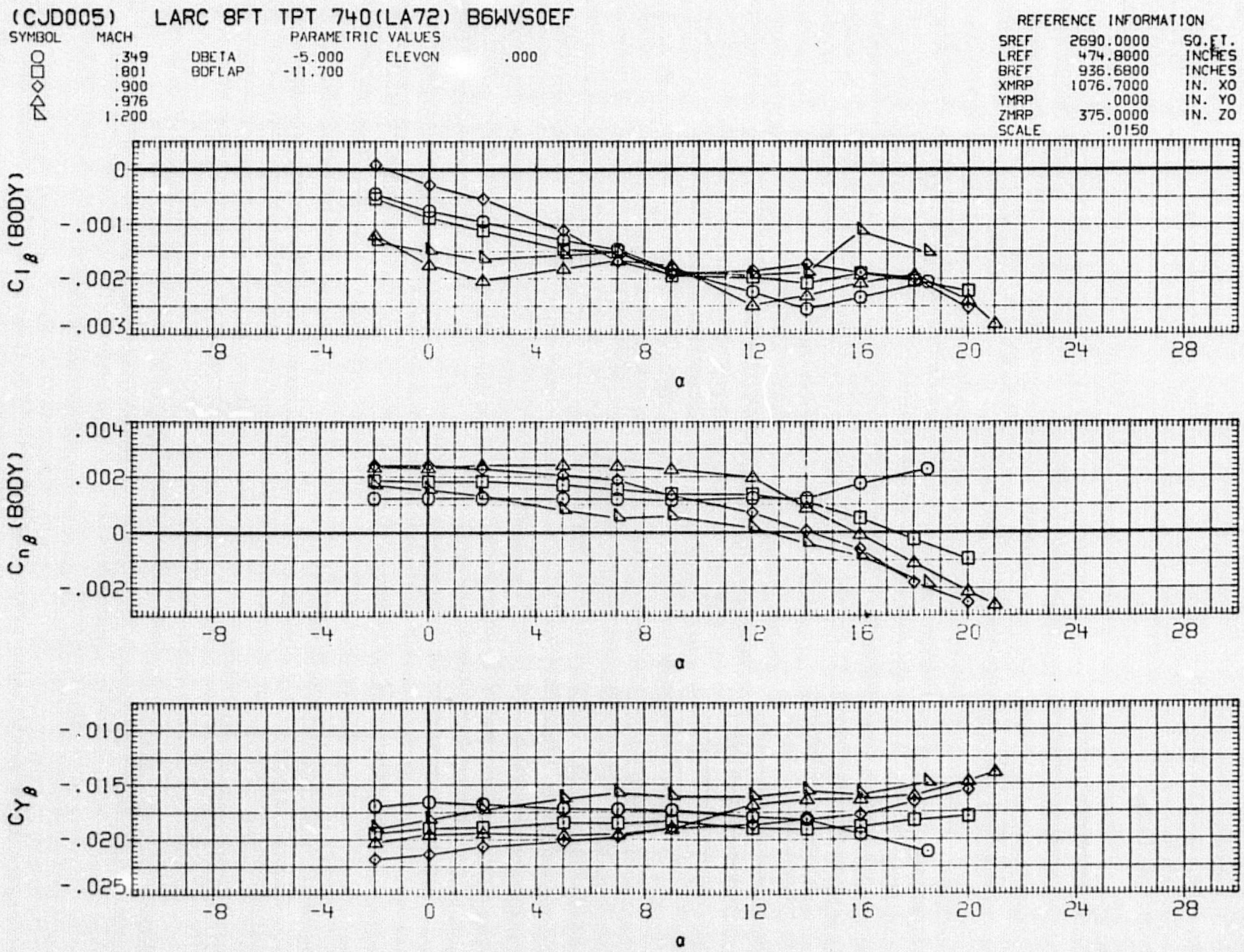


FIGURE 11. EFFECT OF MACH NUMBER ON B6 FOREBODY LATERAL-DIRECTIONAL DERIVATIVES

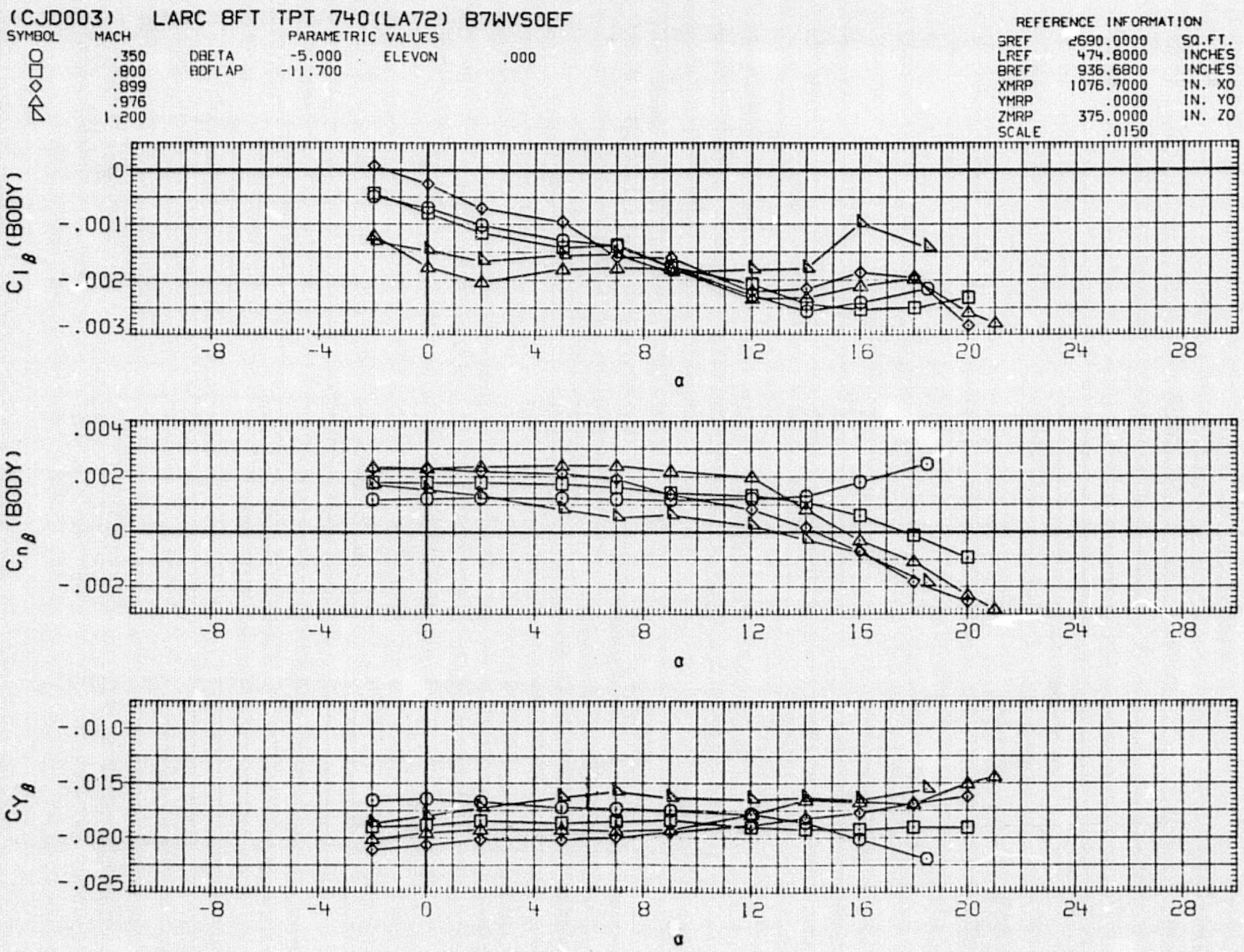


FIGURE 12. EFFECT OF MACH NUMBER ON B7 FOREBODY LATERAL-DIRECTIONAL DERIVATIVES

APPENDIX

TABULATED SOURCE DATA

Tabulations of plotted data are available
from Data Management Services upon request.

ORIGINAL PAGE IS
OF POOR QUALITY

LARC 8FT TPT 740(LA72) B1WV50EF (RJD001) (22 OCT 76)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.7000 IN. XO		
LREF =	474.8000 INCHES	YMRP =	.0000 IN. YO		
BREF =	936.6800 INCHES	ZMRP =	375.0000 IN. ZO		
SCALE =	.0150				

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 5/ 0 RN/L = 2.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.349	-2.066	-.00263	-.14298	.05827	.02857	-.14079	.06339	.00272	.00128	-.00172	-2.22112
.349	-.027	-.00155	-.05389	.06019	.02854	-.05386	.06022	.00061	.00114	-.00138	-.89435
.349	2.035	.00031	.04014	.05842	.02949	.03804	.05981	-.00260	.00073	-.00046	.63600
.350	4.077	-.00060	.13420	.05310	.02931	.13009	.06250	.00018	.00046	-.00042	2.08122
.350	6.152	-.00154	.23444	.04318	.02740	.22846	.06805	.00265	.00035	-.00033	3.35708
.350	8.208	-.00198	.33639	.03010	.02567	.32863	.07788	.00361	.00036	-.00026	4.21995
.350	10.255	-.00218	.43930	.01494	.02485	.42963	.09291	.00377	.00050	.00007	4.62432
.350	12.309	-.00214	.53916	.00013	.02330	.52576	.11485	.00332	.00065	.00017	4.57782
.349	14.364	-.00224	.65886	-.01478	.01996	.64193	.14913	.00523	.00001	.00128	4.30450
.350	16.438	.00107	.78371	-.01604	.00856	.75622	.20638	.01608	-.00720	-.00079	3.66413
.349	18.503	.000 4	.91178	-.01489	-.00218	.86937	.27523	.01146	-.00484	-.00215	3.15868
	GRADIENT	.00039	.04517	-.00084	.00015	.04414	-.00015	-.00053	-.00014	.00024	.70460

RUN NO. 4/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.801	-2.298	-.00400	-.19126	.06109	.04638	-.18866	.06871	-.00117	.00140	-.00110	-2.74589
.800	-.069	.00129	-.07945	.06163	.04461	-.07937	.06173	-.00336	.00099	-.00125	-1.28585
.800	2.142	.00483	.03272	.05955	.04421	.03047	.06073	-.00473	.00069	-.00095	.50174
.800	4.397	.00296	.15846	.05389	.04117	.15387	.06588	-.00279	.00038	-.00046	2.33568
.800	6.616	.00234	.27416	.04876	.03512	.26672	.08002	-.00105	-.00015	-.00091	3.33305
.800	8.849	-.00003	.39327	.04905	.02801	.38105	.10897	.00128	-.00049	-.00113	3.49683
.801	11.070	-.00384	.49971	.05187	.02149	.48046	.14685	.00271	-.00012	-.00137	3.27170
.801	13.283	-.00513	.61151	.05579	.01185	.58233	.19480	.00269	.00020	-.00048	2.98942
.801	15.510	-.00540	.72746	.05910	.00429	.68517	.25147	.00233	.00042	-.00071	2.72465
.799	17.713	-.00690	.83544	.06079	.00108	.77733	.31209	-.00098	.00209	-.00080	2.49075
.799	19.925	-.00951	.92709	.06050	.00878	.87098	.37282	.00099	.00201	-.00126	2.28252
	GRADIENT	.00109	.05209	-.00106	-.00072	.05102	-.00042	-.00028	-.00015	.00010	.76397

LARC 8FT TPT 740(LA72) B1WVSOEF (RJD001) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 3/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.899	-2.399	-.00440	-.21895	.07544	.06554	-.21561	.08454	.00056	.00069	-.00063	-2.55041
.899	-.055	.00233	-.07927	.07560	.05303	-.07920	.07567	-.00243	.00046	.00051	-1.04658
.899	2.198	.00532	.05036	.07458	.04686	.04746	.07646	-.00373	.00034	.00075	.62075
.898	4.459	.00412	.15344	.07529	.05107	.14713	.08700	-.00238	.00006	.00026	1.69117
.899	6.748	.00217	.27893	.07494	.04280	.26819	.10719	-.00078	-.00015	.00005	2.50192
.900	8.972	-.00025	.39683	.07625	.02585	.38009	.13720	.00005	.00003	.00070	2.77023
.901	11.246	-.00604	.52274	.07912	.00896	.49727	.17955	.00317	.00005	.00004	2.76948
.900	13.487	-.00898	.63810	.08108	-.00130	.60159	.22766	.00647	-.00059	-.00106	2.64246
.900	15.768	-.00755	.76129	.08259	-.01029	.71020	.28635	.00503	-.00032	-.00108	2.48018
.900	18.033	-.00709	.88297	.08479	-.01686	.81335	.35396	.00321	.00030	-.00132	2.29786
.900	20.302	-.00546	.98722	.08660	-.01093	.89584	.42375	.00133	.00069	.00010	2.11409
	GRADIENT	.00126	.05464	-.00006	-.00218	.05324	.00034	-.00045	-.00009	.00013	.63063

RUN NO. 2/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.975	-2.335	-.00212	-.19920	.12050	.06914	-.19412	.12852	-.00001	.00041	-.00036	-1.51046
.976	-.014	.00368	-.05322	.11873	.05064	-.05319	.11874	-.00186	.00001	-.00088	-.44794
.975	2.317	.00878	.08954	.11594	.03115	.08478	.11947	-.00380	-.00021	-.00005	.70963
.975	4.653	.00674	.23851	.11467	.01131	.22842	.13363	-.00292	-.00017	.00109	1.70930
.975	6.952	.00309	.37578	.11278	-.00738	.35937	.15743	-.00309	.00060	.00134	2.28270
.975	9.262	-.00133	.50679	.11188	-.02254	.48217	.19199	.00363	-.00114	-.00089	2.51150
.975	11.562	-.01868	.63845	.11170	-.03852	.60311	.23740	.00662	.00110	-.00055	2.54052
.976	13.887	-.00540	.77813	.11644	-.05372	.72744	.29978	.00399	-.00048	.00113	2.42655
.975	16.210	-.00279	.91430	.11295	-.06335	.84642	.36370	.00223	-.00031	.00006	2.32726
.976	18.507	.00008	1.04066	.11666	-.07128	.94982	.44095	.00304	-.00119	.00090	2.15400
.975	20.810	-.00435	1.16509	.11509	-.07740	1.04820	.52149	.00465	-.00091	.00023	2.01000
.976	21.334	-.00432	1.18924	.11367	-.07655	1.06639	.53853	.00416	-.00072	.00028	1.98019
	GRADIENT	.00136	.06250	-.00087	-.00828	.06034	.00069	-.00045	-.00008	.00029	.46433

LARC 8FT TPT 740(LA72) B1WVS0EF (RJD001) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 17 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.200	-2.228	-.00188	-.16614	.14479	.06672	-.16038	.15114	-.00177	.00110	-.00013	-1.06111
1.200	.018	.00209	-.02684	.14516	.03543	-.02688	.14515	-.00350	.00089	.00023	-.18520
1.200	2.268	.00498	.10978	.14444	.00861	.10398	.14867	-.00373	.00037	.00069	.69941
1.200	4.532	.00425	.24121	.14152	-.01452	.22928	.16019	-.00257	.0000'	.00044	1.43173
1.199	6.764	.00302	.36727	.13902	-.03286	.34834	.18132	-.00130	-.000'7	.00123	1.92116
1.200	8.986	.00038	.48019	.13478	-.04209	.45325	.20812	.00122	-.00056	.00084	2.17780
1.200	11.239	-.00151	.60505	.13106	-.05284	.56790	.24648	.00720	-.00244	-.00037	2.30407
1.199	13.516	-.00223	.73845	.13009	-.06656	.68760	.29907	.00124	.00003	.00197	2.29911
1.199	15.749	-.00206	.86506	.13047	-.07984	.79718	.36036	.00129	-.00002	.00178	2.21216
1.200	18.001	-.00136	.98395	.12967	-.08967	.89571	.42740	.00243	-.00062	.00178	2.09574
1.200	20.230	-.00266	1.08849	.12673	-.09038	.97752	.49530	.00614	-.00174	.00037	1.97359
1.200	20.729	-.00275	1.11025	.12593	-.09009	.99384	.51065	.00660	-.00190	.00022	1.94623
	GRADIENT	.00094	.06030	-.00047	-.01201	.05769	.00136	-.00012	-.00017	.00010	.37117

LARC 8FT TPT 740(LA72) B1WVS0EF (RJD002) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 10/ 0 RN/L = 2.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.351	-2.08!	5.02468	-.14888	.05560	.02218	-.14676	.06097	-.08204	.00717	-.00375	-2.40724
.350	-.021	5.02903	-.05528	.05725	.02322	- 05526	.05727	-.08501	.00731	-.00478	-.96490
.350	2.039	5.02766	.03623	.05548	.02458	.03424	.05674	-.03770	.00684	-.00547	.60342
.350	4.102	5.01713	.13528	.05029	.02506	.13134	.05984	-.08500	.00654	-.00651	2.19503
.352	6.155	5.00243	.23378	.04107	.02474	.22802	.06590	-.08685	.00627	-.00758	3.46000
.350	8.226	4.97907	.33111	.02850	.02488	.32361	.07568	-.08531	.00608	-.00858	4.27592
.351	10.280	4.95047	.43152	.01422	.02434	.42205	.09100	-.08540	.00598	-.01082	4.63799
.349	12.357	4.91486	.54501	-.00264	.02144	.53295	.11406	-.08579	.00593	-.01133	4.67251
.350	14.425	4.87450	.65432	-.01776	.01739	.63812	.14580	-.08857	.00579	-.01128	4.37676
.350	16.512	4.82855	.78717	-.02686	.01003	.76234	.19798	-.08437	.00165	-.01143	3.85065
.350	18.573	4.77308	.91281	-.02772	.00028	.87410	.26446	-.09496	.00674	-.01195	3.30517
	GRADIENT	-.00117	.04580	-.00086	.00043	.04483	-.00019	-.00056	-.00011	-.00044	.74604

LARC 8FT TPT 740(LA72) BIWVSOEF (RJD002) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BOFLAP = -11.700

RUN NO. 9/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.799	-2.335	5.11096	-.19404	.05943	.03899	-.19146	.06728	-.09786	.01063	-.00359	-2.84558
.800	-.109	5.11864	-.08323	.06033	.03782	-.08311	.06049	-.09881	.01019	-.00541	-1.37398
.801	2.150	5.11653	.03273	.05828	.03818	.03052	.05947	-.09865	.00982	-.00691	.51314
.800	4.378	5.10573	.14906	.05305	.03720	.14458	.06427	-.09765	.00928	-.00821	2.24946
.801	6.652	5.08629	.27688	.04847	.03111	.26940	.08022	-.09448	.00812	-.00829	3.35827
.801	8.878	5.06278	.39178	.04944	.02560	.37946	.10932	-.09224	.00646	-.01045	3.47117
.801	11.117	5.03147	.50374	.05121	.01917	.48441	.14738	-.09379	.00628	-.00987	3.28680
.801	13.358	4.99609	.62376	.05247	.01059	.59476	.19517	-.09498	.00506	-.00904	3.04746
.800	15.592	4.95619	.73707	.05565	.00113	.69499	.25172	-.09537	.00276	-.01018	2.76094
.800	17.815	4.90811	.84585	.05554	.00157	.78830	.31166	-.09391	-.00005	-.01149	2.52935
.800	20.045	4.85380	.94475	.05390	.01123	.86905	.37445	-.08984	-.00424	-.01151	2.32085
	GRADIENT	-.00080	.05113	-.00095	-.00022	.05008	-.00045	.00004	-.00020	-.00069	.76676

RUN NO. 8/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.901	-2.439	5.13860	-.21997	.07425	.05200	-.21661	.09354	-.10887	.01247	.00043	-2.59287
.899	-.110	5.14467	-.08670	.07698	.04456	-.08655	.07715	-.10818	.01186	-.00040	-1.12169
.898	2.190	5.14144	.03808	.07565	.04313	.03516	.07705	-.10728	.01137	-.00292	.45632
.898	4.470	5.12797	.15796	.07421	.04263	.15170	.08630	-.10563	.01107	-.00481	1.75792
.900	6.746	5.10742	.27387	.07438	.03874	.26323	.10603	-.10296	.01024	-.00833	2.48252
.898	9.016	5.08864	.39735	.07561	.02473	.38060	.13695	-.09747	.00619	-.00834	2.77914
.900	11.301	5.05899	.52748	.07731	.00882	.50210	.17917	-.09497	.00392	-.00918	2.80235
.899	13.565	5.02682	.64700	.07863	-.00294	.61051	.22819	-.09137	.00003	-.00927	2.67543
.900	15.869	4.99174	.77369	.07866	-.01067	.72270	.28721	-.08879	-.00467	-.00919	2.51624
.898	18.135	4.95168	.89589	.07878	-.01396	.82686	.35372	-.08743	-.00955	-.00963	2.33765
.900	20.412	4.89655	.99108	.07998	-.00274	.90380	.42156	-.07957	-.01533	-.01049	2.14395
	GRADIENT	-.00152	.05466	-.00006	-.00129	.05327	.00035	.00046	-.00020	-.00079	.63542

ORIGINAL PAGE IS
OF POOR QUALITY

LARC 8FT TPT 740(LA72) B1WV50EF (RJD002) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 7/ 0 RN/L = 4.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.975	-2.423	5.13961	-.22163	.12198	.06897	-.21628	.13124	-.10328	.01229	-.00635	-1.64802
.976	-.086	5.14299	-.07338	.12162	.05079	-.07320	.12173	-.10134	.01179	-.00959	-.60133
.976	2.269	5.13881	.07599	.12008	.03450	.07118	.12299	-.10173	.01198	-.01063	.57872
.976	4.627	5.12551	.22576	.11938	.01471	.21539	.13721	-.10141	.01197	-.00836	1.56984
.976	6.936	5.10241	.36485	.11790	-.00101	.34794	.16110	-.10175	.01256	-.00727	2.15981
.976	9.262	5.06728	.50065	.11373	-.01884	.47582	.19282	-.09202	.00993	-.00986	2.46762
.977	11.610	5.03041	.65026	.11405	-.03875	.61400	.24258	-.09567	.00730	-.01021	2.53108
.976	13.922	4.99604	.78378	.11278	-.05042	.73362	.29805	-.08062	.00312	-.00953	2.46140
.976	16.260	4.96995	.91918	.11156	-.05791	.85117	.36446	-.08204	-.00197	-.00895	2.33543
.978	18.607	4.92596	1.05284	.11344	-.06574	.96162	.44344	-.07860	-.00711	-.00944	2.16856
.975	20.914	4.86445	1.17909	.11204	-.07004	1.06141	.52556	-.06977	-.01252	-.01233	2.01959
	GRADIENT	-.00198	.06346	-.00040	-.00762	.05124	.00082	.00022	-.00003	-.00030	.46090

RUN NO. 6/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.199	-2.289	5.11978	-.18053	.14590	.06660	-.17456	.15300	-.09700	.00993	-.00654	-1.14091
1.200	-.032	5.12509	-.04151	.14607	.03672	-.04142	.14610	-.09436	.00864	-.00710	-.28354
1.200	2.216	5.12284	.09454	.14555	.01007	.08885	.14910	-.09062	.00685	-.00748	.59587
1.200	4.476	5.11227	.22799	.14335	-.01180	.21610	.16071	-.08554	.00462	-.00758	1.34472
1.199	6.731	5.09370	.35480	.13929	-.02879	.33603	.17992	-.08092	.00260	-.00658	1.86765
1.199	8.982	5.06566	.47256	.13541	-.03751	.44563	.20753	-.08072	.00266	-.00825	2.14735
1.199	11.264	5.03460	.60372	.13121	-.05056	.56646	.24660	-.07655	.00000	-.00940	2.29707
1.199	13.526	5.00064	.72869	.12736	-.06122	.67870	.29426	-.08110	-.00039	-.00727	2.30645
1.199	15.807	4.96196	.86389	.12461	-.07455	.79728	.35523	-.08155	-.00316	-.00315	2.24443
1.200	18.059	4.91519	.98276	.12545	-.08417	.89546	.42392	-.07669	-.00782	-.00446	2.11237
1.199	20.292	4.85976	1.08927	.12206	-.08670	.97933	.49225	-.06847	-.01352	-.00717	1.98948
	GRADIENT	-.00110	.06040	-.00036	-.01162	.05777	.00116	.00169	-.00079	-.00016	.36979

LARC 8FT TPT 740(LA72) B7WVS0EF (RJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 20/ 0 RN/L = 2.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.350	-2.053	-.00207	-.13669	.05907	.02909	-.13449	.06393	.00086	.00148	-.00125	-2.10364
.351	-.016	-.00071	-.05165	.06046	.02870	-.05164	.06048	-.00099	.00100	-.00124	-.85379
.351	2.038	.00061	.04422	.05858	.02995	.04210	.06012	-.00311	.00067	-.00068	.70034
.351	4.101	-.00018	.14001	.05296	.02923	.13587	.06284	-.00093	.00051	-.00060	2.16219
.351	6.146	-.00092	.23885	.04267	.02809	.23291	.06800	.00143	.00026	-.00088	3.42537
.351	8.191	-.00106	.33722	.03012	.02752	.32949	.07786	.00153	.00035	-.00093	4.23182
.351	10.268	-.00235	.44302	.01476	.02577	.43330	.09349	.00462	.00031	-.00046	4.63450
.350	12.314	-.00211	.54326	.00026	.02509	.53071	.11611	.00447	.00016	-.00019	4.57085
.351	14.390	-.00182	.66076	-.01448	.02106	.64363	.15018	.00577	-.00059	.00111	4.28575
.351	16.433	.00082	.78535	-.01599	.01080	.75779	.20684	.01800	-.00770	-.00113	3.66375
.351	18.499	.00023	.91509	-.01428	-.00133	.87329	.27712	.01213	-.00490	-.00153	3.15126
.351	19.004	-.00125	.94582	-.00794	-.00455	.89685	.30048	.00705	-.00156	.00101	2.98470
	GRADIENT	.00034	.04514	-.00099	.00008	.04411	-.00018	-.00036	-.00016	.00012	59960

RUN NO. 19/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.800	-2.312	-.00245	-.18880	.06118	.04649	-.18618	.06874	-.00169	.00123	-.00171	-2.70827
.800	-.083	.00039	-.07668	.06207	.04487	-.07660	.06218	-.00251	.00088	-.00136	-1.23184
.801	2.163	.00437	.03784	.05992	.04442	.03555	.06131	-.00427	.00062	-.00098	.57990
.800	4.425	.00160	.16238	.05385	.04107	.15774	.06622	-.00210	.00043	-.00098	2.38211
.799	6.640	.00066	.28615	.04924	.03478	.27854	.08200	-.00055	.00005	-.00173	3.39694
.800	8.867	-.00222	.39821	.05067	.02831	.38367	.11114	.00146	-.00004	-.00158	3.45214
.799	11.075	-.00601	.50786	.05210	.02236	.48840	.14869	.00289	.00033	-.00056	3.28473
.800	13.302	-.00819	.62580	.05742	.01166	.59580	.19986	.00387	.00049	.00066	2.98105
.800	15.540	-.01091	.74364	.06037	.00216	.69739	.25659	.00463	.00088	.00033	2.71791
.799	17.745	-.01425	.85048	.06135	.00131	.79131	.31765	.00392	.00202	-.00069	2.49118
.800	19.956	-.01688	.93993	.06158	.01092	.86154	.37833	.00339	.00293	-.00149	2.27719
.801	20.501	-.01765	.96037	.06107	.01513	.87816	.39355	.00337	.00314	-.00149	2.23138
	GRADIENT	.00072	.05202	-.00108	-.00074	.05094	-.00037	-.00013	-.00012	.00011	.76079

LARC 8FT TPT 740(LA72) B7WVS0EF (RJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 18/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.899	-2.352	-.00241	-.20690	.07505	.06469	-.20364	.08348	.00002	.00049	-.00056	-2.43951
.900	-.084	.00402	-.07376	.07609	.05219	-.07364	.07620	-.00267	.00020	.00011	-.96647
.900	2.232	.00612	.06062	.07500	.04676	.05765	.07731	-.00386	.00023	.00072	.74576
.899	4.478	.00354	.16836	.07609	.05002	.15991	.08884	-.00226	.00014	-.00020	1.79988
.899	6.751	.00024	.28423	.07577	.04292	.27435	.10856	.00012	-.00010	-.00061	2.51568
.900	9.012	-.00528	.40873	.07650	.02641	.39171	.13958	.00211	.00029	.00017	2.80634
.899	11.245	-.00633	.52606	.07973	.01045	.50042	.18078	.00415	-.00027	.00047	2.76809
.901	13.526	-.00593	.64657	.08221	-.00262	.60941	.23114	.00464	-.00053	.00074	2.63649
.900	15.806	-.00593	.77423	.08429	-.01187	.72200	.29199	.00545	-.00083	-.00050	2.47268
.900	18.038	-.00479	.88330	.08587	-.01355	.81330	.35516	.00326	-.00022	-.00069	2.28995
.901	20.347	-.00316	.99471	.08957	-.00261	.90150	.42985	.00379	-.00077	.00071	2.09727
.899	20.877	-.00417	1.01278	.08983	.00386	.91428	.44485	.00312	-.00028	.00094	2.05525
	GRADIENT	.00088	.05500	.00009	-.00217	.05359	.00075	-.00035	-.00004	.00007	.63302

RUN NO. 17/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.976	-2.364	-.00040	-.19887	.12196	.05972	-.19367	.13006	.00019	.00000	-.00098	-1.48911
.976	-.009	.00330	-.04754	.11935	.05079	-.04752	.11936	-.00099	-.00025	-.00074	-.39812
.976	2.316	.00658	.10127	.11732	.03066	.09645	.12131	-.00186	-.00054	-.00001	.79503
.976	4.656	.00689	.24757	.11656	.01117	.23729	.13627	-.00210	-.00051	.00116	1.74124
.976	6.979	.00401	.38992	.11516	-.00744	.37304	.16168	-.00168	-.00012	.00148	2.30724
.975	9.261	-.00126	.51212	.11256	-.02002	.48733	.19351	.00529	-.00180	-.00074	2.51839
.976	11.554	.00969	.63893	.11509	-.03450	.60293	.24073	.00533	-.00395	.00148	2.50456
.976	13.886	.00651	.78738	.11683	-.05076	.73633	.30238	.00309	-.00248	.00250	2.43516
.976	16.200	-.00083	.92253	.11600	-.05957	.85354	.36877	.00332	-.00112	.00148	2.31454
.976	18.526	-.00045	1.05082	.11833	-.06578	.95876	.44608	.00465	-.00171	.00093	2.14930
.976	20.833	-.00174	1.18387	.11698	-.07560	1.06487	.53037	.00142	-.00019	.00101	2.00779
.976	21.390	-.00316	1.20599	.11510	-.07466	1.08095	.54701	.00347	-.00069	-.00009	1.97609
	GRADIENT	.00108	.06364	-.00078	-.00837	.06144	.00088	-.00033	-.00008	.00031	.46542

LARC 8FT TPT 740(LA72) B7WVS0EF (RJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 16/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.200	-2.253	-.00089	-.16931	.14510	.06785	-.16347	.15164	-.00188	.00092	-.00001	-1.07803
1.200	-.012	.00309	-.02804	.14584	.03659	-.02801	.14585	-.00322	.00055	.00020	-.19202
1.200	2.250	.00588	.11078	.14538	.00899	.10499	.14962	-.00339	.00000	.00070	.70170
1.200	4.482	.00469	.24064	.14269	-.01429	.22876	.16106	-.00214	-.00022	.00041	1.42032
1.199	6.756	.00245	.36662	.13982	-.03142	.34762	.18198	-.00014	-.00049	.00117	1.91023
1.200	8.972	-.00104	.48219	.13574	-.04099	.45513	.20927	.00315	-.00098	.00103	2.17481
1.199	11.226	-.00243	.60657	.13159	-.05091	.56934	.24716	.00650	-.00196	.00014	2.30354
1.200	13.505	-.00332	.74701	.13137	-.06662	.69568	.30218	.00207	-.00004	.00247	2.30217
1.199	15.776	-.00154	.87819	.13111	-.08018	.80946	.36493	.00209	-.00045	.00198	2.21814
1.201	18.006	-.00075	1.00056	.13110	-.09121	.91104	.43395	.00251	-.00080	.00217	2.09936
1.200	20.241	-.00176	1.10106	.12793	-.08646	.98881	.50096	.00366	-.00100	.00170	1.97384
1.200	20.782	-.00180	1.12270	.12678	-.08652	1.00467	.51687	.00416	-.00118	.00131	1.94374
	GRADIENT	.00087	.06092	-.00034	-.01220	.05830	.00142	-.00004	-.00018	.00008	.37341

LARC 8FT TPT 740(LA72) B7WVS0EF (RJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 15/ 0 RN/L = 2.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.348	-2.069	5.02418	-.14809	.05551	.02256	-.14599	.06082	-.08226	.00737	-.00371	-2.40028
.348	-.030	5.02827	-.05519	.05762	.02316	-.05516	.05765	-.08333	.00710	-.00476	-.95676
.350	2.061	5.02703	.03961	.05570	.02518	.03758	.05709	-.08692	.00691	-.00583	.65832
.350	4.110	5.01739	.13117	.05080	.02508	.12719	.06007	-.08619	.00669	-.00678	2.11742
.349	6.152	5.00136	.23026	.04223	.02519	.22440	.06666	-.08556	.00637	-.00762	3.36616
.349	8.236	4.97935	.33182	.02960	.02526	.32416	.07683	-.08437	.00614	-.00863	4.21938
.350	10.291	4.94926	.43463	.01516	.02557	.42493	.09256	-.08403	.00623	-.01094	4.59093
.350	12.360	4.91344	.54734	-.00200	.02325	.53508	.11520	-.08297	.00611	-.01152	4.64464
.350	14.428	4.87314	.65989	-.01732	.01875	.64340	.14765	-.08306	.00594	-.01156	4.35760
.350	16.500	4.82718	.78393	-.02573	.01000	.75896	.19798	-.08093	.00182	-.01206	3.83358
.350	18.572	4.77197	.91268	-.02743	.00054	.87389	.26469	-.09311	.00705	-.01180	3.30152
	GRADIENT	-.00105	.04521	-.00078	.00047	.04423	-.00014	-.00075	-.00011	-.00050	.73538

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LARC 8FT TPT 740(LA72) B7WVS0EF (RJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 14/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.799	-2.343	5.11324	-.19778	.05940	.03853	-.19519	.06743	-.09864	.01037	-.00363	-2.89460
.799	-.125	5.11900	-.08587	.06072	.03769	-.08574	.06091	-.09867	.01003	-.00535	-1.40768
.800	2.131	5.11649	.02832	.05881	.03813	.02611	.05983	-.09842	.00974	-.00704	.43647
.799	4.392	5.10429	.15098	.05390	.03721	.14640	.06531	-.09696	.00933	-.00838	2.24178
.799	6.664	5.08475	.27888	.04839	.03095	.27139	.08043	-.09480	.00850	-.00854	3.37413
.801	8.911	5.05827	.39925	.04878	.02407	.38687	.11004	-.09144	.00713	-.01045	3.51589
.801	11.113	5.02470	.50583	.05064	.02002	.48659	.14719	-.09192	.00721	-.01020	3.30582
.800	13.353	4.98506	.62039	.05345	.01216	.59127	.19529	-.09153	.00641	-.01104	3.02772
.800	15.604	4.94105	.74434	.05737	-.00102	.70147	.25548	-.09053	.00455	-.01219	2.74567
.801	17.828	4.89345	.85320	.05659	-.00084	.79490	.31509	-.08942	.00180	-.01305	2.52277
.801	20.054	4.84233	.94934	.05423	.01000	.87317	.37654	-.08920	-.00163	-.01271	2.31893
	GRADIENT	-.00131	.05167	-.00082	-.00016	.05061	-.00033	.00024	-.00015	-.00071	.76829

RUN NO. 13/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.899	-2.438	5.13922	-.22026	.07379	.05252	-.21692	.08309	-.10852	.01215	.00006	-2.61074
.899	-.128	5.14488	-.08997	.07607	.04441	-.08980	.07627	-.10873	.01201	-.00108	-1.17739
.900	2.189	5.14142	.03790	.07601	.04263	.03497	.07741	-.10708	.01133	-.00301	.45182
.900	4.498	5.12851	.16144	.07574	.04167	.15501	.08817	-.10562	.01097	-.00438	1.75807
.898	6.748	5.10695	.27608	.07428	.03804	.26544	.10621	-.10216	.00996	-.00853	2.49932
.900	9.035	5.08233	.40097	.07579	.02448	.38409	.13781	-.09681	.00723	-.00801	2.78706
.900	11.297	5.04950	.52606	.07842	.00881	.50050	.17995	-.09186	.00474	-.01014	2.78130
.901	13.557	5.01468	.64446	.08108	-.00563	.60750	.22989	-.08705	.00106	-.01034	2.64262
.899	15.845	4.97840	.76817	.07964	-.00985	.71724	.28635	-.08314	-.00390	-.00992	2.50471
.899	18.159	4.93794	.90098	.07961	-.01360	.83130	.35645	-.07976	-.00963	-.01047	2.33219
.899	20.411	4.88140	.99743	.08283	.00014	.90592	.42549	-.07419	-.01412	-.01414	2.12811
	GRADIENT	-.00154	.05505	.00025	-.00148	.05765	.00071	.00045	-.00018	-.00066	.63723

LARC 8FT TPT 740(LA72) B7WVS0EF (RJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 12/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.977	-2.429	5.14185	-.22000	.12254	.06931	-.21461	.13175	-.10382	.01213	-.00651	-1.62885
.976	-.078	5.14442	-.06999	.12182	.05046	-.06982	.12192	-.10125	.01150	-.00974	-.57268
.977	2.288	5.13801	.07976	.11978	.03404	.07491	.12287	-.10038	.01163	-.01045	.60971
.976	4.617	5.12498	.22508	.11811	.01501	.21485	.13584	-.10041	.01173	-.00820	1.58160
.976	6.947	5.10194	.36425	.11718	-.00052	.34740	.16037	-.10037	.01212	-.00758	2.16621
.976	9.277	5.07025	.50508	.11482	-.01733	.47996	.19475	-.09188	.00927	-.00998	2.46453
.975	11.596	5.03379	.64672	.11301	-.03559	.61290	.24070	-.08576	.00669	-.00997	2.53757
.976	13.945	4.99926	.78702	.11342	-.04791	.73649	.29974	-.07944	.00191	-.00910	2.45708
.976	16.278	4.97187	.92063	.11277	-.05589	.85211	.36630	-.08003	-.00322	-.00886	2.32627
.977	18.598	4.92957	1.05175	.11461	-.06284	.96028	.44406	-.07711	-.00839	-.00927	2.16249
.975	20.934	4.86769	1.17896	.11401	-.06809	1.06040	.52772	-.06826	-.01382	-.01269	2.00941
	GRADIENT	-.00242	.06318	-.00065	-.00763	.06097	.00056	.00047	-.00005	-.00025	.46013

RUN NO. 11/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.200	-2.300	5.12177	-.18136	.14635	.06738	-.17534	.15351	-.09791	.00984	-.00665	-1.14222
1.200	-.015	5.12723	-.03878	.14657	.03721	-.03875	.14658	-.09512	.00846	-.00736	-.26432
1.200	2.235	5.12460	.09856	.14625	.01040	.09279	.14999	-.09127	.00670	-.00785	.61862
1.200	4.499	5.11392	.22848	.14418	-.01108	.21647	.16166	-.08632	.00453	-.00778	1.33903
1.200	6.759	5.09372	.35707	.13995	-.02726	.33812	.18101	-.08040	.00234	-.00649	1.86796
1.200	9.001	5.06554	.47484	.13627	-.03598	.44768	.20888	-.07947	.00218	-.00844	2.14322
1.200	11.278	5.03398	.60241	.13226	-.04712	.56491	.24752	-.07675	.00018	-.00846	2.28229
1.200	13.539	4.99973	.73125	.12851	-.05767	.68084	.29513	-.07931	-.00091	-.00718	2.29911
1.199	15.820	4.96174	.86775	.12575	-.07211	.80060	.35755	-.07979	-.00387	-.00312	2.23913
1.199	18.069	4.91650	.98650	.12670	-.08218	.89955	.42643	-.07523	-.00878	-.00422	2.10714
1.200	20.309	4.86132	1.09405	.12376	-.08448	.98309	.49579	-.06570	-.01505	-.00735	1.98298
	GRADIENT	-.00115	.06036	-.00030	-.01158	.05771	.00123	.00170	-.00078	-.00017	.36769

LARC 8FT TPT 740(LA72) B6WVS0EF (RJD005) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 24/ 0 RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.349	-2.077	-.00220	-.14533	.05900	.02922	-.14310	.06423	.00199	.00118	-.00174	-2.22794
.349	-.016	-.00041	-.05220	.06075	.02900	-.05218	.06076	-.00159	.00098	-.00121	-.85881
.349	2.025	.00005	.03965	.05886	.02997	.03754	.06022	-.00163	.00059	-.00072	.62346
.349	4.078	-.00038	.13517	.05353	.02979	.13102	.06301	-.00029	.00045	-.00054	2.07937
.350	6.124	-.00072	.23765	.04295	.02857	.23171	.06806	.00094	.00027	-.00063	3.40434
.350	8.201	-.00177	.33979	.03008	.02729	.33202	.07824	.00369	.00015	-.00042	4.24341
.350	10.236	-.00197	.44096	.01478	.02474	.43132	.09230	.00357	.00038	-.00010	4.64284
.349	12.308	-.00262	.53769	.00012	.02484	.52530	.11474	.00606	.00003	-.00017	4.57825
.349	14.371	-.00204	.65585	-.01433	.02031	.63889	.14890	.00575	-.00036	.00145	4.29080
.348	16.435	.00110	.78294	-.01564	.00935	.75537	.20651	.01672	-.00748	-.00046	3.65777
.349	18.495	-.00016	.91665	-.01362	-.00280	.87563	.27786	.01333	-.00501	-.00217	3.14415
	GRADIENT	.00029	.04552	-.00089	.00013	.04448	-.00021	-.00034	-.00013	.00020	.70242

RUN NO. 23/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.801	-2.318	-.00289	-.19229	.06153	.04749	-.18964	.06926	-.00086	.00101	-.00122	-2.73827
.801	-.094	.00095	-.07749	.06193	.04530	-.07738	.06205	-.00279	.00086	-.00127	-1.24706
.802	2.139	.00211	.03519	.06000	.04497	.03292	.06128	-.00272	.00055	-.00119	.53728
.801	4.413	.00319	.15537	.05435	.04166	.15073	.06614	-.00327	.00051	-.00088	2.27898
.800	6.647	-.00016	.27894	.04910	.03553	.27138	.08106	-.00091	.00039	-.00115	3.34793
.802	8.855	-.00387	.38921	.05040	.02869	.37681	.10971	.00172	.00025	-.00054	3.43456
.801	11.075	-.00740	.50161	.05139	.02250	.48240	.14680	.00354	.00041	-.00021	3.28615
.800	13.282	-.01027	.60906	.05670	.01398	.57974	.19512	.00510	.00052	-.00056	2.97127
.801	15.518	-.01321	.73195	.06050	.00360	.68908	.25412	.00607	.00089	-.00099	2.71162
.800	17.746	-.01471	.84479	.06119	.00077	.78694	.31577	.00326	.00238	-.00108	2.48897
.801	19.940	-.01780	.93039	.06144	.00949	.85365	.37506	.00176	.00378	-.00228	2.27603
	GRADIENT	.00086	.05153	-.00105	-.00080	.05045	-.00045	-.00032	-.00008	.00005	.75082

ORIGINAL PAGE IS
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LARC 8FT TPT 740(LA72) B6WVS0EF (RJ0005) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 22/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.900	-2.374	-.00345	-.21776	.07608	.06661	-.21442	.08503	.00074	.00043	-.00079	-2.52156
.899	-.084	.00104	-.07894	.07640	.05319	-.07882	.07651	-.00112	.00022	.00010	-1.03022
.899	2.209	.00541	.04988	.07434	.04813	.04698	.07621	-.00313	.00009	.00028	.61643
.900	4.472	.00318	.15977	.07590	.04986	.15336	.08813	-.00278	.00041	.00066	1.74020
.899	6.754	.00087	.28120	.07605	.04301	.27030	.10859	-.00059	.00005	.00015	2.48917
.900	8.992	-.00421	.40420	.07613	.02697	.38733	.13837	.00157	.00027	.00114	2.79926
.900	11.250	-.00759	.52231	.07890	.01202	.49688	.17929	.00368	.00018	.00025	2.77140
.899	13.489	-.00873	.63496	.08160	-.00073	.59841	.22745	.00583	-.00039	.00019	2.63095
.901	15.778	-.00747	.76389	.08410	-.00954	.71224	.28865	.00674	-.00100	-.00008	2.46750
.901	18.034	-.00622	.88032	.08645	-.01405	.81031	.35473	.00255	.00037	-.00028	2.28430
.900	20.314	-.00140	.98239	.08950	-.00271	.89021	.42499	.00283	-.00079	.00057	2.09469
	GRADIENT	.00106	.05526	-.00011	-.00243	.05384	.00039	-.00055	-.00001	.00020	.63225

RUN NO. 25/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.976	-2.383	-.00001	-.20363	.12096	.07098	-.19842	.12933	-.00041	.00016	-.00104	-1.53425
.976	-.026	.00655	-.05521	.12006	.05220	-.05516	.12009	-.00280	-.00017	-.00085	-.45933
.976	2.300	.00739	.09296	.11751	.03267	.08817	.12114	-.00211	-.00060	.00002	.72782
.976	4.626	.00640	.23833	.11636	.01256	.22817	.13520	-.00178	-.00054	.00113	1.68766
.976	6.954	.00310	.37893	.11476	-.00591	.36225	.15979	-.00075	-.00031	.00101	2.26698
.976	9.239	.00187	.50728	.11311	-.02061	.48254	.19308	.00424	-.00200	-.00033	2.49912
.976	11.529	.01653	.63809	.11415	-.03578	.60240	.23938	.00213	-.00405	.00244	2.51651
.976	13.848	.00259	.77664	.11711	-.05093	.72603	.29959	.00431	-.00218	.00231	2.42346
.976	16.190	-.00446	.91651	.11629	-.06170	.84783	.36726	.00434	-.00079	.00106	2.30855
.976	18.483	-.00393	1.03835	.11843	-.06598	.94725	.44150	.00512	-.00119	.00069	2.14553
.977	20.794	-.00280	1.16839	.11820	-.07567	1.05032	.52529	.00177	-.00011	.00124	1.99949
	GRADIENT	.00086	.06312	-.00070	-.00834	.06094	.00079	-.00015	-.00011	.00032	.46474

LARC 8FT TPT 740(LA72) B6WVS0EF (RJD005) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 21/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.200	-2.227	-.00245	-.16781	.14480	.06929	-.16206	.15121	-.00151	.00113	-.00001	-1.07172
1.200	.003	.00036	-.02675	.14579	.03774	-.02676	.14579	-.00187	.00064	.00034	-.18354
1.200	2.235	.00553	.10678	.14543	.01063	.10103	.14949	-.00350	.00012	.00070	.67584
1.199	4.482	.00305	.24001	.14279	-.01335	.22811	.16111	-.00128	-.00018	.00059	1.41586
1.200	6.718	.00111	.36190	.14014	-.03005	.34302	.18152	.00049	-.00044	.00120	1.88974
1.199	8.950	-.00196	.47617	.13633	-.04032	.44916	.20975	.00270	-.00060	.00141	2.15165
1.200	11.206	-.00408	.60118	.13204	-.05029	.56406	.24636	.00732	-.00191	.00003	2.28955
1.200	13.490	-.00392	.73938	.13148	-.06565	.68831	.30033	.00070	.00063	.00290	2.29186
1.199	15.751	-.00352	.87080	.13161	-.07952	.80238	.36305	.00108	.00040	.00277	2.21009
1.200	17.999	-.00277	.99249	.13124	-.09081	.90337	.43149	.00326	-.00061	.00220	2.09360
1.200	20.212	-.00317	1.09325	.12857	-.08916	.98151	.49837	.00388	-.00075	.00172	1.96943
	GRADIENT	.00097	.06069	-.00029	-.01230	.05806	.00150	-.00004	-.00020	.00010	.37218

LARC 8FT TPT 740(LA72) B6WVS0EF (RJD006) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 30/ 0 RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.349	-2.069	5.02472	-.14595	.05618	.02241	-.14383	.06141	-.09305	.00731	-.00392	-2.34196
.349	-.022	5.02893	-.05856	.05782	.02368	-.05854	.05784	-.08471	.00716	-.00498	-1.01210
.349	2.048	5.02670	.03588	.05597	.02454	.03386	.05722	-.08582	.00675	-.00549	.59175
.349	4.092	5.01764	.13651	.05056	.02537	.13255	.06017	-.08644	.00657	-.00653	2.20289
.350	6.134	5.00106	.23443	.04156	.02485	.22861	.06650	-.08469	.00628	-.00758	3.43787
.350	8.217	4.97805	.33391	.02923	.02420	.32631	.07936	-.08280	.00605	-.00864	4.25674
.350	10.291	4.94850	.43604	.01454	.02461	.42643	.09221	-.08167	.00598	-.01069	4.62450
.349	12.357	4.91316	.54446	-.00179	.02214	.53223	.11477	-.08213	.00605	-.01136	4.63730
.349	14.425	4.87220	.65824	-.01753	.01676	.64185	.14700	-.08327	.00569	-.01111	4.36647
.349	16.507	4.82633	.78188	-.03501	.00988	.75676	.19818	-.07898	.00158	-.01137	3.81883
.349	18.563	4.77094	.91941	-.02478	-.00042	.87947	.26920	-.08771	.00602	-.01203	3.26694
	GRADIENT	-.00114	.04582	-.00091	.00047	.04484	-.00021	-.00055	-.00013	-.00041	.74144

LARC 8FT TPT 740(LA72) B6WVS0EF (RJD006) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 29/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.800	-2.340	5.11554	-.19662	.05929	.03919	-.19404	.06727	-.10059	.01059	-.00356	-2.88462
.801	-.091	5.11992	-.07986	.06069	.03850	-.07976	.06081	-.09949	.01020	-.00568	-1.31158
.800	2.140	5.11679	.03199	.05868	.03916	.02978	.05984	-.09907	.00989	-.00701	.49759
.799	4.413	5.10415	.15619	.05314	.03739	.15164	.06500	-.09718	.00937	-.00836	2.33295
.798	6.669	5.08505	.28112	.04815	.03175	.27363	.08047	-.09497	.00843	-.00853	3.40048
.800	8.917	5.05629	.40245	.04818	.02447	.39012	.10998	-.09074	.00725	-.01037	3.54728
.799	11.140	5.02103	.51037	.05072	.01993	.49096	.14837	-.09064	.00741	-.00976	3.30906
.799	13.358	4.98127	.62392	.05289	.01254	.59482	.19561	-.08962	.00650	-.01112	3.04080
.800	15.595	4.93793	.74213	.05600	.00243	.69975	.25345	-.08748	.00417	-.01044	2.76095
.800	17.851	4.88942	.86213	.05479	.00246	.80383	.31643	-.08642	.00146	-.01101	2.54032
.799	20.067	4.83185	.95657	.05453	.01189	.87978	.37945	-.08490	-.00086	-.01318	2.31860
	GRADIENT	-.00166	.05204	-.00091	-.00018	.05098	-.00034	.00047	-.00018	-.00070	.77646

RUN NO. 28/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.900	-2.408	5.14216	-.21609	.07363	.05290	-.21280	.08264	-.11156	.01278	.00004	-2.57502
.901	-.102	5.14644	-.08326	.07628	.04451	-.08313	.07643	-.11096	.01265	-.00129	-1.08766
.901	2.188	5.14286	.04142	.07680	.04283	.03846	.07833	-.10860	.01170	-.00256	.49101
.901	4.481	5.12985	.16598	.07601	.04241	.15954	.08874	-.10638	.01108	-.00428	1.79779
.900	6.765	5.10640	.28181	.07471	.03905	.27105	.10739	-.10174	.00994	-.00818	2.52399
.901	9.046	5.07943	.40533	.07706	.03378	.38818	.13983	-.09437	.00692	-.00866	2.77601
.900	11.297	5.04745	.53034	.07914	.00822	.50456	.18149	-.09102	.00486	-.00951	2.78007
.900	13.564	5.01429	.64707	.08096	-.00506	.61003	.23046	-.08534	.00046	-.00848	2.64697
.900	15.851	4.97524	.77014	.08014	-.01099	.71697	.28744	-.08200	-.00363	-.00945	2.50128
.900	18.169	4.93335	.90286	.08034	-.01234	.83280	.35786	-.07894	-.00805	-.01021	2.32713
.900	20.434	4.87470	1.00059	.08342	.00082	.90650	.42751	-.07149	-.01377	-.01249	2.12509
	GRADIENT	-.00176	.05536	.00033	-.00145	.05395	.00088	.00078	-.00026	-.00062	.64021

LARC 8FT TPT 740(LA72) B6WVS0EF (RJD006) (22 OCT 76)

ORIGINAL PAGE IS
OF POOR QUALITY

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 27/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
.976	-2.407	5.14395	-.21584	.12135	.06921	-.21055	.13031	-.10535	.01227	-.00656	-1.61577
.976	-.075	5.14616	-.06976	.12168	.05138	-.06960	.12178	-.10294	.01179	-.00977	-.57157
.976	2.270	5.13903	.07563	.11945	.03525	.07084	.12236	-.10170	.01191	-.01049	.57896
.975	4.629	5.12651	.22561	.11738	.01597	.21540	.13521	-.10188	.01193	-.00837	1.59310
.975	6.966	5.10104	.36828	.11602	.00005	.35149	.15984	-.09993	.01202	-.00751	2.19910
.975	9.295	5.06733	.51372	.11533	-.01866	.48834	.19679	-.09105	.00943	-.00956	2.48157
.975	11.617	5.02825	.65242	.11236	-.03667	.61643	.24143	-.08295	.00659	-.00980	2.55326
.976	13.946	4.99183	.79167	.11397	-.04889	.74087	.30141	-.07702	.00247	-.00930	2.45803
.976	16.289	4.95818	.92929	.11294	-.05716	.86031	.36905	-.07659	-.00185	-.00909	2.33115
.977	18.628	4.91799	1.06162	.11519	-.06550	.98921	.44826	-.07207	-.00817	-.00906	2.16218
.977	20.942	4.85778	1.19078	.11501	-.07164	1.07101	.53302	-.06628	-.01253	-.01230	2.00933
	GRADIENT	-.00254	.06267	-.00060	-.00750	.06047	.00066	.00050	-.00004	-.00026	.45951

RUN NO. 26/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CD	CY	CYN	CBL	L/D
1.199	-2.281	5.12373	-.17785	.14584	.06777	-.17191	.15281	.09927	.00994	-.00670	-1.12499
1.200	-.010	5.12654	-.03689	.14618	.03744	-.03687	.14619	-.09485	.00851	-.00730	-.25218
1.201	2.234	5.12442	.09733	.14589	.01145	.09157	.14957	-.09128	.00674	-.00779	.61220
1.199	4.496	5.11244	.23175	.14389	-.01068	.21975	.16162	-.08524	.00443	-.00771	1.35972
1.199	6.753	5.09253	.35688	.13981	-.02712	.33995	.18104	-.07975	.00234	-.00633	1.87772
1.199	9.007	5.06299	.47834	.13619	-.03648	.45112	.20940	-.07836	.00228	-.00815	2.15440
1.200	11.284	5.03122	.60666	.13229	-.04848	.56905	.24844	-.07471	-.00002	-.00913	2.29045
1.199	13.541	4.99529	.73404	.12848	-.05938	.68355	.29678	-.07710	-.00077	-.00716	2.30322
1.199	15.823	4.95676	.87006	.12617	-.07266	.80269	.35862	-.07769	-.00357	-.00296	2.23928
1.198	18.063	4.90934	.99051	.12738	-.08375	.90220	.42822	-.07095	-.00876	-.00482	2.10683
1.199	20.308	4.85341	1.09367	.12399	-.08378	.98886	.49586	-.06343	-.01407	-.00698	1.98173
	GRADIENT	-.00159	.06038	-.00027	-.01158	.05774	.00132	.00202	-.00081	-.00016	.36848

LARC 8FT TPT 740(LA72) B1WV50EF (AJD001) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 5/ 0 RN/L = 2.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.349	-2.066	166.35244	-.20410	-.23496	-.18564	-.22454	2.05922
.349	-.027	166.25838	-.20373	-.23127	-.18384	-.21893	2.06080
.349	2.035	166.35244	-.20124	-.22684	-.18373	-.21594	2.06260
.350	4.077	166.63393	-.19805	-.22504	-.18057	-.21367	2.06558
.350	6.152	166.63369	-.19329	-.22122	-.17819	-.21320	2.06666
.350	8.208	167.00824	-.19191	-.21883	-.17827	-.21511	2.07011
.350	10.255	166.82109	-.19497	-.22193	-.18180	-.21868	2.07068
.350	12.309	166.82085	-.20021	-.22574	-.18513	-.22011	2.07120
.349	14.364	166.53987	-.20768	-.23327	-.19307	-.22715	2.07115
.350	16.438	166.72775	-.21839	-.24111	-.20714	-.23834	2.07358
.349	18.503	166.35315	-.23652	-.26648	-.24053	-.25607	2.07183
	GRADIENT	.04581	.00101	.00167	.00075	.00174	.00102

RUN NO. 4/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.801	-2.298	624.19888	-.21360	-.23417	-.20220	-.22254	3.77360
.800	-.069	622.89445	-.20548	-.22518	-.19711	-.21301	3.76879
.800	2.142	623.02852	-.20022	-.22195	-.19197	-.21042	3.76913
.800	4.397	622.69329	-.19560	-.22040	-.18773	-.20950	3.76829
.800	6.616	622.48581	-.19400	-.22047	-.18727	-.21110	3.76871
.800	8.849	622.60110	-.19818	-.22503	-.19209	-.21630	3.77076
.801	11.070	623.99169	-.21151	-.23895	-.20519	-.23139	3.77506
.801	13.283	623.70487	-.23487	-.26250	-.23112	-.25838	3.77403
.801	15.510	623.68834	-.26018	-.28542	-.25797	-.28450	3.77275
.799	17.713	622.23000	-.28166	-.31069	-.28188	-.31399	3.76828
.799	19.925	622.01614	-.30305	-.33392	-.30253	-.33761	3.76650
	GRADIENT	-.19655	.00266	.00200	.00218	.00187	-.00070

LARC 8FT TPT 740(LA72) B1WVS0EF (AJD001) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 3/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.899	-2.399	710.28462	-.22290	-.24036	-.21358	-.23014	3.96964
.899	-.055	709.63493	-.21505	-.23262	-.20863	-.22206	3.96758
.899	2.198	710.06061	-.20867	-.22667	-.20146	-.21701	3.96859
.898	4.459	709.39162	-.20842	-.23002	-.19963	-.21990	3.96777
.899	6.748	709.37859	-.20887	-.23394	-.20221	-.22349	3.96681
.900	8.972	710.42655	-.21203	-.24836	-.20672	-.23468	3.97056
.901	11.246	711.32235	-.22626	-.26927	-.22220	-.25316	3.97325
.900	13.487	710.82884	-.25041	-.28769	-.24815	-.27760	3.97309
.900	15.768	710.18869	-.28448	-.31926	-.28392	-.31377	3.97117
.900	18.033	710.81057	-.31983	-.36045	-.32020	-.36157	3.97172
.900	20.302	710.71910	-.36273	-.40868	-.36269	-.41496	3.97188
	GRADIENT		-.09910	.00219	.00163	.00215	.00157	-.00020

RUN NO. 2/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.975	-2.335	767.16060	-.33147	-.37867	-.31006	-.36760	4.06805
.976	-.014	767.31719	-.31610	-.36441	-.30069	-.35354	4.06994
.975	2.317	766.93045	-.30556	-.35169	-.29147	-.33926	4.07516
.975	4.653	766.70025	-.30675	-.34989	-.29255	-.33746	4.07549
.975	6.952	766.82283	-.31313	-.36416	-.29749	-.34489	4.07936
.975	9.262	766.89907	-.32531	-.37531	-.31124	-.35947	4.08089
.975	11.562	766.60603	-.34803	-.39476	-.33593	-.38473	4.08024
.976	13.887	767.89965	-.38924	-.43057	-.37813	-.42523	4.08217
.975	16.210	767.03660	-.41332	-.46251	-.40169	-.44877	4.08038
.976	18.507	767.82341	-.46008	-.50494	-.45160	-.49506	4.08631
.975	20.810	767.49828	-.49571	-.52904	-.48652	-.52102	4.08045
.976	21.334	767.71202	-.49858	-.53418	-.48978	-.52690	4.07808
	GRADIENT		-.07594	.00363	.00425	.00265	.00449	.00118

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LARC 8FT TPT 740(LA72) BIWVSOEF (AJD001) (22 OCT 76)

REFERENCE DATA PARAMETRIC DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 17 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.200	-2.228	660.87938	-.35762	-.36500	-.34369	-.36067	3.16351
1.200	.018	661.19541	-.35295	-.36380	-.33950	-.35996	3.16542
1.200	2.268	661.10821	-.35018	-.35923	-.33853	-.35718	3.16483
1.200	4.532	660.84265	-.34559	-.35596	-.33874	-.35391	3.16401
1.199	6.764	660.70061	-.35352	-.36282	-.34691	-.35801	3.16506
1.200	8.986	661.13728	-.36395	-.37566	-.35507	-.36628	3.16591
1.200	11.239	660.95882	-.37630	-.38298	-.37043	-.37914	3.16480
1.199	13.516	660.85948	-.39702	-.41107	-.39020	-.40675	3.16496
1.199	15.749	660.95273	-.41902	-.42781	-.42412	-.43288	3.16429
1.200	18.001	661.03826	-.43832	-.45195	-.44920	-.44825	3.16430
1.200	20.230	661.17990	-.45138	-.47656	-.46022	-.46013	3.16236
1.200	20.729	661.28066	-.45230	-.47892	-.46066	-.46141	3.16277
	GRADIENT	-.00886	.00172	.00141	.00070	.00102	.00004

LARC 8FT TPT 740(LA72) BIWVSOEF (AJD002) (22 OCT 76)

REFERENCE DATA PARAMETRIC DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 10/ 0 RN/L = 2.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.351	-2.081	167.57056	-.21305	-.23803	-.19995	-.22649	2.10955
.350	-.021	167.00848	-.20853	-.23311	-.19776	-.22533	2.10829
.350	2.039	167.47749	-.20417	-.23057	-.19722	-.22424	2.11320
.350	4.102	167.28989	-.20250	-.22750	-.19791	-.22686	2.11489
.352	6.155	168.50758	-.19635	-.22258	-.19179	-.22242	2.12333
.350	8.226	167.10324	-.19560	-.22239	-.19195	-.22473	2.11621
.351	10.260	167.66436	-.19638	-.22510	-.19274	-.22447	2.12081
.349	12.357	166.44792	-.19693	-.22624	-.19078	-.22369	2.11448
.350	14.425	167.29061	-.20534	-.23367	-.19553	-.22638	2.12098
.350	16.512	167.10348	-.21504	-.24011	-.20620	-.22663	2.12101
.350	18.573	166.82251	-.22255	-.25241	-.22796	-.23320	2.11981
	GRADIENT	-.01810	.00175	.00166	.00032	-.00000	.00102

LARC 8FT TPT 740(LA72) B1WVS0EF (AJD002) (22 OCT 76)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.7000 IN. XO		
LREF =	474.8000 INCHES	YMRP =	.0000 IN. YO		
BREF =	936.6800 INCHES	ZMRP =	375.0000 IN. ZO		
SCALE =	.0150				

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 9/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.799	-2.335	622.61564	-.22275	-.24466	-.21719	-.23460	3.78048
.800	-.109	623.02852	-.21983	-.24185	-.21516	-.23293	3.77536
.801	2.150	623.73011	-.21120	-.23242	-.20997	-.22594	3.77555
.800	4.378	622.95520	-.20610	-.23039	-.20779	-.22428	3.76988
.801	6.652	624.27846	-.20138	-.22549	-.20663	-.21824	3.77297
.801	8.878	623.68204	-.20524	-.23524	-.20731	-.21894	3.77159
.801	11.117	623.84513	-.21664	-.25416	-.21809	-.23329	3.77137
.801	13.358	623.72380	-.23245	-.27115	-.23403	-.25168	3.77231
.800	15.592	623.10184	-.25354	-.28670	-.25413	-.27321	3.77149
.800	17.815	622.90702	-.27386	-.30566	-.27281	-.29447	3.77319
.800	20.045	622.98664	-.29904	-.33138	-.28704	-.31727	3.77360
	GRADIENT	.07701	.00262	.00233	.00149	.00170	-.00141

RUN NO. 8/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.901	-2.439	711.09929	-.24117	-.27059	-.23020	-.25509	3.97097
.899	-.110	710.11524	-.23658	-.26044	-.22704	-.24872	3.96831
.898	2.190	709.16752	-.22929	-.25406	-.22085	-.24154	3.96562
.898	4.470	709.02114	-.22050	-.24862	-.21888	-.23699	3.96497
.900	6.746	710.47688	-.21603	-.24722	-.21821	-.23494	3.96945
.898	9.016	709.43305	-.22082	-.25946	-.22407	-.23540	3.96872
.900	11.301	710.60020	-.23944	-.27670	-.23940	-.24900	3.97273
.899	13.565	709.61174	-.26212	-.29959	-.26222	-.27521	3.97020
.900	15.869	710.49513	-.28223	-.31815	-.28112	-.30205	3.97192
.898	18.135	709.18041	-.31083	-.34682	-.30694	-.33130	3.96988
.900	20.412	710.90197	-.36118	-.41293	-.35120	-.39289	3.97266
	GRADIENT	-.31095	.00391	.00314	.00174	.00267	-.00090

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LARC 8FT TPT 740(LA72) B1WVS0EF (AJD002) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 7/ 0 RN/L = 4.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.975	-2.423	767.17698	-.35765	-.40542	-.34044	-.39027	4.08025
.976	-.086	767.94709	-.35049	-.40028	-.33465	-.38628	4.08527
.976	2.269	767.88340	-.34053	-.39175	-.32353	-.37868	4.08466
.976	4.627	767.76091	-.33819	-.39231	-.32026	-.38297	4.07966
.976	6.936	767.93208	-.33873	-.39316	-.33011	-.38858	4.07831
.975	9.262	767.50094	-.34024	-.39056	-.33730	-.39363	4.07742
.977	11.610	768.51632	-.36889	-.41463	-.37011	-.40593	4.08527
.976	13.932	767.89965	-.38796	-.42767	-.38683	-.42000	4.09239
.976	16.260	767.83454	-.41536	-.44001	-.41787	-.43006	4.09445
.978	18.607	769.31258	-.46815	-.48024	-.48009	-.47177	4.08909
.975	20.914	765.87948	-.50164	-.52482	-.50847	-.51581	4.04365
	GRADIENT	.07163	.00291	.00204	.00305	.00125	-.00010

RUN NO. 6/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.199	-2.289	660.72331	-.37843	-.38108	-.39256	-.38403	3.16297
1.200	-.032	660.69912	-.37042	-.37293	-.36748	-.37552	3.16360
1.200	2.216	660.92023	-.36640	-.37299	-.35817	-.37630	3.16384
1.200	4.476	660.76320	-.36545	-.37589	-.36010	-.37656	3.16361
1.199	6.731	660.60595	-.36102	-.37266	-.35964	-.36550	3.16339
1.199	8.982	660.44847	-.37244	-.38951	-.36638	-.37899	3.16228
1.199	11.264	660.61357	-.37729	-.39761	-.37315	-.38060	3.16269
1.199	13.526	660.28960	-.37843	-.40165	-.37465	-.38090	3.16059
1.199	15.807	660.95033	-.38677	-.41298	-.38336	-.39069	3.16448
1.200	18.059	661.26123	-.42263	-.44048	-.42274	-.41809	3.16600
1.199	20.292	660.35386	-.43857	-.45767	-.44506	-.44440	3.16239
	GRADIENT	.01509	.00191	.00069	.00473	.00096	.00010

LARC 8FT TPT 740(LA72) B7WVS0EF (AJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 20/ 0 RN/L = 2.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.350	-2.053	167.47749	-.20360	-.23237	-.18624	-.22490	2.11497
.351	-.016	167.66507	-.20243	-.22975	-.18509	-.22085	2.11918
.351	2.038	167.66531	-.20101	-.22595	-.18367	-.21563	2.12161
.351	4.101	167.85264	-.19889	-.22428	-.18205	-.21492	2.12460
.351	6.146	168.41406	-.19494	-.21930	-.18051	-.21422	2.12930
.351	8.191	168.22726	-.19374	-.22001	-.17881	-.21682	2.13059
.351	10.268	167.57200	-.19685	-.22370	-.18140	-.22050	2.12823
.350	12.314	167.38465	-.20134	-.22775	-.18587	-.22359	2.12762
.351	14.390	168.41455	-.20814	-.23157	-.19089	-.22839	2.13540
.351	16.433	167.85288	-.22065	-.24228	-.21045	-.24383	2.13302
.351	18.499	167.66627	-.23746	-.26673	-.24528	-.25833	2.13256
.351	19.004	167.66650	-.23367	-.26910	-.25333	-.26735	2.13262
	GRADIENT	.05486	.00076	.00137	.00068	.00171	.00153

RUN NO. 19/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.800	-2.312	623.96498	-.21350	-.23279	-.20275	-.22272	3.78511
.800	-.083	622.47325	-.20633	-.22515	-.19759	-.21441	3.77054
.801	2.163	623.52283	-.20105	-.22237	-.19270	-.21166	3.77389
.800	4.425	622.77291	-.19680	-.22173	-.18806	-.21214	3.77181
.799	6.640	622.37673	-.19424	-.22006	-.18651	-.21252	3.77093
.800	8.867	623.56063	-.19848	-.22414	-.19128	-.21661	3.77461
.799	11.075	621.95781	-.21248	-.23899	-.20629	-.23298	3.77085
.800	13.302	623.40771	-.23571	-.26169	-.23313	-.26005	3.77600
.800	15.540	622.65762	-.26186	-.28698	-.26006	-.28819	3.77392
.799	17.745	622.45637	-.28196	-.30804	-.28031	-.31396	3.77342
.800	19.956	622.64506	-.30623	-.33744	-.30703	-.34402	3.77368
.801	20.501	623.88301	-.31520	-.34764	-.31665	-.35383	3.77729
	GRADIENT	-.11226	.00247	.00160	.00218	.00153	-.00162

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LARC 8FT TPT 740(LA72) B7WVS0EF (AJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 18/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.899	-2.352	709.91351	-.22413	-.24169	-.21505	-.23197	3.97935
.900	-.084	710.52250	-.21679	-.23422	-.20983	-.22461	3.97343
.900	2.232	710.83797	-.20921	-.22651	-.20125	-.21757	3.96993
.899	4.478	709.81762	-.20973	-.23120	-.19985	-.22158	3.96769
.899	6.751	709.96892	-.20991	-.23462	-.20216	-.22534	3.96765
.900	9.012	710.41268	-.21246	-.24746	-.20640	-.23449	3.96893
.899	11.245	710.02843	-.22979	-.27077	-.22531	-.25691	3.96777
.901	13.526	711.50962	-.25319	-.28987	-.24953	-.28020	3.97266
.900	15.806	710.71910	-.28453	-.31749	-.28256	-.31666	3.97078
.900	18.038	710.09276	-.32469	-.36512	-.32298	-.37474	3.97379
.901	20.347	711.55982	-.37579	-.42705	-.37078	-.43378	3.97815
.899	20.877	709.77625	-.38657	-.43730	-.38302	-.44260	3.97442
	GRADIENT	.00180	.00223	.00172	.00239	.00168	-.00169

RUN NO. 17/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.976	-2.364	768.32825	-.34340	-.37980	-.32046	-.37152	4.08156
.976	-.009	768.14335	-.32245	-.36524	-.30454	-.35716	4.07897
.976	2.316	767.83715	-.31188	-.35488	-.29686	-.34555	4.07665
.976	4.656	767.85084	-.31421	-.35608	-.29919	-.34592	4.07042
.976	6.979	768.17458	-.32132	-.37187	-.30445	-.35478	4.07099
.975	9.261	767.13206	-.32675	-.37986	-.31162	-.36753	4.07187
.976	11.554	768.11456	-.35207	-.40766	-.33595	-.39685	4.08167
.976	13.886	767.62213	-.39404	-.44038	-.38053	-.43544	4.08054
.976	16.200	767.20966	-.42578	-.47094	-.41375	-.46053	4.07753
.976	18.526	768.24831	-.46630	-.50463	-.45639	-.49467	4.09595
.976	20.833	767.91707	-.50486	-.53561	-.49861	-.52628	4.05789
.976	21.390	767.59594	-.50690	-.53580	-.50002	-.52822	4.05656
	GRADIENT	-.07433	.00420	.00349	.00306	.00378	-.00153

LARC 8FT TPT 740(LA72) B7WVS0EF (AJD003) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 16/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.200	-2.253	660.79993	-.35932	-.36478	-.34548	-.36222	3.16222
1.200	-.012	660.84265	-.35456	-.36447	-.34084	-.36143	3.16312
1.200	2.250	660.92210	-.35331	-.36153	-.34187	-.35957	3.16530
1.200	4.482	660.79993	-.34815	-.35792	-.34079	-.35572	3.16667
1.199	6.756	660.92370	-.35442	-.36312	-.34791	-.35828	3.16765
1.200	8.972	661.00744	-.36458	-.37570	-.35640	-.36773	3.16531
1.199	11.226	660.89468	-.37560	-.38505	-.36863	-.37926	3.16478
1.200	13.505	660.92210	-.39944	-.41253	-.39273	-.41060	3.16174
1.199	15.776	660.68539	-.41801	-.42885	-.42611	-.43103	3.16112
1.201	18.006	661.30759	-.43794	-.45420	-.44893	-.44677	3.16239
1.200	20.241	661.10821	-.45401	-.47356	-.46406	-.46396	3.16216
1.200	20.782	660.98612	-.45355	-.47274	-.46613	-.46868	3.16175
	GRADIENT	.00358	.00155	.00105	.00058	.00095	.00069

LARC 8FT TPT 740(LA72) B7WVS0EF (AJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 15/ 0 RN/L = 2.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.348	-2.069	165.13214	-.21078	-.23566	-.20035	-.22657	2.09756
.348	-.030	165.50713	-.20695	-.23129	-.20134	-.22607	2.10291
.350	2.061	166.72585	-.20451	-.22867	-.20228	-.22778	2.11499
.350	4.110	167.10038	-.20263	-.22626	-.20183	-.22775	2.11854
.349	6.152	166.16454	-.19993	-.22417	-.20056	-.22758	2.11512
.349	8.236	166.44580	-.19579	-.22284	-.19593	-.22624	2.11815
.350	10.291	166.72680	-.19451	-.22056	-.19560	-.22301	2.12054
.350	12.360	166.72633	-.19642	-.22628	-.19465	-.22492	2.12163
.350	14.428	167.00753	-.20322	-.23114	-.19718	-.22597	2.12407
.350	16.500	166.91396	-.21427	-.23942	-.20729	-.22657	2.12468
.350	18.572	166.72680	-.22355	-.25442	-.23134	-.23636	2.12472
	GRADIENT	.34569	.00130	.00149	-.00026	-.00026	.00364

LARC 8FT TPT 740(LA72) B7WVS0EF (AJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 14/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.799	-2.343	622.25506	-.22272	-.24479	-.21907	-.23503	3.77812
.799	-.125	622.40181	-.21782	-.23924	-.21506	-.23114	3.77766
.800	2.131	623.26737	-.21182	-.23282	-.21237	-.22753	3.77971
.799	4.392	622.77490	-.20470	-.22513	-.20805	-.22295	3.77713
.799	6.664	622.46264	-.20161	-.22607	-.20905	-.22000	3.77562
.801	8.911	624.03589	-.20522	-.23446	-.20959	-.22064	3.78007
.801	11.113	624.02958	-.21731	-.25460	-.21977	-.23416	3.77995
.800	13.353	623.54173	-.23389	-.27506	-.23624	-.25512	3.77842
.800	15.604	623.62134	-.25321	-.28637	-.2550[illegible]	-.27447	3.77882
.801	17.828	623.68204	-.27215	-.30113	-.27110	-.29396	3.77887
.801	20.054	623.88301	-.30083	-.33380	-.29343	-.32115	3.77937
	GRADIENT	.10783	.00267	.00251	.00159	.00177	-.00004

RUN NO. 13/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.899	-2.438	709.75399	-.23950	-.26967	-.22850	-.25407	3.96235
.899	-.128	709.76308	-.23525	-.25903	-.22670	-.24779	3.96249
.900	2.189	709.90090	-.23140	-.25539	-.22599	-.24415	3.96367
.900	4.498	710.35354	-.22120	-.24784	-.22092	-.23762	3.96838
.898	6.748	709.00301	-.21512	-.24708	-.21910	-.23560	3.95798
.900	9.035	710.24817	-.22067	-.25651	-.22622	-.23777	3.97129
.900	11.297	710.71460	-.24041	-.27826	-.24161	-.25361	3.97215
.901	13.557	711.18057	-.26381	-.29988	-.26446	-.27984	3.97300
.899	15.845	709.79036	-.27774	-.31256	-.27740	-.30235	3.97057
.899	18.159	709.90031	-.31069	-.34264	-.30668	-.33424	3.97068
.899	20.411	709.83170	-.36395	-.41134	-.35249	-.39578	3.97152
	GRADIENT	.08373	.00254	.00299	.00101	.00229	.00083

LARC 8FT TPT 740(LA72) B7WV50EF (AJD004) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 12/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.977	-2.429	769.01773	-.36180	-.41034	-.34577	-.39526	4.09529
.976	-.078	768.43450	-.34820	-.39789	-.33308	-.38270	4.09362
.977	2.288	768.80182	-.33828	-.39041	-.32253	-.37667	4.09504
.976	4.617	768.64698	-.32939	-.38669	-.31322	-.37626	4.09161
.976	6.947	768.66198	-.33103	-.38709	-.32313	-.38266	4.09609
.975	9.277	768.11083	-.34090	-.39122	-.33756	-.39435	4.08169
.975	11.596	767.54320	-.35801	-.40425	-.36192	-.39889	4.07639
.976	13.945	767.27352	-.38640	-.42472	-.38795	-.41739	4.08493
.976	16.278	767.74718	-.41516	-.43755	-.41942	-.43013	4.09731
.977	18.598	768.74175	-.46039	-.47238	-.47234	-.46436	4.09214
.975	20.934	767.44918	-.50260	-.52794	-.50908	-.51660	4.08000
	GRADIENT	-.03164	.00456	.00334	.00460	.00268	-.00041

RUN NO. 11/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.200	-2.300	660.85034	-.37745	-.38009	-.39194	-.38274	3.16331
1.200	-.015	660.82130	-.37196	-.37411	-.37250	-.37749	3.16401
1.200	2.235	660.91439	-.36791	-.37319	-.36160	-.37680	3.16600
1.200	4.499	660.92210	-.36509	-.37145	-.36082	-.37565	3.16619
1.200	6.759	660.82897	-.36157	-.37273	-.36030	-.36575	3.16598
1.200	9.001	661.18179	-.37252	-.38959	-.36802	-.37805	3.16738
1.200	11.278	661.03651	-.37679	-.39688	-.37374	-.38100	3.16551
1.200	13.539	660.80760	-.37980	-.40194	-.37639	-.38330	3.16419
1.199	15.820	660.86566	-.38561	-.40993	-.38413	-.38924	3.16370
1.199	18.069	660.79519	-.42276	-.43991	-.42370	-.41755	3.16406
1.200	20.309	660.91439	-.44010	-.45944	-.45032	-.44936	3.16333
	GRADIENT	.01359	.00182	.00079	.00461	.00097	.00047

LARC 8FT TPT 740(LA72) B6WV50EF (AJD005) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 24/ 0 RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.349	-2.077	165.79033	-.20598	-.23414	-.18219	-.22368	2.08999
.349	-.016	165.88348	-.20634	-.23162	-.18114	-.22116	2.09220
.349	2.025	166.25885	-.20350	-.22776	-.17835	-.21493	2.09645
.349	4.078	166.25814	-.20207	-.22632	-.17739	-.21350	2.09805
.350	6.124	166.63322	-.19734	-.22248	-.17367	-.21303	2.10168
.350	8.201	166.91419	-.19701	-.22307	-.17433	-.21553	2.10521
.350	10.236	166.91396	-.19891	-.22497	-.17624	-.21792	2.10692
.349	12.308	166.07140	-.20373	-.22945	-.17807	-.21996	2.10226
.349	14.371	165.88535	-.21208	-.23689	-.18688	-.22883	2.10254
.348	16.435	165.69718	-.22286	-.24483	-.20481	-.24108	2.10176
.349	18.495	166.25885	-.24312	-.27126	-.23565	-.25797	2.10641
	GRADIENT	.08670	.00071	.00133	.00084	.00179	.00139

RUN NO. 23/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.801	-2.318	624.39598	-.21315	-.23272	-.19940	-.22108	3.77410
.801	-.094	623.76164	-.20712	-.22644	-.19641	-.21453	3.77200
.802	2.139	625.53339	-.20126	-.22191	-.18994	-.21042	3.77692
.801	4.413	624.31639	-.19767	-.22192	-.18620	-.21117	3.77369
.800	6.647	623.42030	-.19538	-.22069	-.18593	-.21273	3.77312
.802	8.855	624.87085	-.19967	-.22607	-.19101	-.21749	3.77954
.801	11.075	623.93346	-.21240	-.23937	-.20437	-.23257	3.77721
.800	13.282	623.78686	-.23509	-.26236	-.22961	-.25913	3.77664
.801	15.518	624.01507	-.26134	-.28572	-.25702	-.28580	3.77658
.800	17.746	623.59841	-.28186	-.30882	-.27844	-.31288	3.77326
.801	19.940	624.29111	-.30611	-.33957	-.30651	-.34312	3.77425
	GRADIENT	.06772	.00233	.00164	.00205	.00151	.00016

LARC 8FT TPT 740(LA72) B6WVS0EF (AJDC05) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 22/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.900	-2.374	710.64140	-.22492	-.24206	-.21398	-.23218	3.97478
.899	-.084	710.12921	-.21659	-.23361	-.20764	-.22316	3.97324
.899	2.209	709.41088	-.21166	-.22947	-.20214	-.21991	3.96872
.900	4.472	710.91111	-.21066	-.23179	-.19982	-.22147	3.97059
.899	6.754	709.82260	-.21020	-.23343	-.20102	-.22382	3.96809
.900	8.992	710.37622	-.21484	-.24449	-.20824	-.23406	3.96948
.900	11.250	710.59575	-.23007	-.27048	-.22371	-.25580	3.96970
.899	13.489	709.90520	-.25388	-.29235	-.25065	-.28192	3.97219
.901	15.778	711.51398	-.28577	-.32007	-.28234	-.31816	3.97637
.901	18.034	711.51398	-.32302	-.36330	-.32094	-.36945	3.97526
.900	20.314	710.50893	-.37384	-.42600	-.36932	-.43118	3.96917
	GRADIENT	.00330	.00209	.00153	.00210	.00155	-.00075

RUN NO. 25/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.976	-2.383	768.06711	-.34012	-.37749	-.31485	-.36799	4.09106
.976	-.026	768.60315	-.32489	-.36666	-.30428	-.35685	4.09303
.976	2.300	768.31204	-.31236	-.35496	-.29557	-.34411	4.08519
.976	4.626	767.57718	-.31287	-.35406	-.29595	-.34299	4.08008
.976	6.954	768.06711	-.31987	-.36994	-.30069	-.35319	4.08197
.976	9.239	767.83586	-.32795	-.37784	-.31001	-.36471	4.08156
.976	11.529	767.83586	-.35316	-.40227	-.33545	-.39515	4.08156
.976	13.848	767.48464	-.39156	-.43754	-.37654	-.43281	4.08218
.976	16.190	767.33217	-.42752	-.47190	-.41158	-.45942	4.08026
.976	18.483	767.85084	-.46156	-.50079	-.44854	-.48957	4.08966
.977	20.794	768.25433	-.50471	-.53644	-.49523	-.52637	4.08040
	GRADIENT	-.07502	.00404	.00351	.00280	.00376	-.00174

LARC 8FT TPT 740(LA72) B6WVS0EF (AJD005) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 21/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.200	-2.227	661.23805	-.35870	-.36264	-.34483	-.36132	3.16454
1.200	.003	661.01518	-.35440	-.36459	-.34053	-.36183	3.16195
1.200	2.235	660.97249	-.35387	-.36190	-.34180	-.35998	3.16283
1.199	4.482	660.88704	-.35017	-.35940	-.34134	-.35772	3.16459
1.200	6.718	661.13907	-.35419	-.36282	-.34704	-.35777	3.17005
1.199	8.950	661.07495	-.35384	-.37513	-.35486	-.36576	3.17004
1.200	11.206	661.46864	-.37433	-.38286	-.36695	-.37662	3.17088
1.200	13.490	661.00923	-.39795	-.41062	-.39058	-.40438	3.16589
1.199	15.751	660.73083	-.41879	-.43137	-.42236	-.43621	3.16227
1.200	17.999	661.36788	-.43699	-.45067	-.44596	-.44601	3.16336
1.200	20.212	661.16634	-.45266	-.47082	-.46129	-.46160	3.16433
	GRADIENT	-.04899	.00117	.00056	.00041	.00057	.00005

LARC 8FT TPT 740(LA72) B6WVS0EF (AJD006) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 30/ 0 RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.349	-2.069	165.97639	-.21485	-.23820	-.19730	-.22870	2.08798
.349	-.022	166.25743	-.21067	-.23446	-.19745	-.22688	2.09323
.349	2.048	166.35174	-.20722	-.23099	-.19734	-.22676	2.09571
.349	4.092	166.53916	-.20413	-.22739	-.19517	-.22842	2.09866
.350	6.164	166.72633	-.20248	-.22618	-.19548	-.22912	2.10332
.350	8.217	166.63274	-.19830	-.22297	-.19273	-.22543	2.10450
.350	10.291	166.63322	-.19592	-.22202	-.18939	-.22256	2.10578
.349	12.357	166.44604	-.19852	-.22656	-.18865	-.22520	2.10580
.349	14.425	166.44604	-.20615	-.23133	-.19198	-.22568	2.10639
.349	16.507	166.25908	-.21735	-.23972	-.20557	-.22688	2.10705
.349	18.563	165.97826	-.22584	-.25352	-.22839	-.23540	2.10649
	GRADIENT	.08670	.00173	.00175	.00017	.00005	.00168

LARC 8FT TPT 740(LA72) B6WVS0EF (AJD006) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 29/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.800	-2.340	622.46697	-.22486	-.24616	-.22000	-.23806	3.77042
.801	-.091	624.11929	-.21757	-.23804	-.21438	-.23175	3.77527
.800	2.140	622.99293	-.21054	-.23065	-.21014	-.22690	3.77164
.799	4.413	621.82103	-.20465	-.22734	-.20705	-.22473	3.76716
.798	6.669	621.22758	-.20330	-.22678	-.20966	-.22263	3.76474
.800	8.917	622.63251	-.20558	-.23537	-.20808	-.22191	3.77136
.799	11.140	622.36419	-.21596	-.25347	-.21658	-.23414	3.77069
.799	13.358	622.04565	-.23457	-.27660	-.23545	-.25726	3.76906
.800	15.595	623.27770	-.25617	-.28960	-.25629	-.27822	3.77255
.800	17.851	623.15628	-.27455	-.30394	-.27124	-.29613	3.77246
.799	20.067	622.32217	-.30090	-.33509	-.29224	-.31783	3.77101
	GRADIENT		-.13659	.00301	.00284	.00192	.00199	-.00060

RUN NO. 28/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.900	-2.408	710.74172	-.24064	-.26763	-.23216	-.25709	3.97298
.901	-.102	711.92551	-.23545	-.25860	-.22954	-.24986	3.97616
.901	2.188	711.79286	-.22802	-.25094	-.22300	-.24197	3.97274
.901	4.481	712.01185	-.22182	-.24695	-.22149	-.23877	3.97296
.900	6.765	710.58195	-.21657	-.24923	-.21790	-.23701	3.97026
.901	9.046	711.60562	-.21983	-.25804	-.22262	-.23857	3.97333
.900	11.297	710.94306	-.23979	-.27706	-.23868	-.25288	3.97403
.900	13.564	711.33613	-.25963	-.29266	-.25707	-.27599	3.97862
.900	15.851	711.03901	-.27837	-.31358	-.27694	-.30294	3.97800
.900	18.169	710.90187	-.31415	-.34762	-.30894	-.33655	3.97636
.900	20.434	711.21730	-.36879	-.41486	-.35602	-.39677	3.97398
	GRADIENT		.16038	.00278	.00304	.00168	.00274	-.00015

LARC 8FT TPT 740(LA72) B6WVS0EF (AJD006) (22 OCT 76)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN. XO
LREF = 474.8000 INCHES YMRP = .0000 IN. YO
BREF = 936.6800 INCHES ZMRP = 375.0000 IN. ZO
SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
BDFLAP = -11.700

RUN NO. 27/ 0 RN/L = 4.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
.976	-2.407	767.13342	-.35758	-.40694	-.33995	-.39194	4.08166
.976	-.075	767.33217	-.34810	-.39826	-.33119	-.38419	4.08026
.976	2.270	767.39342	-.33681	-.38829	-.31948	-.37620	4.07824
.975	4.629	767.05582	-.32613	-.38229	-.30797	-.37381	4.07599
.975	6.966	766.97819	-.32654	-.38105	-.31759	-.37837	4.07825
.975	9.295	767.00812	-.34152	-.39190	-.33712	-.39700	4.07969
.975	11.617	766.77797	-.35762	-.40431	-.35100	-.39791	4.08343
.976	13.946	768.00588	-.38746	-.42491	-.38702	-.42112	4.09082
.976	16.289	768.35826	-.41450	-.43574	-.41831	-.42771	4.08640
.977	18.628	768.91035	-.46313	-.47492	-.47522	-.46649	4.08361
.977	20.942	769.01773	-.50488	-.52966	-.50842	-.51391	4.08167
	GRADIENT		-.00745	.00450	.00359	.00459	.00266	-.00081

RUN NO. 26/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	Q(PSF)	CPC	CPB1	CPB2	CPB3	RN/L
1.199	-2.281	660.65777	-.37768	-.37961	-.38880	-.38238	3.16594
1.200	-.010	660.84078	-.37156	-.37336	-.36862	-.37613	3.16433
1.201	2.234	660.95503	-.36837	-.37390	-.35919	-.37751	3.16187
1.199	4.496	660.55553	-.36530	-.37504	-.35887	-.37624	3.16052
1.199	6.753	660.31721	-.36125	-.37230	-.35842	-.36496	3.16111
1.199	9.007	660.53413	-.37381	-.38897	-.36750	-.37897	3.16318
1.200	11.284	660.67008	-.37785	-.39675	-.37275	-.37967	3.16340
1.199	13.541	660.49890	-.37898	-.40174	-.37400	-.38117	3.16337
1.199	15.823	660.49132	-.38974	-.41455	-.38692	-.39242	3.16317
1.198	18.063	660.31224	-.42663	-.44453	-.42815	-.42107	3.16295
1.199	20.308	660.52033	-.44098	-.45868	-.44758	-.44631	3.16337
	GRADIENT		-.00851	.00179	.00058	.00440	.00076	-.00083