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National Aeronautics and
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Lyndon B. Johnson Space Center
Houston, Texas 77058

REVISION A
DMS-DR-2257
NASA CR-151,369

RESULTS OF A DRAG REDUCTION INVESTIGATION ON AN 0.010-SCALE MODEL OF THE SPACE SHUTTLE VEHICLE (72-OTS) LAUNCH CONFIGURATION TESTED IN THE LaRC 8-FOOT TRANSONIC PRESSURE TUNNEL FOR THE MACH RANGE OF 0.35 TO 1.20 (LA69)

SPACE SHUTTLE AEROTHERMODYNAMIC DATA REPORT

Data Management SERVICES
SPACE DIVISION CHRYSLER CORPORATION

DATE: November 1977

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This publication change is issued to revise and reformat the plotted data figures.

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Data Management Services

MICHOUD DEFENSE SPACE DIVISION CHRYSLER CORPORATION

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Prepared under NASA Contract Number NAS9-13247

by

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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' TPT 714
NASA Series Number:	LA69
Model Number:	72-OTS
Test Dates:	April 24 through 29, 1975
Occupancy Hours:	64

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

RESULTS OF A DRAG REDUCTION INVESTIGATION ON AN 0.010-SCALE MODEL OF THE SPACE SHUTTLE VEHICLE (72-OTS) LAUNCH CONFIGURATION TESTED IN THE LaRC 8-FOOT TRANSONIC PRESSURE TUNNEL FOR THE MACH RANGE OF 0.35 TO 1.20

(LA69)

ABSTRACT

A study has been made to determine the effects of various configurational components on the total drag associated with Rockwell International Space Shuttle Launch Vehicle as presently designed (vehicle 5). In addition, several modifications have been made to this vehicle in an attempt to reduce drag, especially near Mach 1.0. Primary attention has been focused on drag reduction for the external tank and some modification to the orbiter and orbiter maneuvering system package (OMS pod).

The models were tested at Mach numbers of 0.35, 0.60, 0.80, 0.85, 0.90, 0.92, 0.95, 0.98, 1.12, and 1.20 over an angle of attack range of about -4° to 4° at 0° sideslip.

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COEFFICIENTS PLOTTED SCHEDULES:

(A) C_N, C_A, C_m, C_L, C_D, L/D, C_Y, C_n, C_ℓ vs α

NOMENCLATURE
General

PLOT 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

NOMENCLATURE (Continued)

Body-Axis System

PLOT 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	CLM	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	CLM	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}

NOMENCLATURE (Concluded)

PLOT SYMBOL	MNEMONIC	DEFINITION
i	IORB	Incidence angle of orbiter reference plane with respect to ET reference plane, degrees
X_o	XO	Orbiter longitudinal station, inches
X_T	XT	Tank longitudinal station, inches
Y_o	YO	Orbiter spanwise station, inches
Y_T	YT	Tank spanwise station, inches
δ_e	ELEVON	Elevon, surface deflection angle, positive deflection, trailing edge down; degrees

INTRODUCTION

The National Aeronautics and Space Administration is continuing its support of the Space Shuttle Vehicle Development Program. While considerable emphasis has been placed on determining orbiter aerodynamics, the launch vehicle has not received such in-depth experimental effort in past. Somewhat detailed studies have been made on an early version of the launch configuration at Langley from subsonic through supersonic speeds (references 1 & 2). However, considerable alterations have been made to this configuration, resulting in a large increase in transonic drag for the vehicle as presently configured (see reference 3). This increase in drag not only results in higher thrust requirements but also large increases in fuel and, therefore, added weight which decreases the payload in orbit capability.

In an effort to reduce this large drag increase, an investigation has been made to determine fixes or methods for reducing drag at transonic speeds by employing simple light weight structures in critical areas of high drag, such as the tank base. Modifications to the present launch vehicle (designated vehicle 5) consisted of external tank base-fairing of an ogival configuration. New solid rocket booster and external tank configurations were also tested in addition to a Langley designed minimum structure orbital maneuvering system (OMS pod).

The test was conducted in three parts in the Langley Research Center 8-foot Transonic Pressure Tunnel. This report presents data obtained during the third test phase from April 24 through April 29, 1974. The models

were tested at Mach numbers of 0.35, 0.60, 0.80, 0.85, 0.90, 0.92, 0.95, 0.98, 1.12, and 1.20 over an angle of attack range of about -4° to 4° at 0° sideslip.

Data are presented in references 4 and 5 for the remainder of the tests.

CONFIGURATIONS INVESTIGATED

The model used in this investigation was a 0.010 scale outer mold line model 72-OTS of the Space Shuttle Mated Vehicle. The model 72-OTS dimensional data are given in table III.

During the test alternate tank and attach structure configurations were investigated in addition to other modifications designed to reduce the overall aerodynamic drag. The tested configurations included the following:

Component	Definition
B_{26}	Fuselage, VL70-0000193, VL70-000140A, V170-000140B
C_9	Canopy, VL70-000140A, VL70-000143A
E_{44}	Elevons, SAS/AERO/74-344
ET_I	External Tank, T28 with Long Ogive Base Fairing
ET_{II}	External Tank, LaRC Built
ET_{III}	External Tank, LaRC Built
F_{10}	Bodyflap, VL70-000140B, VL70-00020
M_{16}	OMS Pod, VL70-000203
N_{28}	OMS Nozzle, VL70-000140A
R_5	Rudder, VL70-000095
SRB_{II}	Solid Rocket Booster, LaRC Built
T_{28}	ET, VL78-000063, VL78-00062B, VC78-00002
V_8	Vertical, VL70-000140A, VL70-00002
W_{116}	Wing, VL70-000140B, VL70-000200

CONFIGURATIONS INVESTIGATED (Concluded)

The tested configurations as designated in table II are identified as follows:

Launch Configuration 1,	Orbiter with External Tank II (ET_{II}).
Launch Configuration 2,	Orbiter with ET_{II} and tank to orbiter fairing.
Launch Configuration 3,	Orbiter with ET_{II}, Solid Rocket Booster II (SRB_{II}) and tank to orbiter fairing.
Launch Configuration 4,	Launch configuration 3 with tank to SRB fairing.
Launch Configuration 5,	Orbiter with External Tank III (ET_{III}).
Launch Configuration 6,	Orbiter with ET_{III} and tank to orbiter fairing.
Launch Configuration 7,	Orbiter with ET_{III}, Solid Rocket Booster II (SRB_{II}) and tank to orbiter fairing.
Launch Configuration 8,	Launch configuration 7 with tank to SRB fairing.
Launch Configuration 9,	Orbiter with External Tank I with tank to orbiter fairing.

Model sketches are shown in figure 2 and model photographs in figure 3.

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 feet square. Reynolds numbers are variable from 0.30×10^6 per foot to 7.00×10^6, 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

The aerodynamic force and moment data were measured by an internal strain gage balance. The data were adjusted for tunnel corrections, sting and balance deflection, and model weight tares.

All final data were presented along a set of body and stability axes (Figure 1) whose origin is located at FS 976 on the longitudinal axis of the external tank and FRL 400 on the vertical axis of the external tank. Model data were converted to standard NASA coefficients using the following:

Reference Area	SREF = 38.736 in.^{2}
Reference Length	LREF = 12.903 in.
Reference Span	BREF = 12.903 in.

Base and cavity pressure coefficients were computed by:

$$C_{P_i} = \frac{P_i - P_\infty}{q}$$

Where i = manifold number.

REFERENCES

1. Chrysler Corporation Space Division, Data Management Services. DMS-DR-2118, "Results of Transonic Wind Tunnel Tests on an 0.015-Scale Space Shuttle Mated Vehicle Model (67-OTS) in the LaRC 8-Foot TPT (IA41)."

2. Chrysler Corporation Space Division, Data Management Services. DMS-DR-2119, "Supersonic Tests of an 0.015-Scale Space Shuttle Mated Vehicle Model (67-OTS) in the LaRC UPWT to Obtain Aerodynamic Force Data (IA42A/B)."

3. Chrysler Corporation Space Division, Data Management Services. DMS-DR-2204, "Results of Transonic Wind Tunnel Tests on an 0.01-Scale Space Shuttle Mated Vehicle Model 72-OTS in the LaRC 8-Foot TPT (IA43)."

4. Chrysler Corporation Space Division, Data Management Services. DMS-DR-2224, "Results of a Drag Reduction Investigation on an 0.010-Scale Model of the Space Shuttle Vehicle 72-OTS Launch Configuration Tested in the LaRC 8-Foot Transonic Pressure Tunnel for the Mach Range of 0.35 to 1.20 (LA56)."

5. Chrysler Corporation Space Division, Data Management Services. DMS-DR-2233, "Results of a Drag Reduction Investigation on an 0.010-Scale Model of the Space Shuttle Vehicle 72-OTS Launch Configuration Tested in the LaRC 8-Foot Transonic Pressure Tunnel for the Mach Range of 0.35 to 1.20 (LA59)."

TABLE I

TEST : LaRC 8' TPT 703 (LA69)

DATE : 3-11-77

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.35	2.06×10^6	1.16	100°
0.60	3.16×10^6	2.90	
0.80	3.78×10^6	4.33	
0.85	3.89×10^6	4.37	
0.90	3.98×10^6	4.94	
0.92	4.01×10^6	5.05	
0.95	4.05×10^6	5.20	
0.98	4.09×10^6	5.35	
1.12	4.20×10^6	5.91	
1.20	4.22×10^6	6.12	

BALANCE UTILIZED: LaRC 840

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	800 lb.	4.0 lb.	
SF	250 lb.	1.25 lb.	
AF	125 lb.	0.625 lb.	
PM	1600 lb.	8.0 in-lb.	
RM	500 in-lb.	2.5 in-lb.	
YM	500 in-lb.	2.5 in-lb.	

COMMENTS:

TABLE II

TEST: 8'TPT 714 (LA-69)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5-20-75

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES δe				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) .35	.60	.80	.85	.90	.92	.95	.98	1.12	1.20	TEST RUN NUMBERS
★RJ9001	Launch Conf. 1	A	0°	0°					10	9	8	7	6	5	4	3	2	1	
2	2								20	19	18	17	16	15	14	13	12	11	
3	3								30	29	28	27	26	25	24	23	22	21	
4	4								40	39	38	37	36	35	34	33	32	31	
5	4								44	43	42		41						
6	5								54	53	52	51	50	49	48	47	46	45	
7	6								64	63	62	61	60	59	58	57	56	55	
8	7								74	73	72	71	70	69	68	67	66	65	
9	8								84	83	82	81	80	79	78	77	76	75	
10	8								88	87	86		85						
11	9								98	97	96	95	94	93	92	91	90	89	

1	7	13	19	25	31	37	43	49	55	61	67	75 76
RJ data												
CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA	MACH	ALPHA	10

α OR β SCHEDULES: A = α = -4 to +4 in 1° increments

coefficients

IDVAR (1) IDVAR (2) NDV

★AJ data

CBL	CYN	CY	BETA			MACH	ALPHA	4

TABLE III.

MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B_{26}

GENERAL DESCRIPTION : Configuration 140A/B orbiter fuselage

NOTE: B_{26} is identical to B_{24} except underside of fuselage has been refaired to accept W_{116}.

MODEL SCALE: 0.010 MODEL DRAWING: SS-A00147, RELEASE 12

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

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (IML: Fwd Sta. X_o=238), In.	1290.3	12.903
Length (OML: Fwd Sta. X_o=235), In.	1293.3	12.933
Max Width (@ X_o = 1528.3), In.	264.0	2.640
Max Depth (@ X_o = 1464), In.	250.0	2.500
Fineness Ratio	0.26357	0.26357
Area - Ft^2		
Max. Cross-Sectional	340.88	0.0341
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT : CANOPY - C_9

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

MODEL SCALE: 0.010 MODEL DRAWING: SS-A00147, Rel. 12

DRAWING NUMBER : VL70-000143A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=434.643 to 578)	143.357	1.434
Max Width (@ X_o = 513.127)	152.412	1.524
Max Depth (@ X_o = 485.0)	25.000	0.250
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT: ELEVON - E_{44}

GENERAL DESCRIPTION: 6.0 In. F.S. gaps machined into E_{26} elevon. Flipper doors, centerbody pieces, and tipseals are not simulated. (Data are for one side.)

MODEL SCALE: 0.010

DRAWING NUMBER: Not available.

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
Area, Ft^2	210.0	0.021
Span (equivalent), In.	349.2	3.492
Inb'd equivalent chord, In.	118.0	1.180
Outb'd equivalent chord, In.	55.19	0.552
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~~) (Product of Area & $\bar{c}$), Ft^3	1587.25	0.00159
Mean Aerodynamic Chord, In.	90.7	0.907

TABLE III (Continued)

MODEL DIMENSIONAL DATA

MODEL COMPONENT : **ETI, External Tank**

GENERAL DESCRIPTION : **T28 with Long Ogive Base Fairing**

DRAWING NUMBER : **not available.**

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length **(inches)**	2354.275	23.543
Max Width **(inches)**	331.0	3.310
Max Depth		
Fineness Ratio	7.085	7.085
Area		
Max. Cross-Sectional **(Ft.^{2})**	594.678	0.059
Planform		
Wetted		
Base		

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : **ETII, External Tank**

GENERAL DESCRIPTION : **LaRC Built External Tank with Ogive Base Fairing**

DRAWING NUMBER : **not available.**

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length **(inches)**	2131.0	21.31
Max Width **(inches)**	317.0	3.17
Max Depth		
Fineness Ratio	6.722	6.722
Area		
Max. Cross-Sectional **(Ft.^{2})**	548.082	0.055
Planform		
Wetted		
Base		

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : **ET_{III}, External Tank**

GENERAL DESCRIPTION : **LaRC Built External Tank with Ogive Base Fairing**

DRAWING NUMBER : **not available.**

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (**inches**)	2345.0	23.450
Max Width (**inches**)	302.0	3.020
Max Depth		
Fineness Ratio	7.765	7.765
Area		
Max. Cross-Sectional (**Ft.^{2}**)	497.441	0.050
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT : BODY FLAP - F_{10}

GENERAL DESCRIPTION : Configuration 140C body flap. Hingeline located at X_o = 1532, Z_o = 287.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000140C, VL70-355114

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=1525.5 to 1613), In.	87.50	0.875
Max Width (@ L.E., X_o = 1525.5), In.	256.00	2.560
Max Depth (@ X_o = 1532), In.	19.798	0.198
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional (@H.L.)	35.196	0.0035
Planform	135.00	0.0135
Wetted		
Base (@ X_o = 1613)	4.89	0.00049

TABLE III (CONT'D)

MODEL COMPONENT : OMS POD - M_{16}

GENERAL DESCRIPTION : Configuration 140C - orbiter OMS Pod - short pod.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-008401, -008410

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta X_o=1310.5)	258.50	2.585
Max Width (@ X_o. = 1511), In.	136.8	1.368
Max Depth (@ X_o = 1511), In.	74.70	0.747
Fineness Ratio	2.484	2.484
Area - Ft^2		
Max. Cross-Sectional	58.864	0.00589
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT: OMS NOZZLES - N 28

GENERAL DESCRIPTION: Configuration 140A/B Orbiter OMS Nozzles.

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000140A(Location), SS-A00106, Rel. 5 (Contour)

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
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 ~~Upper~~ Nozzle		
X_o	1518.0	15.180
Y_o	± 88.0	± 0.880
Z_o	492.0	4.920
Right ~~Lower~~ Nozzles		
X_o	1518.00	15.180
Y_o	88.0	0.880
Z_o	492.0	4.920
Null Position - Deg.	PITCH	YAW
Left ~~Upper~~ Nozzle (OUTB'D)		$13^o17'$ OUTBOARD
Pitch (Pitch ($15^o49'$; Yaw $12^o17'$	+ 8	$2^o30'$ INBOARD
Yaw		
Right ~~Lower~~ Nozzle		$13^o17'$ OUTB'D
Pitch Null: $15^o49'$	± 8	$2^o17'$ INB'D
Yaw $12^o17'$ OUTB'D	± 8	$13^o17'$ OUTB'D
		$2^o17'$ INB'D

TABLE III (CONT'D)

MODEL COMPONENT: RUDDER - R_5

GENERAL DESCRIPTION: Configuration 140C orbiter rudder (identical to configuration 140A/B rudder)

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000095, -000146B

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
Area - Ft^2	100.15	0.0010
Span (equivalent), In.	201.0	2.010
Inb'd equivalent chord, In.	91.585	0.916
Outb'd equivalent chord, In.	50.833	0.508
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		
Tailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (~~Normal to hinge line~~) (Product of Area and $\bar{c}$), Ft^3	610.92	0.00061
Mean Aerodynamic Chord, In.	73.2	0.732

TABLE III (continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT : SRBII, Solid Rocket Booster

GENERAL DESCRIPTION : LaRC Built SRB

DRAWING NUMBER : not available.

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (inches)	1784.0	17.840
Max Width (inches)	146.0	1.460
Max Depth		
Fineness Ratio	12.219	12.219
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT : EXTERNAL TANK - T_{28}

GENERAL DESCRIPTION :

MODEL SCALE: 0.010

DRAWING NUMBER : VL72-000143D, VL78-000063
(Dimensions are to tank structural OML, TPS not included)

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length, In.	1844.275	18.443
Max ~~Width~~ Dia., In.	331.0	3.310
Max Depth		
Fineness Ratio	5.687	5.687
Area - Ft^2		
Max. Cross-Sectional	594.678	0.059
Planform		
Wetted		
Base		

TABLE III (CONT'D)

MODEL COMPONENT: VERTICAL - V_8

GENERAL DESCRIPTION: Configuration 140A/B orbiter vertical tail

MODEL SCALE: 0.010 MODEL DRAWING: SS-A00148, Release 6

DRAWING NUMBER: VL70-000146A

DIMENSIONS:

	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2		
Planform	413.253	0.041
Span (Theo) - In.	315.720	3.157
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	2.684
Tip (Theo) WP	108.470	1.085
MAC	199.808	1.998
Fus. Sta. of .25 MAC	1463.50	14.635
W.P. of .25 MAC	635.522	6.355
B.L. of .25 MAC	0.0	0.0
Airfoil Section		
Leading Wedge Angle - Deg.	10.00	10.0
Trailing Wedge Angle - Deg.	14.920	14.920
Leading Edge Radius	2.00	0.02
Void Area	13.17	0.0013
Blanketed Area	0.00	0.00

TABLE III (CONL'D)

MODEL COMPONENT: WING-W116

GENERAL DESCRIPTION: Configuration 4

NOTE: (Identical to Wing114 except airfoil thickness. Dihedral angle is along trailing edge of wing.)

MODEL SCALE: 0.010

TEST NO. DWG. NO. VL70-000140A, -000200

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2		
Planform	2690.0	0.2690
Span (Theo In.	936.68	9.367
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
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 (Theo) B.P.0.0.	689.24	6.892
Tip, (Theo) B.P.	137.85	1.379
MAC	474.81	4.748
Fus. Sta. of .25 MAC	1136.83	11.368
W.P. of .25 MAC	290.58	2.906
B.L. of .25 MAC	182.13	1.821
EXPOSED DATA		
Area (Theo) Ft^2	1751.50	0.1752
Span, (Theo) In. BP108	720.68	7.207
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	5.621
Tip 1.00 $\frac{b}{2}$	137.85	1.379
MAC	392.83	3.928
Fus. Sta. of .25 MAC	1185.98	11.860
W.P. of .25 MAC	294.30	2.943
B.L. of .25 MAC	251.77	2.518
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.113	0.113
Tip $\frac{b}{2}$ =	0.120	0.120
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area Ft^2	113.18	0.011
Leading Edge Intersects Fus M. L. @ Sta	500.00	5.000
Leading Edge Intersects Wing @ Sta	1024.00	10.240

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

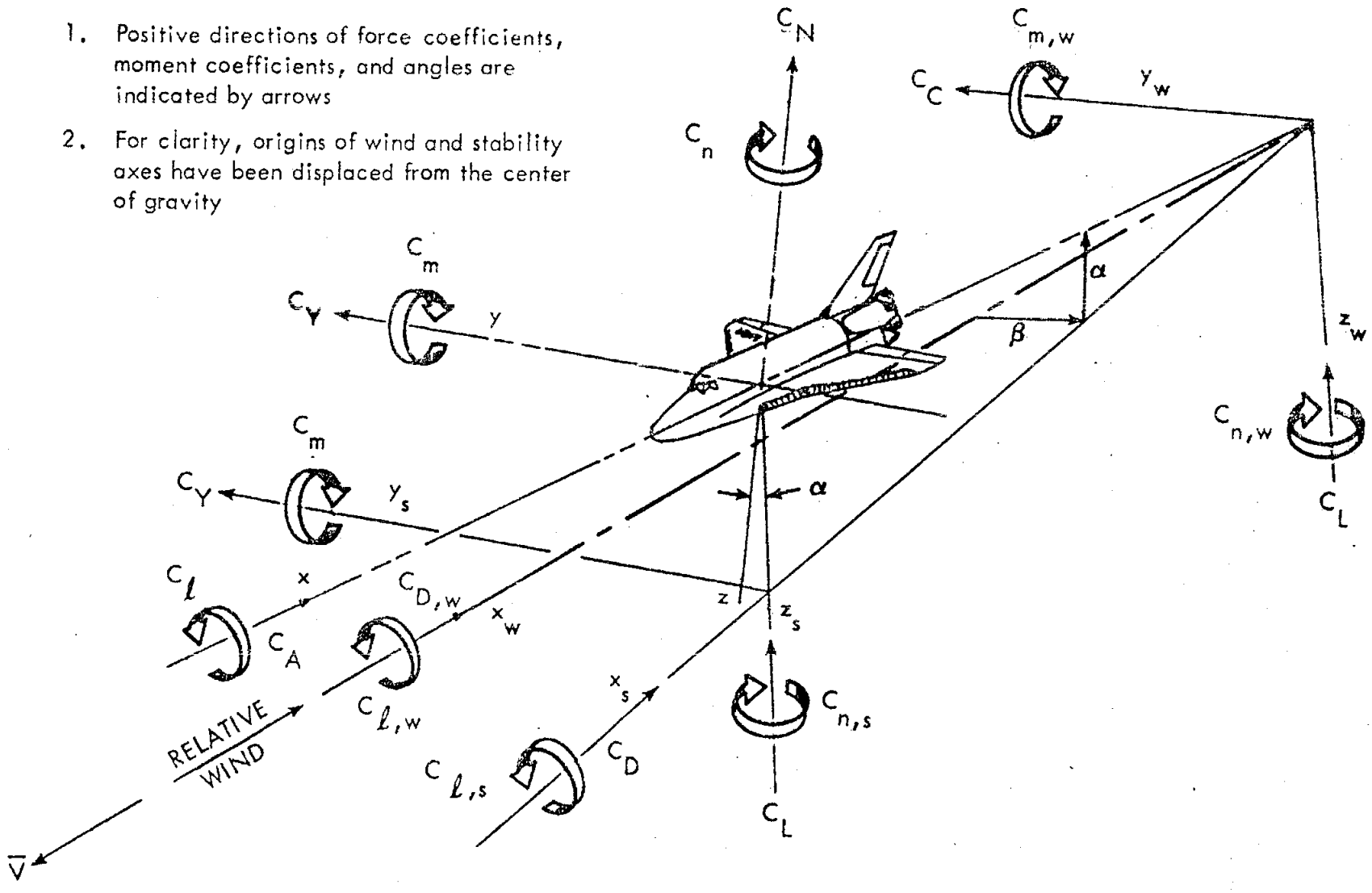
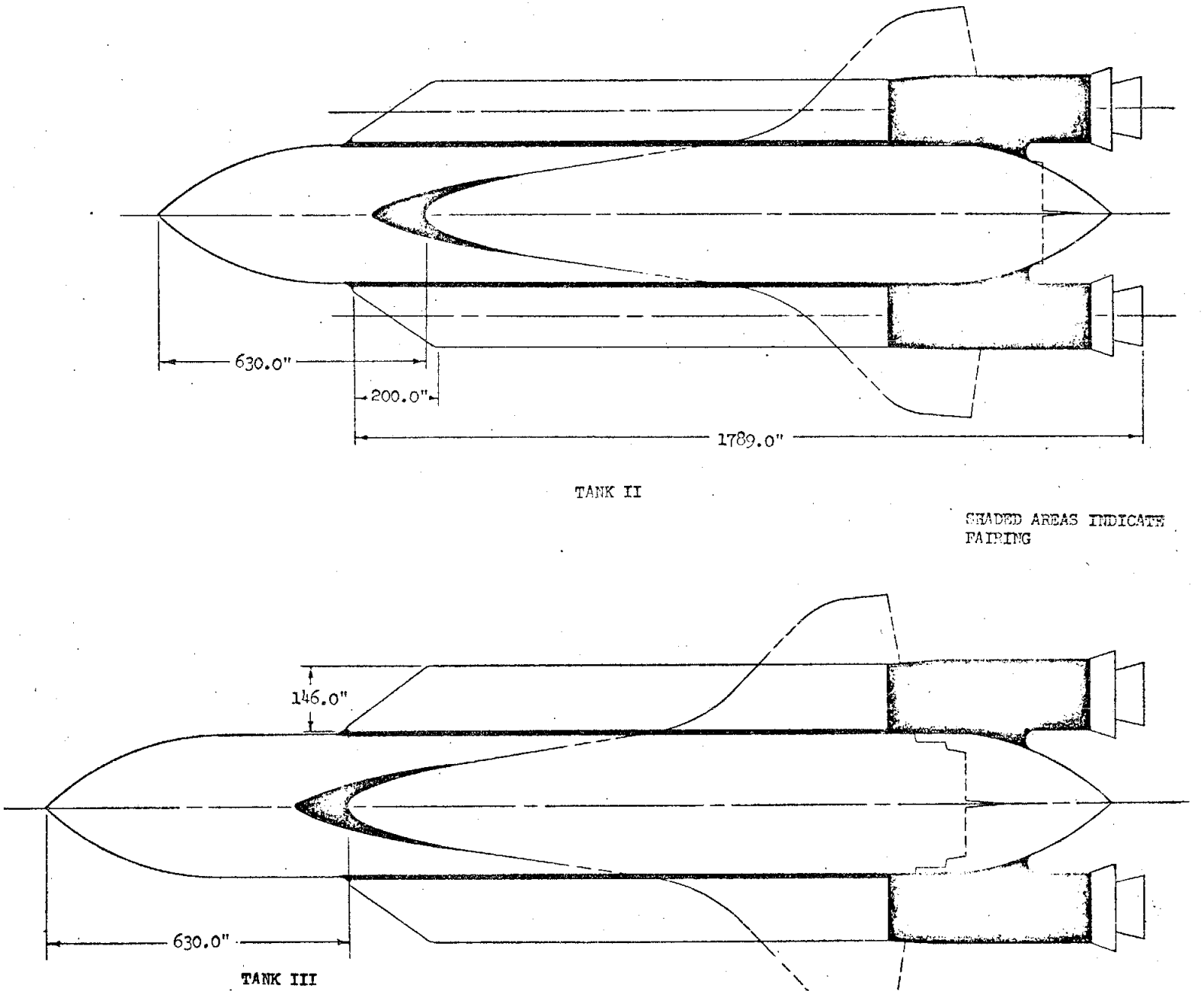
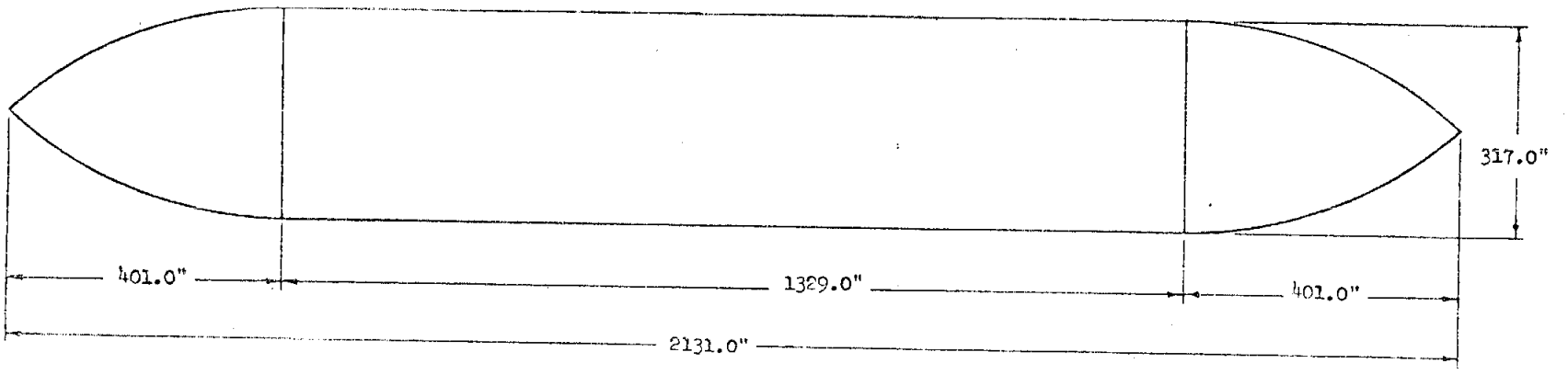


Figure 1. - Axis Systems.

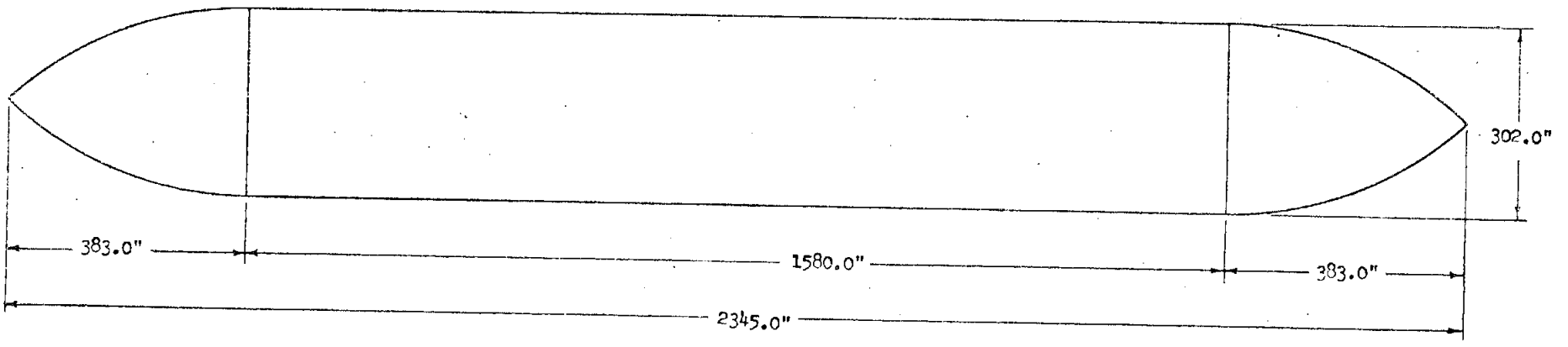


a. Orbiter + ET_{II} and ET_{III}

Figure 2. - Model Sketches



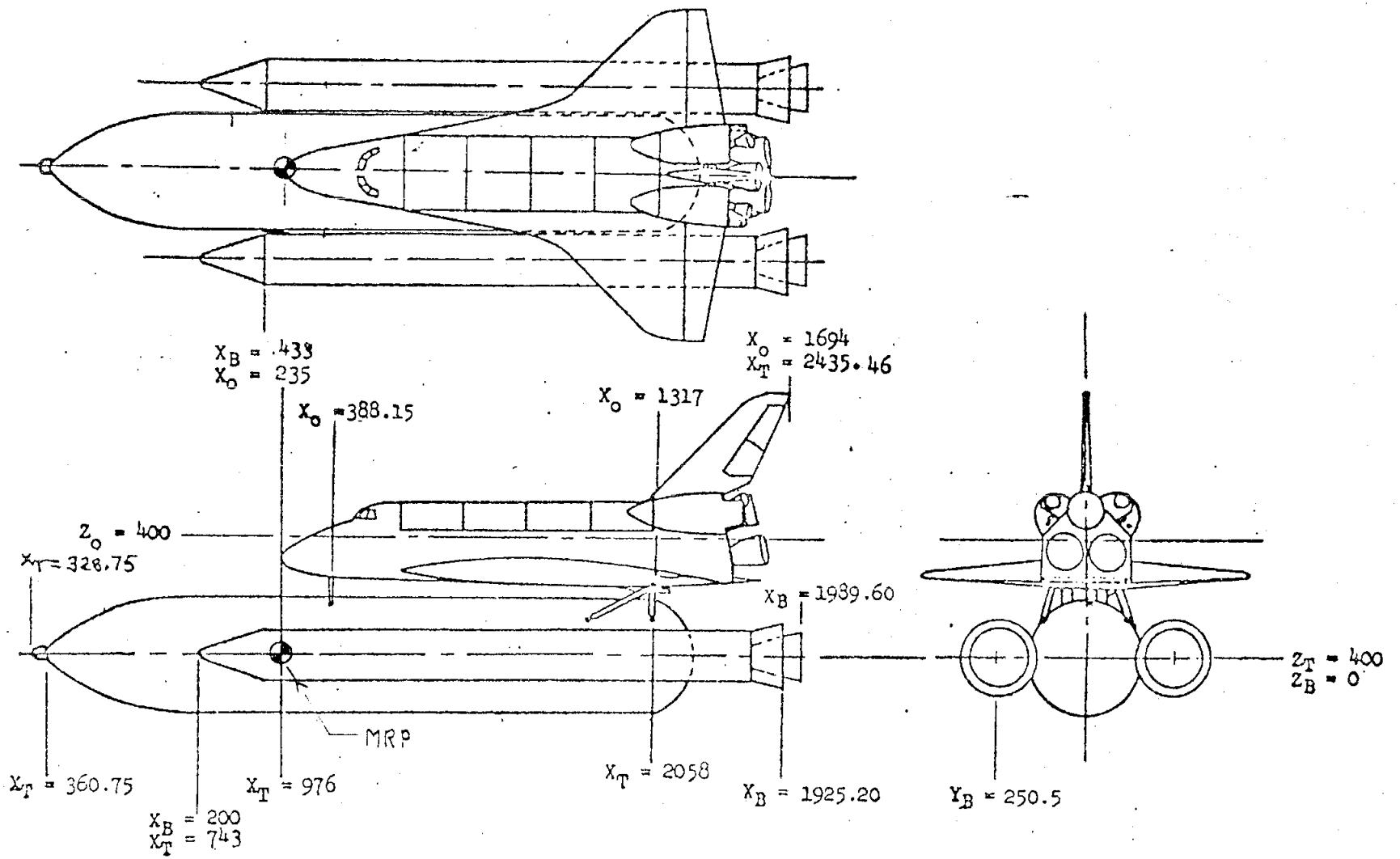
TANK II



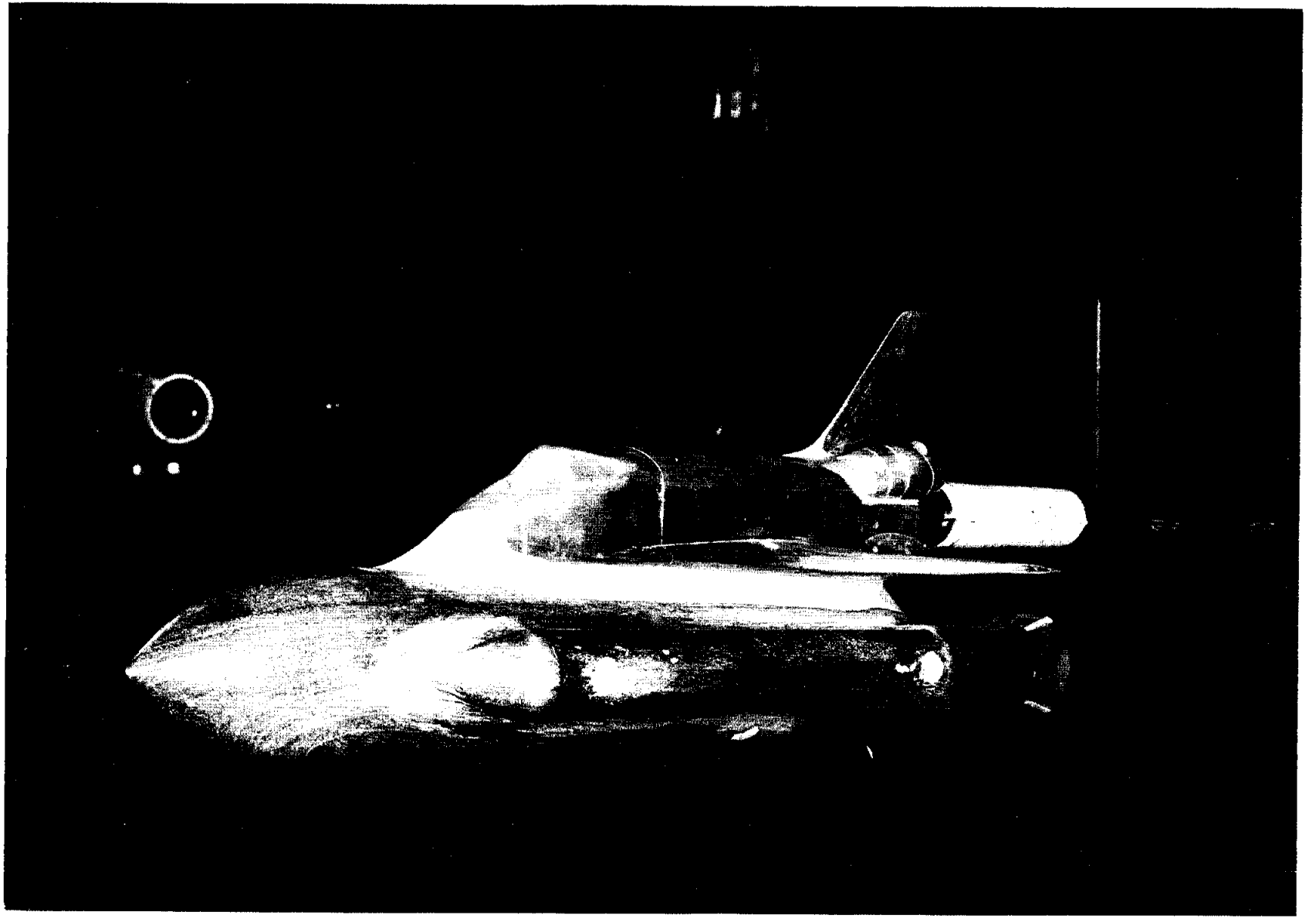
TANK III

b. Modified External Tanks (ET_{II} and ET_{III})

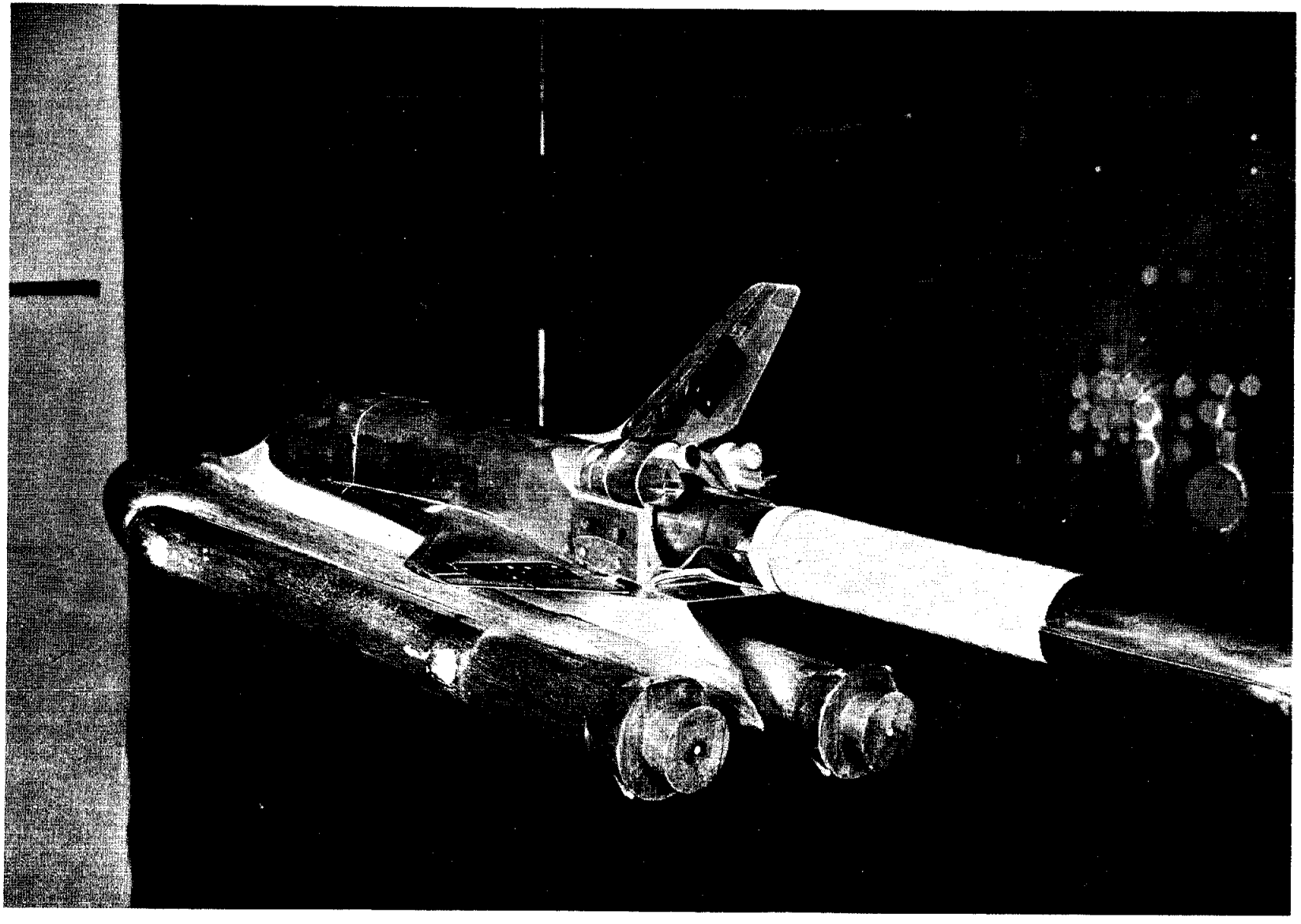
Figure 2. - Model Sketches



c. Baseline Configuration
Figure 2. - Model Sketches



a. Configuration 4, Front 3/4 View
Figure 3. - Model Photographs



b. Configuration 4, Rear 3/4 View

Figure 3. - Model Photographs

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DATA FIGURES

(CJ9001) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1

SYMBOL	MACH
○	.349
□	.599
◇	.801
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

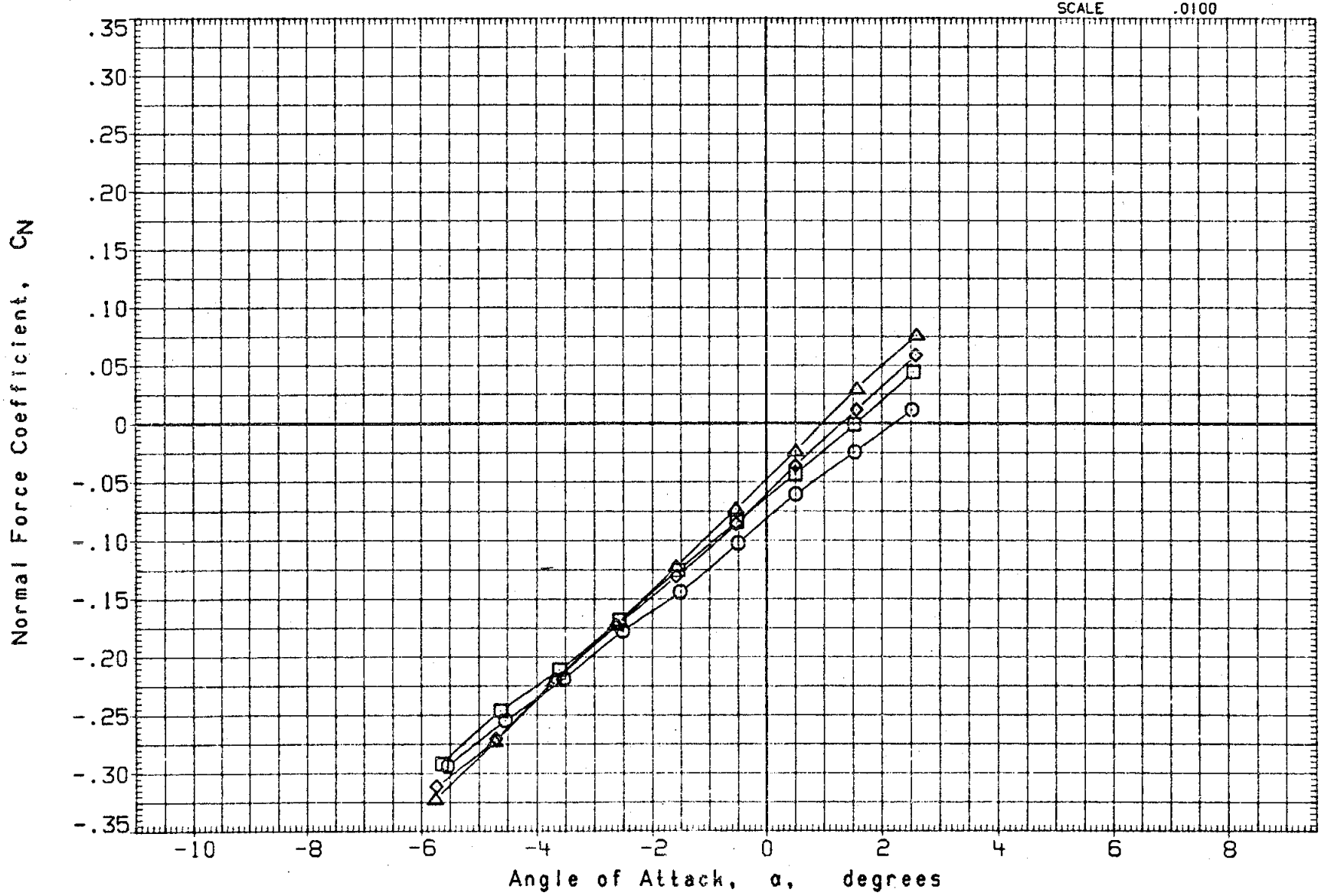


FIGURE 4. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 1

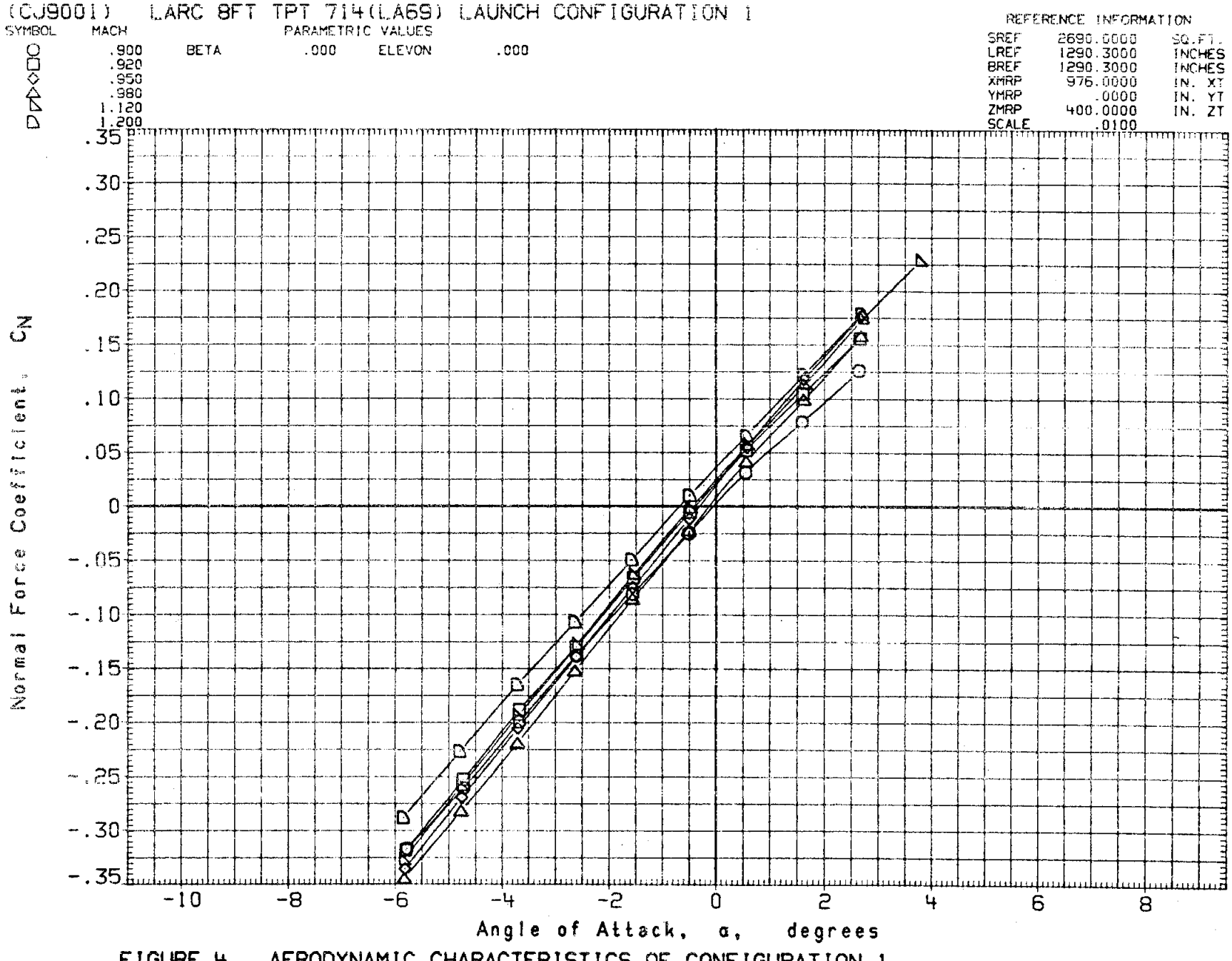


FIGURE 4. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 1

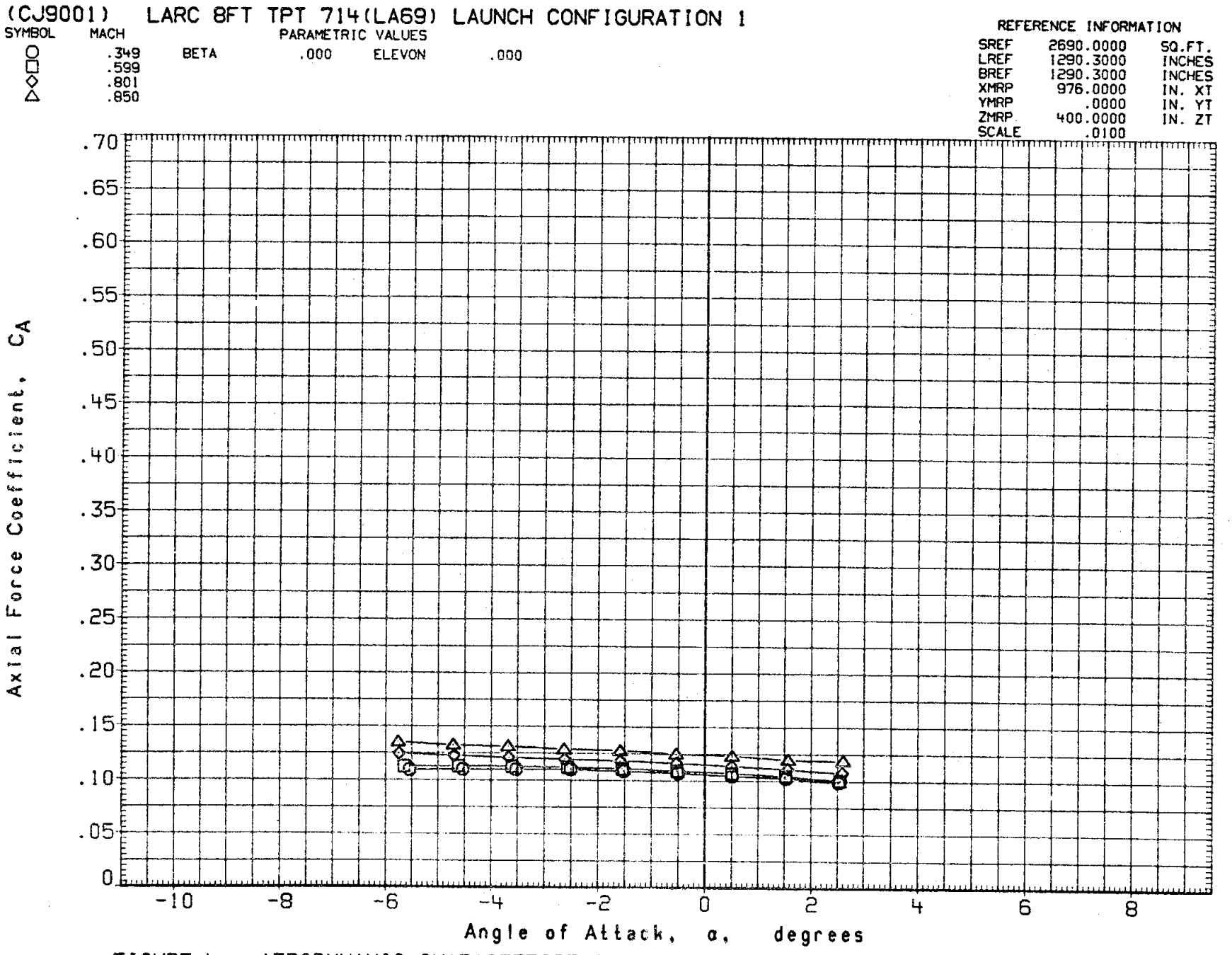
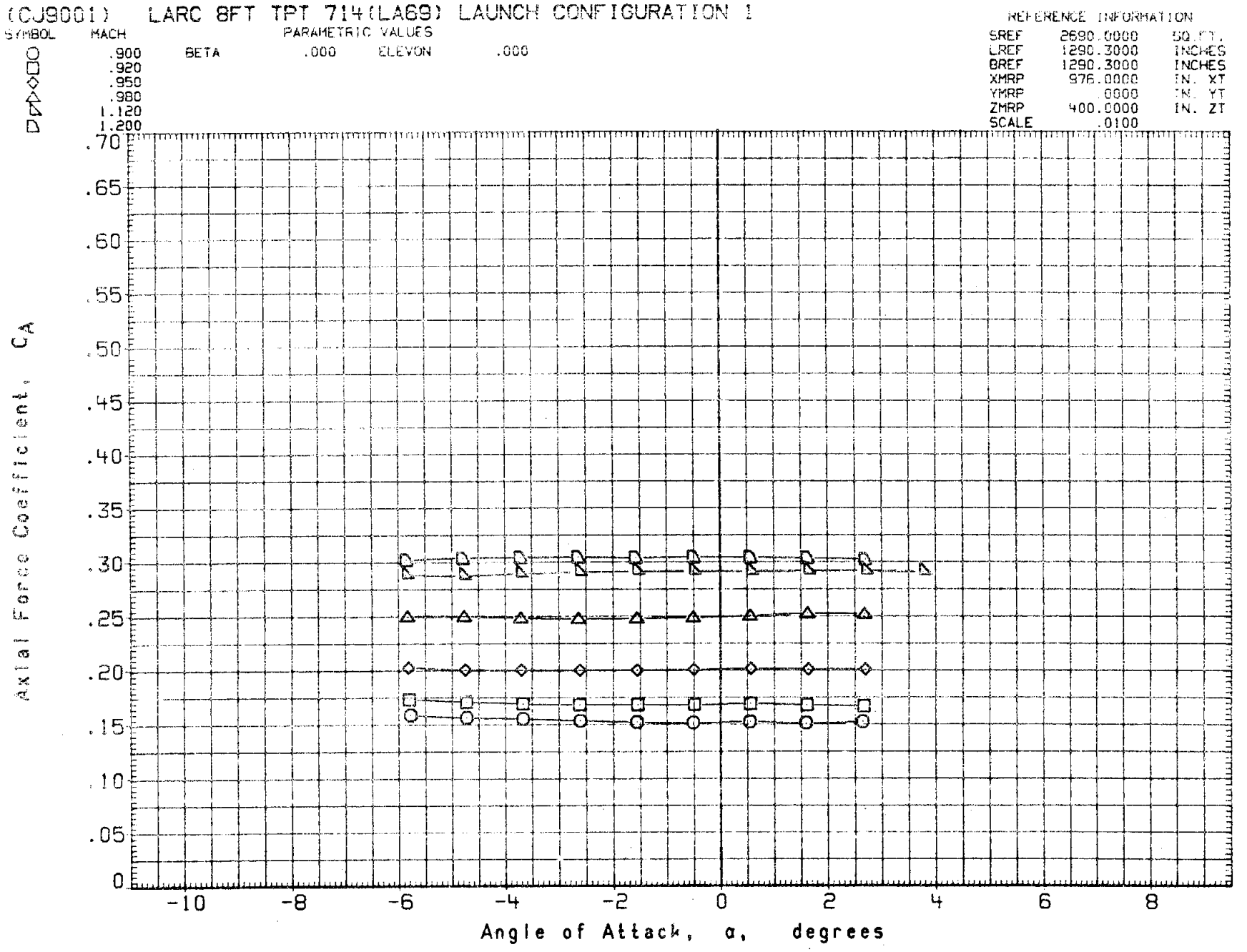


FIGURE 4. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 1



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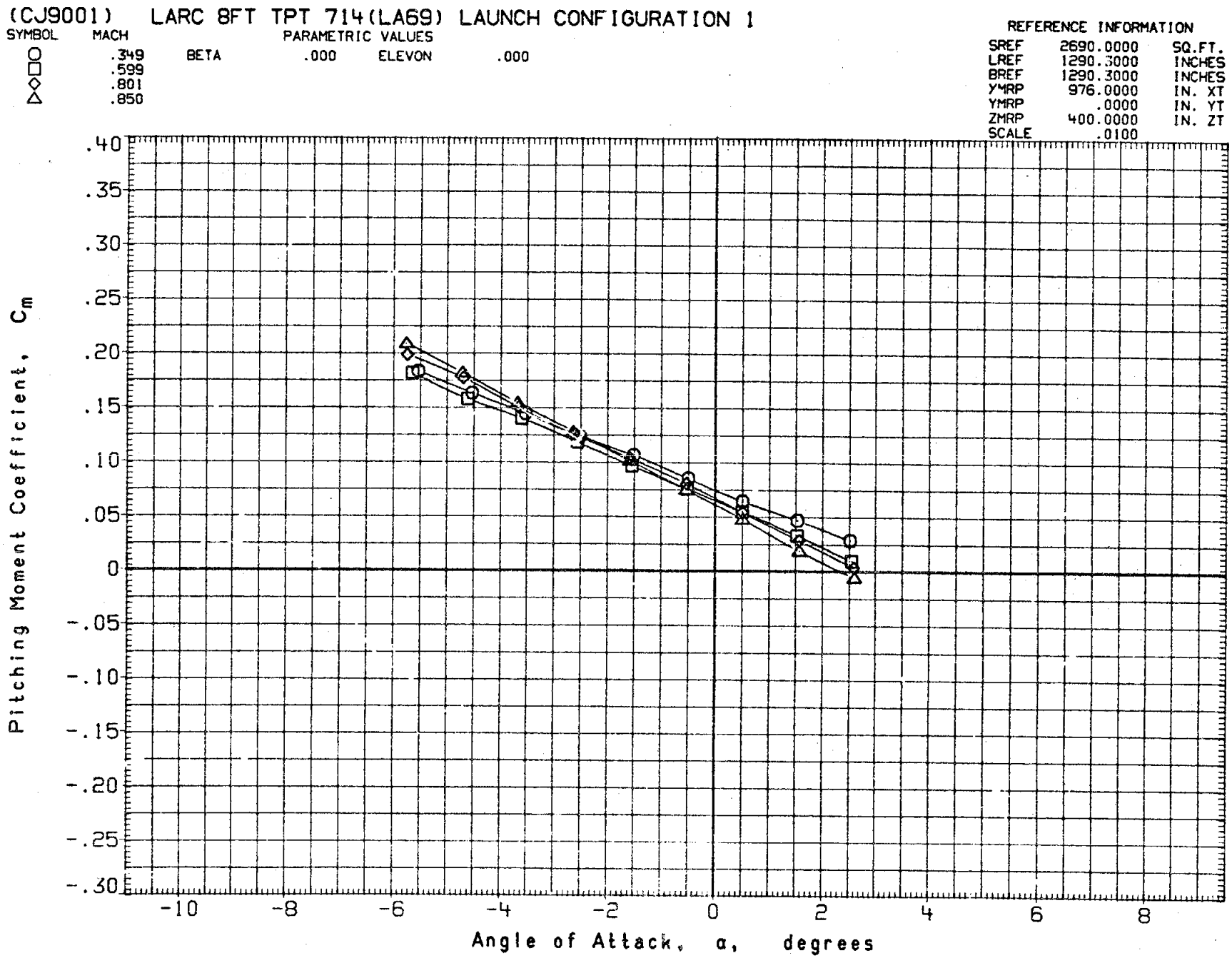

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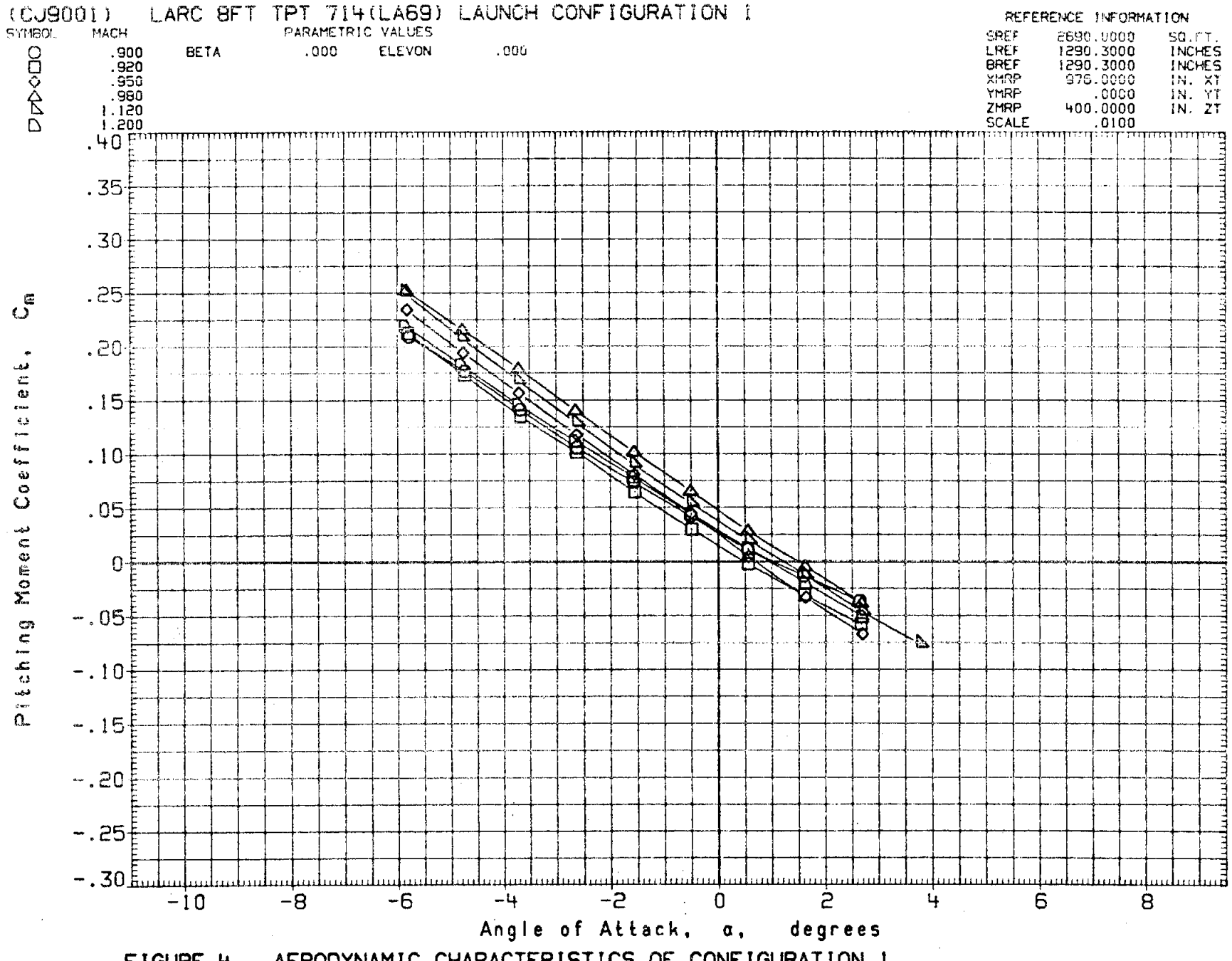
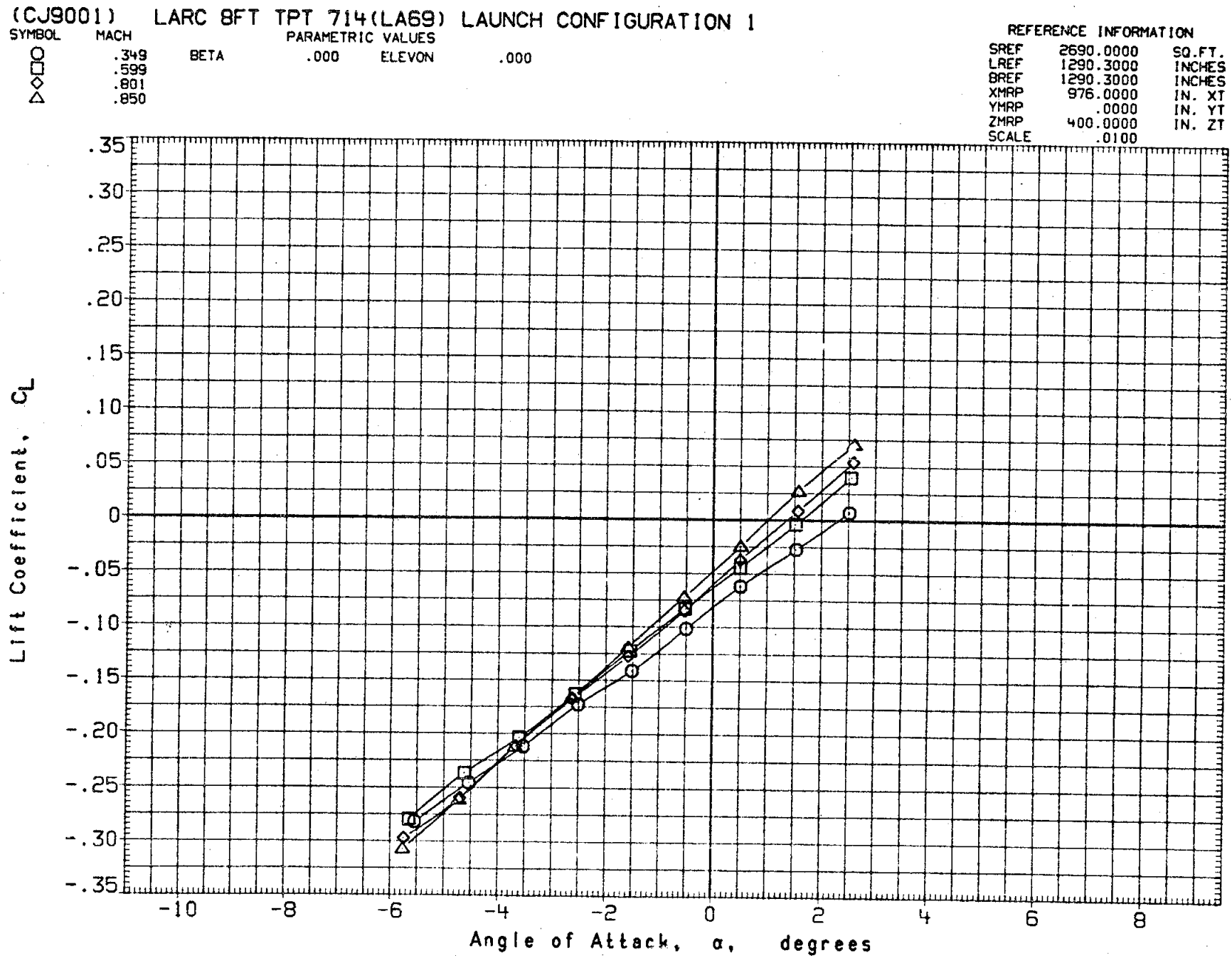


FIGURE 4. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION I



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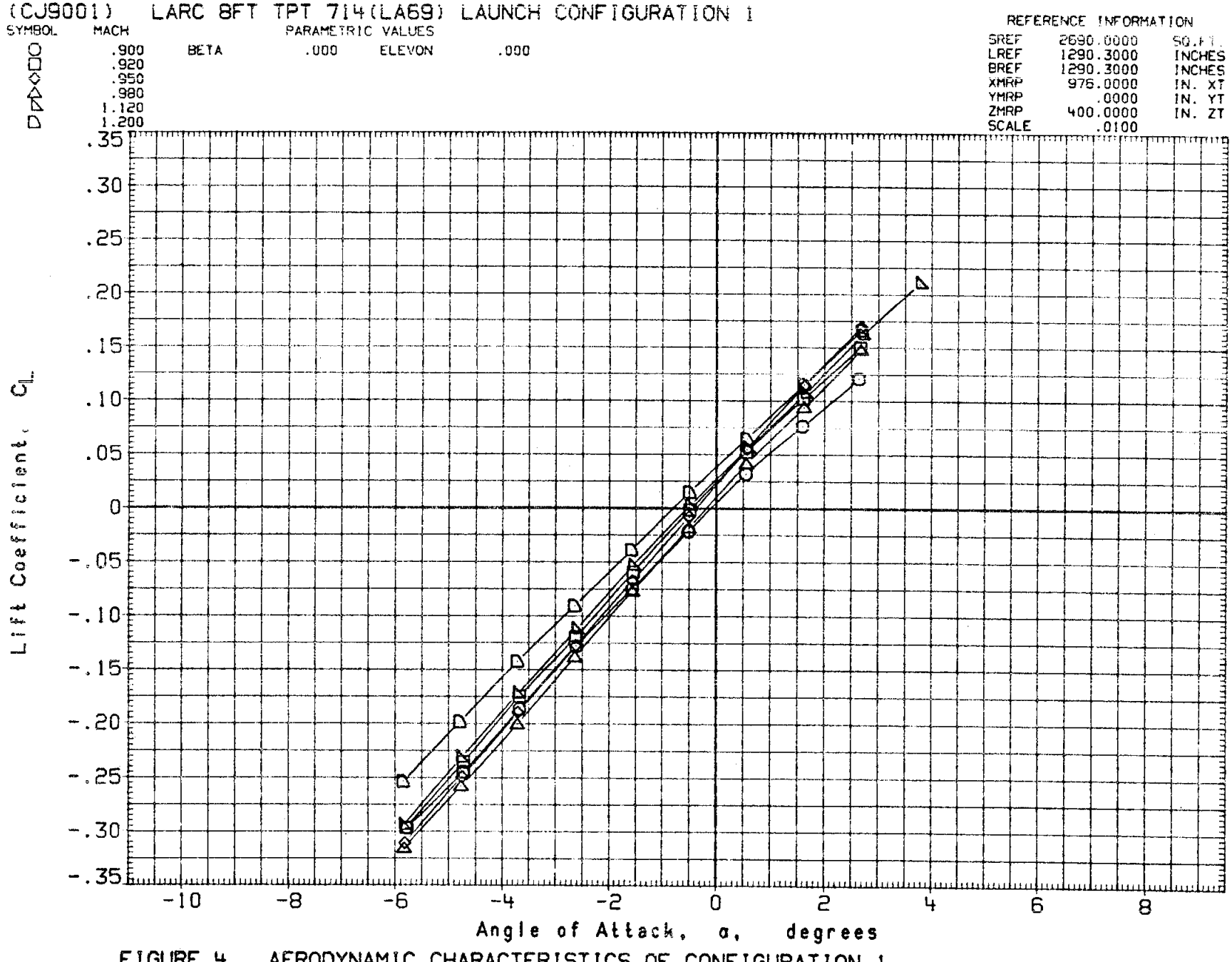

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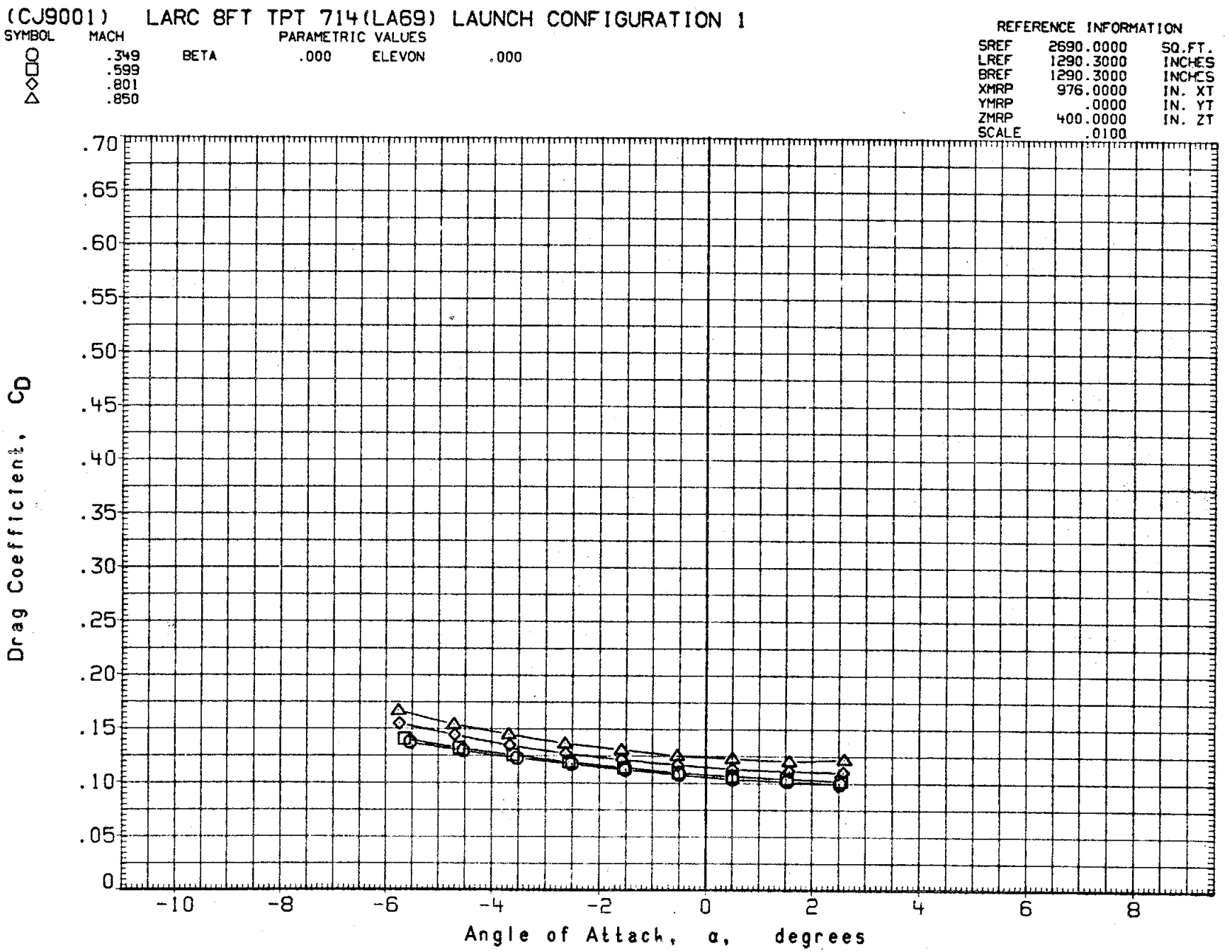

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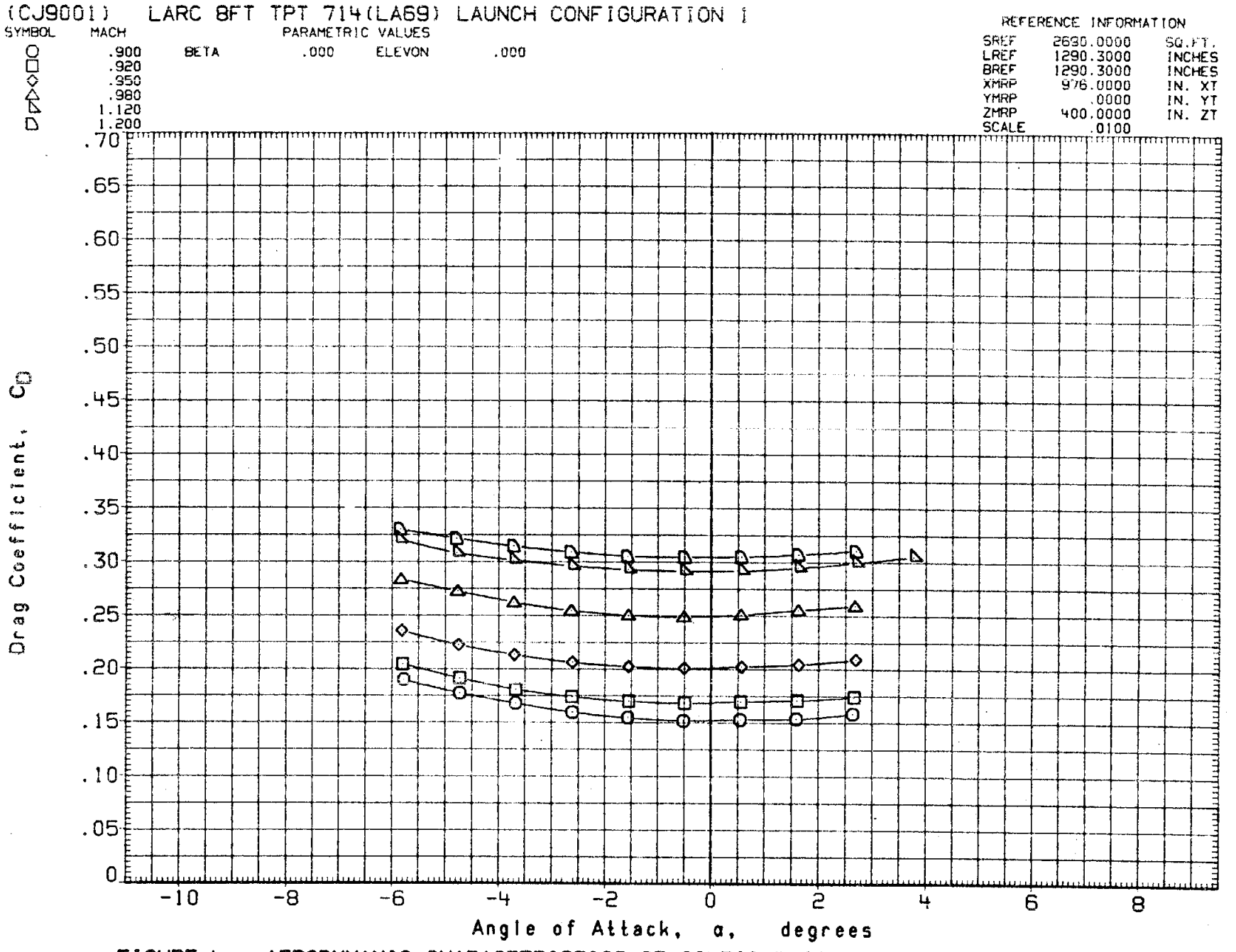

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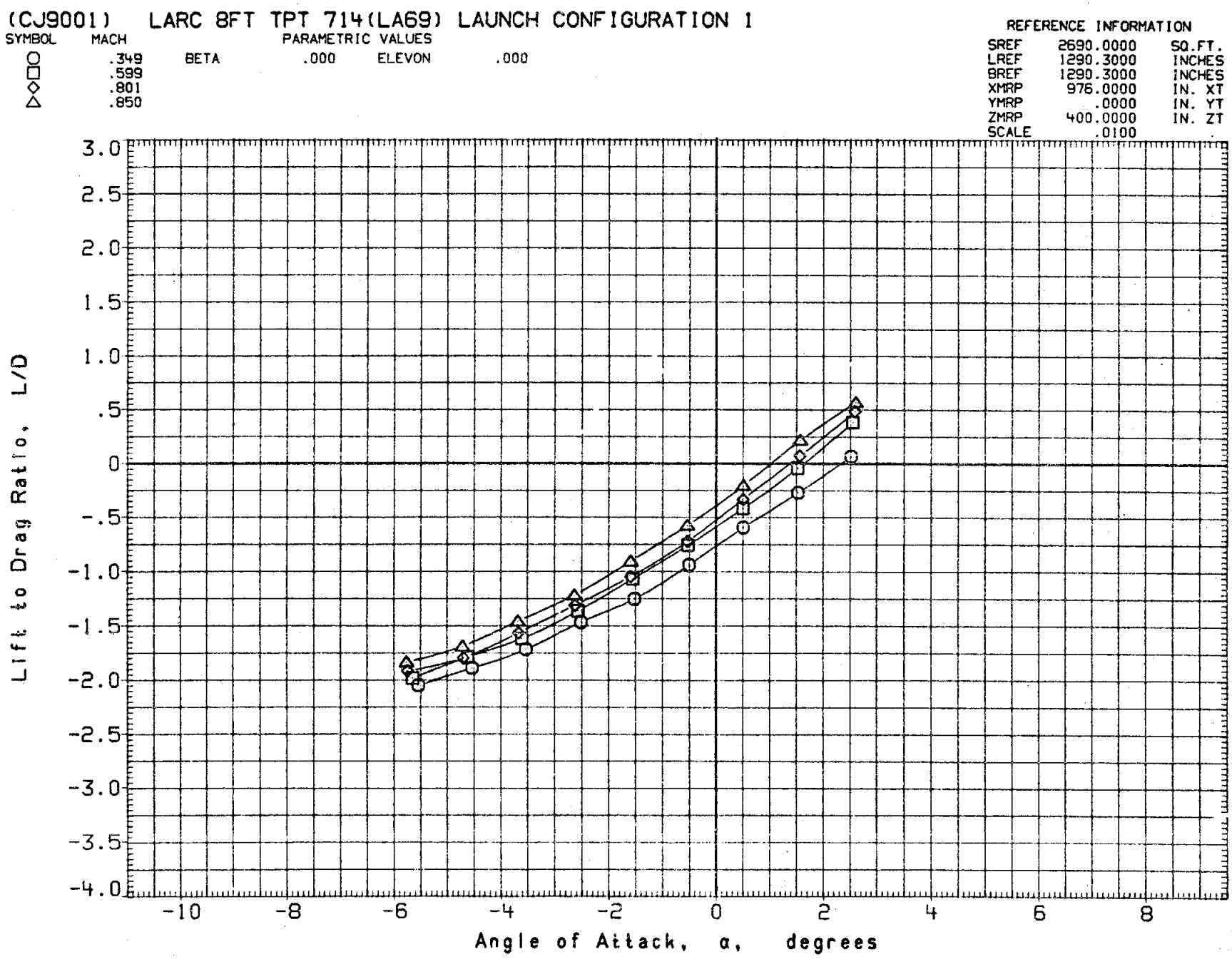

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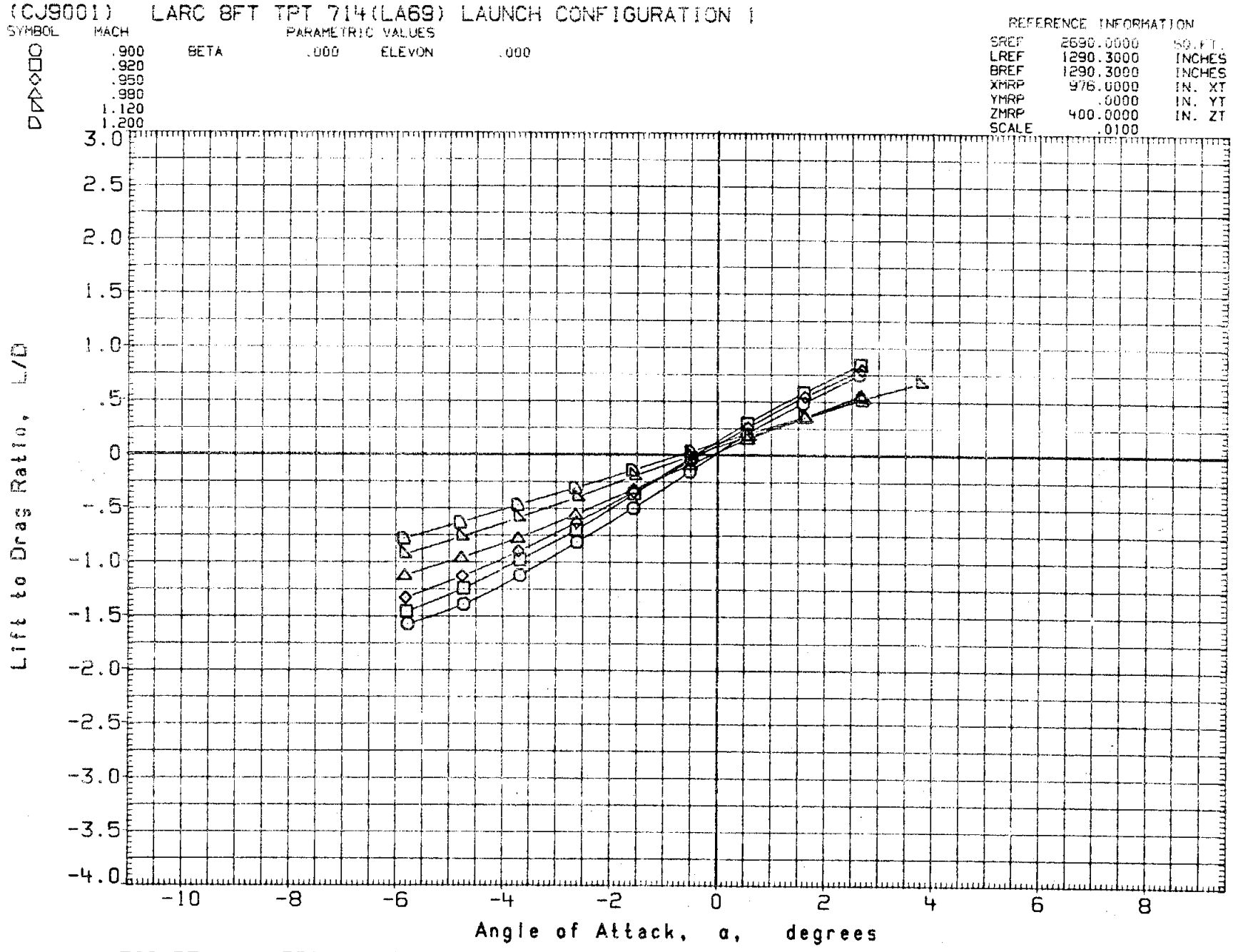

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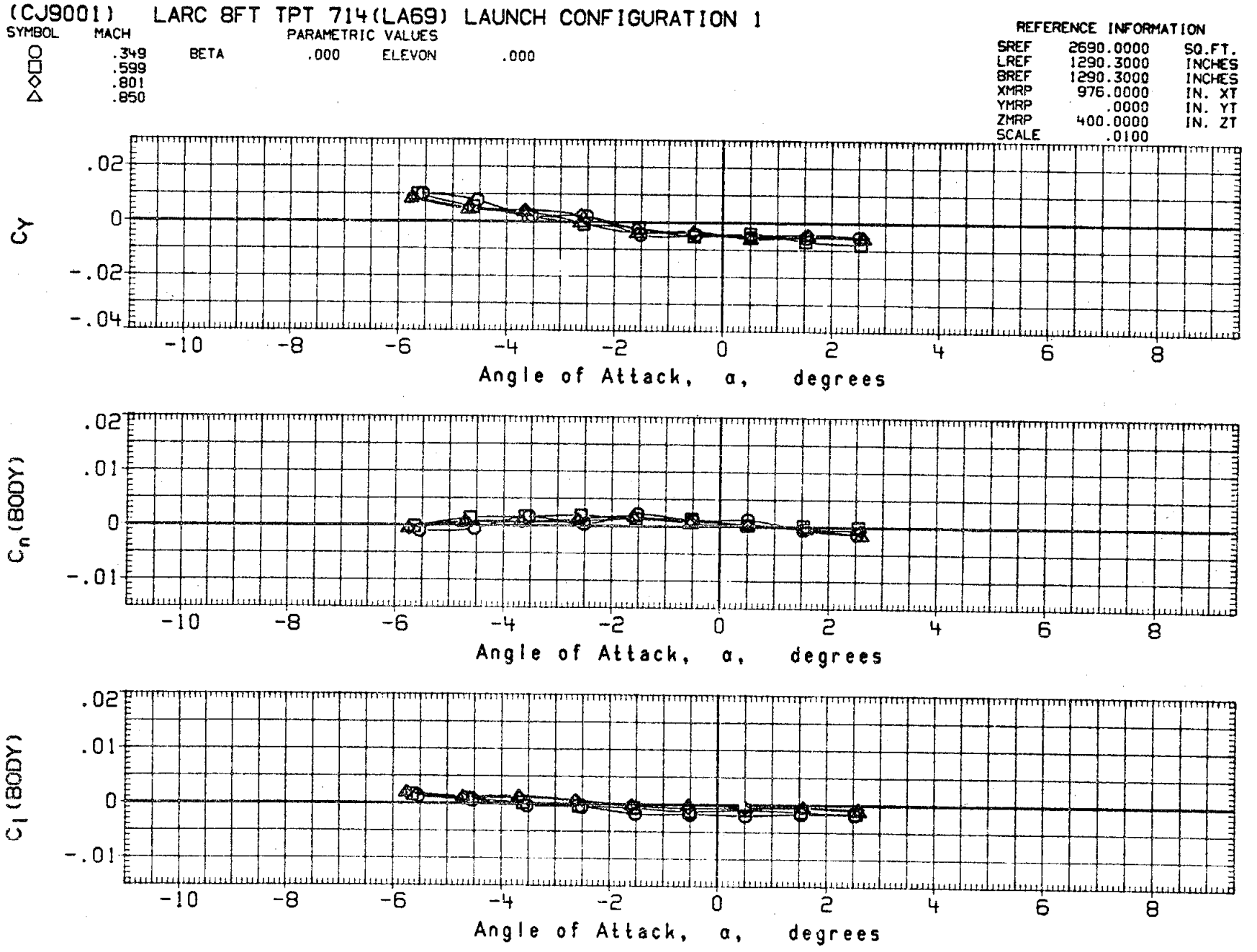

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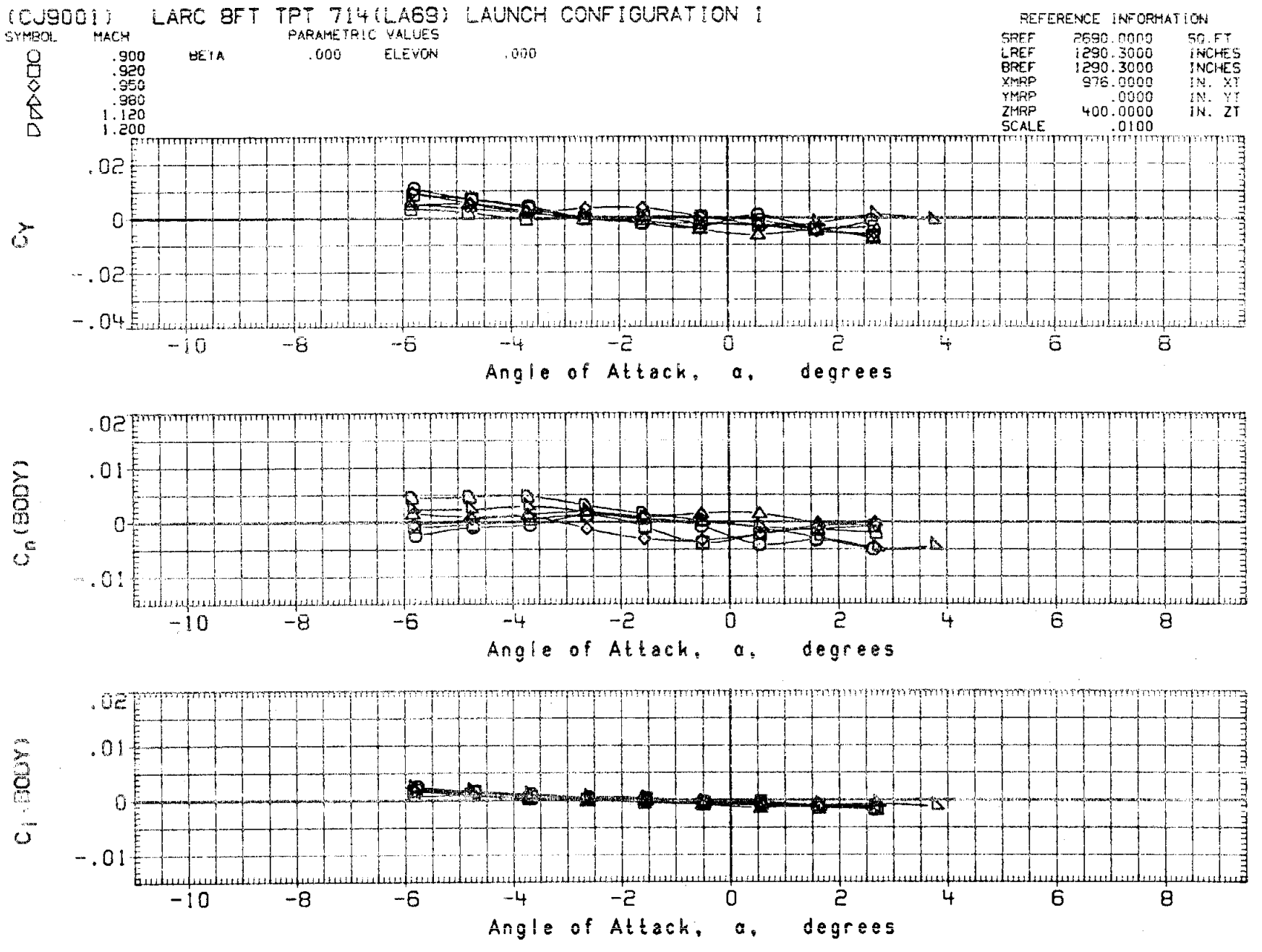

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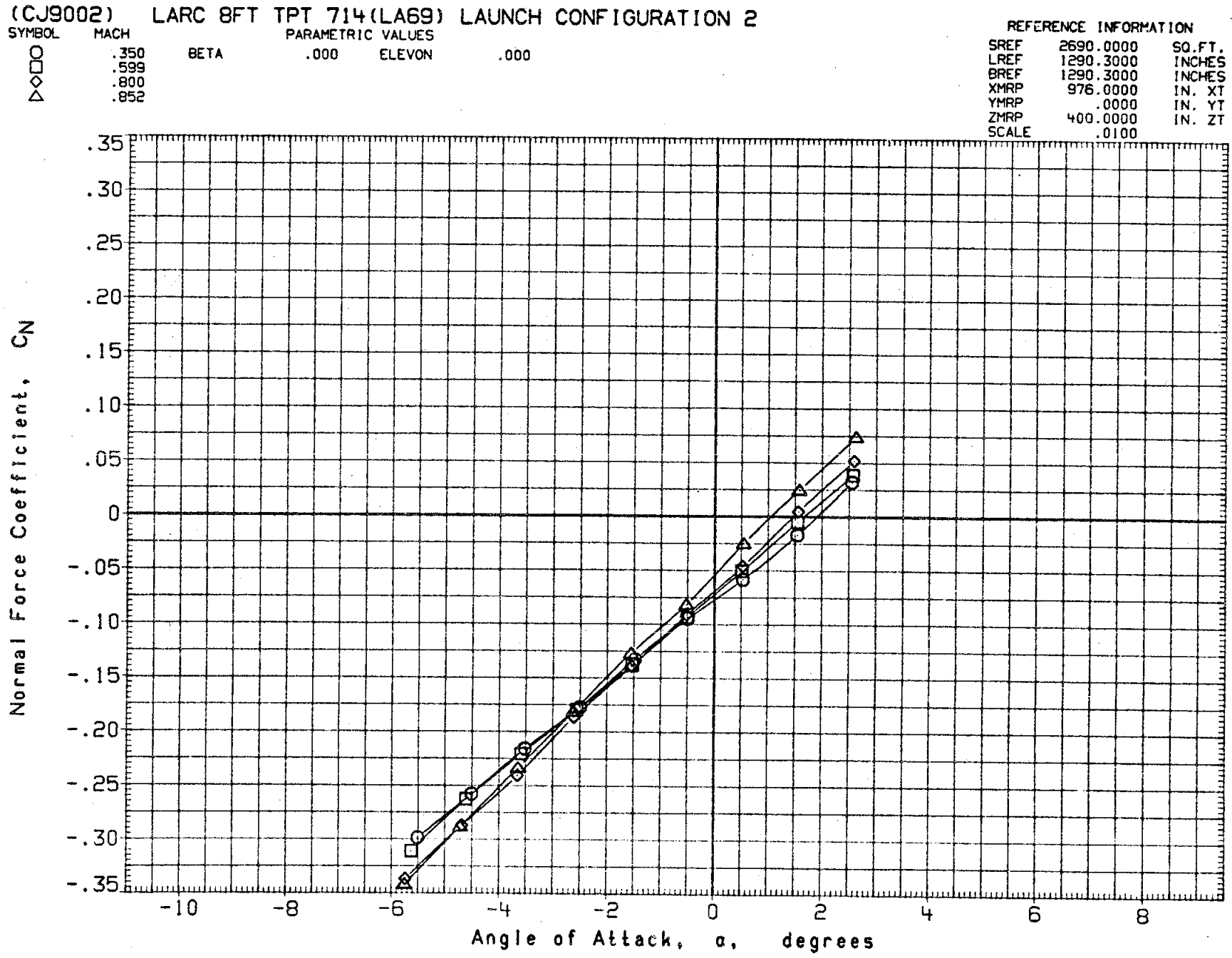


FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

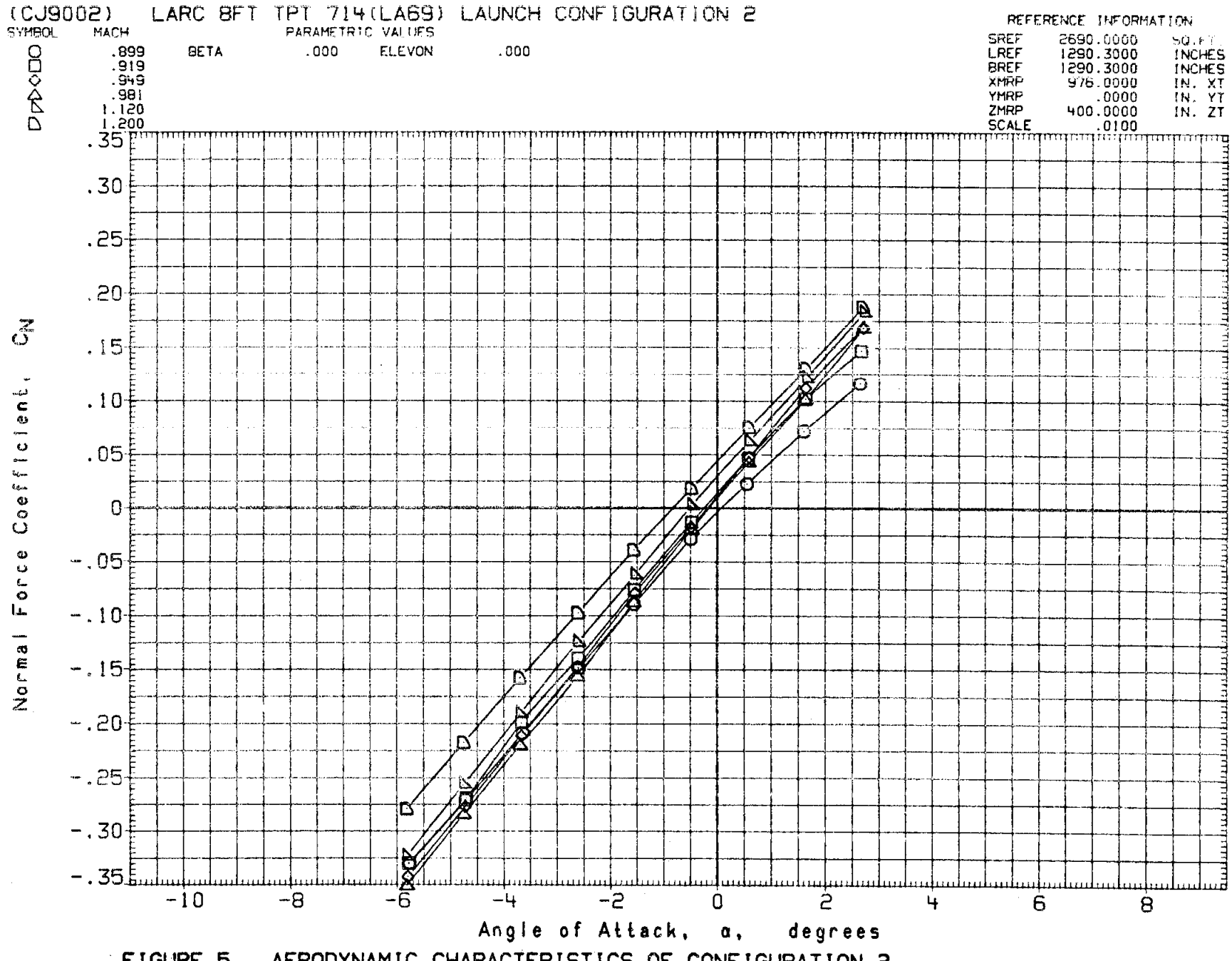


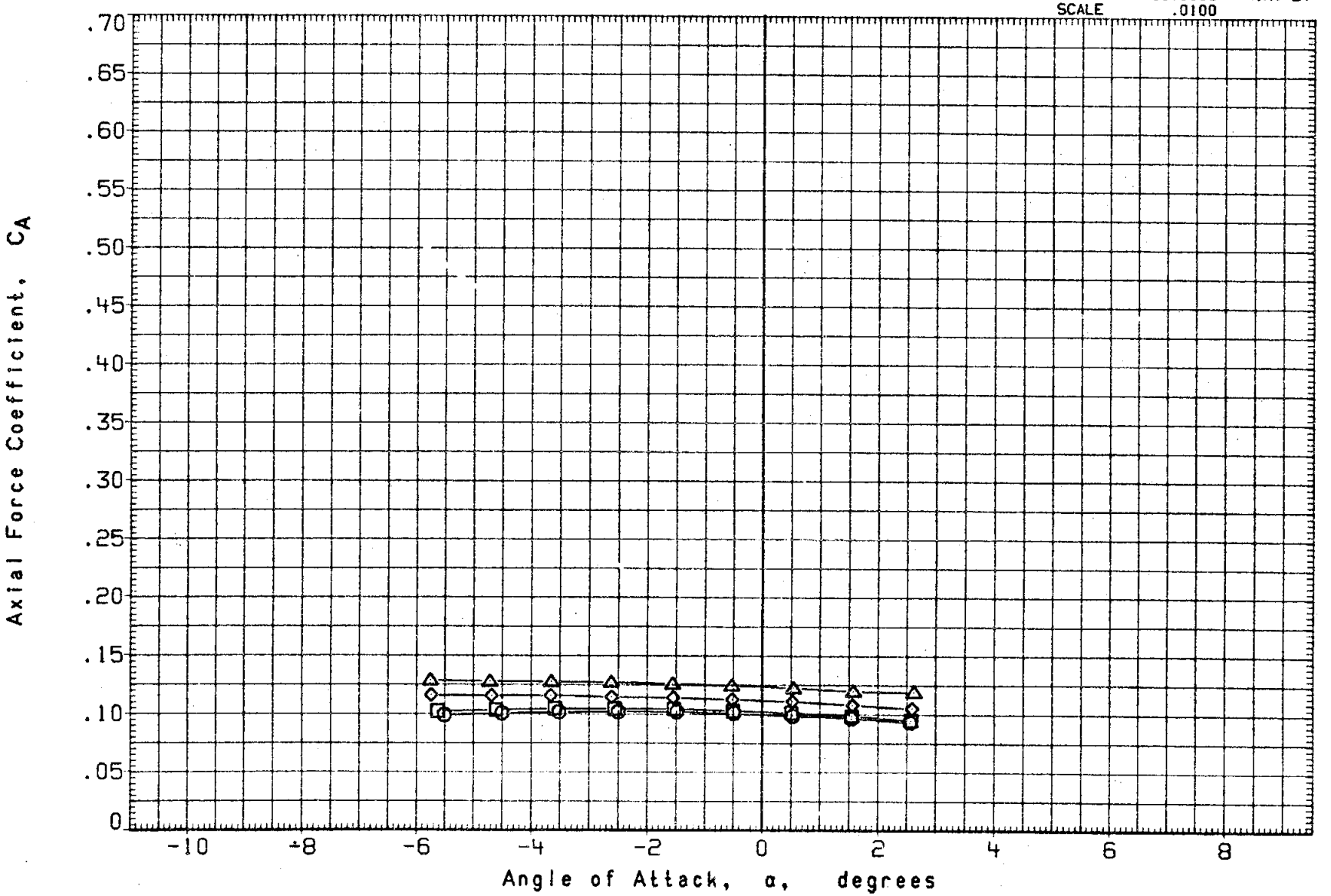
FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

(CJ9002) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.599				
◇	.800				
△	.852				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	



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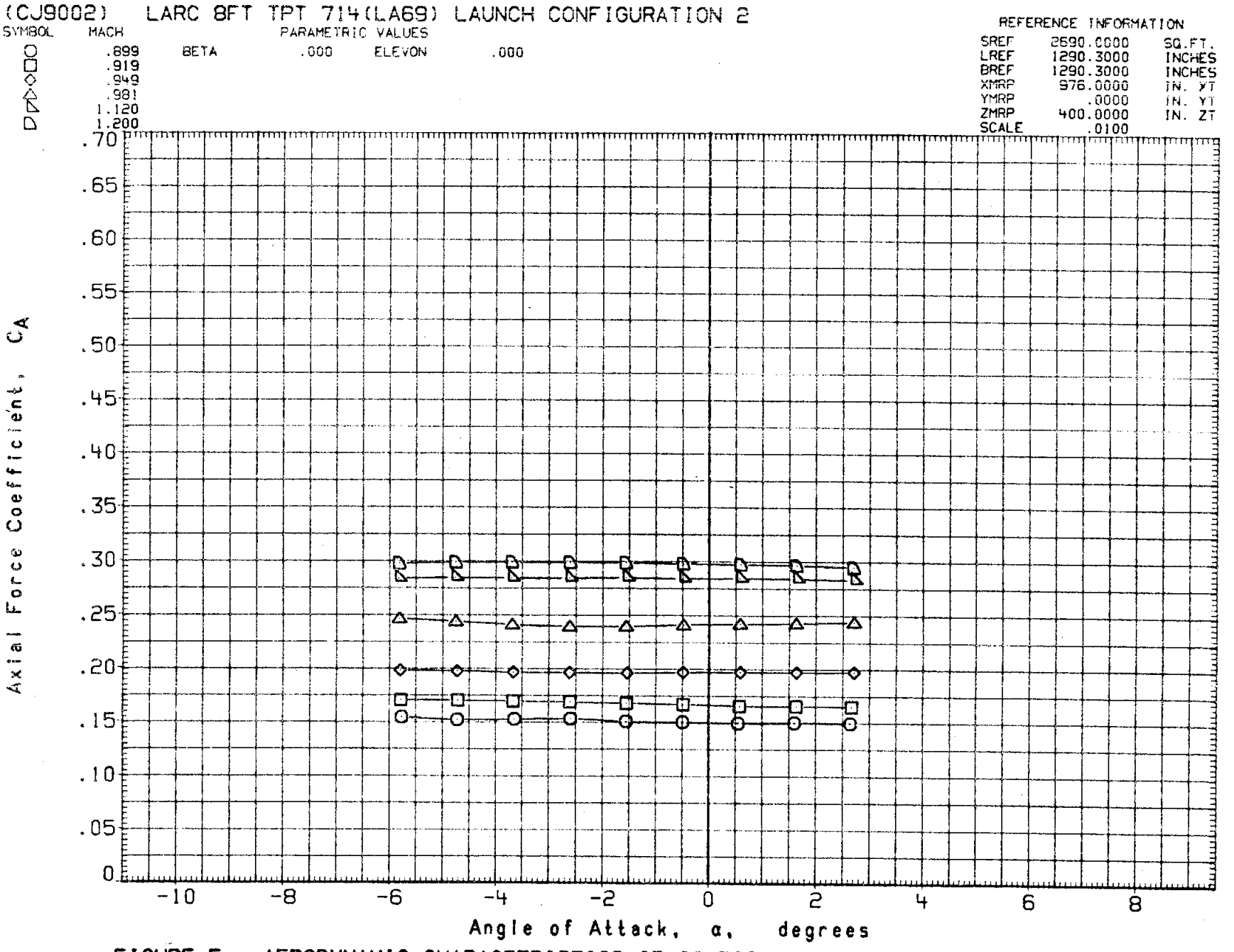

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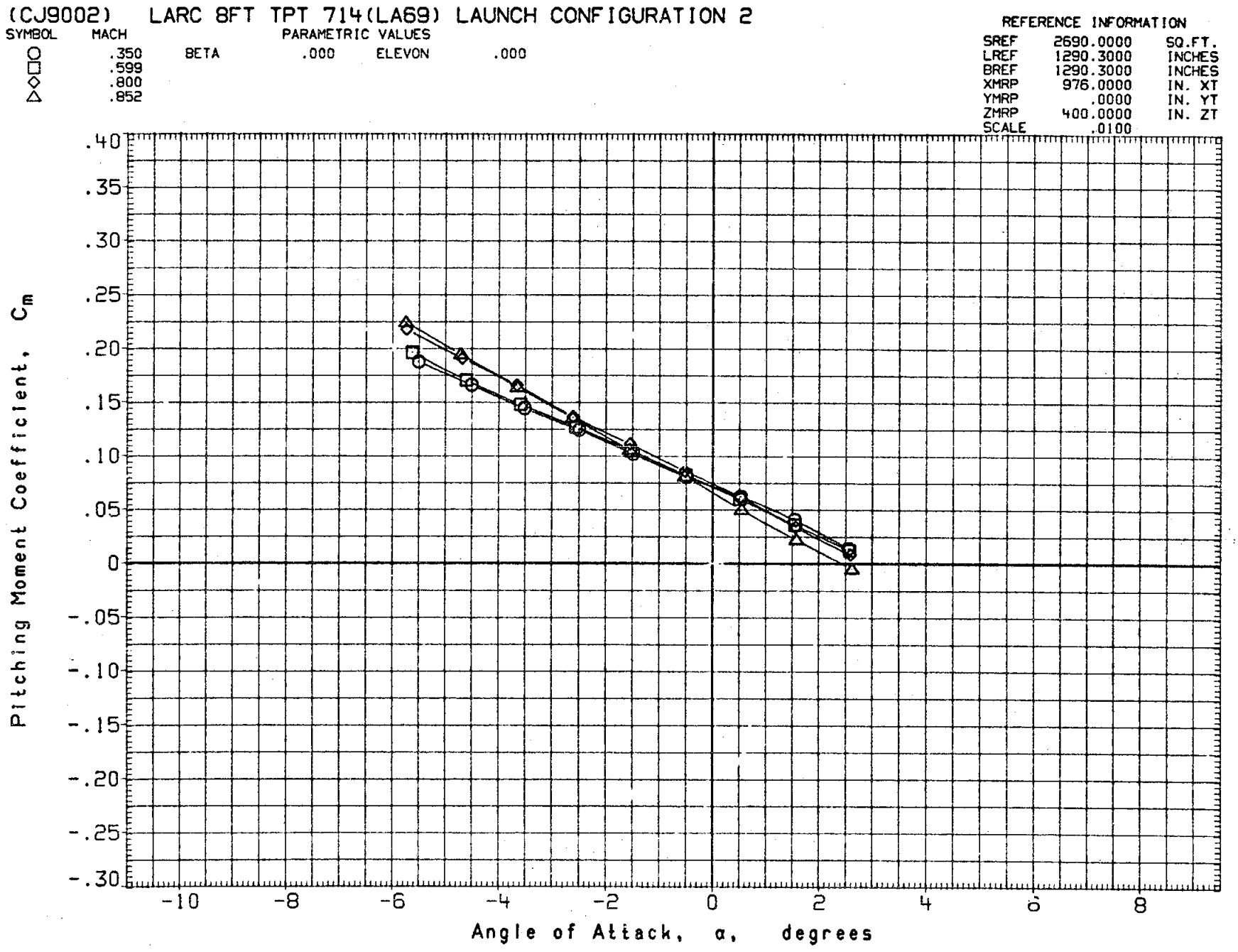

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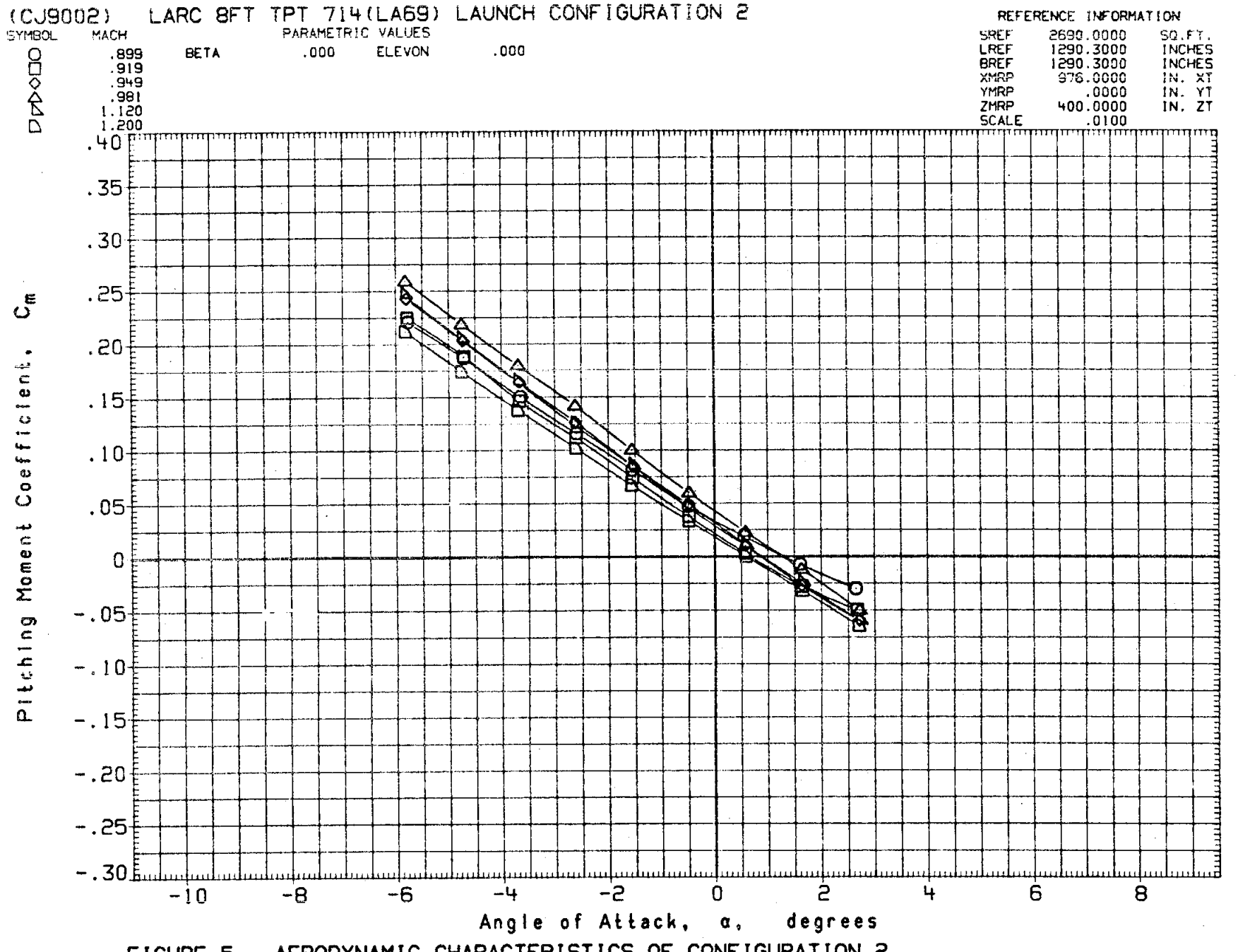

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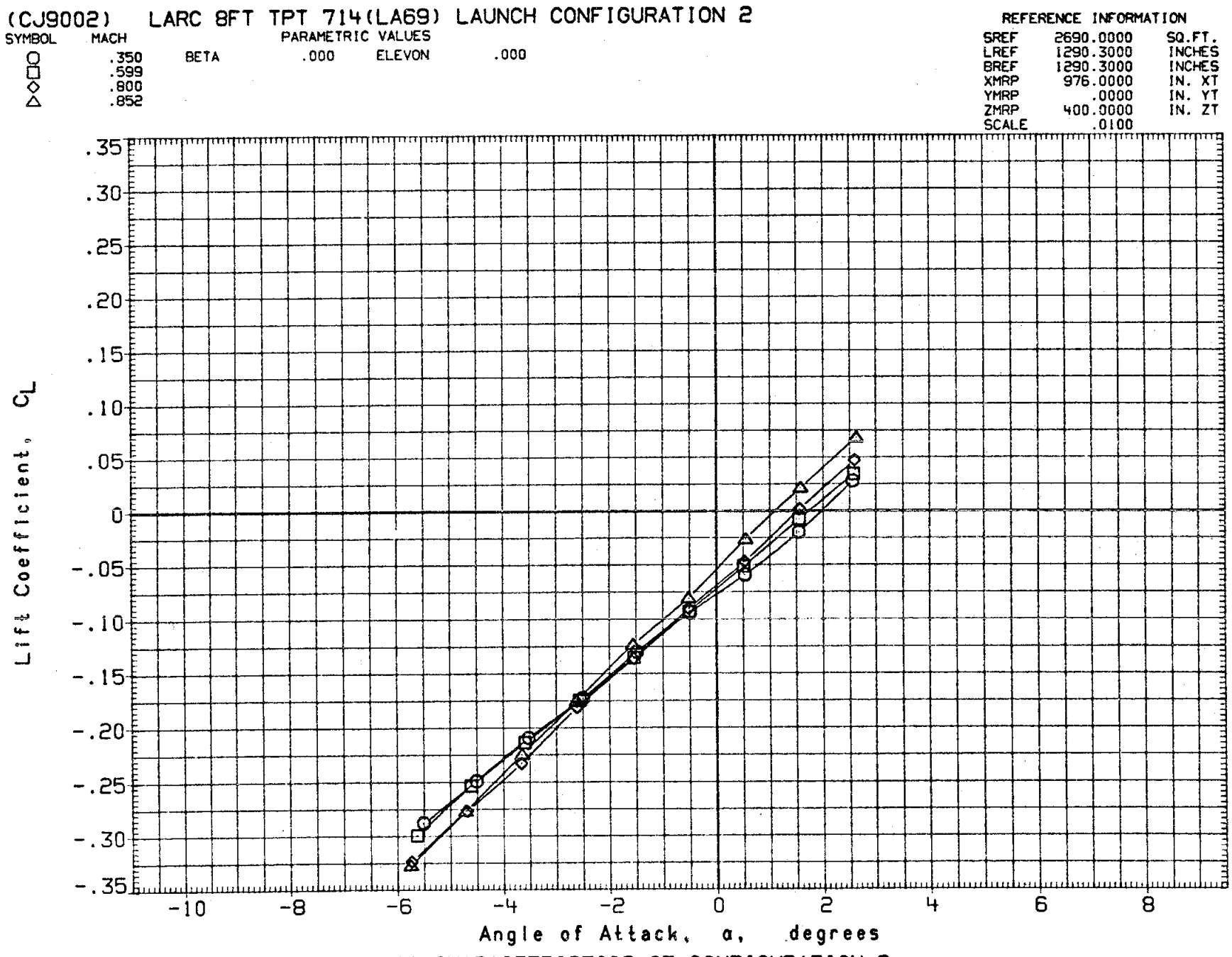

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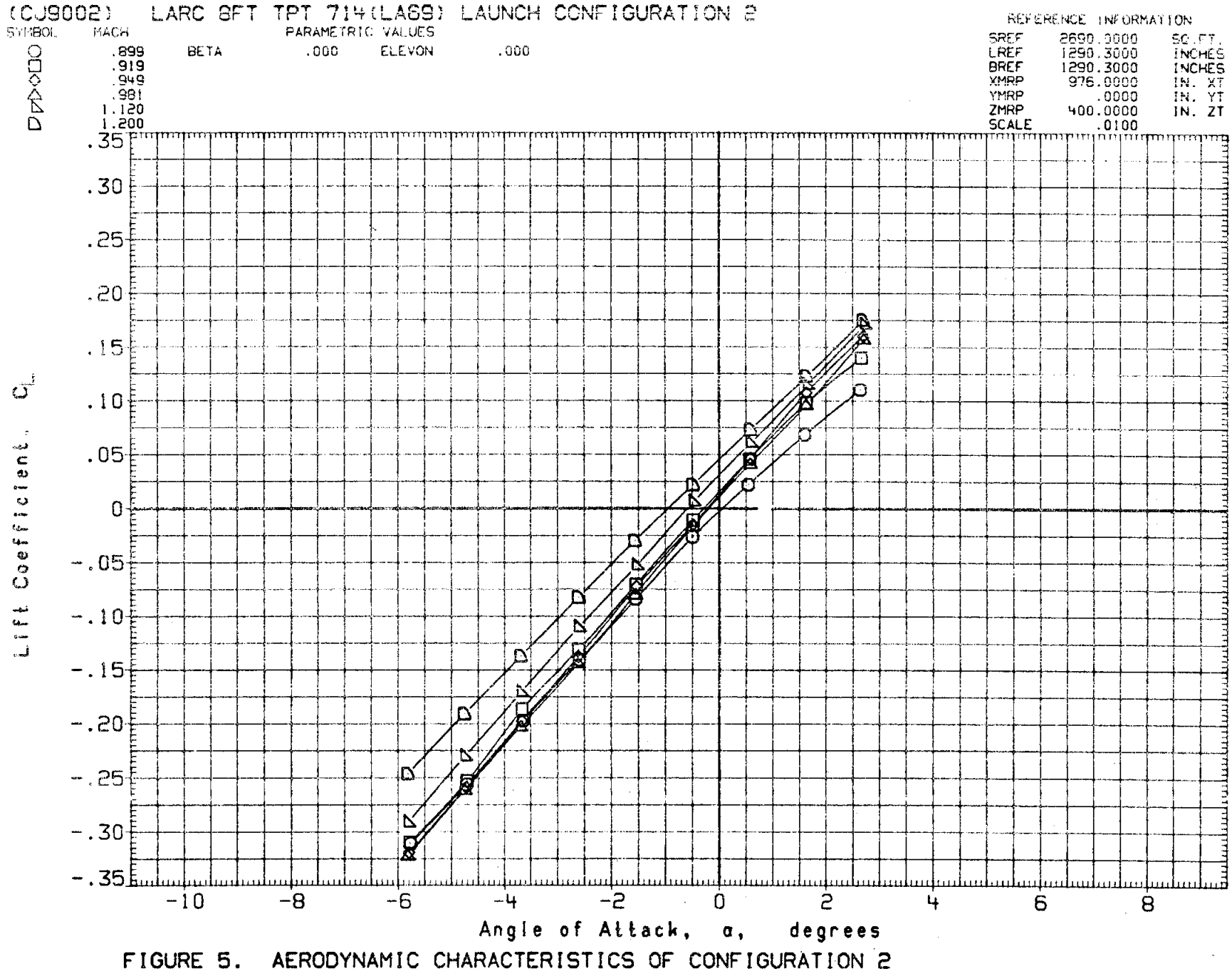

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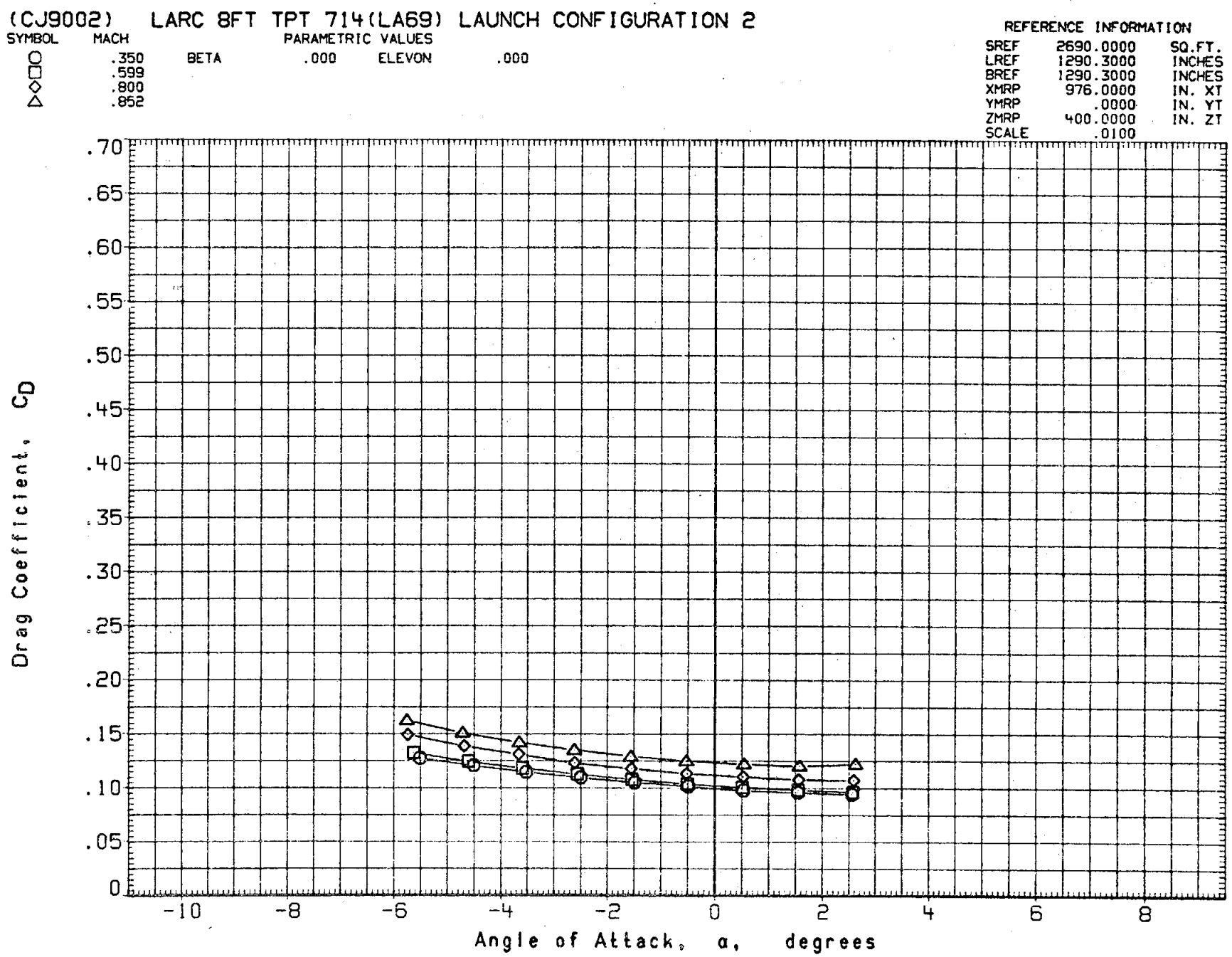

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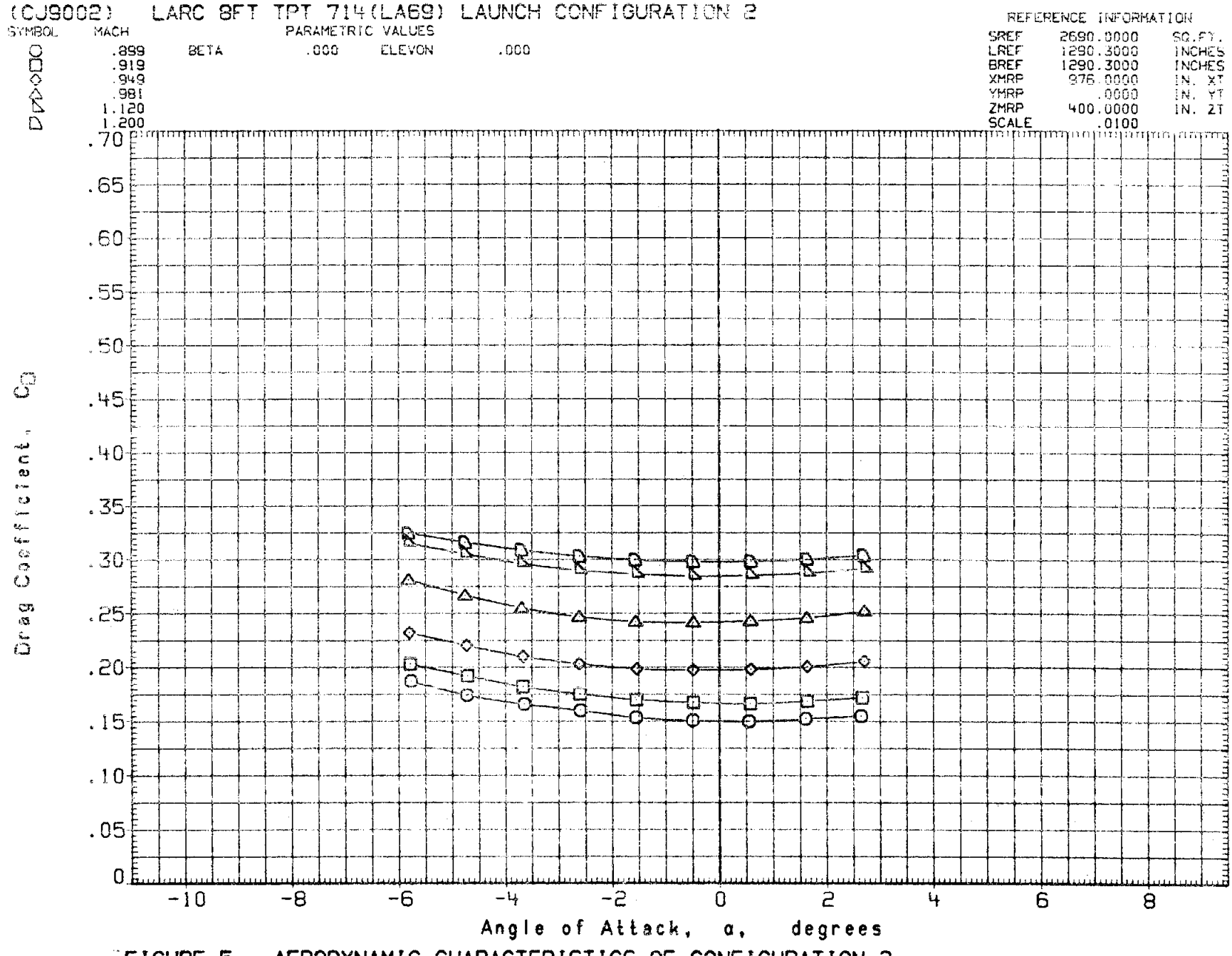

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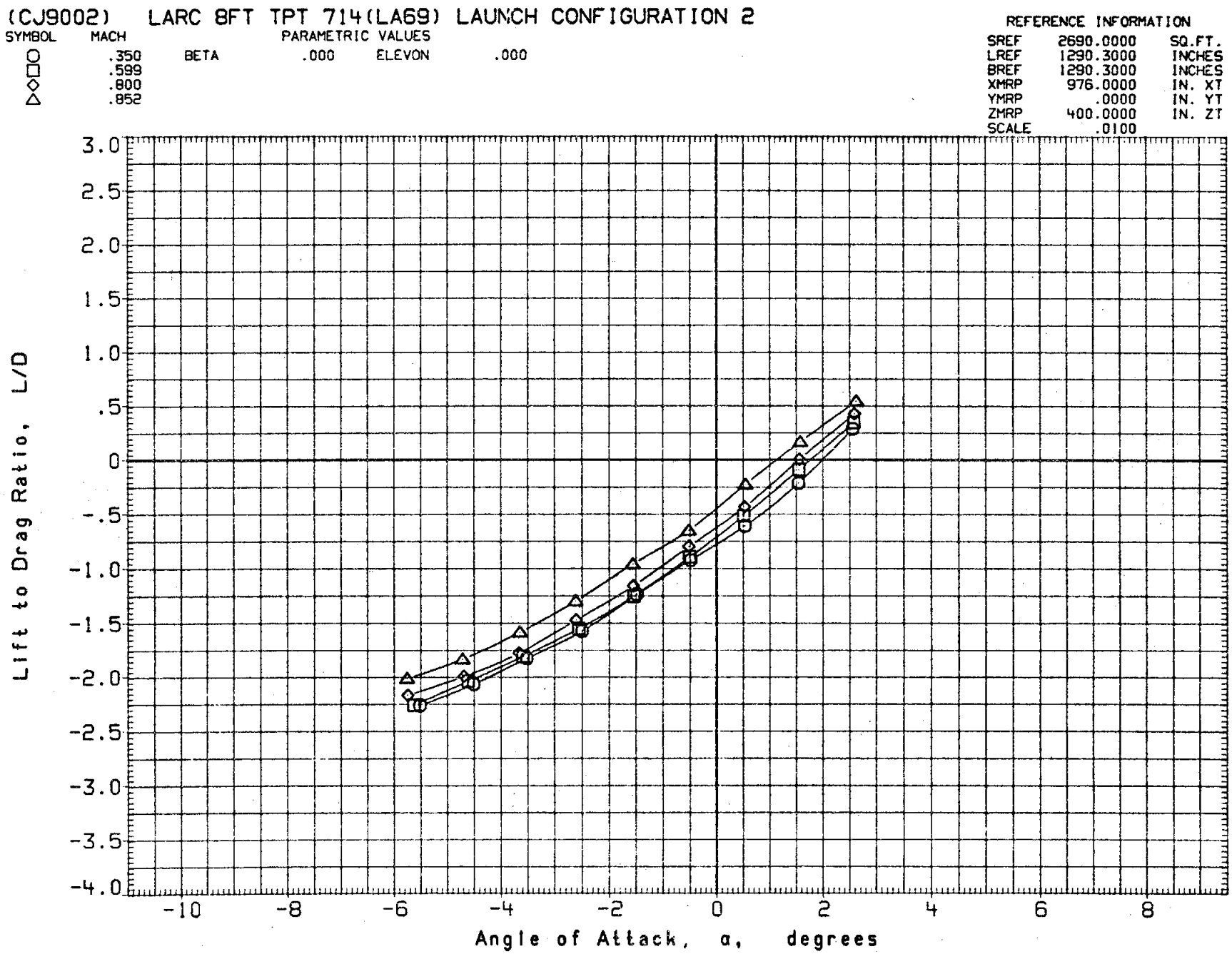

FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

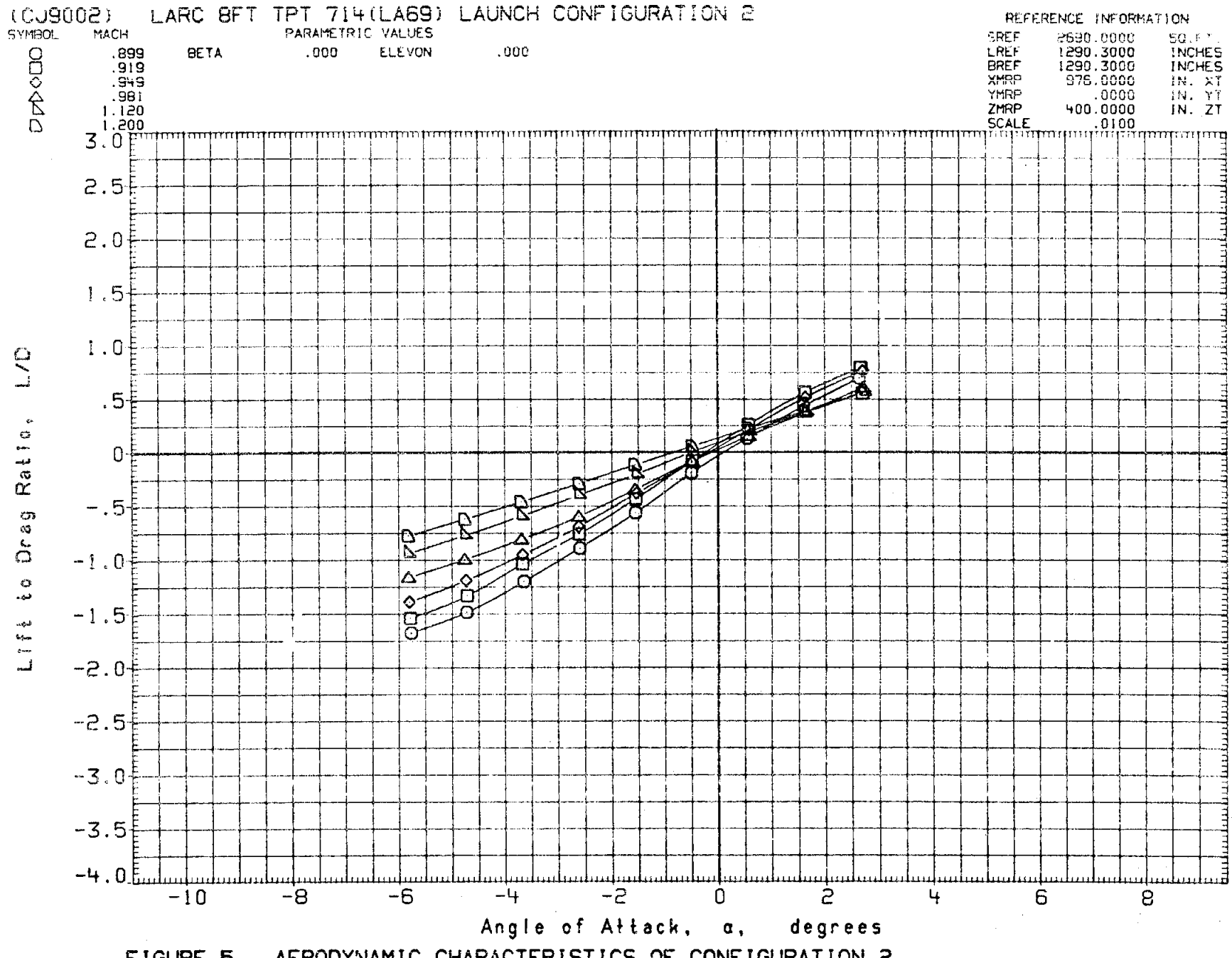

FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

(CJ9002) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.599				
◇	.800				
△	.852				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
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BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

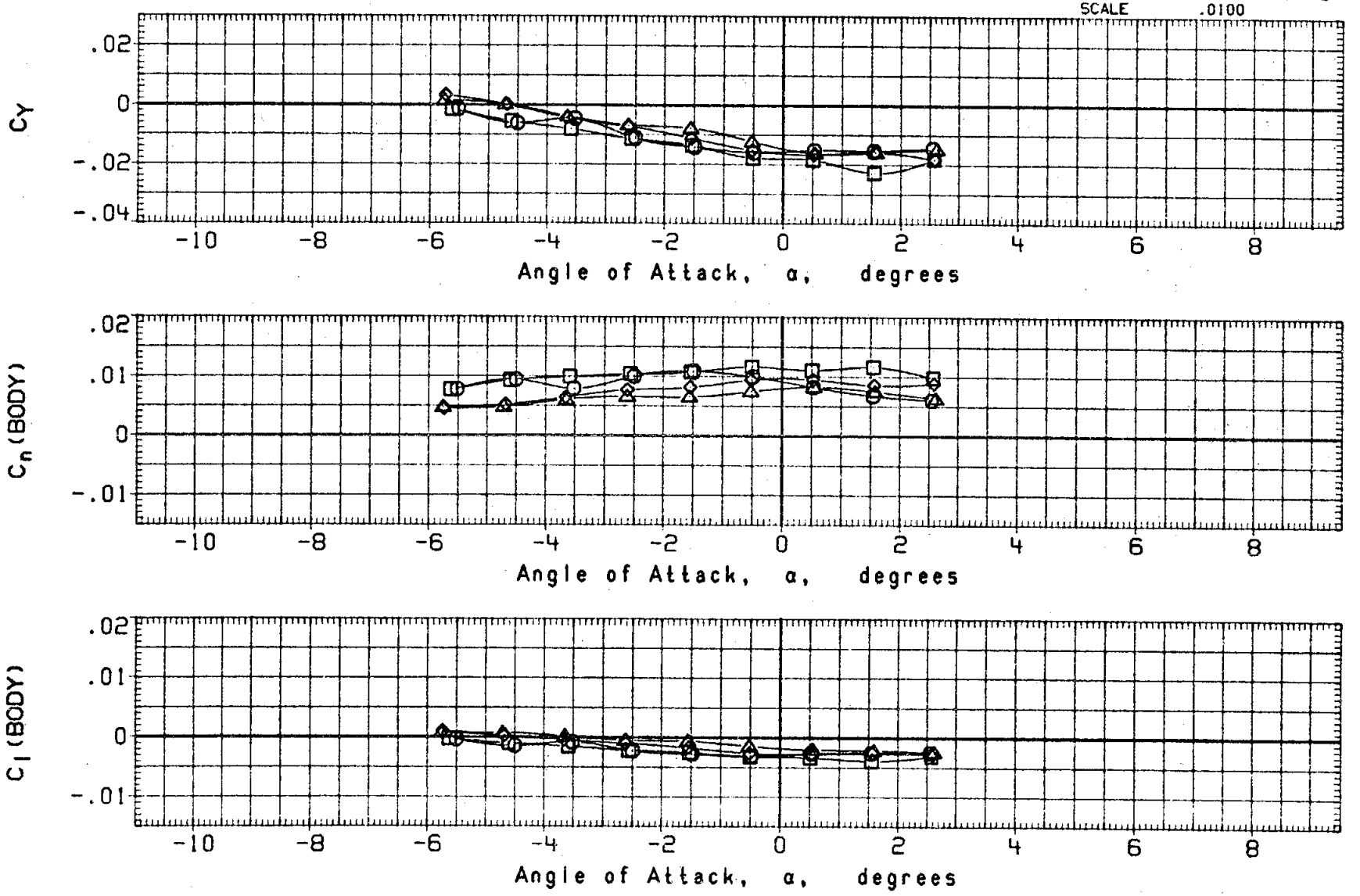

FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

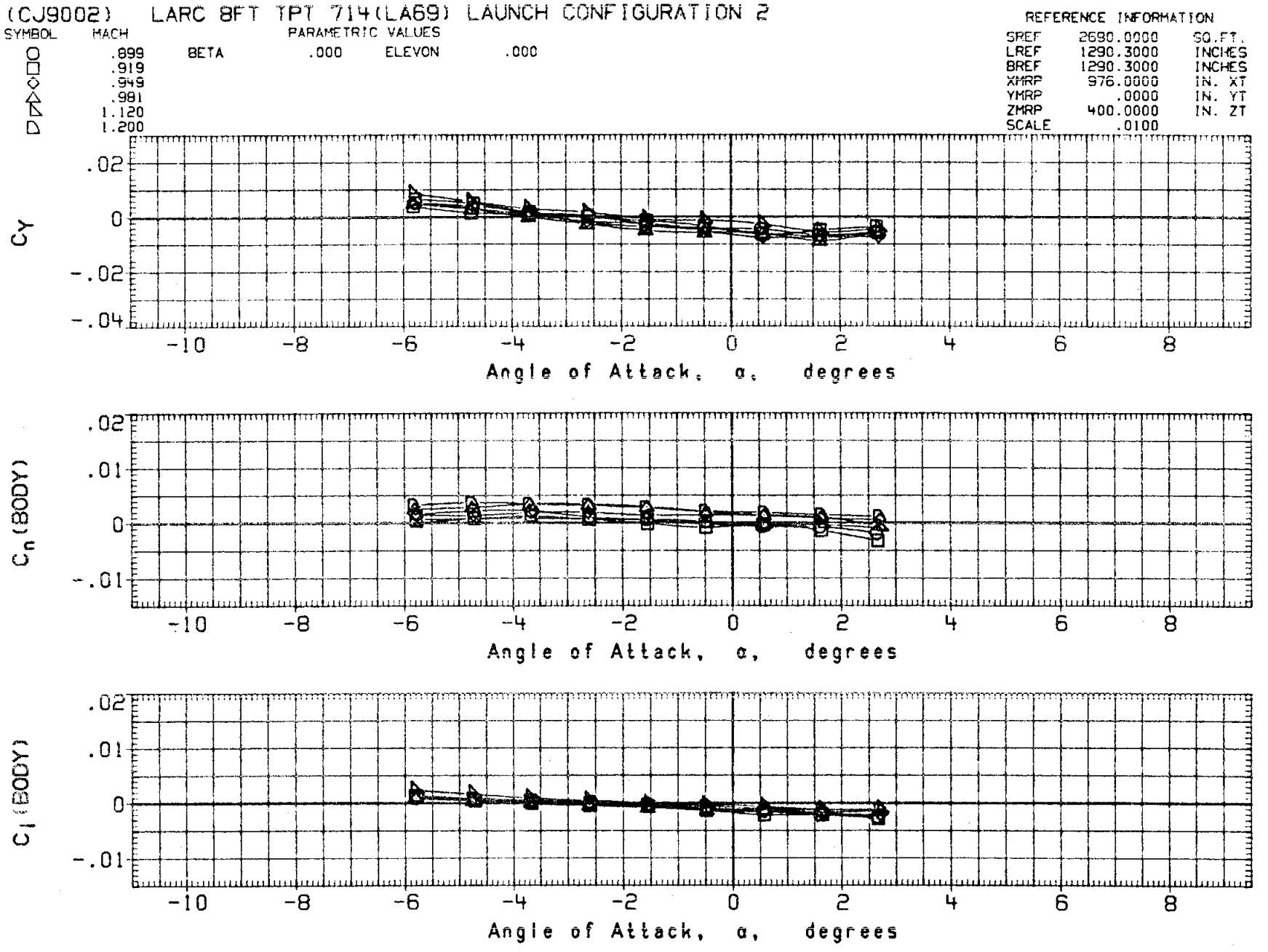

FIGURE 5. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 2

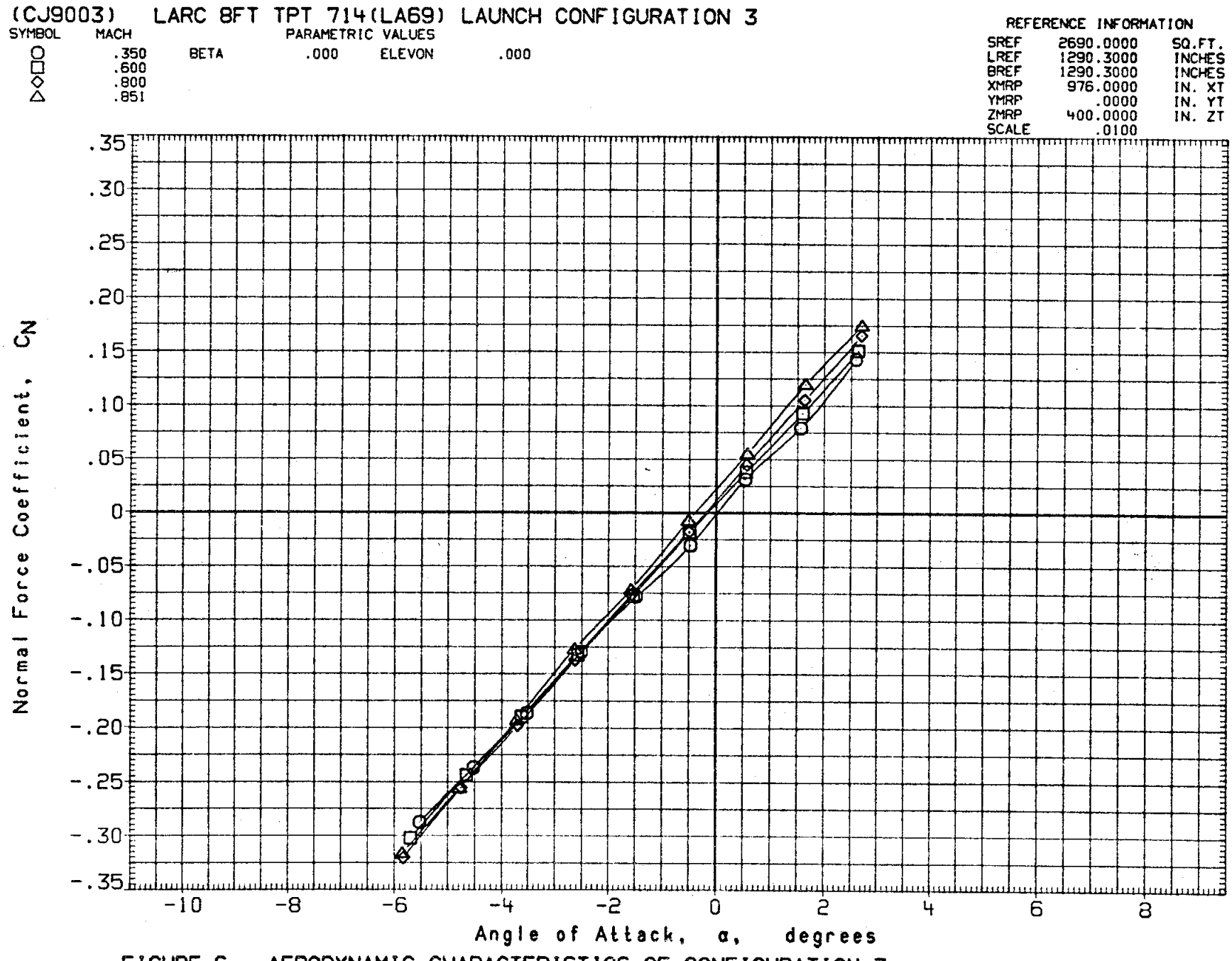

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

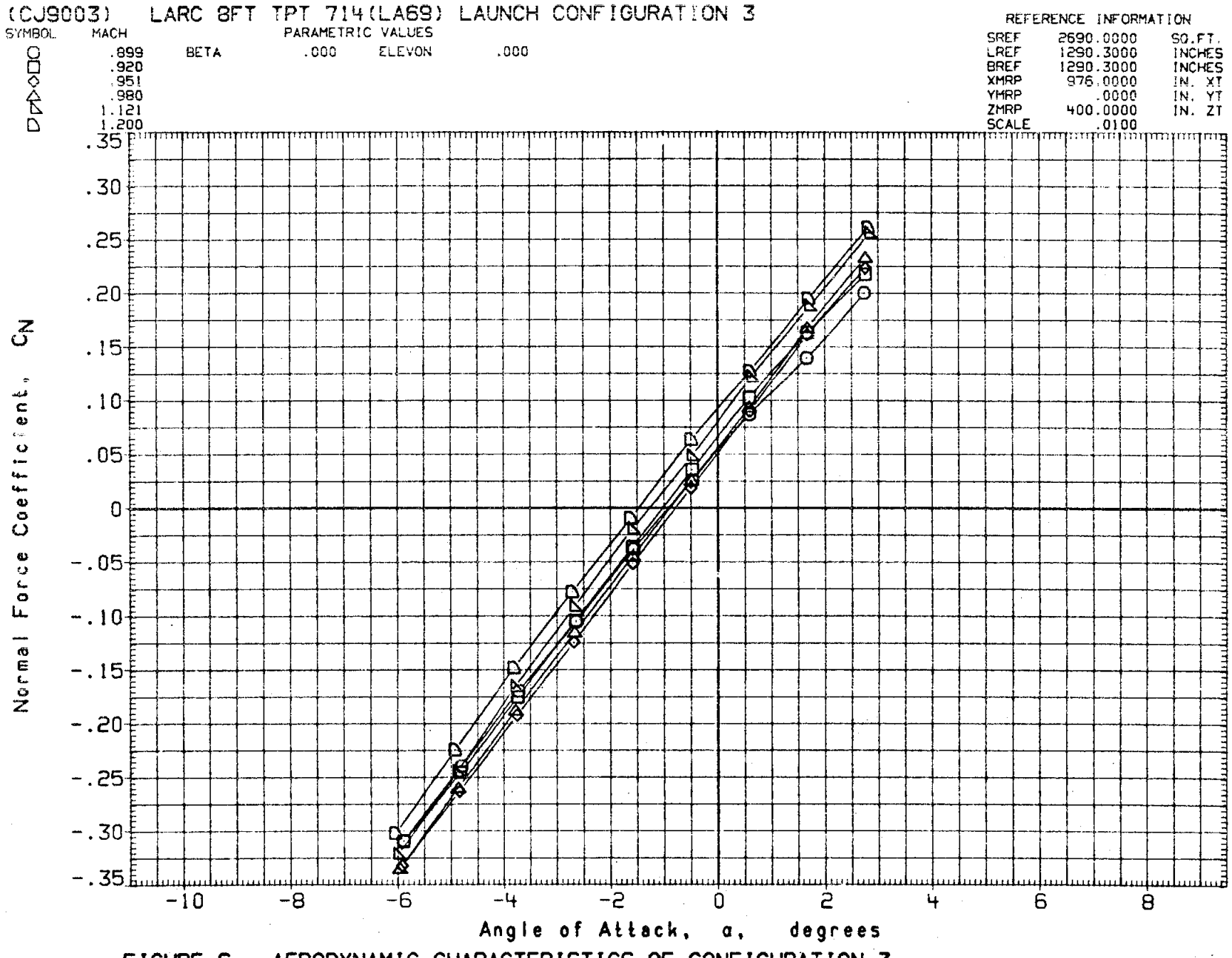

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

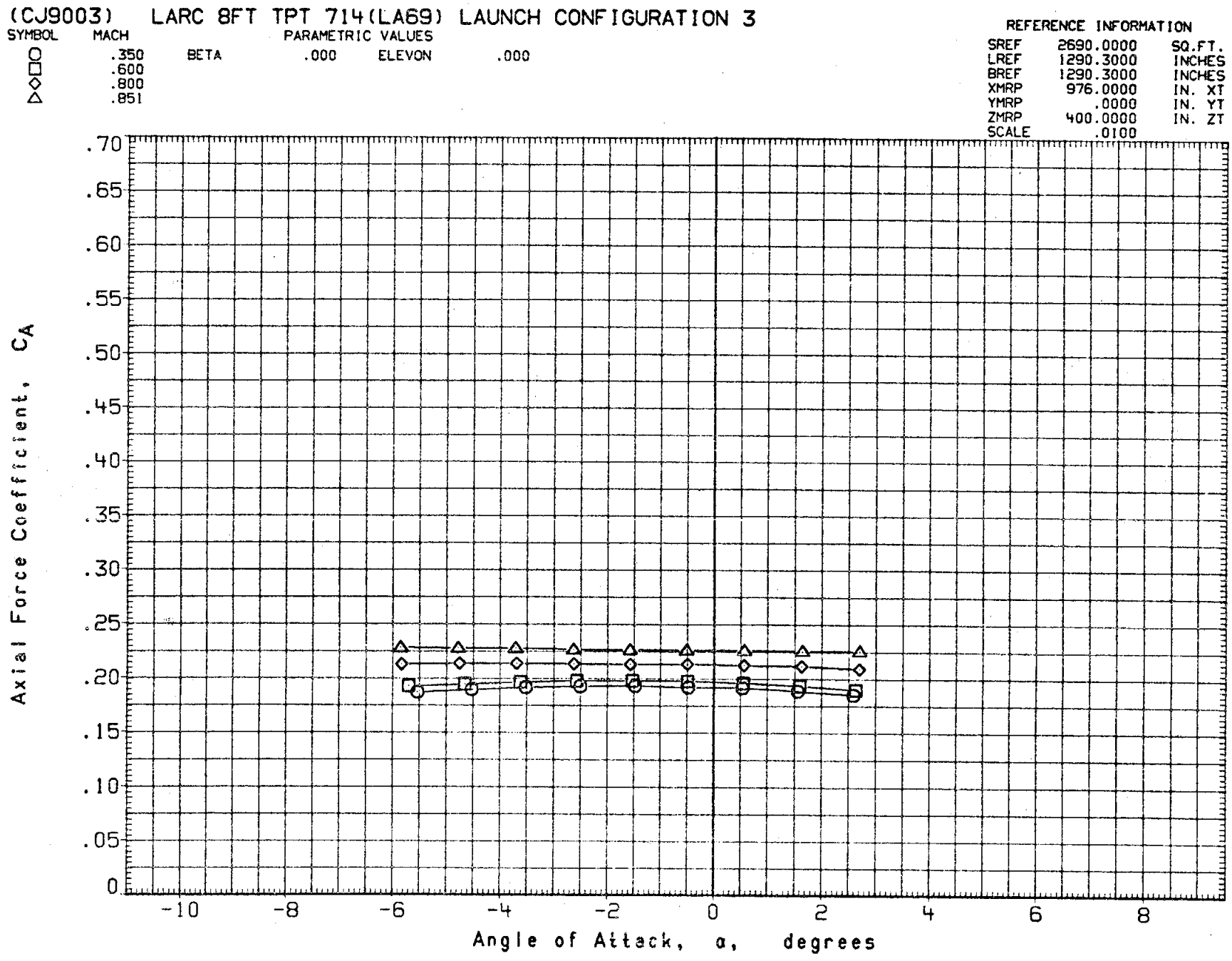

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

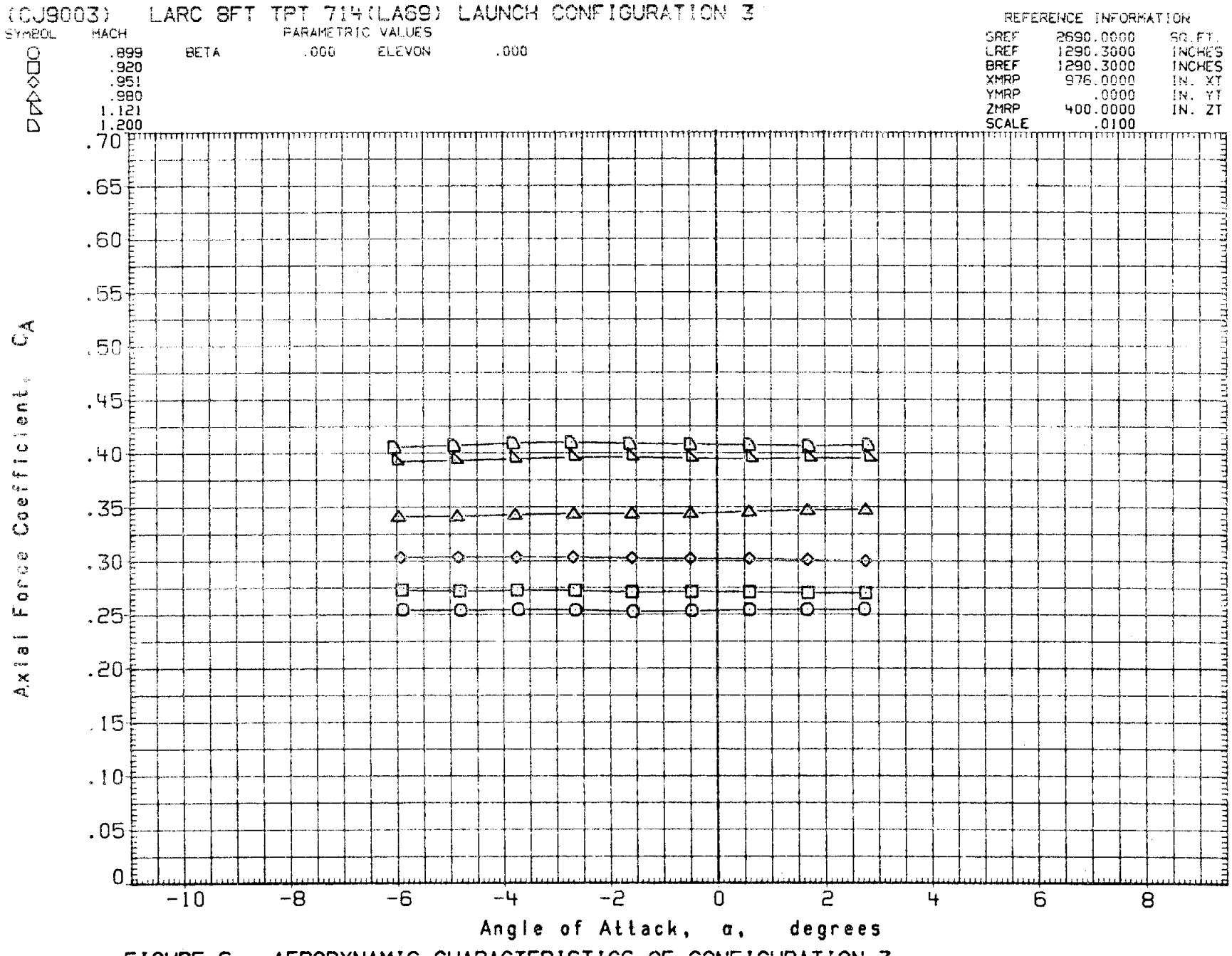

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

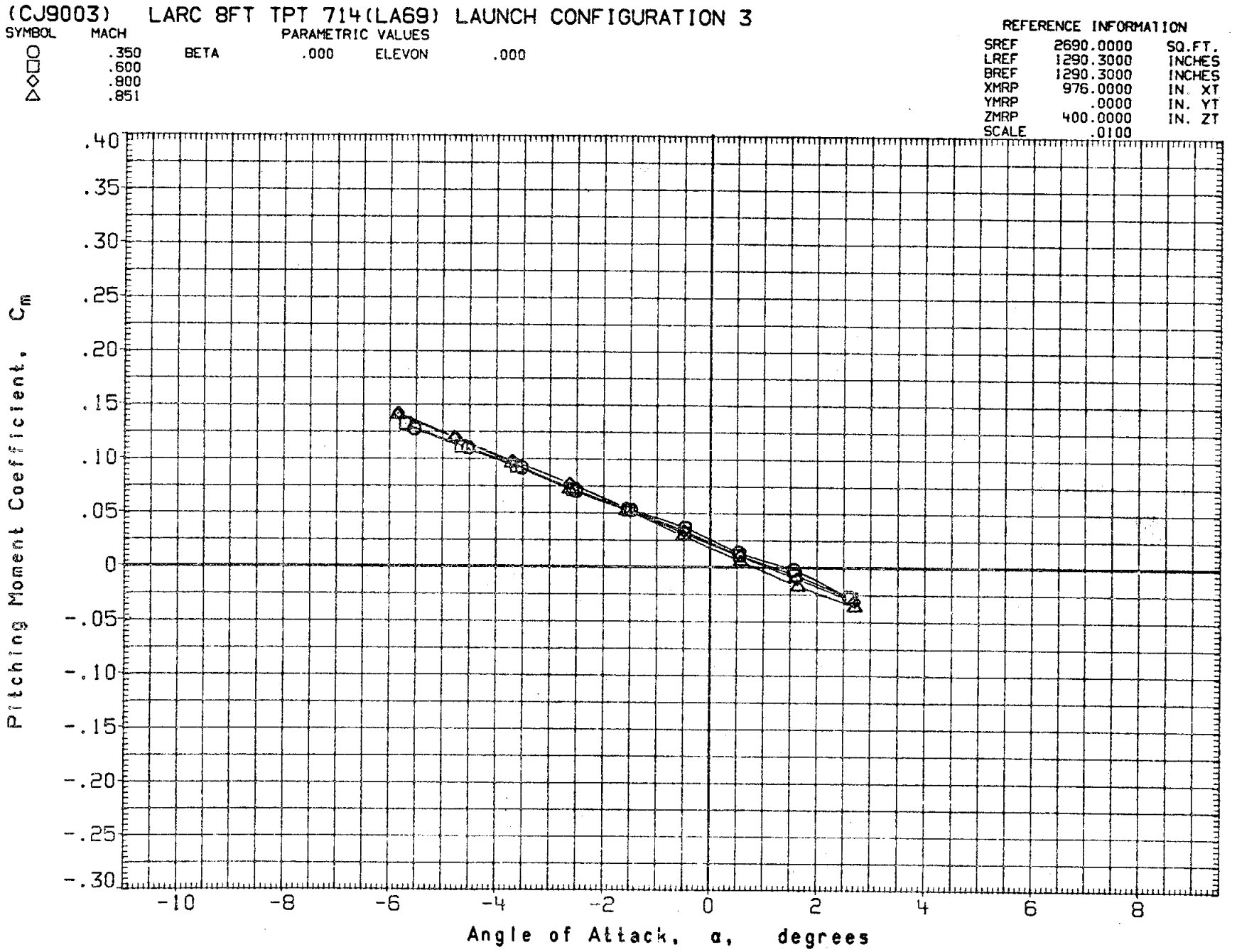

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

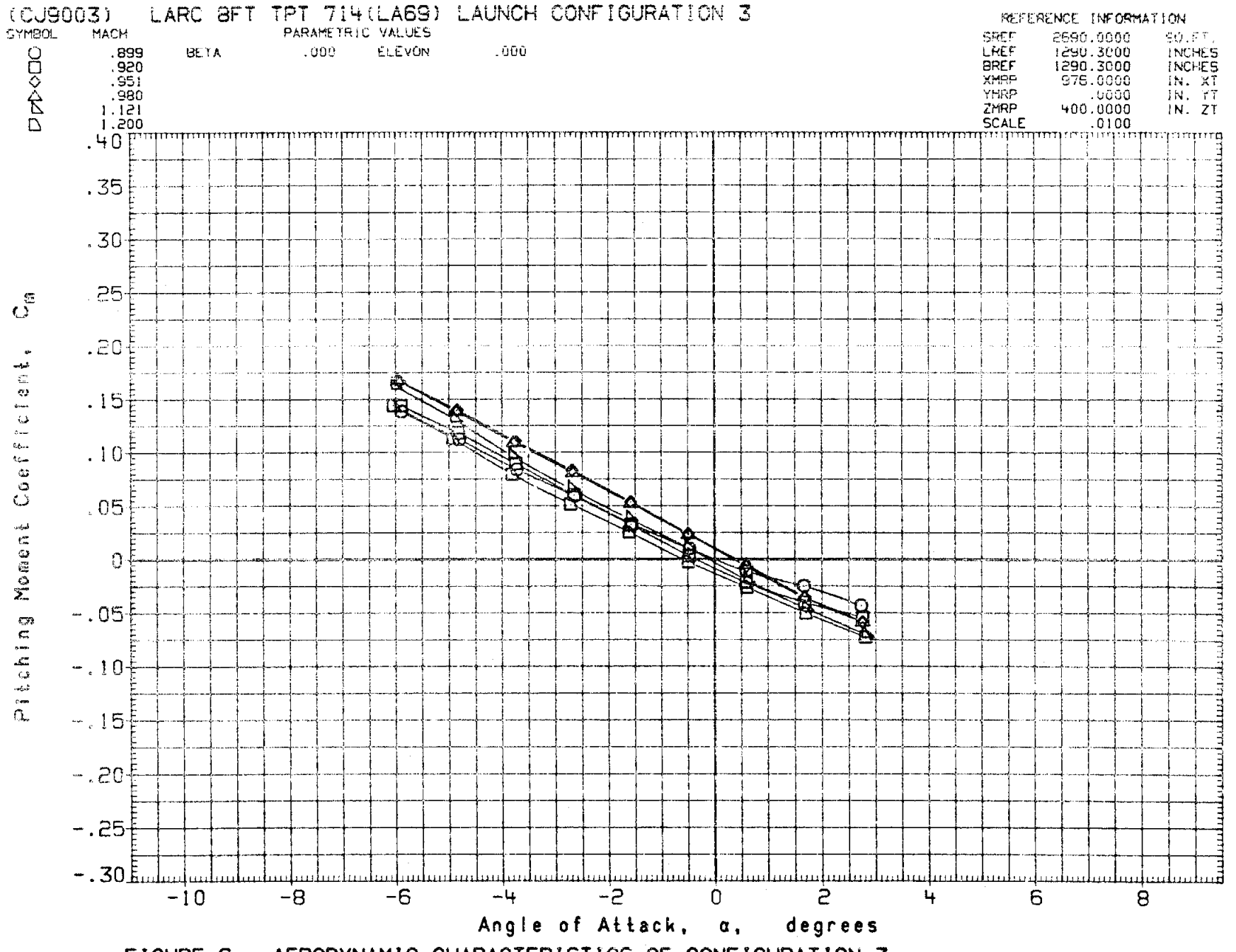

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

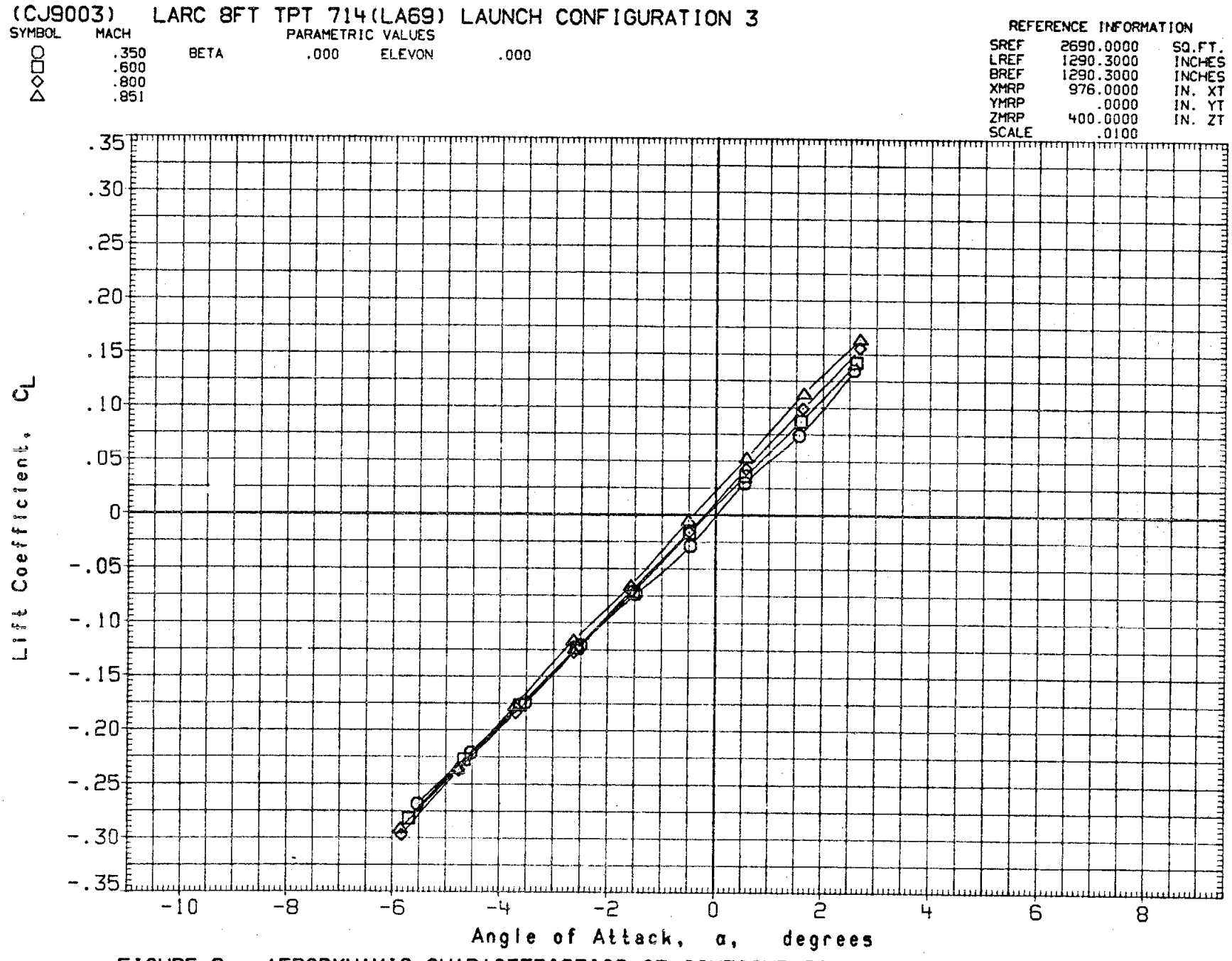

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

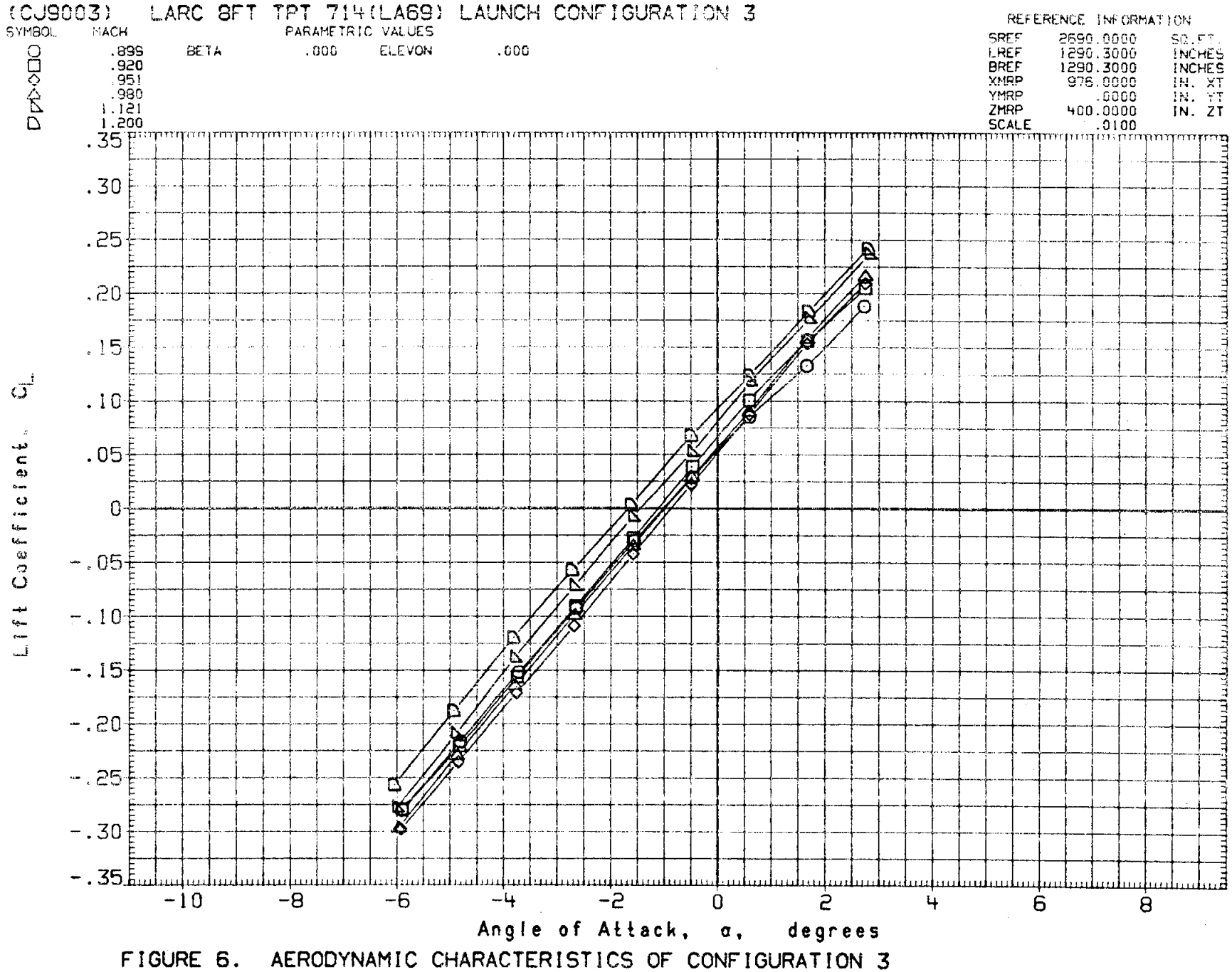

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

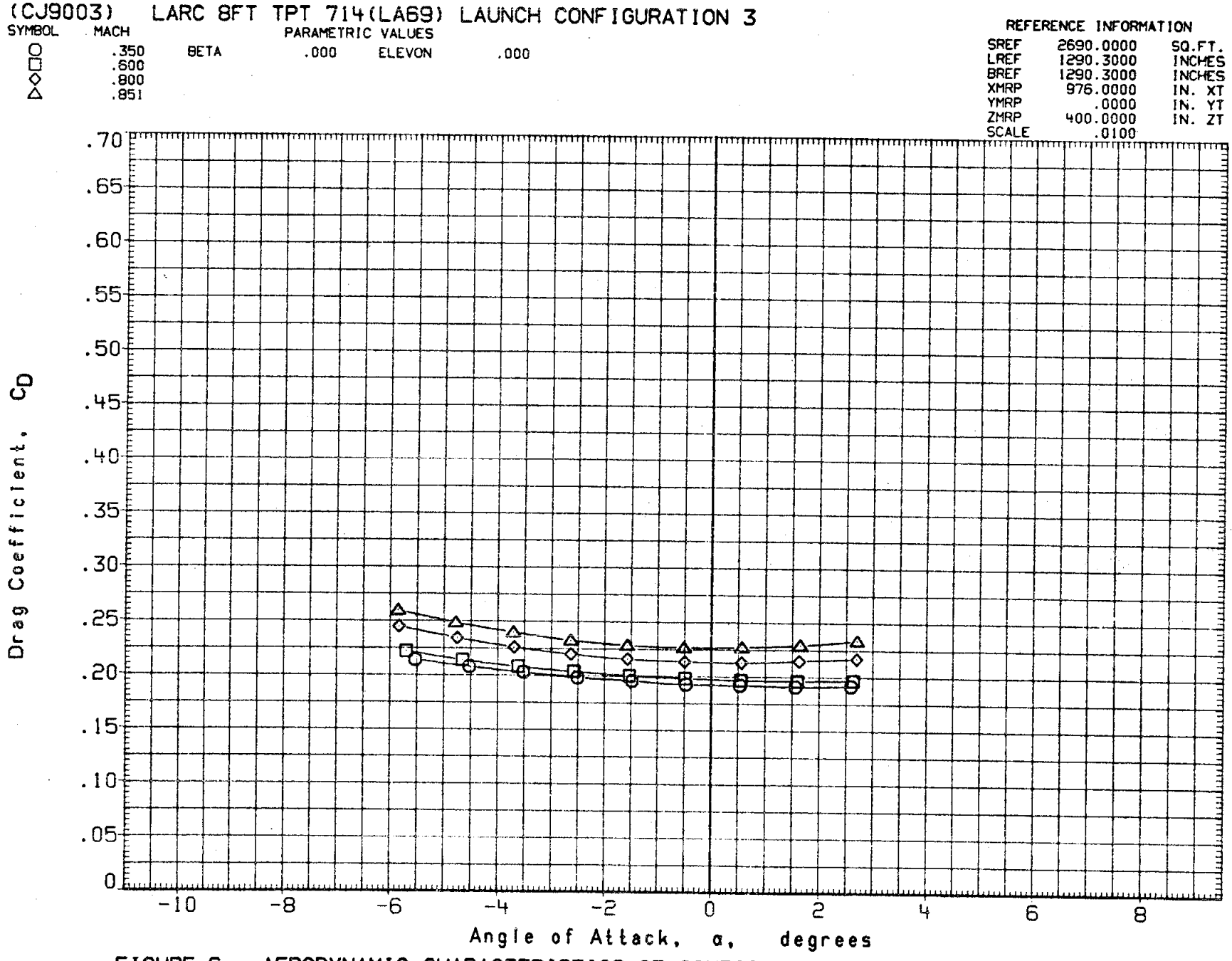

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

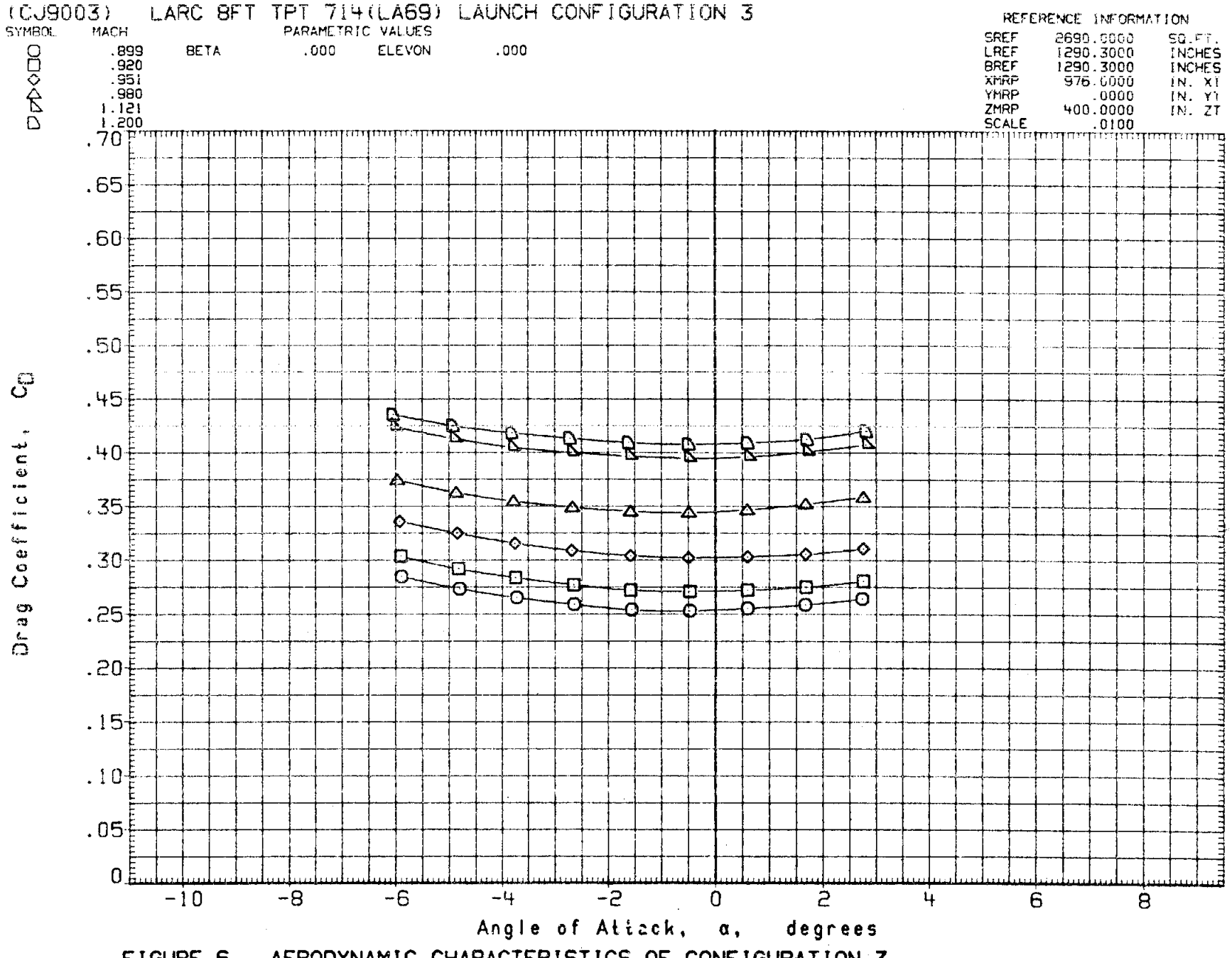

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

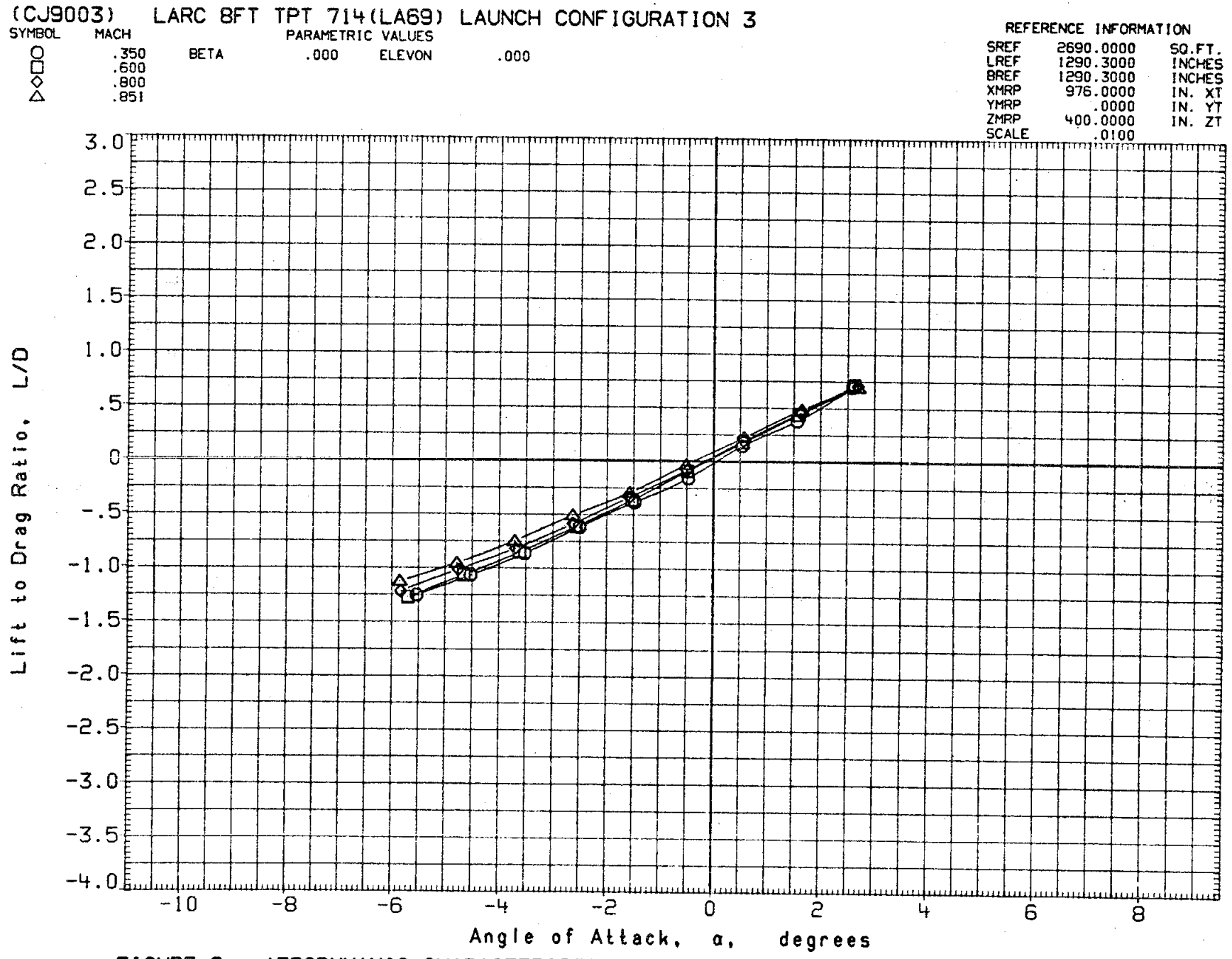

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

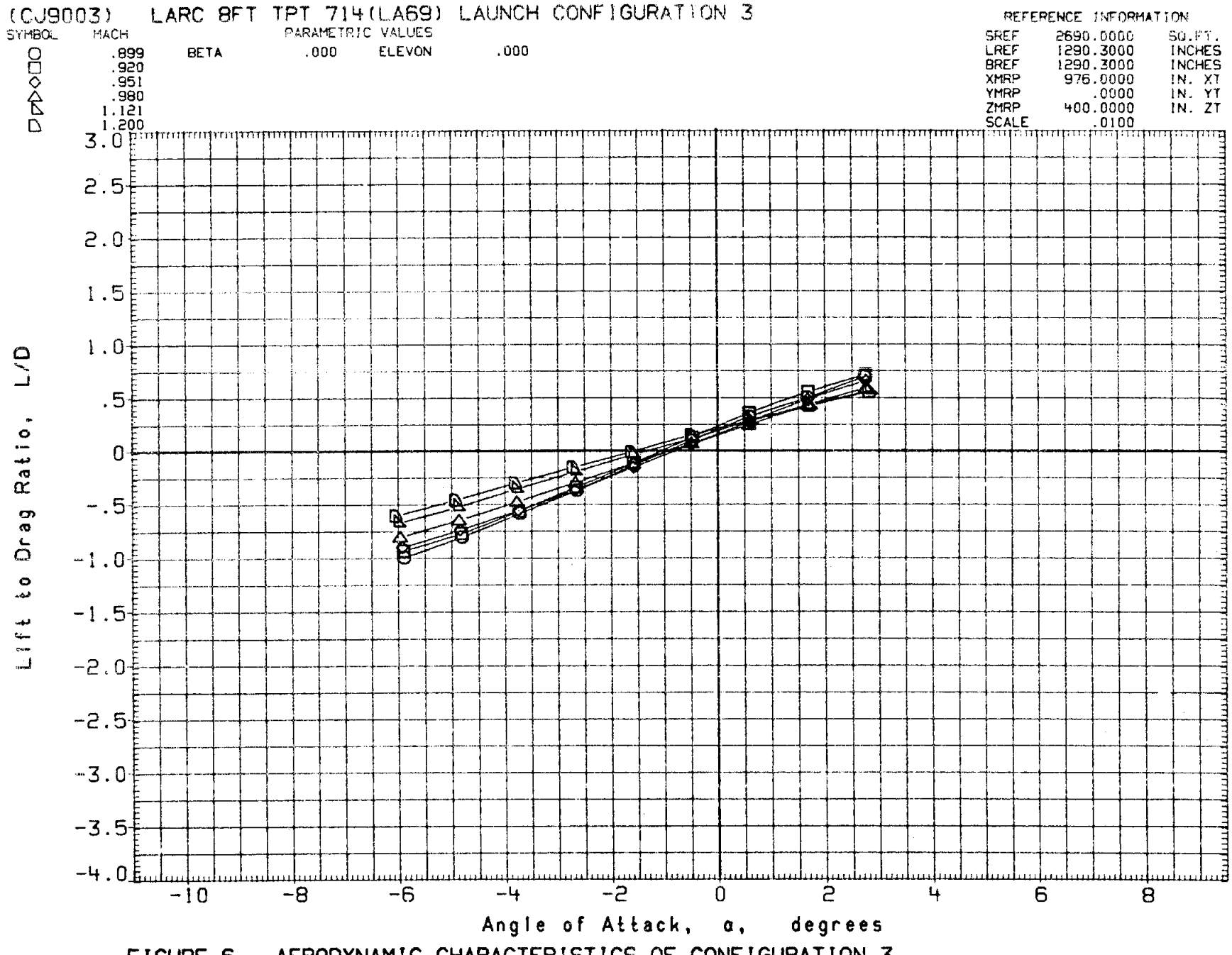

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

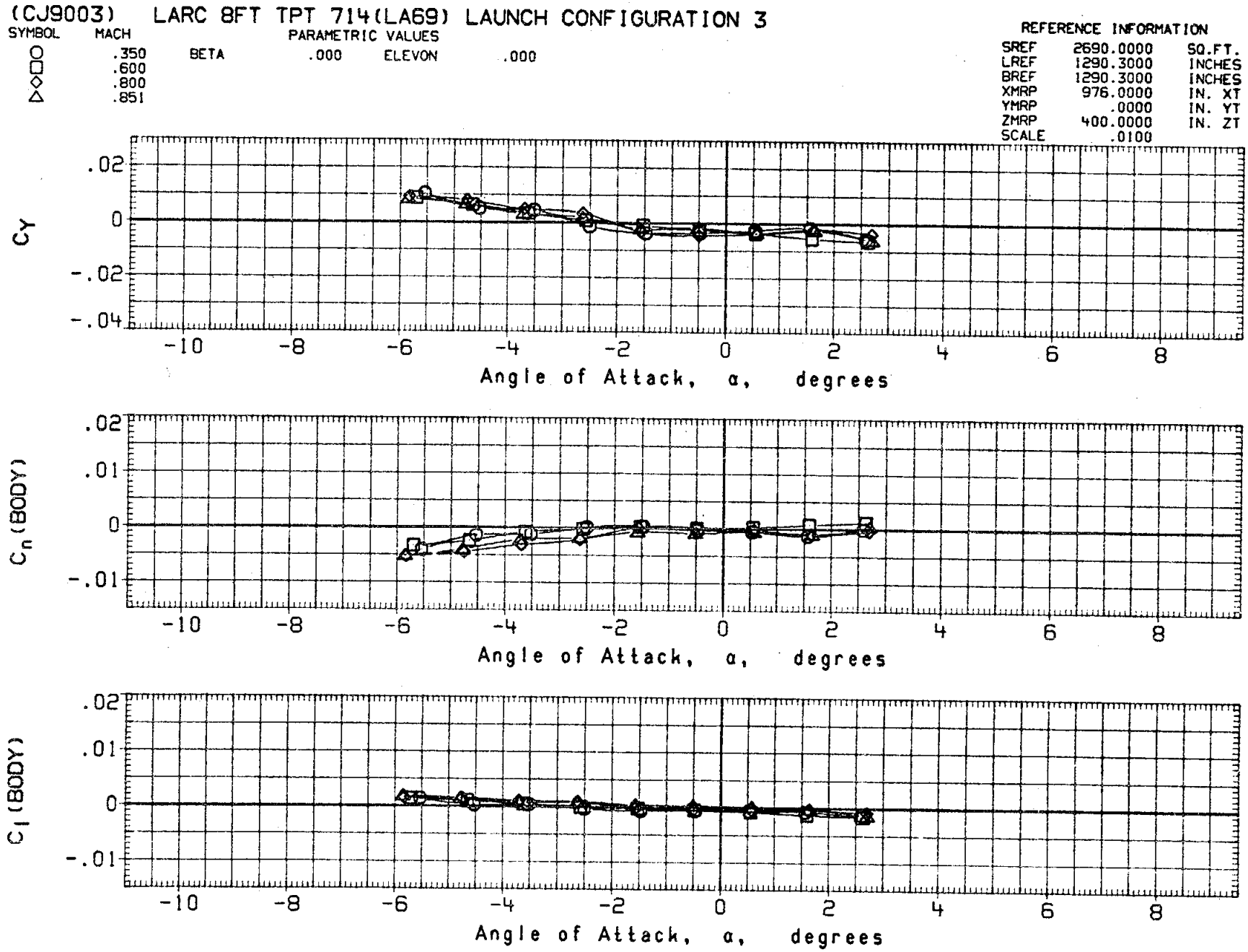

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

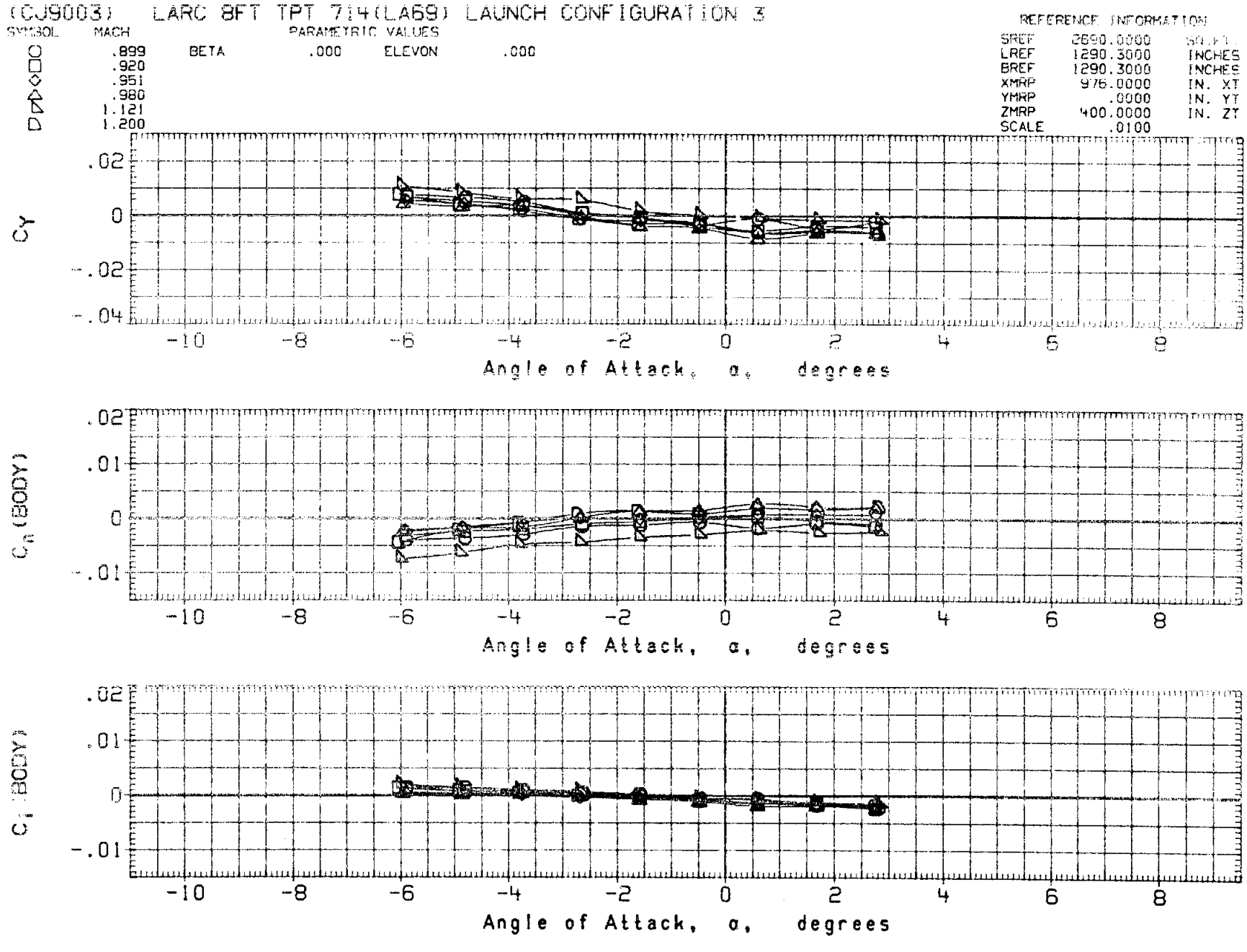

FIGURE 6. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 3

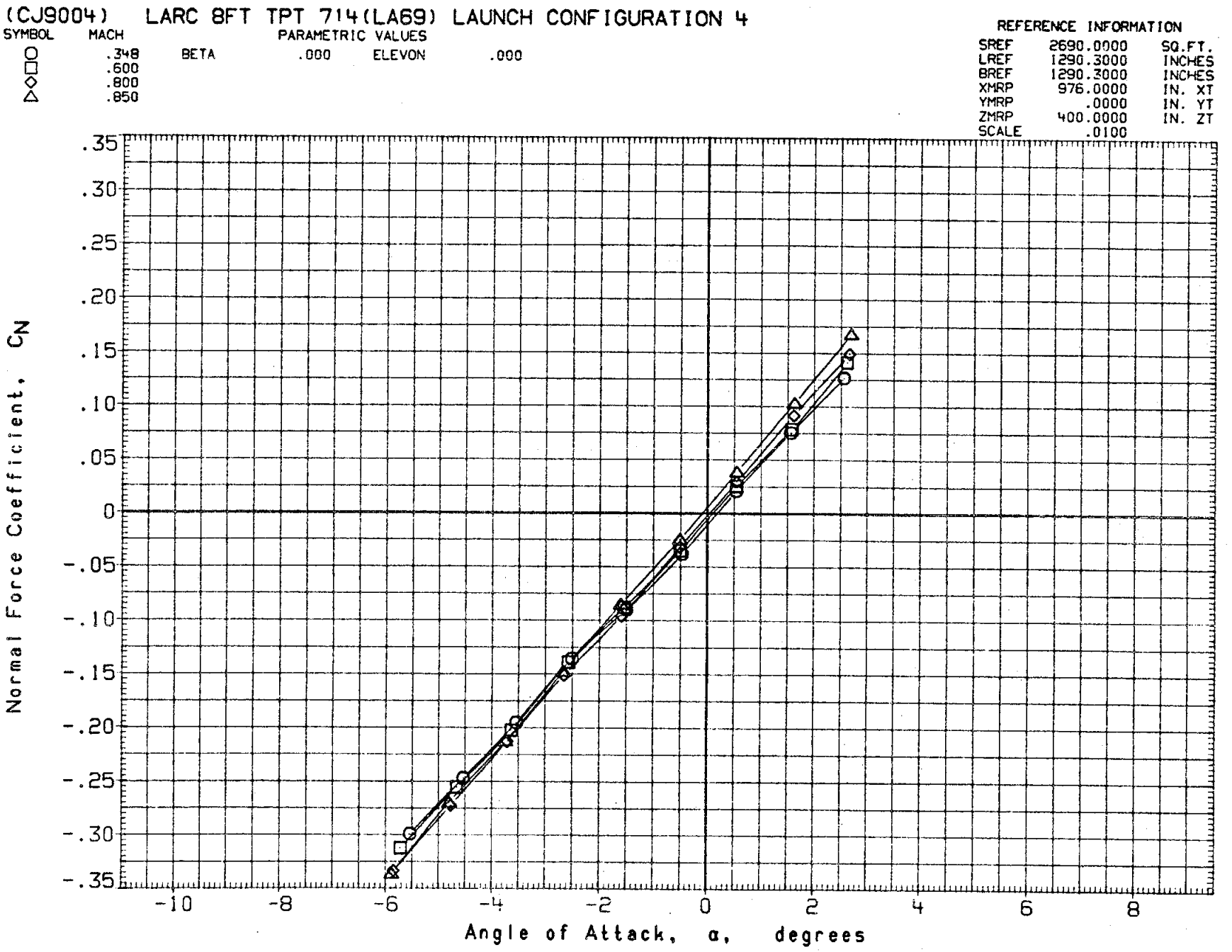

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

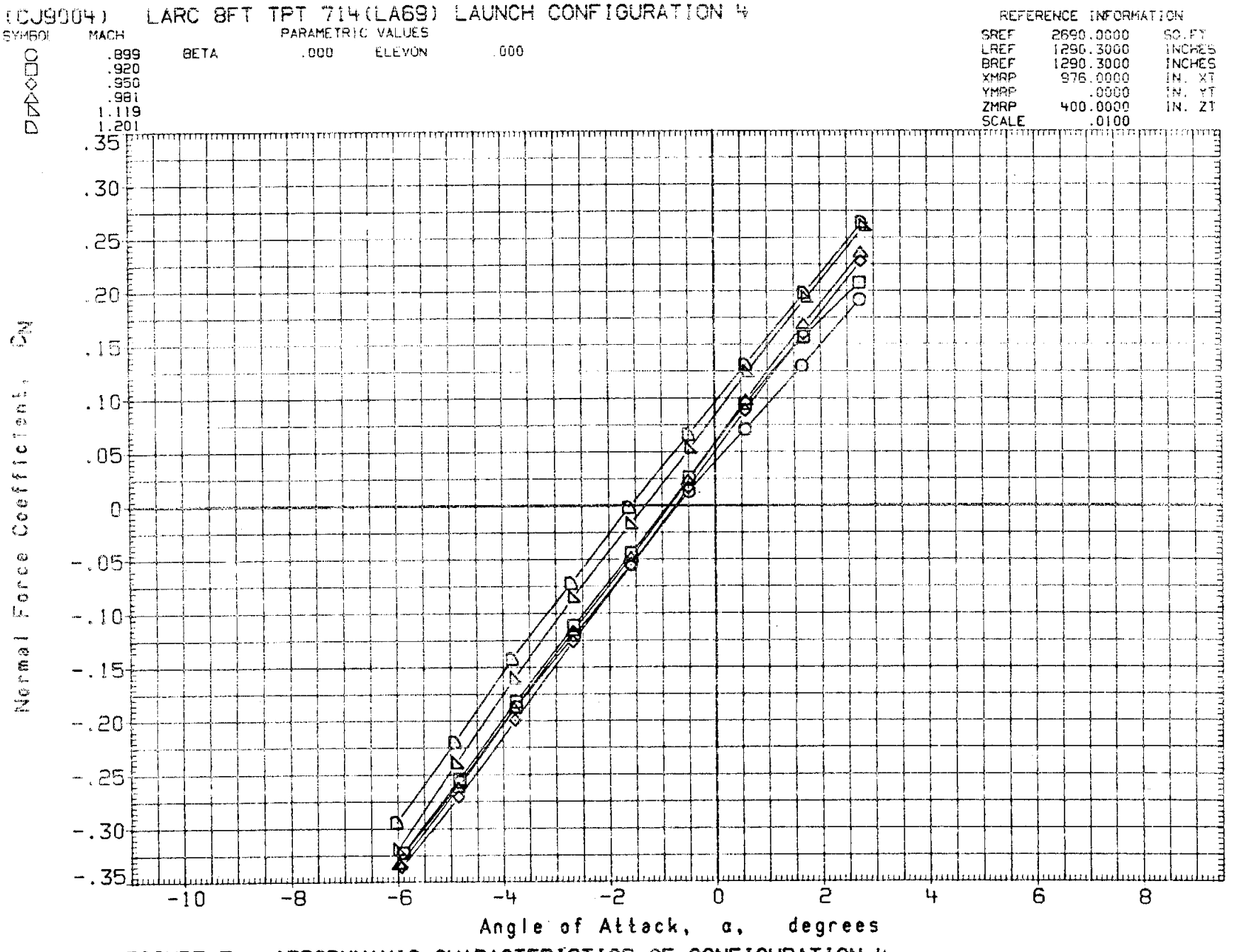

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

(CJ9004) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4

SYMBOL	MACH	PARAMETRIC VALUES			
○	.348	BETA	.000	ELEVON	.000
□	.600				
◇	.800				
△	.850				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

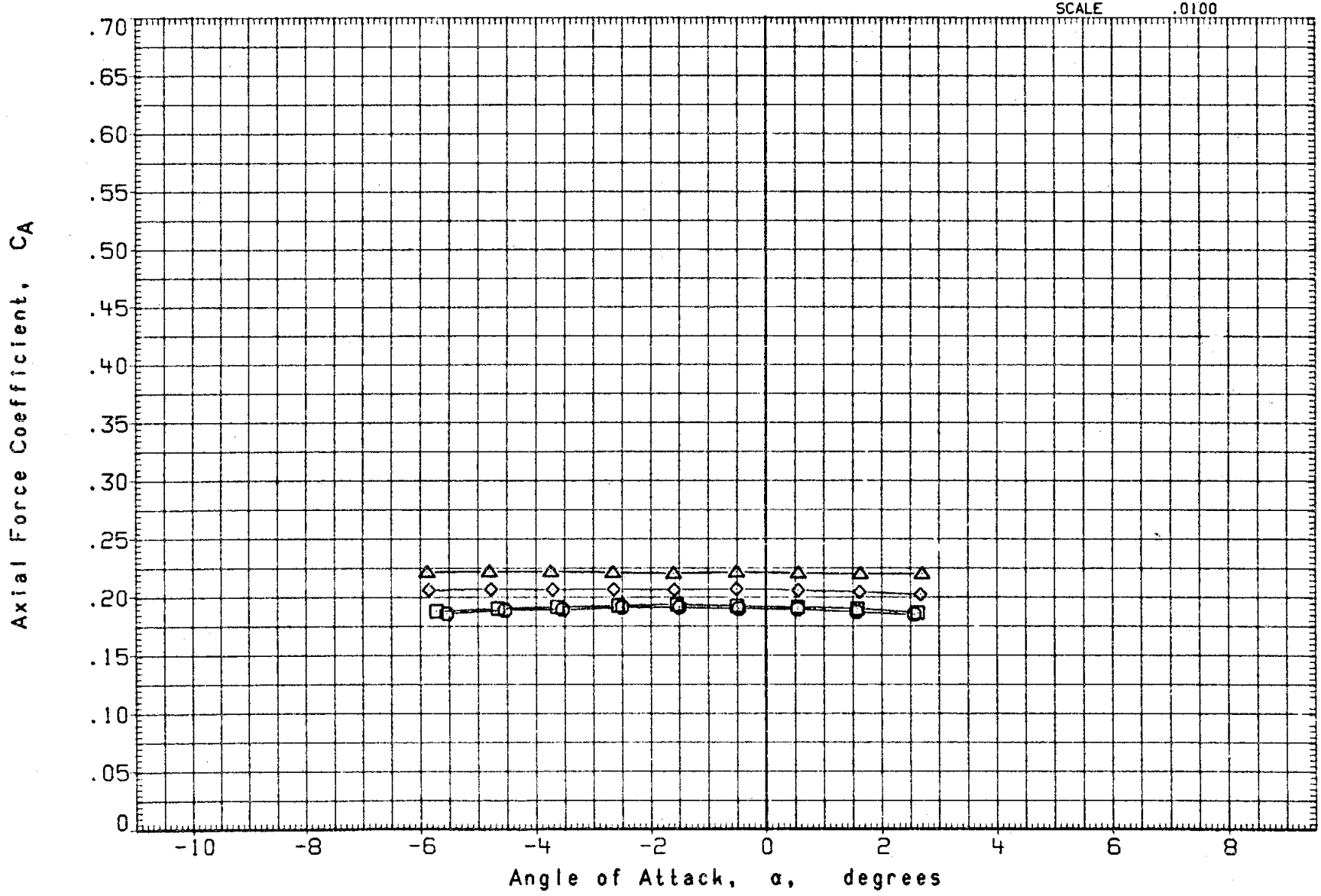

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

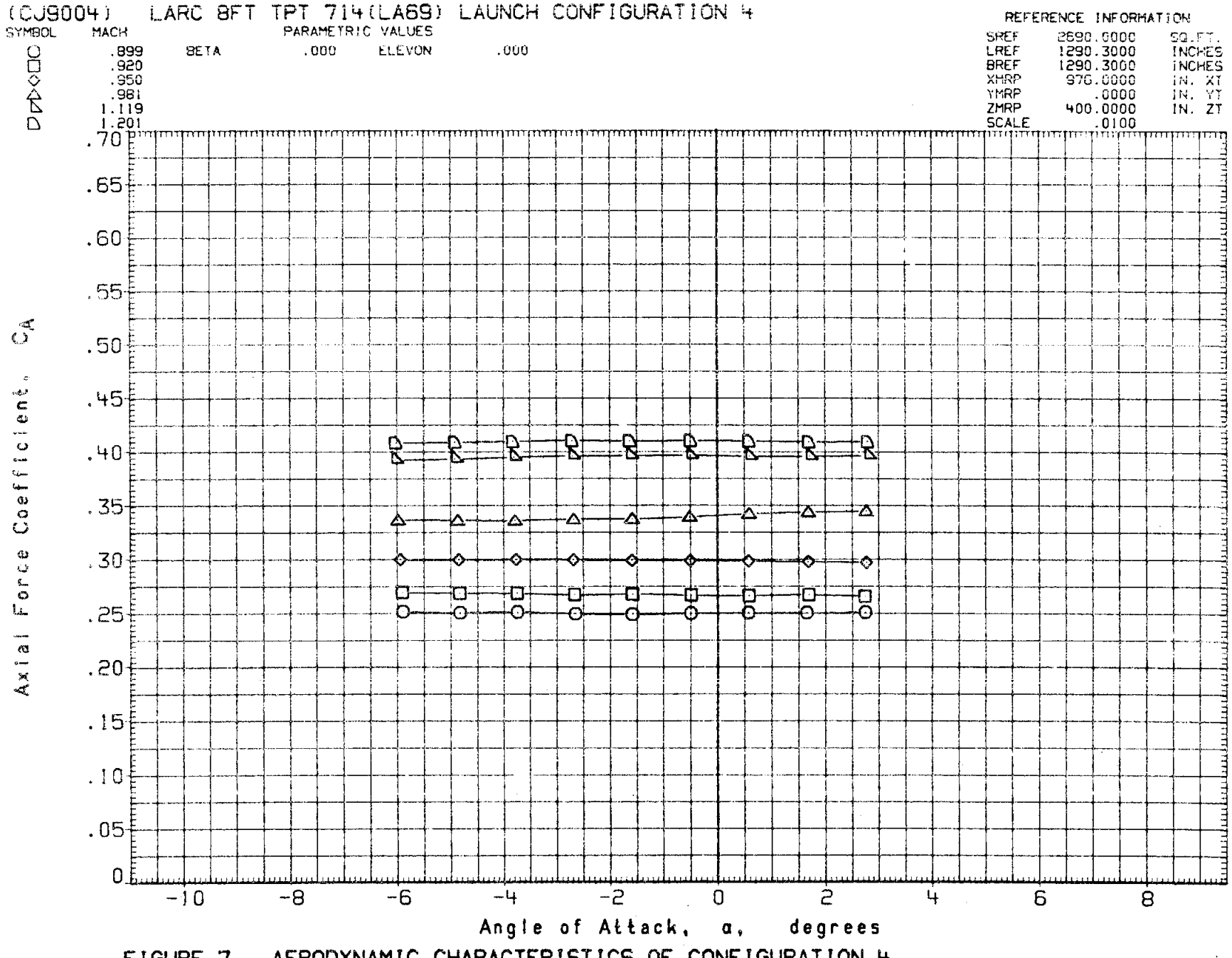

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

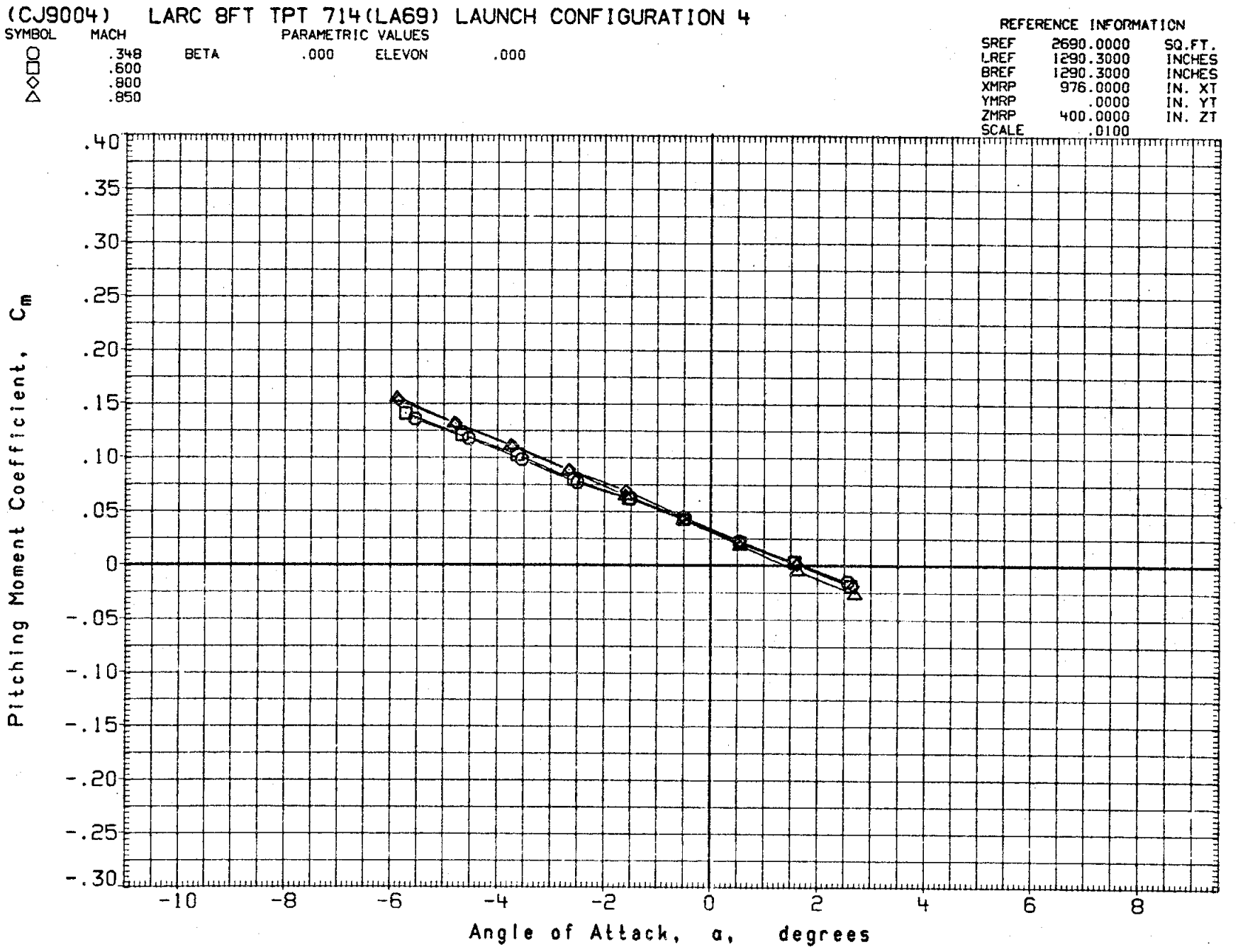

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

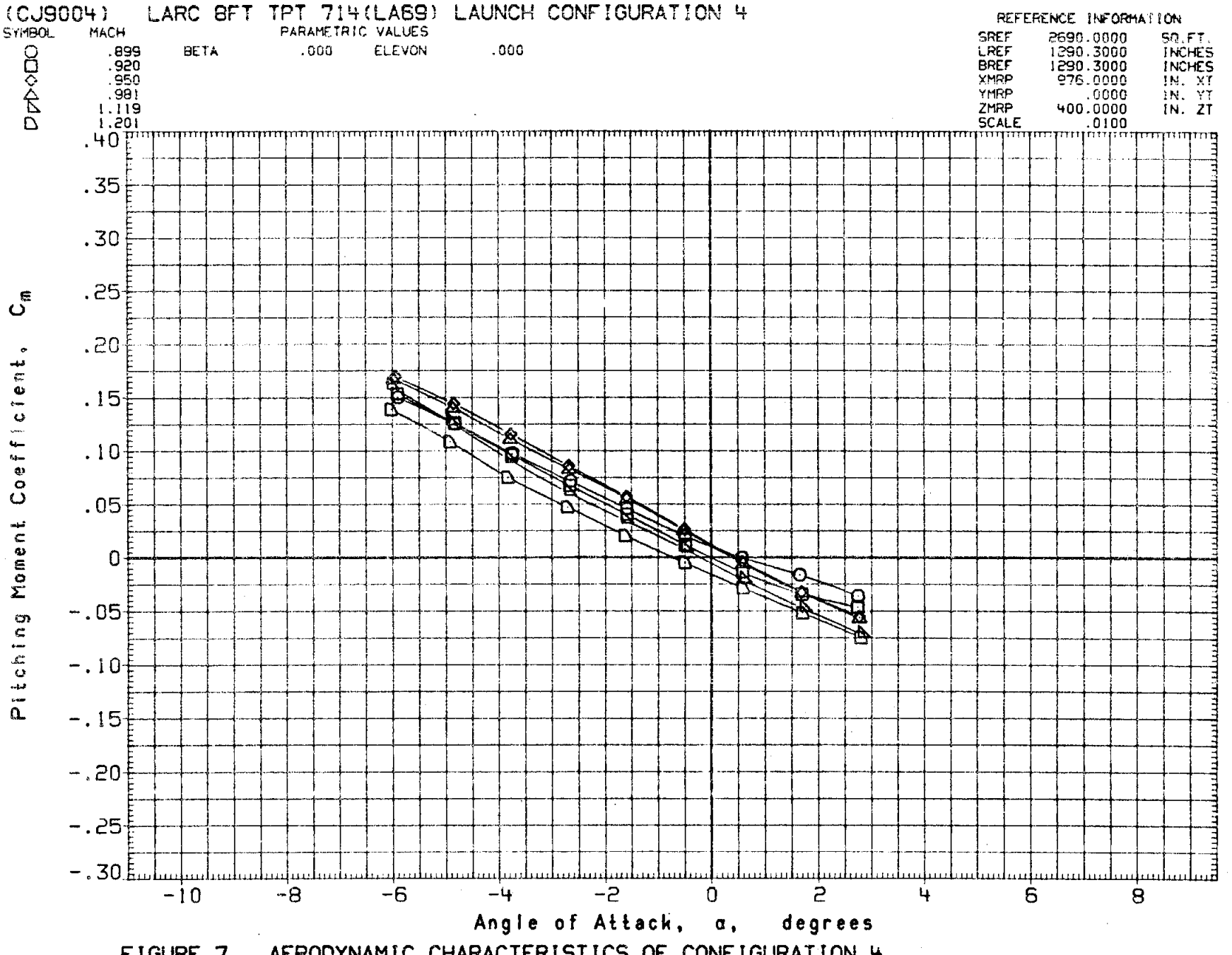

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

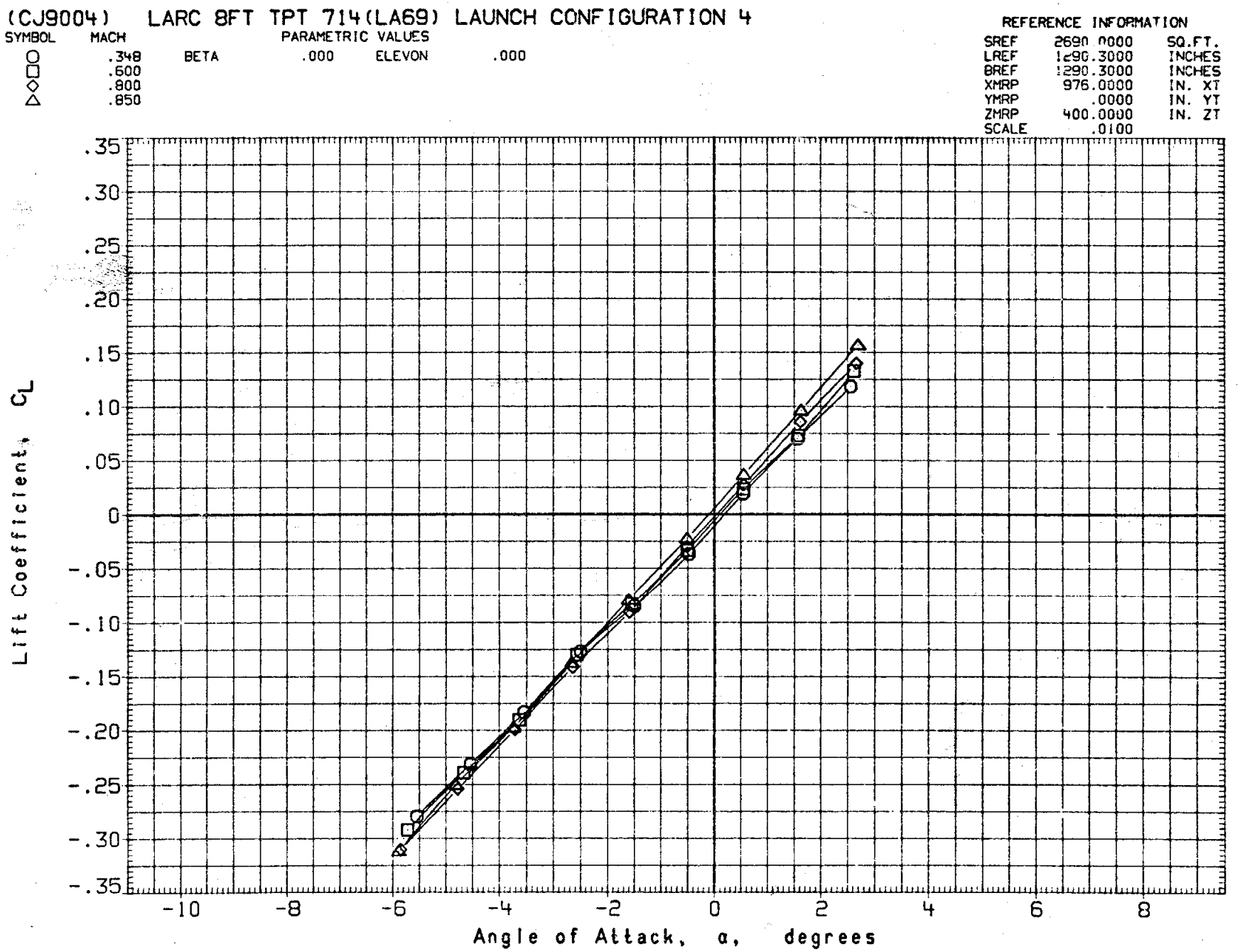

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

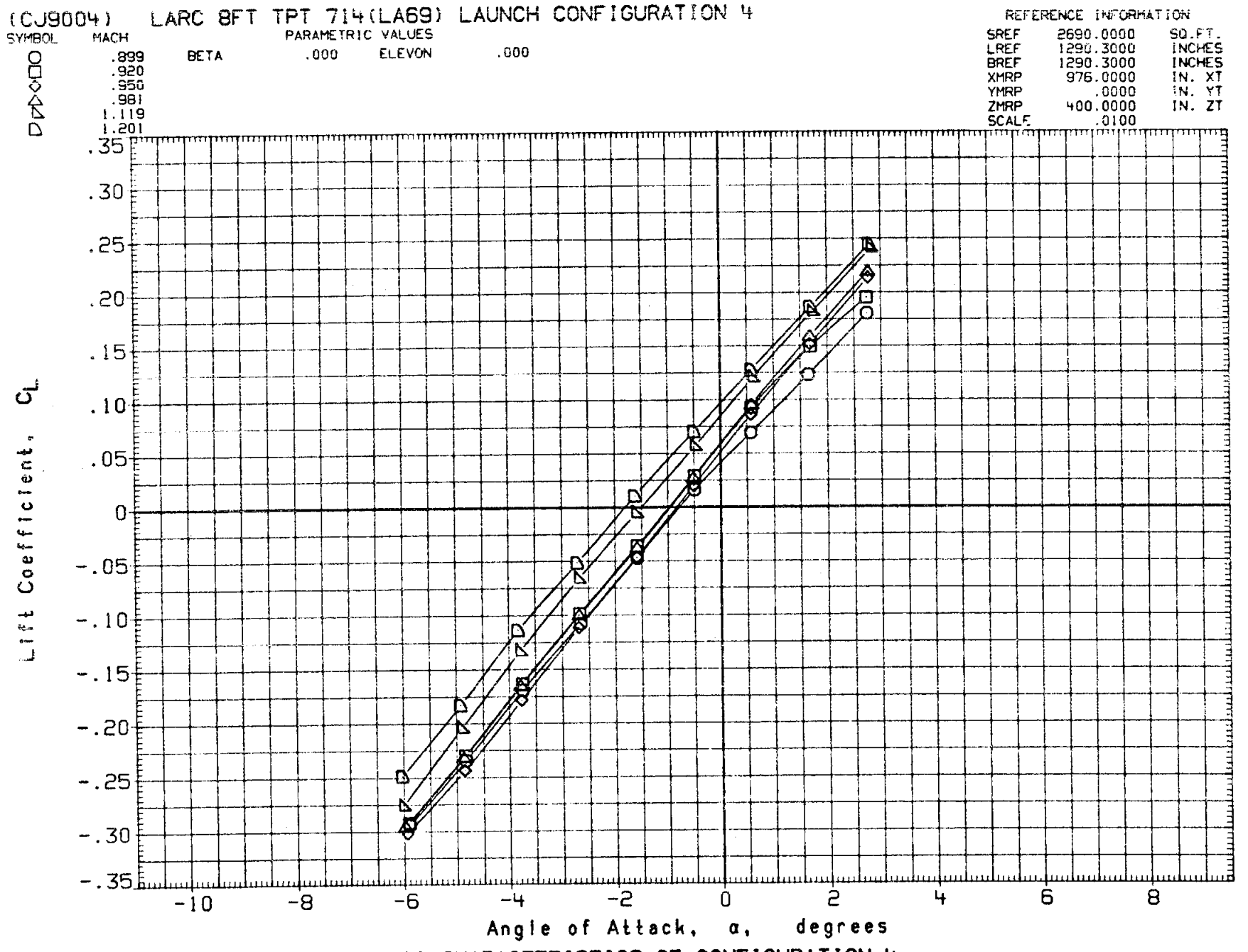

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

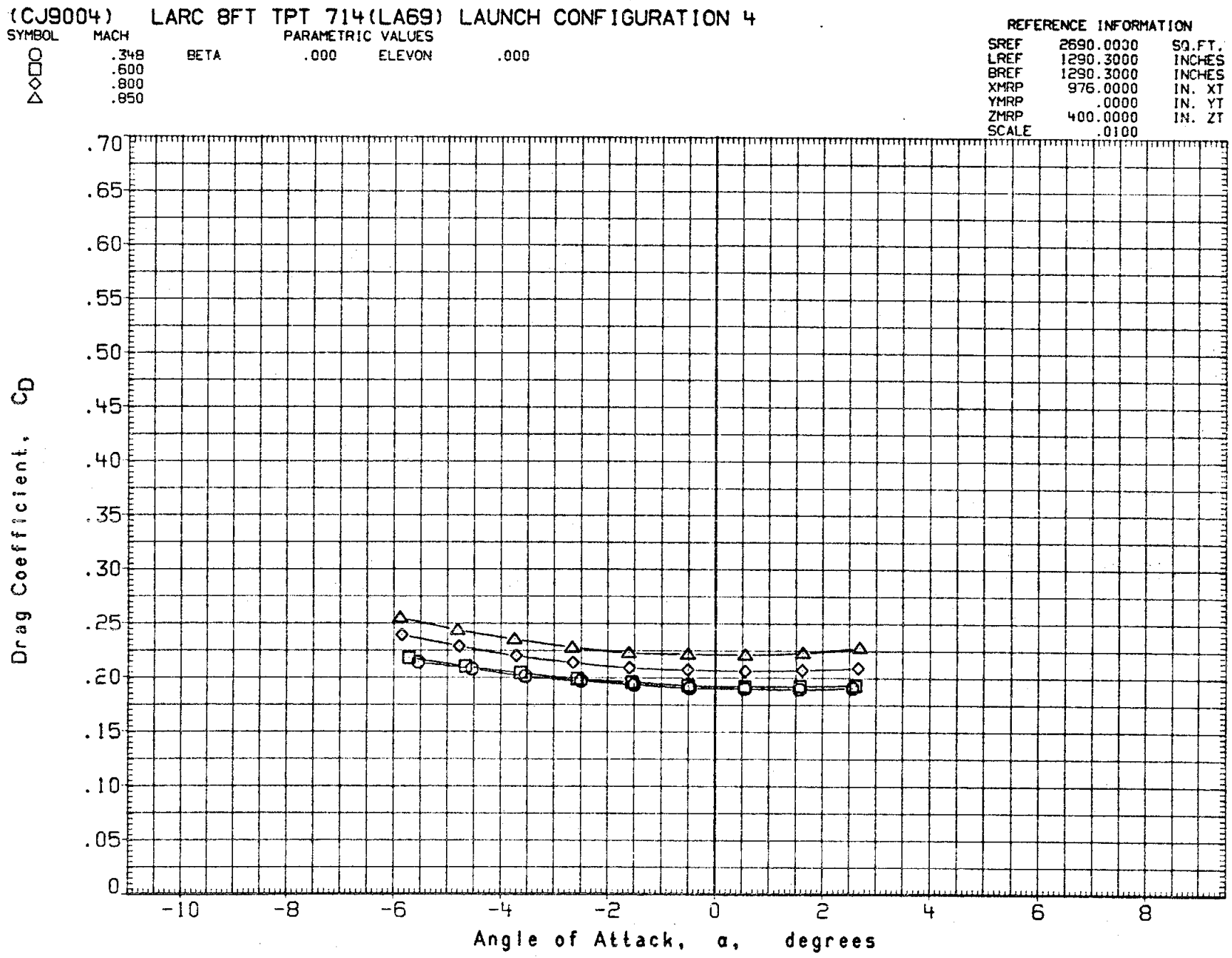

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

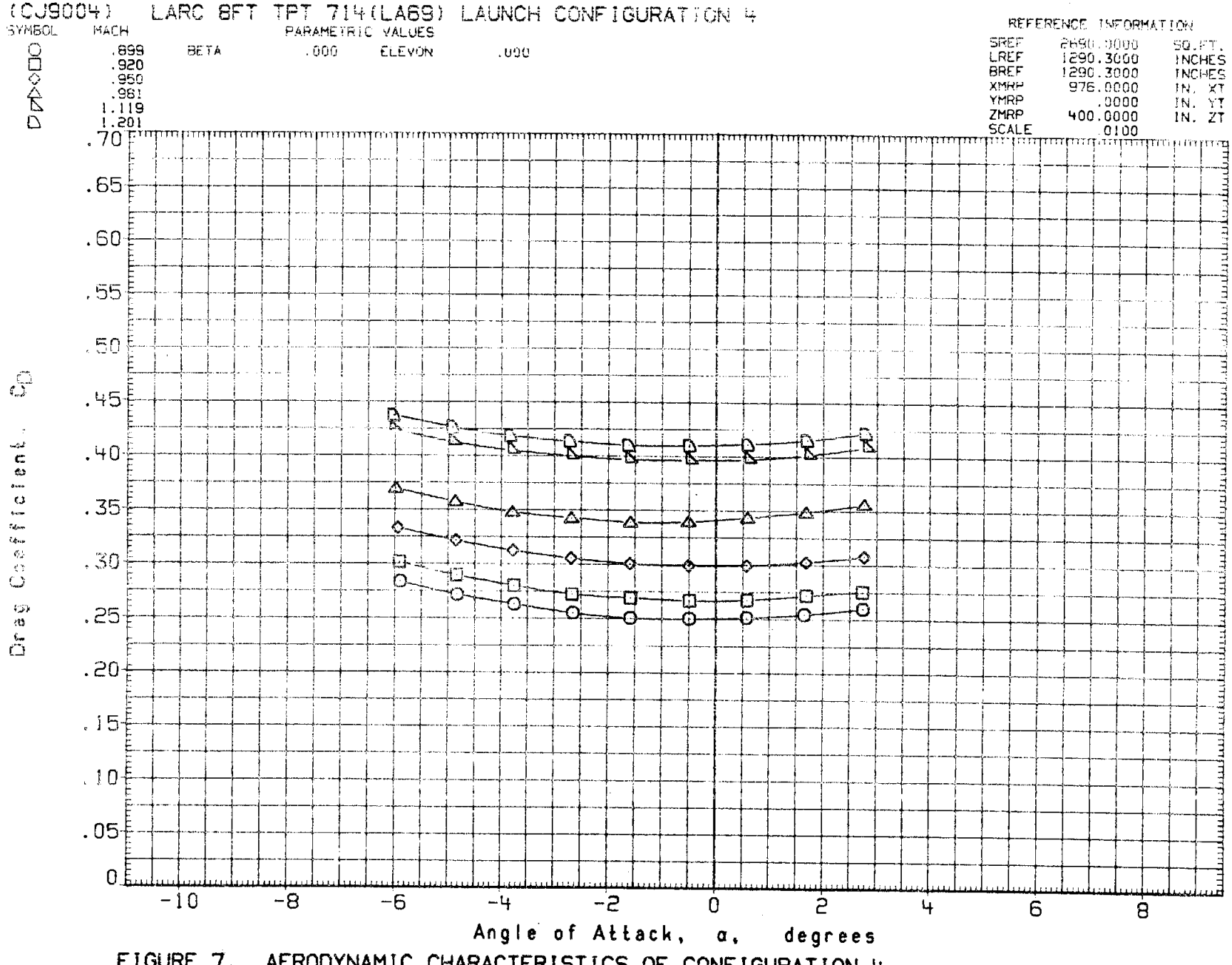

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

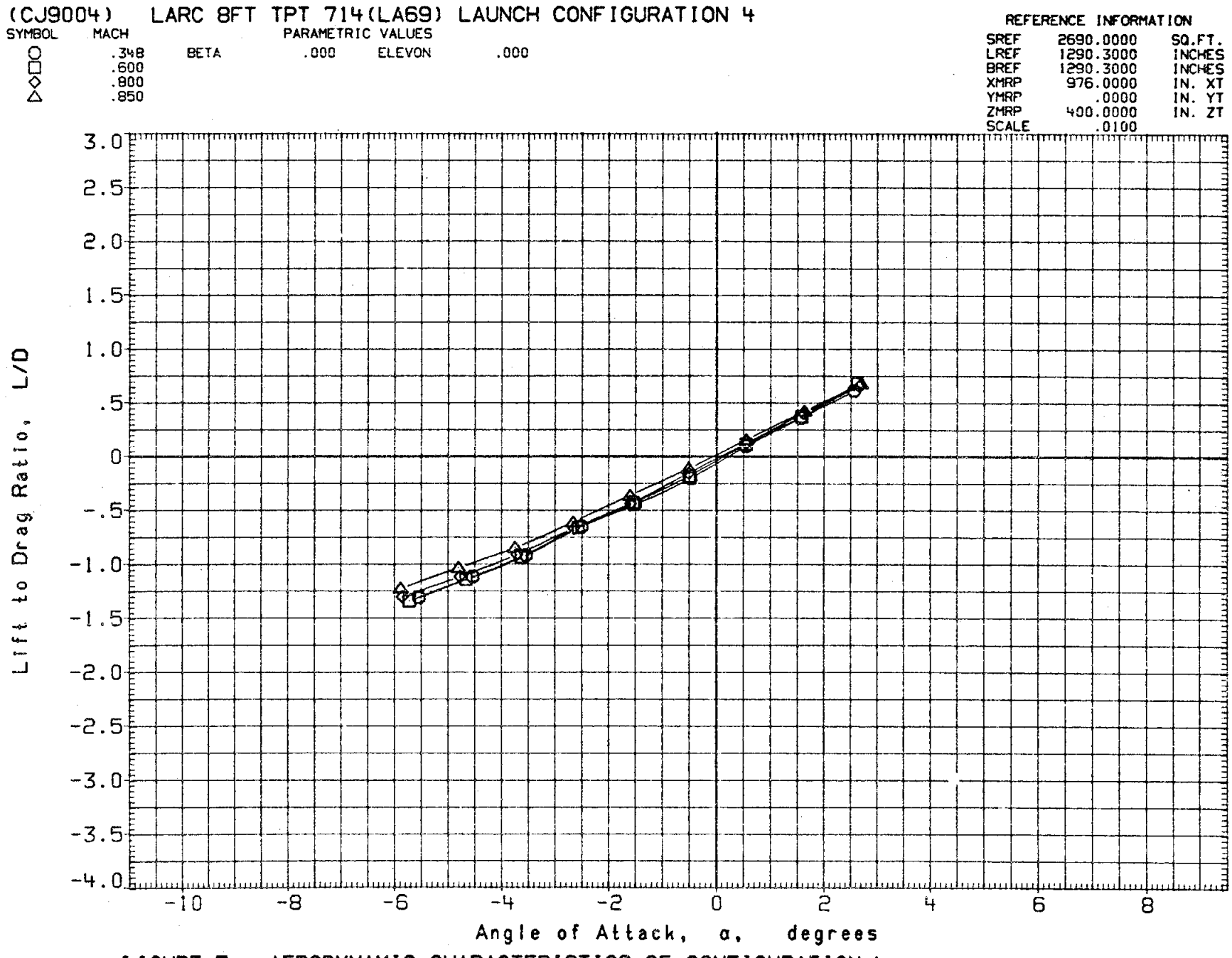

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

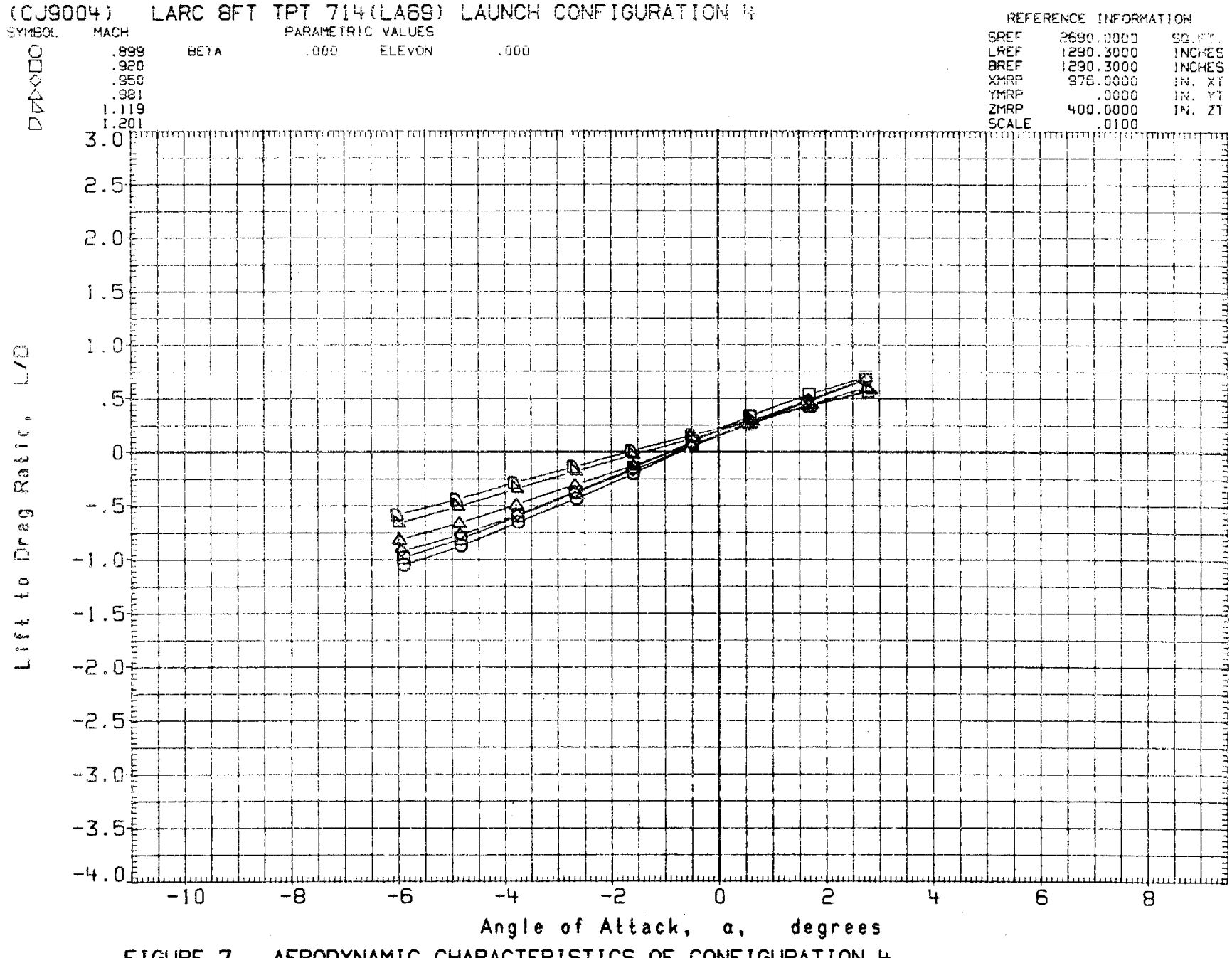

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

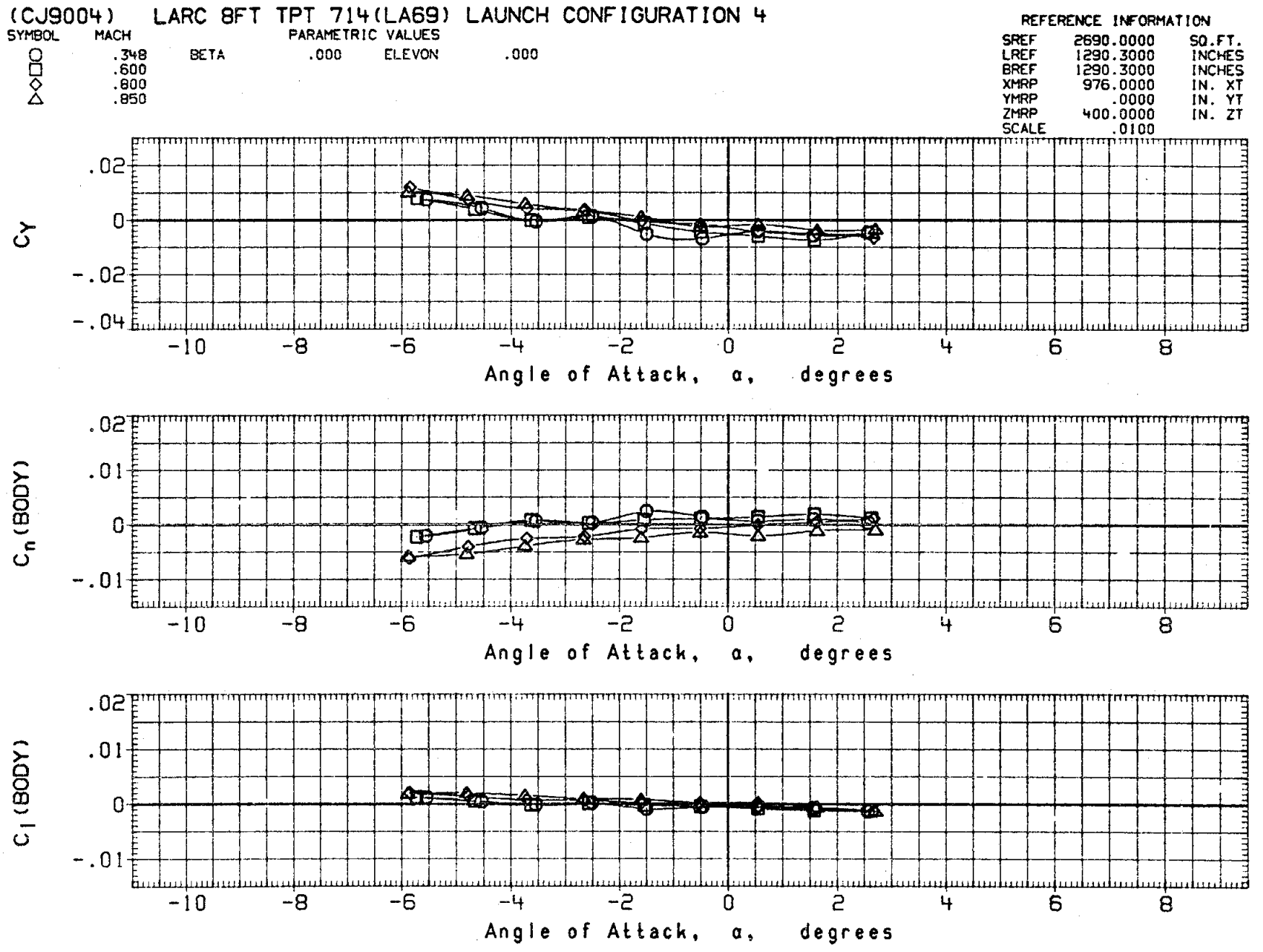

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

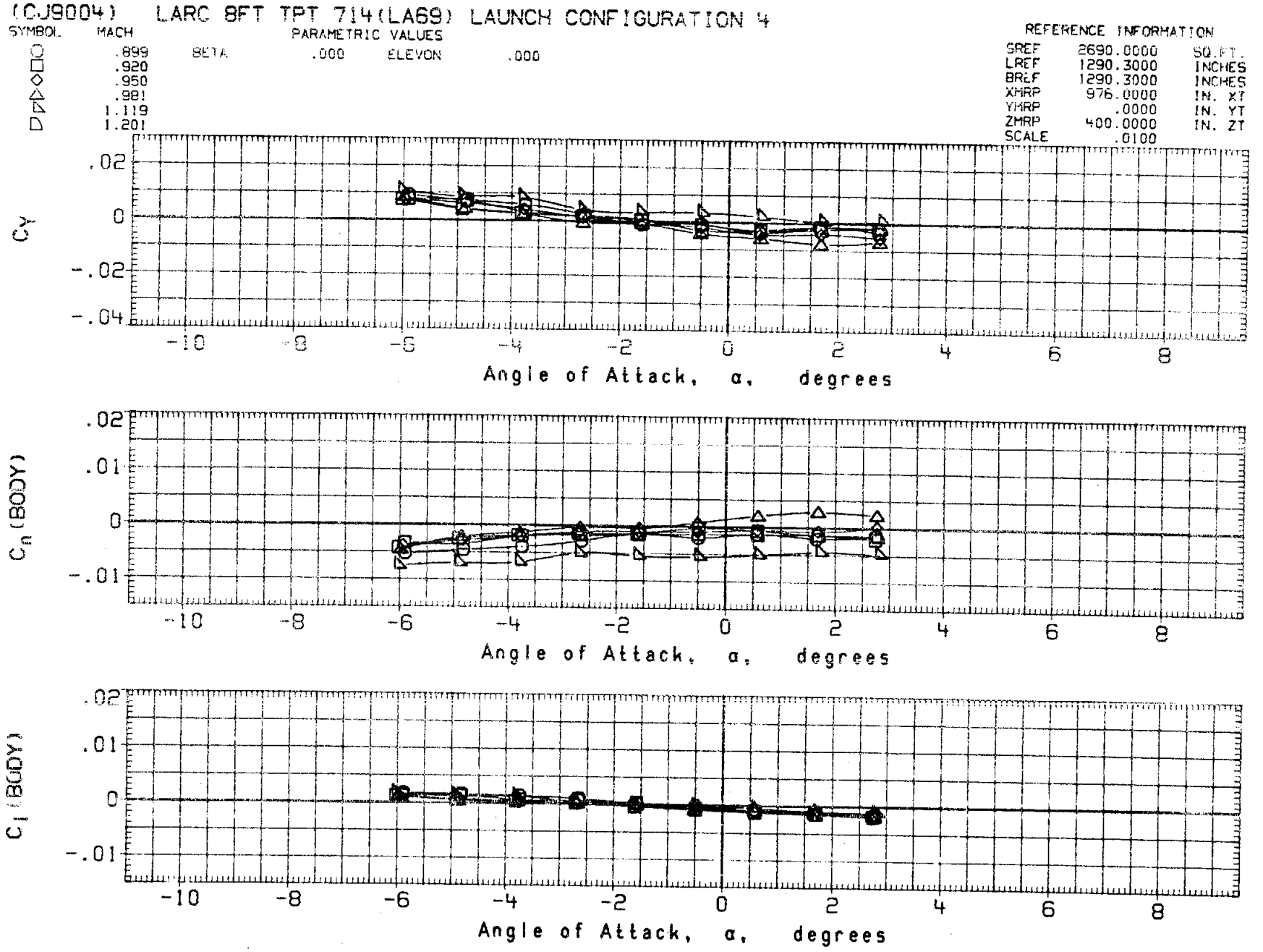

FIGURE 7. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 4

(CJ9006) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5

SYMBOL	MACH
○	.350
□	.600
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

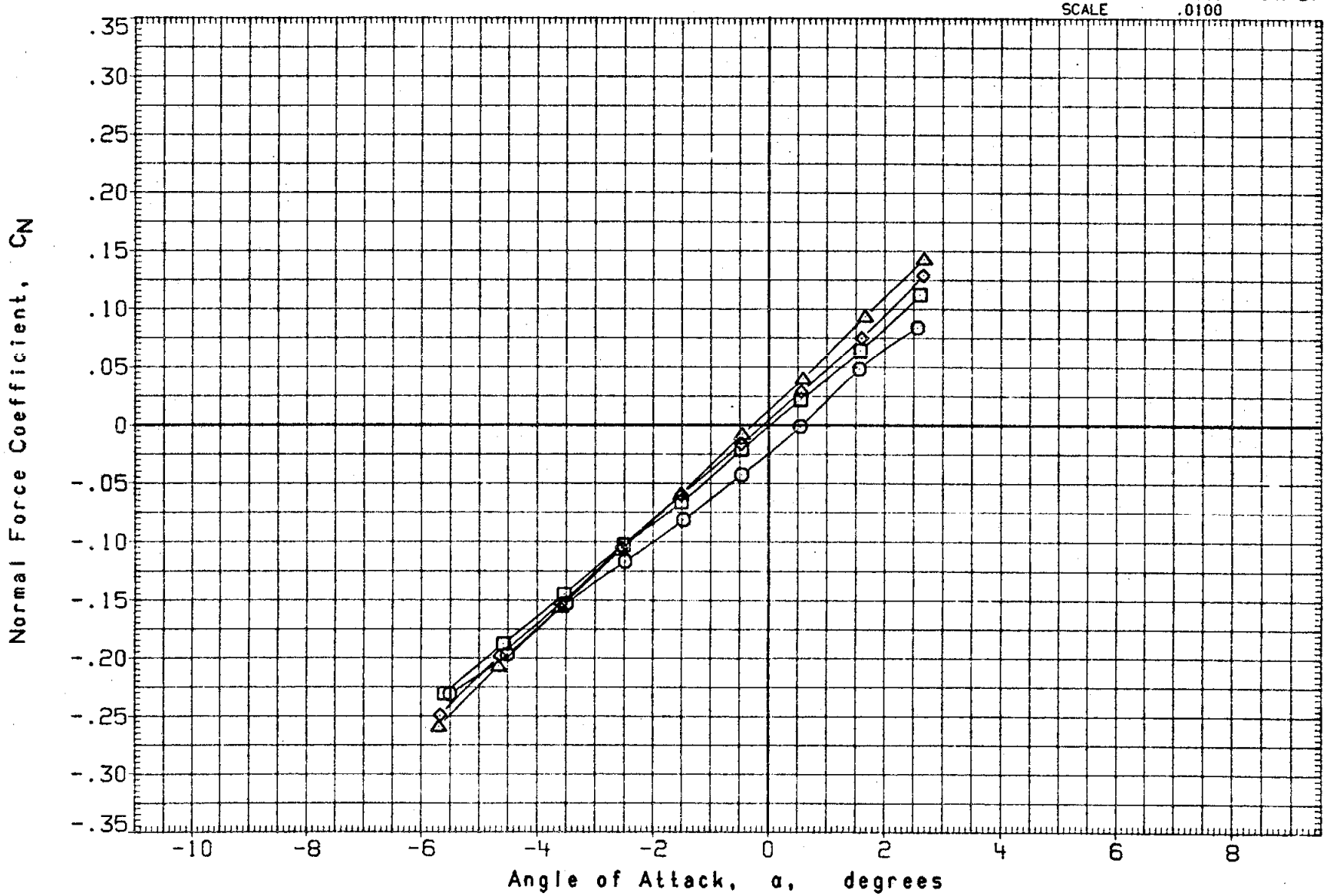

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

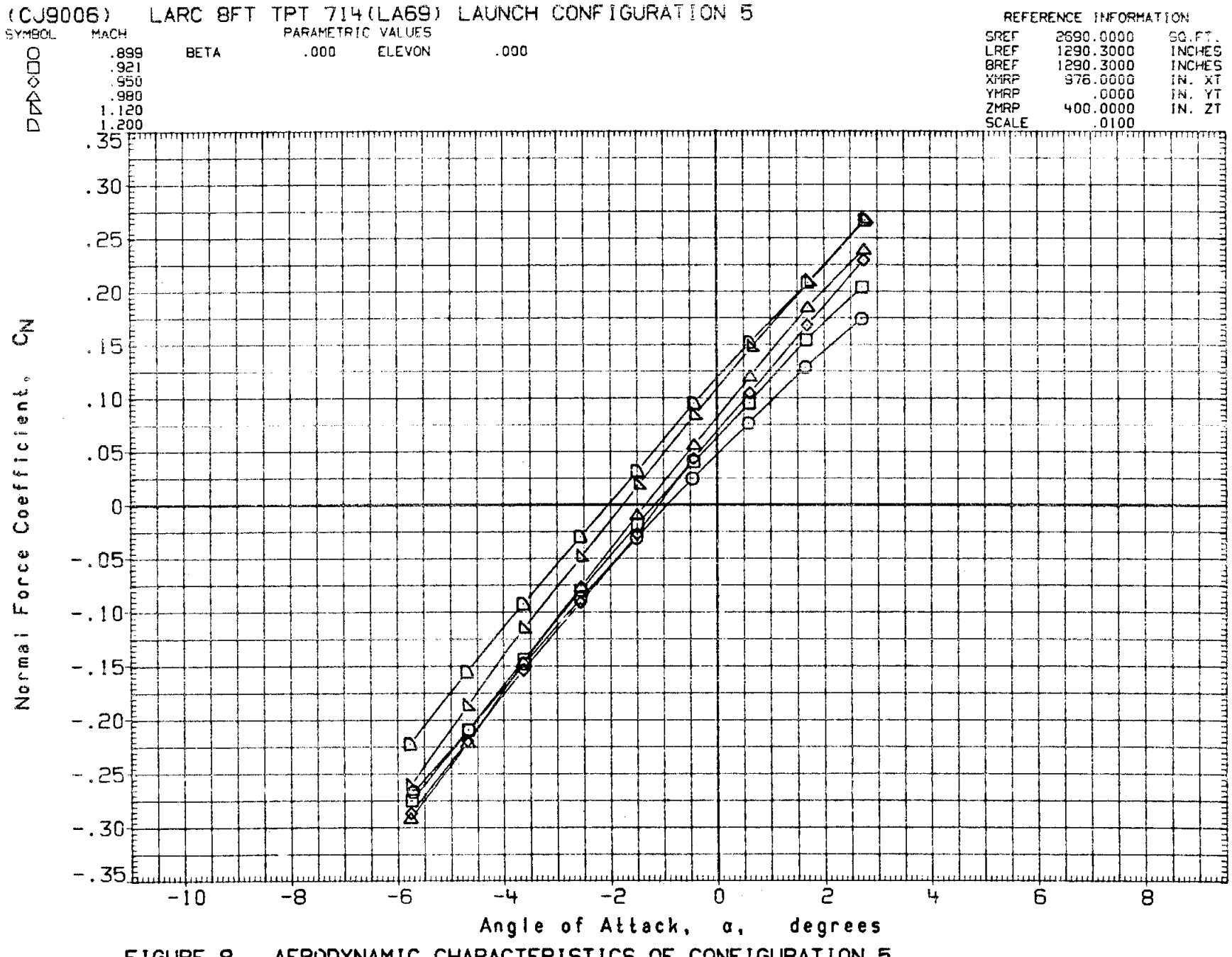

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

(CJ9006) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5

SYMBOL	MACH
○	.350
□	.600
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

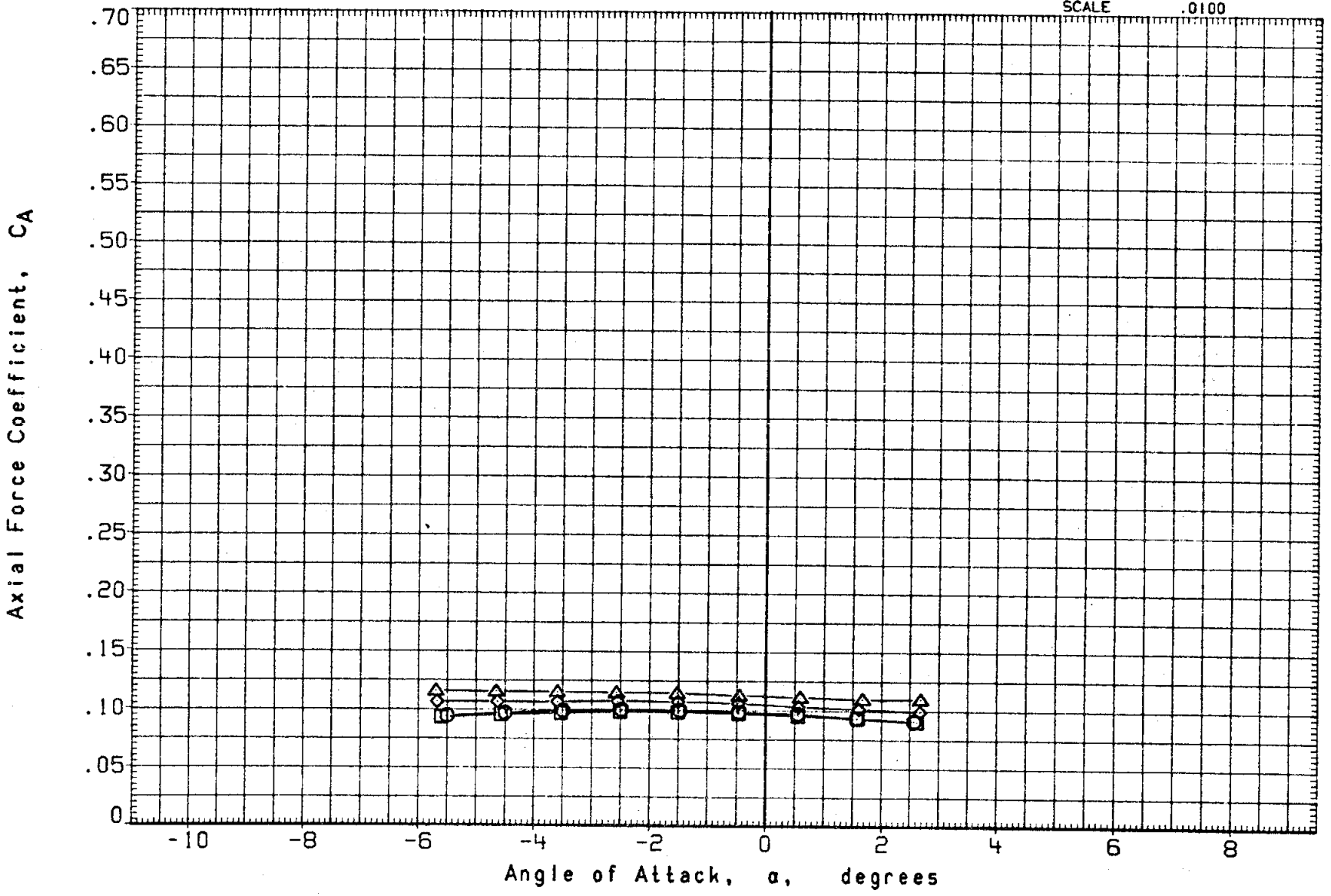

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

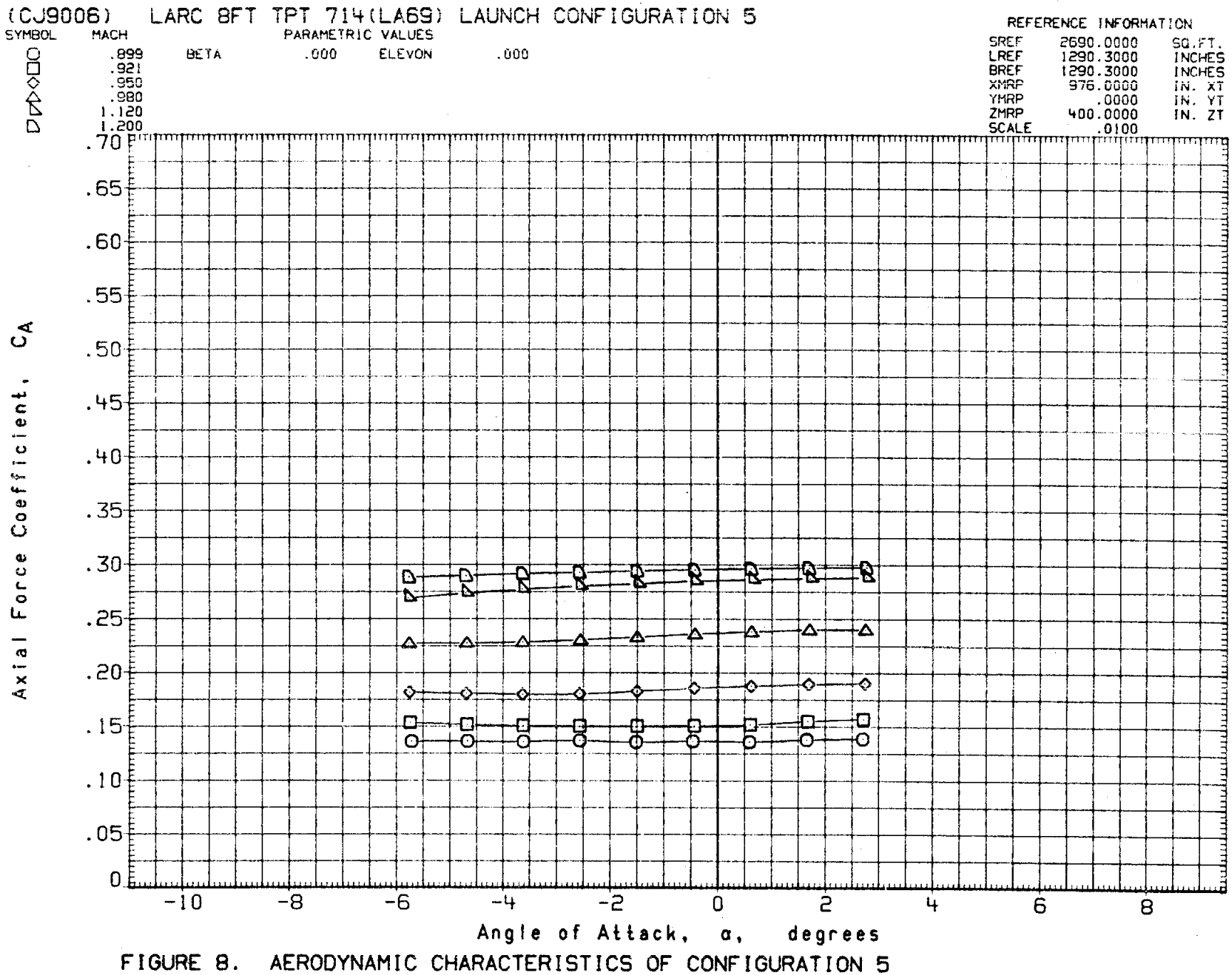

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

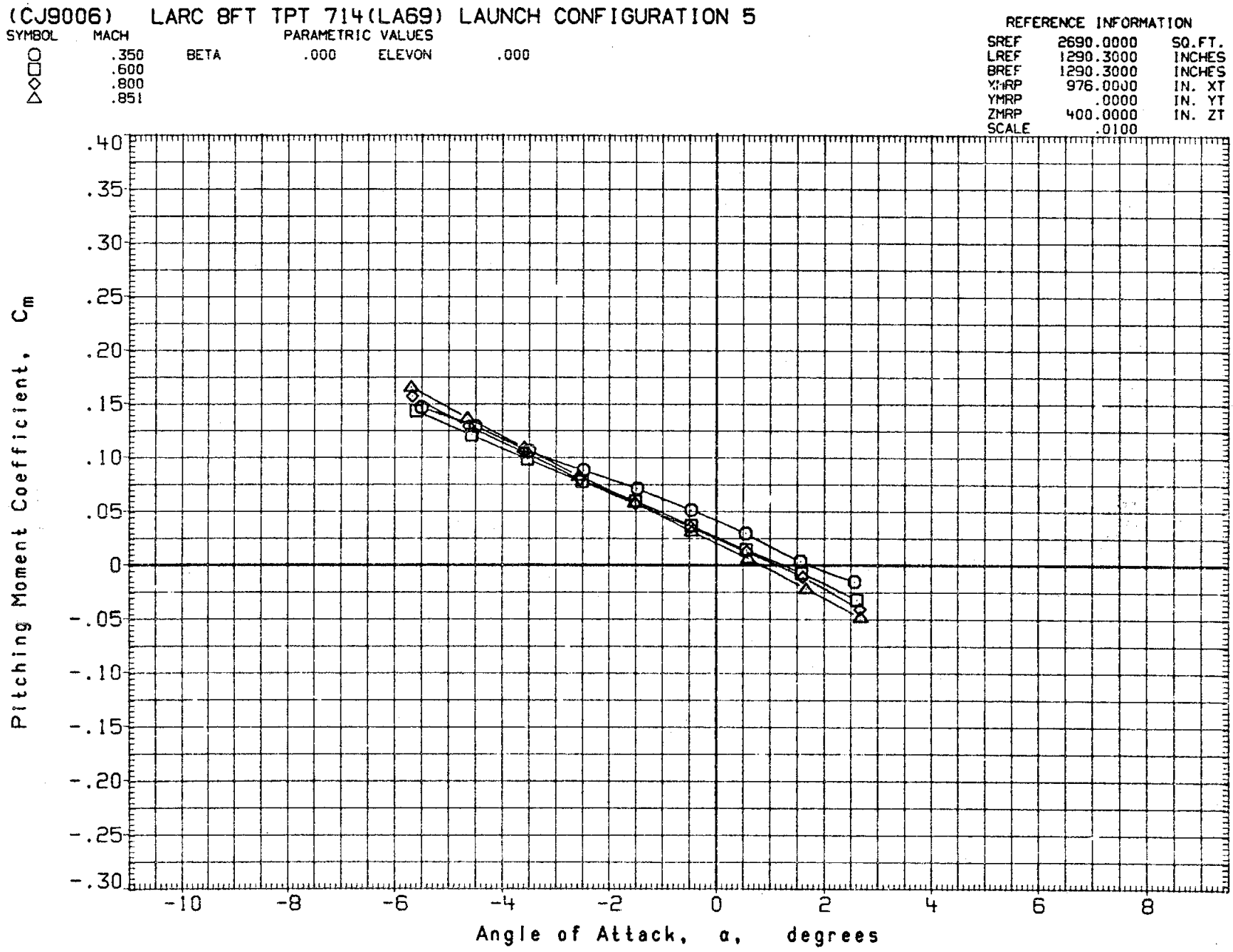

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

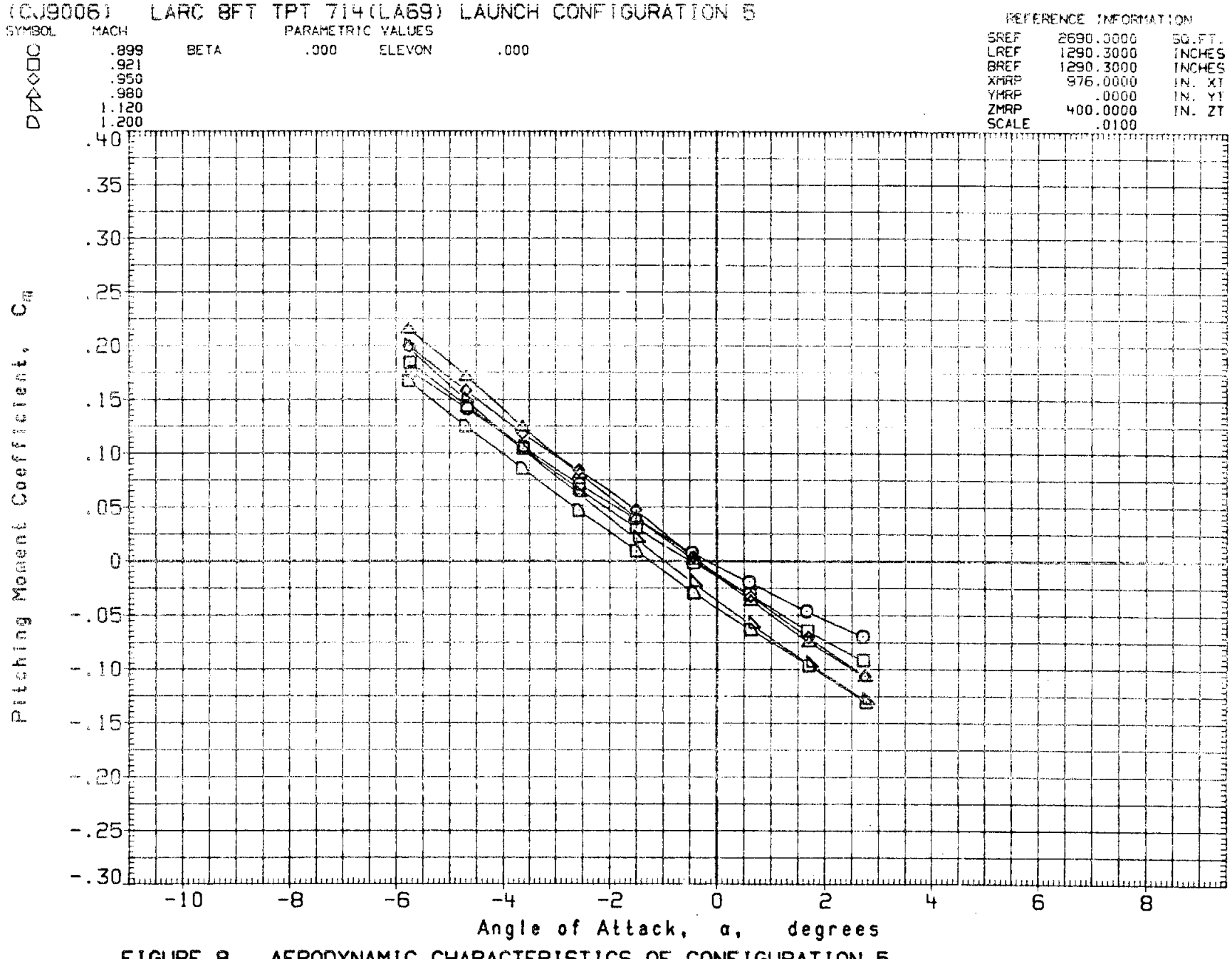

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

(CJ9006) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5

SYMBOL	MACH
○	.350
□	.600
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
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SCALE	.0100	

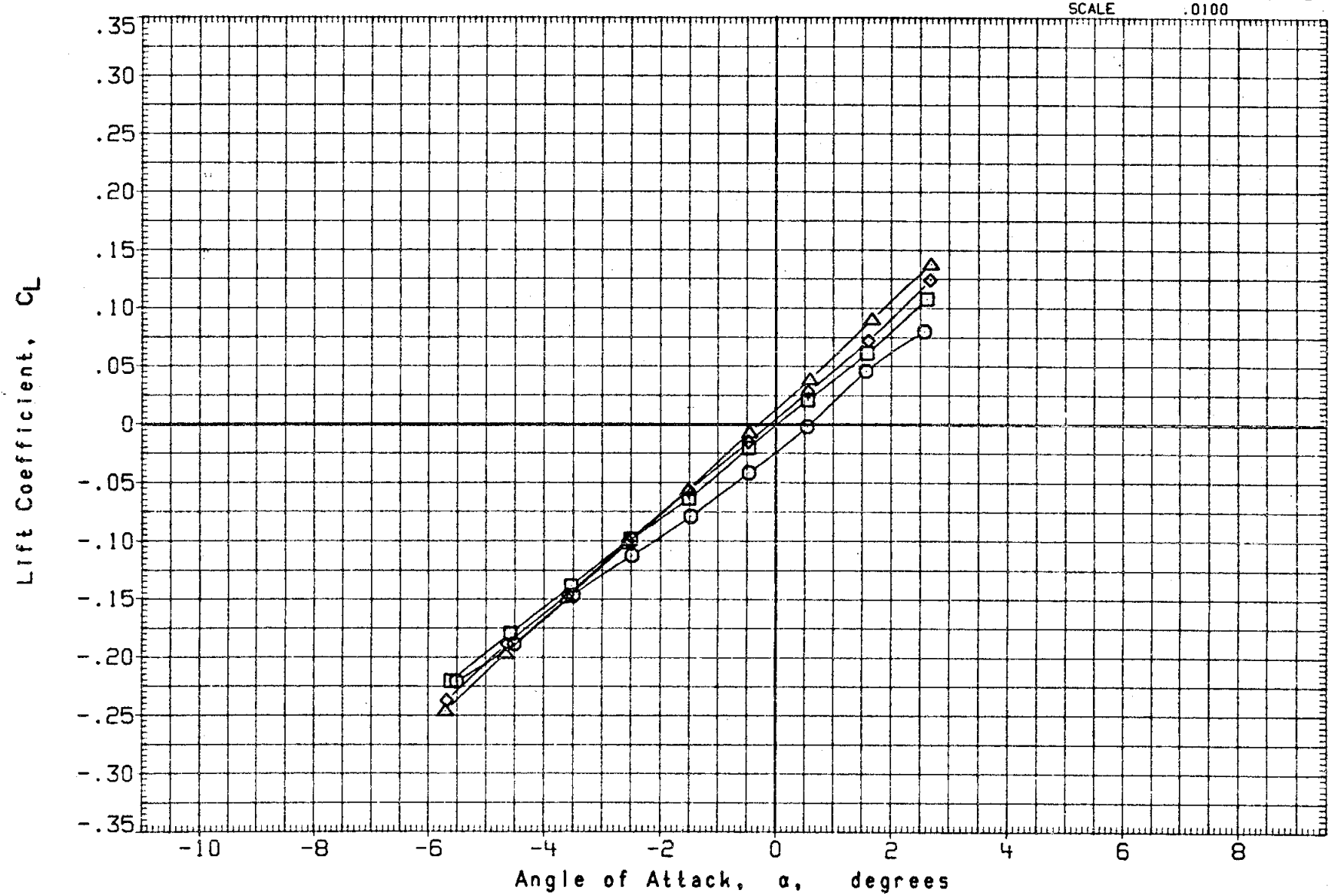

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

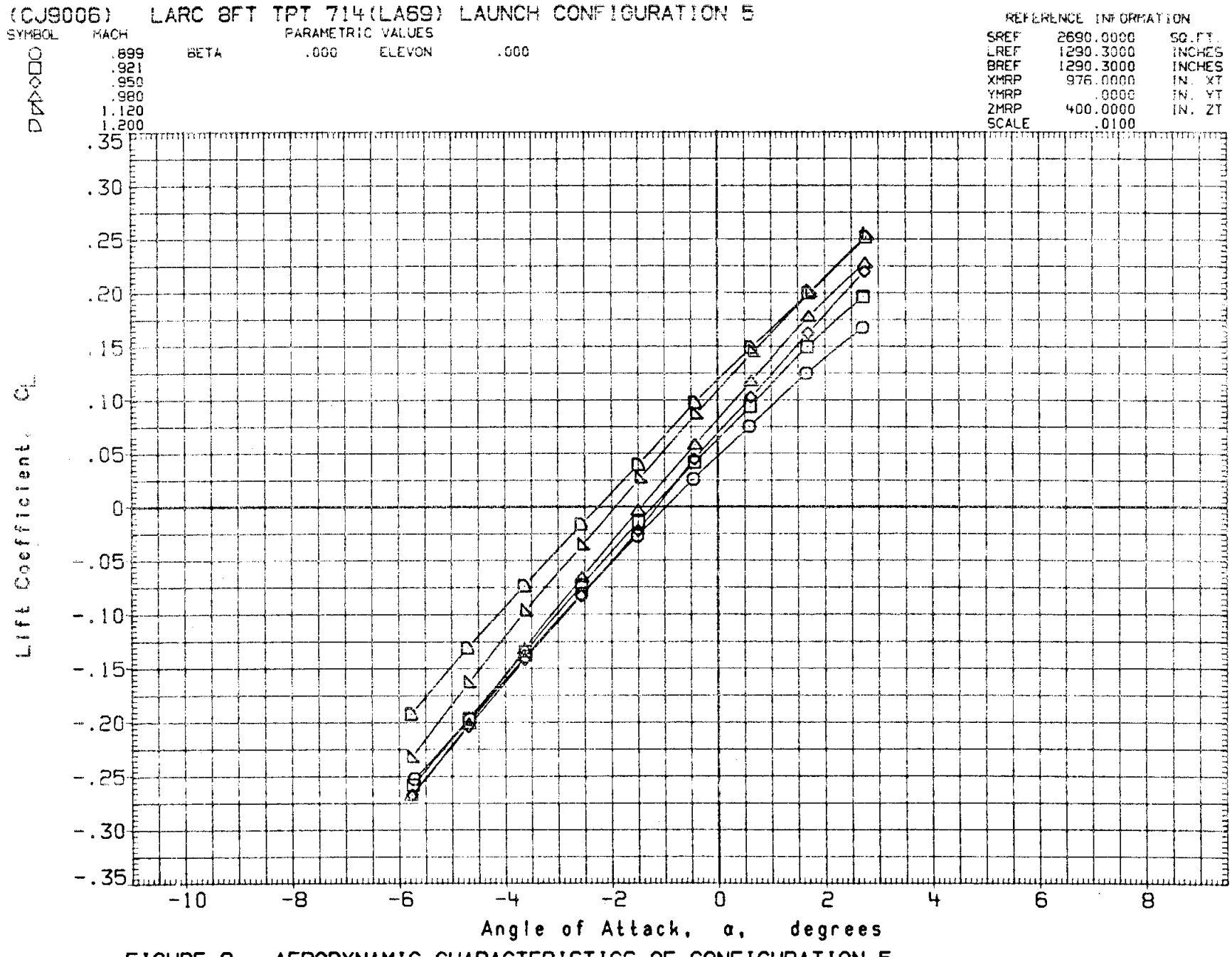

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

(CJ9006) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.600				
◇	.800				
△	.851				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

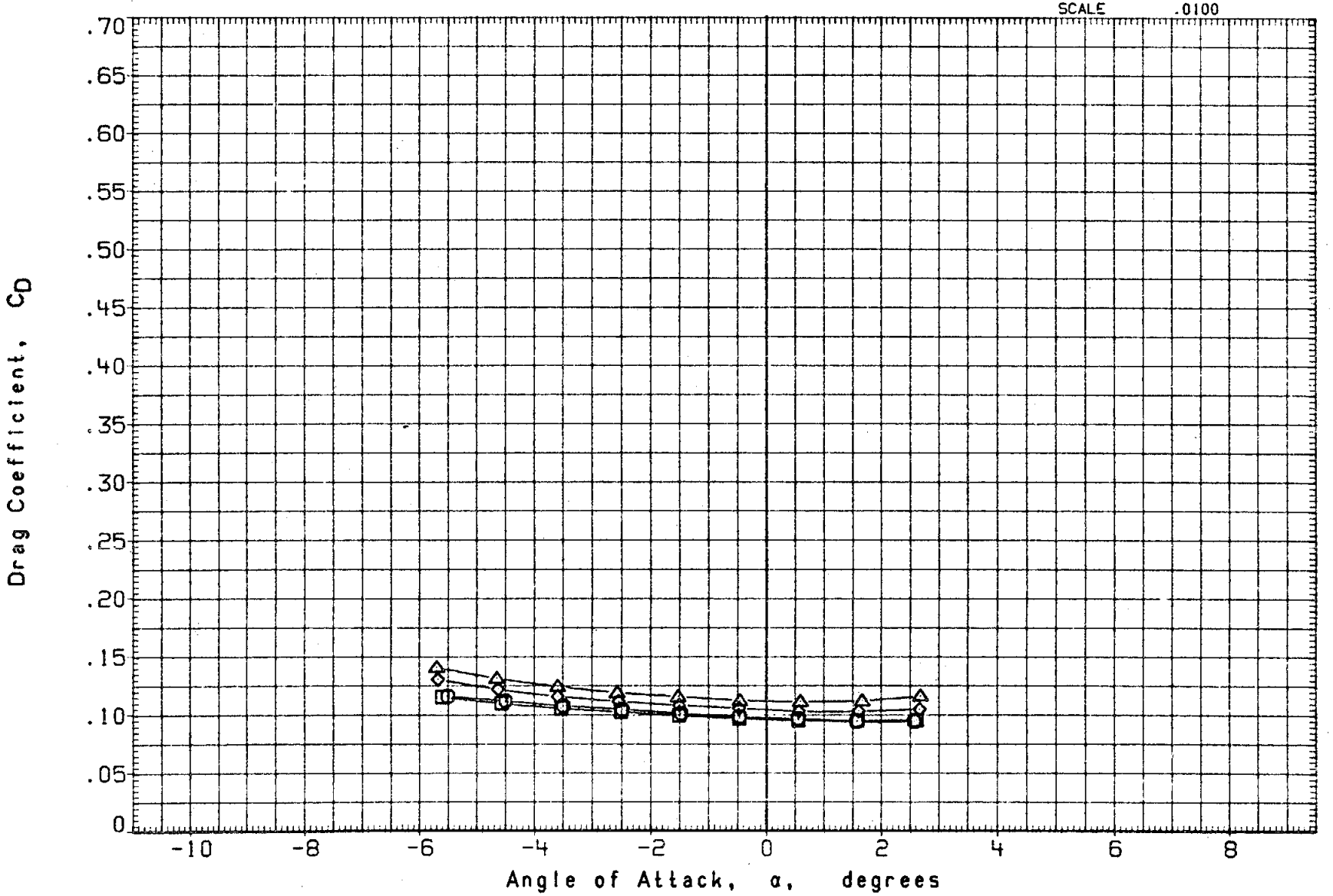

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

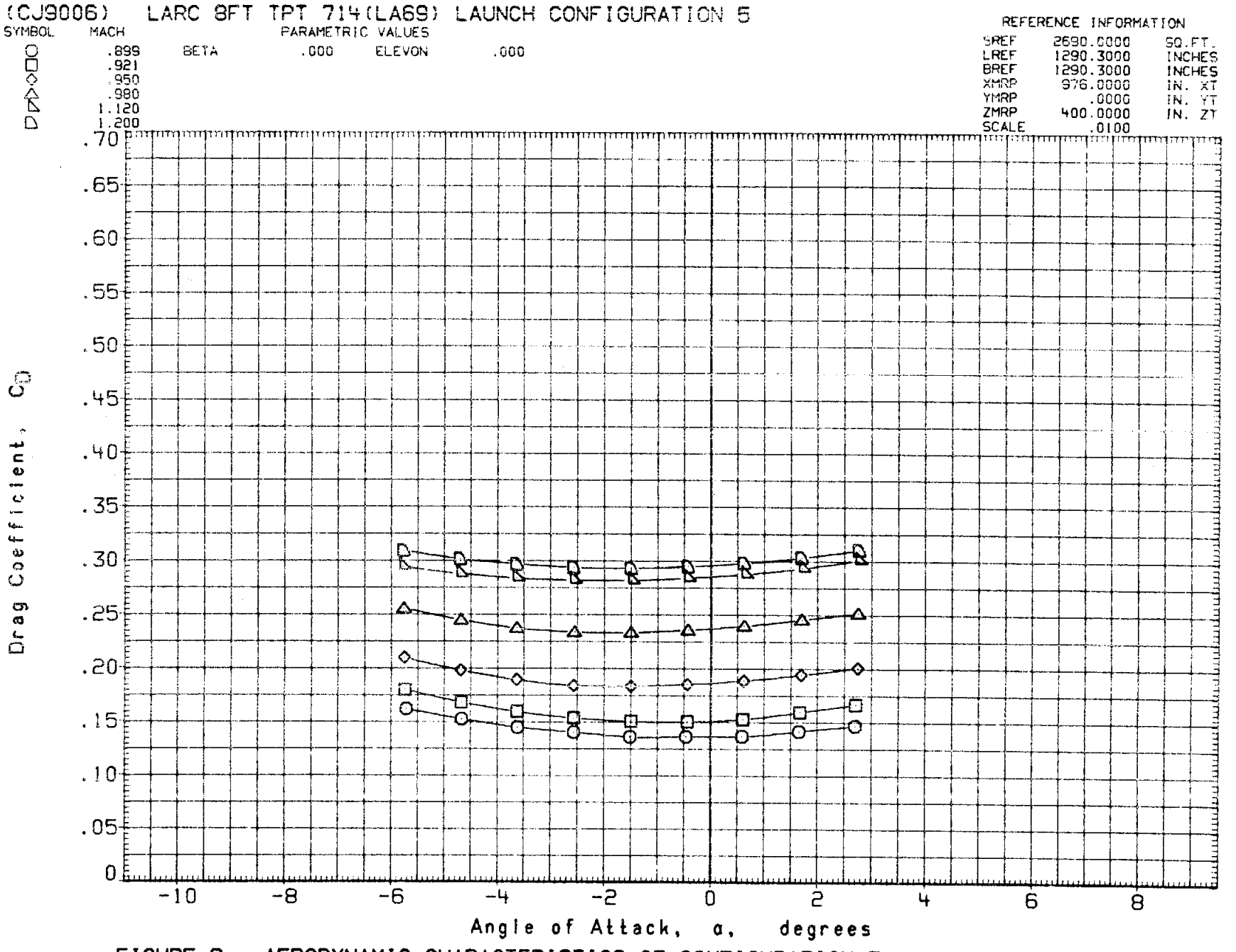

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

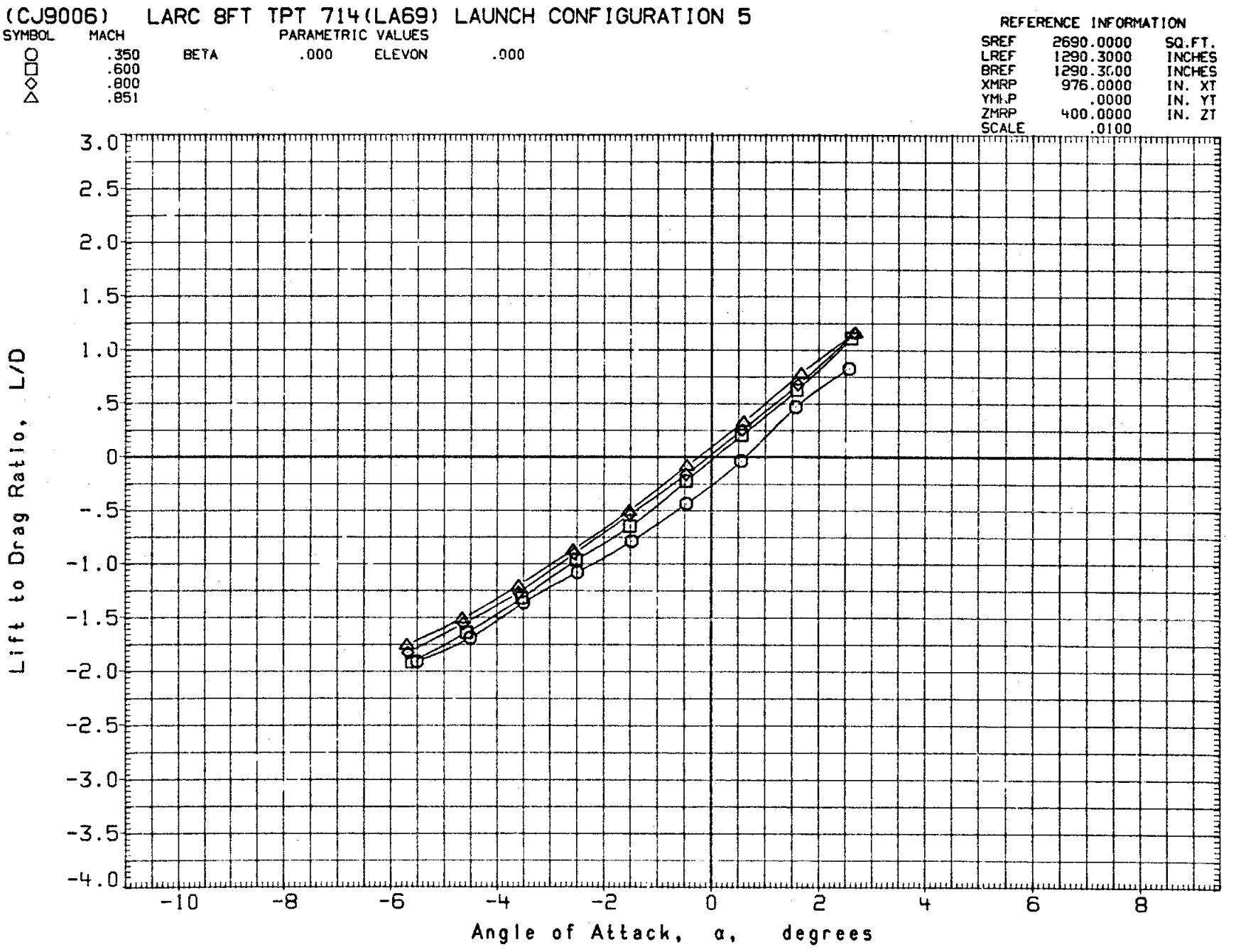

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

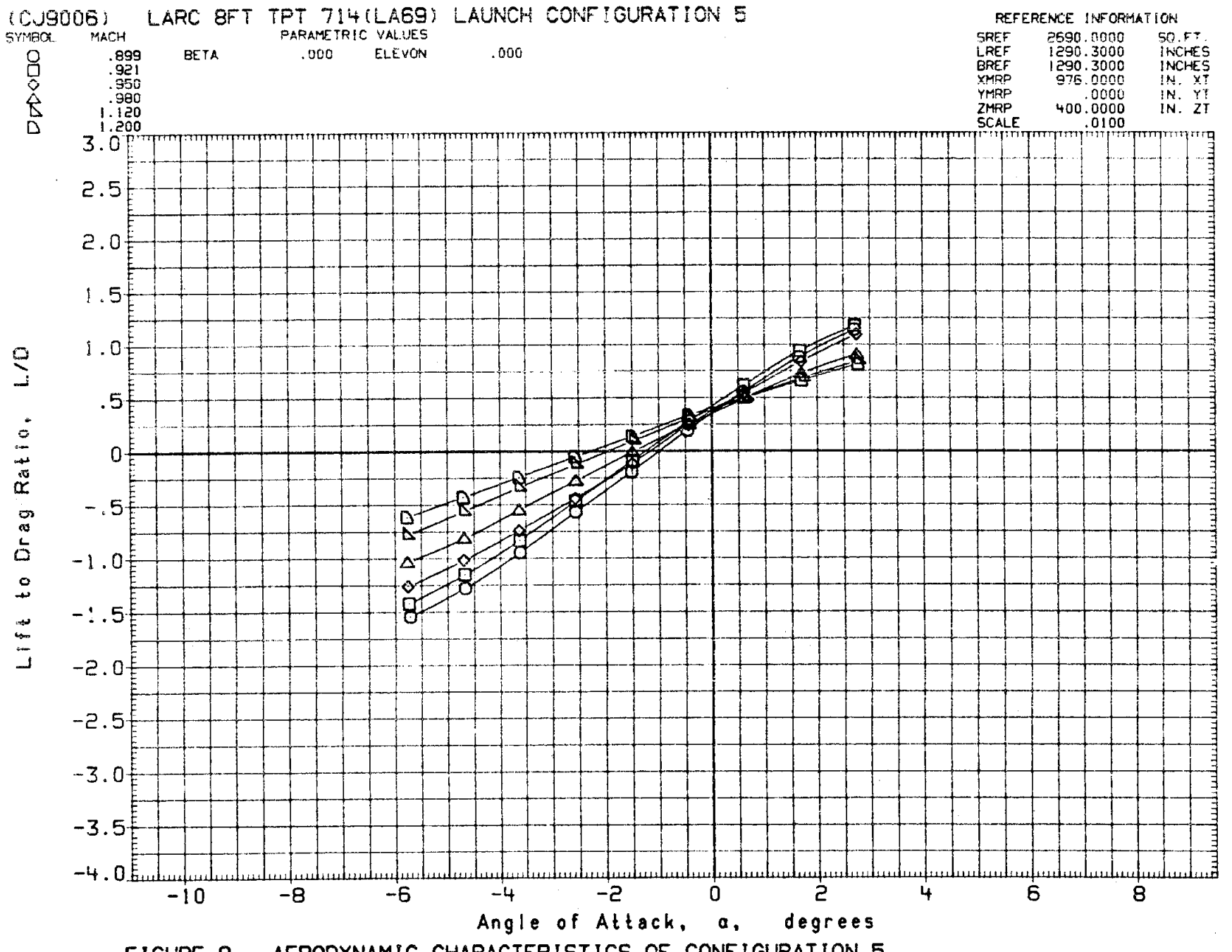

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

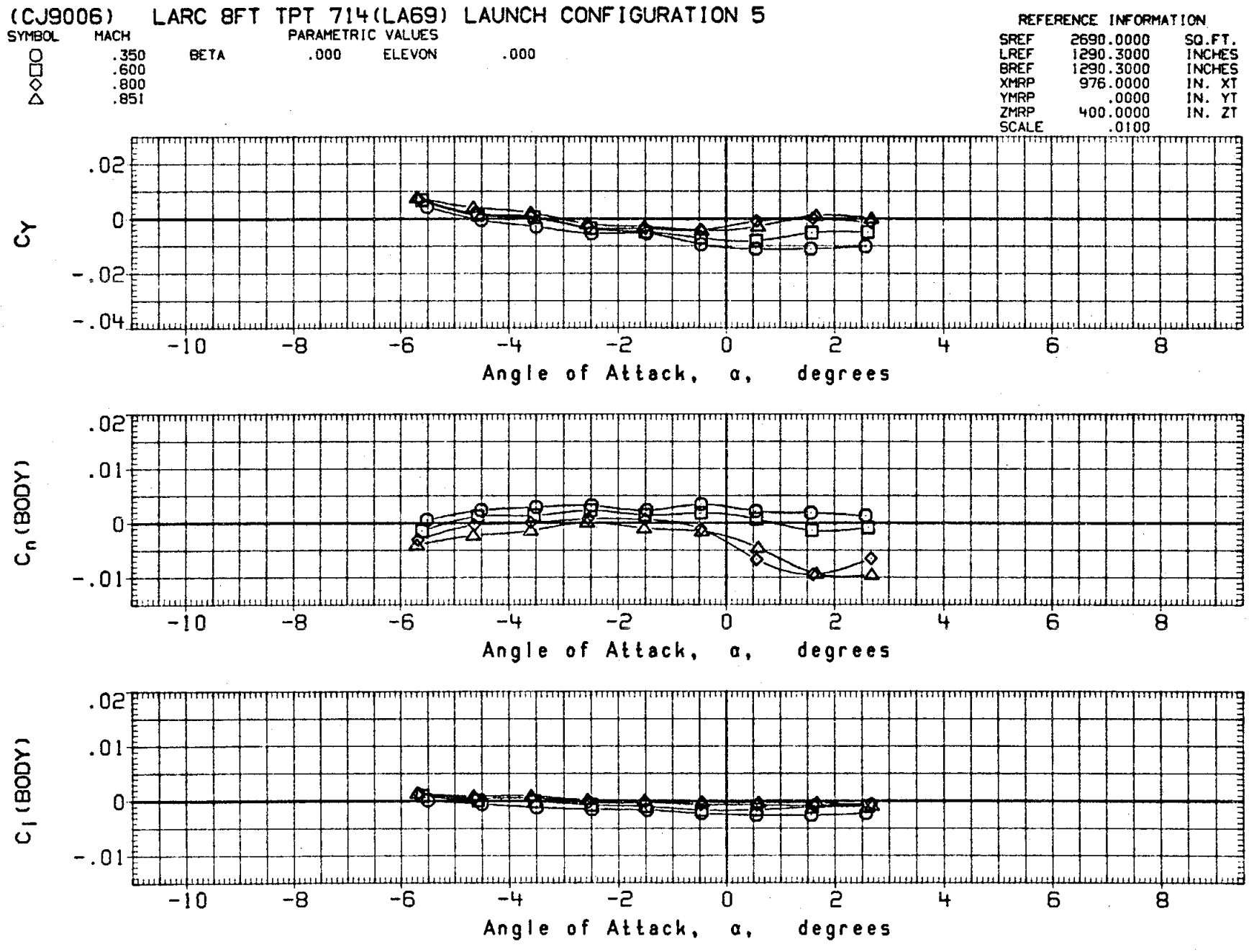

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

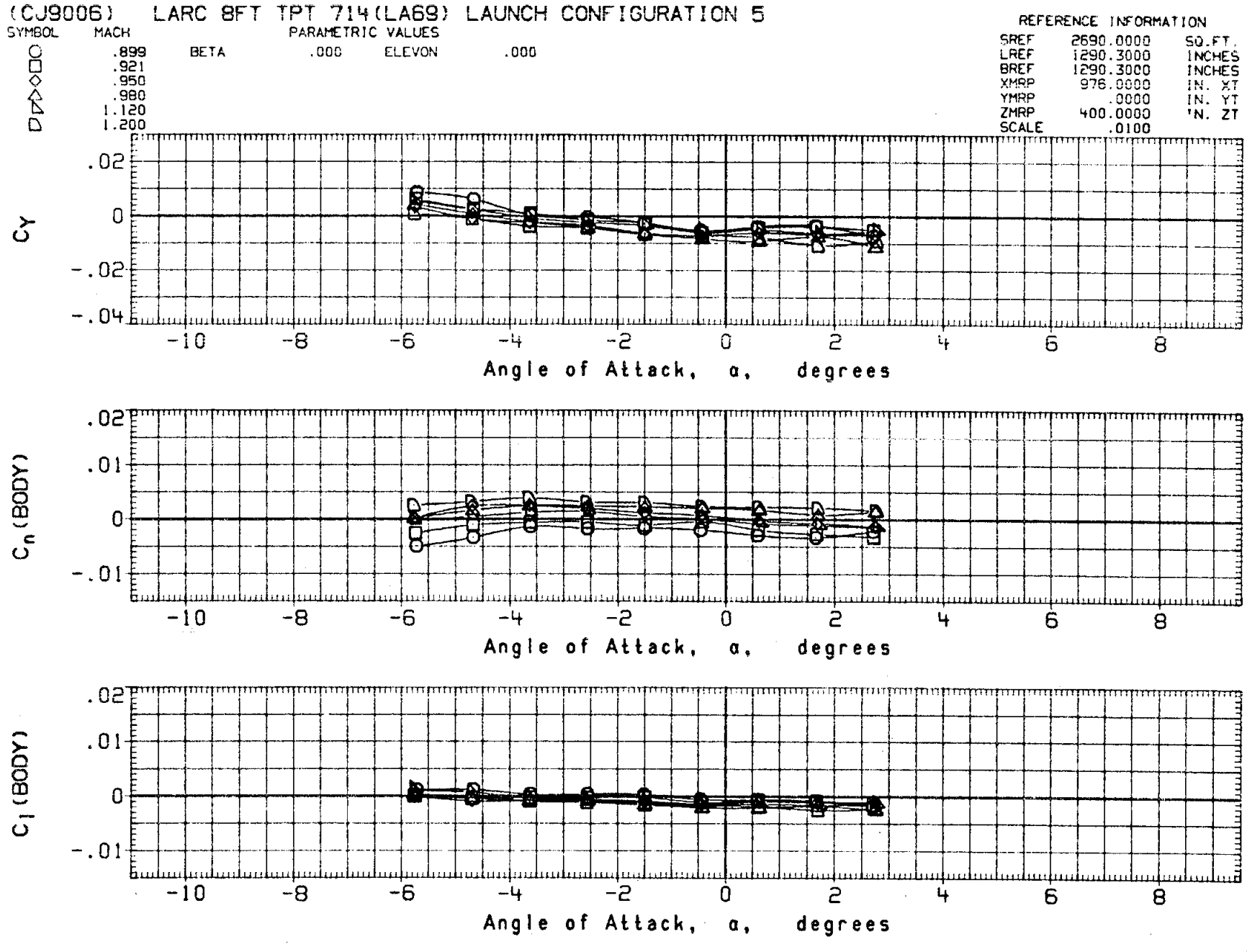

FIGURE 8. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 5

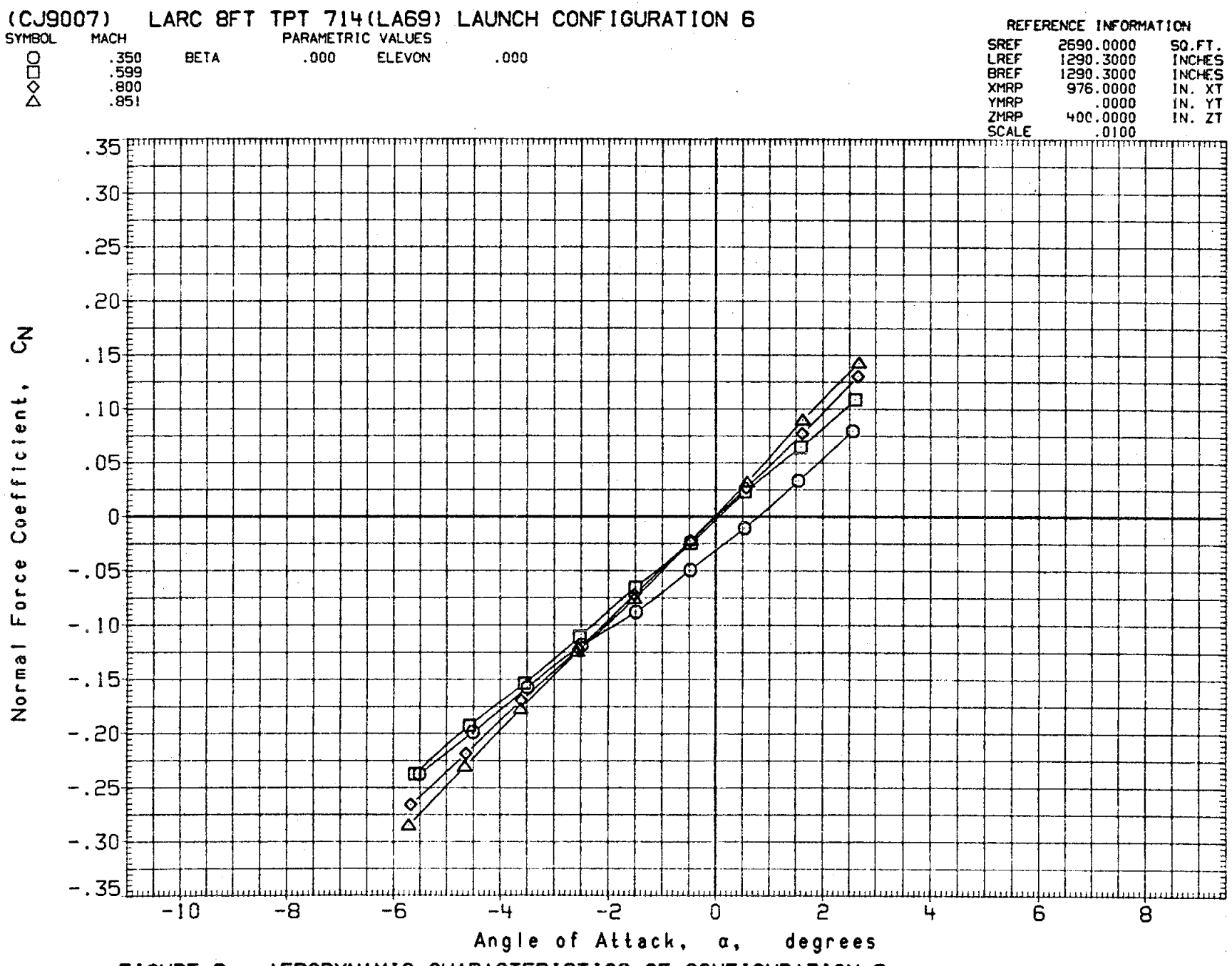

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

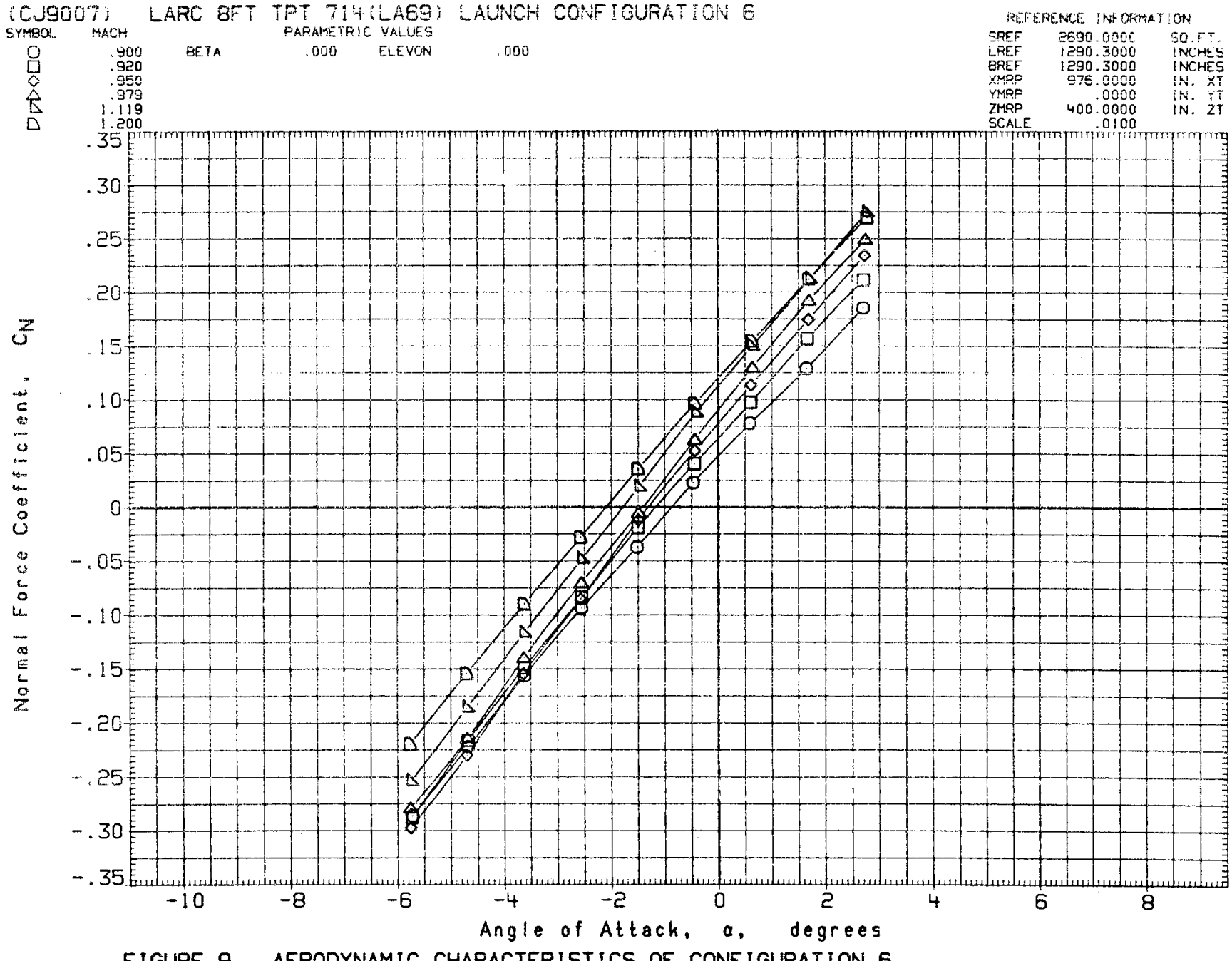

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

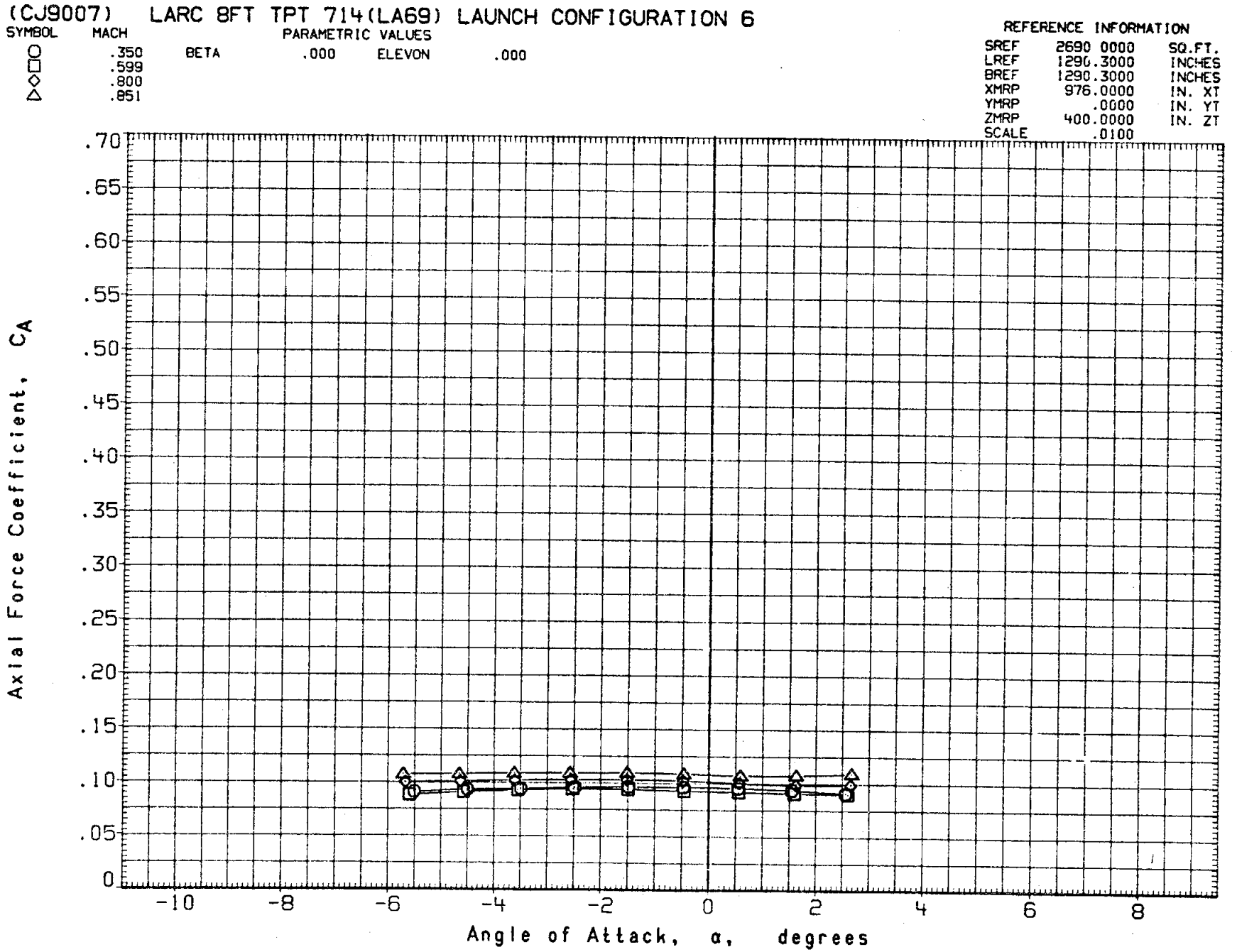

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

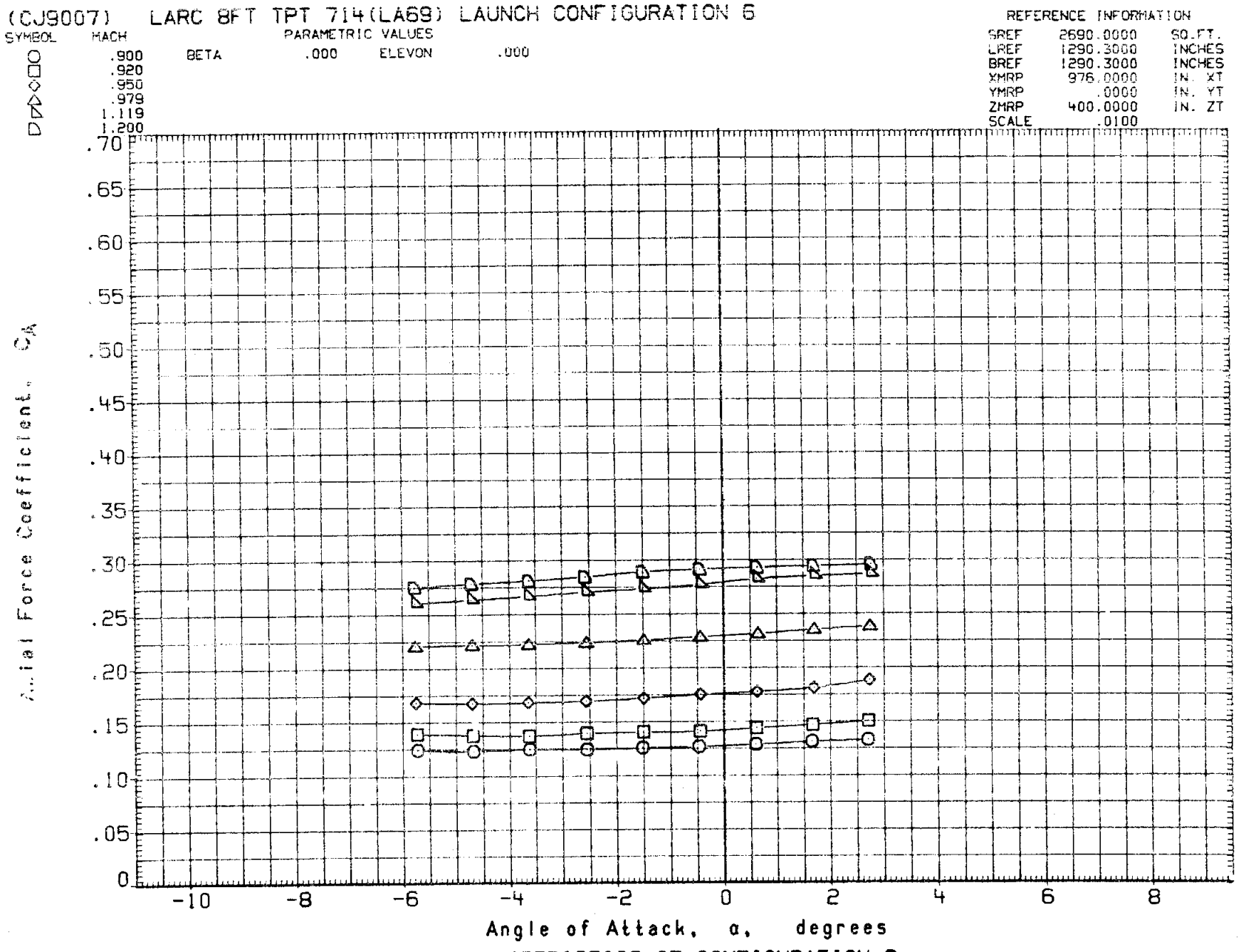

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

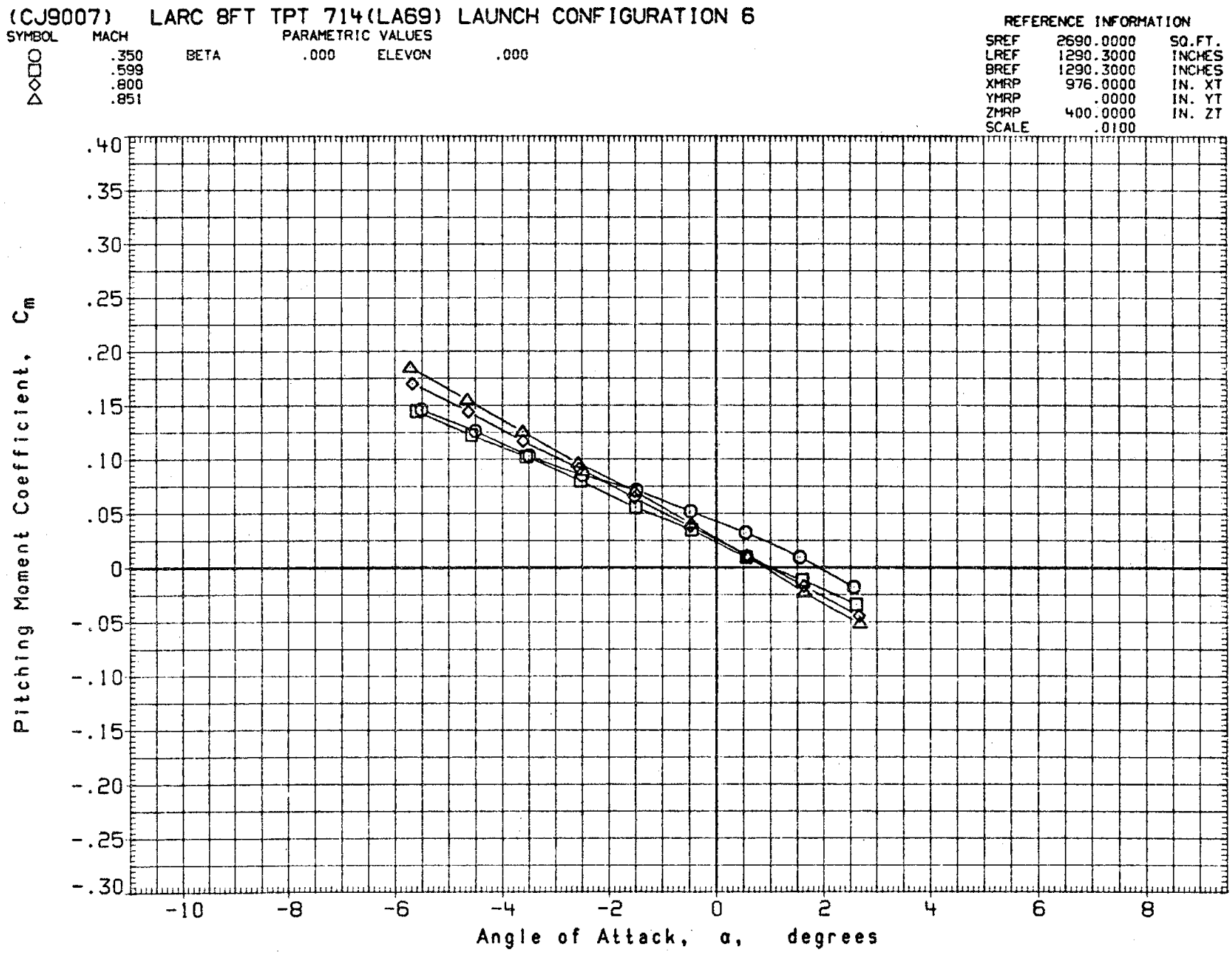

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

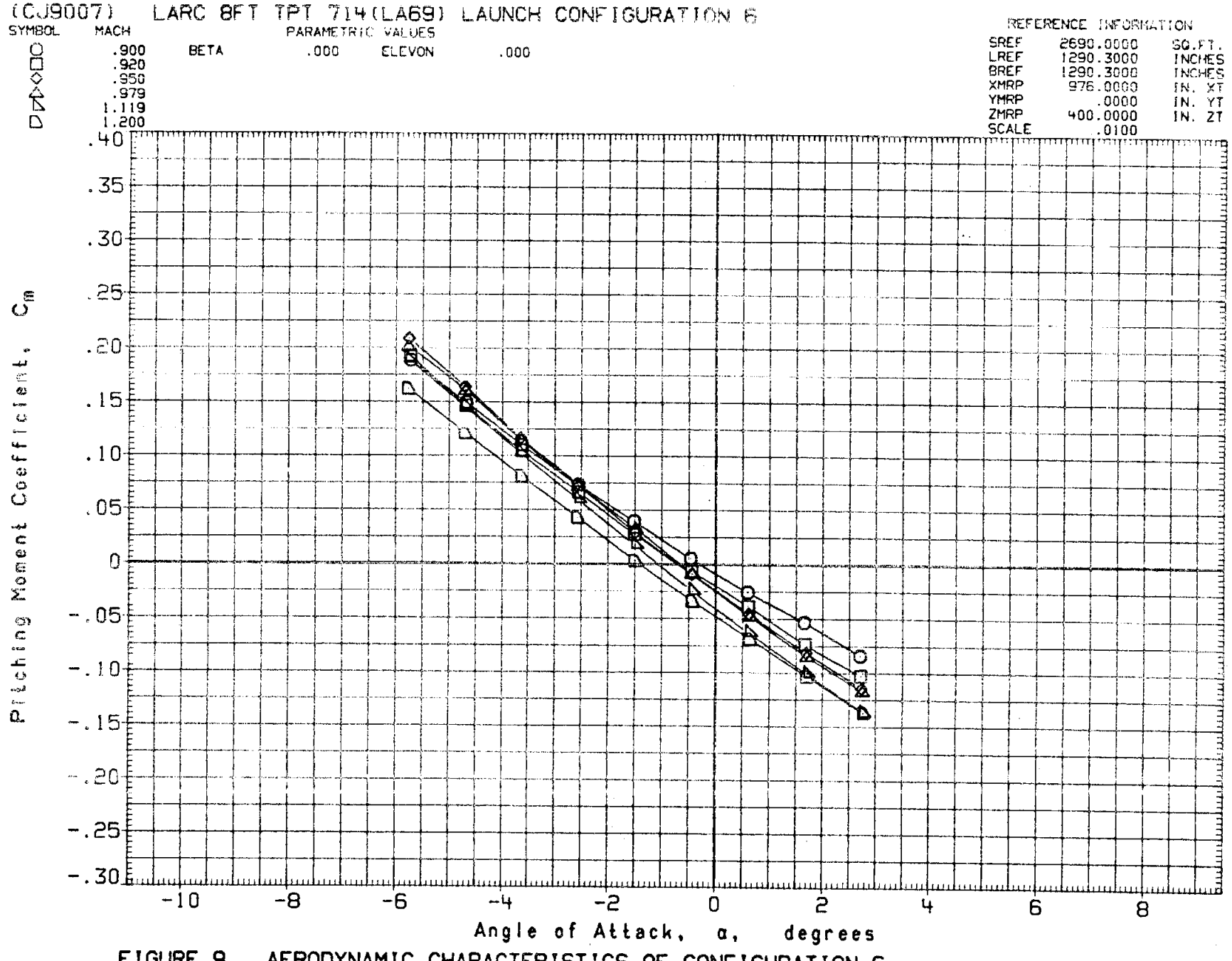

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

(CJ9007) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6

SYMBOL	MACH
○	.350
□	.599
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

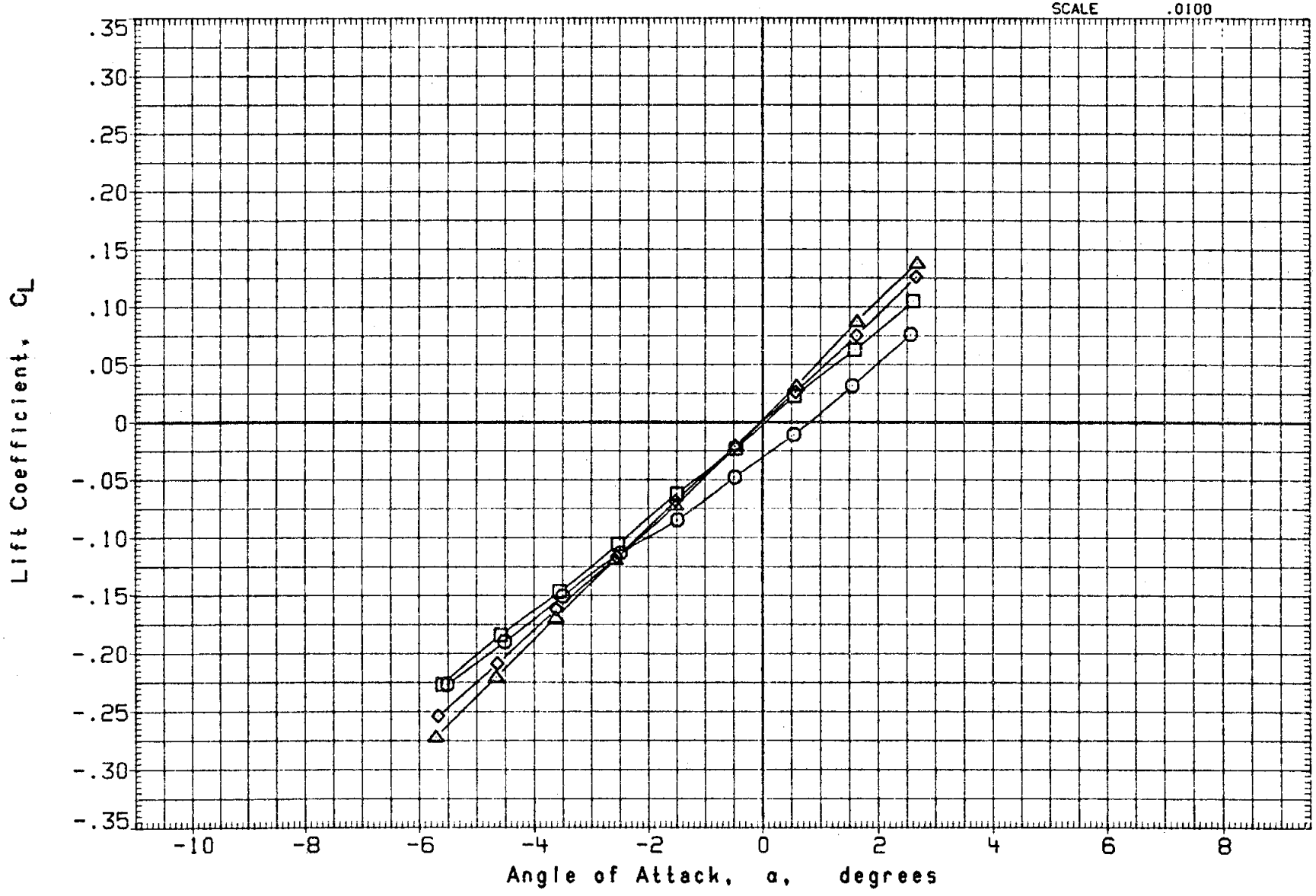

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

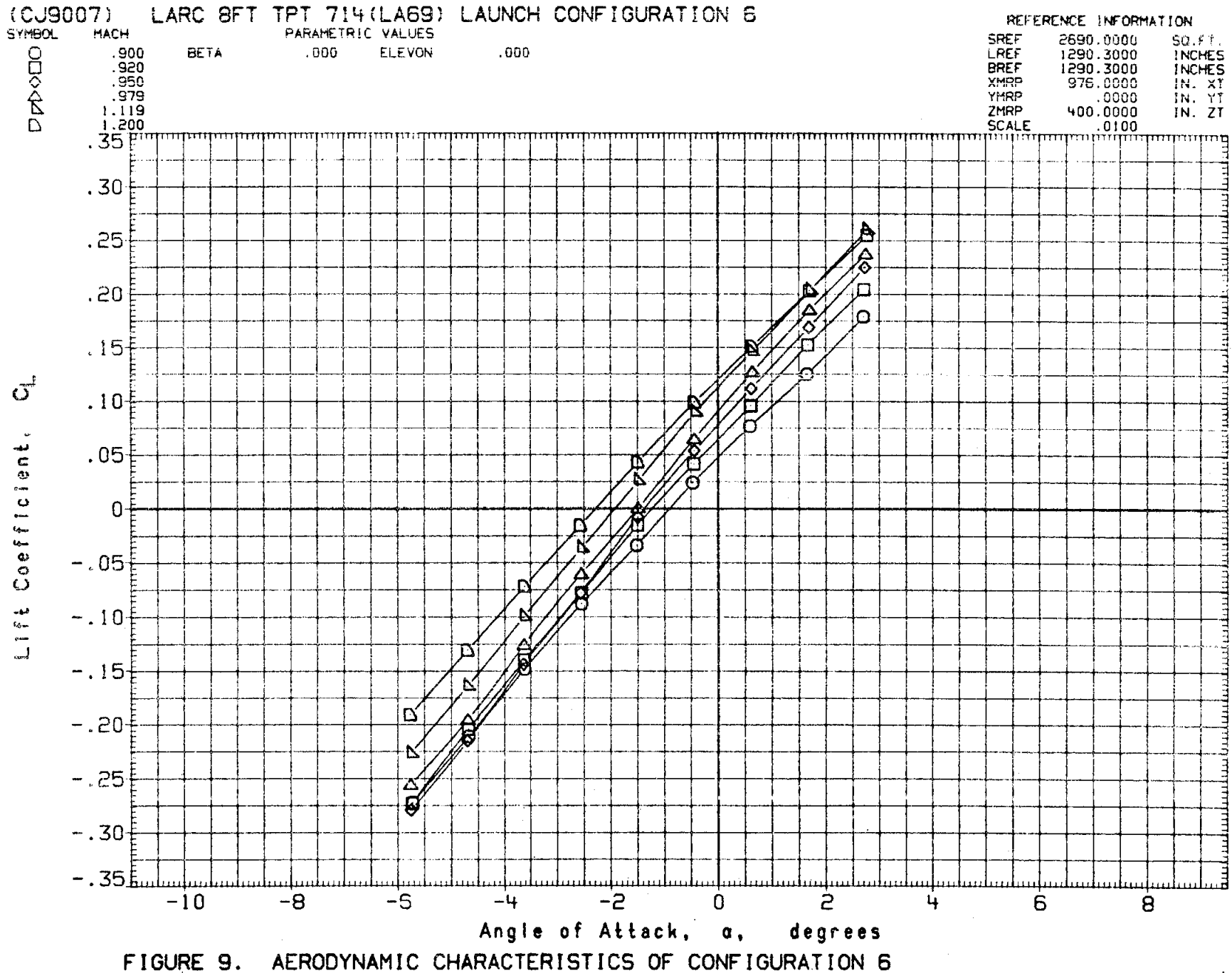

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

(CJ9007) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6

SYMBOL	MACH
○	.350
□	.599
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

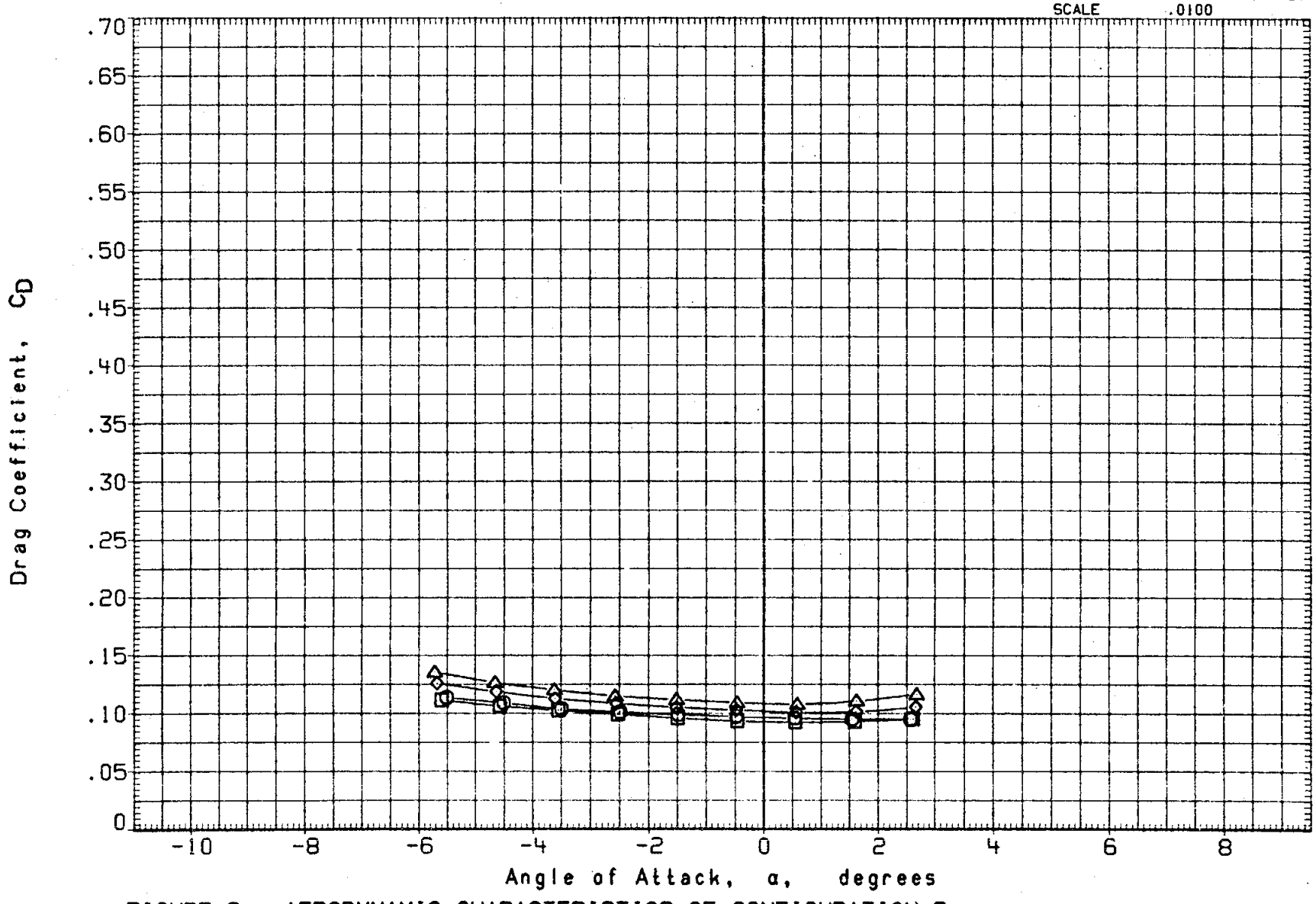

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

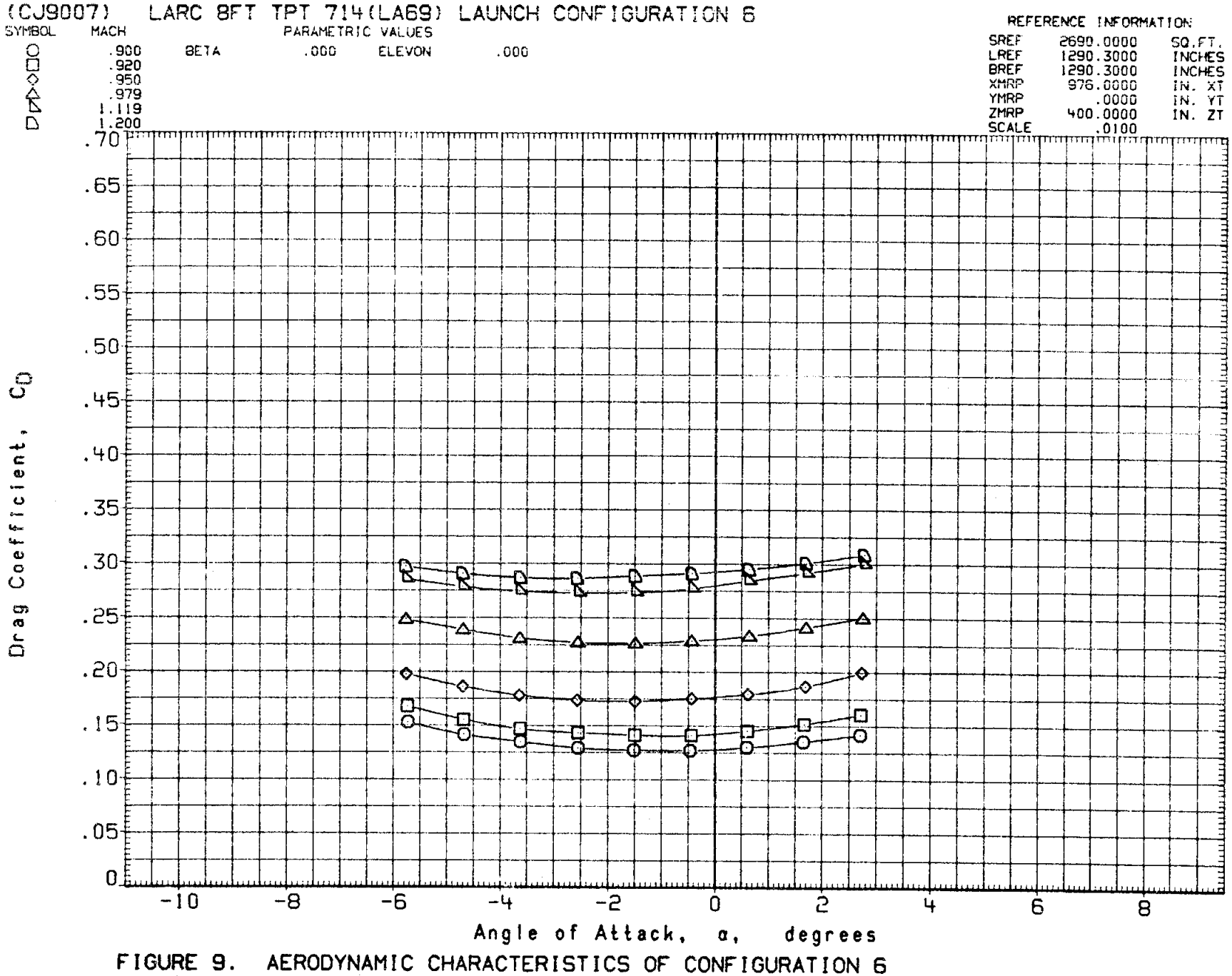

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

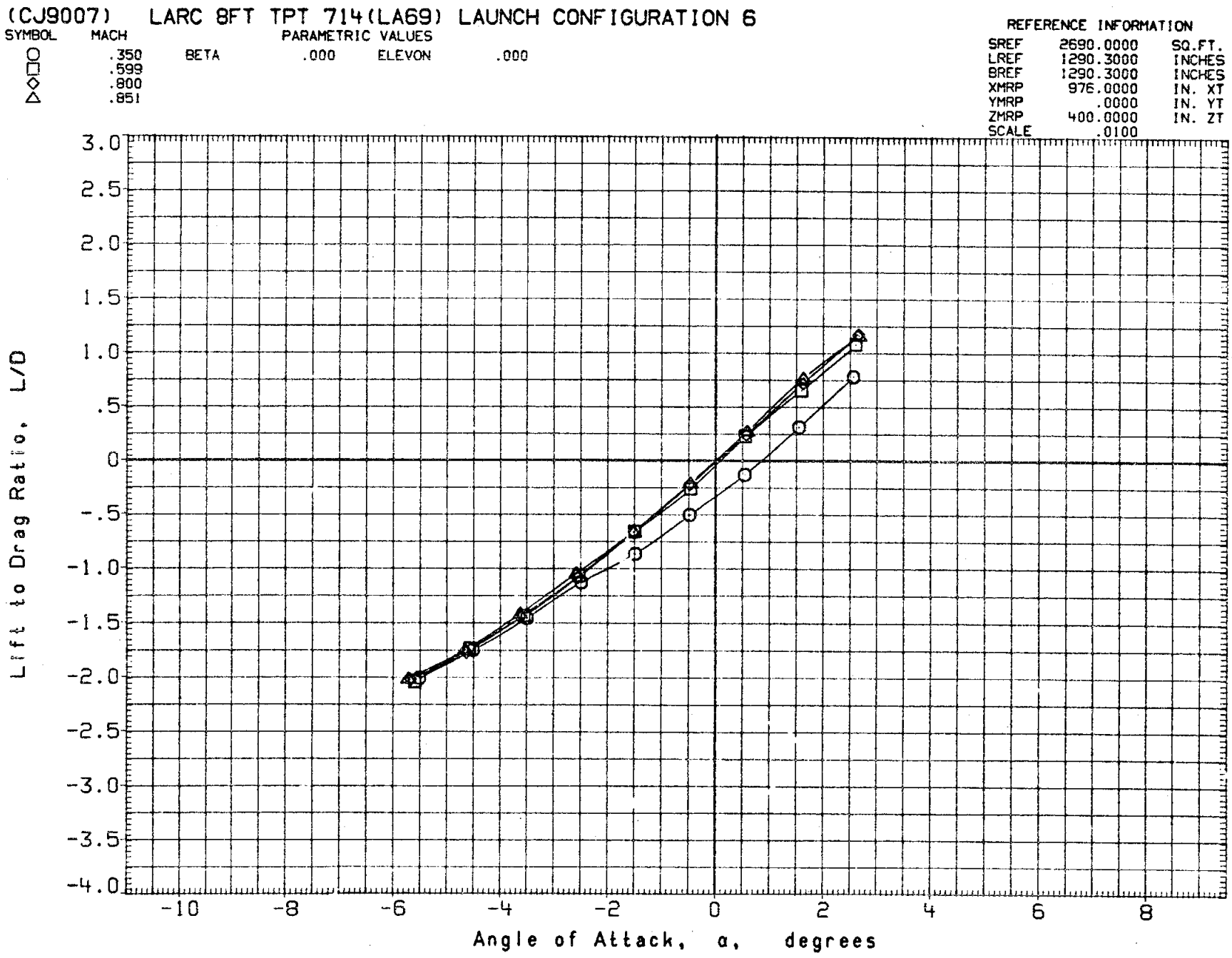

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

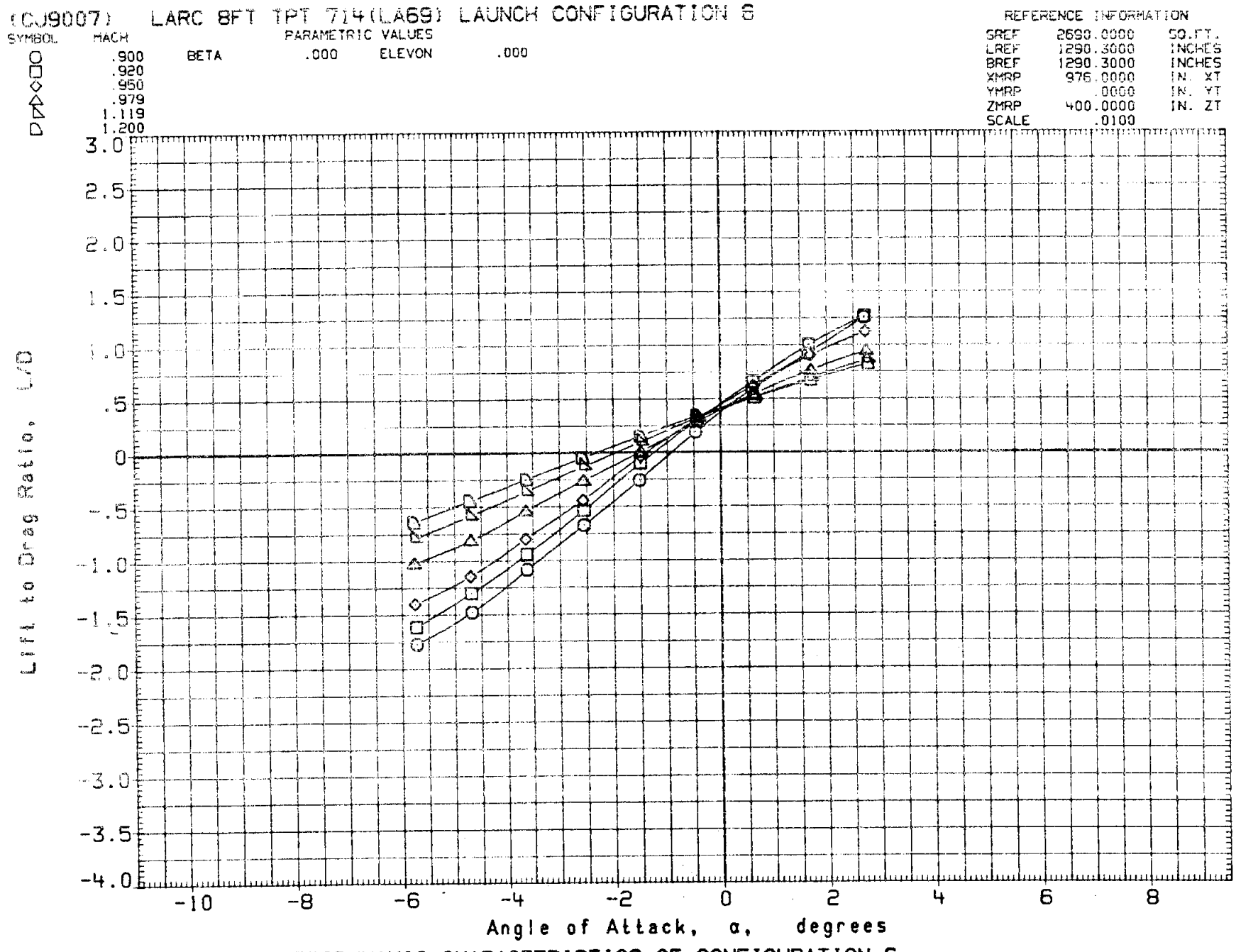

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

(CJ9007) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6

SYMBOL	MACH
○	.350
□	.599
◇	.800
△	.851

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

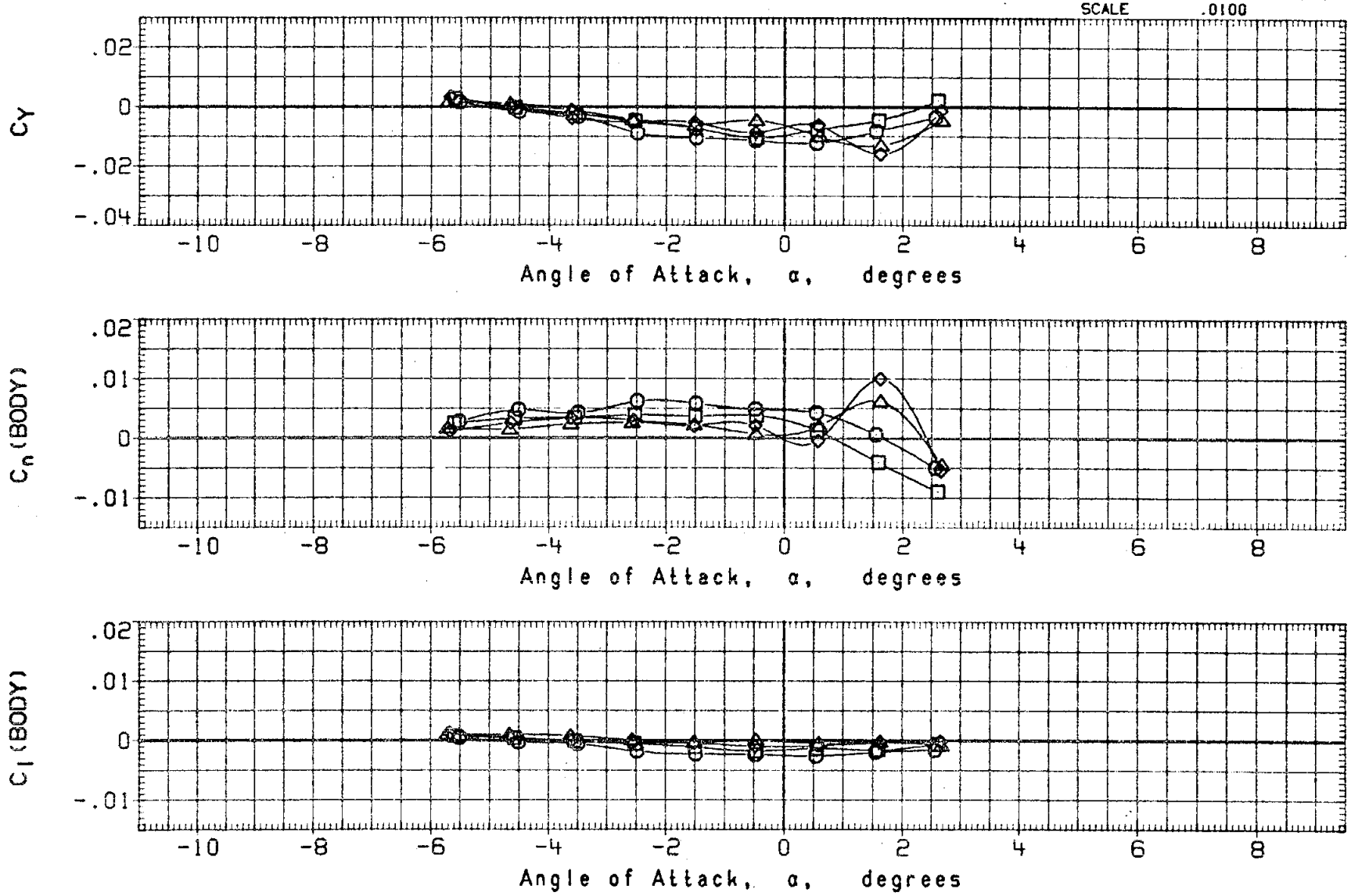

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

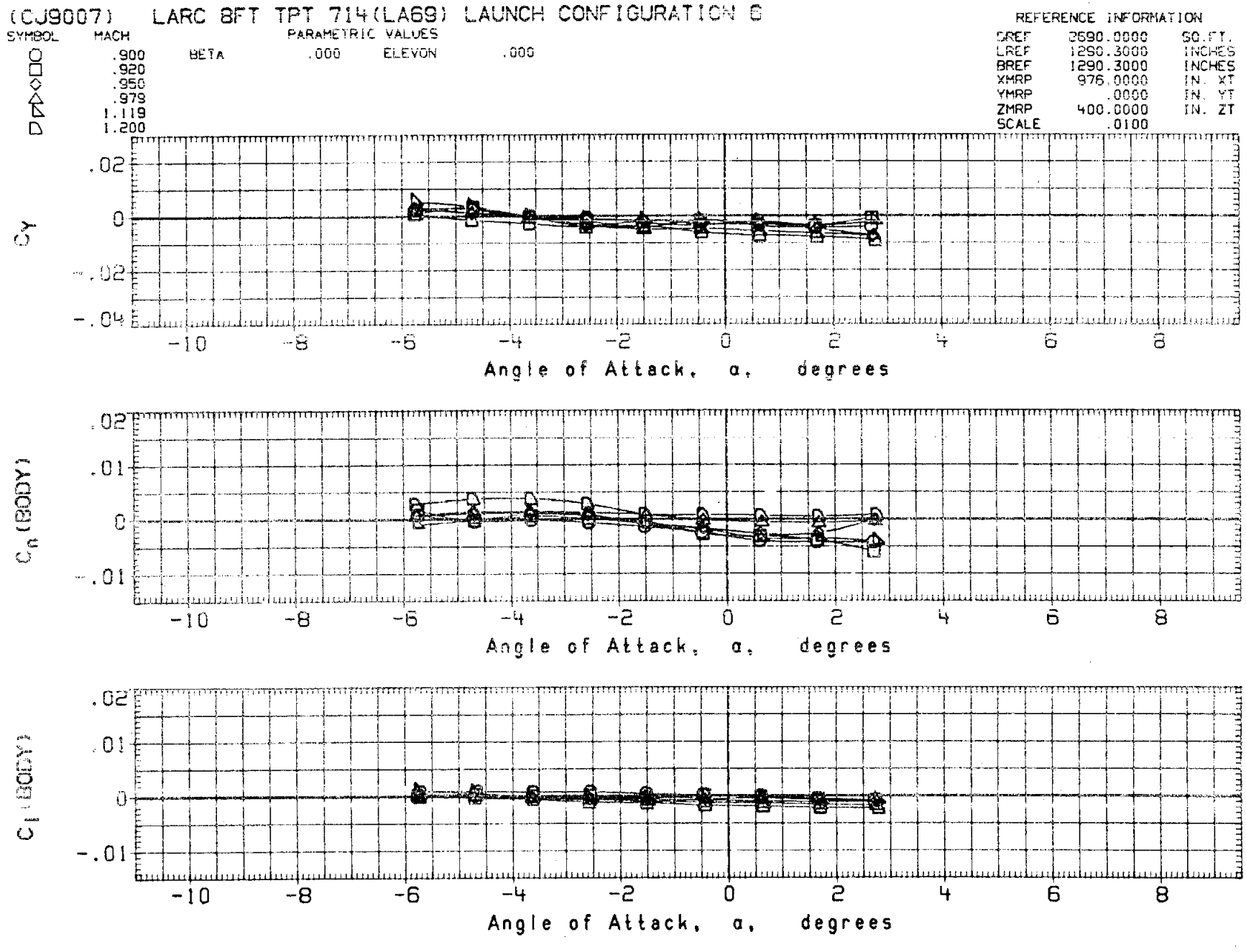

FIGURE 9. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 6

(CJ9008) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7

SYMBOL	MACH
○	.348
□	.599
◇	.800
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

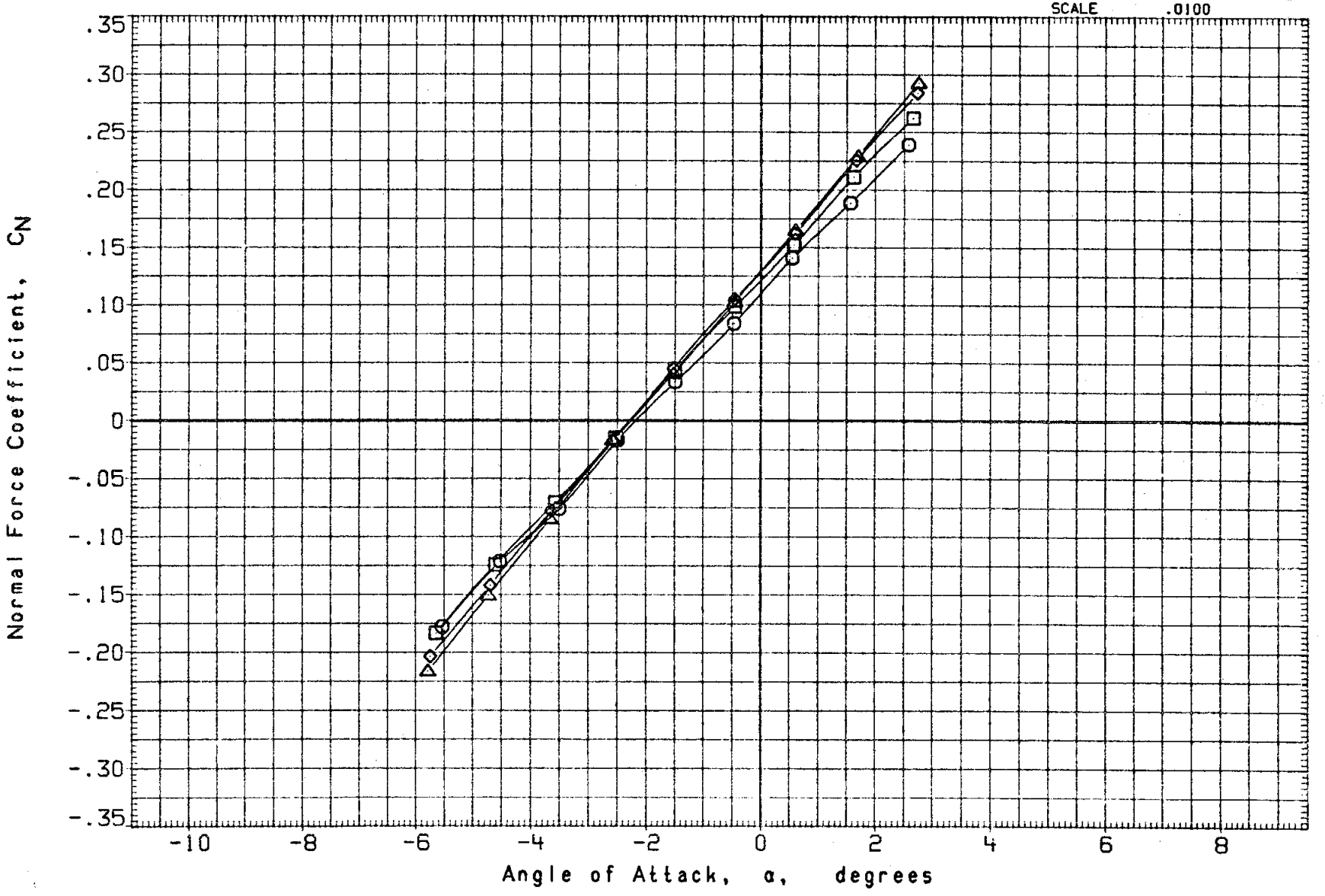

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

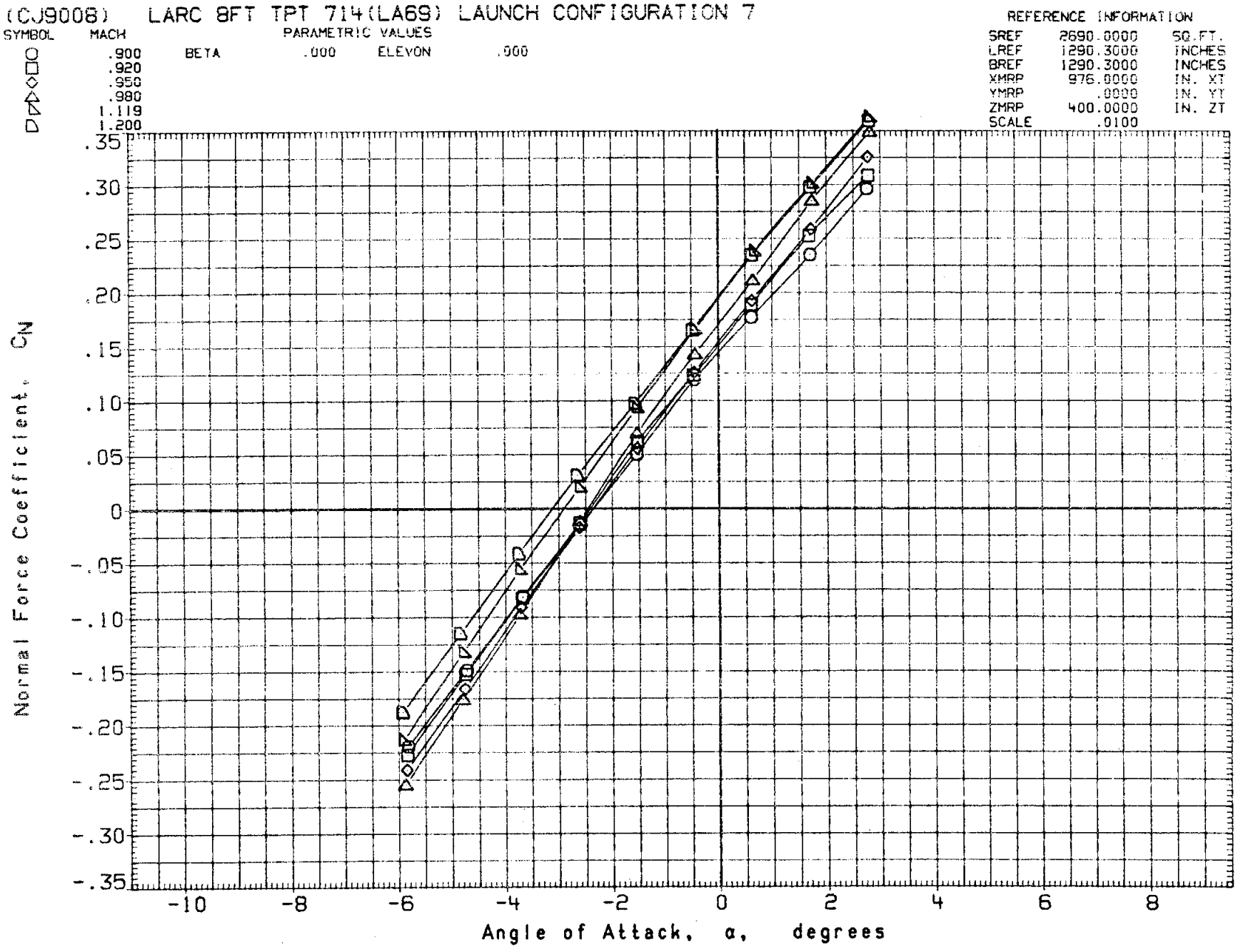

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

(CJ9008) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7

SYMBOL	MACH
○	.348
□	.599
◇	.800
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

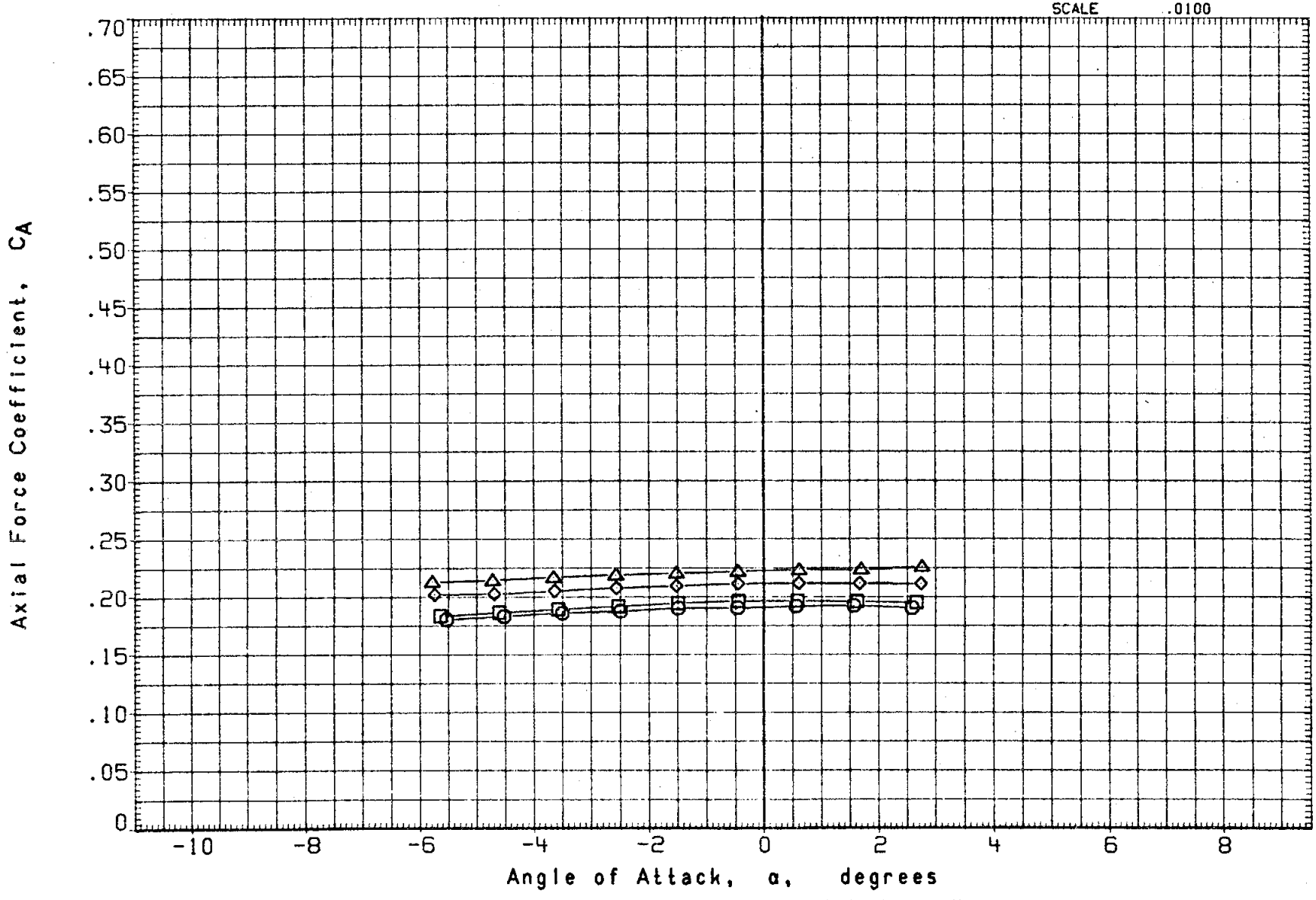

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

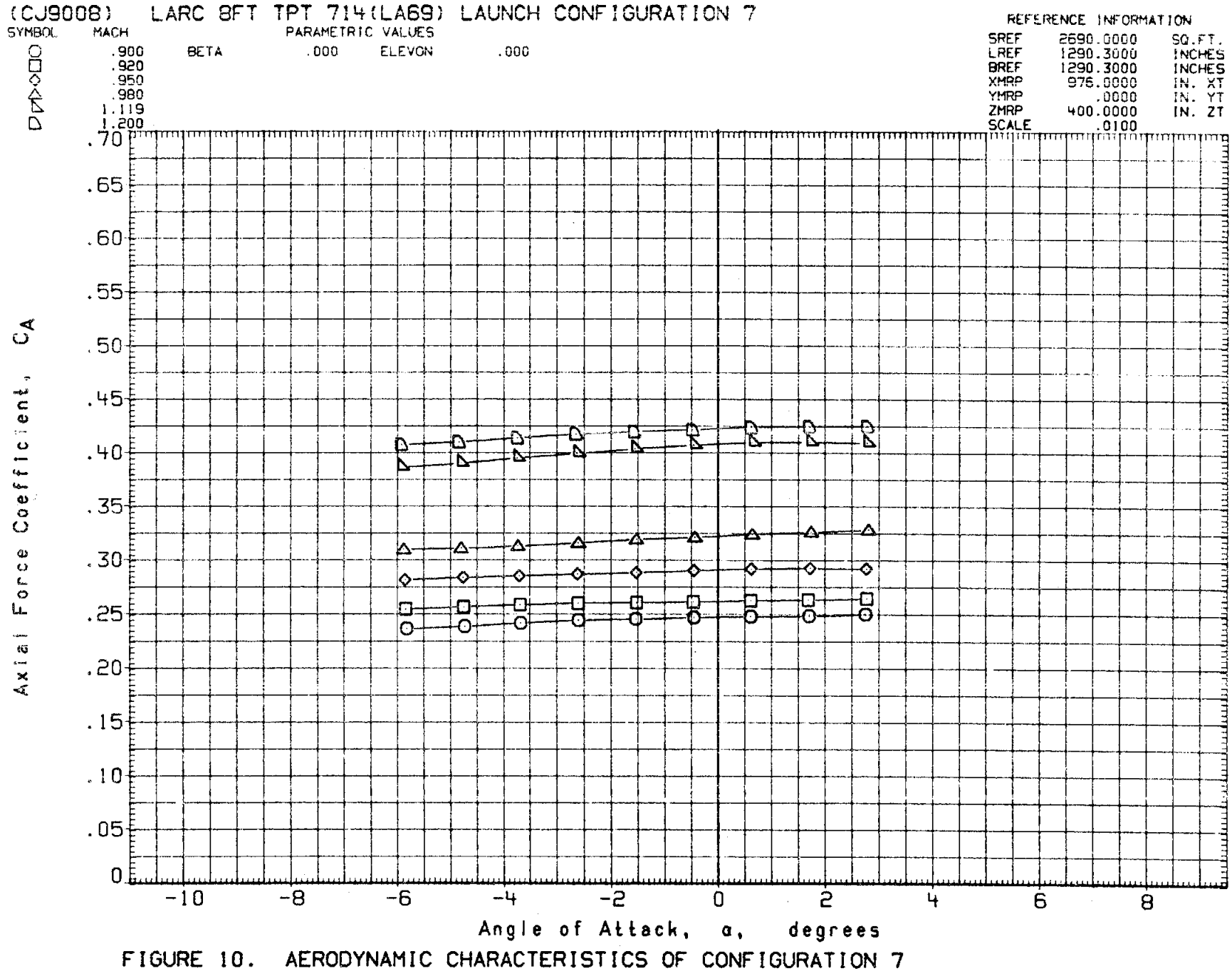

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

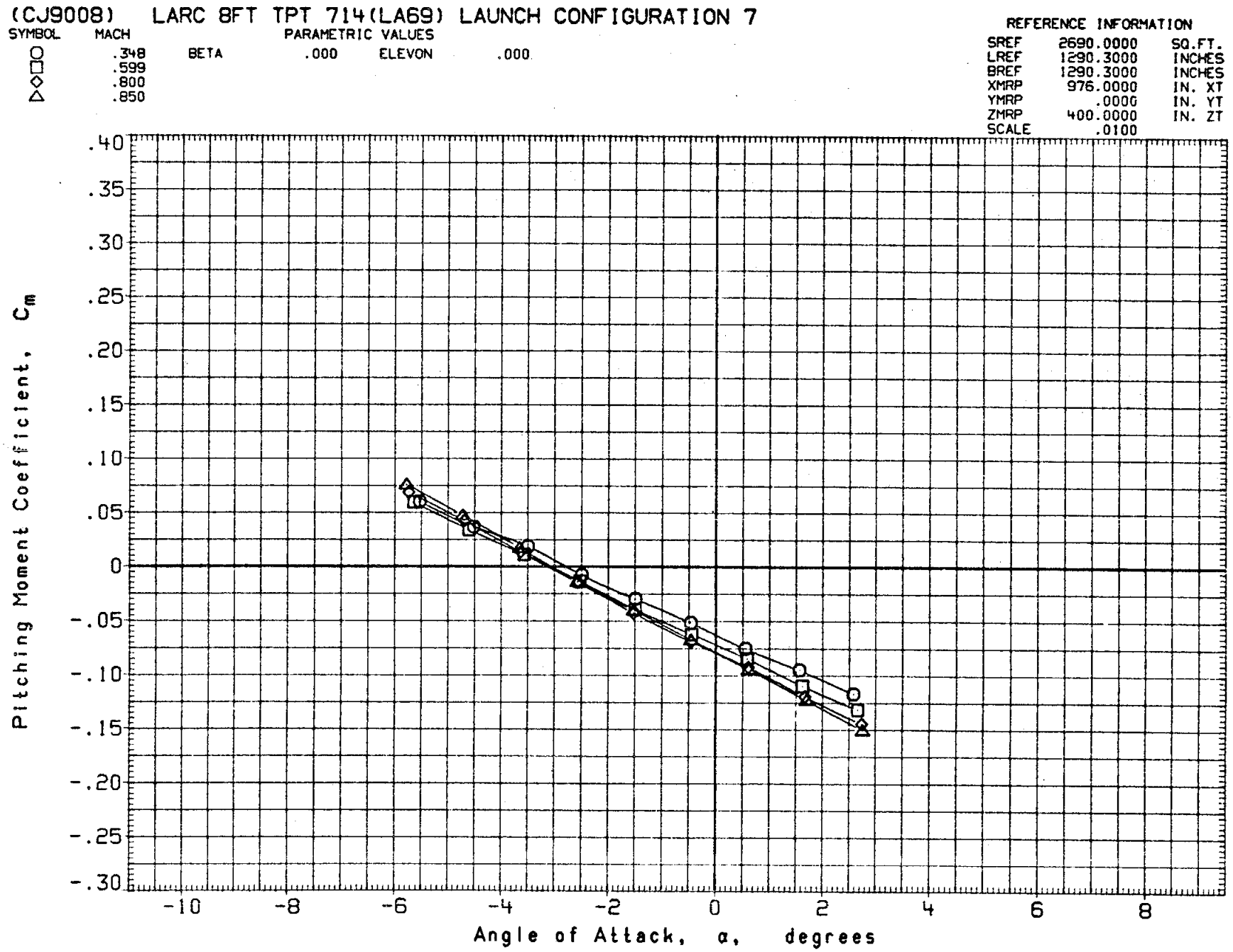

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

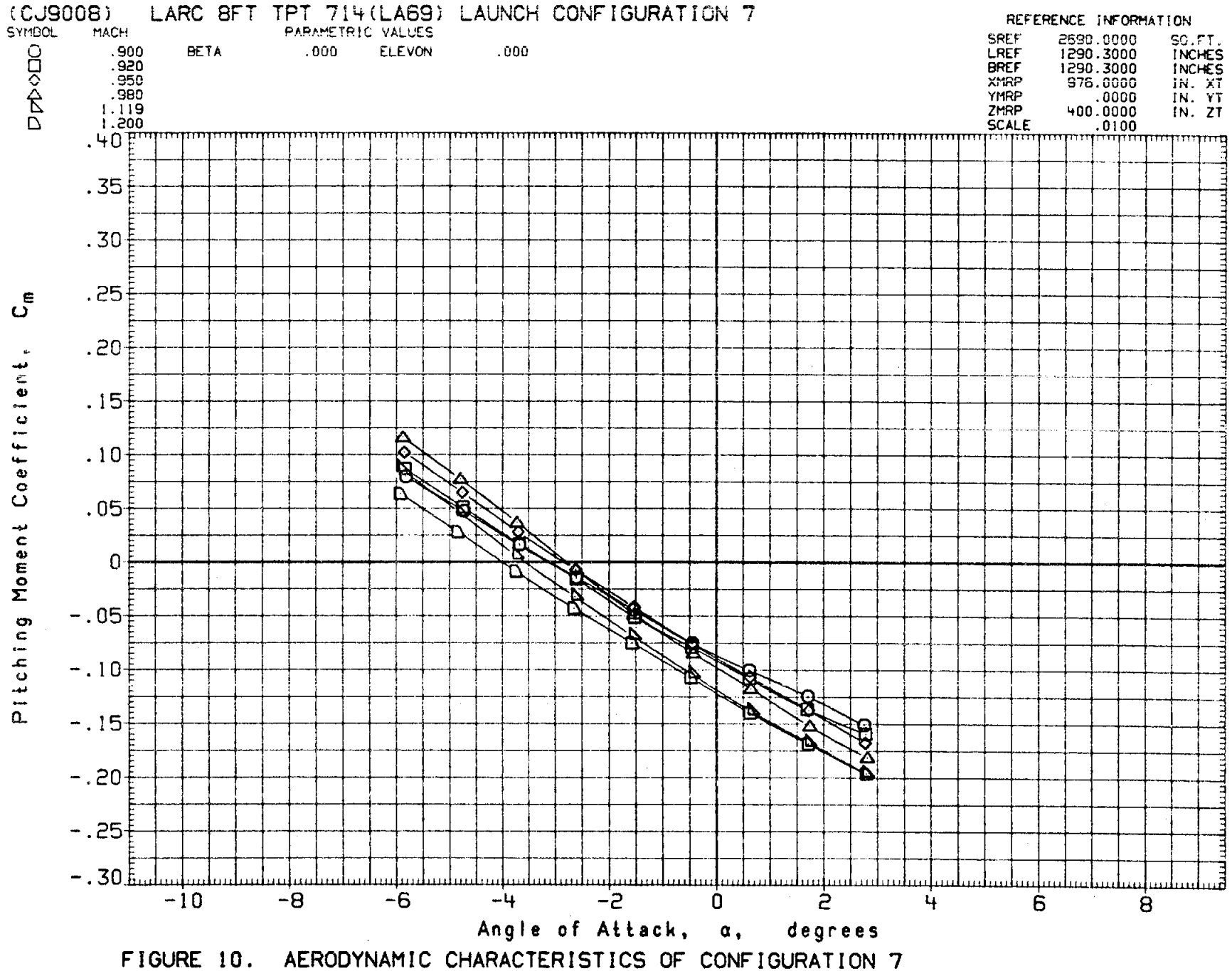

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

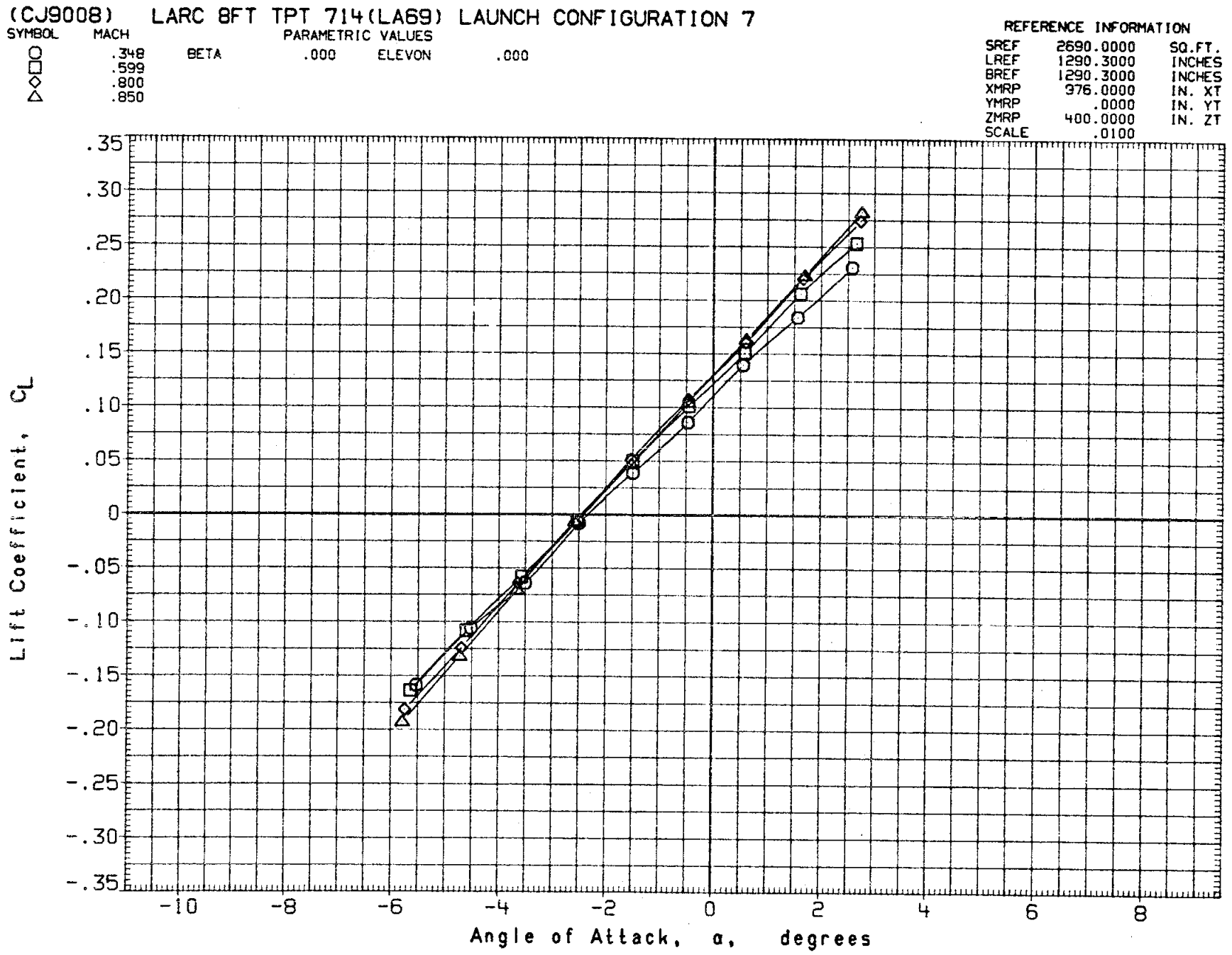

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

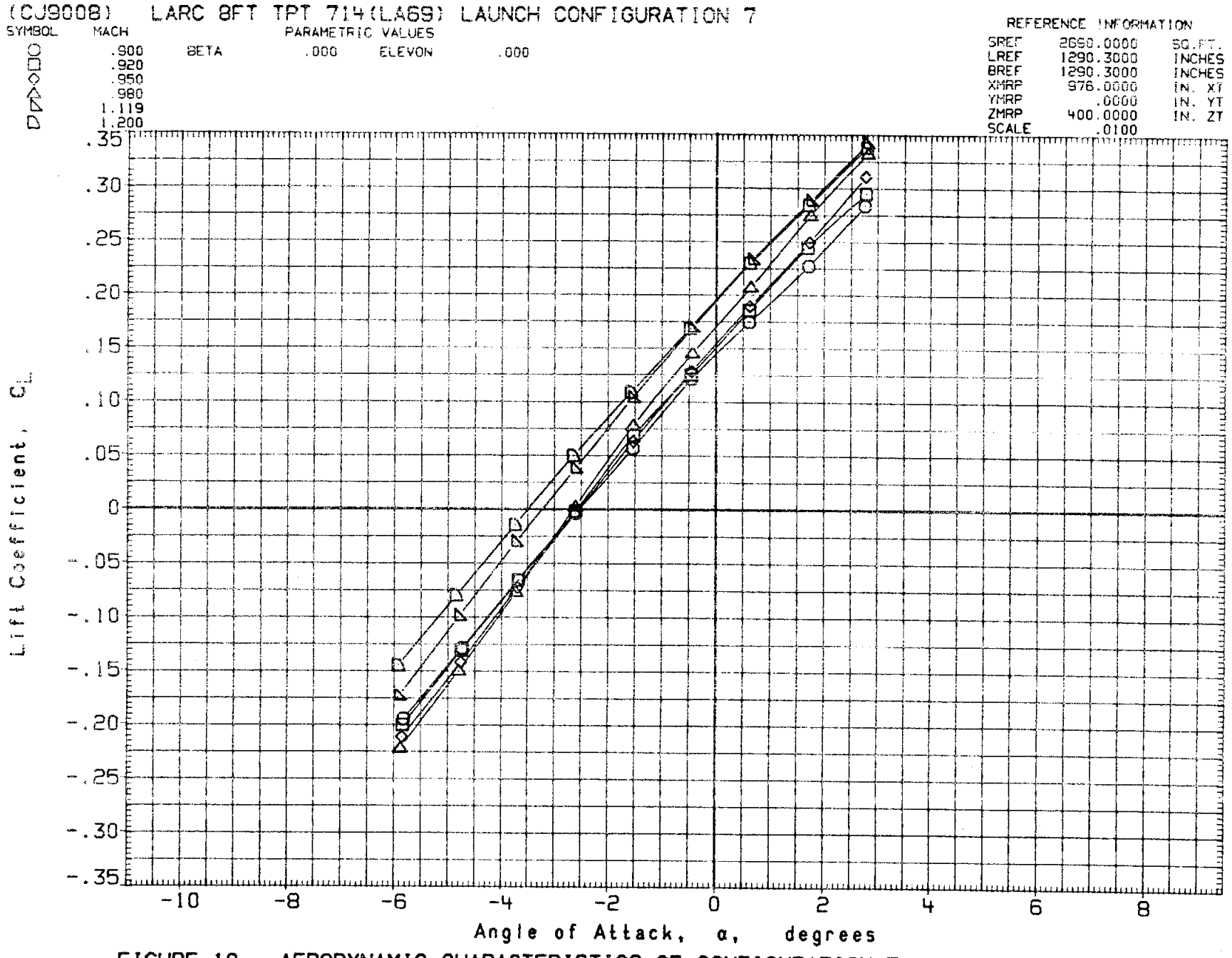

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

(CJ9008) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7

SYMBOL	MACH
○	.348
□	.599
◇	.800
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

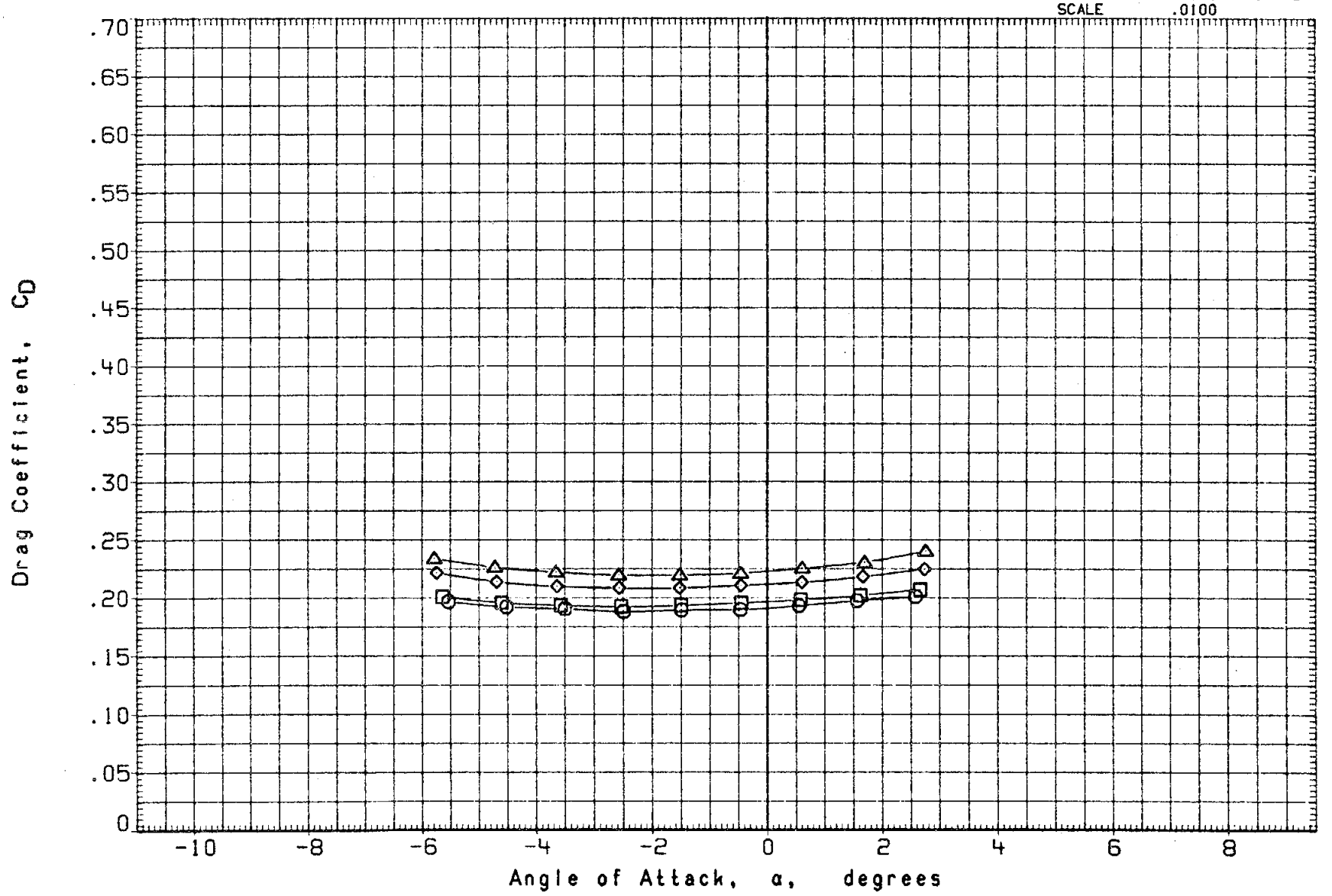

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

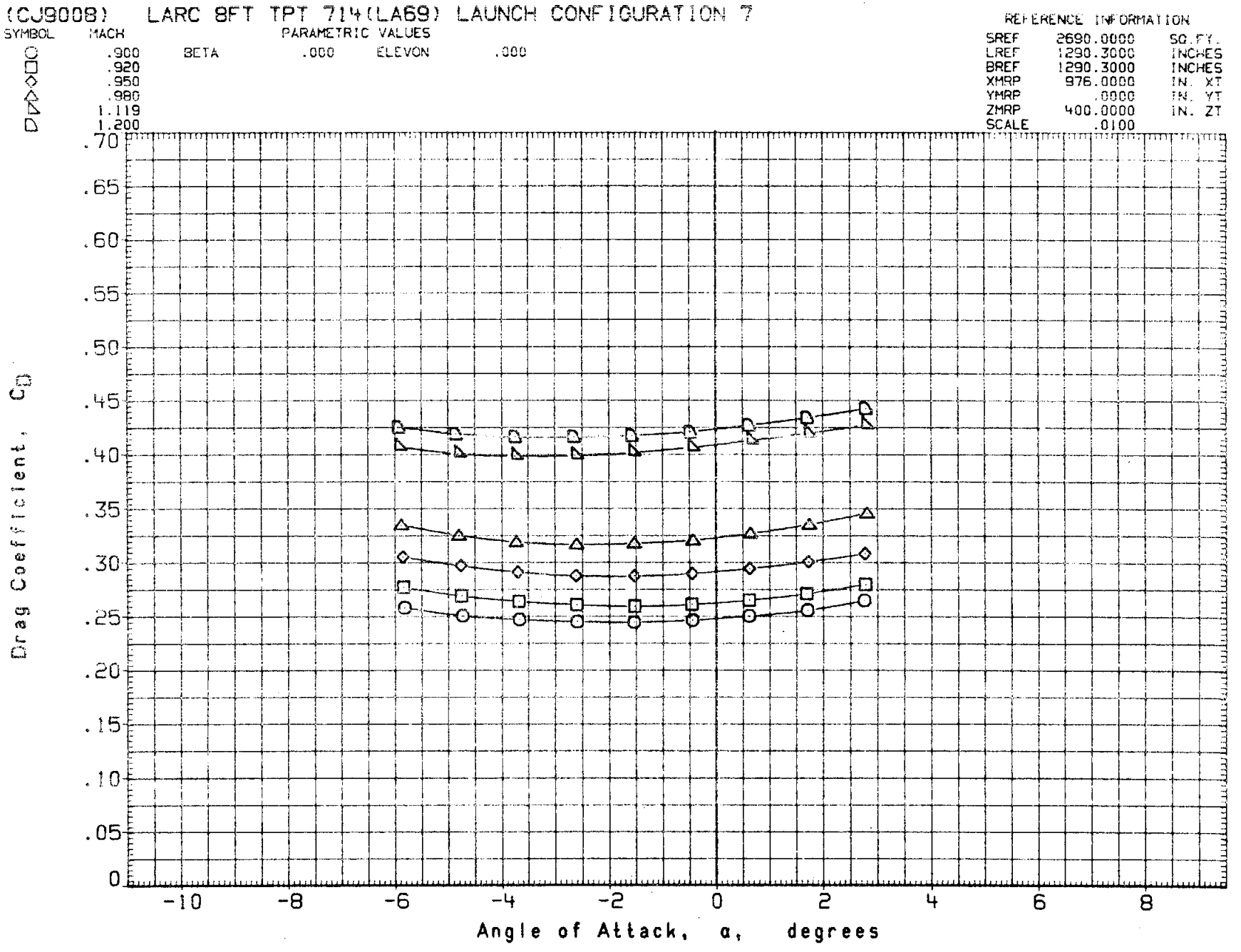

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

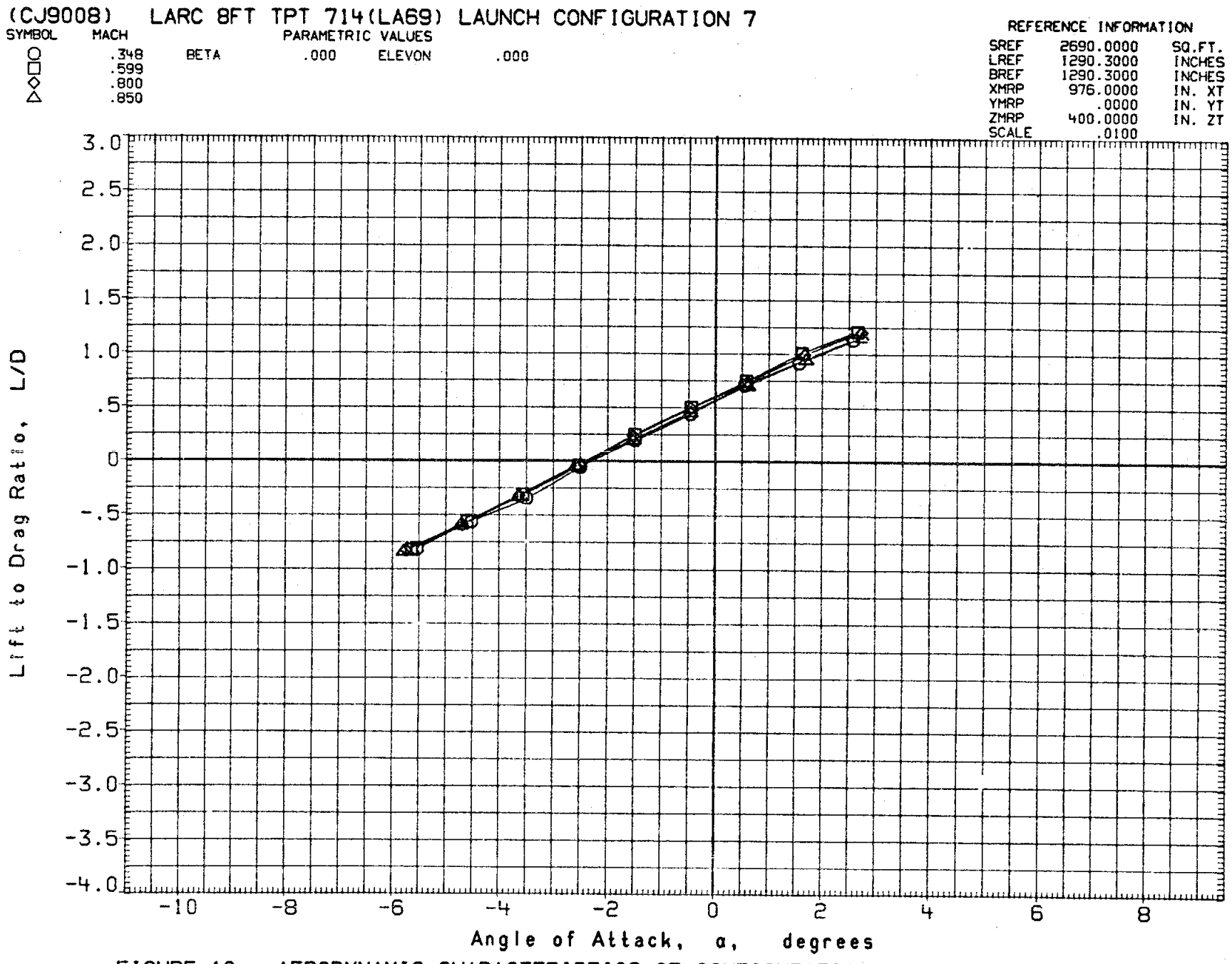

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

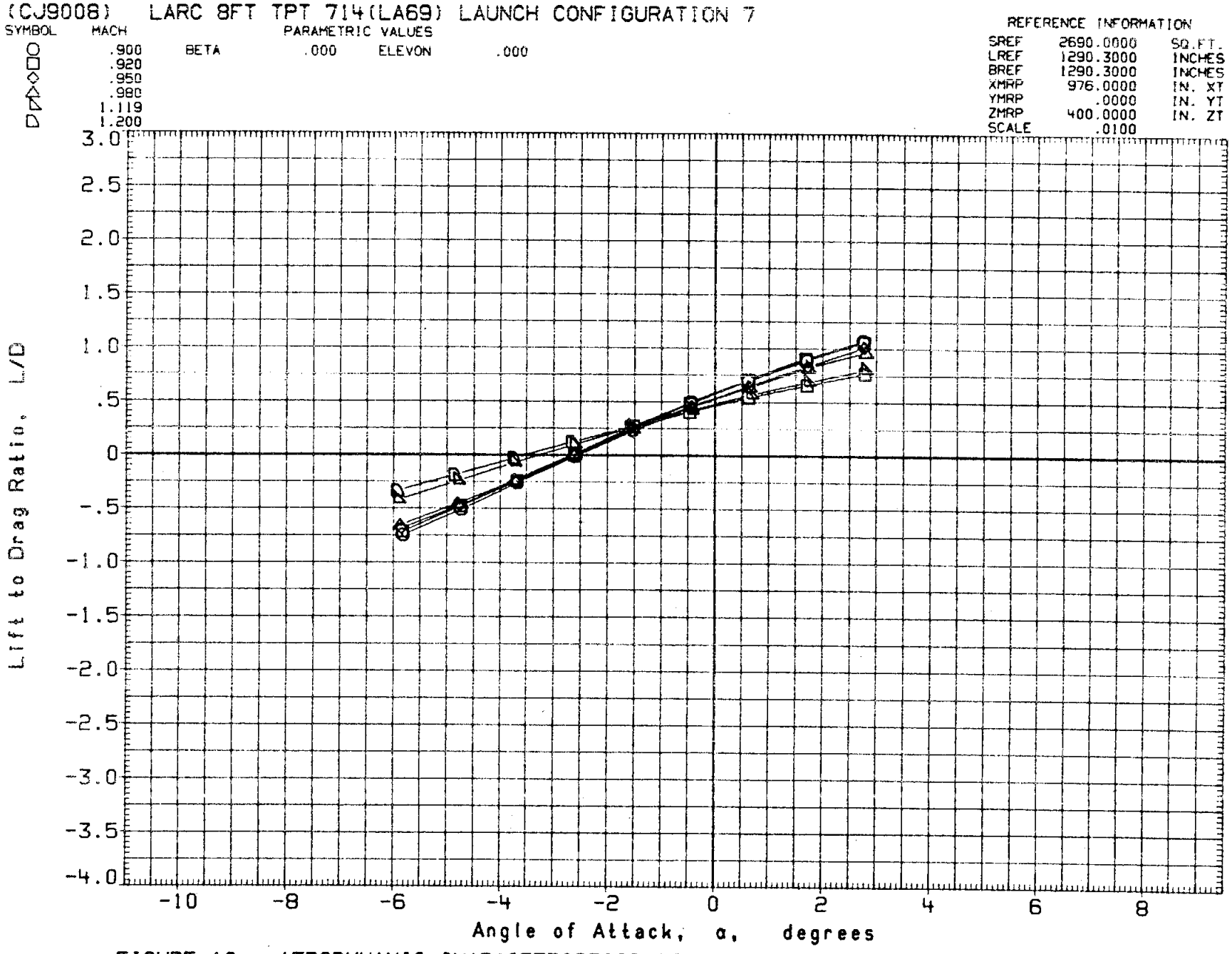

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

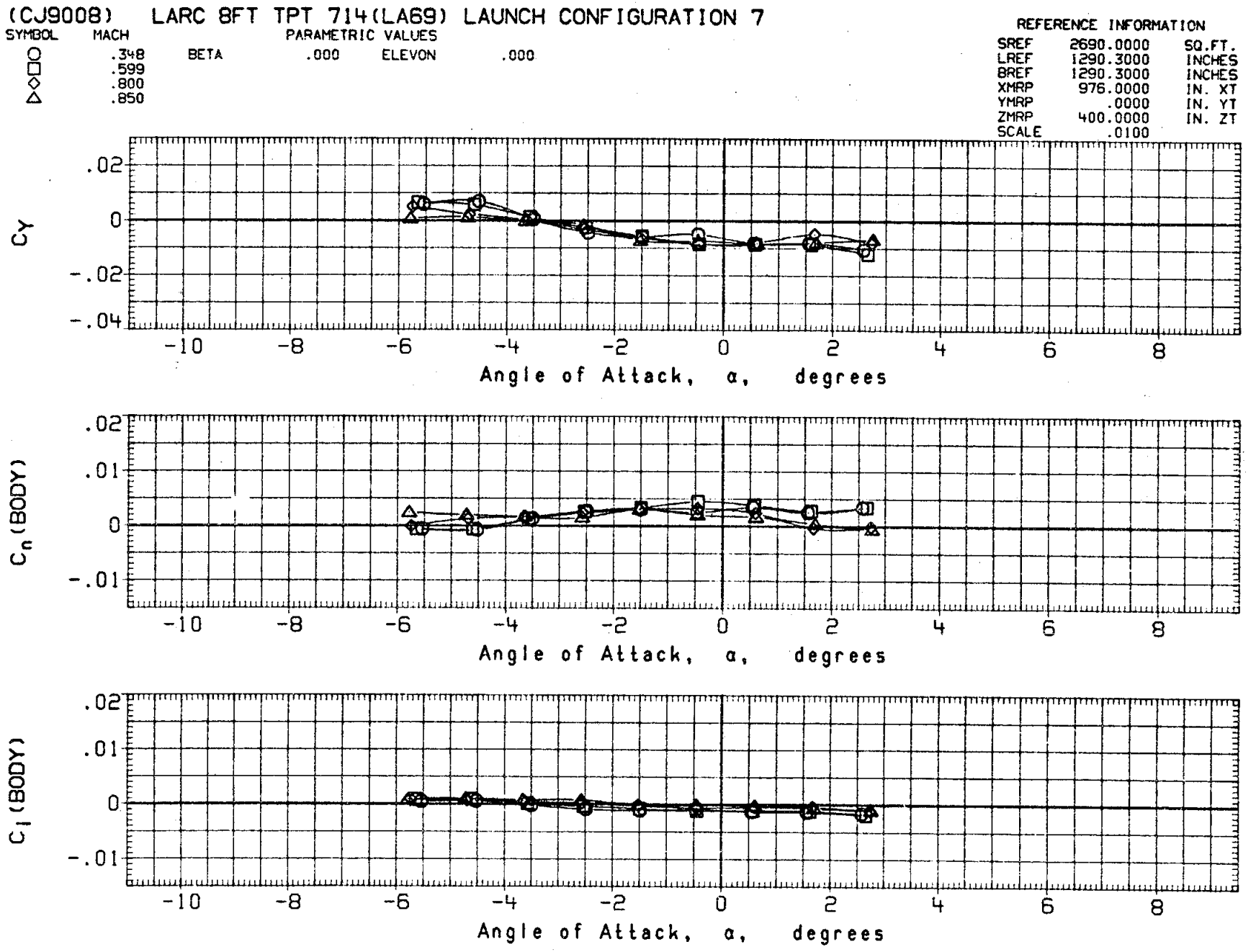

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

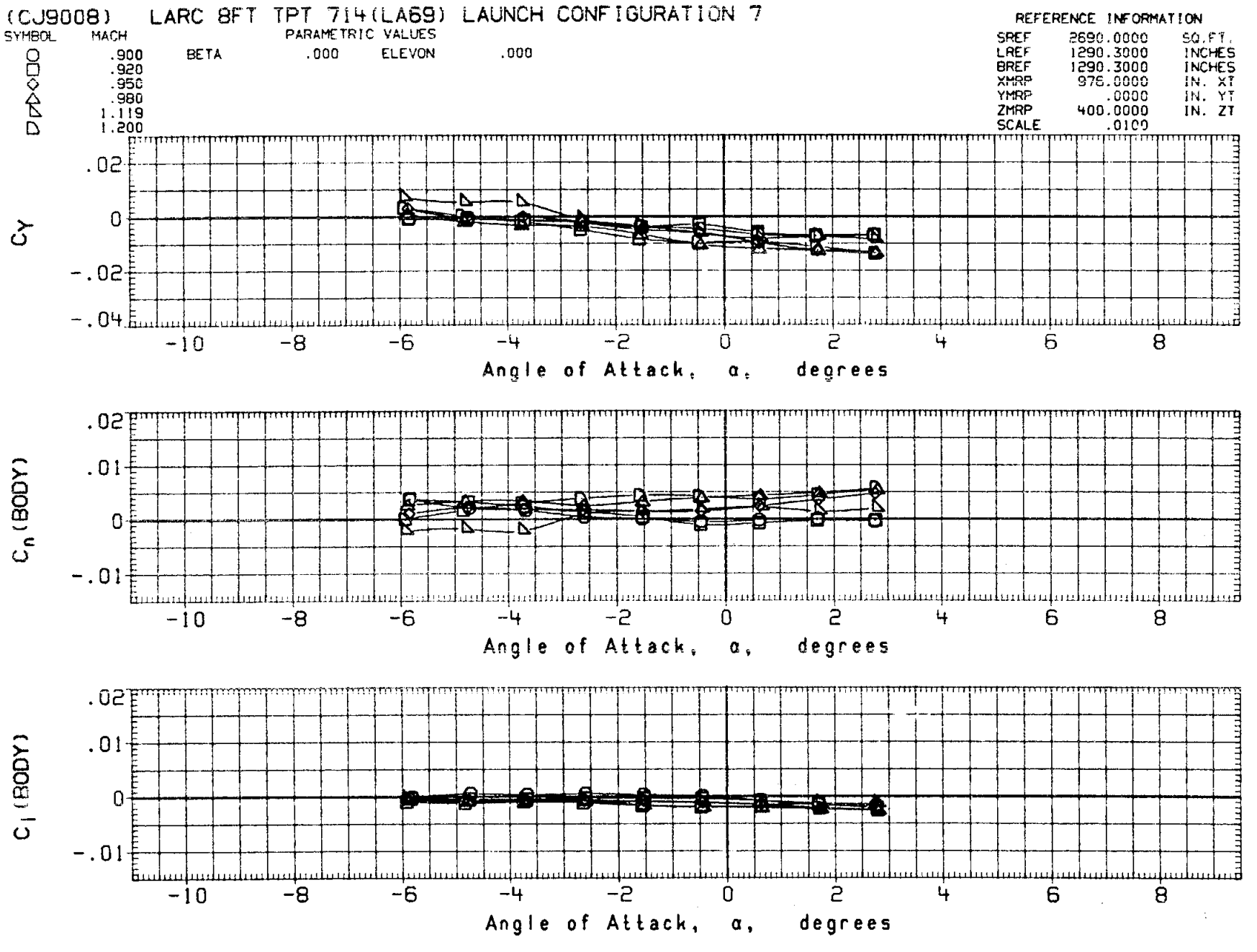

FIGURE 10. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 7

(CJ9009) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8

SYMBOL	MACH
○	.350
□	.601
◇	.801
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

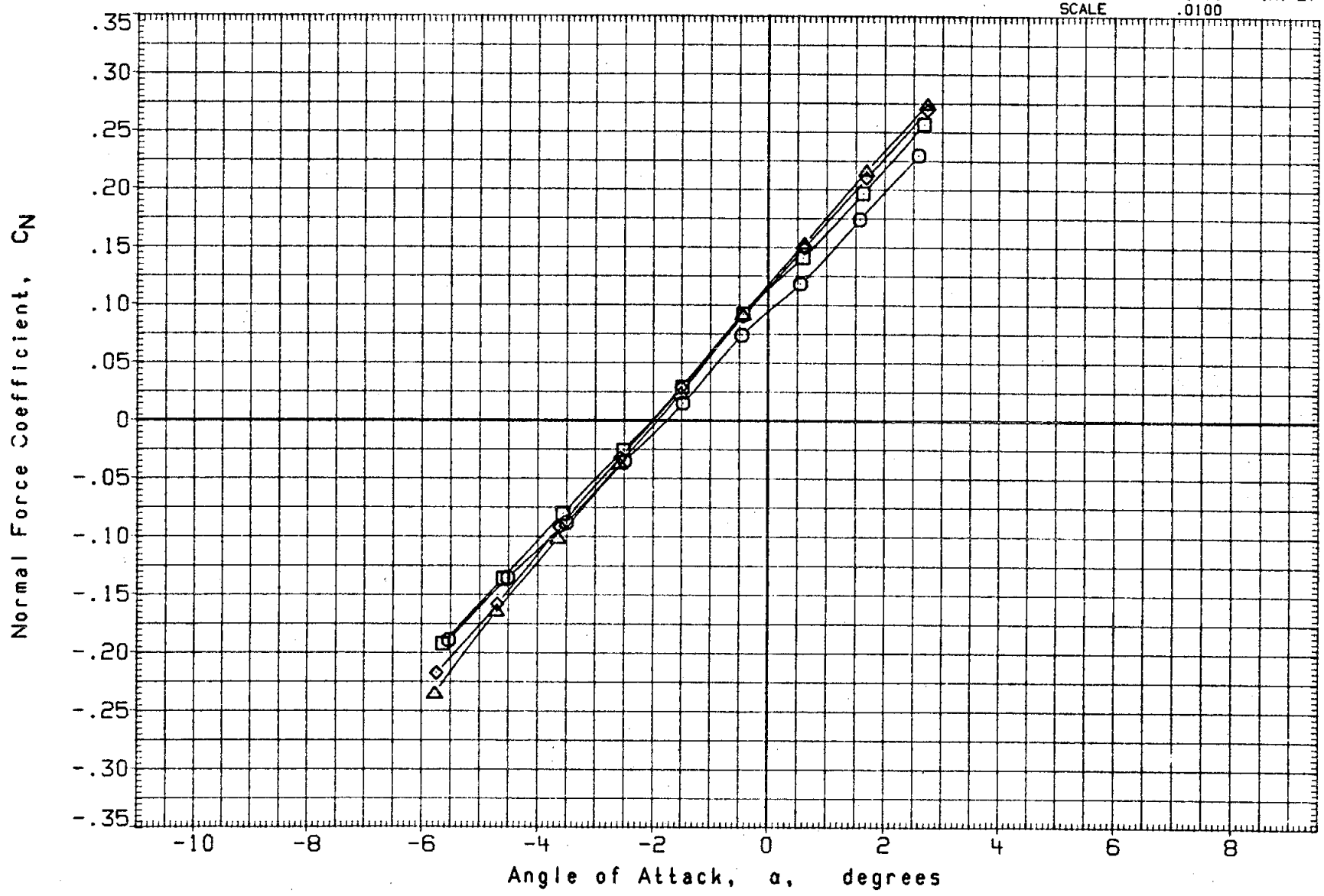

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

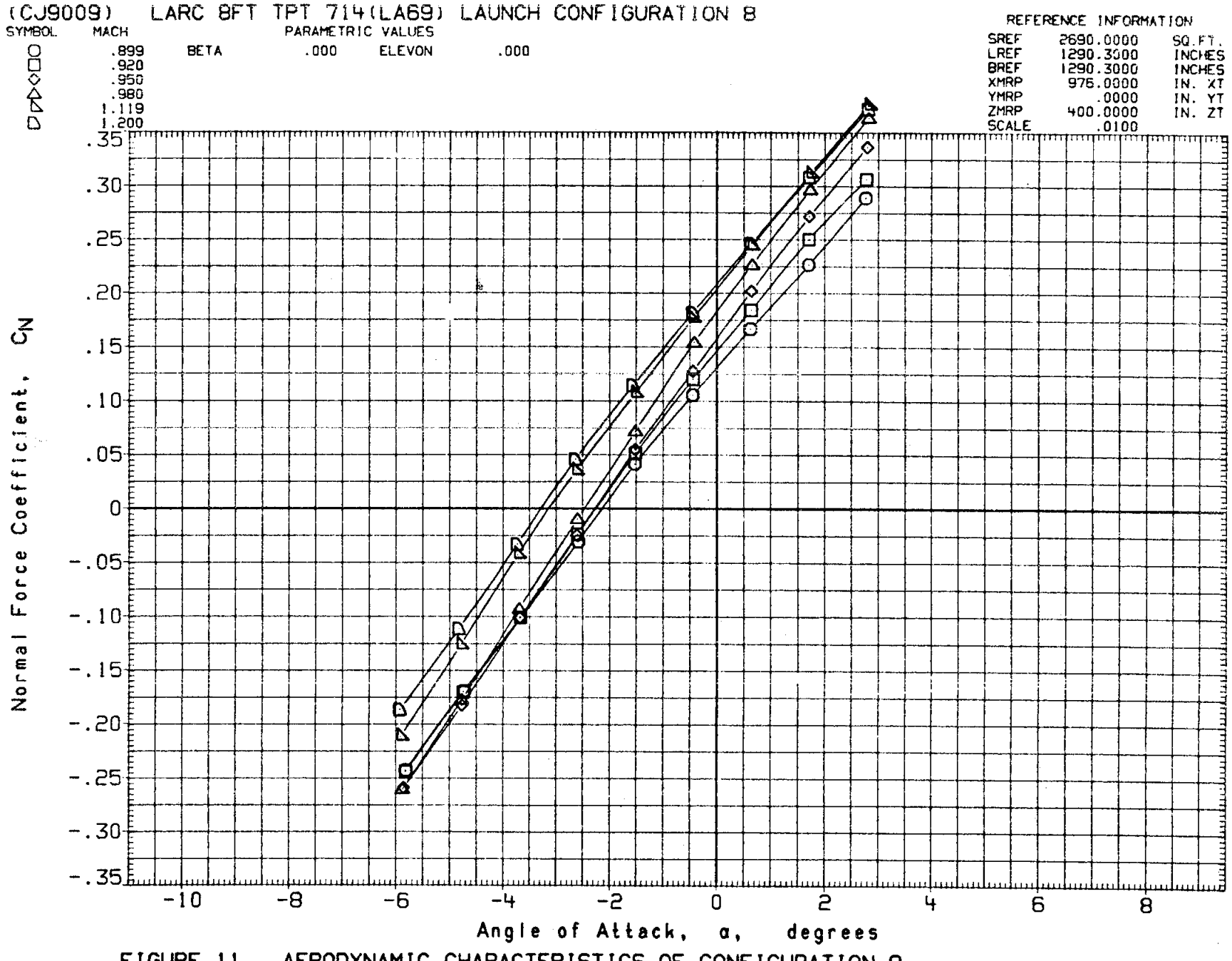

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

(CJ9009) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.601				
◇	.801				
△	.850				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

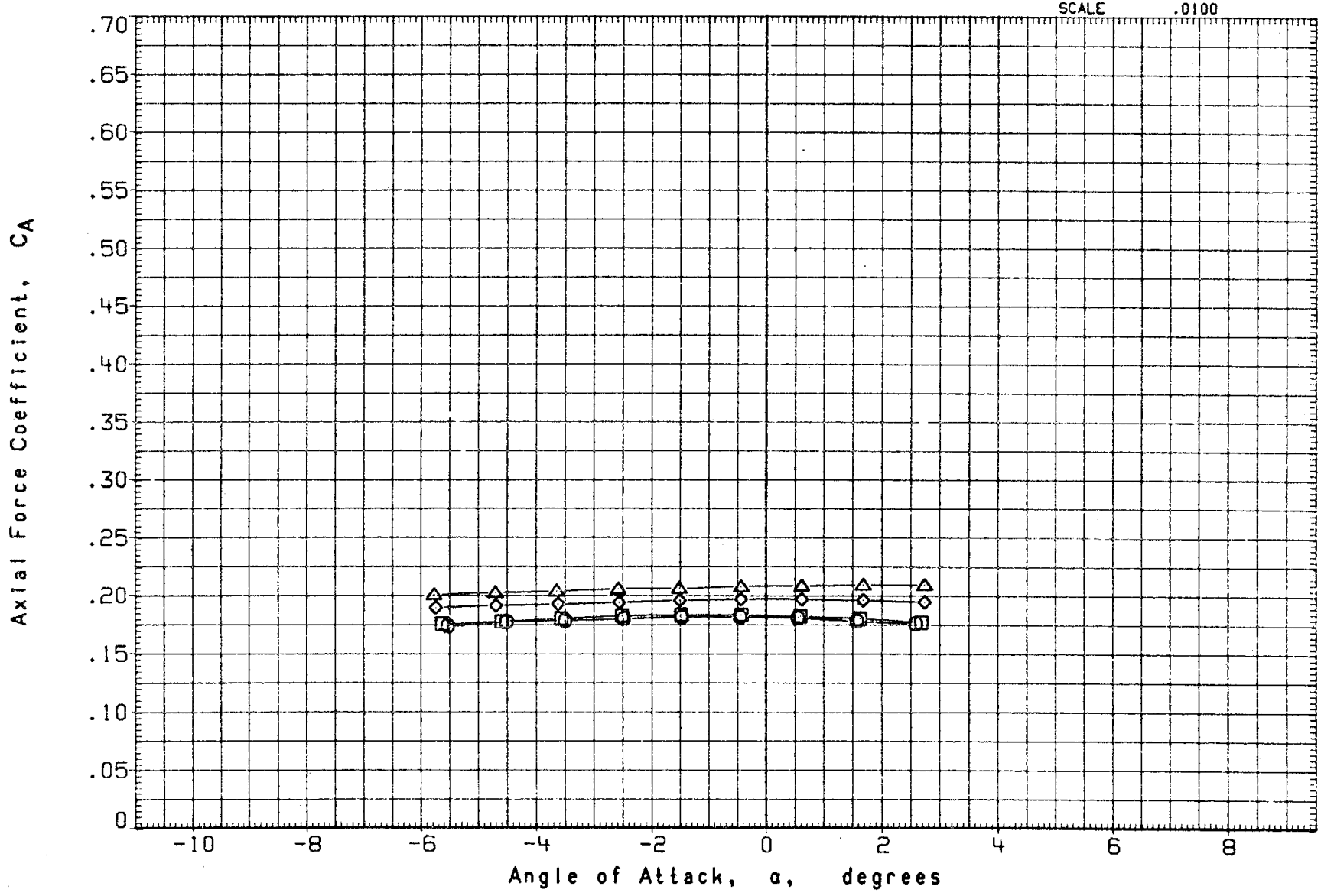

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

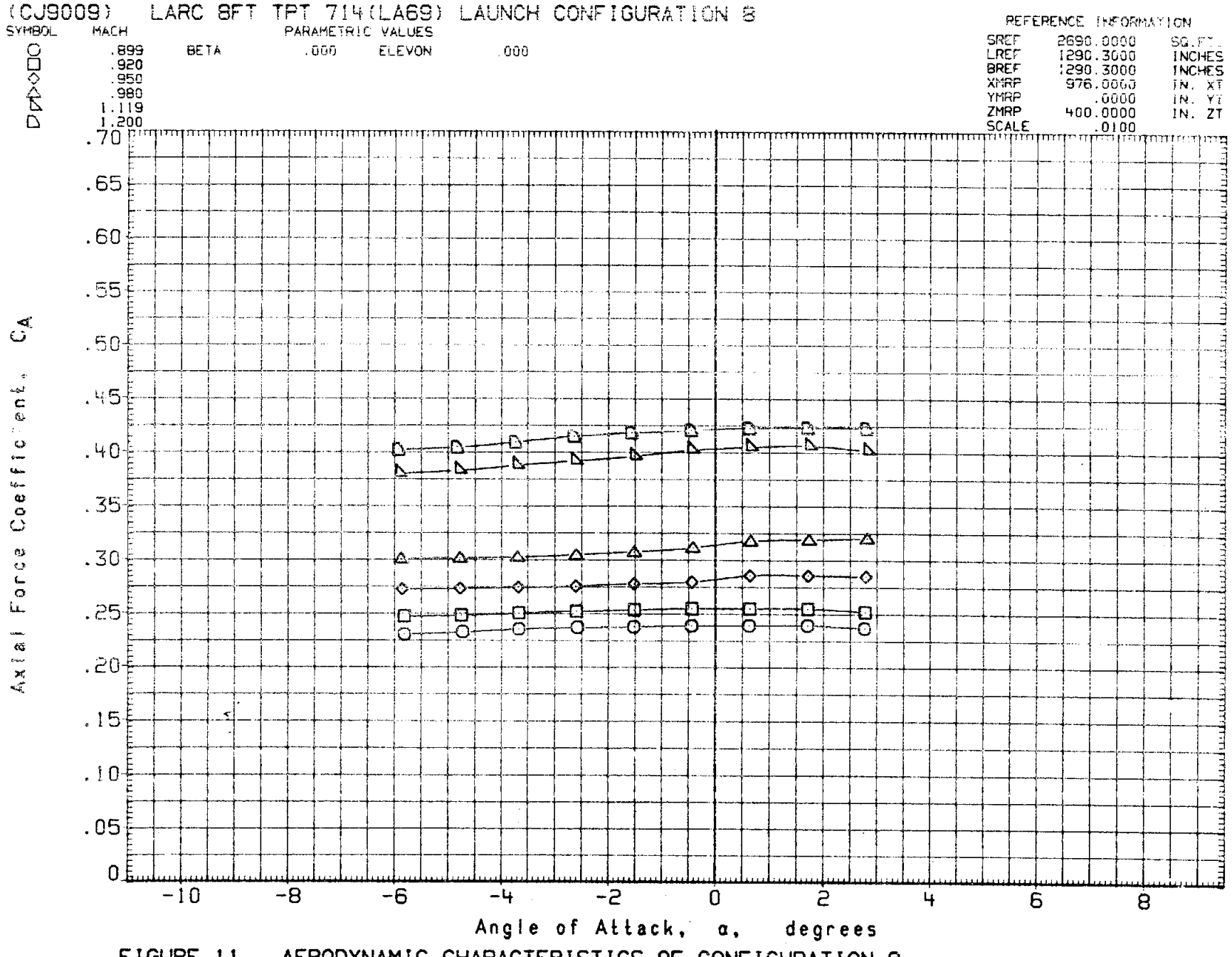

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

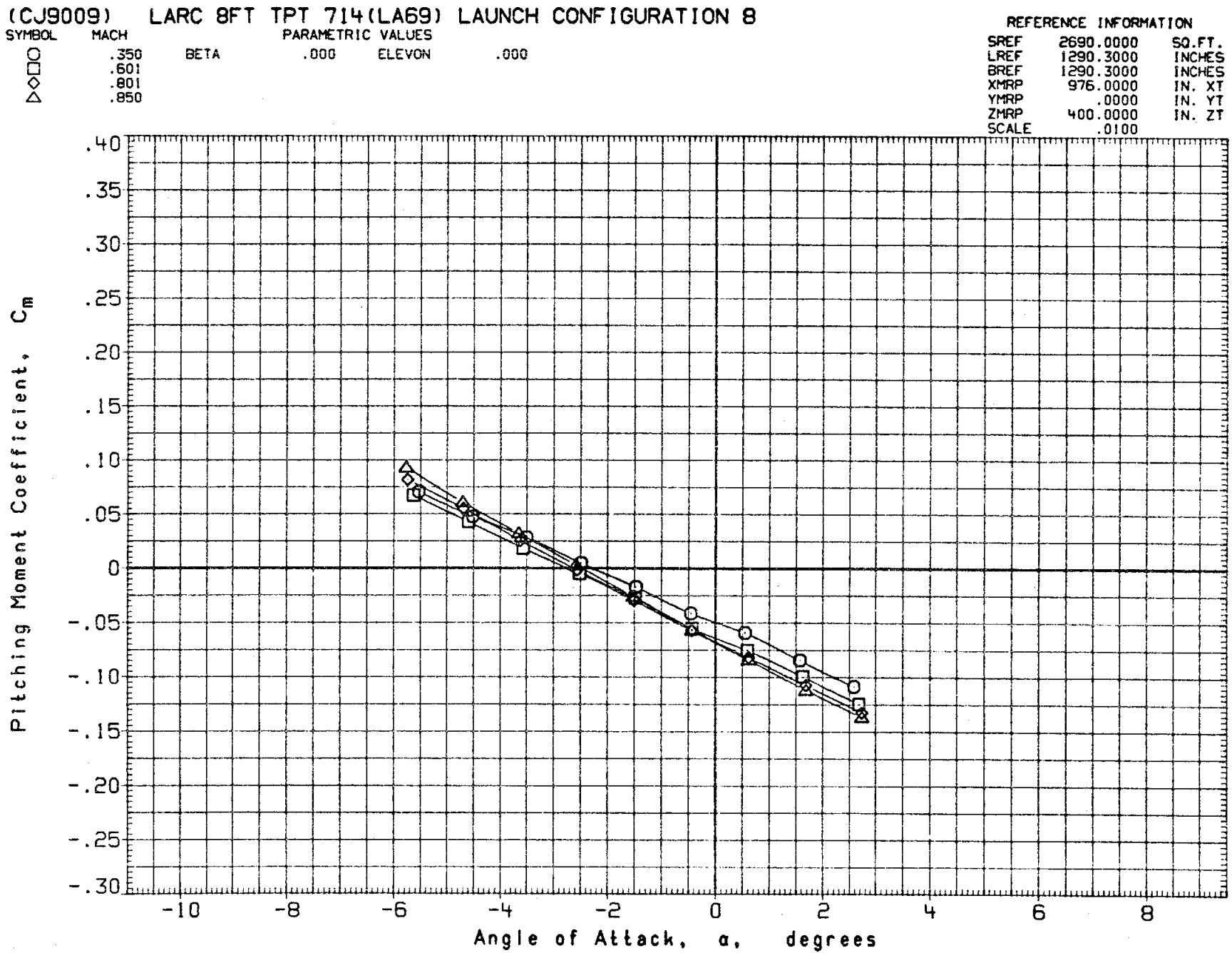

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

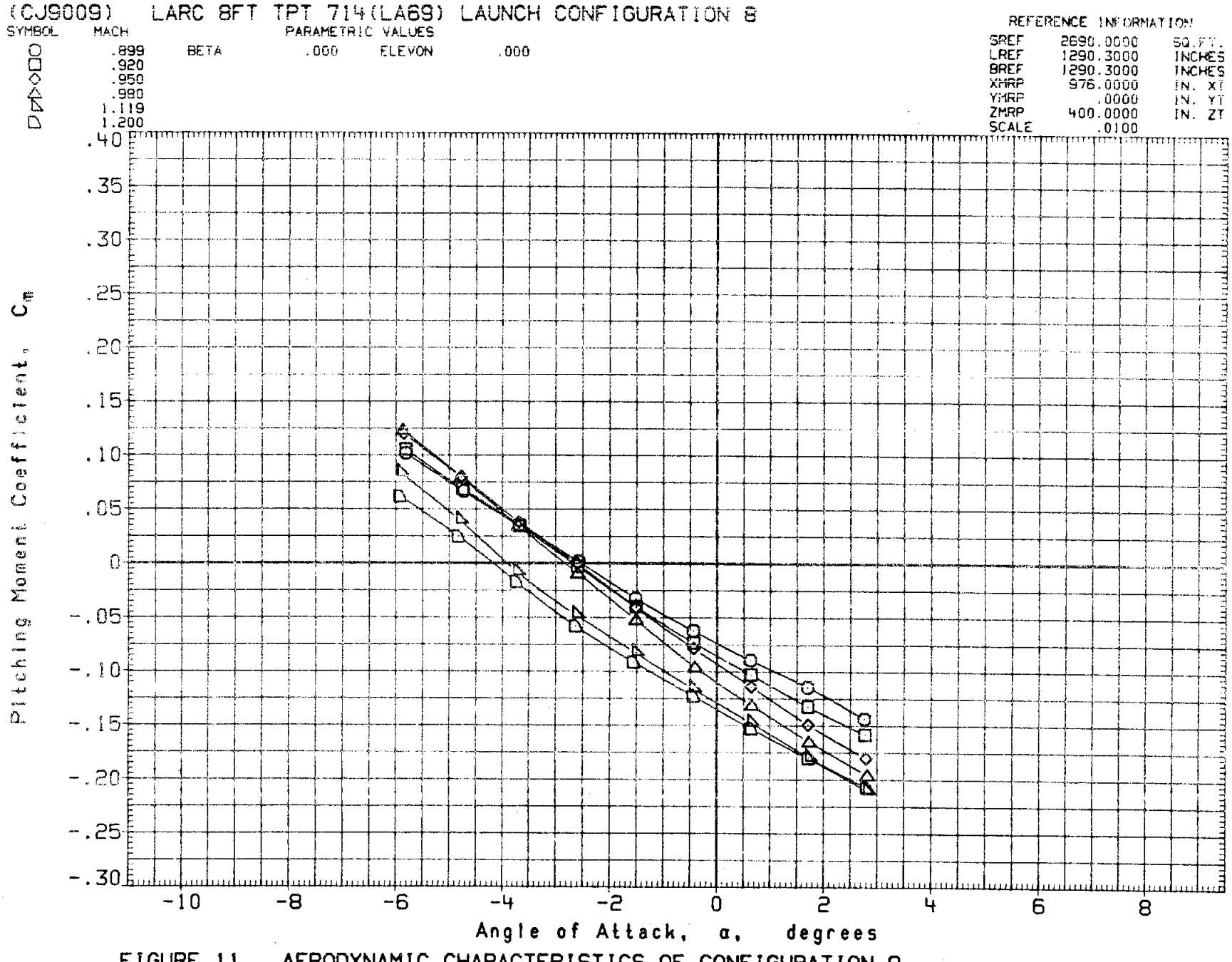

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

(CJ9009) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8

SYMBOL	MACH
○	.350
□	.601
◇	.801
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

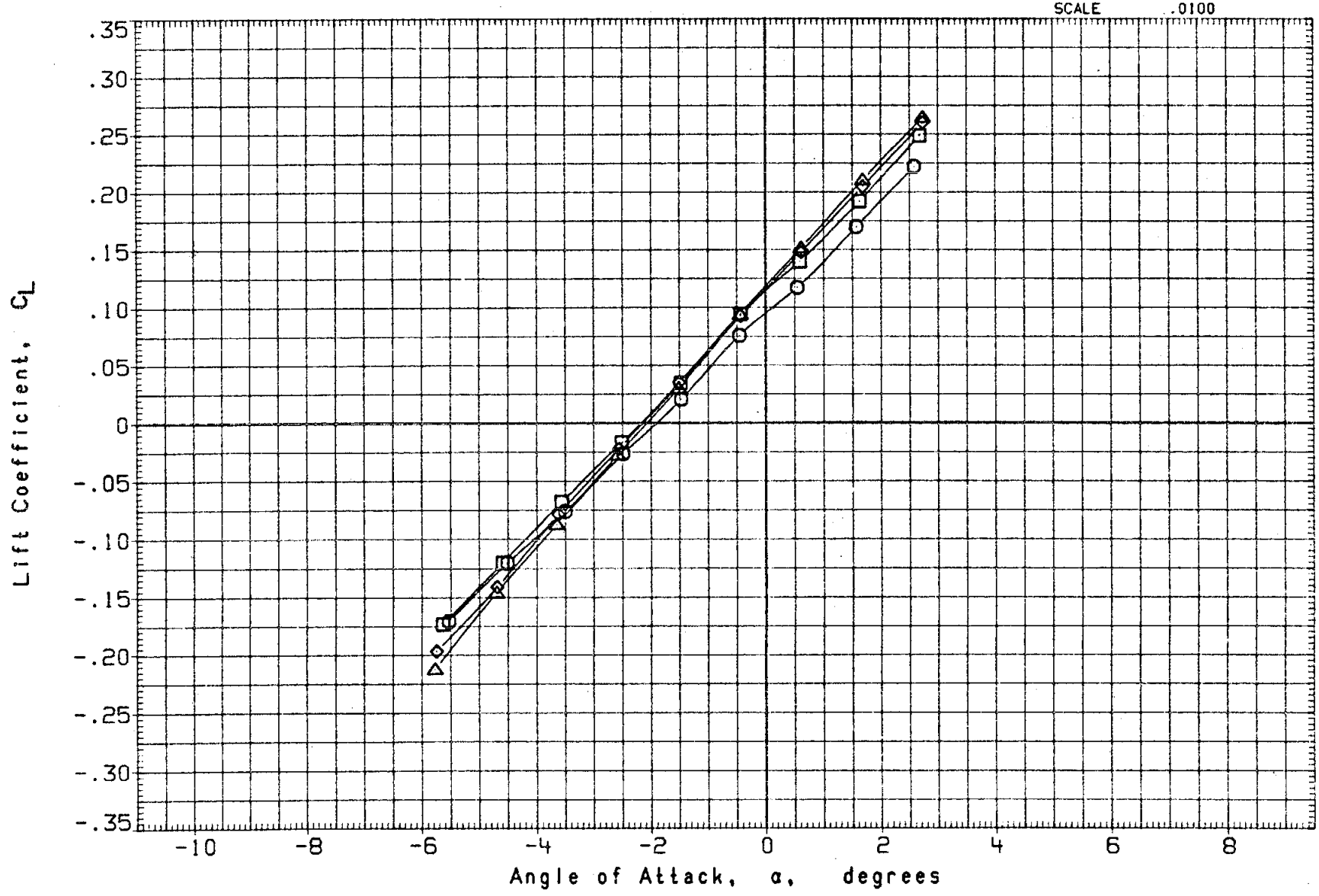

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

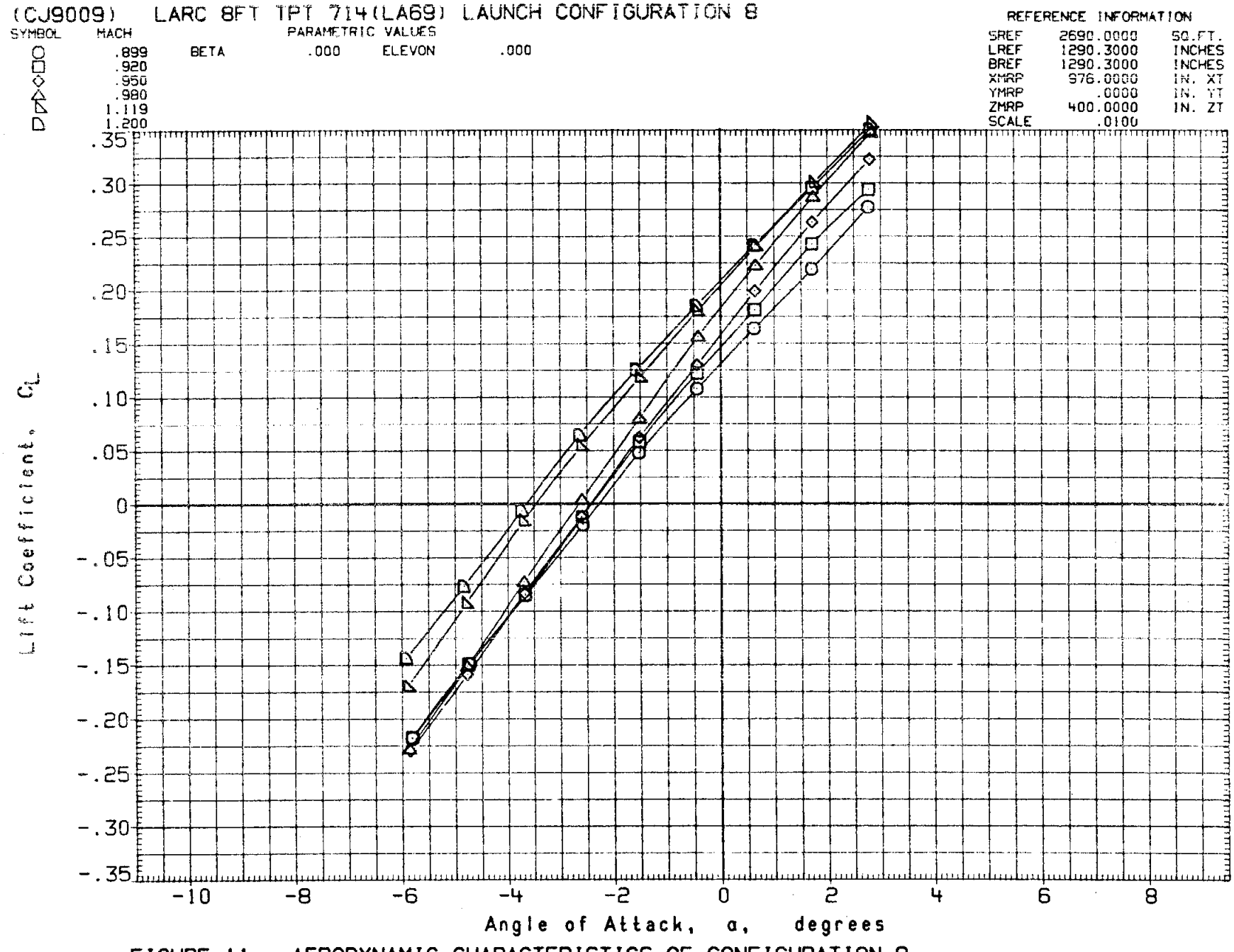

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

(CJ9009) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8

SYMBOL	MACH		PARAMETRIC VALUES		
○	.350	BETA	.000	ELEVON	.000
□	.601				
◇	.801				
△	.850				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

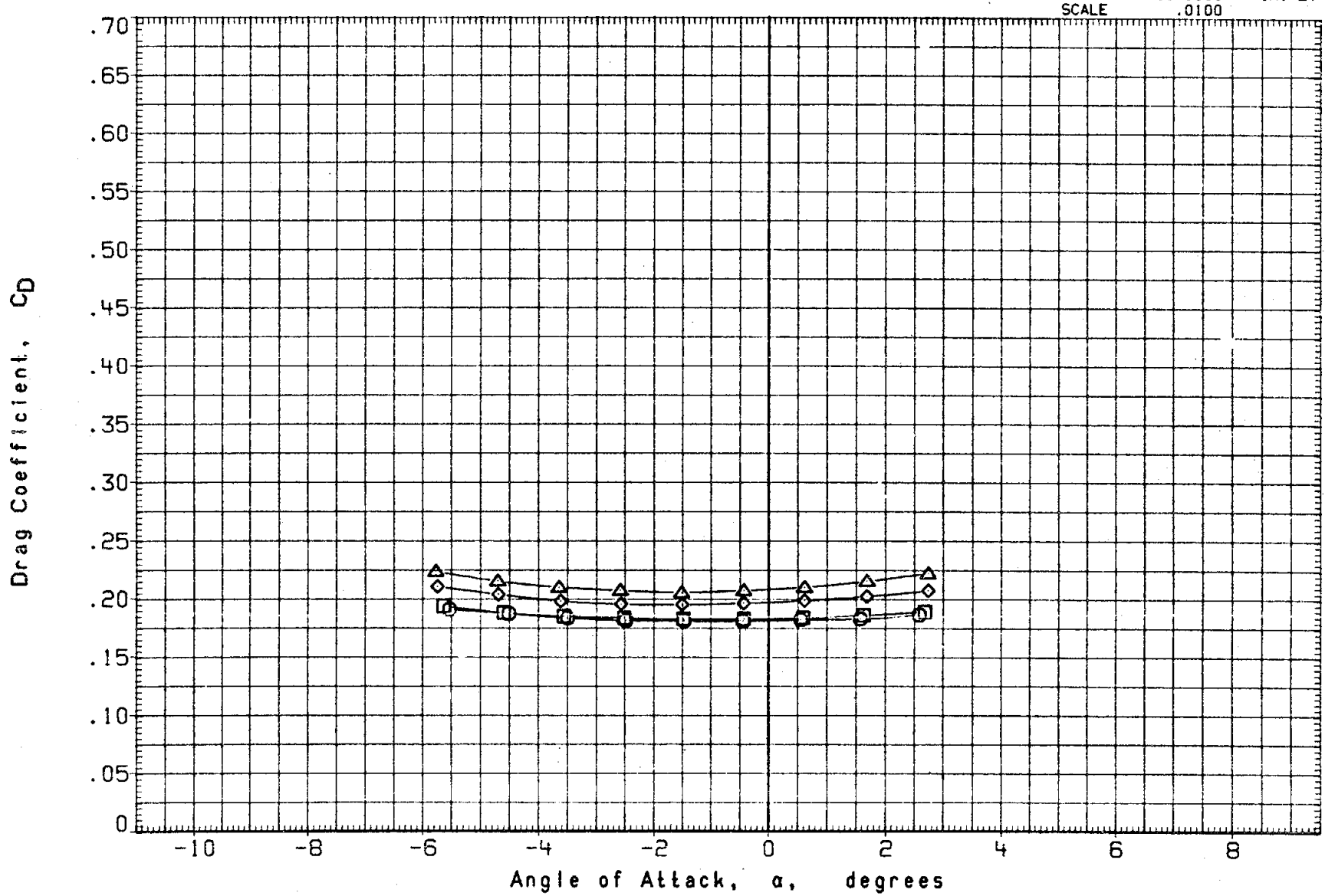

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

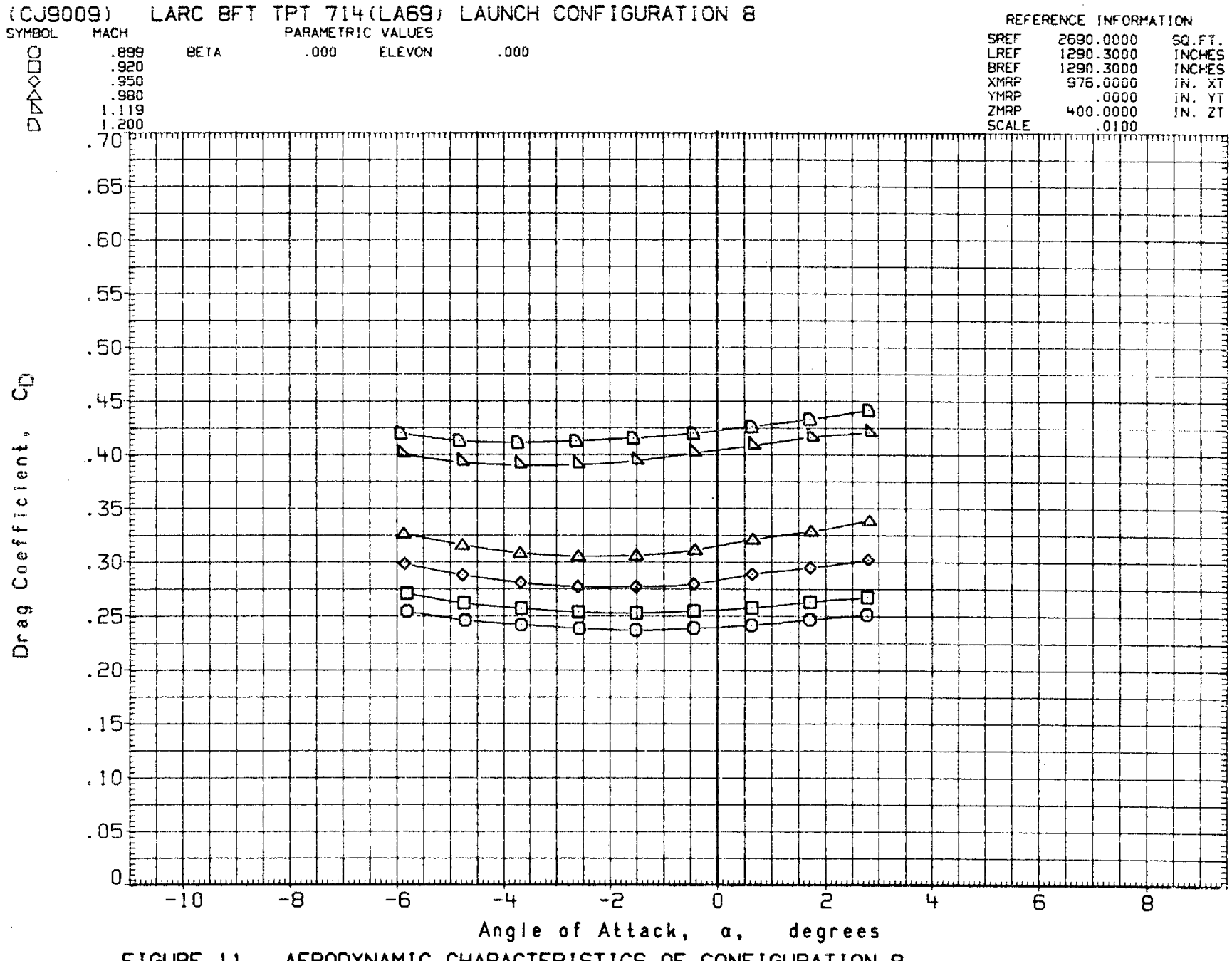

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

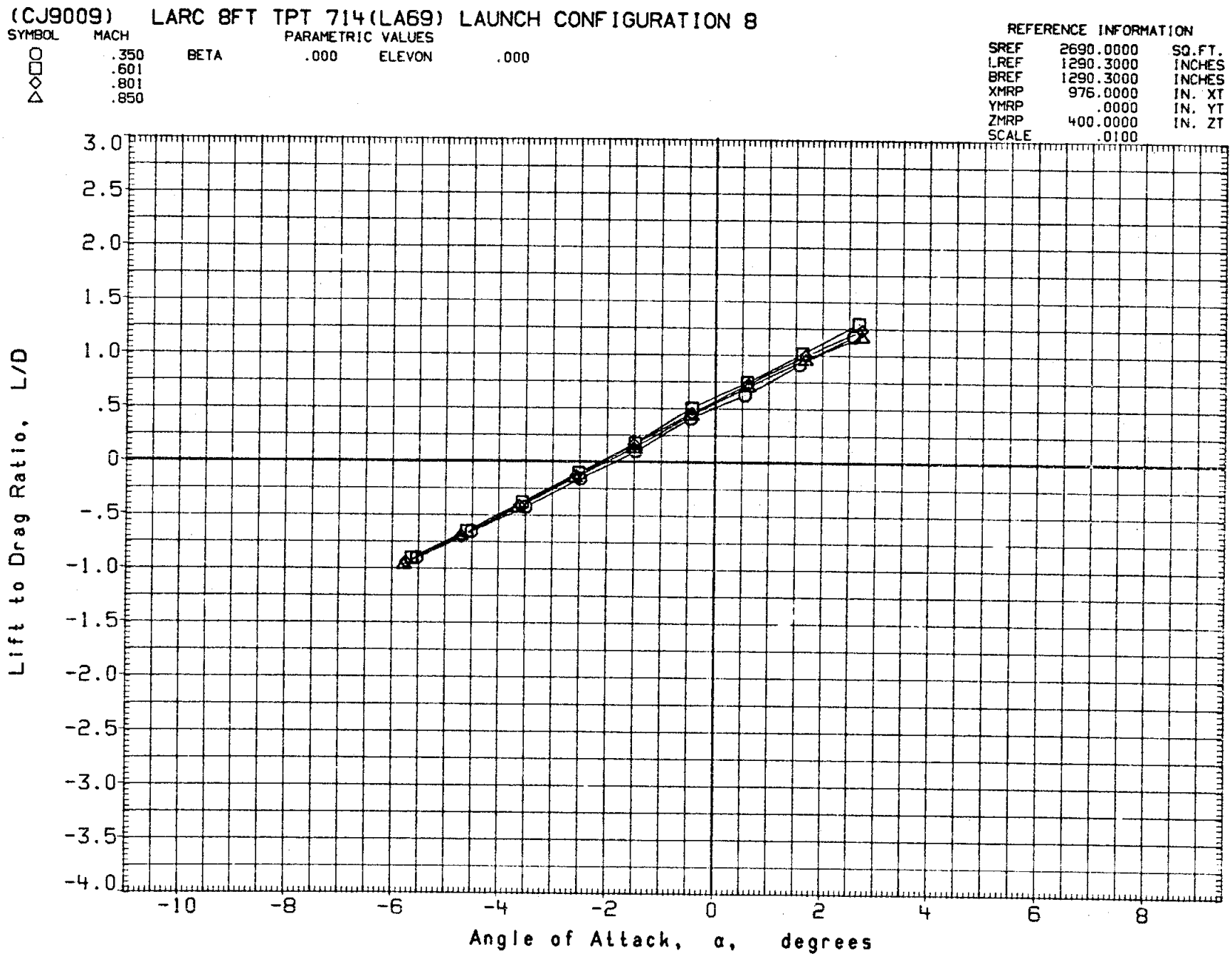

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

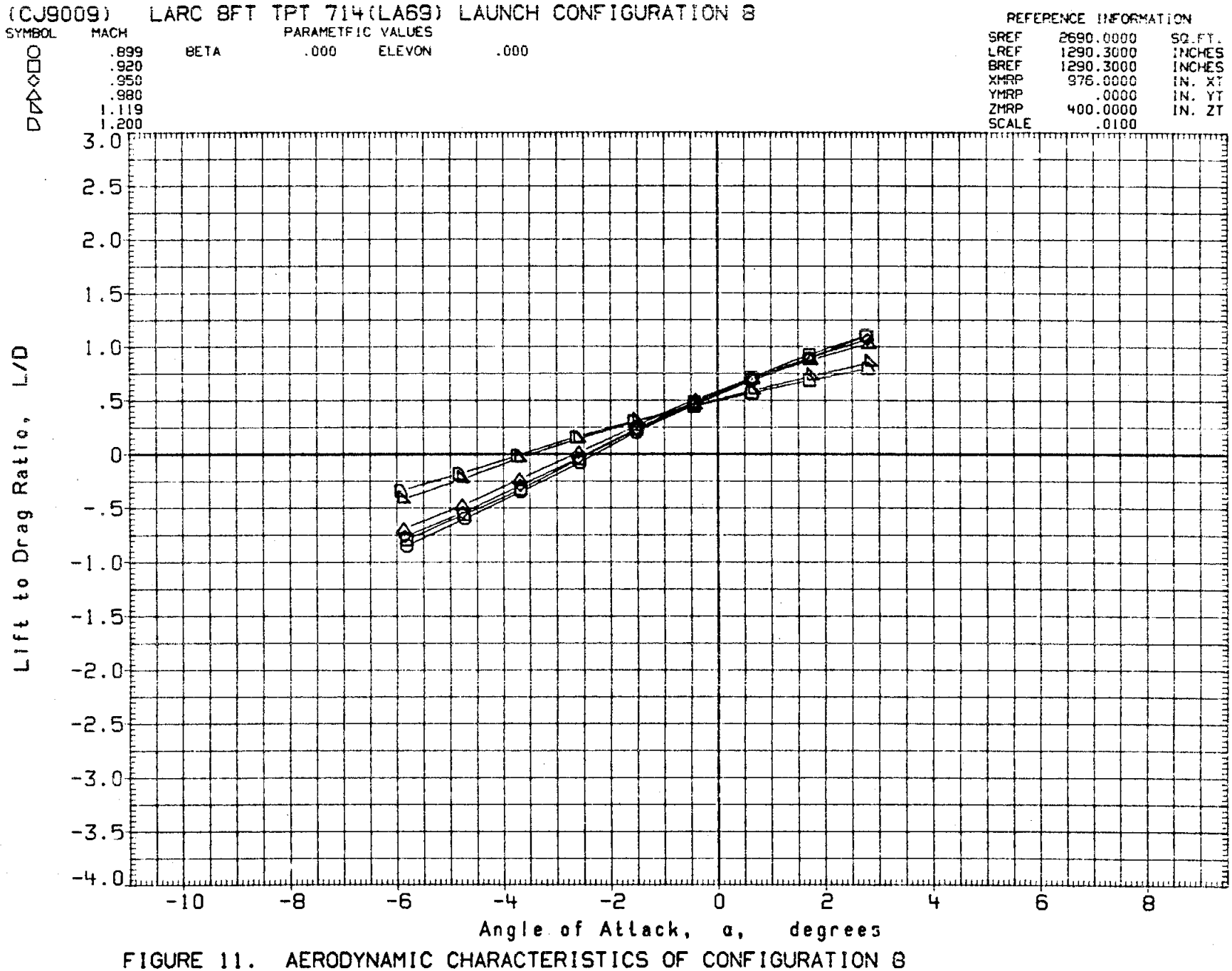

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

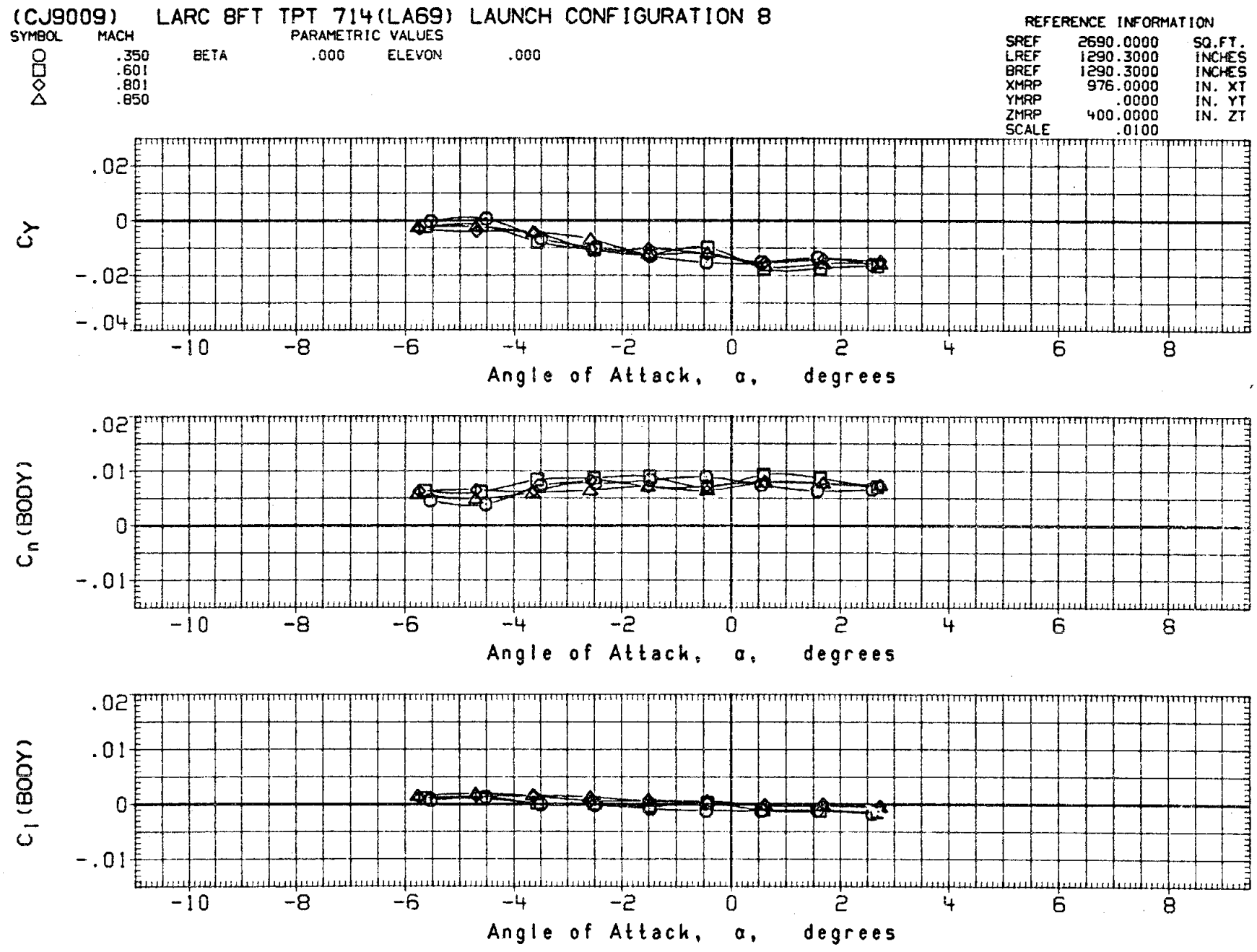

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

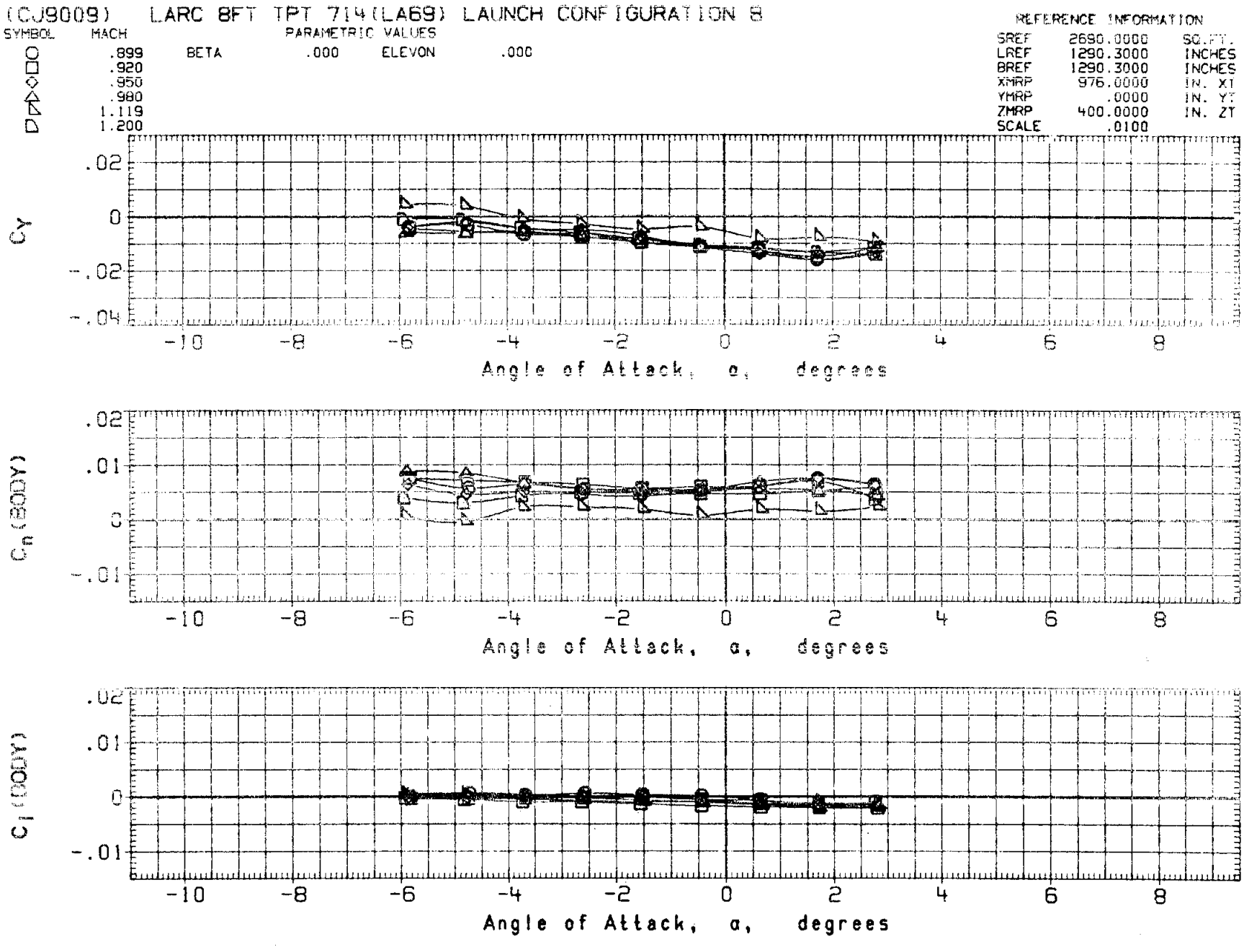

FIGURE 11. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 8

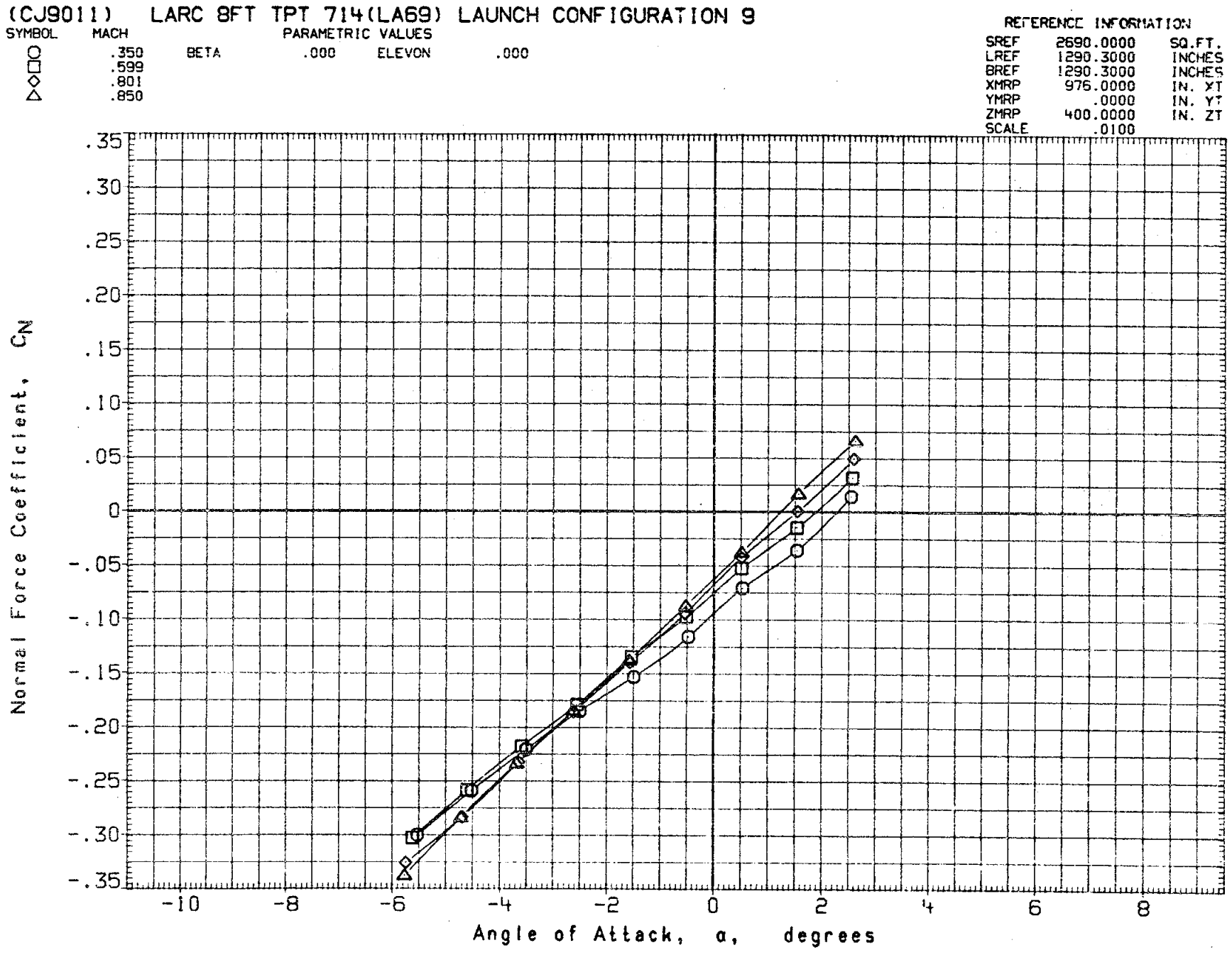

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

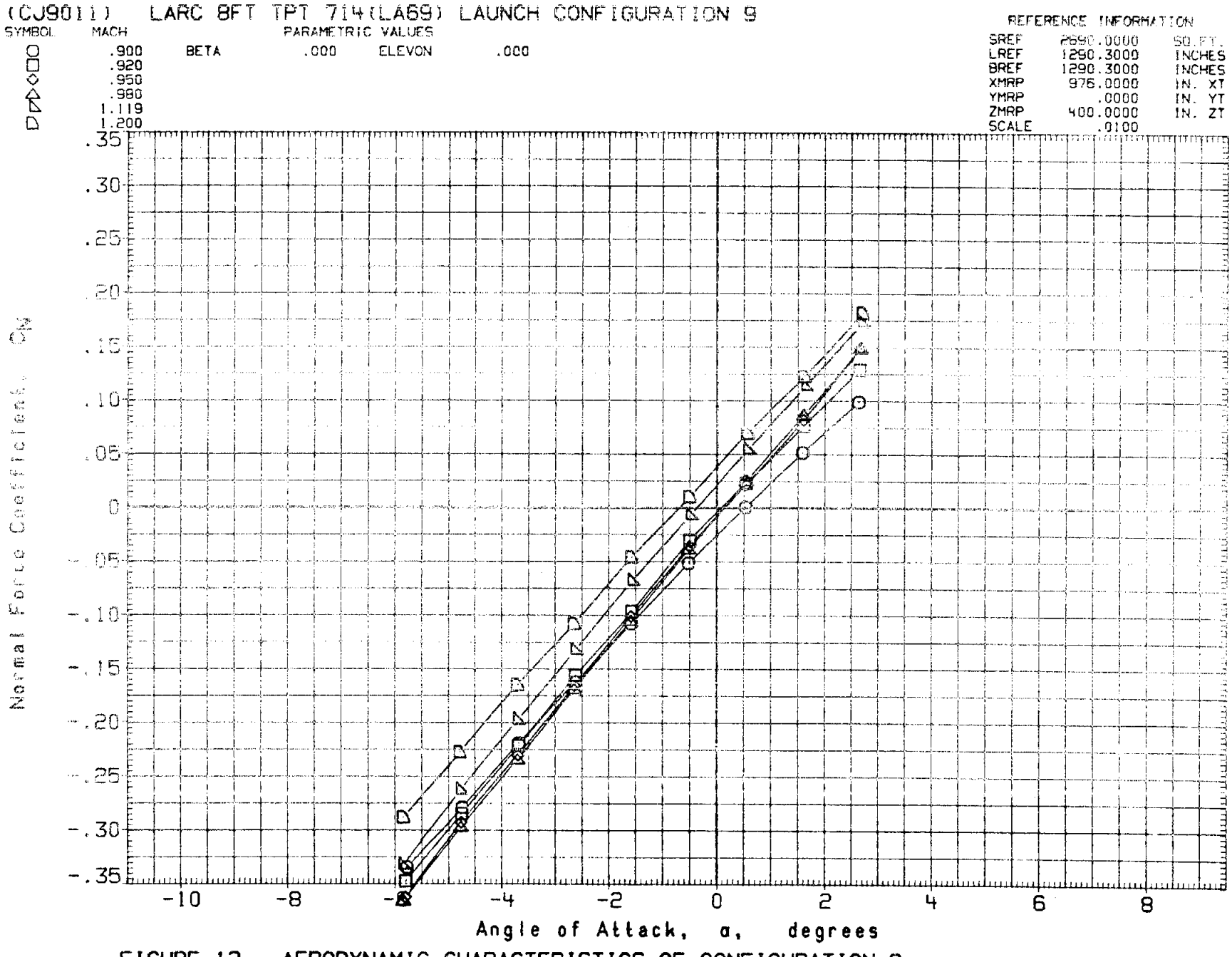

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

(CJ9011) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9

SYMBOL	MACH
○	.350
□	.599
◇	.801
△	.850

PARAMETRIC VALUES

BETA .000 ELEVON .000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

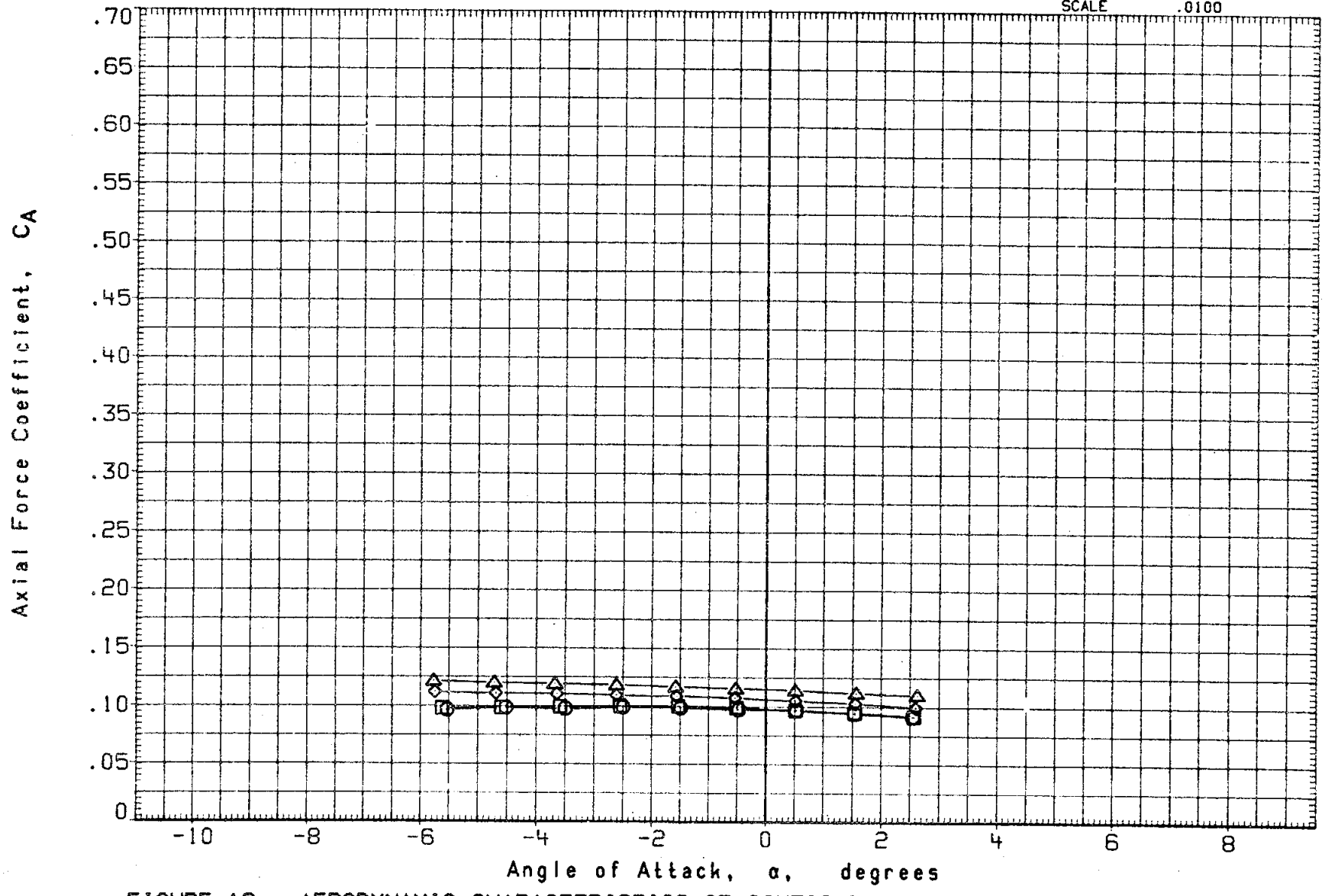

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

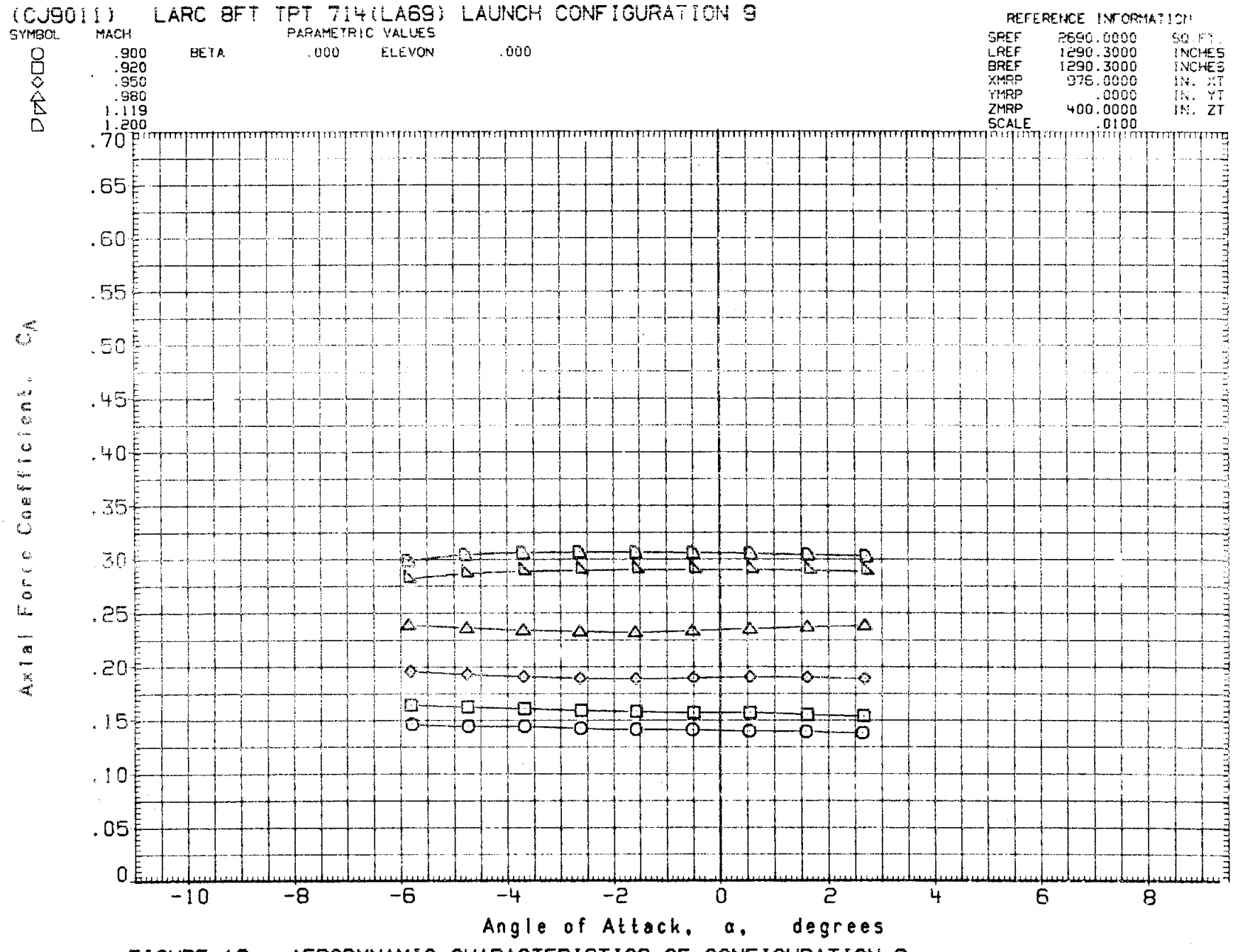

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

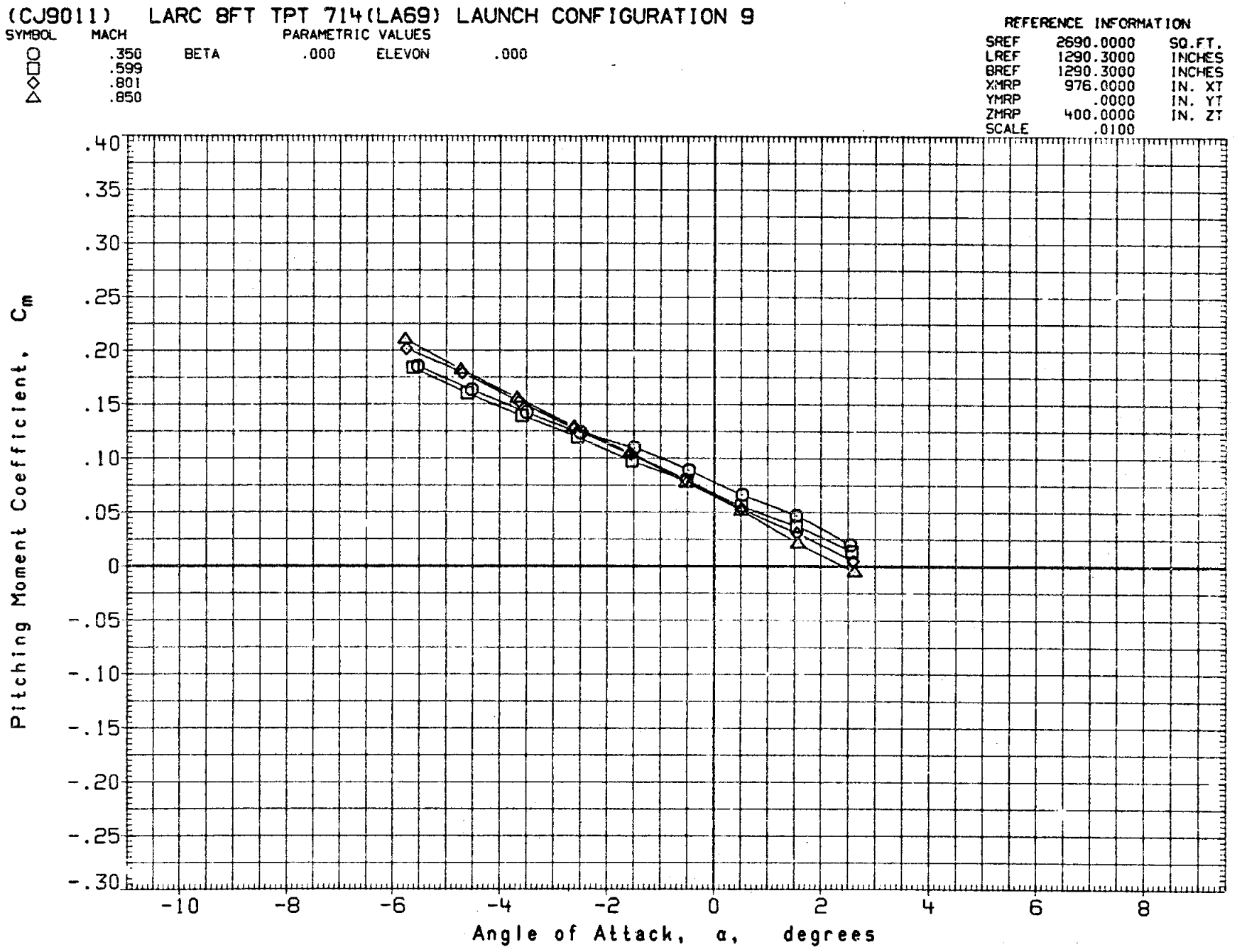

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

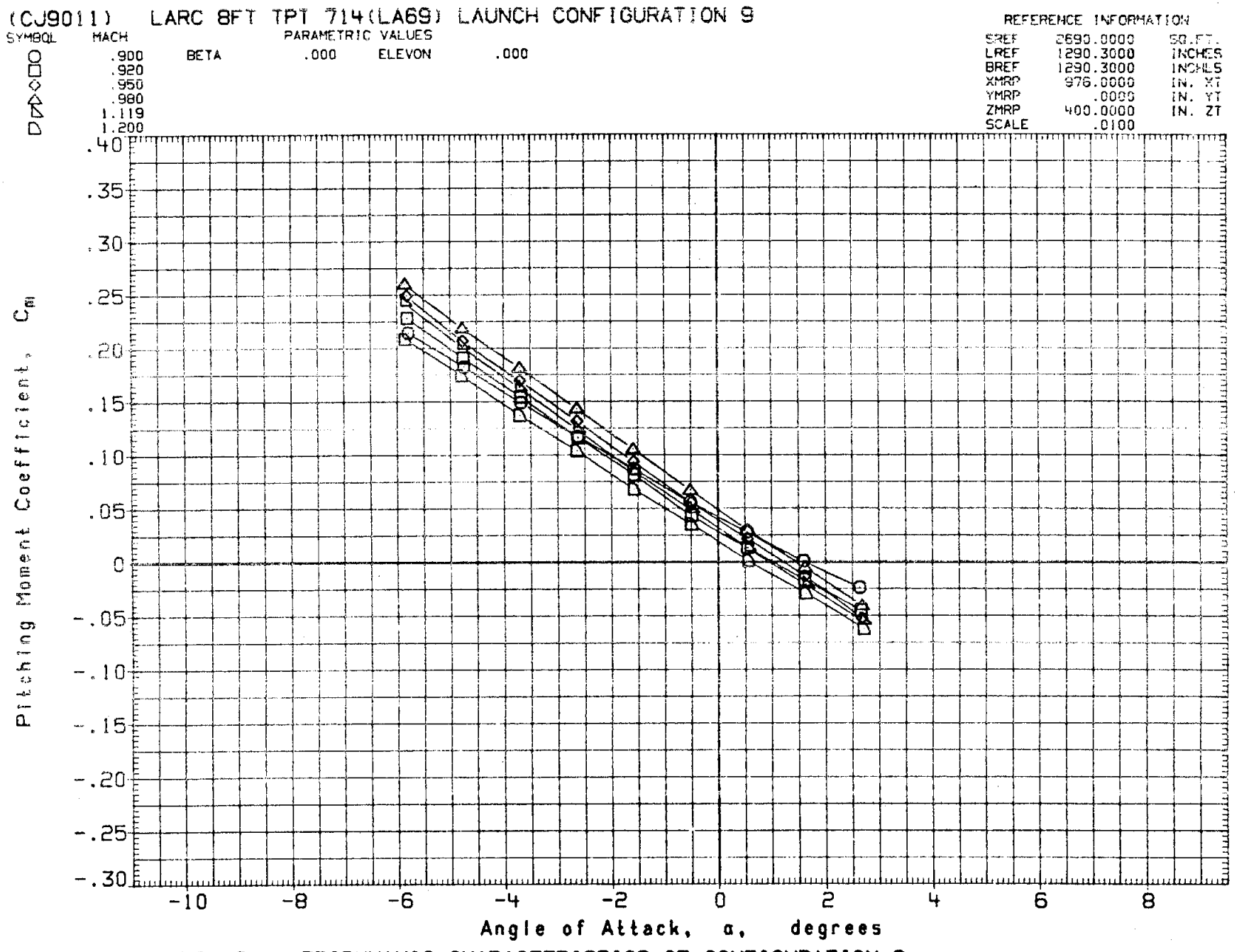

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

(CJ9011) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.599				
◇	.801				
△	.850				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

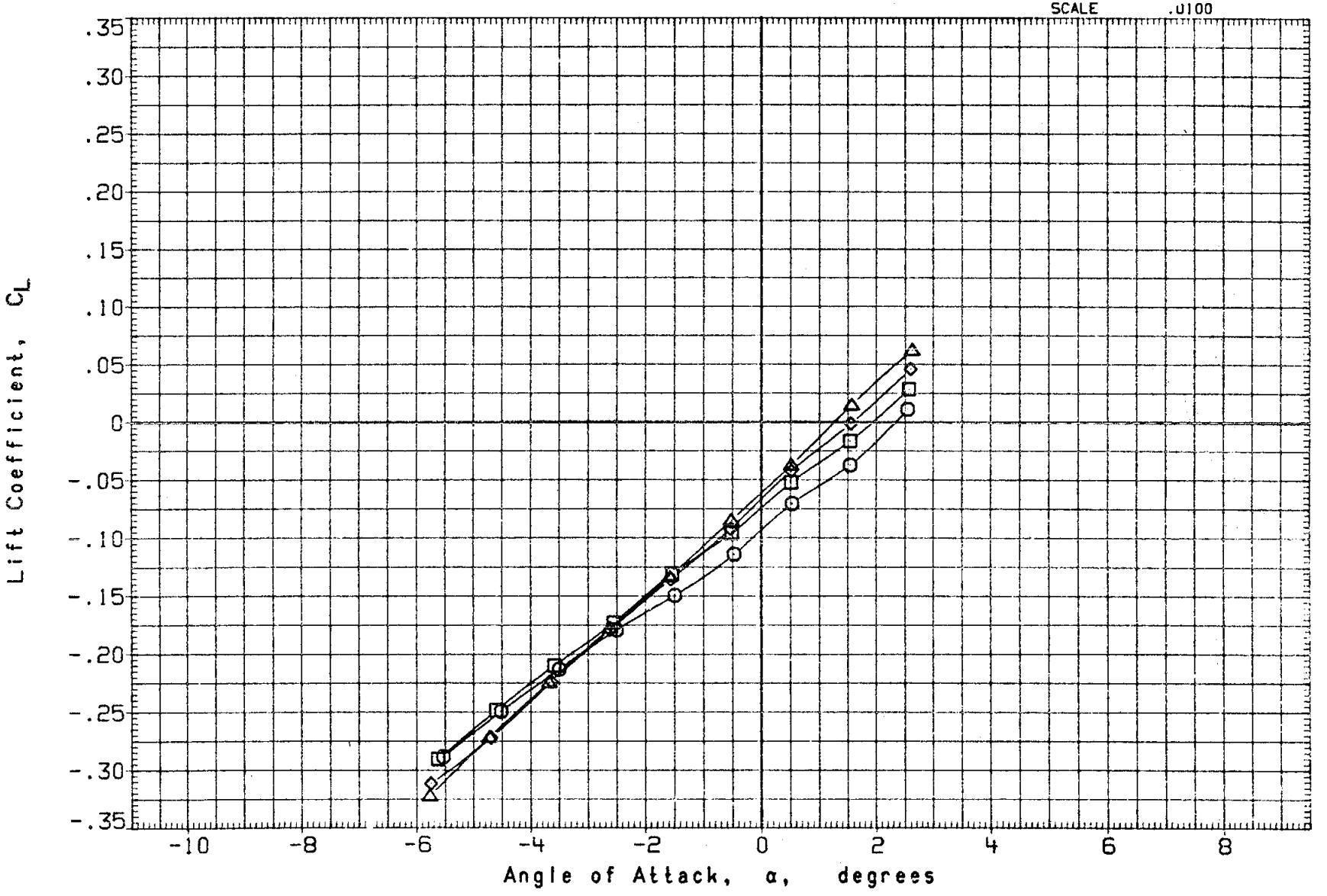

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

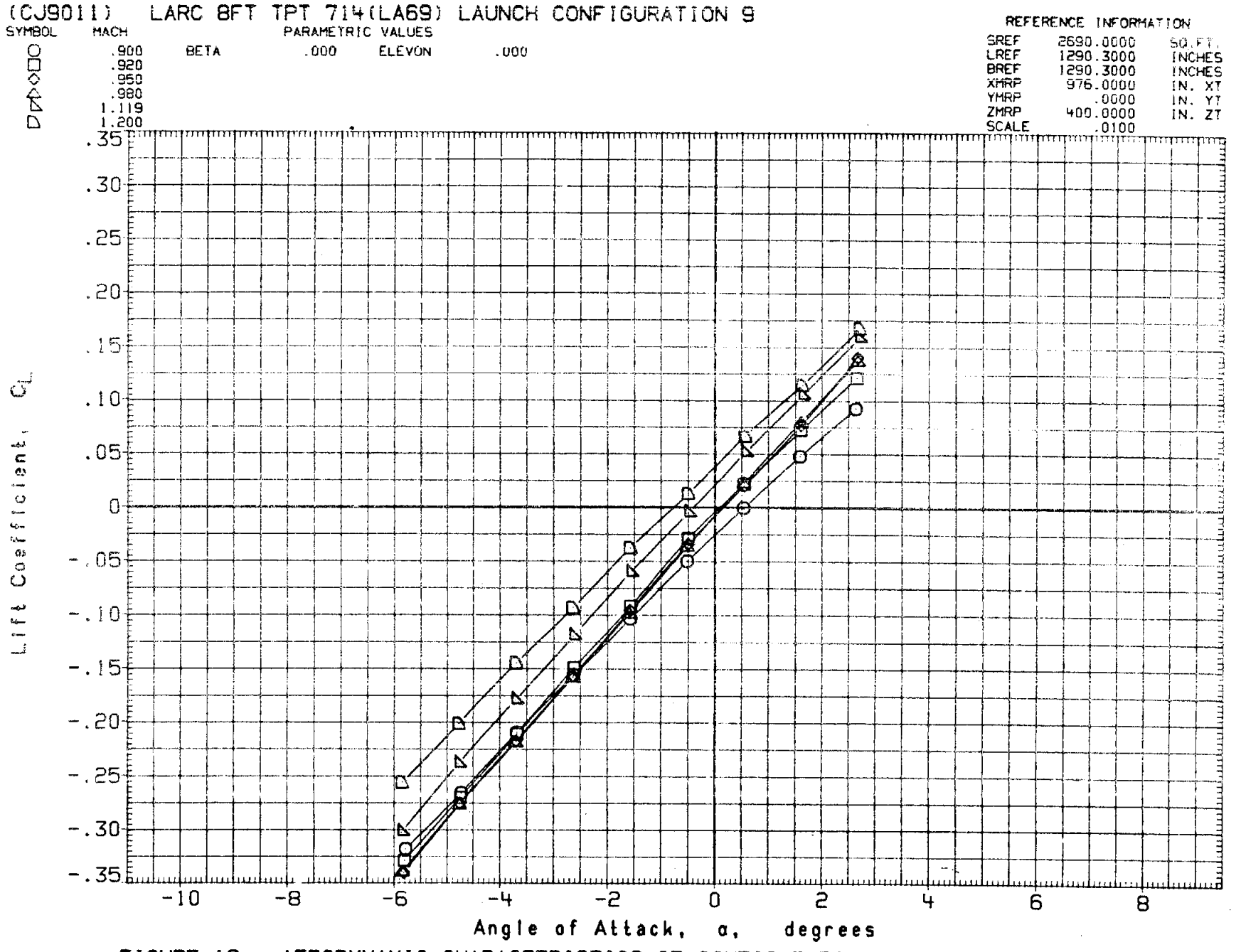

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

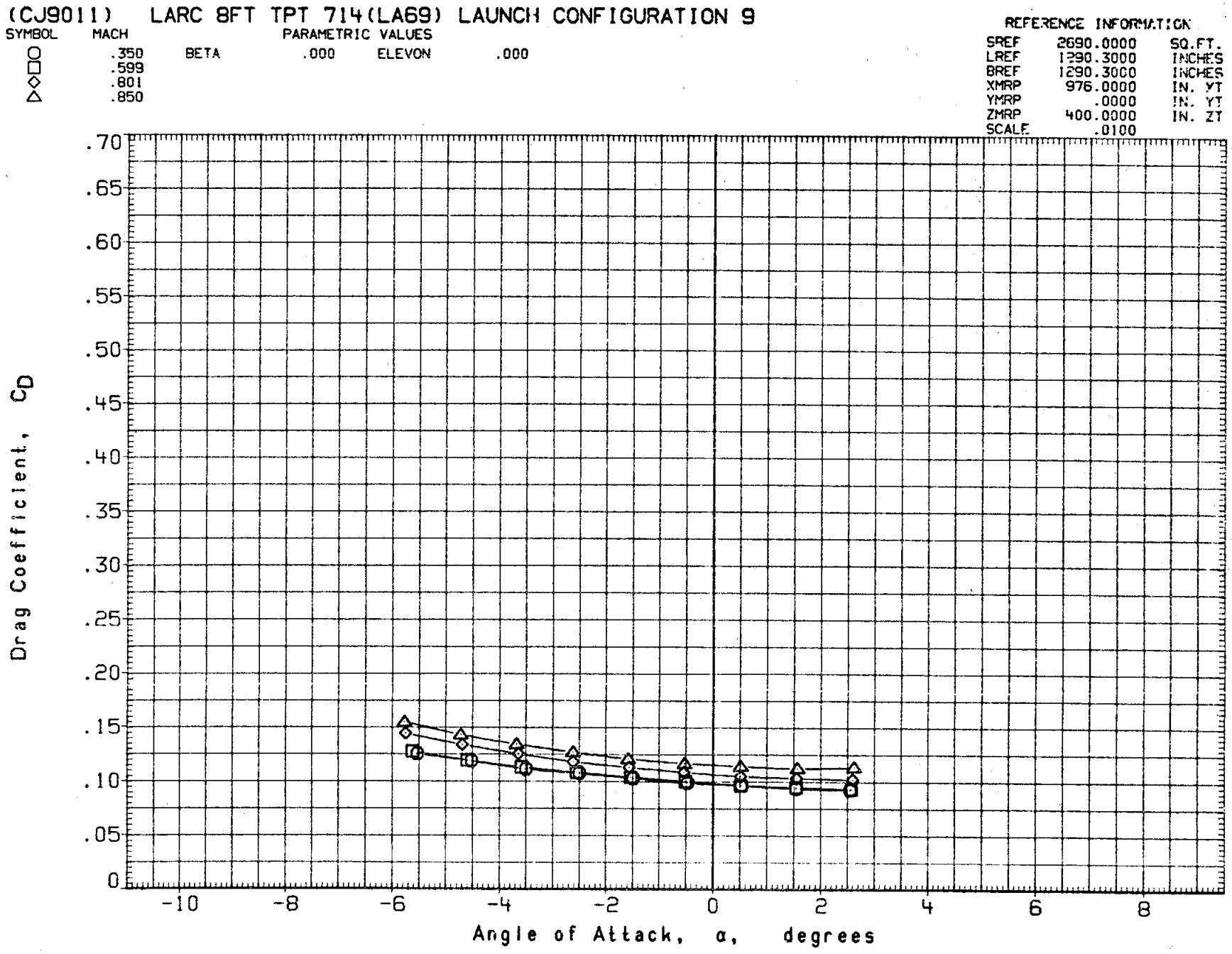

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

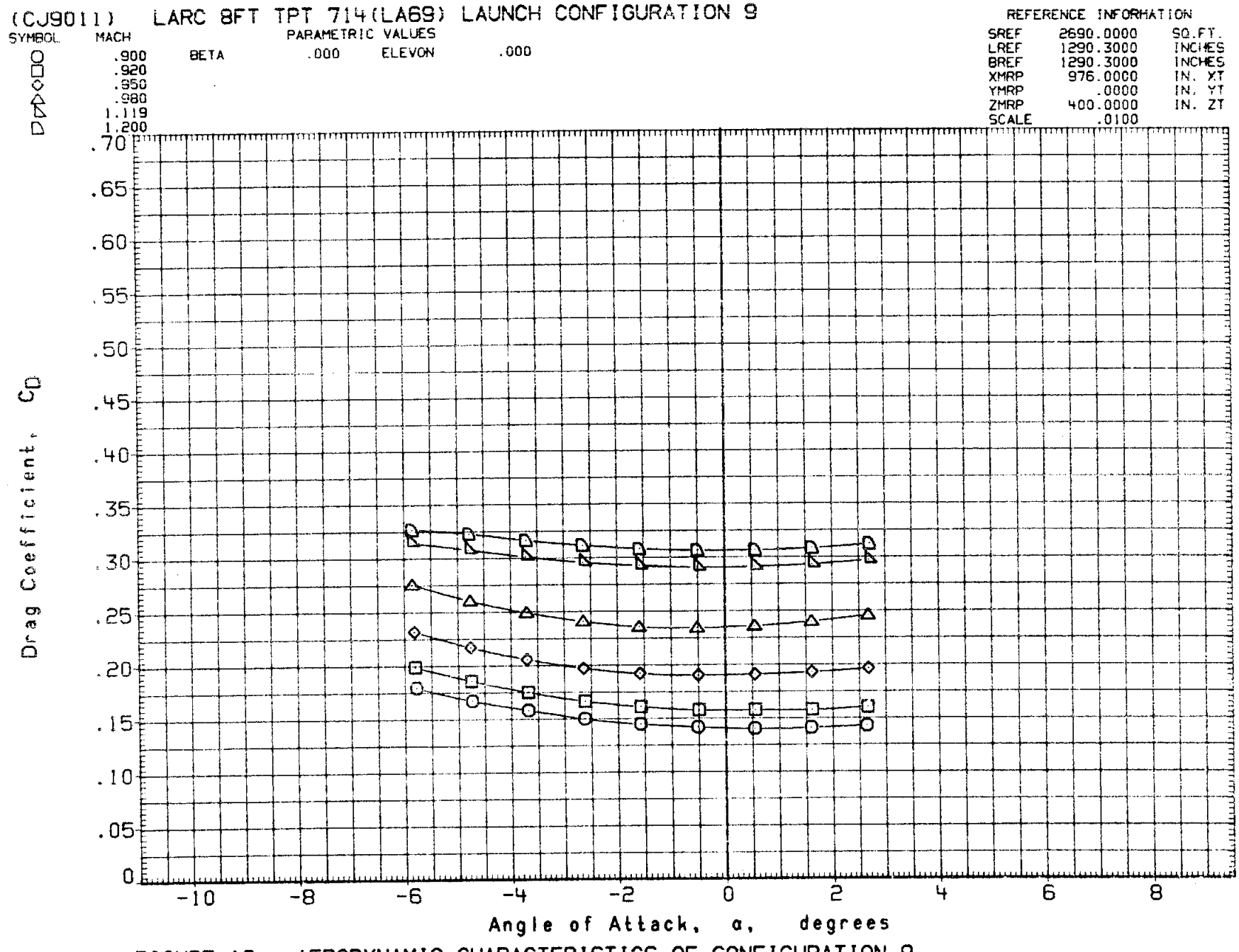

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

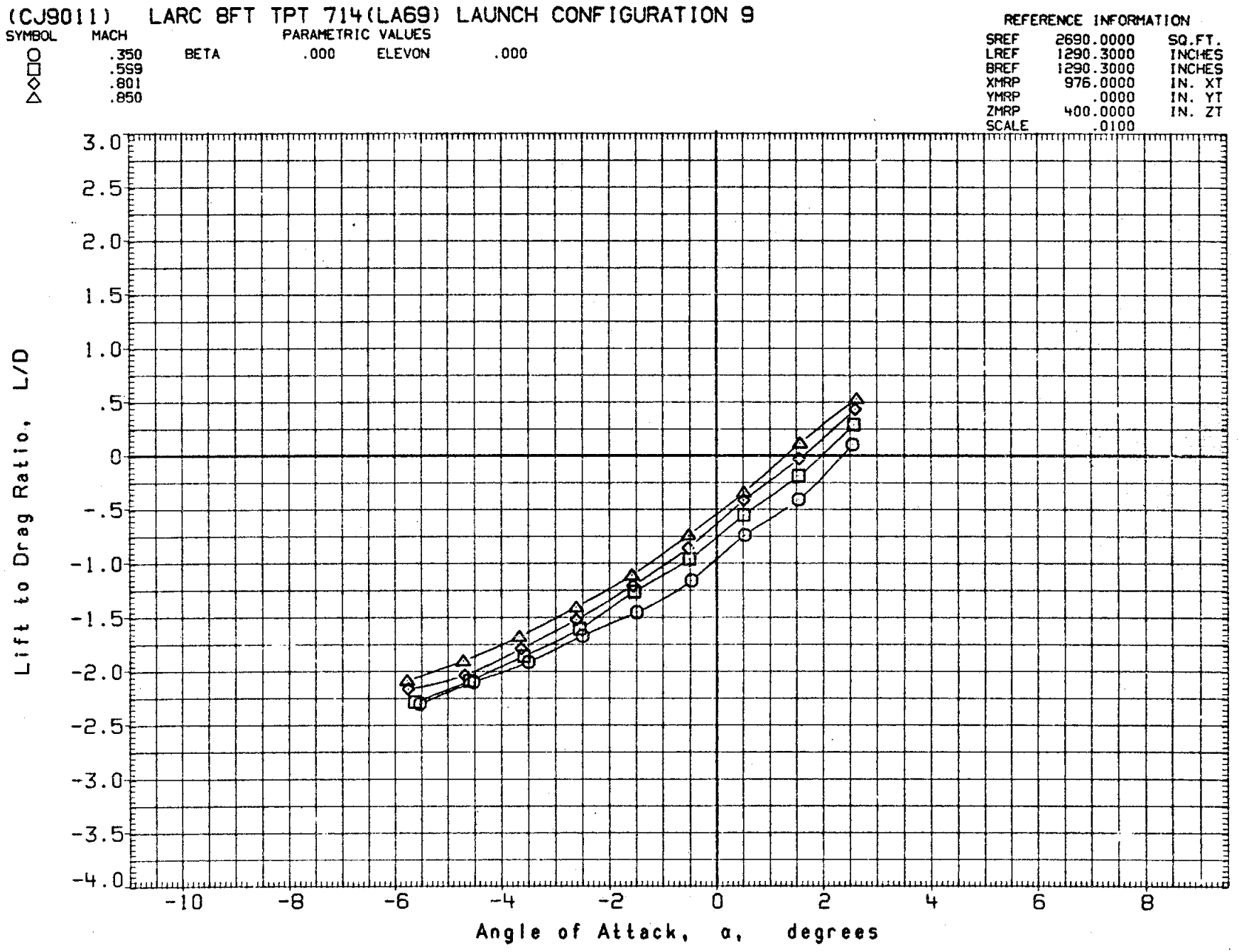

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

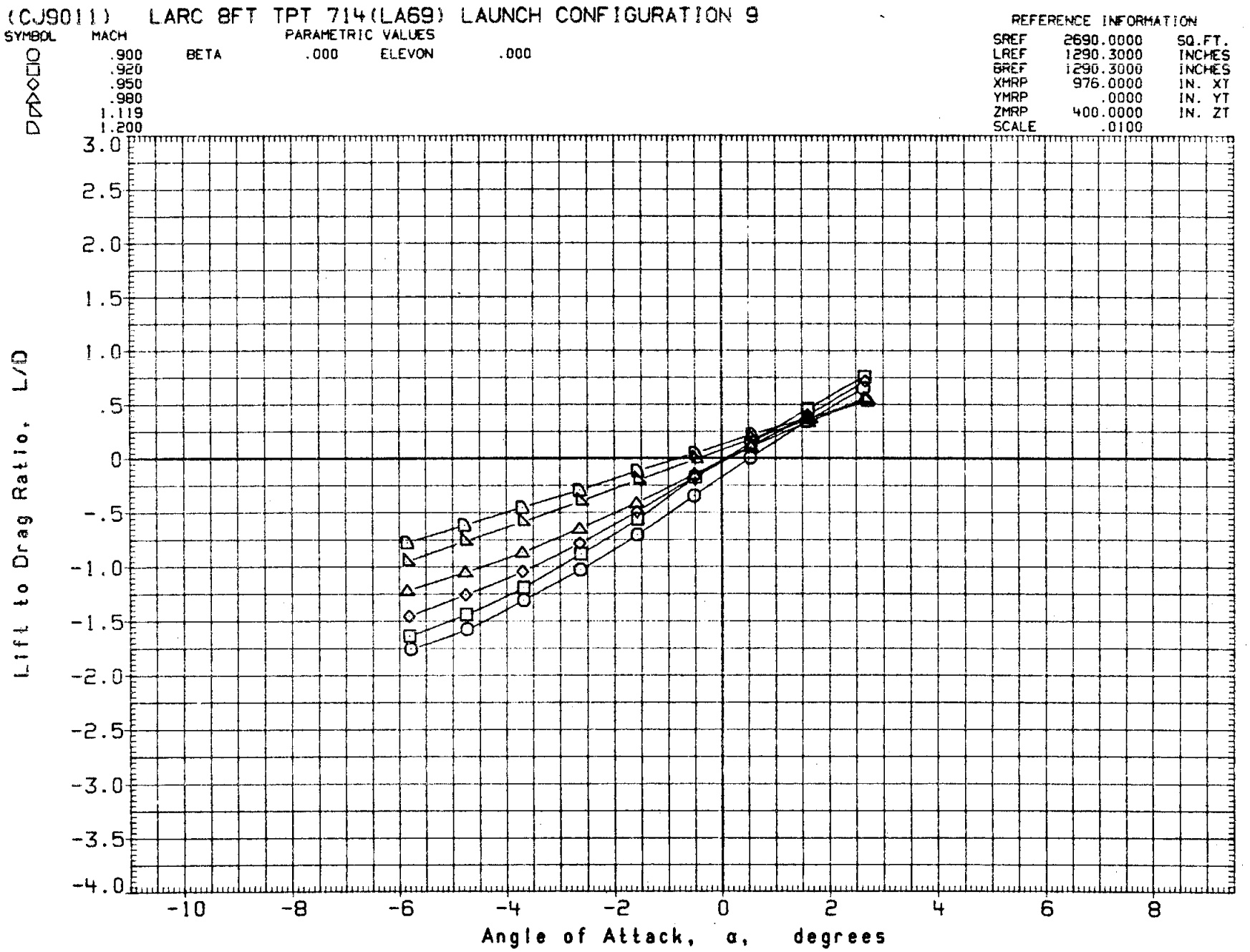

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

(CJ9011) LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9

SYMBOL	MACH	PARAMETRIC VALUES			
○	.350	BETA	.000	ELEVON	.000
□	.599				
◇	.801				
△	.850				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0100	

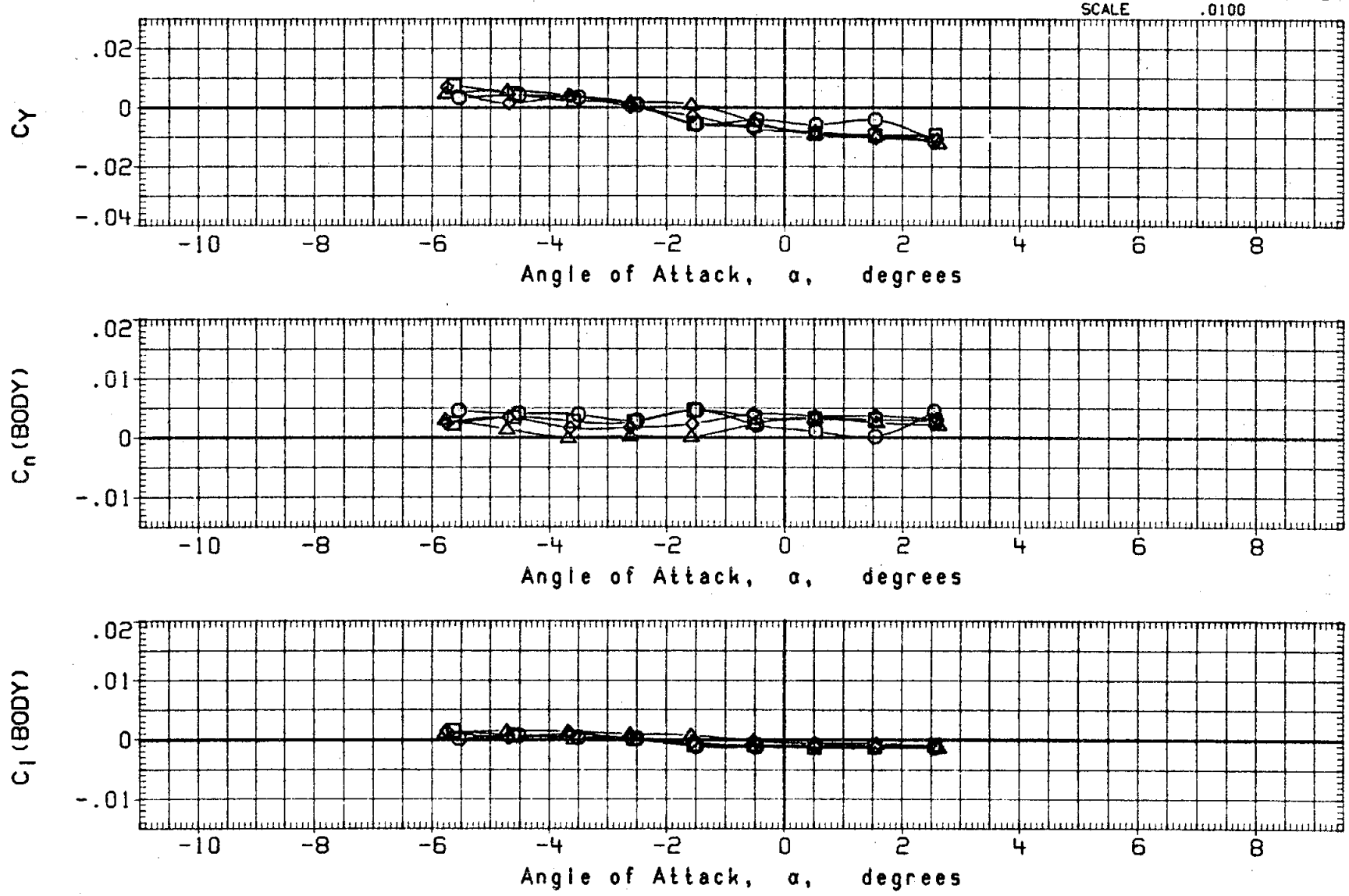

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

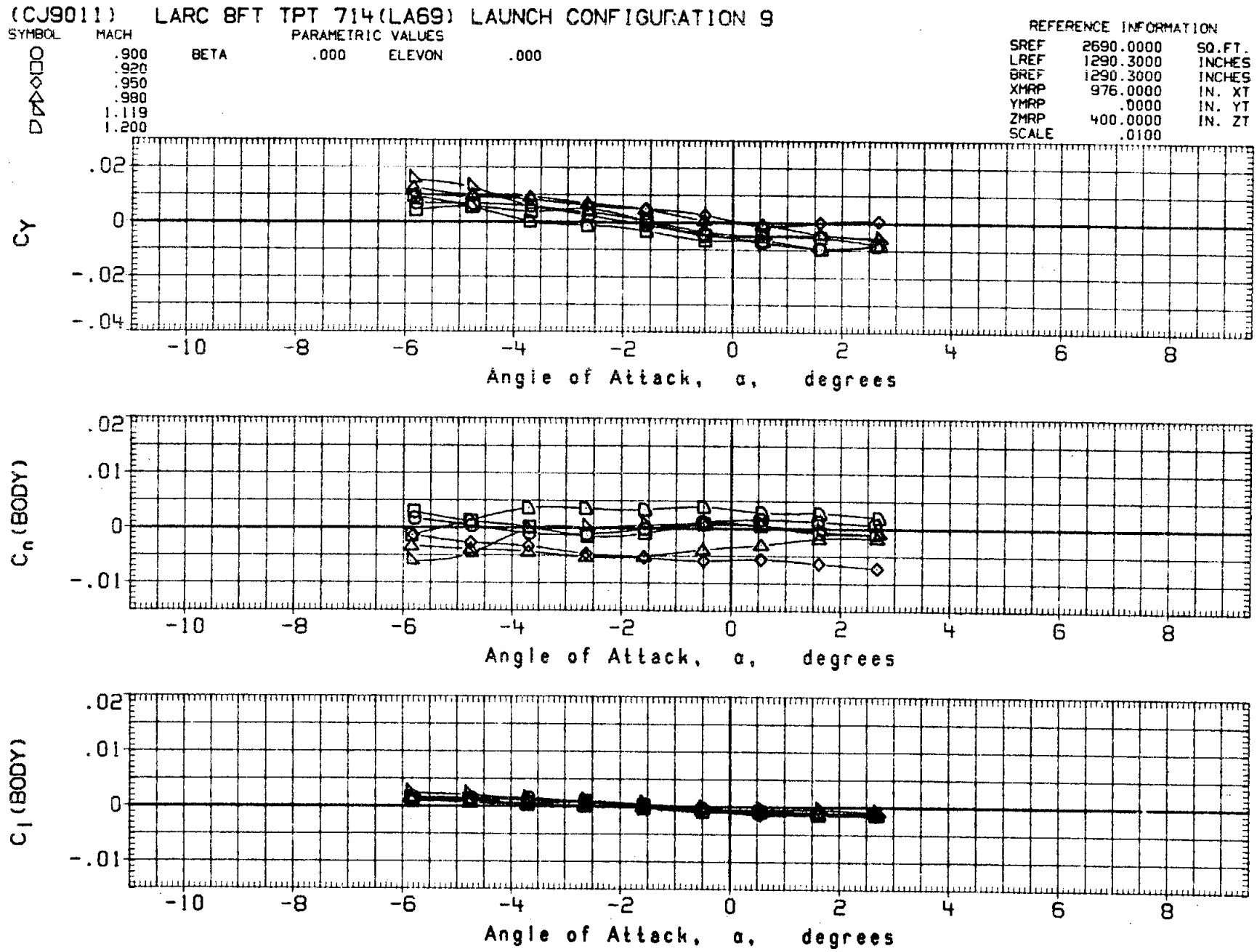

FIGURE 12. AERODYNAMIC CHARACTERISTICS OF CONFIGURATION 9

APPENDIX

TABULATED SOURCE DATA

Tabulations of plotted data are available from DMS upon request.

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (RJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 10/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.349	-5.549	-.29430	.10990	.18447	-.28229	.13785	-2.04785	.00000	2.05651	166.44651	.00000
.349	-4.540	-.25539	.11039	.16445	-.24586	.13026	-1.88744	.00000	2.05595	166.54010	.00000
.349	-3.531	-.21930	.11035	.14546	-.21209	.12365	-1.71523	.00000	2.05544	166.54034	.00000
.349	-2.511	-.17804	.11048	.12437	-.17303	.11818	-1.46412	.00000	2.05365	166.35268	.00000
.350	-1.513	-.14415	.10924	.10750	-.14121	.11301	-1.24961	.00000	2.05493	166.72775	.00000
.350	-.502	-.10256	.10762	.08635	-.10162	.10852	-.93641	.00000	2.05433	166.82109	.00000
.350	.508	-.06105	.10512	.06562	-.06198	.10457	-.59275	.00000	2.05315	166.63369	.00000
.350	1.528	-.02477	.10303	.04812	-.02750	.10233	-.26876	.00000	2.05193	166.63322	.00000
.349	2.517	.01132	.09946	.03000	.00694	.09986	.06949	.00000	2.05091	166.54010	.00000
	GRADIENT	.03813	-.00154	-.01917	.03616	-.00430	.28146	.00000	-.00065	.01649	.00000

RUN NO. 9/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.599	-5.653	-.29228	.11319	.18306	-.27971	.14143	-1.97773	.00000	3.17456	417.82416	.00000
.599	-4.616	-.24682	.11331	.15902	-.23690	.13280	-1.78389	.00000	3.16643	418.16140	.00000
.599	-3.604	-.21154	.11326	.14146	-.20400	.12634	-1.61474	.00000	3.15462	417.90074	.00000
.599	-2.567	-.16862	.11261	.11963	-.16341	.12005	-1.36119	.00000	3.15118	417.38589	.00000
.599	-1.550	-.12556	.11156	.09807	-.12250	.11491	-1.06600	.00000	3.15877	416.96220	.00000
.599	-.525	-.08451	.10971	.07711	-.08350	.11048	-.75581	.00000	3.16594	416.96706	.00000
.598	.500	-.04357	.10765	.05609	-.04451	.10726	-.41495	.00000	3.17364	416.88717	.00000
.598	1.526	-.00139	.10490	.03421	-.00418	.10482	-.03986	.00000	3.17654	416.98650	.00000
.599	2.544	.04399	.10094	.01096	.03946	.10279	.38392	.00000	3.18004	417.82904	.00000
	GRADIENT	.04073	-.00169	-.02075	.03872	-.00419	.30464	.00000	.00325	-.09763	.00000

RUN NO. 8/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.801	-5.750	-.31155	.12502	.19976	-.29746	.15561	-1.91158	.00000	3.78675	623.82864	.00000
.800	-4.703	-.27092	.12321	.17852	-.25990	.14501	-1.79229	.00000	3.78445	623.70095	.00000
.801	-3.668	-.21959	.12154	.15144	-.21147	.13535	-1.56240	.00000	3.78299	624.37070	.00000
.801	-2.626	-.17338	.12024	.12706	-.16769	.12806	-1.30947	.00000	3.77765	623.90193	.00000
.801	-1.587	-.13108	.11885	.10517	-.12773	.12243	-1.04332	.00000	3.77803	624.09655	.00000
.800	-.536	-.08609	.11704	.08190	-.08499	.11784	-.72124	.00000	3.77583	623.34069	.00000
.801	.499	-.03646	.11440	.05566	-.03746	.11408	-.32833	.00000	3.77745	623.94998	.00000
.800	1.562	.01147	.11162	.03012	.00842	.11189	.07526	.00000	3.77645	623.54803	.00000
.801	2.585	.05876	.10826	.00518	.05382	.11080	.48573	.00000	3.77957	624.29743	.00000
	GRADIENT	.04474	-.00198	-.02349	.04257	-.00460	.31284	.00000	-.00080	-.00654	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (RJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 7/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.850	-5.768	-.32256	.13599	.21023	-.30726	.16771	-1.83208	.00000	3.89376	668.72044	.00000
.850	-4.720	-.27317	.13302	.18353	-.26130	.15505	-1.68521	.00000	3.89164	668.17279	.00000
.850	-3.681	-.22121	.13191	.15564	-.21228	.14584	-1.45554	.00000	3.89094	669.08065	.00000
.850	-2.636	-.17313	.12961	.12962	-.16699	.13743	-1.21506	.00000	3.88948	668.61895	.00000
.851	-1.587	-.12269	.12846	.10295	-.11908	.13180	-.90347	.00000	3.88815	669.23830	.00000
.850	-.540	-.07336	.12561	.07626	-.07219	.12630	-.57159	.00000	3.88481	668.14916	.00000
.851	.507	-.02370	.12393	.04939	-.02479	.12372	-.20041	.00000	3.88816	669.32292	.00000
.849	1.567	.02983	.12060	.02018	.02652	.12137	.21848	.00000	3.88369	667.75759	.00000
.850	2.601	.07578	.11970	-.00427	.07027	.12302	.57123	.00000	3.88647	668.68154	.00000
	GRADIENT	.04770	-.00193	-.02568	.04534	-.00447	.31313	.00000	-.00087	-.02376	.00000

RUN NO. 6/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.900	-5.783	-.31495	.15938	.20866	-.29729	.19030	-1.56217	.00000	3.98096	710.71460	.00000
.900	-4.729	-.25876	.15692	.17633	-.24494	.17772	-1.37820	.00000	3.98282	711.04364	.00000
.901	-3.672	-.19745	.15599	.14076	-.18706	.16831	-1.11138	.00000	3.98333	711.81552	.00000
.901	-2.612	-.13571	.15396	.10540	-.12855	.15999	-.80349	.00000	3.98180	711.25382	.00000
.900	-1.568	-.07912	.15284	.07318	-.07491	.15495	-.48345	.00000	3.97981	710.93854	.00000
.900	-.514	-.02306	.15217	.04174	-.02169	.15237	-.14239	.00000	3.98034	711.02537	.00000
.901	.542	.03329	.15321	.01124	.03184	.15352	.20740	.00000	3.98074	711.68768	.00000
.900	1.591	.08026	.15209	-.01312	.07601	.15425	.49277	.00000	3.97834	710.70997	.00000
.901	2.640	.12783	.15323	-.03693	.12064	.15895	.75895	.00000	3.97987	711.27212	.00000
	GRADIENT	.05268	-.00055	-.02914	.04987	-.00253	.29808	.00000	-.00055	-.02867	.00000

RUN NO. 5/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.803	-.31621	.17396	.21175	-.29700	.20504	-1.44850	.00000	4.02028	727.02213	.00000
.920	-4.731	-.25100	.17178	.17279	-.23597	.19190	-1.22968	.00000	4.01765	726.94460	.00000
.920	-3.670	-.18637	.16979	.13469	-.17512	.18137	-.96555	.00000	4.01533	726.83752	.00000
.920	-2.623	-.12781	.16886	.10098	-.11995	.17453	-.68727	.00000	4.01233	726.63370	.00000
.920	-1.552	-.06430	.16881	.06411	-.05971	.17049	-.35022	.00000	4.01171	726.81834	.00000
.920	-.492	-.00340	.16885	.02969	-.00195	.16888	-.01157	.00000	4.01138	726.59450	.00000
.920	.554	.05400	.16985	-.00227	.05235	.17037	.30731	.00000	4.01257	727.12916	.00000
.920	1.608	.10654	.16871	-.03099	.10176	.17163	.59292	.00000	4.01120	726.68246	.00000
.920	2.660	.15740	.16756	-.05831	.14946	.17469	.85555	.00000	4.01024	726.26429	.00000
	GRADIENT	.05557	-.00036	-.03145	.05250	-.00207	.28982	.00000	-.00081	-.04814	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (RJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 4/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.823	-.33361	.20354	.23384	-.31123	.23634	-1.31688	.00000	4.05929	749.59276	.00000
.951	-4.759	-.26719	.20166	.19370	-.24954	.22313	-1.11834	.00000	4.06009	749.88469	.00000
.951	-3.697	-.20323	.20120	.15616	-.18983	.21389	-.88753	.00000	4.06058	750.01536	.00000
.951	-2.621	-.13694	.20086	.11753	-.12762	.20691	-.61676	.00000	4.05984	749.81935	.00000
.950	-1.558	-.07306	.20097	.08051	-.06757	.20288	-.33305	.00000	4.05999	749.83095	.00000
.950	-.505	-.00968	.20139	.04383	-.00790	.20147	-.03923	.00000	4.05801	749.58117	.00000
.951	.559	.05672	.20236	.00466	.05474	.20290	.26980	.00000	4.05975	750.03857	.00000
.950	1.630	.12004	.20185	-.03310	.11425	.20518	.55680	.00000	4.05738	749.71187	.00000
.950	2.688	.17859	.20177	-.06721	.16893	.20992	.80476	.00000	4.05541	749.46205	.00000
	GRADIENT	.06022	.00010	-.03523	.05659	-.00167	.26451	.00000	-.00057	-.04554	.00000

RUN NO. 3/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.840	-.34319	.25067	.25227	-.31590	.28429	-1.11121	.00000	4.09603	770.46446	.00000
.981	-4.777	-.28020	.25079	.21541	-.25834	.27325	-.94542	.00000	4.09795	771.25940	.00000
.981	-3.712	-.21733	.24946	.17908	-.20073	.26301	-.76318	.00000	4.09771	771.27490	.00000
.981	-2.644	-.15033	.24855	.14014	-.13870	.25522	-.54344	.00000	4.09598	771.36628	.00000
.981	-1.566	-.08402	.24874	.10169	-.07719	.25095	-.30761	.00000	4.09370	771.28975	.00000
.980	-.513	-.02128	.24955	.06536	-.01904	.24973	-.07626	.00000	4.09197	770.81660	.00000
.980	.553	.04331	.25124	.02834	.04089	.25165	.16248	.00000	4.09334	770.87764	.00000
.981	1.621	.10066	.25330	-.00446	.09345	.25605	.36498	.00000	4.09453	771.25940	.00000
.980	2.671	.15943	.25283	-.03851	.14747	.25999	.56723	.00000	4.09821	770.90796	.00000
	GRADIENT	.05938	.00047	-.03429	.05488	-.00156	.20771	.00000	-.00027	-.04999	.00000

RUN NO. 2/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.120	-5.864	-.32714	.28916	.24958	-.29589	.32107	-.92157	.00000	4.21816	850.56338	.00000
1.120	-4.790	-.25830	.28833	.20763	-.23332	.30889	-.75537	.00000	4.21405	850.24272	.00000
1.120	-3.720	-.19311	.29019	.16817	-.17388	.30211	-.57554	.00000	4.21212	850.36397	.00000
1.120	-2.629	-.12731	.29119	.12865	-.11382	.29673	-.38359	.00000	4.21150	850.68463	.00000
1.120	-1.569	-.06266	.29203	.09002	-.05464	.29363	-.18608	.00000	4.20993	850.37961	.00000
1.120	-.511	-.00156	.29216	.05397	.00105	.29216	.00358	.00000	4.20775	850.39524	.00000
1.119	.564	.05748	.29207	.01946	.05460	.29262	.18659	.00000	4.20722	850.18393	.00000
1.120	1.619	.11389	.29239	-.01253	.10559	.29549	.35733	.00000	4.20744	850.24458	.00000
1.120	2.689	.17447	.29241	-.04644	.16056	.30028	.53471	.00000	4.20840	850.57710	.00000
1.120	3.763	.22903	.29156	-.07638	.20939	.30596	.68439	.00000	4.20797	850.45586	.00000
	GRADIENT	.05704	.00034	-.03329	.05186	-.00033	.17082	.00000	-.00072	.00657	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (RJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 17 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.849	-.28607	.30303	.21873	-.25370	.33060	-.76740	.00000	4.22827	881.45693	.00000
1.200	-4.789	-.22471	.30468	.18237	-.19849	.32238	-.61569	.00000	4.22648	881.28441	.00000
1.200	-3.709	-.16275	.30524	.14542	-.14267	.31513	-.45273	.00000	4.22668	881.35614	.00000
1.201	-2.642	-.10483	.30536	.11151	-.09064	.30987	-.29250	.00000	4.22752	881.70685	.00000
1.200	-1.576	-.04739	.30487	.07806	-.03899	.30606	-.12740	.00000	4.22750	881.60035	.00000
1.201	-.497	.01208	.30541	.04357	.01473	.30529	.04824	.00000	4.22712	881.64868	.00000
1.200	.559	.06762	.30509	.01192	.06464	.30574	.21142	.00000	4.22708	881.41425	.00000
1.200	1.627	.12418	.30452	-.01997	.11548	.30792	.37504	.00000	4.22731	881.63519	.00000
1.200	2.695	.18044	.30322	-.05109	.16599	.31137	.53308	.00000	4.22586	881.09050	.00000
	GRADIENT	.05401	-.00016	-.03114	.04860	-.00141	.15451	.00000	-.00003	-.00874	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (AJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 10/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.349	-5.549	.00120	-.00098	.00998	.00000
.349	-4.540	.00059	-.00055	.00756	.00000
.349	-3.531	-.00040	.00160	.00191	.00000
.349	-2.511	-.00057	.00038	.00188	.00000
.350	-1.513	-.00178	.00215	-.00465	.00000
.350	-.502	-.00181	.00107	-.00466	.00000
.350	.508	-.00201	.00123	-.00540	.00000
.350	1.528	-.00167	-.00056	-.00552	.00000
.349	2.517	-.00182	-.00120	-.00550	.00000
	GRADIENT	-.00033	-.00016	-.00177	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (AJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 9/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.599	-5.653	.00161	-.00028	.00972	.00000
.599	-4.616	.00087	.00135	.00523	.00000
.599	-3.604	.00016	.00161	.00197	.00000
.599	-2.567	-.00042	.00190	-.00095	.00000
.599	-1.550	-.00072	.00130	-.00227	.00000
.599	-.525	-.00131	.00125	-.00524	.00000
.598	.500	-.00098	.00025	-.00424	.00000
.598	1.526	-.00134	.00011	-.00688	.00000
.599	2.544	-.00159	-.00011	-.00780	.00000
	GRADIENT	-.00031	-.00026	-.00172	.00000

RUN NO. 8/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.801	-5.750	.00189	-.00063	.00873	.00000
.800	-4.703	.00101	.00074	.00489	.00000
.801	-3.668	.00111	.00064	.00406	.00000
.801	-2.626	.00064	.00087	.00238	.00000
.801	-1.587	-.00032	.00134	-.00246	.00000
.800	-.536	-.00069	.00093	-.00399	.00000
.801	.499	-.00067	.00045	-.00508	.00000
.800	1.562	-.00055	-.00032	-.00438	.00000
.801	2.585	-.00073	-.00064	-.00544	.00000
	GRADIENT	-.00028	-.00018	-.00158	.00000

RUN NO. 7/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.850	-5.768	.00199	-.00050	.00831	.00000
.850	-4.720	.00127	.00054	.00450	.00000
.850	-3.681	.00135	.00071	.00355	.00000
.850	-2.636	.00058	.00124	-.00031	.00000
.851	-1.587	-.00018	.00171	-.00396	.00000
.850	-.540	-.00009	.00055	-.00335	.00000
.851	.507	-.00048	.00030	-.00602	.00000
.849	1.567	-.00050	-.00039	-.00493	.00000
.850	2.601	-.00117	-.00148	-.00576	.00000
	GRADIENT	-.00033	-.00027	-.00149	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (AJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 6/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.900	-5.783	.00239	-.00246	.01075	.00000
.900	-4.729	.00157	-.00095	.00683	.00000
.901	-3.672	.00111	-.00049	.00419	.00000
.901	-2.612	.00043	.00137	-.00028	.00000
.900	-1.568	-.00004	.00062	-.00204	.00000
.900	-.514	-.00044	-.00077	-.00346	.00000
.901	.542	-.00060	-.00413	.00092	.00000
.900	1.591	-.00124	-.00327	-.00367	.00000
.901	2.640	-.00170	-.00496	-.00111	.00000
	GRADIENT	-.00043	-.00068	-.00106	.00000

RUN NO. 5/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.803	.00186	-.00090	.00851	.00000
.920	-4.731	.00157	-.00043	.00691	.00000
.920	-3.670	.00056	.00048	.00344	.00000
.920	-2.623	.00006	.00125	.00011	.00000
.920	-1.552	.00025	-.00088	.00038	.00000
.920	-.492	-.00047	-.00384	.00022	.00000
.920	.554	-.00034	-.00223	-.00108	.00000
.920	1.608	-.00107	-.00127	-.00438	.00000
.920	2.660	-.00119	-.00083	-.00678	.00000
	GRADIENT	-.00033	-.00028	-.00156	.00000

RUN NO. 4/ 0 RN/L = 4.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.823	.00168	-.00052	.00941	.00000
.951	-4.759	.00085	.00051	.00529	.00000
.951	-3.697	.00022	.00101	.00224	.00000
.951	-2.621	.00054	-.00120	.00345	.00000
.950	-1.558	.00040	-.00309	.00356	.00000
.950	-.505	-.00029	-.00339	.00044	.00000
.951	.559	-.00063	-.00224	-.00275	.00000
.950	1.630	-.00099	-.00074	-.00514	.00000
.950	2.688	-.00108	-.00069	-.00598	.00000
	GRADIENT	-.00027	-.00023	-.00154	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 1 (AJ9001) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 3/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.840	.00074	.00156	.00457	.00000
.981	-4.777	.00088	.00099	.00516	.00000
.981	-3.712	.00035	.00142	.00239	.00000
.981	-2.644	-.00013	.00184	-.00057	.00000
.981	-1.566	-.00010	.00106	-.00110	.00000
.980	-.513	-.00084	.00155	-.00423	.00000
.980	.553	-.00136	.00155	-.00632	.00000
.981	1.621	-.00110	-.00014	-.00474	.00000
.980	2.671	-.00181	-.00003	-.00774	.00000
	GRADIENT	-.00034	-.00017	-.00164	.00000

RUN NO. 2/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.120	-5.864	.00208	.00236	.00529	.00000
1.120	-4.790	.00147	.00233	.00341	.00000
1.120	-3.720	.00093	.00286	.00175	.00000
1.120	-2.629	.00038	.00186	.00043	.00000
1.120	-1.569	.00006	.00050	.00008	.00000
1.120	-.511	-.00054	.00004	-.00185	.00000
1.119	.564	-.00084	-.00116	-.00270	.00000
1.120	1.619	-.00093	-.00293	-.00211	.00000
1.120	2.689	-.00073	-.00487	.00099	.00000
1.120	3.763	-.00123	-.00456	-.00120	.00000
	GRADIENT	-.00030	-.00097	-.00045	.00000

RUN NO. 1/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.849	.00162	.00451	.00323	.00000
1.200	-4.789	.00114	.00464	.00191	.00000
1.200	-3.709	.00028	.00476	-.00052	.00000
1.201	-2.642	.00012	.00307	-.00027	.00000
1.200	-1.576	-.00045	.00154	-.00175	.00000
1.201	-.497	-.00075	.00026	-.00209	.00000
1.200	.559	-.00097	-.00090	-.00291	.00000
1.200	1.627	-.00137	-.00143	-.00397	.00000
1.200	2.695	-.00129	-.00200	-.00344	.00000
	GRADIENT	-.00032	-.00101	-.00070	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (RJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 20/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.519	-.29908	.09947	.18861	-.28812	.12777	-2.25497	.00000	2.06701	167.10324	.00000
.350	-4.509	-.25789	.10110	.16683	-.24915	.12106	-2.05803	.00000	2.06486	167.01014	.00000
.350	-3.519	-.21616	.10207	.14519	-.20949	.11515	-1.81928	.00000	2.06608	167.29132	.00000
.350	-2.500	-.17750	.10257	.12521	-.17286	.11022	-1.56832	.00000	2.06542	167.29085	.00000
.351	-1.489	-.13298	.10246	.10309	-.13028	.10588	-1.23047	.00000	2.06541	167.57152	.00000
.351	-.490	-.09459	.10138	.08182	-.09372	.10219	-.91713	.00000	2.06490	167.57176	.00000
.351	.529	-.05859	.09908	.06341	-.05950	.09853	-.60386	.00000	2.06597	167.85216	.00000
.350	1.539	-.01741	.09724	.04186	-.02002	.09674	-.20693	.00000	2.06260	167.38441	.00000
.351	2.551	.03200	.09339	.01531	.02781	.09472	.29364	.00000	2.06264	167.57176	.00000
	GRADIENT	.04031	-.00106	-.02104	.03848	-.00372	.32706	.00000	-.00038	.07164	.00000

RUN NO. 19/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.599	-5.638	-.31114	.10288	.19748	-.29953	.13295	-2.25286	.00000	3.17824	418.17118	.00000
.599	-4.610	-.26274	.10414	.17144	-.25352	.12493	-2.02936	.00000	3.17302	418.17118	.00000
.599	-3.586	-.22082	.10514	.14899	-.21381	.11875	-1.80055	.00000	3.16868	418.42042	.00000
.600	-2.561	-.17989	.10539	.12820	-.17500	.11332	-1.54434	.00000	3.16580	418.58656	.00000
.599	-1.536	-.13825	.10491	.10618	-.13539	.10858	-1.24698	.00000	3.16016	418.00174	.00000
.599	-.508	-.09389	.10368	.08373	-.09297	.10451	-.88956	.00000	3.15692	418.08321	.00000
.600	.508	-.05081	.10187	.06115	-.05171	.10142	-.50990	.00000	3.15818	418.74449	.00000
.599	1.545	-.00549	.09915	.03727	-.00816	.09896	-.08247	.00000	3.15697	417.72479	.00000
.598	2.572	.03848	.09551	.01349	.03416	.09715	.35161	.00000	3.15630	416.80889	.00000
	GRADIENT	.04198	-.00119	-.02191	.04009	-.00387	.33332	.00000	-.00234	-.14485	.00000

RUN NO. 18/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.743	-.33693	.11673	.21899	-.32356	.14986	-2.15908	.00000	3.78404	623.16258	.00000
.801	-4.690	-.28725	.11634	.19213	-.27678	.13943	-1.98504	.00000	3.78618	623.68204	.00000
.801	-3.659	-.24076	.11648	.16693	-.23284	.13161	-1.76914	.00000	3.78484	623.60874	.00000
.801	-2.612	-.18682	.11539	.13772	-.18137	.12378	-1.46520	.00000	3.78456	623.99415	.00000
.800	-1.550	-.13959	.11473	.11253	-.13644	.11846	-1.15175	.00000	3.78248	623.70725	.00000
.801	-.517	-.09148	.11331	.08740	-.09045	.11413	-.79255	.00000	3.78186	623.96260	.00000
.801	.523	-.04643	.11162	.06329	-.04745	.11119	-.42673	.00000	3.77944	623.82864	.00000
.801	1.558	.00435	.10870	.03533	.00140	.10877	.01283	.00000	3.78047	624.11549	.00000
.801	2.590	.05165	.10573	.00976	.04682	.10795	.43373	.00000	3.77898	623.97522	.00000
	GRADIENT	.04649	-.00144	-.02495	.04440	-.00431	.33503	.00000	-.00101	.04964	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (RJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 17/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.852	-5.758	-.34190	.12954	.22581	-.32718	.16318	-2.00498	.00000	3.90133	671.18428	.00000
.851	-4.718	-.28847	.12841	.19596	-.27693	.15170	-1.82548	.00000	3.89753	669.77006	.00000
.851	-3.648	-.23370	.12824	.16536	-.22507	.14285	-1.57559	.00000	3.89390	669.46454	.00000
.851	-2.619	-.18141	.12775	.13693	-.17538	.13591	-1.29048	.00000	3.89410	669.97266	.00000
.851	-1.559	-.12733	.12673	.10742	-.12383	.13015	-.95149	.00000	3.89126	669.54215	.00000
.851	-.526	-.08195	.12515	.08260	-.08080	.12590	-.64177	.00000	3.89097	669.41710	.00000
.851	.537	-.02555	.12321	.05146	-.02671	.12296	-.21720	.00000	3.88911	669.54215	.00000
.850	1.573	.02444	.12059	.02365	.02112	.12121	.17423	.00000	3.88603	668.43903	.00000
.851	2.619	.07359	.11991	-.00331	.06803	.12315	.55243	.00000	3.88789	669.25248	.00000
	GRADIENT	.04932	-.00128	-.02711	.04701	-.00399	.32879	.00000	-.00139	-.11561	.00000

RUN NO. 16/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-5.779	-.32908	.15519	.22072	-.31178	.18754	-1.66250	.00000	3.97838	709.87788	.00000
.898	-4.723	-.27043	.15287	.18673	-.25692	.17462	-1.47134	.00000	3.97265	708.33974	.00000
.900	-3.646	-.20788	.15333	.15001	-.19771	.16623	-1.18932	.00000	3.97893	710.59543	.00000
.901	-2.599	-.14794	.15394	.11552	-.14080	.16049	-.87734	.00000	3.98039	711.40919	.00000
.899	-1.553	-.08877	.15169	.08147	-.08463	.15404	-.54939	.00000	3.97773	710.36232	.00000
.900	-.495	-.02826	.15107	.04697	-.02695	.15131	-.17812	.00000	3.97909	710.48127	.00000
.898	.546	.02335	.15022	.01892	.02191	.15044	.14565	.00000	3.97673	709.27762	.00000
.900	1.605	.07244	.15080	-.00752	.06819	.15277	.44638	.00000	3.98053	710.15223	.00000
.899	2.642	.11708	.15019	-.03008	.11003	.15543	.70790	.00000	3.98070	710.01022	.00000
	GRADIENT	.05310	-.00049	-.02978	.05033	-.00266	.30433	.00000	.00062	.03727	.00000

RUN NO. 15/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.919	-5.787	-.32912	.17110	.22424	-.31019	.20341	-1.52494	.00000	4.01671	725.59407	.00000
.920	-4.710	-.26843	.17097	.18802	-.25349	.19243	-1.31726	.00000	4.01811	726.79914	.00000
.920	-3.664	-.19816	.17033	.14616	-.18687	.18264	-1.02311	.00000	4.01486	726.52740	.00000
.920	-2.608	-.13905	.16967	.11143	-.13119	.17583	-.74611	.00000	4.01497	726.58575	.00000
.920	-1.548	-.07559	.16869	.07401	-.07101	.17067	-.41604	.00000	4.01003	726.40110	.00000
.920	-.487	-.01276	.16784	.03739	-.01133	.16794	-.06745	.00000	4.00989	726.39151	.00000
.919	.571	.04712	.16644	.00301	.04546	.16690	.27237	.00000	4.00764	725.63339	.00000
.920	1.636	.10249	.16642	-.02773	.09770	.16928	.57714	.00000	4.00861	726.05176	.00000
.920	2.665	.14730	.16598	-.04990	.13942	.17265	.80754	.00000	4.01038	726.57615	.00000
	GRADIENT	.05675	-.00073	-.03265	.05369	-.00265	.29622	.00000	-.00121	-.07693	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (RJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 14/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.949	-5.803	-.34166	.19907	.24265	-.31978	.23260	-1.37483	.00000	4.05080	748.27375	.00000
.950	-4.730	-.27655	.19857	.20336	-.25923	.22070	-1.17458	.00000	4.04939	748.25063	.00000
.949	-3.667	-.21077	.19755	.16396	-.19770	.21063	-.93863	.00000	4.04850	748.04290	.00000
.950	-2.616	-.14705	.19732	.12611	-.13789	.20383	-.67650	.00000	4.05280	749.06988	.00000
.950	-1.539	-.07841	.19708	.08514	-.07309	.19912	-.36705	.00000	4.05165	748.65850	.00000
.950	-.490	-.01693	.19788	.04873	-.01523	.19802	-.07693	.00000	4.05280	749.06988	.00000
.950	.584	.04829	.19818	.01046	.04627	.19866	.23289	.00000	4.05265	749.05830	.00000
.950	1.637	.11282	.19813	-.02737	.10711	.20127	.53219	.00000	4.05327	748.65450	.00000
.950	2.704	.16939	.19844	-.05939	.15984	.20621	.77514	.00000	4.05600	749.37352	.00000
	GRADIENT	.06039	.00006	-.03564	.05681	-.00185	.26927	.00000	.00079	.12650	.00000

RUN NO. 13/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.981	-5.821	-.34973	.24749	.25925	-.32282	.28169	-1.14603	.00000	4.09370	771.28975	.00000
.980	-4.755	-.28329	.24486	.21864	-.26202	.26751	-.97948	.00000	4.09103	770.64902	.00000
.980	-3.691	-.21887	.24207	.17972	-.20283	.25566	-.79338	.00000	4.08937	770.22166	.00000
.980	-2.618	-.15542	.24049	.14166	-.14428	.24734	-.58333	.00000	4.09055	770.45029	.00000
.980	-1.561	-.08685	.24063	.10020	-.08026	.24290	-.33044	.00000	4.09129	770.29740	.00000
.980	-.484	-.01892	.24207	.05989	-.01687	.24222	-.06966	.00000	4.09185	770.54209	.00000
.980	.578	.04377	.24319	.02291	.04131	.24362	.16958	.00000	4.09393	770.78628	.00000
.980	1.627	.10245	.24380	-.01178	.09549	.24661	.38721	.00000	4.09322	770.52649	.00000
.980	2.704	.16870	.24496	-.05002	.15696	.25264	.62127	.00000	4.09156	770.02233	.00000
	GRADIENT	.06076	.00021	-.03616	.05639	-.00180	.21938	.00000	.00038	-.01796	.00000

RUN NO. 12/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.120	-5.841	-.32376	.28457	.24620	-.29312	.31605	-.92745	.00000	4.22132	851.10894	.00000
1.119	-4.770	-.25637	.28547	.20451	-.23174	.30580	-.75783	.00000	4.20997	849.86675	.00000
1.119	-3.700	-.19070	.28520	.16402	-.17190	.29691	-.57897	.00000	4.20874	849.42790	.00000
1.119	-2.630	-.12492	.28512	.12347	-.11170	.29055	-.38445	.00000	4.20608	849.67070	.00000
1.119	-1.554	-.06232	.28555	.08506	-.05456	.28713	-.19001	.00000	4.20290	849.40926	.00000
1.119	-.494	.00246	.28509	.04577	.00492	.28506	.01725	.00000	4.20447	849.71426	.00000
1.120	.572	.06248	.28533	.00995	.05963	.28594	.20855	.00000	4.20382	849.92573	.00000
1.119	1.637	.12158	.28487	-.02500	.11339	.28823	.39342	.00000	4.20277	849.83207	.00000
	2.706	.18280	.28396	-.06050	.16920	.29227	.57890	.00000	4.20238	849.59126	.00000
	GRADIENT	.05868	-.00013	-.03546	.05360	-.00172	.18069	.00000	-.00098	.01289	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (RJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 11/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.822	-.27836	.29852	.21170	-.24664	.32522	-.75839	.00000	4.22670	881.67980	.00000
1.200	-4.754	-.21657	.29984	.17393	-.19097	.31675	-.60291	.00000	4.22569	881.38520	.00000
1.200	-3.687	-.15681	.30007	.13771	-.13718	.30954	-.44319	.00000	4.22449	881.12551	.00000
1.200	-2.609	-.09671	.29972	.10187	-.08297	.30381	-.27310	.00000	4.22629	881.53638	.00000
1.200	-1.563	-.03829	.29935	.06689	-.03012	.30028	-.10029	.00000	4.22470	881.43559	.00000
1.200	-.487	.01915	.29891	.03327	.02169	.29873	.07260	.00000	4.22392	881.34067	.00000
1.200	.590	.07619	.29822	.00009	.07312	.29899	.24455	.00000	4.22430	881.11779	.00000
1.200	1.644	.13115	.29749	-.03184	.12256	.30113	.40700	.00000	4.22410	881.08874	.00000
1.200	2.702	.18869	.29590	-.06477	.17453	.30446	.57324	.00000	4.22588	880.95889	.00000
	GRADIENT	.05421	-.00051	-.03192	.04890	-.00161	.15873	.00000	-.00008	-.05045	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (AJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 20/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.519	-.00031	.00779	-.00145	.00000
.350	-4.509	-.00137	.00943	-.00627	.00000
.350	-3.519	-.00074	.00795	-.00465	.00000
.350	-2.500	-.00220	.00999	-.01111	.00000
.351	-1.489	-.00273	.01089	-.01428	.00000
.351	-.490	-.00305	.00996	-.01598	.00000
.351	.529	-.00263	.00825	-.01522	.00000
.350	1.539	-.00256	.00677	-.01534	.00000
.351	2.551	-.00250	.00606	-.01444	.00000
	GRADIENT	-.00022	-.00042	-.00147	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (AJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 19/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.599	-5.638	-.00019	.00776	-.00147	.00000
.599	-4.610	-.00096	.00931	-.00561	.00000
.599	-3.586	-.00144	.00992	-.00817	.00000
.600	-2.561	-.00210	.01035	-.01141	.00000
.599	-1.536	-.00251	.01072	-.01367	.00000
.599	-.508	-.00319	.01163	-.01788	.00000
.600	.508	-.00321	.01108	-.01849	.00000
.599	1.545	-.00386	.01162	-.02280	.00000
.598	2.572	-.00307	.00984	-.01819	.00000
	GRADIENT	-.00036	.00018	-.00217	.00000

RUN NO. 18/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.743	.00102	.00457	.00325	.00000
.801	-4.690	.00031	.00519	.00002	.00000
.801	-3.659	-.00038	.00645	-.00430	.00000
.801	-2.612	-.00097	.00771	-.00723	.00000
.800	-1.550	-.00168	.00816	-.01118	.00000
.801	-.517	-.00261	.00942	-.01524	.00000
.801	.523	-.00272	.00949	-.01674	.00000
.801	1.558	-.00249	.00855	-.01583	.00000
.801	2.590	-.00277	.00888	-.01820	.00000
	GRADIENT	-.00044	.00049	-.00249	.00000

RUN NO. 17/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.852	-5.758	.00080	.00478	.00155	.00000
.851	-4.718	.00080	.00485	.00017	.00000
.851	-3.648	.00029	.00606	-.00384	.00000
.851	-2.619	-.00043	.00662	-.00683	.00000
.851	-1.559	-.00053	.00654	-.00780	.00000
.851	-.526	-.00141	.00748	-.01226	.00000
.851	.537	-.00197	.00825	-.01631	.00000
.850	1.573	-.00209	.00751	-.01588	.00000
.851	2.619	-.00242	.00634	-.01481	.00000
	GRADIENT	-.00045	.00027	-.00225	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (AJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 16/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-5.779	.00125	.00161	.00512	.00000
.898	-4.723	.00067	.00219	.00311	.00000
.900	-3.646	.00045	.00217	.00120	.00000
.901	-2.599	.00017	.00104	.00040	.00000
.899	-1.553	-.00038	.00058	-.00292	.00000
.900	-.495	-.00088	.00022	-.00444	.00000
.898	.546	-.00142	-.00059	-.00460	.00000
.900	1.605	-.00205	-.00076	-.00669	.00000
.899	2.642	-.00258	-.00187	-.00568	.00000
	GRADIENT	-.00046	-.00055	-.00133	.00000

RUN NO. 15/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.919	-5.787	.00097	.00062	.00648	.00000
.920	-4.710	.00042	.00082	.00484	.00000
.920	-3.664	-.00006	.00117	.00168	.00000
.920	-2.608	-.00042	.00065	-.00021	.00000
.920	-1.548	-.00061	-.00014	-.00156	.00000
.920	-.487	-.00130	-.00080	-.00345	.00000
.919	.571	-.00212	-.00037	-.00640	.00000
.920	1.636	-.00214	-.00138	-.00502	.00000
.920	2.665	-.00277	-.00323	-.00370	.00000
	GRADIENT	-.00043	-.00050	-.00128	.00000

RUN NO. 14/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.949	-5.803	.00082	.00151	.00484	.00000
.950	-4.730	.00072	.00136	.00398	.00000
.949	-3.667	.00027	.00186	.00130	.00000
.950	-2.616	-.00009	.00188	-.00181	.00000
.950	-1.539	-.00042	.00138	-.00250	.00000
.950	-.490	-.00121	.00143	-.00521	.00000
.950	.584	-.00168	.00135	-.00756	.00000
.950	1.637	-.00194	.00086	-.00750	.00000
.950	2.704	-.00215	.00054	-.00741	.00000
	GRADIENT	-.00041	-.00014	-.00161	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 2 (AJ9002) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 13/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.981	-5.821	.00109	.00258	.00494	.00000
.980	-4.755	.00042	.00282	.00271	.00000
.980	-3.691	.00000	.00342	-.00006	.00000
.980	-2.618	-.00044	.00331	-.00273	.00000
.980	-1.561	-.00083	.00289	-.00505	.00000
.980	-.484	-.00125	.00199	-.00575	.00000
.980	.578	-.00125	.00133	-.00609	.00000
.980	1.627	-.00167	.00100	-.00879	.00000
.980	2.704	-.00132	-.00056	-.00534	.00000
	GRADIENT	-.00026	-.00048	-.00124	.00000

RUN NO. 12/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.120	-5.841	.00232	-.00011	.00862	.00000
1.119	-4.770	.00164	.00072	.00567	.00000
1.119	-3.700	.00091	.00086	.00297	.00000
1.119	-2.630	.00045	.00071	.00156	.00000
1.119	-1.554	-.00008	.00046	-.00086	.00000
1.119	-.494	-.00029	-.00028	-.00133	.00000
1.119	.572	-.00065	-.00045	-.00274	.00000
1.120	1.637	-.00119	-.00039	-.00546	.00000
1.119	2.706	-.00117	-.00093	-.00441	.00000
	GRADIENT	-.00038	-.00025	-.00141	.00000

RUN NO. 11/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.822	.00132	.00323	.00384	.00000
1.200	-4.754	.00086	.00369	.00158	.00000
1.200	-3.687	.00048	.00348	.00070	.00000
1.200	-2.609	-.00010	.00322	-.00211	.00000
1.200	-1.563	-.00039	.00276	-.00367	.00000
1.200	-.487	-.00056	.00210	-.00411	.00000
1.200	.590	-.00104	.00183	-.00612	.00000
1.200	1.644	-.00125	.00146	-.00703	.00000
1.200	2.702	-.00120	.00115	-.00582	.00000
	GRADIENT	-.00029	-.00037	-.00115	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (RJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 30/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.541	-.28801	.18766	.12841	-.26854	.21460	-1.25137	.00000	2.06517	166.91277	.00000
.350	-4.526	-.23708	.19013	.11096	-.22133	.20825	-1.06285	.00000	2.06537	166.91372	.00000
.350	-3.522	-.18657	.19227	.09260	-.17440	.20336	-.85760	.00000	2.06306	166.72633	.00000
.350	-2.506	-.12980	.19331	.07114	-.12123	.19880	-.60981	.00000	2.06373	167.00753	.00000
.350	-1.480	-.07878	.19393	.05373	-.07374	.19590	-.37642	.00000	2.06439	167.19514	.00000
.350	-.476	-.03068	.19273	.03770	-.02908	.19298	-.15071	.00000	2.06270	167.19514	.00000
.350	.532	.03107	.19231	.01502	.02928	.19259	.15204	.00000	2.06096	167.00777	.00000
.350	1.557	.07888	.18940	-.00118	.07370	.19148	.38493	.00000	2.06331	167.47605	.00000
.351	2.586	.14317	.18610	-.02582	.13463	.19237	.69982	.00000	2.06453	167.85072	.00000
	GRADIENT	.05299	-.00055	-.01888	.04957	-.00225	.24695	.00000	-.00017	.12107	.00000

RUN NO. 29/ 0 RN/L = 3.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.600	-5.702	-.30270	.19328	.13310	-.28200	.22240	-1.26797	.00000	3.18023	419.76548	.00000
.599	-4.659	-.24420	.19524	.11230	-.22754	.21443	-1.06115	.00000	3.16571	418.08646	.00000
.600	-3.618	-.18973	.19720	.09391	-.17691	.20878	-.84735	.00000	3.16565	418.66144	.00000
.599	-2.576	-.13281	.19845	.07306	-.12376	.20422	-.60598	.00000	3.15714	417.47874	.00000
.599	-1.535	-.07741	.19880	.05402	-.07205	.20080	-.35882	.00000	3.15650	417.38914	.00000
.599	-.492	-.01870	.19854	.03274	-.01699	.19870	-.08553	.00000	3.15745	417.64007	.00000
.598	.550	.03782	.19684	.01249	.03593	.19720	.18221	.00000	3.15675	416.38023	.00000
.598	1.591	.09240	.19430	-.00602	.08696	.19679	.44192	.00000	3.16146	416.04435	.00000
.599	2.635	.15093	.19058	-.02666	.14201	.19732	.71968	.00000	3.17178	417.30603	.00000
	GRADIENT	.05424	-.00060	-.01914	.05073	-.00232	.24622	.00000	.00024	-.24668	.00000

RUN NO. 28/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.841	-.32069	.21358	.14297	-.29729	.24511	-1.21286	.00000	3.78734	623.22959	.00000
.800	-4.759	-.25582	.21439	.12025	-.23714	.23488	-1.00966	.00000	3.78653	622.77920	.00000
.800	-3.696	-.19813	.21434	.09947	-.18390	.22667	-.81131	.00000	3.78851	623.23179	.00000
.800	-2.629	-.13751	.21431	.07859	-.12753	.22039	-.57866	.00000	3.78865	623.41400	.00000
.800	-1.573	-.07696	.21400	.05632	-.07106	.21603	-.32894	.00000	3.78630	622.93845	.00000
.800	-.499	-.01804	.21414	.03491	-.01618	.21429	-.07548	.00000	3.78484	623.14588	.00000
.800	.560	.04457	.21332	.01200	.04249	.21375	.19878	.00000	3.78237	622.95101	.00000
.801	1.627	.10483	.21246	-.00896	.09876	.21535	.45859	.00000	3.78381	623.78055	.00000
.800	2.696	.16546	.21006	-.02960	.15540	.21761	.71409	.00000	3.78151	623.65284	.00000
	GRADIENT	.05667	-.00048	-.02026	.05284	-.00223	.23481	.00000	-.00088	.08591	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (RJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 27/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.851	-5.858	-.31648	.22910	.14254	-.29145	.26021	-1.12004	.00000	3.89117	669.69800	.00000
.851	-4.787	-.25623	.22860	.12116	-.23626	.24918	-.94814	.00000	3.88948	669.05694	.00000
.850	-3.713	-.19297	.22843	.09774	-.17778	.24045	-.73935	.00000	3.88892	668.86137	.00000
.851	-2.635	-.12738	.22755	.07420	-.11679	.23317	-.50088	.00000	3.88869	668.95487	.00000
.851	-1.580	-.07225	.22702	.05441	-.06596	.22892	-.28815	.00000	3.88815	669.26830	.00000
.850	-.515	-.00772	.22714	.03060	-.00568	.22720	-.02500	.00000	3.88732	669.00229	.00000
.851	.567	.05481	.22716	.00728	.05256	.22770	.23084	.00000	3.88860	669.56508	.00000
.851	1.644	.11939	.22662	-.01548	.11283	.22995	.49069	.00000	3.88830	669.38545	.00000
.851	2.701	.17448	.22645	-.03388	.16361	.23442	.69794	.00000	3.88721	669.10368	.00000
	GRADIENT	.05773	-.00028	-.02087	.05364	-.00194	.22400	.00000	-.00022	.05024	.00000

RUN NO. 26/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-5.894	-.30837	.25493	.13814	-.28056	.28525	-.98359	.00000	3.98202	710.30283	.00000
.899	-4.809	-.23901	.25472	.11172	-.21682	.27386	-.79170	.00000	3.98399	710.13344	.00000
.900	-3.716	-.16906	.25517	.08367	-.15217	.26559	-.57294	.00000	3.98333	710.64579	.00000
.900	-2.648	-.10483	.25486	.05911	-.09294	.25943	-.35827	.00000	3.98142	710.54074	.00000
.899	-1.566	-.03751	.25343	.03273	-.03057	.25436	-.12018	.00000	3.98029	710.00531	.00000
.899	-.477	.02610	.25374	.00964	.02821	.25351	.11128	.00000	3.97712	710.01440	.00000
.900	.590	.08752	.25493	-.01158	.08489	.25582	.33185	.00000	3.98019	710.48127	.00000
.899	1.663	.13995	.25530	-.02541	.13248	.25926	.51100	.00000	3.97904	710.04663	.00000
.899	2.733	.20041	.25547	-.04360	.18800	.26474	.71013	.00000	3.98034	710.44002	.00000
	GRADIENT	.05815	.00007	-.02065	.05359	-.00119	.20152	.00000	-.00060	-.01129	.00000

RUN NO. 25/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.904	-.30919	.27349	.14371	-.27941	.30384	-.91960	.00000	4.01953	726.76958	.00000
.919	-4.826	-.24499	.27267	.11762	-.22118	.29231	-.75666	.00000	4.01608	726.28343	.00000
.920	-3.741	-.17457	.27334	.08899	-.15636	.28415	-.55028	.00000	4.01636	727.10926	.00000
.920	-2.655	-.10372	.27302	.06007	-.09096	.27753	-.32776	.00000	4.01431	726.94460	.00000
.920	-1.583	-.03559	.27167	.03197	-.02807	.27255	-.10299	.00000	4.01206	726.18675	.00000
.920	-.477	.03583	.27203	.00292	.03809	.27172	.14020	.00000	4.01424	726.78876	.00000
.920	.589	.10315	.27163	-.02193	.10036	.27267	.36805	.00000	4.01298	726.77917	.00000
.920	1.681	.16368	.27093	-.04051	.15566	.27561	.56479	.00000	4.01096	726.56575	.00000
.920	2.758	.21797	.27090	-.05448	.20468	.28108	.72819	.00000	4.01148	726.70164	.00000
	GRADIENT	.06178	-.00031	-.02337	.05692	-.00150	.20102	.00000	-.00067	.00359	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (RJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 376.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 24/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.951	-5.927	-.33135	.30386	.16607	-.29820	.33645	-.88631	.00000	4.06304	750.25778	.00000
.951	-4.849	-.26244	.30424	.13938	-.23578	.32534	-.72473	.00000	4.06346	750.74550	.00000
.951	-3.751	-.19154	.30425	.11020	-.17123	.31613	-.54163	.00000	4.06083	750.08069	.00000
.951	-2.686	-.12344	.30399	.08266	-.10907	.30944	-.35246	.00000	4.06024	750.16923	.00000
.951	-1.585	-.05109	.30335	.05325	-.04268	.30465	-.14009	.00000	4.06093	750.26938	.00000
.950	-.499	.01918	.30285	.02350	.02182	.30267	.07209	.00000	4.05837	750.10816	.00000
.950	.588	.09015	.30289	-.00700	.08704	.30379	.28651	.00000	4.05689	749.71605	.00000
.950	1.678	.16175	.30159	-.03599	.15285	.30620	.49918	.00000	4.05734	749.88893	.00000
.950	2.759	.22388	.30073	-.05866	.20914	.31116	.67214	.00000	4.05674	749.70447	.00000
	GRADIENT	.06442	-.00046	-.02646	.05901	-.00184	.18740	.00000	-.00084	-.10700	.00000

RUN NO. 23/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.967	-.33411	.34209	.16795	-.29674	.37496	-.79139	.00000	4.09982	770.87678	.00000
.981	-4.870	-.25926	.34235	.13838	-.22926	.36312	-.63136	.00000	4.09909	771.33592	.00000
.981	-3.777	-.18709	.34356	.10916	-.16405	.35514	-.46194	.00000	4.09391	771.55588	.00000
.981	-2.673	-.11473	.34448	.08080	-.09854	.34945	-.28198	.00000	4.09269	771.43405	.00000
.981	-1.582	-.04427	.34465	.05247	-.03474	.34574	-.10049	.00000	4.09025	771.06114	.00000
.981	-.493	.02588	.34499	.02310	.02884	.34475	.08367	.00000	4.08978	770.93907	.00000
.980	.583	.09379	.34640	-.00503	.09026	.34733	.25987	.00000	4.08899	770.71007	.00000
.981	1.678	.16807	.34792	-.03520	.15781	.35269	.44746	.00000	4.09178	771.13734	.00000
.980	2.756	.23337	.34840	-.05856	.21635	.35921	.60228	.00000	4.09075	770.77071	.00000
	GRADIENT	.06469	.00077	-.02609	.05856	-.00052	.16382	.00000	-.00088	-.09116	.00000

RUN NO. 22/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.121	-6.025	-.32234	.39288	.16224	-.27932	.42455	-.65793	.00000	4.21457	851.01046	.00000
1.120	-4.907	-.24567	.39379	.13090	-.21109	.41336	-.51068	.00000	4.20849	850.20946	.00000
1.120	-3.809	-.16637	.39519	.09609	-.13975	.40537	-.34474	.00000	4.20836	850.07458	.00000
1.120	-2.696	-.09224	.39657	.06539	-.07349	.40047	-.18350	.00000	4.20705	850.33268	.00000
1.120	-1.612	-.02051	.39676	.03751	-.00934	.39718	-.02351	.00000	4.20343	850.01395	.00000
1.120	-.505	.04724	.39586	.01040	.05073	.39543	.12828	.00000	4.20290	849.96703	.00000
1.120	.599	.12087	.39543	-.01990	.11673	.39668	.29428	.00000	4.20360	850.19380	.00000
1.120	1.693	.18692	.39601	-.04592	.17513	.40136	.43634	.00000	4.20439	850.11754	.00000
1.120	2.805	.25495	.39606	-.07059	.23526	.40806	.57653	.00000	4.20473	849.98458	.00000
	GRADIENT	.06463	.00017	-.02599	.05763	-.00076	.14165	.00000	-.00062	-.01966	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (RJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 21/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-6.047	-.30136	.40657	.14392	-.25686	.43605	-.58905	.00000	4.22526	880.72232	.00000
1.200	-4.924	-.22374	.40783	.11227	-.18791	.42553	-.44160	.00000	4.22568	880.88717	.00000
1.200	-3.806	-.14718	.40999	.07917	-.11964	.41886	-.28563	.00000	4.22509	880.79999	.00000
1.200	-2.712	-.07689	.41057	.05139	-.05738	.41374	-.13868	.00000	4.22587	880.89488	.00000
1.200	-1.619	-.00867	.40966	.02513	.00290	.40974	.00709	.00000	4.22527	880.76503	.00000
1.200	-.489	.06418	.40892	-.00291	.06767	.40836	.16571	.00000	4.22549	880.92209	.00000
1.199	.599	.12795	.40843	-.02644	.12368	.40975	.30183	.00000	4.22240	879.82380	.00000
1.199	1.705	.19569	.40761	-.05070	.18348	.41325	.44400	.00000	4.22524	880.61544	.00000
1.199	2.811	.26221	.40845	-.07284	.24187	.42081	.57476	.00000	4.22679	880.32813	.00000
	GRADIENT	.06256	-.00016	-.02379	.05533	-.00080	.13198	.00000	-.00002	-.08499	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (AJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 30/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.541	.00136	-.00408	.01046	.00000
.350	-4.526	.00029	-.00141	.00496	.00000
.350	-3.522	.00039	-.00114	.00429	.00000
.350	-2.506	-.00034	.00009	-.00137	.00000
.350	-1.480	-.00066	.00033	-.00372	.00000
.350	-.476	-.00052	-.00034	-.00364	.00000
.350	.532	-.00067	-.00052	-.00262	.00000
.350	1.557	-.00071	-.00126	-.00168	.00000
.351	2.586	-.00153	-.00005	-.00556	.00000
	GRADIENT	-.00022	.00008	-.00126	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (AJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 29/ 0 RN/L = 3.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.600	-5.702	.00138	-.00336	.00869	.00000
.599	-4.659	.00101	-.00241	.00630	.00000
.600	-3.618	.00048	-.00081	.00325	.00000
.599	-2.576	-.00002	-.00019	.00079	.00000
.599	-1.535	-.00025	.00027	-.00102	.00000
.599	-.492	-.00043	.00000	-.00257	.00000
.598	.550	-.00077	.00023	-.00373	.00000
.598	1.591	-.00127	.00074	-.00553	.00000
.599	2.635	-.00154	.00125	-.00663	.00000
	GRADIENT	-.00033	.00039	-.00171	.00000

RUN NO. 28/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.841	.00155	-.00525	.00921	.00000
.800	-4.759	.00148	-.00447	.00790	.00000
.800	-3.696	.00104	-.00314	.00480	.00000
.800	-2.629	.00086	-.00210	.00328	.00000
.800	-1.573	-.00016	.00015	-.00334	.00000
.800	-.499	-.00038	.00022	-.00451	.00000
.800	.560	-.00035	-.00020	-.00391	.00000
.801	1.627	-.00036	-.00095	-.00219	.00000
.800	2.696	-.00080	-.00035	-.00374	.00000
	GRADIENT	-.00030	.00051	-.00156	.00000

RUN NO. 27/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.851	-5.858	.00183	-.00522	.00843	.00000
.851	-4.787	.00143	-.00402	.00664	.00000
.850	-3.713	.00078	-.00220	.00301	.00000
.851	-2.635	.00084	-.00184	.00176	.00000
.851	-1.580	.00039	-.00071	-.00219	.00000
.850	-.515	.00032	-.00088	-.00180	.00000
.851	.567	.00011	-.00058	-.00370	.00000
.851	1.644	-.00027	-.00106	-.00267	.00000
.851	2.701	-.00137	.00041	-.00613	.00000
	GRADIENT	-.00030	.00045	-.00149	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (AJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 26/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-5.894	.00144	-.00399	.00756	.00000
.899	-4.809	.00143	-.00361	.00661	.00000
.900	-3.716	.00103	-.00289	.00489	.00000
.900	-2.648	.00060	-.00144	.00084	.00000
.899	-1.566	.00025	-.00120	-.00093	.00000
.899	-.477	-.00044	-.00064	-.00345	.00000
.900	.590	-.00054	-.00171	-.00115	.00000
.899	1.663	-.00170	-.00087	-.00463	.00000
.899	2.733	-.00165	-.00146	-.00207	.00000
	GRADIENT	-.00043	.00028	-.00129	.00000

RUN NO. 25/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.904	.00120	-.00317	.00686	.00000
.919	-4.826	.00079	-.00237	.00519	.00000
.920	-3.741	.00071	-.00194	.00366	.00000
.920	-2.655	.00044	-.00099	.00084	.00000
.920	-1.583	-.00002	-.00056	-.00086	.00000
.920	-.477	-.00093	.00031	-.00406	.00000
.920	.589	-.00119	.00045	-.00559	.00000
.920	1.681	-.00142	-.00043	-.00389	.00000
.920	2.758	-.00234	-.00100	-.00428	.00000
	GRADIENT	-.00042	.00025	-.00139	.00000

RUN NO. 24/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.951	-5.927	.00063	-.00224	.00554	.00000
.951	-4.849	.00044	-.00160	.00430	.00000
.951	-3.751	.00012	-.00068	.00158	.00000
.951	-2.686	-.00032	.00006	-.00136	.00000
.951	-1.585	-.00032	-.00007	-.00192	00000
.950	-.499	-.00055	-.00006	-.00286	.00000
.950	.588	-.00129	.00069	-.00636	.00000
.950	1.678	-.00160	.00077	-.00594	.00000
.950	2.759	-.00184	.00076	-.00631	.00000
	GRADIENT	-.00030	.00028	-.00140	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 3 (AJ9003) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 23/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.967	.00040	-.00240	.00436	.00000
.981	-4.8 J	.00021	-.00168	.00337	.00000
.981	-3.777	.00043	-.00160	.00357	.00000
.981	-2.673	-.00008	.00016	-.00026	.00000
.981	-1.582	-.00068	.00142	-.00396	.00000
.981	-.493	-.00106	.00152	-.00467	.00000
.980	.583	-.00186	.00278	-.00838	.00000
.981	1.678	-.00187	.00220	-.00638	.00000
.980	2.756	-.00227	.00202	-.00635	.00000
	GRADIENT	-.00038	.00058	-.00156	.00000

RUN NO. 22/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.121	-6.025	.00193	-.00745	.01085	.00000
1.120	-4.907	.00146	-.00636	.00853	.00000
1.120	-3.809	.00096	-.00478	.00625	.00000
1.120	-2.696	.00081	-.00438	.00567	.00000
1.120	-1.612	-.00008	-.00345	.00167	.00000
1.120	-.505	-.00052	-.00295	.00009	.00000
1.120	.599	-.00077	-.00214	-.00094	.00000
1.120	1.693	-.00121	-.00255	-.00160	.00000
1.120	2.805	-.00146	-.00234	-.00169	.00000
	GRADIENT	-.00039	.00050	-.00143	.00000

RUN NO. 21/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-6.047	.00145	-.00438	.00781	.00000
1.200	-4.924	.00093	-.00203	.00393	.00000
1.200	-3.806	.00056	-.00078	.00250	.00000
1.200	-2.712	.00000	.00086	-.00113	.00000
1.200	-1.619	-.00042	.00137	-.00312	.00000
1.200	-.489	-.00078	.00089	-.00309	.00000
1.199	.599	-.00138	.00188	-.00617	.00000
1.199	1.705	-.00127	.00170	-.00532	.00000
1.199	2.811	-.00185	.00235	-.00646	.00000
	GRADIENT	-.00036	.00049	-.00137	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 40/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.348	-5.552	-.29922	.18640	.13663	-.27978	.21448	-1.30448	.00000	2.05481	164.94624	.00000
.348	-4.537	-.24715	.18944	.11851	-.23138	.20840	-1.11028	.00000	2.05658	165.41467	.00000
.348	-3.543	-.19556	.19012	.09924	-.18344	.20184	-.90882	.00000	2.05382	165.60216	.00000
.349	-2.505	-.13584	.19183	.07806	-.12732	.19758	-.64441	.00000	2.05439	165.78940	.00000
.348	-1.502	-.09011	.19185	.06268	-.08505	.19415	-.43806	.00000	2.05153	165.60192	.00000
.349	-.476	-.03854	.19085	.04457	-.03696	.19116	-.19333	.00000	2.05164	165.78963	.00000
.349	.541	.02080	.19026	.02303	.01901	.19045	.09980	.00000	2.05283	166.16430	.00000
.349	1.557	.07505	.18793	.00408	.06991	.18990	.36815	.00000	2.04935	165.69578	.00000
.348	2.562	.12653	.18573	-.01402	.11810	.19120	.61767	.00000	2.04525	165.13330	.00000
	GRADIENT	.05261	-.00050	-.01859	.04921	-.00240	.24554	.00000	-.00124	-.00206	.00000

RUN NO. 39/ 0 RN/L = 3.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.600	-5.724	-.31259	.18852	.14201	-.29223	.21876	-1.33585	.00000	3.19353	418.91058	.00000
.601	-4.662	-.25583	.19079	.12202	-.23947	.21095	-1.13519	.00000	3.19121	419.66436	.00000
.601	-3.633	-.20289	.19233	.10364	-.19030	.20480	-.92919	.00000	3.18520	419.74406	.00000
.600	-2.576	-.13910	.19343	.08100	-.13027	.19949	-.65303	.00000	3.18015	419.49834	.00000
.601	-1.548	-.08830	.19420	.06344	-.08302	.19652	-.42246	.00000	3.17448	420.25354	.00000
.601	-.509	-.03542	.19307	.04416	-.03371	.19338	-.17430	.00000	3.16805	420.41783	.00000
.601	.546	.02514	.19221	.02235	.02330	.19244	.12109	.00000	3.16228	419.65942	.00000
.600	1.576	.07811	.19069	.00413	.07284	.19277	.37785	.00000	3.15952	419.40710	.00000
.600	2.624	.14127	.18722	-.01774	.13255	.19349	.68506	.00000	3.15465	418.47733	.00000
	GRADIENT	.05409	-.00043	-.01911	.05066	-.00236	.24984	.00000	-.00508	-.10715	.00000

RUN NO. 38/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.855	-.33356	.20675	.15423	-.31073	.23970	-1.29636	.00000	3.78163	622.74149	.00000
.800	-4.778	-.27265	.20746	.13275	-.25442	.22945	-1.10883	.00000	3.78083	623.21700	.00000
.800	-3.712	-.21304	.20722	.11161	-.19918	.22058	-.90300	.00000	3.77973	622.69329	.00000
.801	-2.655	-.15139	.20755	.08976	-.14161	.21434	-.66070	.00000	3.78262	624.35173	.00000
.800	-1.593	-.09623	.20701	.07052	-.09044	.20961	-.43145	.00000	3.77690	623.22959	.00000
.800	-.514	-.03214	.20769	.04656	-.03027	.20797	-.14556	.00000	3.77662	623.15628	.00000
.800	.553	.02914	.20672	.02408	.02714	.20699	.13113	.00000	3.77434	622.45441	.00000
.800	1.612	.09115	.20531	.00230	.08533	.20779	.41067	.00000	3.77678	623.22330	.00000
.800	2.667	.14901	.20284	-.01756	.13941	.20956	.66525	.00000	3.77401	622.32027	.00000
	GRADIENT	.05678	-.00049	-.02035	.05306	-.00254	.24205	.00000	-.00098	-.10518	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 37/ 0 RN/L = 3.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.850	-5.888	-.33656	.22226	.15750	-.31199	.25561	-1.22054	.00000	3.89091	668.06247	.00000
.850	-4.811	-.27013	.22265	.13340	-.25051	.24452	-1.02449	.00000	3.89322	668.40698	.00000
.851	-3.744	-.21279	.22261	.11288	-.19780	.23603	-.83803	.00000	3.89476	668.93115	.00000
.850	-2.667	-.14805	.22201	.08978	-.13756	.22866	-.60159	.00000	3.89365	668.59469	.00000
.850	-1.604	-.08534	.22137	.06658	-.07911	.22367	-.35368	.00000	3.89067	668.55581	.00000
.851	-.514	-.02477	.22223	.04401	-.02278	.22244	-.10233	.00000	3.88939	668.98577	.00000
.850	.550	.03845	.22141	.02039	.03633	.22177	.16380	.00000	3.88715	668.20344	.00000
.850	1.624	.10249	.22091	-.00311	.09619	.22372	.42995	.00000	3.88592	668.08613	.00000
.850	2.693	.16724	.22089	-.02473	.15667	.22851	.68564	.00000	3.88489	668.47745	.00000
	GRADIENT	.05835	-.00024	-.02128	.05436	-.00217	.23148	.00000	-.00137	-.04963	.00000

RUN NO. 36/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-5.900	-.32215	.25213	.14988	-.29453	.28391	-1.03739	.00000	3.98223	709.96469	.00000
.899	-4.830	-.25660	.25144	.12488	-.23452	.27216	-.86170	.00000	3.98153	709.99201	.00000
.900	-3.747	-.13642	.25195	.09724	-.16956	.26359	-.64327	.00000	3.98259	710.80143	.00000
.899	-2.655	-.11975	.25028	.07126	-.10803	.25556	-.42272	.00000	3.97743	709.83660	.00000
.899	-1.586	-.05432	.24960	.04557	-.04739	.25101	-.18879	.00000	3.97795	709.97380	.00000
.900	-.494	.01363	.25078	.01993	.01579	.25065	.06301	.00000	3.97883	710.33973	.00000
.900	.569	.07137	.25125	-.00046	.06887	.25194	.27335	.00000	3.97962	710.54545	.00000
.899	1.650	.13020	.25125	-.01654	.12291	.25489	.48222	.00000	3.97562	709.91431	.00000
.900	2.741	.19218	.25164	-.03615	.17993	.26054	.69059	.00000	3.97652	710.22993	.00000
	GRADIENT	.05913	.00002	-.02135	.05463	-.00150	.20754	.00000	-.00069	-.00311	.00000

RUN NO. 35/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.912	-.32206	.27012	.15307	-.29252	.30186	-.96908	.00000	4.01656	726.89586	.00000
.920	-4.839	-.25386	.26948	.12539	-.23022	.28993	-.79405	.00000	4.01593	726.70164	.00000
.920	-3.752	-.18164	.26932	.09593	-.16363	.28063	-.58307	.00000	4.01616	726.81834	.00000
.920	-2.667	-.11144	.26794	.06730	-.09885	.27283	-.36231	.00000	4.01488	726.55529	.00000
.919	-1.585	-.04386	.26854	.03992	-.03642	.26965	-.13506	.00000	4.01619	727.14837	.00000
.920	-.489	.02639	.26754	.01153	.02868	.26731	.10728	.00000	4.01320	726.13792	.00000
.920	.577	.09488	.26724	-.01406	.09218	.26818	.34374	.00000	4.01349	726.53613	.00000
.920	1.689	.15706	.26788	-.03459	.14909	.27239	.54736	.00000	4.01452	727.10994	.00000
.920	2.733	.20790	.26657	-.04658	.19495	.27618	.70586	.00000	4.01337	726.47775	.00000
	GRADIENT	.06168	-.00034	-.02339	.05588	-.00169	.20337	.00000	-.00037	-.01279	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 34/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.948	-.33524	.30049	.16917	-.30229	.33361	-.90614	.00000	4.05737	749.43888	.00000
.950	-4.855	-.27011	.30020	.14376	-.24374	.32198	-.75699	.00000	4.05826	749.64552	.00000
.950	-3.765	-.19883	.30052	.11529	-.17867	.31293	-.57095	.00000	4.05901	749.84255	.00000
.950	-2.684	-.12572	.30036	.08557	-.11151	.30592	-.36453	.00000	4.05738	749.71187	.00000
.950	-1.596	-.05516	.29980	.05679	-.04679	.30122	-.15535	.00000	4.05689	749.58117	.00000
.950	-.507	.01704	.29960	.02615	.01969	.29944	.06577	.00000	4.05689	749.58117	.00000
.950	.570	.08880	.29931	-.00417	.08581	.30018	.28587	.00000	4.05569	749.21219	.00000
.950	1.681	.15998	.29868	-.03226	.15115	.30324	.49844	.00000	4.05693	749.53900	.00000
.950	2.763	.22805	.29782	-.05565	.21343	.30847	.69190	.00000	4.05718	749.60435	.00000
	GRADIENT	.06561	-.00032	-.02662	.06025	-.00177	.19322	.00000	-.00025	-.03613	.00000

RUN NO. 33/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.981	-5.984	-.33274	.33724	.16713	-.29577	.37009	-.79919	.00000	4.10062	771.25905	.00000
.980	-4.869	-.26159	.33694	.14008	-.23205	.35793	-.64831	.00000	4.09479	770.90796	.00000
.980	-3.784	-.18806	.33683	.11086	-.16543	.34851	-.47467	.00000	4.09392	770.55632	.00000
.980	-2.680	-.11624	.33817	.08269	-.10030	.34324	-.29221	.00000	4.09289	770.26610	.00000
.979	-1.591	-.04757	.33835	.05550	-.03816	.33954	-.11238	.00000	4.09366	770.18813	.00000
.980	-.512	.02386	.34018	.02524	.02690	.33995	.07912	.00000	4.09695	771.12142	.00000
.981	.582	.09837	.34310	-.00560	.09488	.34408	.27574	.00000	4.09602	771.38835	.00000
.980	1.684	.16890	.34453	-.03310	.15870	.34935	.45428	.00000	4.09644	771.25867	.00000
.980	2.765	.23601	.34570	-.05684	.21906	.35668	.61417	.00000	4.09671	770.98374	.00000
	GRADIENT	.06529	.00127	-.02612	.05924	-.00002	.16780	.00000	.00042	.09089	.00000

RUN NO. 32/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.119	-6.034	-.32083	.39330	.16045	-.27771	.42485	-.65366	.00000	4.20875	849.98638	.00000
1.119	-4.923	-.24073	.39391	.12666	-.20603	.41311	-.49873	.00000	4.20936	849.79357	.00000
1.119	-3.806	-.16131	.39572	.09183	-.13468	.40555	-.33210	.00000	4.21032	850.12663	.00000
1.119	-2.701	-.08654	.39685	.06084	-.06774	.40049	-.16915	.00000	4.20687	849.82319	.00000
1.119	-1.622	-.01817	.39707	.03455	-.00692	.39743	-.01741	.00000	4.20726	849.89943	.00000
1.118	-.501	.05189	.39746	.00750	.05536	.39599	.13946	.00000	4.20673	849.68768	.00000
1.118	.591	.12304	.39667	-.02117	.11894	.39792	.29891	.00000	4.20534	849.62697	.00000
1.119	1.712	.19258	.39671	-.04788	.18064	.40229	.44904	.00000	4.20503	849.86981	.00000
1.119	2.802	.25947	.39731	-.07182	.23974	.40951	.58542	.00000	4.20600	850.20288	.00000
	GRADIENT	.06442	.00031	-.02548	.05741	-.00054	.14090	.00000	-.00059	.00846	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 31/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.201	-6.031	-.29357	.40922	.13849	-.24894	.43780	-.56863	.00000	4.23011	881.79978	.00000
1.201	-4.922	-.21933	.40968	.10826	-.18336	.42699	-.42944	.00000	4.22891	881.51885	.00000
1.200	-3.822	-.14163	.41050	.07488	-.11395	.41902	-.27195	.00000	4.22869	881.38330	.00000
1.200	-2.708	-.07151	.41127	.04698	-.05199	.41419	-.12553	.00000	4.23008	881.45498	.00000
1.201	-1.622	-.00128	.41085	.02022	.01035	.41072	.02520	.00000	4.23090	881.69904	.00000
1.200	-.498	.06648	.41125	-.00505	.07005	.41066	.17058	.00000	4.22968	881.35422	.00000
1.201	.582	.13165	.41089	-.02878	.12747	.41220	.30924	.00000	4.23069	881.62739	.00000
1.200	1.698	.19849	.41023	-.05207	.18625	.41593	.44778	.00000	4.23008	881.45498	.00000
1.200	2.792	.26476	.41040	-.07481	.24445	.42281	.57816	.00000	4.23047	881.49182	.00000
	GRADIENT	.06228	.00003	-.02342	.05501	-.00055	.13070	.00000	.00020	.00359	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 40/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.348	-5.552	.00114	-.00211	.00735	.00000
.348	-4.537	.00033	-.00062	.00423	.00000
.348	-3.543	-.00014	.00056	-.00064	.00000
.349	-2.505	.00018	.00033	.00122	.00000
.348	-1.502	-.00087	.00237	-.00526	.00000
.349	-.476	-.00050	.00139	-.00693	.00000
.349	.541	-.00038	.00064	-.00425	.00000
.349	1.557	-.00075	.00096	-.00575	.00000
.348	2.562	-.00132	.00034	-.00478	.00000
	GRADIENT	-.00019	.00010	-.00125	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 39/ 0 RN/L = 3.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.600	-5.724	.00119	-.00226	.00783	.00000
.601	-4.662	.00052	-.00070	.00376	.00000
.601	-3.633	-.00016	.00075	-.00030	.00000
.600	-2.576	.00007	.00027	.00085	.00000
.601	-1.548	-.00025	.00081	-.00129	.00000
.601	-.509	-.00047	.00103	-.00449	.00000
.601	.546	-.00083	.00140	-.00596	.00000
.600	1.576	-.00119	.00188	-.00742	.00000
.600	2.624	-.00123	.00115	-.00458	.00000
	GRADIENT	-.00023	.00025	-.00134	.00000

RUN NO. 38/ 0 RN/L = 3.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.855	.00200	-.00616	.01187	.00000
.800	-4.778	.00141	-.00406	.00726	.00000
.800	-3.712	.00075	-.00258	.00398	.00000
.801	-2.655	.00068	-.00221	.00351	.00000
.800	-1.593	.00020	-.00082	-.00048	.00000
.800	-.514	.00005	-.00071	-.00165	.00000
.800	.553	-.00051	-.00006	-.00435	.00000
.800	1.612	-.00081	.00040	-.00500	.00000
.800	2.667	-.00126	.00116	-.00655	.00000
	GRADIENT	-.00034	.00065	-.00186	.00000

RUN NO. 37/ 0 RN/L = 3.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.850	-5.888	.00189	-.00584	.01010	.00000
.850	-4.811	.00197	-.00540	.00885	.00000
.851	-3.744	.00156	-.00394	.00578	.00000
.850	-2.667	.00095	-.00275	.00315	.00000
.850	-1.604	.00079	-.00240	.00104	.00000
.851	-.514	.00025	-.00142	-.00249	.00000
.850	.550	.00023	-.00205	-.00173	.00000
.850	1.624	-.00059	-.00110	-.00374	.00000
.850	2.693	-.00135	-.00099	-.00347	.00000
	GRADIENT	-.00041	.00053	-.00169	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 36/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-5.900	.00174	-.00534	.00903	.00000
.899	-4.830	.00160	-.00459	.00730	.00000
.900	-3.747	.00140	-.00392	.00577	.00000
.899	-2.655	.00099	-.00279	.00230	.00000
.899	-1.586	.00021	-.00136	-.00115	.00000
.900	-.494	-.00013	-.00201	-.00079	.00000
.900	.569	-.00096	-.00126	-.00391	.00000
.899	1.650	-.00137	-.00198	-.00154	.00000
.900	2.741	-.00192	-.00140	-.00345	.00000
	GRADIENT	-.00049	.00040	-.00143	.00000

RUN NO. 35/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.912	.00131	-.00333	.00762	.00000
.920	-4.839	.00136	-.00341	.00702	.00000
.920	-3.752	.00070	-.00194	.00309	.00000
.920	-2.667	.00063	-.00174	.00175	.00000
.920	-1.585	.00023	-.00142	.00062	.00000
.919	-.489	-.00076	-.00027	-.00314	.00000
.920	.577	-.00100	-.00070	-.00296	.00000
.920	1.689	-.00117	-.00135	-.00163	.00000
.920	2.733	-.00183	-.00206	-.00186	.00000
	GRADIENT	-.00041	.00018	-.00114	.00000

RUN NO. 34/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.948	.00095	-.00365	.00728	.00000
.950	-4.855	.00076	-.00286	.00625	.00000
.950	-3.765	.00040	-.00198	.00409	.00000
.950	-2.684	.00015	-.00118	.00117	.00000
.950	-1.596	-.00019	-.00097	-.00088	.00000
.950	-.507	-.00051	-.00095	-.00200	.00000
.950	.570	-.00104	-.00054	-.00459	.00000
.950	1.681	-.00119	-.00071	-.00420	.00000
.950	2.763	-.00136	.00012	-.00540	.00000
	GRADIENT	-.00029	.00032	-.00155	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9004) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 33/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.981	-5.984	.00139	-.00464	.00834	.00000
.980	-4.869	.00048	-.00216	.00424	.00000
.980	-3.784	.00041	-.00130	.00233	.00000
.980	-2.680	.00013	-.00029	-.00067	.00000
.979	-1.591	-.00002	-.00036	-.00103	.00000
.980	-.512	-.00088	.00074	-.00438	.00000
.981	.582	-.00093	.00211	-.00588	.00000
.980	1.684	-.00140	.00288	-.00779	.00000
.980	2.765	-.00173	.00231	-.00688	.00000
	GRADIENT	-.00031	.00066	-.00161	.00000

RUN NO. 32/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.119	-6.034	.00168	-.00763	.01069	.00000
1.119	-4.923	.00125	-.00699	.00865	.00000
1.119	-3.806	.00129	-.00680	.00854	.00000
1.119	-2.701	.00038	-.00502	.00412	.00000
1.119	-1.622	-.00009	-.00545	.00330	.00000
1.118	-.501	-.00025	-.00551	.00334	.00000
1.118	.591	-.00048	-.00512	.00210	.00000
1.119	1.712	-.00103	-.00450	.00038	.00000
1.119	2.802	-.00116	-.00481	.00074	.00000
	GRADIENT	-.00034	.00029	-.00110	.00000

RUN NO. 31/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.201	-6.031	.00126	-.00427	.00750	.00000
1.201	-4.922	.00065	-.00251	.00405	.00000
1.200	-3.822	.00042	-.00186	.00272	.00000
1.200	-2.708	.00026	-.00144	.00169	.00000
1.201	-1.622	-.00035	-.00150	.00047	.00000
1.200	-.498	-.00076	-.00138	-.00107	.00000
1.201	.582	-.00125	-.00137	-.00310	.00000
1.200	1.698	-.00148	-.00136	-.00254	.00000
1.200	2.792	-.00174	-.00151	-.00184	.00000
	GRADIENT	-.00034	.00011	-.00090	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9005) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 44/ 0 RN/L = 3.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.633	-.31213	.18904	.14575	-.29207	.21877	-1.33504	.00000	3.50695	285.00975	.00000
.350	-4.607	-.25916	.19091	.12684	-.24299	.21111	-1.15102	.00000	3.50738	285.19808	.00000
.350	-3.573	-.21175	.19294	.10993	-.19932	.20577	-.96866	.00000	3.50219	284.54161	.00000
.350	-2.543	-.15007	.19316	.08746	-.14135	.19963	-.70807	.00000	3.50633	285.38403	.00000
.350	-1.514	-.09388	.19408	.06802	-.08871	.19649	-.45149	.00000	3.50431	285.19713	.00000
.350	-.488	-.04235	.19349	.04990	-.04070	.19384	-.20999	.00000	3.50671	285.75852	.00000
.350	.538	.00864	.19250	.03250	.00683	.19258	.03548	.00000	3.50084	285.10332	.00000
.350	1.567	.06516	.19083	.01256	.05991	.19254	.31117	.00000	3.49663	284.54232	.00000
.350	2.595	.11928	.18820	-.00688	.11064	.19341	.57204	.00000	3.50062	285.38403	.00000
	GRADIENT	.05280	-.00037	-.01859	.04936	-.00248	.24232	.00000	-.00103	.01188	.00000

RUN NO. 43/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.600	-5.823	-.32097	.18951	.14643	-.30009	.22109	-1.35727	.00000	4.76847	627.14448	.00000
.600	-4.771	-.26455	.19197	.12652	-.24767	.21331	-1.16108	.00000	4.75961	627.48478	.00000
.600	-3.709	-.20936	.19381	.10725	-.19638	.20695	-.94892	.00000	4.73935	626.49003	.00000
.600	-2.633	-.14976	.19497	.08672	-.14065	.20164	-.69751	.00000	4.73151	626.97843	.00000
.600	-1.582	-.09545	.19507	.06768	-.09003	.19763	-.45552	.00000	4.73607	626.96694	.00000
.599	-.518	-.03770	.19485	.04703	-.03594	.19519	-.18413	.00000	4.74539	625.21949	.00000
.599	.547	.02115	.19401	.02650	.01929	.19421	.09934	.00000	4.75601	625.55834	.00000
.600	1.628	.08358	.19218	.00514	.07808	.19447	.40151	.00000	4.76110	626.48348	.00000
.600	2.679	.13766	.18922	-.01376	.12867	.19545	.65830	.00000	4.76182	627.06475	.00000
	GRADIENT	.05424	-.00034	-.01894	.05077	-.00237	.24766	.00000	.00232	-.10014	.00000

RUN NO. 42/ 0 RN/L = 5.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-6.078	-.34461	.20453	.15518	-.32102	.23987	-1.33830	.00000	5.74467	946.72388	.00000
.800	-4.969	-.27987	.20515	.13286	-.26105	.22862	-1.14183	.00000	5.74500	946.85798	.00000
.800	-3.856	-.21277	.20558	.10947	-.19847	.21942	-.90452	.00000	5.74320	946.47244	.00000
.800	-2.758	-.15475	.20552	.08920	-.14469	.21273	-.68013	.00000	5.74452	946.83283	.00000
.800	-1.661	-.09739	.20548	.06943	-.09139	.20821	-.43893	.00000	5.74296	946.71759	.00000
.800	-.550	-.03022	.20620	.04474	-.02824	.20648	-.13677	.00000	5.74334	946.91245	.00000
.800	.560	.03045	.20548	.02248	.02844	.20577	.13824	.00000	5.74162	946.47244	.00000
.800	1.656	.09271	.20404	.00069	.08678	.20663	.41998	.00000	5.74022	946.16650	.00000
.800	2.772	.16019	.20166	-.02176	.15025	.20917	.71829	.00000	5.74066	946.13083	.00000
	GRADIENT	.05636	-.00034	-.01995	.05267	-.00240	.24137	.00000	-.00058	-.08094	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (RJ9005) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 41/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-6.056	-.32993	.25163	.15164	-.30154	.28504	-1.05790	.00000	5.25540	937.33296	.00000
.900	-4.945	-.26054	.25215	.12500	-.23783	.27367	-.86905	.00000	5.25501	938.06957	.00000
.899	-3.853	-.19074	.25041	.09768	-.17348	.26266	-.66049	.00000	5.25383	937.22304	.00000
.900	-2.746	-.12357	.25019	.07166	-.11144	.25582	-.43564	.00000	5.25297	937.62130	.00000
.900	-1.609	-.05042	.24937	.04310	-.04339	.25069	-.17310	.00000	5.25336	937.74936	.00000
.899	-.502	.01567	.24970	.01864	.01786	.24956	.07155	.00000	5.25194	937.59826	.00000
.900	.609	.08239	.25129	-.00464	.07971	.25215	.31612	.00000	5.25199	938.26148	.00000
.899	1.693	.13565	.25098	-.02046	.12817	.25488	.50287	.00000	5.24995	937.51145	.00000
.900	2.806	.19929	.25131	-.03916	.18674	.26077	.71613	.00000	5.25097	937.88653	.00000
	GRADIENT	.05942	.00001	-.02140	.05491	-.00152	.20841	.00000	-.00056	.02104	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9005) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 44/ 0 RN/L = 3.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.633	-.00003	.00191	.00216	.00000
.350	-4.607	-.00027	.00227	.00087	.00000
.350	-3.573	-.00083	.00330	-.00236	.00000
.350	-2.543	-.00088	.00368	-.00412	.00000
.350	-1.514	-.00147	.00490	-.00780	.00000
.350	-.488	-.00208	.00585	-.01248	.00000
.350	.538	-.00166	.00427	-.00853	.00000
.350	1.567	-.00258	.00539	-.01322	.00000
.350	2.595	-.00220	.00374	-.00970	.00000
	GRADIENT	-.00029	.00027	-.00169	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 4 (AJ9005) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 43/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.600	-5.823	.00053	-.00097	.00424	.00000
.600	-4.771	.00047	-.00079	.00329	.00000
.600	-3.709	-.00027	.00127	.00008	.00000
.600	-2.633	-.00045	.00145	-.00152	.00000
.600	-1.582	-.00118	.00284	-.00663	.00000
.599	-.518	-.00133	.00300	-.00781	.00000
.599	.547	-.00170	.00339	-.00961	.00000
.600	1.628	-.00177	.00318	-.00873	.00000
.600	2.679	-.00191	.00291	-.00857	.00000
	GRADIENT	-.00031	.00046	-.00170	.00000

RUN NO. 42/ 0 RN/L = 5.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-6.078	.00128	-.00398	.00586	.00000
.800	-4.969	.00137	-.00405	.00636	.00000
.800	-3.656	.00104	-.00285	.00506	.00000
.800	-2.758	.00046	-.00120	.00077	.00000
.800	-1.661	-.00014	-.00015	-.00237	.00000
.800	-.550	-.00047	.00047	-.00510	.00000
.800	.560	-.00088	.00098	-.00695	.00000
.800	1.656	-.00105	.00116	-.00643	.00000
.800	2.772	-.00129	.00157	-.00660	.00000
	GRADIENT	-.00036	.00072	-.00187	.00000

RUN NO. 41/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-6.056	.00184	-.00507	.00881	.00000
.900	-4.945	.00149	-.00389	.00566	.00000
.899	-3.853	.00145	-.00376	.00558	.00000
.900	-2.746	.00116	-.00318	.00357	.00000
.900	-1.609	.00031	-.00157	-.00102	.00000
.899	-.502	-.00049	-.00110	-.00286	.00000
.900	.609	-.00097	-.00106	-.00353	.00000
.899	1.693	-.00165	-.00070	-.00526	.00000
.900	2.806	-.00142	-.00153	-.00269	.00000
	GRADIENT	-.00046	.00042	-.00146	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (RJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 54/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.514	-.23141	.09471	.14747	-.22124	.11650	-1.89901	.00000	2.05646	166.82062	.00000
.351	-4.506	-.19716	.09736	.12984	-.18890	.11255	-1.67834	.00000	2.05993	167.66315	.00000
.351	-3.496	-.15312	.09935	.10694	-.14677	.10850	-1.35271	.00000	2.06044	167.85000	.00000
.351	-2.487	-.11719	.10038	.08938	-.11272	.10537	-1.06979	.00000	2.06054	167.94401	.00000
.350	-1.478	-.08177	.09981	.07230	-.07917	.10188	-.77708	.00000	2.05540	167.19514	.00000
.350	-.468	-.04297	.09866	.05241	-.04216	.09901	-.42588	.00000	2.05596	167.28870	.00000
.351	.542	-.00160	.09726	.03076	-.00252	.09725	-.02588	.00000	2.05840	167.65096	.00000
.351	1.564	.04792	.09364	.00473	.04535	.09491	.47781	.00000	2.05611	167.57008	.00000
.351	2.563	.08358	.09135	-.01392	.07941	.09499	.83596	.00000	2.05606	167.85048	.00000
	GRADIENT	.03954	-.00096	-.02018	.03778	-.00257	.35625	.00000	-.00064	-.00323	.00000

RUN NO. 53/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.600	-5.608	-.23094	.09378	.14456	-.22067	.11589	-1.90408	.00000	3.16030	418.39264	.00000
.599	-4.573	-.18810	.09591	.12179	-.17986	.11060	-1.62619	.00000	3.16565	418.14672	.00000
.599	-3.537	-.14528	.09748	.09980	-.13899	.10626	-1.30804	.00000	3.17224	417.89096	.00000
.599	-2.511	-.10311	.09881	.07913	-.09868	.10323	-.95593	.00000	3.17865	418.06854	.00000
.600	-1.508	-.06655	.09856	.06075	-.06394	.10028	-.63760	.00000	3.18268	418.65489	.00000
.600	-.470	-.02138	.09757	.03791	-.02058	.09775	-.21051	.00000	3.18343	418.57511	.00000
.600	.556	.02166	.09574	.01569	.02073	.09594	.21606	.00000	3.18667	419.41204	.00000
.600	1.582	.06349	.09405	-.00579	.06087	.09577	.63561	.00000	3.18302	418.66144	.00000
.601	2.612	.11175	.09089	-.03079	.10750	.09589	1.12103	.00000	3.18402	419.58300	.00000
	GRADIENT	.04136	-.00073	-.02101	.03962	-.00209	.38192	.00000	.00241	.20720	.00000

RUN NO. 52/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.680	-.24943	.10693	.15827	-.23762	.13109	-1.81260	.00000	3.78036	622.90073	.00000
.800	-4.636	-.19862	.10693	.13039	-.18932	.12264	-1.54376	.00000	3.77923	622.49208	.00000
.800	-3.597	-.15331	.10718	.10608	-.14628	.11659	-1.25467	.00000	3.78225	623.40771	.00000
.800	-2.554	-.10529	.10773	.08128	-.10038	.11231	-.89376	.00000	3.78037	623.07255	.00000
.800	-1.512	-.06006	.10747	.05860	-.05720	.10902	-.52471	.00000	3.78000	623.34069	.00000
.800	-.472	-.01643	.10635	.03659	-.01555	.10649	-.14603	.00000	3.77676	623.04739	.00000
.800	.561	.02867	.10366	.01418	.02766	.10393	.26611	.00000	3.77431	622.56544	.00000
.800	1.603	.07450	.10184	-.00952	.07163	.10388	.68947	.00000	3.77539	622.91331	.00000
.800	2.669	.12842	.09966	-.03923	.12364	.10554	1.17151	.00000	3.77565	623.10184	.00000
	GRADIENT	.04426	-.00104	-.02272	.04235	-.00241	.37236	.00000	-.00092	-.00009	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (RJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 51/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.851	-5.704	-.25926	.11636	.16712	-.24641	.14155	-1.74080	.00000	3.89137	669.72260	.00000
.851	-4.656	-.20731	.11558	.13833	-.19724	.13203	-1.49389	.00000	3.88962	669.11949	.00000
.850	-3.599	-.15653	.11557	.11061	-.14897	.12517	-1.19014	.00000	3.88840	668.82977	.00000
.850	-2.573	-.10777	.11517	.08455	-.10249	.11989	-.85484	.00000	3.88631	668.10977	.00000
.850	-1.527	-.06010	.11489	.05997	-.05702	.11645	-.48962	.00000	3.88853	668.61048	.00000
.850	-.456	-.00840	.11320	.03295	-.00750	.11327	-.06622	.00000	3.88852	668.55581	.00000
.851	.590	.03968	.11187	.00784	.03853	.11227	.34318	.00000	3.89045	669.15830	.00000
.850	1.662	.09315	.11030	-.02015	.08991	.11296	.79597	.00000	3.88961	668.83767	.00000
.851	2.678	.14251	.11047	-.04666	.13719	.11701	1.17254	.00000	3.88949	668.88442	.00000
	GRADIENT	.04752	-.00084	-.02501	.04544	-.00218	.36980	.00000	.00020	.01710	.00000

RUN NO. 50/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-5.718	-.26681	.13690	.17523	-.25184	.16280	-1.54695	.00000	3.98279	709.97305	.00000
.900	-4.674	-.20846	.13698	.14112	-.19661	.15351	-1.28077	.00000	3.98501	711.16701	.00000
.900	-3.616	-.14731	.13687	.10564	-.13839	.14589	-.94859	.00000	3.98301	710.85154	.00000
.901	-2.560	-.08682	.13761	.07076	-.08059	.14135	-.57015	.00000	3.98451	711.51432	.00000
.899	-1.515	-.03012	.13638	.03894	-.02650	.13712	-.19326	.00000	3.97940	710.34836	.00000
.900	-.462	.02518	.13749	.00747	.02629	.13728	.19153	.00000	3.98012	711.41382	.00000
.900	.590	.07686	.13693	-.01974	.07545	.13771	.54786	.00000	3.97658	710.63667	.00000
.900	1.654	.12911	.13888	-.04645	.12505	.14255	.87723	.00000	3.97823	711.25844	.00000
.900	2.701	.17465	.13954	-.06989	.16789	.14761	1.13733	.00000	3.97890	710.69614	.00000
	GRADIENT	.05211	.00031	-.02871	.04961	-.00078	.33674	.00000	-.00101	-.03185	.00000

RUN NO. 49/ 0 RN/L = 4.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.921	-5.741	-.27431	.15422	.18406	-.25751	.18089	-1.42359	.00000	4.01360	727.40081	.00000
.920	-4.681	-.20860	.15261	.14365	-.19545	.16912	-1.15566	.00000	4.01188	727.15798	.00000
.920	-3.621	-.14348	.15164	.10404	-.13361	.16040	-.83301	.00000	4.01083	726.93500	.00000
.920	-2.560	-.07933	.15121	.06620	-.07249	.15460	-.46890	.00000	4.00960	726.87667	.00000
.920	-1.501	-.01768	.15138	.03047	-.01371	.15179	-.09032	.00000	4.01174	727.14837	.00000
.921	-.432	.04093	.15171	-.00196	.04207	.15140	.27787	.00000	4.01279	727.67294	.00000
.920	.604	.09588	.15273	-.03125	.09426	.15373	.61316	.00000	4.01538	727.04203	.00000
.921	1.670	.15474	.15595	-.06453	.15013	.16040	.93597	.00000	4.01869	727.59491	.00000
.921	2.709	.20435	.15801	-.09213	.19665	.16750	1.17406	.00000	4.01869	727.59491	.00000
	GRADIENT	.05596	.00072	-.03176	.05318	-.00017	.32419	.00000	.00119	.08327	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (RJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 48/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.759	-.28602	.18270	.19919	-.26624	.21048	-1.26495	.00000	4.05526	749.45047	.00000
.950	-4.695	-.21855	.18161	.15781	-.20295	.19889	-1.02040	.00000	4.05582	749.67708	.00000
.950	-3.632	-.15289	.18081	.11832	-.14112	.19014	-.74222	.00000	4.05483	749.41570	.00000
.950	-2.568	-.09040	.18113	.08369	-.08219	.18500	-.44426	.00000	4.05846	749.75402	.00000
.950	-1.506	-.02646	.18384	.04668	-.02162	.18447	-.11721	.00000	4.05815	749.31975	.00000
.950	-.441	.04371	.18667	.00348	.04515	.18633	.24230	.00000	4.05939	749.64652	.00000
.950	.617	.10506	.18871	-.03305	.10302	.18983	.54272	.00000	4.05964	749.71187	.00000
.951	1.689	.16880	.19043	-.07084	.16311	.19532	.83511	.00000	4.06098	750.09230	.00000
.950	2.738	.22972	.19107	-.10651	.22033	.20183	1.09169	.00000	4.05861	749.76561	.00000
	GRADIENT	.06053	.00157	-.03573	.05721	.00070	.29121	.00000	.00062	.04714	.00000

RUN NO. 47/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.770	-.29098	.22837	.21495	-.26655	.25646	-1.03934	.00000	4.08531	770.49700	.00000
.980	-4.692	-.22026	.22841	.17129	-.20084	.24566	-.81754	.00000	4.08907	770.26799	.00000
.980	-3.632	-.14607	.22949	.12453	-.13123	.23828	-.55076	.00000	4.09409	770.31347	.00000
.980	-2.557	-.07591	.23150	.08072	-.06551	.23465	-.27919	.00000	4.09601	770.46588	.00000
.980	-1.502	-.00873	.23417	.03986	-.00259	.23432	-.01106	.00000	4.09538	770.32862	.00000
.980	-.428	.05679	.23709	.00083	.05856	.23666	.24743	.00000	4.09656	770.63386	.00000
.980	.625	.12075	.23928	-.03670	.11813	.24058	.49103	.00000	4.09472	770.45072	.00000
.980	1.700	.18566	.24108	-.07492	.17843	.24648	.72390	.00000	4.09566	770.69491	.00000
.980	2.744	.23979	.24129	-.10684	.22796	.25249	.90287	.00000	4.09188	770.28272	.00000
	GRADIENT	.06196	.00195	-.03734	.05779	.00122	.23493	.00000	.00028	.02556	.00000

RUN NO. 46/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.120	-5.785	-.26161	.26994	.19822	-.23307	.29494	-.79022	.00000	4.20513	850.91147	.00000
1.120	-4.713	-.18739	.27433	.14985	-.16422	.28880	-.56863	.00000	4.21094	850.59274	.00000
1.120	-3.641	-.11568	.27799	.10385	-.09779	.28477	-.34341	.00000	4.21347	850.83715	.00000
1.120	-2.574	-.04922	.28091	.06193	-.03656	.28284	-.12925	.00000	4.21365	851.01702	.00000
1.119	-1.494	.01846	.28326	.01954	.02594	.29268	.09139	.00000	4.21373	850.77835	.00000
1.120	-.436	.08352	.28568	-.02065	.08569	.28503	.30064	.00000	4.21282	850.81955	.00000
1.120	.632	.14708	.28722	-.05918	.14390	.28882	.49823	.00000	4.21207	850.77652	.00000
1.120	1.709	.20862	.28831	-.09545	.19993	.29441	.67907	.00000	4.21150	851.30641	.00000
1.119	2.764	.26723	.28914	-.12955	.25298	.30169	.83852	.00000	4.20831	850.55133	.00000
	GRADIENT	.06080	.00197	-.03740	.05582	.00177	.19000	.00000	-.00038	.01544	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (RJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 45/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.773	-.22179	.28932	.16735	-.19157	.31016	-.61764	.00000	4.22666	881.05377	.00000
1.200	-4.701	-.15444	.29081	.12489	-.13009	.30249	-.43007	.00000	4.22725	881.14090	.00000
1.200	-3.634	-.09159	.29270	.08572	-.07286	.29792	-.24456	.00000	4.23029	881.74372	.00000
1.200	-2.566	-.02890	.29375	.04659	-.01572	.29475	-.05332	.00000	4.22986	881.27669	.00000
1.200	-1.498	.03249	.29512	.00906	.04020	.29416	.13665	.00000	4.23106	881.53638	.00000
1.200	-.429	.09586	.29644	-.02968	.09808	.29571	.33167	.00000	4.22850	881.61389	.00000
1.200	.625	.15279	.29742	-.06354	.14954	.29907	.50000	.00000	4.22668	881.11779	.00000
1.200	1.700	.20919	.29808	-.09681	.20025	.30416	.65839	.00000	4.23045	881.36386	.00000
1.199	2.766	.26717	.29864	-.13073	.25245	.31119	.81123	.00000	4.22942	881.00500	.00000
	GRADIENT	.05653	.00105	-.03428	.05132	.00119	.16810	.00000	.00004	-.03621	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (AJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 54/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.514	.00012	.00055	.00431	.00000
.351	-4.506	-.00054	.00234	-.00053	.00000
.351	-3.496	-.00114	.00291	-.00291	.00000
.351	-2.487	-.00148	.00319	-.00533	.00000
.350	-1.478	-.00165	.00229	-.00536	.00000
.350	-.468	-.00225	.00343	-.00938	.00000
.351	.542	-.00257	.00219	-.01108	.00000
.351	1.564	-.00258	.00184	-.01103	.00000
.351	2.563	-.00225	.00130	-.01015	.00000
	GRADIENT	-.00027	-.00017	-.00152	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (AJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 53/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.600	-5.608	.00094	-.00147	.00667	.00000
.599	-4.573	.00009	.00118	.00127	.00000
.599	-3.537	-.00009	.00138	.00037	.00000
.599	-2.511	-.00069	.00227	-.00351	.00000
.600	-1.508	-.00099	.00145	-.00486	.00000
.600	-.470	-.00166	.00185	-.00707	.00000
.600	.556	-.00163	.00072	-.00810	.00000
.600	1.582	-.00111	-.00136	-.00520	.00000
.601	2.612	-.00097	-.00089	-.00505	.00000
	GRADIENT	-.00019	-.00038	-.00102	.00000

RUN NO. 52/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.680	.00137	-.00306	.00725	.00000
.800	-4.636	.00049	-.00039	.00194	.00000
.800	-3.597	.00056	.00010	.00070	.00000
.800	-2.554	-.00028	.00073	-.00321	.00000
.800	-1.512	-.00024	.00059	-.00359	.00000
.800	-.472	-.00063	-.00111	-.00411	.00000
.800	.561	-.00074	-.00673	-.00091	.00000
.800	1.603	-.00081	-.00949	.00005	.00000
.800	2.669	-.00047	-.00655	-.00139	.00000
	GRADIENT	-.00018	-.00131	-.00023	.00000

RUN NO. 51/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.851	-5.704	.00136	-.00402	.00764	.00000
.851	-4.656	.00091	-.00231	.00410	.00000
.850	-3.599	.00092	-.00140	.00216	.00000
.850	-2.573	.00020	.00009	-.00182	.00000
.850	-1.527	.00006	-.00097	-.00289	.00000
.850	-.456	-.00022	-.00155	-.00432	.00000
.851	.590	-.00030	-.00460	-.00282	.00000
.850	1.662	-.00032	-.00933	.00107	.00000
.851	2.678	-.00087	-.00953	.00011	.00000
	GRADIENT	-.00023	-.00119	-.00043	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (AJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 50/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-5.718	.00110	-.00495	.00865	.00000
.900	-4.674	.00115	-.00335	.00608	.00000
.900	-3.616	.00034	-.00134	.00022	.00000
.901	-2.560	.00037	-.00174	-.00053	.00000
.899	-1.515	.00027	-.00164	-.00261	.00000
.900	-.462	-.00056	-.00197	-.00531	.00000
.900	.590	-.00067	-.00290	-.00390	.00000
.900	1.654	-.00091	-.00330	-.00342	.00000
.900	2.701	-.00184	-.00216	-.00738	.00000
	GRADIENT	-.00035	-.00006	-.00142	.00000

RUN NO. 49/ 0 RN/L = 4.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.921	-5.741	.00009	-.00257	.00614	.00000
.920	-4.681	-.00028	-.00107	.00250	.00000
.920	-3.621	-.00028	-.00062	.00088	.00000
.920	-2.560	-.00028	-.00052	-.00155	.00000
.920	-1.501	-.00020	-.00112	-.00269	.00000
.921	-.432	-.00112	-.00045	-.00619	.00000
.920	.604	-.00071	-.00192	-.00430	.00000
.921	1.670	-.00086	-.00268	-.00388	.00000
.921	2.709	-.00155	-.00324	-.00518	.00000
	GRADIENT	-.00016	-.00033	-.00101	.00000

RUN NO. 48/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.759	-.00003	.00020	.00336	.00000
.950	-4.695	-.00089	.00237	-.00102	.00000
.950	-3.632	-.00074	.00253	-.00243	.00000
.950	-2.568	-.00057	.00200	-.00352	.00000
.950	-1.506	-.00112	.00116	-.00652	.00000
.950	-.441	-.00148	.00070	-.00721	.00000
.950	.617	-.00101	-.00027	-.00610	.00000
.951	1.689	-.00110	-.00076	-.00680	.00000
.950	2.738	-.00104	-.00130	-.00677	.00000
	GRADIENT	-.00005	-.00055	-.00079	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 5 (AJ9006) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 47/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.770	.00035	.00018	.00416	.00000
.980	-4.692	-.00026	.00162	.00074	.00000
.980	-3.632	-.00076	.00249	-.00219	.00000
.980	-2.557	-.00086	.00241	-.00431	.00000
.980	-1.502	-.00145	.00223	-.00643	.00000
.980	-.428	-.00208	.00209	-.00834	.00000
.980	.625	-.00207	.00172	-.00921	.00000
.980	1.700	-.00183	.00084	-.00754	.00000
.980	2.744	-.00240	.00143	-.01125	.00000
	GRADIENT	-.00028	-.00013	-.00142	.00000

RUN NO. 46/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.120	-5.785	.00113	-.00041	.00544	.00000
1.120	-4.713	.00067	.00041	.00245	.00000
1.120	-3.641	-.00027	.00122	-.00068	.00000
1.120	-2.574	-.00080	.00141	-.00239	.00000
1.119	-1.494	-.00096	.00045	-.00356	.00000
1.120	-.436	-.00148	.00005	-.00549	.00000
1.120	.632	-.00142	-.00079	-.00498	.00000
1.120	1.709	-.00160	-.00110	-.00641	.00000
1.119	2.764	-.00141	-.00145	-.00553	.00000
	GRADIENT	-.00026	-.00035	-.00105	.00000

RUN NO. 45/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.773	-.00002	.00257	.00073	.00000
1.200	-4.701	-.00041	.00321	-.00104	.00000
1.200	-3.634	-.00096	.00389	-.00376	.00000
1.200	-2.566	-.00116	.00314	-.00439	.00000
1.200	-1.498	-.00159	.00304	-.00671	.00000
1.200	-.429	-.00181	.00234	-.00732	.00000
1.200	.625	-.00188	.00220	-.00789	.00000
1.200	1.700	-.00250	.00211	-.01069	.00000
1.199	2.766	-.00227	.00160	-.00904	.00000
	GRADIENT	-.00025	-.00026	-.00114	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (RJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 64/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.517	-.23704	.09164	.14570	-.22713	.11400	-1.99241	.00000	2.05351	166.91348	.00000
.350	-4.508	-.19824	.09415	.12579	-.19023	.10944	-1.73821	.00000	2.05412	167.10086	.00000
.350	-3.498	-.15687	.09503	.10319	-.15078	.10443	-1.44383	.00000	2.05525	167.28799	.00000
.350	-2.488	-.11788	.09667	.08545	-.11357	.10170	-1.11673	.00000	2.05530	167.38178	.00000
.350	-1.490	-.08745	.09735	.07125	-.08489	.09959	-.85240	.00000	2.05418	167.28822	.00000
.350	-.481	-.04883	.09742	.05176	-.04801	.09782	-.49082	.00000	2.05301	167.19442	.00000
.351	.539	-.01017	.09652	.03205	-.01107	.09642	-.11483	.00000	2.05585	167.75598	.00000
.350	1.549	.03387	.09490	.00936	.03130	.09578	.32673	.00000	2.05072	166.91348	.00000
.350	2.560	.08011	.09206	-.01833	.07592	.09555	.79454	.00000	2.05077	167.00729	.00000
	GRADIENT	.03849	-.00019	-.01955	.03677	-.00186	.35322	.00000	-.00054	-.01768	.00000

RUN NO. 63/ 0 RN/L = 3.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.599	-5.603	-.23672	.08931	.14449	-.22687	.11199	-2.02581	.00000	3.17609	417.99197	.00000
.600	-4.576	-.19208	.09195	.12223	-.18413	.10698	-1.72120	.00000	3.17483	418.90403	.00000
.599	-3.552	-.15300	.09397	.10217	-.14688	.10327	-1.42234	.00000	3.16488	417.64983	.00000
.599	-2.526	-.10989	.09522	.07987	-.10559	.09997	-1.05615	.00000	3.16228	417.89911	.00000
.599	-1.500	-.06488	.09495	.05576	-.06237	.09662	-.64557	.00000	3.15361	417.22778	.00000
.598	-.465	-.02394	.09382	.03460	-.02318	.09401	-.24658	.00000	3.14904	416.70795	.00000
.598	.553	.02342	.09298	.00919	.02252	.09320	.24167	.00000	3.14796	415.86190	.00000
.598	1.589	.06523	.09205	-.01167	.06265	.09383	.66774	.00000	3.15877	416.97840	.00000
.599	2.606	.10904	.09119	-.03422	.10478	.09606	1.09087	.00000	3.16649	417.55372	.00000
	GRADIENT	.04220	-.00026	-.02200	.04050	-.00170	.39915	.00000	-.00158	-.22540	.00000

RUN NO. 62/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.679	-.26528	.10101	.16984	-.25399	.12676	-2.00368	.00000	3.78492	623.55433	.00000
.801	-4.638	-.21806	.10192	.14400	-.20911	.11922	-1.75401	.00000	3.78478	623.83494	.00000
.801	-3.607	-.16882	.10315	.11649	-.16200	.11356	-1.42651	.00000	3.78245	623.82233	.00000
.801	-2.556	-.12159	.10394	.09130	-.11683	.10926	-1.06930	.00000	3.78285	624.18878	.00000
.801	-1.522	-.07164	.10400	.06439	-.06885	.10587	-.65034	.00000	3.78082	623.96260	.00000
.801	-.478	-.02219	.10334	.03781	-.02132	.10352	-.20597	.00000	3.77863	623.66943	.00000
.800	.565	.02704	.10125	.01114	.02604	.10151	.25656	.00000	3.77878	623.56063	.00000
.801	1.619	.07784	.09992	-.01702	.07498	.10208	.73453	.00000	3.77655	623.66943	.00000
.801	2.656	.13060	.10021	-.04480	-.12582	.10615	1.18522	.00000	3.77827	624.10918	.00000
	GRADIENT	.04760	-.00042	-.02576	.04573	-.00199	.40875	.00000	-.00102	-.01164	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (RJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 61/ 0 RN/L = 3.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.851	-5.719	-.28434	.10856	.18497	-.27210	.13636	-1.99556	.00000	3.89351	669.21366	.00000
.851	-4.660	-.23023	.10901	.15502	-.22061	.12736	-1.73224	.00000	3.89068	669.29202	.00000
.851	-3.621	-.17658	.11005	.12551	-.16928	.12096	-1.39920	.00000	3.89035	669.94096	.00000
.850	-2.572	-.12410	.11022	.09652	-.11903	.11568	-1.02893	.00000	3.88634	668.67364	.00000
.851	-1.517	-.07528	.11052	.07004	-.07232	.11248	-.64303	.00000	3.88693	669.20575	.00000
.850	-.468	-.02190	.10979	.04053	-.02100	.10997	-.19097	.00000	3.88485	668.54058	.00000
.850	.582	.03247	.10845	.00984	.03137	.10877	.28837	.00000	3.88557	668.85347	.00000
.851	1.624	.09010	.10883	-.02281	.08698	.11134	.78122	.00000	3.88723	669.38545	.00000
.850	2.672	.14300	.11067	-.05154	.13769	.11721	1.17464	.00000	3.88484	668.48587	.00000
	GRADIENT	.05075	-.00001	-.02813	.04874	-.00162	.40489	.00000	-.00069	-.09712	.00000

RUN NO. 60/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.900	-5.730	-.28592	.12551	.18806	-.27197	.15343	-1.77260	.00000	3.98692	711.24930	.00000
.900	-4.681	-.22152	.12453	.14887	-.21062	.14219	-1.48125	.00000	3.98197	710.50425	.00000
.901	-3.622	-.15587	.12604	.10978	-.14760	.13564	-1.08819	.00000	3.98206	711.32235	.00000
.900	-2.554	-.09313	.12592	.07285	-.08742	.12994	-.67280	.00000	3.97693	710.25728	.00000
.900	-1.522	-.03664	.12716	.03952	-.03325	.12809	-.25956	.00000	3.97458	710.29852	.00000
.900	-.466	.02319	.12811	.00529	.02423	.12792	.18944	.00000	3.97393	710.10188	.00000
.900	.597	.07839	.13001	-.02584	.07703	.13082	.58881	.00000	3.97443	710.33973	.00000
.900	1.647	.12936	.13263	-.05334	.12549	.13629	.92075	.00000	3.97468	710.45862	.00000
.899	2.701	.18561	.13403	-.08419	.17908	.14263	1.25561	.00000	3.97447	709.52995	.00000
	GRADIENT	.05479	.00127	-.03137	.05246	.00010	.37769	.00000	-.00110	-.12526	.00000

RUN NO. 59/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.738	-.28776	.14053	.19218	-.27227	.16859	-1.61494	.00000	4.01508	726.26520	.00000
.921	-4.686	-.21579	.13918	.14604	-.20370	.15634	-1.30289	.00000	4.01831	727.39175	.00000
.920	-3.624	-.14834	.13855	.10447	-.13929	.14765	-.94334	.00000	4.01627	726.49780	.00000
.921	-2.554	-.08350	.14067	.06611	-.07715	.14425	-.53482	.00000	4.01971	727.78943	.00000
.921	-1.503	-.01839	.14180	.02741	-.01467	.14224	-.10313	.00000	4.01722	727.34311	.00000
.920	-.446	.04062	.14233	-.00666	.04173	.14201	.29381	.00000	4.01444	726.57534	.00000
.921	.609	.09777	.14524	-.03893	.09622	.14627	.65785	.00000	4.01616	727.62431	.00000
.921	1.665	.15719	.14818	-.07352	.15282	.15268	1.00095	.00000	4.01476	727.60505	.00000
.921	2.710	.21183	.15173	-.10256	.20442	.16158	1.26514	.00000	4.01181	727.30406	.00000
	GRADIENT	.05773	.00169	-.03357	.05514	.00076	.35686	.00000	-.00075	.04133	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (RJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 58/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.761	-.29695	.16972	.20823	-.27842	.19867	-1.40141	.00000	4.05573	749.03168	.00000
.950	-4.702	-.22929	.16893	.16345	-.21467	.18716	-1.14699	.00000	4.05755	749.27007	.00000
.950	-3.644	-.15416	.16969	.11599	-.14306	.17914	-.79858	.00000	4.05790	749.38924	.00000
.950	-2.569	-.06494	.17086	.07367	-.07720	.17450	-.44238	.00000	4.05726	749.24692	.00000
.950	-1.501	-.01159	.17352	.02916	-.00704	.17376	-.04053	.00000	4.05790	749.38924	.00000
.950	-.440	.05270	.17662	-.00928	.05406	.17621	.30678	.00000	4.05821	749.55058	.00000
.950	.619	.11412	.17920	-.04579	.11218	.18043	.62174	.00000	4.05746	749.35450	.00000
.950	1.687	.17486	.18277	-.08137	.16940	.18783	.90188	.00000	4.05875	749.63911	.00000
.950	2.726	.23470	.18969	-.11438	.22541	.20064	1.12344	.00000	4.05835	749.56217	.00000
	GRADIENT	.06222	.00267	-.03729	.05906	.00176	.31297	.00000	.00012	.04232	.00000

RUN NO. 57/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.979	-5.766	-.27888	.22239	.20090	-.25512	.24928	-1.02346	.00000	4.08731	769.82218	.00000
.980	-4.694	-.21385	.22322	.16037	-.19487	.23997	-.81204	.00000	4.08929	770.51039	.00000
.980	-3.634	-.13960	.22387	.11429	-.12513	.23227	-.53873	.00000	4.08906	770.60270	.00000
.980	-2.557	-.05993	.22529	.07177	-.05981	.22818	-.26210	.00000	4.09141	770.64860	.00000
.980	-1.494	-.00502	.22747	.03268	.00092	.22752	.00403	.00000	4.09377	770.69450	.00000
.980	-.438	.06331	.23033	-.00855	.06507	.22984	.28312	.00000	4.09644	770.77071	.00000
.980	.638	.13015	.23301	-.04823	.12755	.23444	.54406	.00000	4.09631	770.34283	.00000
.980	1.700	.19271	.23686	-.08466	.18560	.24247	.76544	.00000	4.09789	770.80102	.00000
.980	2.747	.24954	.23973	-.11702	.23777	.25141	.94572	.00000	4.09829	770.87723	.00000
	GRADIENT	.06235	.00231	-.03734	.05826	.00170	.24078	.00000	.00139	.03033	.00000

RUN NO. 56/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.119	-5.772	-.25452	.26217	.18901	-.22686	.26644	-.79199	.00000	4.20202	849.39530	.00000
1.119	-4.713	-.18642	.26515	.14585	-.16400	.27957	-.58662	.00000	4.20032	848.95491	.00000
1.118	-3.643	-.11709	.26834	.10215	-.09980	.27524	-.36260	.00000	4.20088	848.88142	.00000
1.119	-2.563	-.04876	.27190	.05930	-.03655	.27380	-.13349	.00000	4.20185	849.37974	.00000
1.118	-1.504	.01842	.27498	.01728	.02564	.27440	.09342	.00000	4.20093	848.92665	.00000
1.119	-.433	.08731	.27874	-.02502	.08941	.27807	.32154	.00000	4.20054	849.01561	.00000
1.118	.620	.14924	.28377	-.06339	.14616	.28537	.51216	.00000	4.20101	848.85168	.00000
1.119	1.697	.21192	.28662	-.10097	.20333	.29277	.69452	.00000	4.20071	849.03115	.00000
1.118	2.754	.27361	.28819	-.13752	.25944	.30101	.86192	.00000	4.20297	848.77545	.00000
	GRADIENT	.06171	.00326	-.03806	.05684	.00308	.19636	.00000	.00017	-.02221	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (RJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 55/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.771	-.21919	.27732	.16198	-.19019	.29795	-.63833	.00000	4.22848	881.54996	.00000
1.200	-4.701	-.15340	.28009	.12090	-.12993	.29172	-.44539	.00000	4.22829	881.52089	.00000
1.201	-3.623	-.08916	.28289	.08087	-.07111	.28795	-.24696	.00000	4.22771	881.47627	.00000
1.201	-2.566	-.02749	.28636	.04276	-.01464	.28730	-.05097	.00000	4.22872	881.77068	.00000
1.200	-1.499	.03611	.29077	.00304	.04371	.28972	.15086	.00000	4.22830	881.58481	.00000
1.200	-.432	.09701	.29299	-.03389	.09922	.29225	.33949	.00000	4.22789	881.46275	.00000
1.200	.632	.15486	.29452	-.06861	.15160	.29621	.51181	.00000	4.22730	881.37552	.00000
1.201	1.697	.21260	.29583	-.10316	.20375	.30200	.67466	.00000	4.23089	881.67776	.00000
1.200	2.773	.27008	.29711	-.13697	.25540	.30983	.82431	.00000	4.23086	881.50732	.00000
	GRADIENT	.05672	.00235	-.03456	.05164	.00253	.17161	.00000	.00033	-.00444	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (AJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 64/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.517	.00050	.00278	.00149	.00000
.350	-4.508	-.00025	.00473	-.00161	.00000
.350	-3.498	-.00056	.00422	-.00328	.00000
.350	-2.488	-.00180	.00619	-.00888	.00000
.350	-1.490	-.00223	.00584	-.01053	.00000
.350	-.481	-.00234	.00484	-.01140	.00000
.351	.539	-.00255	.00426	-.01218	.00000
.350	1.549	-.00192	.00057	-.00829	.00000
.350	2.560	-.00153	-.00496	-.00367	.00000
	GRADIENT	-.00021	-.00110	-.00059	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (AJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 63/ 0 RN/L = 3.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.599	-5.603	.00083	.00251	.00280	.00000
.600	-4.576	.00039	.00328	-.00042	.00000
.599	-3.552	-.00010	.00345	-.00234	.00000
.599	-2.526	-.00054	.00389	-.00492	.00000
.599	-1.500	-.00107	.00373	-.00722	.00000
.598	-.465	-.00175	.00382	-.01052	.00000
.598	.553	-.00130	.00126	-.00765	.00000
.598	1.589	-.00155	-.00408	-.00465	.00000
.599	2.606	-.00059	-.00897	.00207	.00000
	GRADIENT	-.00020	-.00152	-.00007	.00000

RUN NO. 62/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.679	.00118	.00117	.00322	.00000
.801	-4.638	.00050	.00257	-.00040	.00000
.801	-3.607	-.00009	.00337	-.00385	.00000
.801	-2.556	-.00026	.00299	-.00516	.00000
.801	-1.522	-.00042	.00213	-.00538	.00000
.801	-.478	-.00094	.00210	-.00869	.00000
.800	.565	-.00084	-.00041	-.00634	.00000
.801	1.619	-.00033	.00996	-.01596	.00000
.801	2.656	-.00019	-.00551	-.00144	.00000
	GRADIENT	-.00009	-.00039	-.00085	.00000

RUN NO. 61/ 0 RN/L = 3.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.851	-5.719	.00106	.00167	.00152	.00000
.851	-4.660	.00103	.00151	.00097	.00000
.851	-3.621	.00082	.00236	-.00118	.00000
.850	-2.572	.00006	.00262	-.00443	.00000
.851	-1.517	-.00029	.00224	-.00627	.00000
.850	-.468	.00013	.00068	-.00466	.00000
.850	.582	-.00049	.00198	-.00993	.00000
.851	1.624	-.00020	.00620	-.01303	.00000
.850	2.672	-.00080	-.00447	-.00463	.00000
	GRADIENT	-.00022	-.00030	-.00129	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (AJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 60/ 0 RN/L = 3.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.900	-5.730	.00083	.00082	.00252	.00000
.900	-4.681	.00091	-.00035	.00230	.00000
.901	-3.622	.00075	-.00016	.00002	.00000
.900	-2.554	.00073	-.00062	-.00093	.00000
.900	-1.522	.00043	-.00134	-.00251	.00000
.900	-.466	.00014	-.00239	-.00350	.00000
.900	.597	-.00001	-.00396	-.00216	.00000
.900	1.647	-.00060	-.00421	-.00407	.00000
.899	2.701	-.00094	-.00432	-.00396	.00000
	GRADIENT	-.00025	-.00067	-.00078	.00000

RUN NO. 59/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.738	-.00010	.00173	.00082	.00000
.921	-4.686	.00033	-.00020	.00305	.00000
.920	-3.624	-.00005	.00059	-.00048	.00000
.921	-2.554	.00008	.00012	-.00200	.00000
.921	-1.503	-.00044	-.00041	-.00428	.00000
.920	-.446	.00015	-.00267	-.00170	.00000
.921	.609	-.00025	-.00313	-.00379	.00000
.921	1.665	-.00058	-.00383	-.00375	.00000
.921	2.710	-.00087	-.00593	-.00091	.00000
	GRADIENT	-.00013	-.00084	-.00053	.00000

RUN NO. 58/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.761	.00011	.00075	.00315	.00000
.950	-4.702	-.00018	.00136	.00102	.00000
.950	-3.644	-.00008	.00116	-.00042	.00000
.950	-2.569	-.00062	.00084	-.00375	.00000
.950	-1.501	-.00005	-.00079	-.00194	.00000
.950	-.440	-.00052	-.00167	-.00305	.00000
.950	.619	-.00034	-.00269	-.00307	.00000
.950	1.687	-.00074	-.00258	-.00485	.00000
.950	2.726	-.00098	-.00010	-.00753	.00000
	GRADIENT	-.00010	-.00045	-.00091	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 6 (AJ9007) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 57/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.979	-5.766	.00026	.00071	.00245	.00000
.980	-4.694	.00014	.00110	.00129	.00000
.980	-3.634	-.00021	.00138	-.00059	.00000
.980	-2.557	-.00057	.00121	-.00326	.00000
.980	-1.494	-.00096	.00082	-.00504	.00000
.980	-.438	-.00119	-.00015	-.00484	.00000
.980	.638	-.00132	-.00048	-.00569	.00000
.980	1.700	-.00159	-.00067	-.00652	.00000
.980	2.747	-.00177	-.00028	-.00730	.00000
	GRADIENT	-.00025	-.00029	-.00108	.00000

RUN NO. 56/ 0 RN/L = 4.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.119	-5.772	.00095	-.00093	.00531	.00000
1.119	-4.713	.00056	-.00017	.00332	.00000
1.118	-3.643	-.00035	.00096	-.00046	.00000
1.119	-2.563	-.00039	.00055	-.00141	.00000
1.118	-1.504	-.00063	-.00097	-.00180	.00000
1.119	-.433	-.00081	-.00185	-.00195	.00000
1.118	.620	-.00095	-.00350	-.00237	.00000
1.119	1.697	-.00111	-.00357	-.00362	.00000
1.118	2.754	-.00093	-.00413	-.00224	.00000
	GRADIENT	-.00018	-.00071	-.00065	.00000

RUN NO. 55/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.771	.00016	.00281	.00066	.00000
1.200	-4.701	-.00029	.00377	-.00155	.00000
1.201	-3.623	-.00060	.00379	-.00290	.00000
1.201	-2.566	-.00109	.00281	-.00419	.00000
1.200	-1.499	-.00126	.00095	-.00380	.00000
1.200	-.432	-.00174	.00080	-.00613	.00000
1.200	.632	-.00191	.00067	-.00717	.00000
1.201	1.697	-.00212	.00049	-.00773	.00000
1.200	2.773	-.00223	.00081	-.00890	.00000
	GRADIENT	-.00027	-.00049	-.00097	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (RJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 74/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.348	-5.538	-.17742	.18111	.05958	-.15911	.19739	-.80609	.00000	2.05082	165.60122	.00000
.349	-4.522	-.12112	.18388	.03642	-.10625	.19286	-.55092	.00000	2.05148	165.69531	.00000
.348	-3.500	-.07578	.18674	.01818	-.06424	.19102	-.33629	.00000	2.05031	165.60146	.00000
.349	-2.495	-.01663	.18827	-.00814	-.00842	.18882	-.04460	.00000	2.05380	166.25720	.00000
.349	-1.491	.03387	.19096	-.03014	.03883	.19002	.20434	.00000	2.05093	165.88254	.00000
.349	-.468	.08423	.19111	-.05185	.08579	.19042	.45054	.00000	2.05268	166.25720	.00000
.349	.548	.14106	.19246	-.07550	.13922	.19380	.71837	.00000	2.04830	165.69555	.00000
.349	1.561	.18902	.19313	-.09520	.18369	.19821	.92677	.00000	2.04818	165.69555	.00000
.349	2.574	.23928	.19116	-.11692	.23045	.20171	1.14249	.00000	2.05043	166.07000	.00000
	GRADIENT	.05134	.00112	-.02190	.04800	.00133	.24320	.00000	-.00035	.02088	.00000

RUN NO. 73/ 0 RN/L = 3.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.599	-5.647	-.18310	.18442	.05933	-.16405	.20155	-.81401	.00000	3.17285	417.65308	.00000
.599	-4.608	-.12402	.18706	.03383	-.10859	.19641	-.55287	.00000	3.16073	417.65308	.00000
.599	-3.572	-.07042	.19003	.01076	-.05845	.19405	-.30120	.00000	3.15396	417.73293	.00000
.599	-2.535	-.01466	.19259	-.01367	-.00613	.19305	-.03173	.00000	3.15149	417.29791	.00000
.599	-1.496	.04457	.19530	-.03976	.04966	.19407	.25588	.00000	3.15983	417.04370	.00000
.600	-.449	.09900	.19712	-.06230	.10054	.19634	.51210	.00000	3.18615	419.16954	.00000
.600	.578	.15250	.19738	-.08471	.15050	.19891	.75665	.00000	3.18916	419.25421	.00000
.600	1.618	.21149	.19684	-.10971	.20584	.20274	1.01532	.00000	3.18933	419.25749	.00000
.601	2.653	.26236	.19590	-.13166	.25301	.20783	1.21739	.00000	3.18788	419.93314	.00000
	GRADIENT	.05356	.00129	-.02290	.05018	.00164	.24777	.00000	.00581	.36241	.00000

RUN NO. 72/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.749	-.20298	.20298	.06845	-.18163	.22230	-.81706	.00000	3.77662	623.61504	.00000
.800	-4.698	-.14178	.20359	.04198	-.12463	.21452	-.58098	.00000	3.77806	622.77291	.00000
.800	-3.635	-.07758	.20591	.01320	-.06436	.21042	-.30589	.00000	3.78460	623.13330	.00000
.801	-2.567	-.01717	.20846	-.01460	-.00782	.20902	-.03741	.00000	3.78711	623.84755	.00000
.800	-1.526	.04555	.21037	-.04298	.05113	.20908	.24456	.00000	3.78235	623.23808	.00000
.801	-.457	.10528	.21219	-.06912	.10697	.21134	.50615	.00000	3.77952	623.77425	.00000
.800	.602	.16248	.21240	-.09267	.16024	.21409	.74847	.00000	3.77495	622.94473	.00000
.800	1.666	.22584	.21242	-.11959	.21957	.21890	1.00305	.00000	3.7751+	623.18775	.00000
.800	2.735	.28428	.21226	-.14505	.27383	.22558	1.21389	.00000	3.77734	623.19405	.00000
	GRADIENT	.05721	.00120	-.02506	.05351	.00154	.24381	.00000	-.00103	.01186	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (RJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 71/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.850	-5.785	-.21569	.21396	.07574	-.19303	.23461	-.82275	.00000	3.88432	668.22710	.00000
.850	-4.725	-.15021	.21541	.04703	-.13196	.22706	-.58116	.00000	3.88422	668.55581	.00000
.850	-3.657	-.08429	.21794	.01696	-.07022	.22288	-.31506	.00000	3.88399	668.64934	.00000
.851	-2.577	-.01623	.21979	-.01431	-.00633	.22030	-.02875	.00000	3.89018	669.08786	.00000
.851	-1.528	.04086	.22150	-.04034	.04675	.22034	.21217	.00000	3.88789	669.02532	.00000
.850	-.461	.10289	.22279	-.06739	.10468	.22196	.47164	.00000	3.88503	668.54002	.00000
.851	.606	.16549	.22445	-.09448	.16311	.22619	.72113	.00000	3.88602	668.92324	.00000
.850	1.694	.22952	.22481	-.12295	.22278	.23149	.96237	.00000	3.88460	668.35229	.00000
.851	2.751	.29313	.22711	-.15083	.28189	.24092	1.17009	.00000	3.88801	668.80606	.00000
	GRADIENT	.05886	.00147	-.02622	.05494	.00178	.23583	.00000	.00016	-.00799	.00000

RUN NO. 70/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.900	-5.825	-.21905	.23777	.07902	-.19379	.25877	-.74889	.00000	3.98518	711.00249	.00000
.900	-4.737	-.14851	.23984	.04696	-.12820	.25129	-.51016	.00000	3.98085	710.62756	.00000
.900	-3.674	-.08074	.24299	.01516	-.06500	.24767	-.26245	.00000	3.97925	710.97509	.00000
.900	-2.600	-.01407	.24535	-.01471	-.00293	.24574	-.01192	.00000	3.97941	710.88362	.00000
.900	-1.539	.05062	.24671	-.04461	.05723	.24526	.23333	.00000	3.97851	710.61844	.00000
.900	-.451	.11994	.24814	-.07569	.12189	.24719	.49309	.00000	3.98029	710.64140	.00000
.900	.614	.17752	.24904	-.10078	.17484	.25093	.69677	.00000	3.98193	710.72822	.00000
.899	1.702	.23534	.24965	-.12465	.22782	.25653	.88811	.00000	3.98119	710.32105	.00000
.900	2.751	.29642	.25145	-.15148	.28401	.26538	1.07019	.00000	3.98323	711.07105	.00000
	GRADIENT	.05930	.00141	-.02641	.05496	.00178	.21328	.00000	.00040	-.00696	.00000

RUN NO. 69/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.842	-.22666	.25594	.08646	-.19943	.27769	-.71819	.00000	4.01534	727.21629	.00000
.920	-4.750	-.15172	.25796	.05064	-.12984	.26963	-.48153	.00000	4.01246	727.07085	.00000
.921	-3.684	-.08180	.25985	.01669	-.06493	.26457	-.24543	.00000	4.01005	727.15863	.00000
.921	-2.608	-.01291	.26125	-.01566	-.00101	.26156	-.00386	.00000	4.01652	727.37197	.00000
.920	-1.524	.06240	.26183	-.05147	.06934	.26008	.26662	.00000	4.01814	727.12916	.00000
.920	-.465	.12361	.26273	-.07931	.12573	.26172	.48042	.00000	4.01605	727.13877	.00000
.920	.610	.18894	.26378	-.10867	.18612	.26578	.70026	.00000	4.01471	727.02213	.00000
.920	1.685	.25292	.26451	-.13665	.24504	.27194	.90142	.00000	4.01419	726.88627	.00000
.920	2.771	.30854	.26576	-.15945	.29533	.28037	1.05338	.00000	4.01232	727.06124	.00000
	GRADIENT	.06166	.00096	-.02820	.05702	.00140	.20845	.00000	.00014	-.02737	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (RJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 68/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.856	-.24058	.28287	.10184	-.21045	.30595	-.68790	.00000	4.05801	749.58117	.00000
.950	-4.764	-.16540	.28499	.06449	-.14116	.29774	-.47411	.00000	4.05822	749.68867	.00000
.951	-3.700	-.09026	.28656	.02752	-.07158	.29178	-.24532	.00000	4.06079	750.12280	.00000
.951	-2.617	-.01672	.28816	-.00759	-.00355	.28862	-.01231	.00000	4.06004	749.92682	.00000
.951	-1.533	.05628	.28975	-.04223	.06401	.28814	.22215	.00000	4.05970	750.08069	.00000
.951	-.454	.12658	.29155	-.07625	.12889	.29054	.44363	.00000	4.05769	749.87309	.00000
.951	.622	.19294	.29319	-.10692	.18974	.29527	.64260	.00000	4.05769	749.87309	.00000
.951	1.719	.25915	.29386	-.13766	.25022	.30150	.82991	.00000	4.05769	749.87309	.00000
.951	2.768	.32602	.29353	-.16801	.31146	.30893	1.00821	.00000	4.05798	749.89629	.00000
	GRADIENT	.06496	.00125	-.03074	.05984	.00165	.19797	.00000	-.00029	-.00189	.00000

RUN NO. 67/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.882	-.25410	.31122	.11592	-.22087	.33562	-.65807	.00000	4.09062	770.34283	.00000
.980	-4.803	-.17543	.31235	.07676	-.14867	.32594	-.45612	.00000	4.09259	770.80057	.00000
.980	-3.725	-.09655	.31426	.03665	-.07593	.31986	-.23738	.00000	4.09203	770.63253	.00000
.980	-2.610	-.01112	.31725	-.00732	.00334	.31743	.01052	.00000	4.09156	770.51039	.00000
.980	-1.530	.07016	.32050	-.04869	.07869	.31851	.24705	.00000	4.09463	770.73951	.00000
.980	-.436	.14350	.32256	-.08479	.14595	.32146	.45402	.00000	4.09513	770.52553	.00000
.980	.643	.21194	.32544	-.11760	.20828	.32780	.63538	.00000	4.09788	770.64767	.00000
.980	1.738	.28515	.32757	-.15236	.27508	.33607	.81854	.00000	4.09796	770.69359	.00000
.980	2.806	.34947	.32991	-.18149	.33291	.34662	.96044	.00000	4.09883	770.89192	.00000
	GRADIENT	.06919	.00236	-.03413	.06353	.00284	.18901	.00000	.00101	.01237	.00000

RUN NO. 66/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.119	-5.933	-.21470	.38775	.08694	-.17346	.40787	-.42530	.00000	4.22001	849.50109	.00000
1.119	-4.813	-.13286	.39150	.04556	-.09954	.40126	-.24808	.00000	4.22277	850.03482	.00000
1.119	-3.742	-.05670	.39635	.00579	-.03071	.39920	-.07692	.00000	4.22436	850.50455	.00000
1.119	-2.630	.01894	.40065	-.03257	.03730	.39936	.09340	.00000	4.22062	850.48894	.00000
1.119	-1.559	.09226	.40505	-.06891	.10324	.40239	.25657	.00000	4.21847	850.54959	.00000
1.120	-.456	.16519	.40846	-.10433	.16844	.40713	.41372	.00000	4.21339	850.51836	.00000
1.120	.646	.23704	.41106	-.13868	.23240	.41370	.56175	.00000	4.21168	850.47149	.00000
1.119	1.718	.29980	.41156	-.16770	.28732	.42036	.69351	.00000	4.21203	850.33817	.00000
1.119	2.780	.36164	.41084	-.19654	.34129	.42789	.79760	.00000	4.20844	850.06434	.00000
	GRADIENT	.06535	.00270	-.03191	.05929	.00372	.13883	.00000	-.00212	-.00763	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (RJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 65/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.930	-.18708	.40905	.06347	-.14382	.42619	-.33745	.00000	4.22866	881.01701	.00000
1.200	-4.845	-.11420	.41161	.02761	-.07903	.41978	-.18826	.00000	4.22824	880.85217	.00000
1.200	-3.741	-.04076	.41526	-.00906	-.01358	.41703	-.03256	.00000	4.22946	881.19724	.00000
1.200	-2.646	.03125	.41892	-.04344	.05055	.41703	.12122	.00000	4.22649	881.15270	.00000
1.200	-1.567	.09808	.42105	-.07529	.10955	.41821	.26196	.00000	4.22668	881.13912	.00000
1.200	-.477	.16586	.42313	-.10760	.16938	.42174	.40162	.00000	4.22627	880.99567	.00000
1.200	.626	.23525	.42527	-.14022	.23059	.42782	.53899	.00000	4.22607	880.96662	.00000
1.200	1.712	.29795	.42603	-.16897	.28509	.43475	.65576	.00000	4.22648	881.08874	.00000
1.200	2.789	.35991	.42631	-.19648	.33874	.44332	.76410	.00000	4.22824	880.83080	.00000
	GRADIENT	.06214	.00194	-.02938	.05478	.00316	.12556	.00000	-.00018	-.01512	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (AJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 74/ 0 RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.348	-5.538	.00049	-.00061	.00595	.00000
.349	-4.522	.00059	-.00076	.00693	.00000
.348	-3.500	-.00020	.00130	.00042	.00000
.349	-2.495	-.00087	.00262	-.00441	.00000
.349	-1.491	-.00112	.00312	-.00595	.00000
.349	-.468	-.00090	.00253	-.00502	.00000
.349	.548	-.00129	.00344	-.00822	.00000
.349	1.561	-.00131	.00249	-.00818	.00000
.349	2.574	-.00161	.00347	-.01049	.00000
	GRADIENT	-.00026	.00044	-.00206	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (AJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 73/ 0 RN/L = 3.19 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.599	-5.647	.00082	-.00062	.00651	.00000
.599	-4.608	.00086	-.00057	.00564	.00000
.599	-3.572	.00015	.00129	.00122	.00000
.599	-2.535	-.00037	.00261	-.00258	.00000
.599	-1.496	-.00079	.00336	-.00575	.00000
.600	-.449	-.00115	.00447	-.00850	.00000
.600	.578	-.00108	.00384	-.00877	.00000
.600	1.618	-.00124	.00276	-.00871	.00000
.601	2.653	-.00190	.00347	-.01219	.00000
	GRADIENT	-.00033	.00046	-.00225	.00000

RUN NO. 72/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.749	.00095	-.00007	.00514	.00000
.800	-4.698	.00080	.00129	.00225	.00000
.800	-3.635	.00053	.00167	.00017	.00000
.801	-2.567	.00017	.00237	-.00325	.00000
.800	-1.526	-.00022	.00310	-.00621	.00000
.801	-.457	-.00063	.00320	-.00853	.00000
.800	.602	-.00045	.00238	-.00802	.00000
.800	1.666	-.00044	-.00035	-.00493	.00000
.800	2.735	-.00107	-.00015	-.00816	.00000
	GRADIENT	-.00023	-.00023	-.00129	.00000

RUN NO. 71/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.850	-5.785	.00079	.00243	.00069	.00000
.850	-4.725	.00104	.00198	.00122	.00000
.850	-3.657	.00078	.00163	-.00013	.00000
.851	-2.577	.00077	.00152	-.00168	.00000
.851	-1.528	-.00012	.00308	-.00731	.00000
.850	-.461	-.00006	.00206	-.00747	.00000
.851	.606	-.00024	.00168	-.00840	.00000
.850	1.694	-.00065	.00041	-.00793	.00000
.851	2.751	-.00102	-.00054	-.00678	.00000
	GRADIENT	-.00027	-.00027	-.00128	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (AJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 70/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.900	-5.825	-.00010	.00373	-.00067	.00000
.900	-4.737	.00053	.00209	-.00049	.00000
.900	-3.674	.00036	.00161	-.00158	.00000
.900	-2.600	.00052	.00041	-.00194	.00000
.900	-1.539	.00033	.00008	-.00361	.00000
.900	-.451	.00004	-.00048	-.00469	.00000
.900	.614	-.00071	-.00021	-.00668	.00000
.899	1.702	-.00139	.00005	-.00727	.00000
.900	2.751	-.00179	-.00041	-.00693	.00000
	GRADIENT	-.00032	-.00031	-.00099	.00000

RUN NO. 69/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.842	-.00032	.00367	-.00069	.00000
.920	-4.750	-.00045	.00318	-.00075	.00000
.921	-3.684	-.00046	.00233	-.00127	.00000
.921	-2.608	-.00029	.00137	-.00219	.00000
.920	-1.524	-.00034	.00039	-.00407	.00000
.920	-.465	-.00040	-.00105	-.00308	.00000
.920	.610	-.00086	-.00071	-.00600	.00000
.920	1.685	-.00148	-.00028	-.00713	.00000
.920	2.771	-.00214	-.00026	-.00694	.00000
	GRADIENT	-.00021	-.00050	-.00092	.00000

RUN NO. 68/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.856	-.00022	.00105	.00300	.00000
.950	-4.764	-.00079	.00217	-.00049	.00000
.951	-3.700	-.00065	.00183	-.00017	.00000
.951	-2.617	-.00064	.00165	-.00229	.00000
.951	-1.533	-.00083	.00150	-.00497	.00000
.951	-.454	-.00111	.00147	-.00613	.00000
.951	.622	-.00146	.00241	-.00966	.00000
.951	1.719	-.00215	.00362	-.01258	.00000
.951	2.768	-.00255	.00472	-.01360	.00000
	GRADIENT	-.00025	.00032	-.00196	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 7 (AJ9008) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 67/ 0 RN/L = 4.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.882	-.00067	.00264	.00083	.00000
.980	-4.803	-.00092	.00339	-.00186	.00000
.980	-3.725	-.00104	.00340	-.00316	.00000
.980	-2.610	-.00087	.00256	-.00381	.00000
.980	-1.530	-.00157	.00323	-.00668	.00000
.980	-.436	-.00193	.00394	-.01050	.00000
.980	.643	-.00201	.00439	-.01195	.00000
.980	1.738	-.00228	.00489	-.01264	.00000
.980	2.806	-.00248	.00542	-.01333	.00000
	GRADIENT	-.00023	.00030	-.00171	.00000

RUN NO. 66/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.119	-5.933	-.00029	-.00214	.00710	.00000
1.119	-4.813	-.00088	-.00179	.00533	.00000
1.119	-3.742	-.00078	-.00214	.00511	.00000
1.119	-2.630	-.00090	.00091	-.00110	.00000
1.119	-1.559	-.00100	.00142	-.00356	.00000
1.120	-.456	-.00119	.00181	-.00636	.00000
1.120	.646	-.00144	.00220	-.00815	.00000
1.119	1.718	-.00135	.00144	-.00757	.00000
1.119	2.780	-.00139	.00193	-.00854	.00000
	GRADIENT	-.00009	.00053	-.00202	.00000

RUN NO. 65/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.930	-.00093	.00007	.00330	.00000
1.200	-4.845	-.00122	.00163	.00041	.00000
1.200	-3.741	-.00092	.00298	-.00188	.00000
1.200	-2.646	-.00118	.00381	-.00484	.00000
1.200	-1.567	-.00165	.00440	-.00832	.00000
1.200	-.477	-.00192	.00420	-.00962	.00000
1.200	.626	-.00184	.00374	-.00950	.00000
1.200	1.712	-.00215	.00449	-.01135	.00000
1.200	2.789	-.00251	.00575	-.01363	.00000
	GRADIENT	-.00019	.00039	-.00176	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 84/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.538	-.18864	.17441	.07046	-.17093	.19181	-.89116	.00000	2.06317	166.72680	.00000
.350	-4.514	-.13506	.17805	.04772	-.12063	.18813	-.64117	.00000	2.06726	167.38250	.00000
.350	-3.501	-.08755	.17942	.02827	-.07642	.18444	-.41437	.00000	2.06434	167.19490	.00000
.350	-2.487	-.03454	.18086	.00443	-.02666	.18219	-.14633	.00000	2.06495	167.38226	.00000
.351	-1.474	.01549	.18246	-.01738	.02018	.18200	.11090	.00000	2.06781	167.94377	.00000
.351	-.458	.07419	.18243	-.04152	.07564	.18183	.41598	.00000	2.06500	167.66315	.00000
.351	.545	.11866	.18179	-.05946	.11693	.18291	.63928	.00000	2.06678	167.94426	.00000
.351	1.570	.17444	.17905	-.08443	.16946	.18376	.92220	.00000	2.06331	167.56960	.00000
.351	2.585	.23011	.17705	-.10867	.22189	.18725	1.18500	.00000	2.06218	167.56960	.00000
	GRADIENT	.05149	-.00007	-.02201	.04830	-.00009	.25984	.00000	-.00045	.05380	.00000

RUN NO. 83/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.601	-5.639	-.19171	.17640	.06732	-.17345	.19439	-.89229	.00000	3.18381	419.75066	.00000
.600	-4.601	-.13540	.17855	.04294	-.12064	.18884	-.63886	.00000	3.17454	419.33559	.00000
.601	-3.564	-.07972	.18109	.01822	-.06831	.16569	-.36784	.00000	3.17045	419.83850	.00000
.601	-2.518	-.02519	.18345	-.00507	-.01711	.18438	-.09281	.00000	3.16311	419.93036	.00000
.600	-1.490	.02941	.18424	-.02755	.03419	.18341	.18642	.00000	3.15623	418.81771	.00000
.600	-.437	.09282	.18424	-.05536	.09422	.18353	.51337	.00000	3.16119	418.47078	.00000
.599	.587	.14143	.18314	-.07545	.13955	.18458	.75604	.00000	3.16629	417.72153	.00000
.600	1.625	.19704	.18131	-.09939	.19182	.18682	1.02677	.00000	3.17571	418.14018	.00000
.600	2.676	.25706	.17825	-.12475	.24845	.19006	1.30723	.00000	3.18204	418.56529	.00000
	GRADIENT	.05380	-.00002	-.02293	.05059	.00017	.26899	.00000	.00107	-.23540	.00000

RUN NO. 82/ 0 RN/L = 3.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.801	-5.751	-.21700	.19069	.08154	-.19680	.21147	-.93061	.00000	3.78541	624.50458	.00000
.801	-4.693	-.15748	.19233	.05503	-.14122	.20457	-.69031	.00000	3.78032	624.22416	.00000
.801	-3.618	-.09129	.19361	.02539	-.07889	.19899	-.39645	.00000	3.77584	623.80340	.00000
.801	-2.570	-.03154	.19512	-.00181	-.02276	.19634	-.11593	.00000	3.77589	623.86407	.00000
.801	-1.511	.02945	.19680	-.02965	.03463	.19595	.17672	.00000	3.77821	623.87669	.00000
.801	[illegible]	.09060	.19792	-.05702	.09212	.19722	.46707	.00000	3.78097	623.85776	.00000
.801	[illegible]	.14980	.19794	-.08199	.14769	.19952	.74021	.00000	3.78383	623.95629	.00000
.801	1.682	.21032	.19707	-.10759	.20444	.20315	1.00634	.00000	3.78637	624.09655	.00000
.801	2.733	.26922	.19557	-.13244	.25959	.20818	1.24694	.00000	3.78669	624.51723	.00000
	GRADIENT	.05725	.00056	-.02520	.05378	.00064	.26303	.00000	.00139	.04229	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 81/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.850	-5.779	-.23423	.20191	.09302	-.21271	.22447	-.94761	.00000	3.88918	668.87716	.00000
.850	-4.705	-.16349	.20338	.06071	-.14625	.21610	-.67678	.00000	3.88644	668.57212	.00000
.850	-3.650	-.10100	.20491	.03209	-.08774	.21093	-.41599	.00000	3.88661	668.74412	.00000
.851	-2.585	-.03708	.20669	.00267	-.02772	.20816	-.13315	.00000	3.88955	669.78427	.00000
.849	-1.522	.02413	.20716	-.02606	.02962	.20645	.14348	.00000	3.88492	668.10228	.00000
.851	-.441	.09207	.20894	-.05676	.09367	.20823	.44987	.00000	3.88922	669.26830	.00000
.850	.614	.15356	.20942	-.08424	.15131	.21106	.71691	.00000	3.88783	668.57949	.00000
.851	1.682	.21647	.21022	-.11185	.21021	.21648	.97104	.00000	3.89220	669.53424	.00000
.850	2.735	.27458	.21027	-.13665	.26423	.22313	1.18421	.00000	3.88982	668.68943	.00000
	GRADIENT	.05920	.00095	-.02676	.05552	.00098	.25521	.00000	.00057	.02615	.00000

RUN NO. 80/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.899	-5.822	-.24220	.23177	.10127	-.21744	.25514	-.85224	.00000	3.97871	709.64402	.00000
.900	-4.732	-.16832	.23383	.06616	-.14846	.24692	-.60125	.00000	3.97899	710.24817	.00000
.900	-3.669	-.10034	.23666	.03426	-.08499	.24260	-.35032	.00000	3.98026	710.74201	.00000
.900	-2.582	-.02990	.23826	.00150	-.01913	.23937	-.07994	.00000	3.97908	710.45862	.00000
.900	-1.524	.04206	.23898	-.03253	.04840	.23778	.20353	.00000	3.97873	710.17958	.00000
.900	-.444	.10601	.24022	-.06240	.10787	.23939	.45062	.00000	3.97936	710.47688	.00000
.900	.625	.16695	.24051	-.08946	.16432	.24231	.67813	.00000	3.97586	710.08365	.00000
.899	1.705	.22692	.24068	-.11443	.21966	.24733	.88813	.00000	3.97551	709.80440	.00000
.900	2.764	.28940	.23816	-.14391	.27758	.25183	1.10222	.00000	3.97675	710.39918	.00000
	GRADIENT	.06102	.00065	-.02795	.05681	.00076	.22920	.00000	-.00054	-.04962	.00000

RUN NO. 79/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.823	-.24320	.24852	.10489	-.21673	.27191	-.79709	.00000	4.01833	726.96450	.00000
.920	-4.753	-.16960	.24959	.06849	-.14834	.26278	-.56448	.00000	4.01346	726.50822	.00000
.920	-3.665	-.10030	.25197	.03435	-.08397	.25787	-.32561	.00000	4.01073	726.75114	.00000
.920	-2.595	-.02325	.25364	-.00307	-.01174	.25443	-.04616	.00000	4.00765	726.44028	.00000
.920	-1.514	.05195	.25514	-.04026	.05867	.25368	.23128	.00000	4.00751	726.43068	.00000
.920	-.439	.12067	.25632	-.07345	.12263	.25539	.48018	.00000	4.00809	726.72232	.00000
.920	.633	.18464	.25647	-.10284	.18179	.25850	.70327	.00000	4.01133	726.61529	.00000
.920	1.709	.25068	.25647	-.13256	.24292	.26384	.92073	.00000	4.01283	726.31398	.00000
.920	2.774	.30680	.25362	-.15836	.29417	.26817	1.09693	.00000	4.01279	726.41150	.00000
	GRADIENT	.06401	.00067	-.03050	.05952	.00090	.22539	.00000	.00019	-.02262	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 78/ 0 RN/L = 4.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.860	-.25832	.27412	.11961	-.22899	.29906	-.76569	.00000	4.05859	749.21964	.00000
.951	-4.777	-.18164	.27454	.07960	-.15813	.28881	-.54753	.00000	4.05959	749.61907	.00000
.951	-3.680	-.10044	.27582	.03778	-.08253	.28169	-.29297	.00000	4.05906	749.80344	.00000
.951	-2.606	-.02412	.27710	-.00063	-.01150	.27791	-.04138	.00000	4.05709	749.55374	.00000
.951	-1.520	.05532	.27948	-.04101	.06272	.27791	.22566	.00000	4.05793	749.80344	.00000
.951	-.442	.12796	.28126	-.07859	.13012	.28026	.46429	.00000	4.05494	749.60746	.00000
.951	.642	.20257	.28734	-.11394	.19934	.28960	.68835	.00000	4.05434	749.42306	.00000
.951	1.718	.27219	.28737	-.14949	.26345	.29540	.89185	.00000	4.05459	749.48840	.00000
.950	2.793	.33699	.28633	-.18007	.32261	.30301	1.06469	.00000	4.05399	749.30398	.00000
	GRADIENT	.06879	.00194	-.03449	.06382	.00226	.21629	.00000	-.00080	-.04805	.00000

RUN NO. 77/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.878	-.25967	.30234	.12305	-.22734	.32734	-.69451	.00000	4.08760	769.93099	.00000
.980	-4.778	-.17661	.30306	.07924	-.15076	.31671	-.47600	.00000	4.09177	770.49619	.00000
.980	-3.696	-.09209	.30396	.03429	-.07231	.30926	-.23380	.00000	4.09357	770.37408	.00000
.980	-2.596	-.00926	.30631	-.00941	.00462	.30642	.01509	.00000	4.09813	770.37408	.00000
.980	-1.517	.07240	.30918	-.05238	.08056	.30716	.26226	.00000	4.09793	770.54165	.00000
.980	-.418	.15477	.31317	-.09580	.15705	.31204	.50330	.00000	4.09738	770.37361	.00000
.980	.653	.22710	.31940	-.13140	.22344	.32197	.69399	.00000	4.09656	770.48059	.00000
.980	1.735	.29742	.32071	-.16510	.28758	.32957	.87259	.00000	4.09471	770.29740	.00000
.980	2.814	.36405	.32205	-.19602	.34781	.33953	1.02437	.00000	4.09398	770.40438	.00000
	GRADIENT	.07158	.00285	-.03658	.06608	.00343	.20095	.00000	.00017	-.00961	.00000

RUN NO. 76/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.119	-5.920	-.21114	.38162	.08303	-.17065	.40136	-.42518	.00000	4.20089	849.50414	.00000
1.119	-4.806	-.12610	.38443	.03939	-.09345	.39364	-.23740	.00000	4.20093	849.54931	.00000
1.118	-3.722	-.04223	.38922	-.00826	-.01687	.39114	-.04313	.00000	4.20328	849.38407	.00000
1.118	-2.628	.03530	.39345	-.04780	.05330	.39142	.13618	.00000	4.20490	849.27681	.00000
1.119	-1.528	.10705	.39789	-.08279	.11762	.39489	.29786	.00000	4.20870	849.77653	.00000
1.121	-.451	.17630	.40376	-.11603	.17947	.40236	.44604	.00000	4.20958	850.83979	.00000
1.121	.637	.24416	.40660	-.14751	.23962	.40930	.58544	.00000	4.20967	850.60223	.00000
1.121	1.724	.31163	.40804	-.17964	.29921	.41724	.71712	.00000	4.20950	850.58654	.00000
1.121	2.809	.37547	.40348	-.21011	.35524	.42140	.84301	.00000	4.20954	850.63140	.00000
	GRADIENT	.06538	.00299	-.03212	.05845	.00422	.14070	.00000	.00117	.20377	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 75/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.929	-.18595	.40401	.06172	-.14322	.42105	-.34016	.00000	4.22984	881.40828	.00000
1.200	-4.831	-.11062	.40604	.02462	-.07603	.41391	-.18369	.00000	4.22926	881.60220	.00000
1.200	-3.736	-.03262	.41104	-.01724	-.00577	.41229	-.01399	.00000	4.22845	881.40060	.00000
.200	-2.638	.04617	.41646	-.05811	.06529	.41389	.15775	.00000	4.23263	881.53045	.00000
1.200	-1.558	.11491	.41983	-.09147	.12629	.41655	.30318	.00000	4.23103	881.42964	.00000
1.200	-.447	.18228	.42224	-.12284	.18557	.42081	.44098	.00000	4.23143	881.50909	.00000
1.200	.640	.24699	.42457	-.15305	.24224	.42730	.56691	.00000	4.22587	881.32883	.00000
1.199	1.716	.30888	.42487	-.18051	.29601	.43393	.68216	.00000	4.22585	881.26471	.00000
1.200	2.808	.37240	.42484	-.20740	.35115	.44257	.79342	.00000	4.22745	881.38691	.00000
	GRADIENT	.06282	.00248	-.03007	.05552	.00385	.12748	.00000	-.00050	-.02956	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 84/ 0 RN/L = 2.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.538	.00073	.00459	-.00040	.00000
.350	-4.514	.00133	.00386	.00048	.00000
.350	-3.501	-.00001	.00726	-.00665	.00000
.350	-2.487	-.00015	.00773	-.00986	.00000
.351	-1.474	-.00081	.00831	-.01301	.00000
.351	-.458	-.00113	.00686	-.01535	.00000
.351	.545	-.00116	.00747	-.01534	.00000
.351	1.570	-.00102	.00640	-.01365	.00000
.351	2.585	-.00174	.00654	-.01599	.00000
	GRADIENT	-.00035	.00018	-.00198	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 83/ 0 RN/L = 3.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.601	-5.639	.00111	.00626	-.00233	.00000
.600	-4.601	.00111	.00616	-.00186	.00000
.601	-3.564	.00020	.00834	-.00790	.00000
.601	-2.518	.00011	.00867	-.01078	.00000
.600	-1.490	-.00032	.00890	-.01231	.00000
.600	-.437	.00017	.00707	-.00999	.00000
.599	.587	-.00107	.00927	-.01744	.00000
.600	1.625	-.00123	.00865	-.01733	.00000
.600	2.676	-.00140	.00703	-.01662	.00000
	GRADIENT	-.00032	.00009	-.00193	.00000

RUN NO. 82/ 0 RN/L = 3.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.801	-5.751	.00127	.00629	-.00310	.00000
.801	-4.693	.00141	.00649	-.00408	.00000
.801	-3.618	.00148	.00641	-.00462	.00000
.801	-2.570	.00063	.00824	-.01064	.00000
.801	-1.511	.00073	.00709	-.01039	.00000
.801	-.440	.00027	.00724	-.01248	.00000
.801	.610	-.00009	.00800	-.01520	.00000
.801	1.682	.00009	.00772	-.01416	.00000
.801	2.733	-.00034	.00721	-.01494	.00000
	GRADIENT	-.00024	.00012	-.00157	.00000

RUN NO. 81/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.850	-5.779	.00155	.00578	-.00238	.00000
.850	-4.705	.00194	.00489	-.00232	.00000
.850	-3.650	.00162	.00592	-.00439	.00000
.851	-2.585	.00134	.00646	-.00693	.00000
.849	-1.522	.00055	.00710	-.01225	.00000
.851	-.441	.00063	.00643	-.01192	.00000
.850	.614	-.00015	.00792	-.01671	.00000
.851	1.682	-.00025	.00771	-.01569	.00000
.850	2.735	-.00055	.00742	-.01579	.00000
	GRADIENT	-.00035	.00034	-.00201	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 80/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.899	-5.822	.00003	.00753	-.00387	.00000
.900	-4.732	.00056	.00568	-.00331	.00000
.900	-3.669	.00024	.00637	-.00667	.00000
.900	-2.582	.00059	.00551	-.00641	.00000
.900	-1.524	.00036	.00543	-.00965	.00000
.900	-.444	.00012	.00524	-.01091	.00000
.900	.625	-.00060	.00594	-.01266	.00000
.899	1.705	-.00149	.00744	-.01592	.00000
.900	2.764	-.00096	.00640	-.01368	.00000
	GRADIENT	-.00026	.00013	-.00154	.00000

RUN NO. 79/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.823	-.00038	.00749	-.00456	.00000
.920	-4.753	-.00039	.00712	-.00561	.00000
.920	-3.669	-.00028	.00672	-.00629	.00000
.920	-2.595	-.00015	.00635	-.00773	.00000
.920	-1.514	-.00004	.00567	-.00960	.00000
.920	-.439	-.00052	.00591	-.01135	.00000
.920	.633	-.00075	.00607	-.01274	.00000
.920	1.709	-.00124	.00695	-.01482	.00000
.920	2.774	-.00105	.00375	-.01149	.00000
	GRADIENT	-.00013	-.00025	-.00111	.00000

RUN NO. 78/ 0 RN/L = 4.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.860	-.00035	.00637	-.00420	.00000
.951	-4.777	-.00012	.00456	-.00215	.00000
.951	-3.680	-.00021	.00501	-.00458	.00000
.951	-2.606	.00008	.00452	-.00505	.00000
.951	-1.520	.00003	.00422	-.00738	.00000
.951	-.442	-.00058	.00523	-.01147	.00000
.951	.642	-.00130	.00685	-.01377	.00000
.951	1.718	-.00151	.00750	-.01602	.00000
.950	2.793	-.00142	.00636	-.01294	.00000
	GRADIENT	-.00022	.00036	-.00180	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9009) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 77/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.878	.00050	.00887	-.00594	.00000
.980	-4.778	.00052	.00841	-.00619	.00000
.980	-3.696	.00041	.00669	-.00564	.00000
.980	-2.596	-.00019	.00559	-.00740	.00000
.980	-1.517	-.00064	.00509	-.00838	.00000
.980	-.418	-.00103	.00550	-.01075	.00000
.980	.653	-.00148	.00555	-.01204	.00000
.980	1.735	-.00186	.00534	-.01300	.00000
.980	2.814	-.00182	.00442	-.01126	.00000
	GRADIENT	-.00035	-.00038	-.00097	.00000

RUN NO. 76/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.119	-5.920	.00027	.00060	.00418	.00000
1.119	-4.806	.00031	-.00050	.00375	.00000
1.118	-3.722	-.00043	.00218	-.00099	.00000
1.118	-2.628	-.00070	.00220	-.00282	.00000
1.119	-1.528	-.00100	.00184	-.00486	.00000
1.121	-.451	-.00089	.00068	-.00398	.00000
1.121	.637	-.00124	.00178	-.00821	.00000
1.121	1.724	-.00112	.00146	-.00775	.00000
1.121	2.809	-.00159	.00230	-.00933	.00000
	GRADIENT	-.00020	.00015	-.00154	.00000

RUN NO. 75/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.929	-.00024	.00392	-.00101	.00000
1.200	-4.831	-.00046	.00299	-.00125	.00000
1.200	-3.736	-.00094	.00428	-.00433	.00000
1.200	-2.638	-.00095	.00485	-.00604	.00000
1.200	-1.558	-.00131	.00472	-.00831	.00000
1.200	-.447	-.00166	.00469	-.01055	.00000
1.200	.640	-.00191	.00467	-.01168	.00000
1.199	1.716	-.00202	.00526	-.01323	.00000
1.200	2.808	-.00208	.00583	-.01396	.00000
	GRADIENT	-.00022	.00026	-.00167	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9010) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 88/ 0 RN/L = 3.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.349	-5.577	-.18583	.17158	.06602	-.16827	.18882	-.89117	.00000	3.49785	284.35278	.00000
.349	-4.542	-.13155	.17522	.04421	-.11726	.18509	-.63355	.00000	3.51028	284.44826	.00000
.350	-3.528	-.07892	.17716	.02101	-.06787	.18168	-.37355	.00000	3.51498	284.63425	.00000
.350	-2.505	-.02827	.17923	-.00103	-.02041	.18029	-.11320	.00000	3.51714	285.10356	.00000
.350	-1.480	.02593	.18007	-.02404	.03057	.17934	.17045	.00000	3.51060	284.63614	.00000
.350	-.455	.07989	.18043	-.04706	.08132	.17979	.45232	.00000	3.50846	284.91688	.00000
.350	.557	.12601	.17958	-.06528	.12426	.18080	.68727	.00000	3.50521	285.19689	.00000
.350	1.602	.18019	.17769	-.08849	.17515	.18266	.95890	.00000	3.50128	285.00998	.00000
.350	2.631	.24240	.17537	-.11667	.23409	.18631	1.25647	.00000	3.49363	284.54161	.00000
	GRADIENT	.05147	.00006	-.02195	.04833	.00018	.26229	.00000	-.00259	.03568	.00000

RUN NO. 87/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.600	-5.714	-.18577	.17375	.06087	-.16755	.19138	-.87545	.00000	4.73262	626.22778	.00000
.600	-4.672	-.13411	.17687	.03951	-.11926	.18721	-.63704	.00000	4.72472	626.97186	.00000
.600	-3.618	-.07986	.17947	.01636	-.06838	.18415	-.37133	.00000	4.72675	626.88391	.00000
.599	-2.548	-.02111	.18111	-.00873	-.01304	.18187	-.07170	.00000	4.73848	625.21134	.00000
.600	-1.505	.03185	.18239	-.03142	.03662	.18149	.20180	.00000	4.75518	627.21764	.00000
.600	-.445	.09008	.18255	-.05591	.09149	.18185	.50313	.00000	4.75907	626.39224	.00000
.600	.628	.15065	.18171	-.08099	.14865	.18335	.81077	.00000	4.75812	626.14145	.00000
.600	1.670	.20181	.17989	-.10293	.19648	.18570	1.05806	.00000	4.76022	626.98172	.00000
.600	2.740	.25951	.17739	-.12786	.25074	.18959	1.32254	.00000	4.75671	627.40176	.00000
	GRADIENT	.05328	.00009	-.02260	.05010	.00033	.26783	.00000	.00510	.06104	.00000

RUN NO. 86/ 0 RN/L = 5.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.800	-5.917	-.22474	.18813	.08250	-.20415	.21030	-.97075	.00000	5.74257	946.81396	.00000
.799	-4.816	-.15761	.18972	.05263	-.14112	.20228	-.69768	.00000	5.73503	944.89329	.00000
.800	-3.712	-.09436	.19133	.02459	-.08178	.19704	-.41502	.00000	5.74200	946.37600	.00000
.799	-2.617	-.03015	.19309	-.00465	-.02130	.19426	-.10966	.00000	5.73905	945.69697	.00000
.800	-1.534	.03323	.19458	-.03353	.03843	.19363	.19845	.00000	5.74642	947.59754	.00000
.800	-.445	.09276	.19556	-.05995	.09428	.19483	.48389	.00000	5.74299	946.60232	.00000
.800	.653	.15632	.19607	-.08680	.15407	.19784	.77880	.00000	5.74623	946.83912	.00000
.799	1.752	.21904	.19477	-.11254	.21298	.20137	1.05766	.00000	5.73758	945.44553	.00000
.800	2.845	.27916	.19294	-.13836	.26924	.20656	1.30341	.00000	5.74462	947.21205	.00000
	GRADIENT	.05709	.00054	-.02499	.05366	.00069	.26480	.00000	.00069	.15244	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (RJ9010) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 85/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.901	-5.947	-.24700	.23306	.10305	-.22152	.25740	-.86061	.00000	5.26503	939.16635	.00000
.900	-4.834	-.17516	.23431	.06868	-.15479	.24824	-.62354	.00000	5.26102	938.22942	.00000
.901	-3.739	-.10096	.23765	.03370	-.08525	.24373	-.34976	.00000	5.26269	939.61375	.00000
.900	-2.635	-.02885	.23833	-.00017	-.01786	.23940	-.07462	.00000	5.25589	938.73682	.00000
.901	-1.539	.03878	.23994	-.03223	.04521	.23881	.18930	.00000	5.25743	939.24848	.00000
.900	-.441	.10568	.24011	-.06282	.10753	.23929	.44936	.00000	5.25144	938.22496	.00000
.900	.656	.17108	.24092	-.09199	.16830	.24287	.69299	.00000	5.25195	938.41236	.00000
.901	1.757	.23056	.24203	-.11738	.22304	.24899	.89577	.00000	5.25437	939.28952	.00000
.900	2.850	.30057	.23757	-.15001	.28838	.25223	1.14334	.00000	5.25327	938.70485	.00000
	GRADIENT	.06130	.00057	-.02810	.05707	.00071	.22939	.00000	-.00123	-.00316	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9010) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 88/ 0 RN/L = 3.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.349	-5.577	.00034	.00728	-.00363	.00000
.349	-4.542	.00032	.00773	-.00494	.00000
.350	-3.528	-.00075	.01055	-.01247	.00000
.350	-2.505	-.00074	.01012	-.01237	.00000
.350	-1.480	-.00142	.01090	-.01664	.00000
.350	-.455	-.00171	.01096	-.01746	.00000
.350	.557	-.00195	.01118	-.02028	.00000
.350	1.602	-.00242	.01108	-.02214	.00000
.350	2.631	-.00169	.00820	-.01684	.00000
	GRADIENT	-.00031	.00011	-.00181	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 8 (AJ9010) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 87/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.600	-5.714	.00123	.00692	-.00183	.00000
.600	-4.672	.00088	.00732	-.00504	.00000
.600	-3.618	.00057	.00813	-.00730	.00000
.599	-2.548	-.00002	.00959	-.01087	.00000
.600	-1.505	-.00080	.01066	-.01555	.00000
.600	-.445	-.00135	.01065	-.01789	.00000
.600	.628	-.00095	.00950	-.01719	.00000
.600	1.670	-.00128	.00937	-.01816	.00000
.600	2.740	-.00160	.00785	-.01677	.00000
	GRADIENT	-.00034	.00011	-.00177	.00000

RUN NO. 86/ 0 RN/L = 5.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.800	-5.917	.00162	.00542	-.00080	.00000
.799	-4.816	.00112	.00731	-.00554	.00000
.800	-3.712	.00086	.00823	-.00873	.00000
.799	-2.617	.00072	.00803	-.00980	.00000
.800	-1.534	.00013	.00851	-.01361	.00000
.800	-.445	.00010	.00801	-.01413	.00000
.800	.653	-.00004	.00811	-.01484	.00000
.799	1.752	-.00067	.00931	-.01846	.00000
.800	2.845	-.00086	.00851	-.01819	.00000
	GRADIENT	-.00026	.00015	-.00166	.00000

RUN NO. 85/ 0 RN/L = 5.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.901	-5.947	-.00040	.00874	-.00590	.00000
.900	-4.834	.00028	.00668	-.00506	.00000
.901	-3.739	.00022	.00653	-.00701	.00000
.900	-2.635	.00056	.00589	-.00799	.00000
.901	-1.539	.00043	.00536	-.00955	.00000
.900	-.441	-.00028	.00578	-.01221	.00000
.900	.656	-.00096	.00666	-.01465	.00000
.901	1.757	-.00147	.00795	-.01766	.00000
.900	2.850	-.00066	.00675	-.01524	.00000
	GRADIENT	-.00022	.00011	-.00160	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (RJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 98/ 0 RN/L = 2.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.350	-5.540	-.29931	.09739	.18535	-.28851	.12583	-2.29283	.00000	2.06794	167.28942	.00000
.350	-4.520	-.25813	.09945	.16325	-.24919	.11948	-2.08810	.00000	2.06737	167.28942	.00000
.350	-3.502	-.21965	.09879	.14215	-.21320	.11202	-1.90323	.00000	2.06742	167.38321	.00000
.350	-2.503	-.18398	.10017	.12365	-.17943	.10811	-1.65967	.00000	2.06511	167.19585	.00000
.351	-1.495	-.15222	.09977	.10940	-.14956	.10370	-1.44221	.00000	2.07093	168.22581	.00000
.350	-.476	-.11506	.09837	.08882	-.11424	.09932	-1.15024	.00000	2.06163	166.91467	.00000
.351	.525	-.07000	.09779	.06616	-.07090	.09714	-.72984	.00000	2.06980	168.31933	.00000
.350	1.533	-.03491	.09527	.04680	-.03745	.09430	-.39712	.00000	2.06229	167.19585	.00000
.351	2.545	.01494	.09266	.01967	.01081	.09324	.11596	.00000	2.06642	167.94522	.00000
	GRADIENT	.03793	-.00087	-.01977	.03613	-.00365	.20732	.00000	-.00033	.06729	.00000

RUN NO. 97/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.599	-5.629	-.30175	.09886	.18390	-.29060	.12798	-2.27066	.00000	3.19093	417.64820	.00000
.599	-4.603	-.25760	.09944	.16020	-.24879	.11979	-2.07691	.00000	3.18873	417.90563	.00000
.599	-3.589	-.21684	.10044	.13921	-.21013	.11382	-1.84617	.00000	3.18473	417.74106	.00000
.599	-2.555	-.17802	.10101	.11947	-.17334	.10884	-1.59254	.00000	3.18042	418.16303	.00000
.599	-1.537	-.13367	.10098	.09748	-.13091	.10453	-1.25237	.00000	3.17589	417.91051	.00000
.600	-.515	-.09691	.09995	.07879	-.09600	.10082	-.95225	.00000	3.17590	419.00182	.00000
.599	.513	-.05170	.09763	.05572	-.05257	.09716	-.54106	.00000	3.16467	418.33245	.00000
.600	1.537	-.01405	.09571	.03697	-.01661	.09530	-.17430	.00000	3.16160	418.66635	.00000
.600	2.566	.03239	.09253	.01329	.02821	.09389	.30048	.00000	3.15778	418.83082	.00000
	GRADIENT	.04021	-.00097	-.02033	.03840	-.00363	.33076	.00000	-.00441	.14764	.00000

RUN NO. 96/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.801	-5.755	-.32480	.11285	.20130	-.31165	.14483	-2.15177	.00000	3.78900	624.18246	.00000
.801	-4.698	-.28252	.11183	.17879	-.27241	.13459	-2.02405	.00000	3.78859	624.10286	.00000
.801	-3.642	-.23151	.11160	.15208	-.22396	.12608	-1.77627	.00000	3.78810	624.53620	.00000
.800	-2.620	-.18472	.11052	.12744	-.17948	.11885	-1.51012	.00000	3.78129	623.06626	.00000
.800	-1.568	-.13880	.10984	.10396	-.13574	.11360	-1.19494	.00000	3.77439	622.97407	.00000
.801	-.537	-.09349	.10837	.08021	-.09247	.10925	-.84648	.00000	3.77503	623.35731	.00000
.800	.510	-.04170	.10601	.05313	-.04264	.10563	-.40367	.00000	3.77449	623.09555	.00000
.801	1.548	.00127	.10392	.03034	-.00154	.10392	-.01480	.00000	3.77578	623.57091	.00000
.800	2.593	.05022	.10055	.00467	.04562	.10272	.44412	.00000	3.77511	623.30291	.00000
	GRADIENT	.04539	-.00151	-.02373	.04338	-.00432	.34040	.00000	-.00201	-.11368	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (RJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 95/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.850	-5.776	-.33646	.12237	.21053	-.32244	.15560	-2.07216	.00000	3.88686	668.70520	.00000
.850	-4.724	-.28272	.12101	.18209	-.27179	.14389	-1.88894	.00000	3.88742	668.90085	.00000
.851	-3.677	-.23299	.12031	.15564	-.22480	.13501	-1.66509	.00000	3.89136	669.21366	.00000
.851	-2.620	-.18349	.11947	.12915	-.17784	.12773	-1.39224	.00000	3.89028	669.21366	.00000
.849	-1.585	-.13696	.11797	.10467	-.13364	.12171	-1.09802	.00000	3.88492	668.10228	.00000
.851	-.527	-.08633	.11666	.07786	-.08525	.11745	-.72587	.00000	3.88813	669.21366	.00000
.851	.511	-.03660	.11515	.05141	-.03763	.11482	-.32771	.00000	3.89004	669.47963	.00000
.850	1.561	.01759	.11273	.02149	.01451	.11316	.12825	.00000	3.88819	668.49375	.00000
.850	2.619	.06721	.11118	-.00492	.06206	.11414	.54371	.00000	3.89266	668.89295	.00000
	GRADIENT	.04763	-.00137	-.02544	.04546	-.00409	.33577	.00000	.00027	-.01970	.00000

RUN NO. 94/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.900	-5.795	-.33398	.14746	.21382	-.31738	.18043	-1.75905	.00000	3.98374	711.25844	.00000
.900	-4.741	-.27813	.14557	.18228	-.26515	.16806	-1.57768	.00000	3.97902	710.80592	.00000
.901	-3.684	-.21854	.14540	.14868	-.20875	.15914	-1.31167	.00000	3.98129	711.72434	.00000
.900	-2.628	-.16196	.14348	.11710	-.15521	.15076	-1.02953	.00000	3.97926	710.92479	.00000
.900	-1.575	-.10696	.14281	.08653	-.10300	.14569	-.70696	.00000	3.98014	711.29041	.00000
.901	-.519	-.05081	.14230	.05558	-.04952	.14276	-.34690	.00000	3.98354	711.50046	.00000
.900	.534	.00155	.14113	.02767	.00023	.14114	.00166	.00000	3.98296	711.05278	.00000
.900	1.584	.05210	.14057	.00050	.04820	.14196	.33952	.00000	3.98319	711.22187	.00000
.900	2.633	.09942	.13937	-.02401	.09291	.14379	.64620	.00000	3.98296	711.05278	.00000
	GRADIENT	.05133	-.00085	-.02807	.04871	-.00325	.30820	.00000	.00058	-.00211	.00000

RUN NO. 93/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.920	-5.811	-.34660	.16571	.22788	-.32804	.19995	-1.64056	.00000	4.01254	726.79914	.00000
.921	-4.752	-.28376	.16380	.19060	-.26921	.18674	-1.44165	.00000	4.01406	727.25538	.00000
.921	-3.682	-.22094	.16222	.15365	-.21007	.17607	-1.19308	.00000	4.01529	727.31368	.00000
.920	-2.619	-.15564	.16048	.11580	-.14815	.16743	-.88485	.00000	4.01452	727.10994	.00000
.921	-1.571	-.09575	.15952	.08107	-.09134	.16209	-.56352	.00000	4.01692	727.44949	.00000
.920	-.497	-.02971	.15840	.04300	-.02834	.15865	-.17862	.00000	4.01703	727.12916	.00000
.921	.546	.02378	.15842	.01292	.02227	.15864	.14037	.00000	4.01904	727.76972	.00000
.920	1.610	.07739	.15662	-.01692	.07296	.15874	.45964	.00000	4.01534	727.21629	.00000
.920	2.653	.12948	.15547	-.04493	.12214	.16130	.75726	.00000	4.01310	726.83752	.00000
	GRADIENT	.05614	-.00105	-.03206	.05322	-.00332	.30514	.00000	.00008	-.01973	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (RJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 92/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.950	-5.820	-.36149	.19725	.24879	-.33962	.23289	-1.45830	.00000	4.05800	749.30817	.00000
.950	-4.764	-.29212	.19442	.20654	-.27497	.21800	-1.26130	.00000	4.05850	749.43888	.00000
.950	-3.702	-.22943	.19226	.16916	-.21653	.20668	-1.04769	.00000	4.05835	749.42729	.00000
.950	-2.639	-.16483	.19088	.13113	-.15587	.19827	-.78613	.00000	4.05825	749.37352	.00000
.950	-1.585	-.10036	.19027	.09335	-.09506	.19298	-.49259	.00000	4.05667	749.20061	.00000
.950	-.502	-.03521	.19099	.05532	-.03353	.19130	-.17530	.00000	4.05698	749.63493	.00000
.950	.545	.02266	.19188	.02151	.02083	.19209	.10844	.00000	4.05560	749.29658	.00000
.950	1.605	.08292	.19165	-.01342	.07752	.19390	.39981	.00000	4.05635	749.49264	.00000
.950	2.671	.14992	.19046	-.05271	.14089	.19724	.71428	.00000	4.05515	749.12367	.00000
	GRADIENT	.05922	-.00030	-.03469	.05574	-.00257	.26977	.00000	-.00046	-.01869	.00000

RUN NO. 91/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
.980	-5.856	-.36479	.24072	.25973	-.33833	.27669	-1.22277	.00000	4.10750	770.76980	.00000
.980	-4.768	-.29623	.23762	.21842	-.27546	.26142	-1.05372	.00000	4.10368	770.77027	.00000
.980	-3.705	-.23349	.23558	.18124	-.21778	.25018	-.87050	.00000	4.09951	770.92312	.00000
.980	-2.649	-.16830	.23439	.14293	-.15729	.24191	-.65020	.00000	4.09401	770.75555	.00000
.980	-1.594	-.10432	.23356	.10533	-.09778	.23637	-.41369	.00000	4.09094	770.44982	.00000
.980	-.517	-.03783	.23503	.06682	-.03571	.23536	-.15173	.00000	4.09078	770.43467	.00000
.980	.547	.02614	.23679	.02961	.02388	.23702	.10073	.00000	4.09046	770.32769	.00000
.980	1.610	.08743	.23862	-.00530	.08069	.24099	.33482	.00000	4.09086	770.48059	.00000
.980	2.673	.14918	.23987	-.04084	.13784	.24656	.55904	.00000	4.09372	770.31255	.00000
	GRADIENT	.06014	.00044	-.03499	.05587	-.00185	.22201	.00000	-.00138	-.07515	.00000

RUN NO. 90/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.119	-5.875	-.33271	.28311	.24275	-.30199	.31567	-.95663	.00000	4.20613	849.86067	.00000
1.120	-4.790	-.26288	.28794	.20161	-.23792	.30889	-.77024	.00000	4.20722	850.34833	.00000
1.120	-3.719	-.19796	.28994	.16280	-.17873	.30217	-.59150	.00000	4.20652	850.12147	.00000
1.119	-2.639	-.13266	.29090	.12339	-.11912	.29669	-.40149	.00000	4.20757	849.98638	.00000
1.119	-1.580	-.06833	.29161	.08462	-.06026	.29338	-.20541	.00000	4.20919	850.10768	.00000
1.119	-.502	-.00710	.29154	.04857	-.00454	.29159	-.01558	.00000	4.20386	849.57734	.00000
1.120	.556	.05417	.29169	.01279	.05134	.29220	.17570	.00000	4.20945	850.37764	.00000
1.120	1.623	.11330	.29112	-.02152	.10501	.29421	.35693	.00000	4.20932	850.24272	.00000
1.119	2.691	.17256	.29011	-.05530	.15875	.29790	.53290	.00000	4.20858	849.97078	.00000
	GRADIENT	.05824	.00026	-.03441	.05307	-.00147	.17590	.00000	.00026	-.01568	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (RJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 89/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CL	CD	L/D	CAB	RN/L	Q(PSF)	BETA
1.200	-5.848	-.28712	.30034	.20827	-.25503	.32803	-.77745	.00000	4.23004	881.48004	.00000
1.200	-4.778	-.22642	.30606	.17396	-.20014	.32386	-.61797	.00000	4.23023	881.48772	.00000
1.200	-3.698	-.16384	.30760	.13687	-.14366	.31753	-.45242	.00000	4.22806	881.36386	.00000
1.200	-2.642	-.10690	.30810	.10348	-.09258	.31270	-.29607	.00000	4.22806	881.36386	.00000
1.200	-1.571	-.04528	.30801	.06748	-.03682	.30914	-.11909	.00000	4.22747	881.25535	.00000
1.200	-.495	.01135	.30765	.03484	.01401	.30754	.04554	.00000	4.23166	881.70887	.00000
1.200	.565	.07052	.30705	.00089	.06749	.30773	.21932	.00000	4.23105	881.49370	.00000
1.200	1.629	.12412	.30584	-.02947	.11537	.30925	.37307	.00000	4.23103	881.40828	.00000
1.200	2.710	.18274	.30458	-.06238	.16814	.31298	.53721	.00000	4.22983	881.38691	.00000
	GRADIENT	.05452	-.00024	-.03149	.04907	-.00149	.15515	.00000	.00028	.00403	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (AJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 98/ 0 RN/L = 2.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.350	-5.540	.00008	.00458	.00330	.00000
.350	-4.520	.00067	.00405	.00414	.00000
.350	-3.502	.00033	.00391	.00336	.00000
.350	-2.503	.00006	.00291	.00079	.00000
.351	-1.495	-.00114	.00464	-.00567	.00000
.350	-.476	-.00122	.00217	-.00419	.00000
.351	.525	-.00100	.00108	-.00587	.00000
.350	1.533	-.00101	.00019	-.00423	.00000
.351	2.545	-.00141	.00447	-.01129	.00000
	GRADIENT	-.00029	-.00028	-.00194	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (AJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 97/ 0 RN/L = 3.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.599	-5.629	.00142	.00240	.00742	.00000
.599	-4.603	.00071	.00344	.00457	.00000
.599	-3.589	.00031	.00275	.00222	.00000
.599	-2.555	.00009	.00269	.00094	.00000
.599	-1.537	-.00093	.00465	-.00553	.00000
.600	-.515	-.00092	.00348	-.00623	.00000
.599	.513	-.00133	.00317	-.00888	.00000
.600	1.537	-.00128	.00305	-.00948	.00000
.600	2.566	-.00091	.00288	-.00941	.00000
	GRADIENT	-.00027	-.00003	-.00217	.00000

RUN NO. 96/ 0 RN/L = 3.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.801	-5.755	.00145	.00245	.00684	.00000
.801	-4.698	.00026	.00340	.00138	.00000
.801	-3.642	.00096	.00164	.00378	.00000
.800	-2.620	.00005	.00171	.00005	.00000
.800	-1.568	-.00053	.00232	-.00297	.00000
.801	-.537	-.00123	.00400	-.00723	.00000
.800	.510	-.00127	.00368	-.00830	.00000
.801	1.548	-.00141	.00366	-.01026	.00000
.800	2.593	-.00122	.00310	-.01069	.00000
	GRADIENT	-.00031	.00018	-.00210	.00000

RUN NO. 95/ 0 RN/L = 3.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.850	-5.776	.00112	.00304	.00471	.00000
.850	-4.724	.00143	.00144	.00571	.00000
.851	-3.677	.00132	-.00002	.00396	.00000
.851	-2.620	.00093	.00028	.00176	.00000
.849	-1.585	.00069	.00017	.00101	.00000
.851	-.527	-.00022	.00232	-.00480	.00000
.851	.511	-.00065	.00339	-.00904	.00000
.850	1.561	-.00069	.00255	-.00924	.00000
.850	2.619	-.00137	.00216	-.01213	.00000
	GRADIENT	-.00040	.00033	-.00260	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (AJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 94/ 0 RN/L = 3.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.900	-5.795	.00162	.00163	.00683	.00000
.900	-4.741	.00162	.00043	.00662	.00000
.901	-3.684	.00167	-.00094	.00577	.00000
.900	-2.628	.00099	-.00106	.00250	.00000
.900	-1.575	.00055	-.00012	-.00109	.00000
.901	-.519	-.00008	.00113	-.00423	.00000
.900	.534	-.00090	.00164	-.00724	.00000
.900	1.584	-.00108	.00130	-.00937	.00000
.900	2.633	-.00093	.00074	-.00854	.00000
	GRADIENT	-.00043	.00026	-.00242	.00000

RUN NO. 93/ 0 RN/L = 4.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.920	-5.811	.00108	.00294	.00428	.00000
.921	-4.752	.00116	.00123	.00557	.00000
.921	-3.682	.00081	.00019	.00382	.00000
.920	-2.619	.00113	-.00145	.00474	.00000
.921	-1.571	.00042	-.00089	.00023	.00000
.920	-.497	-.00066	.00083	-.00472	.00000
.921	.546	-.00071	.00057	-.00504	.00000
.920	1.610	-.00103	-.00077	-.00546	.00000
.920	2.653	-.00121	-.00094	-.00791	.00000
	GRADIENT	-.00036	-.00014	-.00197	.00000

RUN NO. 92/ 0 RN/L = 4.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.950	-5.820	.00150	-.00135	.00995	.00000
.950	-4.764	.00146	-.00265	.00917	.00000
.950	-3.702	.00135	-.00329	.00826	.00000
.950	-2.639	.00095	-.00466	.00616	.00000
.950	-1.585	.00042	-.00538	.00489	.00000
.950	-.502	-.00025	-.00589	.00269	.00000
.950	.545	-.00125	-.00560	-.00113	.00000
.950	1.605	-.00118	-.00636	.00003	.00000
.950	2.671	-.00136	-.00716	.00064	.00000
	GRADIENT	-.00044	-.00056	-.00140	.00000

LARC 8FT TPT 714(LA69) LAUNCH CONFIGURATION 9 (AJ9011) (05 JUN 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0100

PARAMETRIC DATA

BETA = .000 ELEVON = .000

RUN NO. 91/ 0 RN/L = 4.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
.980	-5.856	.00179	-.00332	.01255	.00000
.980	-4.768	.00083	-.00384	.00970	.00000
.980	-3.705	.00065	-.00430	.00921	.00000
.980	-2.649	.00036	-.00523	.00684	.00000
.980	-1.594	.00019	-.00510	.00475	.00000
.980	-.517	-.00030	-.00387	.00076	.00000
.980	.547	-.00050	-.00298	-.00070	.00000
.980	1.610	-.00084	-.00177	-.00434	.00000
.980	2.673	-.00093	-.00170	-.00552	.00000
	GRADIENT	-.00026	.00040	-.00225	.00000

RUN NO. 90/ 0 RN/L = 4.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.119	-5.875	.00256	-.00610	.01547	.00000
1.120	-4.790	.00229	-.00477	.01254	.00000
1.120	-3.719	.00149	-.00024	.00594	.00000
1.119	-2.639	.00111	.00015	.00359	.00000
1.119	-1.580	.00065	.00058	.00057	.00000
1.119	-.502	-.00020	.00077	-.00346	.00000
1.120	.556	-.00035	.00054	-.00488	.00000
1.120	1.623	-.00063	-.00051	-.00472	.00000
1.119	2.691	-.00074	-.00102	-.00599	.00000
	GRADIENT	-.00039	.00029	-.00237	.00000

RUN NO. 89/ 0 RN/L = 4.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CBL	CYN	CY	BETA
1.200	-5.848	.00181	-.00133	.00941	.00000
1.200	-4.778	.00154	.00137	.00544	.00000
1.200	-3.698	.00057	.00367	.00033	.00000
1.200	-2.642	.00035	.00362	-.00119	.00000
1.200	-1.571	-.00008	.00346	-.00318	.00000
1.200	-.495	-.00059	.00334	-.00656	.00000
1.200	.565	-.00050	.00295	-.00656	.00000
1.200	1.629	-.00118	.00286	-.00951	.00000
1.200	2.710	-.00111	.00207	-.00787	.00000
	GRADIENT	-.00034	-.00001	-.00180	.00000