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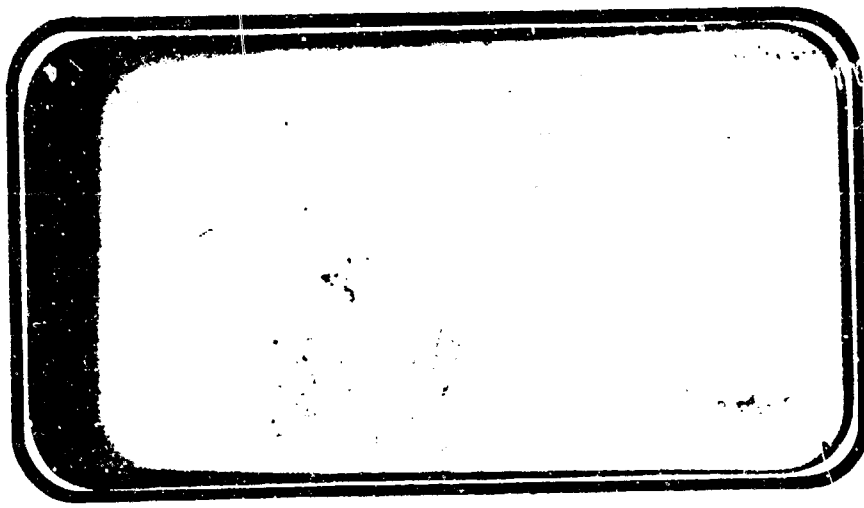
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SPACE SHUTTLE

HEAT THERMODYNAMIC DATA REPORT



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SURFACE ROUGHNESS EFFECTS ON THE
SUPERSONIC AERODYNAMICS OF THE ROCKWELL
INTERNATIONAL 089B-139 ORBITER

By

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Prepared under NASA Contract Number NAS9-13247

by

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

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFIC

Test Numbers: UPWT 1025 & 1034
NASA Series No.: LA-8/LA-8A
Date: April 18-24, May 7-16, 1973 (115 Occ. Hrs.)

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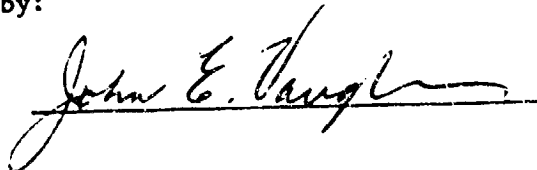
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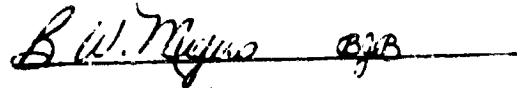
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SURFACE ROUGHNESS EFFECTS ON THE SUPERSONIC AERODYNAMICS
OF THE ROCKWELL INTERNATIONAL O89B-139 ORBITER

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George M. Ware and Bernard Spencer, Jr.

SUMMARY

An experimental test program has been conducted to determine the effects of vehicle surface roughness on the supersonic aerodynamic characteristics of a 0.01875 scale model of a Rockwell International space shuttle configuration. Surface roughness was simulated by applying a sparse coating of carborundum grit to complete model. Various grit sizes were investigated. The tests were conducted in the Langley Unitary Plan Wind Tunnel at Mach numbers from 1.60 to 4.63. The angle of attack was varied from about -2° to as much as 42° at 0° and $+3^\circ$ of sideslip. The angle of sideslip was varied from -8° to 8° at angles of attack from 0° to 40° .

These tests were two in a series of several tests to determine the effects of surface roughness on the orbiter aerodynamic characteristics over the complete Mach number range. Data Management System reports covering the other data are:

DMS-DR-2056

Low speed results, $M = .25$

DMS-DR-2040

Transonic results, $M = .35$ to 1.20

DMS-DR-2079

Hypersonic results, $M = 6$

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COEFFICIENT SCHEDULE:

- A: CA, CN, CL, CIM, L/D, CD, CPC, CPB, CPF², CPF1 vs. ALPHA
- CN vs. CIM, CL vs. CIM, CD vs. CL
- B: CA, CN, CL, CIM, L/D, CD vs. ALPHA
- CN vs. CIM, CL vs. CIM, CD vs. CL
- C: DCY/DB, DCBLDB, DCYNDB vs. ALPHA
- CY, CYN, CEL vs. ALPHA
- D: CY, CYN, CEL vs. BETA
- E: DCY/DA, DCYNDA, DCELDA vs. ALPHA
- CY, CYN, CEL vs. ALPHA

WORDING BY AUTHOR
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C _p	CP	pressure coefficient; $(P_1 - P_\infty)/q$
M	MACH	Mach number; V/a
P		pressure; N/m ² , psf
q	Q(NEM) 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
$\frac{l}{c}$ _{REF}	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

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
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_{Ab}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(P_b - P_\infty)/qS$
C_{Af}	CAF	forebody axial force coefficient, $C_A - C_{Ab}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS L_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CLL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
<u>Stability-Axis System</u>		
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{Db}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{Df}	CDF	forebody drag coefficient; $C_D - C_{Db}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS L_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CLL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
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_{Df}

NOMENCLATURE (Continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$\delta_{eLI,0}$		left inboard/outboard elevon surface deflection angle, positive deflection trailing edge down; degrees.
$\delta_{eRI,0}$		right inboard/outboard elevon surface deflection angle, positive deflection trailing edge down; degrees.
δ_e	ELEVTR	elevator, surface deflection angle, positive deflection trailing edge down, degrees, $(\delta_{eLI,0} + \delta_{eRI,0})/2$
δ_a	AILRON	aileron, aileron deflection angle, degrees, $(\delta_{eL0} - \delta_{eR0})/2$
	GT-LOC	grit location (refer to Test Conditions).
K	K	roughness height.
K/L	K''	ratio of roughness to model body length.
	ALFSWP	direction of alpha sweep, 1.0 = negative to positive sweep, 2.0 = positive to negative sweep.
	CPC	cavity pressure coefficient.
	CPB	base pressure coefficient for UPWT 1034.
	CPB1,CPB2	base pressure coefficients for UPWT 1023.
$C_{Y\beta}$	DCY/DB	side force coefficient derivative with respect to beta. Algebraic difference of the side force coefficient of two runs divided by the algebraic difference of the side slip angle of the runs; per degree.
$C_{n\beta}$	DCYMB	yawing moment coefficient derivative with respect to beta. Algebraic difference of the yawing moment coefficient of two runs divided by the algebraic difference of the side slip angle of the runs; body axis system; per degree.

NOMENCLATURE (Concluded)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$C_{l\beta}$	DCBLDB	rolling moment coefficient derivative with respect to beta. Algebraic difference of rolling moment coefficient of two runs divided by algebraic difference of side slip angle of the runs; body axis system; per degree.
$C_{y\delta_a}$	DCY/DA	side force coefficient derivative with respect to total aileron deflection. Algebraic difference of the side force coefficients of two runs divided by the algebraic difference of the total aileron deflection angle of the runs; per degree.
$C_{l\delta_a}$	DCBLDA	rolling moment coefficient derivative with respect to total aileron deflection. Algebraic difference of the rolling moment coefficient of two runs divided by the algebraic difference of the total aileron deflection angle of the runs; body axis system; per degree.
$C_{n\delta_a}$	DCYNDA	yawing moment coefficient derivative with respect to total aileron deflection. Algebraic difference of the yawing moment coefficient of two runs divided by the algebraic difference of the total aileron deflection angle of the runs; body axis system; per degree.

TEST FACILITY DESCRIPTION

The NASA LaRC 4 Foot Unitary Plan Wind Tunnel (UPWT) is a closed-circuit, continuous flow, variable density facility. The test section is 4 feet by 4 feet long.

Two tunnel legs are available for supersonic testing in the Mach number ranges 1.47 to 2.86 (Leg No. 1) and 2.29 to 4.63 (Leg No. 2). Both tunnel legs were used for this test. An asymmetric, sliding block nozzle position and total pressure setting provide the test Mach numbers at a specified Reynolds number. Reynolds number can be varied from 0.76 to 7.78 million per foot. Available stagnation pressure variation is 4.0 to 142. psia. Dynamic pressure variation is 95. to 1260. psf with normal operating stagnation temperature about 150°F in Mach modes 2 or 3 and about 175°F in Mach mode 4. The tunnel is equipped with a dry air supply, an evacuating system, and a cooling system. The facility power is approximately 83,000 horsepower.

Model mounting provisions consist of various sting arrangements, including axial (longitudinal), lateral (independent pitch and yaw), and roll movement with side wall support. A Schlieren system and oil flow visualization equipment are available. Data are recorded at the tunnel and reduced off-line at the Langley Computer Center. The tunnel is used for force and moment, pressure, and dynamic stability tests. Hot and cold jet effects and heat transfer have been studied in the UPWT.

TEST CONDITIONS

Tunnel conditions existing during the test are summarized in Table I. The model was sting supported, and the aerodynamic forces and moments were measured by an internally mounted six-component strain gage balance. Model angle of attack was varied from about -2° to as much as 42° . Reynolds number was held constant at 1.5×10^6 per foot for $M = 1.6, 1.9, \text{ and } 2.36$ and 2.5×10^6 for $M = 4.63$.

Vehicle roughness was simulated by applying a relatively sparse coating of carborundum grit over the complete model. This overall roughness is referred to acreage roughness (grit location no. 1). For comparison purposes, the model was also tested with no fixed transition and with transition fixed in the normal manner by thin strips of no. 46 grit .25 inches aft of the leading edge of the wing, vertical tail, and 1.0 inch aft of the nose (grit location no. 2). As a most extreme case, grit was applied to one-half of the model and the other half was left clean (grit location 3). The grit size and the type of application are indicated in the following table.

GRIT NO.	K, in.	K/l	TYPE	GRIT LOCATION NO.
46	.0165	6.82×10^{-4}	Normal Trans. Strips	2
46	.0165	6.82×10^{-4}	Acreage	1
46	.0165	6.82×10^{-4}	Acreage on 1/2	3

CONFIGURATION INVESTIGATED

The configuration tested was a 0.01875 scale model of a blend of Rockwell International shuttle configurations. The model consisted of a 039B configuration with a 139B configuration nose forward of F.S. 500. A sketch and a photograph of the model are shown in figures 2 and 3, respectively. Most of the supersonic tests were made with the rudder flared to form a $10^\circ/40^\circ$ wedge vertical tail. Tests were made with 0° and -20° elevon deflections and with 10° of aileron superimposed on -20° elevon deflection.

DATA REDUCTION

A LaRC 832-B six-component strain gage balance was used to measure model forces and moments. All final data were presented along a set of body and stability axes passing through the nominal center of gravity located at F.S. 1076.48 or 65 percent of the body length. Model data were converted to standard NASA Coefficients using the following constants.

Reference Area, $S_{ref} = \text{wing planform area} = 0.9457 \text{ ft.}^2$

Reference Length, $\bar{c}_{ref} = \text{wing mean aerodynamic chord} = 8.9025 \text{ in.}$

Reference Span, $b_{ref} = \text{wing span} = 17.5628 \text{ in.}$

Vehicle surface roughness was nondimensionalized by the model body length, $l = 24.193 \text{ in.}$ The drag data presented herein is gross drag in that base drag is included. Tabulated base pressure coefficients are presented however, if corrections are desired.

TABLE I.

TEST : UPWT 1023 & 1034			DATE :
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
1.60	1.5 x 10 ⁶	2.500	
1.90	1.5 x 10 ⁶	2.500	
2.36	1.5 x 10 ⁶	2.333	
4.63	2.5 x 10 ⁶	2.014	

BALANCE UTILIZED: 832-B

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	<u>1000 lb</u>	<u>+ 5.00 lb</u>	_____
SF	<u>250 lb</u>	<u>+ 1.25 lb</u>	_____
AF	<u>85 lb</u>	<u>+ 0.43 lb</u>	_____
PM	<u>2000 in-lb</u>	<u>+ 10.00 in-lb</u>	_____
RM	<u>1000 in-lb</u>	<u>+ 5.00 in-lb</u>	_____
YM	<u>500 in-lb</u>	<u>+ 2.50 in-lb</u>	_____

COMMENTS:

TABLE II.

TEST: UPNT 1023 (LA-8)		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:									
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS		TEST RUN NUMBERS										
		α	β	Sec.	Sec.	Sec.	K/L		2.36	4.63											
RP6 001	OR6 089B N/Mag.	A	0	0%	0%	2	6.82	1	12												
02	Nose	B	0			2		3	14												
03		A	3			2		2	13												
04		B	3			2		47	49												
05		A	0			1		48	50												
06		A	-3			1		43	45												
07		A	0			3		44	46												
08		A	-3			3		53	51												
09		A						54	52												
10		A	-3	-29%	-30%			55	57												
11		A	0	-10%				56	58												
12		A	-3					52	22												
13		A	0			3	6.82	35	25												
14		B	0			3		34	24												
15		A	-3			3		33	23												
16		B	-3			3		9	21												
17		0	A	%	%	2		8	20												
18		10	A	%	%	2															
7								61	67	75	76										

COEFFICIENTS
 α OR β SCHEDULES
 A) -4° → 40° Ad = 3°
 B) 40° → -40°
 A) -6° → 8°
 B) 8° → -6°

TABLE II. (Continued)

TEST: <u>UPWT 1023 (LA-8)</u>		DATE: _____										
DATA SET IDENTIFIER		DATA SET/RUN NUMBER COLLATION SUMMARY										
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES					NO. OF RUNS	MACH NUMBERS		
		α	β	$\frac{3e L_0}{L_0}$	$\frac{3e L_0}{L_0}$	$\frac{3e L_0}{L_0}$	$\frac{3e L_0}{L_0}$	$\frac{3e L_0}{L_0}$		$\frac{3e L_0}{L_0}$		
RP6019	ORA 0890 w/MOD	20	A	0%	0%	2	6.02				2.36	4.63
20	N05E	30	A								7	19
21		30	B								6	17
22		40	A								11	18
23		0	A	-20/-10	-20/-30	3					5	16
24		10	A								42	31
25		20	A								41	30
26		30	A								40	29
27		30	B								39	27
28		40	A								38	28
											36	26

TEST RUN NUMBERS													
1	7	13	19	25	31	37	43	49	55	61	67	75	76

COEFFICIENTS

α OR β SCHEDULES

IDVAR (1) IDVAR (2) IDV

TABLE II. (Continued)

TEST: UPWT 1034 (LA-8A)		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		α	β	δ	ϵ	ζ	η	θ	κ		λ	μ	ν
RPG 101	CRS 0815 w/mmo	A	0	%	%	2	6.82	2	2	2	2	1.6	1.9
102	None	3	0	↓	↓	1	↓	1	1	1	1	23	25
103		3	0	↓	↓	1	↓	1	1	1	1	24	26
104		0	3	↓	↓	1	↓	1	1	1	1	19	21
105		3	0	↓	↓	1	↓	1	1	1	1	20	22
106		0	3	↓	↓	1	↓	1	1	1	1	15	17
107		3	0	↓	↓	1	↓	1	1	1	1	16	18
108		0	3	↓	↓	1	↓	1	1	1	1	5	7
109		3	0	↓	↓	1	↓	1	1	1	1	6	8
110		0	3	↓	↓	3	↓	3	3	3	3	9	12
111		3	0	↓	↓	3	↓	3	3	3	3	10	13
112		0	3	↓	↓	3	↓	3	3	3	3	11	14
113		-3	0	%	%	2	↓	2	2	2	2	53	59
114		0	3	%	%	2	↓	2	2	2	2	54	60
115		3	0	↓	↓	2	↓	2	2	2	2	27	33
116		0	3	↓	↓	2	↓	2	2	2	2	28	34
117		3	0	↓	↓	2	↓	2	2	2	2		
118		3	0	↓	↓	2	↓	2	2	2	2		

TEST RUN NUMBERS: 7, 19, 25, 31, 37, 43, 49, 55, 61, 67, 75, 76

COEFFICIENTS: α OR β SCHEDULES: A) $-2^\circ \rightarrow 24^\circ$, $\Delta \alpha = 2^\circ$; B) $-6^\circ \rightarrow 8^\circ$, $\Delta \beta = 2^\circ$

TABLE II. (Continued)

TEST: UPWT 1034 (LA-8A)		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:																									
DATA SET IDENTIFIER	CONFIGURATION	SCHD. α β	PARAMETERS/VALUES					NO. OF RUNS	MACH NUMBERS																												
			T ₃₀ L	S ₁₀ R	S ₁₀ L	CRIST MAX	R/L X 10 ⁴		1.6	1.9	40	46	41	47	55	61	62	63	64	65	29	35	36	37	38	39	42	48	43	49	44	50	45	51	52		
RP6119	ORB 0910 W/MOR	A 0	-10%	-10%	2	6.82	2	2	1.6	1.9	40	46	41	47	55	61	62	63	64	65	29	35	36	37	38	39	42	48	43	49	44	50	45	51	52		
120	NDSE	A 3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
121		A -3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
122		0 A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
123		5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
124		10	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
125		15	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
126		20	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
127		0	-10%	-10%	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
128		5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
129		10	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
130		15	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
131		20	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
132		0	-10%	-10%	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
133		5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
134		10	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
135		15	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
136		20	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

TABLE III.
MODEL COMPONENT DIMENSIONAL DATA

MODEL COMPONENT: BODY - 089B-139B(Modified Nose)

GENERAL DESCRIPTION: Nose section from full-scale station 238.0 to STA. 500
from NAR drawing VL70-000139B. Remaining body AFT of STA 500 from NAR
drawing VL70-000093

DRAWING NUMBER: VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
		.01875
Length	<u>1290.3</u>	<u>24.193</u>
Max. Width	<u>265.0</u>	<u>4.969</u>
Max. Depth	<u>248.0</u>	<u>4.650</u>
Fineness Ratio	<u>4.869</u>	<u>4.869</u>
Area		
Max. Cross-Sectional	<u>456.40</u>	<u>0.1605</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III. (CONTINUED)

MODEL COMPONENT: ELEVON

GENERAL DESCRIPTION: CONFIGURATION PER LINES VL70-000093

DATA FOR (1) OF (2) SIDES

MODEL SCALE = 0.01875

DRAWING NUMBER: VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>205.517</u>	<u>0.0723</u>
Span (equivalent)	<u>353.34</u>	<u>6.625</u>
Inb'd equivalent chord	<u>114.78</u>	<u>2.152</u>
Outb'd equivalent chord	<u>55.00</u>	<u>1.031</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.208</u>	<u>.208</u>
At Outb'd equiv. chord	<u>.400</u>	<u>.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.02</u>	<u>-10.02</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line)-ft ³	<u>1548.07</u>	<u>0.0102</u>

TABLE III. (CONTINUED)

MODEL COMPONENT: WINGGENERAL DESCRIPTION: Orbiter Configuration per Lines VL70-000093.NOTE: (Dihedral angle is defined at the lower surface of the wing at the 75.33% element line projected into a plane perpendicular to the FRL).

SCALE MODEL = 0.01875

DRAWING NUMBER: VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area	2690.00	0.9457
Planform	-----	-----
Wetted	-----	-----
Span (equivalent)	936.68	17.56
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	3.000	3.000
Aerodynamic Twist, degrees	+3.000	+3.000
Toe-In Angle	-----	-----
Cant Angle	-----	-----
Sweep Back Angles, degrees	-----	-----
Leading Edge	45.000	45.000
Trailing Edge	-10.24	-10.24
0.25 Element Line	35.209	35.209
Chords:	-----	-----
Root (Wing Sta. 0.0)	689.24	12.923
Tip, (equivalent)	137.85	2.585
MAC	474.81	8.903
Fus. Sta. of .25 MAC	1136.89	21.317
W.P. of .25 MAC	299.20	5.610
B.L. of .25 MAC	182.13	3.415
Airfoil Section	-----	-----
Root	-----	-----
Tip	-----	-----
<u>EXPOSED DATA</u>		
Area	1752.29	0.6160
Span, (equivalent)	720.68	13.513
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chord:	-----	-----
Root	562.40	10.545
Tip	137.85	2.585
MAC	393.03	7.369
Fus. Sta. of .25 MAC	1185.31	22.224
W.P. of .25 MAC	300.20	5.629
B.L. of .25 MAC	143.76	2.700

TABLE III. (CONTINUED)

MODEL COMPONENT: Vertical Tail

GENERAL DESCRIPTION: Centerline vertical tail double wedge airfoil with rounded leading edge.

Scale Model = 0.01875

DRAWING NUMBER: VL70-000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area (theo) ft. ²	<u>413.25</u>	<u>0.145</u>
Span (equivalent)	<u>315.72</u>	<u>5.920</u>
Inb'd equivalent chord	<u>268.50</u>	<u>5.034</u>
Outb'd equivalent chord	<u>108.47</u>	<u>2.034</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u> </u>	<u> </u>
At Outb'd equiv. chord	<u> </u>	<u> </u>
Sweep Back Angles, degrees		
Leading Edge	<u>45</u>	<u>45</u>
Tailing Edge	<u>26.249</u>	<u>26.249</u>
Hingeline	<u> </u>	<u> </u>
Area Moment (Normal to hinge line)	<u> </u>	<u> </u>

TABLE III. (CONCLUDED)

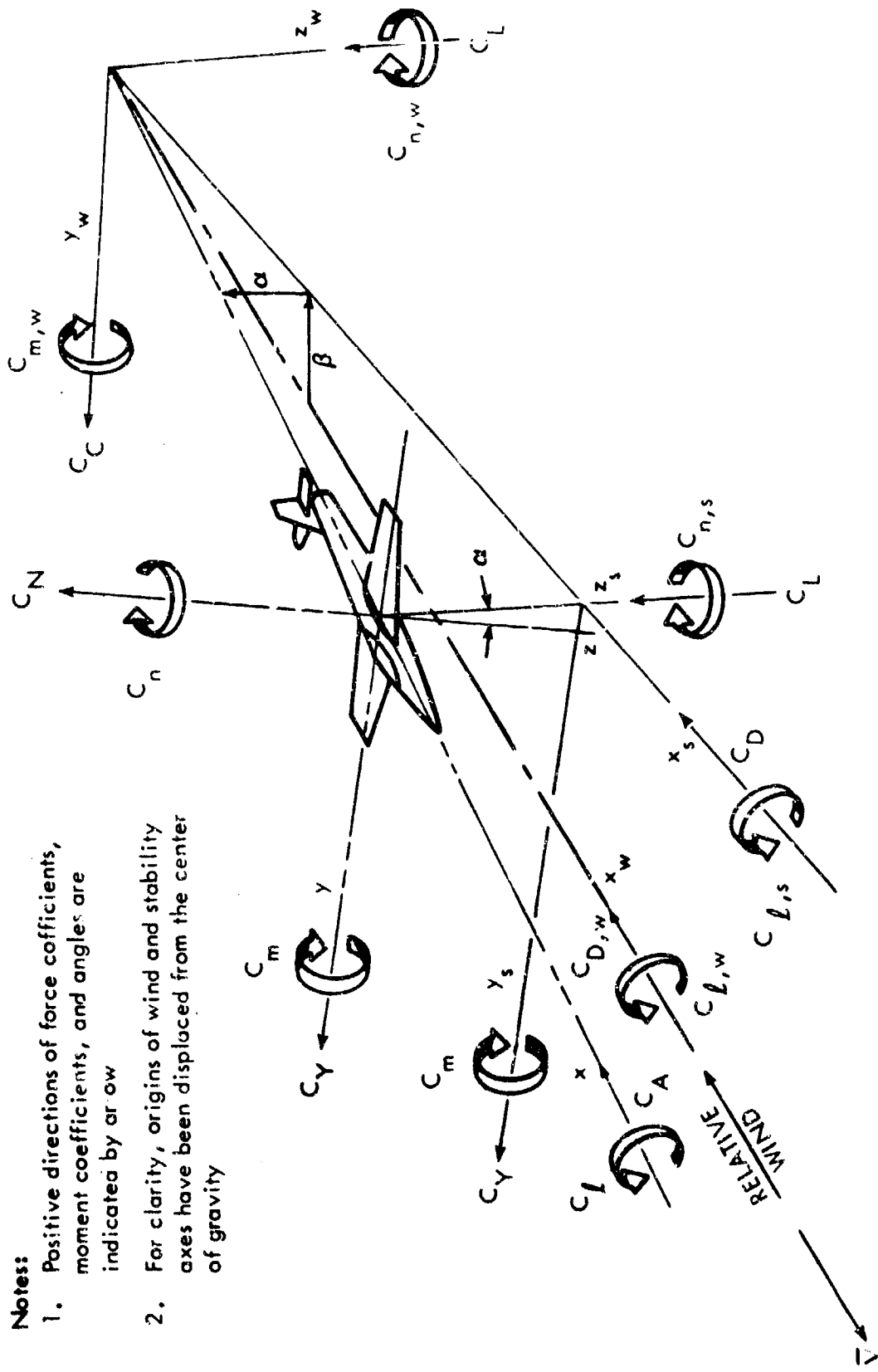
MODEL COMPONENT: RUDDER

GENERAL DESCRIPTION: CONFIGURATION PER LINES VL70-000095

SCALE MODEL = 0.01875

DRAWING NUMBER: VL70-000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>106.38</u>	<u>0.0374</u>
Span (equivalent)	<u>201.0</u>	<u>3.769</u>
Inb'd equivalent chord	<u>91.585</u>	<u>1.717</u>
Outb'd equivalent chord	<u>50.833</u>	<u>0.953</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angies, degrees		
Leading Edge	<u>34.83</u>	<u>34.83</u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line)-Ft ³	<u>526.125</u>	<u>0.0034</u>



- 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.

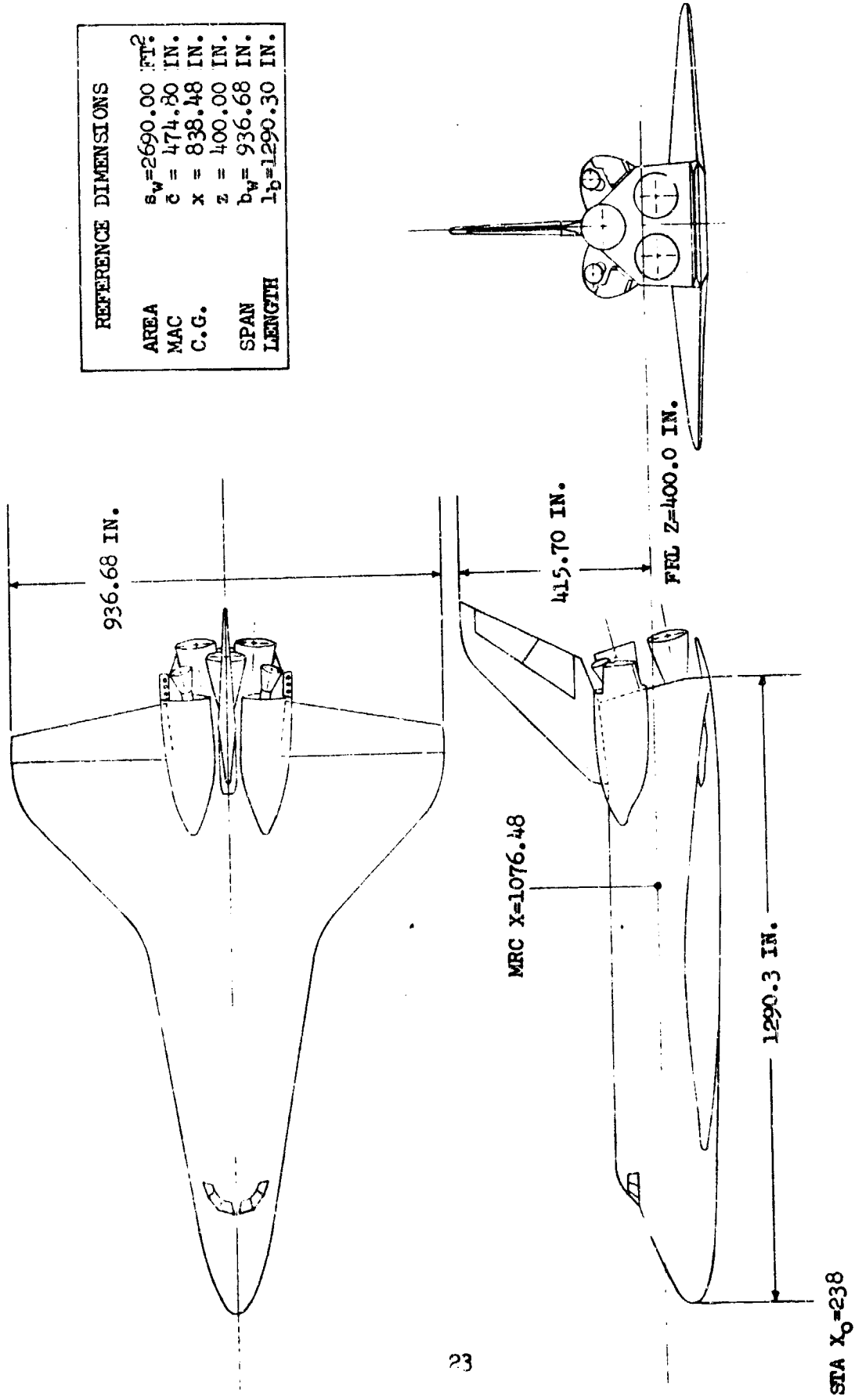


Figure 2. - SSV Orbiter Configuration.

STA $X_0 = 238$

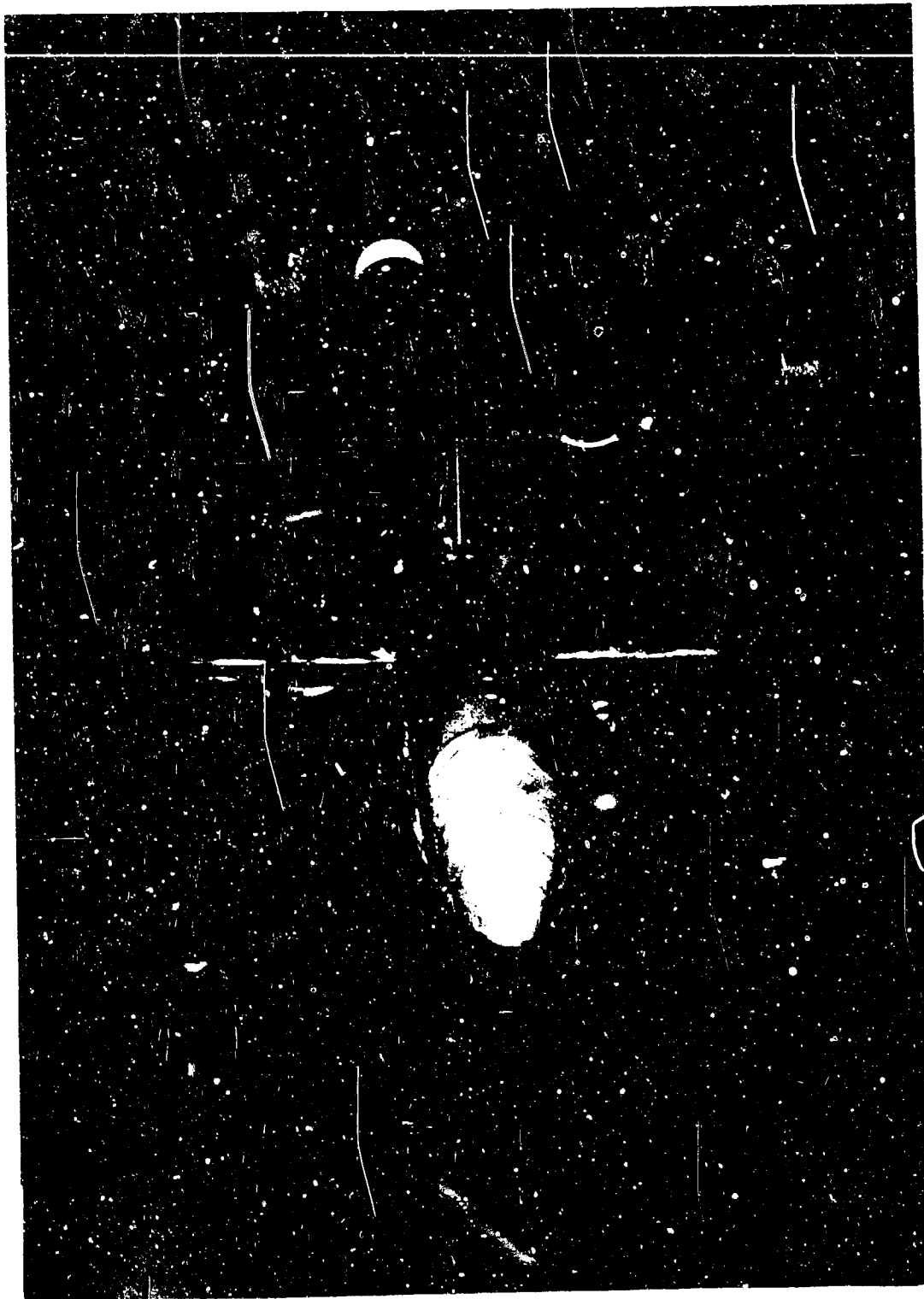


Figure 3. - Photograph of Model.

DATA FIGURES



DATA SET SYMBOL
 (LPS105)
 (LPS106)
 (LPS107)
 (LPS108)

CONFIGURATION DESCRIPTION
 LA-8/8A MAR 0888-100. NOSE ORBITER
 LA-8/8A MAR 0888-100. NOSE ORBITER
 LA-8/8A MAR 0888-100. NOSE ORBITER
 DATA NOT AVAILABLE

AIRLON ELEVTR GT-LOC M/L
 .000 .000 1.000 .000
 .000 .000 1.000 6.820
 .000 .000 2.000 6.820
 .000 .000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.5025 INCHES
 BREF 17.5628 INCHES
 XREF 15.0000 INCHES
 YREF .0000 INCHES
 ZREF .0188 INCHES
 SCALE

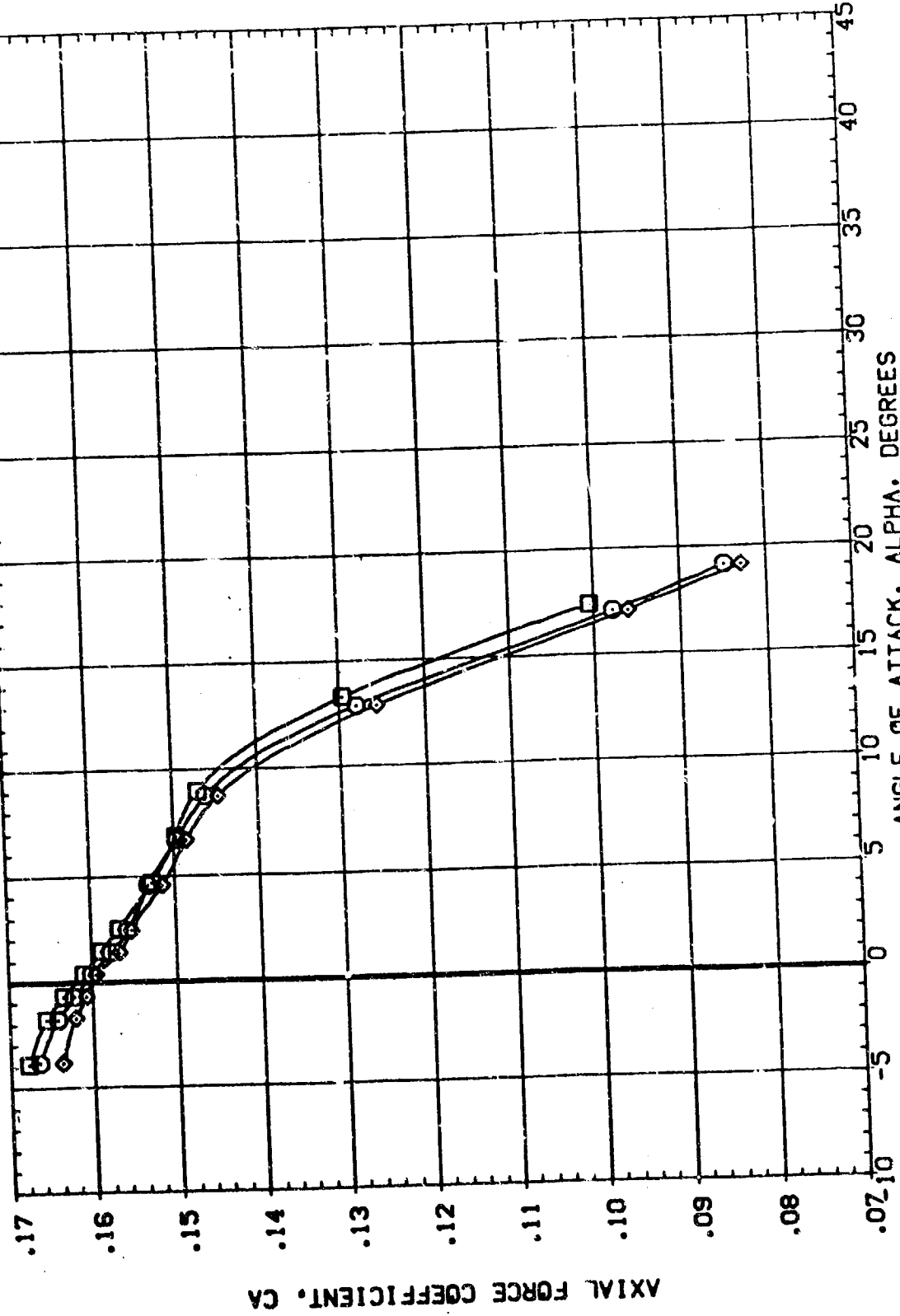


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (A)MACH = 1.60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LPS105) LA-8/BA MAR 0897-100. NOSE ORBITER
 (LPS103) LA-8/BA MAR 0858-100. NOSE ORBITER
 (LPS101) LA-8/BA MAR 0858-100. NOSE ORBITER
 (LPS007) DATA NOT AVAILABLE

AIRLON ELEVTR GT-LOC KVL
 .000 .000 1.000 .000
 .000 .000 1.000 6.820
 .000 .000 2.000 6.820
 .000 .000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 50. IN.
 LREF 8.9023 INCHES
 BREF 17.5628 INCHES
 XREF 15.9638 INCHES
 YREF .0000 INCHES
 ZREF .0000 INCHES
 SCALE .0188 SCALE

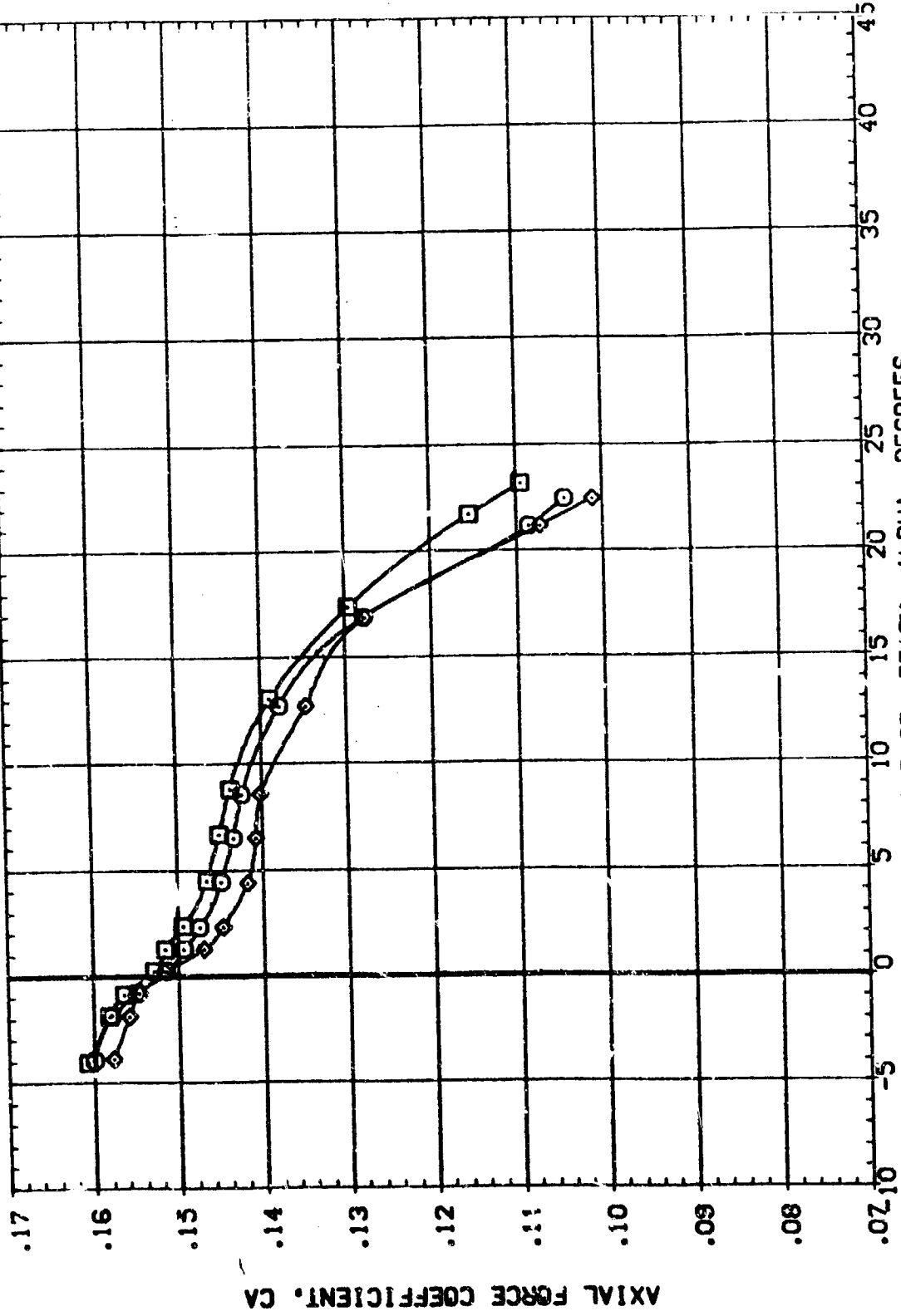


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (B)MACH = 1.90

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(LP6105)	LA-8/BA MAR 085B-MOD. NOSE ORBITER
(LP6103)	LA-8/BA MAR 085B-MOD. NOSE ORBITER
(LP6101)	LA-8/BA MAR 085B-MOD. NOSE ORBITER
(LP6007)	LA-8/BA MAR 085B-MOD. NOSE ORBITER

AIRLON ELEVTR GT-LBC K/L

.000	.000	1.000	.000
.000	.000	1.000	6.820
.000	.000	2.000	6.820
.000	.000	3.000	

REFERENCE INFORMATION

SREF	136.1808	SO, IN.
LREF	8.9025	INCHES
BREF	17.5628	INCHES
XREF	15.0000	INCHES
YREF	.0000	INCHES
ZREF	.0000	INCHES
SCALE	.0188	SCALE

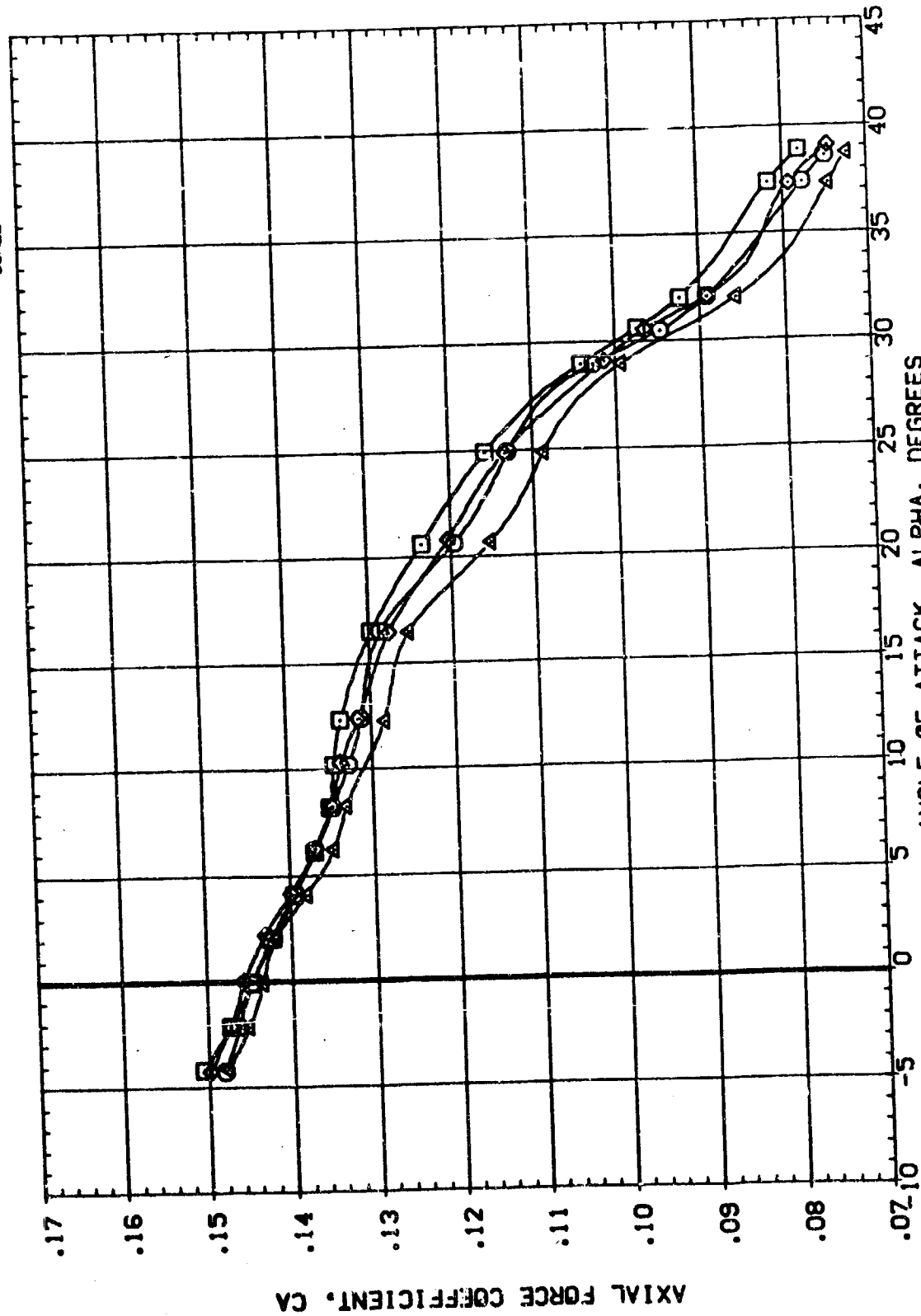


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(C)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ATLERN	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION
(LPS105)	LA-8/8A WAR 0956-F00. NOSE CRBITER	.000	.000	1.000	.000	SREF 136.1808 50.11N
(LPS103)	LA-8/8A WAR 0958-F00. NOSE CRBITER	.000	.000	1.000	6.820	LREF 8.5025 INCHES
(LPS101)	LA-8/8A WAR 0958-F00. NOSE CRBITER	.000	.000	2.000	6.820	BREF 17.5626 INCHES
(LPS007)	LA-8/8A WAR 0958-F00. NOSE CRBITER	.000	.000	3.000	6.820	XTRP 15.9638 INCHES
						ZTRP .0000 INCHES
						SCALE .0186 INCHES

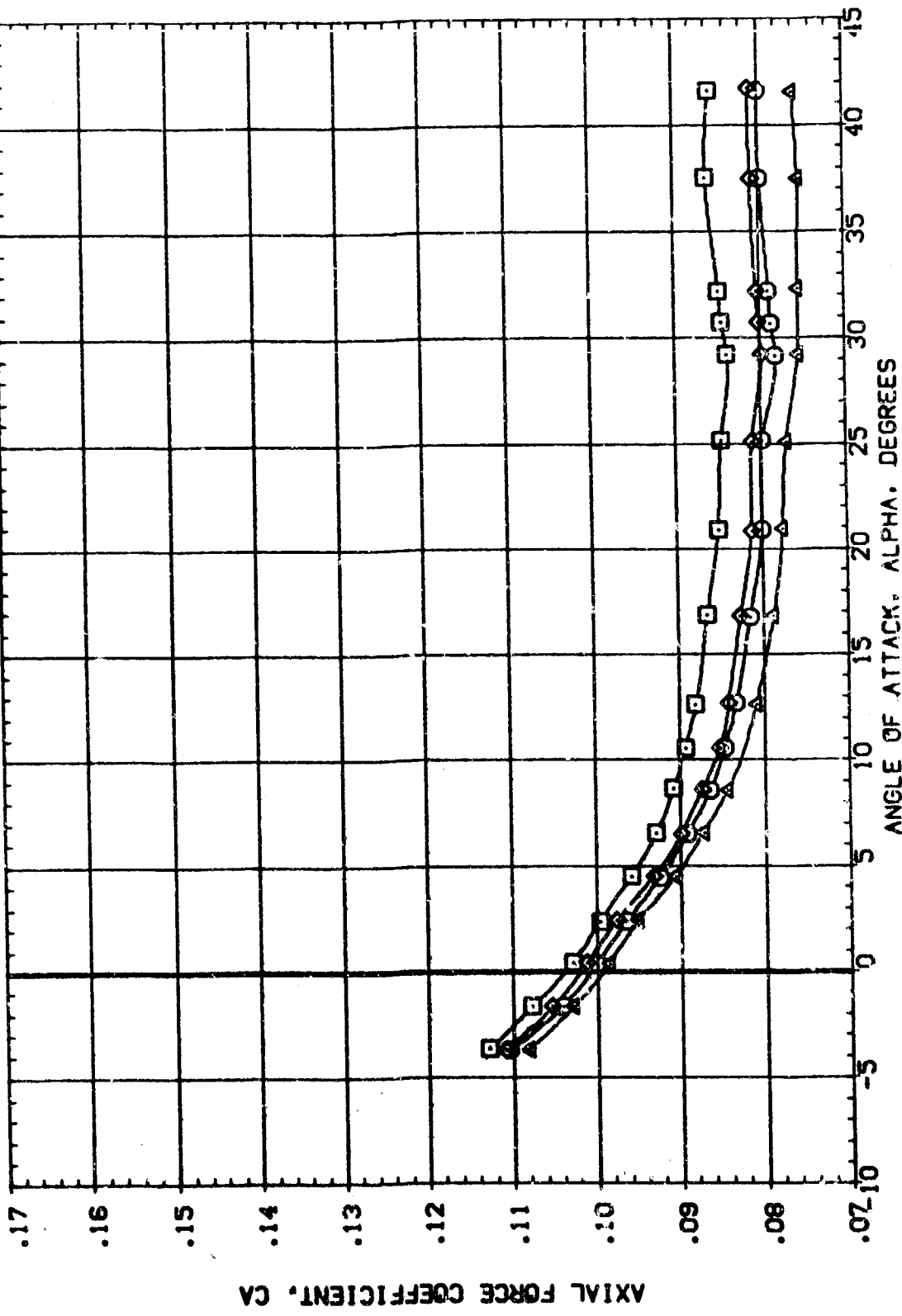


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(M)MACH = 4.63

DATA SET SYMBOL: (LPS105) □ (LPS103) ○ (LPS101) △ (LPS007)
 CONFIGURATION DESCRIPTION:
 LA-8/BA WAR 0858-HOD. NOSE ORBITTER
 LA-8/BA WAR 0858-HOD. NOSE ORBITTER
 LA-8/BA WAR 0858-HOD. NOSE ORBITTER
 DATA NOT AVAILABLE

AILRON ELEVTR GT-LOC K/L REFERENCE INFORMATION
 .000 .000 1.000 136.1808 50. IN.
 .000 .000 1.000 8.5025 INCHES
 .000 .000 2.000 17.5528 INCHES
 .000 .000 3.000 15.9538 INCHES
 .000 .000 .0000 INCHES
 ZTRP SCALE .0188 INCHES SCALE

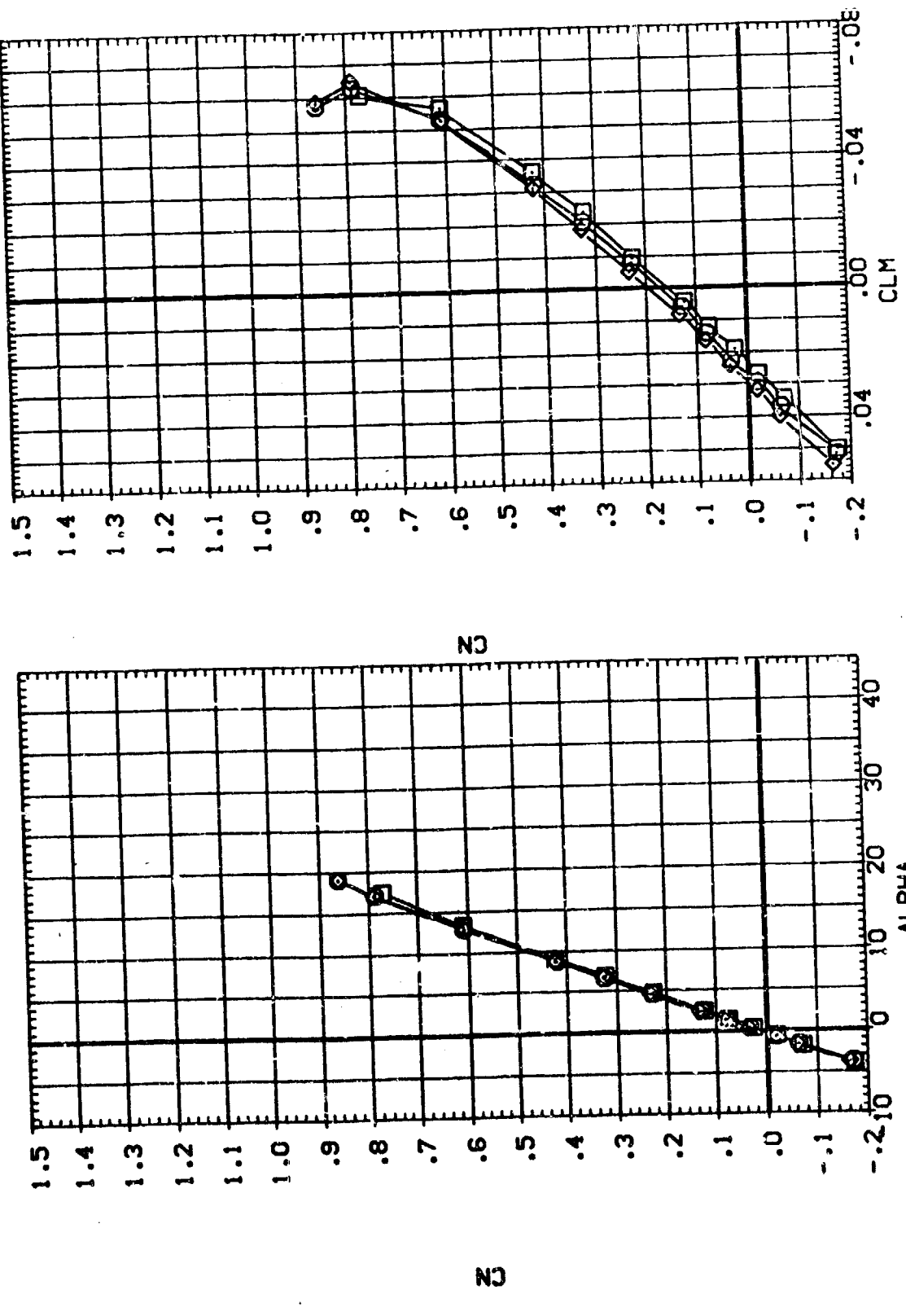


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (M)MACH = 1.60

AIRLIFT .000
 ELEVTR .000
 GT-LOC 1.000
 KVL .000
 SREF 136.1308
 LREF 8.5023
 BREF 17.5628
 XMRP 15.9638
 YMRP .0000
 ZMRP .0000
 SCALE .0188

DATA SET SYMBOL
 (LPS105)
 (LPS103)
 (LPS101)
 (LPS007)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR C888-MOD. NOSE ORBITER
 LA-8/8A NAR C888-MOD. NOSE ORBITER
 LA-8/8A NAR C888-MOD. NOSE ORBITER
 DATA NOT AVAILABLE

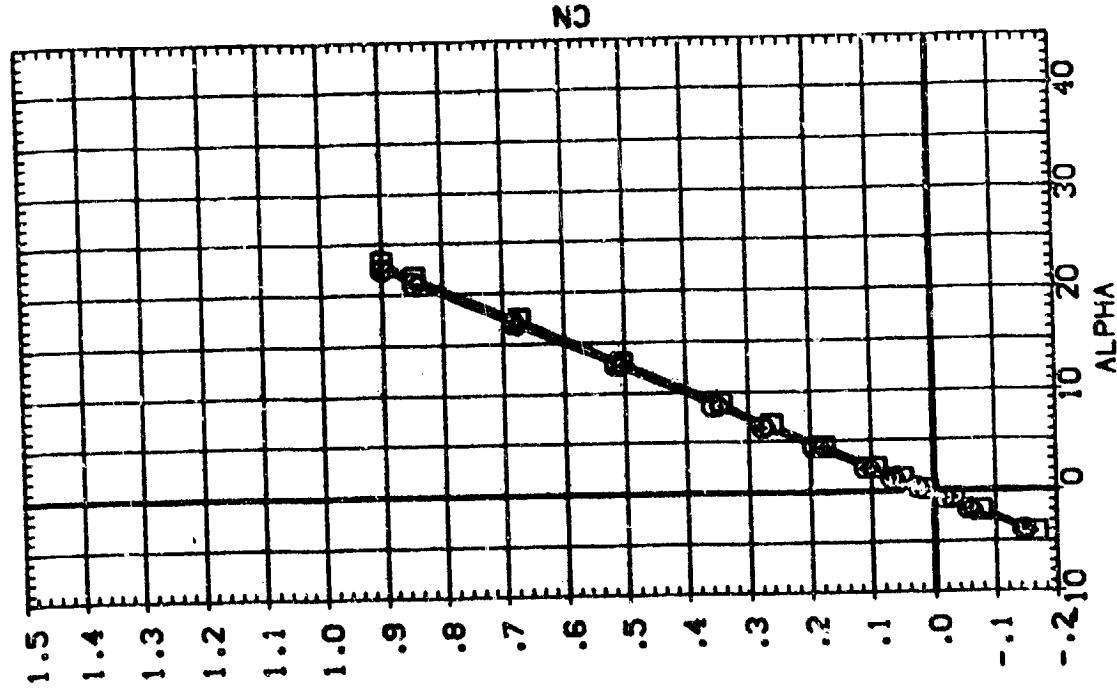
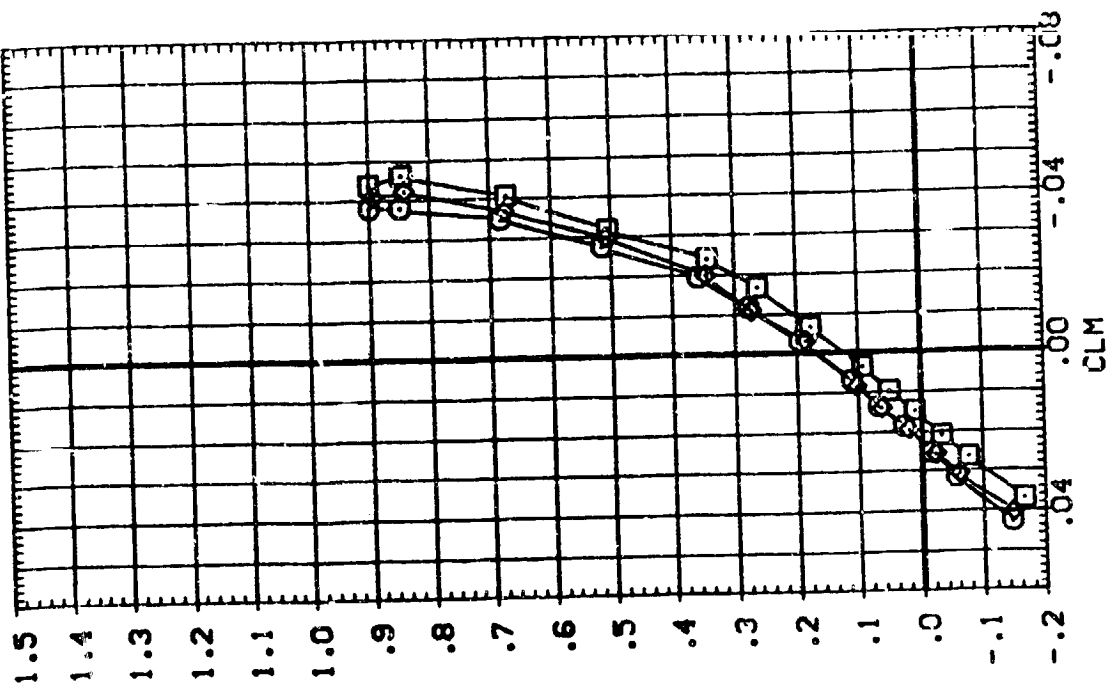
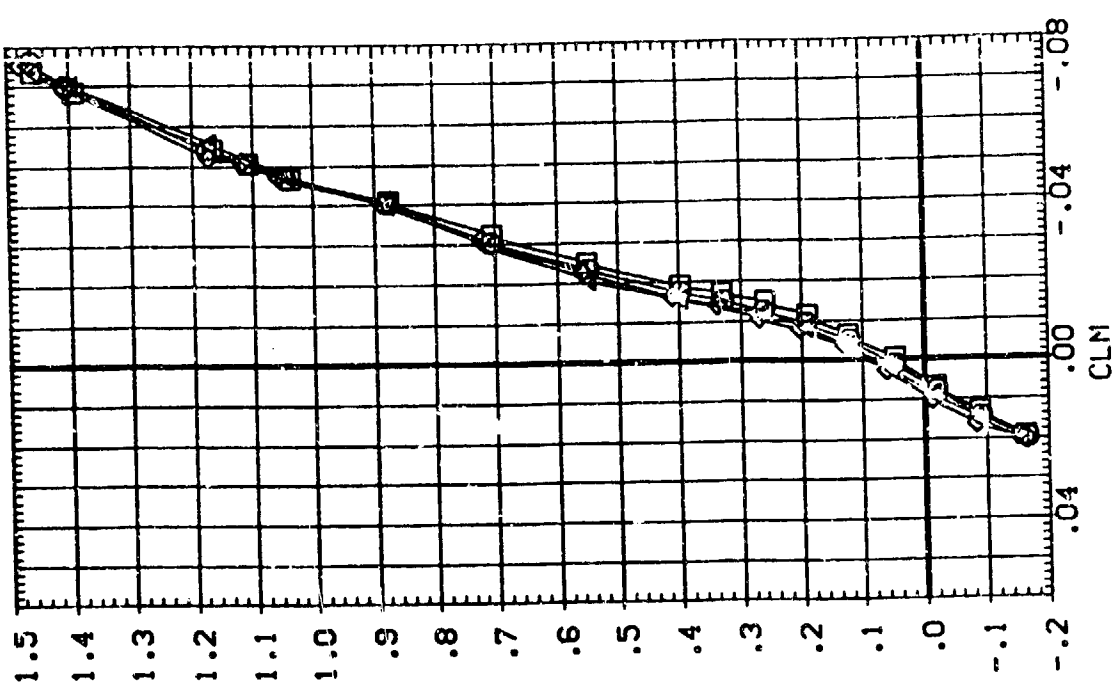


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (8)MACH = 1.90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	GT-LDC	K/L	ELEVTR	REFERENCE INFORMATION
(LP6105)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	1.000	.000	.000	SREF 136.1808 SO. IN.
(LP6101)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	1.000	6.820	.000	LREF 8.9025 INCHES
(LP6007)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	3.000	6.820	.000	BREF 17.5638 INCHES
					XTRP 15.5638 INCHES
					YTRP .0000 INCHES
					ZTRP .0000 INCHES
					SCALE .0188 SCALE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	GT-LDC	K/L	ELEVTR	REFERENCE INFORMATION
(LP6105)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	1.000	.000	.000	SREF 136.1808 SO. IN.
(LP6101)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	1.000	6.820	.000	LREF 8.9025 INCHES
(LP6007)	LA-8/8A NAR 085B-HDD. NOSE ORBITER	3.000	6.820	.000	BREF 17.5638 INCHES
					XTRP 15.5638 INCHES
					YTRP .0000 INCHES
					ZTRP .0000 INCHES
					SCALE .0188 SCALE

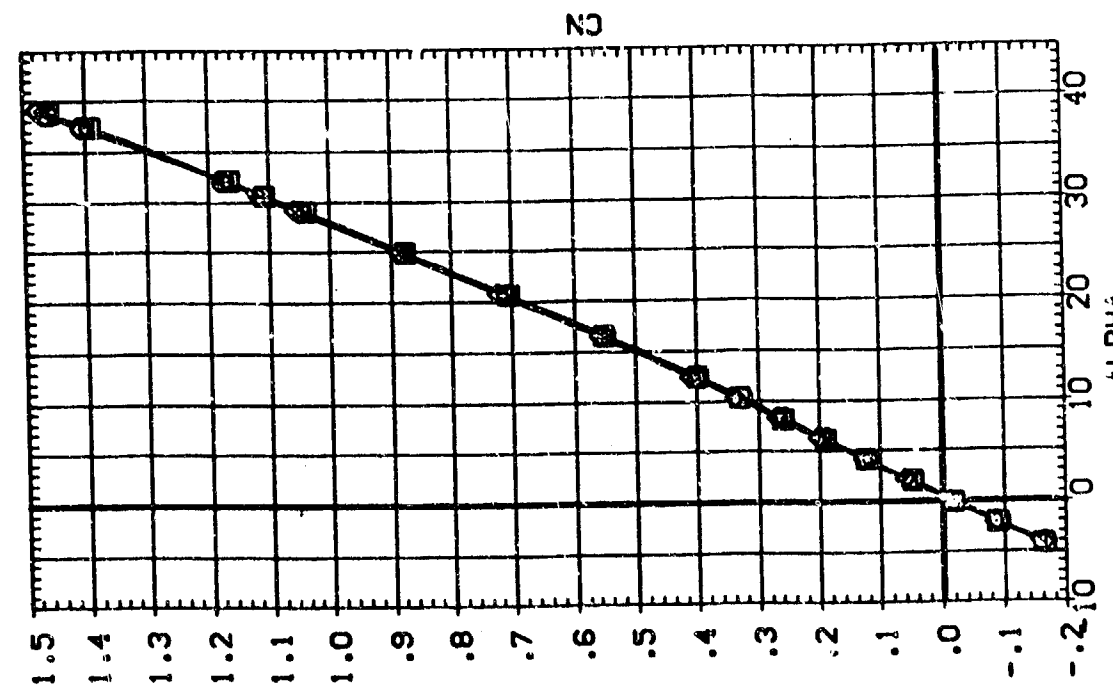


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

DATA SET SYMBOL: (LP6105), (LP6103), (LP6101), (LP6007)

CONFIGURATION DESCRIPTION:
 LA-8/BA NAR 0858-MOD. NOSE ORBITER
 LA-8/BA NAR 0858-MOD. NOSE ORBITER
 LA-8/BA NAR 0858-MOD. NOSE ORBITER
 LA-8/BA NAR 0858-MOD. NOSE ORBITER

GT-LOC: 1.000, 1.000, 2.000, 3.000

ELEVTR: .000, .000, .000, .000

KVL: .000, 6.820, 6.820, 6.820

REFERENCE INFORMATION:
 SREF: 136.1808 SO. IN: .000
 LREF: 8.5025 INCHES: 6.820
 BREF: 17.5628 INCHES: 6.820
 XPRP: 15.5638 INCHES: 6.820
 YPRP: .0000 INCHES: .0000
 ZPRP: .0000 INCHES: .0000
 SCALE: .0188

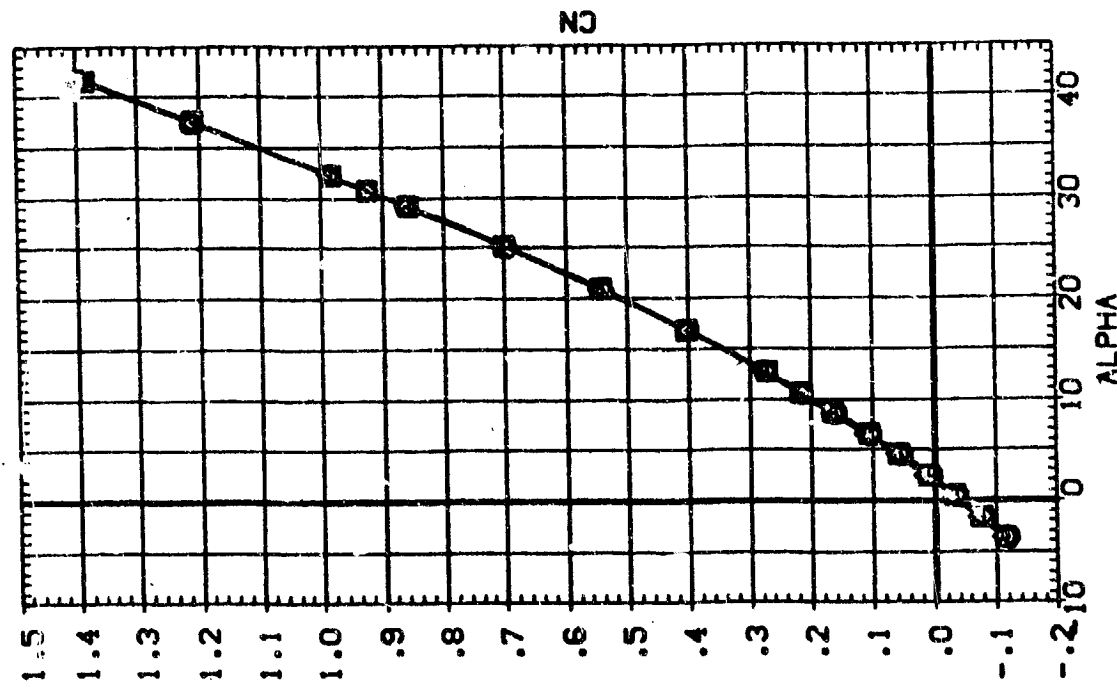
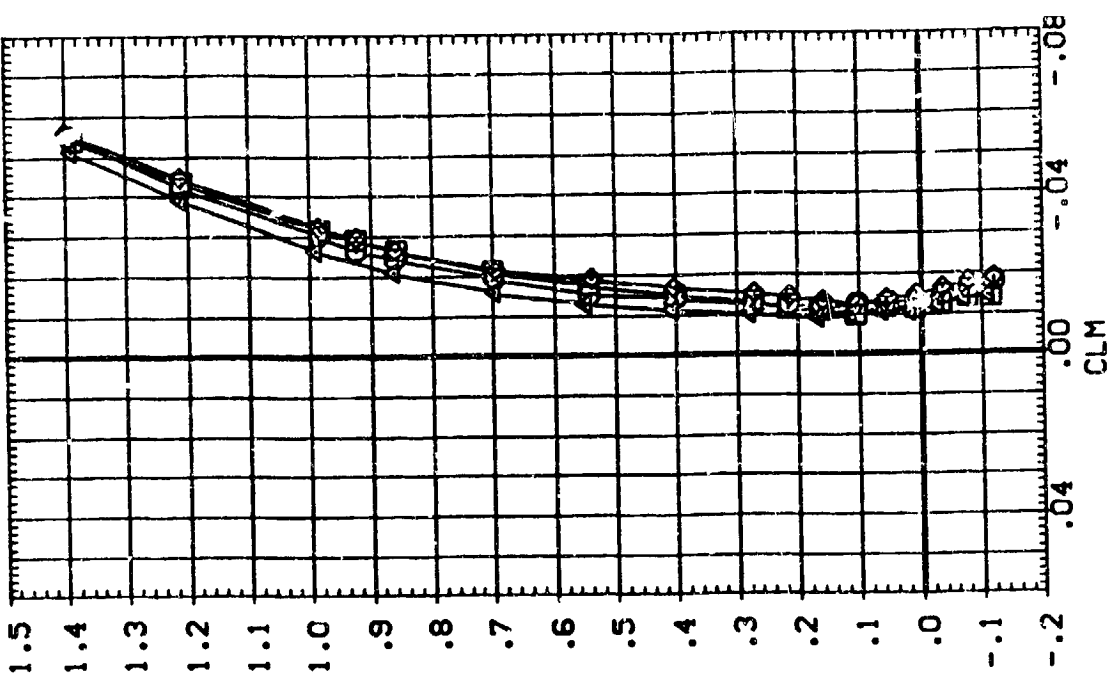


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(COM)MACH = 4.63

DATA SET SYMBOL: (LP6105), (LP6103), (LP6101), (LP6007)
 CONFIGURATION DESCRIPTION: LA-8/BA NAR 0698-MOD. NOSE ORBITER, LA-8/BA NAR 0698-MOD. NOSE ORBITER, LA-8/BA NAR 0698-MOD. NOSE ORBITER, DATA NOT AVAILABLE
 AILRON - ELEVTR: .000, .000, .000, .000, .000, .000
 GT-LOC: 1.000, 1.000, 2.000, 3.000
 KVL: .000, 6.820, 6.820, 6.820
 REFERENCE INFORMATION: SREF 136.1808 SQ. IN., LREF 8.9025 INCHES, XREF 17.5628 INCHES, YREF 15.5638 INCHES, ZREF .0000 INCHES, SCALE .0188

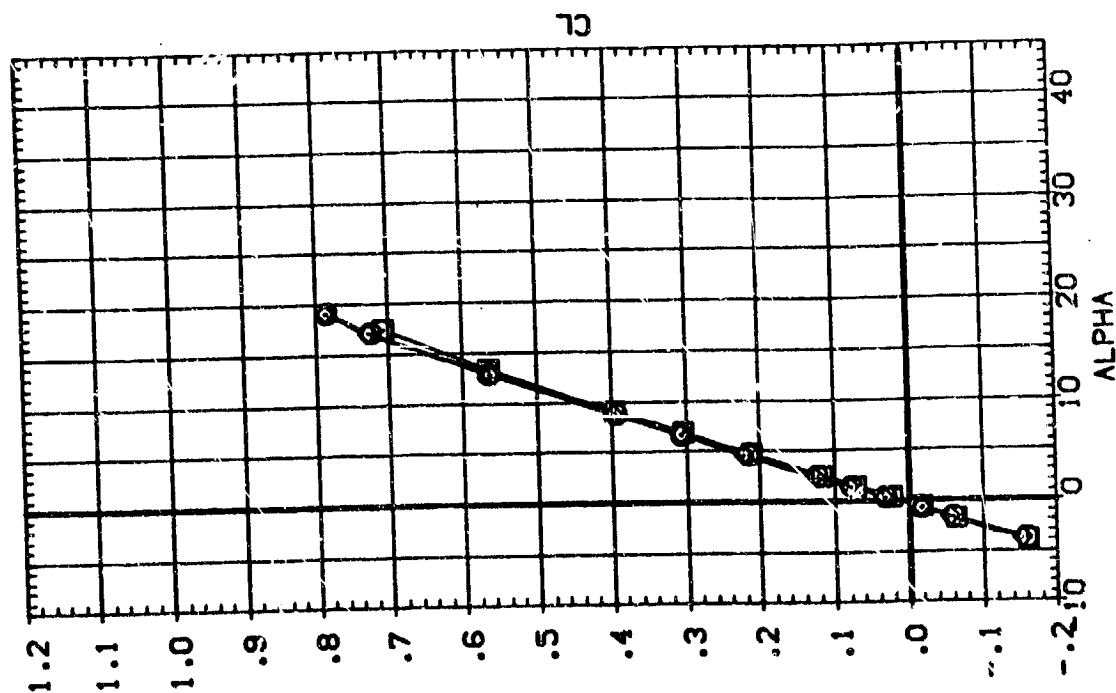
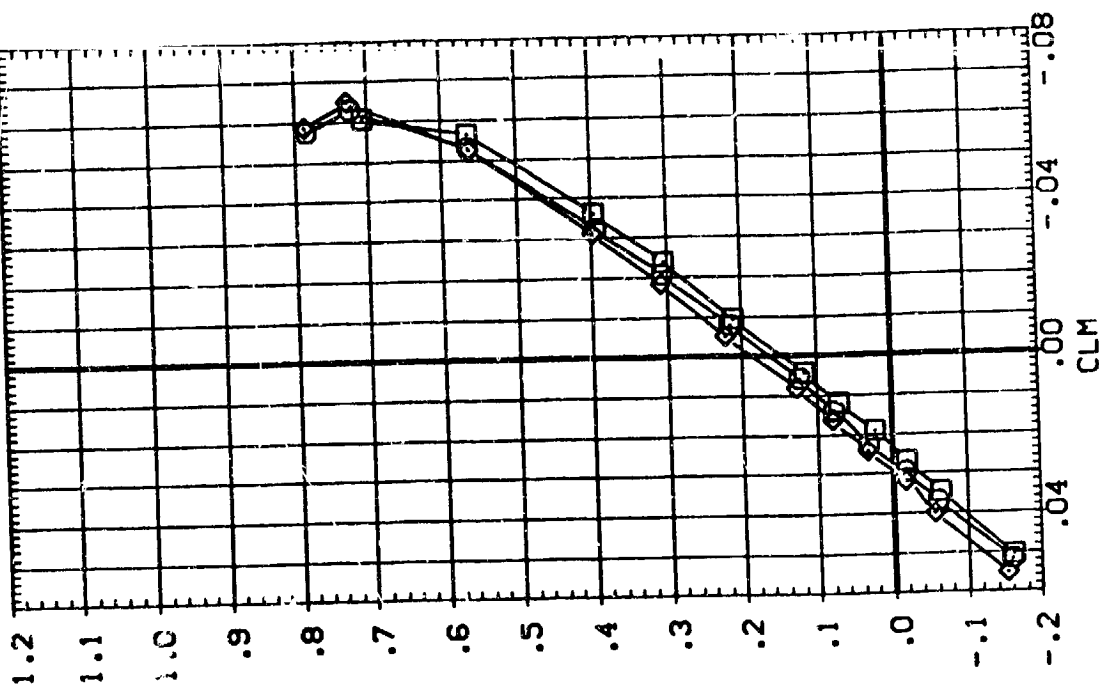


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 1.60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LPS105) LA-8/8A NAR 0858-100. NOSE ORBITER
 (LPS103) LA-8/8A NAR 0858-100. NOSE ORBITER
 (LPS101) LA-8/8A NAR 0858-100. NOSE ORBITER
 (LPS007) DATA NOT AVAILABLE

AILRON ELEVTR GT-LOC KA SREF LREF BREF YMRP ZMRP SCALE
 .000 .000 1.000 .000 1.361808 8.9025 17.5628 .0000 .0000 .0188
 .000 .000 1.000 .000 .820 8.9025 17.5628 .0000 .0000 .0188
 .000 .000 2.000 .000 .820 .0000 .0000 .0000 .0000 .0188
 .000 .000 3.000 .000 .820 .0000 .0000 .0000 .0000 .0188

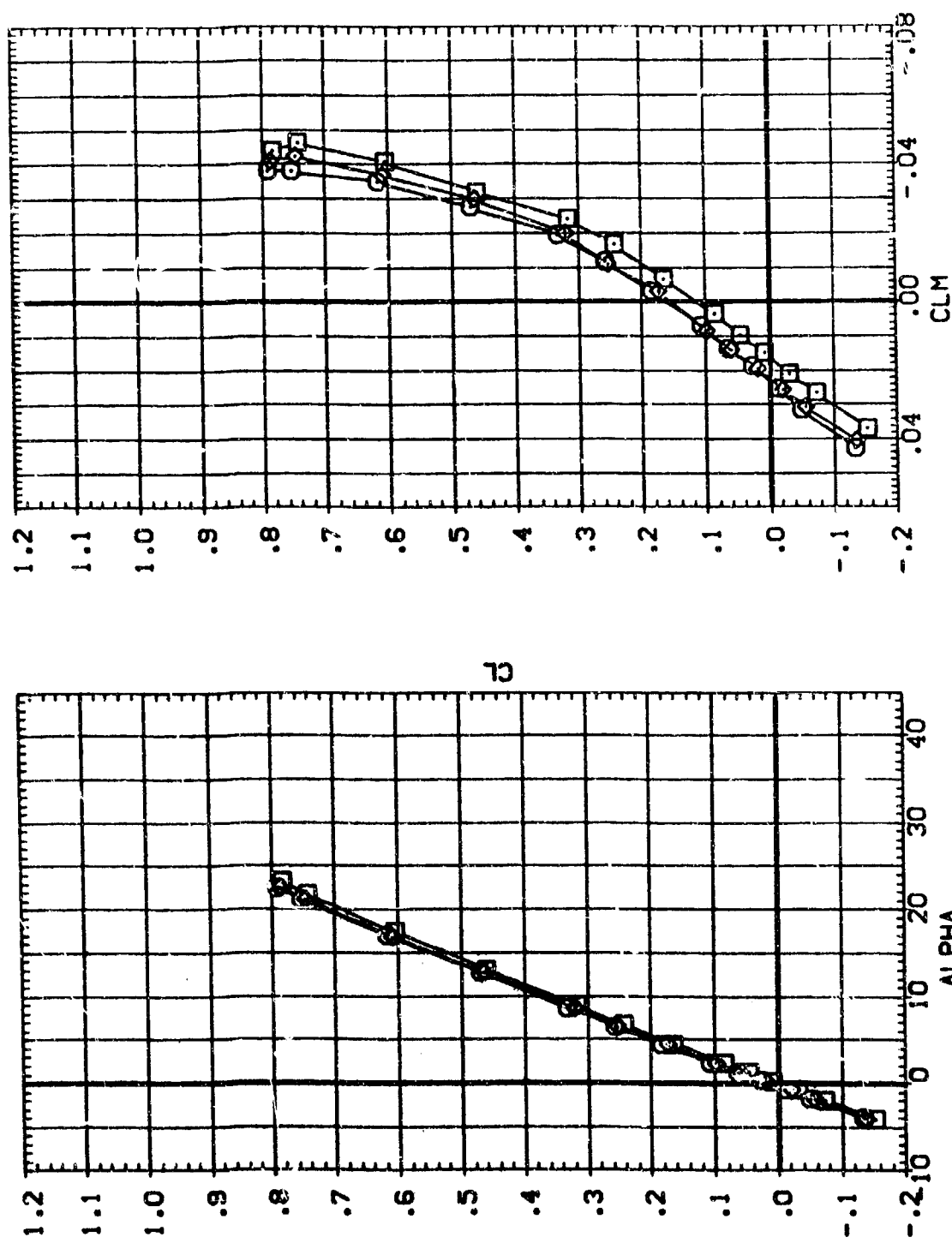


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (B)MACH = 1.90

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LP6105) LA-8/8A NAR 0898-100 NOSE ORBITER
 (LP6103) LA-8/8A N/R 0898-100 NOSE ORBITER
 (LP6101) LA-8/8A NAR 0898-100 NOSE ORBITER
 (LP6007) LA-8/8A NAR 0898-100 NOSE ORBITER

AIRLON ELEVTR GT-LOC K/L SREF LREF XMRP ZMRP SCALE
 .000 .000 1.000 .000 136.1808 8.9025 .0000 .0000 .0188
 .000 .000 1.000 6.820 8.9025 17.5628 .0000 .0000 .0188
 .000 .000 2.000 6.820 8.9025 15.9638 .0000 .0000 .0188
 .000 .000 3.000 5.820 8.9025 15.9638 .0000 .0000 .0188

REFERENCE INFORMATION
 SQ. IN. INCHES
 136.1808 8.9025
 17.5628 15.9638
 .0000 .0000
 .0188 .0188

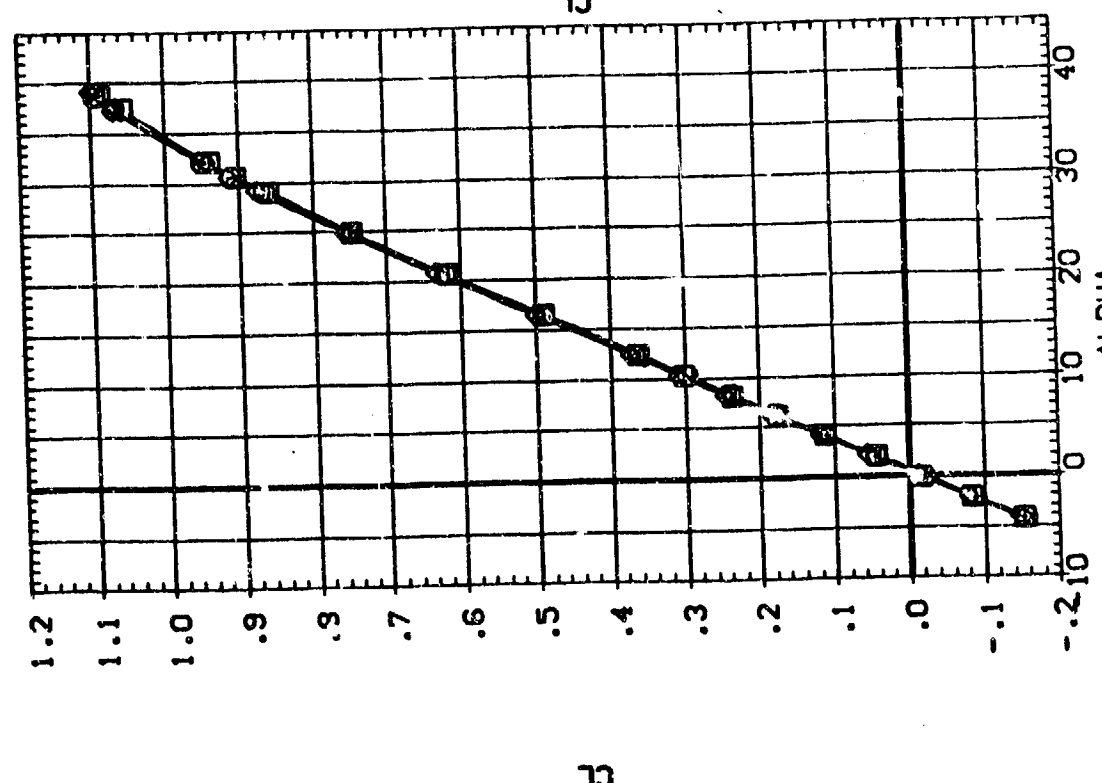
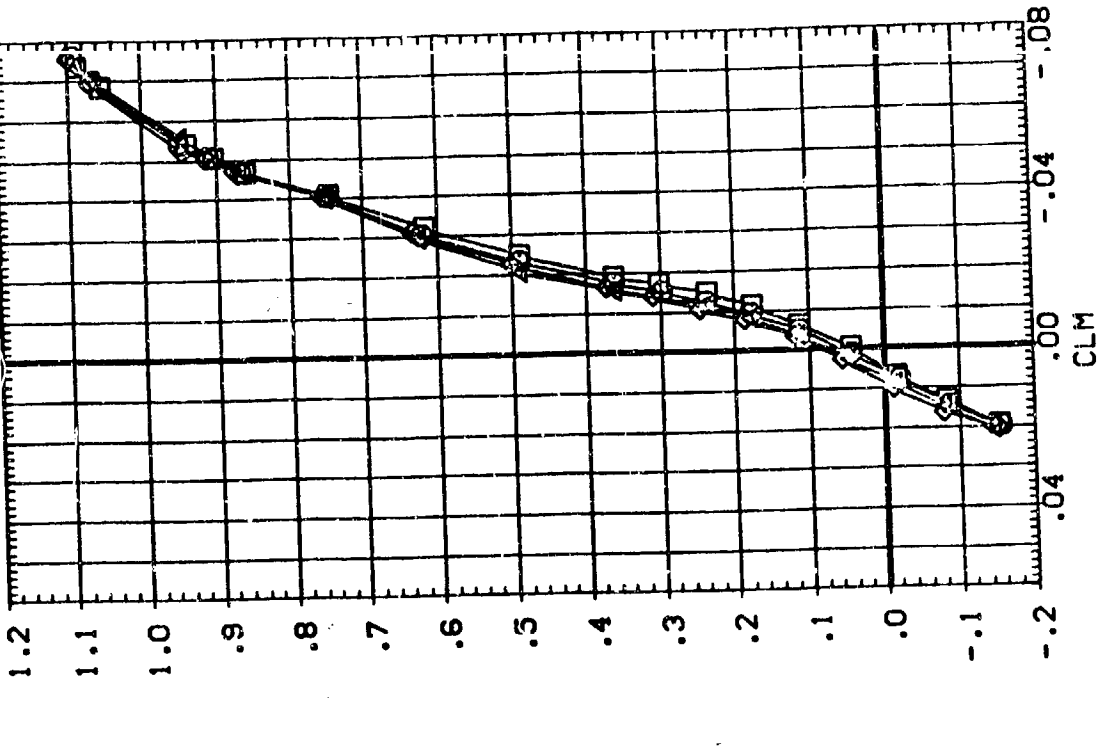


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(C)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	GT-LOC	ELEVTR	KVL	REFERENCE INFORMATION
(LP6105)	LA-8/8A NAR 0898-MOD. NOSE DRBITER	1.000	.000	.000	SREF 138.1808 SQ. IN.
(LP6103)	LA-8/8A NAR 0898-MOD. NOSE DRBITER	1.000	.000	6.820	LREF 8.9075 INCHES
(LP6101)	LA-8/8A NAR 0898-MOD. NOSE DRBITER	2.000	.000	6.820	BREF 17.5678 INCHES
(LP6007)	LA-8/8A NAR 0898-MOD. NOSE DRBITER	3.000	.000	6.820	XPRP 15.5638 INCHES
					YPRP .0000 INCHES
					ZPRP .0000 INCHES
					SCALE .0188 SCALE

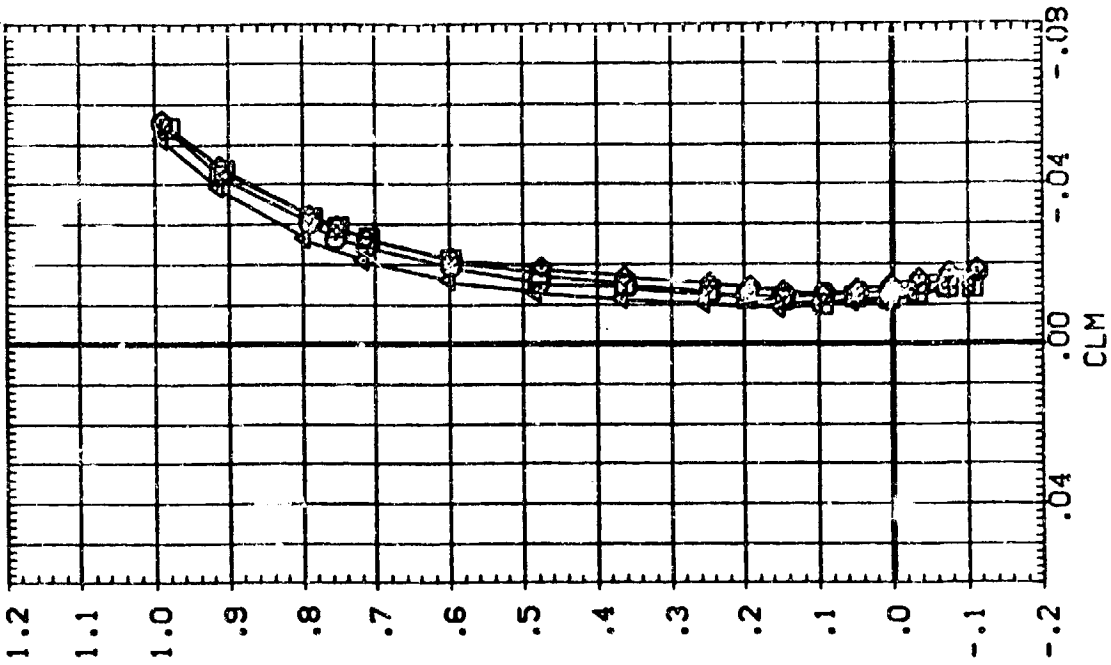
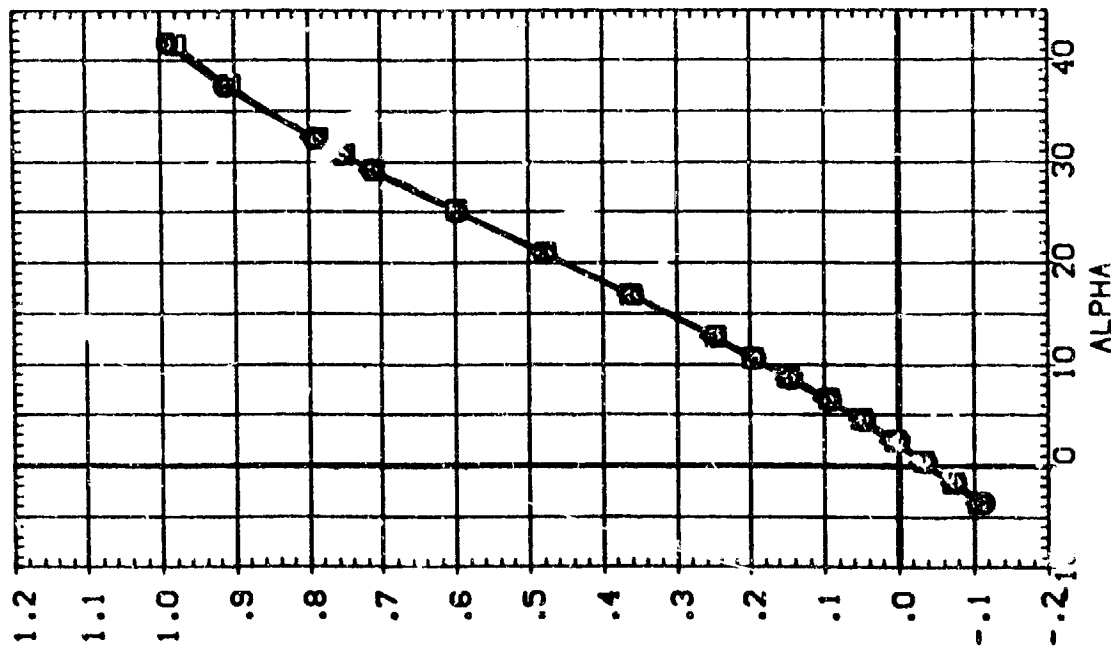


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

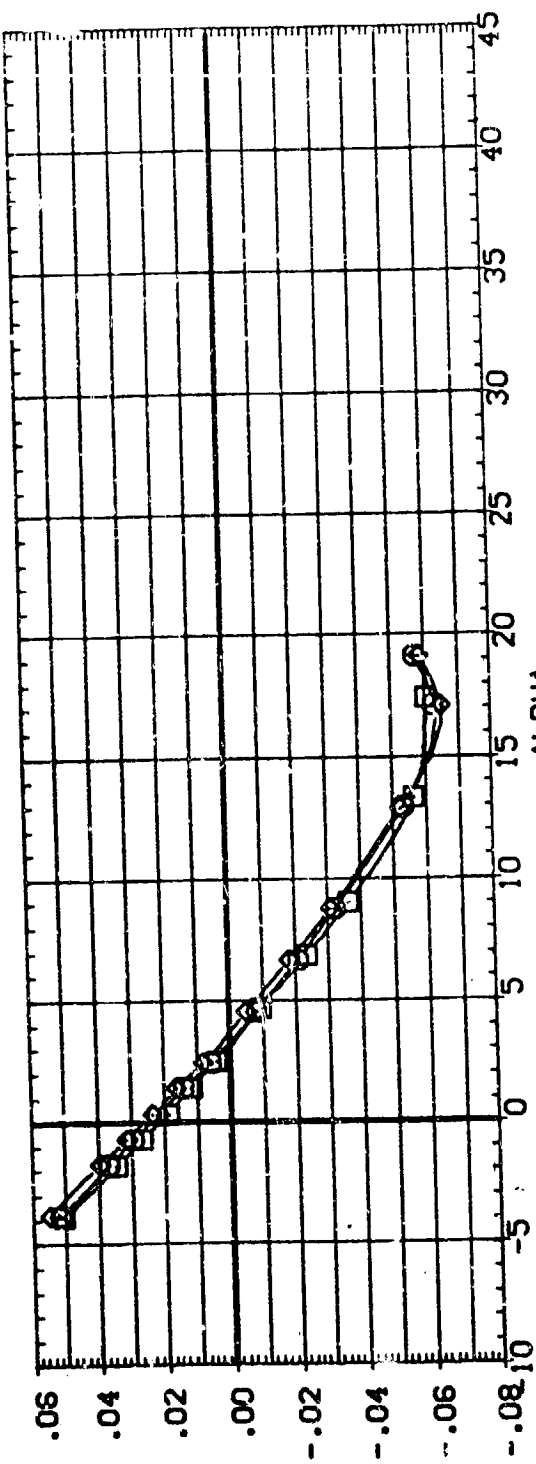
COMACH = 4.63

DATA SET SYMBOL
 (LPS105)
 (LPS107)
 (LPS101)
 (LPS007)

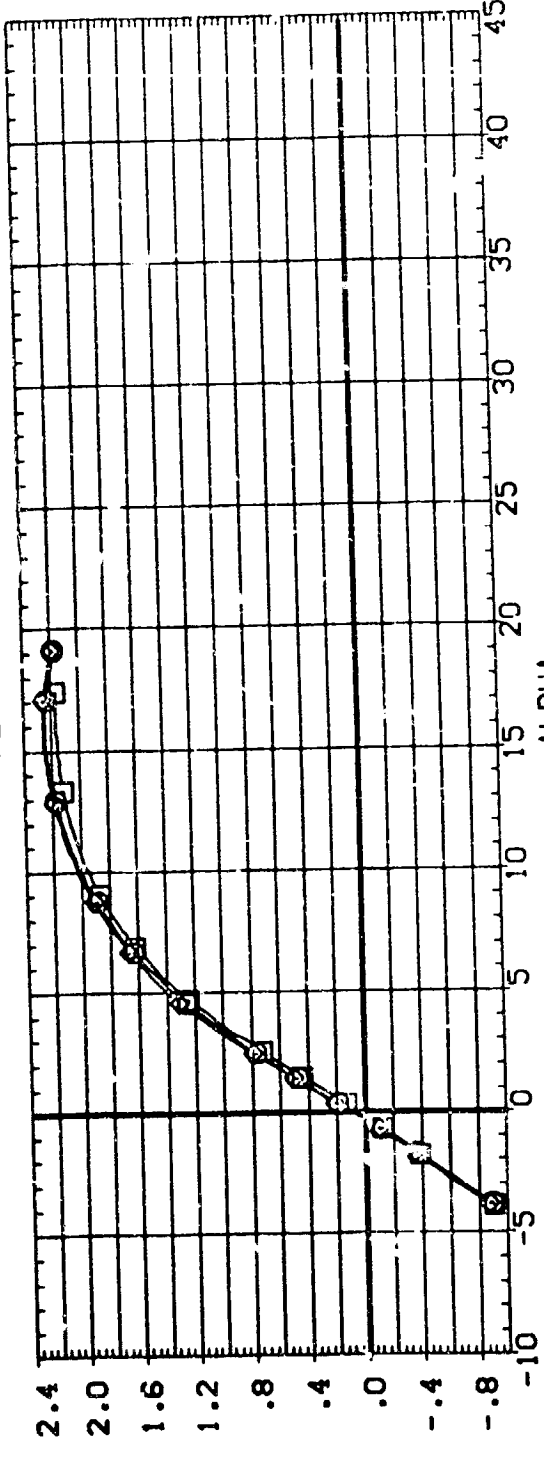
CONFIGURATION DESCRIPTION
 LA-8/8A MAR 0959-100. NOSE ORBITER
 LA-8/8A MAR 0959-100. NOSE ORBITER
 LA-8/8A MAR 0959-100. NOSE ORBITER
 DATA NOT AVAILABLE

AILRON ELEVTR GT-LOC KAL
 .000 .000 1.000 .000
 .000 .000 1.000 6.820
 .000 .000 2.000 6.820
 .000 .000 3.000 6.820

REFERENCE INFORMATION
 SRJT 136.1808 50.1 IN.
 LRF 8.9025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.5638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE



CLM



L/D

FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A) MACH = 1.60

DATA SET SYMBOL: (LPS105), (LPS103), (LPS101), (LPS6007)

CONFIGURATION DESCRIPTION: LA-8/BA NAR D888-HDD, NOSE D881TER; LA-8/BA NAR D888-HDD, NOSE D881TER; LA-8/BA NAR D888-HDD, NOSE D881TER; DATA NOT AVAILABLE.

AIRLIFT: .000, .000, .000, .000

ELEVTR: .000, .000, .000, .000

GT-LOC: 1.000, 1.000, 2.000, 3.000

KAL: .000, 6.820, 6.820, 6.820

REFERENCE INFORMATION: SREF 1.26, 1.808, 8.9075, 17.5628, 15.0000, .0000, .0188; LREF 6.820; BREF 17.5628; XTRP 15.0000; ZTRP .0000; SCALE .0188

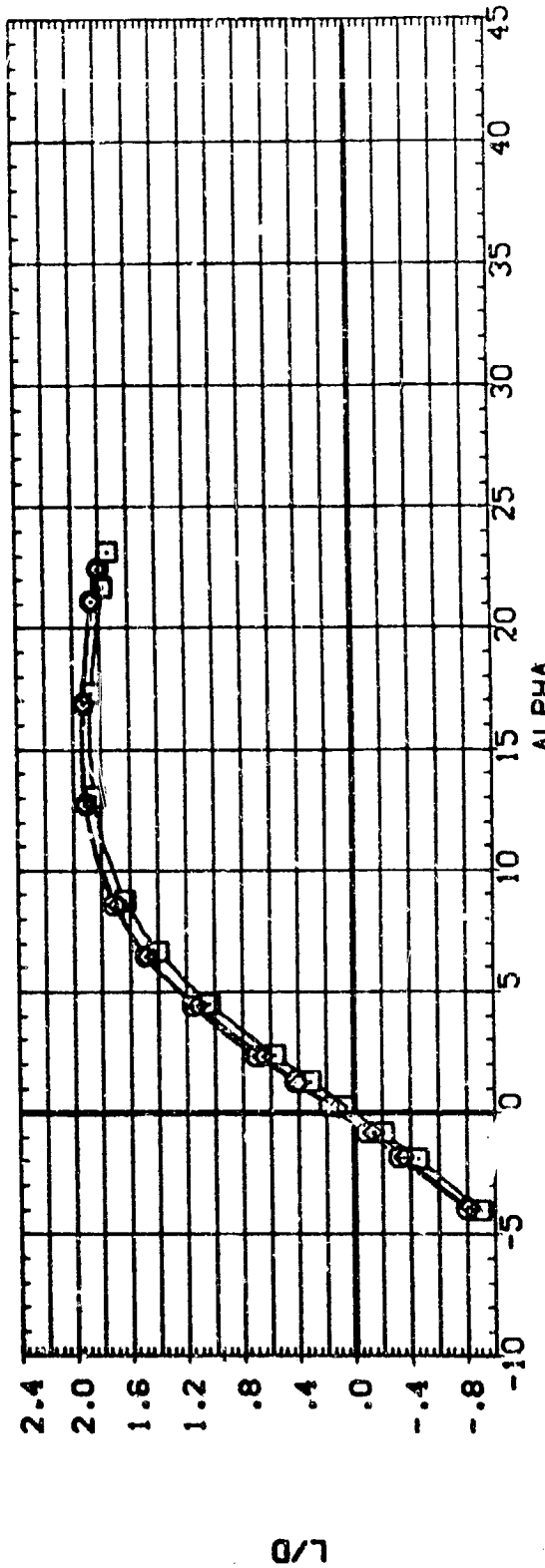
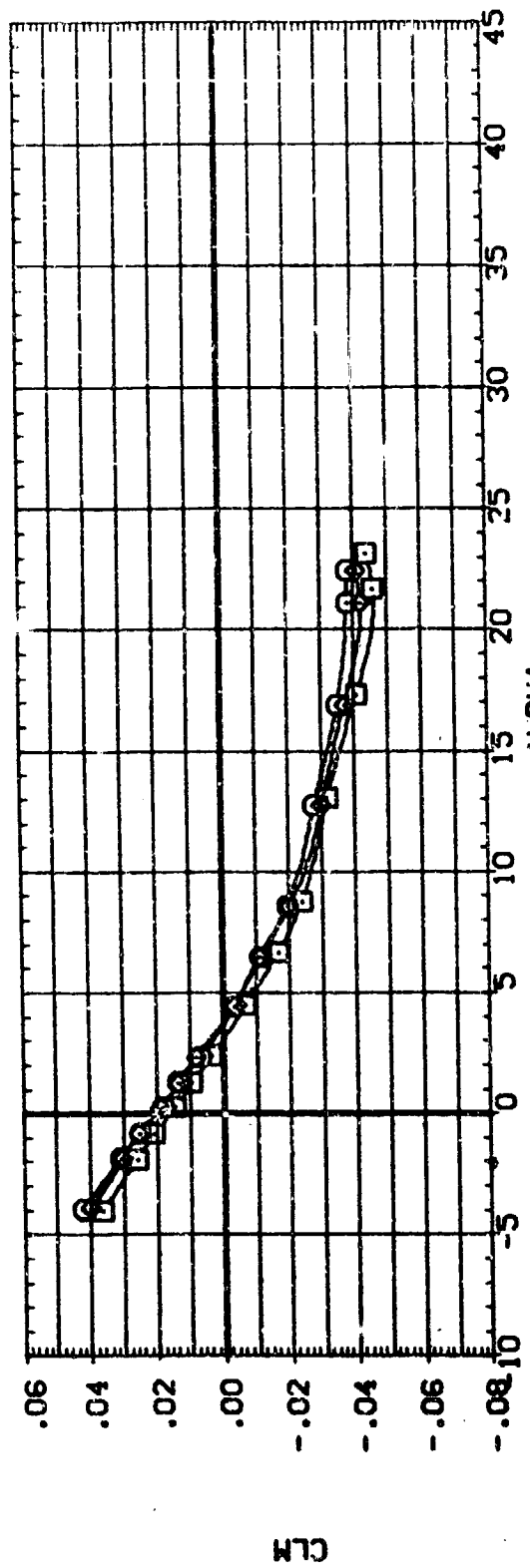


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (B)MACH = 1.90

DATA SET SYMBOL
 (LPS105)
 (LPS103)
 (LPS101)
 (LPS007)

CONFIGURATION DESCRIPTION
 LA-8/BA NAR DBSB-HOD. NOSE DBB/ITER
 LA-8/BA NAR DBSB-HOD. NOSE DBB/ITER
 LA-8/BA NAR DBSB-HOD. NOSE DBB/ITER
 LA-8/BA NAR DBSB-HOD. NOSE DBB/ITER

AILRON
 .000
 .000
 .000

ELEVTR
 .000
 .000
 .000

GT-LOC
 1.000
 1.000
 3.000

K/L
 .000
 6.820
 6.820

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XREF 15.9638 INCHES
 YREF .0000 INCHES
 ZREF .0000 INCHES
 SCALE .0188

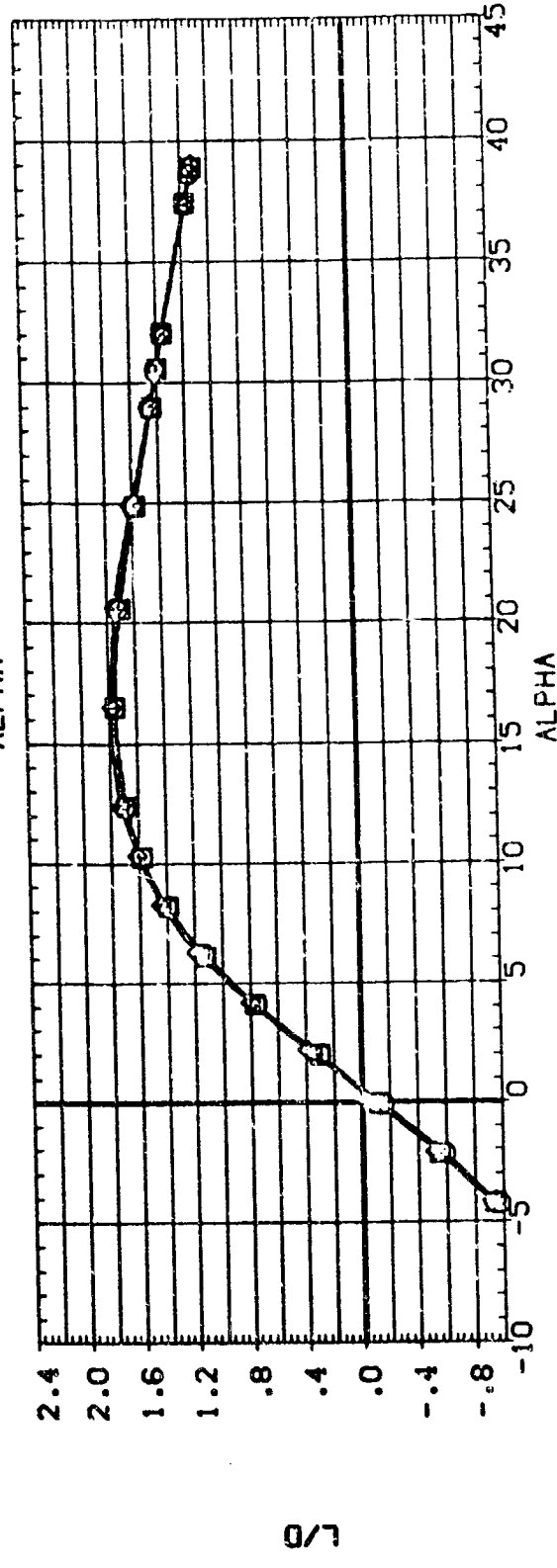
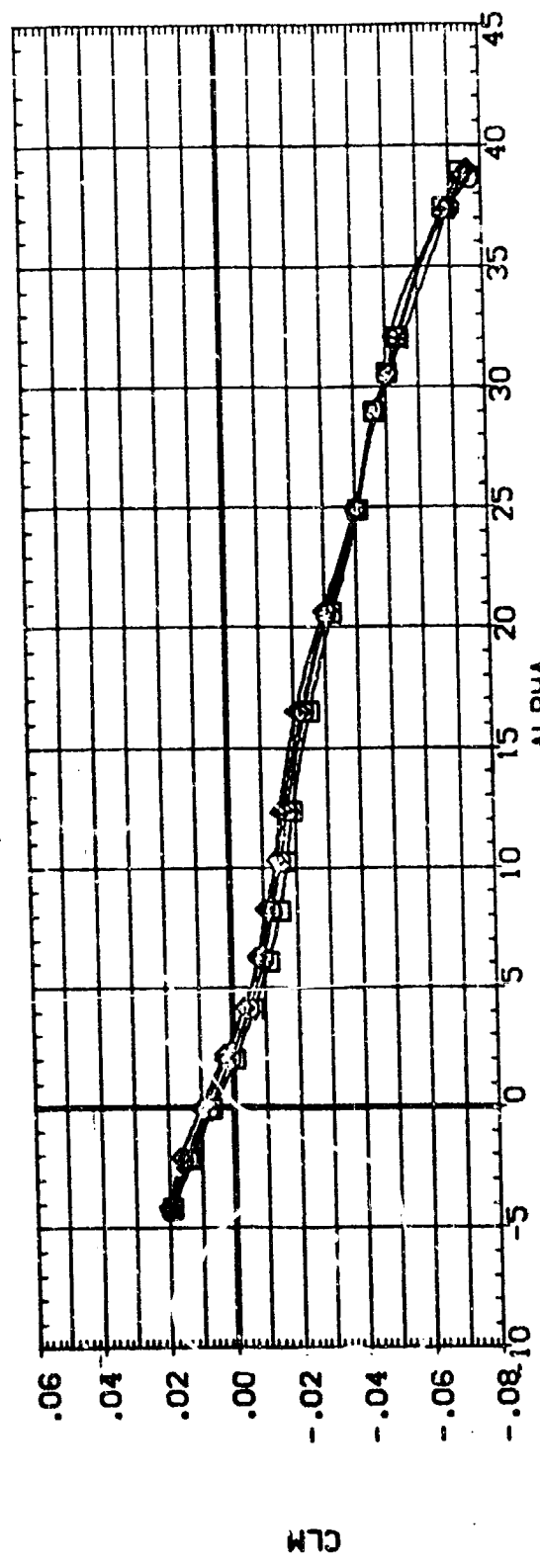


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(C)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AIRLON	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION
(LP6105)	LA-8/BA NAR 0858-MOD. NOSE D881TER	.000	.000	1.000	.000	SREF 1.36 1808 S2.IN.
(LP6106)	LA-8/BA NAR 0858-MOD. NOSE D881TER	.000	.000	1.000	6.820	LREF 8.9025 INCHES
(LP6107)	LA-8/BA NAR 0858-MOD. NOSE D881TER	.000	.000	2.000	6.820	BREF 17.8628 INCHES
(LP6007)	LA-8/BA NAR 0858-MOD. NOSE D881TER	.000	.000	3.000	6.820	XTRP .0000 INCHES
						ZTRP .0000 INCHES
						SCALE .0183 INCHES

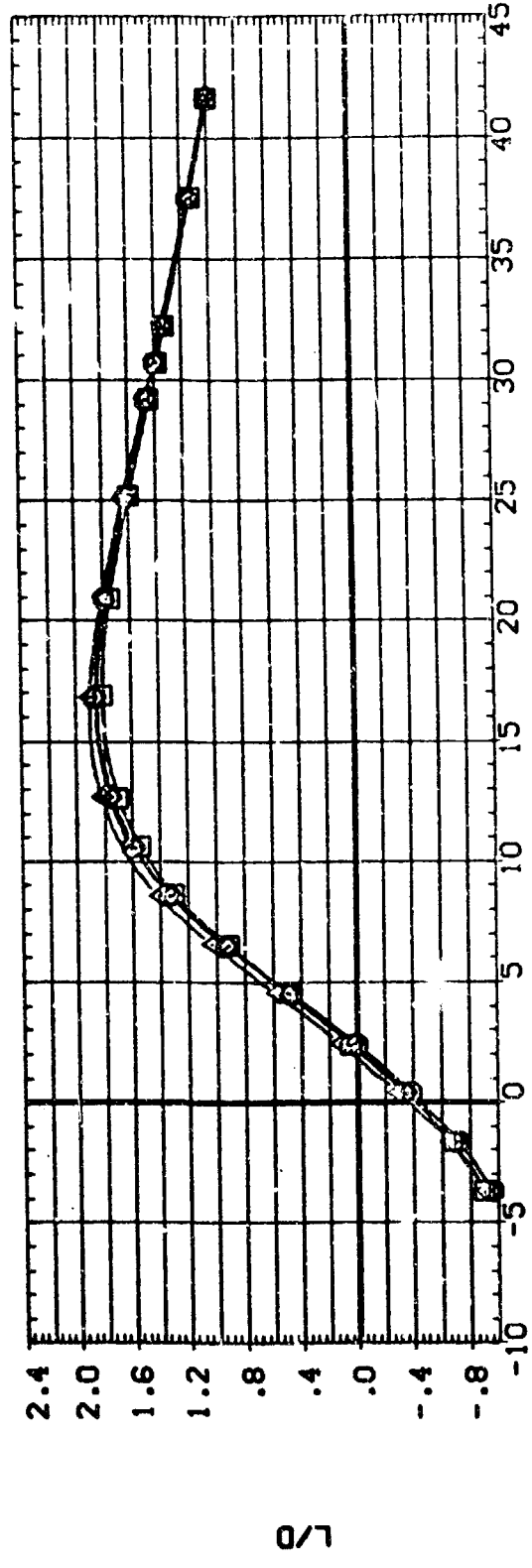
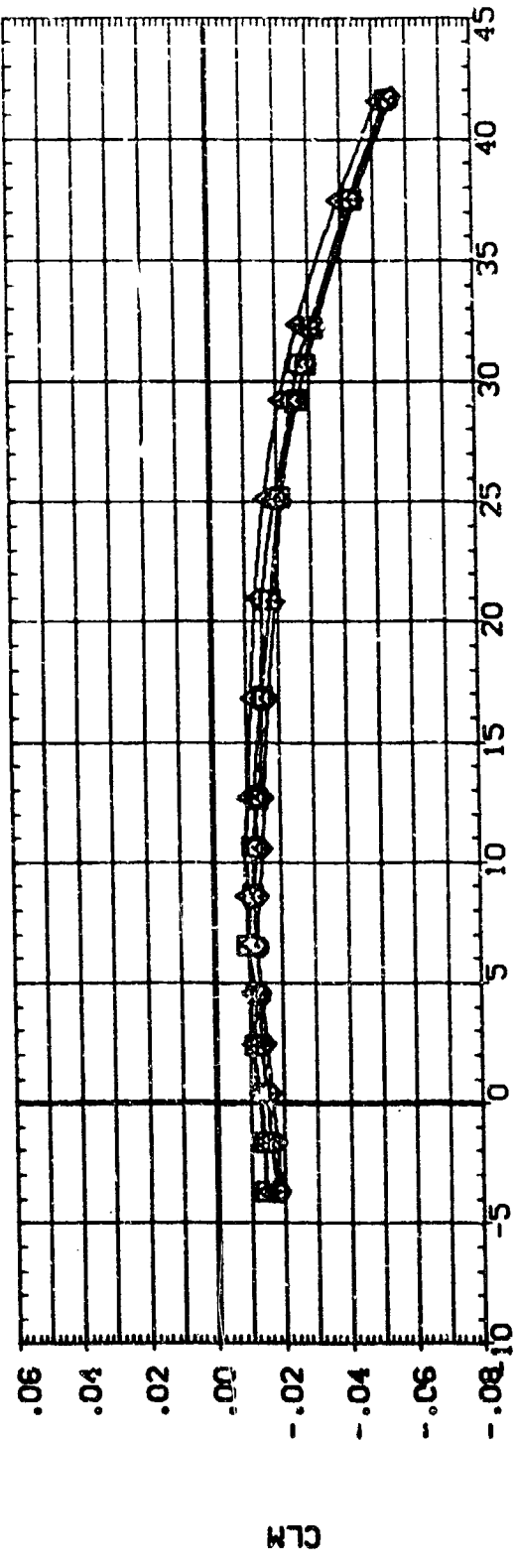


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

AIU/SEN	ELEVTR	GT-LUC	KVL	REFERENCE INFORMATION
.000	.000	1.000	.000	SREF 136.1808
.000	.000	1.000	6.820	LREF 8.9075
.000	.000	2.000	6.820	BREF 17.5678
.000	.000	3.000	6.820	XMPR 15.9638
				YMPR .0000
				ZMPR .0000
				SCALE .0188

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(LP6105)	LA-8/8A NAR 0858-MOD. NOSE ORBITER
(LP6109)	LA-8/8A NAR 0858-MOD. NOSE ORBITER
(LP6101)	LA-8/8A NAR 0858-MOD. NOSE ORBITER
(LP6007)	DATA NOT AVAILABLE

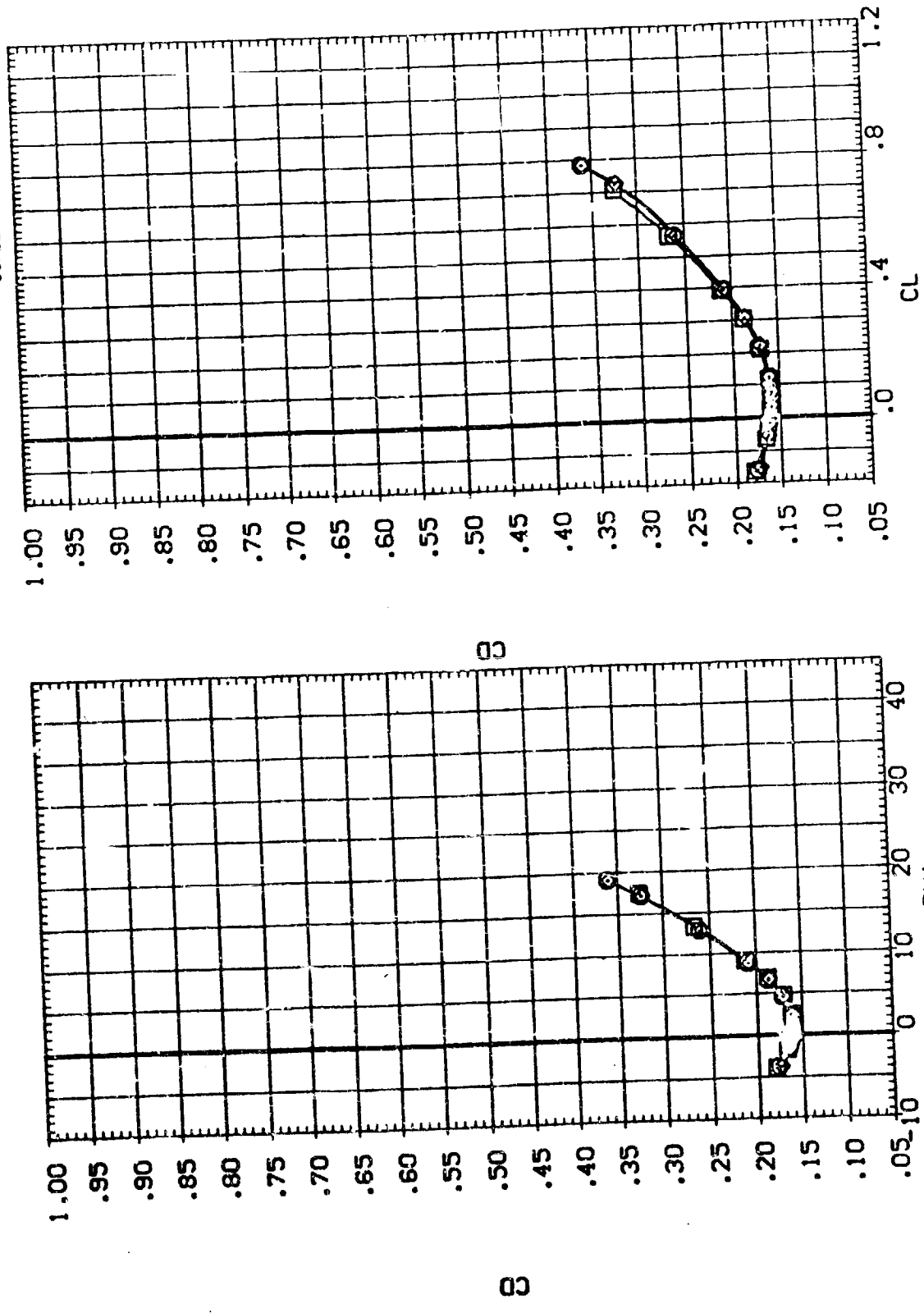


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = C)

(A)MACH = 1.60

AILRON ELEVTR GT-LOC K/L REFERENCE INFORMATION SQ. IN. INCHES
 .000 .000 .000 1.361802 8.9025
 .000 .000 .000 1.000 8.9025
 .000 .000 .000 2.000 17.8050
 .000 .000 .000 3.000 26.7075
 .000 .000 .000 6.820 46.4150
 .000 .000 .000 6.820 46.4150
 .000 .000 .000 .0000
 .000 .000 .000 .0000
 .000 .000 .000 .0188
 .000 .000 .000 .0188

DATA SET SYMBL. CONFIGURATION DESCRIPTION
 (LP6105) LA-8/BA WAR 0958-100. NOISE ORBITER
 (LP6103) LA-8/BA WAR 0958-100. NOISE ORBITER
 (LP6101) LA-8/BA WAR 0958-100. NOISE ORBITER
 (LP6007) DATA NOT AVAILABLE

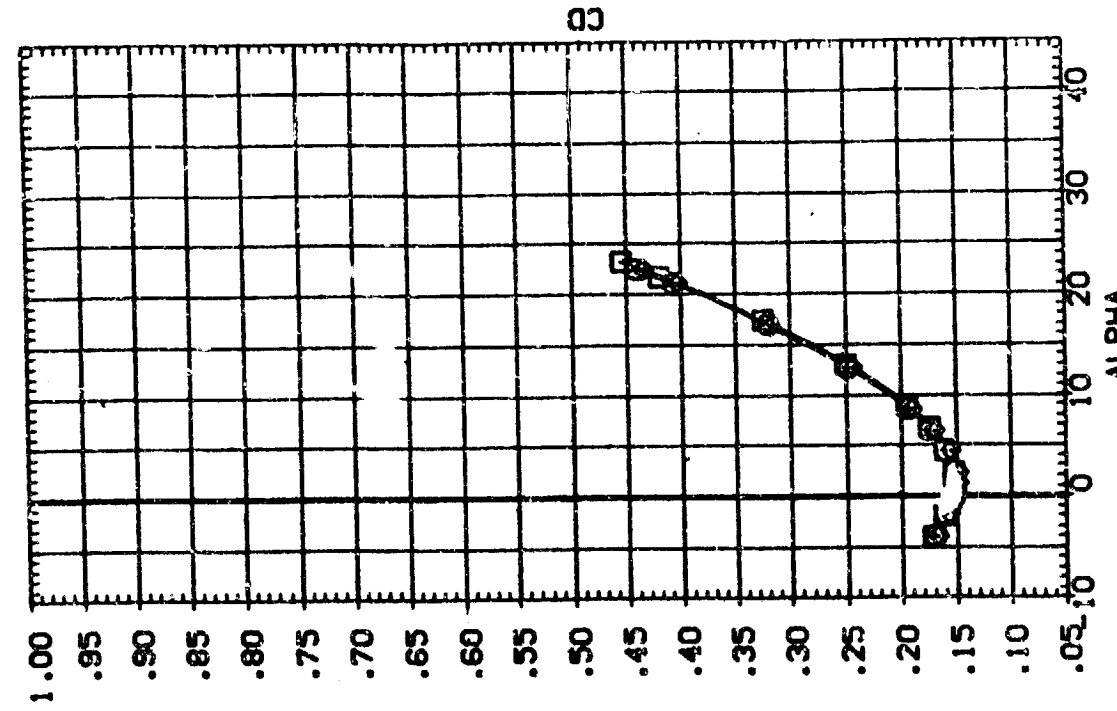
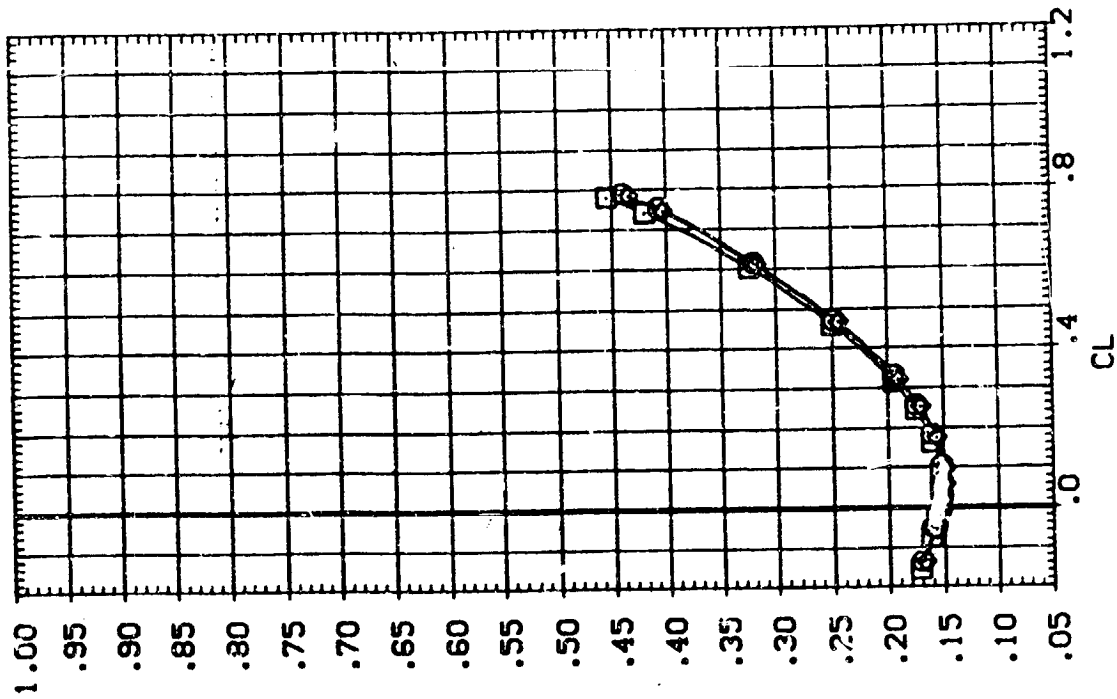
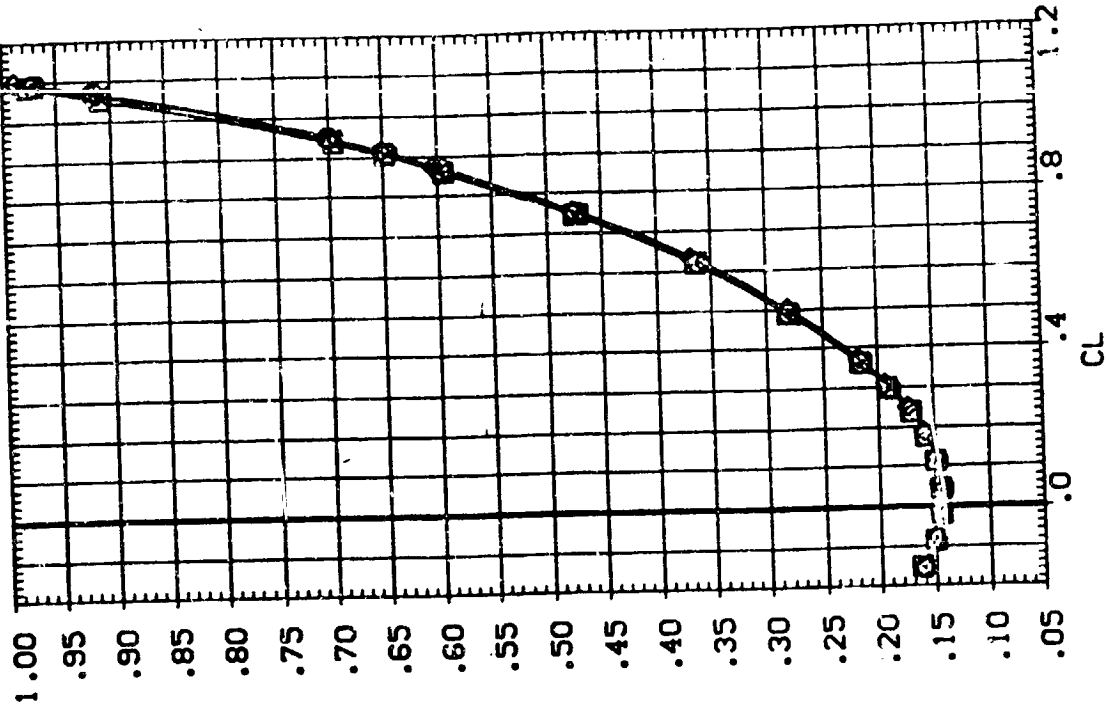


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 1.90

DATA SET SYMBOL	SURFACE DESCRIPTION	GT-LOC	SCALE	ELEVTR	GT-LOC	SCALE	REFERENCE INFORMATION
(LP6105)	LA-8/8A NAR 0899-MOD. NOSE ORBITER	1.000	.000	.000	1.000	.000	SFCT 136.1808 50. IN.
(LP6103)	LA-8/8A NAR 0899-MOD. NOSE ORBITER	1.000	6.820	.000	1.000	6.820	LREF 8.9025 INCHES
(LP6107)	LA-8/8A NAR 0899-MOD. NOSE ORBITER	2.000	6.820	.000	2.000	6.820	BREF 17.5628 INCHES
(LP6101)	LA-8/8A NAR 0899-MOD. NOSE ORBITER	3.000	6.820	.000	3.000	6.820	XTRP 15.9638 INCHES
(LP6007)	LA-8/8A NAR 0899-MOD. NOSE ORBITER						ZTRP .0000 INCHES
							SCALE .0188 INCHES



DATA SET SYMBOL	SURFACE DESCRIPTION
(LP6105)	LA-8/8A NAR 0899-MOD. NOSE ORBITER
(LP6103)	LA-8/8A NAR 0899-MOD. NOSE ORBITER
(LP6107)	LA-8/8A NAR 0899-MOD. NOSE ORBITER
(LP6101)	LA-8/8A NAR 0899-MOD. NOSE ORBITER
(LP6007)	LA-8/8A NAR 0899-MOD. NOSE ORBITER

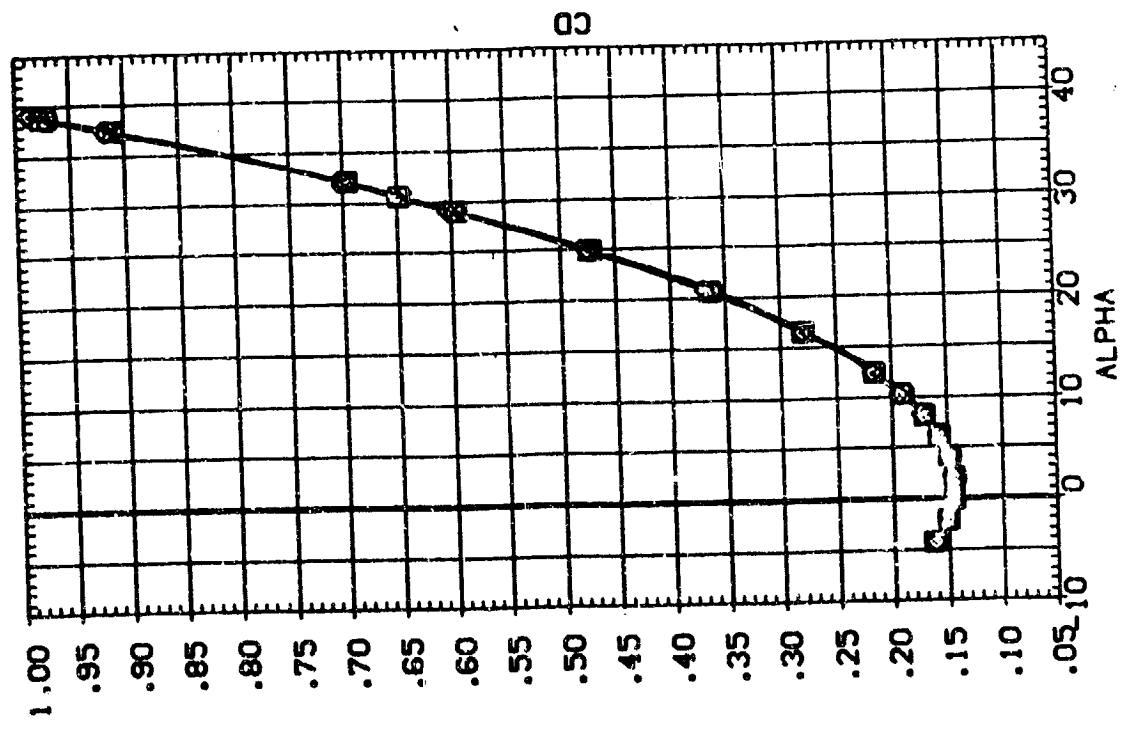


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(C)MACH = 2.36

AIRLON ELEVTR GT-LOC KVL REFERENCE INFORMATION
 .000 .000 .000 136.1808 SQ. IN.
 .000 .000 .000 8.3025 INCHES
 .000 .000 .000 17.5628 INCHES
 .000 .000 .000 15.9638 INCHES
 .000 .000 .000 .0000 INCHES
 .000 .000 .000 .0000 INCHES
 .000 .000 .000 .0188 SCALE

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LPS105) LA-8A/8A NAR 085B-MOD. NOSE ORBITER
 (LPS103) LA-8A/8A NAR 085B-MOD. NOSE ORBITER
 (LPS101) LA-8A/8A NAR 085B-MOD. NOSE ORBITER
 (LPS007) LA-8A/8A NAR 085B-MOD. NOSE ORBITER

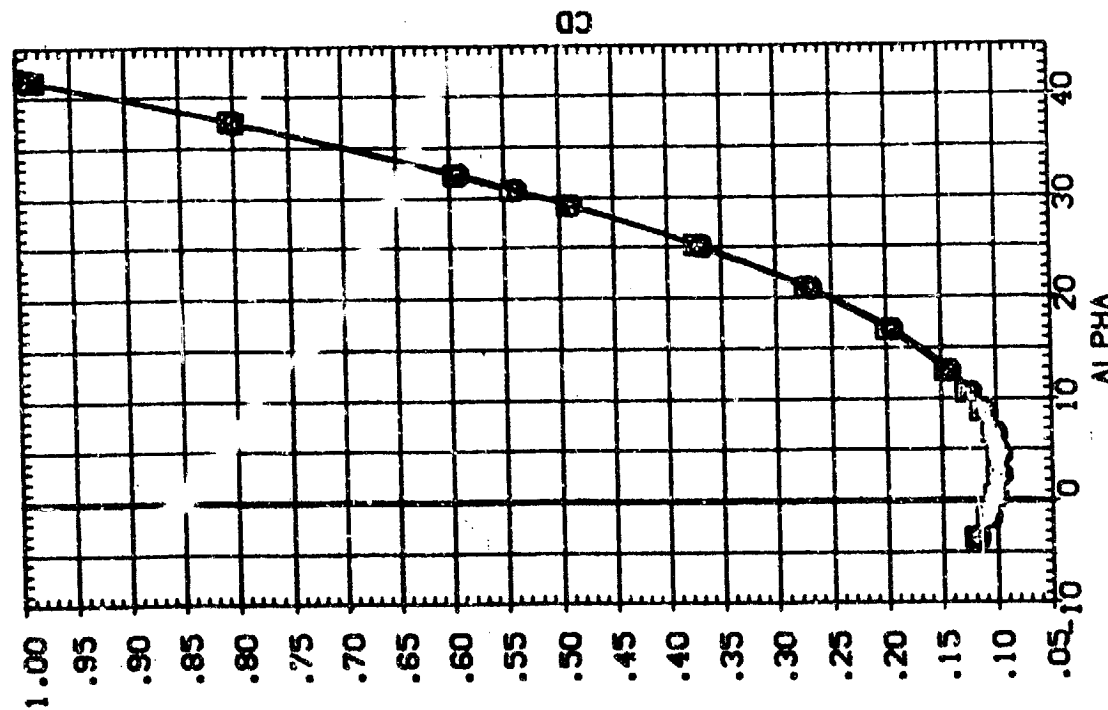
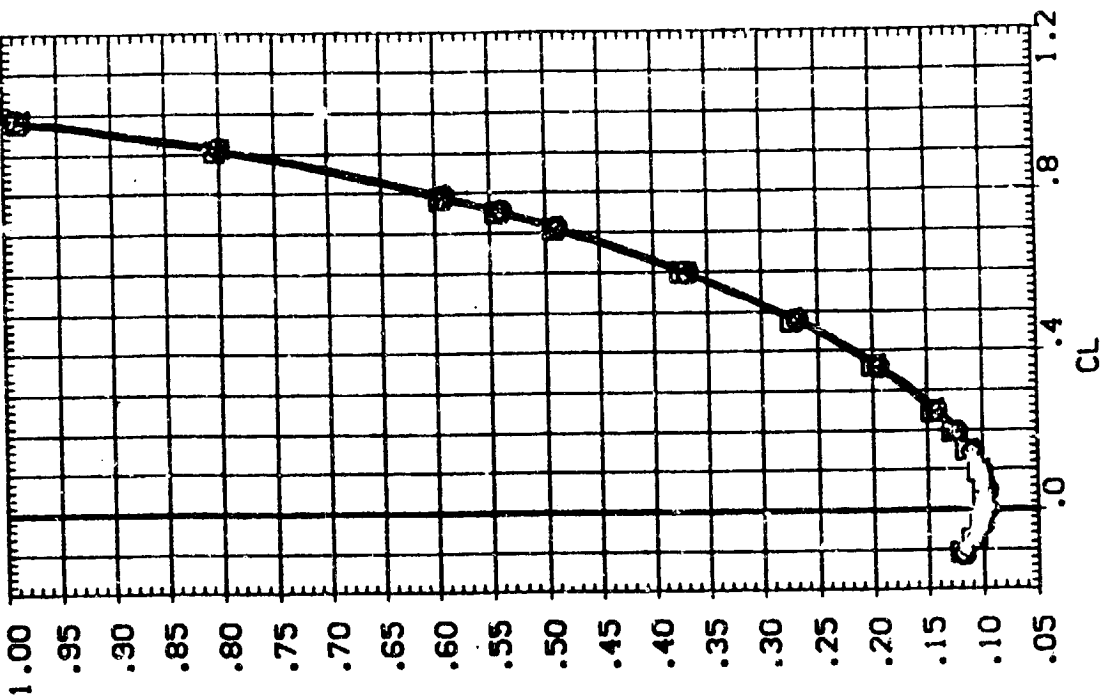


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(O)MACH = 4.63

DATA SET SYMBOL: (NPS105) (NPS106) (NPS101)

CONFIGURATION DESCRIPTION:
 LA-8/8A NAR OBSS-MOD. NOSE DRIBBITER
 LA-8/8A NAR OBSS-MOD. NOSE DRIBBITER
 LA-8/8A NAR OBSS-MOD. NOSE DRIBBITER

AIRLON - ELEVTR - GT-LOC K/L

.000	.000	.000	.000
.000	.000	1.000	1.000
.000	.000	2.000	1.000
.000	.000	6.820	6.820

REFERENCE INFORMATION:
 SREF 136.1808 50. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.5638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188

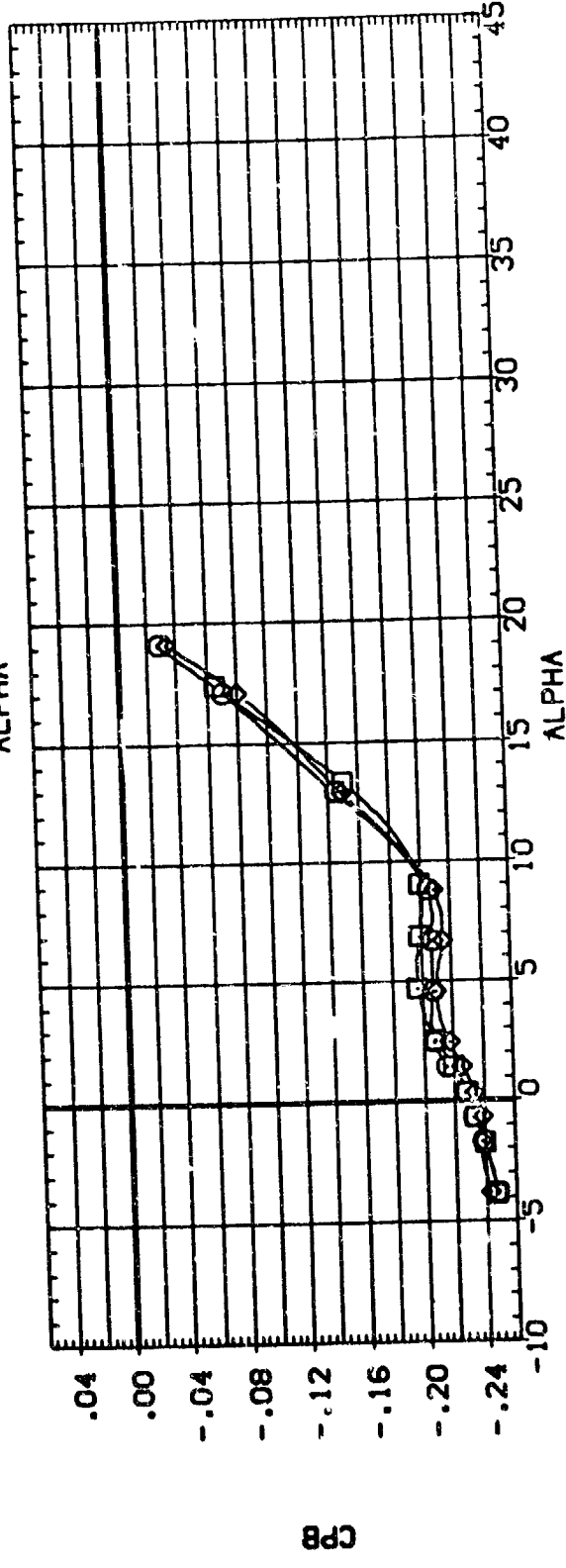
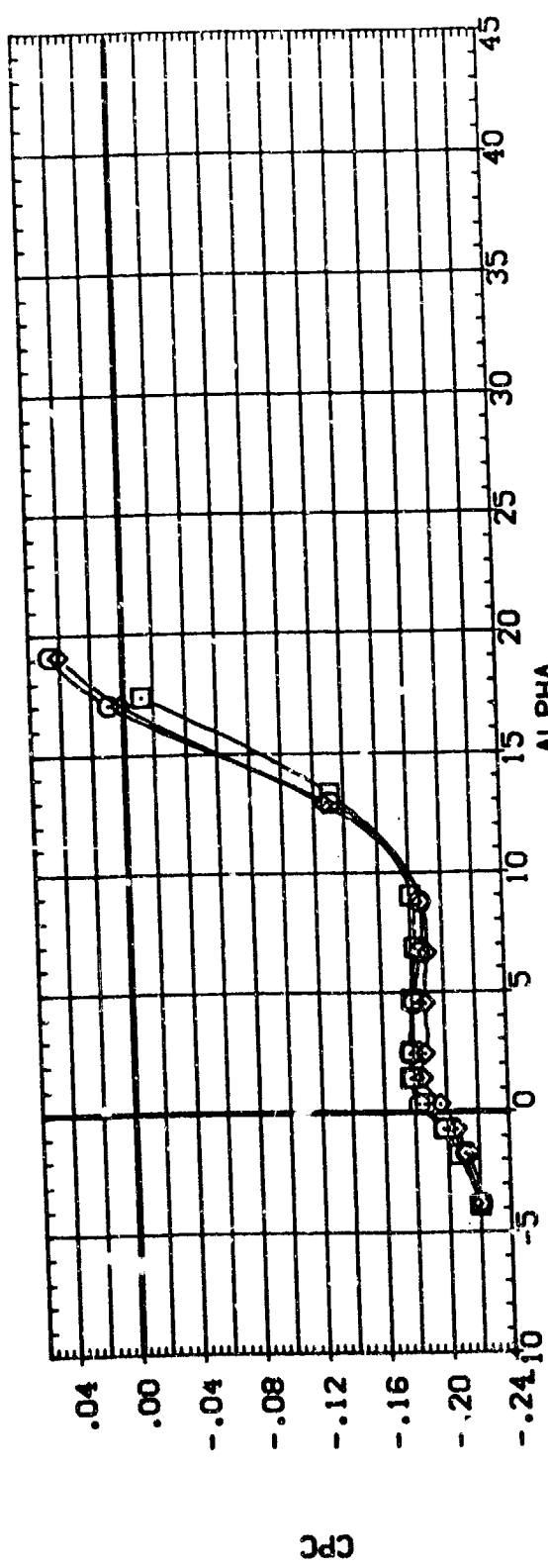


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

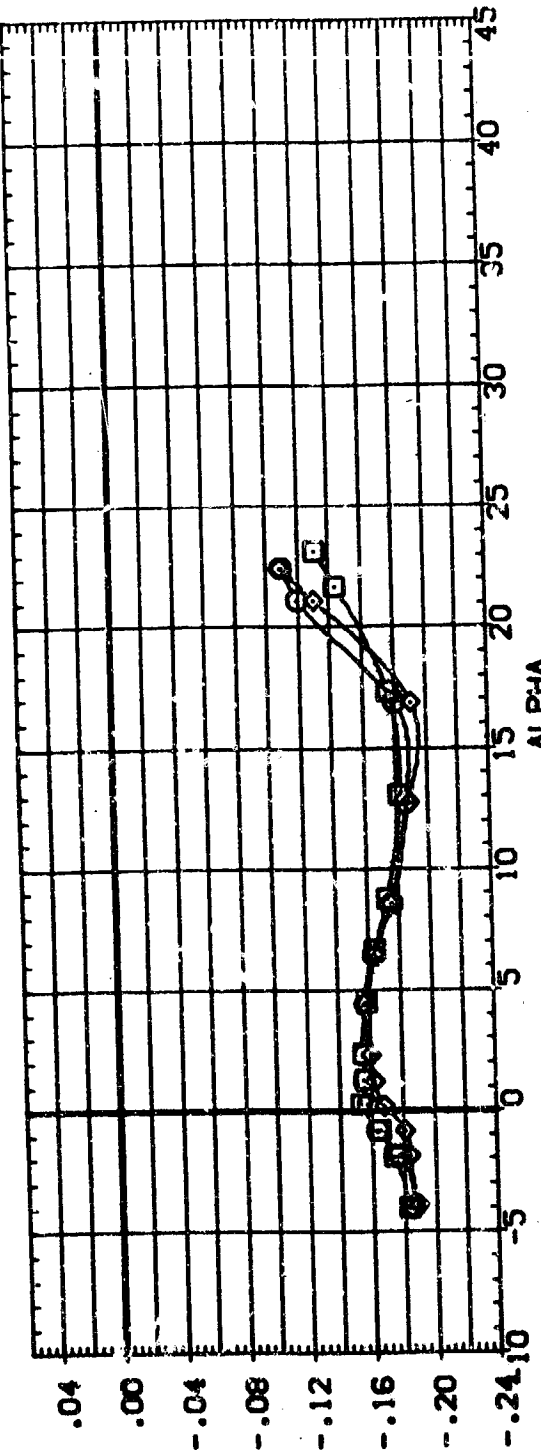
(A) MACH = 1.60

DATA SET SYMBOL: (NPS105) (NPS103) (NPS101)

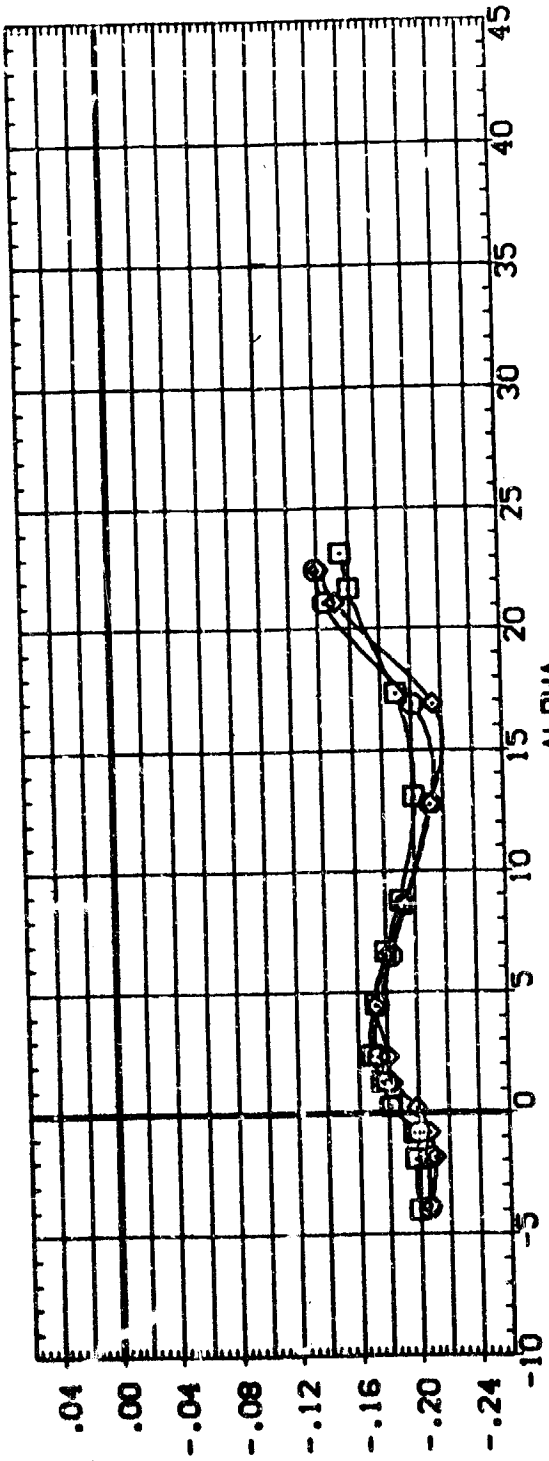
CONFIGURATION DESCRIPTION:
 LA-8/8A NAR 0858-HDD. NOSE ORBITER
 LA-8/8A NAR 0858-HDD. NOSE ORBITER
 LA-8/8A NAR 0858-HDD. NOSE ORBITER

AIRLON ELEVTR GT-LOC... KAL
 .000 .000 .000
 .000 .000 .000
 .000 .000 .000
 1.000 1.000 1.000
 2.000 2.000 2.000
 6.820 6.820 6.820

REFERENCE INFORMATION
 SREF 136.1809 SQ. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XTRP 15.5638 INCHES
 YTRP .0000 INCHES
 ZTRP .0000 INCHES
 SCALE .0188



CP



CP

FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B) MACH = 1.90

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(NFB008) LA-8/8A NAR DBSB-MOD. NOSE ORBITER
(NFB009) LA-8/8A NAR DBSB-MOD. NOSE ORBITER
(NFB001) LA-8/8A NAR DBSB-MOD. NOSE ORBITER
(NFB007) LA-8/8A NAR DBSB-MOD. NOSE ORBITER

ALPHON ELEVTR GT-LOC KVL REFERENCE INFORMATION

ALPHON	ELEVTR	GT-LOC	KVL	SREF	SO.IN.
.000	.000	2.000	6.820	1.36	1808
.000	.000	1.000	6.820	8.9075	INCHES
.000	.000	3.000	6.820	17.5628	INCHES
.000	.000	1.000	.000	15.0000	INCHES
			ZMRP	.0000	INCHES
			SCALE	.0188	SCALE

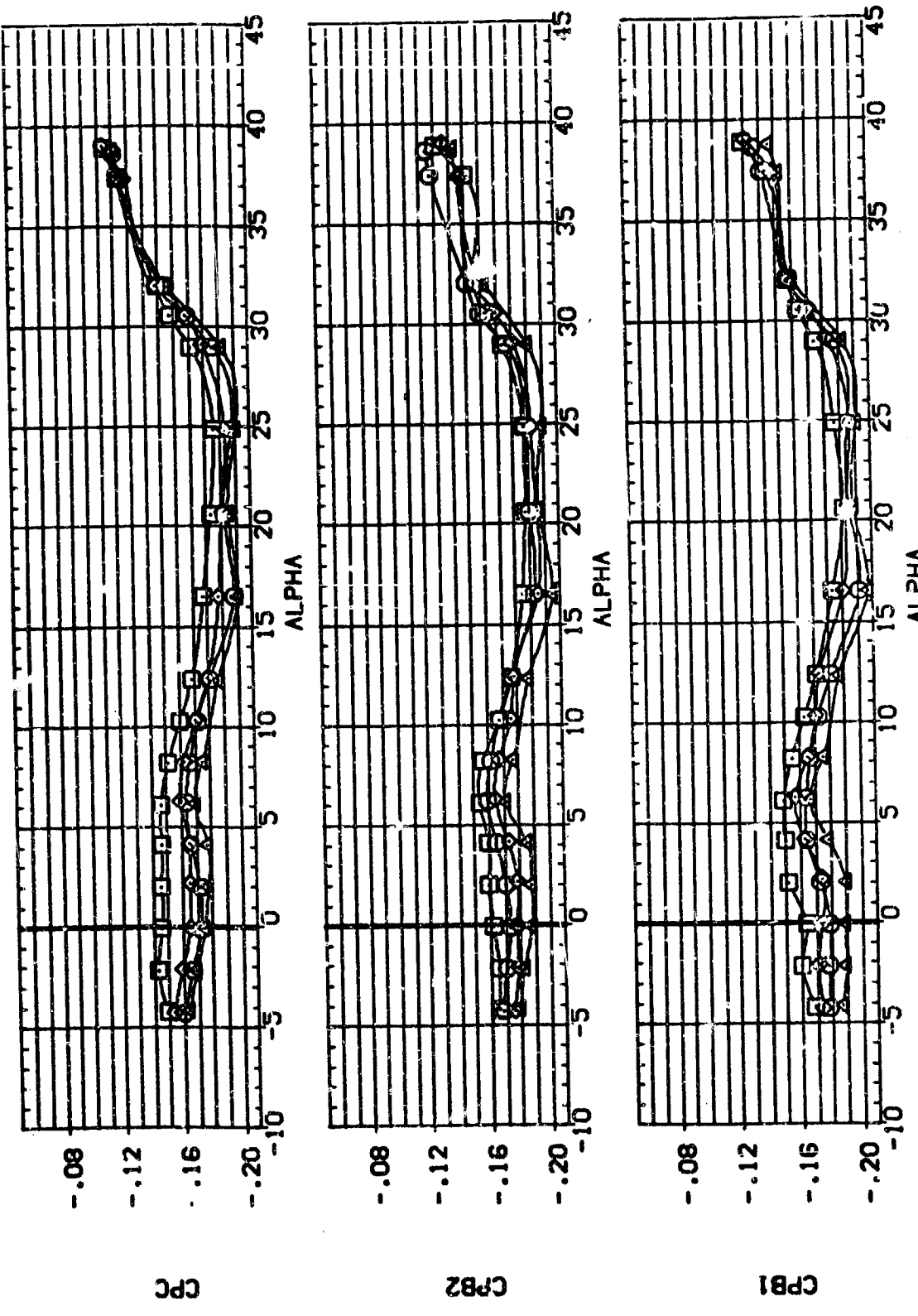


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	GT-LOC	KVA	ELEVTR	ALPHA	REFERENCE INFORMATION	50. IN.
(NFB008)	LA-8/8A NAR DBS8-HDD; NOSE DB8 TER	2.000	6.620	.000	.000	SREF	INCHES
(NFB009)	LA-8/8A NAR DBS3-HDD; NOSE DB8 TER	1.000	6.620	.000	.000	LREF	INCHES
(NFB001)	LA-8/8A NAR DBS8-HDD; NOSE DB8 TER	3.000	6.620	.000	.000	BREF	INCHES
(NFB007)	LA-8/8A NAR DBS8-HDD; NOSE DB8 TER	1.000	6.620	.000	.000	YMRP	INCHES
						ZMRP	INCHES
						SCALE	SCALE

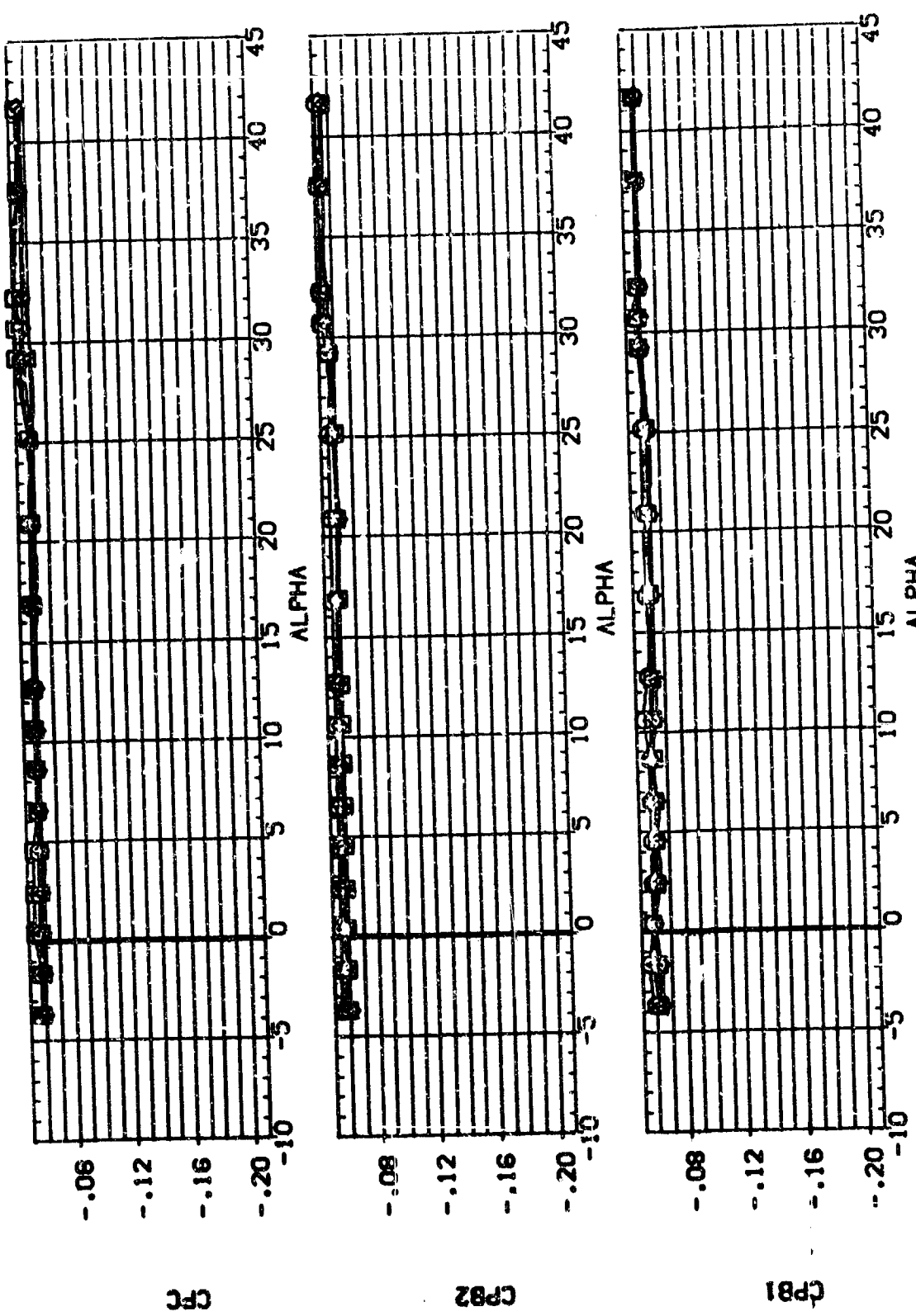


FIG. 1 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AIRLON	ELEVTR	GT-LOC	M/L	REFERENCE INFORMATION
(LP8107)	LA-8/8A NAR 0058-MOD. NOSE CRBITER	10.000	-20.000	1.000	.000	SREF 136.1808
(LP8109)	LA-8/8A NAR 0658-MOD. NOSE CRBITER	10.000	-20.000	1.000	6.820	LREF 8.9025
(LP8111)	LA-8/8A NAR 0658-MOD. NOSE CRBITER	10.000	-20.000	3.000	6.820	BREF 17.5628
						XMRP 15.5638
						YMRP .0000
						ZMRP .0000
						SCALE .0188

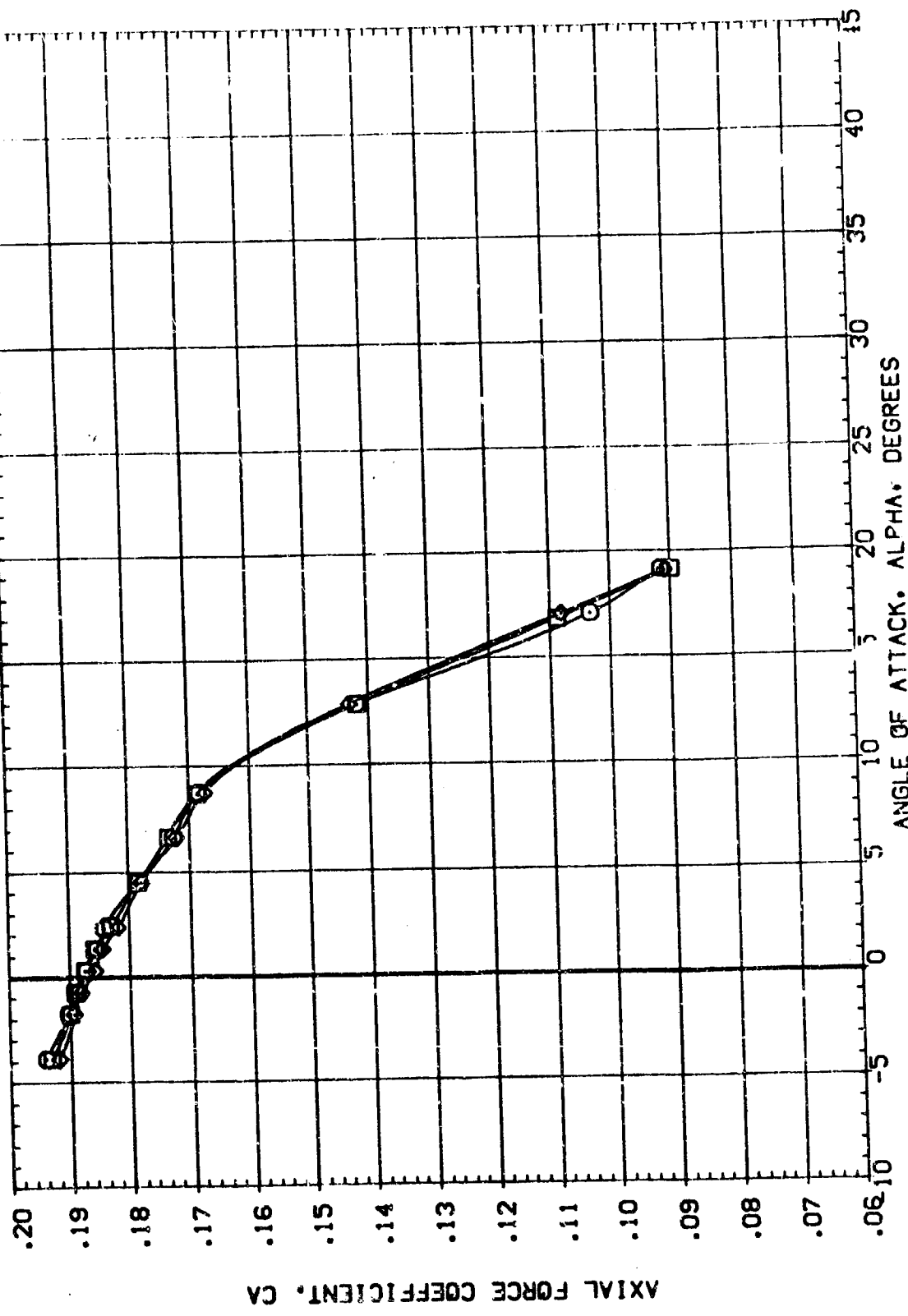


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)
 (A) MACH = 1.60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LP6107) LA-8/8A NAR 0858-MOD. NOSE CRIBBITER
 (LP6108) LA-8/8A NAR 0858-MOD. NOSE CRIBBITER
 (LP6111) LA-8/8A NAR 0858-MOD. NOSE CRIBBITER

AIRLON ELEVTR GT-LOC KVL
 10.000 -20.000 1.000 .000
 10.000 -20.000 1.000 6.820
 10.000 -20.000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.9023 INCHES
 BRFP 17.5528 INCHES
 XMRP 15.5638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188

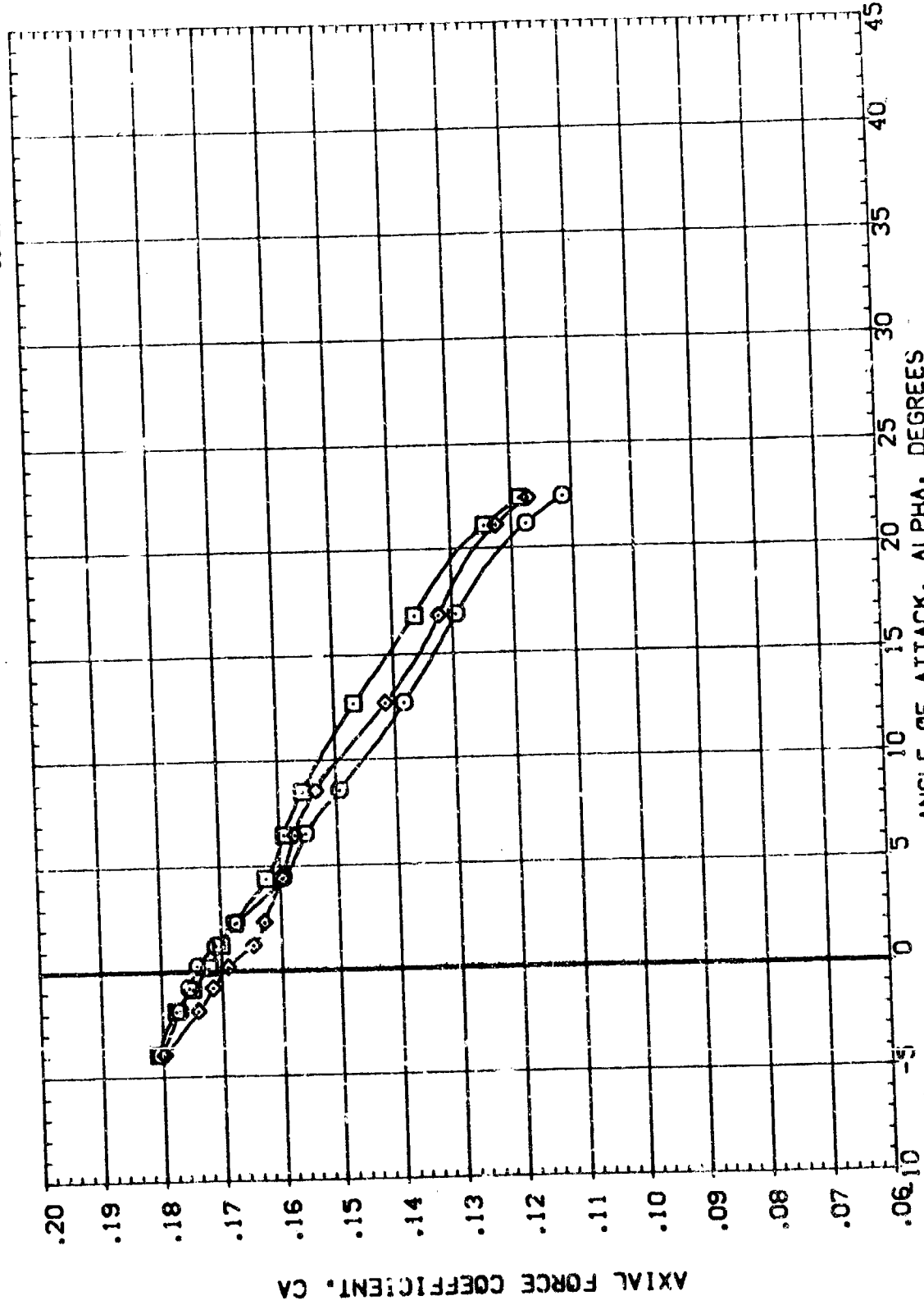


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LP6107) A-B/R/A NAR O/SB-HOC, NOSE CRG/ITER
 (LP6109) DATA NOT AVAILABLE
 (LP6111) LA-B/R/A NAR O/SB-HOC, NOSE CRG/ITER

AILRON 10.000
 10.000
 10.000

ELEVTR -20.000
 -20.000
 -20.000

GT-LOC 1.000
 1.000
 3.000

KA .000
 6.820
 5.820

REFERENCE INFORMATION
 SREF 136.1803 50. IN.
 LREF 8.9025 INCHES
 BRREF 17.5628 INCHES
 XTRP 15.9638 INCHES
 YTRP .0000 INCHES
 ZTRP .0000 INCHES
 SCALE .0188

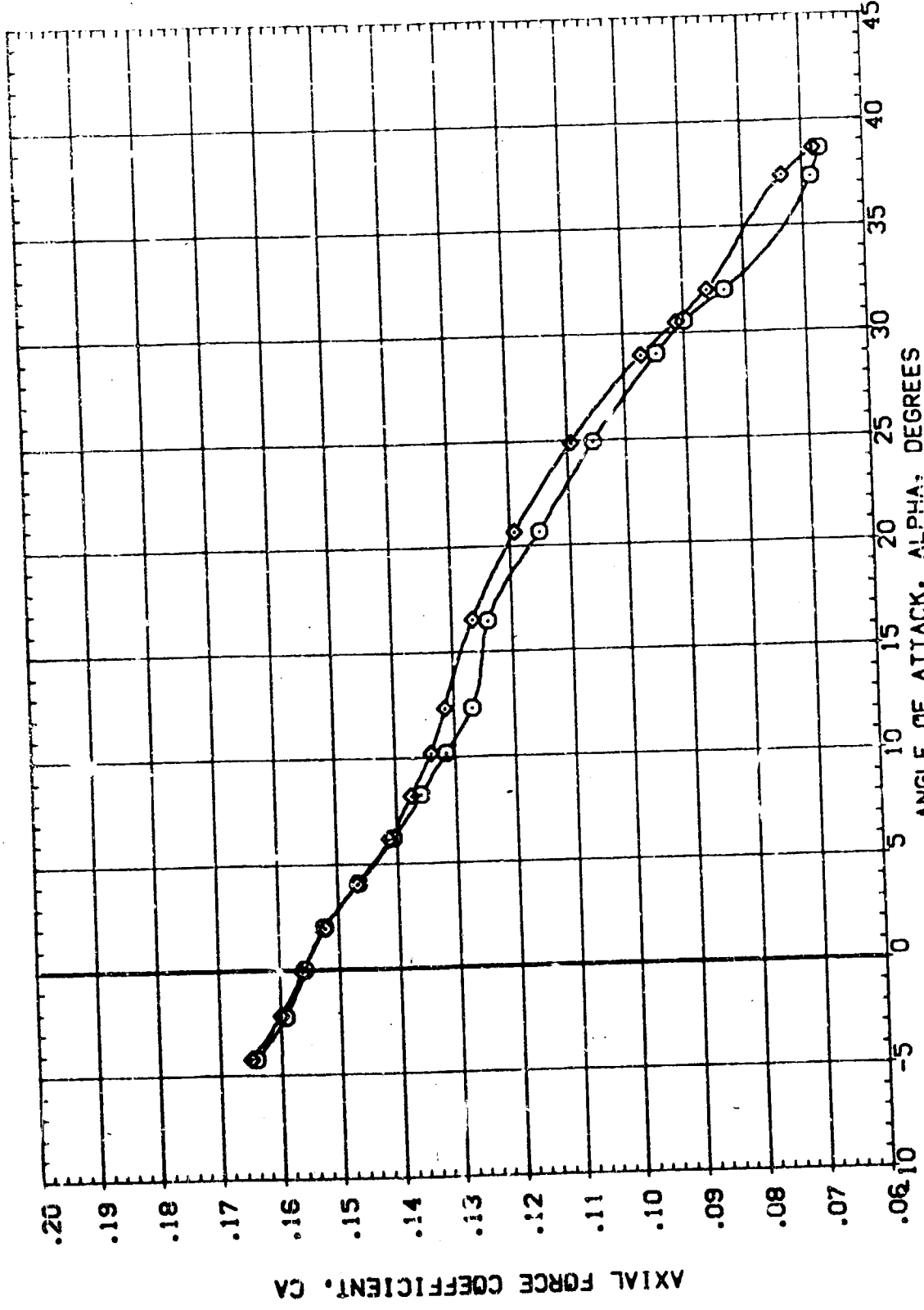


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 2.36

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LPS107) LA-8/8A NAR 0850-HOD. NOSE ORBITER
 (LPS109) DATA NOT AVAILABLE
 (LPS111) LA-8/8A NAR 0850-HOD. NOSE ORBITER

AILRON ELEVTR GT-LOC KAL REFERENCE INFORMATION SQ-IN.
 10.000 -20.000 1.000 .000 136.1808 8.5075 INCHES
 10.000 -20.000 1.000 5.020 17.5628 INCHES
 10.000 -20.000 3.000 6.820 15.9538 INCHES
 XMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

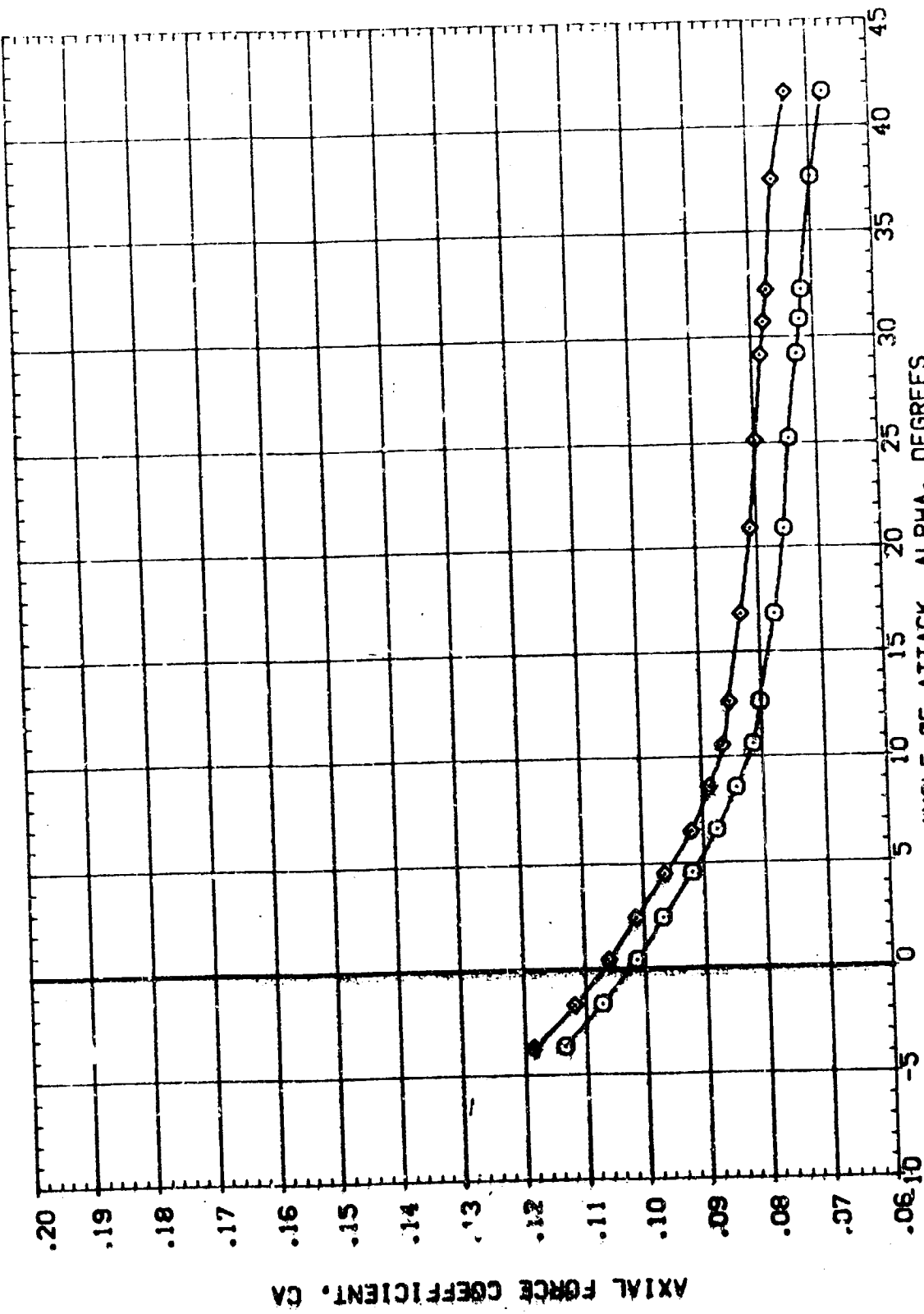


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(COM)MACH = 4.63

DATA SET SYMBOL: (LP6107) (LP6108) (LP6111)

CONFIGURATION DESCRIPTION:
 LA-8A/NAR 085B-MOD. NOSE ORBITER
 LA-8A/NAR 085B-MOD. NOSE ORBITER
 LA-8A/NAR 085B-MOD. NOSE ORBITER

AIRRON: 10.000 10.000 10.000
 ELEVTR: -20.000 -20.000 -20.000
 GT-LDC: 1.000 1.000 3.000
 K/L: .000 6.820 6.820

REFERENCE INFORMATION:
 SREF: 136.1808 SQ. IN.
 LREF: 8.5025 INCHES
 BREF: 17.5628 INCHES
 XPRP: 15.9638 INCHES
 YPRP: .0000 INCHES
 ZPRP: .0000 INCHES
 SCALE: .0188 INCHES

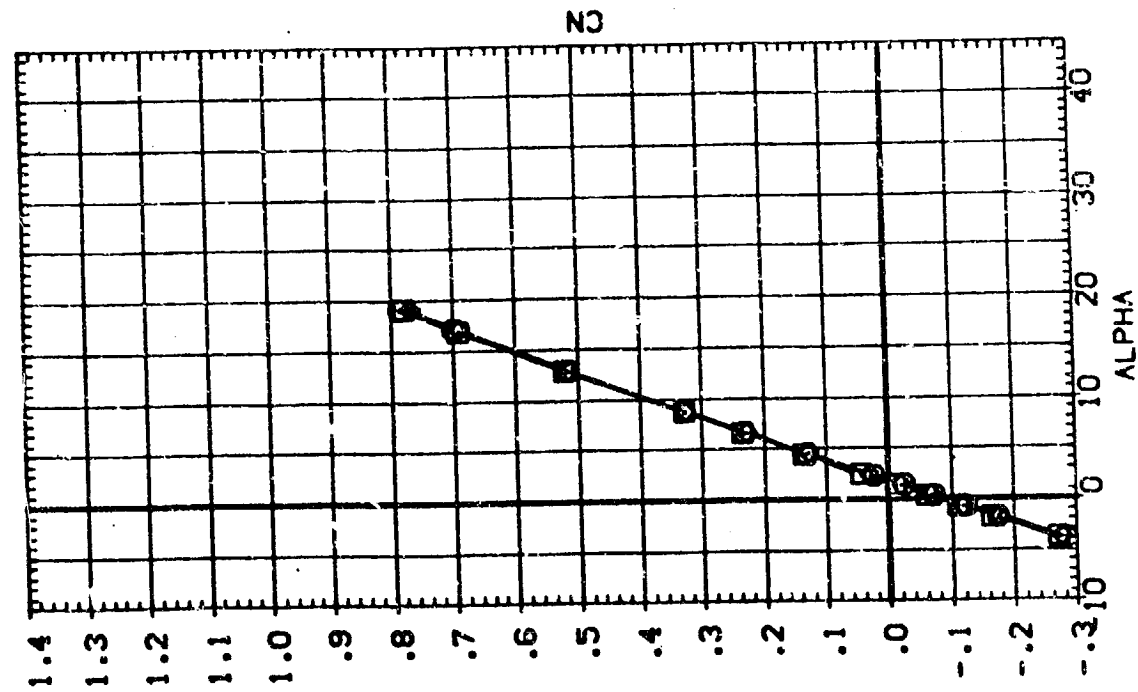
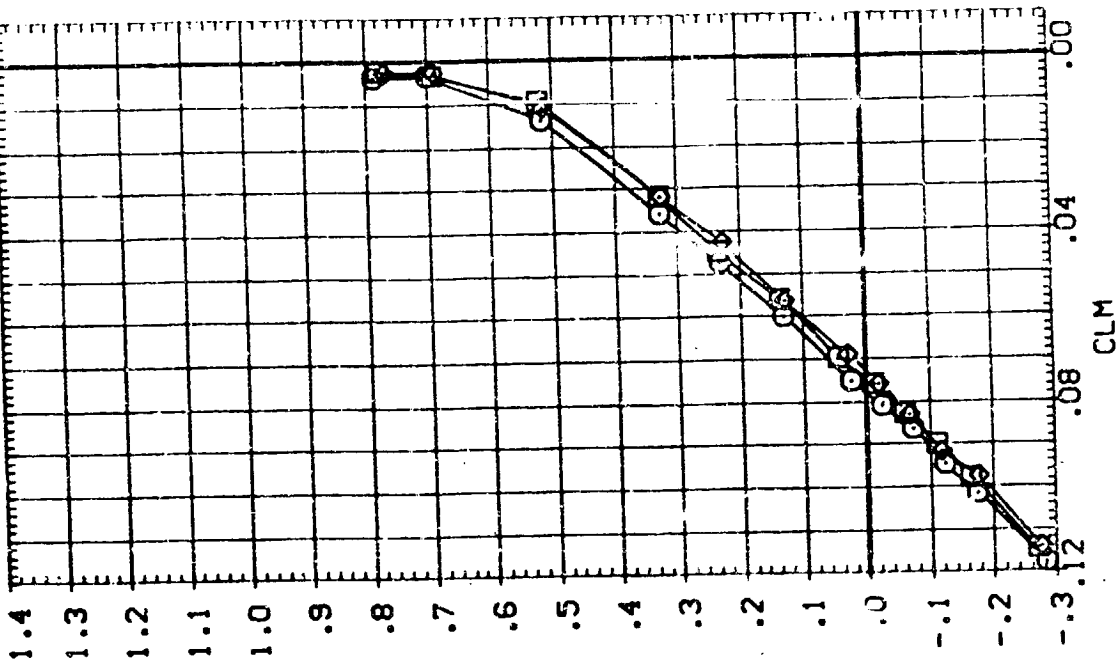


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL
 (LP6107)
 (LP6108)
 (LP6111)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0898-100. NOISE ORBITER
 LA-8/8A NAR 0898-100. NOISE ORBITER
 LA-8/8A NAR 0898-100. NOISE ORBITER

AIRFLOW ELEVTR GT-LDC K.L
 10.000 -20.000 1.000 .000
 10.000 -20.000 1.000 6.820
 10.000 -20.000 3.000 5.820

REFERENCE INFORMATION
 SREF 136.1808 SO. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.9538 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

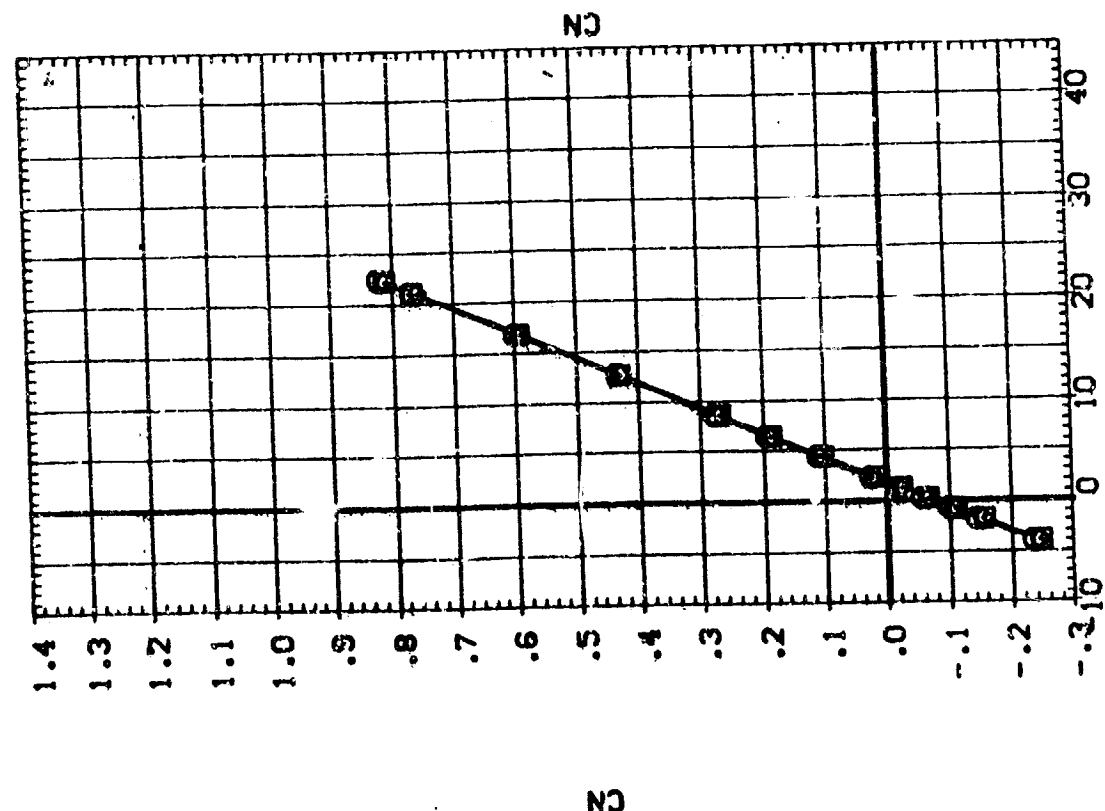
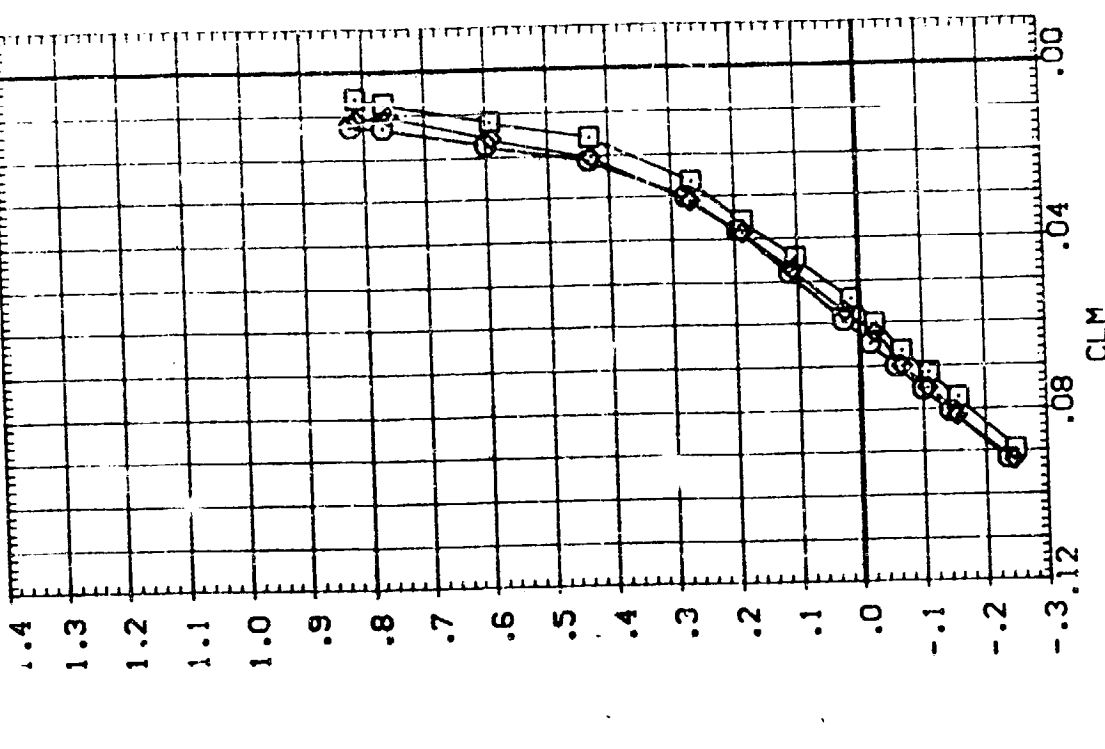


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90

DATA SET SYMBOL (LPS107)
 (LPS109)
 (LPS111)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR O88B-HOD. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR O88B-HOD. NOSE ORBITER

AILRON 10.000
 10.000
 10.000

ELEVTR -20.000
 -20.000
 -20.000

GT-LOC 1.000
 1.000
 3.000

KVL .000
 6.620
 6.520

REFERENCE INFORMATION
 SREF 136.1808 SO. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XTRP 15.9638 INCHES
 YTRP .0000 INCHES
 ZTRP .0000 INCHES
 SCALE .0188 SCALE

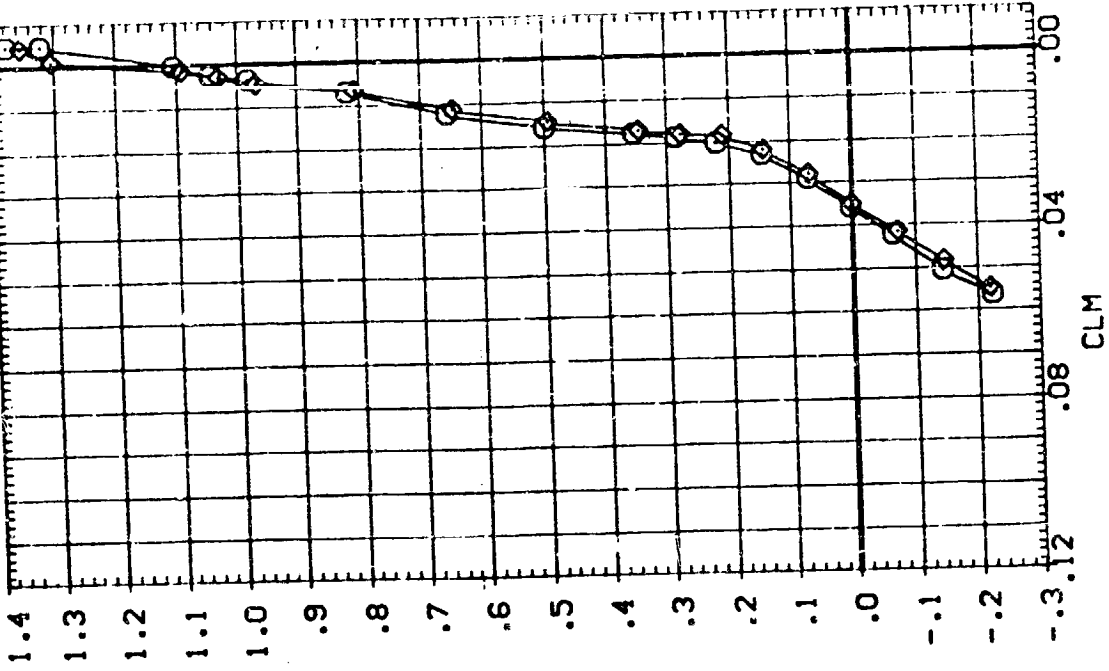
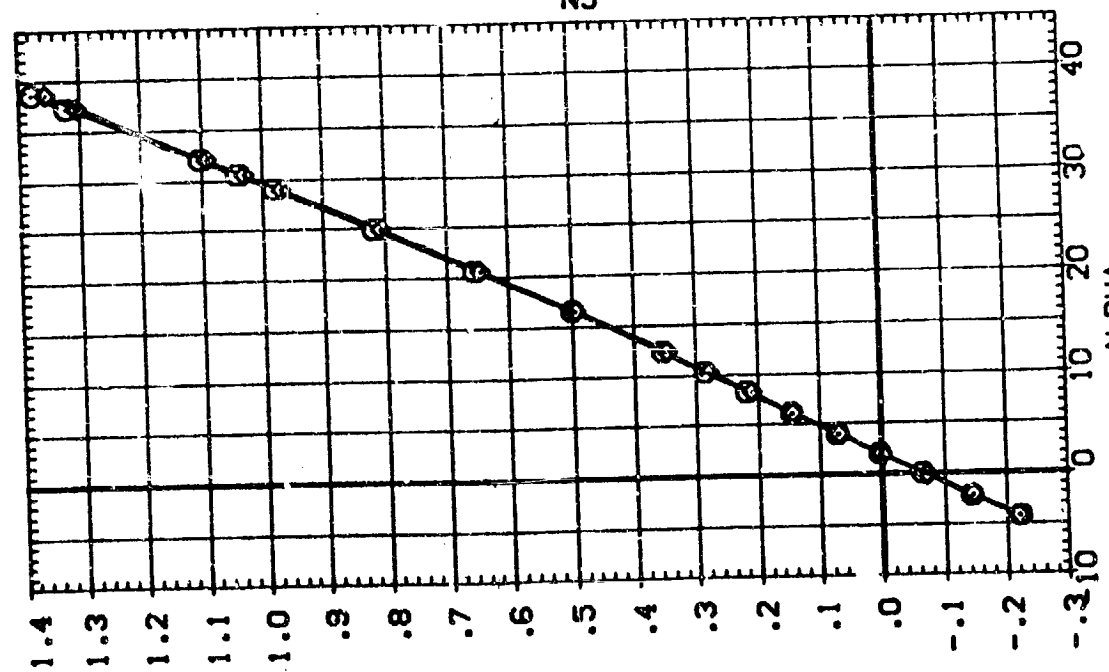



FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 2.36

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION
 LA-8/BA NAR 0859-M O. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/BA NAR 0859-MOD: NOSE WRITER

REFERENCE INFORMATION
 SREF 136.1809 - 50. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XTRP 15.9638 INCHES
 YTRP .0000 INCHES
 ZTRP .0000 INCHES
 SCALE .0188

AIRLON ELEVTR GT-LOC K/L
 10.000 -20.000 1.000 .000
 10.000 -20.000 1.000 8.820
 10.000 -20.000 3.000 8.820

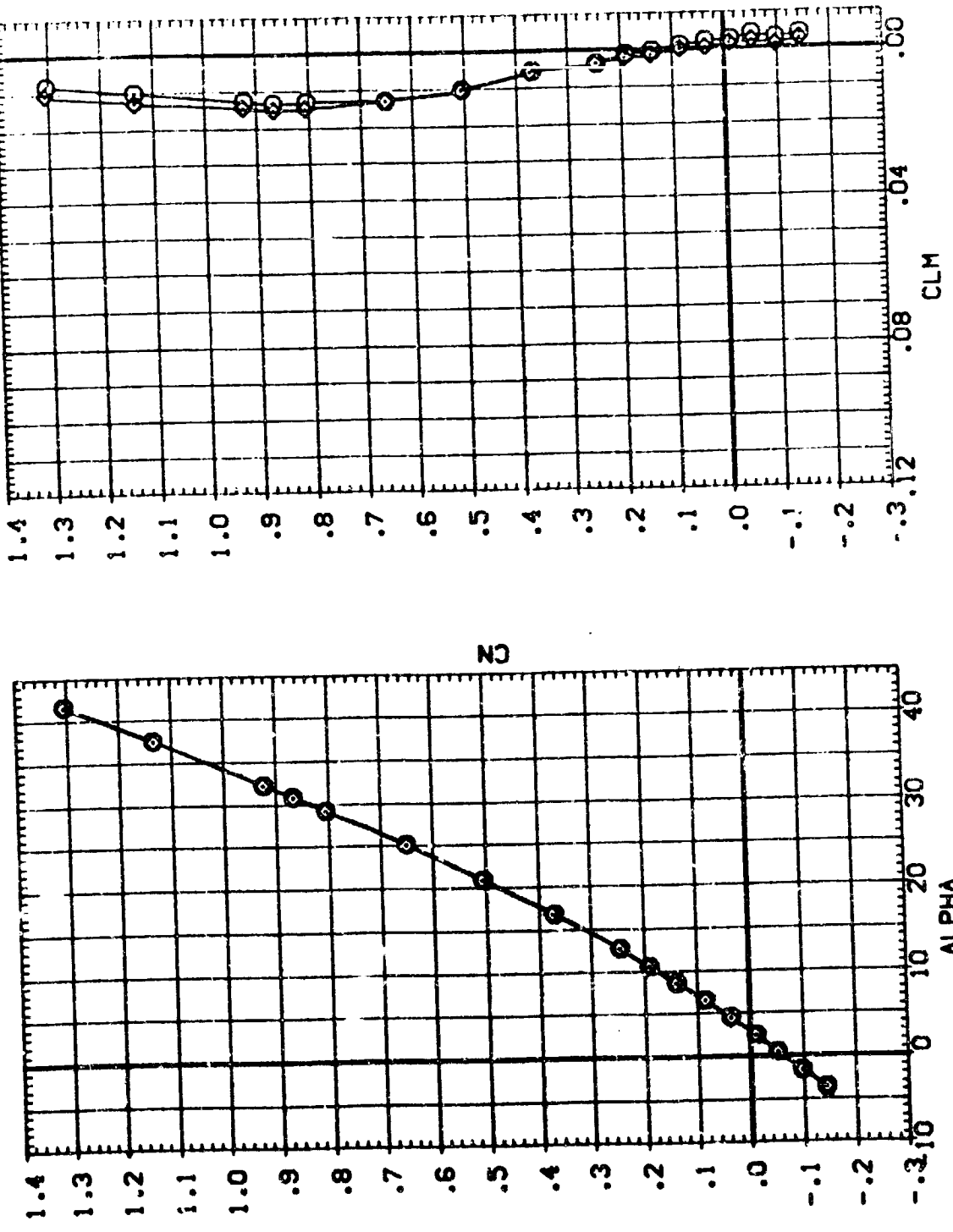


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)
 (D)MACH = 4.63

DATA SET SYMBOL
 (LP61074)
 (LP6109)
 (LP6111)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0858-MOD. NOSE CRIBITER
 LA-8/8A NAR 0858-MOD. NOSE CRIBITER
 LA-8/8A NAR 0858-MOD. NOSE CRIBITER

AILRON 10.000
 10.000
 10.000

ELEVTR -20.000
 -20.000
 -20.000

GT-LOC 1.000
 1.000
 3.000

KAL .000
 6.820
 6.820

REFERENCE INFORMATION
 SRE 136.1808
 LREF 8.5075
 XREF 17.5628
 YPRP 15.9630
 ZPRP .0000
 SCALE .0188

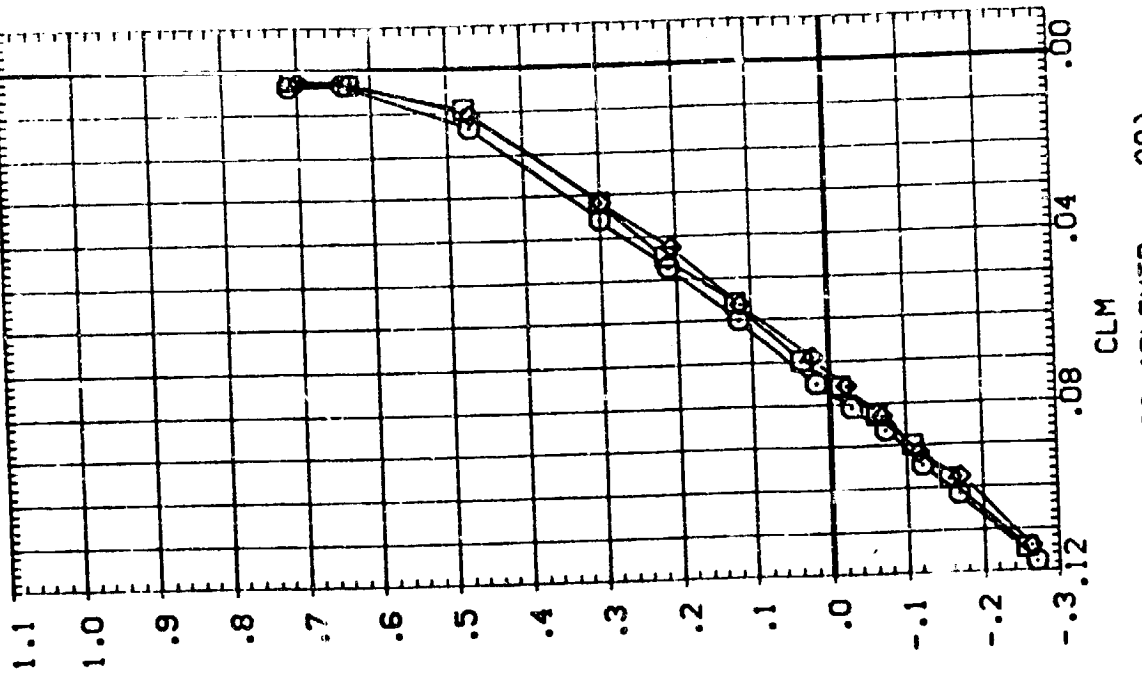
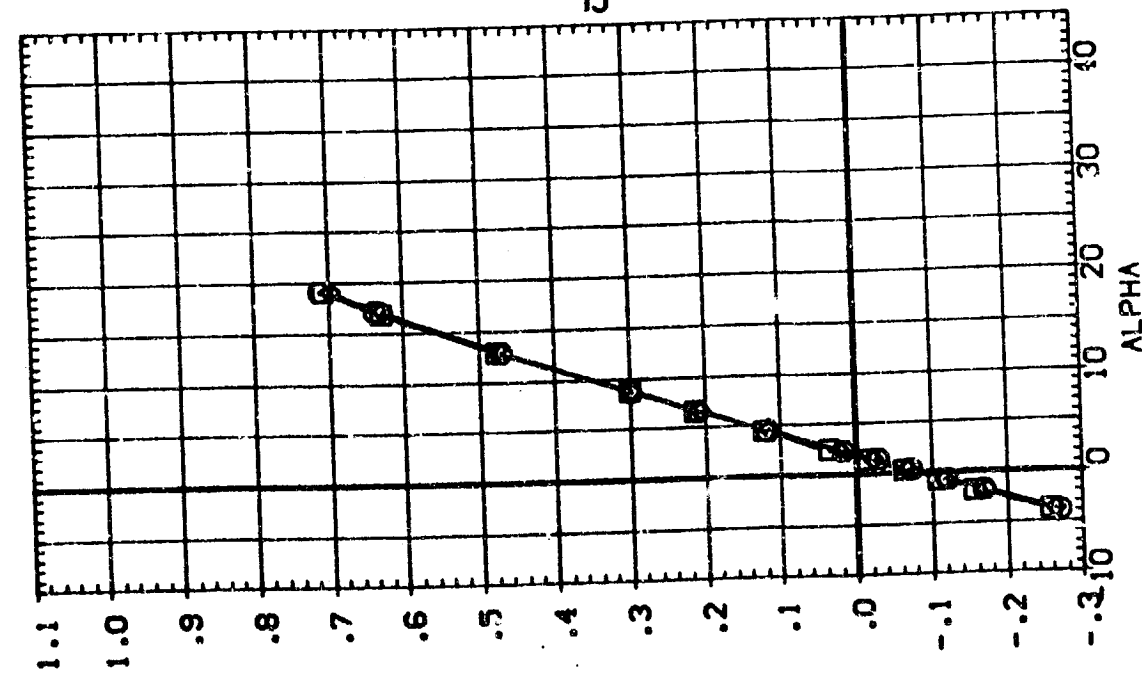


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 1.60

DATA SET SYMBS.
 (LP6107)
 (LP6109)
 (LP6111)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR O85B-MOD. NOSE ORBITER
 LA-8/8A NAR O85B-MOD. NOSE ORBITER
 LA-8/8A NAR O85B-MOD. NOSE ORBITER

AIRLIN ELEVTR GT-LOC K/L REFERENCE INFORMATION
 10.010 -20.000 1.000 SREF 131.1809 SQ. IN.
 10.010 -20.000 1.000 LREF 18.9075 INCHES
 10.010 -20.000 3.000 XPRP 17.5628 INCHES
 YPRP 15.9638 INCHES
 ZPRP .0000 INCHES
 SCALE .0188 SCALE

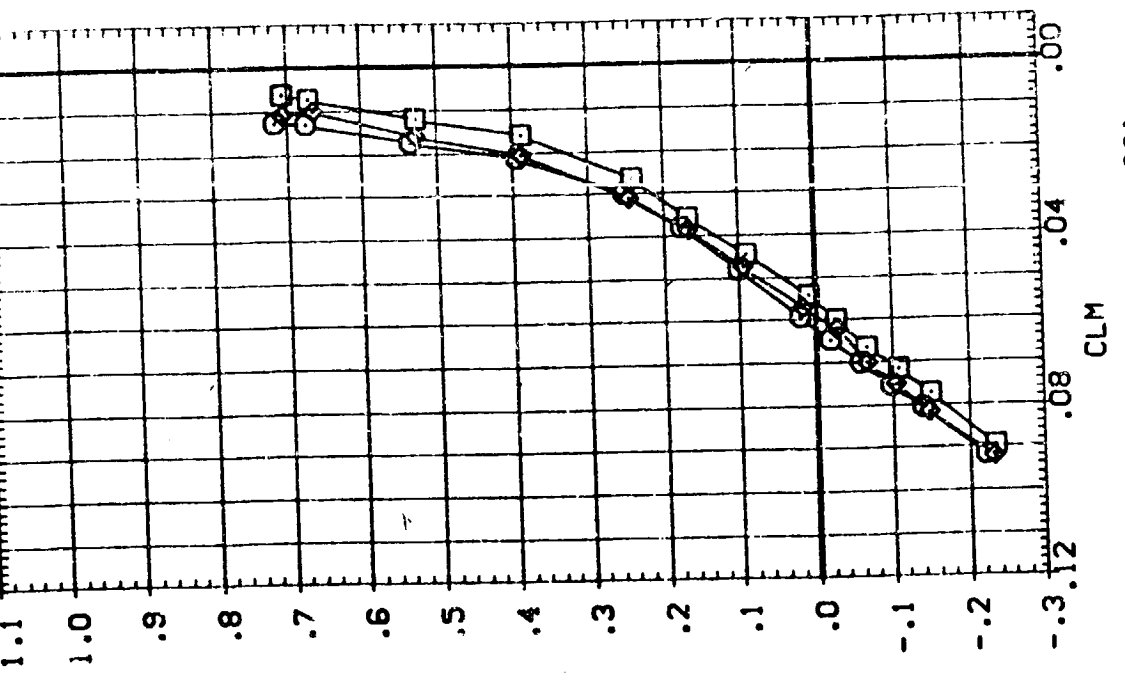
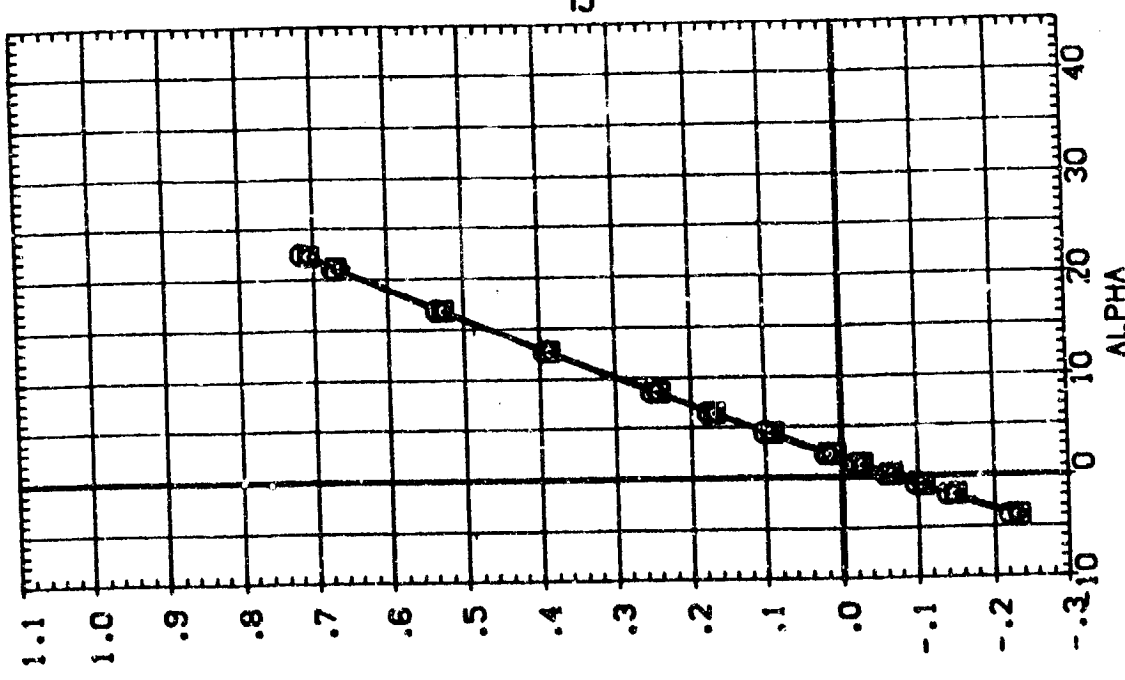


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90

DATA SET SYMBOL. CONFIGURATION DESCRIPTION
 (LP6107) LA-8/8A NAR 0738-100. NOSE ORBITER
 (LP6109) DATA NOT AVAILABLE
 (LP6111) LA-8/8A NAR 0538-100. NOSE ORBITER

AILRON ELEVTR GT-LOC K/L REFERENCE INFORMATION SO. IN.
 10.000 -20.000 1.000 SREF 736.1809 INCHES
 10.000 -20.000 1.000 LREF 8.5025 INCHES
 10.000 -20.000 3.000 XMRP 17.5528 INCHES
 10.000 -20.000 3.000 YMRP 15.9538 INCHES
 .000 .000 ZMRP .000 INCHES
 .0188 SCALE

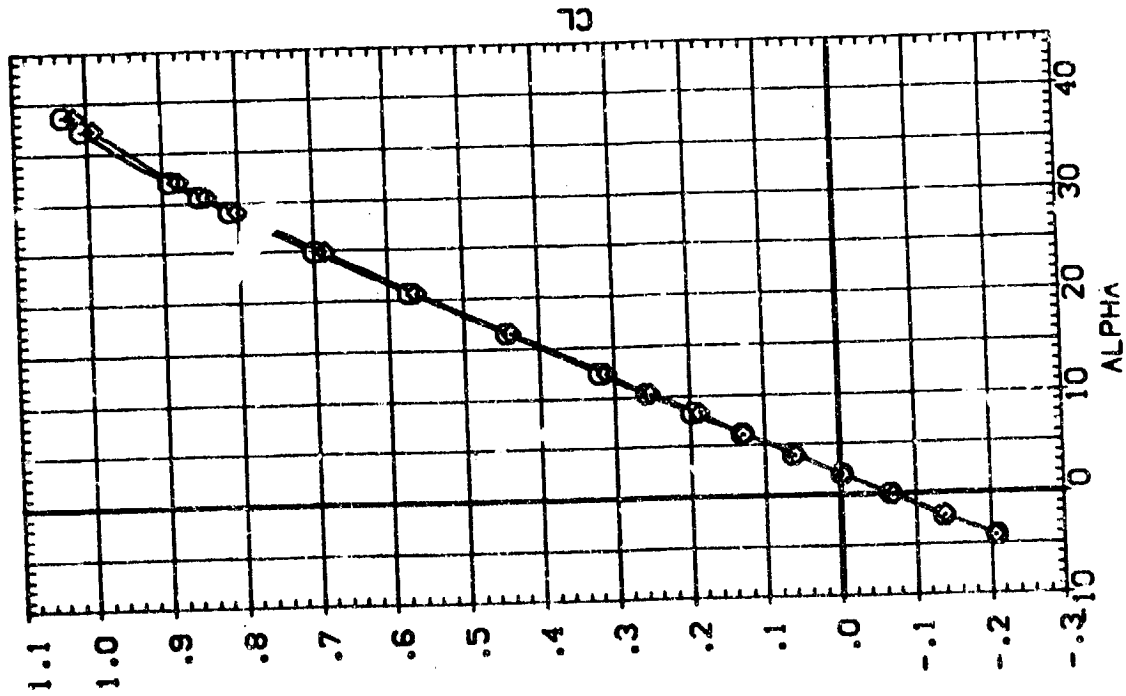
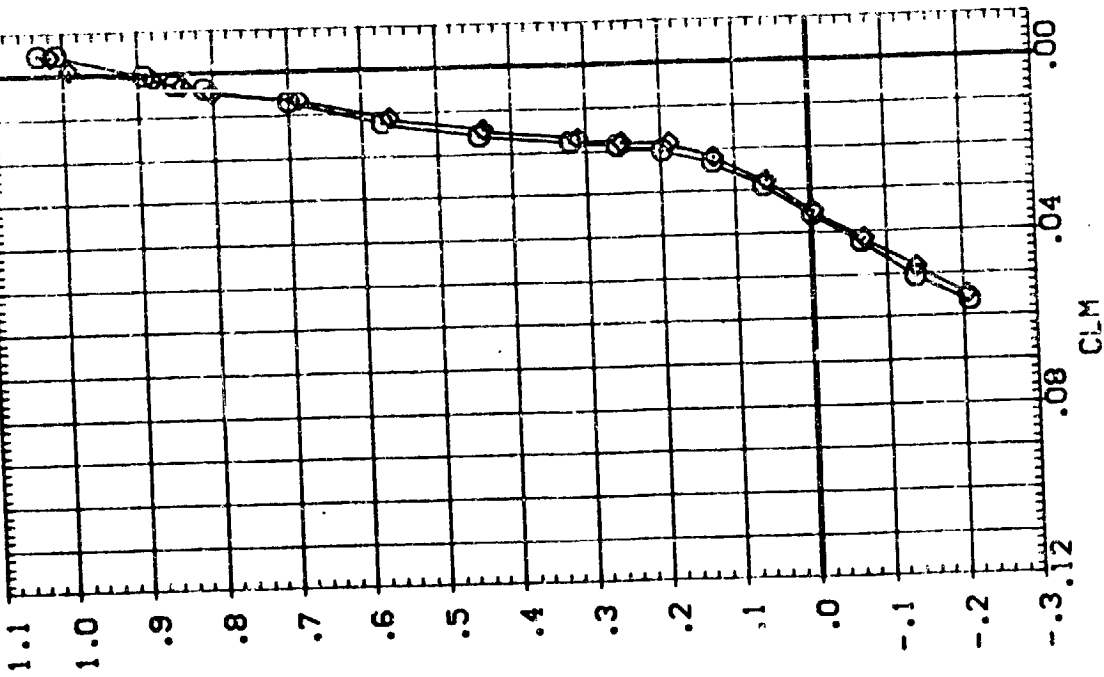
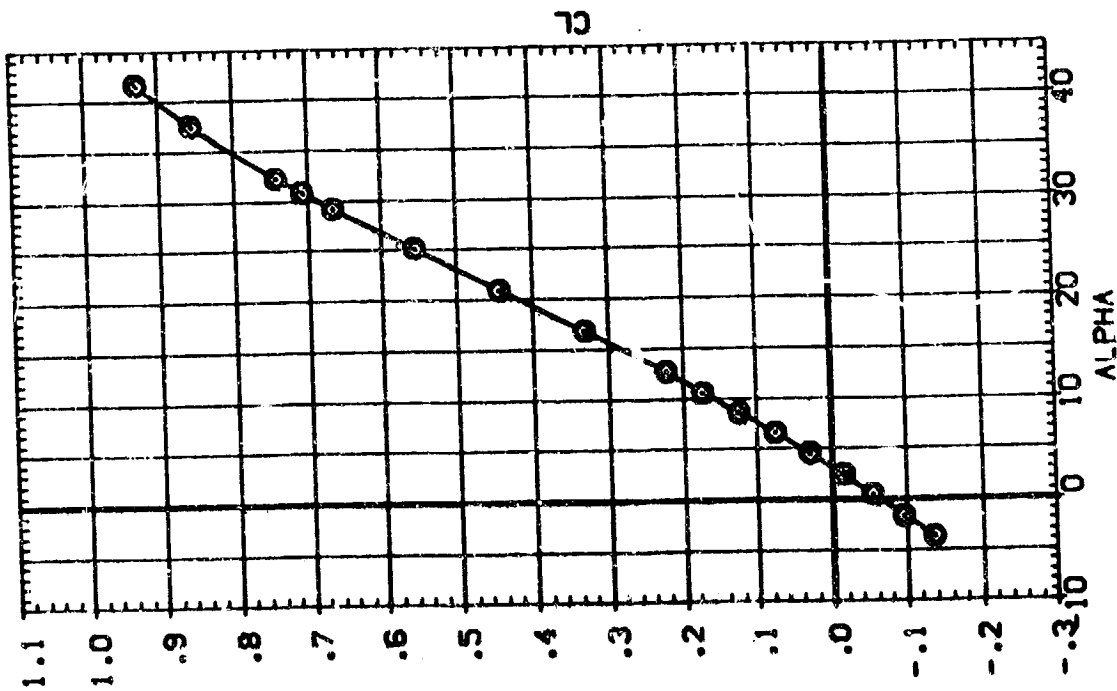


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 2.36

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LP6107) LA-2/BA NAR ORSB-MOD. NOSE ORBITER
 (LP6108) DATA NOT AVAILABLE
 (LP6109) LA-2/BA NAR ORSB-MOD. NOSE ORBITER
 (LP6111)



AILRON ELEVTR GT-LOC K/L REFERENCE INFORMATION
 10.000 -20.000 1.000 .000 SREF 136.1808 SQ. IN.
 10.000 -20.000 1.000 6.820 LREF 8.9025 INCHES
 10.000 -20.000 3.000 5.820 BREF 17.5578 INCHES
 .0000 .0000 .0000 .0000 XMRP 15.2638 INCHES
 .0000 .0000 .0000 .0000 YMRP INCHES
 .0188 SCALE ZMRP INCHES
 .0188 SCALE SCALE

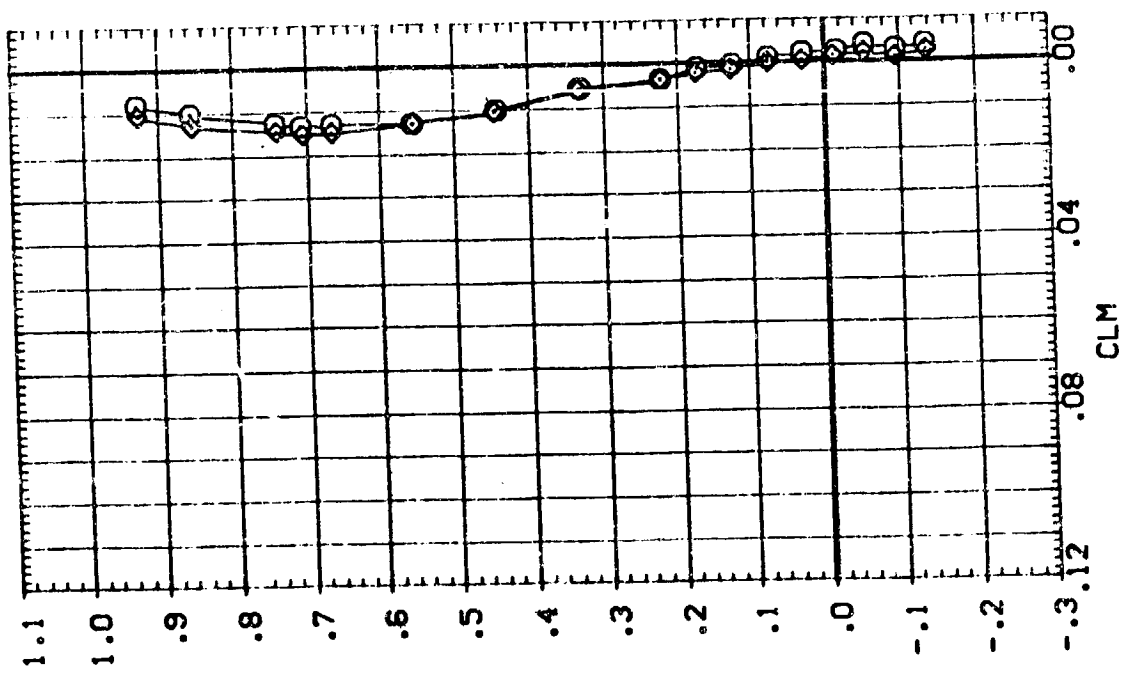


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 4.63

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LPS107) LA-8/8A WAR Q958-HDD. NOSE ORBITTER
 (LPS108) LA-8/8A WAR Q958-HDD. NOSE ORBITTER
 (LPS111) LA-8/8A WAR Q958-HDD. NOSE ORBITTER

AIURON ELEVTR GT-LOC K/L REFERENCE INFORMATION
 10.000 -20.000 1.000 .000 SREF 136.1808 50.1 IN
 10.000 -20.000 1.000 6.820 LREF 8.9023 INCHES
 10.000 -20.000 3.000 6.820 BREF 17.5628 INCHES
 YMRP .0000 XMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

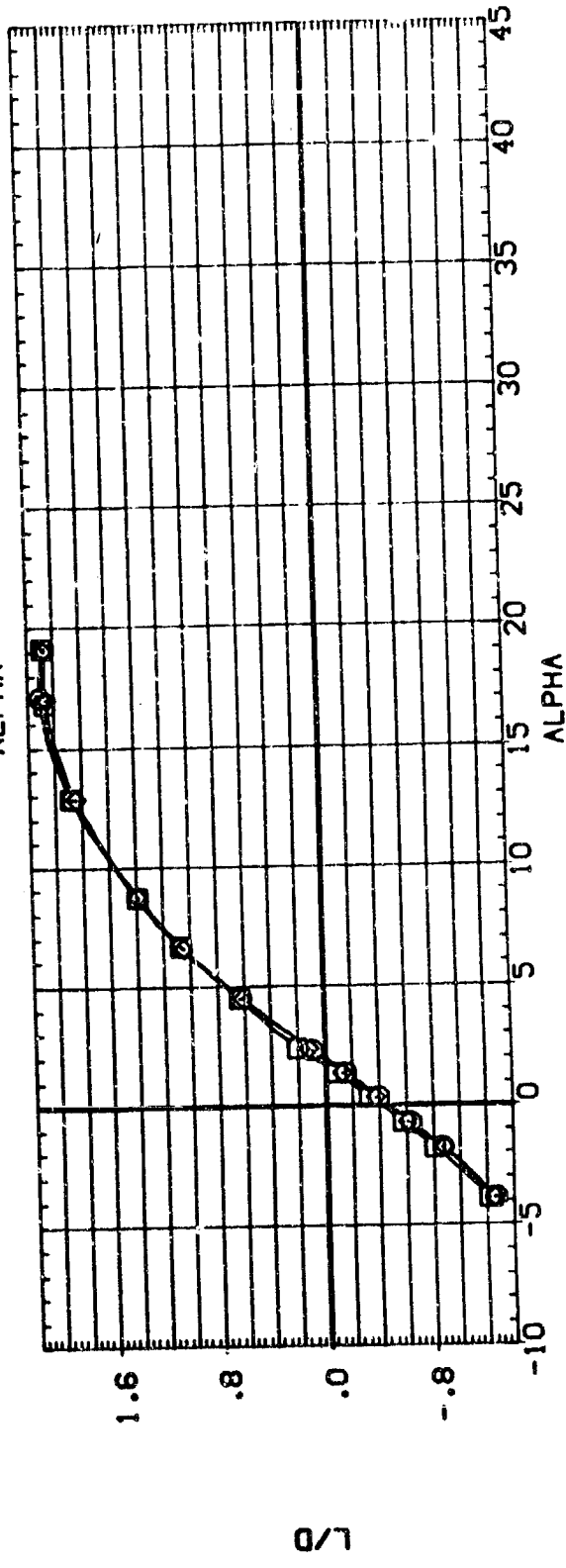
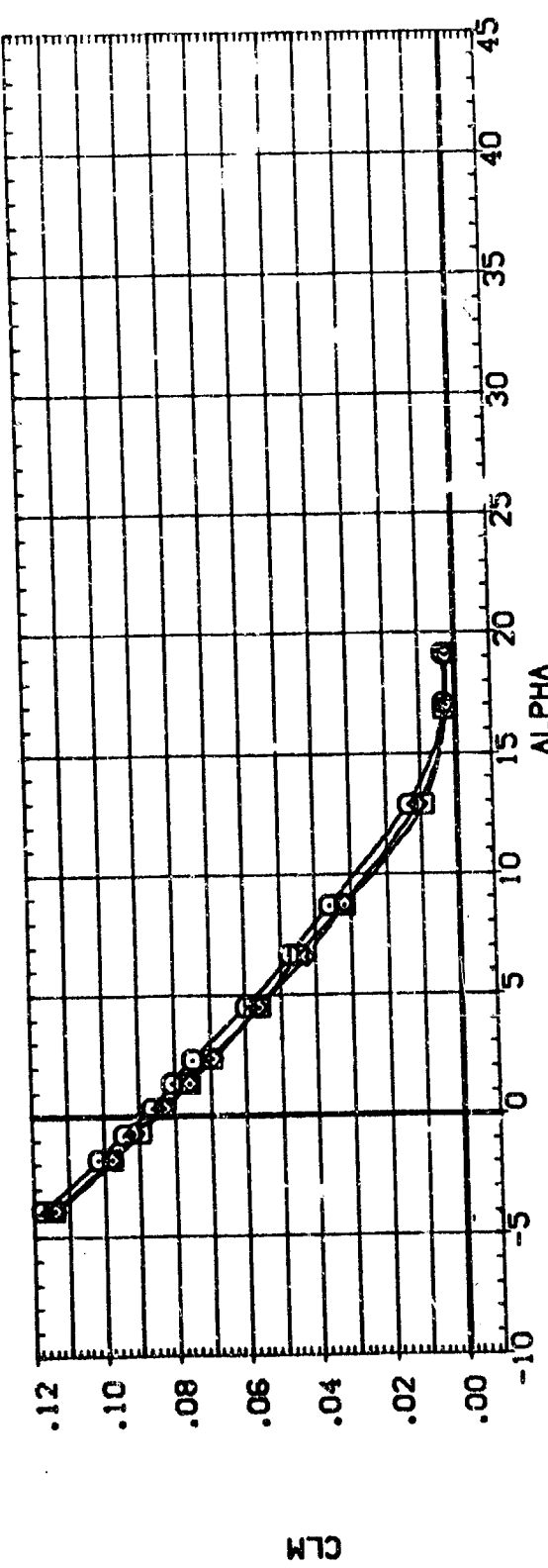


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	GT-LOC	ELEVTR	K/L	SCALE	REFERENCE INFORMATION
(LP6107)	(LP6108)	LA-8/BA NAR 0898-MOD. NOSE DRBITTER	1.000	-20.000	6.820	.000	SREF 136.1808 SC. IN. INCHES
(LP6109)	(LP6110)	LA-8/BA NAR 0898-MOD. NOSE DRBITTER	1.000	-20.000	6.820	.000	LREF 8.9025 INCHES
(LP6111)	(LP6112)	LA-8/BA NAR 3898-MOD. NOSE DRBITTER	3.000	-20.000	6.820	.000	BREF 17.5628 INCHES
							XPRP 15.5638 INCHES
							ZMRP .0000 INCHES
							SCALE .0188

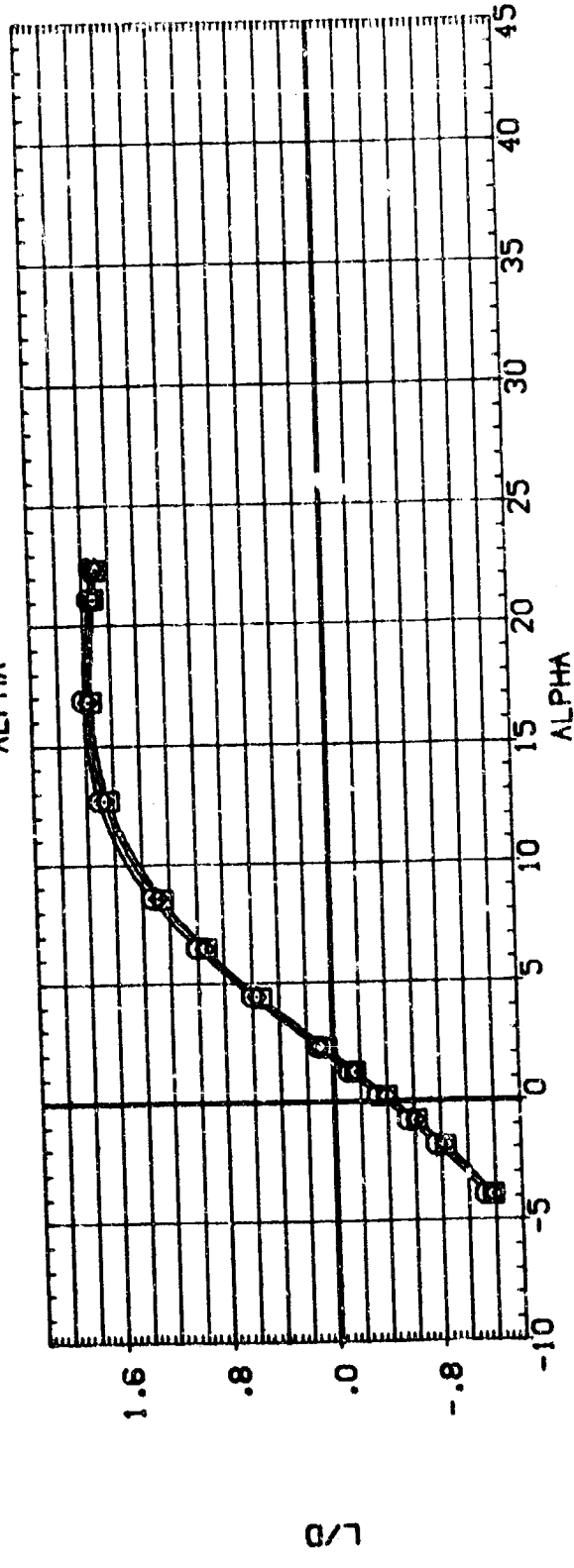
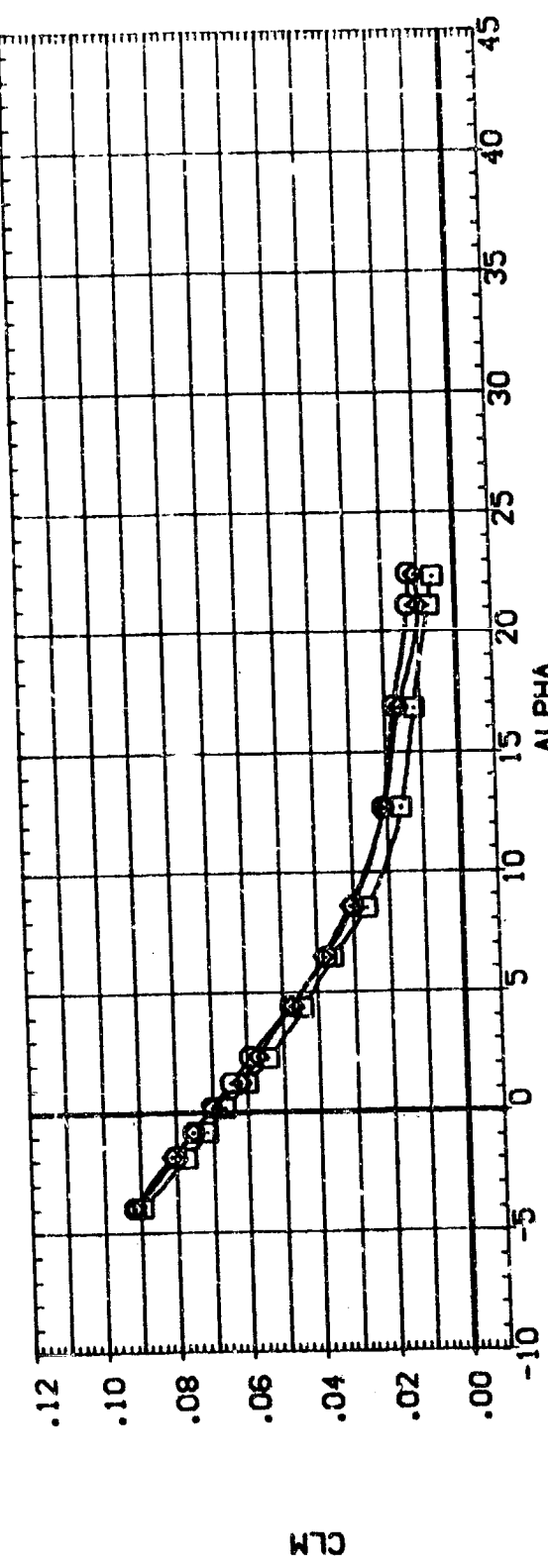


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)
(B)MACH = 1.90

DATA SET SYMBOL (LP6107) (LP6109) (LP6111)

CONFIGURATION DESCRIPTION LA-8/8A NAR 085B-MOD. NOSE ORBITTER DATA NOT AVAILABLE LA-8/8A NAR 085B-MOD. NOSE ORBITTER

GT-LOC 1.000 1.000 3.000

ELEVTR -20.000 -20.000 -20.000

AILRON 10.000 10.000 10.000

KVL .000 6.820 2.820

SREF 1.361809 8.9025 17.5628

LREF 8.9025 17.5628 15.5638

XMRP .0000 .0000 .0000

ZMRP .0000 .0000 .0000

SCALE .0188 .0188 .0188

REFERENCE INFORMATION 50. IN. INCHES

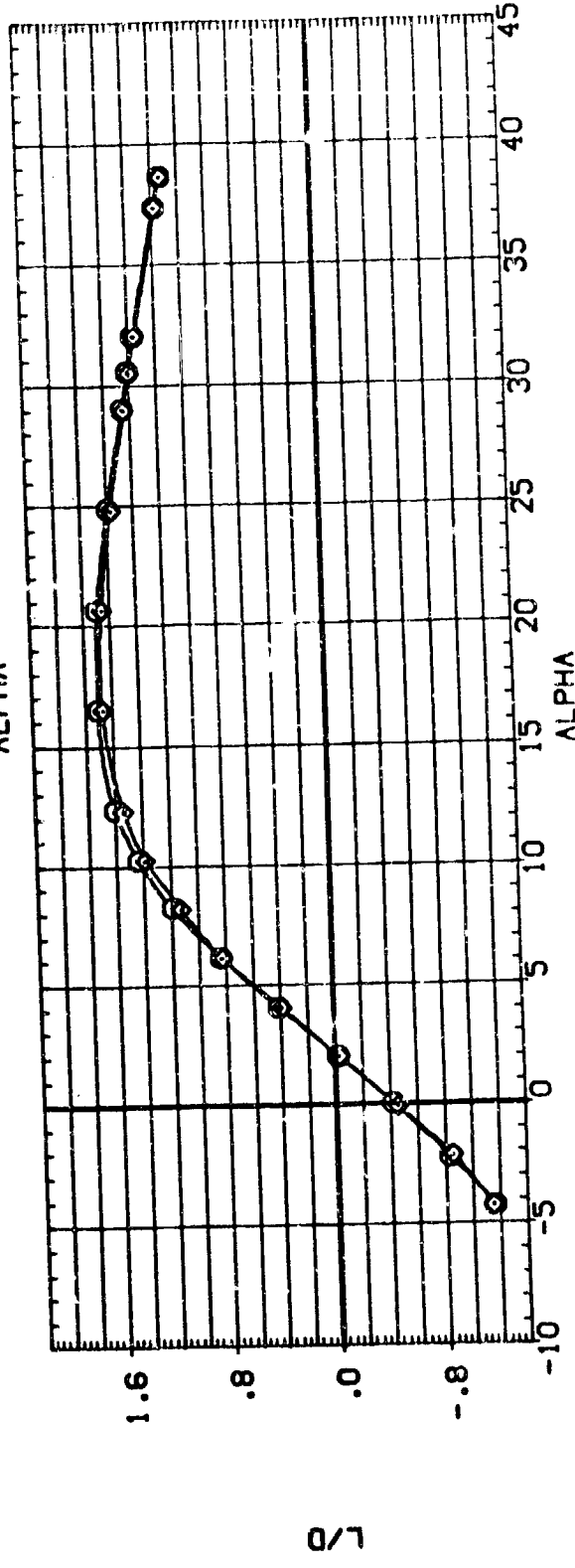
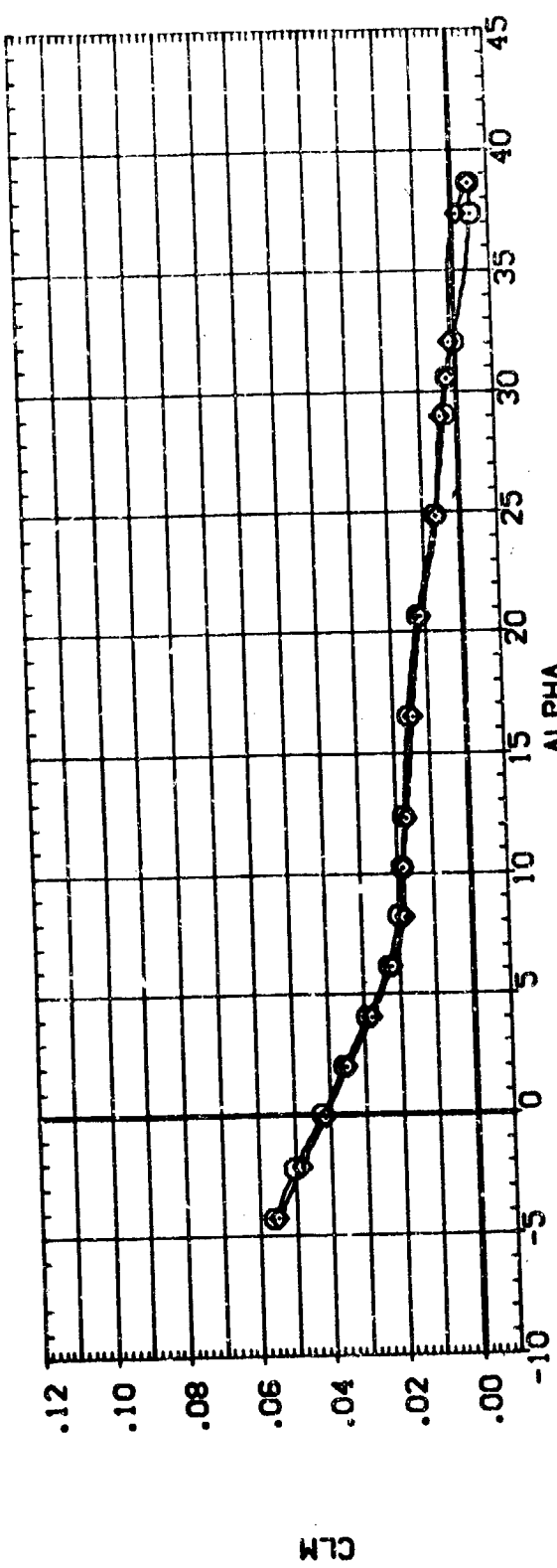


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 2.36

DATA SET SYMBOL
 (LPS107)
 (LPS109)
 (LPS111)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0698-MOD. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR 0698-MOD. NOSE ORBITER

AILRON 10.000
 10.000
 10.000
 10.000

ELEVTR -20.000
 -20.000
 -20.000
 -20.000

GT-LOC 1.000
 1.000
 3.000

K/L .000
 6.820
 6.820

REFERENCE INFORMATION
 SQ. IN. 136.1803
 INCHES 8.8025
 INCHES 17.5528
 INCHES 15.9538
 INCHES .0000
 INCHES .0000
 INCHES .0188
 SCALE

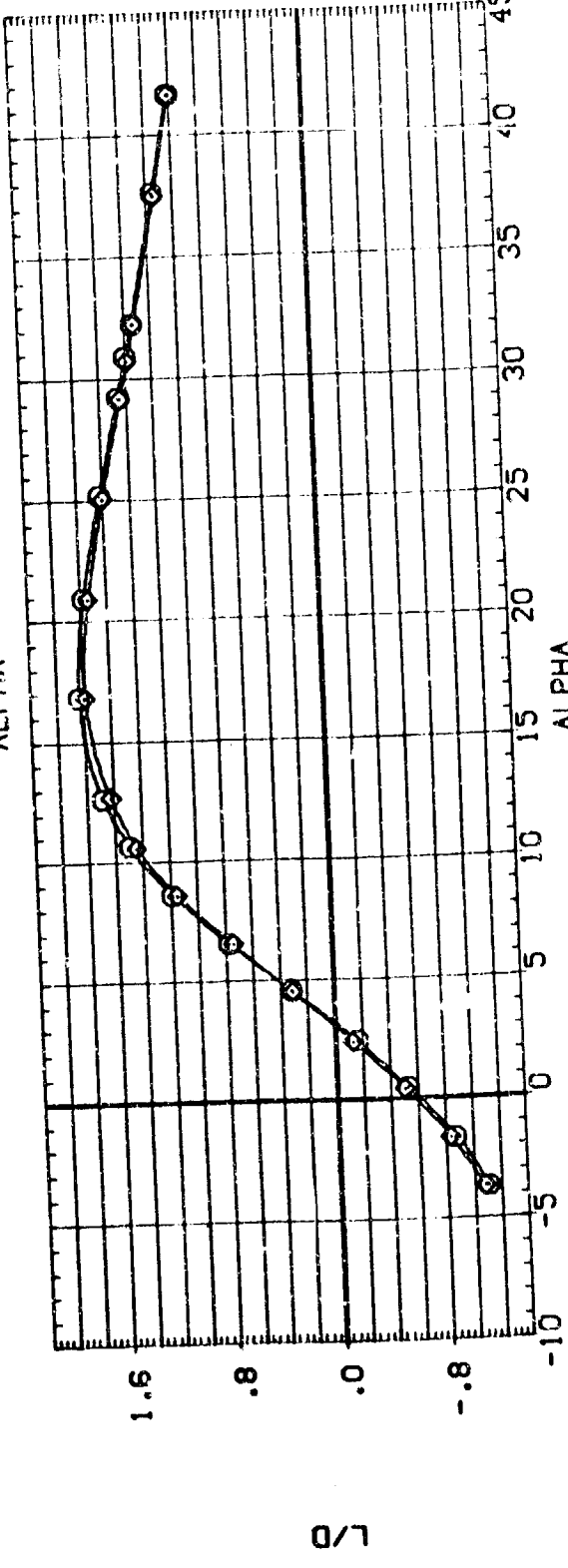
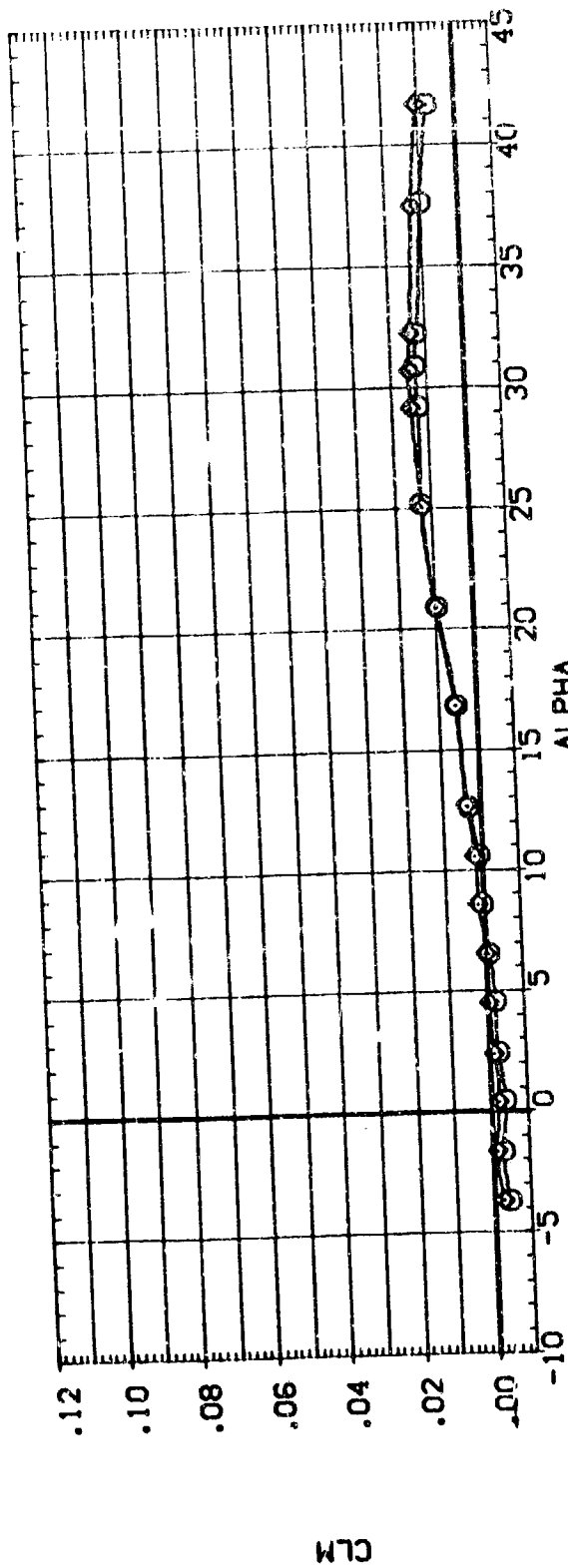


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)
 (O)MACH = 4.63

DATA SET SYMBOL (LP6107) (LP6108) (LP6111)

CONFIGURATION DESCRIPTION
 LA-8/BA NAR O85B-MOD. NOSE ORBITER
 LA-8/BA NAR O85B-MOD. NOSE ORBITER
 LA-8/BA NAR O85B-MOD. NOSE ORBITER

AILRON .ELEVTR GT-LGC KVL SREF REFERENCE INFORMATION
 10.000 -20.000 1.000 .000 136.1828 50.1 IN.
 10.000 -20.000 1.000 6.820 8.9025 INCHES
 10.000 -20.000 3.000 6.820 17.5532 INCHES
 XMRP YMRP ZMRP .0000 .0000 .0000 INCHES
 SCALE .0188 SCALE

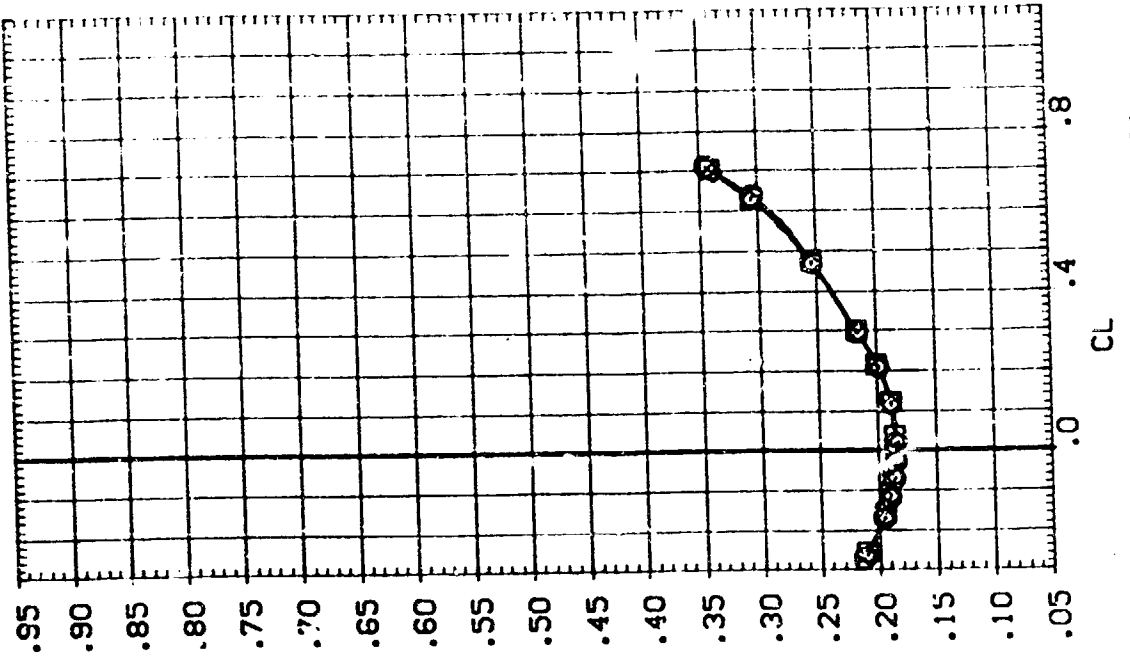
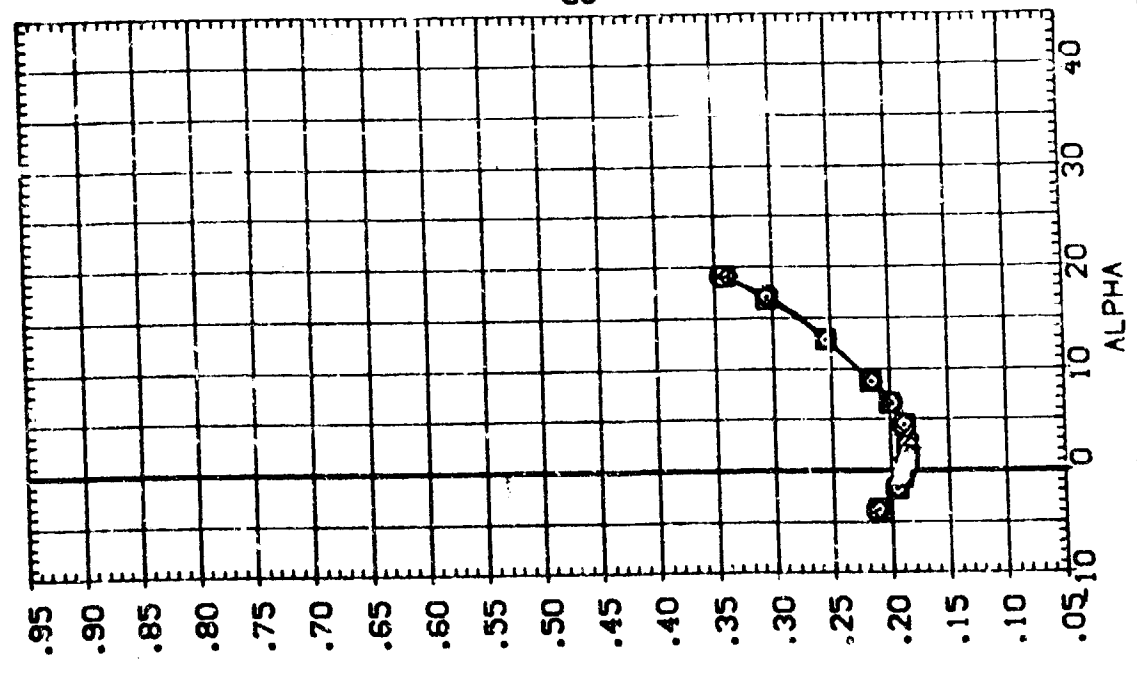


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 1.60

DATA SET SYMBOL: {LPS107} □, {LPS109} □, {LPS111} ◇
 CONFIGURATION DESCRIPTION:
 LA-8/8A NAR 0888-MOD. NOSE ORBITTER
 LA-8/8A NAR 0828-MOD. NOSE ORBITTER
 LA-8/8A NAR 0888-MOD. NOSE ORBITTER

AILRON: 10.000, 10.000, 10.000
 ELEVTR: -20.000, -20.000, -20.000
 GT-LOC: 1.000, 1.000, 3.000
 K/L: .000, 6.820, 6.820
 REFERENCE INFORMATION:
 SREF: 136.1808, 8.5025, 17.5628, 15.5638, .0000, .0188
 LREF: 50. IN, INCHES, INCHES, INCHES, INCHES, INCHES
 BRCF: 6.820
 XMRP: 6.820
 YMRP: 6.820
 ZMRP: 6.820
 SCALE: .0188

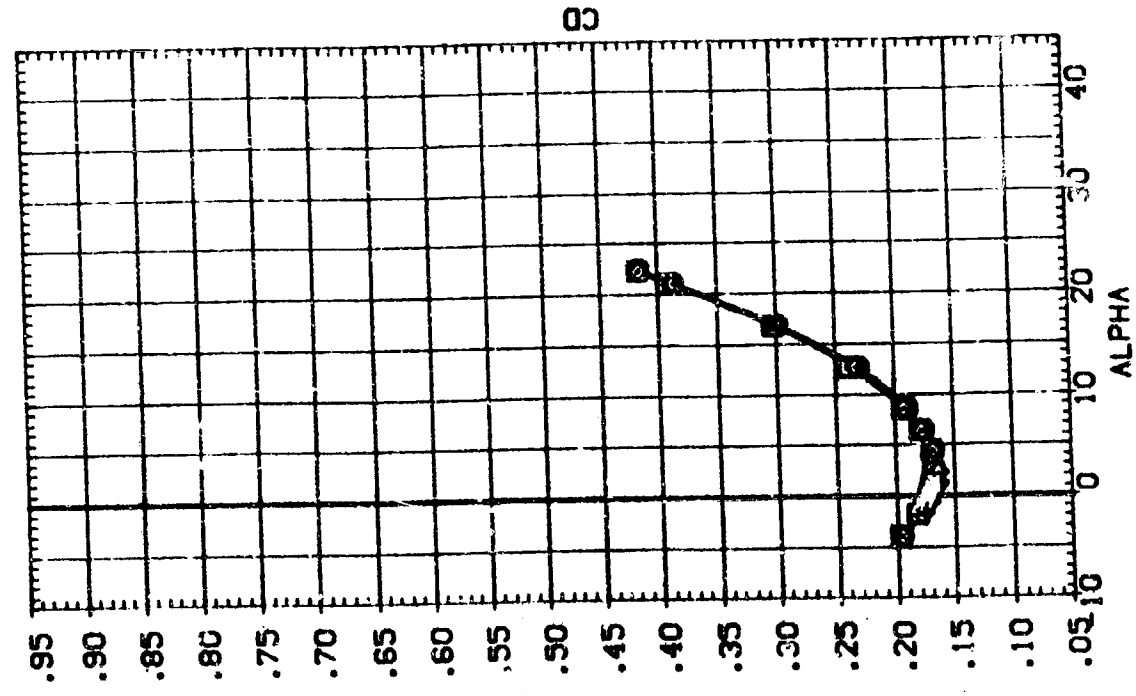
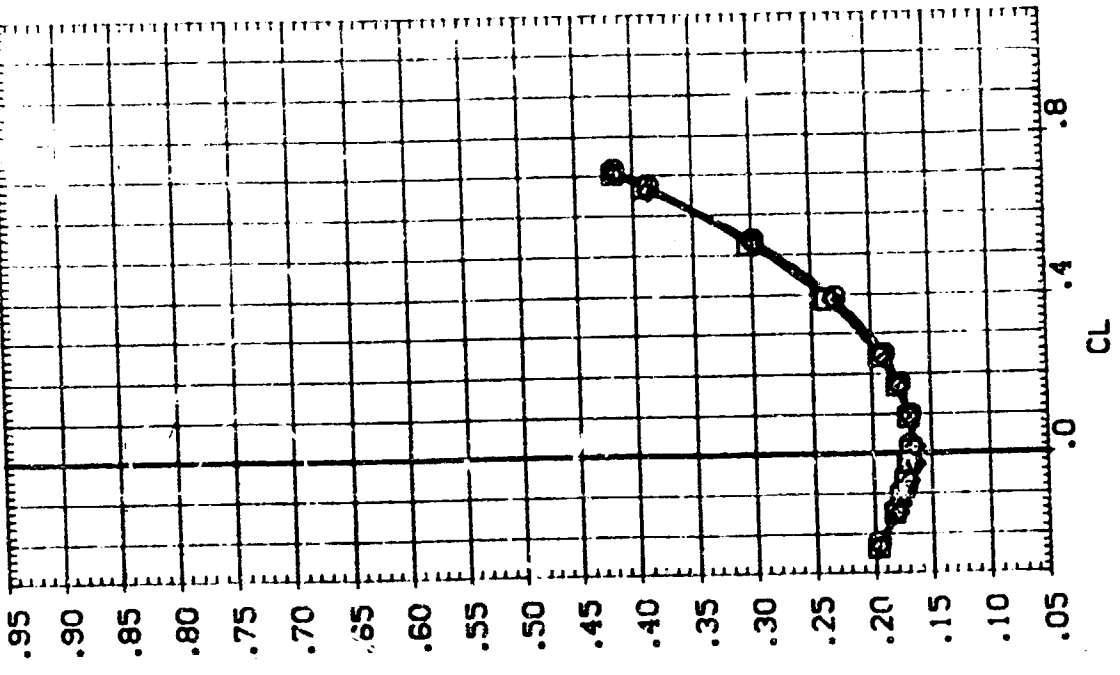


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90

DATA SET SYMBOL: (LPS107)
 CONFIGURATION DESCRIPTION: LA-8/8A NAR OBSD-HOD. NOSE ORBITER
 (LPS108) DATA NOT AVAILABLE
 (LPS111) LA-8/8A NAR OBSD-HOD. NOSE ORBITER

ALTRON	ELEVTR	GT-LOC	K/L	SCALE
10.000	-20.000	1.000	.000	136.1808
10.000	-20.000	1.000	6.820	8.9025
10.000	-20.000	3.000	6.820	17.5628
				15.5638
				.0000
				.0000
				.0188

REFERENCE INFORMATION
 SREF 50. IN.
 LREF INCHES
 XREF INCHES
 YREF INCHES
 ZREF INCHES

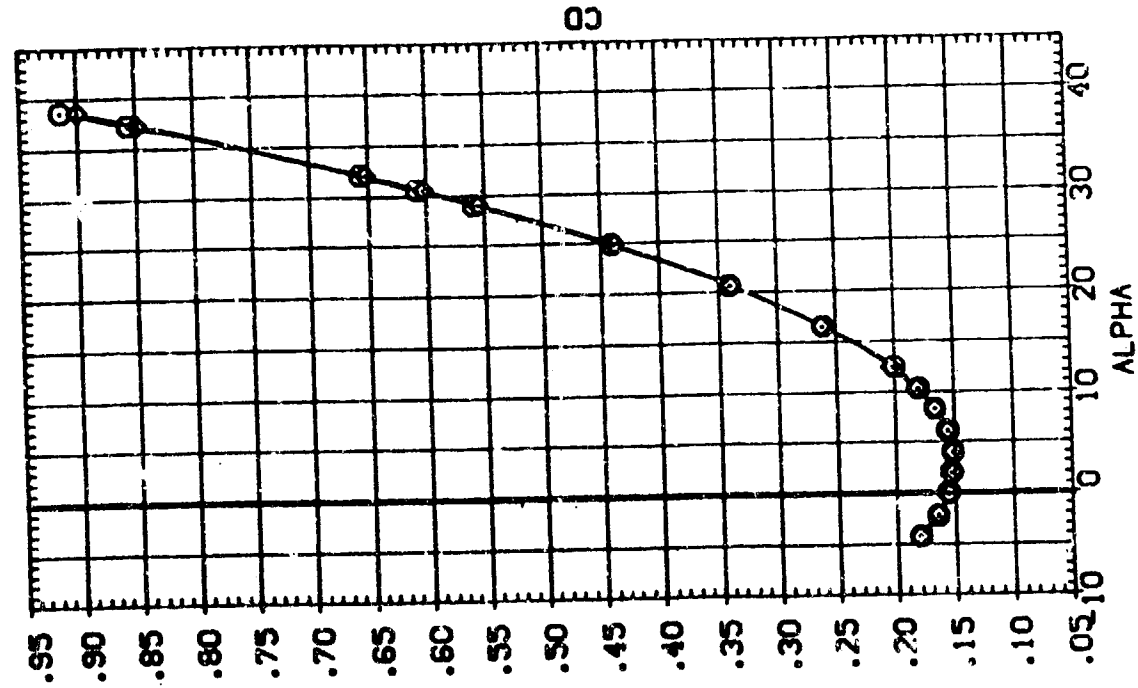
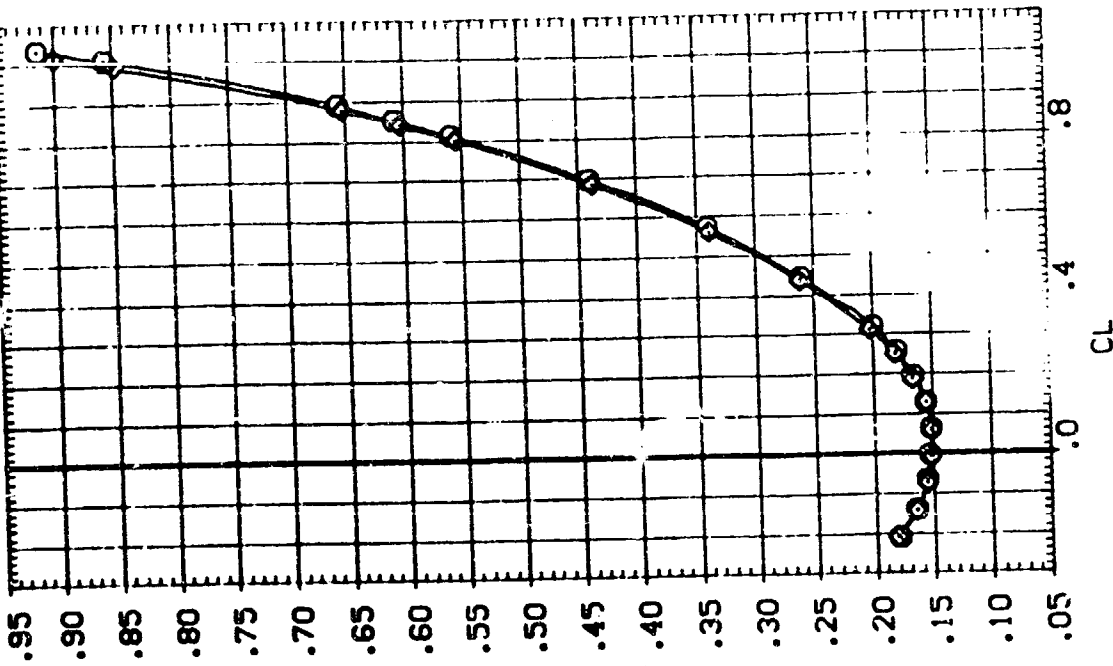


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(C)MACH = 2.36

DATA SET SYMBOL: (LPS107)
 (LPS108)
 (LPS111)

CONFIGURATION DESCRIPTION:
 LA-8/8A NAR 0850-MOD. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR 0850-MOD. NOSE ORBITER

AIRLON: 10.000
 10.000
 10.000

ELEVTR: -20.000
 -20.000
 -20.000

GT-LOC: 1.000
 1.000
 3.000

K/L: .000
 6.820
 6.820

REFERENCE INFORMATION:
 SREF: 136.1808 50. IN.
 LREF: 8.9075 INCHES
 BREF: 17.5628 INCHES
 XMRP: 15.9638 INCHES
 YMRP: .0000 INCHES
 ZMRP: .0000 INCHES
 SCALE: .0189 INCHES

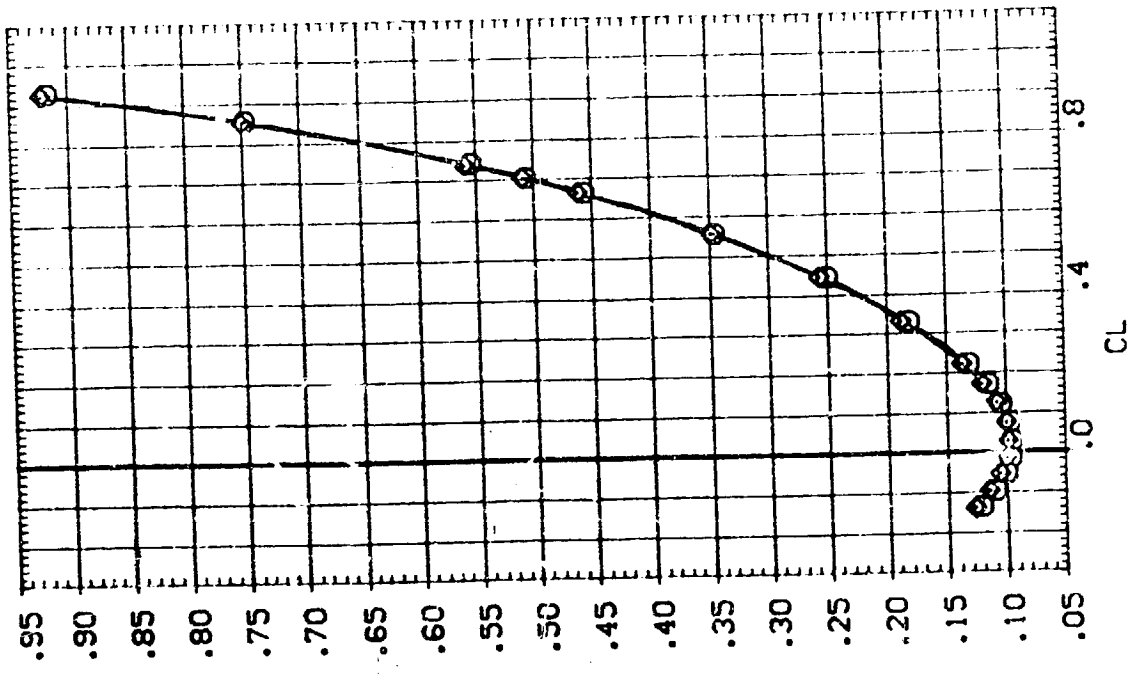
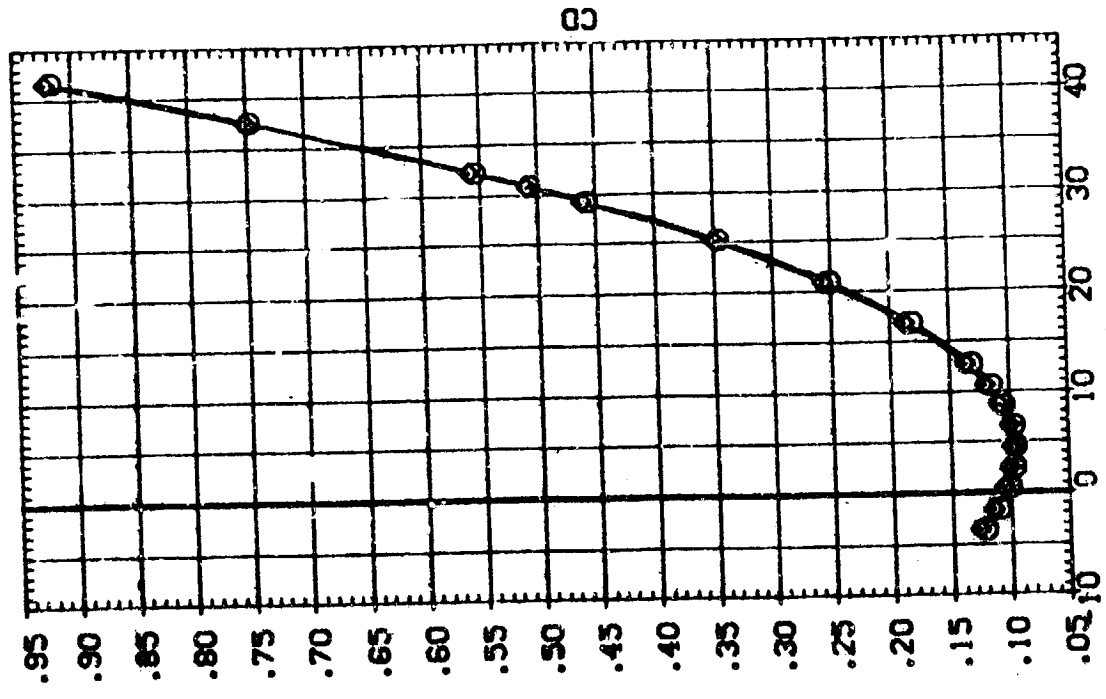


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(D)MACH = 4.83

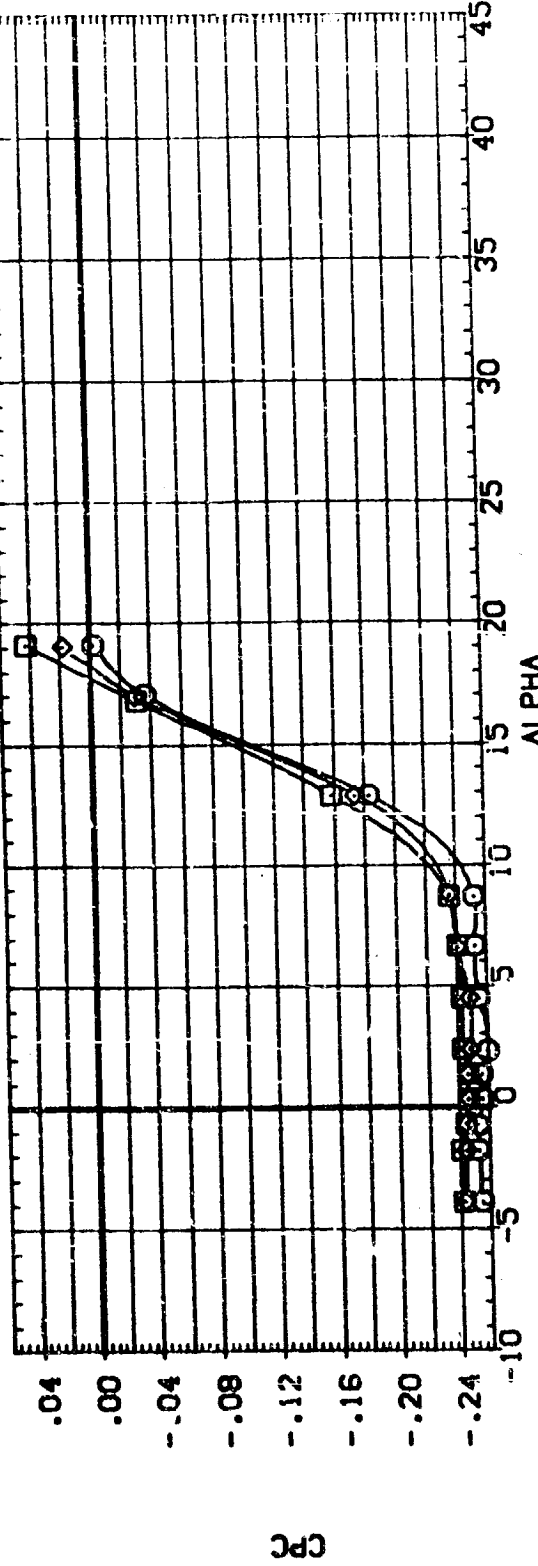


DATA SET SYMBOL
 (NPS107) □
 (NPS108) ◇
 (NPS111) ○

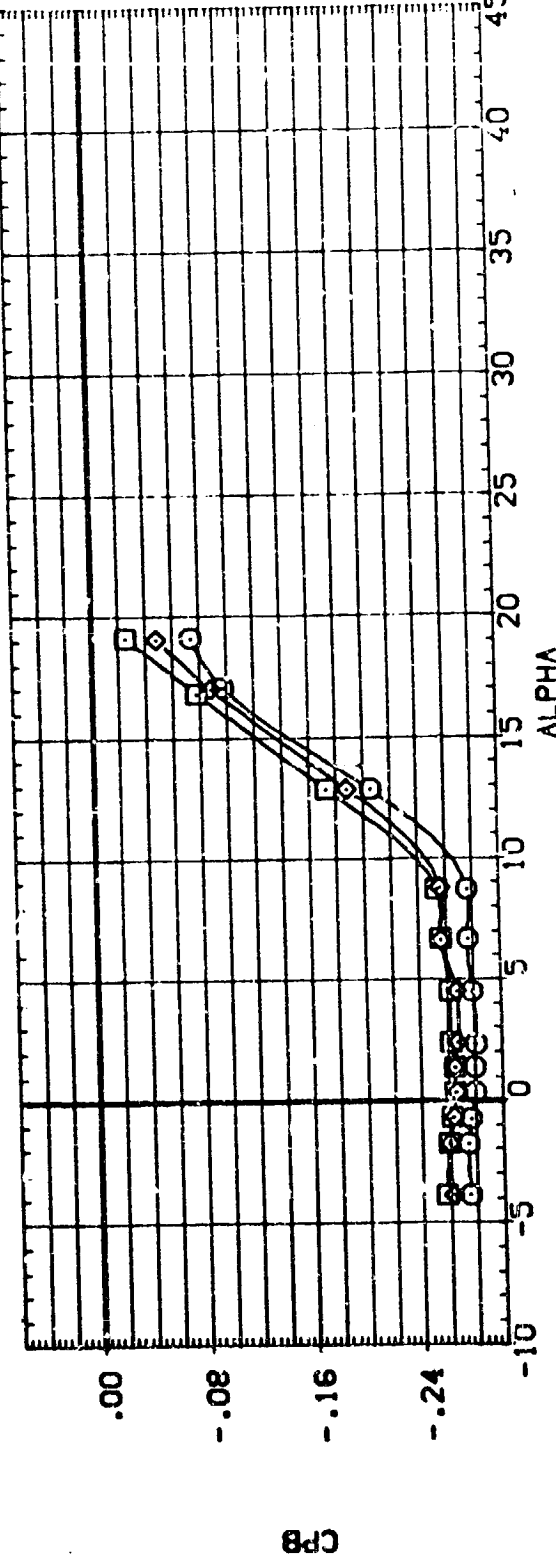
CONFIGURATION DESCRIPTION
 LA-8/8A NAR 085B-MOD. NOSE DRIBBITER
 LA-8/8A NAR 085B-MOD. NOSE DRIBBITER
 LA-8/8A NAR 085B-MOD. NOSE DRIBBITER

AILRDN 10.000
 ELEVTR 10.000
 GT-LOC 1.000
 KVL .000
 SREF 1.000
 LREF 1.000
 XMRP 3.000
 YMRP .000
 ZMRP .000
 SCALE .0188

REFERENC INFORMATION
 SQ. IN. 136.1808
 INCHES 8.3025
 INCHES 17.5628
 INCHES 15.9638
 INCHES .0000
 INCHES .0000
 INCHES .0188
 SCALE



CFC



CPB

FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A) MACH = 1.60

DATA SET SYMBOL: (NPS107) (NPS108) (NPS111)

CONFIGURATION DESCRIPTION: LA-8/8A NAR ORBITER, LA-8/8A NAR ORBITER, LA-8/8A NAR ORBITER

GT-LOC: 1.000, 1.000, 3.000

ELEVTR: -20.000, -20.000, -20.000

AILPRN: 10.000, 10.000, 10.000

K/L: .000, 6.820, 6.820

REFERENCE INFORMATION: SREF 136.1808, LREF 0.5023, XMRP 17.5528, YMRP .0000, ZMRP .0000, SCALE .0188

INFORMATION: 50. IN., INCHES, INCHES, INCHES, INCHES, INCHES, SCALE

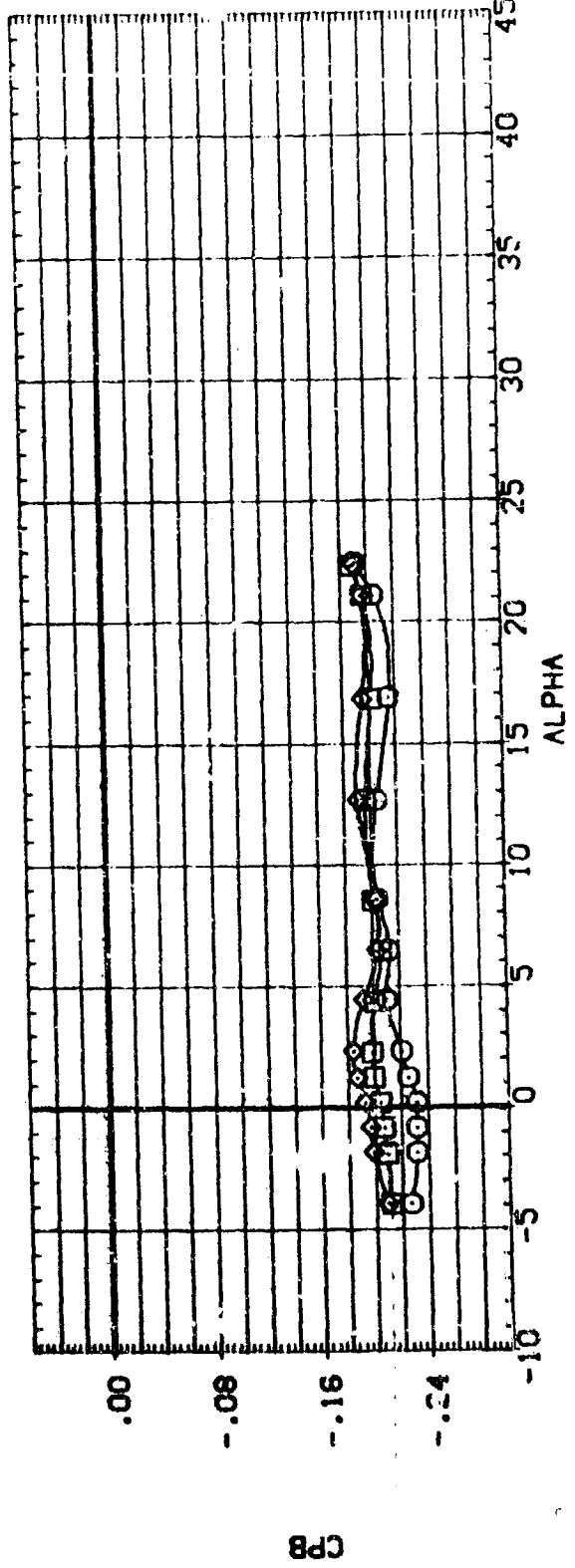
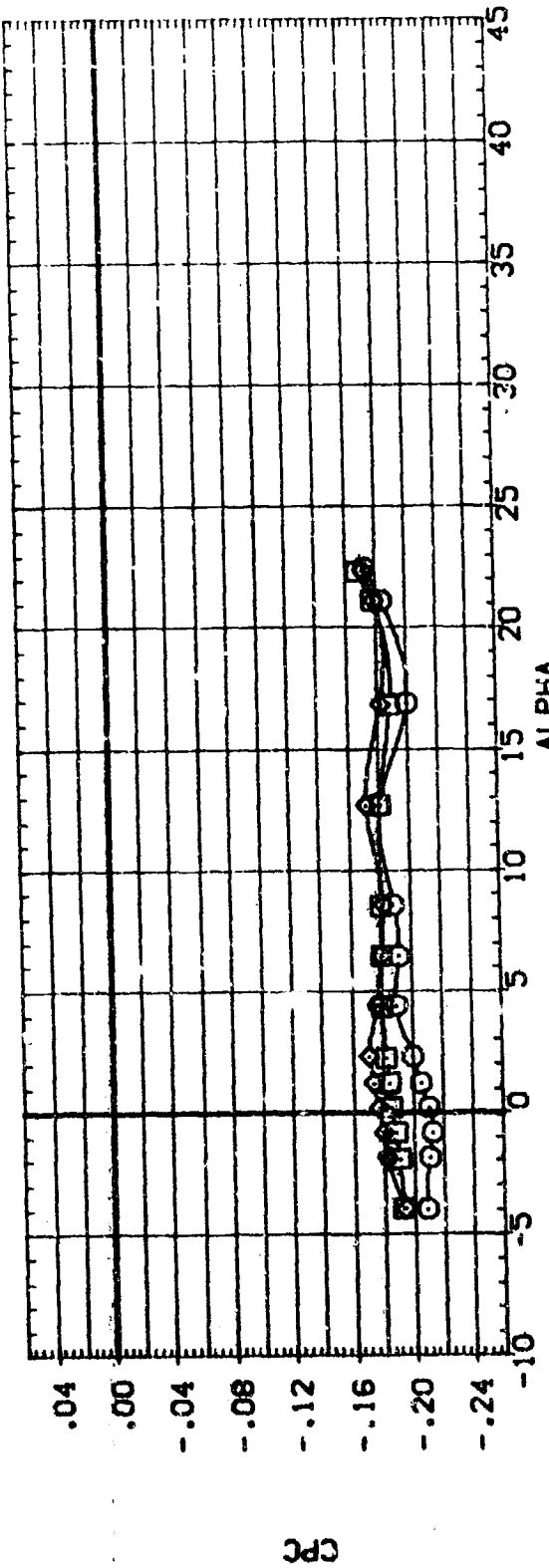


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90



DATA SET SYMBL. (MFD011) (MFD013) □

CONFIGURATION DESCRIPTION
 LA-8/BA NAR 0859-MOD. NOSE ORBITTER
 LA-8/BA NAR 0859-MOD. NOSE ORBITTER

AILRON 10.000
 10.000
 10.000

ELEVTR -20.000
 -20.000
 -20.000

GT-LOC 1.000
 3.000
 3.000

K² .000
 6.820
 6.820

REFERENCE INFORMATION

SREF 136.1808
 LREF 8.9025
 XREF 17.5628
 YREF 15.5638
 ZREF .0000
 SCALE .0188

SO. IN. 50. IN.
 INCHES INCHES
 INCHES INCHES
 INCHES INCHES
 SCALE SCALE

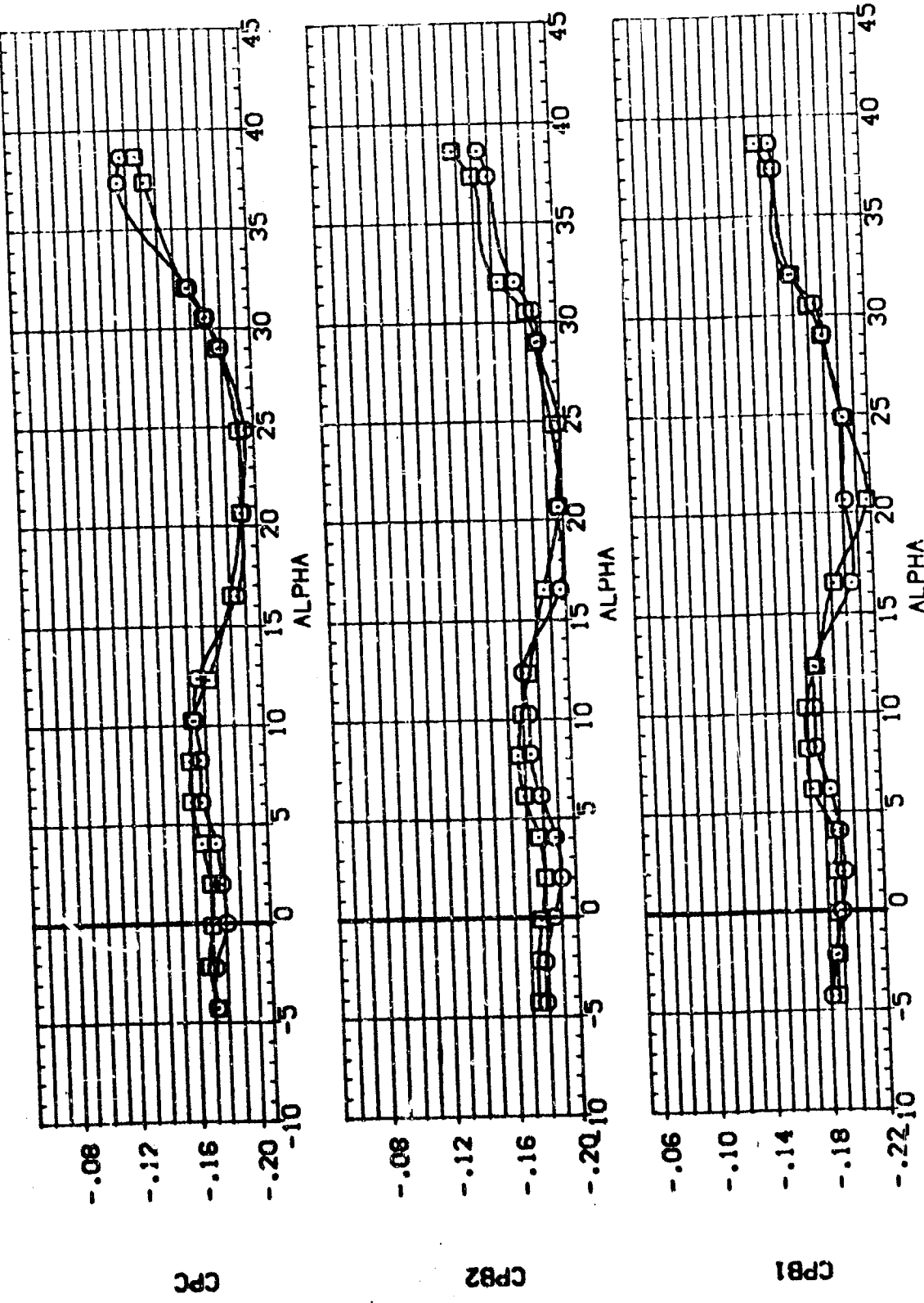


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL: []
 CONFIGURATION DESCRIPTION:
 LA-8/8A NAR 0858-POD. NOSE ORBITER
 LA-8/8A NAR 0858-POD. NOSE ORBITER

AIRION 10.000
 ELEVTR -20.000
 GT-LOC 1.000
 K/L 6.820
 SREF 136.1808
 LREF 9.9023
 BREF 17.5628
 XREF 15.5638
 YREF .0000
 ZREF .0000
 SCALE .0188

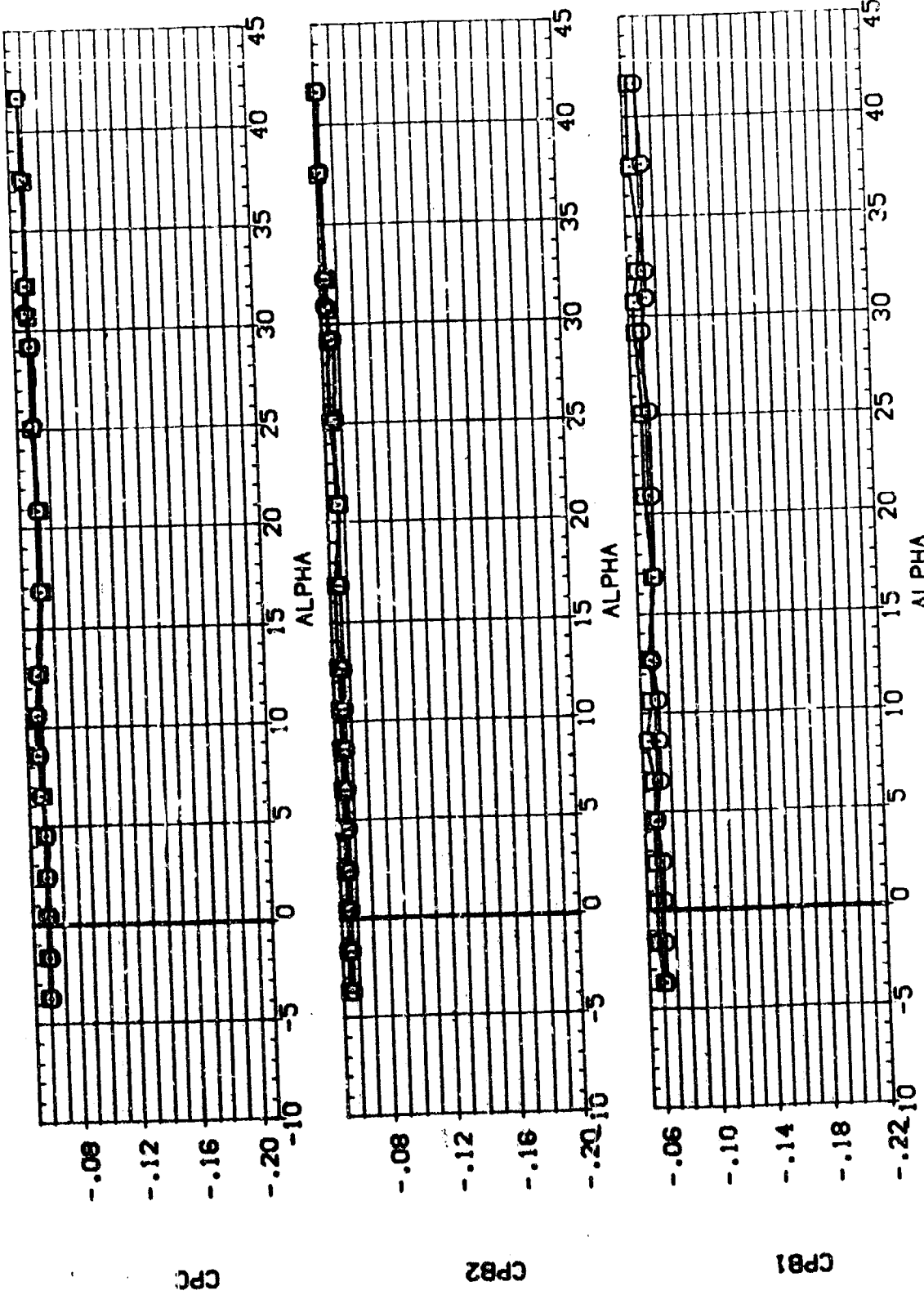


FIG. 2 EFFECT OF ROUGHNESS ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B) MACH = 4.63



DATA SET SYMBOL: (LP6001) (LP6002) (LP6003) (LP6004)
 CONFIGURATION DESCRIPTION: LA-8 LARC UPVT 1023 NAR 0858-MOD; NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD; NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD; NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD; NOSE ORBITER
 BETA: .000, .000, 3.000
 ALPSWP: 1.000, 2.000, 1.000, 2.000
 GT-LOC: 2.000, 2.000, 2.000
 K/L: 6.820, 6.820, 6.820
 SREF: 136.1808, 8.9025, 17.5828, 15.9638, .0000, .0000, .0188
 LREF: INCHES
 XMRP: INCHES
 YMRP: INCHES
 ZMRP: INCHES
 SCALE: SCALE

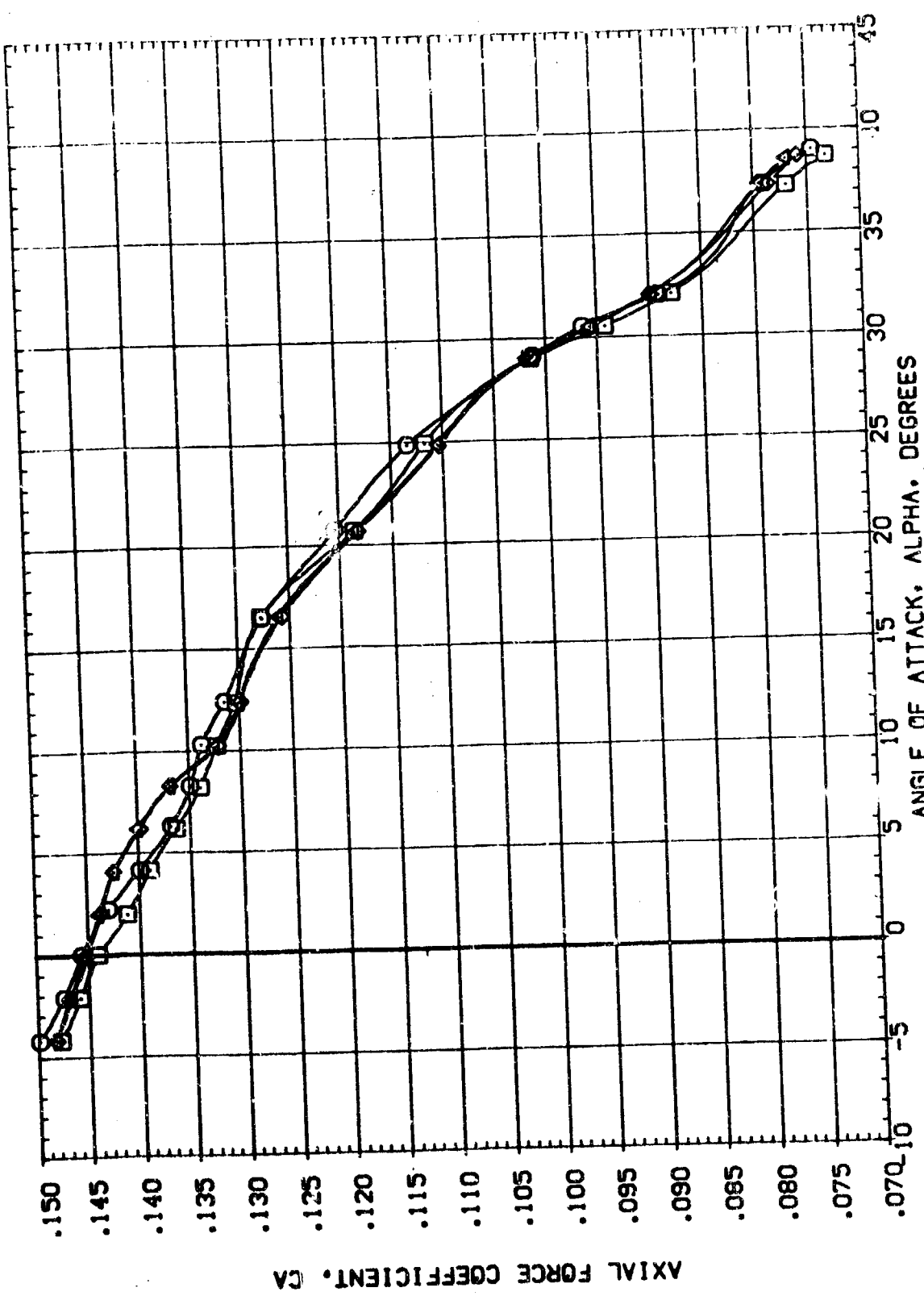


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL
 (LP6001)
 (LP6002)
 (LP6003)
 (LP6004)

CONFIGURATION DESCRIPTION
 LA-8 LARC UPVT 1023 NAR 0858-MOD.
 LA-8 LARC UPVT 1023 NAR 0858-MOD.
 LA-8 LARC UPVT 1023 NAR 0858-MOD.
 LA-8 LARC UPVT 1023 NAR 0858-MOD.

BETA
 .000
 .000
 3.000
 3.000

ALPSVP
 1.000
 2.000
 1.000
 2.000

GT-LOC
 2.000
 2.000
 2.000
 2.000

K/L
 6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 SREF 136.1808
 LREF 8.9035
 BREF 17.5628
 XMRP 15.9538
 YMRP .0000
 ZMRP .0188

SCALE
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES

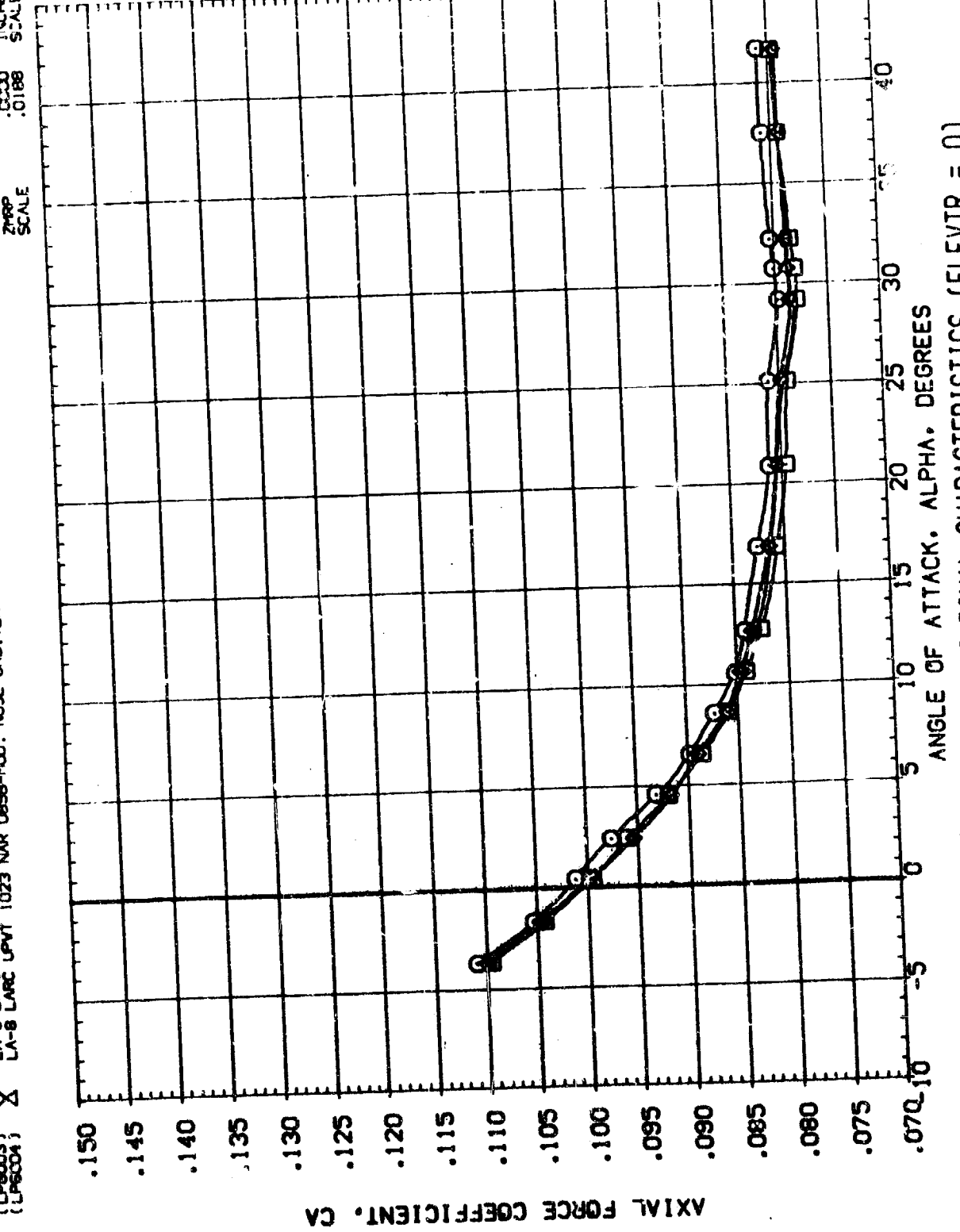


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 4.63



DATA SET SYMBOL: (LP6001) (LP6002) (LP6003) (LP6004)
 CONFIGURATION DESCRIPTION: LA-8 LARC LPV1 1023 NAR 0898-100; NOSE ORBITER; LA-8 LARC LPV1 1023 NAR 0898-100; NOSE ORBITER; LA-8 LARC LPVT 1023 NAR 0898-100; NOSE ORBITER; LA-8 LARC LPVT 1023 NAR 0898-100; NOSE ORBITER
 BETA: .000; .000; 3.000; 3.000
 ALPSPV: 1.000; 2.000; 1.000; 2.000
 GT-LOC: 2.000; 2.000; 2.000; 2.000
 K/L: 6.820; 6.820; 6.820; 6.820
 SREF: 1.0; 6.0; 15.0; 17.5628
 LREF: 3025; 3025; 3025; 3025
 BREF: 17.5628; 17.5628; 17.5628; 17.5628
 XMRP: .0000; .0000; .0000; .0000
 YMRP: .0188; .0188; .0188; .0188
 ZMRP: .0188; .0188; .0188; .0188
 SCALE: .0188; .0188; .0188; .0188
 REFEREN: 1.0; 6.0; 15.0; 17.5628
 INFORMATION: SQ. IN.; INCHES; INCHES; INCHES; INCHES; INCHES; SCALE

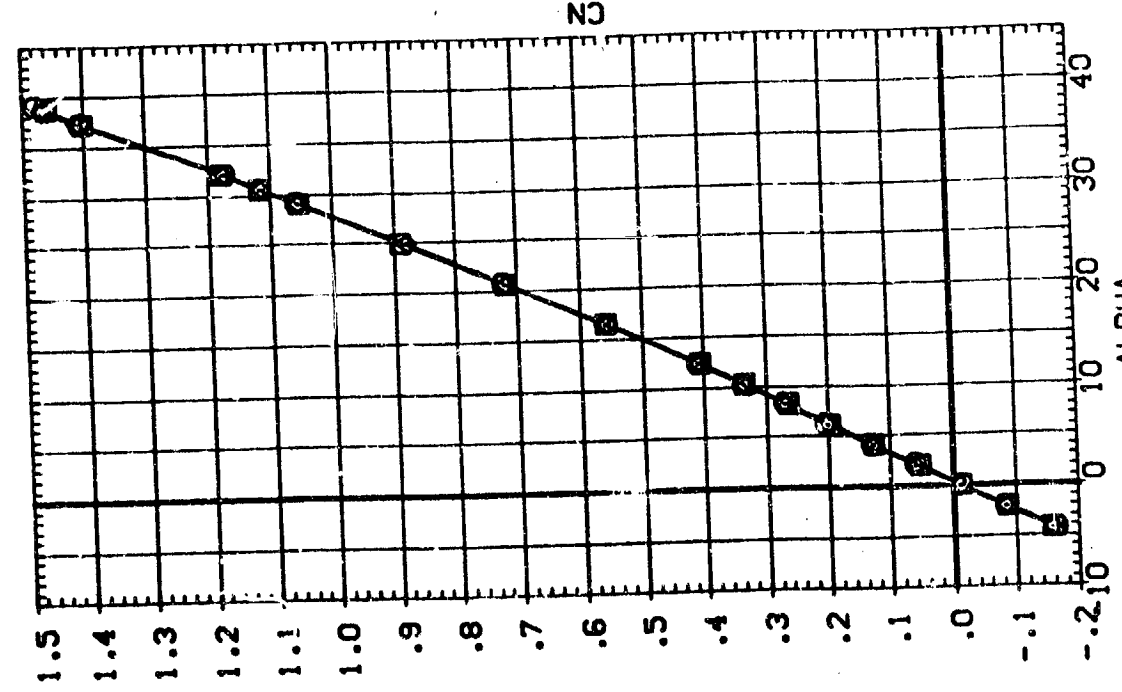
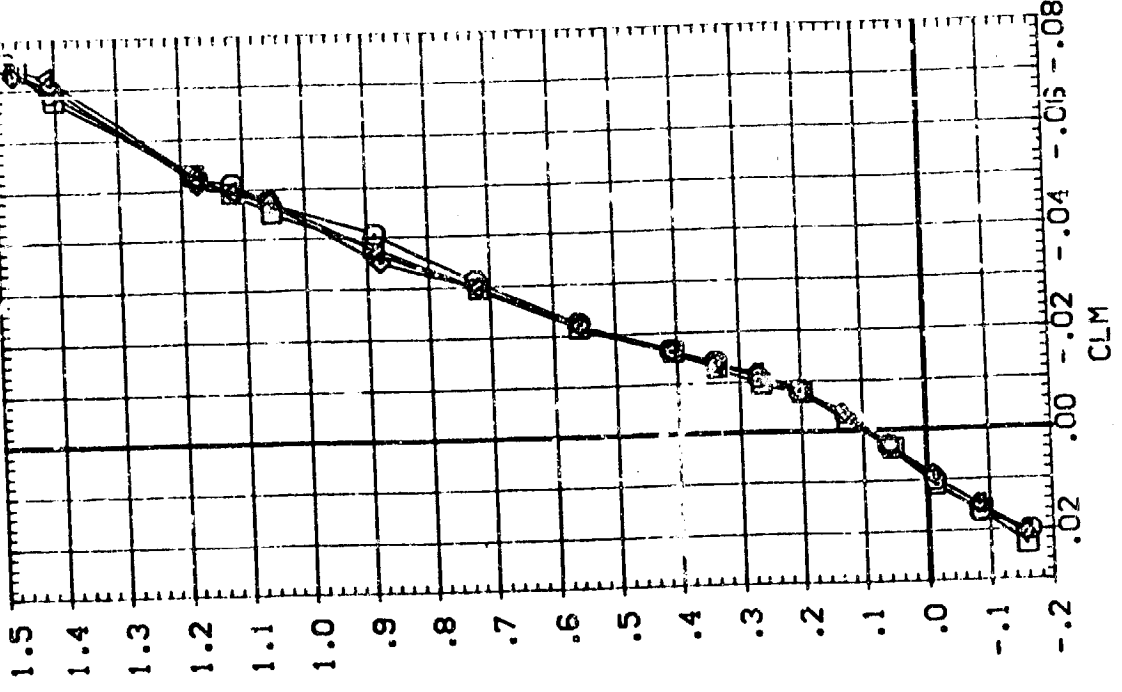


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL
 (LP6001)
 (LP6002)
 (LP6003)
 (LP6004)

BETA
 .000
 .000
 3.000
 3.000

CONFIGURATION DESCRIPTION
 LA-8 LARC LPVT 1023 MAR 0658-MOD. NOSE ORBITER
 LA-8 LARC LPVT 023 MAR 0658-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 MAR 0658-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 MAR 0658-MOD. NOSE ORBITER

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.9075 INCHES
 BREF 17.5528 INCHES
 XTRP 15.8678 INCHES
 YTRP .0000 INCHES
 ZTRP .0000 INCHES
 SCALE .0188 SCALE

GT-LOC
 2.000
 2.500
 2.000

K/L
 5.820
 5.820
 5.820

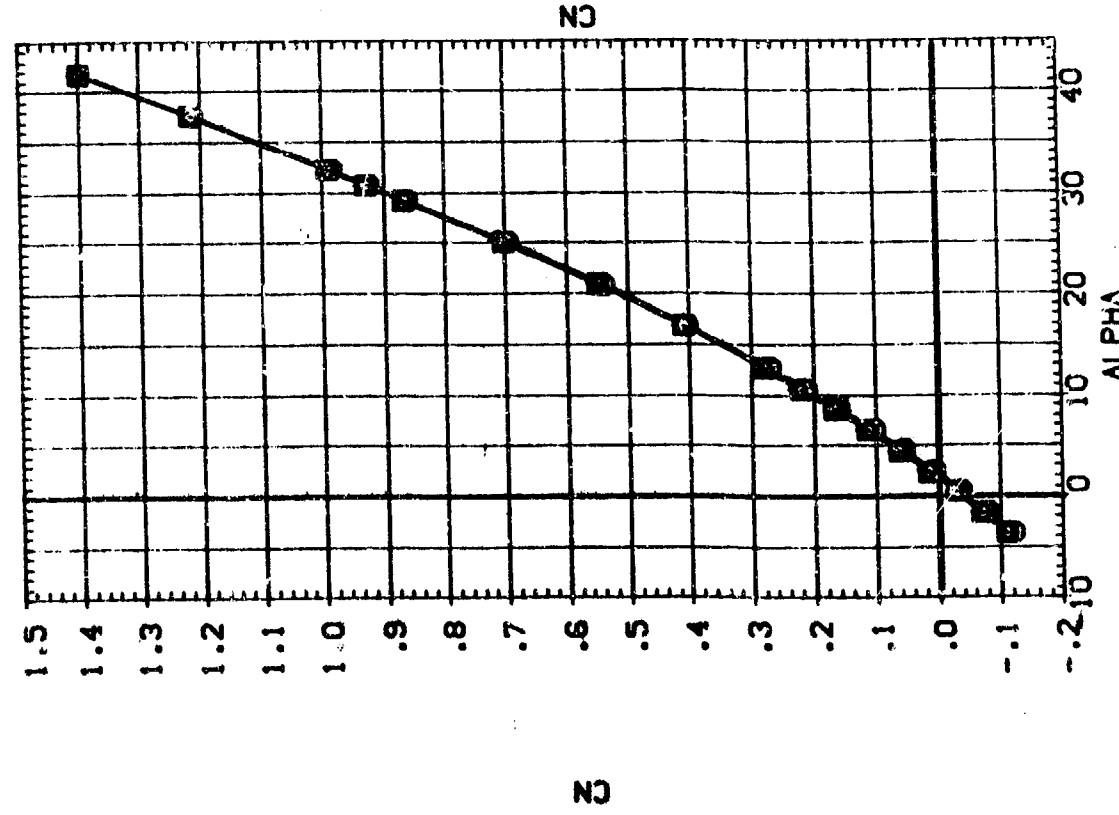
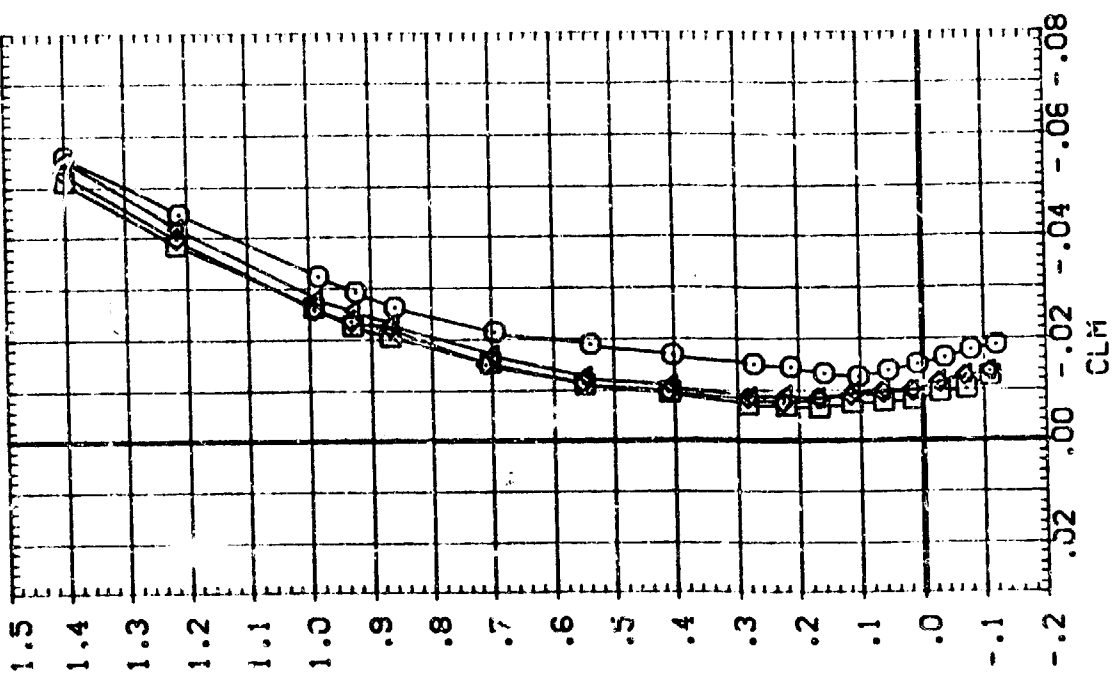


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 4.63

BETA: .000
 .000
 .000
 3.000
 3.000

ALPSP: 1.000
 2.000
 1.000
 2.000

GT-LOC: 2.000
 2.000
 2.000
 2.000

K: 6.828
 6.820
 6.820
 6.820

REFERENCE INFORMATION:
 SREF: 136.1801
 LREF: 8.5021
 BREF: 17.5621
 XPRP: 15.9631
 YPRP: .0001
 ZPRP: .0001
 SCALE: .0181

SO, IN.: INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES
 INCHES

DATA SET SYMBOL: (LP6001)
 (LP6002)
 (LP6003)
 (LP6004)

CONFIGURATION DESCRIPTION:
 LA-8 LARC LPVT 1023 MAR 0858-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 MAR 0858-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 MAR 0858-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 MAR 0858-MOD. NOSE ORBITER

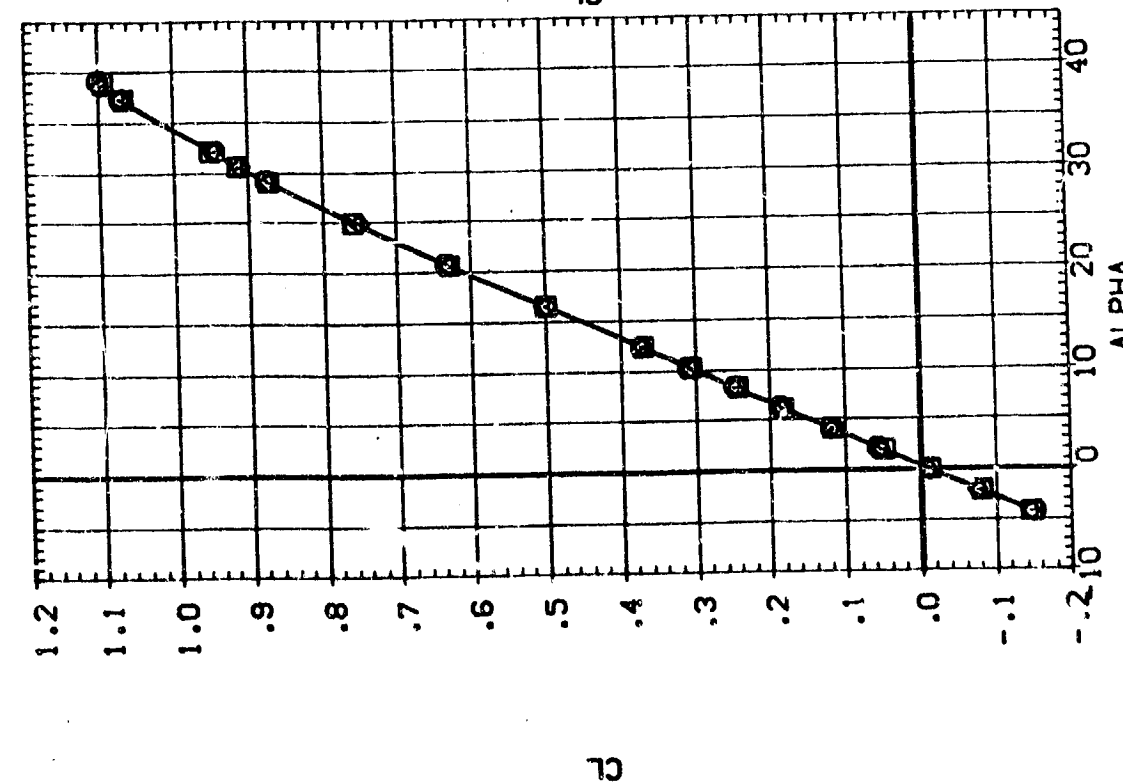
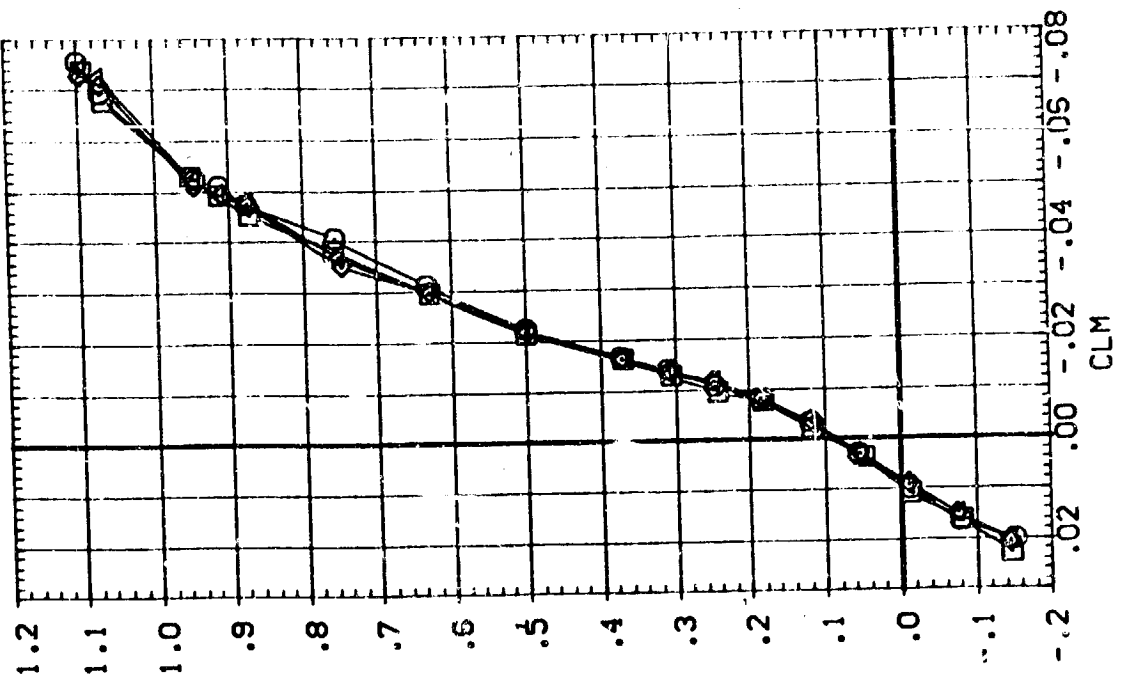


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

BETA .000
 .000
 3.000
 3.000

ALPSPV 1.000
 2.000
 2.000

GT-LOC 2.000
 2.000
 2.000

K/V 6.820
 6.820
 6.820

SREF 136.1808
 LREF 8.9025
 BREF 17.5628
 YMRP .0000
 ZMRP .0000
 SCALE .0188

REFERENCE INFORMATION
 SQ. IN INCHES
 INCHES INCHES
 INCHES INCHES
 INCHES INCHES
 SCALE

DATA SET SYMBOL
 (LP6001)
 (LP6002)
 (LP6003)
 (LP6004)

CONFIGURATION DESCRIPTION
 LA-8 L'ARC UPVT 1023 NAR 0698-MOD.
 LA-8 L'ARC UPVT 1023 NAR 0698-MOD.
 LA-8 L'ARC UPVT 1023 NAR 0698-MOD.
 LA-8 L'ARC UPVT 1023 NAR 0698-MOD.

NOSE ORBITTER
 NOSE ORBITTER
 NOSE ORBITTER
 NOSE ORBITTER

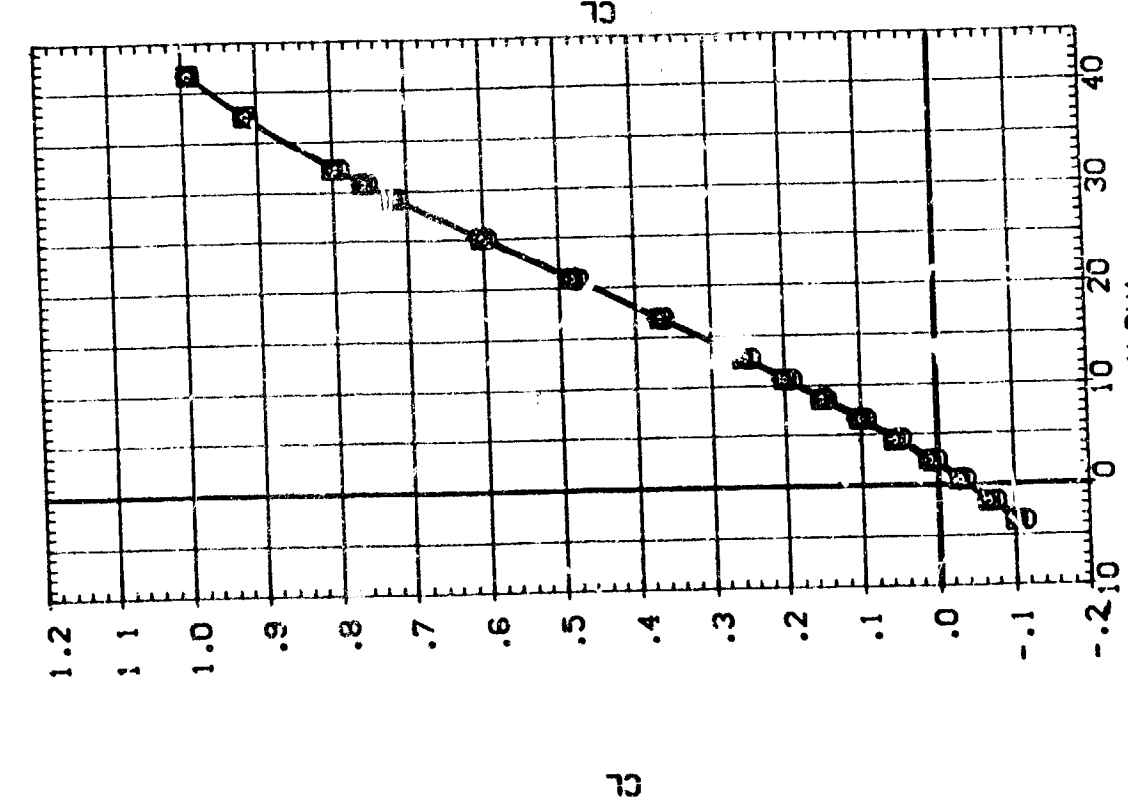
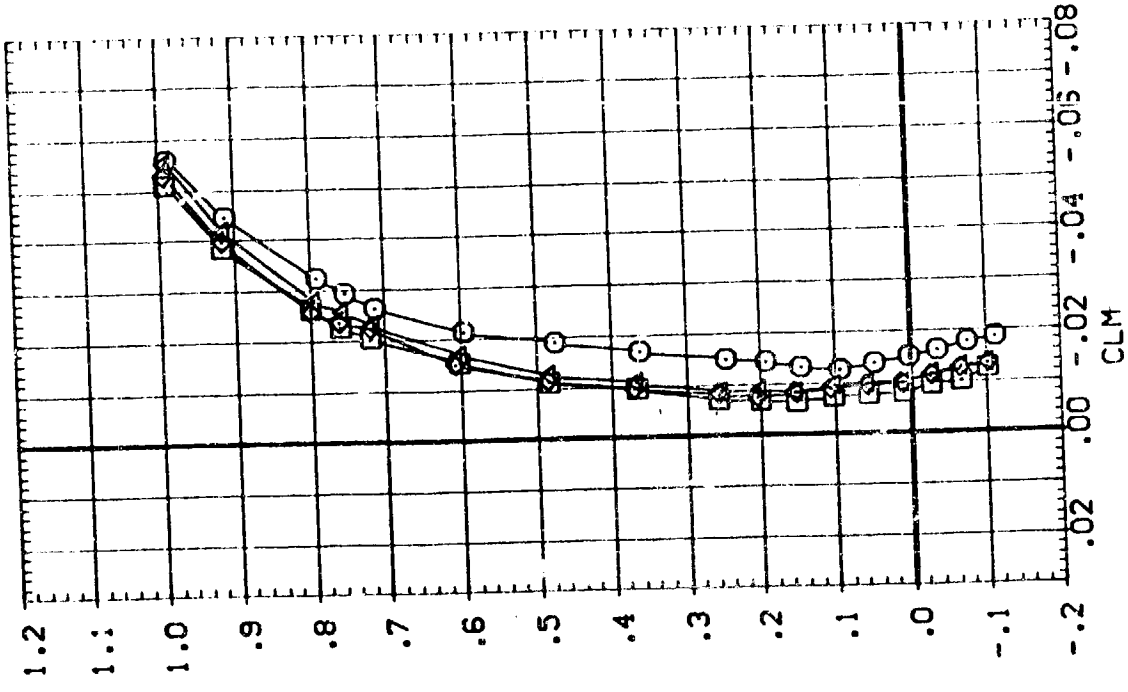


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B'MACH = 4.63)

DATA SET SYMBOL: (LP6001) (LP6002) (LP6003) (LP6004)
 CONFIGURATION DESCRIPTION: LA-8 LARC LPNT 1023 MAR 0958-MOD. NOISE ORBITER
 LA-8 LARC LPNT 1023 MAR 0958-MOD. NOISE ORBITER
 LA-8 LARC LPNT 1023 MAR 0958-MOD. NOISE ORBITER
 LA-8 LARC LPNT 1023 MAR 0958-MOD. NOISE ORBITER
 BETA: .000, .000, 3.000, 3.000
 ALPMA: 1.000, 2.000, 1.000, 2.000
 OT-LOC: 2.000, 2.000, 2.000, 2.000
 K/L: 6.820, 6.820, 6.820, 6.820
 REFERENCE INFORMATION: SREF: 136.1806, LREF: 19.9025, BREF: 17.5628, XREF: 15.5630, YREF: .0000, ZREF: .0000, SCALE: .0188

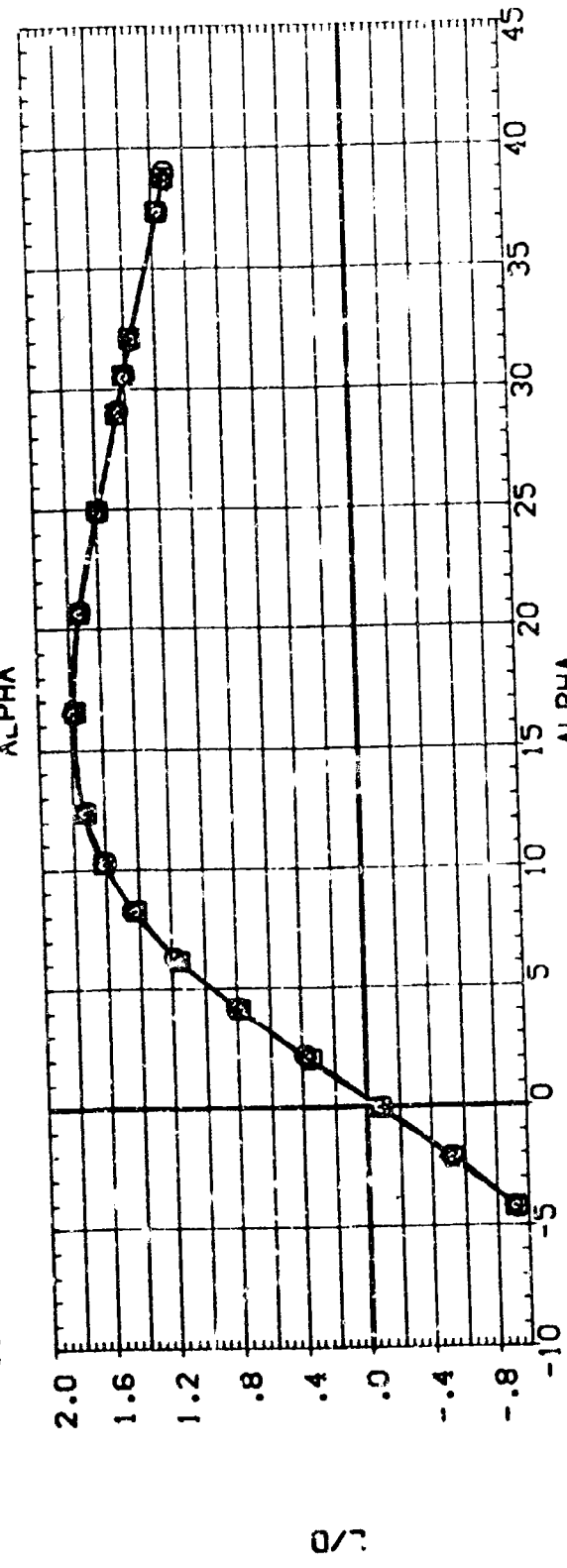
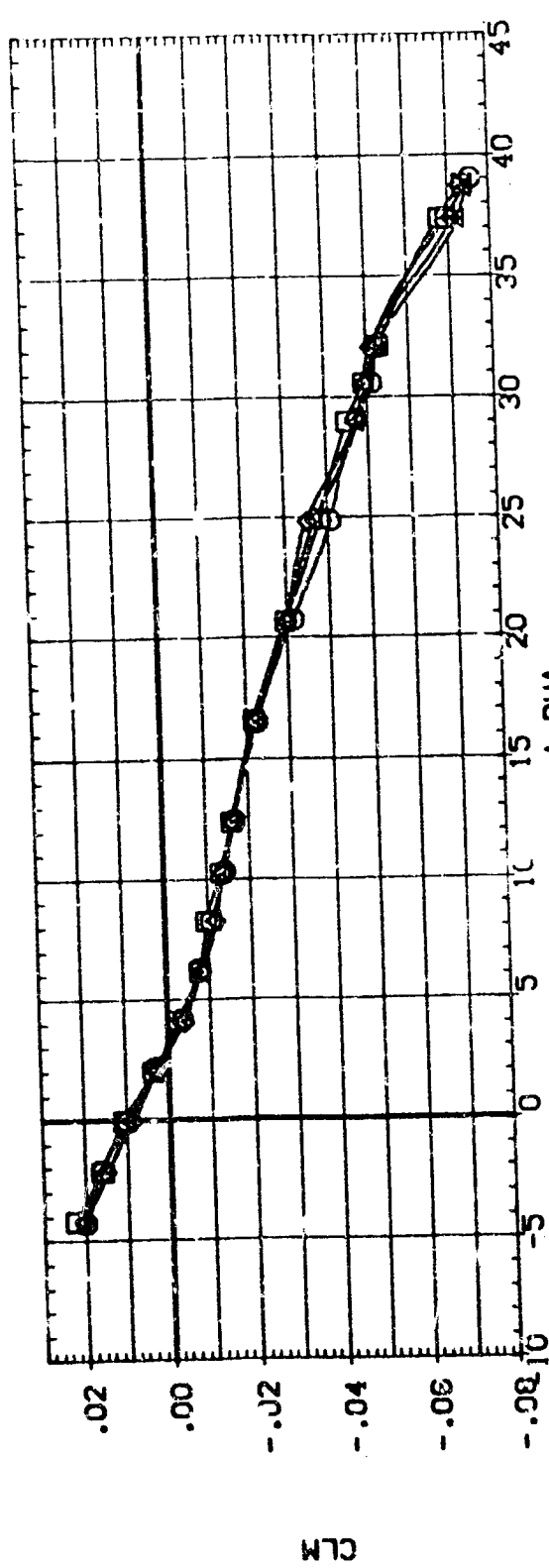


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

REFERENCE INFORMATION
 SREF 136.1808 SCI. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XHREF 15.9638 INCHES
 YHREF .0000 INCHES
 ZHREF .0188 INCHES
 SCALE

BETA ALPSPV GT-LGC K/L
 .000 1.000 2.000 6.820
 .000 2.000 2.000 6.820
 3.000 1.000 2.000 6.820
 3.000 2.000 2.000 6.820

CONFIGURATION DESCRIPTION
 LA-8 LARC PVT 1023 NAR 0898-MOD. NOISE ORBITER
 LA-8 LARC PVT 1023 NAR 0898-MOD. NOISE ORBITER
 LA-8 LARC PVT 1023 NAR 0898-MOD. NOISE ORBITER
 LA-8 LARC PVT 1023 NAR 0898-MOD. NOISE ORBITER

DATA SET SYMBOL
 (LP6001)
 (LP6002)
 (LP6003)
 (LP6004)

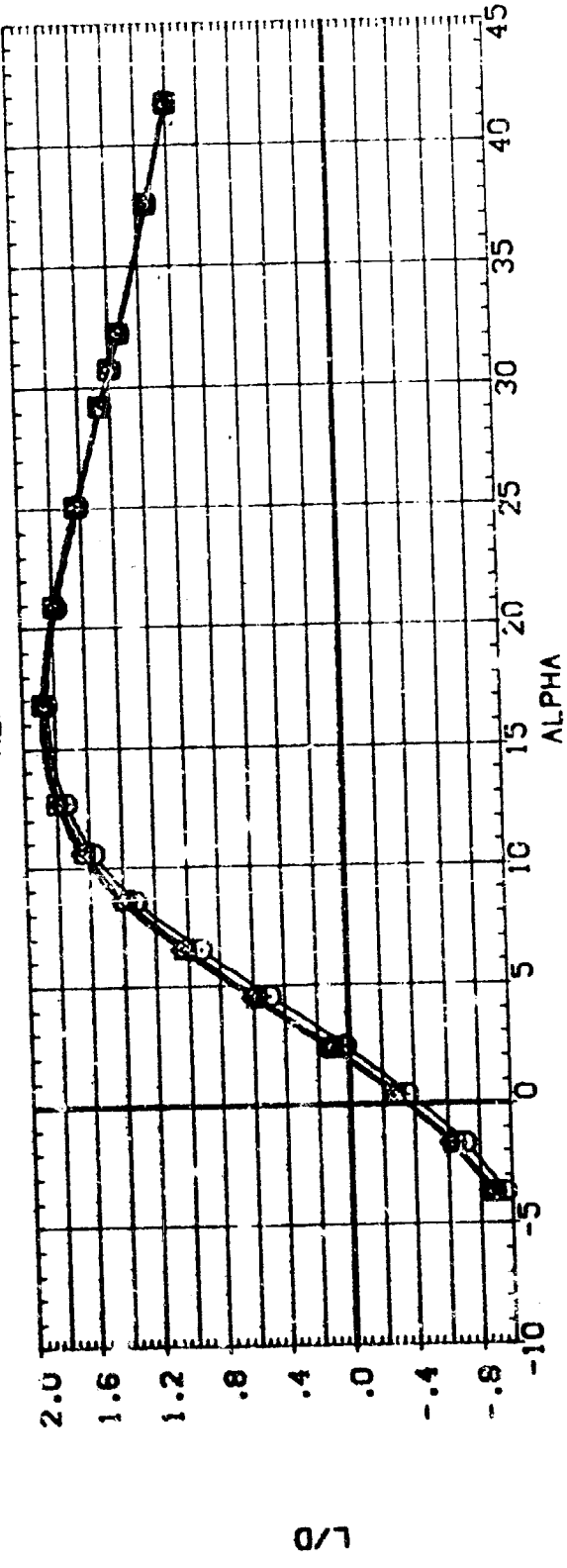
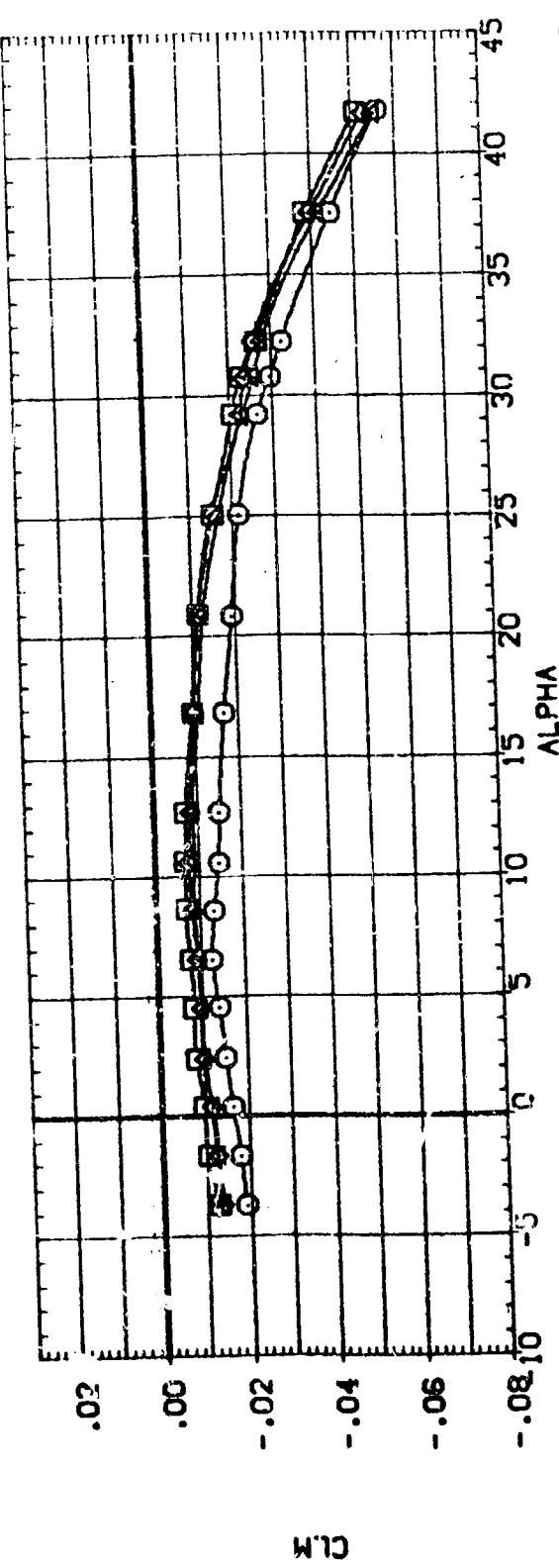


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)
 (B)MACH = 4.63



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		REFERENCE INFORMATION	
(LP6001)	LA-8 LARC UPVT 1023 NAR 0838-H00	SREF	136.1808	SL, IN.	INCHES
(LP6002)	LA-8 LARC UPVT 1023 NAR 0838-H00	LREF	9.9075	LR, IN.	INCHES
(LP6003)	LA-8 LARC UPVT 1023 NAR 0838-H00	BREF	17.5628	BR, IN.	INCHES
(LP6004)	LA-8 LARC UPVT 1023 NAR 0838-H00	XPRP	15	XPRP	INCHES
		YPRP	.0000	YPRP	INCHES
		ZPRP	.0000	ZPRP	INCHES
		SCALE	.0188	SCALE	SCALE

BETA		ALPSPV		GT-LOC		K/L	
.000	1.000	2.000	6.820				
.000	2.000	2.000	6.820				
3.000	1.000	2.000	6.820				
3.000	2.000	2.000	6.820				

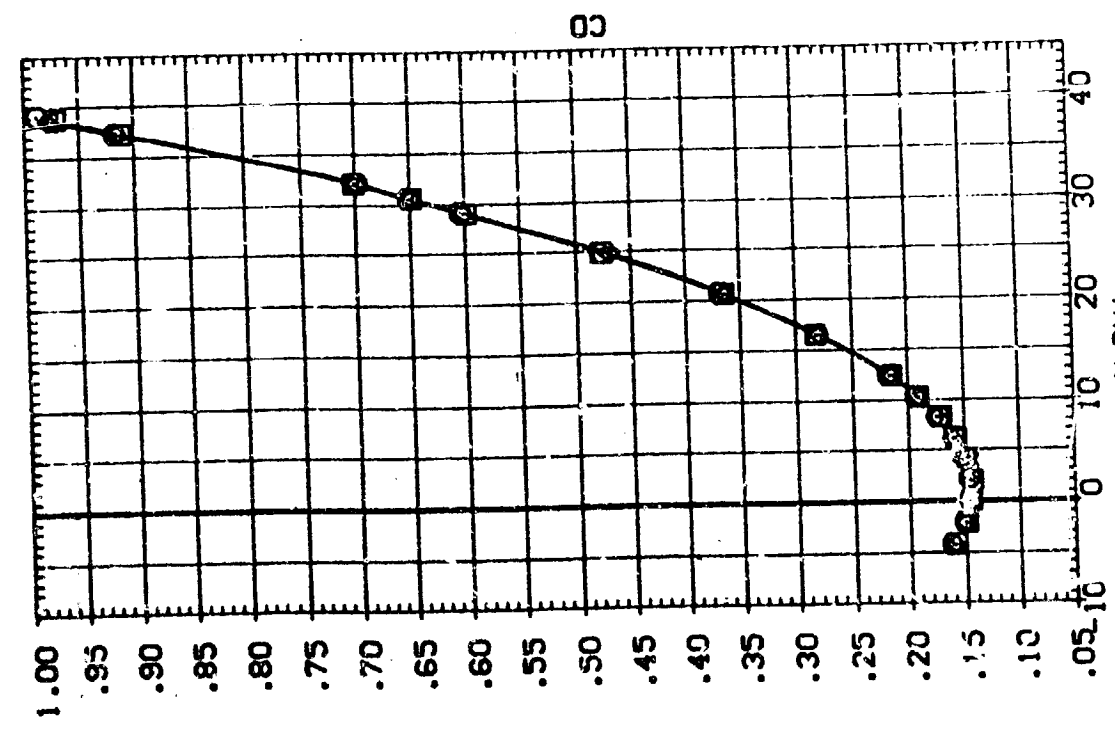
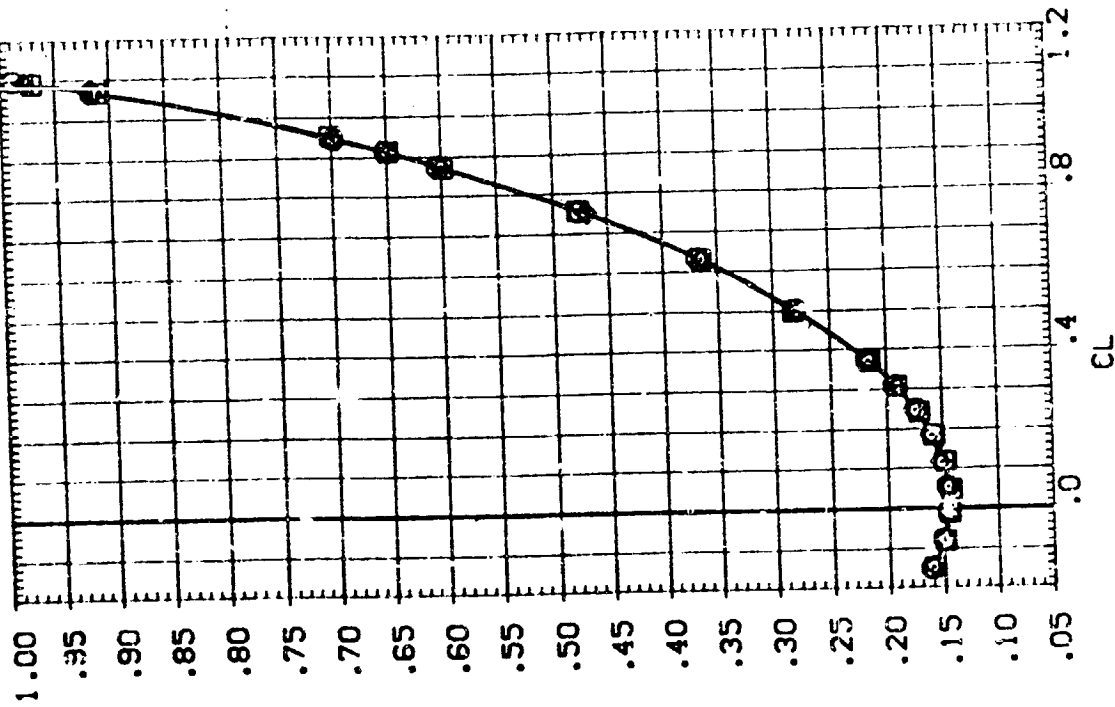


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL: (LP6001), (LP6002), (LP6003), (LP6004)
 CONFIGURATION DESCRIPTION: LA-8 LARC LPVT 1023 NAR 0858-MOD. NOISE ORBITER, LA-8 LARC LPVT 1023 NAR 0858-MOD. NOISE ORBITER, LA-8 LARC LPVT 1023 NAR 0858-MOD. NOISE ORBITER, LA-3 LARC LPVT 1023 NAR 0858-MOD. NOISE ORBITER
 BETA: .000, .000, 3.000, 3.000
 ALFSWP: 1.000, 2.000, 1.000, 2.000
 GT-LOC: 2.000, 2.000, 2.000, 2.000
 KVA: 6.820, 6.820, 6.820, 6.820
 SREF: 136.1308, 9.9375, 17.9428, 15.5638
 LREF: 1.000, 1.000, 1.000, 1.000
 BREF: 1.000, 1.000, 1.000, 1.000
 XPRP: .0000, .0000, .0000, .0000
 YPRP: .0188, .0188, .0188, .0188
 ZPRP: .0188, .0188, .0188, .0188
 SCALE: 1/2 IN., 1/2 IN., 1/2 IN., 1/2 IN.

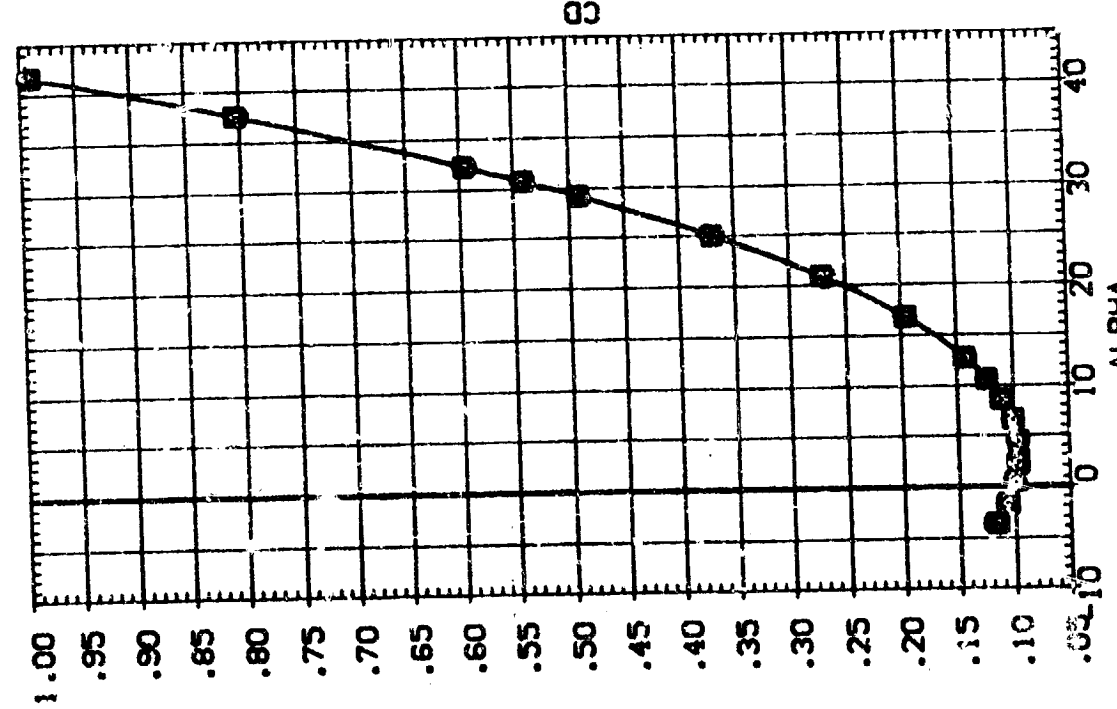
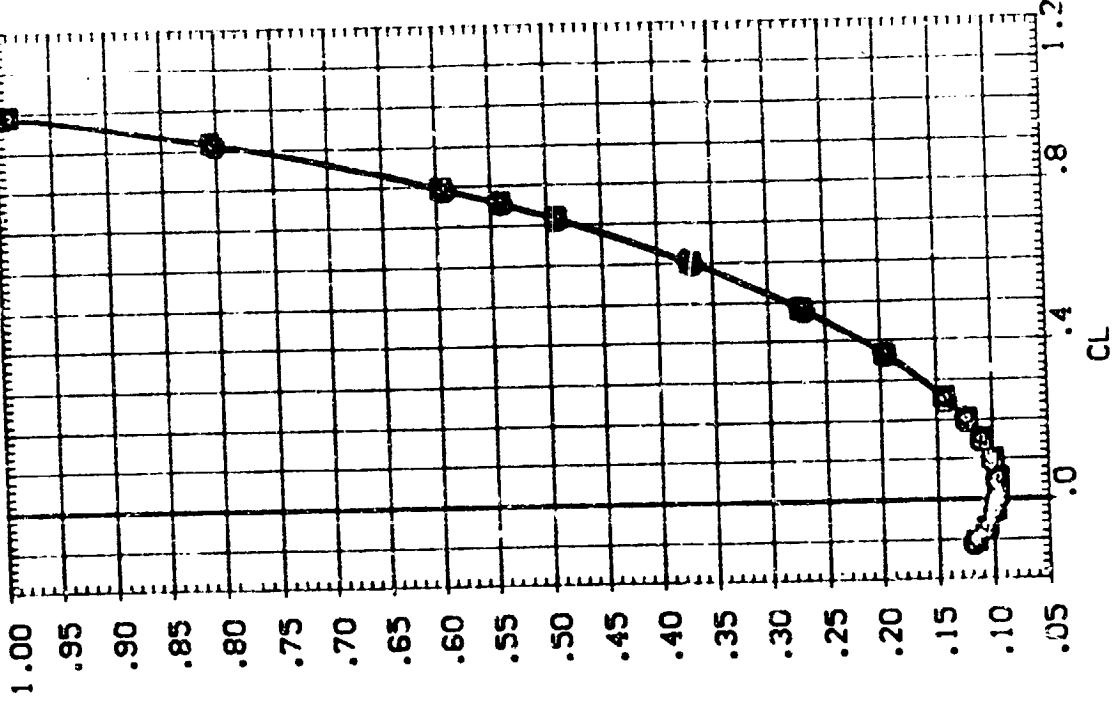


FIG. 3 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 4.63



DATA SET SYMBOL: (C-6013), (C-6014), (C-6015), (C-6016)
 CONFIGURATION DESCRIPTION: LA-8 LARC UPVT 1023 NAR 0858-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0858-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0858-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0858-100, NOSE ORBITER
 BETA: .000, -3.000
 ALPSPV: 1.000, 2.000
 GT-LOC: 3.000, 3.000, 3.000
 K/L: 6.820, 6.820, 6.820, 6.820
 REFERENCE INFORMATION: SREF 136.1808 SO IN INCHES; LREF 8.9025 IN INCHES; PREF 17.5628 IN INCHES; XREF 15.9638 IN INCHES; YREF 0.000 IN INCHES; ZREF 0.000 IN INCHES; SCALE .0188

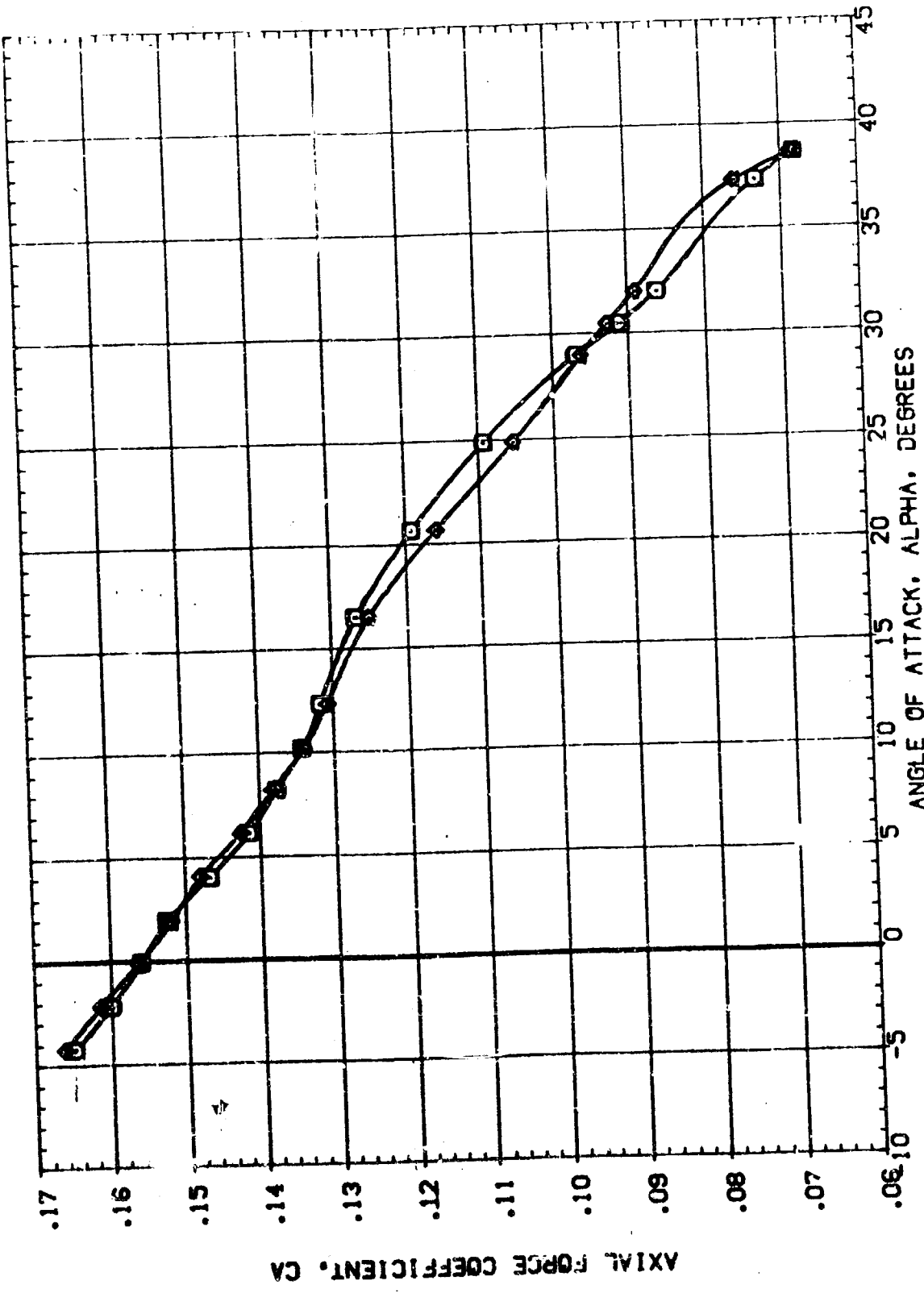


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ALPSPV	GT-LOC	K/L	REFERENCE INFORMATION	SC. IN.
(CP6013)	LA-8 LARC UPVT 1023 NAR 0898-HOD. NOSE ORBITER	.000	1.000	3.000	6.820	SREF 136.1808	INCHES
(CP6014)	LA-8 LARC UPVT 1023 NAR 0898-HOD. NOSE ORBITER	.000	2.000	3.000	6.820	LREF 8.5025	INCHES
(CP6015)	LA-8 LARC UPVT 1023 NAR 0898-HOD. NOSE ORBITER	-3.000	1.000	3.000	6.820	BREF 17.5628	INCHES
(CP6016)	LA-8 LARC UPVT 1023 NAR 0898-HOD. NOSE ORBITER	-3.000	2.000	3.000	6.820	XMRP 15.5638	INCHES
						ZMRP .0000	INCHES
						SCALE .0188	SCALE

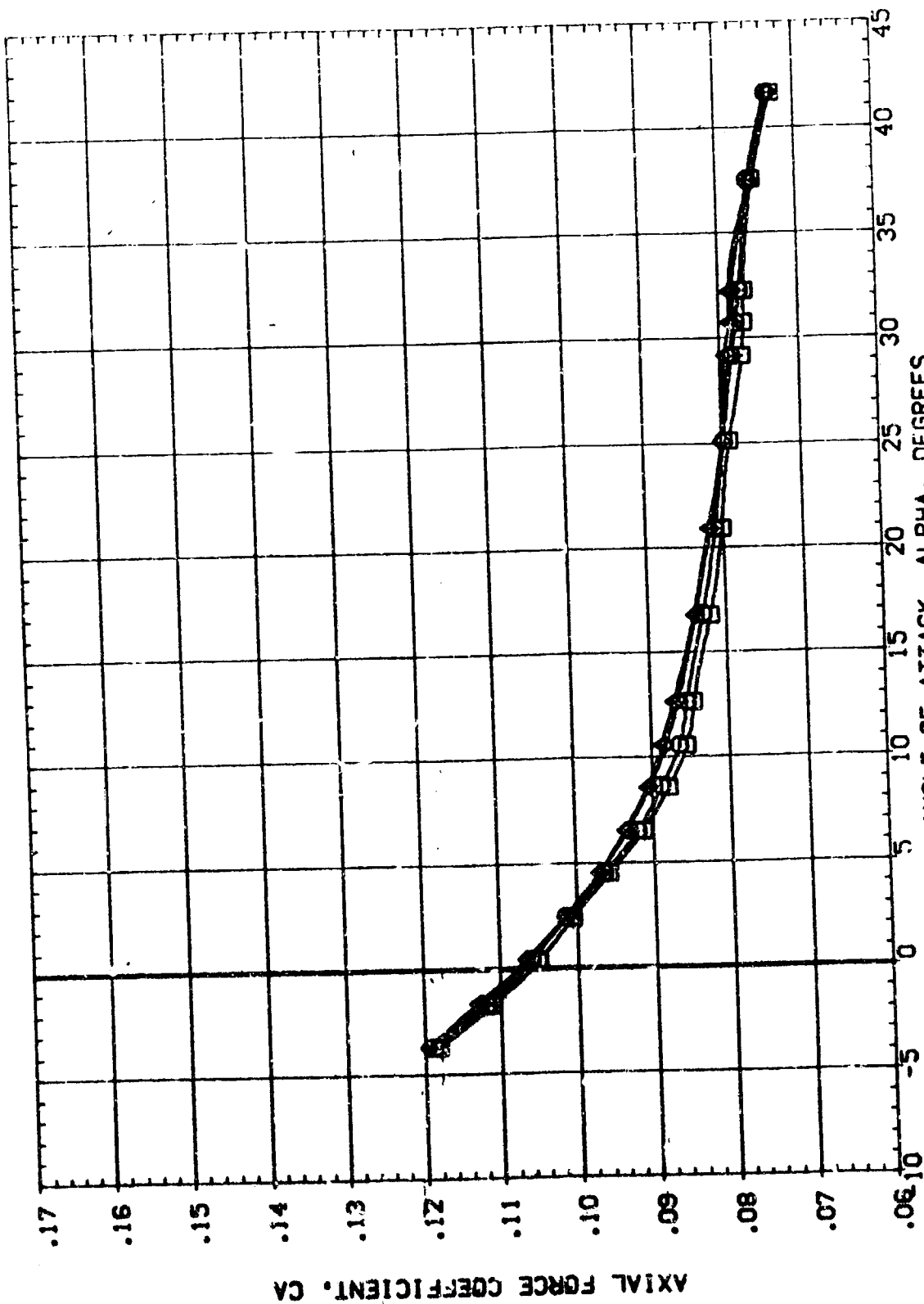


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 6.63

DATA SET SYMBOL: (CP8013) (CP8014) (CP8015) (CP8016)
 CONFIGURATION DESCRIPTION: LA-8 LARC UPVT 1023 NAR OBSB-MOD. NOSE DRBITER
 LA-8 LARC UPVT 1023 NAR OBSB-MOD. NOSE DRBITER
 LA-8 LARC UPVT 1023 NAR OBSB-MOD. NOSE DRBITER
 LA-8 LARC UPVT 1023 NAR OBSB-MOD. NOSE DRBITER
 REFERENCE INFORMATION: SREF 136.1808 SQ. IN. INCHES
 LREF 8.9025 INCHES
 XMRP 15.5628 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

BETA: .000
 .000
 -3.000
 ALPSP: 1.000
 2.000
 1.000
 2.000
 GT-LOC: 3.000
 3.000
 3.000
 3.000
 K/L: 6.820
 6.820
 6.820
 6.820

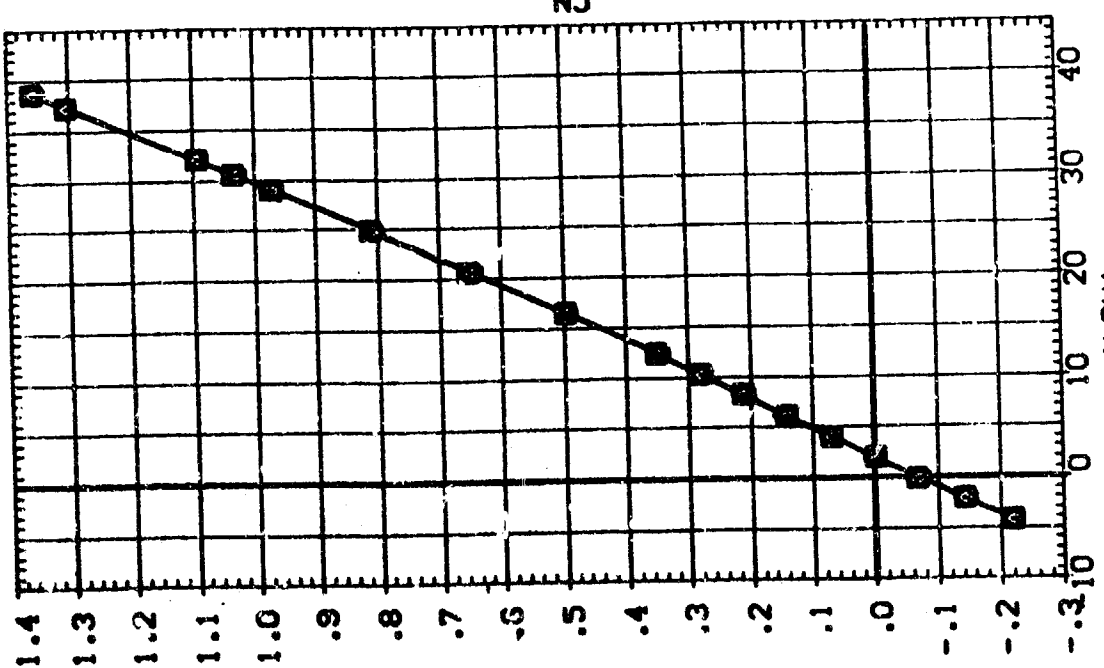
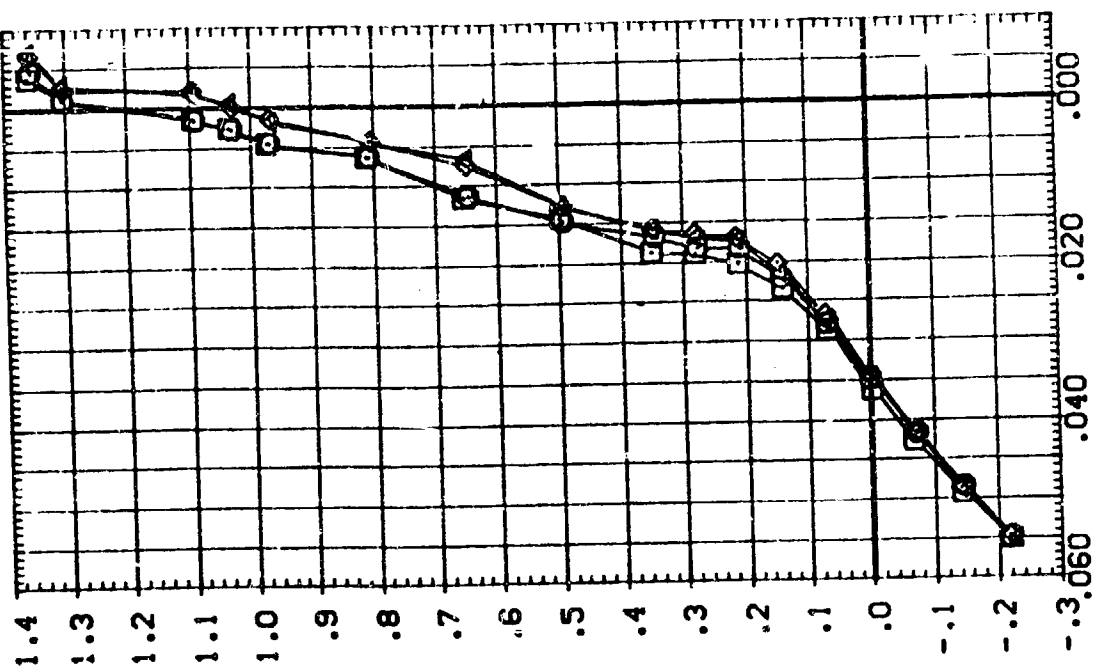


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 2.36

DATA SET SYMBOL: (CP6013), (CP6014), (CP6015), (CP6016)
 CONFIGURATION: LA-8 LARC LPNT 1023, LA-8 LARC LPNT 1023, LA-8 LARC LPNT 1023
 DESCRIPTION: NAR 0898-100, NAR 0898-100, NAR 0898-100
 NOSE ORBITER: NOSE ORBITER, NOSE ORBITER, NOSE ORBITER
 REFERENCE INFORMATION: SQ. IN. 136.1808, SREF 6.820, GT-LOC 3.000, ALPSP 1.000, BETA .000
 INCHES 8.5025, LREF 6.820, KVL 6.820, SREF 6.820, ALPSP 2.000, BETA .000
 INCHES 17.5628, BRFP 6.820, GT-LOC 3.000, ALPSP 3.000, BETA .000
 INCHES 15.5638, XTRP .000, GT-LOC 3.000, ALPSP 2.000, BETA -3.000
 INCHES .0000, ZTRP .0000, SCALE .0188, BETA -3.000

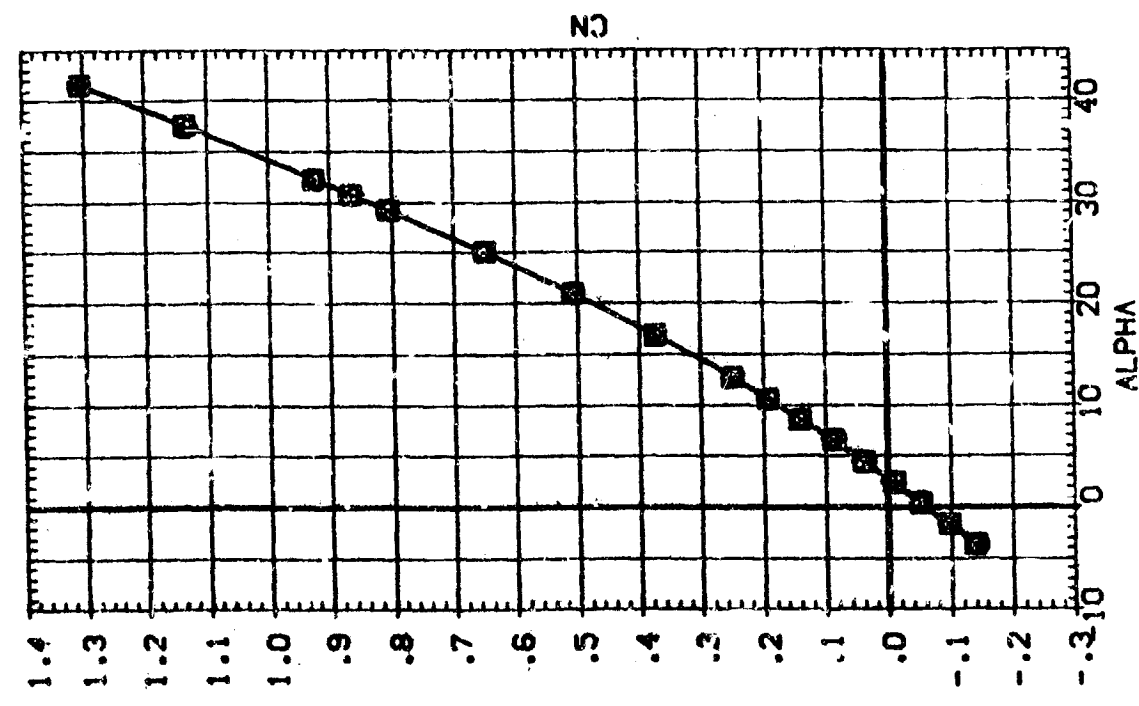
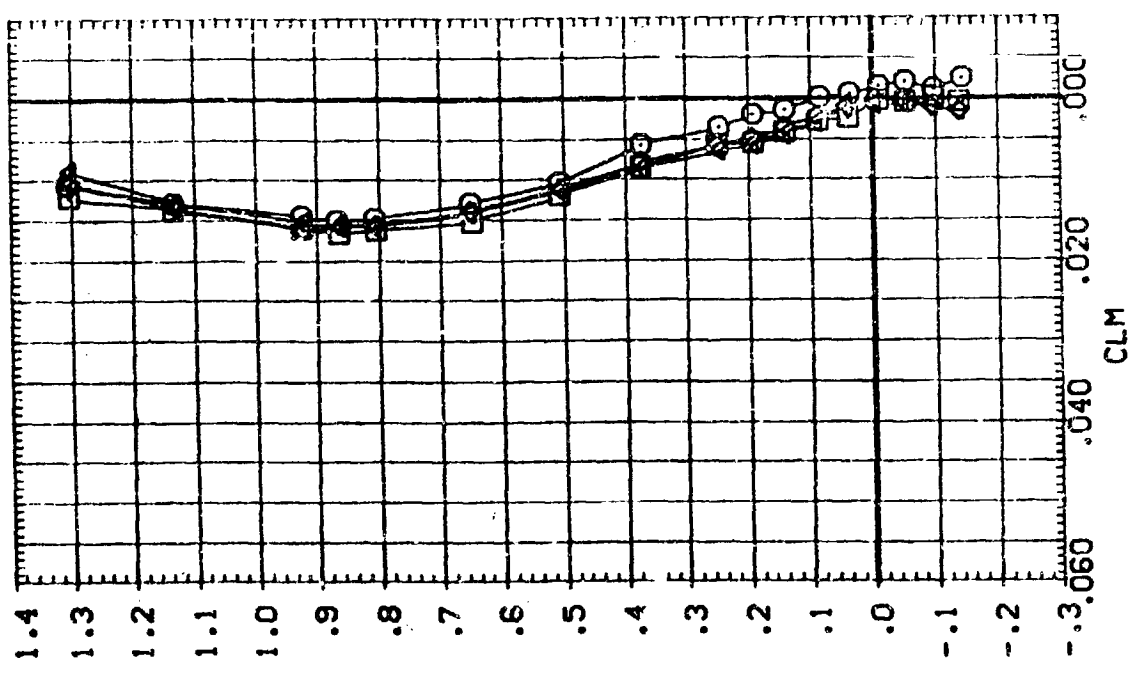


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(CBMACH = 4.63)



DATA SET SYMBOL: (CP6013) (CP6014) (CP6015) (CP6016)
 CONFIGURATION: LA-8 LARC UPVT 1013 MAR 0858-100. NOISE ORBITER
 LA-8 LARC UPVT 1013 MAR 0858-100. NOISE ORBITER
 LA-8 LARC UPVT 1013 MAR 0858-100. NOISE ORBITER
 LA-8 LARC UPVT 1013 MAR 0858-100. NOISE ORBITER
 REFERENCE INFORMATION: SREF 136.1808 SO IN. INCHES
 LREF 8.5028 INCHES
 BREF 17.5628 INCHES
 XARP 15.0000 INCHES
 YARP 0.0000 INCHES
 ZARP 0.0000 INCHES
 SCALE .0188 SCALE

BETA: 000 1.000 2.000 1.000 2.000 1.000 2.000
 GT-LDC: 3.000 3.000 3.000 3.000 3.000 3.000 3.000
 K/L: 6.820 6.820 6.820 6.820 6.820 6.820 6.820

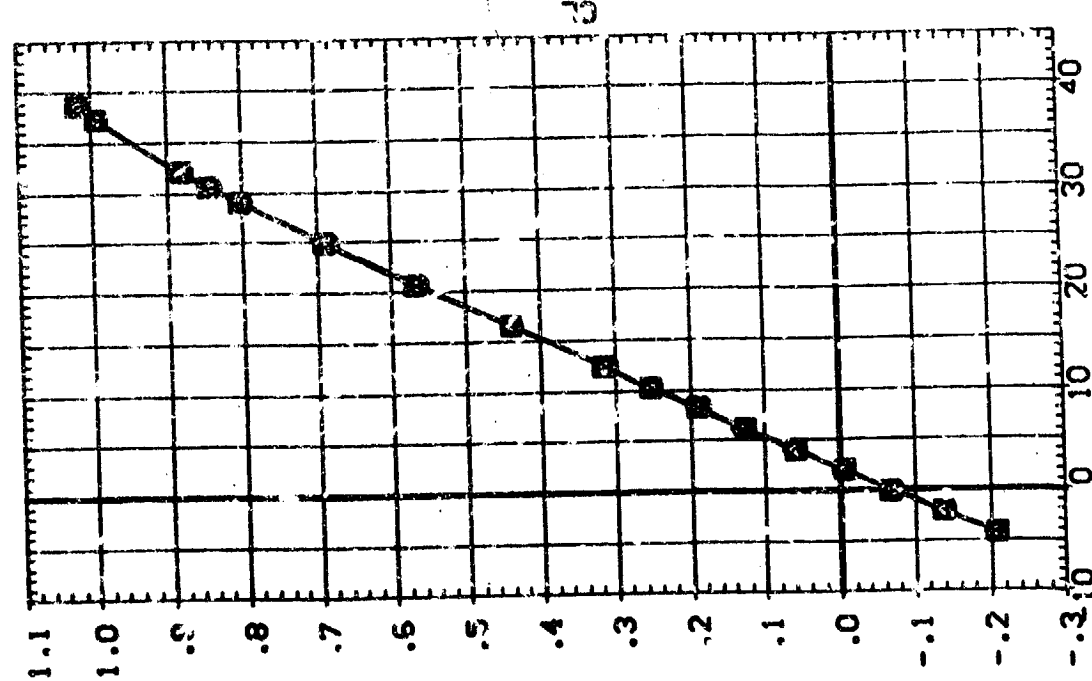
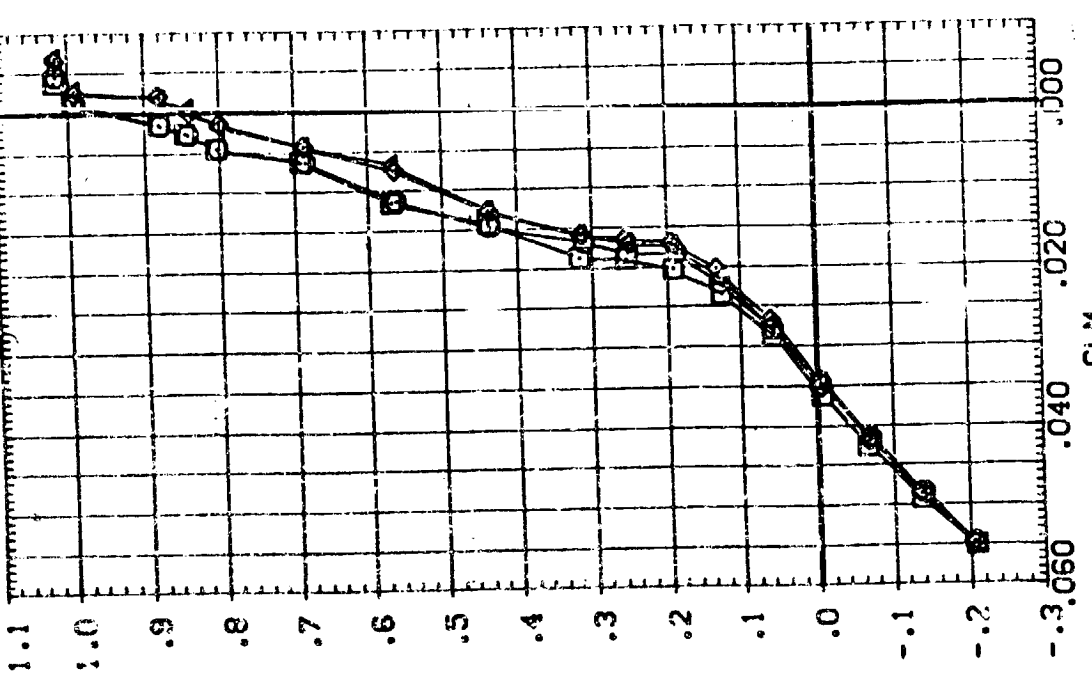


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 2.36

DATA SET SYMBOL: \square Δ
 (CP5013)
 (CP5014)
 (CP5015)
 (CP5016)

BETA: .000
 .000
 -3.000
 -3.000

ALPSP: 1.000
 2.000
 2.000

ST-LDC: 3.000
 3.000
 3.000

K/L: 6.820
 6.820
 6.820

REFERENCE INFORMATION:
 SRE: 136.1808
 LREI: 8.9075
 BRCE: 17.5528
 YMRP: 15.3538
 ZMRP: .0000
 SCALE: .0188

CONFIGURATION DESCRIPTION:
 LA-8 LARC LPVT 1023 NAR 0858-HOD. NOSE ORBITTER
 LA-8 LARC LPVT 1023 MAP 0858-HOD. NOSE ORBITTER
 LA-8 LARC LPVT 1023 NAR 0858-HOD. NOSE ORBITTER
 LA-8 LARC LPVT 1023 NAR 0858-HOD. NOSE ORBITTER

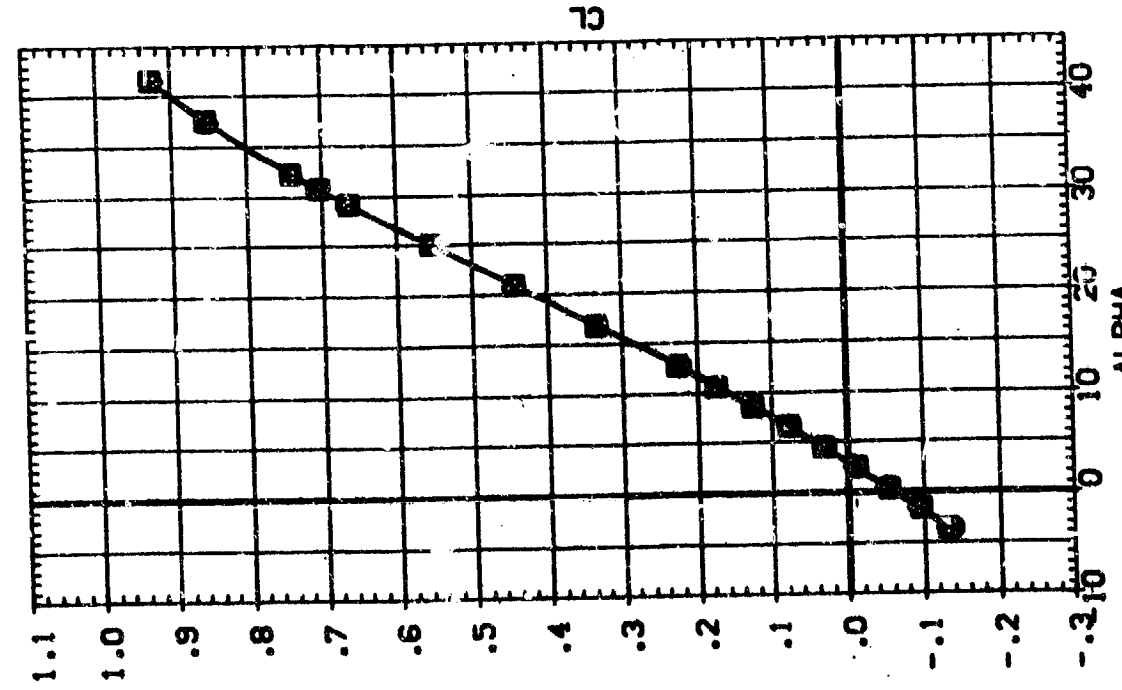
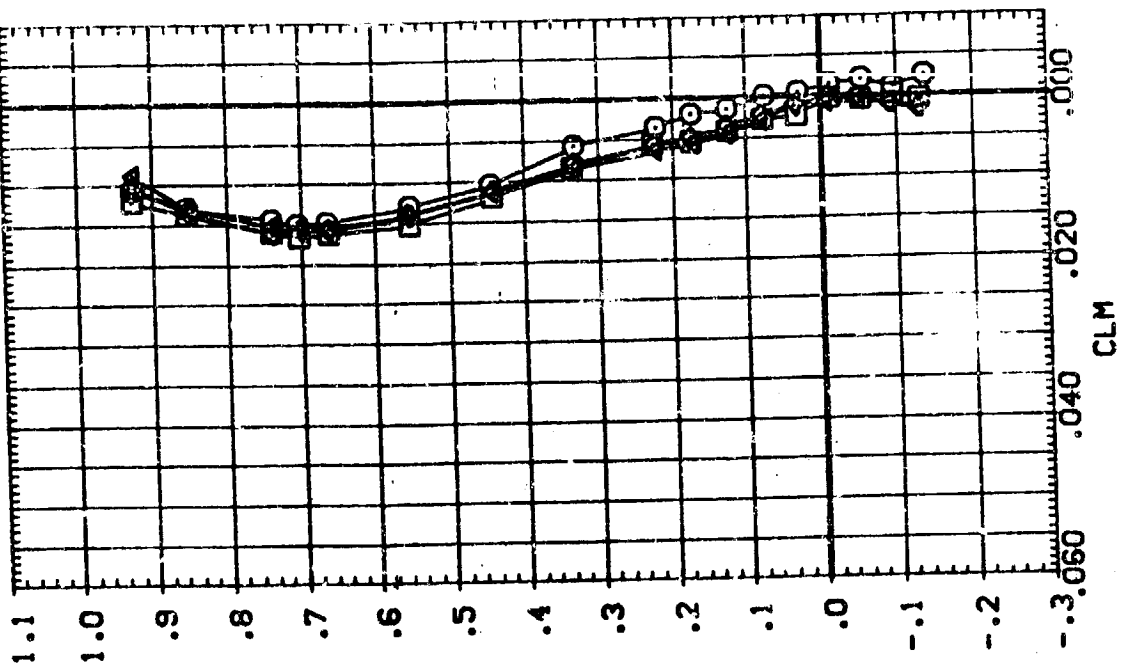


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 4.63

DATA SET SYMBOL: (CP6013) (CP6014) (CP6015) (CP6016)

CONF IGURATION DESCRIPTION
 LA-0 ARC UPVT 1023 MAR 0898-MOD. NOSE 0881TER
 LA-1 ARC UPVT 1023 MAR 0898-MOD. NOSE 0881TER
 LA-8 ARC UPVT 1023 MAR 0898-MOD. NOSE 0881TER
 LA-9 ARC UPVT 1023 MAR 0898-MOD. NOSE 0881TER

BETA

.000
 .000
 -3.000
 -3.000

ALP5AP

1.000
 2.000
 1.000
 2.000

GT-LOC

3.000
 3.000
 3.000
 3.000

K/L

6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION

SREF 136.1808 50. IN.
 LRTF 8.9025 NC-E5
 BREF 17.5628 NC-E5
 XMRP 15.5638 NC-E5
 YMRP .0000 NC-E5
 ZMRP .0000 NC-E5
 SCALE .0188 SCALE

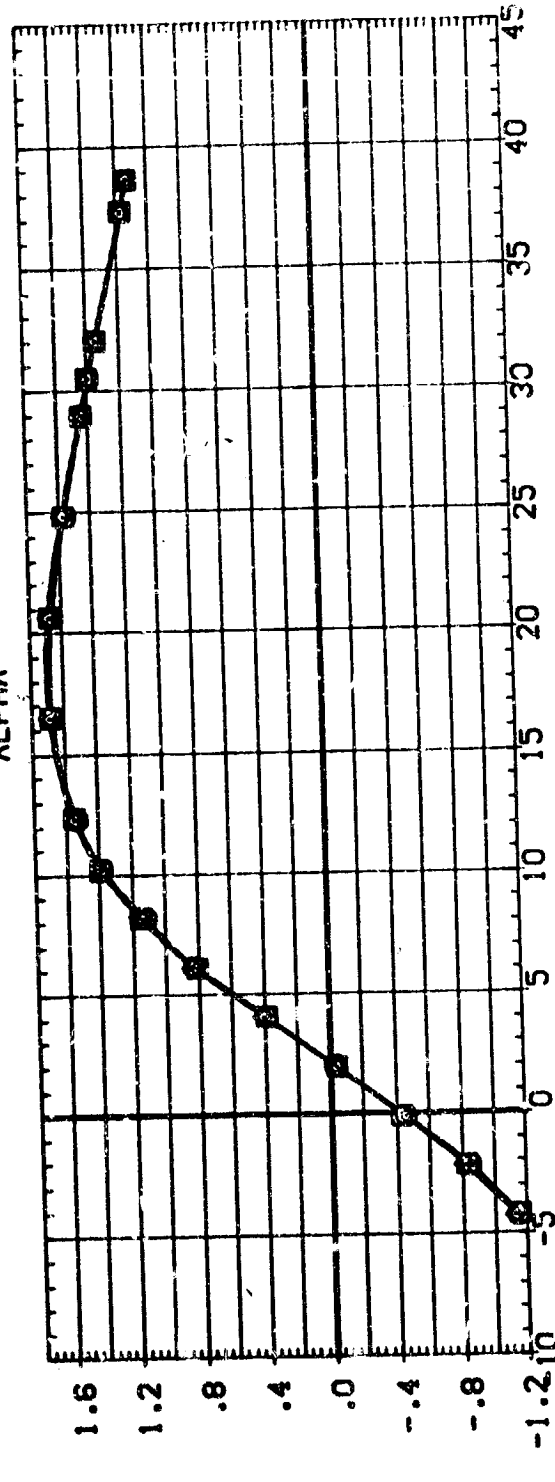
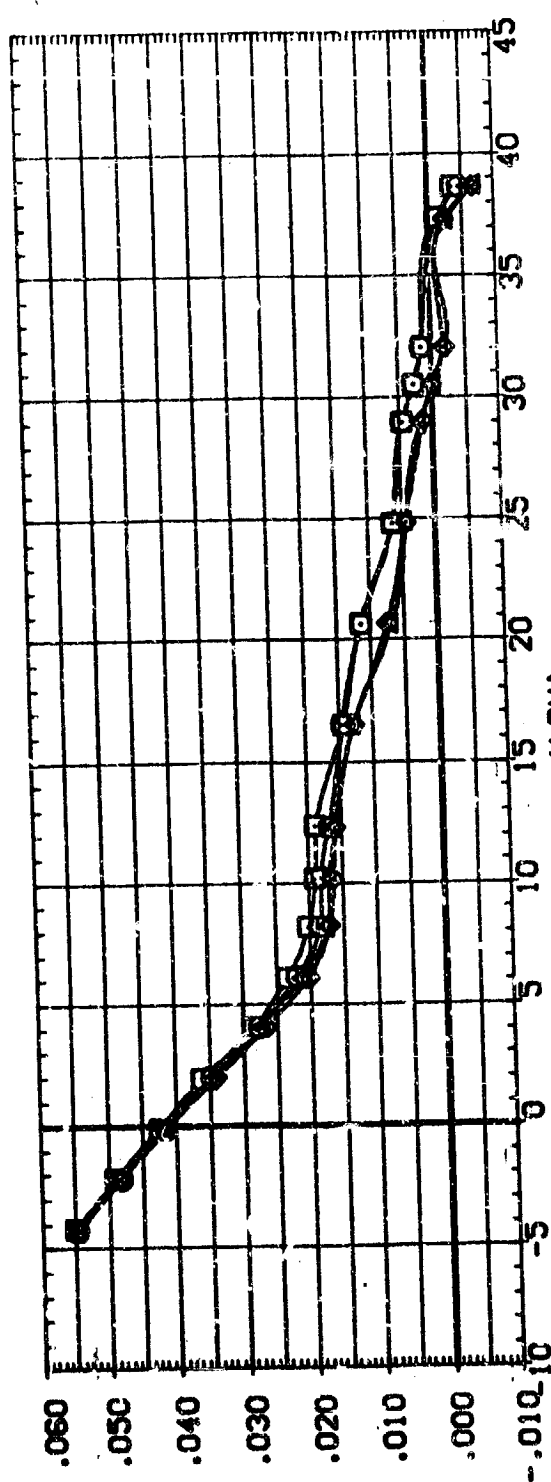


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(A)MACH = 2.36

DATA SET SYMBOL
 (C-5013)
 (C-5014)
 (C-5015)
 (C-5016)

CONFIGURATION DESCRIPTION
 LA-8 LARC UPVT 1023 NAR 0858-MOD. NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD. NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD. NOSE ORBITER
 LA-8 LARC UPVT 1023 NAR 0858-MOD. NOSE ORBITER

PETA
 .000
 .000
 -3.000
 -3.000

ALPSP
 1.000
 2.000
 1.000
 2.000

GT-LOC
 3.000
 3.000
 3.000
 3.000

K/L
 6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 SUFF 136.1808L SI, IN.
 LRF 8.9025 INCHES
 DRF 17.5628 INCHES
 XPRF 15.9638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

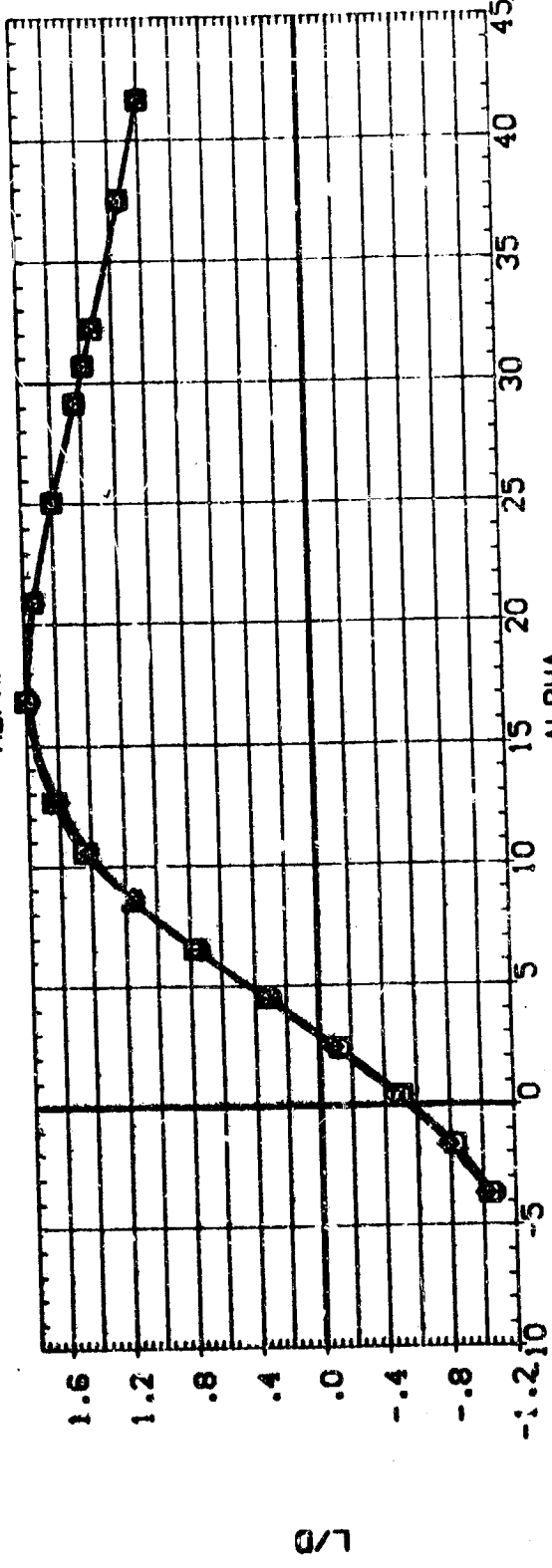
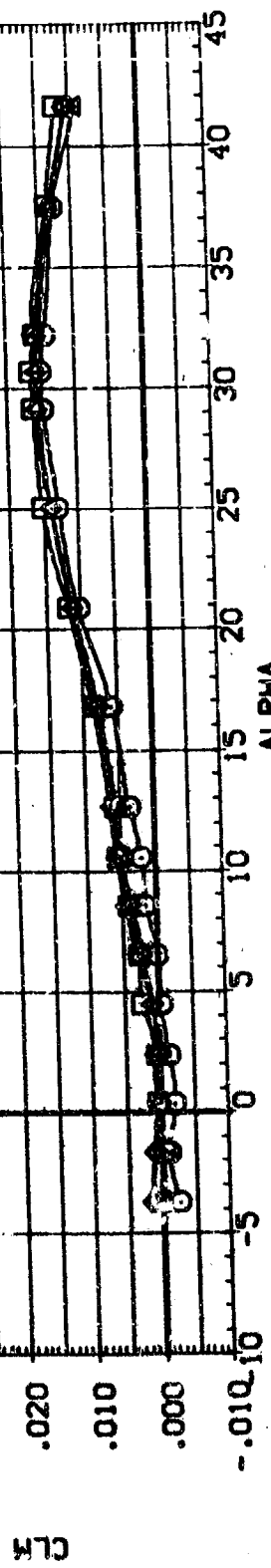


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 4.63



DATA SET SYMBOL: \square \otimes
 (CP8013)
 (CP8014)
 (CP8015)
 (CP8016)

CONFIGURATION DESCRIPTION
 LA-8 LARC UPVT 1023 NAR 0898-100. NOSE CR811TER
 LA-8 LARC UPVT 1023 NAR 0898-100. NOSE CR811TER
 LA-8 LARC UPVT 1023 NAR 0898-100. NOSE CR811TER
 LA-8 LARC UPVT 1023 NAR 0898-100. NOSE CR811TER

BETA: .000
 .000
 -3.000
 -3.000

ALP SWP: 1.000
 2.000
 1.000
 2.000

GT-LOC: 3.000
 3.000
 3.000
 3.000

K/L: 6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 SREF: 136.1808 50. IN.
 LREF: 8.9025 INCHES
 BREF: 17.5628 INCHES
 XREF: 15.9638 INCHES
 YREF: .0000 INCHES
 ZREF: .0000 INCHES
 SCALE: .0188

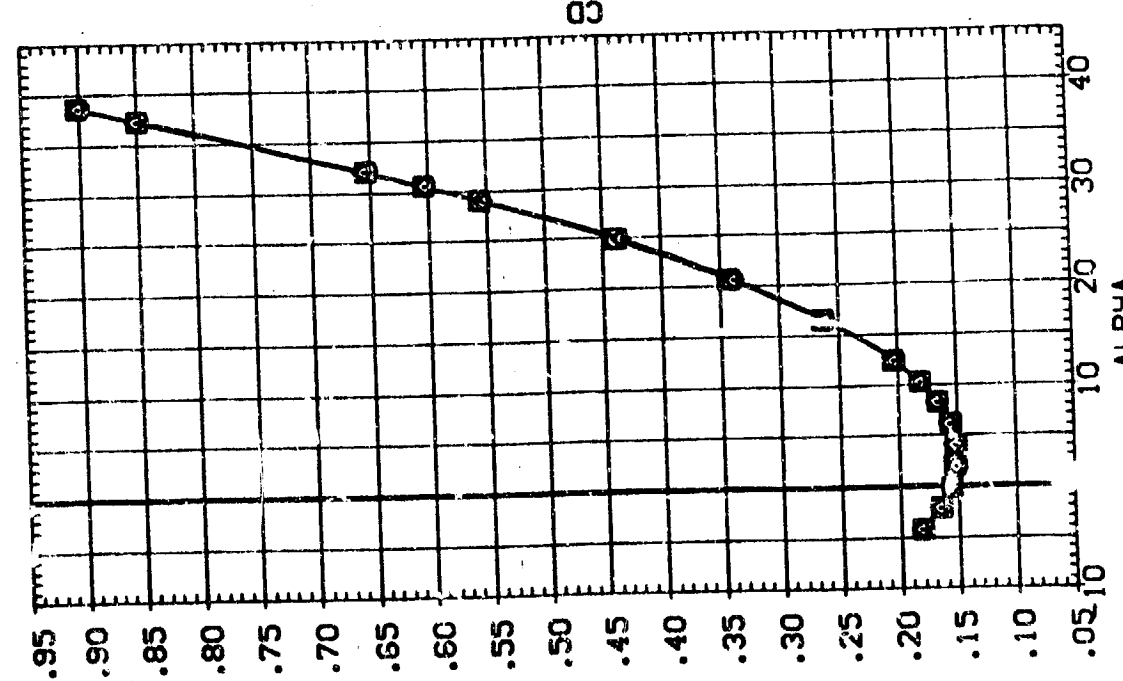
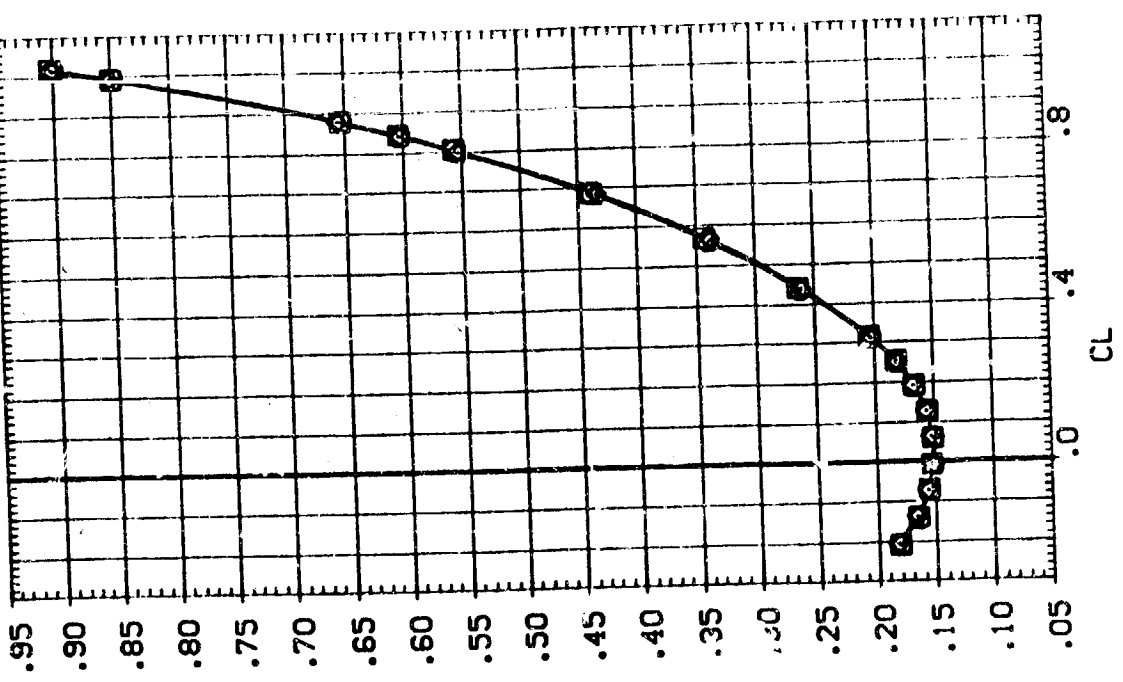


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL
 (CP6013)
 (CP6014)
 (CP6015)
 (CP6016)

CONFIGURATION DESCRIPTION
 LA-8 LARC JPVT 1023 NAR 0898-100 NOSE ORBITTER
 LA-8 LARC JPVT 1023 NAR 0898-100 NOSE ORBITTER
 LA-8 LARC JPVT 1023 NAR 0898-100 NOSE ORBITTER
 LA-8 LARC JPVT 1023 NAR 0898-100 NOSE ORBITTER

BETA
 .000
 .000
 -3.000

ALPSPV
 1.000
 1.000
 2.000

GT-LDC
 3.000
 3.000
 3.000
 3.000

K/L
 6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 SREF 136.1808
 LREF 8.9025
 BREF 17.5628
 XMRP 15.5638
 YMRP .0000
 ZMRP .0188
 SCALE

SQ. IN.
 NCHES
 NCHES
 NCHES
 NCHES
 NCHES
 NCHES
 NCHES

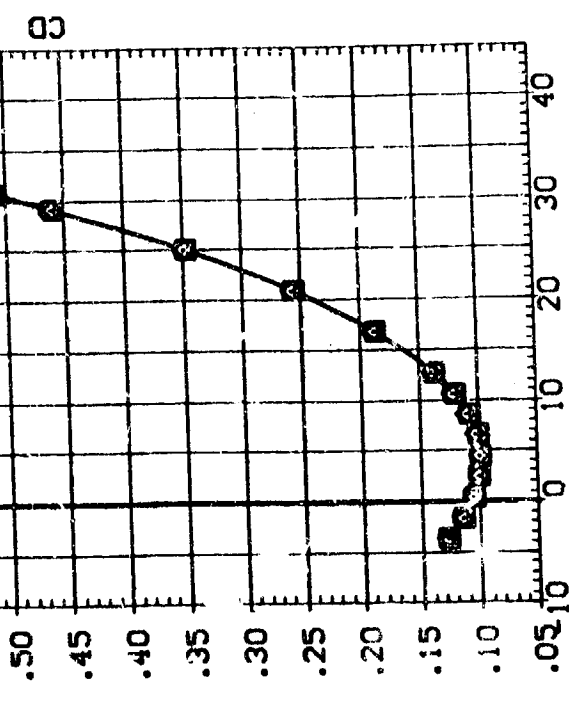
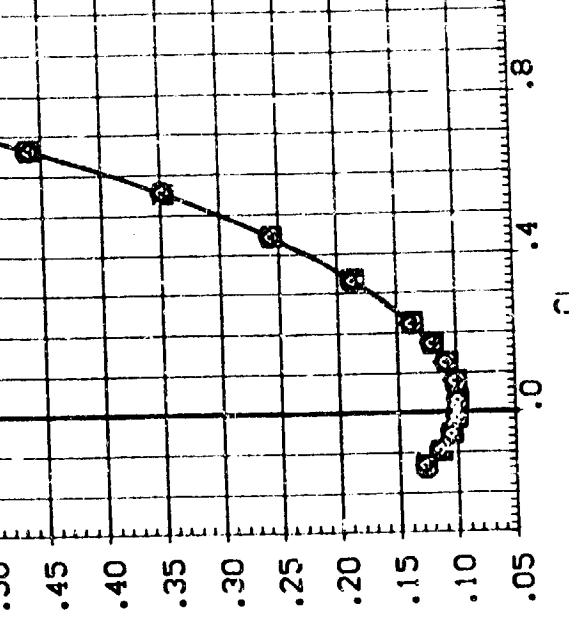


FIG. 4 HYSTERESIS EFFECT ON LONGITUDINAL CHARACTERISTICS (ELEVTR = -20)
 (B)MACH = 4.63



DATA SET SYMBOL
 (LP6106) □
 (LP6104) ○
 (LP6102) △
 (LP6008) X

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0998-MOD. NOSE DRBITER
 LA-9/8A NAR 0998-MOD. NOSE DRBITER
 LA-8/8A NAR 0998-MOD. NOSE DRBITER
 DATA NOT AVAILABLE

AIRLON ELEVTR GT-LOC K/L
 .000 .000 1.000 .000
 .000 .000 1.000 6.820
 .000 .000 2.000 6.820
 .000 .000 3.000 6.820

REFERENCE INFORMATION
 SREF 1.36 1.808 SQ. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XFRP 15 INCHES
 YFRP .0000 INCHES
 ZFRP .0000 INCHES
 SCALE .0188 INCHES

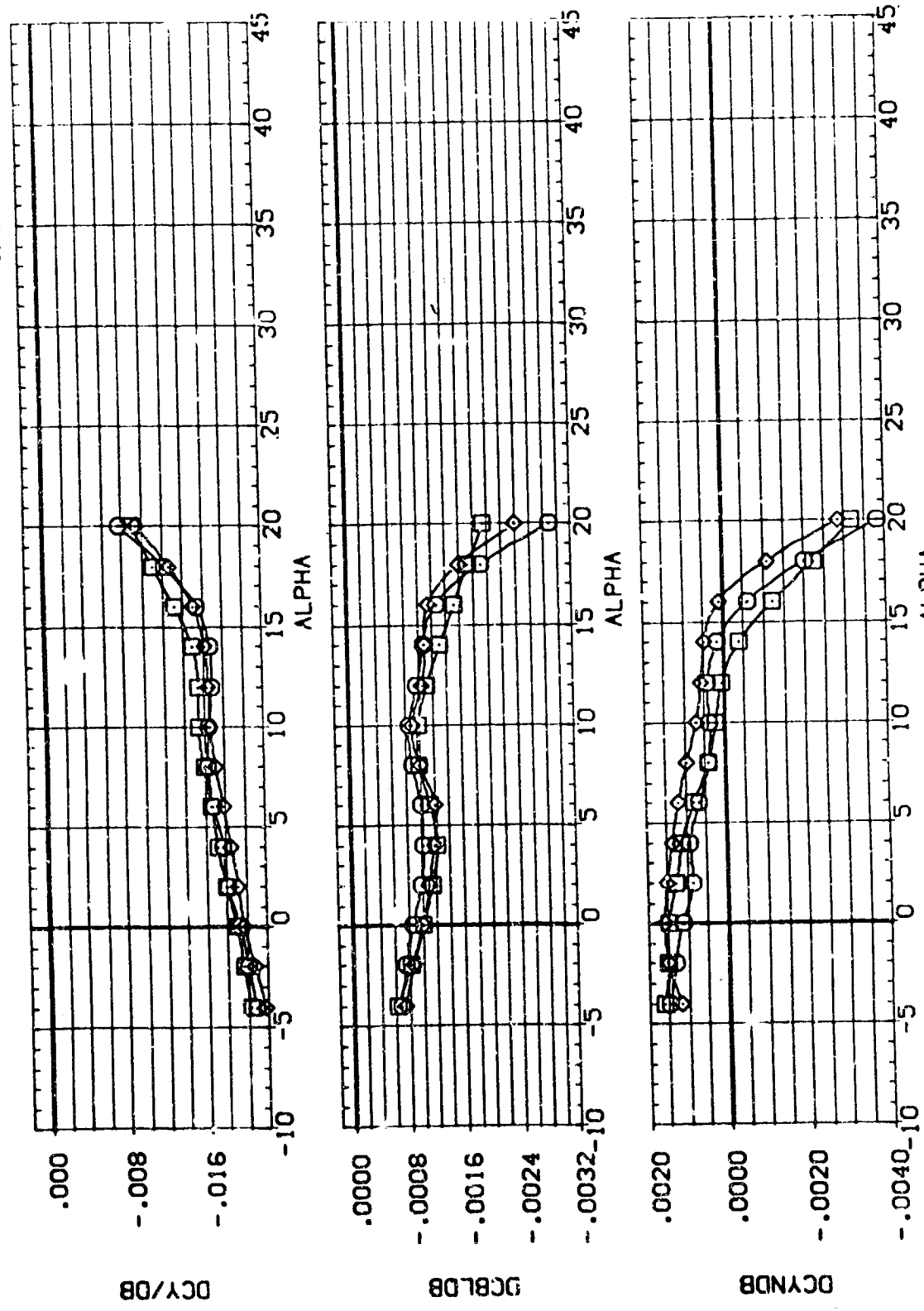


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 1.60

20

DATA SET SYMBOL
 (LP6106)
 (LP6104)
 (LP6102)
 (LP6008)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0858-MOD. NOSE ORBITER
 LA-8/8A NAR 0858-MOD. NOSE ORBITER
 LA-8/8A NAR 0858-MOD. NOSE ORBITER
 DATA NOT AVAILABLE

AIRLON ELEVTR GT-LDC K/L SREF SO. IN.
 .000 .000 1.000 .000 136.1808
 .000 .000 1.000 6.820 8.9075
 .000 .000 2.000 6.820 17.5678
 .000 .000 3.000 6.820 15.9638
 ZMRP .0000
 SCALE .0188

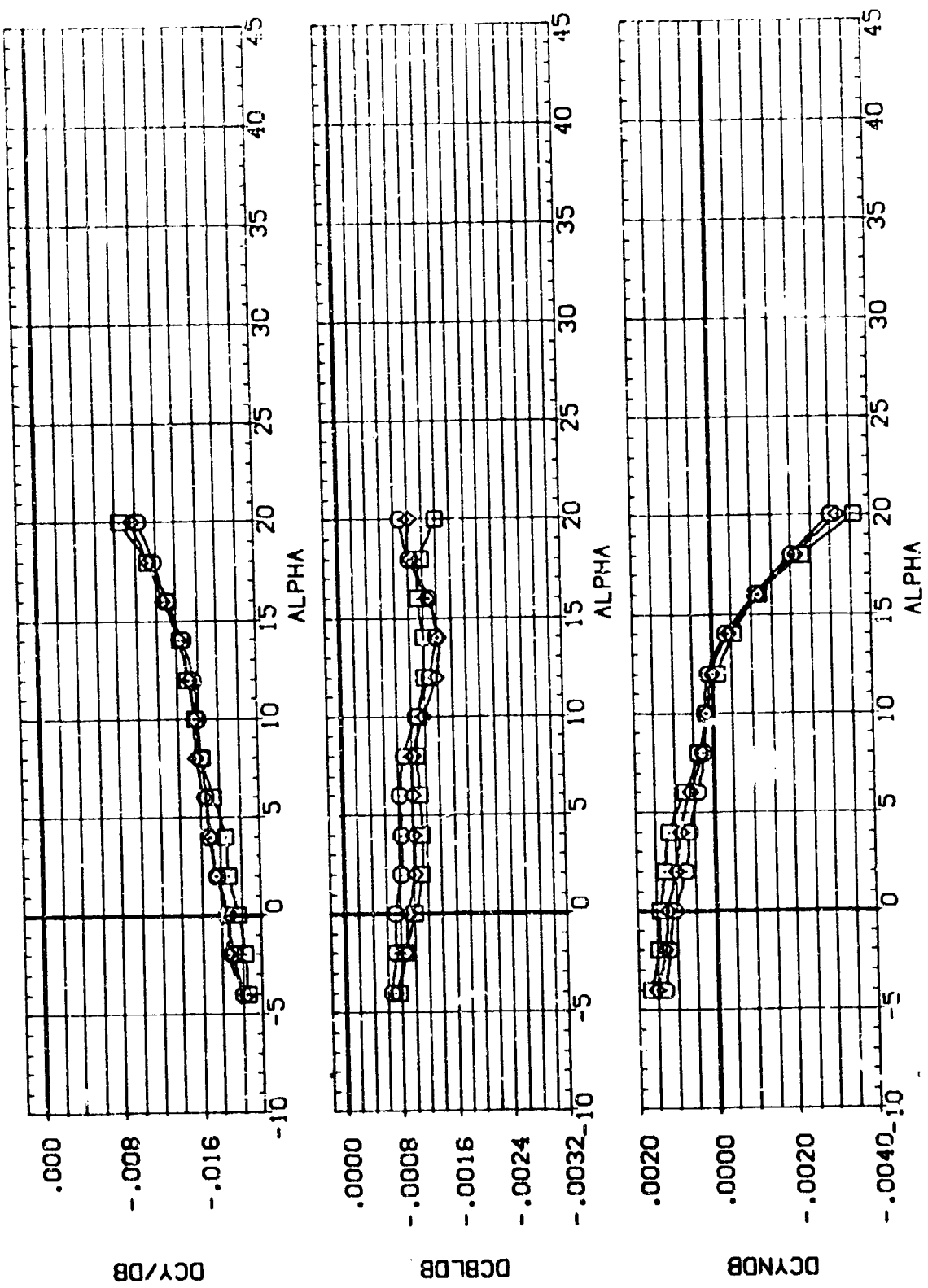


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 1.90



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	AIRLON	ELEVTR	GT-LOC	KVL	REFERENCE INFORMATION
(LP6106)	LA-8/8A	NAR 0898-M00. NOSE ORBITER	.000	.000	1.000	.000	SREF 136.1808 SO. IN.
(LP6104)	LA-8/8A	NAR 0898-M00. NOSE ORBITER	.000	.000	1.000	6.820	LREF 8.9325 INCHES
(LP6102)	LA-8/8A	NAR 0898-M00. NOSE ORBITER	.000	.000	2.000	6.820	RREF 17.5628 INCHES
(LP6008)	LA-8/8A	NAR 0898-M00. NOSE ORBITER	.000	.000	3.000	6.820	XTRP 15.9638 INCHES
							YTRP .0000 INCHES
							ZTRP .0000 INCHES
							SCALE .0188 SCALE

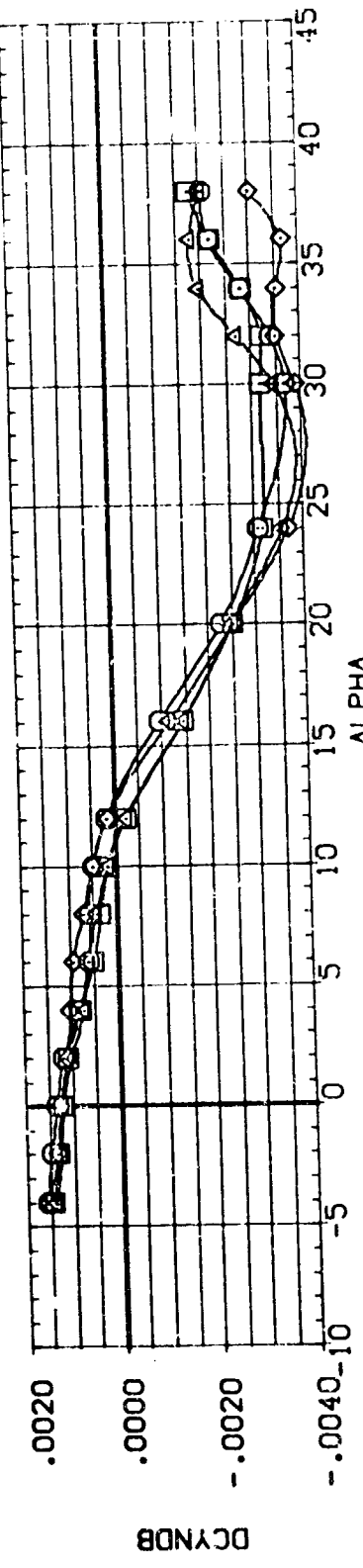
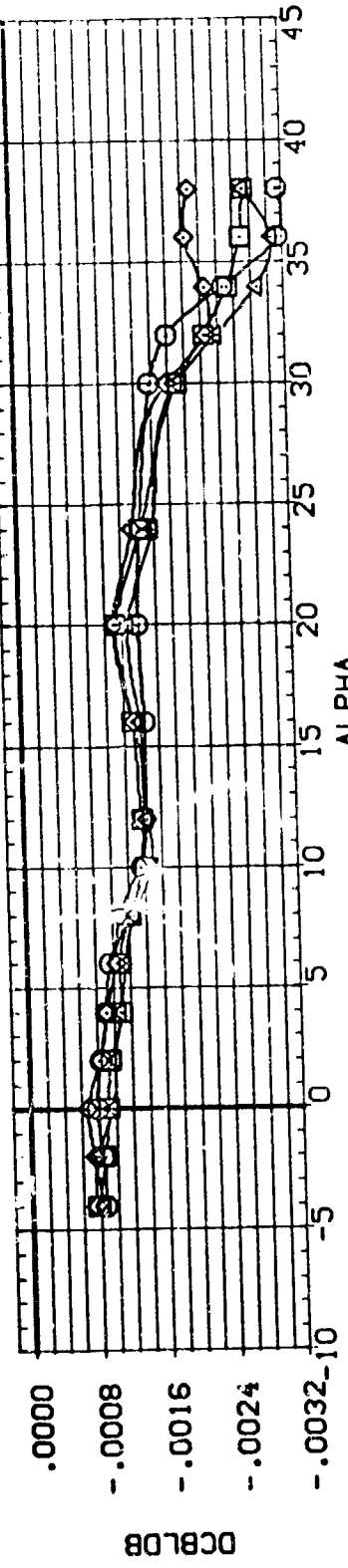
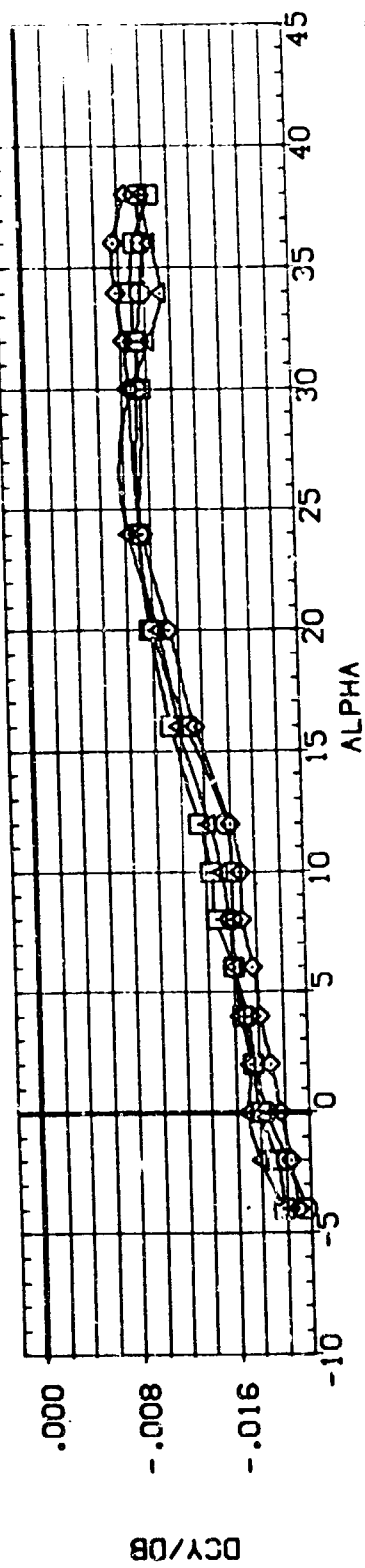


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

DATA SET SYMB.	CONFIGURATION DESCRIPTION	AIRLON	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION
(LP6106)	LA-8/8A NAR 085B-MOD. NOISE ORBITER	.000	.000	1.000	.000	136.1809 SQ. IN.
(LP6104)	LA-8/8A NAR 085B-MOD. NOISE ORBITER	.000	.000	1.000	6.820	8.9025 INCHES
(LP6102)	LA-8/8A NAR 085B-MOD. NOISE ORBITER	.000	.000	2.000	6.820	17.5628 INCHES
(LP6008)	LA-8/8A NAR 085B-MOD. NOISE ORBITER	.000	.000	3.000	6.820	15.5638 INCHES
						.0000 INCHES
						ZMRP .0000 INCHES
						SCALE .0189 INCHES

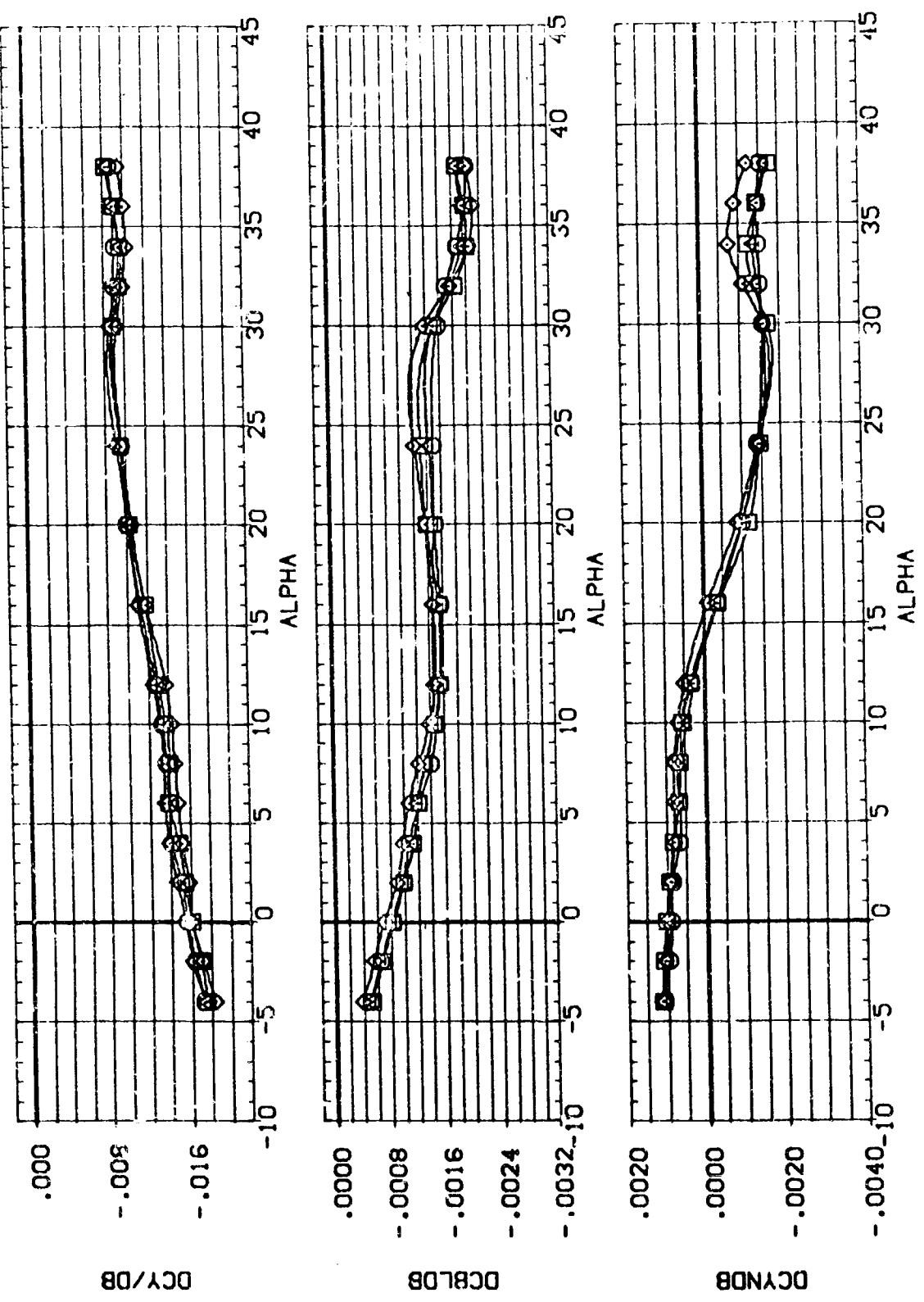


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(DJ)MAC 1 = 4.63



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	GT-LDC	KVL	REFERENCE INFORMATION
(RPG106)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	.000	.000	SREF 136.1808 SO.111.
(RPG105)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	.000	6.970	LREF 8.9025 INCHES
(RPG104)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	.000	6.820	BREF 17.5628 INCHES
(RPG103)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	2.000	6.820	YMPP .0000 INCHES
(RPG102)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	2.000	6.820	ZMRP .0000 INCHES
(RPG101)	LA-8A LARC LPVT 1034 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	2.000	6.820	SCALE .0188 SCALE

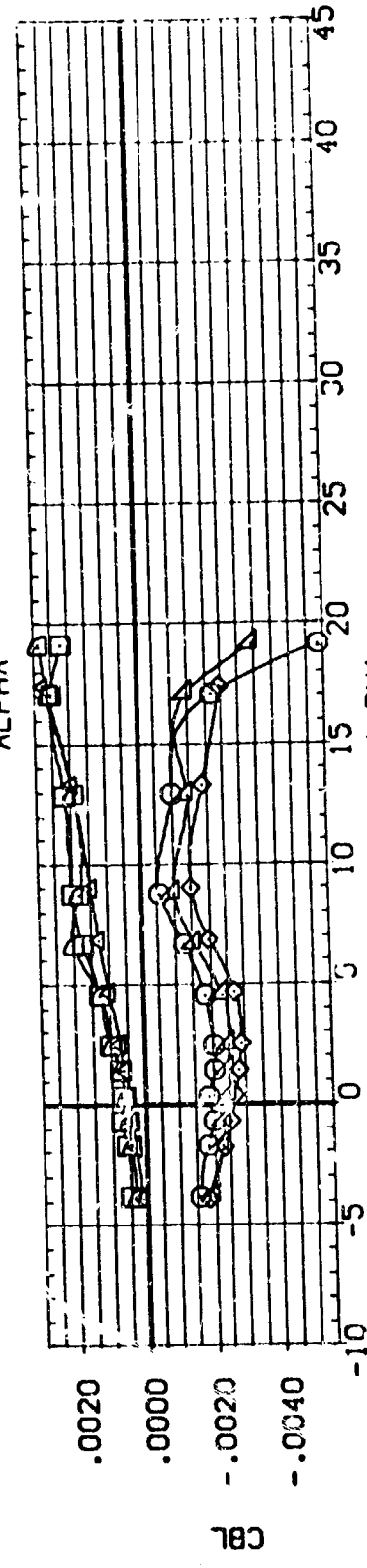
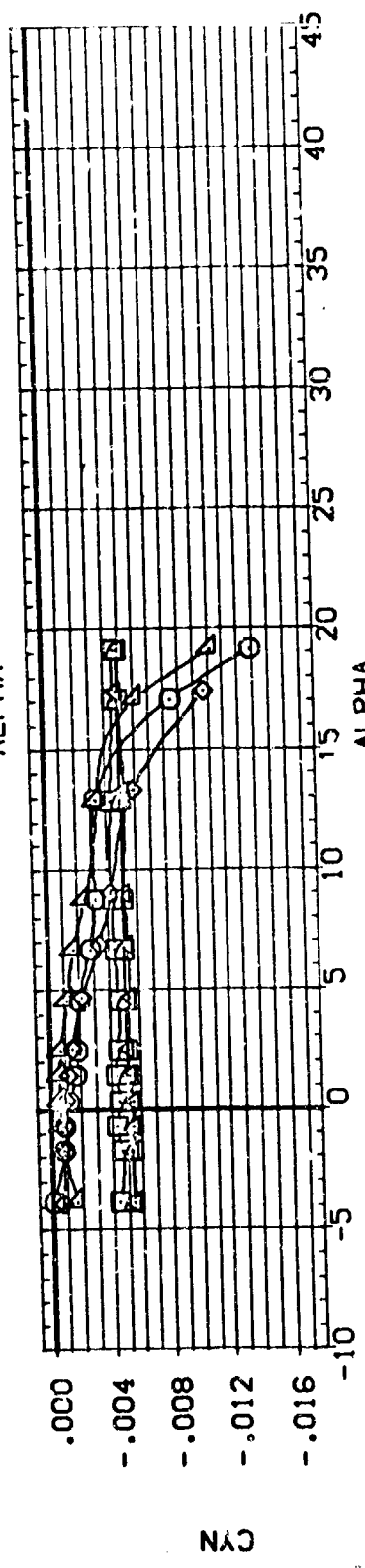
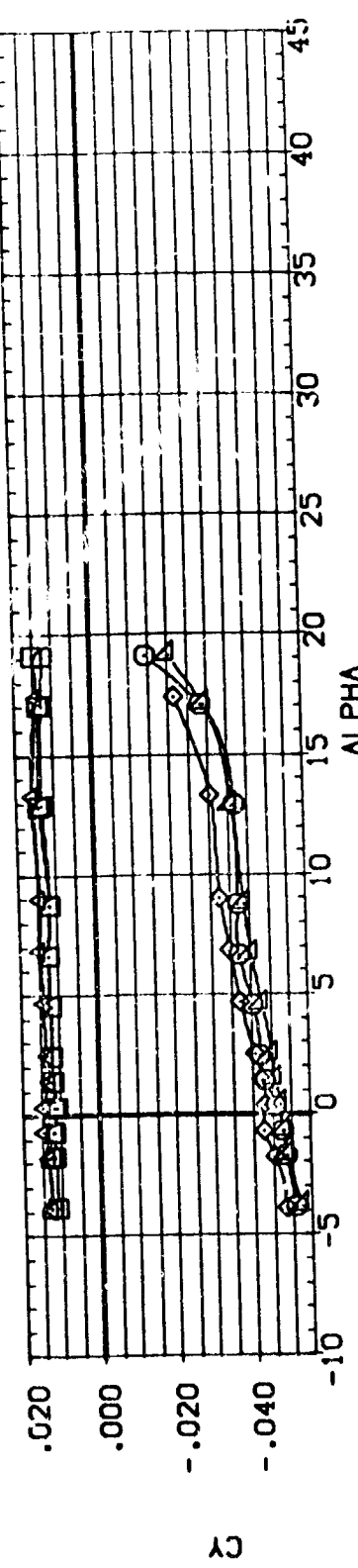


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITTER	BETA	ELEVTR	GT-LOC	KVL	REFERENCE INFORMATION	SO. IN.
(RPF106)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	1.000	.000	SREF 136.1808	INCHES
(RPF105)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	1.000	.000	LREF 9.9025	INCHES
(RPF104)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	1.000	6.870	BREF 17.5628	INCHES
(RPF103)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	2.000	6.870	XMRP 15.9538	INCHES
(RPF102)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	2.000	6.870	ZMRP .0000	INCHES
(RPF101)	LA-8A LARC UPVT 1034 NAR 0898-M00	NOSE ORBITTER	3.000	.000	2.000	6.870	SCALE .0188	SCALE

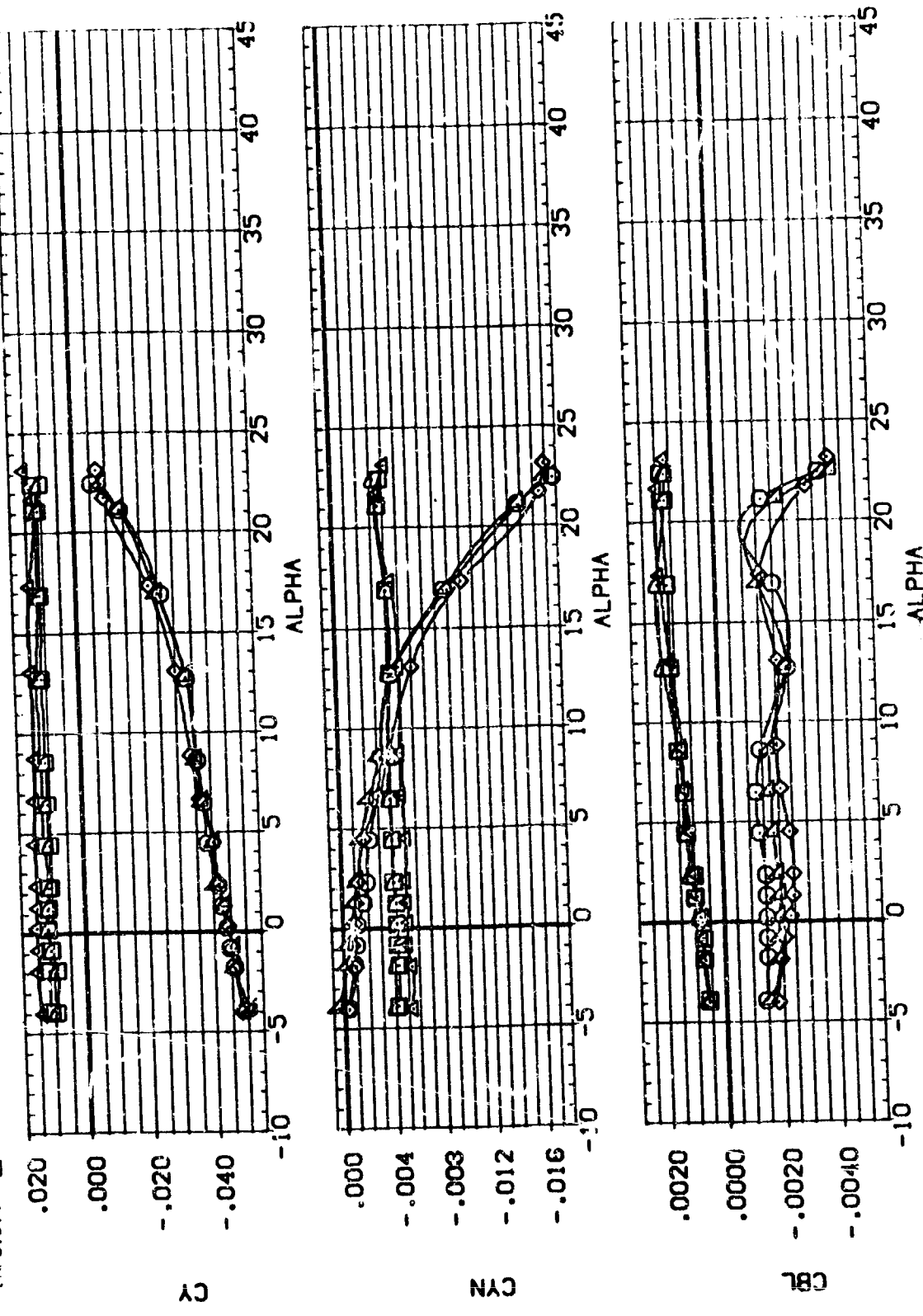


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 1.90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	GT-LOC	KVL	REFERENCE INFORMATION
(RP6010)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE ORBITER	-3.000	.000	1.000	.000	SREF 126.1808 SO. IN.
(RP6009)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE ORBITER	.000	.000	1.000	.000	LREF 8.5025 INCHES
(RP6005)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE ORBITER	-3.000	.000	1.000	6.820	BFT 17.5628 INCHES
(RP6005)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE ORBITER	.000	.000	1.000	1.820	XMRP 15.9638 INCHES
						ZMRP .0000 INCHES
						SCALE .0188

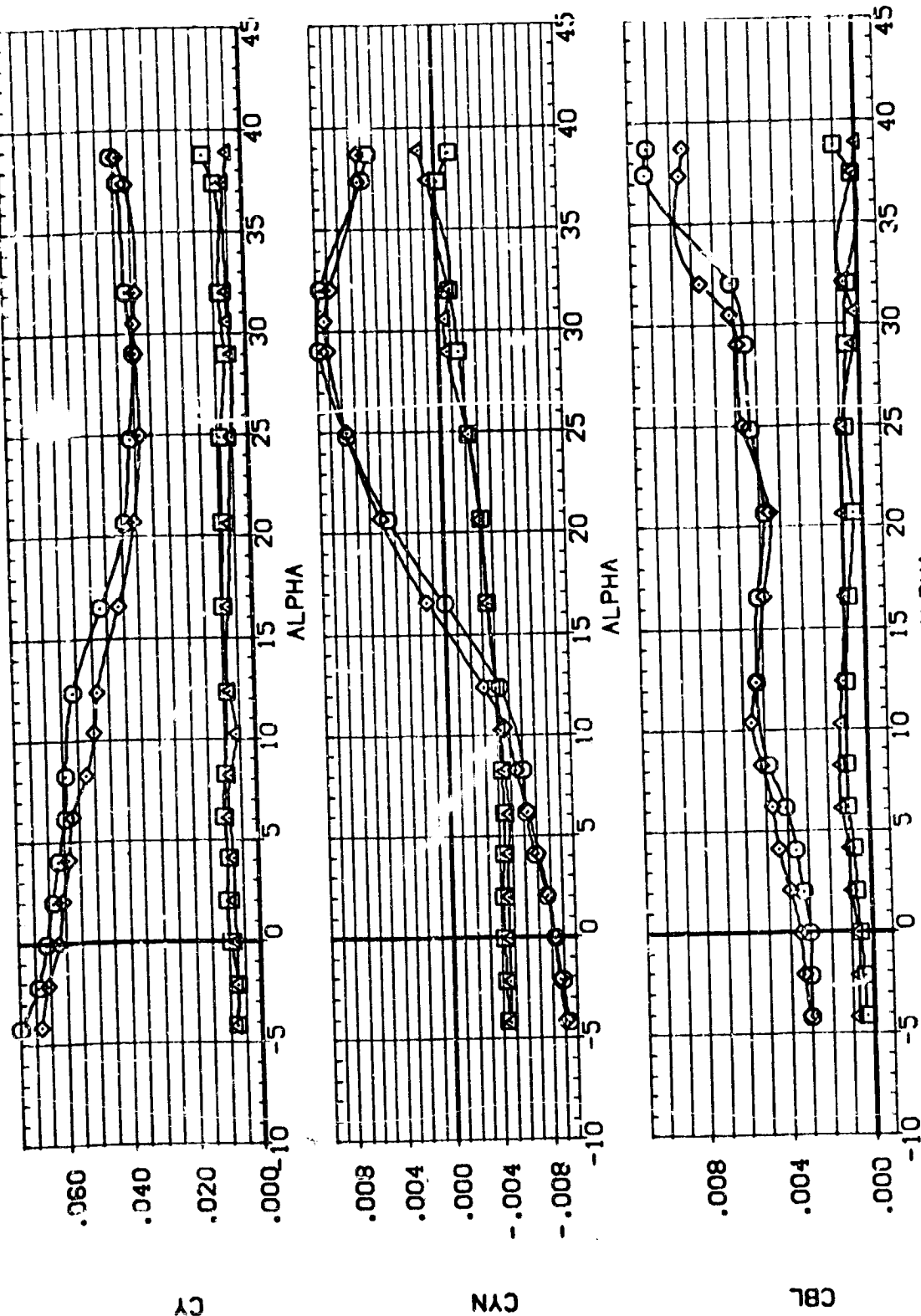


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL
 (RP5010)
 (RP5009)
 (RP5008)
 (RP5005)

CONFIGURATION DESCRIPTION
 LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER
 LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER

BETA
 -3.000
 .000
 -3.000
 .000

ELEVTR
 .000
 .000
 .000
 .000

GT-LOC
 1.000
 1.000
 1.000
 1.000

K/L
 .000
 .000
 6.820
 6.820

REFERENCE INFORMATION
 SREF 136.1809 SC.IN.
 LREF 8.5025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.9638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

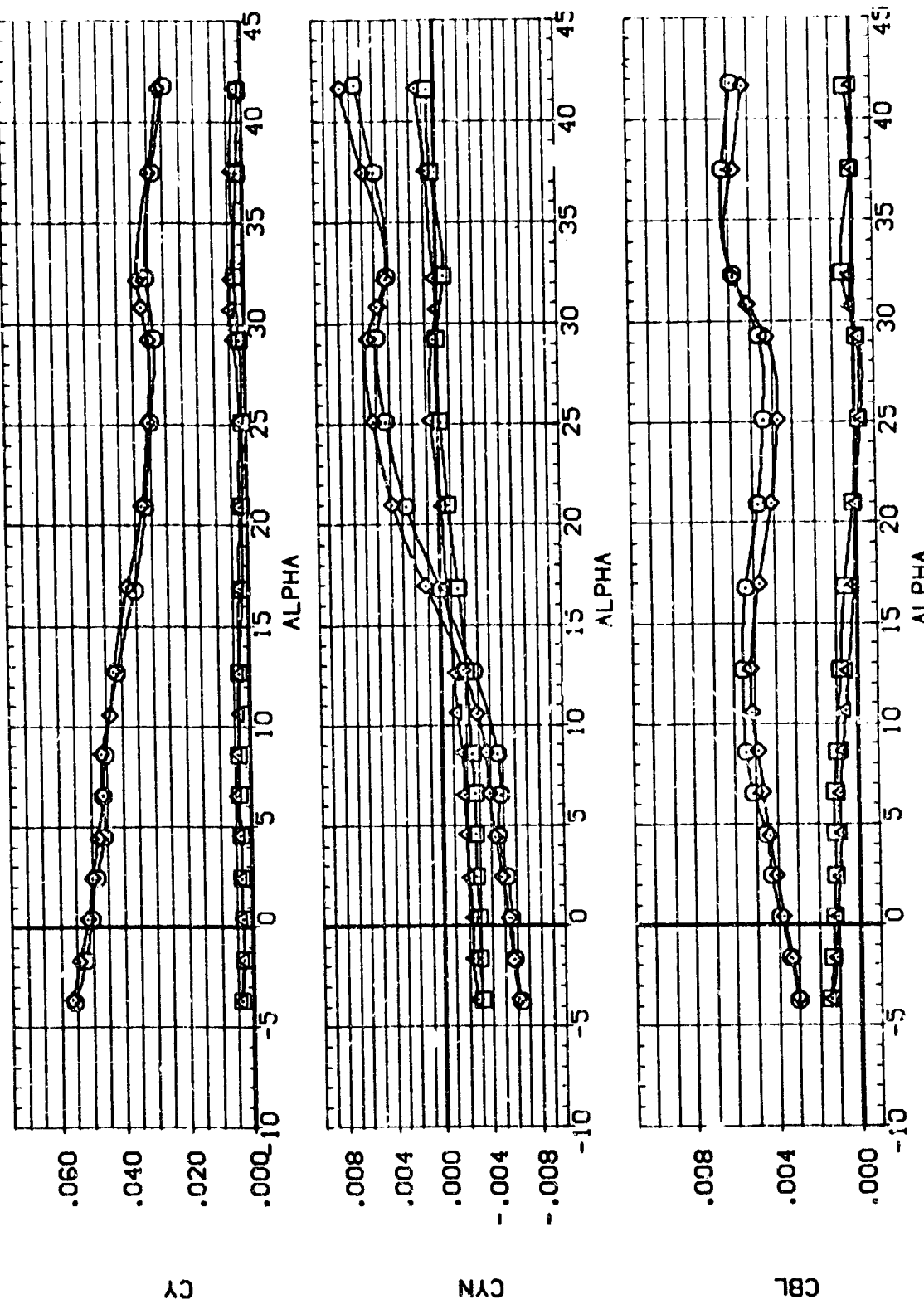


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 4.63

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	GT-LJC	K/L	REFERENCE INFORMATION
(RP6003)	LA-8 LARC UPVT 1023 NAR 0898-MOD. NOSE ORBITTER	3.000	.000	2.000	6.820	136.1808 SQ. INCHES
(RP6001)	LA-8 LARC UPVT 1023 NAR 0898-MOD. NOSE ORBITTER	.000	.000	2.000	6.820	8.9025 INCHES
(RP6008)	LA-8 LARC UPVT 1023 NAR 0898-MOD. NOSE ORBITTER	-3.000	.000	3.000	6.820	17.5628 INCHES
(RP6007)	LA-8 LARC UPVT 1023 NAR 0898-MOD. NOSE ORBITTER	.000	.000	3.000	6.820	15.9638 INCHES
						.0000 INCHES
						.0000 INCHES
						.0188 SCALE

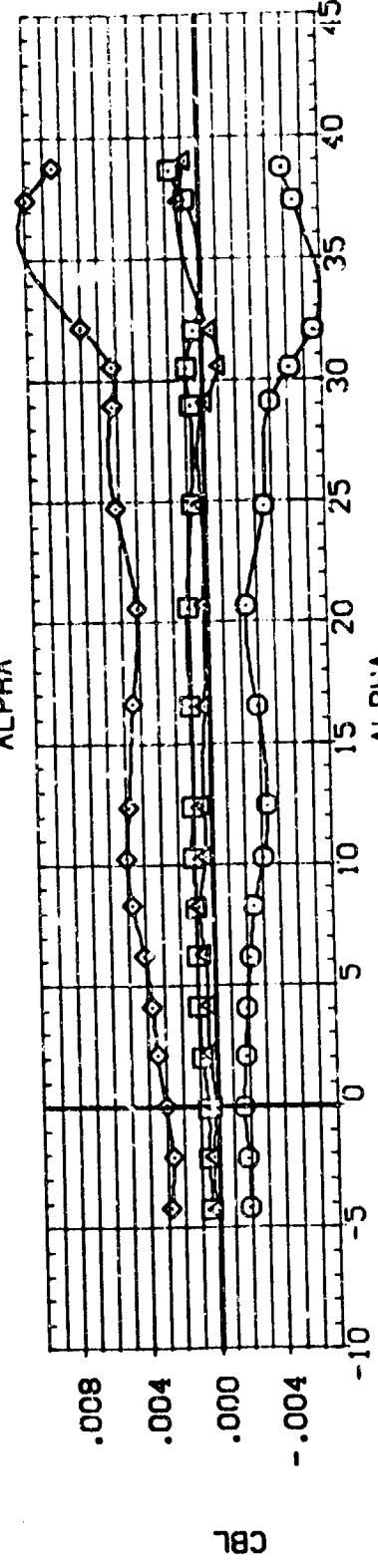
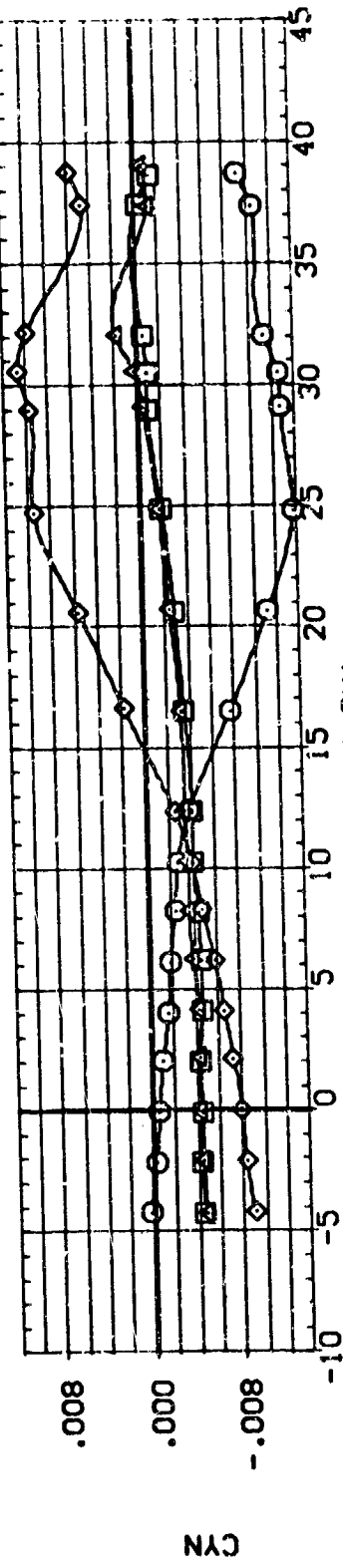
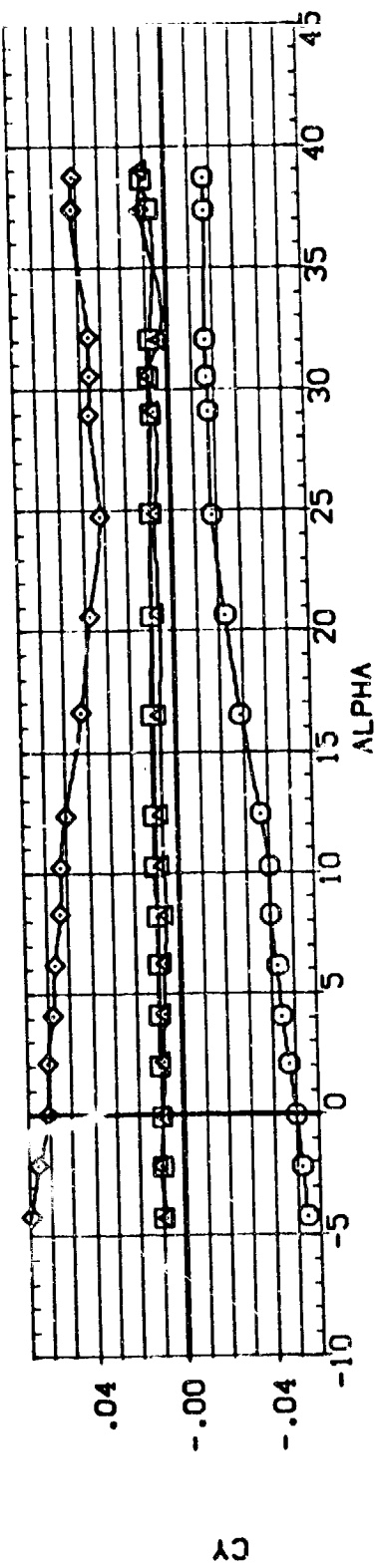


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	G7-LOC	K/L	REFERENCE INFORMATION
(RP6003)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE CRB/TER	3.000	.000	2.000	6.820	SREF 136.1808
(RP6001)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE CRB/TER	.000	.000	2.000	6.820	LAREF 8.9075
(RP6008)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE CRB/TER	-3.000	.000	3.000	6.820	BREF 17.5628
(RP6007)	LA-8 LARC LPVT 1023 NAR 0898-MOD. NOISE CRB/TER	.000	.000	3.000	6.820	XPRP 5.5638
						ZPRP .0000
						SCALE .0188

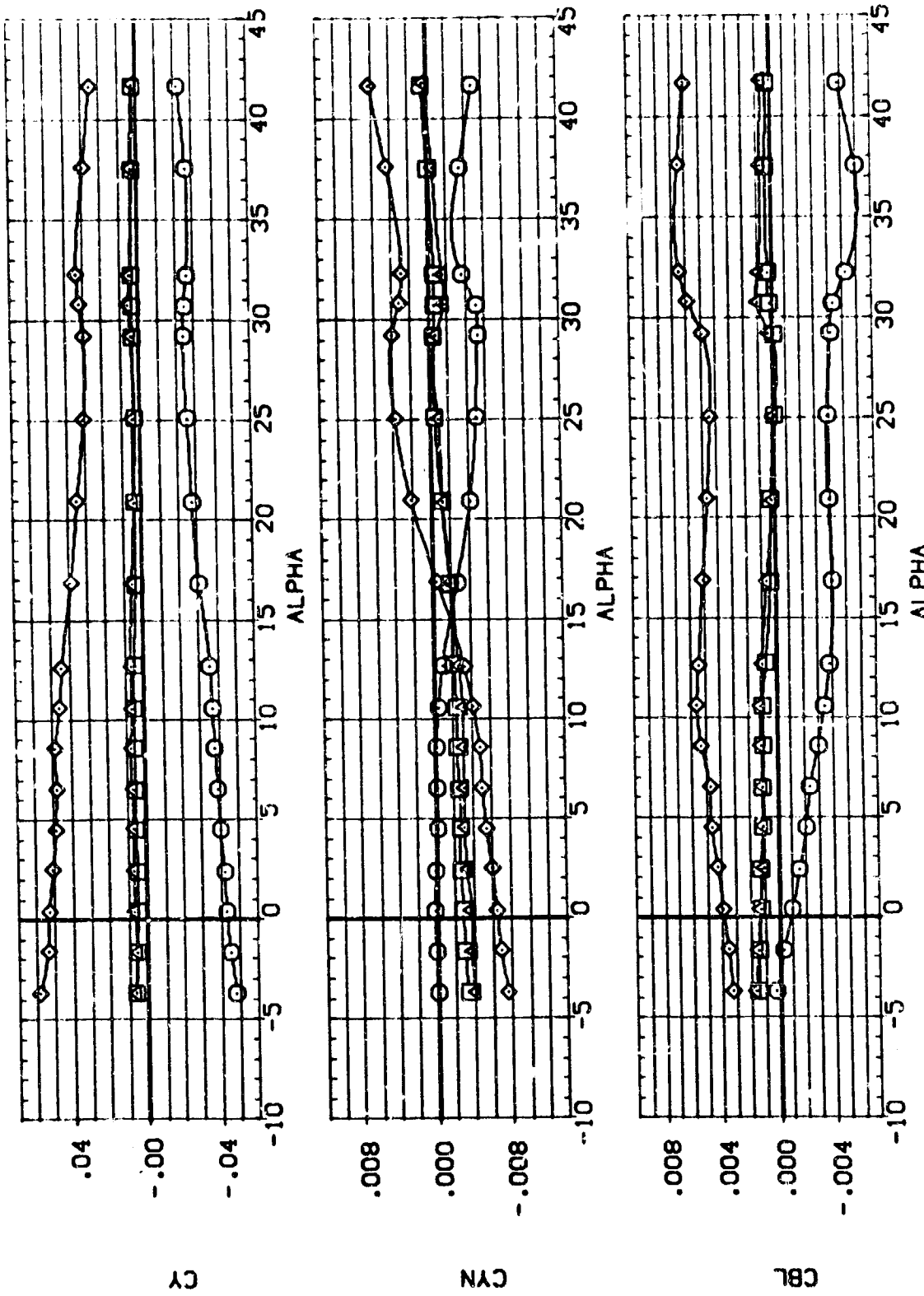


FIG. 5 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(B)MACH = 4.63



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALTRON	ELEVTR	GT-LOC	KAL	REFERENCE INFORMATION
(LP6108)	LA-B/8A NAR D858-100. NOISE ORBITTER	10.000	-20.000	1.000	.000	SREF 136.1608 SO IN.
(LP6110)	LA-B/8A NAR D858-100. NOISE ORBITTER	10.000	-20.000	1.000	6.820	LREF 8.9025 INC-ES
(LP6112)	LA-B/8A NAR D858-100. NOISE ORBITTER	10.000	-20.000	3.000	6.820	BREF 17.5628 INC-ES
						XTRP 15.3638 INC-ES
						YTRP .0000 INC-ES
						ZTRP .0000 INC-ES
						SCALE .0168 SCALE

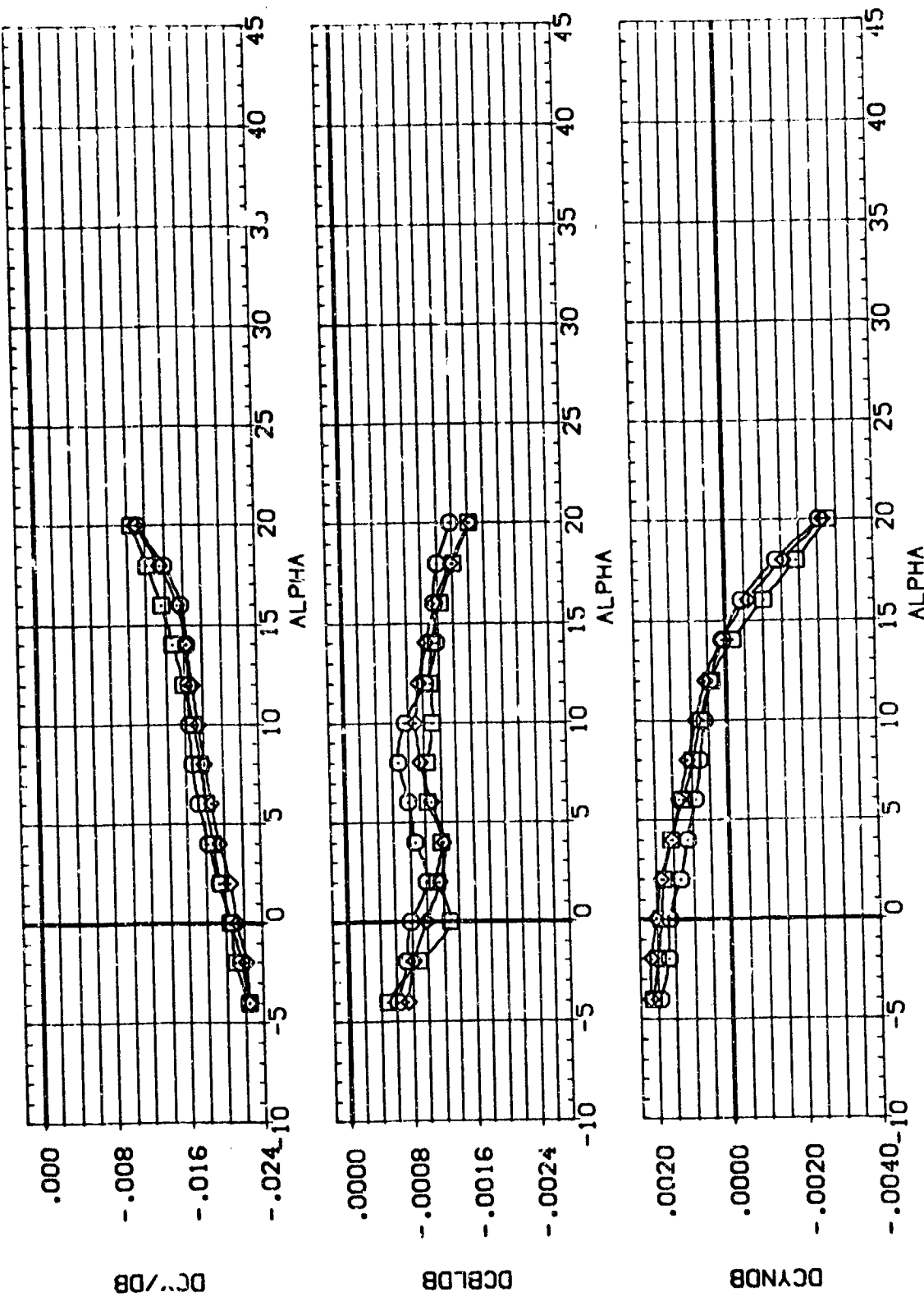


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL
 (LP6108)
 (LP6110)
 (LP6112)

CONFIGURATION DESCRIPTION
 LA-8/BA NAR DB98-MOD. NOSE ORBITTER
 LA-8/BA NAR DB98-MOD. NOSE ORBITTER
 LA-8/BA NAR DB98-MOD. NOSE ORBITTER

AILRON ELEVTR GT-LOC K/L
 10.000 -20.000 1.000 .000
 10.000 -20.000 1.000 6.820
 10.000 -20.000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SC. N.
 LREF 8.9025 INCHES
 BREF 7.5628 INCHES
 XMRP 5.8638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 INCHES

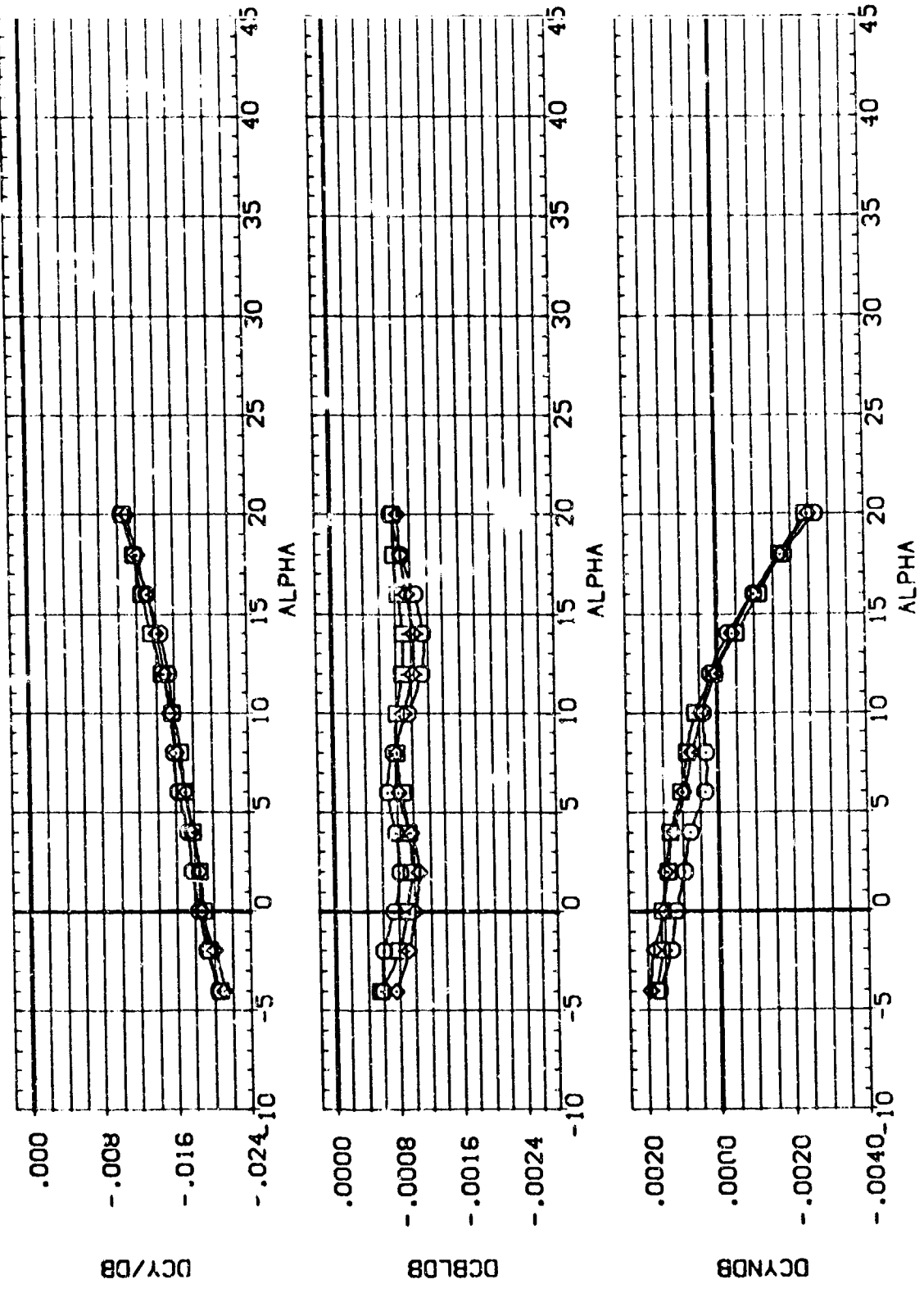


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 1.90

DATA SET SYMBOL
 (LP6108)
 (LP6110)
 (LP6112)

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0898-100, NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR 0898-100, NOSE ORBITER

ALLIRON ELEVTR GT-LOC K/L
 10.000 -20.000 1.000 .000
 10.000 -20.000 1.000 6.820
 10.000 -20.000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SO. IN.
 LREF 8.7025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.9638 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

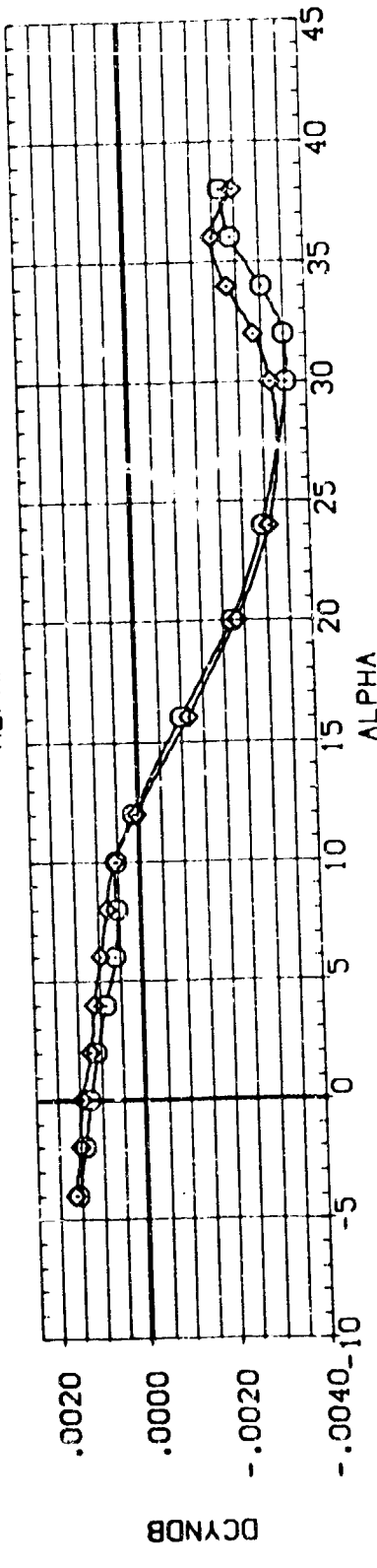
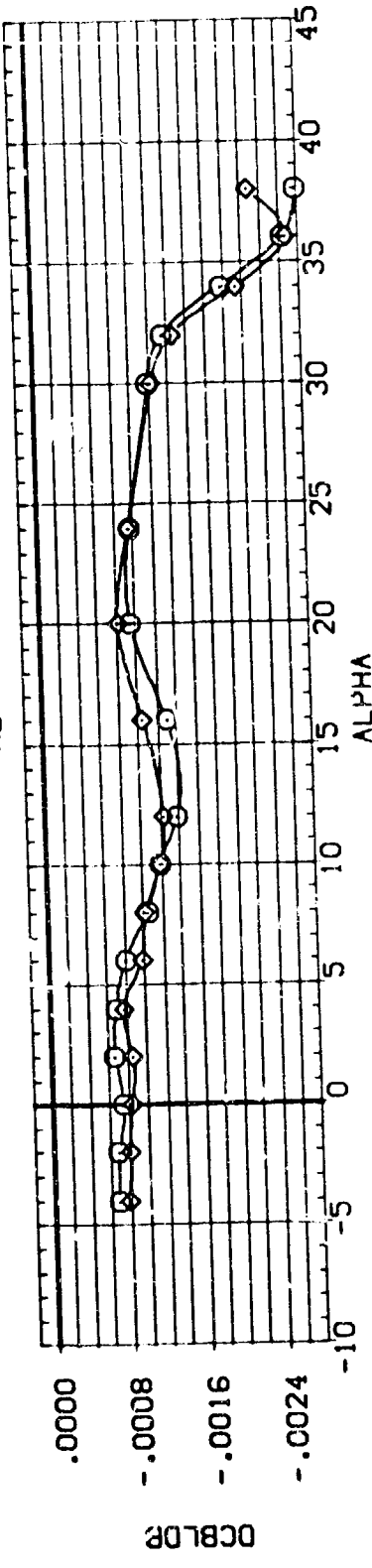
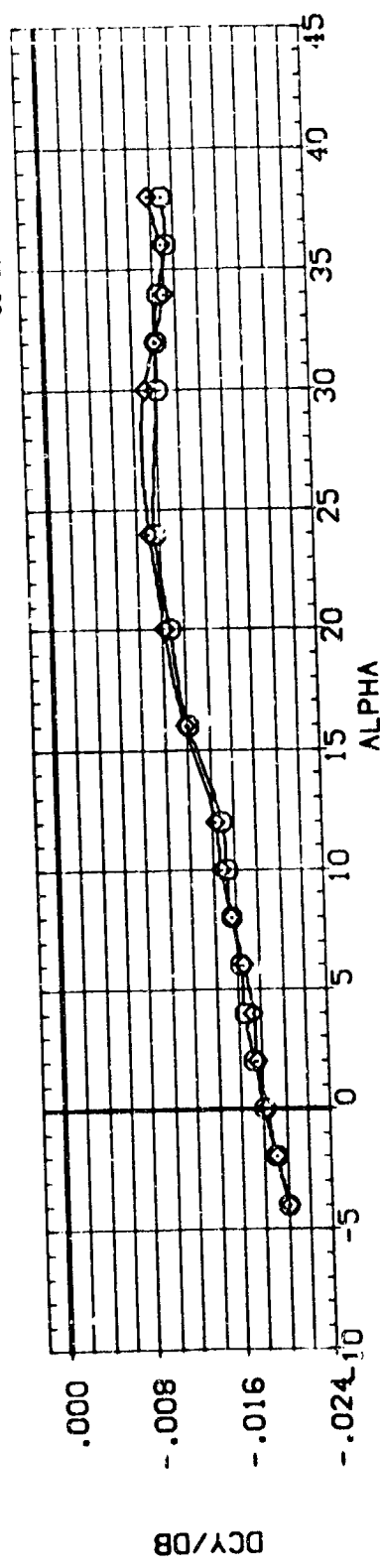


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL: (LPS108), (LPS110), (LPS112)

CONFIGURATION DESCRIPTION: LA-8/8A NAR 0858-MOD, NOSE ORBITER; DATA NOT AVAILABLE; LA-8/8A NAR 0899-MOD, NOSE ORBITER

REFERENCE INFORMATION: SREF 136.1808 SQ. IN.; LREF 8.5025 INCHES; BREF 17.5676 INCHES; YMRP 15.9638 INCHES; ZMRP .0000 INCHES; SCALE .0188

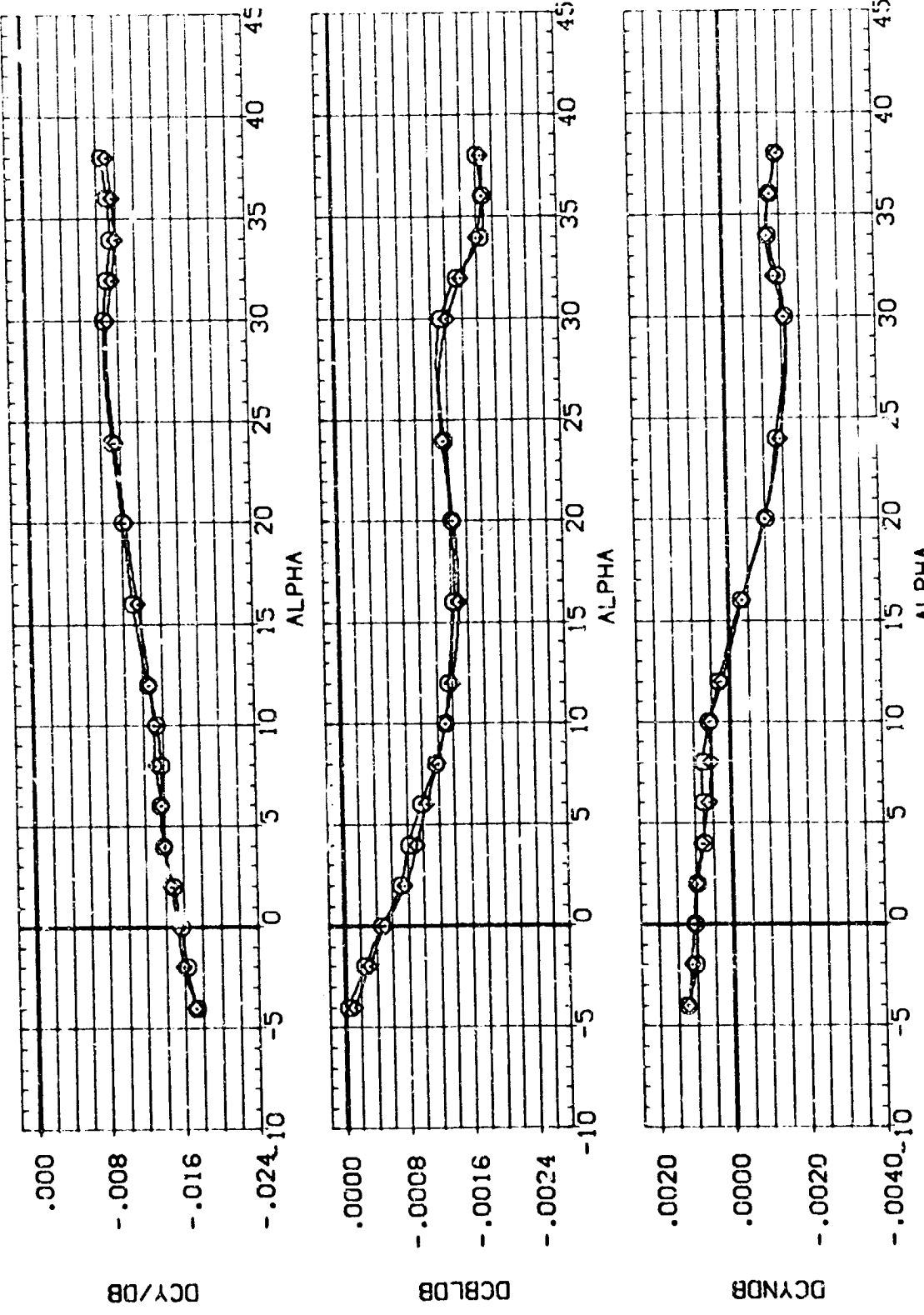


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITER	BETA	ELEVTR	GT-LOC	KVL	REFERENCE INFORMATION	SO. IN.
(RP6108)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	3.000	-20.000	1.000	.000	SREF 136.1808	INCHES
(RP6110)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	3.000	-20.000	1.000	6.820	LREF 8.9025	INCHES
(RP6112)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	3.000	-20.000	3.000	6.820	BREF 17.5628	INCHES
(RP6107)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	.000	-20.000	1.000	6.820	XMRP 15.5638	INCHES
(RP6109)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	.000	-20.000	1.000	6.820	YMRP .0000	INCHES
(RP6111)	LA-8A LARC LPVT 1034 NAR 0898-MOD.	ORBITER	.000	-20.000	3.000	6.820	ZMRP .0000	INCHES
							SCALE .0188	SCALE

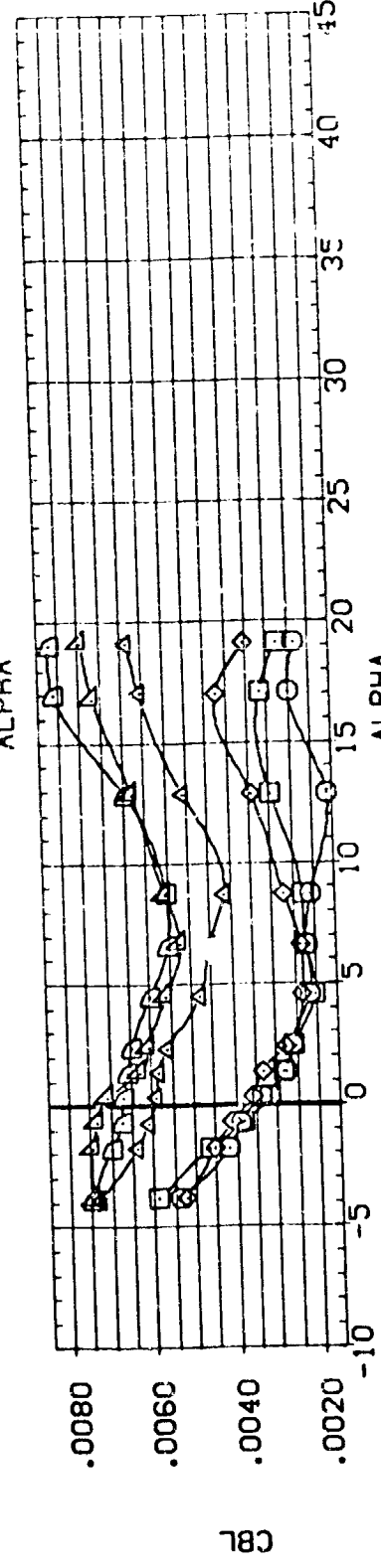
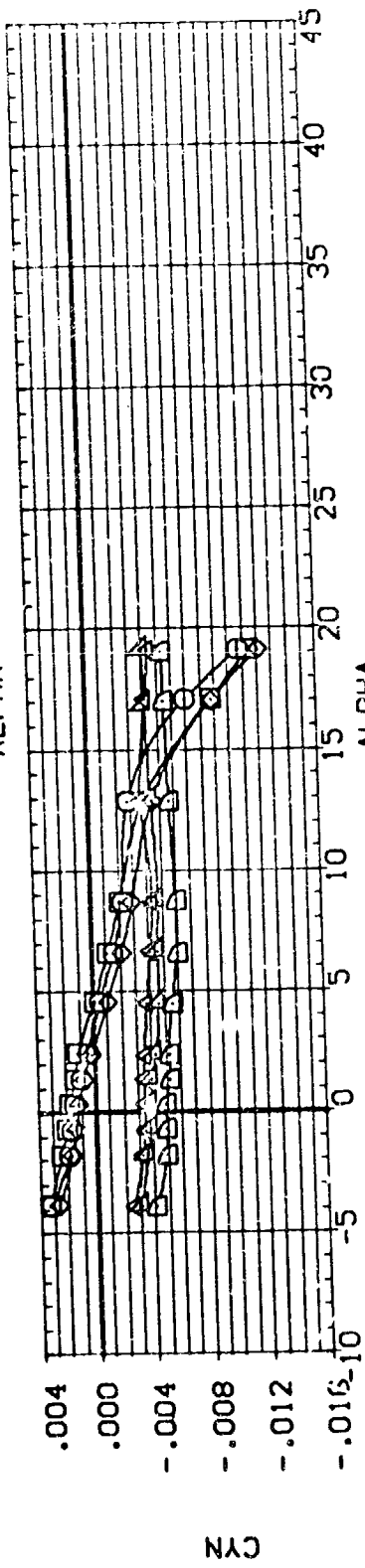
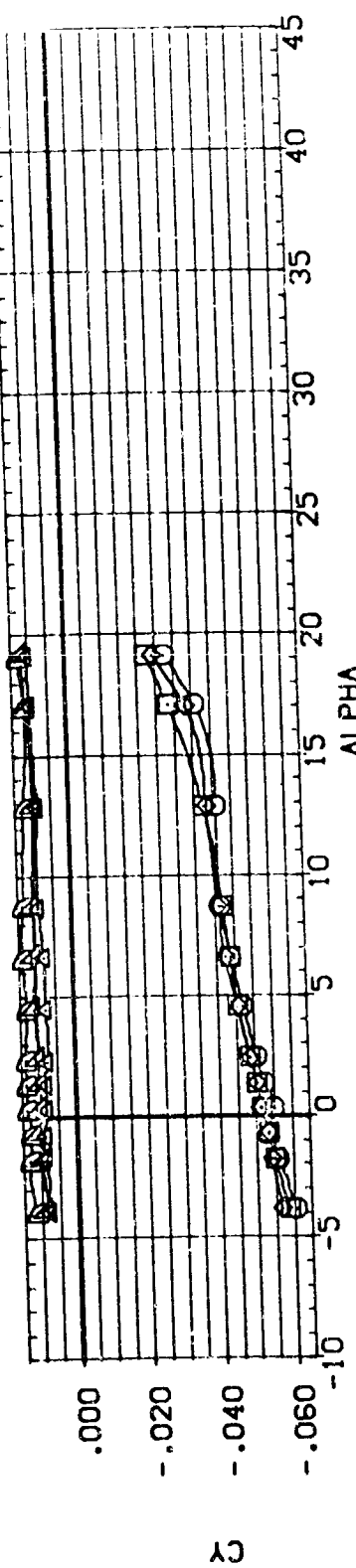


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION	SO. IN.
(RP6108)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	3.000	-20.000	1.000	.000	36.1808	INCHES
(RP6110)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	3.000	-20.000	1.000	6.820	9.9025	INCHES
(RP6112)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	3.000	-20.000	3.000	6.820	17.5628	INCHES
(RP6107)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	.000	-20.000	1.000	.000	15.0000	INCHES
(RP6109)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	.000	-20.000	1.000	6.820	.0000	INCHES
(RP6111)	LA-8A LARC UPVT 034 NAR 0898-MOD. NOSE ORBITER	.000	-20.000	3.000	6.820	.0189	SCALE

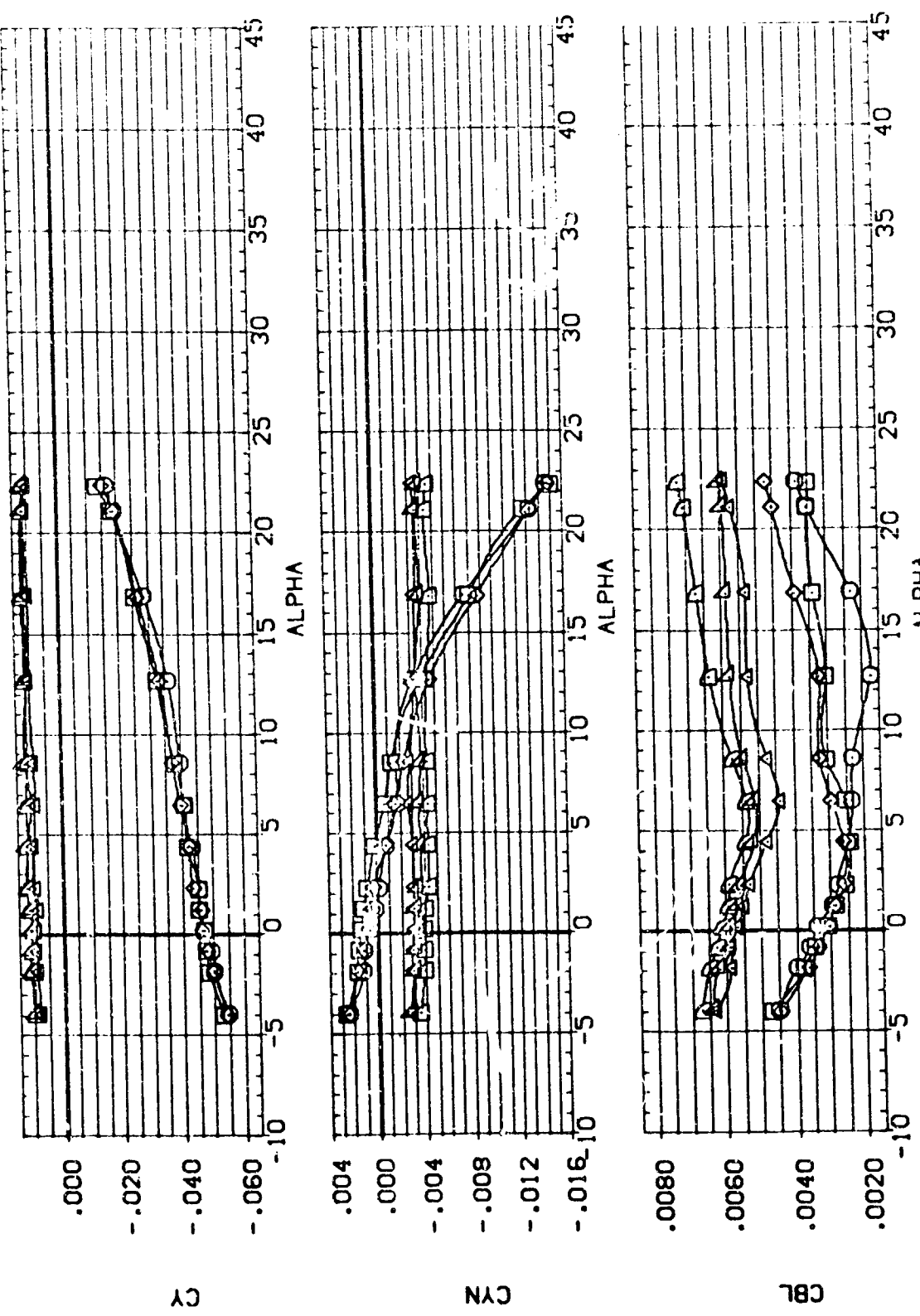


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

REFERENCE INFORMATION
 SC. IN. INC. -ES
 36.1808 8.9025
 17.5628 15.9638
 .0000 .0000
 .0189

BETA ELEVTR GT-LOC KVL
 -3.000 -20.000 1.000 .000
 -3.000 -20.000 3.000 6.820
 .000 -20.000 1.000 .000
 .000 -20.000 3.000 6.820

CONFIGURATION DESCRIPTION
 LA-B LARC UPVT 1023 NAR 0698-MOD. NOSE ORBITTER
 LA-B LARC UPVT 1023 NAR 0698-MOD. NOSE ORBITTER
 LA-B LARC UPVT 1023 NAR 0698-MOD. NOSE ORBITTER
 LA-B LARC UPVT 1023 NAR 0698-MOD. NOSE ORBITTER

DATA SET SYMBOL
 (RP6012) □
 (RP6015) ○
 (RP6011) △
 (RP6011) ◇

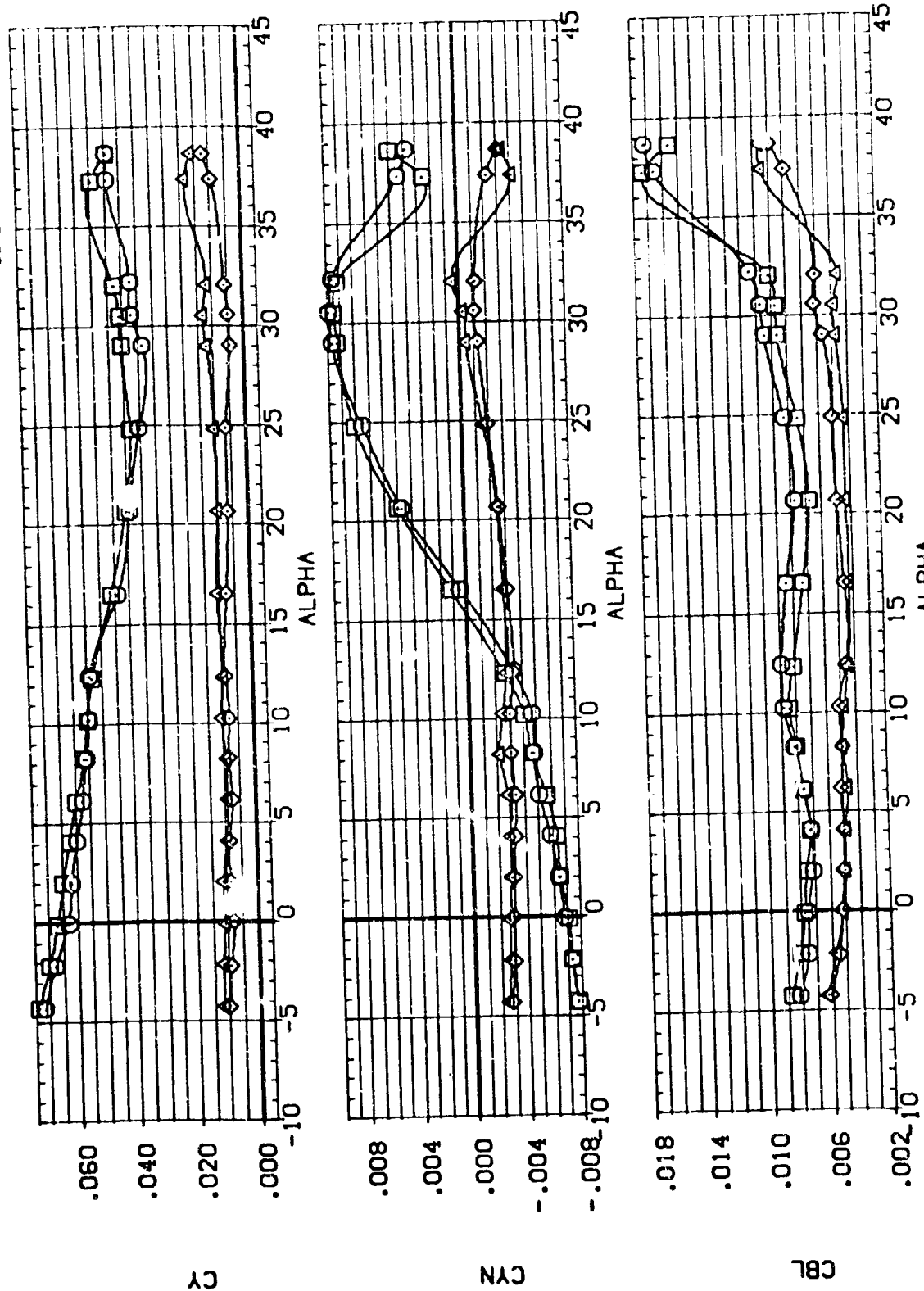


FIG. 6 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION
(RPS012)	LA-8 LARC UPVT 1023 NAR 0898-100. NOISE ORBITTER	-3.000	-20.000	1.000	.000	136.1808 SQ. IN.
(RPS015)	LA-8 LARC UPVT 1023 NAR 0898-100. NOISE ORBITTER	-3.000	-20.000	3.000	6.820	8.9025 INC-ES
(RPS011)	LA-8 LARC UPVT 1023 NAR 0898-100. NOISE ORBITTER	.000	-20.000	1.000	.000	17.5528 INC-ES
(RPS013)	LA-8 LARC UPVT 1023 NAR 0898-100. NOISE ORBITTER	.000	-20.000	3.000	6.820	15.5638 INC-ES
						.0000 INC-ES
						.0000 INC-ES
						.0188 SCALE

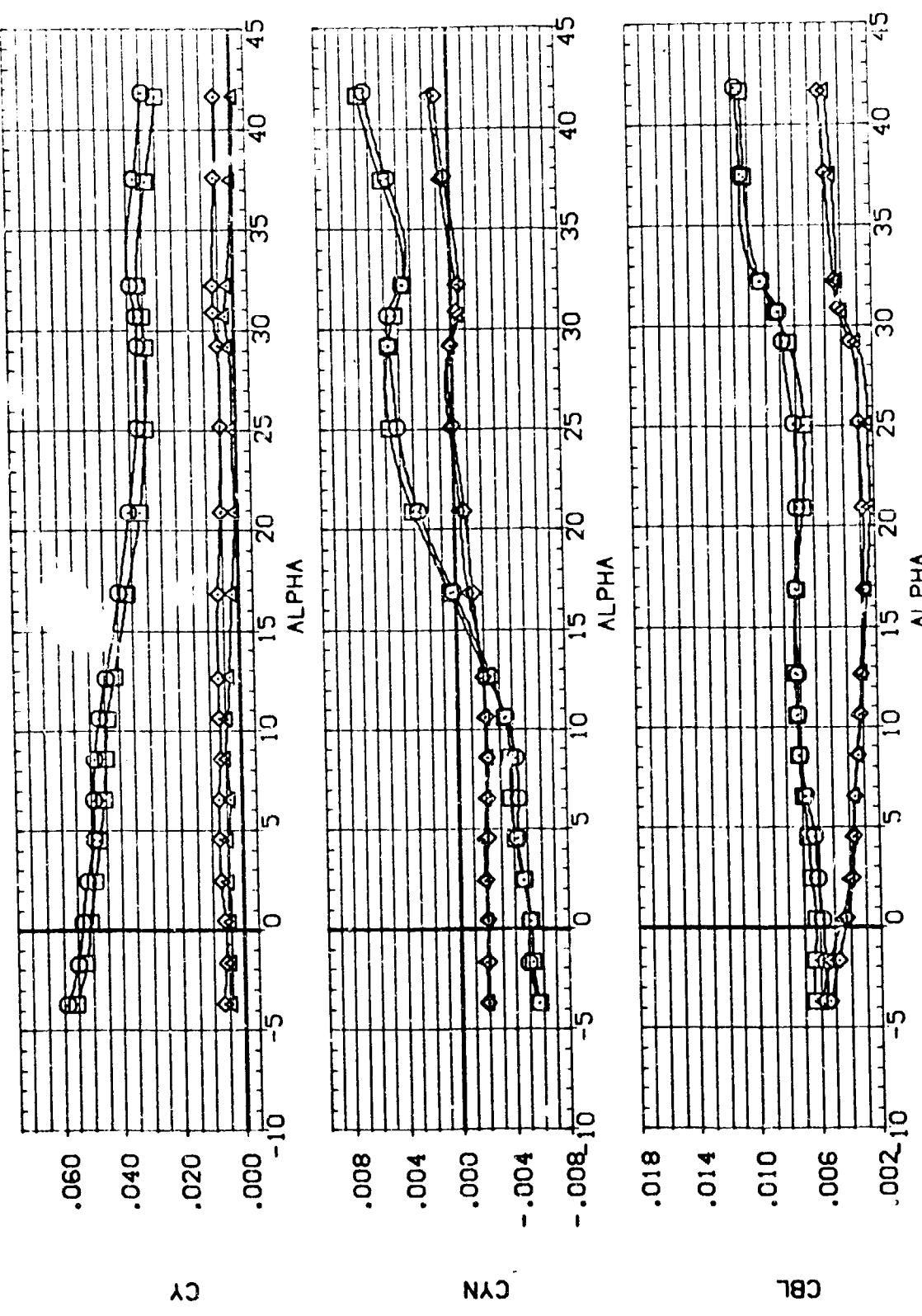


FIG. 3 EFFECT OF ROUGHNESS ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 4.63

DATA SET SYMBOL: (HP6003) (HP6004) □
 CONFIGURATION DESCRIPTION: LA-8 LARC UPVT 1023 NAR 0958-H00. NOSE ORBITTER
 LA-8 LARC UPVT 1023 NAR 0958-H00. NOSE ORBITTER
 AIRLON: .000
 ALPSVP: 1.000 2.000
 GT-LOC: 2.000 2.000
 K/L: 6.820 6.820
 SREF: 136.1808
 LREF: 8.9073
 XMRP: 17.5678
 YMRP: 15.9638
 ZMRP: .0000
 SCALE: .0188
 REFERENCE INFORMATION: SCI, IN. INCHES
 INCHES INCHES
 INCHES INCHES
 INCHES INCHES
 SCALE SCALE

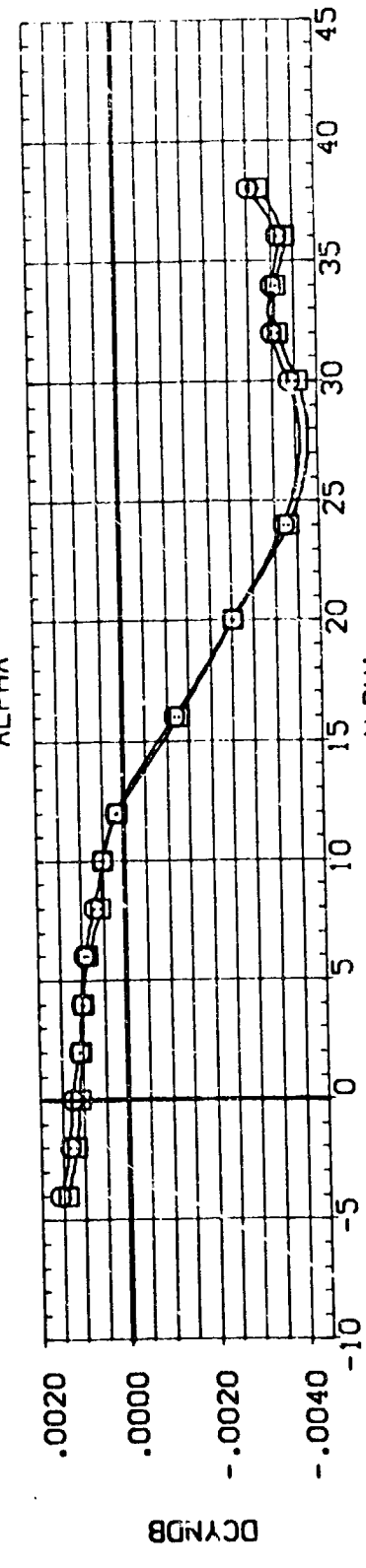
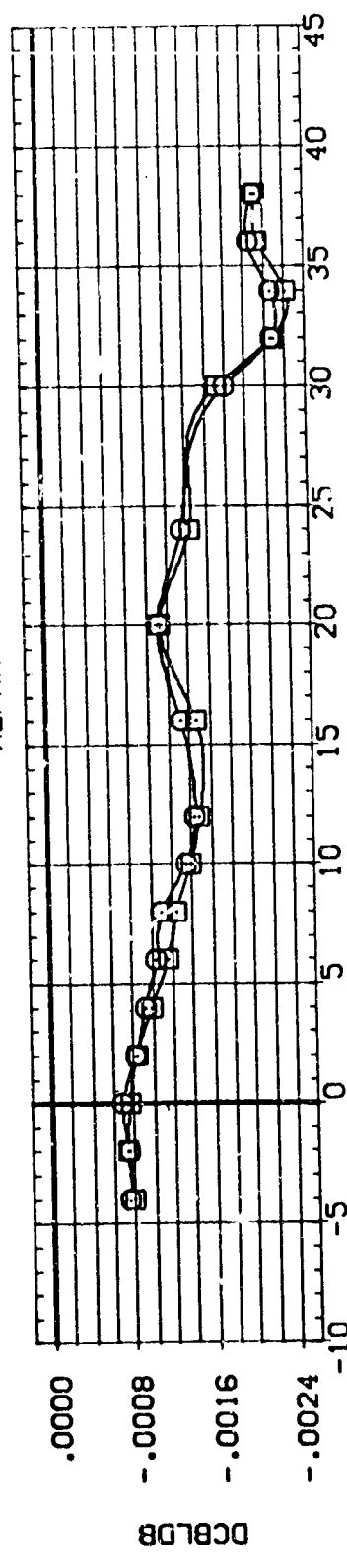
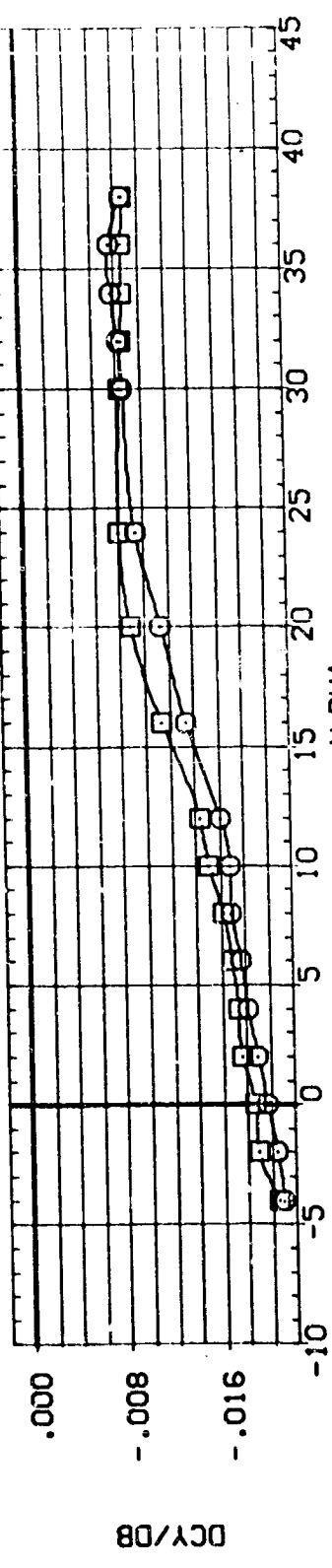


FIG. 7 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILRON	ALPSVP	GT-LOC	K/L	REFERENCE INFORMATION
(HP8003)	LA-8 LARC UPVT 1023 MAR 0898-MOD. NOSE CR811TER	.000	1.000	2.000	6.820	SREF 136.1808 SC. IN.
(HP8004)	LA-8 LARC UPVT 1023 MAR 0898-MOD. NOSE CR811TER	.000	2.000	2.000	6.820	LREF 8.9025 INCHES
						BREF 17.5528 INCHES
						XMP 15.5638 INCHES
						YMP .0000 INCHES
						ZMP .0000 INCHES
						SCALE .0188 INCHES

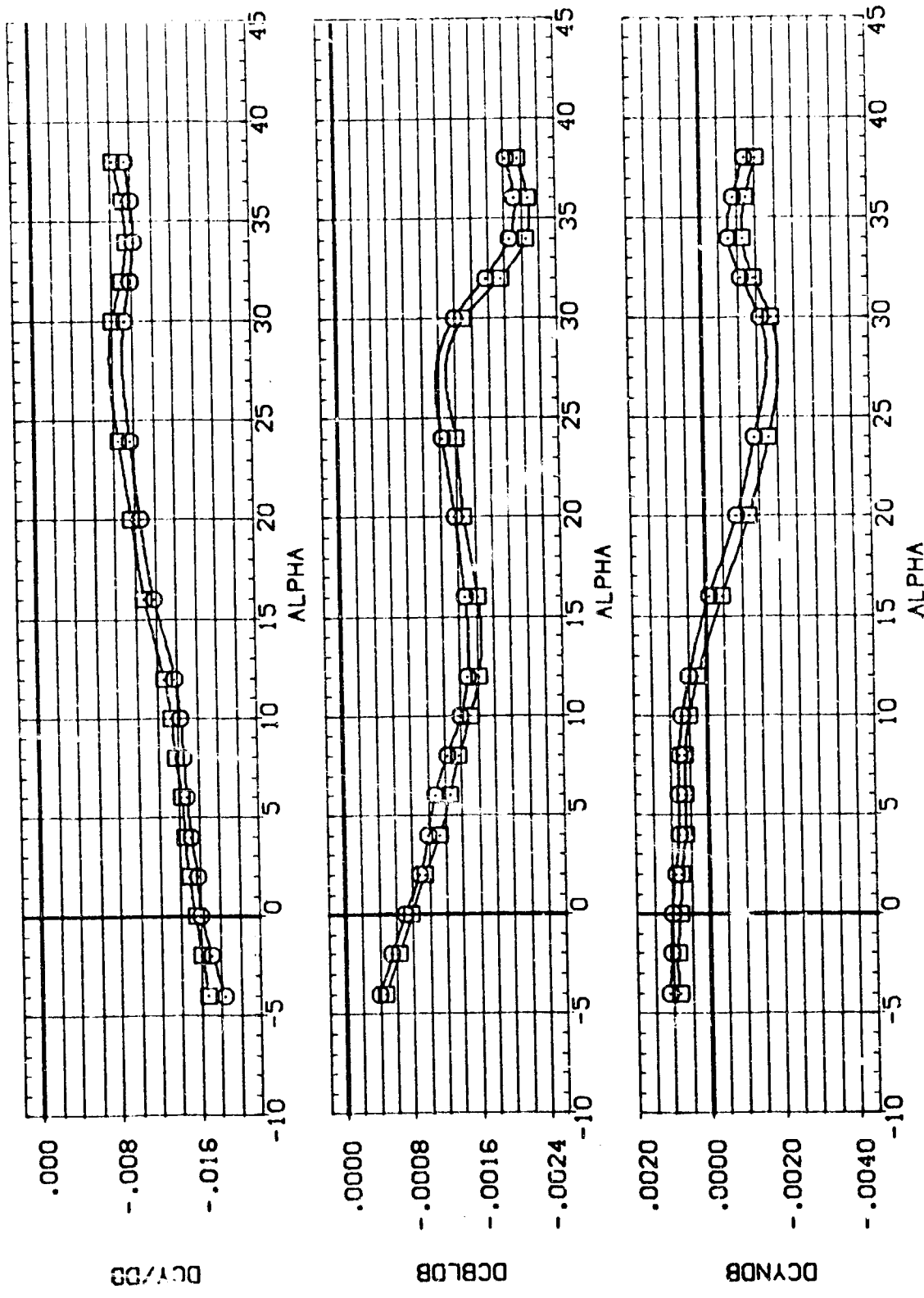


FIG. 7 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)
 (B)MACH = 4.63

DATA SET SYMBOLS: (RP6003), (RP6004), (RP6001), (RP6002)

CONFIGURATION DESCRIPTION: LA-8 LARC UPVT 1023 NAR 0698-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0698-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0698-100, NOSE ORBITER; LA-8 LARC UPVT 1023 NAR 0698-100, NOSE ORBITER

BETA: 3.000, 3.000, .000, .000

AIRLON: .000, .000, .000, .000

GT-LOC: 2.000, 2.000, 2.000, 2.000

K/L: 6.820, 6.820, 6.820, 6.820

REFERENCE INFORMATION: SREF 136.1808, LREF 8.5025, BREF 17.5628, XMRP 15.9638, YMRP .0000, ZMRP .0000, SCALE .0188

SO IN.: 136.1808, 8.5025, 17.5628, 15.9638, .0000, .0000, .0188

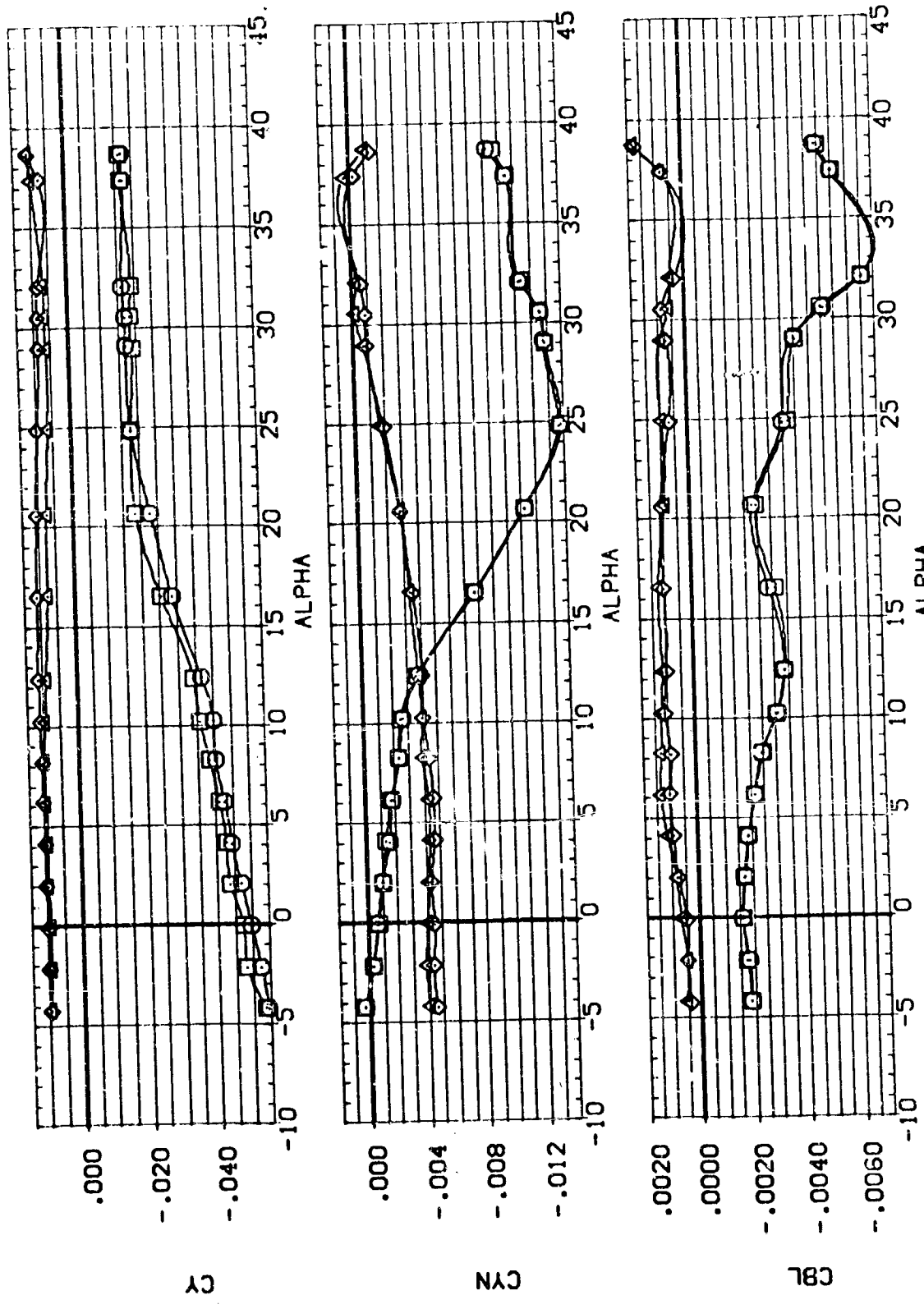


FIG. 7 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = 0)

(A)MACH = 2.36

DATA SET SYMBOL: (RP6003) (RP6004) (RP6001) (RP6002)

CONFIGURATION DESCRIPTION:
 LA-8 LARC LPVT 1023 NAR D898-M30. NOSE CR81TER
 LA-8 LARC LPVT 1023 NAR D898-M30. NOSE CR81TER
 LA-8 LARC LPVT 1023 NAR D898-M30. NOSE CR81TER
 LA-8 LARC LPVT 1023 NAR D898-M30. NOSE CR81TER

BETA: 3.000, 3.000, .000, .000

AIRLON: .000, .000, .000, .000

GT-LOC: 2.000, 2.000, 2.000, 2.000

K/L: 6.820, 6.820, 6.820, 6.820

REFERENCE INFORMATION:
 SREF: 136.1808 SQ. IN.
 LREF: 19.9025 INCHES
 BREF: 17.5628 INCHES
 XMRP: 15.9638 INCHES
 YMRP: .0000 INCHES
 ZMRP: .0000 INCHES
 SCALE: .0189

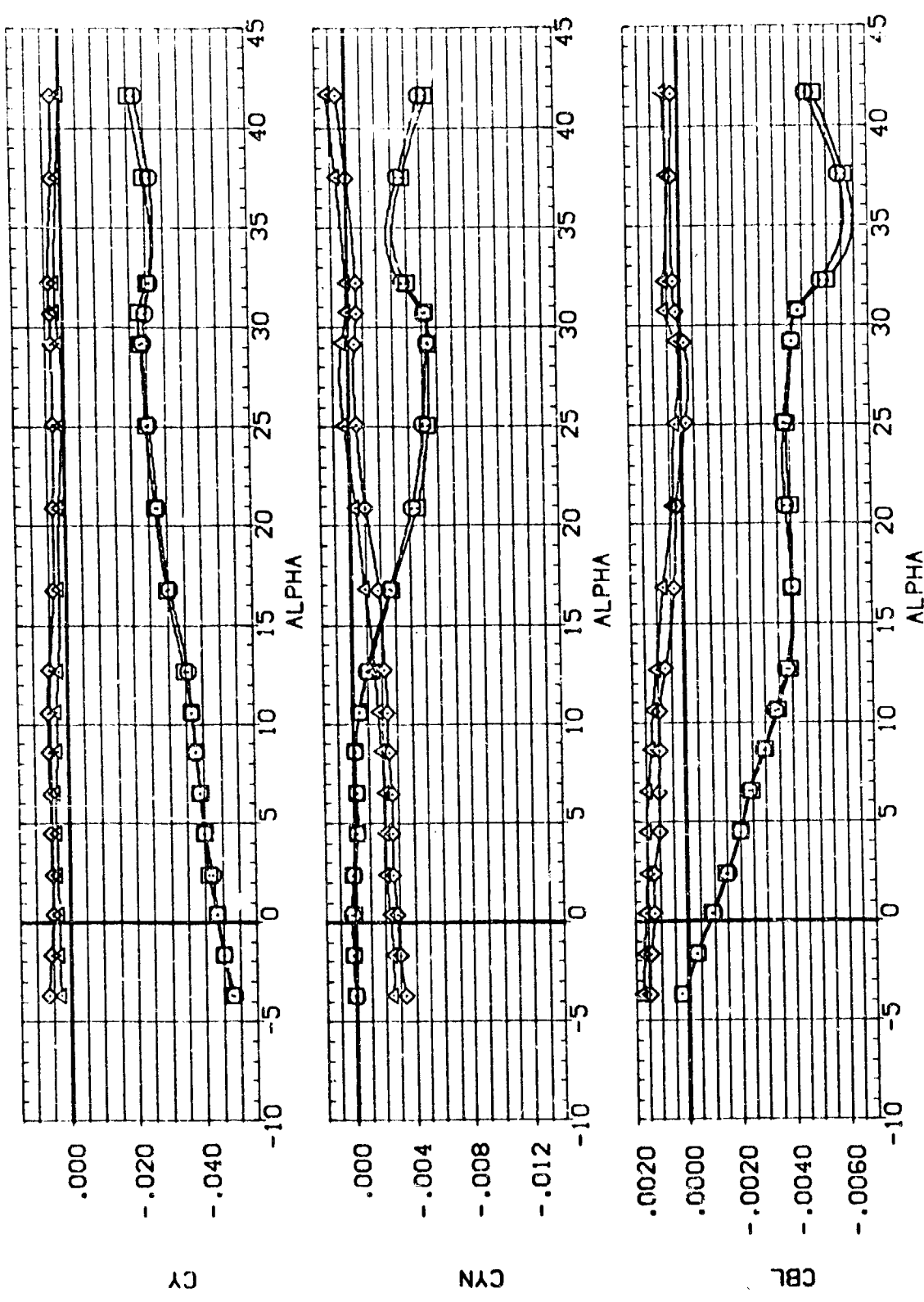


FIG. 7 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (CELETR = 0)

(B)MACH = 4.63

REFERENCE INFORMATION

SREF	136.1808	SO. IN.
LREF	8.9025	INCHES
BREF	17.5628	INCHES
XMRP	15.5638	INCHES
YMRP	.0000	INCHES
ZMRP	.0000	INCHES
SCALE	.0188	SCALE

AILRON ALPSVP GT-LOC K/L

AIRON	10.000	ALPSVP	1.000	GT-LOC	3.000	K/L	6.820
	10.000		2.000		3.000		6.820

CONFIGURATION DESCRIPTION

LA-8 LARC UPVT 1023 NAR 0898-MOD	NOSE ORBITER
LA-8 LARC UPVT 1023 NAR 0898-MOD	NOSE ORBITER

DATA SET SYMBOL
 (MPS015)
 (MPS016)

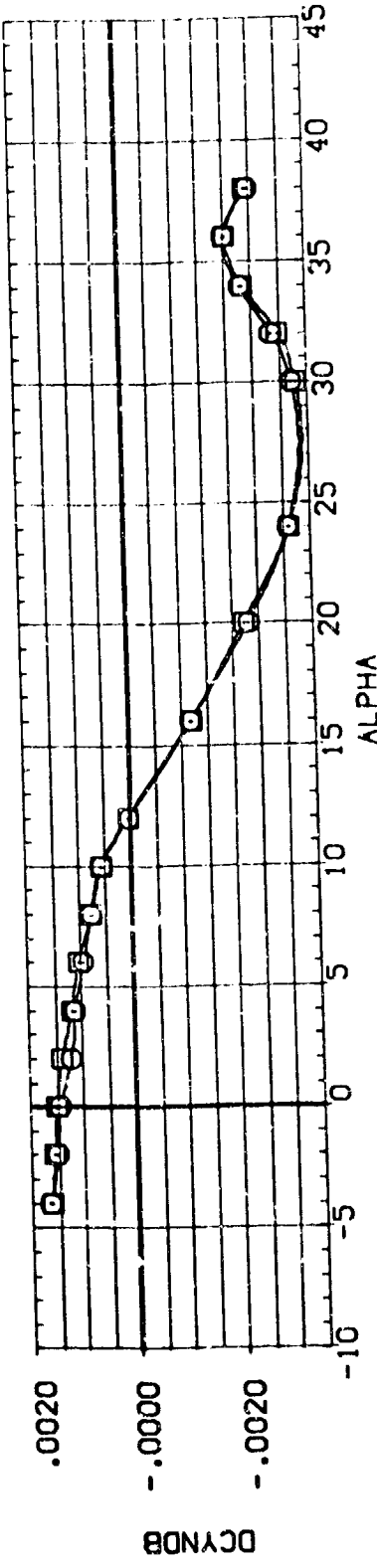
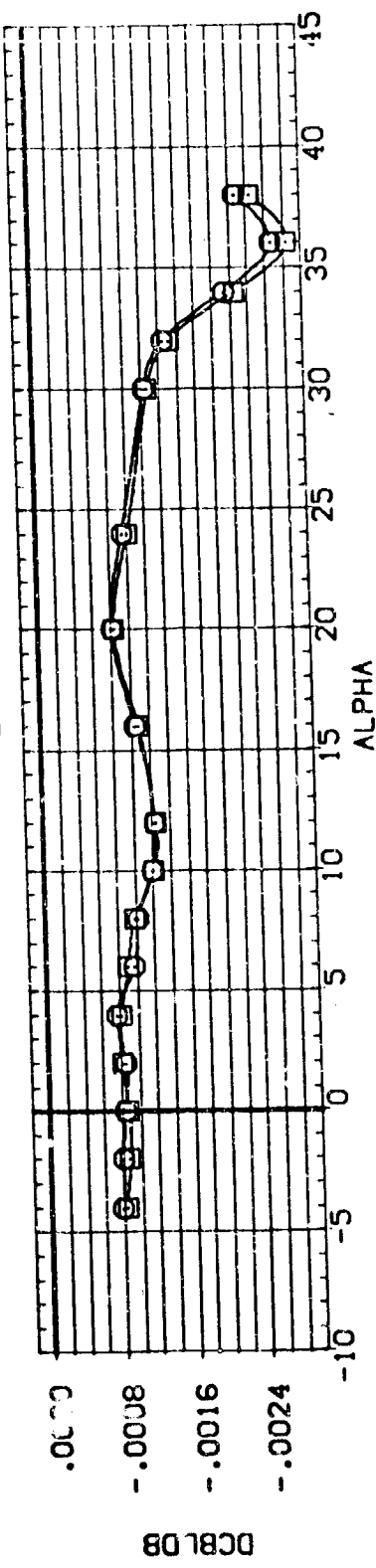
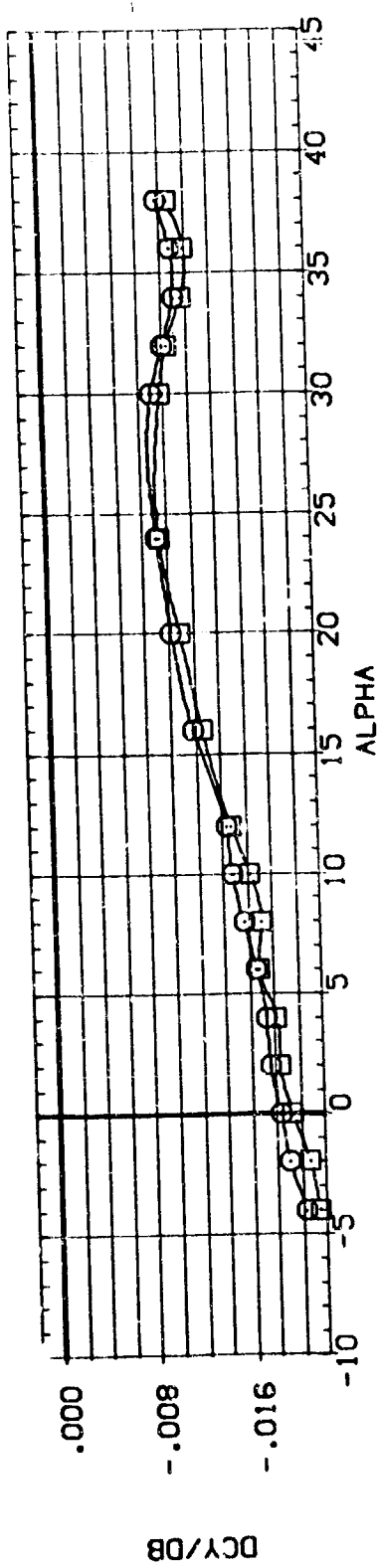


FIG. 8 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

(A) MACH = 2.36

DATA SET SYMBOL (MP6015) □
 CONFIGURATION DESCRIPTION LA-8 LARC LPVT 1023 NAR 0898-M00. NOSE CR8BITER
 LA-8 LARC LPVT 1023 NAR 0898-P50. NOSE CR8BITER
 REFERENCE INFORMATION SO. N. INCHES
 SREF 136.1808
 LREF 8.9023
 BREF 17.5628
 XREF .0000
 YREF .0000
 ZREF .0000
 SCALE 0.188

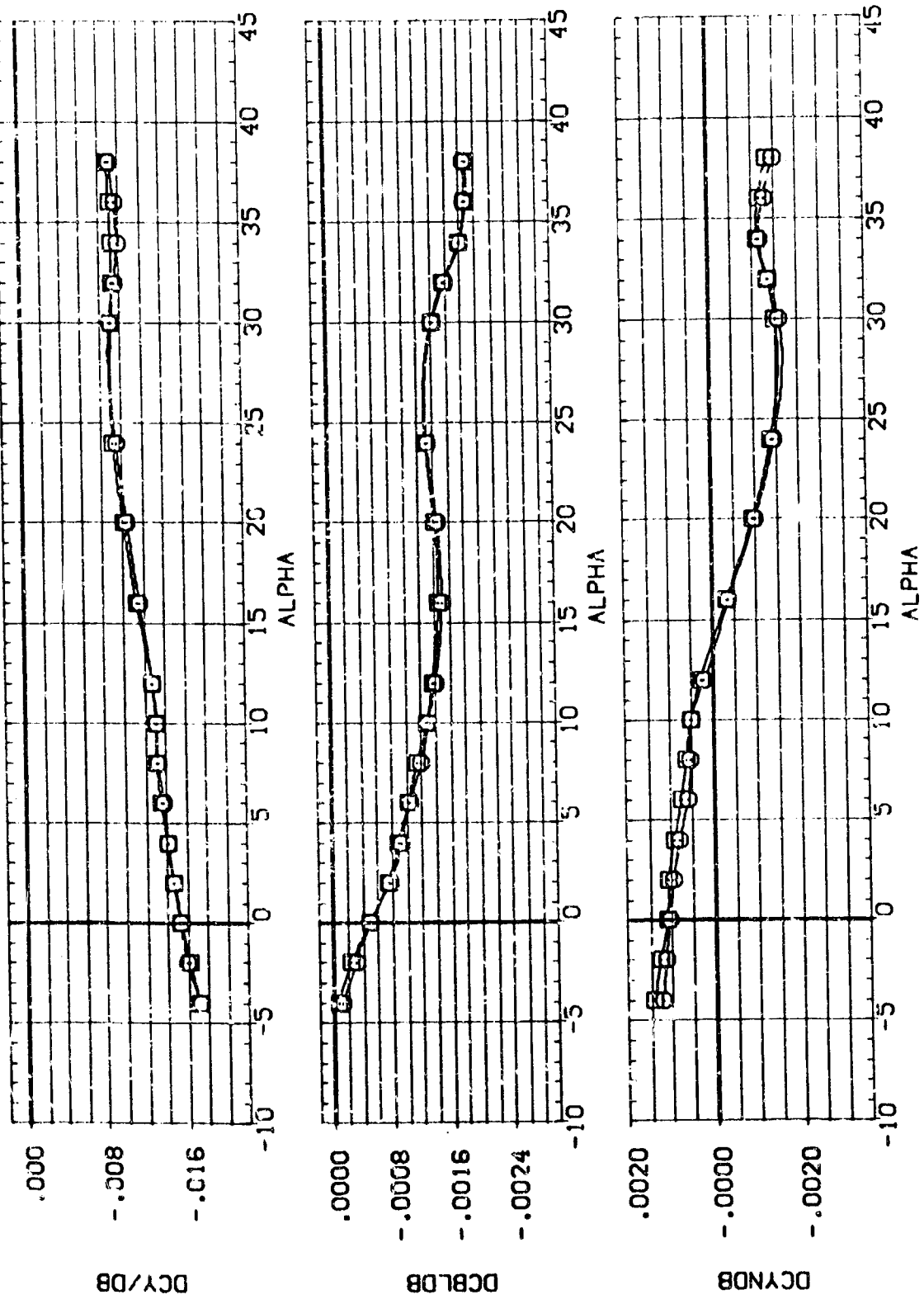


FIG. 8 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 4.63

DATA SET SYMBOL
 (RP6015)
 (RP6016)
 (RP6013)
 (RP6014)

CONFIGURATION DESCRIPTION
 LA-8 LARC LPVT 1023 NAR D898-H00. NOISE CR811TER
 LA-8 LARC LPVT 1023 NAR D898-H00. NOISE CR811TER
 LA-8 LARC LPVT 1023 NAR D893-H00. NOISE CR811TER
 LA-8 LARC LPVT 1023 NAR D898-H00. NOISE CR811TER

BETA
 -3.000
 -3.000
 .000
 .000

AILRON
 10.000
 10.000
 10.000
 10.000

GT-LOC
 3.000
 3.000
 3.000
 3.000

K/L
 6.820
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.9025 INCHES
 XMRP 17.5528 INCHES
 YMRP 15.5638 INCHES
 ZMRP .0000 INCHES
 SCALE .0188

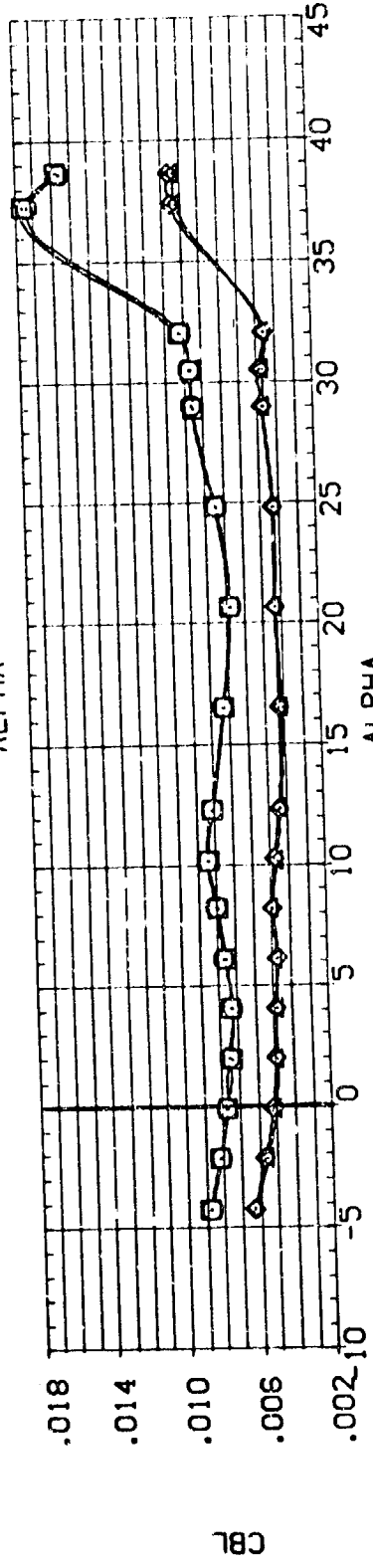
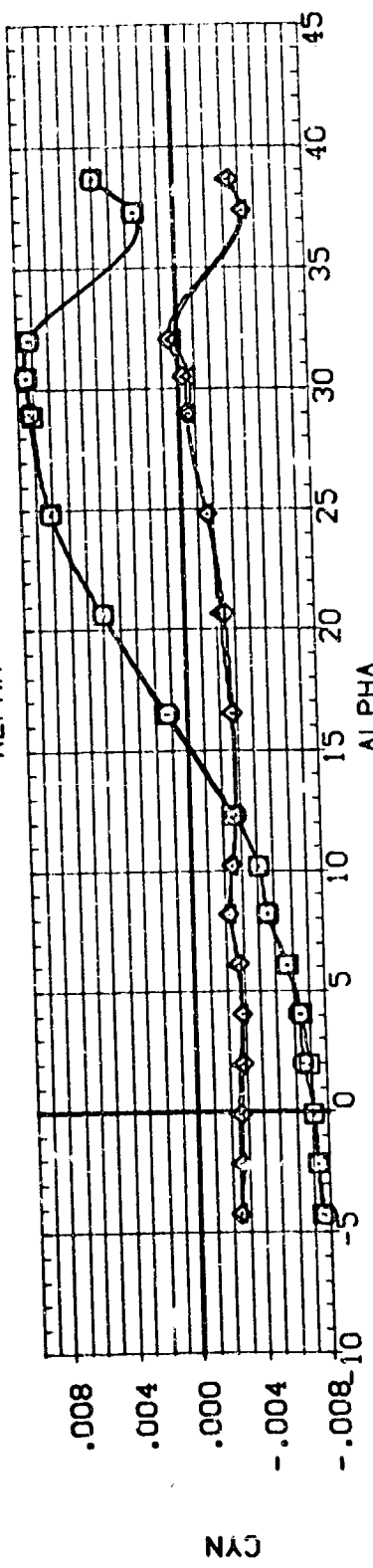
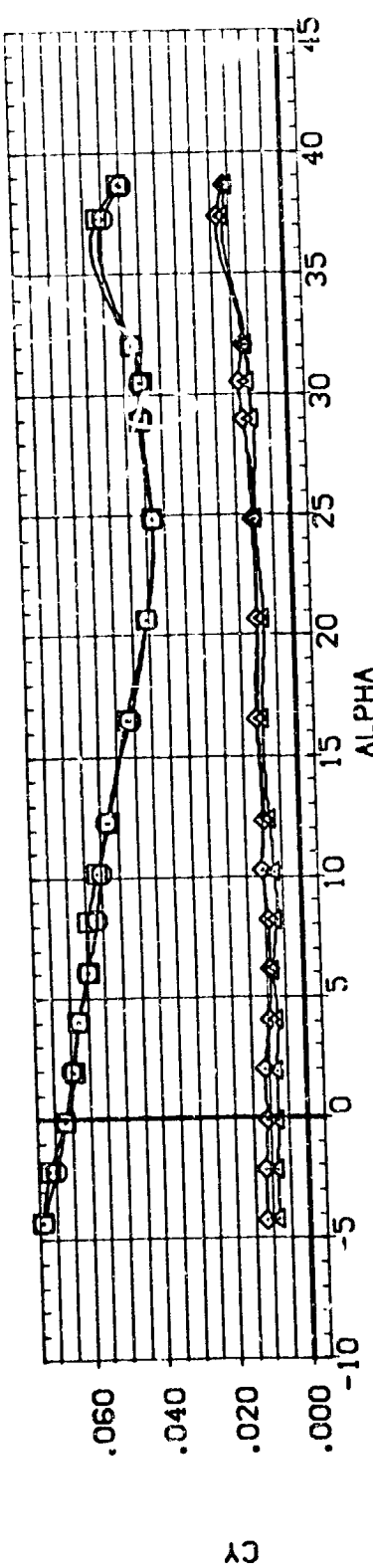


FIG. 8 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	AIRFOIL	GT-LOC	KVL	REFERENCE INFORMATION
(RP60:15)	LA-8 LARC UPVT 1023 NAR C898-MOD. NOSE ORBITER	-3.000	10.000	3.000	6.820	SREF 136.1808 SQ IN.
(RP60:16)	LA-8 LARC UPVT 1023 NAR C898-MOD. NOSE ORBITER	-3.000	10.000	3.000	6.820	LREF 8.9025 INCHES
(RP60:13)	LA-8 LARC UPVT 102 NAR C898-MOD. NOSE ORBITER	.000	10.000	3.000	6.820	BREF 7.5528 INCHES
(RP60:14)	LA-8 LARC UPVT 1023 NAR C898-MOD. NOSE ORBITER	.000	10.000	3.000	6.820	XMRP 15.9638 INCHES
						YMRP .0000 INCHES
						ZMRP .0000 INCHES
						SCALE .0188

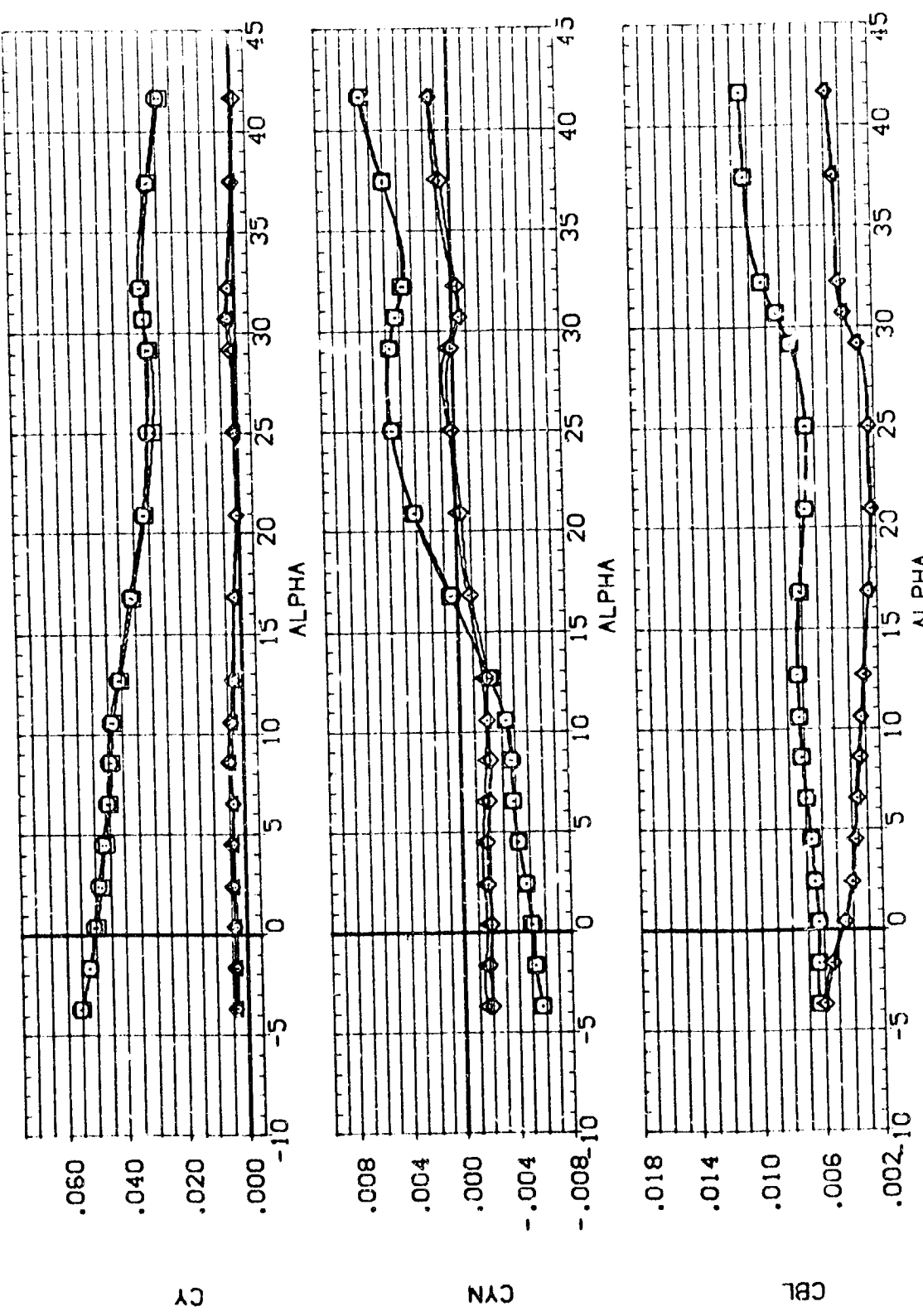


FIG. 8 HYSTERESIS EFFECT ON LAT-DIR CHARACTERISTICS (ELEVTR = -20)

(B)MACH = 4.63

DATA SET SYMBOL (U76112) □
 CONFIGURATION DESCRIPTION LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER
 REFERENCE INFORMATION
 SREF 126.1808 SQ. IN.
 LREF 8.9026 INCHES
 DREF 17.5628 INCHES
 XMRP 15.9638 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 INCHES

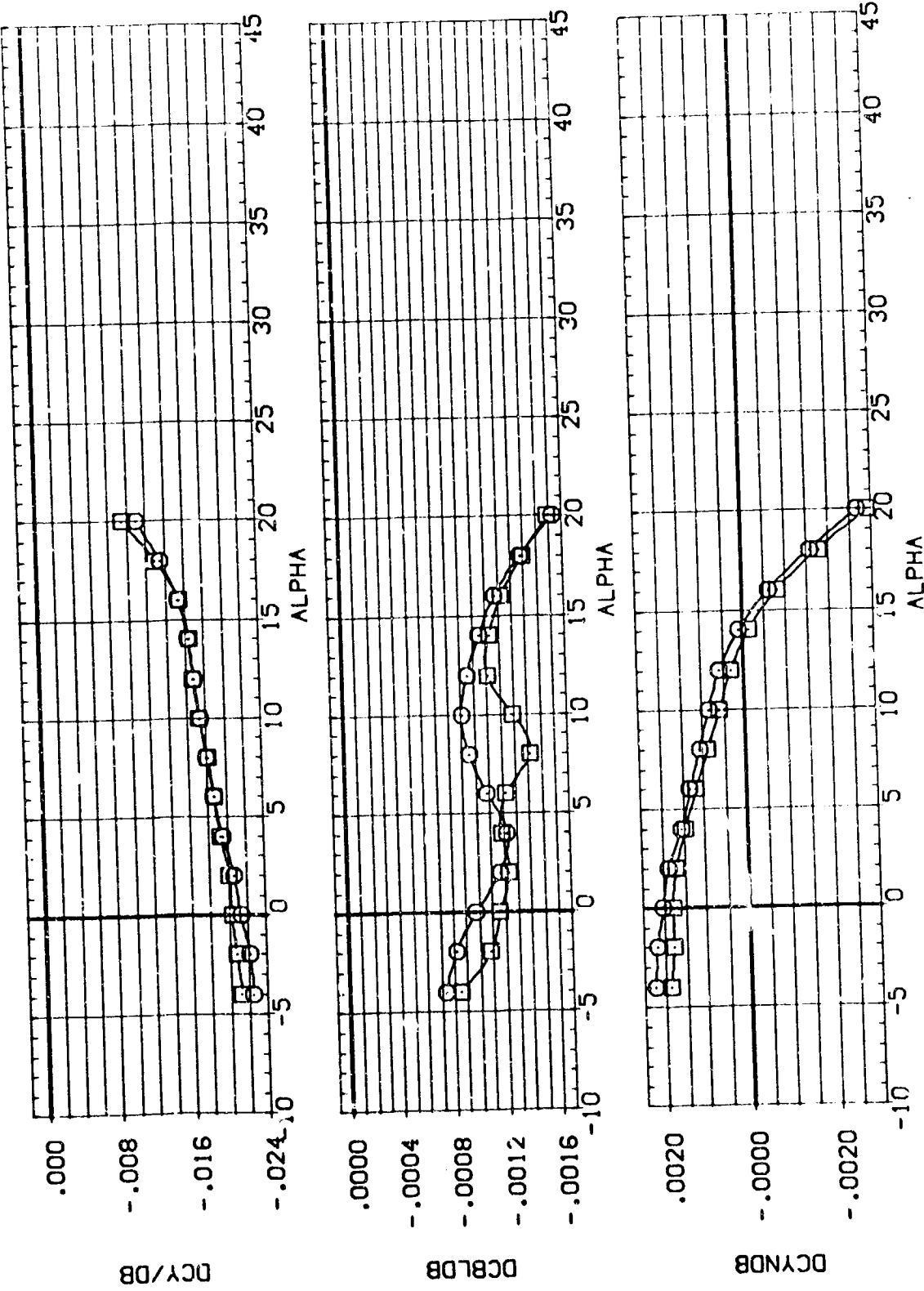


FIG. 9 COMPARISON OF LAT-DIR CHARACTERISTICS (ELEVTR = -20)
 (A) MACH = 1.60

DATA SET SYMBOL (UP6112) (UP6113)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR C898-MOD. NOISE ORBITTER
 LA-8A LARC UPVT 1034 NAR C898-MOD. NOISE ORBITTER

AILRON ELEVTR GT-LOC K/L
 10.000 -20.000 3.000 6.820
 10.000 -20.000 3.000 6.820

SRREF 136.1808 SQ. IN.
 LRREF 8.9025 INCHES
 BRREF 17.5628 INCHES
 YMRP 15.5638 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

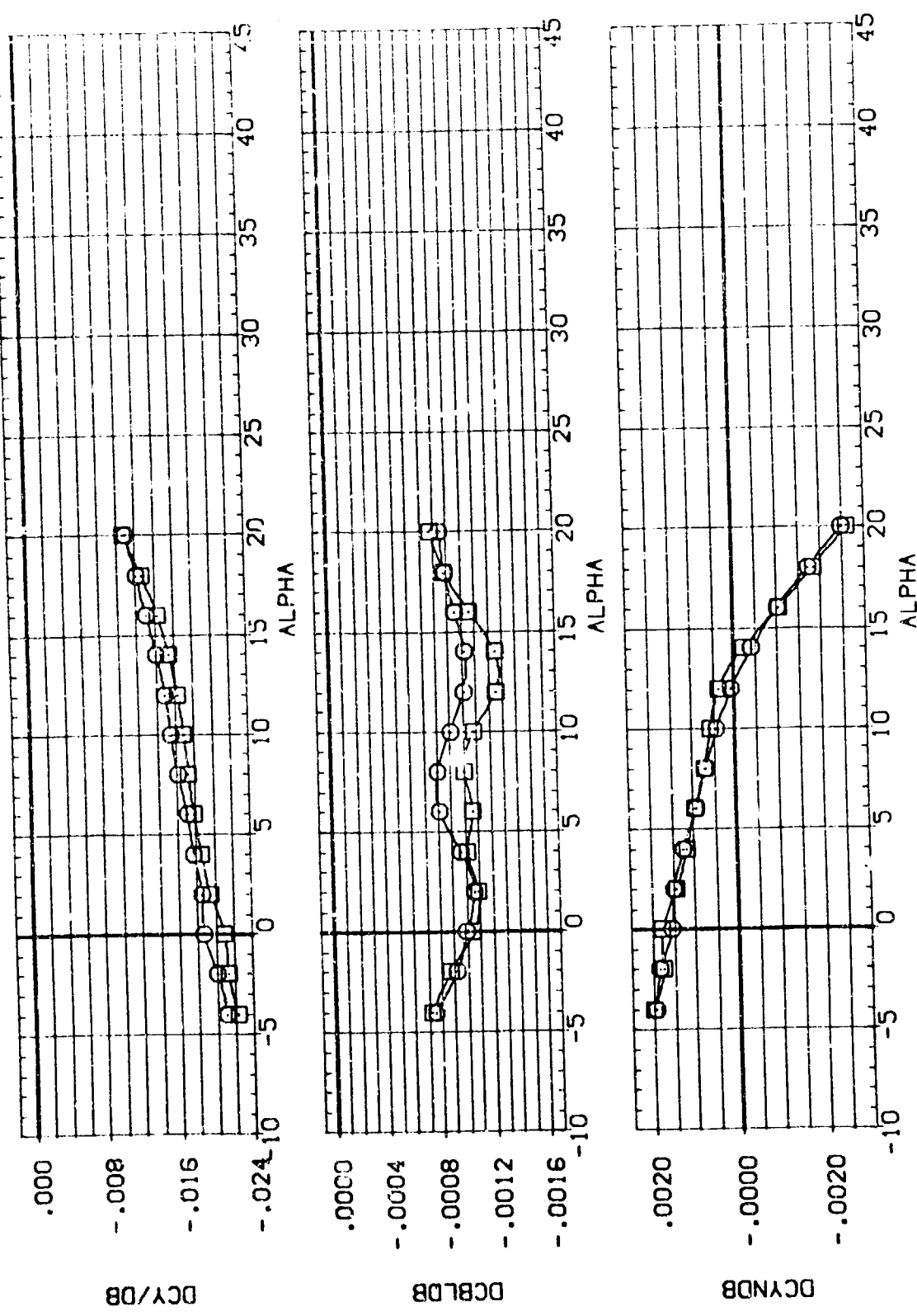


FIG. 9 COMPARISON OF LAT-DIR CHARACTERISTICS (ELEVTR = -20)
 (B)MACH = 1.90

DATA SET SYMBOL (RPS112) (RPS113) (RPS111)
 CONFIGURATION DESCRIPTION
 LA-8A LARC LPVT 1034 NAR 0898-H00. NOISE ORBITER
 LA-8A LARC LPVT 1034 NAR 0898-H00. NOISE ORBITER
 LA-8A LARC LPVT 1034 NAR 0898-H00. NOISE ORBITER
 AIRY ELEVTR 10.000 -20.000
 GT-LOC 3.000 3.000 3.000
 KVL 6.870 6.870 6.870
 REFERENCE INFORMATION
 SQ. IN. 136.1808
 INCHES 8.9025
 INCHES 17.5628
 INCHES 15.3638
 INCHES .0000
 INCHES .0000
 INCHES .0188
 SCALE

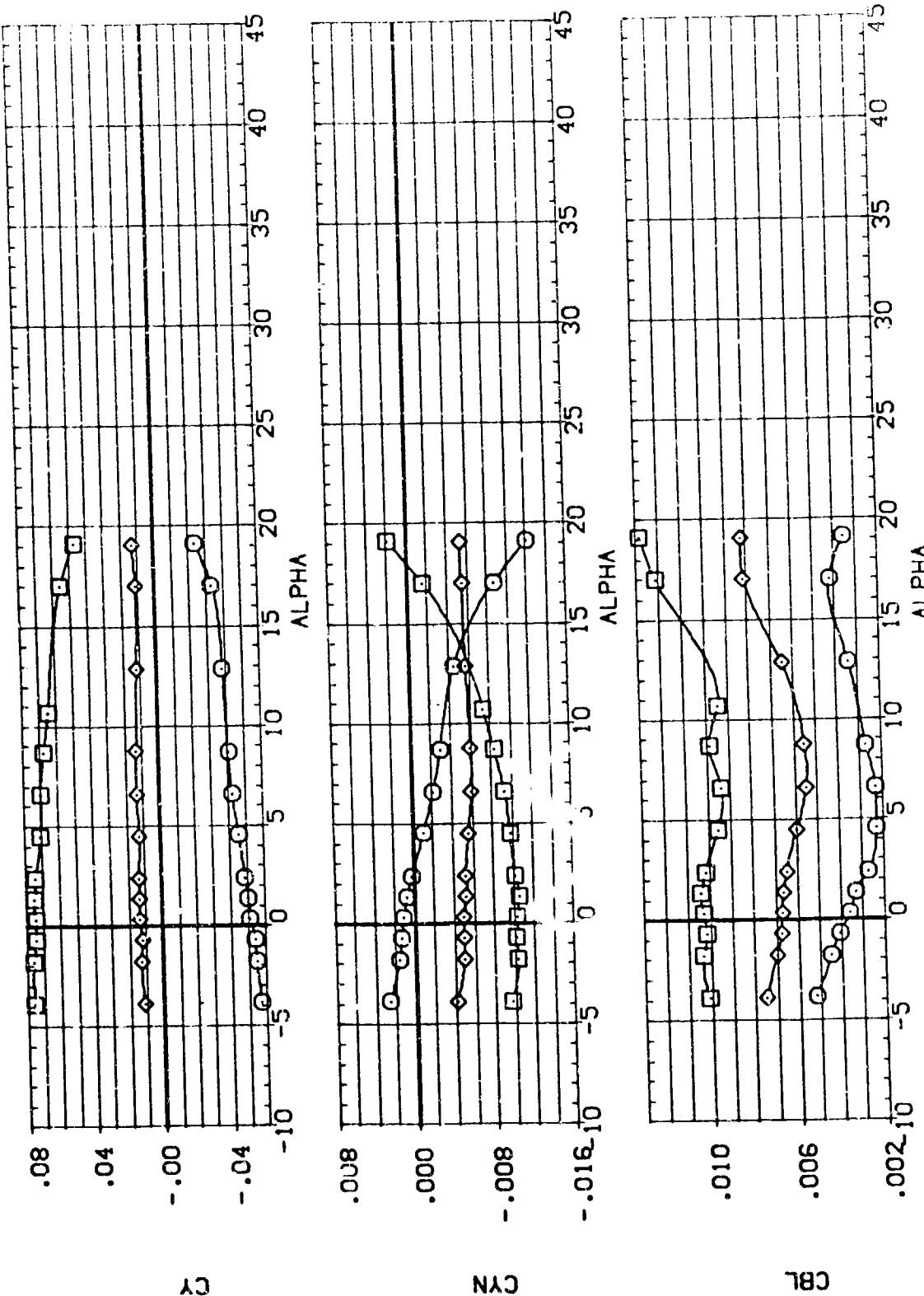


FIG. 9 COMPARISON OF LAT-DIR CHARACTERISTICS (ELEVTR = -20)

CAJMACB = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILTRON	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION
(RP6 12)	LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER	10.000	-20.000	3.000	6.820	SREF 136.1808 SO. IN.
(RP6 13)	LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER	10.000	-20.000	3.000	6.820	LREF 8.9025 INCHES
(RP6 11)	LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER	10.000	-20.000	3.000	6.820	BREF 17.5628 INCHES
						XMRP 15.9638 INCHES
						YMRP .0030 INCHES
						ZMRP .0000 INCHES
						SCALE .0188

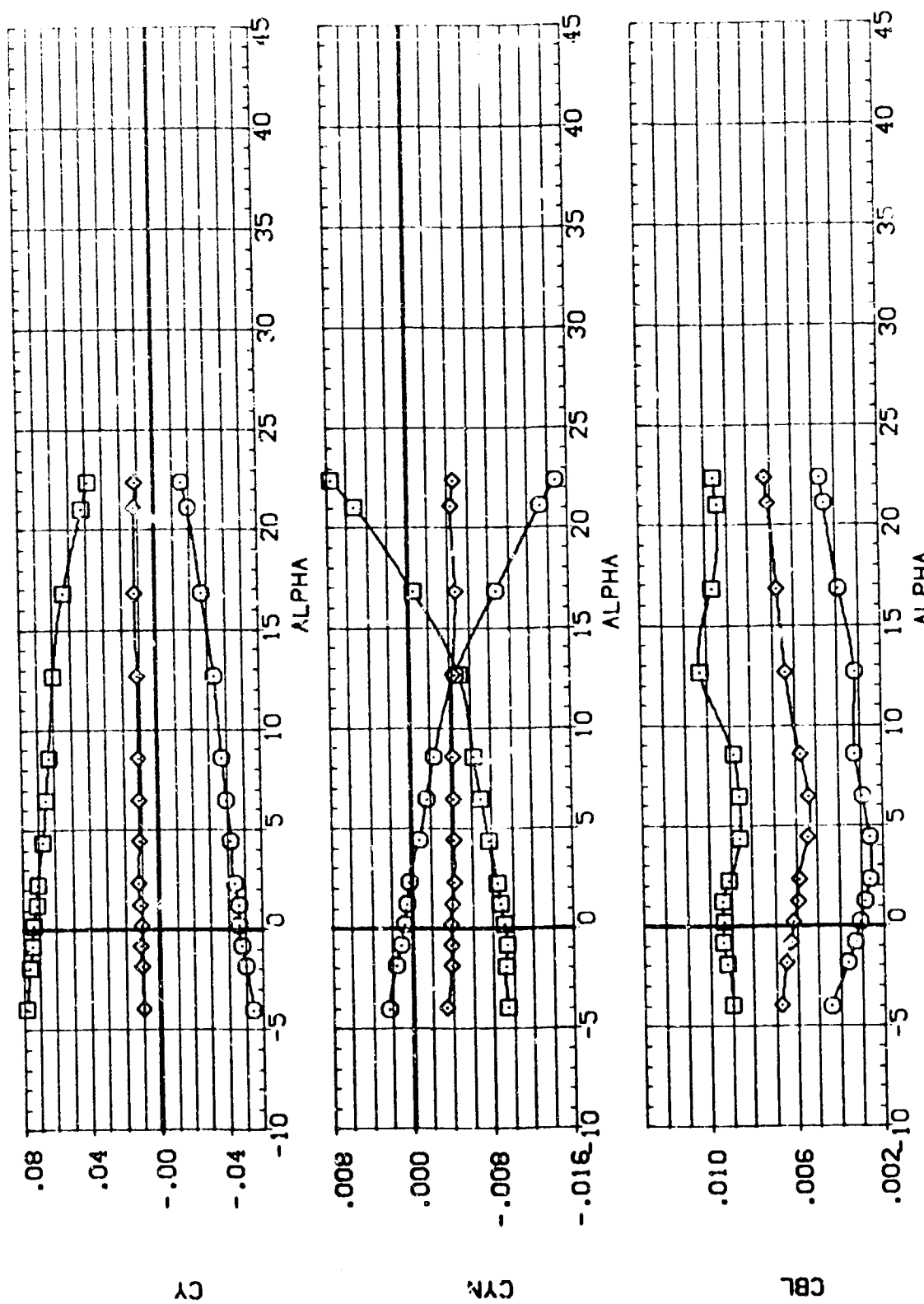


FIG. 9 COMPARISON OF LAT-DIR CHARACTERISTICS (ELEVTR = -20)
 (B)MACH = 1.90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AIRLON	ELEVTR	GT-DC	K/L	REFERENCE INFORMATION
(CP6114)	LA-8A LARC LFVT 1034 NAR 0898-MOD. NOSE ORBITER	.000	.000	2.000	6.820	SREF 136.1808 SO.IN
(CP6116)	LA-8A LARC LFVT 1034 NAR 0898-MOD. NOSE ORBITER	.000	-10.000	2.000	6.820	LREF 8.9025 INCHES
(CP6119)	LA-8A LARC LFVT 1034 NAR 0898-MOD. NOSE ORBITER	10.000	-10.000	2.000	6.820	BREF 17.5628 INCHES
						XRRP 15.9638 INCHES
						YRRP .0000 INCHES
						ZRRP .0000 INCHES
						SCALE .0188 SCALE

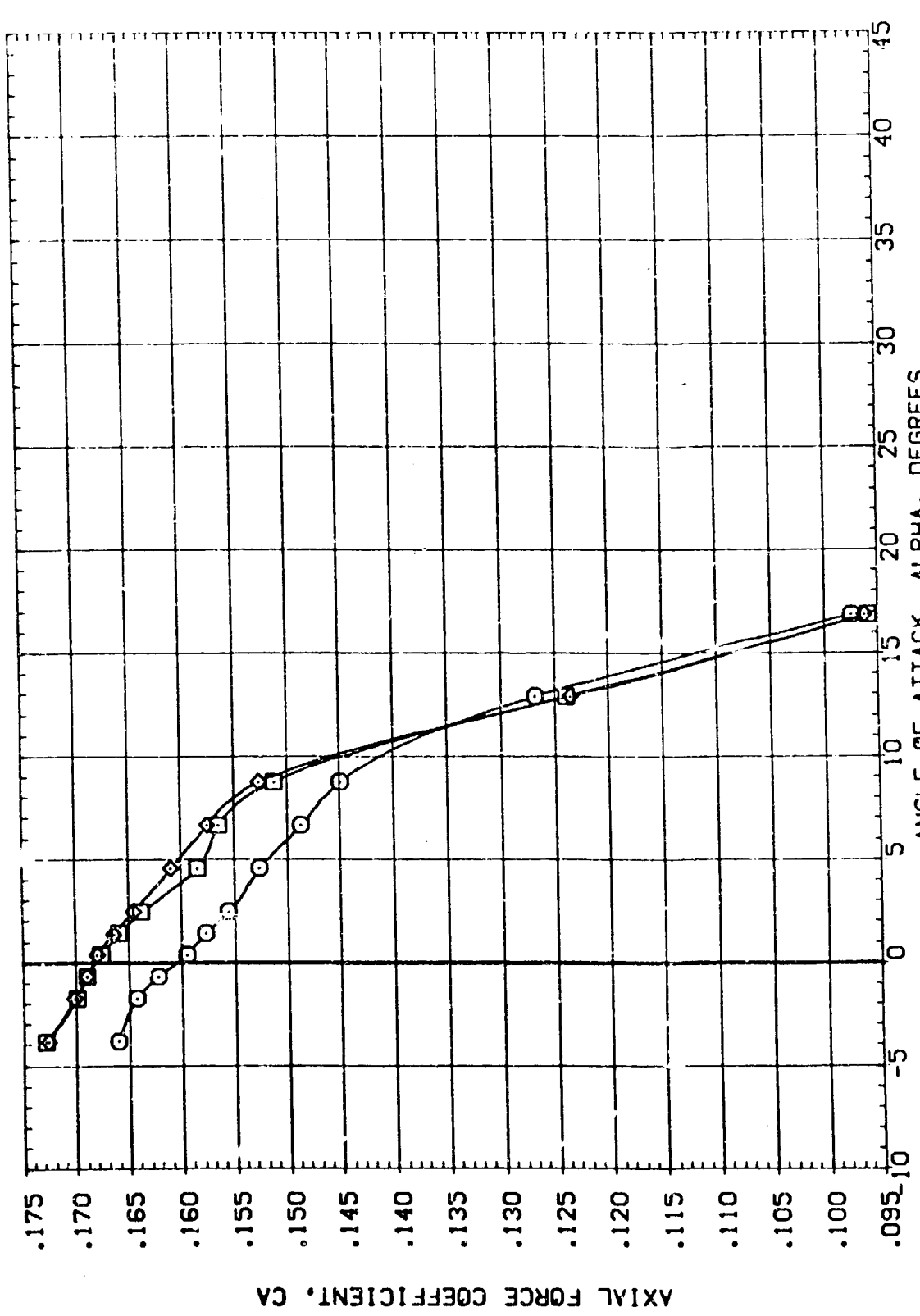


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(A)MACH = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILLRON	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION	SQ. IN.
(CP8114)	LA-BA LARC UPVT 1034 NAR 0898-H00. NOSE ORBITER	.000	.000	2.000	6.820	SREF	136.1808
(CP8116)	LA-BA LARC UPVT 1034 NAR 0898-H00. NOSE ORBITER	.000	-10.000	2.000	6.820	LREF	8.3025
(CP8119)	LA-BA LARC UPVT 1034 NAR 0898-H00. NOSE ORBITER	10.000	-10.000	2.000	6.820	BREF	17.5628
						XMRP	15.5638
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0188

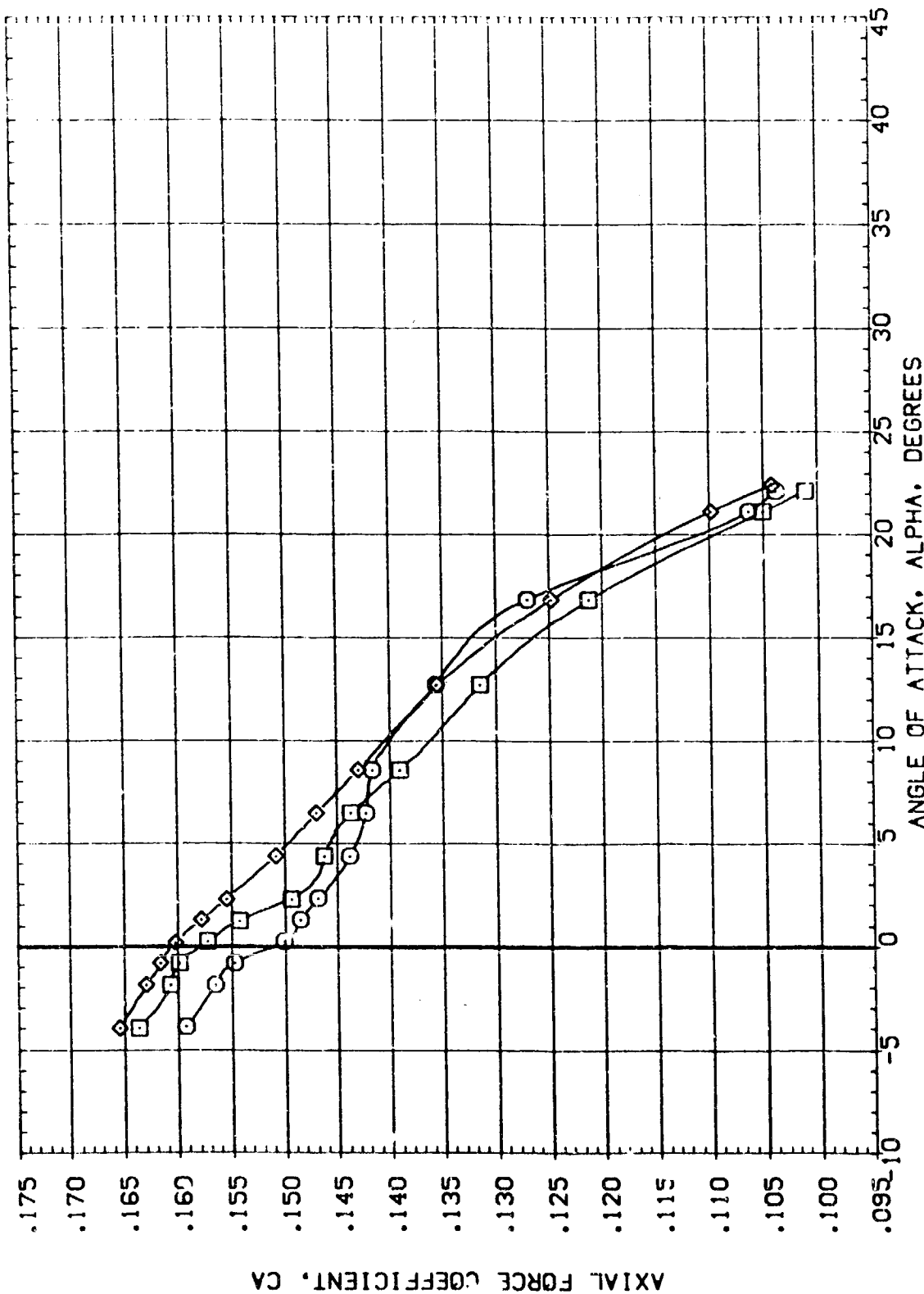


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(B)MACH = 1.90

DATA SET SYMBOL: (CP6114), (CP6116), (CP6119)
 CONFIGURATION DESCRIPTION: LA-BA LARC UPVT 1034 NAR 0898-MOD, NOSE ORBITTER; LA-BA LARC UPVT 1034 NAR 0898-MOD, NOSE ORBITTER; LA-BA LARC UPVT 1034 NAR 0898-MOD, NOSE ORBITTER
 REFERENCE INFORMATION: SQ. IN. 136.1808, 8.5025, 17.5628, 15.0000, .0000, .0000, .0188; LREF, BREF, XTRP, YTRP, ZTRP, SCALE; K/L 6.820, 6.820, 6.820; GT-LDC 2.000, 2.000, 2.000; ELEVTR 0.000, -10.000, -10.000; AIRLON .000, .000, :0.000

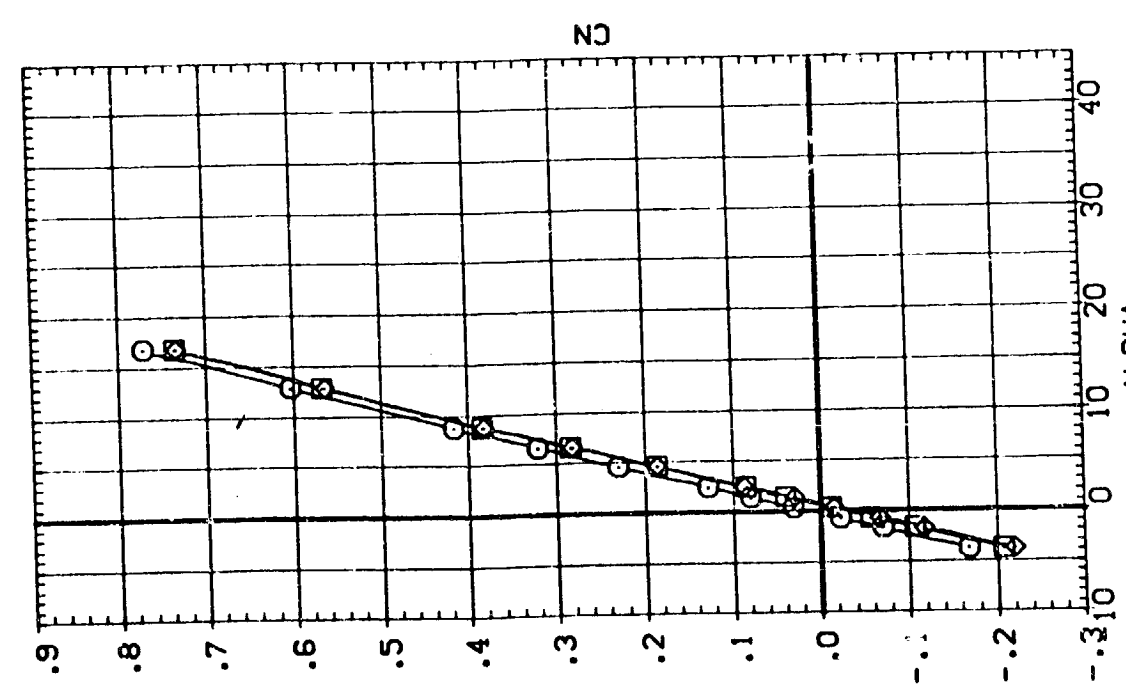
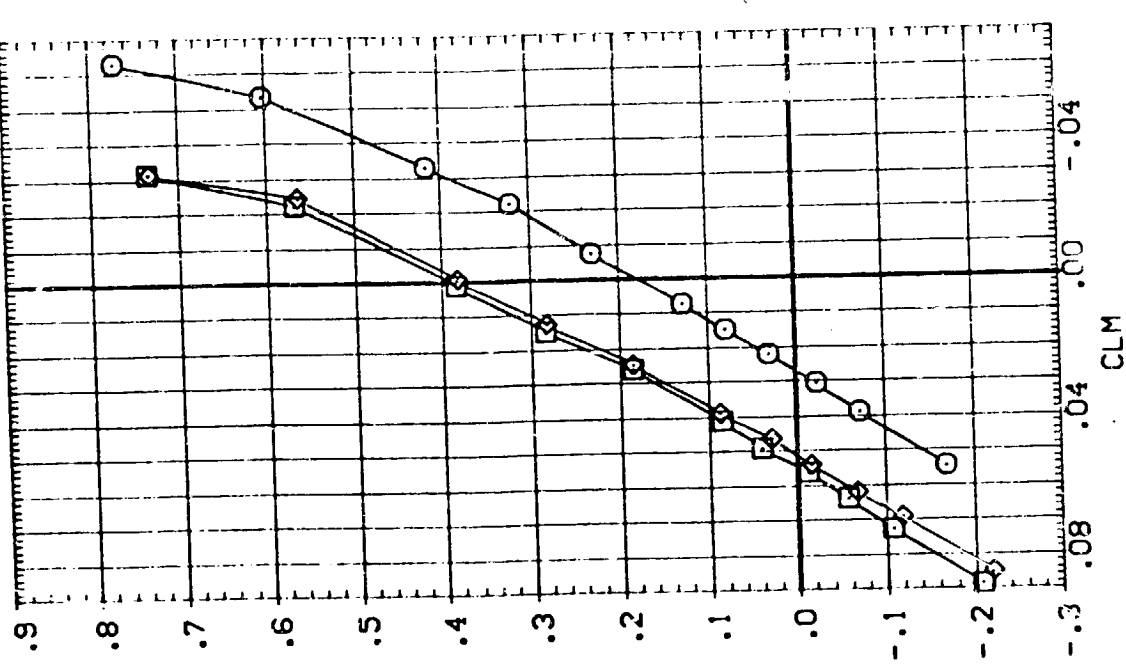


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS
 (A)MACH = 1.60

DATA SET SYMBOL (CP6114) (CP6116) (CP6119)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOISE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOISE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOISE ORBITER

ALLRON .000
 ELEVTR .000
 GT-LDC 2.000
 K/L 6.820
 SREF 136.1808
 LREF 8.9025
 BREF 17.5628
 XMRP .0000
 YMRP .0000
 ZMRP .0000
 SCALE .0188

REFERENCE INFORMATION
 SQ. IN. INCHES
 INCHES INCHES
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 INCHES INCHES
 INCHES INCHES
 INCHES INCHES

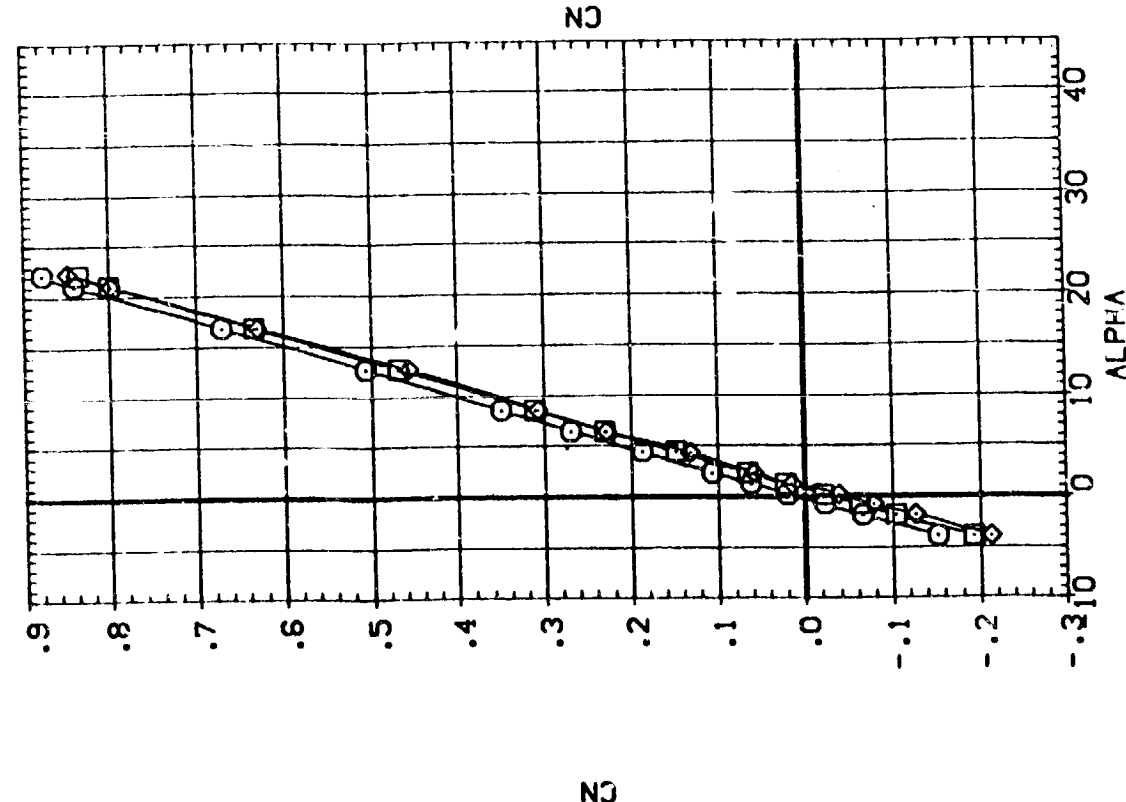
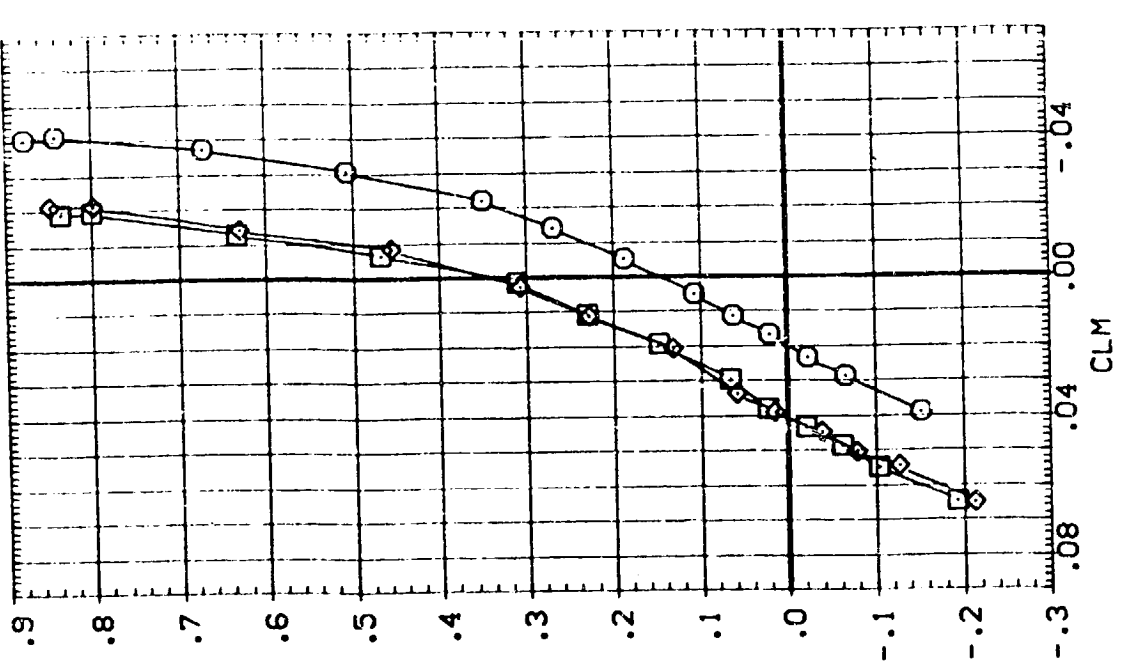


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(B)MACH = 1.90

DATA SET SYMBOL
 (CP6114)
 (CP6116)
 (CP6119)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITTER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITTER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITTER

REFERENCE INFORMATION
 SQ. IN.
 SREF 136.1808 INCHES
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XPRF 15.9639 INCHES
 YPRF .0000 INCHES
 ZPRF .0000 INCHES
 SCALE .0186

AILRON
 .000
 .000
 10.000

ELEVTR
 .000
 -10.000
 -10.000

GT-LOC
 2.000
 2.000
 2.000

K/L
 6.820
 6.820
 6.820

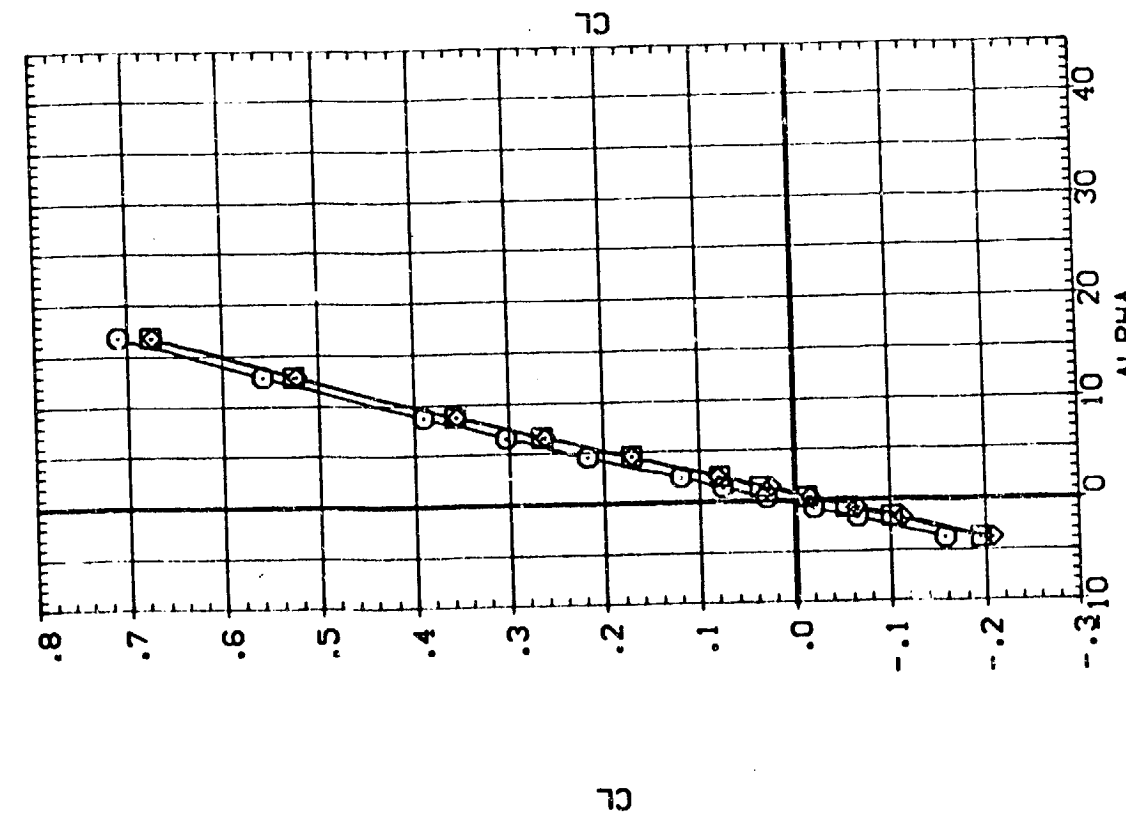
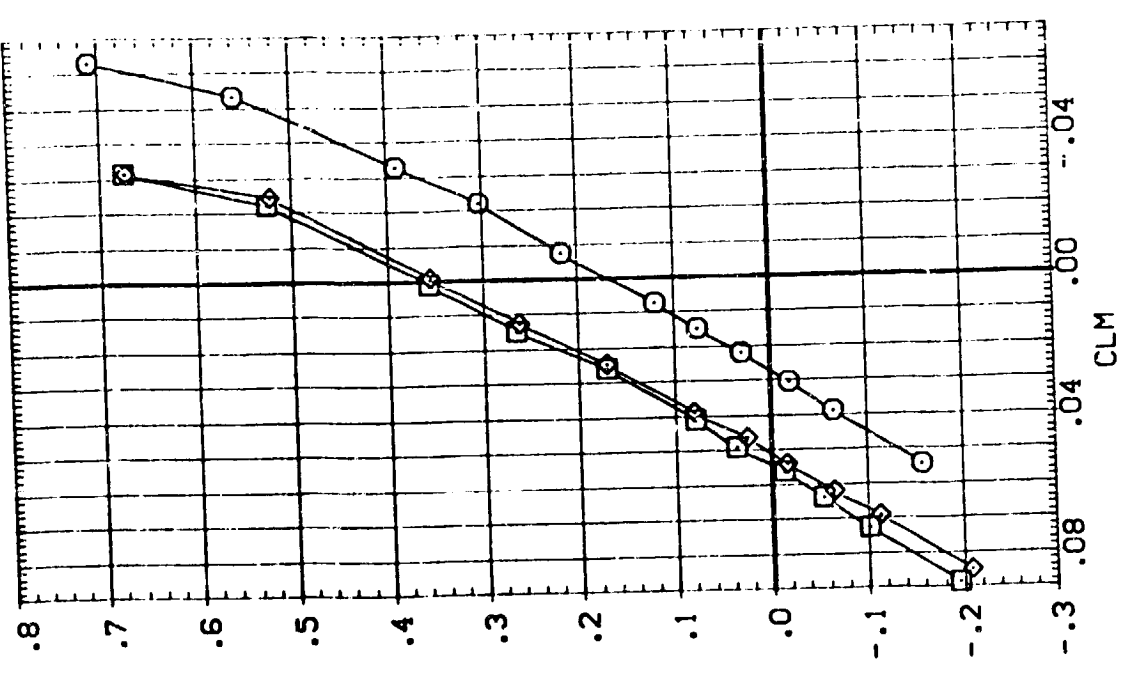


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(M)MACH = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITER	NOSE ORBITER	GT-LOC	K/L	SREF	REFERENCE INFORMATION
(CP6114)	LA-BA LARC UPVT 1034 NAF 0898-100	NOSE ORBITER	NOSE ORBITER	2.000	6.820	136.1808	SO IN.
(CP6116)	LA-BA LARC UPVT 1034 NAF 0898-100	NOSE ORBITER	NOSE ORBITER	2.000	6.820	8.9023	INCHES
(CP6119)	LA-BA LARC UPVT 1034 NAF 0898-100	NOSE ORBITER	NOSE ORBITER	2.000	6.820	17.5628	INCHES
						15.9538	INCHES
						.0000	INCHES
						.0000	INCHES
						.0188	SCALE

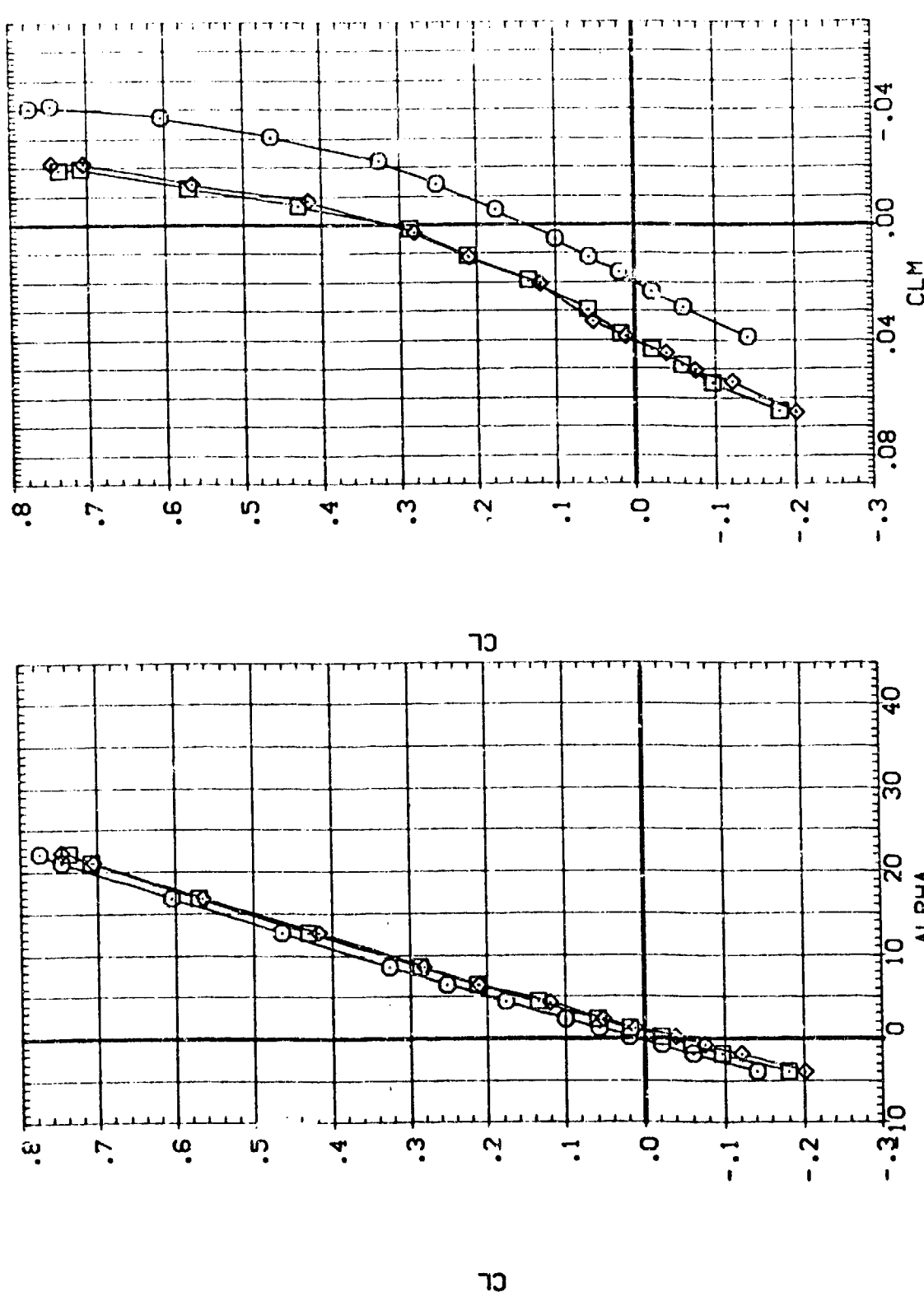


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(B)MACH = 1.90

DATA SET SYMBOL
 (CP6114)
 (CP6116)
 (CP6119)

CONFIGURATION DESCRIPTION
 LA-8A LARC LPVT 1034 NAR 0698-MOD. NOSE ORBITER
 LA-8A LARC LPVT 1034 NAR 0698-MOD. NOSE ORBITER
 LA-8A LARC LPVT 1034 NAR 0698-MOD. NOSE ORBITER

AIRRON ELEVTR GT-LOC KVL
 .000 .000 2.000 6.820
 .000 .000 2.000 6.820
 10.000 -10.000 2.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 30. IN.
 LREF 8.9025 INCHES
 BREF 17.5628 INCHES
 XMRP 15.0000 INCHES
 YMRP .0000 INCHES
 ZMRP .0000 INCHES
 SCALE .0188 SCALE

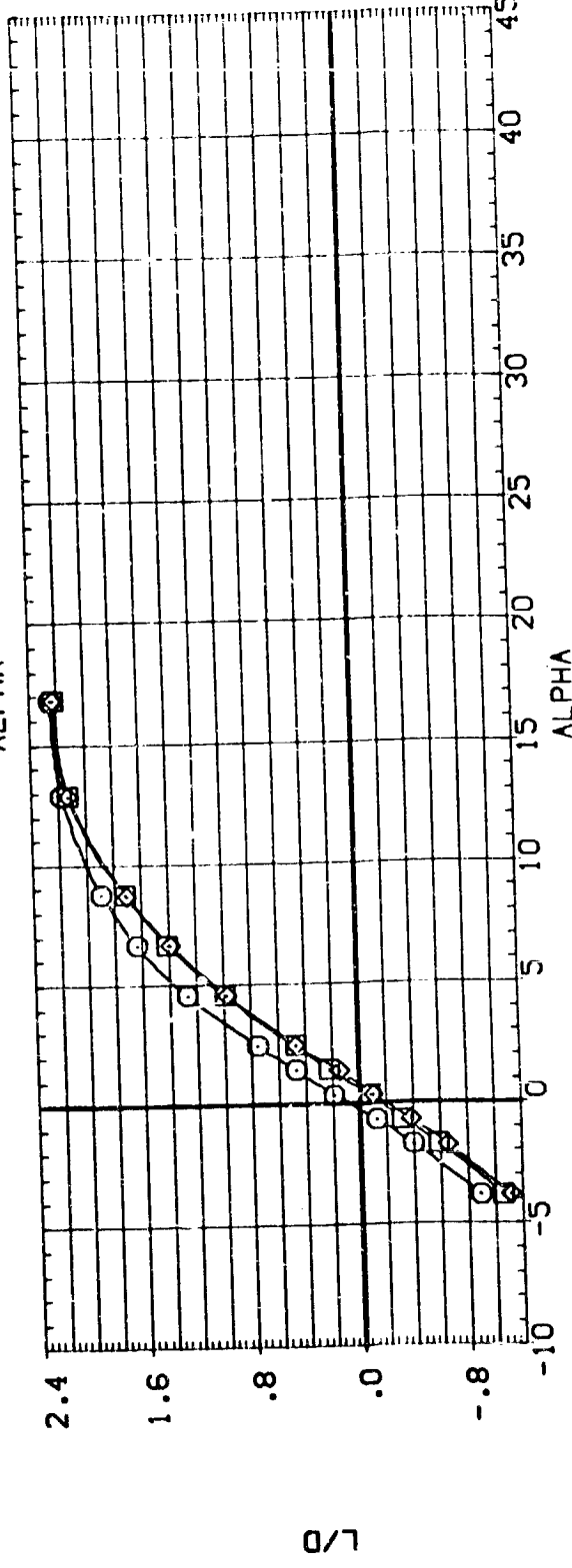
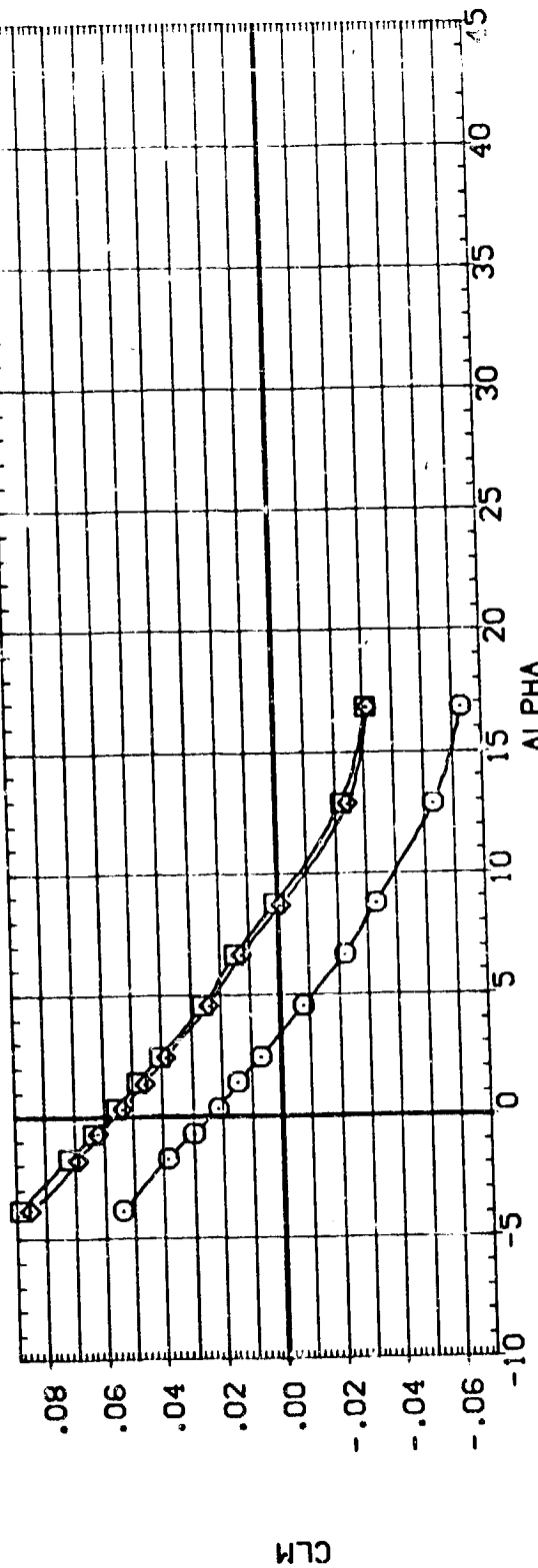


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(M)MACH = 1.60

DATA SET SYMBOL
 (CP6114)
 (CP6116)
 (CP6119)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD. NOSE ORBITER

AIRLON ELEVTR GT-LDC K/L
 .000 .000 2.000 6.820
 .000 -10.000 2.000 6.820
 10.000 -10.000 2.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SO. IN.
 LREF 6.9025 IN. IN.
 BRREF 17.5628 IN. IN.
 XMRP 15.9638 IN. IN.
 YMRP .0000 IN. IN.
 ZMRP .0000 IN. IN.
 SCALE .0189 SCALE

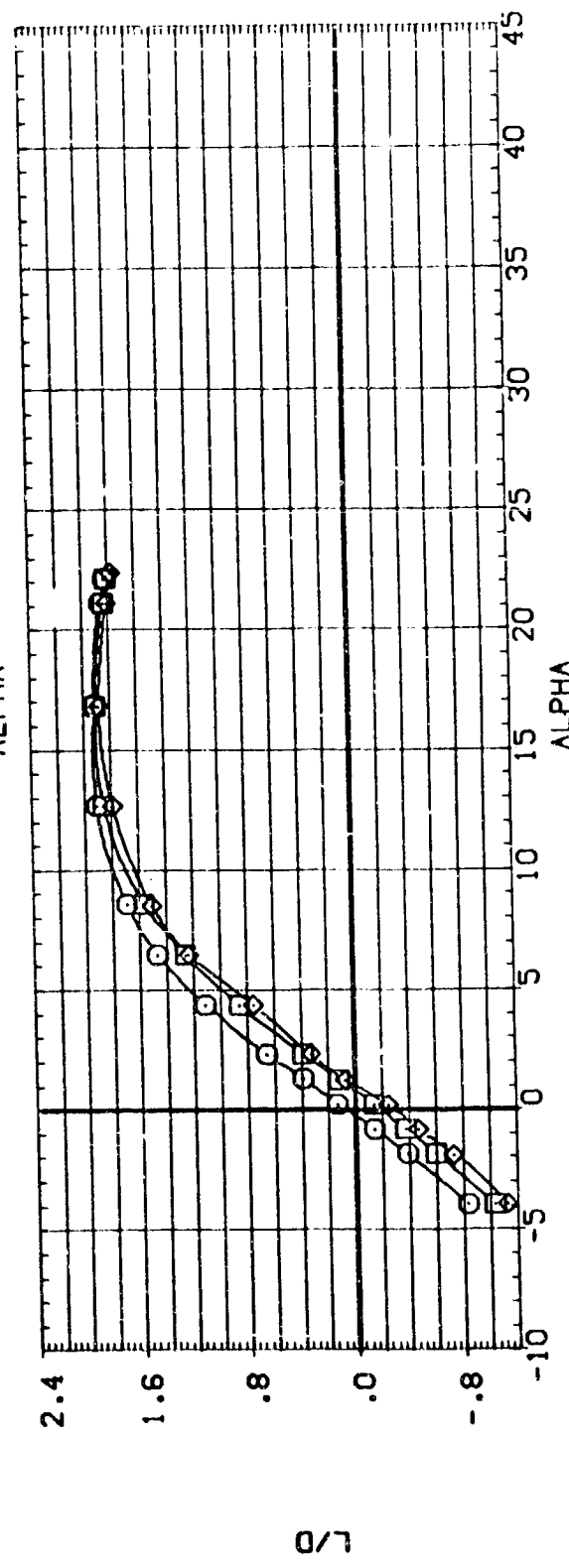
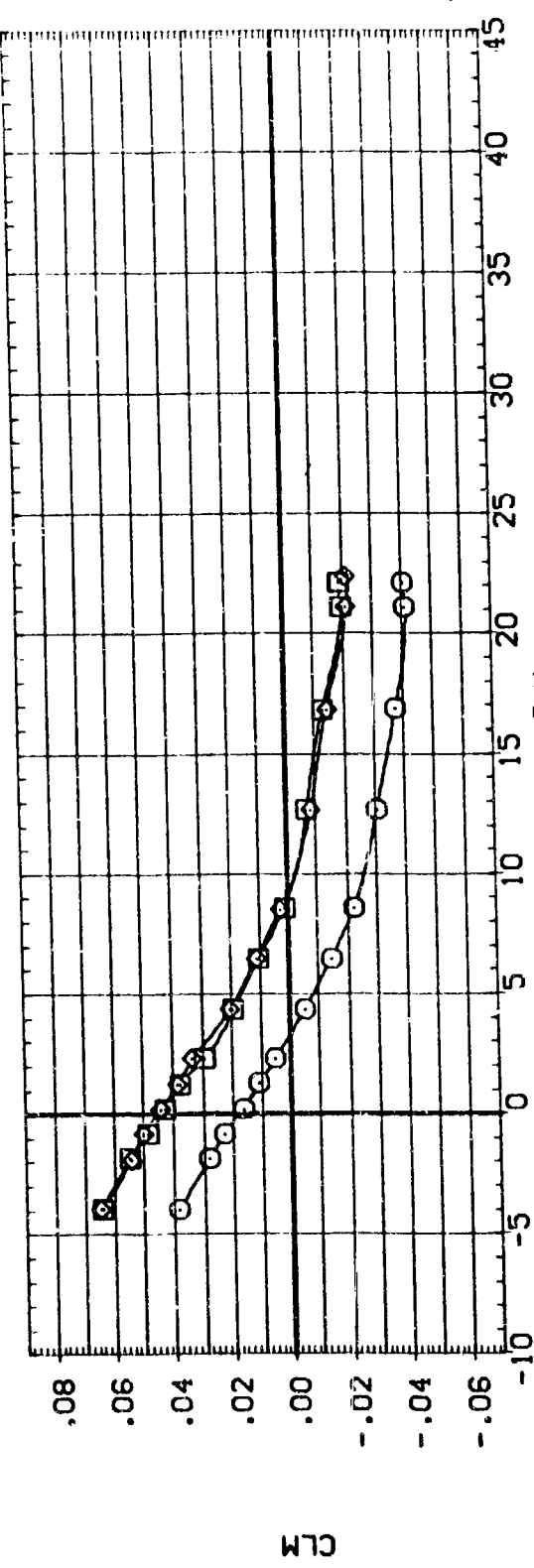


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTIC

(B)MACH = 1.90

DATA SET SYMBOL
 (CP6114)
 (CP6116)
 (CP6119)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR C898-MOD. NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR C898-MOD. NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR C898-MOD. NOSE ORBITER

AILRON ELEVTR GT-LDC K/L
 .000 .000 2.000 6.820
 .000 .000 2.000 6.820
 10.000 -10.000 2.000 6.820

REFERENCE INFORMATION
 SREF SC.IN.
 LREF INCHES
 BREF INCHES
 XMRP INCHES
 YMRP INCHES
 ZMRP INCHES
 SCALE

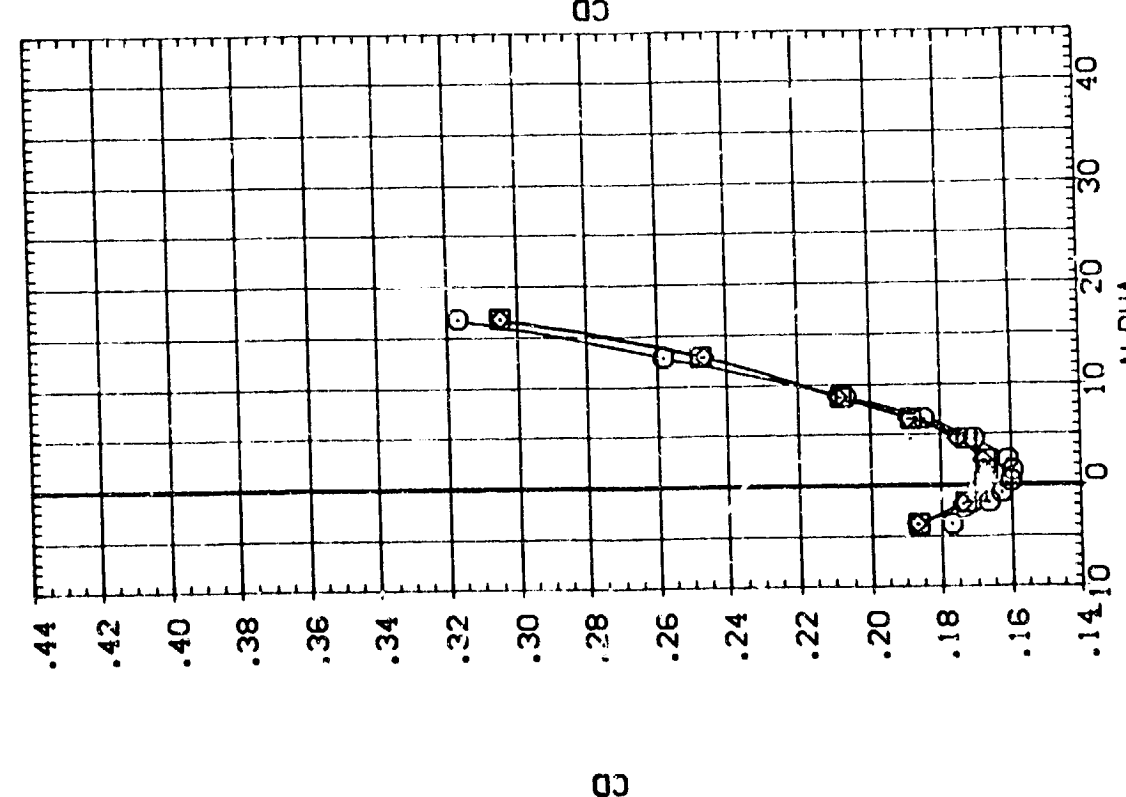
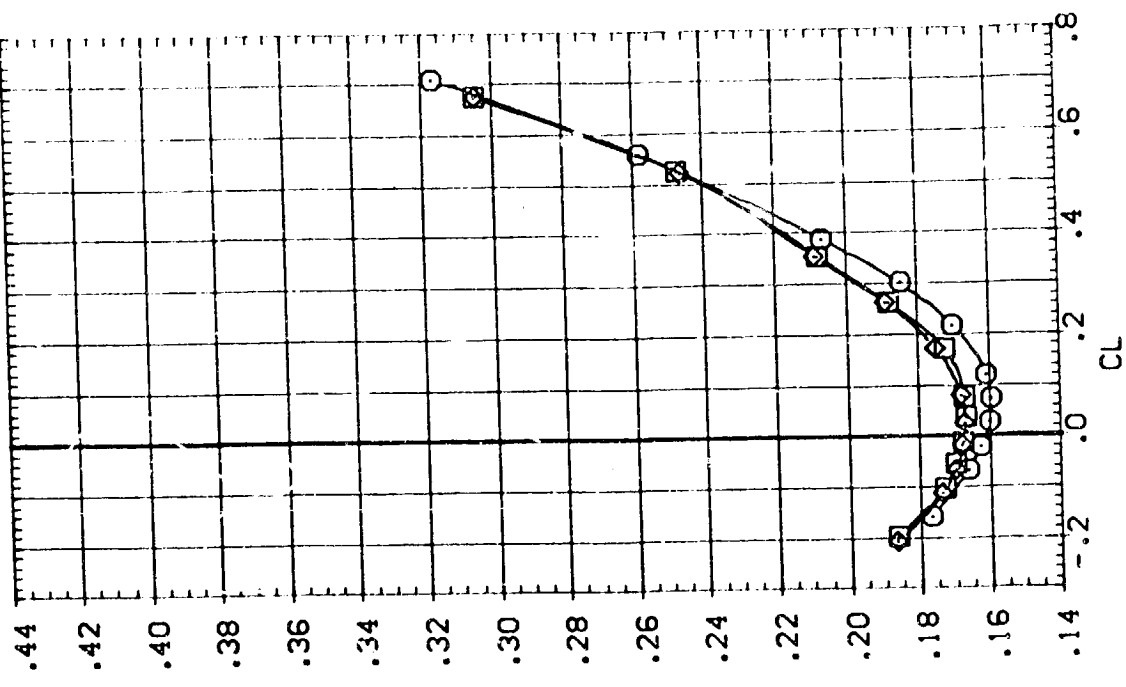


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(M)MACH = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITER	NOSE ORBITER	AIRLON	ELEVTR	GT-LOC	K/L	REFERENCE INFORMATION	SCALE
(CP6114)	LA-8A LARC UPVT 1034 NAR D958-H00.	NOSE ORBITER	NOSE ORBITER	.000	.000	2.000	6.820	SREF	136.1808
(CP6116)	LA-8A LARC UPVT 1034 NAR D958-H00.	NOSE ORBITER	NOSE ORBITER	.000	-10.000	2.000	6.820	LREF	8.9025
(CP6119)	LA-8A LARC UPVT 1034 NAR D958-H00.	NOSE ORBITER	NOSE ORBITER	10.000	-10.000	2.000	6.820	BREF	17.5628
								YMRP	13.9638
								ZMRP	.0000
								SCALE	.0188

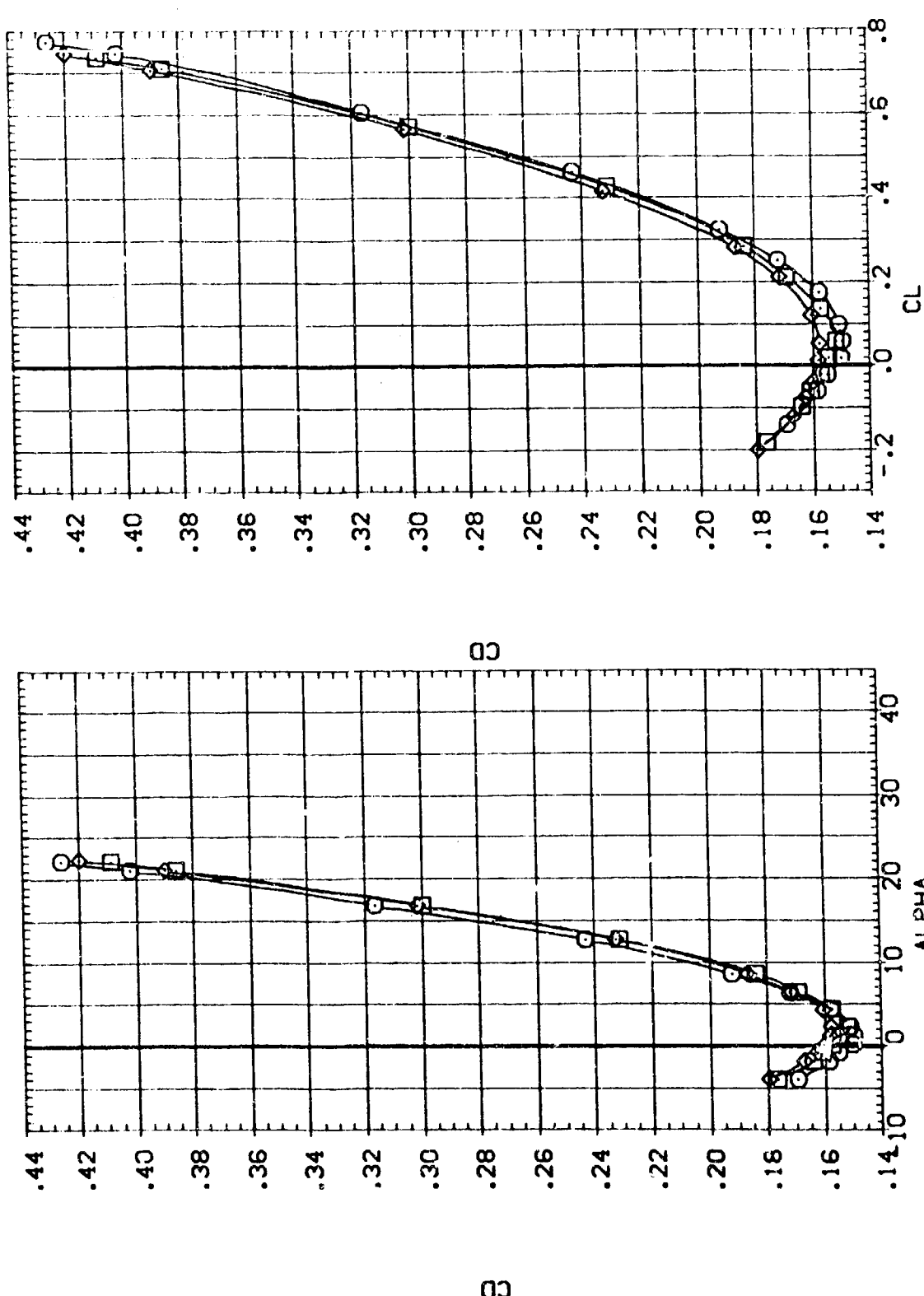


FIG. 10 EFFECT OF ELEVON DEFLECTION ON LONGITUDINAL CHARACTERISTICS

(B)MACH = 1.90



DATA SET SYMBOL
(GP6113)
(GP6120)

CONFIGURATION DESCRIPTION
LA-8A LARC UPVT 1034 NAR 089B-MOD
LA-8A LARC UPVT 1034 NAR 089B-MOD

ELEVTR
GT-LOC
K/L

NOSE ORBITER
NOSE ORBITER

REFERENCE INFORMATION
SREF
LREF
BREF
XMRP
YMRP
ZMRP
SCALE

36.1908 SO. IN.
8.9025 INCHES
17.5328 INCHES
15.9638 INCHES
.0000 INCHES
.0000 INCHES
.0188 SCALE

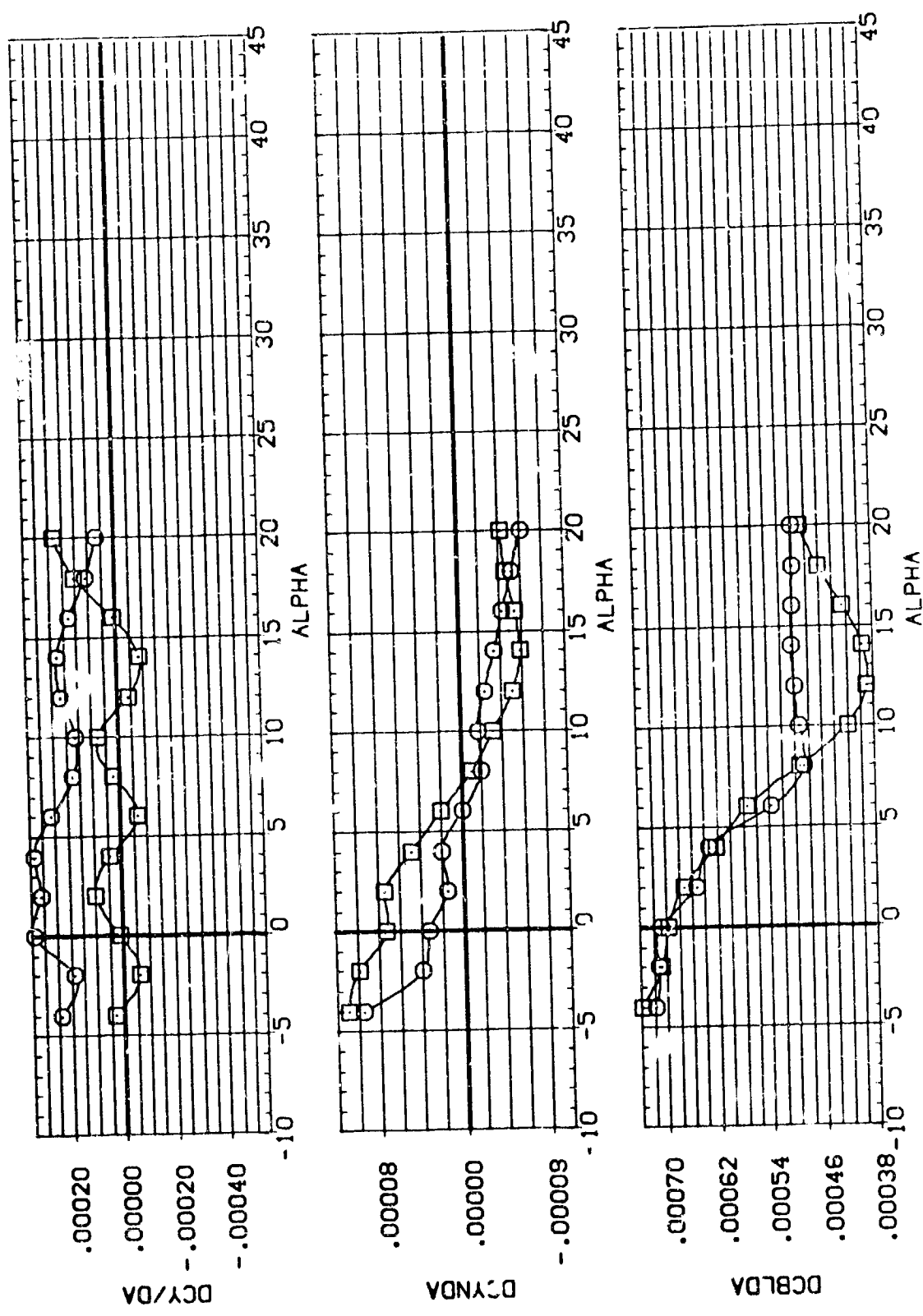


FIG. 11 AILERON CONTROL EFFECTIVENESS

(A) MACH = 1.60

DATA SET SYMBOL (G76119) (G76120)

CONFIGURATION DESCRIPTION
 LA-8A LARC UPVT 1034 NAR 0898-MOD; NOSE ORBITER
 LA-8A LARC UPVT 1034 NAR 0898-MOD; NOSE ORBITER

GT-LOC KVL
 2.000 6.820
 2.000 6.820

ELEVTR
 -10.000
 -10.000

NOSE ORBITER
 NOSE ORBITER

REFERENCE INFORMATION
 SREF 136.1808 SO. IN.
 LREF 9.9225 INCHES
 BREF 17.5628 INCHES
 XREF 15.9638 INCHES
 YREF .0000 INCHES
 ZREF .0000 INCHES
 SCALE .0188 SCALE

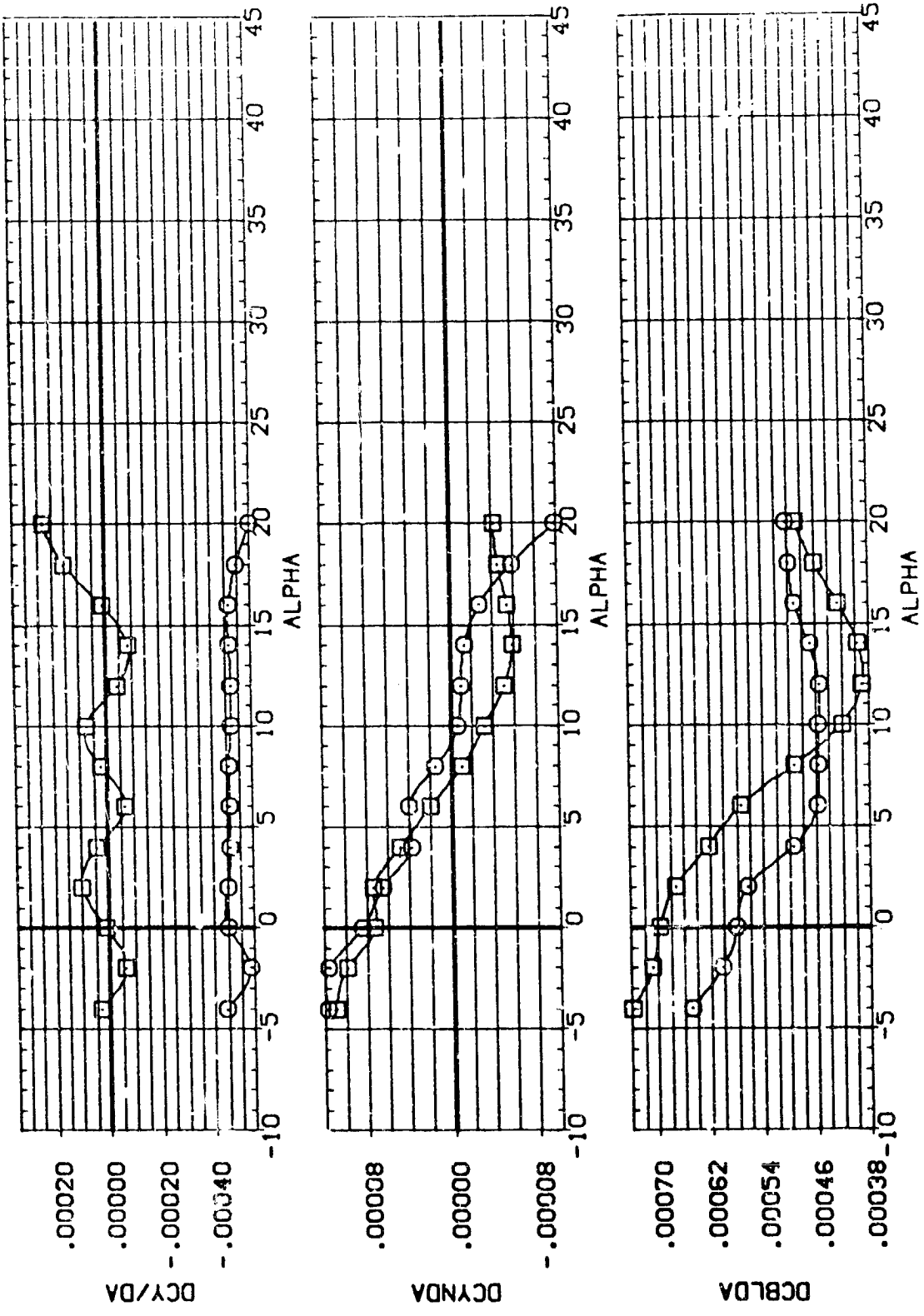


FIG. 11 AILERON CONTROL EFFECTIVENESS

(B)MACH = 1.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RP6119)	LA-8A	LARC	LPVT	1034	NAR	0898-MOD.	NOSE	ORBITER
(RP6116)	LA-8A	LARC	LPVT	1034	NAR	0898-MOD.	NOSE	ORBITER
(RP6120)	LA-8A	LARC	LPVT	1034	NAR	0898-MOD.	NOSE	ORBITER
(RP6117)	LA-8A	LARC	LPVT	1034	NAR	0898-MOD.	NOSE	ORBITER

REFERENCE INFORMATION

SREF	136.1808	SO. IN.
LREF	8.9025	INCHES
BREF	17.9628	INCHES
XMPRP	15.9638	INCHES
YMPRP	.0000	INCHES
ZMPRP	.0000	INCHES
SCALE	.0168	SCALE

AILERON ELEVTR GT-LOC K/L

AILERON	10.000	GT-LOC	2.000	K/L	6.820
ELEVTR	-10.000		2.000		6.820
	10.000		2.000		6.820
	-10.000		2.000		6.820

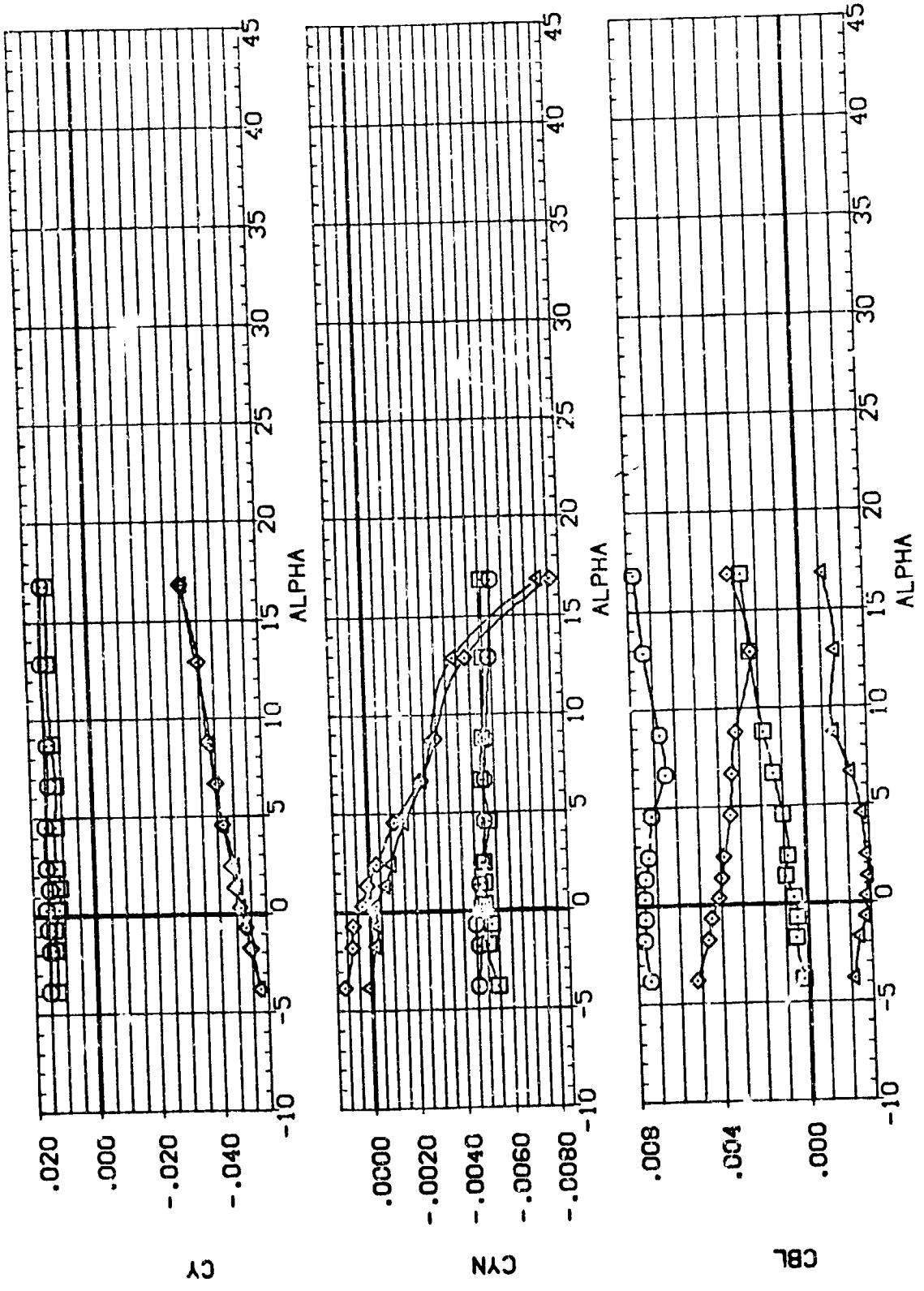


FIG. 11 AILERON CONTROL EFFECTIVENESS

(A)MACH = 1.60

DATA SET SYMBOL
 (RPS119)
 (RPS116)
 (RPS120)
 (RPS117)

CONFIGURATION DESCRIPTION
 LA-8A LARC LPVT 1034 NAR C898-MOD. NOSE CRBITER
 LA-8A LARC LPVT 1034 NAR C898-MOD. NOSE CRBITER
 DATA NOT AVAILABLE
 DATA NOT AVAILABLE

AILERON
 10.000
 10.000
 .000

ELEVTR
 -10.000
 -10.000
 -10.000

GT-LCC
 2.000
 2.000
 2.000

K/L
 6.820
 6.820
 6.820

REFERENCE INFORMATION
 S/D, IN.
 136.1808
 8.3073
 17.5623
 15.9533
 .0000
 .0000
 .0168
 SCALE

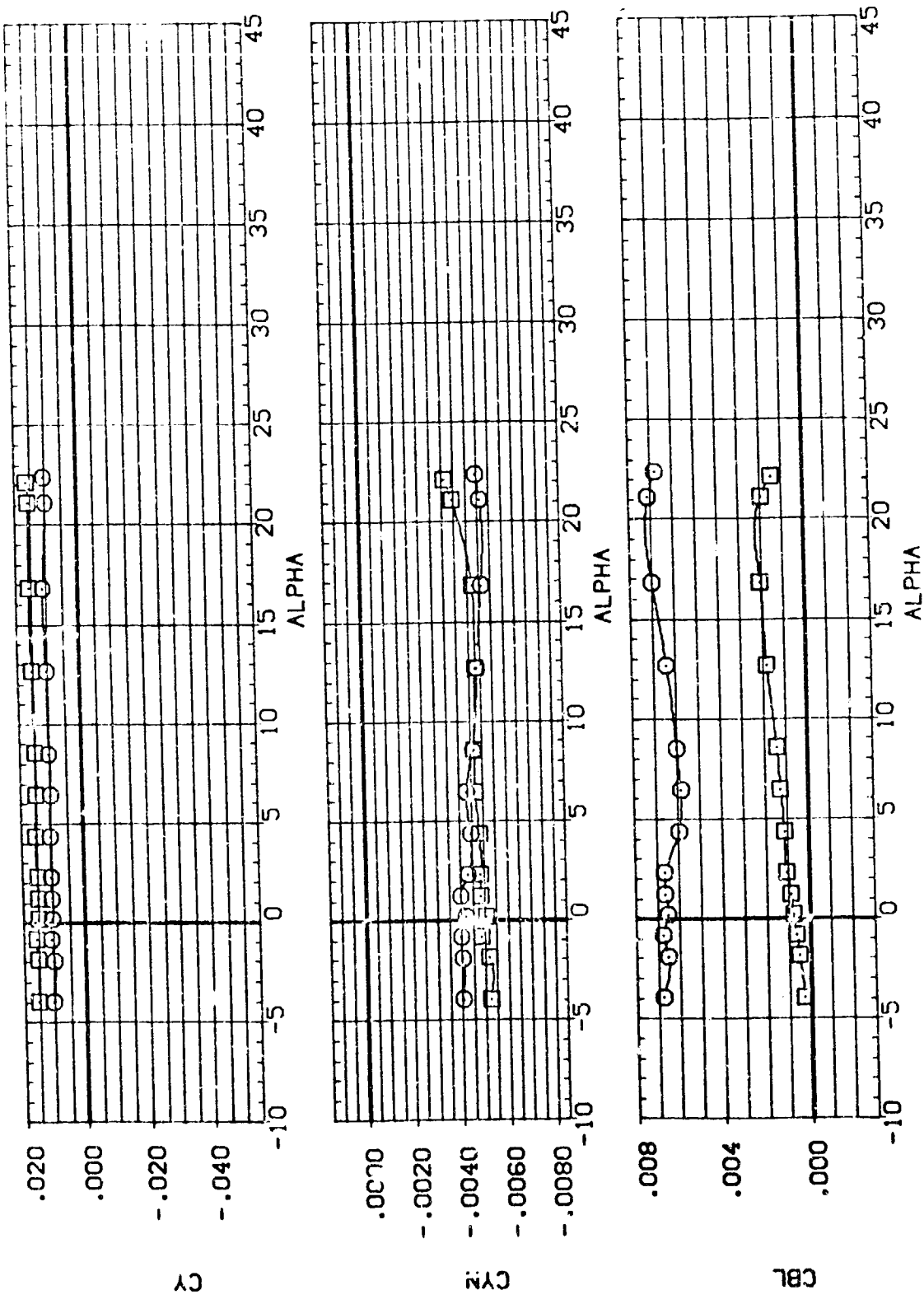


FIG. 11 AILERON CONTROL EFFECTIVENESS

(8)MACH = 1.90

REFERENCE INFORMATION	
SREF	136.1808 SO. IN.
LREF	8.9025 INCHES
BREF	17.5628 INCHES
ZMRP	15.9638 INCHES
ZMRP	.0000 INCHES
ZMRP	.0000 INCHES
SCALE	.0188

CONFIGURATION DESCRIPTION	
LA-8/8A NAR 0898-M00	NOSE CRBITTER
LA-8/8A NAR 0898-M00	NOSE CRBITTER
LA-8/8A NAR 0898-M00	NOSE CRBITTER
LA-8/8A NAR 0898-M00	NOSE CRBITTER
DATA NOT AVAILABLE	
DATA NOT AVAILABLE	

DATA SET SYMBOL	
(NPG122)	□
(NPG123)	○
(NPG124)	△
(NPG125)	◇
(NPG126)	◇
(NPG127)	◇
(NPG128)	◇
(NPG129)	◇
(NPG130)	◇
(NPG131)	◇
(NPG132)	◇
(NPG133)	◇
(NPG134)	◇
(NPG135)	◇
(NPG136)	◇
(NPG137)	◇
(NPG138)	◇
(NPG139)	◇
(NPG140)	◇
(NPG141)	◇
(NPG142)	◇
(NPG143)	◇
(NPG144)	◇
(NPG145)	◇
(NPG146)	◇
(NPG147)	◇
(NPG148)	◇
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(NPG191)	◇
(NPG192)	◇
(NPG193)	◇
(NPG194)	◇
(NPG195)	◇
(NPG196)	◇
(NPG197)	◇
(NPG198)	◇
(NPG199)	◇
(NPG200)	◇

AILROY		ELEVTR		GT-LOC		KVL		REFERENCE INFORMATION	
.000	.000	2.000	6.820	SREF	136.1808	SO. IN.			
.000	.000	2.000	6.820	LREF	8.9025	INCHES			
.000	.000	2.000	6.820	BREF	17.5628	INCHES			
.000	.000	2.000	6.820	ZMRP	15.9638	INCHES			
.000	.000	2.000	6.820	ZMRP	.0000	INCHES			
.000	.000	2.000	6.820	ZMRP	.0000	INCHES			
.000	.000	2.000	6.820	SCALE	.0188				

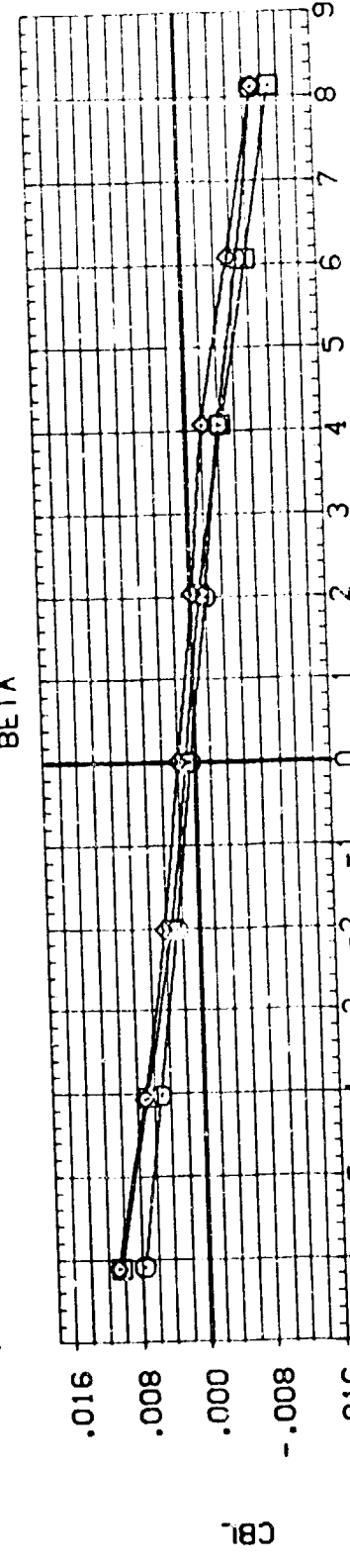
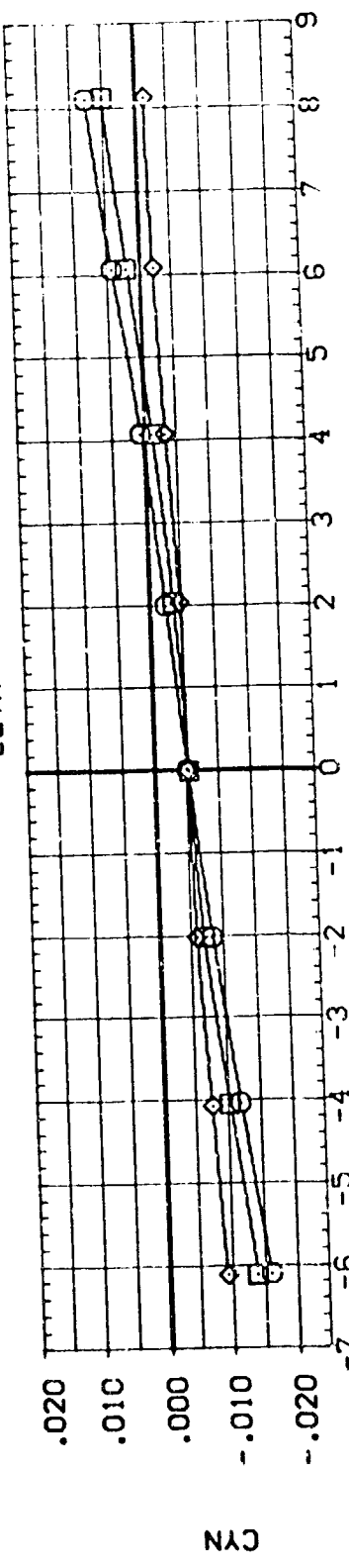
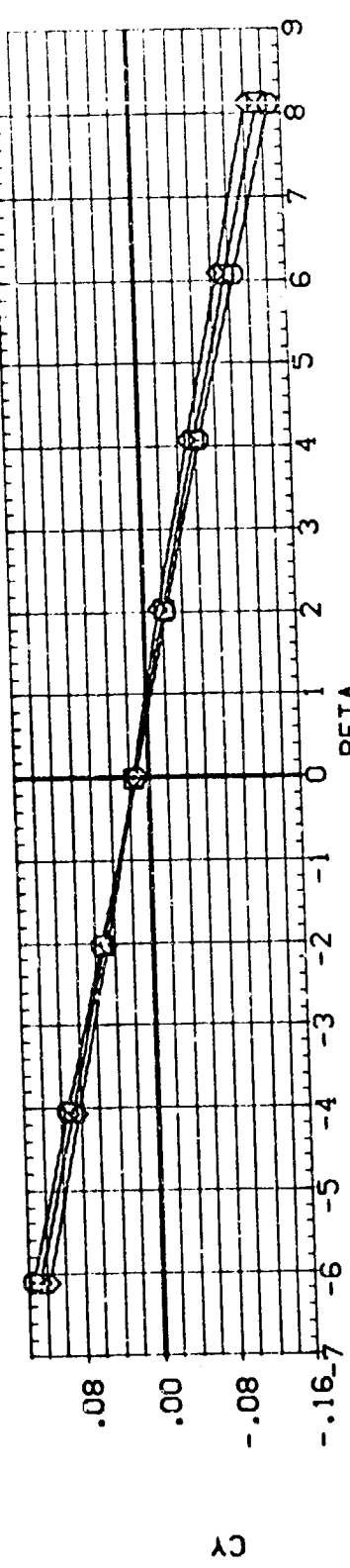


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(A)MACH = 1.60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILTRON	ELEVTR	ST-LOC	K/L	REFERENCE INFORMATION
(N6122)	LA-8/BA NAR 0898-MOD, NOSE ORBITER	.000	.000	2.000	6.820	SREF 136.1808 SQ. IN.
(N6123)	LA-8/BA NAR 0898-MOD, NOSE ORBITER	.000	.000	2.000	6.820	LREF 8.9025 INCHES
(N6124)	LA-8/BA NAR 0898-MOD, NOSE ORBITER	.000	.000	2.000	6.820	BREF 17.5628 INCHES
(N6125)	LA-8/BA NAR 0898-MOD, NOSE ORBITER	.000	.000	2.000	6.820	XMRP 15.6538 INCHES
(N6200)	DATA NOT AVAILABLE	.000	.000	2.000	6.820	YMRP .0000 INCHES
(N6C22)	DATA NOT AVAILABLE	.000	.000	2.000	6.820	ZMRP .0000 INCHES
						SCALE .0188

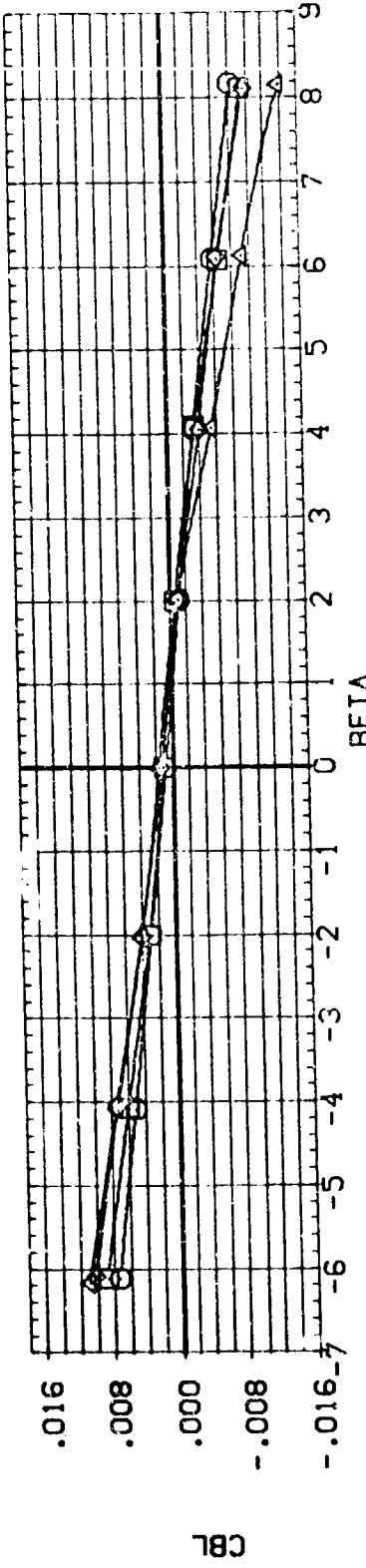
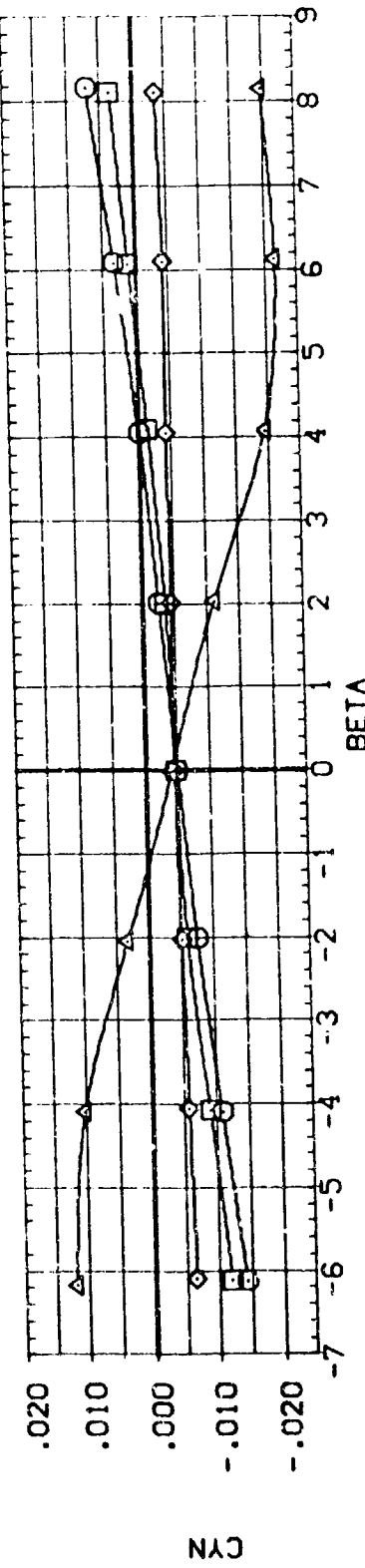
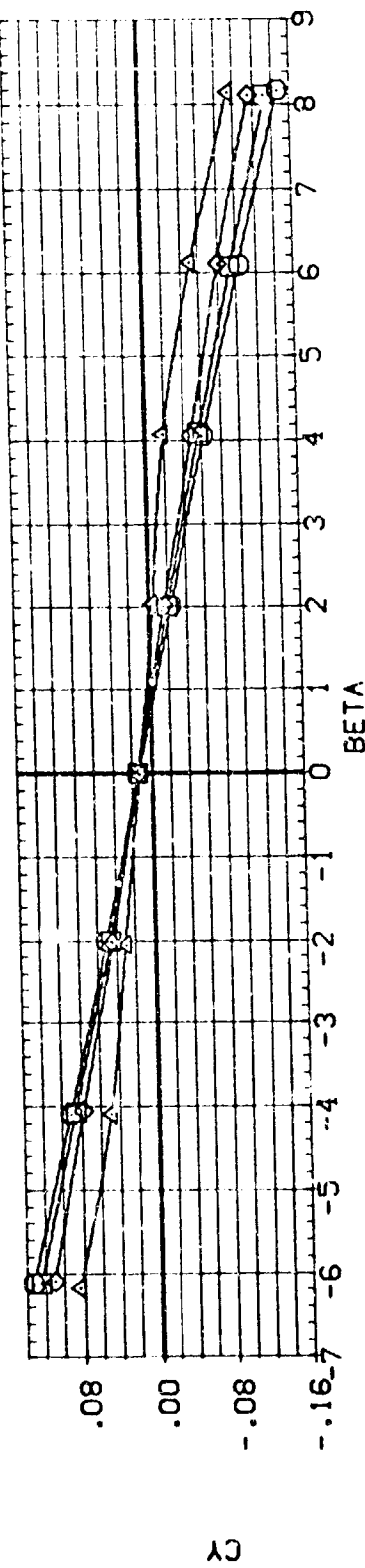


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

DATA SET SYMBOL
 (NPS122) □
 (NPS123) ○
 (NPS124) △
 (NPS126) ◇
 (NPS020) ⊙
 (NPS022) ⊠

CONFIGURATION DESCRIPTION
 LA-8/8A NAR 0898-MOD. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR 0898-MOD. NOSE ORBITER
 DATA NOT AVAILABLE
 LA-8/8A NAR 0899-MOD. NOSE ORBITER
 LA-8/8A NAR 0899-MOD. NOSE ORBITER
 LA-8/8A NAR 0899-MOD. NOSE ORBITER

AILRON ELEVTR GT-LOC K/L SREF SO.I.N.
 .000 .000 2.000 6.820 136.1808 INCHES
 .000 .000 2.000 6.820 8.9075 INCHES
 .000 .000 2.000 6.820 17.5628 INCHES
 .000 .000 2.000 6.820 15.5638 INCHES
 .000 .000 2.000 6.820 .0000 INCHES
 .000 .000 2.000 6.820 .0000 INCHES
 .000 .000 2.000 6.820 .0188 INCHES
 .000 .000 2.000 6.820 SCALE

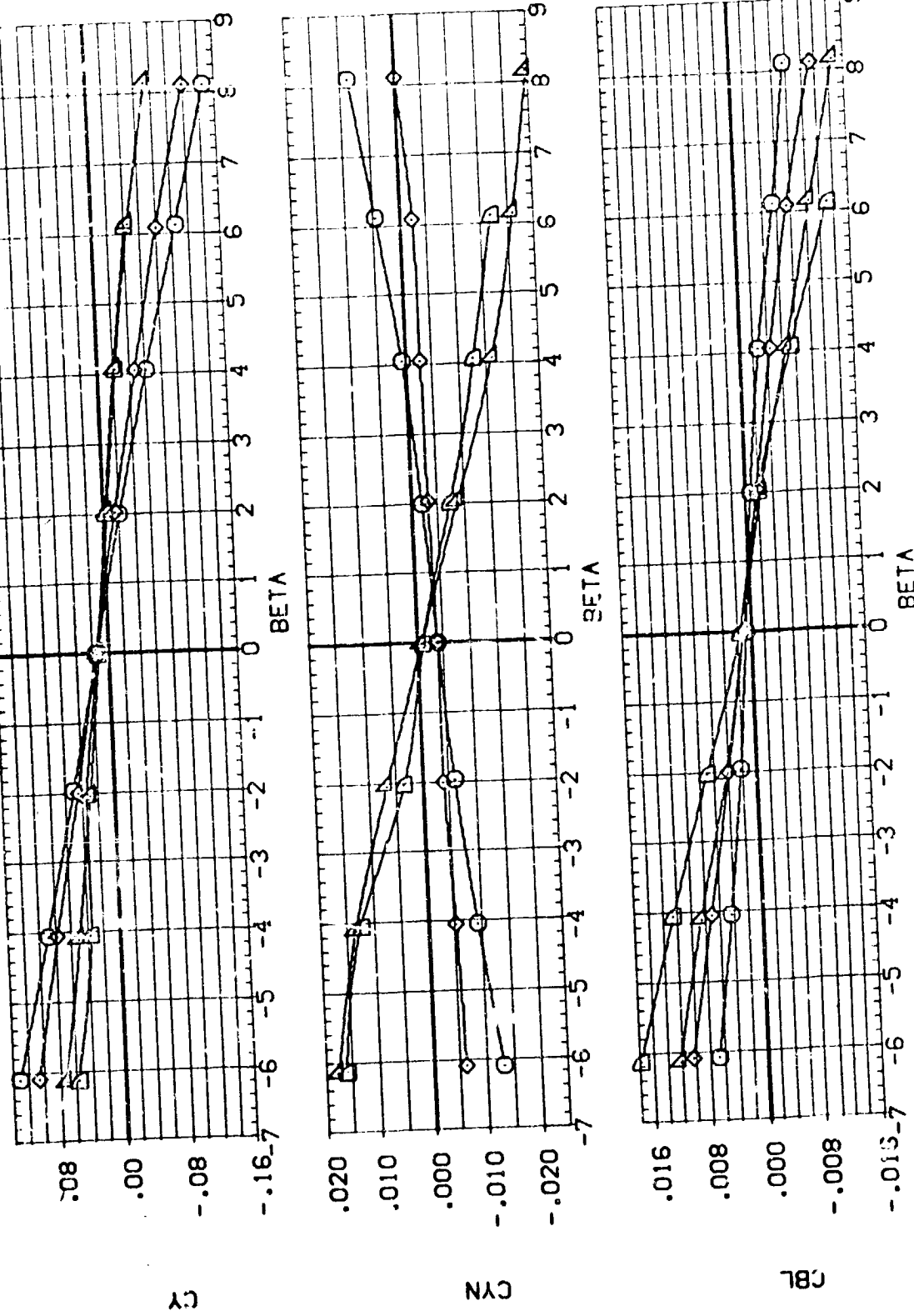


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

DATA SET SYMBOL: (HP6127), (HP6128), (HP6129), (HP6130), (HP6131)

CONFIGURATION DESCRIPTION: LA-BA LARC LPVT 1034 NAR 0898-MOD., LA-BA LARC LPVT 1034 NAR 0898-MOD., LA-BA LARC LPVT 1034 NAR 0898-MOD., LA-BA LARC LPVT 1034 NAR 0898-MOD., DATA NOT AVAILABLE

NOSE ORBITTER: NOSE ORBITTER, NOSE ORBITTER, NOSE ORBITTER, NOSE ORBITTER

ELEVTR: -10.000, -10.000, -10.000, -10.000, -10.000

ALPHA: .000, .000, .000, .000, .000

GT-LDC: 2.000, 2.000, 2.000, 2.000, 2.000

K/L: 6.820, 6.820, 6.820, 6.820, 6.820

REFERENCE INFORMATION: SREF 136.19081 SQ. IN., LREF 8.90281 INCHES, BREF 17.56281 INCHES, XHREF 15.56381 INCHES, YHREF .00000 INCHES, ZHREF .01681 INCHES, SCALE

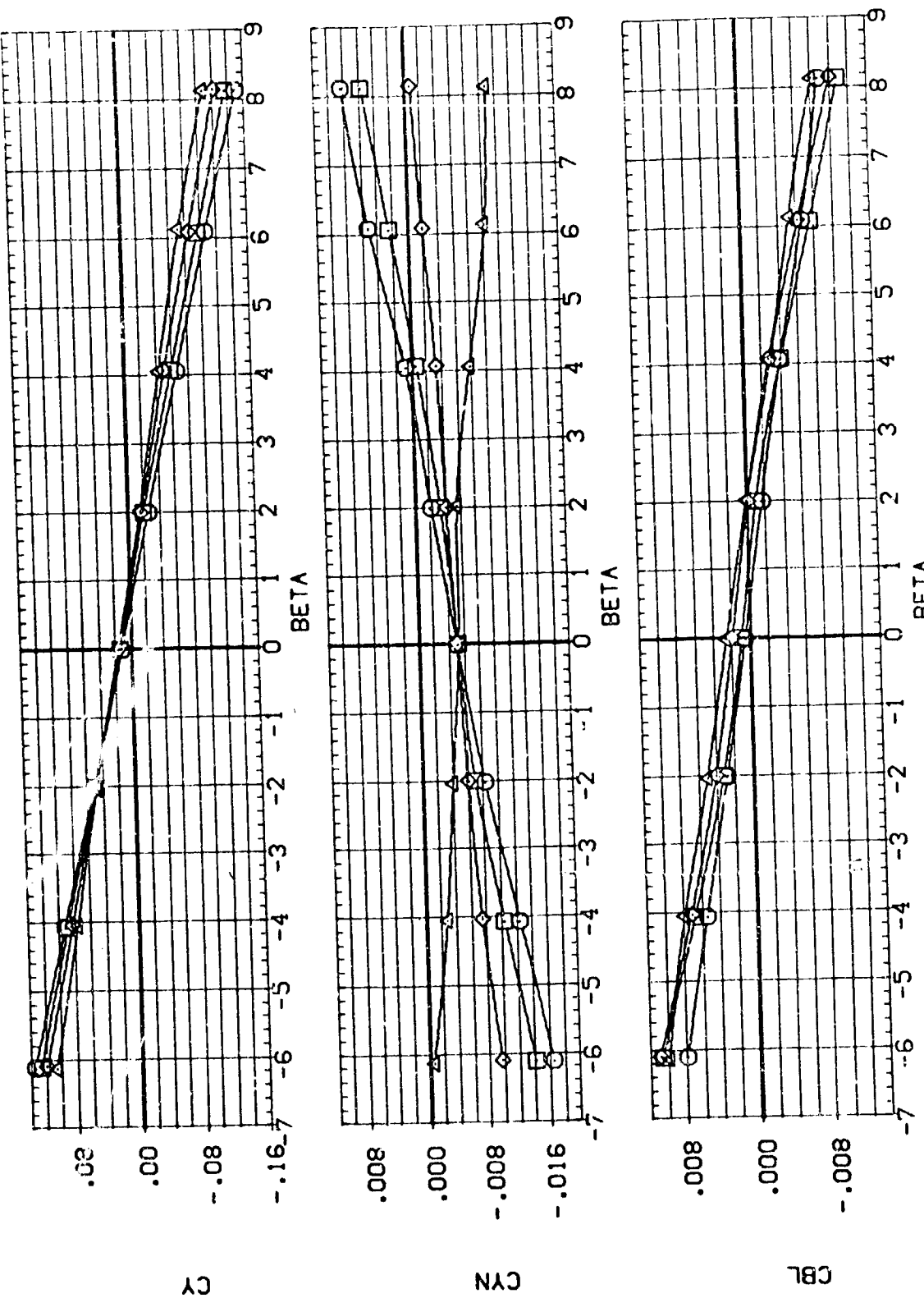


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP
 (M)MACH = 1.60
 PAGE 117

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	NOSE ORBITTER	ELEVTR	ALPHA	GT-LOC	K/L	SREF	REFERENCE INFORMATION	SC. IN.
(HP61271)	LA-8A	LARC LPVT 1034 NAR	D898-MOD.	-10.000	.000	2.000	6.820	136	1808	INCHES
(HP61281)	LA-8A	LARC LPVT 1034 NAR	D899-MOD.	-10.000	5.000	2.000	6.820	81	9025	INCHES
(HP61291)	LA-8A	LARC LPVT 1034 NAR	D899-MOD.	-10.000	10.000	2.000	6.820	17	5528	INCHES
(HP61301)	LA-8A	LARC LPVT 1034 NAR	D899-MOD.	-10.000	15.000	2.000	6.820	15	5538	INCHES
(HP61311)	LA-8A	LARC LPVT 1034 NAR	D898-MOD.	-10.000	20.000	2.000	6.820		0000	INCHES
								ZMRP	.0000	INCHES
								SCALE	.0188	SCALE

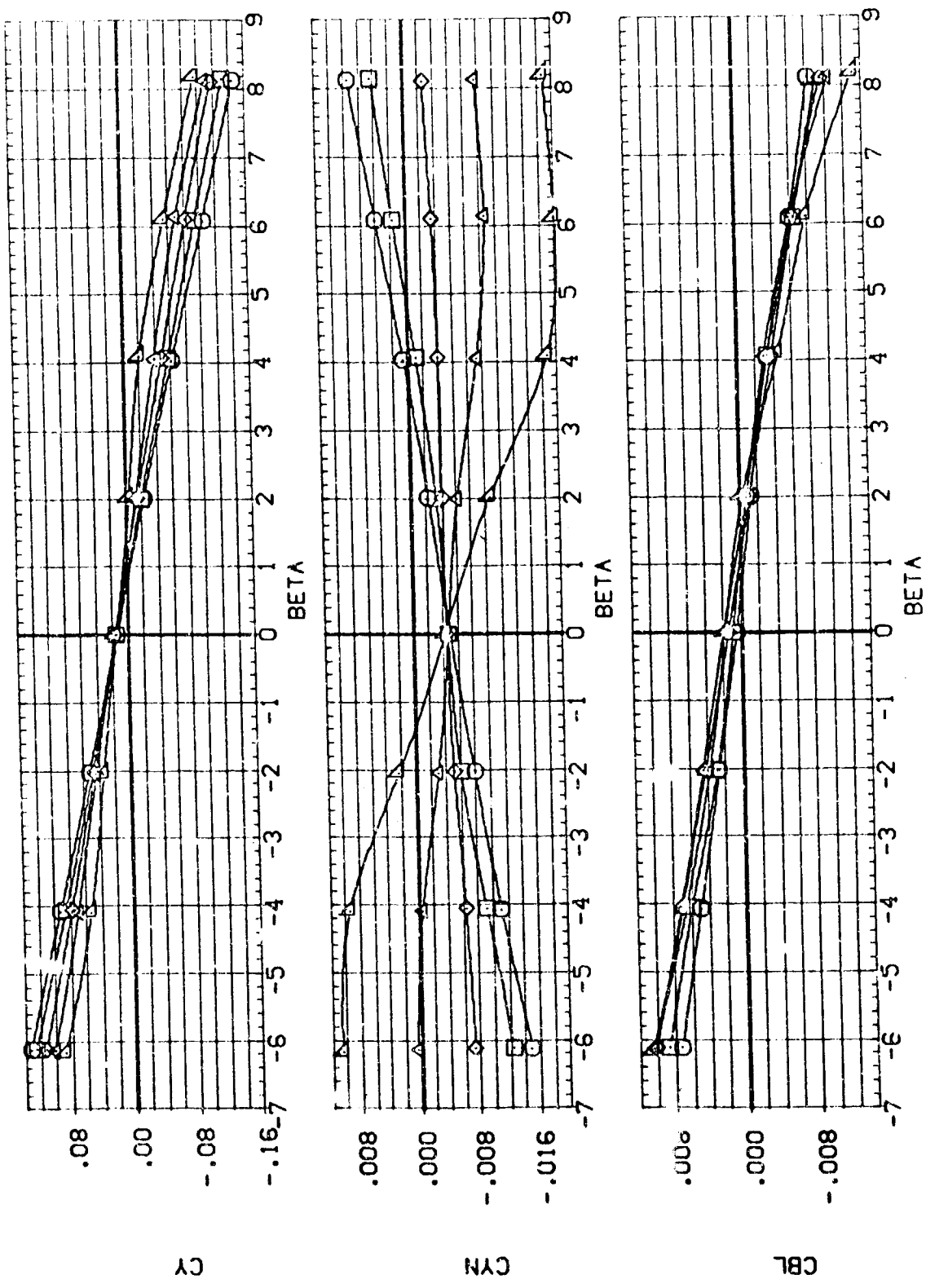


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITER	ELEV/IR	ALPHA	GT-LOC	K/L	REFERENCE	INTEGRATION
(1476 32)	LA-8A LARC UPVT 1034 NAR 0898-MOD.	NOSE ORBITER	-10.000	.000	2.000	6.820	SREF	50.114
(1476 33)	LA-8A LARC UPVT 1034 NAR 0898-MOD.	NOSE ORBITER	-10.000	5.000	2.000	6.820	LREF	8.9025
(1476 34)	LA-8A LARC UPVT 1034 NAR 0898-MOD.	NOSE ORBITER	-10.000	10.000	2.000	6.820	BREF	17.5628
(1476 35)	LA-8A LARC UPVT 1034 NAR 0898-MOD.	NOSE ORBITER	-10.000	15.000	2.000	6.820	XMRP	15.9638
(1476 36)	DATA NOT AVAILABLE		-10.000	20.000	2.000	6.820	ZMRP	.0000
							SCALE	.0188

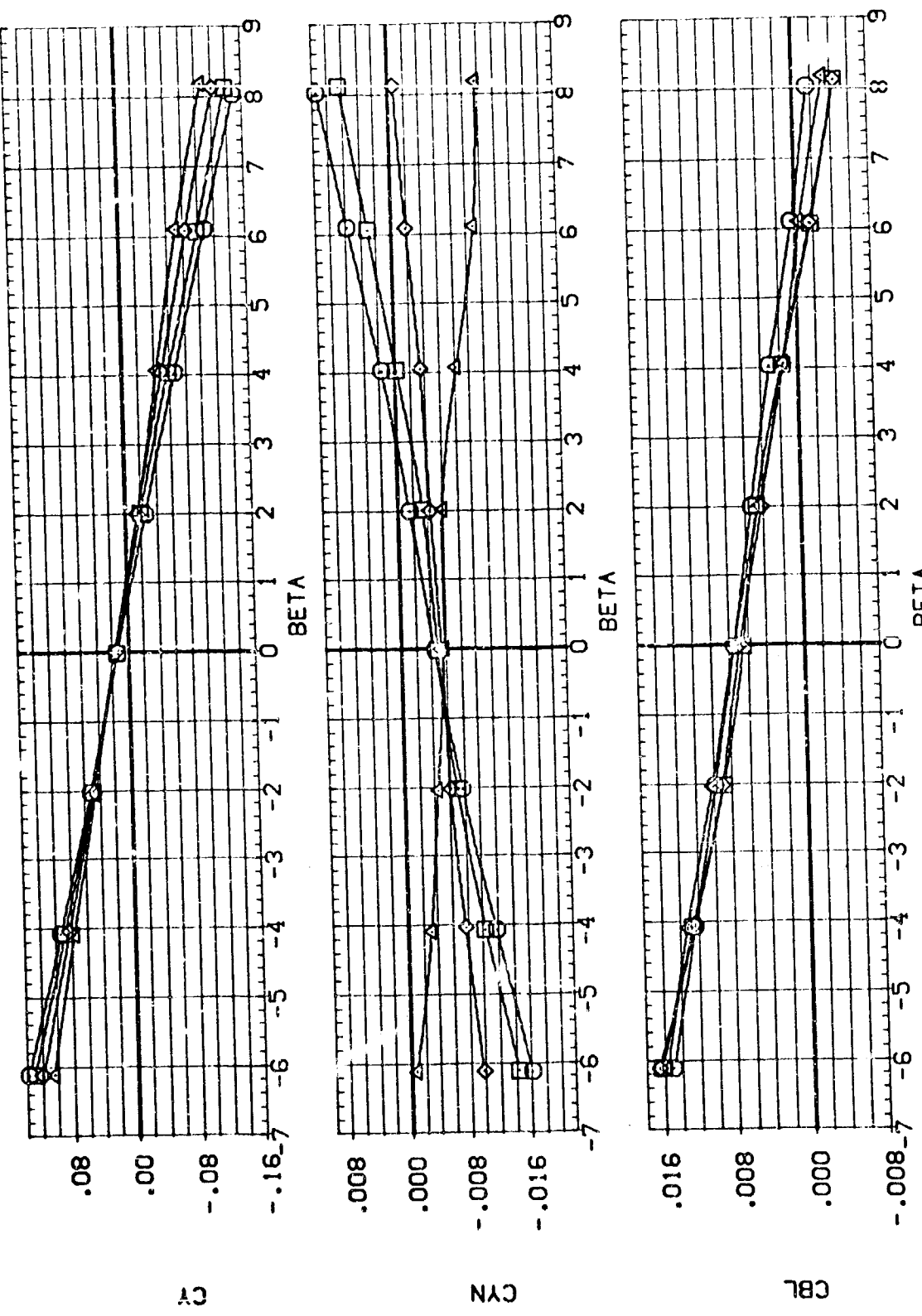


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(A) MACH = 1.60

DATA SET SYMBOL: (HP6132) (HP6131) (HP6130) (HP6129) (HP6128) (HP6127) (HP6126) (HP6125) (HP6124) (HP6123) (HP6122) (HP6121) (HP6120)

CONFIGURATION DESCRIPTION: LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER LA-BA LARC UPVT 1034 NAR (898-M00) NOSE ORBITTER

REFERENCE INFORMATION: SREF 136.1808 SC.IN. 8.9225 INCHES LREF 8.9225 INCHES BREF 17.5528 INCHES XMRP 15.5538 INCHES YMRP .0000 INCHES ZMRP .0000 INCHES SCALE .0189

GT-LOC 2.0 U ALPHA 0.000 FLEVR 10.000 KVL 6.820

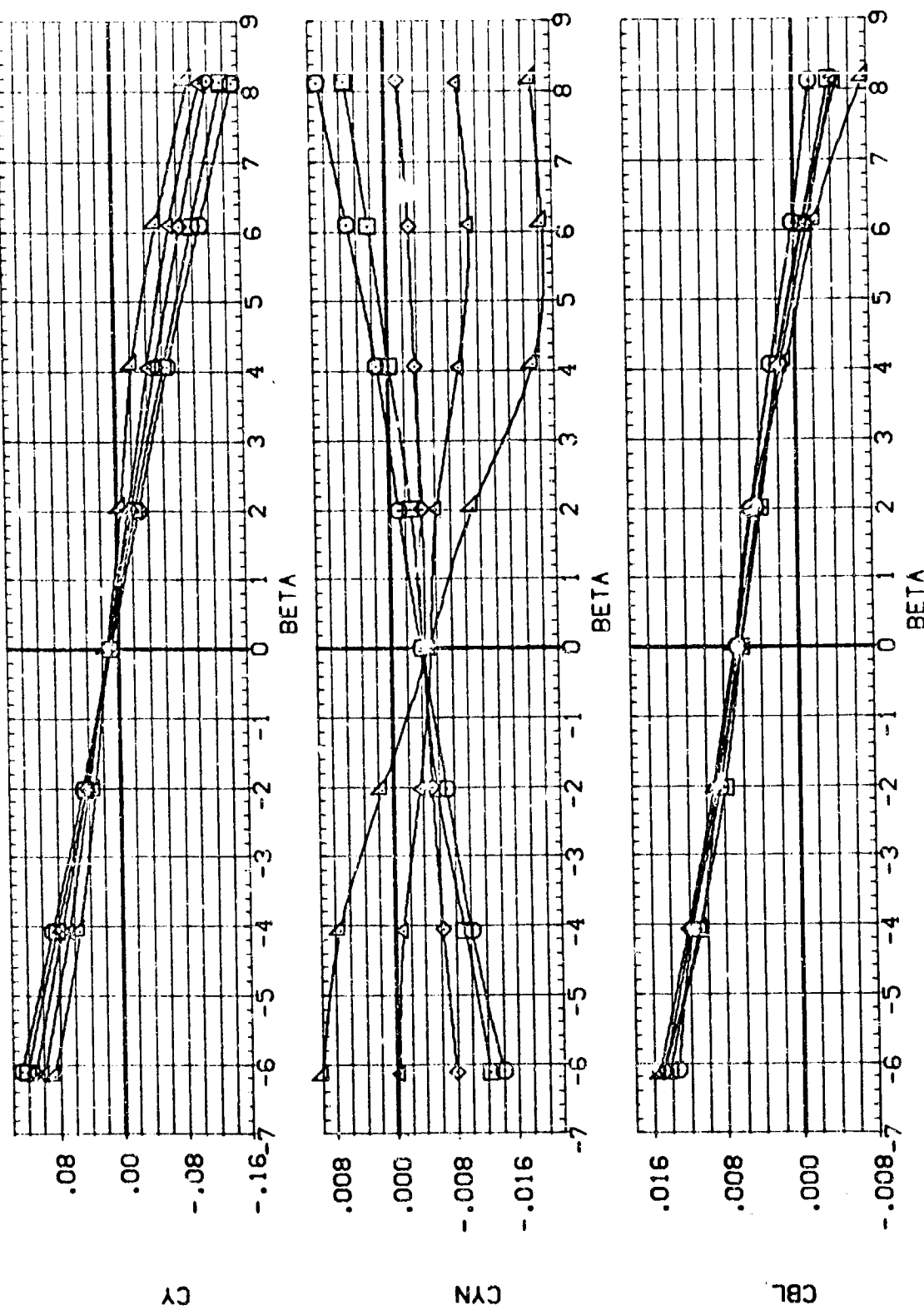


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

DATA SET SYMBOL: (HP6023), (HP6024), (HP6025), (HP6026), (HP6028)
 CONFIGURATION DESCRIPTION: LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER, LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER, LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER, LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER, LA-8 LARC LPVT 1023 NAR 0898-MOD. NOSE ORBITER
 ELEVTR: -20.000, -20.000, -20.000, -20.000, -20.000
 ALPHA: .000, 10.000, 20.000, 30.000, 40.000
 GT-LOC: 3.000, 3.000, 3.000, 3.000, 3.000
 K/L: 6.820, 6.820, 6.820, 6.820, 6.820
 REFERENCE INFORMATION: SREF 136.1808 SQ. IN., LREF 8.9025 INCHES, BREF 17.5628 INCHES, XMRP 15.9628 INCHES, YMRP .0000 INCHES, ZMRP .0000 INCHES, SCALE .0188

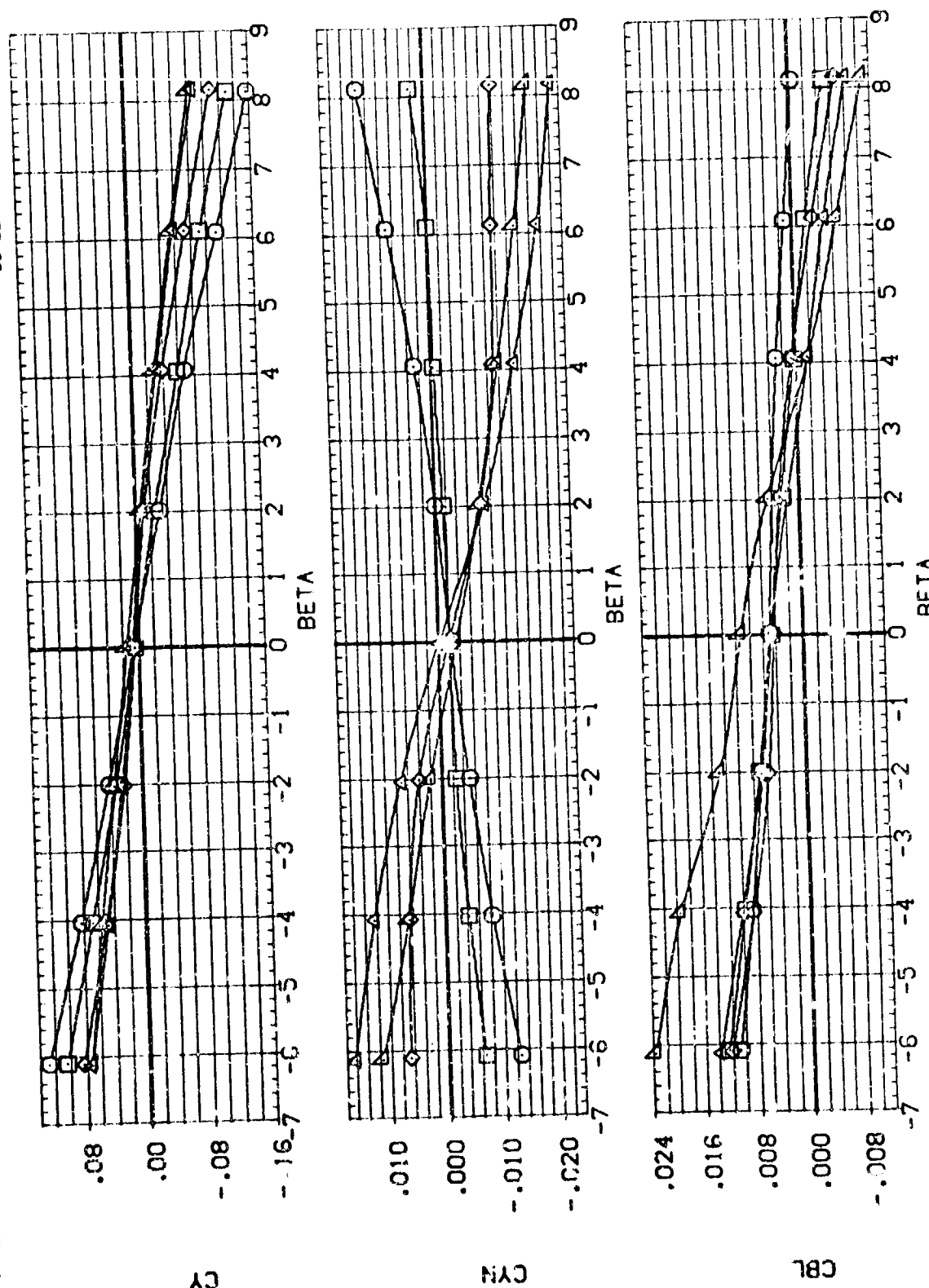


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP
 (A)MACH = 2.35 PAGE 121

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	NOSE ORBITER	ELEVTR	ALPHA	GT-LDC	K/L	REFERENCE INFORMATION	SO. IN.
(HP6023)	LA-8 LARC UPVT 1023 NAR 0198-MCC	NOSE ORBITER	-20.000	.000	3.000	6.820	135.1809	INCHES
(HP6024)	LA-8 LARC UPVT 1023 NAR 0898-MCC	NOSE ORBITER	-20.000	10.000	3.000	6.820	8.9025	INCHES
(HP6025)	LA-8 LARC UPVT 1023 NAR 0698-MCC	NOSE ORBITER	-20.000	20.000	3.000	6.820	17.5628	INCHES
(HP6026)	LA-8 LARC UPVT 1023 NAR 0893-MCC	NOSE ORBITER	-20.000	30.000	3.000	6.820	15.0000	INCHES
(HP6028)	LA-8 LARC UPVT 1023 NAR 0893-MCC	NOSE ORBITER	-20.000	40.000	3.000	6.820	0.0000	INCHES
							0.188	SCALE

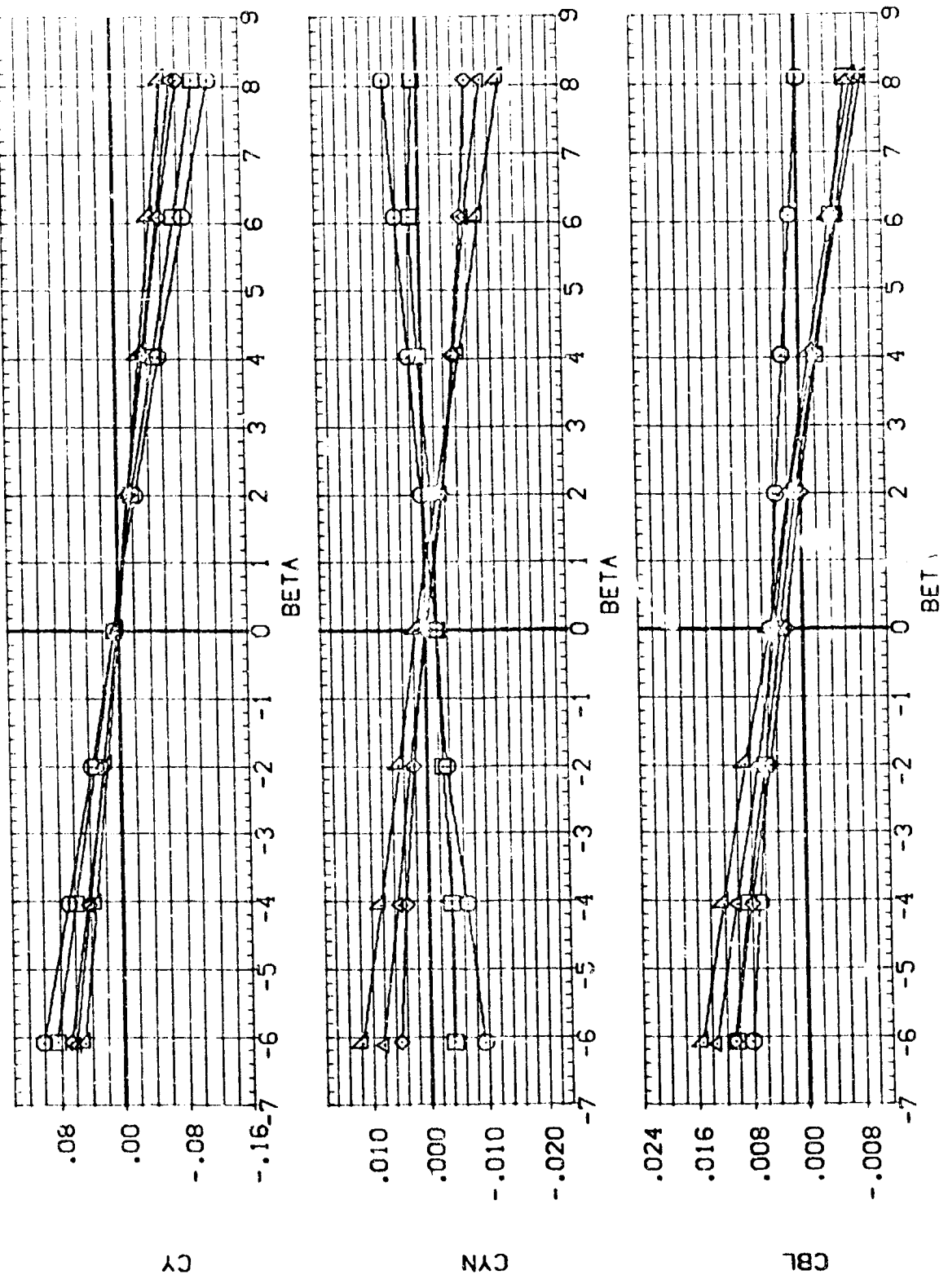


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP



DATA SET SYMBOL (NPS020) **B** CONFIGURATION DESCRIPTION LA-8/8A NAR C333-100. 1/5SE CRBITER
 (NPS021) LA-8/8A NAR C333-100. 1/5SE CRBITER

ELEVTR ALPHA GT-LOC KVL
 .000 30.000 2.000 6.820
 .000 30.000 2.000 6.820

REFERENCE INFORMATION
 SREF 139.1601 SQ. IN.
 LREF 9.8742 INCHES
 EREF 17.8323 INCHES
 XREF 15.0000 INCHES
 YREF .0000 INCHES
 ZREF .0000 INCHES
 SCALE .0100

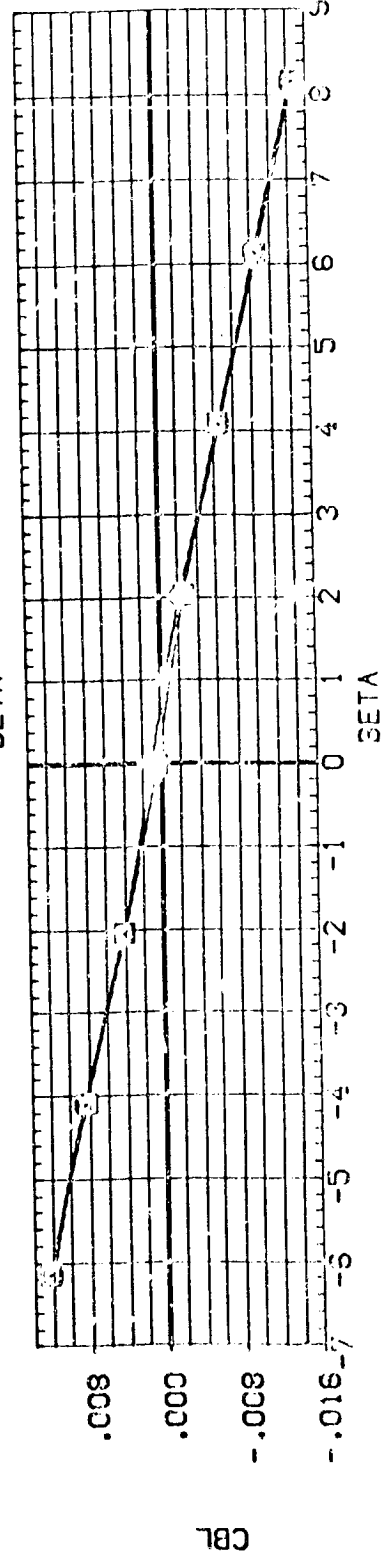
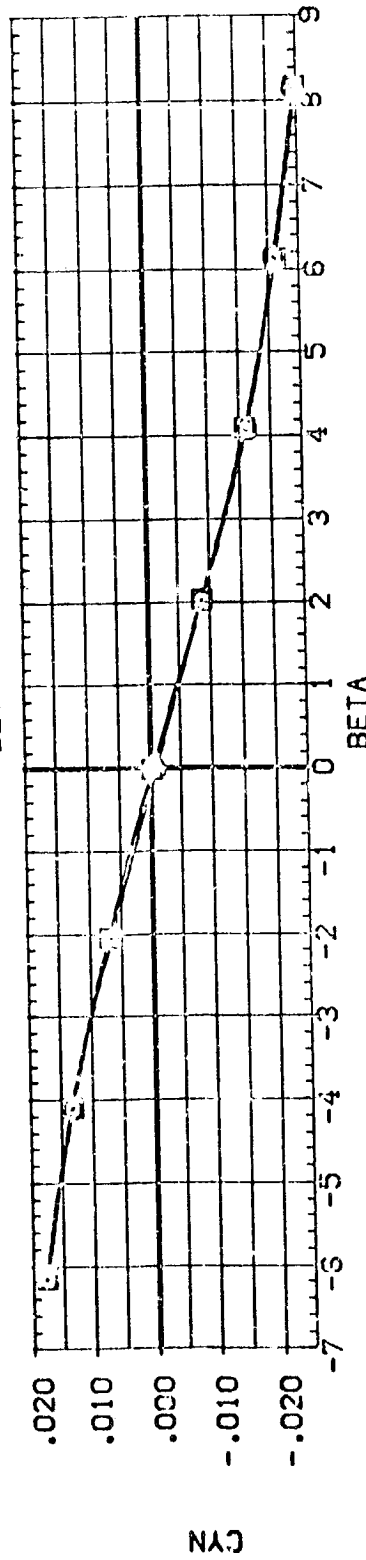
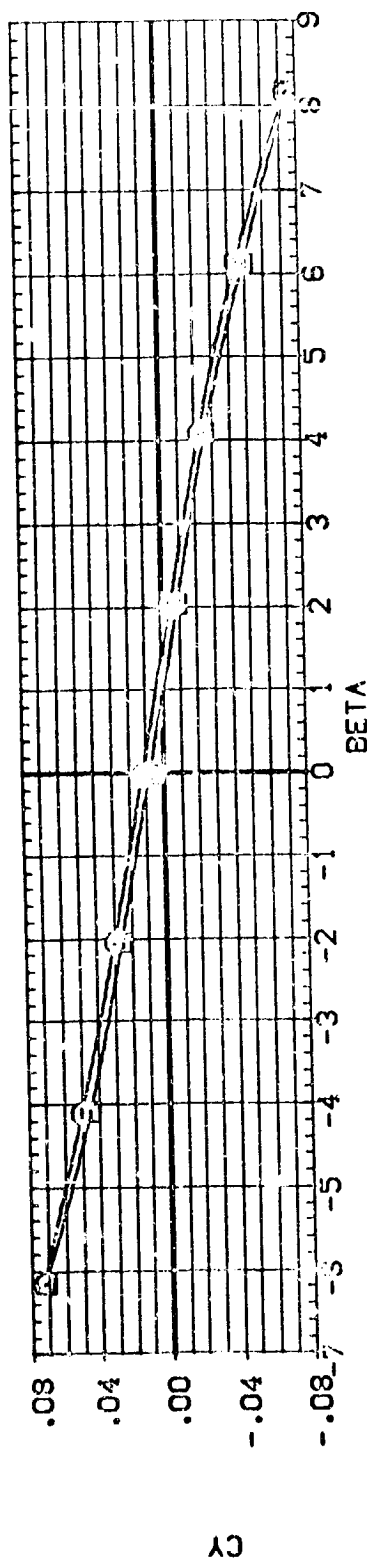


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(MACH = 2.35)

DATA SET SYMBOL (N76020) (N76021) □

CONFIGURATION DESCRIPTION
 LA-8/8A NAR C333-K00 NOSE CRBITER
 LA-8/8A NAR C333-K00 NOSE CRBITER

ELEVTR ALPHA GT-LOJ KVL
 .000 30.000 2.000 6.820
 .000 30.000 2.000 6.820

REFERENCE INFORMATION
 SREF 105.1003 50. IN.
 LREF 8.0000 INCHES
 XREF 1.0000 INCHES
 YREF 1.0000 INCHES
 ZREF 1.0000 INCHES
 SCALE .0100

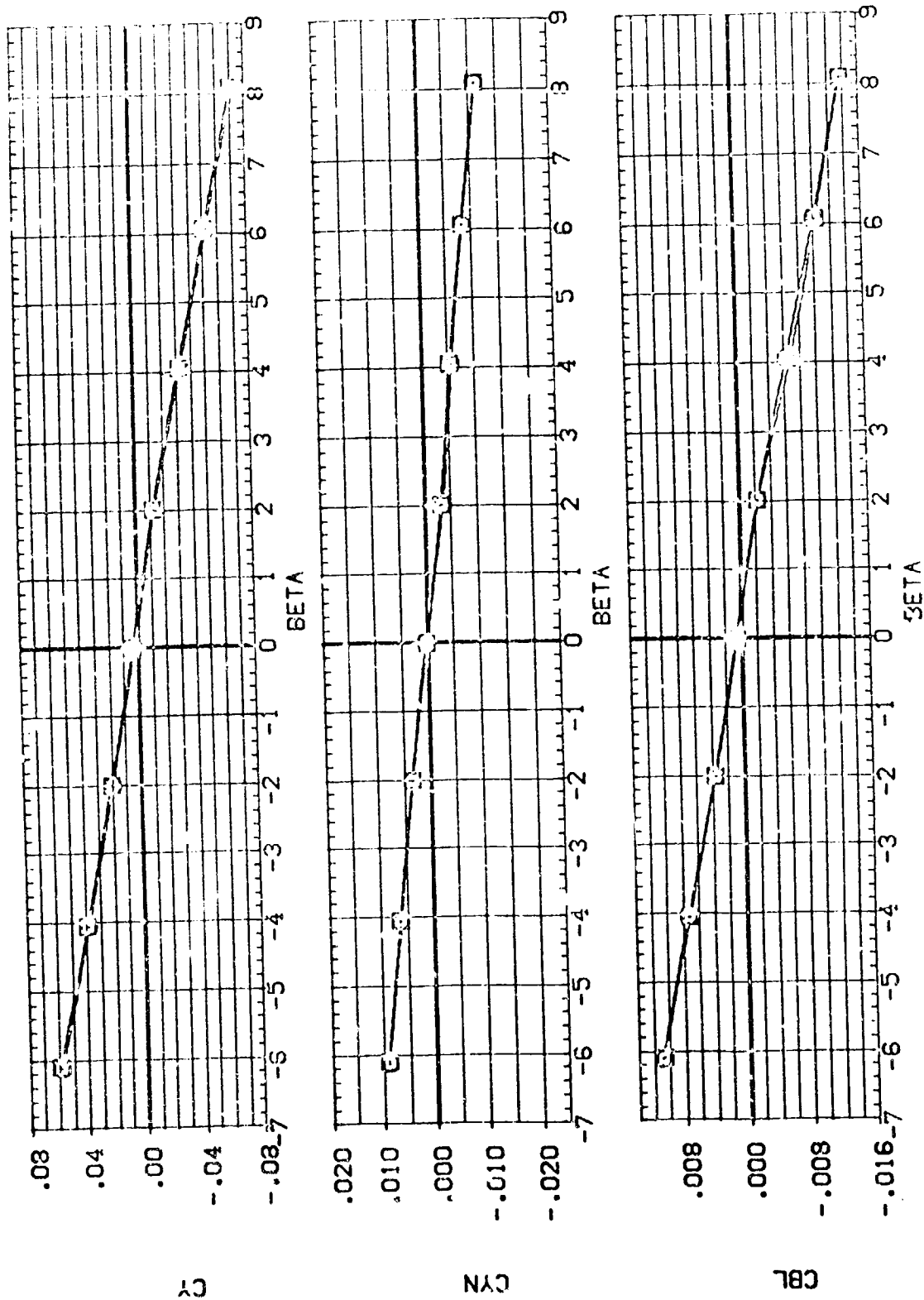


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(B)MACH = 4.63

DATA SET SYMBOL (HF2023) (146027)

CONFIGURATION DESCRIPTION
 LA-5 LARC UPVT 1023 NAR C839-HOD. NOSE ORBITER
 LA-3 LARC UPVT 1023 NAR C339-HOD. NOSE CRBITER

ELEVTR ALPHA GT-LOC K/L
 -20.000 30.000 3.000 8.920
 -20.000 30.000 3.000 6.820

REFERENCE INFORMATION
 SREF 136.1808 SQ. IN.
 LREF 8.9073 INCHES
 XREF 17.5528 INCHES
 YREF 15.5333 INCHES
 ZREF .0000 INCHES
 ZPROP .0000 INCHES
 SCALE .0158

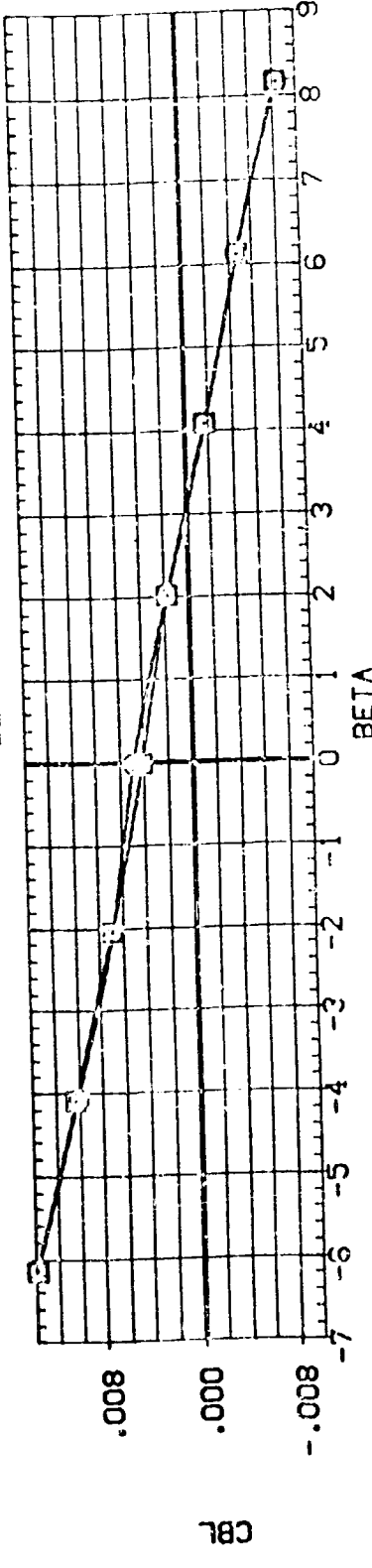
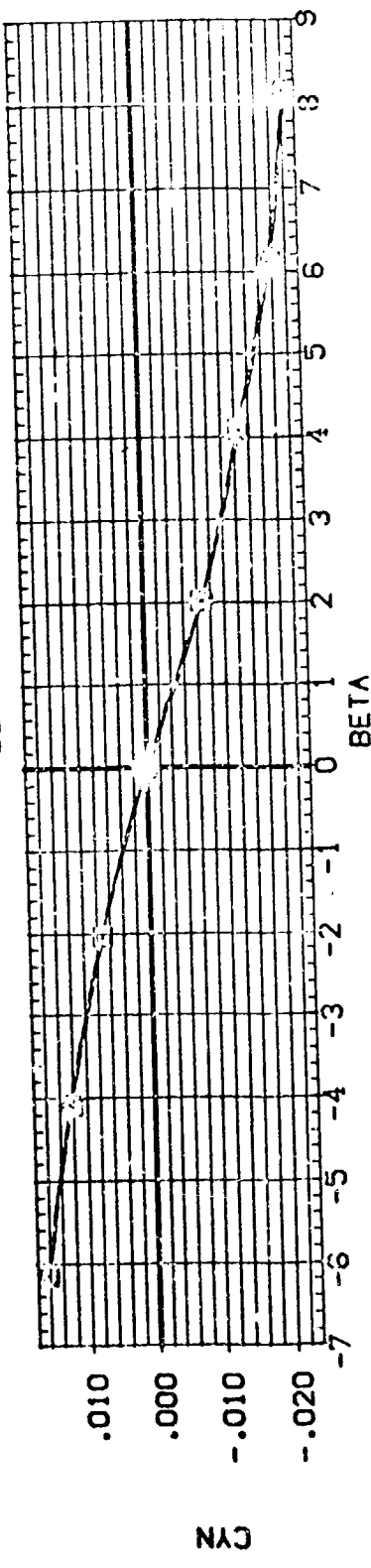
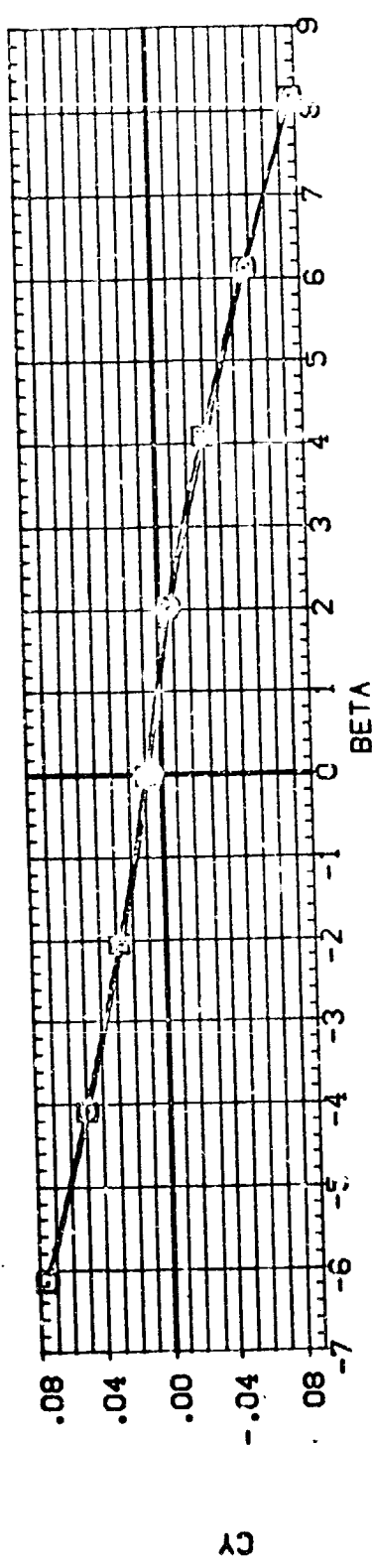


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(A) MACH = 2.36

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	GT-LOC	KVL	REFERENCE INFORMATION
(HP6023)	LA-8 LARC UPVT 1023 NAR 0233-MOD. NOISE CRIB/ITER	3.000	6.820	SQ. IN.
(HP6027)	LA-8 LARC UPVT 1023 NAR 0233-MOD. NOISE CRIB/ITER	3.000	6.820	INCHES
				INCHES
				INCHES
				INCHES
				SCALE
				SCALE

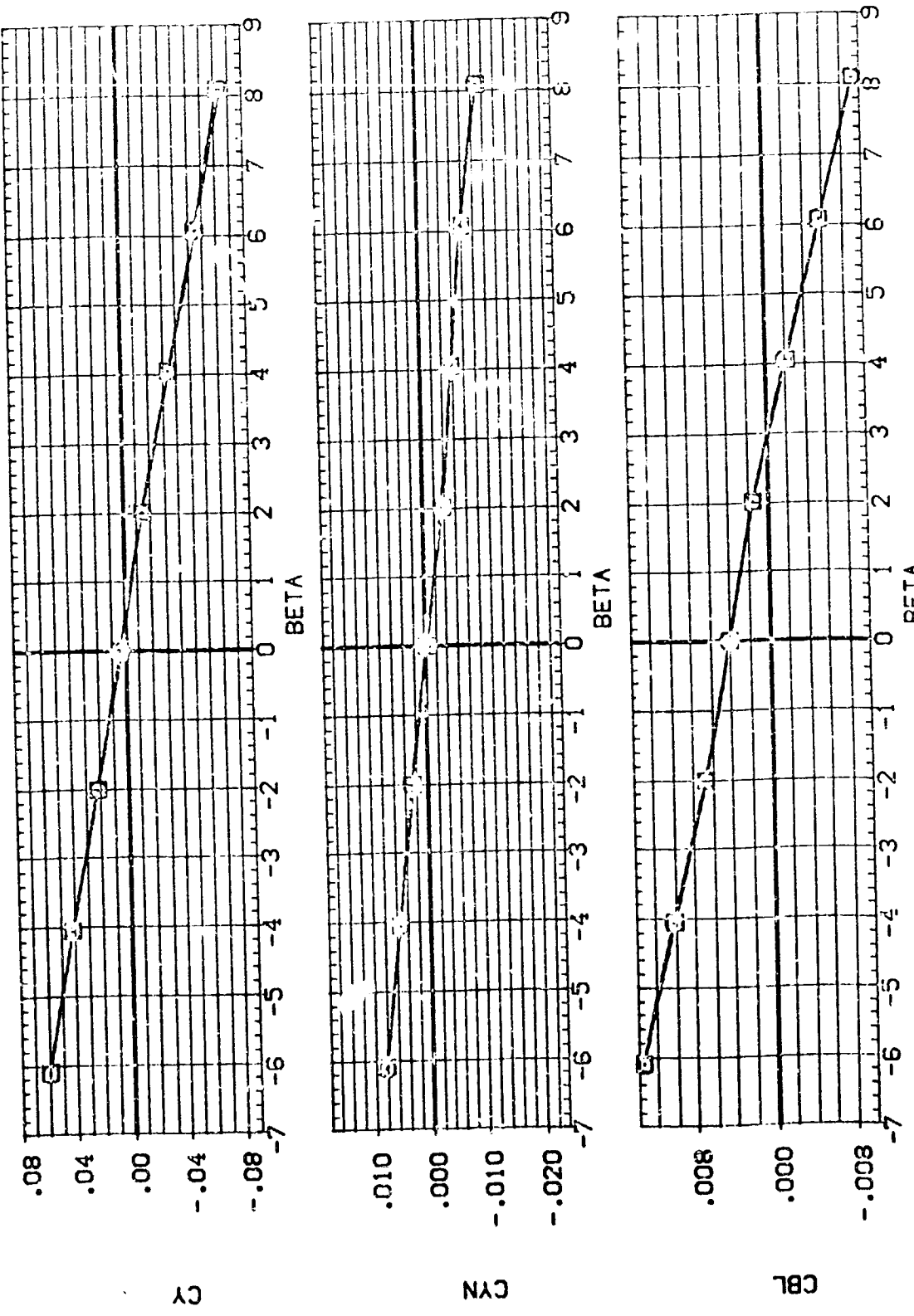


FIG. 12 VARIATION OF LONG AND LAT-DIR CHARACTERISTICS WITH SIDESLIP

(B)MACH = 4.63

APPENDIX
TABULATED SOURCE DATA

Plotted data tabulations are available
from the DMS on request.

LA-6 LARC UPWT 1023 MAR 0698-MOD. NODE ORBITER

(RP-6001) (20 JUN 75)

REFERENCE DATA

SREF = 136.1070 96.1M. XORP = 15.9638 INCHES
 LREF = 8.0025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

RUN NO. 1/ 0 RNL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00
 BETA = .000 ELEVTR = .000
 AIRLON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

PARAMETRIC DATA

MACH	ALPHA	BETA	CN	CA	CLM	CLB	CYN	CY	CFB1	CFB2	CPC
2.360	-4.257	.00665	-1.6620	.14809	.01975	.00059	-.00454	.00938	-.17830	-.16728	-.16051
2.360	-2.159	.00579	-.09305	.14640	.01419	.00047	-.00435	.00985	-.17825	-.17006	-.16995
2.360	-.091	.00614	-.02193	.14484	.00785	.00048	-.0448	.00997	-.17849	-.17315	-.17192
2.360	1.964	.00529	.04902	.14205	.00697	.00077	-.00431	.01022	-.17259	-.17013	-.17172
2.360	4.079	.00620	.12222	.13942	-.00498	.00092	-.00461	.01037	-.16400	-.16446	-.16802
2.360	6.222	.00593	.19320	.13702	-.00959	.00099	-.00459	.01057	-.16410	-.15891	-.16327
2.360	8.220	.00509	.26047	.13480	-.01239	.00093	-.00441	.01081	-.16686	-.16163	-.16502
2.360	10.217	.00384	.32646	.13277	-.01530	.00102	-.00405	.01107	-.17262	-.16753	-.17175
2.360	12.368	.00336	.39693	.13114	-.01768	.00102	-.00403	.01129	-.18118	-.17579	-.18028
2.360	16.528	.00168	.54946	.12862	-.02334	.00105	-.00332	.01100	-.20125	-.19283	-.19743
2.360	20.628	-.00022	.70902	.11958	-.03057	.00108	-.00284	.01077	-.19551	-.18997	-.19171
2.360	24.699	-.00260	.87976	.11290	-.04066	.00069	-.00108	.00977	-.19553	-.18717	-.19742
2.360	29.004	-.00504	1.04762	.10260	-.04660	.00072	-.00090	.00880	-.18683	-.17583	-.18601
2.360	30.324	-.00529	1.11126	.09492	-.05056	.00086	-.00088	.00899	-.16979	-.15888	-.16894
2.360	32.081	-.00561	1.17589	.08906	-.05431	.00099	-.00098	.00840	-.15842	-.15046	-.15476
2.360	37.394	-.00610	1.40528	.07757	-.06003	.00076	-.00025	.00747	-.14124	-.12781	-.12341
2.360	36.036	-.00518	1.46013	.07485	-.07612	.00072	-.00139	.00072	-.13557	-.12503	-.12061
GRADIENT		-.00007	.03454	-.00104	-.00007	.00007	-.00000	.00009	-.00165	.00027	-.00003

RUN NO. 12/ 0 RNL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CLB	CYN	CY	CFB1	CFB2	CPC
4.630	-3.719	.00459	-.12049	.11036	-.01791	.00146	-.00334	.00660	-.05859	-.05479	-.05725
4.630	-1.659	.00413	-.07899	.10407	-.01602	.00139	-.00298	.00585	-.05529	-.05479	-.05725
4.630	.366	.00428	-.03757	.09203	-.01482	.00124	-.00282	.00507	-.05859	-.05479	-.05725
4.630	2.361	.00352	.00393	.08637	-.01340	.00125	-.00261	.00525	-.05859	-.05479	-.05725
4.630	4.457	.00336	.05256	.08238	-.01308	.00101	-.00260	.00541	-.05859	-.05479	-.05725
4.630	6.495	.00316	.10371	.08910	-.01254	.00102	-.00258	.00559	-.05859	-.05479	-.05725
4.630	8.592	.00236	.15972	.08633	-.01157	.00095	-.00237	.00582	-.05859	-.05479	-.05725
4.630	10.593	.00216	.21440	.08464	-.01223	.00095	-.00235	.00600	-.05529	-.05479	-.05725
4.630	12.712	.00225	.27089	.08316	-.01223	.00072	-.00218	.00527	-.05859	-.05479	-.05725
4.630	16.763	.00240	.40006	.08150	-.01445	.00034	-.00185	.00382	-.05859	-.05479	-.05725
4.630	20.513	.00040	.54344	.07992	-.01514	.00021	-.00107	.00346	-.05859	-.05479	-.05725
4.630	25.131	-.00101	.69804	.07979	-.01958	-.00017	-.00050	.00309	-.05859	-.05479	-.05396
4.630	29.183	-.00158	.86010	.07808	-.02469	-.00015	-.00045	.00360	-.05859	-.05479	-.05396
4.630	30.711	-.00124	.92459	.07858	-.02666	.00017	-.00061	.00377	-.05529	-.05152	-.05396
4.630	32.233	-.00145	.98576	.07883	-.03054	.00026	-.00059	.00395	-.05859	-.05152	-.05396
4.630	37.462	-.00220	1.21202	.07977	-.04261	.00029	-.00003	.00280	-.05859	-.05152	-.05396
4.630	41.644	-.00367	1.39573	.07997	-.05513	.00023	-.00005	.00246	-.05859	-.05152	-.05396
GRADIENT		-.00015	.02104	-.00014	-.00000	.00000	-.00000	.00009	-.00016	.00000	-.00000

TABLATED SOURCE DATA LARC 1023/1034

LA-6 LARC UPMT 1023 MAR 0898-MOD. NOSE ORBITER

(RF6002) (20 JUN 73)

REFERENCE DATA

SREF = 156.1608 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.9628 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = .000
 AIRLON = .000 RUCFLR = 40.000
 GT-LOC = 2.000 K/L = 6.620

RUN NO. 4/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CPC
2.360	-4.197	.00480	-1.19698	.10776	.02267	.00554	-.00402	.00969	-.17853	-.17037	-.16059
2.360	-2.142	.00486	-.08826	.14591	.01620	.00046	-.00387	.00008	-.16419	-.17314	-.16906
2.360	-.047	.00317	-.01318	.17407	.01084	.00070	-.00401	.00927	-.18141	-.17322	-.17483
2.360	1.961	.00553	.00338	.14118	.00359	.00084	-.00416	.00943	-.17278	-.17032	-.17192
2.360	4.006	.00364	.12639	.13897	.00233	.00113	-.00430	.00961	-.16709	-.16470	-.16909
2.360	6.167	.00557	.19736	.13636	-.00769	.00134	-.00427	.00981	-.16424	-.15905	-.16625
2.360	8.228	.00413	.26437	.13390	-.00971	.00129	-.00392	.00908	-.16007	-.16165	-.16907
2.360	10.256	.00475	.33469	.13228	-.01303	.00123	-.00394	.00888	-.17472	-.17026	-.17470
2.360	12.369	.00477	.40666	.13037	-.01614	.00117	-.00379	.00868	-.18418	-.17878	-.18328
2.360	16.571	.00415	.59963	.12770	-.02163	.00126	-.00331	.00777	-.20416	-.19571	-.20033
2.360	20.691	.00268	.89867	.11864	-.02963	.00094	-.00281	.00750	-.19842	-.18721	-.19177
2.360	24.936	-.00033	1.1168	.08967	-.03817	.00097	-.00167	.00655	-.19844	-.19076	-.20032
2.360	29.009	-.00362	1.05290	.10135	-.04523	.00093	-.00067	.00638	-.18286	-.17309	-.18608
2.360	30.954	-.00561	.98419	.09419	-.04926	.00060	-.00016	.00668	-.16966	-.15608	-.16896
2.360	32.109	-.00526	1.17849	.08784	-.05310	.00053	-.00031	.00681	-.16141	-.14779	-.15491
2.360	37.326	-.01053	1.40161	.07692	-.06786	.00076	.00036	.00004	-.14140	-.12798	-.12644
2.360	39.737	-.00639	1.46788	.07320	-.07359	.00180	-.00106	.00079	-.13854	-.12516	-.12075
2.360	GRADIENT	.00013	.03414	-.00108	-.00303	.02207	-.00204	.00201	.00166	.00069	-.00096

RUN NO. 15/ 0 RNVL = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CPC
4.630	-3.685	.00508	-.11028	.10956	-.01270	.00172	-.00253	.00299	-.05859	-.05805	-.05725
4.630	-1.673	.00492	-.07112	.10422	-.01015	.00164	-.00231	.00313	-.05859	-.05805	-.05725
4.630	.403	.00417	-.02729	.09953	-.00959	.00157	-.00231	.00332	-.05859	-.05805	-.06054
4.630	2.373	.00342	.01419	.09596	-.00818	.00150	-.00210	.00350	-.05859	-.05805	-.06054
4.630	4.472	.00324	.06288	.09194	-.00765	.00150	-.00208	.00367	-.05859	-.05805	-.05725
4.630	6.554	.00305	.11101	.08856	-.00730	.00143	-.00207	.00384	-.05859	-.05805	-.06054
4.630	8.613	.00315	.16751	.08586	-.00656	.00128	-.00190	.00310	-.05859	-.05805	-.06054
4.630	10.599	.00237	.21979	.08406	-.00689	.00121	-.00169	.00330	-.05859	-.05805	-.06054
4.630	12.696	.00244	.28171	.08245	-.00723	.00106	-.00152	.00258	-.05859	-.05805	-.06054
4.630	16.825	.00112	.40788	.08069	-.00942	.00076	-.00095	.00212	-.05859	-.05479	-.05725
4.630	20.912	-.00025	.54868	.07913	-.01122	.00038	-.00038	.00171	-.05859	-.05479	-.05725
4.630	25.109	-.00134	.70334	.07794	-.01545	.00025	-.00035	.00141	-.05859	-.05152	-.05386
4.630	29.217	-.00196	.86779	.07794	-.02055	.00018	-.00040	.00093	-.05859	-.05152	-.05386
4.630	30.764	-.00191	.92985	.07841	-.02639	.00059	.00009	.00002	-.05859	-.05479	-.05725
4.630	32.255	-.00212	.99347	.07841	-.03639	.00059	.00011	.00021	-.05859	-.05479	-.05725
4.630	37.325	-.00286	1.21722	.07929	-.04369	.00046	.00066	.00103	-.05859	-.05479	-.05725
4.630	41.687	-.00345	1.39893	.07969	-.05113	.00057	.00081	.00025	-.05859	-.05154	-.05727
4.630	GRADIENT	-.00025	.02120	-.00214	.00057	-.00003	.00006	.00008	.00000	.00000	-.00009

LA-6 LARC UPMT 1023 NAR 0608-MOD. NOSE ORBITER

(RP6703) (17 SEP 75)

REFERENCE DATA

SRF = 136.1608 94. IN. XREF = 15.9638 INCHES
 LREF = 6.9028 INCHES YREF = .0000 INCHES
 BREF = 17.5628 INCHES ZREF = .0000 INCHES
 SCALE = .0186 SCALE

BETA = 3.000 ELEVTR = .000
 ATLRON = .000 RUFPLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

PARAMETRIC DATA

RUN NO. 3/ 0 RVL = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPH1	CPB2	CPC
2.360	-4.124	3.03700	-1.9344	.14651	.02053	-.00188	.00030	-.0403	-.17257	-.17293	-.16865
2.360	-2.153	3.03732	-.08208	.14682	.01496	-.00181	-.00027	-.05220	-.17839	-.17587	-.17181
2.360	-.078	3.03616	-.01106	.14530	.00666	-.00180	-.00064	-.04939	-.18410	-.17869	-.17465
2.360	2.030	3.03506	.05997	.14376	.00253	-.00175	-.00101	-.04702	-.18404	-.18146	-.18028
2.360	4.047	3.03455	.12876	.14259	-.00382	-.00189	-.00155	-.04441	-.18411	-.18435	-.18036
2.360	6.171	3.03371	.20218	.13980	-.00828	-.00217	-.00181	-.04264	-.18403	-.18710	-.18312
2.360	8.242	3.03316	.27123	.13661	-.01163	-.00245	-.00234	-.04004	-.18116	-.19277	-.18313
2.360	10.239	3.03414	.33709	.13207	-.01385	-.00307	-.00266	-.03988	-.17836	-.17584	-.17748
2.360	12.409	3.03505	.40942	.12984	-.01622	-.00336	-.00383	-.03654	-.18409	-.17585	-.18316
2.360	16.527	3.04088	.55655	.12571	-.02223	-.00285	-.00771	-.02848	-.19552	-.18716	-.19457
2.360	20.690	3.04755	.71325	.11820	-.02998	-.00233	-.01121	-.02279	-.19263	-.18714	-.19456
2.360	24.890	3.05110	.87746	.11030	-.03523	-.00353	-.01362	-.01774	-.19263	-.18147	-.19169
2.360	29.077	3.04750	1.05743	.10125	-.04735	-.00399	-.01273	-.01704	-.18701	-.18158	-.18610
2.360	30.517	3.04676	1.11408	.09562	-.04919	-.00510	-.01258	-.01685	-.16979	-.16453	-.17178
2.360	32.049	3.04189	1.17342	.08991	-.05107	-.00653	-.01125	-.01641	-.16136	-.15055	-.15769
2.360	34.339	3.03379	1.40670	.07850	-.07087	-.00546	-.01042	-.01727	-.14989	-.13356	-.12920
2.360	36.731	3.03538	1.46797	.07577	-.07296	-.00489	-.00924	-.01691	-.14119	-.12776	-.12031
GRADIENT		-.00035	.03428	-.00072	-.00295	-.00020	-.00021	.00118	-.00139	-.00137	-.00152

RUN NO. 14/ 0 RVL = 2.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CPC
4.630	-3.711	3.02659	-.10941	.11012	-.01359	.00022	.00003	-.04812	-.05859	-.05479	-.05725
4.630	-1.659	3.02383	-.06802	.10437	-.01259	-.00034	.00015	-.04511	-.05859	-.05479	-.05725
4.630	.367	3.02195	-.02664	.09967	-.01141	-.00098	.00024	-.04305	-.05859	-.05479	-.05725
4.630	2.405	3.02152	.01720	.09538	-.00981	-.00154	.00029	-.04197	-.05859	-.05479	-.05725
4.630	4.473	3.02079	.04583	.09169	-.00951	-.00203	.00020	-.03995	-.05859	-.05479	-.05725
4.630	6.548	3.01973	.11692	.08893	-.00898	-.00235	.00010	-.03768	-.05859	-.05479	-.05725
4.630	8.589	3.01864	.17041	.08597	-.00827	-.00289	-.00043	-.03660	-.05859	-.05805	-.06054
4.630	10.511	3.01679	.22515	.08438	-.00754	-.00339	-.00095	-.03554	-.05859	-.05805	-.06054
4.630	12.167	3.01549	.28216	.08337	-.00682	-.00379	-.00095	-.03447	-.05859	-.05805	-.06054
4.630	16.348	3.02248	.41101	.08152	-.00942	-.00405	-.00262	-.03362	-.06189	-.05805	-.06054
4.630	20.112	3.02259	.55041	.08055	-.01140	-.00382	-.00417	-.03259	-.05868	-.05804	-.06054
4.630	25.167	3.02317	.71030	.07977	-.01519	-.00382	-.00499	-.02530	-.06189	-.05805	-.06054
4.630	29.213	3.02293	.86866	.07861	-.02245	-.00412	-.00528	-.02387	-.05859	-.05805	-.06054
4.630	30.731	3.02300	.93310	.07874	-.02359	-.00436	-.00511	-.02459	-.05859	-.05479	-.05725
4.630	31.24	3.01990	.99417	.07888	-.02579	-.00522	-.00366	-.02607	-.05859	-.05479	-.05725
4.630	31.524	3.01949	1.21763	.07918	-.03396	-.00592	-.00346	-.02634	-.05859	-.05479	-.05725
4.630	31.670	3.02260	1.40090	.07938	-.03288	-.00473	-.00495	-.02232	-.05526	-.05475	-.05725
GRADIENT		-.00068	.02132	-.00054	-.00026	-.00002	-.00003	.00095	-.00000	-.00000	-.00000

PARAMETRIC DATA

REFERENCE DATA

SREF = 196.1806 SQ. IN. YMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

BETA = 3.000 ELEVTR = .000
 AIRLON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 2/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-4.220	3.03613	-1.1752	.14827	.02034	-.00108	.00033	-.05320	-.17258	-.17295	-.16867
2.360	-2.155	3.03350	-.08415	.14676	.01480	-.00175	-.00026	-.04811	-.17834	-.17562	-.17176
2.360	-.054	3.03411	-.01094	.14517	.00944	-.00161	.00070	-.04719	-.18400	-.18141	-.17754
2.360	1.981	3.03212	.05797	.14399	.00310	-.00168	-.00104	-.04570	-.18123	-.18433	-.18033
2.360	4.070	3.03220	.12678	.14235	-.00324	-.00189	-.00132	-.04274	-.18409	-.18433	-.18034
2.360	6.169	3.03196	.19997	.13998	-.00846	-.00217	-.00173	-.04096	-.18407	-.18714	-.18316
2.360	8.248	3.03143	.26923	.13684	-.01182	-.00252	-.00228	-.03840	-.18401	-.18992	-.18310
2.360	10.166	3.02972	.33338	.13250	-.01328	-.00301	-.00249	-.03574	-.17546	-.17579	-.17743
2.360	12.352	3.03240	.40992	.13007	-.01624	-.00337	-.00373	-.03408	-.18401	-.17859	-.18310
2.360	16.522	3.03793	.56116	.12618	-.02188	-.00307	-.00375	-.02518	-.19548	-.18711	-.19453
2.360	20.651	3.04373	.72076	.11845	-.02981	-.00247	-.00321	-.01866	-.19548	-.18429	-.19168
2.360	24.864	3.05170	.88210	.1045	-.03716	-.00568	-.00380	-.01778	-.19259	-.17853	-.19164
2.360	29.007	3.04930	1.05558	.10181	-.04784	-.00406	-.00283	-.01876	-.18686	-.17657	-.18534
2.360	30.587	3.04792	1.11825	.09560	-.04957	-.00406	-.00248	-.01848	-.16978	-.16169	-.16892
2.360	32.106	3.04455	1.17837	.08973	-.04244	-.00653	-.00137	-.01892	-.15841	-.14480	-.15475
2.360	37.377	3.03949	1.41222	.07936	-.02753	-.00553	-.00354	-.01645	-.14708	-.13079	-.12641
2.360	38.616	3.03629	1.46497	.07689	-.02433	-.00502	-.00369	-.01614	-.13857	-.12520	-.12078
GRADIENT		-.00045	.03431	-.00071	-.00284	-.00020	-.00020	-.00122	-.00125	-.00151	-.00152

RUN NO. 13/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.698	3.02571	-1.0939	.10970	-.01359	.00022	.00207	-.04716	-.05859	-.05479	-.05725
4.630	-1.668	3.02384	-.07047	.10468	-.01280	-.00034	.00015	-.04512	-.05859	-.05479	-.05725
4.630	.592	3.02234	-.02910	.09965	-.01162	-.00090	.00005	-.04309	-.05859	-.05479	-.05725
4.630	2.387	3.02064	.01479	.09541	-.01072	-.00146	.00013	-.04102	-.05859	-.05479	-.06054
4.630	4.470	3.02000	.06338	.09169	-.00973	-.00203	-.00020	-.03996	-.05859	-.05479	-.05725
4.630	6.515	3.01976	.11200	.08897	-.00942	-.00243	-.00015	-.03884	-.05859	-.05479	-.06054
4.630	8.630	3.01870	.16790	.08614	-.00849	-.00299	-.00010	-.03769	-.05859	-.05479	-.05725
4.630	10.607	3.01883	.22312	.08465	-.00884	-.00347	-.00044	-.03662	-.05859	-.05479	-.05725
4.630	12.690	3.01922	.27724	.08299	-.00875	-.00388	-.00111	-.03464	-.05859	-.05479	-.05725
4.630	14.792	3.02122	.40606	.08131	-.01072	-.00405	-.00277	-.03267	-.05859	-.05152	-.05725
4.630	16.929	3.02291	.54705	.08038	-.01248	-.00398	-.00451	-.03067	-.05859	-.05152	-.05725
4.630	19.093	3.02333	.69943	.07916	-.01690	-.00390	-.00533	-.02866	-.05859	-.05152	-.05725
4.630	21.193	3.02266	.86378	.07830	-.02287	-.00413	-.00543	-.02666	-.05859	-.05152	-.05725
4.630	23.238	3.02186	.98204	.07874	-.02575	-.00436	-.00522	-.02466	-.05859	-.05152	-.05725
4.630	25.093	3.02025	.07861	.07906	-.02798	-.00456	-.00521	-.02266	-.05859	-.05152	-.05725
4.630	27.531	3.01895	1.21498	.07921	-.03183	-.00461	-.00529	-.02066	-.05859	-.05152	-.05725
4.630	41.656	3.02064	1.09660	.07927	-.03535	-.00461	-.00529	-.01866	-.05859	-.05152	-.05725
GRADIENT		-.00064	.02113	-.00222	-.00028	-.00003	-.00003	-.00122	-.00000	-.00000	-.00000

REFERENCE DATA
 SREF = 136.1073 88.1M. XARP = 15.9638 INCHES
 LREF = 0.9025 INCHES YARP = .0000 INCHES
 BREF = 17.5628 INCHES ZARP = .0000 INCHES
 SCALE = .0186 SCALE

BETA = .000 ELEVTR = .000
 AILRON = .000 RUFLR = 40.000
 GT-LOC = 1.000 K/L = 6.820

PARAMETRIC DATA
 RUN NO. 47/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CFC
2.360	-4.222	.00638	-1.16435	.19366	.01921	.00074	-.00461	.00794	-.16987	-.16471	-.14842
2.360	-2.141	.00970	-.06972	.14737	.01937	.00068	-.00462	.00732	-.16028	-.16472	-.14272
2.360	-.073	.00876	-.01791	.14468	.00674	.00069	-.00460	.00752	-.16314	-.16188	-.14557
2.360	1.890	.00632	.04899	.14241	-.01053	.00098	-.00457	.00769	-.15161	-.15916	-.14571
2.360	4.060	.00684	.12377	.13957	-.00828	.00105	-.00470	.00785	-.14933	-.15951	-.14610
2.360	1.095	.00828	.19089	.13705	-.01129	.00134	-.00482	.00887	-.14909	-.15364	-.14586
2.360	6.379	.00774	.25844	.13510	-.01483	.00136	-.00451	.00831	-.15460	-.15627	-.15134
2.360	0.228	.00774	.33076	.13457	-.01721	.00130	-.00426	.00879	-.16323	-.16763	-.15994
2.360	12.356	.00631	.39945	.13355	-.01921	.00117	-.00401	.00870	-.17173	-.17605	-.16840
2.360	16.526	.00484	.55519	.12969	-.02490	.00098	-.00350	.00659	-.18327	-.18462	-.17705
2.360	20.601	.00425	.70556	.12350	-.03251	.00094	-.00302	.00558	-.19184	-.18744	-.18273
2.360	24.905	.00241	.87695	.11568	-.04109	.00090	-.00222	.00558	-.18613	-.18745	-.18559
2.360	28.991	.00231	1.10390	.10402	-.04666	.00124	-.00260	.00469	-.17475	-.17355	-.17139
2.360	30.679	-.00346	1.10882	.09722	-.05079	.00018	-.00154	.00373	-.16338	-.16212	-.15724
2.360	32.023	-.00195	1.16496	.09227	-.05397	.00018	-.00101	.00582	-.15758	-.15638	-.14860
2.360	37.403	-.00777	1.39118	.08156	-.06842	.00015	-.00066	.00593	-.14329	-.14298	-.12298
2.360	36.068	-.00859	1.45919	.07802	-.07350	.00005	-.00127	.00457	-.12898	-.13092	-.11442
GRADIENT		.00002	.03413	-.00131	-.00311	.00004	-.00001	.00001	.00229	-.00077	.00008

WACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CFC
4.630	-3.670	.00484	-.11226	.11273	-.01401	.00139	-.007269	.00388	-.06142	-.05886	-.05723
4.630	-1.647	.00442	-.07655	.10767	-.01410	.00116	-.00234	.00311	-.06141	-.05883	-.05722
4.630	.411	.00425	-.03255	.10283	-.01263	.00109	-.00232	.00327	-.05812	-.05886	-.05394
4.630	2.396	.00351	.00889	.09452	-.01125	.00093	-.00212	.00345	-.06142	-.05886	-.05394
4.630	4.520	.00275	.05744	.08379	-.01178	.00086	-.00191	.00364	-.06142	-.05886	-.05394
4.630	6.535	.00167	.10633	.06278	-.00972	.00087	-.00185	.00478	-.06142	-.05886	-.05723
4.630	8.660	.00177	.16440	.05068	-.00702	.00072	-.00169	.00470	-.06142	-.05886	-.05723
4.630	10.601	.00130	.21664	.03927	-.00557	.00057	-.00133	.00331	-.06142	-.05886	-.05723
4.630	12.623	.00053	.27153	.02794	-.00336	.00042	-.00113	.00352	-.06141	-.05885	-.05722
4.630	16.866	-.00083	.40453	.02648	-.01488	.00012	-.00055	.00309	-.06142	-.05886	-.05723
4.630	20.930	-.00161	.54279	.02519	-.01775	-.00002	-.00017	.00263	-.06142	-.05886	-.05723
4.630	25.184	-.00363	.69985	.02458	-.02090	-.00032	-.00060	.00231	-.05812	-.05886	-.05723
4.630	29.247	-.00391	.85947	.02377	-.02641	-.00023	-.00031	.00270	-.05812	-.05886	-.05723
4.630	30.719	-.00386	.92383	.02441	-.02925	.00010	-.00010	.00480	-.05812	-.05886	-.05723
4.630	32.218	-.00377	.98479	.02472	-.03166	.00011	-.00017	.00436	-.05812	-.05886	-.05723
4.630	37.535	-.00540	1.23872	.02805	-.03368	-.00002	-.00077	.00386	-.05812	-.05886	-.05723
4.630	41.634	-.00657	1.38773	.02559	-.03543	-.00008	-.00150	.00259	-.05812	-.05886	-.05723
GRADIENT		-.00025	.02110	-.00006	-.00006	-.00006	-.00009	-.00001	.00000	-.00000	-.00000

PARAMETRIC DATA

REFEY' MCL DATA
 SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

BETA = -3.000 ELEVTR = .000
 ATLRON = .000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = 6.820

RUN NO. 46/ 0 RN/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CA	CLM	CBL	CYN	CY	CFB1	CPB2	CFC
2.360	-4.180	-3.04289	.15224	.01983	.00309	-.00905	.06823	-.16061	-.17068	-.14879
2.360	-2.127	-3.04230	.14936	.01506	.00332	-.00864	.06610	-.15480	-.16777	-.14869
2.360	-.060	-3.03989	.14692	.00855	.00349	-.00830	.06222	-.15481	-.16778	-.14870
2.360	2.041	-3.04017	.14519	.00244	.00392	-.00784	.06080	-.16060	-.16784	-.15732
2.360	4.085	-3.04075	.14361	-.00367	.00443	-.00709	.05862	-.16350	-.17071	-.16306
2.360	6.237	-3.04220	.14074	-.00959	.00466	-.00631	.05734	-.16629	-.17065	-.16584
2.360	8.246	-3.04074	.13777	-.01290	.00517	-.00549	.05269	-.16352	-.17073	-.16592
2.360	10.363	-3.04105	.13407	-.01617	.00561	-.00461	.04974	-.16354	-.16510	-.16310
2.360	12.341	-3.04539	.13256	-.01798	.00536	-.00302	.04854	-.16359	-.16793	-.16878
2.360	16.547	-3.05416	.12750	-.02520	.00489	.00145	.04149	-.16064	-.17920	-.18014
2.360	20.732	-3.06179	.12074	-.03433	.00448	.00517	.03598	-.18634	-.18484	-.18297
2.360	25.016	-3.06842	.11211	-.04219	.00371	.00774	.03358	-.18355	-.18490	-.18303
2.360	29.075	-3.07376	.10450	-.04979	.00368	.00911	.03430	-.18367	-.18487	-.18016
2.360	30.506	-3.07460	.10116	-.05338	.00624	.00830	.03451	-.17208	-.17444	-.17444
2.360	32.028	-3.07229	.09711	-.05641	.00763	.00881	.03377	-.16930	-.16798	-.16883
2.360	37.327	-3.06644	.08341	-.06546	.00859	.00636	.03648	-.14936	-.14543	-.11489
2.360	38.875	-3.06871	.07824	-.07221	.00831	.00631	.03911	-.14981	-.13980	-.11206
2.360	GRADIENT	.00031	-.00104	-.00288	.00210	.00223	-.00118	-.00056	-.00001	-.00180

RUN NO. 50/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CA	CLM	CBL	CYN	CY	CFB1	CPB2	CFC
4.630	-3.657	-3.03810	.11473	.01245	.00304	-.00611	.05672	-.05812	-.05560	-.05723
4.630	-1.688	-3.03739	.10977	.01230	.00330	-.00365	.05416	-.06141	-.05885	-.05722
4.630	.385	-3.03611	.10464	-.01191	.00371	-.00336	.05142	-.05812	-.05886	-.05723
4.630	2.442	-3.03631	.10005	-.01112	.00405	-.00484	.04976	-.05812	-.05886	-.05723
4.630	4.444	-3.03649	.09687	-.01187	.00439	-.00433	.04809	-.05312	-.05886	-.05723
4.630	6.595	-3.03671	.09378	-.01044	.00466	-.00382	.04652	-.00480	-.05885	-.05722
4.630	8.822	-3.03752	.09137	-.01032	.00489	-.00359	.04667	-.05812	-.05886	-.05723
4.630	10.572	-3.03744	.08880	-.01063	.00515	-.00293	.04410	-.06142	-.05886	-.05723
4.630	12.718	-3.03941	.08680	-.01225	.00518	-.00185	.04254	-.05812	-.05886	-.05723
4.630	16.955	-3.04455	.08700	-.01467	.00476	.00119	.03774	-.05812	-.05886	-.05723
4.630	21.016	-3.04853	.08585	-.01737	.00409	.00384	.03269	-.05812	-.05886	-.06052
4.630	25.147	-3.05109	.08491	-.02118	.00373	.00529	.03072	-.05812	-.05886	-.05723
4.630	29.235	-3.05199	.08599	-.02627	.00424	.00370	.03038	-.05812	-.05886	-.05722
4.630	30.840	-3.05109	.08511	-.02816	.00511	.00456	.03231	-.05812	-.05886	-.05394
4.630	32.181	-3.04985	.08556	-.03030	.00583	.00416	.03331	-.05812	-.05886	-.05394
4.630	37.510	-3.05206	.08553	-.04362	.00580	.00533	.02948	-.05812	-.05886	-.05394
4.630	41.646	-3.05495	.08488	-.05401	.00528	.00772	.02647	-.05812	-.05886	-.05394
4.630	GRADIENT	.00021	-.00223	.00012	.00017	.00021	-.00107	.00016	-.00032	-.00000

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

LA-8 LARC UPWT 1023 NAR 089B-MOC. NOSE CR81TER

(RF6008) (20 JUN 73)

PARAMETRIC DATA

REFERENCE DATA

SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

WTA = -3.000 ELEVTR = .000
 AILRON = .000 RUDFLK = 40.000
 GT-LOC = 3.000 K/L = 6.820

RUN NO. 44/ 0 RN/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	C.M	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-4.197	-3.02480	-1.15073	.15027	.02256	.00274	-.00900	.06893	-.16827	-.17534	-.15643
2.360	-2.095	-3.02363	-.07542	.14780	.02170	.00263	-.00832	.06518	-.18541	-.17533	-.16210
2.360	-.011	-3.02042	-.00428	.14572	.01992	.00300	-.00801	.06563	-.16824	-.17814	-.16492
2.360	2.117	-3.02301	.06407	.14430	.01065	.00343	-.00732	.06076	-.17118	-.17822	-.16785
2.360	4.079	-3.02268	.13468	.14300	.00377	.00366	-.00662	.05780	-.17685	-.18101	-.17349
2.360	6.187	-3.02417	.20371	.13980	.00274	.00403	-.00583	.05647	-.17405	-.18105	-.17632
2.360	8.342	-3.02501	.27803	.13727	-.00492	.00488	-.00479	.05357	-.17684	-.18100	-.17370
2.360	10.236	-3.02755	.33956	.13326	-.01225	.00491	-.00398	.05304	-.17119	-.17260	-.17070
2.360	12.345	-3.02994	.40984	.13055	-.01958	.00440	-.00246	.05027	-.16823	-.17249	-.16826
2.360	16.616	-3.03727	.56367	.12505	-.02238	.00440	-.00181	.04235	-.18538	-.18362	-.18767
2.360	20.610	-3.04634	.71723	.11868	-.03143	.00406	.00571	.03764	-.19592	-.18950	-.19155
2.360	24.788	-3.05410	.87805	.11026	-.03861	.00517	.00946	.03218	-.19109	-.18883	-.19052
2.360	28.984	-3.05827	1.05361	.10216	-.05176	.00525	.00864	.03595	-.18831	-.18672	-.18492
2.360	30.581	-3.06119	1.11964	.09872	-.05180	.00520	.00661	.03550	-.18261	-.18108	-.18278
2.360	32.290	-3.05858	1.18788	.09485	-.06201	.00700	.00985	.03557	-.17399	-.16692	-.17348
2.360	37.426	-3.04673	1.40376	.08164	-.06652	.00693	.00465	.04192	-.15134	-.14734	-.12542
2.360	38.754	-3.05005	1.46221	.07534	-.07271	.00837	.00876	.04149	-.14265	-.14154	-.11672
GRADIENT		.00024	.03421	-.00087	-.00234	.00013	.00028	-.00129	-.00110	-.00068	-.00192

RUN NO. 46/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	C.M	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.711	-3.01614	-.12140	.11288	-.01617	.00327	-.00758	.05881	-.06342	-.05748	-.05919
4.630	-1.609	-3.01484	-.08030	.10687	-.01600	.00353	-.00680	.05401	-.06011	-.05748	-.05919
4.630	.398	-3.01534	-.03593	.10259	-.01454	.00387	-.00644	.05327	-.06342	-.05748	-.05919
4.630	2.479	-3.01464	.00795	.09798	-.01162	.00420	-.00596	.05064	-.06342	-.05748	-.05919
4.630	4.491	-3.01485	.05449	.09453	-.01364	.00463	-.00545	.04905	-.06342	-.05746	-.05918
4.630	6.529	-3.01533	.10319	.09170	-.01329	.00472	-.00508	.04825	-.06342	-.05748	-.05919
4.630	8.570	-3.01617	.15701	.08907	-.01249	.00529	-.00486	.04847	-.06342	-.05748	-.05919
4.630	10.625	-3.01611	.21460	.08730	-.01238	.00556	-.00419	.04597	-.06342	-.05748	-.05919
4.630	12.627	-3.01746	.26651	.08538	-.01357	.00541	-.00330	.04431	-.06342	-.05748	-.05919
4.630	16.882	-3.02115	.40245	.08343	-.01578	.00507	-.00248	.03850	-.06342	-.05748	-.06248
4.630	20.961	-3.02603	.54341	.08225	-.01760	.00464	-.00222	.03461	-.06342	-.05075	-.05918
4.630	25.092	-3.02742	.68449	.08113	-.02144	.00437	-.00179	.03060	-.06342	-.05746	-.05918
4.630	29.243	-3.02772	.83824	.08000	-.02275	.00427	-.00189	.03013	-.06342	-.05748	-.05919
4.630	30.848	-3.02683	.92239	.08111	-.02297	.00483	-.00116	.03211	-.06342	-.05748	-.05919
4.630	32.266	-3.02679	.98473	.08145	-.02351	.00640	-.00043	.03320	-.05680	-.05420	-.05589
4.630	37.592	-3.02320	1.21122	.08139	-.02434	.00642	-.00043	.02933	-.06311	-.05420	-.05589
4.630	41.657	-3.03040	1.38791	.08028	-.02584	.00600	-.00019	.02532	-.06111	-.05420	-.05589
GRADIENT		.00014	.02146	-.00223	-.00131	.00017	.00025	-.00109	-.00016	-.00009	-.00000

TABULATED SOURCE DATA LARC 1023/1034

LA-6 LARC UPWT 1023 NAR 0853-MOD. NOSE ORBITER

DATE 31 OCT 73

(RP8DC09) (20 JUN 73)

REFERENCE DATA

SREF = 136.1000 SQ. IN. XMRP = 15.9636 INCHES
 LREF = 6.0725 INCHES YMRP = .0000 INCHES
 BREF = 1.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0166 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = .000
 AIRLON = .000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = .000

RUN NO. 53/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-4.185	.02709	-1.1756	.14778	.02044	.00033	-.00443	.00797	-.18661	-.17915	-.16320
2.360	-2.151	.02712	-.08664	.14519	.01472	.00141	-.05428	.00738	-.18943	-.18193	-.16684
2.360	-.077	.02511	-.01785	.14349	.00897	.00056	-.00419	.00923	-.18944	-.18760	-.17453
2.360	2.005	.02336	.05123	.14182	.00266	.00070	-.00413	.01025	-.18947	-.18763	-.17743
2.360	4.073	.02520	.12212	.13809	-.00348	.00078	-.00431	.00959	-.17808	-.18484	-.17727
2.360	6.177	.02664	.19107	.13482	-.003827	.00059	-.00442	.01099	-.16659	-.17074	-.16897
2.360	8.257	.02467	.25997	.13312	-.01160	.00101	-.00426	.00999	-.17527	-.17640	-.17467
2.360	12.302	.02471	.39592	.12843	-.01558	.00096	-.00396	.00881	-.18674	-.18775	-.18610
2.360	6.477	.02237	.50498	.12527	-.02071	.00077	-.00342	.00836	-.20640	-.20463	-.20026
2.360	20.682	.02147	.70935	.11519	-.02960	.00045	-.00308	.00846	-.19817	-.19624	-.19465
2.360	24.956	.01876	.87509	.10864	-.03997	.00075	-.00224	.00886	-.20106	-.19910	-.19700
2.360	28.997	.01840	1.04432	.09924	-.04751	.00064	-.00164	.00701	-.19236	-.19049	-.18841
2.360	32.016	.01470	1.16826	.08560	-.05955	.00052	-.00081	.00832	-.16103	-.16232	-.15481
2.360	37.339	.01151	1.39564	.07452	-.07000	.00020	-.00019	.00910	-.15241	-.14532	-.12346
2.360	38.739	.01182	1.45379	.07232	-.07371	.00103	-.00117	.01241	-.14664	-.14244	-.12053
GRADIENT		-.00034	.05379	-.00110	-.00290	.00006	.00002	.00030	-.00083	-.00083	-.00180

RUN NO. 51/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.693	.02530	-1.1042	.10807	-.01445	.00147	-.00307	.00383	-.06184	-.05566	-.05752
4.630	-1.663	.02545	-.07150	.10277	-.01364	.00132	-.00290	.00304	-.05854	-.05892	-.05681
4.630	.365	.02528	-.02764	.09854	-.01223	.00124	-.00289	.00320	-.05853	-.05891	-.06081
4.630	2.427	.02452	.01631	.09499	-.01058	.00117	-.00268	.00339	-.05854	-.05566	-.06081
4.630	4.518	.02435	.06261	.09051	-.00948	.00118	-.00265	.00373	-.06183	-.05564	-.05751
4.630	6.586	.02416	.11380	.08317	-.00799	.00118	-.00265	.00394	-.05853	-.05564	-.05751
4.630	9.557	.02338	.16741	.08433	-.00620	.00103	-.00244	.00342	-.06183	-.05564	-.05751
4.630	12.643	.02268	.22925	.08790	-.00408	.00081	-.00207	.00320	-.05891	-.05564	-.05681
4.630	16.810	.02223	.40560	.07872	-.00140	.00059	-.00154	.00201	-.06184	-.05892	-.05681
4.630	20.982	.02026	.54812	.07758	-.00127	.00053	-.00077	.00164	-.06184	-.05892	-.05681
4.630	25.114	.01985	.69900	.07701	-.00192	-.00017	-.00019	.00126	-.06183	-.05391	-.06081
4.630	29.211	.01768	.86362	.07553	-.00212	-.00015	.00005	.00181	-.05853	-.05566	-.05752
4.630	32.354	.01867	.99039	.07545	-.00269	.00050	-.00062	.00304	-.05854	-.05566	-.05751
4.630	37.459	.01679	1.21092	.07536	-.00340	.00005	-.00005	.00192	-.05853	-.05564	-.05751
4.630	41.596	.01650	1.39912	.07509	-.00448	.00003	-.00032	.00151	-.05853	-.05564	-.05751
GRADIENT		-.00034	.05379	-.00110	-.00290	.00006	.00002	.00030	-.00083	-.00083	-.00180

LA-8 LARC UFMV 1023 NAR 089B-MOS, NOSE GRABBER

(RP6010) (20 JUN 73)

PARAMETRIC DATA

BETA = -3.000 ELEVTR = .000
AILRON = .000 RUDPLF = 40.000
GT-LCC = 1.000 K/L = .000

REFERENCE DATA

SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES
LREF = 8.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5628 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

RUN NO. 54/ 0 RNVL = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-4.205	-3.04816	-1.16170	.1759	.01016	.00301	-.00927	.07476	-.16689	-.18204	-.16329
2.360	-2.161	-3.04460	-.08878	.14684	.01391	.00303	-.00883	.06926	-.16956	-.18205	-.16614
2.360	-.072	-3.04366	-.01997	.1318	.00889	.00298	-.00829	.06618	-.17535	-.18212	-.17191
2.360	2.020	-3.04363	.05083	.14101	.00203	.00329	-.00772	.06409	-.17809	-.18485	-.17749
2.360	4.058	-3.04476	.11547	.14039	-.00314	.00359	-.00680	.06192	-.18098	-.18770	-.18036
2.360	6.134	-3.04478	.19055	.13942	-.00737	.00403	-.00621	.05970	-.18392	-.19060	-.18613
2.360	8.230	-3.04481	.25935	.13459	-.01138	.00480	-.00604	.05808	-.18111	-.18500	-.18334
2.360	12.329	-3.04833	.39557	.12926	-.01808	.00533	-.00432	.05653	-.18392	-.18778	-.18858
2.360	16.494	-3.05448	.54385	.12347	-.02271	.00521	-.00375	.04700	-.19530	-.19904	-.20032
2.360	21.664	-3.06239	.70450	.11461	-.03203	.00474	-.00449	.03914	-.19528	-.19820	-.20030
2.360	24.845	-3.07128	.86699	.10560	-.04053	.00354	-.00979	.03520	-.19339	-.19462	-.19462
2.360	29.026	-3.07696	1.04137	.09788	-.05017	.00354	-.00979	.03319	-.18920	-.18496	-.18898
2.360	32.050	-3.07806	1.17102	.09107	-.05859	.00617	-.00968	.03191	-.17930	-.17820	-.18080
2.360	37.394	-3.06743	1.39222	.07655	-.07024	.01018	-.00600	.02689	-.15255	-.14829	-.14280
2.360	38.698	-3.06702	1.44616	.07226	-.07561	.01010	-.00542	.02456	-.14692	-.14554	-.14521
GRADIENT		.00038	.00351	-.00088	-.00276	.00007	-.00029	-.00149	-.00068	-.00068	-.00220

RUN NO. 52/ 0 RNVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.738	-3.01763	-1.1631	.11032	-.01490	.00304	-.001635	.05581	-.06183	-.05564	-.06081
4.630	-1.672	-3.01665	-.07474	.10493	-.01218	.00338	-.00573	.05225	-.05883	-.05564	-.06081
4.630	.399	-3.03468	-.03070	.09994	-.01062	.00388	-.00559	.05053	-.05853	-.05564	-.05751
4.630	2.409	-3.03430	.01326	.09604	-.00933	.00429	-.00526	.04883	-.06183	-.05564	-.06081
4.630	4.509	-3.03420	.05961	.09199	-.00783	.00455	-.00460	.04624	-.06183	-.05564	-.06081
4.630	6.518	-3.03382	.10902	.08876	-.00668	.00512	-.00476	.04638	-.05883	-.05564	-.06081
4.630	8.607	-3.03376	.16442	.08581	-.00521	.00545	-.00458	.04565	-.06183	-.05564	-.06081
4.630	12.677	-3.03624	.27397	.08213	-.00385	.00558	-.00264	.04156	-.05183	-.05564	-.06081
4.630	16.759	-3.03933	.40203	.07962	-.00262	.00539	-.00264	.03666	-.06184	-.05892	-.06081
4.630	20.917	-3.04421	.54578	.07809	-.01214	.00473	-.00268	.03183	-.06183	-.05591	-.06081
4.630	25.157	-3.04738	.70047	.07701	-.01639	.00445	-.00432	.02871	-.06183	-.05591	-.06081
4.630	29.300	-3.04796	.86506	.07636	-.02147	.00463	-.00487	.02839	-.06183	-.05564	-.06081
4.630	32.280	-3.04726	.98389	.07555	-.02617	.00584	-.00496	.02845	-.06183	-.05564	-.05751
4.630	37.479	-3.04830	1.20557	.07571	-.03066	.00628	-.00496	.02845	-.06183	-.05564	-.05751
4.630	41.771	-3.04974	1.59394	.07512	-.03167	.00684	-.00632	.02445	-.05853	-.05564	-.05751
GRADIENT		-.00247	.00138	-.00221	-.00161	.00019	-.00019	-.00110	-.00016	-.00016	-.00000

TABULATED SOURCE DATA LARC 1023/1034

DATE 31 OCT 73

(RP6011) (20 JUN 73)

LA-8 LARC UPMT 1023 MAR 0898-MOU. NOSE ORBITER

REFERENCE DATA

XREF = 136.1808 52. IN. XPRP = 15.9635 INCHES
 LREF = 6.9025 INCHES YPRP = .0000 INCHES
 BREF = 17.9628 INCHES ZPRP = .0000 INCHES
 SCALE = .0186 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = -20.000
 ATLRON = 10.000 RUFLR = 40.000
 GT-LOC = 1.000 K/L = .000

RUN NO. 55/ 0 RN/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	GN	CA	CLM	CEL	CYN	CY	CPB1	CPB2	CPC
2.360	-4.247	.01845	-.22239	.16412	.05616	.00612	-.00274	.01001	-.18082	-.17926	-.17189
2.360	-2.225	.02069	-.14306	.19909	.05036	.00550	-.00293	.00936	-.18368	-.17907	-.17100
2.360	-.020	.02223	-.06590	.15575	.04225	.00523	-.00298	.00768	-.18952	-.18485	-.18382
2.360	2.016	.02172	.00285	.15236	.03585	.00509	-.00309	.00885	-.19249	-.19082	-.17763
2.360	4.051	.02208	.07353	.14645	.02896	.00502	-.00324	.00901	-.18964	-.18780	-.17479
2.360	6.167	.02359	.14658	.14065	.02302	.00510	-.00329	.00756	-.18395	-.17935	-.16629
2.360	8.243	.02185	.21941	.13585	.02006	.00497	-.00307	.00863	-.17542	-.17373	-.16631
2.360	10.252	.02246	.28542	.13146	.01864	.00512	-.00308	.00801	-.17542	-.17373	-.16347
2.360	12.345	.02251	.35545	.12687	.01736	.00457	-.00336	.00900	-.17542	-.17092	-.16631
2.360	16.493	.02249	.49883	.12392	.01583	.00459	-.00305	.00786	-.20394	-.19631	-.19472
2.360	20.687	.02183	.65649	.11498	.01222	.00496	-.00237	.00678	-.20111	-.19633	-.20042
2.360	24.894	.01970	.81913	.10555	.00670	.00513	-.00130	.00656	-.20111	-.19915	-.20325
2.360	29.049	.01930	.98336	.09463	.00345	.00564	-.00128	.00470	-.18970	-.18786	-.18905
2.360	30.562	.01842	1.04288	.08987	.00233	.00564	-.00108	.00492	-.18410	-.18514	-.18064
2.360	32.051	.01786	1.10645	.08314	.00147	.00707	-.00119	.00591	-.16700	-.17385	-.18928
2.360	37.342	.01806	1.32213	.06885	.000795	.00795	-.00227	.00869	-.10841	-.15973	-.12385
2.360	39.667	.01864	1.37868	.06697	.000484	.00891	-.00311	.01218	-.15565	-.15418	-.12679
GRADIENT		.00030	.03541	-.00202	-.00331	-.00013	-.00026	-.00012	-.00128	-.00140	-.00065

RUN NO. 57/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	GN	CA	CLM	CEL	CYN	CY	CPB1	CPB2	CFC
4.630	-3.678	.00012	-.14273	.11349	-.00413	.00335	-.00191	.00692	-.06183	-.05564	-.06081
4.630	-1.627	.00097	-.09883	.10723	-.00293	.00479	-.00194	.00610	-.06183	-.05564	-.06081
4.630	.440	.00076	-.05289	.10140	-.00392	.00423	-.00194	.00624	-.06183	-.05564	-.06081
4.630	2.409	-.00025	-.01143	.09690	-.00254	.00383	-.00189	.00734	-.06183	-.05564	-.06081
4.630	4.544	.00017	.03727	.09189	-.00220	.00367	-.00207	.00747	-.06183	-.05564	-.06081
4.630	5.552	-.00001	.08698	.08170	-.00102	.00340	-.00205	.00764	-.06183	-.05564	-.06081
4.630	6.593	.00069	.13726	.08238	.00037	.00336	-.00208	.00686	-.06183	-.05564	-.06081
4.630	10.625	.00051	.18961	.08153	.00090	.00313	-.00207	.00704	-.06183	-.05564	-.06081
4.630	12.634	-.00031	.24465	.08020	.00340	.00306	-.00185	.00727	-.06183	-.05564	-.06081
4.630	16.843	-.00165	.36888	.07746	.00535	.00284	-.00128	.00683	-.06183	-.05564	-.06081
4.630	20.931	-.00219	.50318	.07563	.00589	.00278	-.00074	.00548	-.06183	-.05564	-.06081
4.630	25.203	-.00426	.65143	.07441	.00287	.00297	.00005	.00516	-.06183	-.05564	-.06081
4.630	29.235	-.00426	.80453	.07270	.01282	.00347	.00011	.00567	-.06183	-.05564	-.06081
4.630	30.873	-.00426	.86688	.07187	.00420	.00420	-.00039	.00675	-.06183	-.05237	-.05751
4.630	32.263	-.00389	.92369	.07165	.00444	.00444	-.00055	.00690	-.06183	-.05237	-.05751
4.630	37.588	-.00587	1.13409	.06965	.00421	.00496	-.00040	.00581	-.06183	-.05237	-.05751
4.630	41.645	-.00718	1.30456	.06751	.00071	.00531	-.00000	.00548	-.06183	-.05237	-.05751
GRADIENT		-.00005	.02185	-.00261	-.00021	-.00021	-.00001	-.00001	-.00032	-.00000	-.00000

PARAMETRIC DATA

BETA = -3.000 ELEVTR = -20.000
ATLURON = 10.000 RUFLU = 40.000
GT-LOC = 1.000 K/L = .000

REFERENCE DATA

SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES
LREF = 6.9125 INCHES YMRP = .0000 INCHES
PREF = 17.5828 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SC/LE

RUN NO. 56/ 0 R/V/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CPC
2.360	-4.260	-3.05109	-1.21763	.16531	.03801	.00823	-.00762	.07182	-.18101	-.10490	-.17755
2.360	-2.143	-3.04685	-1.13875	.16020	.03071	.00756	-.00730	.06795	-.18671	-.18490	-.17755
2.360	-.070	-3.04595	-.06369	.15570	.04400	.00752	-.01683	.06328	-.18957	-.18773	-.17755
2.360	1.966	-3.04613	.00454	.15120	.03612	.00712	-.00639	.06164	-.18962	-.18778	-.17761
2.360	4.091	-3.04609	.07946	.14704	.02962	.00714	-.00582	.05968	-.18390	-.18776	-.18043
2.360	6.146	-3.04687	.15052	.14277	.02429	.00759	-.00508	.05759	-.17812	-.18487	-.18036
2.360	8.233	-3.04638	.21924	.13601	.02023	.00822	-.00478	.05612	-.16967	-.17366	-.17193
2.360	10.226	-3.04553	.28778	.13285	.01904	.00880	-.00465	.05477	-.17243	-.17077	-.17185
2.360	12.432	-3.04964	.35569	.12850	.01856	.00809	-.00434	.05433	-.17821	-.17366	-.17475
2.360	16.323	-3.05312	.50203	.12234	.01472	.00842	-.00349	.04368	-.18961	-.15340	-.19463
2.360	20.674	-3.06339	.65872	.11269	.00954	.00780	-.00249	.03928	-.20671	-.19934	-.20031
2.360	24.857	-3.06934	.81658	.10278	.00515	.00627	-.00174	.03524	-.19822	-.19347	-.19754
2.360	29.031	-3.07506	.97884	.09345	.00252	.00950	-.000967	.03364	-.19244	-.18095	-.19462
2.360	30.583	-3.07887	1.04619	.08959	.00046	.00978	-.00082	.03173	-.18680	-.18781	-.18970
2.360	32.246	-3.07800	1.11126	.08553	-.00098	.01040	-.00098	.03726	-.18113	-.18502	-.18335
2.360	37.353	-3.06713	1.31903	.07124	-.001497	.01663	-.00442	.04447	-.16106	-.15106	-.15199
2.360	38.684	-3.06505	1.37803	.06758	-.001753	.01722	-.00378	.04445	-.16409	-.15689	-.14885
GRADIENT		.00060	.03541	-.00219	-.00343	-.00013	.00222	-.00146	-.00041	-.00042	-.00028

RUN NO. 58/ 0 R/V/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CPB1	CPB2	CPC
4.630	-3.718	-3.04124	-1.14376	.11488	-.00247	.00554	-.00560	.03882	-.06183	-.05564	-.06081
4.630	-1.695	-3.04022	-1.0251	.10816	-.00318	.00564	-.00498	.03524	-.06183	-.05564	-.06081
4.630	.408	-3.03882	-.05626	.10256	-.00326	.00581	-.00304	.03348	-.06183	-.05564	-.06081
4.630	2.440	-3.03823	-.01234	.09770	-.00241	.02606	-.00472	.03177	-.05853	-.05564	-.06081
4.630	4.527	-3.03754	.03636	.09310	-.00214	.02624	-.00375	.02915	-.06183	-.05564	-.06081
4.630	6.514	-3.03717	.08292	.08924	-.00016	.02673	-.00441	.02930	-.05853	-.05564	-.06081
4.630	8.583	-3.03710	.13660	.08563	.00051	.00706	-.00423	.02856	-.06183	-.05564	-.06081
4.630	10.617	-3.03790	.18916	.08363	.00281	.00716	-.00353	.02695	-.06183	-.05564	-.06081
4.630	12.622	-3.03898	.24151	.08146	.00336	.00719	-.00248	.02443	-.06183	-.05564	-.06081
4.630	16.883	-3.04300	.36819	.07828	.00641	.00724	-.00019	.02957	-.06183	-.05564	-.06081
4.630	20.909	-3.04732	.50224	.07631	.00919	.00705	-.00270	.03565	-.06183	-.05564	-.06081
4.630	25.126	-3.04976	.64806	.07421	.01281	.00718	-.00413	.03256	-.06183	-.05564	-.06081
4.630	29.245	-3.04956	.80357	.07266	.01299	.00785	-.00472	.03220	-.05853	-.05564	-.06081
4.630	30.690	-3.05077	.85859	.07249	.01276	.00809	-.00475	.03238	-.06183	-.05564	-.06081
4.630	32.215	-3.04930	.91819	.07254	.01396	.00929	-.00373	.03431	-.06183	-.05564	-.06081
4.630	37.537	-3.05040	1.12857	.06873	.01003	.01054	-.00465	.03223	-.05853	-.05564	-.06081
4.630	41.808	-3.05219	1.30824	.06680	.00957	.01075	-.00627	.02922	-.05853	-.05564	-.06081
GRADIENT		.00046	.02184	-.00262	-.00007	.00009	.00004	-.00111	-.00016	-.00010	-.00005

PARAMETRIC DATA

BETA = .000 ELEVTR = -20.000
 AIRLON = 10.000 RUOFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820
 ALPSAP = 1.000

REFERENCE DATA

SRPF = 136.1606 84. IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BRFP = 17.3628 INCHES ZMRP = .0000 INCHES
 SCALE = .0100 SCALE

RUN NO. 32/ 0 RN/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	CPB1	CPB2	CPC
2.360	-4.247	-.02822	-.22028	.16483	.05484	.00633	-.02290	.01170	-.18528	-.17430	-.17501
2.360	-2.163	-.00183	-.14994	.15993	.04837	.00570	-.00265	.01183	-.18546	-.17451	-.16754
2.360	-.105	-.00116	-.07207	.15610	.04181	.00522	-.00260	.01119	-.18551	-.17739	-.17044
2.360	1.965	-.00079	.00068	.15227	.03491	.00495	-.00283	.01130	-.18548	-.18017	-.17040
2.360	4.029	.00076	.06923	.14682	.02784	.03469	-.00266	.00928	-.18548	-.17735	-.16472
2.360	6.128	.00061	.14418	.14129	.02207	.00469	-.00274	.00928	-.17124	-.16891	-.15926
2.360	8.211	-.00121	.20861	.13760	.01837	.00491	-.00222	.00928	-.16850	-.16820	-.15918
2.360	10.224	-.00120	.27908	.13306	.01607	.00478	-.00249	.01035	-.16842	-.16894	-.16194
2.360	12.316	.00061	.34695	.13155	.01681	.00443	-.00284	.00984	-.17700	-.17461	-.17332
2.360	16.504	-.00086	.49355	.12654	.01452	.00424	-.00276	.01117	-.17124	-.18588	-.19035
2.360	20.843	-.00093	.64587	.11914	.01126	.00436	-.00245	.01034	-.21691	-.19720	-.19891
2.360	24.848	-.00449	.80617	.10936	.00829	.00436	-.00157	.01067	-.20269	-.19440	-.19892
2.360	28.982	-.00981	.96940	.09709	.00455	.00481	-.00049	.01219	-.18845	-.18594	-.18757
2.360	30.527	-.01134	1.09287	.09134	.00266	.00486	-.00027	.01323	-.17993	-.18033	-.17908
2.360	32.059	-.01276	1.09205	.08610	.00153	.00462	-.00050	.01191	-.16855	-.16374	-.16774
2.360	37.390	-.00277	1.30352	.07324	-.00123	.00951	-.00046	.01836	-.15434	-.14936	-.14225
2.360	38.631	-.00326	1.35638	.06611	-.00458	.00959	-.00043	.01616	-.14580	-.13812	-.13658
GRADIENT	.00034	.03510	-.00212	-.00326	-.00018	-.00018	-.00005	-.00020	-.00002	-.00002	-.00066

RUN NO. 22/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	CPB1	CPB2	CPC
4.630	-3.719	.00271	-.14489	.11859	-.00258	.00159	-.00203	.00405	-.06035	-.05338	-.05905
4.630	-1.676	.00199	-.09863	.11175	-.00115	.00156	-.00182	.00424	-.05705	-.05338	-.05905
4.630	.403	.00249	-.05266	.10589	-.00017	.00455	-.00201	.00434	-.05705	-.05338	-.05905
4.630	2.405	.00178	-.00891	.10136	-.00044	.00400	-.00182	.00451	-.05705	-.05338	-.05905
4.630	4.472	.00162	.03739	.09644	-.00048	.00376	-.00181	.00466	-.05705	-.05338	-.05905
4.630	6.509	.00292	.08605	.09193	-.00017	.00360	-.00202	.00383	-.05705	-.05338	-.05905
4.630	8.674	.00244	.13970	.08880	.00145	.00336	-.00026	.00495	-.05374	-.05338	-.05576
4.630	10.585	.00254	.19207	.08641	.00198	.00321	-.00019	.00420	-.05705	-.05338	-.05576
4.630	12.646	.00322	.24690	.08528	.00380	.00298	-.00020	.00343	-.05705	-.05338	-.05905
4.630	16.808	.00099	.37350	.08294	.00575	.00261	-.00091	.00213	-.06035	-.05338	-.06234
4.630	20.915	.00047	.50769	.08106	.00107	.00231	-.00037	.00077	-.05705	-.05665	-.06234
4.630	25.089	-.00186	.65104	.07970	.00281	.00241	-.00026	.00136	-.05705	-.05338	-.05905
4.630	29.185	-.00191	.80670	.07844	.00473	.00307	-.00013	.00187	-.05374	-.05338	-.05505
4.630	30.733	-.02072	.86671	.07786	.00396	.00355	-.00055	.00291	-.05374	-.05338	-.05505
4.630	32.245	-.00066	.92581	.07734	.00437	.00449	-.00037	.00217	-.05705	-.05338	-.05905
4.630	37.500	-.00232	1.13377	.07601	.00276	.00449	-.00033	.00144	-.05374	-.05338	-.05576
4.630	41.627	-.00355	1.30552	.07348	.00168	.00462	-.00047	.00110	-.05374	-.05338	-.05576
GRADIENT	.00012	.02220	-.00267	-.00019	-.00028	-.00002	-.00002	-.00017	-.00000	-.00000	-.00000

(RP6014) (17 SEP 73)

LA-6 LARC UFW: 1023 MAR 0698-MCO. NOSE ORBITER

PARAMETRIC DATA

BETA = .000 ELEVTR = -20.000
 AILRON = 10.000 RUFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820
 ALPSAF = 2.000

REFERENCE DATA

SREF = 136.1608 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 8.8025 INCHES YMRP = .0000 INCHES
 BREF = 17.3626 INCHES ZMRP = .0000 INCHES
 SCALE = .0166 SCALE

RUN NO. 35/ 0 RNVL = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-4.226	.00172	-.22112	.16494	.05516	.00630	-.00246	.00835	-.18568	-.17477	-.17346
2.360	-2.173	.00152	-.14444	.16019	.04914	.00555	-.00246	.00855	-.18567	-.17475	-.16779
2.360	-.091	.00119	-.06767	.15609	.04258	.00500	-.00248	.00792	-.18573	-.17763	-.17070
2.360	1.933	.00157	-.00138	.15260	.03611	.00487	-.00263	.00807	-.18852	-.18038	-.17063
2.360	4.030	.00282	.06913	.14681	.02854	.00482	-.00282	.00741	-.18559	-.17466	-.16486
2.360	6.110	.00110	.14197	.14153	.02334	.00476	-.00260	.00847	-.17423	-.16905	-.16206
2.360	8.191	.00141	.21270	.13768	.02121	.00491	-.00232	.00708	-.16631	-.15929	-.15204
2.360	10.192	.00174	.28088	.13419	.01897	.00464	-.00247	.00727	-.16567	-.16904	-.16204
2.360	12.326	.00175	.35171	.13165	.01877	.00435	-.00275	.00824	-.17738	-.17372	-.17372
2.360	16.511	.00030	.49733	.12676	.01424	.00409	-.00255	.00951	-.19440	-.18903	-.19350
2.360	20.654	-.00036	.65391	.11974	.01139	.00432	-.00218	.00844	-.21706	-.19742	-.19912
2.360	24.647	-.00063	.81167	.10932	.00826	.00428	-.00160	.00983	-.18874	-.19462	-.20195
2.360	28.991	-.00700	.97354	.09675	.00451	.00472	-.00059	.00969	-.17737	-.17824	-.17936
2.360	30.514	-.00754	1.03544	.09085	.00261	.00466	-.00070	.00951	-.16601	-.16375	-.16304
2.360	32.045	-.01072	1.09462	.08815	.00135	.00461	-.00114	.00920	-.15466	-.14972	-.14261
2.360	37.335	-.00101	1.30555	.07310	-.00144	.00920	-.00422	.00667	-.14620	-.13895	-.13701
2.360	36.641	-.00299	1.35986	.06817	-.00384	.00935	-.00328	.00534	-.00013	-.00026	.00070
GRADIENT		.00025	.03509	-.00213	-.00321	-.00018	-.00024	-.00011			

RUN NO. 25/ 0 RNVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.712	.00178	-.13991	.11806	.02047	.00609	-.00148	.00323	-.06034	-.05664	-.06234
4.630	-1.662	.00168	-.09867	.11599	-.00207	.00553	-.00147	.00335	-.06034	-.05664	-.06234
4.630	.366	.00216	-.05241	.10495	.00344	.00484	-.00167	.00346	-.06035	-.05665	-.06234
4.630	2.391	.00146	-.00875	.10056	.00209	.00409	-.00147	.00363	-.06034	-.05336	-.05904
4.630	4.477	.00129	.04010	.09273	.00385	.00385	-.00146	.00379	-.06035	-.05338	-.05905
4.630	6.514	.00171	.08876	.09122	.00266	.00369	-.00163	.00393	-.06035	-.05338	-.05905
4.630	8.572	.00211	.13999	.08786	.00406	.00353	-.00181	.00407	-.05705	-.05338	-.05905
4.630	10.569	.00281	.19239	.08535	.00546	.00322	-.00184	.00329	-.05705	-.05338	-.05905
4.630	12.660	.00290	.24988	.08440	.00557	.00307	-.00167	.00253	-.06365	-.05664	-.06234
4.630	16.801	.00038	.37377	.08334	.00836	.00261	-.00072	.00218	-.06366	-.05336	-.06234
4.630	20.695	-.00071	.50617	.08022	.01182	.00240	.00001	.00084	-.06034	-.05338	-.06234
4.630	25.066	-.00108	.64885	.07901	.01521	.00250	.00041	.00044	-.06035	-.05338	-.06234
4.630	29.184	-.00221	.80439	.07713	.01625	.00308	.00048	.00097	-.05705	-.05338	-.06234
4.630	30.721	-.00243	.86442	.07687	.01650	.00396	-.00040	.00138	-.05705	-.05338	-.06234
4.630	32.245	-.00126	.92488	.07676	.01592	.00430	-.00018	.00220	-.05705	-.05338	-.06234
4.630	37.535	-.00350	1.13379	.07530	.01363	.00441	-.00021	.00211	-.05705	-.05338	-.06234
4.630	41.627	-.00444	1.30426	.07277	.01201	.00484	-.00051	.00014	-.05705	-.05338	-.06234
GRADIENT		-.00006	.02200	-.00269	-.00021	-.00029	-.00000	-.00027			

LA-6 LARC UPWT 1025 MAR 0998-MOD. NOSE ORBITER

(RP6015) (17 SEP 73)

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -20.000
 AIRLON = 10.000 RUCPLR = 40.000
 GT-LOC = 3.000 K/L = 6.820
 ALPSNF = 1.000

REFERENCE DATA

SNRP = 136.1808 94. IN. XMRP = 15.9638 INCHES
 LURP = 6.9025 INCHES YMRP = .0000 INCHES
 BRPF = 17.9626 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

RUN NO. 34/ 0 RNVL = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

M CH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CPD2	CFC
2.360	-4.260	-3.05316	-2.1807	.16627	.05461	.00675	-.00764	.07392	-.18007	-.17766	-.17639
2.360	-2.104	-3.05072	-1.1431	.16160	.04845	.00614	-.00791	.07013	-.18560	-.17771	-.17562
2.360	-1.059	-3.04858	-.06793	.15642	.04179	.00775	-.00712	.06703	-.17723	-.17765	-.17073
2.360	1.964	-3.04649	.00034	.15195	.03414	.00756	-.00655	.06460	-.18296	-.17770	-.17079
2.360	4.037	-3.04723	.07261	.14799	.02669	.00723	-.00631	.06253	-.17732	-.17774	-.17366
2.360	6.113	-3.04693	.14735	.14251	.02325	.00768	-.00560	.05963	-.17157	-.17206	-.17076
2.360	8.236	-3.04781	.21561	.13782	.01696	.00804	-.00456	.05660	-.16879	-.16650	-.16799
2.360	10.209	-3.04811	.28161	.13395	.01631	.00847	-.00411	.05332	-.16314	-.16091	-.16518
2.360	12.310	-3.05101	.34919	.13062	.01560	.00816	-.00272	.05328	-.17168	-.16375	-.16706
2.360	16.500	-3.05600	.49471	.12506	.01272	.00734	-.00123	.04618	-.19153	-.16619	-.16264
2.360	20.644	-3.06621	.64863	.11578	.00738	.00679	.001509	.04074	-.20269	-.19178	-.16627
2.360	24.836	-3.07454	.80449	.10541	.00435	.00747	.001812	.03643	-.19436	-.17496	-.16063
2.360	29.014	-3.08037	.96656	.09629	.00135	.00860	.001925	.04073	-.19156	-.18342	-.16785
2.360	30.325	-3.08140	1.02937	.09282	.00203	.00869	.001944	.04100	-.18578	-.18612	-.16774
2.360	32.040	-3.08227	1.09501	.08956	-.00217	.00911	.001921	.04279	-.17726	-.17768	-.16208
2.360	37.287	-3.06370	1.30517	.07000	-.00245	.01732	.00232	.04960	-.15471	-.14697	-.14831
2.360	38.646	-3.05961	1.35773	.06863	-.00666	.01558	.001505	.04446	-.15184	-.14692	-.13132
GRADIENT		.00068	-.03499	-.00222	-.00337	-.00016	.00016	-.00135	.00040	-.00000	.00040

RUN NO. 24/ 0 RNVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-3.696	-3.05771	-1.3833	.11952	.00149	.00635	-.00570	.05598	-.05701	-.05338	-.05905
4.630	-1.670	-3.05610	-.09463	.11250	.00299	.00536	-.00527	.05237	-.05705	-.05338	-.05905
4.630	.993	-3.05507	-.04865	.10655	.00201	.00622	-.00516	.05070	-.06034	-.05336	-.05904
4.630	2.410	-3.05524	-.00477	.10131	-.00238	.00647	-.00464	.04895	-.05705	-.05338	-.05905
4.630	4.465	-3.05543	.04157	.09699	.00292	.00665	-.00412	.04729	-.05705	-.05338	-.05905
4.630	6.507	-3.05505	.09036	.09340	.00212	.00690	-.00380	.04560	-.05705	-.05338	-.05905
4.630	8.591	-3.05438	.14165	.09031	.00335	.00715	-.00381	.04482	-.05705	-.05338	-.05905
4.630	10.570	-3.05488	.19415	.08816	.00497	.00724	-.00345	.04411	-.05705	-.05338	-.05905
4.630	12.678	-3.05557	.24890	.08641	.00575	.00735	-.00221	.04163	-.06035	-.05338	-.06234
4.630	16.800	-3.06155	.37354	.08395	.00770	.00718	.00045	.03681	-.06034	-.05336	-.06234
4.630	20.513	-3.06455	.50449	.08163	.01110	.00666	.00311	.03190	-.06035	-.05665	-.06234
4.630	25.068	-3.06774	.65109	.07979	.01385	.00647	.00476	.02984	-.06034	-.05664	-.06234
4.630	29.149	-3.06749	.80342	.07874	.01556	.00744	.00479	.02934	-.05705	-.05338	-.05905
4.630	33.684	-3.06697	.96099	.07816	.01559	.00833	.00429	.02840	-.05705	-.05338	-.06234
4.630	32.267	-3.06568	.92277	.07515	.00921	.00861	.00361	.02849	-.05705	-.05338	-.05905
4.630	37.427	-3.06764	1.12843	.07349	.01134	.00922	.00306	.02849	-.05705	-.05338	-.05905
4.630	41.622	-3.06971	1.33390	.07246	.01303	.00943	.00282	.02452	-.05705	-.05338	-.05905
GRADIENT		.00026	-.02200	-.00215	-.00011	.00003	.00019	-.00102	.00000	.00000	.00000

LA-8 LARC UPWT 1023 NAR 089B-HCC, NOSE ORBITER

(RP6016) (17 SEP 73)

PARAMETRIC DATA

BETA = -3.000 ELEVTR = -20.000
 AIRLON = 10.000 RUDFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820
 ALPSWP = 2.000

REFERENCE DATA

SREF = 136.1808 SQ.IN. XMRP = 15.9636 INCHES
 LREF = 9.9225 INCHES YMRP = .0000 INCHES
 BREF = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

RUN NO. 33/ 0 R/V/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB1	CFB2	CFC
2.360	-4.246	-3.05375	-2.1862	.16632	.03456	.00881	-.00747	.07387	-.18016	-.17774	-.17366
2.360	-2.150	-3.05250	-1.14219	.16132	.04865	.00821	-.00724	.07170	-.18578	-.17769	-.17360
2.360	-1.119	-3.04856	-.07205	.15644	.04159	.00768	-.00712	.06791	-.17723	-.17766	-.17374
2.360	1.900	-3.04641	-.00176	.15180	.03471	.00736	-.00692	.06397	-.18289	-.17763	-.17371
2.360	4.041	-3.04665	.07285	.14833	.02471	.00731	-.00648	.06264	-.17716	-.17759	-.17366
2.360	6.092	-3.04632	.14322	.14268	.02136	.00753	-.00577	.05958	-.17159	-.17207	-.17377
2.360	8.196	-3.04983	.21208	.13833	.01736	.00798	-.00463	.05927	-.16334	-.16880	-.16784
2.360	10.198	-3.04899	.27991	.13382	.01582	.00841	-.00329	.05626	-.16587	-.16080	-.16508
2.360	12.310	-3.05071	.34968	.13081	.01274	.00810	-.00209	.05250	-.17155	-.16642	-.17074
2.360	16.514	-3.05947	.49587	.12482	.00665	.00687	.00509	.04079	-.19138	-.18884	-.19048
2.360	20.643	-3.07434	.80591	.10531	.00436	.00796	.00814	.03850	-.19425	-.19170	-.19619
2.360	24.857	-3.07996	.96736	.09610	.00173	.00856	.00911	.04081	-.18601	-.18764	-.19152
2.360	28.944	-3.07966	.96736	.09268	-.00154	.00863	.00942	.04021	-.18325	-.18325	-.18769
2.360	30.927	-3.08022	1.03243	.09268	-.00178	.00927	.00923	.04287	-.17995	-.17753	-.18193
2.360	32.025	-3.08022	1.09310	.08894	-.00178	.00927	.00923	.05134	-.15442	-.14667	-.14801
2.360	37.316	-3.06688	1.30461	.07563	-.00281	.01758	.00243	.04537	-.14869	-.14380	-.13996
2.360	38.675	-3.06989	1.33738	.06822	-.00705	.01569	.00493	.04537	-.14869	-.14380	-.13996
GRADIENT		.00098	.03508	-.00223	-.00330	-.00319	.00311	-.00146	.00043	.00002	.00043

RUN NO. 23/ 0 R/V/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB1	CFB2	CFC
4.630	-3.698	-3.05682	-.13835	.11952	.00149	.00635	-.00374	.05502	-.05705	-.05338	-.06234
4.630	-1.663	-3.05610	-.09465	.11309	.00099	.00636	-.00327	.05237	-.06035	-.05338	-.05905
4.630	.384	-3.05478	-.05095	.10637	.00267	.00630	-.00300	.04969	-.05705	-.05338	-.05905
4.630	2.403	-3.05437	-.00471	.10159	.00079	.00647	-.00268	.04799	-.05705	-.05338	-.05905
4.630	4.409	-3.05455	.04154	.09702	.00091	.00665	-.00246	.04633	-.05705	-.05338	-.05905
4.630	6.516	-3.05417	.09045	.09336	.00099	.00690	-.00284	.04465	-.05705	-.05338	-.05905
4.630	8.582	-3.05409	.14172	.08959	.00242	.00715	-.00366	.04390	-.05705	-.05338	-.06234
4.630	10.559	-3.05458	.19177	.08873	.00562	.00725	-.00330	.04318	-.05705	-.05338	-.06234
4.630	12.840	-3.05567	.24651	.08702	.00659	.00727	-.00226	.04267	-.06035	-.05338	-.06234
4.630	16.791	-3.06026	.37306	.08410	.00655	.00709	-.00160	.04183	-.06035	-.05338	-.06234
4.630	20.906	-3.06426	.50693	.08196	.00666	.00666	.00326	.04098	-.06035	-.05338	-.05905
4.630	25.092	-3.06599	.65237	.07935	.00654	.00654	.00468	.02788	-.05705	-.05338	-.05905
4.630	29.174	-3.06661	.80584	.07932	.01577	.00745	.00475	.02839	-.05705	-.05338	-.05905
4.630	30.719	-3.06688	.86342	.07872	.01581	.00833	.00429	.03041	-.05705	-.05338	-.05905
4.630	32.232	-3.06538	.92403	.07866	.01527	.00823	.00376	.03055	-.05705	-.05338	-.05905
4.630	37.474	-3.06676	1.13073	.07573	.01262	.00823	.00302	.02753	-.05374	-.05374	-.05576
4.630	41.611	-3.06824	1.30318	.07328	.00878	.00878	.00659	.02350	-.05374	-.05374	-.05576
GRADIENT		.00031	.02265	-.00277	-.00303	-.00303	.00018	-.00107	.00016	.00000	.00032

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034
LA-8 LARC LF WT 1023 NAR 0698-HO. NOSE ORBITER

(RP6017) (23 JUN 75)

REFERENCE DATA

MACH = 156.1808 98. IN. XMRP = 15.9838 INCHES
LREF = 6.9025 INCHES YMRP = .0000 INCHES
BREF = 17.9628 INCHES ZMRP = .0000 INCHES
SCALE = .0166 SCALE

PARAMETRIC DATA

ALPHA = .000 ELEVTRI = .000
AULRON = .000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

RUN NO. 9/ 0 R/V/L = 1.50 GRADIENT INTERVAL = -.5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.095	-0.0498	-0.00750	.14582	.00574	.00667	-.01307	.13066	-.18119	-.17863	-.16029
2.360	-4.051	-0.0667	-0.00651	.14524	.00941	.00427	-.00923	.09010	-.16906	-.17591	-.17470
2.360	-1.975	-0.0970	-0.00996	.14420	.00974	.00214	-.00604	.05021	-.16984	-.17306	-.17183
2.360	.000	-0.0919	-0.00895	.14382	.00916	.00062	-.00394	.01506	-.18134	-.17315	-.17476
2.360	1.995	-0.0663	-0.00612	.14390	.00766	-.00065	-.00201	-.02010	-.18411	-.17587	-.17182
2.360	4.065	-0.0335	-0.00557	.14431	.00535	-.00269	.00066	-.06093	-.18698	-.18154	-.17752
2.360	6.132	-0.0430	-0.00337	.14340	.00093	-.00535	.00453	-.10404	-.18700	-.18721	-.18323
2.360	8.119	-0.05196	-0.00110	.14254	-.00422	-.00752	.00862	-.14535	-.19277	-.19292	-.19183
GRADIENT		.00184	.00028	-.00011	-.00051	-.00064	.00118	-.01844	-.00240	-.00070	-.00028

RUN NO. 21/ 0 R/V/L = 2.50 GRADIENT INTERVAL = -.5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.075	.36931	-.03356	.10259	-.00982	.00705	-.00823	.10245	-.06189	-.05805	-.06054
4.630	-4.036	.37330	-.03484	.10087	-.01025	.00505	-.00617	.06756	-.06189	-.05805	-.06054
4.630	-2.002	.41244	-.03355	.09938	-.01073	.00319	-.00395	.03548	-.05859	-.05805	-.06054
4.630	.002	.39727	-.03221	.09837	-.01087	.00165	-.00238	.00614	-.06189	-.05805	-.06054
4.630	2.027	.36990	-.03084	.09796	-.01170	.00018	-.00099	-.02322	-.05059	-.05805	-.06054
4.630	4.055	.38769	-.03204	.09841	-.01277	-.00152	.00084	-.05359	-.06189	-.05075	-.06054
4.630	6.094	.40350	-.03082	.09854	-.01364	-.00338	.00286	-.08752	-.05859	-.05805	-.06054
4.630	8.097	.39606	-.02952	.09904	-.01448	-.00492	.00431	-.11974	-.06189	-.05805	-.06054
GRADIENT		.00031	.00041	-.00031	-.00235	-.00280	.00084	-.01507	-.00000	-.00000	-.00000

(RF6018) (20 JUN 73)

LA-8 LARC UPVT 1023 MAR 0898-MOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = 10.000 ELEVTR = .000
 AILRON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1800 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 PREF = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0186 SCALE

RUN NO. 8/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.096	10.24890	.34113	.13248	-.01651	.01027	-.00605	.10749	-.18404	-.17579	-.18313
2.360	-4.034	10.24194	.33882	.13292	-.01378	.00704	-.00522	.07783	-.17550	-.16736	-.17748
2.360	-2.013	10.22205	.33820	.13115	-.01409	.00382	-.00404	.04496	-.17554	-.16739	-.17182
2.360	-.002	10.21142	.33700	.13173	-.01435	.00108	-.00383	.01709	-.17552	-.17021	-.17465
2.360	2.030	10.23167	.33906	.13071	-.01570	-.00165	-.00320	-.01436	-.17267	-.16738	-.17465
2.360	4.064	10.23645	.34455	.13171	-.01545	-.00431	-.00283	-.04728	-.18416	-.17875	-.18041
2.360	6.095	10.21779	.34737	.13172	-.01840	-.00733	-.00232	-.08028	-.19268	-.19848	-.18889
2.360	8.125	10.22263	.34913	.12815	-.02365	-.01128	-.00012	-.11954	-.18986	-.19286	-.18893
2.360	GRADIENT	-.00007	.00055	-.00010	-.00021	-.00139	.00028	-.01526	-.00071	-.00112	-.00043

RUN NO. 20/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.095	10.57489	.21370	.08546	-.00781	.00976	-.00377	.08507	-.06789	-.05805	-.06054
4.630	-4.034	10.55903	.21503	.08522	-.00699	.00714	-.00385	.05737	-.06119	-.05805	-.06054
4.630	-2.001	10.59592	.21617	.08450	-.00705	.00413	-.00275	.03081	-.06189	-.05805	-.06054
4.630	.020	10.56913	.21733	.08295	-.00797	.00120	-.00176	.00614	-.06189	-.05805	-.06054
4.630	2.005	10.57027	.21861	.08302	-.00801	-.00157	-.00116	-.01859	-.06189	-.05805	-.06054
4.630	4.048	10.58915	.21970	.08333	-.00809	-.00474	.00005	-.04705	-.06189	-.05805	-.06054
4.630	6.070	10.60369	.21825	.08253	-.01010	-.00766	.00091	-.07463	-.05805	-.05805	-.06054
4.630	8.095	10.60409	.21965	.08239	-.01096	-.00965	.00034	-.10020	-.06189	-.05805	-.06054
4.630	GRADIENT	.00172	.00058	-.00025	-.00016	-.00146	.00047	-.01280	.00000	.00000	-.00000

DATE 31 OCT 73 TABULATED SOURCE DATA LARC 1023/1034

LA-6 LARC UPMT 1023 NAR 0698-MOD. NOSE ORBITER

(RP6019) (20 JUN 73)

REFERENCE DATA
 3REF = 136.1608 SQ.IN. XDRP = 15.9636 INCHES
 LREF = 8.9025 INCHES YDRP = .0000 INCHES
 BREF = 17.5628 INCHES ZDRP = .0000 INCHES
 SCALE = .0166 SCALE

PARAMETRIC DATA
 ALPHA = 20.000 ELEVTR = .000
 ATLRON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 7/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CPC
2.360	-6.129	20.66675	.72502	.11398	-.03660	.01121	.09796	.09796	-.19835	-.18713	-.19739
2.360	-4.077	20.66190	.72475	.11345	-.03472	.00663	.00666	.05837	-.19442	-.18721	-.19746
2.360	-2.027	20.66283	.72396	.11749	-.03281	.00301	.01365	.03168	-.19839	-.18717	-.19458
2.360	-.004	20.70767	.72396	.11780	-.03059	.00086	-.01283	.01495	-.19837	-.18714	-.19171
2.360	2.020	20.69620	.72346	.11744	-.03079	-.00100	-.00889	-.00339	-.19262	-.18429	-.19168
2.360	4.101	20.69704	.72652	.11617	-.03216	-.00442	-.01266	-.02937	-.19563	-.18446	-.19468
2.360	6.059	20.66295	.72771	.11425	-.03343	-.00906	-.01361	-.06116	-.19840	-.18436	-.19744
2.360	8.133	20.64879	.72623	.11241	-.03734	-.01342	-.01422	-.09684	-.19837	-.18432	-.19741
2.360	GRADIENT	.00072	.00007	.00007	.00005	.00007	.00025	.00036	.00055	.00041	.00041

RUN NO. 19/ 0 RV/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CPC
4.630	-8.069	20.94800	.54461	.08011	-.01191	.00955	.00172	.06572	-.06189	-.05805	-.06054
4.630	-4.047	20.93710	.54352	.07987	-.01132	.00642	.00415	.04350	-.06189	-.05805	-.06054
4.630	-2.009	20.94069	.54723	.07965	-.01119	.00312	.00224	.02219	-.06189	-.05805	-.06054
4.630	-.001	20.91913	.54828	.07888	-.01143	.00045	-.00049	.00360	-.06189	-.05805	-.06054
4.630	2.007	20.90162	.54792	.07960	-.01058	-.00213	-.00318	-.01402	-.06189	-.05805	-.06054
4.630	4.055	20.90919	.54663	.07905	-.01174	-.00543	-.00513	-.03632	-.05859	-.05805	-.06054
4.630	6.079	20.92931	.54789	.07850	-.01265	-.00840	-.00766	-.03758	-.06189	-.05805	-.06054
4.630	8.102	20.92788	.54667	.07882	-.01295	-.01176	-.00789	-.08071	-.05859	-.05805	-.06054
4.630	GRADIENT	-.00468	.00034	-.00008	-.00001	-.00143	-.00119	-.00969	.00033	-.00000	-.00000

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

(RF6020) (20 JUN 73)

LA-8 LARC UPWT 1023 NAR D89B-MOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = 30.000 ELEVTR = .000
AILRON = .000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1600 SQ.IN. XMRP = 15.9638 INCHES
LREF = 8.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5626 INCHES ZMRP = .0000 INCHES
SCALE = .0168 SCALE

RUN NO. 6/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.147	30.55301	1.12299	.00027	-.05483	.01209	.01762	.07313	-.20123	-.18997	-.20025
2.360	-4.111	30.53127	1.12322	.09804	-.05372	.00852	.01348	.05022	-.19257	-.18140	-.19163
2.360	-2.035	30.52384	1.12273	.09547	-.05159	.00414	.00663	.03006	-.18123	-.17502	-.18033
2.360	-.006	30.55827	1.12173	.09246	-.04961	.00100	-.00090	.01233	-.16980	-.15889	-.16895
2.360	2.021	30.57133	1.12308	.09375	-.04896	-.00228	-.00875	-.00463	-.17266	-.15889	-.16895
2.360	4.086	30.53978	1.12639	.09726	-.05046	-.00660	-.01612	-.02236	-.15521	-.17583	-.18031
2.360	6.145	30.55206	1.12865	.10009	-.05189	-.01093	-.02106	-.04462	-.19533	-.18435	-.19174
2.360	8.146	30.53918	1.12810	.10135	-.05228	-.01452	-.02449	-.07331	-.20407	-.19278	-.20023
GRADIENT		.00314	.00033	-.00016	.00045	-.00179	-.00365	-.00880	.00153	.00123	.00166

RUN NO. 17/ 0 RNVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.111	30.76858	.92119	.08074	-.02117	.01093	.00908	.05787	-.05859	-.05152	-.05725
4.630	-4.049	30.77114	.92479	.07966	-.02192	.00730	.00630	.03834	-.05859	-.05152	-.05725
4.630	-2.011	30.76374	.92851	.07825	-.02180	.00367	.00355	.01577	-.05859	-.05152	-.05725
4.630	-.003	30.77352	.92751	.07771	-.02206	.00067	-.00032	.02401	-.05859	-.05479	-.05725
4.630	2.007	30.76390	.92902	.07752	-.02210	-.00234	-.00344	-.01287	-.05859	-.05479	-.05725
4.630	4.053	30.72950	.92777	.07849	-.02243	-.00629	-.00356	-.03233	-.06189	-.05479	-.06054
4.630	6.079	30.71902	.92674	.07964	-.02101	-.01008	-.00826	-.05184	-.05859	-.05479	-.05725
4.630	8.105	30.68415	.92329	.08081	-.01979	-.01371	-.01128	-.07238	-.05859	-.05479	-.05725
GRADIENT		-.00412	.00032	-.00015	.00007	-.00164	-.00153	-.00860	.00033	-.00048	-.00033



DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

LA-6 LARC UPWT 1023 NAR 0698-MOD. NOSE ORBITER

(RP6021) (20 JUN 73)

REFERENCE DATA

SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0186 SCALE

PARAMETRIC DATA

ALPHA = 30.0000 ELEVTR = .0000
 AIRLON = .0000 RUDFLR = 40.0000
 GT-LOC = 2.0000 K/L = 6.820

RUN NO. 11/ 0 RVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.147	30.57504	1.12115	.10016	-.05624	.01228	.01772	.07221	-.20131	-.19007	-.20034
2.360	-4.087	30.5805	1.12707	.09788	-.05458	.00837	.01325	.04515	-.19270	-.18155	-.19176
2.360	-2.033	30.57661	1.12205	.09768	-.05308	.00414	.00695	.02597	-.18411	-.17305	-.18036
2.360	-.036	30.58299	1.12563	.09406	-.05078	.00052	-.00042	.00828	-.16981	-.15607	-.16895
2.360	2.025	30.56919	1.12290	.09403	-.05048	-.00255	-.00874	-.00877	-.16982	-.15691	-.17182
2.360	4.069	30.56914	1.12315	.09662	-.05156	-.00652	-.01592	-.02562	-.17842	-.17307	-.17733
2.360	6.131	30.59378	1.12754	.09966	-.05187	-.01065	-.02122	-.04874	-.19559	-.18441	-.19463
2.360	8.167	30.57007	1.12560	.10115	-.05369	-.01463	-.02465	-.07403	-.20417	-.19291	-.20319
GRADIENT		-.00148	-.00036	-.00020	.00044	-.00179	-.00363	-.00864	.00210	.00152	.00181

RUN NO. 18/ 0 RVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.093	30.75309	.91864	.09076	-.02226	.01077	.00912	.05982	-.05859	-.05479	-.05725
4.630	-4.050	30.75768	.92235	.07936	-.02214	.00722	.00633	.03929	-.05859	-.05152	-.05725
4.630	-2.012	30.76127	.92808	.07824	-.02201	.00566	.00559	.02072	-.05859	-.05152	-.05725
4.630	-.023	30.76256	.92753	.07743	-.02206	.00358	.00017	.00394	-.05859	-.05479	-.05396
4.630	2.006	30.77489	.92903	.07720	-.02210	-.00234	-.00321	-.01188	-.05859	-.05479	-.05725
4.630	4.052	30.76477	.93011	.07811	-.02225	-.00677	-.00544	-.03133	-.05859	-.05479	-.06054
4.630	6.078	30.74243	.92905	.07964	-.02168	-.01052	-.00823	-.05087	-.06189	-.05479	-.06054
4.630	8.103	30.70767	.92570	.08053	-.02144	-.01363	-.01120	-.07545	-.05859	-.05479	-.06054
GRADIENT		.00137	.00091	-.00014	-.00012	-.00168	-.00150	-.00860	.00000	-.00048	-.00000

LA-8 LARC UPWT 1023 NAR 0598-MOD. NOSE ORBITER

(RP6022) (20 JUN 73)

REFERENCE DATA

SREF = 136.1108 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5626 INCHES ZMRP = .0000 INCHES
 SCALE = .5188 SCALE

PARAMETRIC DATA

ALPHA = 40.000 ELEVTR = .000
 AIRCON = .000 RUDFLR = 40.000
 GT-LOC = 2.00 K/L = 6.820

RUN NO. 5/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.126	36.71898	1.44616	.07836	-.06794	.01766	.01613	.05800	-.15285	-.15061	-.12081
2.360	-4.057	36.69640	1.44756	.07374	-.06672	.01243	.01249	.05604	-.14424	-.14209	-.12074
2.360	-2.028	36.65945	1.46216	.07283	-.07316	.00683	.00344	.03376	-.13857	-.12802	-.12078
2.360	-.029	36.64690	1.46709	.07297	-.07280	.00158	-.00109	.01408	-.13862	-.12243	-.12084
2.360	2.014	36.66180	1.46428	.07304	-.07278	-.00188	-.00742	-.00258	-.13569	-.12234	-.11506
2.360	4.073	36.65417	1.46263	.07473	-.06866	-.00721	-.01270	-.02070	-.13574	-.11957	-.11512
2.360	6.128	36.64923	1.45562	.07314	-.06594	-.01301	-.01695	-.04117	-.14140	-.12798	-.11222
GRADIENT		-.00404	.00153	-.00008	-.00017	-.00236	-.00302	-.00738	.00098	.00250	.00084

RUN NO. 16/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.094	41.67306	1.38259	.08074	-.04789	.01127	.01232	.04729	-.05859	-.05479	-.05725
4.630	-4.051	41.70180	1.39108	.07917	-.04992	.00803	.00875	.03147	-.05859	-.05479	-.05725
4.630	-1.993	41.65786	1.39476	.07882	-.05154	.00429	.00464	.01650	-.05859	-.05479	-.05725
4.630	-.004	41.63362	1.39619	.07908	-.04990	.00040	.00125	.00070	-.05859	-.05479	-.05725
4.630	2.005	41.64972	1.39750	.07892	-.05067	-.00333	-.00249	-.01421	-.05529	-.05479	-.05725
4.630	4.054	41.65845	1.39421	.07890	-.05047	-.00642	-.00712	-.02832	-.05859	-.05479	-.05725
4.630	6.081	41.65863	1.39111	.07967	-.04748	-.00967	-.01088	-.04418	-.05859	-.05479	-.05725
4.630	8.124	41.61711	1.38058	.08040	-.04516	-.01332	-.01450	-.06100	-.05859	-.05479	-.05725
GRADIENT		-.00471	.00044	-.00002	-.00002	-.00181	-.00192	-.00744	.00016	-.00000	-.00000

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

(RP6023) (29 JUN 73)

REFERENCE DATA

SREF = 134.1610 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 1.9025 INCHES YMRP = .0000 INCHES
 BRDY = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

ALPHA = .000 ELEVTR = -20.000
 AILRON = 10.000 RUDFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820

RUN NO. 42/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.094	-0.0421	-0.675	.15668	.03901	.01077	-.01261	.12763	-.17950	-.17664	-.17565
2.360	-4.030	-.09640	-0.559	.15761	.04253	.00860	-.00827	.06363	-.17946	-.17660	-.17276
2.360	-2.008	-.09625	-.5674	.15721	.04373	.00661	-.00492	.04302	-.18416	-.17074	-.16721
2.360	.021	-.09875	-.5809	.15724	.04282	.00503	-.00224	.00636	-.18410	-.17666	-.16998
2.360	2.015	-.10105	-.6024	.15792	.04191	.00408	-.00019	-.00045	-.19666	-.17948	-.17280
2.360	4.082	-.07905	-.06841	.15782	.04043	.00285	.00283	-.06711	-.19093	-.18229	-.17857
2.360	6.093	-.06765	-.06804	.15657	.03659	.00117	.00711	-.11235	-.18614	-.18237	-.18421
2.360	8.137	-.07949	-.06997	.15473	.03114	-.00030	.01163	-.15650	-.18809	-.18514	-.18421
	GRADIENT	.00149	-.00040	.00005	-.00030	-.00069	.00133	-.01854	-.00155	-.00070	-.00028

RUN NO. 31/ 0 RN/L = 2.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.073	.37629	-.05711	.10840	-.00147	.00813	-.00927	.10191	-.06032	-.05332	-.06232
4.630	-4.035	.37662	-.05583	.10672	-.00230	.00676	-.00650	.06880	-.06032	-.05332	-.06232
4.630	-2.003	.36915	-.05680	.10531	-.00159	.00556	-.00354	.03574	-.06032	-.05332	-.05902
4.630	.001	.36820	-.05768	.10486	-.00173	.00465	-.00194	.00627	-.06032	-.05661	-.05902
4.630	2.004	.36971	-.05612	.10472	-.00166	.00367	.00023	-.02309	-.06032	-.05661	-.06232
4.630	4.049	.37590	-.05713	.10516	-.00182	.00245	.00209	-.05539	-.06032	-.05661	-.06232
4.630	6.090	.37381	-.05825	.10504	-.00287	.00115	.00413	-.08767	-.06032	-.05661	-.06232
4.630	8.093	.38042	-.05923	.10563	-.00304	-.00023	.00093	-.12077	-.06365	-.05334	-.06232
	GRADIENT	-.00004	-.00010	-.00018	.00004	-.00052	.00104	-.01523	.00000	-.00049	-.00016

DATE : OCT 73

TABULATED SOURCE DATA LARC 1023/1034
(RP6024) (20 JUN 73)

LA-8 LARC LFMT 1023 NAR 0898-MOD. NOSE ORBITER

REFERENCE TA

SREF = 136.1808 SQ. IN. XMRP = 15.9638 INCHES ALPHA = 10.000 ELEVTR = -20.000
LREF = 8.9025 INCHES YMRP = .0000 INCHES AIRLON = 10.000 RUDFLR = 40.000
BREF = 17.9628 INCHES ZMRP = .0000 INCHES GT-LOC = 3.000 K/L = 6.820
SCALE = .0108 SCALE

PARAMETRIC DATA

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.094	10.20689	.29080	.13448	.01507	.01250	-.00653	.00530	-.17127	-.16851	-.17597
2.360	-4.030	10.20689	.28766	.13566	.01761	.00967	-.00420	.06873	-.17121	-.16281	-.16740
2.360	-2.007	10.21336	.28655	.13435	.01885	.00697	-.00282	.03362	-.16546	-.15712	-.15883
2.360	.003	10.21424	.28356	.13484	.02068	.00466	-.00208	.00489	-.16829	-.16555	-.16184
2.360	2.015	10.21430	.28429	.13459	.01989	.00262	-.00156	-.02466	-.17974	-.16843	-.16171
2.360	4.067	10.19218	.28618	.13587	.02065	.00032	-.00057	-.05843	-.18520	-.17945	-.17278
2.360	6.098	10.21216	.28689	.13564	.01684	-.00193	-.00003	-.09147	-.19515	-.19072	-.18128
2.360	8.126	10.21028	.28902	.13339	.01313	-.00497	.00239	-.12985	-.19306	-.18511	-.18135
GRADIENT			-.00026	.00003	.00035	-.00014	.00041	-.01546	-.00209	-.00221	-.00068

RUN NO. 41/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.075	10.56924	.18892	.08887	.00118	.01052	-.00415	.02539	-.06032	-.05661	-.06232
4.630	-4.036	10.56102	.18804	.08841	.00272	.00846	-.00395	.05953	-.06032	-.05661	-.06232
4.630	-2.072	10.56307	.18935	.08753	.00355	.00576	-.00288	.03189	-.06032	-.05661	-.05902
4.630	.001	10.57227	.19058	.08552	.00266	.00330	-.00211	.00611	-.06032	-.05661	-.05902
4.630	2.005	10.55152	.18708	.08529	.00307	.00376	-.00130	-.01871	-.06032	-.05332	-.06232
4.630	4.048	10.56143	.18817	.08472	.00300	-.00233	.00044	-.04817	-.06364	-.05661	-.06232
4.630	6.068	10.54173	.18920	.08435	.00335	-.00286	.00151	-.07584	-.06032	-.05661	-.06232
4.630	8.092	10.54762	.18823	.08417	.00314	-.00686	.00079	-.10031	-.06364	-.05661	-.06232
GRADIENT			-.00010	-.00043	.00000	-.00032	.00051	-.01319	-.00033	.00016	-.00016

RUN NO. 30/ 0 RN/L = 2.49 GRADIENT INTERVAL = -5.00/ 5.00



DATE 31 OCT 75

TABULATED SOURCE DATA LARC 1023/1054

LA-8 LARC UPWT 1023 NAR 068B-MOD. NOSE ORBITER

(RP6025) (20 JUN 73)

REFERENCE DATA:

BREF = 136.1406 94. IN. XMRP = 15.9636 INCHES
 LAREF = 6.9225 INCHES YMRP = .0000 INCHES
 BREF = 17.9626 INCHES ZMRP = .0000 INCHES
 SCALE = .0165 SCALE

PARAMETRIC DATA

ALPHA = 20.000 ELEVTR = -20.000
 ATLRON = 10.000 RUDFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820

RUN NO. 40/ 0 RN/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.40	-6.121	20.63683	.66253	.11482	.00264	.01208	.00674	.08494	-.19969	-.18523	-.19568
2.40	-4.068	20.64156	.66086	.11613	.00605	.00843	.00922	.05104	-.19964	-.19092	-.19288
2.360	-2.020	20.64324	.65808	.11807	.01010	.00559	.00403	.02351	-.21389	-.18809	-.19287
2.360	.021	20.64335	.65783	.11999	.01220	.00436	-.00200	.00523	-.21389	-.19372	-.19570
2.360	2.025	20.64704	.65943	.11937	.01220	.00708	-.00813	-.01143	-.20817	-.18807	-.19569
2.360	4.084	20.65856	.66180	.11701	.01084	.00755	-.01096	-.03905	-.19967	-.18814	-.19575
2.360	6.119	20.64273	.66033	.11907	.00752	-.00286	-.01132	-.07292	-.19964	-.18528	-.19572
2.360	8.174	21.65304	.66046	.11570	.00735	-.00667	-.01177	-.10918	-.20252	-.19096	-.19859
GRADIENT		.00186	.00016	.00015	.00058	-.00290	-.00228	-.01057	.00028	.00027	-.00042

RUN NO. 29/ 0 RN/L = 2.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.087	20.89766	.50009	.08229	.01089	.01087	.00505	.06687	-.06032	-.05332	-.06232
4.630	-4.046	20.91125	.50475	.08147	.01106	.00798	.00383	.04366	-.06032	-.05332	-.06232
4.630	-2.008	20.91243	.50308	.08065	.01101	.00507	.00207	.02131	-.06364	-.05661	-.06232
4.630	-.002	20.91225	.50319	.08011	.01164	.00240	-.00210	.00273	-.06364	-.05661	-.06232
4.630	2.006	20.91127	.50437	.08024	.01143	.00312	-.00333	-.01411	-.06364	-.05661	-.06232
4.630	4.053	20.91159	.50571	.07946	.01052	-.00235	-.00543	-.03555	-.06364	-.05661	-.06232
4.630	6.080	20.92233	.50700	.07864	.00961	-.00537	-.00700	-.05788	-.06364	-.05661	-.06232
4.630	8.103	20.91048	.50583	.07901	.00933	-.00842	-.00808	-.08204	-.06032	-.05661	-.06232
GRADIENT		-.00002	.00001	-.00022	-.00023	-.00129	-.00118	-.00095	-.00033	-.00033	-.00000

TABLATED SOURCE DATA LARC 1023/1034

LA-8 LARC UPWT 1023 NAR 0898-MOD. NOSE CRBITER

(RP6026) (20 JUN 75)

PARAMETRIC DATA

ALPHA = 30.000 ELEVTR = -20.000
ATLRON = 10.000 RUDFLR = 40.000
GT-LOC = 3.000 K/L = 6.020

REFERENCE DAT

SREF = 136.1000 SQ.IN. XMRP = 5.9038 INCHES
LREF = 8.725 INCHES YMRP = .0000 INCHES
BREF = 17.5826 INCHES ZMRP = .0000 INCHES
SCALE = .0168 SCALE

RUN NO. 39/ 0 RVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.144	30.51793	1.04201	.09758	-.00214	.01361	.01641	.07456	-.19667	-.19080	-.19275
2.360	-4.068	30.54643	1.04776	.09529	-.00117	.01011	.01246	.04640	-.18805	-.18509	-.18701
2.360	-2.034	30.52734	1.04863	.09373	.00021	.00686	.00720	.02609	-.18807	-.18228	-.18133
2.360	-.008	30.53614	1.04402	.09236	.00264	.00485	-.00018	.00756	-.17948	-.17379	-.17563
2.360	2.024	30.53873	1.04297	.09118	.00537	.00169	-.00876	-.00184	-.17094	-.16535	-.16427
2.360	4.097	30.54416	1.04934	.09310	.00354	-.00176	-.01458	-.03186	-.17328	-.17388	-.17572
2.360	6.173	30.54913	1.05007	.09604	.00346	-.00472	-.01948	-.05742	-.19668	-.18798	-.19276
2.360	8.171	30.54478	1.05153	.09705	.00237	-.00834	-.02228	-.08757	-.20525	-.19646	-.19560
GRADIENT		.00034	-.00012	-.00034	.00071	-.00142	-.00344	-.00955	.00111	-.00193	.00194

RUN NO. 27/ 0 RVL = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.110	30.72256	.85782	.01981	.01544	.01345	.00830	.05983	-.06033	-.05334	-.05903
4.630	-4.049	30.73719	.96172	.07870	.01558	.01021	.00936	.04118	-.06033	-.05334	-.05903
4.630	2.010	30.75273	.86545	.07764	.01659	.00681	.00276	.02164	-.06033	-.05334	-.05903
4.630	-.001	30.73118	.86687	.07713	.01569	.00113	-.00036	.00294	-.05702	-.05334	-.05903
4.630	2.004	30.71915	.86398	.07634	.01546	.00153	-.00340	-.01383	-.05702	-.05334	-.05903
4.630	4.055	30.74312	.86730	.07662	.01624	-.00203	-.00565	-.03428	-.05702	-.05334	-.05903
4.630	6.080	30.74282	.86615	.07689	.01680	-.001974	-.00773	-.05472	-.06033	-.05334	-.05903
4.630	8.105	30.73224	.86395	.07825	.01822	-.001922	-.01088	-.07427	-.06034	-.05336	-.05904
GRADIENT		-.00106	.00059	-.00028	.00003	-.00147	-.00159	-.00922	.00049	-.00020	-.00000



DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034
(RF6027) (20 JUN 73)

LA-8 LARC UPWT 1023 NAR 0098-MOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = 30.000 ELEVTR = -20.000
ATLRON = 10.000 RUFPLR = 40.000
GT-LOC = 3.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1008 SQ.IN. XMRP = 15.9638 INCHES
LREF = 8.9025 INCHES YMRP = .0000 INCHES
PREF = 17.9628 INCHES ZMRP = .0000 INCHES
SCALE = .0168 SCALE

RUN NO. 36/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-0.145	30.56338	1.04310	.09722	-.00289	.01386	.01630	.07612	-.19673	-.19086	-.19281
2.360	-4.088	30.53460	1.04610	.09921	-.00191	.01050	.01235	.04995	-.19816	-.18521	-.18712
2.360	-2.033	30.51297	1.04465	.09334	-.00372	.00692	.00709	.02766	-.18819	-.17959	-.18147
2.360	-.009	30.53555	1.04438	.09311	.00053	.00414	.00004	.00823	-.19244	-.17590	-.17574
2.360	2.022	30.53184	1.03739	.09165	.00349	.00169	-.00868	-.07620	-.17104	-.16263	-.16438
2.360	4.089	30.53828	1.04430	.09331	.00243	-.00170	-.01479	-.02942	-.18533	-.17395	-.17378
2.360	6.135	30.53473	1.04350	.09603	.00264	-.00479	-.01977	-.05664	-.19672	-.18803	-.18996
2.360	8.171	30.52693	1.04577	.09751	.00070	-.00806	-.02256	-.08671	-.20246	-.19371	-.19569
GRADIENT		.00128	-.00053	-.00027	.00063	-.00343	-.00343	-.00944	.00111	.00193	.00194

RUN NO. 28/ 0 RN/L = 2.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.091	30.70050	.85779	.07979	.01543	.01337	.00830	.05983	-.06033	-.05334	-.06233
4.630	-4.049	30.72618	.86159	.07841	.01557	.01005	.00536	.04118	-.05702	-.05334	-.05903
4.630	-2.010	30.72829	.86299	.07786	.01637	.00673	.00257	.02159	-.06033	-.05334	-.05903
4.630	-.002	30.70773	.86452	.07681	.01634	.00405	-.00032	.00390	-.06033	-.05334	-.05903
4.630	2.008	30.73009	.86595	.07632	.01545	.00145	-.00359	-.01386	-.05702	-.05334	-.05903
4.630	4.055	30.72961	.86481	.07631	.01601	-.00219	-.00566	-.03429	-.06033	-.05334	-.05903
4.630	6.079	30.71822	.86373	.07692	.01659	-.00374	-.00788	-.05380	-.06033	-.05334	-.05903
4.630	8.104	30.72730	.86531	.07804	.01782	-.00923	-.01101	-.07250	-.06033	-.05334	-.05903
GRADIENT		.00043	.00046	-.00028	-.00220	-.00147	-.00139	-.00822	-.00017	-.00020	-.00020

LA-8 LARC UPWT 1023 NAR 0898-MOD. NOSE ORBITER

(RP6028) (20 JUN 73)

REFERENCE DATA

SREF = 136.1826 94.1% XMRP = 15.9838 INCHES
 LREF = 8.3025 INCHES YMRP = 16.0000 INCHES
 PRF = 17.5828 INCHES ZMRP = 10.0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

ALPHA = 40.000 ELEVTR = -20.000
 AIRLON = 10.000 RUFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820

RUN NO. 36/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
2.360	-6.127	38.64908	1.34772	.07692	.00058	.02367	.01150	.07354	-1.15708	-1.14645	-1.14760
2.360	-4.074	38.62226	1.36078	.07165	-.00452	.01940	.00645	.05635	-1.15423	-1.14644	-1.13845
2.360	-2.025	38.63334	1.35925	.06791	-.00579	.01291	.00204	.03596	-1.14849	-1.13755	-1.13073
2.360	-.003	38.63587	1.36222	.06820	-.00424	.00928	-.00330	.01540	-1.14566	-1.13797	-1.13644
2.360	2.020	38.64345	1.37368	.06884	-.00594	.00472	-.00791	-.00667	-1.15140	-1.14646	-1.13079
2.360	4.076	38.63135	1.37031	.07076	-.00497	-.00150	-.01177	-.02947	-1.15689	-1.15481	-1.13350
2.360	6.116	38.63414	1.36780	.07566	-.00159	-.00650	-.01535	-.05464	-1.17418	-1.16055	-1.15349
2.360	8.152	38.63986	1.36197	.07727	.00049	-.01082	-.01808	-.08230	-1.17978	-1.17171	-1.16472
GRADIENT		.00035	.00150	-.00034	-.00005	-.00250	-.00028	-.01053	-.00041	-.00124	-.00029

RUN NO. 37/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB1	CFB2	CFC
4.630	-6.093	41.62334	1.28990	.07424	.01208	.01348	.01176	.04918	-1.05372	-1.05009	-1.05904
4.630	-4.051	41.57869	1.29355	.07306	.00961	.01215	.00837	.03330	-1.05703	-1.05009	-1.05574
4.630	-1.993	41.62143	1.30223	.07225	.01017	.00465	.00476	.01658	-1.05703	-1.05009	-1.05574
4.630	-.004	41.62445	1.30368	.07256	.01181	.00484	.00192	-.00015	-.05703	-.05009	-.05574
4.630	2.006	41.63523	1.30501	.07182	.01003	.00183	-.00240	-.01511	-.05372	-.05009	-.05574
4.630	4.054	41.61131	1.30405	.07131	.00975	-.00143	-.00651	-.03000	-.05372	-.04681	-.05574
4.630	6.080	41.59670	1.29844	.07194	.01157	-.00452	-.01027	-.04598	-.05372	-.04681	-.05574
4.630	8.106	41.59187	1.29039	.07197	.01424	-.00777	-.01407	-.06283	-.05372	-.04681	-.05574
GRADIENT		.00391	.00118	-.00019	.00001	-.00168	-.00183	-.00785	-.00049	-.00033	-.00000



DATE 31 OCT 73 TABULATED SOURCE DATA LARC 1023/1034 (RP6101) (20 JUN 73)

LA-6A LARC UPMT 1034 NAR 0898-MOD. NOSE CRISITER

REFERENCE DATA

SREF = 136.1808 94. IN. XMRP = 15.9638 INCHES BETA = .000 ELEVTR = .000
LREF = 6.9025 INCH'S YMRP = .0000 INCHES AIRLON = .000 RUOFLR = 40.000
BREF = 17.5628 INCH'S ZMRP = .0000 INCHES GT-LOC = 2.000 K/L = 6.620
SCALE = .0136 SCALE

PARAMETRIC DATA

Table with columns: RUN NO., ALPHA, BETA, MACH, CN, CA, CLM, CBL, CYN, CY, CFB, CFC. Includes sub-headers for RUN NO. 23/0 and RUN NO. 25/0.

Table with columns: RUN NO., ALPHA, BETA, MACH, CN, CA, CLM, CBL, CYN, CY, CFB, CFC. Includes sub-headers for RUN NO. 23/0 and RUN NO. 25/0.

LA-8A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER (RP6102) (29 JUN 75)

REFERENCE DATA

SREF = 136.1908 94.1N. XMRP = 15.9838 INCHES
LREF = 8.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5828 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = 3.000 TLEVTR = .000
AILRON = .000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

RUN NO. 24/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.000	-3.830	3.02736	-1.6418	.16445	.05480	-.00198	-.00164	-.09229	-.22894	-.20798
1.000	-1.736	3.02062	-.06307	.16268	.03737	-.00220	-.00079	-.04384	-.22627	-.19166
1.000	-.688	3.01901	-.01437	.16099	.02999	-.00235	-.00063	-.04793	-.22099	-.18637
1.000	.781	3.01799	.03630	.16077	.02254	-.00254	-.00062	-.04704	-.22103	-.18906
1.000	1.382	3.01695	.08511	.16034	.01565	-.00247	-.00088	-.04615	-.22363	-.19431
1.000	2.431	3.01653	.13184	.16001	.00785	-.00234	-.00169	-.04530	-.22623	-.19956
1.000	4.553	3.01591	.23133	.15872	-.00647	-.00234	-.00119	-.04283	-.23411	-.21275
1.000	6.641	3.01524	.32815	.15430	-.01997	-.00156	-.00167	-.04135	-.23938	-.21539
1.000	8.743	3.01664	.42307	.14728	-.03156	-.00098	-.00250	-.03868	-.21839	-.19700
1.000	12.893	3.01730	.67645	.12953	-.05017	-.00143	-.00345	-.03606	-.17072	-.13860
1.000	17.080	3.02061	.78056	.09810	-.06033	-.00146	-.00621	-.02802	-.09143	-.08612
1.000	19.120	3.03035	.85734	.08071	-.05650	-.00341	-.01123	-.02024	-.03930	-.04869
GRADIENT		-.00127	.04713	-.00000	-.000724	-.00000	.00005	.00106	-.00053	-.00101

RUN NO. 26/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.000	-3.929	3.01625	-1.4016	.15907	.03882	-.00163	.00155	-.05123	-.19040	-.16671
1.000	-1.836	3.01625	-.05606	.15300	.02753	-.00196	-.00023	-.04649	-.18791	-.15894
1.000	-.803	3.01670	-.01497	.15168	.02188	-.00196	-.00041	-.04643	-.19048	-.16151
1.000	.231	3.01511	.02405	.15080	.01663	-.00196	-.00064	-.04405	-.19052	-.16685
1.000	1.272	3.01614	.07097	.15009	.01094	-.00203	-.00094	-.04398	-.19316	-.16950
1.000	2.299	3.01425	.10816	.15002	.00581	-.00197	-.00127	-.04185	-.19842	-.17477
1.000	4.395	3.01516	.19722	.14946	-.00517	-.00183	-.00156	-.04072	-.21174	-.18527
1.000	6.493	3.01484	.27755	.14737	-.01396	-.00177	-.00233	-.03752	-.22209	-.19319
1.000	8.588	3.01632	.33717	.14345	-.02136	-.00178	-.00318	-.03591	-.21415	-.18788
1.000	12.707	3.01838	.51177	.13016	-.02849	-.00244	-.00444	-.03332	-.19570	-.17733
1.000	16.868	3.02672	.68032	.12130	-.03629	-.00151	-.00496	-.02503	-.17724	-.16146
1.000	21.116	3.03751	.84337	.10761	-.03982	-.00229	-.01494	-.01387	-.14288	-.12791
1.000	22.449	3.04005	.88778	.10582	-.03563	-.00421	-.01704	-.00862	-.14560	-.12709
GRADIENT		-.00039	.03977	-.00069	-.000530	-.00002	-.00025	.00128	-.00248	-.00261

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

(RP6103) (20 JUN 73)

LA-8A LARC UPMT 1034 NAR 0898-MOD. NOSE ORBITER

REFERENCE DATA

SREF = 136.1808 SQ.IN. XGRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YGRP = .0000 INCHES
 BREF = 17.5626 INCHES ZGRP = .0000 INCHES
 SCALE = .0186 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = .000
 AIRLON = .000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = 6.620

RUN NO. 1/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.600	-3.915	.01166	-.17369	.16783	.05085	.00011	-.00549	.01316	-.24725	-.22008
1.600	-1.771	.01078	-.07068	.16363	.03462	.00029	-.00540	.01345	-.23956	-.20750
1.600	-.667	.00994	-.02157	.16353	.02673	.00041	-.00550	.01439	-.23339	-.19833
1.600	.360	.00915	.02371	.16116	.01881	.00046	-.00543	.01458	-.22825	-.18663
1.500	1.442	.01063	.07499	.15879	.01199	.00062	-.00521	.01285	-.21958	-.17803
1.600	2.509	.00950	.12397	.15680	.00417	.00071	-.00518	.01343	-.20832	-.17937
1.600	4.697	.00923	.22544	.15271	-.00796	.00099	-.00532	.01411	-.19736	-.17945
1.600	6.662	.00783	.32283	.14981	-.02367	.00124	-.00527	.01479	-.19893	-.18261
1.600	5.022	.00756	.42274	.14705	-.03644	.00145	-.00517	.01458	-.20056	-.18108
1.600	13.309	.00581	.61059	.12951	-.05647	.00193	-.00526	.01597	-.15019	-.13557
1.600	17.386	.00597	.77243	.10049	-.06059	.00270	-.00483	.01427	-.06516	-.01211
1.600	GRADIENT	-.00028	.04616	-.00184	-.00700	.00010	.00003	.00005	.00061	.00029

RUN NO. 3/ 0 RN/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.900	-4.049	.00905	-.16526	.16077	.03668	.00055	-.00530	.01413	-.20022	-.18275
1.900	-1.912	.00738	-.07768	.15827	.02623	.00068	-.00535	.01532	-.19793	-.17403
1.900	-.826	.00625	-.03413	.15650	.02086	.00077	-.00507	.01498	-.19664	-.16482
1.900	.233	.00574	.00920	.15289	.01467	.00081	-.00513	.01554	-.18230	-.15361
1.900	1.291	.00580	.05027	.15148	.00945	.00080	-.00505	.01518	-.17594	-.15676
1.900	2.368	.00646	.09245	.14947	.00349	.00098	-.00506	.01481	-.16984	-.15322
1.900	4.500	.00570	.17693	.14667	-.00671	.00107	-.00511	.01517	-.17279	-.15838
1.900	6.672	.00521	.26207	.14514	-.01665	.00124	-.00485	.01479	-.18072	-.16473
1.900	8.798	.00561	.34286	.14384	-.02408	.00129	-.00485	.01454	-.19018	-.17264
1.900	13.065	.00568	.50439	.13891	-.03194	.00162	-.00497	.01498	-.23128	-.18217
1.900	17.362	.00275	.67369	.12955	-.04096	.00182	-.00440	.01463	-.19020	-.17583
1.900	21.712	.00007	.84588	.11335	-.04621	.00191	-.00351	.01298	-.16010	-.14606
1.900	23.155	.00054	.80878	.10934	-.04416	.00164	-.00423	.01537	-.15540	-.13140
1.900	GRADIENT	-.00035	.03997	-.00176	-.00014	.00006	.00005	.00010	.00047	.00019

REFERENCE DA

MREF = 136.1606 SQ.IN. XMRP = 15.9638 INCHES
 LMRP = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5626 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = .0000
 AIRLON = .0000 RUDFLR = 40.0000
 GT-LOC = 1.0000 K/L = 6.620

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB	CPC
1.600	-3.911	3.05328	-1.17012	.16404	.04601	-.00182	-.00069	-.04833	-.22632	-.20064
1.600	-1.757	3.04935	-.06933	.16220	.03210	-.00229	-.00084	-.04554	-.22353	-.18824
1.600	-.694	3.04505	-.02157	.16149	.02379	-.00232	-.00091	-.04266	-.21898	-.18370
1.600	.366	3.04631	.02854	.16042	.01612	-.00268	-.00101	-.04304	-.21898	-.18528
1.600	1.439	3.04638	.07533	.15945	.01017	-.00279	-.00117	-.04251	-.21854	-.18829
1.600	2.516	3.04496	.12555	.15898	.00326	-.00287	-.00145	-.04057	-.21903	-.19325
1.600	4.697	3.04417	.22487	.15666	-.01144	-.00272	-.00222	-.03727	-.22198	-.20253
1.600	6.870	3.04742	.32241	.15266	-.02563	-.00199	-.00338	-.03491	-.22217	-.20589
1.600	9.024	3.04869	.41916	.14633	-.03743	-.00149	-.00427	-.03250	-.20640	-.19167
1.600	13.305	3.05490	.60561	.13088	-.05244	-.00189	-.00582	-.03044	-.16507	-.14704
1.600	17.391	3.07024	.77327	.10278	-.06148	-.00245	-.01076	-.02145	-.08136	-.02846
1.600	GRADIENT	-.00097	.04581	-.00084	-.00685	-.00011	-.00017	.00020	.00058	-.00050

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB	CPC
1.900	-4.050	3.04966	-.16668	.15836	.03446	-.00182	-.00022	-.04831	-.19537	-.17265
1.900	1.910	3.05041	-.07742	.15593	.02396	-.00198	-.00087	-.04622	-.19181	-.16314
1.900	-.825	3.04727	-.03406	.15417	.01819	-.00213	-.00064	-.04516	-.18544	-.15994
1.900	.242	3.04709	.02811	.15324	.01230	-.00233	-.00088	-.04418	-.18385	-.16310
1.900	1.288	3.04828	.04926	.15221	.00792	-.00241	-.00101	-.04317	-.18386	-.16788
1.900	2.352	3.04519	.09151	.15111	.00237	-.00249	-.00123	-.04172	-.18701	-.17105
1.900	4.508	3.04620	.17711	.14933	-.00356	-.00237	-.00180	-.04022	-.19339	-.17903
1.900	6.687	3.04805	.26249	.14740	-.01807	-.00212	-.00310	-.03652	-.19969	-.18535
1.900	8.806	3.04962	.34331	.14575	-.02849	-.00201	-.00400	-.03414	-.20286	-.18694
1.900	13.066	3.05472	.50375	.13516	-.03263	-.00210	-.00620	-.02982	-.19018	-.17423
1.900	17.333	3.06737	.67200	.12275	-.04258	-.00159	-.01016	-.02212	-.16329	-.14884
1.900	21.750	3.08478	.83673	.11127	-.04146	-.00032	-.01553	-.00913	-.15217	-.13610
1.900	23.132	3.08385	.88842	.10949	-.04083	-.00405	-.01691	-.00715	-.14898	-.13291
1.900	GRADIENT	-.00056	.04034	-.00106	-.00503	-.00008	-.00017	.00095	.00025	-.00109

TABULATED SOURCE DATA LARC 1D22/1034

(RP6105) (20 JUN 75)

LA-8A LARC UPWT 1034 NAR 0898-MCJ. NOSE ORBITER

REFERENCE DATA

SREF = 136.1608 98.1N. XMRP = 15.6636 INCHES
 LPEF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.9628 INCHES ZMRP = .0000 INCHES
 SCALE = .0186 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = .000
 AILRON = .000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = .000

RUN NO. 19/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.600	-3.816	.00540	-1.6414	.16375	.05495	.00049	-.00444	.01146	-.24259	-.22113
1.600	-1.720	.00568	-.06077	.16220	.03978	.00058	-.00484	.01167	-.23752	-.21087
1.600	-.684	.00437	-.01803	.16068	.03172	.00070	-.00434	.01176	-.23627	-.20641
1.600	.350	.00570	.03435	.15961	.02388	.00064	-.00454	.01109	-.23332	-.19620
1.600	1.402	.00407	.08286	.15678	.01629	.00071	-.00435	.01200	-.22544	-.18567
1.600	2.440	.00449	.13337	.15529	.00820	.00058	-.00449	.01210	-.21744	-.18817
1.600	4.545	.00473	.23441	.15135	-.00518	.00125	-.00461	.01232	-.20960	-.18622
1.600	6.633	.00391	.32697	.14860	-.01172	.00043	-.00443	.01259	-.21461	-.19050
1.600	8.750	.00377	.42340	.14463	-.03112	.00199	-.00429	.01208	-.20935	-.18796
1.600	12.883	.00195	.60561	.12558	-.05241	.00214	-.00433	.01408	-.14894	-.12737
1.600	17.083	.00324	.79120	.09592	-.06496	.00248	-.00461	.01381	-.06065	.00173
1.600	19.125	.00257	.86145	.08283	-.05878	.00216	-.00470	.01484	-.00377	.04078
GRADIENT		-.00012	.04750	-.00152	-.00728	.00009	-.00001	.00010	.00421	.00451

RUN NO. 21/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.900	-3.921	.00489	-1.4726	.13784	.04017	.00056	-.00428	.01142	-.20748	-.18918
1.900	-1.861	.00458	-.06148	.13588	.03055	.00070	-.00432	.01183	-.21014	-.18395
1.900	-.000	.00475	-.02260	.13463	.02577	.00070	-.00423	.01098	-.20732	-.18110
1.900	.220	.00374	.02017	.13174	.01920	.00077	-.00422	.01186	-.19939	-.16786
1.900	1.247	.00357	.06309	.14710	.01390	.00098	-.00430	.01197	-.18358	-.16256
1.900	2.304	.00374	.10395	.14481	.00841	.00098	-.00407	.01132	-.18095	-.15992
1.900	4.403	.00257	.18600	.14183	-.00322	.00126	-.00403	.01232	-.17262	-.15681
1.900	6.490	.00226	.27161	.14084	-.01079	.00127	-.00401	.01257	-.18021	-.16440
1.900	8.558	.00201	.34494	.14013	-.02011	.00141	-.00399	.01276	-.19345	-.17504
1.900	12.727	.00253	.50729	.13469	-.03001	.00162	-.00425	.01318	-.21193	-.18827
1.900	16.883	.00301	.67527	.12762	-.03717	.00164	-.00411	.01216	-.21461	-.19096
1.900	21.132	.00051	.84149	.10717	-.04239	.00179	-.00358	.01276	-.15135	-.13018
1.900	22.441	.00143	.89198	.10108	-.04410	.00180	-.00387	.01289	-.14582	-.10904
GRADIENT		-.00028	.04006	-.00215	-.00526	.00008	-.00004	.00009	.00507	.00449

LA-8A LARC UPWT 103' NAR 0899-MOD. NOSE ORBITER

(RP6106) (20 JUN 73)

REFERENCE DATA

SREF = 156.1808 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = .000
 ATLRON = .000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = .000

RUN NO. 20/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-3.835	3.02059	-1.6918	.18135	.05258	-.00156	-.00036	-.05097	-.23122	-.20984
1.600	-1.738	3.02358	-.06259	.15904	.03717	-.00182	-.00078	-.04854	-.22598	-.19416
1.600	-.677	3.02016	-.01611	.15816	.03023	-.00201	-.00093	-.04765	-.22359	-.19179
1.600	.355	3.01942	.03418	.15761	.02158	-.00189	-.00119	-.04606	-.22351	-.19170
1.600	1.395	3.01813	.07877	.15755	.01437	-.00209	-.00167	-.04301	-.22582	-.19663
1.600	2.440	3.01768	.12924	.15658	.00696	-.00219	-.00173	-.04216	-.22833	-.20439
1.600	4.546	3.01875	.23228	.15542	-.01763	-.00182	-.00210	-.04045	-.23853	-.21723
1.600	6.643	3.01638	.32868	.15267	-.02038	-.00125	-.00276	-.03756	-.24378	-.22251
1.600	8.740	3.01780	.42123	.14649	-.03280	-.00099	-.00319	-.03710	-.23065	-.21670
1.600	12.899	3.01776	.60712	.12752	-.03164	-.00097	-.00330	-.03661	-.18092	-.14894
1.600	17.063	3.02861	.78374	.09619	-.06146	-.00210	-.00384	-.02843	-.10751	-.07952
1.600	19.117	3.03460	.86150	.07998	-.05711	-.00332	-.00389	-.01443	-.08215	-.04878
GRADIENT		-.00053	.04743	-.00065	-.00721	-.00004	-.00024	-.00135	-.00082	-.00124

RUN NO. 22/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-3.828	3.03318	-.14993	.15244	.03721	-.00144	-.00028	-.04903	-.19094	-.16988
1.600	-1.773	3.03662	-.06382	.15035	.02757	-.00151	-.00081	-.04581	-.19092	-.16192
1.600	-.810	3.03619	-.02088	.14872	.02167	-.00151	-.00096	-.04497	-.18824	-.16188
1.600	.220	3.03574	.02222	.14761	.01719	-.00151	-.00110	-.04410	-.18562	-.16455
1.600	1.263	3.03619	.06331	.14699	.01259	-.00152	-.00164	-.04253	-.18830	-.16556
1.600	2.296	3.03639	.10090	.14675	.00584	-.00132	-.00191	-.04174	-.19349	-.17244
1.600	4.312	3.03431	.16638	.14609	-.00406	-.00132	-.00222	-.03847	-.20407	-.18304
1.600	6.483	3.03608	.26941	.14562	-.01319	-.00126	-.00294	-.03758	-.21737	-.19176
1.600	8.574	3.03581	.34692	.14196	-.02078	-.00145	-.00333	-.03591	-.21732	-.19103
1.600	12.698	3.03674	.50500	.13107	-.03039	-.00243	-.00428	-.03329	-.19360	-.17520
1.600	16.881	3.04541	.67334	.12206	-.03751	-.00202	-.00468	-.02576	-.18833	-.16991
1.600	21.117	3.05581	.84014	.10413	-.04201	-.00170	-.00475	-.01384	-.14351	-.12233
1.600	22.434	3.05834	.88673	.10462	-.03766	-.00370	-.00756	-.00563	-.14801	-.12765
GRADIENT		-.00036	.04034	-.00079	-.00900	.00001	-.00024	-.00121	-.00133	-.00187

DATE 31 OCT 73

TABULATED SC ICE DATA LARC 1023/1034

LA-8A LARC UPMT 1024 NAR 089B-MOD. NOSE ORBITER

(RP6107) (17 SEP 73)

REFERENC. DATA

SREF = 136. 808 SQ. IN. YMRP = 15.9636 INCHES
 LREF = 8.1025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = -20.000
 ALLRON = 10.000 RUDFLR = 40.000
 GT-LOC = 1.000 K/L = .000

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB	CFC
1.000	-3.897	-0.1739	-0.28295	.19406	.11750	.00727	-.00256	.00797	-.27506	-.25366
1.070	-1.783	-0.1647	-0.17319	.19226	.10153	.00640	-.00325	.00960	-.27362	-.25252
1.070	-7.700	-0.1514	-0.12297	.18858	.09451	.00609	-.00344	.00893	-.27595	-.25220
1.070	3.25	-0.1439	-0.07248	.18742	.08637	.00590	-.00346	.00825	-.27900	-.25330
1.070	1.336	-0.1454	-0.02363	.18552	.08082	.00585	-.00345	.00837	-.27923	-.25554
1.070	2.332	-0.1380	.02475	.18424	.07497	.00551	-.00349	.00775	-.28059	-.25945
1.000	4.505	-0.1288	.13135	.17830	.05977	.00476	-.00378	.00793	-.27848	-.25473
1.000	6.680	-0.1201	.23165	.17239	.04732	.00452	-.00408	.00813	-.27372	-.25195
1.000	8.736	-0.1201	.32820	.16839	.03586	.00415	-.00434	.00909	-.27565	-.25191
1.000	12.867	-0.1420	.51670	.14194	.01371	.00507	-.00369	.00890	-.20503	-.18372
1.000	17.059	-0.1354	.69869	.13320	.00606	.00606	-.00420	.01013	-.09750	-.03638
1.000	19.141	-0.1278	.78664	.10157	.00338	.00633	-.00447	.01038	-.07375	-.00200
1.000	GRADIENT	.00055	.04909	-.00178	-.00678	-.00927	-.00012	-.00010	-.00070	-.00046

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CFB	CFC
1.900	-3.967	-0.1670	-0.23426	.18037	.09164	.00630	-.00274	.00793	-.22619	-.20790
1.900	-1.863	-0.1725	-0.14470	.17704	.08029	.00586	-.00286	.00891	-.23127	-.21041
1.900	-8.10	-0.1740	-0.09986	.17544	.07536	.00588	-.00285	.00904	-.23110	-.21286
1.900	.221	-0.1693	-0.05683	.17386	.07010	.00568	-.00300	.00911	-.23115	-.21027
1.900	1.238	-0.1616	-0.01585	.17090	.06054	.00549	-.00302	.00842	-.22803	-.20516
1.900	2.286	-0.1717	.02711	.16732	.05920	.00530	-.00298	.00931	-.22077	-.19989
1.900	4.404	-0.1740	.11284	.15931	.04785	.00479	-.00298	.00951	-.21014	-.18922
1.900	6.483	-0.1793	.19385	.15527	.04441	.00441	-.00269	.00899	-.21276	-.19184
1.900	8.567	-0.1767	.27744	.14955	.03008	.00475	-.00282	.00919	-.20478	-.18911
1.900	12.696	-0.1636	.43389	.13829	.00528	.00528	-.00335	.01032	-.20484	-.18126
1.900	16.862	-0.1609	.59995	.12937	.00348	.00348	-.00348	.01003	-.21551	-.18991
1.900	21.133	-0.1713	.76665	.11738	.00571	.00571	-.00354	.01131	-.20492	-.18099
1.900	22.438	-0.1708	.82133	.11139	.00591	.00591	-.00340	.01073	-.19167	-.17334
1.900	GRADIENT	.00033	.04144	-.00247	-.00017	-.00003	-.00003	.00015	-.00206	-.00237

LA-8A LARC UPWT 1034 NAR 0398-MOD. NOSE ORBITER

(RP6108) (17 SEP 73)

REFERENCE DATA

SREF = 136.1908 94.1N. XMRP = 11.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -20.000
 AILRON = 10.000 RUDEFLR = 40.000
 GT-LOC = 1.000 K/L = .000

RUN NO. 16/ 0 RNL = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	CFB	CFC
1.600	-3.634	3.03602	-0.27166	.19160	.11913	.00537	.00326	-.06033	-.27369	-.24733
1.600	-1.776	3.03639	-0.16905	.18763	.10326	.00418	.00191	-.05570	-.27113	-.24740
1.600	-1.739	3.03479	-0.11685	.18370	.09479	.00386	.00171	-.05333	-.26837	-.24726
1.600	.319	3.03703	-0.06664	.18416	.08682	.00335	.00149	-.05483	-.26824	-.24974
1.600	1.366	3.03666	-0.02015	.18263	.07971	.00276	.00097	-.05249	-.27090	-.25241
1.600	2.416	3.03623	.00026	.18192	.07157	.00262	.00046	-.05015	-.27621	-.25512
1.600	4.535	3.03653	.12925	.17737	.05935	.00216	-.00046	-.04696	-.27970	-.25793
1.600	6.624	3.03739	.22918	.17250	.04481	.00221	-.00135	-.04382	-.27904	-.25533
1.600	8.734	3.03718	.32547	.16880	.03339	.00208	-.00221	-.04138	-.26861	-.25962
1.600	12.876	3.03913	.51331	.13780	.01192	.00164	-.00279	-.04102	-.18973	-.16840
1.600	17.073	3.04920	.69601	.10622	.00289	.001	-.00695	-.03574	-.13482	-.05546
1.600	19.105	3.05499	.77592	.08740	.00245	.00233	-.01072	-.02760	-.07995	-.01267
GRADIENT		.00008	.04765	-.00162	-.000721	-.00039	-.00042	.00148	-.00077	-.00043

RUN NO. 16/ 0 RNL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEL	CYN	CY	CFB	CFC
1.900	-3.964	3.05216	-0.23483	.17920	.08954	.00453	.00242	-.05467	-.23123	-.20510
1.900	-1.861	3.05193	-0.14624	.17447	.07720	.00399	.00124	-.05002	-.22861	-.19980
1.900	-.831	3.05151	-0.10179	.17136	.07284	.00360	.00112	-.04913	-.22605	-.19460
1.900	.217	3.05111	-.05892	.16769	.06623	.00340	.00060	-.04680	-.21288	-.18668
1.900	1.234	3.05102	-.01807	.16491	.05939	.00294	.00020	-.04523	-.21024	-.18404
1.900	2.271	3.05276	.02310	.16203	.05661	.00281	-.00010	-.04518	-.21020	-.18399
1.900	4.377	3.05212	.10876	.15745	.04984	.00248	-.00077	-.04277	-.20756	-.18399
1.900	6.454	3.05332	.19004	.15233	.03992	.00234	-.00173	-.04030	-.20496	-.18393
1.900	8.560	3.05215	.27317	.14627	.02675	.00229	-.00168	-.03939	-.20237	-.18144
1.900	12.692	3.05449	.42935	.13480	.01981	.00176	-.00321	-.03608	-.19450	-.17619
1.900	16.872	3.06316	.59435	.12273	.01329	.00230	-.00762	-.02888	-.18914	-.17081
1.900	21.107	3.07380	.76353	.11107	.01159	.00254	-.01315	-.01890	-.17857	-.16285
1.900	22.420	3.07678	.81579	.10846	.01114	.00385	-.01457	-.01664	-.18127	-.16557
GRADIENT		-.00003	.04113	-.00271	-.000542	-.00026	-.00037	.00149	-.00337	-.00290

DATE 31 OCT 73 TABULATED SOURCE DATA LARC 1023/1034

LA-8A LARC UPWT 1034 NAR D898-MOD. NOSE ORBITER (RP6109) (17 SEP 73)

REFERENCE DATA
 SREF = 136.1006 Sq. IN. XREF = 15.9638 INCHES
 LREF = 6.9025 INCHES YREF = .0000 INCHES
 HREF = 17.5628 INCHES ZREF = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA
 BETA = .0000 ELEVTR = -20.000
 AILRON = 10.000 RUPFLR = 40.000
 GT-LOC = 1.000 K/L = 5.820

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-3.866	-0.1396	-0.26982	.19319	.11442	.00742	-.00313	.00862	-.25712	-.24124
1.600	-1.769	-0.1451	-0.16355	.19017	.09773	.00744	-.00357	.00879	-.25939	-.24087
1.600	-.724	-0.1524	-0.11118	.18925	.08993	.00732	-.00381	.01042	-.26198	-.24347
1.600	.330	-0.1640	-0.06088	.18764	.08275	.00707	-.00384	.00977	-.26420	-.24566
1.600	1.355	-0.1400	-0.01045	.18578	.07592	.00629	-.00400	.00985	-.26444	-.24592
1.600	2.403	-0.1208	.04402	.18312	.06953	.00604	-.00430	.00993	-.26181	-.24328
1.600	4.511	-0.1293	.13509	.17845	.05593	.00559	-.00456	.01087	-.26178	-.24325
1.600	6.641	-0.1236	.23535	.17341	.04486	.00522	-.00458	.01035	-.25648	-.24058
1.600	8.717	-0.1209	.32979	.16852	.03188	.00555	-.00471	.01055	-.25386	-.23531
1.600	12.872	-0.1222	.52184	.14178	.00940	.00630	.0441	.00955	-.17235	-.15883
1.600	16.845	-0.1247	.69115	.10872	.00327	.00716	-.00445	.01088	-.07806	-.05005
1.600	19.119	-0.1578	.77948	.08984	.00223	.00743	-.00428	.01195	-.02591	.04328
GRADIENT		.00037	.04861	-.00174	-.00693	-.00025	-.00017	.00024	-.00059	-.00035

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.900	-3.976	-0.1840	-0.24730	.18089	.08955	.00639	-.00269	.01169	-.21117	-.19283
1.900	-1.901	-0.1778	-0.15718	.17780	.07732	.00620	-.00311	.01039	-.20864	-.19031
1.900	-.839	-0.1731	-0.11195	.17485	.07140	.00586	-.00325	.01044	-.20645	-.18816
1.900	.196	-0.1687	-0.05682	.17201	.06625	.00585	-.00339	.01051	-.20422	-.18595
1.900	1.230	-0.1758	-.02391	.17005	.05990	.00564	-.00332	.01058	-.19998	-.18442
1.900	2.271	-0.1740	.01474	.16771	.05403	.00555	-.00347	.01134	-.19822	-.18272
1.900	4.162	-0.1706	.10288	.16214	.04425	.00517	-.00366	.01169	-.19085	-.17986
1.900	6.447	-0.1617	.18598	.15910	.03575	.00512	-.00355	.01036	-.20633	-.18009
1.900	8.534	-0.1576	.26683	.15574	.02638	.00544	-.00376	.01205	-.20144	-.18052
1.900	12.676	-0.1713	.43009	.14665	.01595	.00578	-.00345	.01100	-.19649	-.18085
1.900	16.850	-0.1605	.59210	.13637	.01192	.00566	-.00366	.01142	-.20173	-.18875
1.900	21.100	-0.1650	.766	.12429	.00727	.00559	-.00369	.01122	-.19638	-.17810
1.900	22.314	-0.1610	.811	.11839	.00608	.00602	-.00353	.01134	-.18836	-.16740
GRADIENT		.00012	.04416	-.00228	-.00547	-.00015	-.00010	.00025	-.00017	.00162

LA-8A LARC UPWT 1034 NAR 089B-MOD. NOSE ORBITER

(AF6110) (17 SEP 73)

REFERENCE DATA

SREF = 136.1808 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.9628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

BETA = 3.300 ELEVTR = -20.000
 AIRLON = 10.000 RUOPLR = 40.000
 GT-LOC = 1.000 K/L = 6.820

PARAMETRIC DATA

RUN NO. 6/ 0 RM/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-3.859	3.01531	-2.5999	.18082	.11379	.00388	.00333	-.05871	-.25449	-.23598
1.600	-1.739	3.01484	-1.6351	.18830	.09670	.00464	.00241	-.05480	-.25722	-.23609
1.600	-.720	3.01475	-1.0950	.18628	.08837	.00380	.00201	-.05323	-.25449	-.23598
1.600	.313	3.01405	-.05914	.18439	.08176	.00315	.00177	-.05162	-.25449	-.23598
1.600	1.350	3.01396	-.01290	.18257	.07260	.00282	.00137	-.05007	-.25442	-.23591
1.600	2.407	3.01323	.03755	.18109	.06588	.00256	.00113	-.04845	-.25705	-.23654
1.600	4.529	3.01471	.14036	.17580	.05266	.00203	-.00011	-.04535	-.25435	-.23846
1.600	6.624	3.01875	.23624	.17099	.03915	.00222	-.00110	-.04371	-.25201	-.23350
1.600	8.712	3.01879	.32860	.16474	.02811	.00228	-.00209	-.04211	-.24419	-.22566
1.600	12.872	3.02041	.51478	.13942	.01148	.00298	-.00383	-.03727	-.17089	-.15741
1.600	17.057	3.02965	.69534	.10448	.00154	.00318	-.00876	-.02831	-.09496	-.03134
1.600	19.100	3.03341	.77663	.09012	.00179	.00276	-.01140	-.02232	-.04496	-.02923
GRADIENT		-.00014	.04772	-.00178	-.00731	-.00047	-.00039	.00157	.00002	-.00034

RUN NO. 8/ 0 RM/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.900	-3.992	3.01208	-1.44993	.17897	.08649	.00471	.00263	-.05299	-.21695	-.18871
1.900	-1.898	3.01068	-1.15849	.17643	.07450	.00379	.00175	-.04829	-.20697	-.18872
1.900	-.846	3.01028	-.11564	.17459	.06930	.00347	.00163	-.04743	-.20964	-.18877
1.900	.162	3.01047	-.07291	.17140	.06340	.00308	.00136	-.04661	-.20438	-.18549
1.900	1.219	3.00975	-.02806	.16882	.05925	.00268	.00112	-.04499	-.20440	-.18088
1.900	2.265	3.01083	.01457	.16646	.05148	.00255	.00081	-.04492	-.20187	-.17572
1.900	4.366	3.00961	.10232	.16176	.04246	.00242	.00019	-.04171	-.19663	-.17310
1.900	6.455	3.01233	.18299	.15754	.03107	.00254	-.00068	-.04090	-.19665	-.18103
1.900	8.540	3.01138	.25834	.15351	.02428	.00306	-.00129	-.03769	-.19661	-.18099
1.900	12.674	3.01516	.42613	.14145	.01564	.00304	-.00379	-.03226	-.18601	-.17035
1.900	16.840	3.02419	.58840	.12888	.00865	.00338	-.00807	-.02555	-.17284	-.15714
1.900	21.035	3.03342	.75860	.11610	.00646	.00353	-.01262	-.01804	-.16239	-.14667
1.900	22.349	3.03787	.81084	.11660	.00879	.00350	-.01501	-.01361	-.17828	-.16261
GRADIENT		-.00020	.04205	-.00216	-.00034	-.00028	-.00028	.00124	.00129	.00020



DATE 31 OCT 75

TABULATED SOURCE DATA LARC 1023/1034

LA-9A LARC UPWT 1034 NAR 0626-MCO. NO. CRBITER

(RP6111) (17 SEP 75)

REFERENCE DATA

SREF = 136.1808 80.1N. XRRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YRRP = .0000 INCHES
 WREF = 17.9628 INCHES ZRRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = .0000 ELEVTR = -20.000
 AIRRON = 10.000 RUFFLR = 40.000
 GT-LOC = 3.000 K/L = 6.020

RUN NO. 9/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	CFB	CPC
1.000	-3.865	-0.01535	-2.7800	.19195	.11404	.00748	-.00406	.01153	-.26147	-.24293
1.000	-1.790	-0.01363	-1.7669	.16934	.09756	.00700	-.00491	.01310	-.25985	-.24399
1.000	-.723	-0.01312	-1.1837	.16622	.09159	.00674	-.00493	.01246	-.26276	-.24432
1.000	.324	-0.01415	-.08739	.16580	.08310	.00670	-.00490	.01337	-.26488	-.24640
1.000	1.347	-0.01311	-.01615	.16469	.07389	.00659	-.00521	.01347	-.26313	-.24560
1.000	2.359	-0.01324	.02839	.16191	.06699	.00647	-.00521	.01359	-.26645	-.24791
1.000	4.315	-0.01146	.12934	.17793	.05614	.00596	-.00551	.01300	-.26640	-.24794
1.000	6.821	-0.01066	.22707	.17199	.04272	.00551	-.00595	.01391	-.25643	-.24052
1.000	8.777	-0.01032	.32756	.16730	.03169	.00553	-.00596	.01340	-.25622	-.23503
1.000	12.894	-0.01044	.51365	.14324	.01082	.00647	-.00566	.01240	-.18783	-.17434
1.000	17.045	-0.01011	.68911	.10799	.00252	.00812	-.00548	.01142	-.08808	-.07254
1.000	19.075	-0.01225	.76840	.09685	.00263	.00819	-.00539	.01324	-.04869	-.01787
GRADIENT		.00238	.04837	-.00170	-.00694	-.00207	-.00015	.00016	-.00209	-.00266

RUN NO. 12/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CSL	CYN	CY	CFB	CPC
1.000	-3.978	-0.01640	-2.4564	.17987	.09193	.00674	-.00341	.01010	-.20093	-.19330
1.000	-1.676	-0.01560	-1.5396	.17389	.08139	.00648	-.00362	.01103	-.19840	-.18274
1.000	-.615	-0.01593	-1.0724	.17139	.07513	.00629	-.00382	.01118	-.19581	-.18014
1.000	.203	-0.01516	-.06656	.16887	.06995	.00612	-.00385	.01048	-.19265	-.17693
1.000	1.235	-0.01555	-.02392	.16459	.06192	.00594	-.00398	.01135	-.18691	-.17380
1.000	2.291	-0.01541	.02317	.16269	.05691	.00588	-.00423	.01220	-.18434	-.17121
1.000	4.395	-0.01477	.10706	.15958	.04737	.00542	-.00426	.01160	-.19265	-.17693
1.000	6.443	-0.01504	.18607	.15729	.03853	.00536	-.00424	.01179	-.20345	-.17985
1.000	8.566	-0.01450	.27146	.15345	.03099	.00576	-.00424	.01125	-.20341	-.18245
1.000	12.672	-0.01455	.42793	.14146	.02062	.00637	-.00434	.01168	-.19012	-.17176
1.000	16.856	-0.01349	.59273	.13221	.01590	.00672	-.00475	.01211	-.19529	-.18222
1.000	21.085	-0.01450	.75893	.12240	.01001	.00707	-.00442	.01189	-.19533	-.17962
1.000	22.387	-0.01328	.81078	.11775	.00984	.00720	-.00448	.01125	-.19023	-.17187
GRADIENT		.00218	.04214	-.00221	-.00543	-.00201	-.00010	.00020	-.00233	-.00216

LA-6A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

(RP6112) (17 SEP 73)

REFERENCE DATA

SREF = 136.1008 SQ. IN. XMRP = 15.9636 INCHES
 LREF = 6.9023 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -20.000
 AIRRON = 10.000 RUFLR = 40.000
 GT-LOC = 3.000 K/L = 6.620

RUN NO. 10/ 0 RW/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	GN	CA	CLM	CLB	CYN	CY	CPB	CPC
1.800	-3.859	3.03458	-2.6816	.19787	.11456	.00522	.00285	-.05660	-.26151	-.24297
1.800	-1.786	3.03562	-1.16962	.16825	.09733	.00430	.00167	-.05423	-.26157	-.24304
1.800	-.716	3.03597	-.11122	.16825	.09034	.00411	.00140	-.05334	-.26175	-.24322
1.800	.324	3.03439	-.06096	.18516	.08236	.00339	.00119	-.05097	-.26166	-.24315
1.800	1.367	3.03515	-.01237	.18415	.07473	.00333	.00077	-.05019	-.26440	-.24369
1.800	2.382	3.03567	.03178	.18245	.06675	.00274	.00021	-.04867	-.26709	-.24459
1.800	4.523	3.03713	.13465	.17734	.05424	.00234	-.00103	-.04550	-.26178	-.24326
1.800	6.594	3.03600	.22865	.17192	.04199	.00233	-.00211	-.04237	-.25919	-.23804
1.800	8.730	3.03941	.32723	.16477	.03010	.00272	-.00294	-.04074	-.24863	-.22744
1.800	12.674	3.04234	.51132	.13733	.01117	.00343	-.00447	-.03819	-.16479	-.15388
1.800	17.049	3.05322	.69024	.10560	.00178	.00423	-.00879	-.03297	-.10447	-.09027
1.800	19.099	3.05636	.77111	.09149	.00412	.00334	-.01216	-.02397	-.04975	-.02980
GRADIENT		.00021	.04796	-.00155	-.00725	-.00036	-.00042	.00134	-.00033	-.00034

RUN NO. 13/ 0 RW/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	GN	CA	CLM	CLB	CYN	CY	CPB	CPC
1.800	-3.991	3.03242	-2.4067	.17874	.08829	.00446	.00245	-.05391	-.21114	-.19548
1.800	-1.667	3.03130	-1.19070	.17449	.07746	.00367	.00169	-.04991	-.20668	-.19300
1.800	-.644	3.03069	-.10764	.17240	.07294	.00334	.00117	-.04755	-.20608	-.19042
1.800	.231	3.03077	-.06266	.16920	.06652	.00307	.00078	-.04598	-.20343	-.18511
1.800	1.224	3.03185	-.02232	.16825	.06031	.00288	.00047	-.04594	-.19550	-.17716
1.800	2.303	3.03025	.02286	.16320	.045	.00262	.00027	-.04336	-.19018	-.17163
1.800	4.402	3.03234	.10679	.15837	.03368	.00261	-.00073	-.04200	-.19274	-.16909
1.800	6.450	3.03292	.16807	.15341	.03438	.00293	-.00154	-.03960	-.18746	-.17438
1.800	8.557	3.03347	.26943	.14360	.02787	.00325	-.00234	-.03716	-.18766	-.17194
1.800	12.676	3.03784	.42592	.13663	.02027	.00323	-.00460	-.03332	-.17709	-.16133
1.800	16.654	3.04624	.58842	.12328	.01416	.00391	-.00873	-.02645	-.16650	-.14808
1.800	21.107	3.05547	.75745	.11902	.01043	.00451	-.01328	-.01895	-.16116	-.14800
1.800	22.413	3.05727	.81004	.11316	.01004	.00469	-.01480	-.01516	-.17170	-.15594
GRADIENT		-.00003	.04144	-.00251	-.00339	-.00023	-.00037	.00141	-.00275	-.00366

LA-6A LARC UPWT 1034 NAR D898-MOD. NOSE ORBITER

(RP6115) (20 JUN 75)

REFERENCE DATA

SREF = 136.1826 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 6.9325 INCHES YMRP = .0000 INCHES
 DREF = 17.5626 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

BETA = -3.000 ELEVTR = -20.000
 AILRON = 10.000 RUDFLR = 40.000
 GT-LOC = 3.000 K/L = 6.820

RUN NO. 11/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.800	-3.684	-3.05044	-2.7298	.19321	.11473	.01011	-.00970	.07580	-.27264	-.24651
1.800	-1.798	-3.04840	-1.1745	.19244	.09920	.01032	-.01029	.07592	-.26075	-.23709
1.800	-.720	-3.04737	-1.1631	.19159	.09195	.01014	-.01020	.07456	-.26324	-.25694
1.800	.311	-3.04693	-.07305	.18944	.08368	.01029	-.01035	.07469	-.28308	-.25413
1.800	1.356	-3.04649	-.01983	.18665	.07508	.01036	-.01049	.07476	-.28312	-.25417
1.800	2.389	-3.04692	.02660	.18507	.06871	.01017	-.01021	.07413	-.28318	-.25161
1.800	4.517	-3.04512	.12695	.17920	.05458	.00955	-.00974	.07059	-.28124	-.25431
1.800	6.611	-3.04632	.22475	.17236	.04267	.00938	-.00929	.07011	-.27025	-.23867
1.800	8.730	-3.04728	.32276	.16794	.03149	.00987	-.00831	.06744	-.25724	-.23612
1.800	10.717	-3.04814	.40943	.16766	.02267	.00934	-.00795	.06474	-.25207	-.23095
1.800	17.047	-3.05070	.68313	.10703	.00347	.01211	-.00159	.05534	-.09197	-.03856
1.800	19.101	-3.06420	.76398	.09722	.00291	.01276	-.00193	.04699	-.04354	.01541
GRADIENT	.00057	.04749	-.00171	-.00722	-.00205	-.00201	-.00055	-.00040	-.00105	-.00040

RUN NO. 14/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.900	-3.950	-3.07222	-.23836	.18164	.08796	.00896	-.00943	.07790	-.22979	-.20362
1.900	-1.888	-3.07104	-.15258	.17019	.07693	.00918	-.00920	.07586	-.23235	-.20353
1.900	-.832	-3.06834	-.10570	.17645	.07068	.00938	-.00940	.07437	-.22977	-.20360
1.900	.218	-3.05029	-.06262	.17409	.06689	.00923	-.00912	.07375	-.22715	-.20097
1.900	1.227	-3.04954	-.01978	.17278	.06085	.00941	-.00874	.07158	-.22719	-.19837
1.900	2.265	-3.04994	.02107	.17010	.05531	.00909	-.00845	.07092	-.22727	-.19847
1.900	4.308	-3.04928	.10466	.16534	.04517	.00853	-.00768	.06737	-.22994	-.20116
1.900	6.455	-3.04937	.19150	.15751	.03499	.00856	-.00699	.06541	-.20882	-.18789
1.900	8.567	-3.05047	.27268	.15122	.02638	.00879	-.00629	.06343	-.19826	-.18522
1.900	12.668	-3.05208	.42722	.14176	.01870	.00826	-.00499	.06023	-.19826	-.18522
1.900	16.851	-3.06213	.59083	.12890	.01408	.00797	-.00348	.05372	-.18777	-.17734
1.900	21.079	-3.07132	.75832	.11369	.00814	.00841	-.00241	.04201	-.17201	-.15626
1.900	22.413	-3.07655	.81061	.11204	.00769	.00958	-.00175	.02869	-.18515	-.15416
GRADIENT	.00051	.04137	-.00200	-.00514	-.00204	-.00201	-.00021	-.00028	-.00028	.00058

REFERENCE DATA
 SREF = 136.1808 IN. XMRP = 15.5638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0160 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = .000
 AILRON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 93 / 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CYN	CY	CFB	CPC
1.800	-3.833	-0.01283	-0.16905	.16805	.03405	-.00006	-.00577	.01576	-.24407	-.22035
1.900	-1.741	-0.01253	-0.07063	.16425	.03679	.00002	-.00559	.01453	-.24036	-.21130
1.800	-.697	-0.01336	-.02227	.16227	.03005	.00016	-.00548	.01471	-.23999	-.20210
1.800	.345	-0.01402	.03041	.15957	.02156	.00037	-.00535	.01468	-.22797	-.18543
1.800	1.384	-0.01359	.07911	.15776	.01439	.00044	-.00548	.01493	-.21300	-.17846
1.800	2.427	-0.01345	.12713	.15554	.00694	.00064	-.00532	.01422	-.20439	-.17791
1.800	4.547	-0.01497	.22948	.15236	-.00783	.00084	-.00537	.01596	-.20505	-.18124
1.800	6.637	-0.01349	.32144	.14887	-.02213	.00105	-.00542	.01463	-.20751	-.18369
1.800	8.742	-0.01354	.41598	.14493	-.03300	.00126	-.00527	.01414	-.20468	-.18610
1.800	12.884	-0.01484	.60307	.12870	-.05326	.00186	-.00547	.01617	-.14095	-.13005
1.800	16.847	-0.01327	.77236	.09740	-.06304	.00214	-.00529	.01595	-.07786	-.05434
GRADIENT		-.00024	.04759	-.00173	-.00742	.00012	-.00005	.00001	-.00566	.00561

RUN NO. 99 / 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CL	CYN	CY	CFB	CPC
1.900	-3.940	.00494	-0.15220	.15929	.03463	.00035	-.00511	.01442	-.20596	-.18770
1.900	-1.649	.00406	-0.06601	.15656	.02625	.00049	-.00500	.01465	-.20605	-.17980
1.900	-.806	.00309	-.02291	.15469	.02301	.00056	-.00492	.01320	-.20372	-.16898
1.900	.228	.00496	.01996	.15039	.01643	.00064	-.00494	.01330	-.18254	-.16159
1.900	1.260	.00483	.06065	.14854	.01090	.00064	-.00493	.01336	-.19028	-.15937
1.900	2.304	.00378	.10557	.14684	.00506	.00077	-.00487	.01425	-.17536	-.15710
1.900	4.389	.00360	.16704	.14382	-.00517	.00092	-.00472	.01368	-.17566	-.15743
1.900	6.461	.00290	.26961	.14232	-.01424	.00112	-.00454	.01392	-.18371	-.16552
1.900	8.558	.00251	.35066	.14167	-.02212	.00120	-.00452	.01414	-.19677	-.17861
1.900	12.699	.00490	.50595	.13564	-.03065	.00154	-.00486	.01304	-.20931	-.18649
1.900	16.876	.00272	.67164	.12693	-.03752	.00176	-.00463	.01439	-.20352	-.18527
1.900	21.115	.00229	.84100	.10630	-.04125	.00193	-.00406	.01271	-.14521	-.11883
1.900	22.106	.00093	.87768	.10374	-.04054	.00154	-.00373	.01289	-.14259	-.11091
GRADIENT		-.00012	.04063	-.00200	-.00533	.00007	-.00004	-.00008	.00471	.00398

LA-6A LARC UPWT 1034 NAR 0688-HOD. NOSE ORBITER

(RP6115) (20 JUN 73)

REFERENCE DATA

SREF = 136.1606 96.1N. XMRP = 15.9636 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5626 INCHES ZMRP = .0000 INCHES
 SCALE = .0166 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = .000
 ALLRON = .000 RUCFLR = 40.000
 97-LOC = 2.000 K/L = 6.620

RUN NO. 54/ 0 RM/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CPB	CPC
1.600	-3.822	3.03665	-1.6770	.16287	.05355	-.00235	-.00044	-.04665	-.22727	-.25307
1.600	-1.750	3.03661	-.06463	.16131	.03704	-.03235	-.00082	-.04560	-.22209	-.19033
1.600	-.690	3.03706	-.01434	.16028	.02973	-.02274	-.00100	-.04543	-.21966	-.16526
1.600	.353	3.03695	.03206	.15980	.02139	-.00268	-.00102	-.04536	-.21978	-.18604
1.600	1.395	3.03531	.08461	.15936	.01484	-.00293	-.00122	-.04297	-.22244	-.19335
1.600	2.435	3.03519	.12917	.15901	.00691	-.00293	-.00161	-.04141	-.22499	-.19653
1.600	4.549	3.03603	.23004	.15799	-.00787	-.00260	-.00290	-.03974	-.23291	-.21438
1.600	6.646	3.03687	.33215	.15312	-.02152	-.00248	-.00297	-.03607	-.23616	-.21701
1.600	8.739	3.03591	.42291	.14621	-.03340	-.00171	-.00350	-.03466	-.21449	-.19590
1.600	12.897	3.03679	.60717	.12758	-.05315	-.00222	-.00433	-.03224	-.16712	-.13766
1.600	16.861	3.04637	.77671	.09914	-.06185	-.00239	-.00456	-.02697	-.10144	-.01403
GRADIENT		-.00034	.04733	-.00055	-.00731	-.00206	-.00021	-.00108	-.00071	-.00032

RUN NO. 60/ 0 RM/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CEB	CYN	CY	CPB	CPC
1.900	-3.943	3.01836	-1.5226	.15361	.03634	-.00190	-.00026	-.04633	-.18762	-.16402
1.900	-1.870	3.01663	-.06819	.15123	.02509	-.00214	-.00092	-.04437	-.16493	-.16132
1.900	-.810	3.01620	-.02317	.15035	.02026	-.00224	-.00107	-.04331	-.16737	-.16132
1.900	.226	3.01636	.01990	.14997	.01487	-.00224	-.00136	-.04267	-.16782	-.16667
1.900	1.248	3.01565	.05895	.14961	.00918	-.00224	-.00160	-.04105	-.19298	-.17276
1.900	2.288	3.01696	.10399	.14934	.00403	-.00210	-.00177	-.04174	-.19824	-.17733
1.900	4.400	2.95711	.18595	.14841	-.00547	-.00191	-.00309	-.03596	-.21148	-.18532
1.900	6.477	3.01728	.26721	.14668	-.01554	-.00198	-.00296	-.03764	-.22209	-.19332
1.900	8.559	3.01638	.34887	.14288	-.02277	-.00199	-.00336	-.03371	-.21960	-.19061
1.900	12.705	3.01737	.50745	.13270	-.03097	-.00271	-.00481	-.03109	-.19822	-.17731
1.900	16.870	3.02739	.67212	.12081	-.03912	-.00171	-.00593	-.02362	-.17444	-.16140
1.900	21.119	3.03729	.83724	.10530	-.04207	-.00276	-.00547	-.01166	-.14011	-.12168
1.900	22.128	3.03902	.86787	.10664	-.03677	-.00461	-.00755	-.00568	-.14813	-.12973
GRADIENT		-.00062	.04067	-.00058	-.00503	-.00200	-.00017	-.00131	-.00292	-.00029

LA-8A LARC UPWT 1034 NAR 0698-900, NOSE ORBITER

(82-6116) (20 JUN 73)

REFERENCE DATA

SREF = 136.1808 88.14, XWP = 15.9638 INCHES
 LREF = 5.9025 INCHES, YWP = .0000 INCHES
 BREF = 17.5828 INCHES, ZWP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

BETA = .000 ELEVTR = -10.000
 ATURON = .000 RUOPLR = 45.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 27/ 0 RW/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

M-CH	ALPHA	BETA	CH	CA	CLM	CLB	CYN	CY	C-B	CPC
1.800	-3.826	.00704	-.20822	.17280	.04086	.00060	-.00542	.01293	-.25442	-.22803
1.800	-1.736	.00395	-.10679	.16891	.07825	.00046	-.00507	.01319	.247 3	-.21805
1.800	-.896	.00601	-.05659	.16883	.06343	.00042	-.00522	.01358	-.24427	-.21529
1.800	.346	.00646	-.01167	.16787	.06007	.00036	-.00496	.01106	-.24753	-.21329
1.800	1.369	.00715	.04078	.16592	.04872	.00069	-.00496	.01118	-.24628	-.21151
1.800	2.432	.00815	.08531	.16376	.04064	.00077	-.00493	.01207	-.24526	-.21106
1.800	4.545	.00702	.16453	.15848	.02996	.00096	-.00491	.01228	-.23446	-.21074
1.800	6.646	.00635	.28449	.15659	.01459	.00136	-.00491	.01179	-.23735	-.21192
1.800	8.760	.00571	.38397	.15152	.00103	.00176	-.00499	.01276	-.22750	-.20956
1.800	12.889	.00563	.56787	.12346	-.02212	.00232	-.00510	.01322	-.14855	-.12463
1.800	16.843	.00579	.73596	.09367	-.03140	.00267	-.00506	.01296	-.07874	-.01347
GRADIENT		.00205	.04872	-.00166	-.00748	.00009	.00003	-.00016	.00181	.00196

RUN NO. 33/ 0 RW/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

M-CH	ALPHA	BETA	CH	CA	CLM	CLB	CYN	CY	C-B	CPC
1.900	-3.934	.00399	-.19310	.16370	.06427	.00027	-.00619	.01320	-.21051	-.19237
1.900	-1.688	.00063	-.10298	.16071	.05470	.00046	-.00517	.01345	-.21039	-.19224
1.900	-.615	.00234	-.06197	.15922	.04849	.00062	-.00485	.01360	-.21039	-.18959
1.900	.211	.00367	-.02080	.15723	.04299	.00076	-.00503	.01490	-.21035	-.18424
1.900	1.245	.00294	.02219	.15423	.03765	.00083	-.00486	.01504	-.20907	-.17364
1.900	2.294	.00201	.08502	.14938	.02951	.00103	-.00485	.01513	-.18659	-.16378
1.900	4.361	.00233	.14714	.14623	.01926	.00111	-.00483	.01533	-.18132	-.16044
1.900	6.463	.00223	.23052	.14375	.01047	.00123	-.00468	.01480	-.16656	-.16099
1.900	8.582	.00225	.31007	.13974	.00126	.00139	-.00466	.01301	-.19179	-.16836
1.900	12.694	.00216	.46932	.13136	-.00686	.00180	-.00476	.01347	-.19441	-.17090
1.900	16.860	.00145	.63354	.12120	-.01298	.00202	-.00471	.01396	-.18652	-.17094
1.900	21.102	-.00131	.80010	.10496	-.01966	.00192	-.00391	.01364	-.15479	-.13117
1.900	22.110	-.00263	.85697	.10105	-.01697	.00147	-.00360	.01302	-.14866	-.12037
GRADIENT		-.00016	.04073	-.00223	-.00552	.00011	.00003	-.00002	.00388	.00482

DATE 31 OCT 73

TABULATED SOURCE DATA LARC 1023/1034

(RP6117) (20 JUN 73)

LA-8A LARC UPWT 1034 NAR 0698-HCD, NOSE ORBITER

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -10.000
AILRON = .000 RUOFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

GRADIENT INTERVAL = -5.00/ 5.00

REFERENCE DATA

REF = 136.1808 SQ.IN. YMRP = 15.9638 INCHES
LREF = 6.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5626 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

RUN NO. 28/ 0 RV/L = 1.50

MACH	ALPHA	BETA	CA	CLM	CBL	CYN	CY	CFB	CPC
1.000	-3.641	3.02104	.16910	.08716	-.00215	.00007	-.05890	-.25450	-.21889
1.000	-1.742	3.01897	.16645	.07203	-.00247	-.00024	-.04918	-.22892	-.20847
1.000	-.721	3.01861	.16559	.06349	-.00273	-.00037	-.04831	-.22731	-.20825
1.000	.327	3.01671	.16474	.05396	-.00279	-.00029	-.04664	-.22742	-.20374
1.000	1.374	3.01744	.16395	.04621	-.00292	-.00072	-.04583	-.23255	-.21825
1.000	2.424	3.01761	.16368	.03832	-.00285	-.00098	-.04504	-.23757	-.21390
1.000	4.526	3.01670	.16281	.02833	-.00266	-.00160	-.04405	-.24796	-.22694
1.000	6.645	3.01720	.15756	.01175	-.00221	-.00239	-.03941	-.25062	-.22961
1.000	8.734	3.01773	.15151	-.00072	-.00150	-.00329	-.03484	-.24537	-.22171
1.000	12.875	3.01741	.12541	-.02164	-.00163	-.00382	-.03432	-.16673	-.14522
1.600	16.841	3.02753	.09851	-.03034	-.00114	-.00759	-.03655	-.15633	-.03514
GRADIENT		-.00048	-.00073	-.00756	-.00007	-.00019	-.00122	-.00184	-.00101

(RP6118) (20 JUN 73)

LA-8A LARC UPWT 1034 NAR 0698-HCD, NOSE ORBITER

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -10.000
AILRON = .000 RUOFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

GRADIENT INTERVAL = -5.00/ 5.00

REFERENCE DATA

REF = 136.1808 SQ.IN. YMRP = 15.9638 INCHES
LREF = 6.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5626 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

RUN NO. 34/ 0 RV/L = 1.50

MACH	ALPHA	BETA	CA	CLM	CBL	CYN	CY	CFB	CPC
1.000	-3.984	3.03750	.15740	.06121	-.00204	-.00025	-.04915	-.16361	-.17087
1.000	-1.865	3.03457	.15940	.05052	-.00217	-.00054	-.04510	-.17325	-.16029
1.000	-.830	3.03384	.15148	.04516	-.00224	-.00077	-.04347	-.17597	-.15506
1.000	.210	3.03339	.14212	.04070	-.00230	-.00088	-.04280	-.17859	-.14973
1.000	1.238	3.03357	.14866	.03377	-.00230	-.00115	-.04117	-.17866	-.14981
1.000	2.278	3.03284	.14783	.02897	-.00230	-.00139	-.04015	-.1812	-.15243
1.000	4.377	3.03313	.14670	.01838	-.00204	-.00192	-.03848	-.1812	-.15243
1.000	6.480	3.03314	.14200	.00819	-.00192	-.00258	-.03616	-.1913	-.16564
1.000	8.555	3.03345	.14054	-.00050	-.00166	-.00351	-.03292	-.20028	-.18150
1.000	12.692	3.03668	.12757	-.00192	-.00138	-.00463	-.03187	-.20784	-.18023
1.000	16.855	3.04443	.11624	-.00192	-.00138	-.00535	-.02954	-.21684	-.18503
1.000	21.103	3.05307	.09987	-.00192	-.00138	-.00627	-.02829	-.22684	-.19126
1.000	22.102	3.05717	.09255	-.00192	-.00138	-.00739	-.02663	-.23717	-.19717
GRADIENT		-.00049	-.00135	-.00817	-.00001	-.00020	-.00124	-.00184	-.00101

LA-6A LARC UPWT 1034 NAR 0898-930. NOSE ORBITER

(RP6119) (20 JUN 73)

REFERENCE DATA

SREF = 136.1908 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 6.9725 INCHES YMRP = .0700 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

BETA = .0000 ELEVTR = -10.000
 AIRLON = 10.0000 RUDPLR = 40.000
 CT-LOC = 2.0000 K/L = 6.620

RUN NO. 40/ 0 RVAL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	CPB	CPC
1.600	-3.853	-.01737	-.22010	.17265	.06486	.00736	-.00455	.01533	-.24636	-.22266
1.600	-1.770	-.01660	-.11874	.17012	.06892	.00760	-.00482	.01497	-.23969	-.21589
1.600	-.713	-.01753	-.06824	.16896	.06194	.00754	-.00449	.01925	-.23709	-.21287
1.600	.323	-.01663	-.01616	.16800	.05368	.00757	-.00481	.01574	-.23687	-.20991
1.600	1.361	-.01576	.02842	.16649	.04617	.00749	-.00474	.01439	-.23686	-.21076
1.600	2.428	-.01623	.08712	.16459	.03874	.00731	-.00486	.01530	-.24217	-.20774
1.600	4.544	-.01592	.18448	.16094	.02423	.00712	-.00499	.01549	-.23440	-.21320
1.600	6.636	-.01442	.28236	.15750	.01253	.00646	-.00504	.01414	-.24053	-.21941
1.600	8.731	-.01417	.38236	.15257	-.00108	.00666	-.00516	.01434	-.22779	-.21193
1.600	12.680	-.01454	.50450	.12357	-.02446	.00733	-.00538	.01553	-.13362	-.11707
1.600	16.246	-.01292	.75437	.09829	-.03145	.00767	-.00554	.01449	-.07260	-.06618
GRADIENT		.00000	.04828	-.00137	-.00723	-.00004	-.00006	.00001	.00092	.00027

RUN NO. 46/ 0 RVAL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CLB	CYN	CY	CPB	CPC
1.900	-5.972	.00409	-.21333	.16548	.06485	.00675	-.00402	.01075	-.20179	-.18356
1.900	-1.879	.00472	-.12748	.16295	.05421	.00651	-.00404	.01018	-.19903	-.18343
1.900	-.422	.00564	-.07835	.16166	.05012	.00671	-.00399	.01110	-.19901	-.18076
1.900	.150	.00501	-.03935	.16029	.04439	.00652	-.00417	.01030	-.19913	-.17825
1.900	1.253	.00422	.01550	.15784	.03870	.00659	-.00400	.01055	-.19915	-.17298
1.900	2.201	.00326	.09846	.15348	.03335	.00659	-.00430	.01060	-.19402	-.16785
1.900	4.361	.00370	.13200	.15084	.02024	.00594	-.00445	.01072	-.18886	-.16268
1.900	6.451	.00367	.22684	.14696	.01128	.00562	-.00431	.01022	-.18361	-.16271
1.900	8.542	.00357	.34834	.14307	.00262	.00596	-.00450	.01038	-.18679	-.16254
1.900	12.688	.00315	.45668	.13542	-.00831	.00637	-.00466	.01076	-.19398	-.16760
1.900	16.658	.00377	.62924	.12472	-.01438	.00698	-.00510	.01124	-.18332	-.16239
1.900	21.089	.00463	.79928	.10982	-.02139	.00716	-.00512	.01019	-.15434	-.13334
1.900	22.385	.00784	.84957	.10419	-.02153	.00874	-.00495	.01038	-.14362	-.11749
GRADIENT		.00000	.04224	-.00177	-.00530	-.00007	-.00005	.00000	.00141	.00000

REFERENCE DATA
 SREF = 136.1606 SQ. IN. XRRF = 15.9636 INCHES
 LREF = 6.9025 INCHES YRRF = .0000 INCHES
 BREF = 17.5626 INCHES ZRRF = .0000 INCHES
 SCALE = .0166 SCALE

PARAMETRIC DATA

BETA = 3.000 ELEVTR = -10.000
 AIRLON = 10.000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.620

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.800	-3.836	3.01692	-21412	.17152	.06520	.00521	.00114	-.05229	-.23339	-.22020
1.800	-1.762	3.01578	-11312	.16851	.06951	.00462	.00078	-.04973	-.22605	-.20760
1.800	-.697	3.01446	-.06269	.16725	.06205	.00442	.00070	-.04607	-.22362	-.20517
1.800	.336	3.01435	-.01250	.16625	.05325	.00410	.00031	-.04651	-.22613	-.20505
1.800	1.374	3.01365	.03203	.16569	.04675	.00391	.00007	-.04495	-.23111	-.20739
1.800	2.415	3.01437	.08451	.16551	.03950	.00377	-.00035	-.04411	-.23840	-.21533
1.800	4.533	3.01496	.18717	.16368	.02490	.00344	-.00116	-.04169	-.24436	-.22558
1.800	6.640	3.01764	.27922	.15948	.01143	.00331	-.00231	-.04013	-.24442	-.22665
1.800	8.744	3.01764	.37745	.15351	-.00162	.00311	-.00297	-.03770	-.24172	-.22767
1.800	12.862	3.02031	.56113	.12730	-.02136	.00226	-.00438	-.03514	-.16376	-.13925
1.800	16.836	3.02664	.73245	.09462	-.03091	.00226	-.00808	-.02934	-.10716	-.02677
1.800	GRADIENT	-.00023	.04773	-.00089	-.00723	-.00021	-.00028	.00129	-.00165	-.00093

REFERENCE DATA

SREF = 136.1606 SQ. IN. XRRF = 15.9636 INCHES
 LREF = 6.9025 INCHES YRRF = .0000 INCHES
 BREF = 17.5626 INCHES ZRRF = .0000 INCHES
 SCALE = .0166 SCALE

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.900	-3.970	-3.05062	-21285	.16761	.06636	.00543	-.00965	.07631	-.21250	-.16636
1.900	-1.872	-3.04818	-12303	.16522	.05535	.00965	-.00500	.07195	-.21256	-.16361
1.900	-.831	-3.04775	-.07998	.16360	.05072	.00979	-.00894	.07053	-.21264	-.16125
1.900	.216	-3.04707	-.02722	.16221	.04488	.01007	-.00856	.06843	-.20733	-.16121
1.900	1.237	-3.04625	.00375	.16089	.03850	.00988	-.00859	.06772	-.20994	-.16383
1.900	2.275	-3.04579	.05237	.15988	.03226	.00957	-.00834	.06632	-.21262	-.16387
1.900	4.366	-3.04517	.13797	.15637	.02027	.00959	-.00796	.06427	-.21262	-.16387
1.900	6.460	-3.04634	.22287	.15166	.01097	.00955	-.00711	.06230	-.21000	-.16369
1.900	8.542	-3.04662	.30407	.14832	.00125	.00972	-.00629	.05958	-.20727	-.16378
1.900	12.685	-3.04859	.47057	.13659	-.00680	.00951	-.00511	.05717	-.19145	-.17585
1.900	16.842	-3.05739	.62810	.12524	-.01550	.00962	-.00392	.05538	-.17827	-.16528
1.900	21.002	-3.05684	.81154	.10589	-.02300	.00995	-.00494	.05368	-.14664	-.12298
1.900	22.394	-3.05706	.84639	.10073	-.02704	.00921	-.00821	.05264	-.14927	-.12827
1.900	GRADIENT	.00066	.05285	-.00014	-.00056	.00001	.00020	-.00042	.00005	.00007

PARAMETRIC DATA

BETA = -3.020 ELEVTR = -10.000
 AIRLON = 10.000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.620

GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.900	-3.970	-3.05062	-21285	.16761	.06636	.00543	-.00965	.07631	-.21250	-.16636
1.900	-1.872	-3.04818	-12303	.16522	.05535	.00965	-.00500	.07195	-.21256	-.16361
1.900	-.831	-3.04775	-.07998	.16360	.05072	.00979	-.00894	.07053	-.21264	-.16125
1.900	.216	-3.04707	-.02722	.16221	.04488	.01007	-.00856	.06843	-.20733	-.16121
1.900	1.237	-3.04625	.00375	.16089	.03850	.00988	-.00859	.06772	-.20994	-.16383
1.900	2.275	-3.04579	.05237	.15988	.03226	.00957	-.00834	.06632	-.21262	-.16387
1.900	4.366	-3.04517	.13797	.15637	.02027	.00959	-.00796	.06427	-.21262	-.16387
1.900	6.460	-3.04634	.22287	.15166	.01097	.00955	-.00711	.06230	-.21000	-.16369
1.900	8.542	-3.04662	.30407	.14832	.00125	.00972	-.00629	.05958	-.20727	-.16378
1.900	12.685	-3.04859	.47057	.13659	-.00680	.00951	-.00511	.05717	-.19145	-.17585
1.900	16.842	-3.05739	.62810	.12524	-.01550	.00962	-.00392	.05538	-.17827	-.16528
1.900	21.002	-3.05684	.81154	.10589	-.02300	.00995	-.00494	.05368	-.14664	-.12298
1.900	22.394	-3.05706	.84639	.10073	-.02704	.00921	-.00821	.05264	-.14927	-.12827
1.900	GRADIENT	.00066	.05285	-.00014	-.00056	.00001	.00020	-.00042	.00005	.00007

LA-8A LARC UPWT 1054 NAR D698-HOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = .000 ELEVTR = .000
 ATLRON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1008 50. IN. YMRP = 15.9636 INCHES
 LREF = 8.9025 1. INCHES YMRP = .0000 INCHES
 BREF = 17.9626 1. INCHES ZMRP = .0000 INCHES
 SCALE = .0166 SCALE

RUN NO. 55/0 RV/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CEL	CYN	CY	CFB	CPC
1.800	-8.094	.33376	.03023	.16706	.01761	.00790	-.01603	.13453	-.28033	-.24636
1.800	-4.050	.34555	.02904	.16391	.02065	.00979	-.01196	.09566	-.24647	-.21749
1.800	-2.026	.34395	.03347	.15976	.02110	.00254	-.00637	.09350	-.22263	-.19641
1.800	.006	.34947	.03021	.15981	.02209	.00043	-.00322	.01324	-.22676	-.16566
1.800	2.003	.35106	.03062	.15949	.02272	-.00166	-.00252	-.02366	-.21739	-.16567
1.800	4.071	.34276	.03133	.15963	.02055	-.00392	.00051	-.06261	-.22526	-.15919
1.900	6.064	.35616	.03151	.15940	.01632	-.00666	.00420	-.10451	-.23657	-.20926
1.800	8.113	.34237	.03352	.15795	.01350	-.02666	.00770	-.14704	-.25696	-.22601
GRADIENT		.00056	.00010	-.00044	.00005	-.00111	.00192	-.01926	.00235	.00262

RUN NO. 61/0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CEL	CYN	CY	CFB	CPC
1.800	-8.117	.22025	.01566	.15779	.01225	.00726	-.01427	.13857	-.23516	-.21113
1.800	-4.066	.22512	.01667	.15567	.01516	.00976	-.01061	.09134	-.21670	-.18214
1.800	-2.006	.22707	.01734	.15406	.01633	.00263	-.00746	.09064	-.20766	-.17994
1.800	.005	.23128	.01993	.15044	.01574	.00077	-.00464	.01331	-.16242	-.16147
1.800	2.019	.22305	.02057	.14951	.01496	-.00317	-.00253	-.02347	-.17963	-.16152
1.800	4.063	.21473	.01724	.15068	.01456	-.00317	-.00074	-.06176	-.19313	-.17467
1.800	6.063	.21626	.01754	.15084	.01235	-.00567	.00326	-.10229	-.20626	-.16274
1.800	8.170	.21546	.01730	.15363	.00731	-.00617	.00693	-.14592	-.23522	-.21971
GRADIENT		-.00122	.00002	-.00072	-.00013	-.00101	.00130	-.01674	.00336	.00296

TABLATED SOURCE DATA LARC 1023/1034

LA-6A LARC UPWT 1034 NAR 3098-MOD. NOSE ORBITER

(RP6123) (20 JUN 73)

REFERENCE DATA

SREF = 136.1806 SQ. IN. YMRP = 15.9636 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

ALPHA = 5.000 ELEVTR = .000
 ALLRON = .000 RUFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 56/ 0 RVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-6.114	5.59040	.27241	.16450	-.01575	.01024	-.01393	.12772	-.27807	-.25445
1.600	-4.050	5.59387	.27475	.16121	-.01502	.00872	-.01031	.08635	-.25441	-.25334
1.600	-2.029	5.60148	.27694	.15443	-.01429	.00324	-.00705	.05116	-.22315	-.20200
1.600	-.014	5.60465	.27951	.14979	-.01418	.00098	-.00539	.01532	-.21489	-.17844
1.600	2.040	5.60283	.27817	.15367	-.01442	-.00122	-.00374	-.02054	-.22064	-.19849
1.600	4.073	5.59969	.27652	.15680	-.01543	-.00431	-.00125	-.05781	-.24687	-.22318
1.600	6.063	5.59743	.27475	.15779	-.01716	-.00771	.00196	-.09574	-.26521	-.23631
1.600	8.129	5.59126	.27312	.15936	-.01888	-.01093	.00600	-.13452	-.28606	-.26247
GRADIENT		.00064	.00023	-.00047	-.00005	-.00131	.00105	-.01792	.00085	.00110

RUN NO. 62/ 0 RVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.900	-6.117	5.42823	.22655	.15317	-.01238	.00870	-.01194	.12411	-.23268	-.22647
1.900	-4.072	5.44745	.22712	.15194	-.01037	.00692	-.00895	.08665	-.21936	-.20932
1.900	-2.010	5.44723	.22558	.14945	-.01067	.00302	-.00592	.04692	-.20898	-.19341
1.900	.004	5.44554	.22455	.14284	-.00948	.00105	-.00473	.01384	-.17730	-.16164
1.900	2.000	5.44160	.22534	.14601	-.01163	-.00264	-.00355	-.01927	-.21148	-.18202
1.900	4.091	5.44207	.22505	.14844	-.01175	-.00337	-.00134	-.05686	-.22469	-.19593
1.900	6.064	5.44103	.22821	.14900	-.01310	-.00642	.00104	-.09366	-.22732	-.20649
1.900	8.113	5.44292	.23050	.14948	-.01375	-.00940	.00348	-.13272	-.24585	-.22509
GRADIENT		-.00080	-.00014	-.00051	-.00018	-.00109	.00087	-.01737	-.00063	.00197

LA-8A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

REFERENCE DATA

SREF = 136.1808 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 6.9025 INCHES YMRP = .0000 INCHES
 PREF = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

ALPHA = 10.000 ELEVTR = .000
 AILRON = .000 RUFLR = 40.000
 CT-LOC = 2.000 K/L = 6.620

RUN NO. 57/ 0 RV/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-6.121	10.61405	.51095	.15424	-.04409	.01062	-.07918	.11754	-.26510	-.24671
1.600	-4.073	10.61929	.51100	.14894	-.04425	.00705	-.07746	.08241	-.23909	-.22593
1.600	-2.029	10.61970	.51119	.14102	-.04432	.00403	-.07594	.04728	-.20002	-.16458
1.600	.004	10.62098	.51404	.13914	-.04422	.00185	-.07520	.01516	-.18685	-.17087
1.600	2.036	10.61162	.51096	.13756	-.04499	-.00101	-.07471	-.01590	-.18934	-.16611
1.600	4.073	10.60454	.50812	.13771	-.04292	-.00206	-.07332	-.09062	-.20767	-.17593
1.600	6.106	10.61356	.50678	.14136	-.04327	-.00550	-.07213	-.08661	-.24156	-.19945
1.600	8.140	10.61977	.51101	.14572	-.04376	-.00894	-.07142	-.12183	-.27164	-.23105
GRADIENT		-.00164	-.00010	-.00127	.00010	-.00111	.00047	-.01615	.00362	.00517

RUN NO. 63/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.900	-6.105	10.62779	.42671	.14298	-.02834	.01013	-.07644	.11069	-.22213	-.21186
1.900	-4.056	10.63129	.42740	.14122	-.02775	.00718	-.07571	.07851	-.21156	-.19864
1.900	-2.029	10.63320	.42558	.14032	-.02804	.00397	-.07505	.04450	-.19831	-.18785
1.900	.002	10.63584	.42661	.13934	-.02873	.00128	-.07452	.01443	-.20106	-.18527
1.900	2.018	10.63224	.42533	.13674	-.02838	-.00103	-.07446	-.01577	-.19841	-.17487
1.900	4.055	10.64435	.42824	.13769	-.02691	-.00346	-.07422	-.04902	-.21418	-.18803
1.900	6.107	10.62960	.42669	.13992	-.02856	-.00636	-.07419	-.07598	-.23535	-.20134
1.900	8.123	10.63605	.43079	.14092	-.03047	-.00975	-.07348	-.11622	-.25122	-.21991
GRADIENT		.00124	.00007	-.00053	.00007	-.00134	.00018	-.03556	-.00326	.00183

DATE 31 OCT 73 TABULATED SOURCE DATA LARC 1023/1034

LA-8A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

(RF6123) (20 JUN 75)

ALPHA = 15.000 ELEVTR = .000
AL_RON = .000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1608 SQ. IN. XMRP = 15.9638 INCHES
LREF = 8.9225 INCHES YMRP = .0000 INCHES
BREF = 17.5628 INCHES ZMRP = .0000 INCHES
SCALE = .0168 SCALE

PARAMETRIC DATA

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.600	-6.142	16.09280	.73679	.10771	-.06192	.00978	.00011	.10475	-.10880	-.08725
1.600	-4.065	16.09703	.73494	.11001	-.05860	.00783	.00240	.07497	-.11432	-.06644
1.600	-2.035	16.09896	.74299	.10506	-.06221	.00485	-.00398	.04616	-.09865	-.03756
1.600	.003	16.09737	.74167	.10268	-.06386	.00240	-.00542	.01660	-.00000	-.01584
1.600	2.023	16.09475	.73893	.10379	-.06156	-.00263	-.00690	-.01364	-.11664	-.02941
1.600	4.064	16.09482	.73815	.10464	-.05905	-.00395	-.00287	-.04030	-.09833	-.05302
1.600	6.124	16.09490	.73904	.10545	-.05979	-.00590	-.01138	-.07005	-.11674	-.05885
1.600	8.144	16.09867	.74291	.10605	-.06376	-.00892	-.01218	-.10567	-.13793	-.09274
GRADIENT	.00026	.00012	-.00059	-.00001	-.00001	-.00001	-.00075	-.01429	.00068	.00172

RUN NO. 58/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.900	-6.122	15.89057	.63166	.12728	-.03996	.01047	.00115	.10038	-.21418	-.20126
1.900	-4.088	15.89226	.63007	.12823	-.03745	.00690	.00348	.06769	-.21433	-.19349
1.900	-1.997	15.89119	.63511	.13152	-.03719	.00429	-.00254	.04091	-.21427	-.19817
1.900	-.016	15.89559	.62986	.12944	-.03635	.00195	-.00475	.01499	-.21646	-.18560
1.900	2.020	15.89435	.63099	.12723	-.03644	-.00078	-.00645	-.01314	-.19594	-.18004
1.900	4.085	15.89053	.63170	.12413	-.03721	.00314	-.01002	-.03849	-.19924	-.17234
1.900	6.104	15.89928	.63267	.12719	-.03975	.00612	-.01164	-.06922	-.21158	-.19866
1.900	8.141	15.89477	.63452	.12575	-.04234	.00950	-.01054	-.09912	-.21420	-.20657
GRADIENT	.00053	.00026	-.00006	-.00001	-.00006	-.00012	-.00122	-.01308	.00297	.00284

RUN NO. 64/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

LA-8A LARC UPWT 1034 NAR 0698-MOD. NCSF ORBITER

(RP6126) (20 JUN 73)

REFERENCE DATA

SRFP = 136.1606 80. IN. XMRP = 15.9636 INC-E
LREF = 6.9725 1-ACHES YMRP = .0000 1-ACHES
BREF = 17.9628 1-ACHES ZMRP = .0000 1-ACHES
SCALE = .0120 SCALE

PARAMETRIC DATA

ALPHA = 20.000 ELEVTR = .000
AIIIRON = .000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.82C

RUN NO. 65/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 3.00

MACH	BETA	ALPHA	CN	CA	CLM	CEL	CYN	CY	CFB	CPC
1.900	-6.184	21.10125	.64139	.10924	-.03063	.01090	.01348	.06411	-.19799	-.17745
1.900	-6.066	21.10365	.64025	.11045	-.04766	.00726	.01021	.04961	-.17476	-.16441
1.900	-2.048	21.11126	.89959	.10632	-.04300	.00094	.00321	.03066	-.14561	-.12742
1.900	-.017	21.11302	.63911	.10664	-.04257	.00159	-.06405	.01267	-.14573	-.11941
1.900	2.031	21.11467	.61855	.10616	-.04211	-.00095	-.01110	-.07396	-.14304	-.11670
1.900	4.061	21.11671	.63191	.10602	-.04005	-.00534	-.01948	-.01651	-.15359	-.13766
1.900	6.125	21.11435	.63154	.10534	-.04314	-.00916	-.02156	-.09215	-.15633	-.15119
1.900	8.180	21.10681	.63153	.10169	-.04406	-.01373	-.01976	-.09442	-.14578	-.14326
	GRADIENT	.00153	-.07767	-.03224	.00399	-.00147	-.00361	-.07640	.00221	.00312

LA-8A LARC UPWT 1034 NAR 0898-H00, NOSE ORBITER (RP6127) (20 JUN 75)

REFERENCE DATA

SREF = 136.1808 SQ.IN. XMRP = 15.9638 INCHES ALPHA = .000 ELEVTR = -10.000
 LREF = 8.9025 INCHES YMRP = .0000 INCHES AILRON = .000 RUDFLR = 40.000
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES GT-LOC = 2.000 K/L = 6.620
 SCALE = .0188 SCALE

PARAMETRIC DATA

RUN NO. 29/ 0 RV/L = 1.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CL I	CBL	CYN	CY	CFB	CPC
1.000	-6.111	.32586	-.01577	.17144	.04834	.00793	-.01647	.13446	-.28759	-.25092
1.000	-4.065	.32756	-.01302	.16933	.00546	.00546	-.01245	.09267	-.26133	-.22984
1.000	-2.024	.32782	-.01637	.16618	.03357	.03285	-.00829	.05124	-.24563	-.20621
1.000	-.013	.34928	-.01155	.16991	.03661	.00056	-.00507	.01257	-.24843	-.21430
1.000	2.001	.33592	-.01902	.16432	.03443	-.00166	-.00213	-.02542	-.22750	-.20383
1.000	4.054	.33403	-.01669	.16387	.03241	-.00197	.00086	-.06566	-.23020	-.20391
1.000	6.061	.32350	-.01661	.16132	.04877	-.00669	.00519	-.10643	-.23297	-.20670
1.000	8.132	.31170	-.01646	.16063	.04433	-.00872	.00836	-.14975	-.25126	-.22767
	GRADIENT	.00103	-.00049	-.00064	.00209	-.00115	.00162	-.01943	.00797	.00266

RUN NO. 35/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CL M	CBL	CYN	CY	CFB	CPC
1.900	-6.115	.20246	-.02719	.16028	.03722	.00731	-.01486	.13343	-.23411	-.20006
1.900	-4.070	.20329	-.02842	.15865	.03979	.00494	-.01107	.09299	-.21556	-.18946
1.900	-2.027	.20171	-.02766	.15751	.04182	.00269	-.00788	.05240	-.20767	-.17625
1.900	.004	.21337	-.02303	.15502	.04209	.00056	-.00491	.01413	-.19452	-.17101
1.900	2.017	.20121	-.02643	.15103	.04031	-.00124	-.00234	-.02269	-.17328	-.15501
1.900	4.050	.20540	-.02306	.15233	.03972	-.00330	.00060	-.06177	-.18912	-.16559
1.900	6.062	.20587	-.02371	.15098	.03677	-.00620	.00401	-.10390	-.19443	-.17357
1.900	8.130	.20458	-.02357	.15319	.03245	-.00824	.00745	-.14527	-.20185	-.20272
	GRADIENT	.00048	.00051	-.00094	-.00208	-.00101	.00142	-.01896	.00430	.00340

TABULATED SOURCE DATA LARC 1023/1034

(RFB126) (20 JUN 73)

LA-6A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = 5.000 ELEVTR = -10.000
AILRON = .000 RUOFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1828 98. IN. XMRP = 15.9638 INCHES
LREF = 8.9325 INCHES YMRP = .0000 INCHES
BREF = 17.5626 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

RUN NO. 30/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CPB	CPC
1.000	-6.112	5.57791	.22676	.16193	.01327	.01055	-.01409	.12686	-.26466	-.25120
1.000	-4.069	5.57180	.22446	.16393	.01623	.00676	-.01040	.06699	-.27235	-.24683
1.000	-2.008	5.56579	.22686	.15960	.01713	.00324	-.00697	.04890	-.25119	-.22497
1.000	.075	5.56781	.22450	.15723	.01669	.00791	-.00515	.01369	-.23971	-.21865
1.000	2.000	5.56824	.23135	.16016	.01649	-.00103	-.00339	-.01975	-.25257	-.22684
1.000	4.071	5.59305	.22971	.15897	.01676	-.00476	-.00364	-.05666	-.25233	-.23148
1.000	6.062	5.60072	.22783	.15721	.01904	-.00754	-.00243	-.09674	-.25790	-.23667
1.000	8.128	5.57374	.22971	.15570	.01583	-.01088	.00575	-.11100	-.27112	-.24749
	GRADIENT	.00227	.00064	-.00142	.00112	-.00126	.00114	-.01794	.00169	.00153

RUN NO. 36/ 0 RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CPB	PC
1.900	-6.117	5.42339	.18395	.15346	.01205	.00870	-.01206	.12589	-.23143	-.01367
1.900	-4.081	5.41919	.18249	.15233	.01317	.00592	-.00915	.06607	-.22087	-.13478
1.900	-2.000	5.42595	.18507	.14928	.01464	.00268	-.00601	.04660	-.20763	-.17683
1.900	.002	5.43079	.18583	.14315	.01459	.00192	-.00467	.01546	-.17859	-.15169
1.900	1.999	5.42462	.18642	.14425	.01244	-.00078	-.00059	-.01924	-.16921	-.18304
1.900	4.071	5.42827	.18396	.14641	.01199	.00337	-.00102	-.05666	-.21037	-.18162
1.900	6.060	5.43022	.1842	.14770	.01134	-.00636	.00168	-.09367	-.22303	-.19748
1.900	8.147	5.41977	.18571	.14709	.00910	-.00921	.00452	-.15214	-.22884	-.21073
	GRADIENT	.00084	.00011	-.00083	-.00022	-.00110	.00093	-.01745	.00193	.00207

TABLATED SOURCE DATA LARC 1023/1034

LA-6A LARC UPWT 1034 MAR 0698-HOC NOSE ORBITER

DATE 31 OCT 73

(RP6129) (20 JUN 73)

REFERENCE DATA

SREF = 136.1908 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 8.9225 INCHES YMRP = .0000 INCHES
 BREF = 17.5626 INCHES ZMRP = .0000 INCHES
 SCALE = .0186 SCALE

PARAMETRIC DATA

ALPHA = 10.000 ELEVTR = -10.000
 AIRLON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.620

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.000	-6.102	10.79152	.46456	.13391	-.01293	.01063	-.00969	.11338	-.28170	-.25547
1.600	-4.035	10.79010	.46672	.14890	-.01292	.00713	-.00747	.06272	-.24760	-.22392
1.800	-2.011	10.79158	.46689	.14147	-.01374	.00407	-.00603	.04901	-.21101	-.16187
1.900	.003	10.60497	.46939	.13976	-.01432	.00192	-.00301	.01604	-.20850	-.17947
1.900	2.070	10.60630	.46838	.14052	-.01384	-.00011	-.00414	-.01694	-.21893	-.16201
1.900	4.072	10.78832	.46306	.13709	-.01447	-.00284	-.00329	-.04996	-.21368	-.17938
1.900	6.086	10.79813	.46560	.14094	-.13374	-.00629	-.00193	-.06519	-.24515	-.20567
1.900	8.137	10.60287	.46396	.14477	-.01409	-.01016	-.00280	-.12201	-.27142	-.23728
GRADIENT		.00054	-.00029	-.00122	-.00016	-.00119	.00031	-.01638	.00296	.00479

RUN NO. 37/ D RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CPC
1.900	-6.123	10.61159	.39052	.14187	-.00365	.01013	-.00728	.11333	-.22618	-.20276
1.900	-4.054	10.60296	.38302	.14124	-.00376	.00711	-.00633	.07854	-.21300	-.19220
1.900	-2.031	10.60455	.38358	.13684	-.00407	.00423	-.00513	.04617	-.18634	-.17362
1.900	.001	10.61121	.38435	.13513	-.00467	.00141	-.00149	.01525	-.18914	-.16296
1.900	2.017	10.61303	.38503	.13370	-.00546	-.00110	-.00427	-.01498	-.18914	-.16296
1.900	4.073	10.60862	.38580	.13492	-.00385	-.00380	-.00403	-.04830	-.20499	-.17620
1.900	6.106	10.61931	.38632	.13757	-.00423	-.00643	-.00348	-.08157	-.23145	-.19213
1.900	8.120	10.62032	.38887	.14153	-.00560	-.00957	-.00257	-.11711	-.24204	-.22662
GRADIENT		.00097	.00035	-.00078	-.00015	-.00134	.00027	-.01551	.00065	.00209

RUN NO. 37/ D RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

(RF-6130) (20 JUN 73)

LA-9A LARC UPWT 1034 NAR D898-MOD. NOSE ORBITER

PARAMETRIC DATA

ALPHA = 11.000 ELEVTR = -10.000
ATLRON = .000 RUCFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1808 SQ.IN. YMRP = 15.9836 INCHES
LREF = 6.9225 INCHES YMRP = .0000 INCHES
BREF = 17.9828 INCHES ZMRP = .0000 INCHES
SCALE = .0188 SCALE

MACH	BETA	ALPHA	CN	CA	CLM	CEB	CYN	CY	CFB	CPC
1.600	-6.142	16.06971	.66874	.10678	-.03178	.00988	-.00055	.10678	-.12444	-.10306
1.600	-4.046	16.07044	.66997	.10841	-.02833	.00787	-.00278	.07639	-.12969	-.07936
1.600	-2.037	16.07849	.69393	.10342	-.03227	.00503	-.00401	.04843	-.10326	-.05326
1.600	-.015	16.08272	.69649	.09971	-.03147	.00259	-.00324	.01666	-.09331	-.02713
1.600	2.022	16.07628	.69332	.10162	-.03051	-.00704	-.00355	-.01496	-.11157	-.05069
1.600	4.063	16.07292	.66686	.10393	-.02851	-.00295	-.00771	-.04307	-.10354	-.07157
1.600	6.125	16.06330	.66178	.10103	-.02980	-.00528	-.01023	-.07279	-.11136	-.07152
1.600	8.141	16.07110	.66985	.10117	-.03272	-.00810	-.01083	-.10753	-.11934	-.09795
GRADIENT		.00013	-.00033	.00037	.00032	-.00132	-.00056	-.01491	.00218	-.00087

RUN NO. 32/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CEB	CYN	CY	CFB	CPC
1.900	-6.140	15.67120	.56821	.12821	-.01368	.01034	.00045	.10201	-.21558	-.20274
1.900	-4.087	15.67409	.56679	.12383	-.01207	.00703	-.00046	.07081	-.19185	-.18159
1.900	-2.036	15.67197	.56764	.12466	-.01286	.00448	-.00303	.04403	-.18654	-.17892
1.900	.002	15.66068	.56067	.12315	-.01153	.00195	-.00472	.01584	-.18652	-.16829
1.900	2.073	15.66178	.56948	.12103	-.01303	-.00071	-.00627	-.01235	-.17590	-.16294
1.900	4.065	15.66810	.58844	.11935	-.01326	-.00301	-.00926	-.03845	-.17590	-.16729
1.900	6.139	15.67331	.59082	.12156	-.01482	-.00619	-.01064	-.06971	-.19374	-.18155
1.900	8.136	15.67251	.59074	.12308	-.01836	-.01037	-.00961	-.10916	-.22087	-.20539
GRADIENT		-.00011	.00025	-.00062	-.00013	-.00124	-.00103	-.01352	.00209	-.00288

RUN NO. 36/ 0 RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

LA-6A LARC UPWT 1034 NAR 0698-MOD. NOSE ORBITER

(RP6131) (20 JUN 73)

REFERENCE DATA

SREF = 156.1806 SQ. IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

ALPHA = 20.000 ELEVTR = -10.000
 AIRCON = .000 RUDFLR = 40.000
 GT-LOC = 2.000 K/L = 6.020

RUN NO. 39/ 0 RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB	CPC
1.900	-6.165	21.06068	.79308	.10432	-.02556	.01051	.01059	.08955	-.18383	-.17355
1.900	-4.087	21.08622	.79544	.10394	-.02325	.00661	.00931	.05366	-.16537	-.14708
1.900	-2.046	21.08966	.79484	.10113	-.01999	.00380	.00230	.03469	-.13693	-.11792
1.900	.701	21.08996	.79612	.10589	-.01932	.00172	-.00426	.01500	-.15744	-.13117
1.900	2.010	21.08817	.79342	.10119	-.01828	-.00000	-.01064	-.00388	-.13631	-.10999
1.900	4.099	21.07946	.78163	.10164	-.01686	-.00450	-.01867	-.02075	-.14157	-.12587
1.900	6.102	21.08568	.78691	.09801	-.01930	-.00781	-.01999	-.05431	-.14157	-.13117
1.900	8.196	21.08064	.78486	.09776	-.01976	-.01304	-.01877	-.09601	-.14951	-.13913
	GRADIENT	-.00074	.00152	-.00022	.00071	-.00129	-.00337	-.00917	.00245	.00245

LA-RA LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

(RP6132) (20 JUN 73)

REFERENCE DATA

SREF = 136.1808 SQ.IN. XMRP = 15.9638 INCHES
 LREF = 8.9025 INCHES YMRP = .0000 INCHES
 BRFP = 17.5828 INCHES ZMRP = .0000 INCHES
 SCALE = .0188 SCALE

PARAMETRIC DATA

ALPHA = .000 ELEVTR = -10.000
 ATLRON = 10.000 RUCKFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 42/ D RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 3.00

MACH	BETA	ALPHA	ON	CA	CLM	CEL	CYN	CY	CFB	CPC
1.870	-6.115	31691	-.02004	.17333	.04832	.01901	-.01607	.13689	-.28645	-.23239
1.870	-4.068	32744	-.01742	.17093	.05283	.01234	-.01176	.09348	-.28143	-.22979
1.870	-2.027	33629	-.01484	.16732	.05429	.00984	-.00769	.05241	-.24313	-.20352
1.800	-.017	33225	-.01615	.16835	.05541	.00747	-.00442	.01431	-.24066	-.21429
1.800	1.998	32729	-.01754	.16642	.05517	.00529	-.00153	-.02537	-.22469	-.20373
1.870	4.090	33493	-.01729	.16353	.05226	.00299	.00176	-.06375	-.22760	-.20381
1.870	6.096	33548	-.01728	.16406	.04794	.00058	.00579	-.10761	-.23278	-.21165
1.870	8.033	31122	-.01701	.16521	.04434	-.00153	.00936	-.14665	-.26192	-.24088
GRADIENT		-.00004	-.00012	-.00058	-.00001	-.00115	.00104	-.01956	.00424	.00256

RUN NO. 48/ D RNVL = 1.50 GRADIENT INTERVAL = -5.00/ 3.00

MACH	BETA	ALPHA	ON	CA	CLM	CEL	CYN	CY	CFB	CPC
1.870	-6.095	19774	-.03539	.16363	.04088	.01330	-.01397	.12663	-.22830	-.20223
1.870	-4.069	19676	-.03641	.16323	.04420	.01166	-.01004	.08755	-.21772	-.19425
1.870	-2.025	19941	-.03394	.16265	.04565	.00853	-.00701	.04784	-.20717	-.17838
1.870	.005	20609	-.03327	.16032	.04557	.00851	-.00389	.00987	-.20200	-.17650
1.800	1.999	20697	-.03287	.15555	.04413	.00485	-.00120	-.02776	-.17827	-.15735
1.870	4.071	20609	-.03413	.15416	.04318	.00280	.00145	-.06603	-.17825	-.15468
1.870	6.102	20668	-.03409	.15531	.03885	.00017	.00513	-.10675	-.19409	-.17057
1.870	8.131	19986	-.03590	.15658	.03509	-.00106	.00882	-.15155	-.21510	-.19956
GRADIENT		.00129	.00002	-.00114	-.00018	-.00107	.00142	-.01685	.00330	.00493

(R06133) (20 JUN 73)

LA-6A LARC UPM1 1034 MAR 0398-400, NOSE ORBITER

PARAMETRIC DATA

ALPHA = 5.000 ELEVTR = -10.000
AULRON = 10.000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 134.1808 58. IN. XDRP = 15.9638 INCHES
LREF = 9.9025 INCHES YDRP = .0000 INCHES
BREF = 17.5828 INCHES ZDRP = .0000 INCHES
SCALE = .0188 SCALE

RUN NO. 43/ D RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.600	-6.114	5.56140	.22848	.16698	.01495	.01624	-.01440	.12970	-.28040	-.26733
1.600	-4.069	5.57775	.22697	.16471	.01812	.01258	-.01038	.06870	-.26991	-.24362
1.600	-2.028	5.57329	.22512	.16040	.01776	.00890	-.00701	.04908	-.24898	-.22264
1.600	-.016	5.59228	.22787	.15934	.01927	.00651	-.00485	.01478	-.24109	-.21737
1.600	2.018	5.56677	.22058	.16227	.01731	.00470	-.00327	-.01968	-.24880	-.22772
1.600	4.050	5.57316	.22688	.16108	.01613	.00107	-.00019	-.05779	-.24613	-.25032
1.600	6.081	5.58230	.22717	.15957	.01527	-.00161	.00311	-.08814	-.25672	-.23831
1.600	8.127	5.57935	.22914	.16325	.01111	-.00444	.00644	-.13772	-.27783	-.25948
	GRADIENT	.00021	.00027	-.00027	-.00022	-.00128	.00119	-.01787	.00235	.00106

RUN NO. 49/ D RN/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CBL	CYN	CY	CFB	CFC
1.900	-6.113	5.42418	.18066	.15461	.01344	.01420	-.01236	.12161	-.22379	-.20237
1.900	-4.067	5.41922	.17728	.15416	.01576	.01093	-.00915	.06274	-.21521	-.18911
1.900	-2.026	5.42049	.17782	.15120	.01635	.00797	-.00578	.04389	-.20459	-.17316
1.900	.005	5.44484	.19254	.14808	.01754	.00608	-.00415	.01018	-.18352	-.15997
1.900	2.020	5.43609	.18324	.14810	.01590	.00387	-.00283	-.02291	-.19143	-.16261
1.900	4.072	5.42731	.18608	.14911	.01742	.00187	-.00017	-.06113	-.20457	-.18107
1.900	6.083	5.42681	.18619	.15029	.01518	-.00097	.00234	-.09855	-.21529	-.19154
1.900	8.149	5.42130	.18639	.14947	.01224	-.00388	.00524	-.13754	-.22581	-.21032
	GRADIENT	.00156	.00113	-.00765	.00014	-.00109	.00103	-.01745	.00169	.00131

REFERENCE DATA

SREF = 136.1808 34. IN. XMRP = 15.9638 INCHES
 LREF = 8.9028 INCHES YMRP = .0000 INCHES
 BREF = 17.5628 INCHES ZMRP = .0000 INCHES
 SCALE = .0168 SCALE

PARAMETRIC DATA

ALPHA = 10.000 ELEVTR = -10.000
 AILRON = 10.000 RUOFLR = 40.000
 GT-LOC = 2.000 K/L = 6.820

RUN NO. 44/ 0 RM/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CEL	CYN	CY	CFB	CPC
1.600	-6.121	10.79354	.46616	.15432	-.01254	.01656	-.00973	.11949	-.27517	-.24890
1.600	-4.035	10.79091	.46019	.14966	-.01256	.01233	-.00767	.08274	-.24113	-.21741
1.600	-2.029	10.60182	.47041	.14174	-.01464	.00906	-.00612	.04832	-.20161	-.18303
1.600	.304	10.61171	.47106	.14167	-.01329	.00686	-.00537	.01603	-.20966	-.16322
1.600	1.998	10.79931	.46770	.14229	-.01443	.00418	-.00430	-.01541	-.22016	-.18327
1.600	4.053	10.79483	.46454	.13818	-.01347	.00157	-.00336	-.04997	-.21225	-.17527
1.600	6.084	10.60388	.46684	.14063	-.01412	-.00155	-.00193	-.06966	-.23332	-.19377
1.600	6.137	10.79725	.46326	.14455	-.01459	-.00447	-.00069	-.12206	-.25490	-.22004
	GRADIENT	.00045	.00029	-.00110	-.00008	-.00131	.00052	-.01629	.00194	.00416

RUN NO. 50/ 0 RM/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CEL	CYN	CY	CFB	CPC
1.900	-6.119	10.62827	.39429	.14436	-.00267	.01479	-.00784	.11137	-.22050	-.19706
1.900	-4.052	10.62359	.39084	.14249	-.00273	.01179	-.00631	.07624	-.20737	-.18654
1.900	-2.008	10.62708	.39147	.13950	-.00144	.00685	-.00315	.04300	-.18892	-.16804
1.900	.004	10.62771	.39216	.13829	-.00153	.00610	-.00490	.01218	-.19417	-.16009
1.900	2.021	10.63120	.39114	.13665	-.00174	.00419	-.00430	-.01871	-.19413	-.16004
1.900	4.074	10.62989	.39186	.13790	-.00183	.00157	-.00337	-.03108	-.21256	-.17588
1.900	6.089	10.63339	.39252	.13937	-.00124	-.00144	-.00302	-.04424	-.22374	-.18645
1.900	6.177	10.63766	.39286	.14489	-.00136	-.00437	-.00172	-.12110	-.23635	-.22069
	GRADIENT	.00762	.00006	-.00059	.00000	-.00124	.00031	-.01558	-.00077	.00144

LA-3A LARC UPWT 1034 NAR 0898-MOD. NOSE ORBITER

(RF6133) (20 JUN 73)

PARAMETRIC DATA

ALPHA = 15.000 ELEVTR = -10.000
ALTIRON = 10.000 RUDFLR = 40.000
GT-LOC = 2.000 K/L = 6.820

REFERENCE DATA

SREF = 136.1608 SQ.IN. XMRP = 15.9638 INCHES
LREF = 6.9025 INCHES YMRP = .0000 INCHES
BREF = 17.5628 INCHES ZMRP = .0000 INCHES
SCALE = .0168 SCALE

RUN NO. 45/ D RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.000	-6.121	16.07376	.69078	.10739	-.03071	.01967	-.00077	.10611	-.12030	-.10152
1.000	-4.084	16.06674	.68986	.10924	-.02745	.01321	-.00310	.07720	-.12561	-.07785
1.000	-2.033	16.06707	.69189	.10455	-.03231	.01017	-.00447	.04612	-.09938	-.04892
1.000	.105	16.07847	.69434	.10211	-.03222	.00752	-.00576	.01661	-.09418	-.03317
1.000	2.105	16.08449	.69734	.10332	-.03147	.00444	-.00596	-.01579	-.10984	-.04886
1.000	4.085	16.07905	.69424	.10492	-.02981	.00152	-.00827	-.04393	-.10201	-.07500
1.000	6.105	16.08518	.69338	.10299	-.02916	-.00049	-.01100	-.07136	-.11247	-.06731
1.000	8.182	16.08144	.69716	.10291	-.03399	-.00325	-.01166	-.10769	-.11793	-.09388
GRADIENT		.02206	-.00048	-.00019	-.00143	-.00058	-.00058	-.01493	.00181	.00077

RUN NO. 51/ D RV/L = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CFB	CFC
1.000	-4.136	15.89151	.59769	.12827	-.01121	.01539	-.00029	.10010	-.21254	-.19965
1.000	-4.062	15.89695	.59789	.12594	-.01064	.01209	-.00110	.06745	-.18895	-.17599
1.000	-2.030	15.89663	.59878	.12644	-.01034	.00923	-.00354	.04001	-.18629	-.17333
1.000	.006	15.89344	.59657	.12550	-.01011	.00676	-.00520	.01268	-.18631	-.16542
1.000	2.035	15.89183	.59811	.12309	-.01178	.00405	-.00624	-.01455	-.17582	-.15753
1.000	4.067	15.88777	.59536	.12113	-.01077	.00189	-.00941	-.04136	-.17577	-.15750
1.000	6.105	15.88655	.59433	.12421	-.01229	-.00095	-.01102	-.07105	-.20200	-.18378
1.000	8.140	15.88523	.59061	.12654	-.01513	-.00480	-.00956	-.11111	-.22563	-.20483
GRADIENT		-.00114	-.00028	-.00064	-.00010	-.00126	-.00035	-.01341	.00181	.00260

REFERENCE DATA PARAMETRIC DATA

XREF = 136.1808 88.1N. XMRP = 15.9636 INCHES ALPHA = 20.000 ELEVTR = -10.000
 YREF = 6.3225 INCHES YMRP = .0000 INCHES ATLRON = 10.000 RUCFLR = 40.000
 ZREF = 17.3628 INCHES ZMRP = .0000 INCHES GT-LOC = 2.000 K/L = 6.620
 SCALE = .0100 SCALE

RUN NO. 52/0 RVL = 1.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	ON	CA	CLM	CB	CTN	CY	CPB	CPC
1.900	-6.160	21.08473	.80540	.10682	-.02442	.01530	.00997	.08786	-.18359	-.16797
1.900	-4.081	21.09805	.80374	.10539	-.02201	.01074	.00739	.05389	-.18255	-.14159
1.900	-2.040	21.09671	.80392	.10415	-.01841	.00867	.00190	.03141	-.13679	-.11769
1.900	.005	21.10160	.80304	.10914	-.01622	.00673	-.00498	.01333	-.15713	-.13350
1.900	2.032	21.10566	.80245	.10379	-.01771	.00465	-.01103	-.00544	-.13601	-.11232
1.900	4.103	21.10748	.79593	.10399	-.01364	.00392	-.01919	-.02225	-.14390	-.12531
1.900	6.124	21.09736	.79778	.10291	-.01853	-.00251	-.02062	-.05499	-.14925	-.14146
1.900	8.160	21.08149	.79128	.10082	-.01933	-.00729	-.01927	-.09728	-.13201	-.14159
	GRADIENT	.00146	-.00062	-.07017	.00790	-.00116	-.00322	-.00926	.00182	.00183