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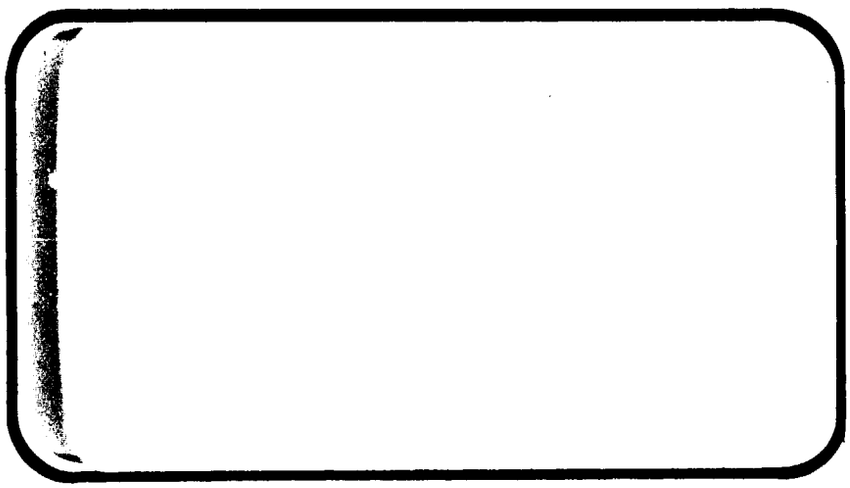

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

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RESULTS OF A PRESSURE LOADS INVESTIGATION ON A 0.030-SCALE MODEL (47-OTS) OF THE INTEGRATED SPACE SHUTTLE VEHICLE CONFIGURATION 5 IN THE NASA AMES RESEARCH CENTER 9 x 7 FOOT LEG OF THE UNITARY PLAN WIND TUNNEL (IA81B)

VOLUME 1 OF 5

by

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by

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for

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Johnson Space Center
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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	ARC 97-019
NASA Series Number:	IA81B
Model Number:	47-0TS
Test Dates:	August 6-22, 1974
Occupancy Hours:	208

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by

E. Chee, Rockwell International Space Division

ABSTRACT

Presented in this report are results of wind tunnel test IA81B. The model tested was a 0.030-scale model of the Integrated Space Shuttle Vehicle Configuration 5. Testing was conducted in the NASA Ames Research Center 9 x 7-foot Unitary Plan Wind Tunnel to investigate pressure distributions for aeroloads analysis at Mach numbers from 1.55 through 2.5. Angles of attack and sideslip were varied from -0 to +6 degrees.

This report consists of 1 volume of force data and 4 volumes of pressure data for a total of 5 volumes. They are arranged in the following manner:

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3	IA81B tabulated pressure data	
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B) CY, CYNF, CBL versus BETAI
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CY versus CBL

C) CHEO, CHEI versus ALPHAO

D) CABO versus ALPHAO

E) CABET versus ALPHAT

F) CABSRB versus ALPHAL

G) CABSRB versus ALPHAR

H) CAFAFO versus MACH

I) XAC/LV versus MACH

J) CNALFA versus MACH

K) YAC/LV versus MACH

L) CYBETA versus MACH

M) CHEO, CHEI versus MACH

N) DCAF, DCNF, DCLMF versus MACH

O) CP versus X/LB

P) CP versus X/LT

Q) CP versus X/LS

R) CP versus X/CV

S) CP versus X/CW

NOMENCLATURE
General

SYMBOL	PLOT SYMBOL	DEFINITION
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(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$

Reference & C.G. Definitions

A_b		base area; m^2, ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

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

NOMENCLATURE (Continued)

Body-Axis System

SYMBOL	PLOT SYMBOL	DEFINITION
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qSl_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$

Stability-Axis System

C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qSl_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

NOMENCLATURE (Continued)
Additions to Standard Nomenclature

Symbol	Plot Symbol	Defintion
$A_{b_{ET}}$		external tank base area, ft^2
A_{b_f}		body flap upper surface area, ft^2
A_{b_o}		Orbiter base area, ft^2
$A_{b_{OMS}}$		OMS pod base area, ft^2
$A_{b_{SRB}}$		SRB base area, ft^2
$C_{A_{b_{ET}}}$	CABET	external tank base axial force coefficient
$C_{A_{b_o}}$	CABO	Orbiter base axial force coefficient
$C_{A_{b_{SRB}}}$	CABSRB	SRB base axial force coefficient
$C_{A_{ET}}$		external tank total axial force coefficient
$C_{A_{f_{ET}}}$		external tank forebody axial force coefficient
$C_{A_{f_o}}$		Orbiter forebody axial force coefficient
$C_{A_{f_{SRB}}}$		SRB forebody axial force coefficient
C_{A_o}		Orbiter total axial force coefficient

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
$C_{P_{b_{OMS}}}$		OMS pod average base pressure coefficient
$C_{P_{b_{SRB}}}$		SRB average base pressure coefficient
C_{P_i}		pressure coefficient associated with i^{th} tap
ET		external tank
i_{b_o}		Oribter base incidence angle to a line of constant X_o, deg.
ℓ_b		Orbiter fuselage length, in.
MRP		moment reference point
OMS		orbital manuvering system
RN/FT	RN/L	unit Reynolds number, million per foot
S_e		elevon surface area, ft^2
SRB		solid rocket booster
X_{bf}		longitudinal distance from MRP to bodyflap area centroid, in.
X_{b_o}		longitudinal distance from MRP to Orbiter base area centroid, in.
X/C	X/CW	chordwise location on wing
X/Cv	X/CV	chordwise location on vertical tail
X_o		Orbiter longitudinal station, in.
X_o/L_o	X/LT	location on Orbiter, fraction of Orbiter body length aft of Orbiter nose

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
$C_{A_{SRB}}$		SRB total axial force coefficient
$\bar{C}_e$		elevon mean aerodynamic chord, in
$C_{h_{e_I}}$	CHEI	inboard elevon hinge moment coefficient
$C_{h_{e_o}}$	CHEO	outboard elevon hinge moment coefficient
$C_{m_{bf}}$	CMBF	bodyflap upper surface pitching moment coefficient
$C_{m_{b_o}}$	CMBO	Orbiter base pitching moment coefficient
$C_{m_{f_o}}$		Orbiter forebody pitching moment coefficient
C_{m_o}		Orbiter total pitching moment coefficient
$C_{n_{bf}}$		bodyflap upper surface normal force coefficient
$C_{N_{b_o}}$		Orbiter base normal force coefficient
$C_{N_{f_o}}$		Orbiter forebody normal force coefficient
C_{N_o}		Orbiter total normal force coefficient
$C_{P_{b_{ET}}}$		external tank average base pressure coefficient
$C_{P_{bf}}$		bodyflap average upper surface pressure coefficient

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
$C_{P_{b_o}}$		Orbiter average base pressure coefficient
X_S	XS	SRB longitudinal station, in.
X_S/ℓ_S	X/LS	location on SRB, fraction of SRB body length aft of SRB nose
X_T	XT	external tank longitudinal station, in.
X_T/ℓ_T	X/LT	location on ET, fraction of ET body length aft of ET nose
Y_o	YO	Orbiter lateral station, in.
Y_S	YS	SRB lateral station, in.
Y_T	YT	external tank lateral station, in.
Z_{b_o}		vertical distance from MRP to Orbiter base area centroid, in.
Z_o	ZO	Orbiter vertical station, in.
Z_s	ZS	SRB vertical station, in
Z_T	ZT	external tank vertical station, in.
α_o	ALPHAO	Orbiter angle of attack, degrees
α_{S_L}	ALPHAL	left SRB angle of attack, degrees
α_{S_R}	ALPHAR	right SRB angle of attack, degrees
α_T	ALPHAT	external tank angle of attack, degrees
β_o	BETAO	Orbiter angle of sideslip, degrees

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
β_{B_L}	BETAL	left SRB angle of sideslip, degrees
β_{S_R}	BETAR	right SRB angle of sideslip, degrees
β_T	BETAT	external tank angle of sideslip, degrees
δ_{e_i}	ELV-IB	inboard elevon deflection angle, degrees
δ_{e_o}	ELV-OB	outboard elevon deflection angle, degrees
δ_R	RUDDER	rudder deflection angle, degrees
δ_{SB}	SPDBRK	speedbrake deflection angle, degrees
η	2Y/b	spanwise station, 2Y/b
ϕ	PHI	radial location, degrees
C_{A_c}		orbiter sting cavity axial force coefficient
β_I	BETAI	integrated vehicle angle of sideslip, degrees
α_I	ALPHAI	integrated vehicle angle of attack, degrees
X/LB	X/LB	longitudinal position/body length (fuselage)
Y/BW	Y/BW	local spanwise position/wing span
Z/BV	Z/BV	local spanwise position/vertical tail span

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
C_{n_f}	CYNF	forebody yawing moment coefficient, body axis system
C_{m_f}	CLMF	forebody pitching moment coefficient
C_{N_f}	CNF	forebody normal force coefficient
$C_{A_{f_o}}$	CAFAFO	forebody axial force coefficient at zero alpha
C_{N_α}	CNALFA	derivative of normal-force coefficient with respect to alpha, per degree
X_{cp}/ℓ_v	XAC/LV	vertical tail chordwise center of pressure location
Y_{cp}/ℓ_v	YAC/LV	vertical tail spanwise center of pressure location
C_{Y_β}	CYBETA	derivative of side-force coefficient with respect to beta, per degree
ΔC_{A_f}	DCAF	incremental forebody axial force coefficient
ΔC_{N_f}	DCNF	incremental forebody normal force coefficient
ΔC_{m_f}	DCLMF	incremental forebody pitching moment coefficient
CHM1	CHM1	contributions of the forward bridge to the inboard elevon hinge moment coefficient
CHM2	CHM2	contributions of the aft bridge to the inboard elevon hinge moment coefficient
CHM3	CHM3	contributions of the forward bridge to the outboard elevon hinge moment coefficient
CHM4	CHM4	contributions of the aft bridge to the outboard elevon hinge moment coefficient

NOMENCLATURE (Concluded)

Data Set Identifiers

The fourth letter of the data set identifier indicates the component, e.g., RETT04.

Force

O	Orbiter
T	External Tank
L	Left SRB
R	Right SRB
H	Orbiter - Hinge moment
I	Integrated Vehicle

Pressure

B	Orbiter Fuselage
L	Left Wing lower surface
U	Left Wing upper surface
W	Right Wing lower surface
R	Right Wing upper surface
V	Left Vertical Tail
S	SRM Booster
T	External Tank
C	Miscellaneous Orifices

CONFIGURATIONS INVESTIGATED

The model was a 0.030-scale representation of the Rockwell International Space Shuttle Integrated Vehicle. The Orbiter was per VL70-000140A/B lines. The external tank represented VL78-000063 lines. The solid rocket motors were per VL72-000066 lines. Figures 2a, b, and c present sketches of the model configuration. Model simulation included attach structure protuberances, fairings, fuel feed lines, vent lines, etc. (basic model construction was of ARMCO 17-4 steel).

Model forces and moments were measured by 3 Task Corporation six component balances. A 2.5 in. MK XXA was mounted in the Orbiter. A 2.0 in. MK IIIC was mounted in the external tank. A 1.5 in. MK IIC was mounted in the LH SRB. The balances are attached to stings entering each component through the base areas. Figures 2m and 2n show the balance locations in the model. The RH wing inboard and outboard elevon panels are instrumented with hinge moment gages as shown in figure 1c.

Surface and base pressures were measured on the Orbiter, external tank and solid rocket motors. The Orbiter was instrumented with a total of 480 pressure-orifices, of which 6 were base and cavity pressures. The external tank was instrumented with a total of 314 pressure orifices. The LH SRM was instrumented with a total of 149 pressure orifices. Orifice locations are presented in tables IV through VIII and figures 2d through 2 1.

The following model shorthand configuration notation was used:

$LVA' = AT_{28 \text{ thru } 32}\ FL_{10}\ FL_{11}\ FR_{10}\ N_{86}\ O_1\ PT_{12}\ PT_{22\text{-}27}\ S_{21}\ T_{28}$

CONFIGURATIONS INVESTIGATED (Concluded)

$AT_{28 \text{ thru } 32}$ = Attach hardware structure

FL_{10} = LH_2 feedline

FL_{11} = LO_2 feedline

FR_{10} = Umbilical door fairing

N_{86} = Nozzles for solid rocket boosters

O_1 = B_{26} C_9 E_{44} F_9 M_{16} N_{28} R_5 V_8 W_{116}

PT_{12} = Lightning rod on nose of T_{28}

$PT_{22 \text{ thru } 27}$ = External protuberance

S_{21} = Solid rocket boosters

T_{28} = External tank

Where model dimensions are as described in table III. The LVA' configuration was tested with speed brake gap both sealed and open and with elevon gap both sealed and open. The (instrumented) right elevon gap was sealed by a permanent sponge rubber seal. The left elevon gap was sealed with plaster. Speed brake gaps were sealed by red wax.

TEST FACILITY DESCRIPTION

The Ames Research Center 9 by 7 foot Supersonic Wind Tunnel is a closed-circuit, air-medium, variable-density facility capable of attaining Mach numbers from 1.55 to 2.50 at Reynolds numbers from 1.5×10^6/ft to 6.5×10^6/ft. The 18 foot long test section is part of a dual system of supersonic circuits and uses the same motors and compressor as the 8 by 7 foot tunnel. A sliding-block throat arrangement is used to control tunnel Mach number.

Models are supported by means of stings attached to the wall-to-wall strut/BOR system of the 9 by 7 foot tunnel.

Schlieren photograph, shadowgraphs, and pressure monitoring instrumentation are available.

DATA REDUCTION

All balances data were reduced to coefficients about a moment reference point located at:

X_T = 976.0 in.

Y_T = 0.0 in.

Z_T = 400.0 in.

The following reference dimensions were used:

S = 2690.0 ft^2

ℓ_b = 1297.0 in.

Hinge moment data were reduced about their respective hinge lines using the following reference values:

S_e = 210.0 ft^2

$\bar{C}_e$ = 90.7 in.

Base and forebody coefficients were calculated as follows:

$$C_{N_{b_o}} = -C_{P_{b_o}} \frac{A_{b_o}}{S} \tan i_{b_o} - C_{P_{b_{OMS}}} \frac{A_{b_{OMS}}}{S}$$

$$C_{N_{bf}} = -C_{P_{bf}} \frac{A_{bf}}{S}$$

$$C_{A_{b_o}} = -C_{P_{b_o}} \frac{A_{b_o}}{S} - C_{P_{b_{OMS}}} \frac{A_{b_{OMS}}}{S}$$

$$C_{A_{b_{ET}}} = -C_{P_{b_{ET}}} \frac{A_{b_{ET}}}{S}$$

$$C_{A_{b_{SRB}}} = -C_{P_{b_{SRB}}} \frac{A_{b_{SRB}}}{S}$$

$$C_{m_{b_o}} = -\frac{X_{b_o}}{\ell_b} C_{N_{b_o}} + \frac{Z_{b_o}}{\ell_b} C_{A_{b_o}}$$

$$C_{m_{bf}} = -\frac{X_{bf}}{\ell_b} C_{N_{bf}}$$

$$C_{N_{f_o}} = C_{N_o} - C_{N_{b_o}} - C_{N_{bf}}$$

$$C_{m_{f_o}} = C_{m_o} - C_{m_{b_o}} - C_{m_{bf}}$$

$$C_{A_{f_o}} = C_{A_o} - C_{A_{b_o}}$$

$$C_{A_{f_{ET}}} = C_{A_{ET}} - C_{A_{b_{ET}}}$$

$$C_{A_{f_{SRB}}} = C_{A_{SRB}} - C_{A_{b_{SRB}}}$$

$$A_{b_{ET}} = 597.56 \text{ ft}^2$$

$$A_{bf} = 142.6 \text{ ft}^2$$

$$A_{b_o} = 314.10 \text{ ft}^2$$

$$A_{b_{OMS}} = 122.57 \text{ ft}^2$$

$A_{b_{SRB}} = 201.07 \text{ ft}^2$

$i_{b_o} = 14.75°$

$X_{bf} = 1329.7 \text{ in.}$

$X_{b_o} = 1263.0 \text{ in.}$

$Z_{b_o} = 336.5 \text{ in.}$

Base pressure coefficients represented the average pressure on the respective bases. Body flap pressure coefficients were as given by figure 2o.

Right SRB forces and moments were calculated as a mirror image of left SRB forces and moments about $\beta = 0$:

$$\begin{pmatrix}\text{Coefficient on}\\ \text{Right SRB}\\ \text{at } +\beta\end{pmatrix} = \begin{pmatrix}\text{Coefficient on}\\ \text{Left SRB}\\ \text{at } -\beta\end{pmatrix}$$

Forces and moment on each component (Orbiter, ET, left SRB, and right SRB) were interpolated versus the respective angle of attack and angle of sideslip of each component to nominal angles. These data were then added to provide total integrated vehicle forces and moments.

TABLE I

TEST : IA81B

DATE : 8-23-74

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
1.55	2.50×10^6	3.189	120
2.00	2.50×10^6	3.189	120
2.20	2.50×10^6	3.750	120
2.50	2.50×10^6	3.472	120

BALANCE UTILIZED: Task Corp 2.5" MK XXA, 2.0" MKIIIC, 1.5" MKIIC

	CAPACITY: 2.5"	2.0"	1.5"	COEFFICIENT TOLERANCE:
NF	6000	1800	1000	
SF	3000	900	500	
AF	600	500	100	
PM				
RM	4000	1000	800	
YM				

COMMENTS:

TABLE II

TEST: IA81B 97-019 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 8-23-74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	δ_{SB}/δ_{SOB}	δ_R	$\delta_{S\Theta}$	M	RN/RT		β=0		ALPHA - α: -6	-4	-2	0	+2	+4	+6
RET 030	LVA' W/ALL HINGELINES SEALED	D	0	0	0	55	2.5	3.0		100								
31		D	0	0	"	55	2.2	"		101								
32		D	0	0		55	2.0			102								
33		I	0	0		55	1.55	↓		103								
34		E	0	8/4		0	1.55	2.5		115								
35		A	A	8/4		"	1.55	"				112	116	117	118	119	120	121
36		A	A	8/4			2.0					122	123	124	125	126	127	128
37		A	A	8/4			2.2					129	130	131	132	133	134	135
38		A	A	8/4			2.5					136	137	138	139	140	141	142
39		G	G	0/0			1.55					143	144		145		146	147
40		G	G	0/0			2.0					148	149		150		151	152
41		G	G	0/0			2.2					153	154		155		156	157
42		G	G	0/0			2.5					158	159		160		161	162
43		H	H	8/0			1.55					163	164	165	166	167	168	169
44		H	H	8/0			2.0					170	171	172	173	174	175	176
45		H	H	8/0			2.2					177	178	179	180	181	182	183
46		H	H	10/4			1.55					184	185	186	187	188	189	190
↓ 47	↓	H	H	10/4	↓	↓	2.0	↓		↓		191	192	193	194	195	196	197

TEST RUN NUMBERS

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

SEE SUPPLEMENTARY SCHEDULE ON FOLLOWING PAGE

IDVAR(1) IDVAR(2) NDV

α OR β SCHEDULES: SEE PAGE 28

TABLE II (Continued)

COMPONENT	DATASET IDENTIFIER	INDEPENDENT VARIABLES		FORCE COEFFICIENT SCHEDULE							
Orbiter	RETOXX	BETAO	ALPHAO	CNF	CLMF	CA	CY	CYNF	CBL	*CABT	CAF
External Tank	RETTXX	BETAT	ALPHAT	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
Left SRB	RETLXX	BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
Hinge Moment	RETHXX	BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4		

* Where CABT is $C_{A_b} + C_{A_c}$ for each vehicle component.

TABLE II (Concluded)

Nominal α or β Schedules

Schedule A

β \ α	-6	-4	-2	0	2	4	6
-6	-	x	x	x	x	x	-
-4	x	x	-	x	-	x	x
-2	x	-	x	-	x	-	x
0	x	x	-	x	-	x	x
2	x	-	x	-	x	-	x
4	x	x	-	x	-	x	x
6	-	x	x	x	x	x	-

Schedule H

β \ α	-6	-4	-2	0	2	4	6
-6				x			
-4		x		x		x	
-2				x			
0	x	x	x	x	x	x	x
2				x			
4		x		x		x	
6				x			

Schedule G

β \ α	-6	-4	0	4	6
-6			x		
-4		x	x	x	
0	x	x	x	x	x
4		x	x	x	
6			x		

Schedule D

$\beta = 0$, $\alpha = -6, -4, 0, 4, 8, 10$

Schedule E

$\beta = 0$, $\alpha = -6, -4, -2, 0, 2, 4, 6$

Schedule I

$\beta = 0$, $\alpha = -6, -4, 0, 4, 8$

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT_{28}

GENERAL DESCRIPTION: Rear orbiter to ET attach structure (LH and RH). 2 Members.

MODEL SCALE: 0.030 MODEL DRAWING NO.: _____

DRAWING NO.: VL78-000063, -000062B

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_o	1317.00	39.51
		Y_o	- 96.50 (LH)	- 2.895
			96.50 (RH)	2.895
		Z_o	267.50	8.025
		X_T	2058.00	61.740
		Y_T	- 125.68 (LH)	- 3.770
			125.68 (RH)	3.770
		Z_T	515.5	15.465
	#2	X_o	1317.00	39.51
		Y_o	- 96.50 (LH)	- 2.895
			96.50 (RH)	2.895
		Z_o	267.50	8.025
		X_T	1872.00	56.160
		Y_T	-125.68 (LH)	- 3.770
			125.68 (RH)	3.770
		Z_T	504.5	15.135
Diameter, In.	#1		11.5	0.345
	#2		15.5	0.465

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT_{29}

GENERAL DESCRIPTION: Right-hand umbilical fairing to ET cross member attach structure (1 member).

MODEL SCALE: 0.030 MODEL DRAWING NO.: _____

DRAWING NO.: VL78-000062B, -Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Umbilical fairing attach point:	X_o	1317.00	39.510
	Y_o	66.316	1.989
	Z_o	247.182	7.415
	X_T	2058.683	61.740
	Y_T	66.316	1.989
	Z_T	583.683	17.510
ET attach point:	X_T	2058.00	61.740
	Y_T	- 12.00	- 0.360
	Z_T	568.25	17.048
	X_o	1317.00	39.510
	Y_o	- 12.00	- 0.36
	Z_o	60.75	1.823
Attach structure dia., in.		4.5	0.135

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT_{30}

GENERAL DESCRIPTION: Forward SRB to ET attach structure (LH and RH).

MODEL SCALE: 0.030

DRAWING NO.: VL78-000066, Martin Marietta 82600204300

DIMENSIONS:		FULL SCALE	MODEL SCALE
Attach point	X_T	985.675	29.570
	Y_T	-172.50 (LH)	- 5.175
		172.50 (RH)	5.175
	Z_T	0.0	0.0
	X_S	442.675	13.280
	Y_S	80.00	2.400
	Z_S	0.0	0.0
	X_O	244.675	7.340
	Y_O	- 184.5 (LH)	—5.535
		184.5 (RH)	5.535
	Z_O	0.0	0.0

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT_{31}

GENERAL DESCRIPTION: Rear ET to SRB attach structure (LH & RH), 3 members.

MODEL SCALE: 0.030 MODEL DRAWING: _____

DRAWING NO.: VL78-000063, -000062B, -000066

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_T	2058.00	61.74
		Y_T	- 171.50 (LH)	- 5.145
			171.50 (RH)	5.145
		Z_T	457.00	13.710
		X_s	1511.00	45.33
		Y_s	53.24	1.597
		Z_s	57.00	1.710
	#2	X_T	2058.00	61.74
		Y_T	- 163.58	- 4.916
		Z_T	449.81	13.494
		X_s	1511.00	45.33
		Y_s	76.56	2.297
		Z_s	15.73	0.472
	#3	X_T	2058.00	61.74
		Y_T	- 161.72	- 4.852
		Z_T	343.00	10.29
		X_s	1511.00	45.33
		Y_s	53.24	1.597
		Z_s	- 57.00	- 1.710
Diameter of members, In.:	#1			
	#2			
	#3			

TABLE III.- MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT32

GENERAL DESCRIPTION: Forward orbiter/ET attach structure (2 member structure)

MODEL SCALE: 0.030

DRAWING NO.: VL78-000062B, Martin Marietta 8260020914

DIMENSIONS:	MEMBER		FULL SCALE	MODEL SCALE
	#1	X_o	388.15	11.6445
		Y_o	0.0	0.0
	(Attach pt on orb Z_T= 614)	Z_o	LWR ML	LWR ML
		X_T	1129.9	34.05
		Y_T	46.50	1.395
	(Attach pt on tank)	Z_T	562.58	16.877
	#2	X_o	388.15	11.645
		Y_o	0.0	0.0
		Z_o	LWR ML	LWR ML
		X_T	1129.9	34.05
		Y_T	- 46.50	- 1.395
		Z_T	562.58	16.877
Diameter, In.	#1		6.0	0.180
	#2		6.0	0.180

TABLE III.- MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY - B_{26}

GENERAL DESCRIPTION : Configuration 140A/B orbiter fuselage

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

MODEL SCALE: 0.030 MODEL DRAWING NO.: SS-A00147, Rel. 12.

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

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OML: Fwd Sta. X_o=235), In.	1293.3	38.799
Length (IML: Fwd Sta. X_o=238), In.	1290.3	38.709
Max Width (@ X_o = 1528.3), In.	264.0	7.920
Max Depth (@ X_o = 1464), In.	250.00	7.500
Fineness Ratio	0.264	0.264
Area - Ft^2		
Max. Cross-Sectional	340.88	0.307
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : CANOPY - C_9

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

MODEL SCALE: 0.030 MODEL DWG NO.: SS-A00147

DRAWING NUMBER : VL70-000143A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o =434.643 to 578), In.	143.357	4.301
Max Width (X_o = 513.127), In.	152.412	4.572
Max Depth (At X_o = 485.), In.	25.000	0.750
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E_{44}

GENERAL DESCRIPTION: 6.0 In. F.S. gaps machined into E_{44} elevon. Flapper doors, centerbody pieces, and tipseals are not simulated. (Data are for one of two sides).

MODEL SCALE: 0.030

DRAWING NUMBER: Not available

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area -- Ft^2	210.0	0.189
Span (equivalent), In.	349.2	10.476
Inb'd equivalent chord , In.	118.0	3.54
Outb'd equivalent chord, In.	55.19	1.656
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.2096	0.2096
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Trailing Edge	- 10.056	- 10.056
Hingeline	0.00	0.00
Area Moment (Product of area & $\bar{c}$), Ft^3	1587.25	0.0429
Mean Aerodynamic Chord, In.	90.7	2.721

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY FLAP - F_9

GENERAL DESCRIPTION : Configuration 140 A'B

MODEL SCALE: 0.030

DRAWING NUMBER : VL70-000140B, -000200

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Chord), In.	84.7	2.541
Max Width , In.	262.308	7.869
Max Depth , In.	23.00	0.690
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional		
Planform	142.60	0.128
Wetted		
Base	41.90	0.0377

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FEEDLINE - FL_{10}

GENERAL DESCRIPTION: LH_2 feedline on upper left-hand side of T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	2071.5	62.145
	Y_T	- 70.0	- 2.100
	Z_T	573.934	17.218
Trailing edge at:	X_T	2081.80	62.454
	Y_T	- 70.00	- 2.10
	Z_T	584.059	17.522
Diameter of line (17.0 I.D.)		18.160	0.545

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FEEDLINE - FL_{11}

GENERAL DESCRIPTION: LO_2 feedline on upper right-hand of T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:

			FULL SCALE	MODEL SCALE
Leading edge at:	X_T		1000.667	30.02
	Y_T		70.00	2.10
	Z_T		150.519	4.516
Trailing edge at:	X_T		2071.5	62.145
	Y_T		70.00	2.100
	Z_T		573.934	17.218
Line diameter (17.0 I.D.)		(O.D.)	18.16	0.545

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FAIRING - FR_{10}

GENERAL DESCRIPTION: Umbilical door fairing between aft ET/orbiter attach structure.

MODEL SCALE: 0.030

DRAWING NO.: V178-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:	FULL SCALE	MODEL SCALE
Leading edge at	2052.0	61.74
Length	193.0	5.79
Width	15.0	0.45

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: OMS POD - M_{16}

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

MODEL SCALE: 0.030.

DRAWING NUMBER VL70-008401, -008410

DIMENSION:	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta. X_o=1310.5), In.	258.50	7.755
Max Width (@ X_o = 1511), In.	136.8	4.104
Max Depth (@ X_o = 1511), In.	74.70	2.241
Fineness Ratio	2.484	2.484
Area - Ft^2		
Max Cross-Sectional	58.864	0.053
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA- Continued.

MODEL COMPONENT: OMS NOZZLES - N_{28}

GENERAL DESCRIPTION: Configuration 140A/B orbiter OMS Nozzles

MODEL SCALE: 0.030

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

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane		
Throat to Exit Plane		
Diameter - In.		
Exit		
Throat		
Inlet		
Area - ft^2		
Exit		
Throat		
Gimbal Point (Station) - In.		
Left Upper Nozzle		
X_o	1518.00	45.54
Y_o	- 88.0	--2.64
Z_o	492.00	14.76
Right Lower Nozzle		
X_o	1518.00	45.54
Y_o	88.0	2.64
Z_o	492.00	14.76
Null Position - Deg.		
Left Upper Nozzle		
Pitch	15°49'	15°49'
Yaw	12°17'	12°17'
Right Lower Nozzle		
Pitch	15°49'	15°49'
Yaw	12°17'	12°17'

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: BSRM NOZZLE - N_{86}

GENERAL DESCRIPTION: Booster solid rocket motor nozzles.

MODEL SCALE: 0.030

DRAWING NO.: VL70-000066

DIMENSIONS:	FULL SCALE	MODEL SCALE
Diameter, D_{ex} - In. (I.D.)	144.29	4.3287
Diameter, D_{ex} - In. (O.D.)	146.79	4.4037
Diameter, DT - IN.		
Diameter, D_{in} - In.		
Area - Ft^2		
Max. Cross-sectional (I.D.)	113.553	0.102
Gimbal Origin:		
Left Nozzle		
X_o	1902.6	57.078
Y_o	--250.50	- 7.515
Z_o	400.0	12.00
Right Nozzle		
X_o	1902.6	57.078
Y_o	250.50	7.515
Z_o	400.0	12.00
Null Position: (Deg.)		
Left nozzle gimbal	± 8	± 8
Right nozzle gimbal	± 8	± 8

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ET PROTUBERANCE - PT_{12}

GENERAL DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.030

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length	30.90	0.927
Diameter - In.	3.20	0.096

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELECTRICAL LINE - PT_{22}

GENERAL DESCRIPTION: Left-hand electrical conduit line on T_{28}.

MODEL SCALE: 0.030.

DRAWING NUMBER VL78-000063, -000062B

DIMENSION:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1084.333	32.530
	Y_T	- 99.591	- 2.988
	Z_T	-139.620	- 4.189
Trailing edge at:	X_T	2058.000	61.740
	Y_T	- 99.591	- 2.988
	Z_T	- 139.620	- 4.189
Conduit size:		2.0 x 6.0	0.06 x 0.18

Centerline of line located radially at $\emptyset$ = 35.5 deg.

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: LO_2 RECIRCULATION LINE - PT_{23}

GENERAL DESCRIPTION: LO_2 recirculation line on right-hand upper side side of T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1040.667	31.220
	Y_T	94.169	2.825
	Z_T	540.934	16.228
Trailing edge at:	X_T	2062.920	61.888
	Y_T	70.000	2.100
	Z_T	573.934	17.218
Diameter of line		4.0	0.120

Centerline of line located radially at $\emptyset = 33^{\circ}45'$
(Right of TDC looking forward)

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: LH_2 RECIRCULATION LINE - PT_{24}

GENERAL DESCRIPTION: LH_2 recirculation line on T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1040.667	31.220
	Y_T	- 94.169	- 2.825
	Z_T	540.934	16.228
Trailing edge at:	X_T	2062.920	61.883
	Y_T	- 70.00	-2.100
	Z_T	573.934	17.218
Diameter of line		4.00	0.120

Centerline of line located radially at $\emptyset = 33^{\circ}45'$
(Left of TDC looking forward)

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELECTRICAL LINE - PT_{25}

GENERAL DESCRIPTION: Right-hand aft electrical conduit line on T_{28} with LH_2 pressure sensor line and LOX vent valve actuator line.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	1084.333	32.530
	Y_T	99.591	2.988
	Z_T	139.620	4.189
Trailing edge at:	X_T	2058.000	61.74
	Y_T	99.591	2.988
	Z_T	139.620	4.189
Line diameter		2.0 x 6.0	0.06 x 0.18

Centerline of line located radially at $\emptyset = 35.5^{\circ}$

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: LO_2 PRESSURE LINE - FT_{26}

GENERAL DESCRIPTION: LO_2 pressure line on T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000063, -000628, Martin Marietta 82600207000

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	360.733	10.822
	Y_T	15.145	0.454
	Z_T	407.718	12.232
Trailing edge at:	X_T	2083.5	62.505
	Y_T	63.25	1.898
	Z_T	609.00	18.27
Centerline of line located radially at $\emptyset = 27^\circ$			
Line diameter		2.0	0.060

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELECTRICAL LINE - T_{27}

GENERAL DESCRIPTION: Electrical conduit on the right-hand forward section of T_{28}.

MODEL SCALE: 0.030

DRAWING NO.: VL78-000062B

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	360.733	10.822
	Y_T	11.549	0.346
	Z_T	412.474	12.374
Trailing edge at:	X_T	876.273	26.288
	Y_T	226.114	6.783
	Z_T	646.774	19.403

Centerline of conduit located radially at $\phi = 47.5^{\circ}$

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT. RUDDER - R_5

GENERAL DESCRIPTION: Configuration 140C orbiter rudder (Identical to configuration 140A'B rudder).

MODEL SCALE: 0.030

DRAWING NUMBER: VL70-000146B, --000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft^2	100.15	0.090
Span (equivalent), In.	201.0	6.03
Inb'd equivalent chord, In.	91.585	2.748
Outb'd equivalent chord, In.	50.833	1.525
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83	34.83
Trailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Product of area & $\bar{c}$), Ft^3	610.92	0.016
Mean Aerodynamic Chord, In.	73.2	2.196

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: BOOSTER SOLID ROCKET MOTOR - S_{21}

GENERAL DESCRIPTION:

MODEL SCALE: 0.030 .

DRAWING NUMBER VL72-000143D, VL77-000066

DIMENSION:	FULL SCALE	MODEL SCALE
Length (Includes nozzle), In.	1789.40	53.682
~~Max Width~~ Tank Diameter, In.	146.00	4.38
~~Max Depth~~ Aft shroud Dia., In.	192.00	5.76
Fineness Ratio	9.3198	9.3198
Area - Ft^2		
Max Cross-Sectional	201.062	0.1809
Planform		
Wetted		
Base		
WP of BSRM centerline (Z_T)	400.0	1.200
FS of BSRM nose (X_T)	743.0	22.29
BP of BSRM centerline (Y_T)	250.5	7.515

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: EXTERNAL TANK - T_{20}

GENERAL DESCRIPTION:

NOTE: (Dimensions are to tank structural OML, TPS not included.)

MODEL SCALE: 0.030

DRAWING NUMBER VL72-000143D, VL78-000063

DIMENSION:	FULL SCALE	MODEL SCALE
Length, In.	1844.275	55.328
Max ~~Width~~ Dia., In.	331.00	9.93
Max Depth		
Fineness Ratio	5.687	5.687
Area - Ft^2		
Max Cross-Sectional	594.678	0.053
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V_8

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

MODEL SCALE: 0.030

DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2	413.253	0.372
Planform	315.72	9.472
Span (Theo) - In.	1.675	1.675
Aspect Ratio	0.507	0.507
Rate of Taper	0.404	0.404
Taper Ratio		
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
Trailing Edge	26.25	26.25
0.25 Element Line	41.13	41.13
Chords:		
Root (Theo) WP	268.50	8.055
Tip (Theo) WP	108.47	3.254
MAC	199.81	5.992
Fus. Sta. of .25 MAC	1463.35	43.901
W.P. of .25 MAC	635.52	19.066
B.L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle - Deg.	10.00	10.00
Trailing Wedge Angle - Deg.	14.92	14.92
Leading Edge Radius	2.00	0.060
Void Area	13.17	0.0019
Blanketed Area	0.0	0.0

TABLE III. - MODEL DIMENSIONAL DATA - Concluded.

MODEL COMPONENT: W_{116}

GENERAL DESCRIPTION: Configuration 4

NOTE: Identical to W_{114} except airfoil thickness. Dihedral angle is along trailing edge of wing.

MODEL SCALE : 0.030

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

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2 Planform	2690.00	2.421
Span (Theo In.	936.68	28.10
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees	3.000	3.000
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	- 10.056	- 10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	689.24	20.677
Tip, (Theo) B.P.	137.85	4.136
MAC	474.81	14.244
Fus. Sta. of .25 MAC	1136.83	34.105
W.P. of .25 MAC	290.58	8.717
B.L. of .25 MAC	182.13	5.464
EXPOSED DATA		
Area (Theo) Ft^2	1751.50	1.576
Span, (Theo) In. BP108	720.68	21.620
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	16.863
Tip 1.00 $\frac{b}{2}$	137.85	4.136
MAC	392.83	11.785
Fus. Sta. of .25 MAC	1185.98	35.579
W.P. of .25 MAC	294.30	8.829
B.L. of .25 MAC	251.77	7.553
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.113	0.113
Tip $\frac{b}{2}$ =	0.120	0.120
Data for (1) of (2) Sides		
Leading Edge Cuff Planform Area Ft^2	113.13	0.102
Leading Edge Intersects Fus M. L. @ Sta	500.0	15.00
Leading Edge Intersects Wing @ Sta	1024.00	30.72

TABLE IV.
ORBITER WING PRESSURE TAP NUMBERS

ORBITER LEFT WING PRESSURE TAP NUMBERS

η	Y₀		NO. TAPS	Σ TAPS
		X/C 0 .041 .113 .247 .415 .547 .638 .727 .793		
.233	110	TOP 208 209 210 211 212 213 214 215 216	9	9
		BOT - - - - - - - - -	0	
		X/C 0 .010 .020 .030 .044 .229 .362 .497 .700 .794 .865 .930 .965		
.299	140	TOP 217 218 219 220 221 222 223 224 225 226 227 228 229	13	34
		BOT - 230 231 232 233 234 235 236 237 238 239 240 241	12	
		X/C 0 .010 .020 .040 .056 .163 .246 .340 .631 .745 .839 .879 .919 .955		
.364	170	TOP 242 243 244 245 246 247 248 249 250 251 252 253 254 255	14	61
		BOT - 256 257 258 259 260 261 262 263 264 265 266 267 268	13	
		X/C 0 .010 .020 .040 .063 .171 .274 .402 .565 .760 .808 .857 .905 .953 1.000		
.427	200	TOP 269 270 271 272 273 274 275 276 277 278 279 280 281 282 -	14	89
		BOT - 283 284 285 286 287 288 289 290 291 292 293 294 295 296	14	
		X/C 0 .010 .020 .030 .040 .050 .080 .150 .250 .400 .550 .725 .775 .850 .900 .950		
.534	250	TOP 297 298 299 300 301 302 303 304 305 306 307 308 309 310	14	116
		BOT - 311 312 313 314 315 316 317 318 319 320 321 322 323	13	
		X/C .775 .850 .900 1.000		
.641	300	TOP 333 334 335 -	3	123
		BOT 344 345 346 347	4	
		X/C 0 .010 .020 .030 .050 .150 .250 .400 .550 .700		
.673	315	TOP 324 325 326 327 328 329 330 331 332	9	140
		BOT - 336 337 338 339 340 341 342 343	8	
		X/C 0 .010 .020 .030 .050 .150 .250 .650 .750 .850 .950		
.780	365	TOP 348 349 350 351 352 353 354 355 356 357	10	159
		BOT - 358 359 360 361 362 363 364 365 366	9	
		X/C 0 .010 .020 .030 .050 .150 .250 .400 .600 .750 .900 1.000		
.885	415	TOP 367 368 369 370 371 372 373 374 375 376 -	10	179
		BOT - 377 378 379 380 381 382 383 384 385 386	10	
		X/C 0 .028 .069 .167 .345 .503 .670 .862		
.972	455	TOP 387 388 389 390 391 392 393 394	8	194
		BOT - 395 396 397 398 399 400 401	7	
		X/C 1.000 1.362 1.405		
1.0		TOP 402 403	2	196
		BOT - -		

ORBITER RIGHT WING PRESSURE TAP NUMBERS

η	Y₀		NO. TAPS	Σ TAPS
		X/C 0 .041 .113 .247 .415 .547 .638 .727 .793		
.235	110	TOP 404 405 406 407 408 409 410 411 412	9	205
		BOT - - - - - - - - -	0	
		X/C 0 .010 .020 .040 .056 .163 .246 .340 .631 .745		
.304	170	TOP 413 414 415 416 - 417 418 419 420 421	9	222
		BOT - 422 423 424 425 426 427 428 - 429	9	

TABLE V. ORBITER FUSELAGE PRESSURE TAP NUMBERS

ORBITER X_o - IN.			Φ RADIAL LOCATION ~ DEGREES																								
FULL	MODE_	X_o/L_o	0	20	40	55	70	90	105	110	120	135	140	150	151	156	162	165	169	174	180	305	320	340	NO TAPS	Σ TAPS
235	7.05	0	7																						1	1
245	7.35	.008	8					9													10				3	4
265	7.95	.023	11	12	13	14	15	16			17			18							19	20	21	22	12	16
295	8.85	.046	23	24	25	26	27	28			29			30							31	32	33	34	12	28
325	9.75	.070	35	36	37	38	39	40			41			42							43	44	45	46	12	40
380	11.40	.112	47	48	49	50	51	52			53			54							55	56	57	58	12	52
440	13.20	.158																		59					1	53
450	13.50	.166	60	61	62	63	64	65			66					67			68		69	70	71	72	13	66
465	13.95	.177													73		74								2	68
500	15.00	.204	75	76	77	78	79	80			81		82	83				84			85	86	87	88	14	82
560	16.80	.251	89		90		91	92			93			94				95			96		97		9	91
625	18.75	.301	98		99		100	101			102			103				104			105		106		9	100
725	21.75	.378	107		108		109	110			111			112				113			114		115		9	109
880	26.40	.497	116		117		118	119			120			121				122			123		124		9	118
980	29.40	.574	125		126																		127		3	121
1080	32.40	.652	128		129		130	131			132			133				134			135		136		9	130
1180	35.40	.729	137		138		139	140			141			142							143		144		8	138
1245	37.35	.779	145		146		147	148	149		150	151		152				153			154		155		11	149
1300	39.00	.821	156		157		158	159	160		161	162		163							164		165		10	159
1375	41.25	.879	166		167		168	169	170		171	172		173				174					175		10	169
1430	42.90	.921	176		177		178	179	180		181	182		183				184					185		10	179
1480	44.40	.960	186		187		188	189	190		191	192		193				194					195		10	189
1530	45.90	.999								196	197														2	191
1530	45.90	.999								198	199														2	193

L_o = 1297.0 IN.

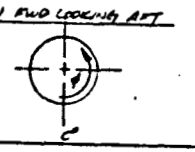
a. OMS POD, INSIDE
b. OMS POD OUTSIDE

TABLE VI. ORBITER VERTICAL TAIL PRESSURE TAP

NUMBERS (LEFT SIDE ONLY)

VERTICAL			X/CV										
z_o FULL SCALE	z_o MODEL SCALE	η_V	0	.025	.05	.15	.30	.52	.685	.775	.90	No. TAPS	TAPS
550	16.5	.153	430	431	432	433	434	435	436	437		8	8
600	18.0	.316	438	439	440	441	442	443	444	445	446	9	17
690	20.7	.600	447	448	449	450	451	452	453	454	455	9	26
765	22.95	.840	456	457	458	459	460	461	462	463	464	9	35
792	23.76	.925	465	466	467	468	469	470	471	472	473	9	44

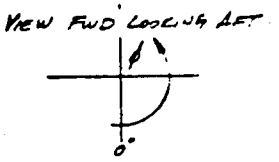
TABLE VII. EXTERNAL TANK PRESSURE TAP NUMBERS



X_T ~ IN. FULL SCALE	X_T IN. UNDER SCALE	X_T/L_T	ϕ ~ DEGREES																NO TAPS
			0	30	60	90	120	135	147	162	180	198	213	225	240	270	300	330	
298/339	8.937/9.837	0	474																1
346	10.38	0.0092	475	476	477	478	479		480		481		482		483	484	485	486	12
363	10.89	0.0186	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	16
403	12.09	0.0400	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	16
448	13.44	0.0644	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	16
568	17.04	0.1292	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	16
688	20.64	0.1944	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	16
718	21.54	0.2106	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	16
758	22.74	0.2323	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	16
803	24.22	0.2598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	16
850	25.50	0.2821	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	16
950	28.50	0.3362	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	16
1050	31.50	0.3904	647	648/662	649	650	651	652	653	654	655	656	657	658	659	660	661	--	16
1150	34.50	0.4445	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	16
1250	37.50	0.4987	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	16
1350	40.50	0.5528	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	16
1500	45.00	0.6340	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	16
1700	51.00	0.7423	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	16
1900	57.00	0.8506	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	16
2040	61.20	0.9264	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	16
2146	64.38	0.9838	775	776	777	778	779		780		781		782		783	784	785	786	12
STING CAVITY			787																1
																	Σ TAPS		314

L_T = 1846.91 IN.

TABLE VIII LEFT SRB PRESSURE TAP NUMBERS



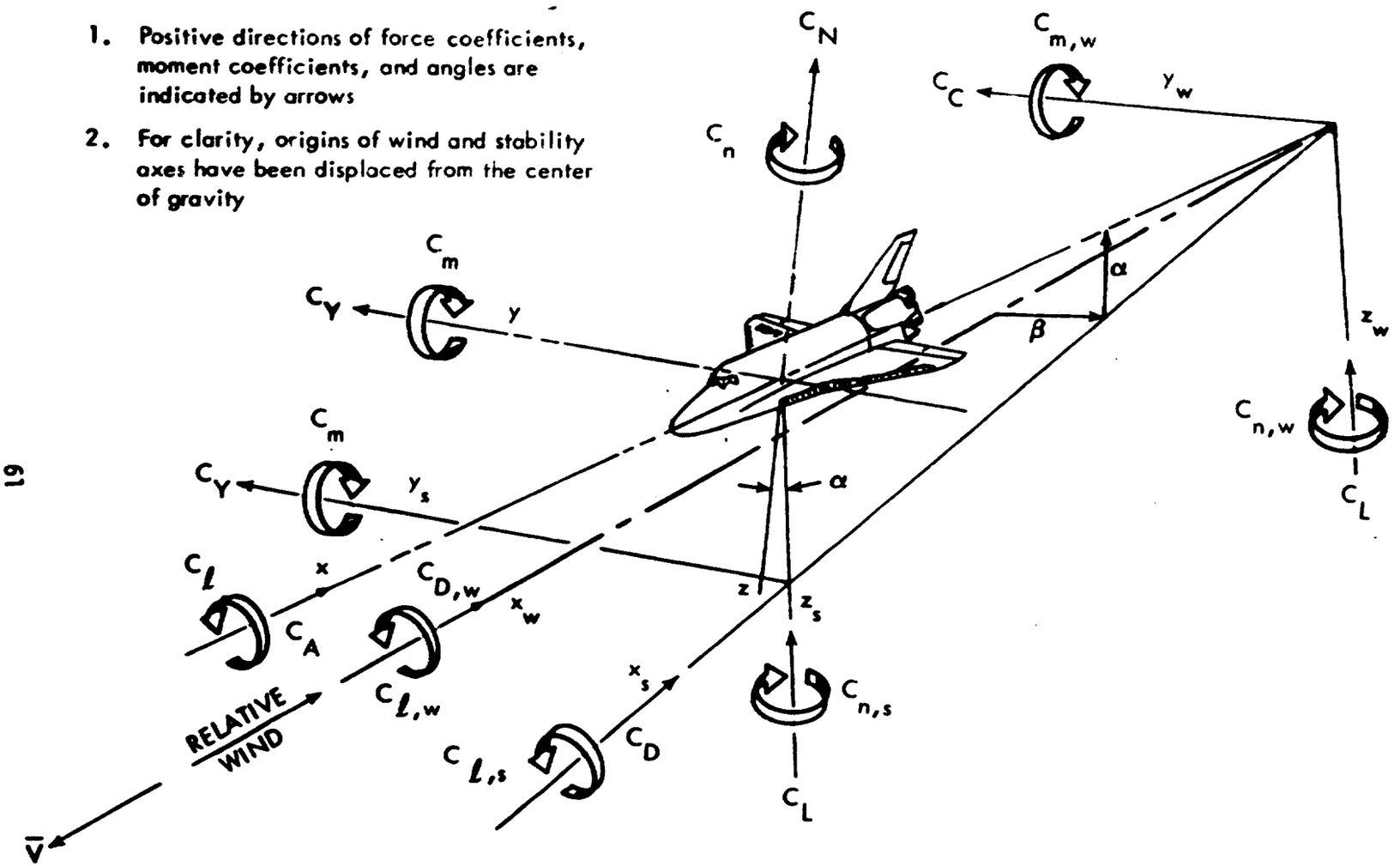
	X_s ~ IN. FULL SCALE	X_s ~ IN. MODEL SCALE	X_s/ℓ_s	φ ~ DEGREES									NO. TAPS	Σ NO TAPS
				0	45	90	135	180	225	270	315			
	200	6	0	788									1	1
	260	7.8	0.0335	789	790	791	792	793	794	795	796		8	9
	370	11.1	0.0950	797	798	799	800	801	802	803	804		8	17
	400	12.0	0.1118	805	806	807	808	809	810	811	812		8	25
	450	13.5	0.1397	813	814	815	816	817	818	819	820		8	33
	550	16.5	0.1956	821	822	823	824	825	826	827	828		8	41
	700	21.0	0.2794	829	830	831	832	833	834	835	836		8	49
	850	25.5	0.3632	837	838	839	840	841	842	843	844		8	57
	1050	31.5	0.4750	845	846	847	848	849	850	851	852		8	65
	1250	37.5	0.5867	853	854	855	856	857	858	859	860		8	73
	1450	43.5	0.6985	861	862	863	864	865	866	867	868		8	81
*	1503	45.09	0.7280	869				871		872			3	84
*	1505	45.15	0.7290	873		874		875		876			4	88
*	1517	45.51	0.7360	877		878		879		880			4	92
*	1519	45.57	0.737	881				883		884			3	95
	1650	49.5	0.8102	885	886	887	888	889	890	891	892		8	103
	1750	52.5	0.8661	893	894	895	896	897	898	899	900		8	111
*	1832.9	54.99	0.9120	909		910		911		912			4	115
*	1833.9	55.02	0.9130	913		914		915		916			4	119
	1872.2	56.17	0.9344	917	918	919	920	921	922	923	924		8	127
	1911.7	57.35	0.9565	925	926	927	928	929	930	931	932		8	135
	SOLID BASE			933			934			935			3	138
	NOZZLE BASE ℄			936									1	139

ℓ_s = 1789.60 IN.

* PRESSURE TAPS AT 77.5 IN. RADIUS ON THE STRUCTURAL RINGS

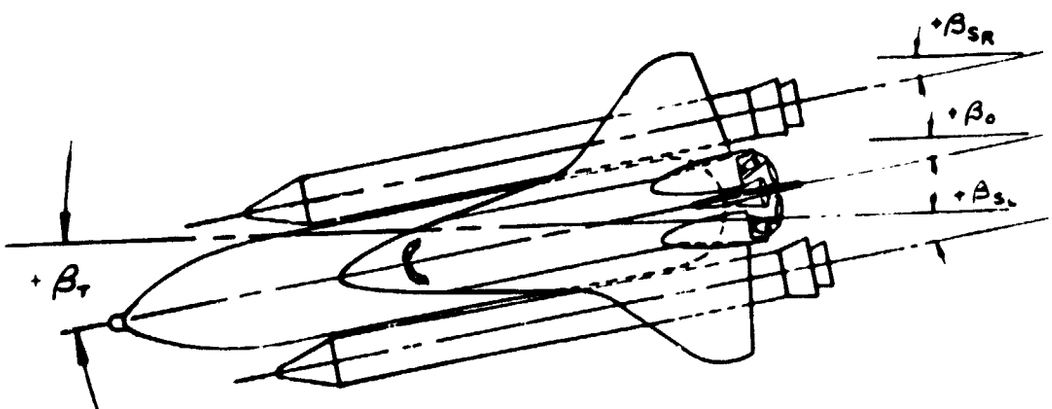
Notes:

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

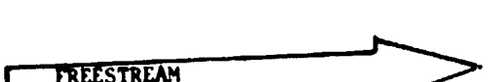


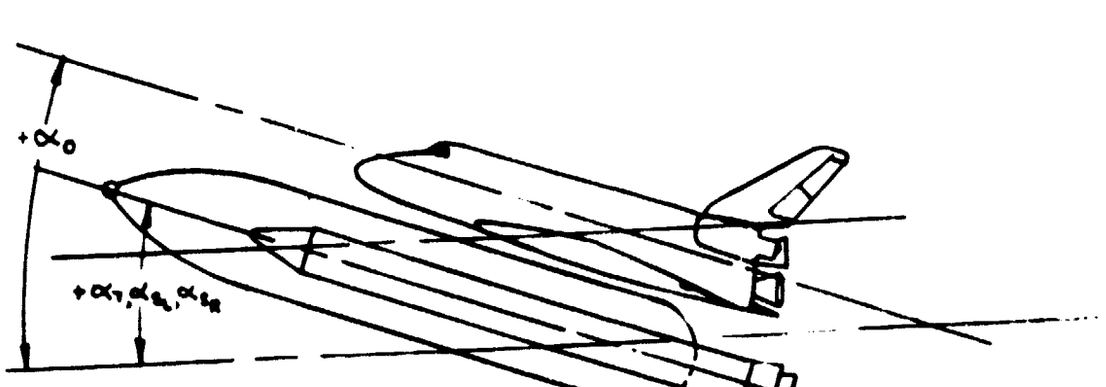
a. Forces and Moments

Figure 1. - Axis Systems.



SIDESLIP ANGLES

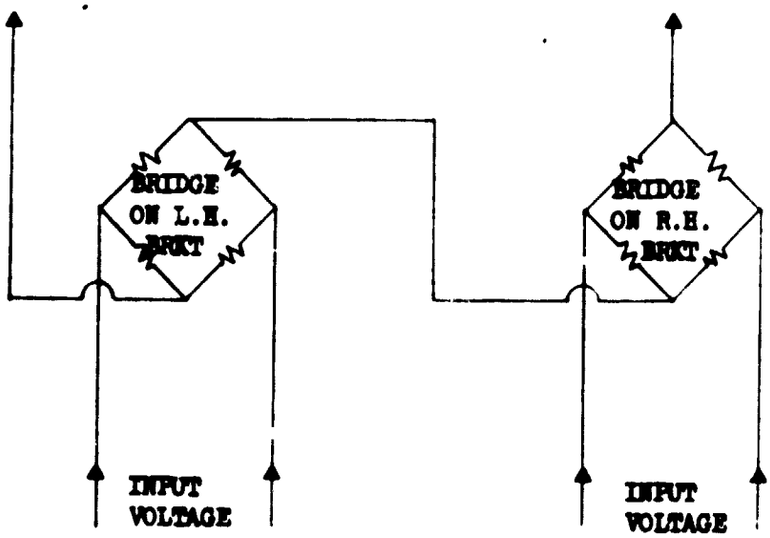




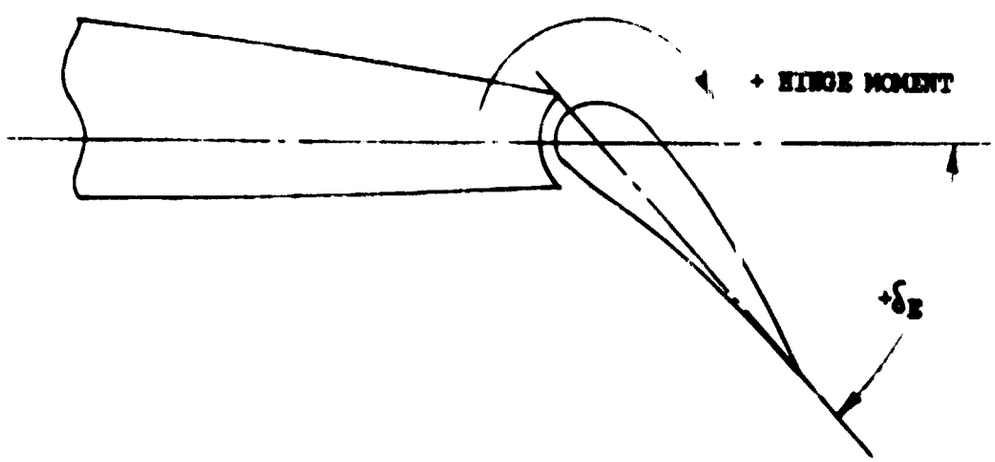
PITCH ANGLES

b. Model Attitude Definition
Figure 1. - Continued.

OUTPUT VOLTAGE

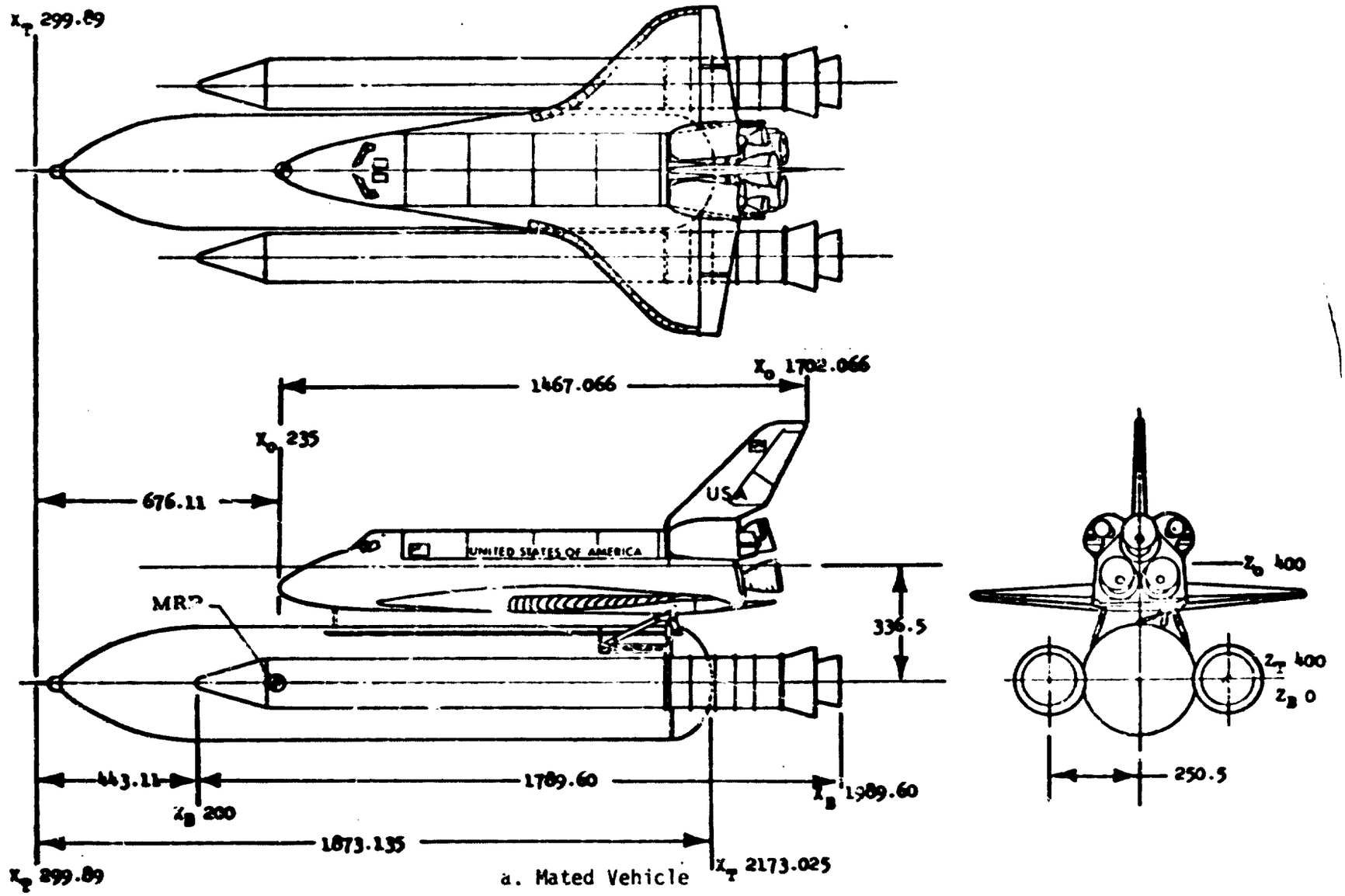


ELEVON HINGE MOMENT WIRING DIAGRAM
TYPICAL FOR INBOARD AND OUTBOARD ELEVONS



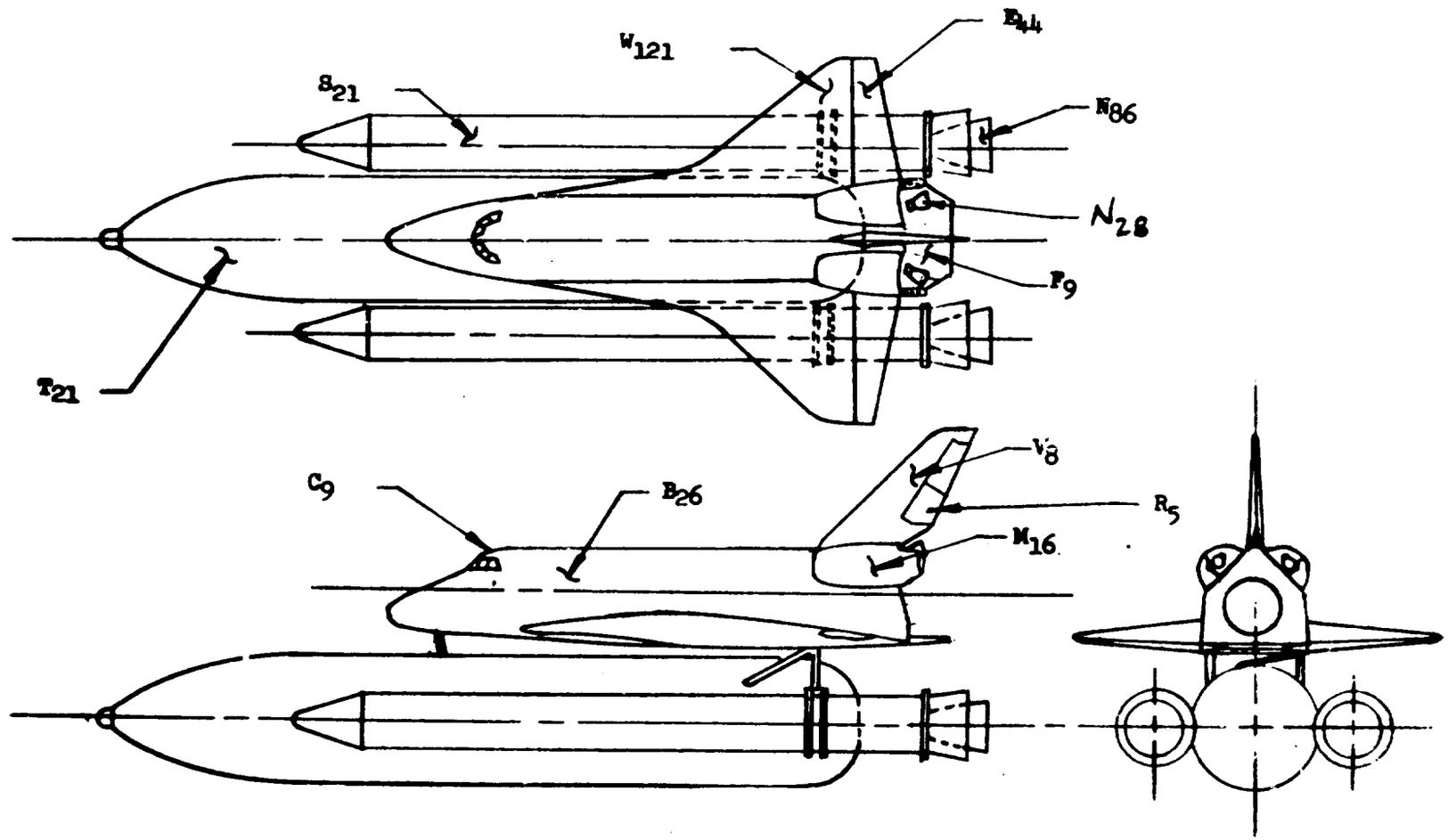
c. Elevon Electrical Hookup and Sign Conventions

Figure 1. - Concluded.



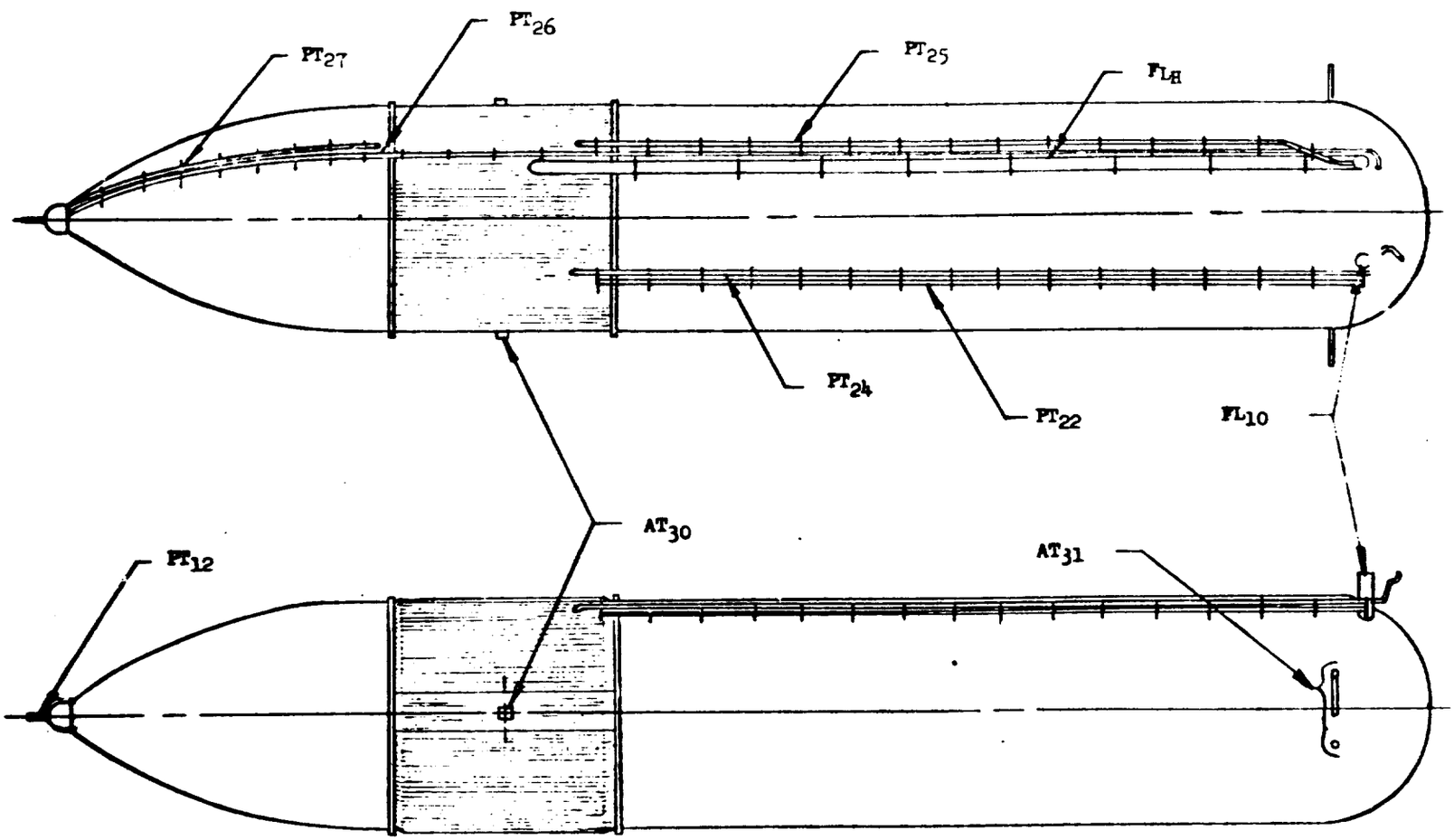
a. Mated Vehicle

Figure 2. - Model sketches.



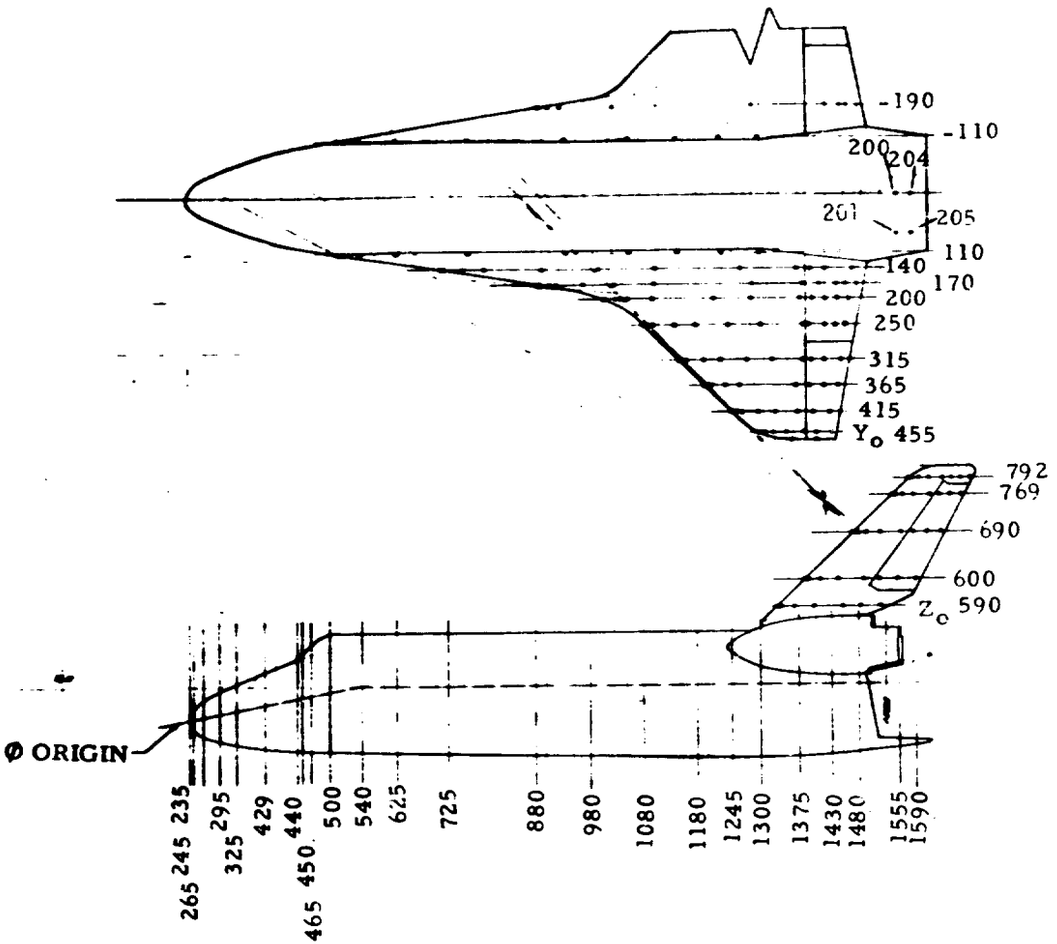
b. LVA Integrated Vehicle Three View

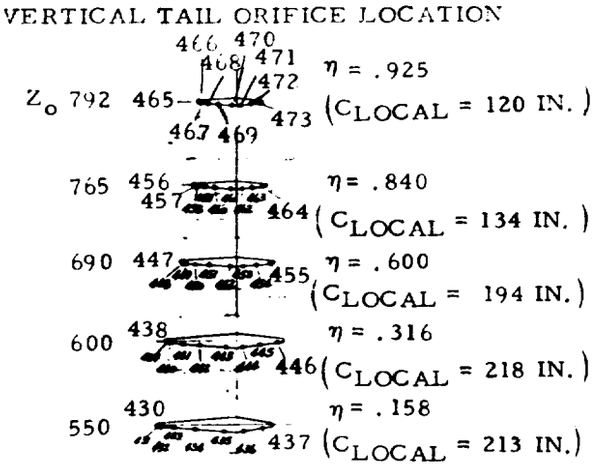
Figure 2. - Continued.

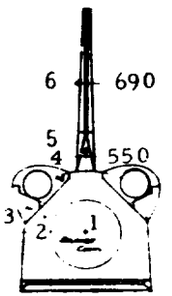


c. (T_{28}) External Tank Protuberances

Figure 2. - Continued.



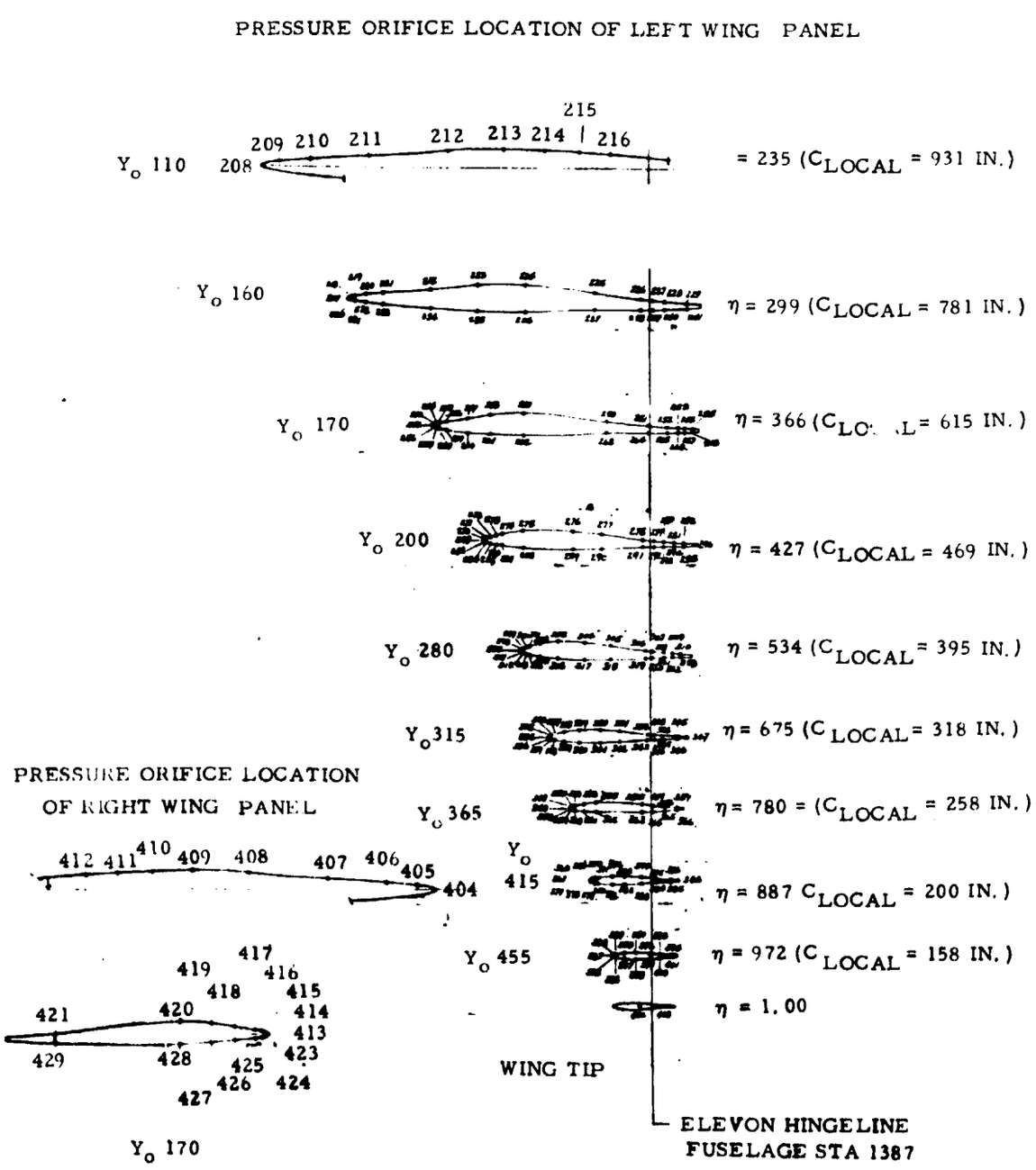




ORBITER BASE
VIEW LOOKING FORWARD

d. Orbiter Upper Wing and Vertical Tail Pressure Tap Locations

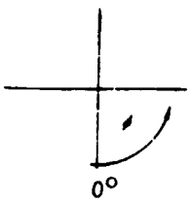
Figure 2. - Continued.



e. Orbiter Wing Pressure Tap Locations

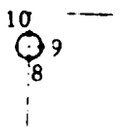
Figure 2. - Continued.

FUSELAGE ORIFICE LOCATION
NOTE:
VIEW LOOKING AFT

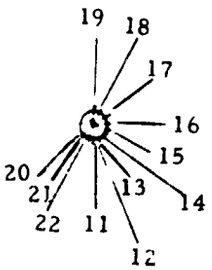


FUS STA 235

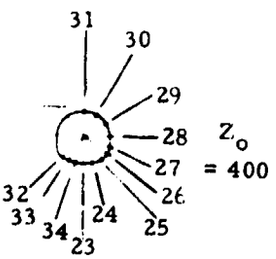
FUS STA 245



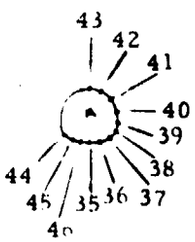
FUS STA 265



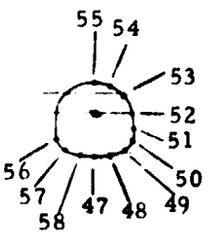
FUS STA 295



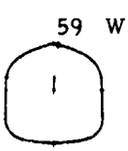
FUS STA 325



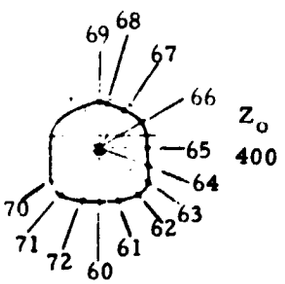
FUS STA 380



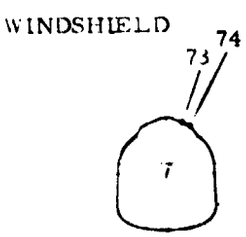
FUS STA 440



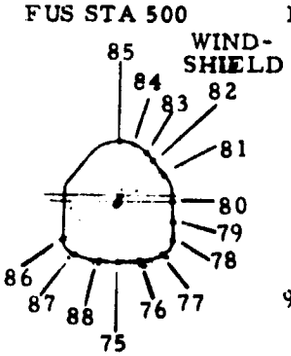
FUS STA 450



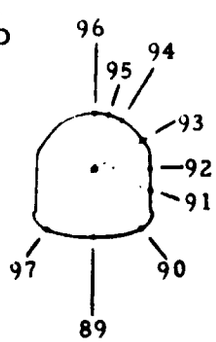
FUS STA 465



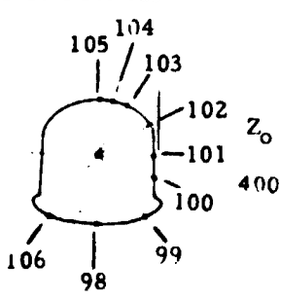
FUS STA 500



FUS STA 560

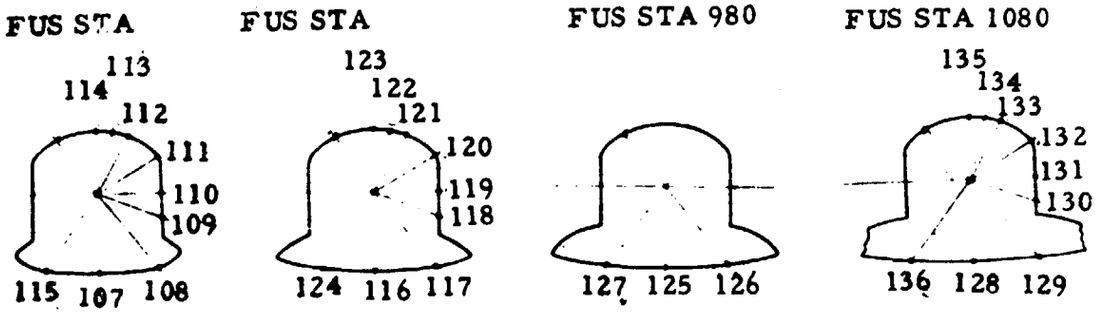


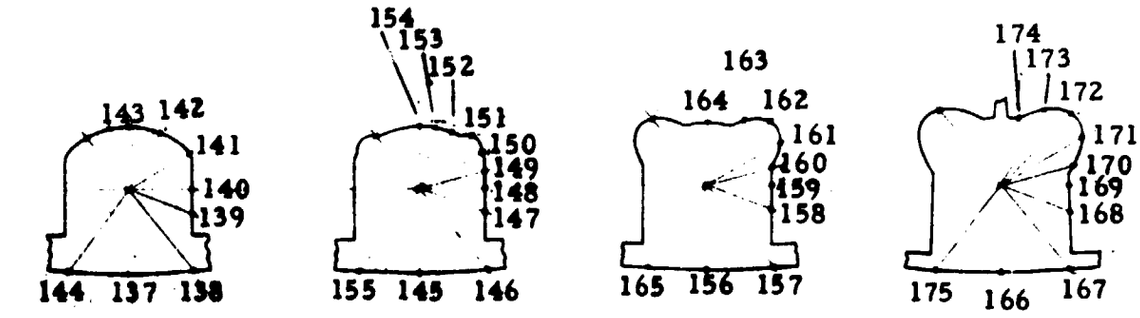
FUS STA 625

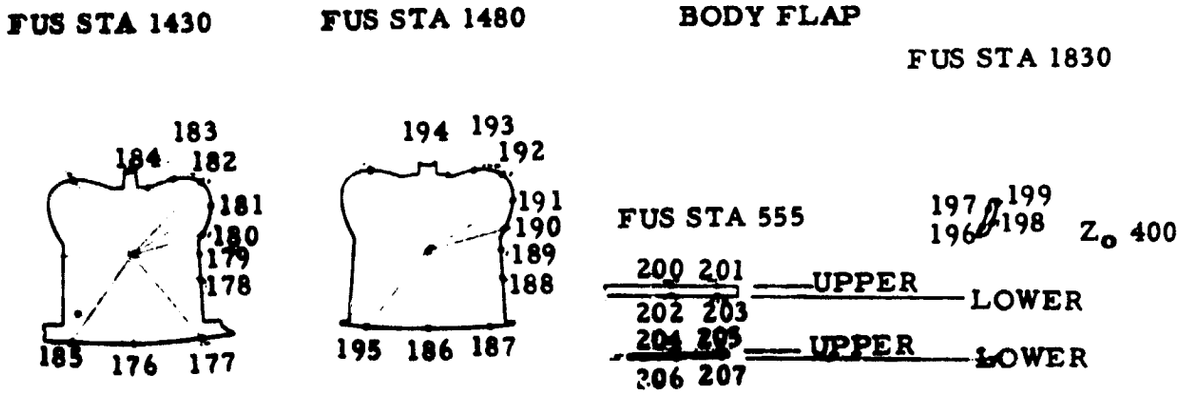


f. Orbiter Forward Fuselage Pressure Tap Locations

Figure 2. - Continued.

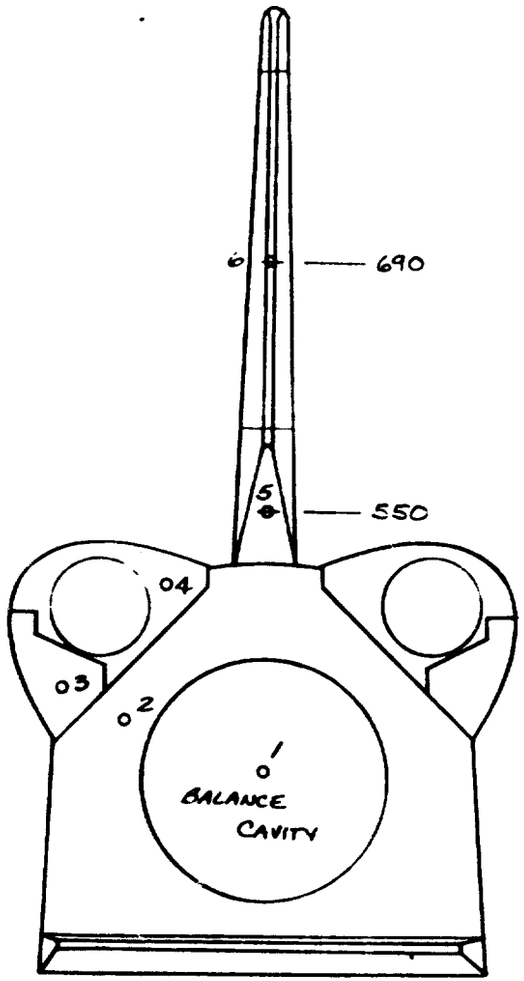






g. Orbiter Aft Fuselage Pressure Tap Locations

Figure 2. - Continued.



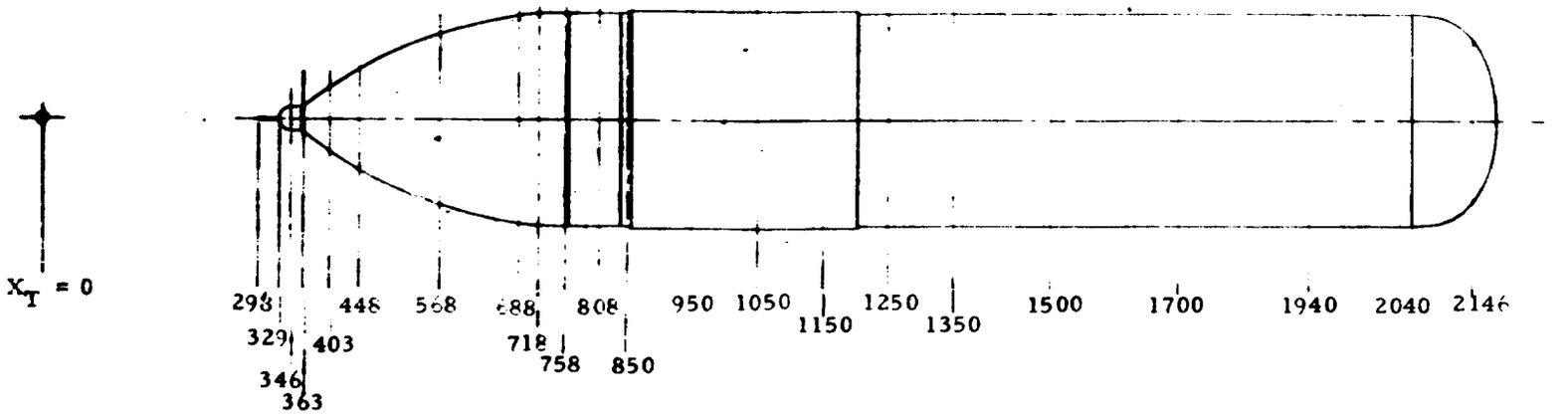
ORBITER BASE PRESSURE TAPS

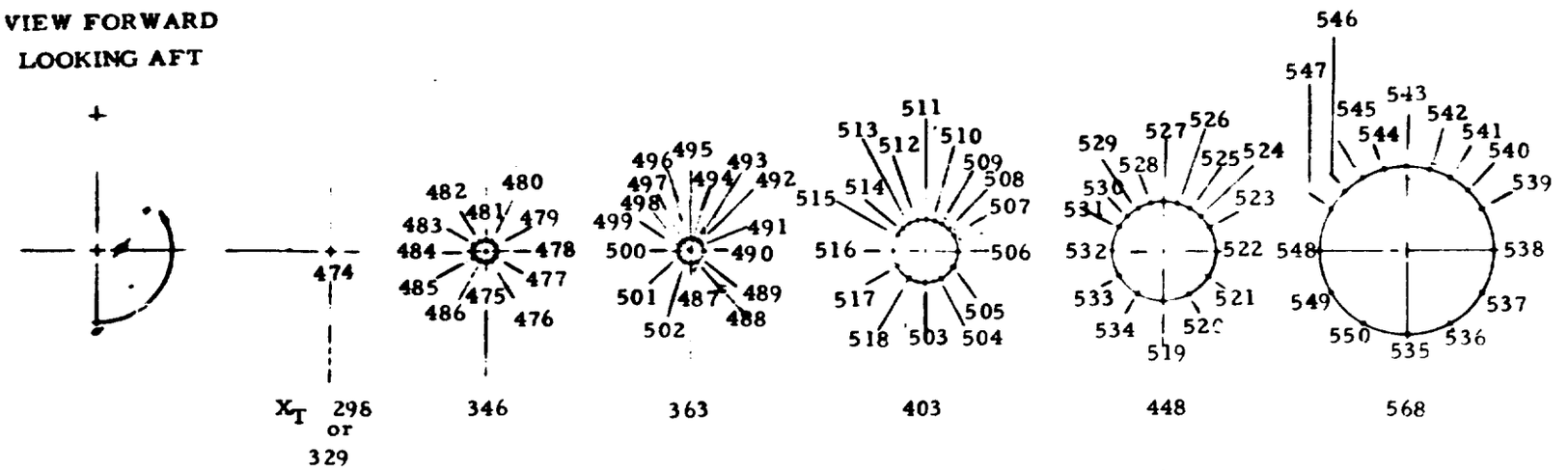
BODY FLAP PRESSURE TAP NUMBERS

ORBITER ~ X_O			$\phi \sim 066.$			
FULL SCALE	MODEL SCALE	X_O/L_O	0	40	NO TAPS	Σ NO TAPS
1555_U	46.65		200	201	2	2
1555_L	46.65		202	203	2	4
1590_U	47.70		204	205	2	6
1590_L	47.70		206	207	2	8

h. Orbiter Base Pressure Tap Locations

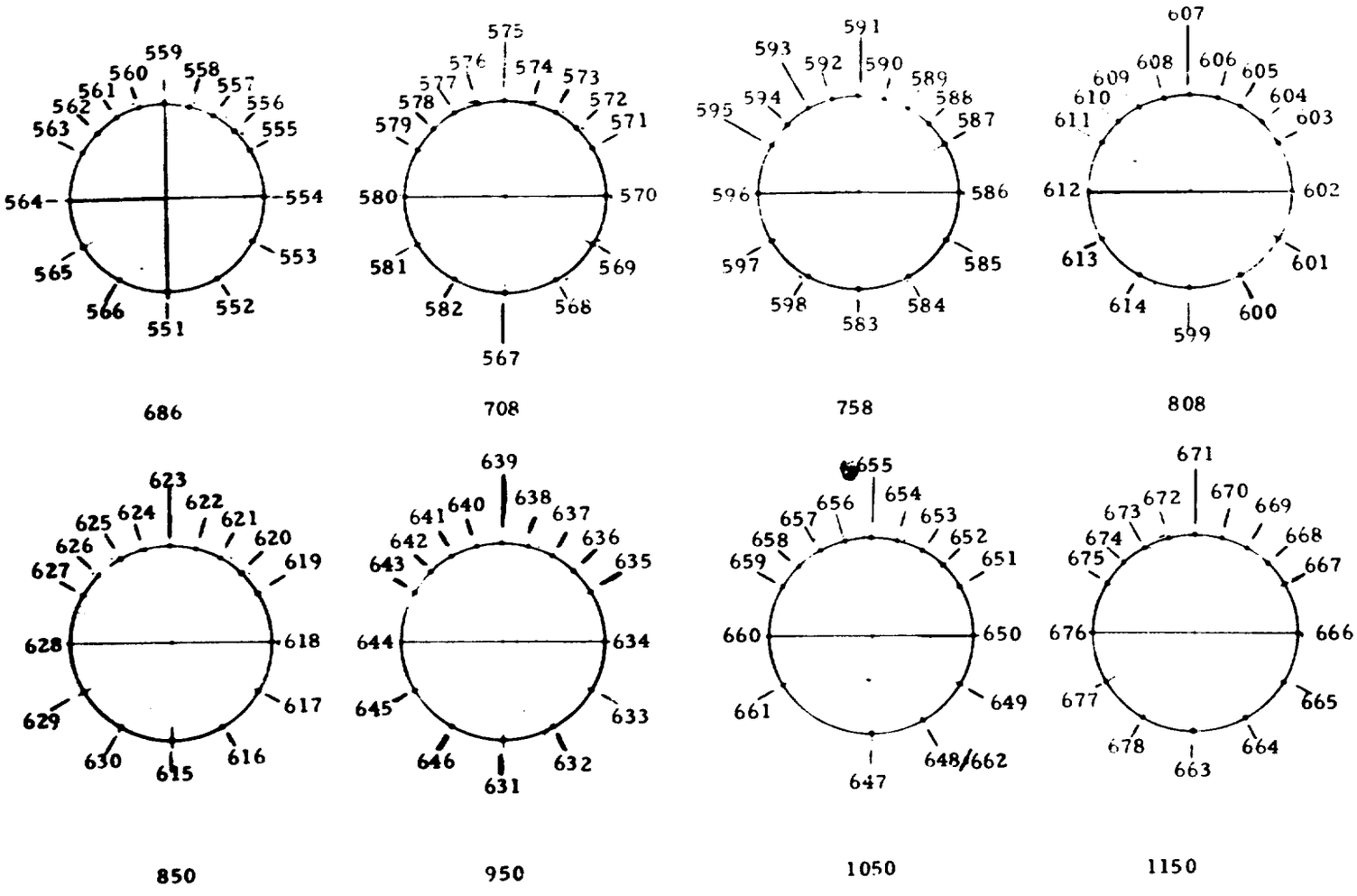
Figure 2. - Continued.





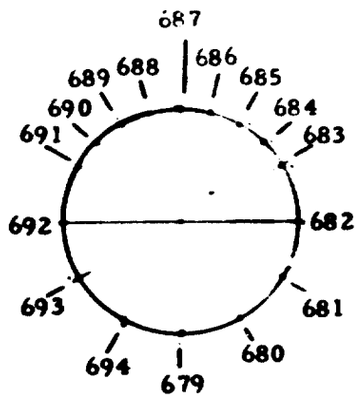
i. External Tank Forward Pressure Tap Locations

Figure 2. - Continued.

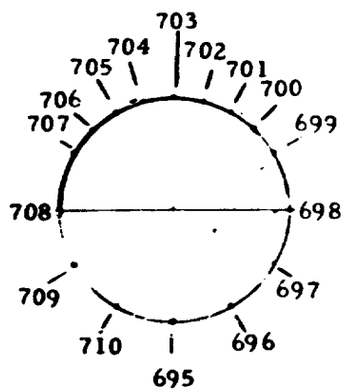


j. External Tank Mid Pressure Tap Locations

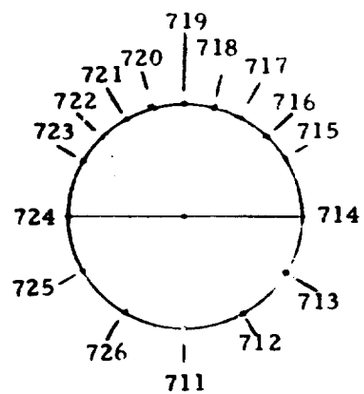
Figure 2. - Continued.



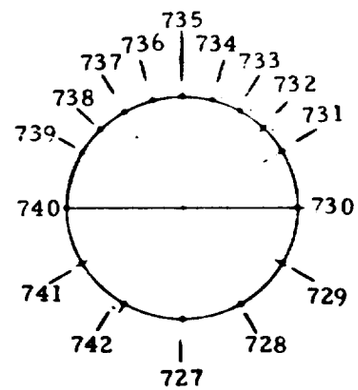
1250



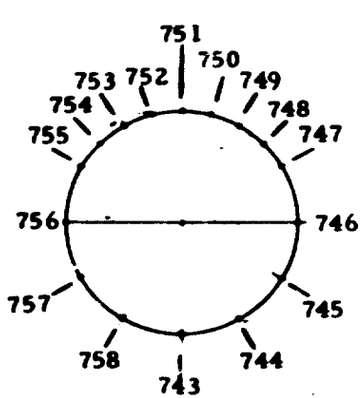
1350



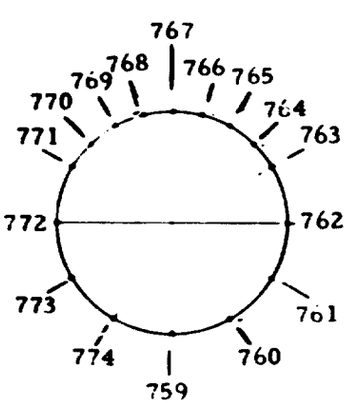
1500

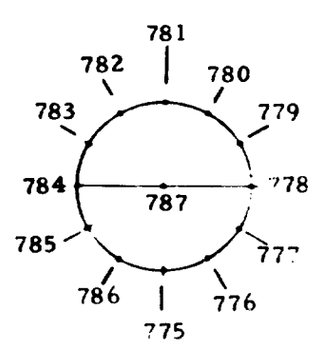


1700



1900

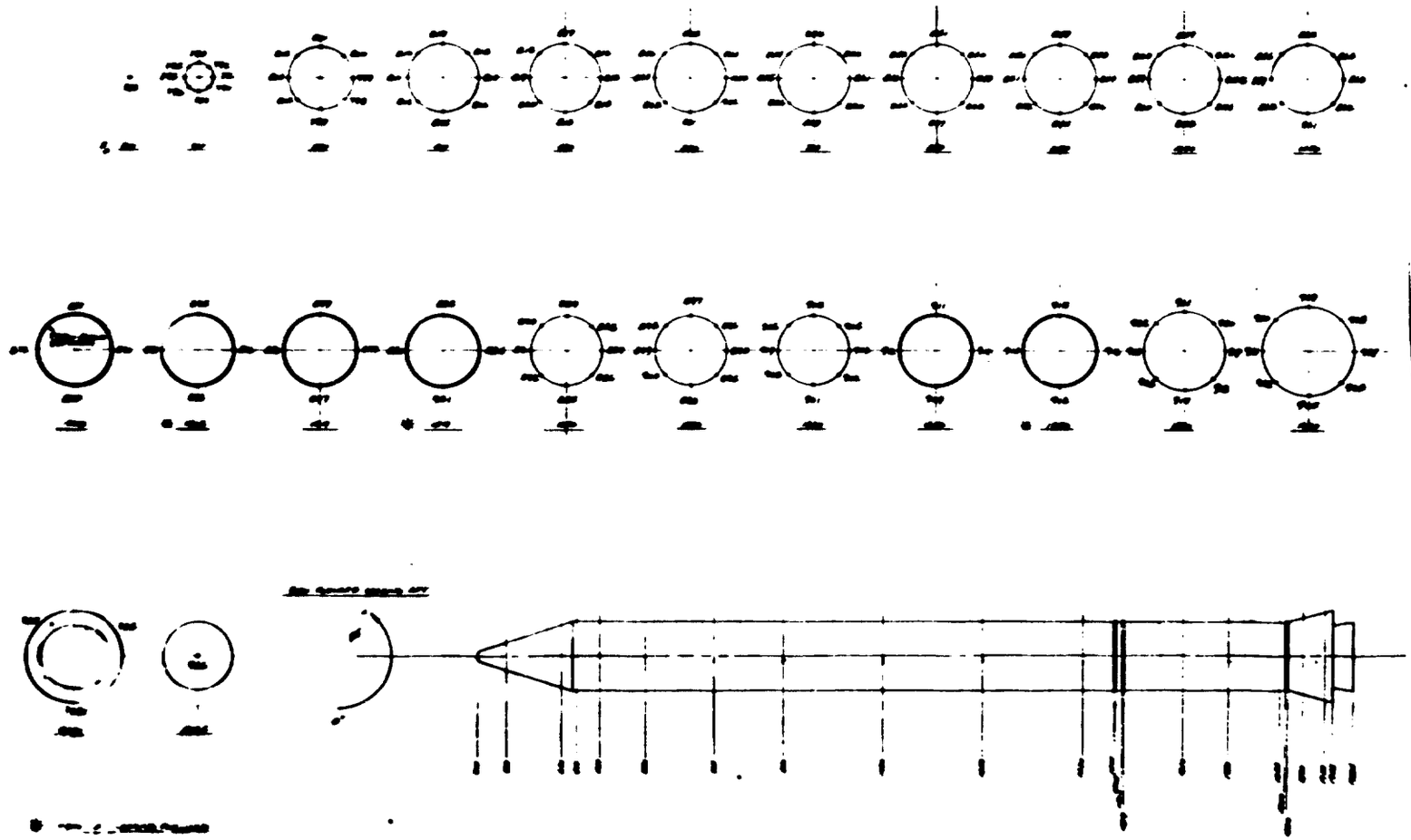




2040

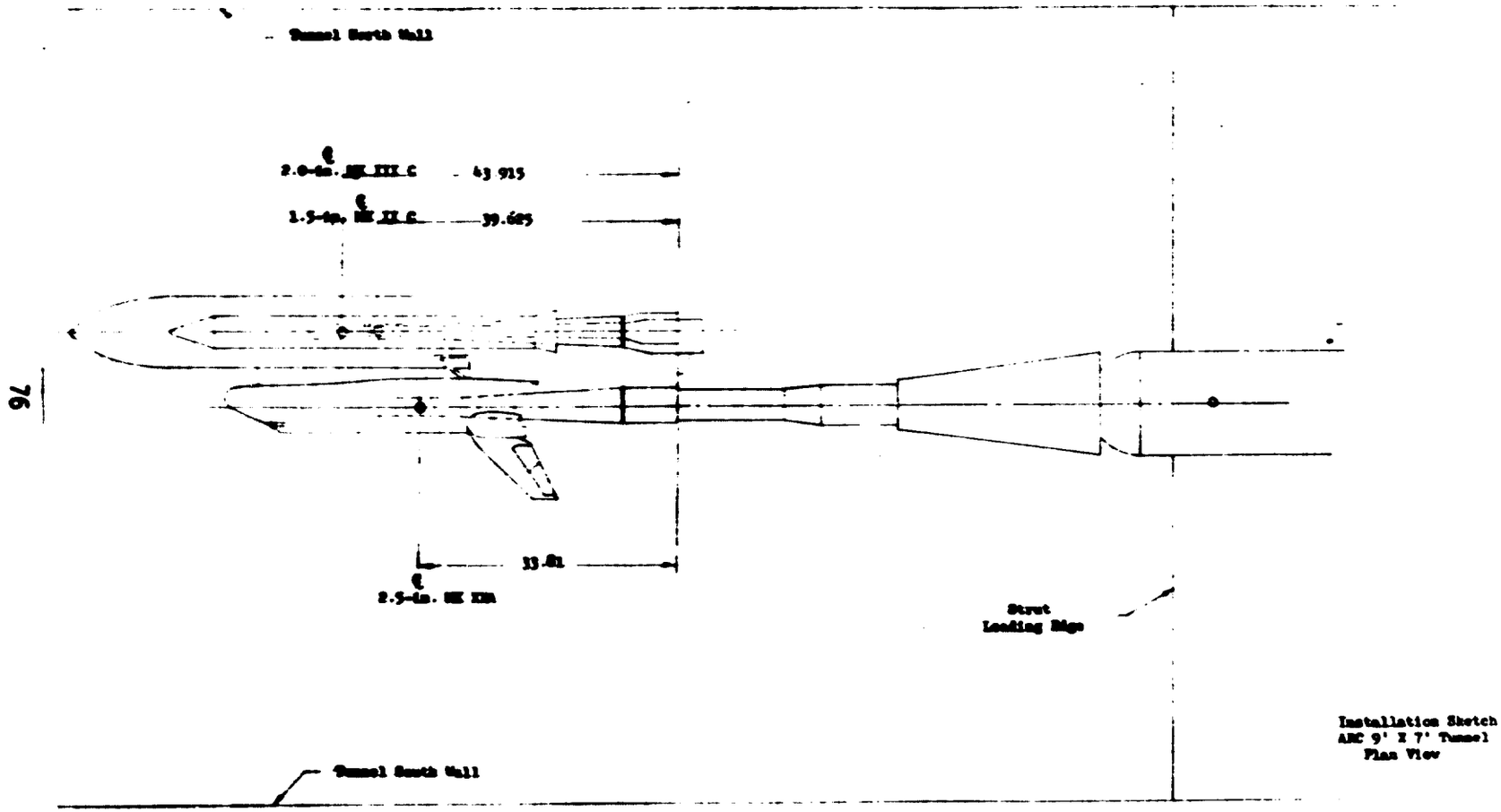
k. External Tank Aft Pressure Tap Locations

Figure 2. - Continued.



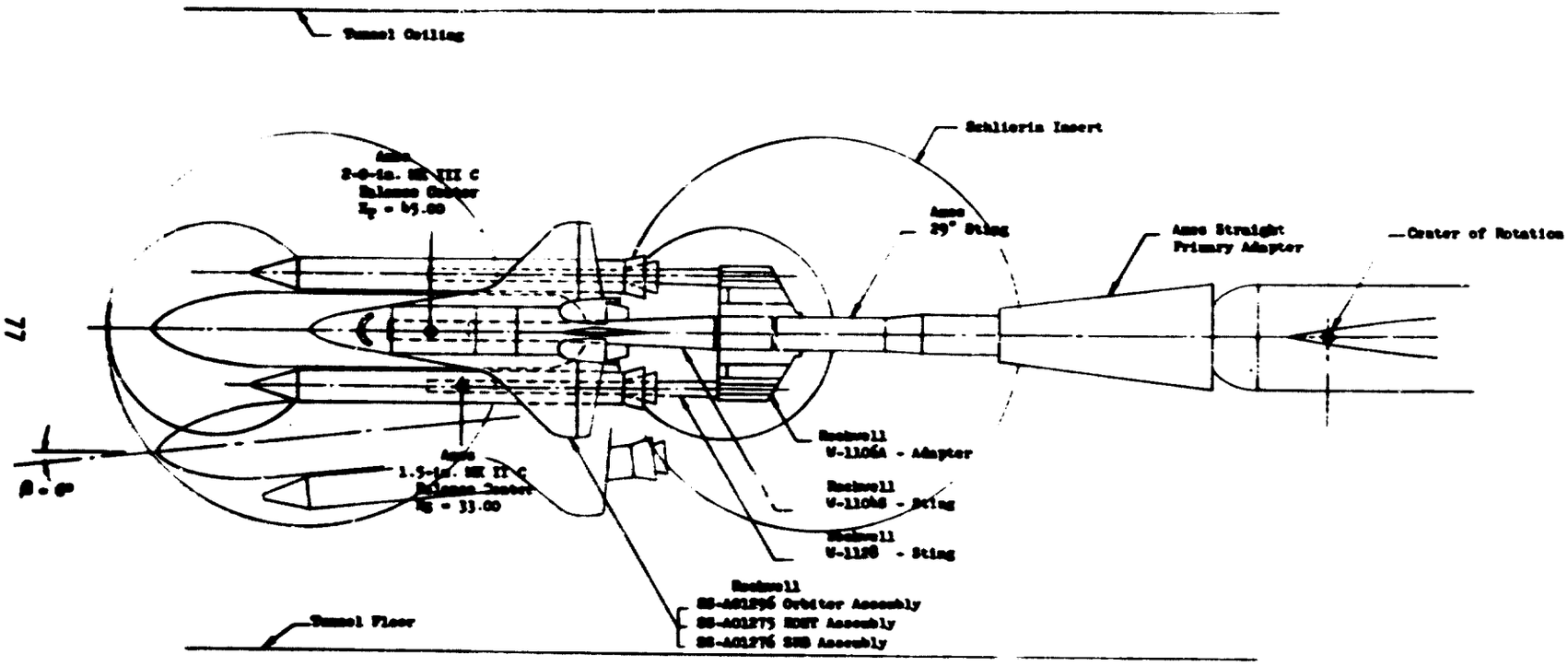
1. SRB Pressure Tap Locations

Figure 2. - Continued.



m. Model Installation Side View

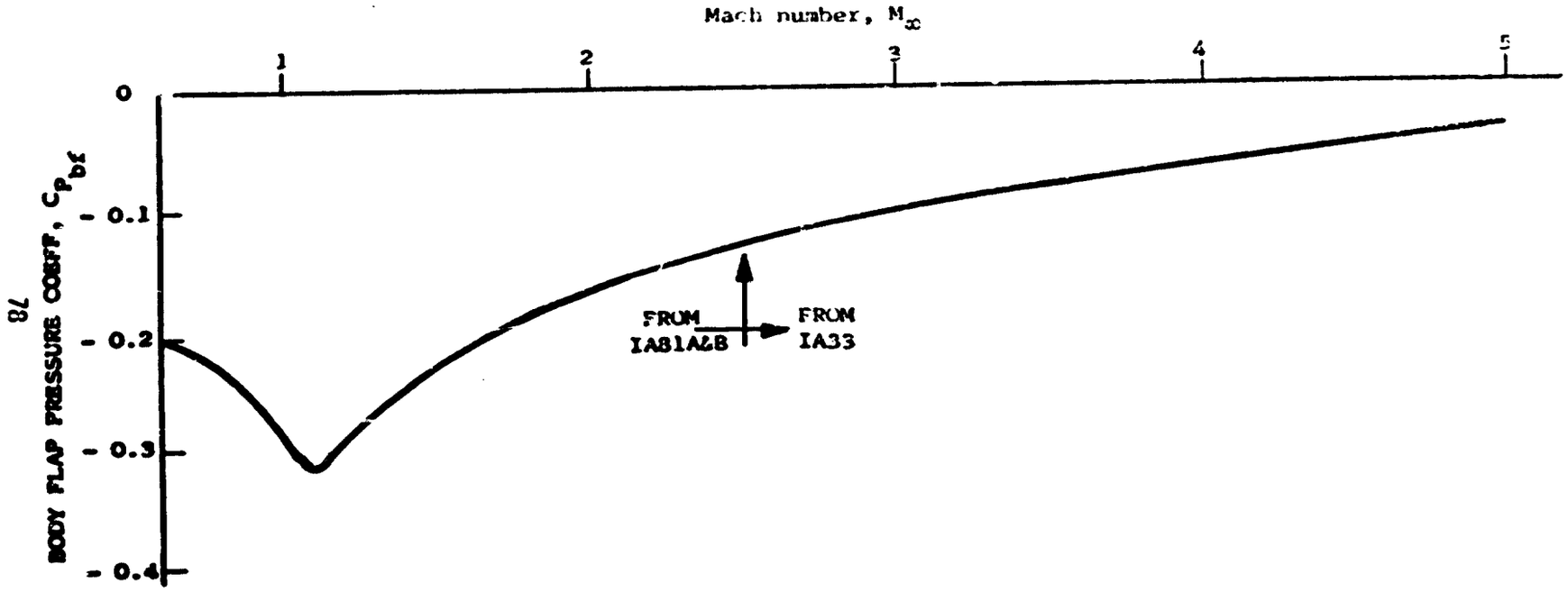
Figure 2. - Continued.



Installation Sketch
ARC 9' X 7' Tunnel
Side View Looking North

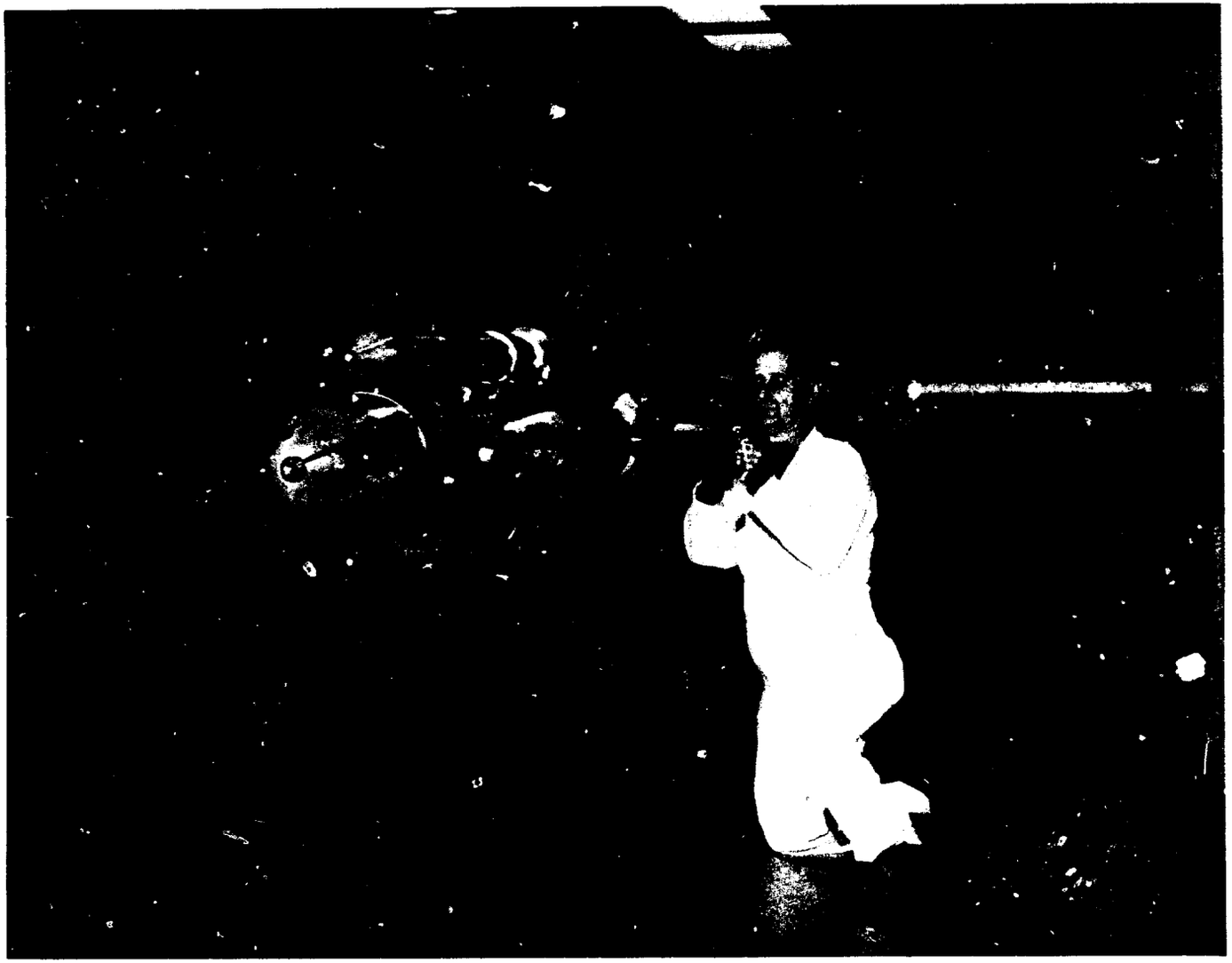
n. Model Installation Top View

Figure 2. - Continued.



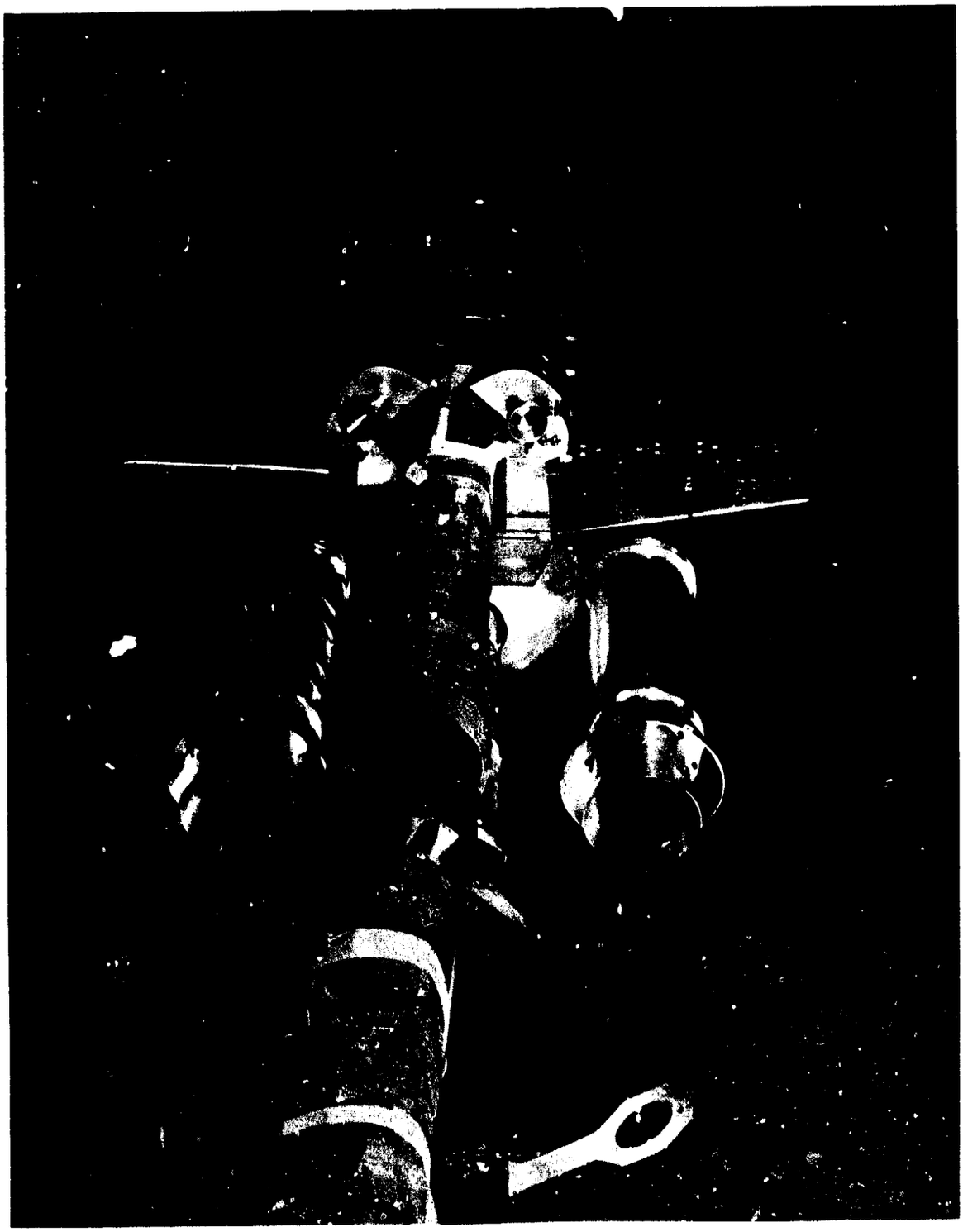
o. Orbiter Body Flap Pressure Coefficient.

Figure 2. - Concluded.



a. Side View

Figure 3. - Model photographs.



b. Rear View

Figure 3. - Concluded.

DATA FIGURES

VOLUME 1 Pages 1-808 (Force)

VOLUME 2 Pages 809-1663 (Pressure)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO35) ○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35) □	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35) ◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35) △	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

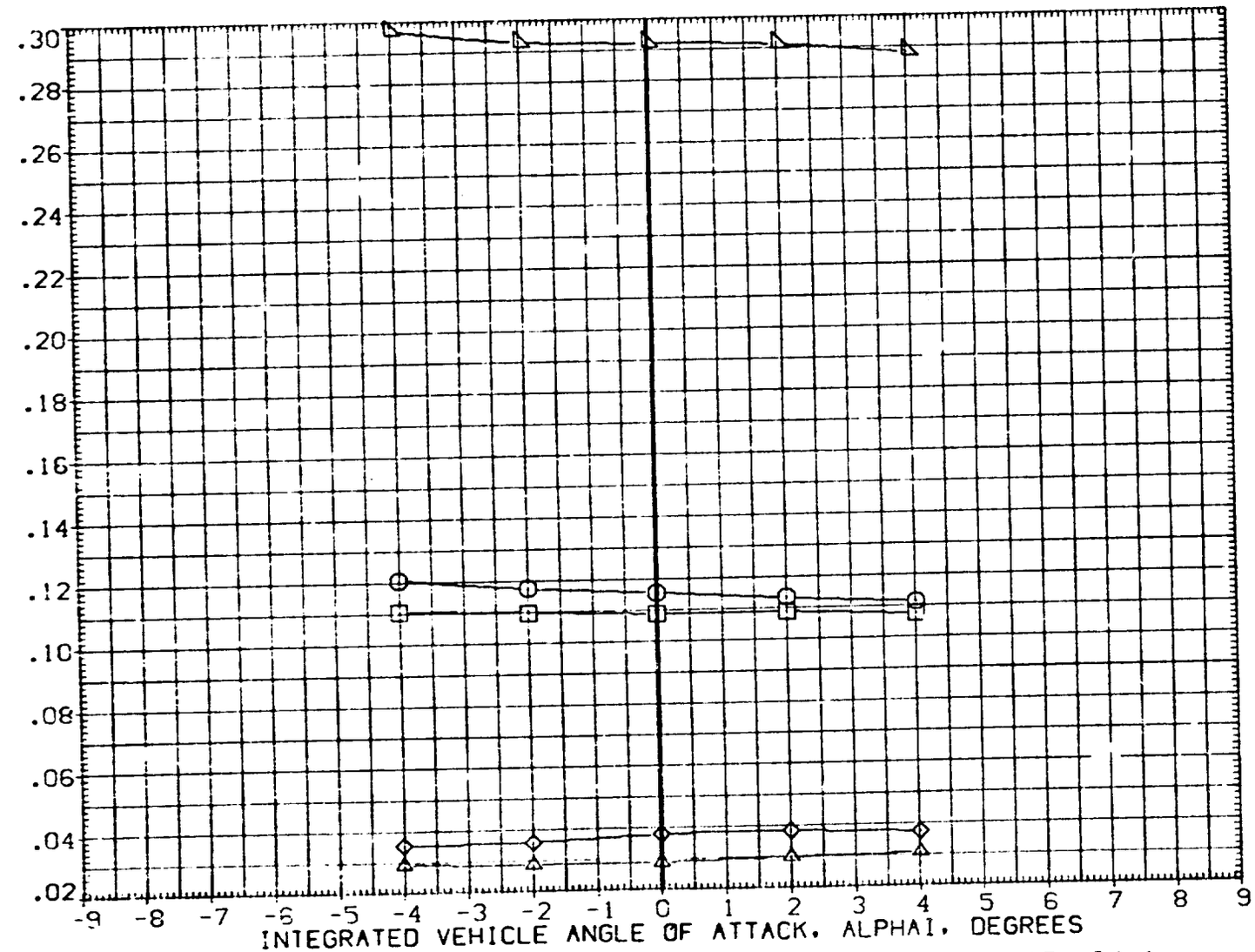


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)BETAI = -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

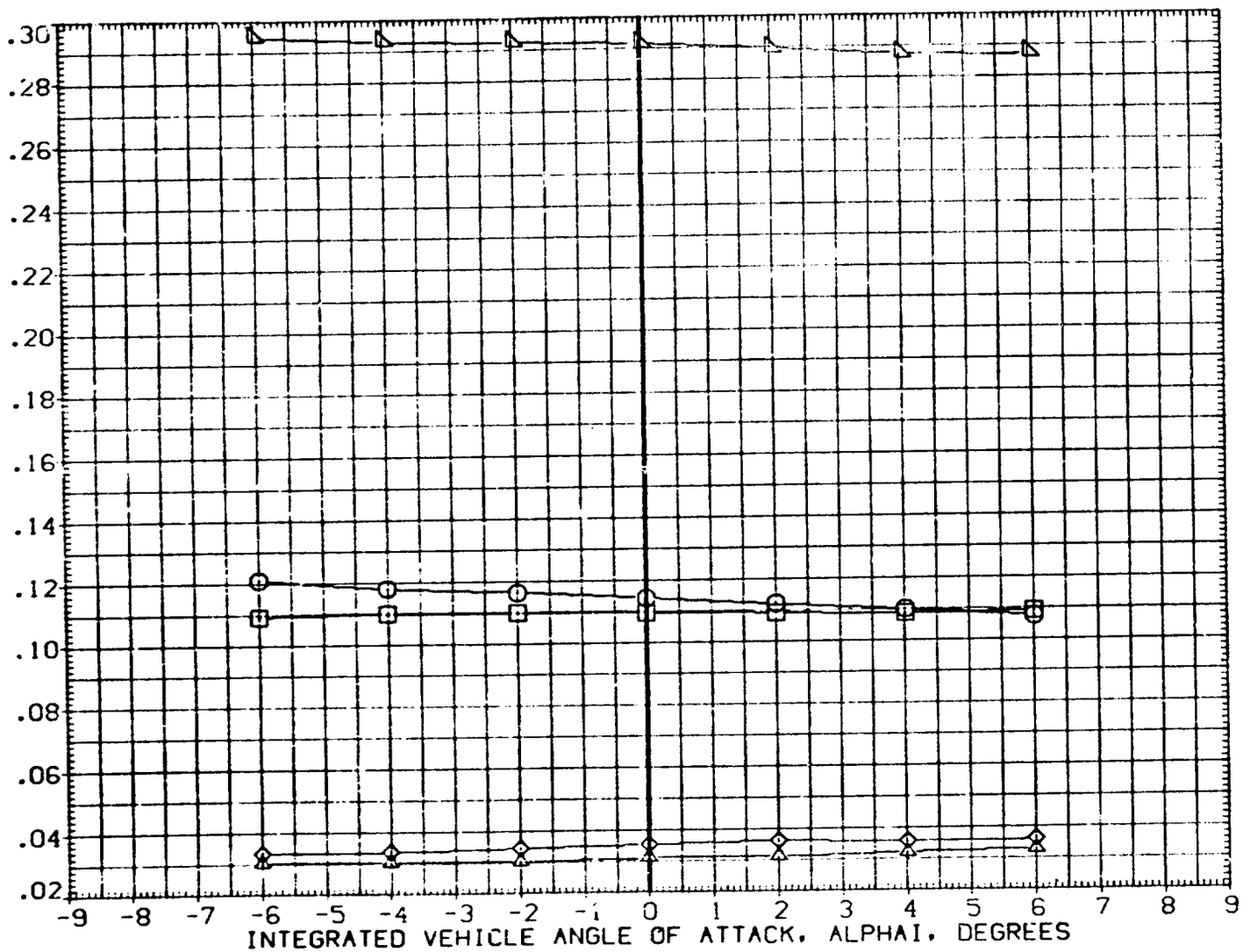


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)		AMES97-013([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)		AMES97-013([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019([A81]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

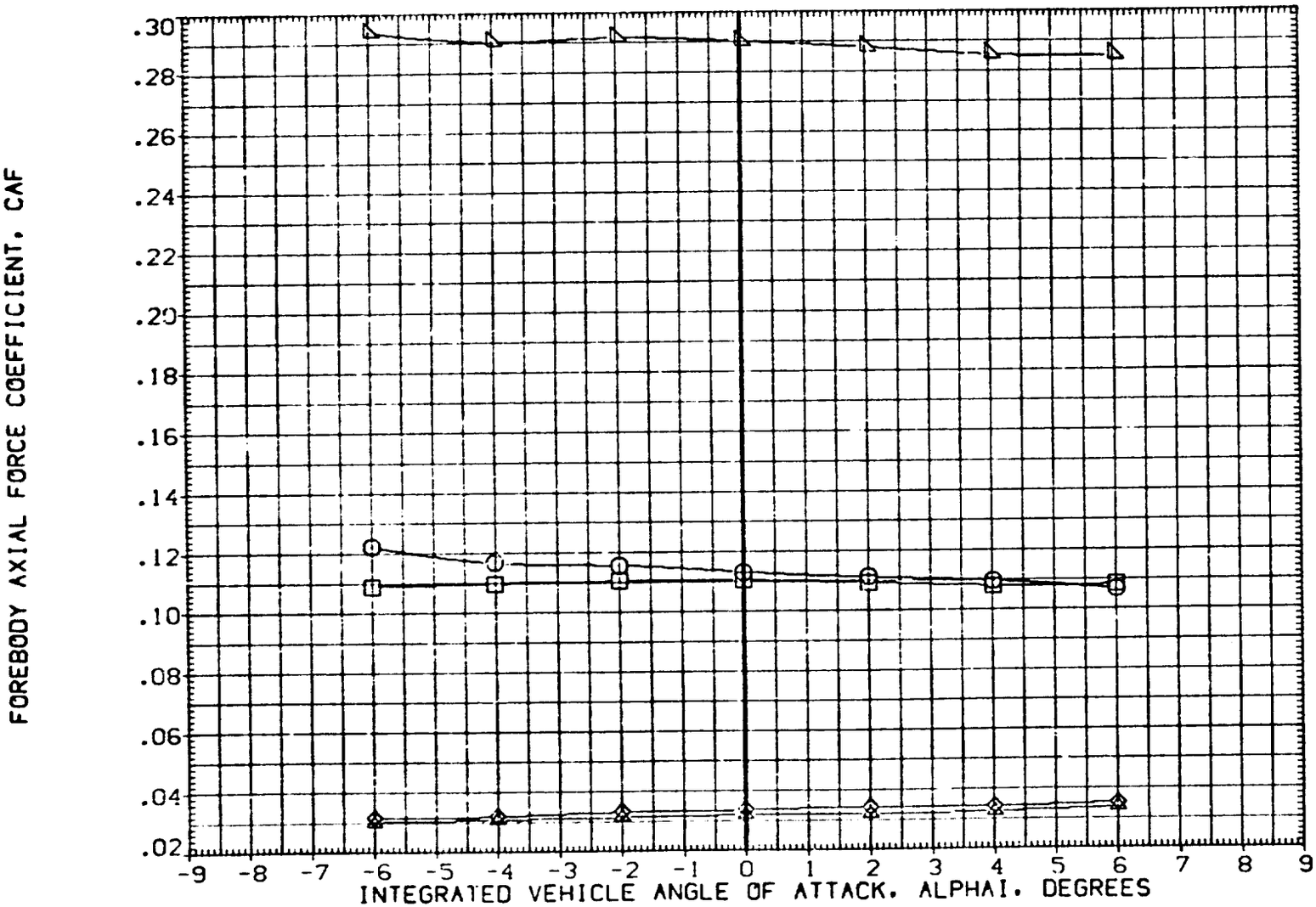


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)BETAI = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO35)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

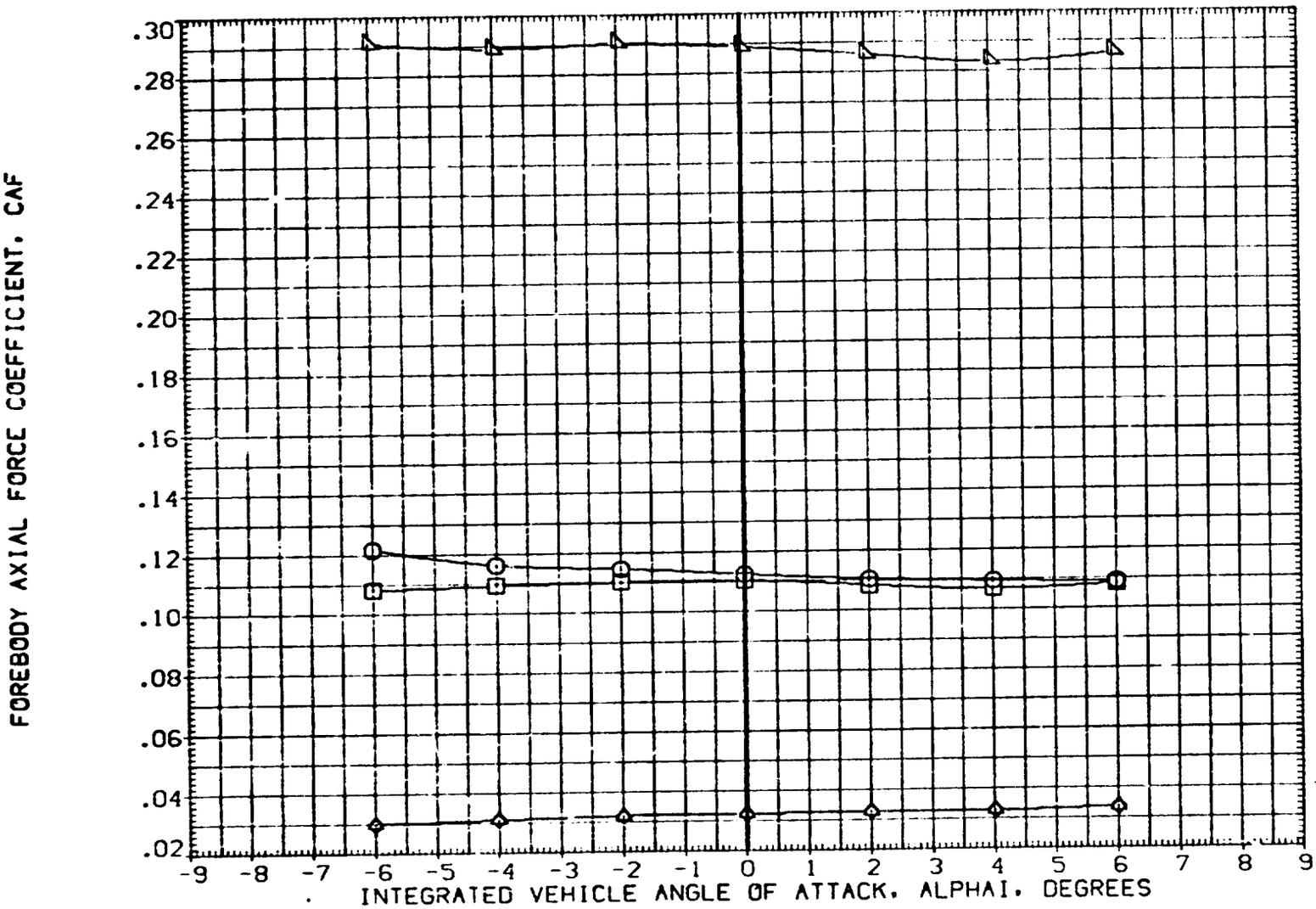


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)BETAI = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO35)	AMES97-019C(ARI) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	AMES97-019C(ABI) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019C(ABI) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019C(ABI) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	AMES97-019C(ARI) LVAP INT -OB- ALL HL SEALED				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

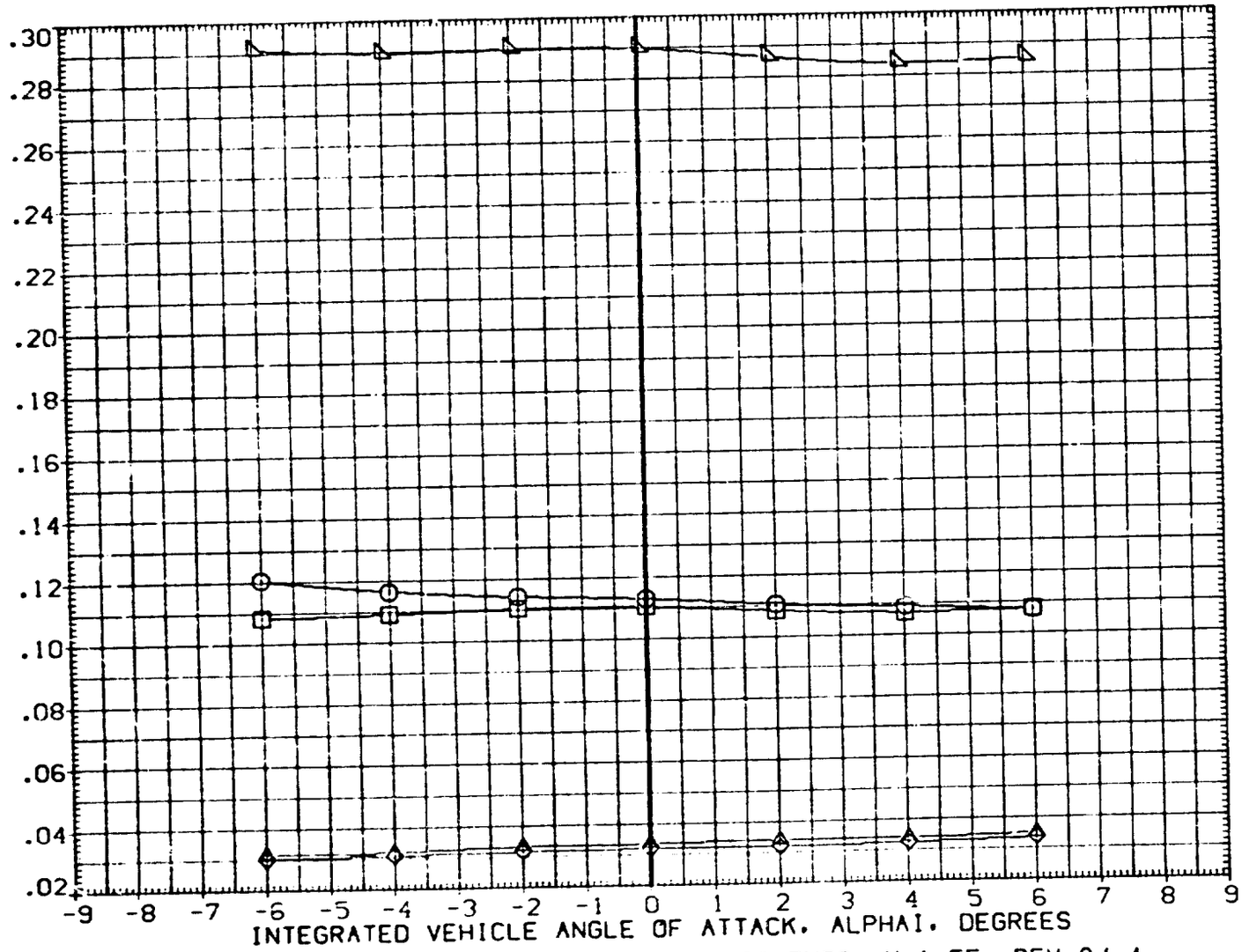


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(ESBETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(MET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED
(MET135)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED
(METL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED
(METR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED
(MET135)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED

ELV-1B	ELV-2B	MACH	SPDBRK
8.000	-4.000	1.550	.000
8.000	-4.000	1.550	.000
8.000	-4.000	1.550	.000
8.000	-4.000	1.550	.000
8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

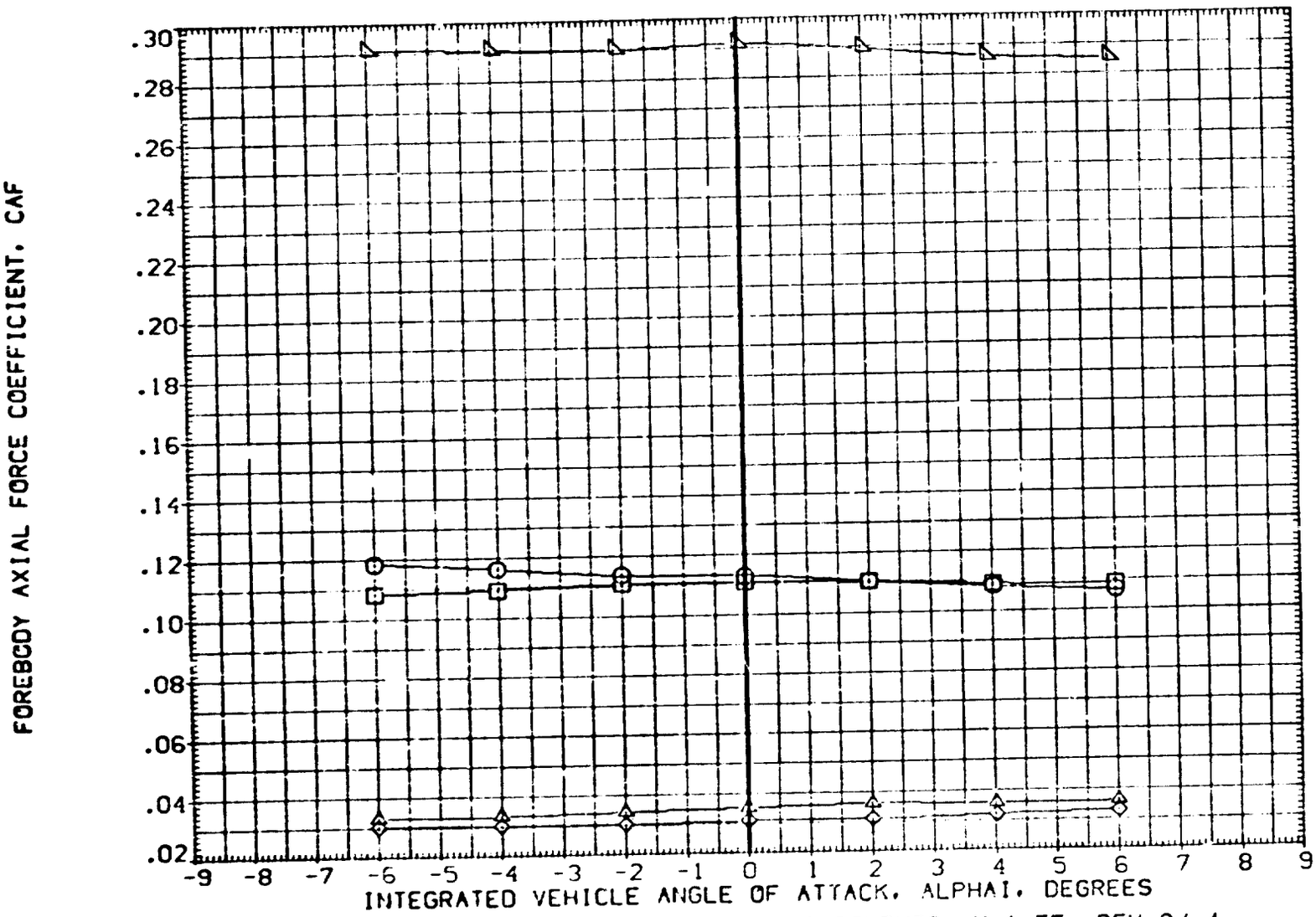


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M-1.55 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(AMETO35)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(AMETT35)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(AMETL35)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(AMETR35)		AMES97-019(1A81) LVAP R-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(AMETI35)		AMES97-019(1A81) LVAP INTERM ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

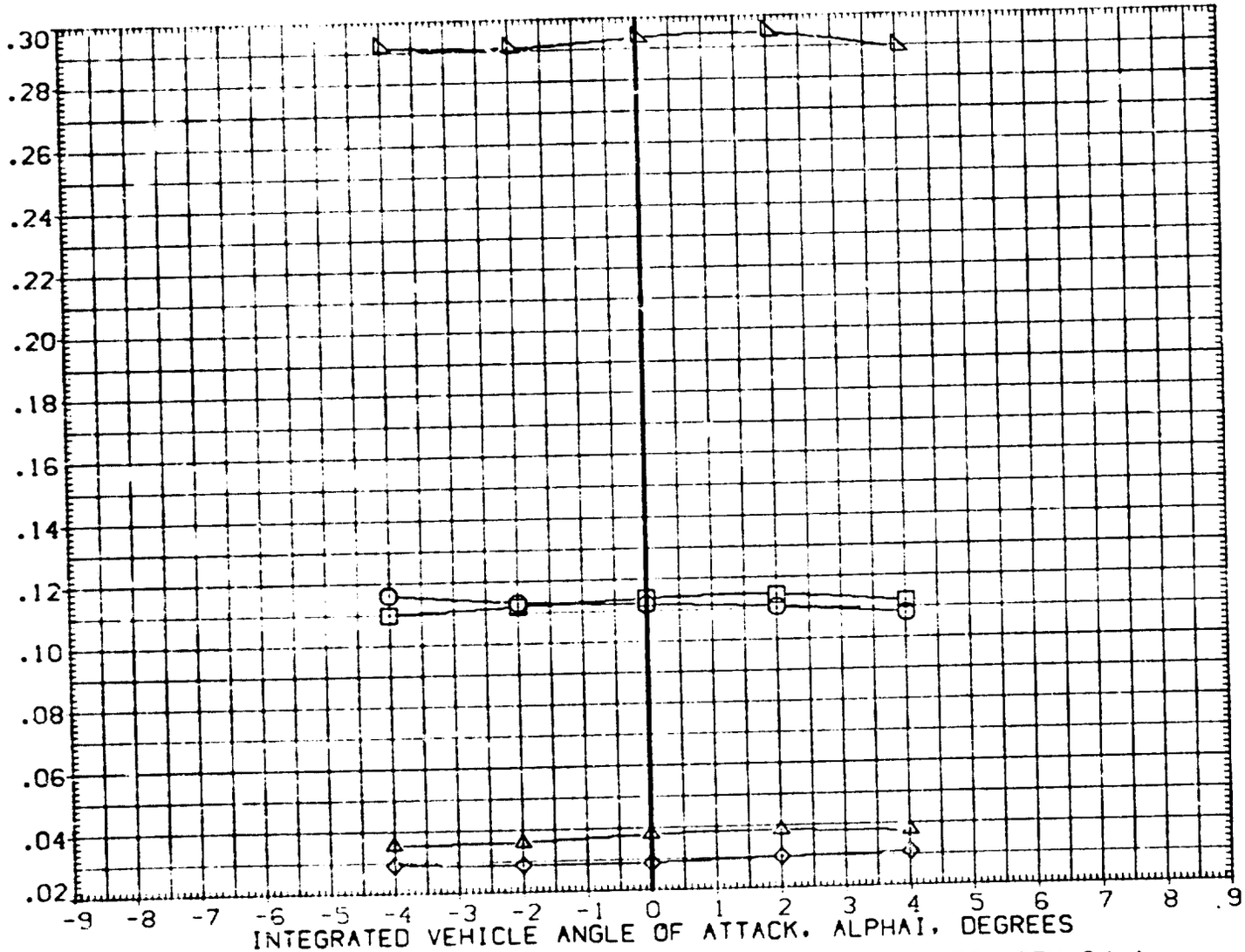


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)BETA = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO35)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	876.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

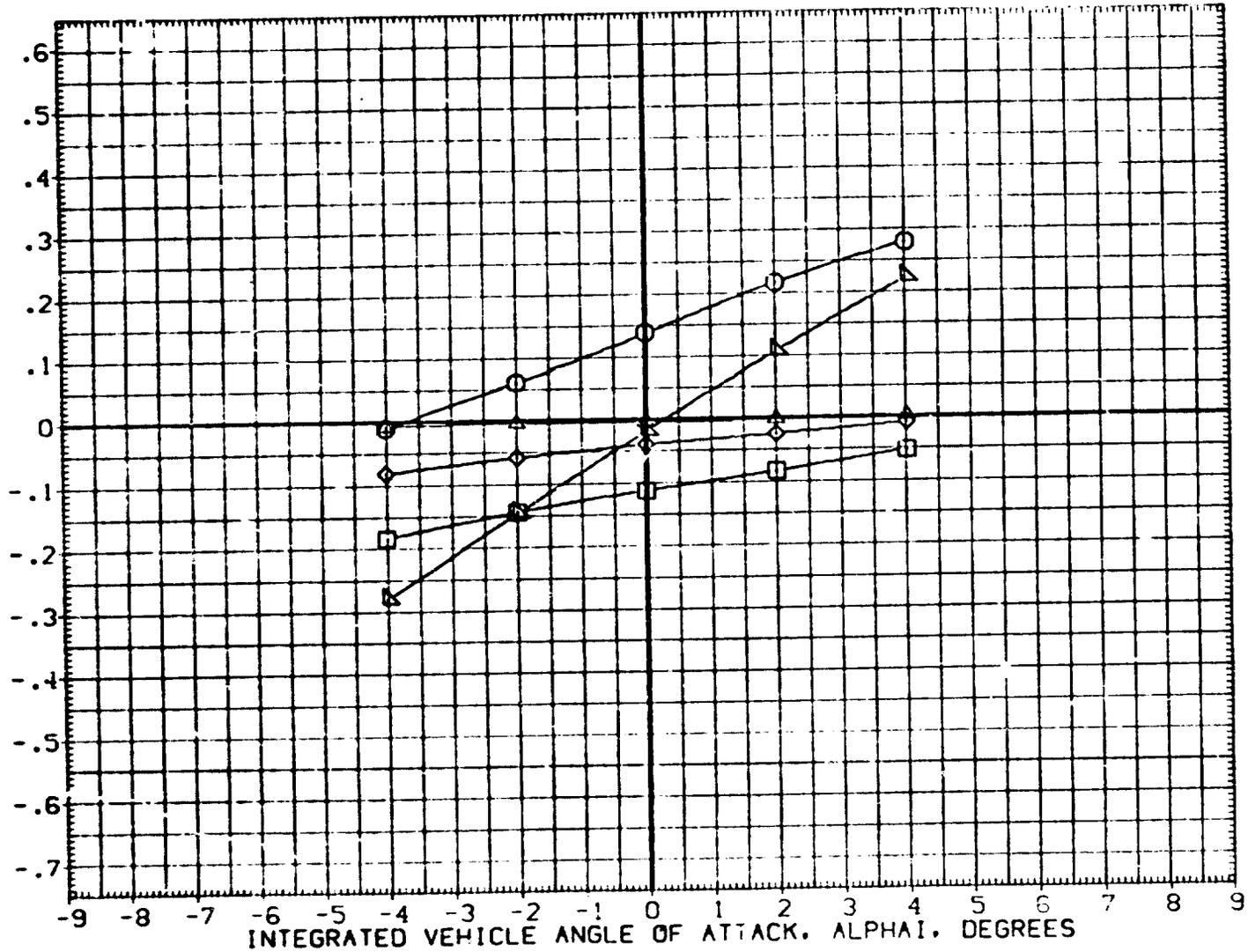


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET735)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

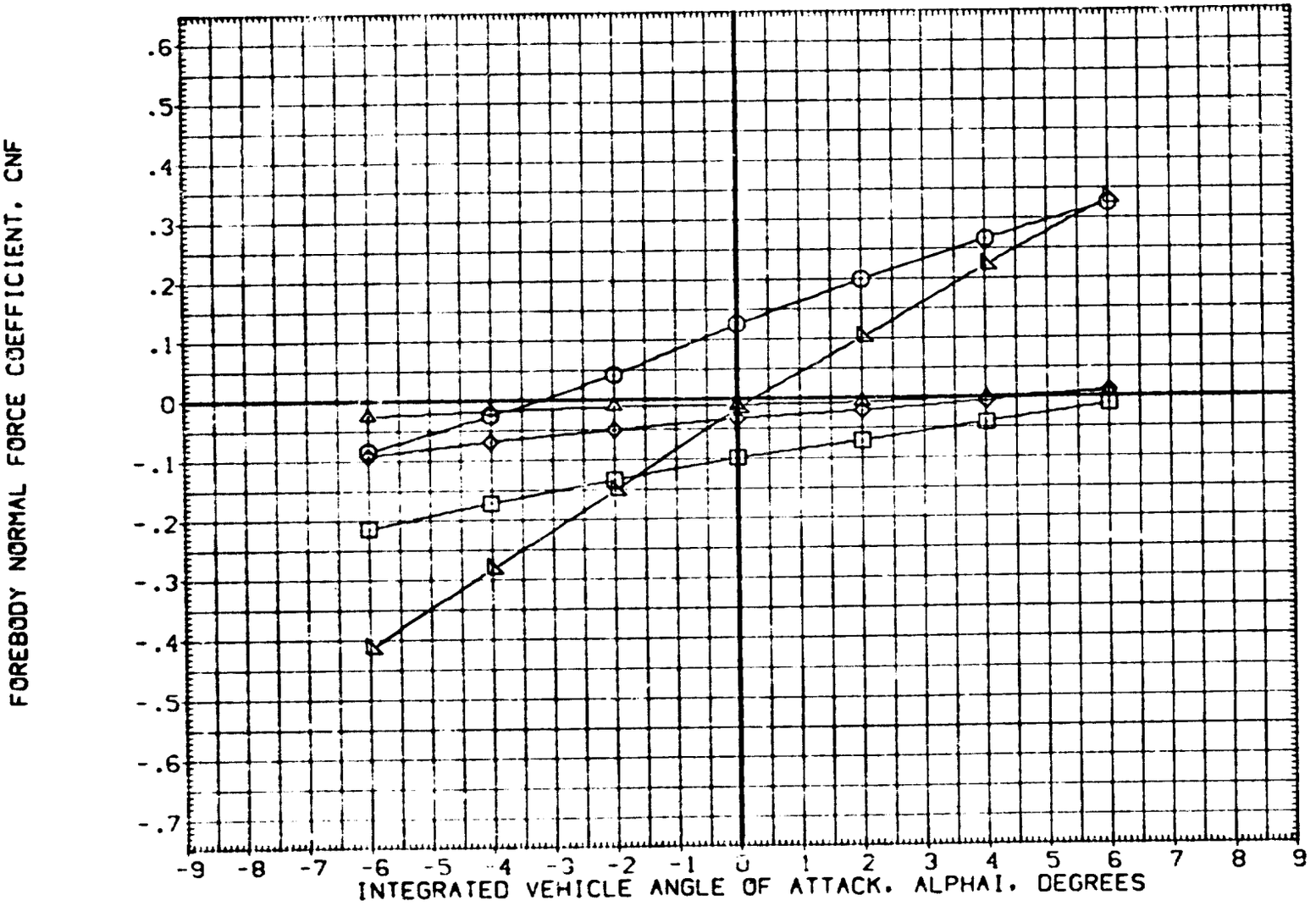


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)BETAI = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPLBRK
(MET035)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(MET235)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(MET335)	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET435)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2630.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

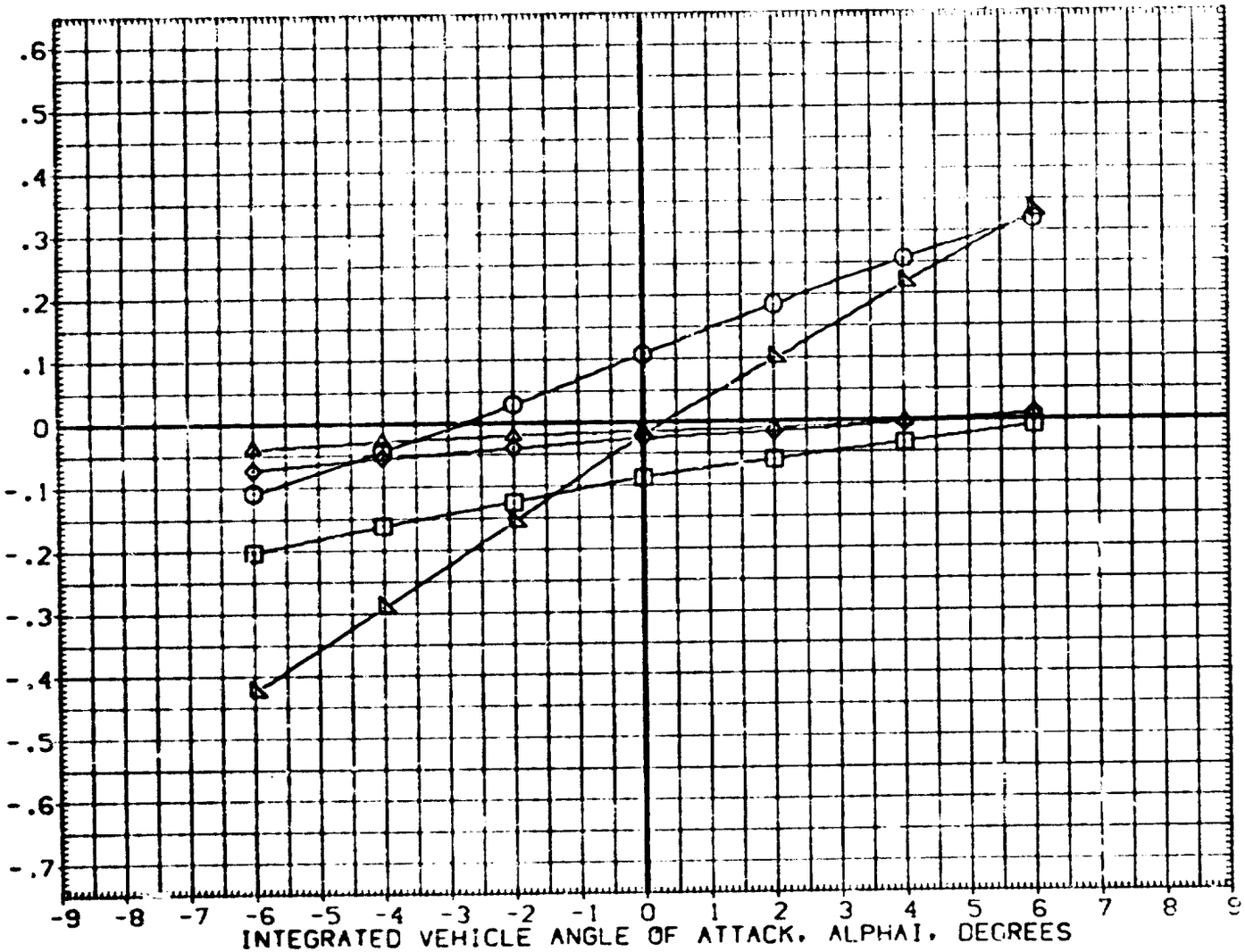


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO35)		AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	-1.000	1.550	.000
(METT35)		AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)		AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

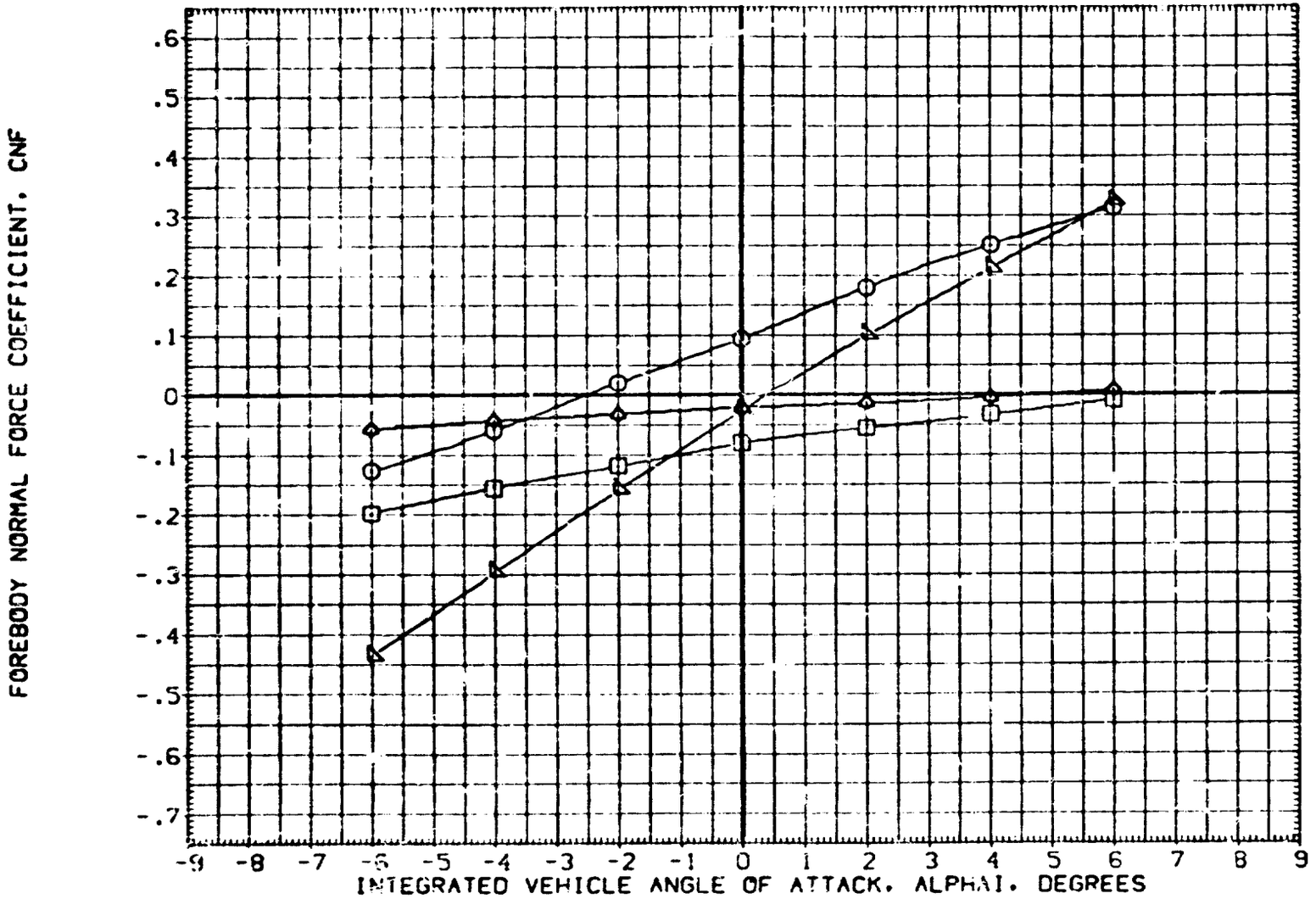


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)BETAI = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

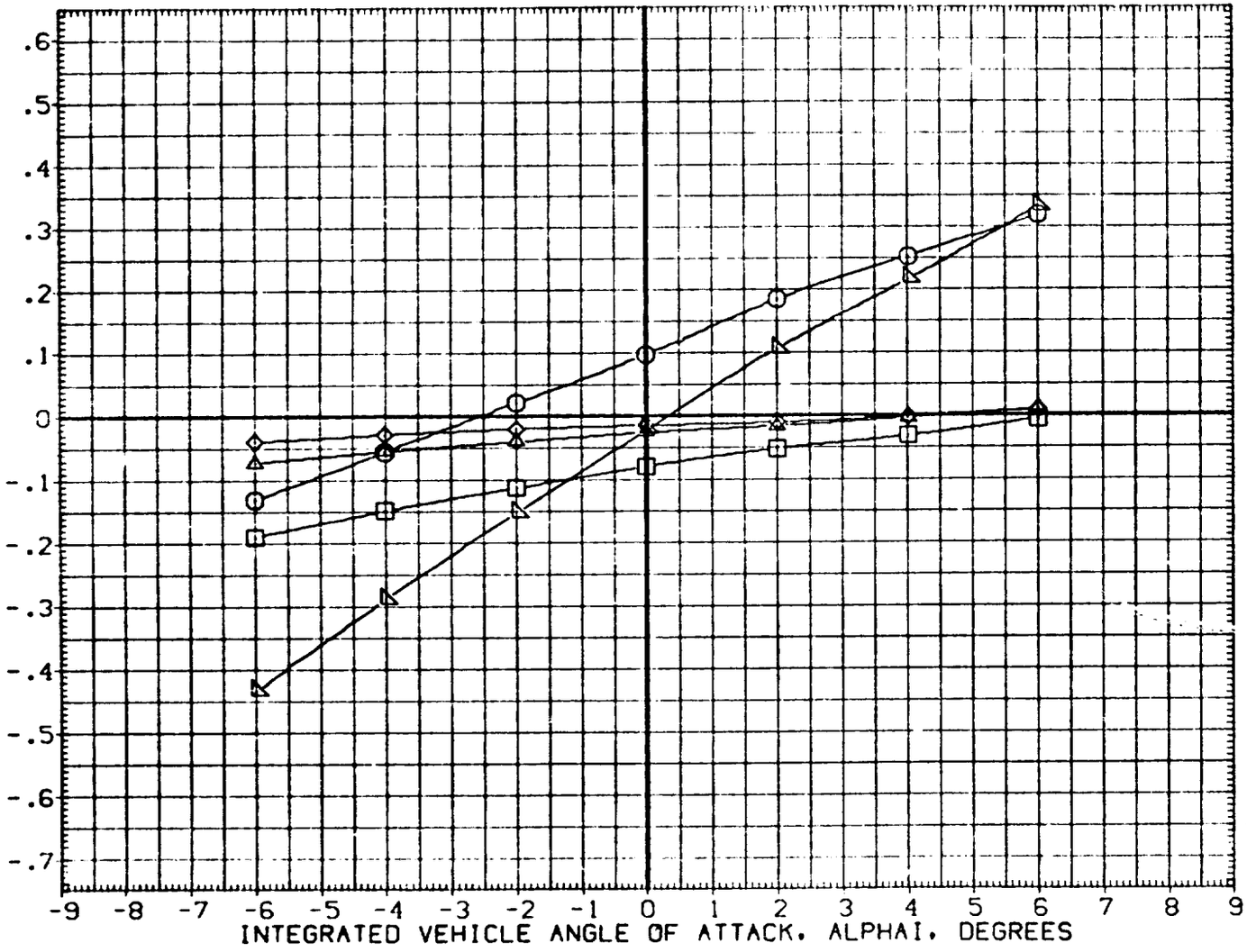


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METC35)	◇	AMES97-019(IA81) LVAP ORBITER ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	⋈	AMES97-019(IA81) LVAP [illegible]NB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	△	AMES97-019(IA81) LVAP R-[illegible] ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	◺	AMES97-019(IA81) LVAP INT [illegible] ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

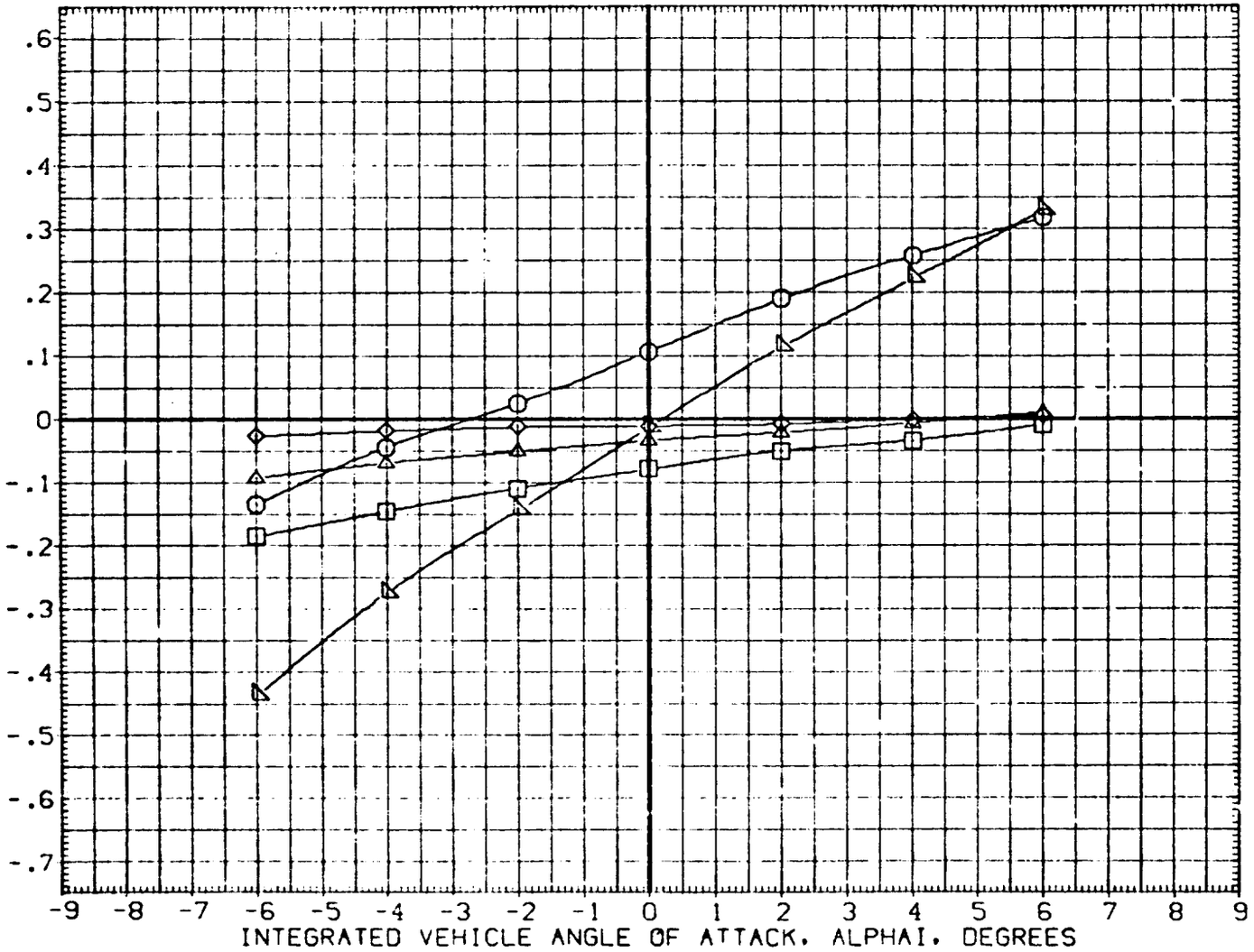


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

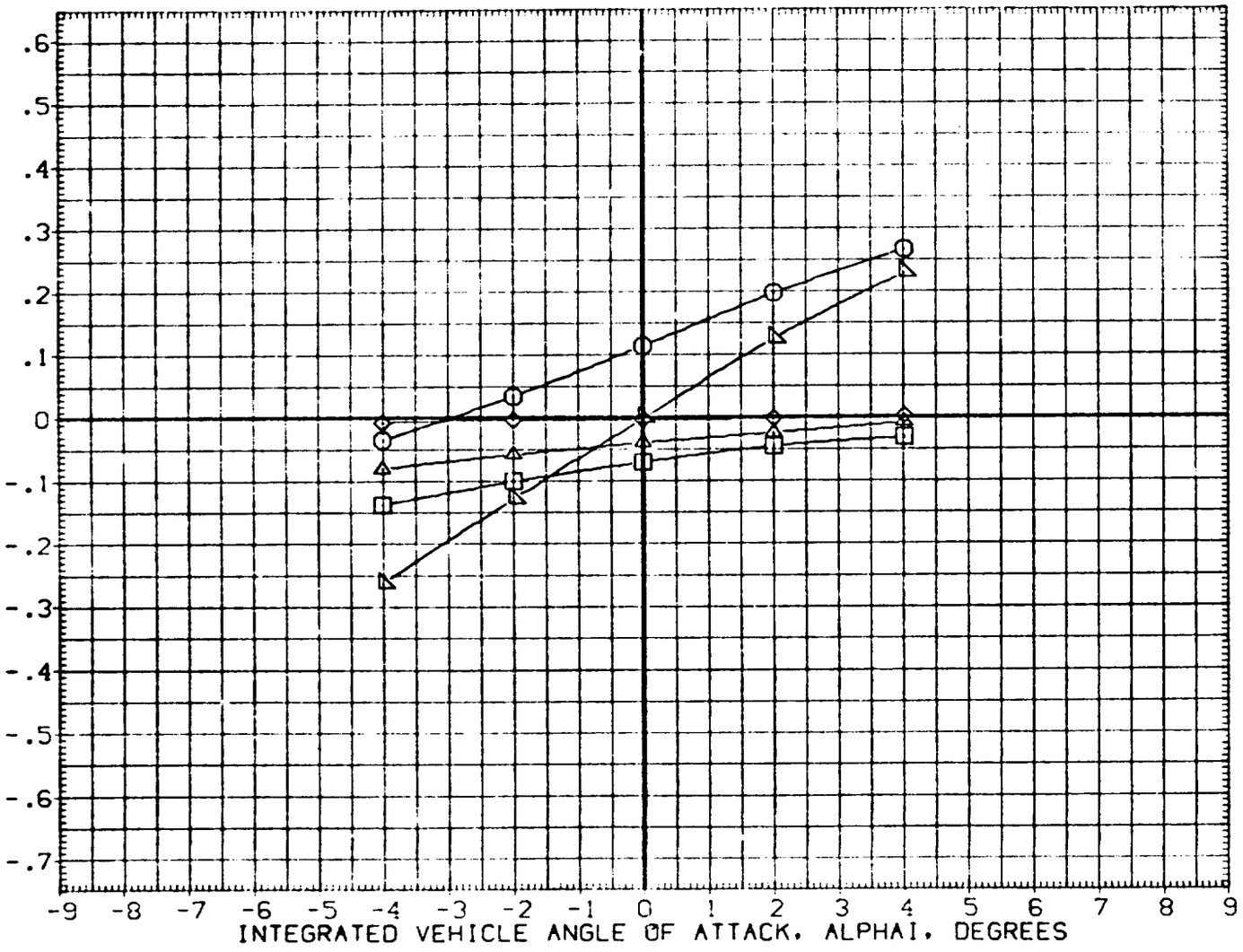


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)	AMES97-019C(A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019C(A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019C(A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019C(A81) LVAP R-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	AMES97-019C(A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

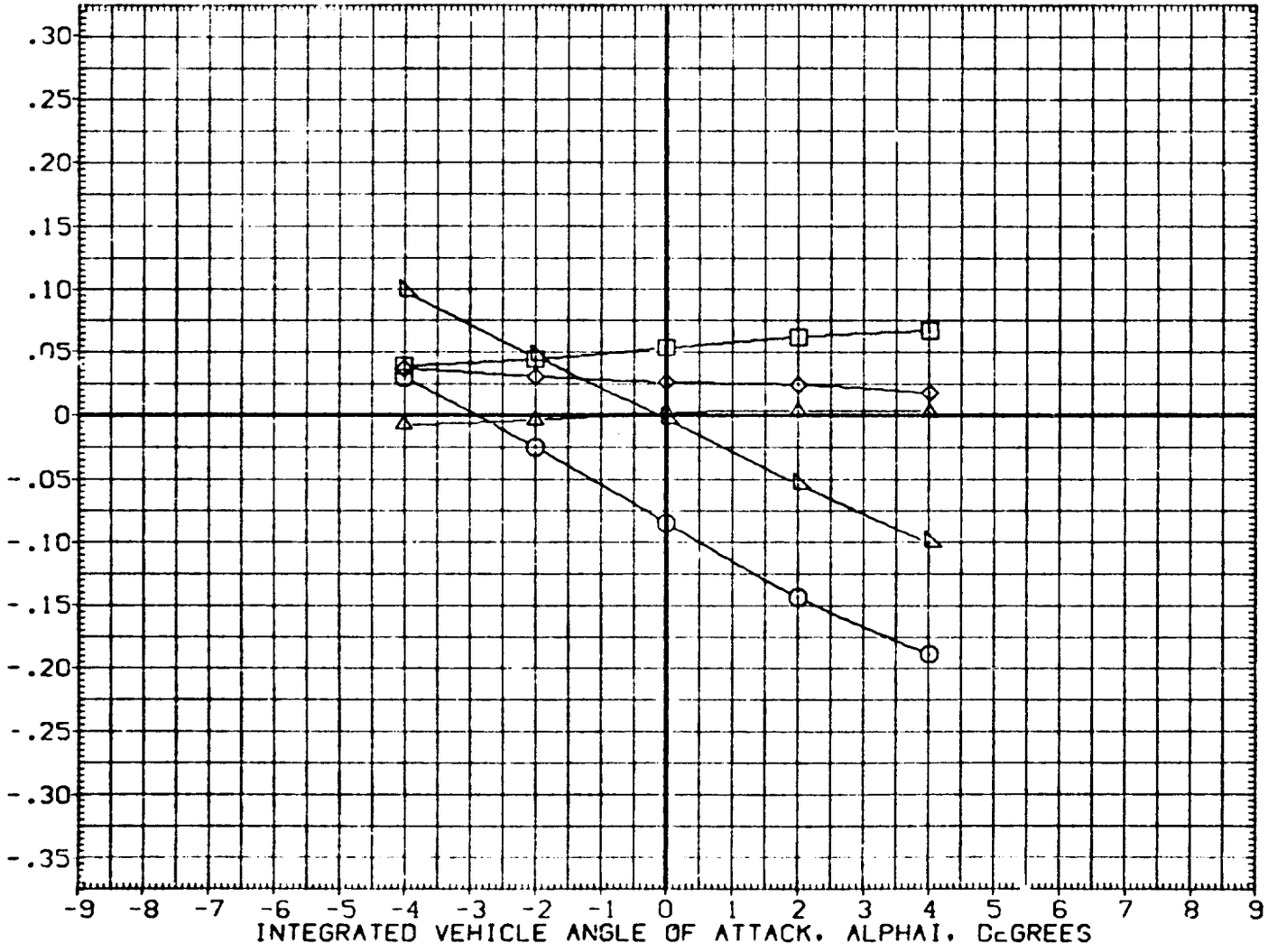


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	S-DBRK
(MET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0200	

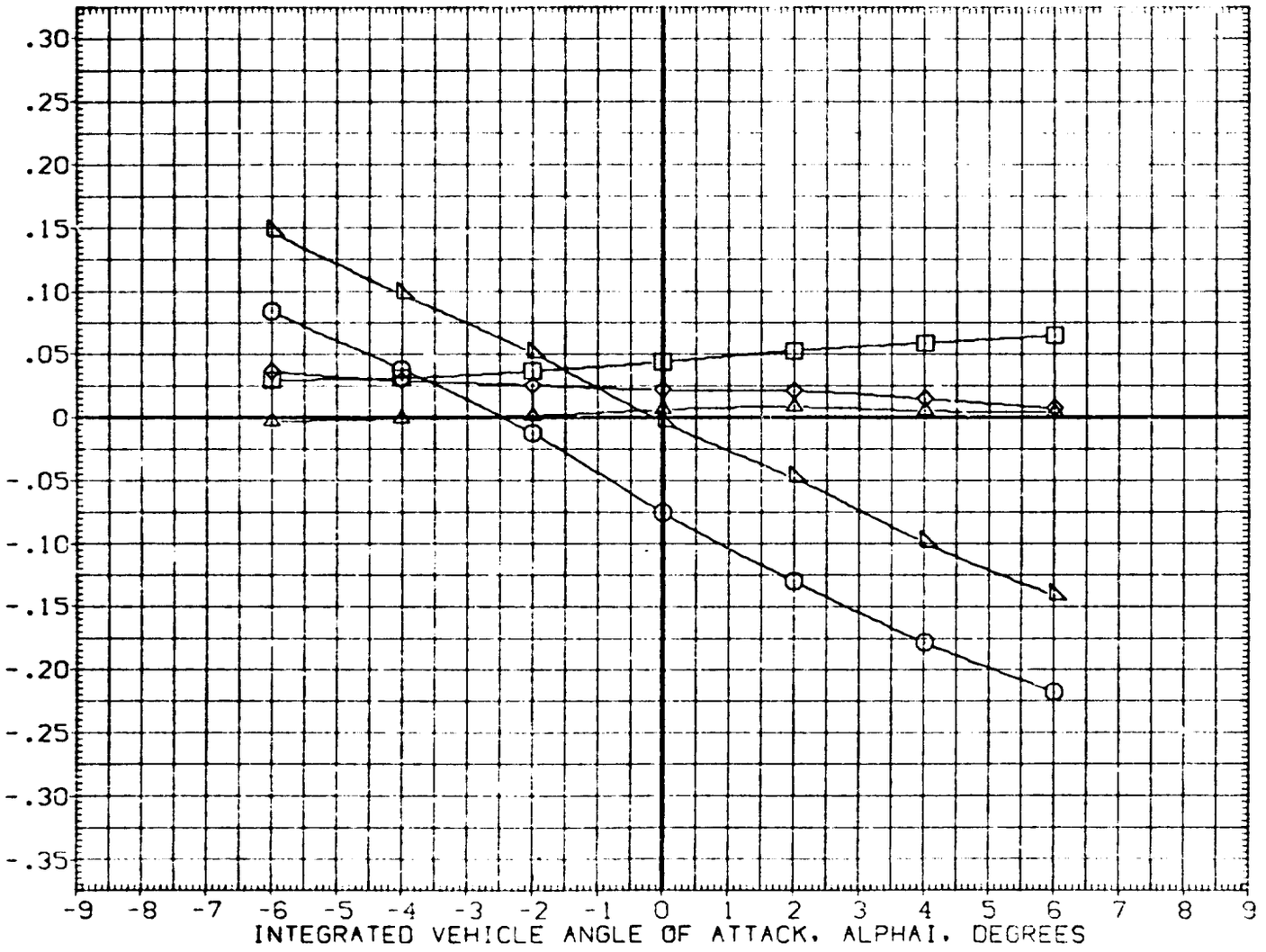


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

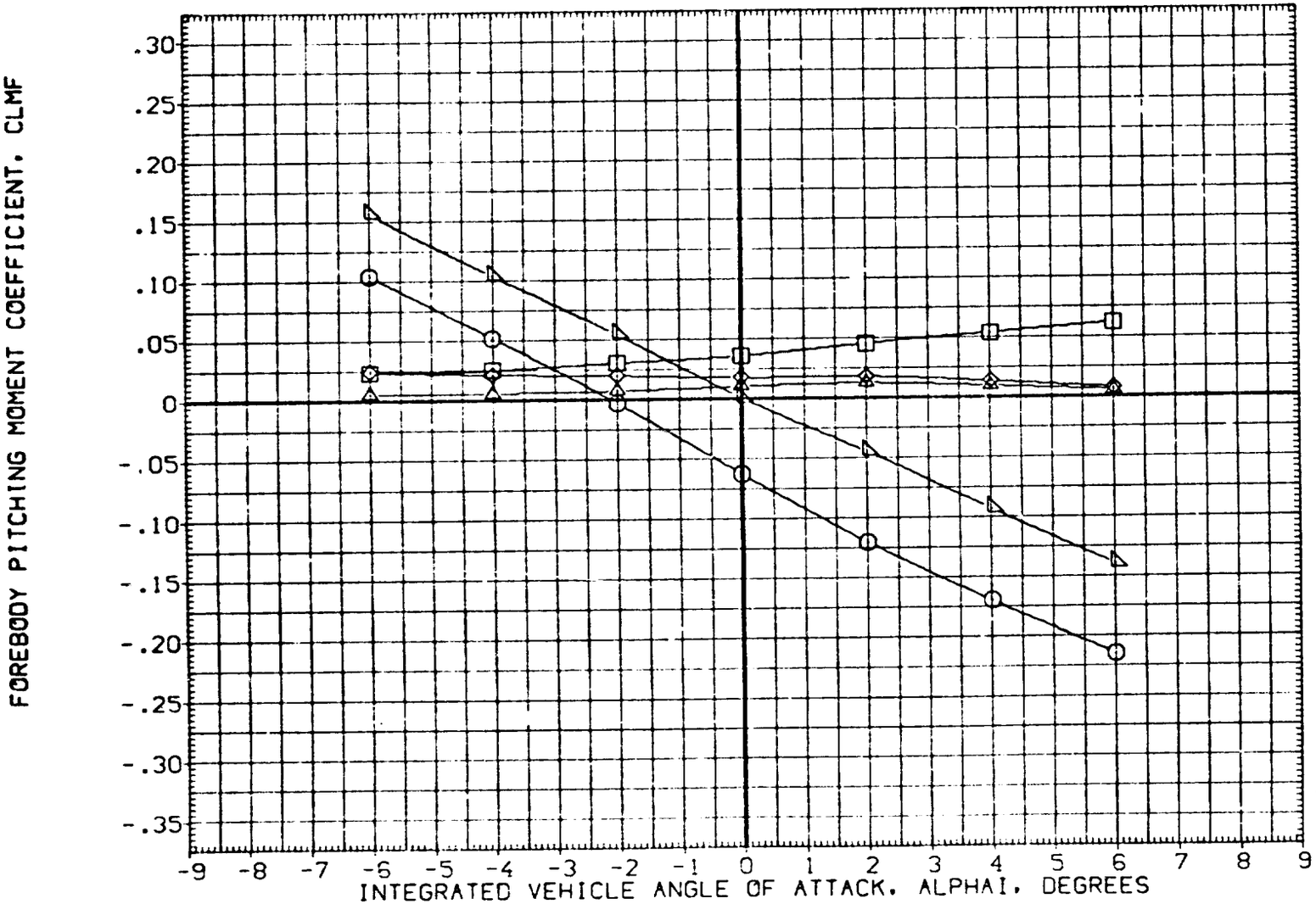


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)BETAI = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	996.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

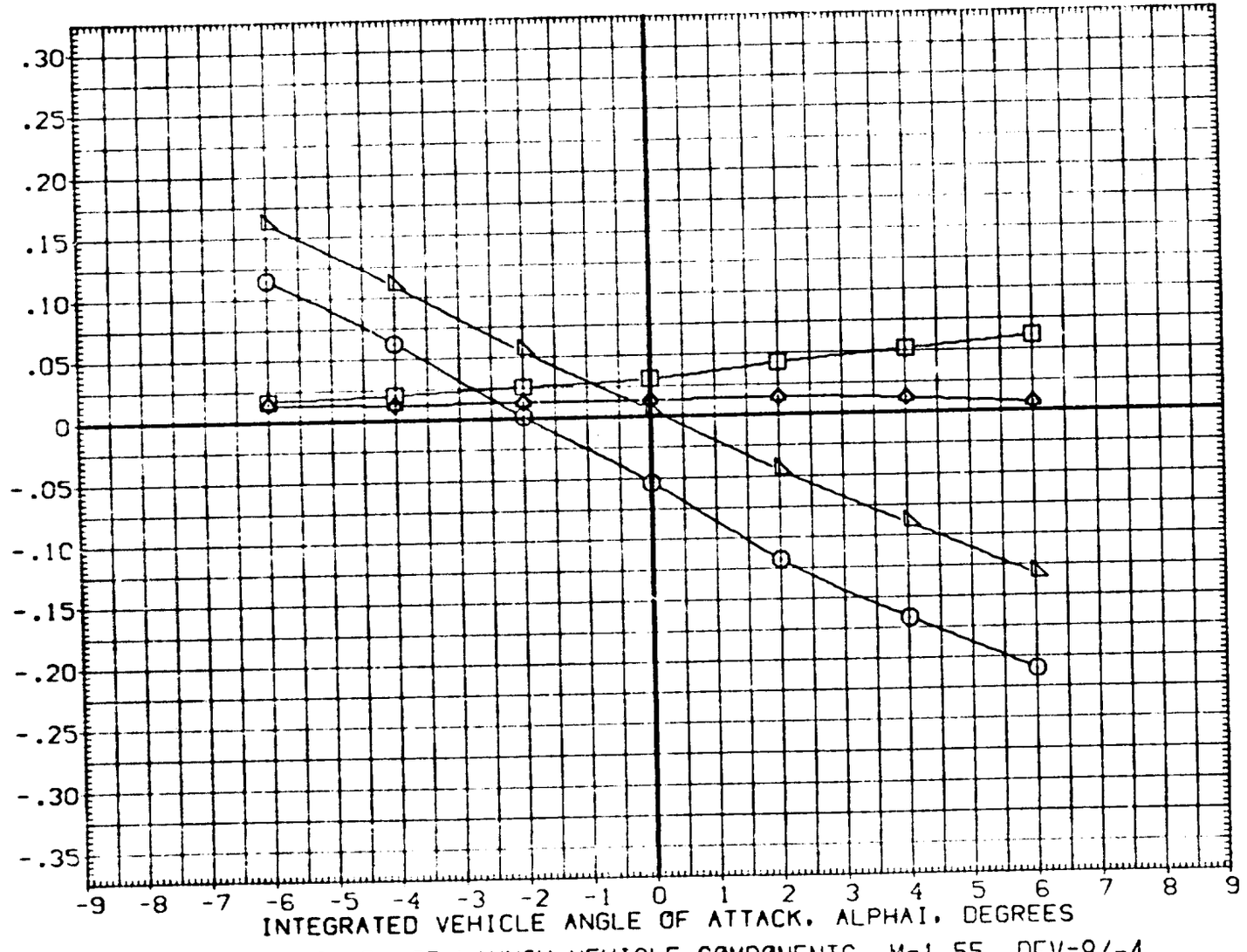


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET035)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	◇	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	◇	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	◇	AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	△	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

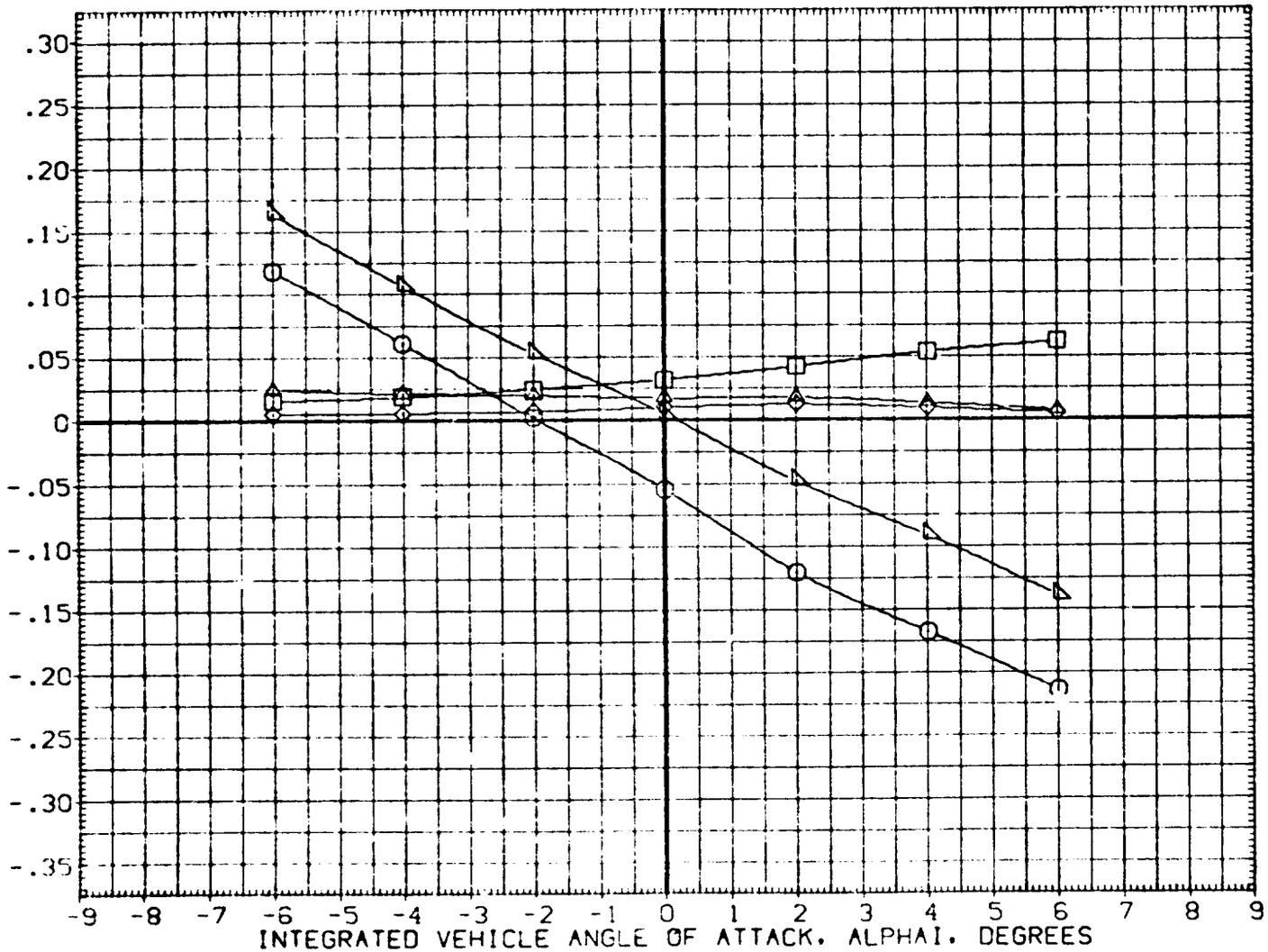


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(ELEVON) = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

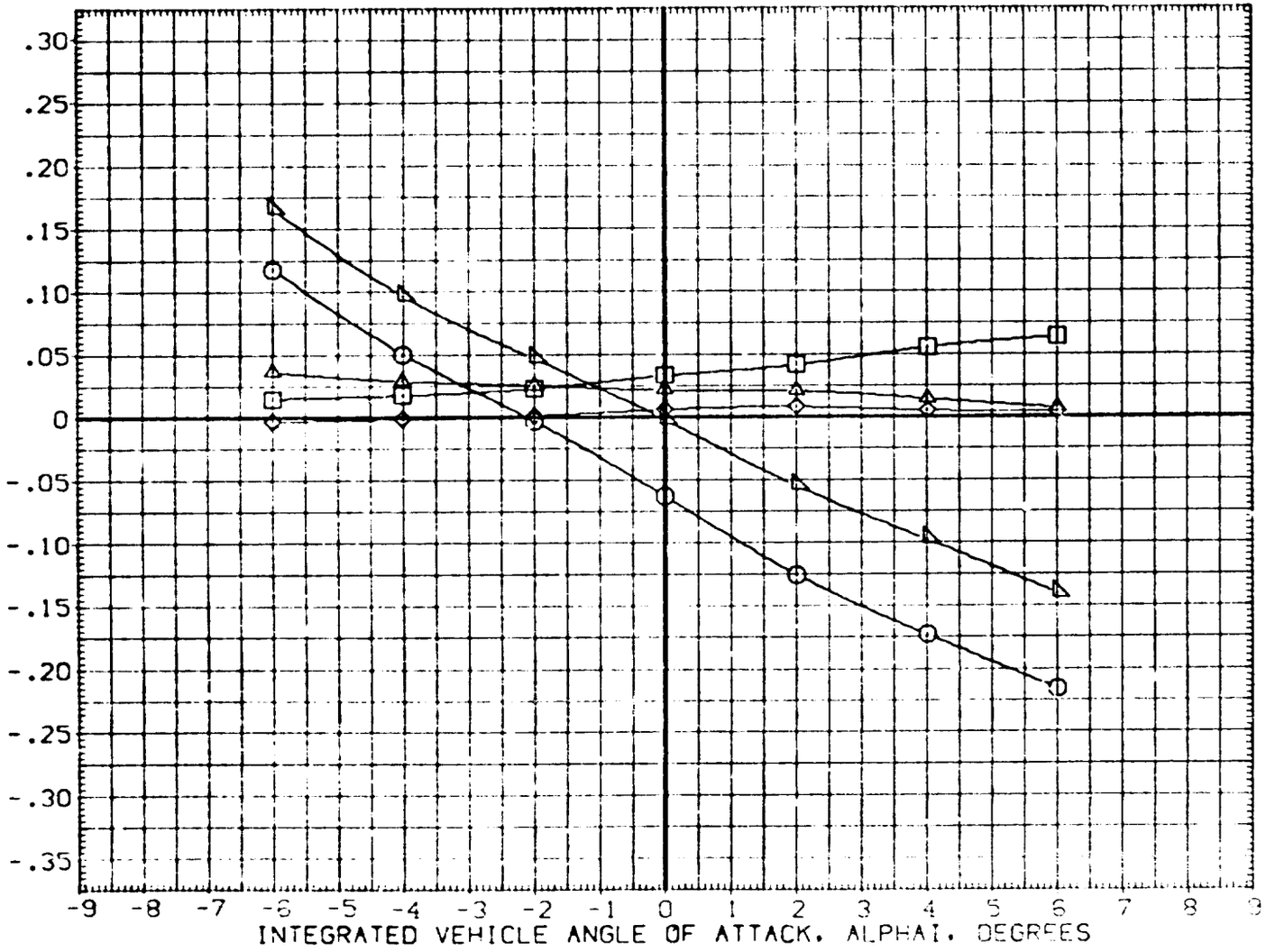


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	9.000	-4.000	1.550	.000
(METT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	◁	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	△	AMES97-019(IA81) LVAP INT WGH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

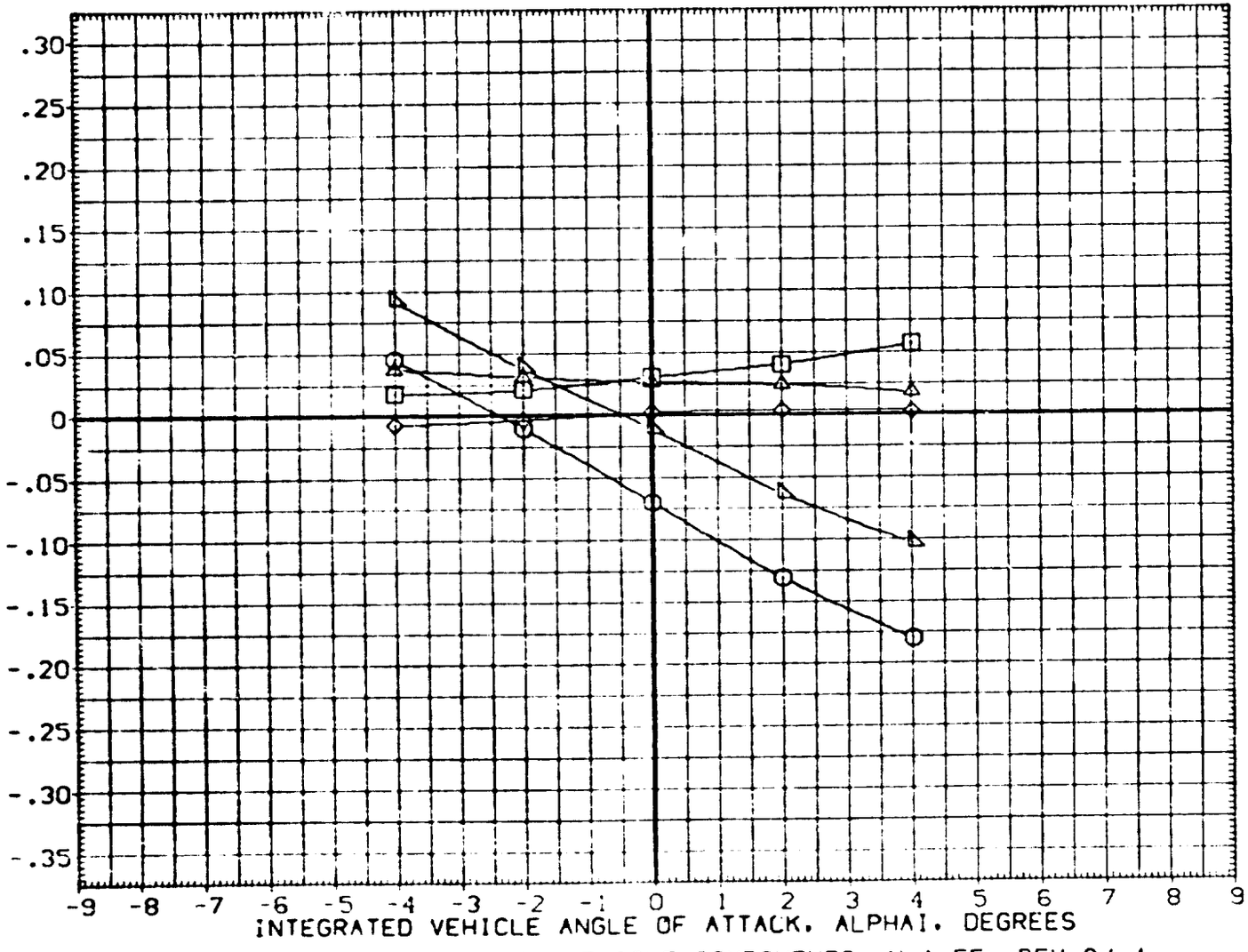


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO3S)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METT3S)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL3S)	◁	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR3S)		AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI3S)	▷	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	7690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

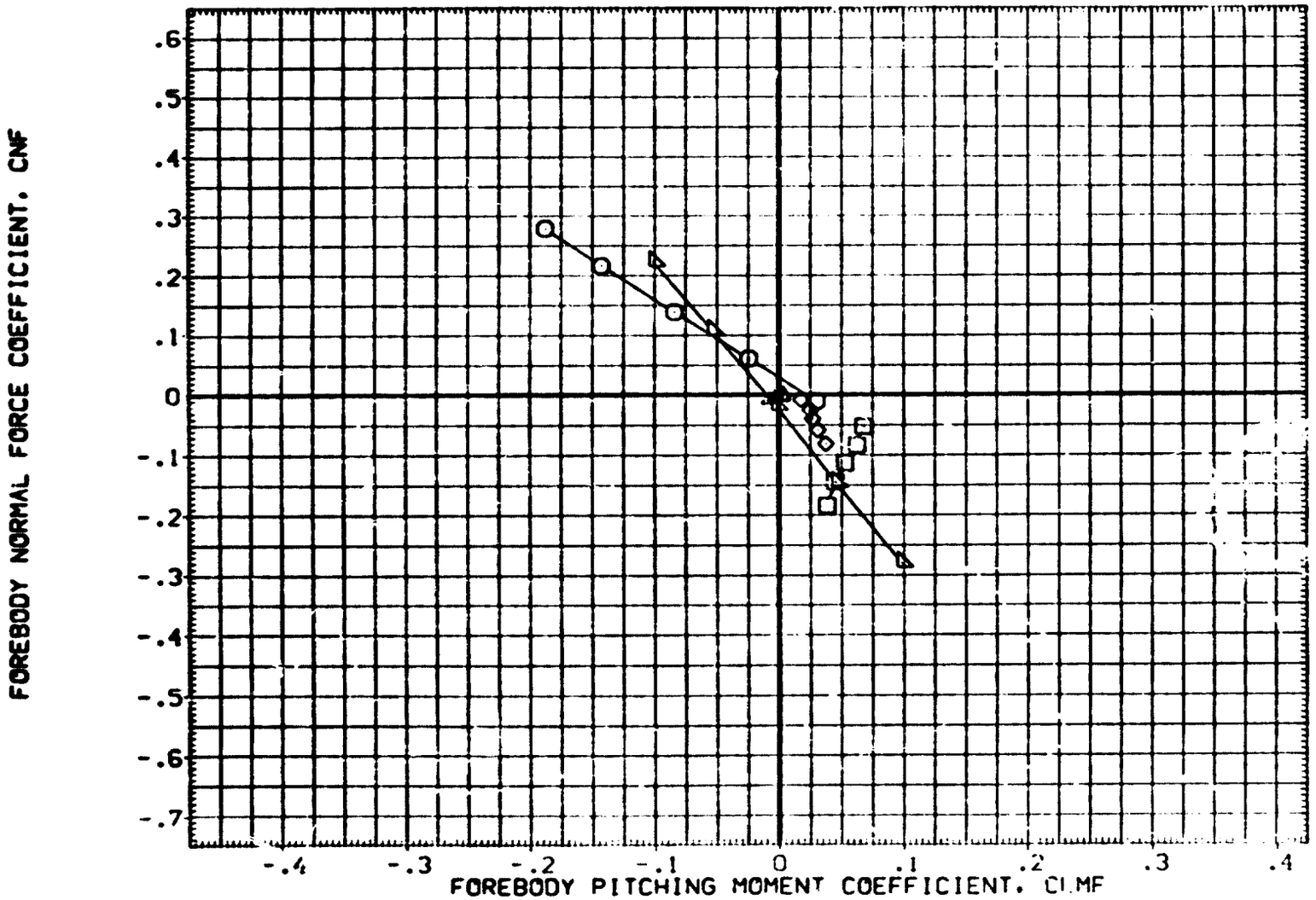


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO35)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	1.550	.000
(METT35)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	1.550	.000
(METL35)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	1.550	.000
(METI35)		AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0600	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

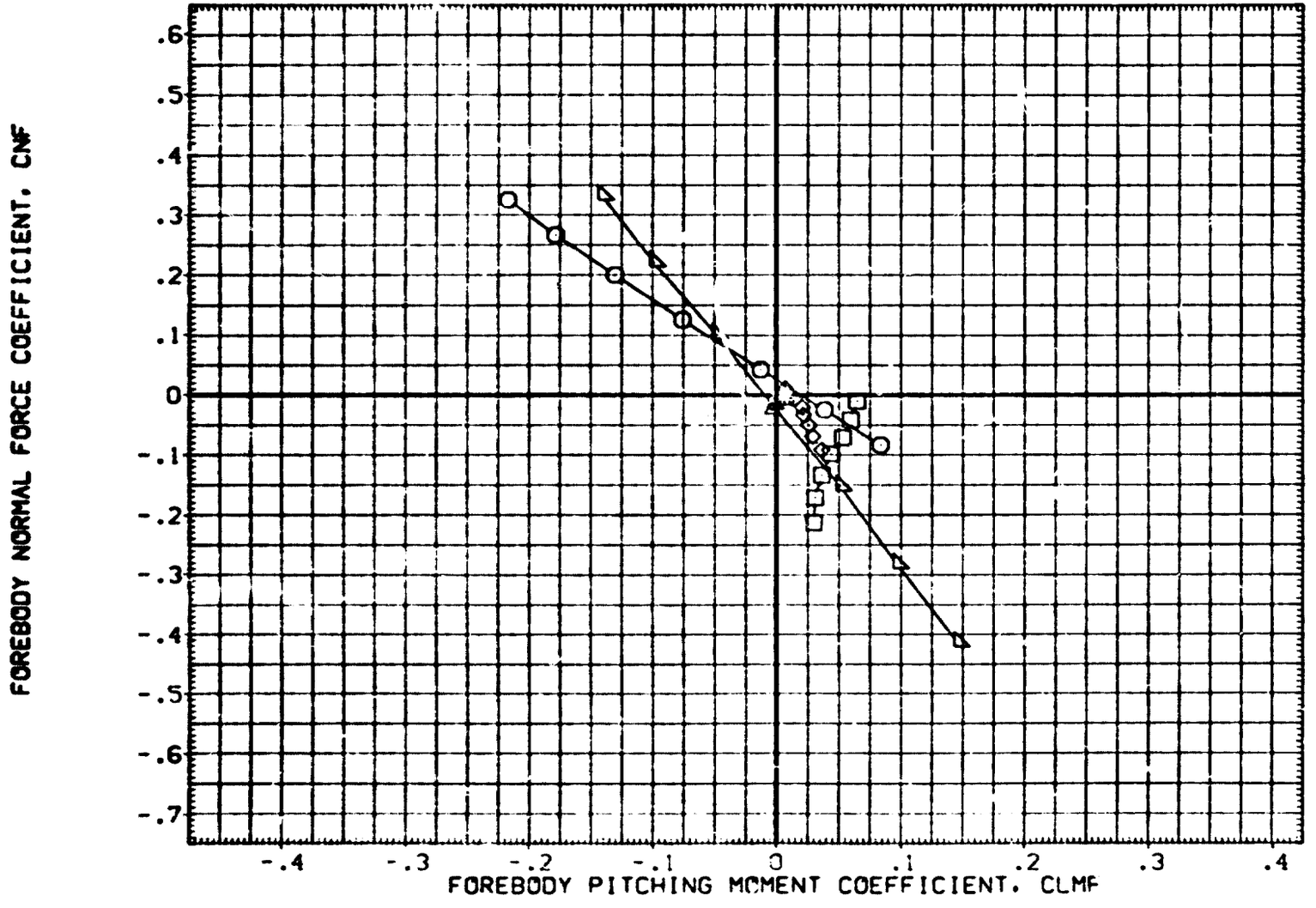


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	□	AMES97-019([AB1) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	1.550	.000
(MET735)	◇	AMES97-019([AB1) LVAP TANK - ALL ML SEALED	8.000	-4.000	1.550	.000
(METL35)	×Δ	AMES97-019([AB1) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	1.550	.000
(METR35)		AMES97-019([AB1) LVAP R-SRB ALL ML SEALED	8.000	-4.000	1.550	.000
(METI35)	Δ	AMES97-019([AB1) LVAP INT VEH ALL ML SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

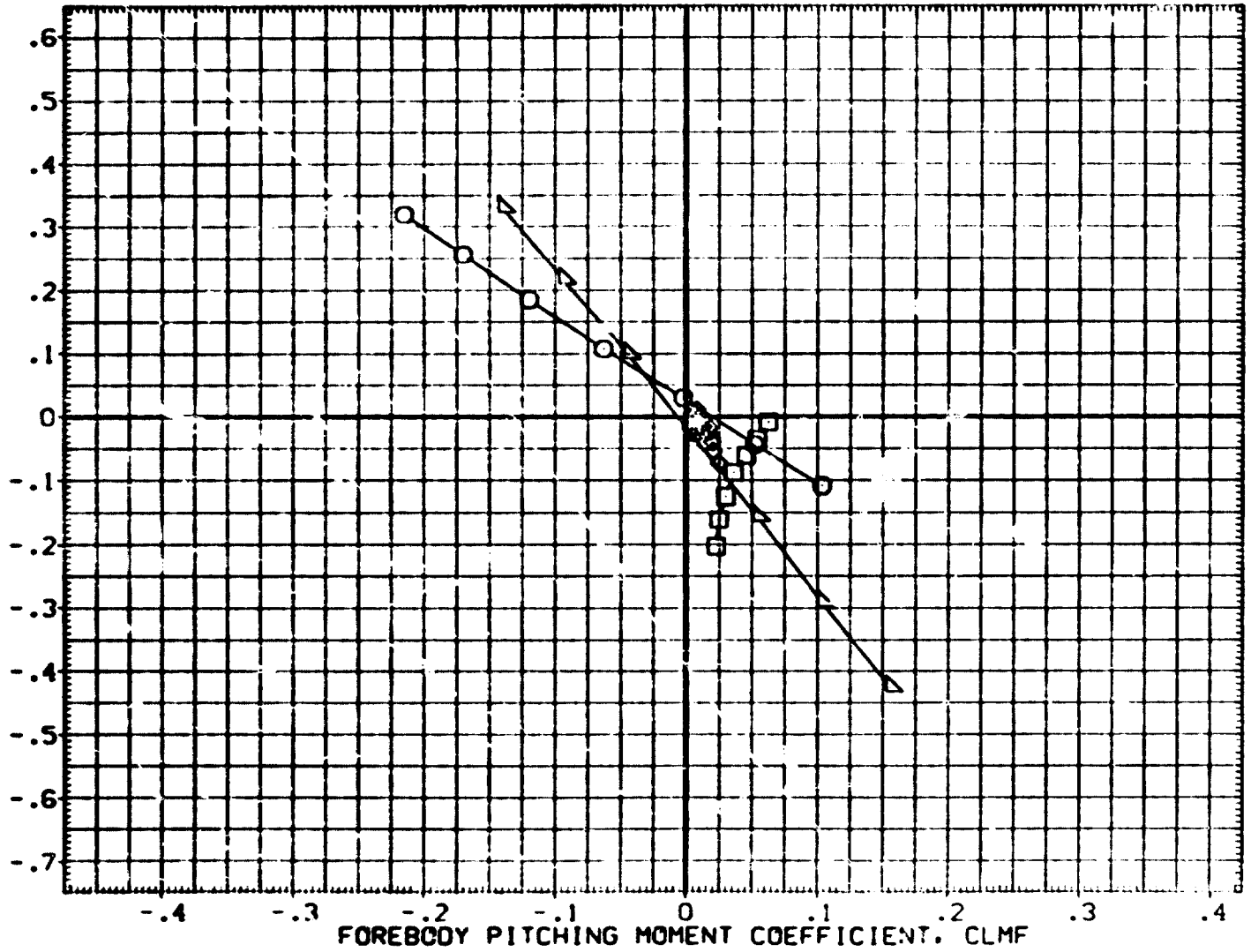


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	◺	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

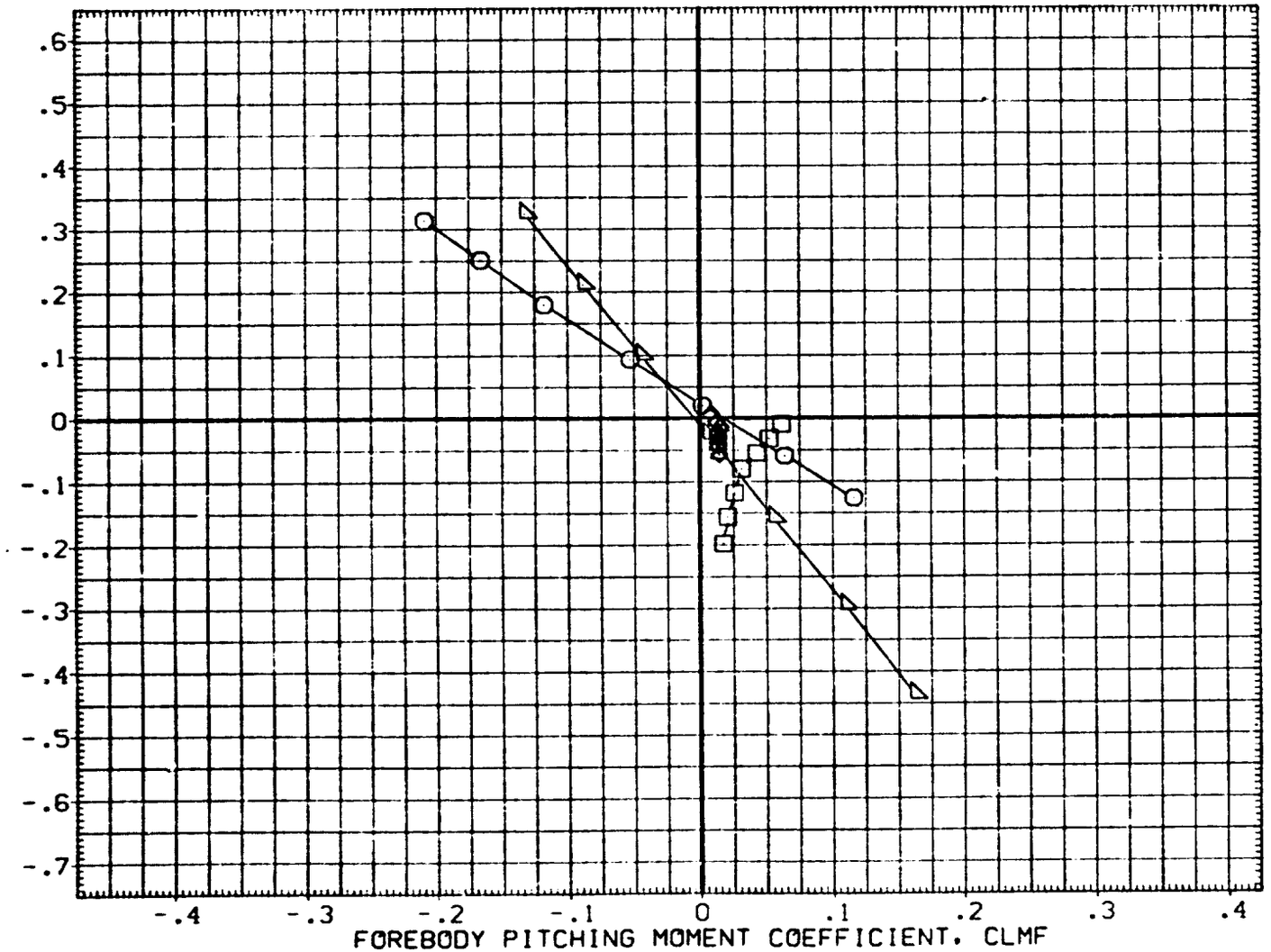


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

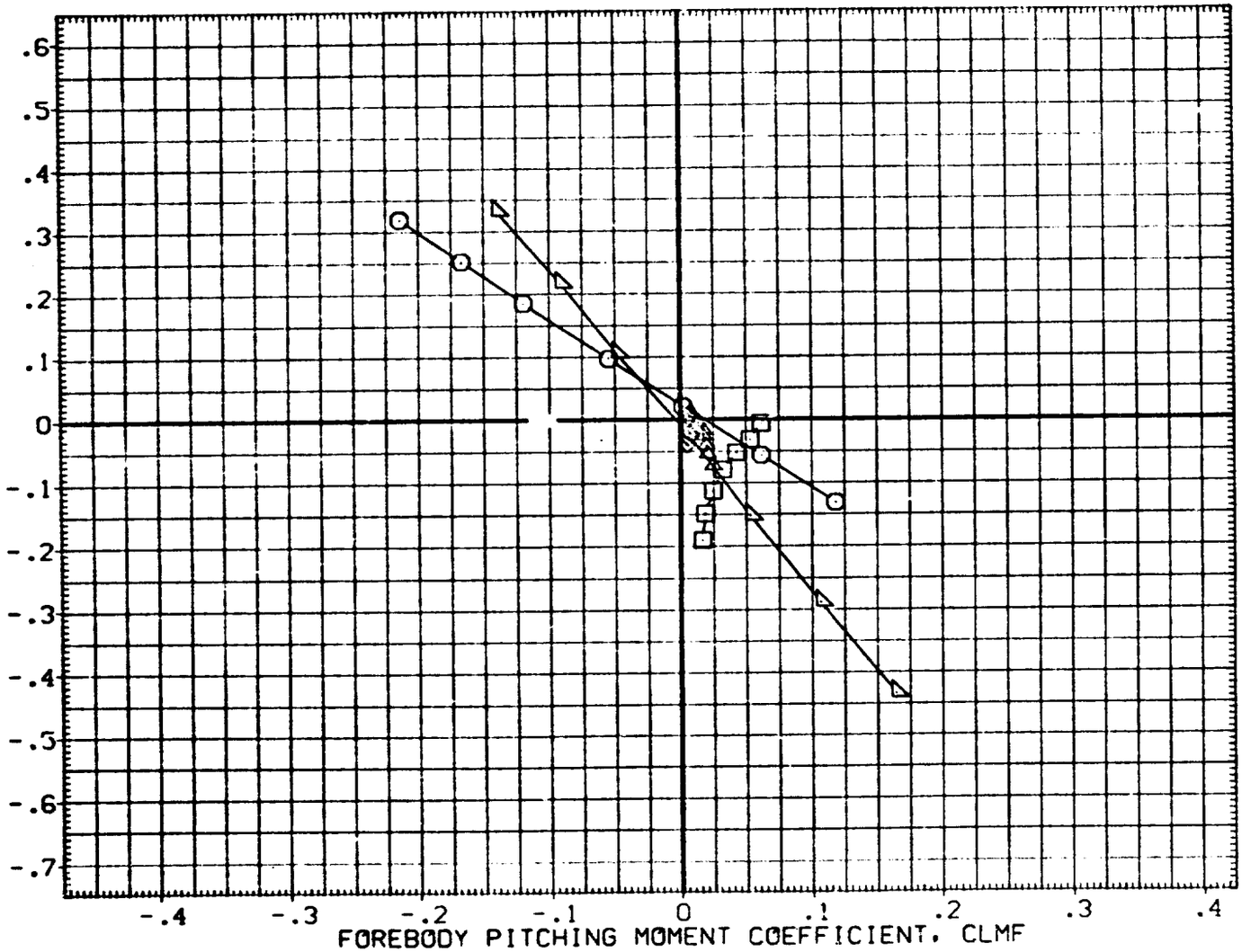


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)BETA = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET335)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(MET135)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

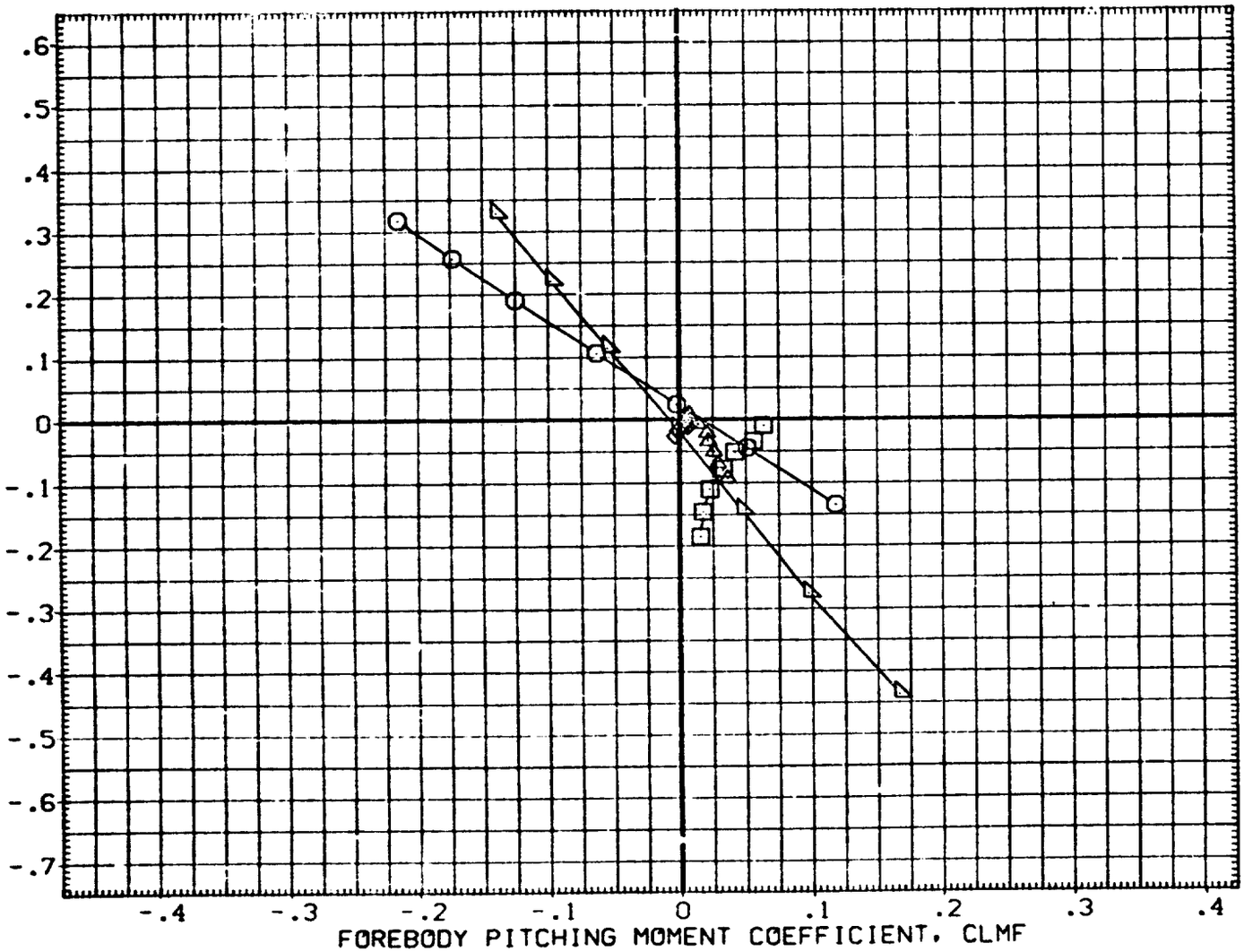


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET035)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(MET735)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(METL35)	⊠	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(METR35)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(METI35)	▽	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

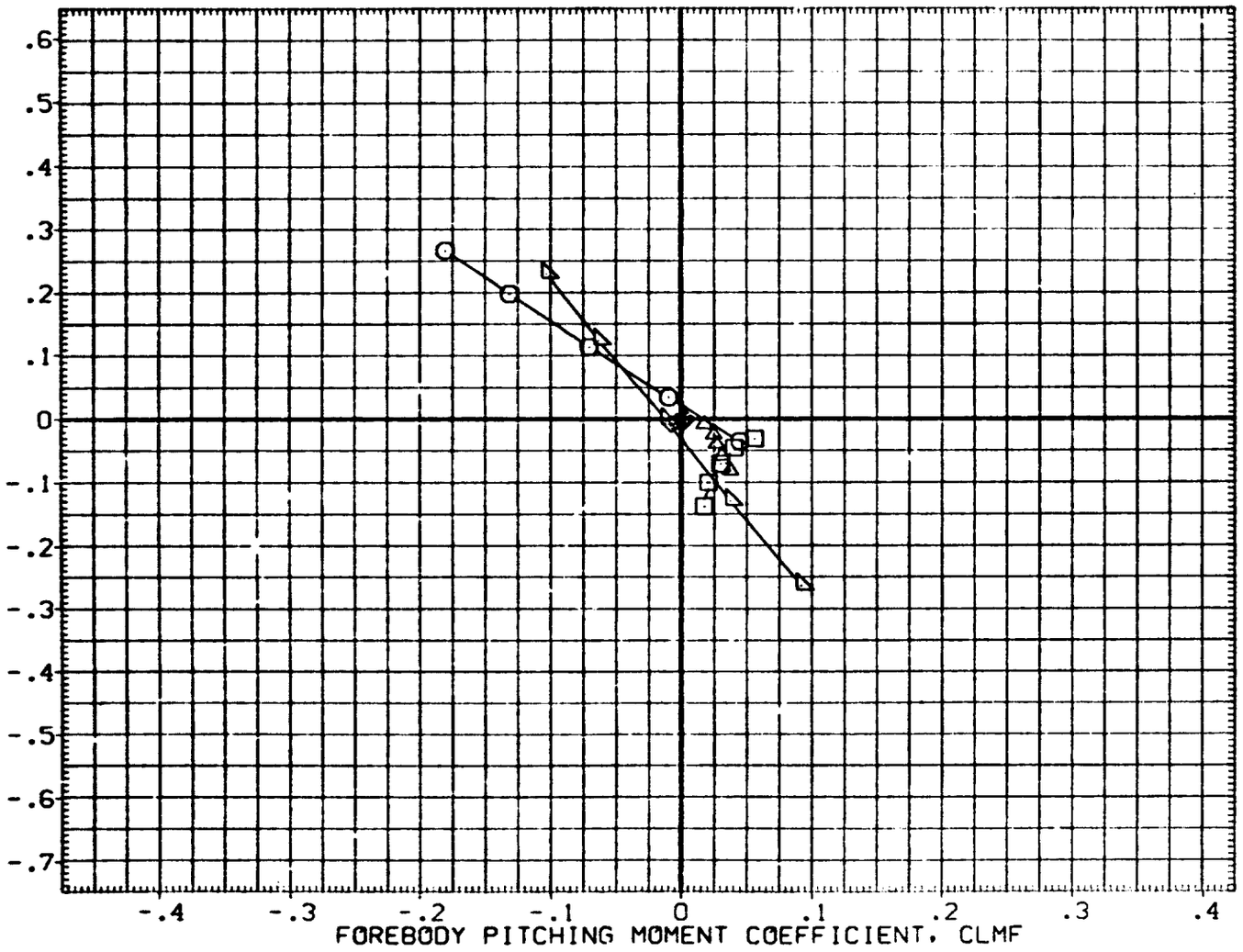


FIG. 4 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

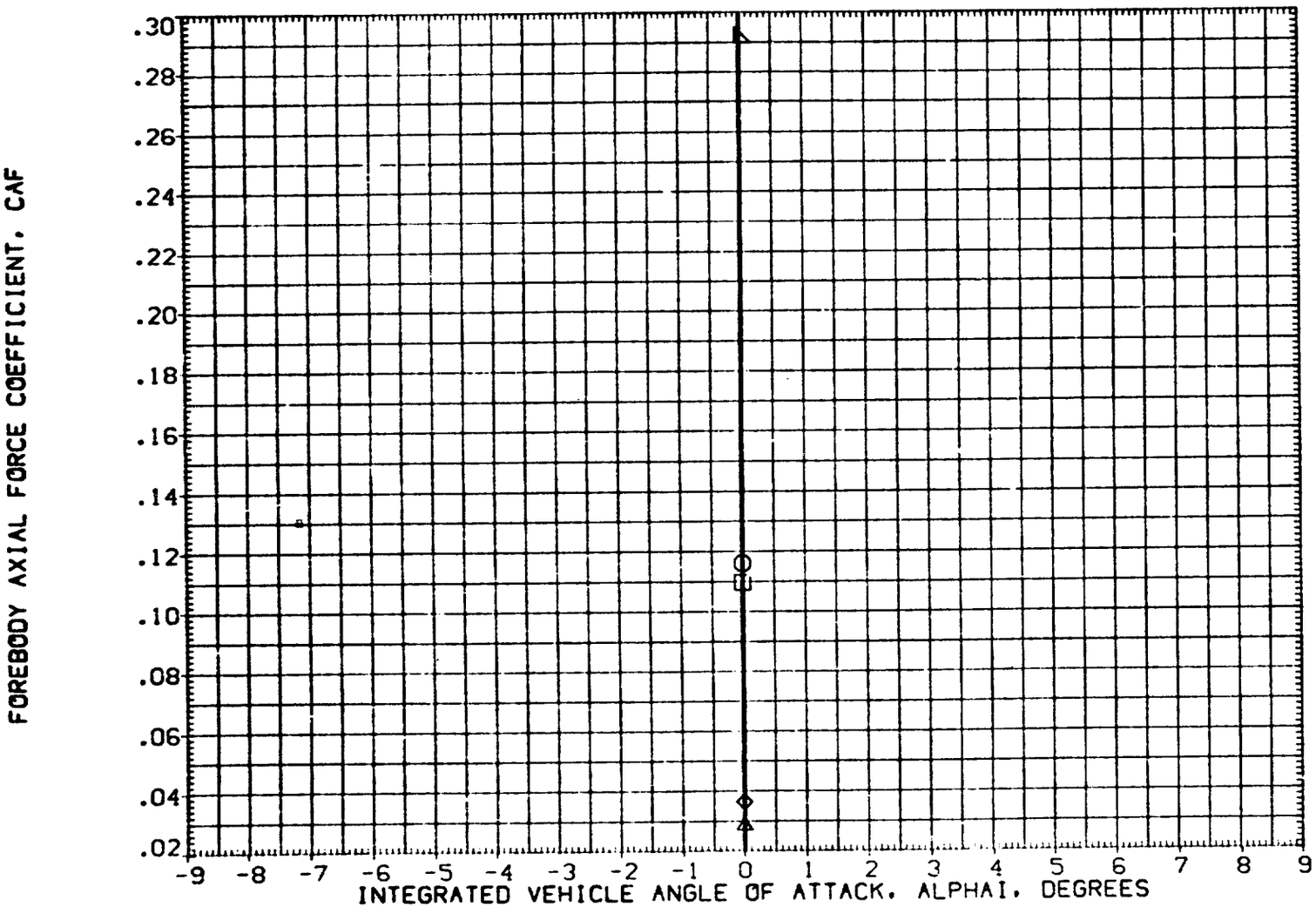


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(MET239)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(MET339)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET439)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

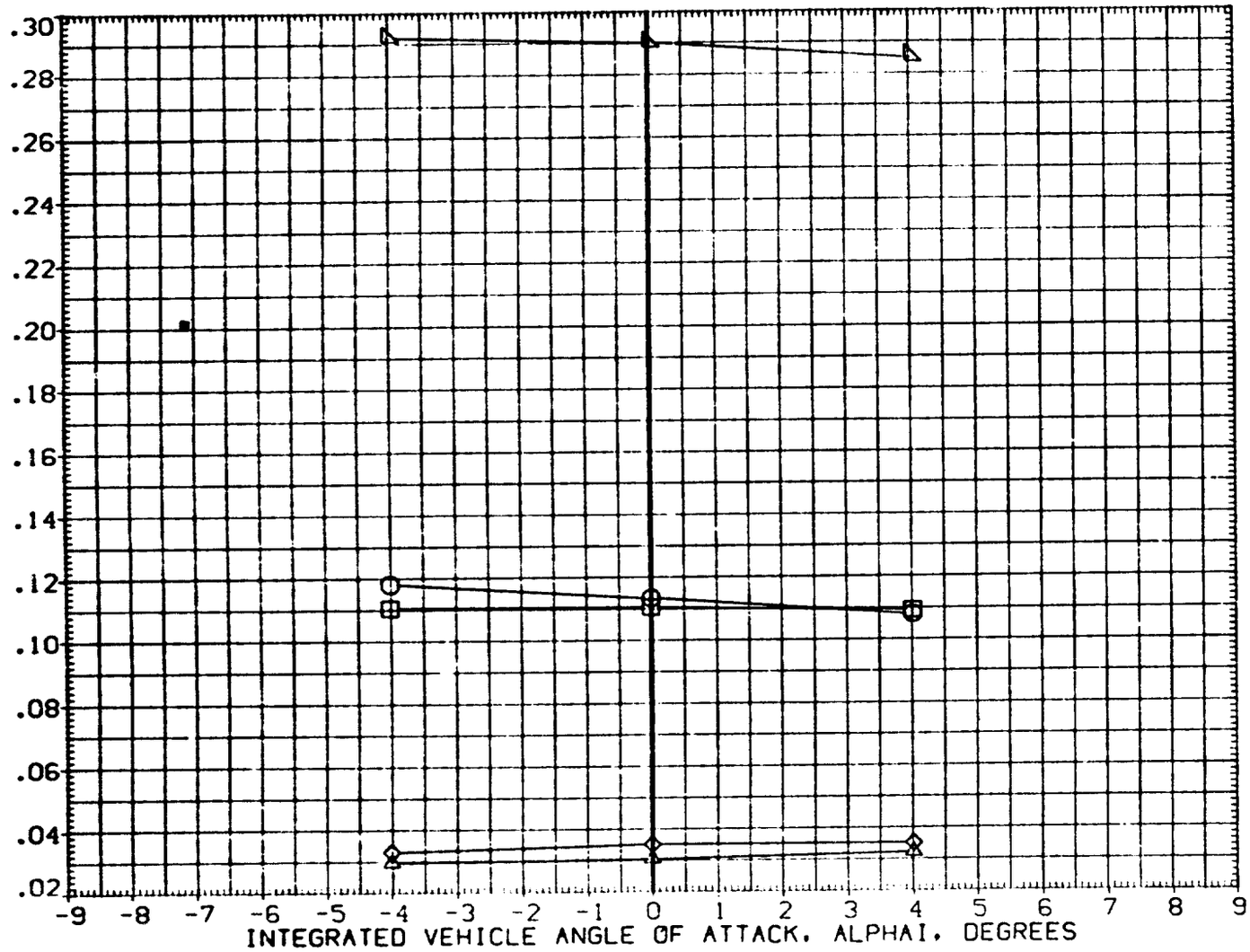


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)BETAI = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(METT39)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

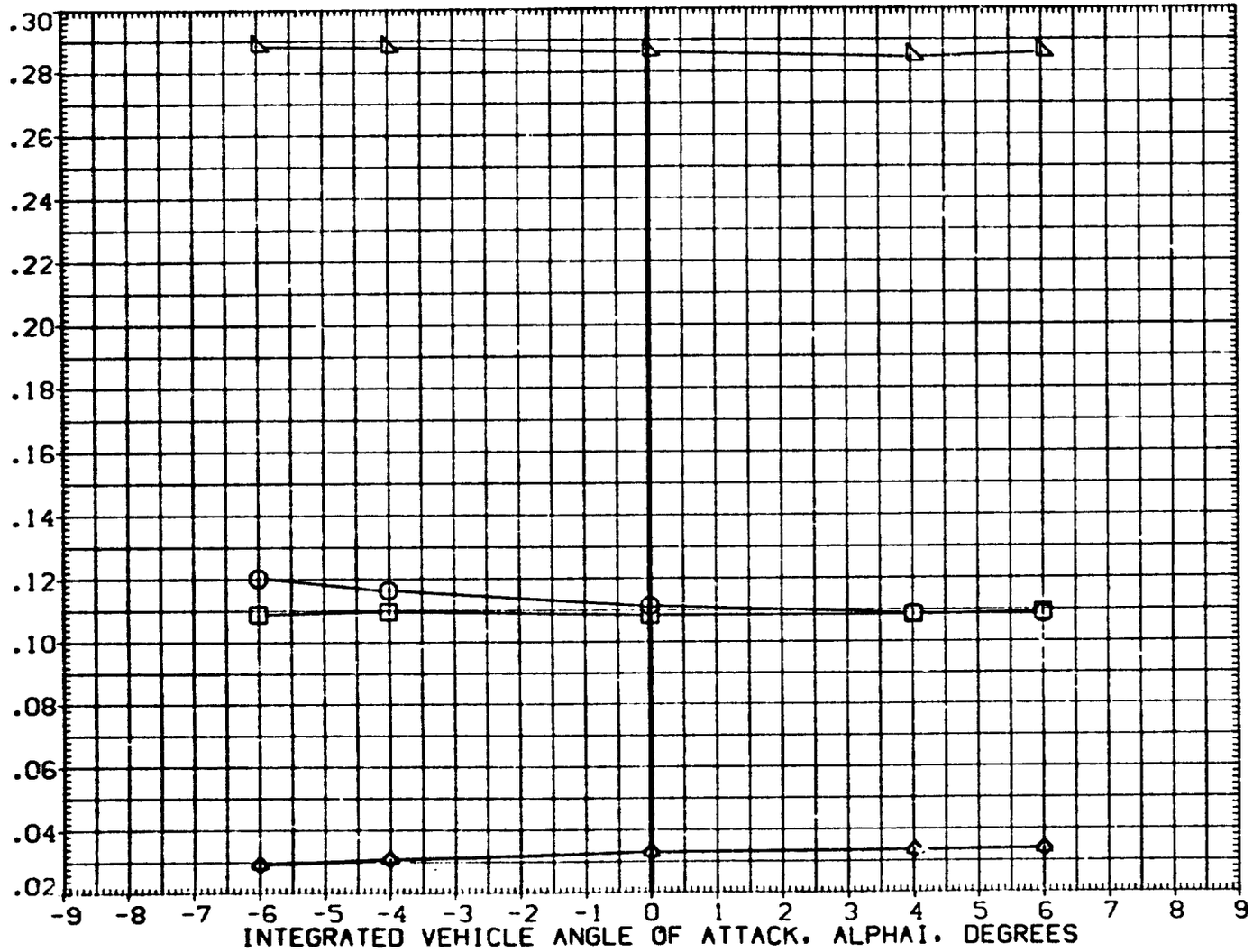


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET039)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	▷	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

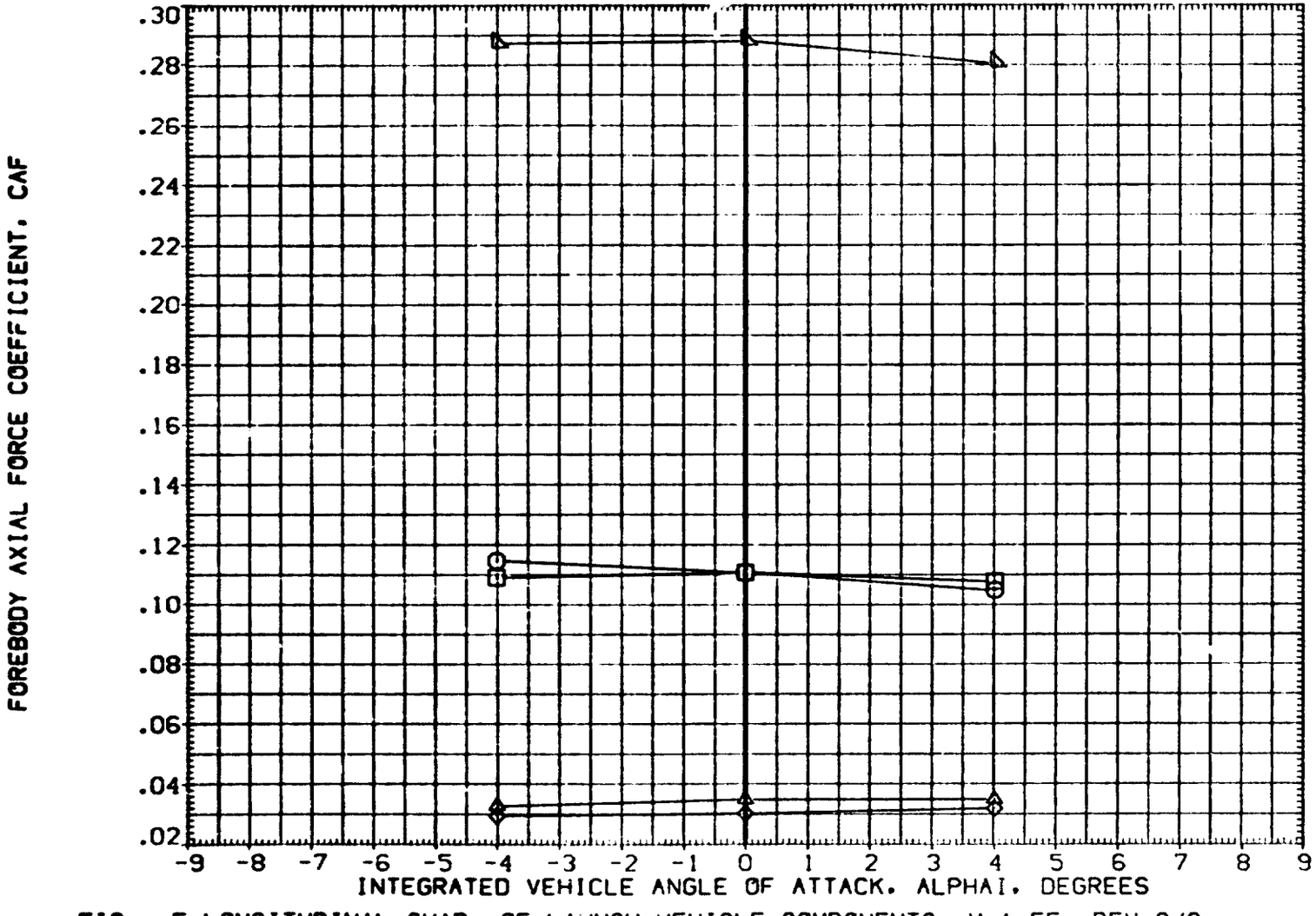


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(METT39)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(METL39)		AMES97-019(IA81) LVAP L-SER - ALL ML SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(METI39)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

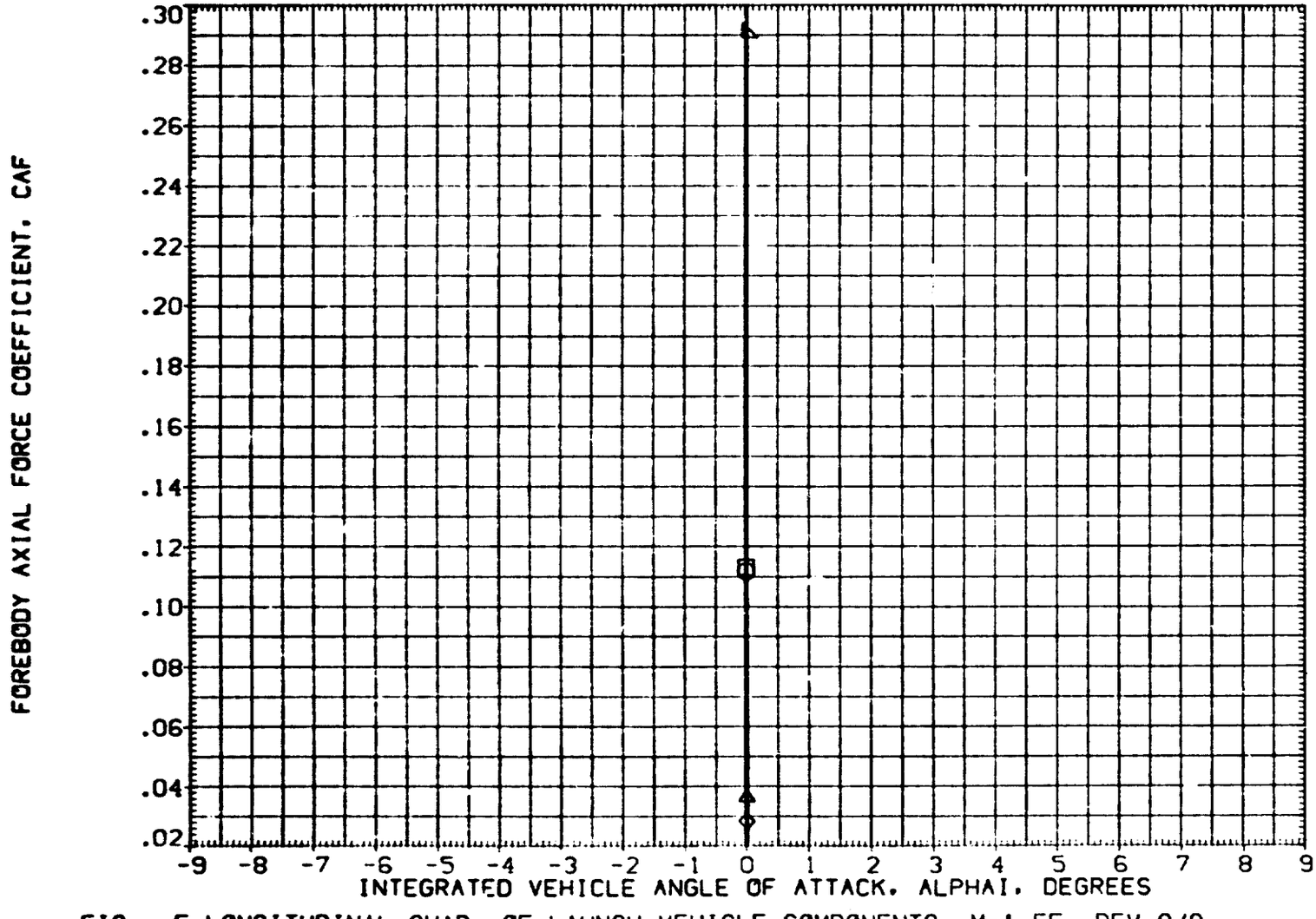


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET 039)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET 039)	○	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(MET 039)	◇	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(MET 039)	▽	AMES97-019([AB1]) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET 039)	△	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

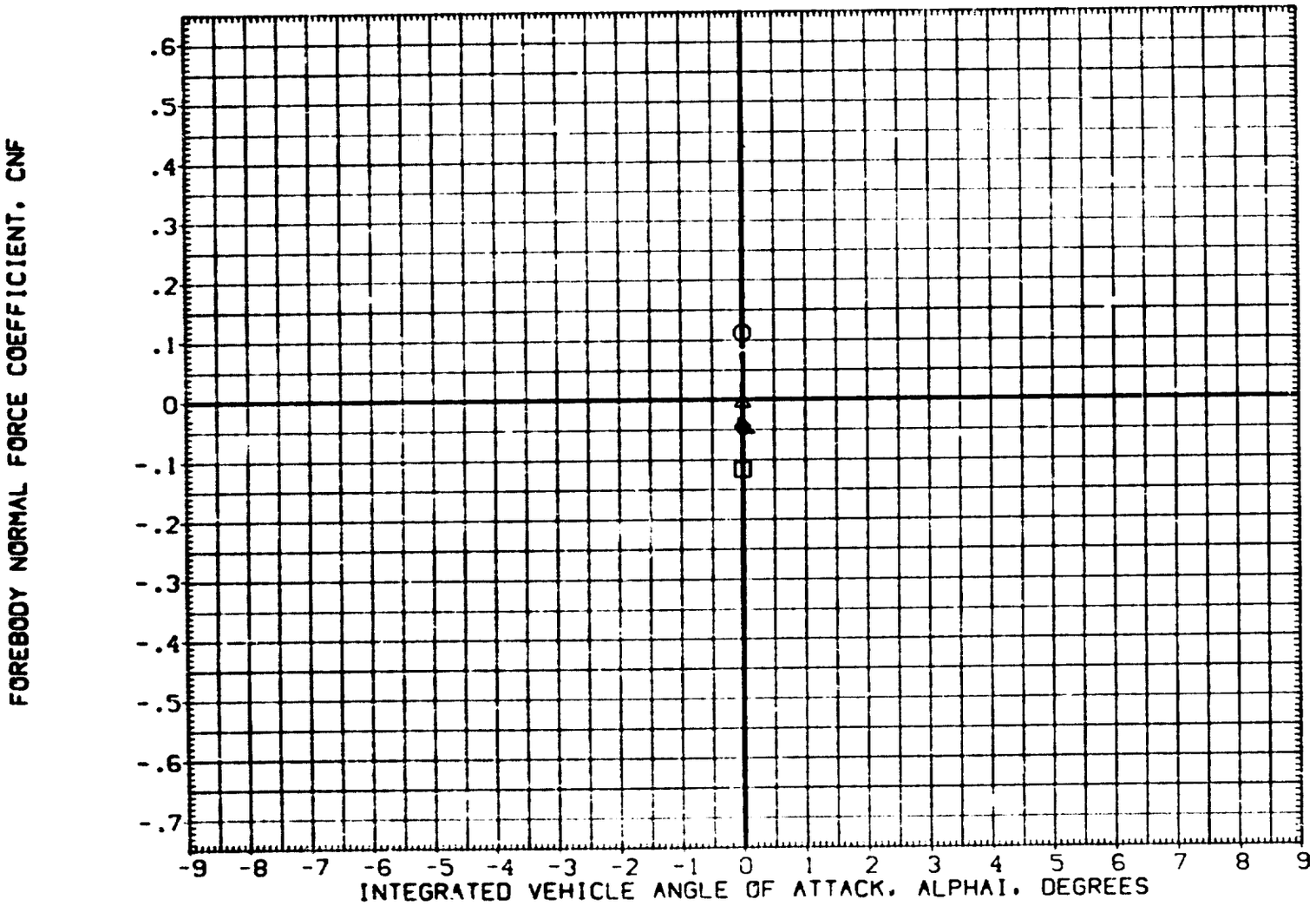
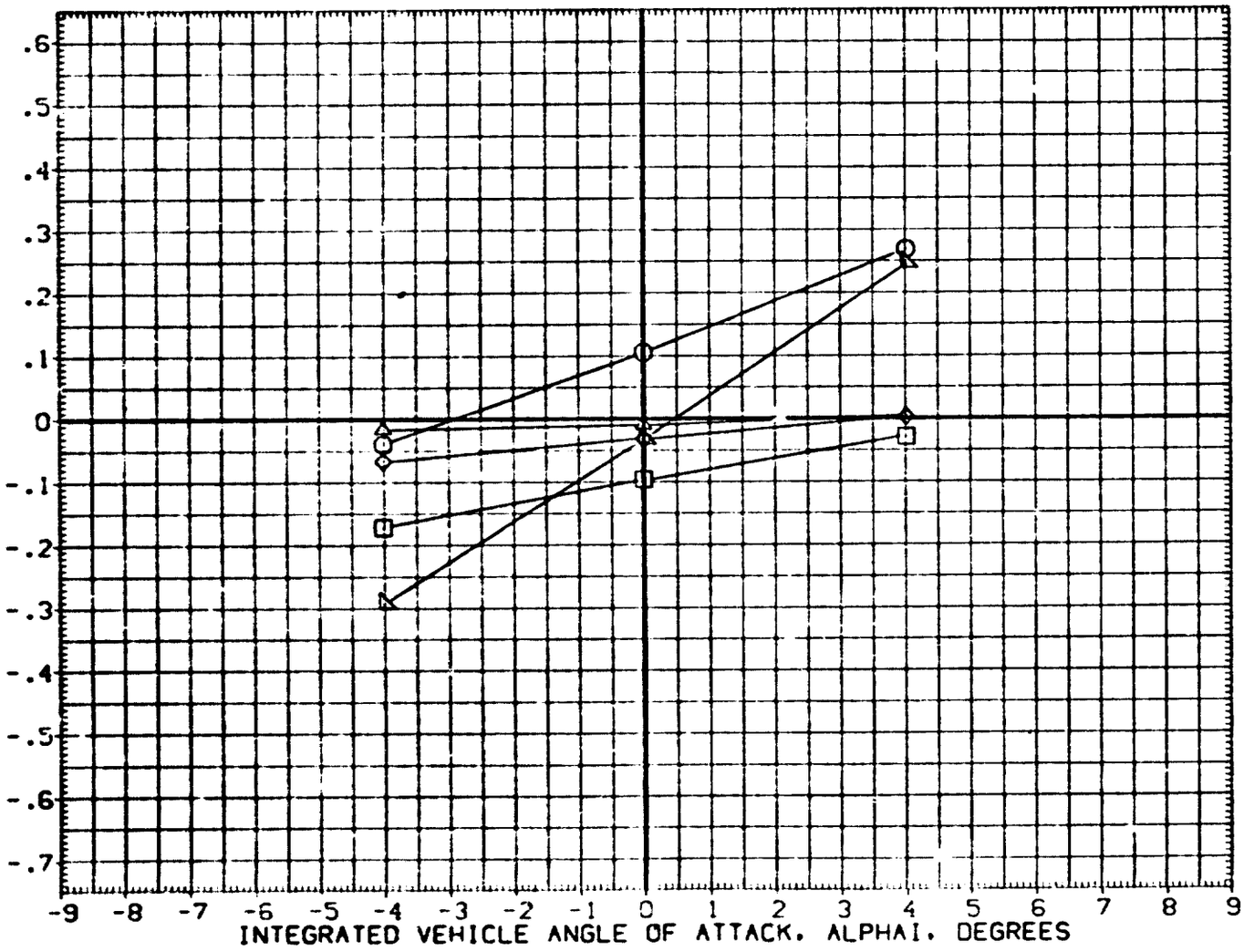


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019([A81) LVAP R LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1257.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	



FIG, 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	□	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(METT39)	◇	AMES97-019([A81) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(METL39)	▷	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019([A81) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(MET139)	△	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

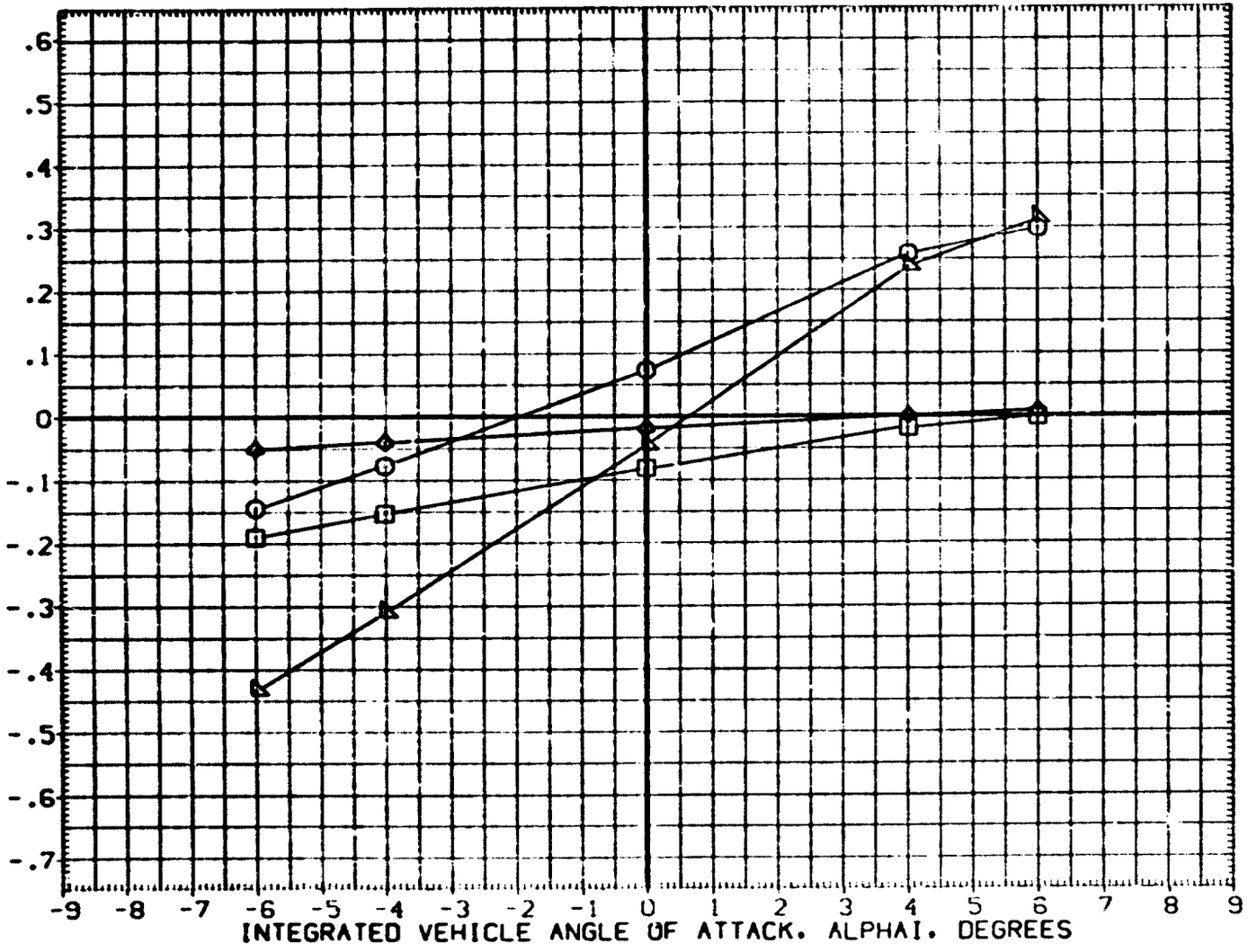


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

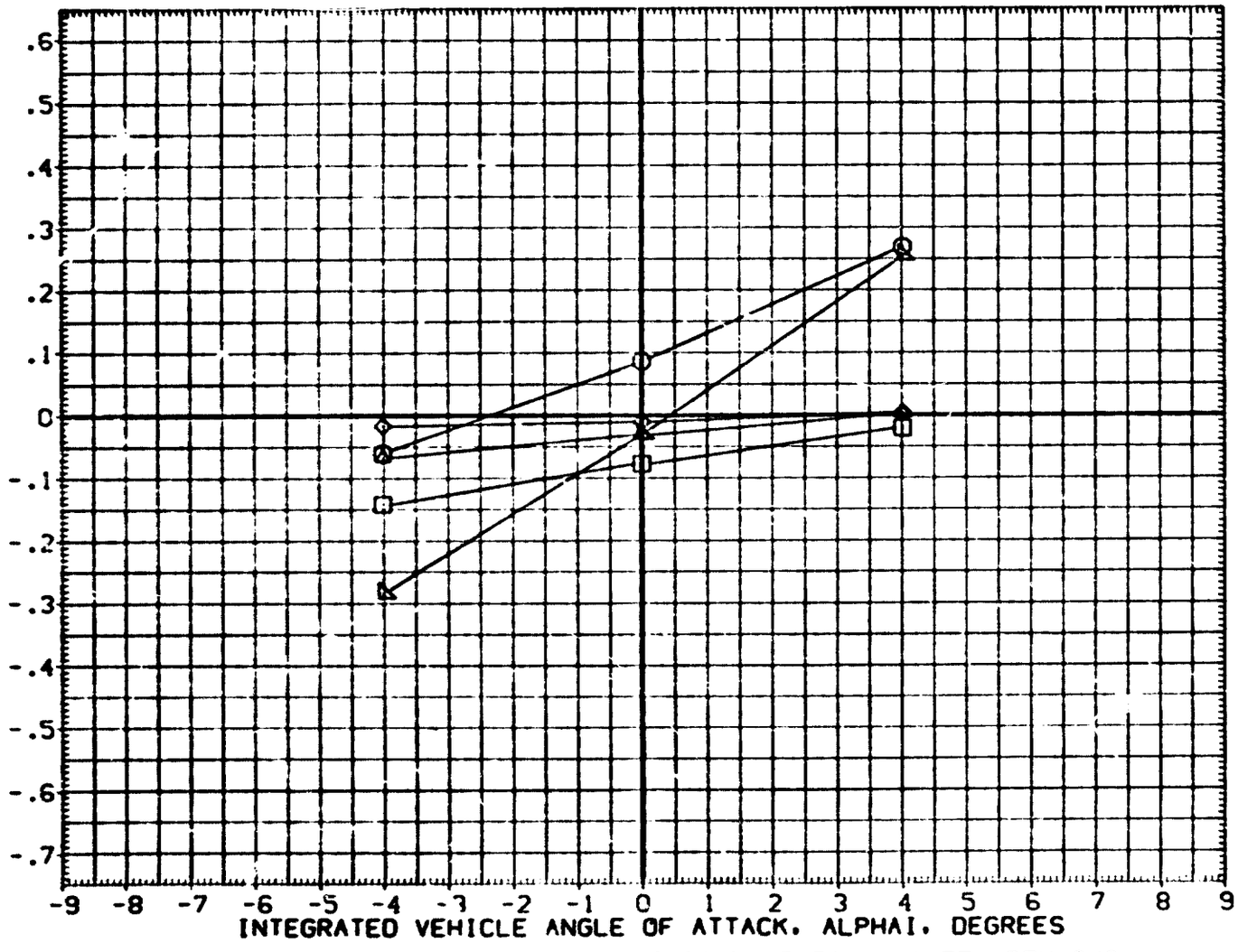


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
[illegible]		AMES97-019([ABI]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
[illegible]		AMES97-019([ABI]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
[illegible]		AMES97-019([ABI]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
[illegible]		AMES97-019([ABI]) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
[illegible]		AMES97-019([ABI]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

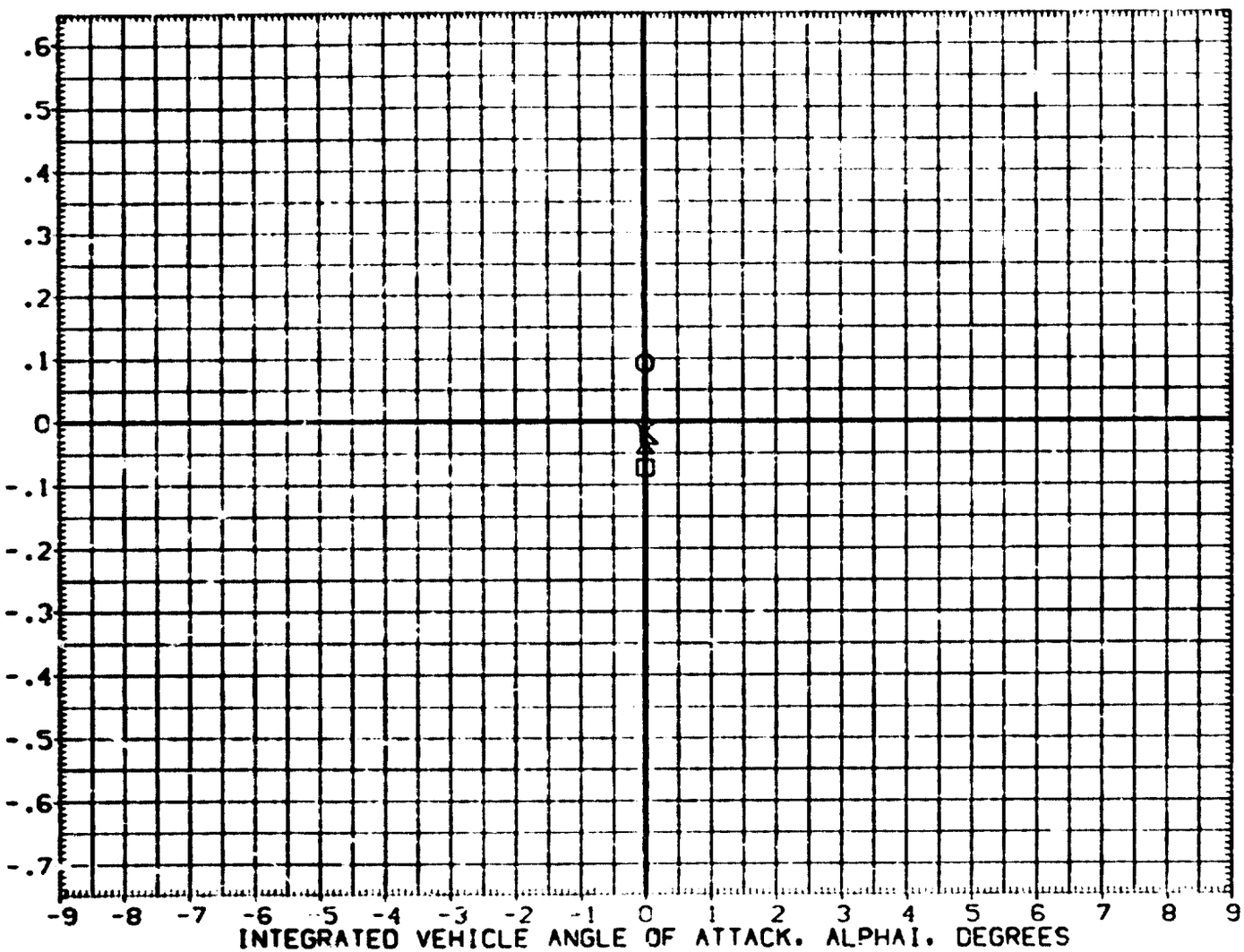


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	○	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

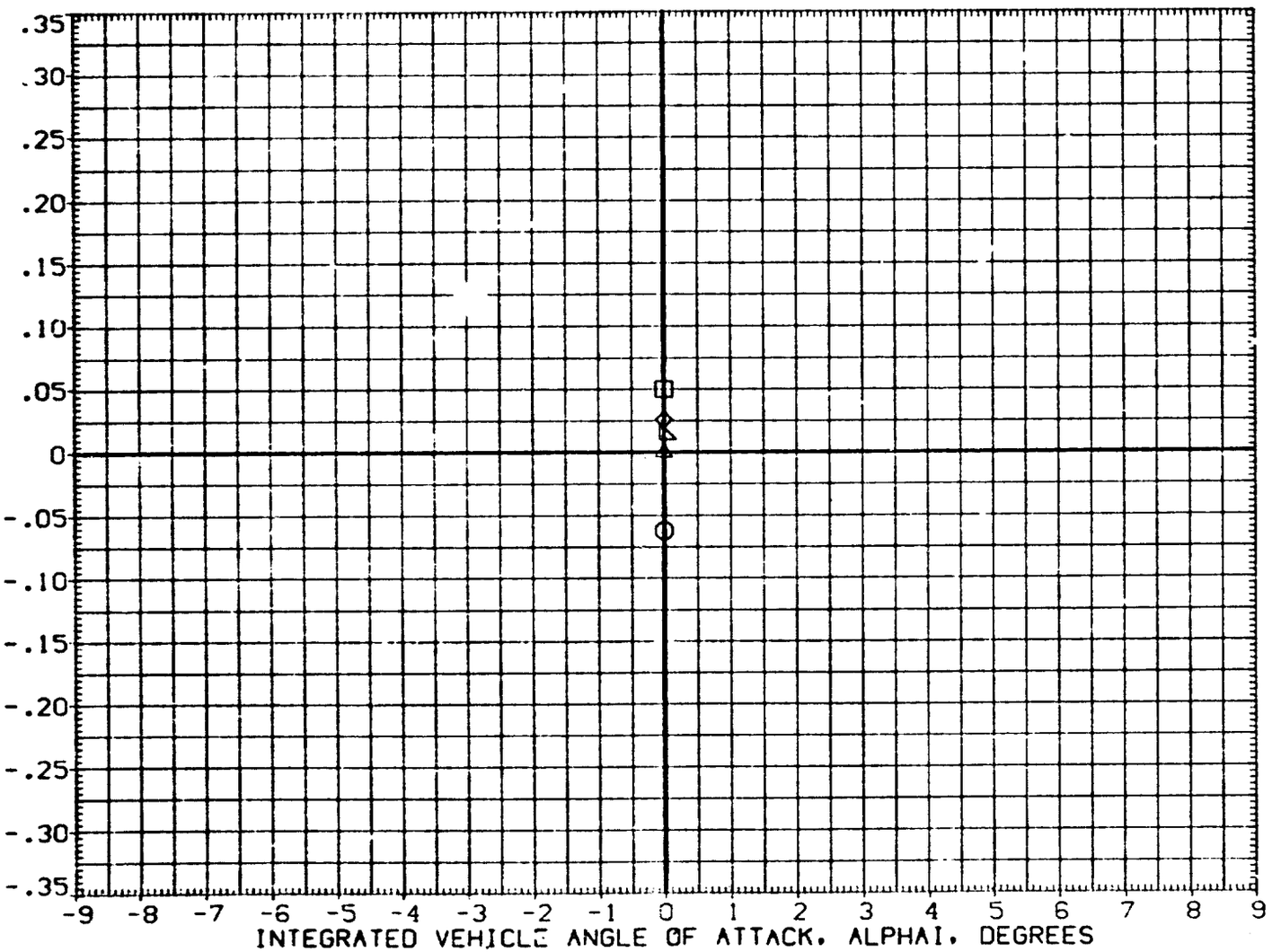


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

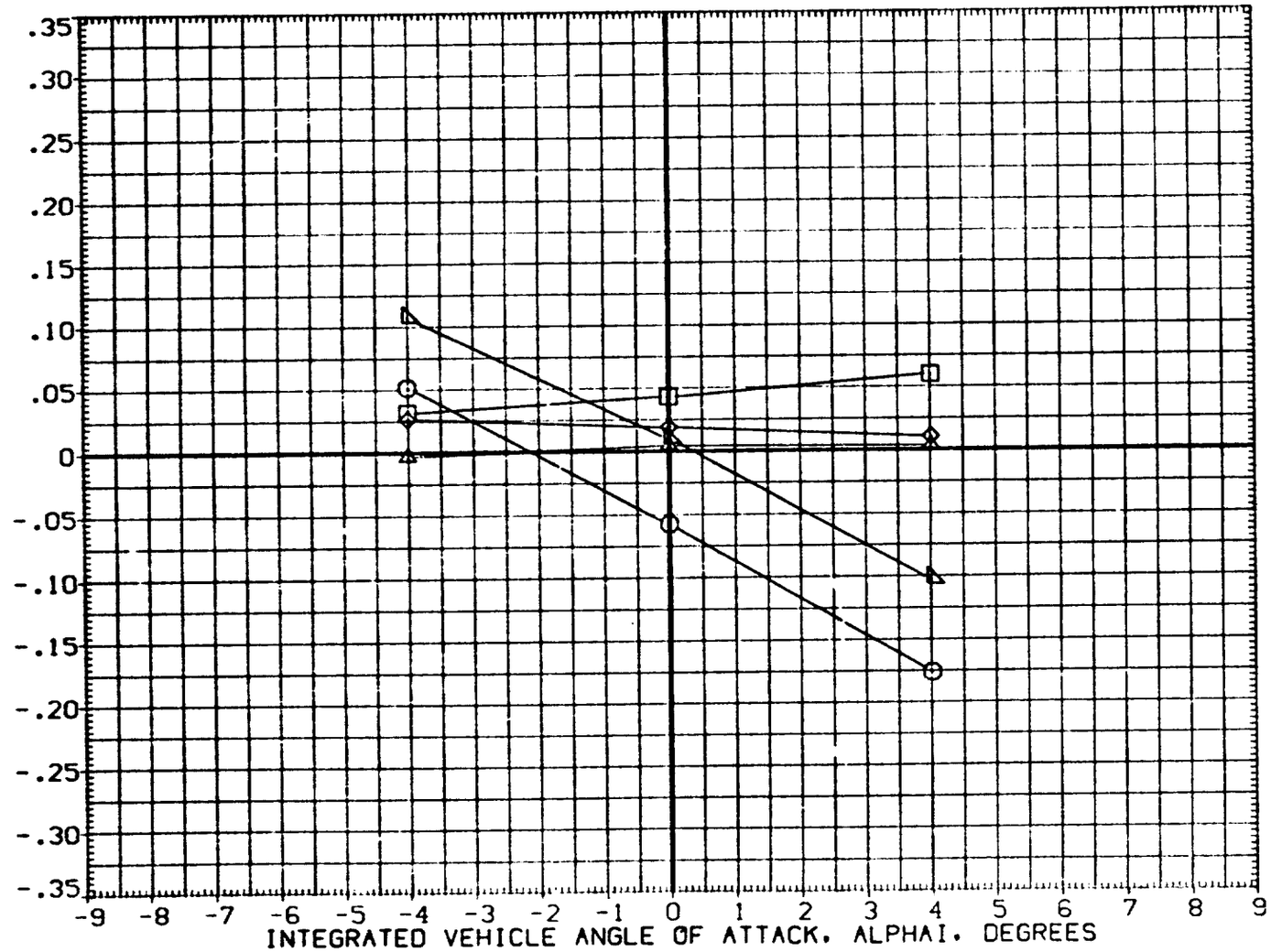


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

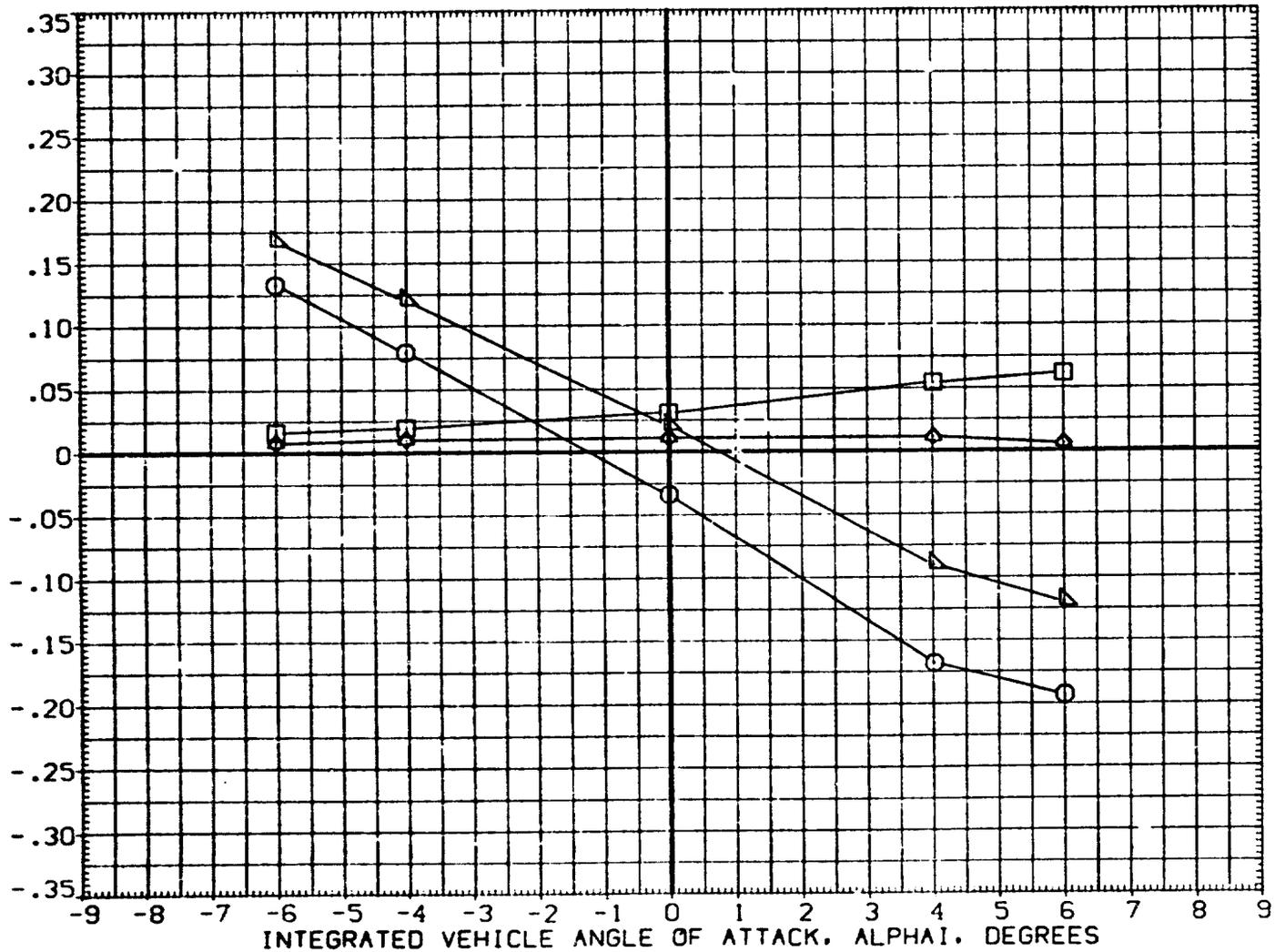


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET039)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(MET239)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(MET339)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET139)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

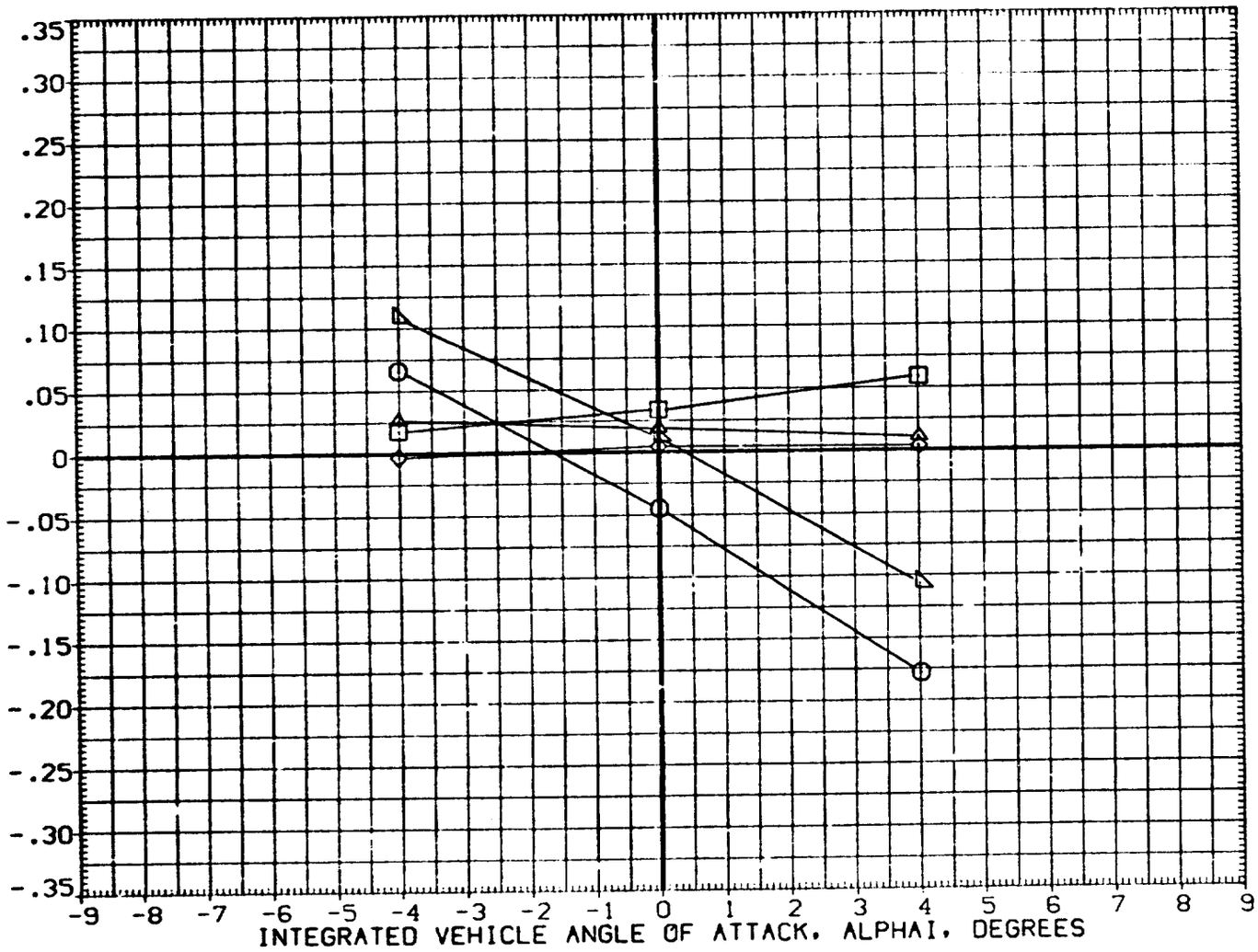


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)BETAI = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(METT39)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET139)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

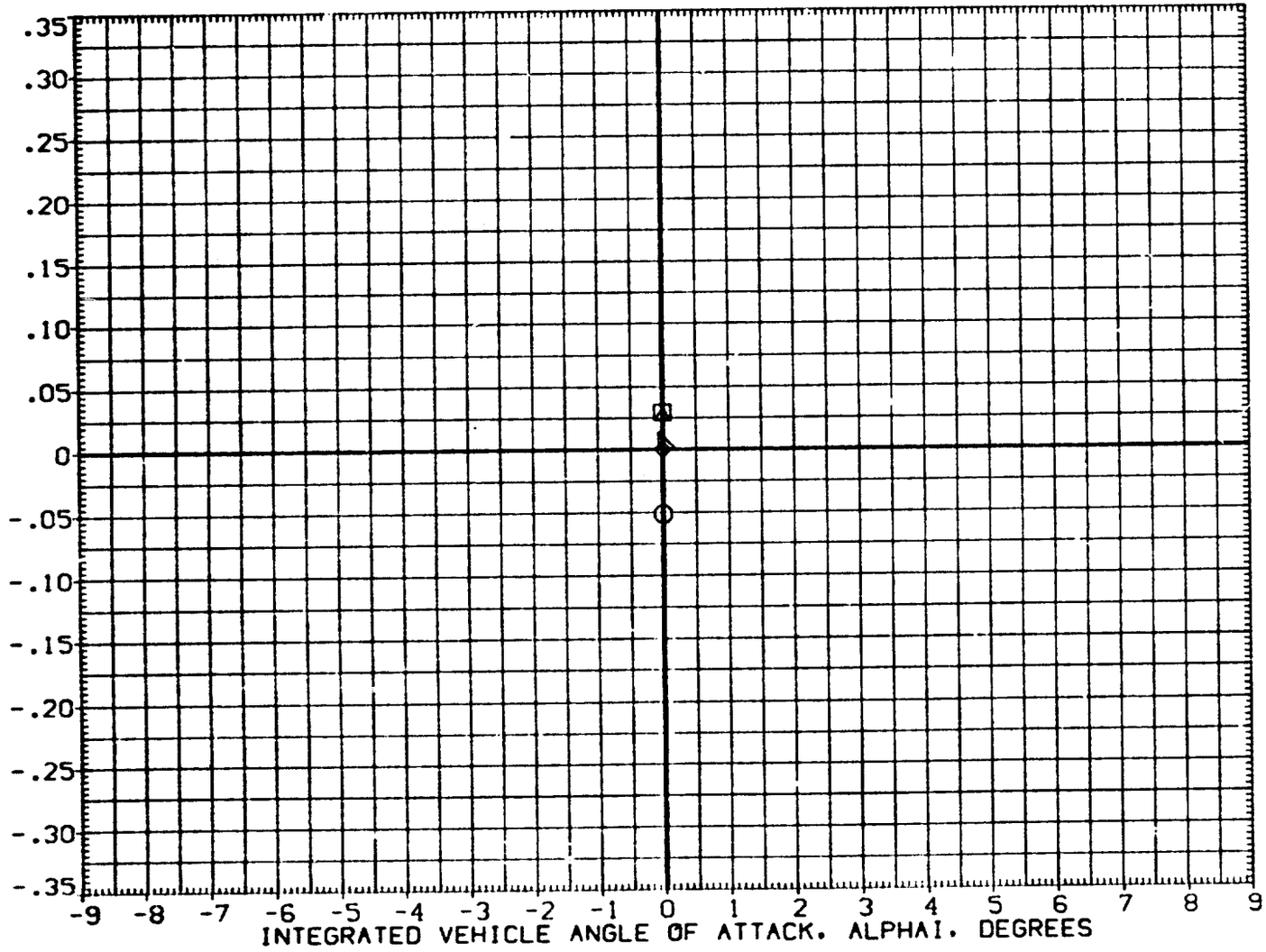


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(METT39)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

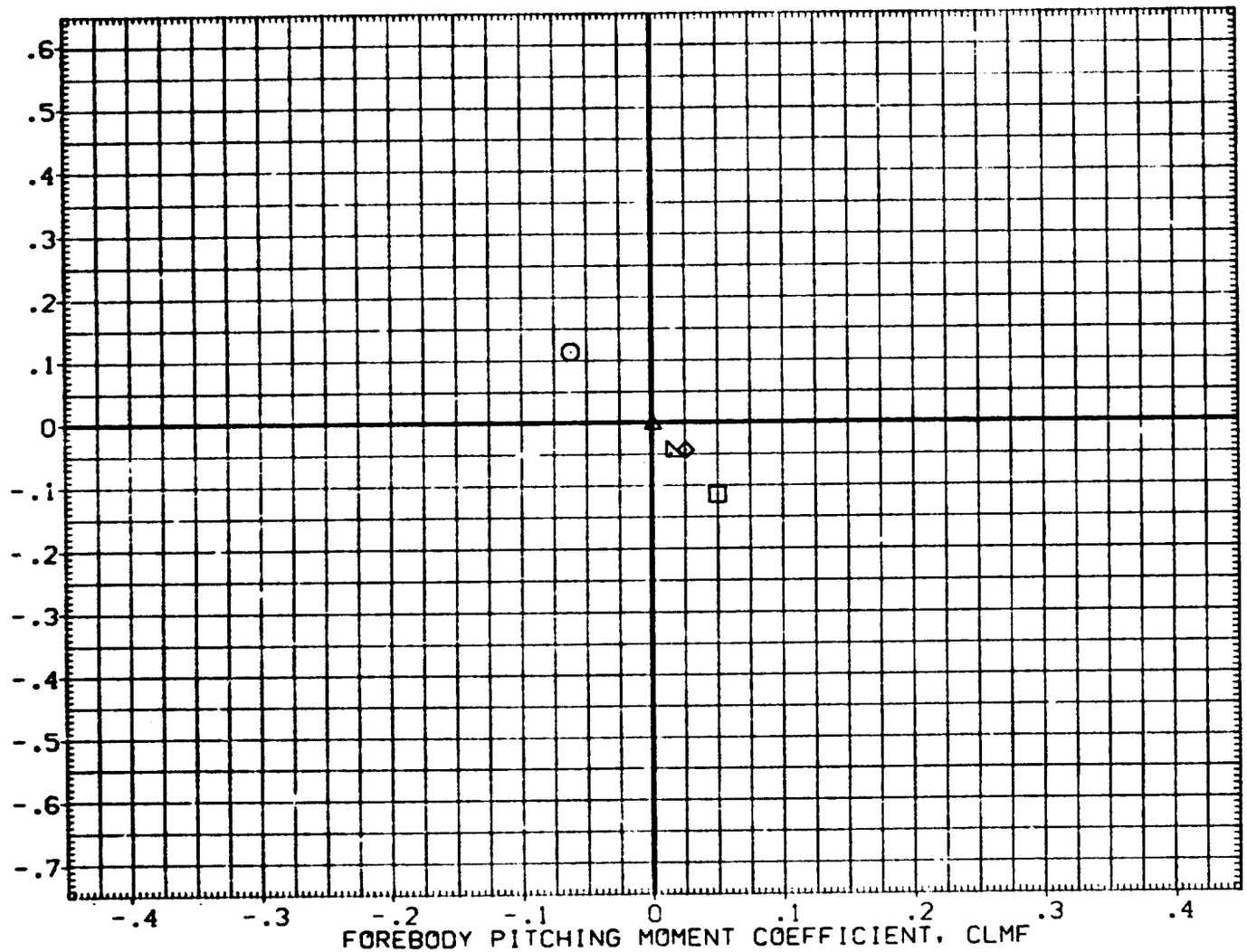


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

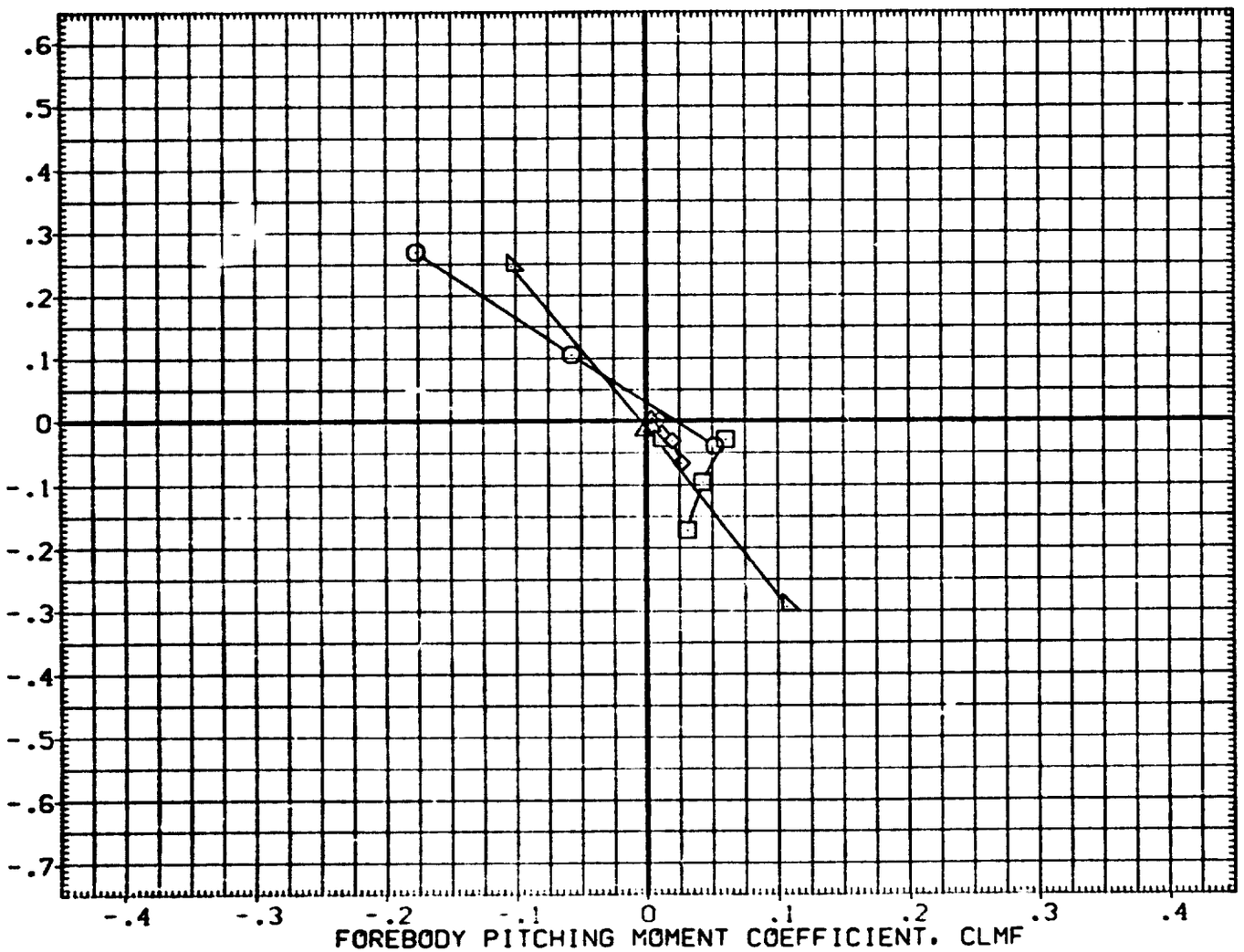


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(MET139)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(MET239)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(MET339)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(MET439)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

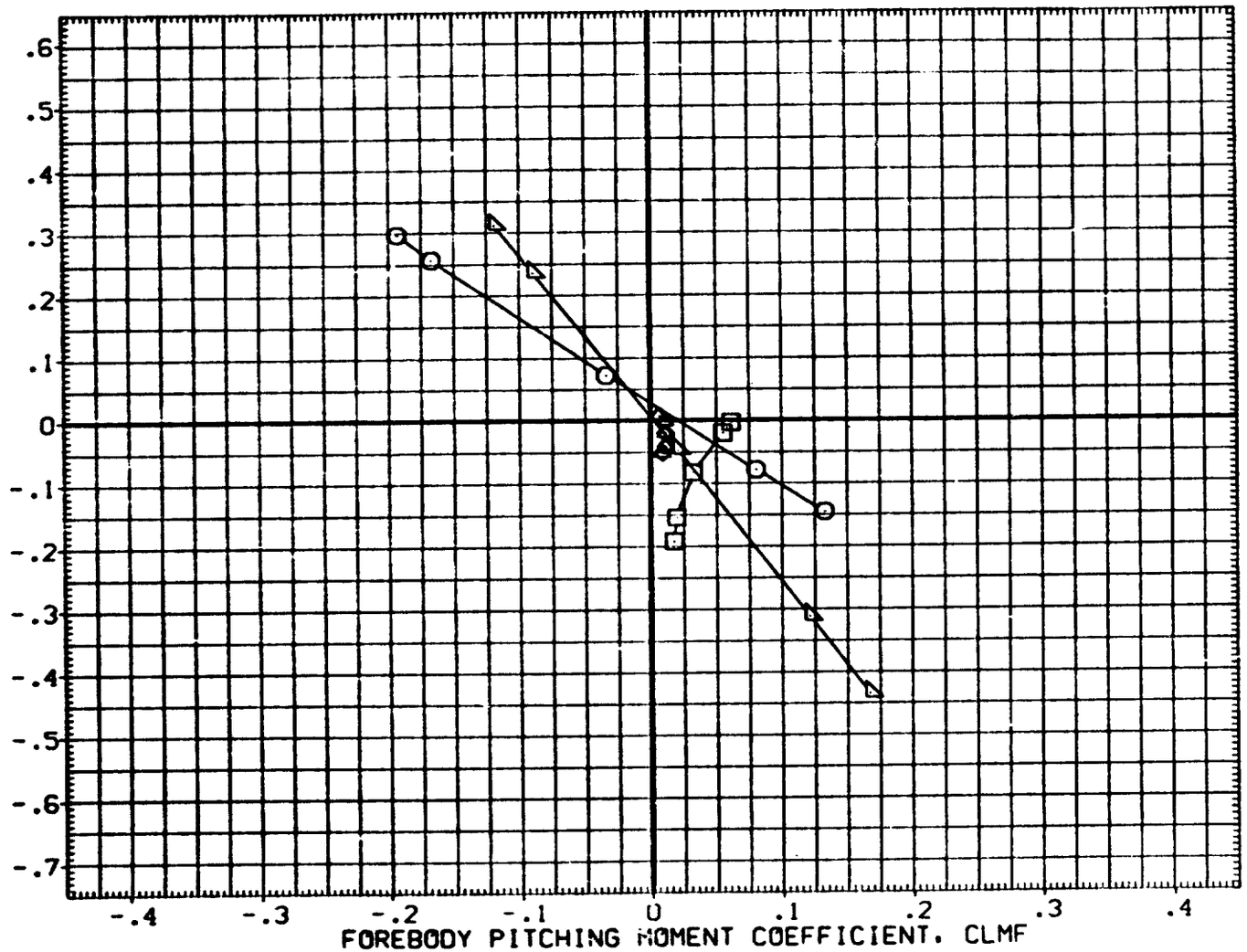


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO39)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(METT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(METL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(METR39)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(METI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

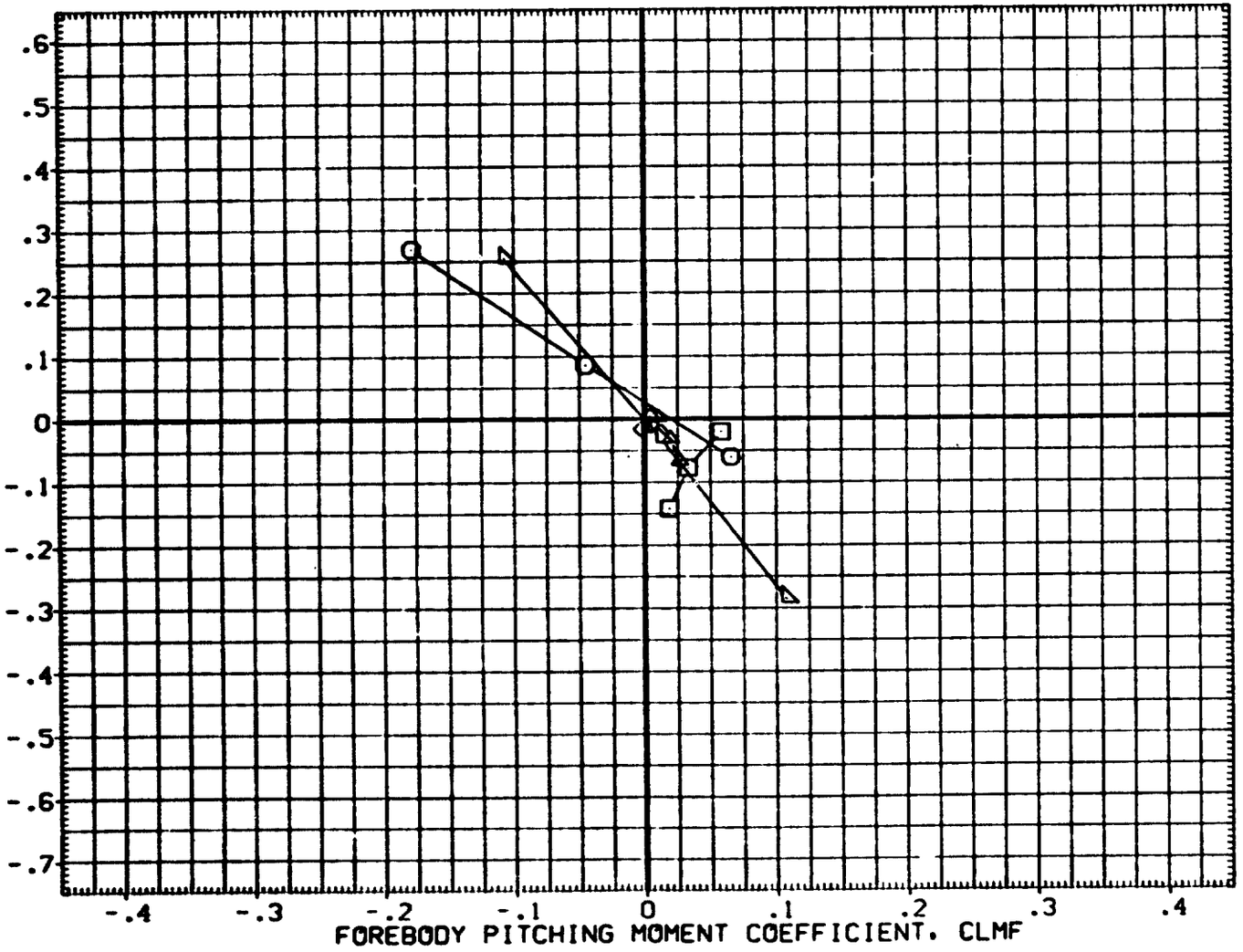


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(MET139)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(METL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(METR39)	◁	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(MET139)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

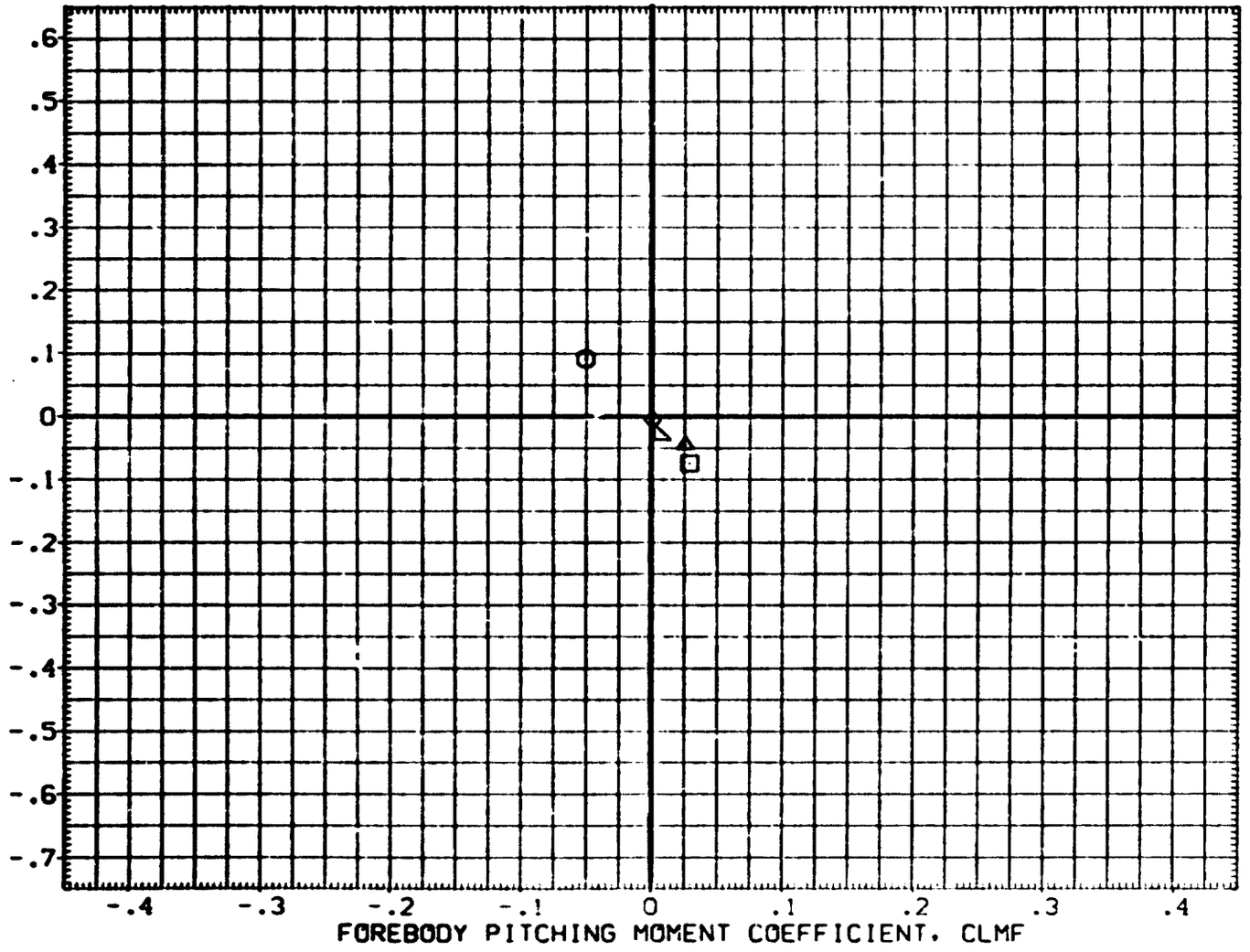


FIG. 5 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET043)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◇	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	△	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

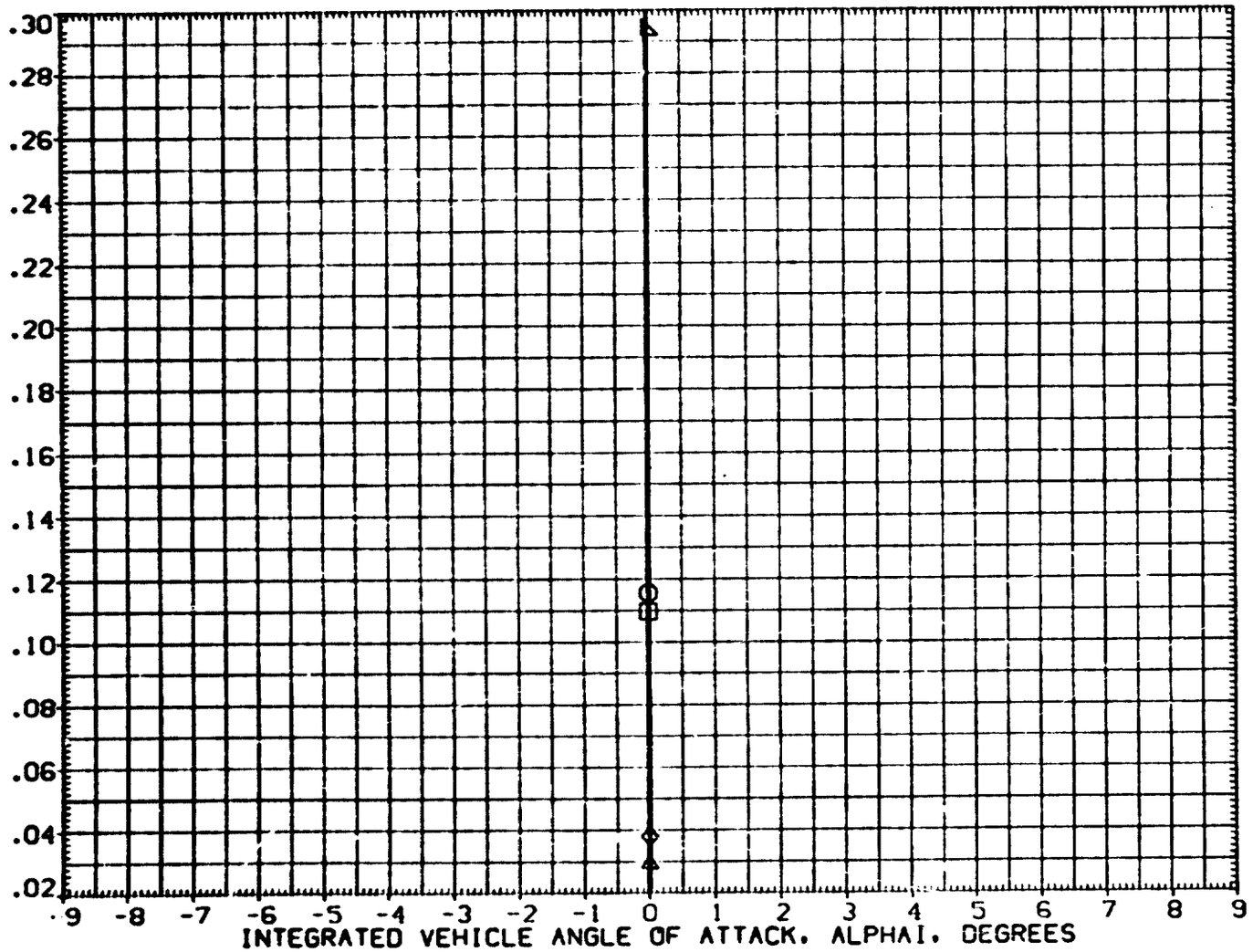


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=B/C

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019([AB]) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◇	AMES97-019([AB]) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(MET243)	▽	AMES97-019([AB.]) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(MET343)	⊲	AMES97-019([AB]) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	△	AMES97-019([AB]) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

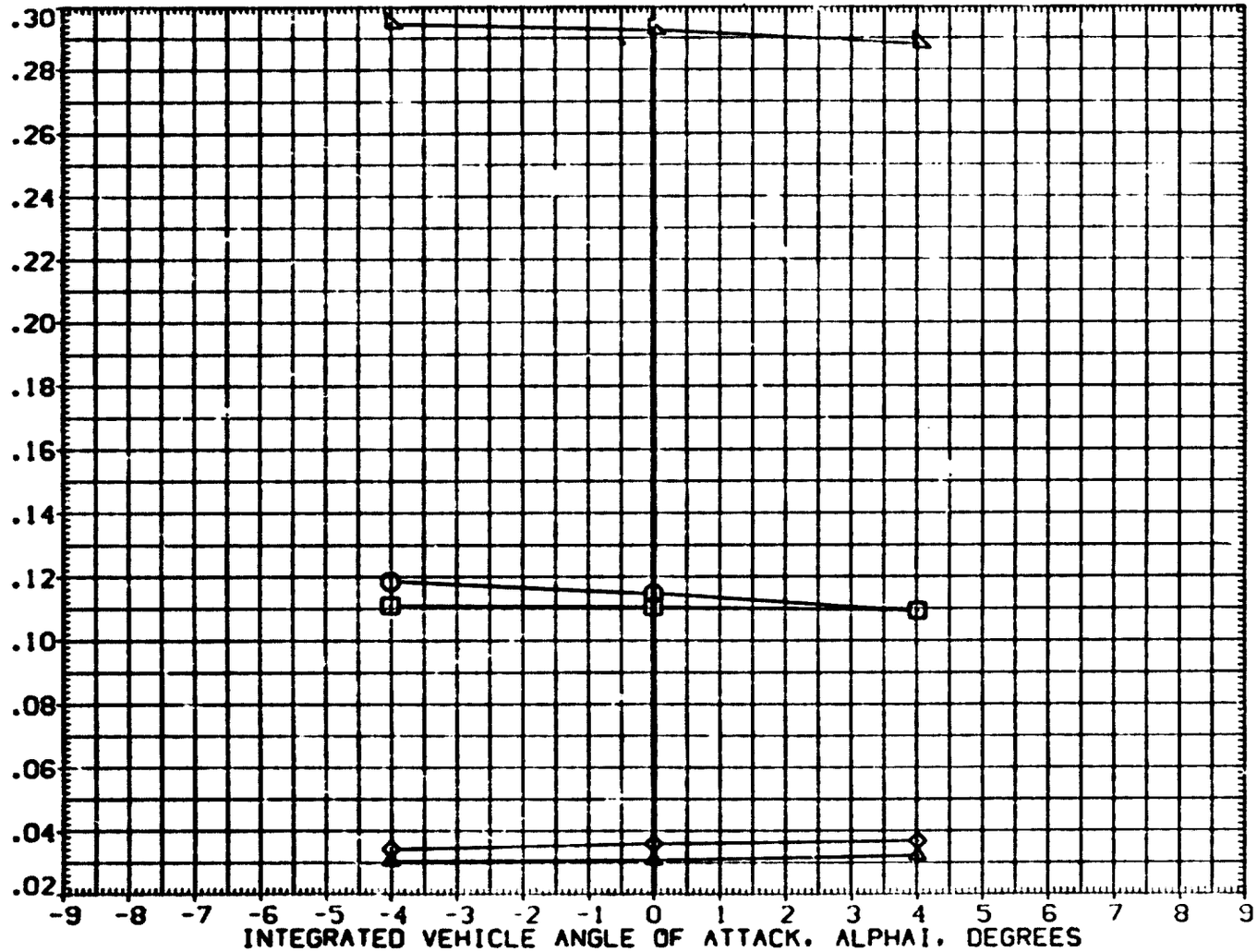


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET04)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET43)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL4)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR4)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(MET14)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

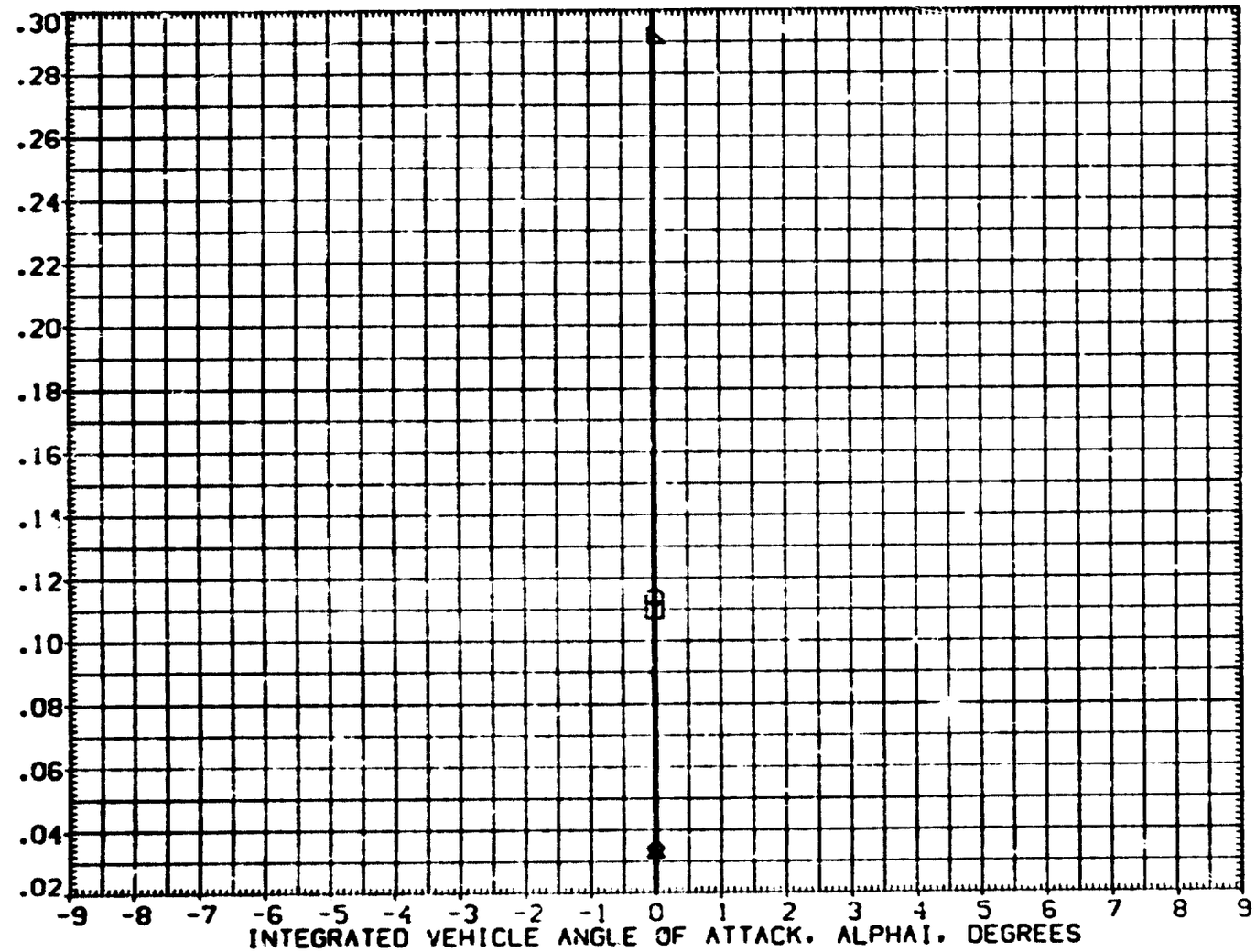


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)BETAI = -2.00

DATA SET	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO43)	AMES97-019(IAB1) LVAP ORBITER ALL ML SEALED	8.000	.000	1.550	.000
(METT43)	AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	8.000	.000	1.550	.000
(METL43)	AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	8.000	.000	1.550	.000
(METR43)	AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	8.000	.000	1.550	.000
(METI43)	AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

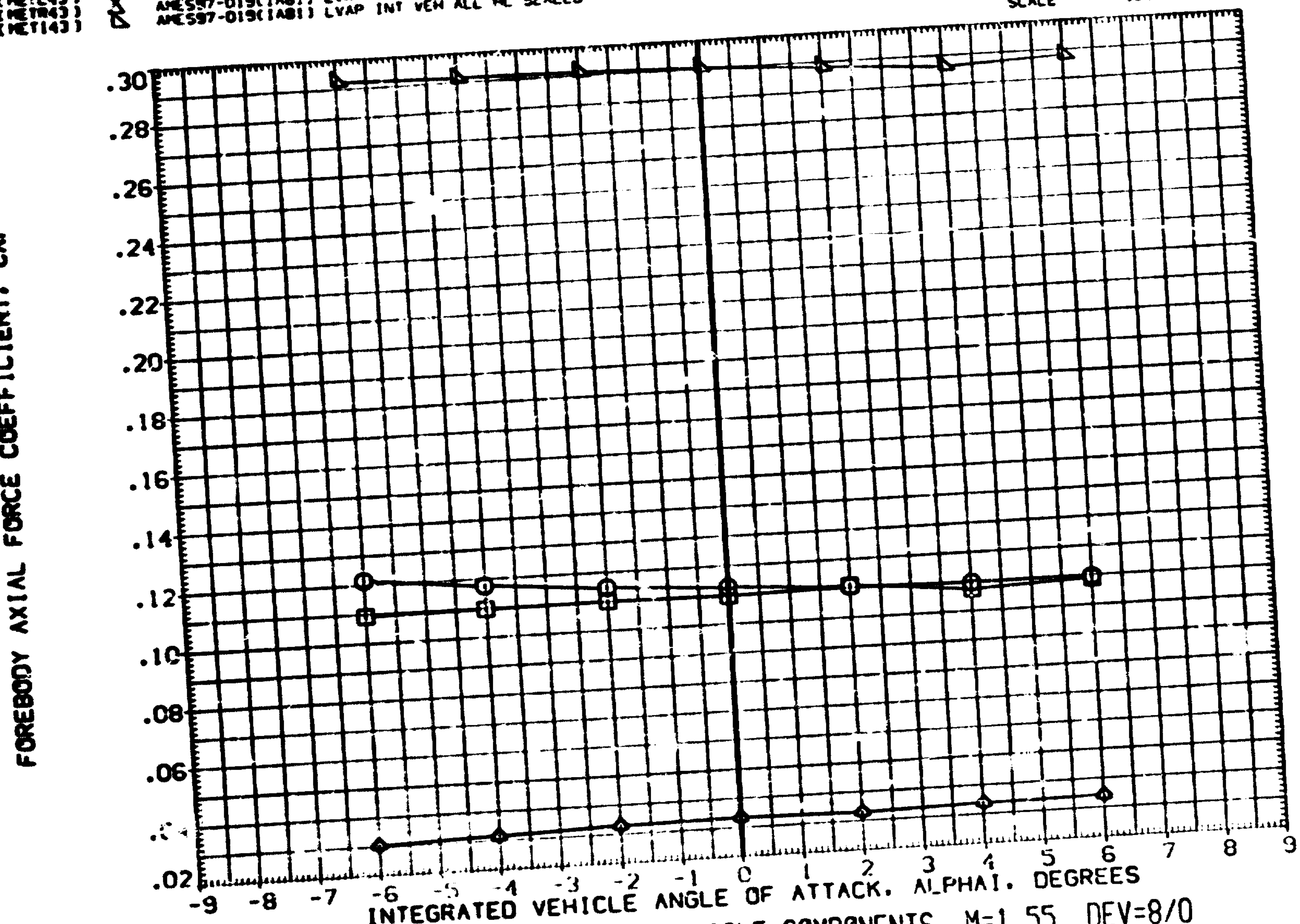


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)BET.I = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO43)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

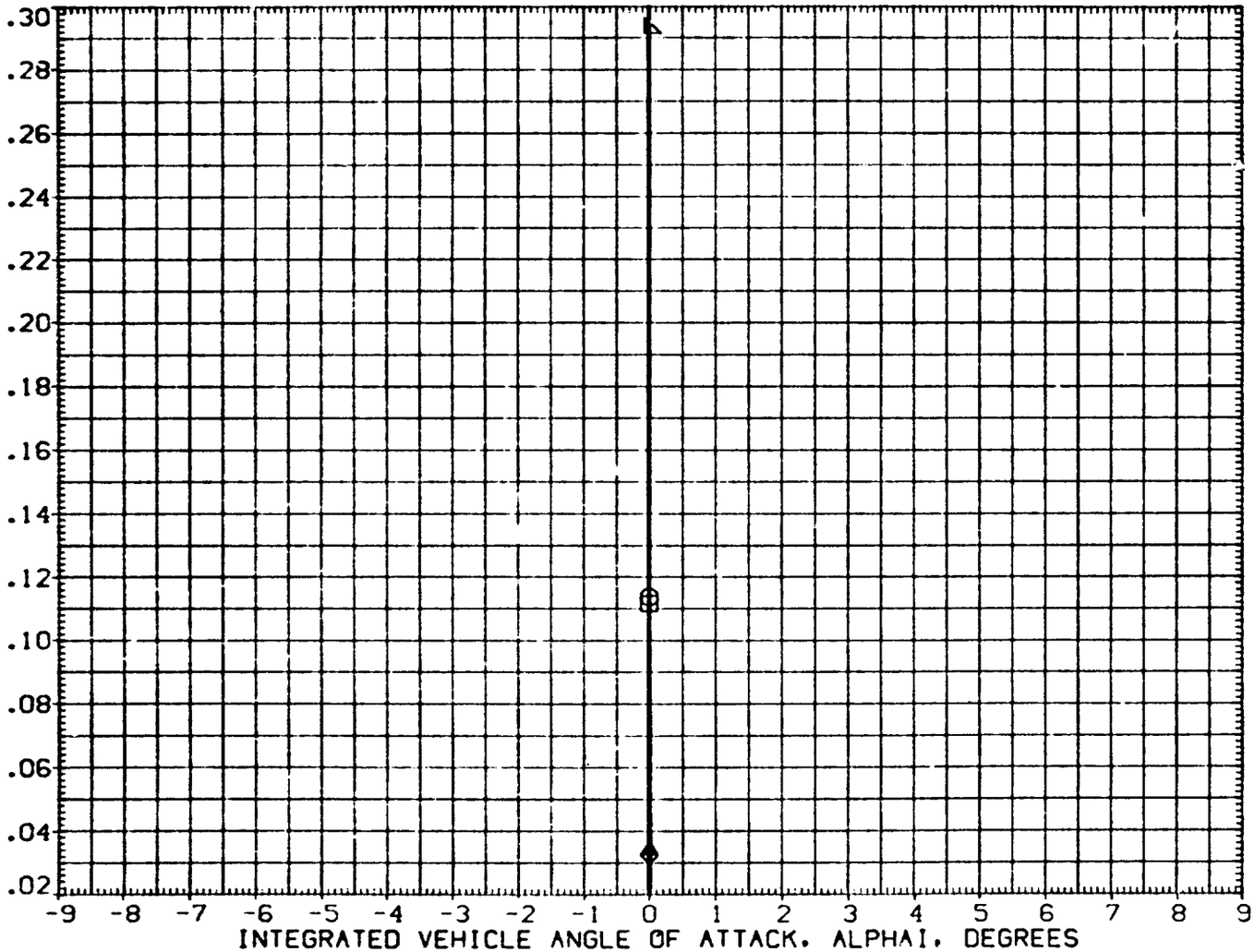


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

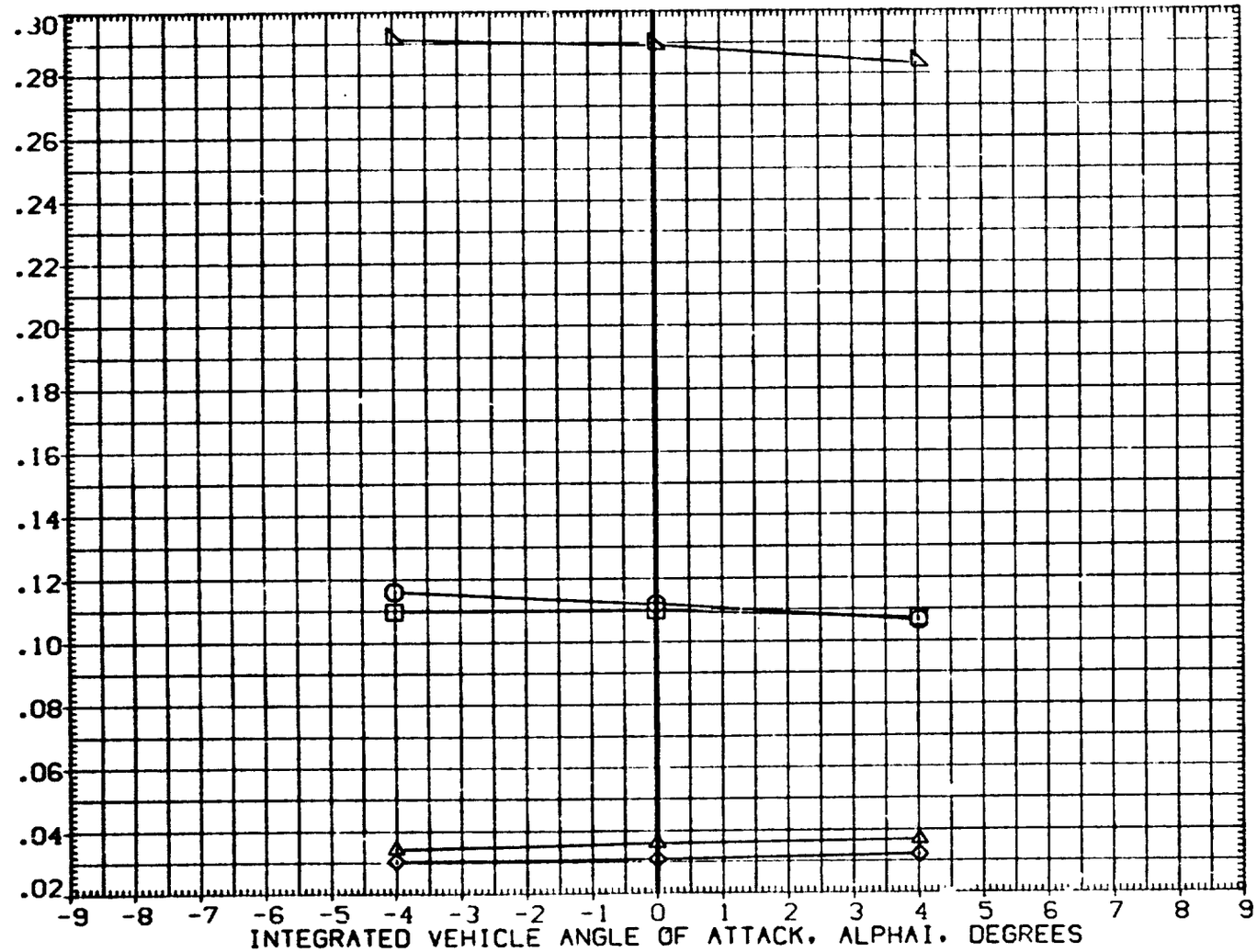


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

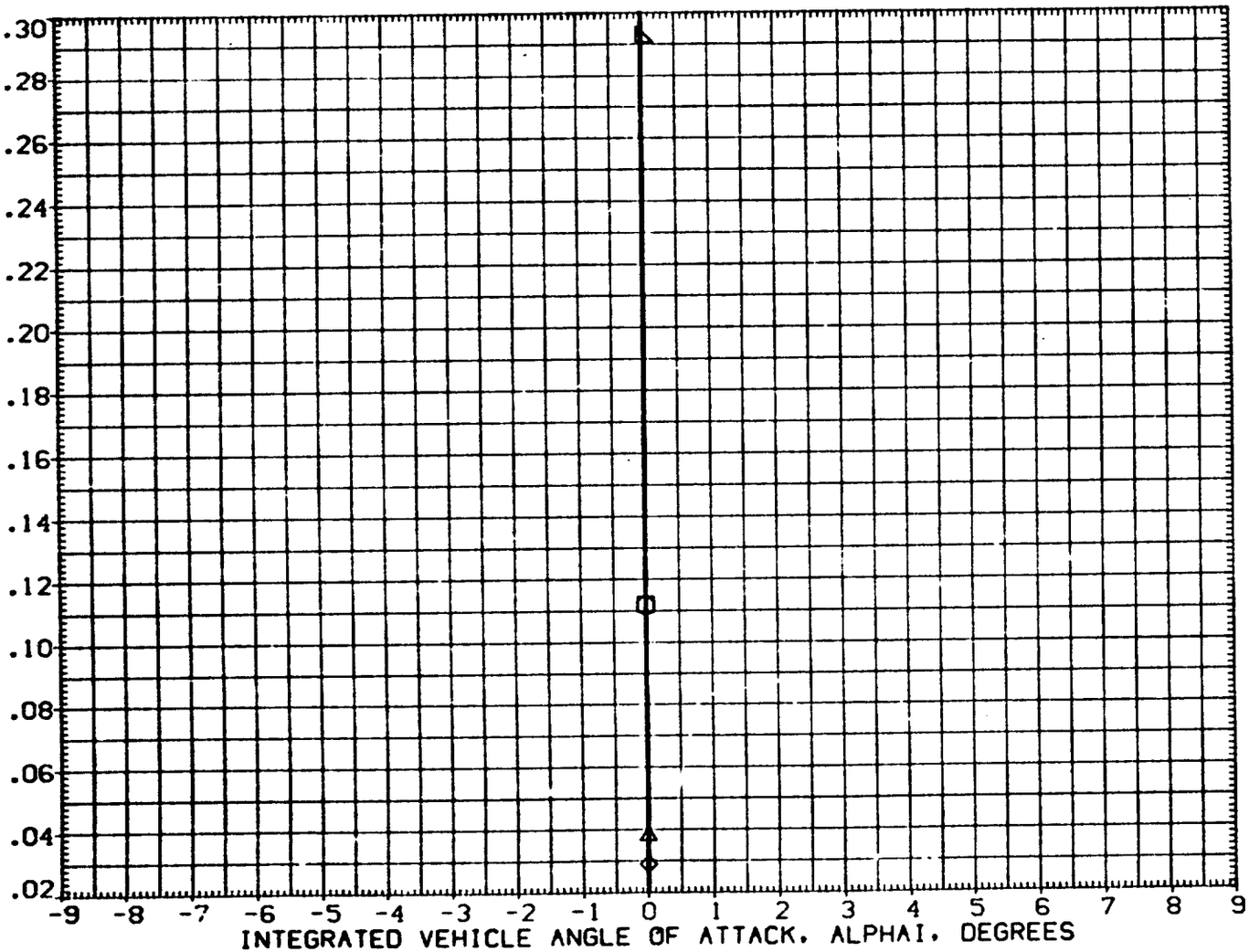


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	▷	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

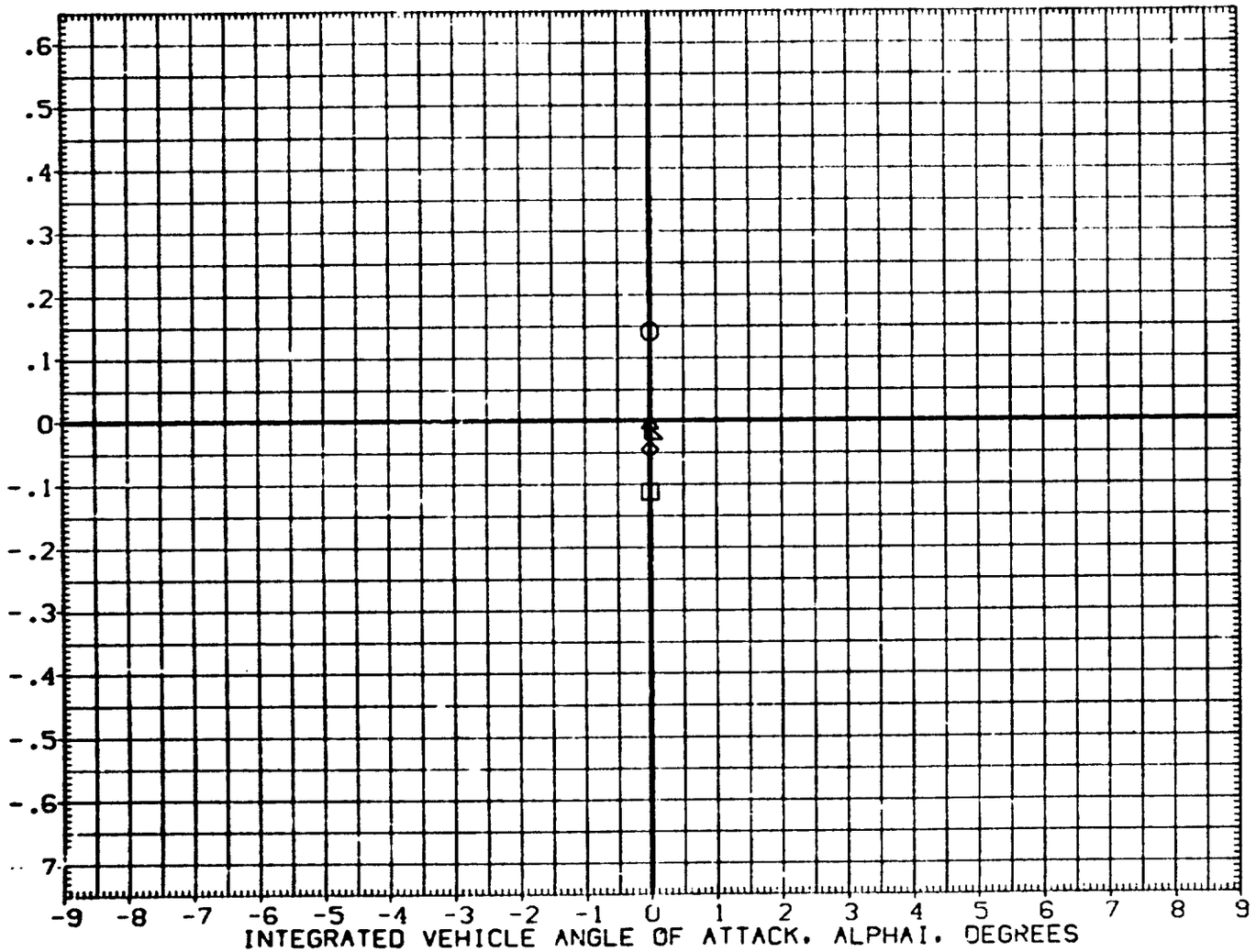


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(MET243)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(MET343)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET443)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

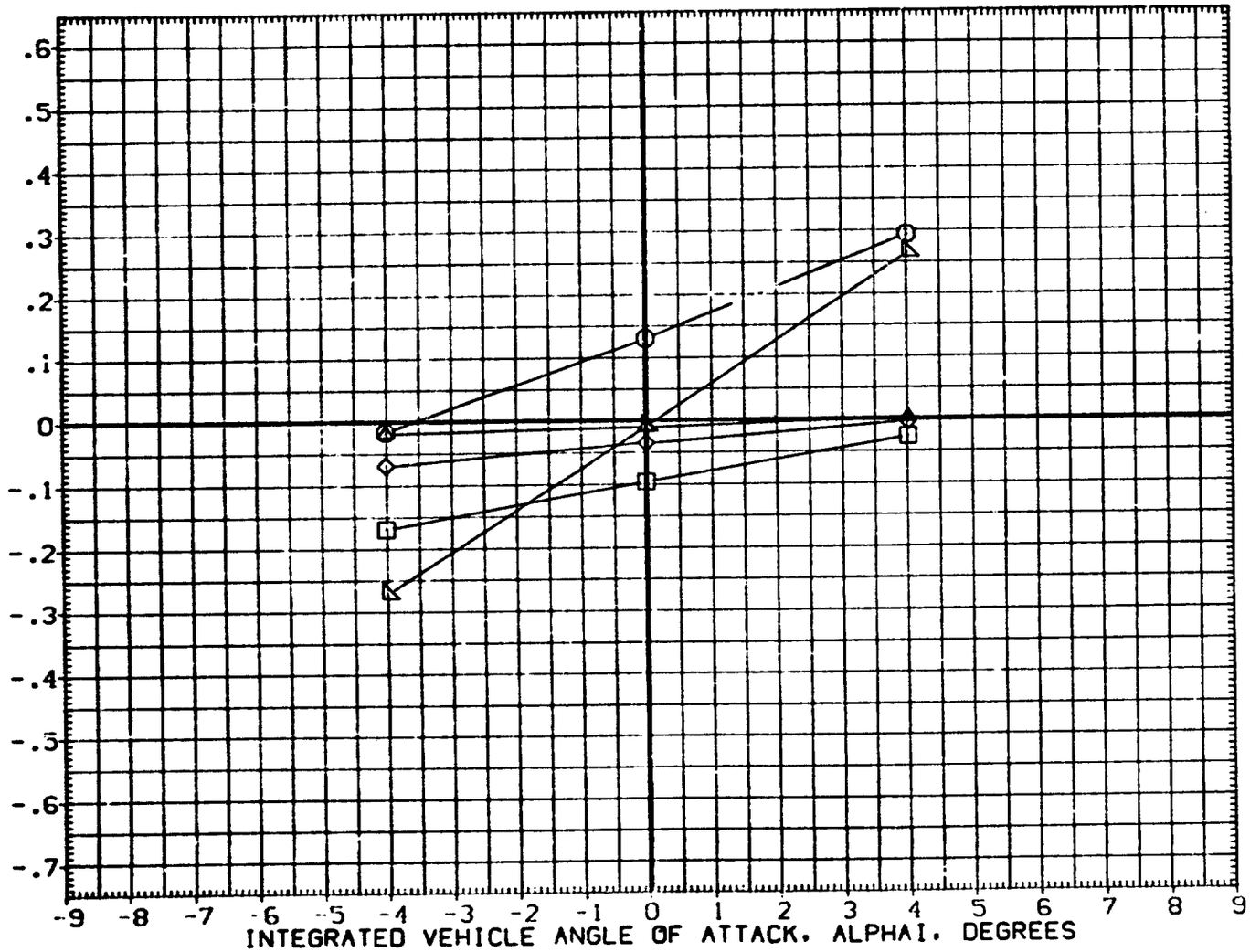


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	▽	AMES97-019(IAC1) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

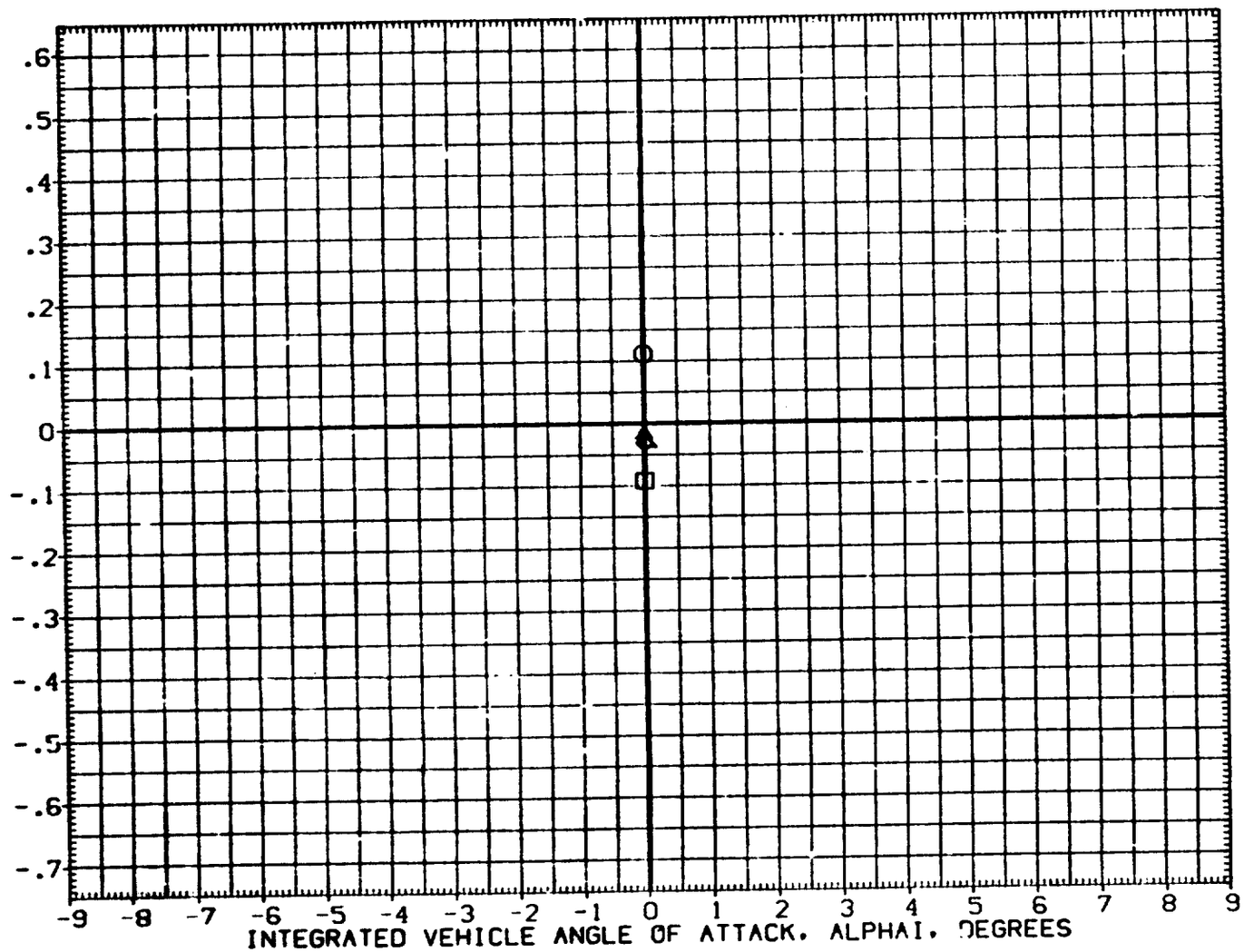


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)BETAI = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-13	ELV-08	MACH	SPDBRK
(MET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

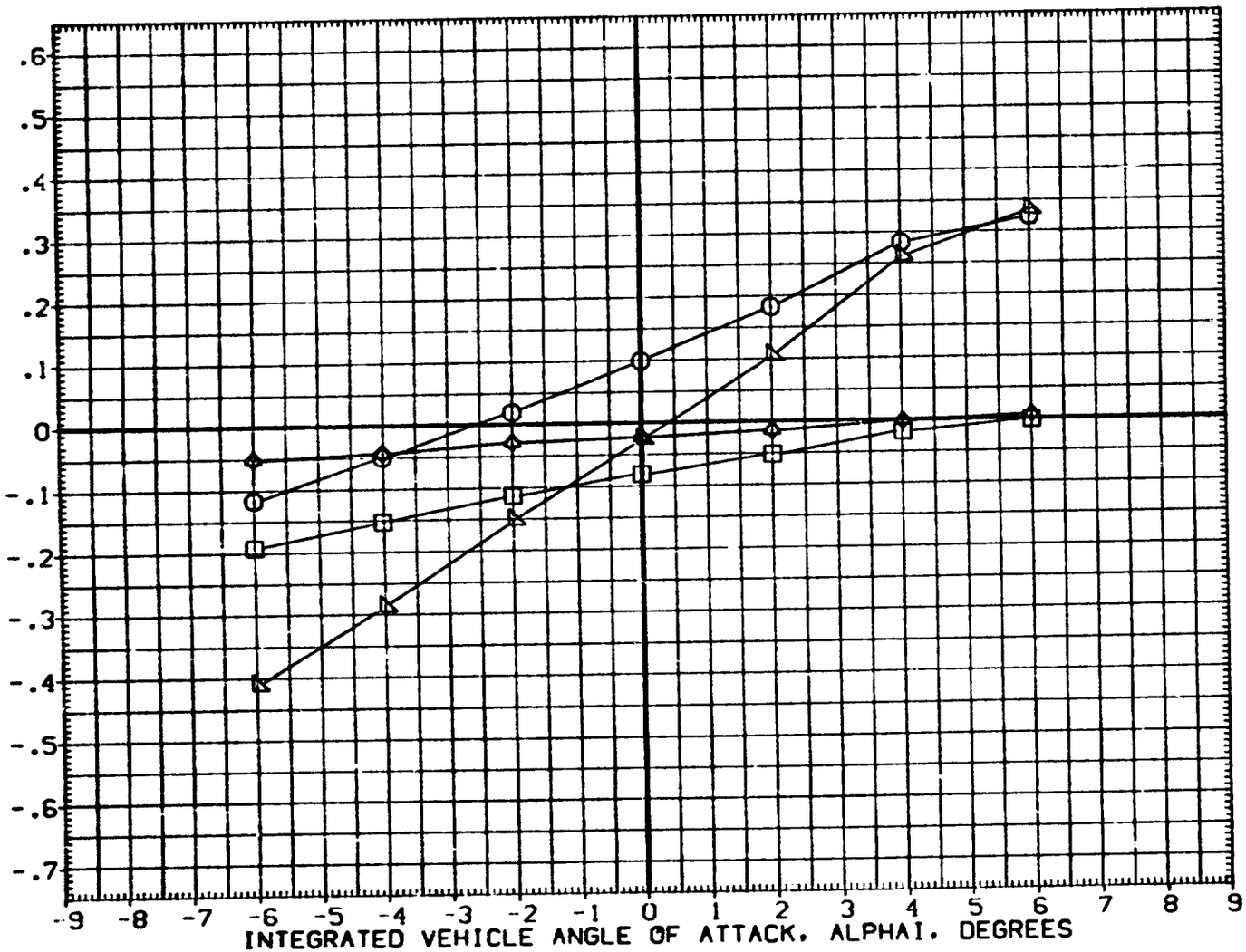


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

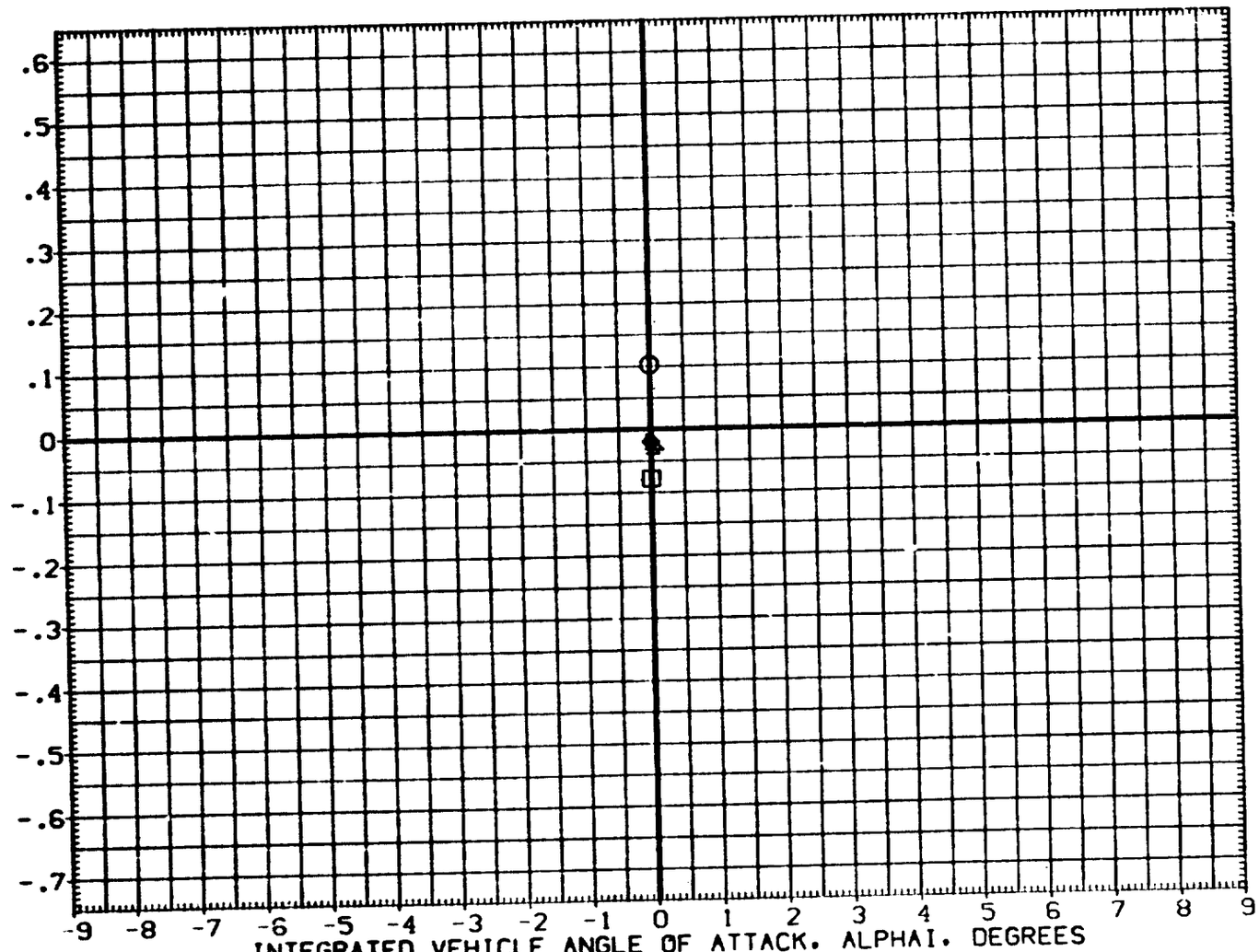


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	1.550	.000
(METT43)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	.000	1.550	.000
(MET143)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

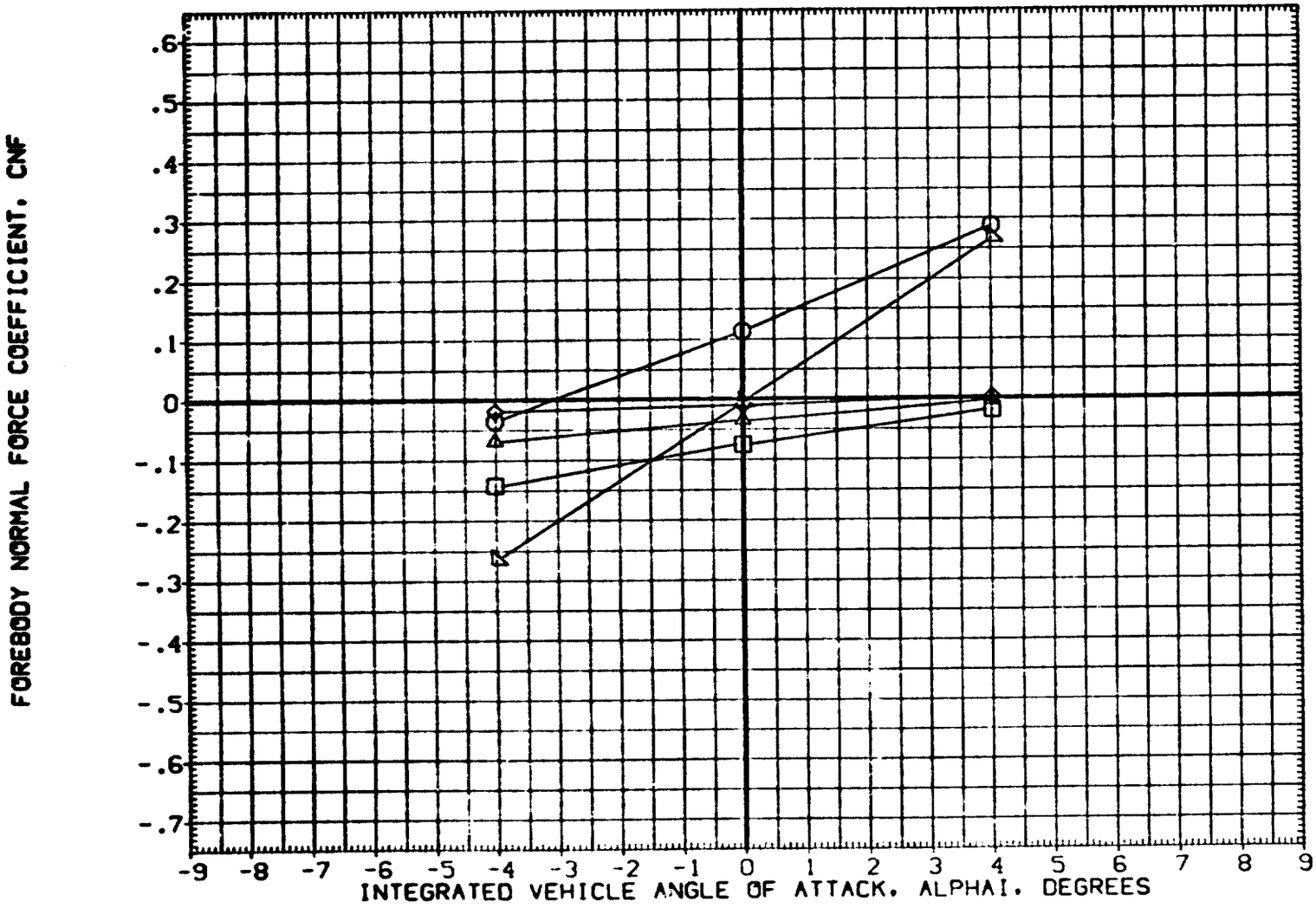


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	.000	1.550	.000
(MET743)	◇	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	.000	1.550	.000
(METL43)	⋈	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	.000	1.550	.000
(METR43)	⇗	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	.000	1.550	.000
(METI43)		AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

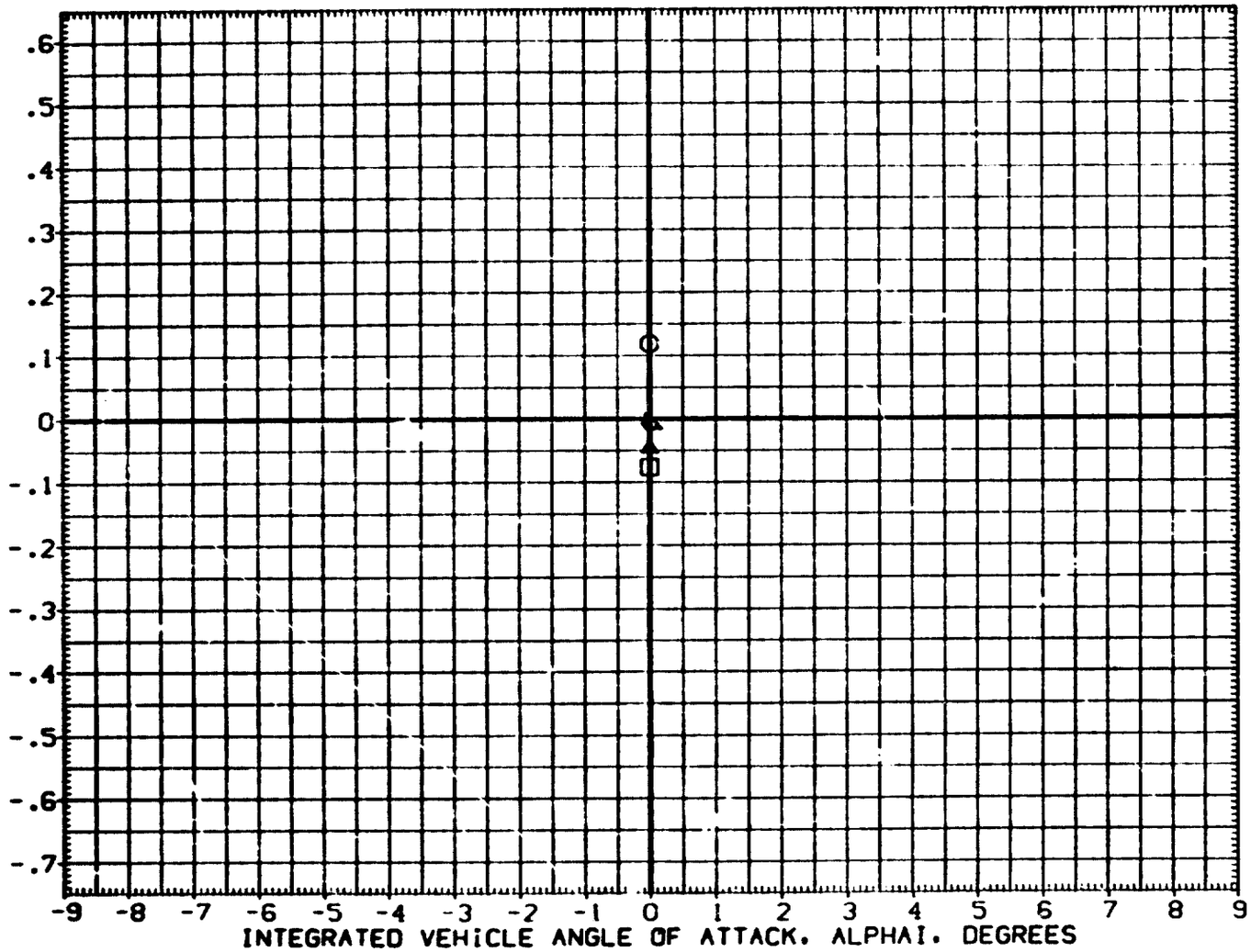


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	▷	AMES97-019(IA81) LVAP R-LPB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

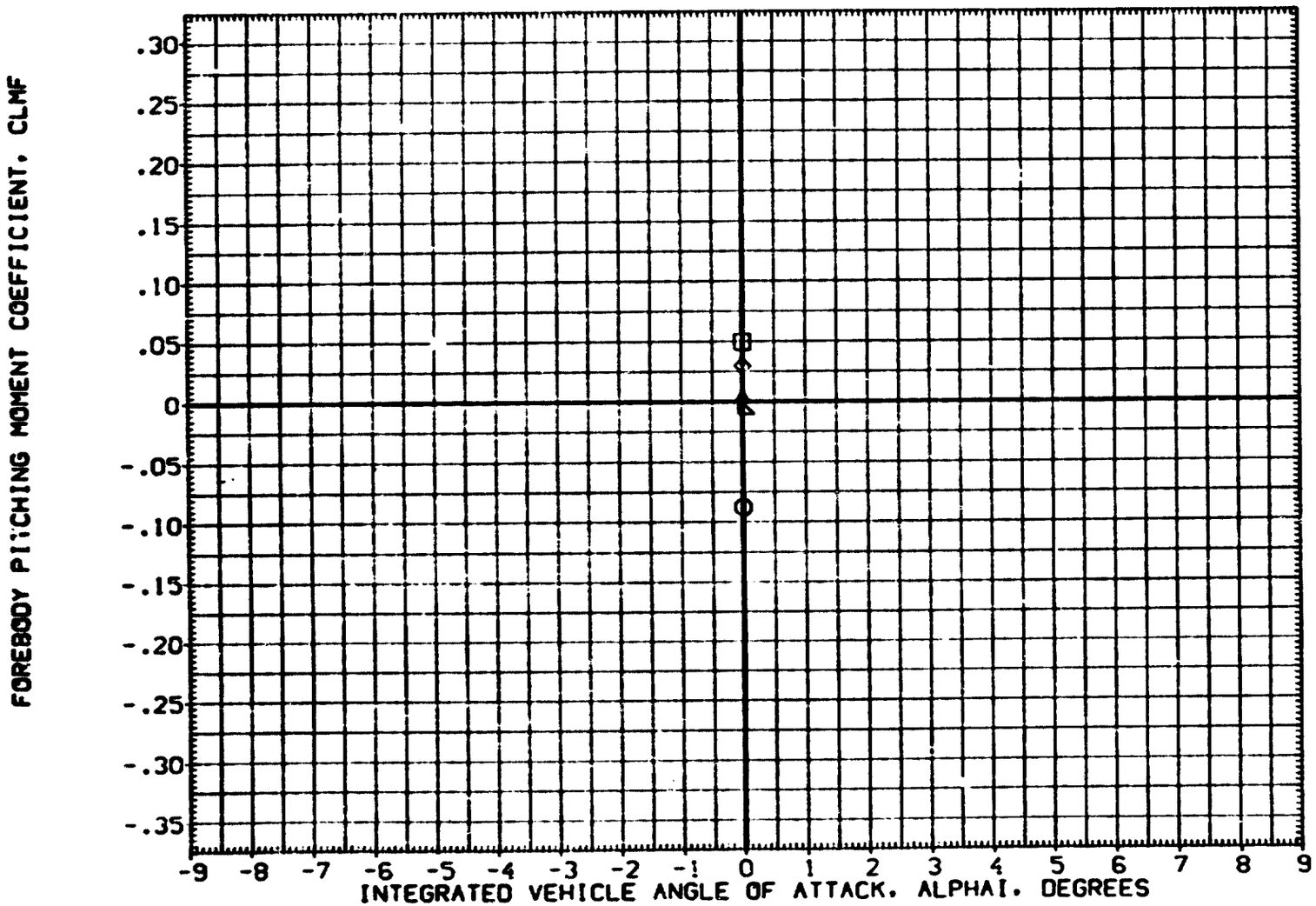


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(AETO43)	□	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	0.000	.000	1.550	.000
(AETT43)	◇	AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	0.000	.000	1.550	.000
(AETL43)	⊠	AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	0.000	.000	1.550	.000
(AETR43)	▷	AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	0.000	.000	1.550	.000
(AETI43)	○	AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	0.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

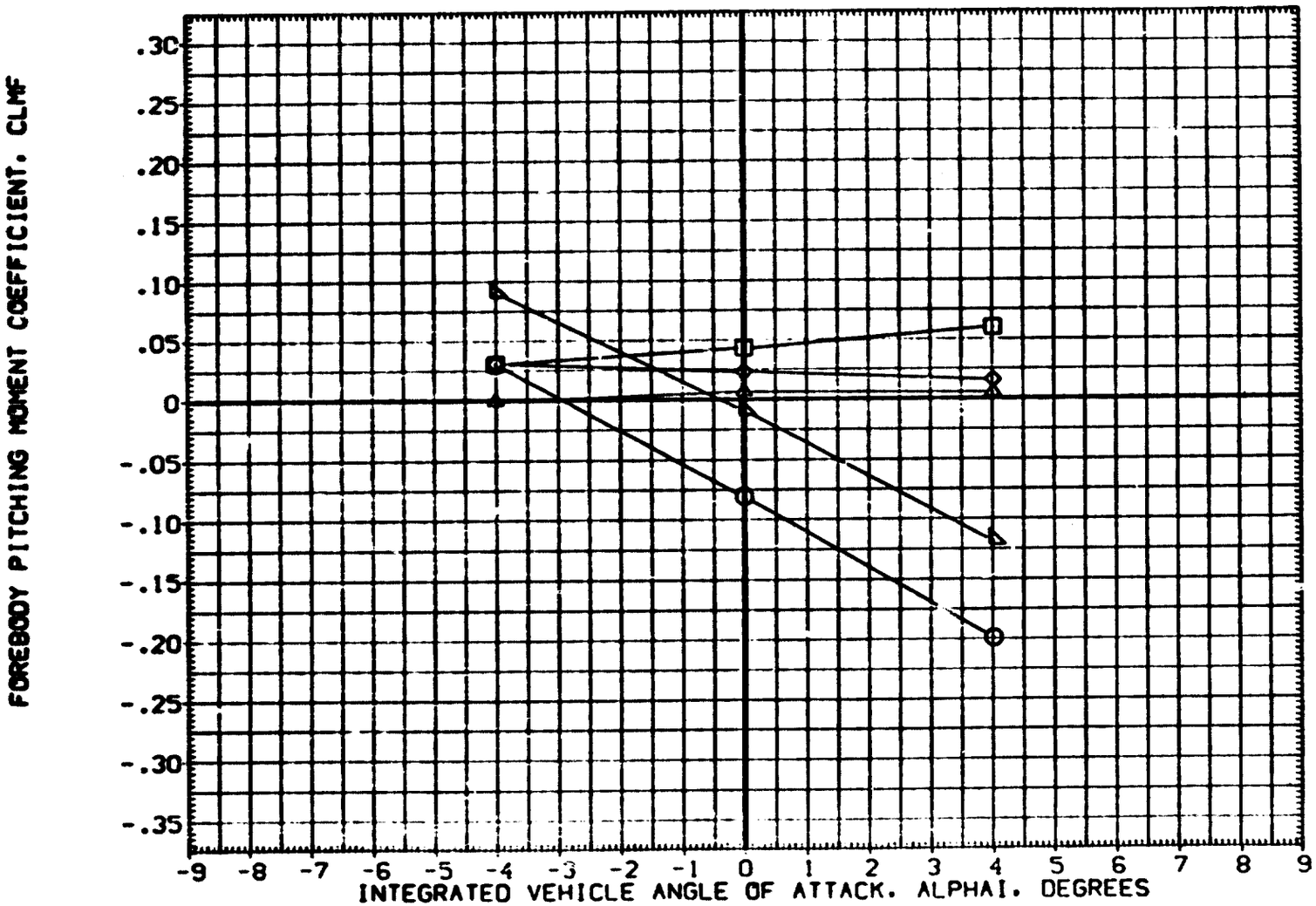


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO43)	□	AMES97-019([ABI) LVAP ORBITER-ALL ML SEALED	8.000	.000	1.550	.000
(METT43)	◇	AMES97-019([ABI) LVAP TANK - ALL ML SEALED	8.000	.000	1.550	.000
(METL43)	⋈	AMES97-019([ABI) LVAP L-SRB - ALL ML SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019([ABI) LVAP R-LRB ALL ML SEALED	8.000	.000	1.550	.000
(MET143)	△	AMES97-019([ABI) LVAP INT VEH ALL ML SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

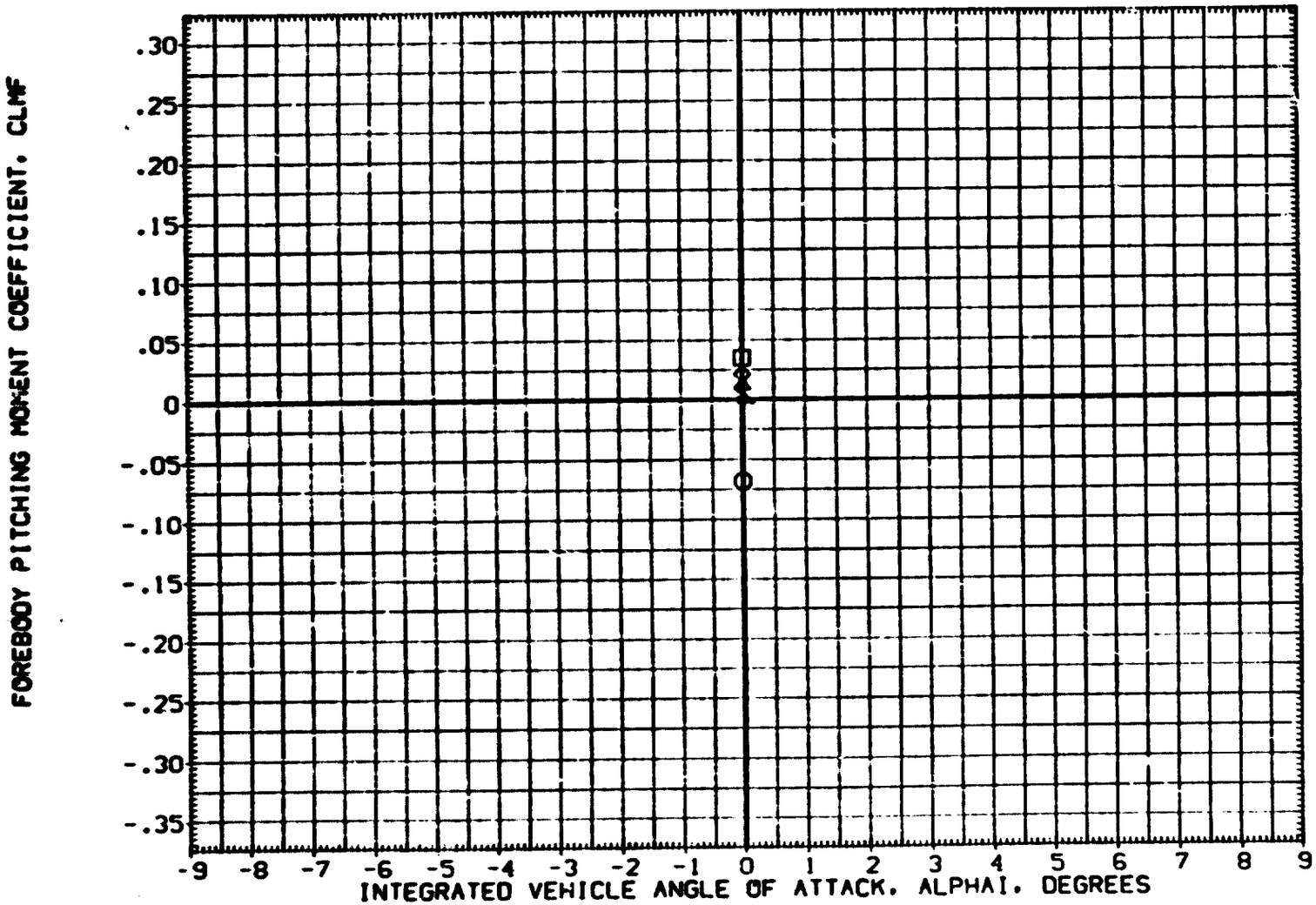


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO43)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	✕	AMES97-019(IA81) LVAP R-LPB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

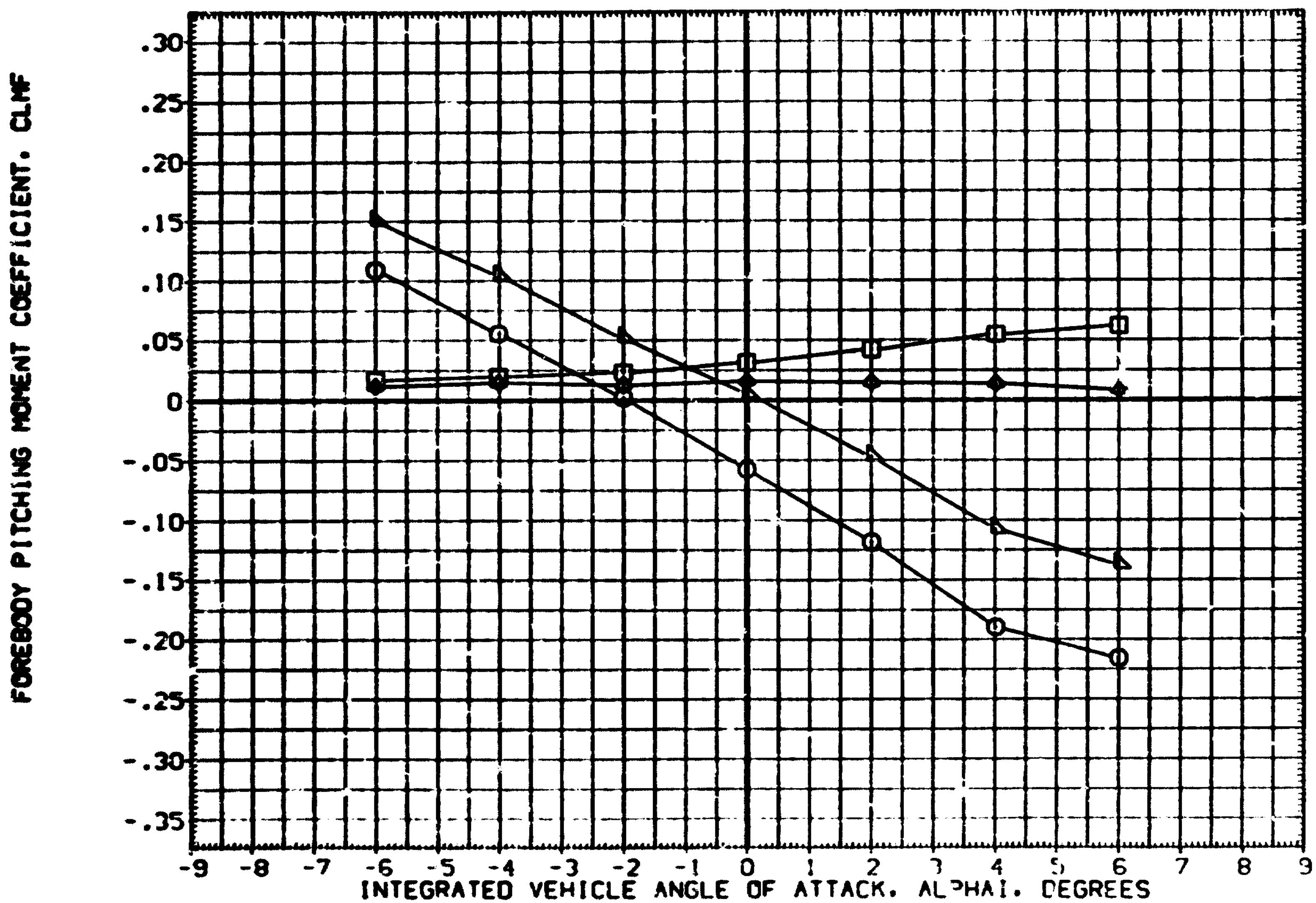


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET743)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	◁	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

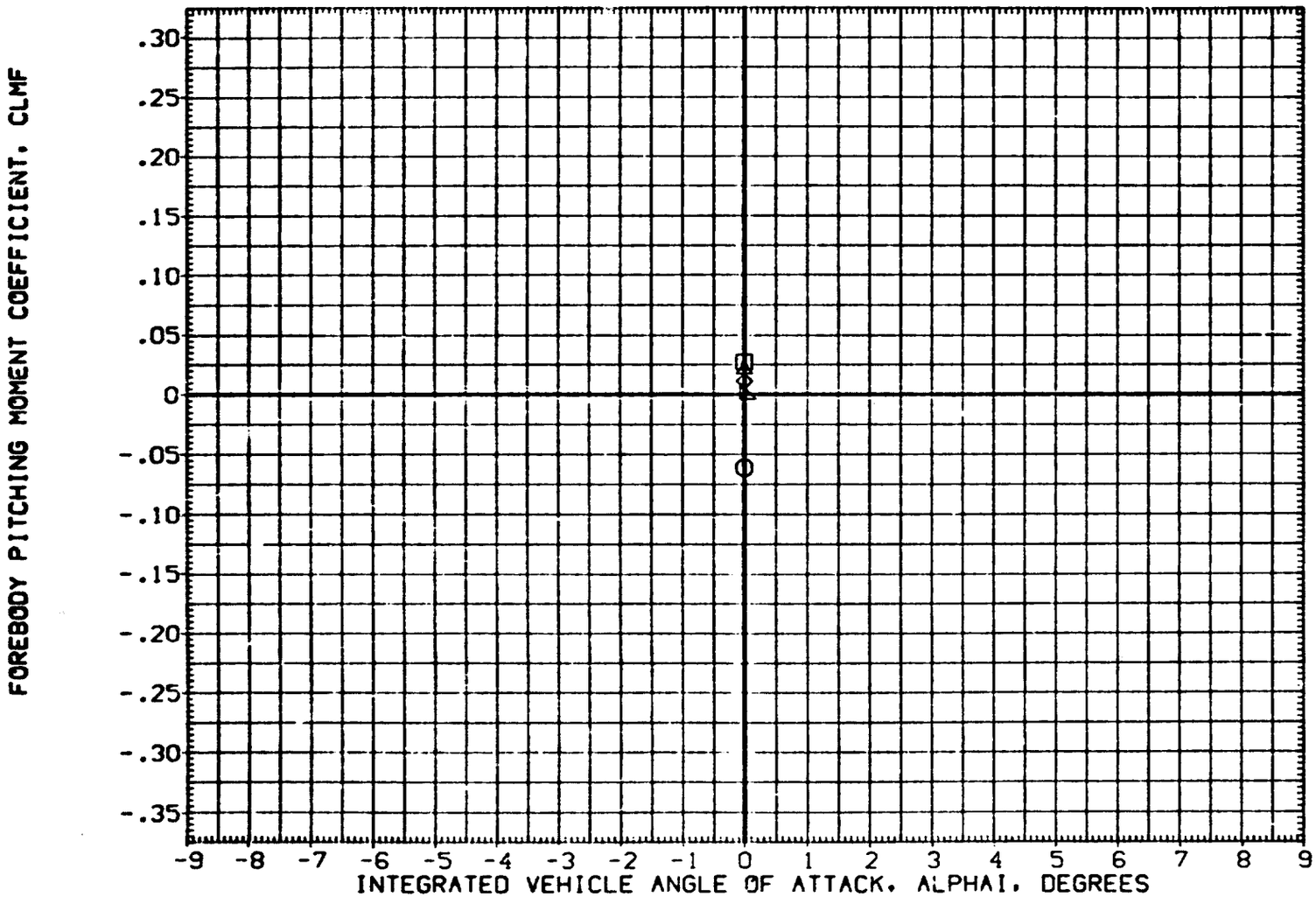


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(MET243)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(MET343)	▽	AMES97-019([A81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(MET443)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2630.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

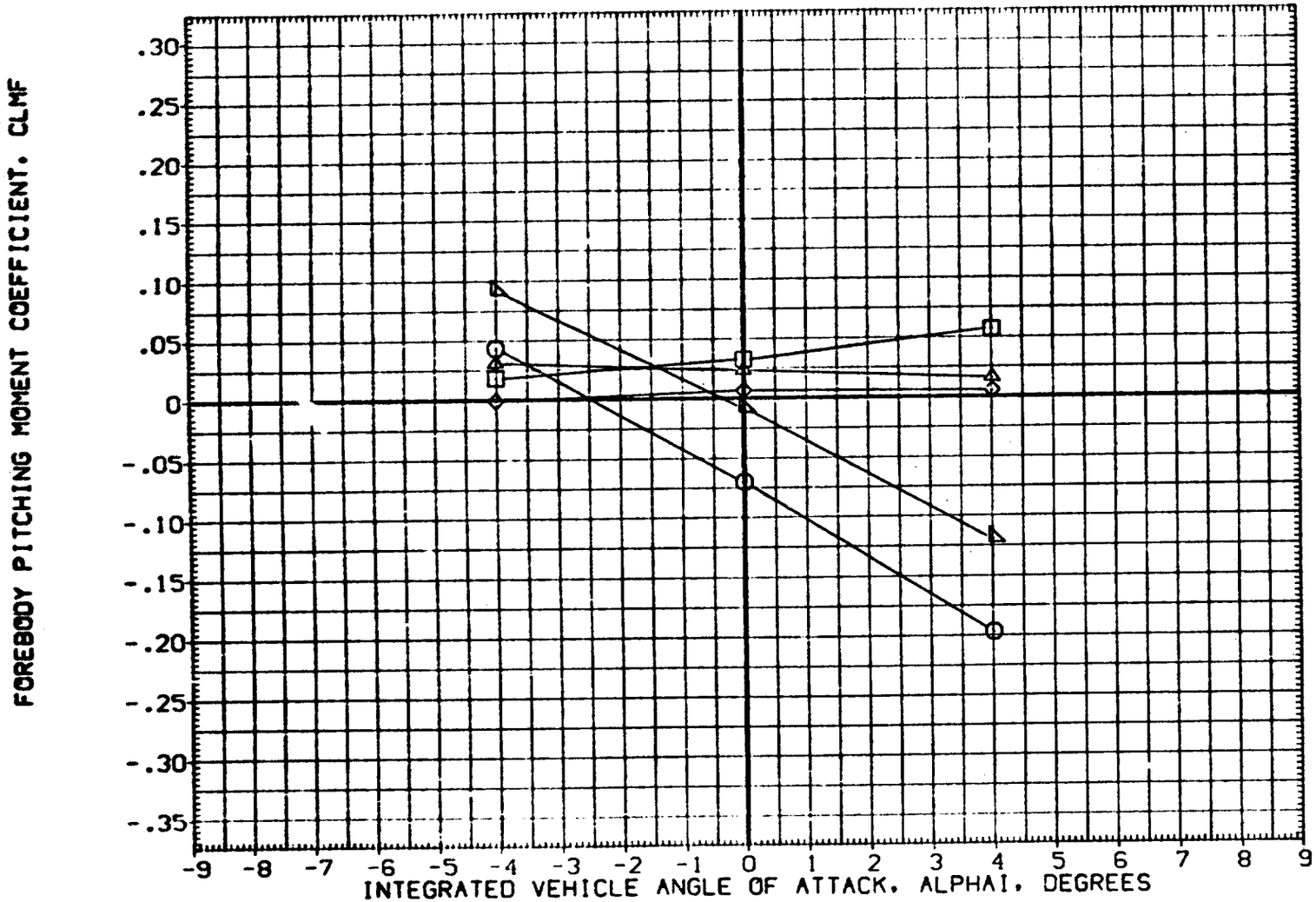


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019([A81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◁	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

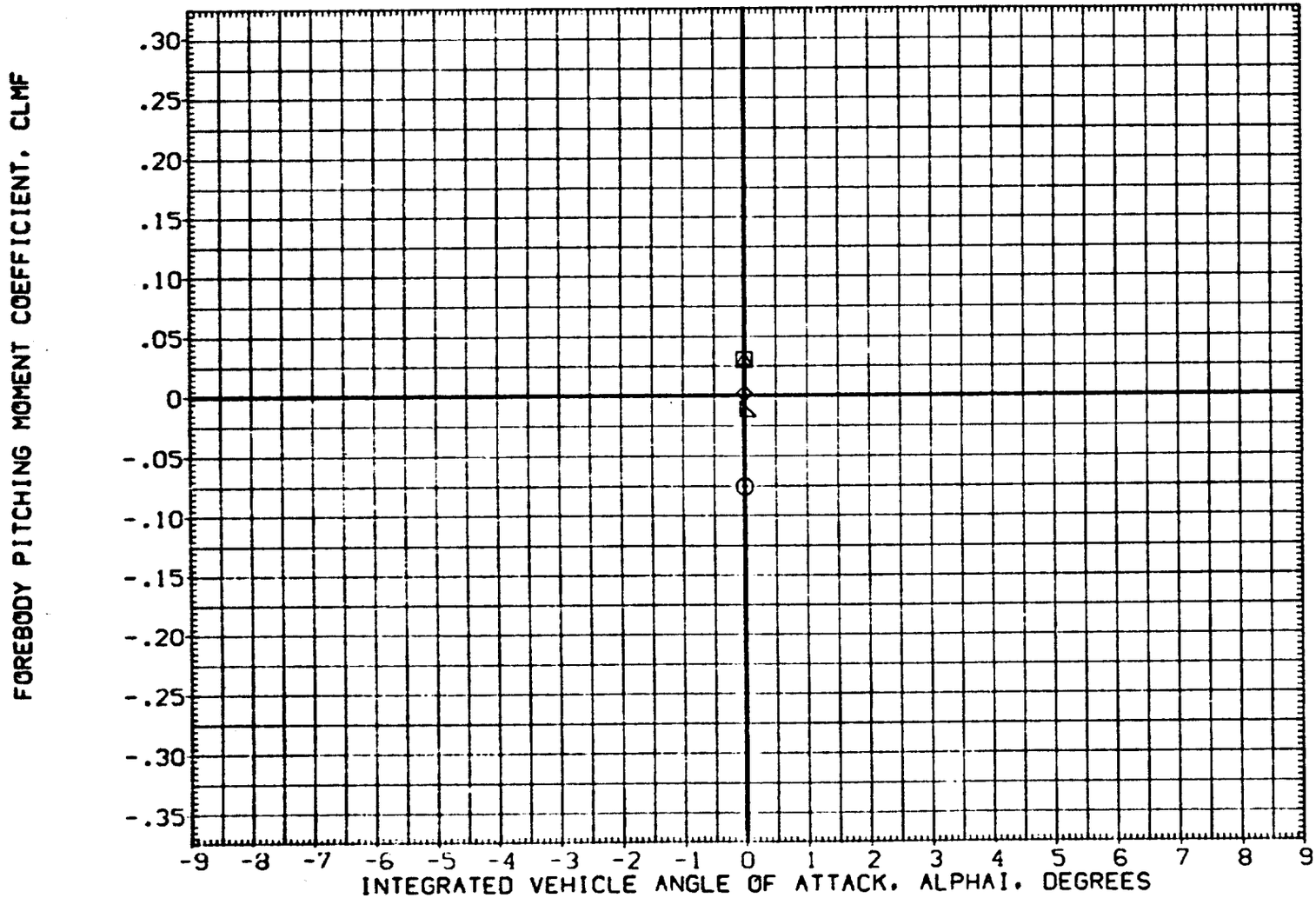


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(MET143)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

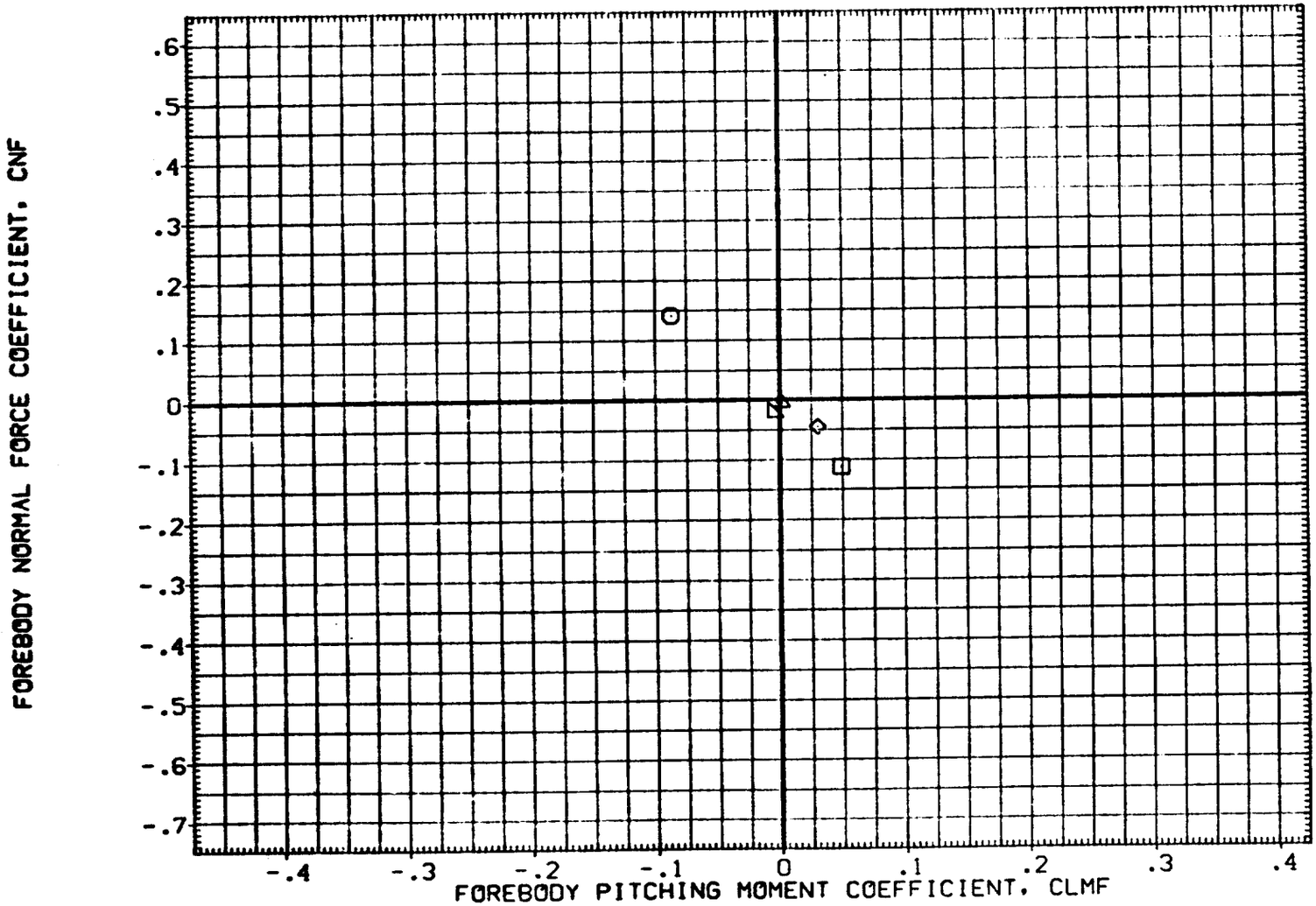


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)BET.AI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET743)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

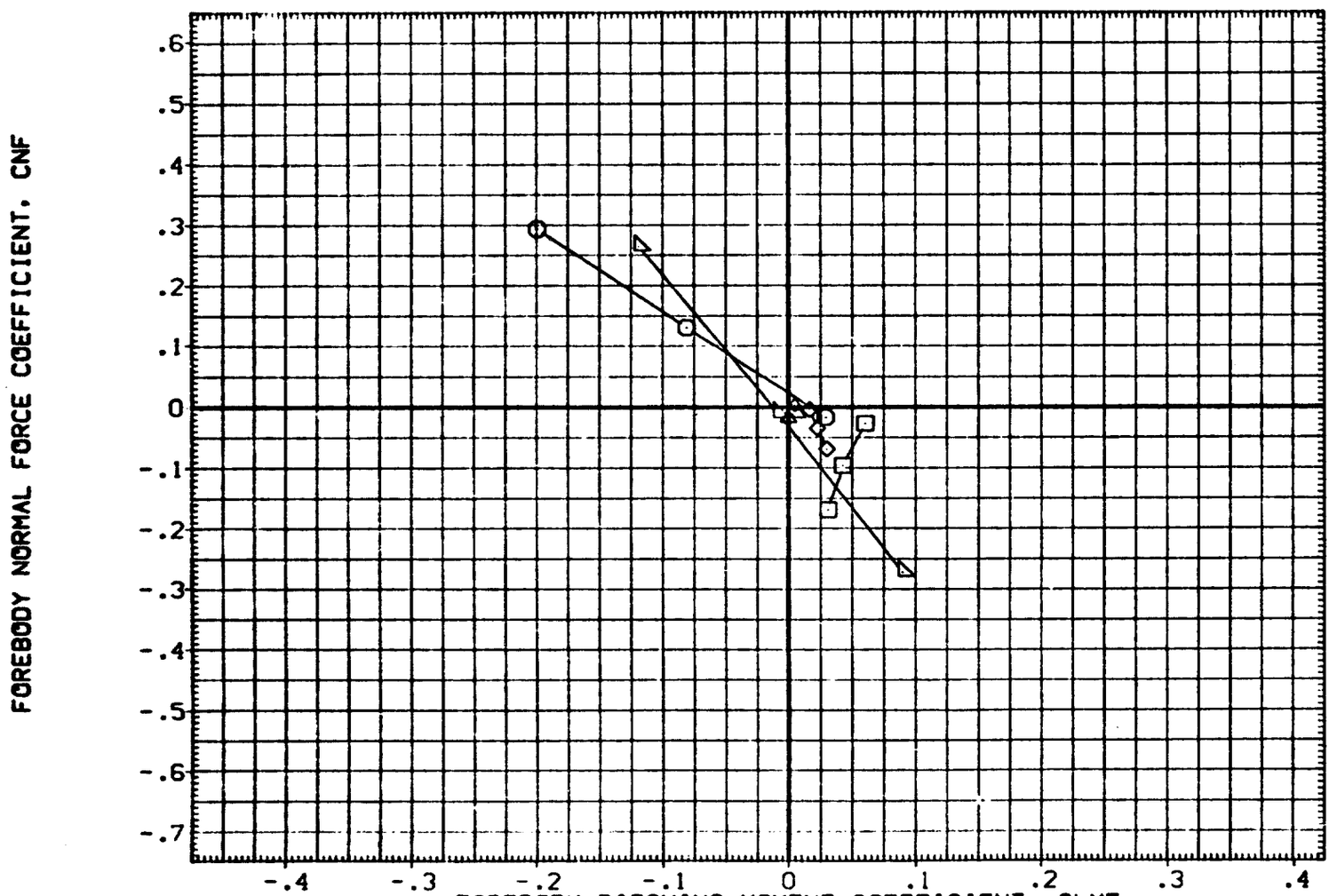


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPOBRK
(MET043)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	▷	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

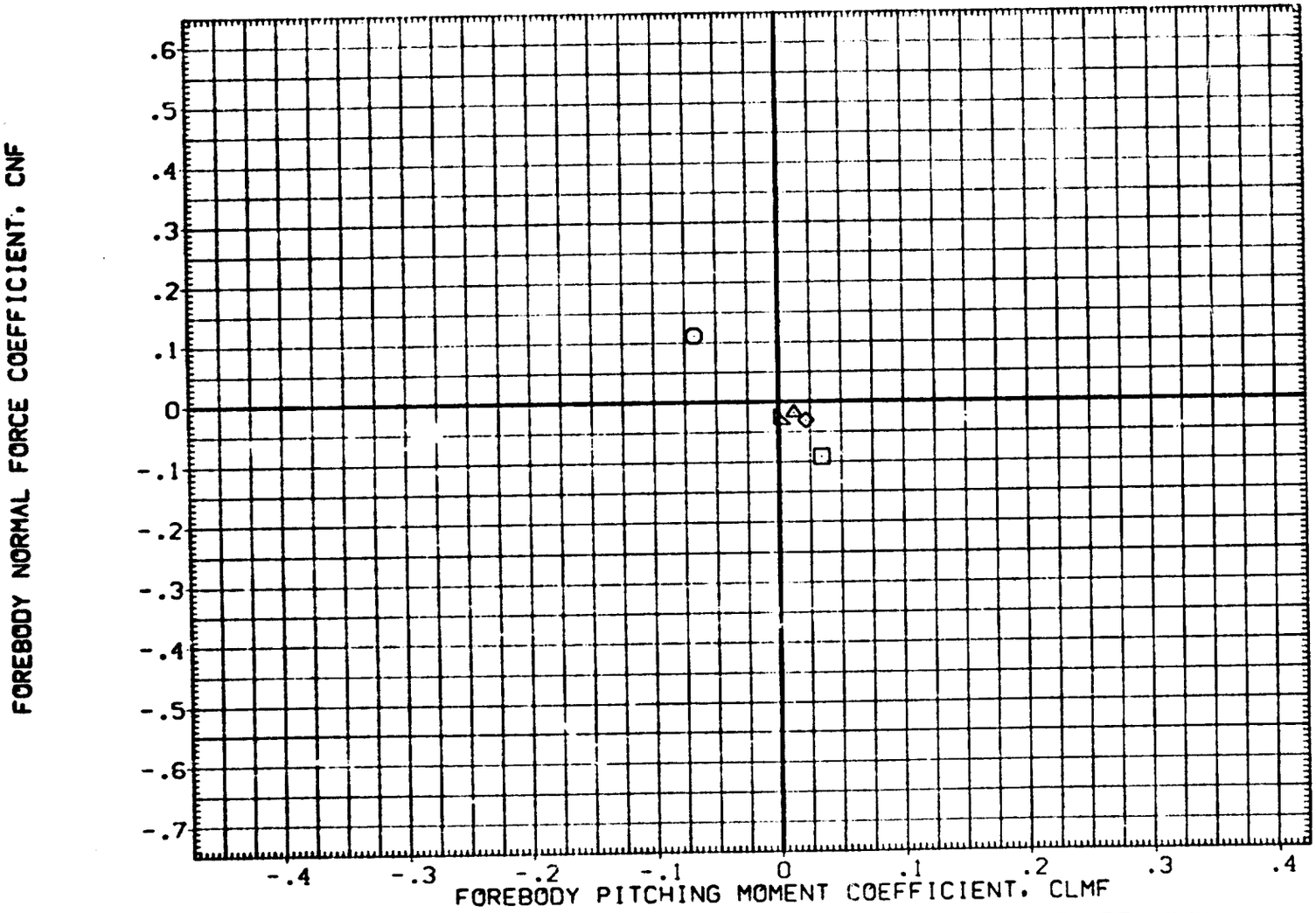


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)BET(I = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(MET743)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	▽	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

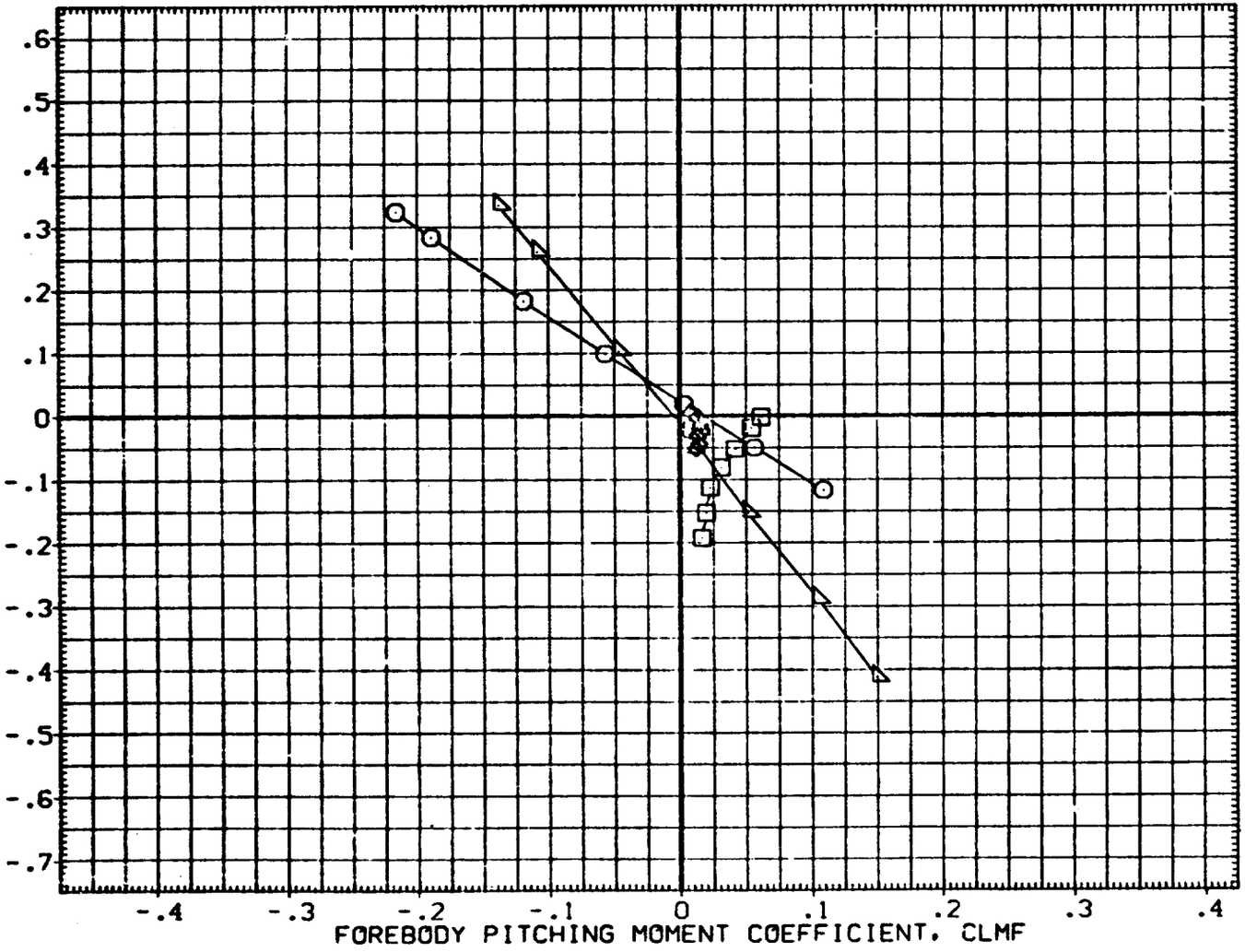


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	1.550	.000
(MET143)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	.000	1.550	.000
(METL43)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	.000	1.550	.000
(METR43)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	.000	1.550	.000
(MET143)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2600.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

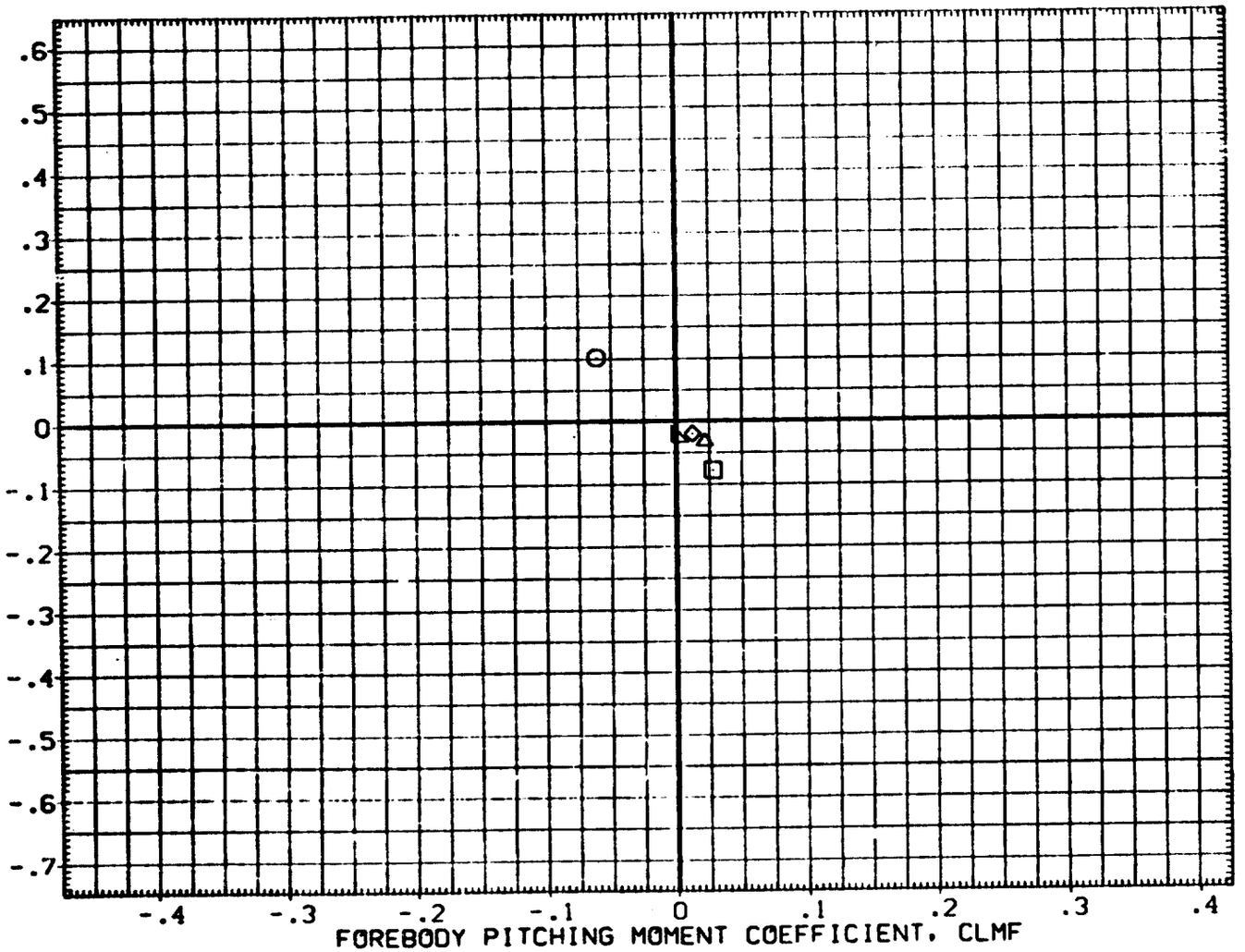


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL [illegible] SEALED	8.000	.000	1.550	.000
(MET143)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

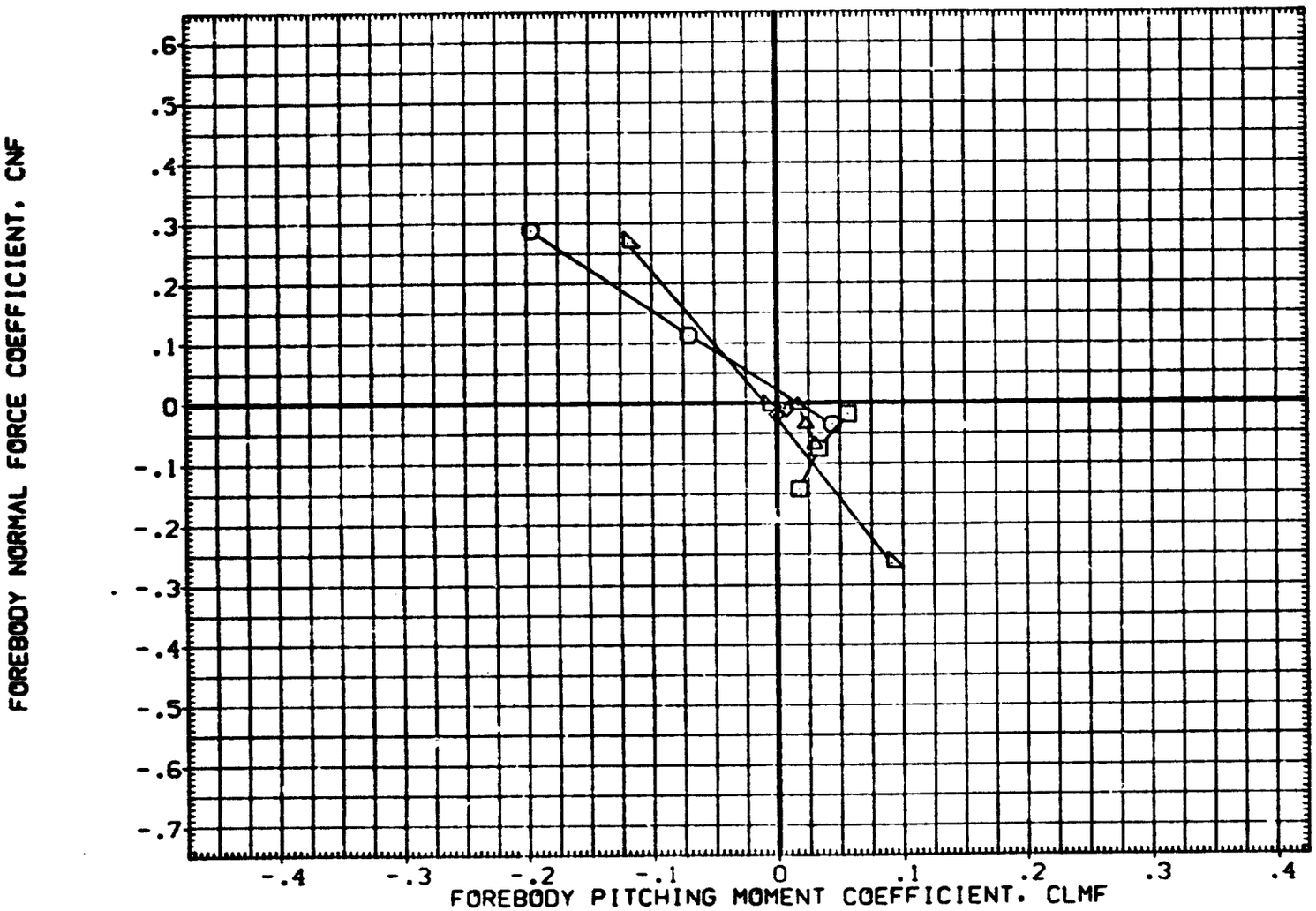


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET043)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METT43)	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(METL43)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(METR43)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(METI43)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

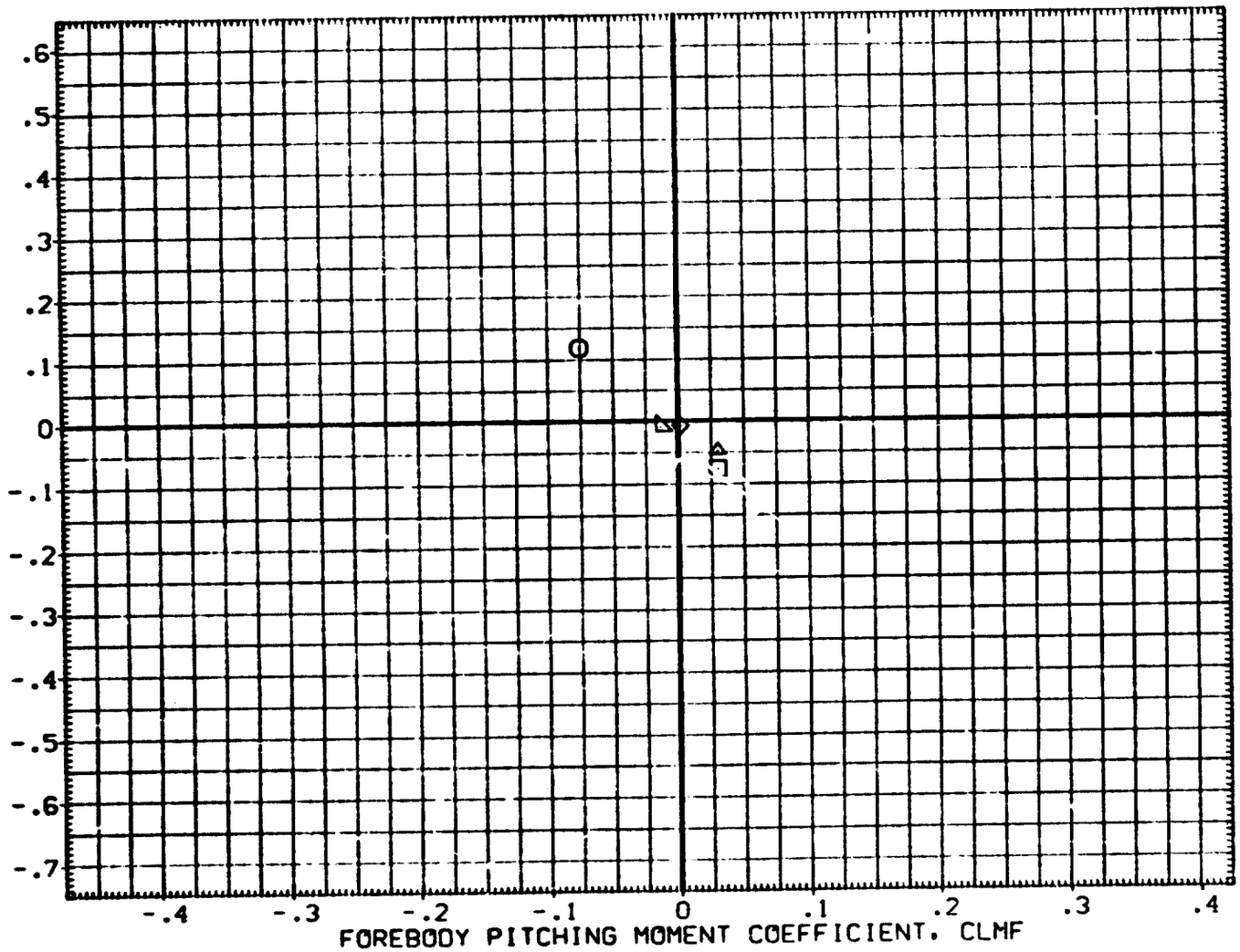


FIG. 6 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET746)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

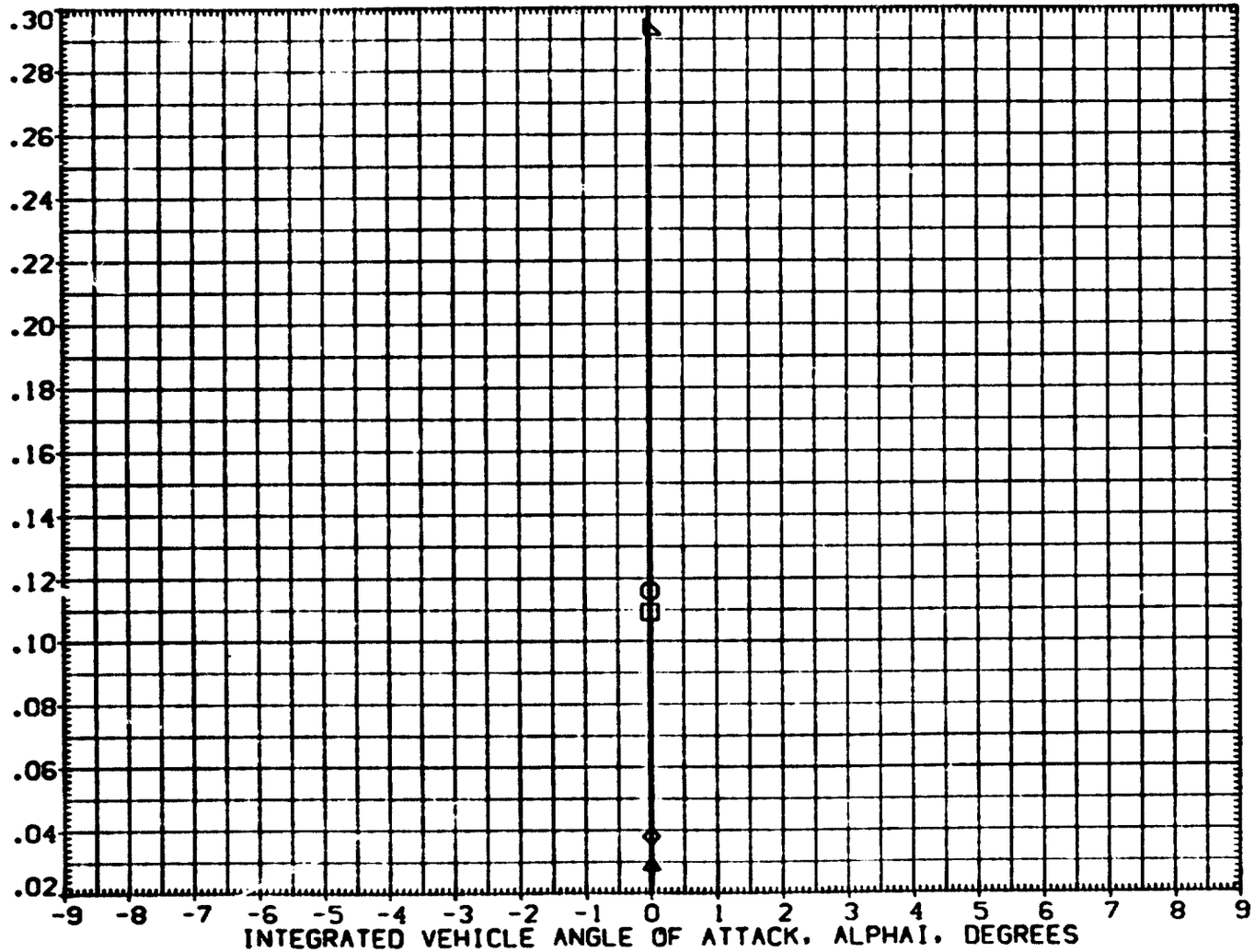


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)BETA1 = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET746)	◇	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	◇	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	△	AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	△	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

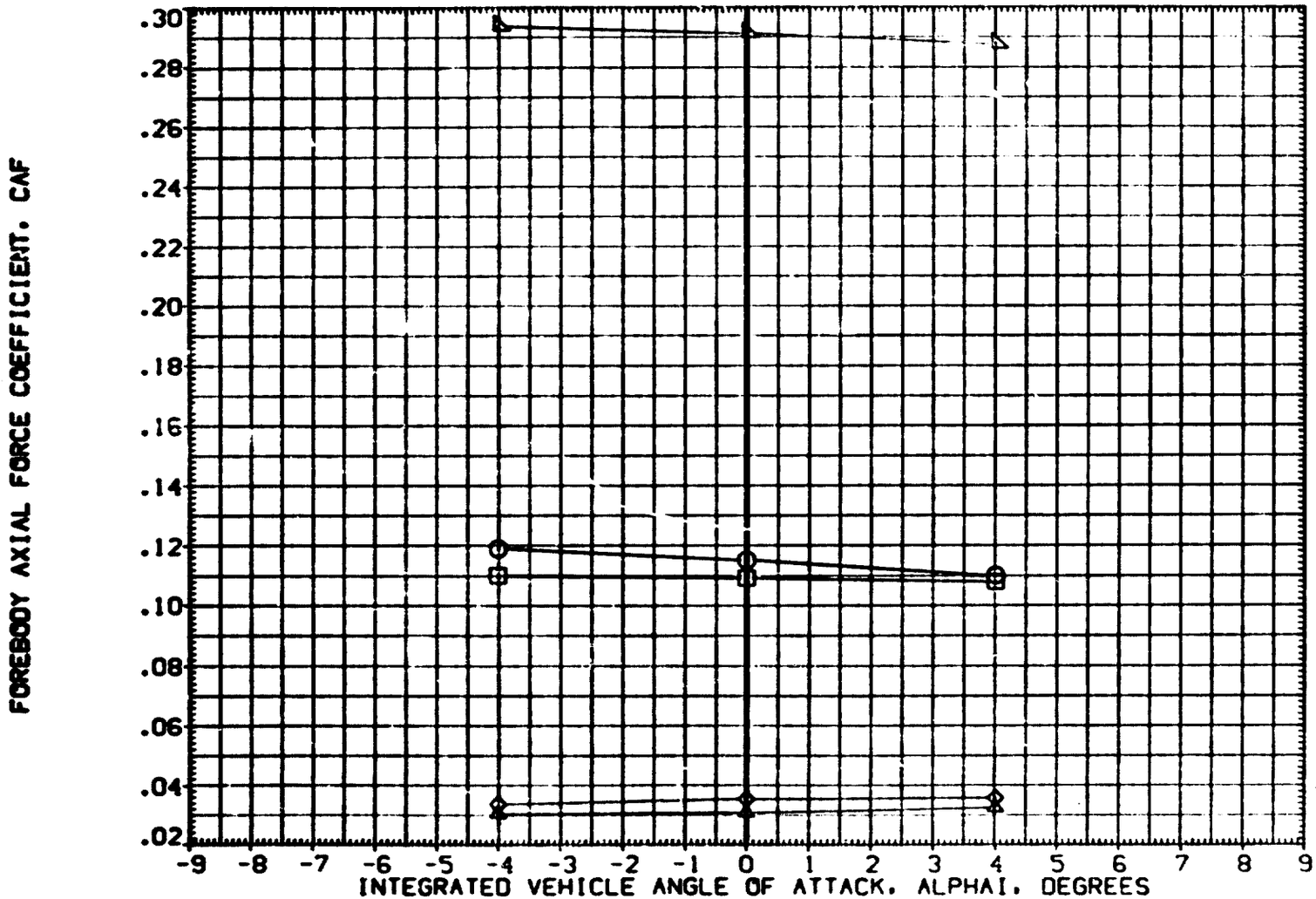


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)		AMES97-019([ABI) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(MET146)		AMES97-019([ABI) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019([ABI) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019([ABI) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019([ABI) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

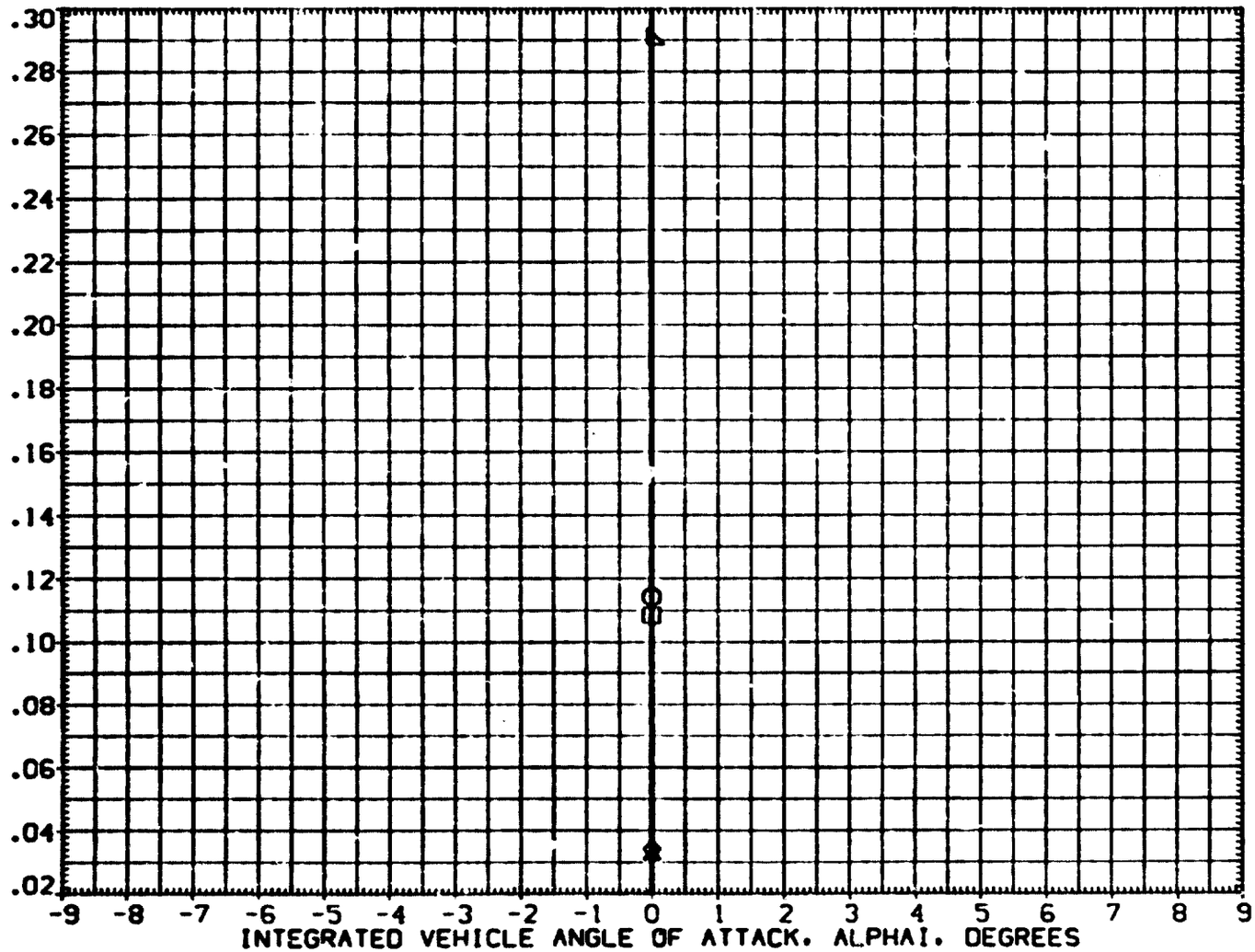


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=10/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO46)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⊠	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	◁	AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	▷	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

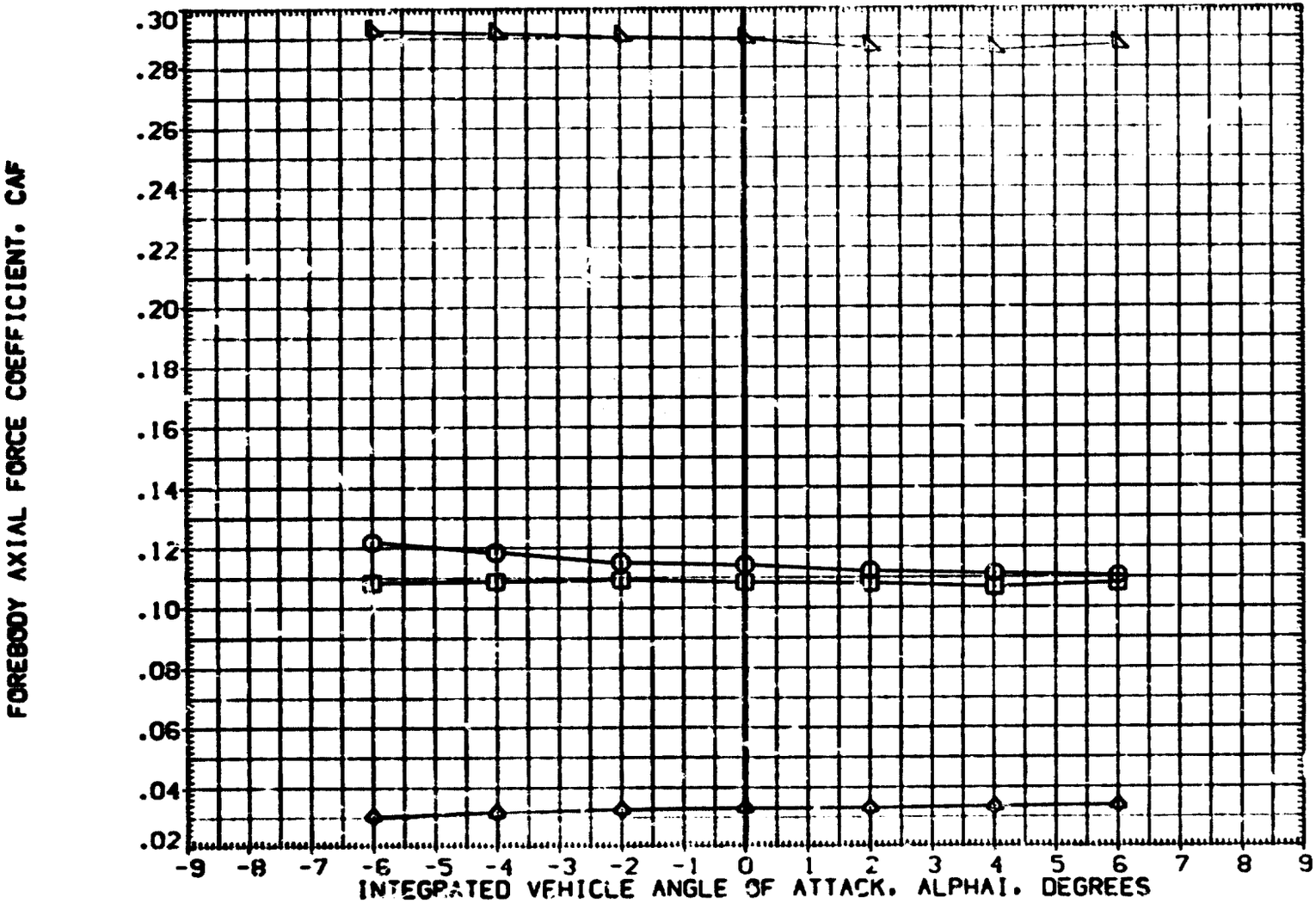


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)SET.I = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

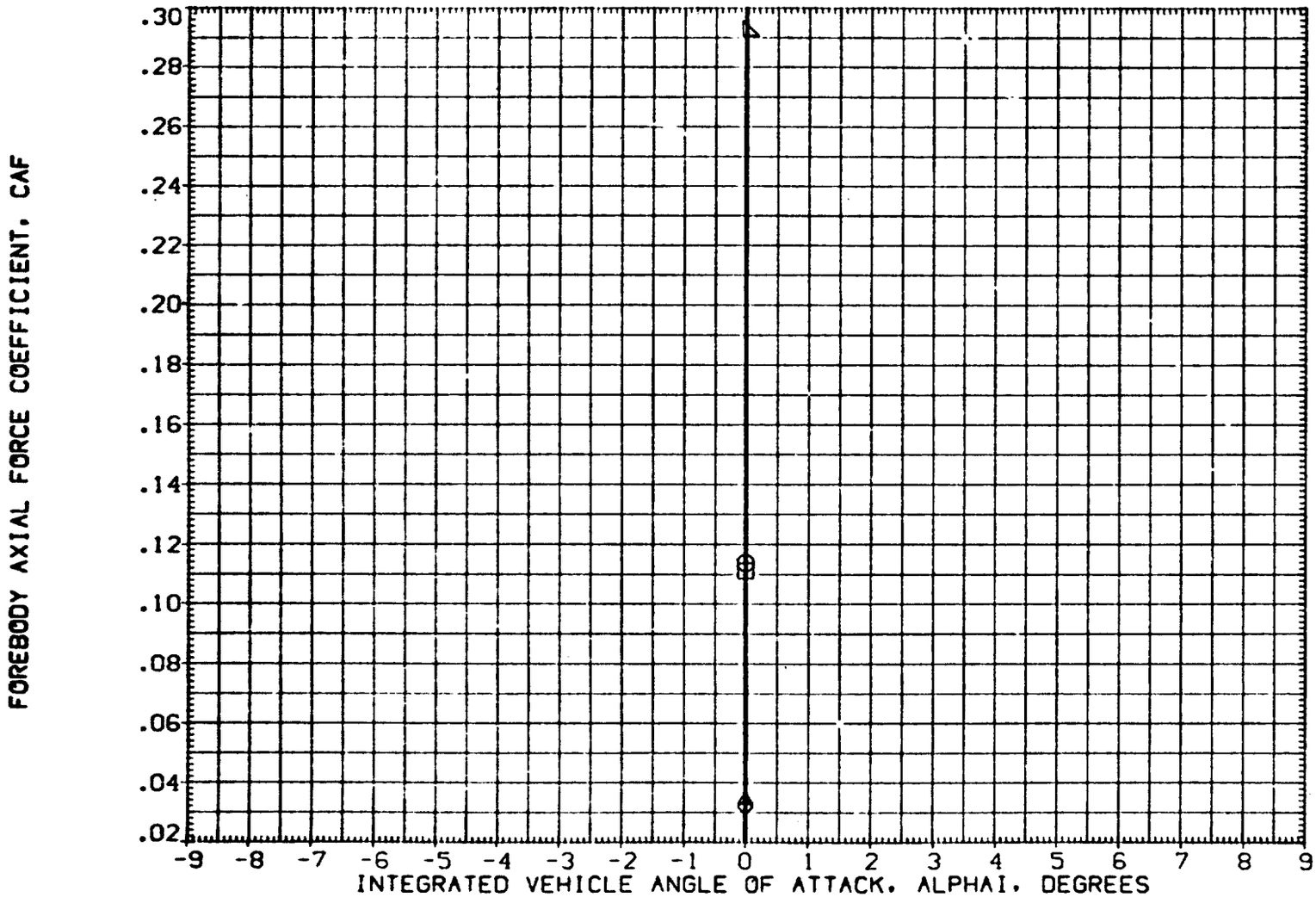


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET 46)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

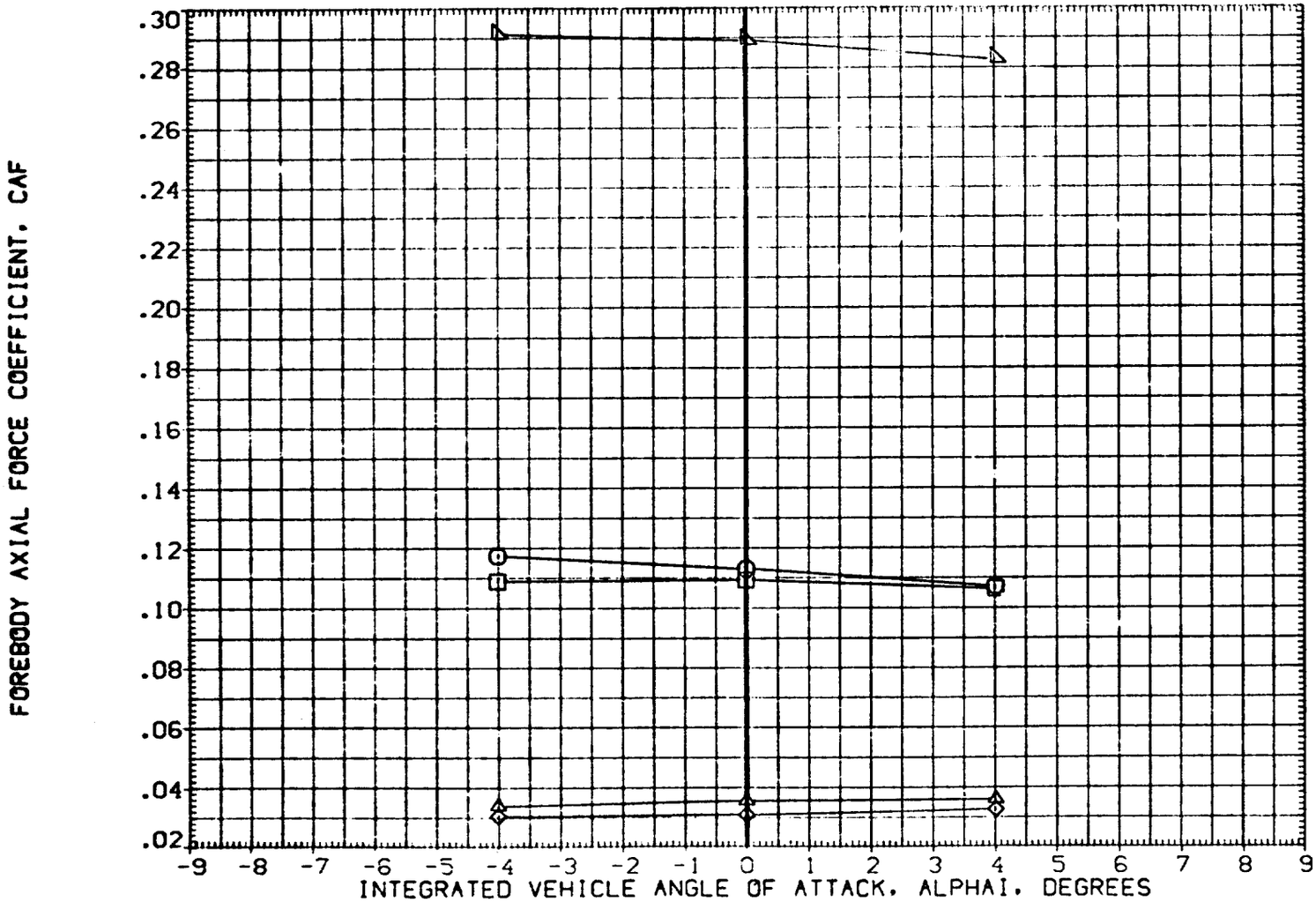


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

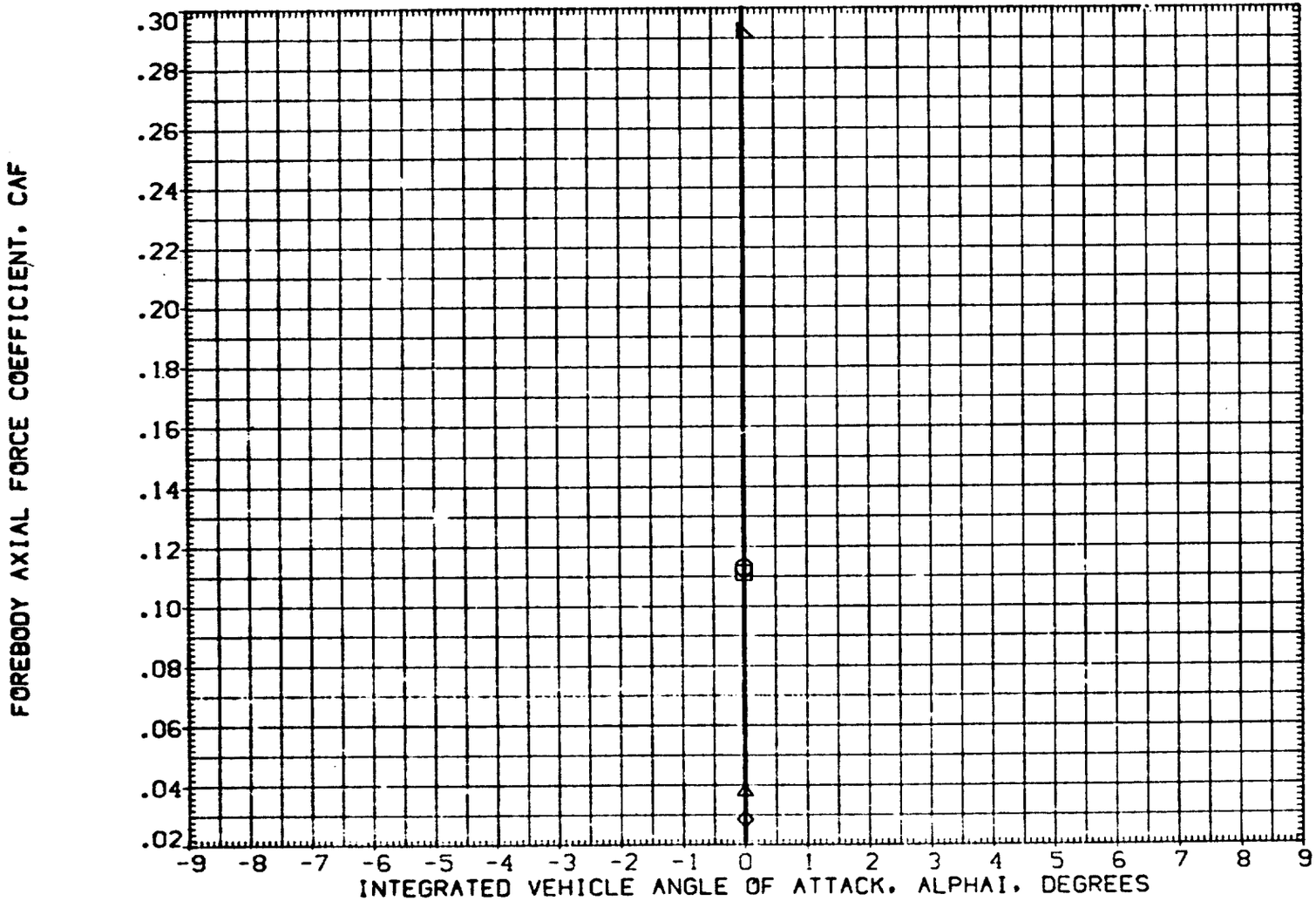


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

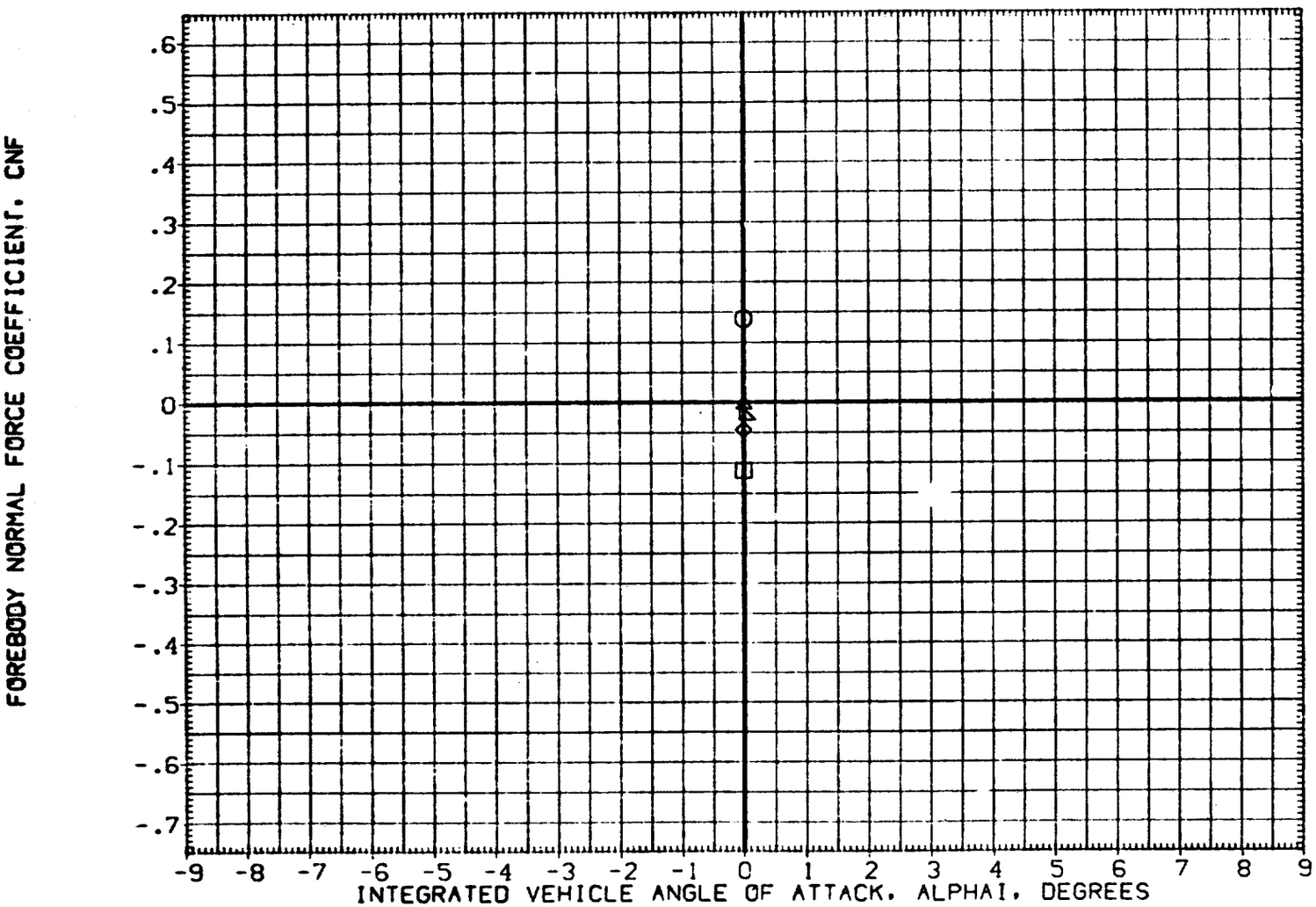


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

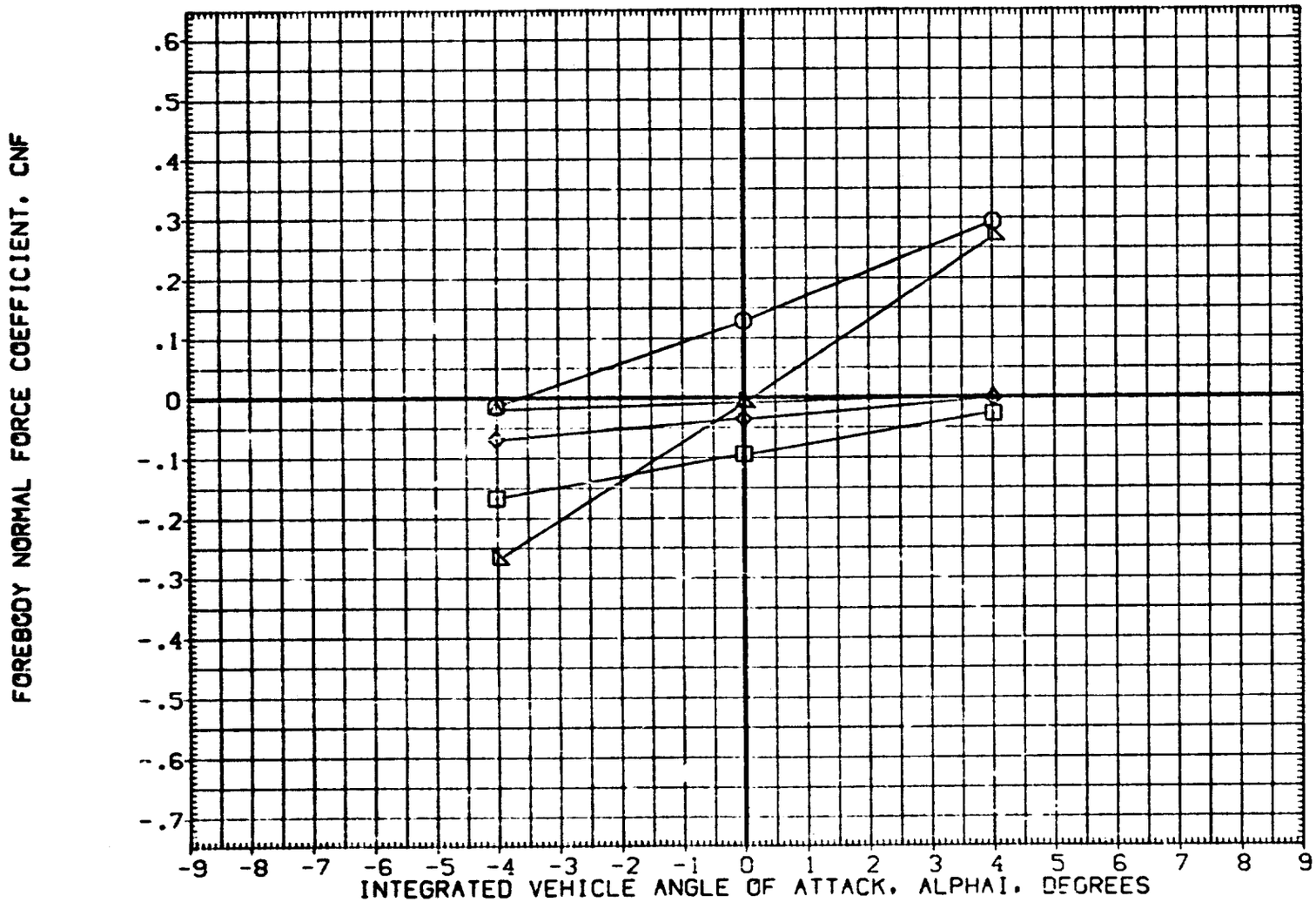


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

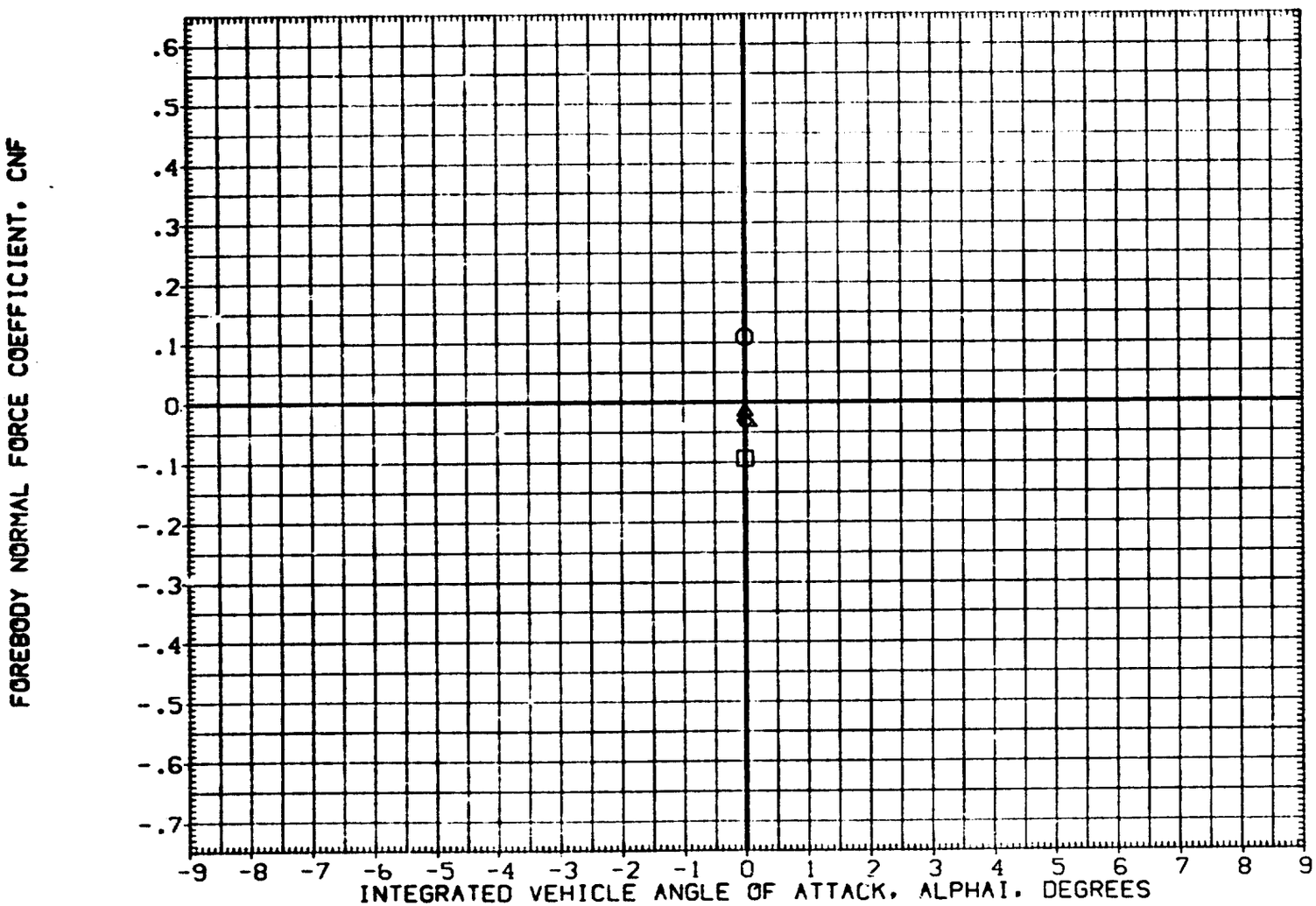


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

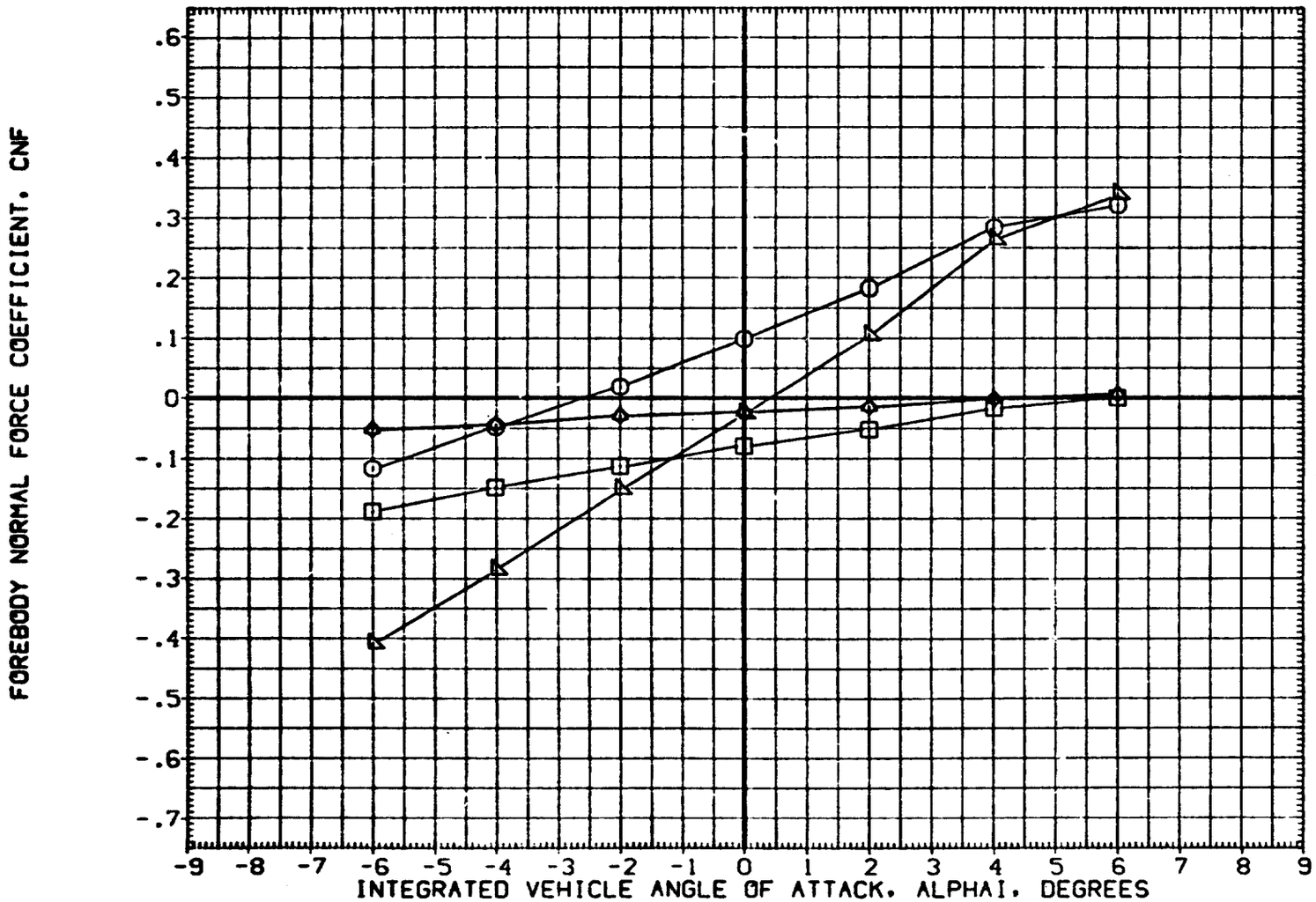


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)BETAI = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

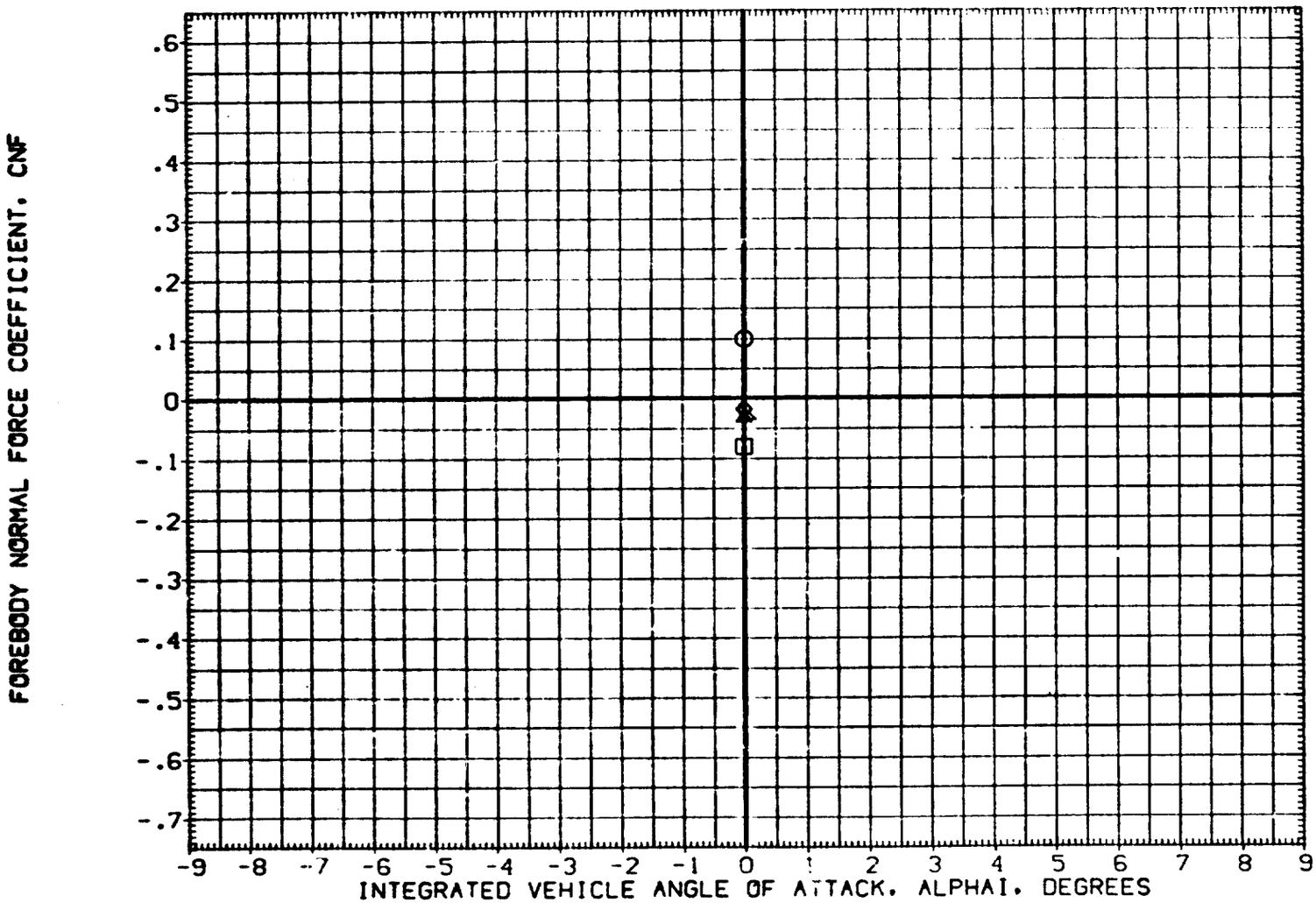


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)		AMES97-019([A81) LVAP ORBITER ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

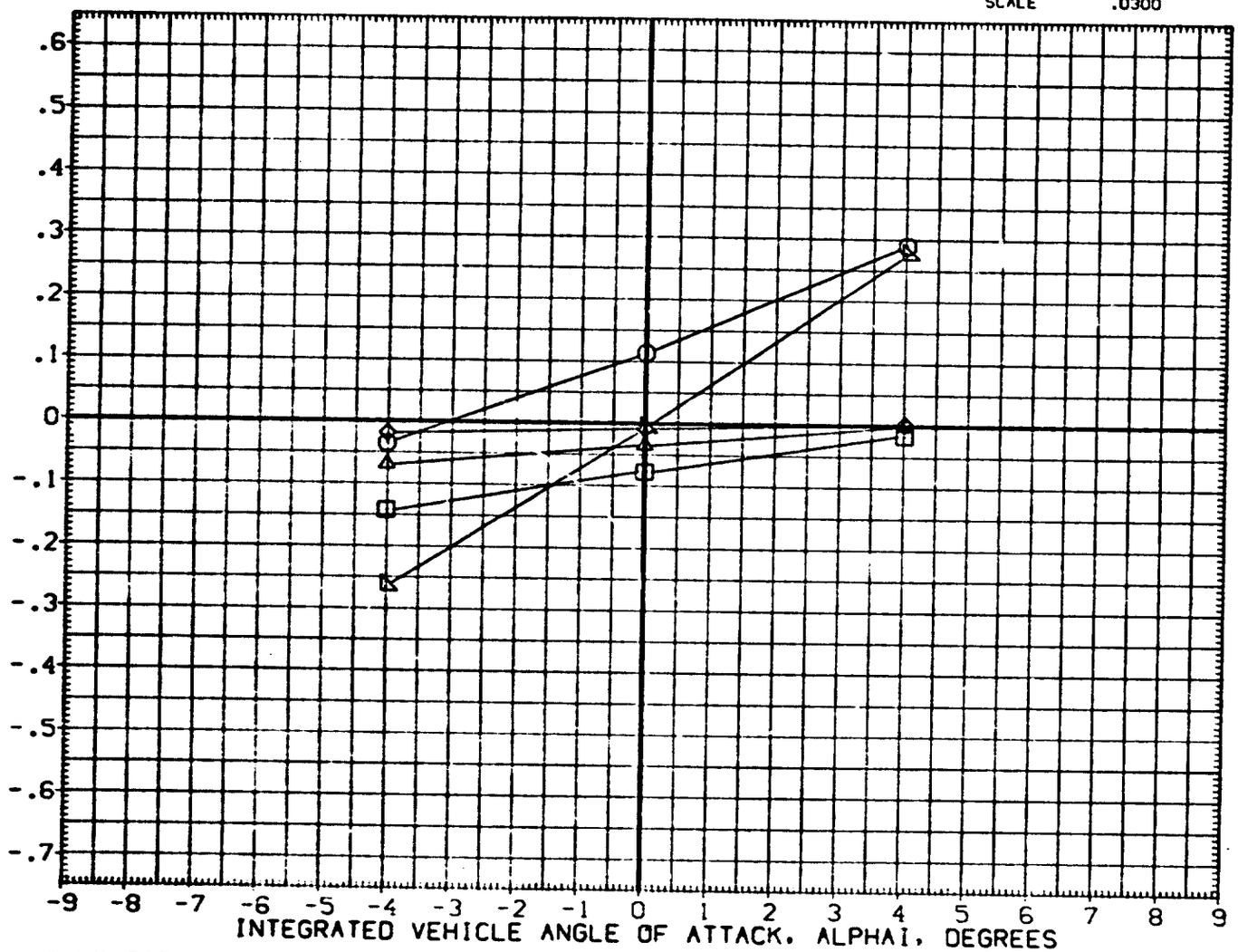


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET746)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1237.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

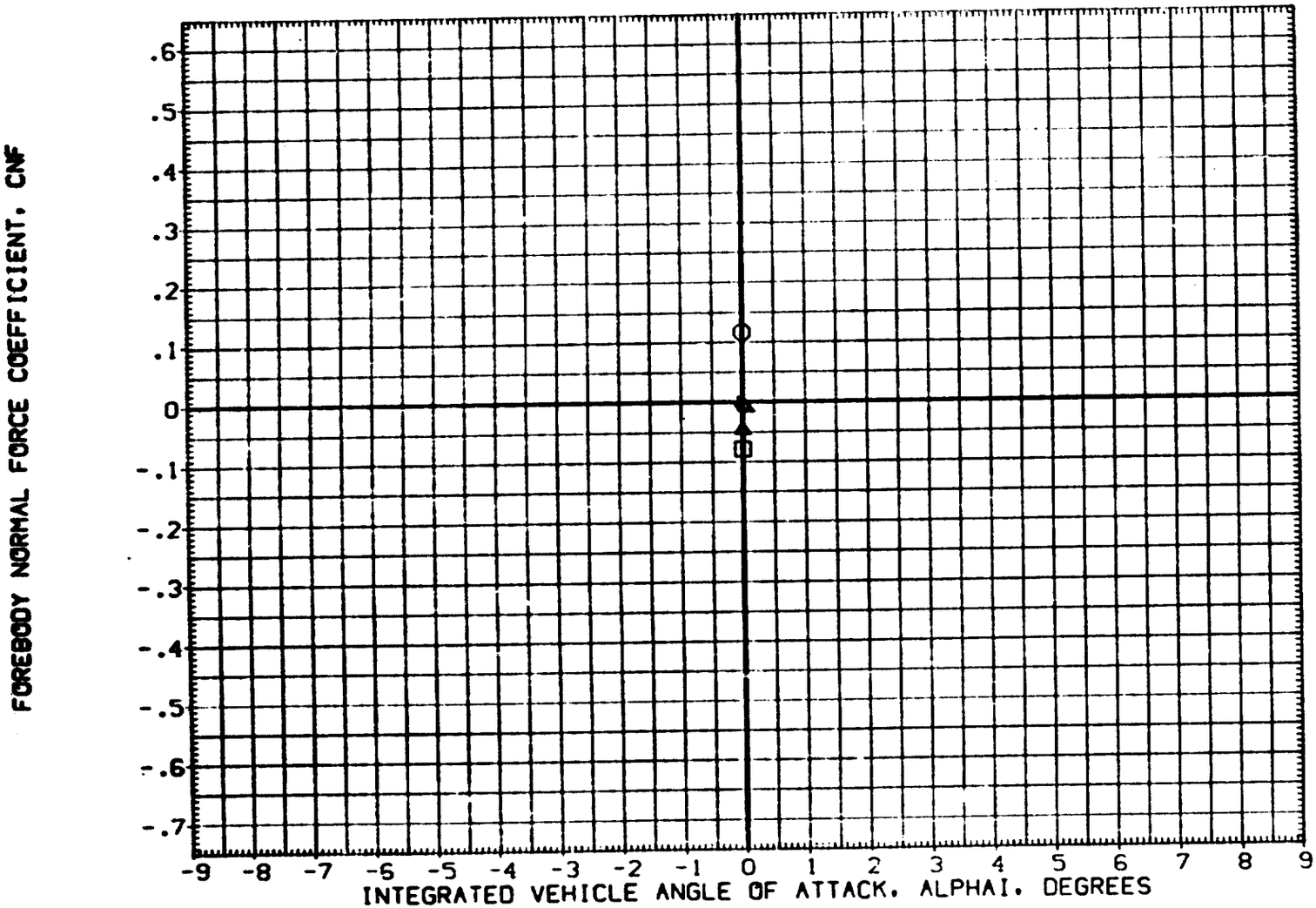


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	◁▷	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	⬡	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	376.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

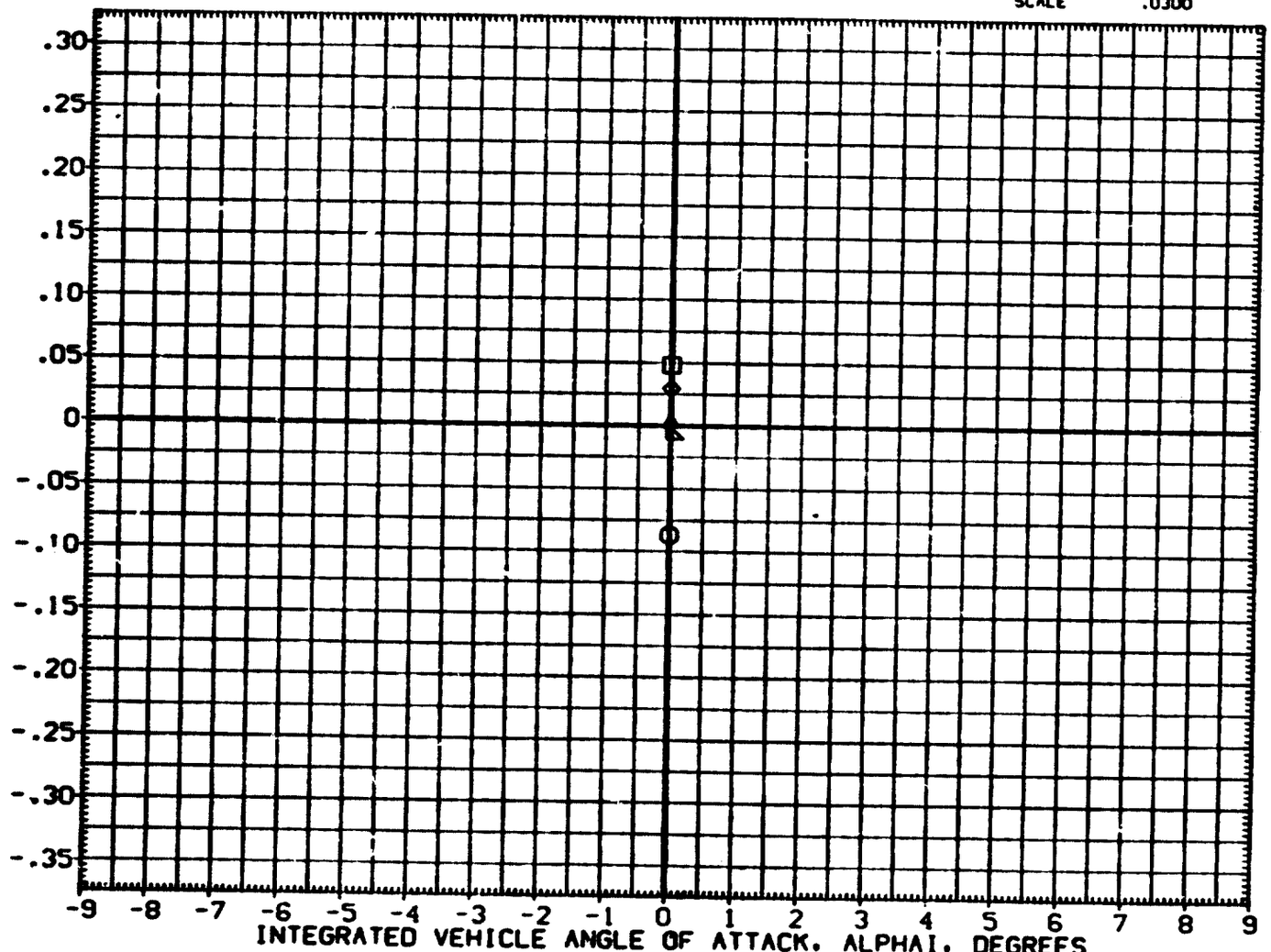


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=10/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-ID	ELV-OB	MACH	SPDBRK
(METO46)	□	AMES97-019([ABI] LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019([ABI] LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019([ABI] LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019([ABI] LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	◺	AMES97-019([ABI] LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

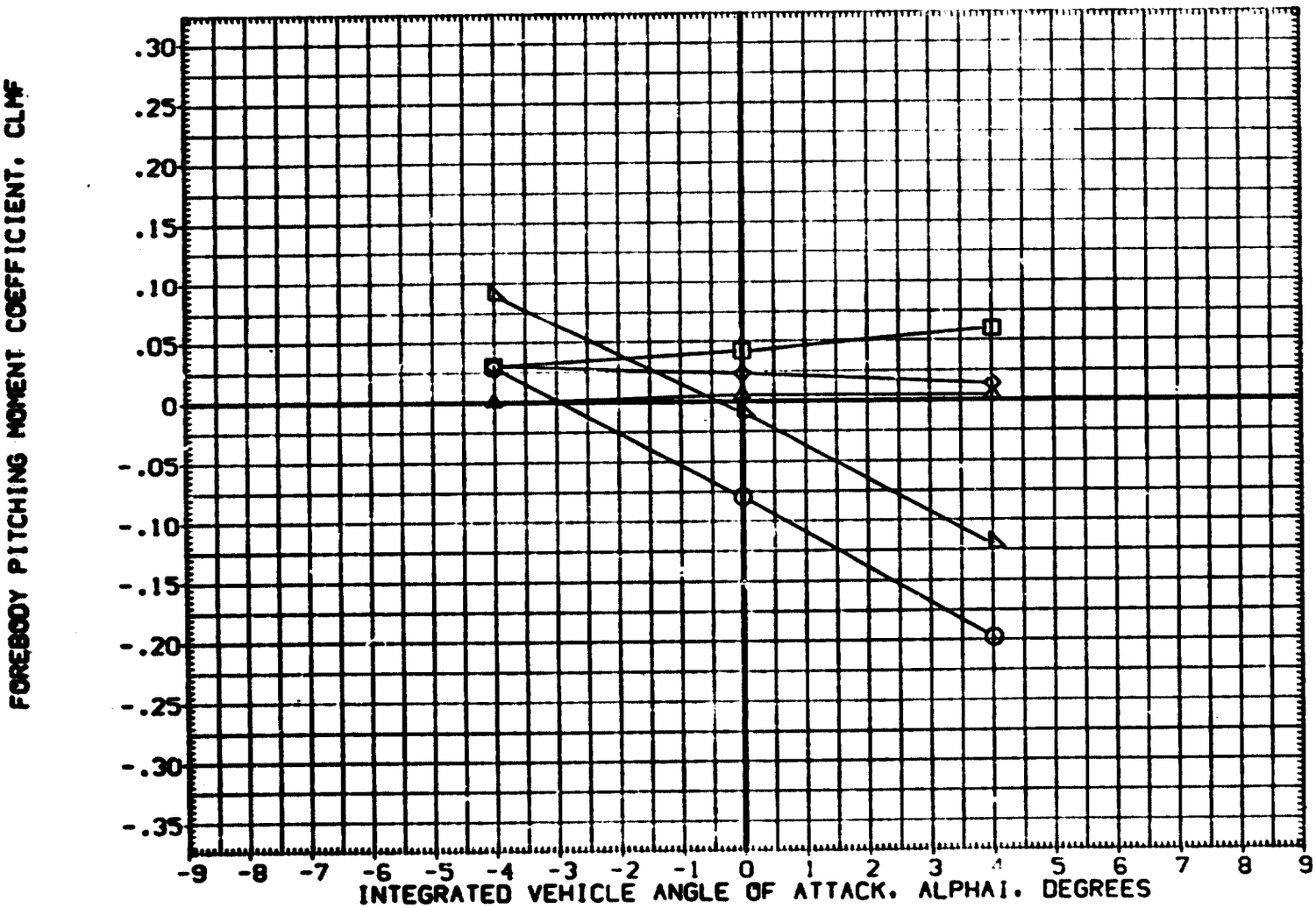


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO46)		AMES97-019C(IAB1) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019C(IAB1) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019C(IAB1) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019C(IAB1) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019C(IAB1) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

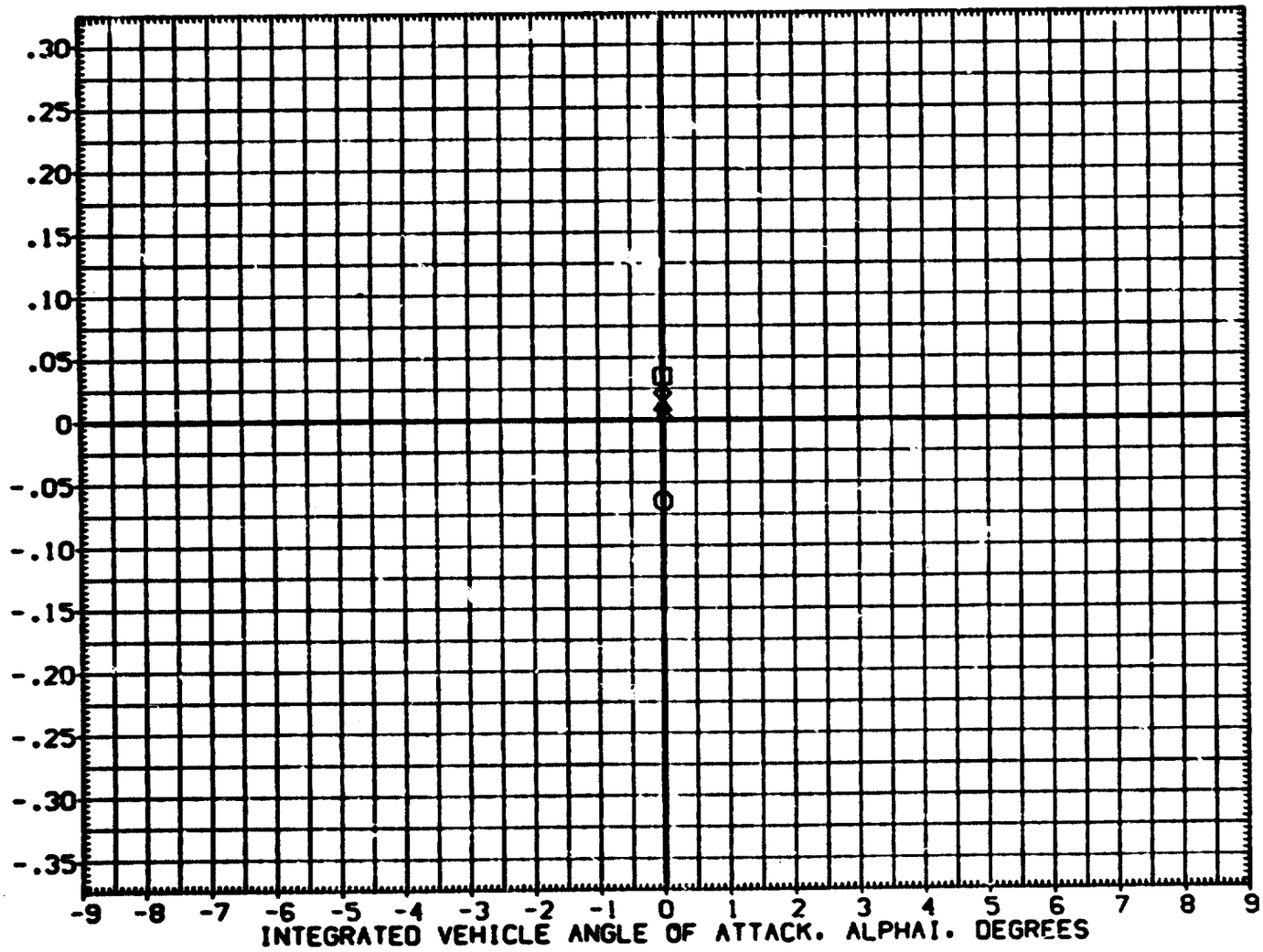


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPCORK
(AETO66)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(AETT66)	○	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(AETL66)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(AETR66)	▷	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(AETI66)	△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

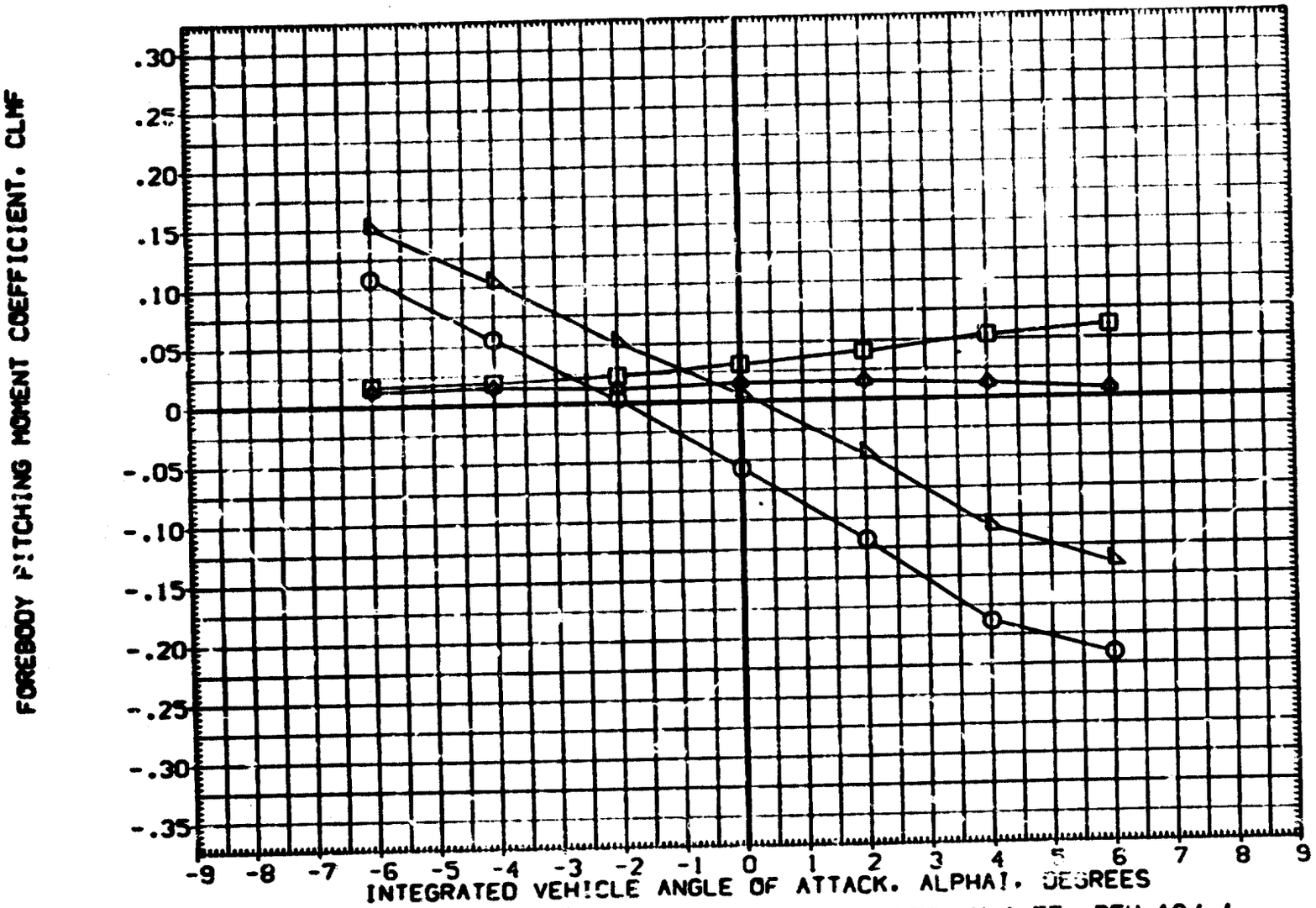


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

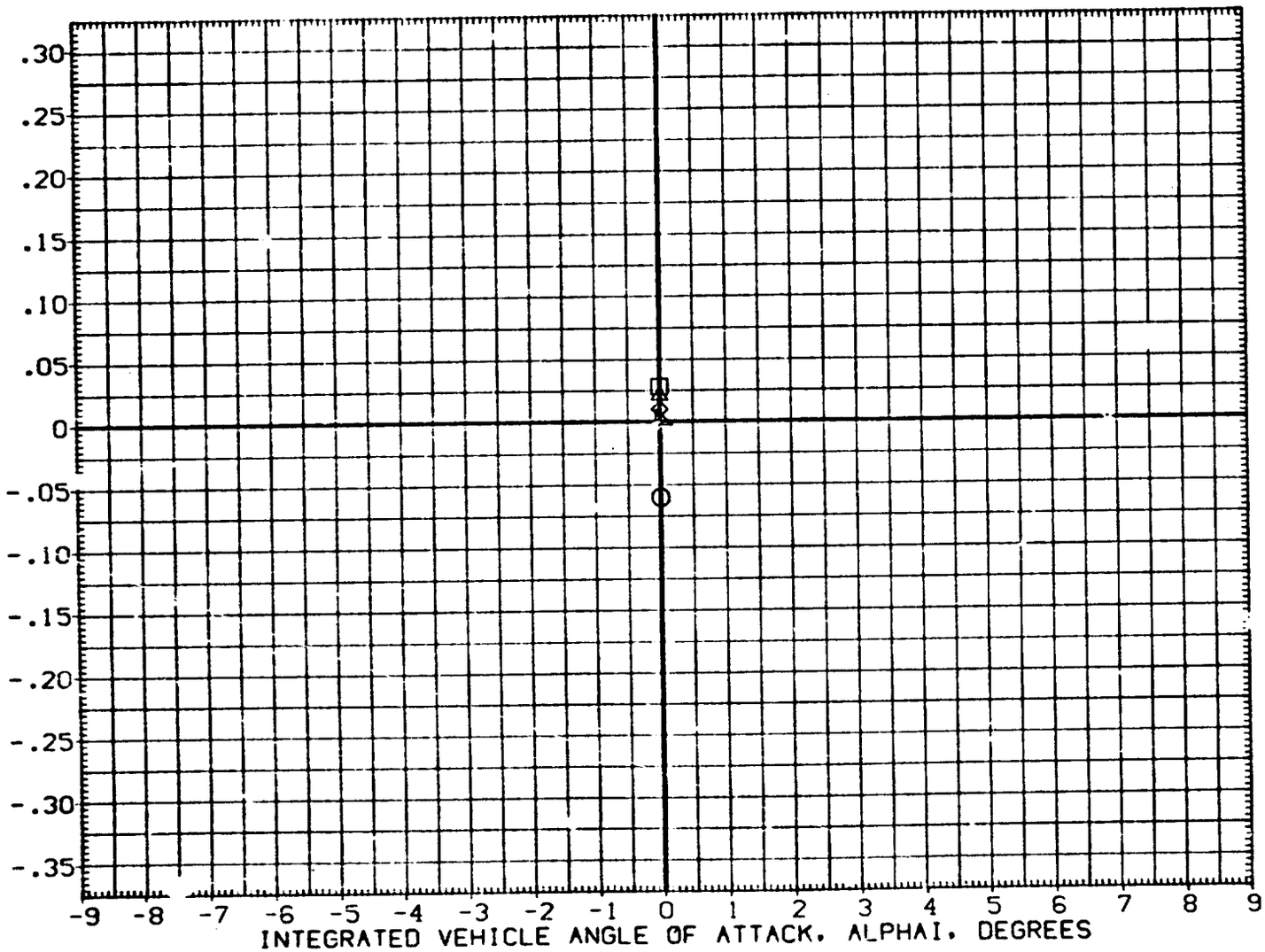


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

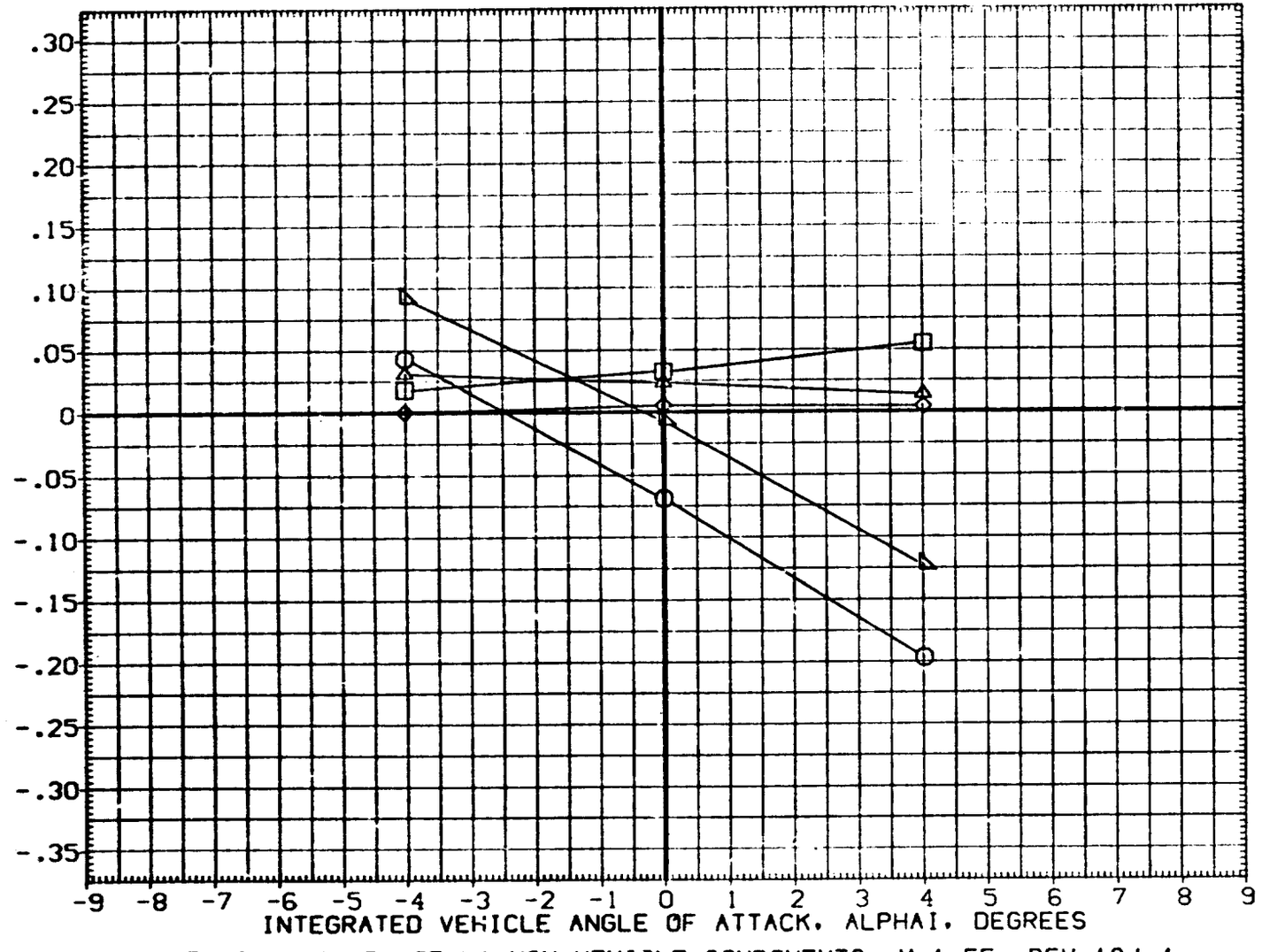


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	◻	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

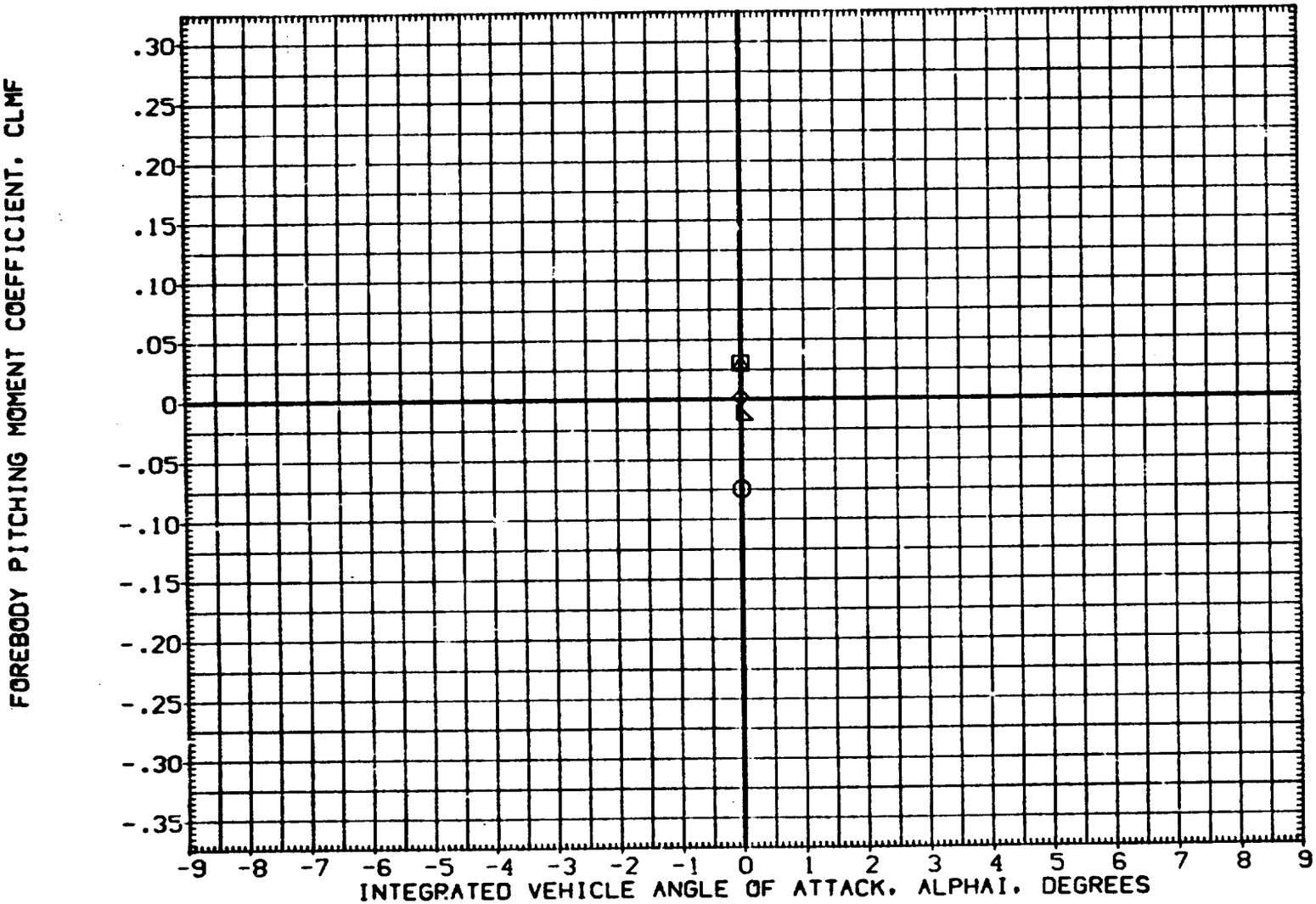


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL4E)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

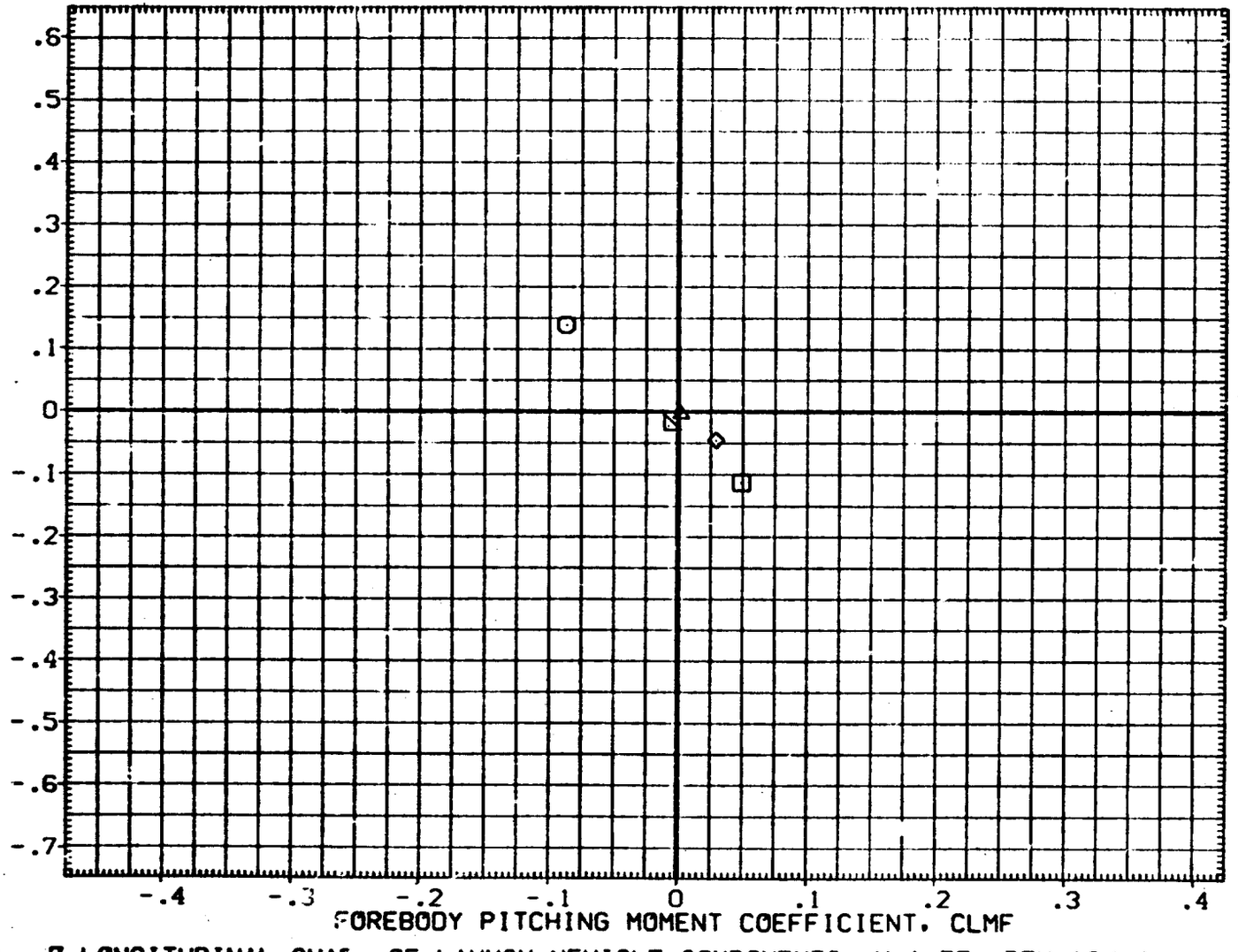


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

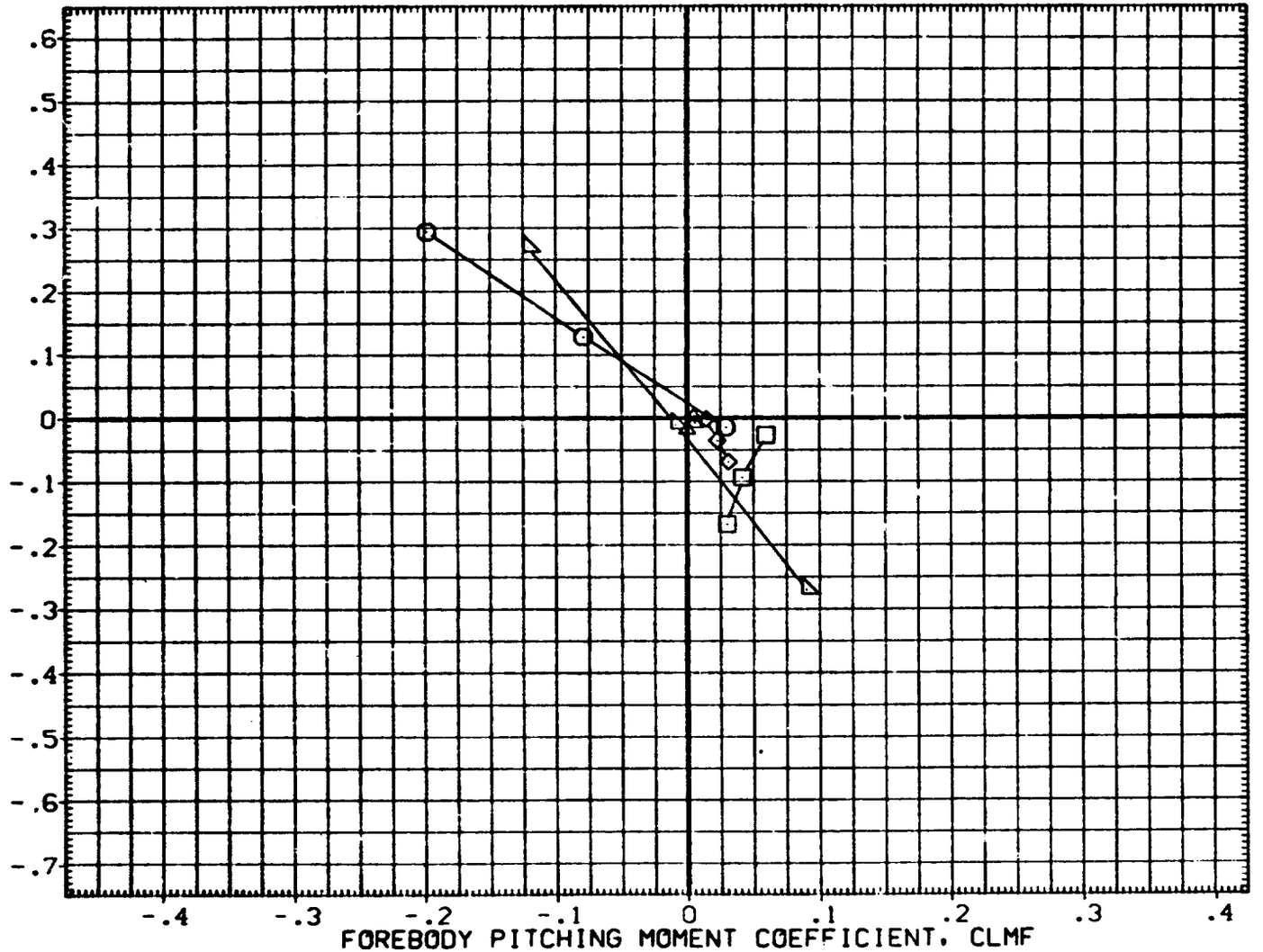


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET048)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(MET746)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(MET146)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

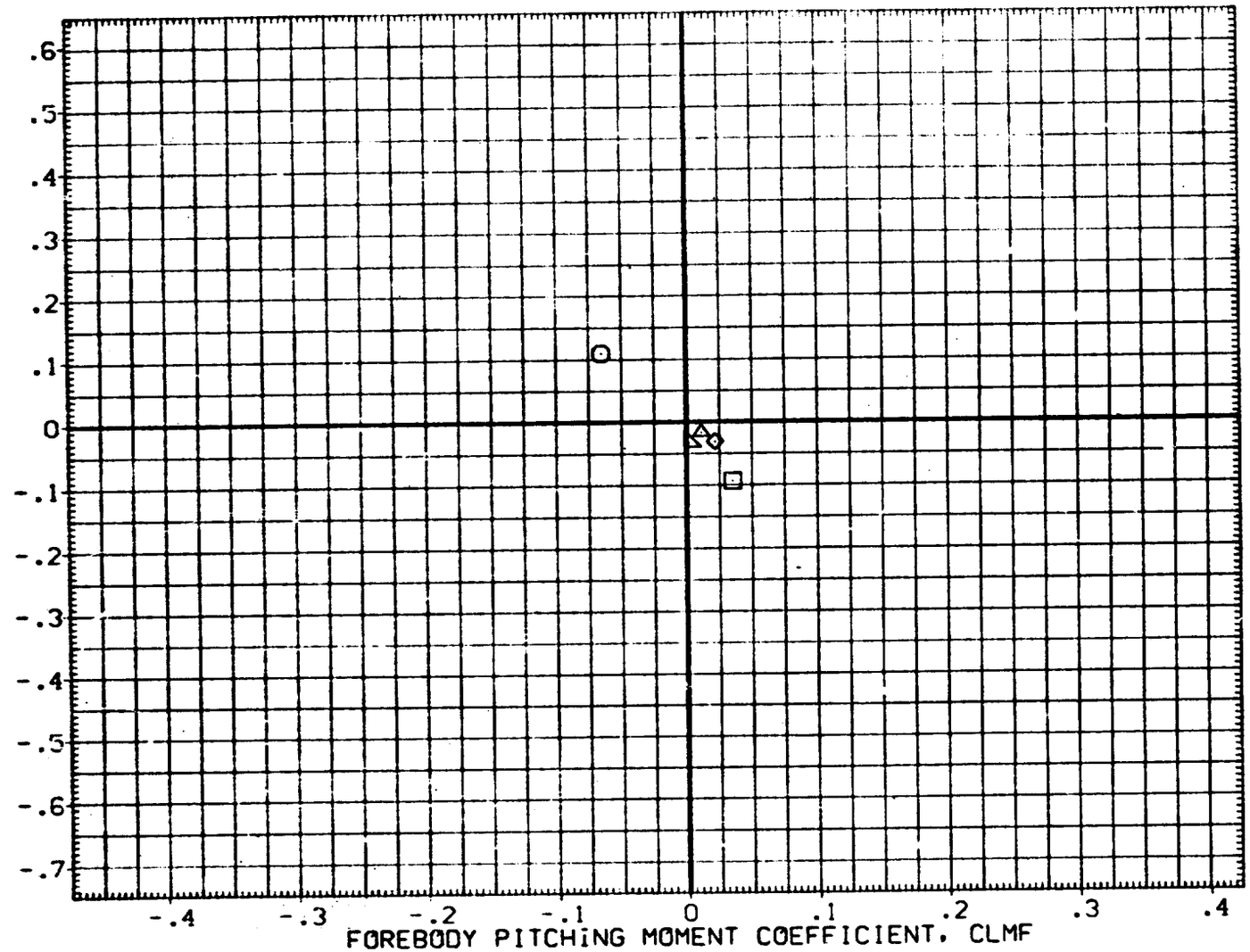


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

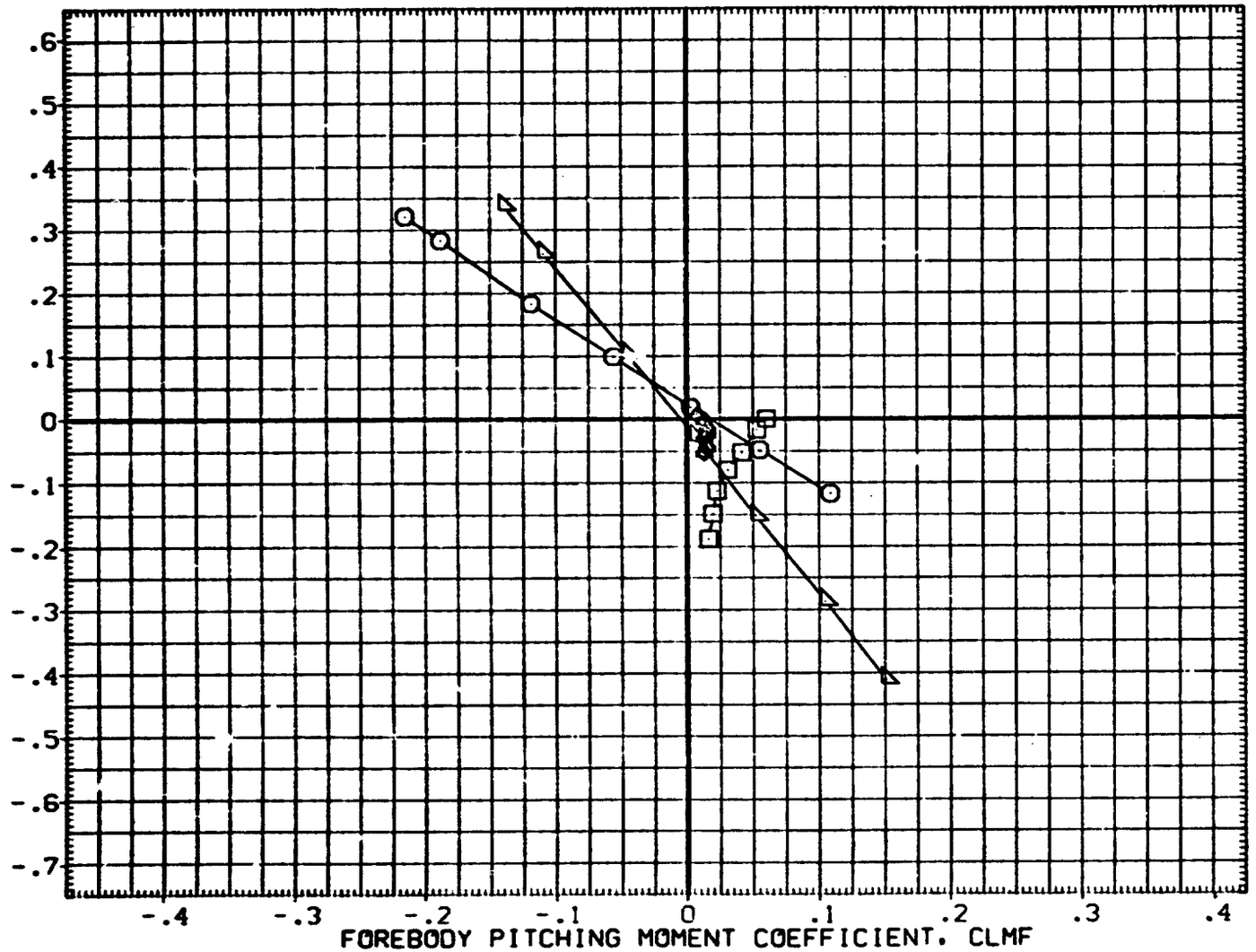


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METD46)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

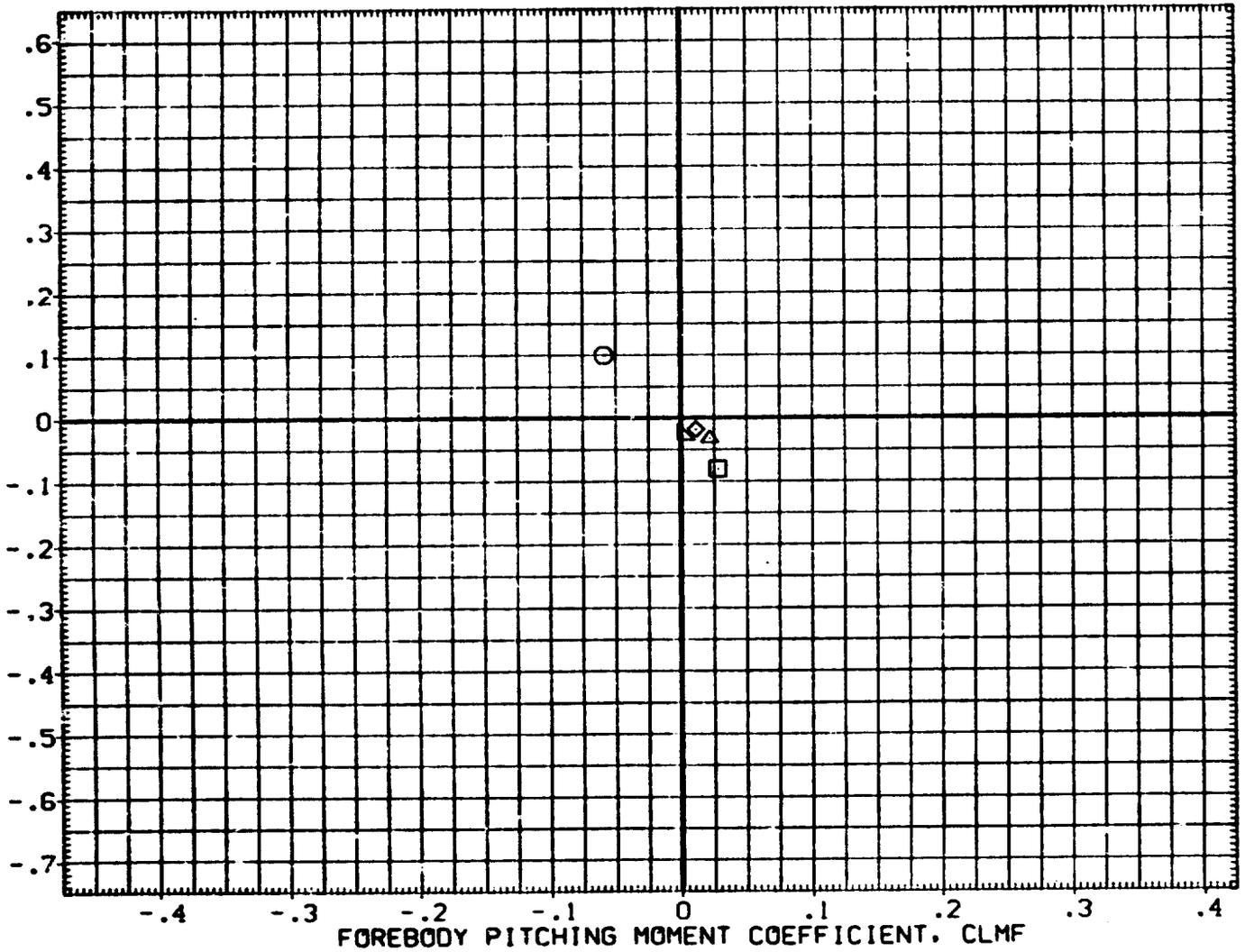


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)BET,I = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO46)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METT46)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(METL46)	⋈	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(METR46)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(METI46)	◁	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

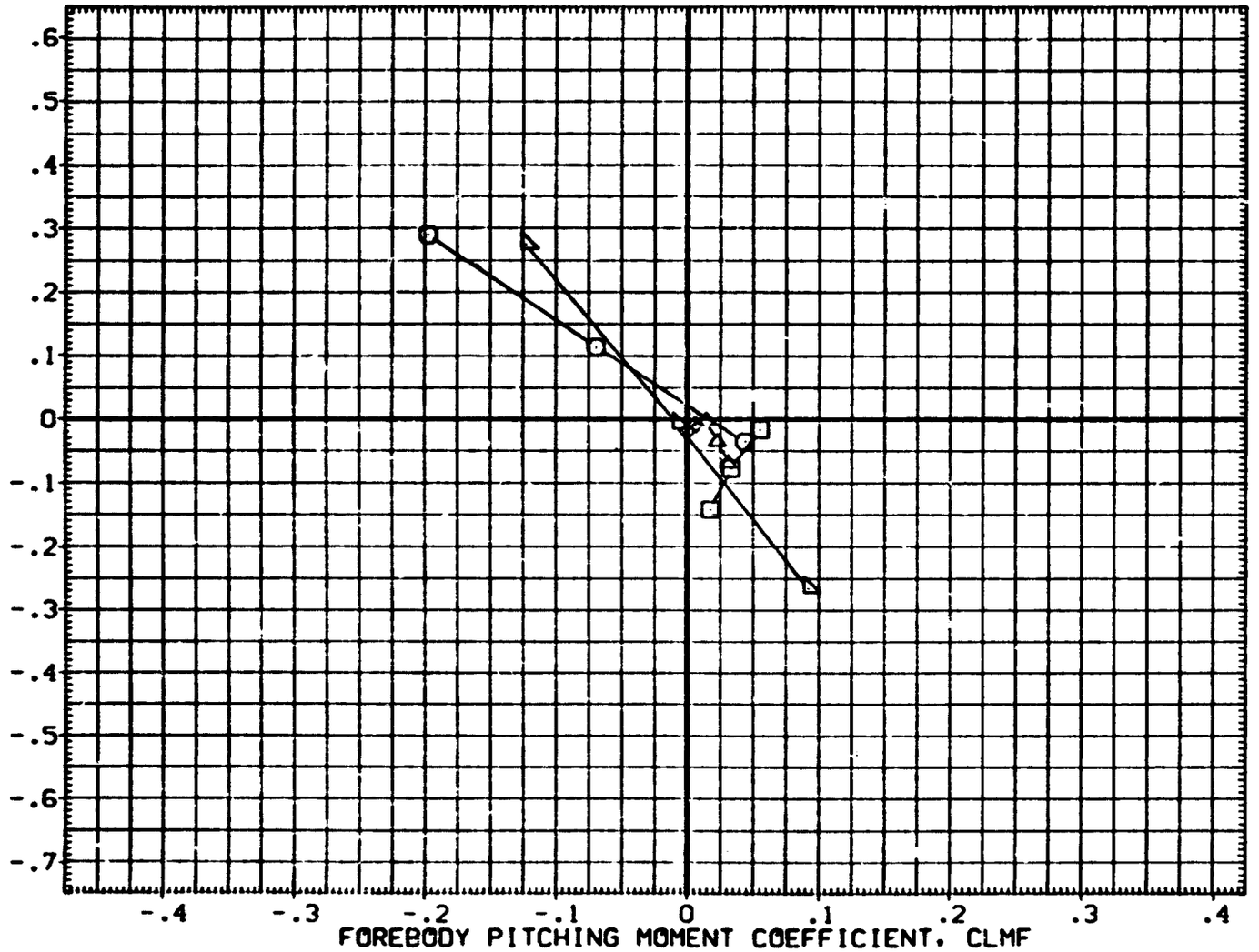


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)BET = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET046)	AMES97-C19([A81]) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(MET746)	AMES97-019([A81]) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(METL46)	AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(METR46)	AMES97-019([A81]) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(METI46)	AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

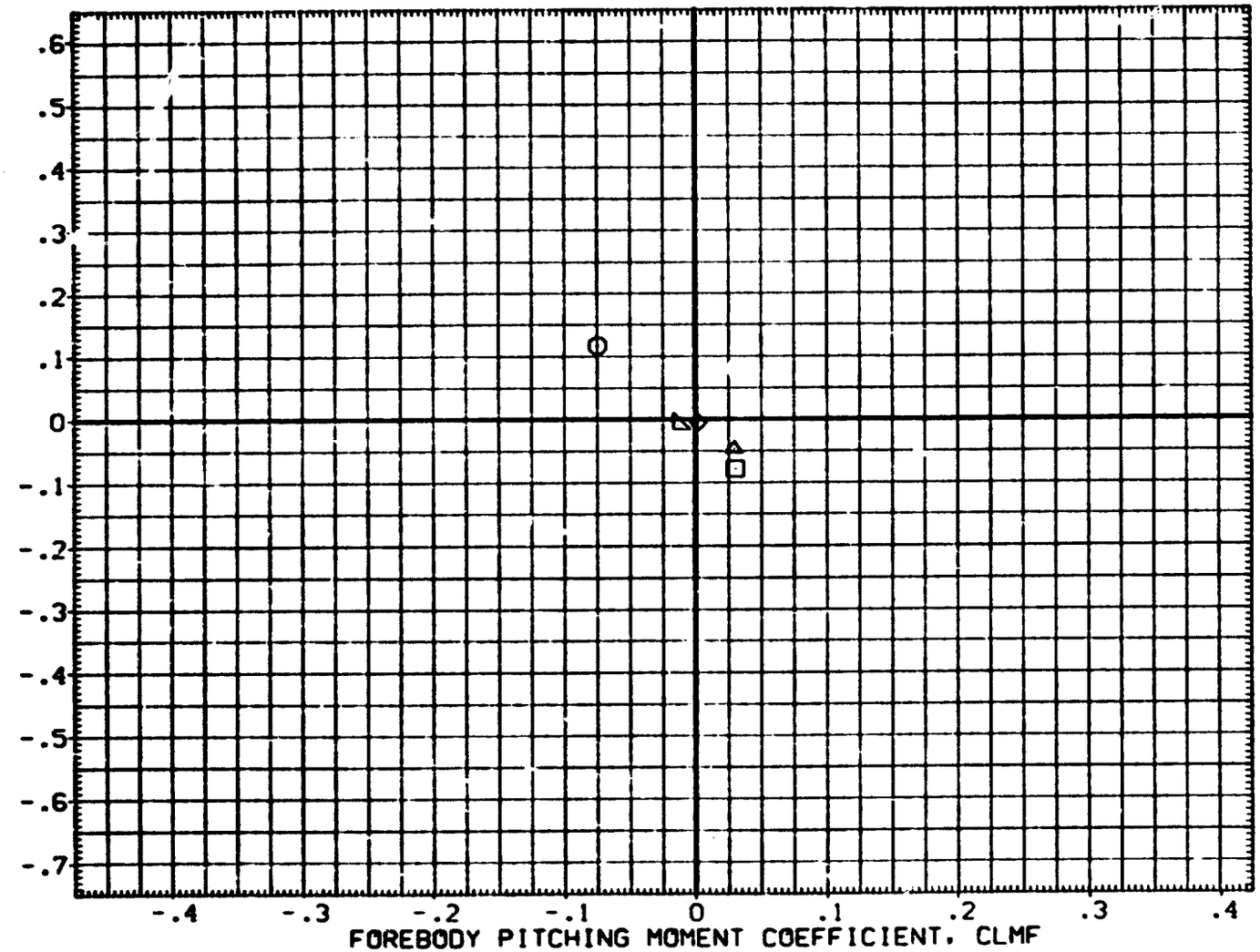


FIG. 7 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO36)	□	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METT36)	◇	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)	⊠	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)	△	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)	▷	AMES97-019([A81) LVAF INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

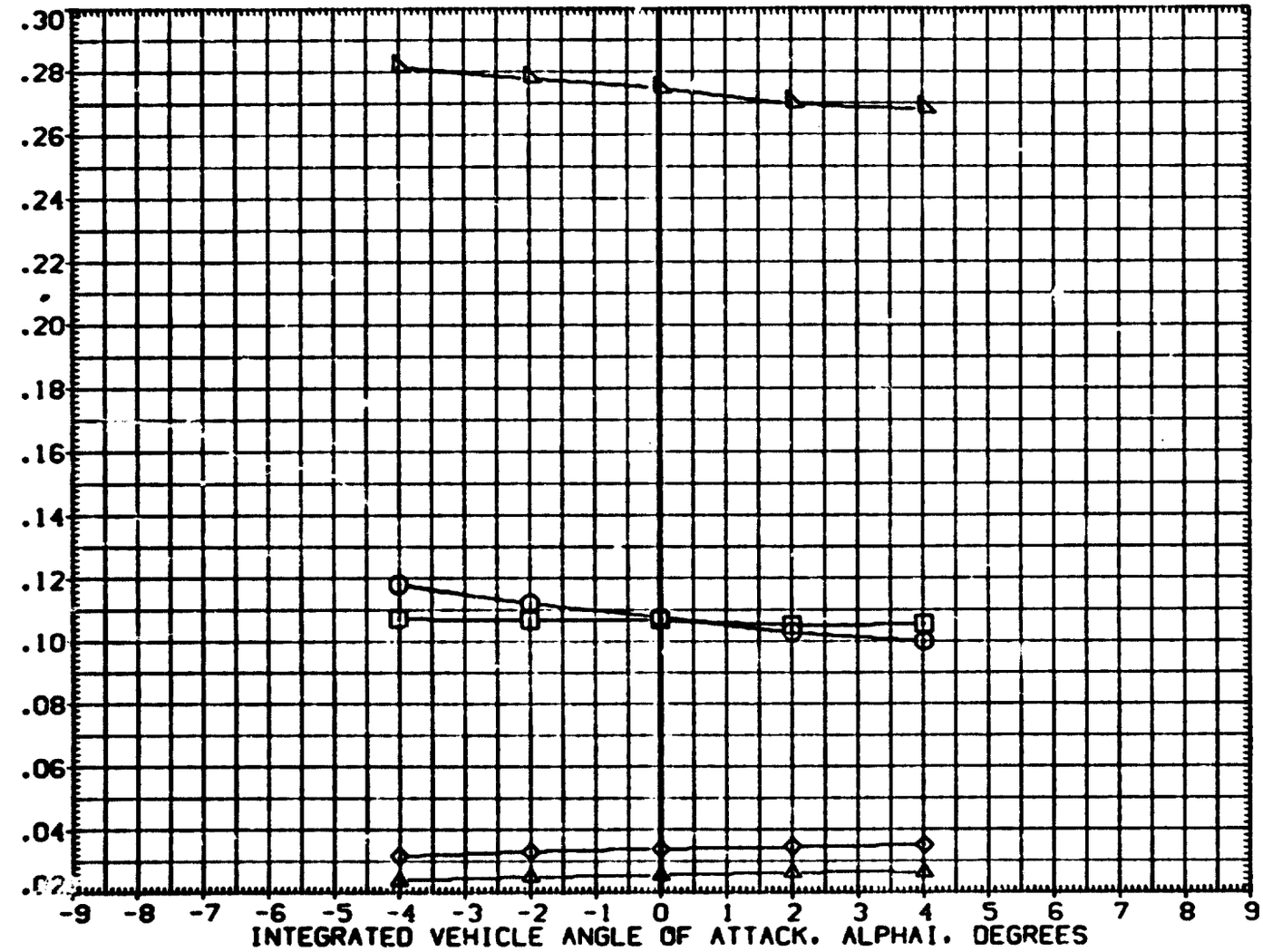


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO36)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL35)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

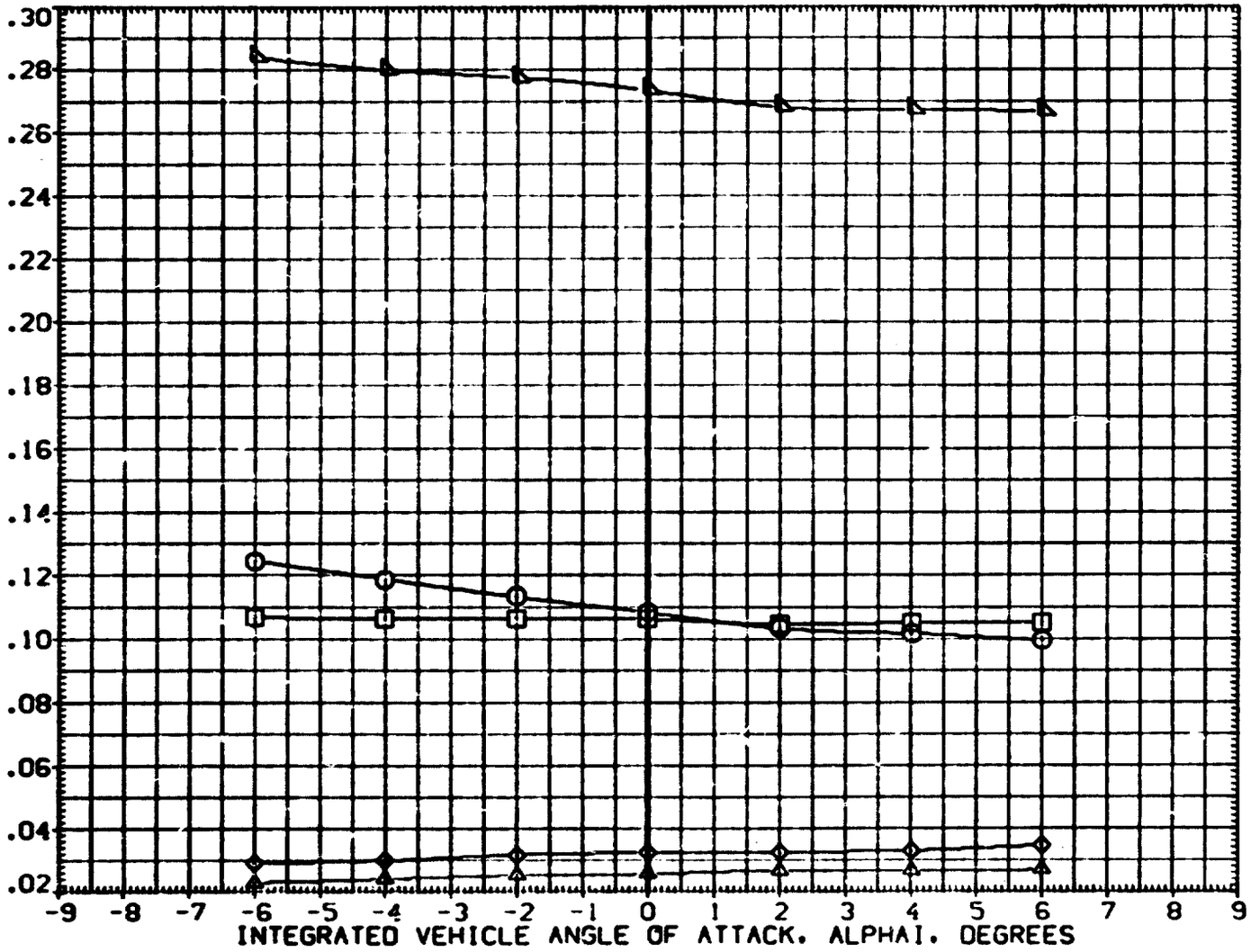


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO3G)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT3G)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL3G)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR3G)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI3G)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

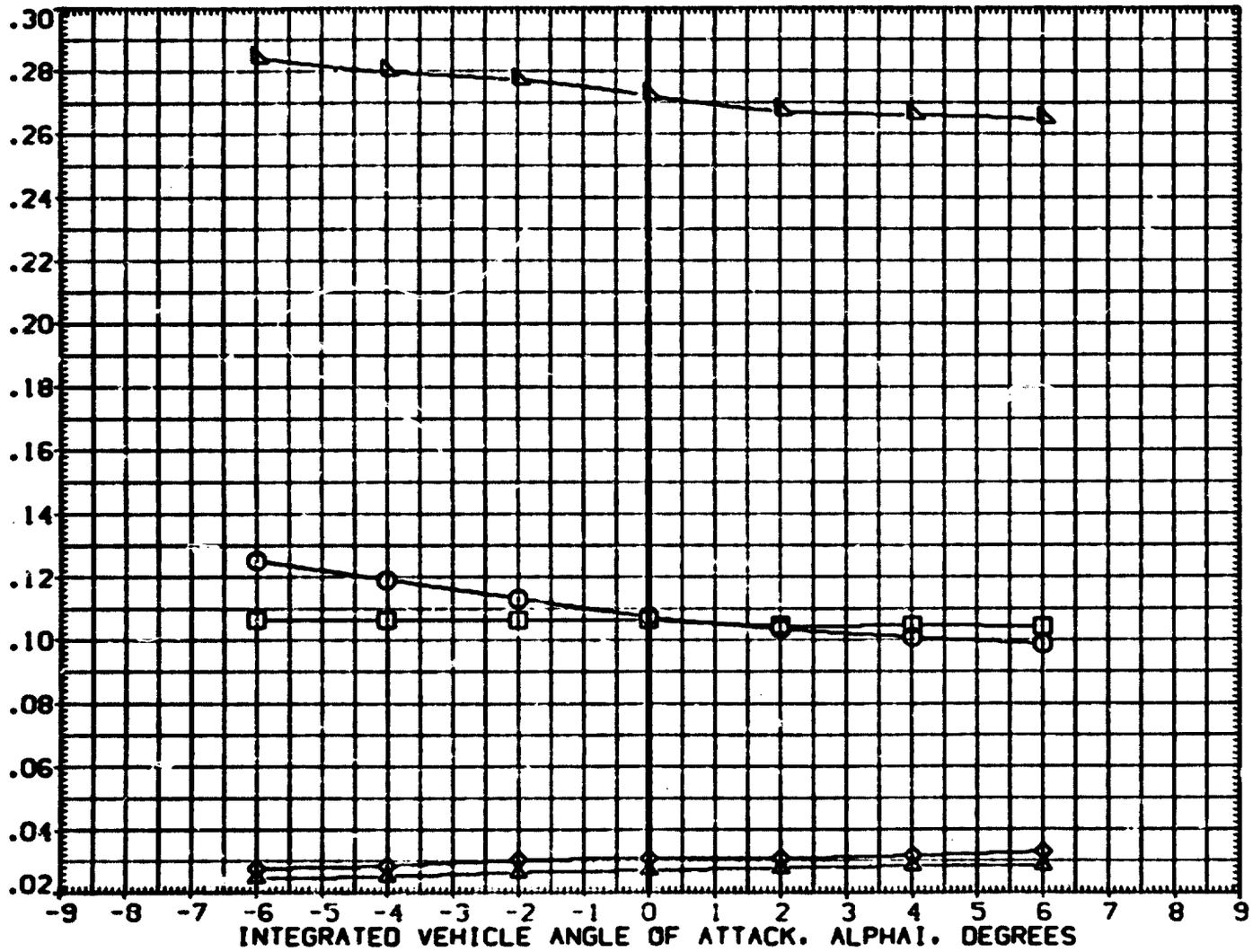


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(XETO36)	□	AMES97-019([AB]) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(XETT36)	◇	AMES97-019([AB]) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(XETL36)	▽	AMES97-019([AB]) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(XETR36)	▷	AMES97-019([AB]) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(XETI36)		AMES97-019([AB]) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

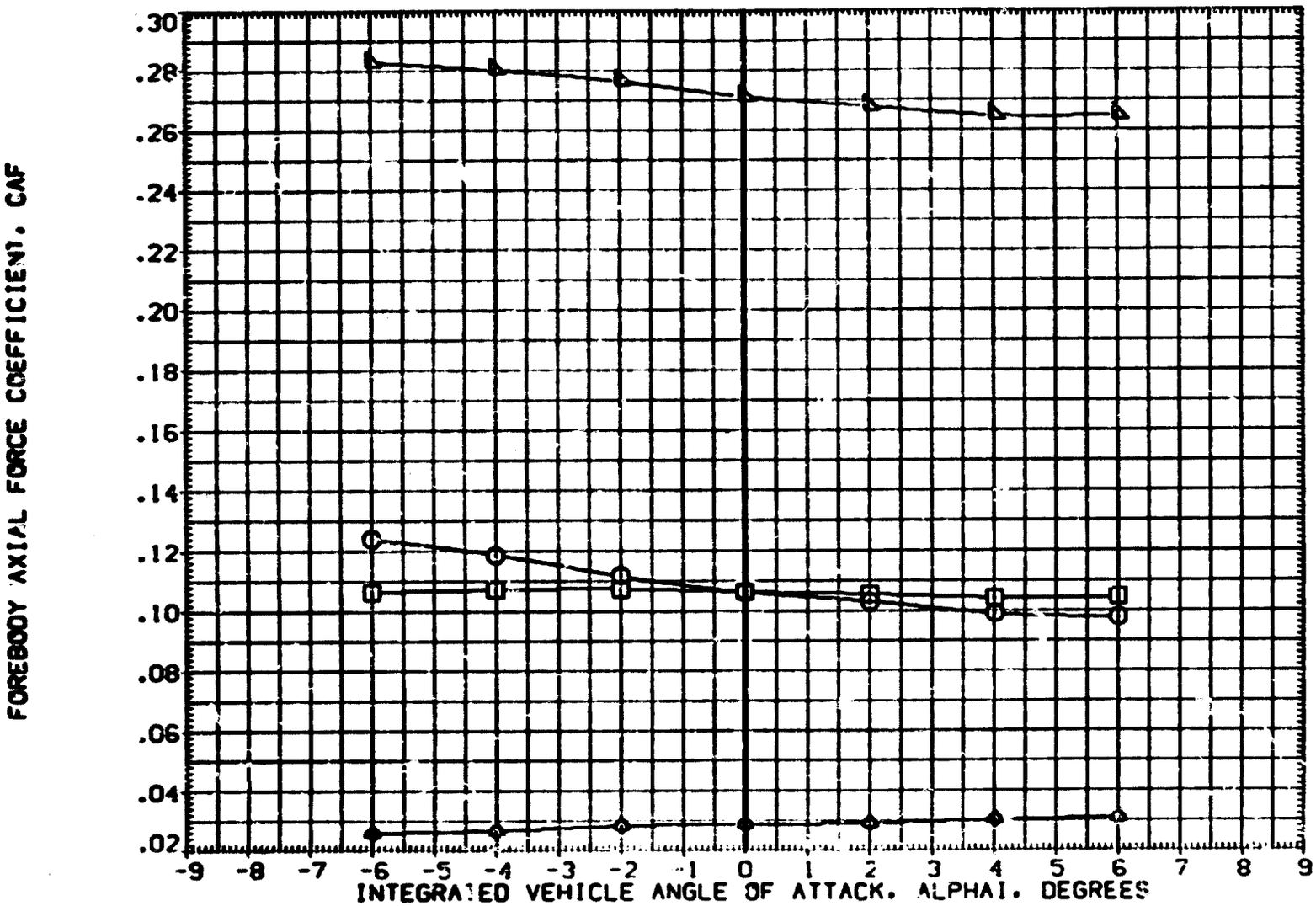


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

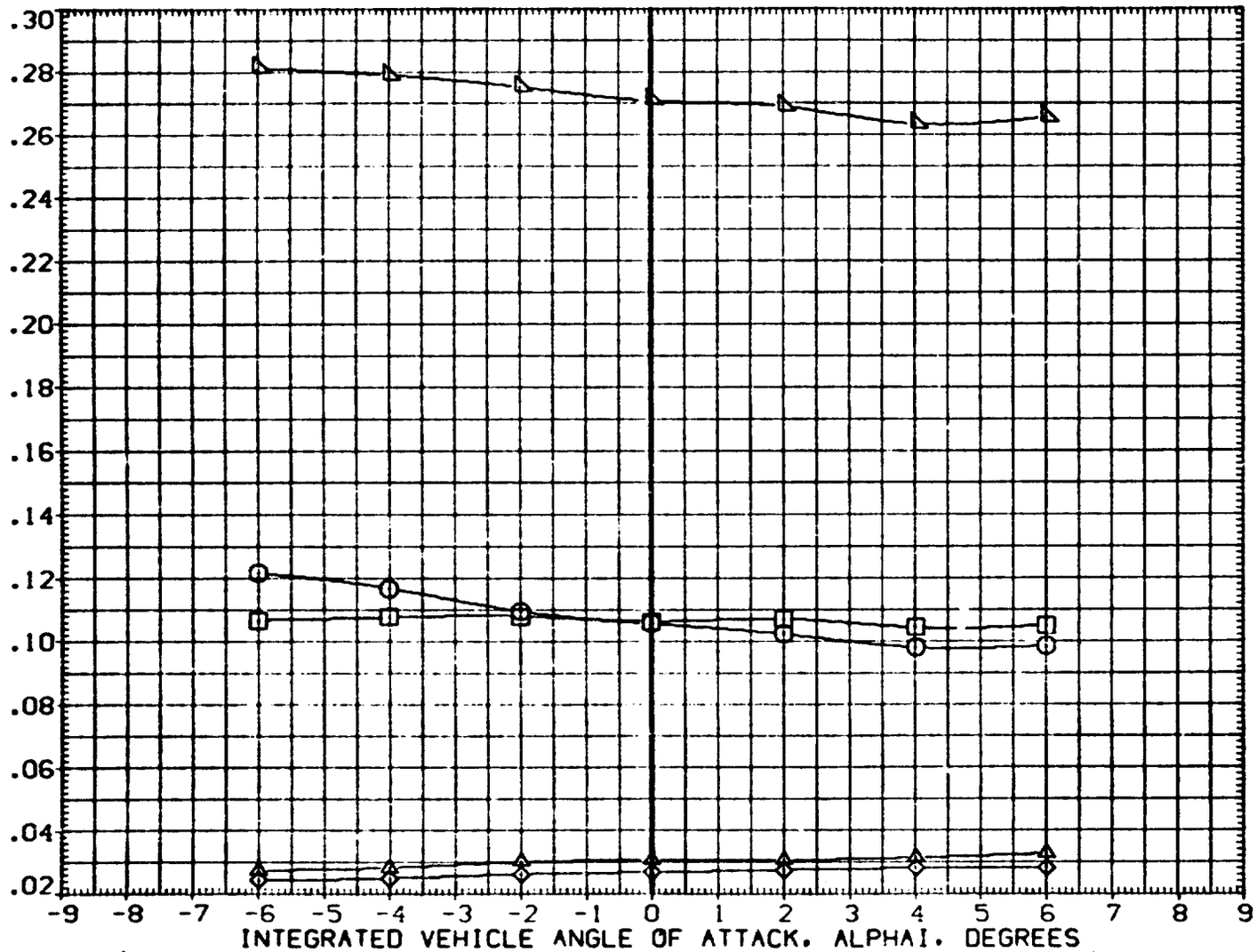


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METT36)	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

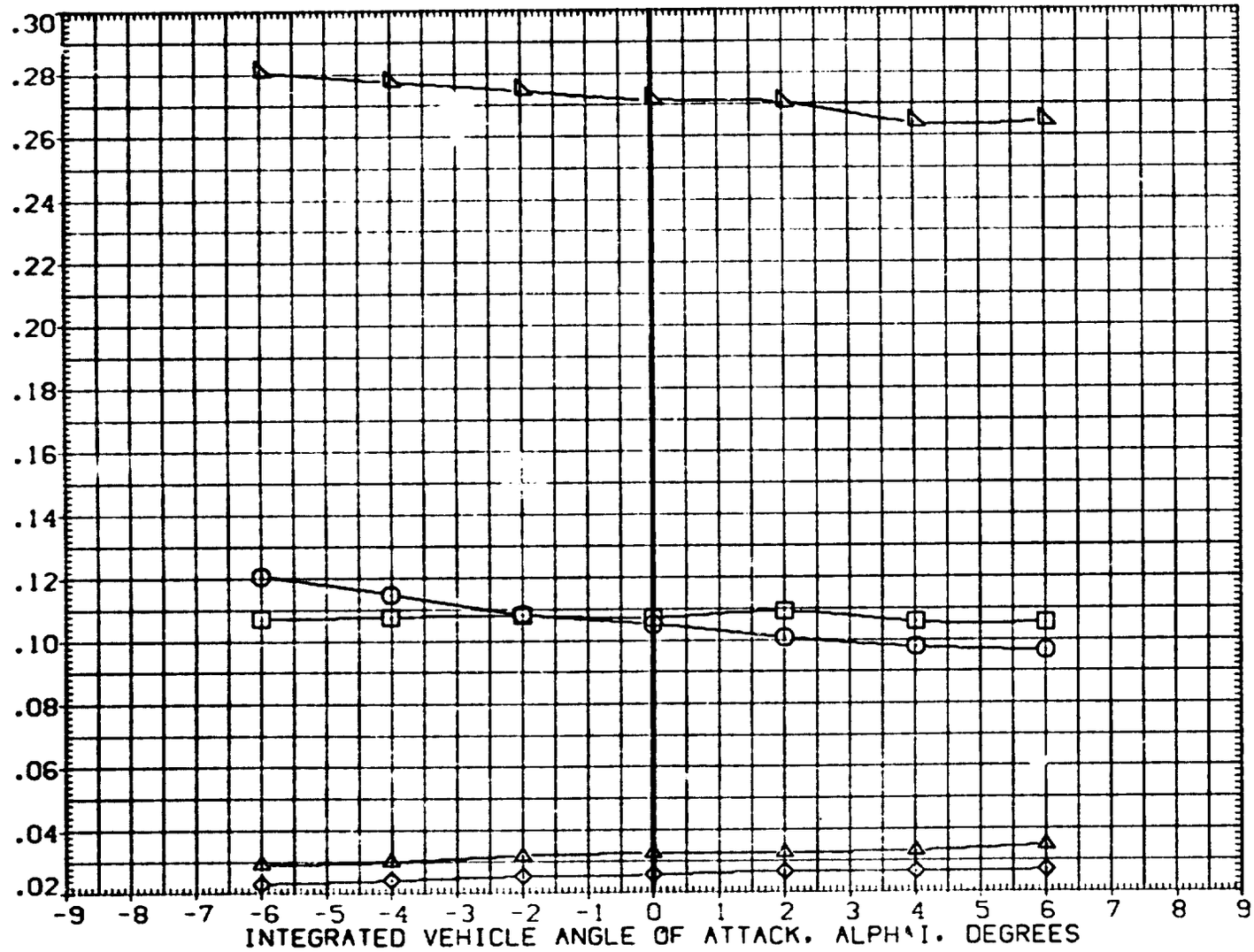


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)	◇□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	◇◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	◇△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

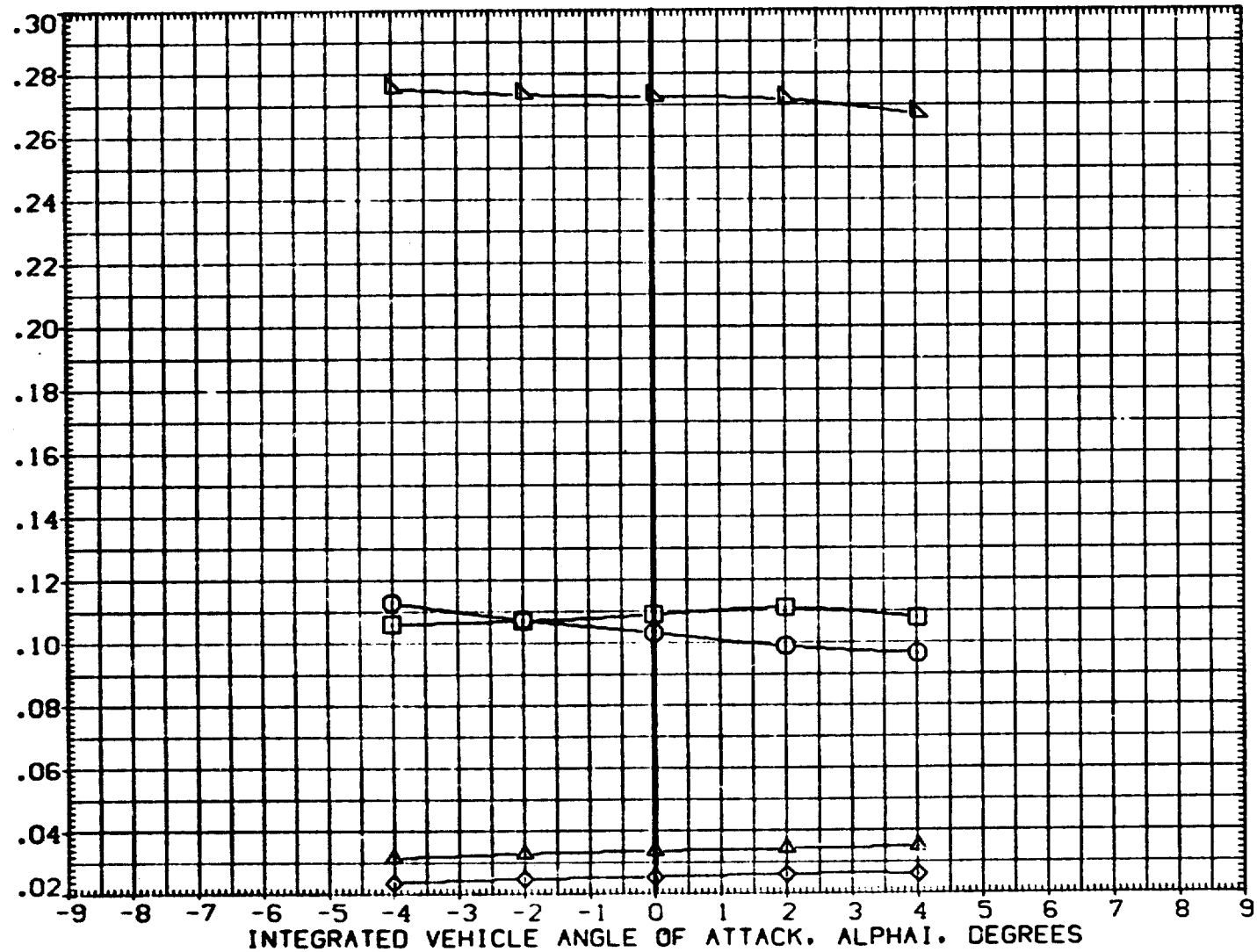


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

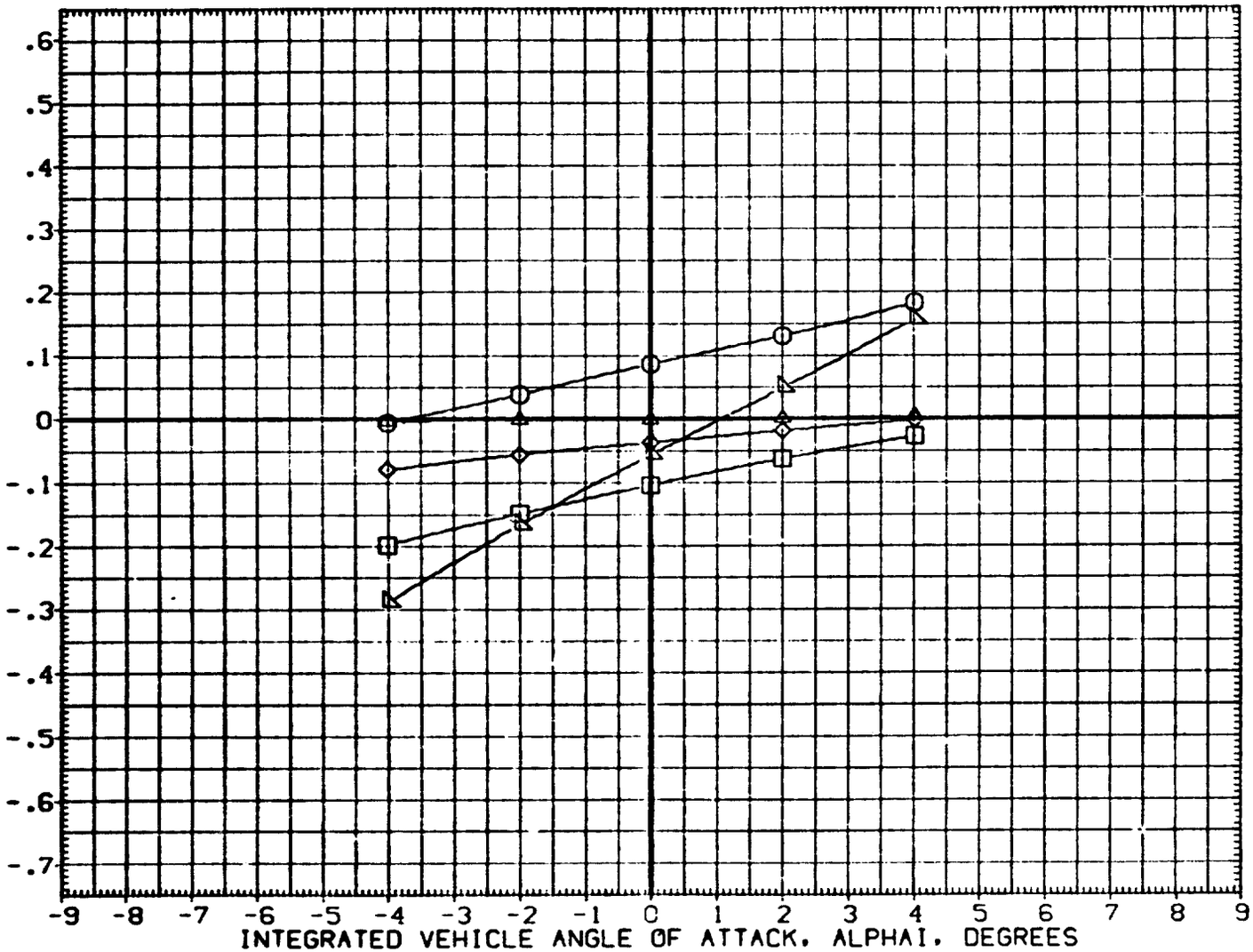


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	0.000	-4.000	2.000	.000
(MET736)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	0.000	-4.000	2.000	.000
(METL36)	▽	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	0.000	-4.000	2.000	.000
(METR36)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	0.000	-4.000	2.000	.000
(METI36)	○	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	0.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

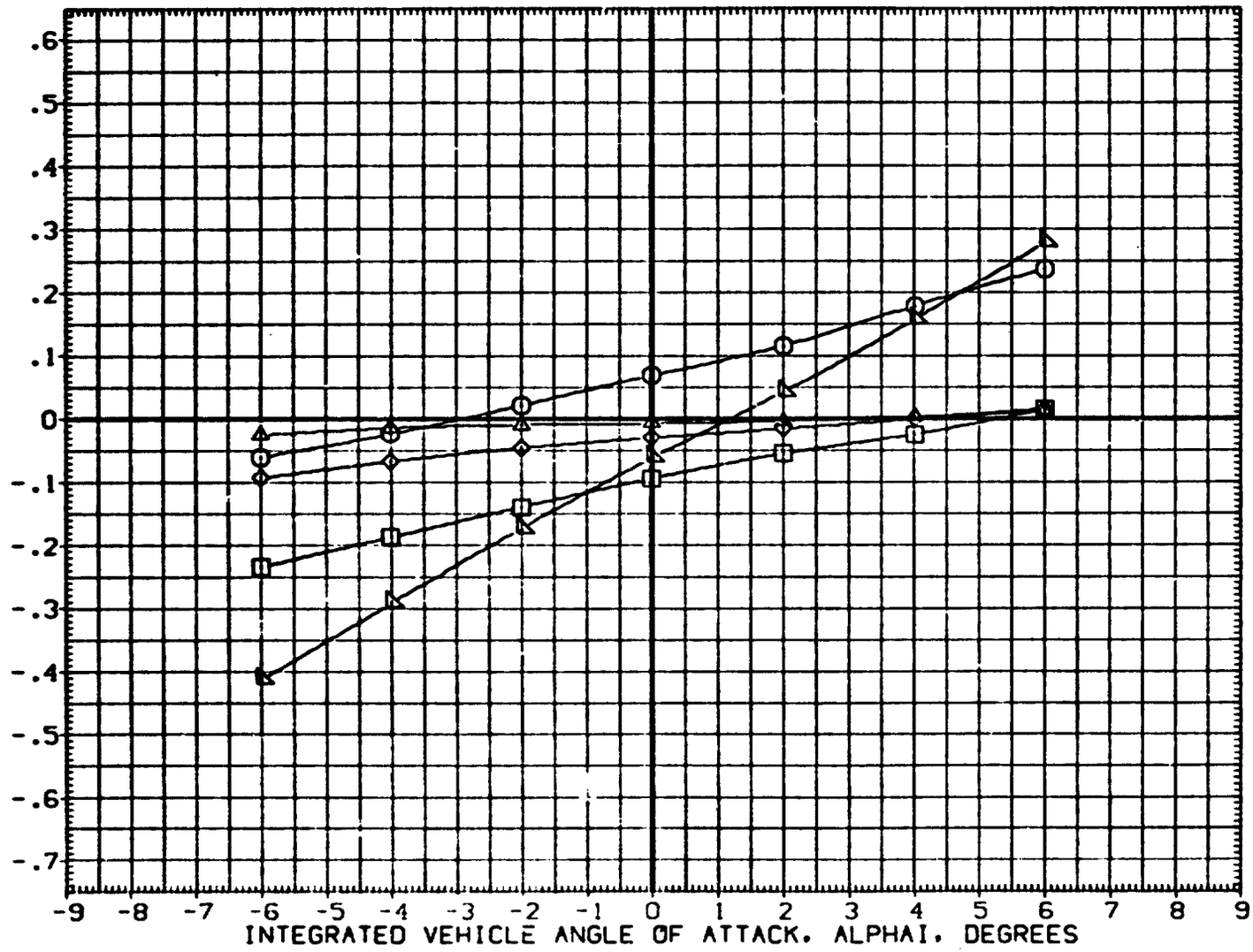


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	◺	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

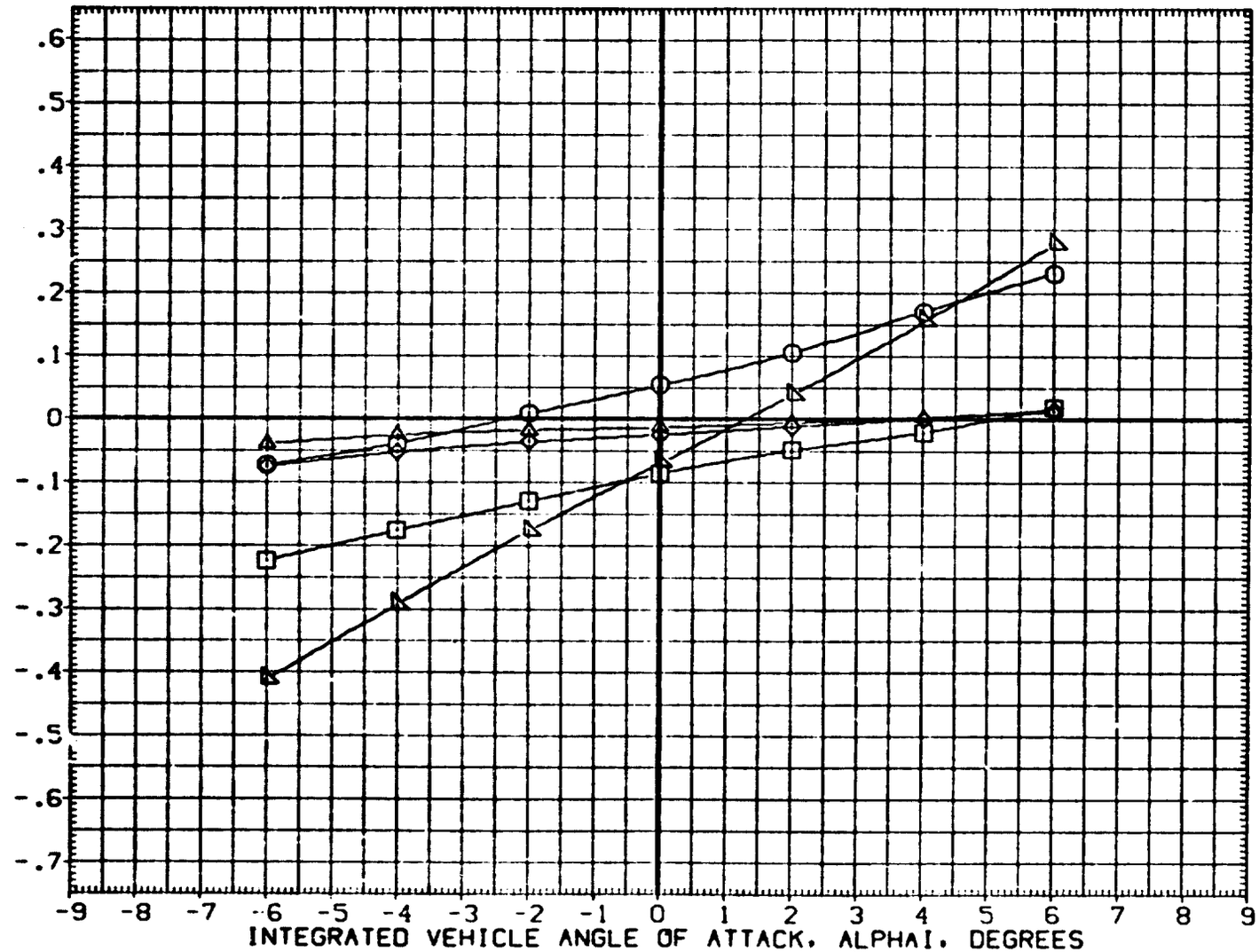


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	□	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METT36)	◇	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)	⋈	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)	△	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)	▽	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

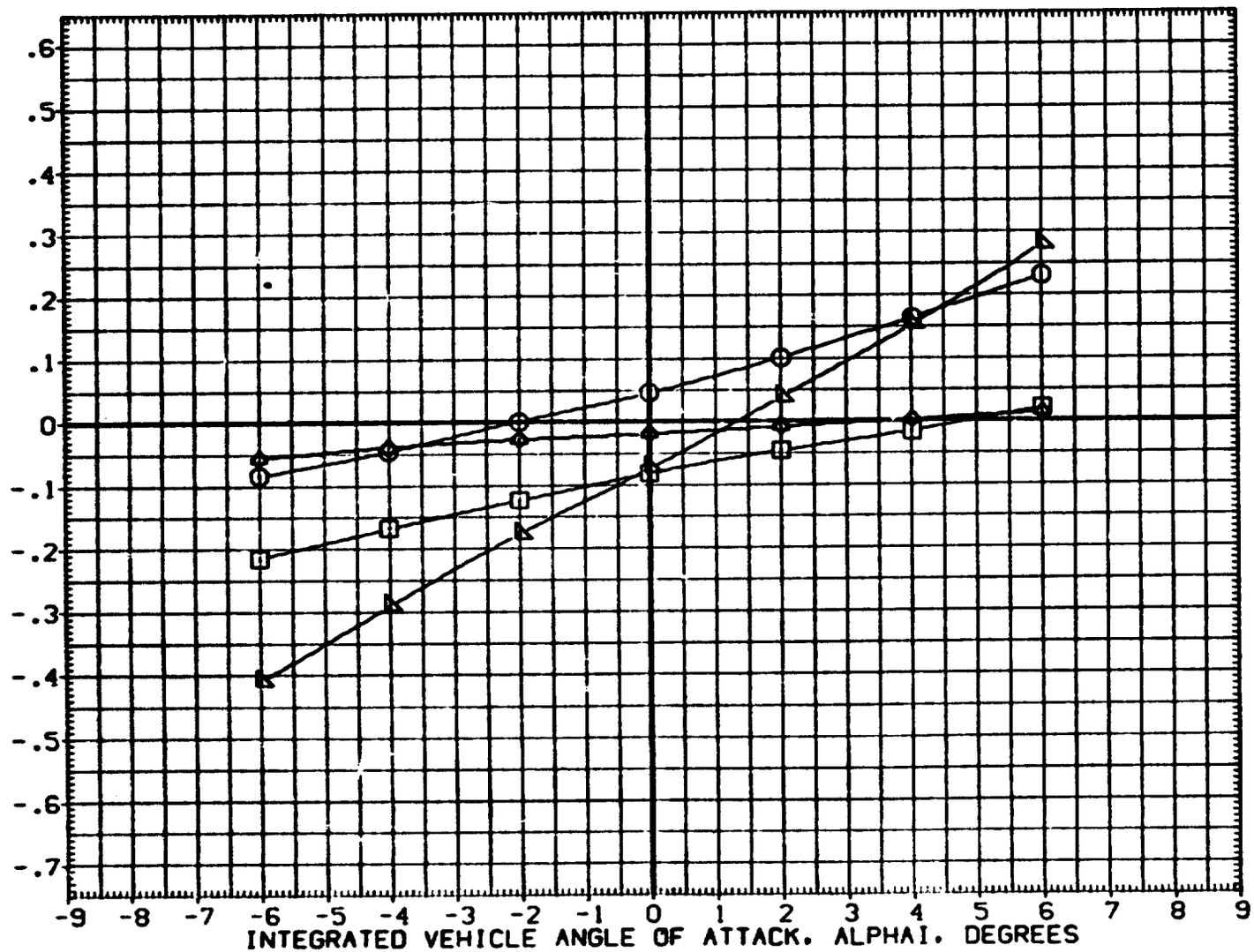


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(MET236)	△	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(MET336)	▽	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET436)	○	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

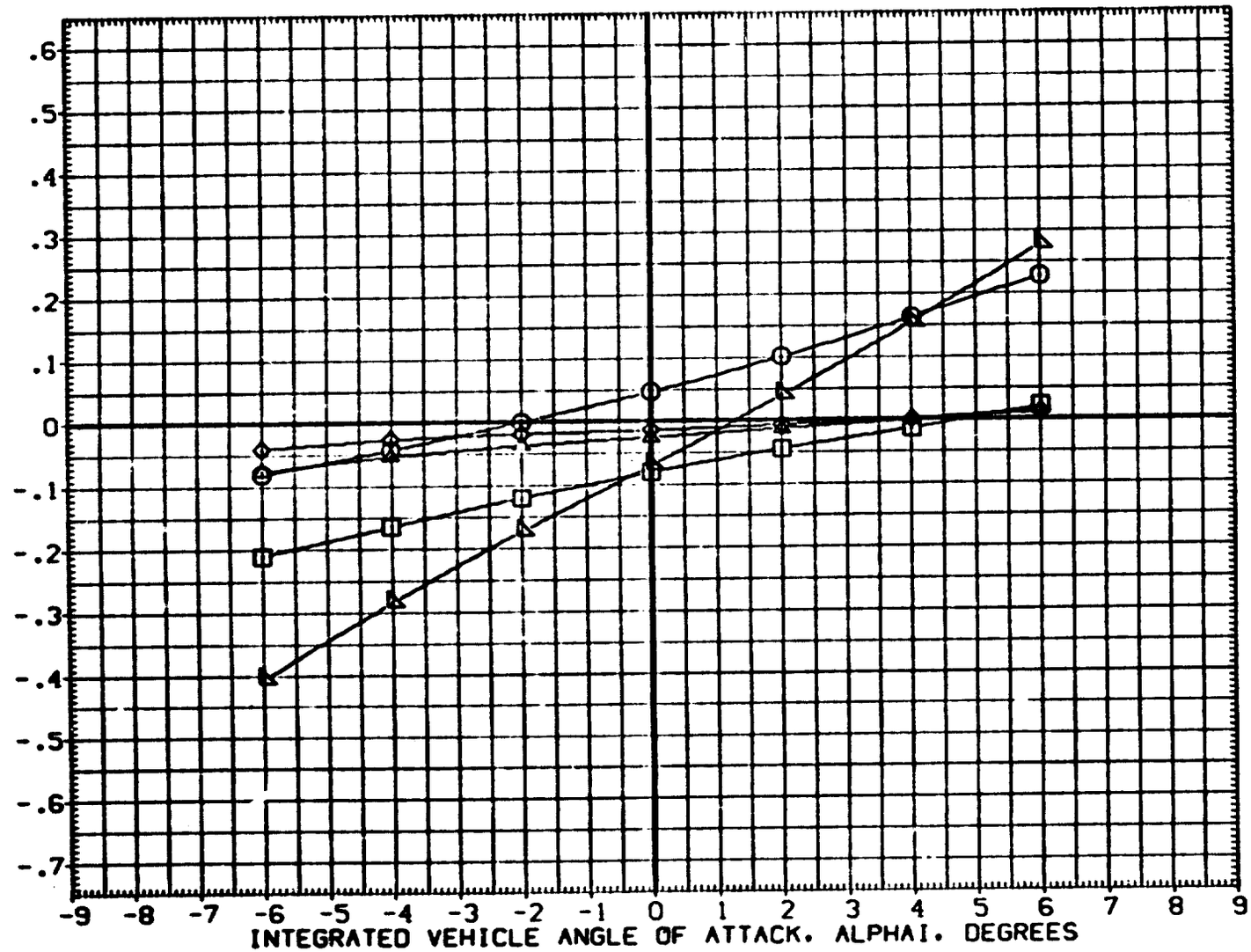


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	○	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	△	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	▽	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

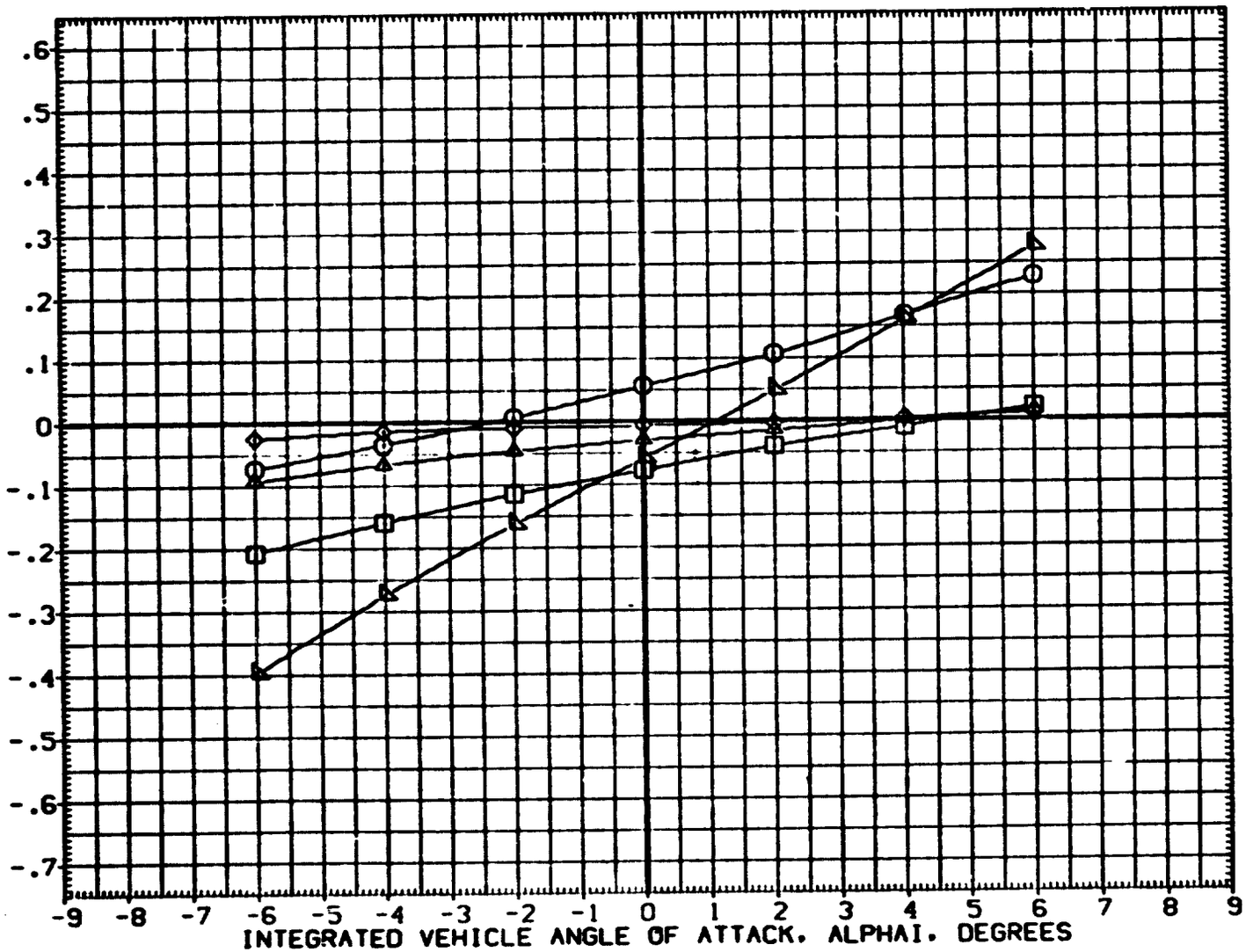


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(METO36)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	⋈	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	◁	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◺	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

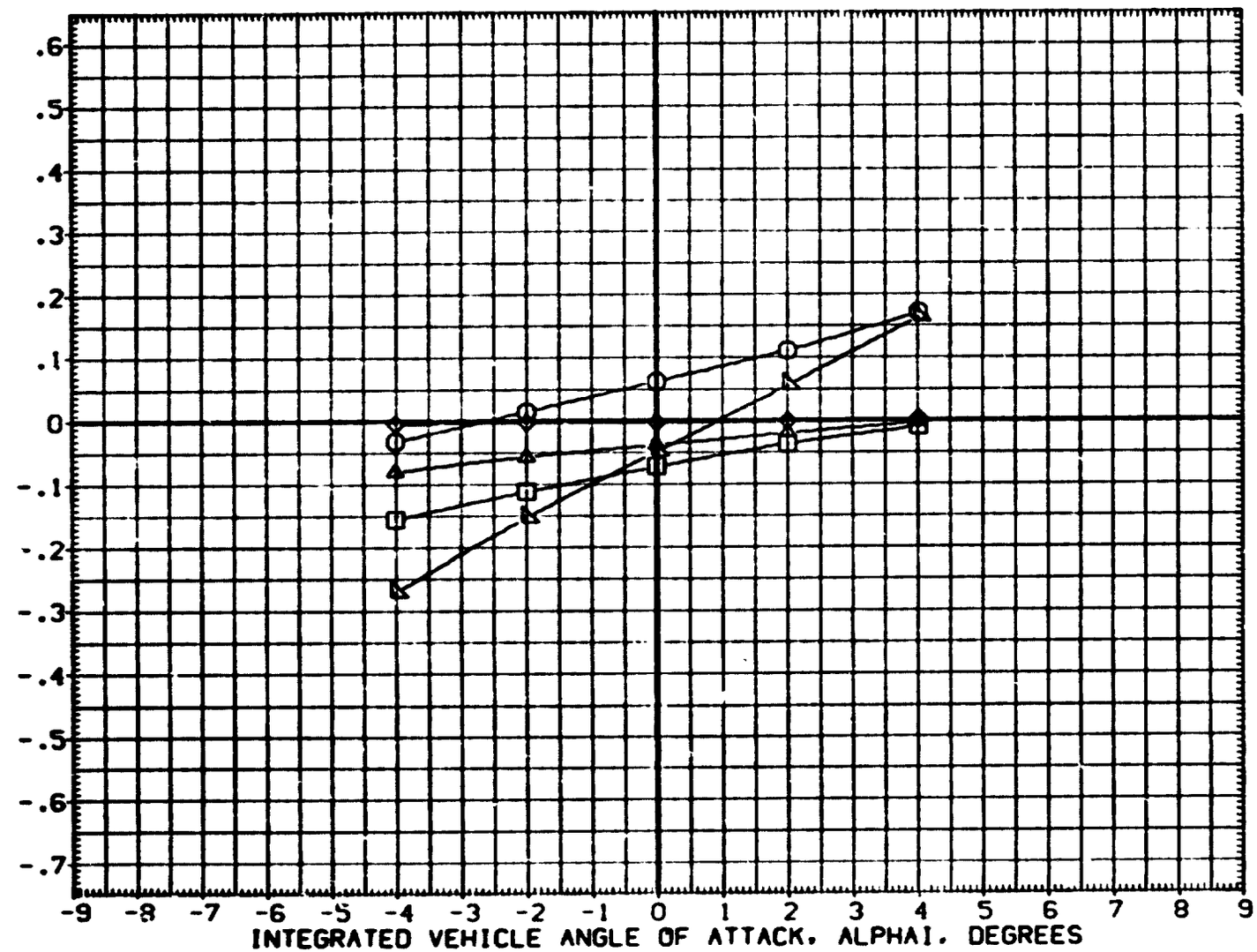


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO36)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METT36)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)	△	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

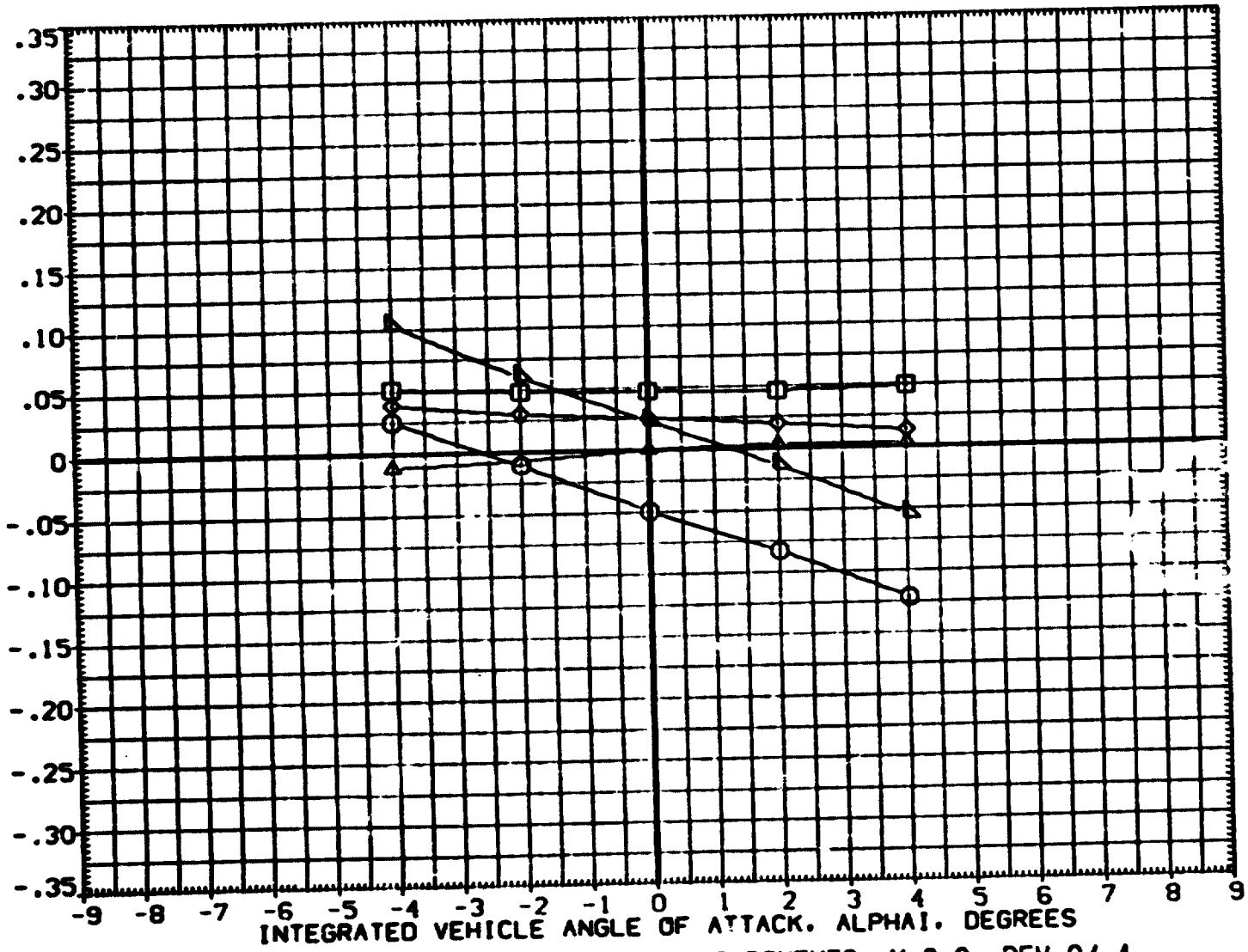


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)		AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	9.000	-4.000	2.000	.000
(MET136)		AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(MET236)		AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(MET336)		AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(MET436)		AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

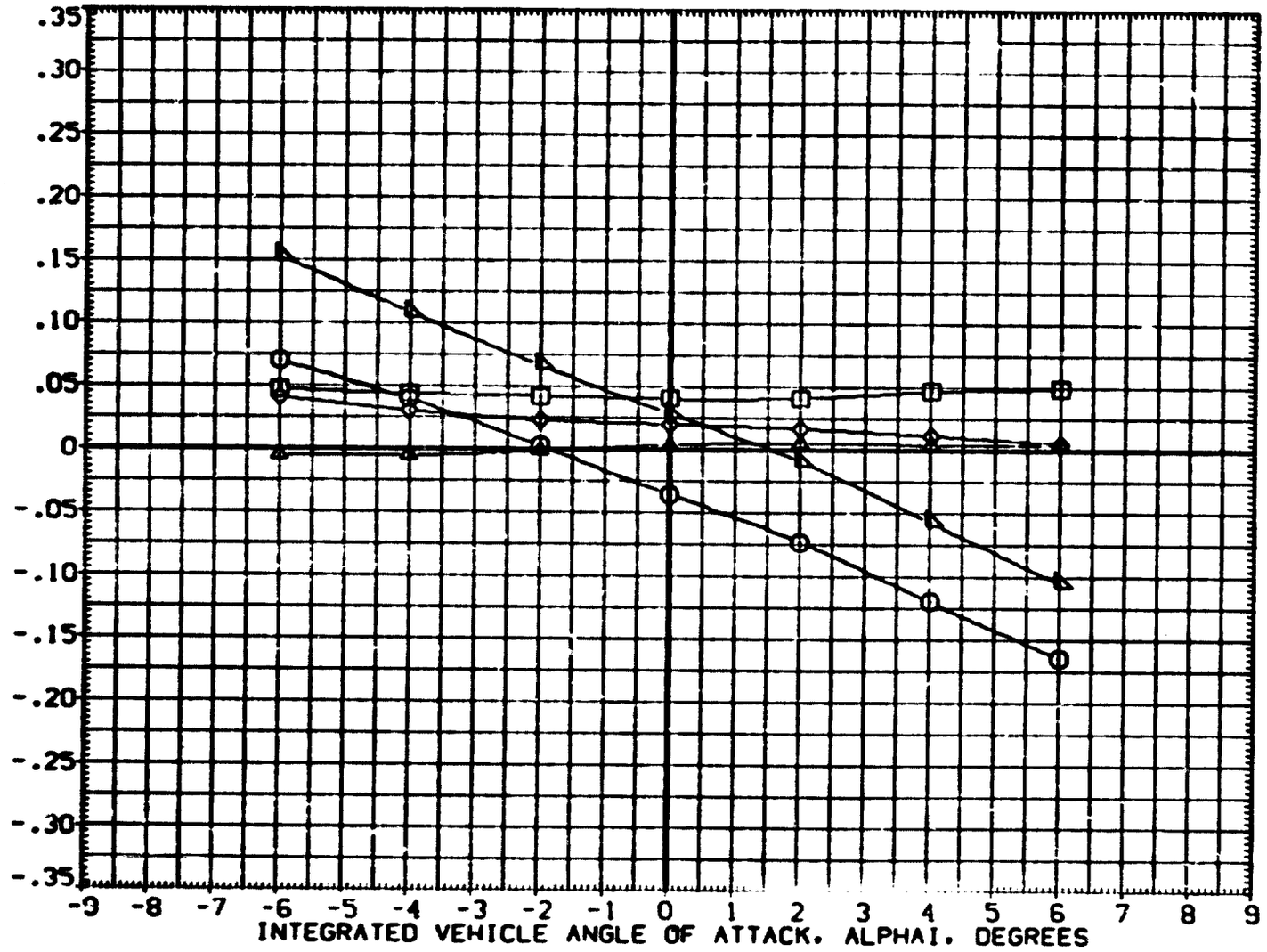


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(AETO36)	□	AMES97-019([ABI]) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(AETT36)	◇	AMES97-019([ABI]) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(AETL36)	⊠	AMES97-019([ABI]) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(AETR36)	◇	AMES97-019([ABI]) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(AETI36)	△	AMES97-019([ABI]) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

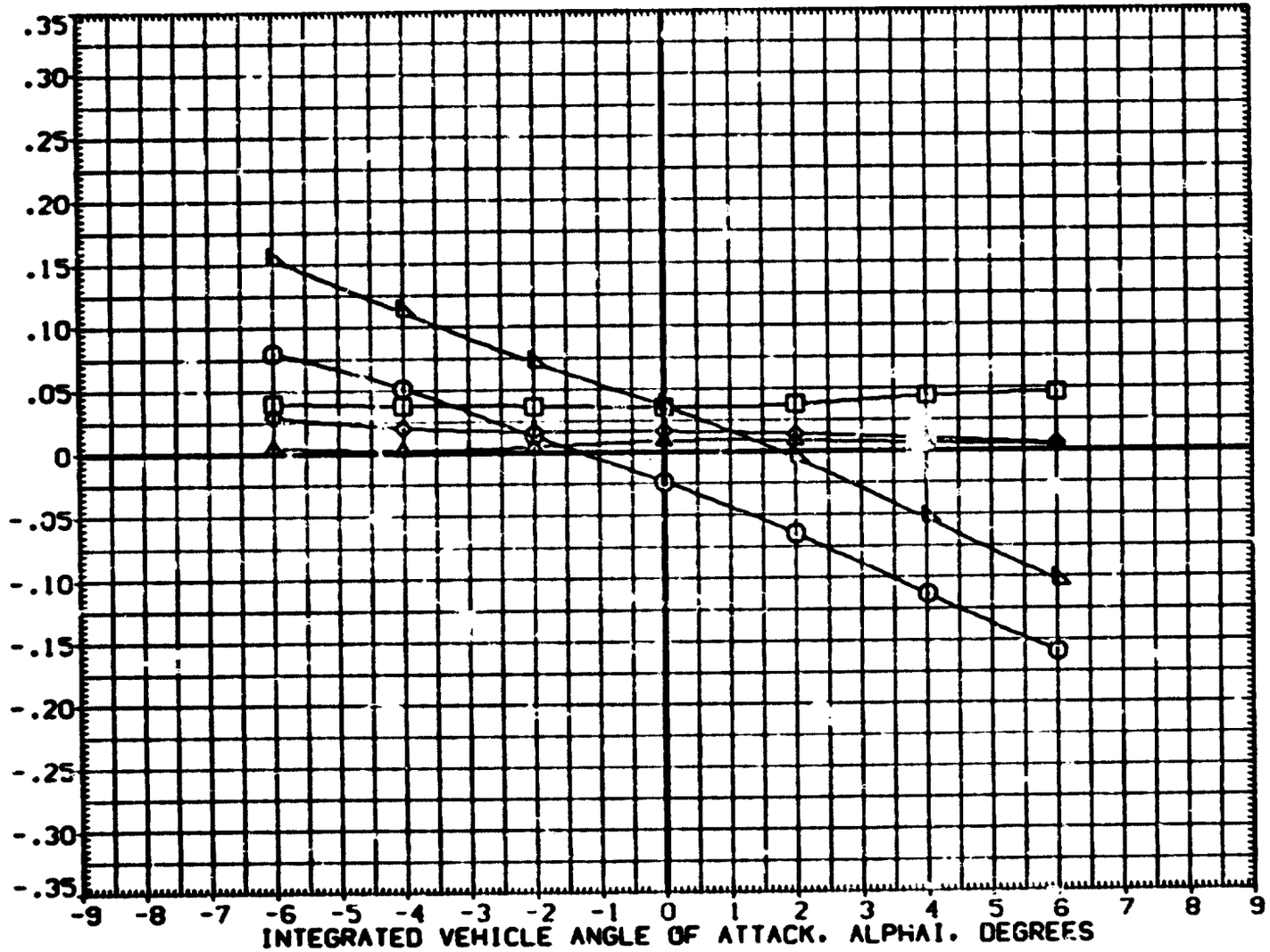


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(MET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED
(METT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED
(METL36)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED
(METR36)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED
(METI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPOBRK
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

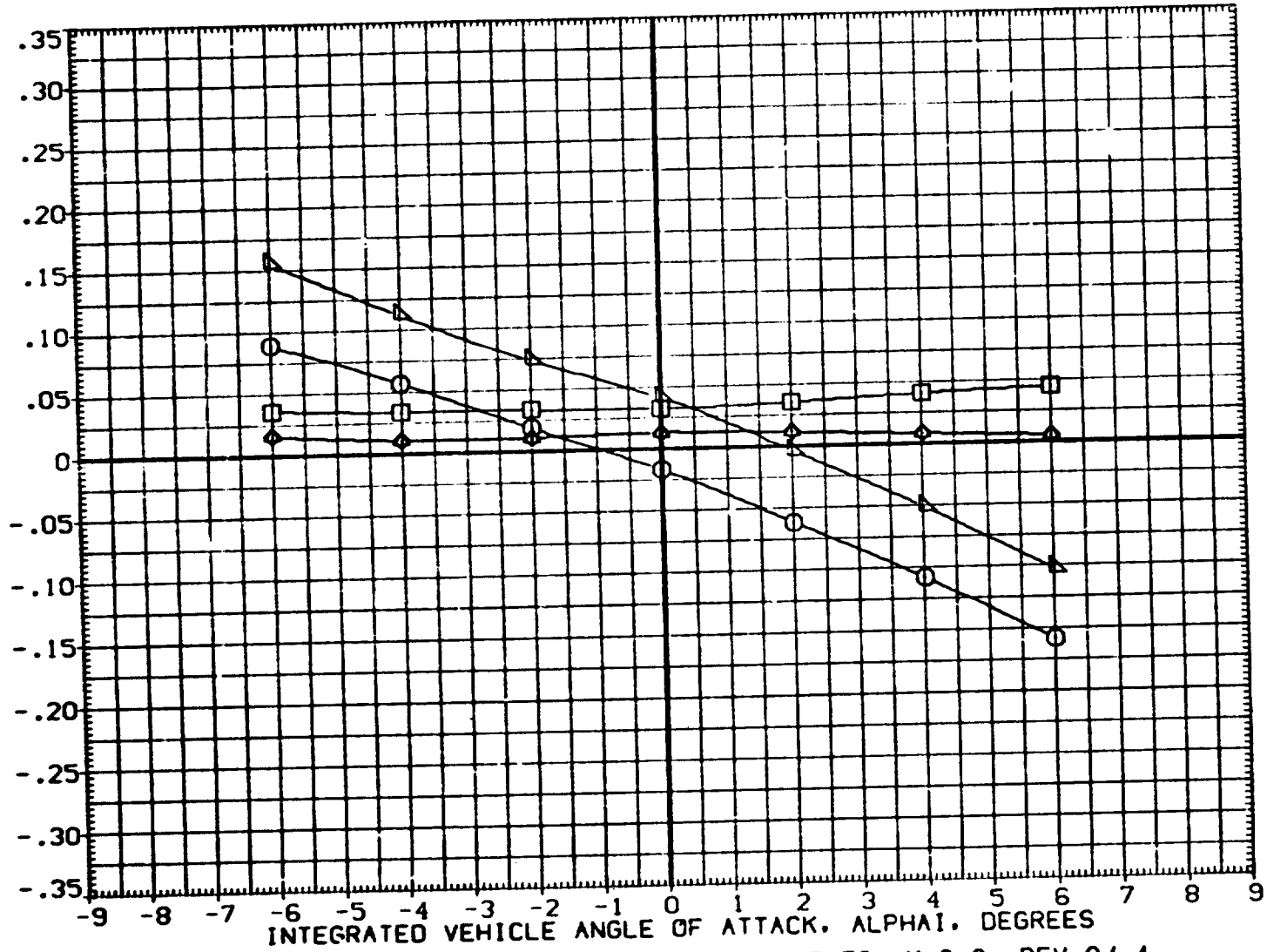


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	6.000	-4.000	2.000	.000
(MET736)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

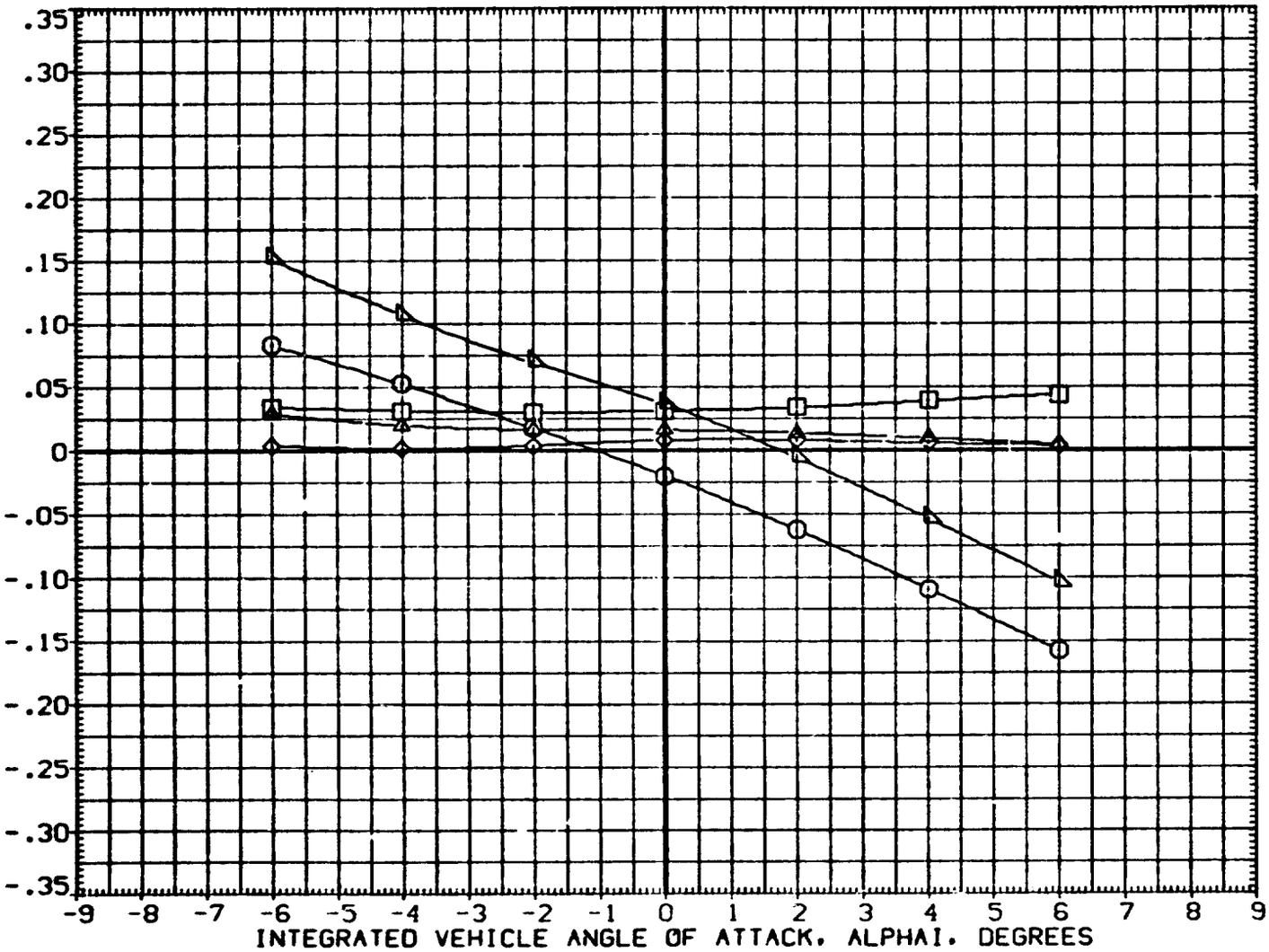


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

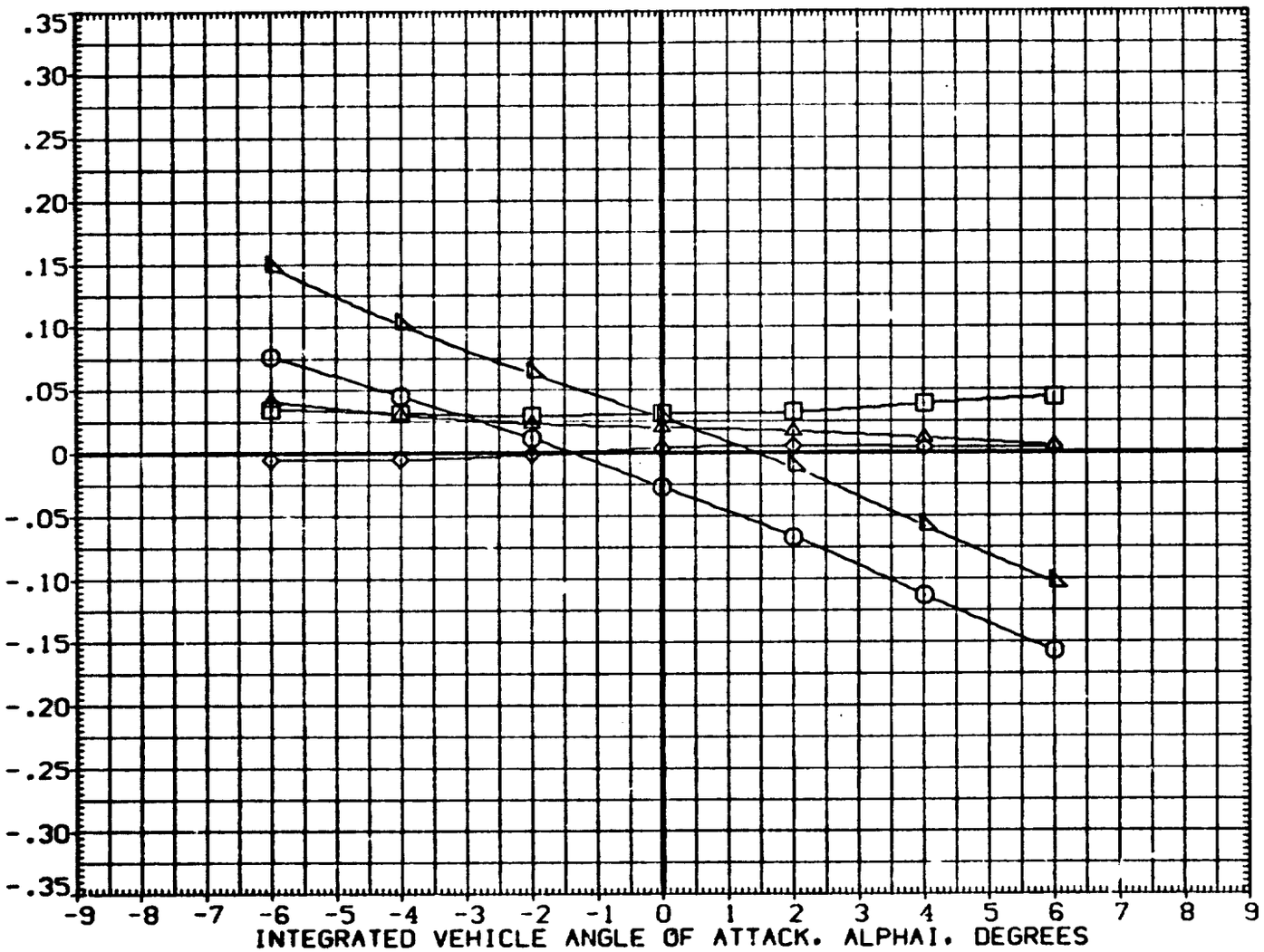


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO36)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

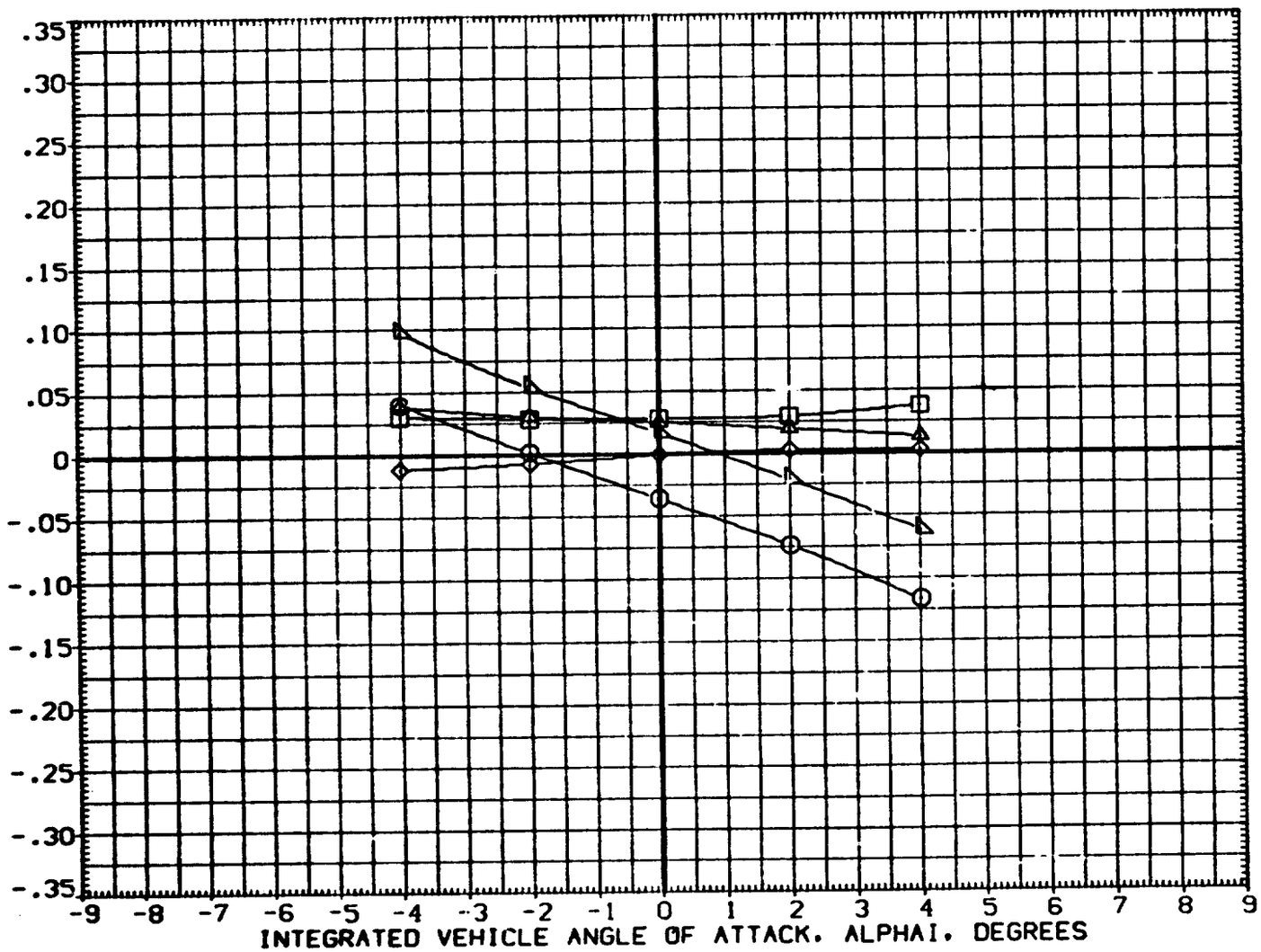


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(MET236)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(MET336)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET436)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

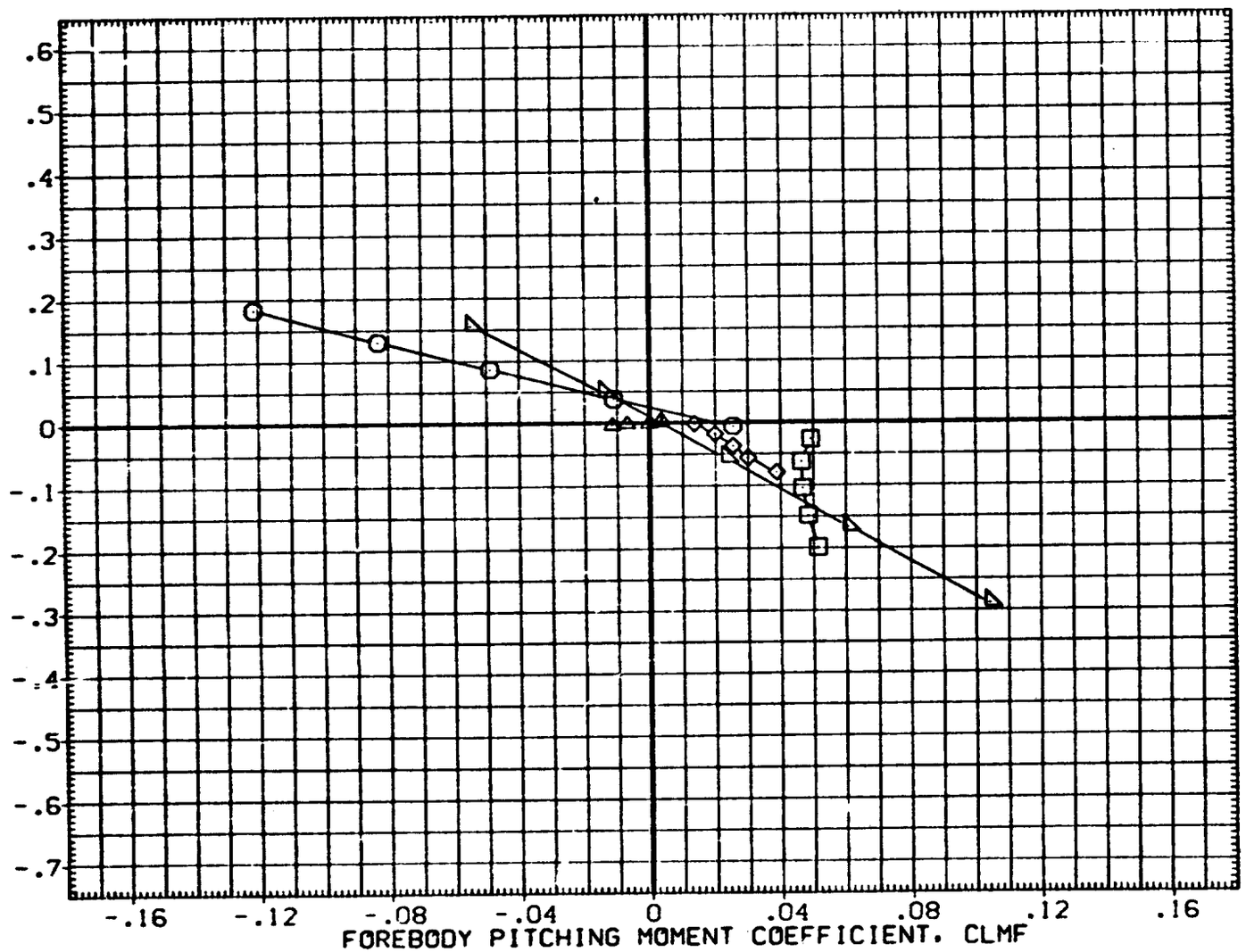


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)	▷◁	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(MET136)	▽△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

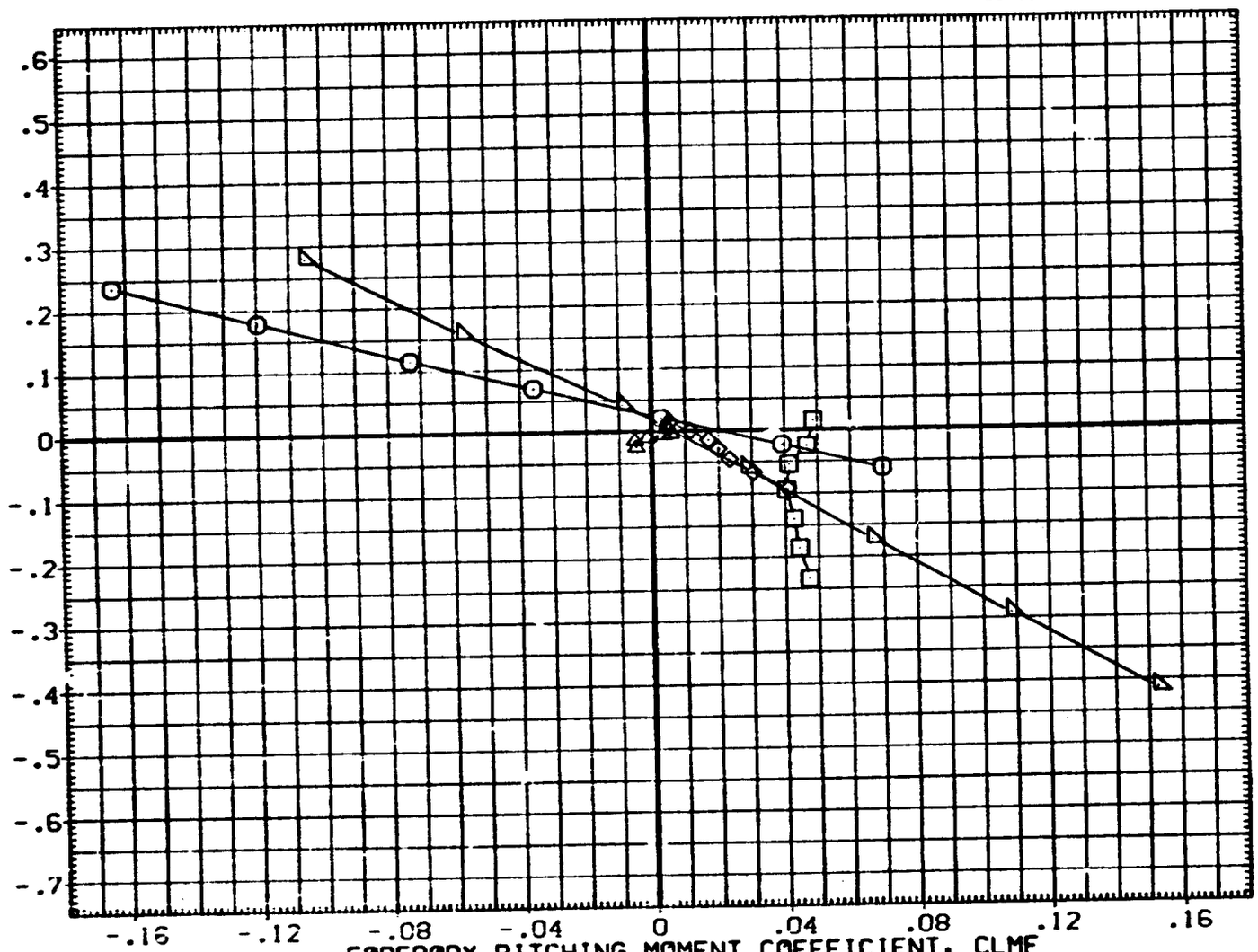


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(MET036)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED
(MET736)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED
(METL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED
(METR36)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED
(MET136)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPDBRK
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

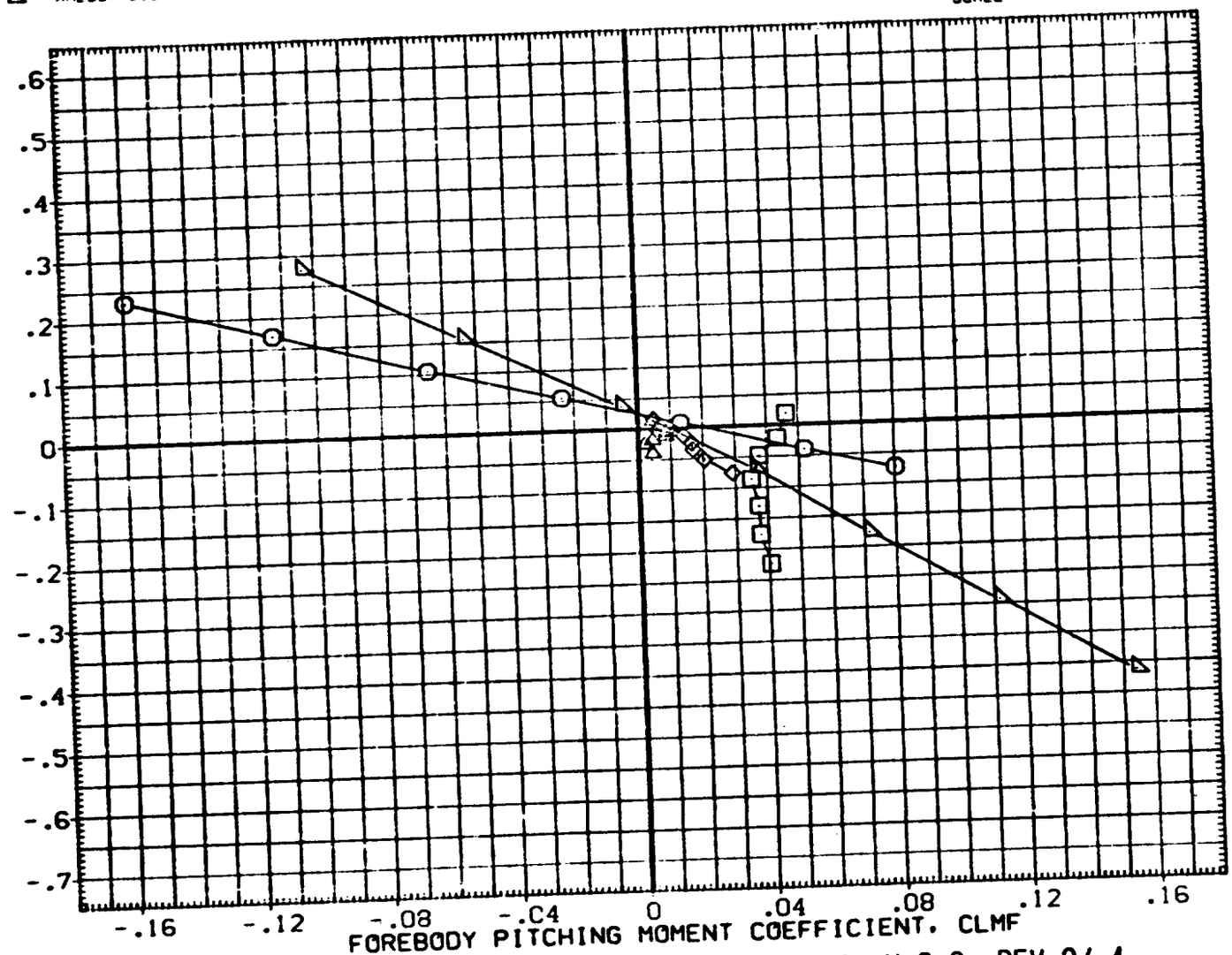


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(METL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

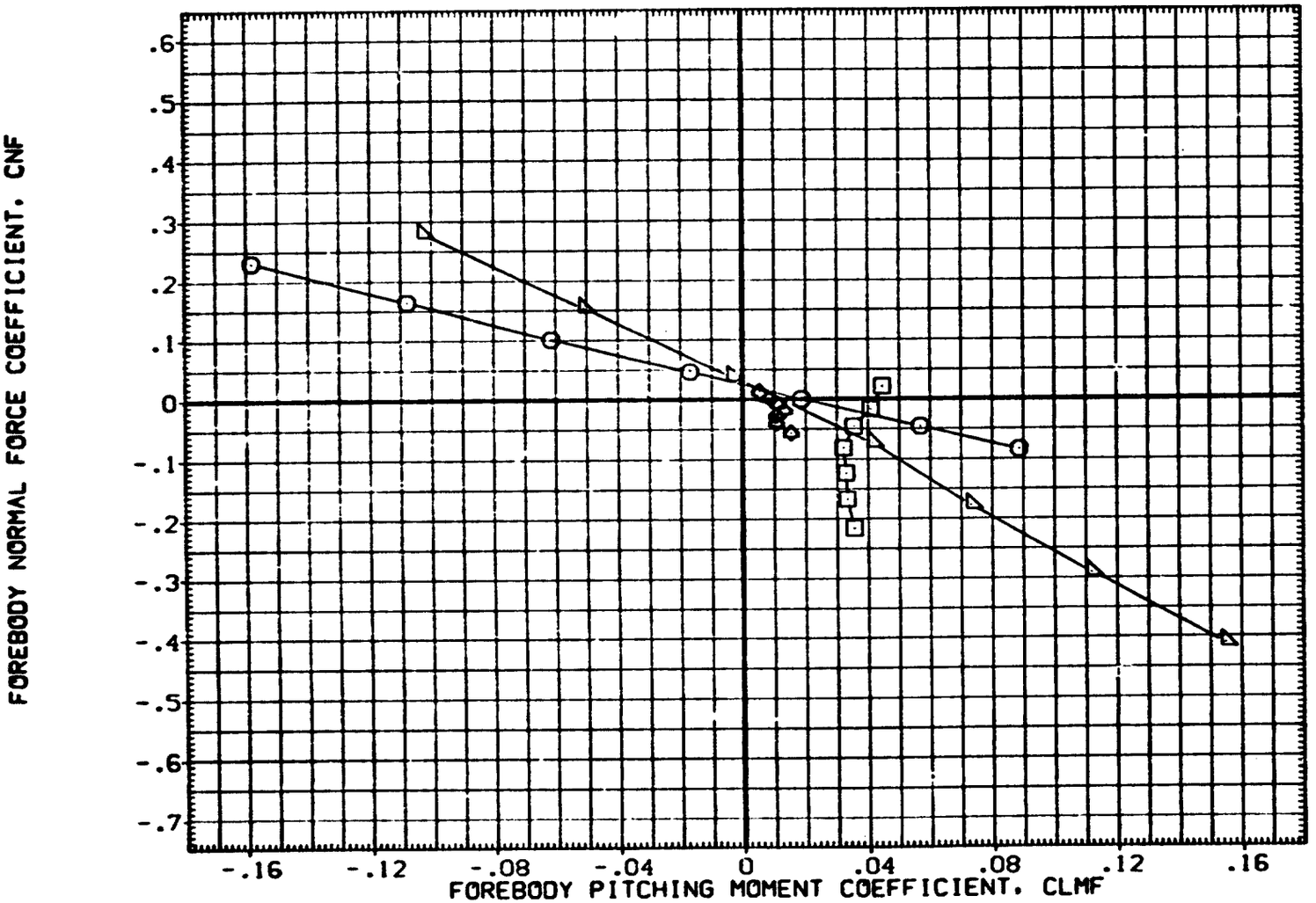


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET036)	○	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(MET136)	□	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)	⋈	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)	⋈	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)	△	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

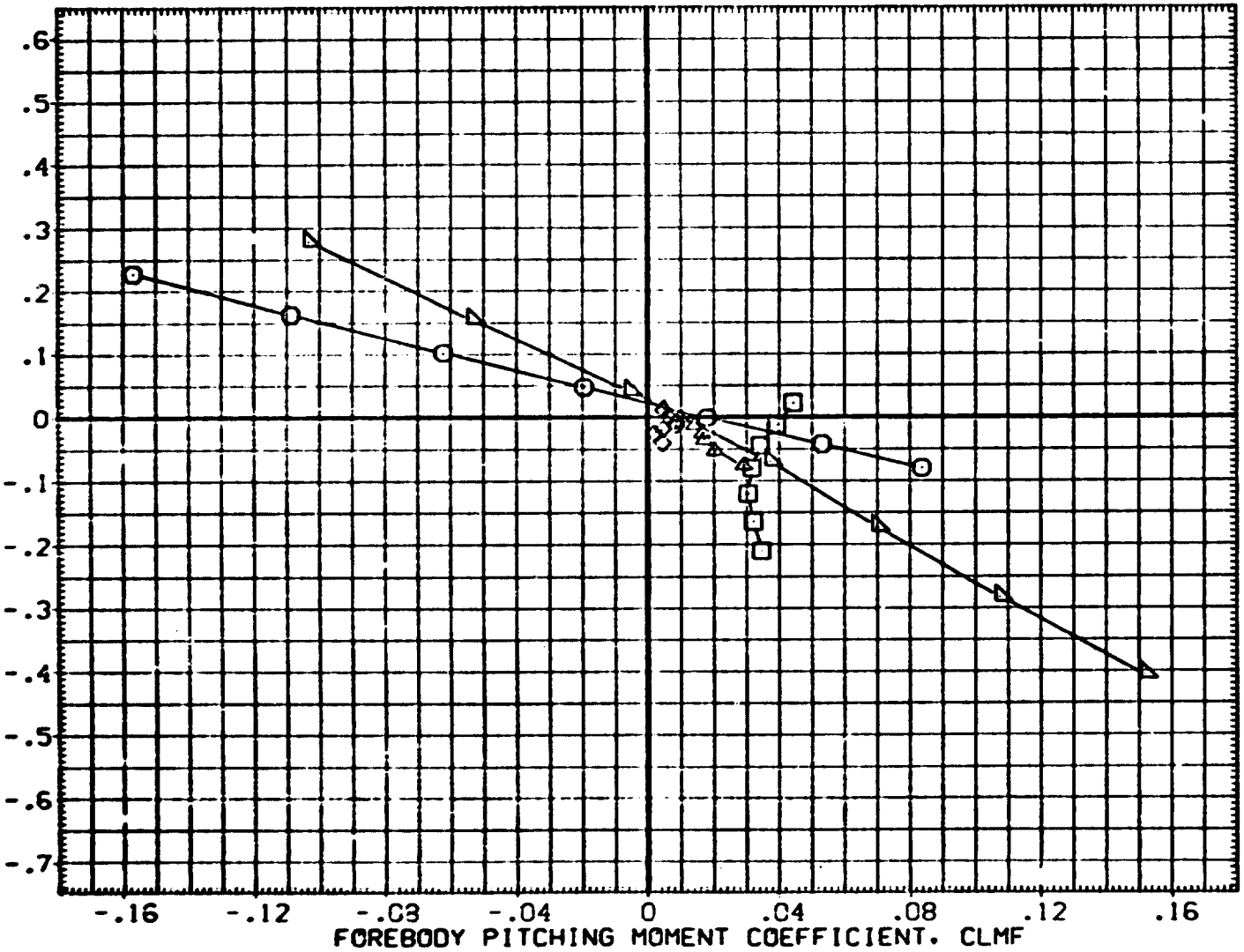


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET036)		AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METT36)		AMES97-019([A81]) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)		AMES97-013([A81]) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019([A81]) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(METI36)		AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

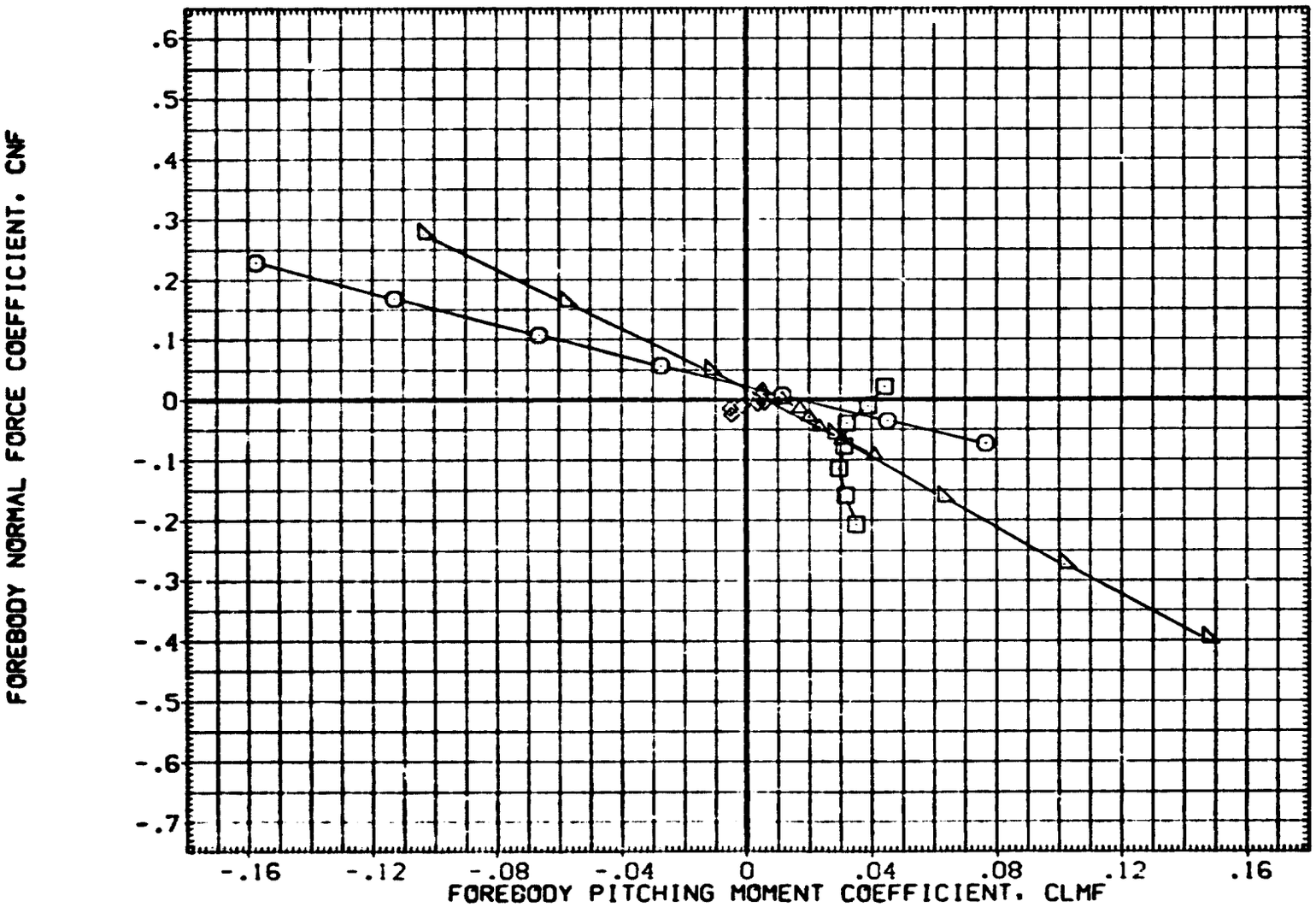


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(MET036)		AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(MET136)		AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(METL36)		AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(METR36)		AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(MET136)		AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

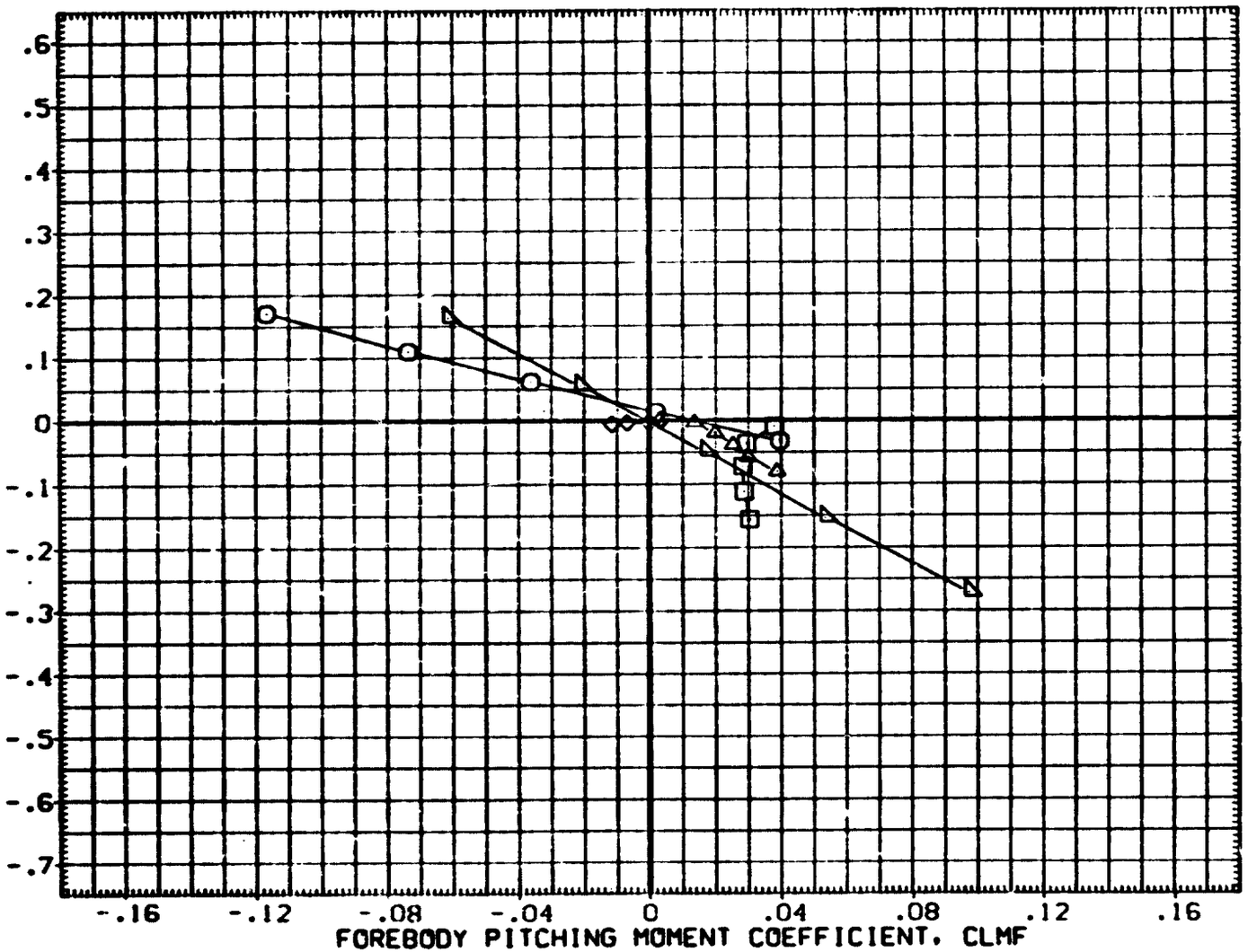


FIG. 8 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)BET,1 = 8.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET040)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(METT40)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(METI40)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

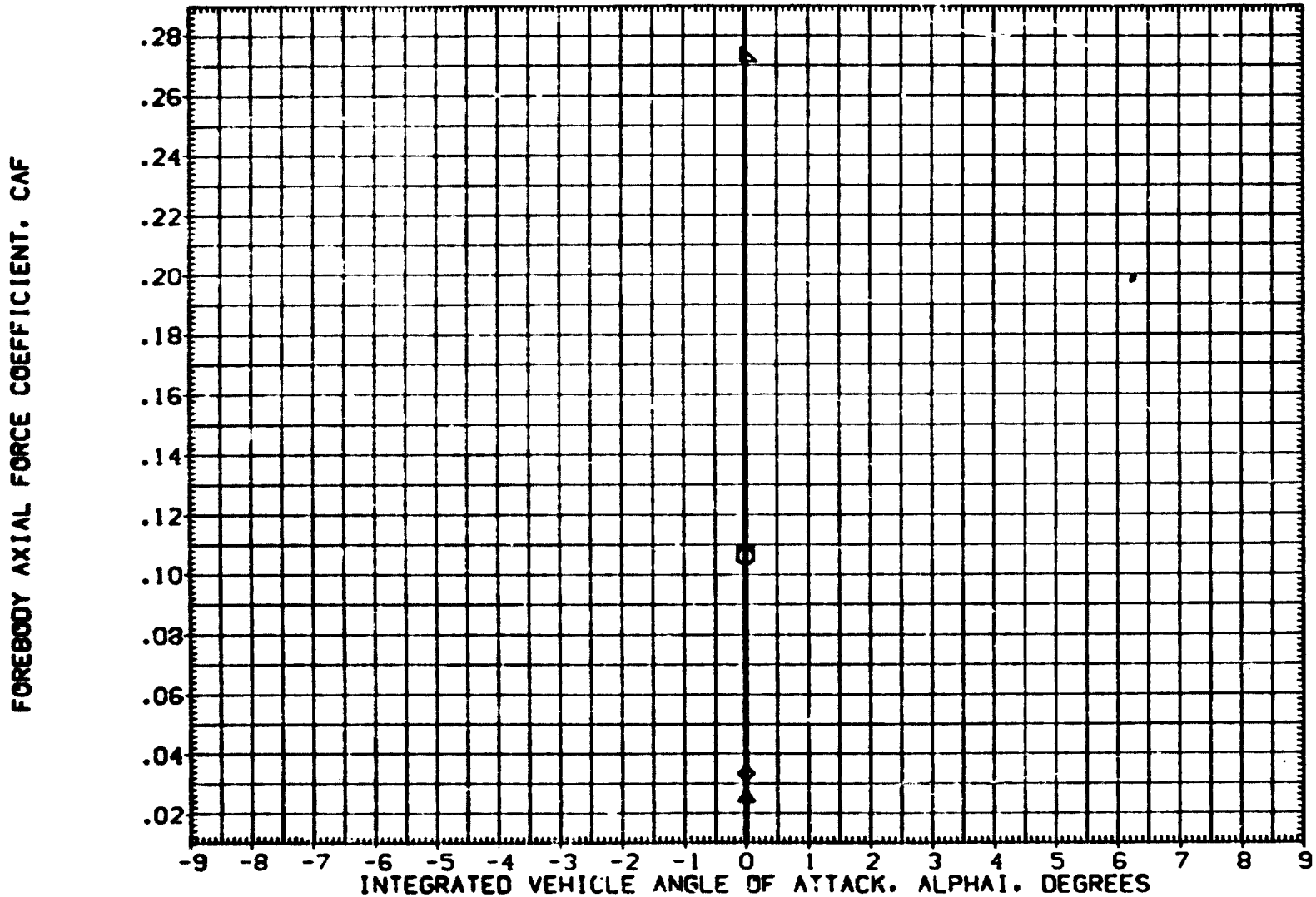


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)BETAI = -5.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET040)		AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019([A81]) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019([A81]) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

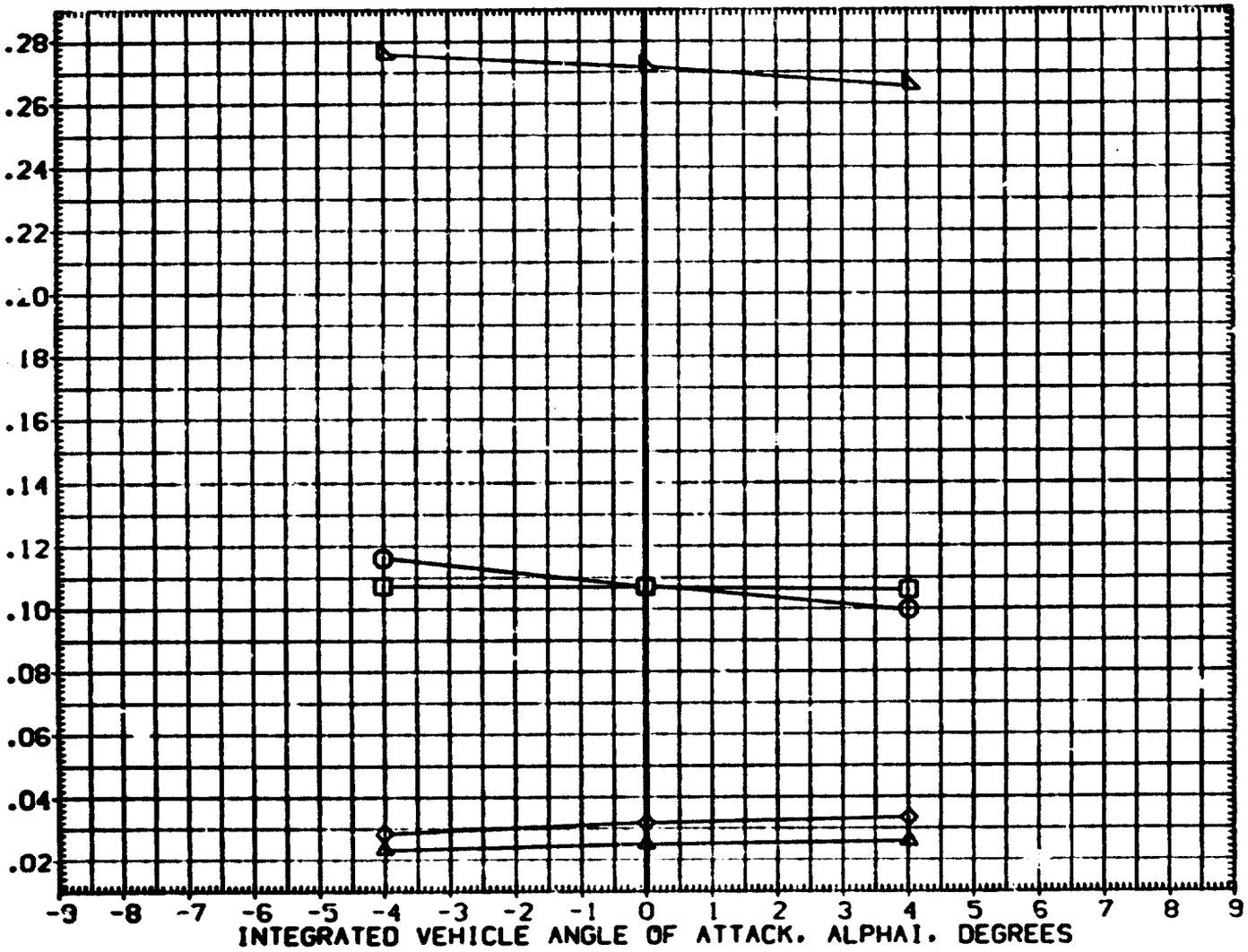


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPOBRK
(MET040)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0300	IN. ZT
SCALE	.0300	

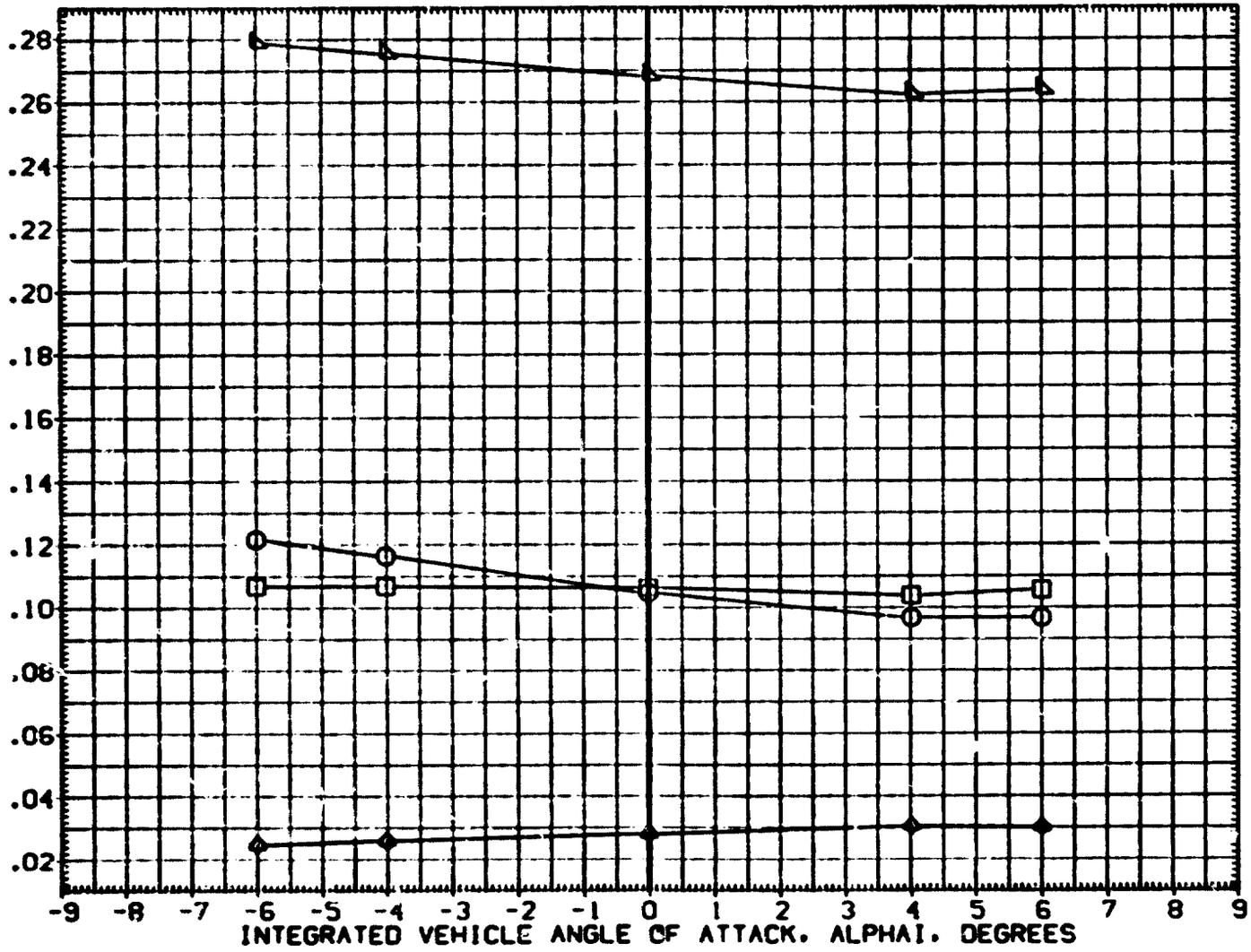


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

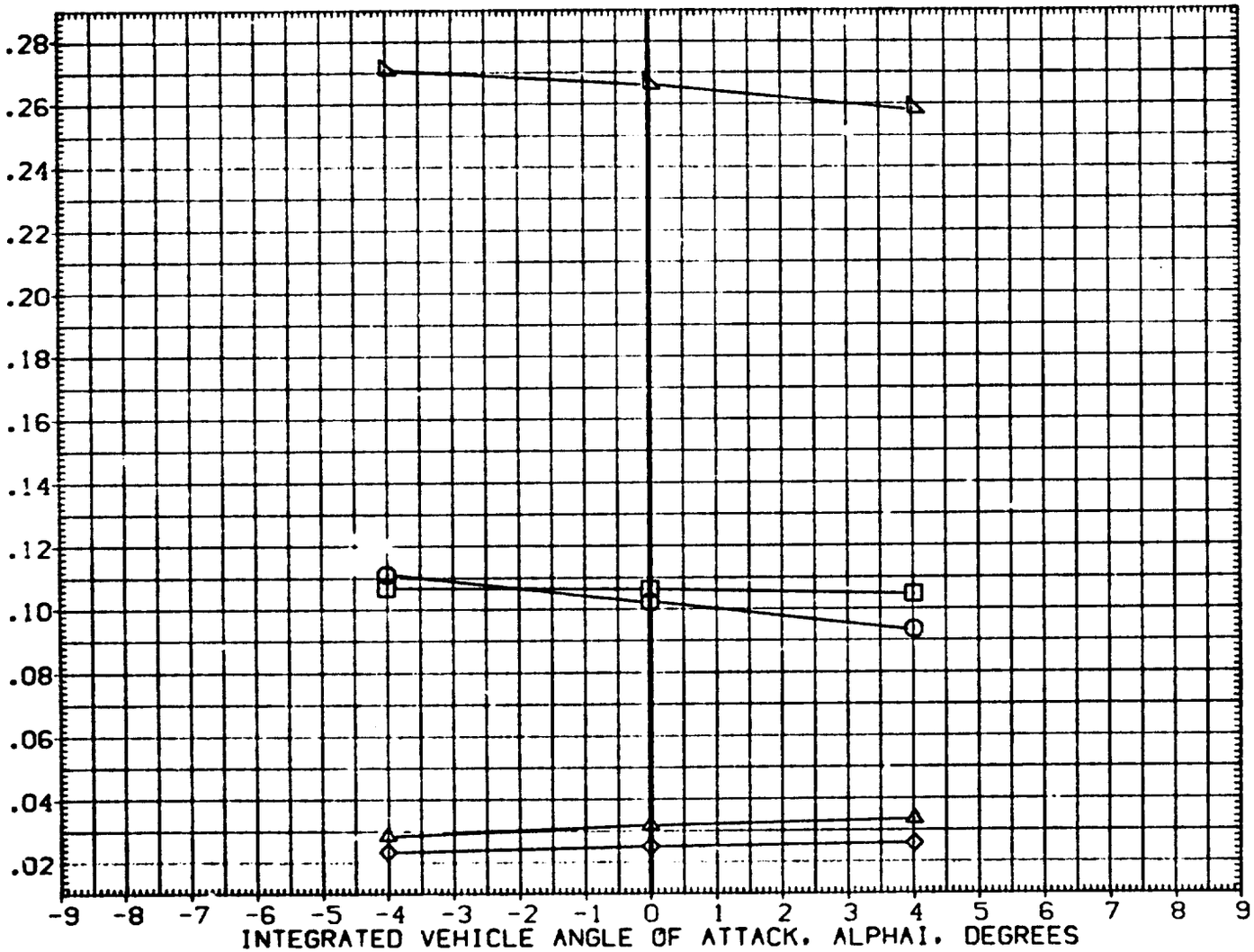


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(METT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019(IA81) LVAF L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(METI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

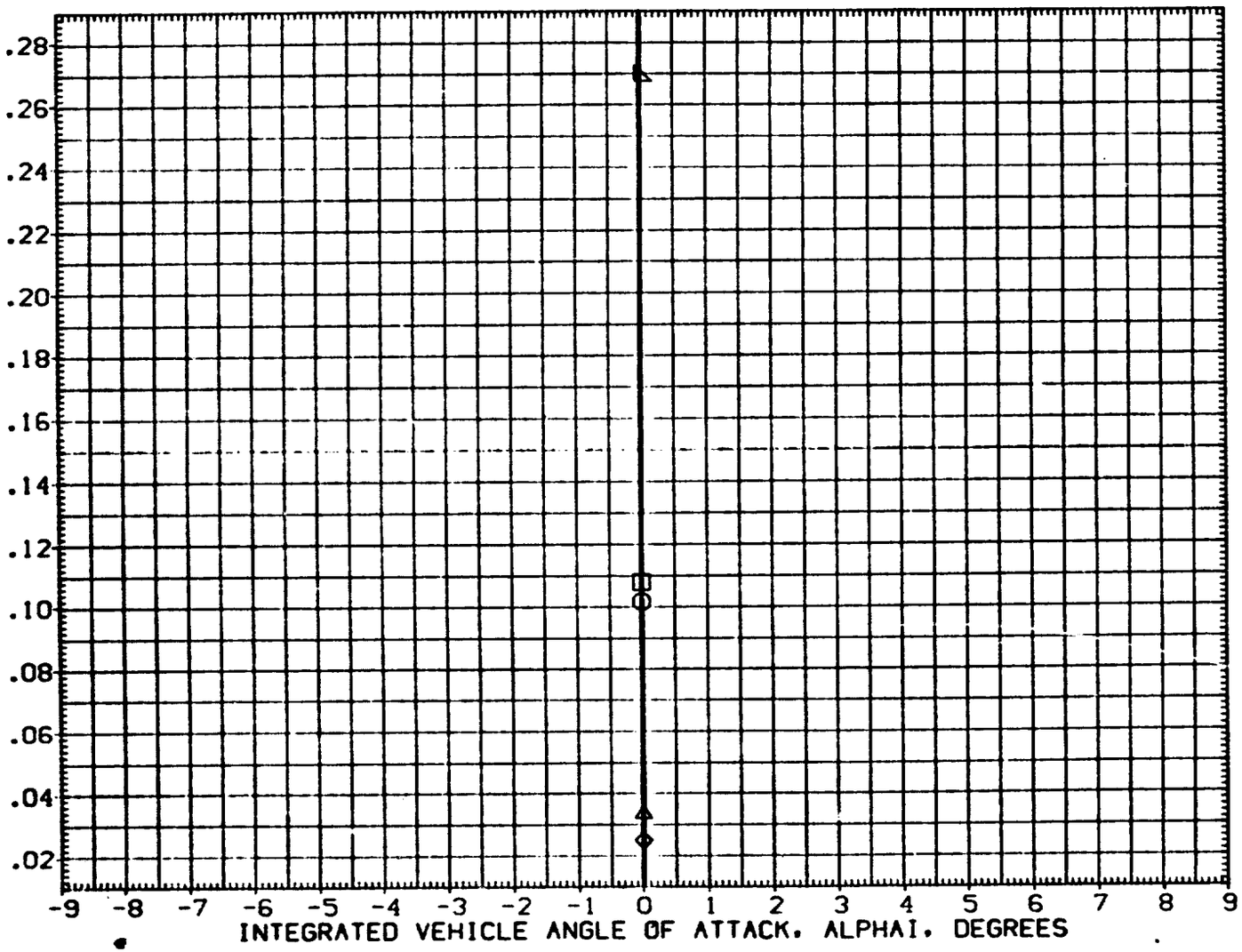


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

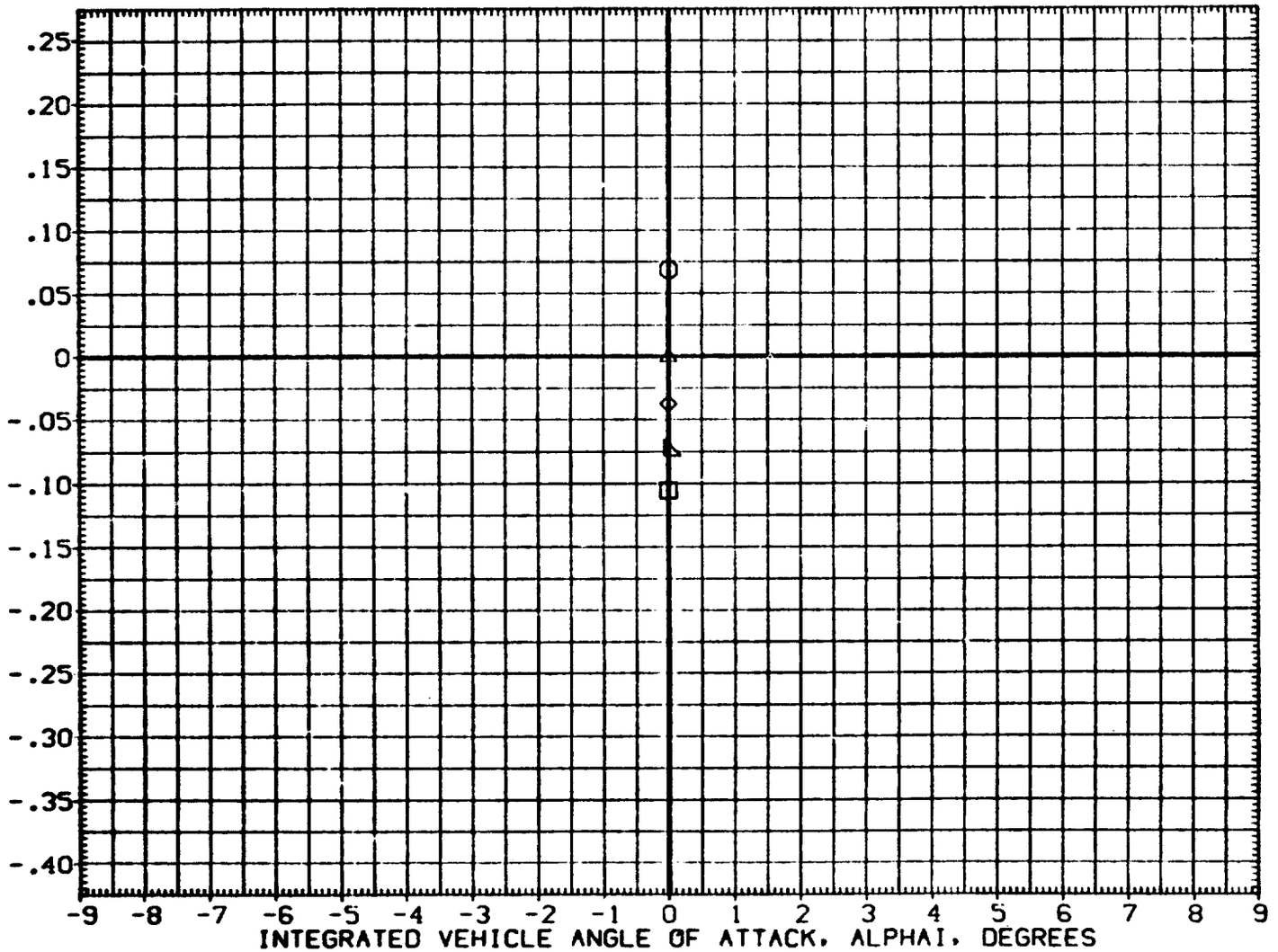


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(METT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(METI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

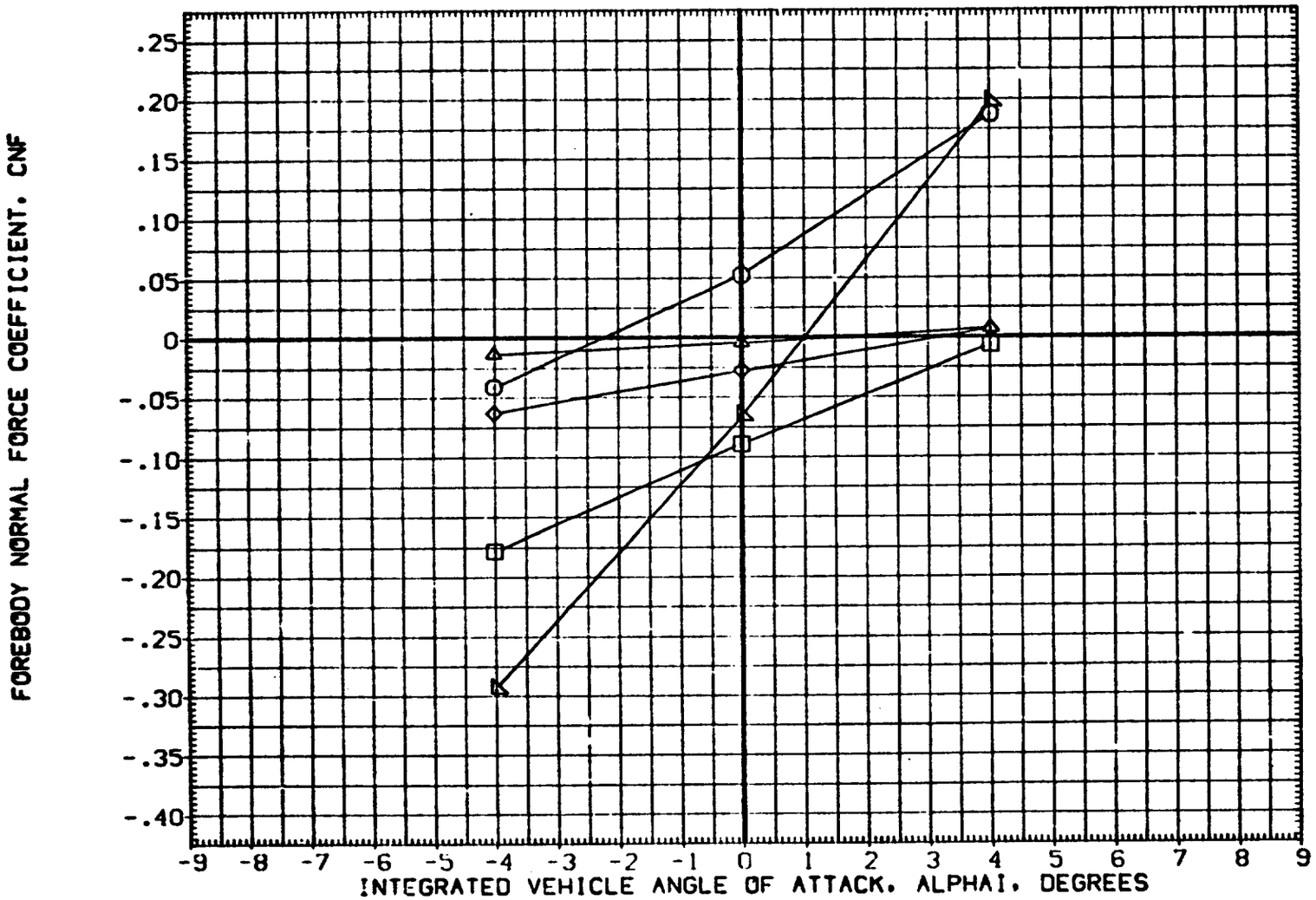


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(METI40)	▷	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

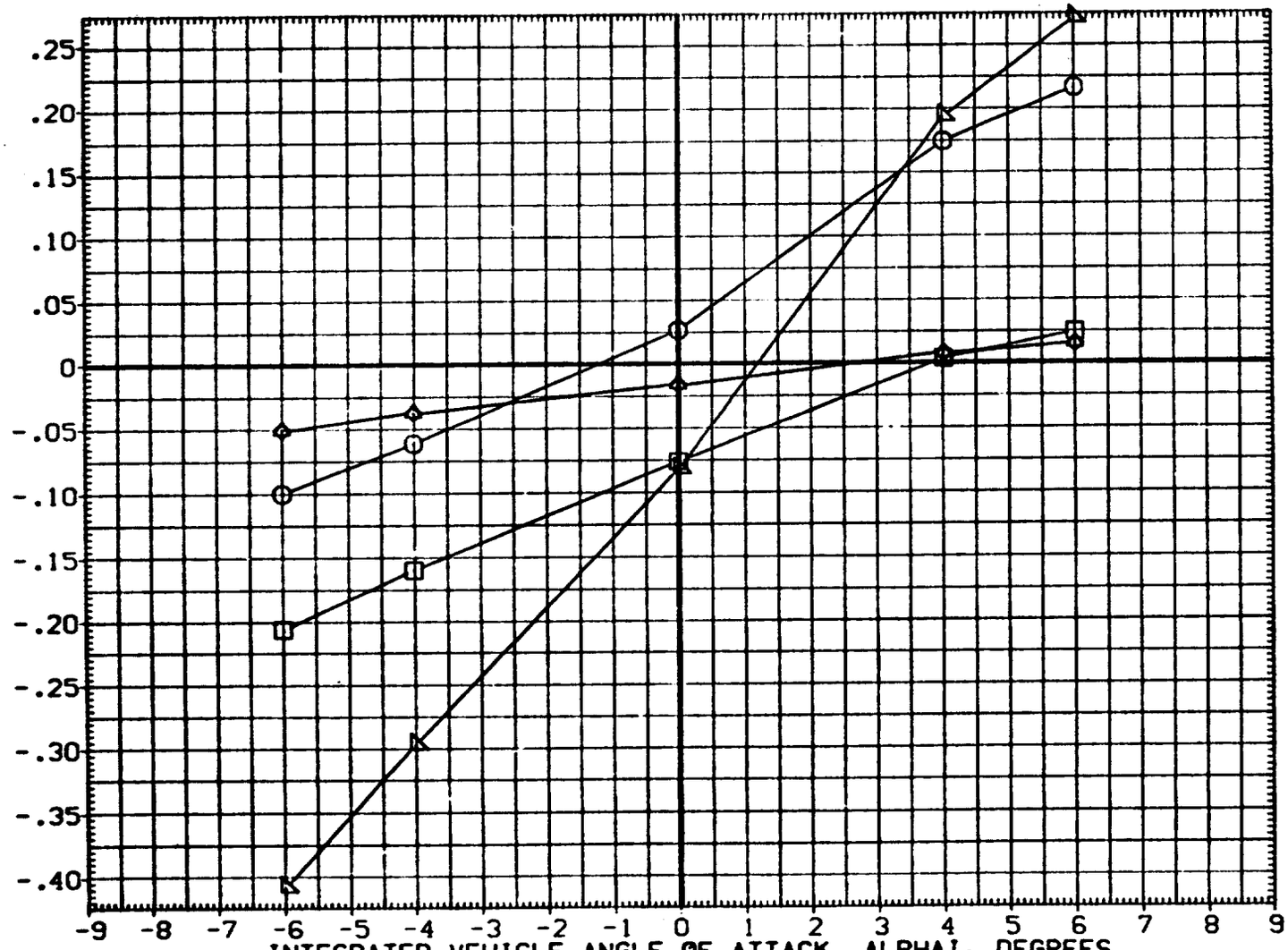


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

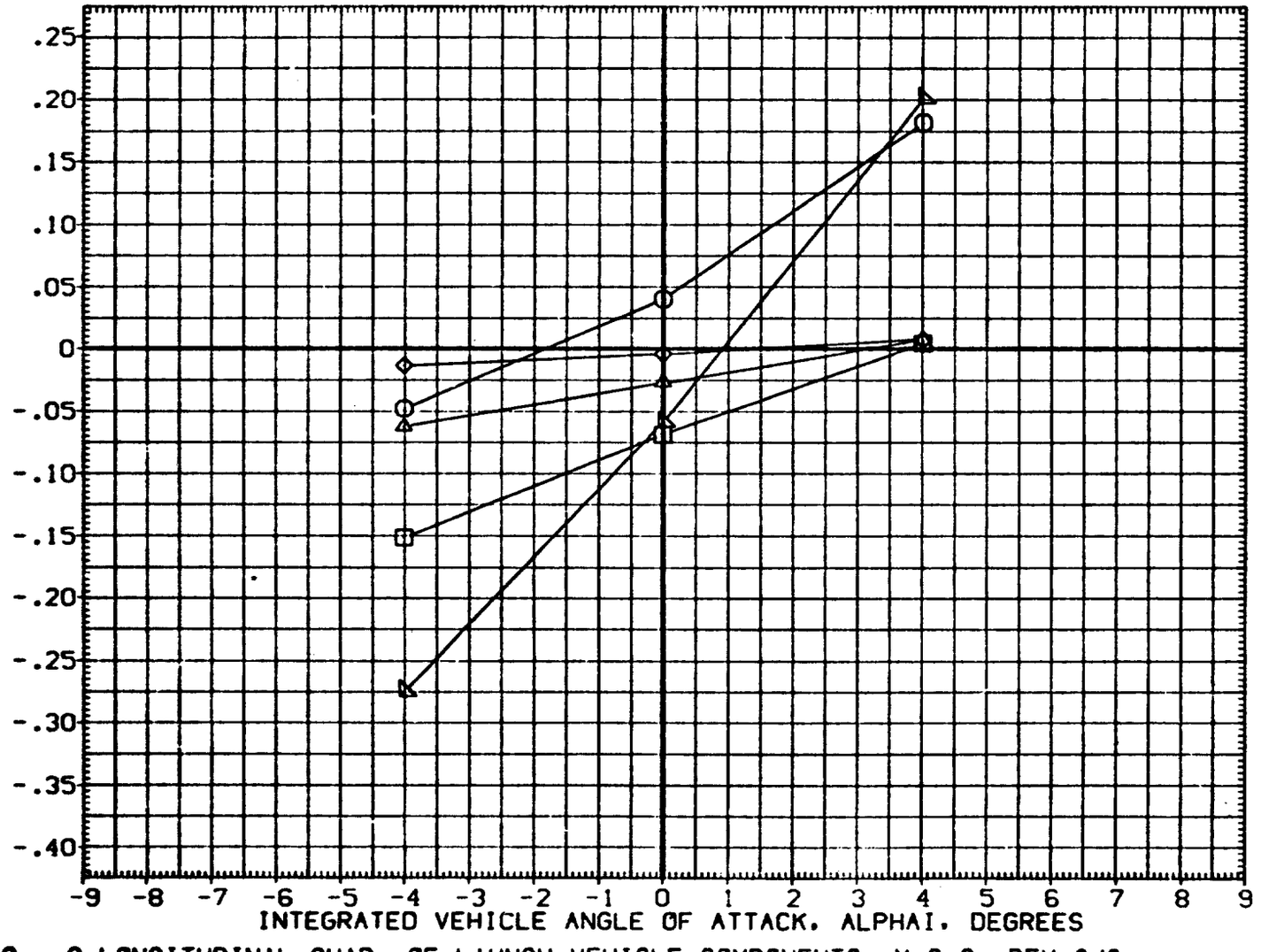


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)BETAI = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

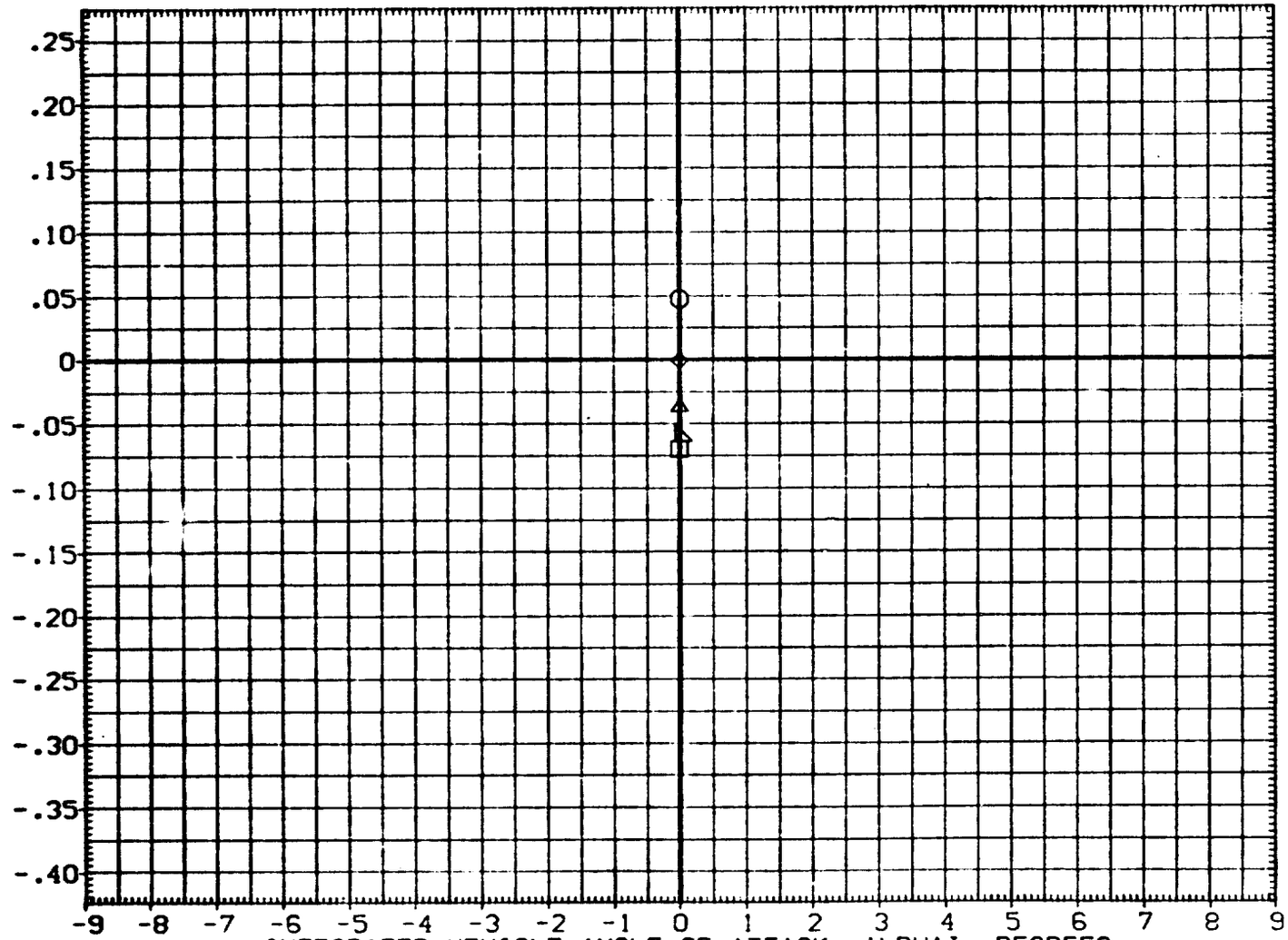


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 JEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	△	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	▽	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◁	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

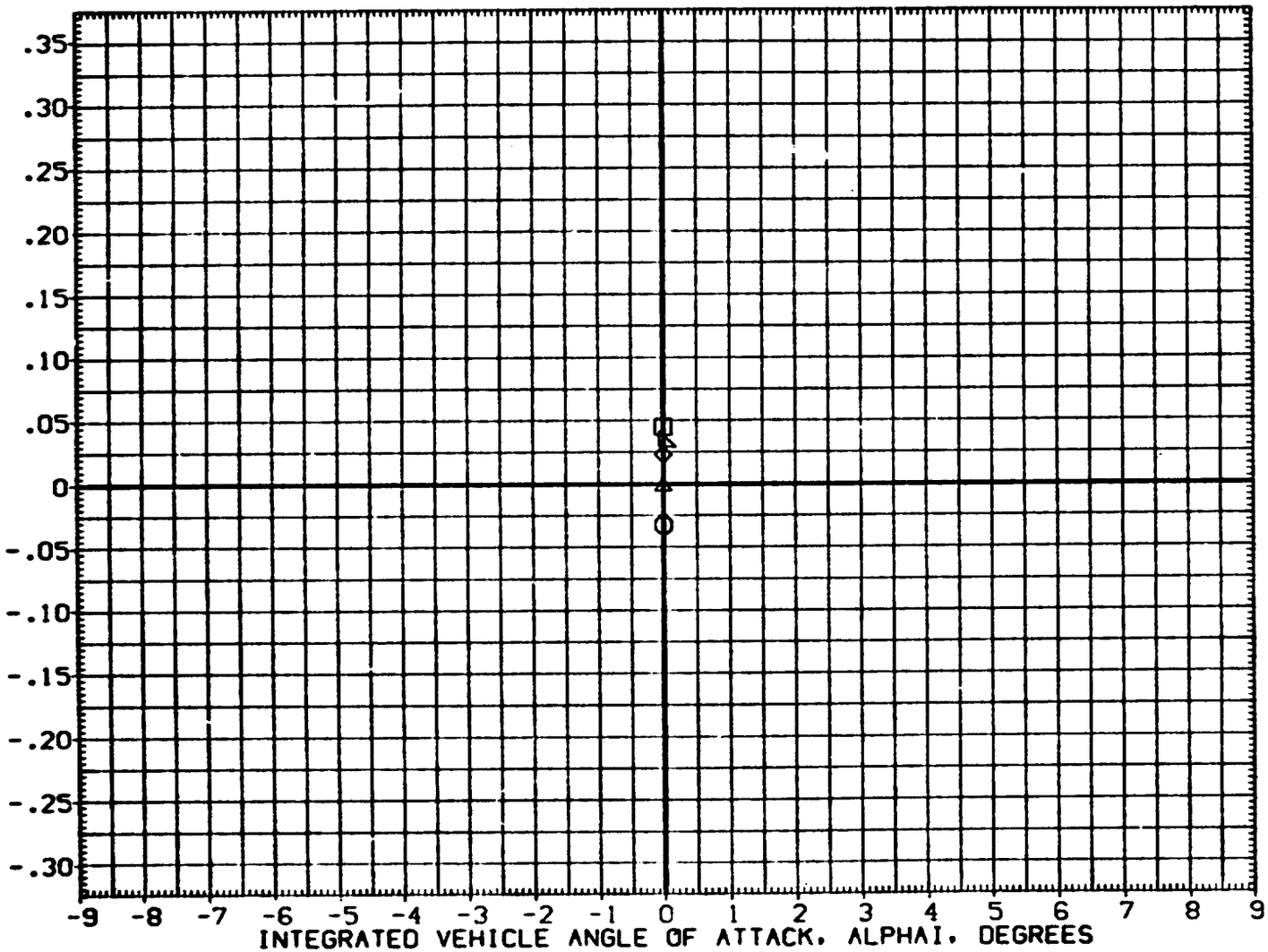


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(MET040)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

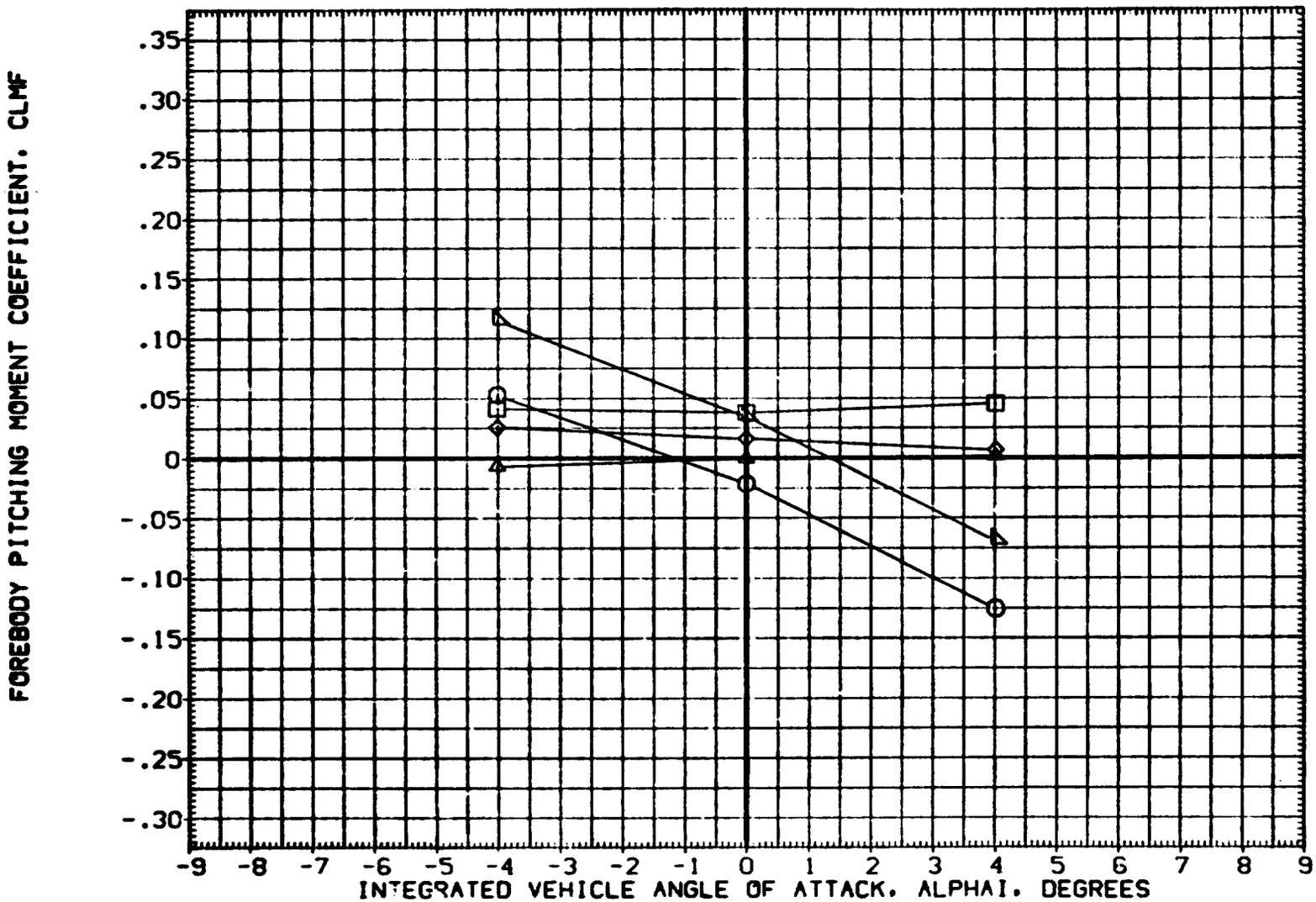


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	◇	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

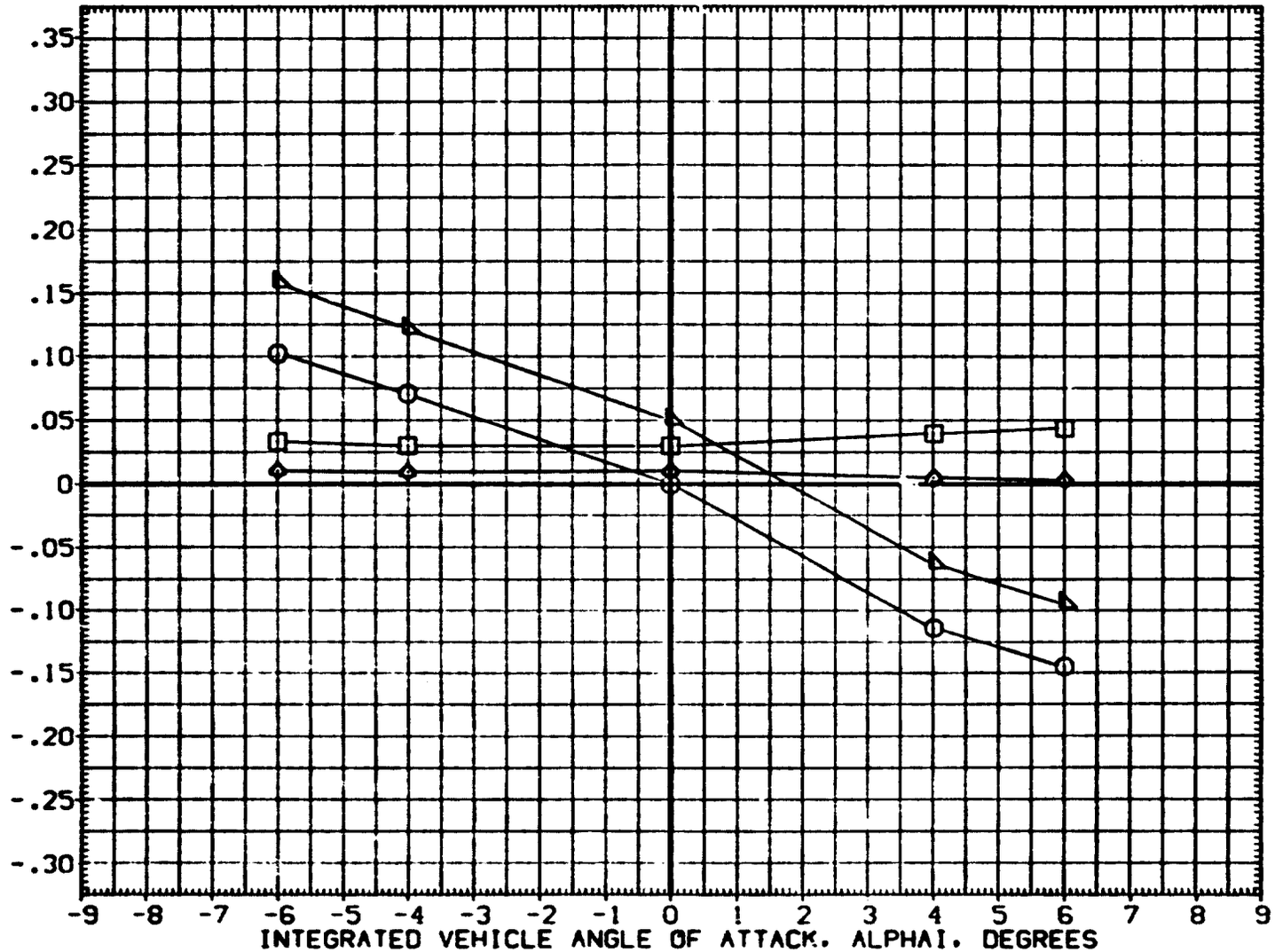


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)BETA1 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPOBRK
(MET040)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)	▷	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)	⊲	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(METI40)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

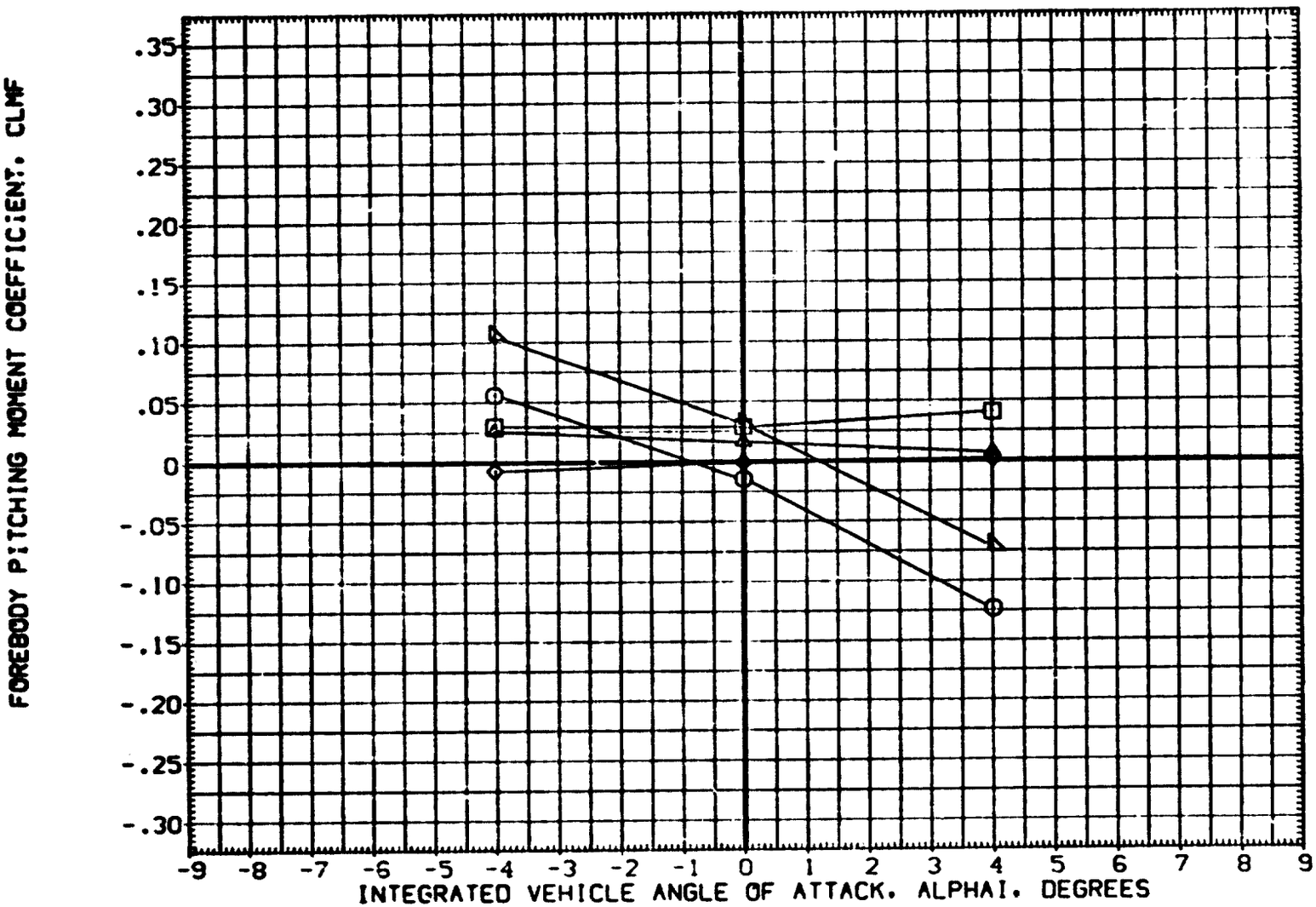


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(METT40)	⊠	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(METL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(METR40)	△	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(MET140)	▽	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

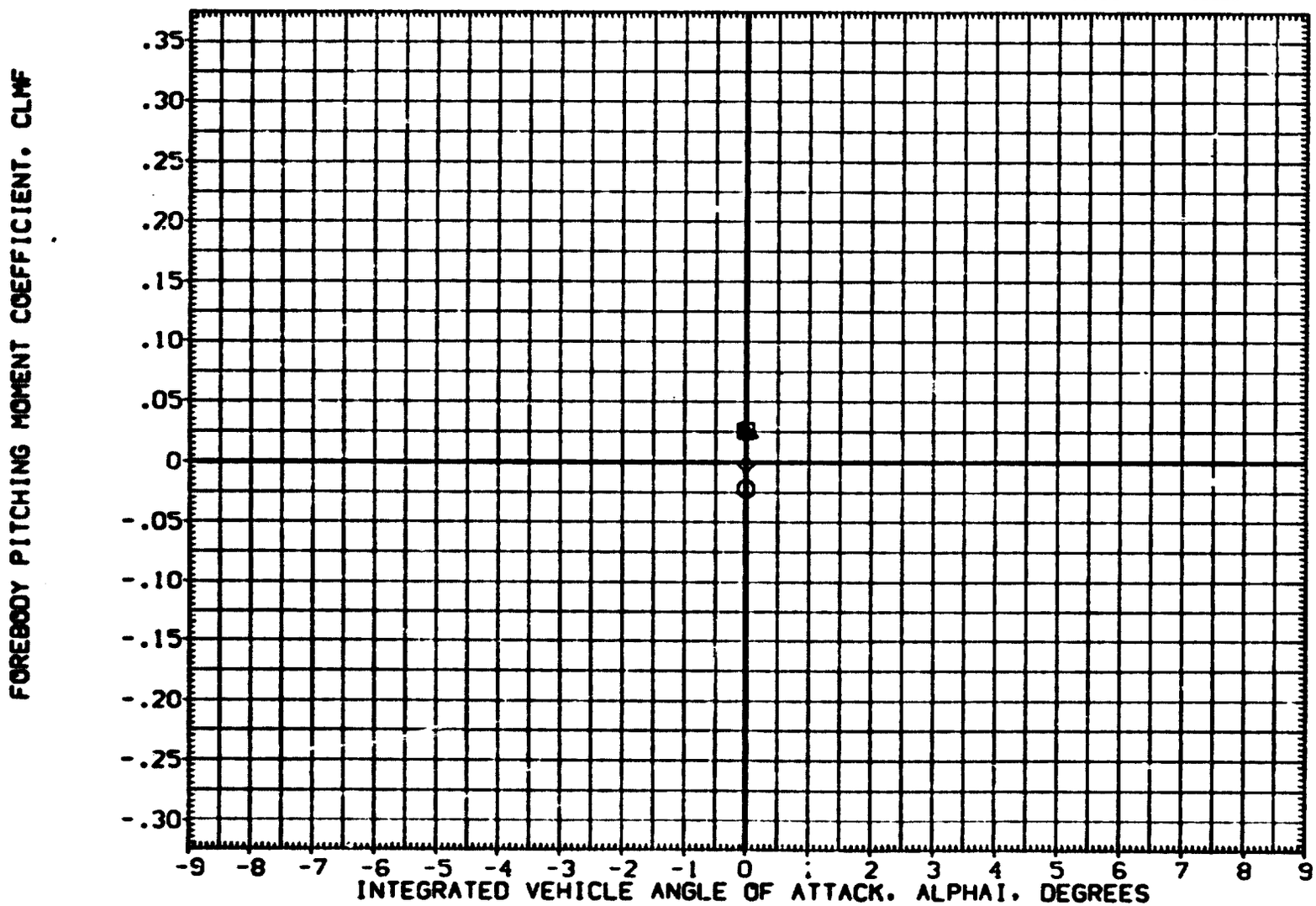


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPOBRK
(AETO40)	□	AMES97-019C(AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(AETT40)	◇	AMES97-019C(AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(AETL40)	△	AMES97-019C(AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(AETR40)	▽	AMES97-019C(AB1) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(AETI40)	◁	AMES97-019C(AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

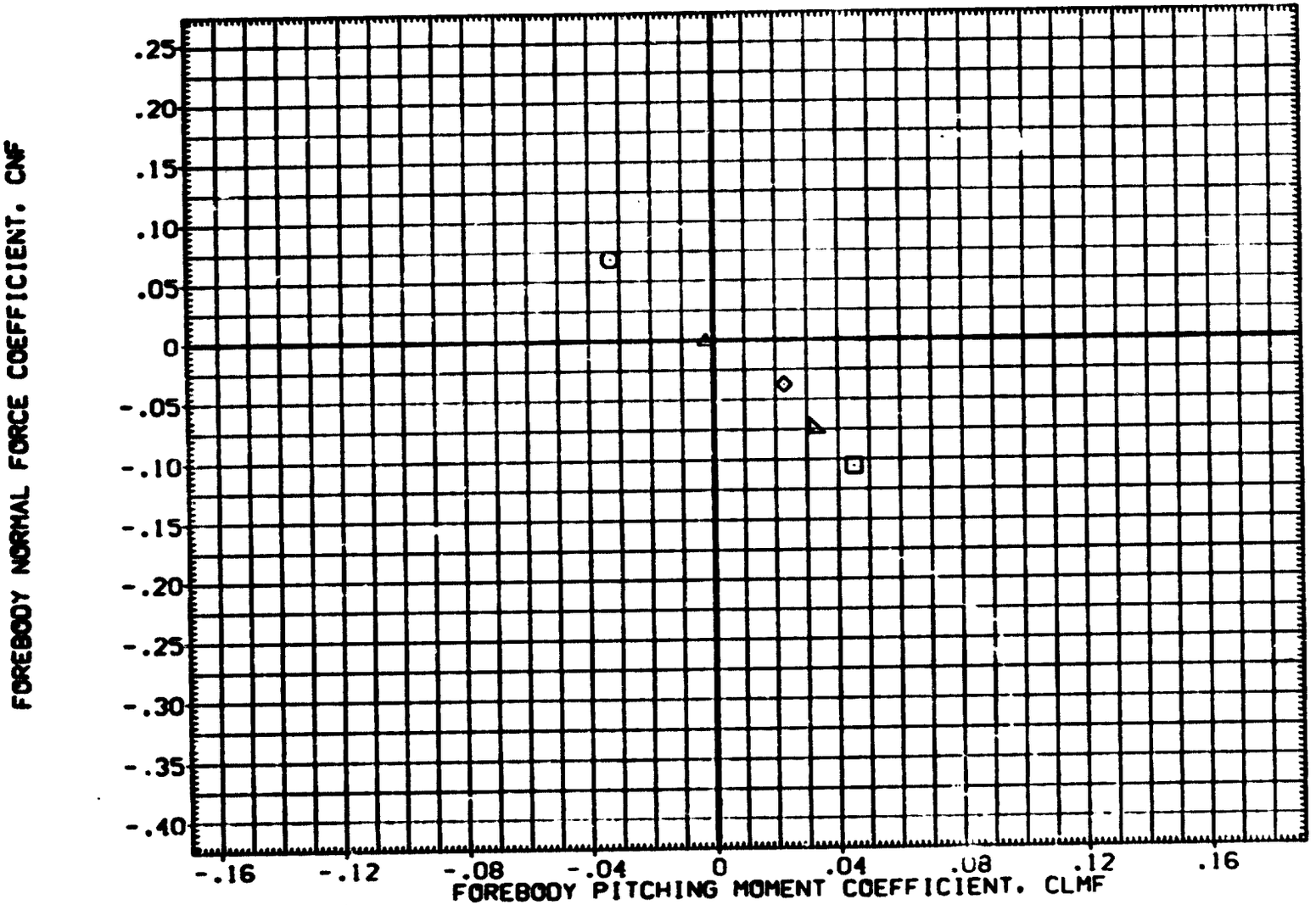


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPOBRK
(RETO40)	○	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(RETT40)	□	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(RETL40)	◇	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(RETR40)	△	AMES97-019([AB1]) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(RETI40)	▽	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

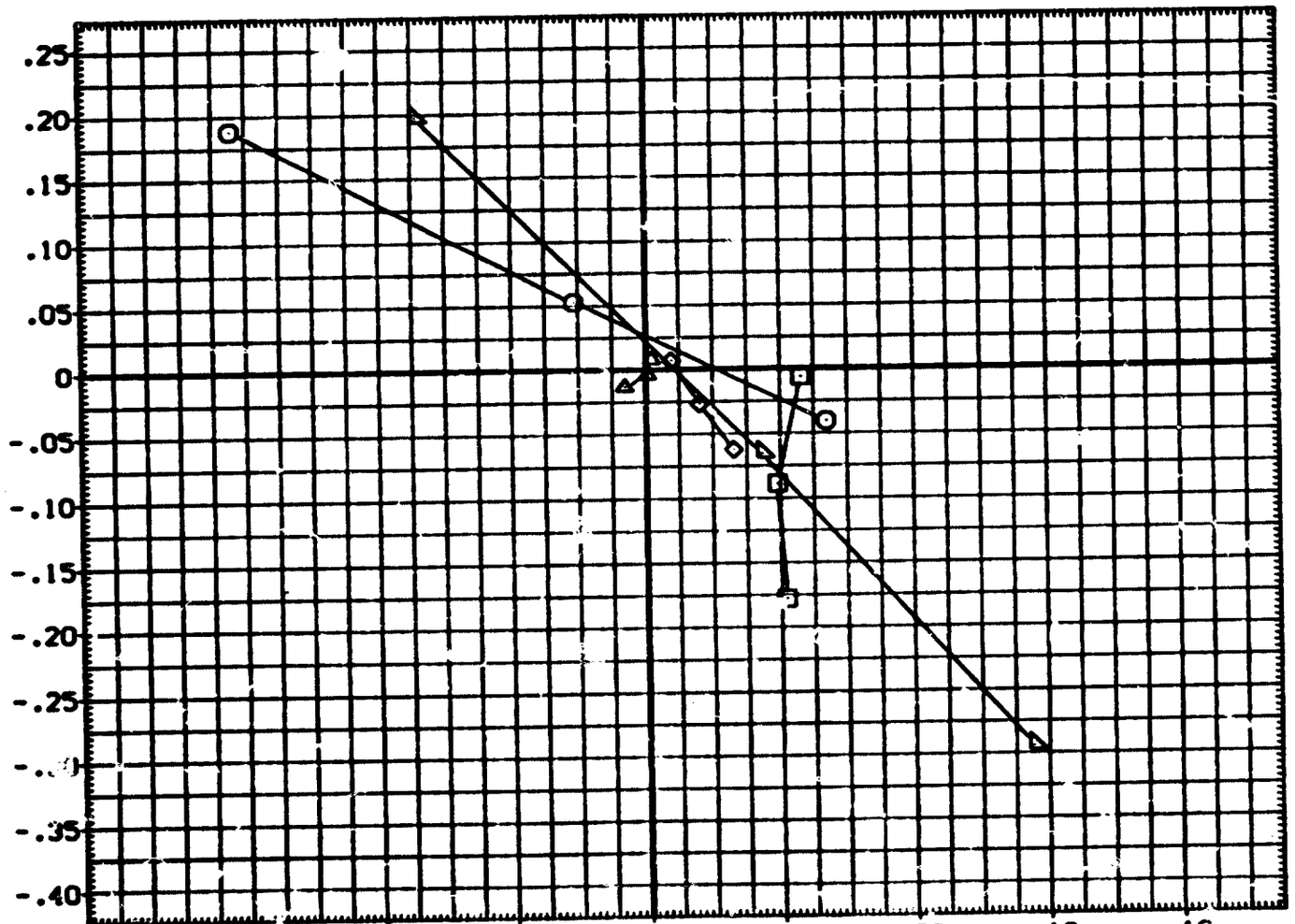


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)RET,L = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(METL40)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(METR40)		AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

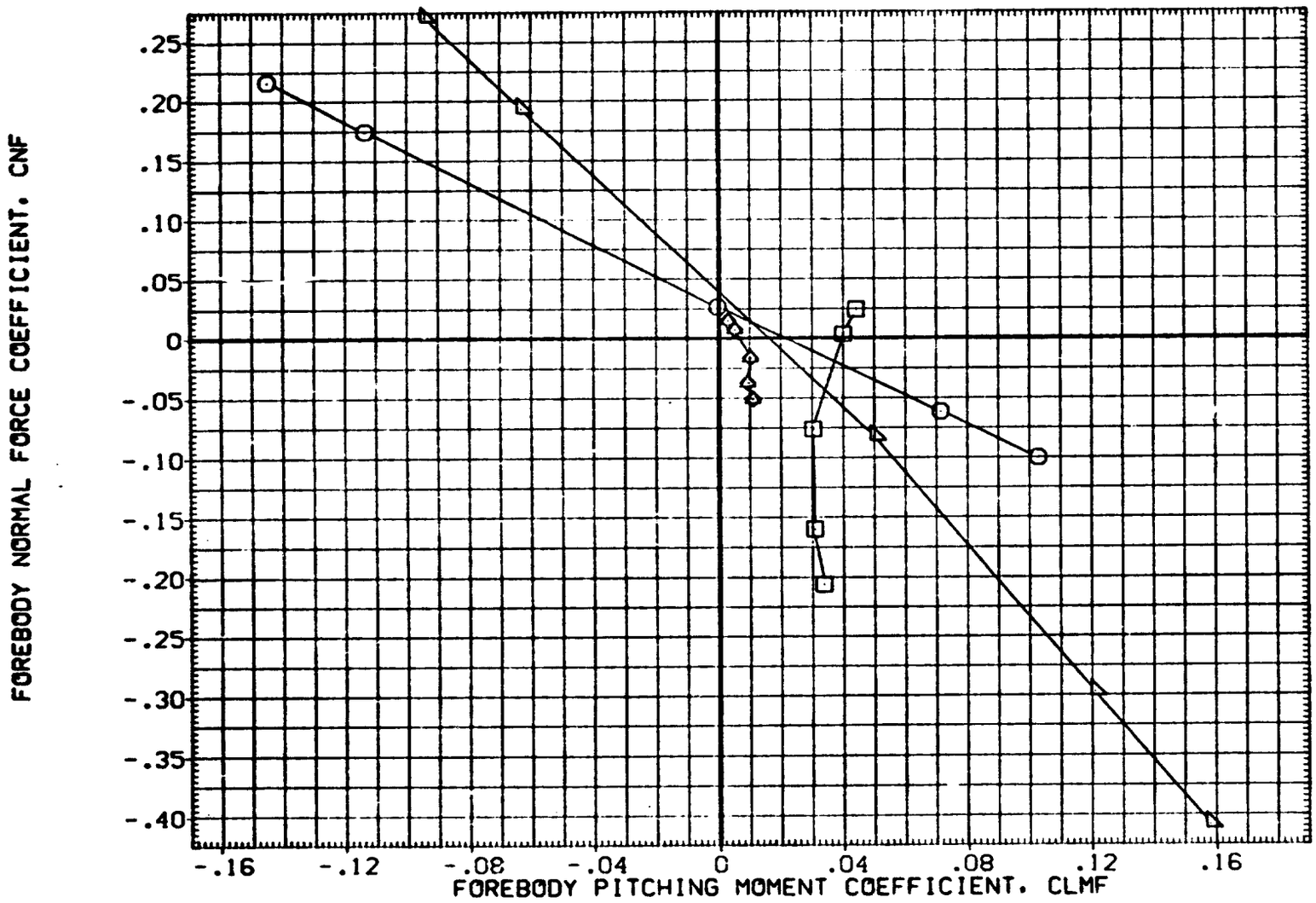


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET040)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(MET240)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(MET340)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET440)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

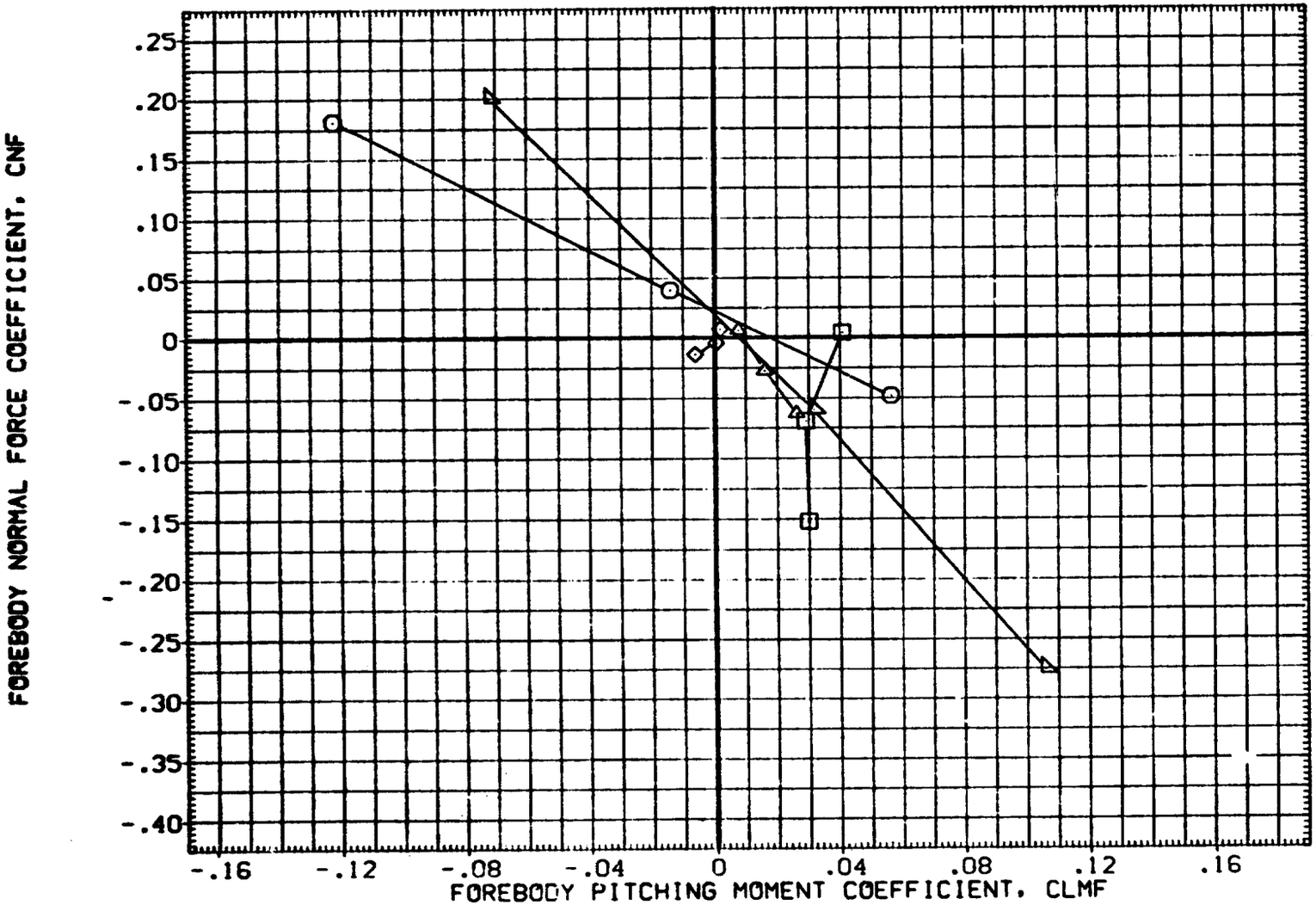


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)BET,I = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(MET140)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(MET240)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(MET340)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(MET440)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

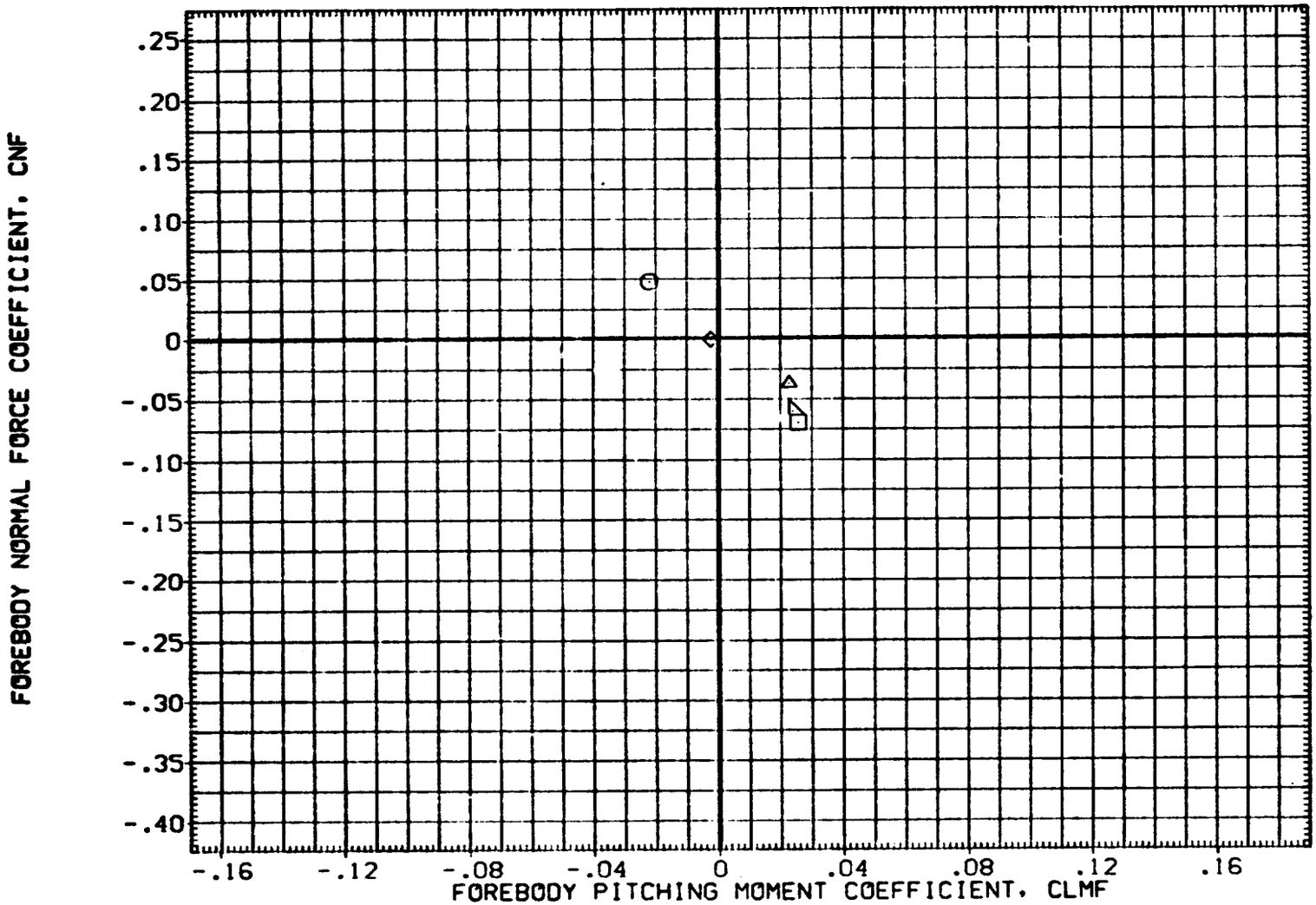


FIG. 9 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

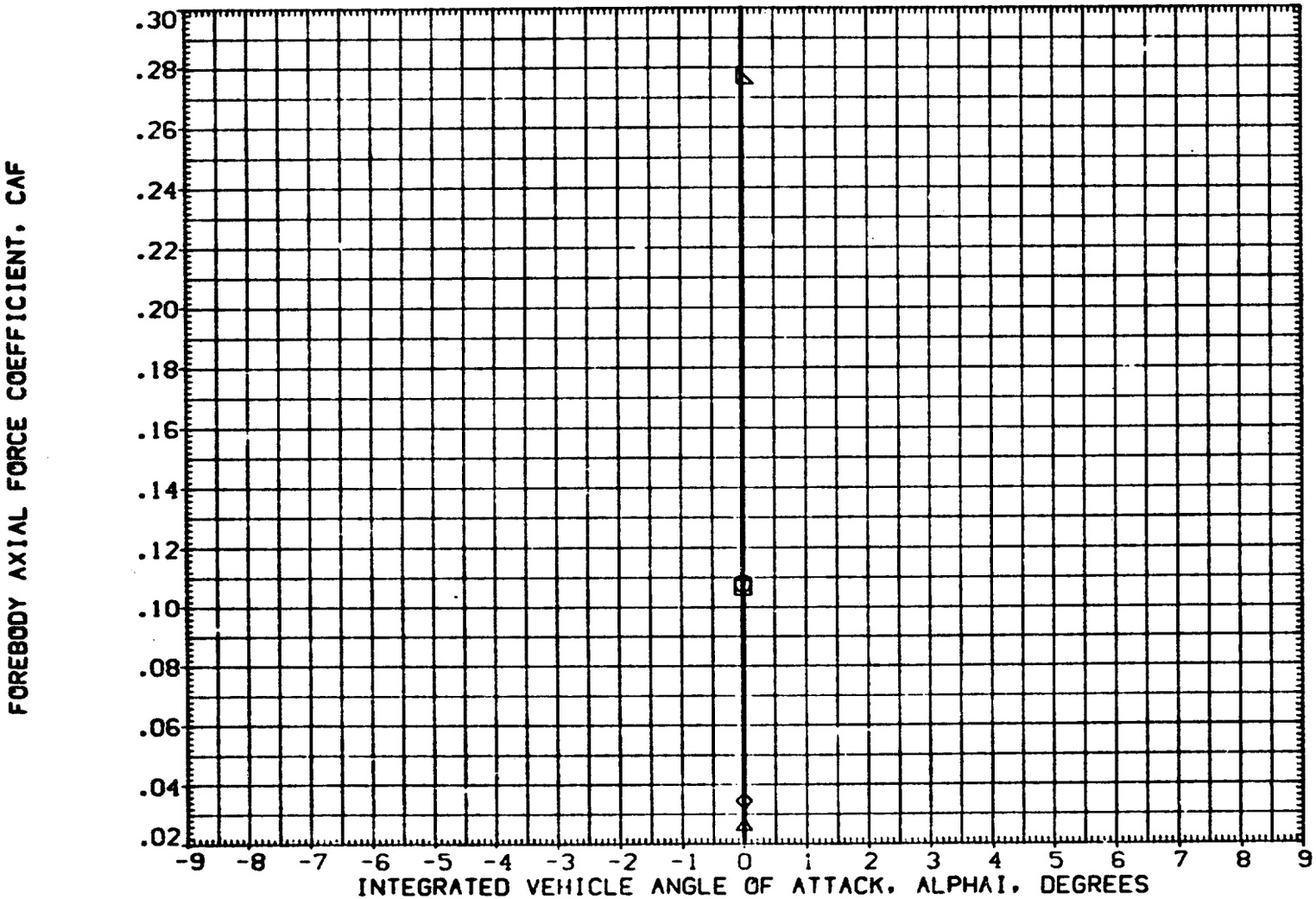


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

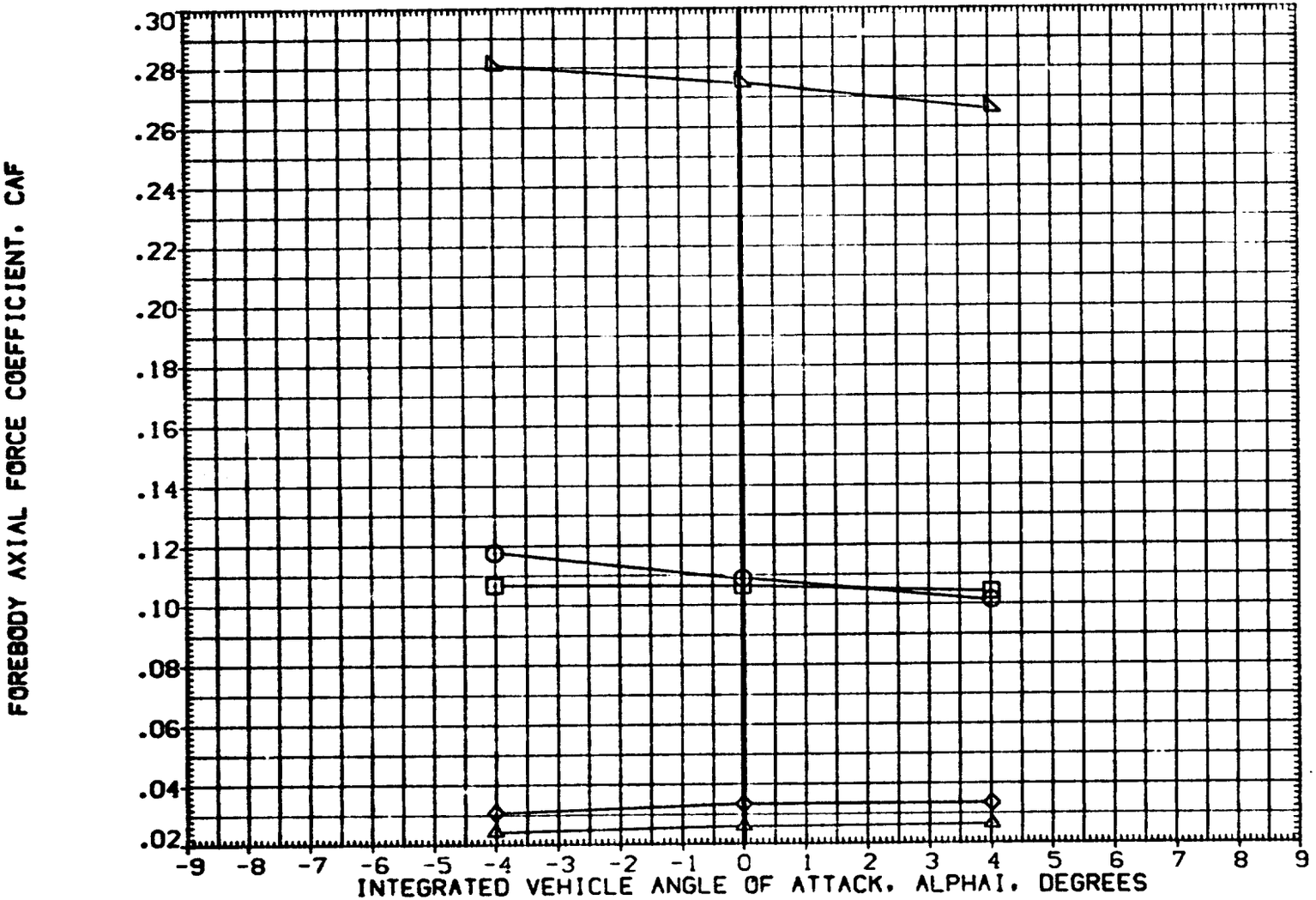


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

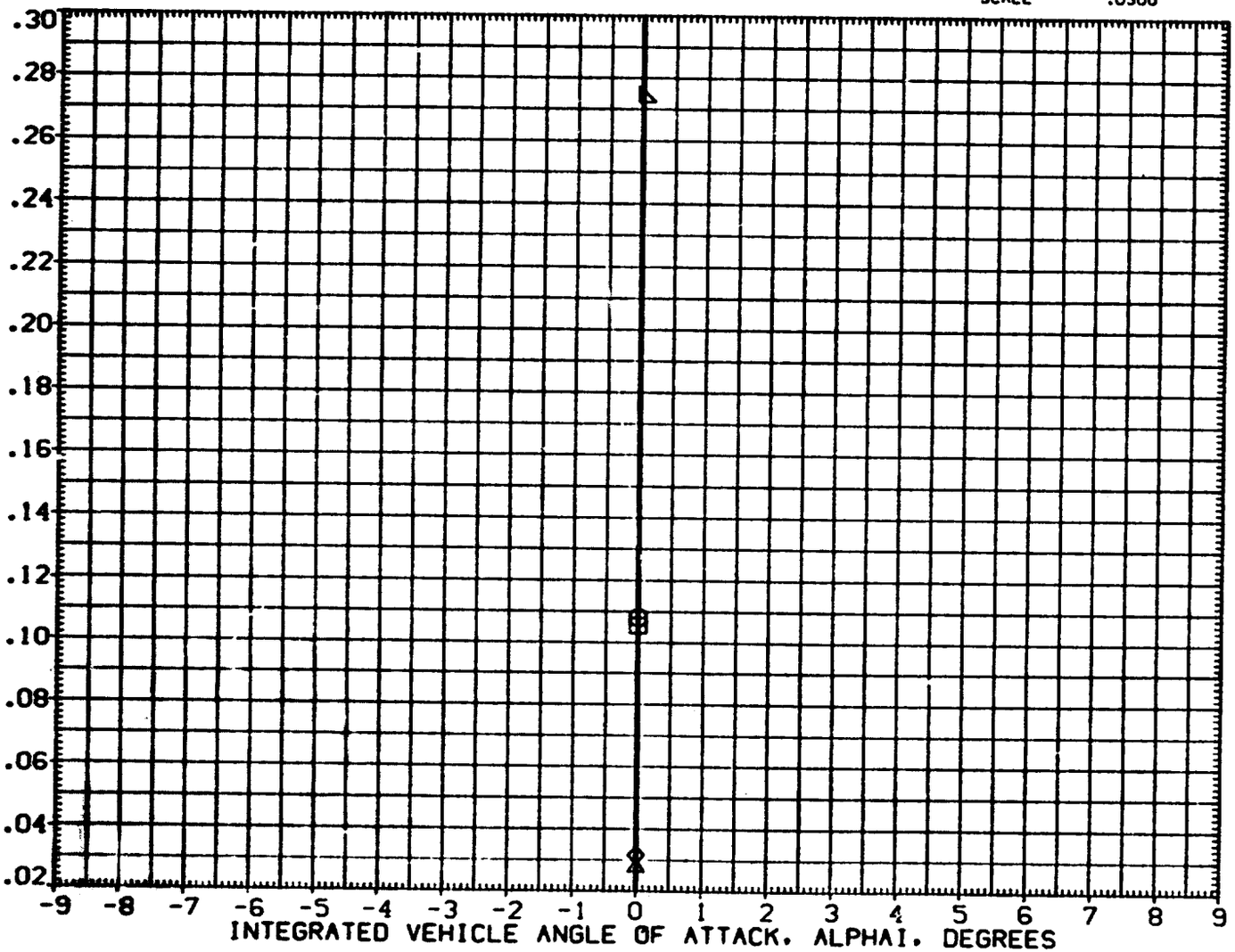


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METD44)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

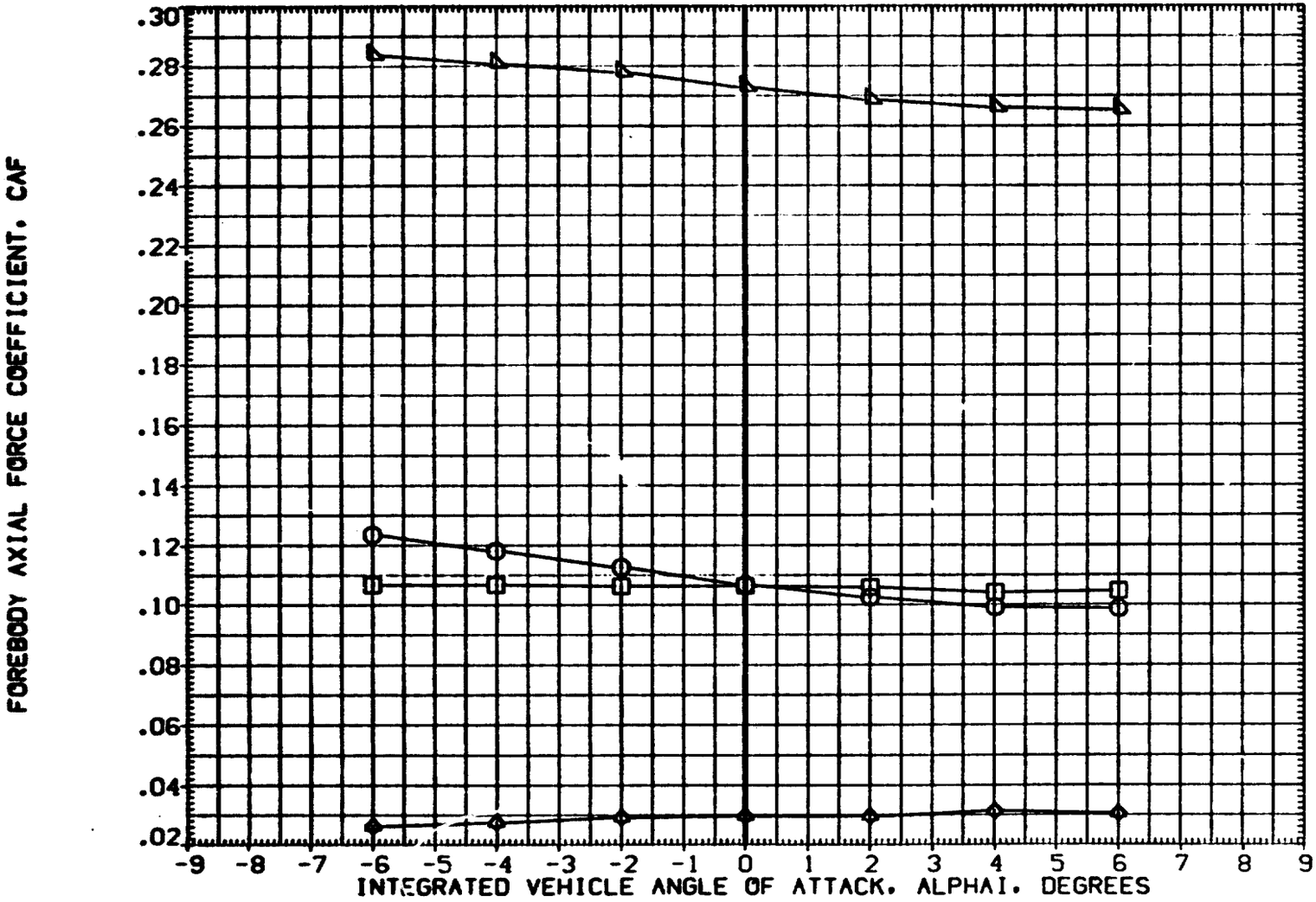


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METD44)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

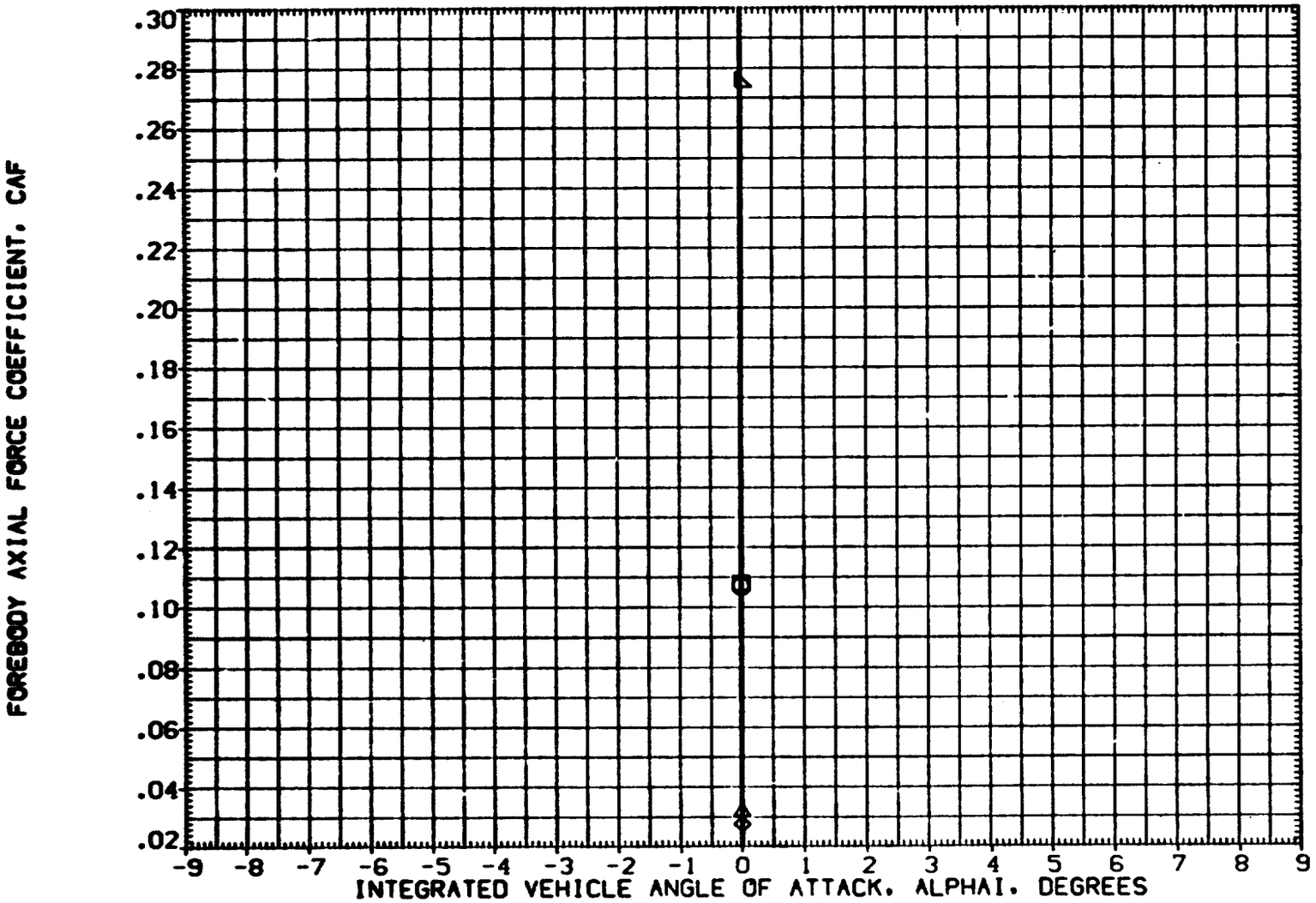


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

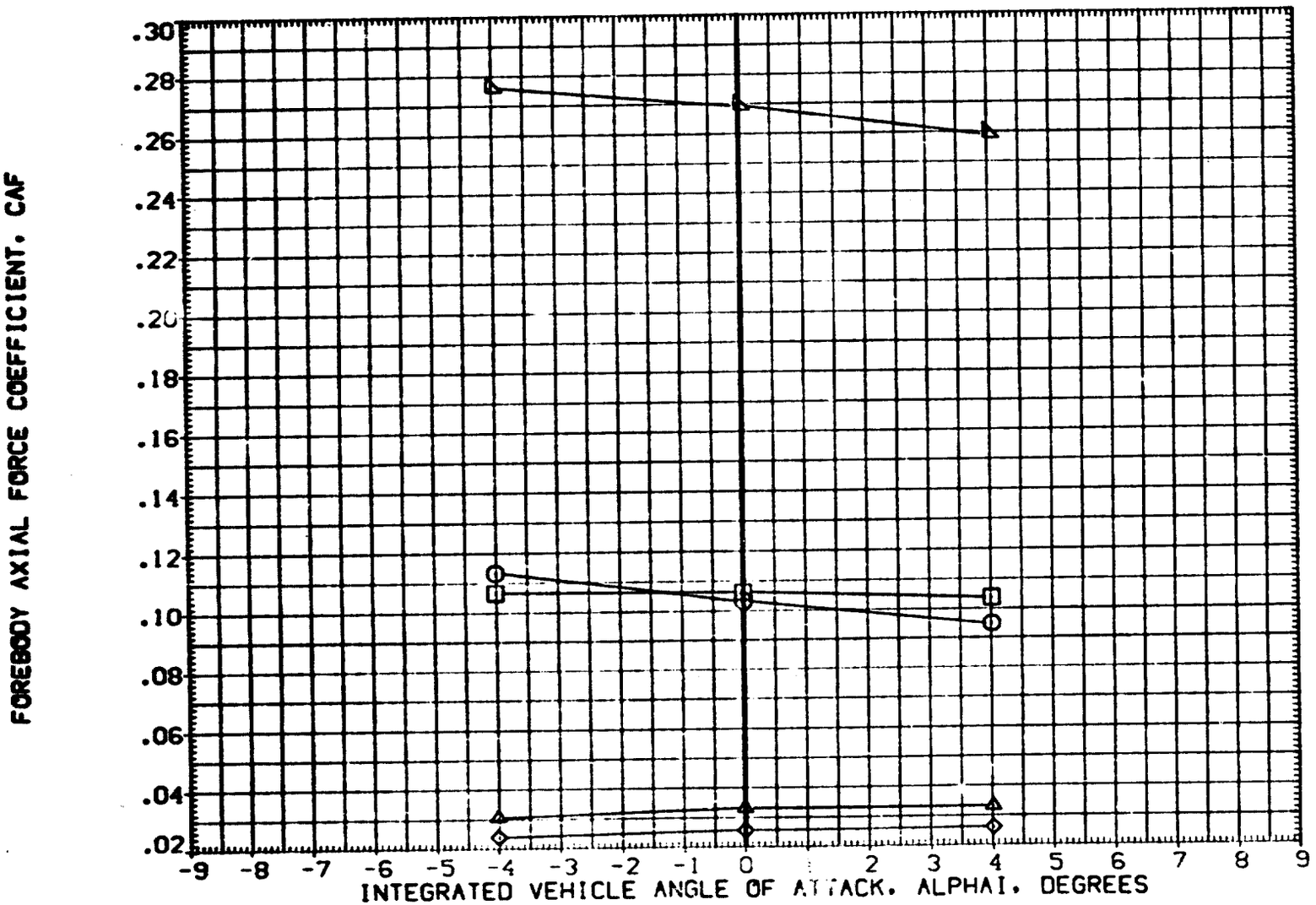


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO44)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

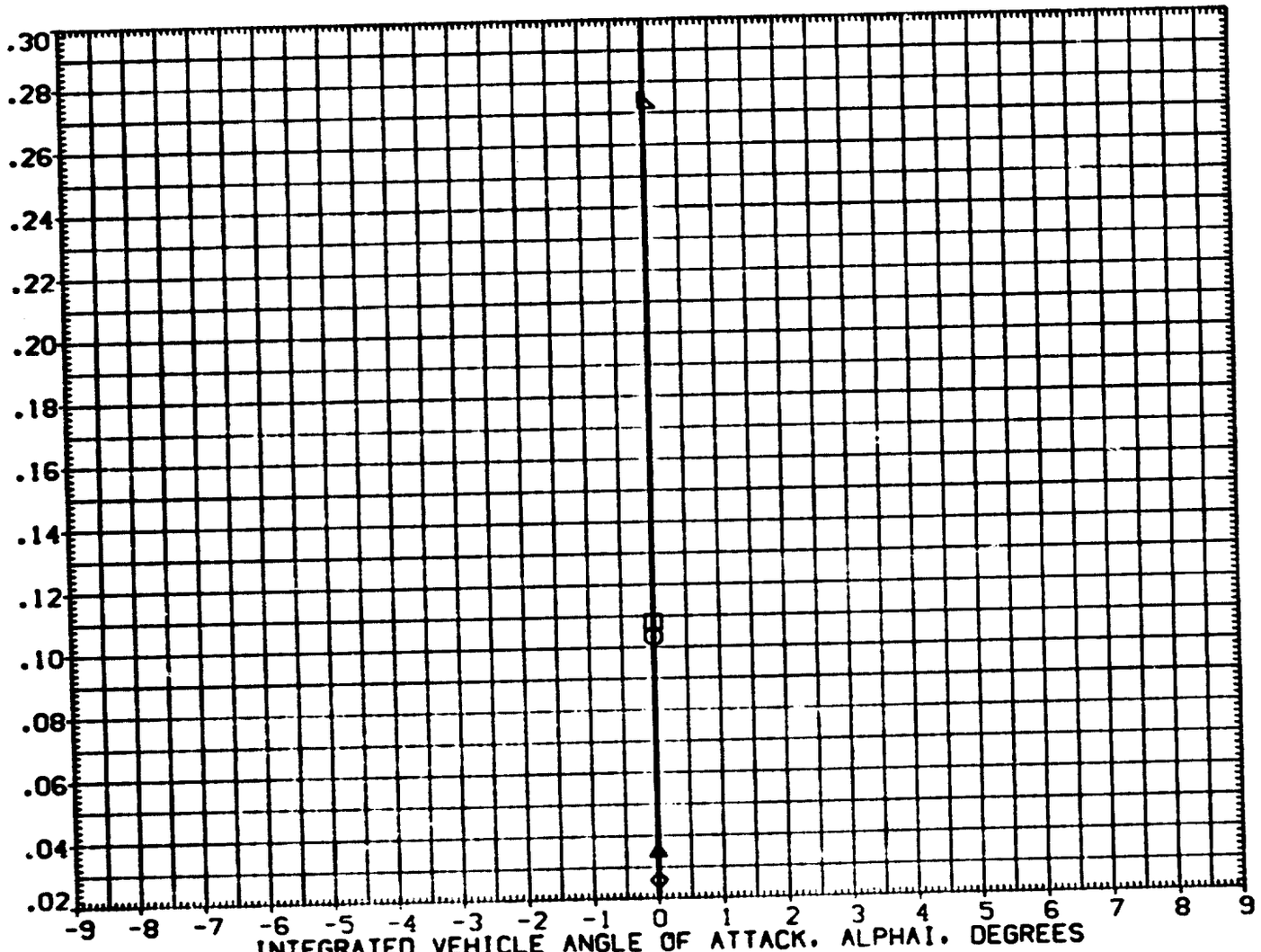


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)		AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

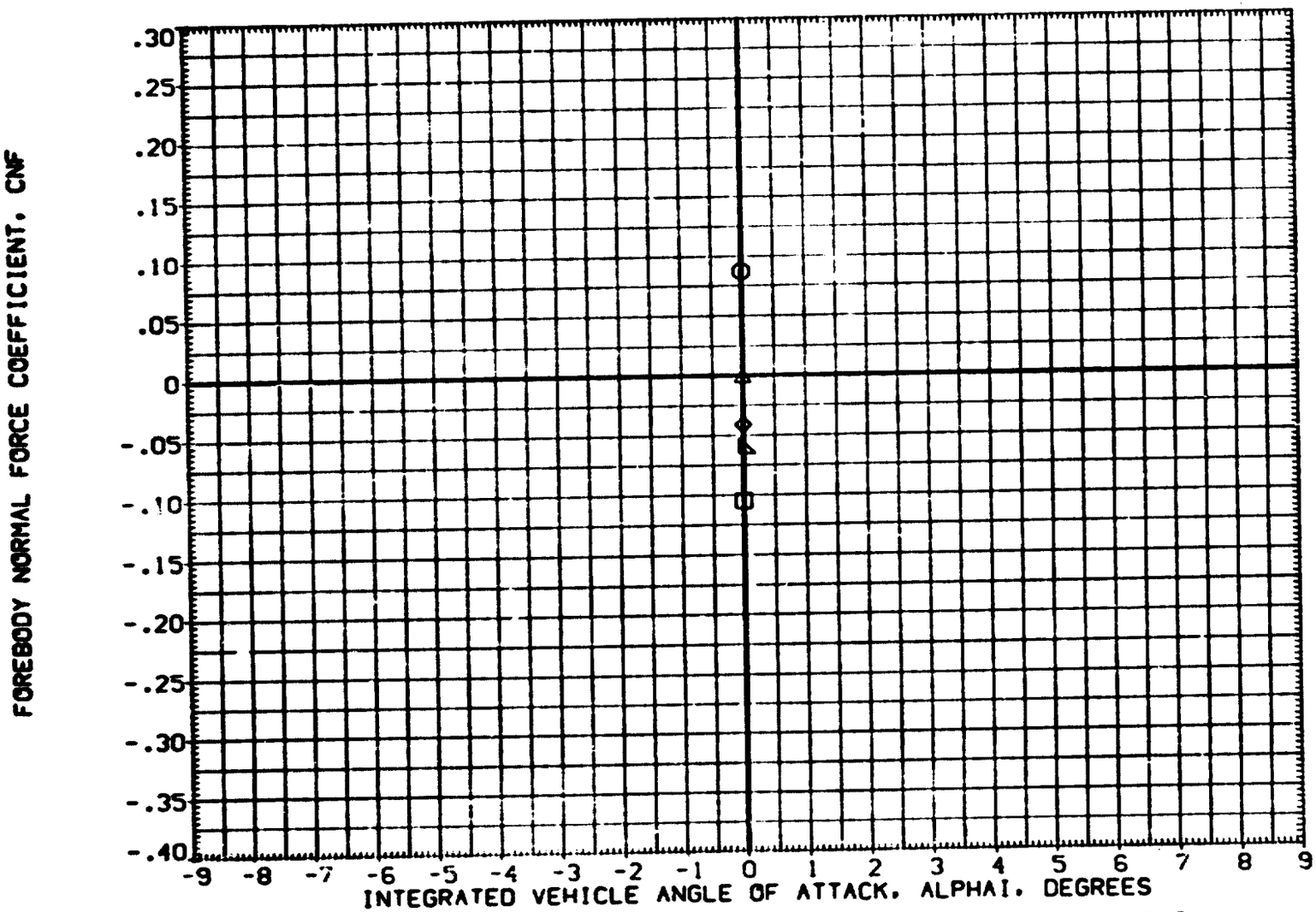


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)	○	AMES97-019([A8]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	□	AMES97-019([A8]) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	◇	AMES97-019([A8]) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	▷	AMES97-019([A8]) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	△	AMES97-019([A8]) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

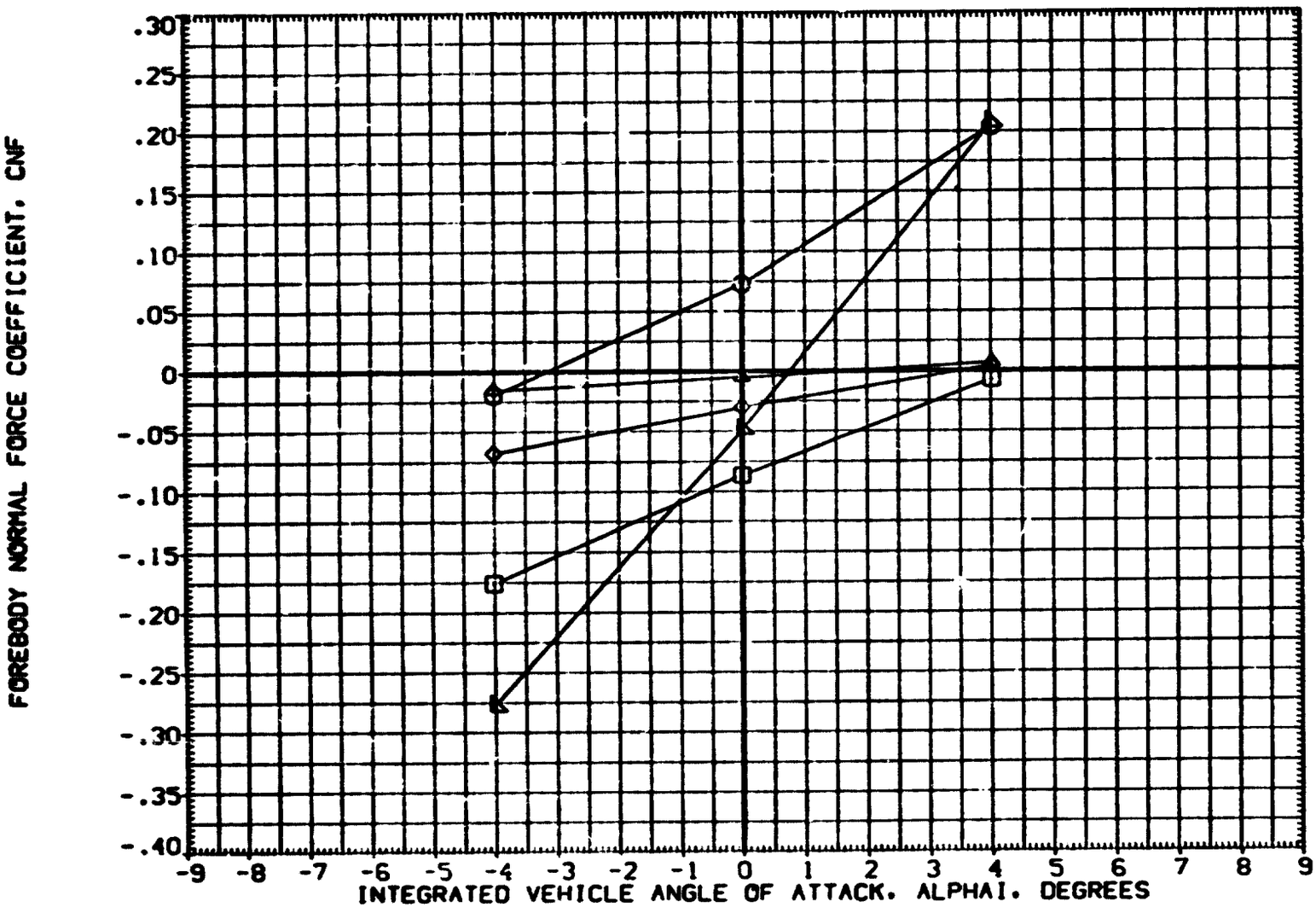


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METB44)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	▷	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	376.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

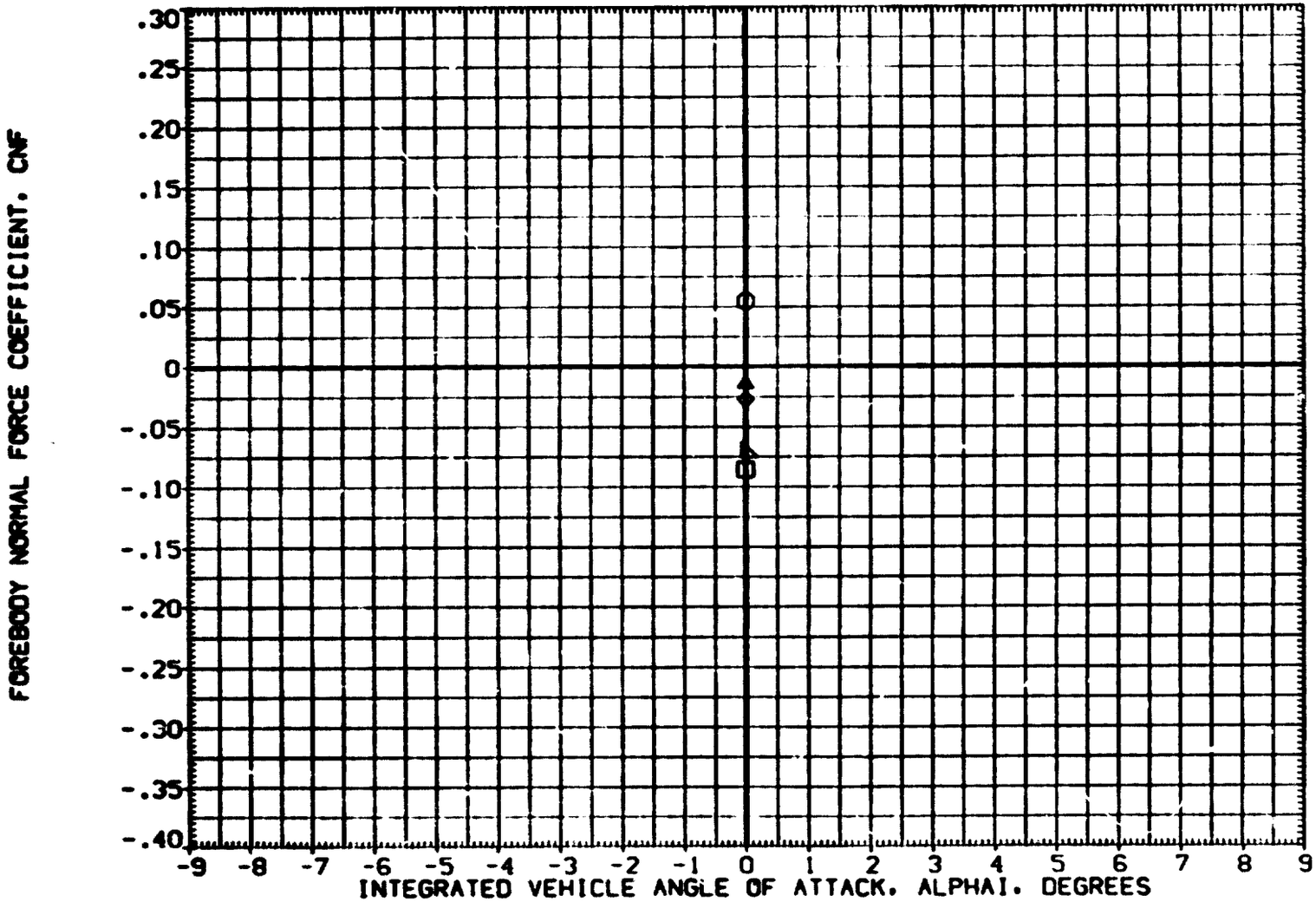


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METD44)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	0.000	.000	2.000	.000
(METT44)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	0.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	0.000	.000	2.000	.000
(METR44)	▷	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	0.000	.000	2.000	.000
(METI44)	▷	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

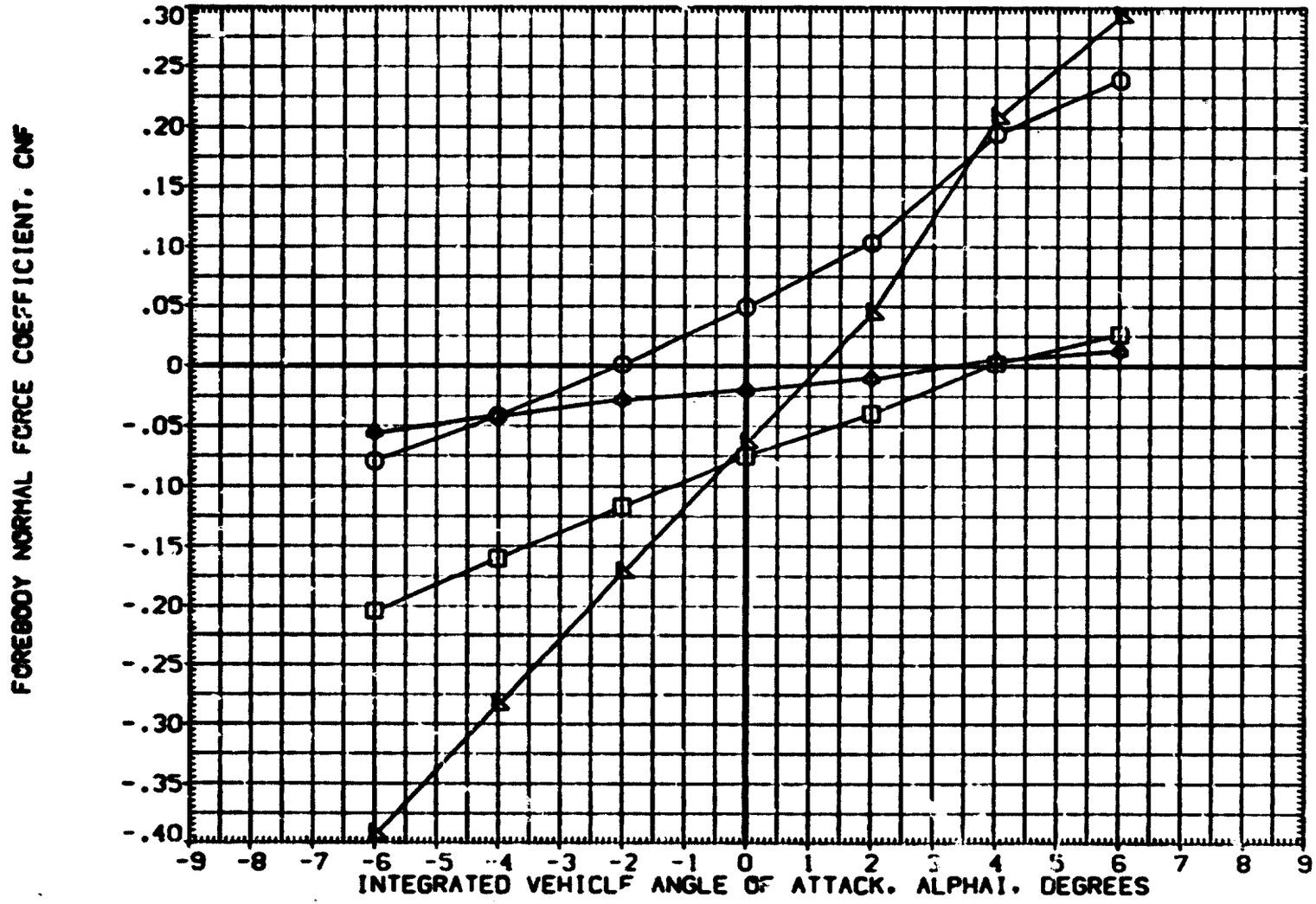


FIG. 1C LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)SET 1 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

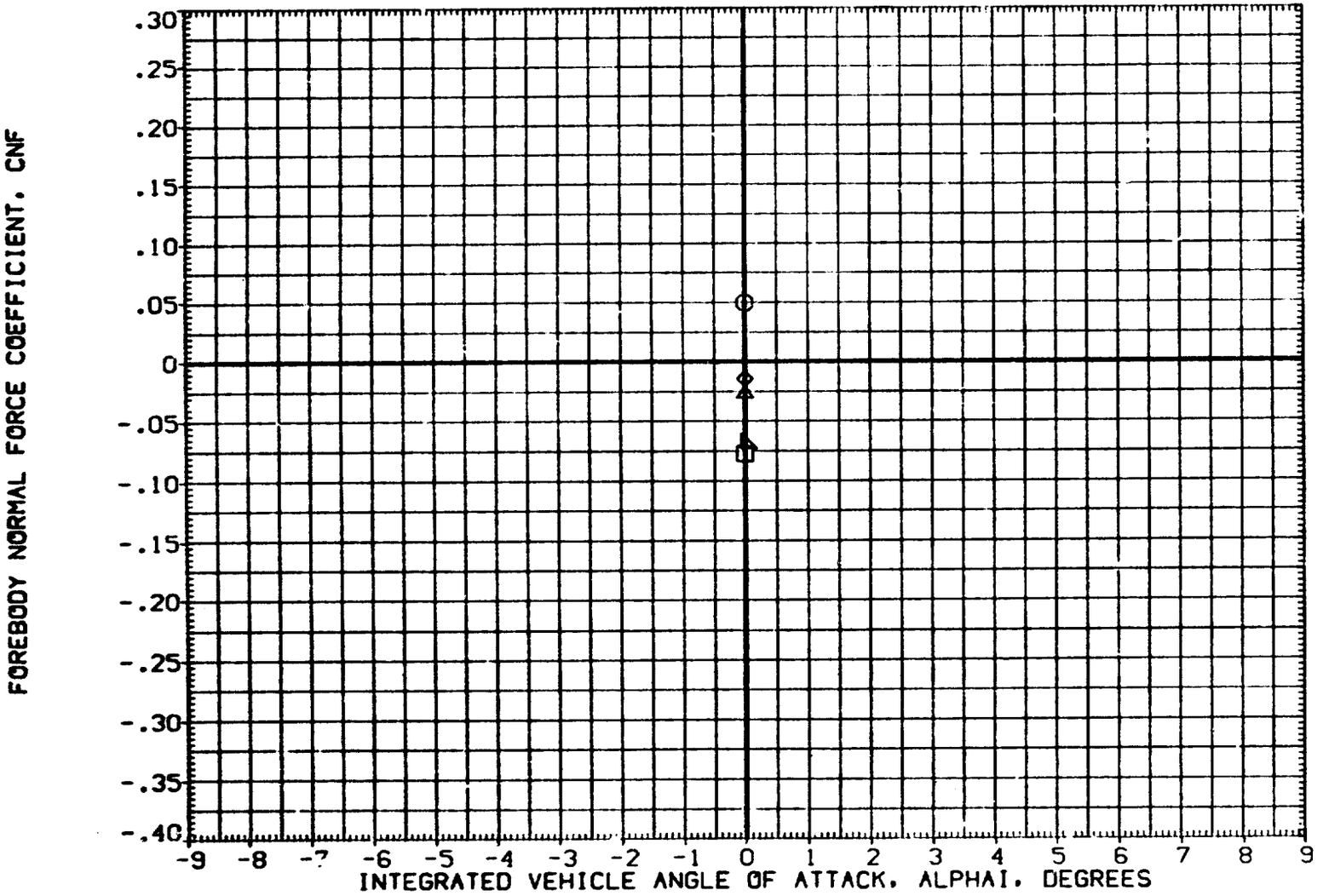


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO44)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

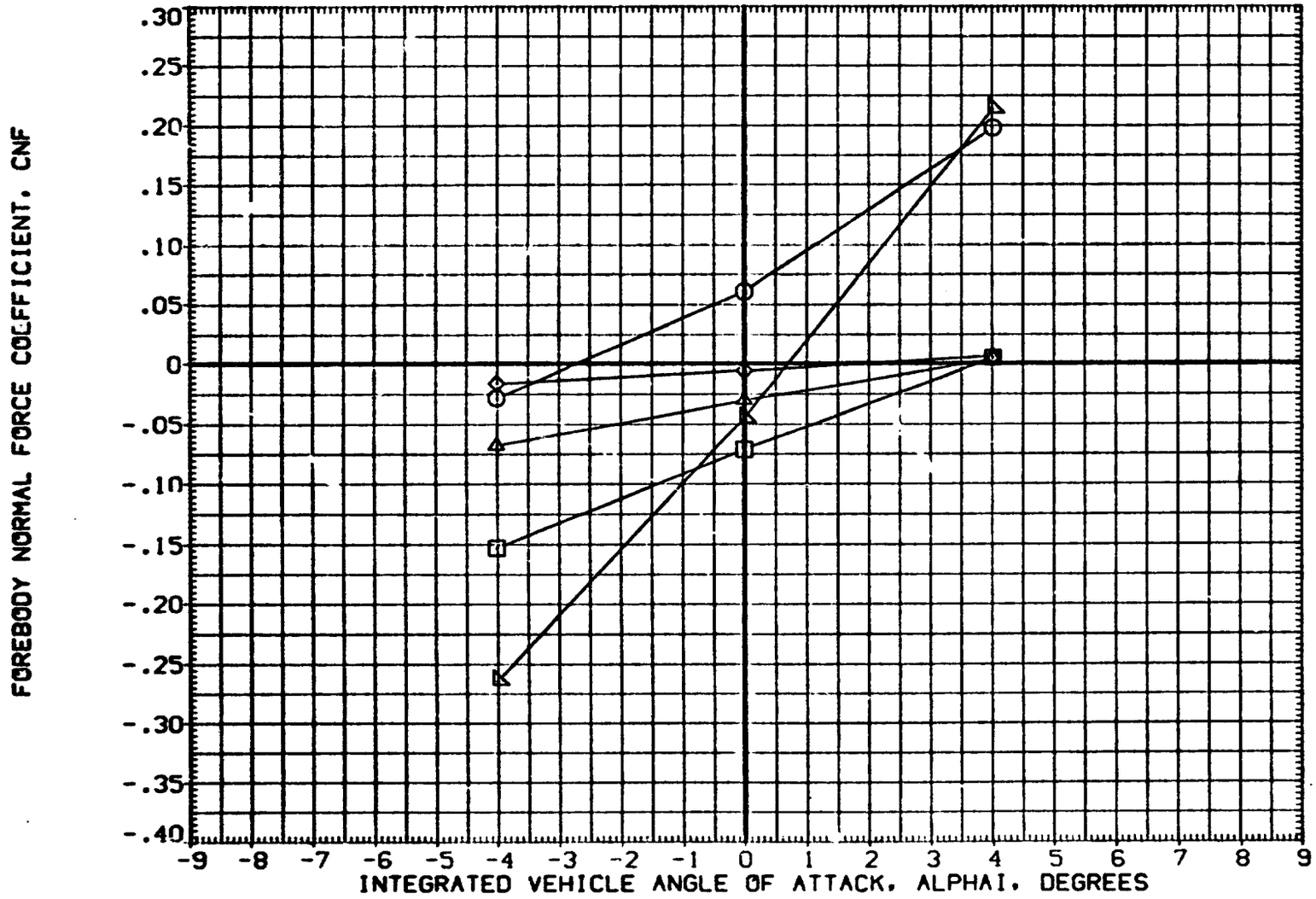


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

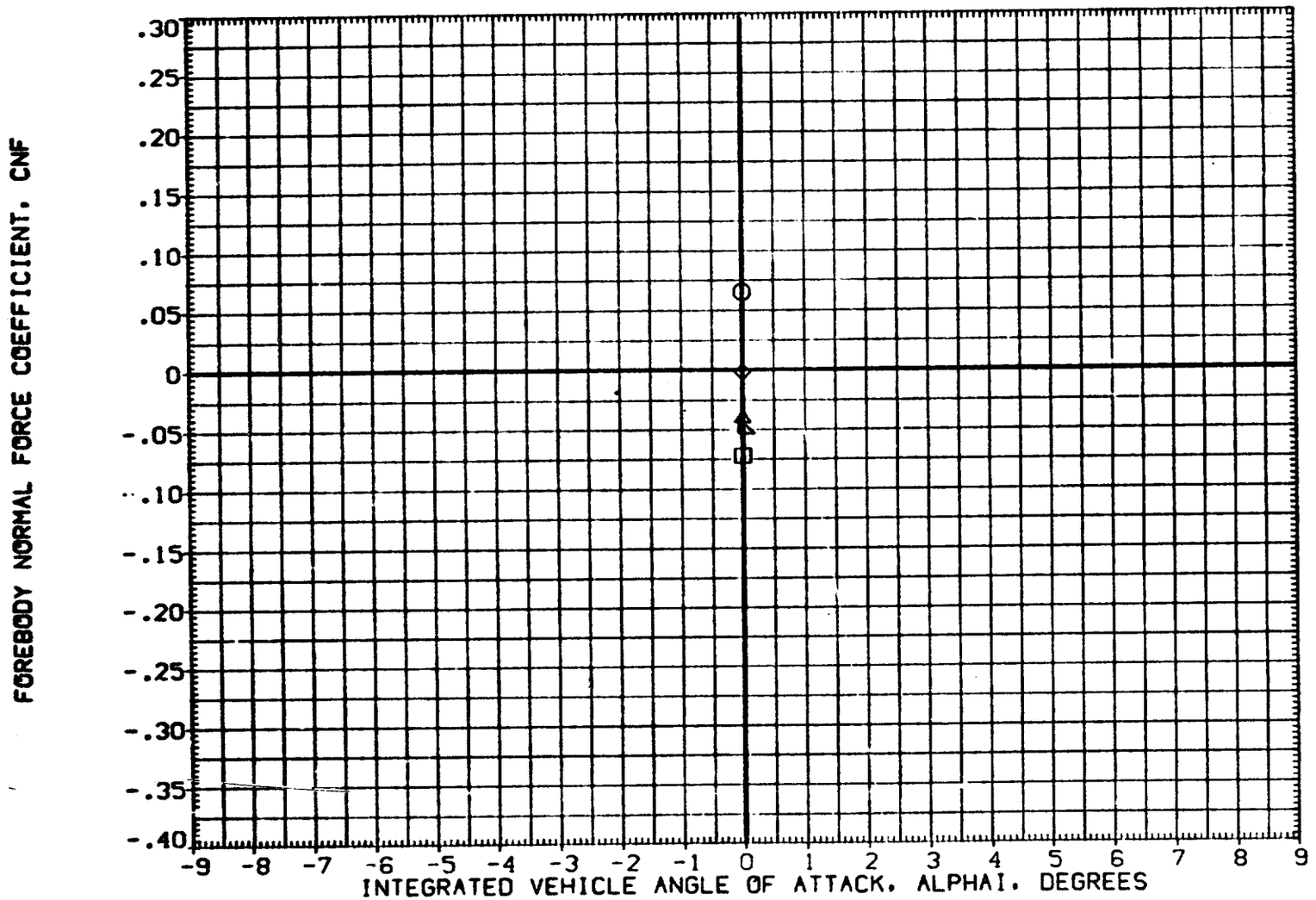


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

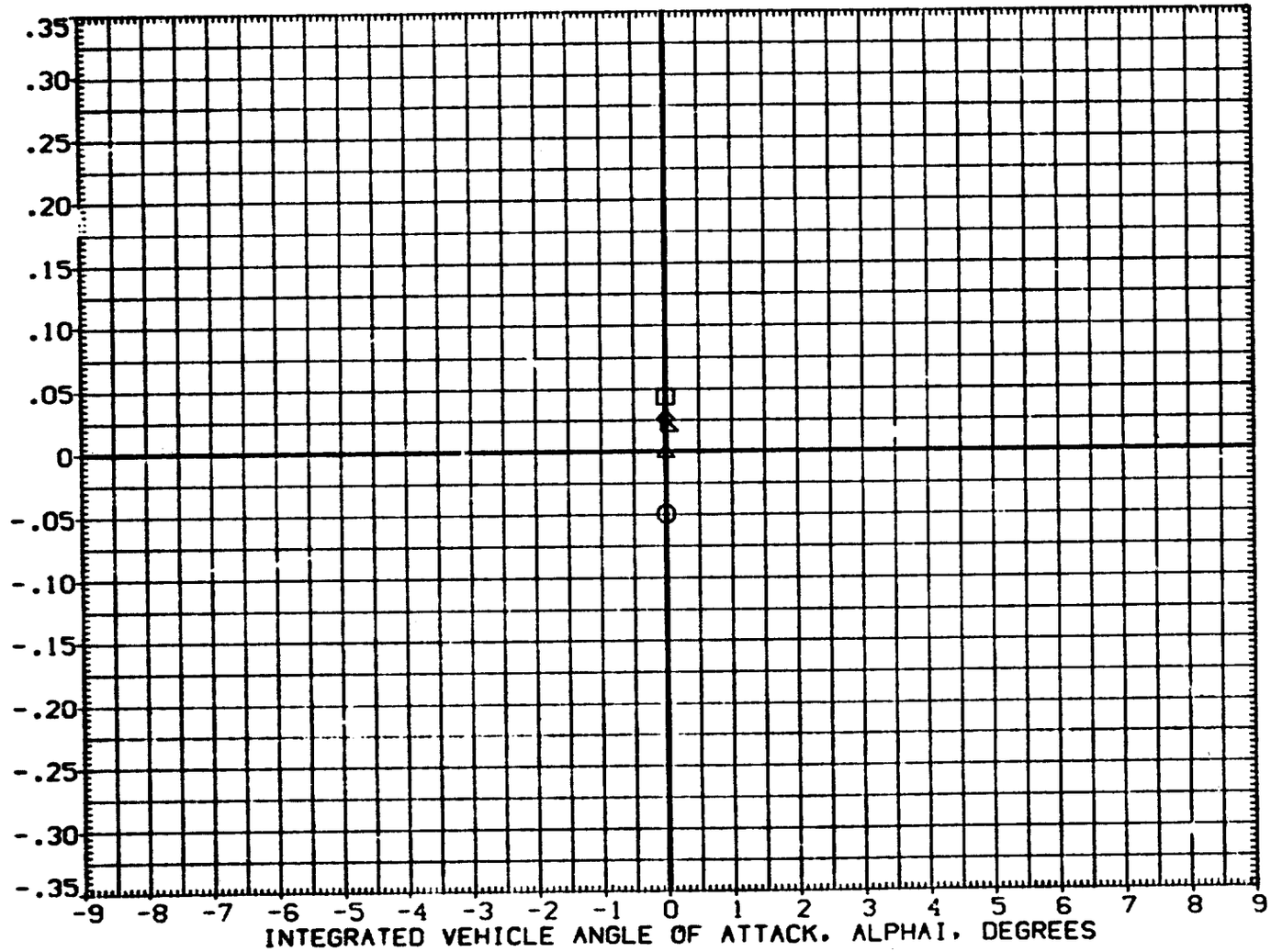


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	△	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	◁	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

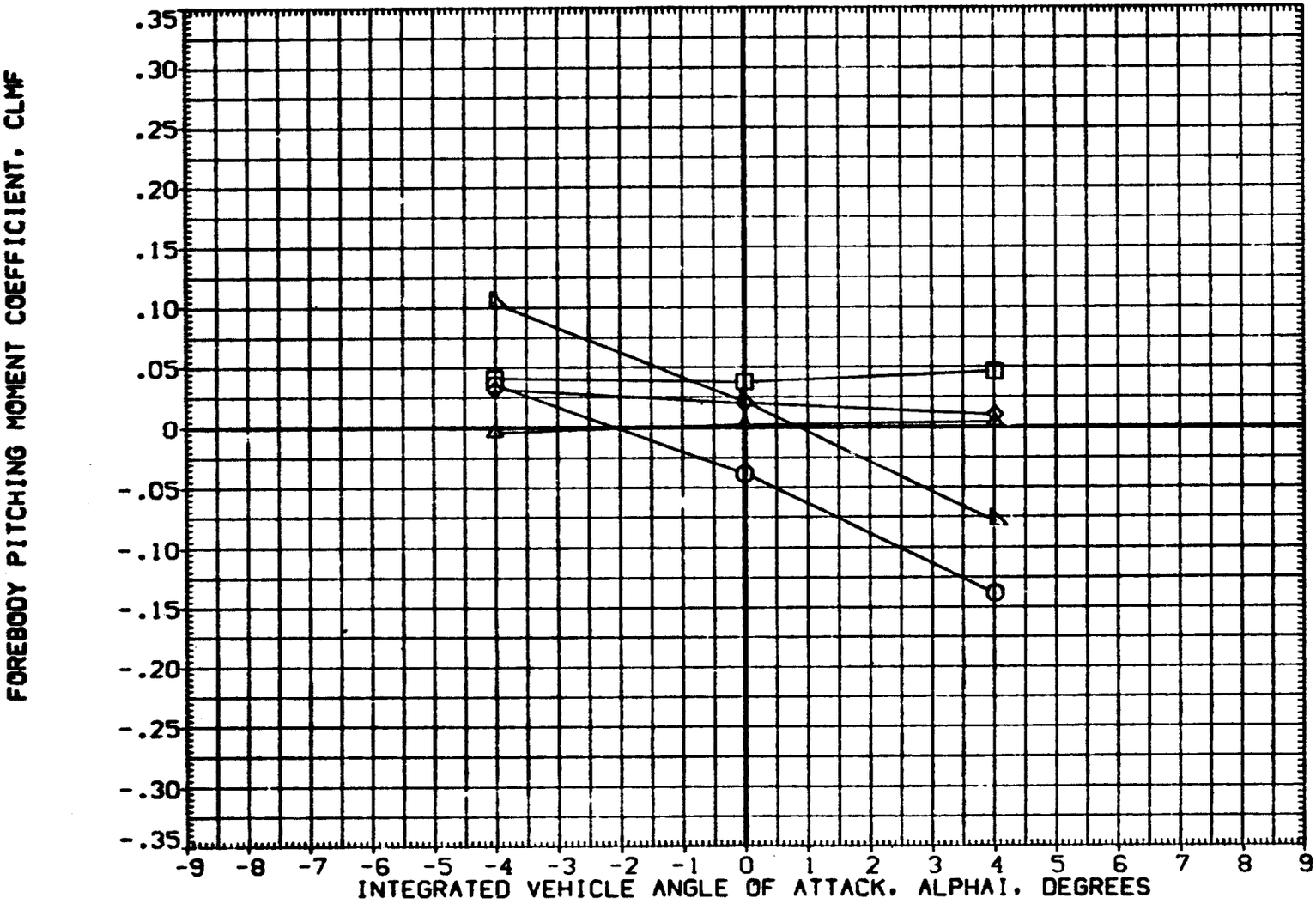


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO44)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	⋈	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

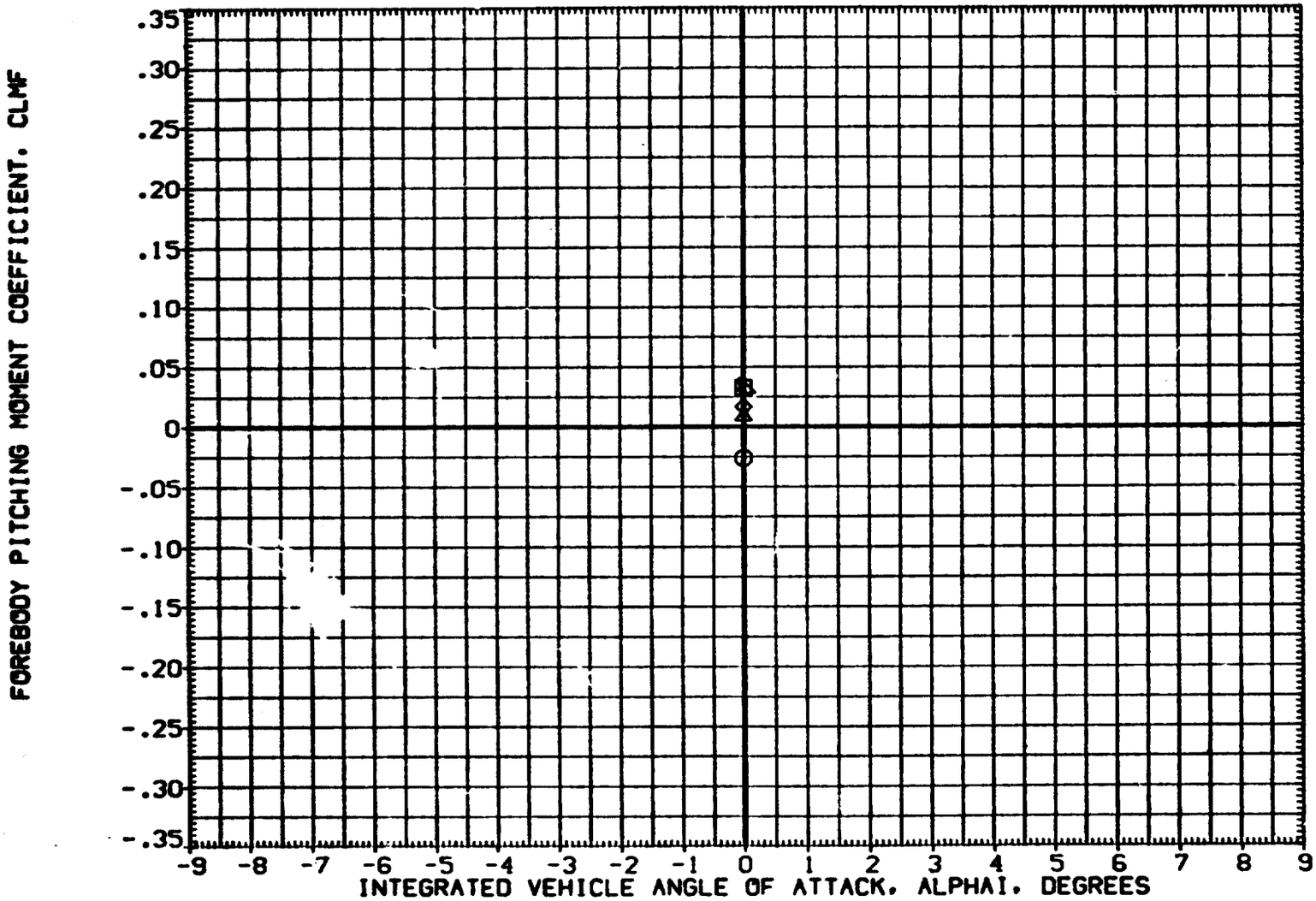


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

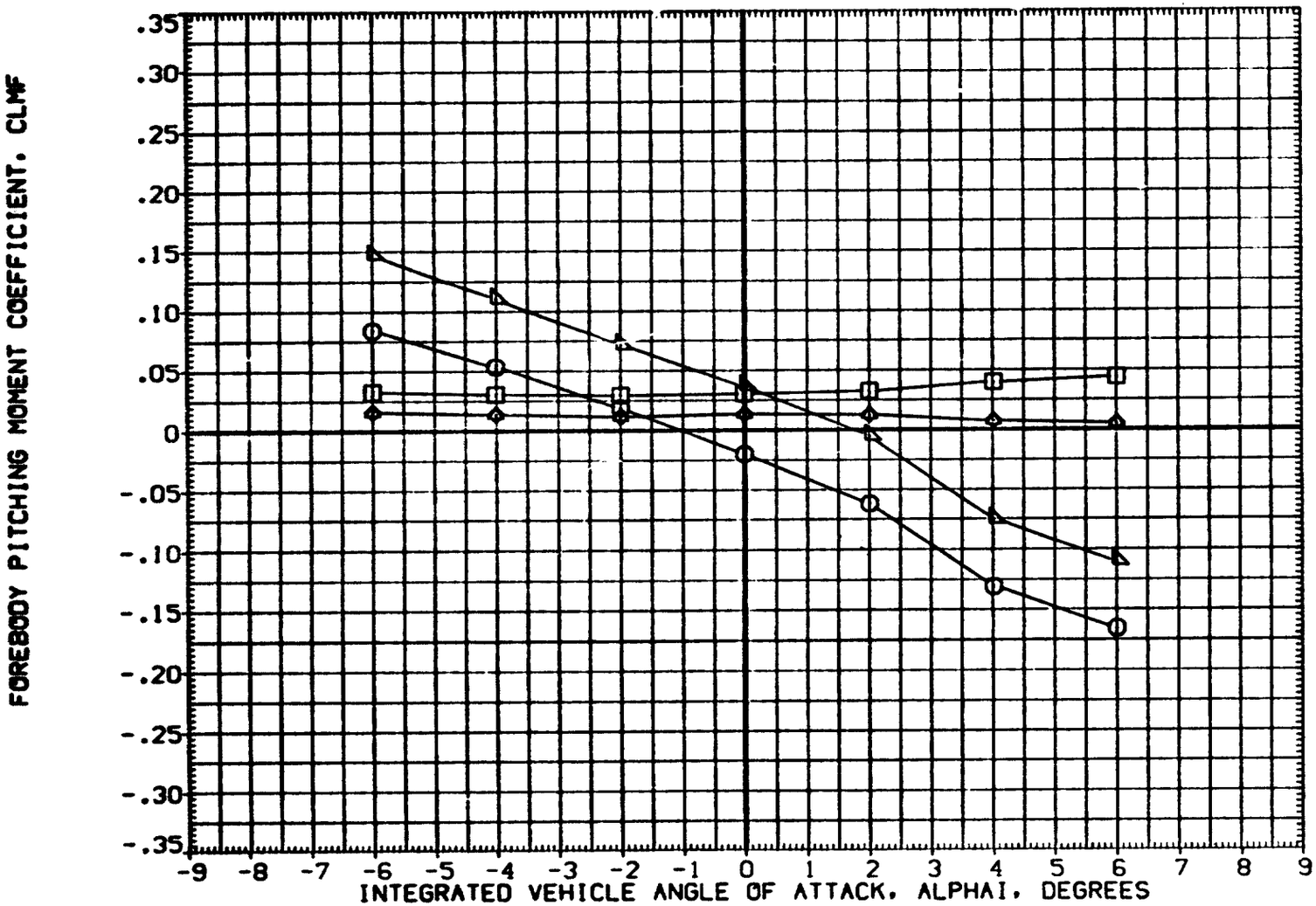


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO44)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

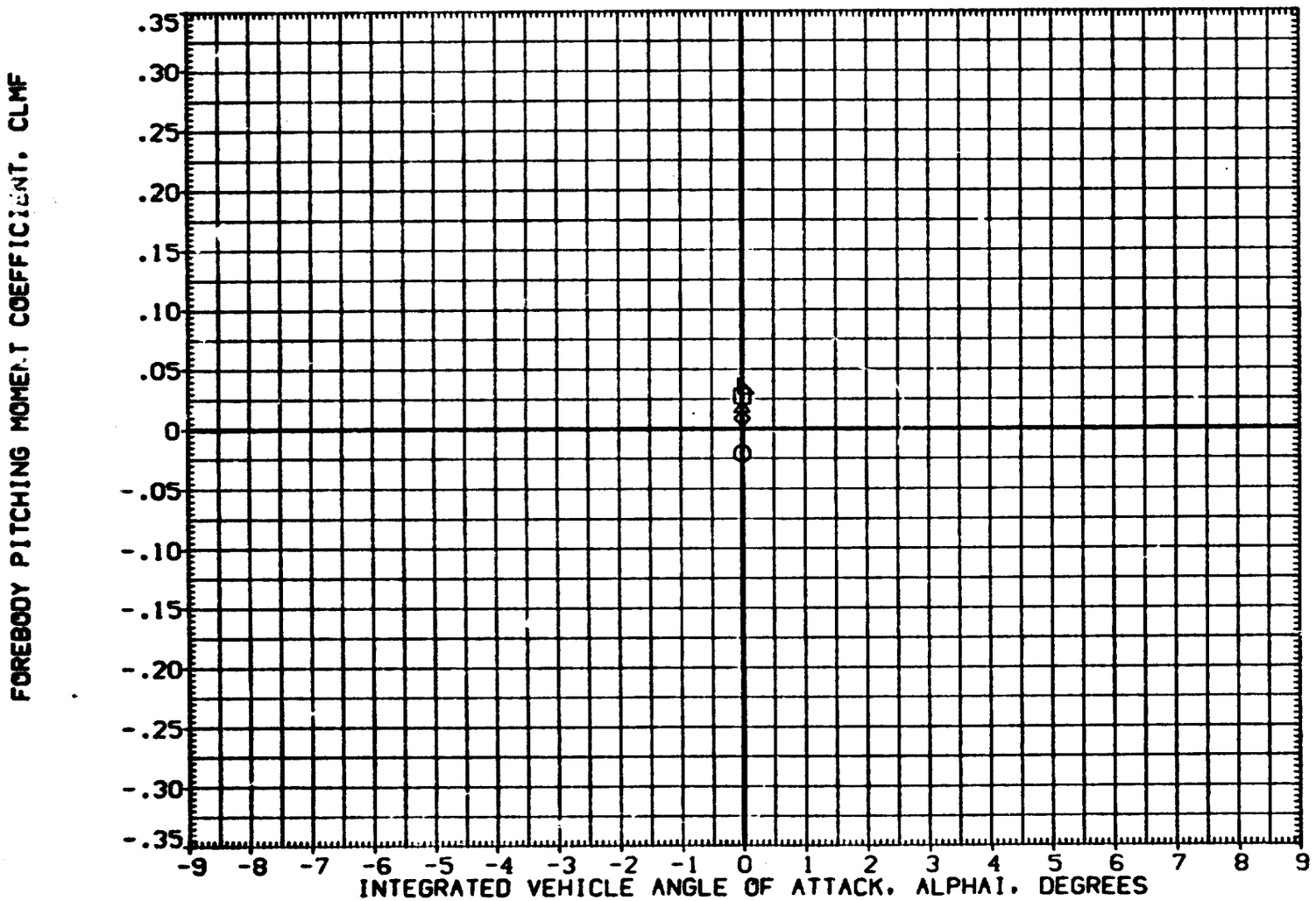


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

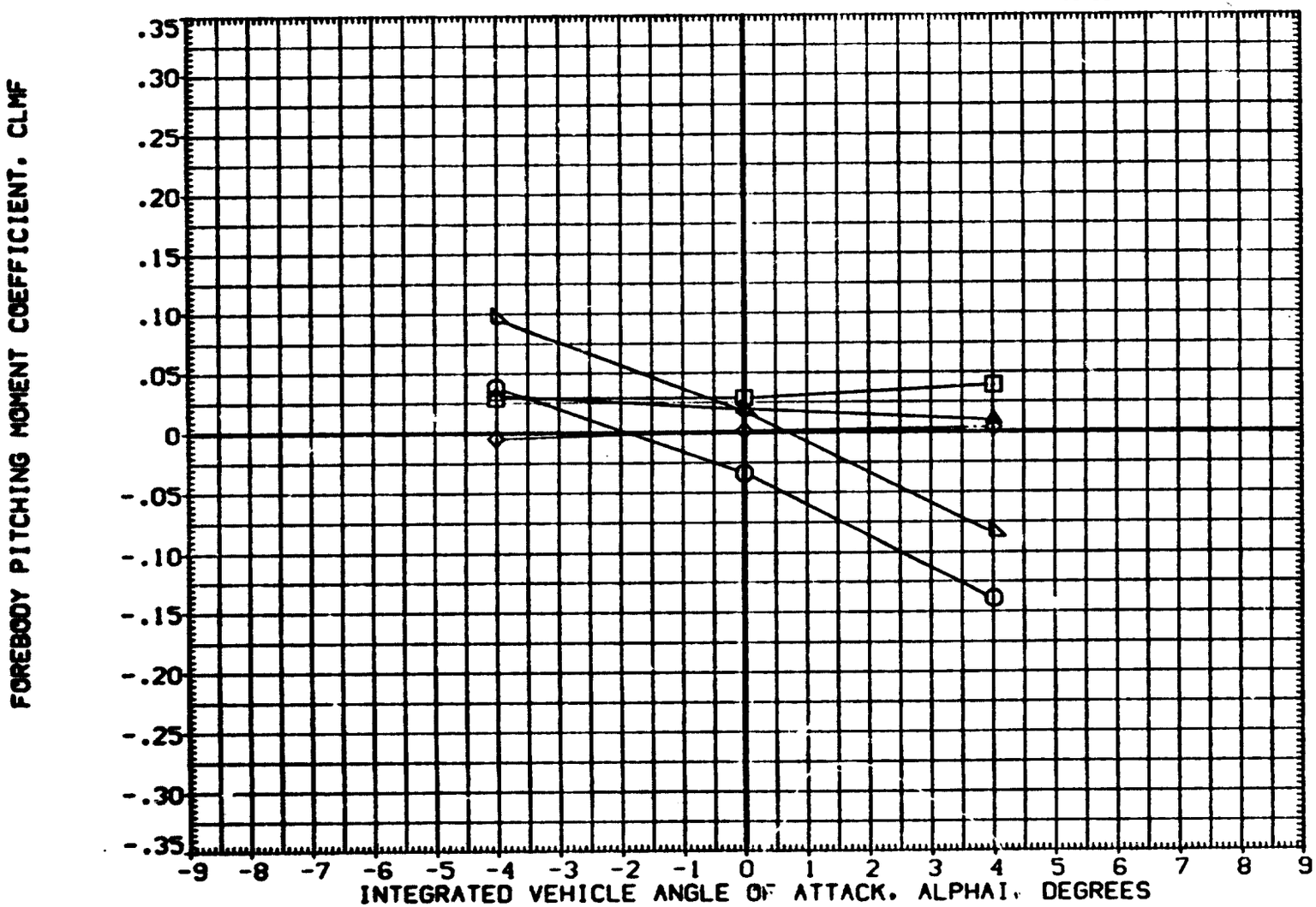


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	0.000	.000	2.000	.000
(METT44)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	0.000	.000	2.000	.000
(METL44)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	0.000	.000	2.000	.000
(METP44)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	0.000	.000	2.000	.000
(METI44)	◁	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

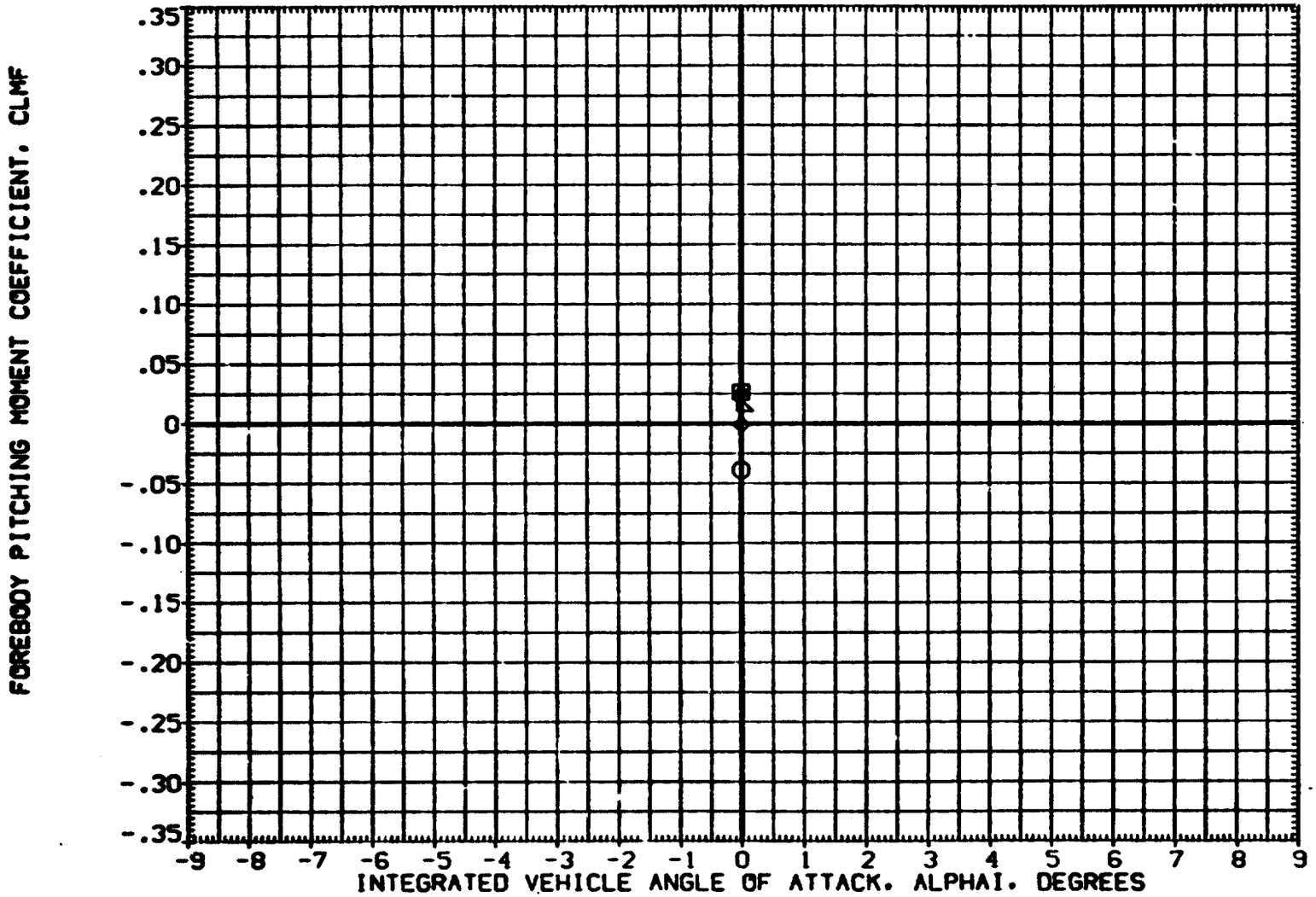


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)BET,I = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)	□	AMES97-019([AB1) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.000	.000
(MET744)	◇	AMES97-019([AB1) LVAP TANK - ALL ML SEALED	8.000	.000	2.000	.000
(METL44)	⊠	AMES97-019([AB1) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.000	.000
(METR44)	◁	AMES97-019([AB1) LVAP R-LRB ALL ML SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019([AB1) LVAP INT VEH ALL ML SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

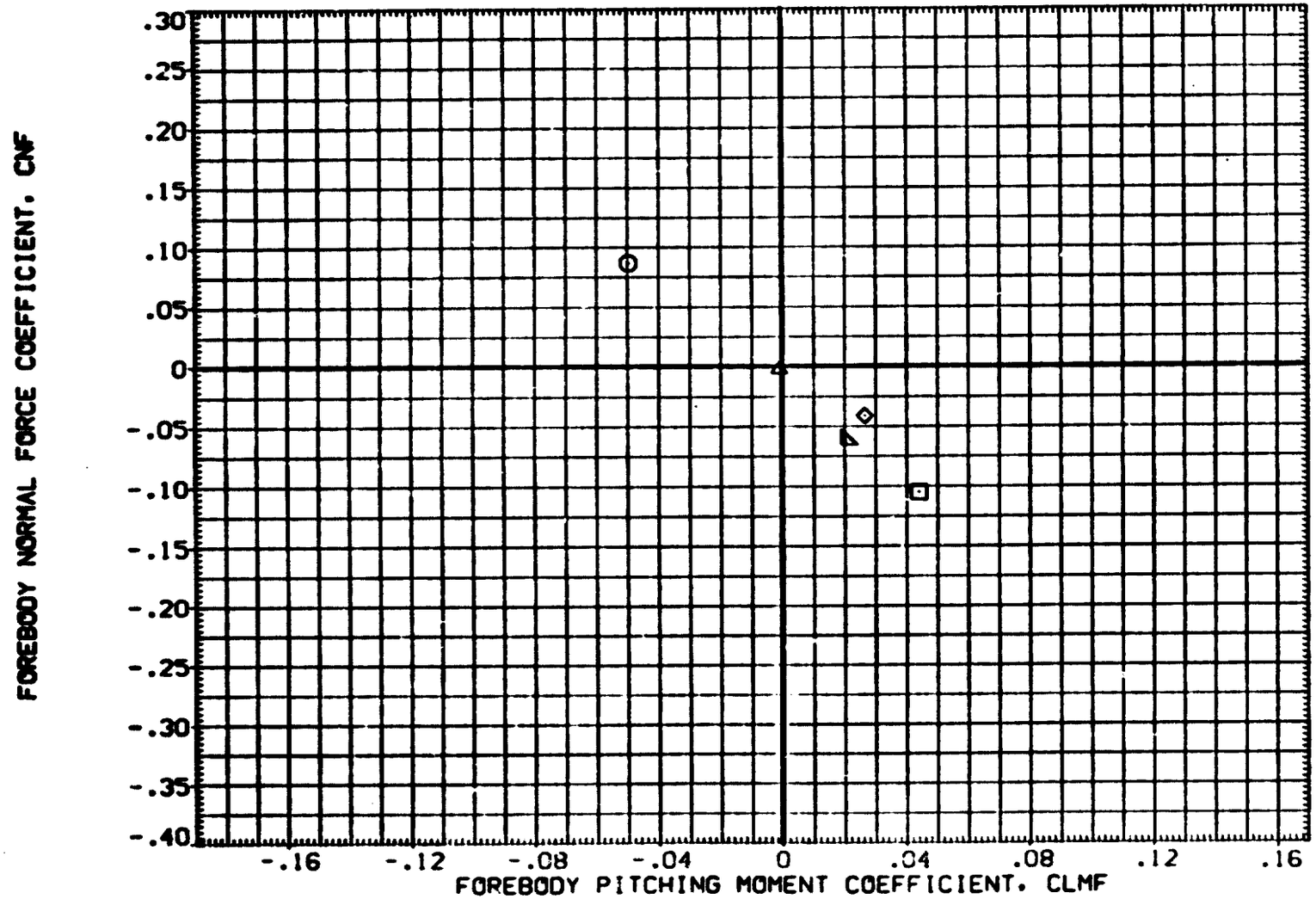


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET044)		AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.000	.000
(MET144)		AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

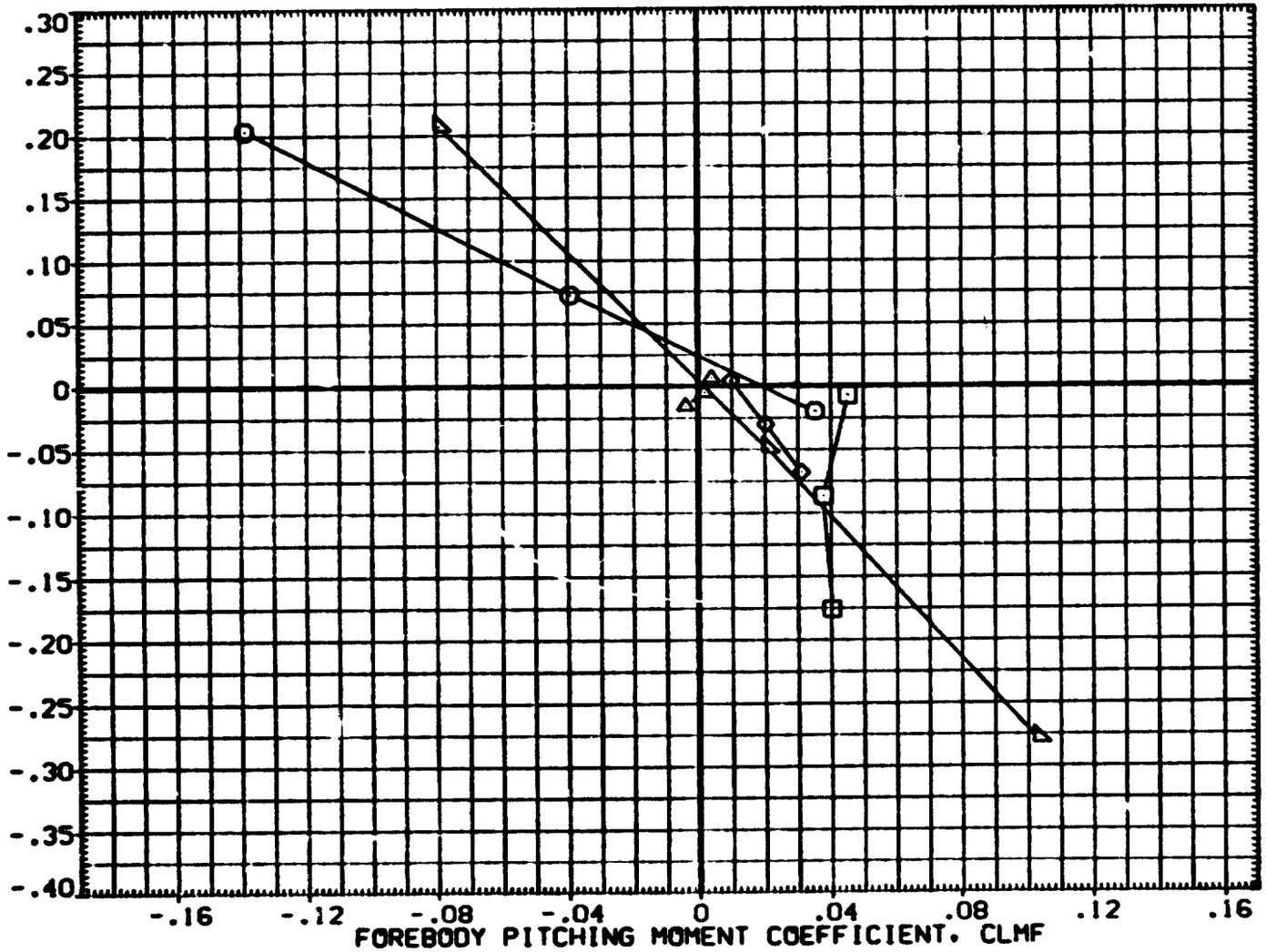


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METD44)	□	AMES97-019X(A81) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.000	.000
(METT44)	▷	AMES97-019X(A81) LVAP TANK - ALL ML SEALED	0.000	.000	2.000	.000
(METL44)	◇	AMES97-019X(A81) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.000	.000
(METR44)	△	AMES97-019X(A81) LVAP R-SRB ALL ML SEALED	0.000	.000	2.000	.000
(MET144)	○	AMES97-019X(A81) LVAP INT VEH ALL ML SEALED				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

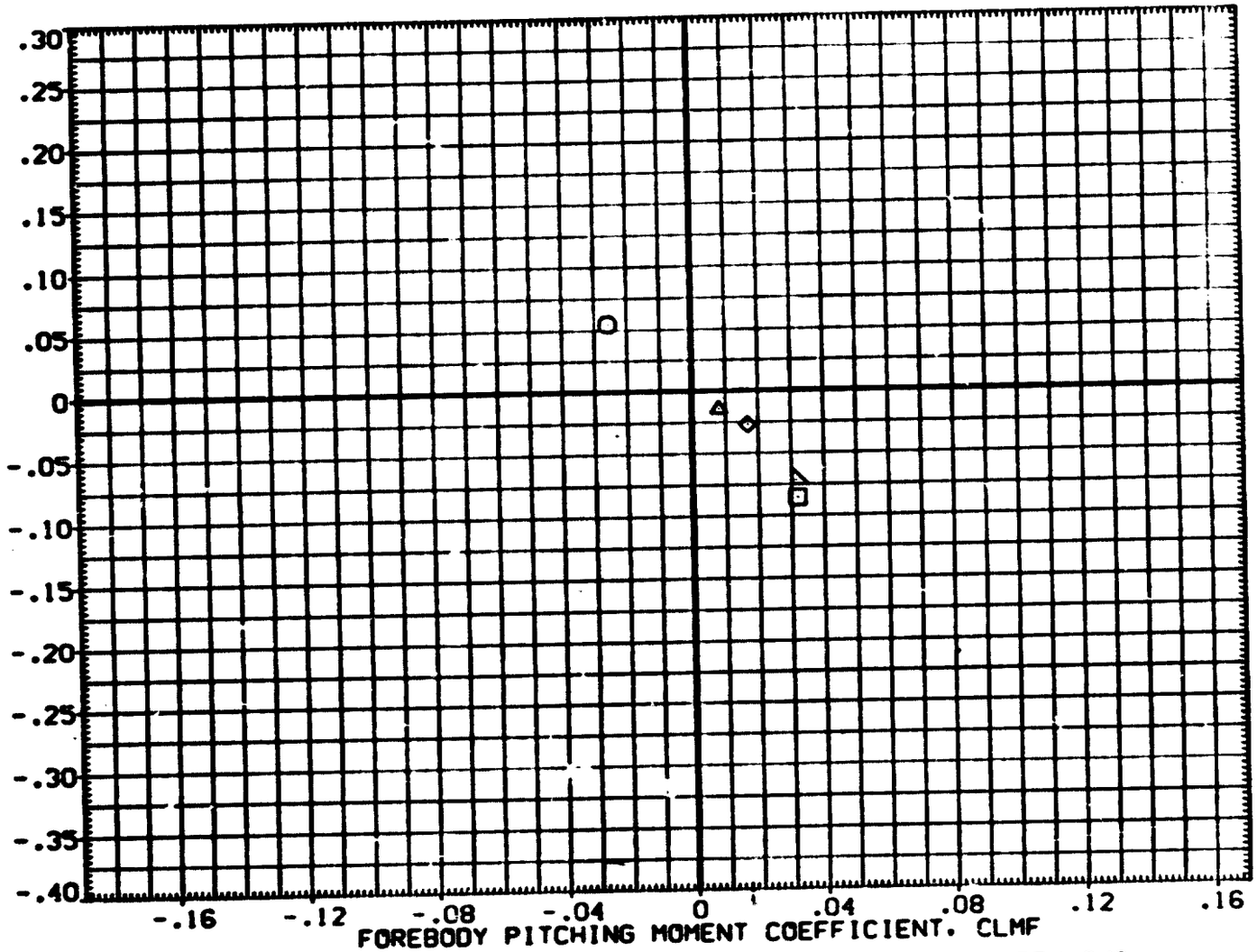


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO44)	□	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.000	.000
(METT44)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	0.000	.000	2.000	.000
(METL44)	△	AMES97-013(IABI) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.000	.000
(METR44)		AMES97-019(IABI) LVAP R-LPB ALL ML SEALED	0.000	.000	2.000	.000
(METI44)		AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

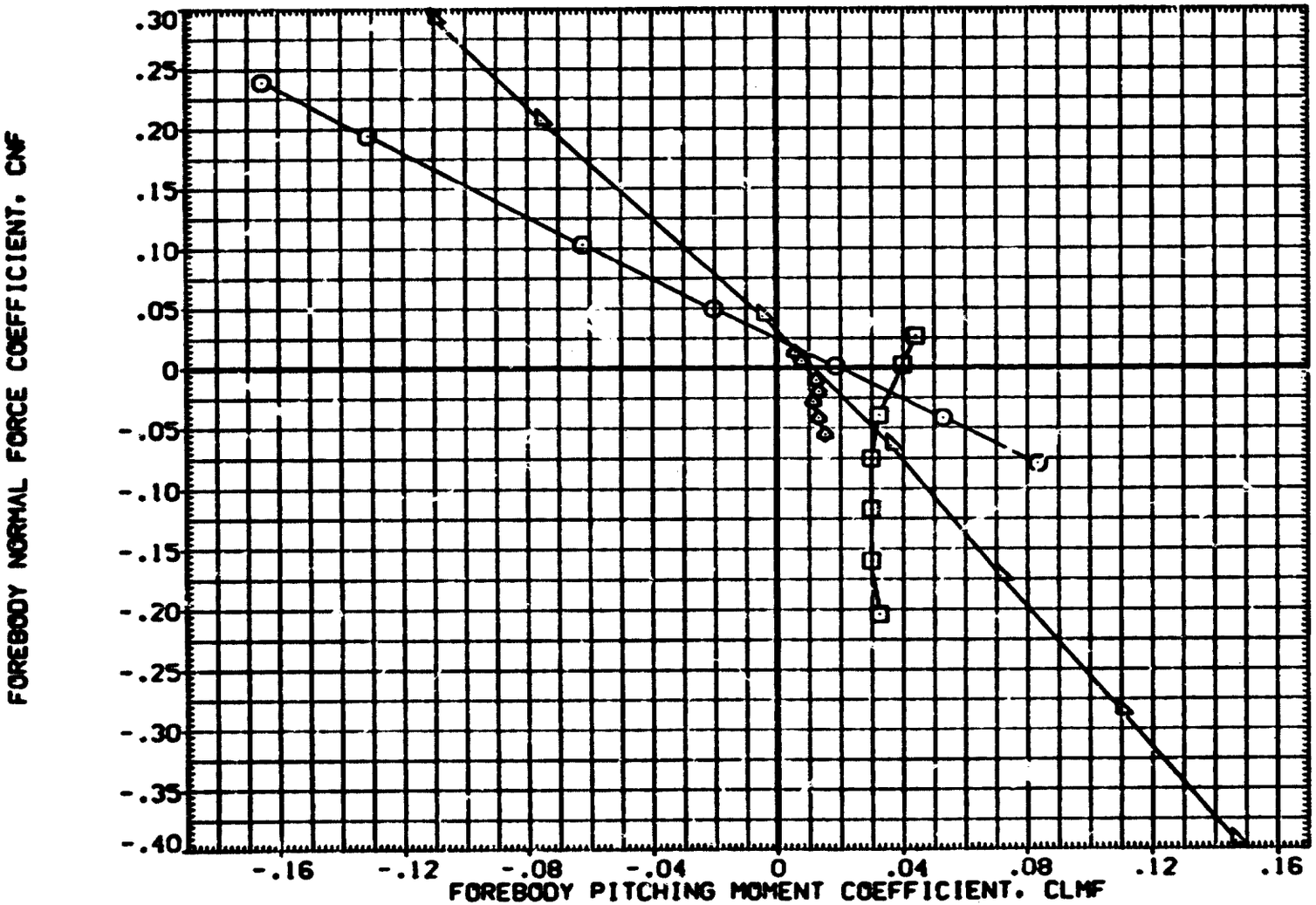


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	M/CH	SPDBRK
(MET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

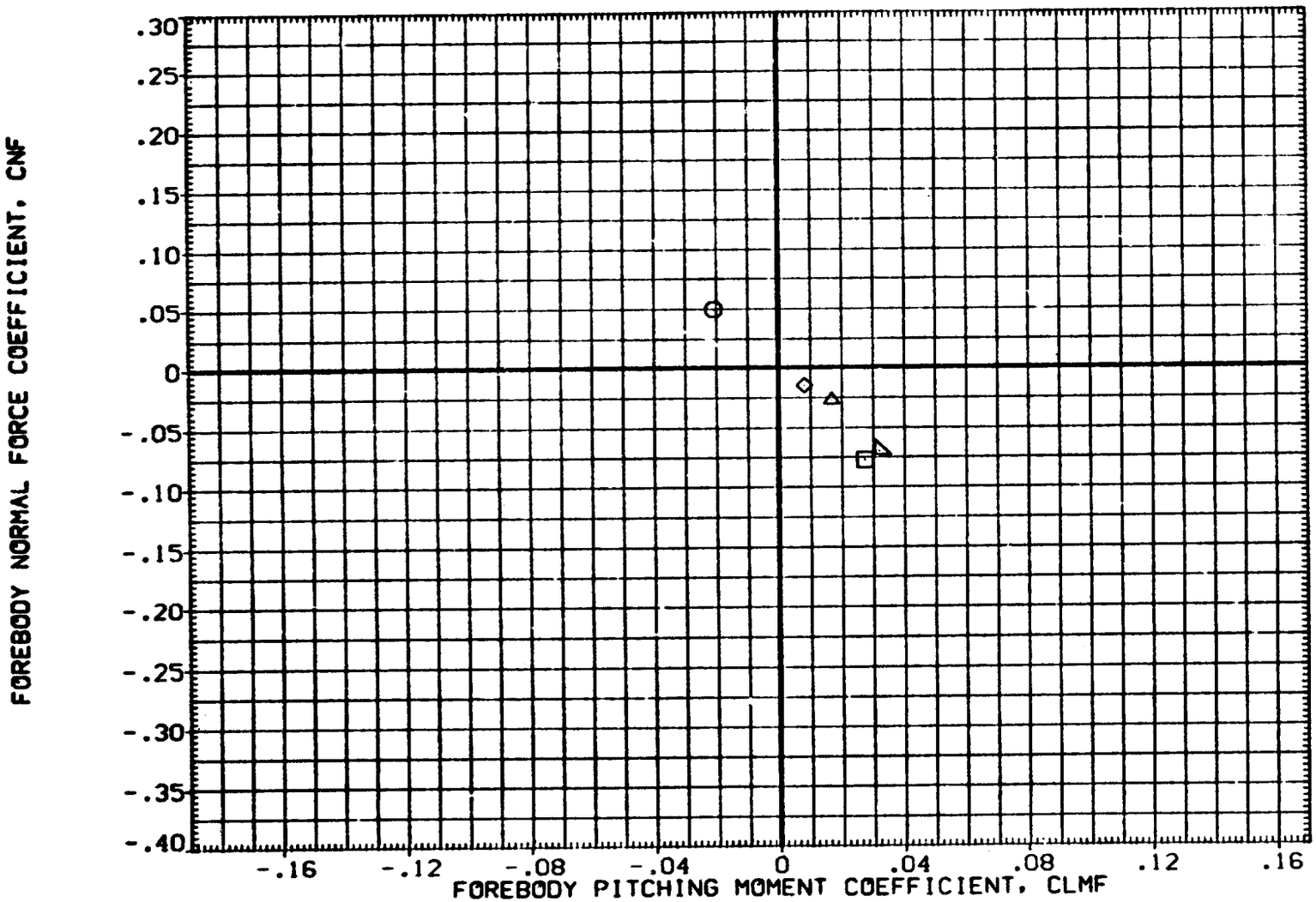


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL41)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

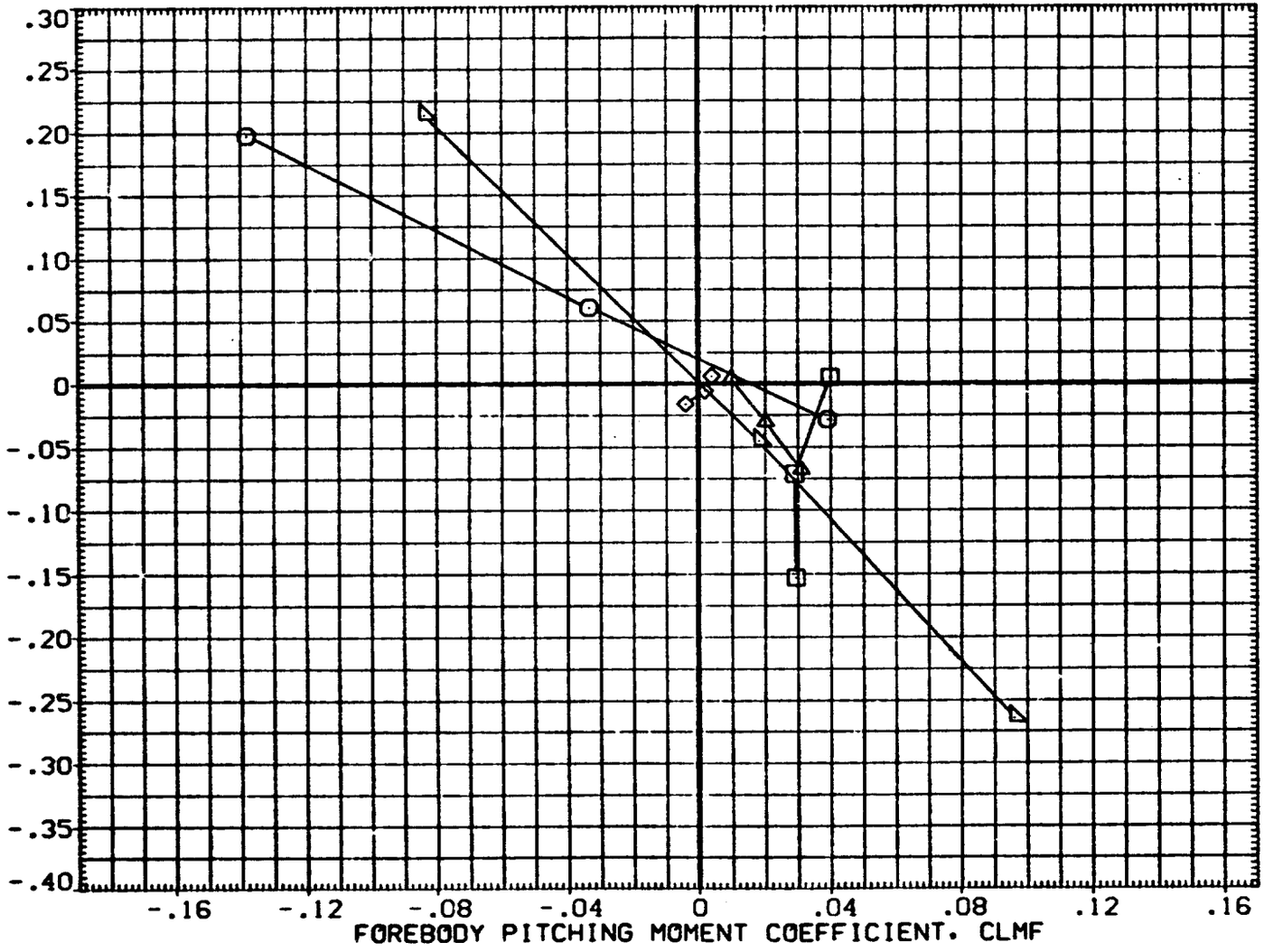


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)BETA1 = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METT44)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(METL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(METR44)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(METI44)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

ERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

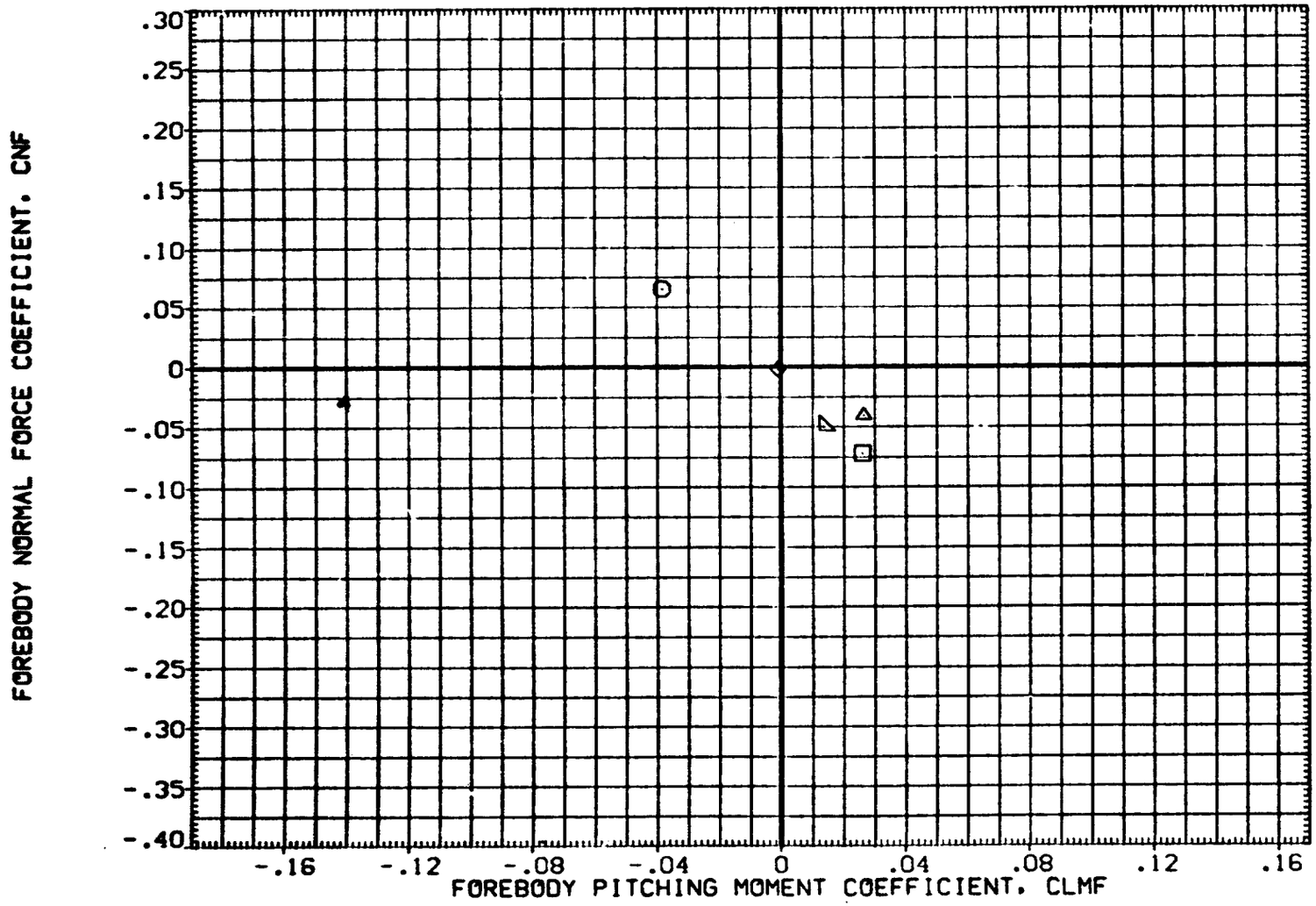


FIG. 10 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(MET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED
(MET147)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED
(METL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED
(METR47)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED
(METI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPDBRK
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

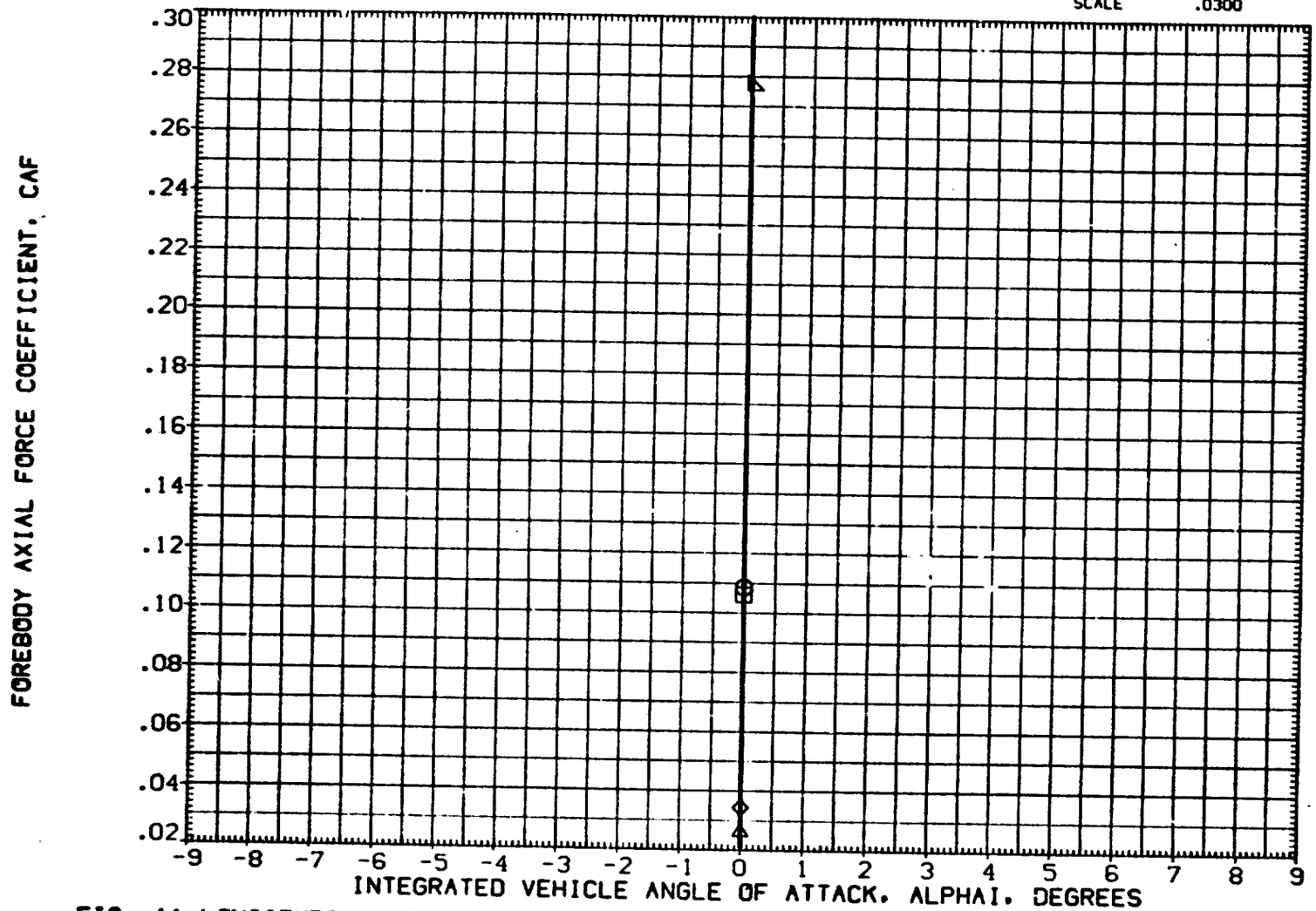


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019(IA61) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

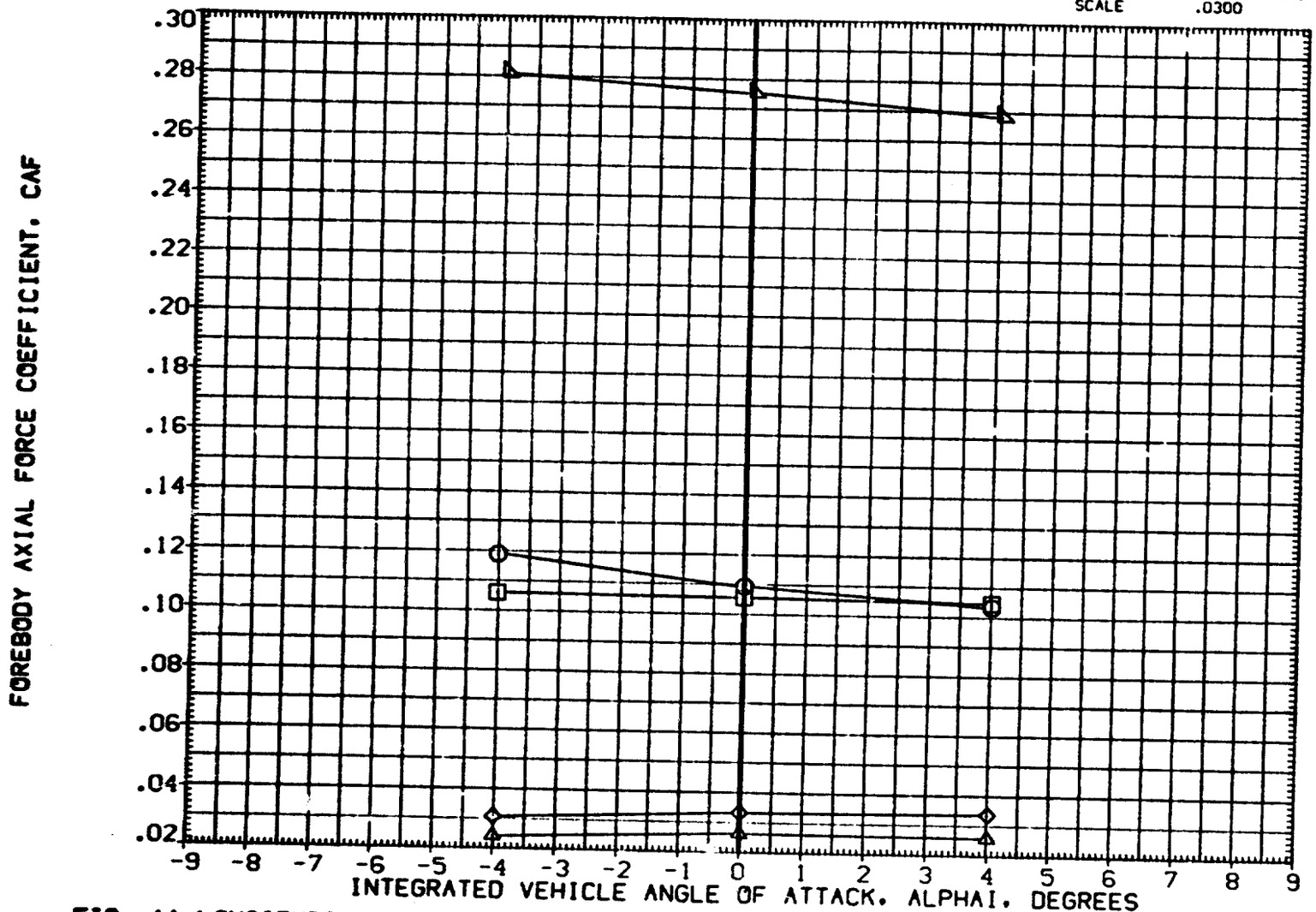


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET247)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET347)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

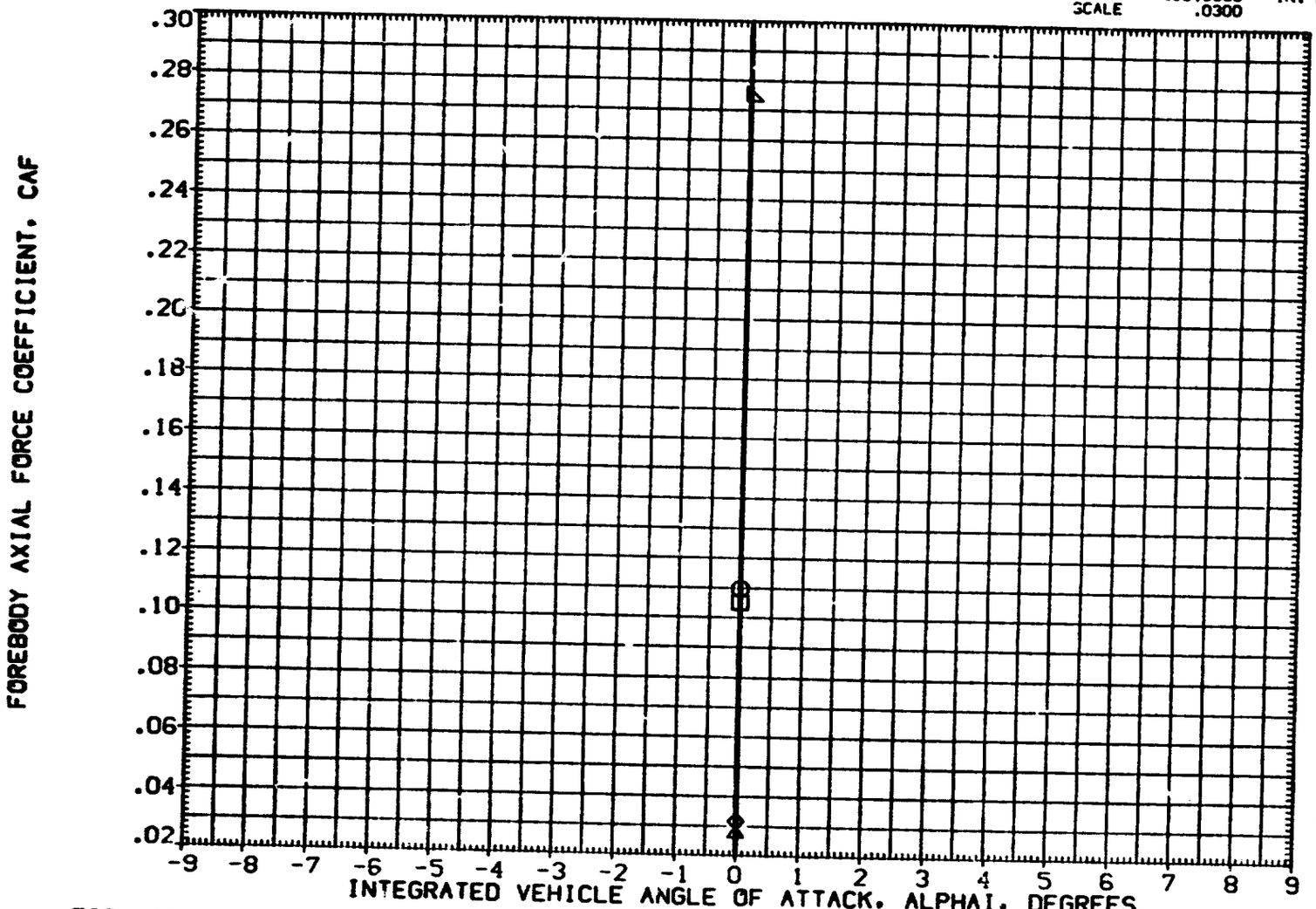


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)		AMES97-019([AB]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019([AB]) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET247)		AMES97-019([AB]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET347)		AMES97-019([AB]) LVAP R-SRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET447)		AMES97-019([AB]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

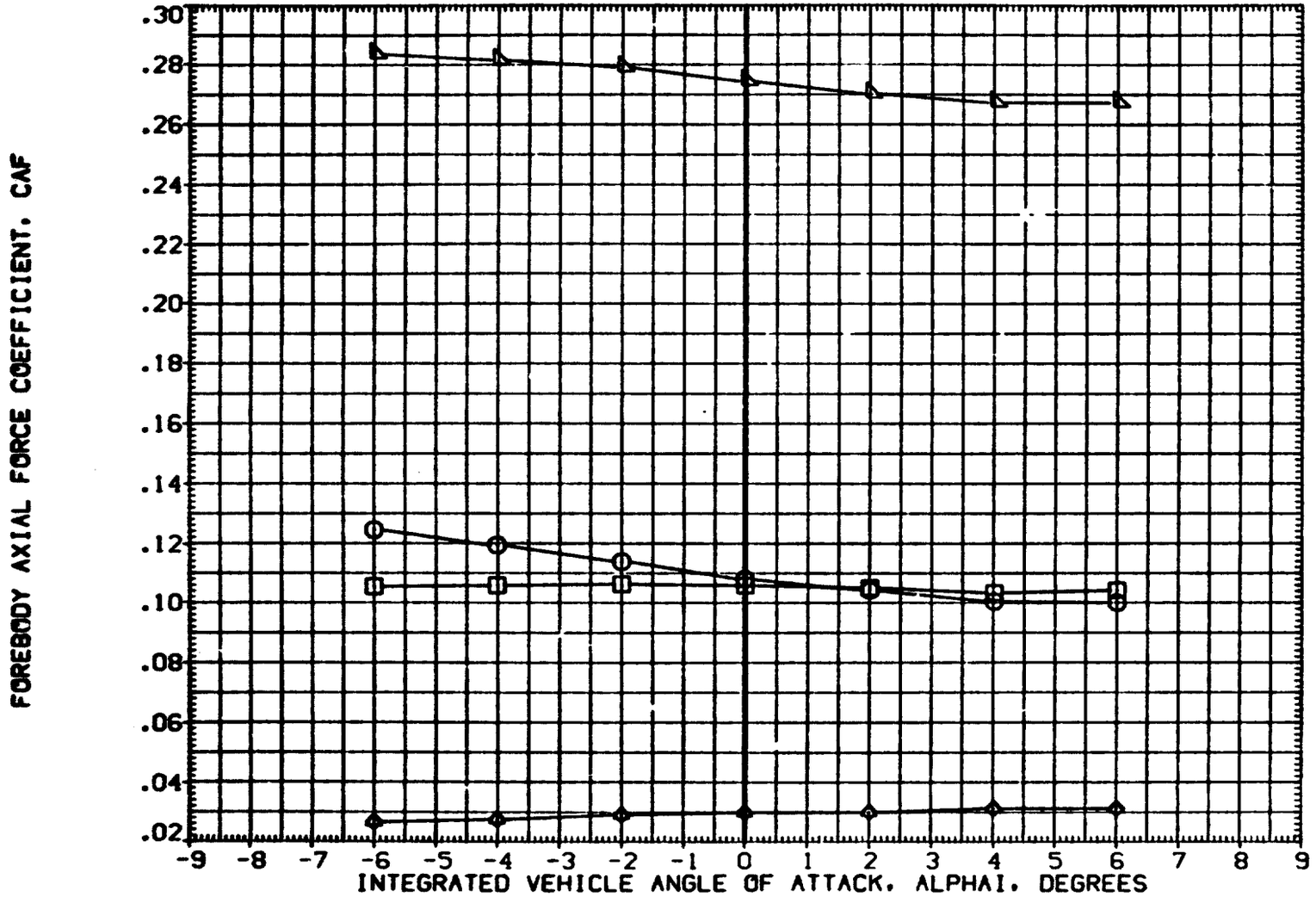


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	▷	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	◁	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

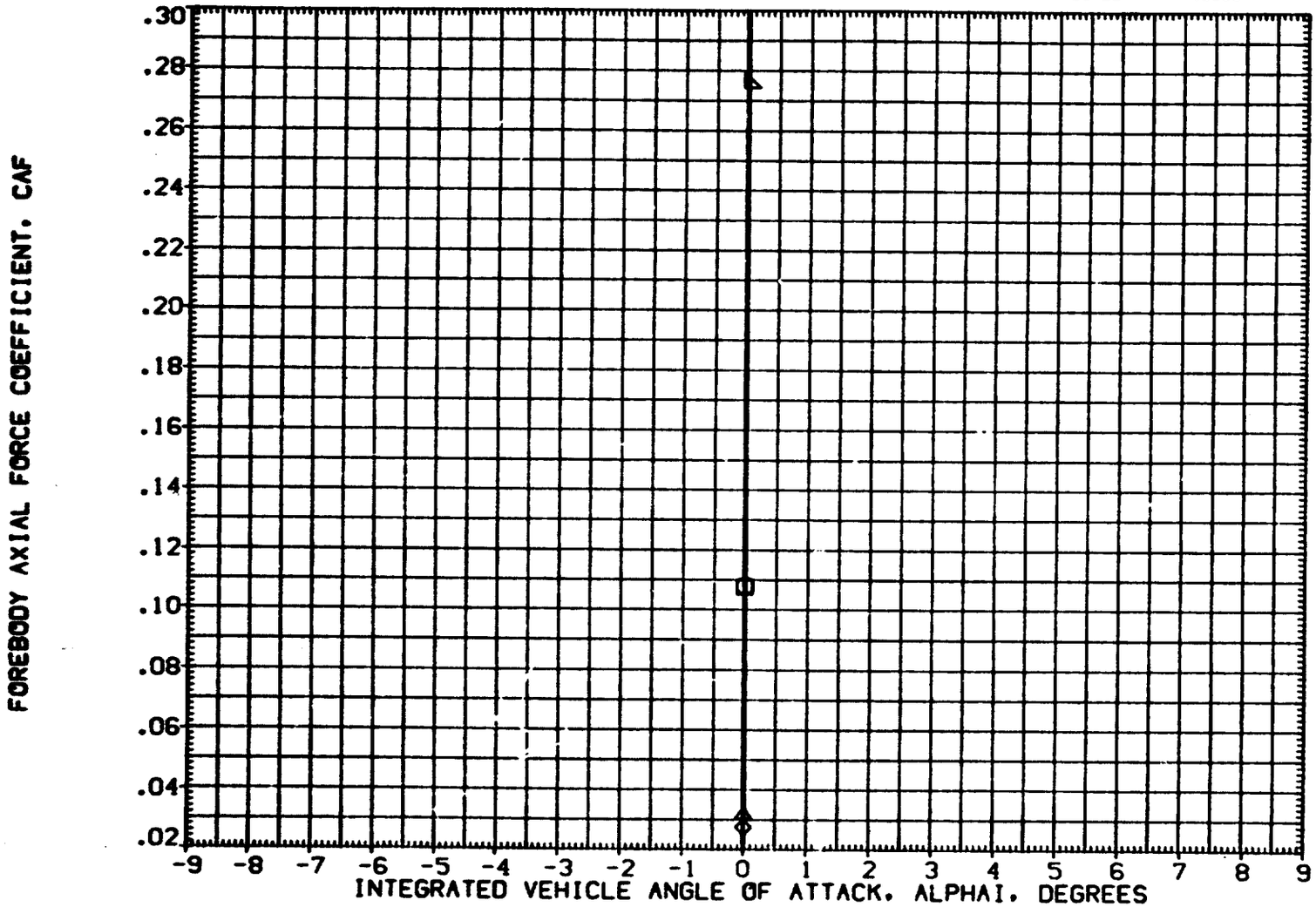


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)BET,I = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(METO47)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED
(METT47)	AMES97-019([A81) LVAP TANK - ALL HL SEALED
(METL47)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED
(METR47)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED
(METI47)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPOBRK
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

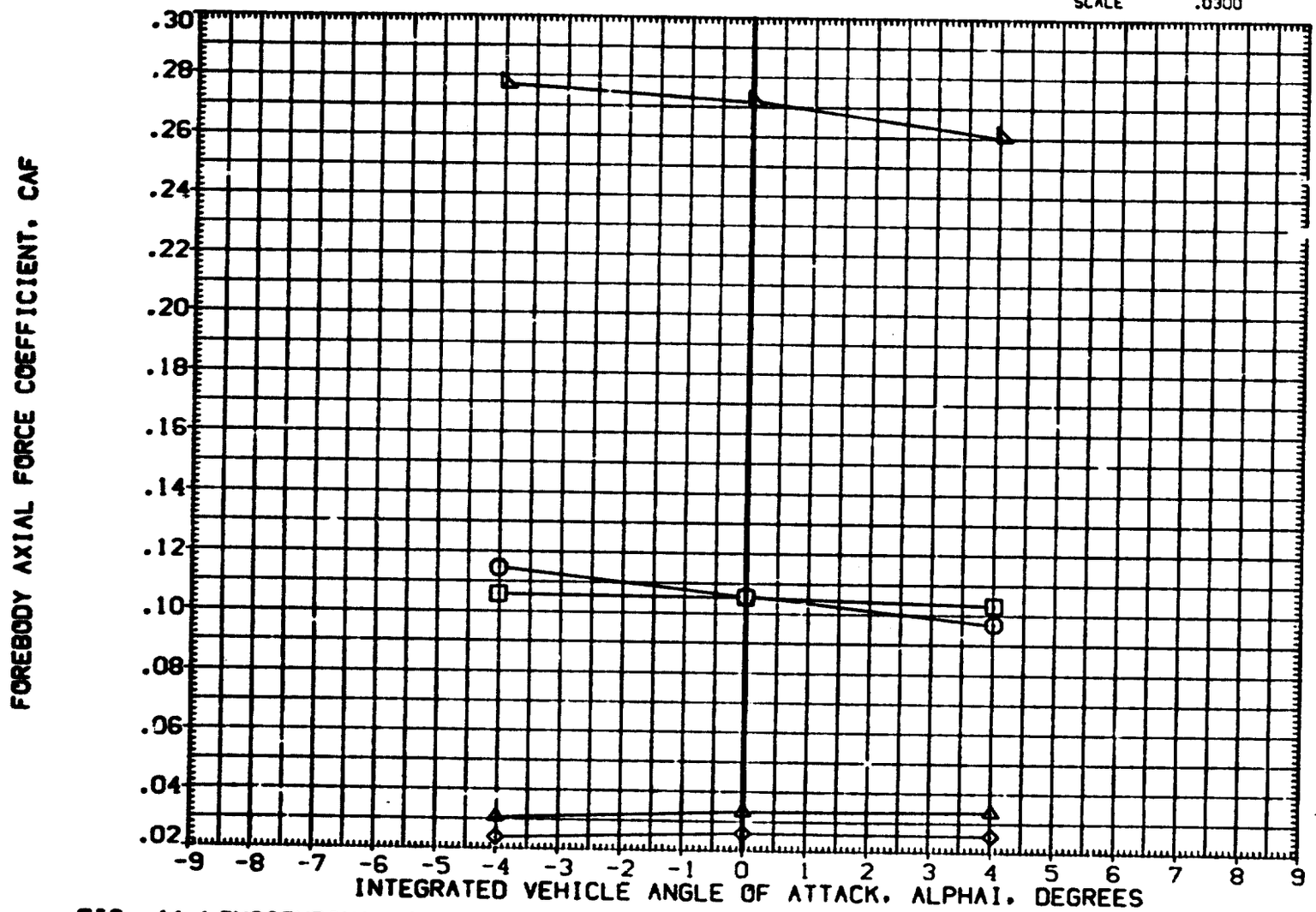


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=10/-4

(F)BET.\I = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO47)		AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(METT47)		AMES97-019([A81]) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(METL47)		AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019([A81]) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

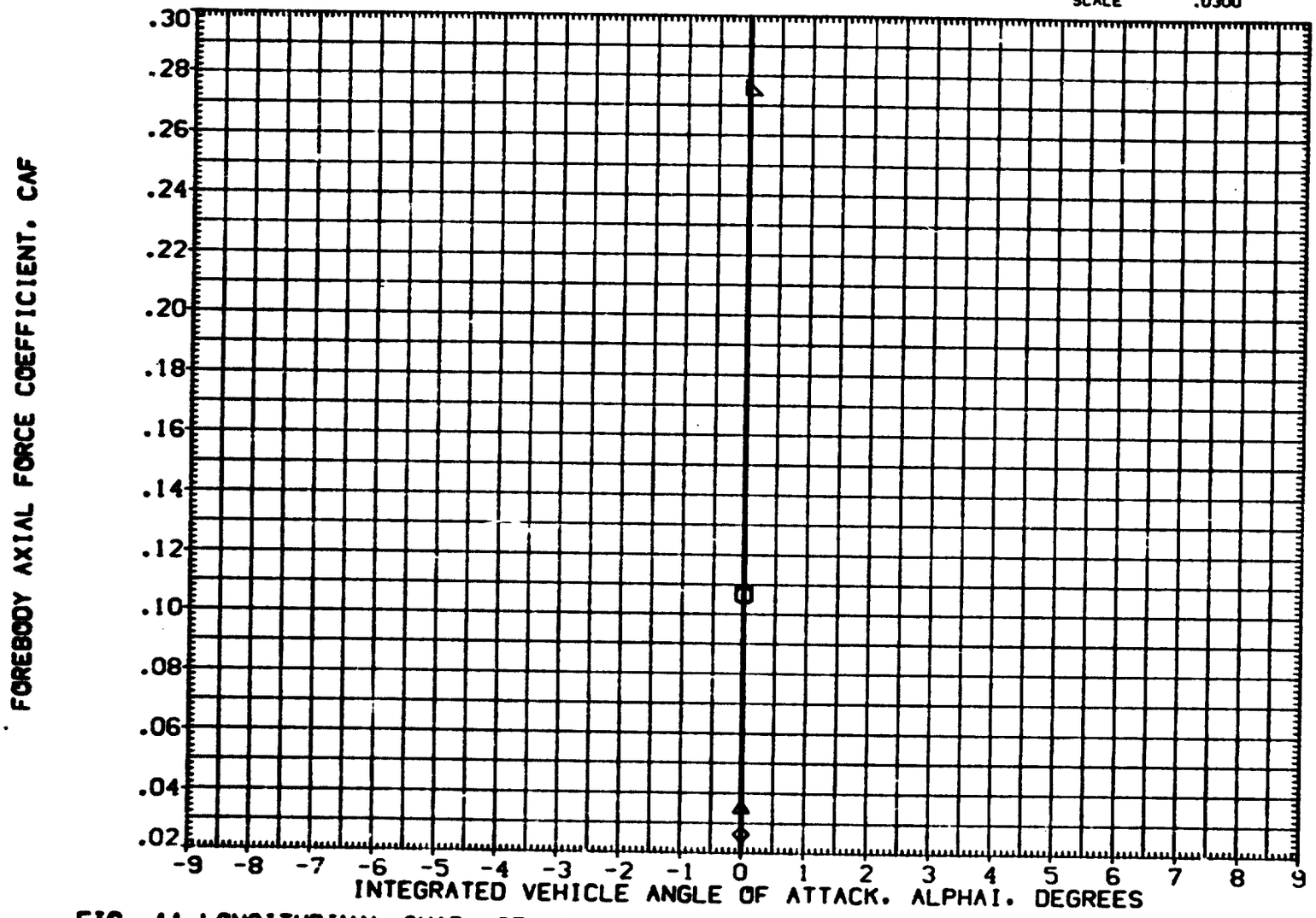


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO47)	□	AMES97-019([ABI]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)	◇	AMES97-019([ABI]) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	△	AMES97-019([ABI]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019([ABI]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019([ABI]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

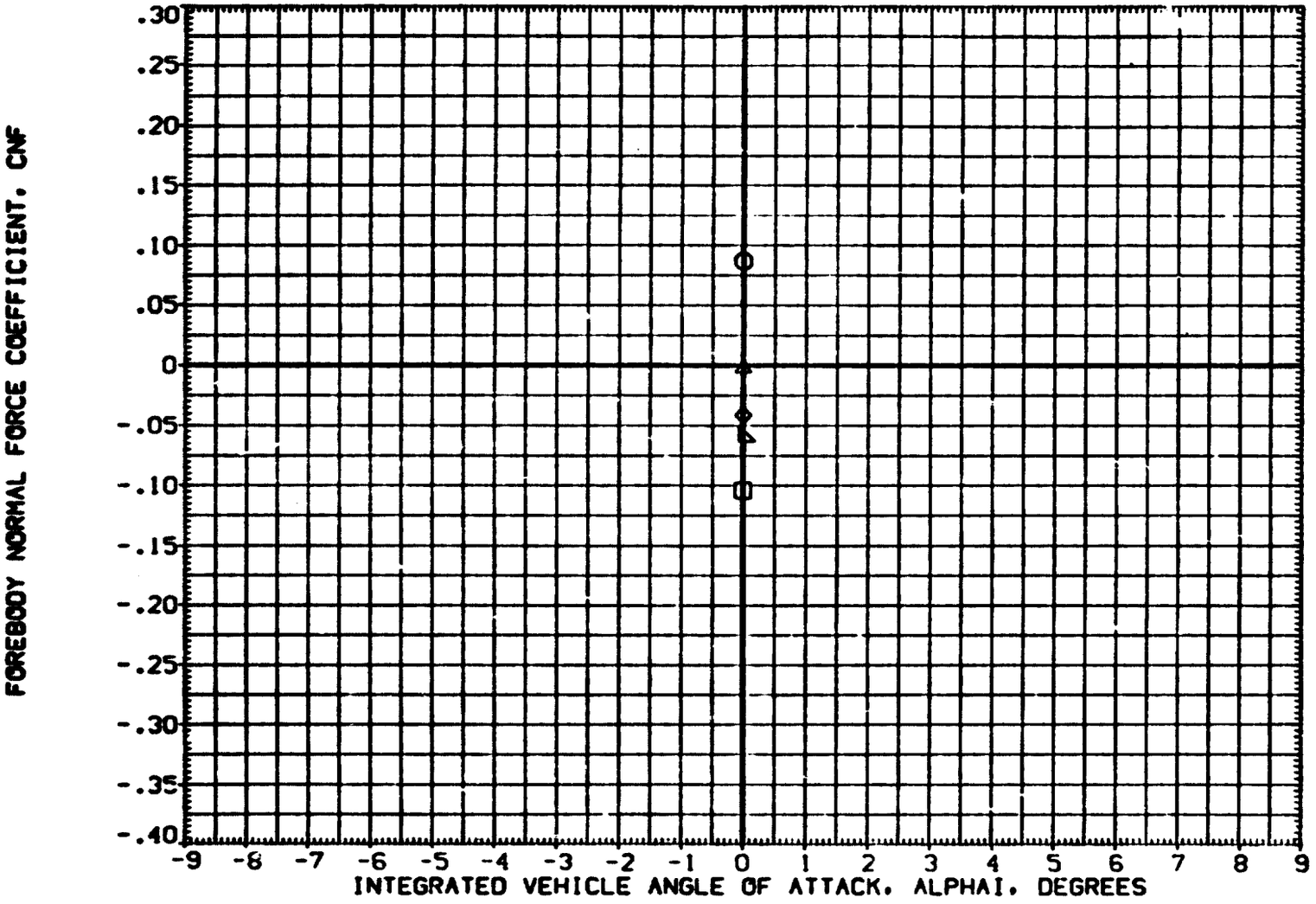


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)	□	AMES97-019([ABI]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	□	AMES97-019([ABI]) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	◇	AMES97-019([ABI]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	◇	AMES97-019([ABI]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	△	AMES97-019([ABI]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

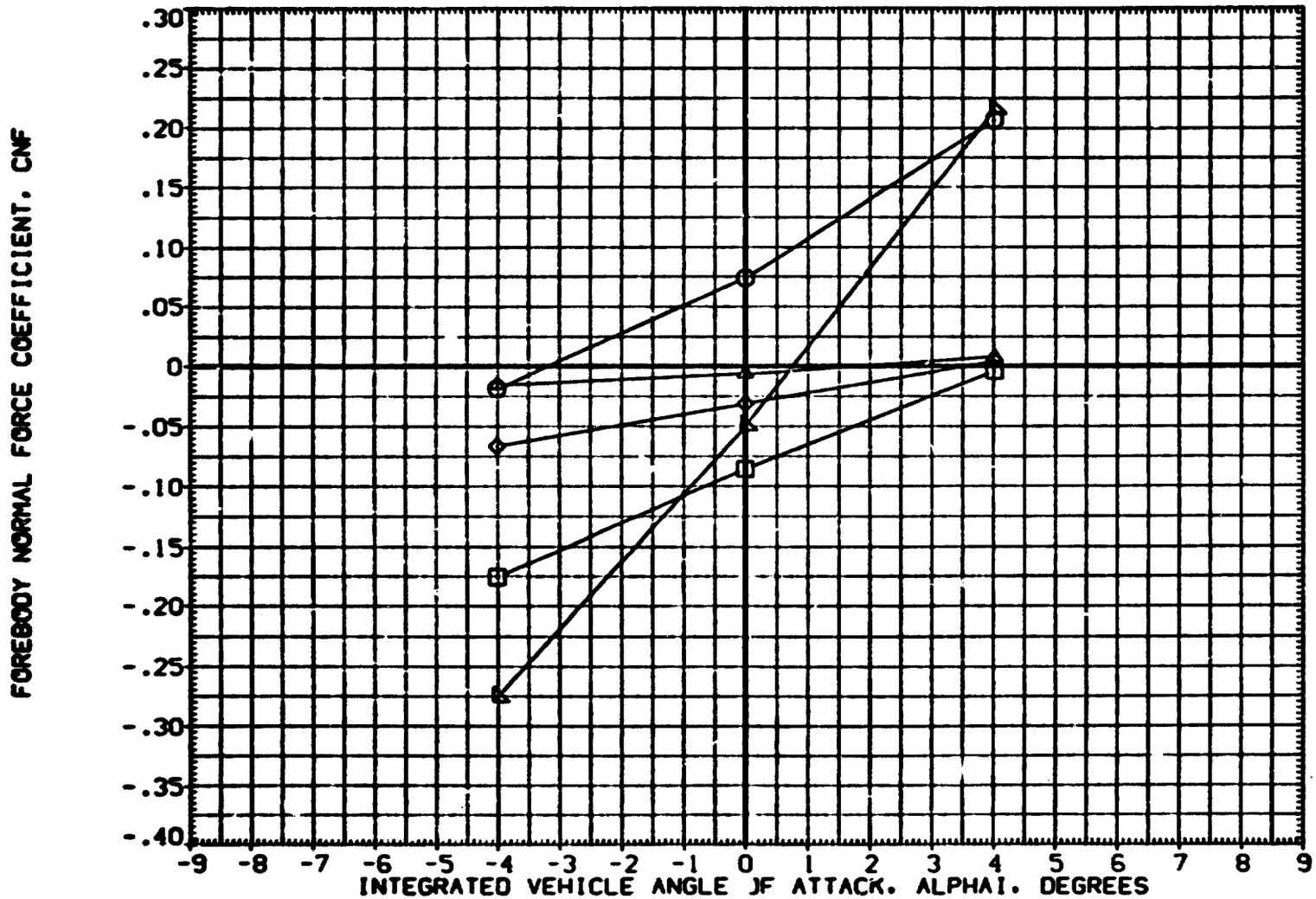


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(NETO47)		AMES97-019C(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(NETT47)		AMES97-019C(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(NETL47)		AMES97-019C(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(NETR47)		AMES97-019C(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(NETI47)		AMES97-019C(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

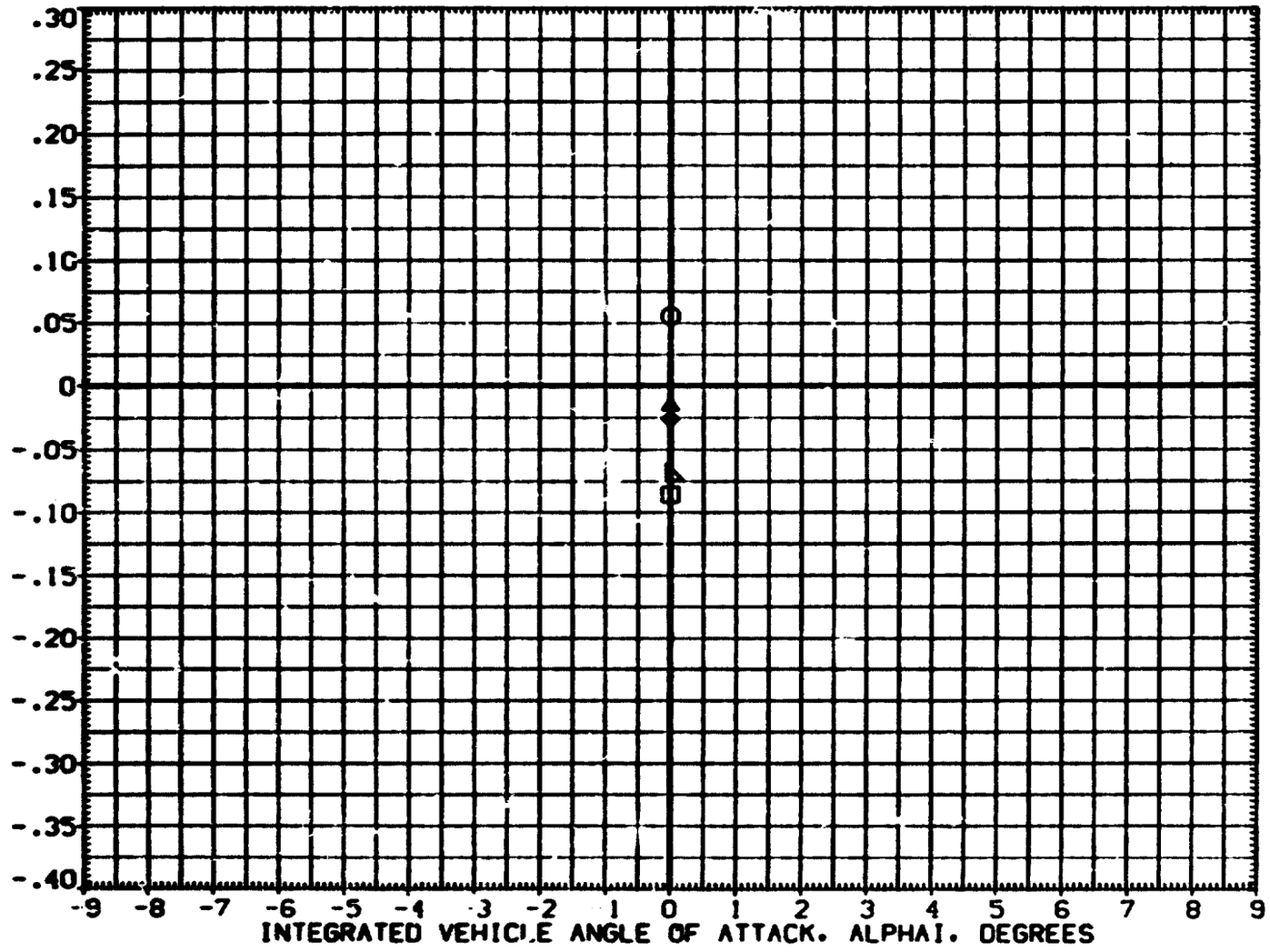


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=10/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(AETO47)	○	AMES97-019([ABI]) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(AETT47)	□	AMES97-019([ABI]) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(AETL47)	◇	AMES97-019([ABI]) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(AETR47)	△	AMES97-019([ABI]) LVAP R-LPB ALL ML SEALED	10.000	-4.000	2.000	.000
(AETI47)	⊗	AMES97-019([ABI]) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1257.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

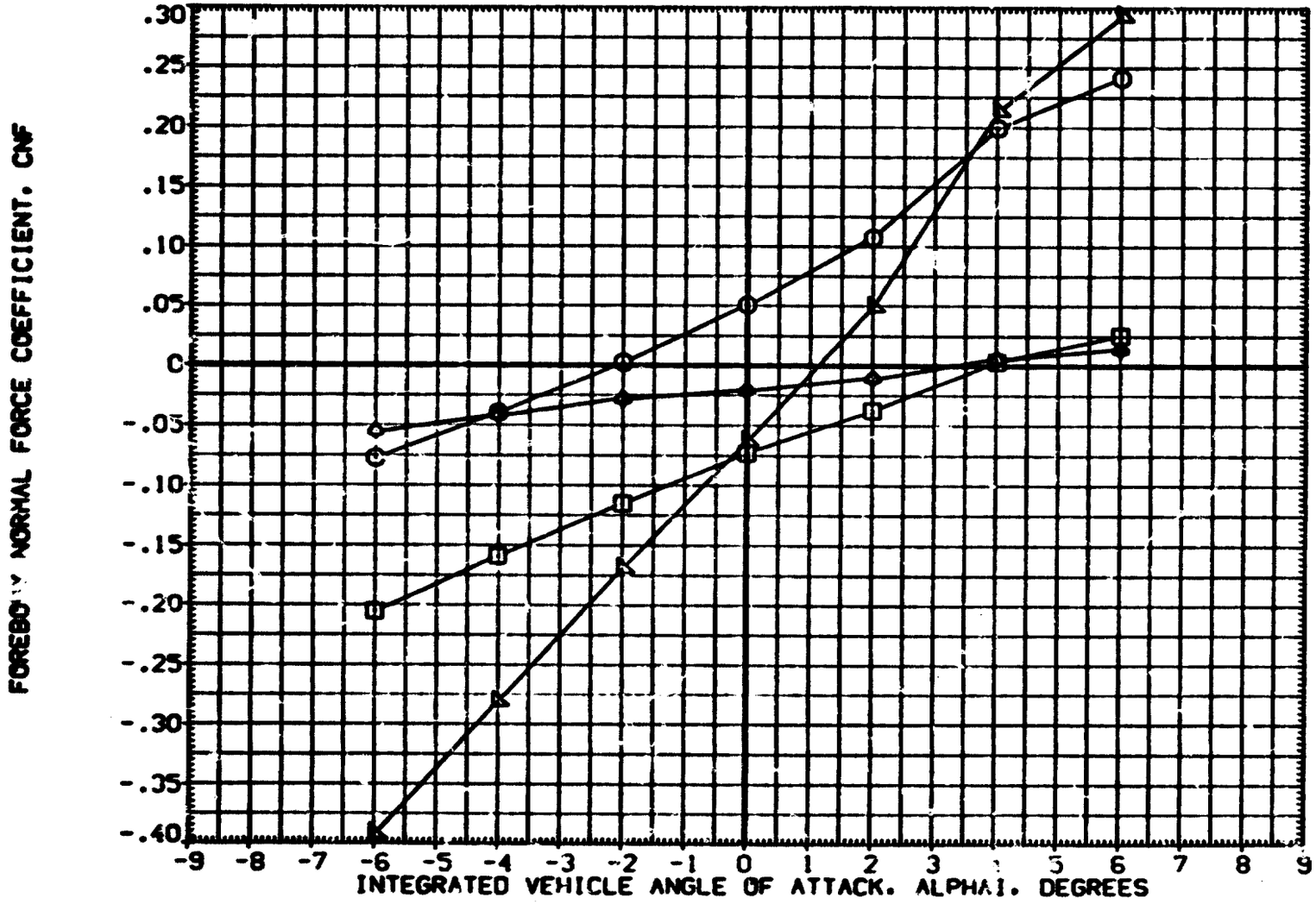


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET247)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET347)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET447)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

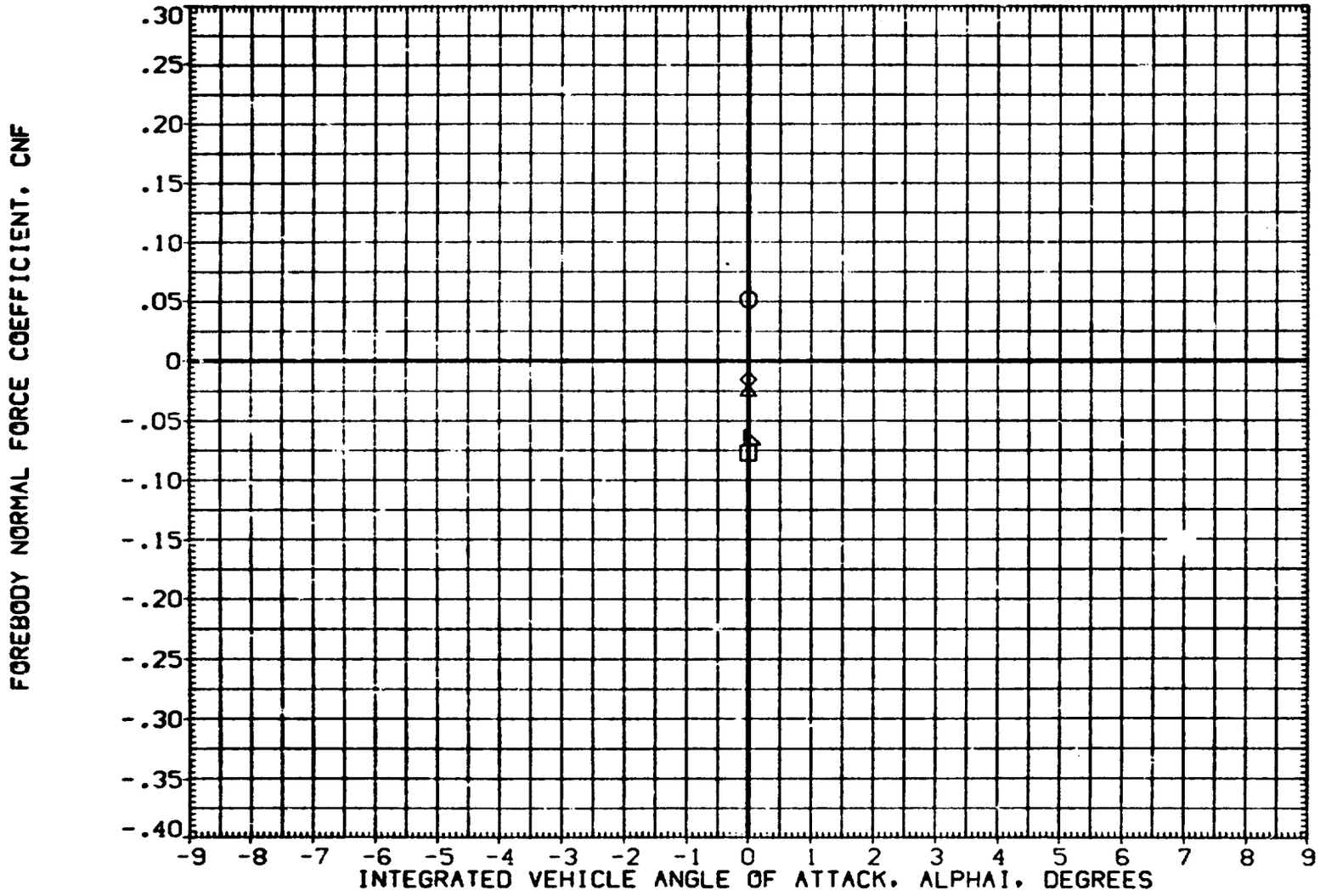


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

PEFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

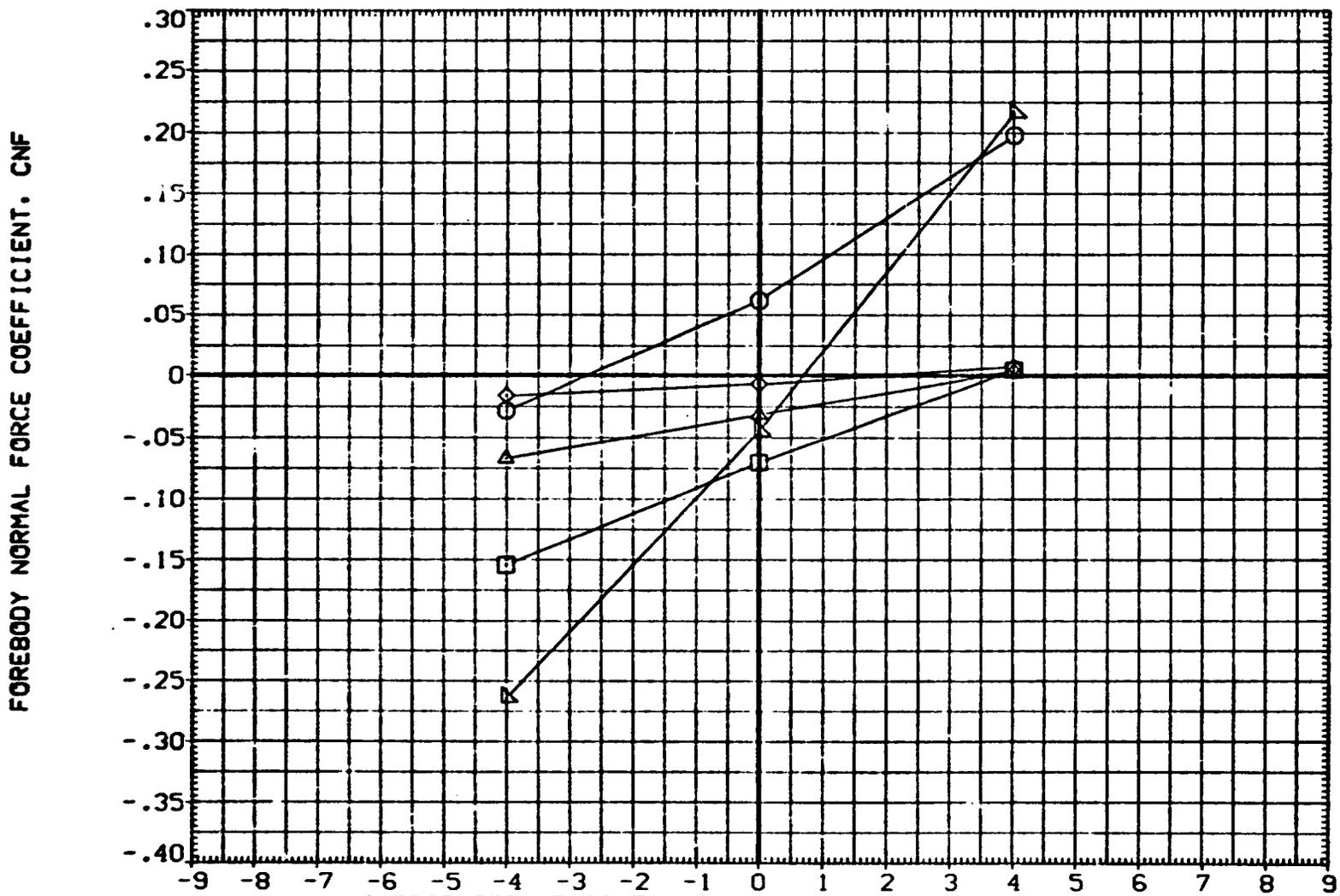


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METC47)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(METT47)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(METL47)	△	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(METR47)	▽	AMES97-019(IA81) LVAP R-LPB ALL ML SEALED	10.000	-4.000	2.000	.000
(METI47)	⊲	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

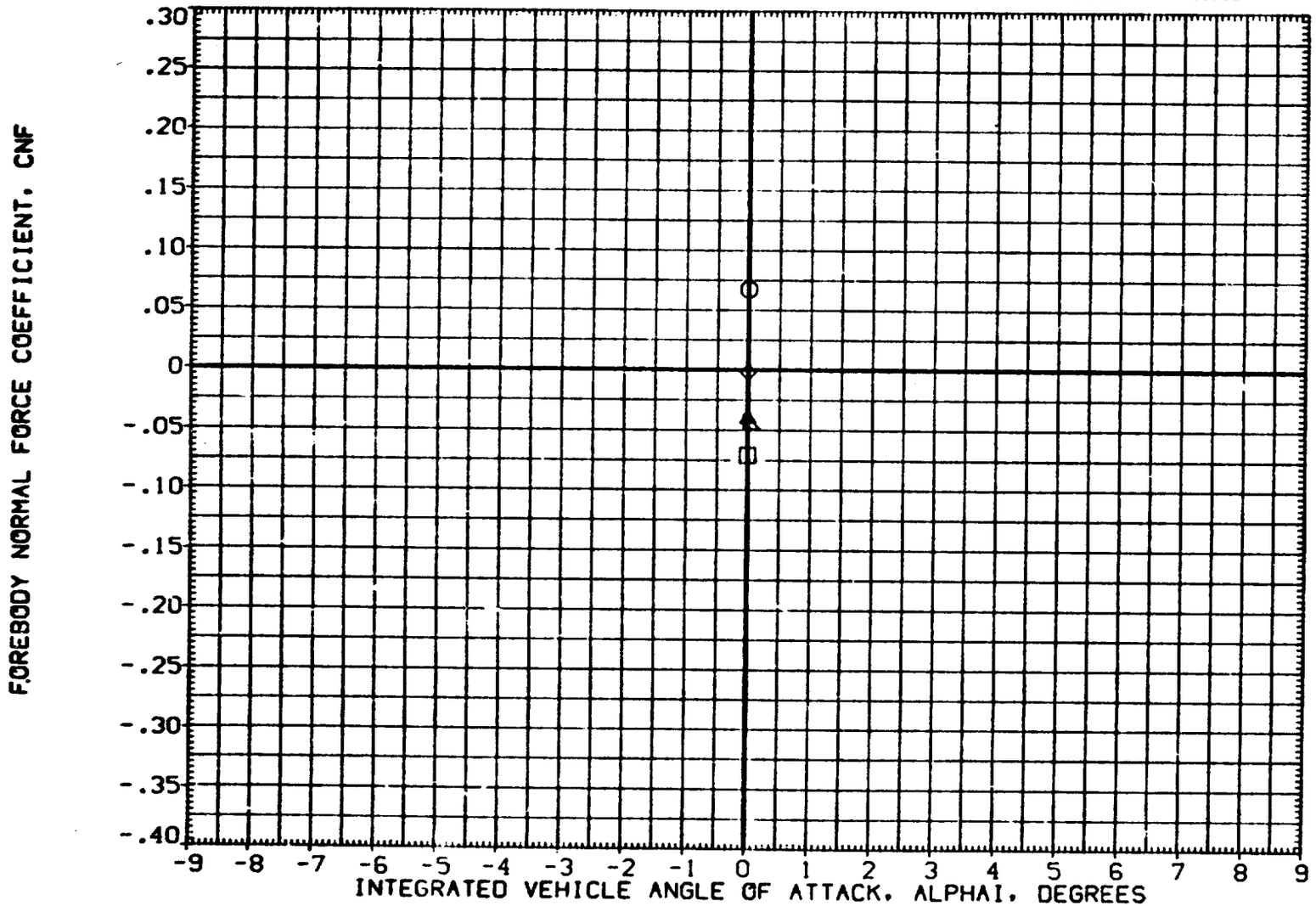


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET247)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(MET347)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET447)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

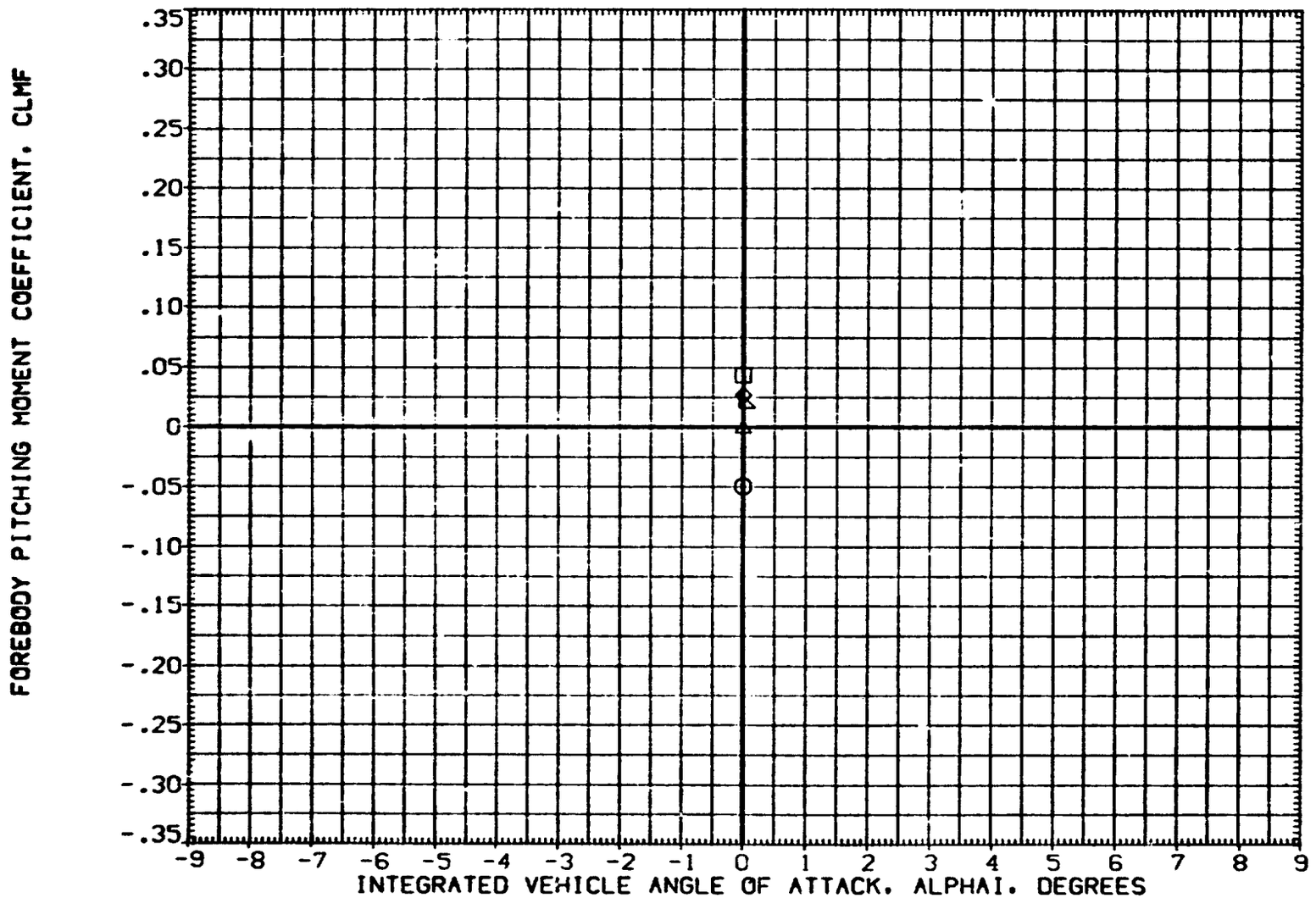


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	◻	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

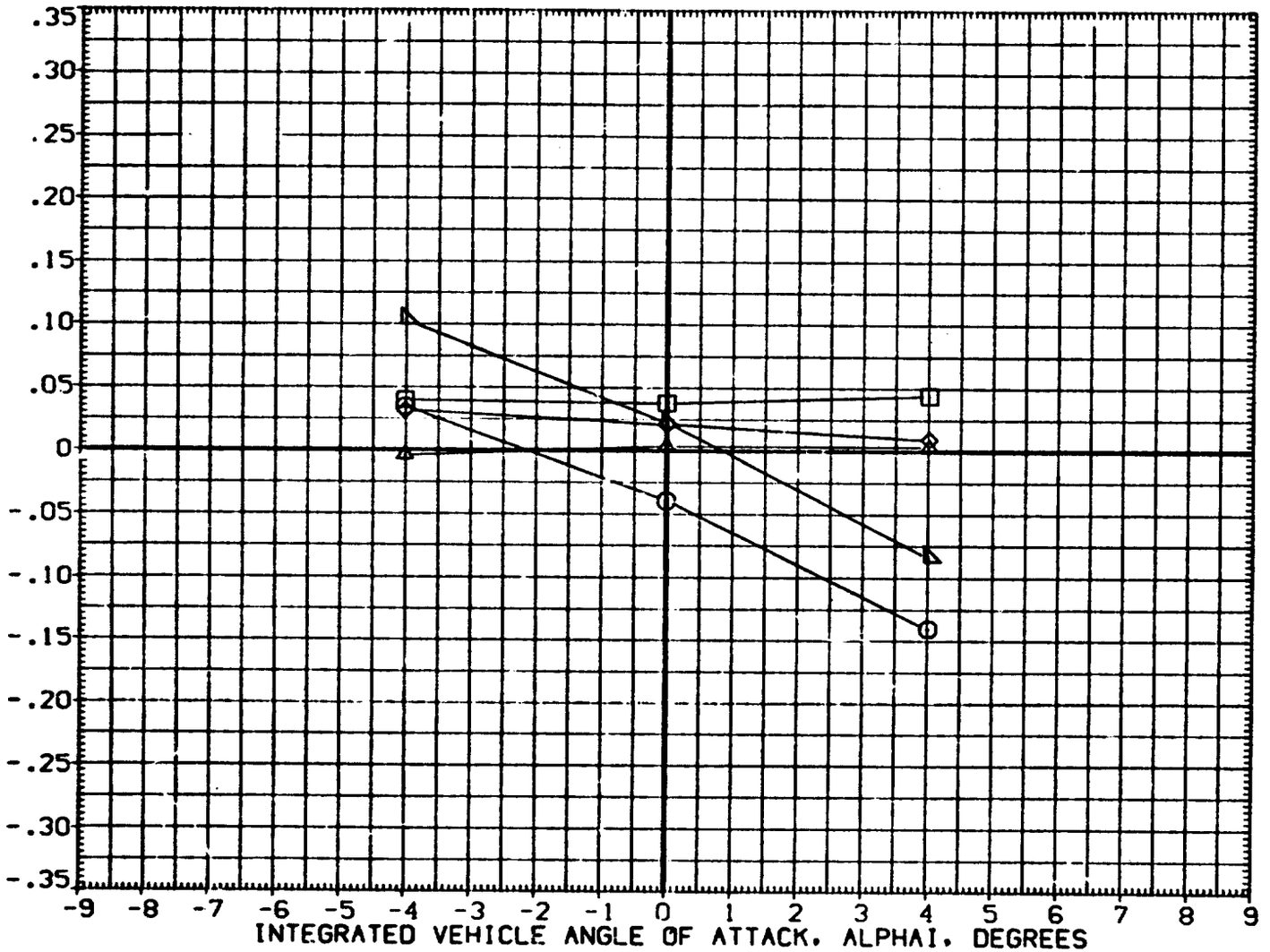


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	◺	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

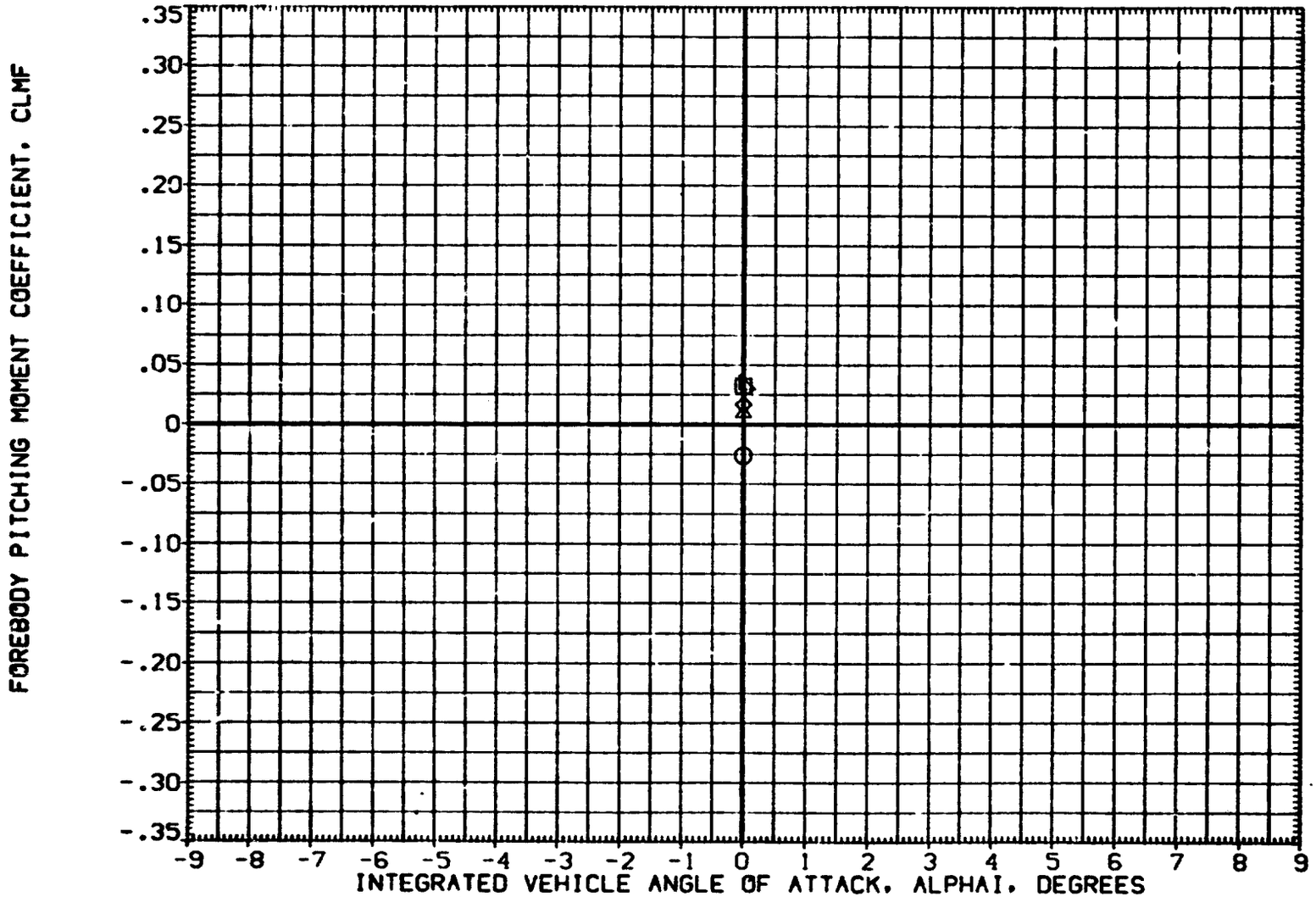


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	▷	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)	△	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

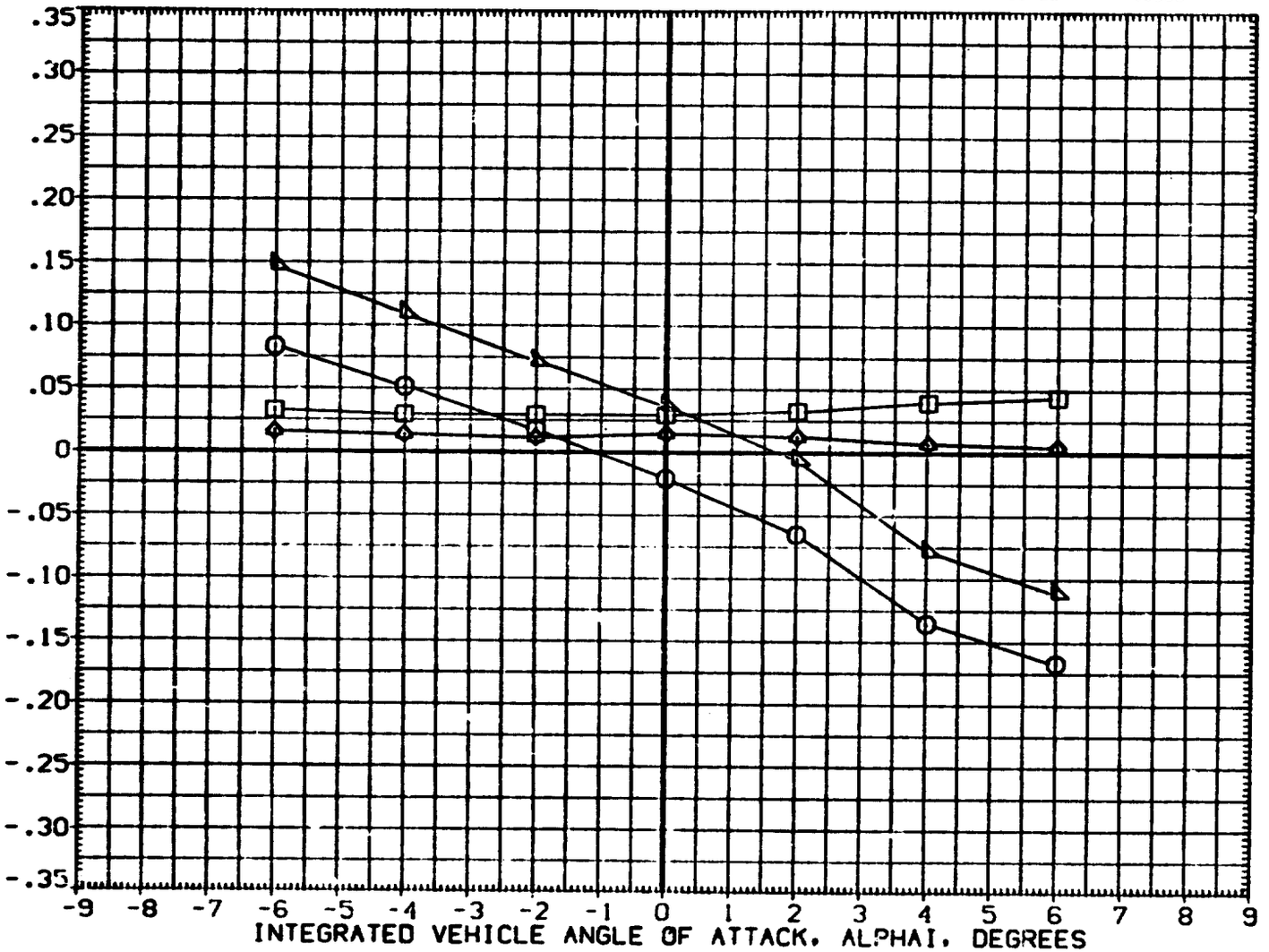


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-C19(IABI) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)	▽	AMES97-C19(IABI) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	◇	AMES97-C19(IABI) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	◁	AMES97-C19(IABI) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET!47)		AMES97-C19(IABI) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

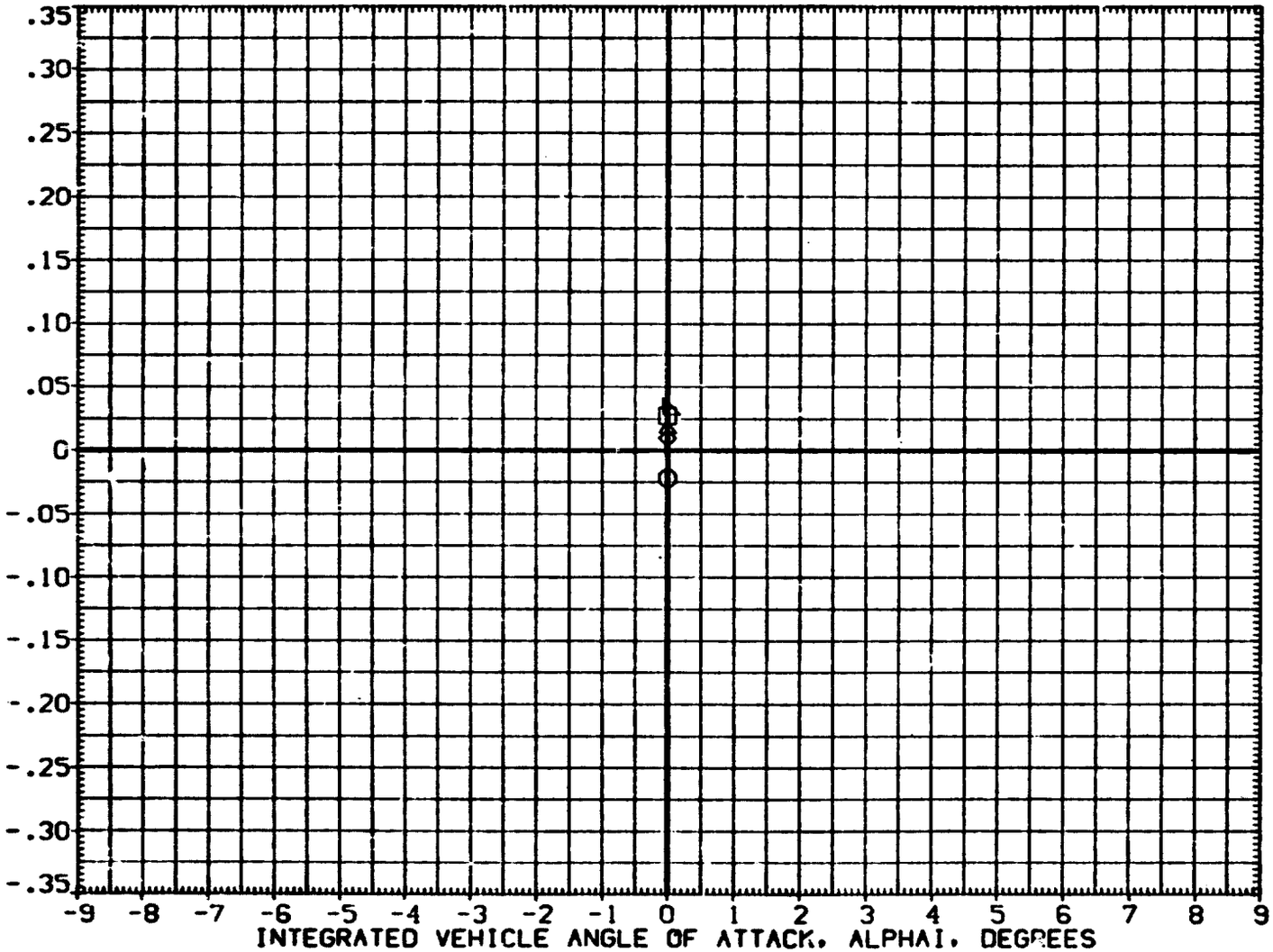


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET[illegible])	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	⊗	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

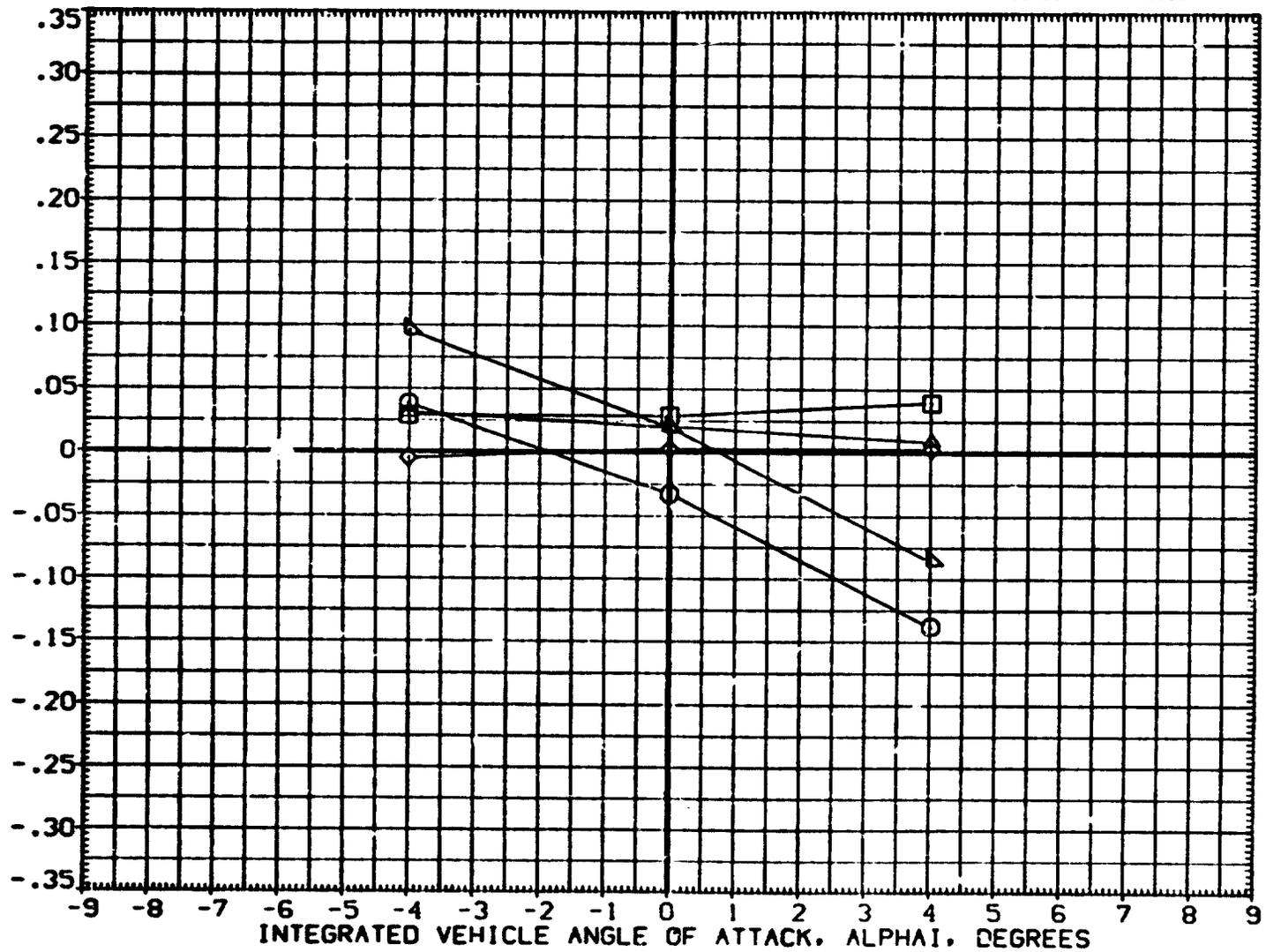


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METD47)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

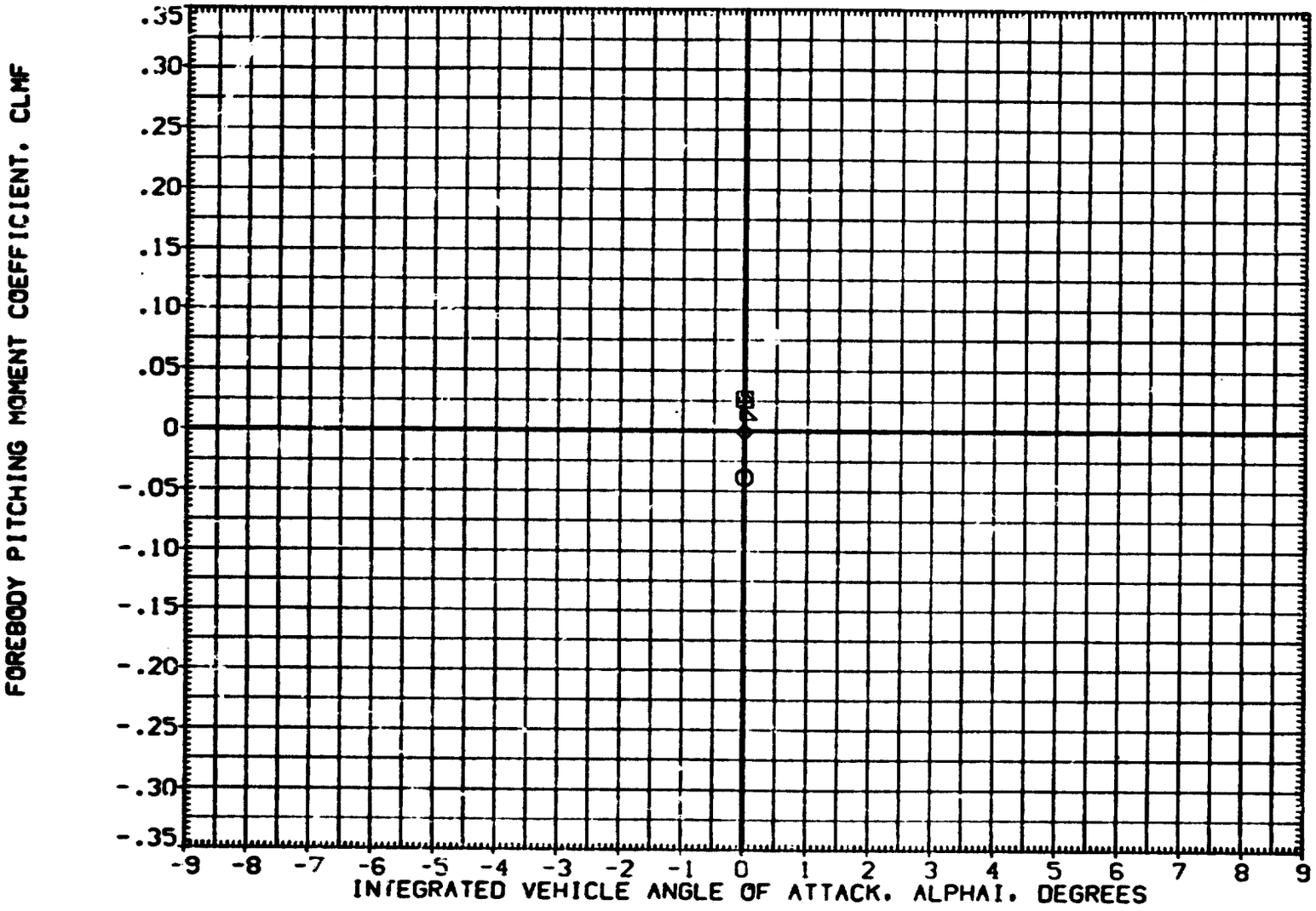


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)	□	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(MET147)	◇	AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(MET247)	△	AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(MET347)		AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(MET447)		AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

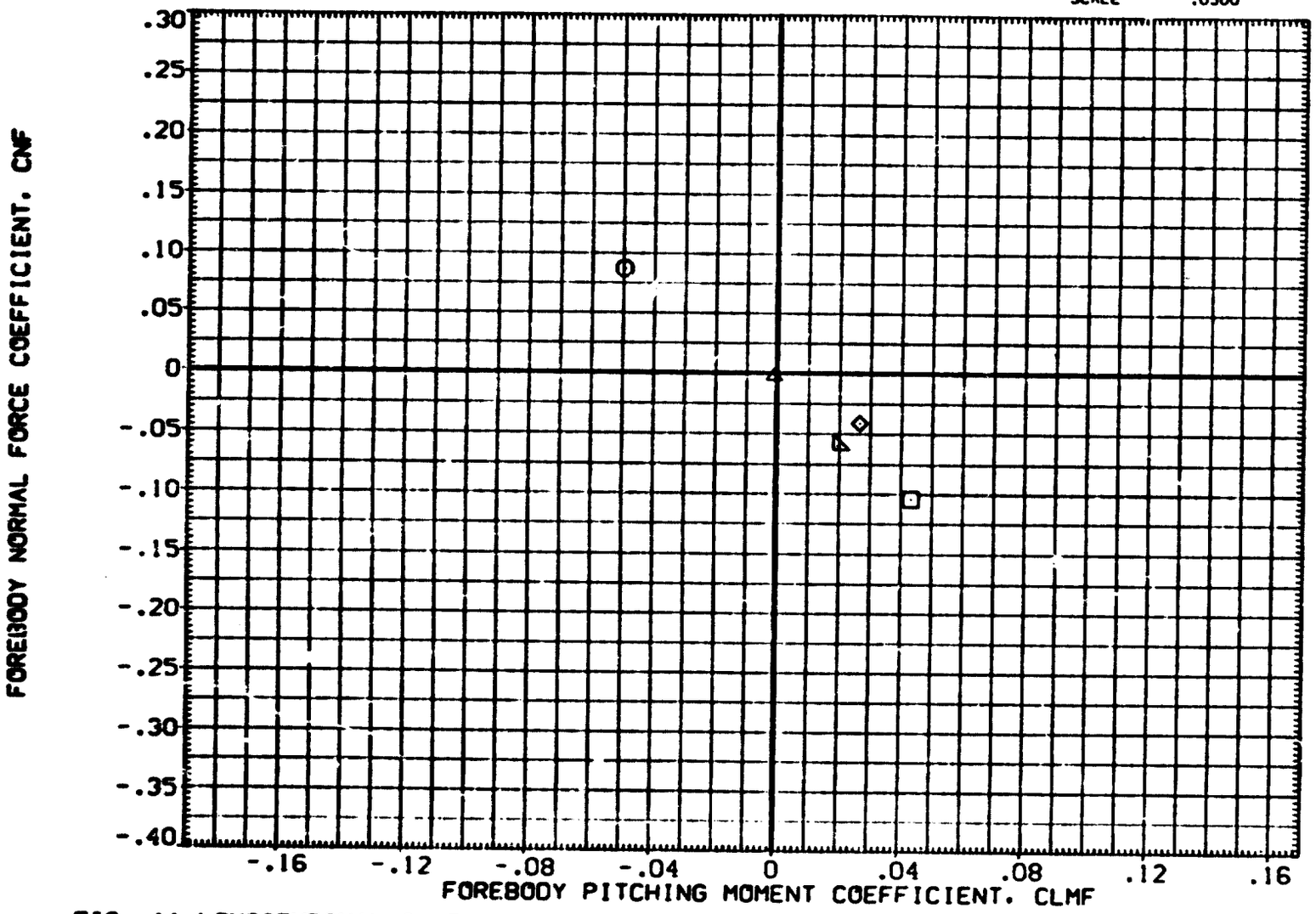


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)BET\I = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET047)		AMES97-019((AB1) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(MET147)		AMES97-019((AB1) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(MET247)		AMES97-019((AB1) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(MET347)		AMES97-019((AB1) LVAP R-SRB ALL ML SEALED	10.000	-4.000	2.000	.000
(MET447)		AMES97-019((AB1) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

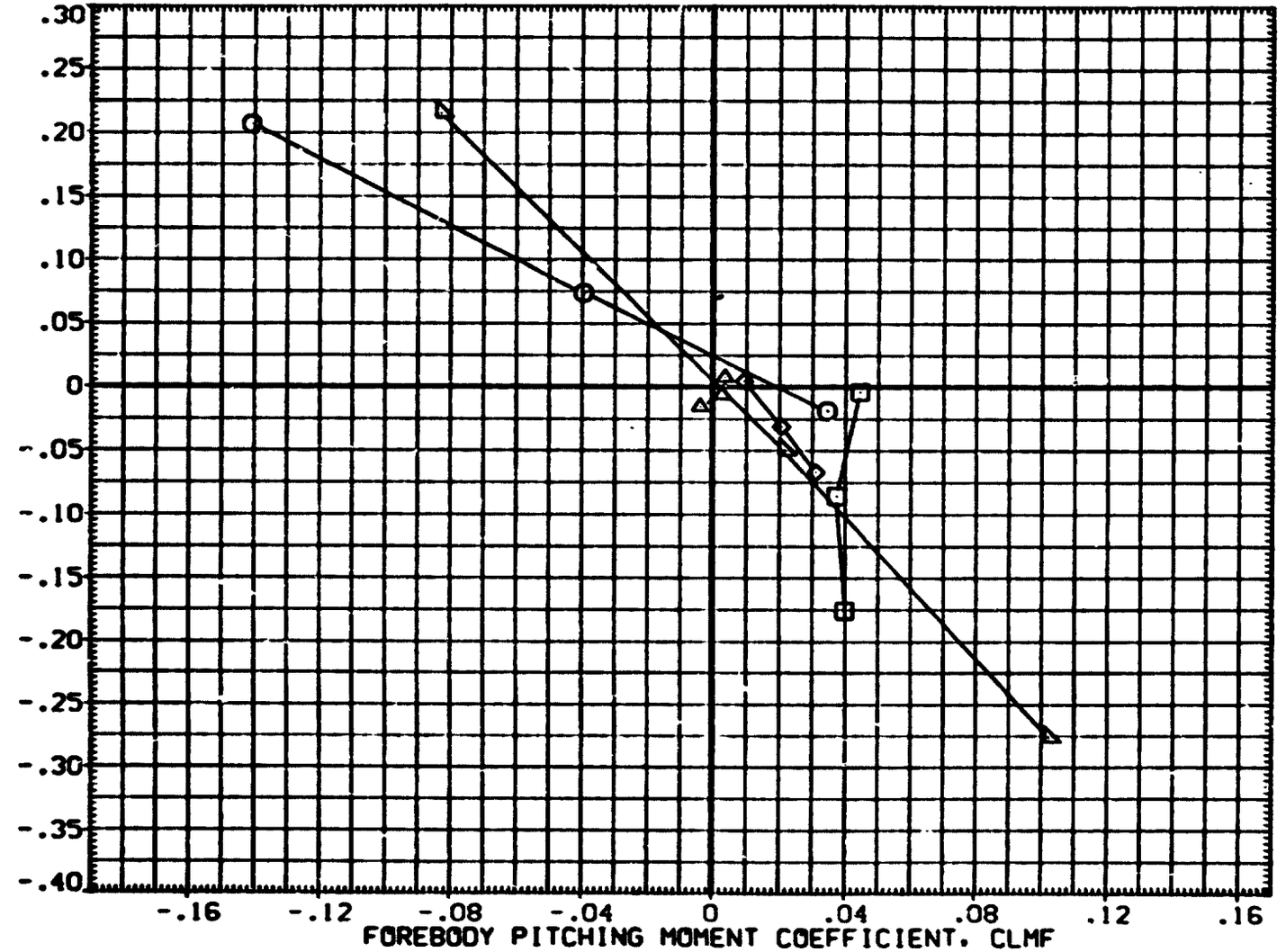


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)SET,I = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(META047)	□	AMES97-019((AB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METT47)	◇	AMES97-019((AB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	△	AMES97-019((AB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019((AB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019((AB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

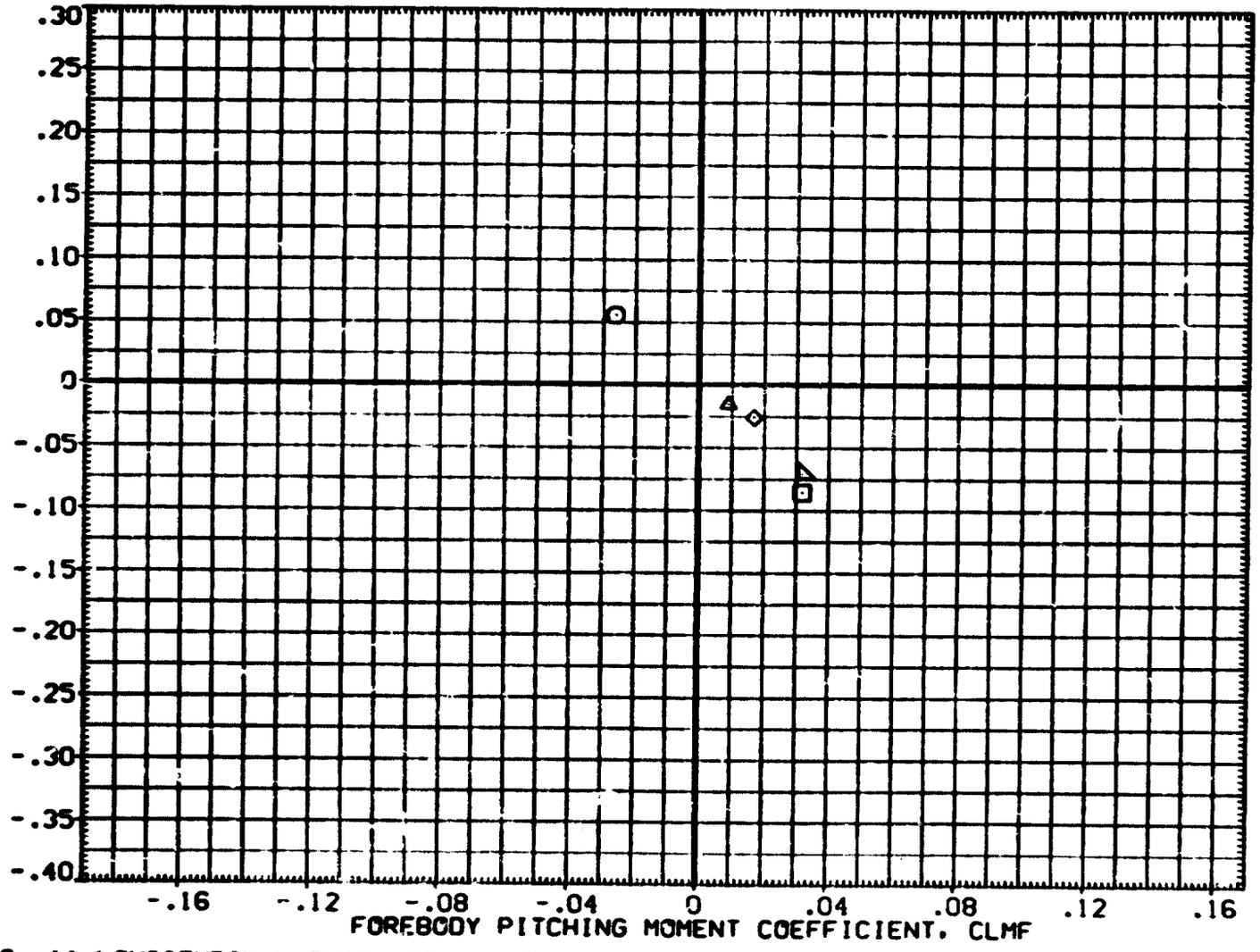


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-LE	ELV-OB	MACH	SPOBRK
(METD47)		AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(METT47)		AMES97-019(IABI) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(METL47)		AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(METR47)		AMES97-019(IABI) LVAP R-SRB ALL ML SEALED	10.000	-4.000	2.000	.000
(METI47)		AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

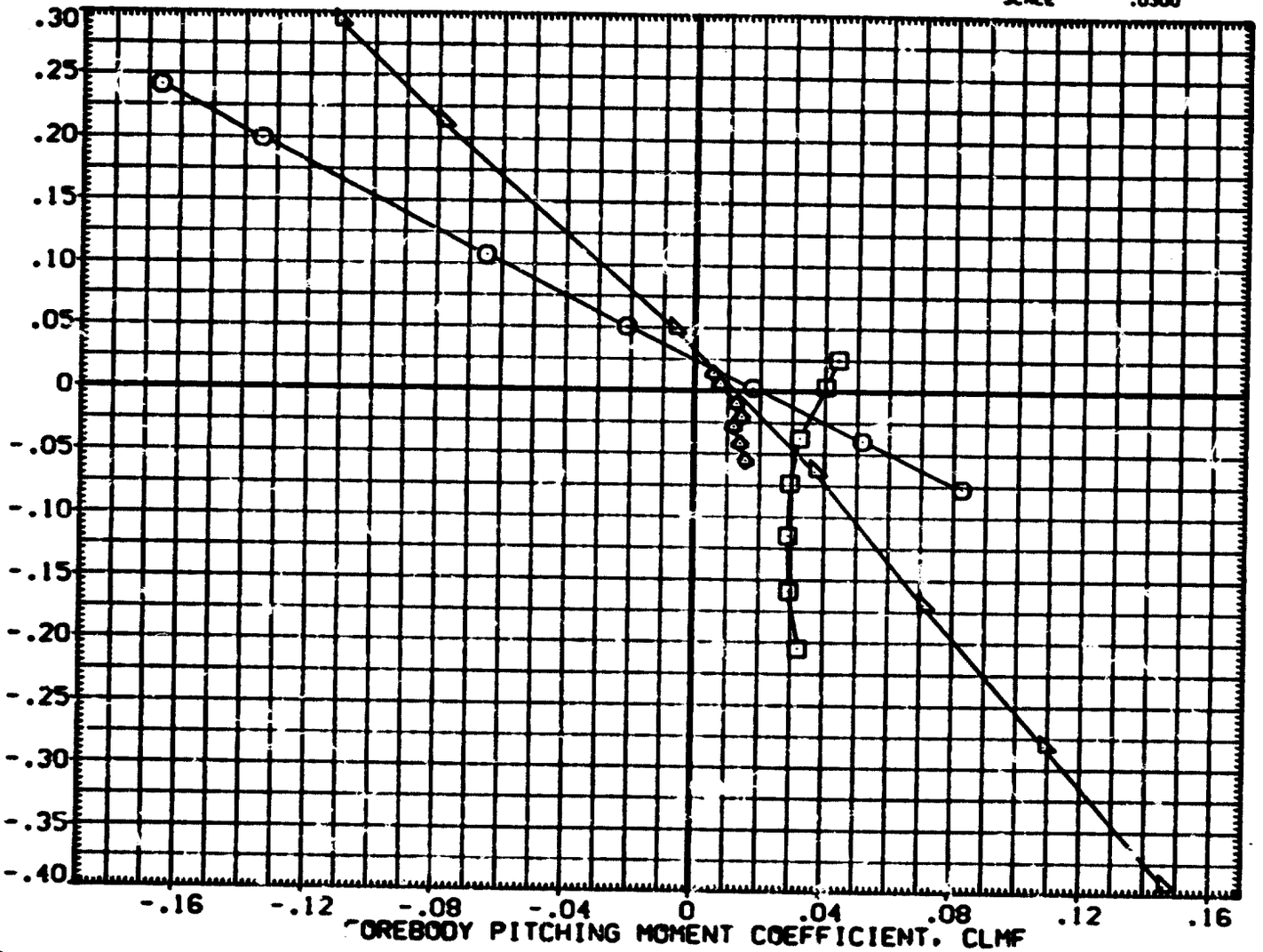


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(MET147)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(METL47)	▷	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(METR47)	▽	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(METI47)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

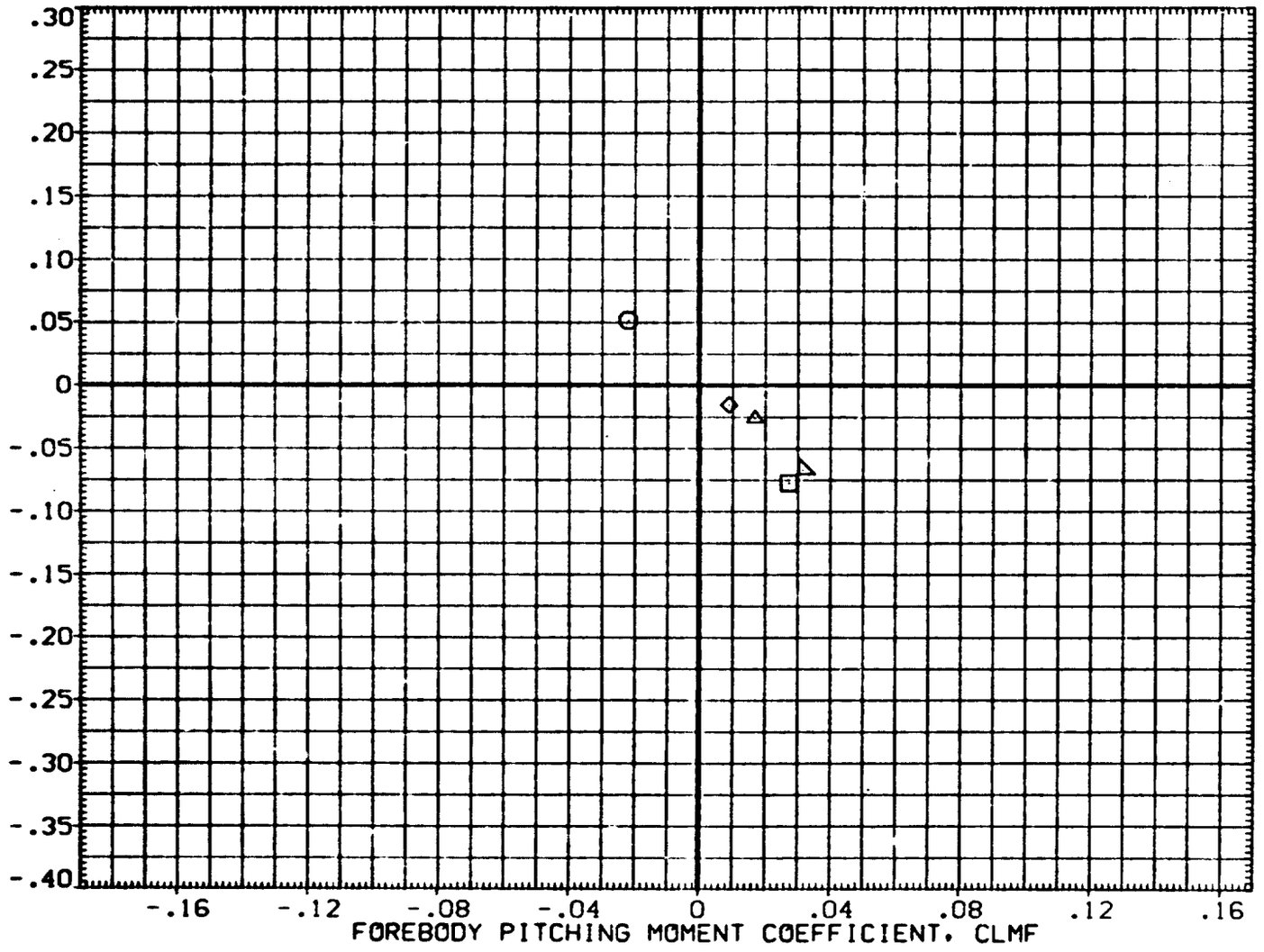


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(MET047)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED
(MET147)	◻	AMES97-019([A81) LVAP TANK - ALL HL SEALED
(METL47)	⊠	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED
(METR47)	◺	AMES97-019([A81) LVAP R-LRB ALL HL SEALED
(MET1147)	◺	AMES97-019([A81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPOBRK
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000
10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

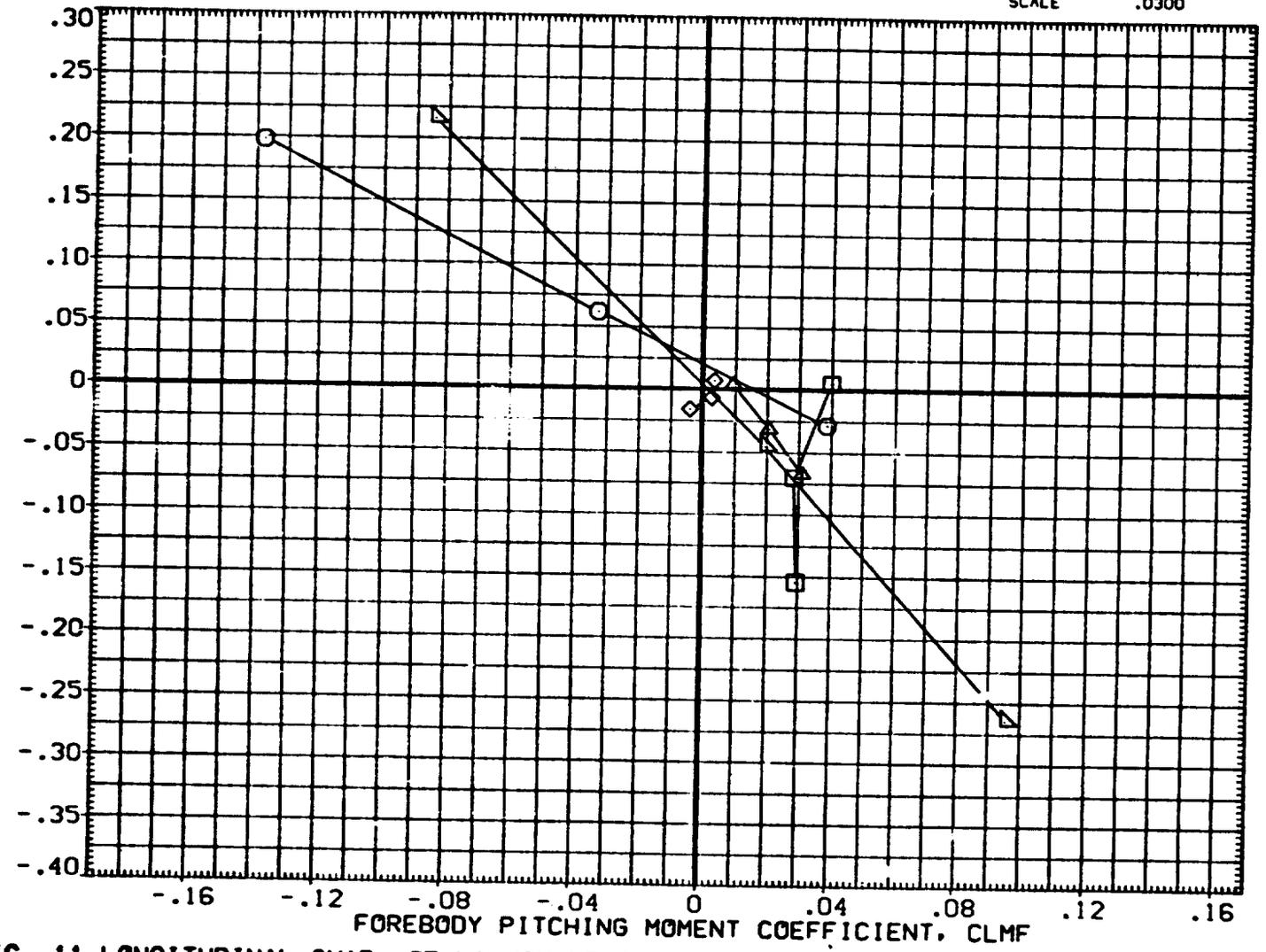


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)BET,I = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(METL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(METR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(MET147)	⊿	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

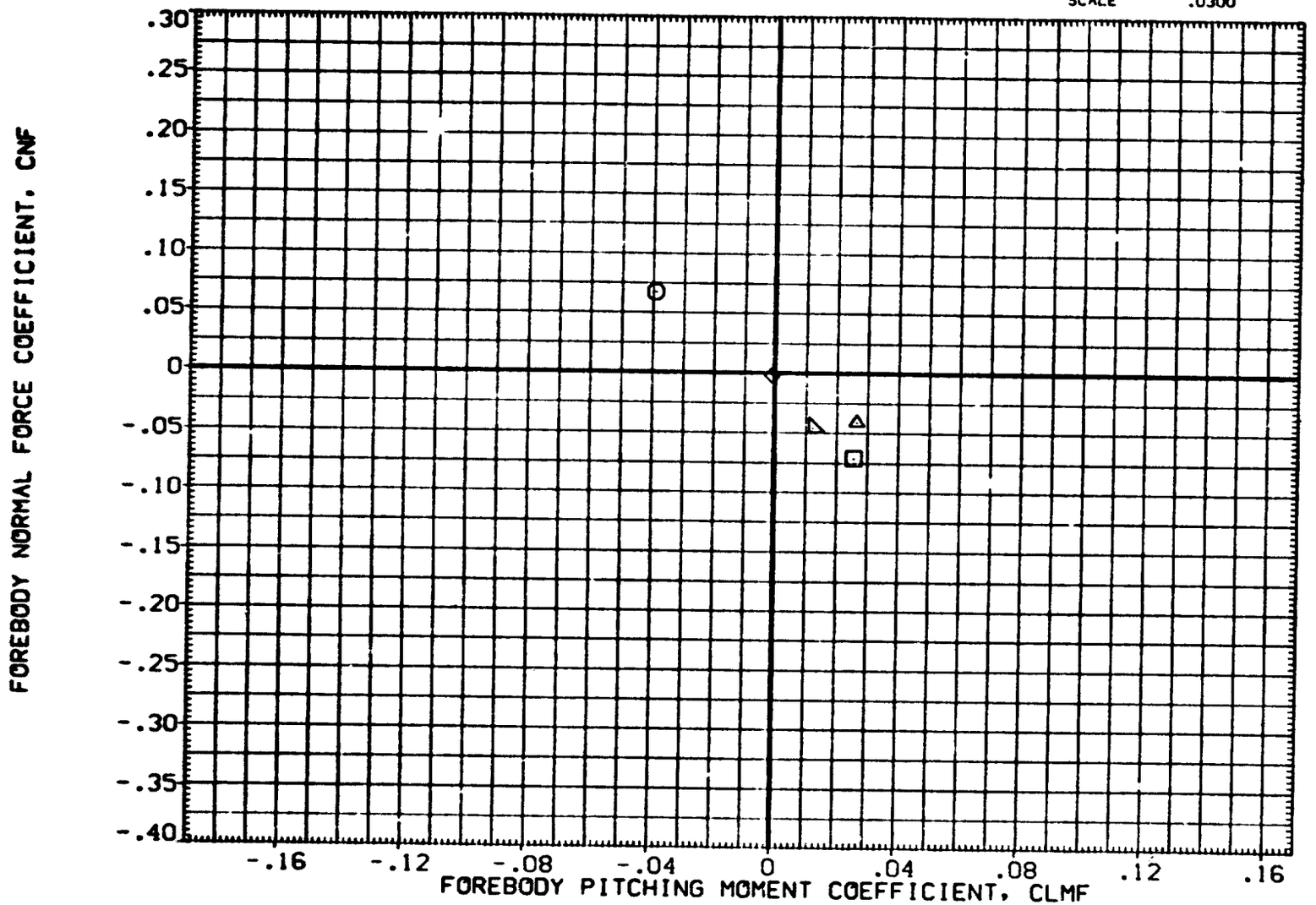


FIG. 11 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

[G]BET.AI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	○	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

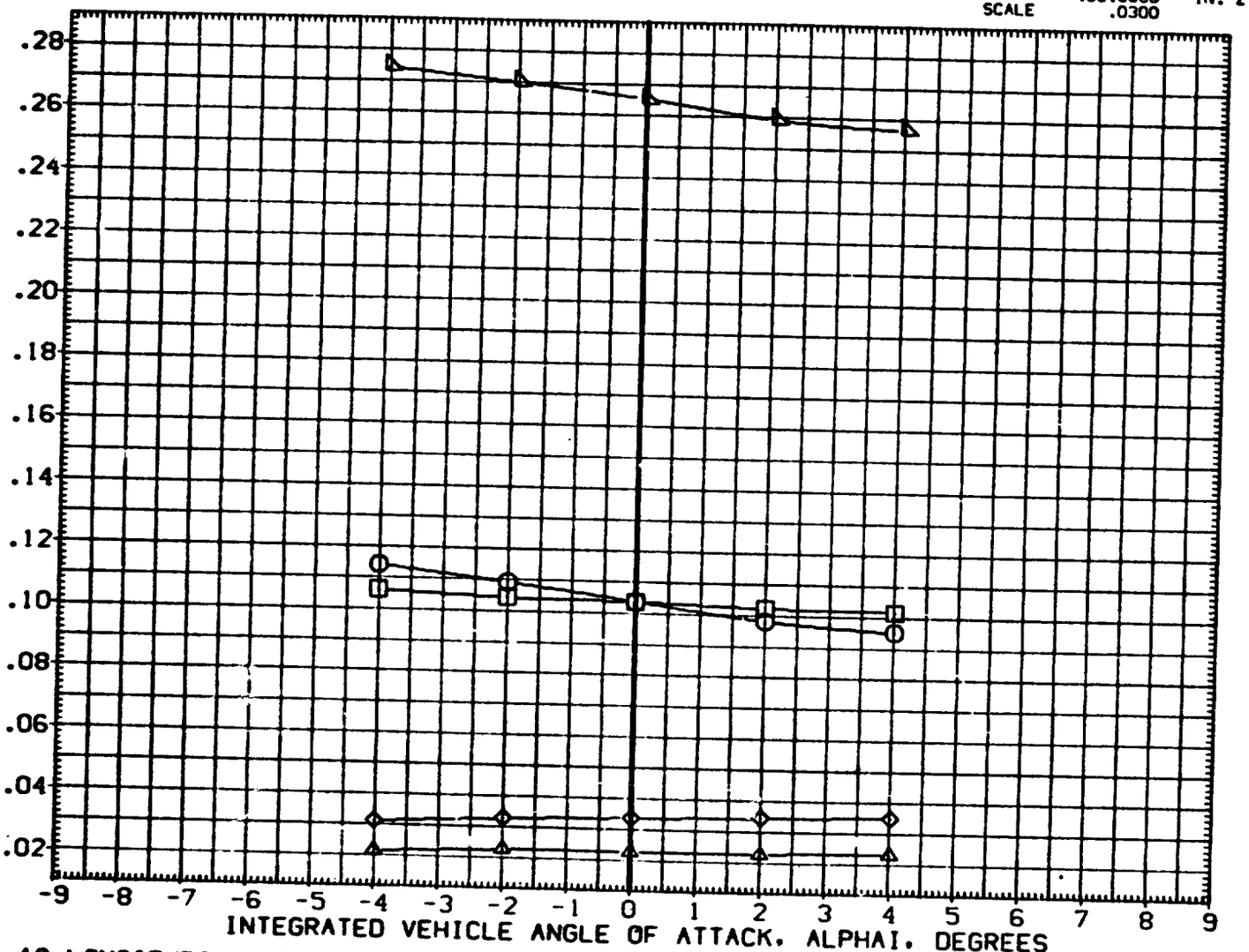


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)BETAI = -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET237)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET337)	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

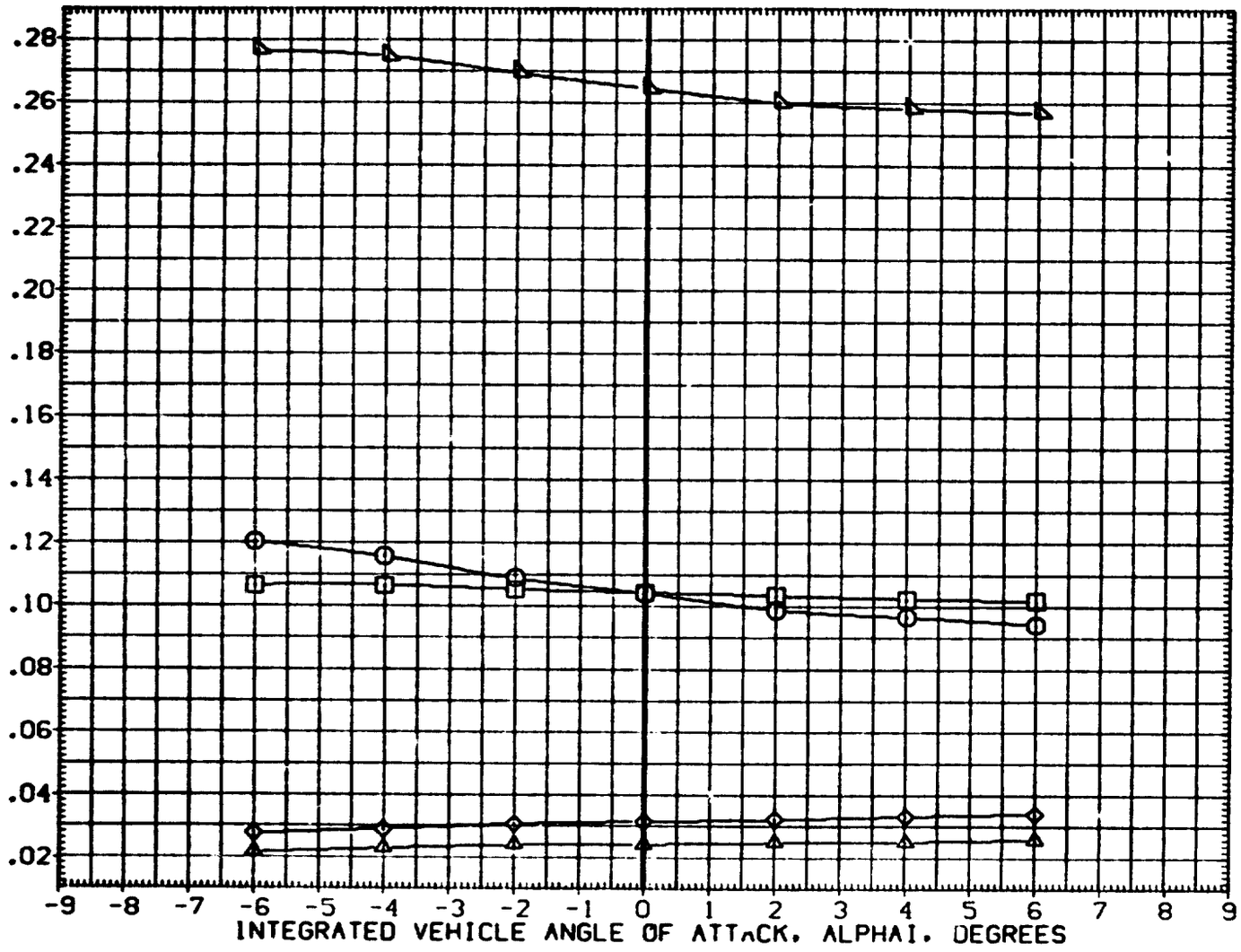


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	○	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

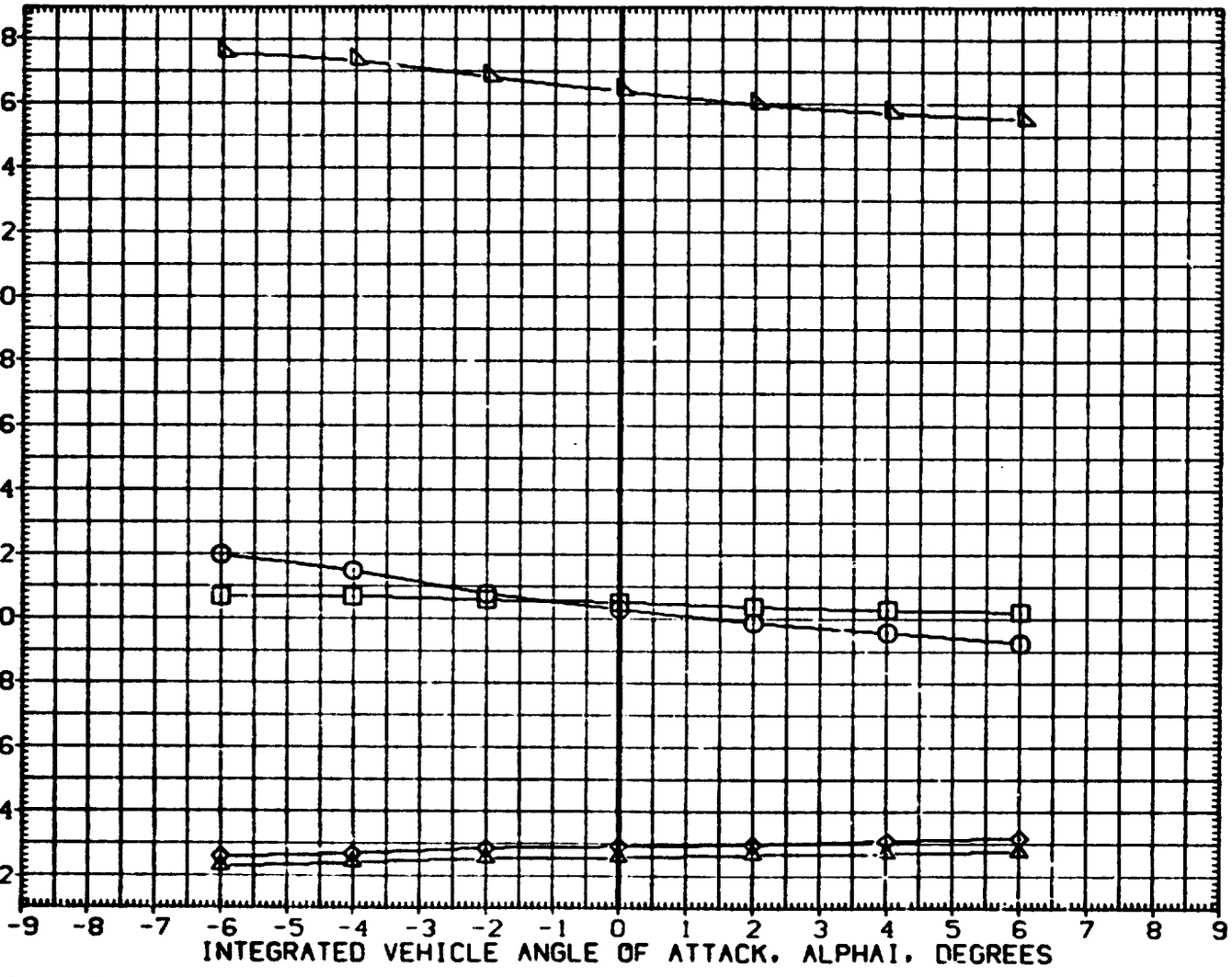


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET237)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET337)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET437)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

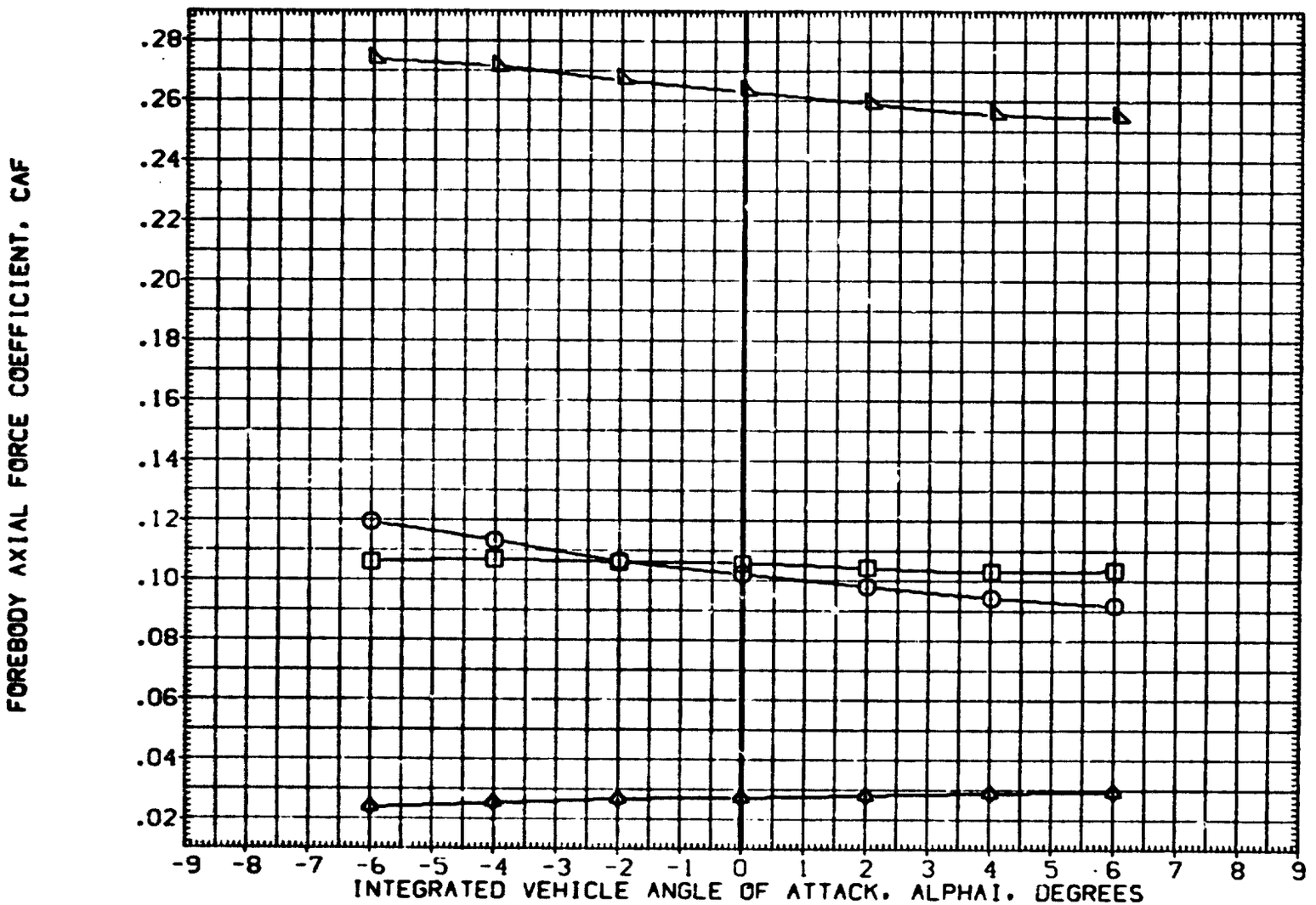


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.200	.000
(MET237)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.200	.000
(MET337)		AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	8.000	-4.000	2.200	.000
(MET437)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

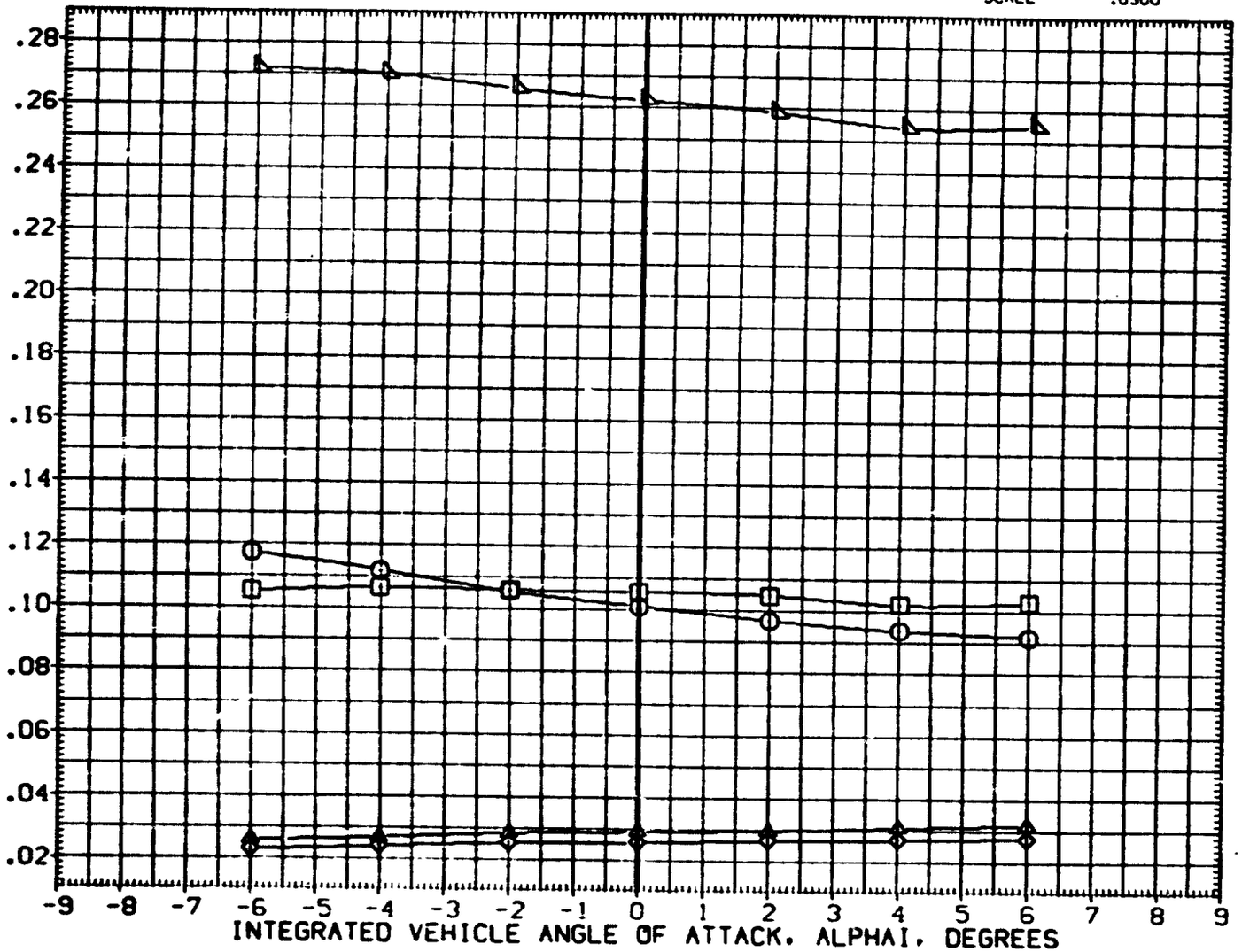


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	AMES97-019([AB]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	AMES97-019([AB]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET237)	AMES97-019([AB]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET337)	AMES97-019([AB]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET437)	AMES97-019([AB]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

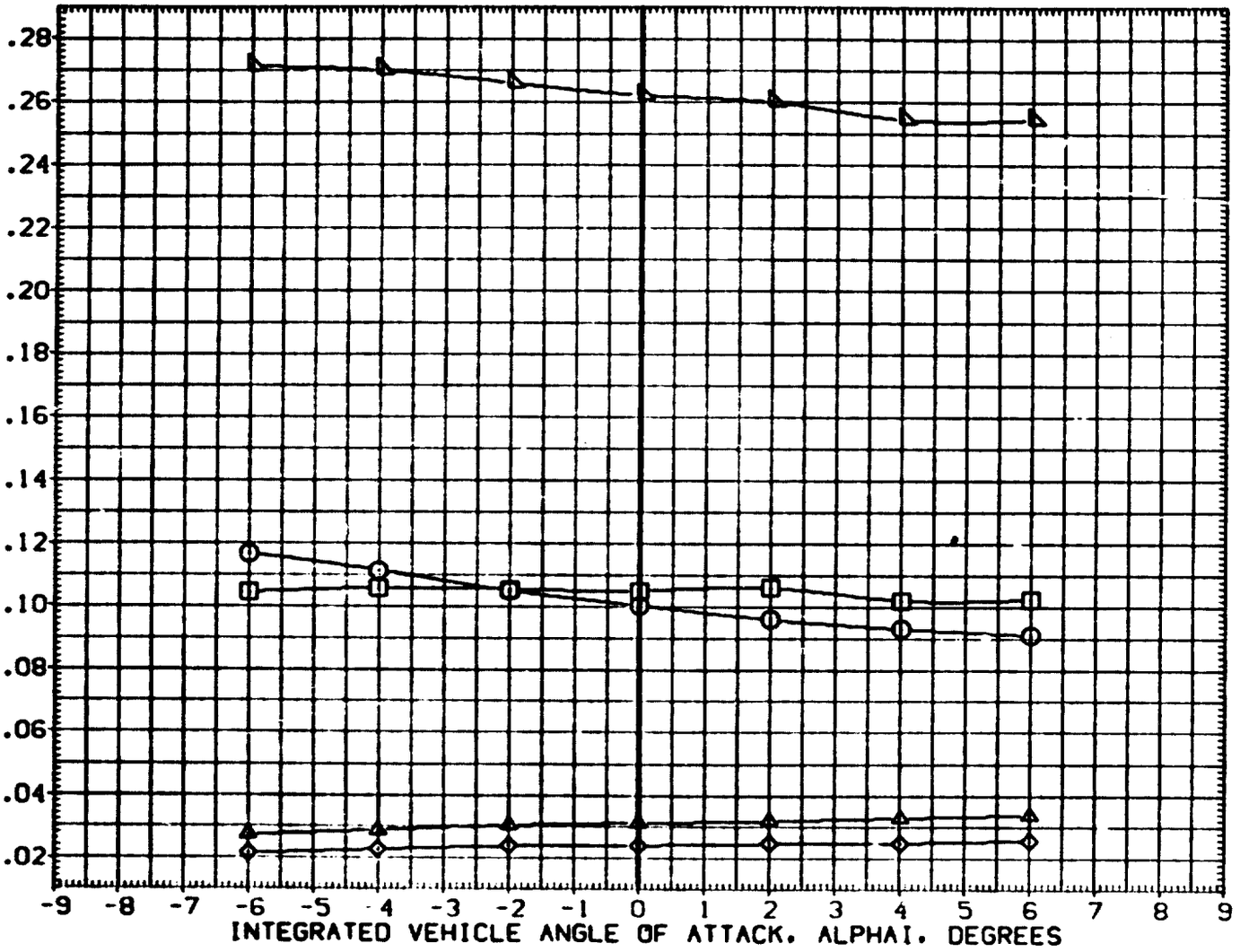


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2630.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

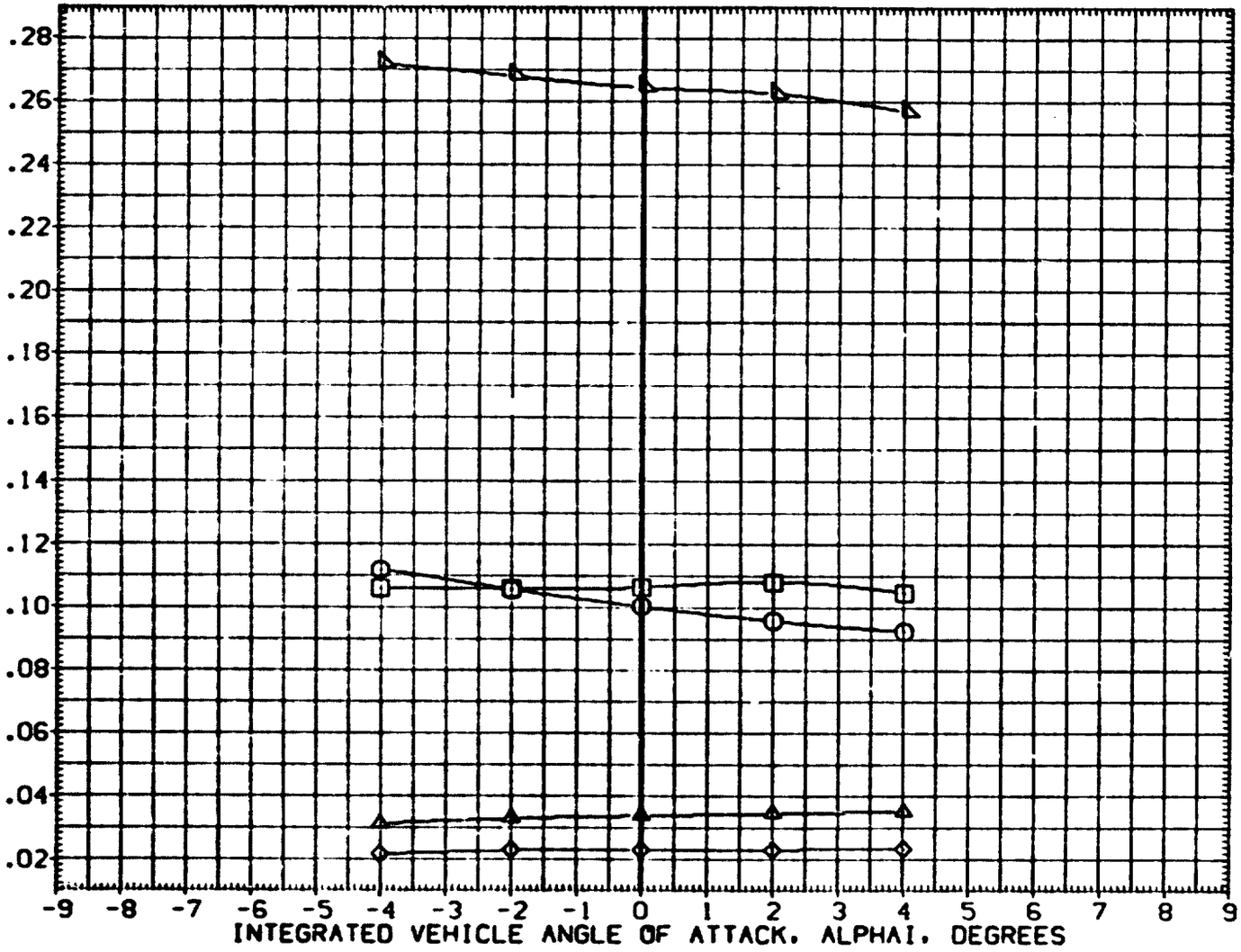


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	○	AMES97-019C(A81) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.200	.000
(MET137)	□	AMES97-019C(A81) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.200	.000
(MET237)	◇	AMES97-019C(A81) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.200	.000
(MET337)	△	AMES97-019C(A81) LVAP R-LRB ALL ML SEALED	0.000	-4.000	2.200	.000
(MET137)	▷	AMES97-019C(A81) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

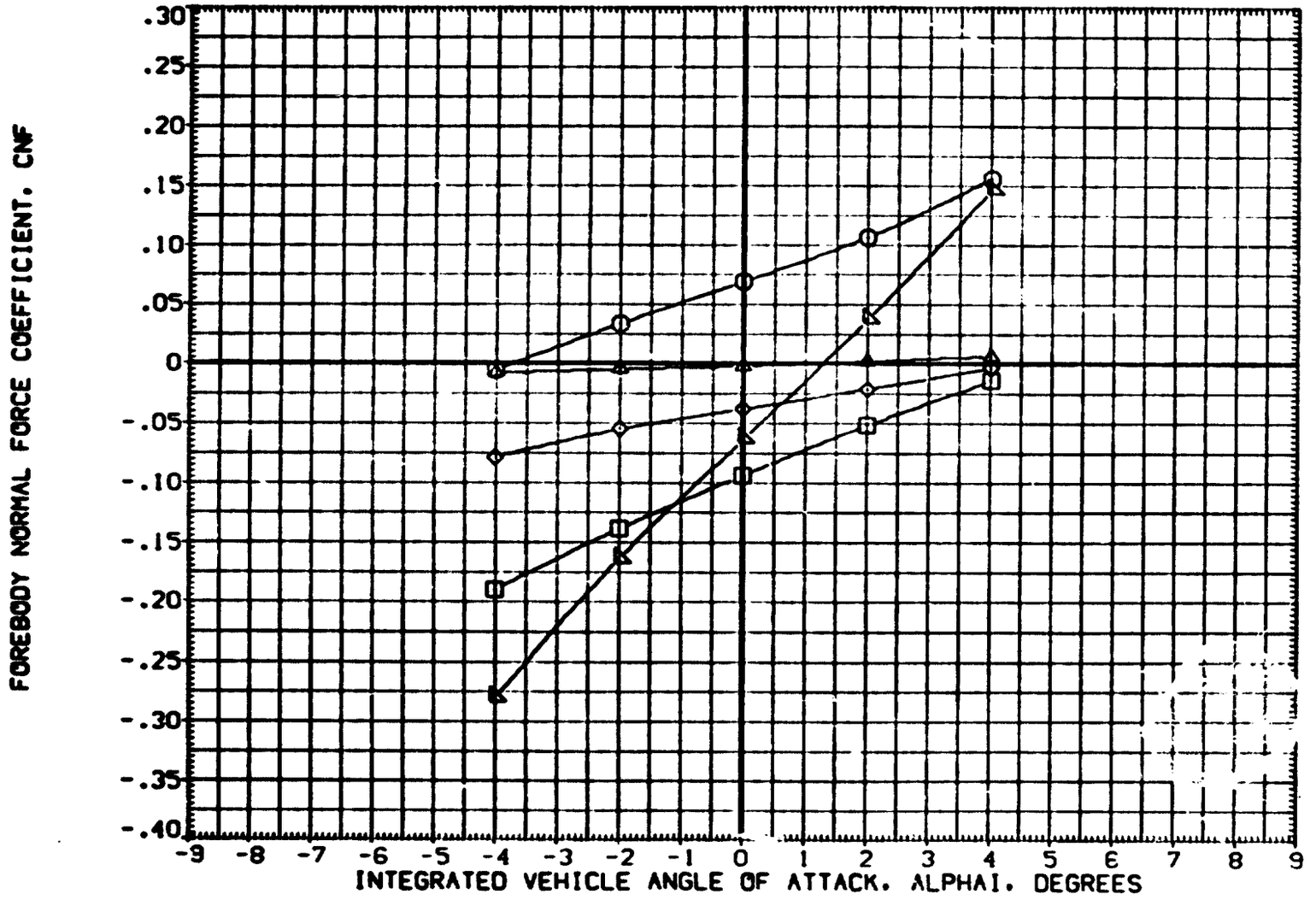


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

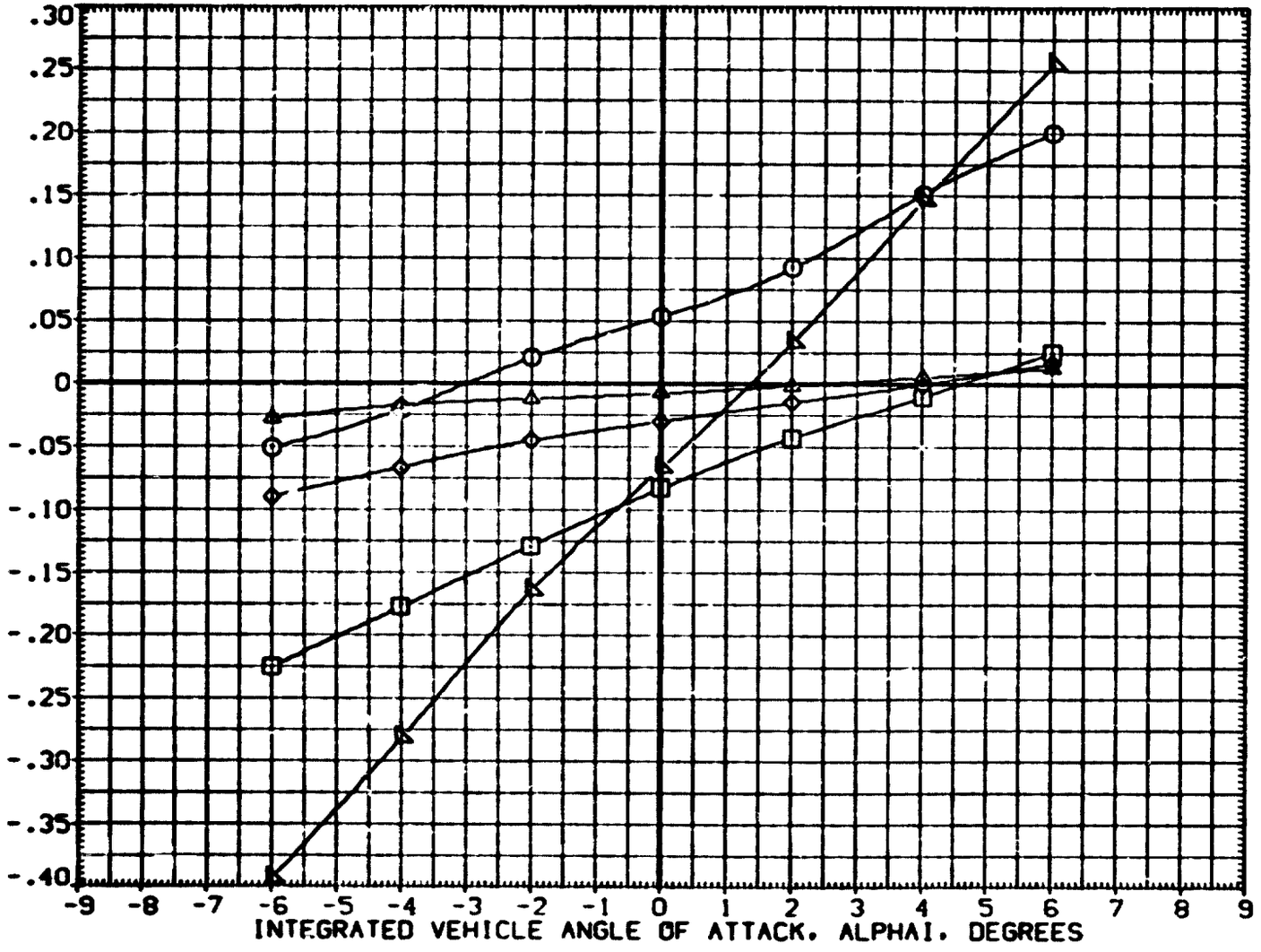


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019([ABI]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET737)	◇	AMES97-019([ABI]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	⋈	AMES97-019([ABI]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)		AMES97-019([ABI]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◁	AMES97-019([ABI]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

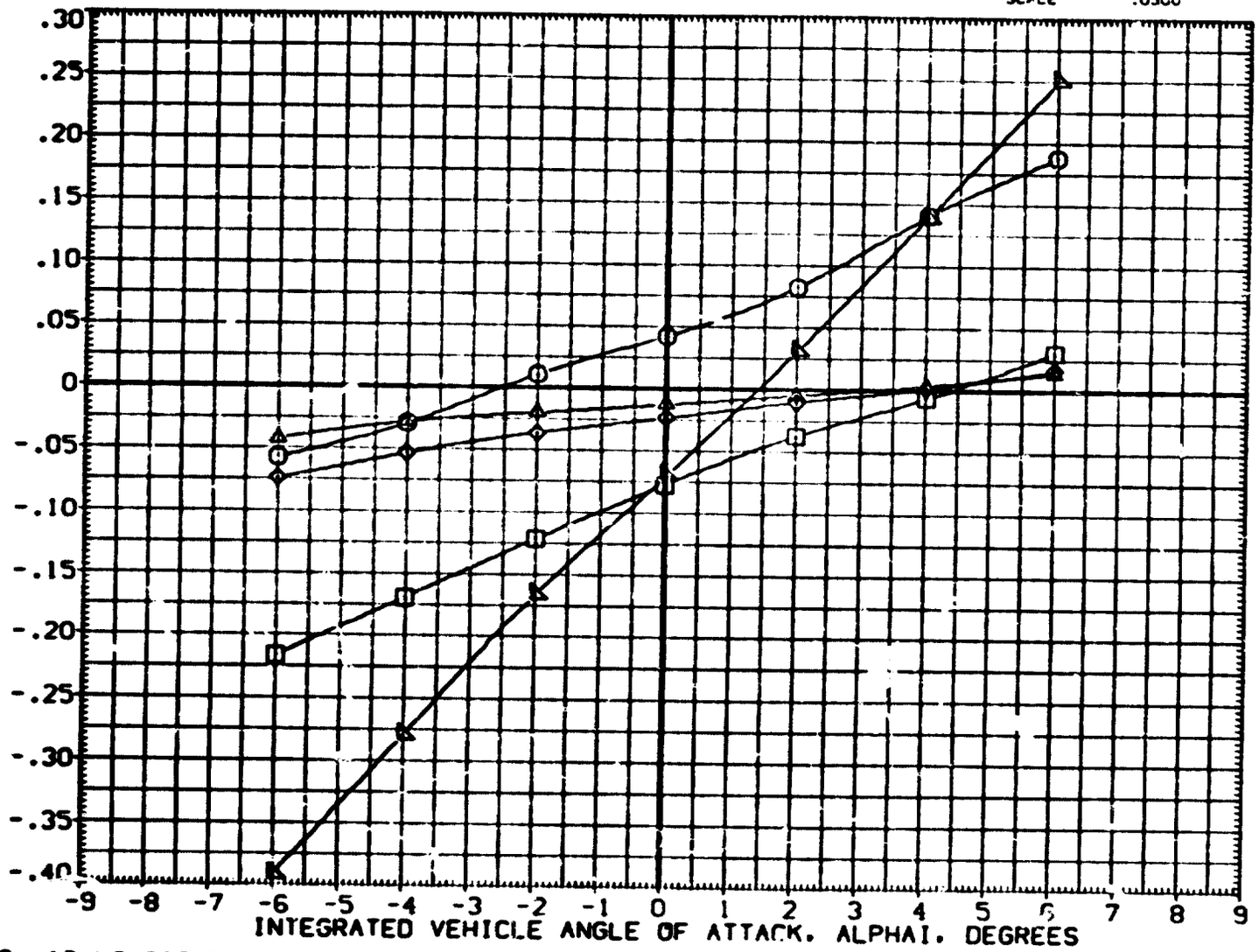


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET237)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(MET337)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET437)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

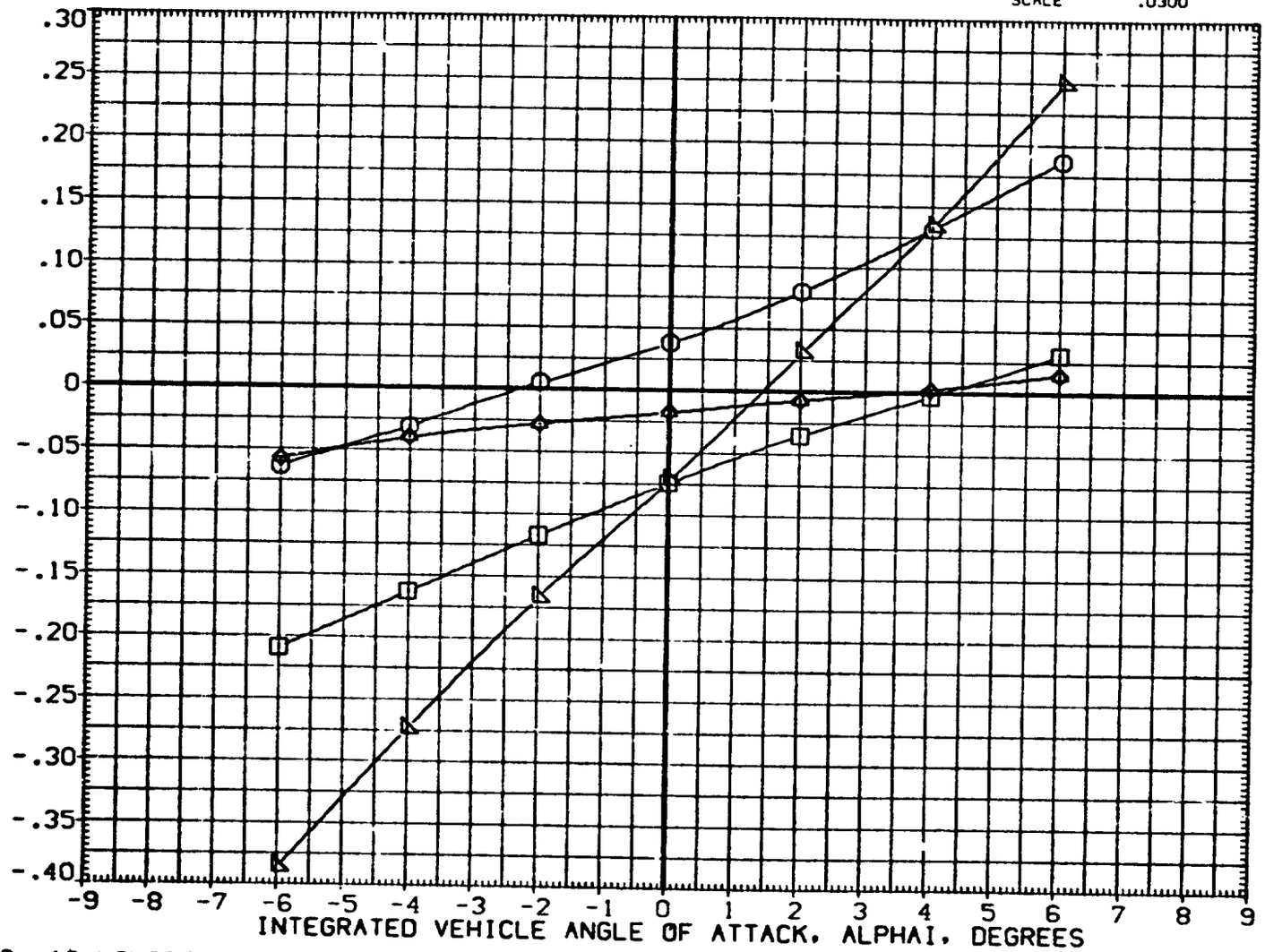


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)BETAI = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

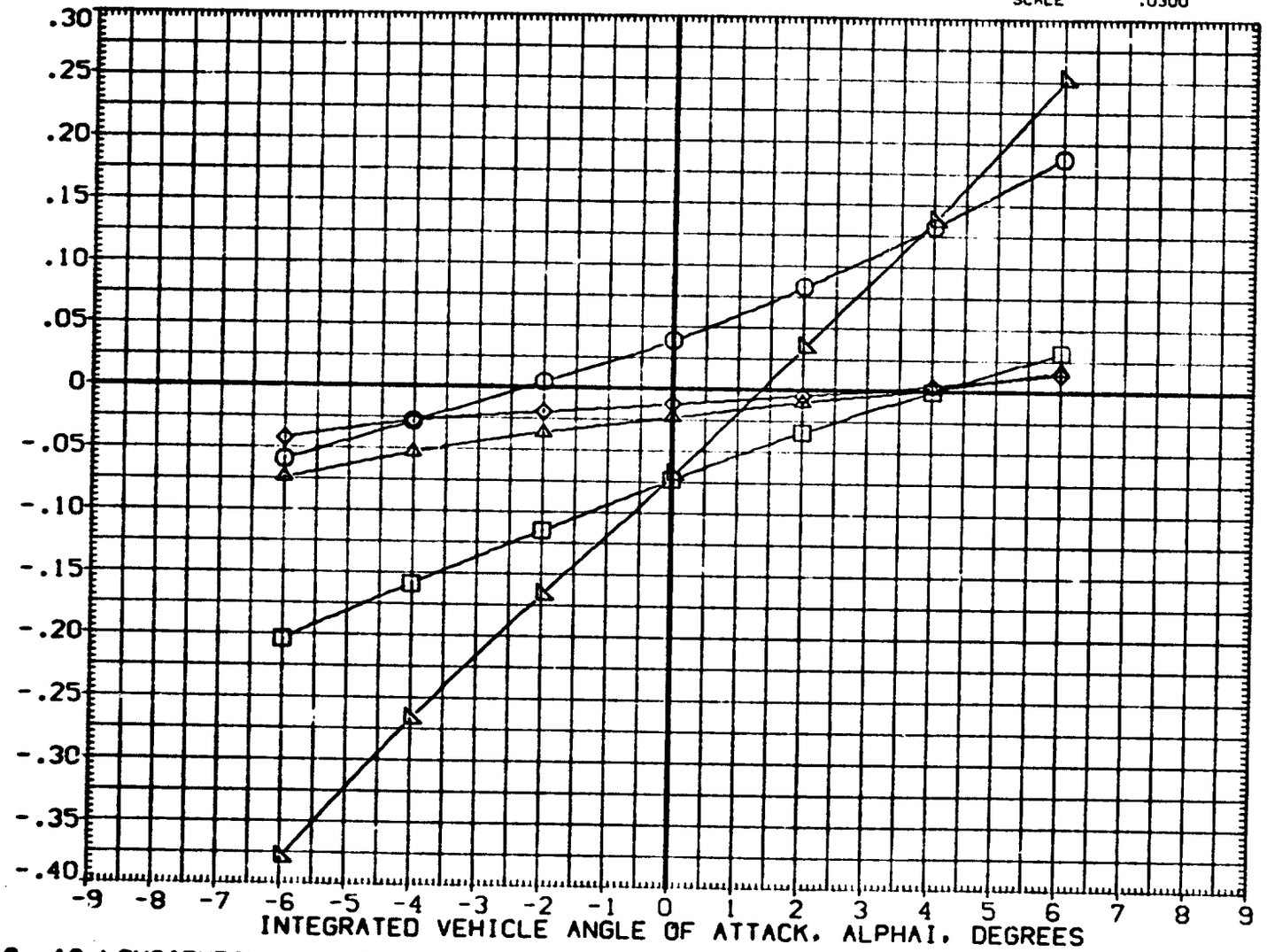


FIG. 12 LONGITUDINAL CHAP. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET037)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET737)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

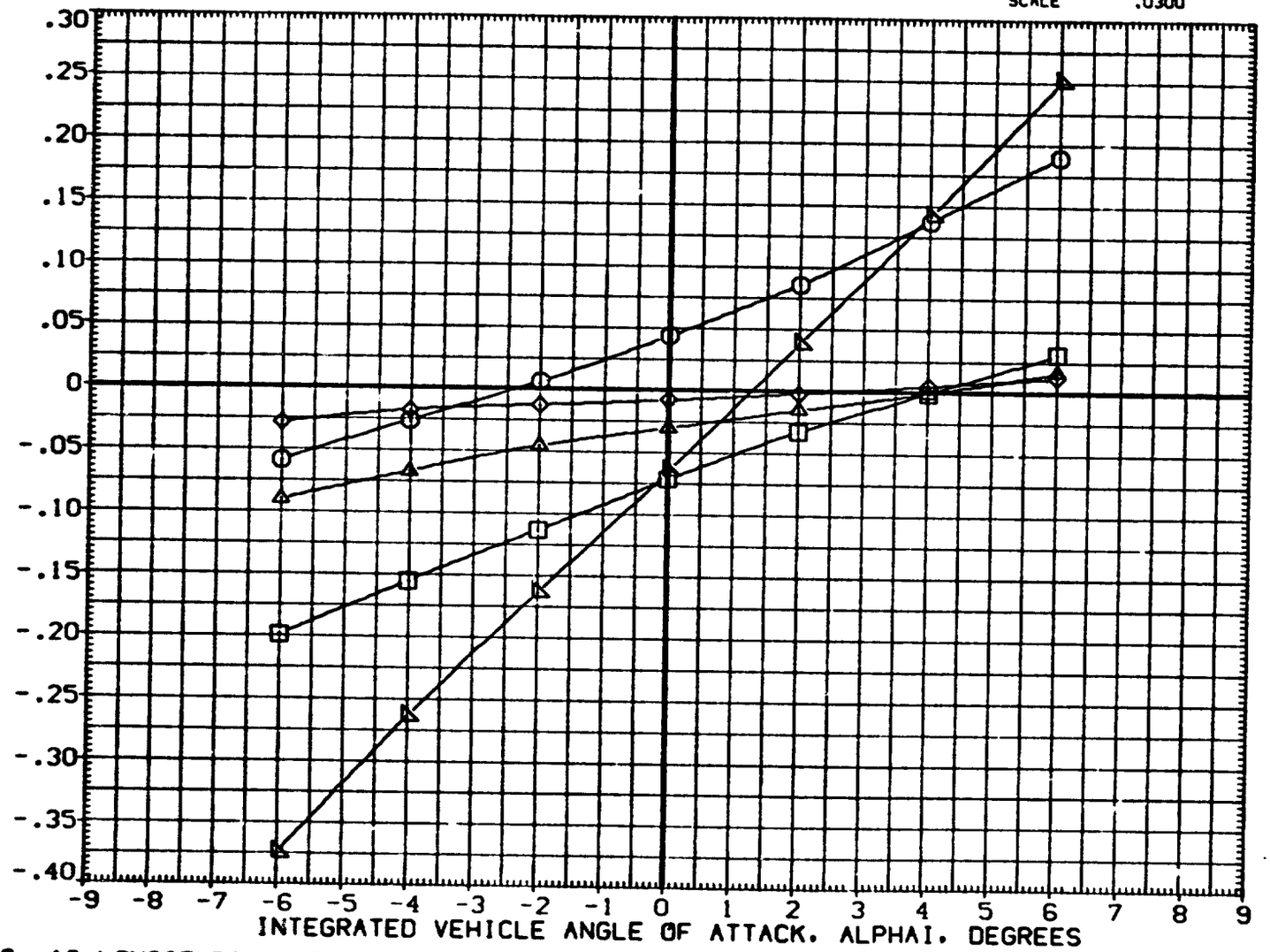


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

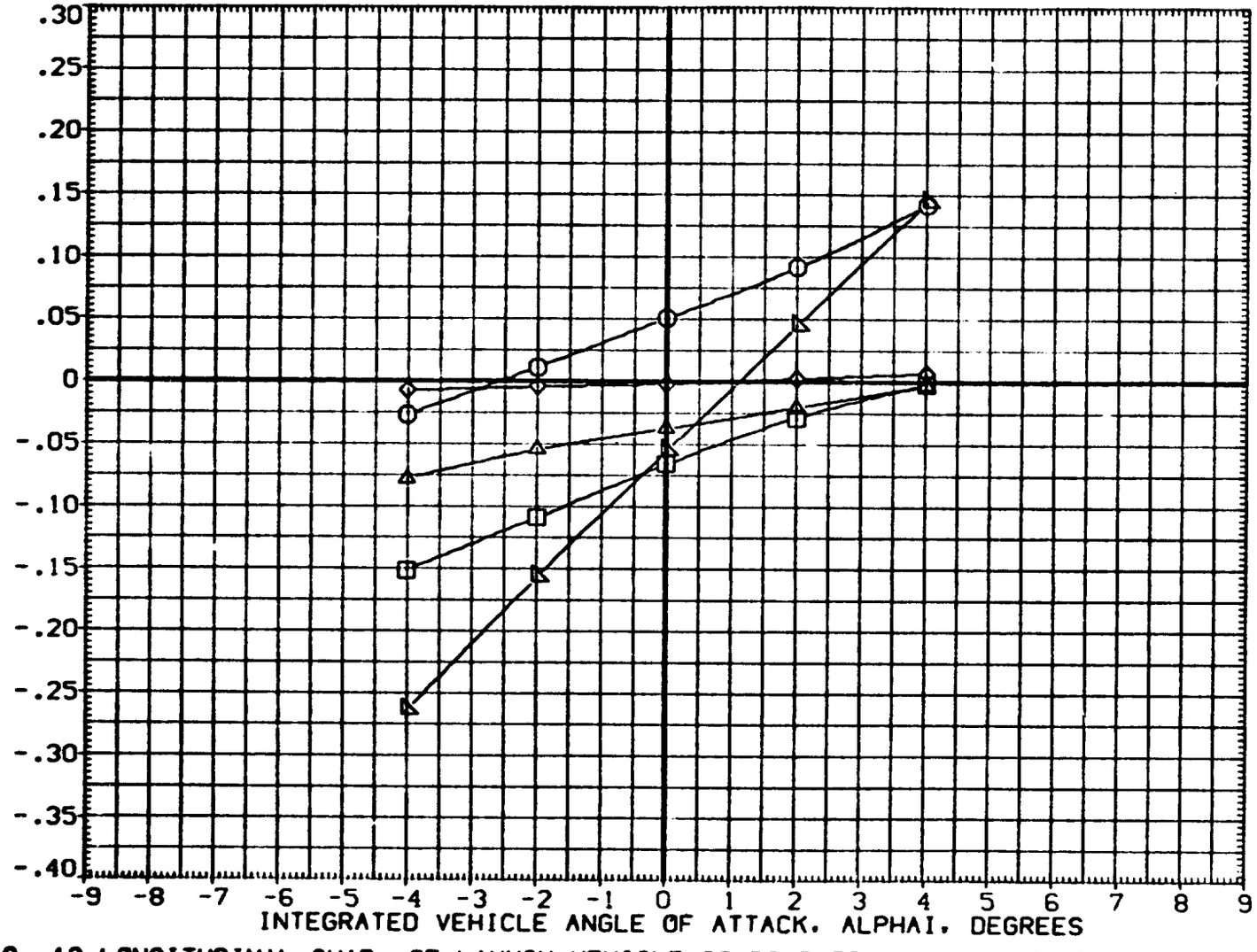


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	○	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

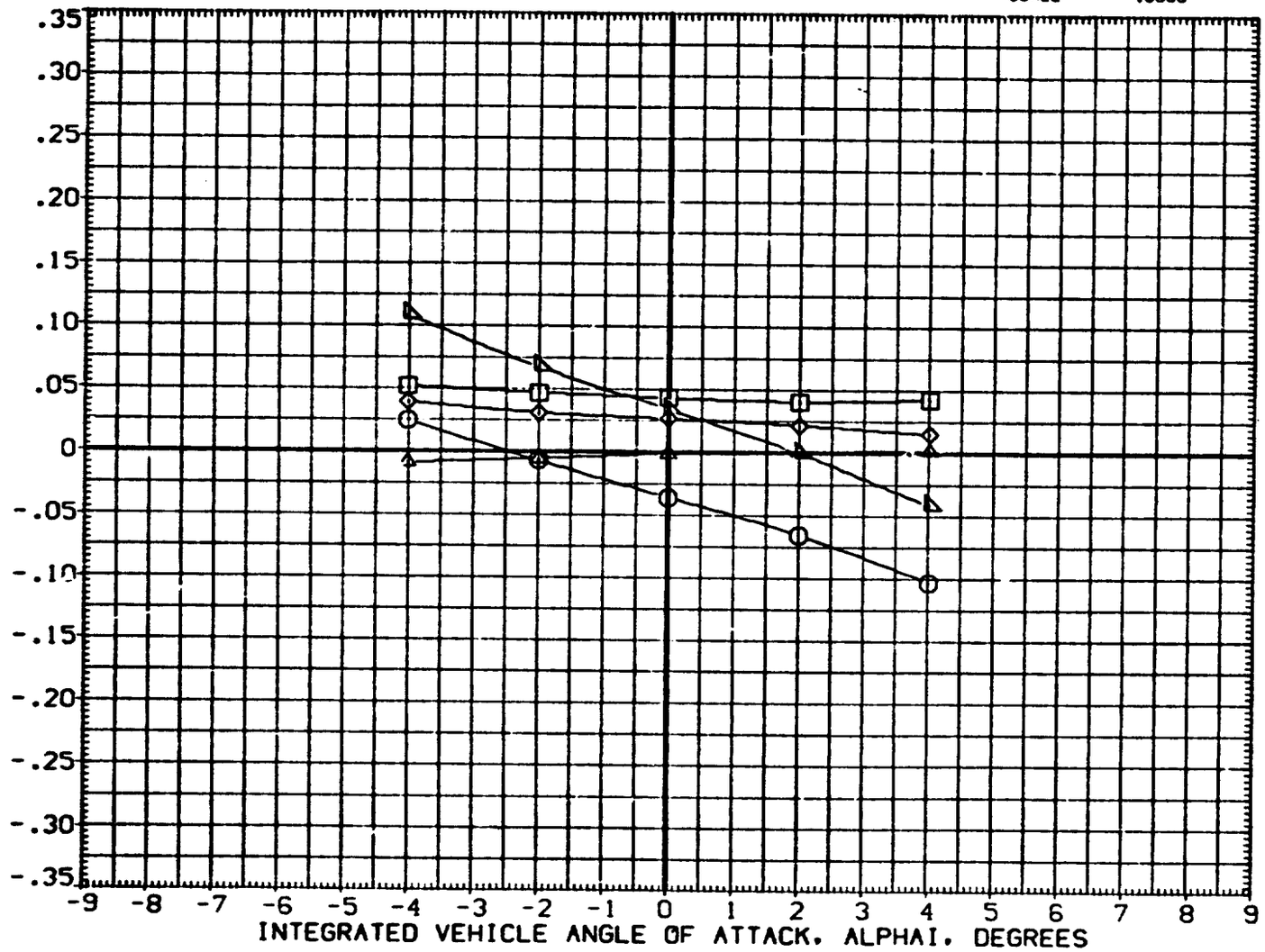


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET337)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

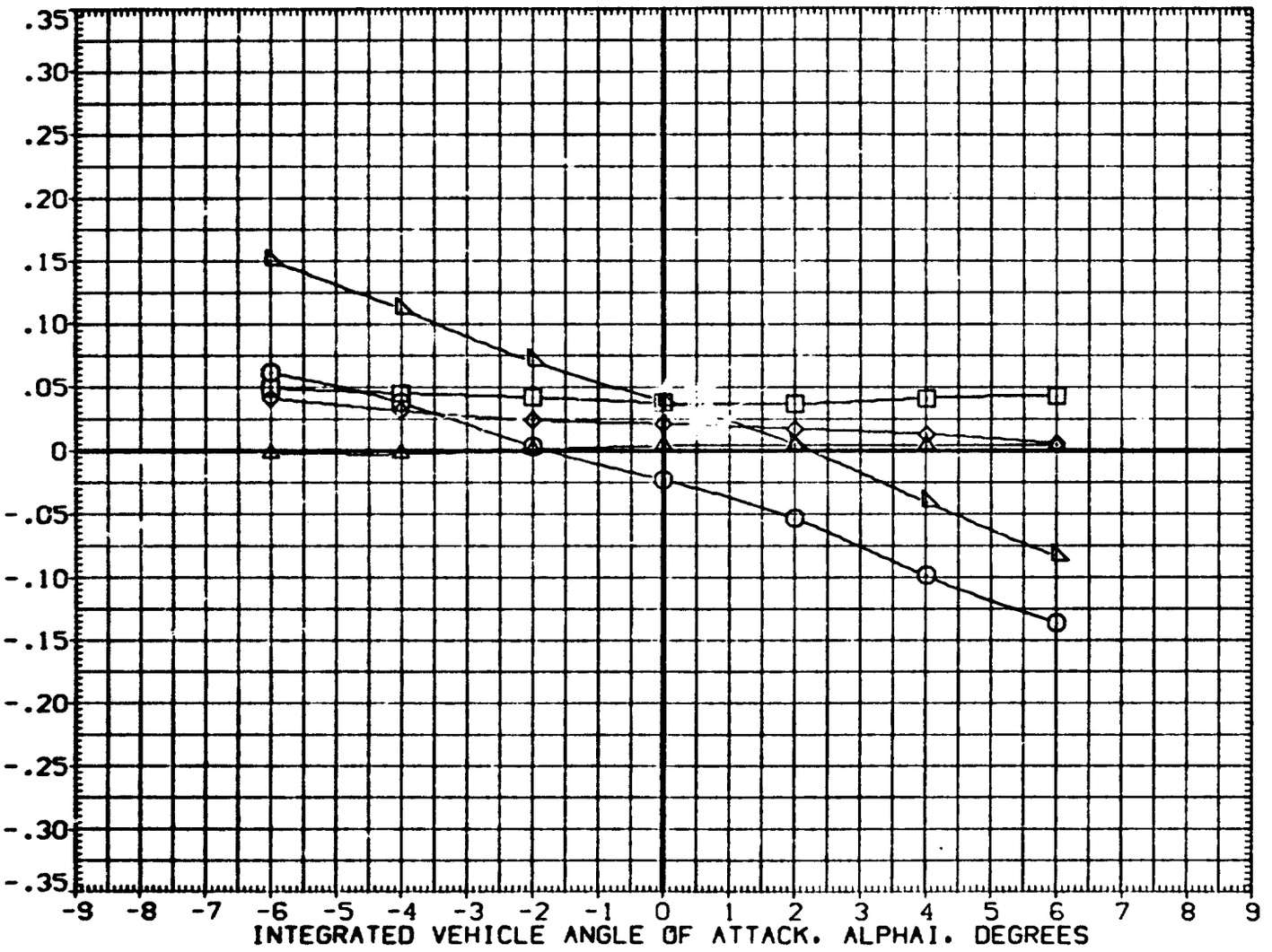


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

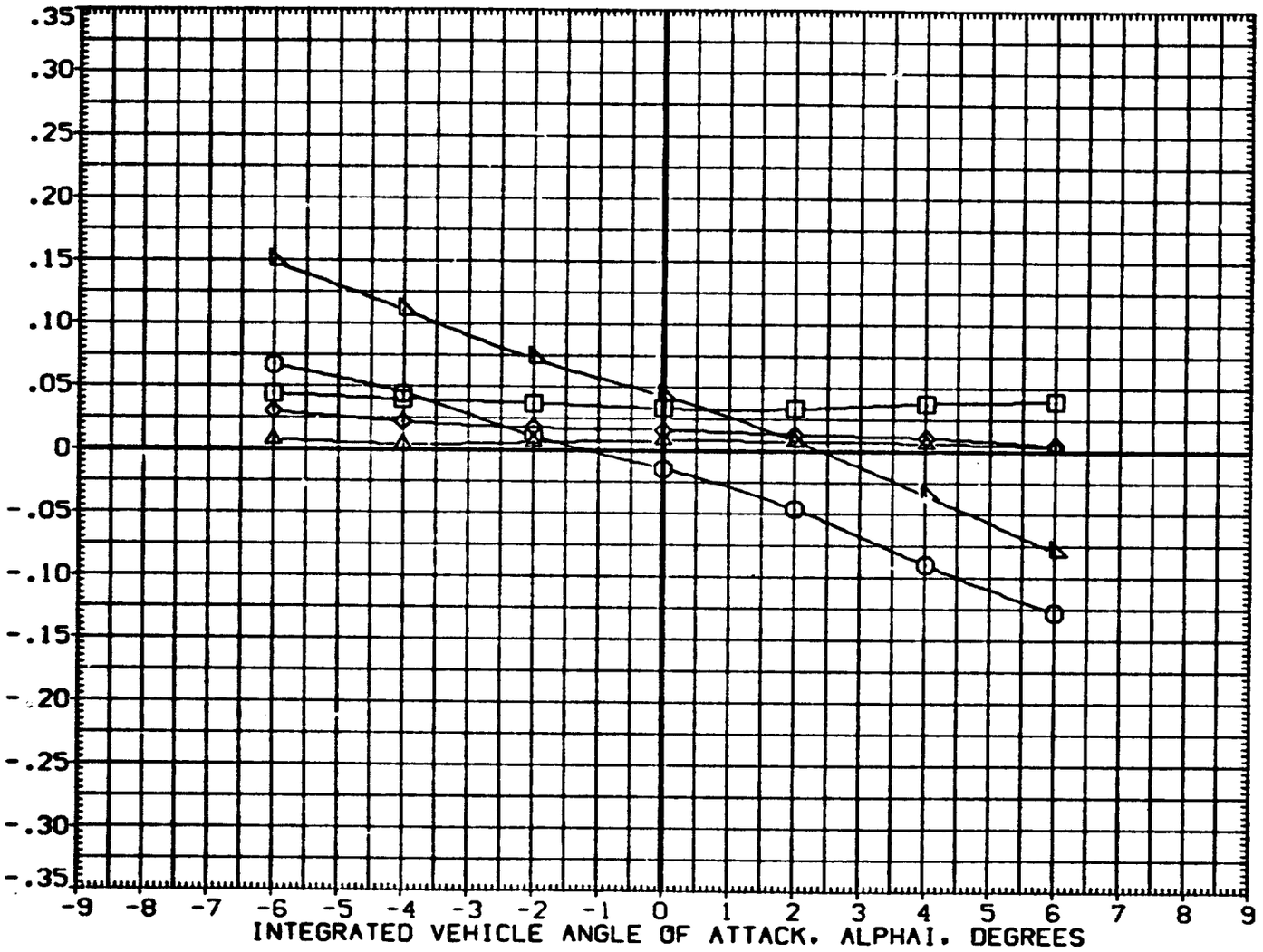


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019C(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◇	AMES97-019C(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	○	AMES97-019C(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019C(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	▽	AMES97-019C(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

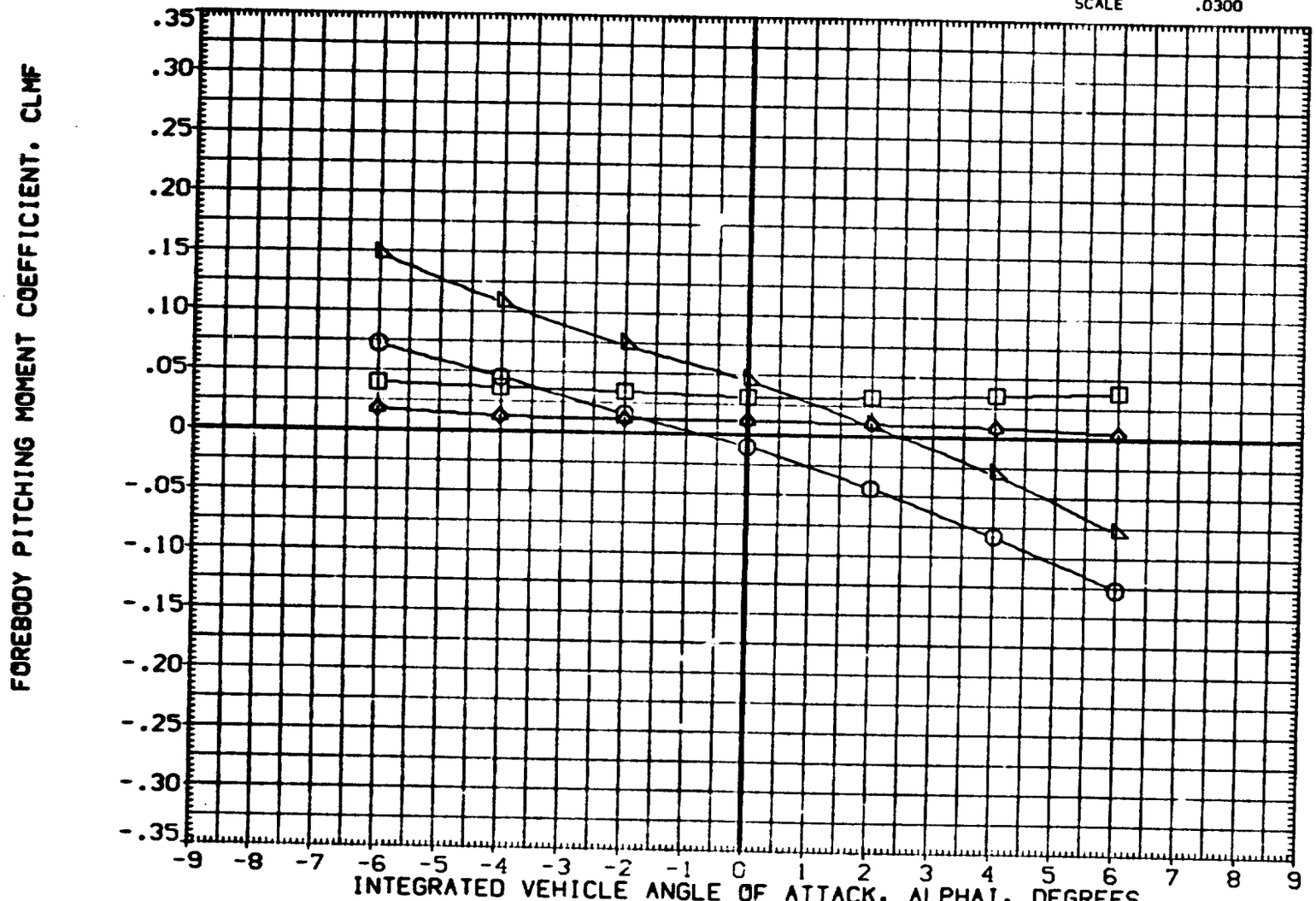


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

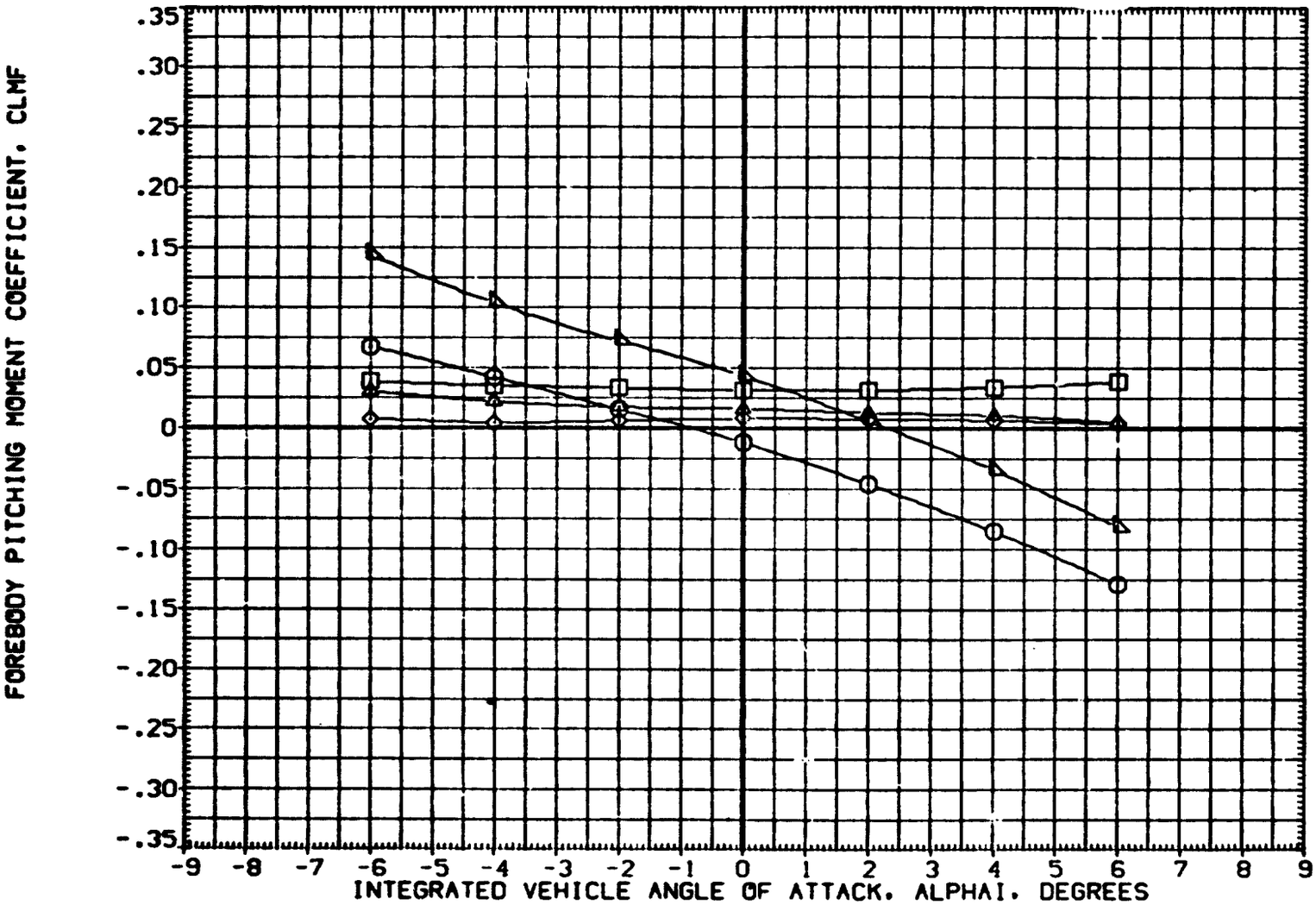


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET237)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

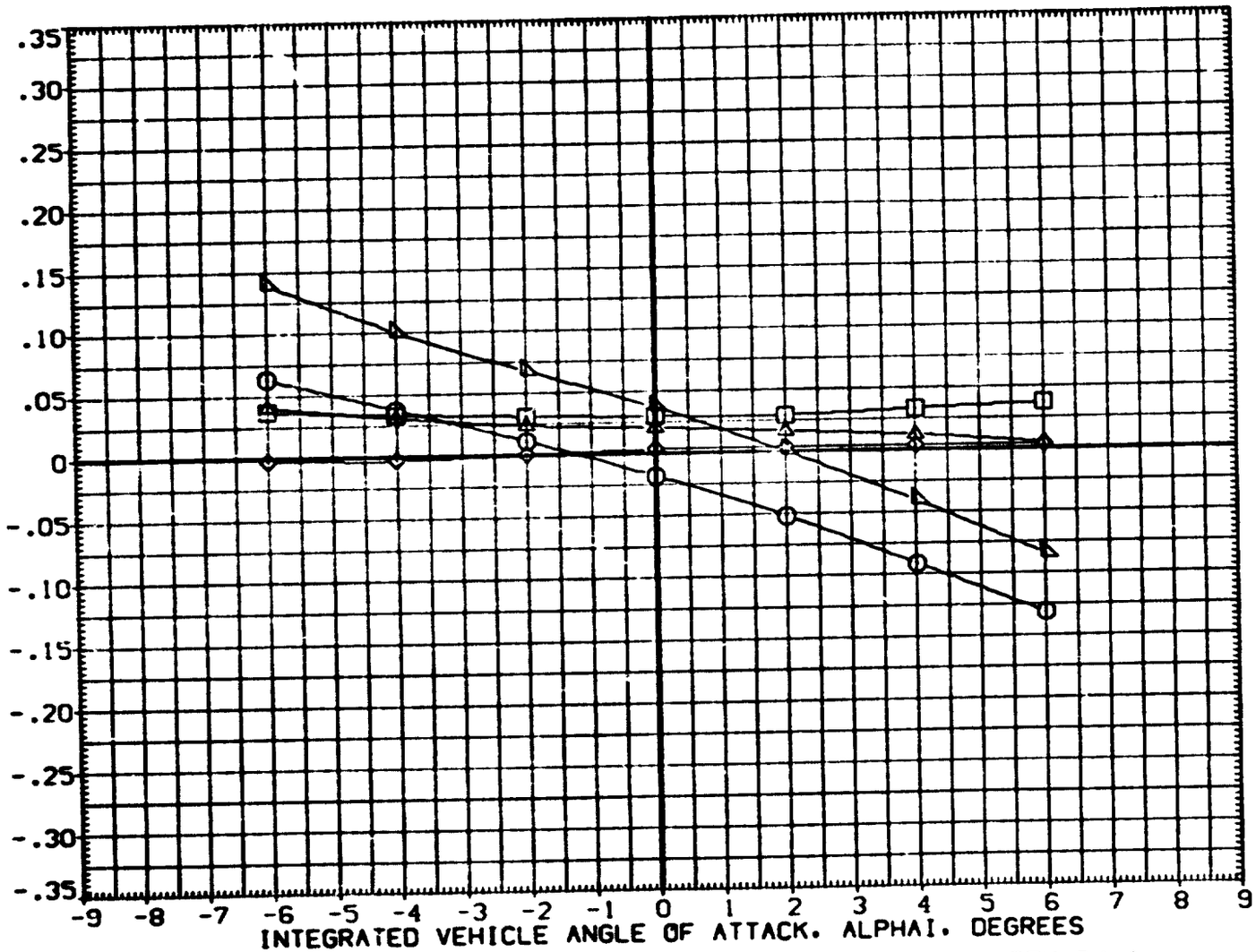


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

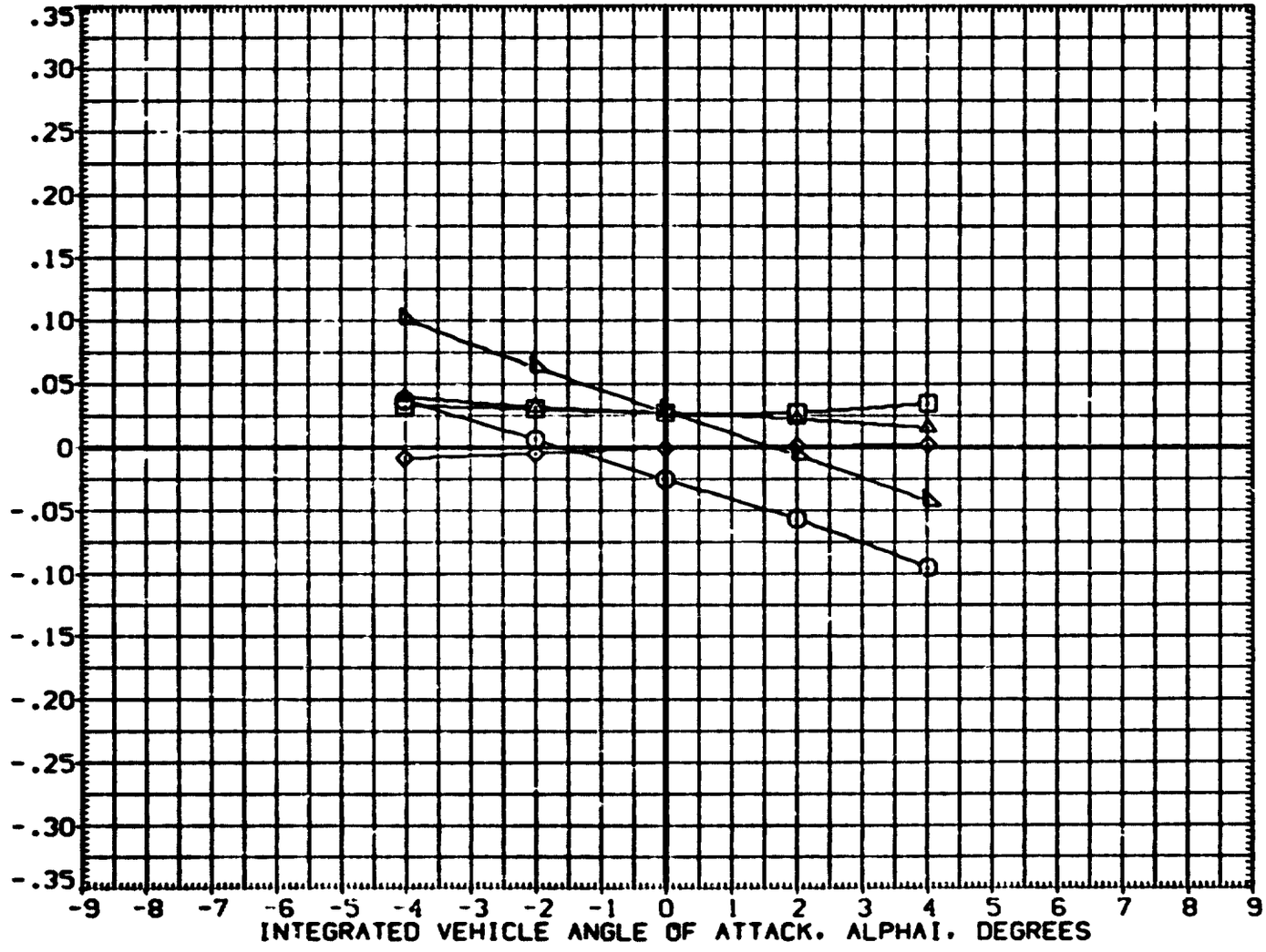


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET03J)	□	AMES97-019(ABI) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.200	.000
(MET37)	◇	AMES97-019(ABI) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.200	.000
(METL37)	⊠	AMES97-019(ABI) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.200	.000
(METR37)	▽	AMES97-019(ABI) LVAP R-LRB ALL ML SEALED	0.000	-4.000	2.200	.000
(MET137)	△	AMES97-019(ABI) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

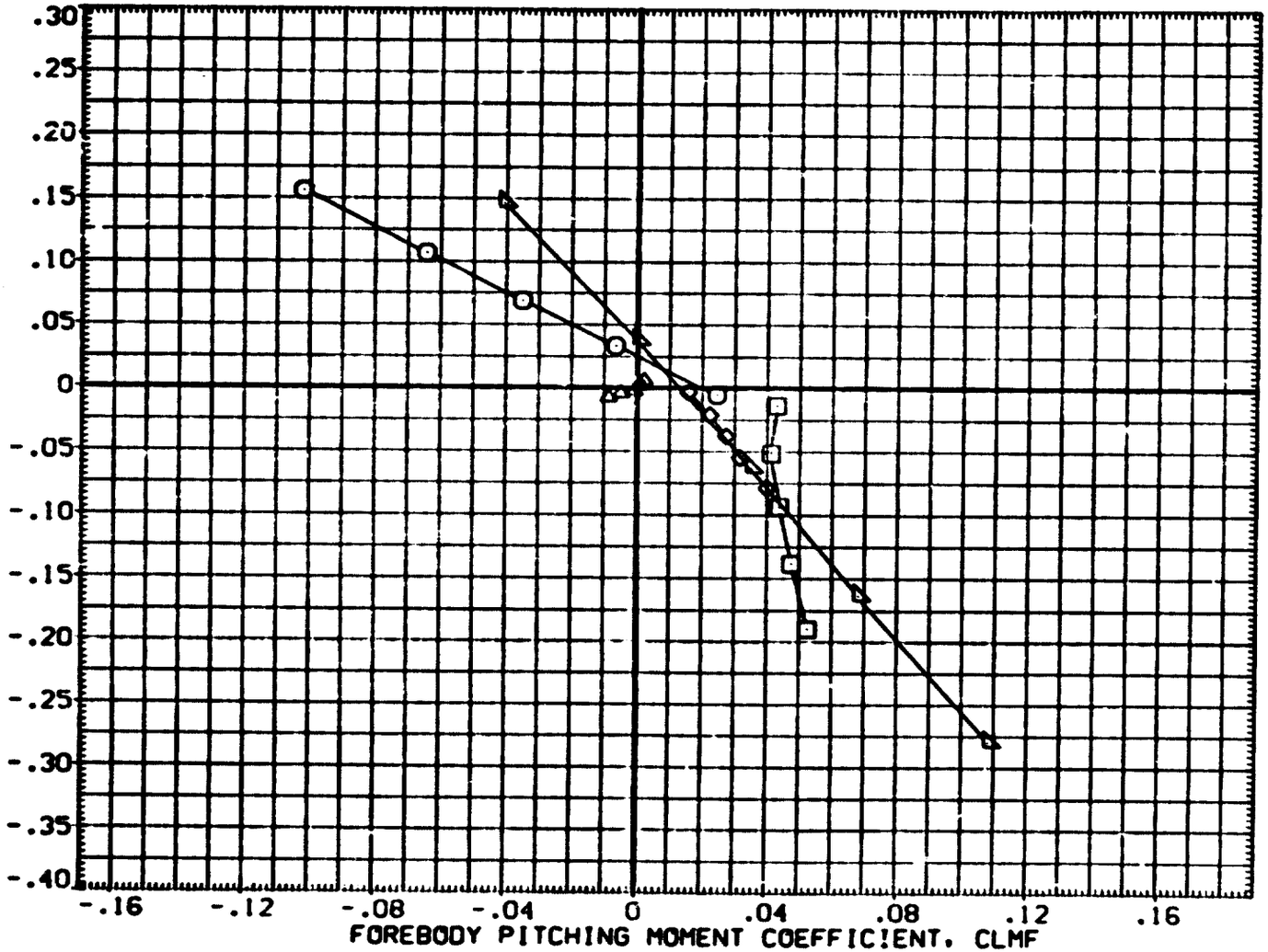


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	⋈	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)	◁	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

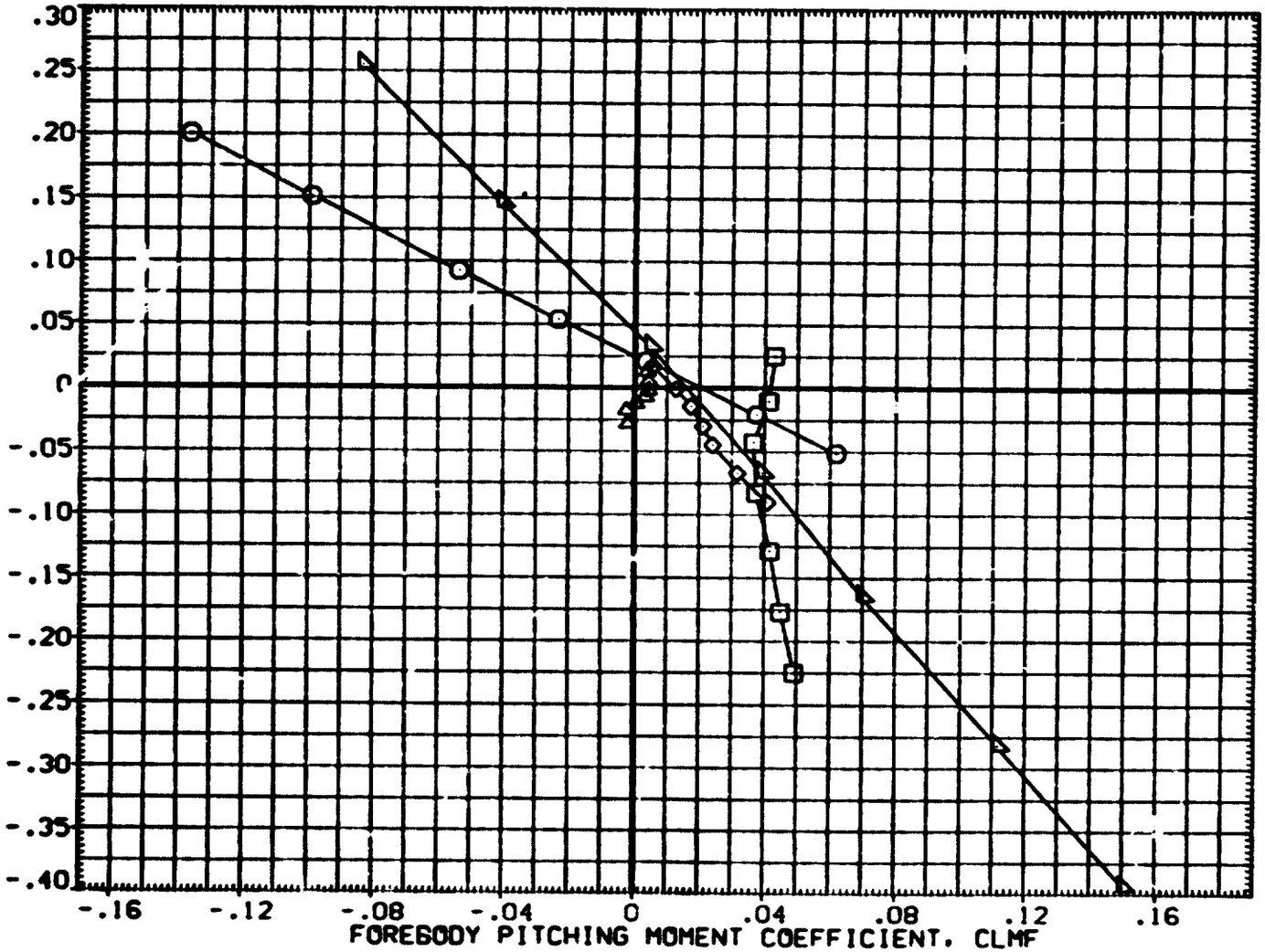


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)BET.1 = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET027)		AMES97-019C(IA81) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.200	.000
(MET137)		AMES97-019C(IA81) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.200	.000
(MET237)		AMES97-019C(IA81) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.200	.000
(MET337)		AMES97-019C(IA81) LVAP R-LRB ALL ML SEALED	0.000	-4.000	2.200	.000
(MET137)		AMES97-019C(IA81) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

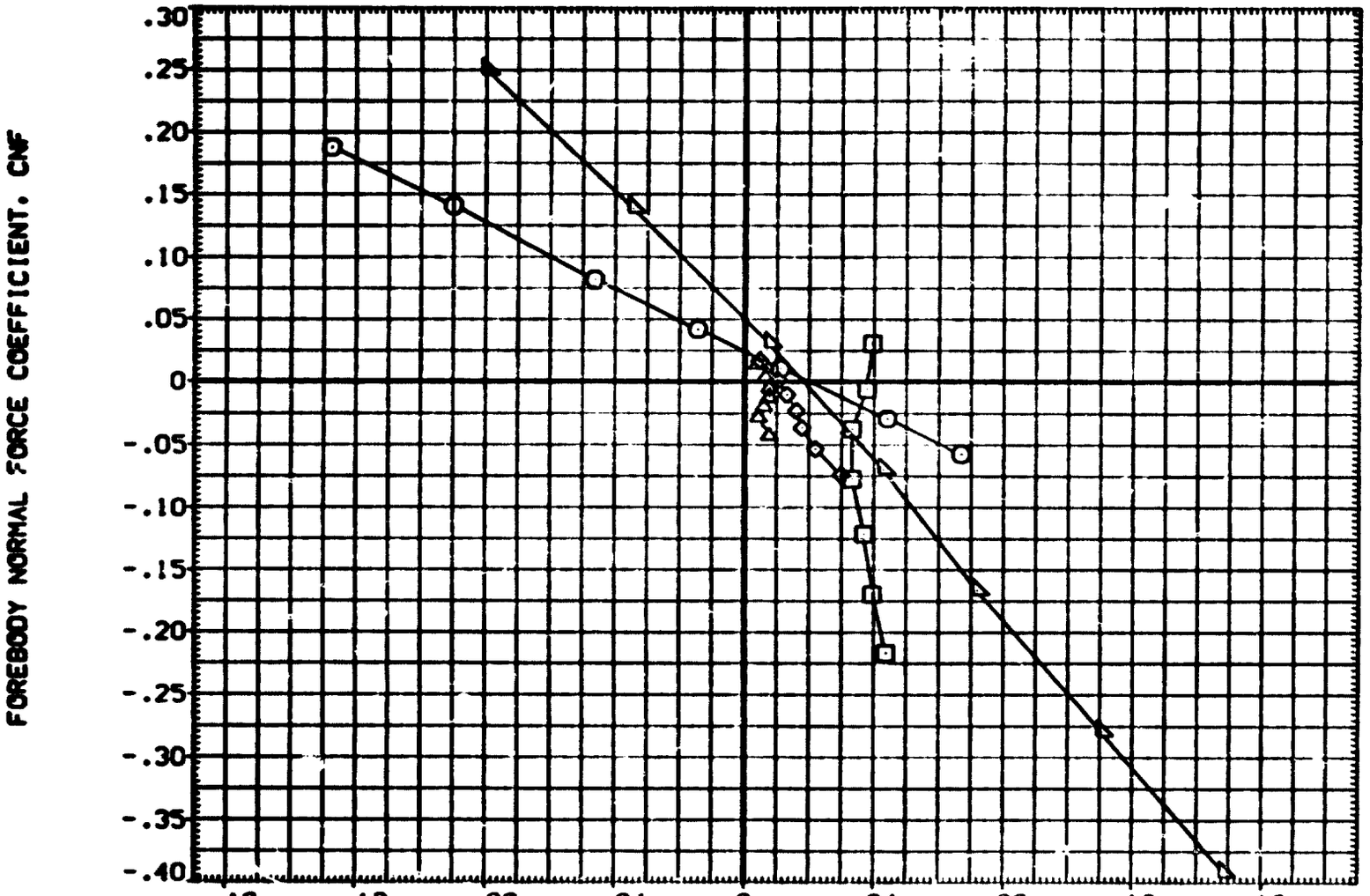


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

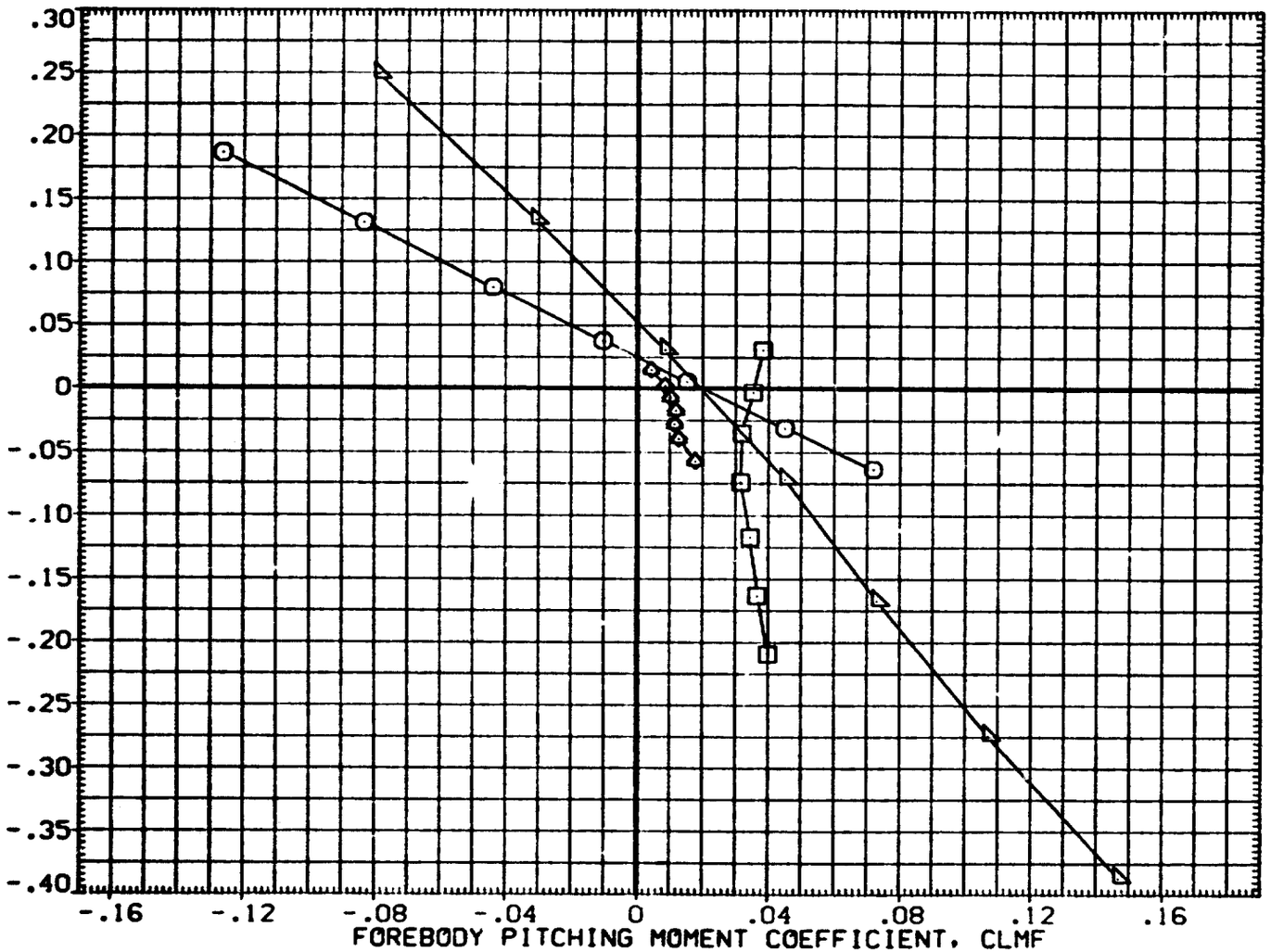


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

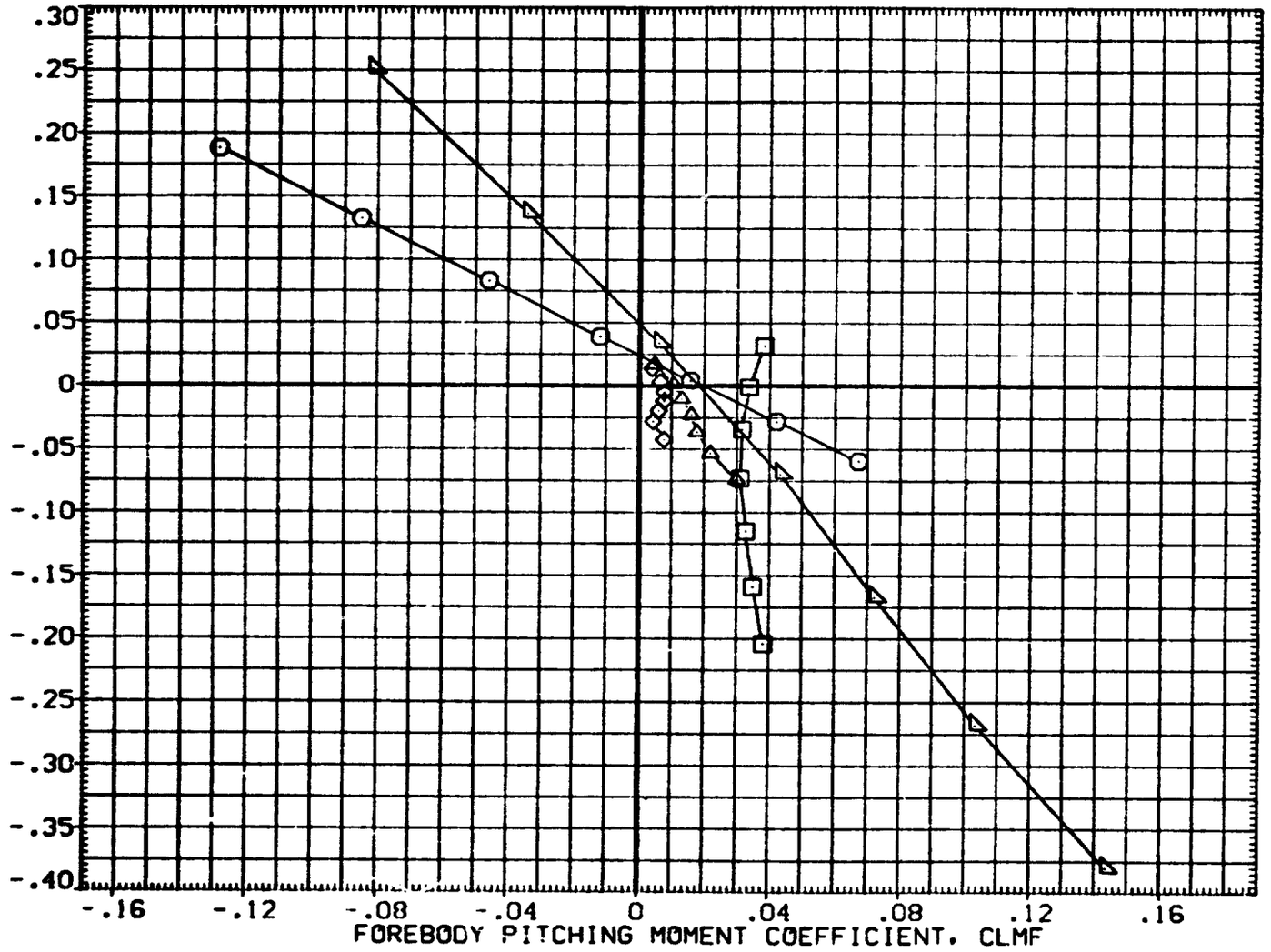


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)BETA1 = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO37)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METT37)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(METI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

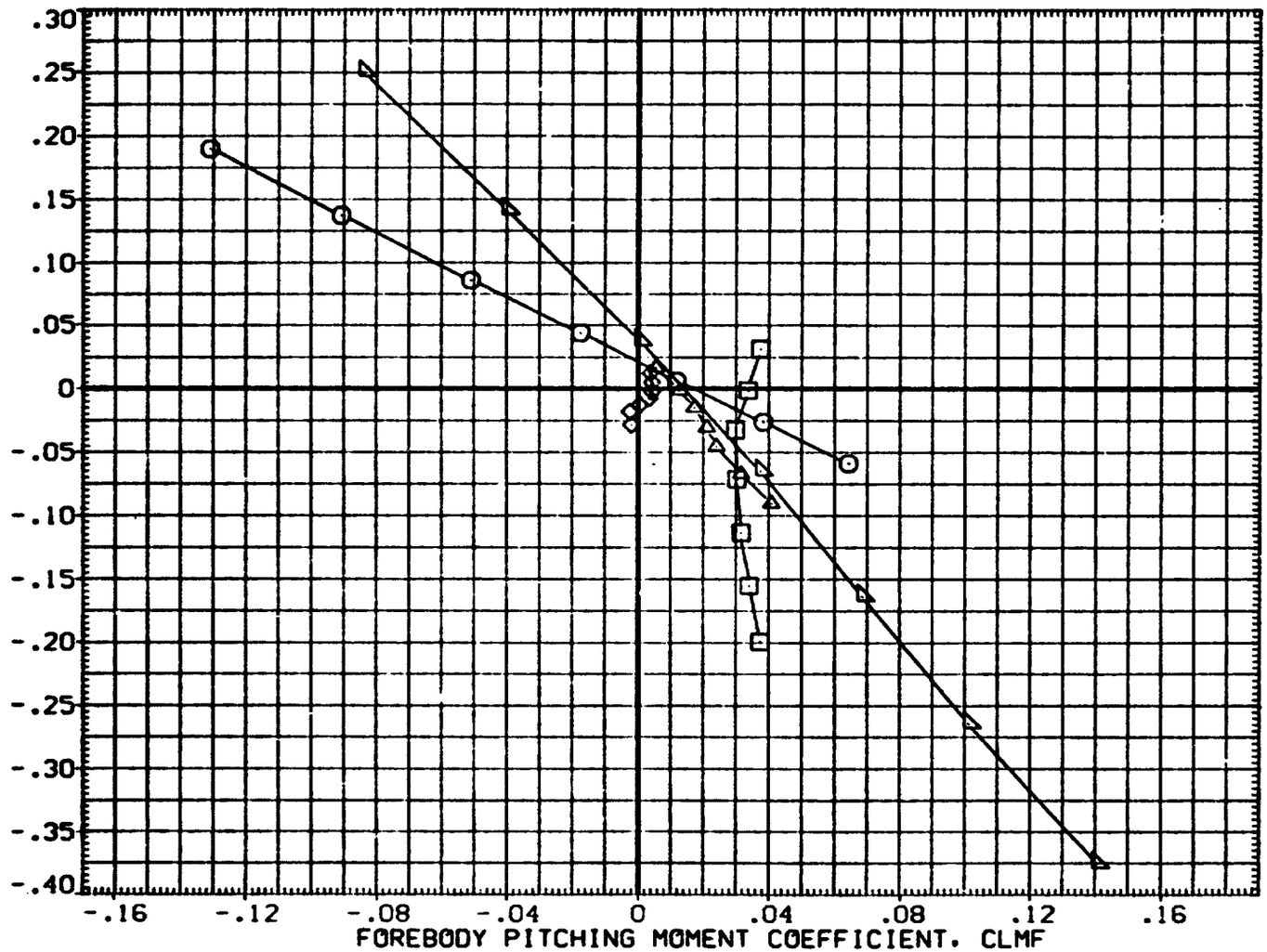


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET037)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(METL37)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(METR37)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(MET137)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

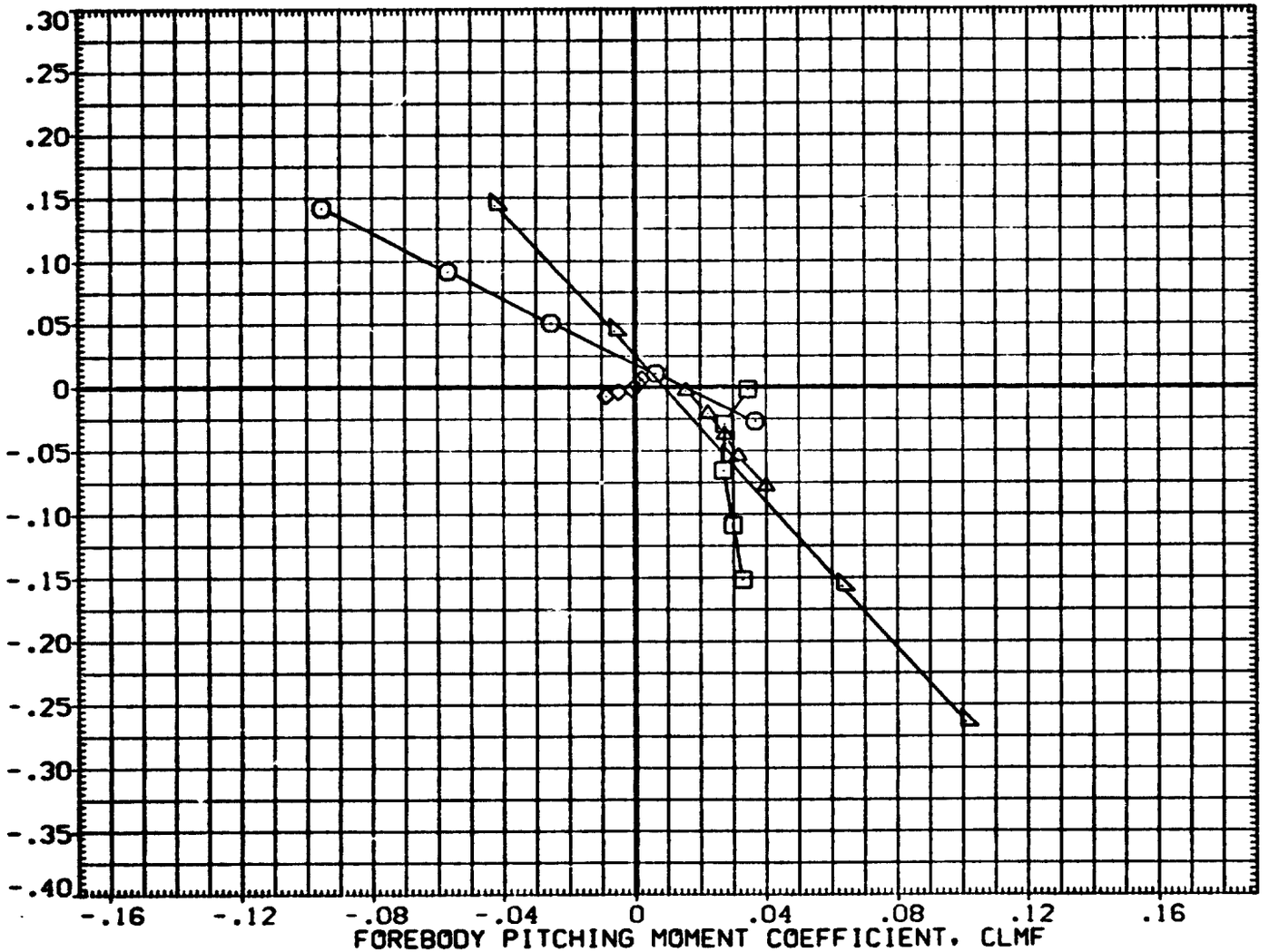


FIG. 12 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)BET,! = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

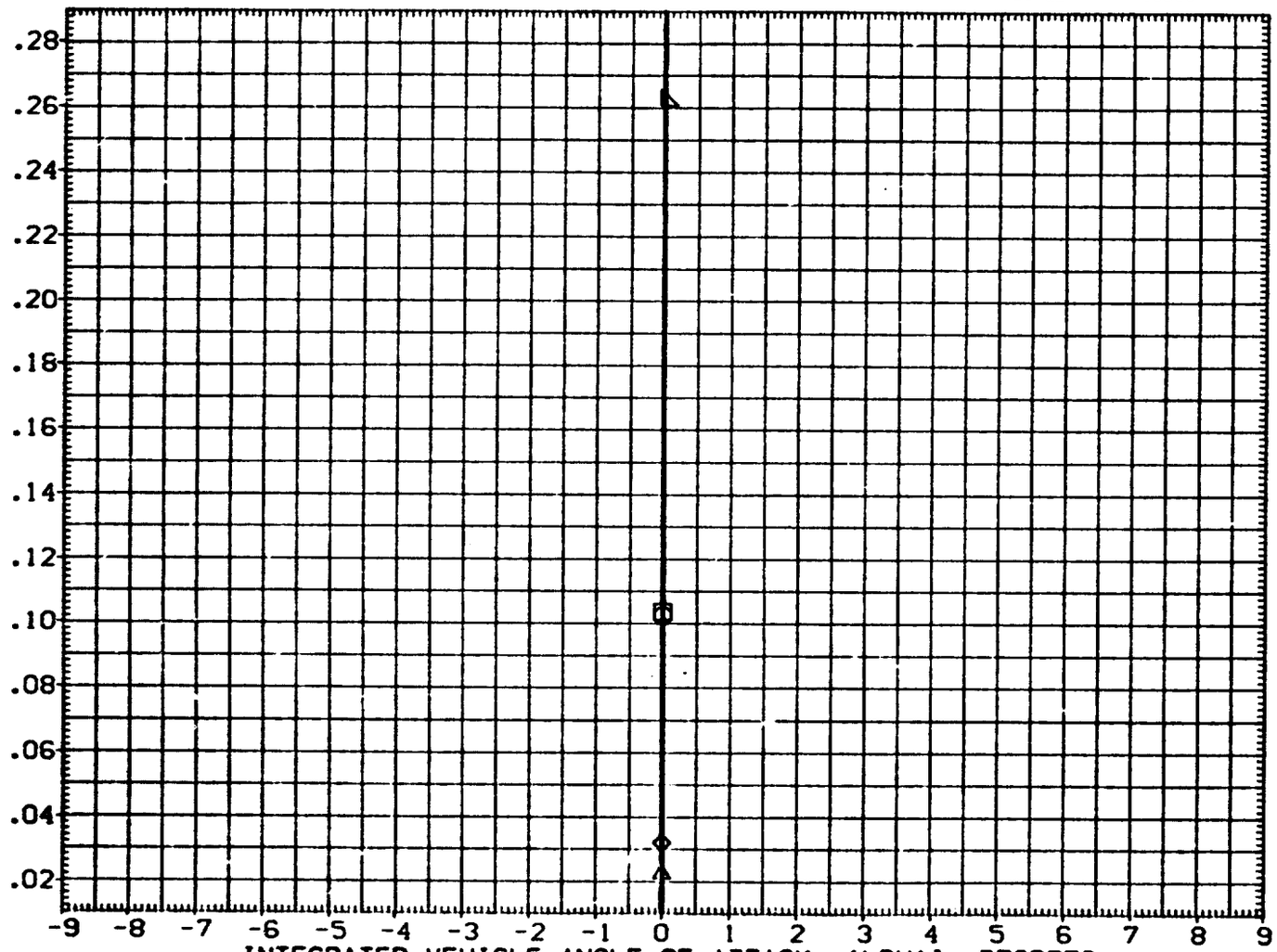


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	○	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

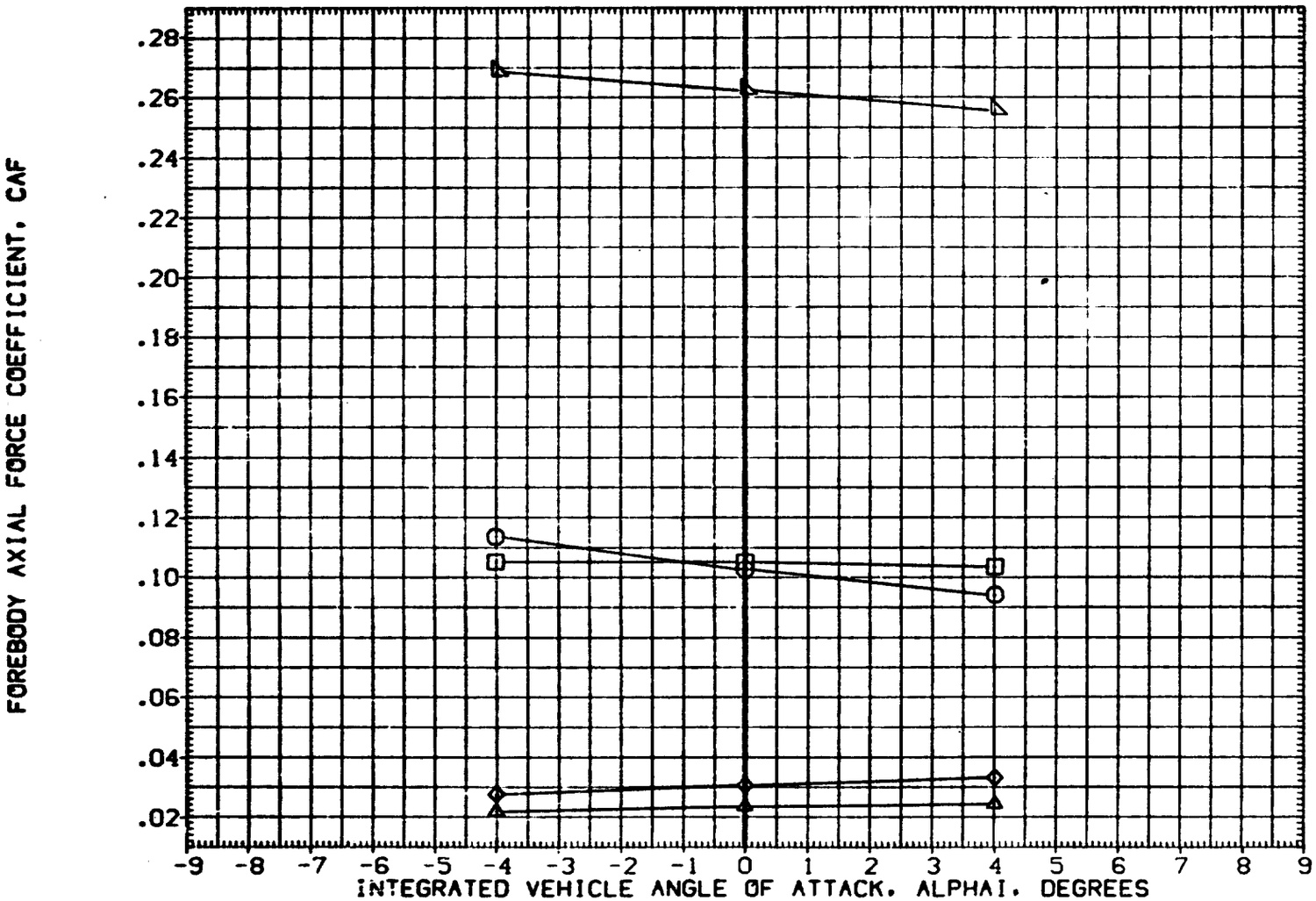


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET741)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

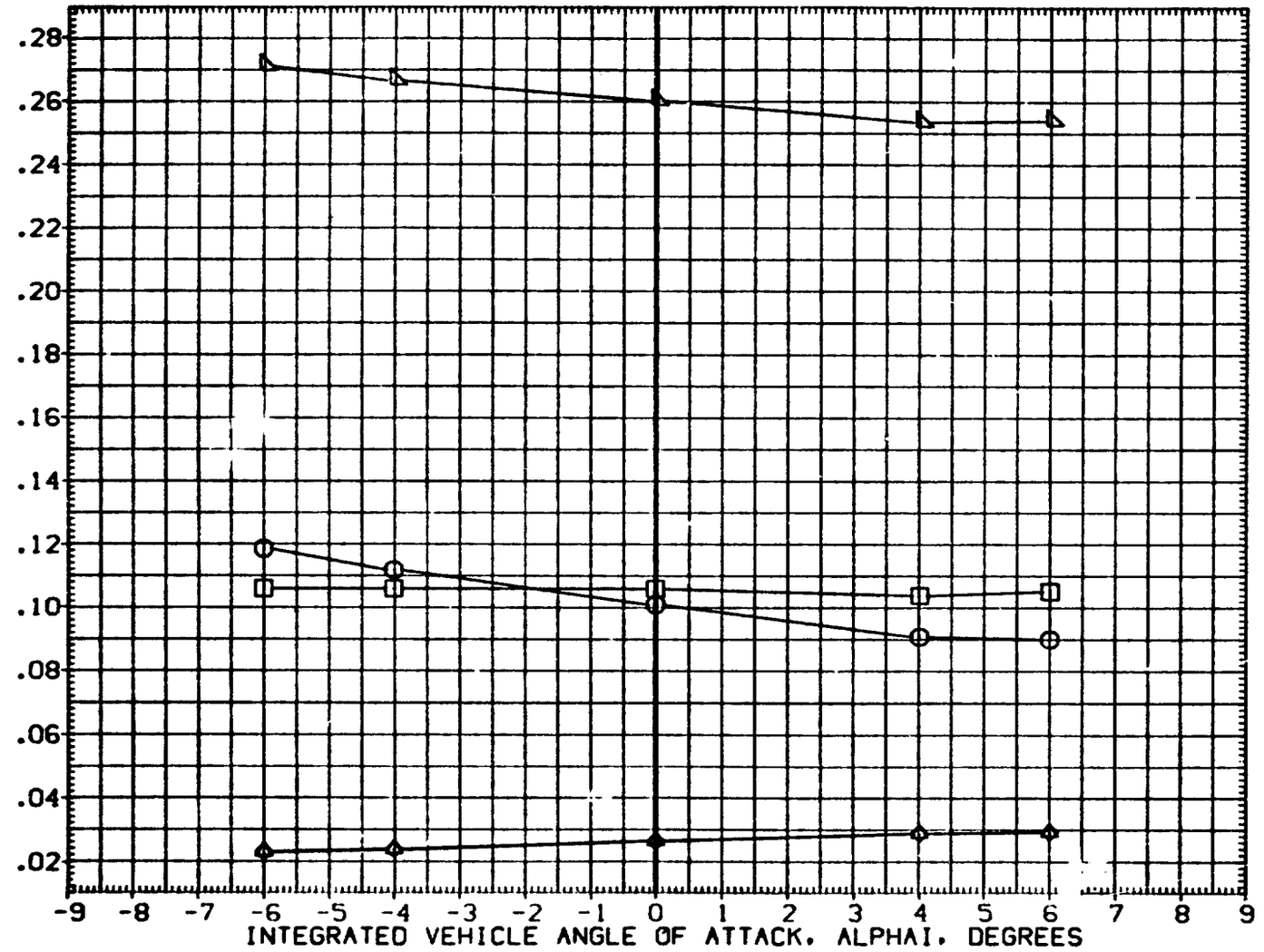


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(META41)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

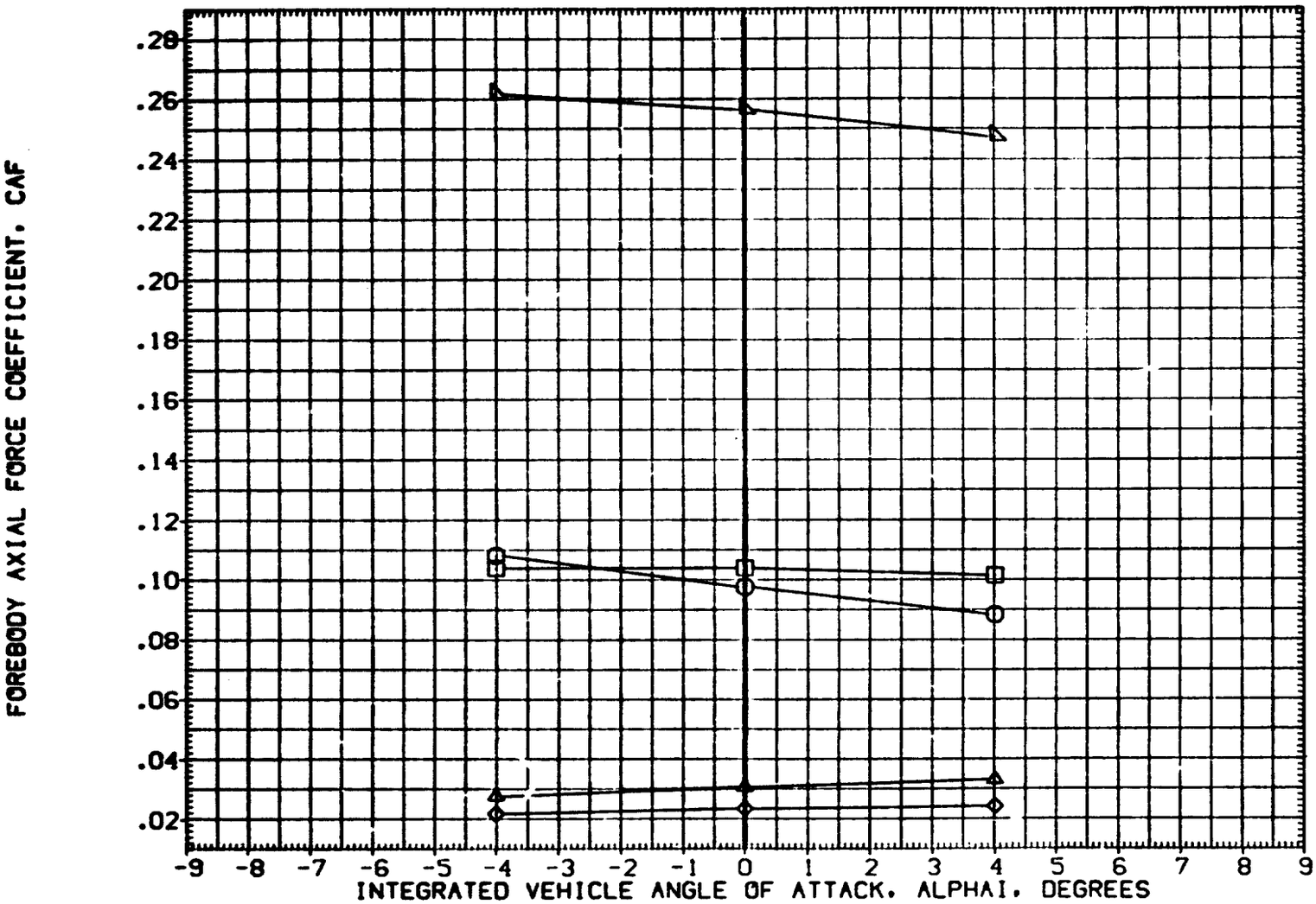


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	⊠	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	◪	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	◪	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	◪	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

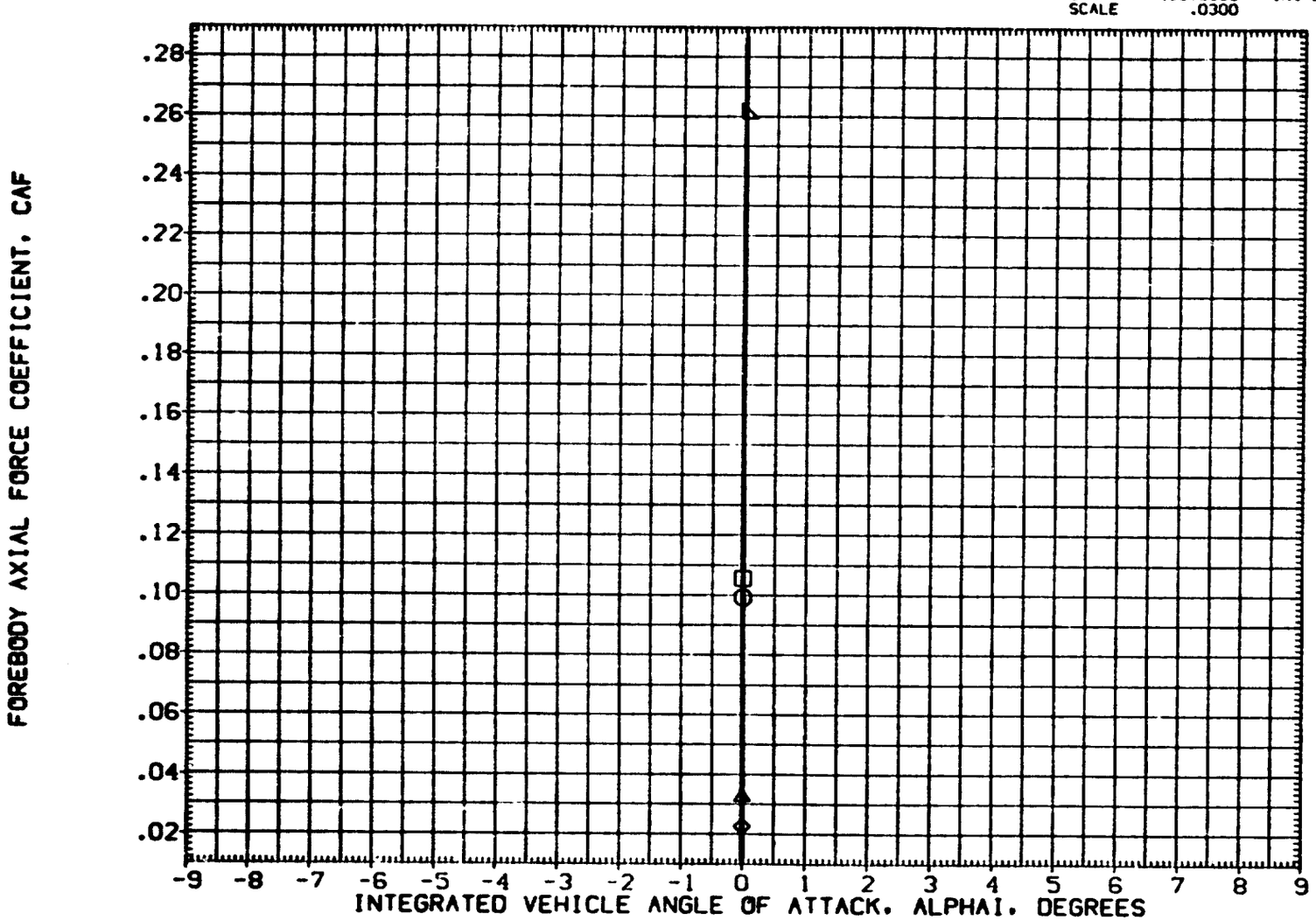


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET141)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	△	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	▽	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	◁	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

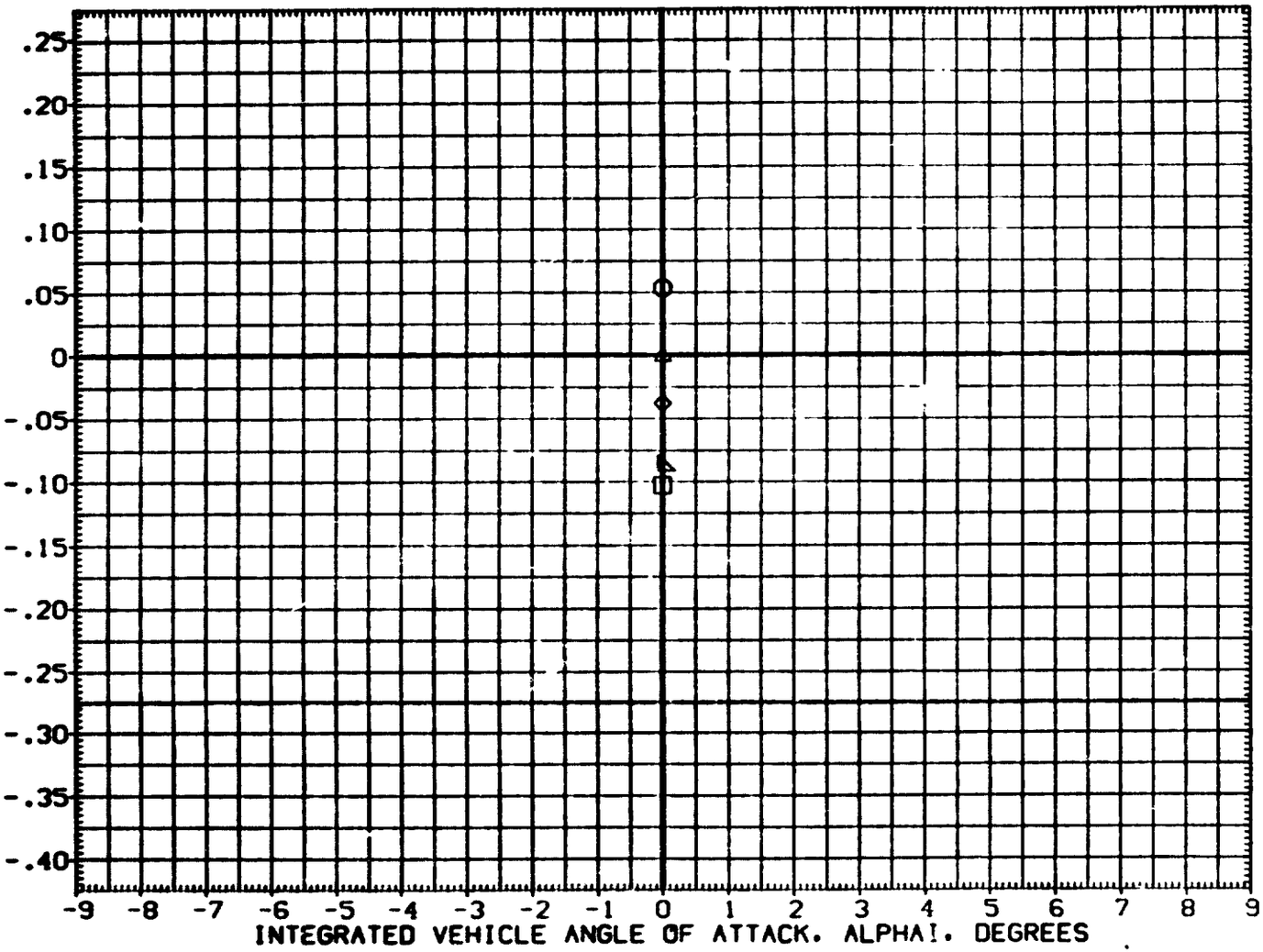


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBR.
(MET04I)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET14I)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL4I)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR4I)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET14I)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

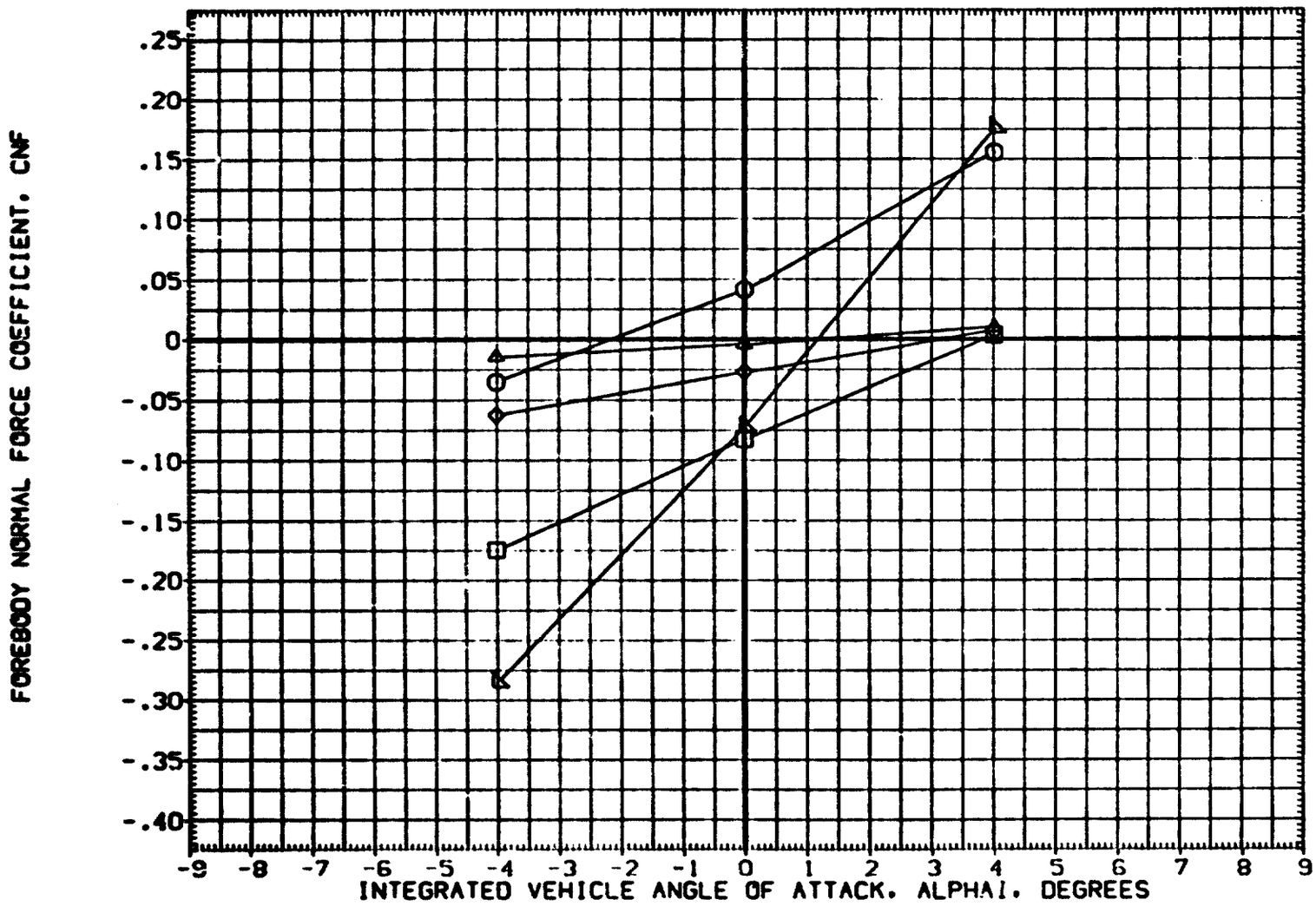


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)BETAI = -4.CO

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO4I)	○	AMES97-019X(IA01) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT4I)	□	AMES97-019X(IA01) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL4I)	◇	AMES97-019X(IA01) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR4I)	△	AMES97-019X(IA01) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET14I)	▷	AMES97-019X(IA01) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

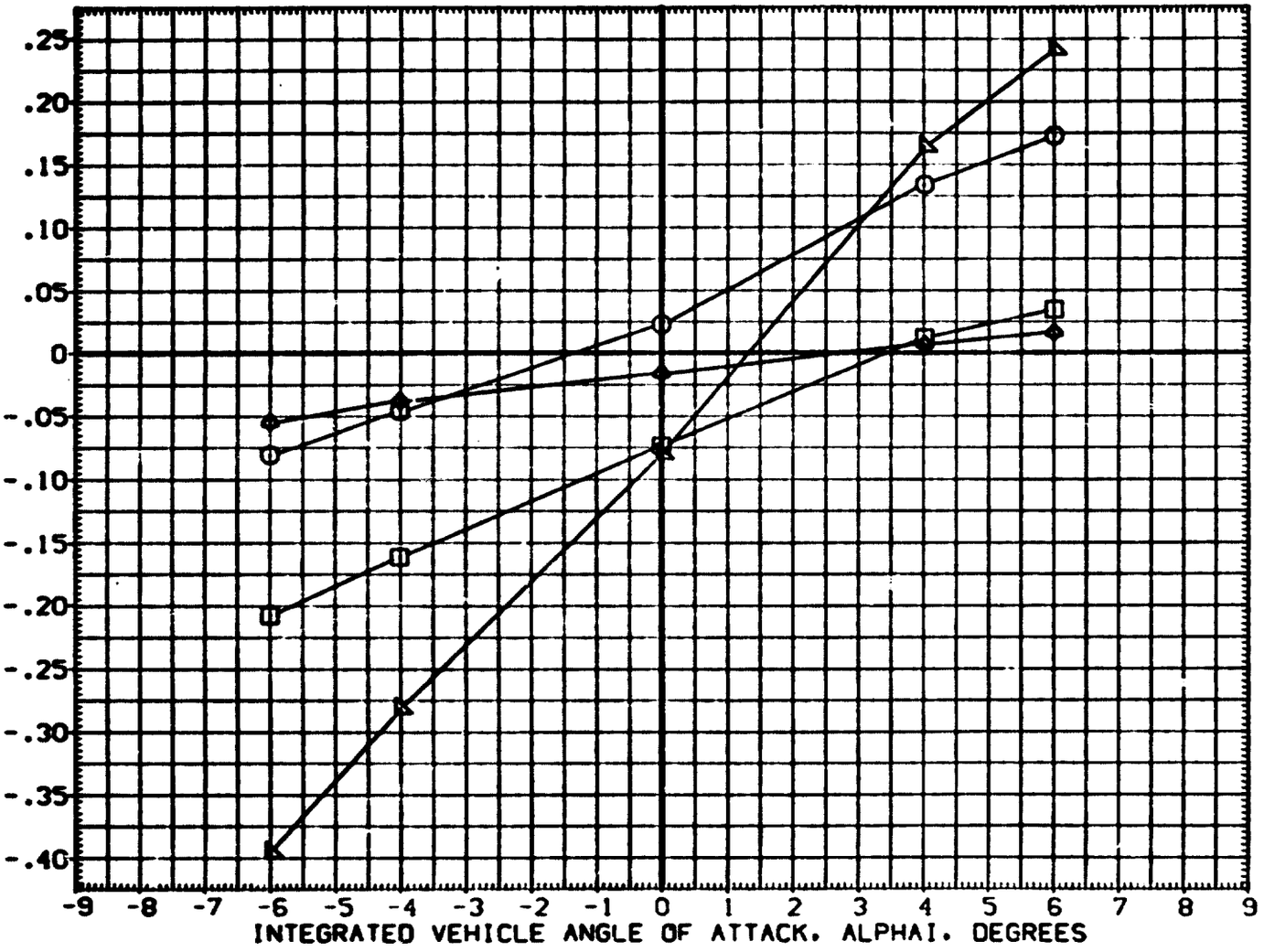


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO4I)	□	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT4I)	◇	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL4I)	⊠	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR4I)	△	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI4I)	▽	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

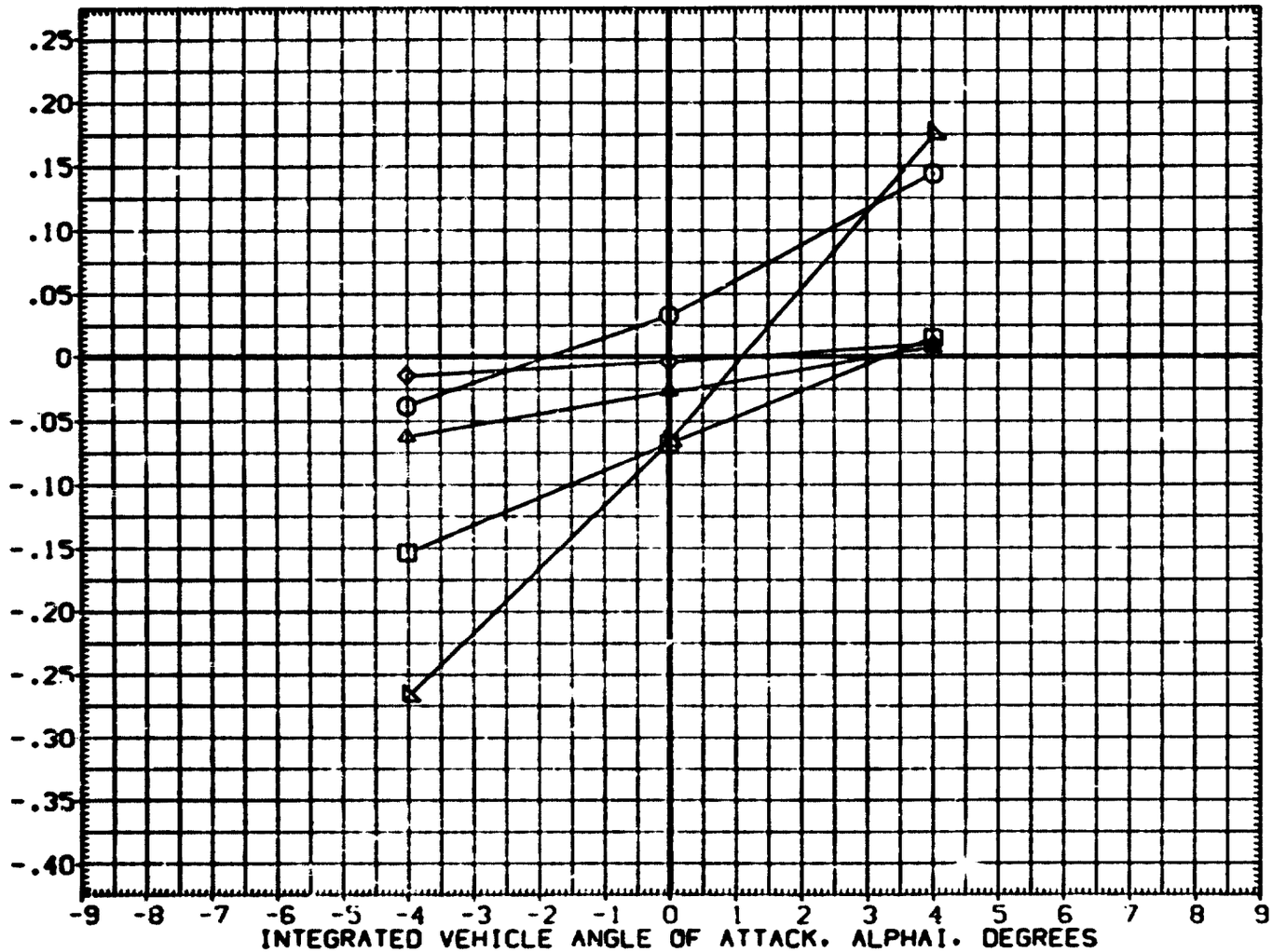


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(RETD4I)	□	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(RETT4I)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(RETL4I)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(RETR4I)	▷	AMES97-019(IABI) LVAP R-SRB ALL ML SEALED	.000	.000	2.200	.000
(RETI4I)	△	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

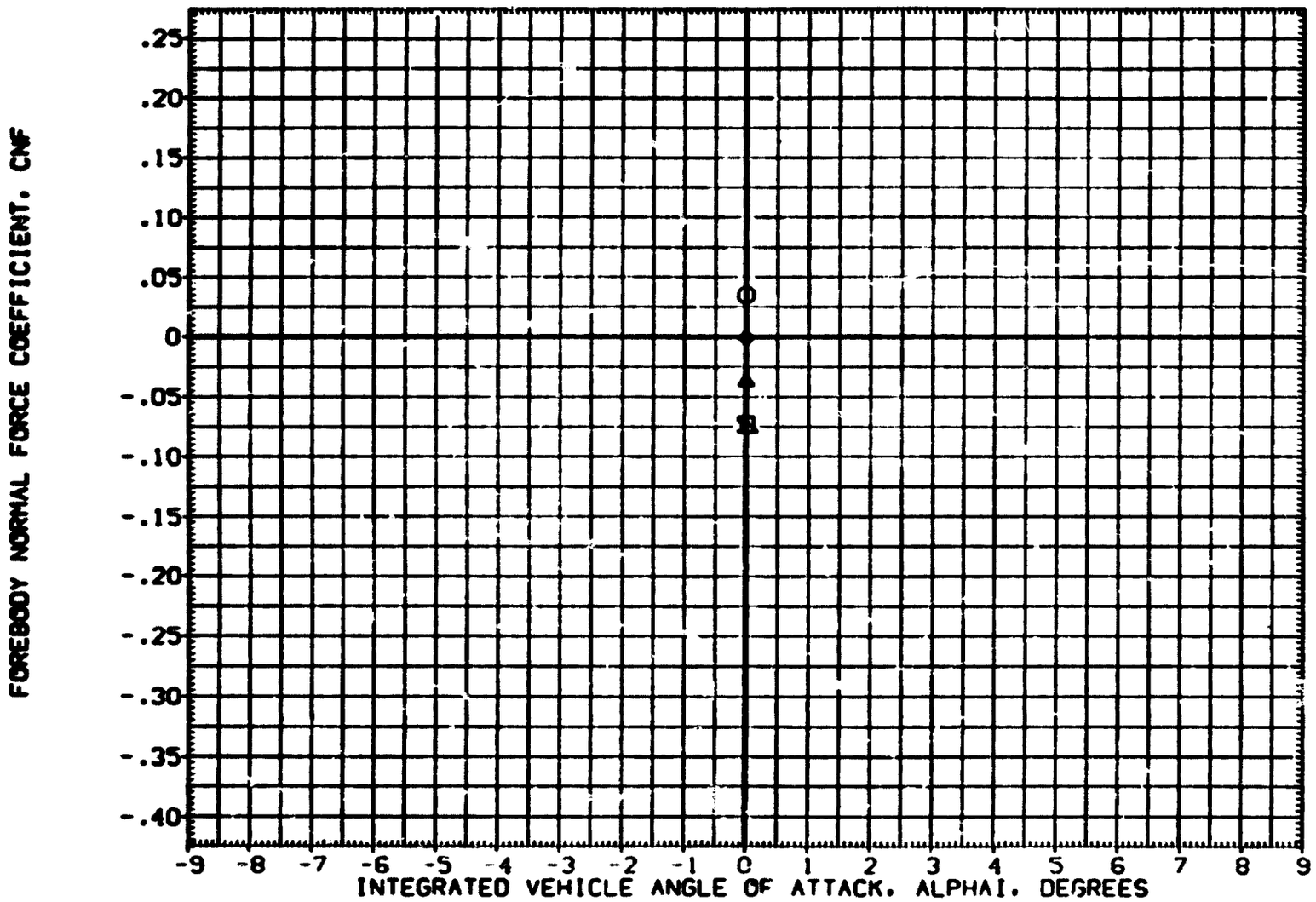


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	⊗	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	△	AMES97-019(IA91) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET141)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

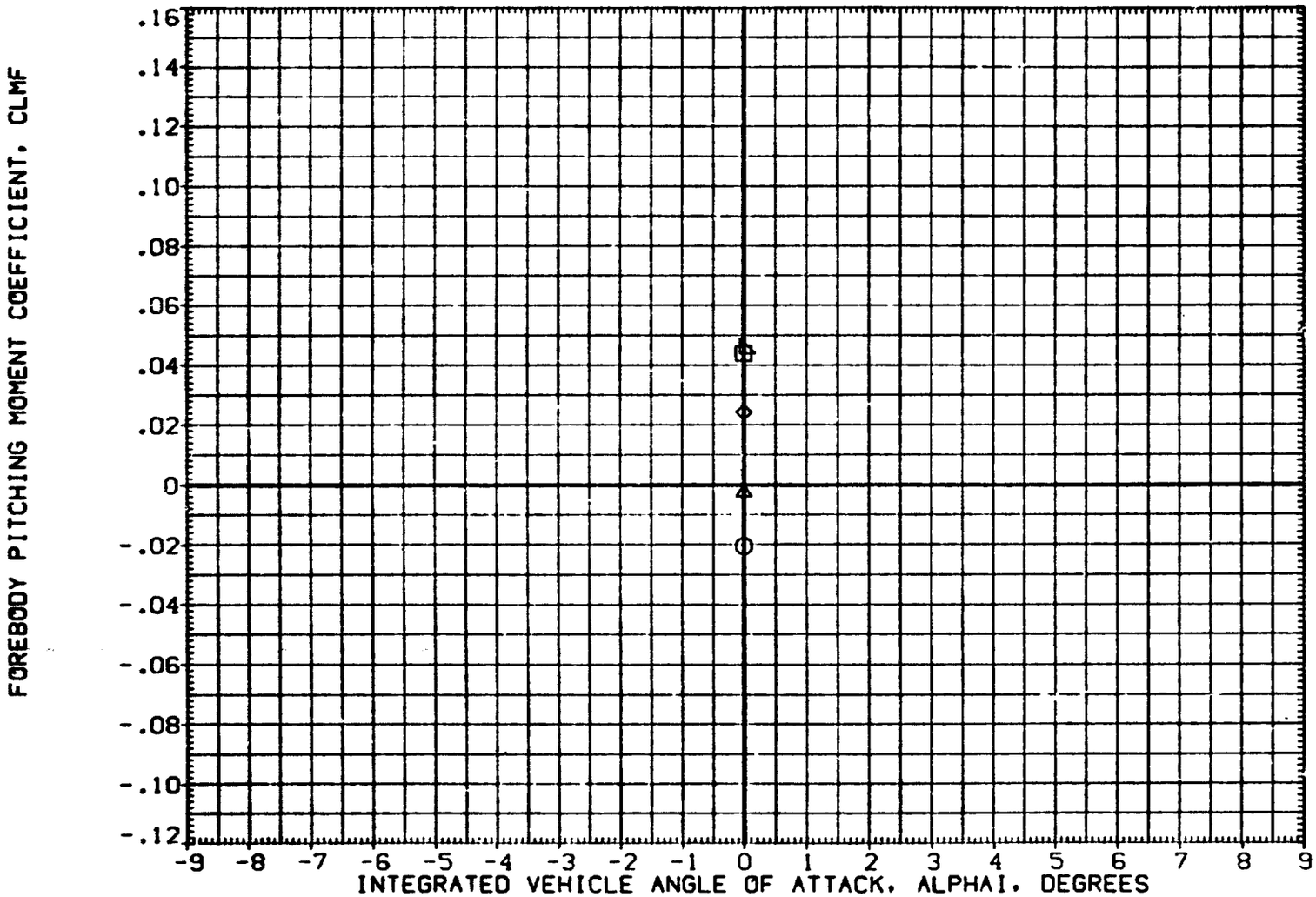


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET141)	⊠	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(MET241)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(MET341)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET441)	⊿	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

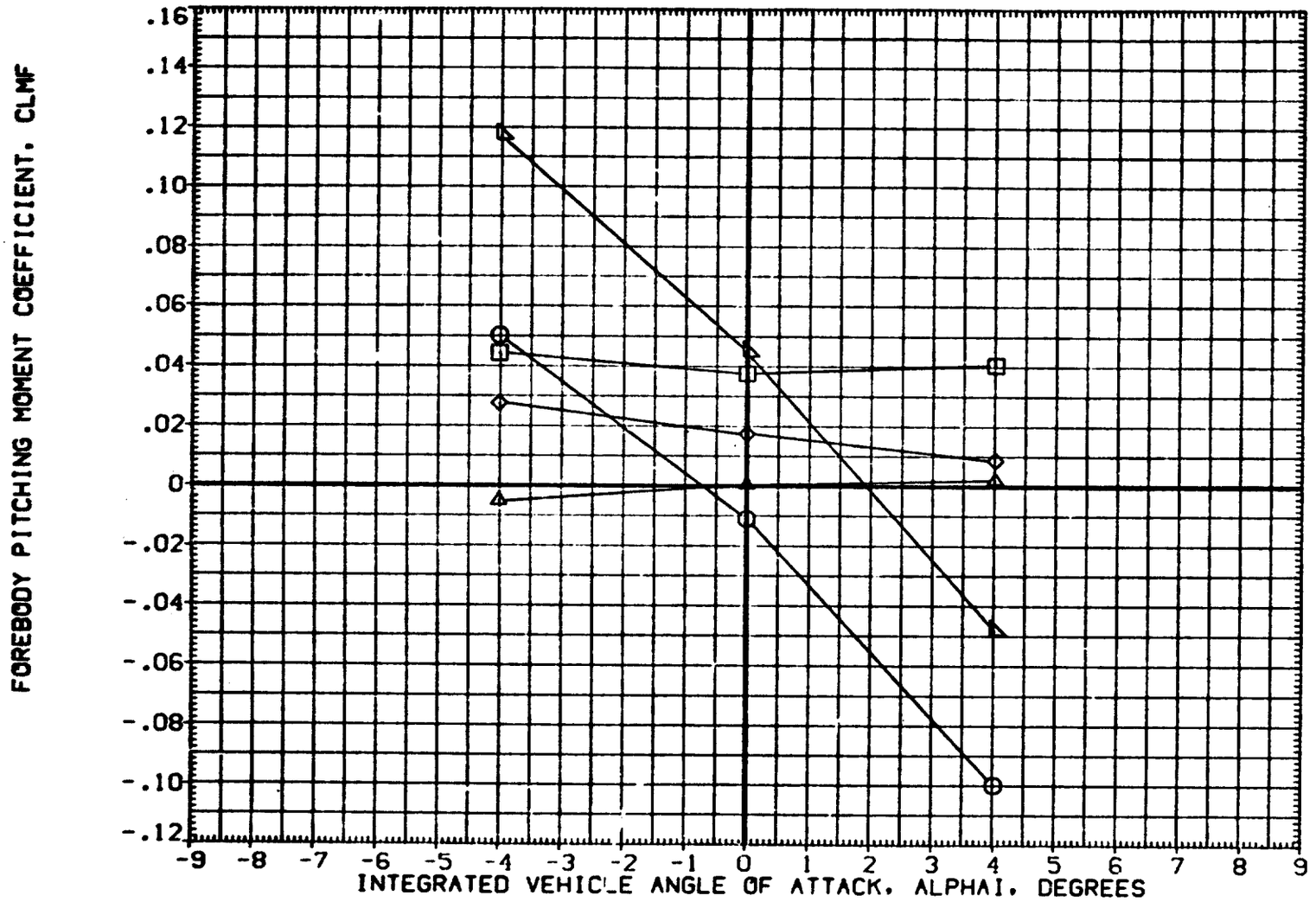


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET04I)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT4I)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL4I)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR4I)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET14I)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

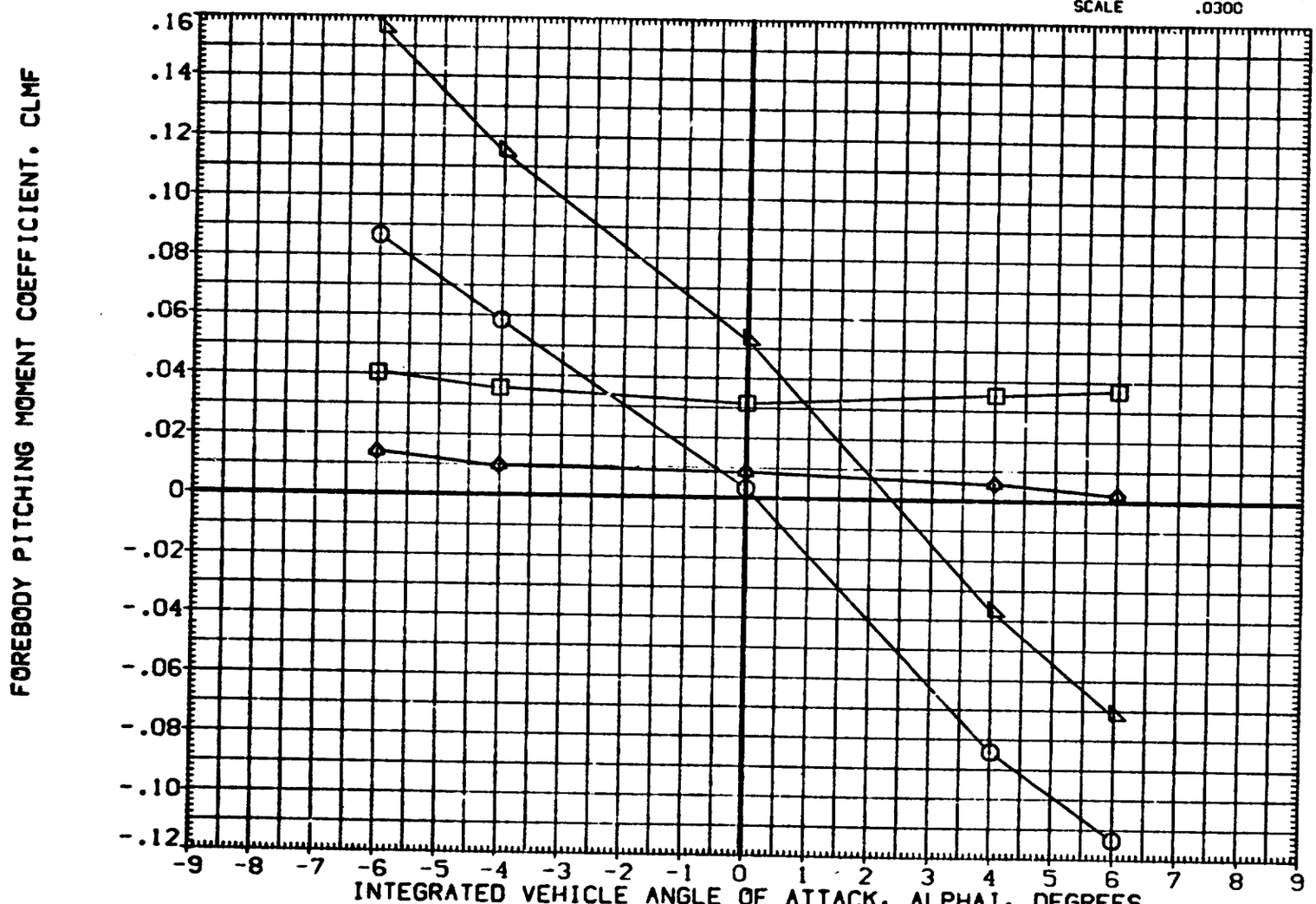


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)BETAI = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO41)	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

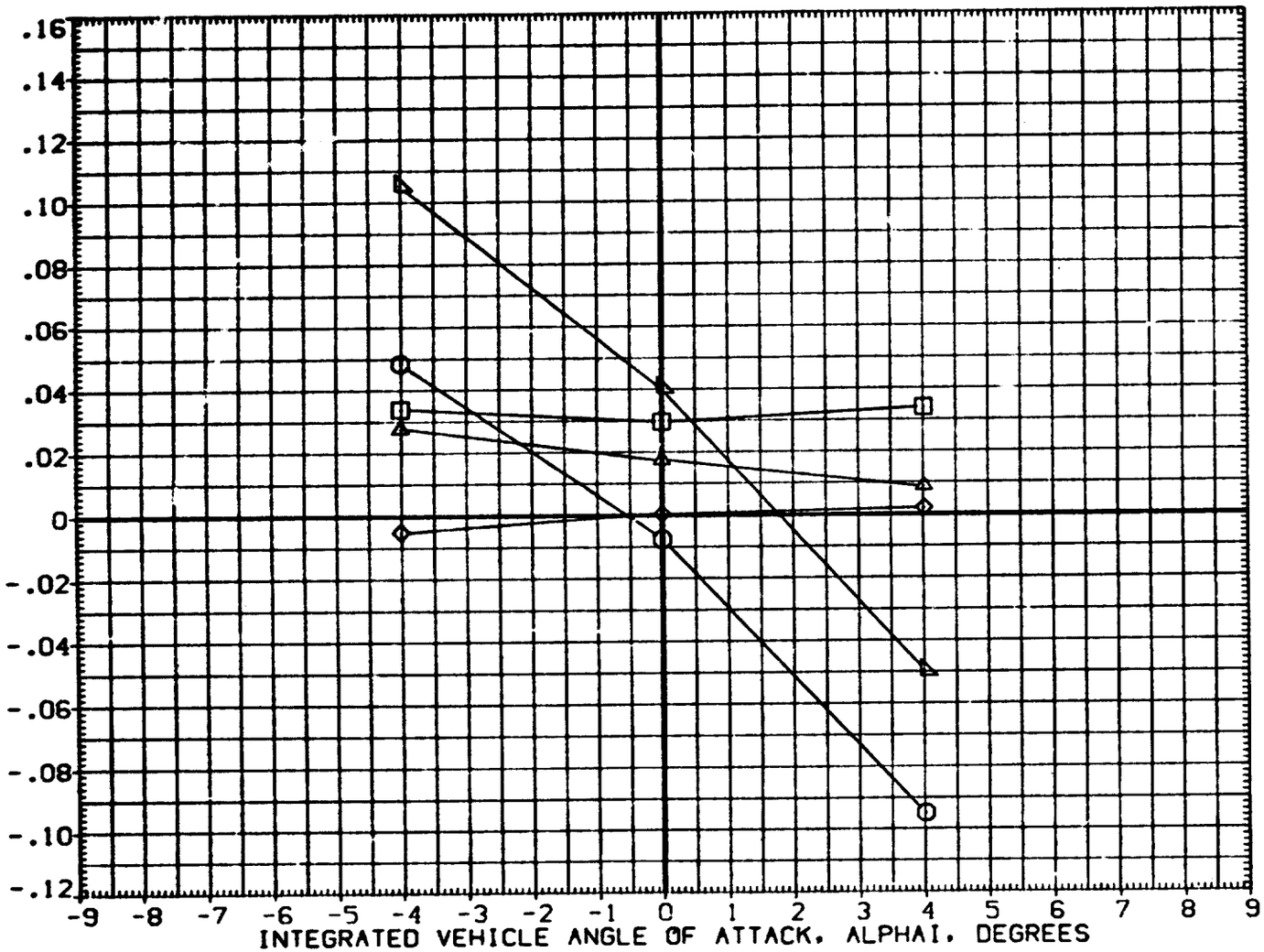


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET04I)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET14I)	⊡	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(MET24I)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(MET34I)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET41I)	▽	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

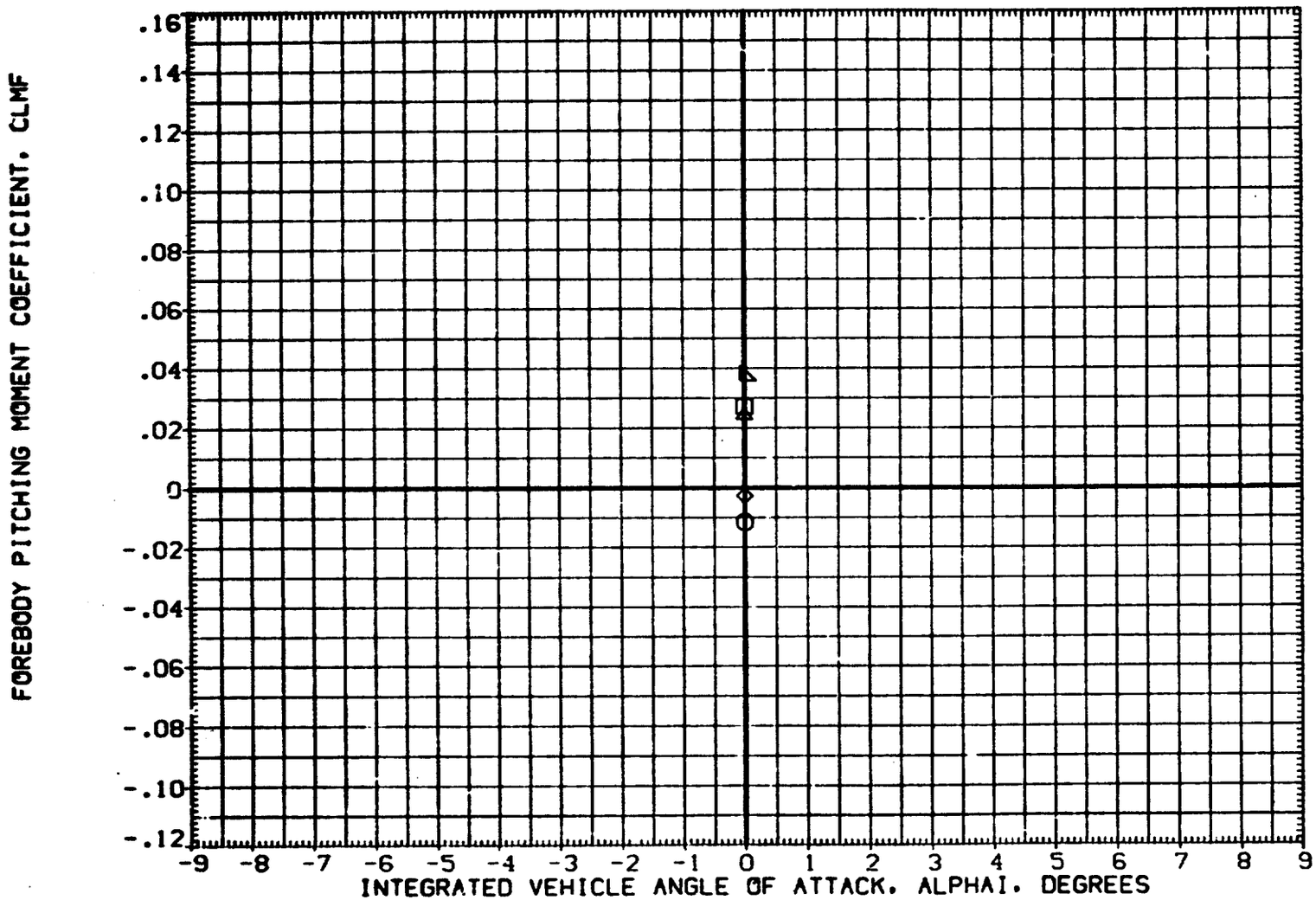


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET041)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET741)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(MET141)	▷	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

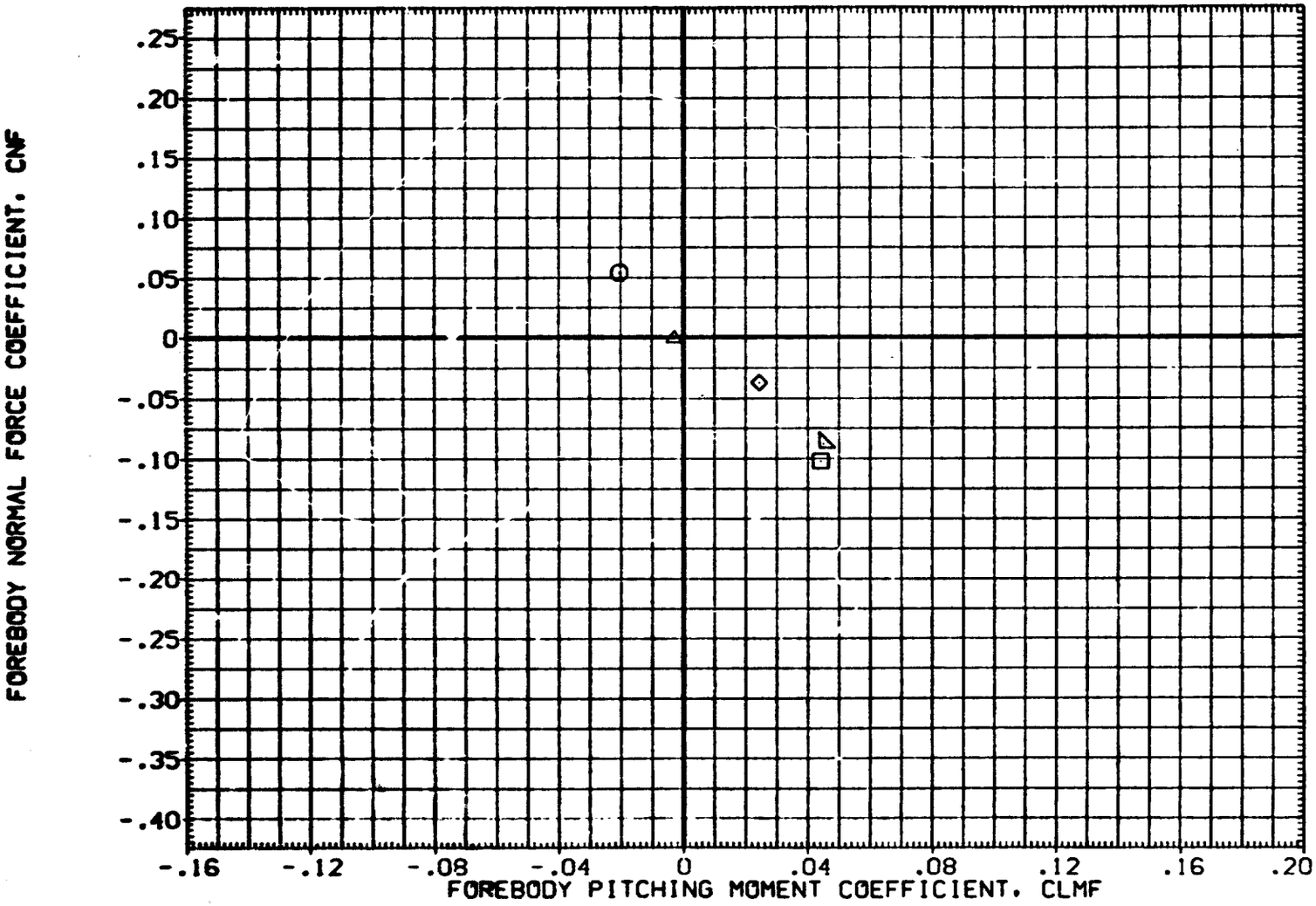


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)BET\I = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(METT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL41)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR41)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI41)	○	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

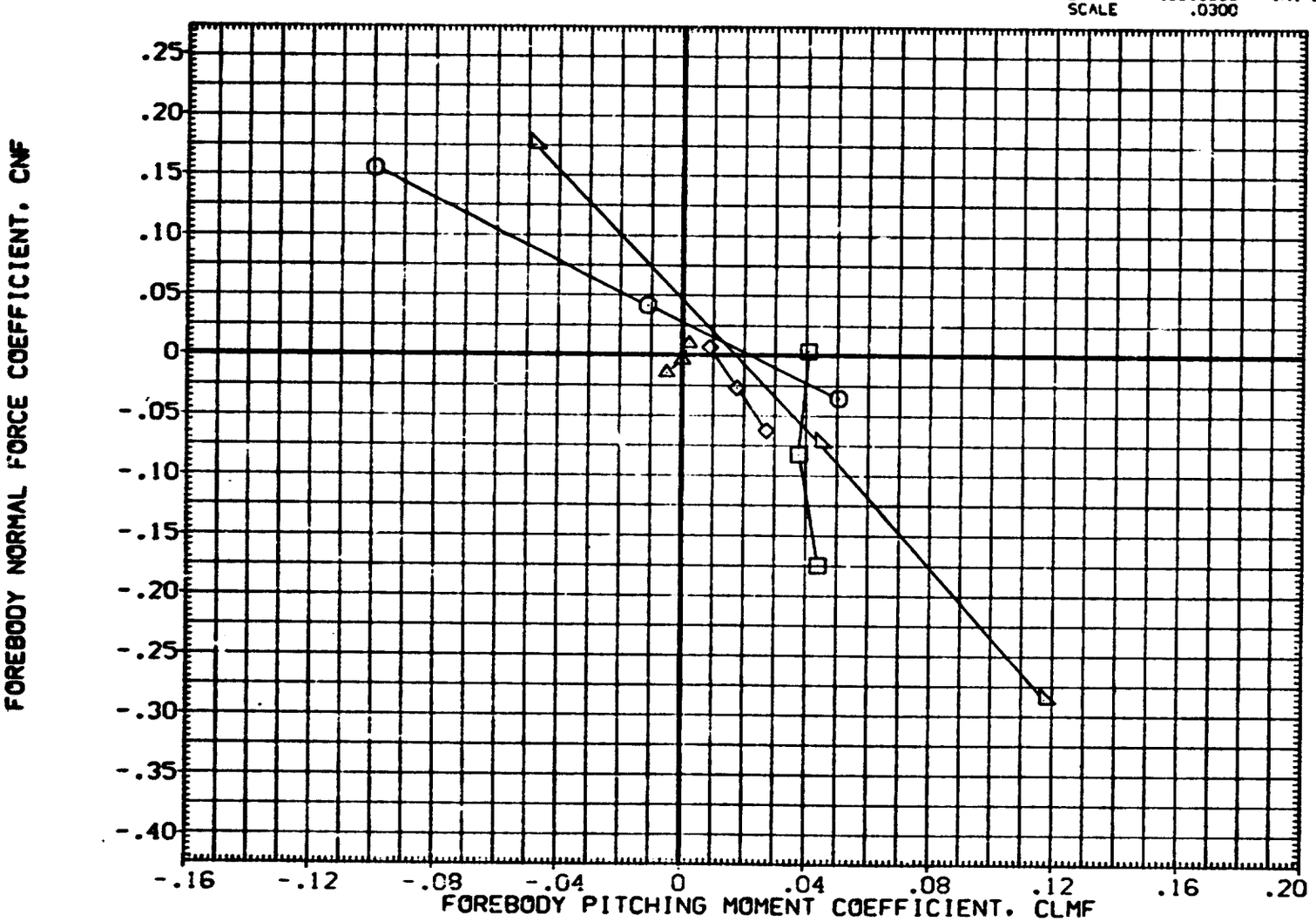


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET04I)		AMES97-C19([A81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(MET74I)		AMES97-019([A81) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(METL4I)		AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(METR4I)		AMES97-019([A8:) LVAP R-SRB ALL ML SEALED	.000	.000	2.200	.000
(MET14I)		AMES97-019([A81) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

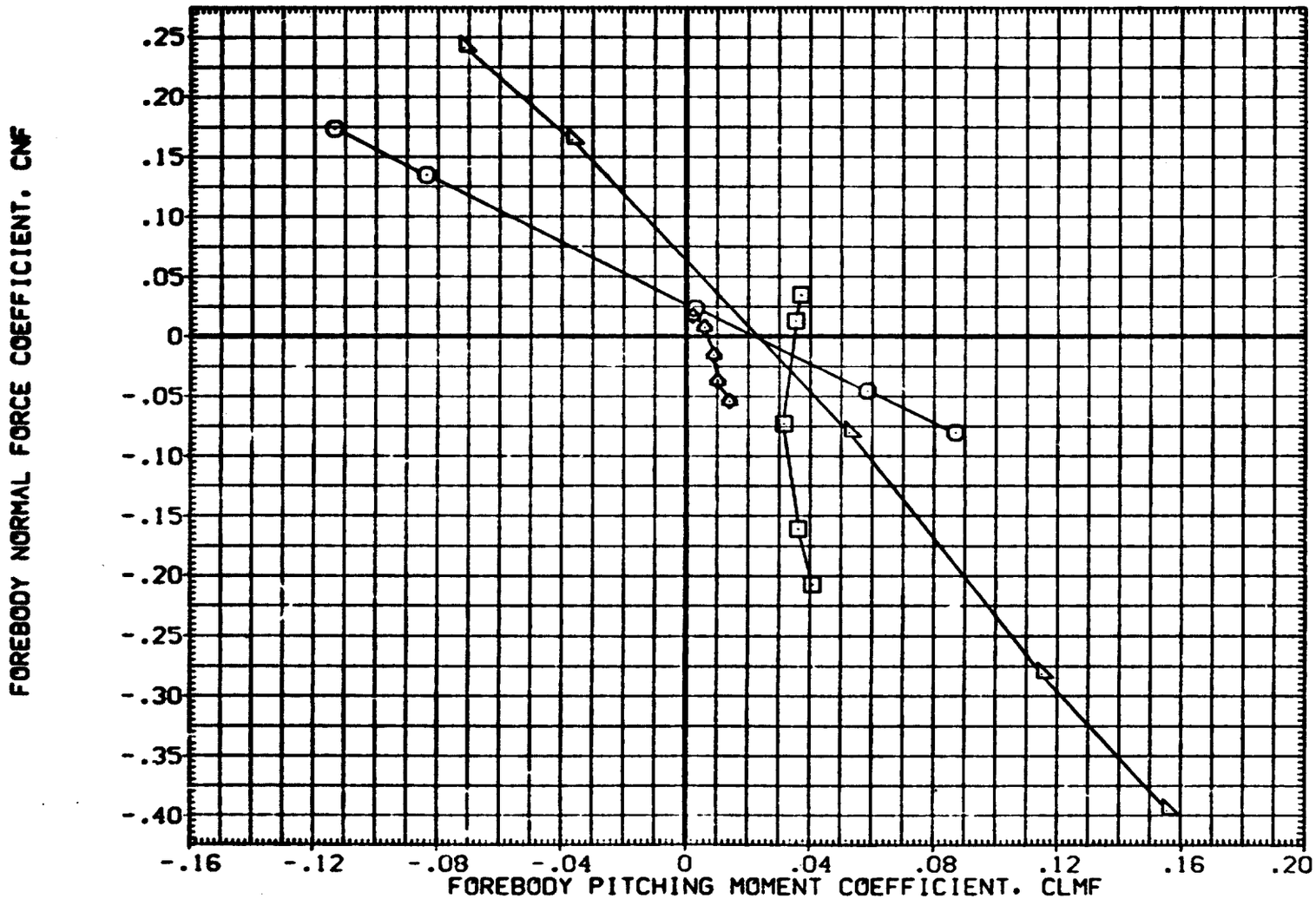


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET04I)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(MET74I)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(METL4I)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(METR4I)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(METI4I)	▽	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

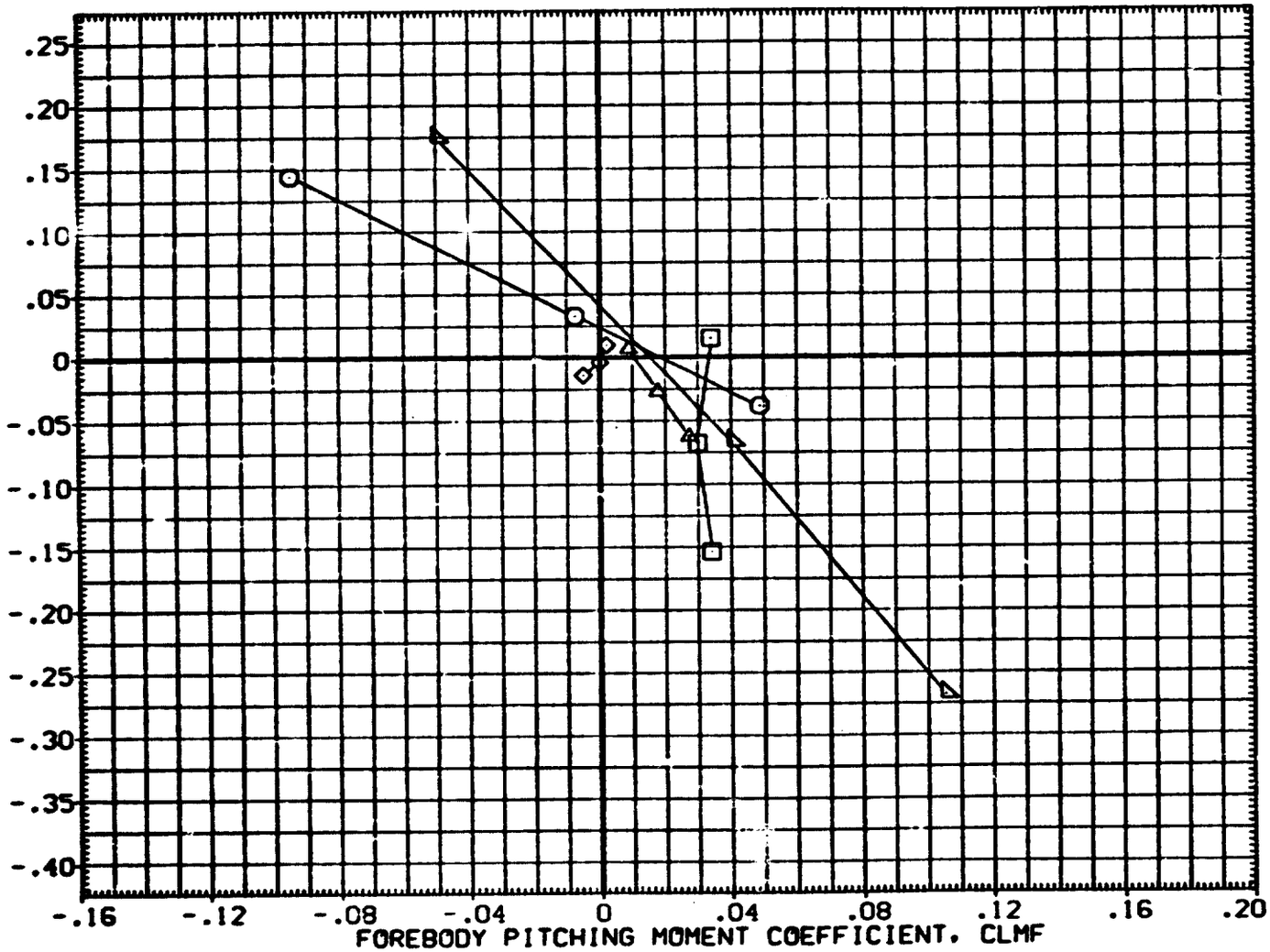


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)BET,1 = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET04I)	○	AMES97-019C(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(MET14I)	□	AMES97-019C(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(MET14I)	◇	AMES97-019C(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(MET24I)	⋈	AMES97-019C(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.200	.000
(MET34I)	△	AMES97-019C(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

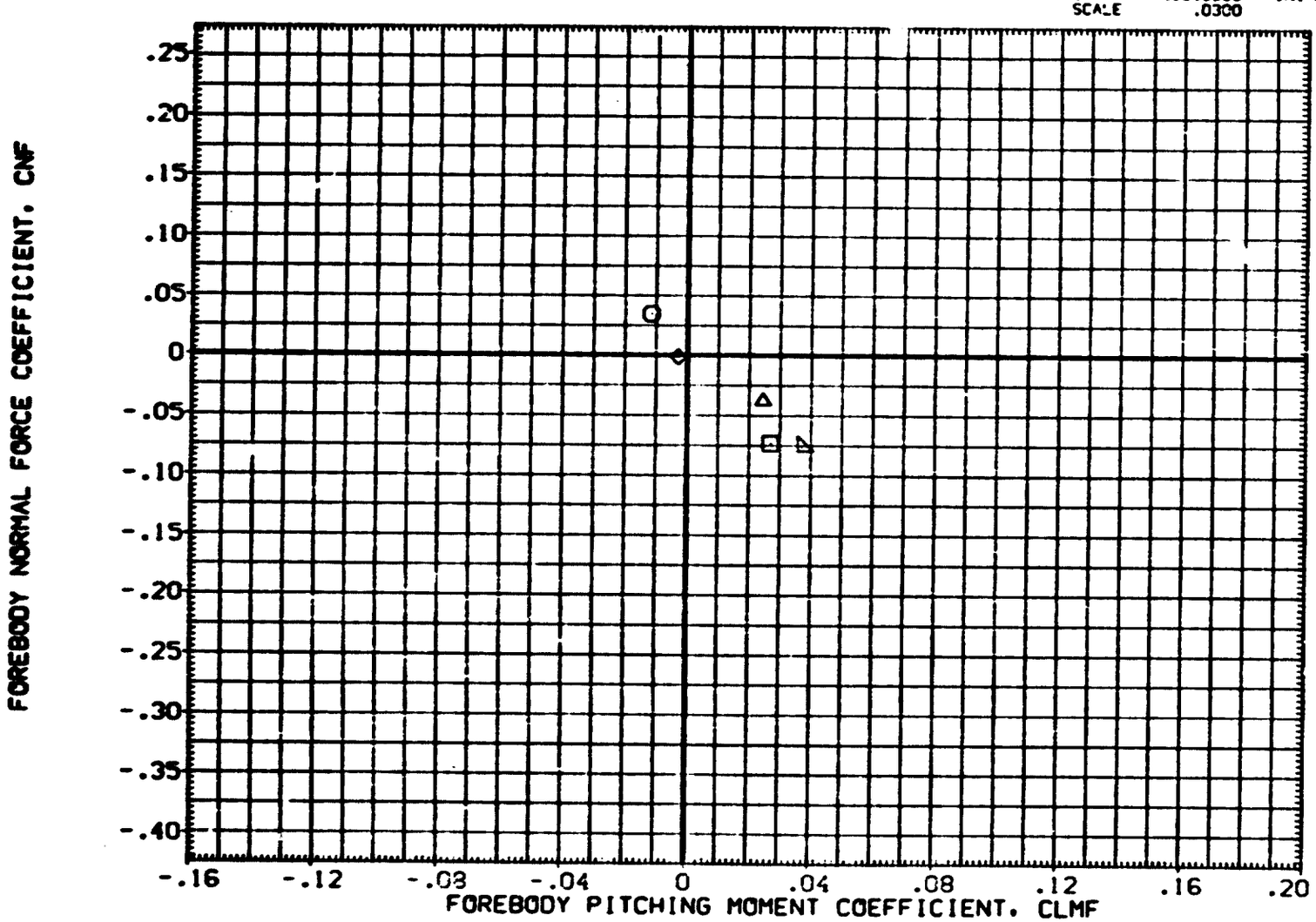


FIG. 13 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(MET145)	◇	AMES97-019([A81]) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(MET245)	▷	AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(MET345)		AMES97-019([A81]) LVAP R-SRB ALL ML SEALED	8.000	.000	2.200	.000
(MET145)	△	AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

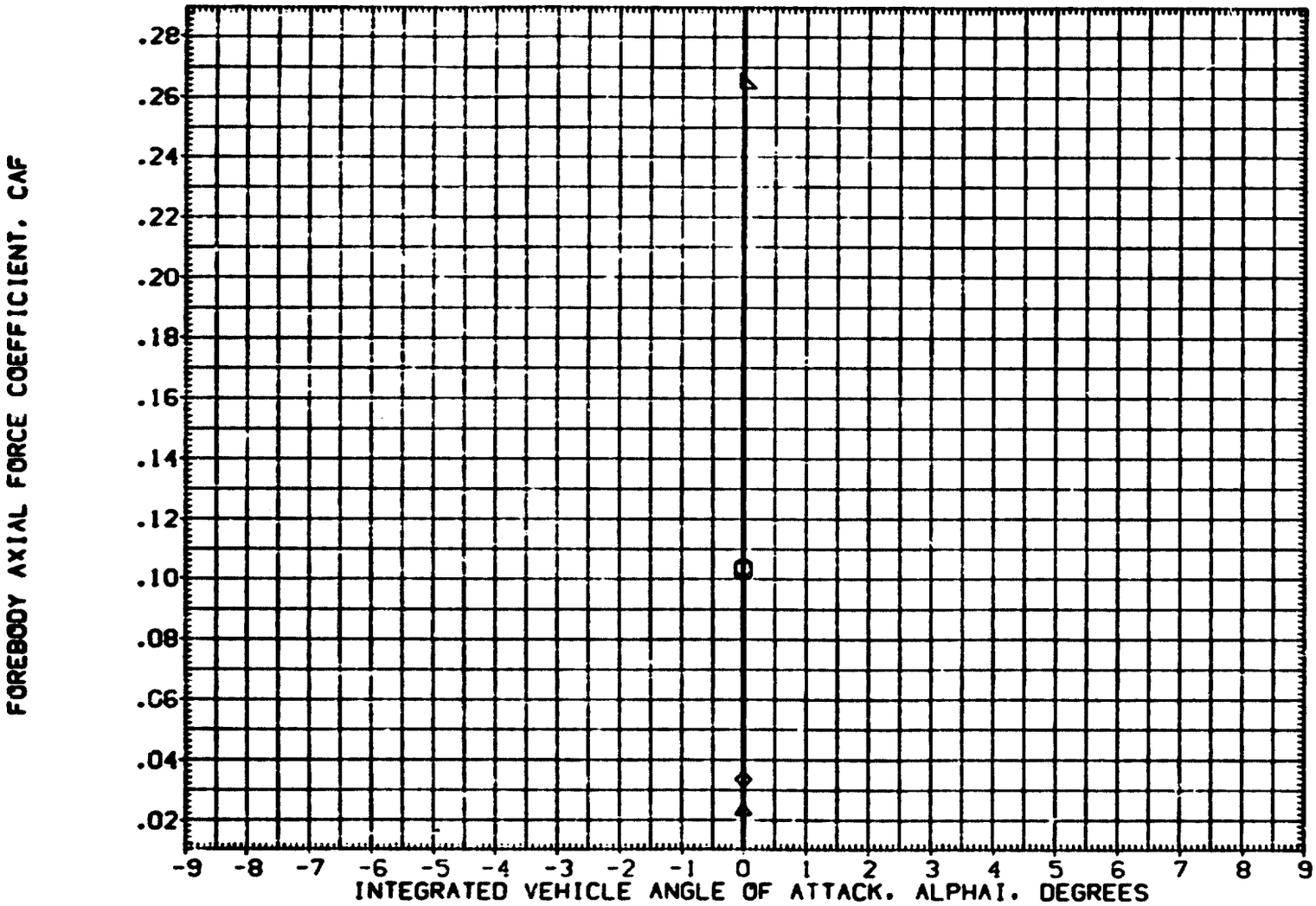


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPOBRK
(MET065)	○	AMES97-019(1AB:) LVAP ORBITER-ALL HL SEALED	0.000	.000	2.200	.000
(MET145)	□	AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	0.000	.000	2.200	.000
(MET245)	◇	AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	0.000	.000	2.200	.000
(MET345)	△	AMES97-019(1AB1) LVAP R-SRB ALL HL SEALED	0.000	.000	2.200	.000
(MET145)	◺	AMES97-019(1AB1) LVAP INT VE-- ALL HL SEALED	0.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

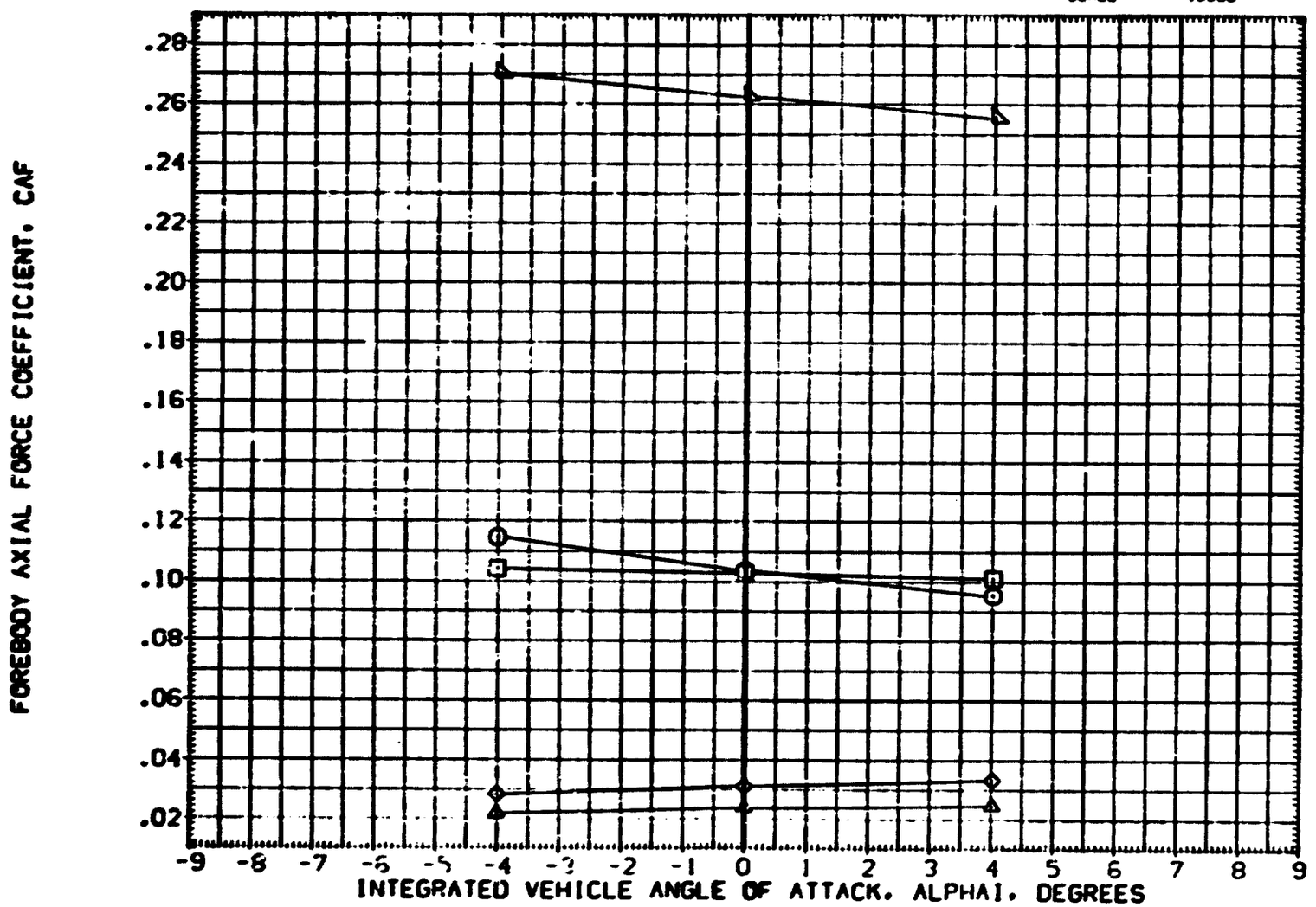


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO45)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(METT45)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(METL45)	△	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(METR45)		AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	8.000	.000	2.200	.000
(METI45)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

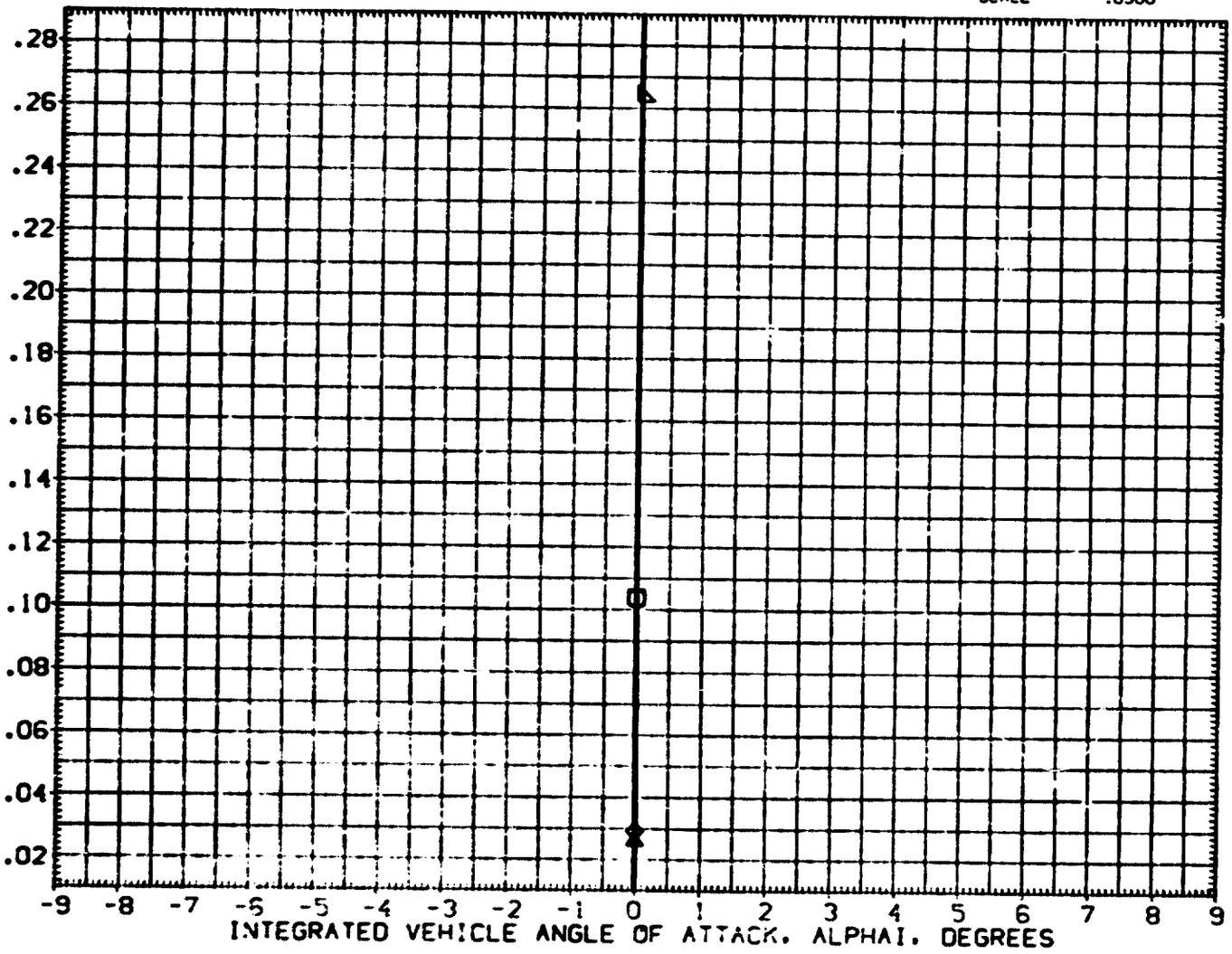


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	□	AMES97-019(1AB1) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.200	.000
(MET145)	◇	AMES97-019(1AB1) LVAP TANK - ALL ML SEALED	0.000	.000	2.200	.000
(METL45)	△	AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.200	.000
(METR45)	▽	AMES97-019(1AB1) LVAP R-SRB ALL ML SEALED	0.000	.000	2.200	.000
(MET145)	⊠	AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED	0.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

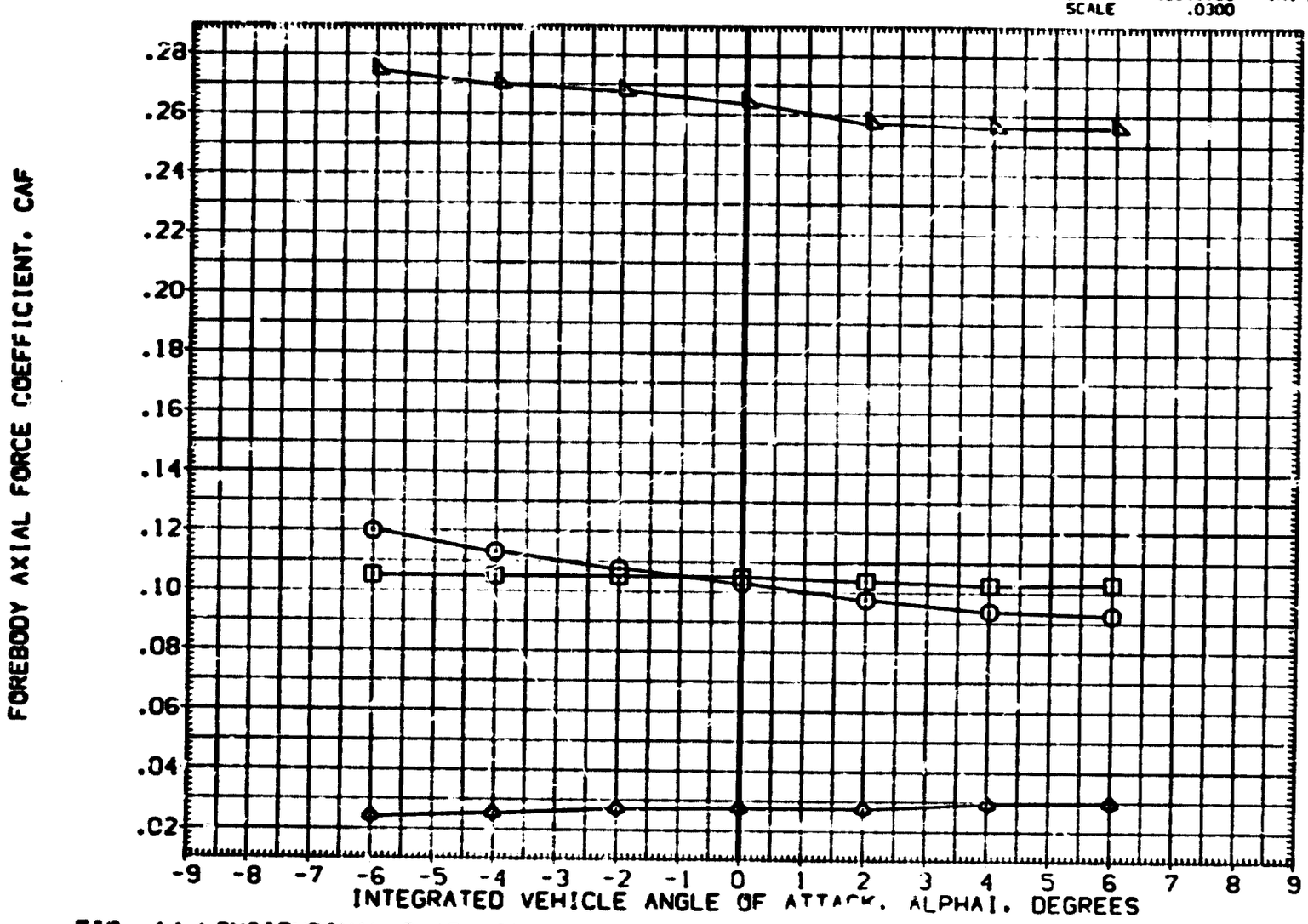


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METT45)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	⊲	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. Y"
ZMRP	400.0000	IN. ZT
SCALE	.0300	

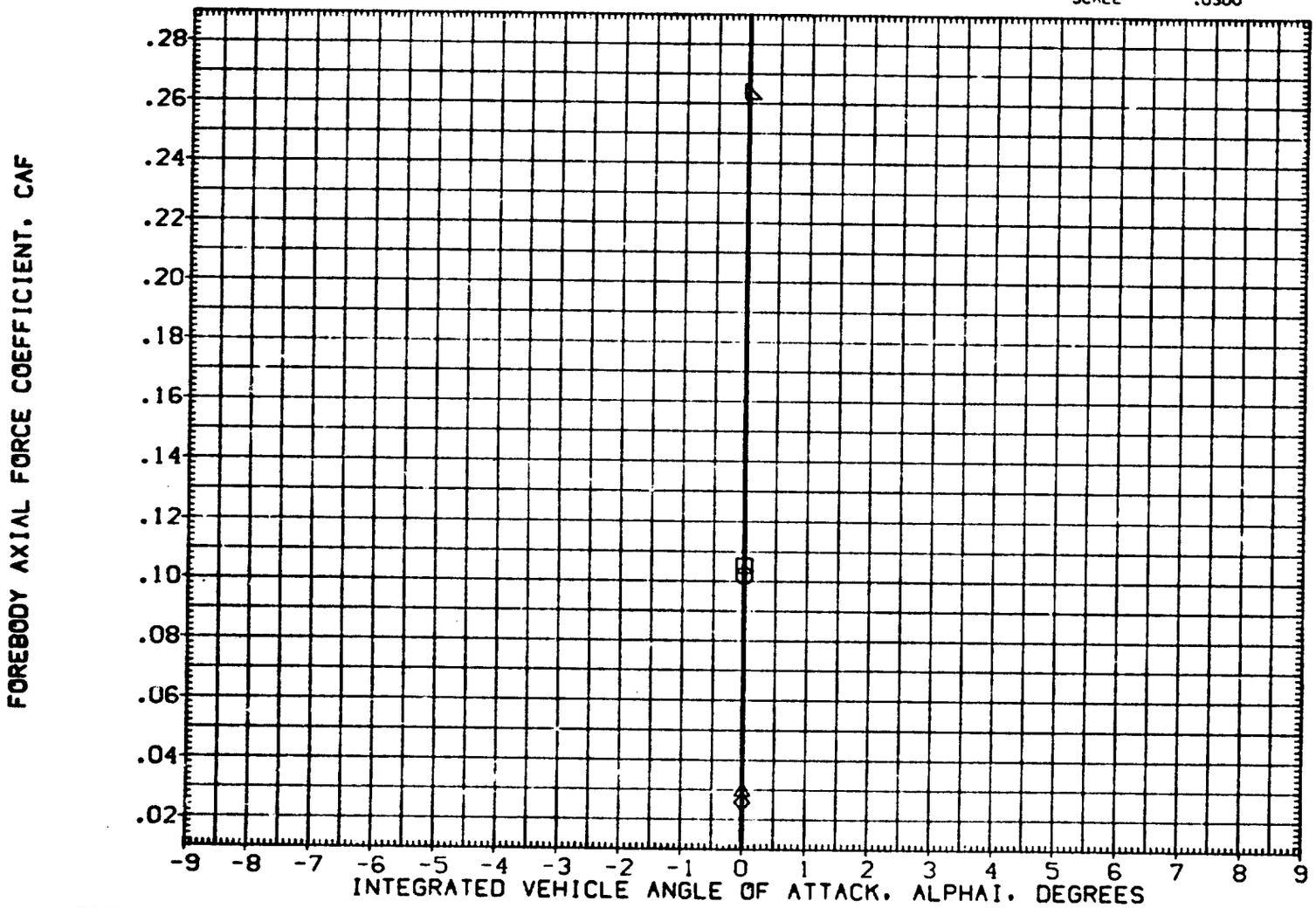


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

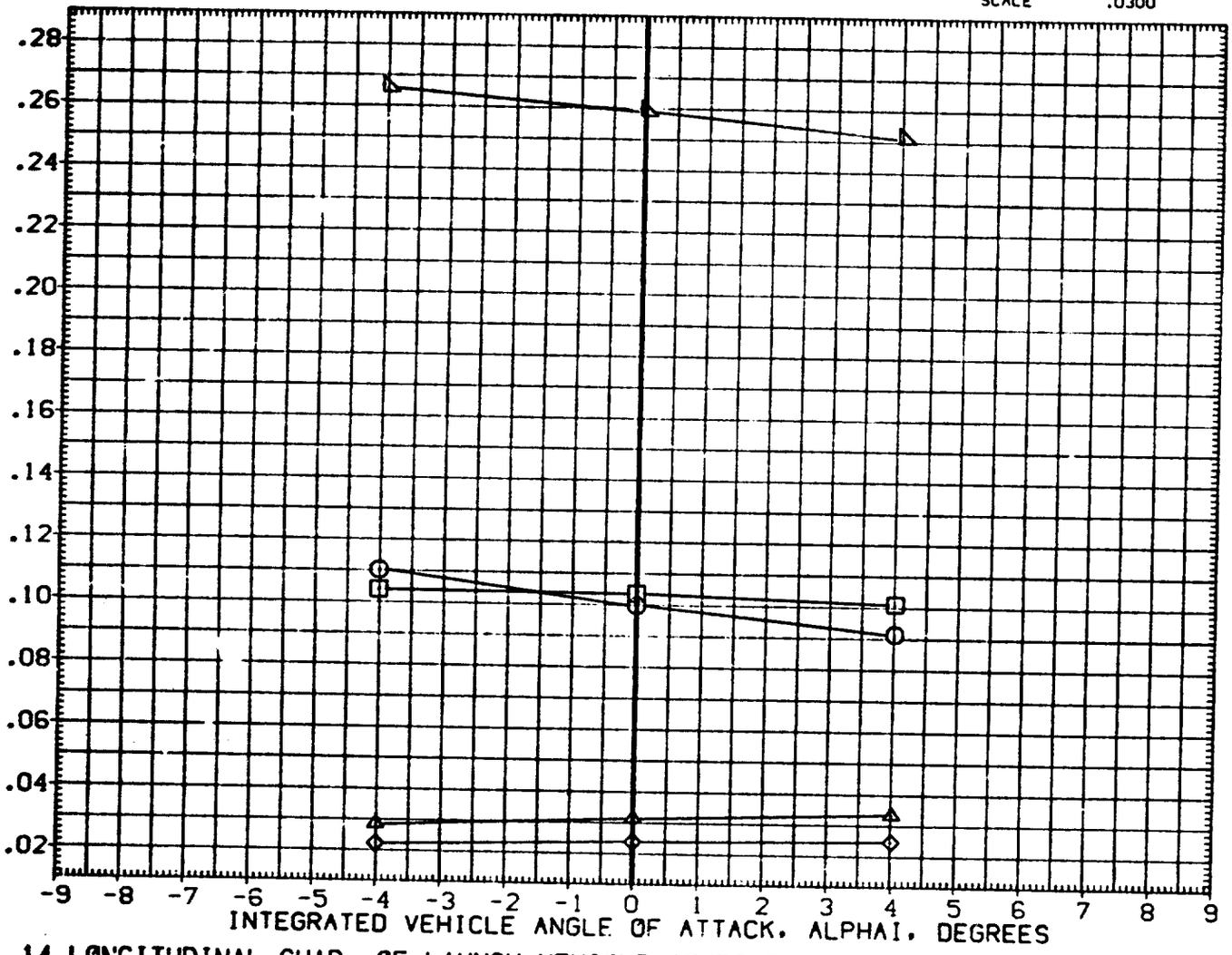


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

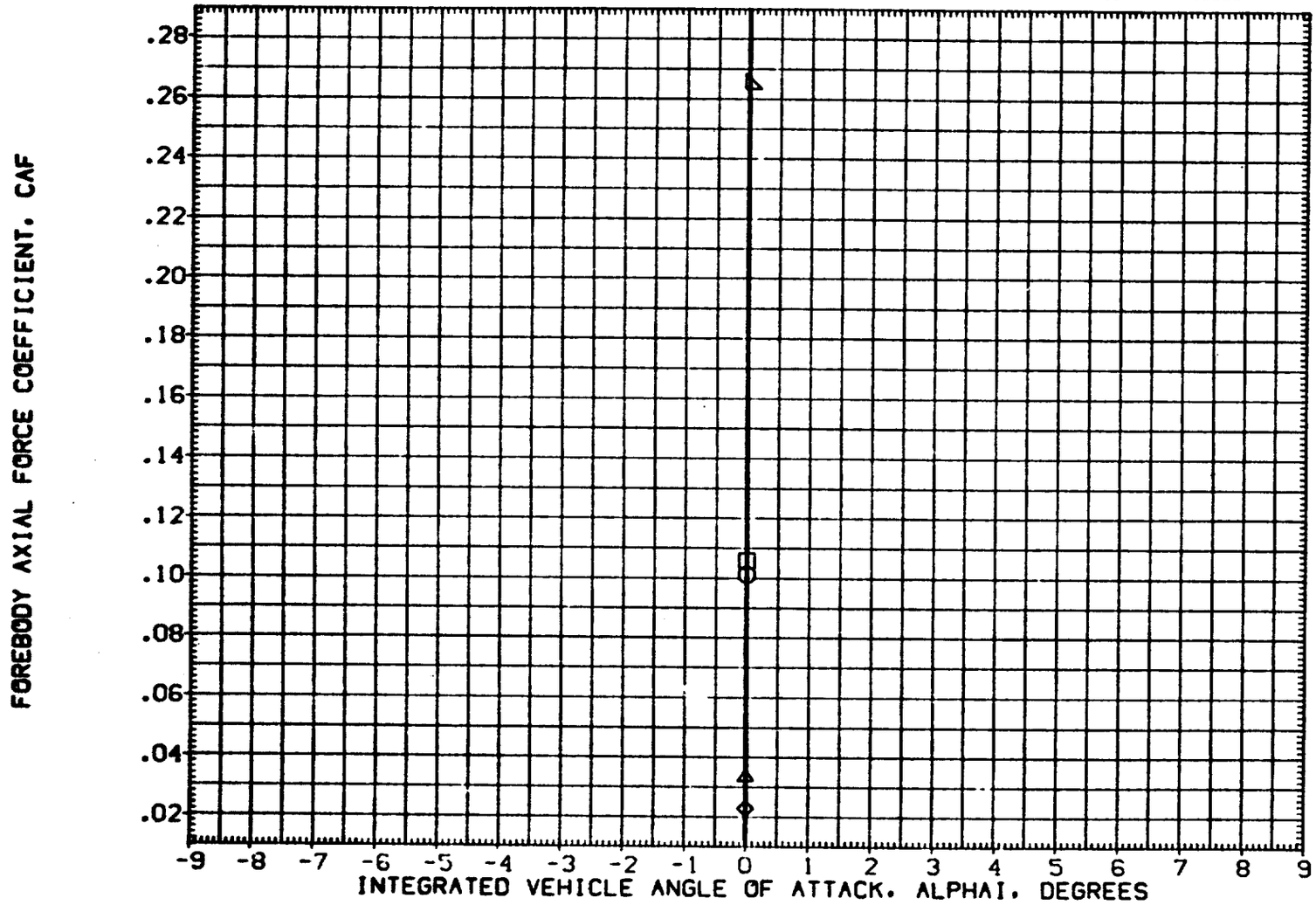


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET745)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

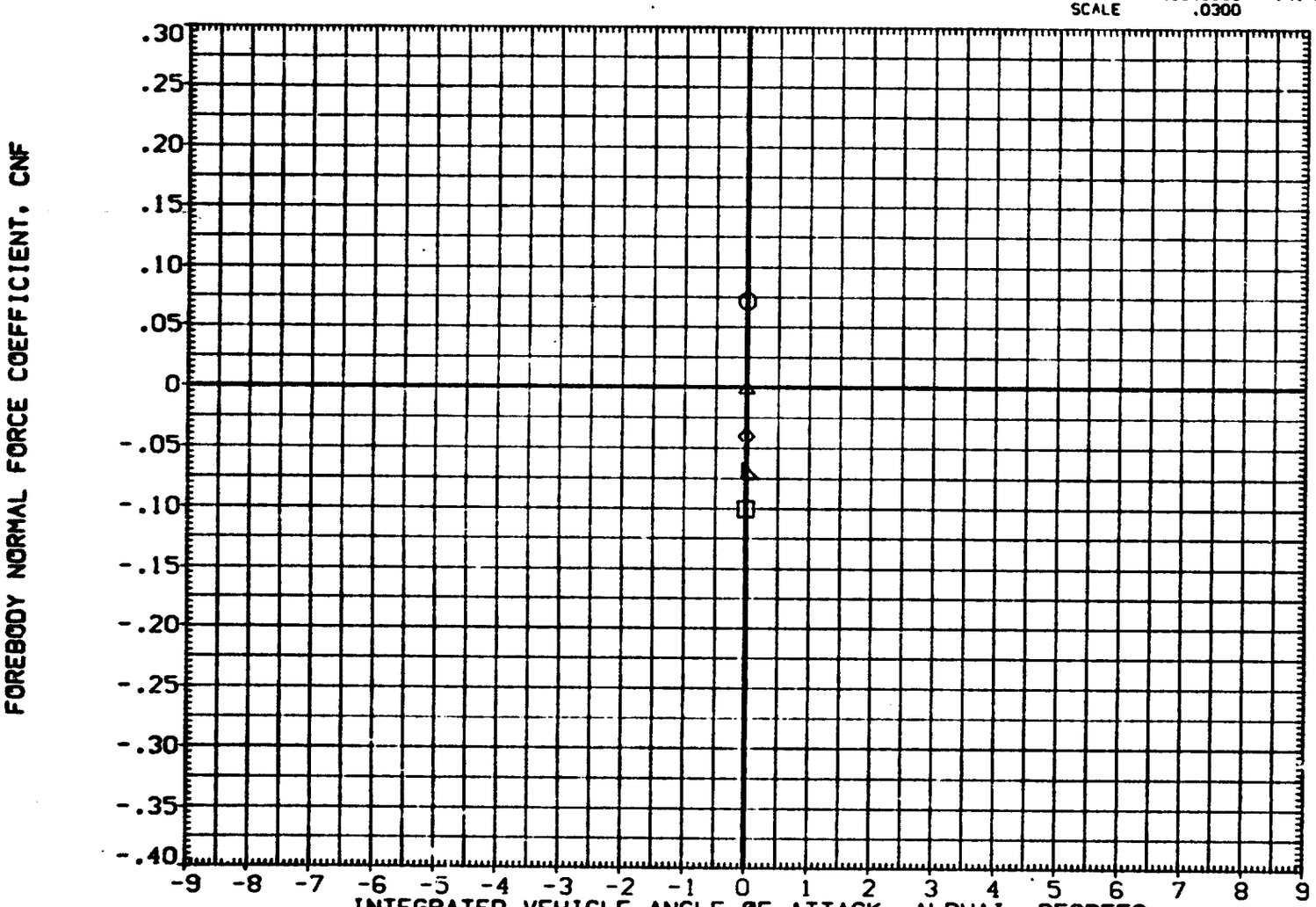


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(MET245)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(MET345)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET445)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

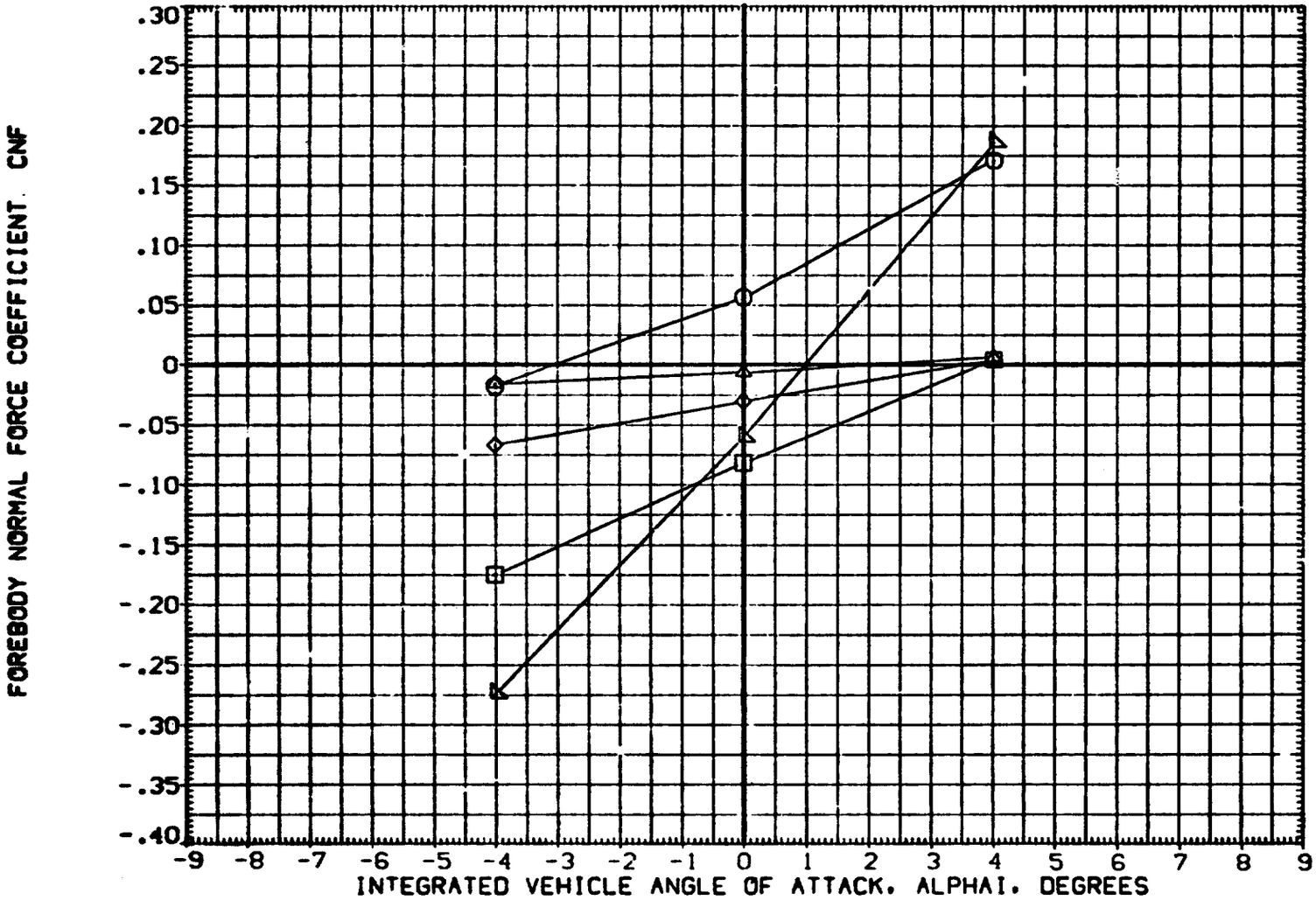


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

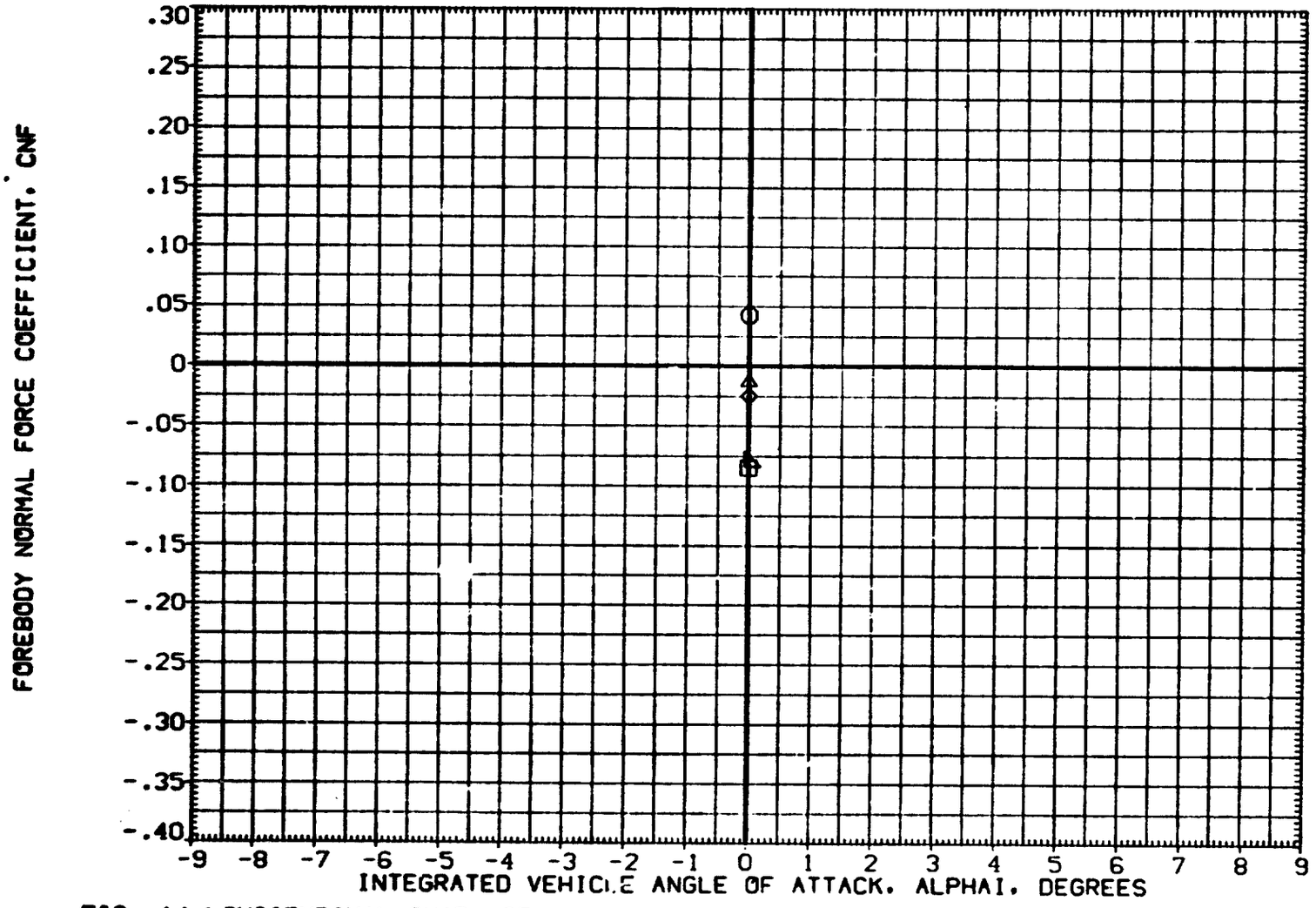


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES57-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(MET245)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(MET345)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET445)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

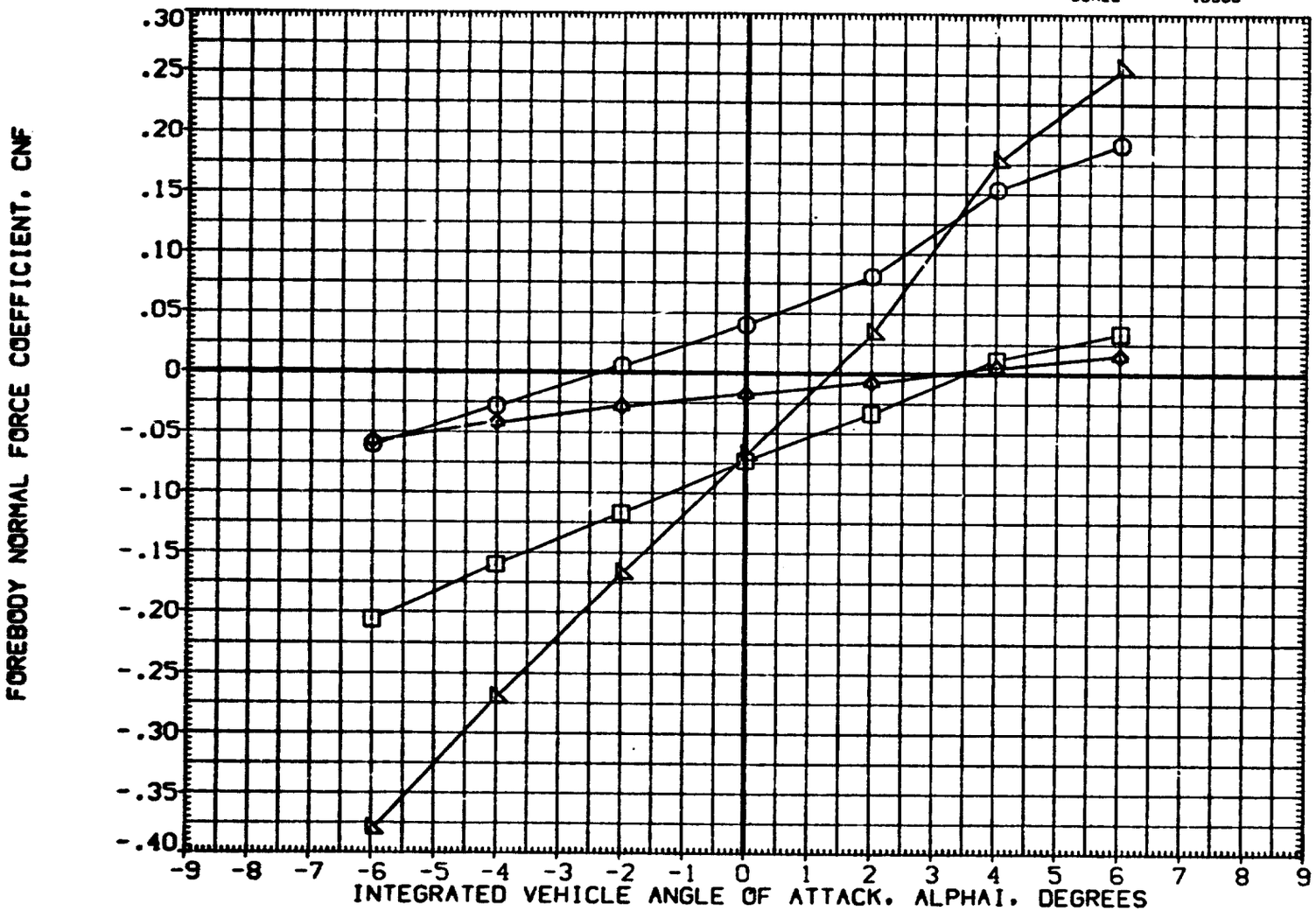


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)		AMES97-019(IA81) LVAP ORBITER-ALL [illegible] SEALED	8.000	.000	2.200	.000
(METT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

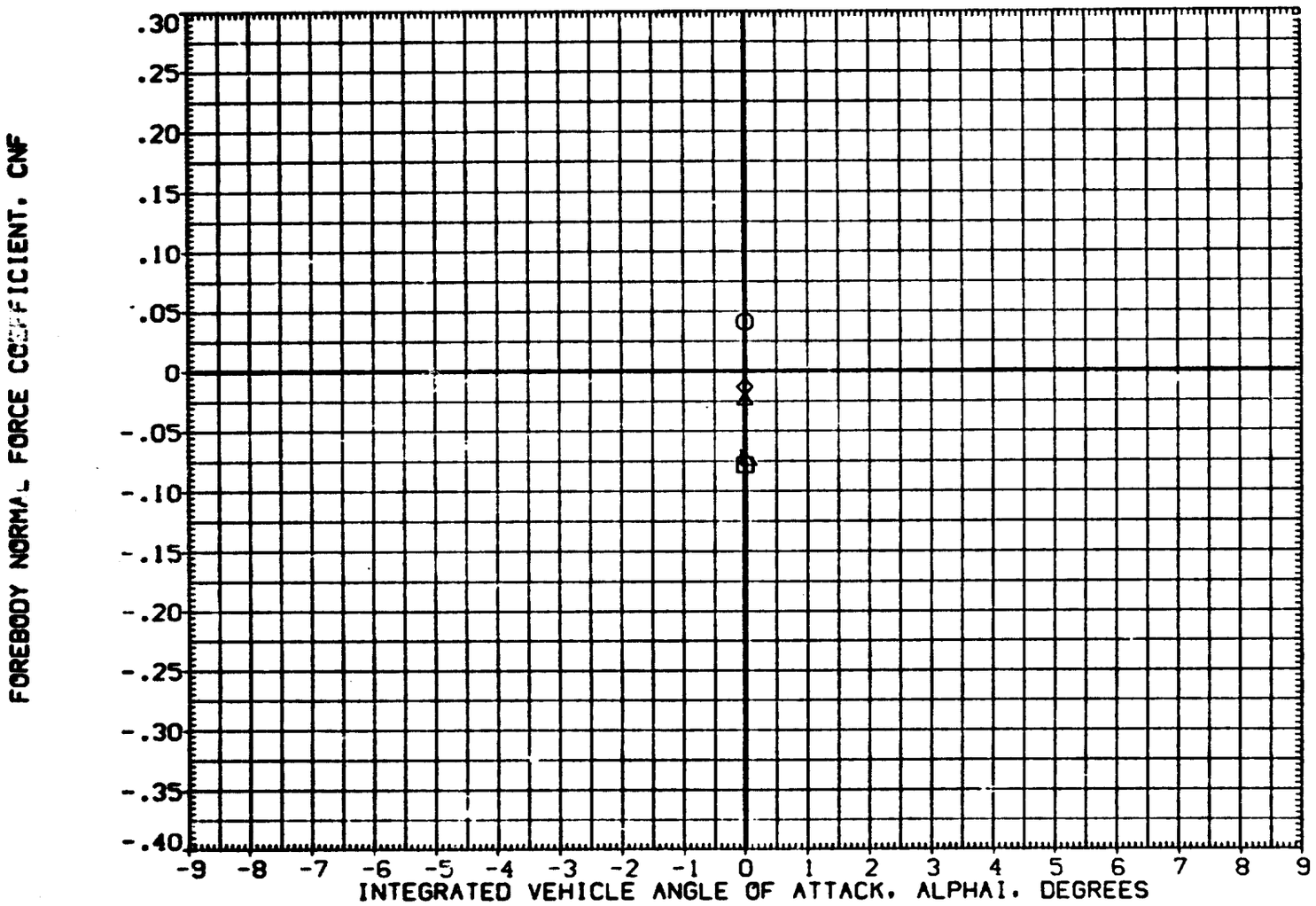


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO45)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METT45)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	▽	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

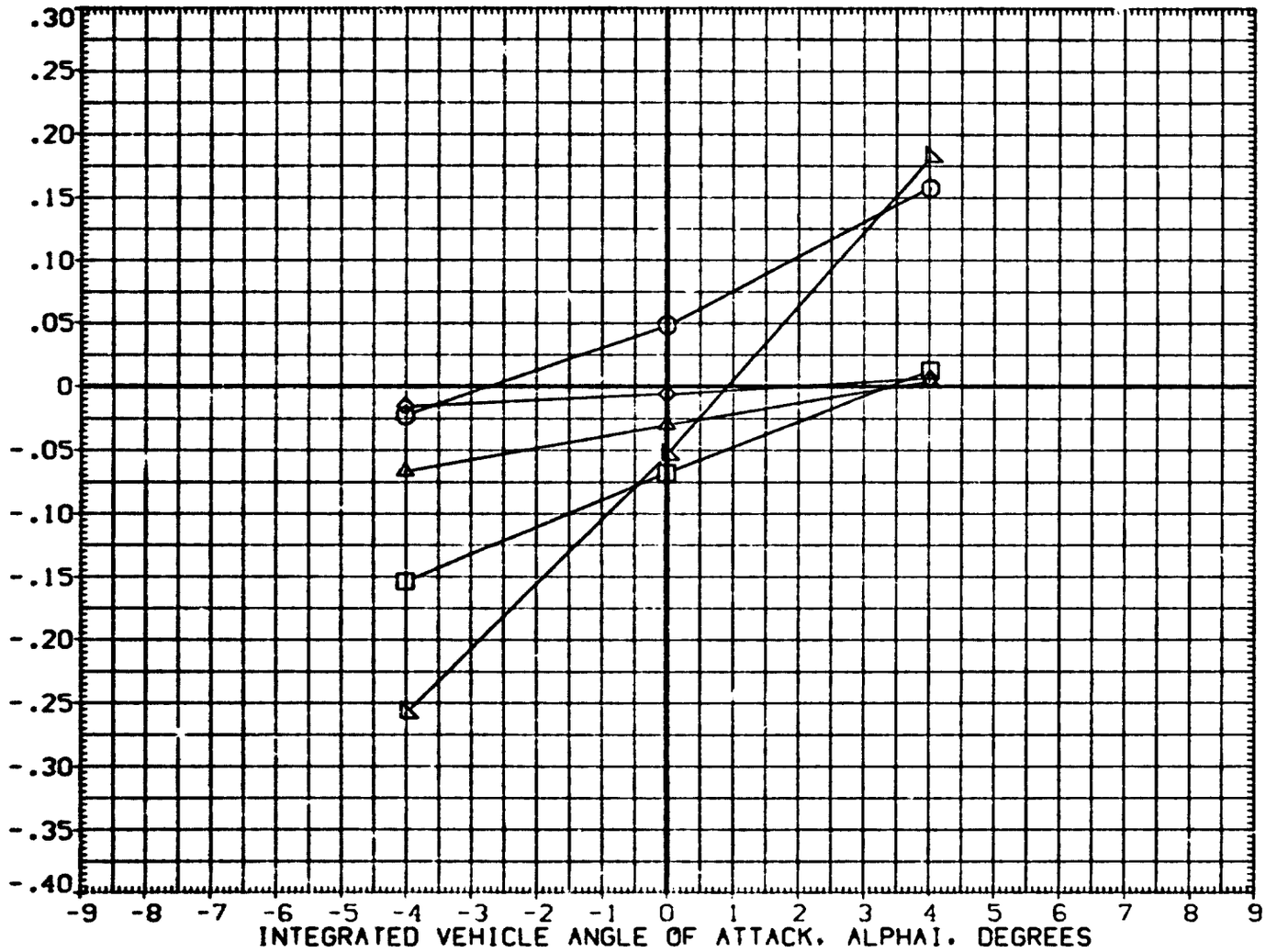


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)BETAI = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET745)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

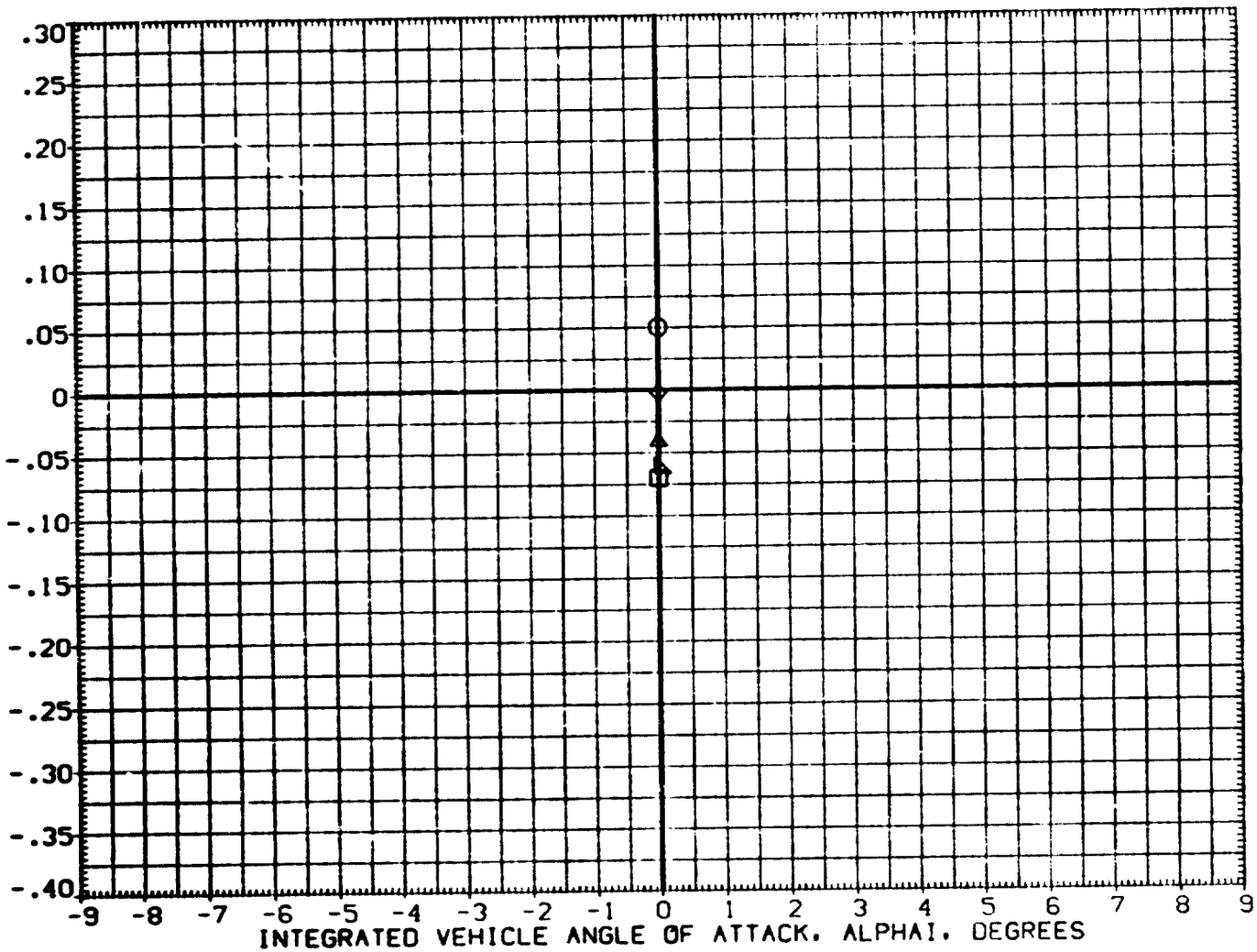


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET745)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

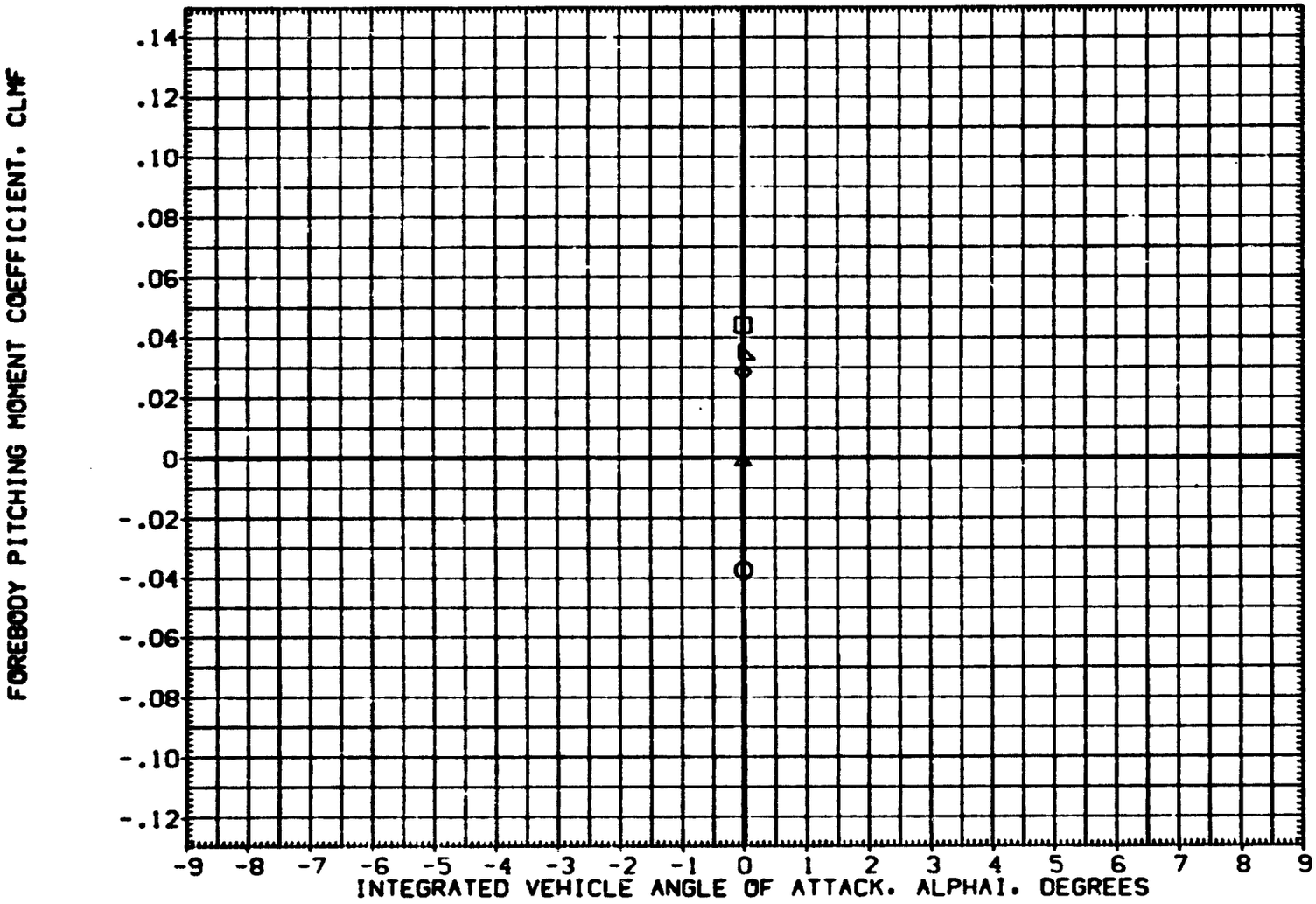


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019([ABI]) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(MET745)	◇	AMES97-019([ABI]) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(METL45)	⊗	AMES97-019([ABI]) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(METR45)	▽	AMES97-019([ABI]) LVAP R-LRB ALL ML SEALED	8.000	.000	2.200	.000
(MET145)	△	AMES97-019([ABI]) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

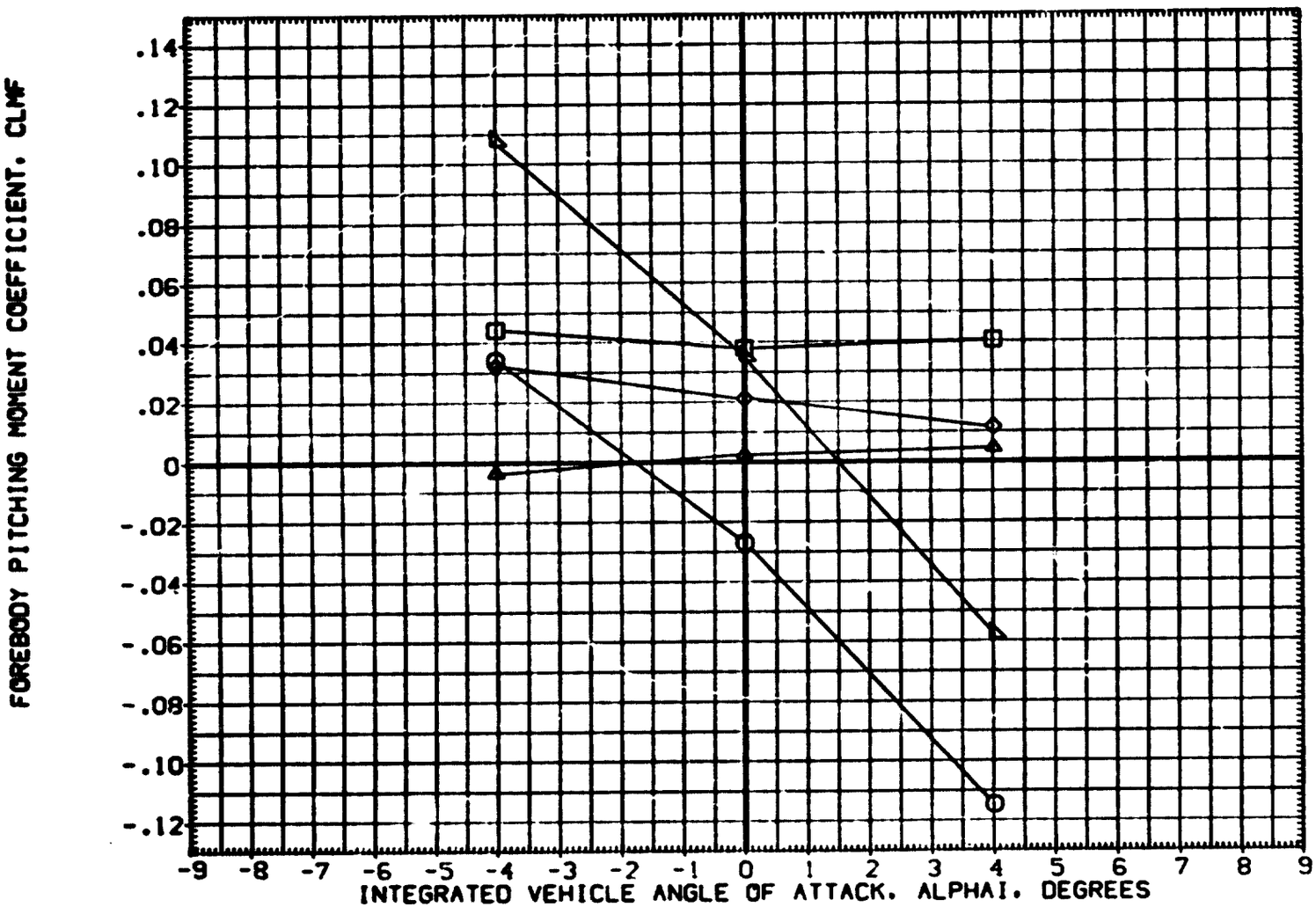


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(MET745)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(METL45)	△	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(METR45)	▽	AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	8.000	.000	2.200	.000
(MET!45)	⊲	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

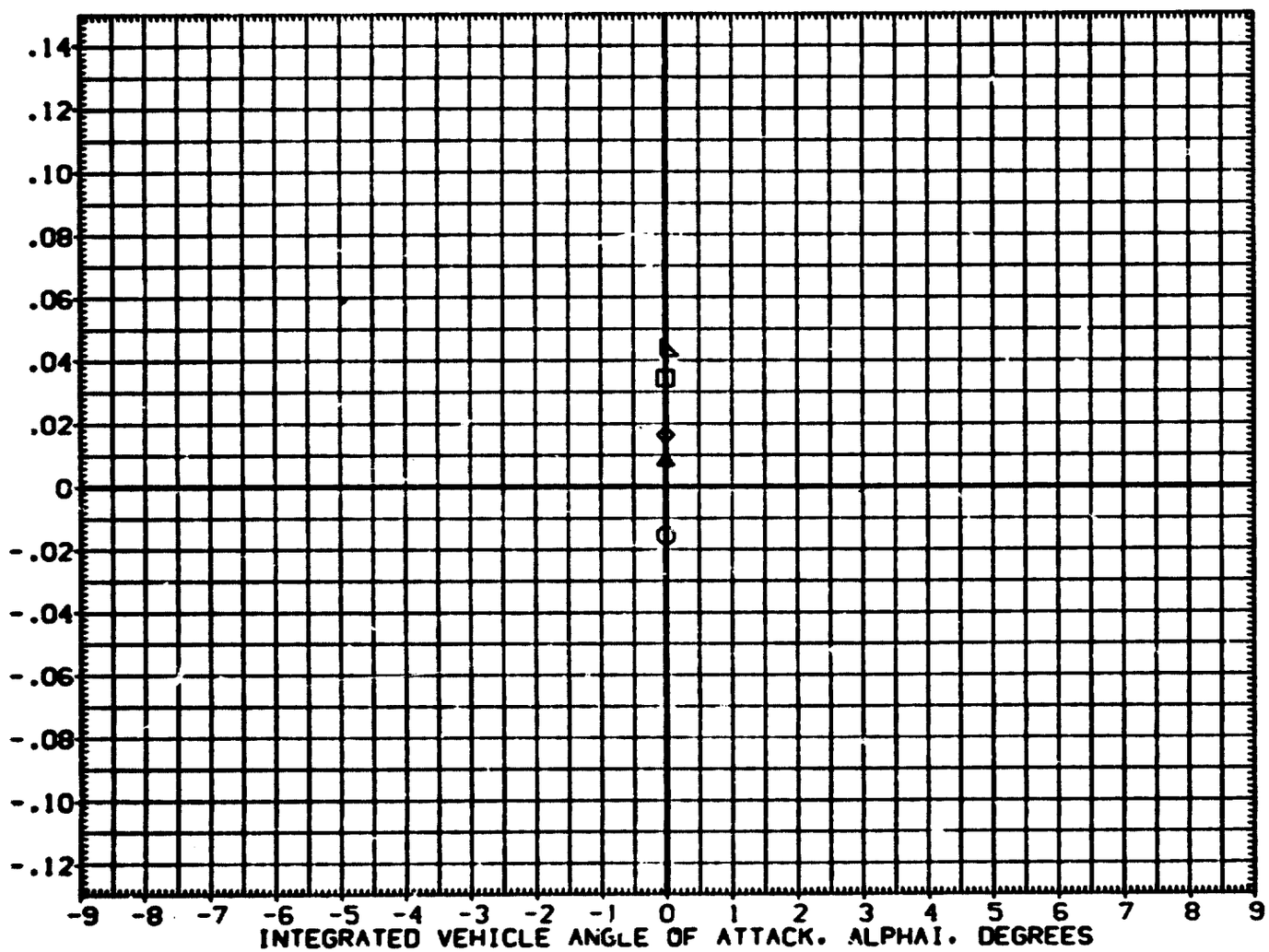


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.2 DEV=8/0

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(AETO45)	□	AMES97-019([AB1) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.200	.000
(AETT45)	◇	AMES97-019([AB1) LVAP TANK - ALL ML SEALED	0.000	.000	2.200	.000
(AETL45)	△	AMES97-019([AB1) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.200	.000
(AETR45)	⋈	AMES97-019([AB1) LVAP R-LRB ALL ML SEALED	0.000	.000	2.200	.000
(AETI45)	◁▷	AMES97-019([AB1) LVAP INT VEH ALL ML SEALED	0.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

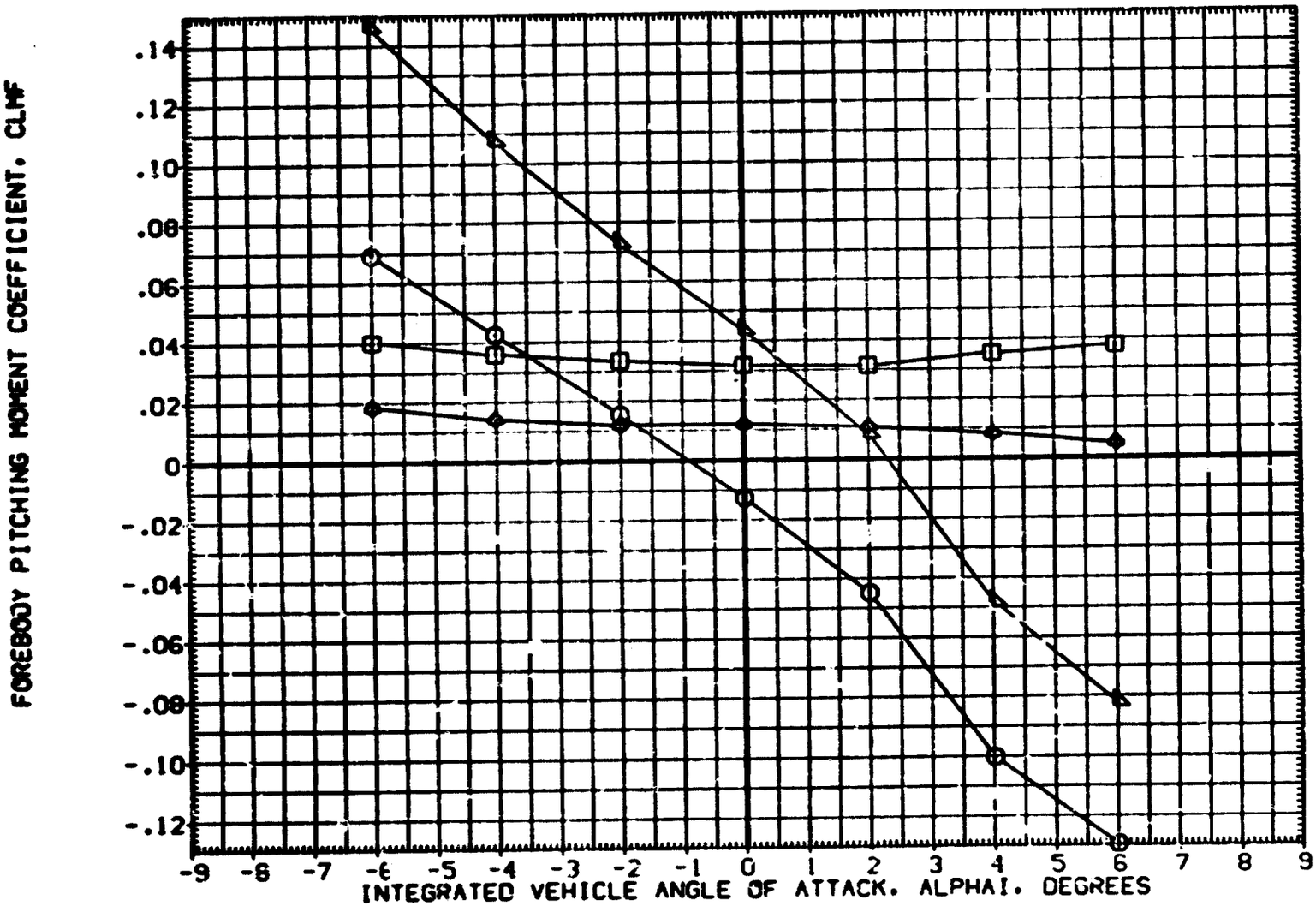


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	376.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

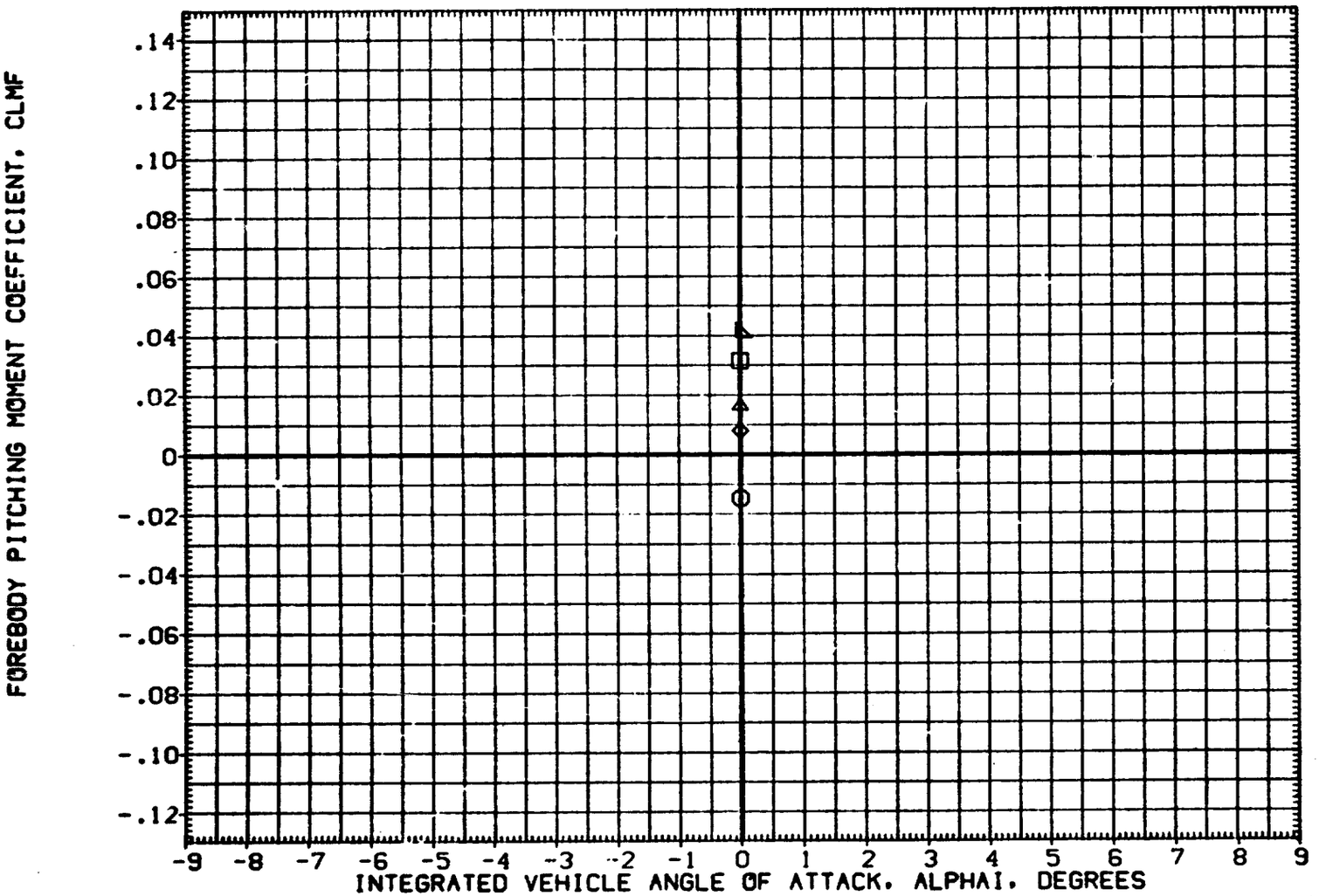


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

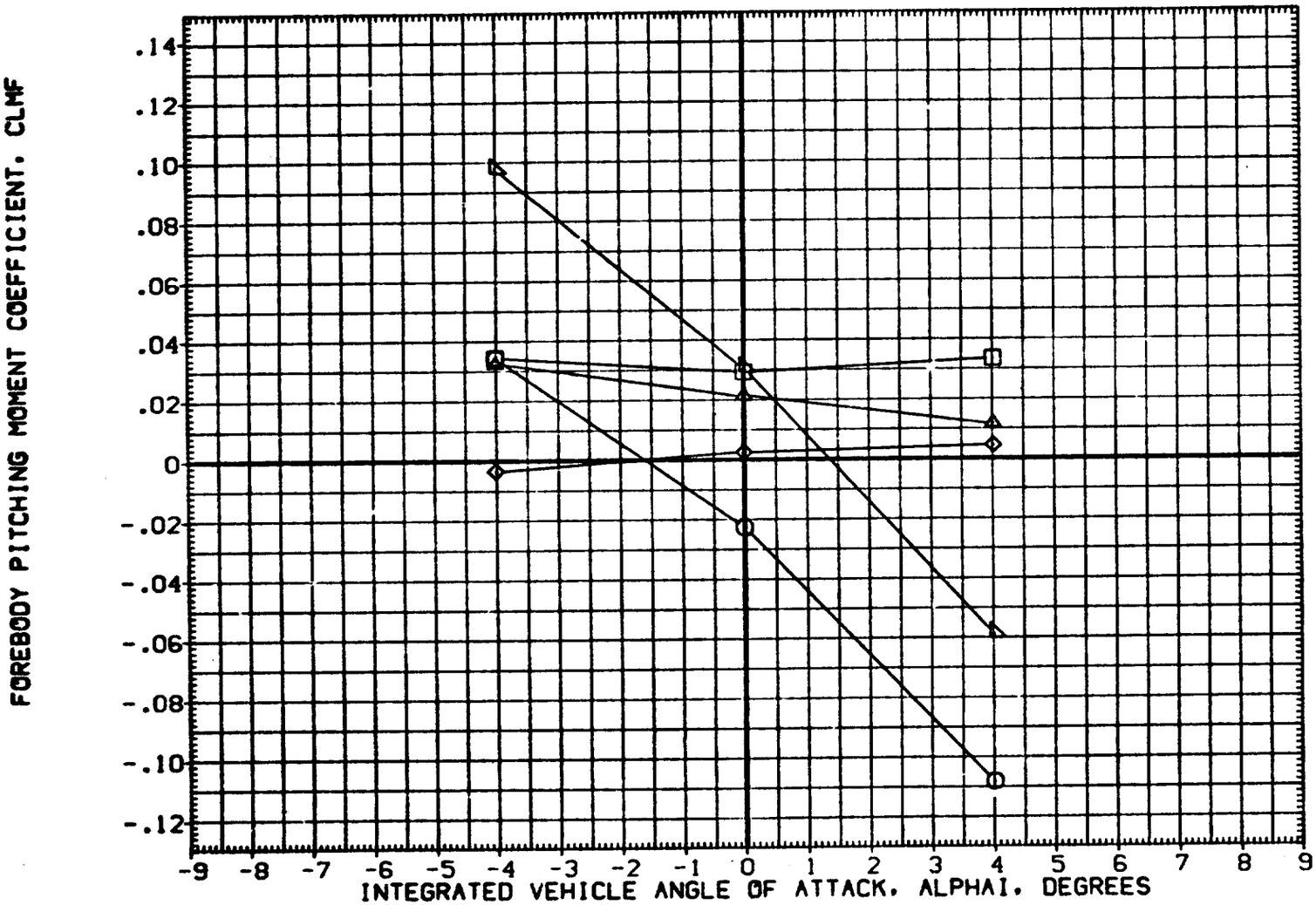


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)BET I = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	◁▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

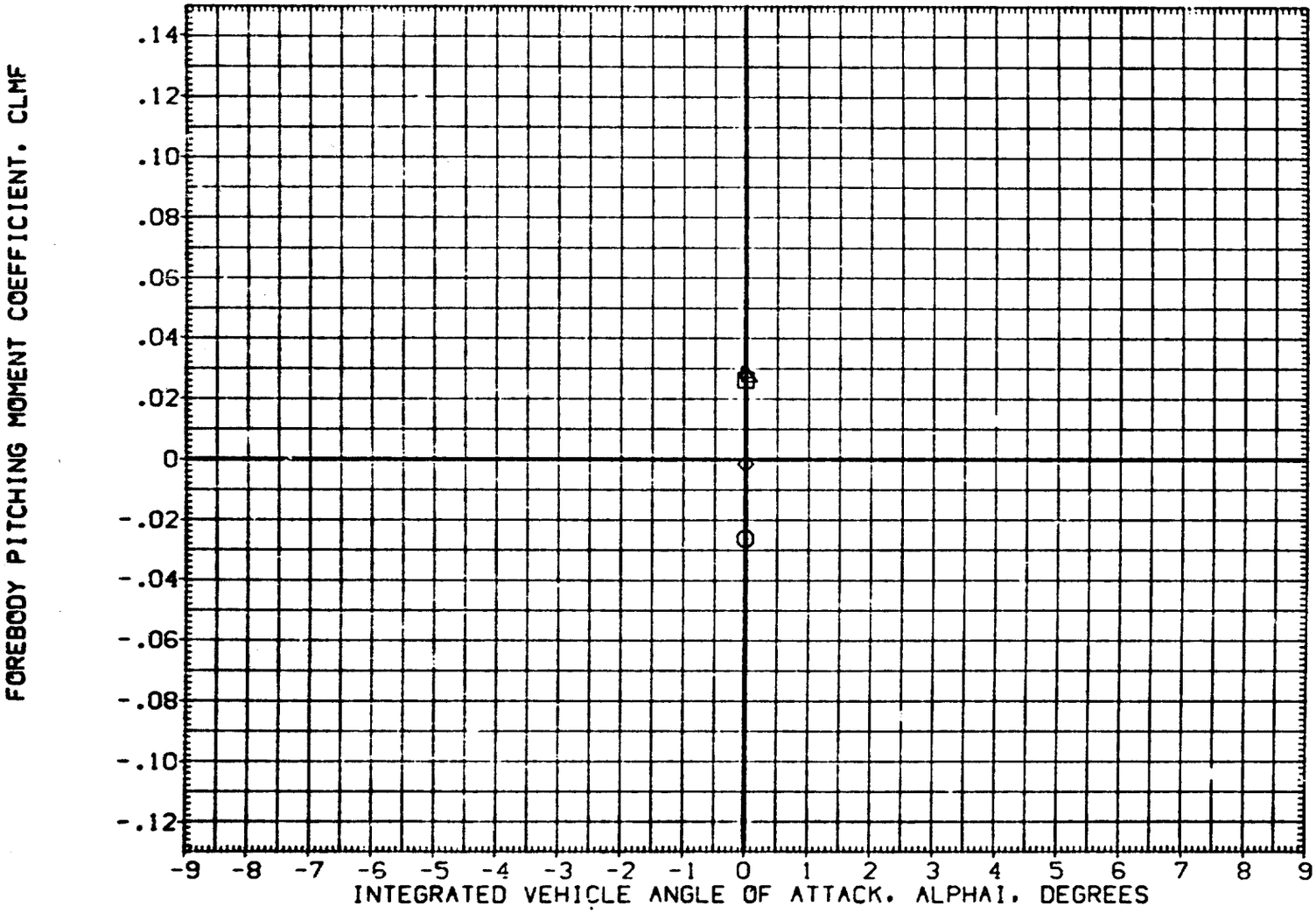


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

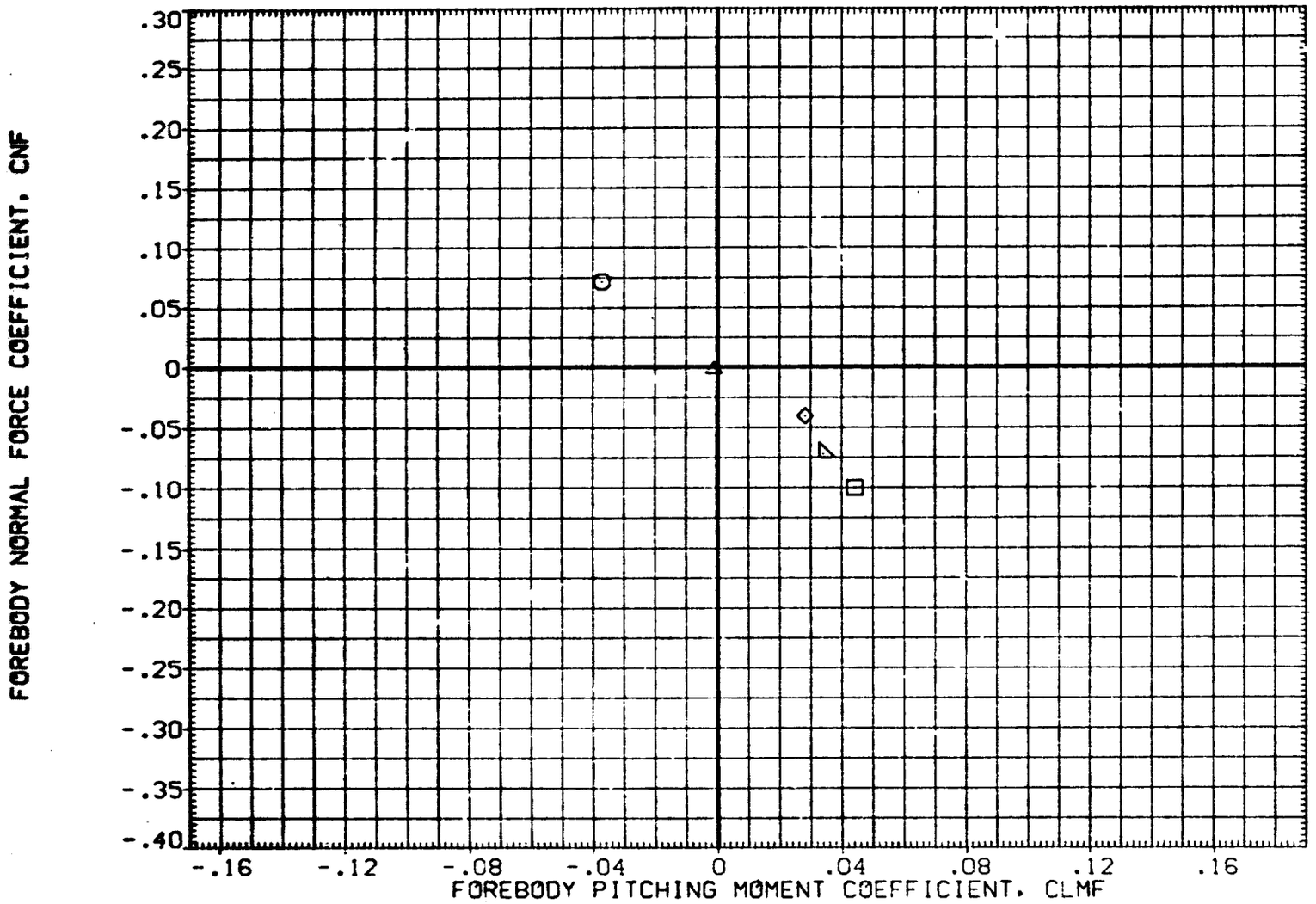


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METT45)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(METI45)	▽	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

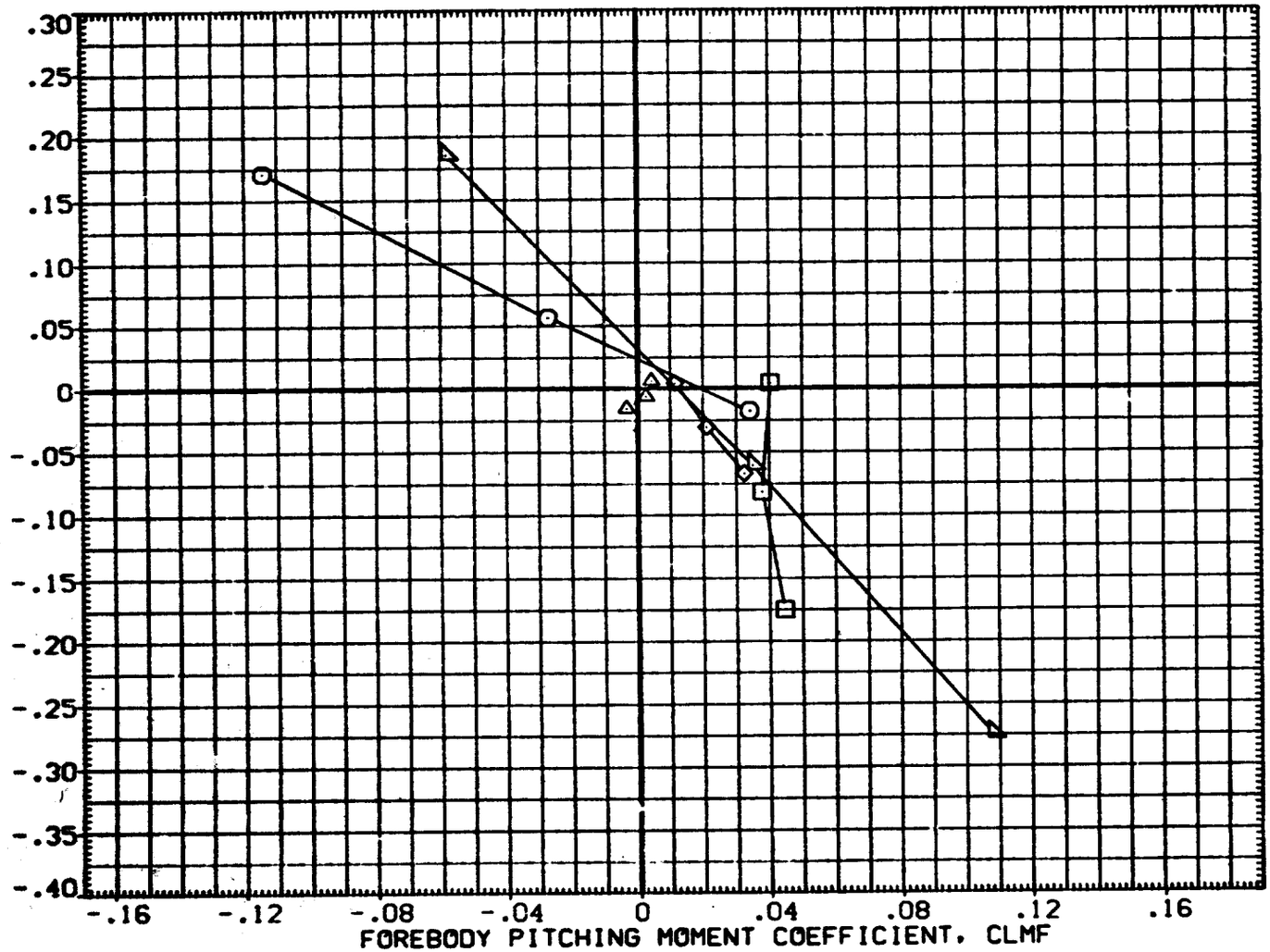


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)BET.\I = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET745)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	⊡	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	◁	AMES97-019(IA81) LVAP INT /EH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

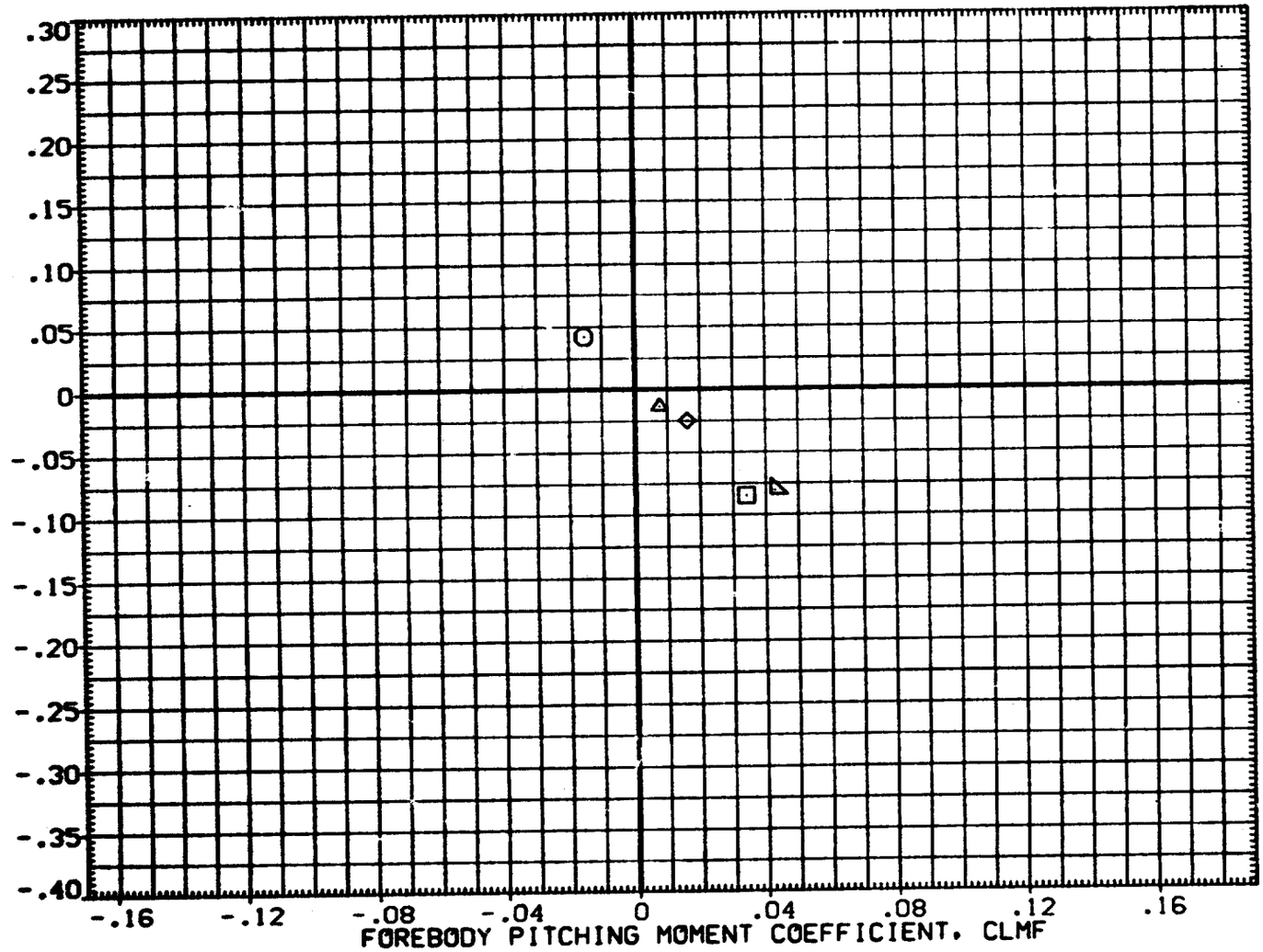


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)BETA1 = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(METL45)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(METR45)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

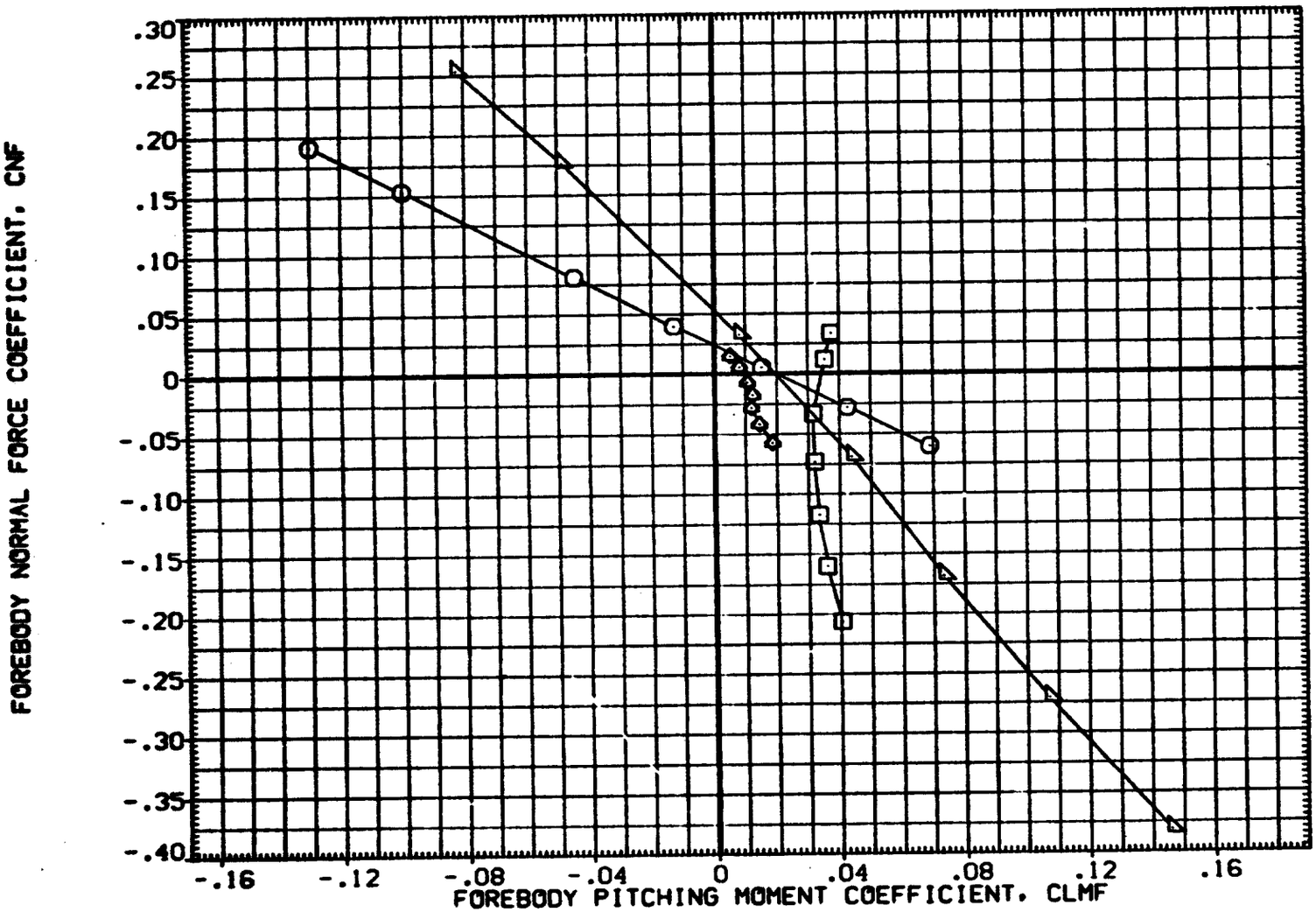


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	0.000	.000	2.200	.000
(MET145)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	0.000	.000	2.200	.000
(MET245)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	0.000	.000	2.200	.000
(MET345)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	0.000	.000	2.200	.000
(MET445)	▷	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	0.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

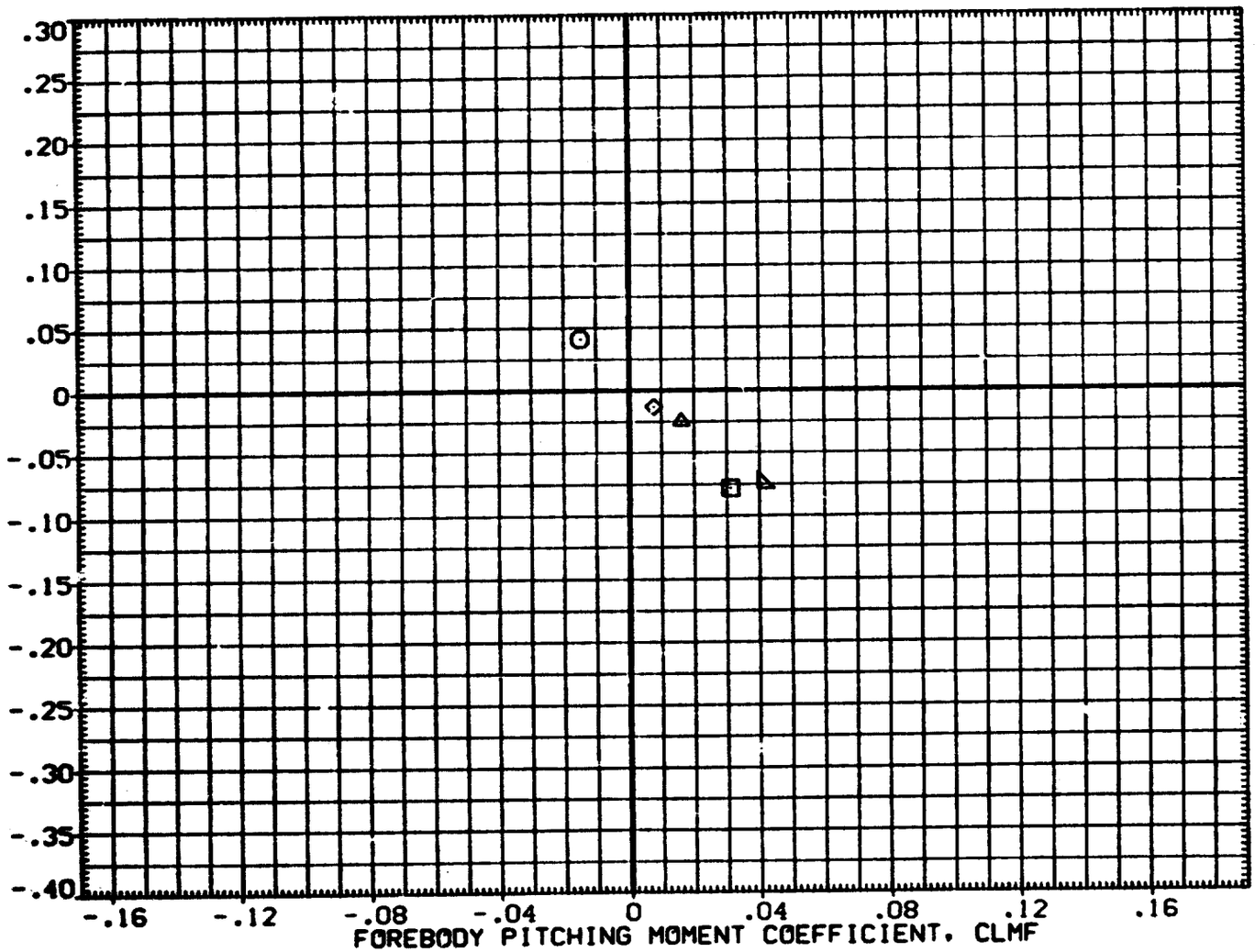


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/C

(E)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO45)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(METT45)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(METL45)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(METR45)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	.000	2.200	.000
(METI45)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

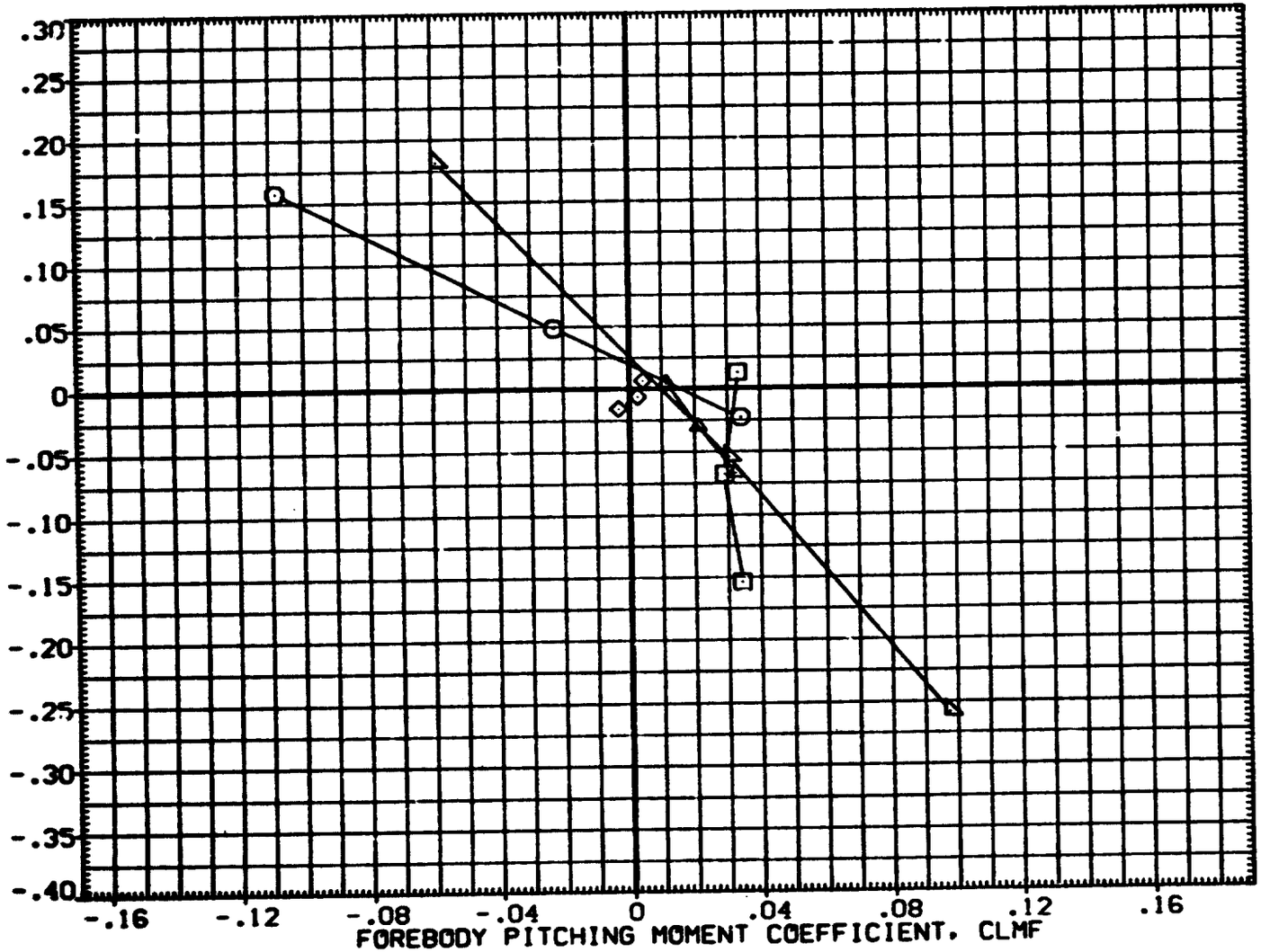


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(MET145)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(MET245)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(MET345)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(MET445)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

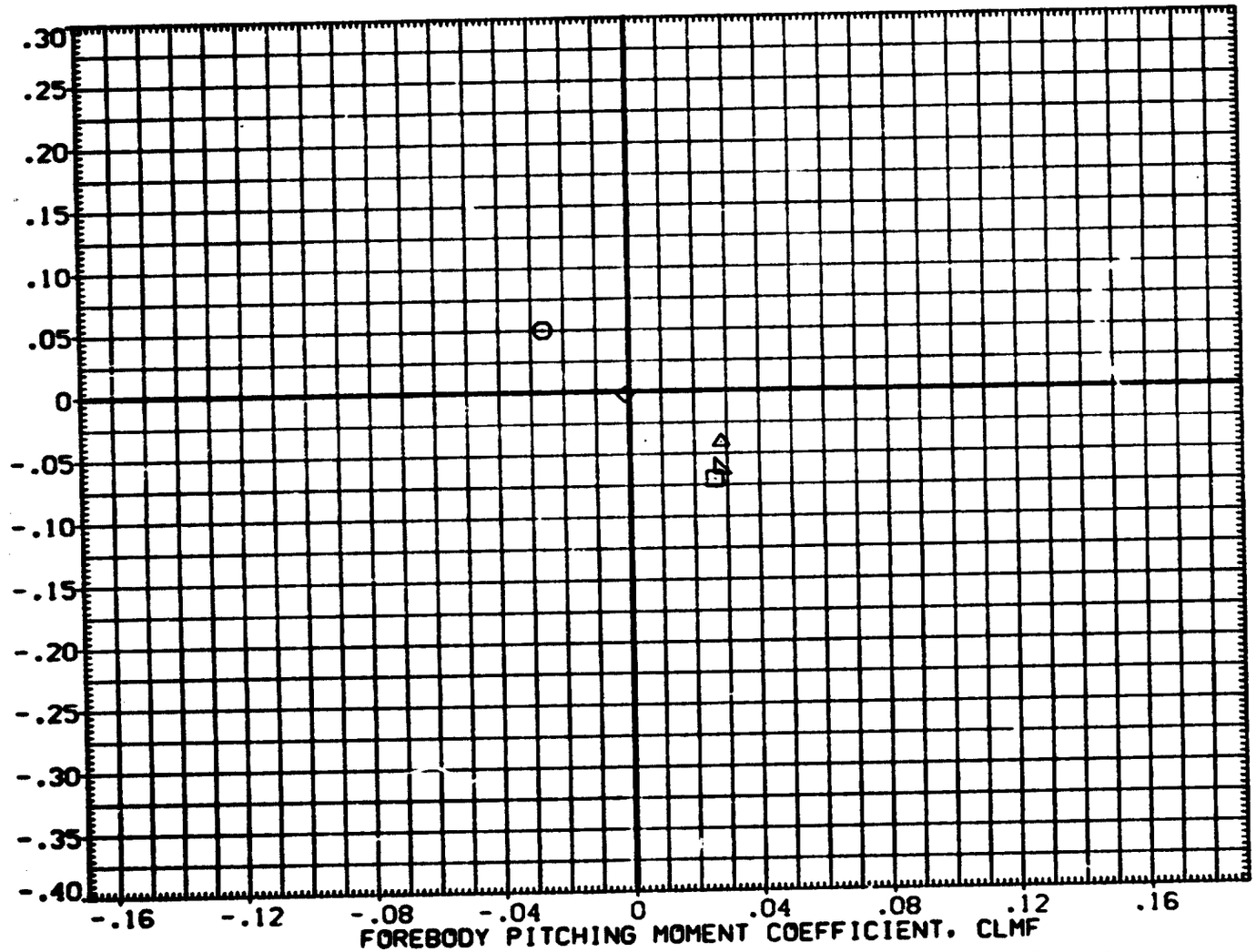


FIG. 14 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	□	AMES97-019C(ABI) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(MET138)	▽	AMES97-019C(ABI) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(MET238)	⊠	AMES97-019C(ABI) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(MET338)	◇	AMES97-019C(ABI) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(MET138)	△	AMES97-019C(ABI) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	376.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

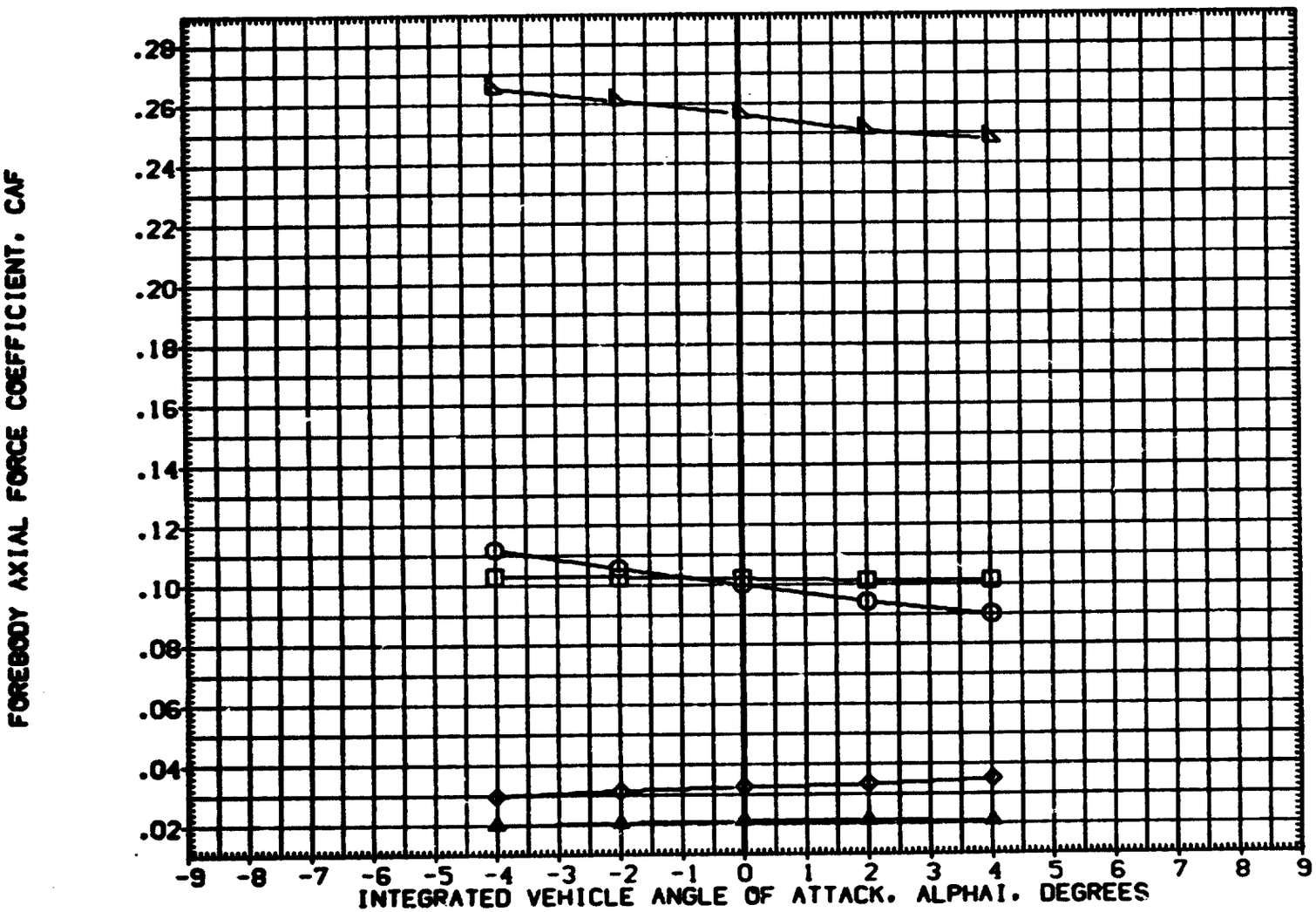


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.5 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(RETO08)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(RETT38)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(RETL38)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(RETR38)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(RETI38)	⊿	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

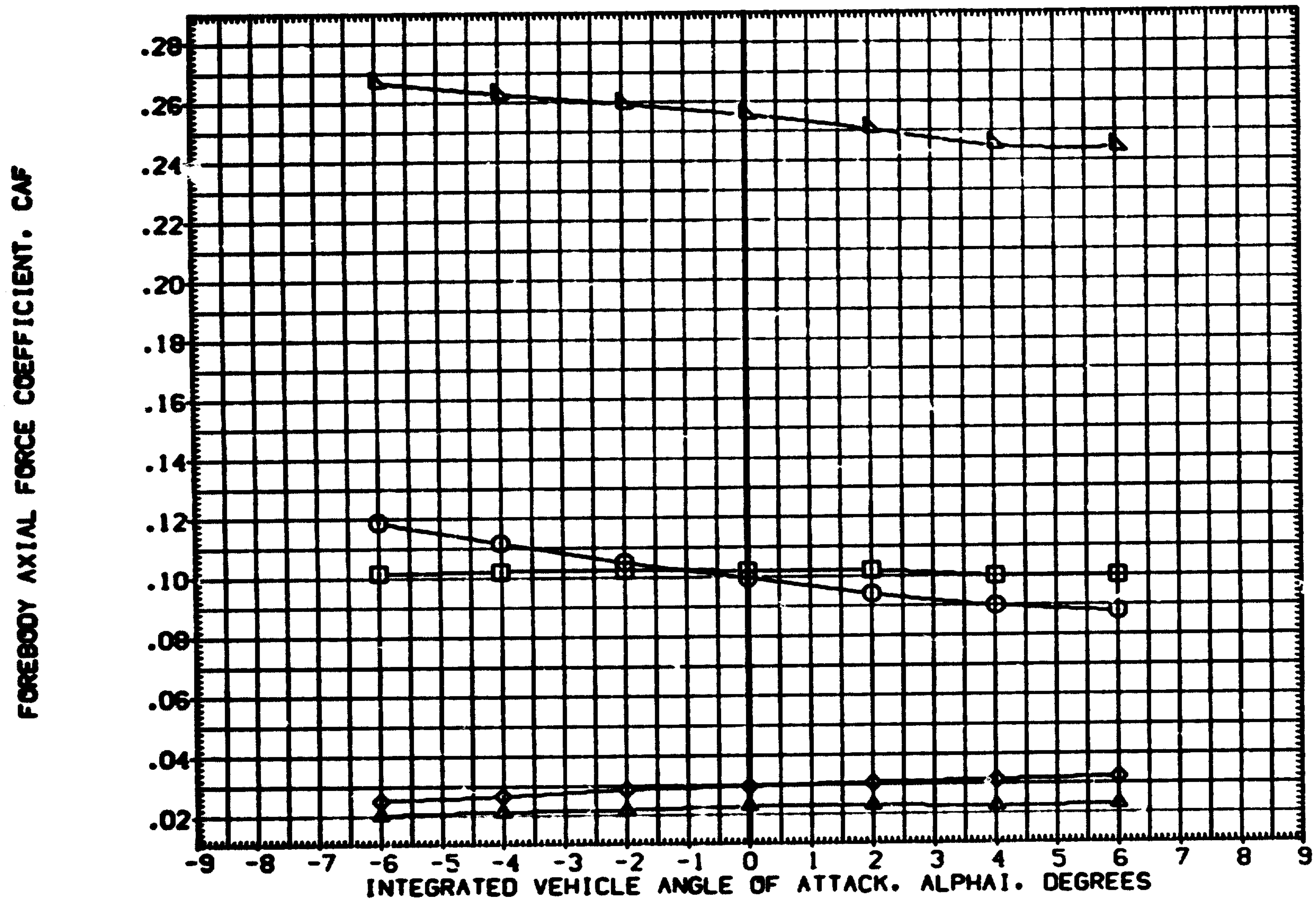


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO38)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	X	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

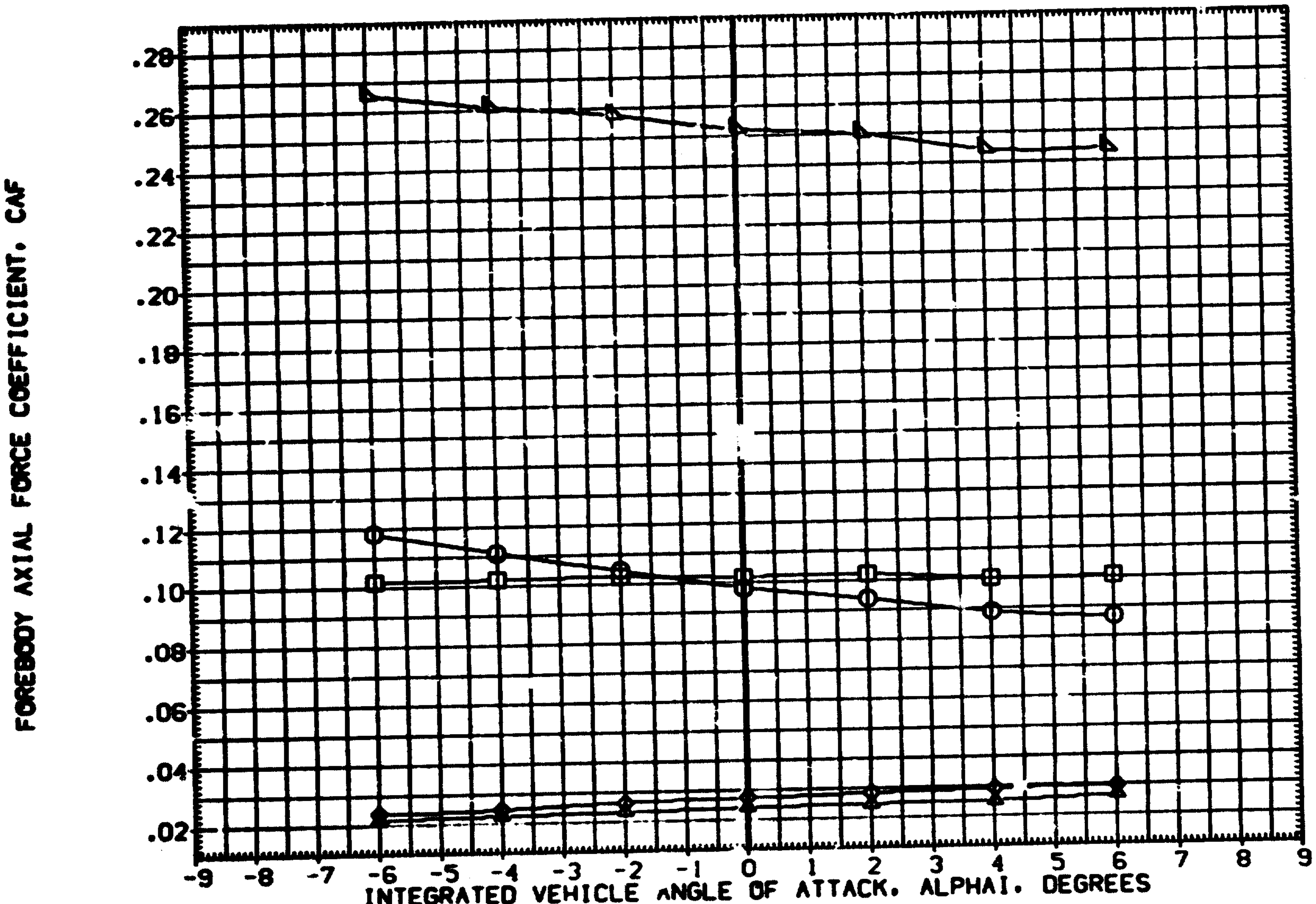


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)BET,I = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO3B)	○	AMES97-019(AB1) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(METT3B)	□	AMES97-019(AB1) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(METL3B)	◇	AMES97-019(AB1) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(METR3B)	✕	AMES97-019(AB1) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(METI3B)	△	AMES97-019(AB1) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

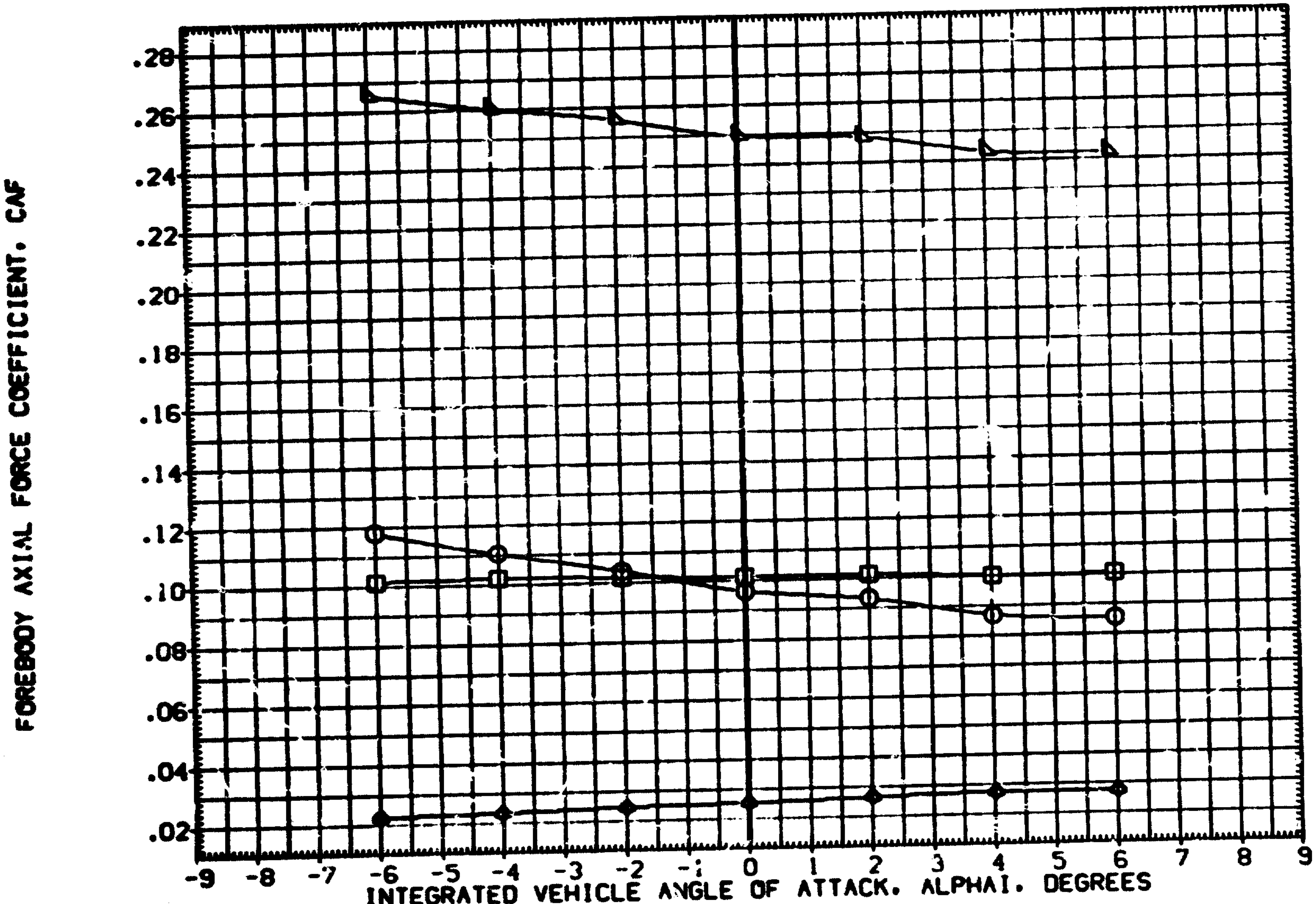


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)BET.I = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MEI138)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

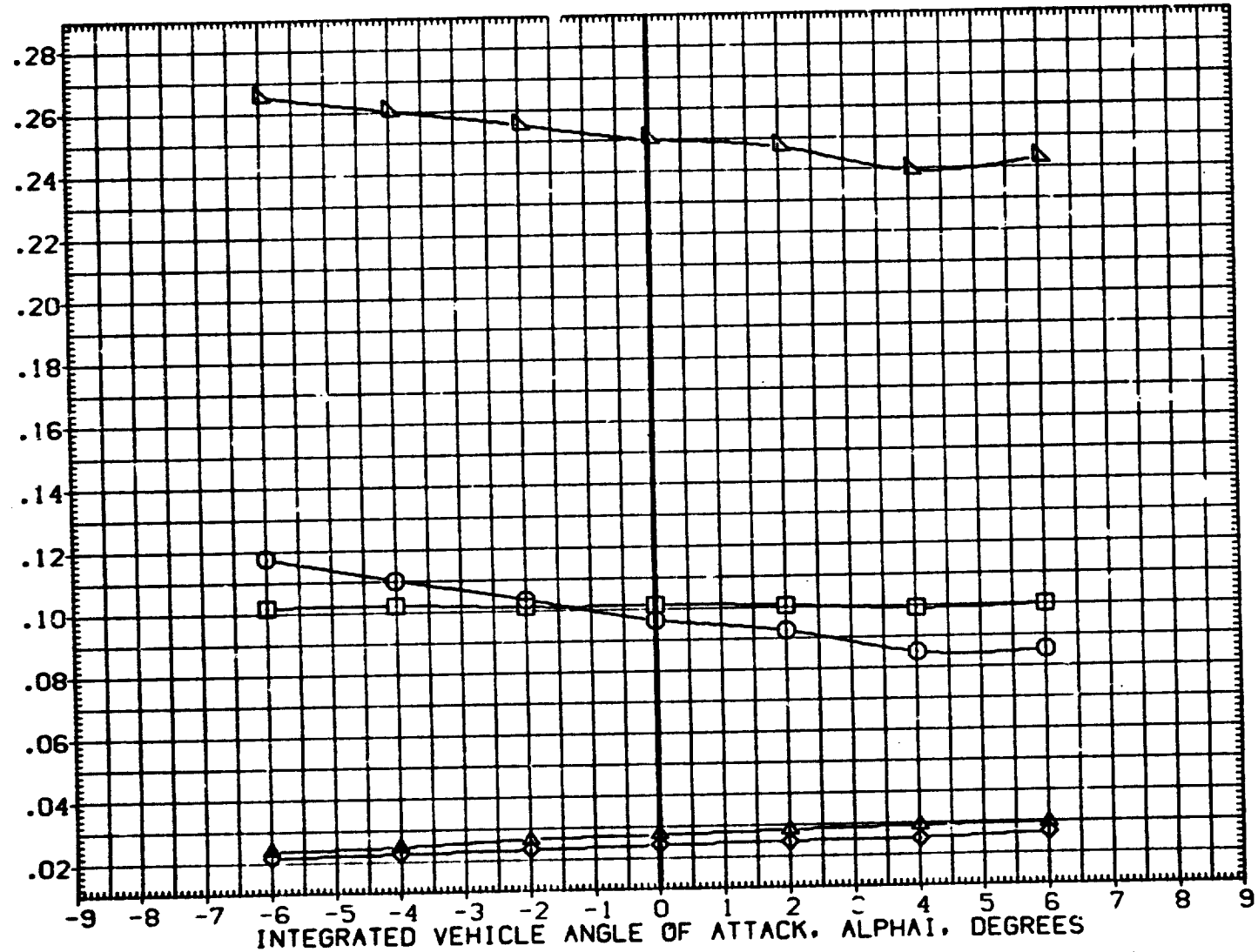


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL39)	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

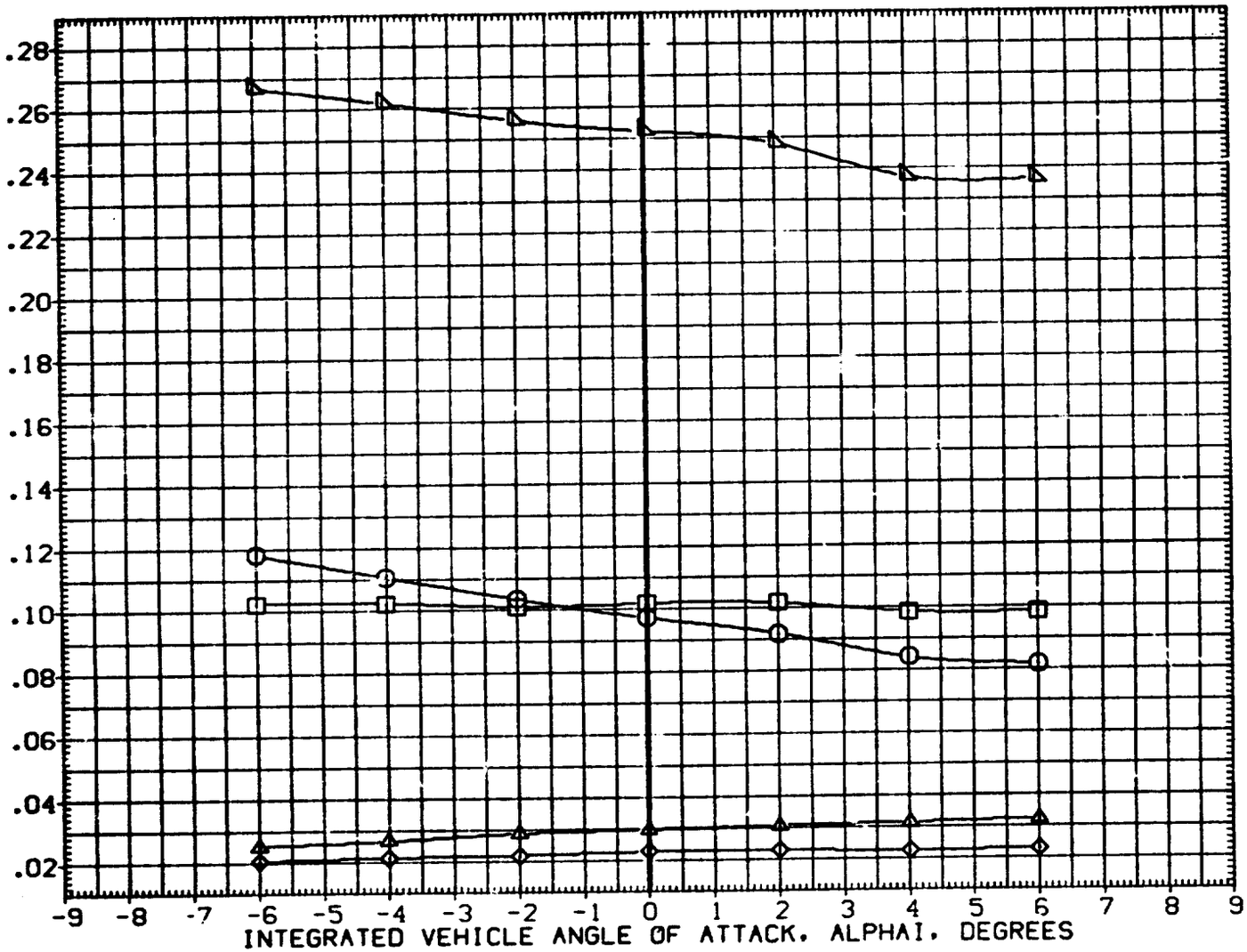


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)BETAI = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

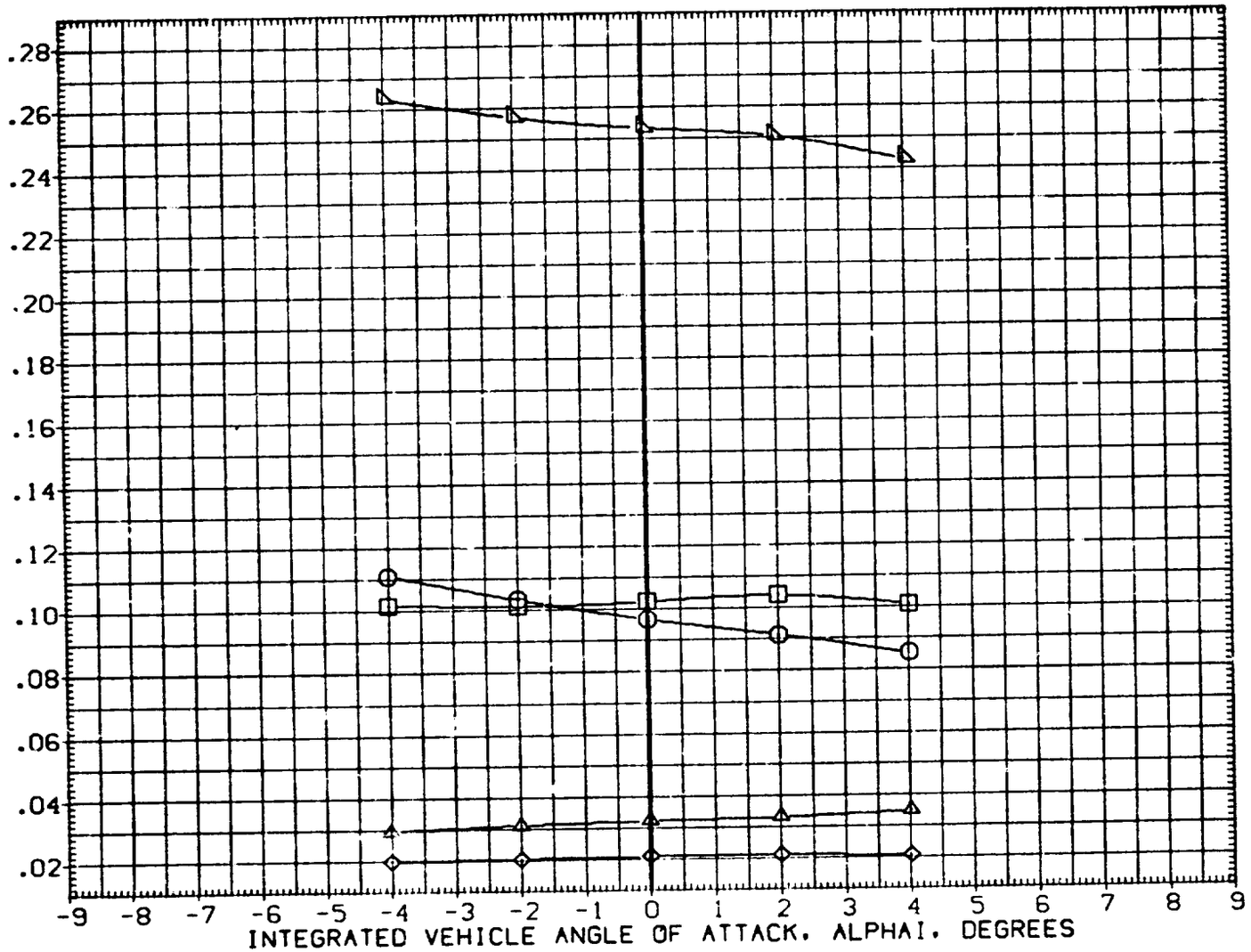


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

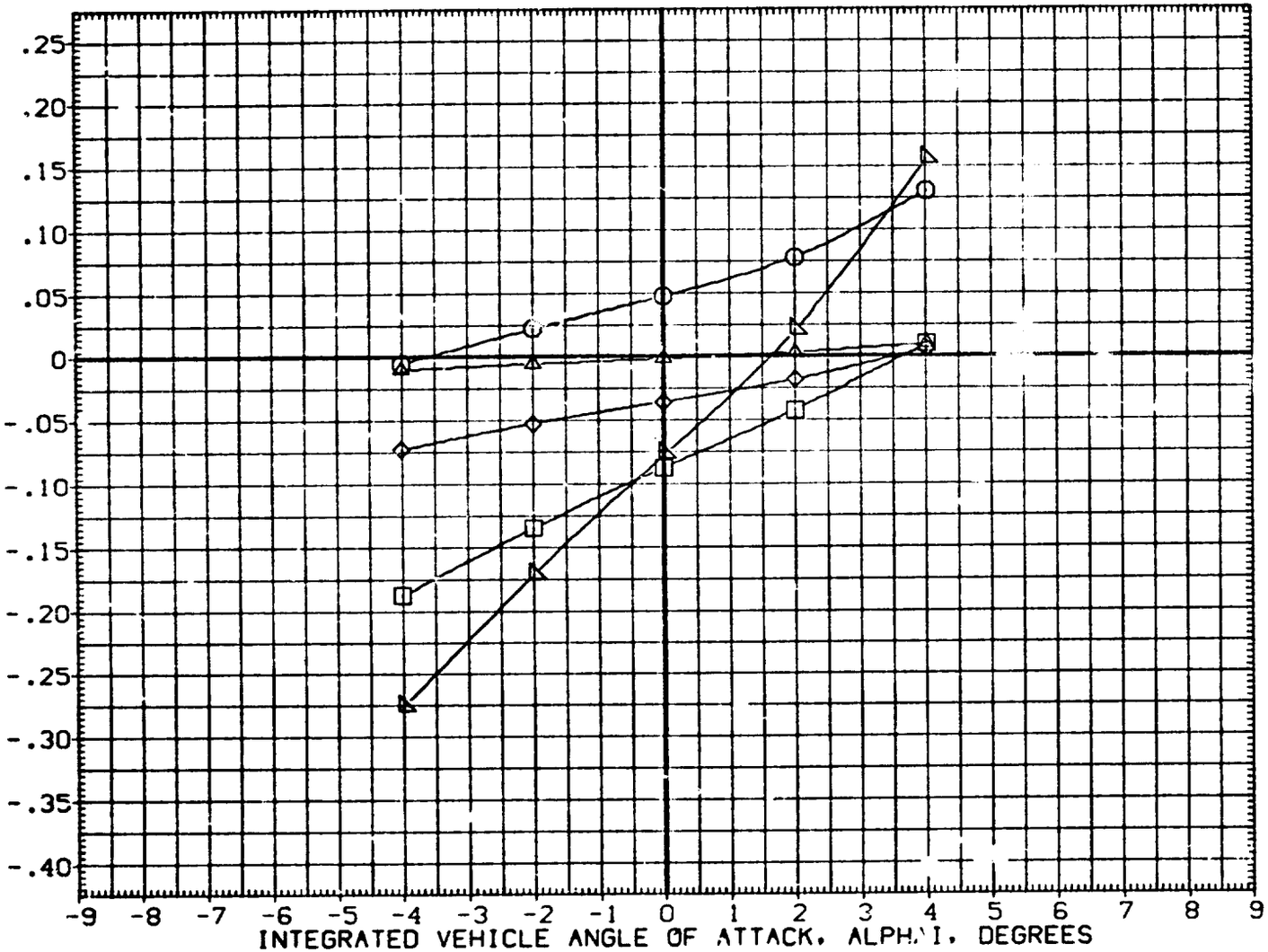


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	⊠	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

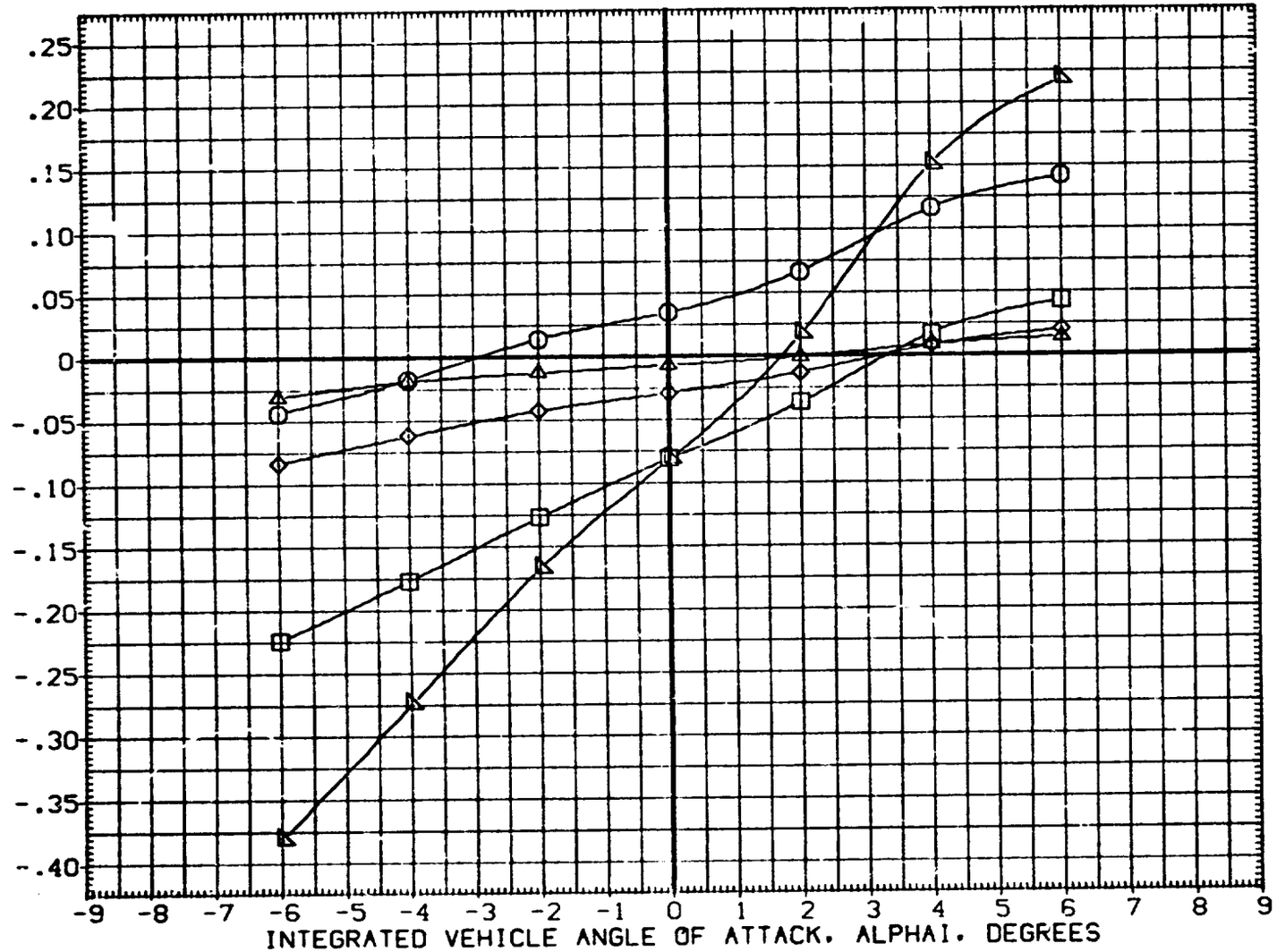


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(MET138)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(MET139)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(MET238)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MET138)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

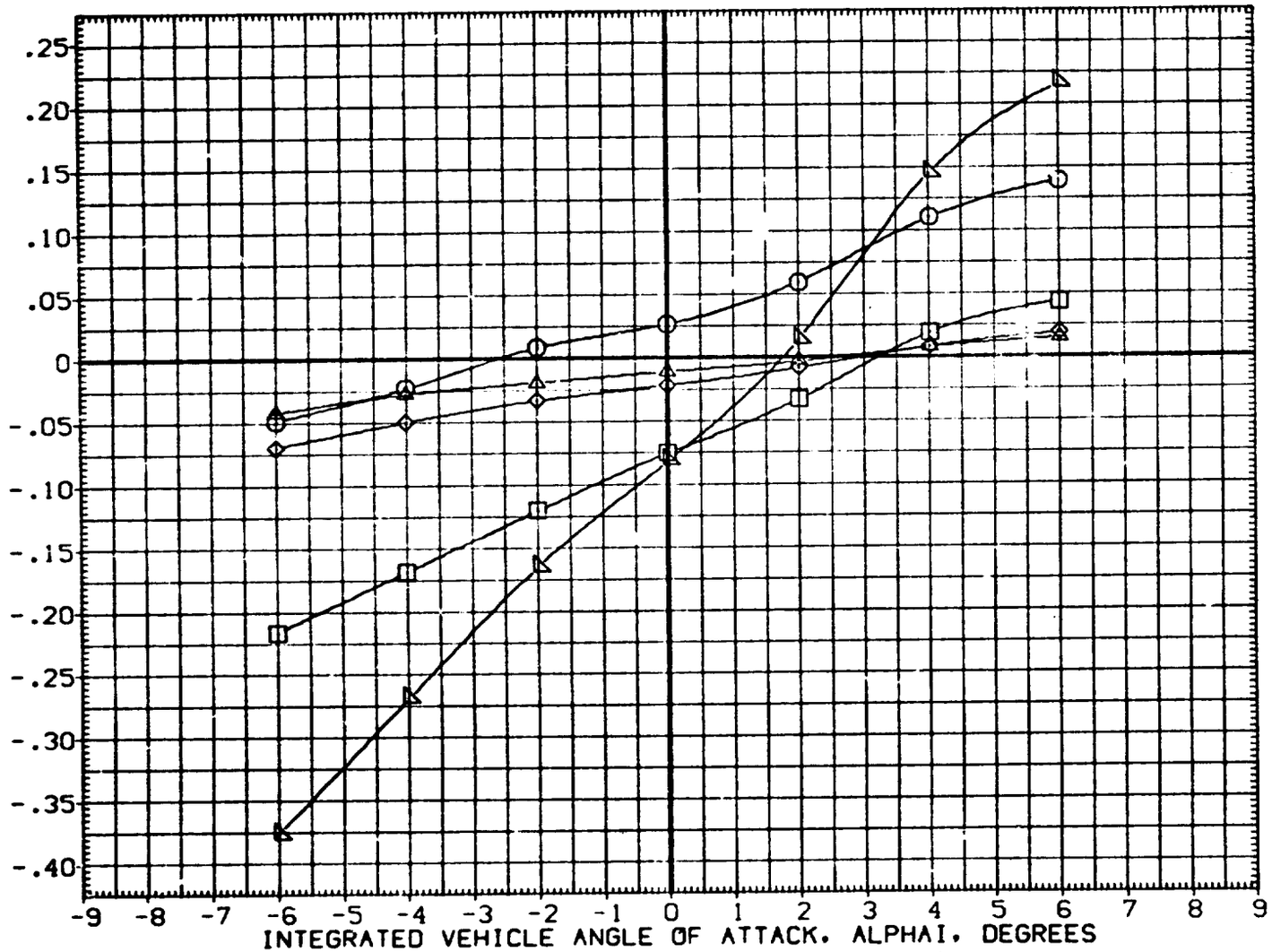


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

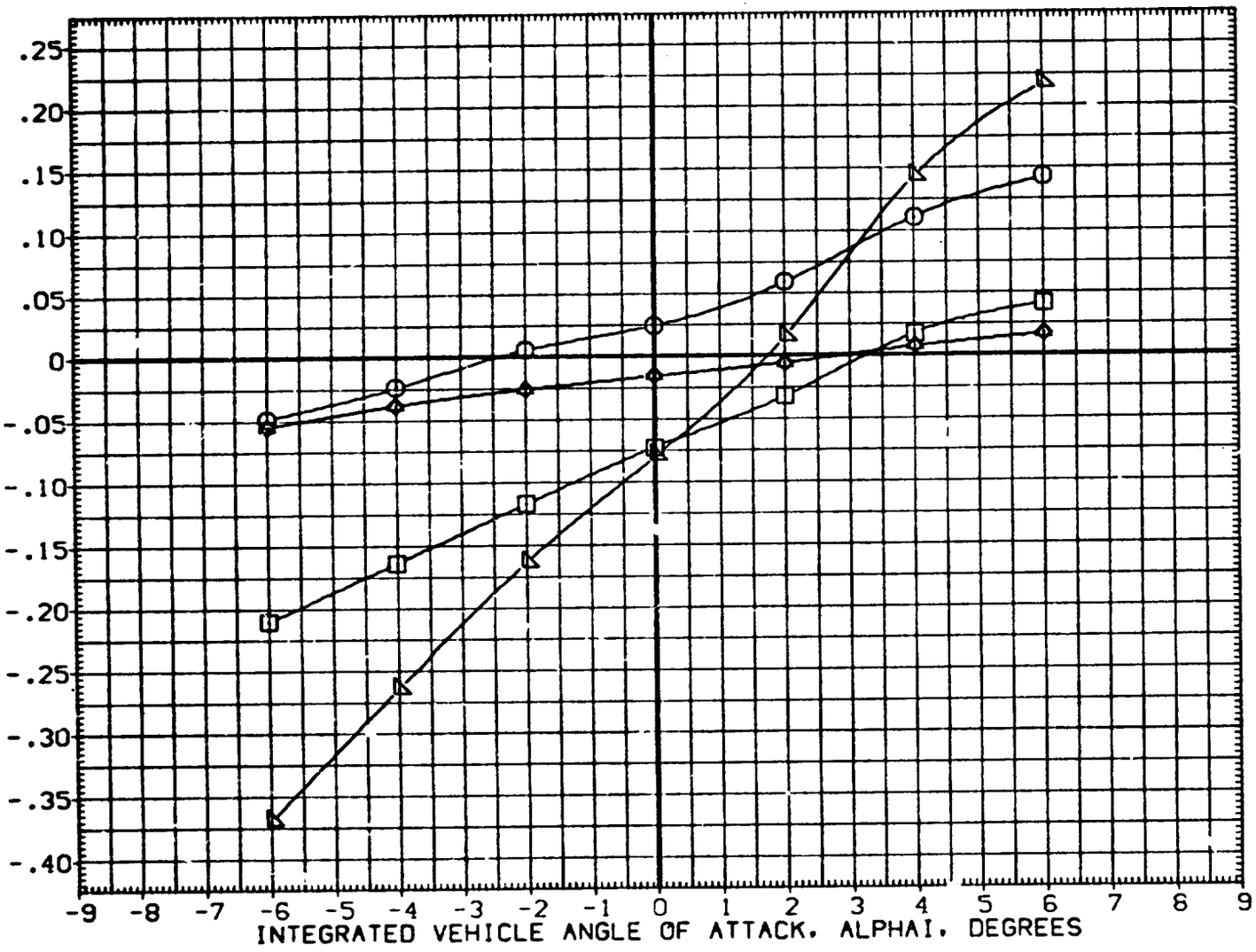


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET030)		AMES97-019(!A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(MET130)		AMES97-019(!A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL30)		AMES97-019(!A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR30)		AMES97-019(!A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MET136)		AMES97-019(!A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

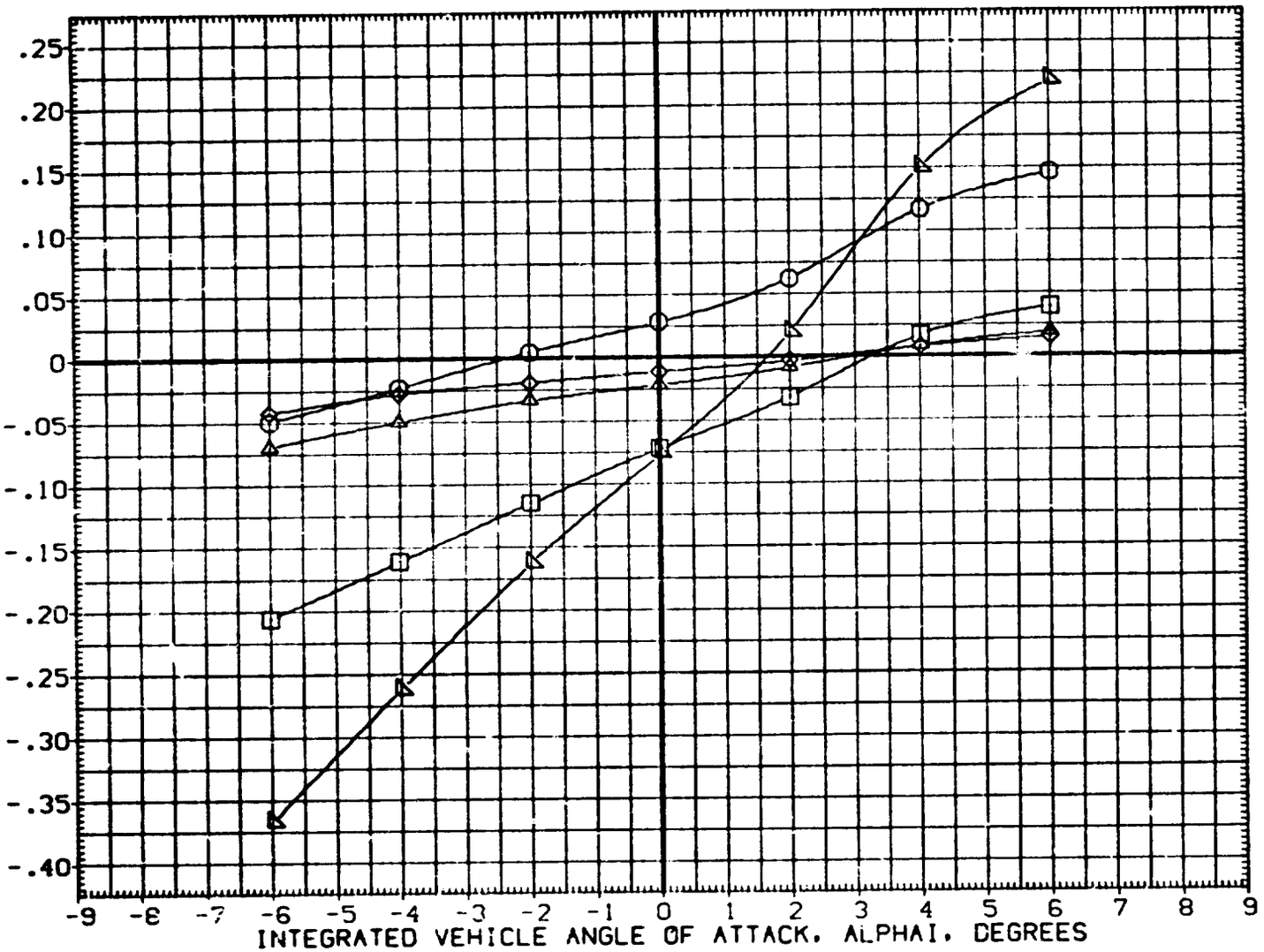


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)BETAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO38)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)	△	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	▽	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	○	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

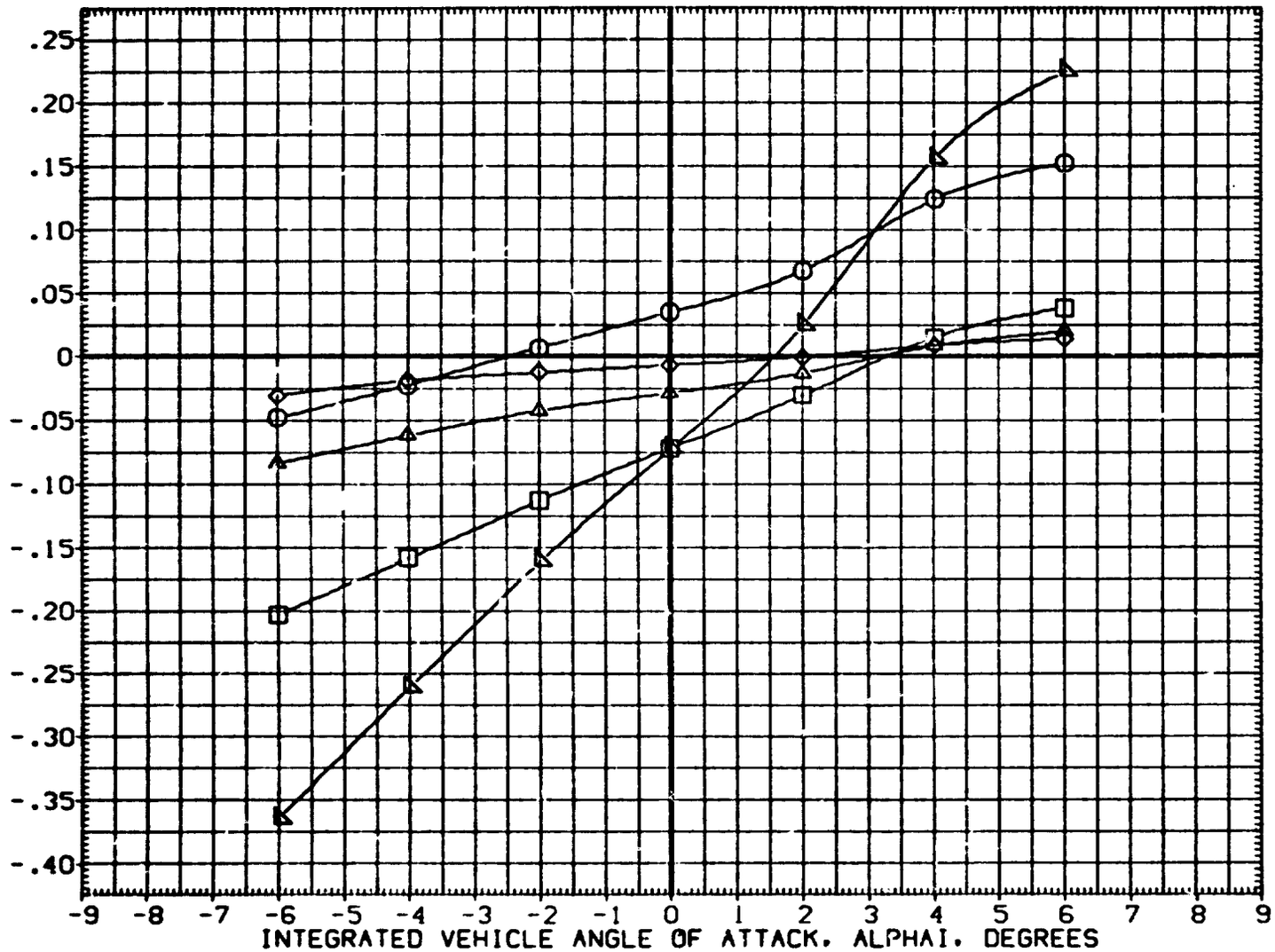


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET030)	□	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(MET730)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(METL30)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(METR30)	△	AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(MET130)	◁	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

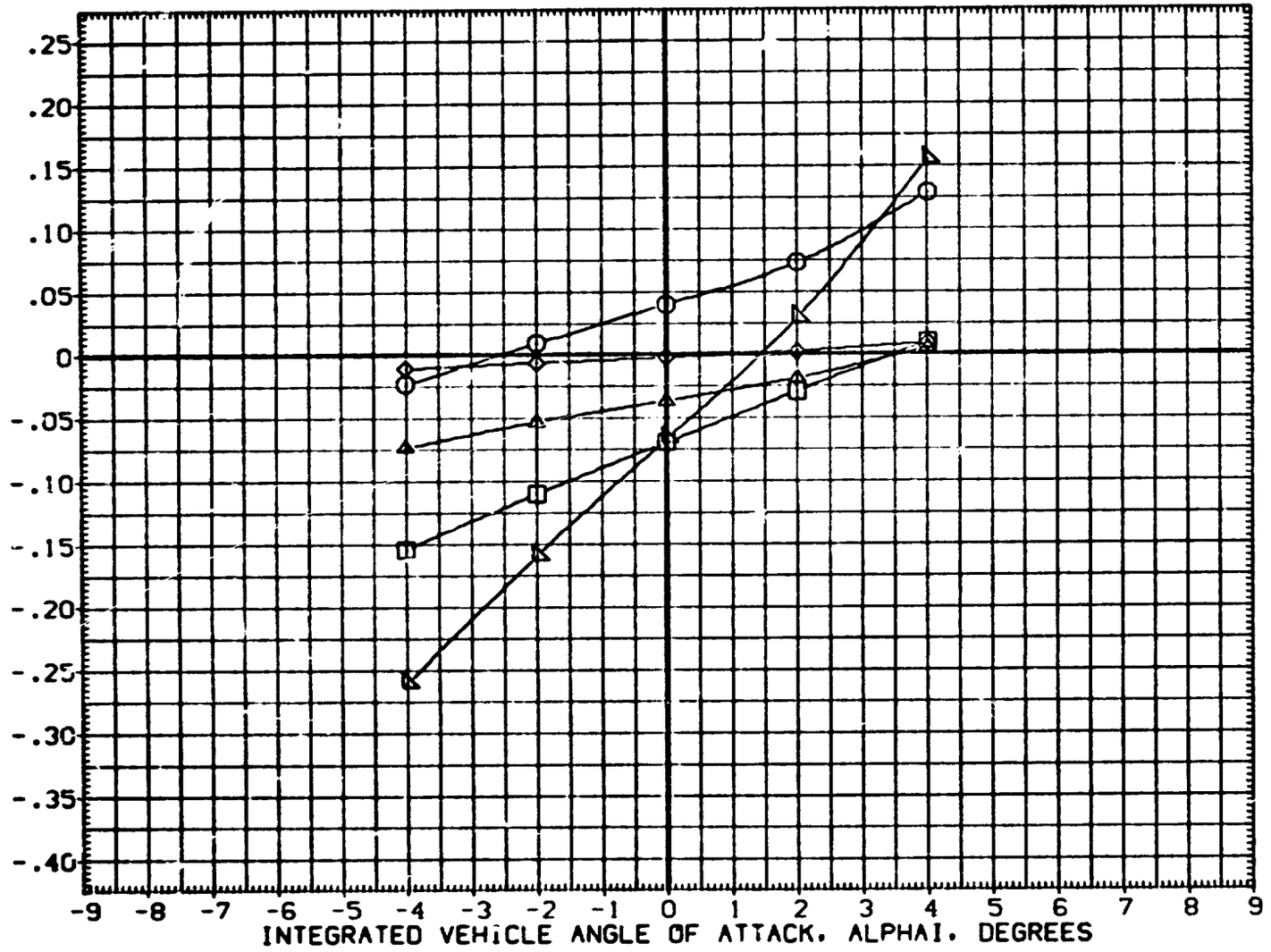


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)BET,I = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

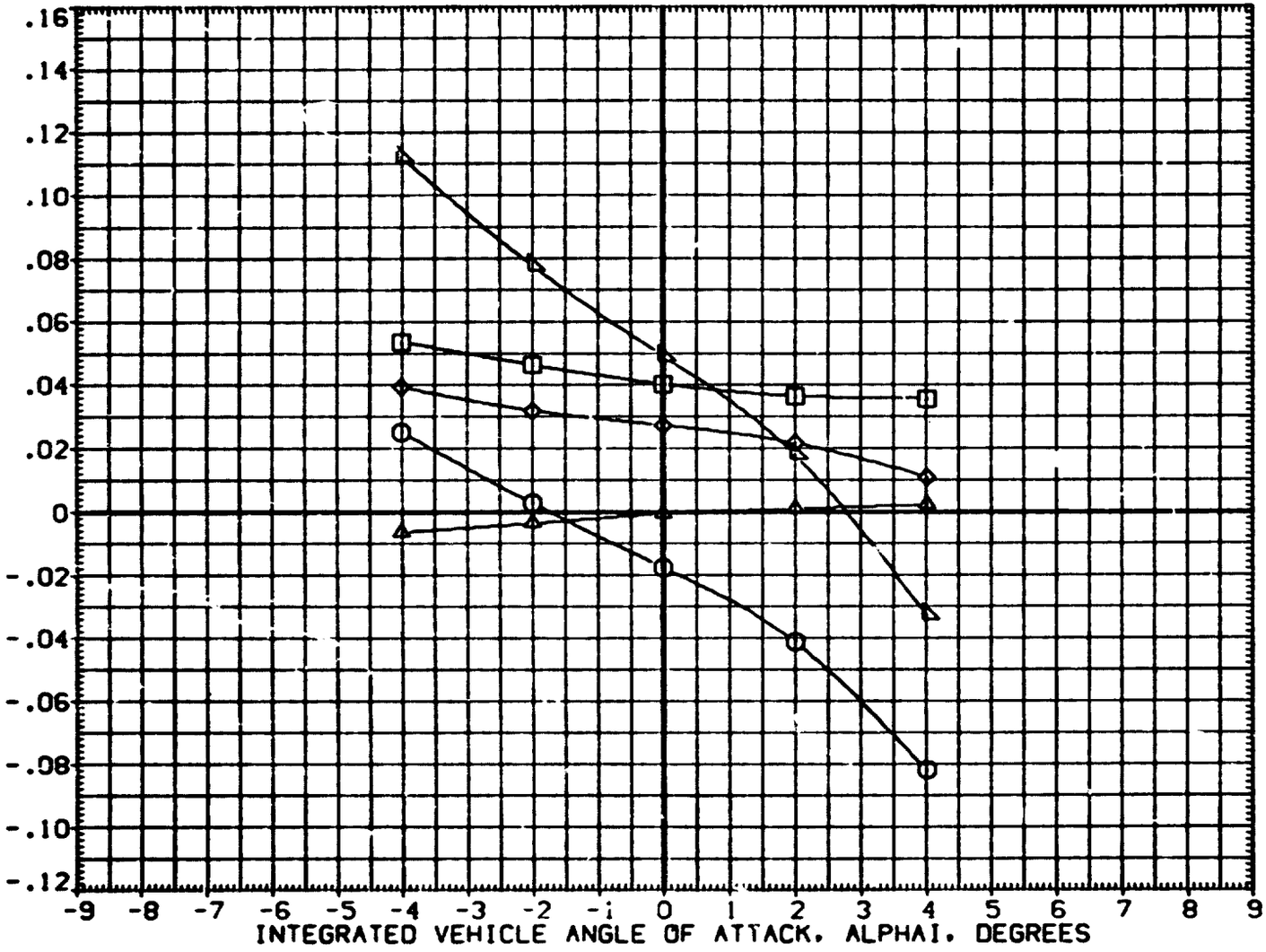


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METO30)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.500	.000
(METT30)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.500	.000
(METL30)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.500	.000
(METR30)	△	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	0.000	-4.000	2.500	.000
(METI30)	▷	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

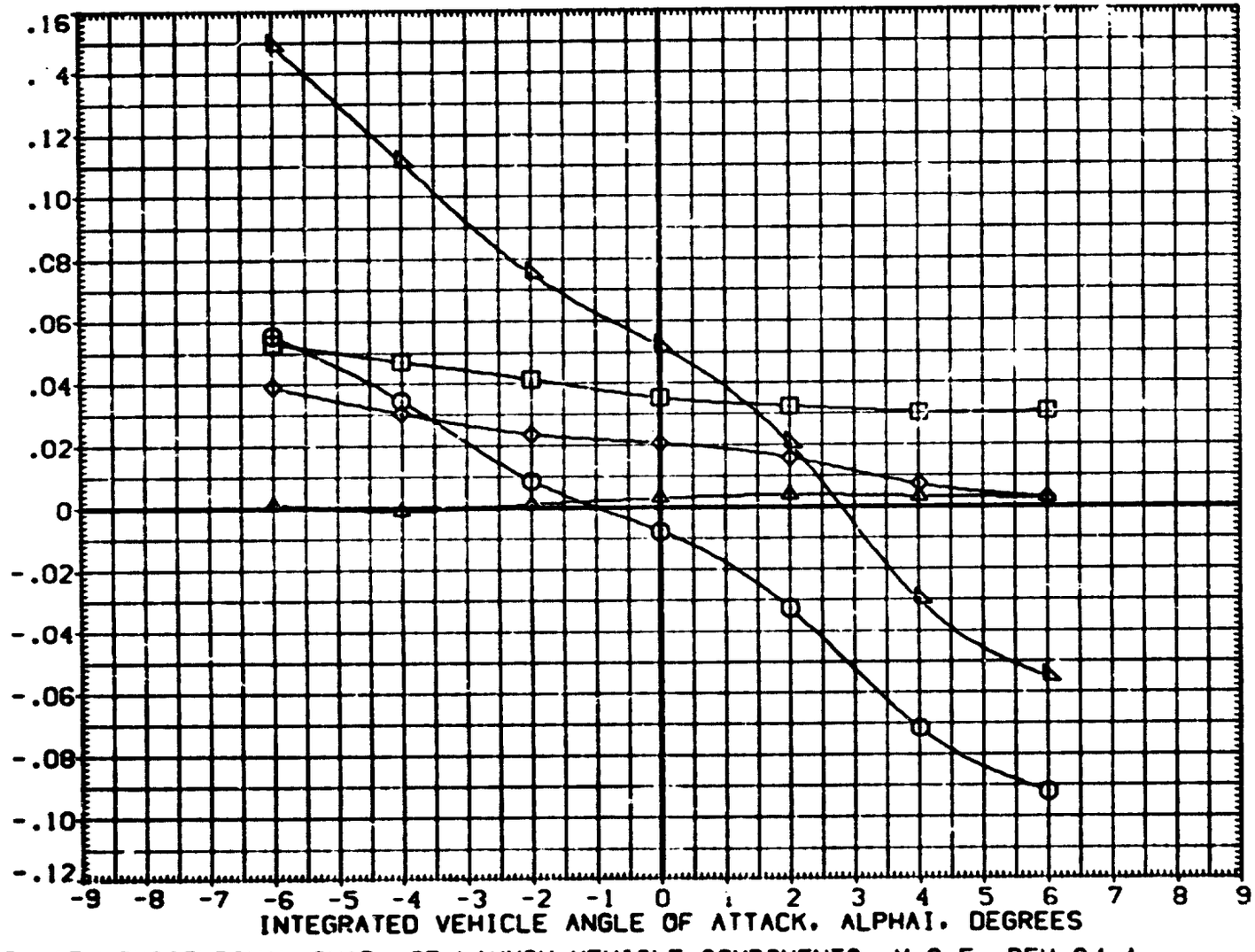


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)BET-1 = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO30)	□	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(METT30)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(METL30)	⊠	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(METR30)	△	AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(METI30)	▽	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

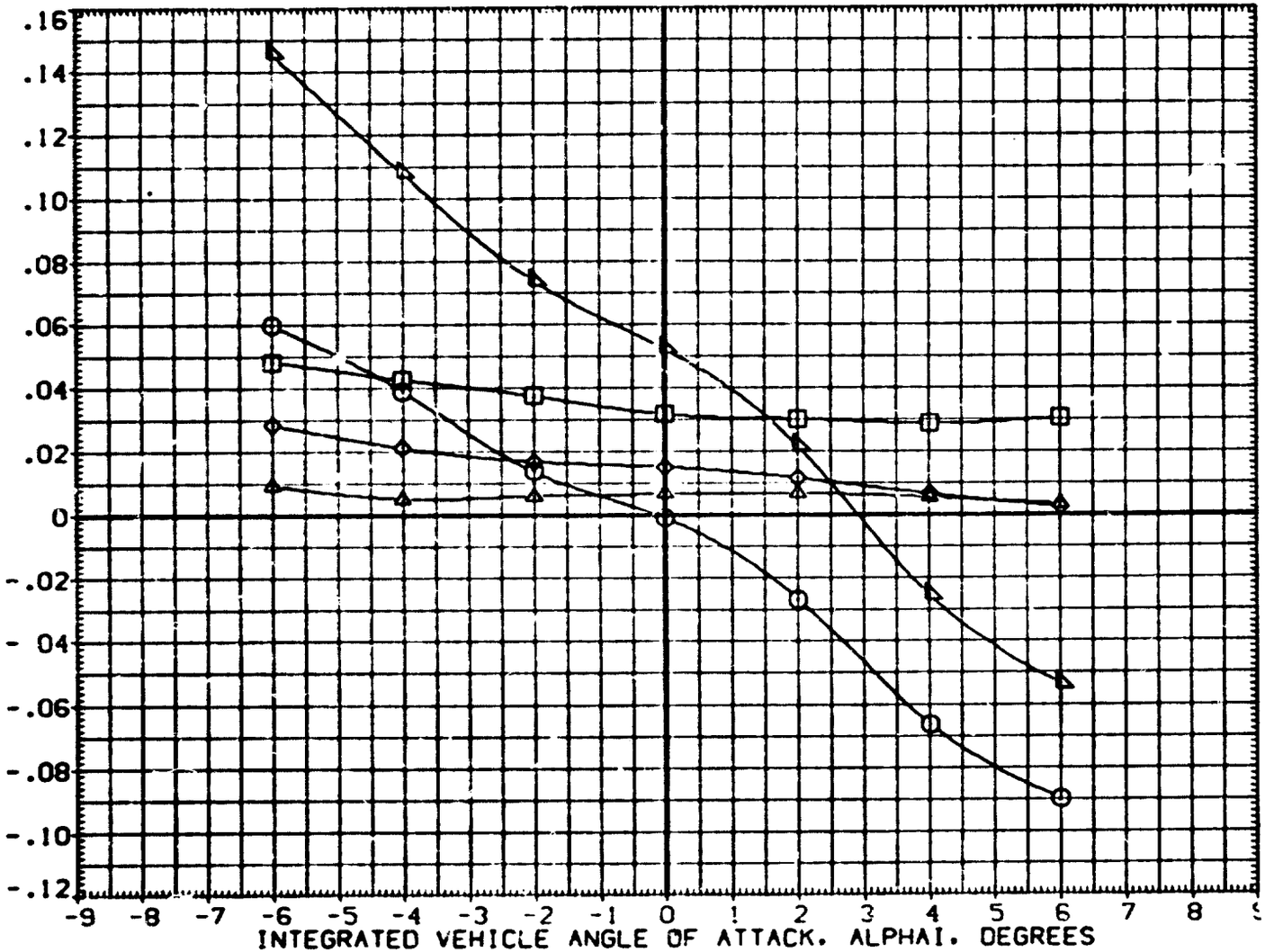


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)BETAI = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET030)	□	AMES97-015(IAB1) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.500	.000
(MET730)	◇	AMES97-015(IAB1) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.500	.000
(METL30)	⊠	AMES97-015(IAB1) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.500	.000
(METR30)	▷	AMES97-015(IAB1) LVAP R-LRB ALL ML SEALED	0.000	-4.000	2.500	.000
(MET130)	△	AMES97-015(IAB1) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

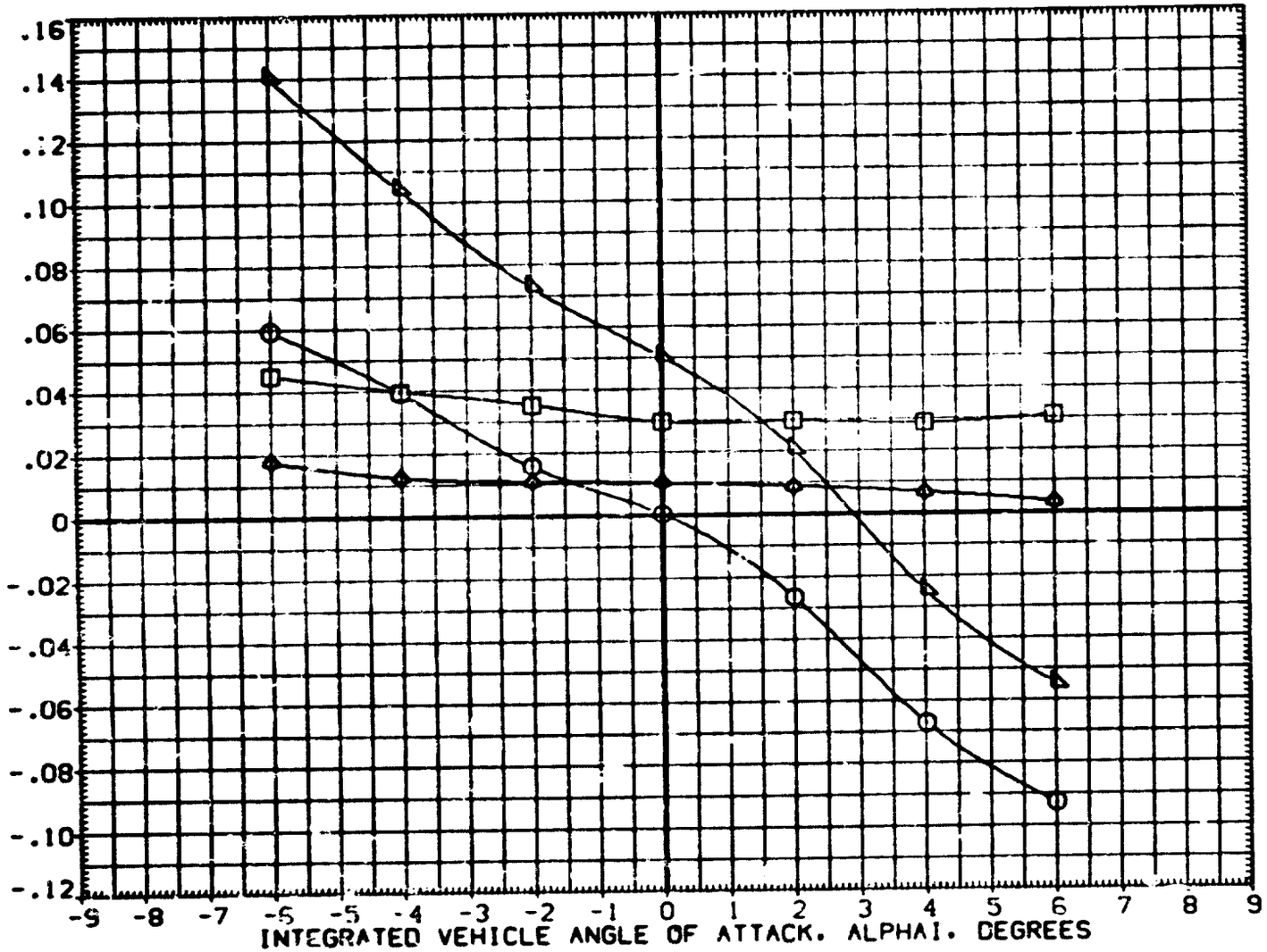


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)BET(1) = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)		AMES97-019([A8:) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

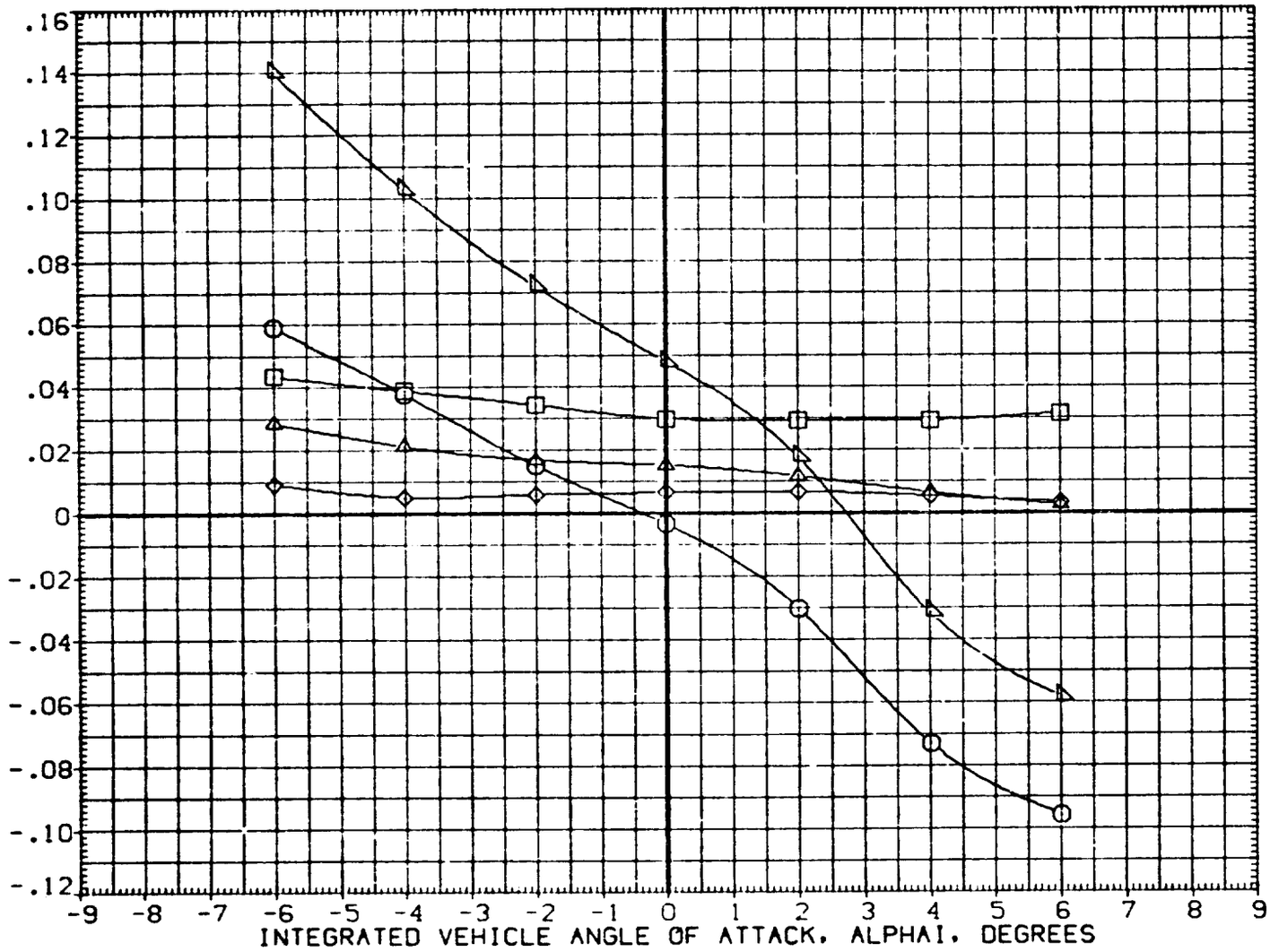


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)BETAI = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(MET138)	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(MET239)	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(MET338)	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(MET138)	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

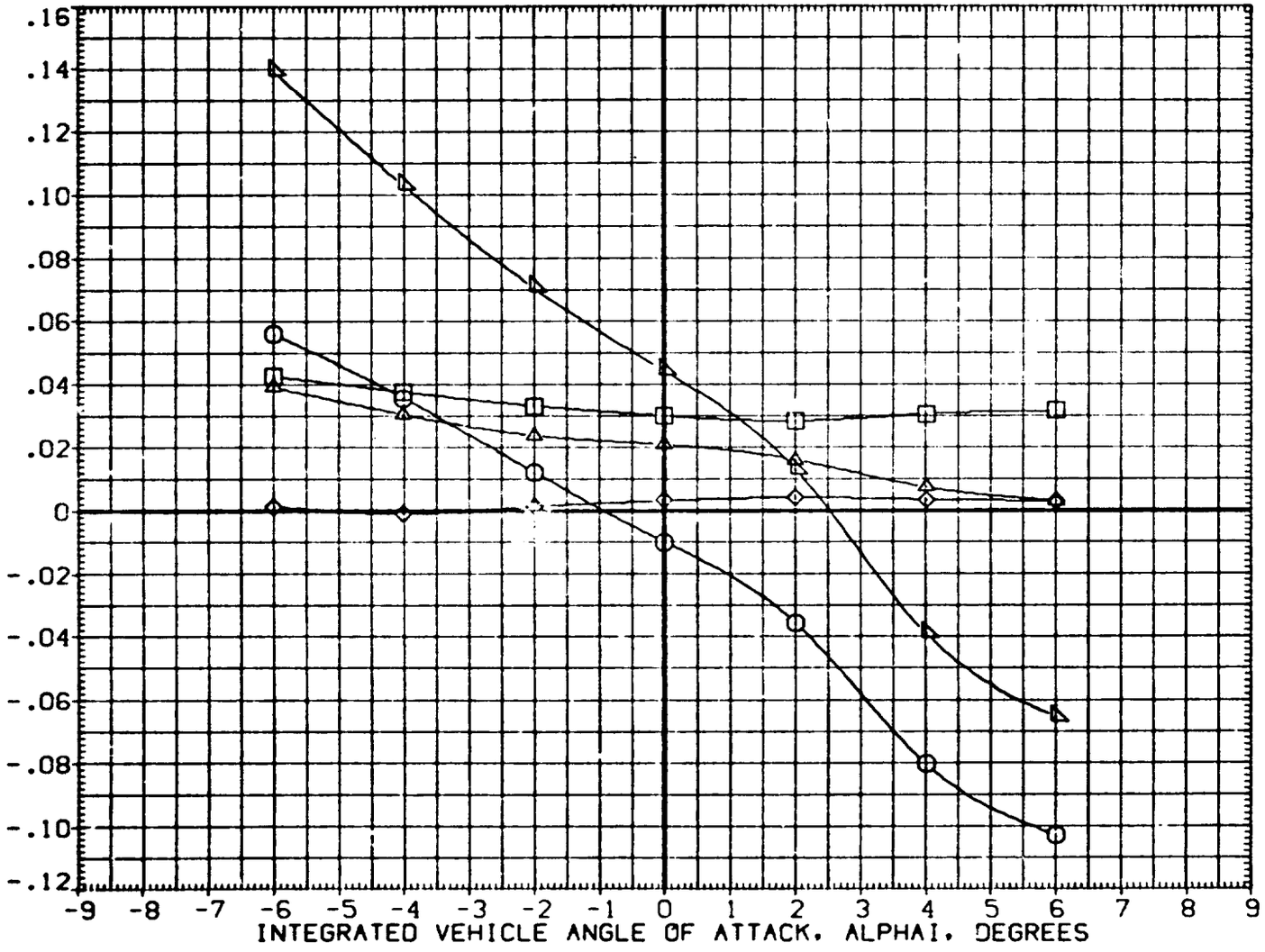


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL39)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)	⊠	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

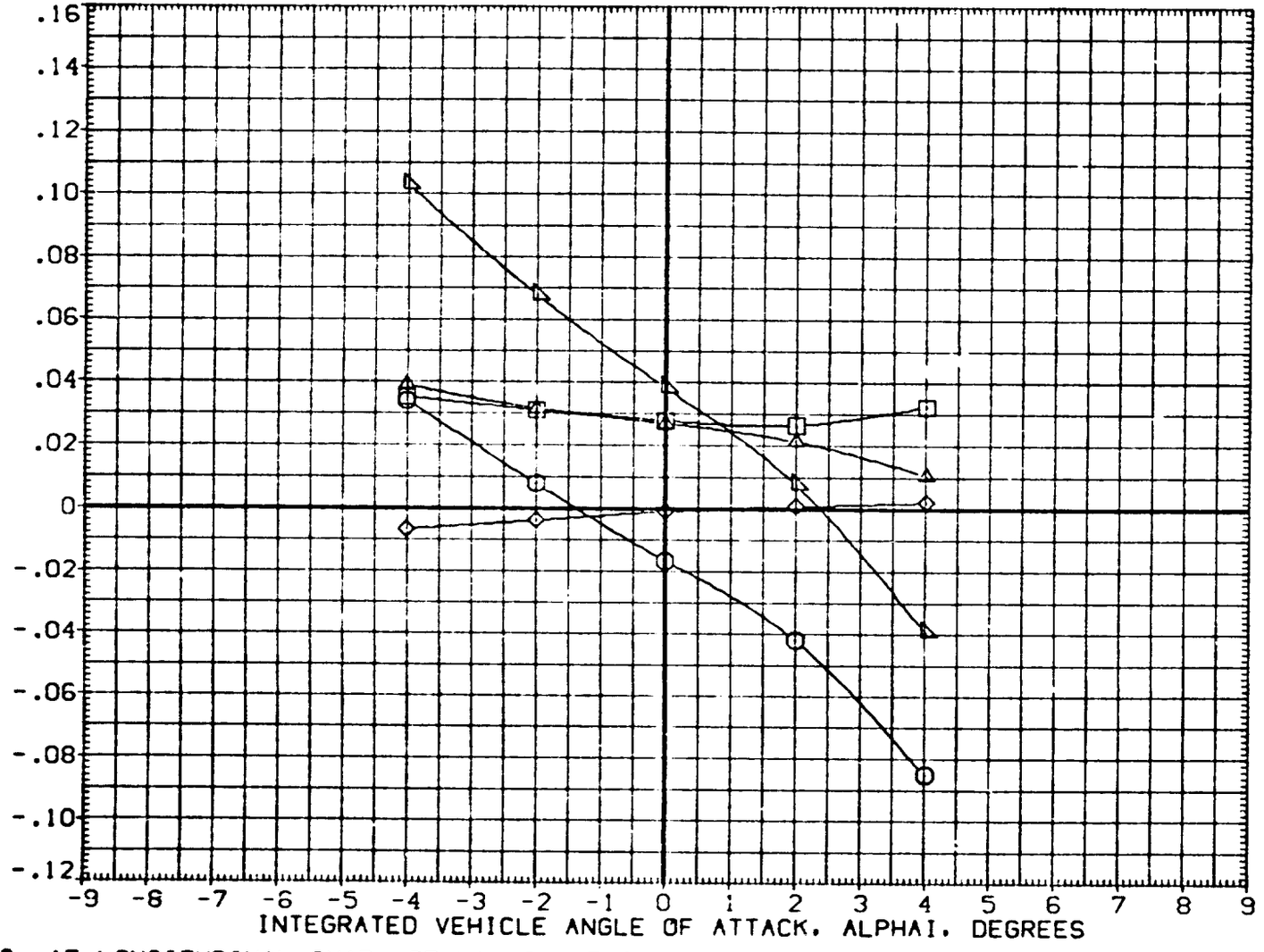


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(MET038)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED
(METT38)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED
(METL38)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED
(METR38)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED
(MET138)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED

ELV-1B	ELV-0B	MACH	SPDBRK
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

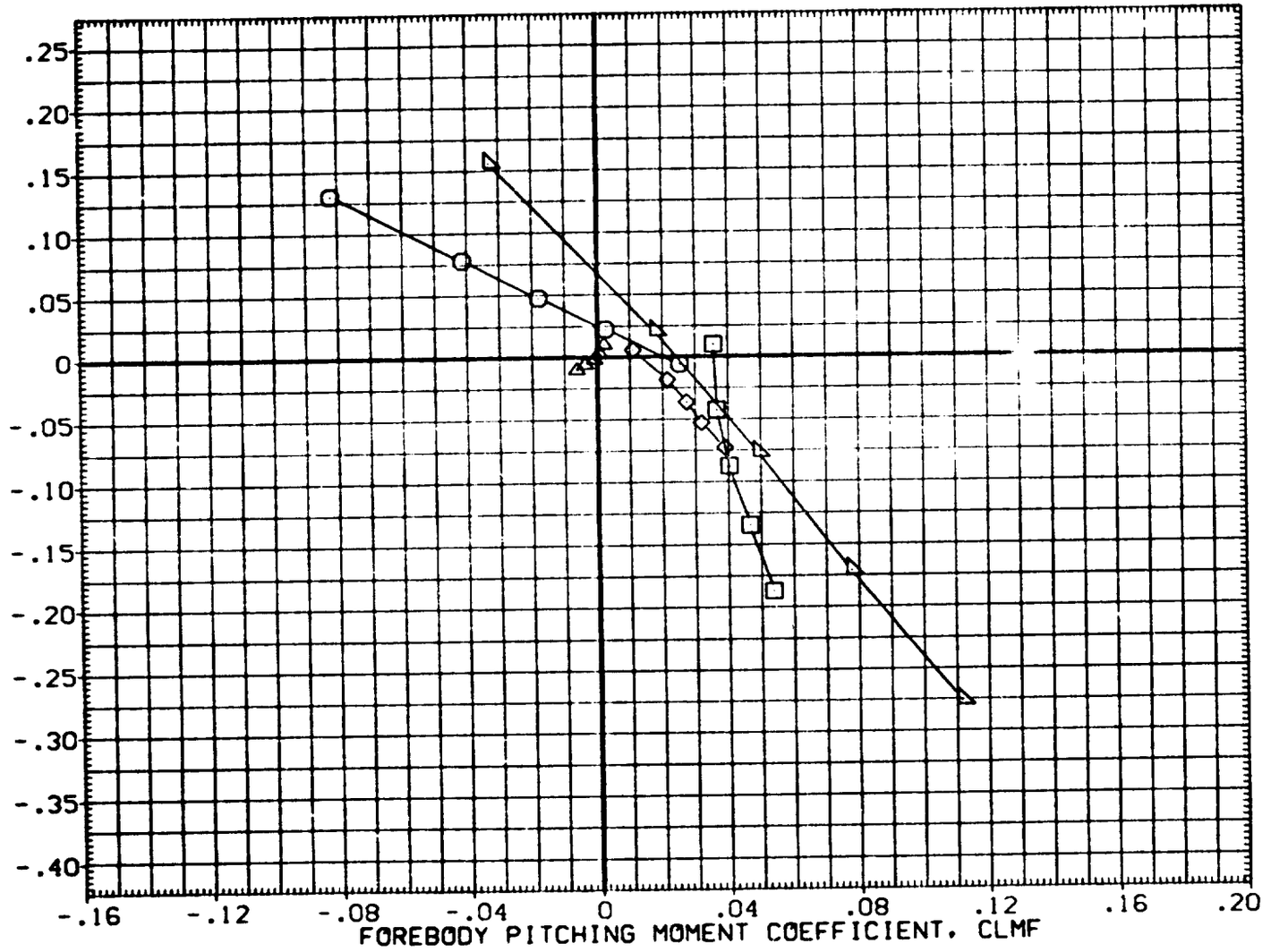


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL38)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

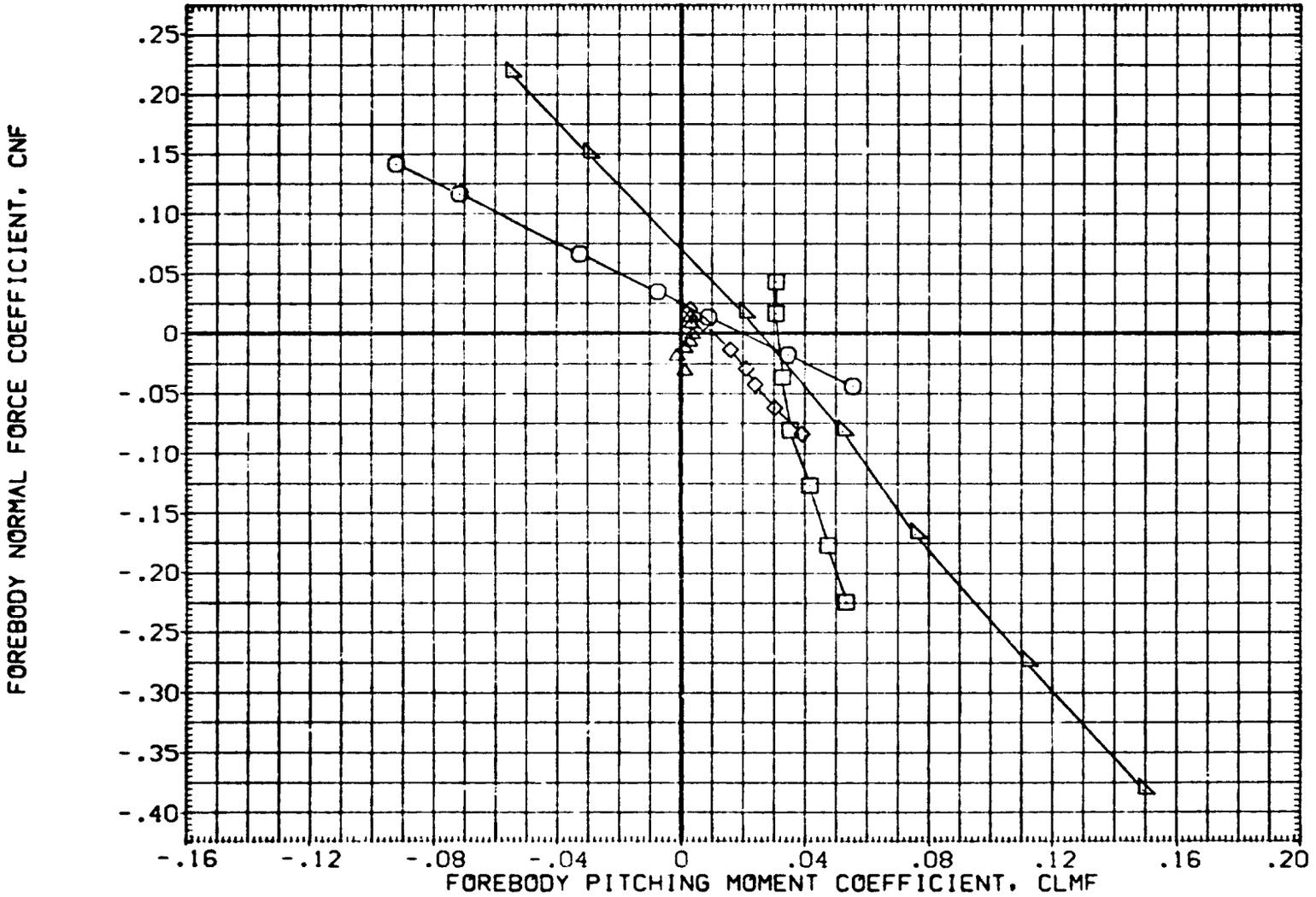


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(MET138)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(MET238)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(MET338)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MET438)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

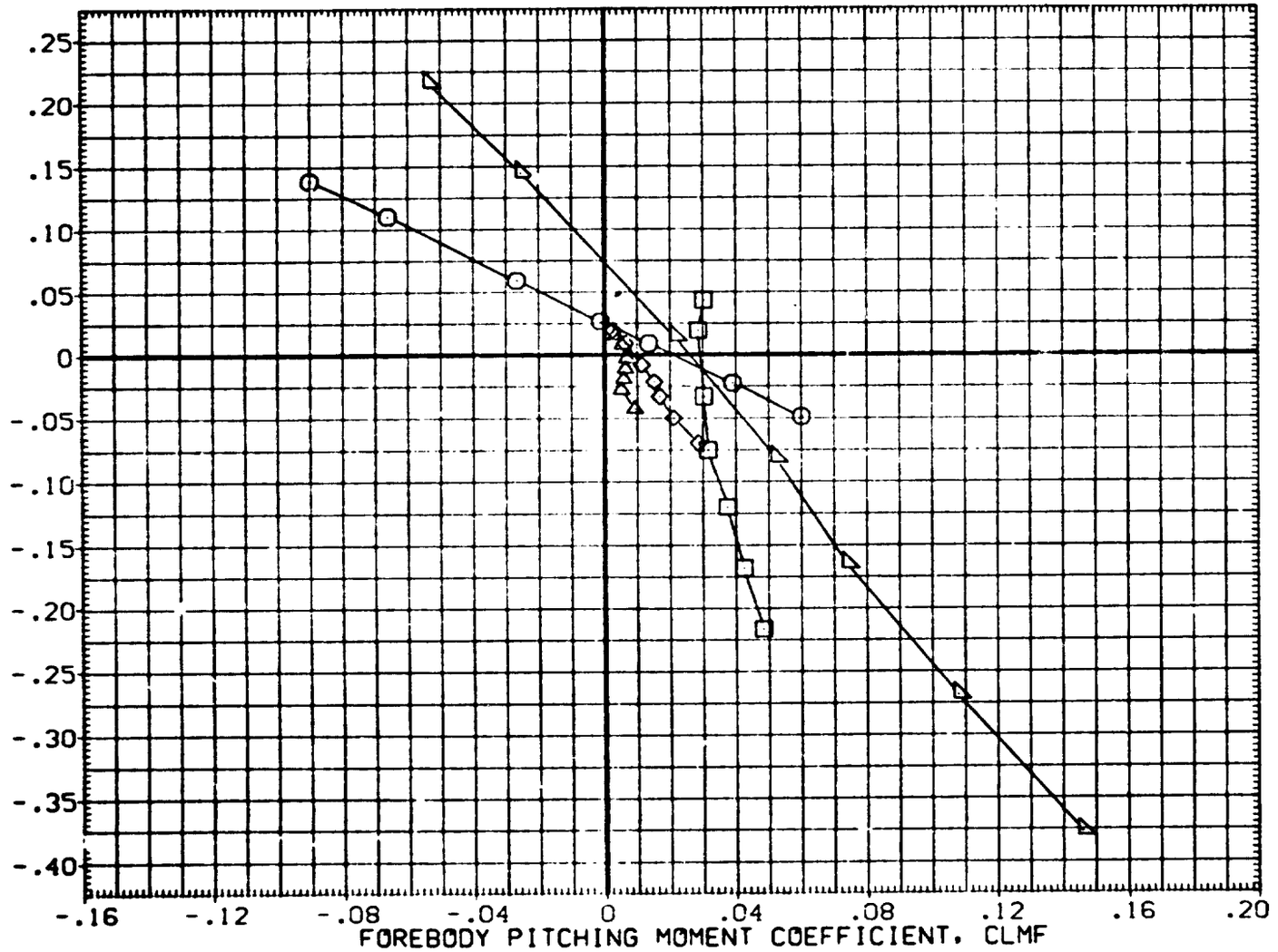


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)BETA = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(MET138)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MET138)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

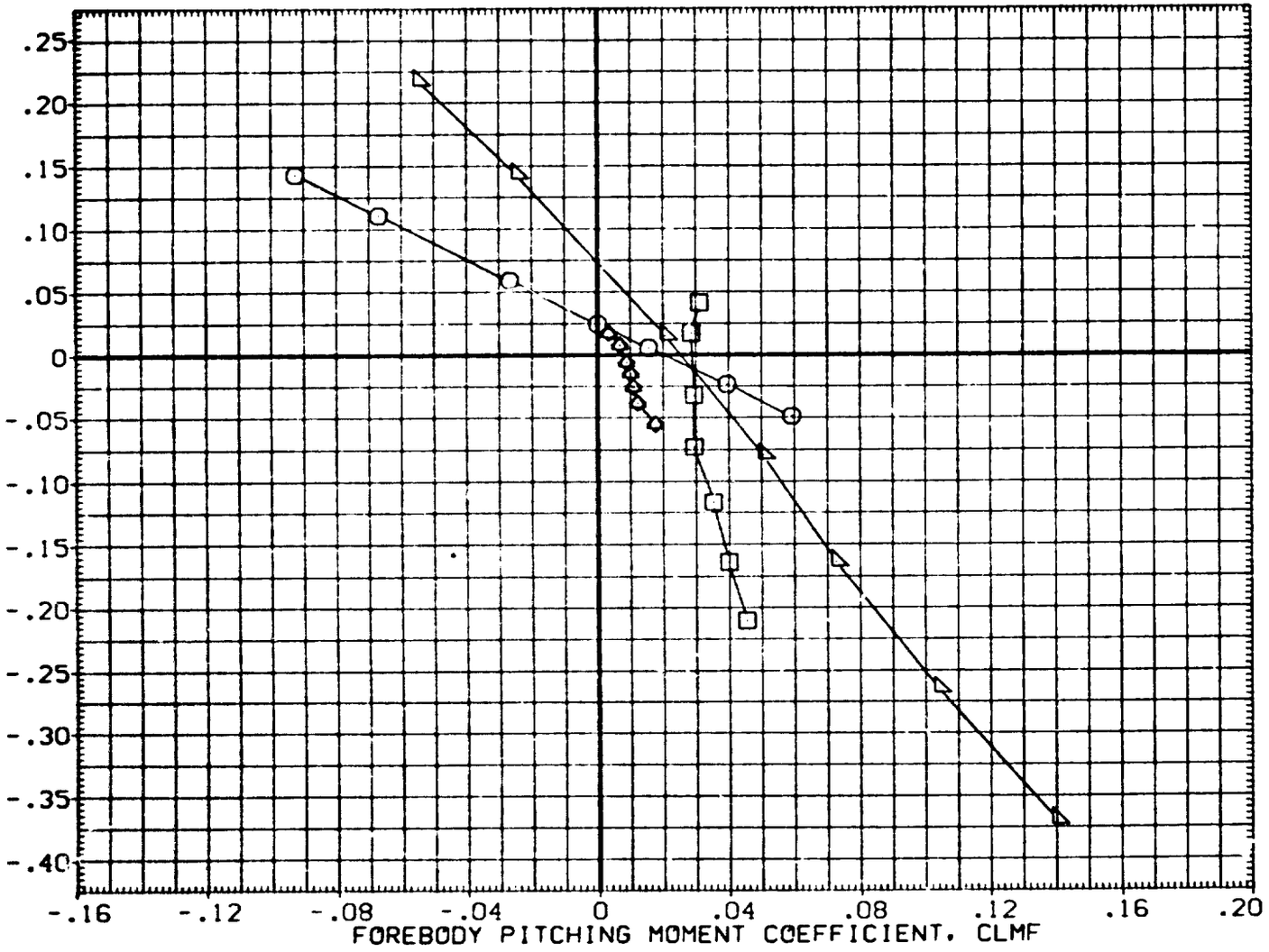


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO3B)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT3B)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL3B)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR3B)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI3B)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

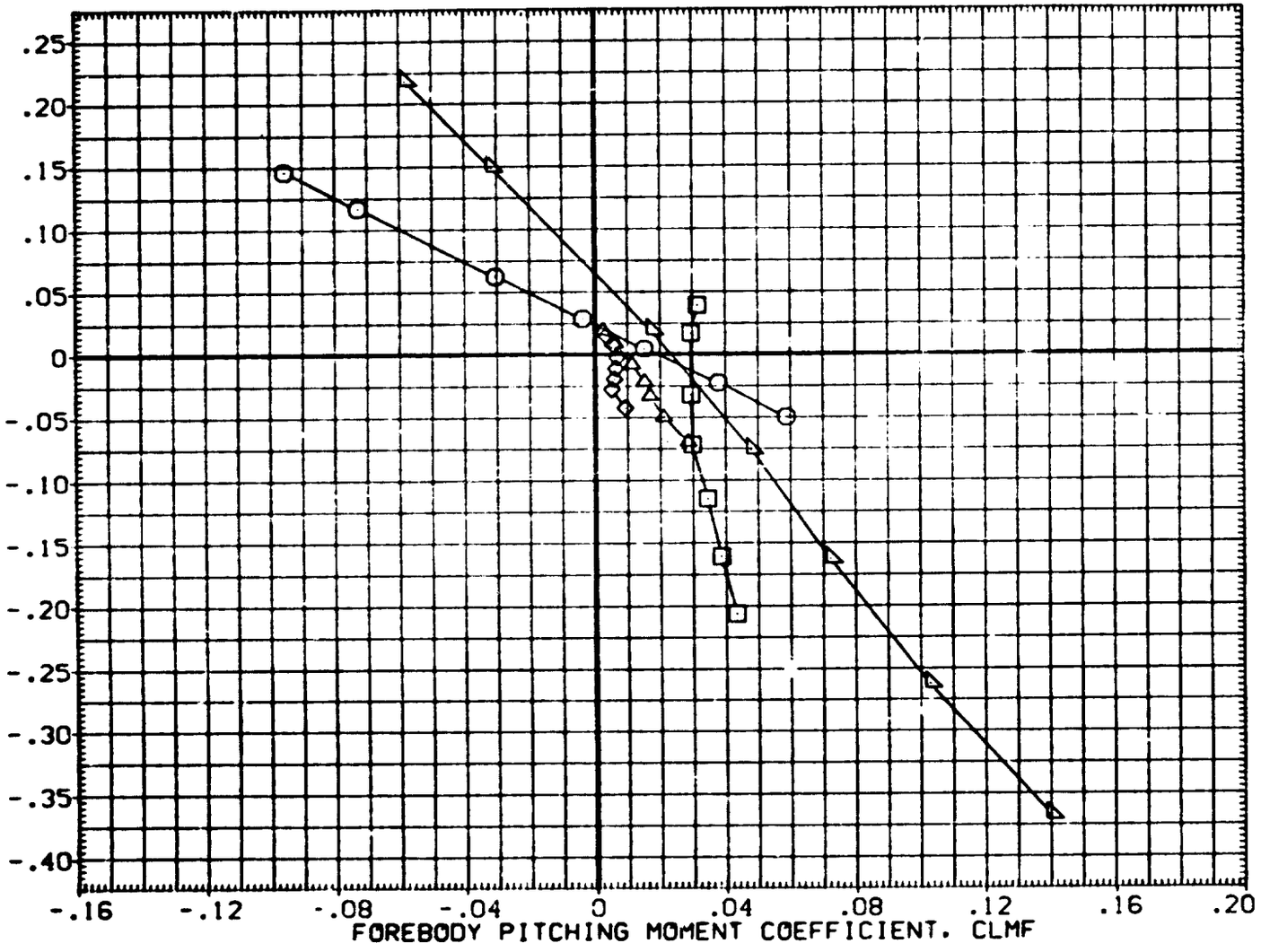


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)BETA = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(METI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

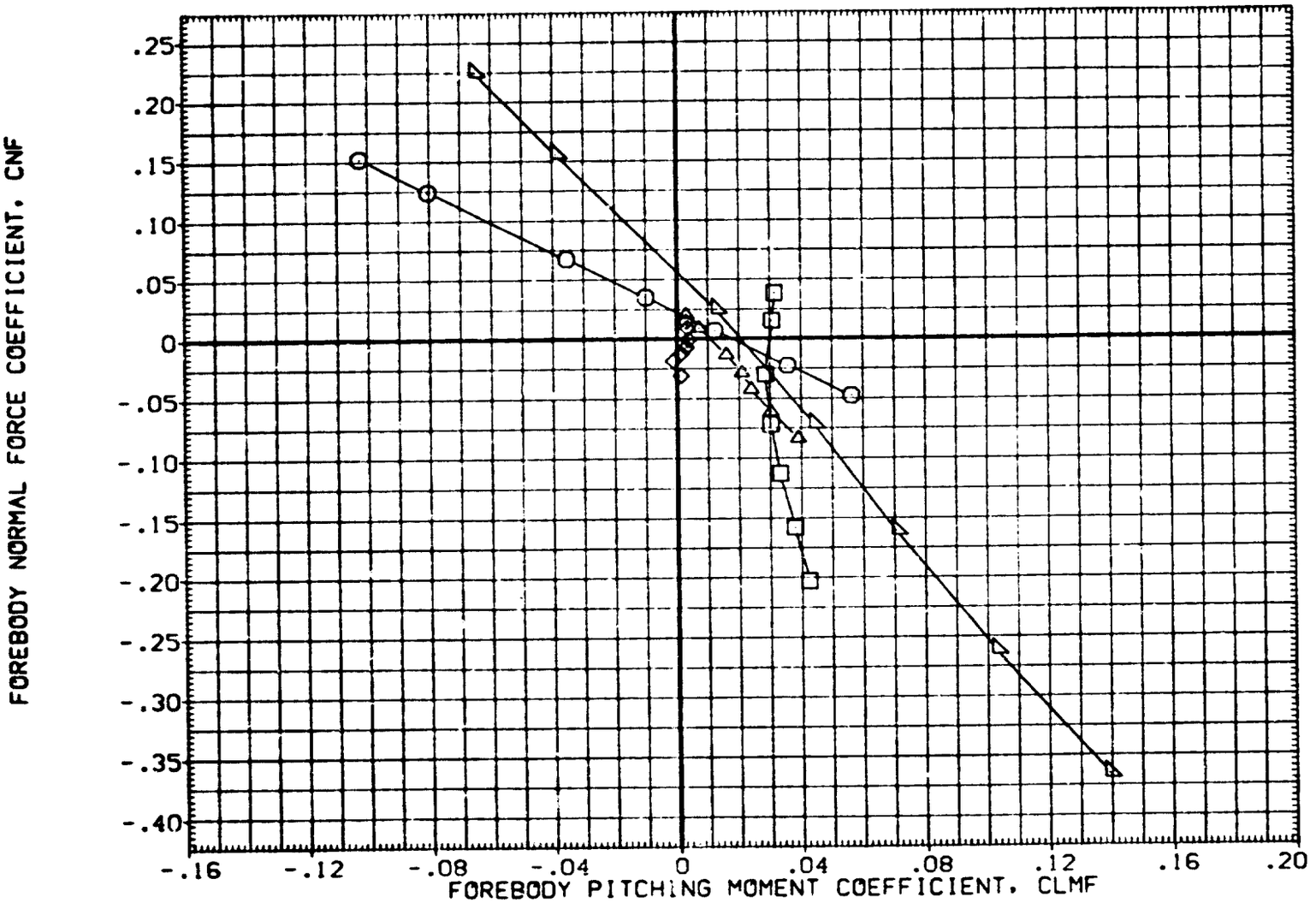


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METC30)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METT30)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(METL30)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(METR30)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(MET130)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

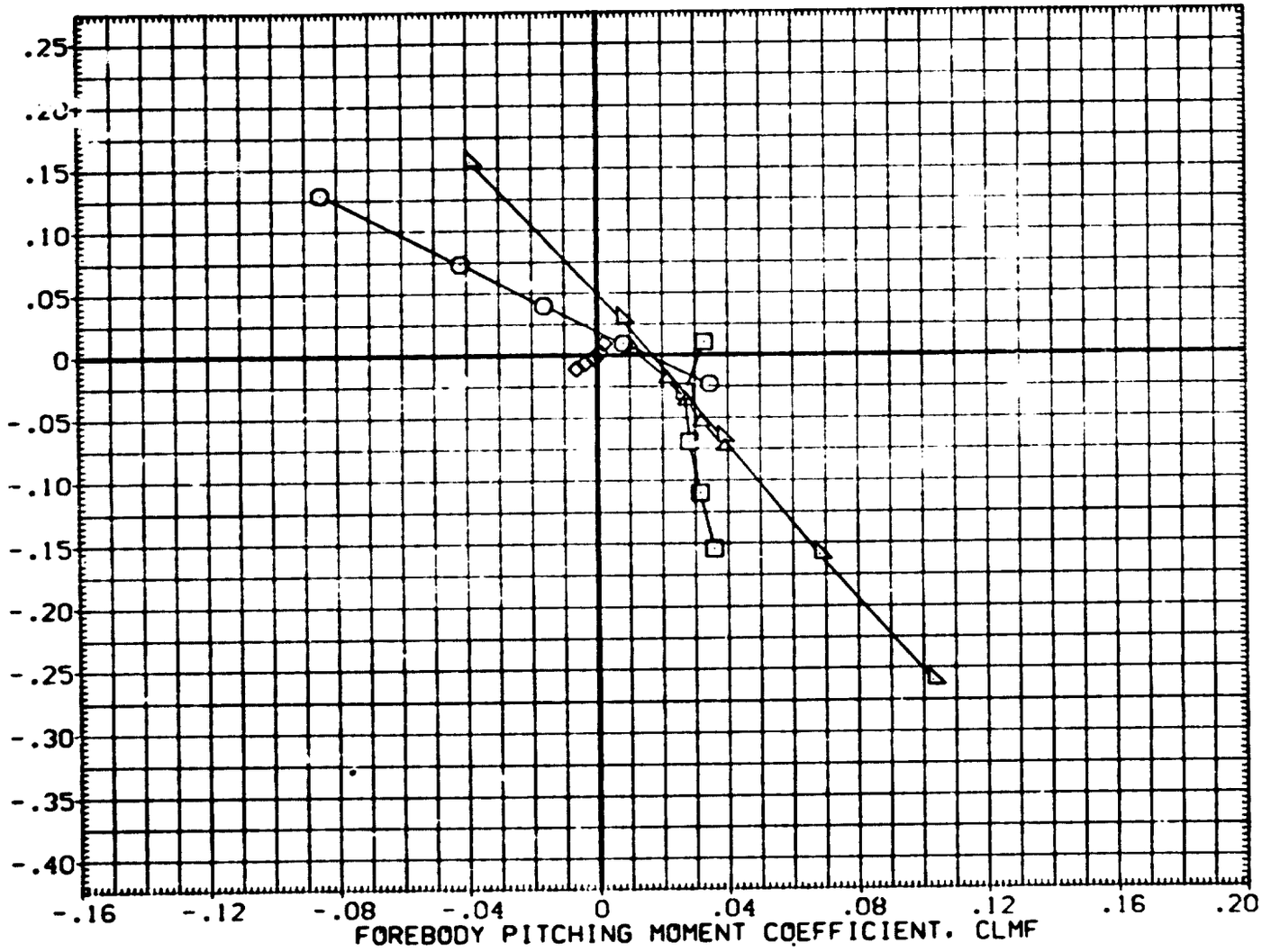


FIG. 15 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET042)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

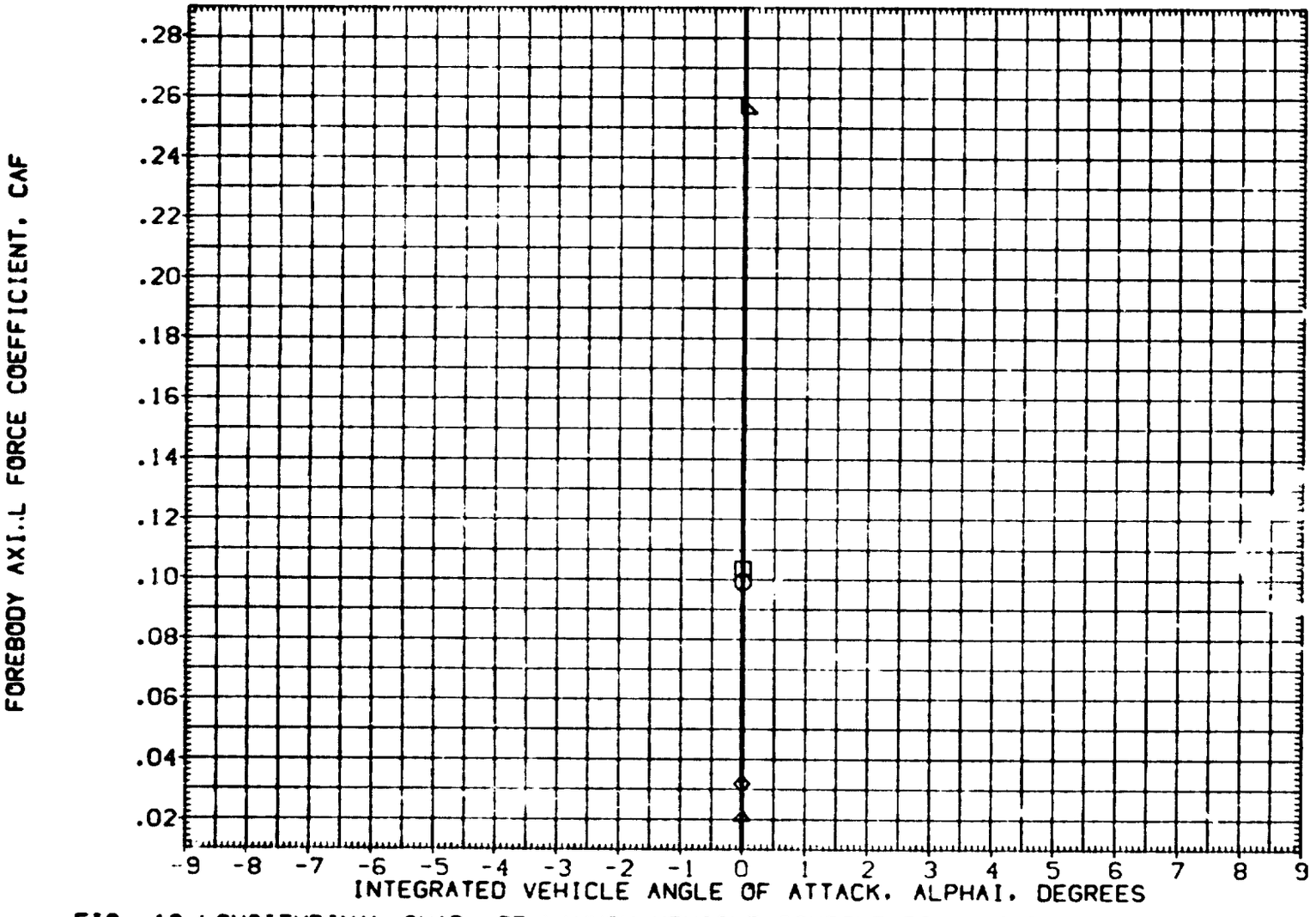


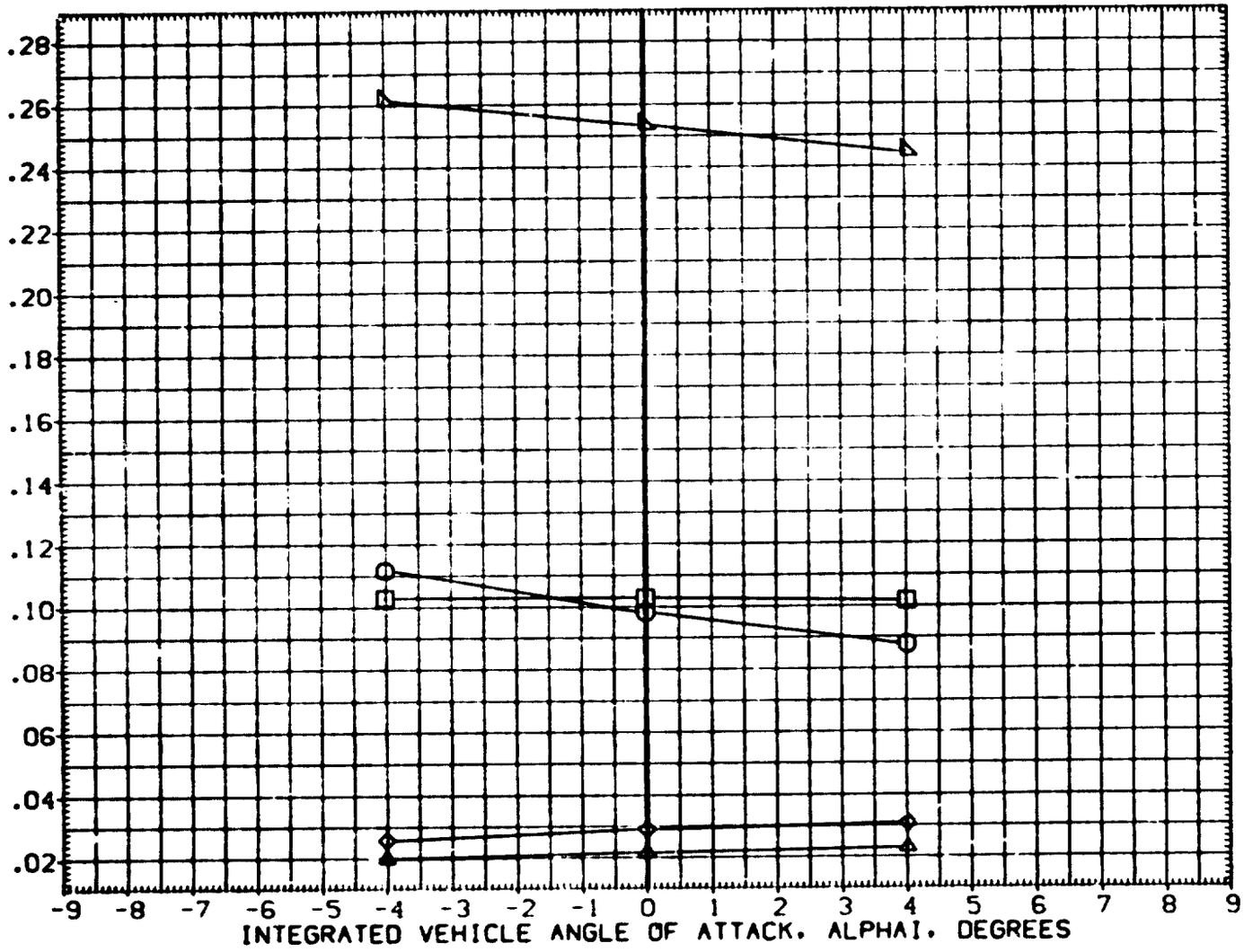
FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	○	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(MET142)	□	AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(MET242)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(MET342)	△	AMES97-019(IAB LVAP R-LRB ALL ML SEALED	.000	.000	2.500	.000
(MET442)	▽	AMES97-019(IAB LVAP INT VEH ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	



FOREBODY AXIAL FORCE COEFFICIENT, CAF

FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	□	AMES97-019(IAB1) EVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)	◇	AMES97-019(IAB1) EVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	▽	AMES97-019(IAB1) EVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	◁	AMES97-019(IAB1) EVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)	▷	AMES97-019(IAB1) EVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

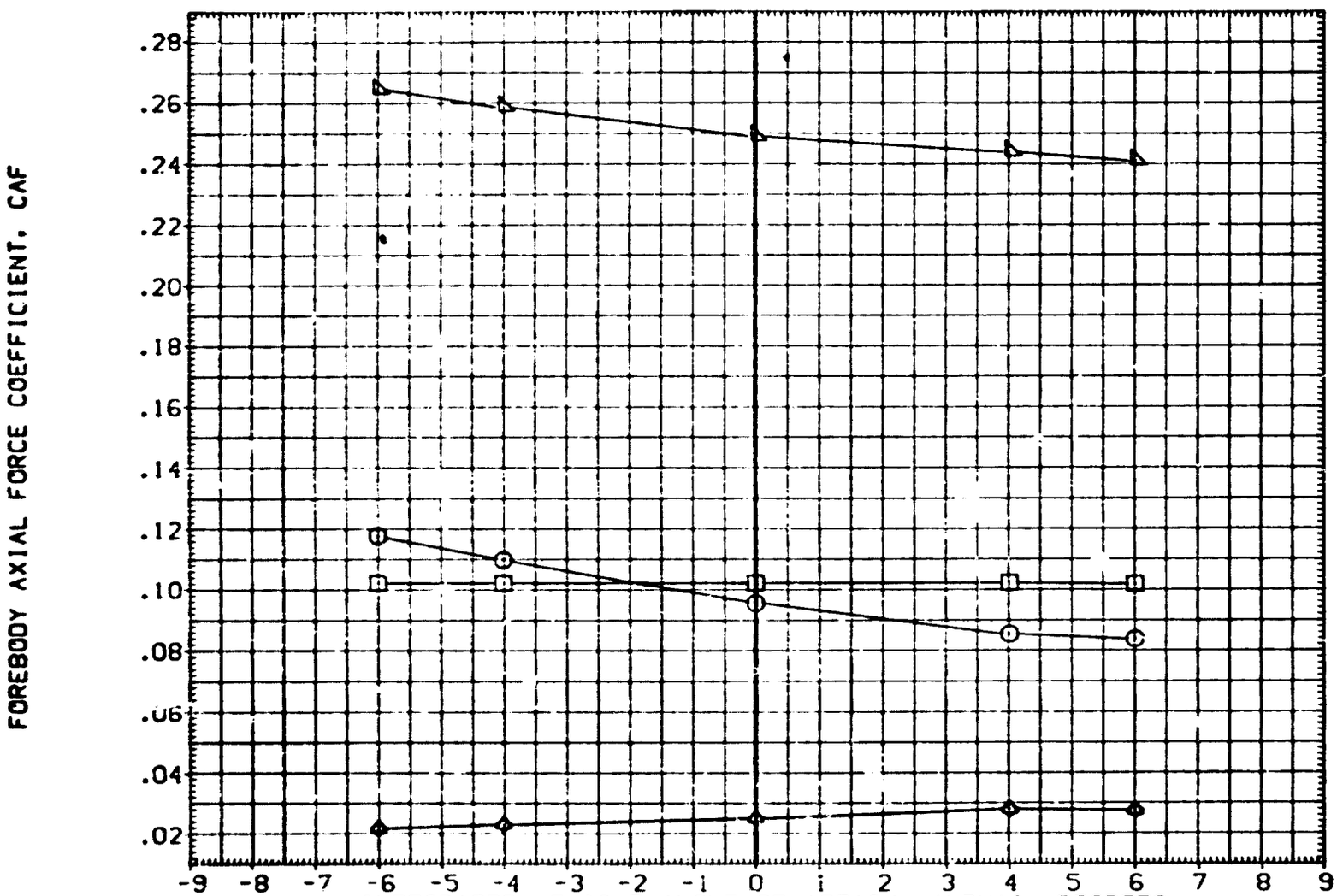


FIG. 1C LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)BETA1 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET742)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	⊗	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

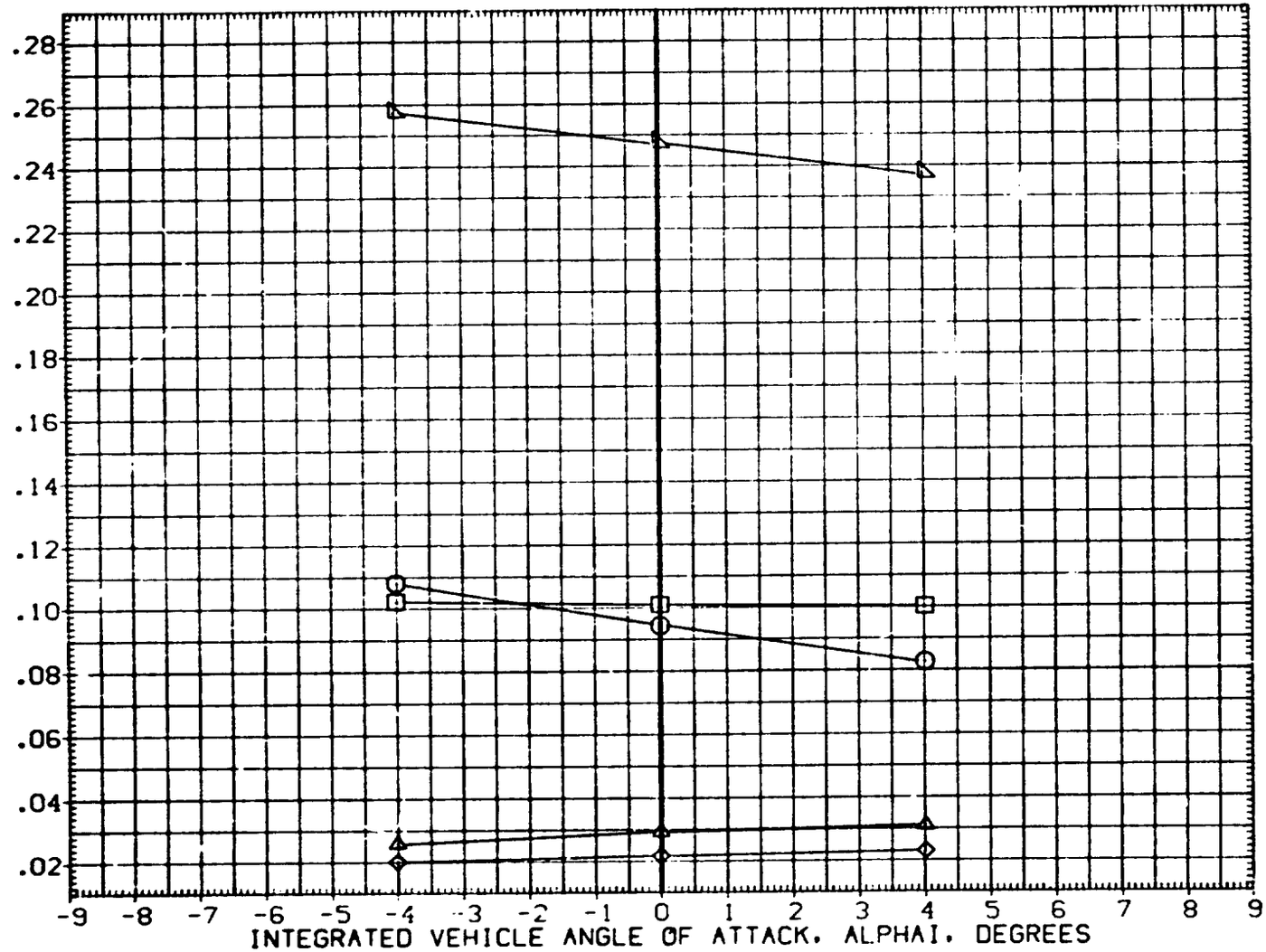


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)BETAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(MET242)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(MET342)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(MET442)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

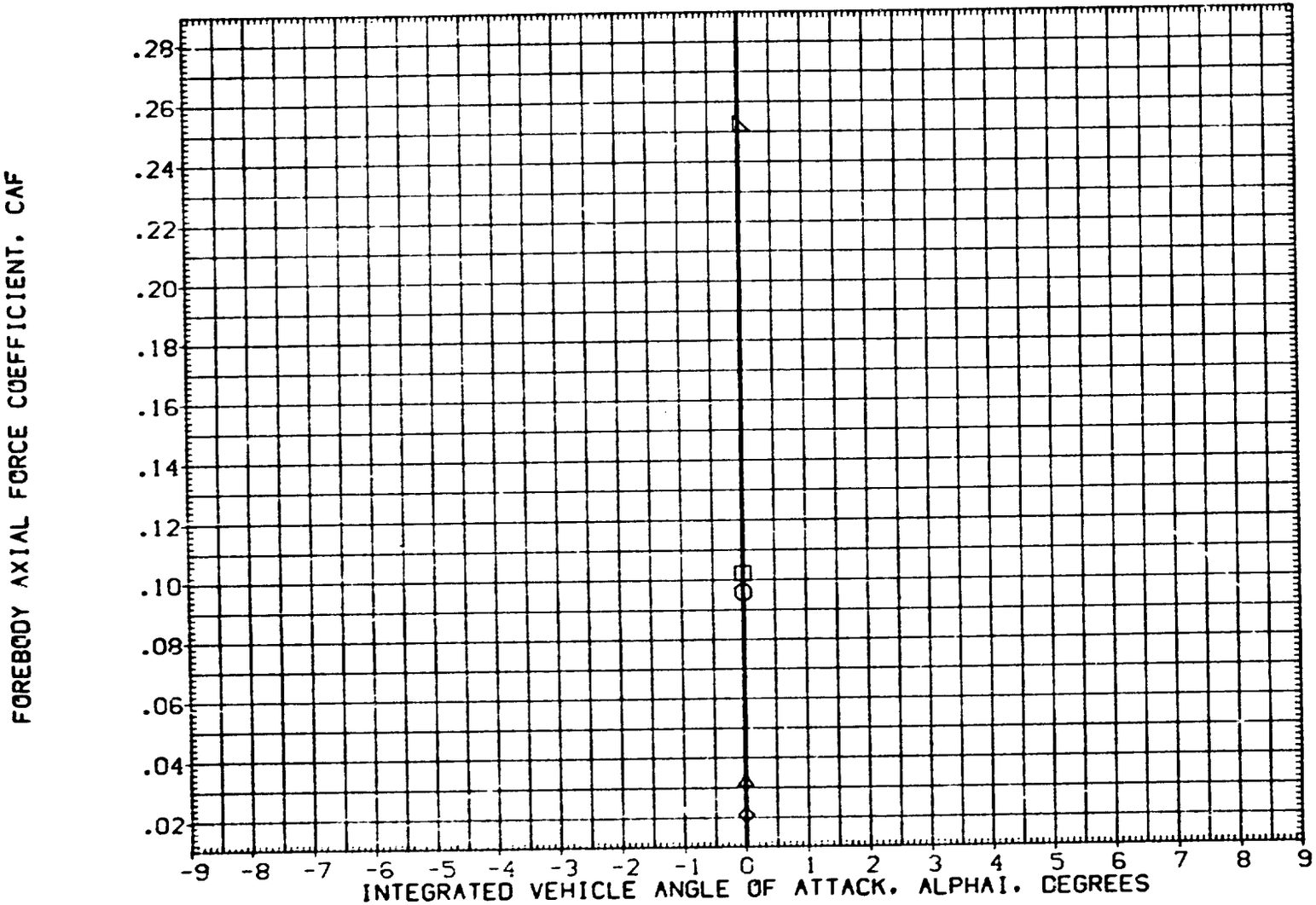


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)BETAI = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	AMES97-019(IA81) LVAP OPBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

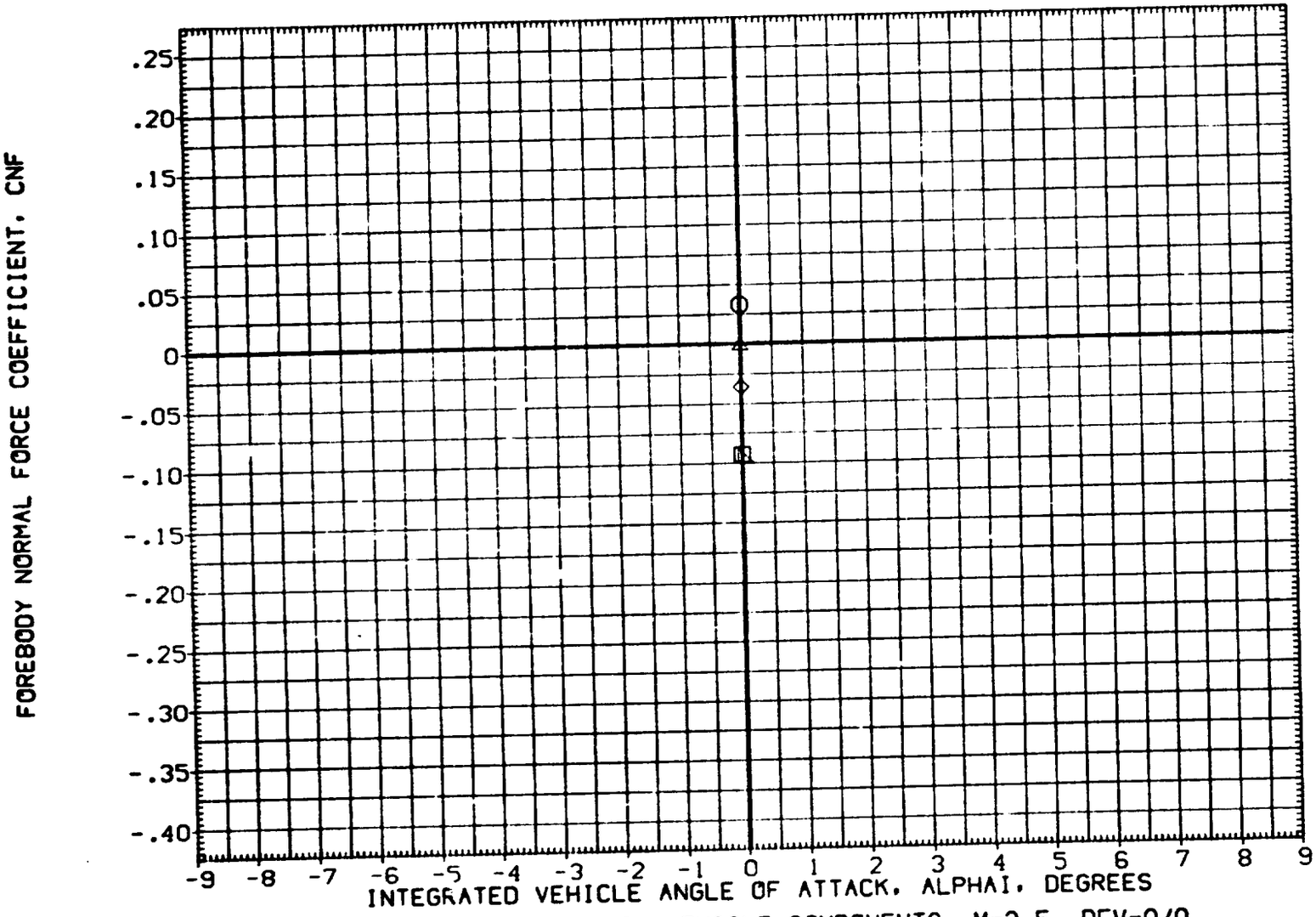


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)BETAI = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)		AMES97 019(IA81) LVAP INT /EH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMPP	976.0000	IN. XT
YMPP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

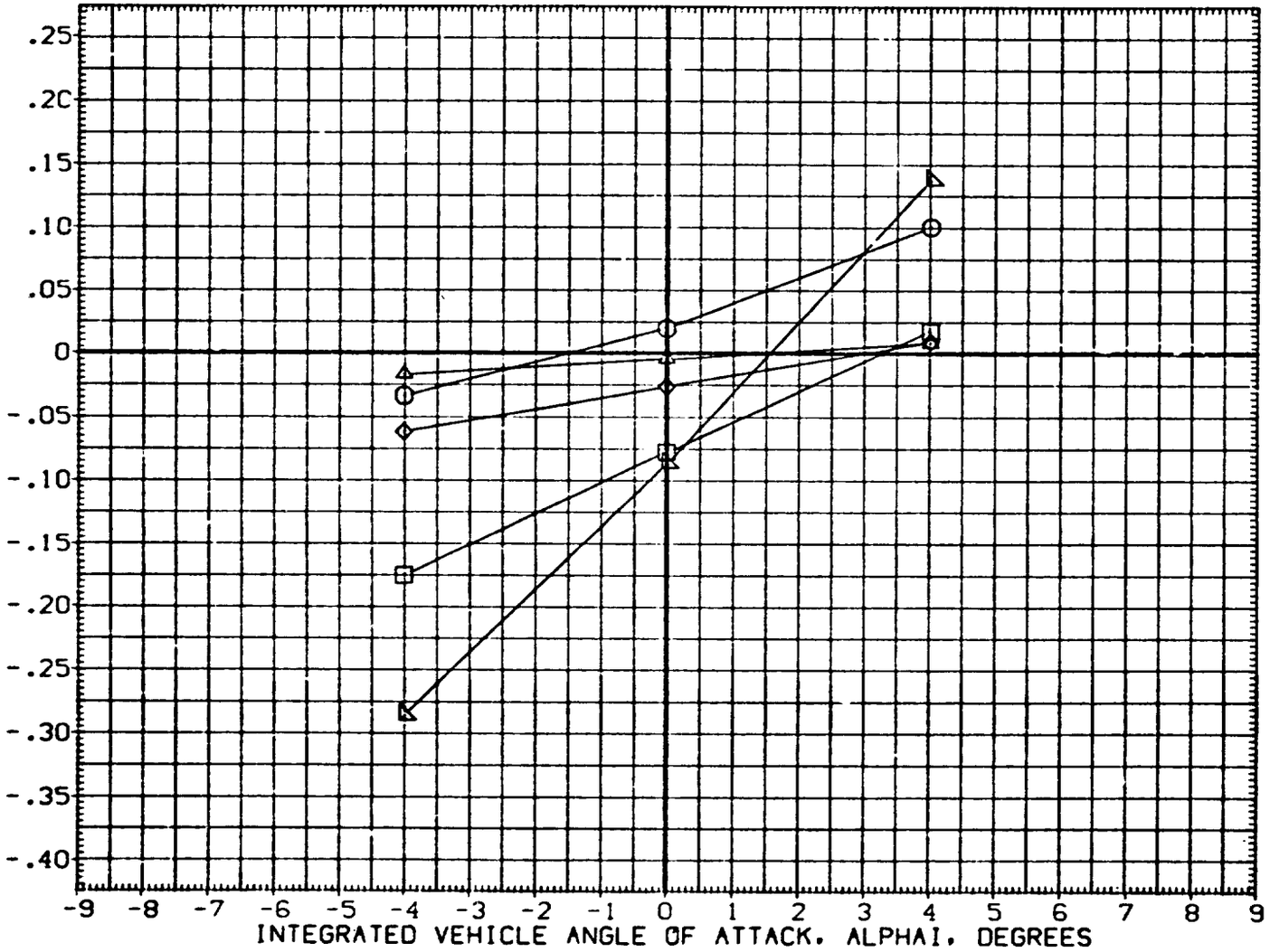


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	▽	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	◁	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

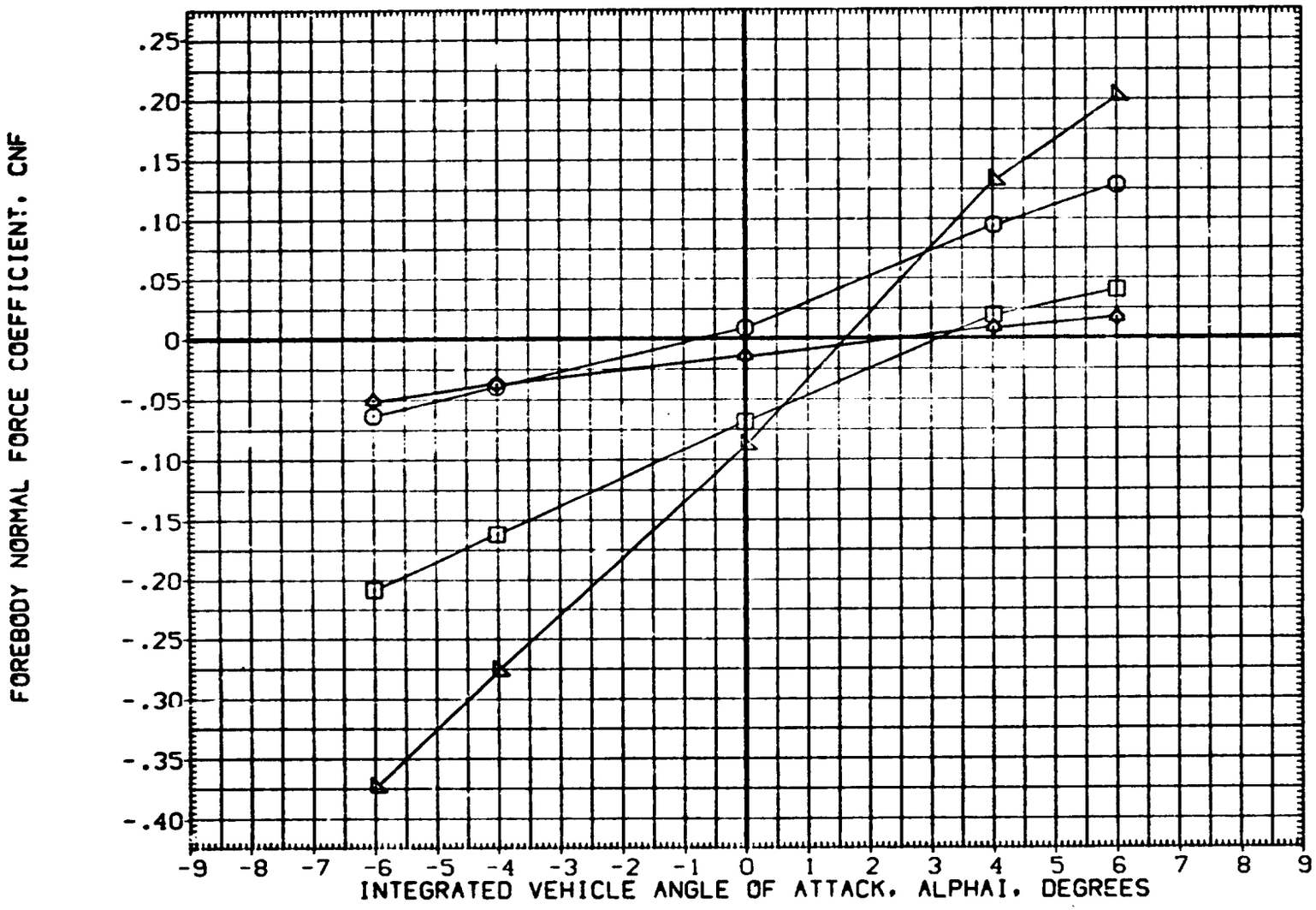


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)		AMES97-019(IA81) LVAP INT TEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

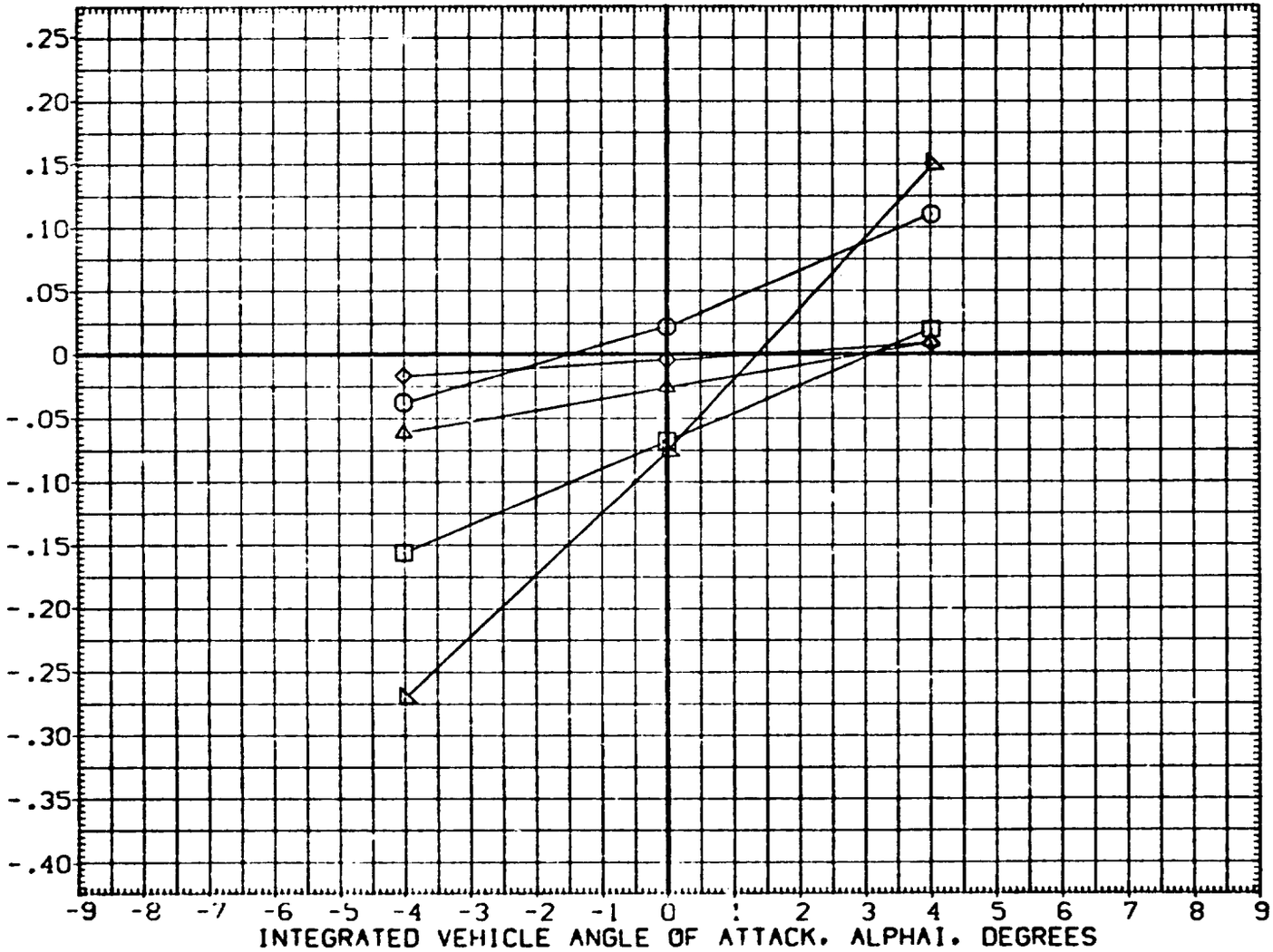


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)BETAI = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

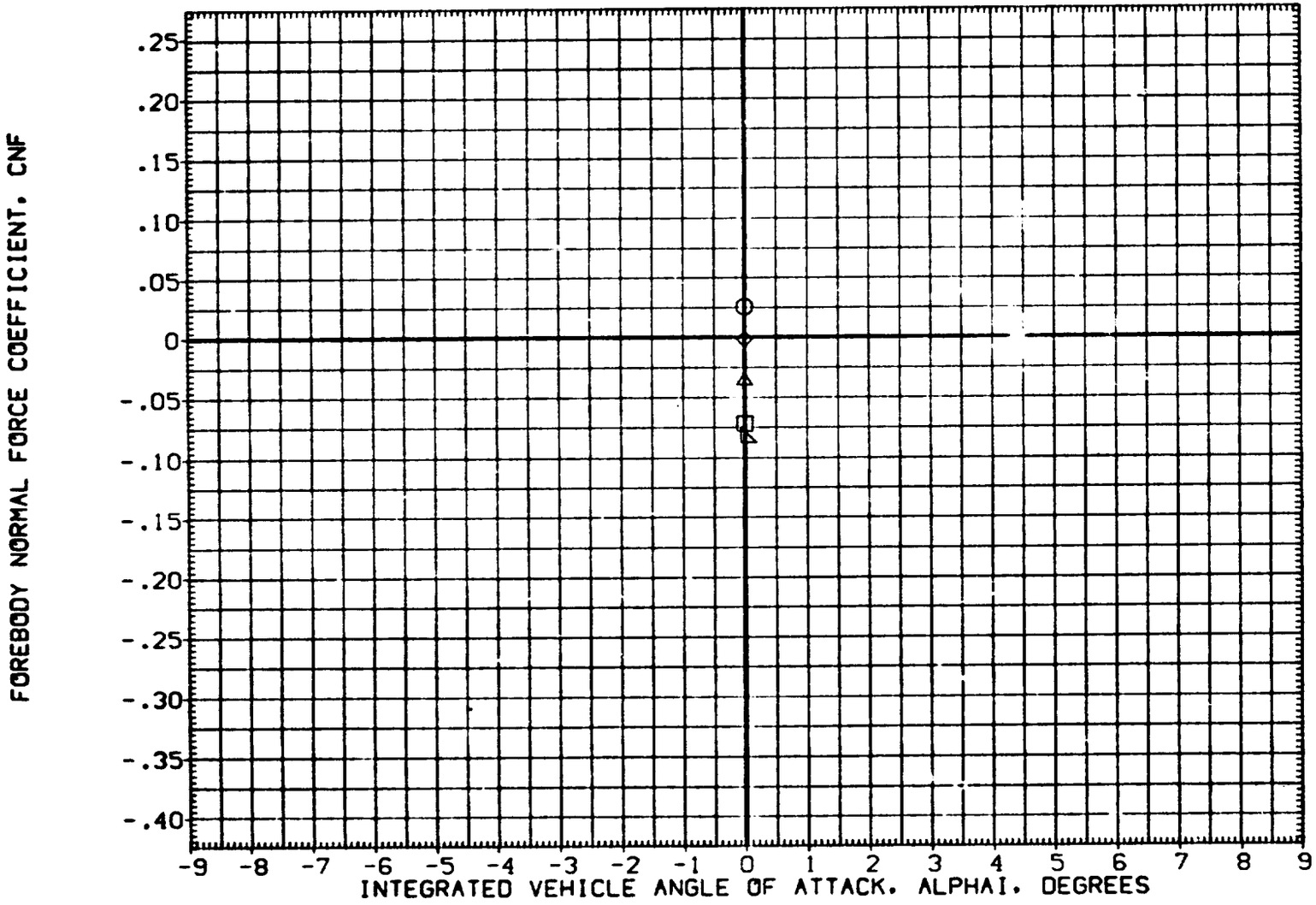


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO42)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

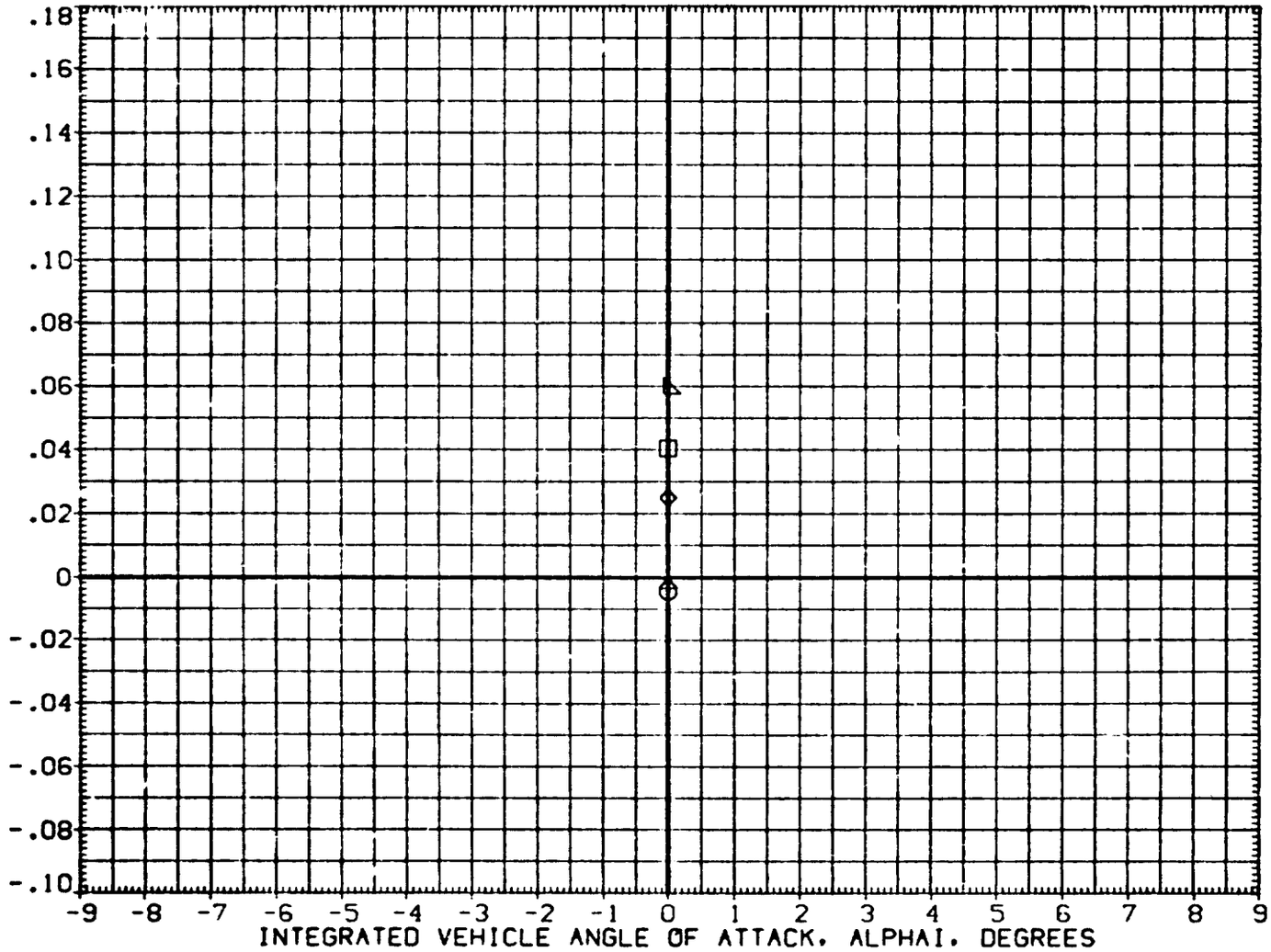


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)BETAI = -6.70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET742)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)	◁	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

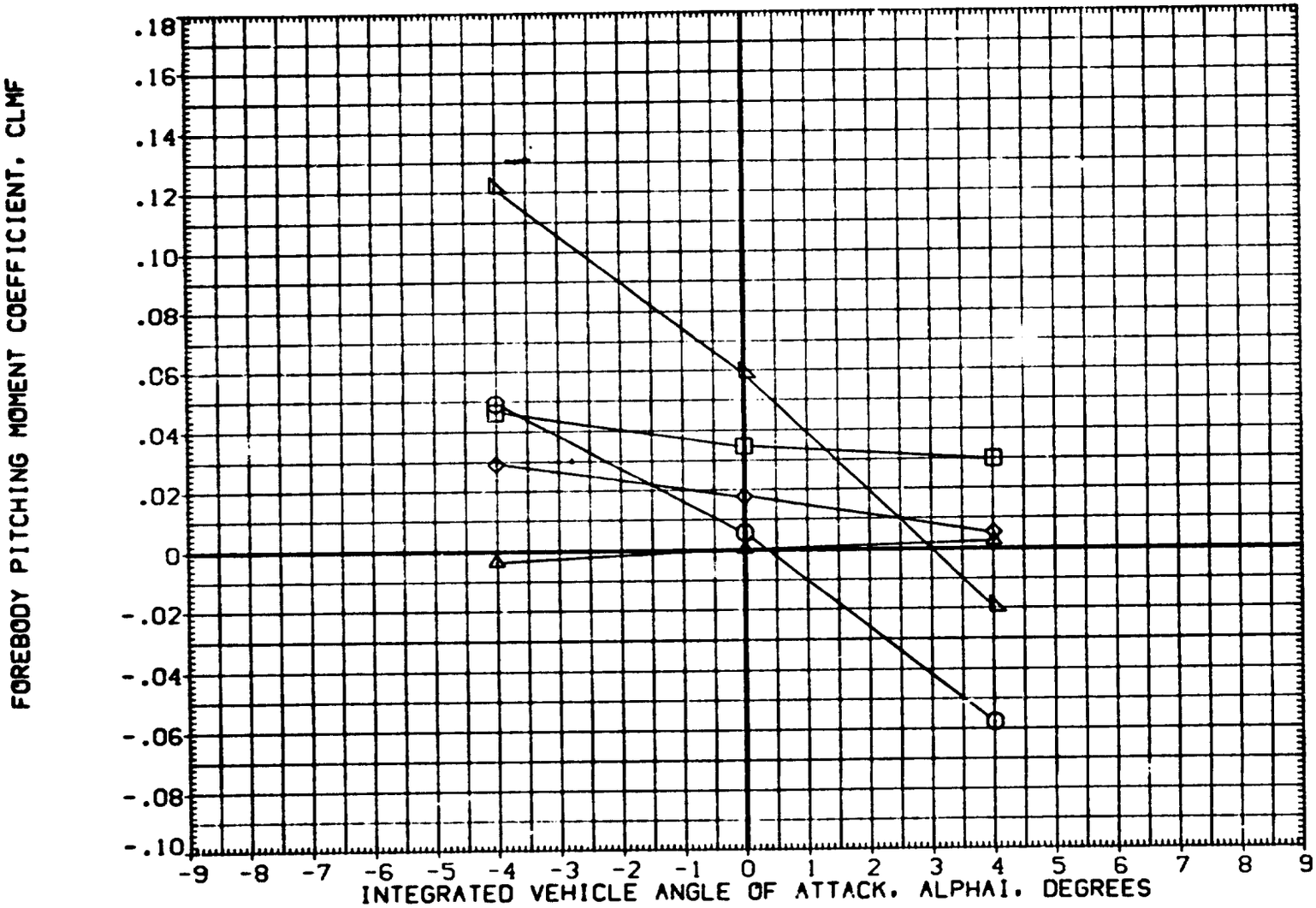


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)BETAI = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET042)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

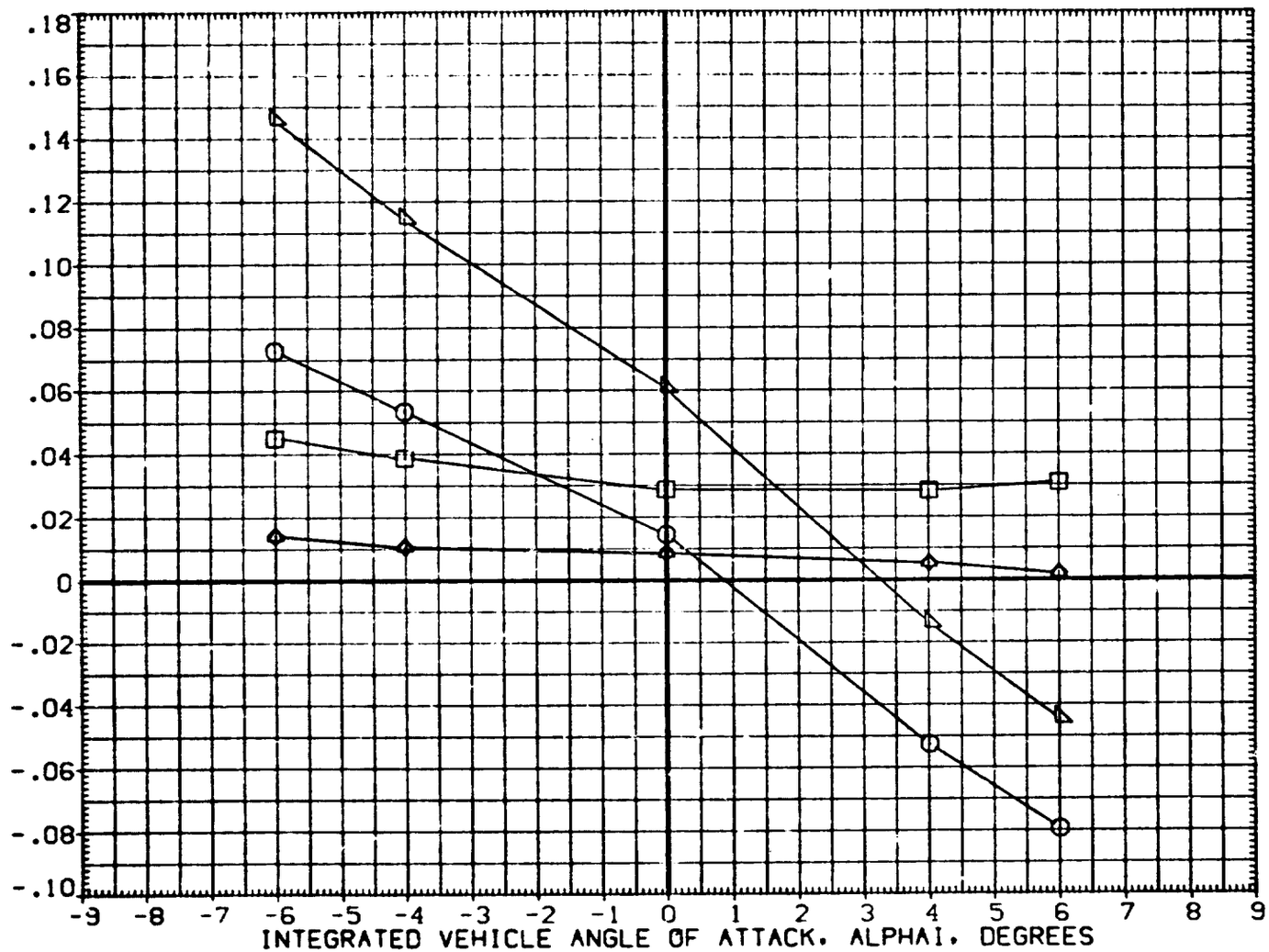


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)BETAI = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET042)	□	AMES97-019([ABI) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)	◇	AMES97-019([ABI) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	▽	AMES97-019([ABI) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	△	AMES97-019([ABI) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)	◁	AMES97-019([ABI) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

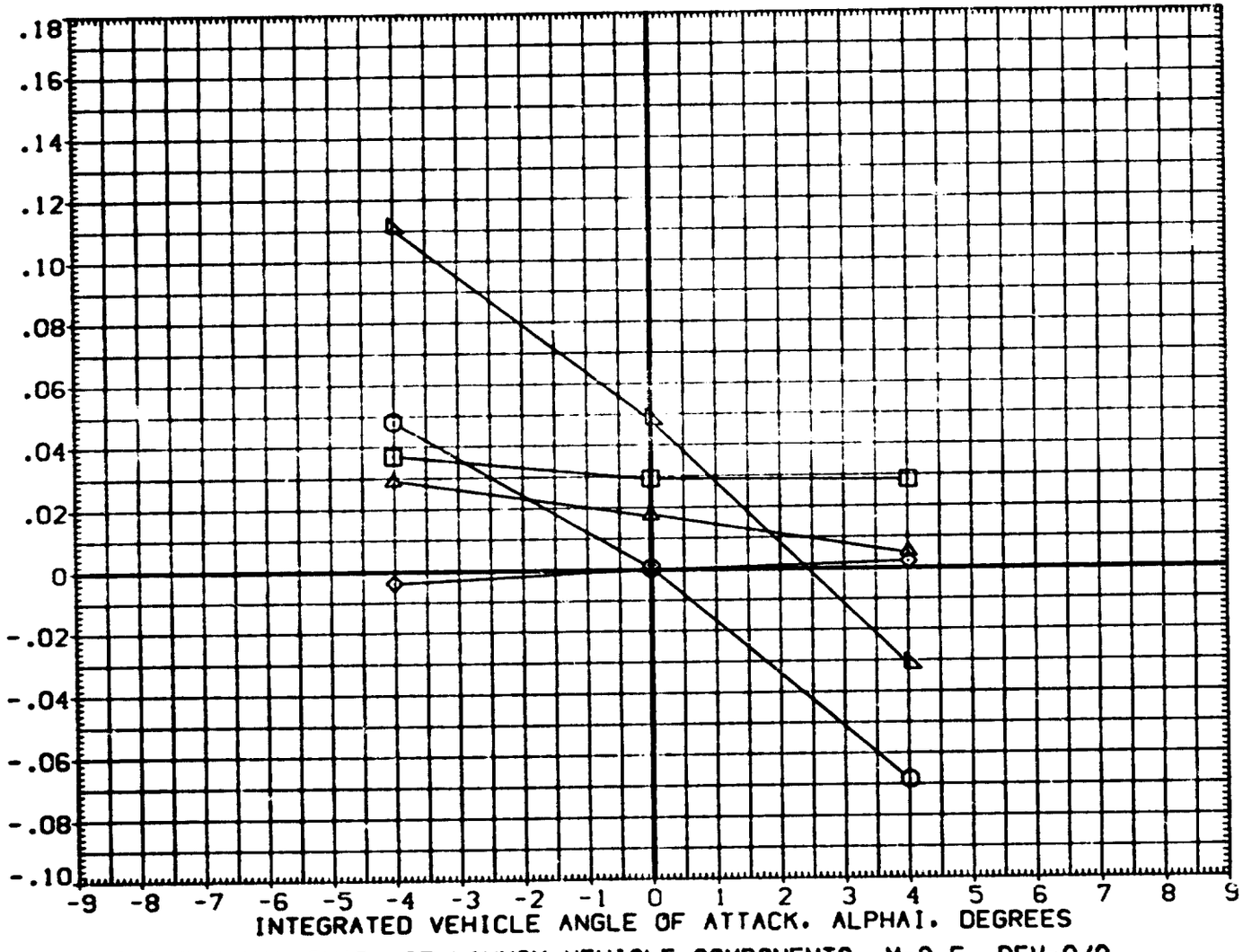


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)BET :! = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO42)	□	AMES97-019(1AB1) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(METT42)	□	AMES97-019(1AB1) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(METL42)	◇	AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(METR42)	△	AMES97-019(1AB1) LVAP R-LRB ALL ML SEALED	.000	.000	2.500	.000
(MET142)	▷	AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
dREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

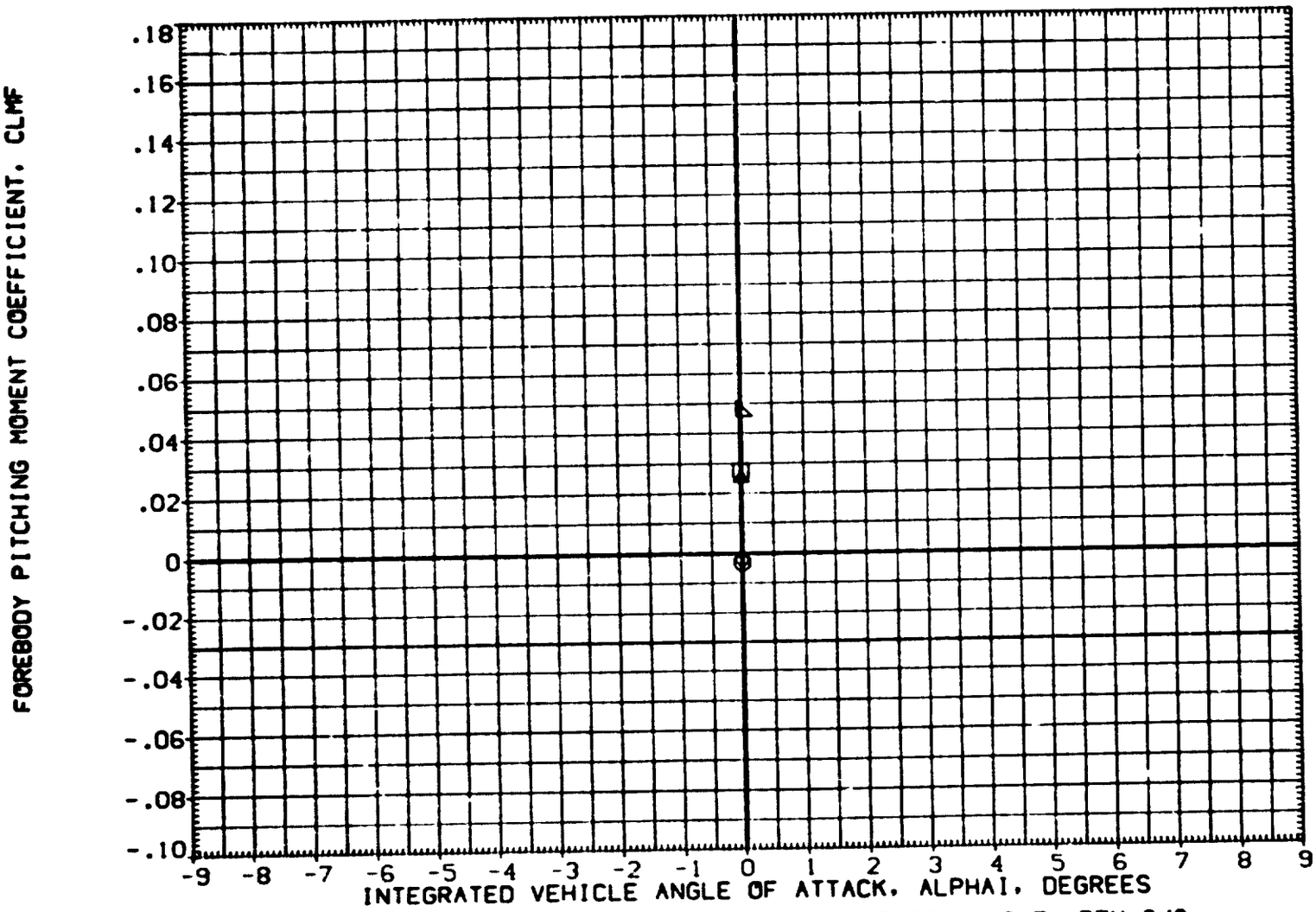


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)BETAI = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METO42)	○	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(METT42)	△	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(METL42)	□	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(METR42)	▷	AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	.000	.000	2.500	.000
(MET142)	◇	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

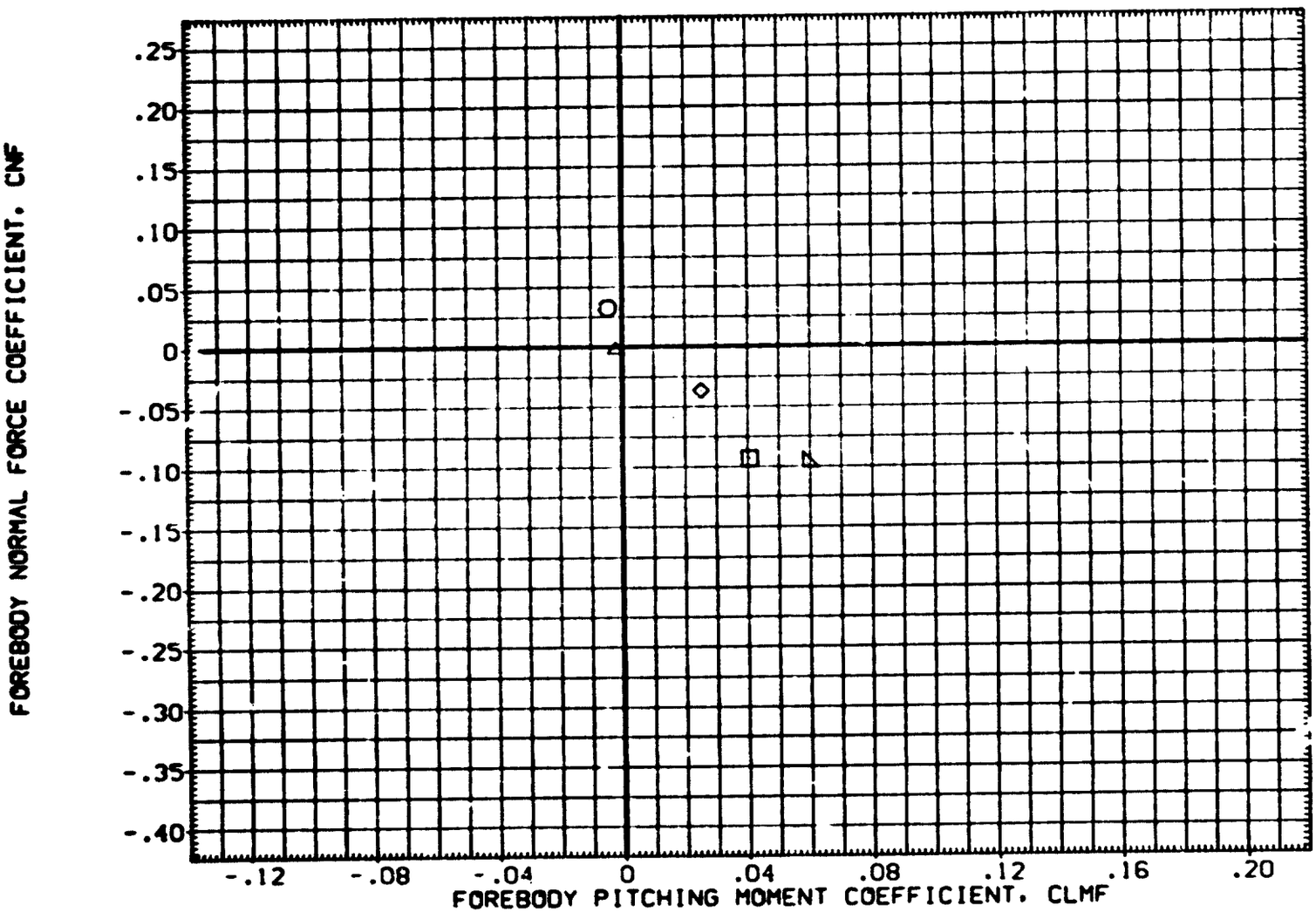


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)BETA = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET042)	□	AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(METT42)	◇	AMES97-019([A81]) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(METL42)	▽	AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(METR42)	◁	AMES97-019([A81]) LVAP R-SRB ALL ML SEALED	.000	.000	2.500	.000
(MET142)	△	AMES97-013([A81]) LVAP INT VEH ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

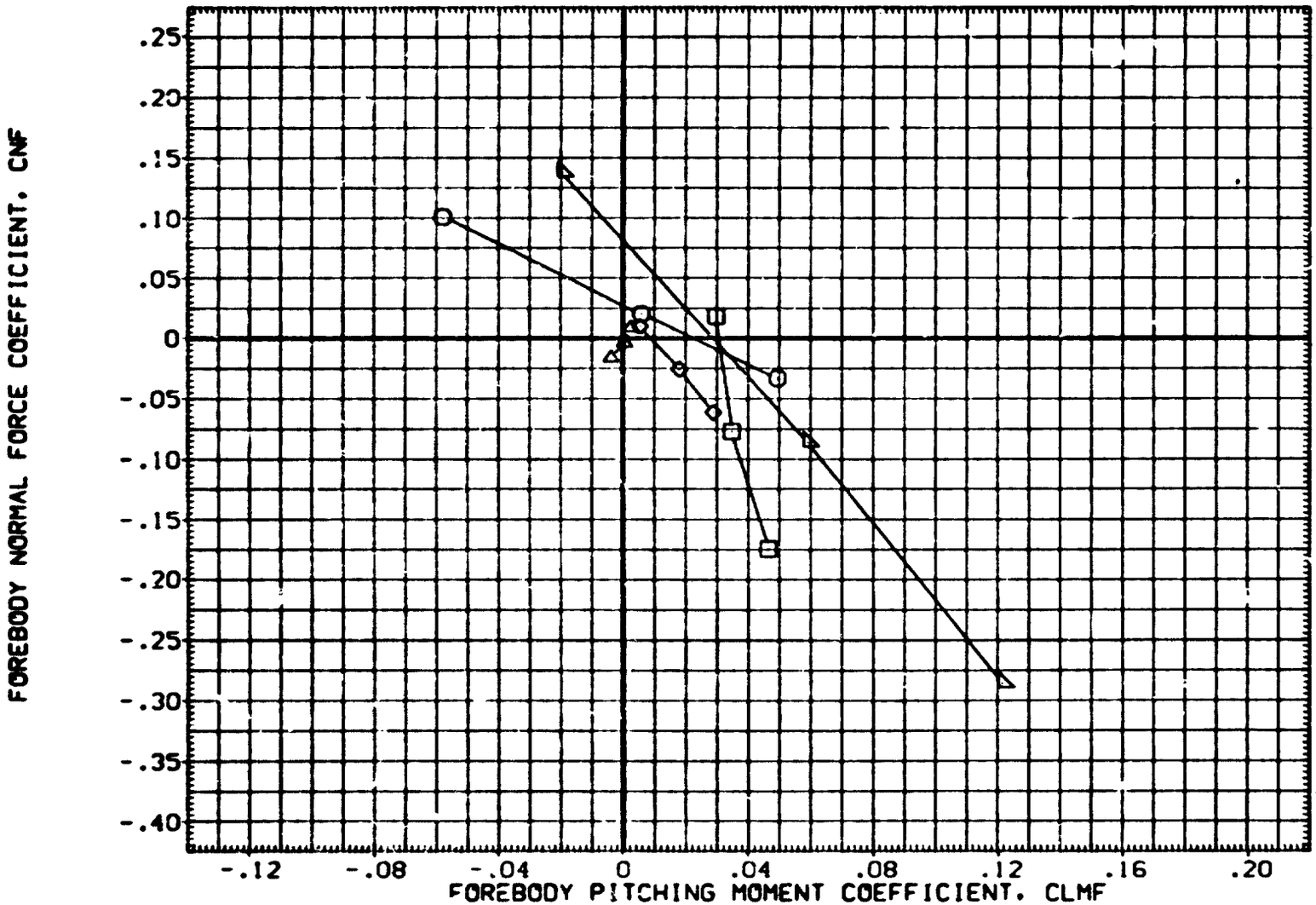


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)BETA = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(METT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(METI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

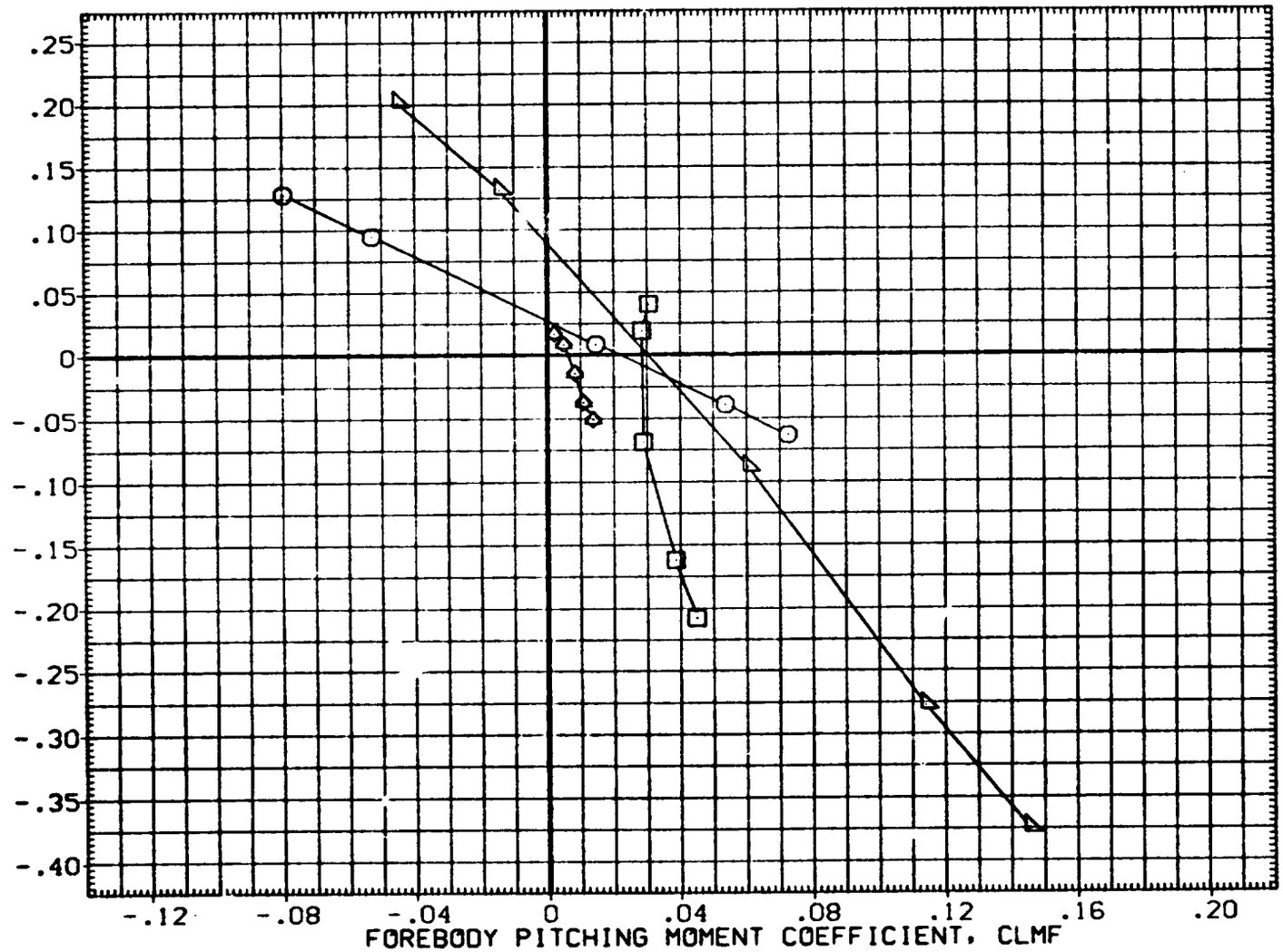


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(MET042)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)		AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

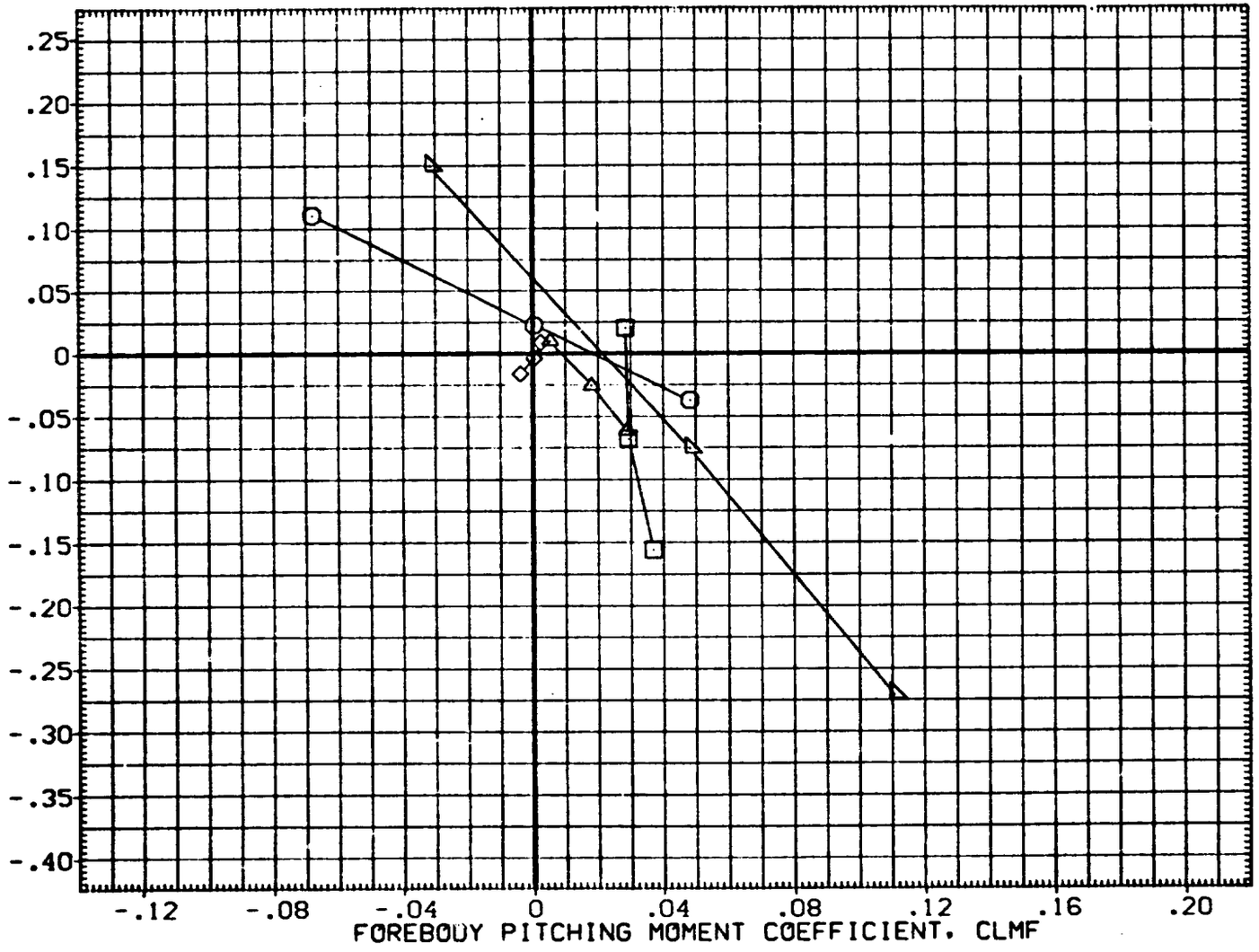


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)BETA = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(MET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(MET142)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(METL42)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(METR42)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(MET142)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

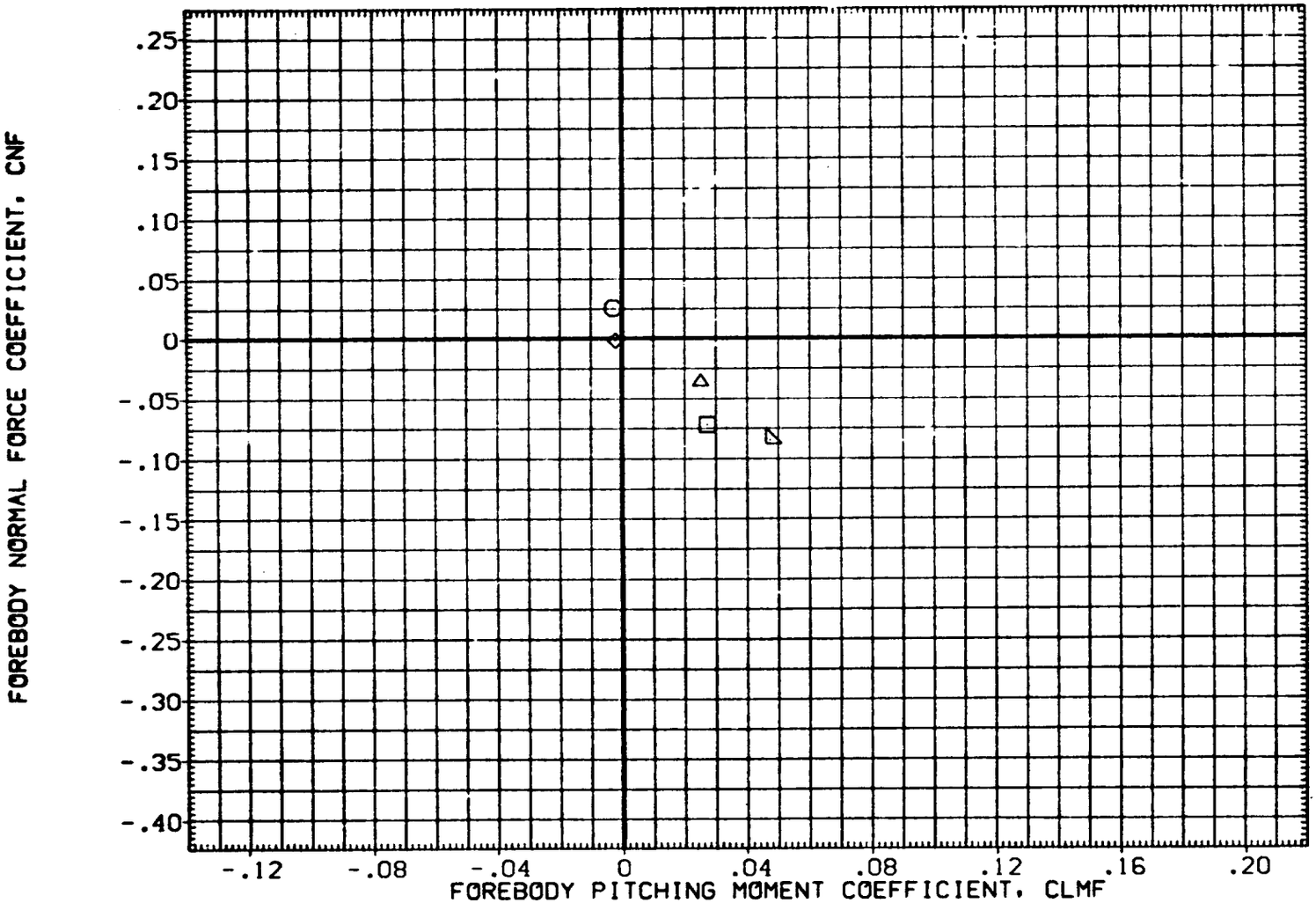


FIG. 16 LONGITUDINAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)BETA = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

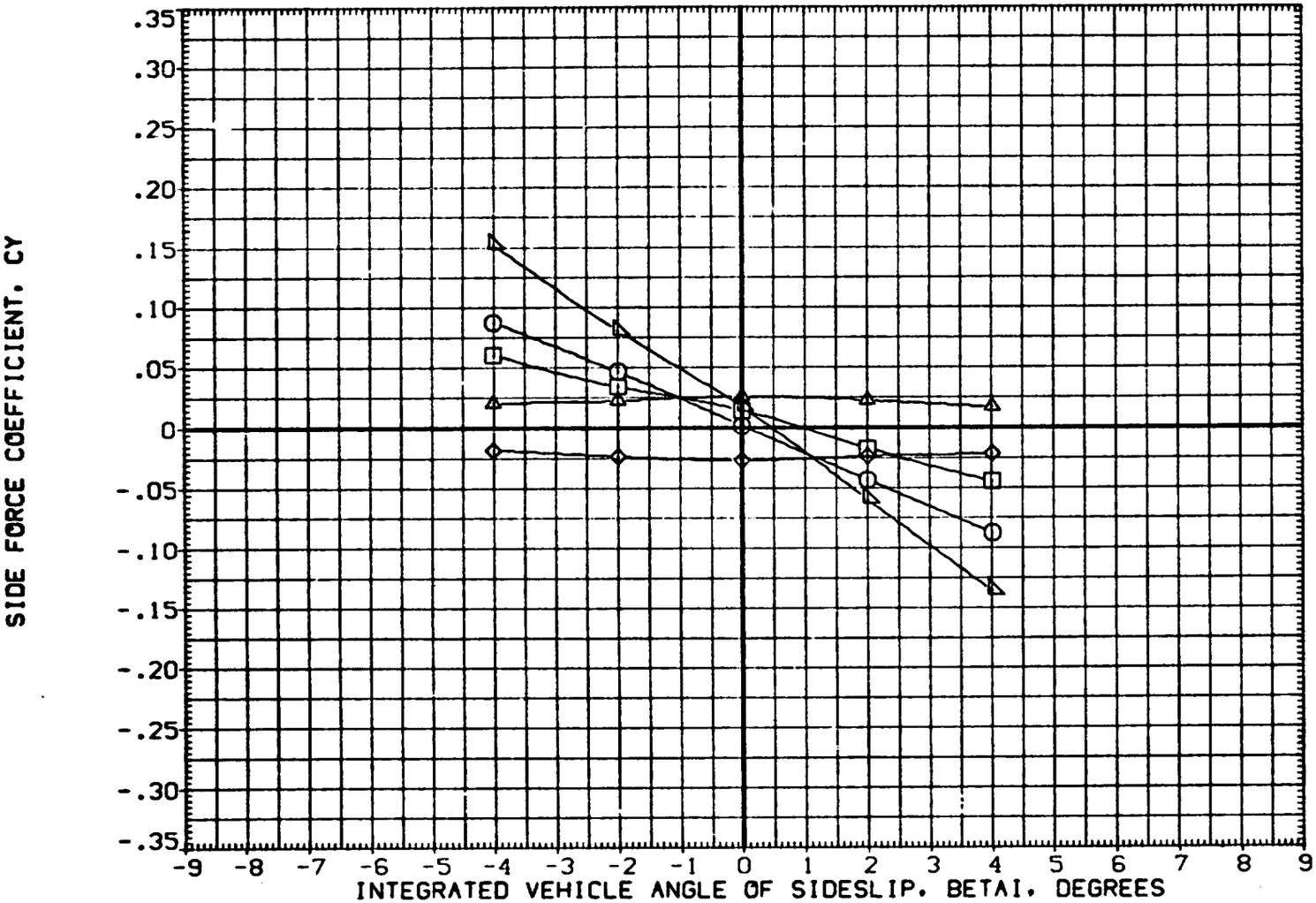


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

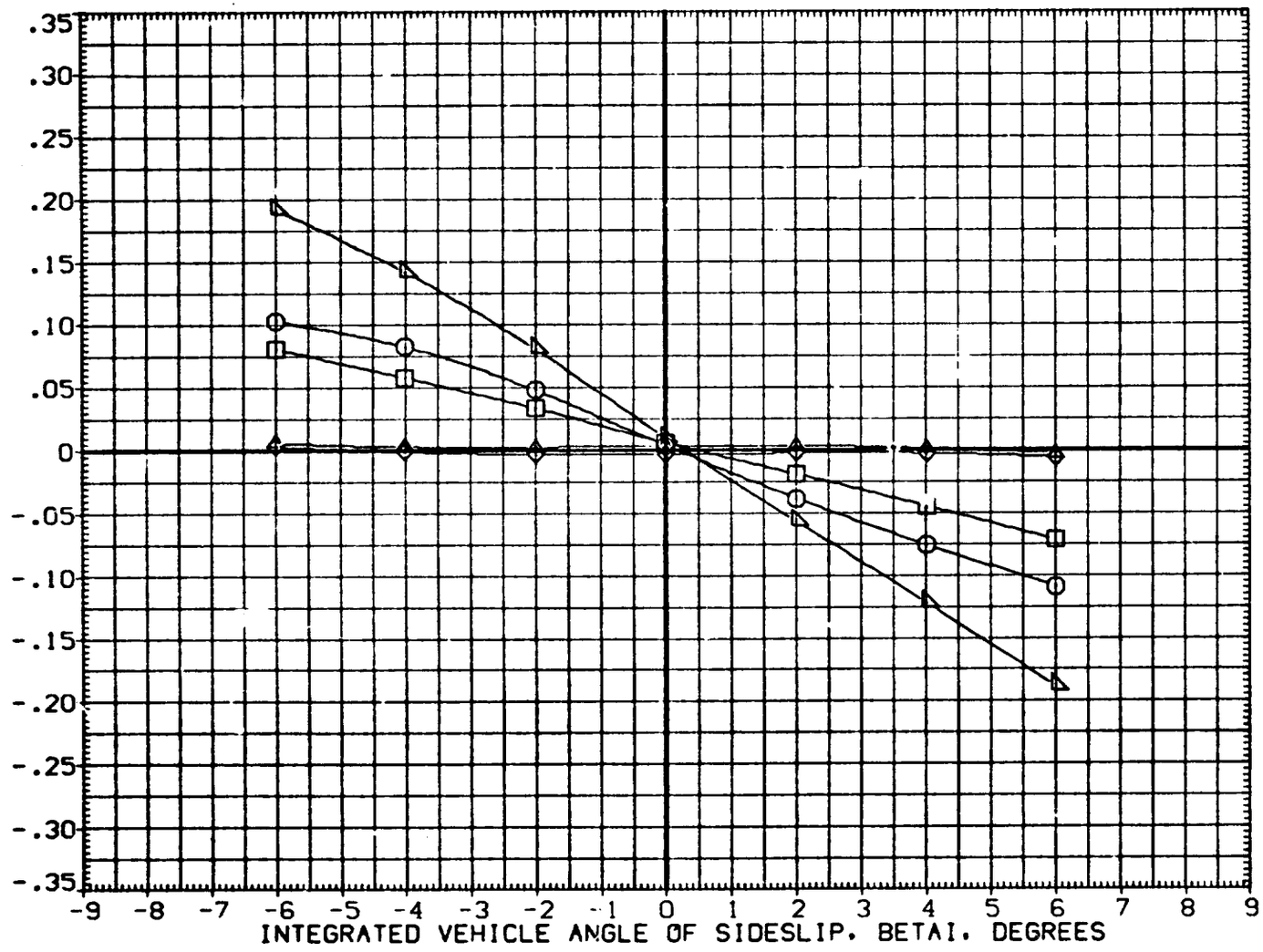


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETD35)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

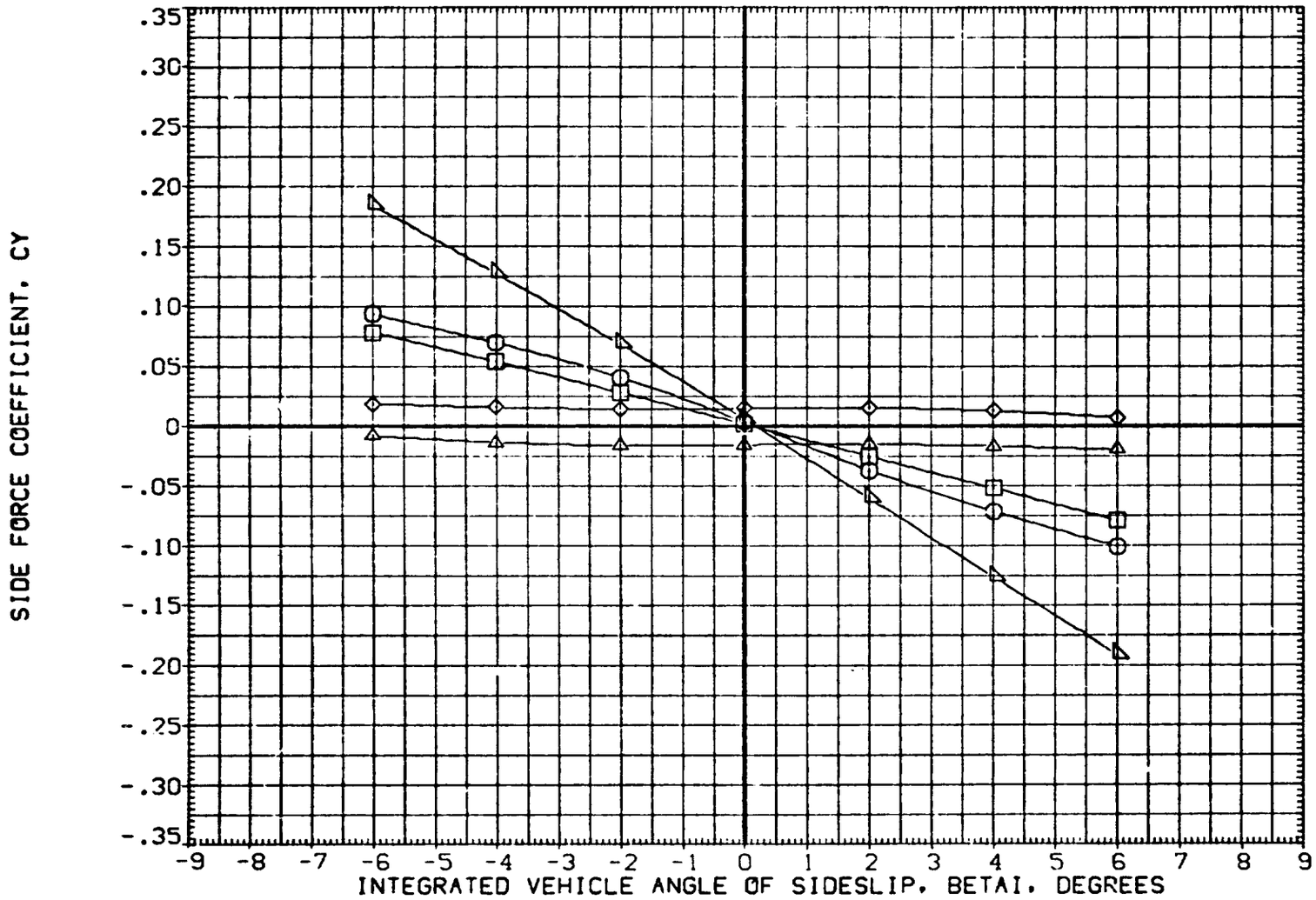


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	◫	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

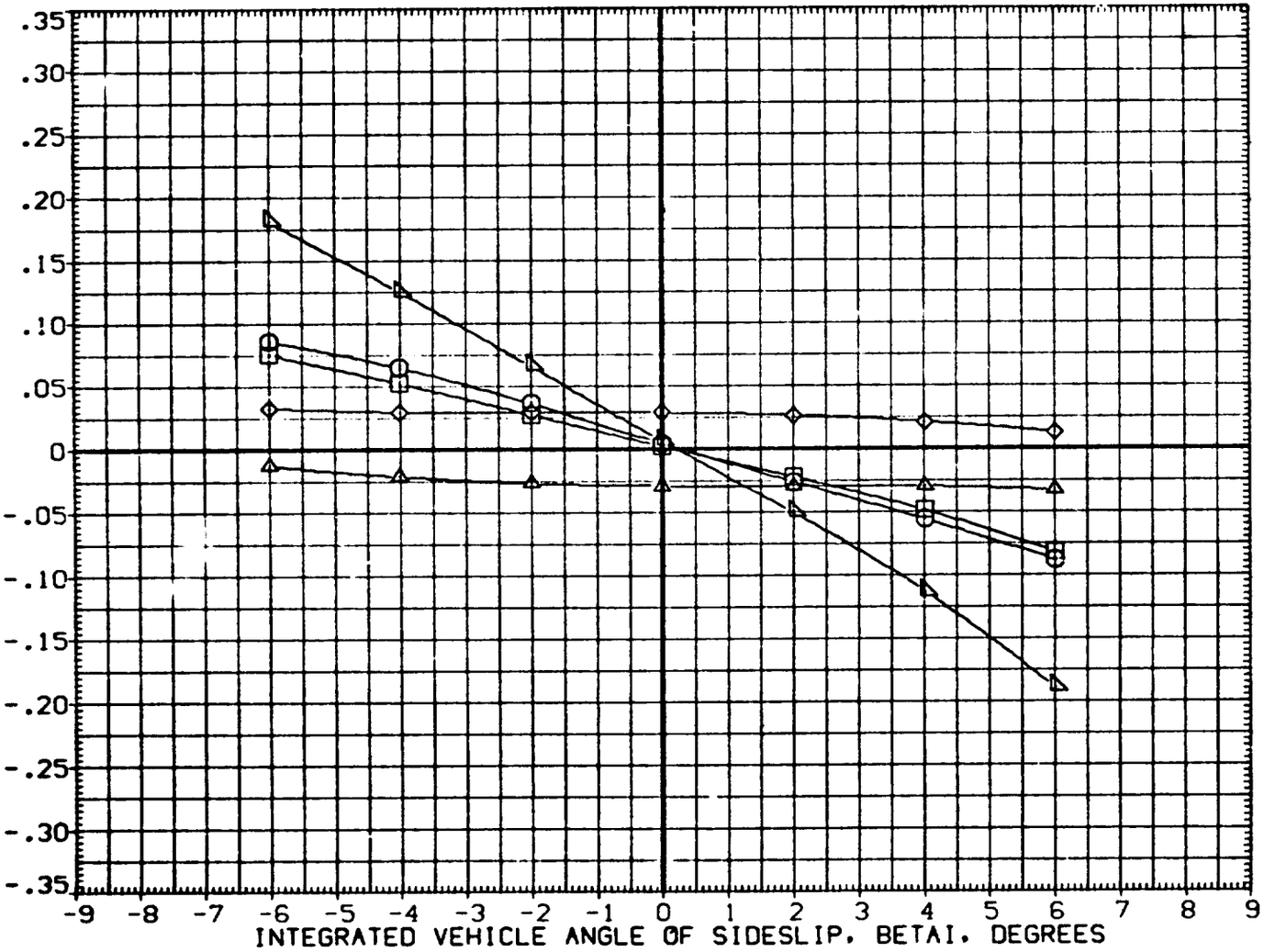


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

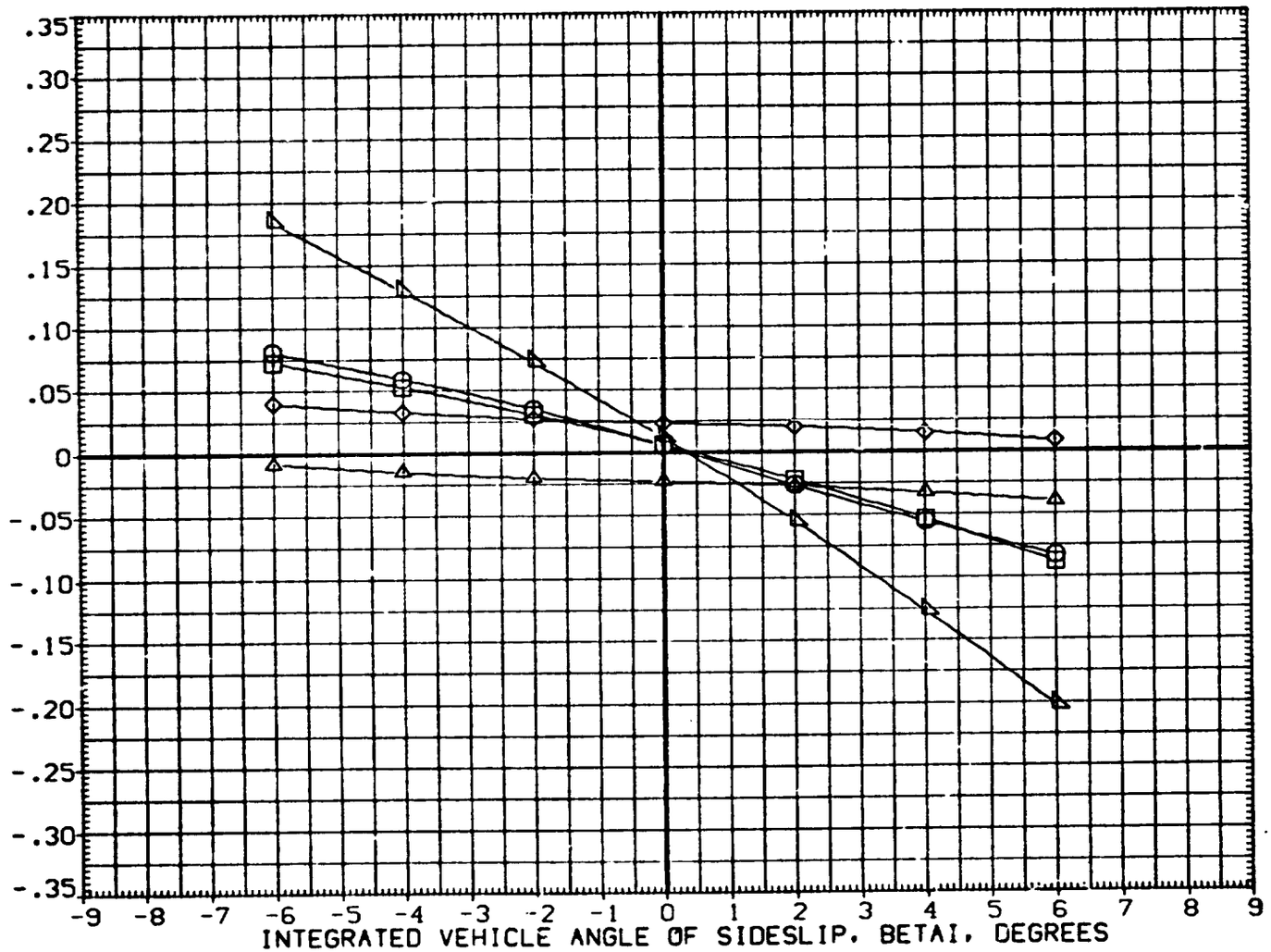


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO35)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

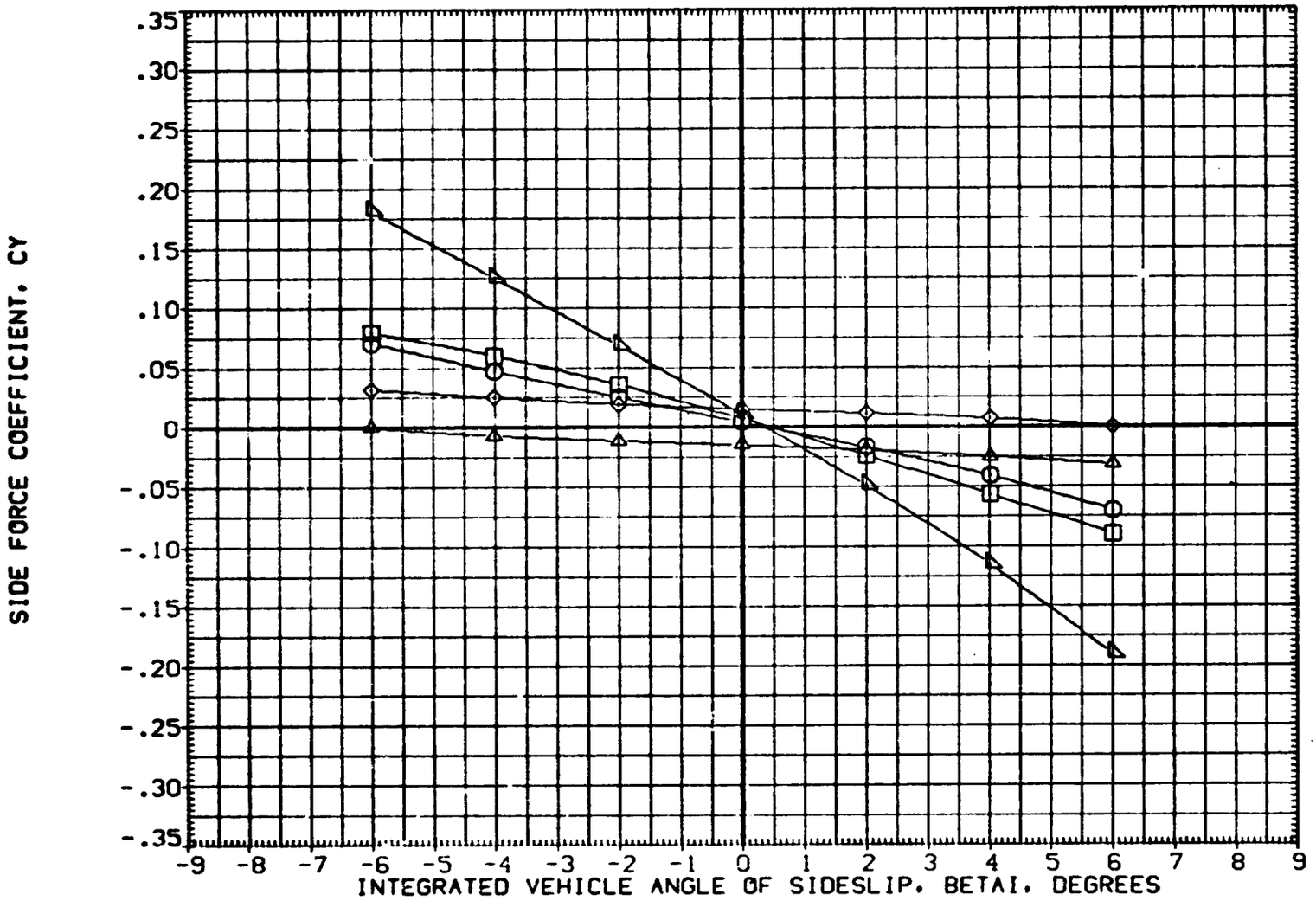


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

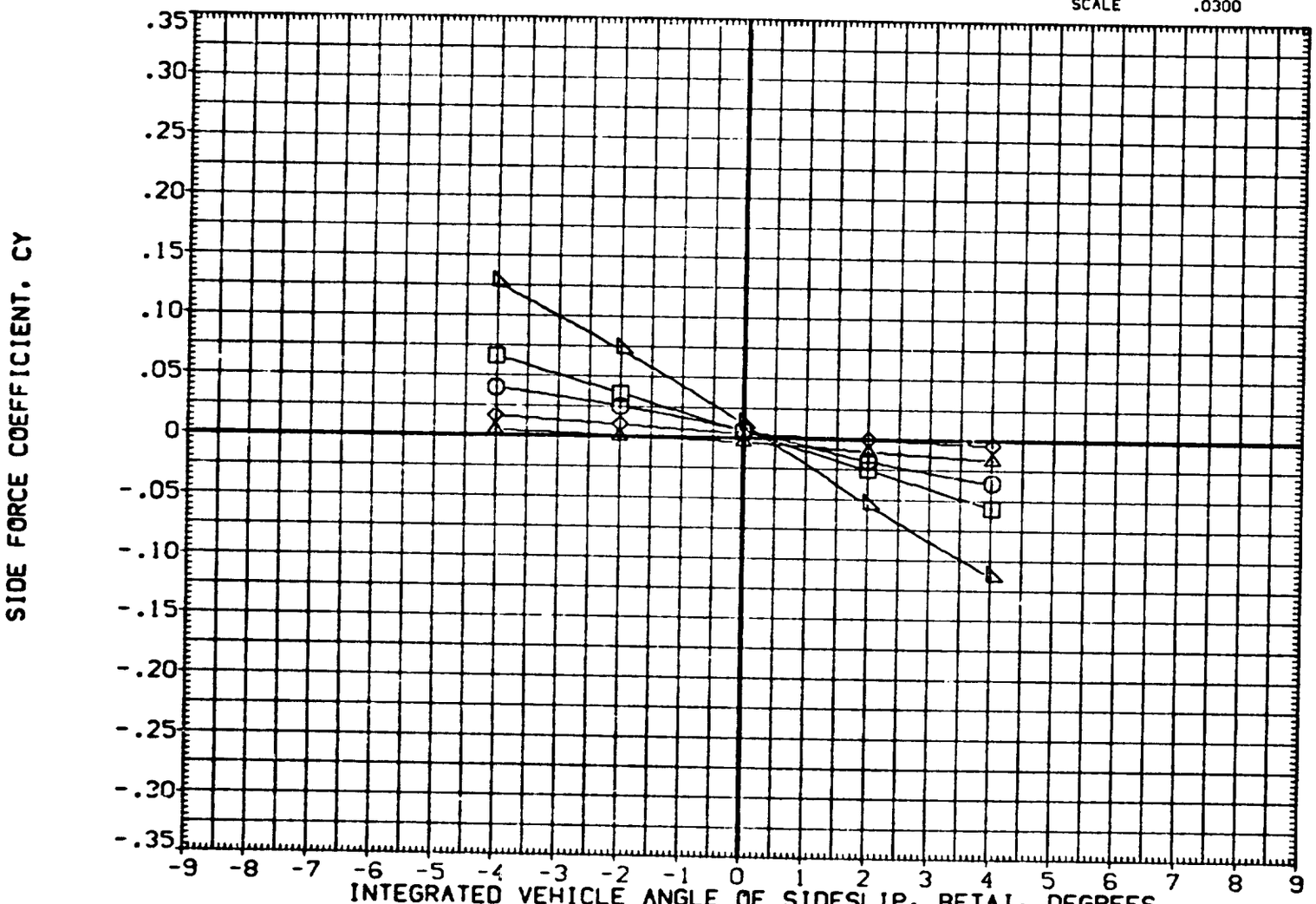


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETOJ5)	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	1.550	.000
(LETTJ5)	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETLJ5)	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETRJ5)	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	1.550	.000
(LETIJ5)	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

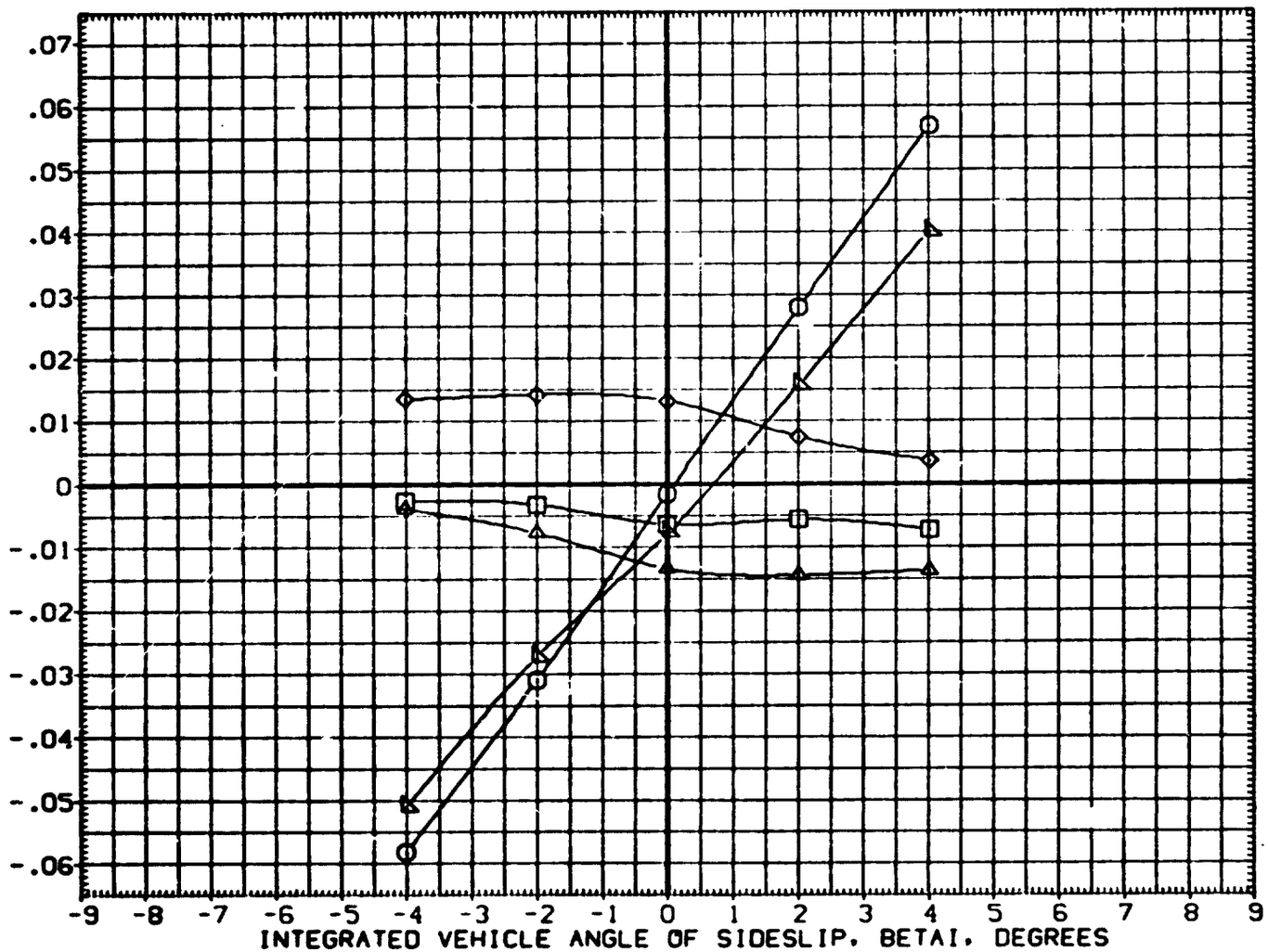


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET035)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

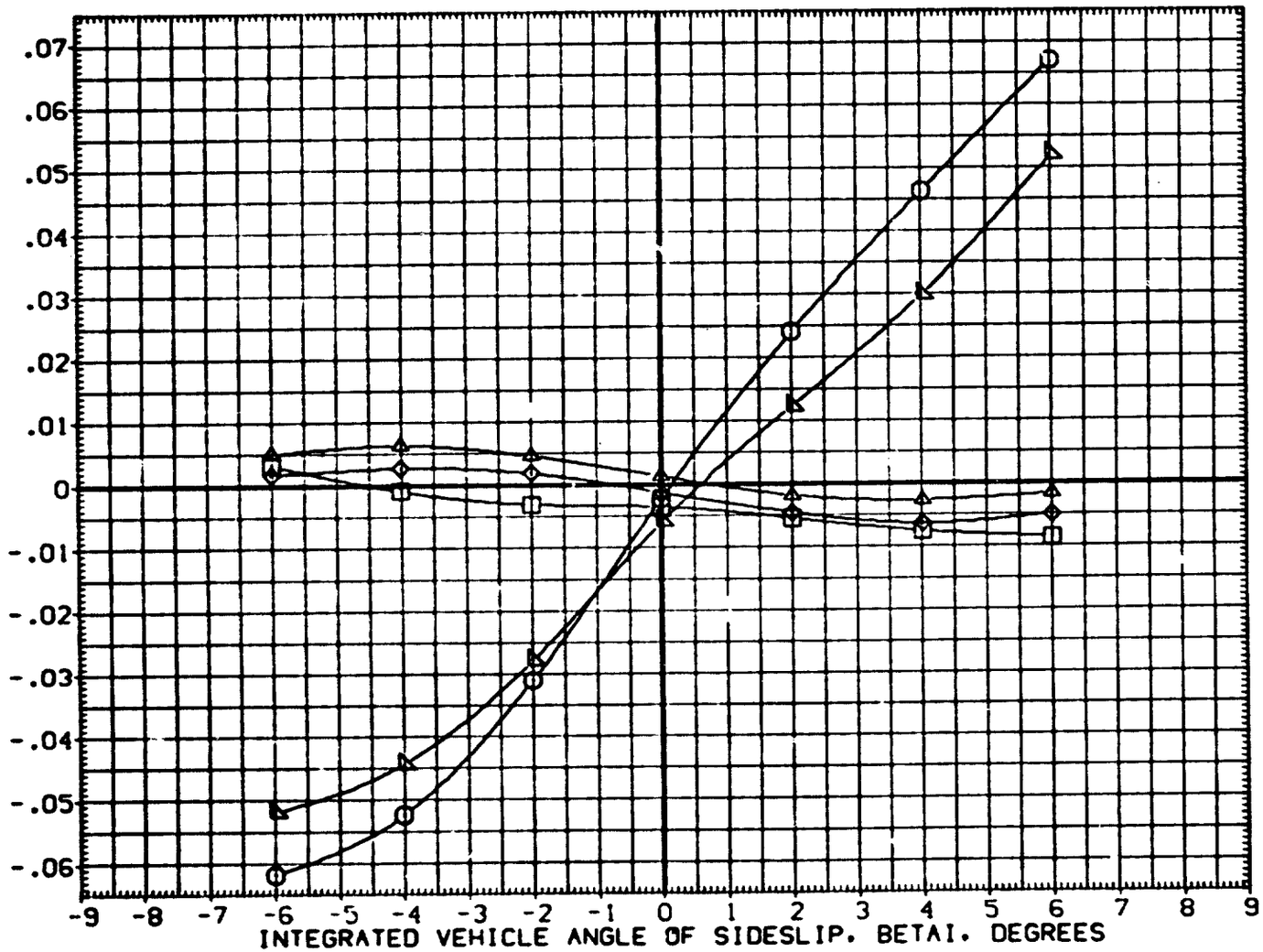


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET033)		AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

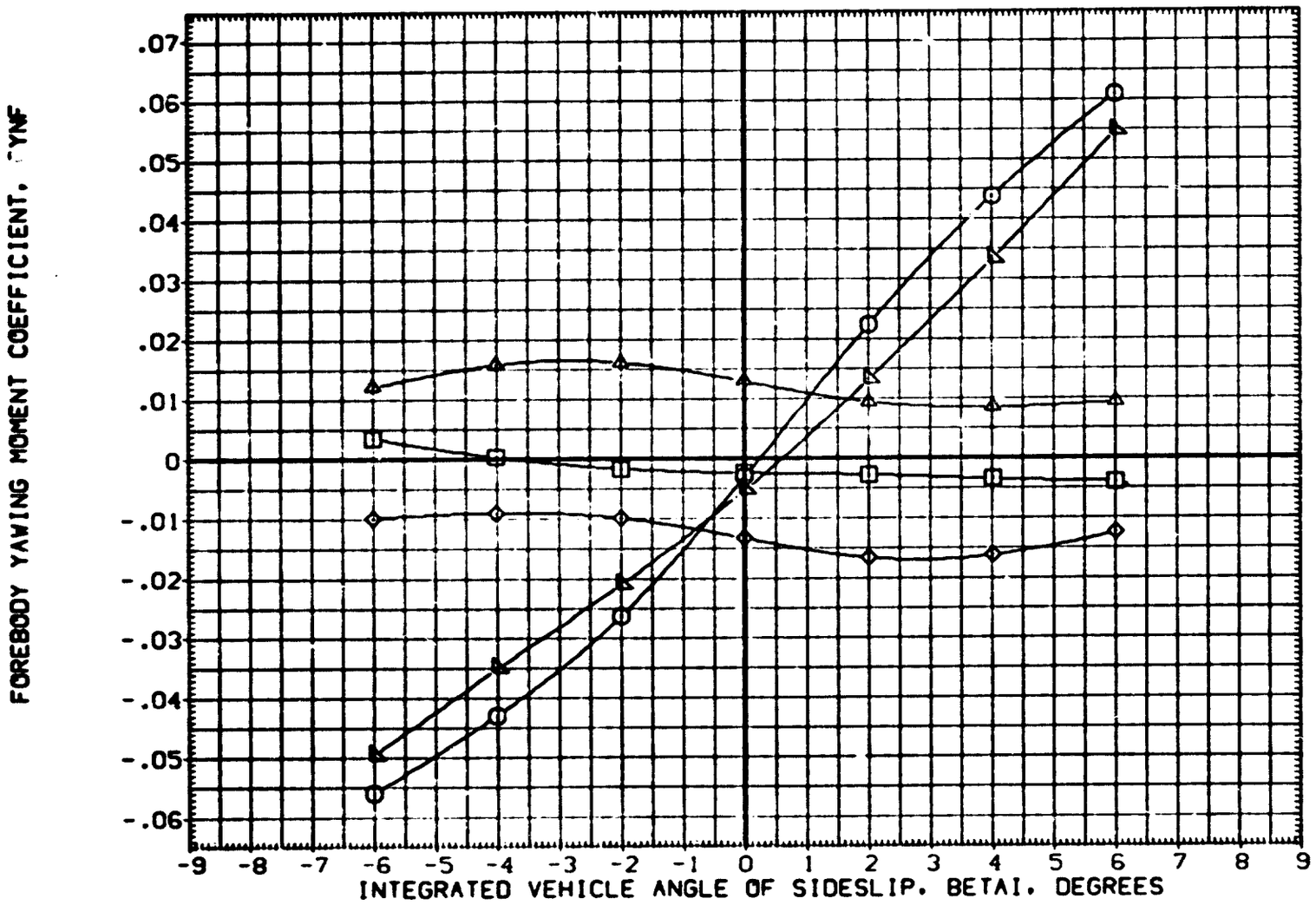


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET035) □	AMES97-019((A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35) ○	AMES97-019((A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35) ◇	AMES97-019((A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35) △	AMES97-019((A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35) ▷	AMES97-019((AC1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

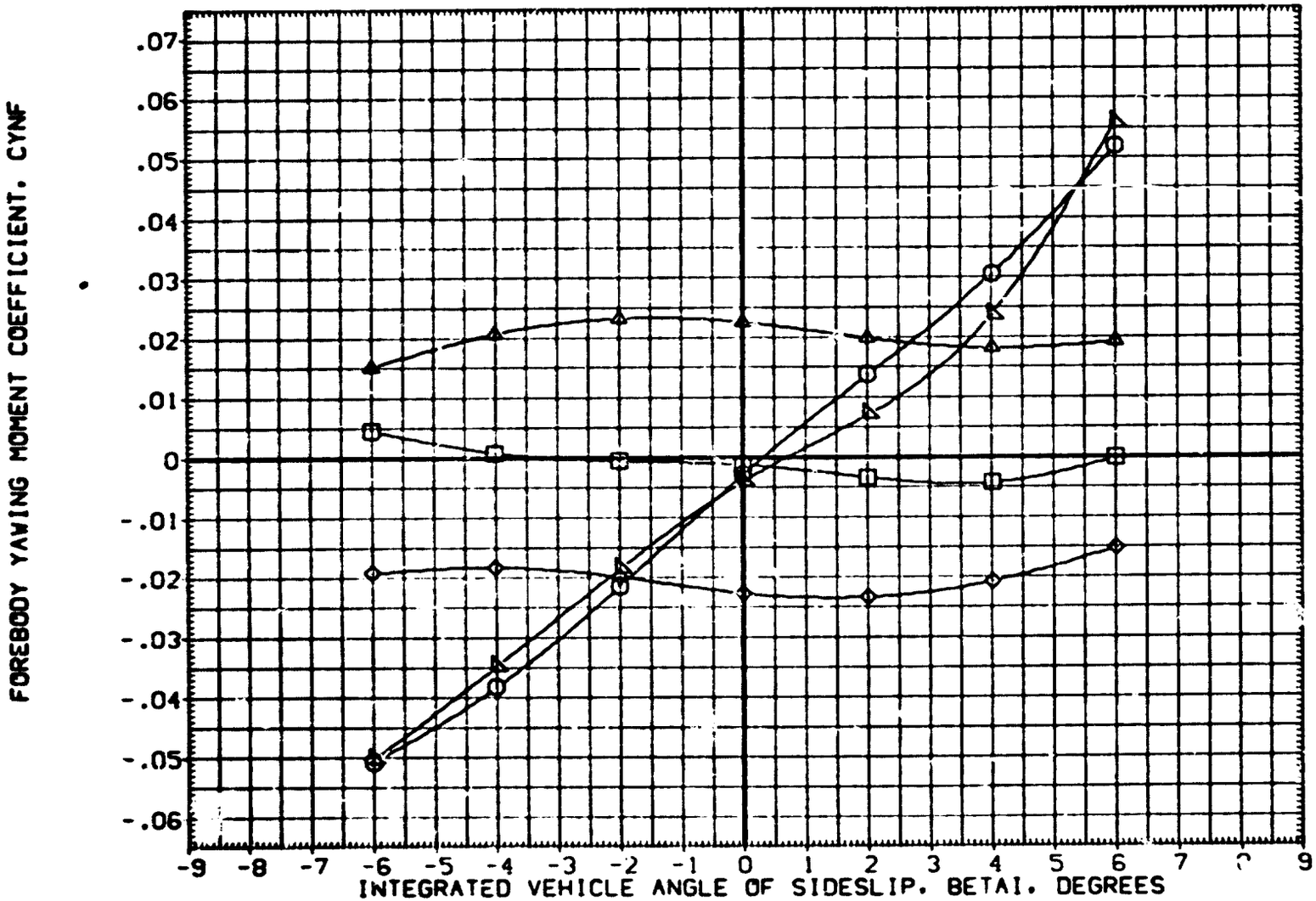


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET035)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

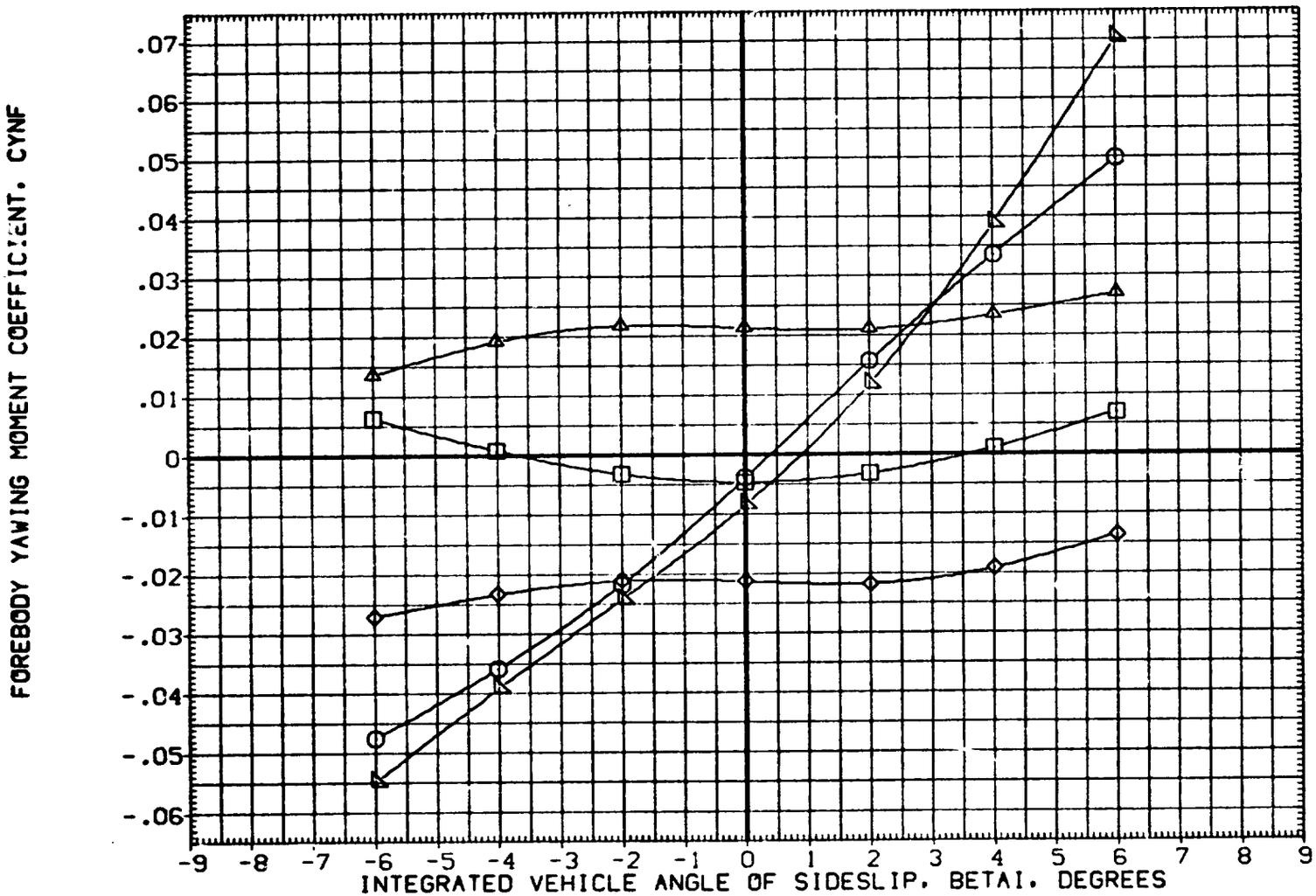


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	⋈	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

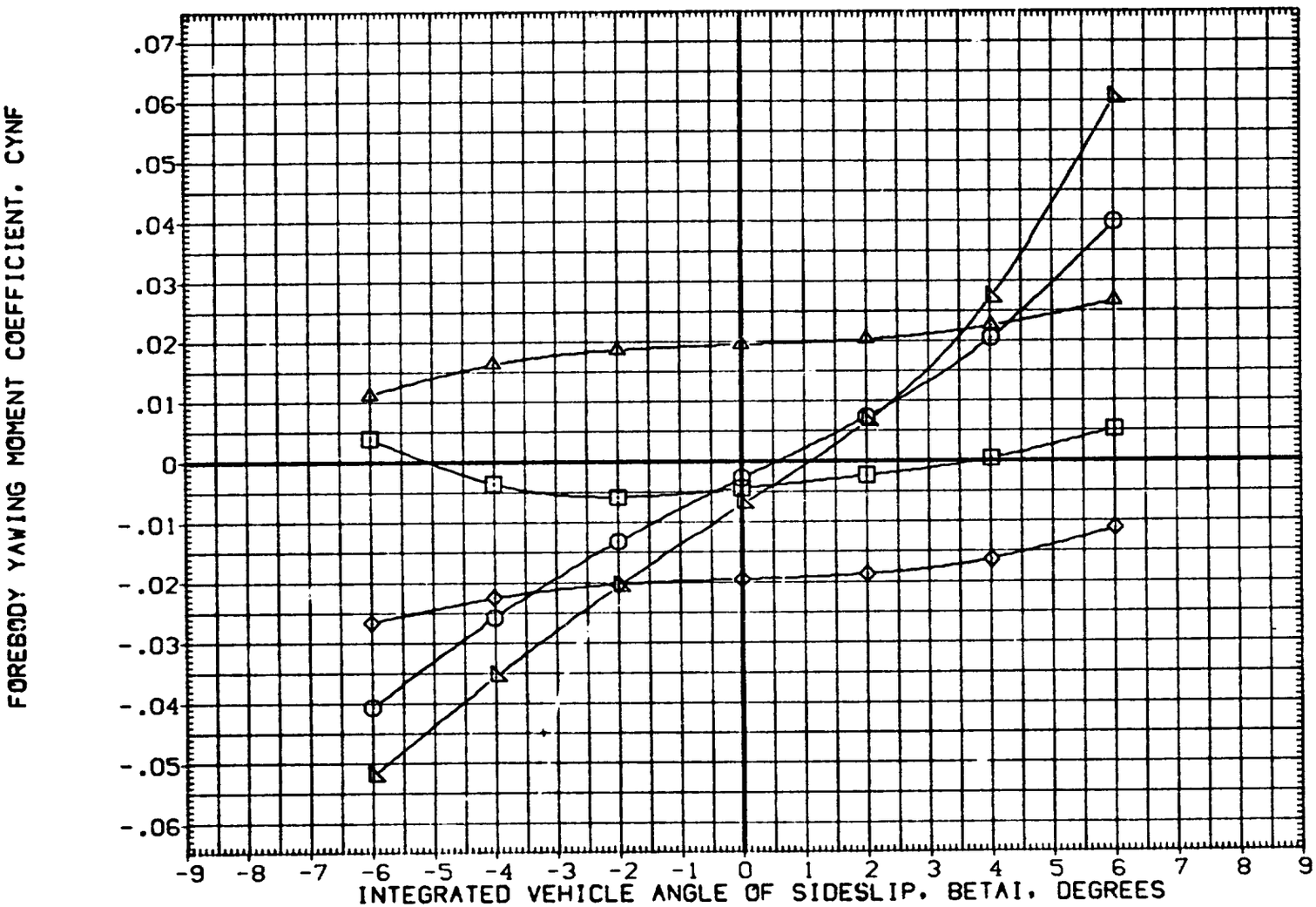


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

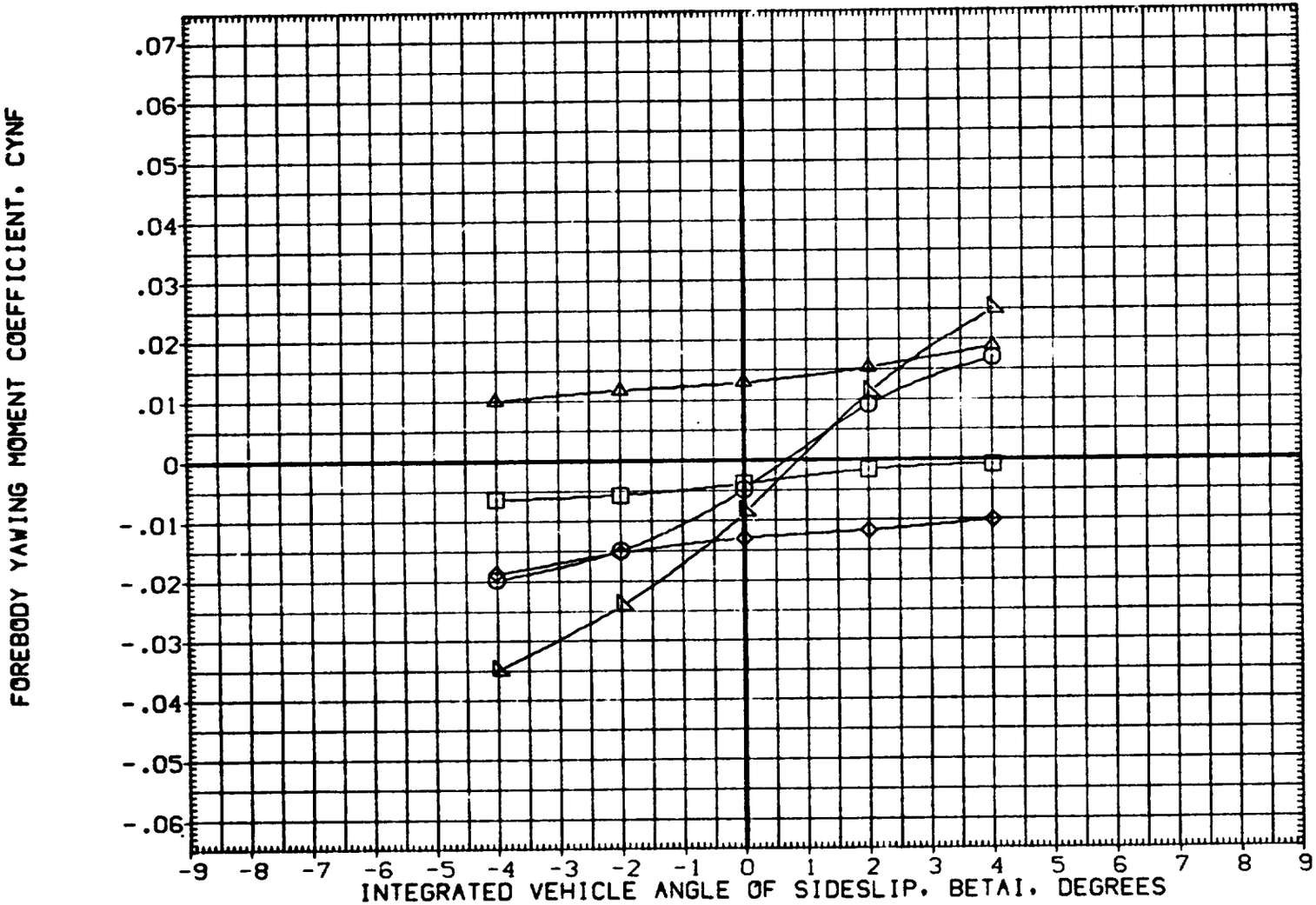


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

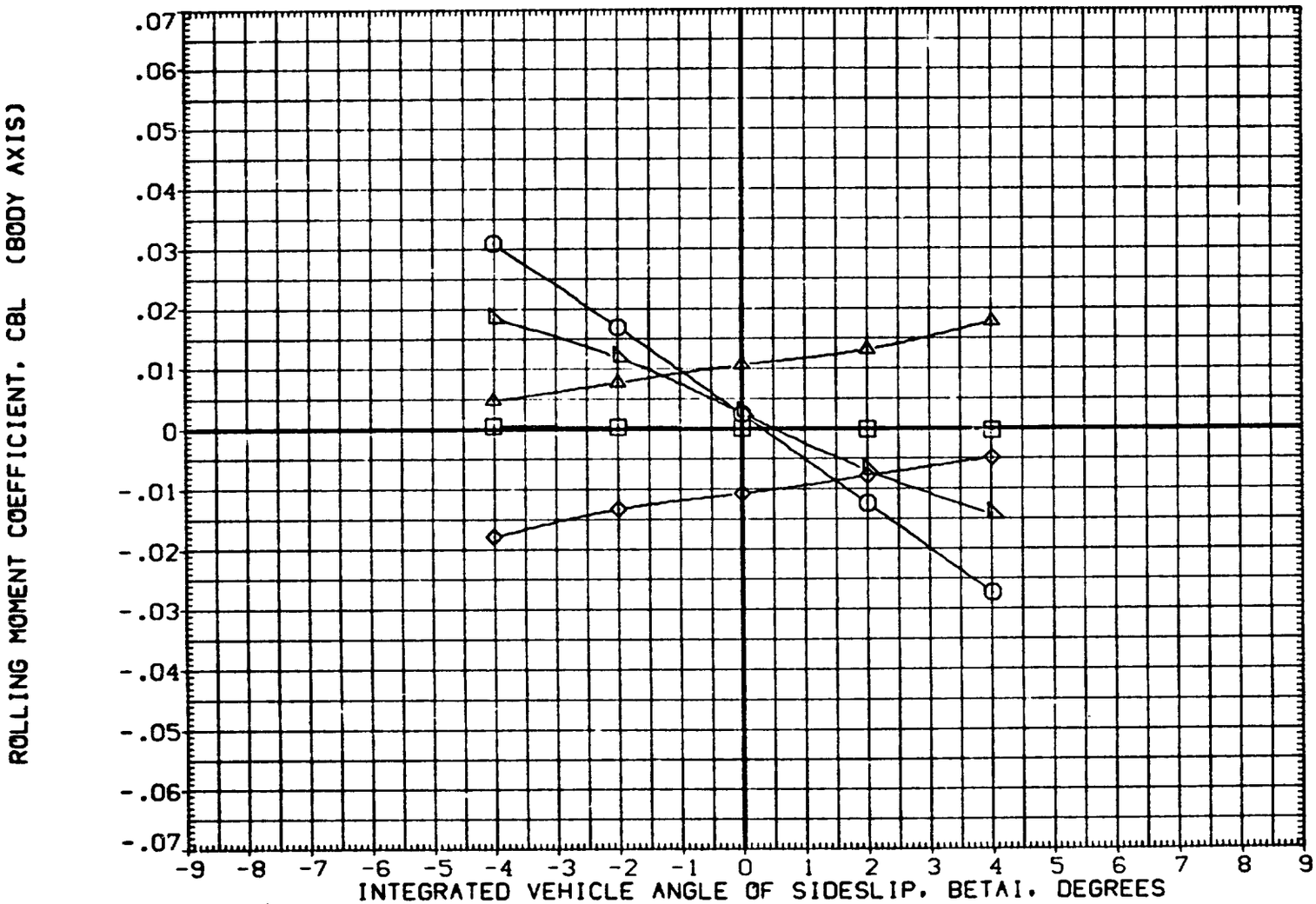


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

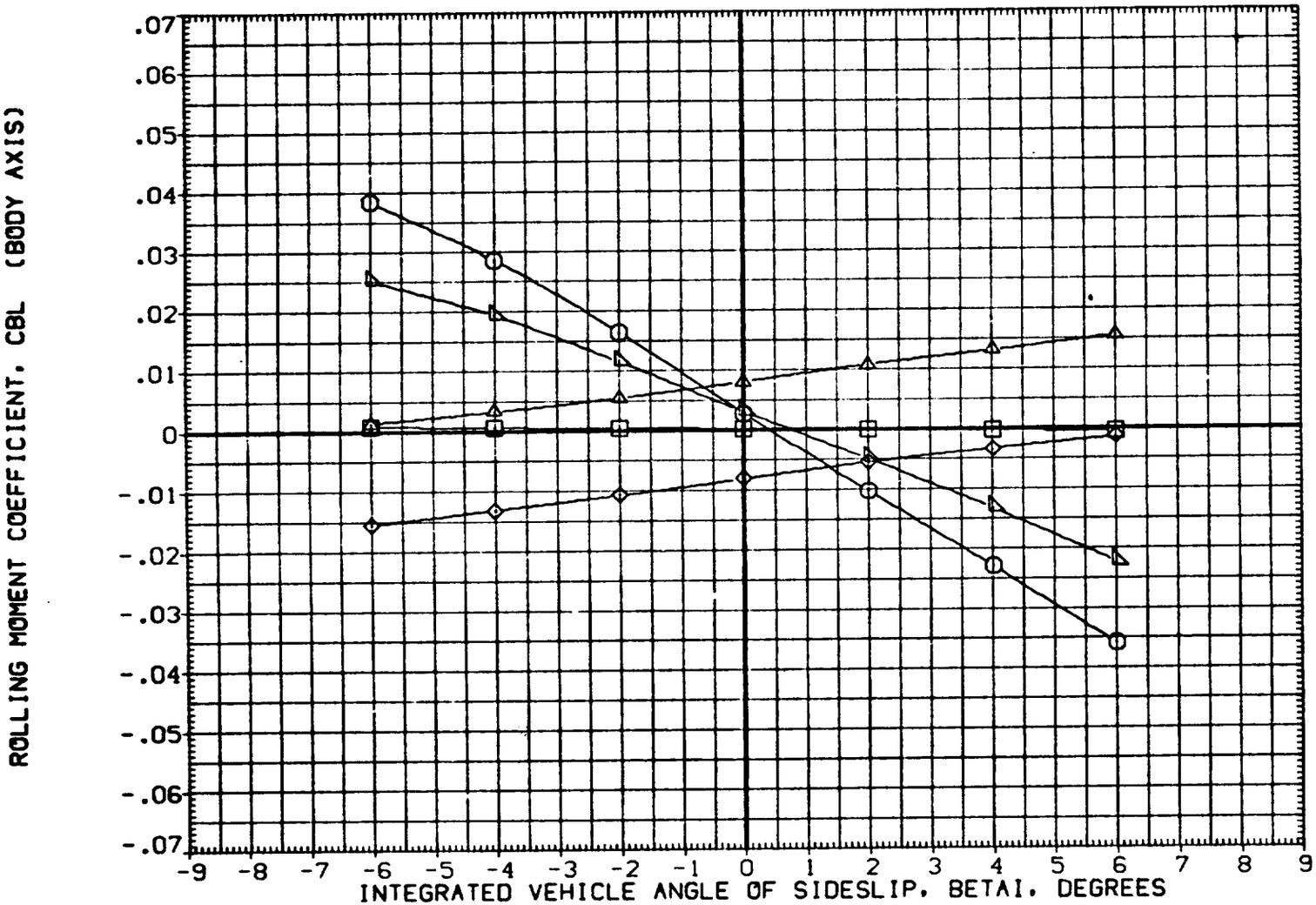


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

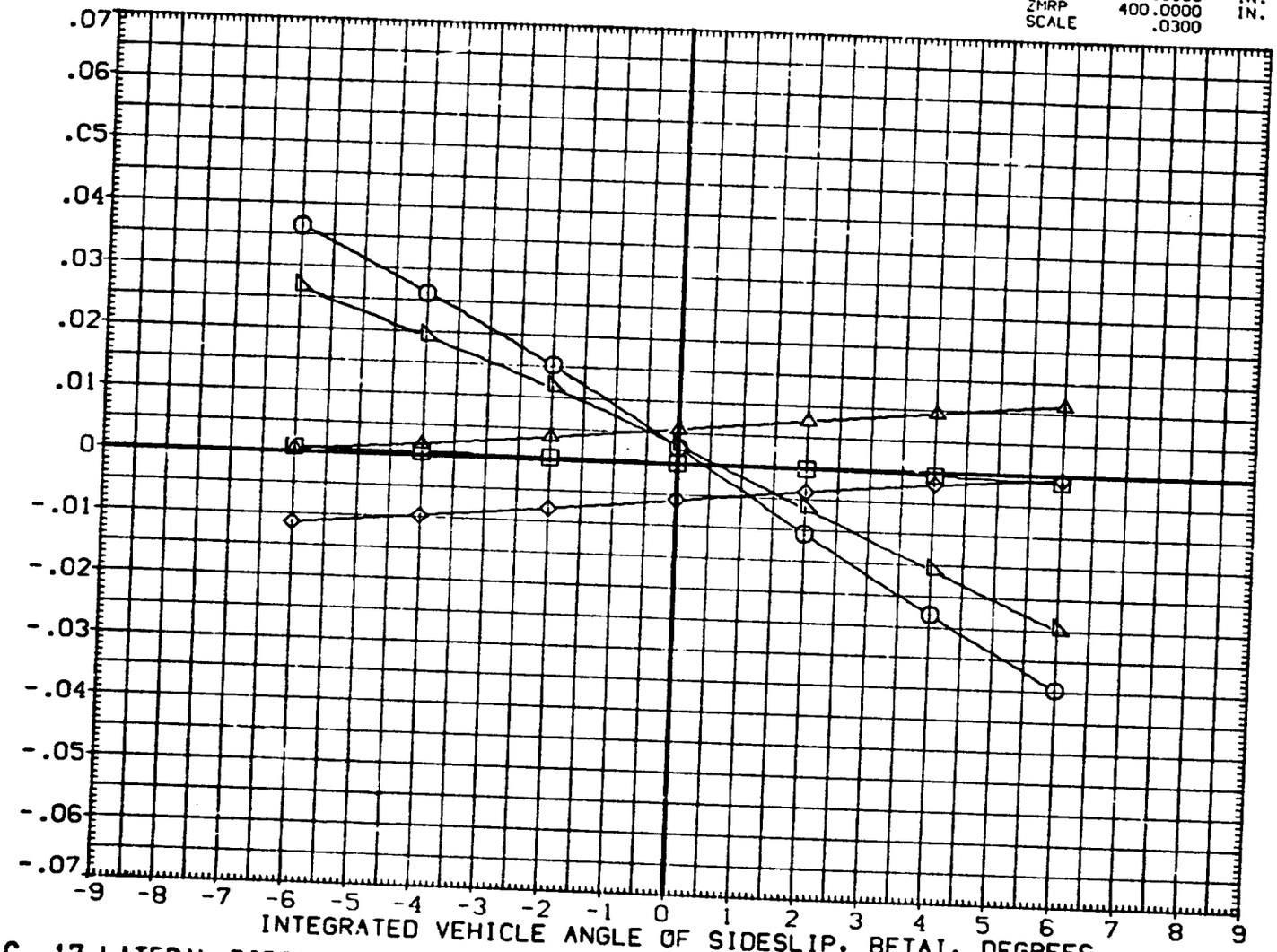


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

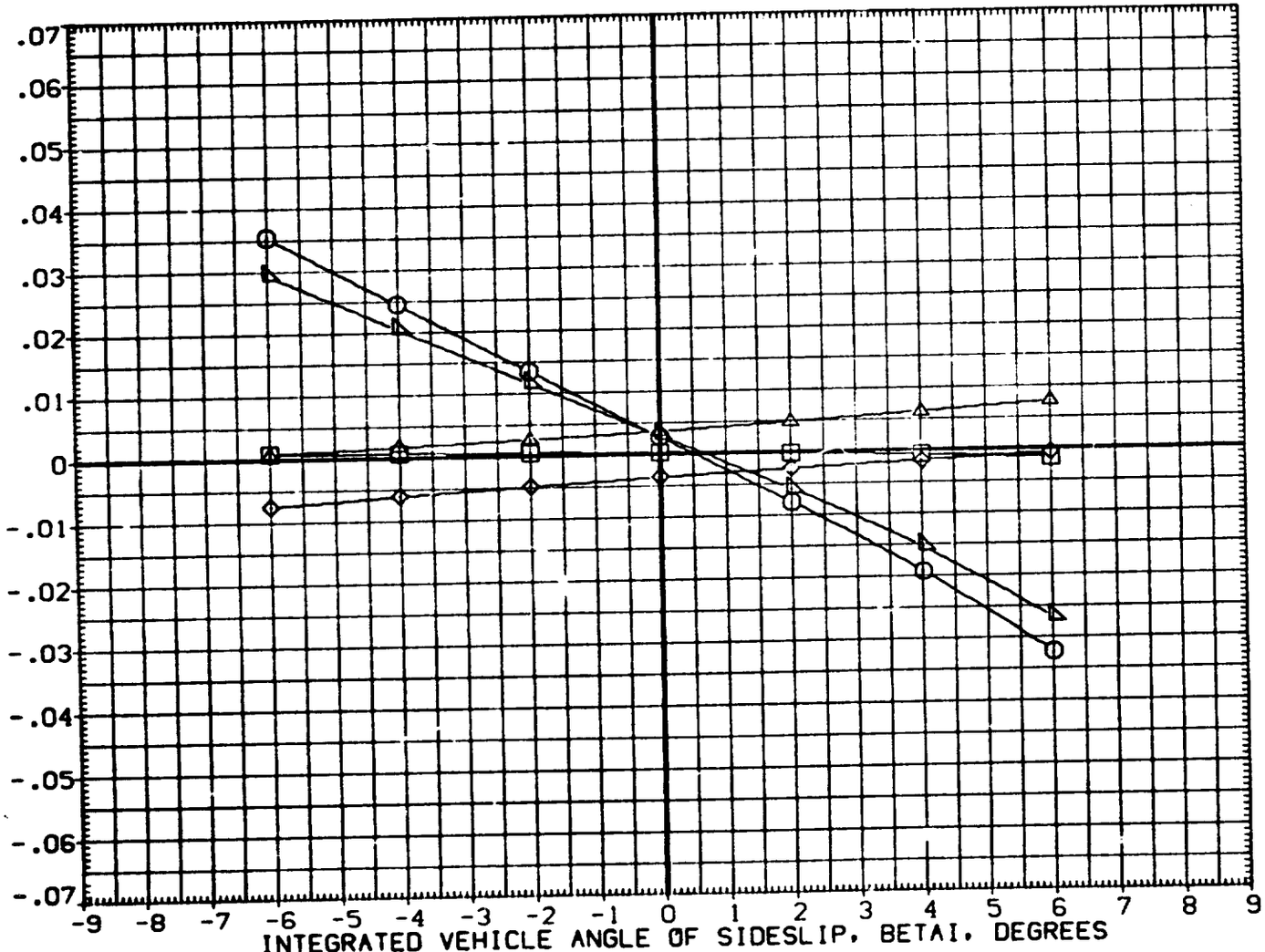


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO35)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

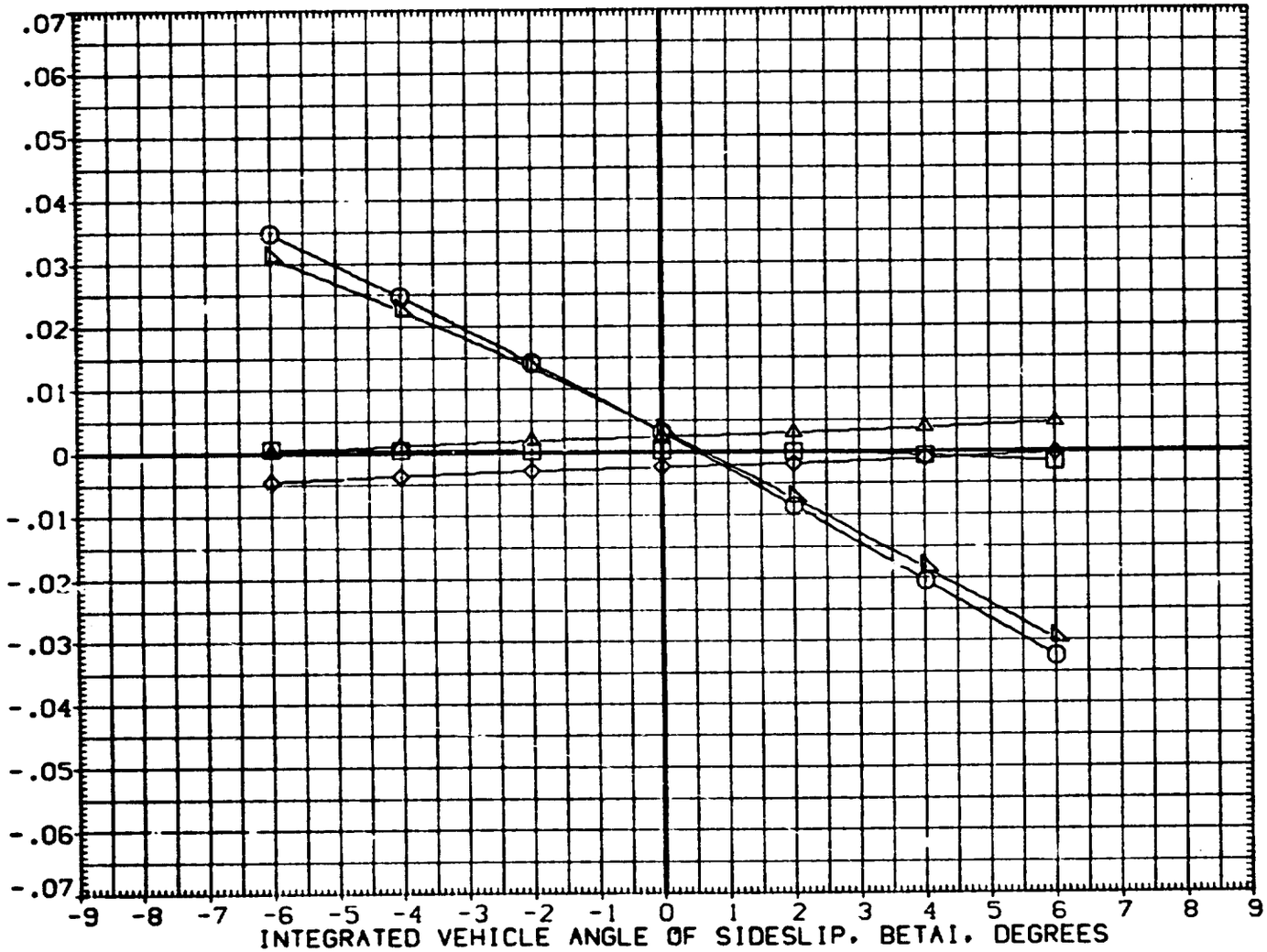


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO35)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	△	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	▷	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

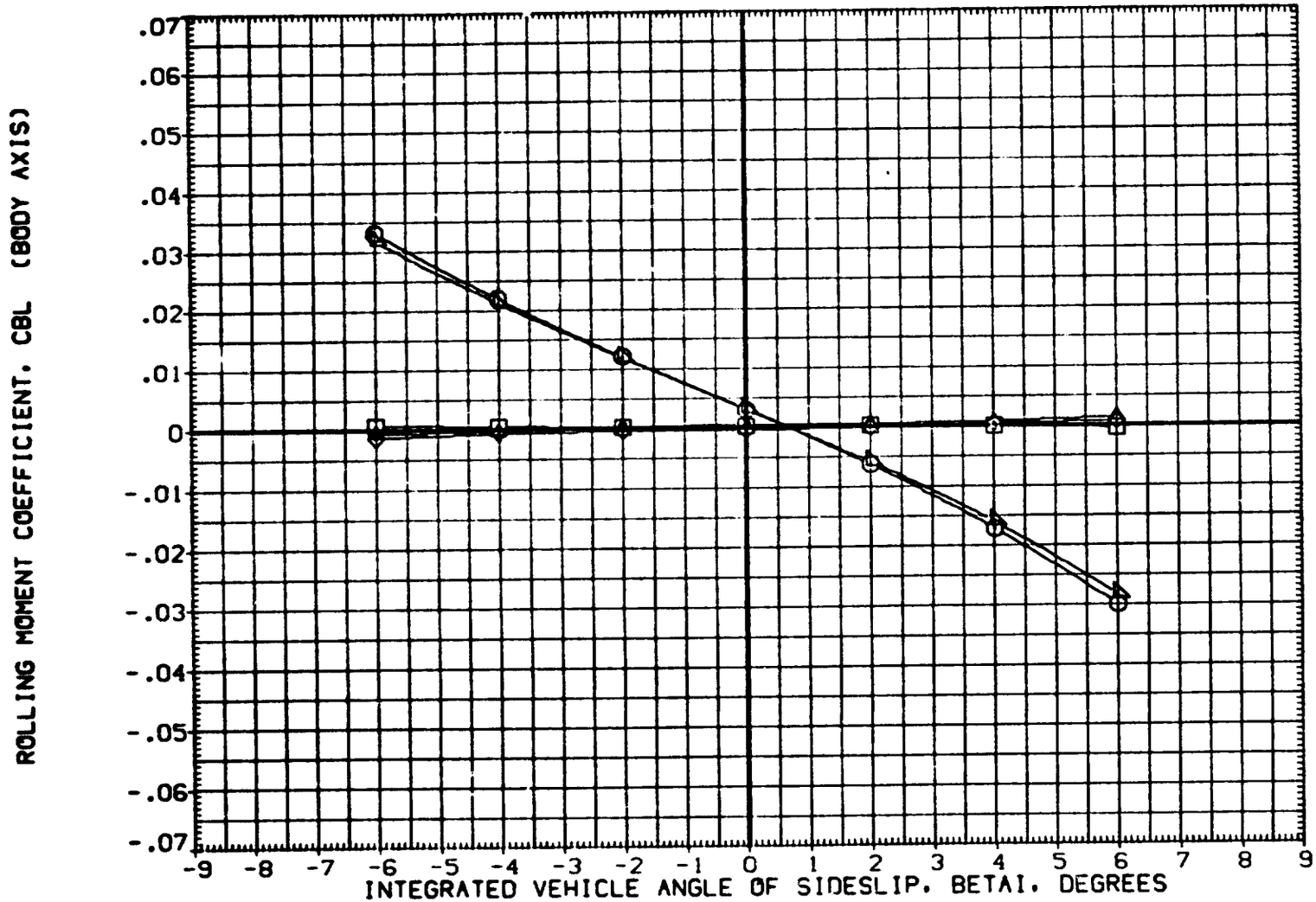


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB		SPOBRK
(LETO35)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	.550	.000
(LETT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

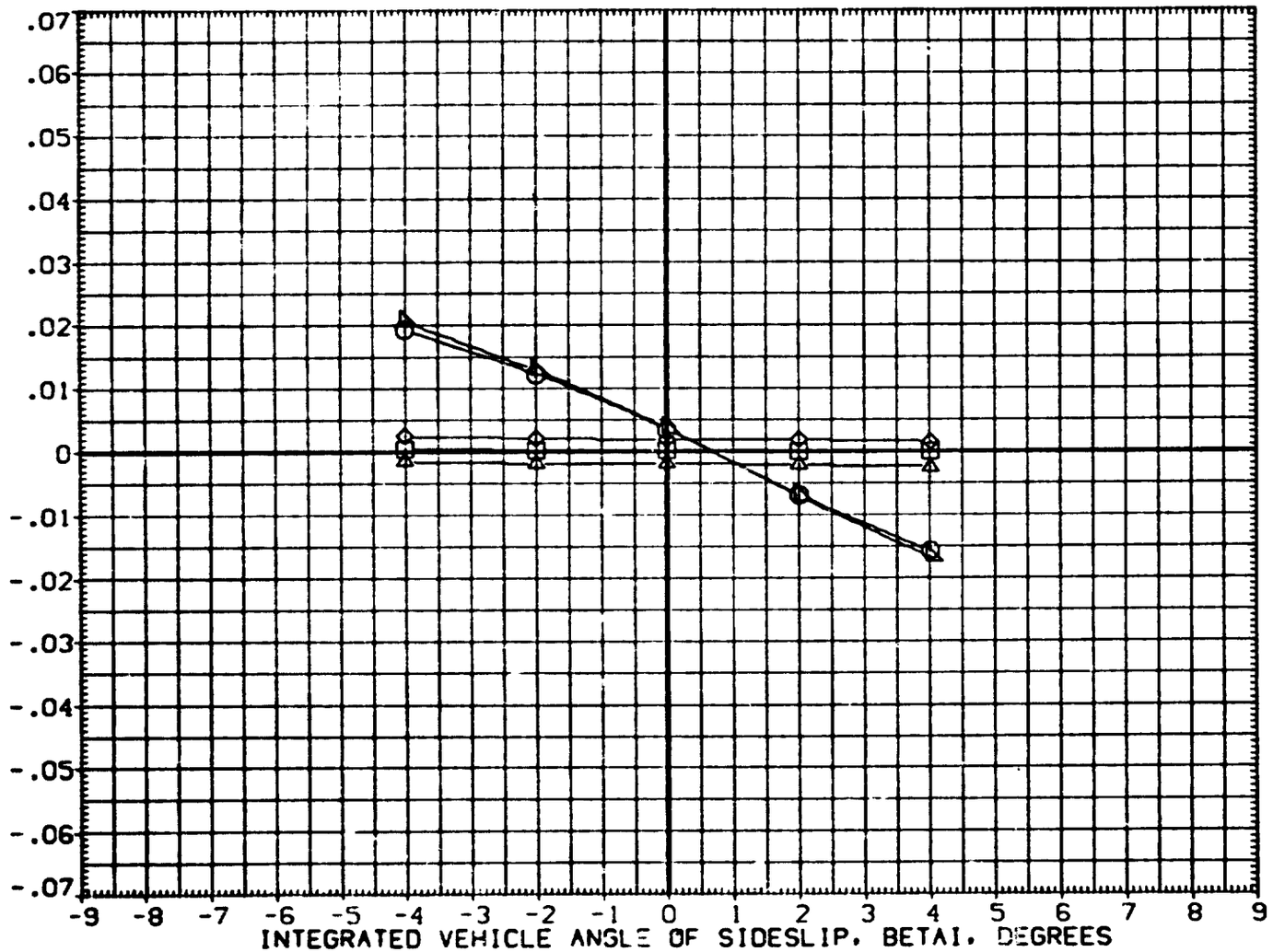


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=1.55 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETOJ5)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	0.000	-4.000	1.550	.000
(LETTJ5)	▭	AMES97-019([A81) LVAP TANK - ALL HL SEALED	0.000	-4.000	1.550	.000
(LETLJ5)	◇	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	0.000	-4.000	1.550	.000
(LETRJ5)	◁	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	0.000	-4.000	1.550	.000
(LETIJ5)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

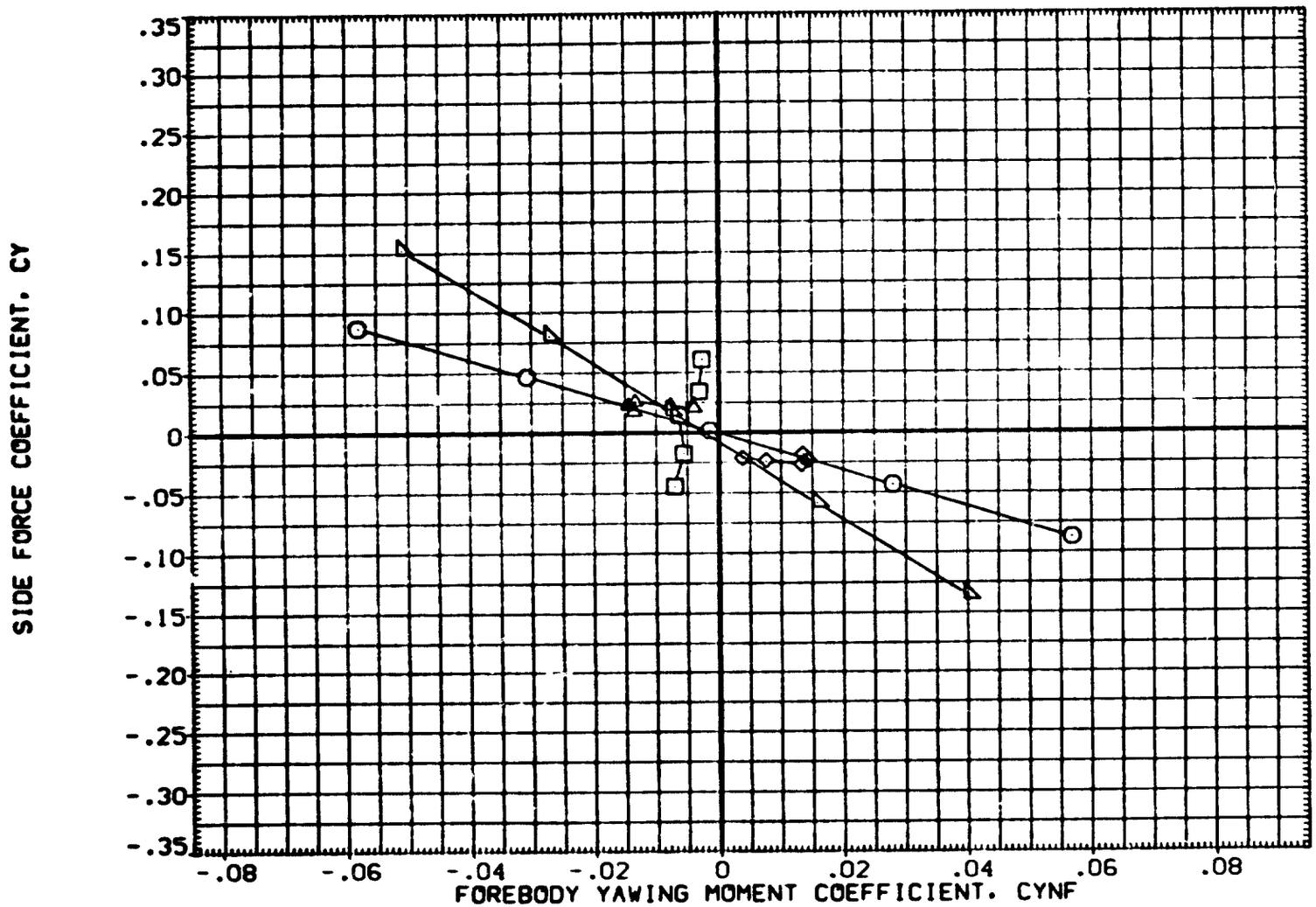


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETOJ5)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETTJ5)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETLJ5)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETRJ5)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETIJ5)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

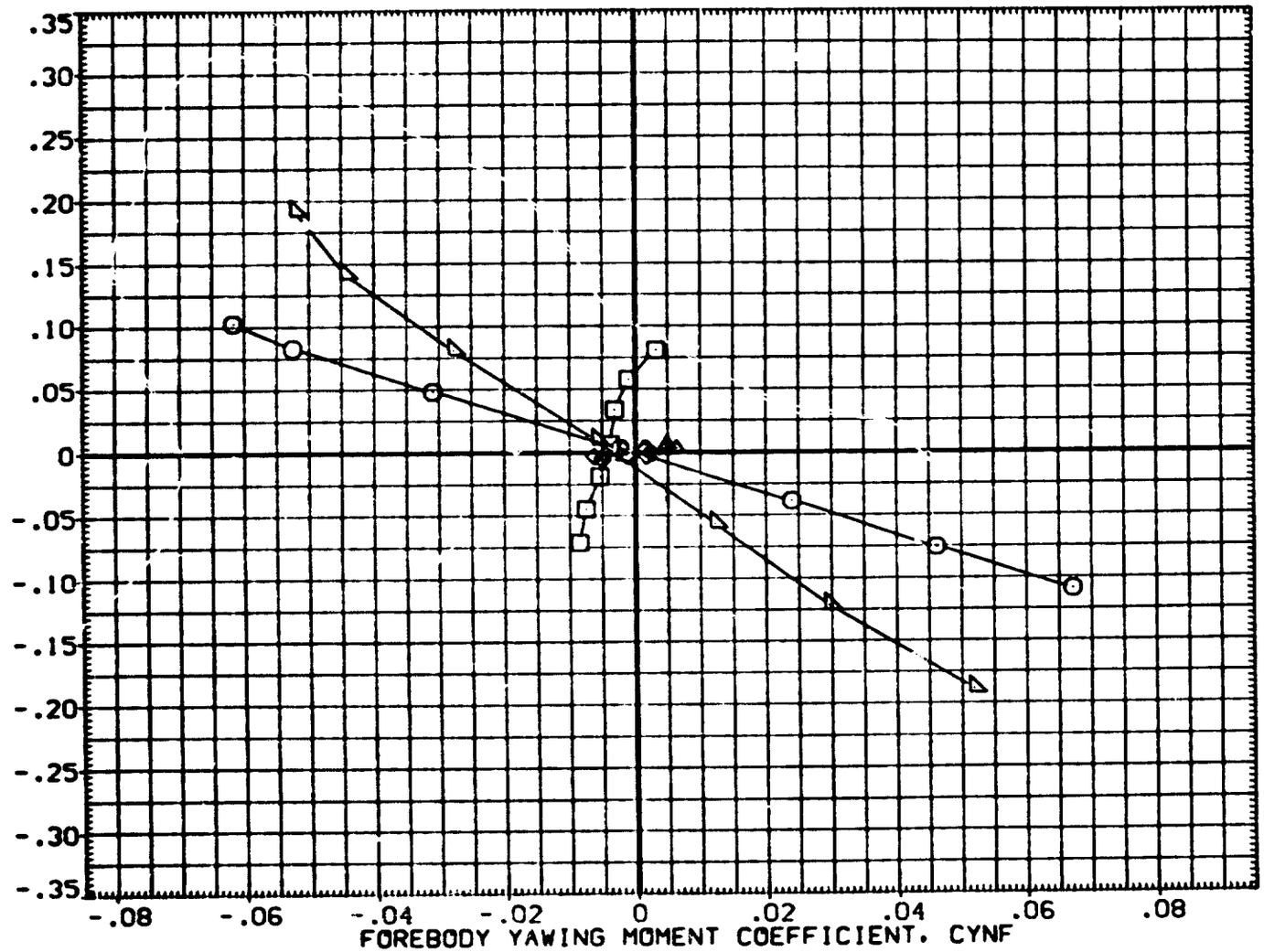


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IABI) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

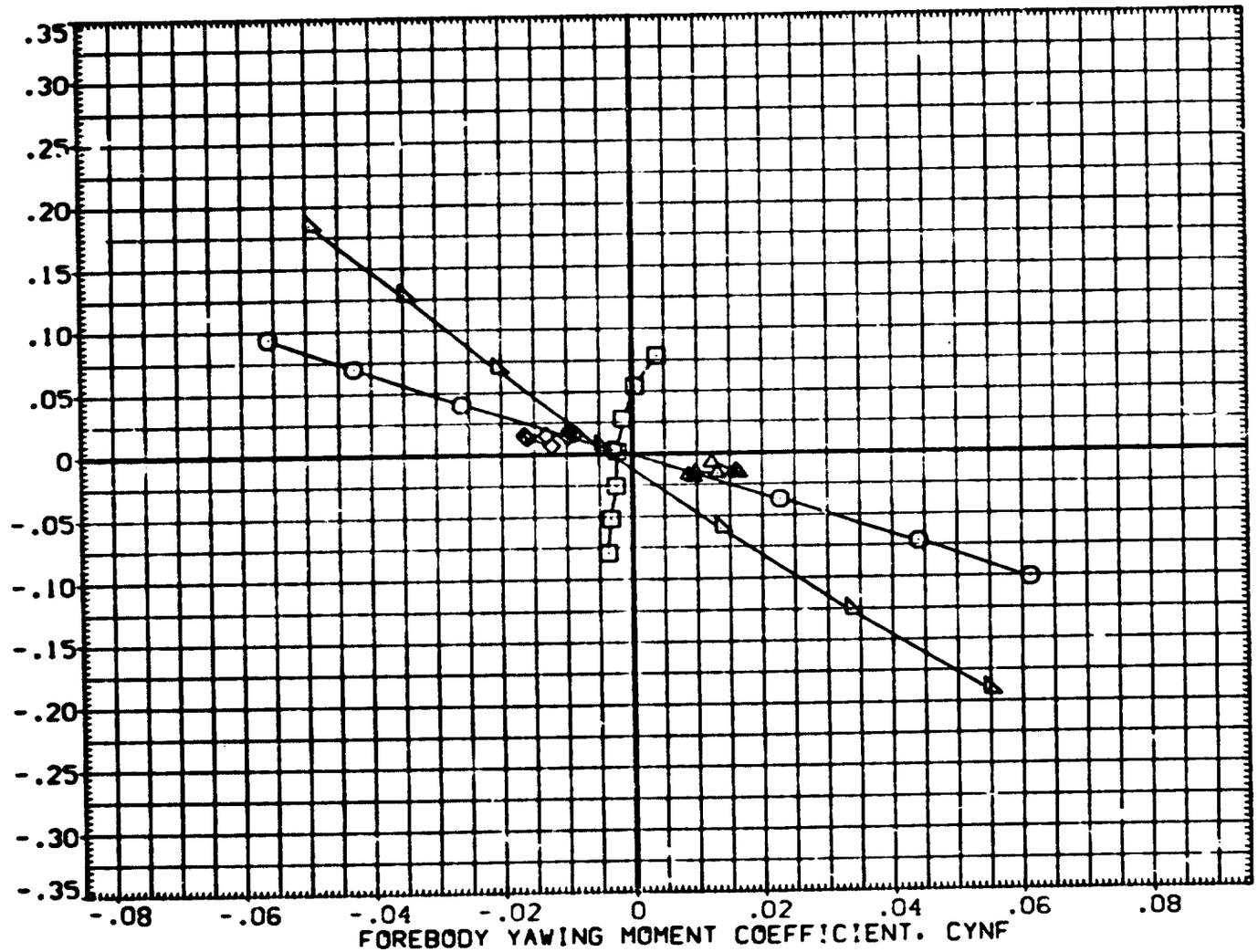


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-013([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	▷	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◁	AMES97-019([A8.) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	○	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

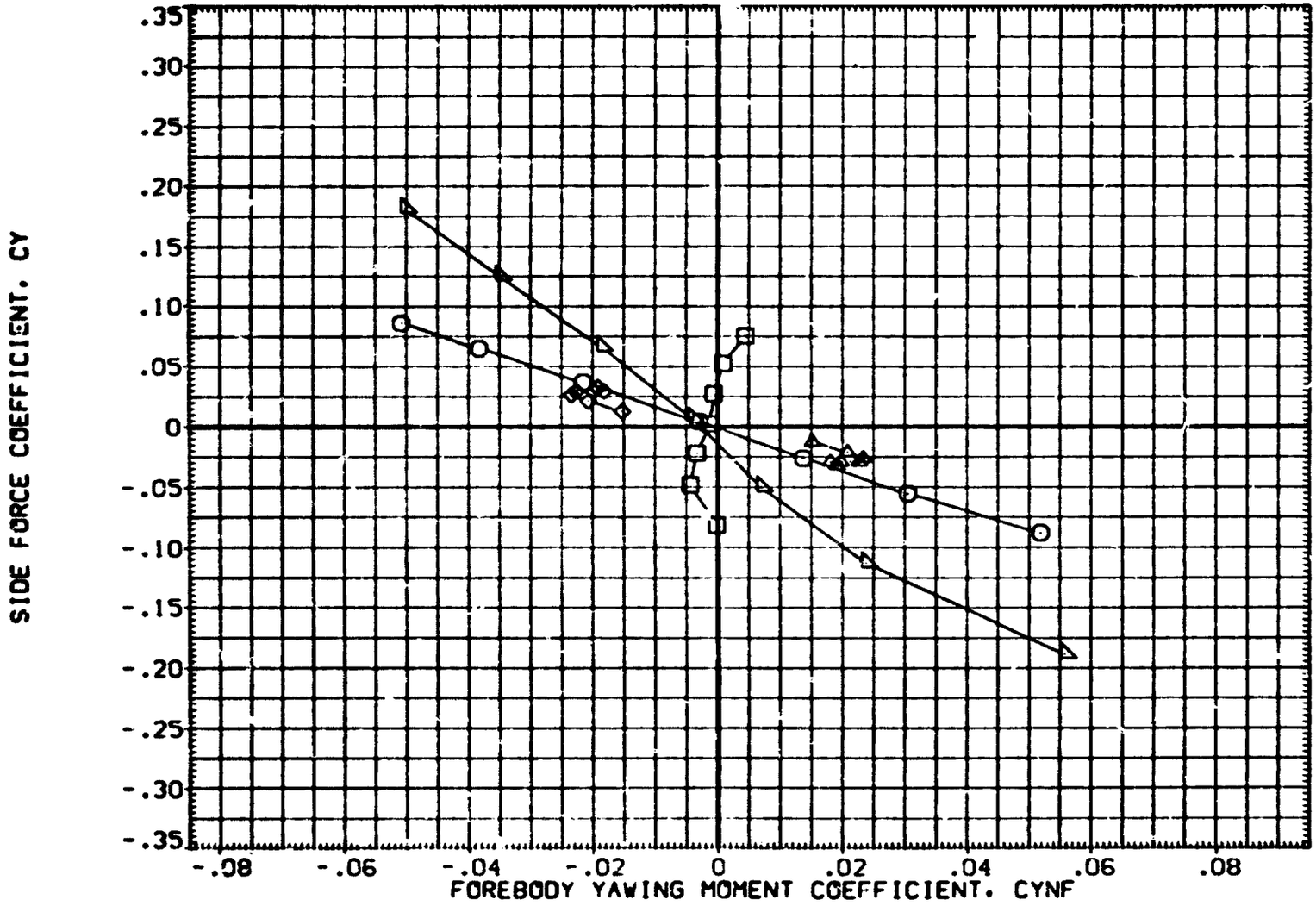


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

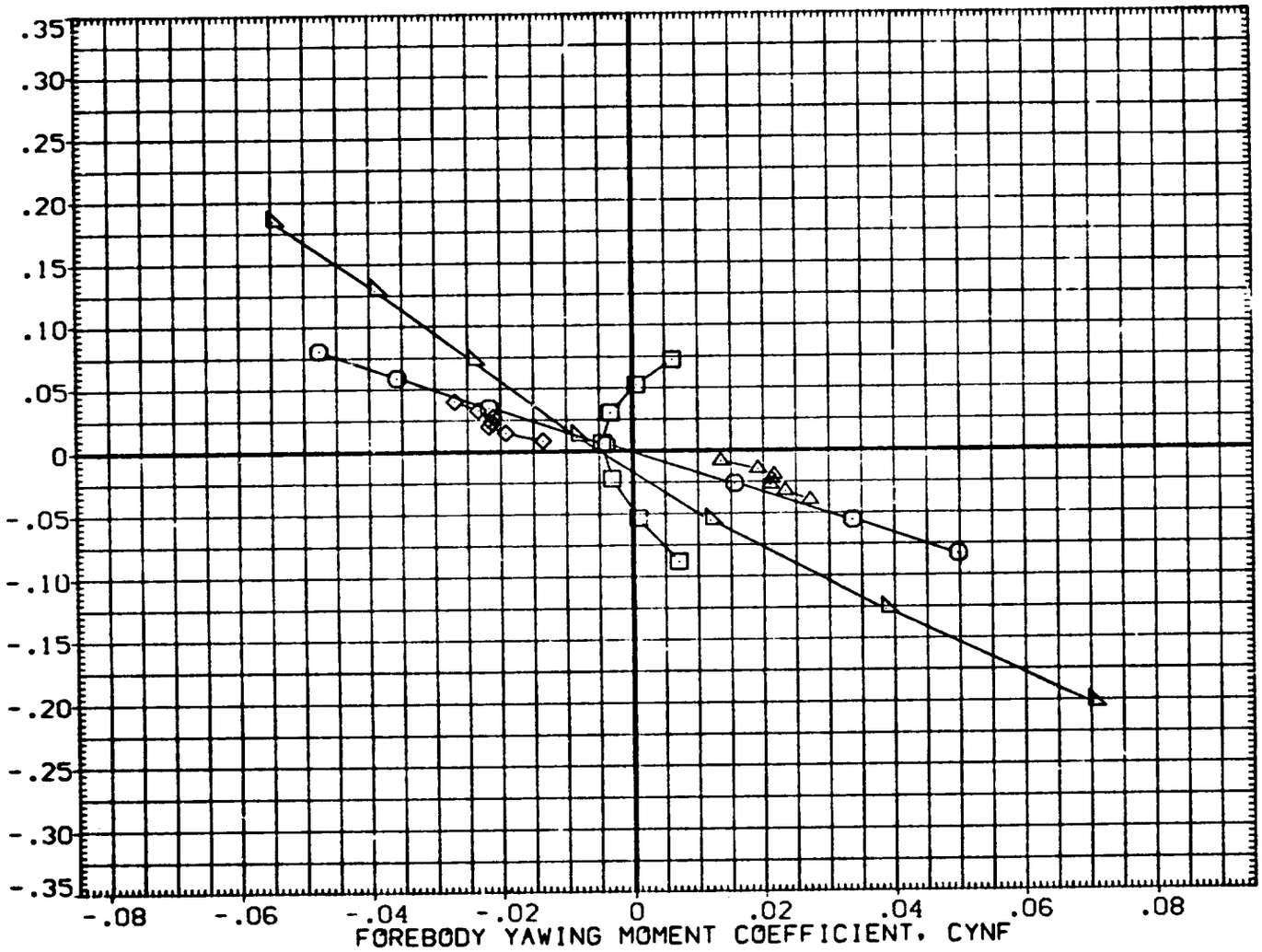


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

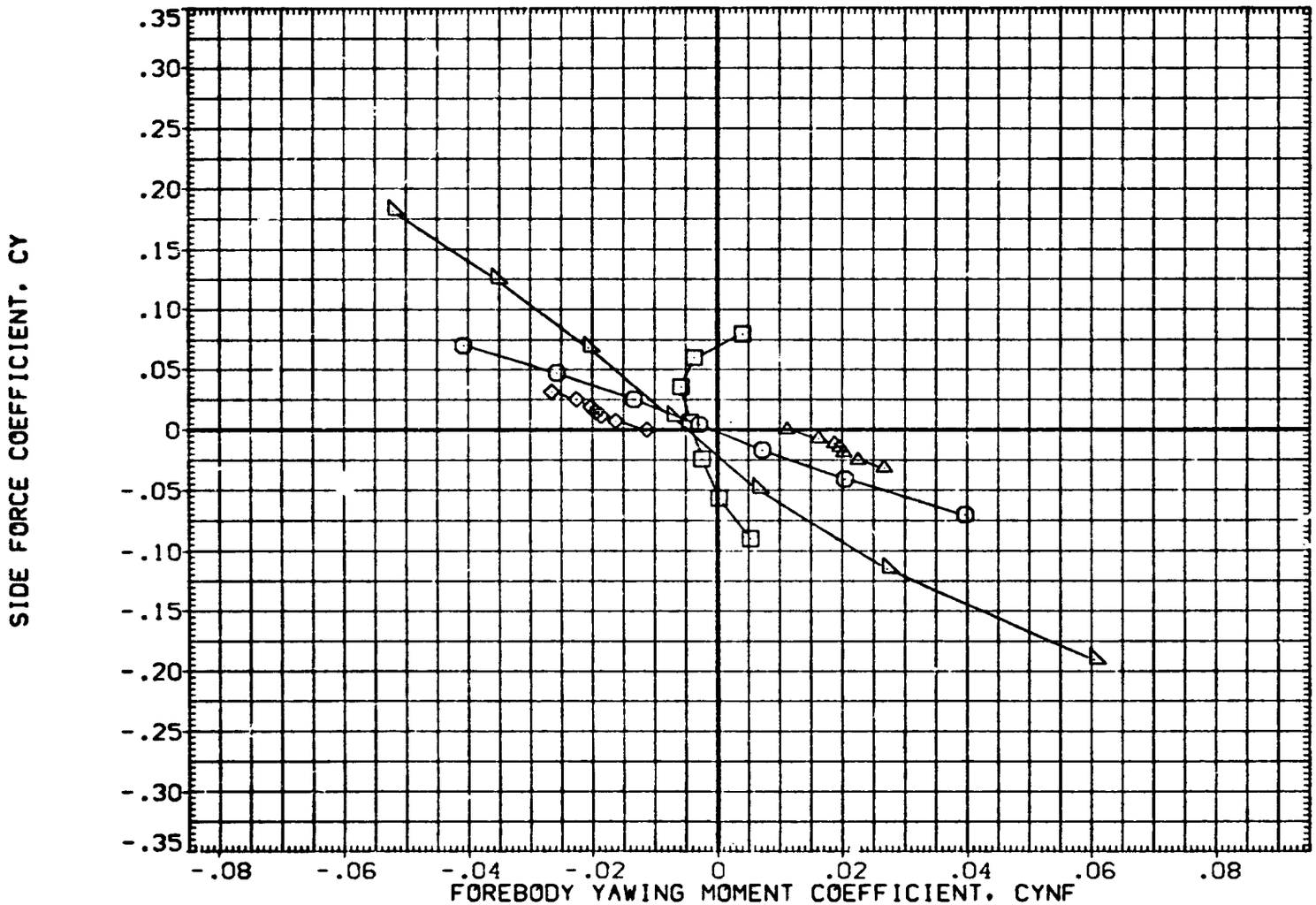


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	⋈	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

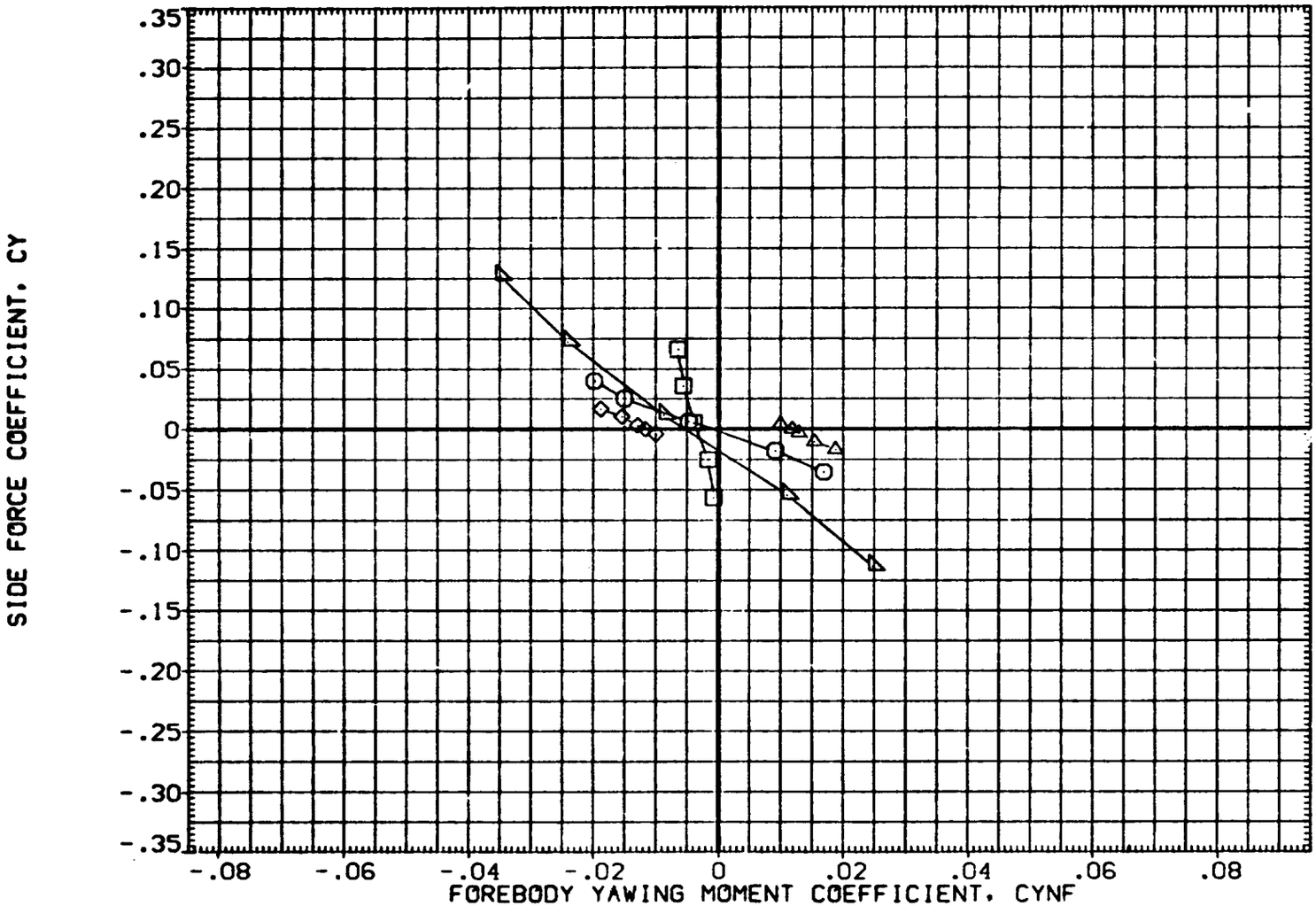


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
X1RP	976.0000	IN. XT
Y1RP	.0000	IN. YT
Z1RP	400.0000	IN. ZT
SCALE	.0300	

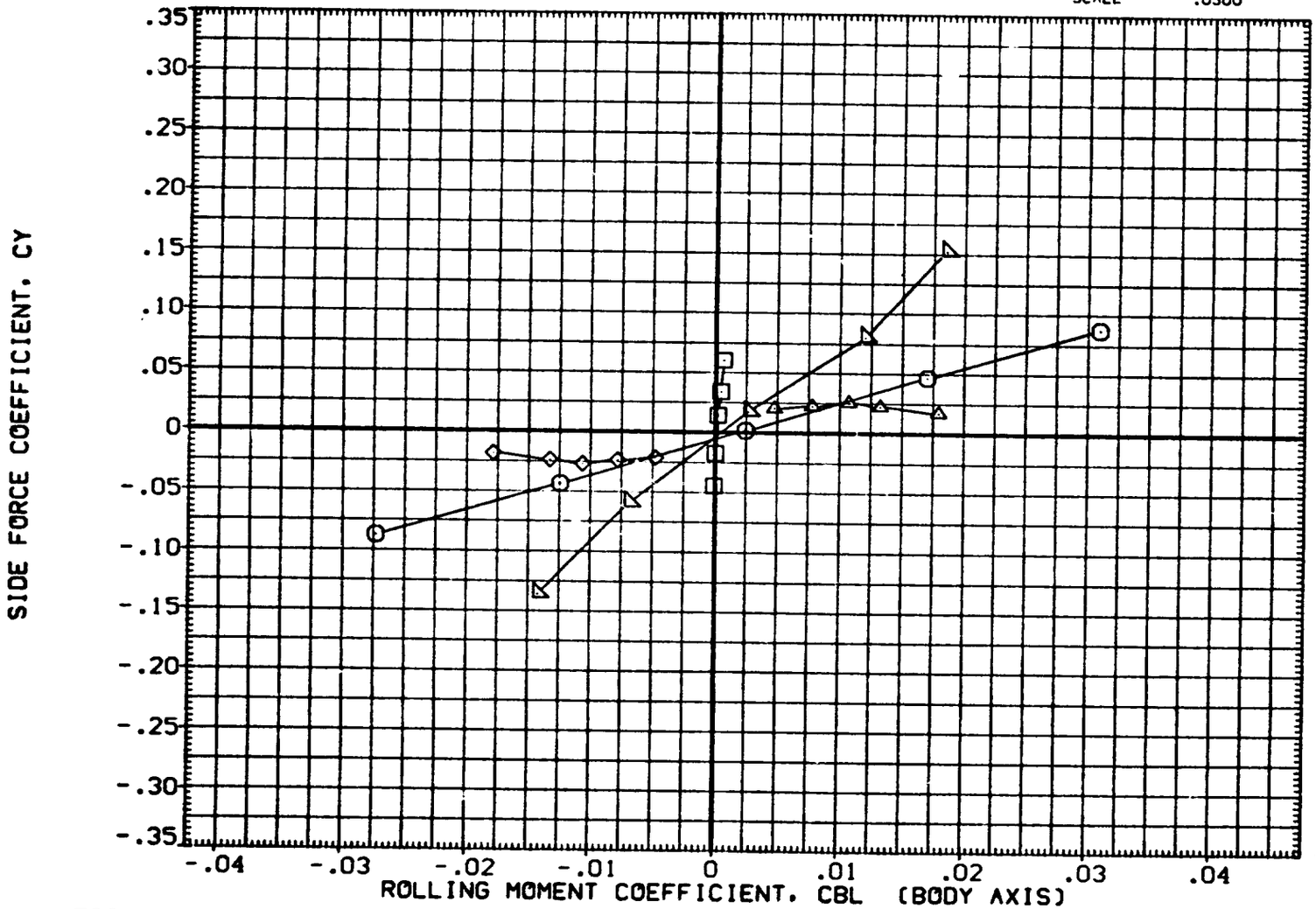


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

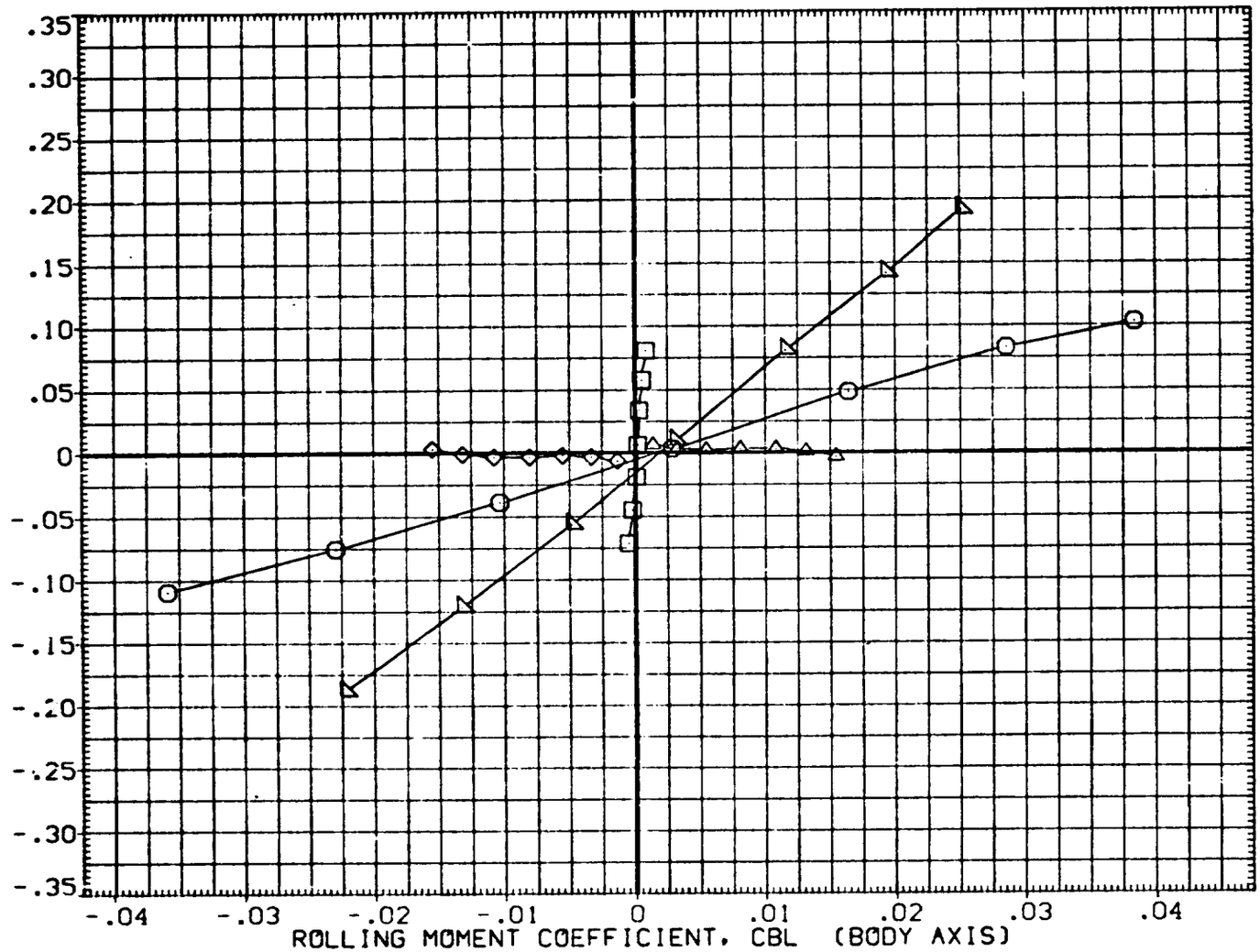


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019([A8I]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019([A8I]) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019([A8I]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019([A8I]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019([A8I]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

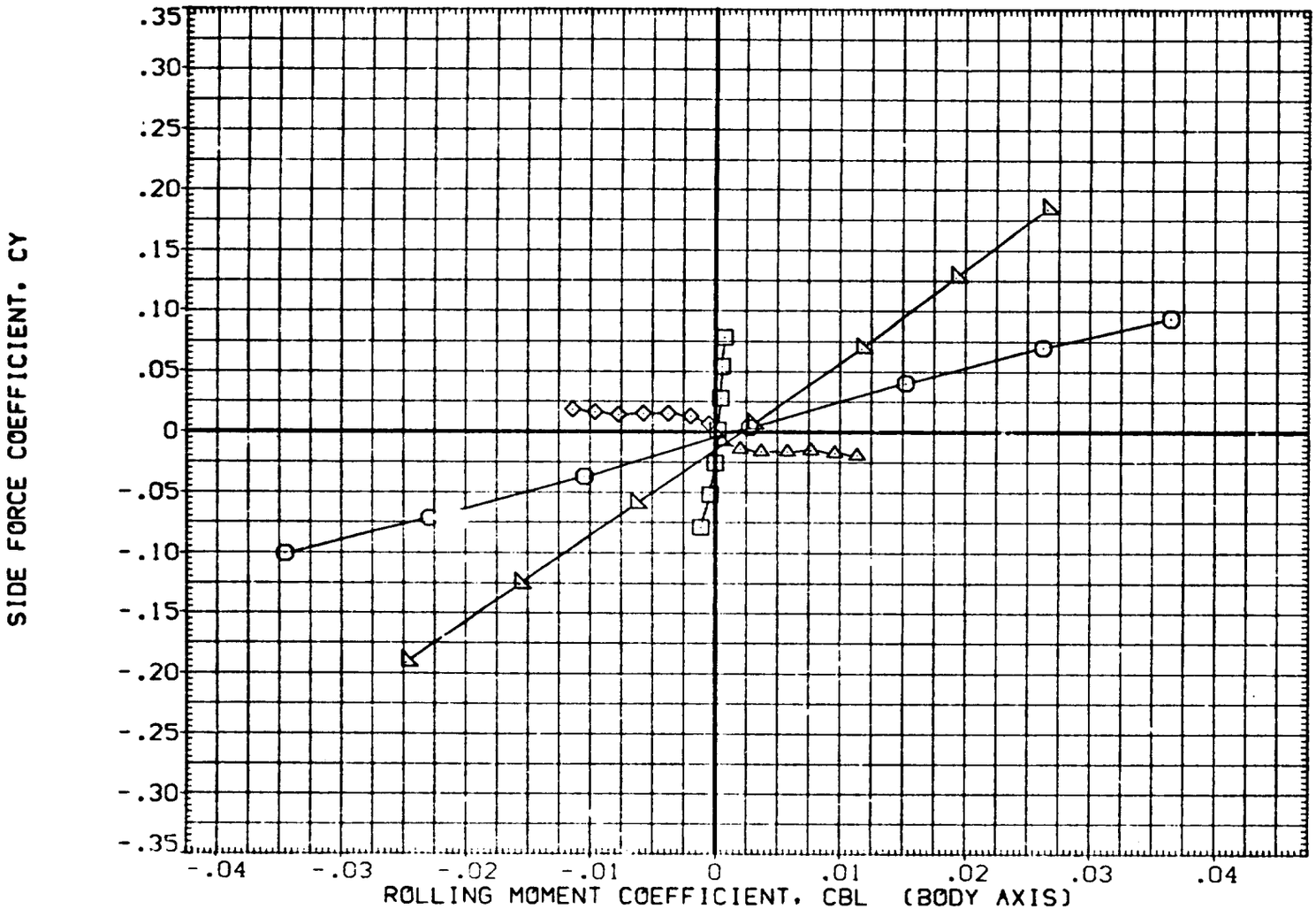


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

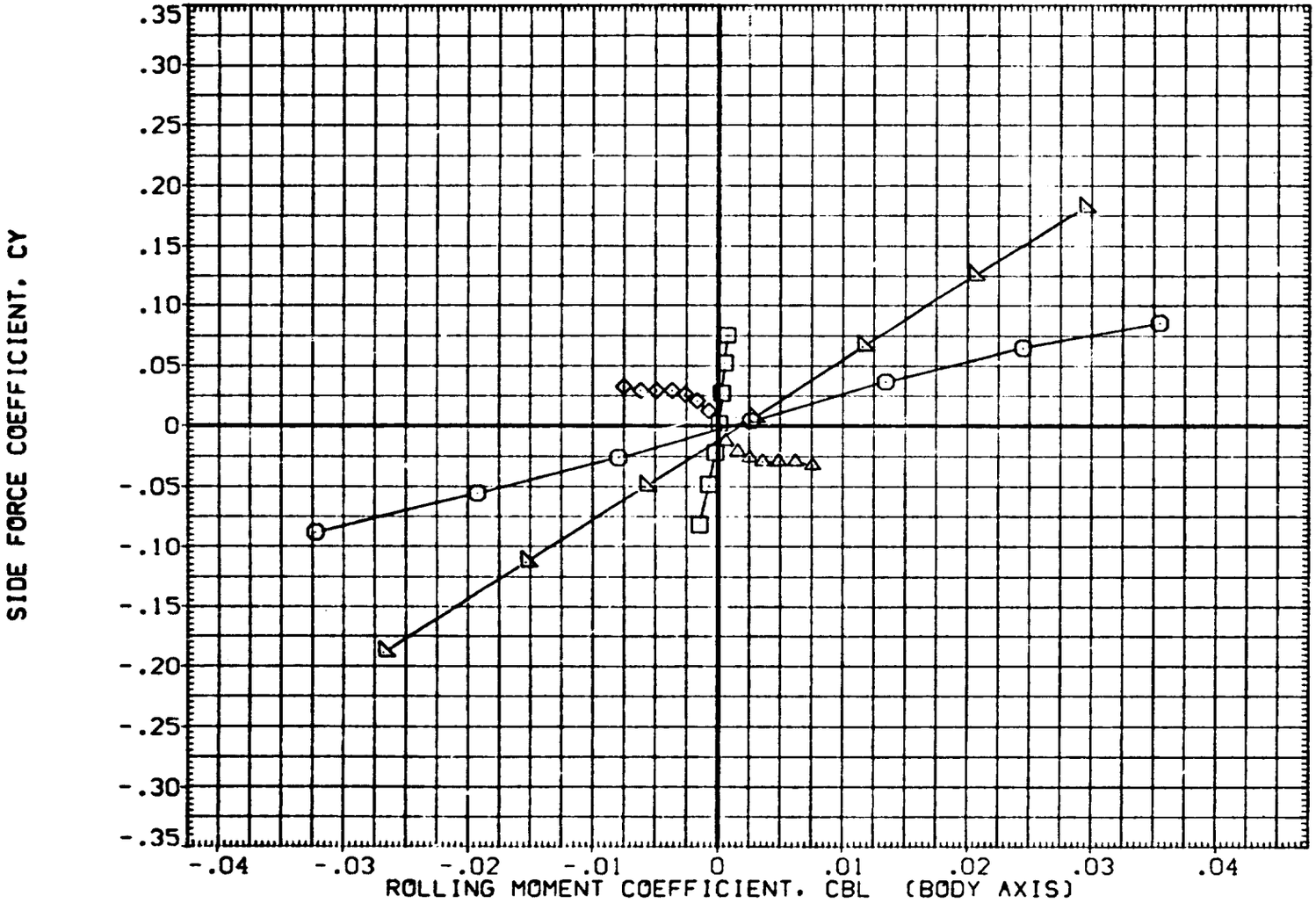


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(LETT35)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	1.550	.000
(LETR35)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	1.550	.000
(LETI35)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

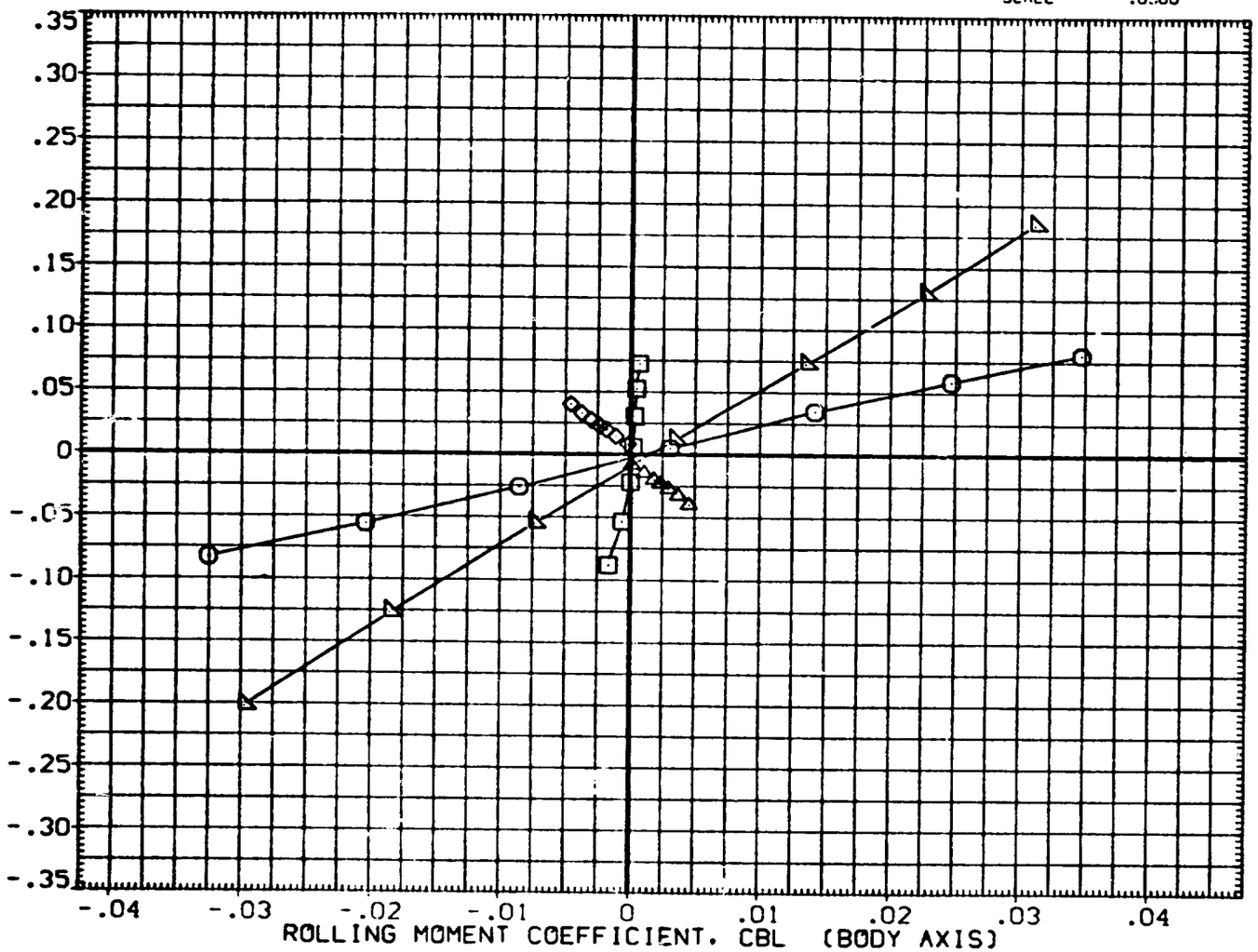


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	1.550	.000
(LET135)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETL35)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

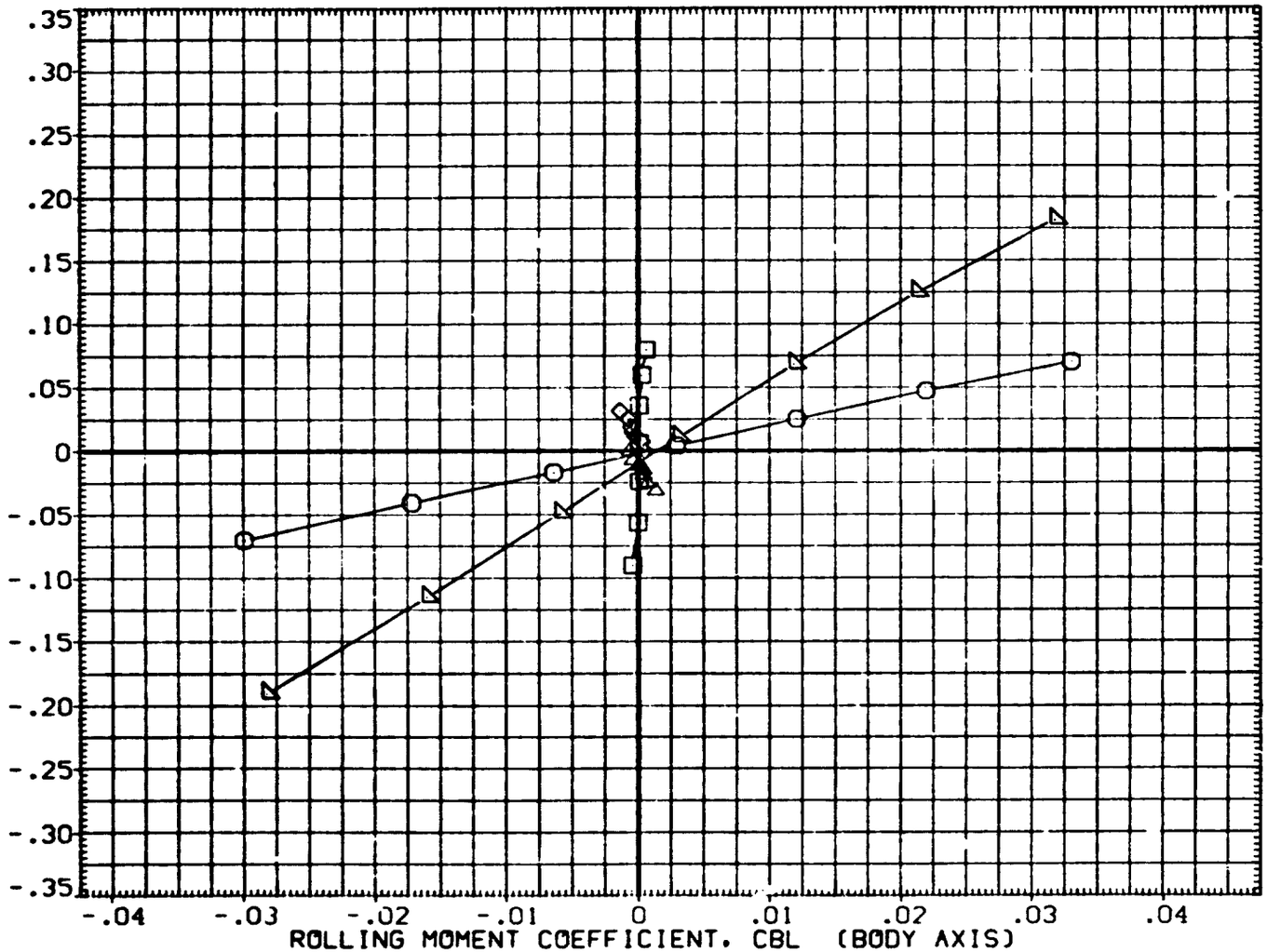


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET035)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	1.550	.000
(LETT35)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETL35)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	1.550	.000
(LETR35)	◁	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	1.550	.000
(LETI35)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

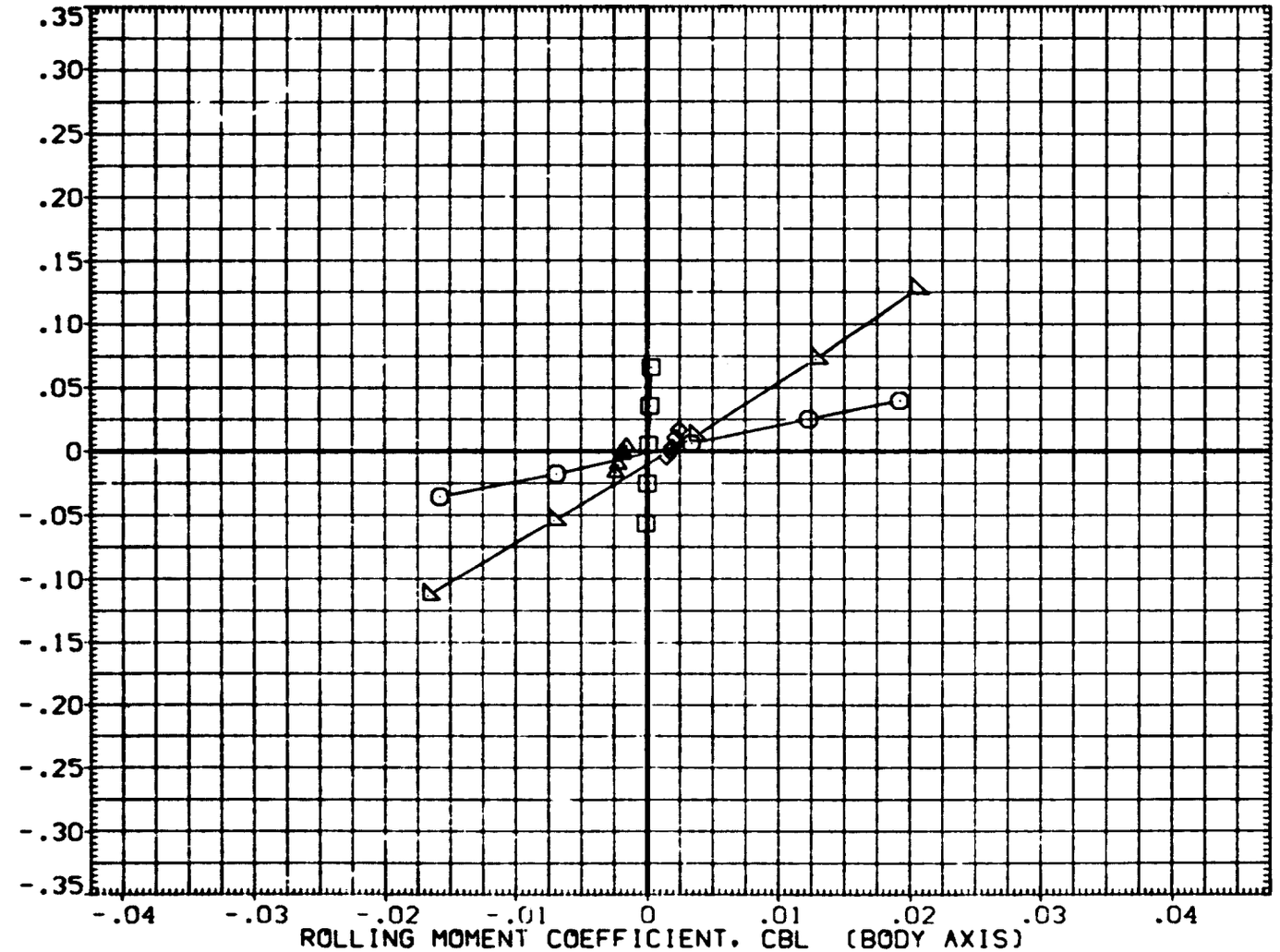


FIG. 17 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

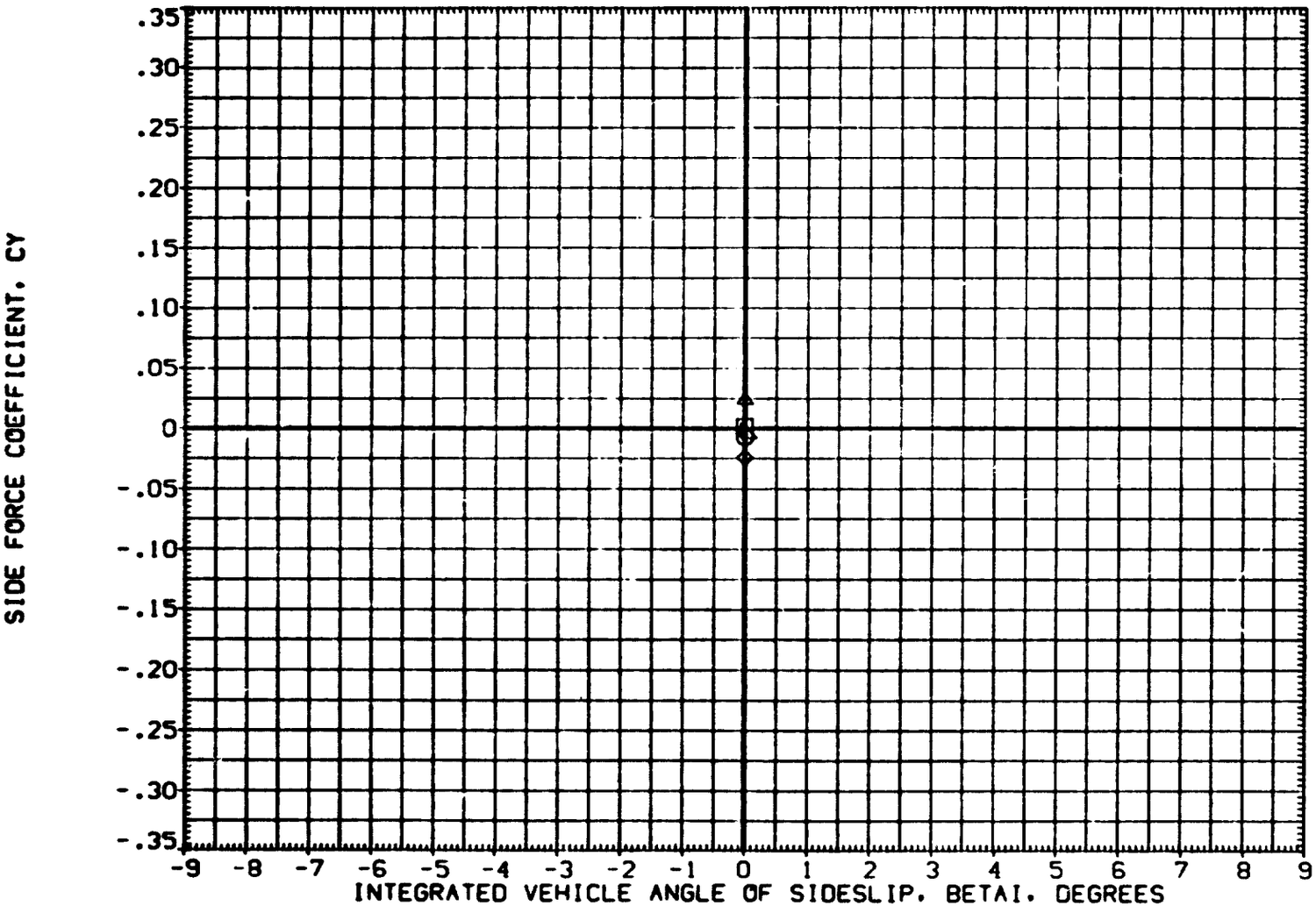


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO39)		AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019([A81) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019([A81) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019([A81) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

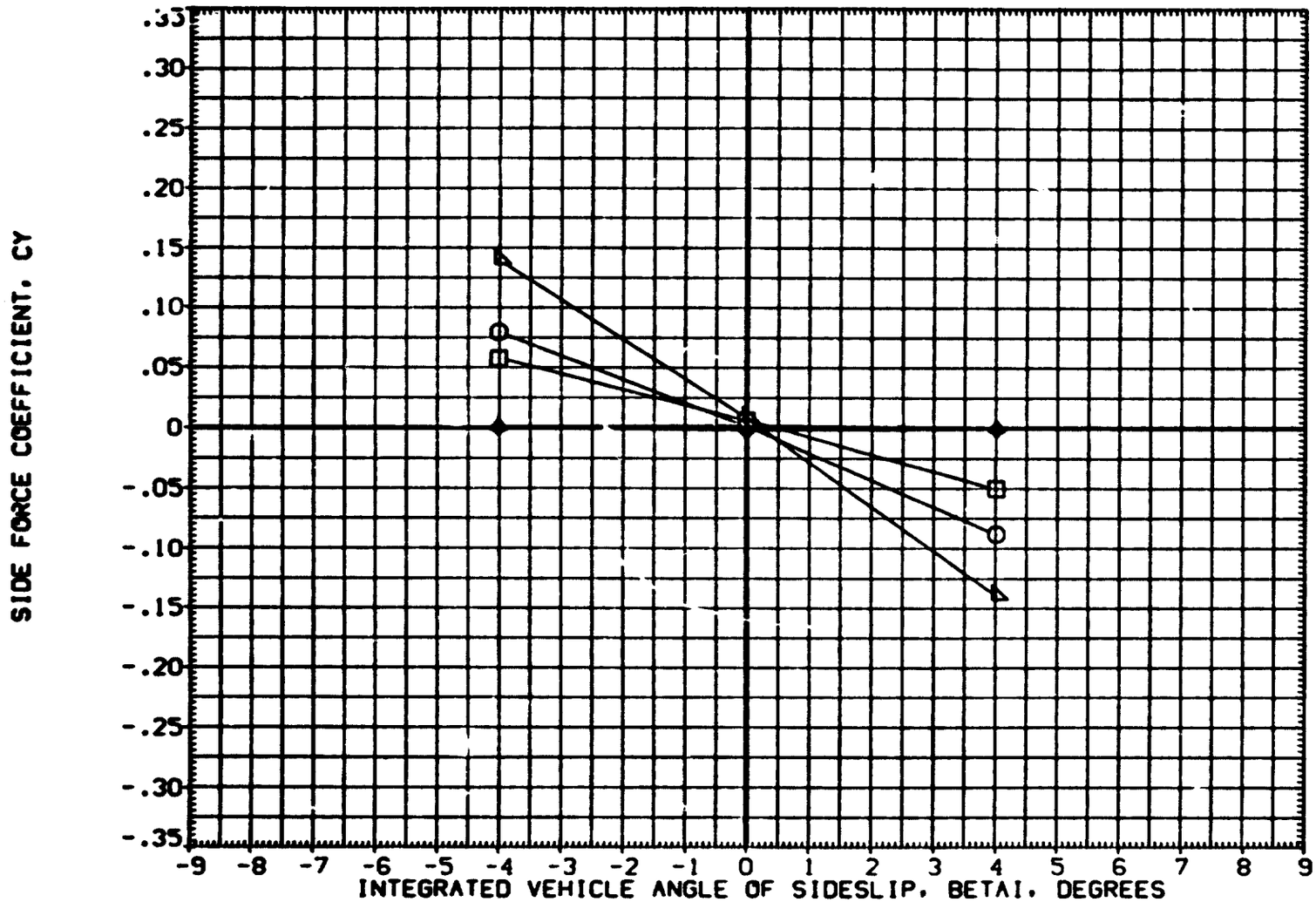


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO39)		AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

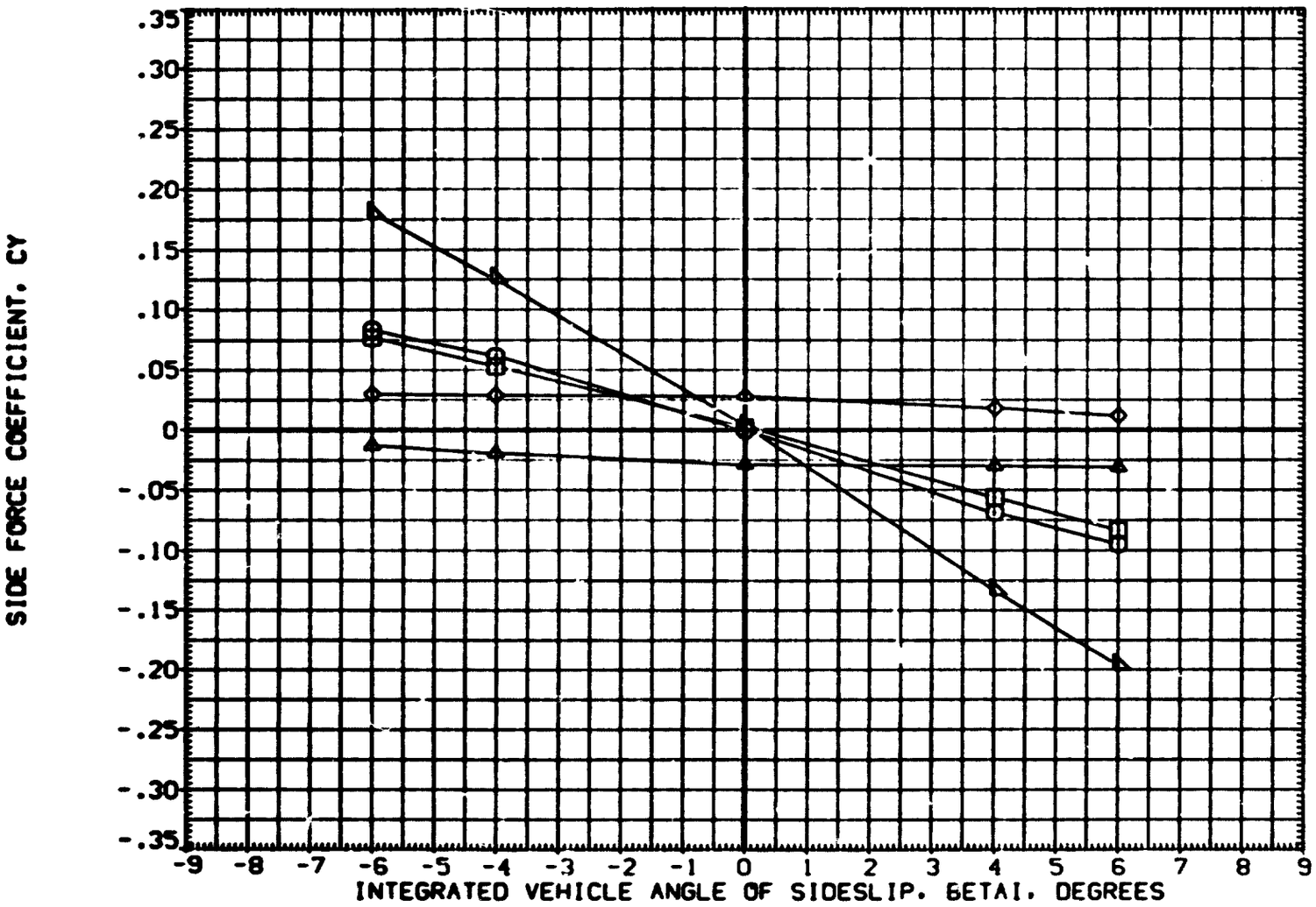


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETD39)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	△	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

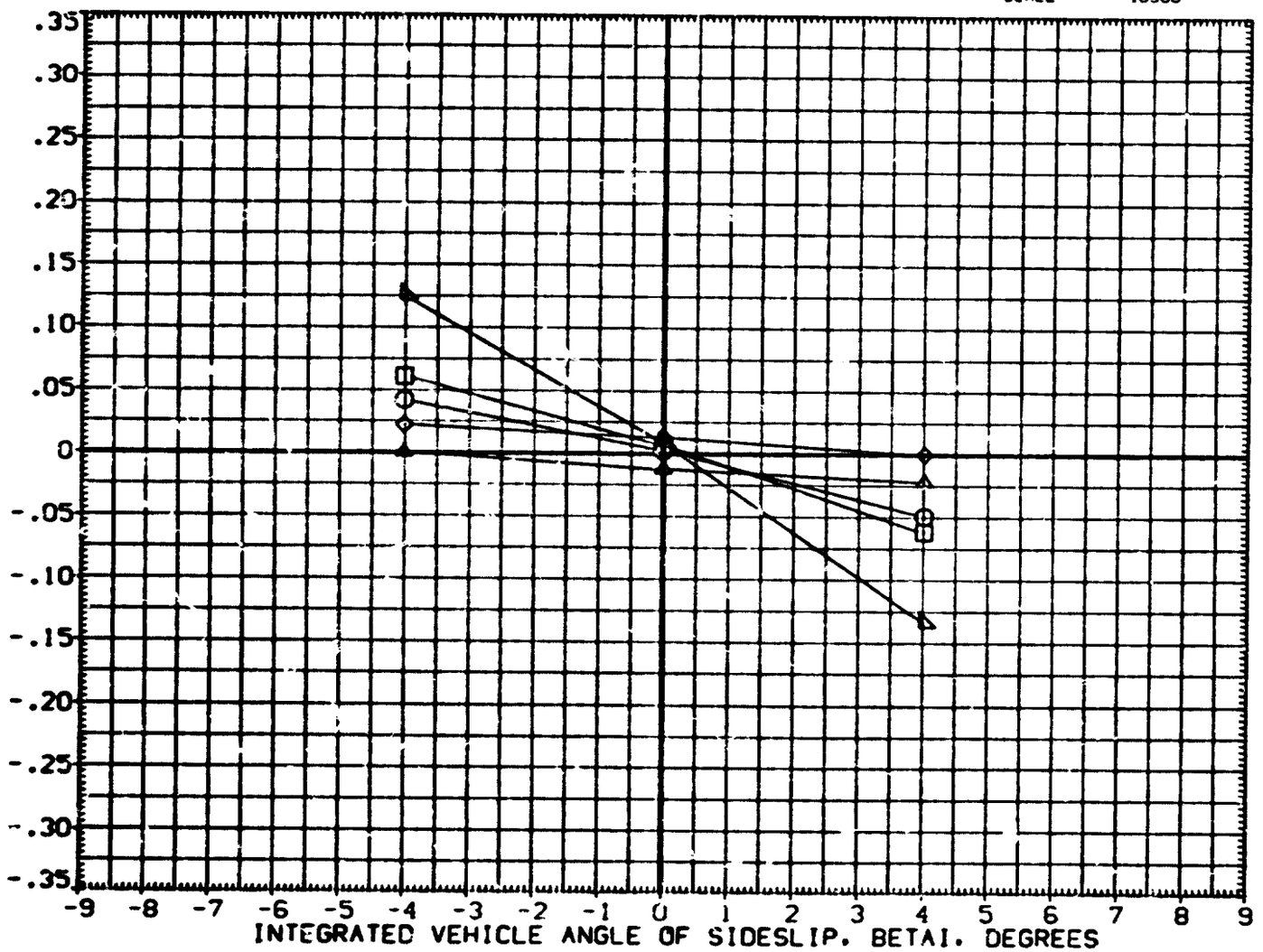


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGUF\TION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO39)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	⊠	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	▽	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

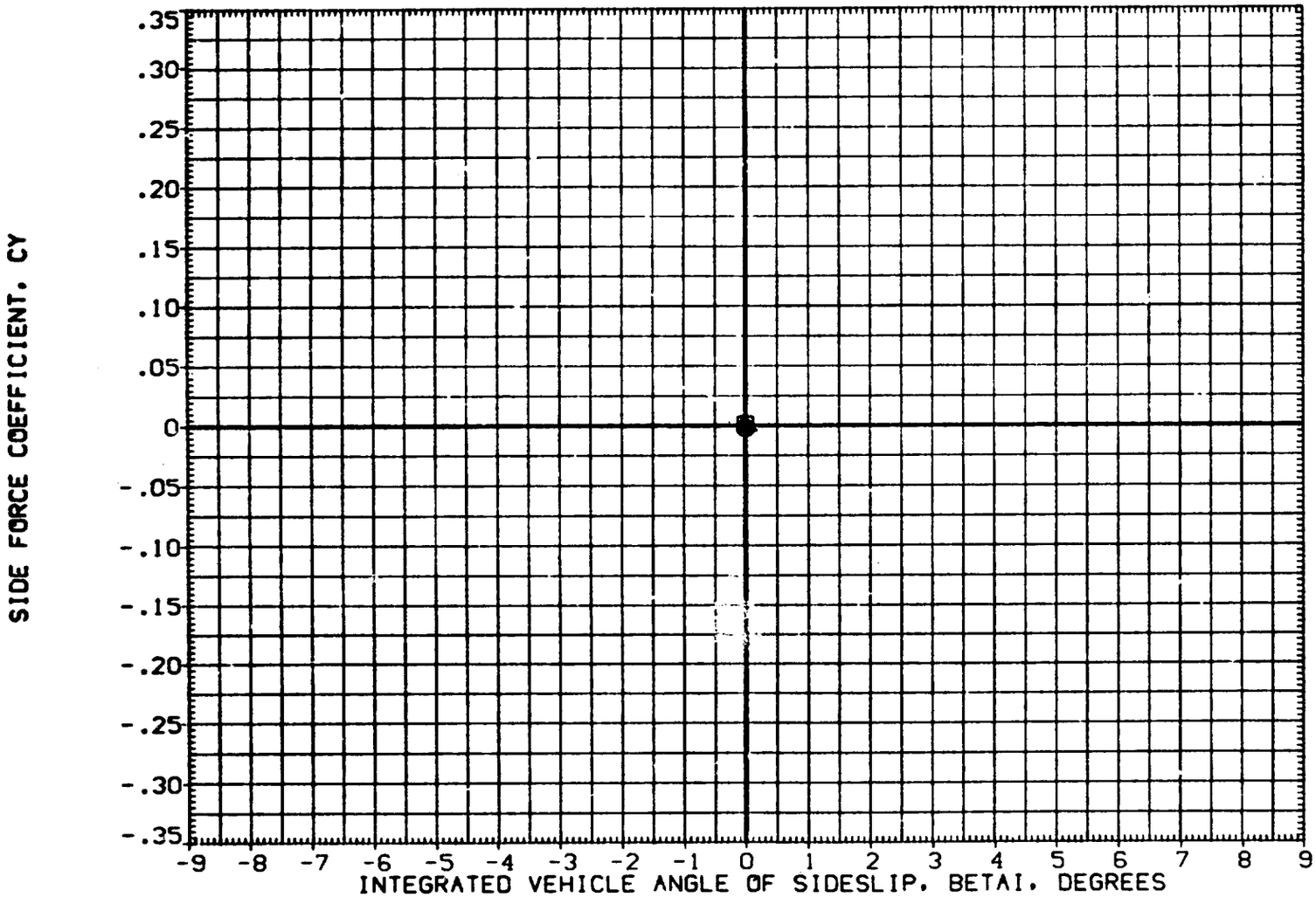


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET03)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

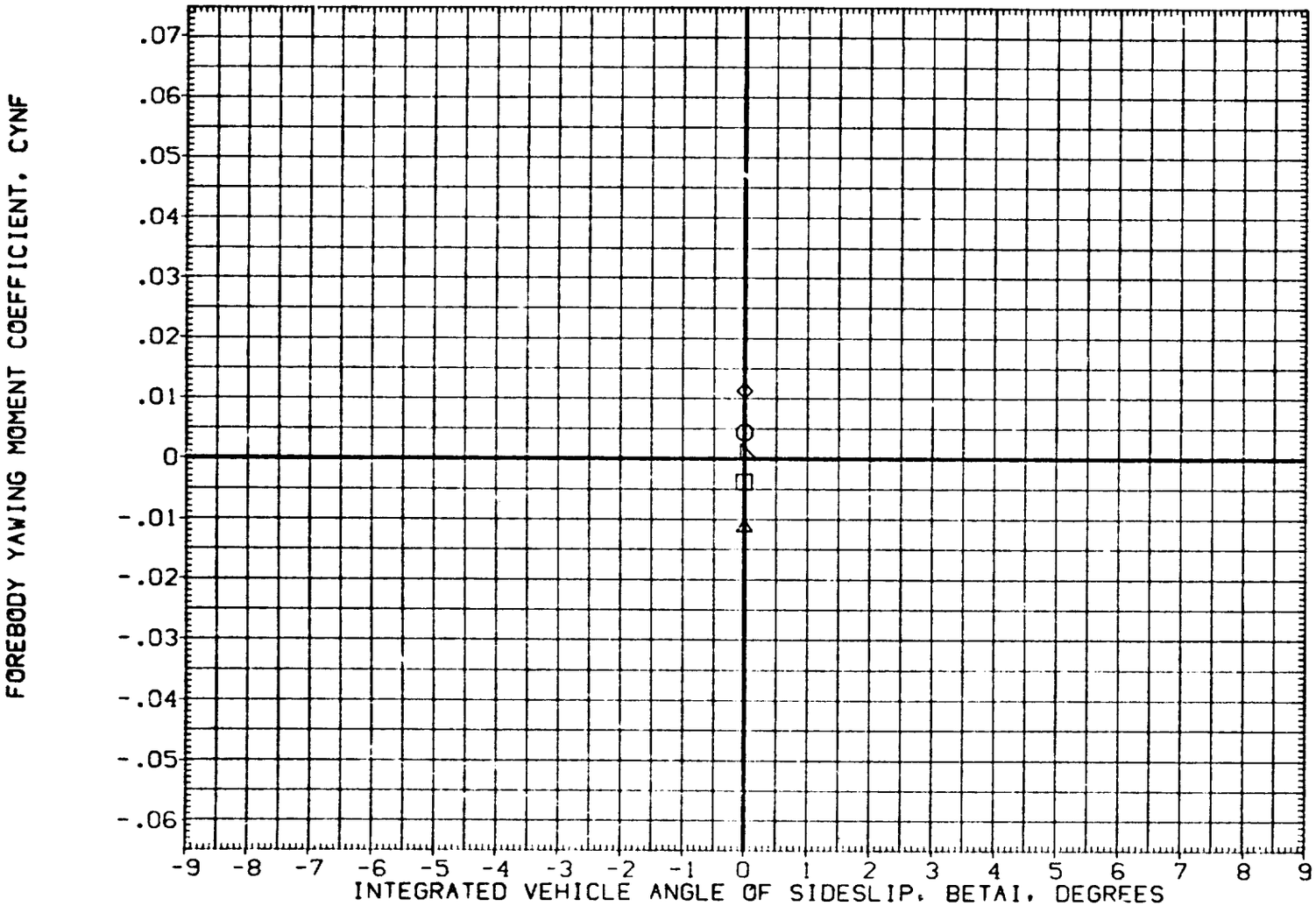


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE1039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	⊠	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

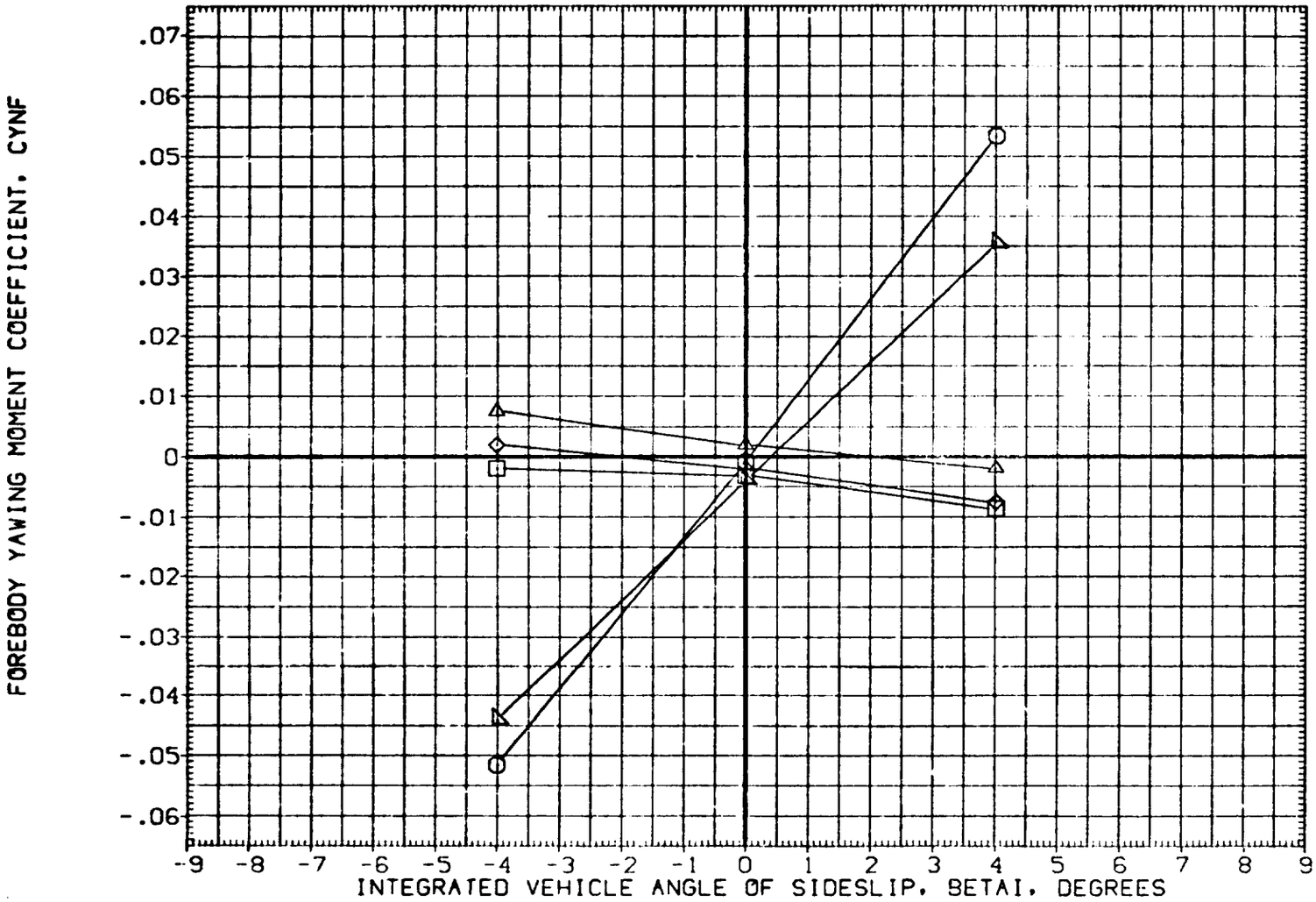


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET033)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LET739)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	▽	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

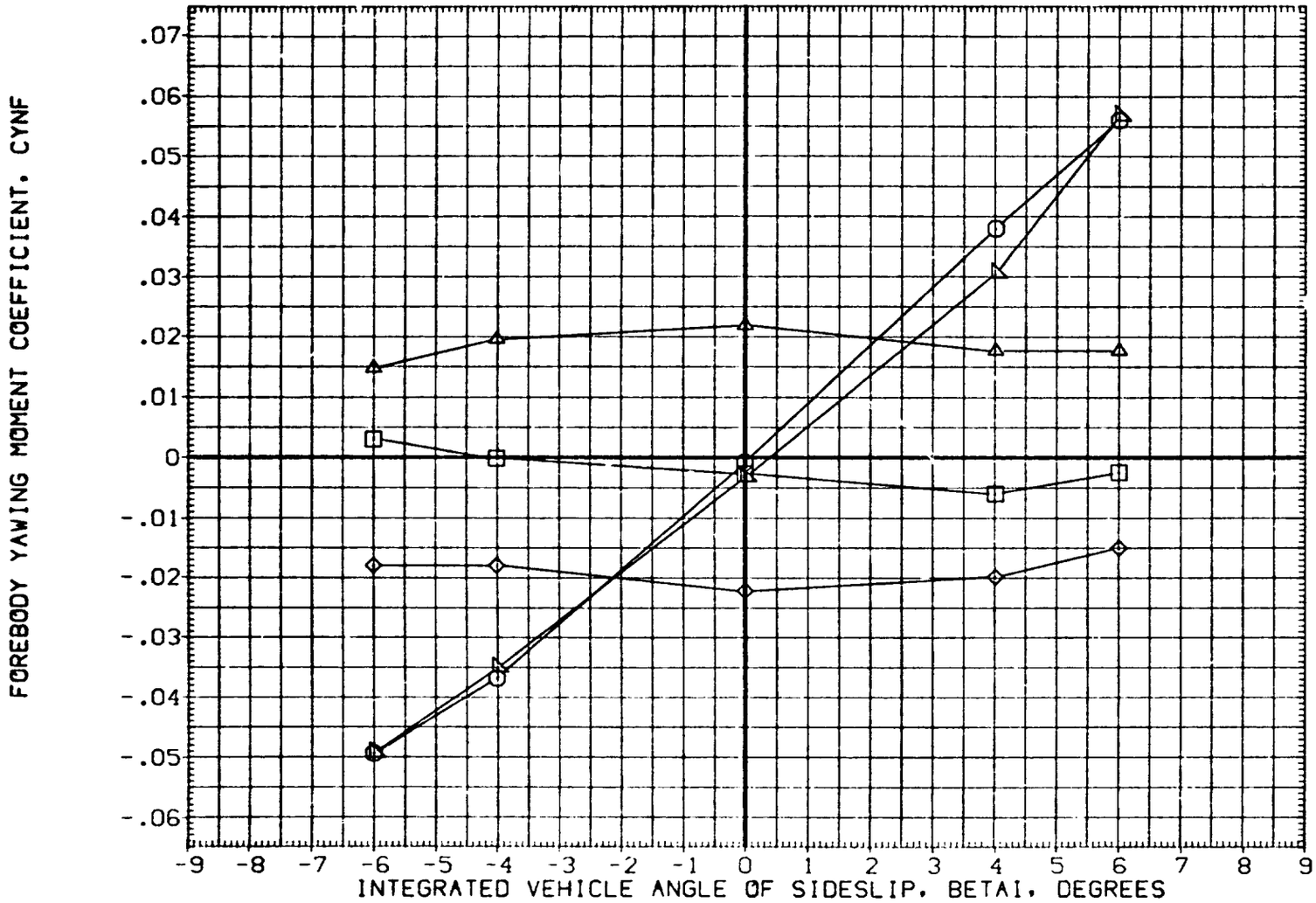


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETJ39)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

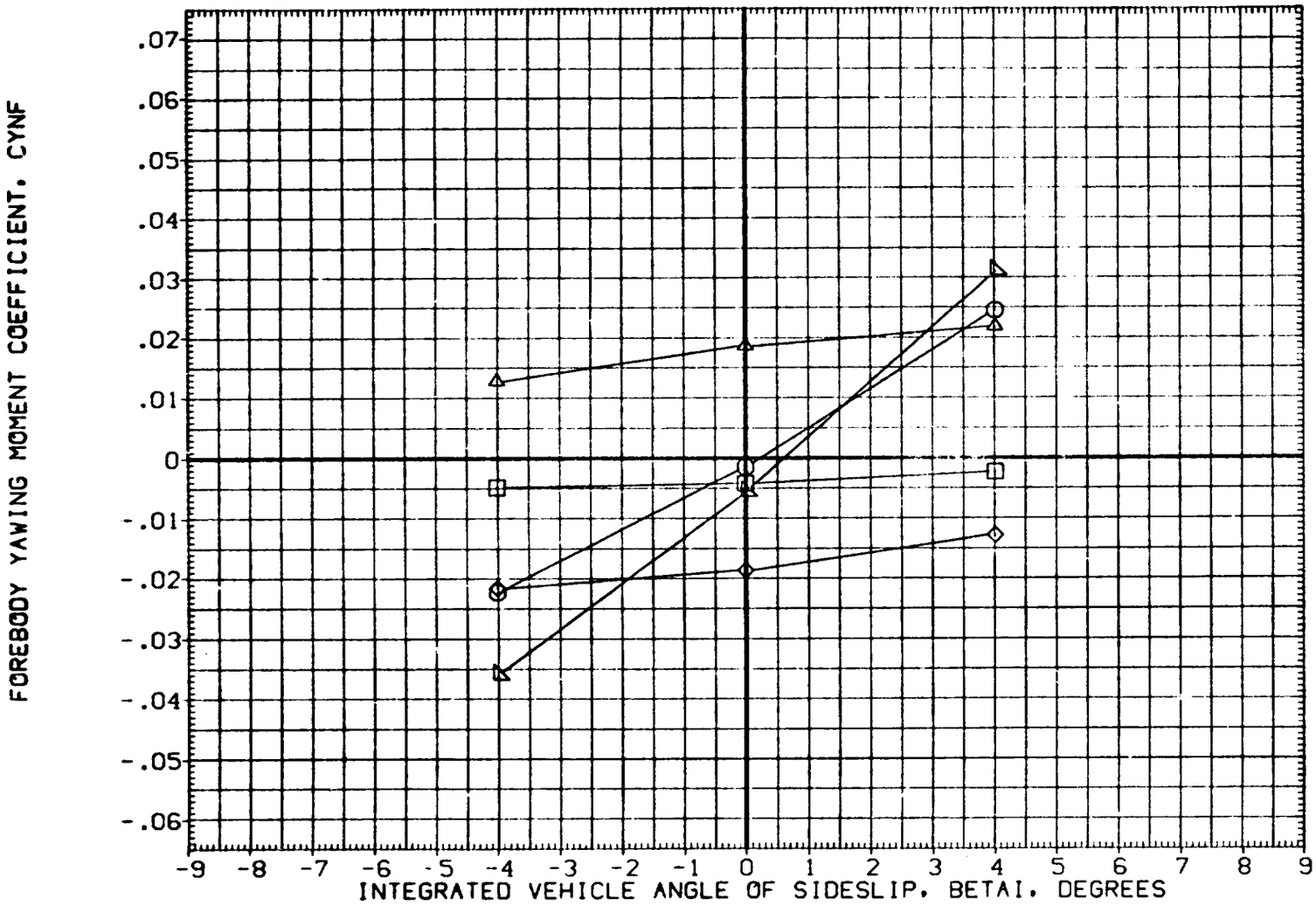


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

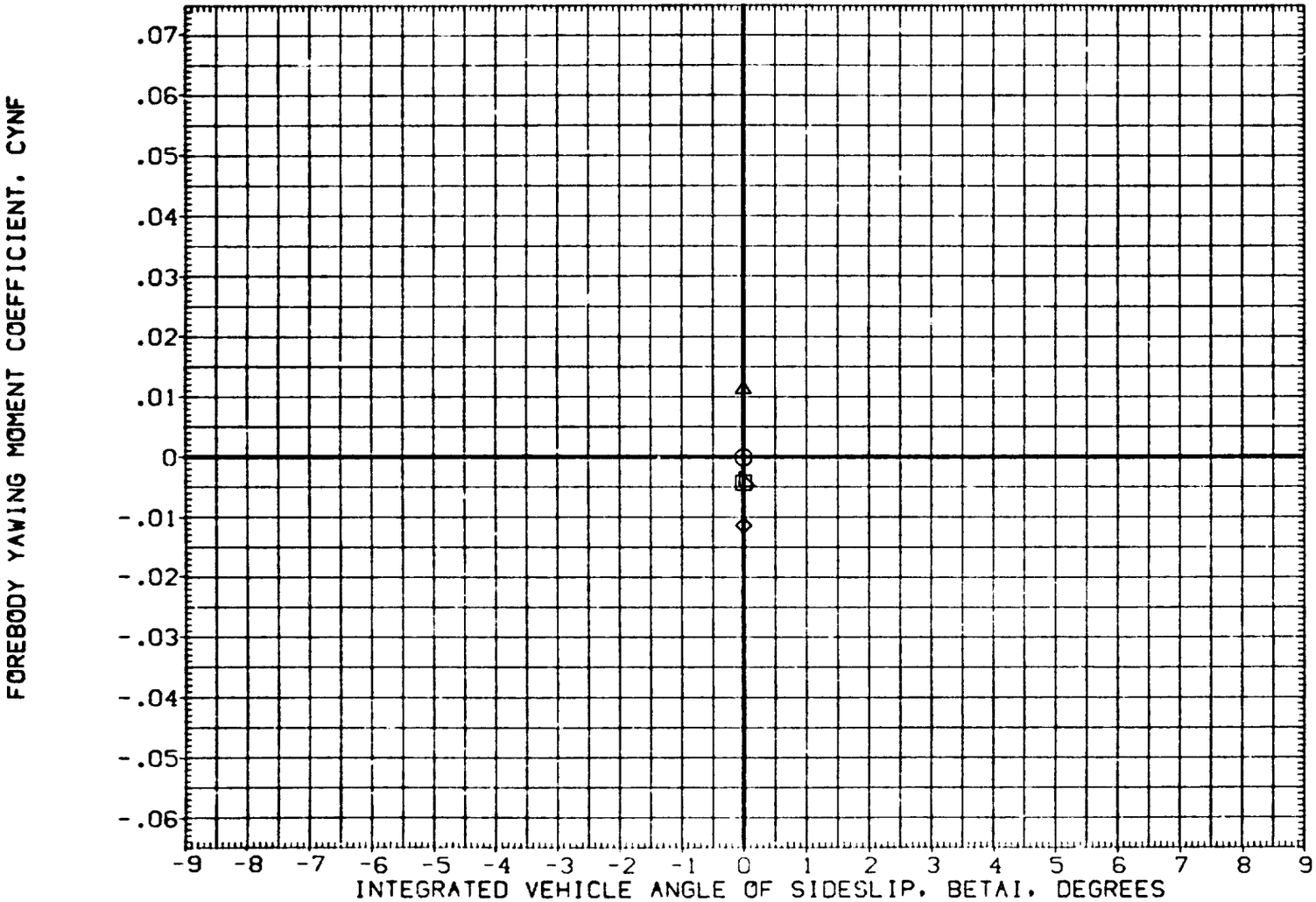


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

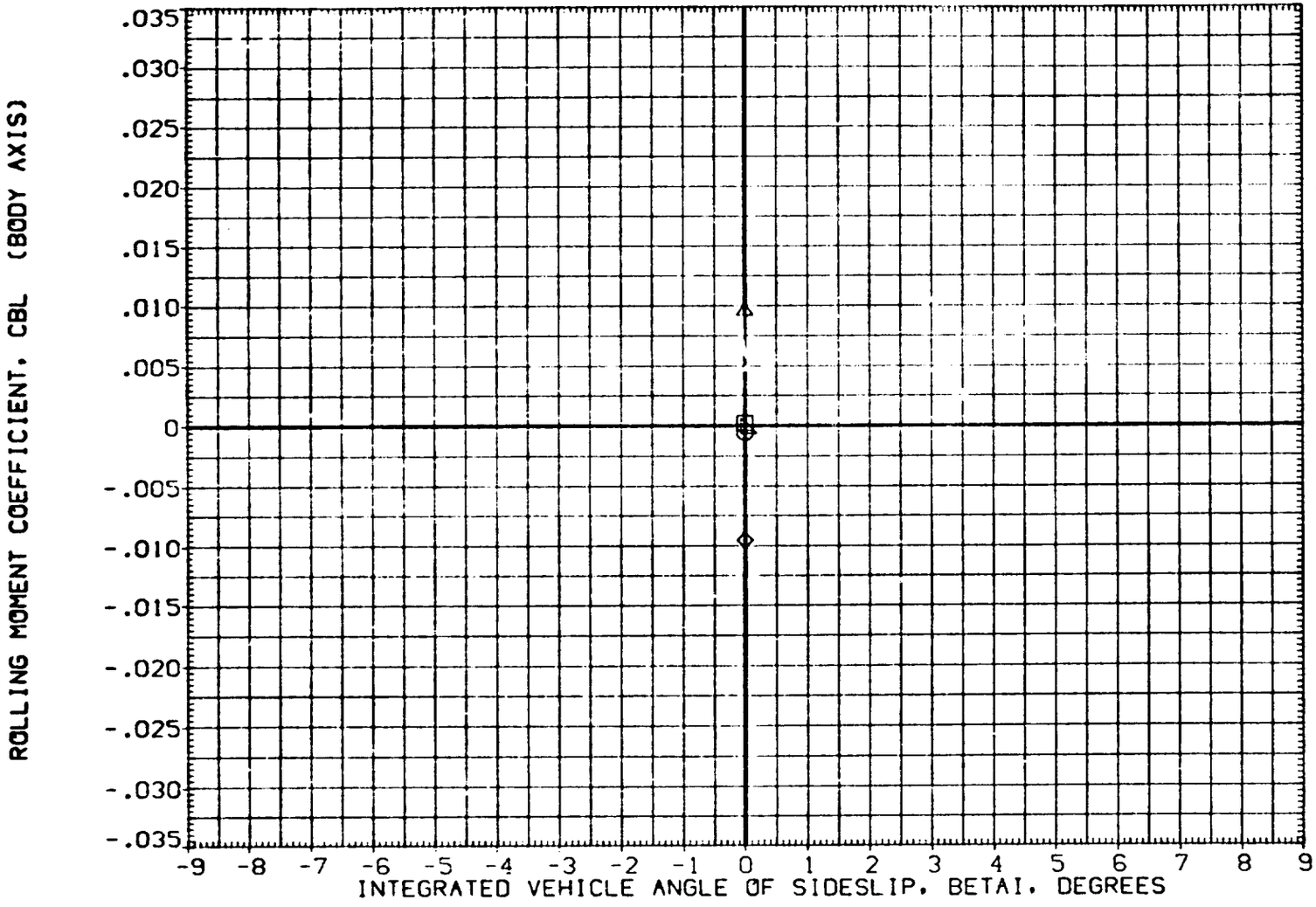


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

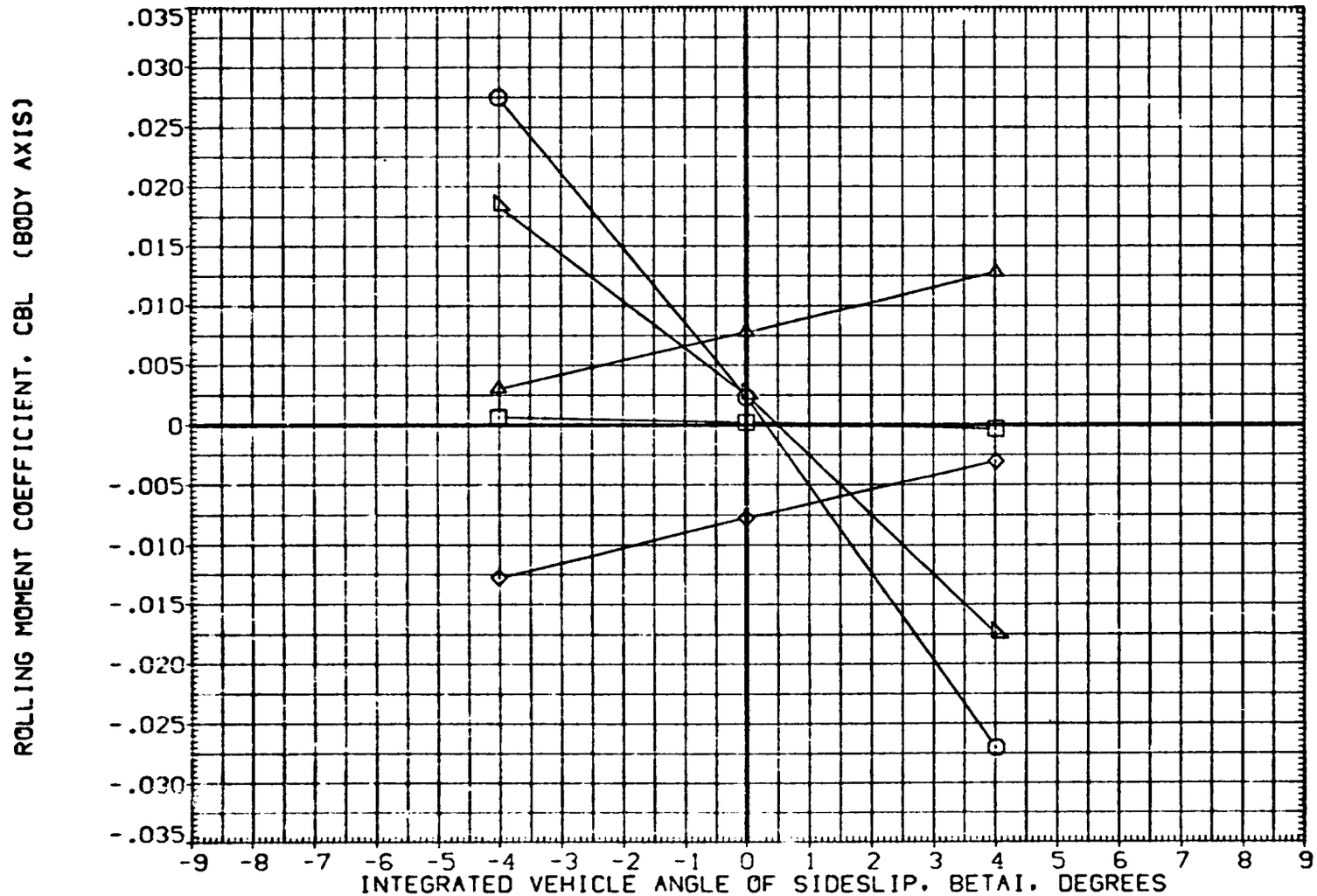


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET039)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	▽	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LET439)	△	AMES97-019([A81]) LVAP R-LPB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	▷	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

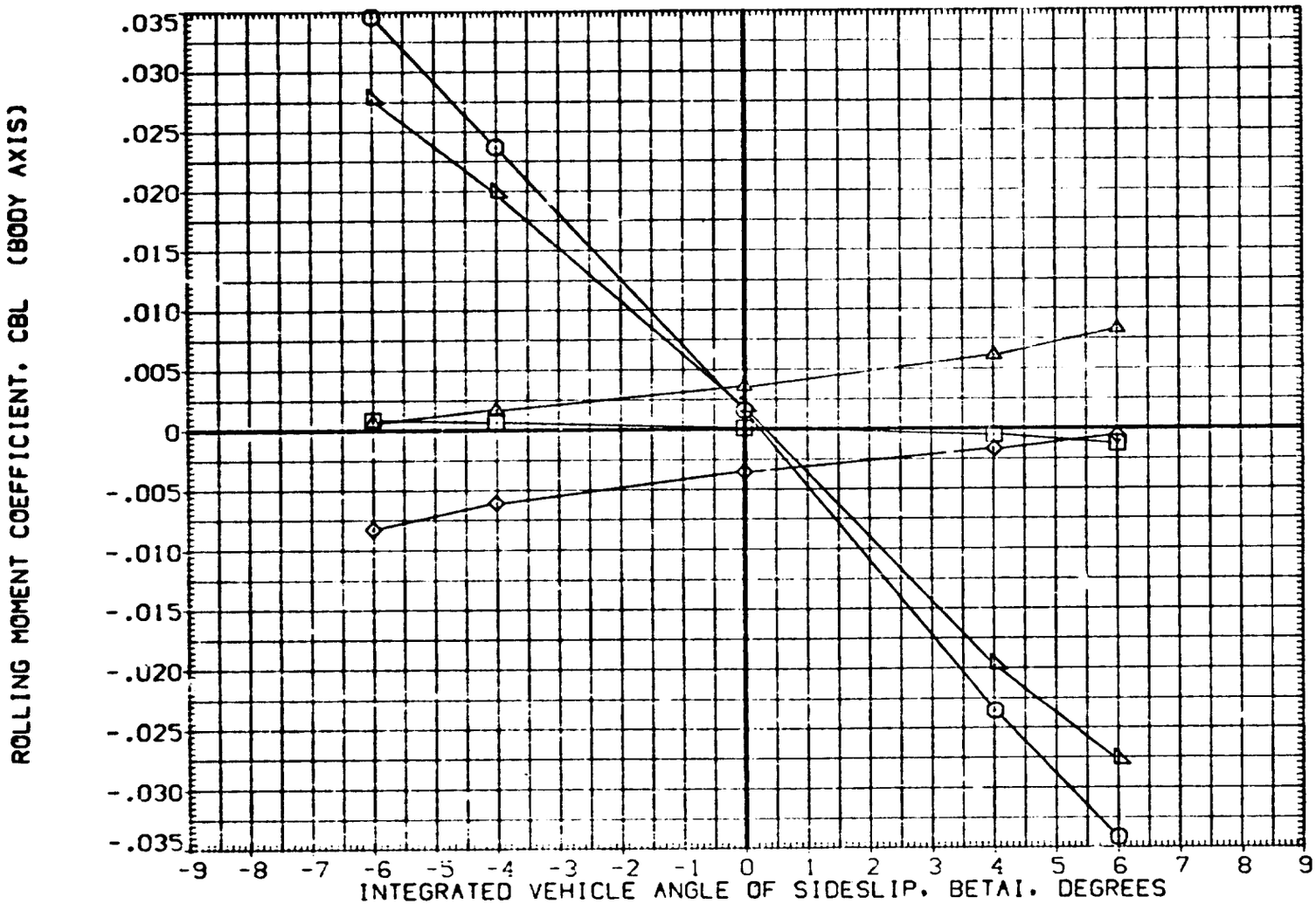


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

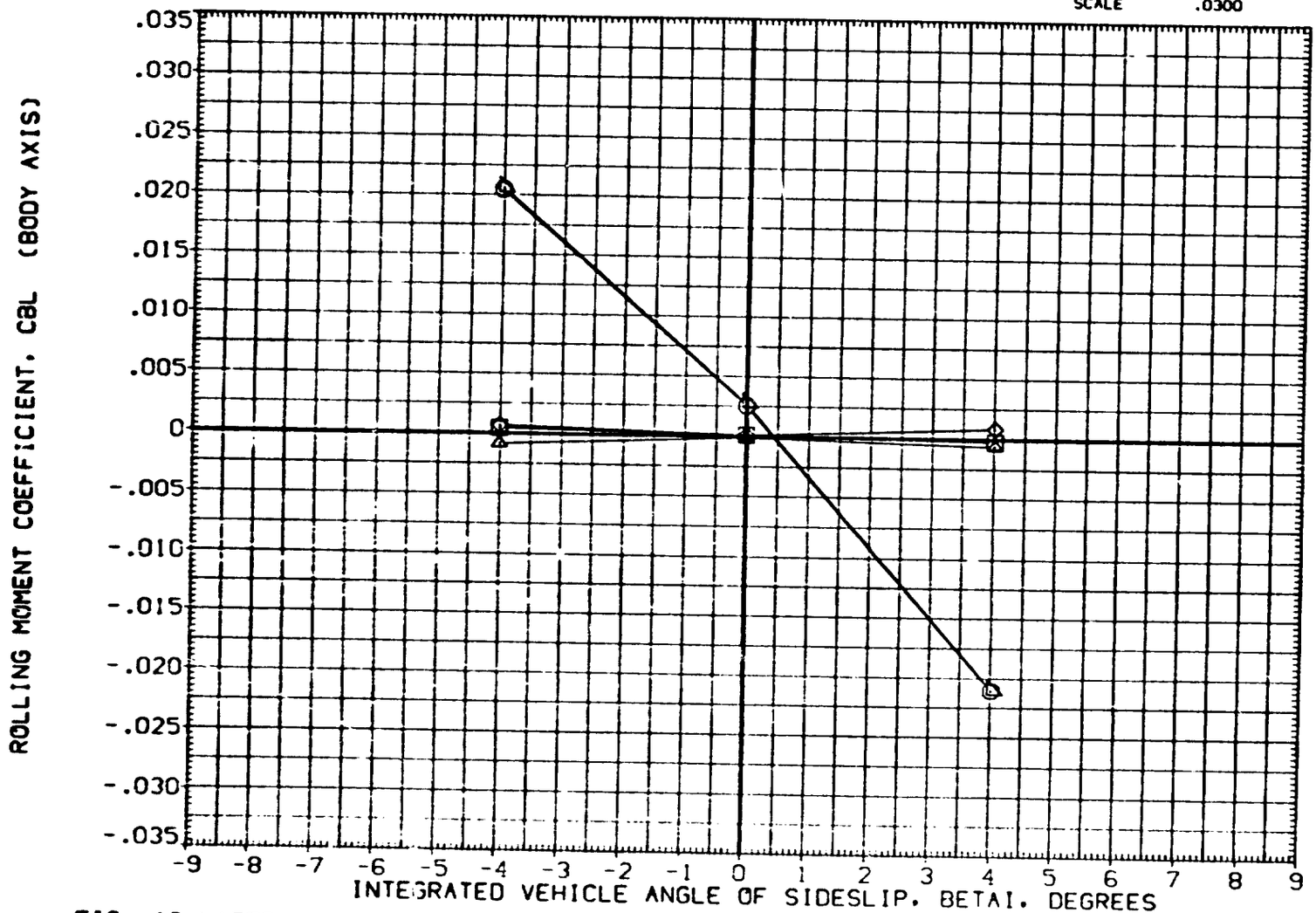


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LETO39)	□	AMES97-019(:AB:) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(LETT39)	□	AMES97-019(IAB:) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(LETL39)	⊠	AMES97-019(IAB:) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(LETRJ3)	⊠	AMES97-019(IAB:) LVAP R-LRB ALL ML SEALED	.000	.000	1.550	.000
(LETI39)	△	AMES97-019(IAB:) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

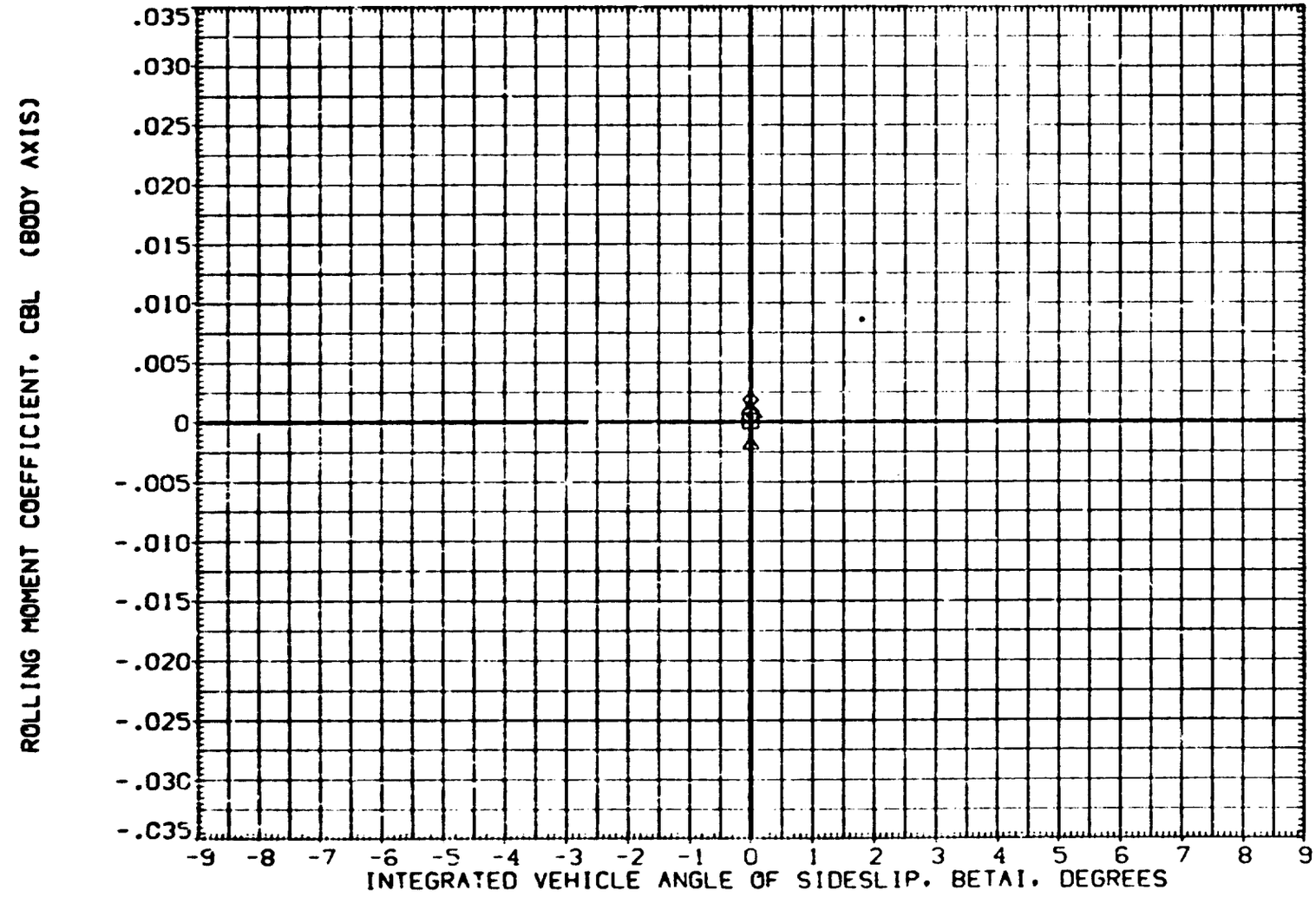


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO39)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	1.550	.000
(LETT39)	▽	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	1.550	.000
(LETL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	1.550	.000
(LETR39)	△	AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	.000	.000	1.550	.000
(LETI39)	◁	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

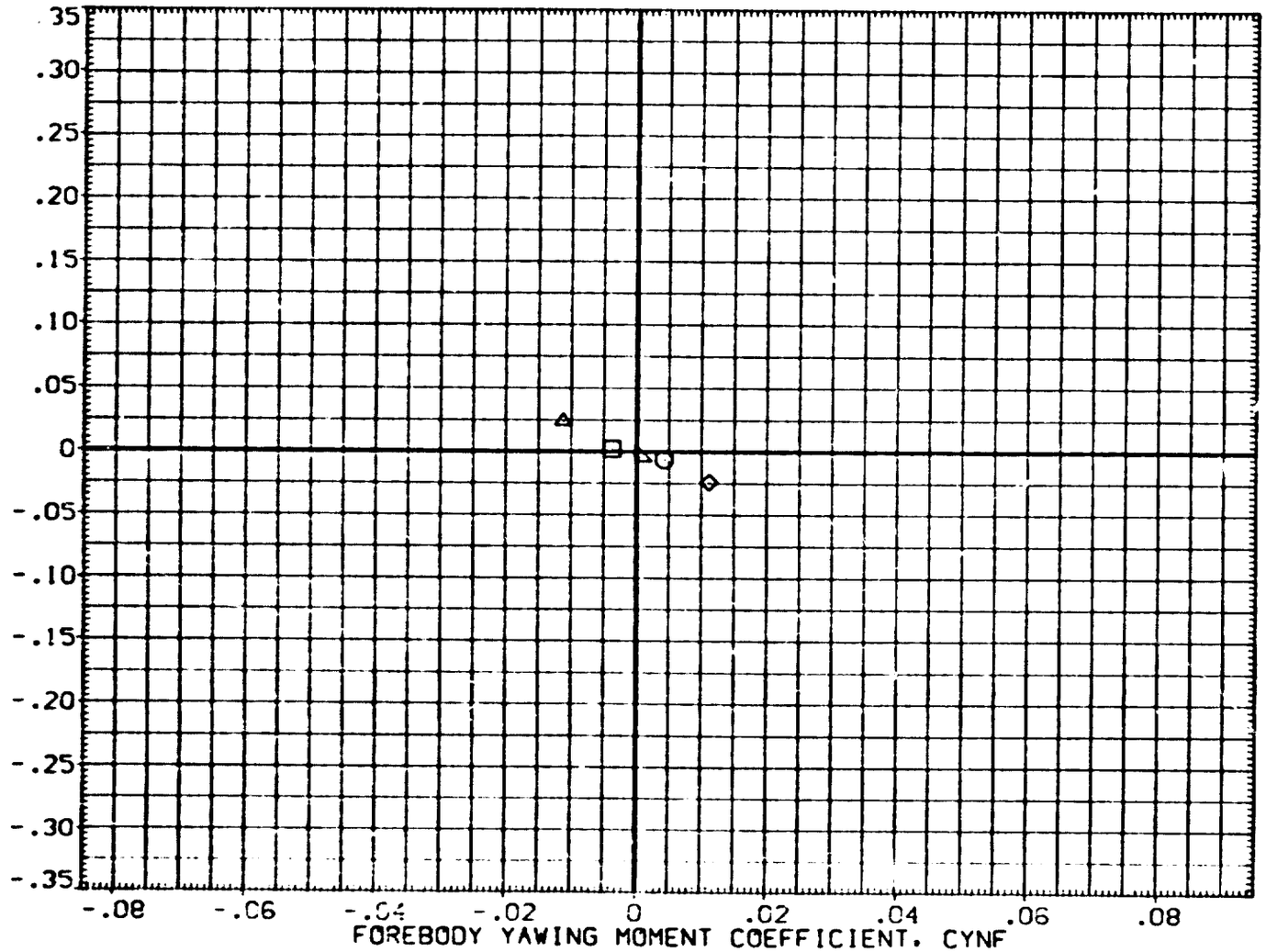


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)ALPHA(= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETOJ9)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETTJ9)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETLJ9)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETRJ9)	△	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	.000	.000	1.550	.000
(LETIJ9)	▽	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

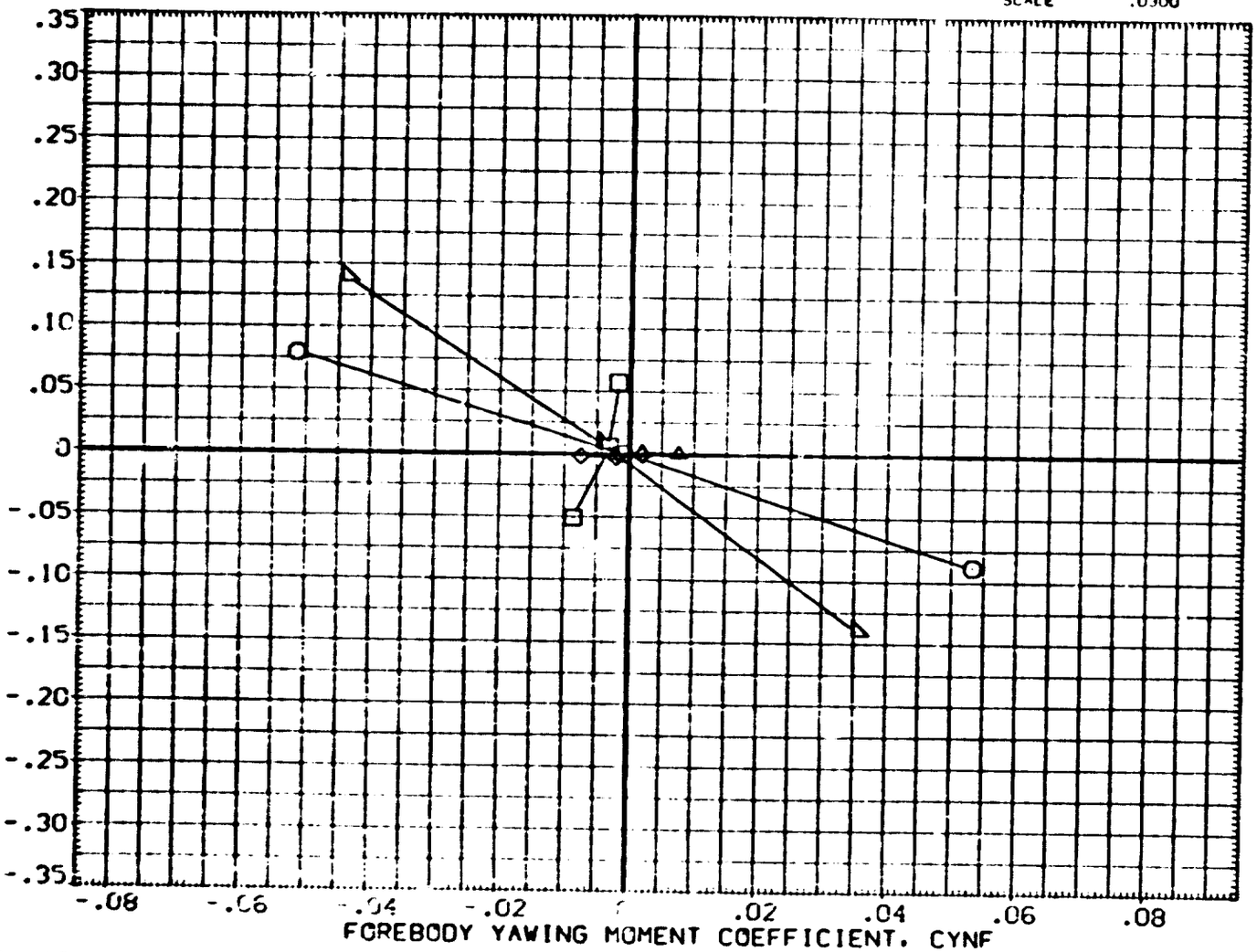


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(B)ALPHA[-1.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPCBRK
(LET039)	□	AMES97-019(IA61) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LET139)	○	AMES97-019(IA61) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LET239)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LET339)	▽	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	1.550	.000
(LET139)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

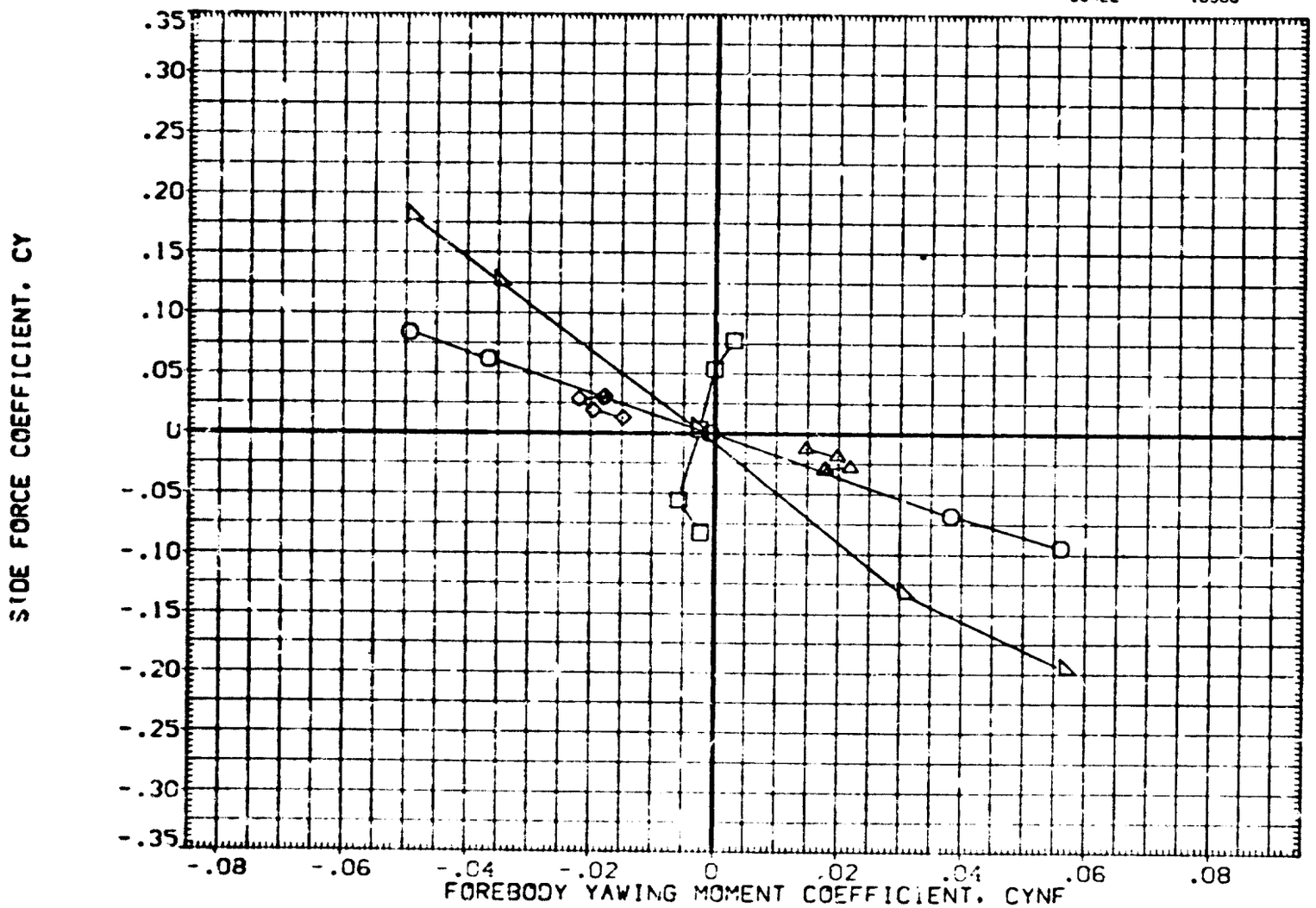


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)ALPHA1 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

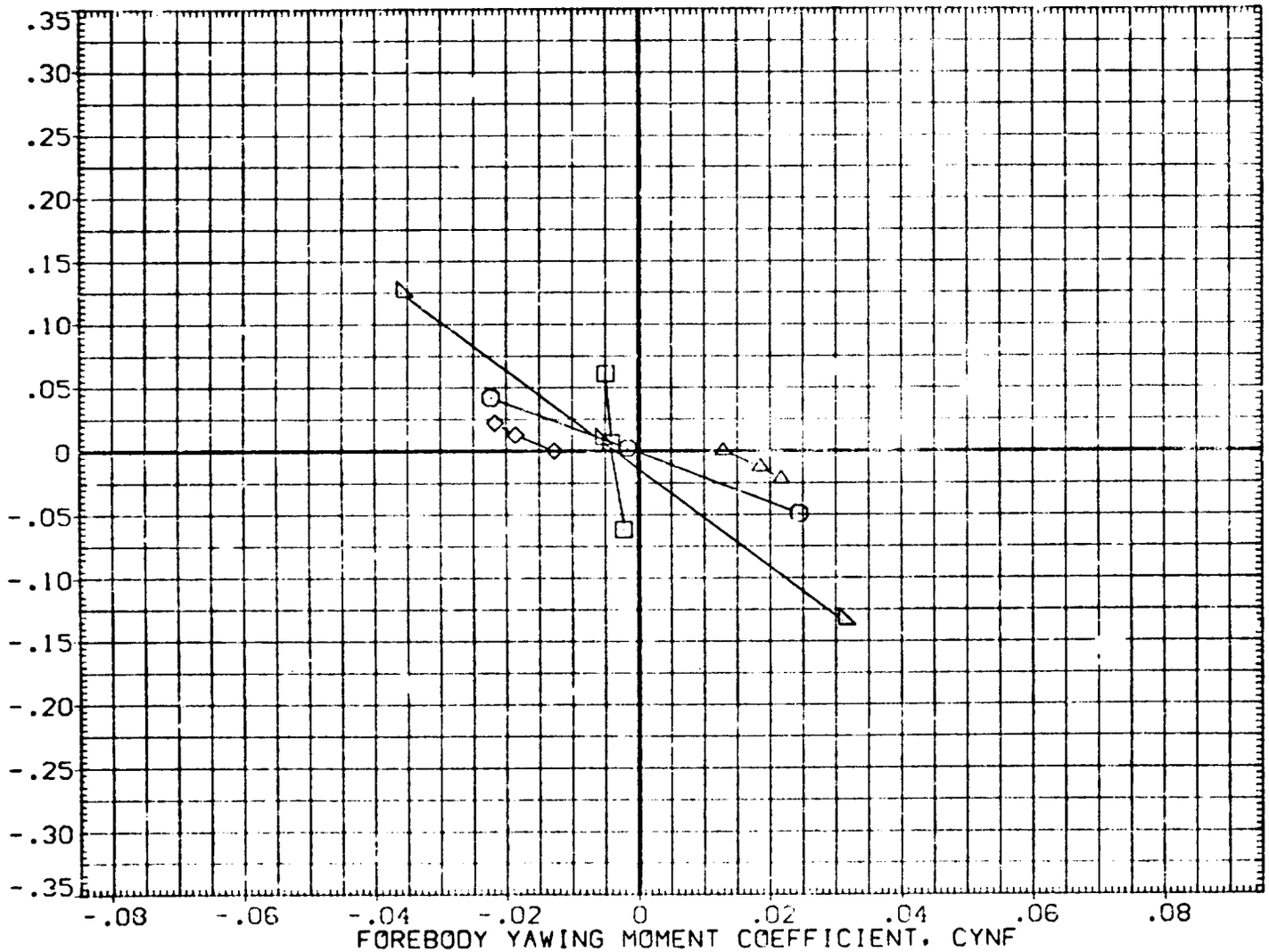


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO39)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

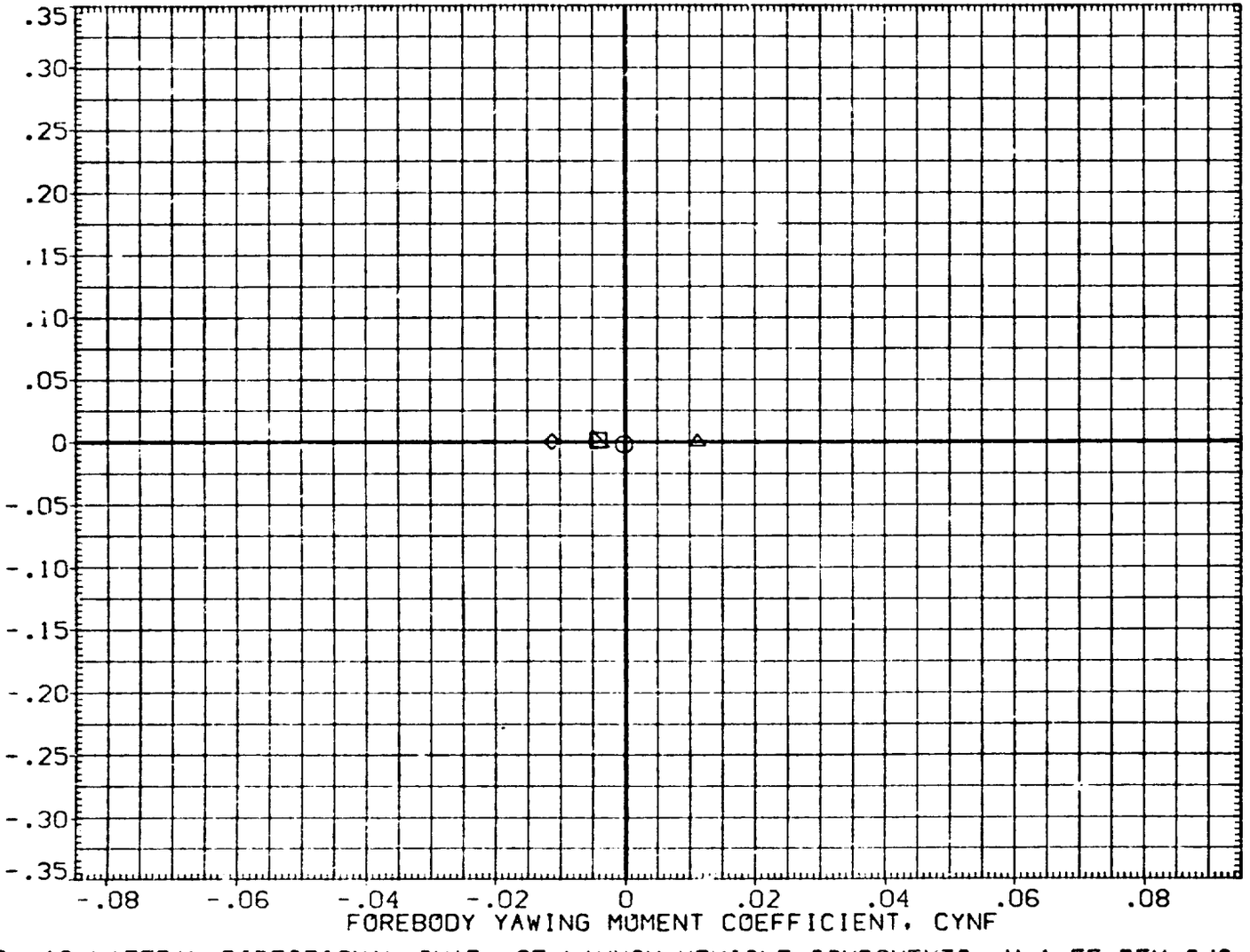


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

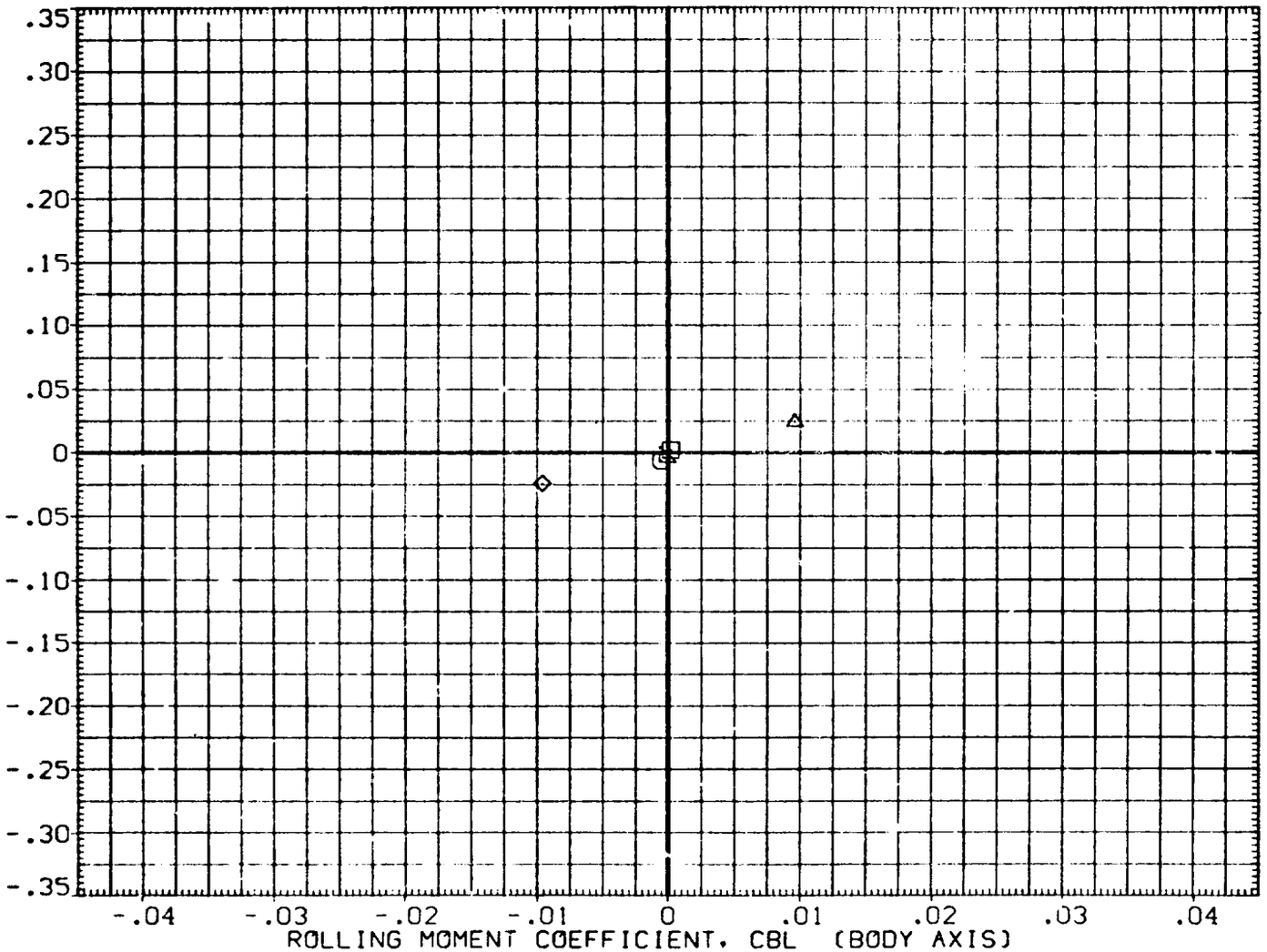


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

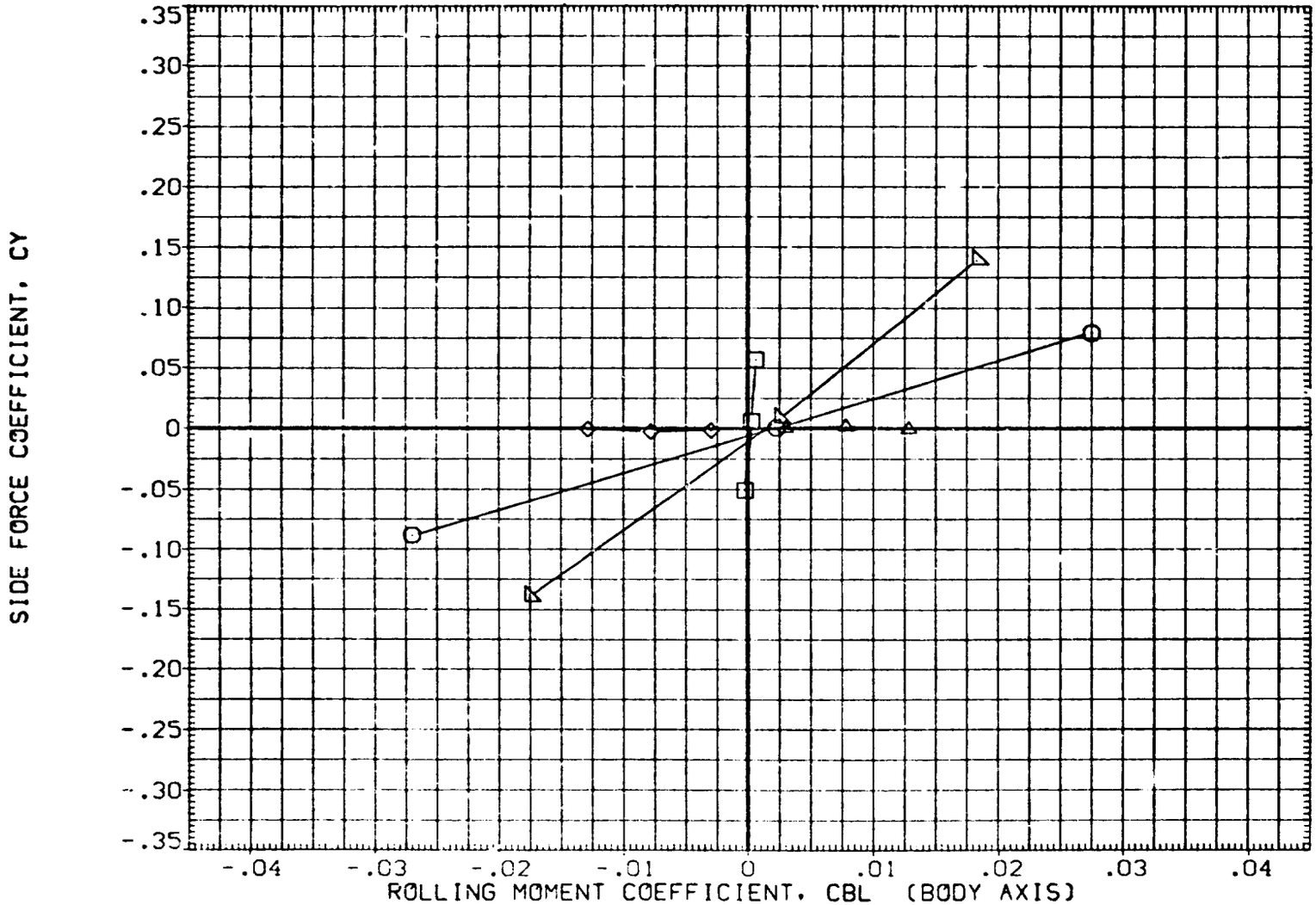


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

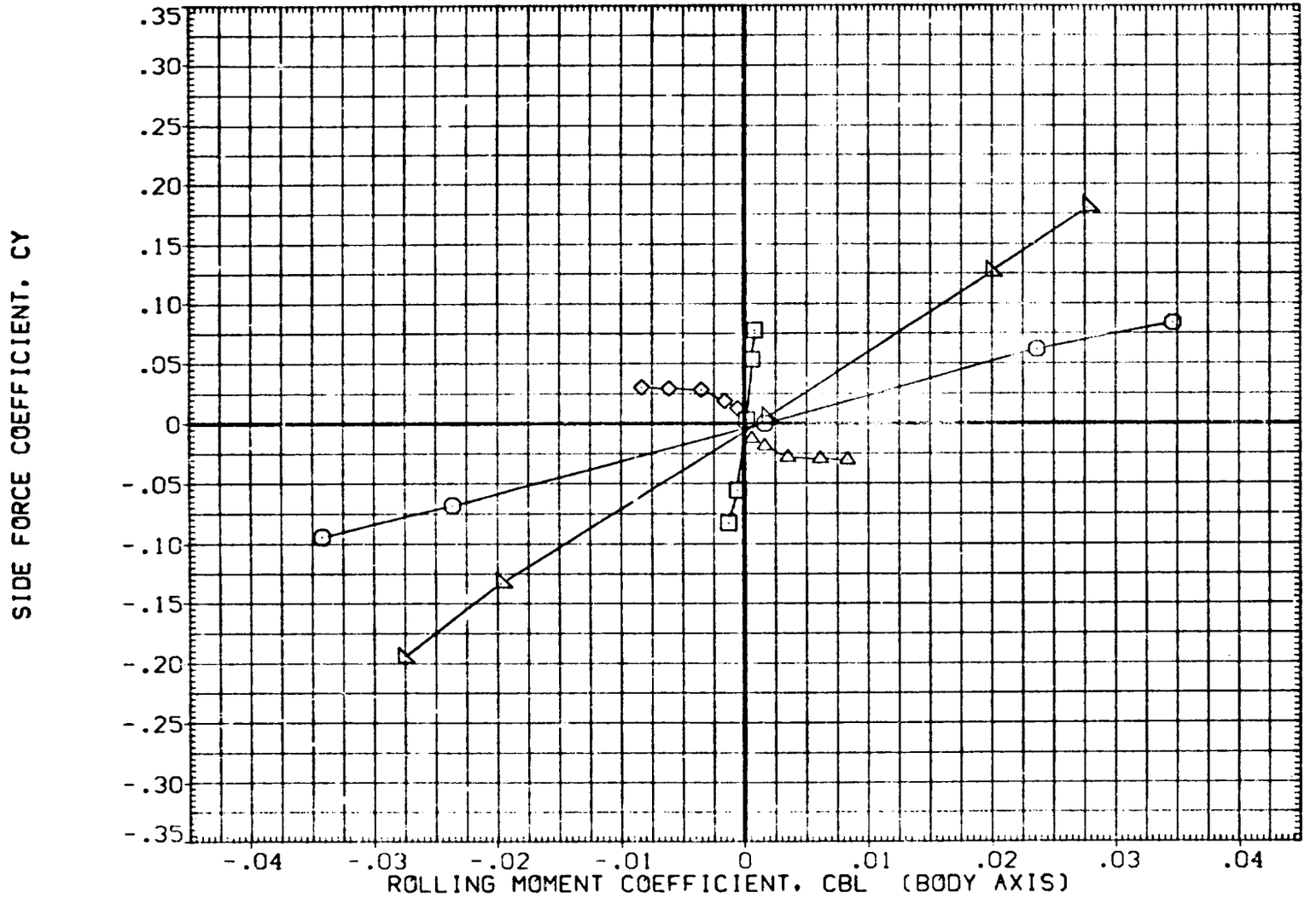


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET039)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

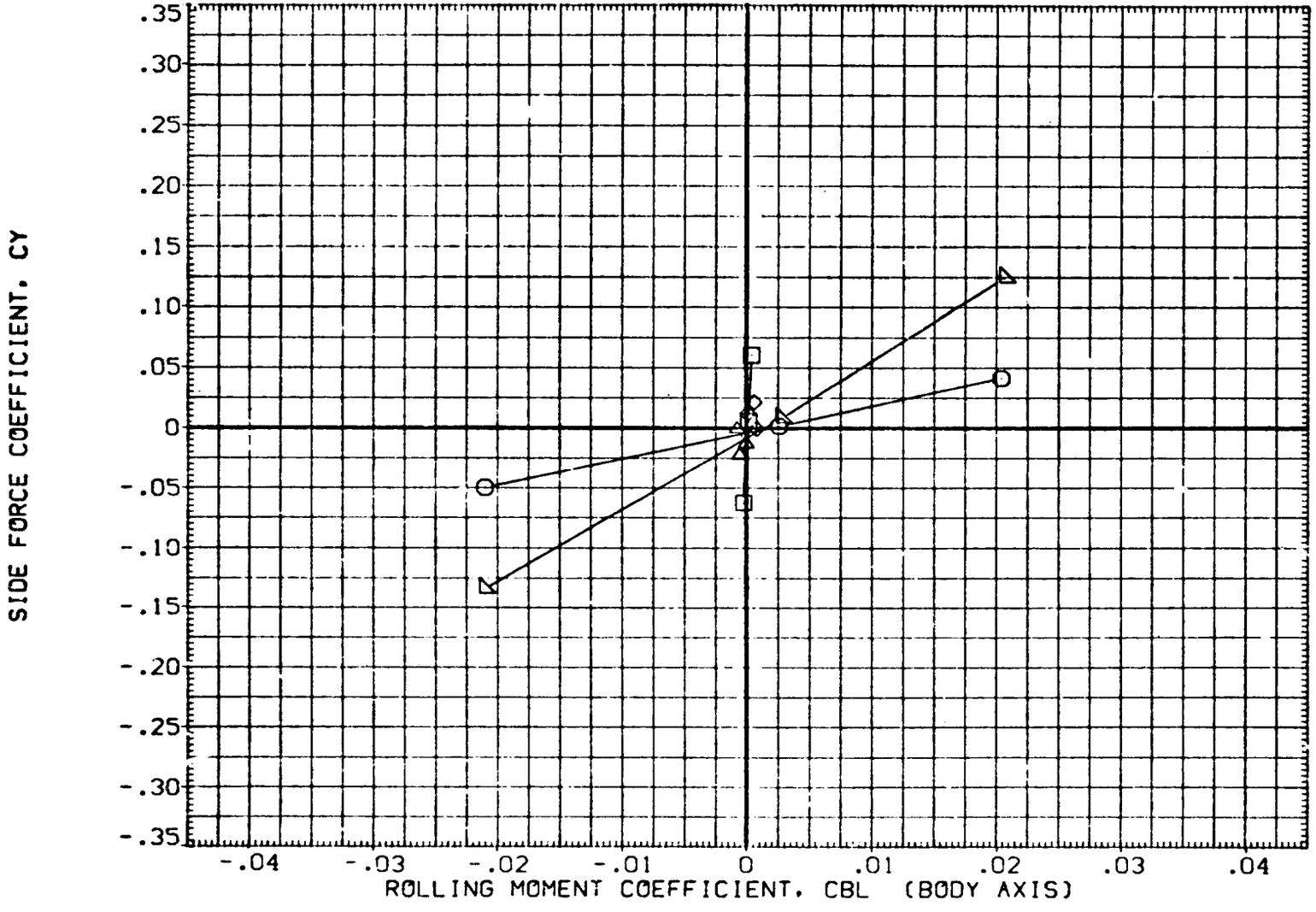


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(LETT39)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(LETR39)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	1.550	.000
(LETI39)	⊿	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

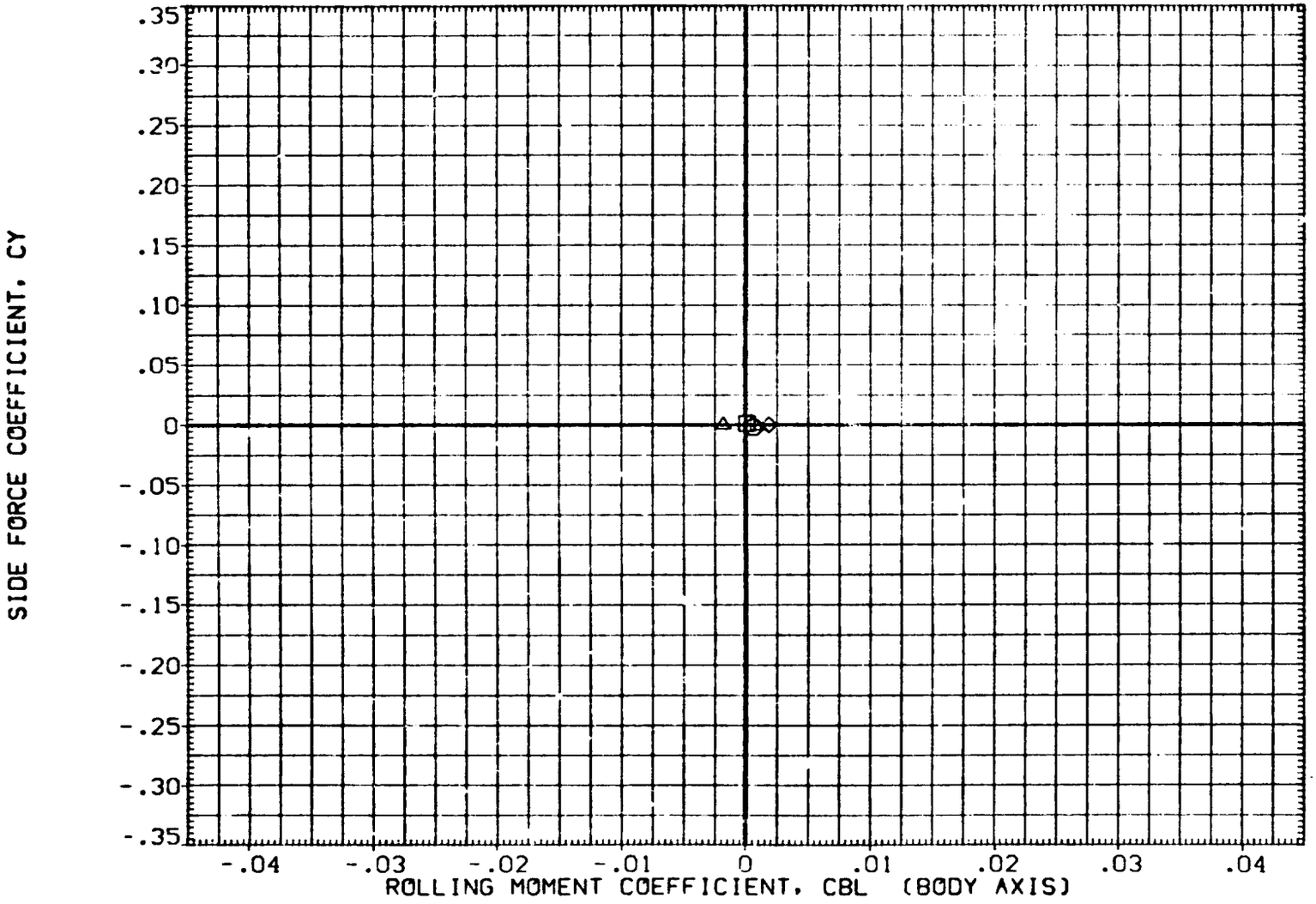


FIG. 18 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

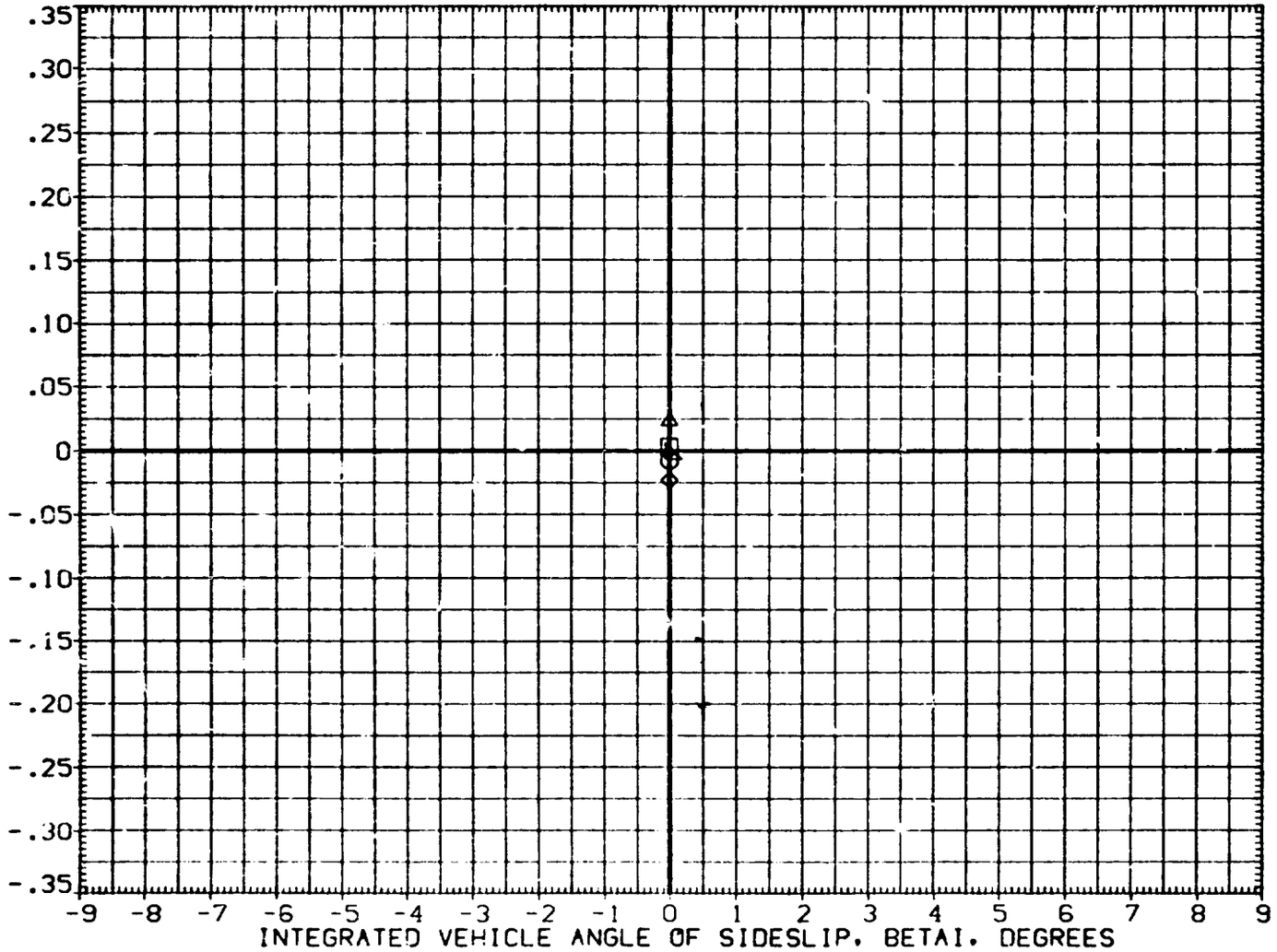


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO43)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◁	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

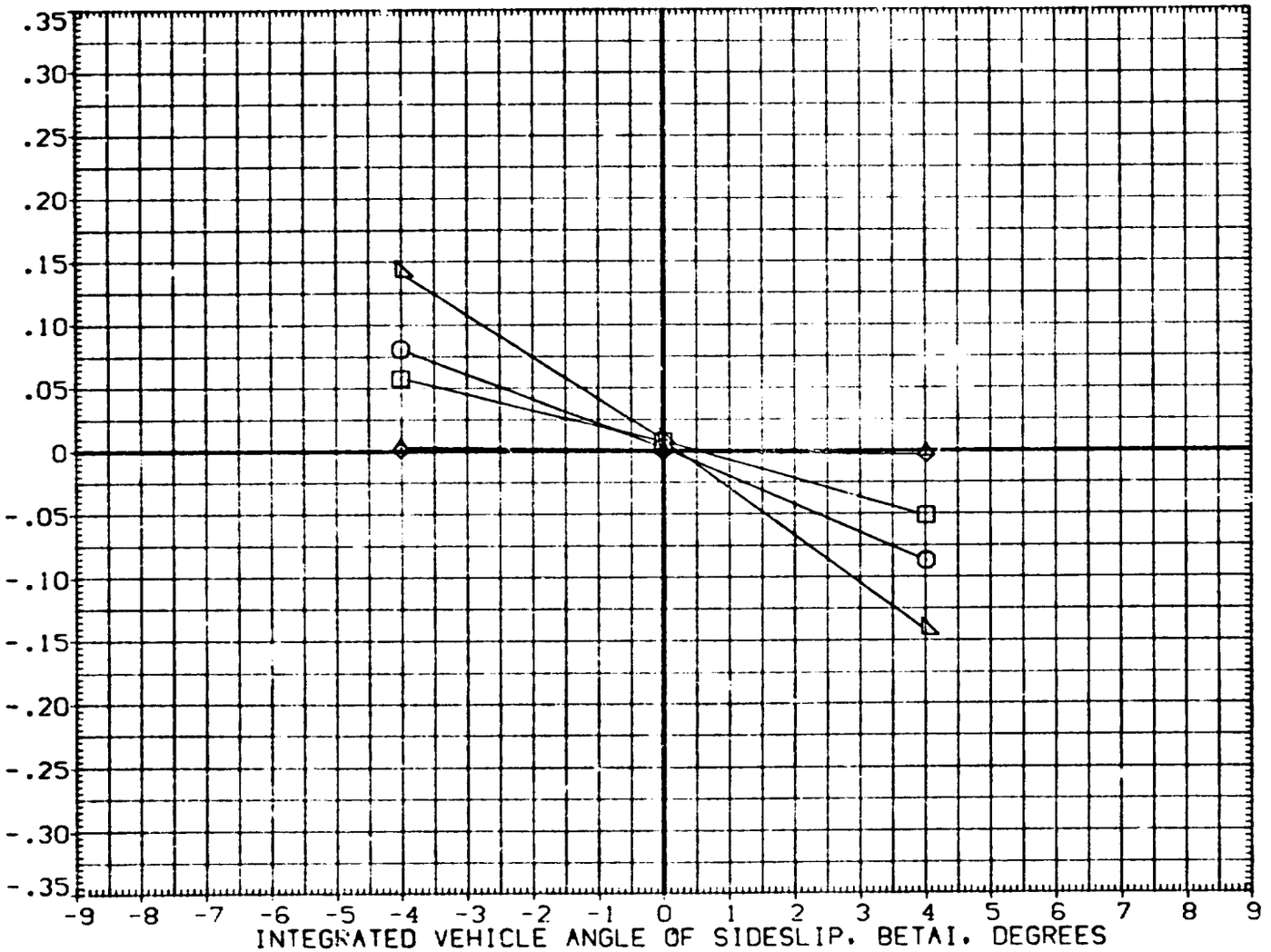


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	▽	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
CREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

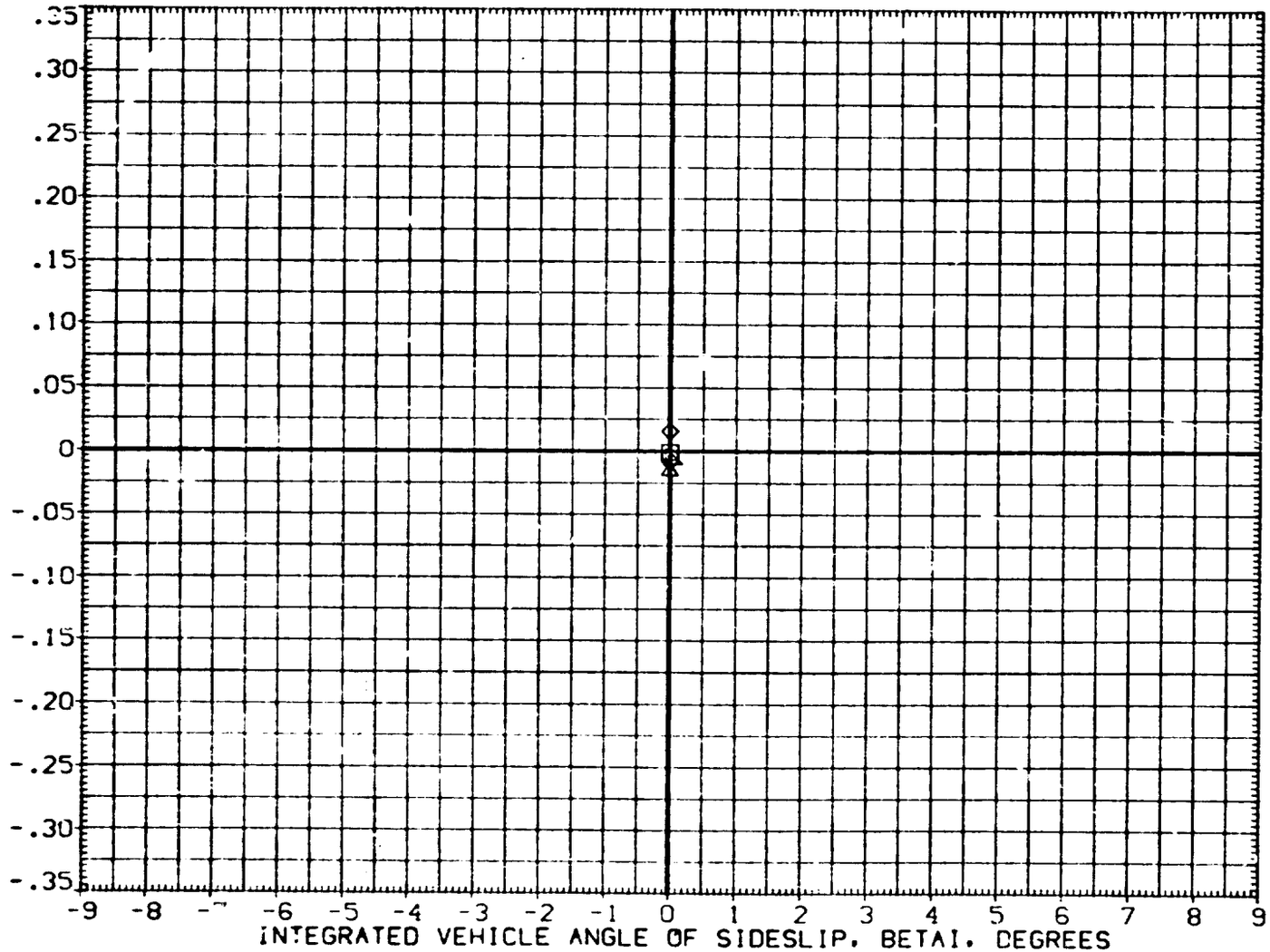


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LE..43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

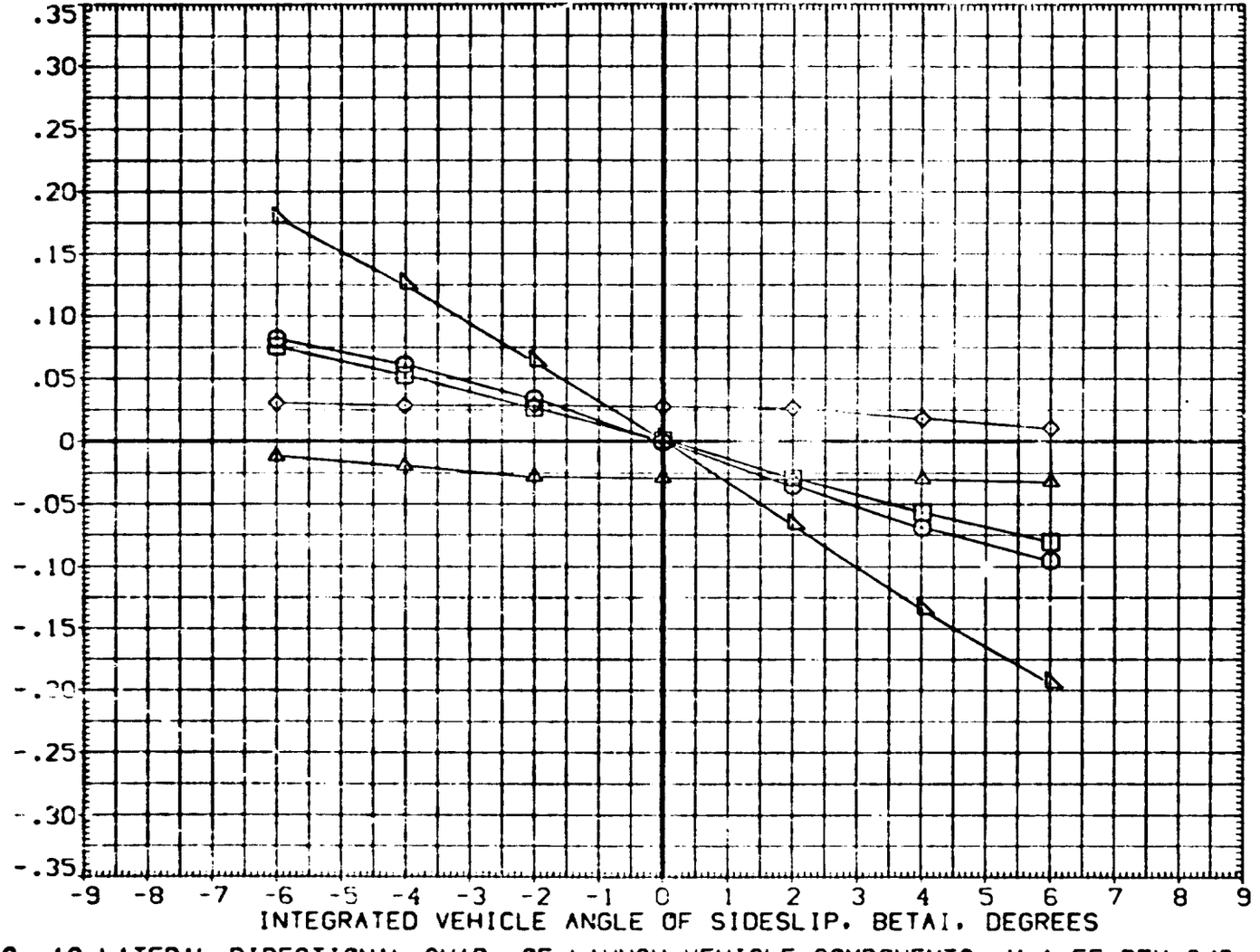


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOILER
(LET043)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI 1)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

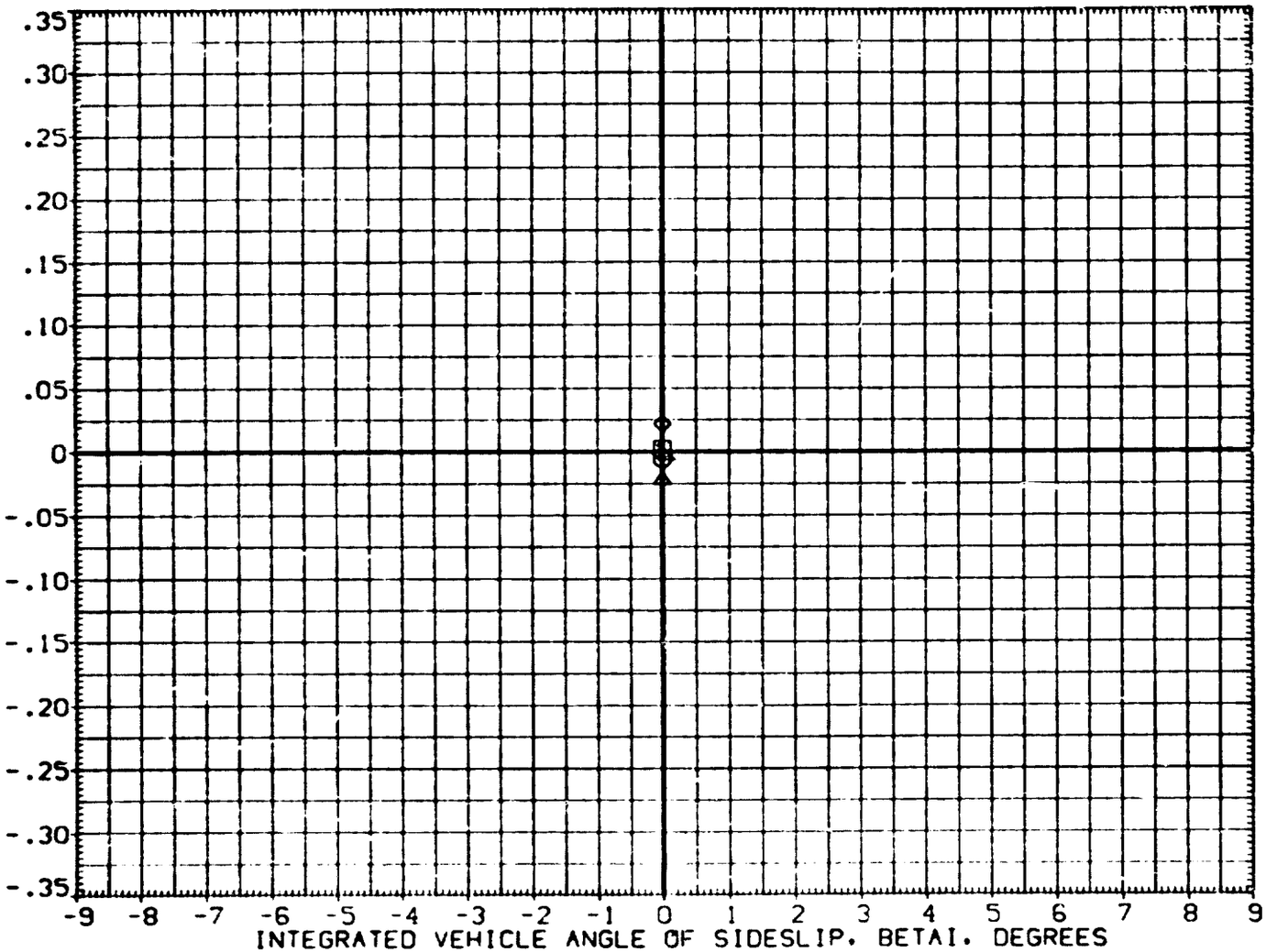


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	◁	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

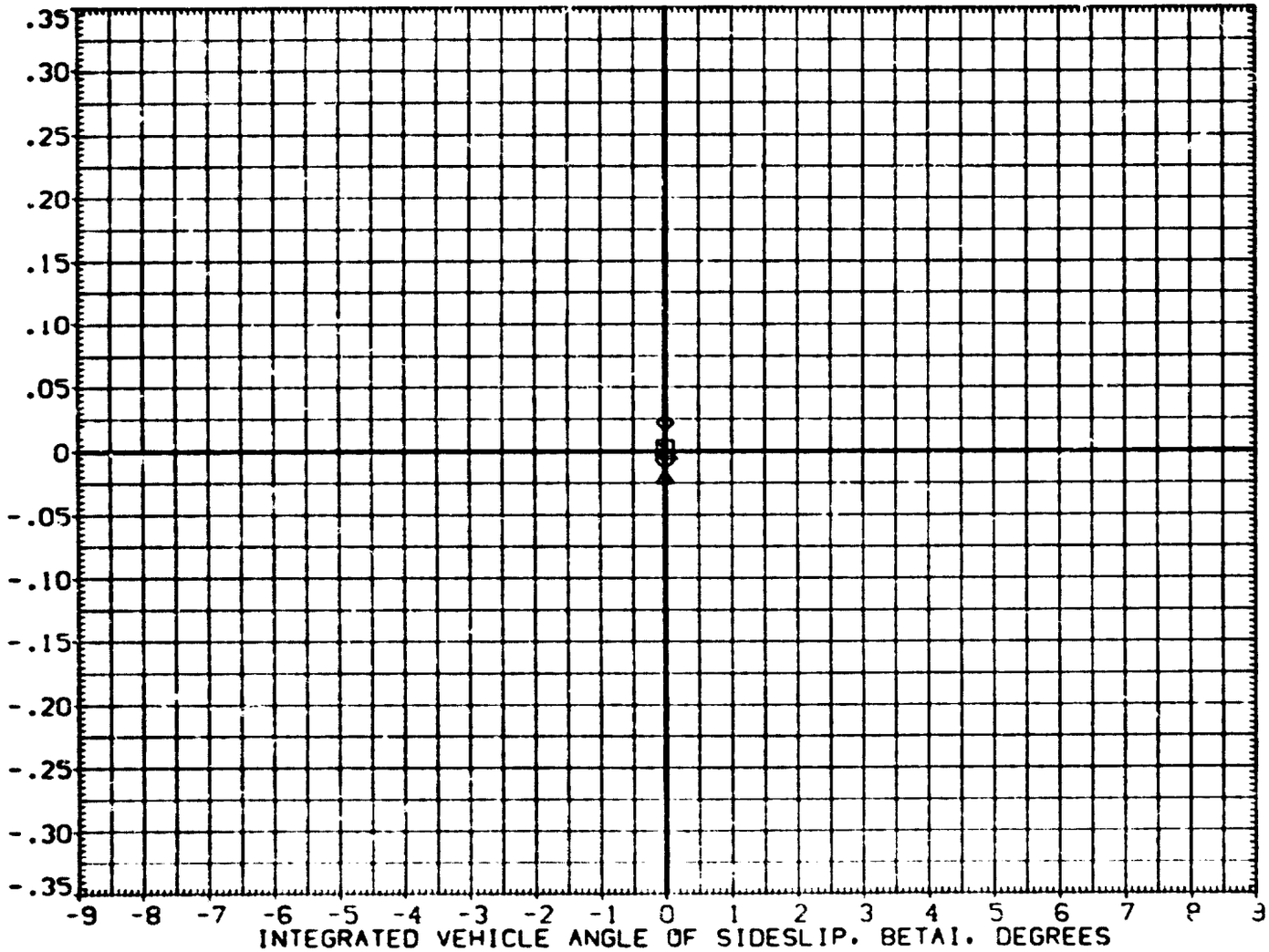


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)	AMES97-019([ABI) LVAP ORBITER-ALL HL SEALED	0.000	.000	1.550	.000
(LETT43)	AMES97-019([ABI) LVAP TANK - ALL HL SEALED	0.000	.000	1.550	.000
(LETL43)	AMES97-019([ABI) LVAP L-SRB - ALL HL SEALED	0.000	.000	1.550	.000
(LETR43)	AMES97-019([ABI) LVAP R-SRB ALL HL SEALED	0.000	.000	1.550	.000
(LETI43)	AMES97-019([ABI) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

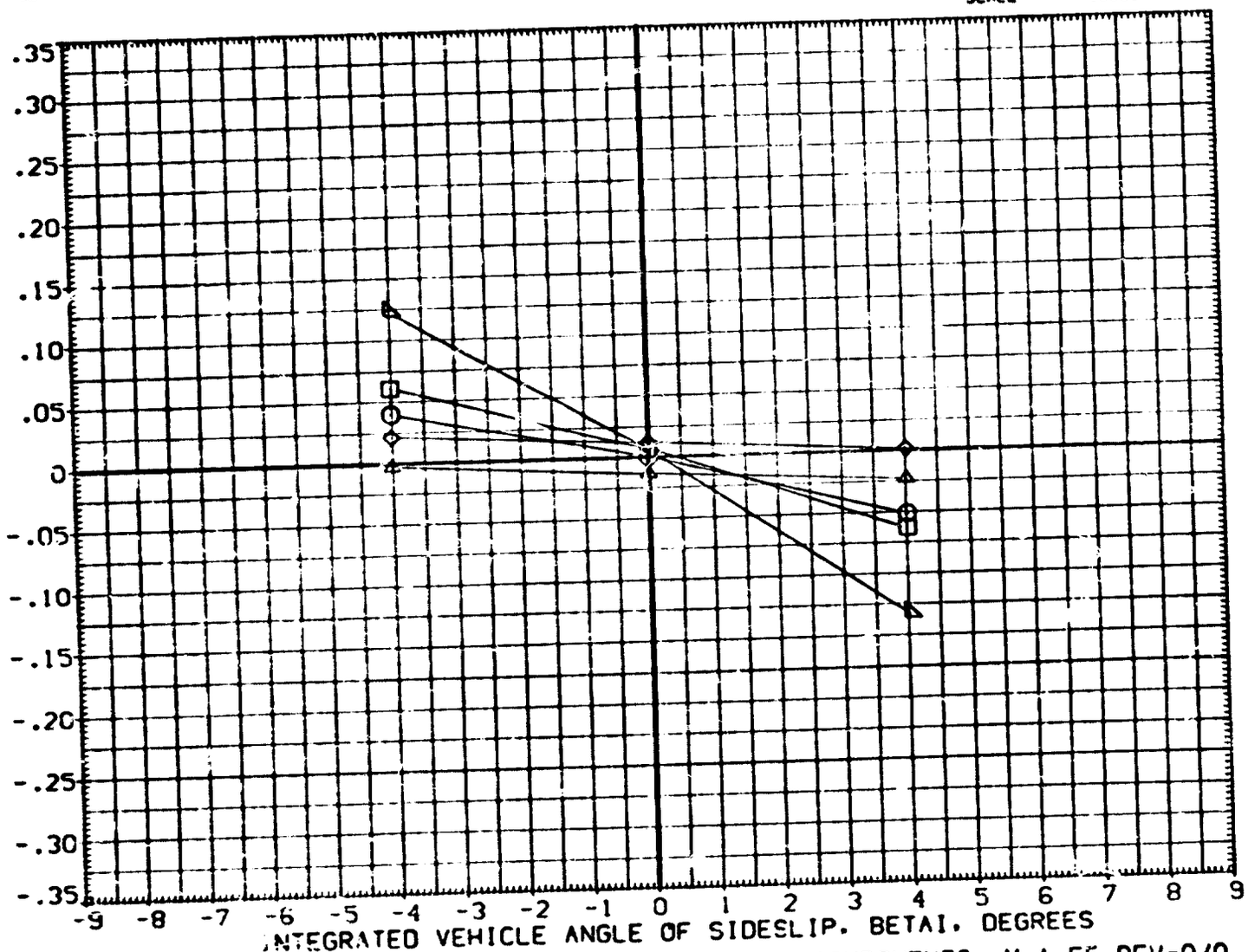


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

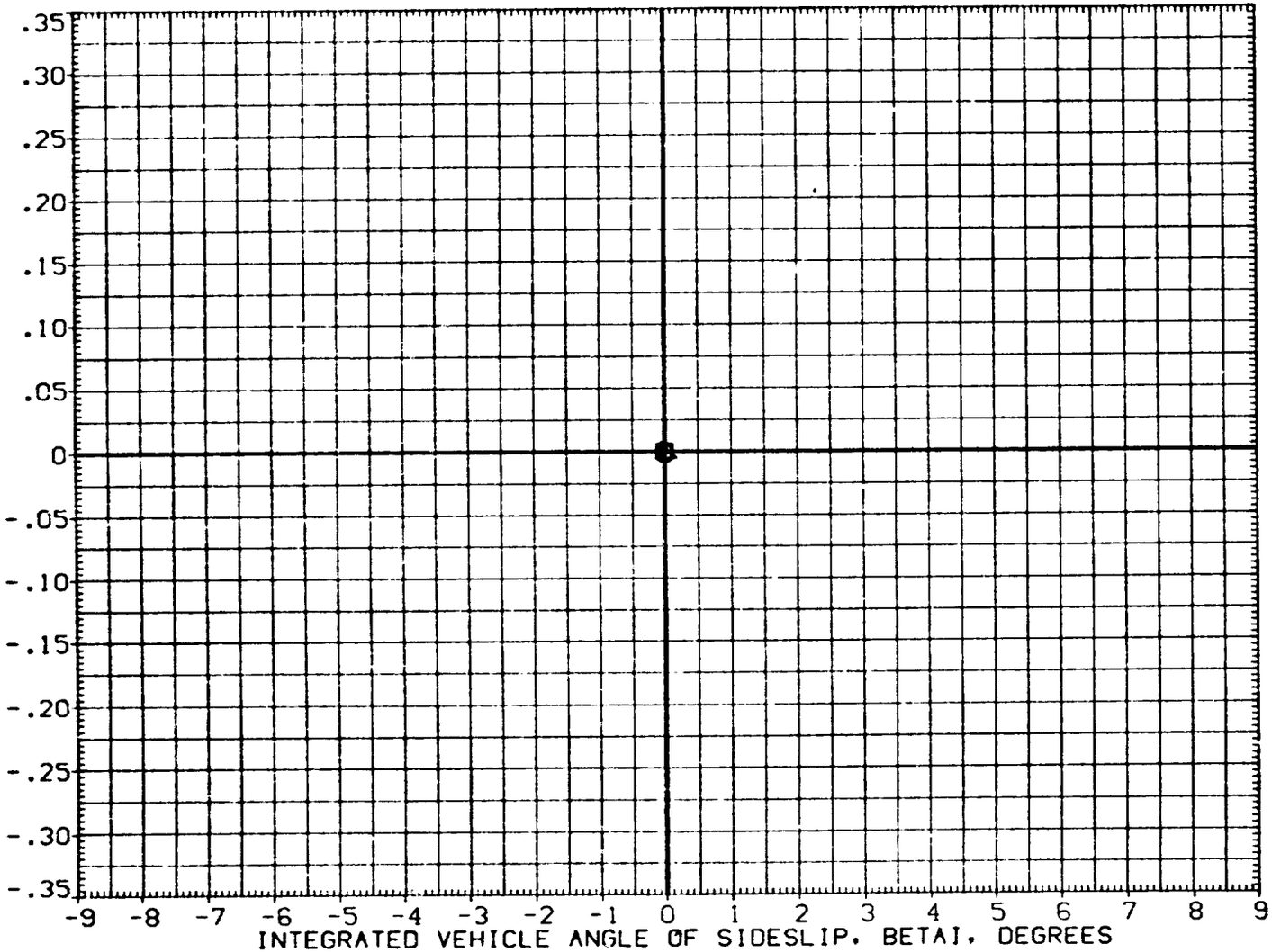


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

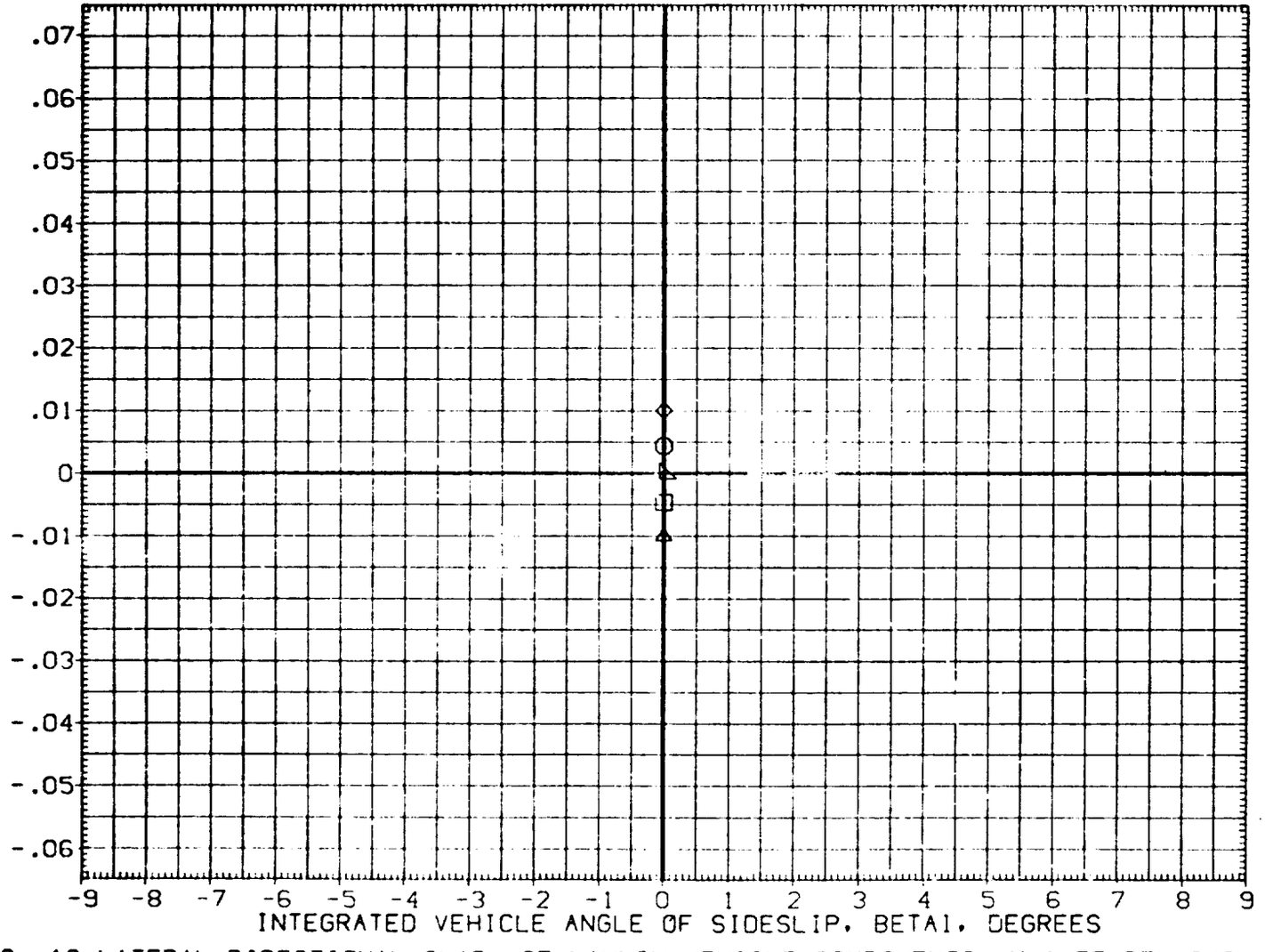


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO43)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

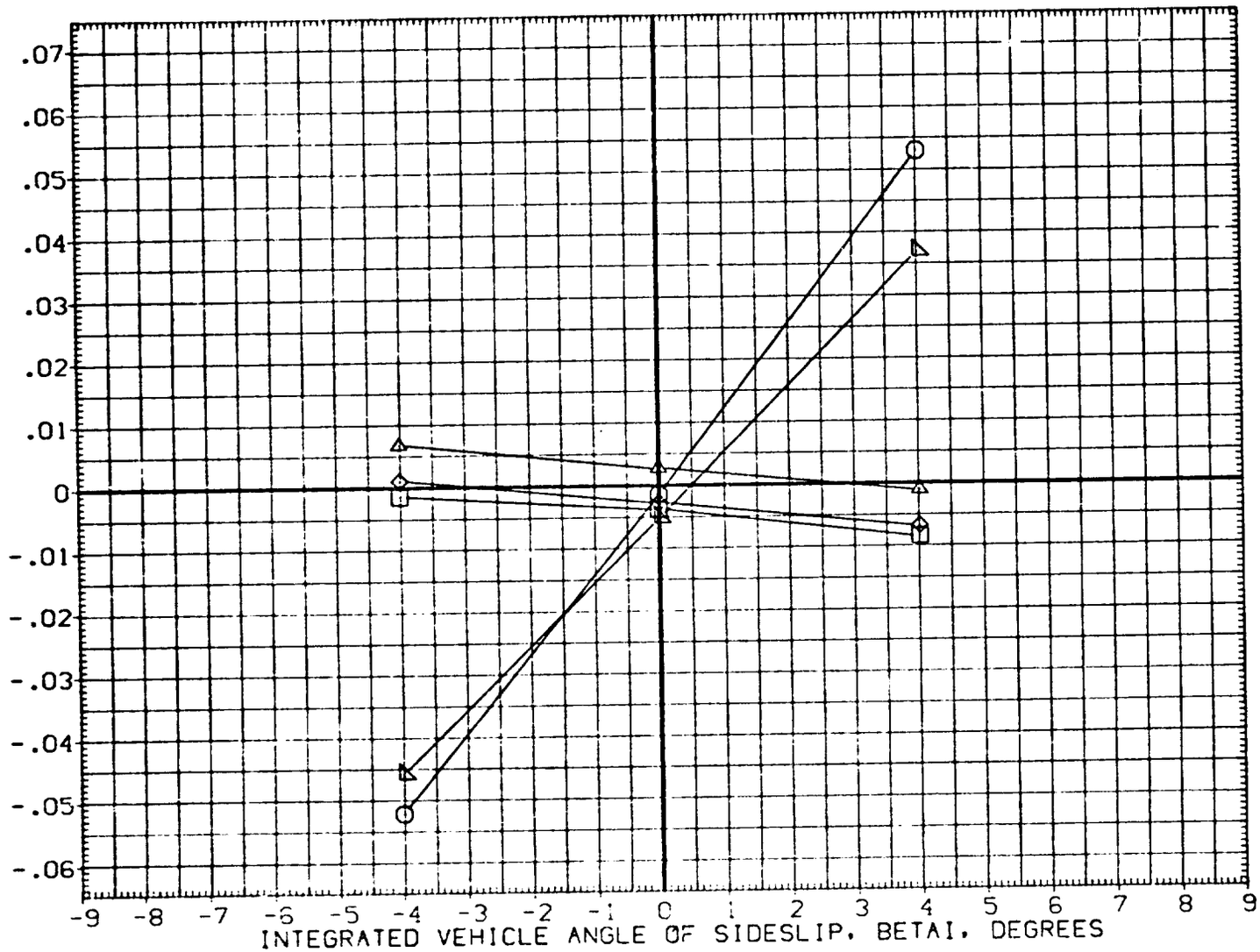


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

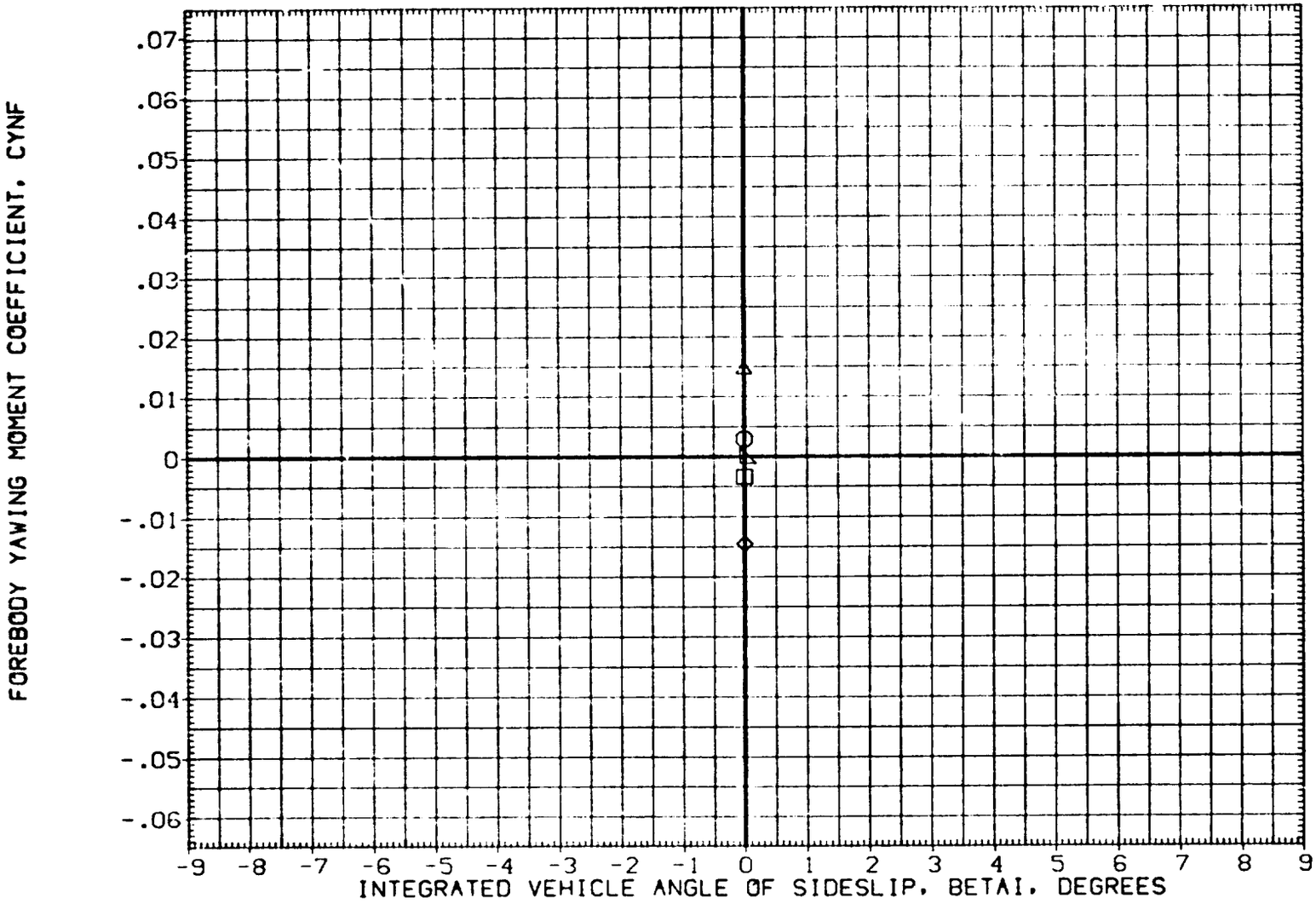


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(LET043)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

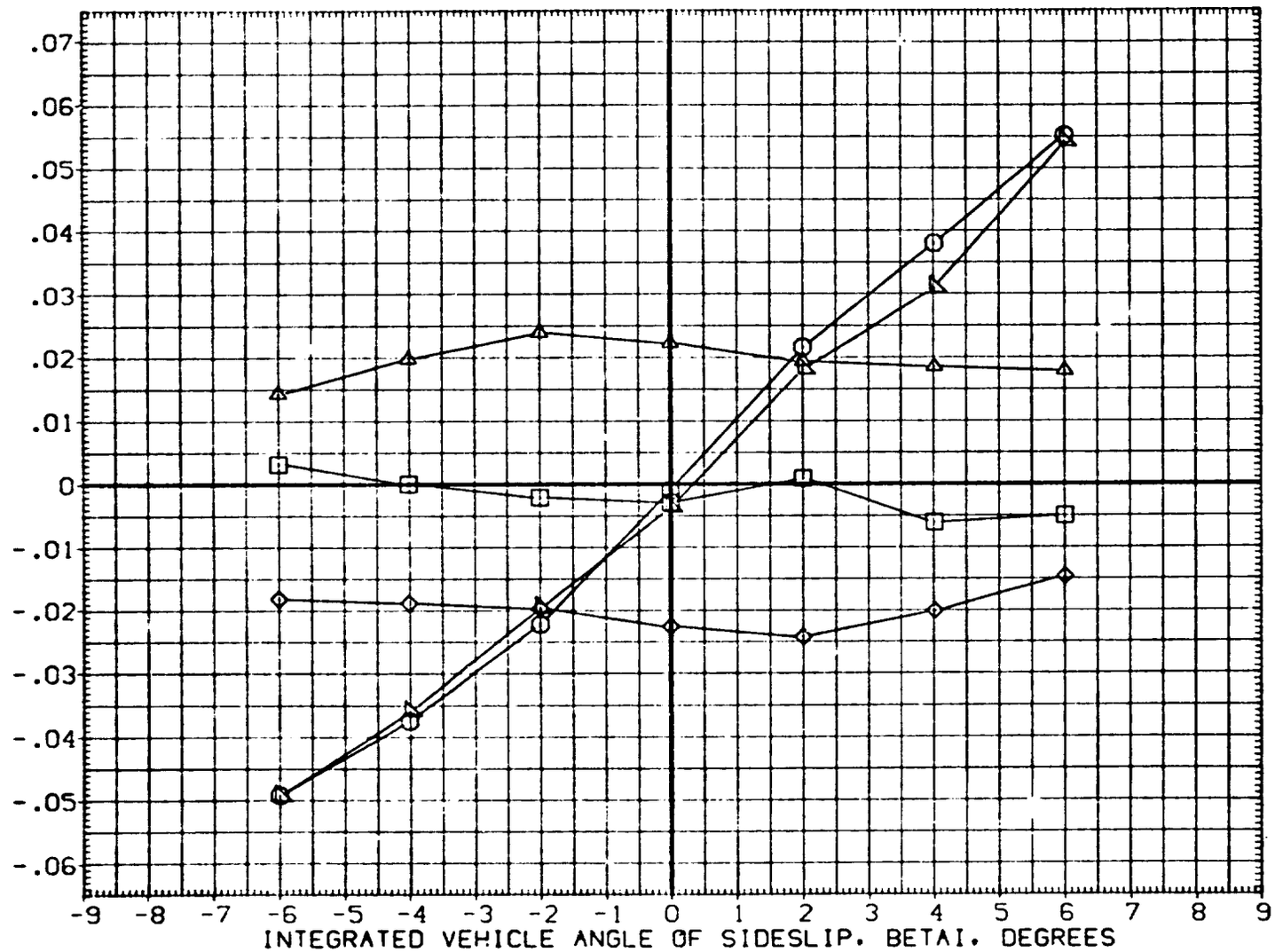


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

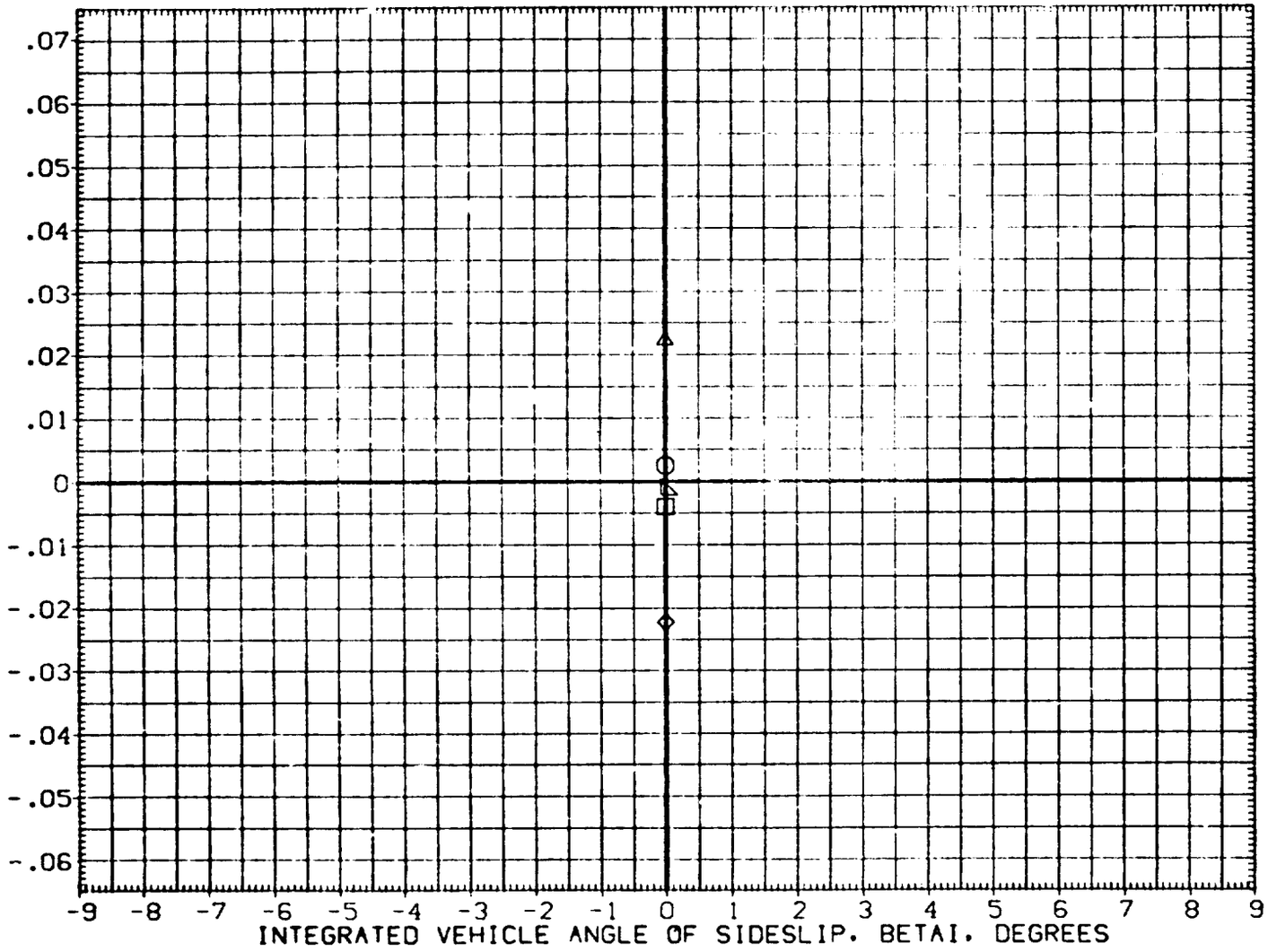


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IA91) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	▷	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

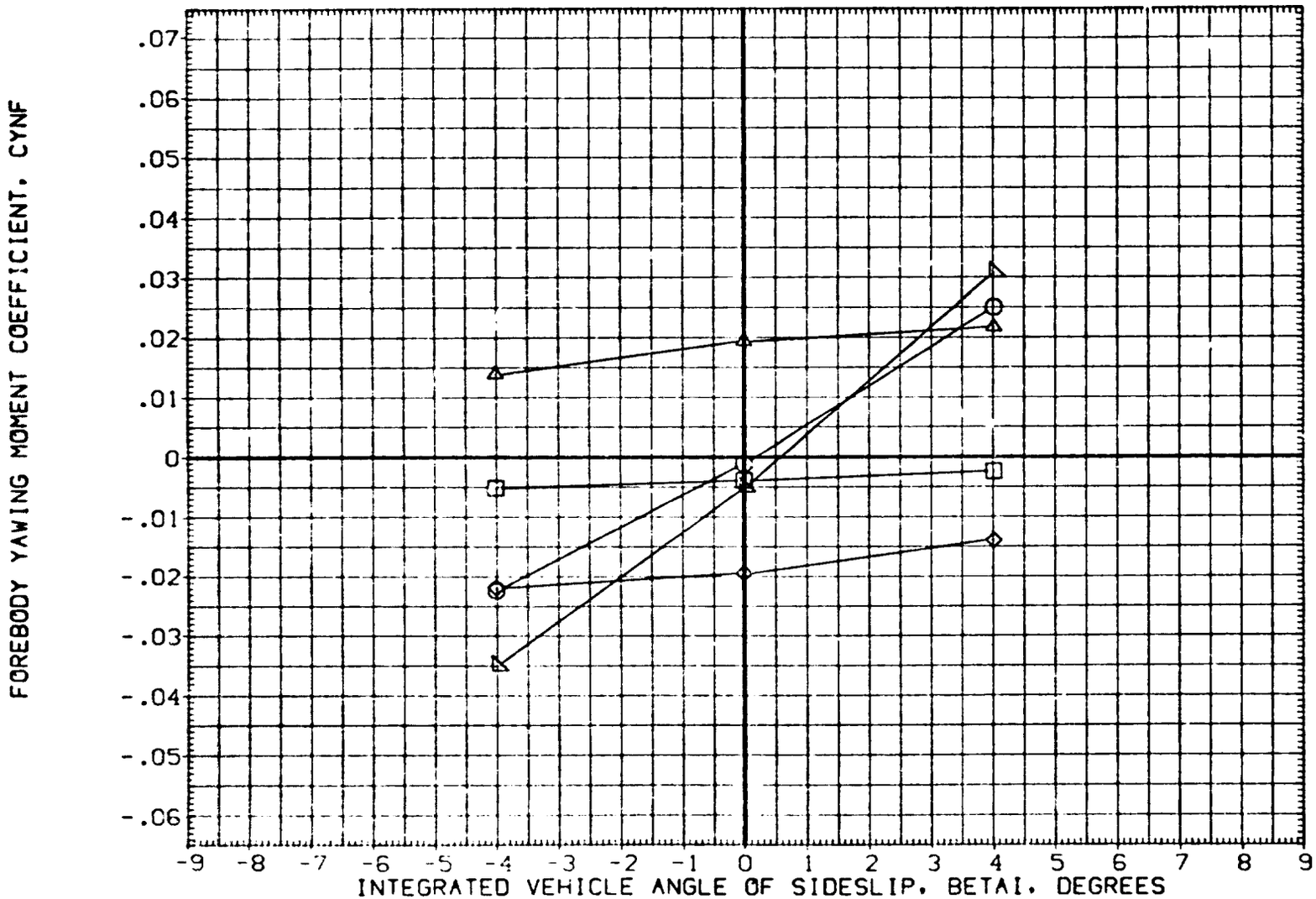


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	◻	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019(IA81) LVAP -SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

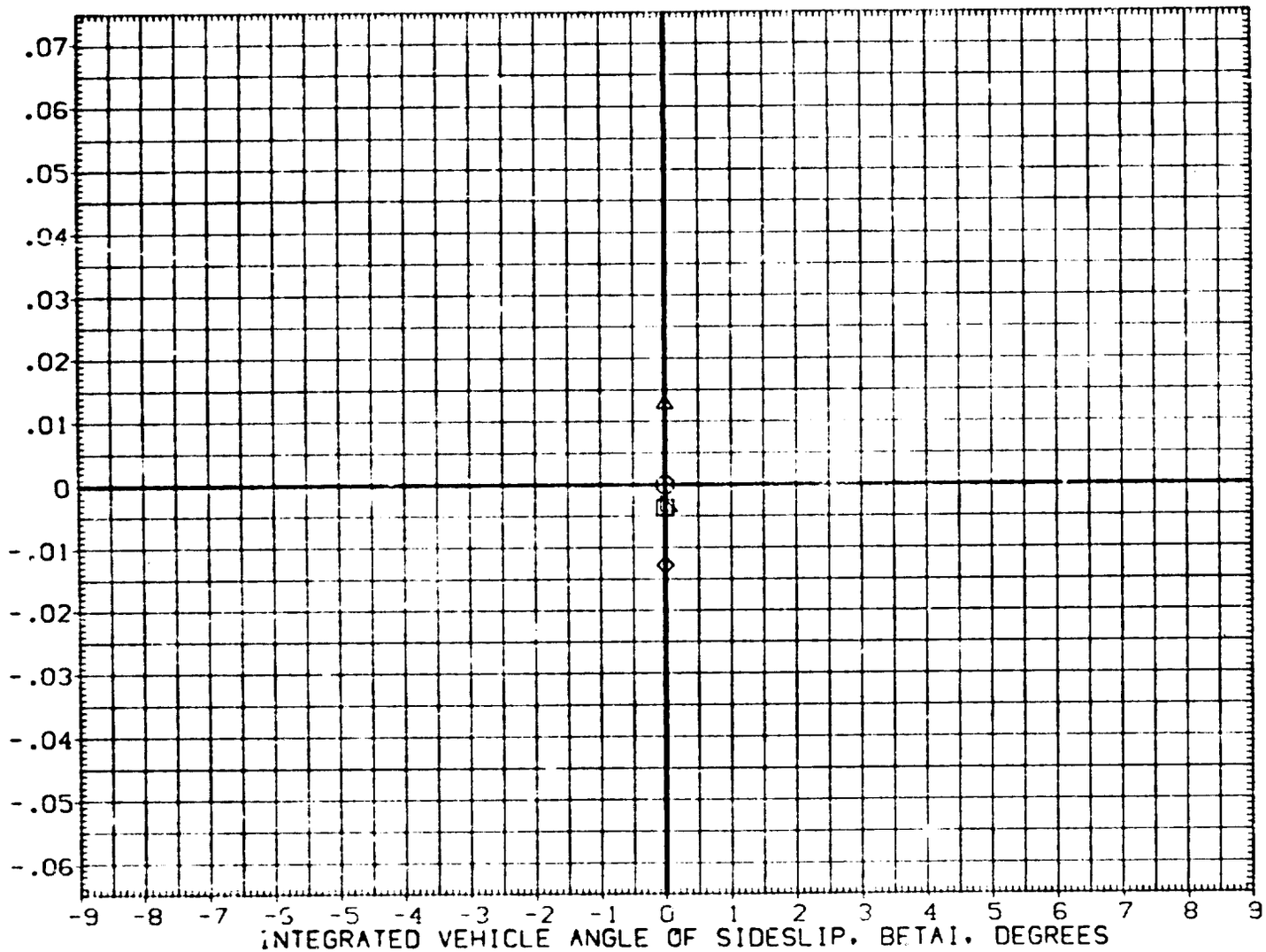


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO43)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019([A81) LVAP R-LPB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

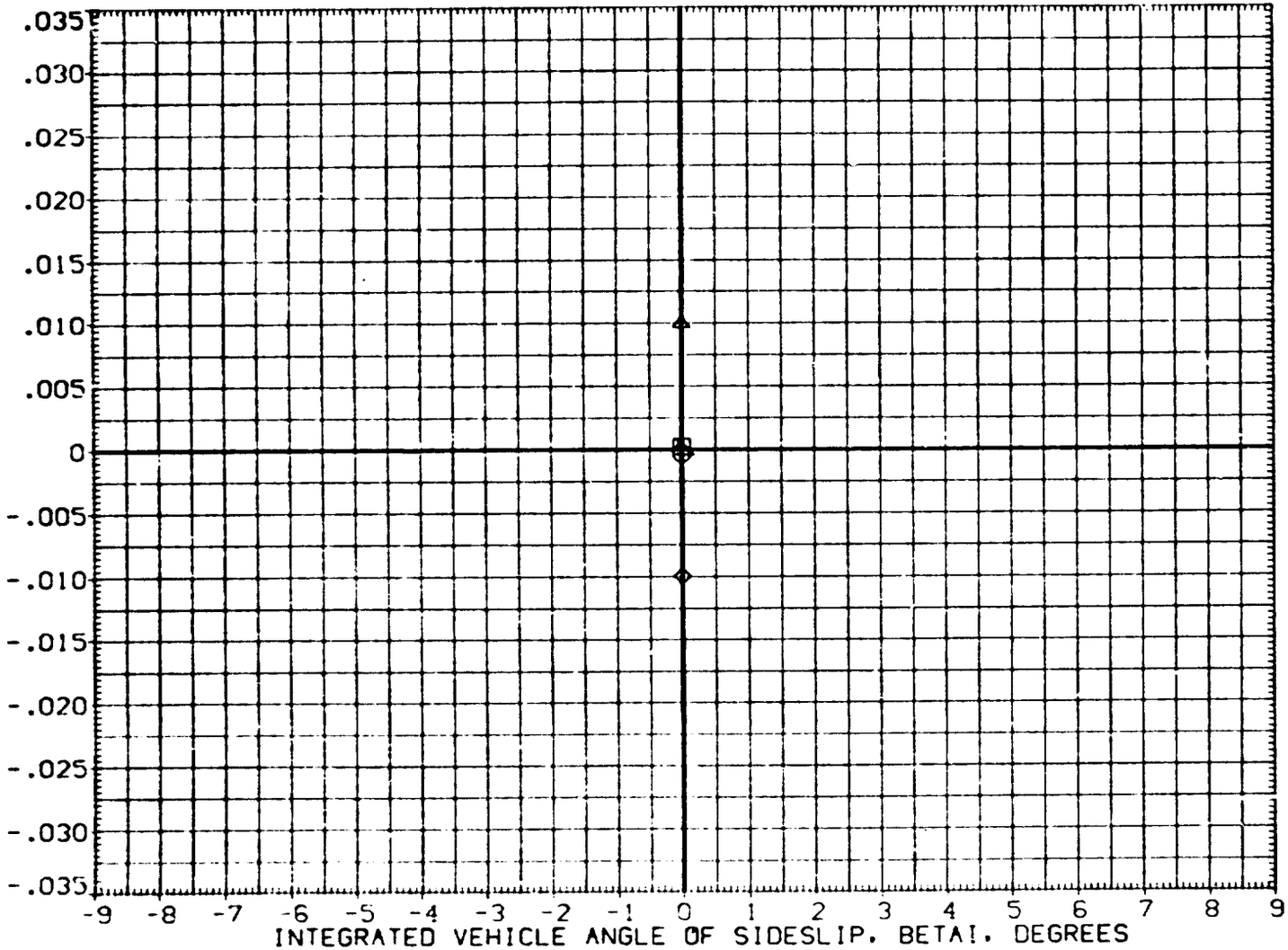


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	□	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	◇	AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

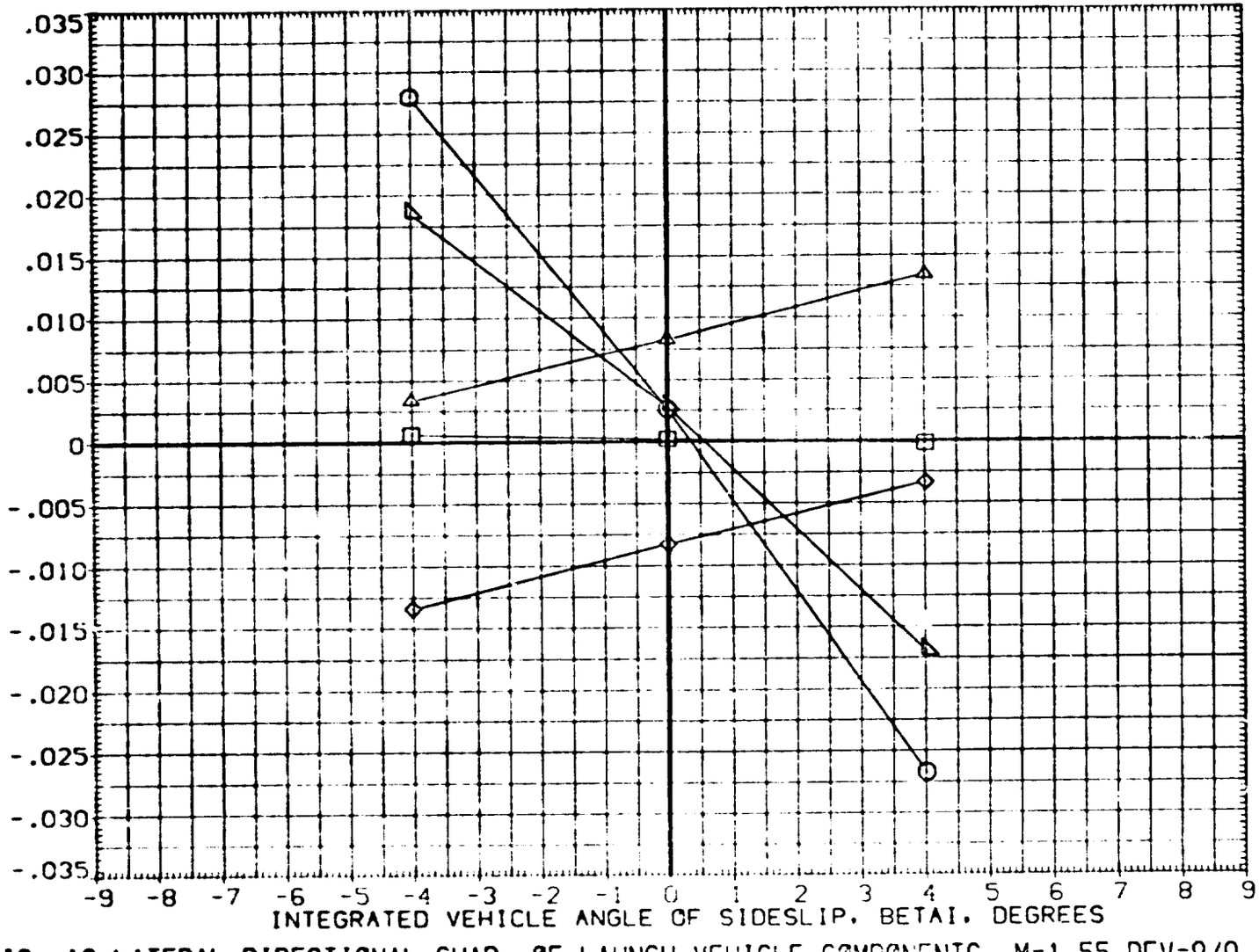


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)ALPHAI= -4.00

ATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO43)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

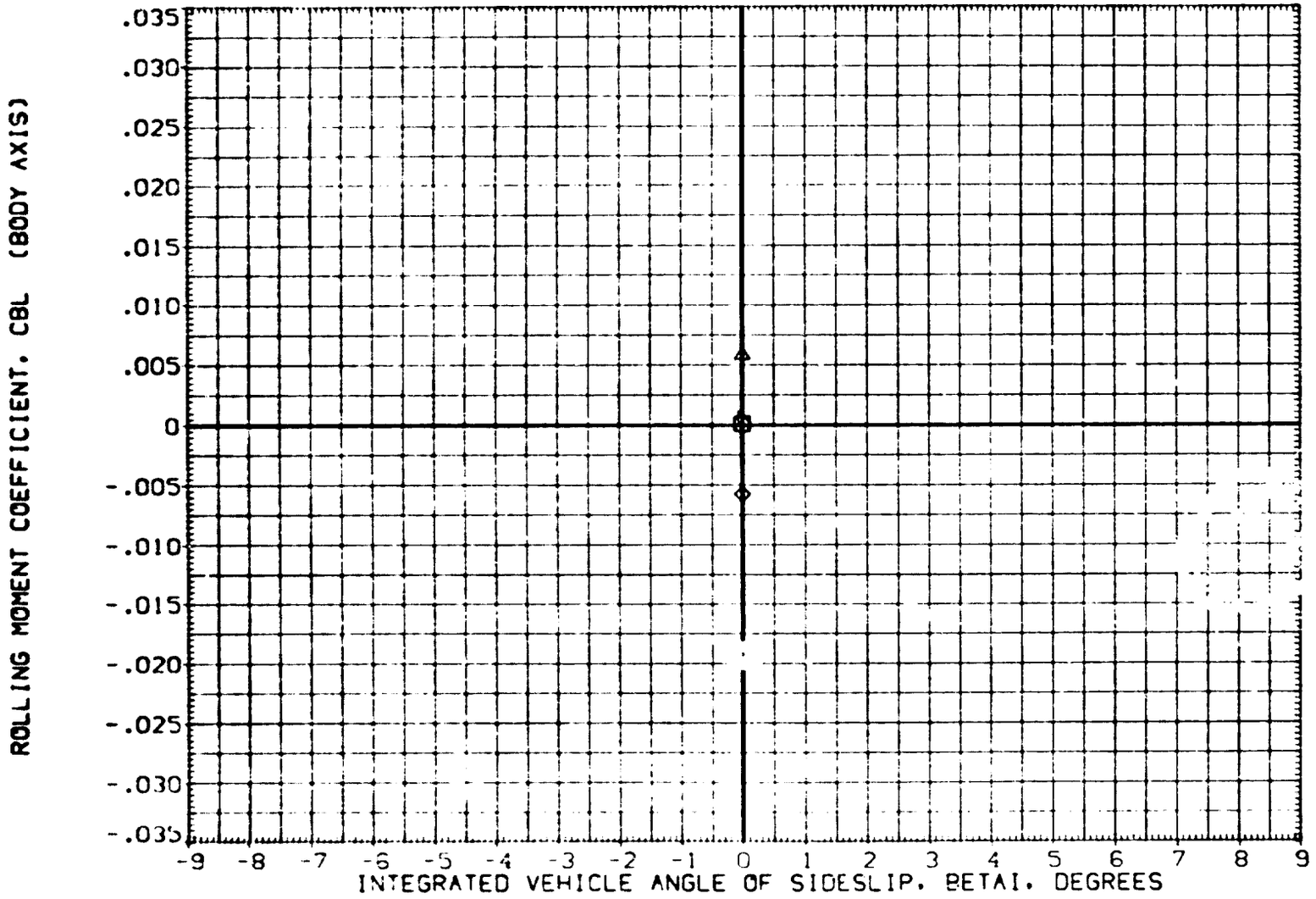


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⊠	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	▽	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

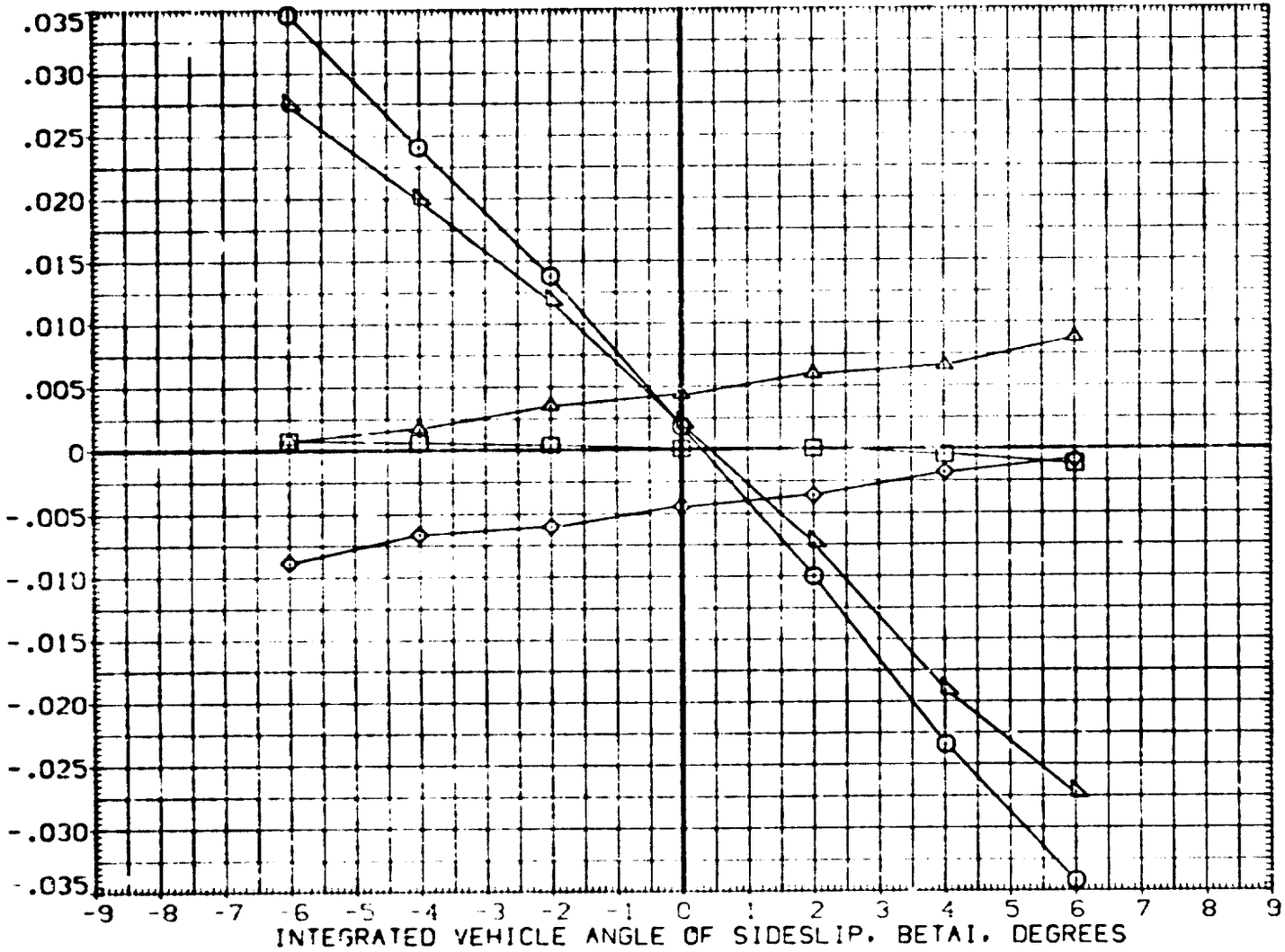


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT. ELM ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

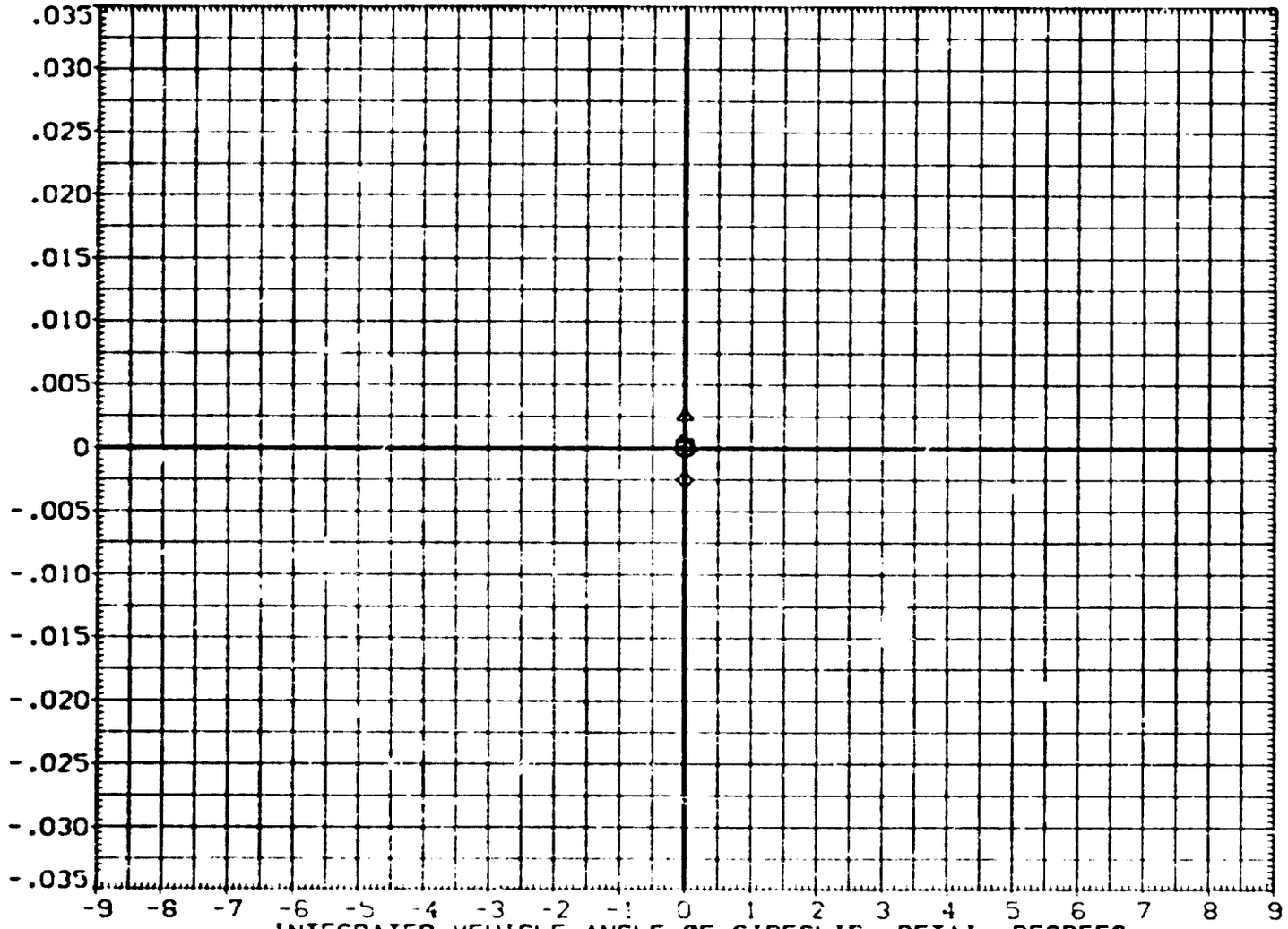


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(Γ)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO43)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

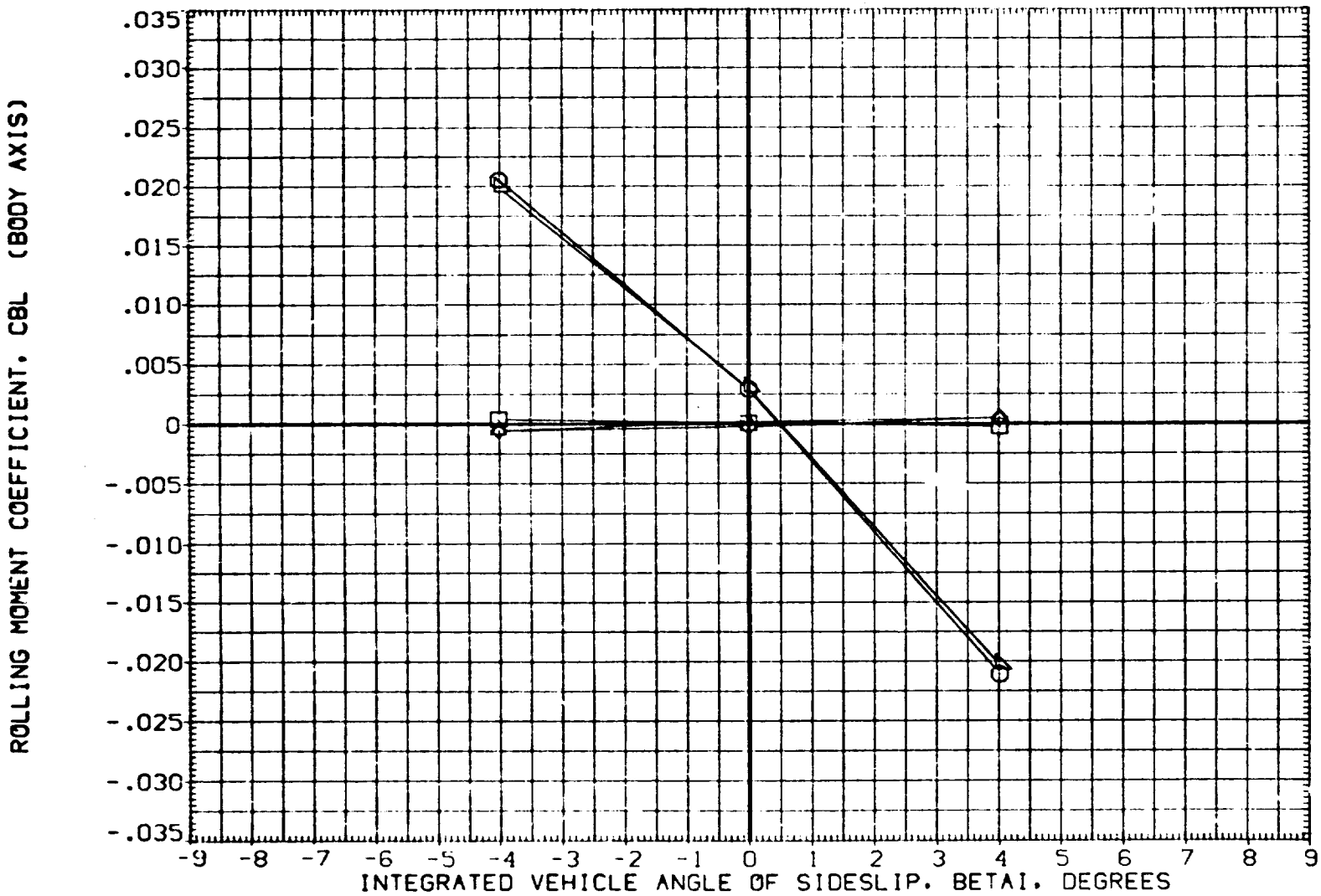


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LET!43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

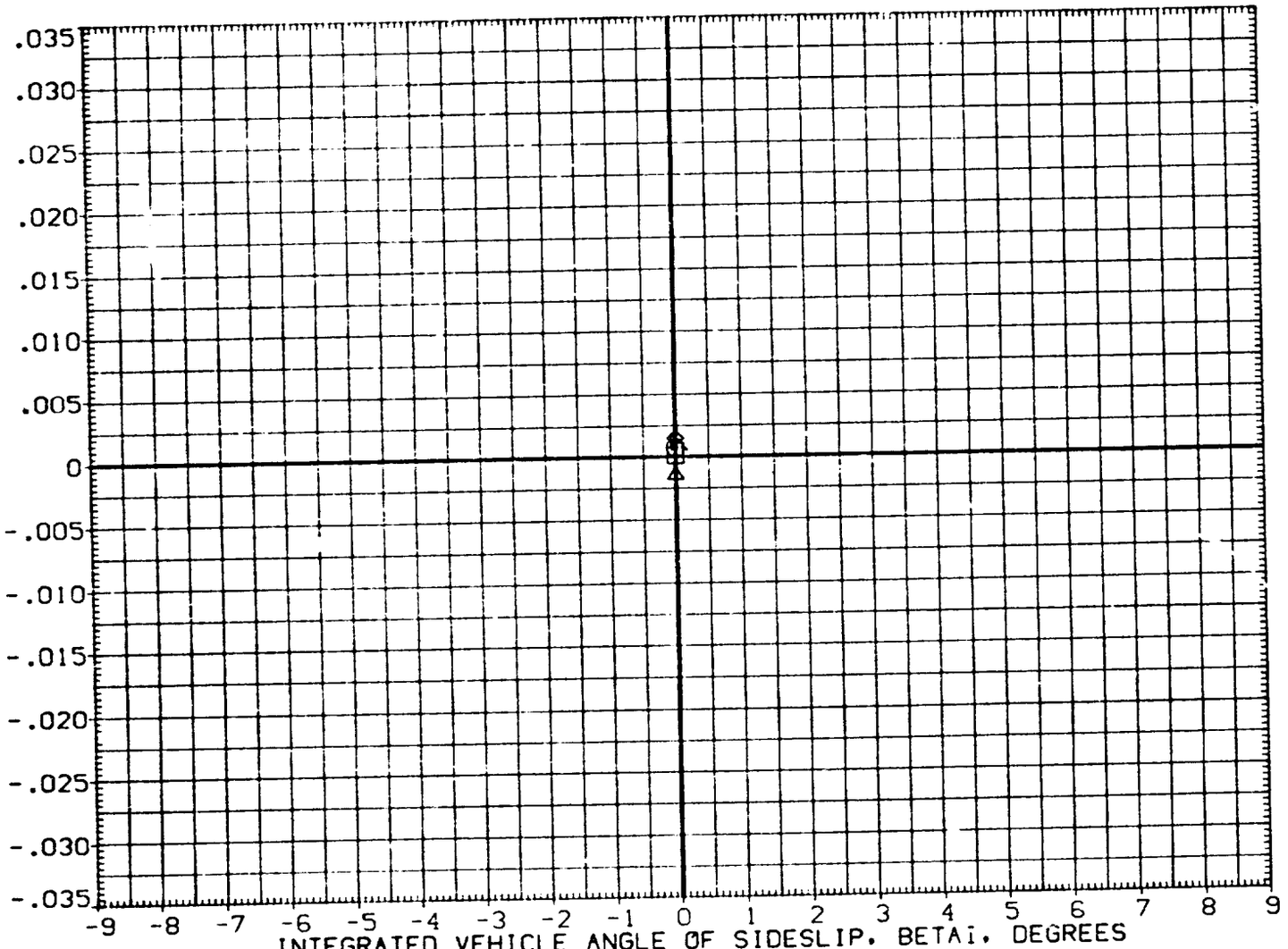


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

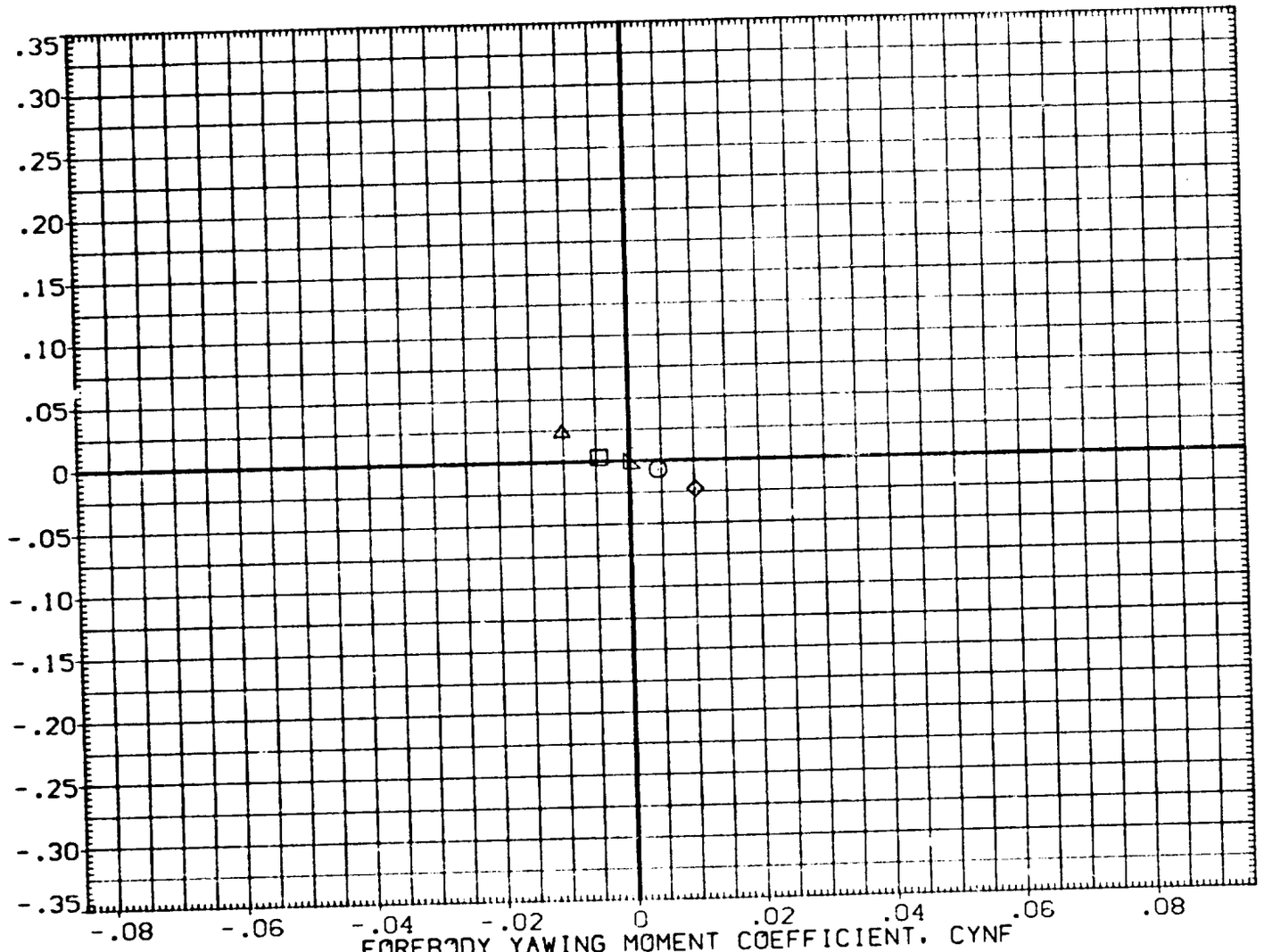


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPOBRK
(LET043)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

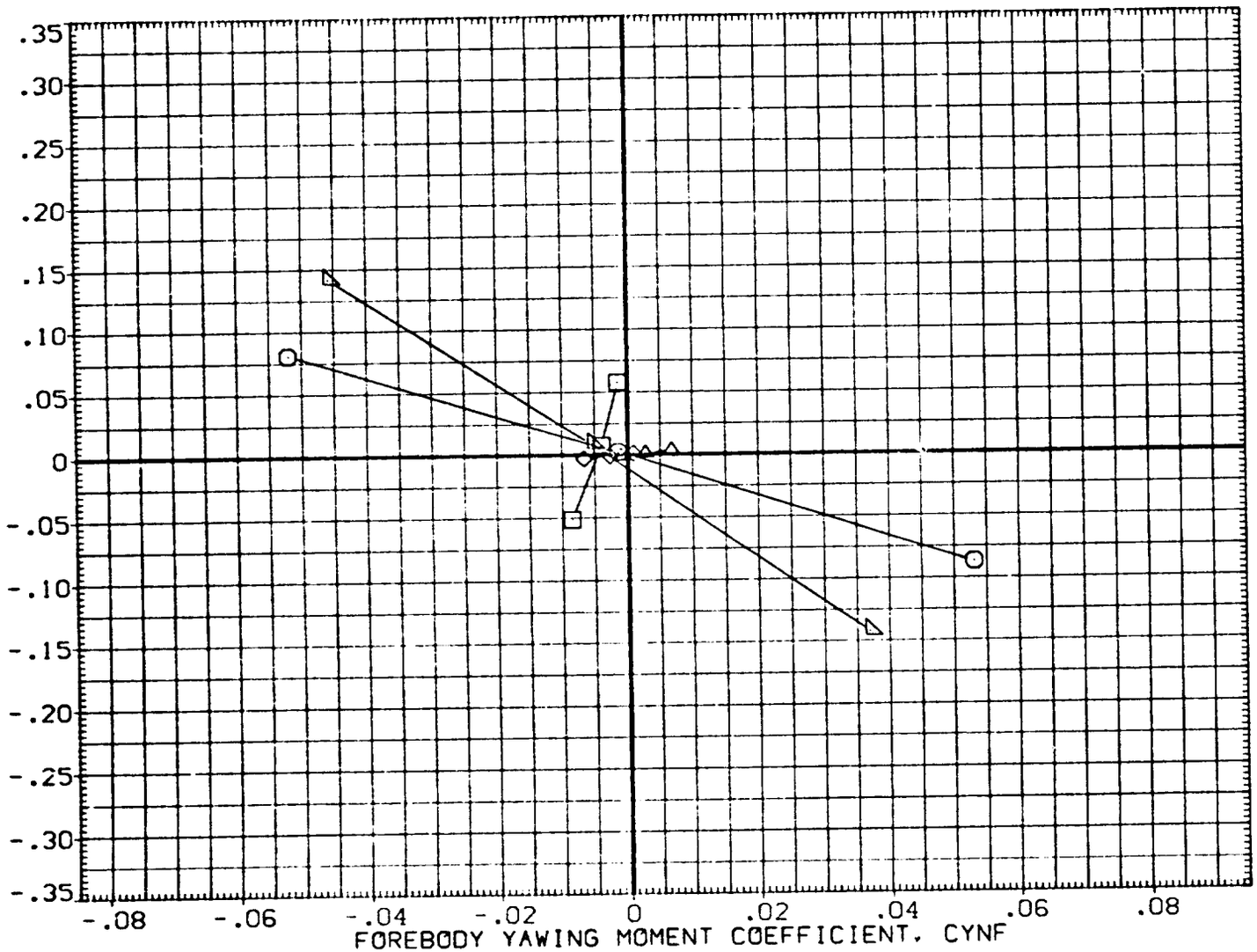


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

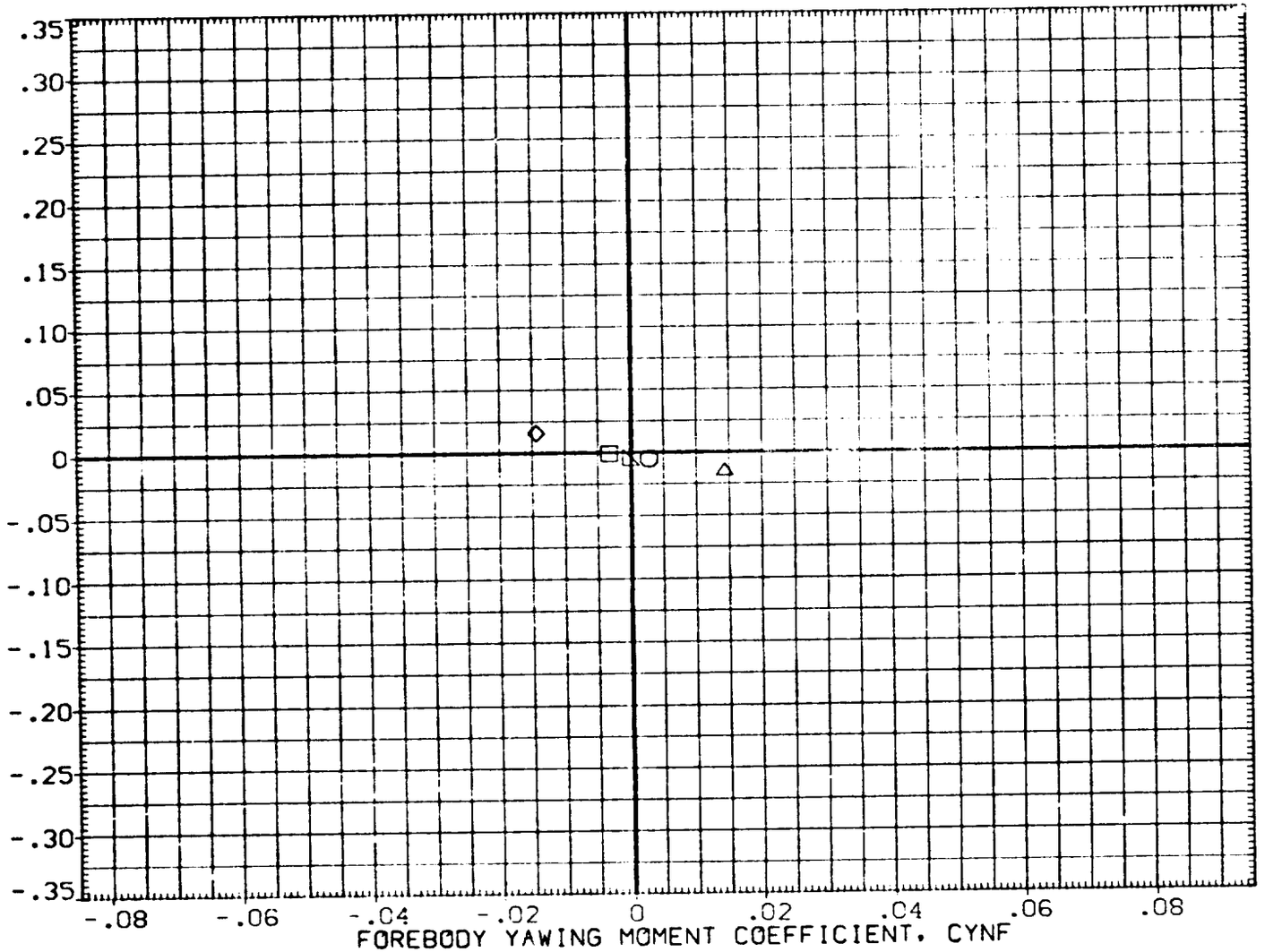


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

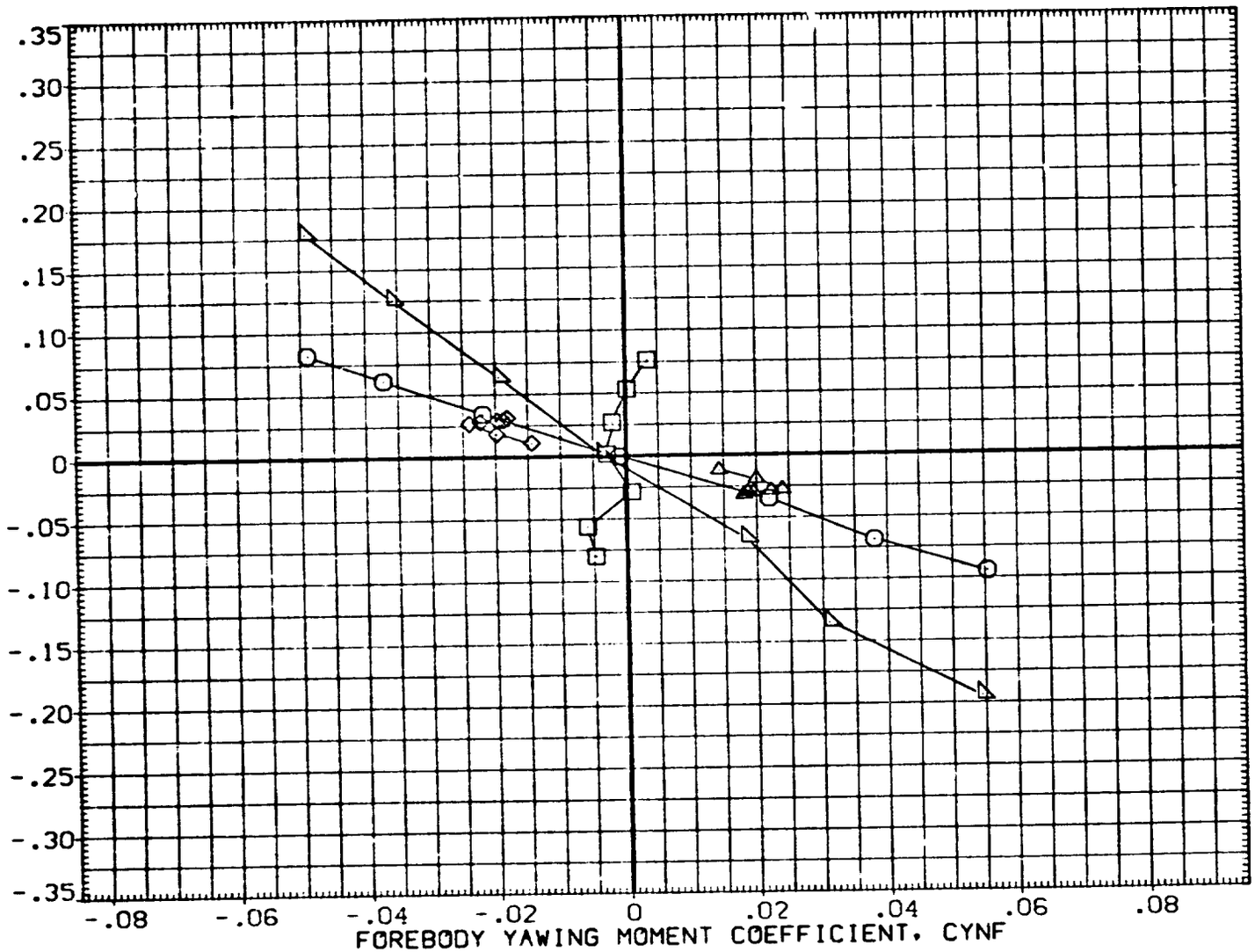


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

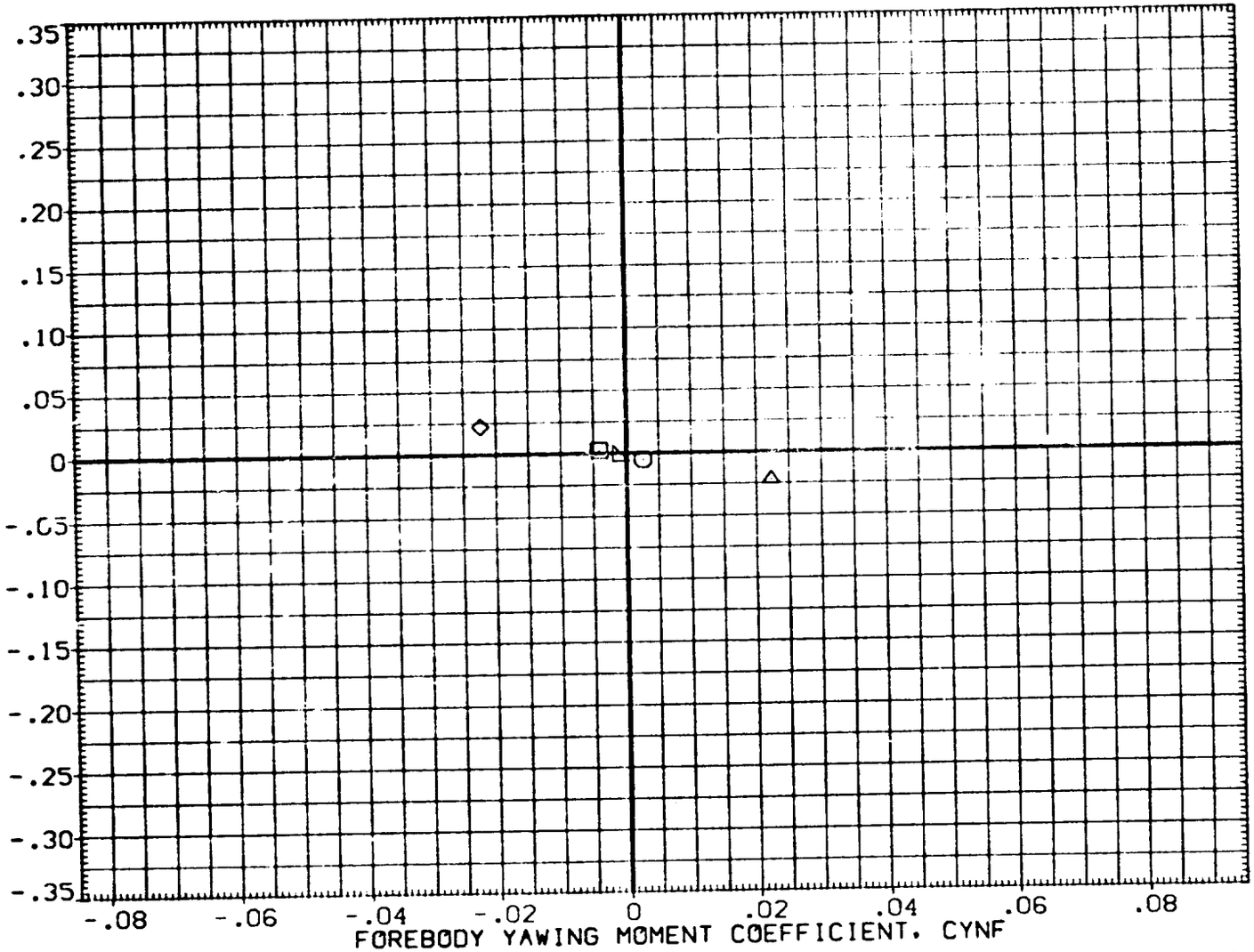


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)ALPHAI= 2.00

DAT. SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

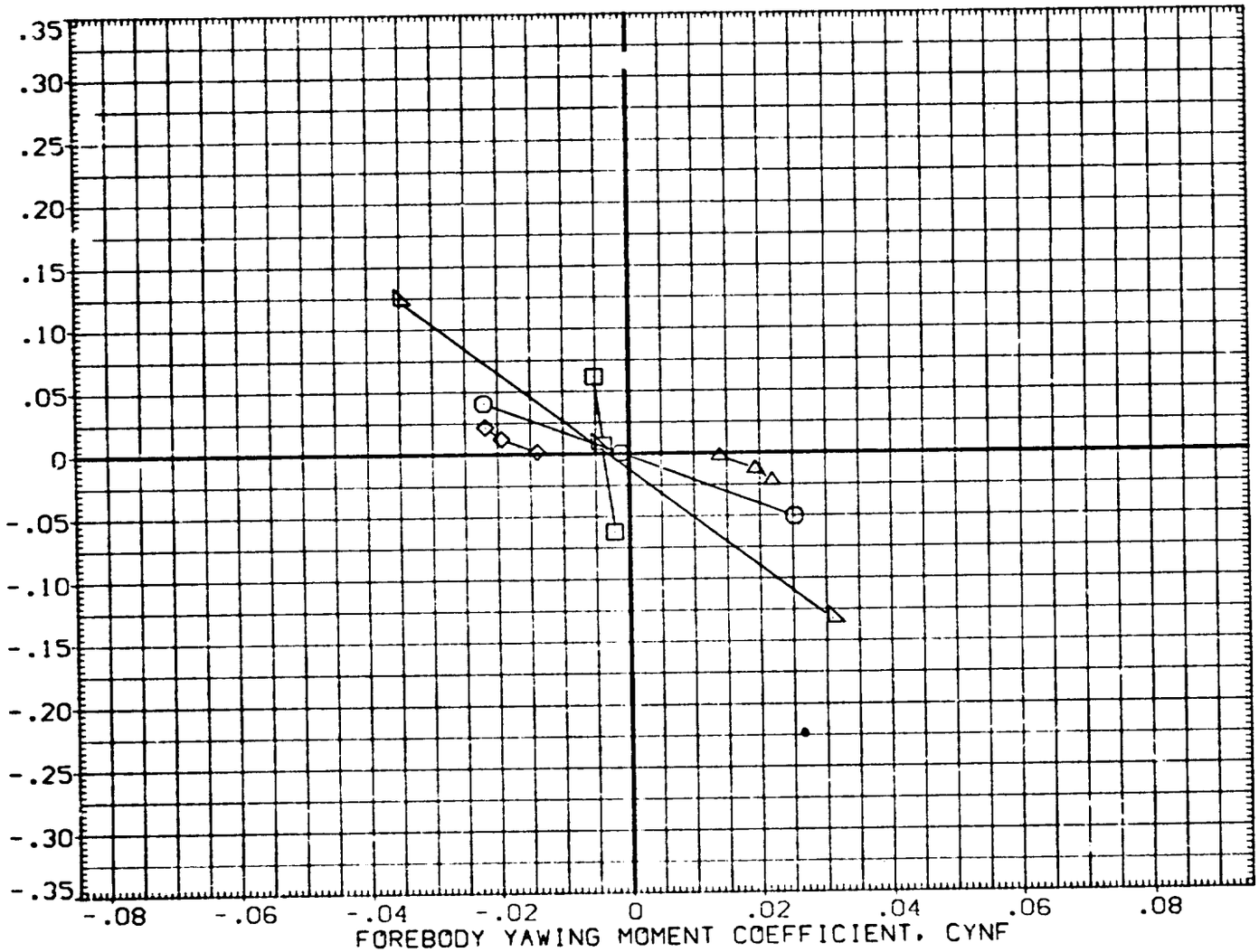


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	3.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA01) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

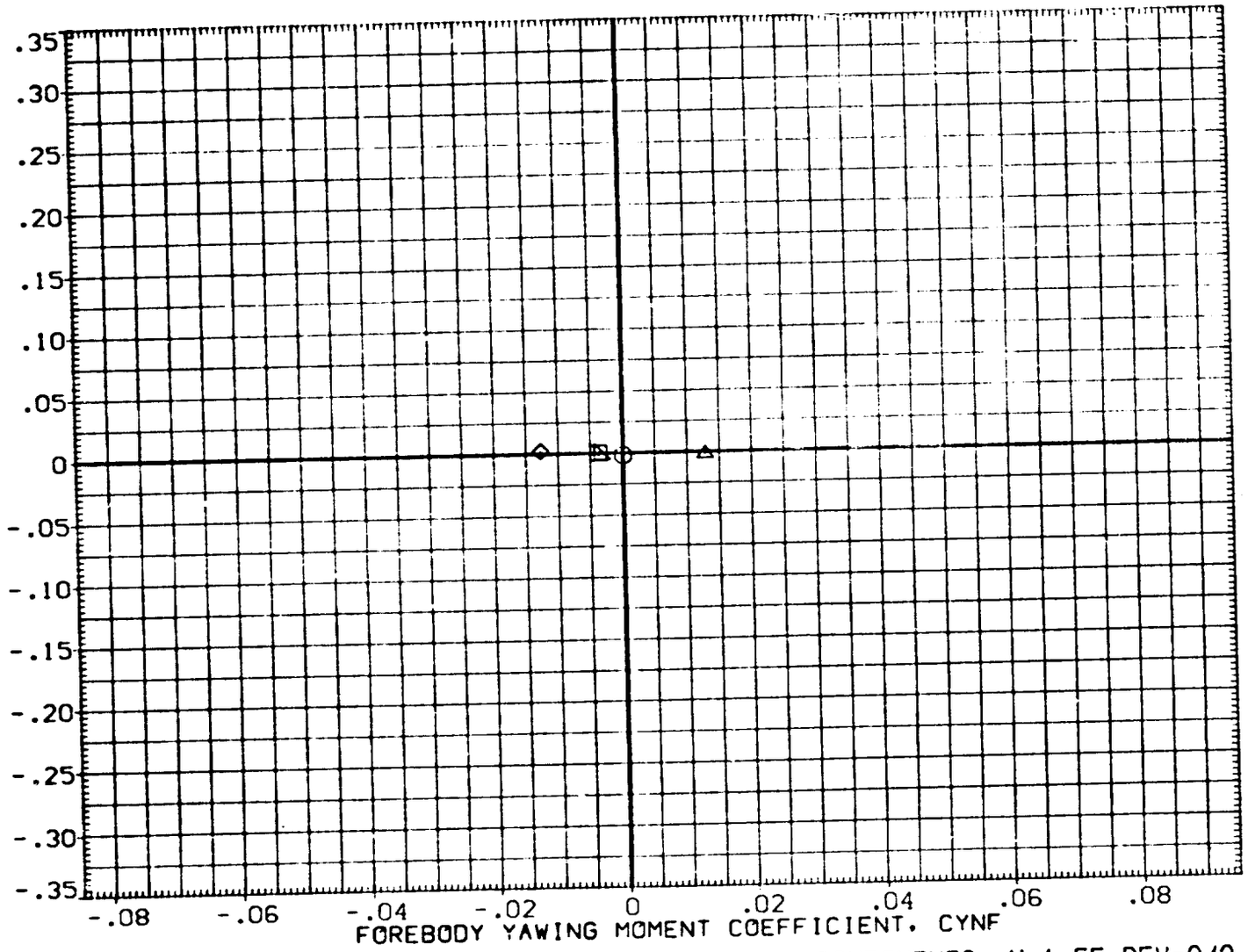


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

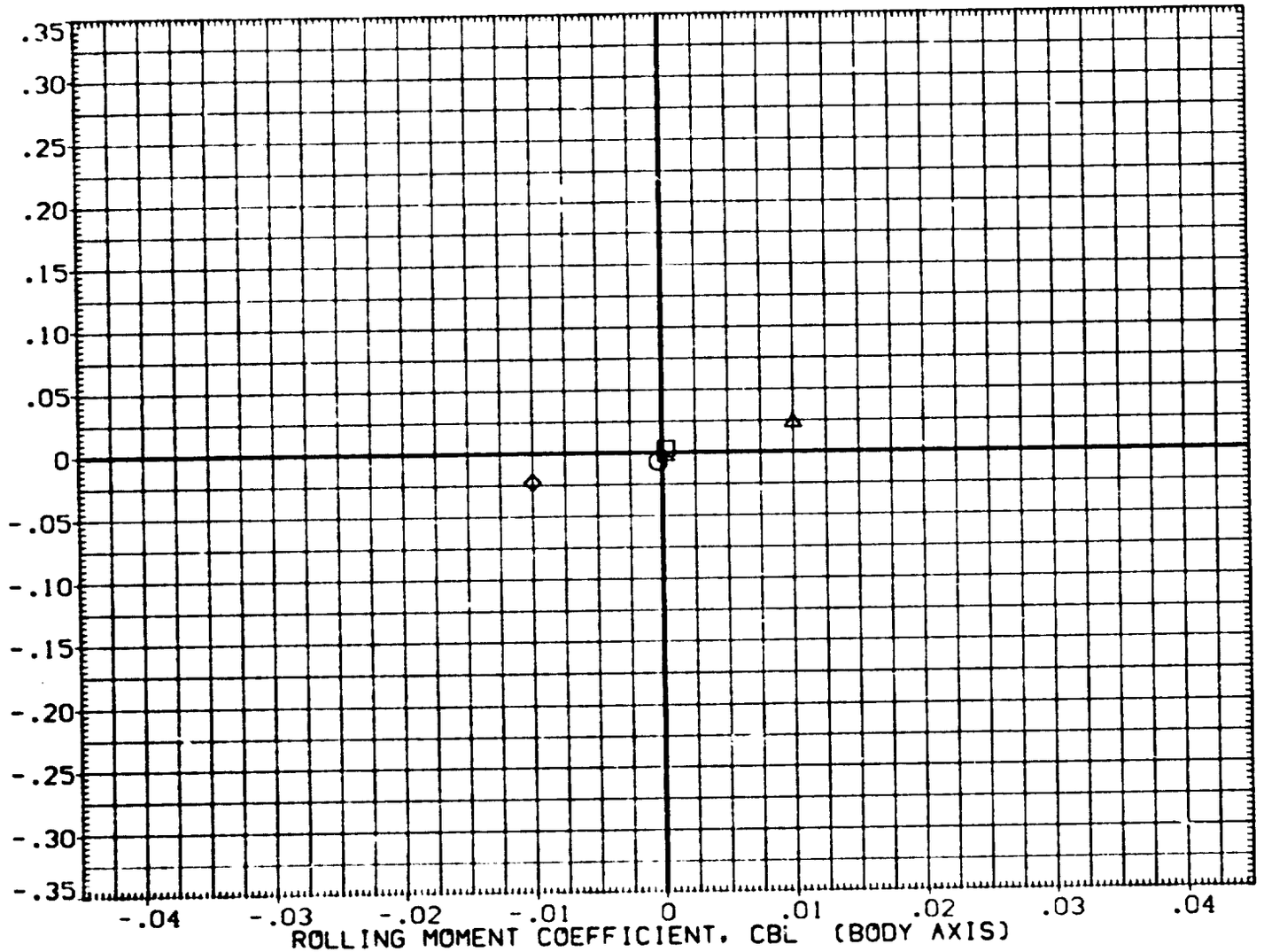


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

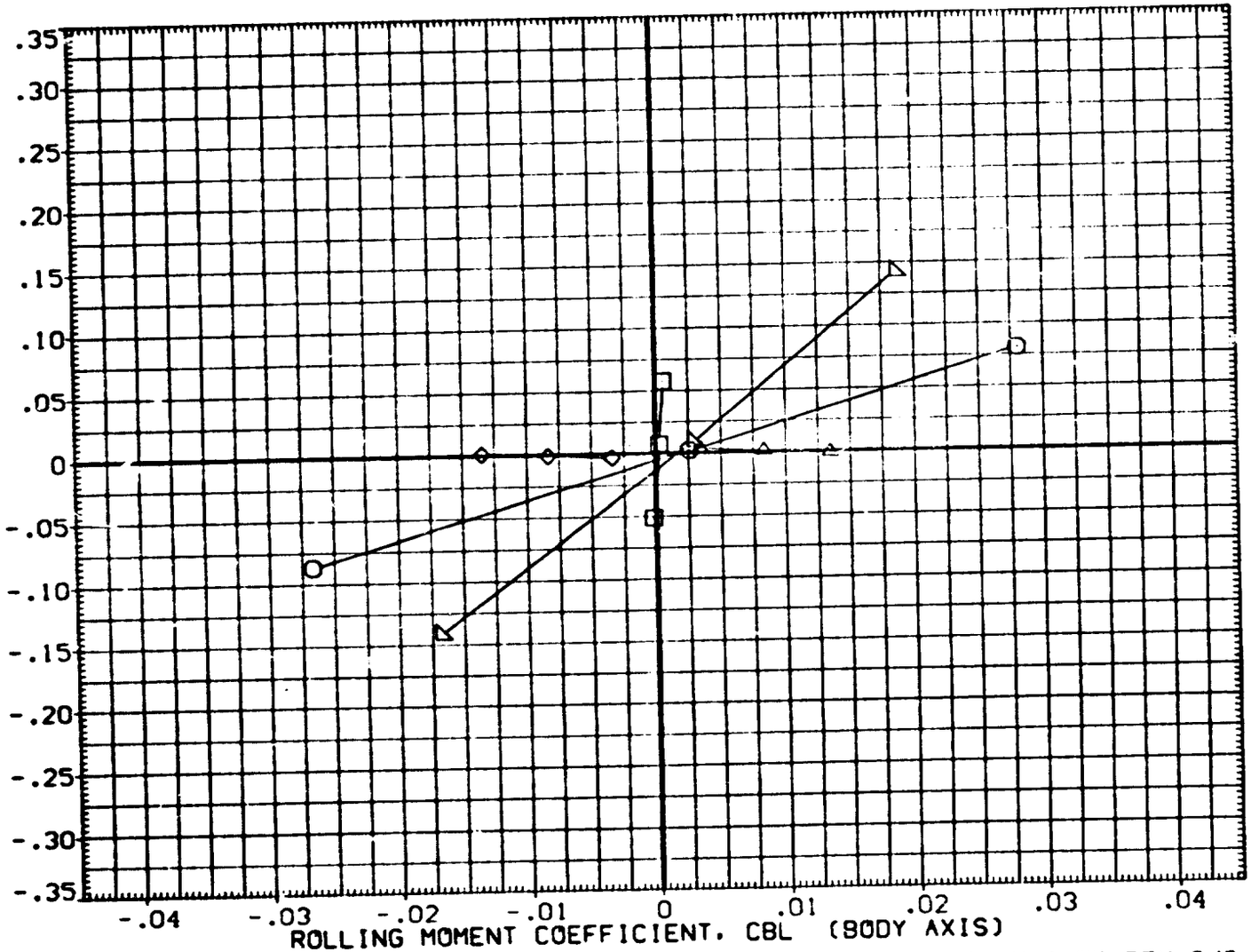


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(B)ALPHA1= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	○	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⊠	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	◇	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

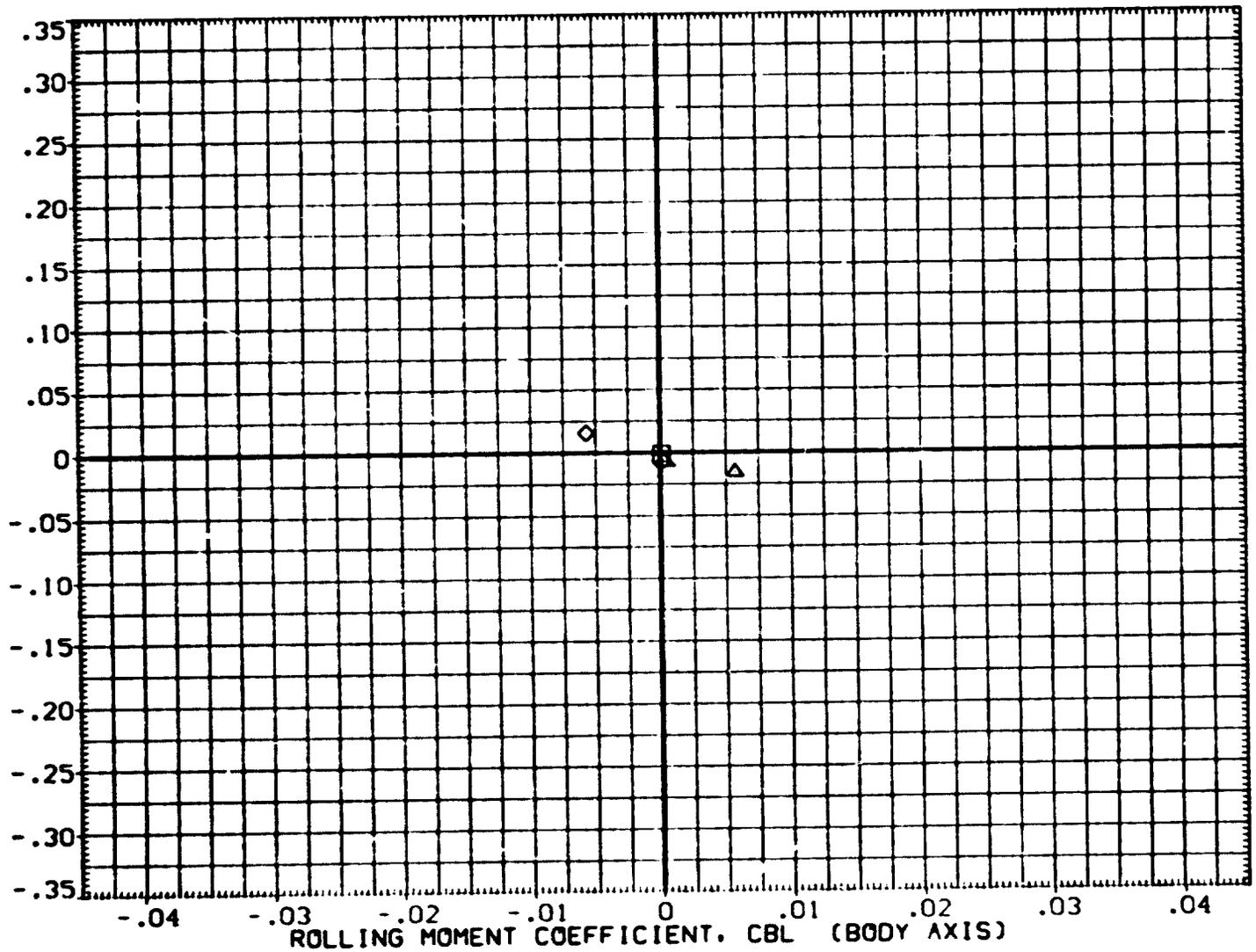


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)		AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)		AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)		AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)		AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)		AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

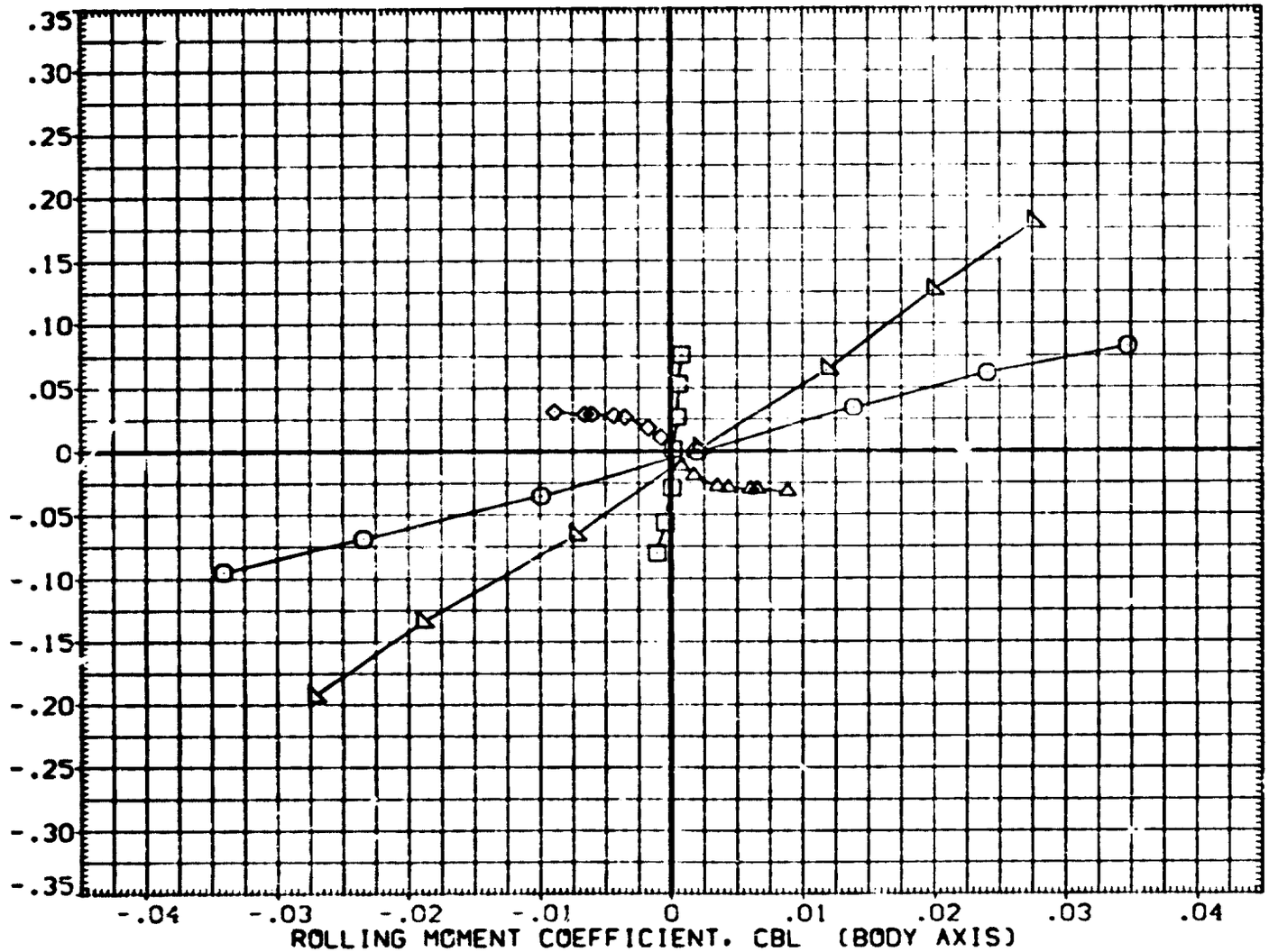


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(D)ALPHA(I) = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET043)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	◁	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

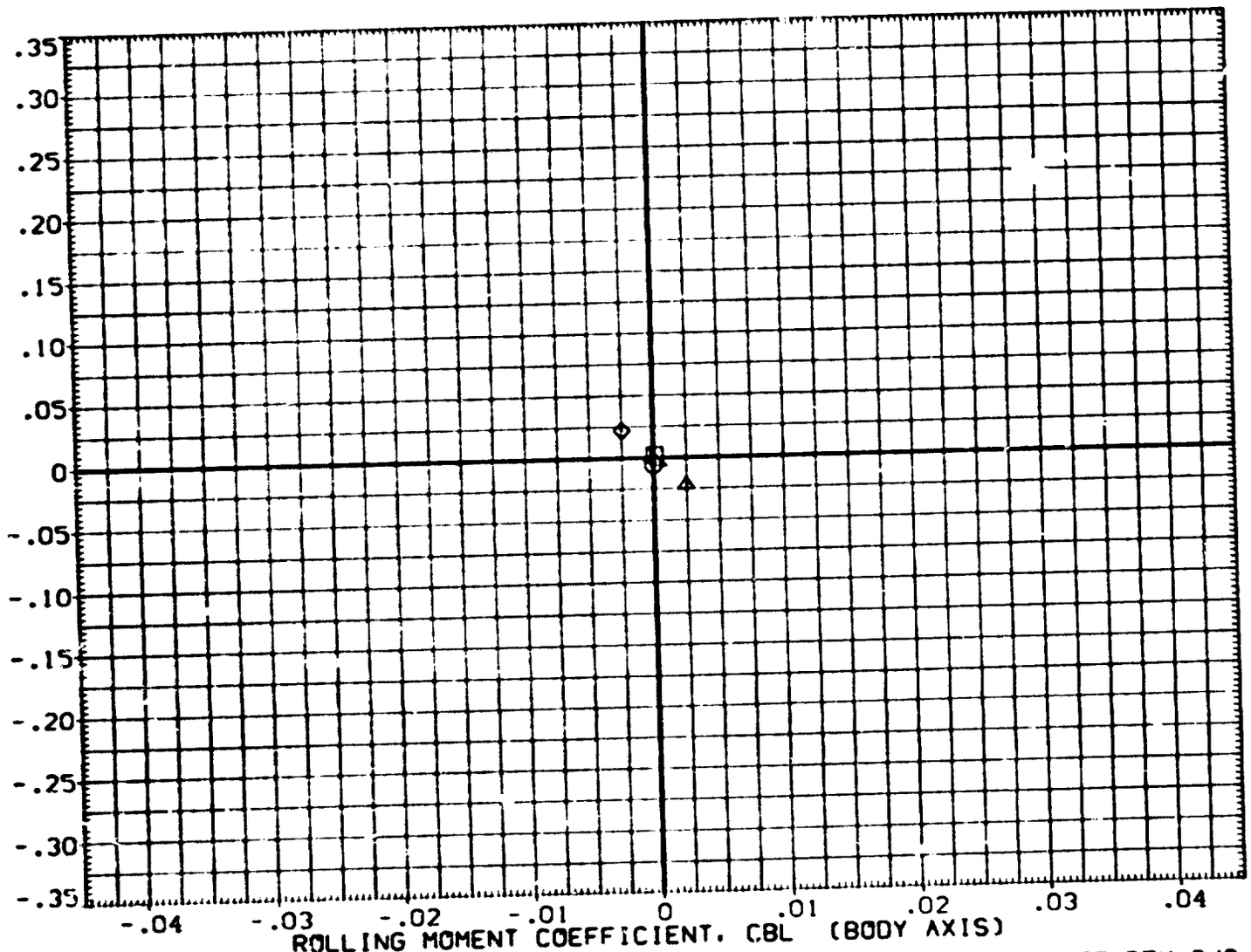


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	◇	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	⊠	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	△	AMES97-019([AB1]) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	▽	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

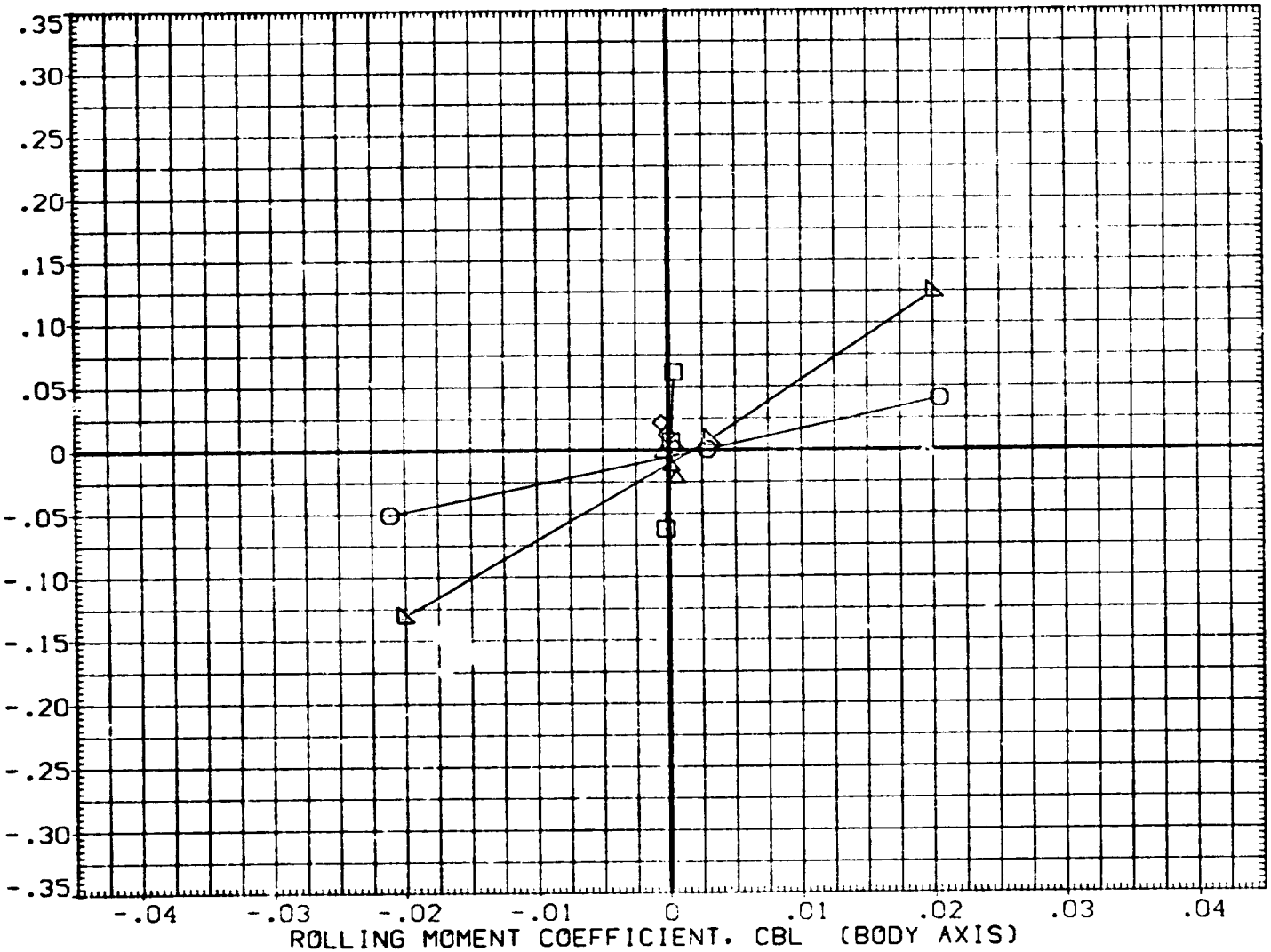


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(F)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET043)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(LETT43)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	1.550	.000
(LETL43)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	1.550	.000
(LETR43)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	1.550	.000
(LETI43)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

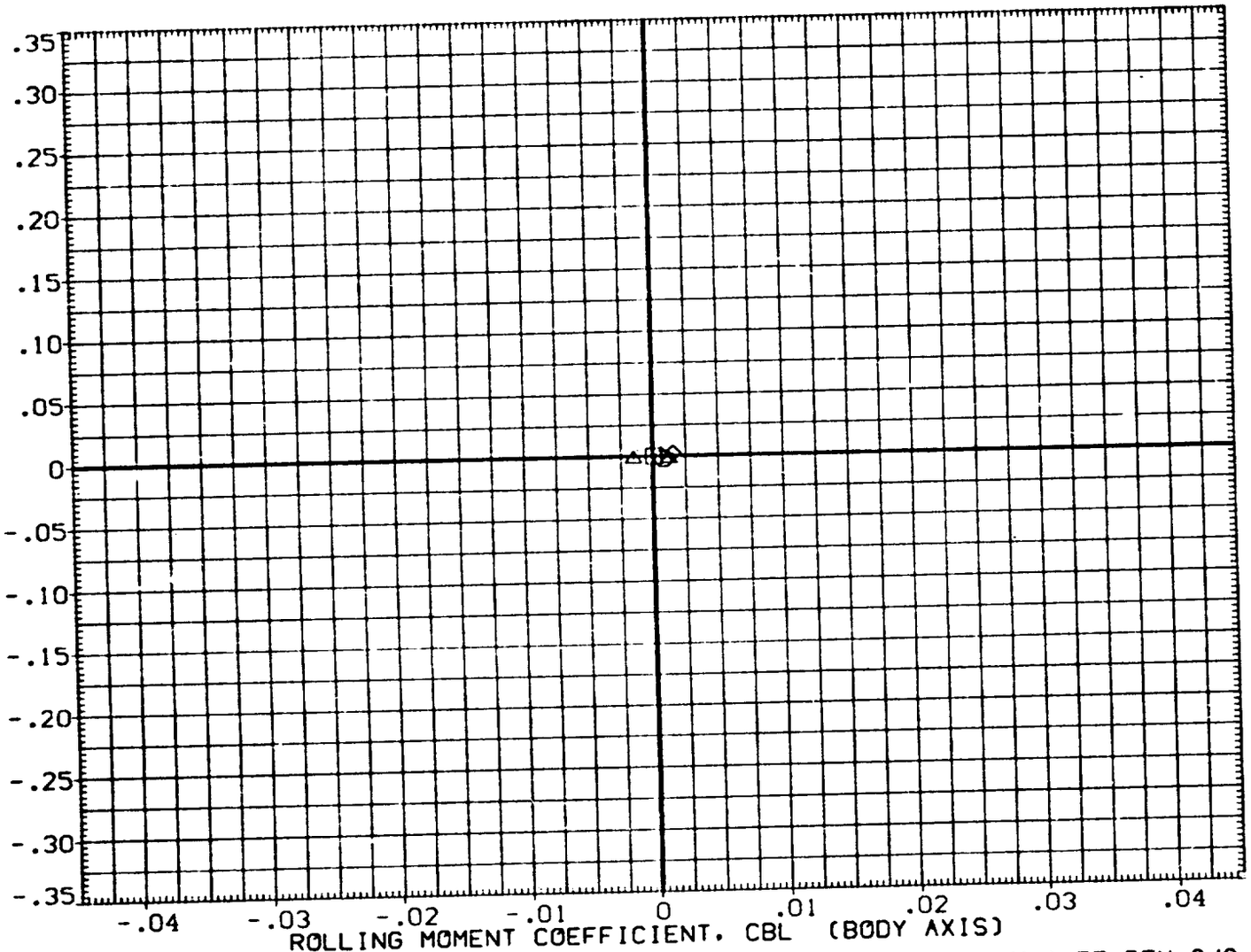


FIG. 19 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=8/0

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

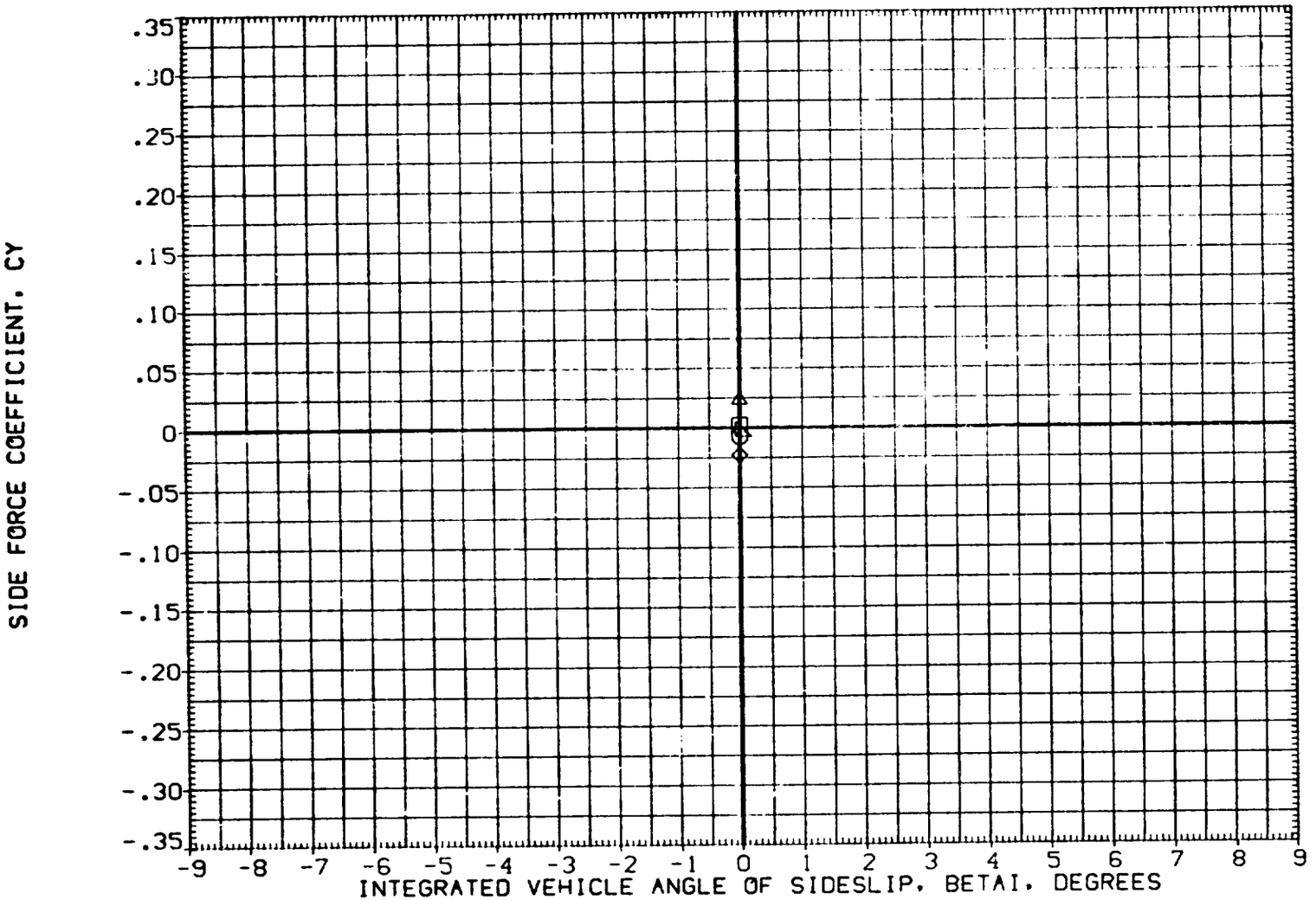


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC46)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL4S)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

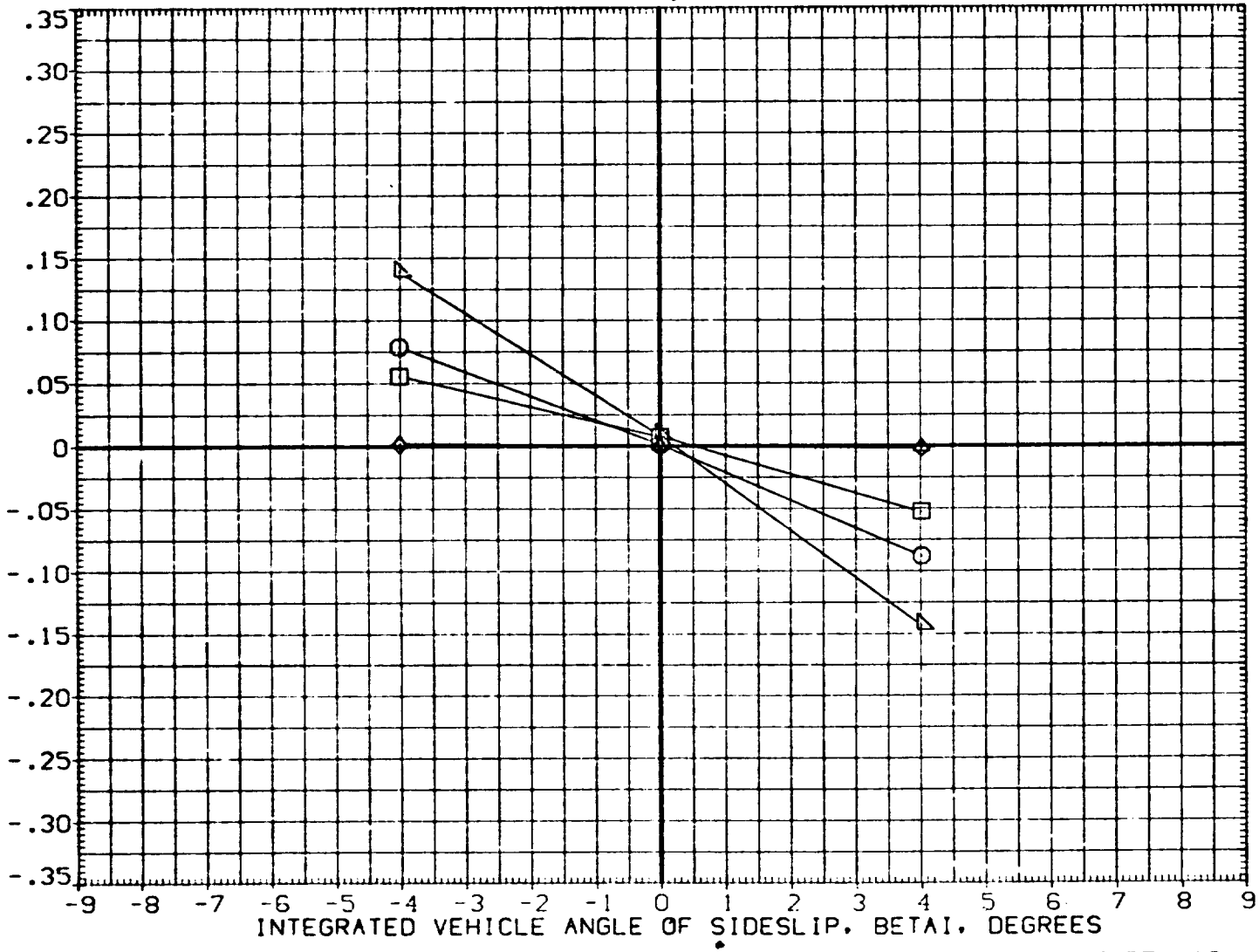


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

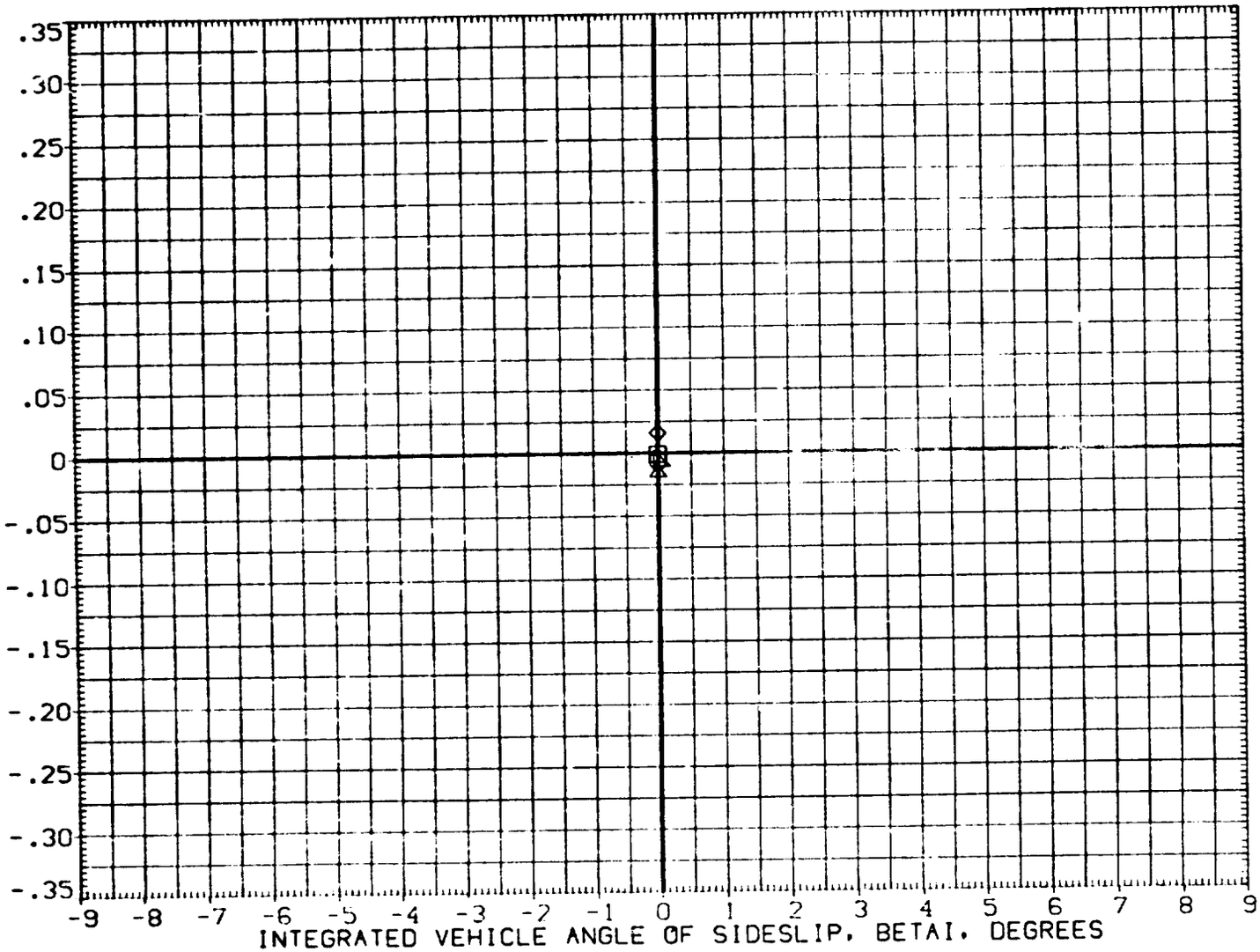


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

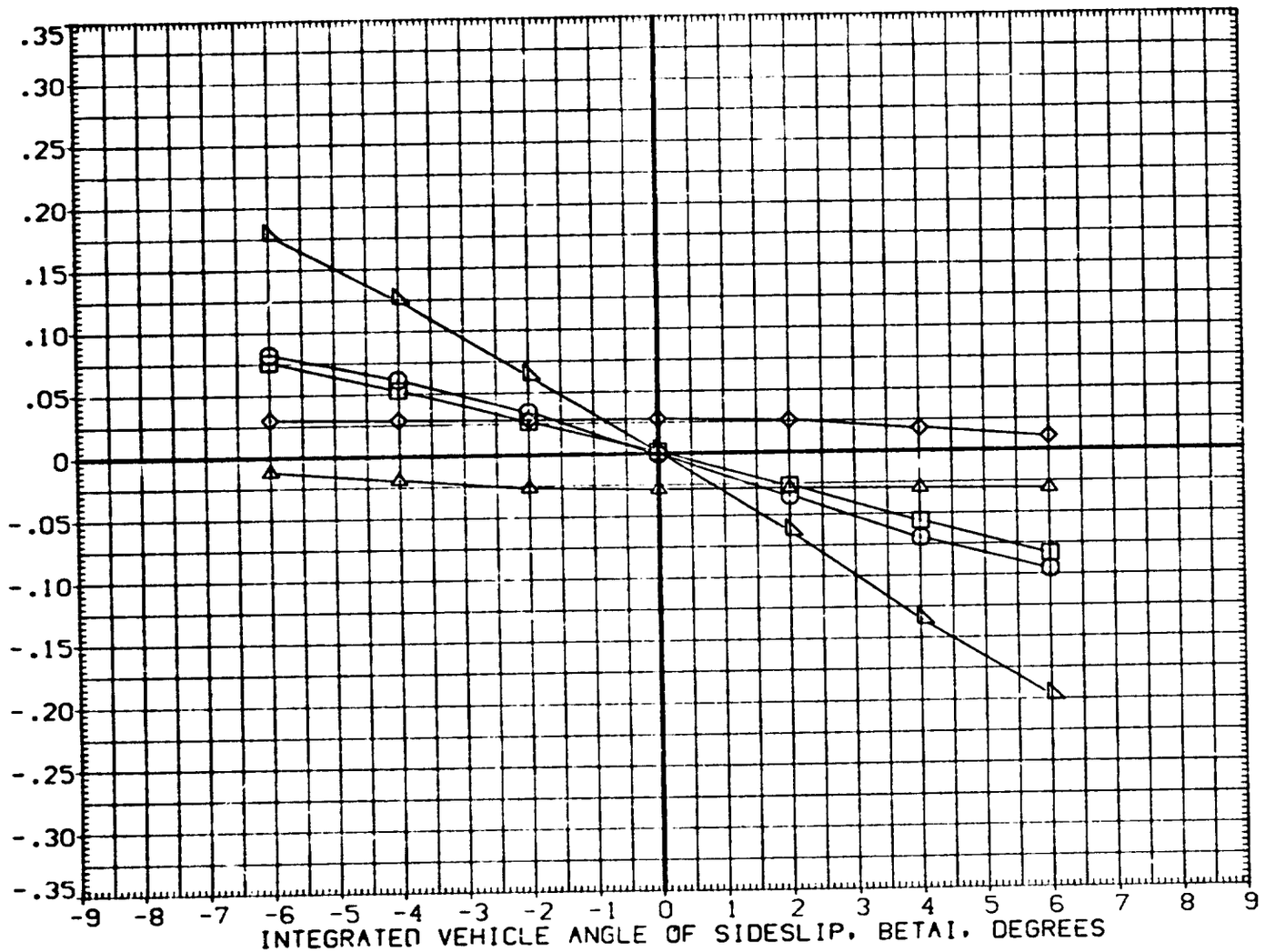


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL45)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

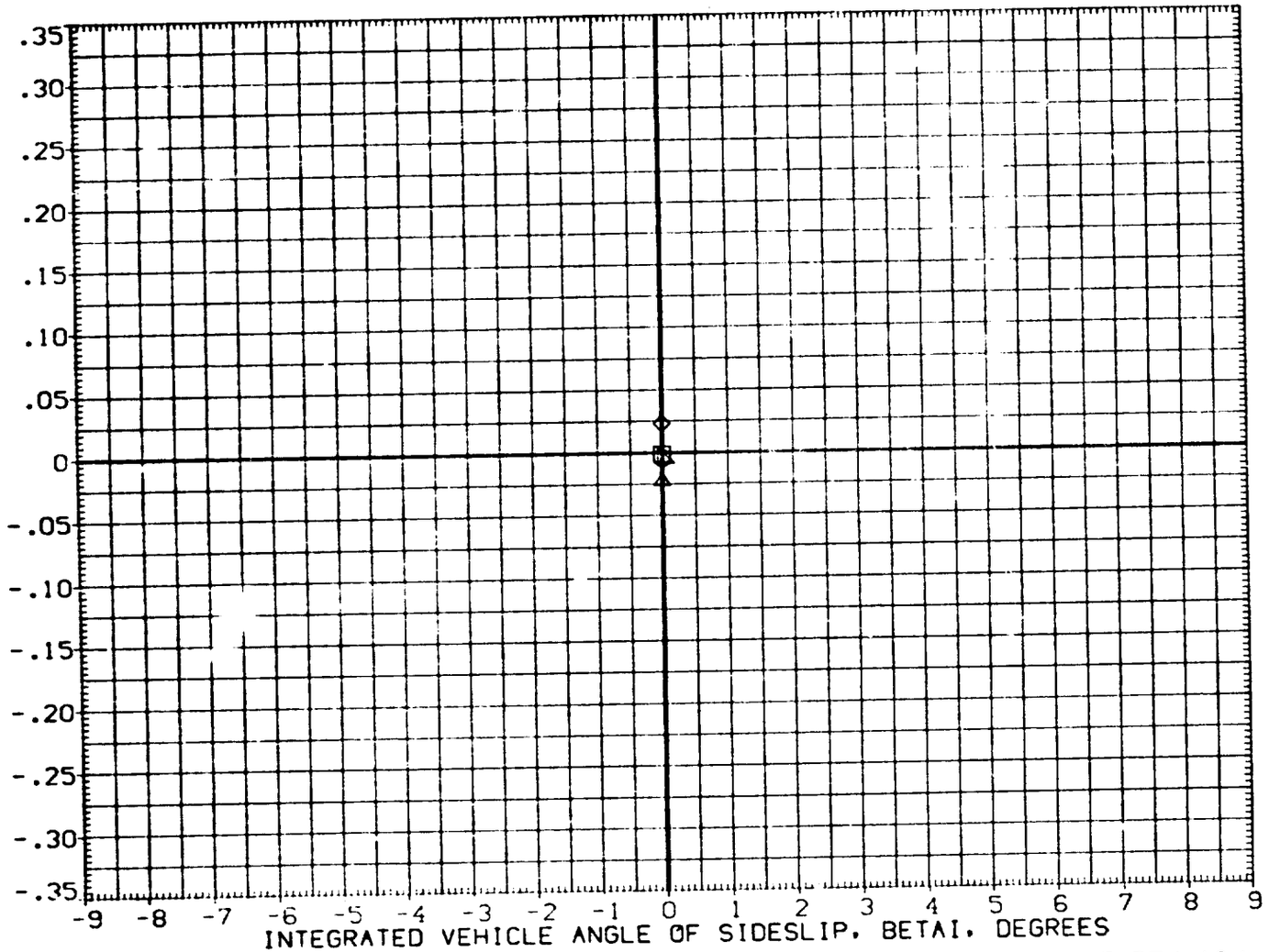


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

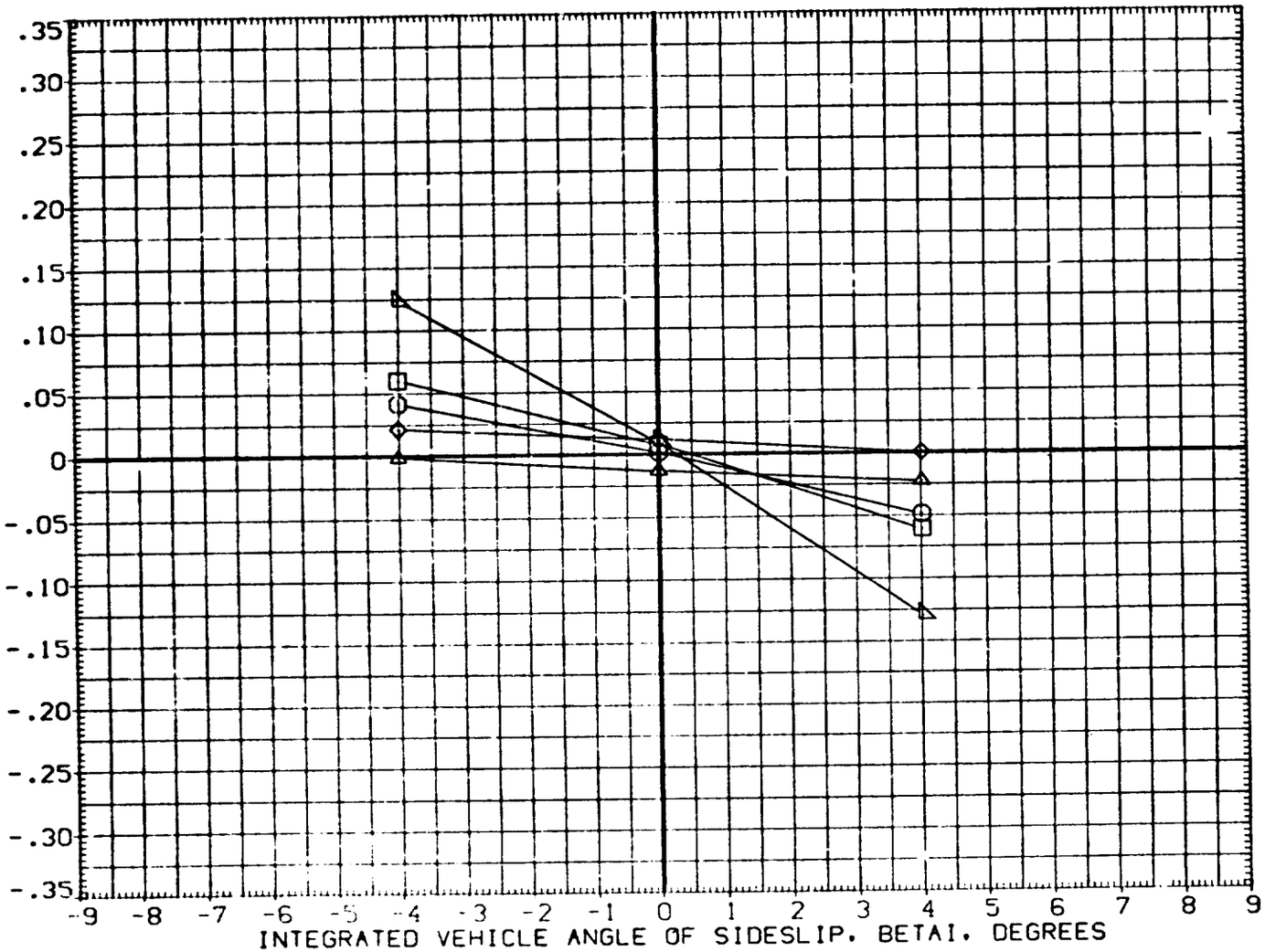


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

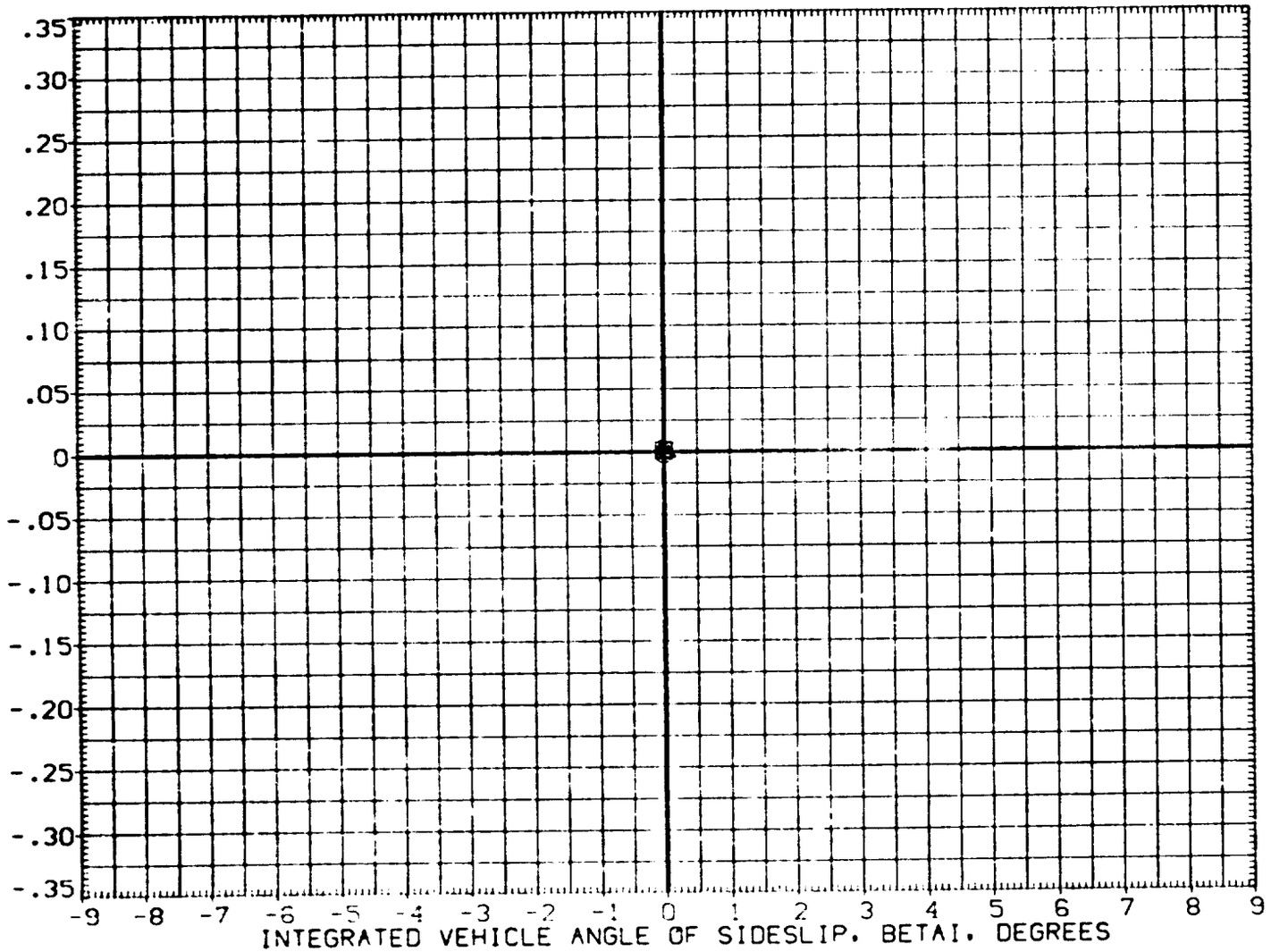


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO46)	○	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019([A81) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETR46)	◇	AMES97-019([A81) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

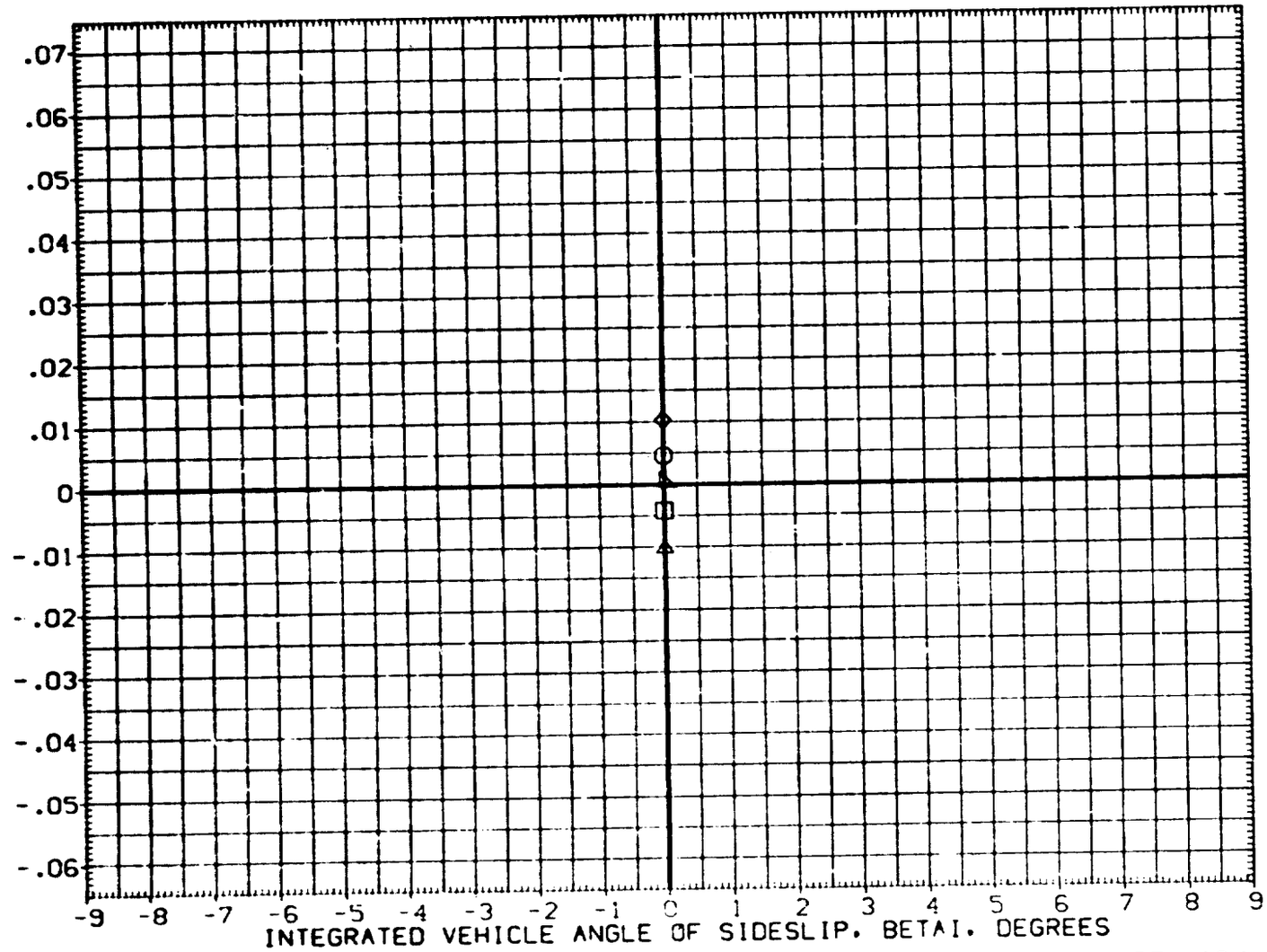


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

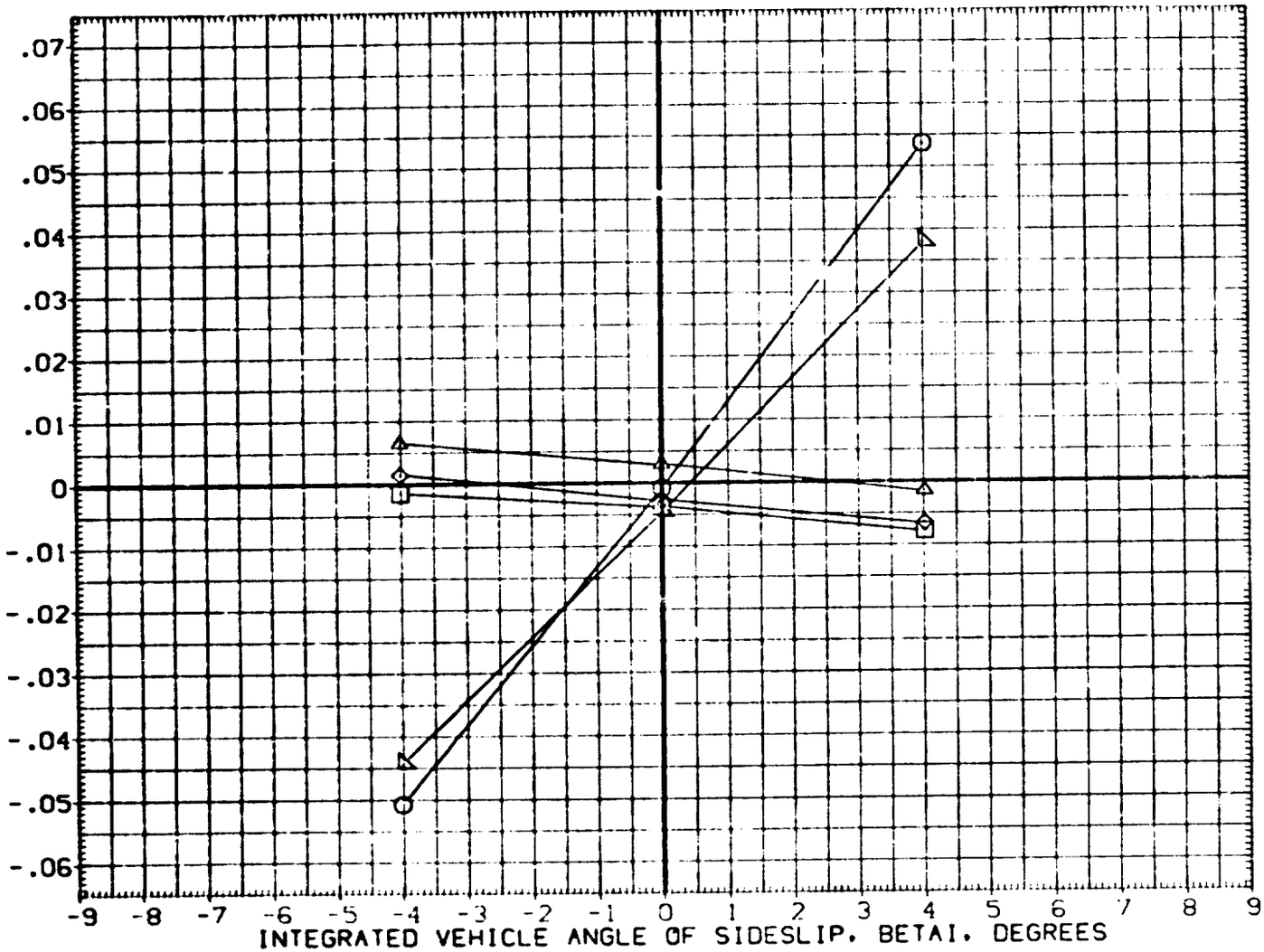


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(8)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

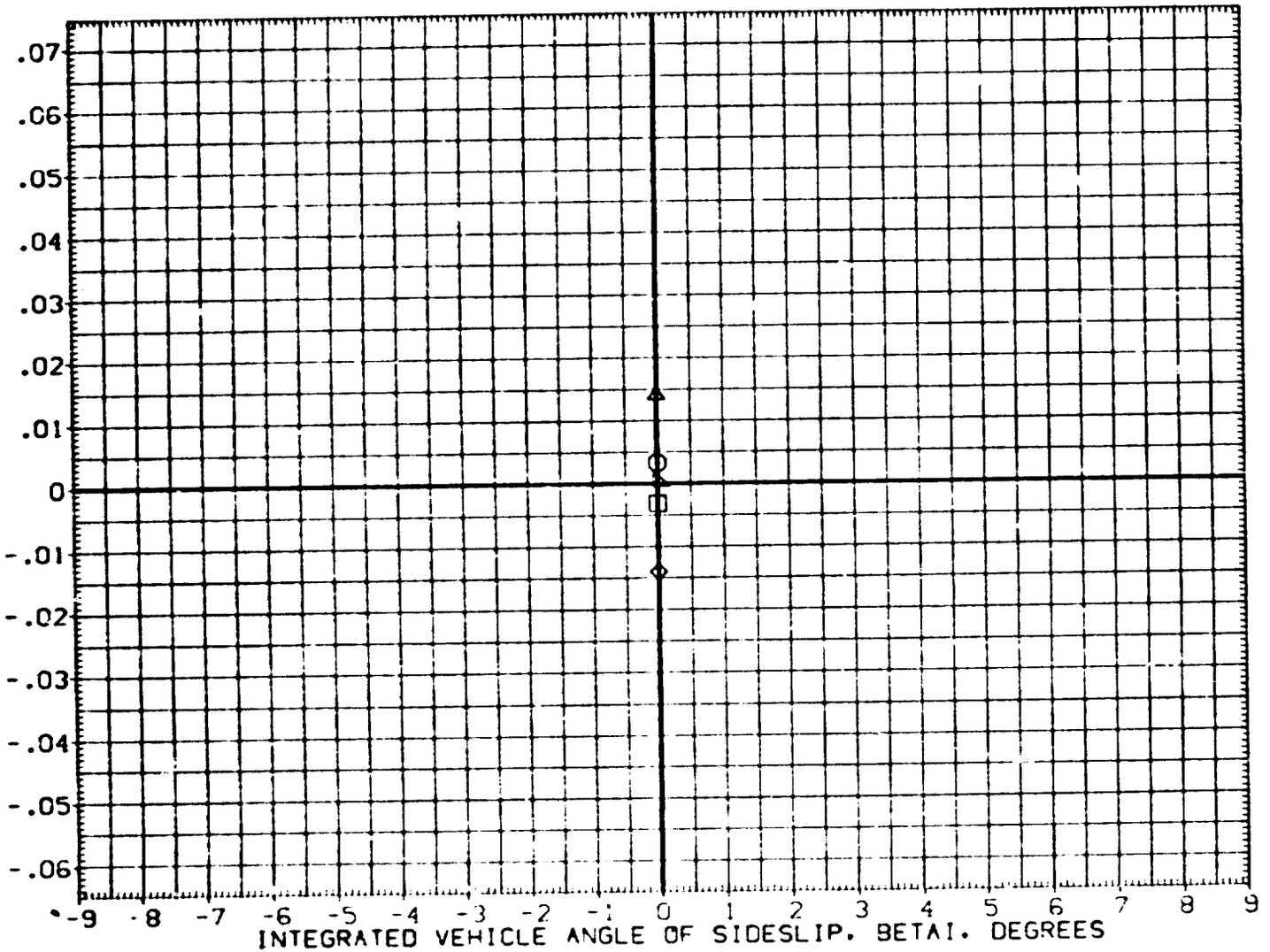


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	⊡	AMES97 -19([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	⊠	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◇	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	▽	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

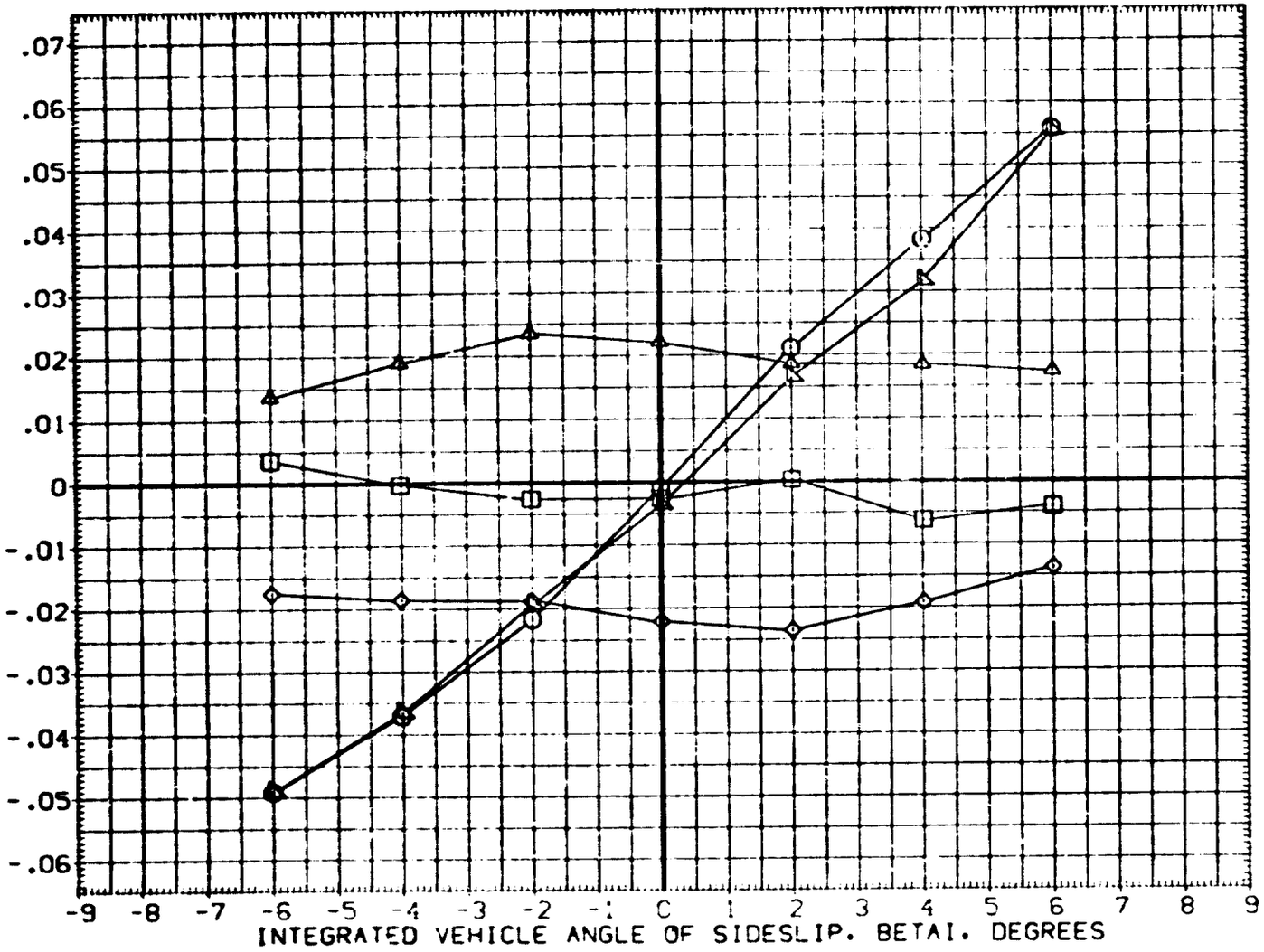


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(1A31) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

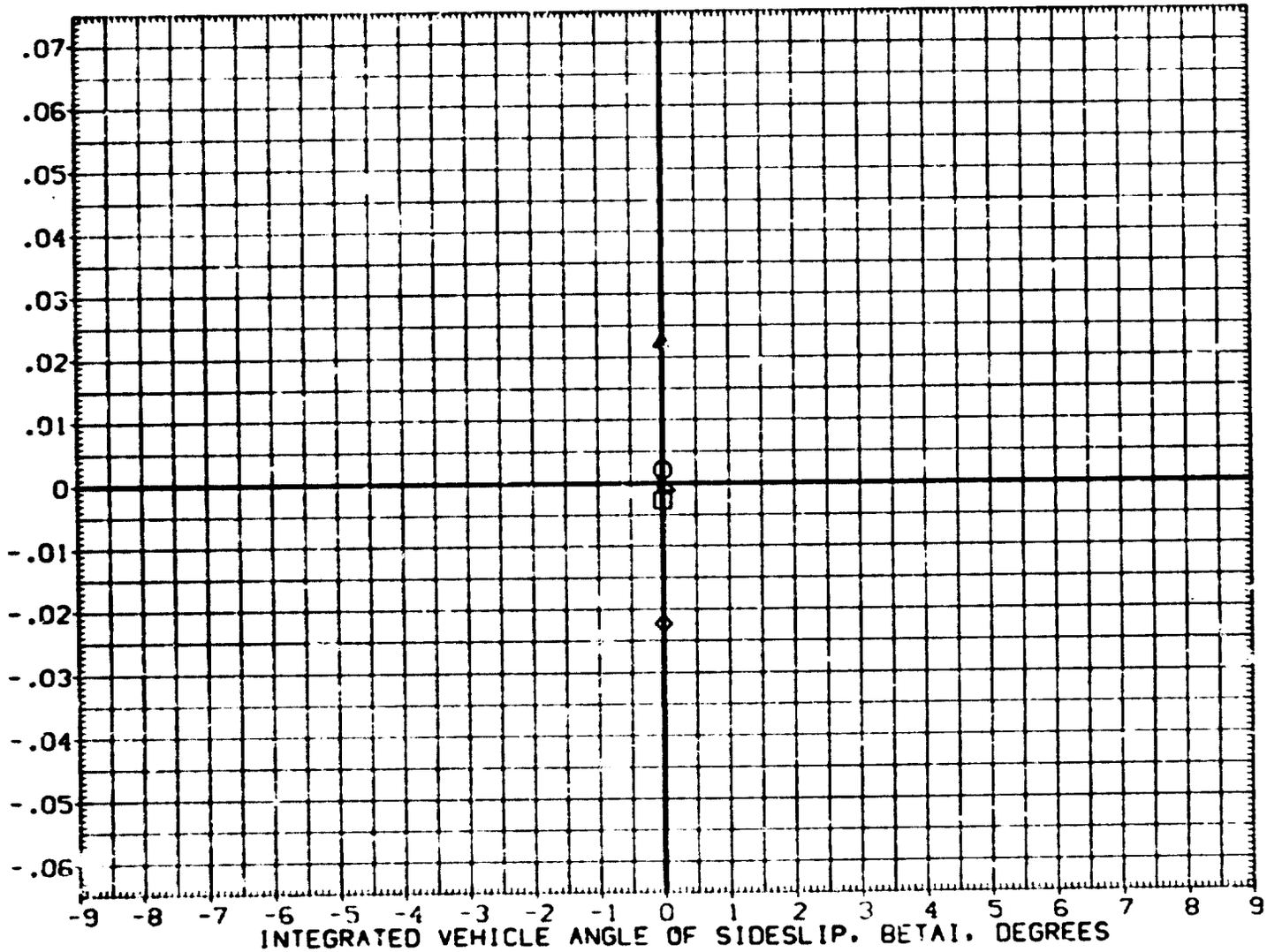


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

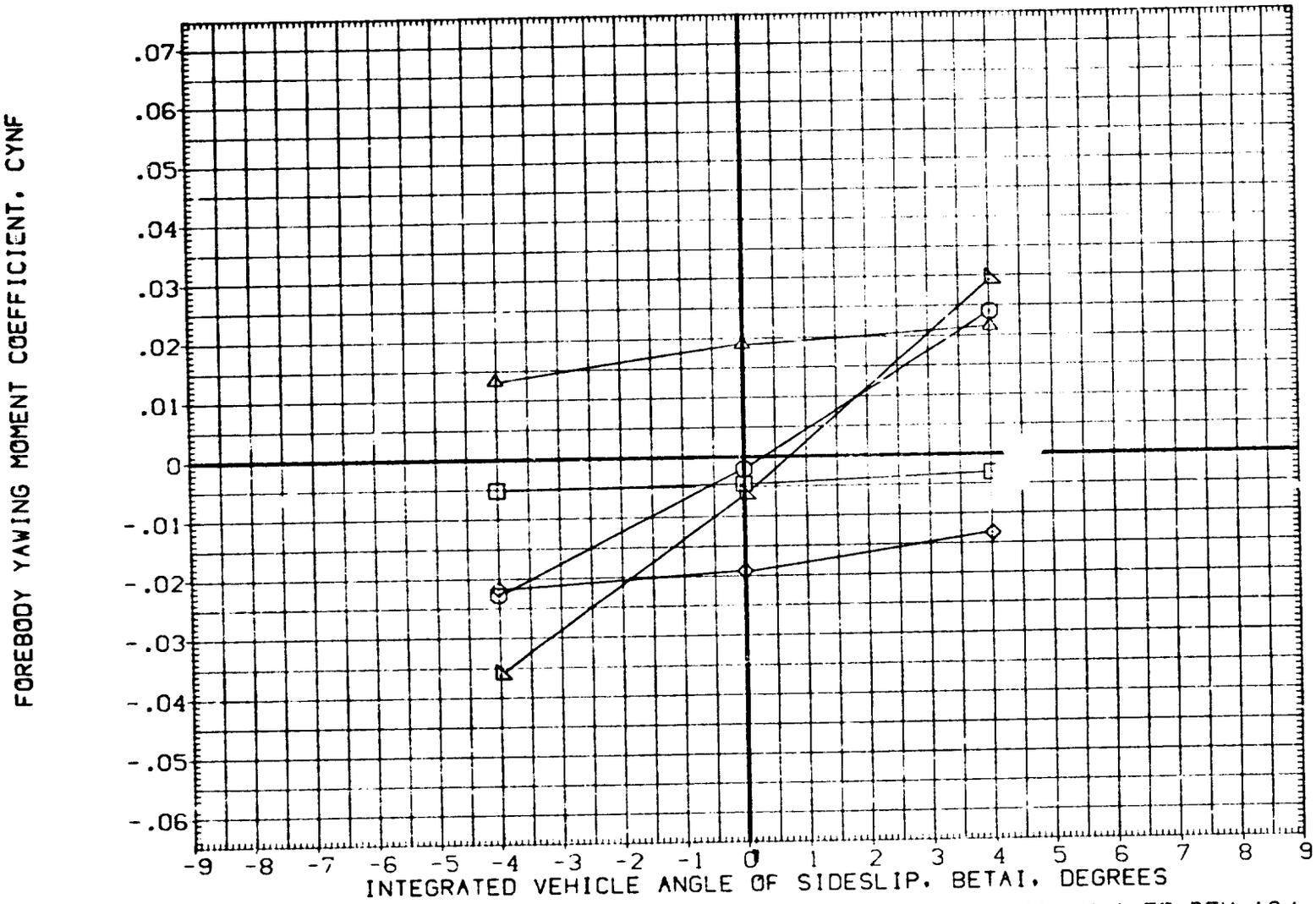


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

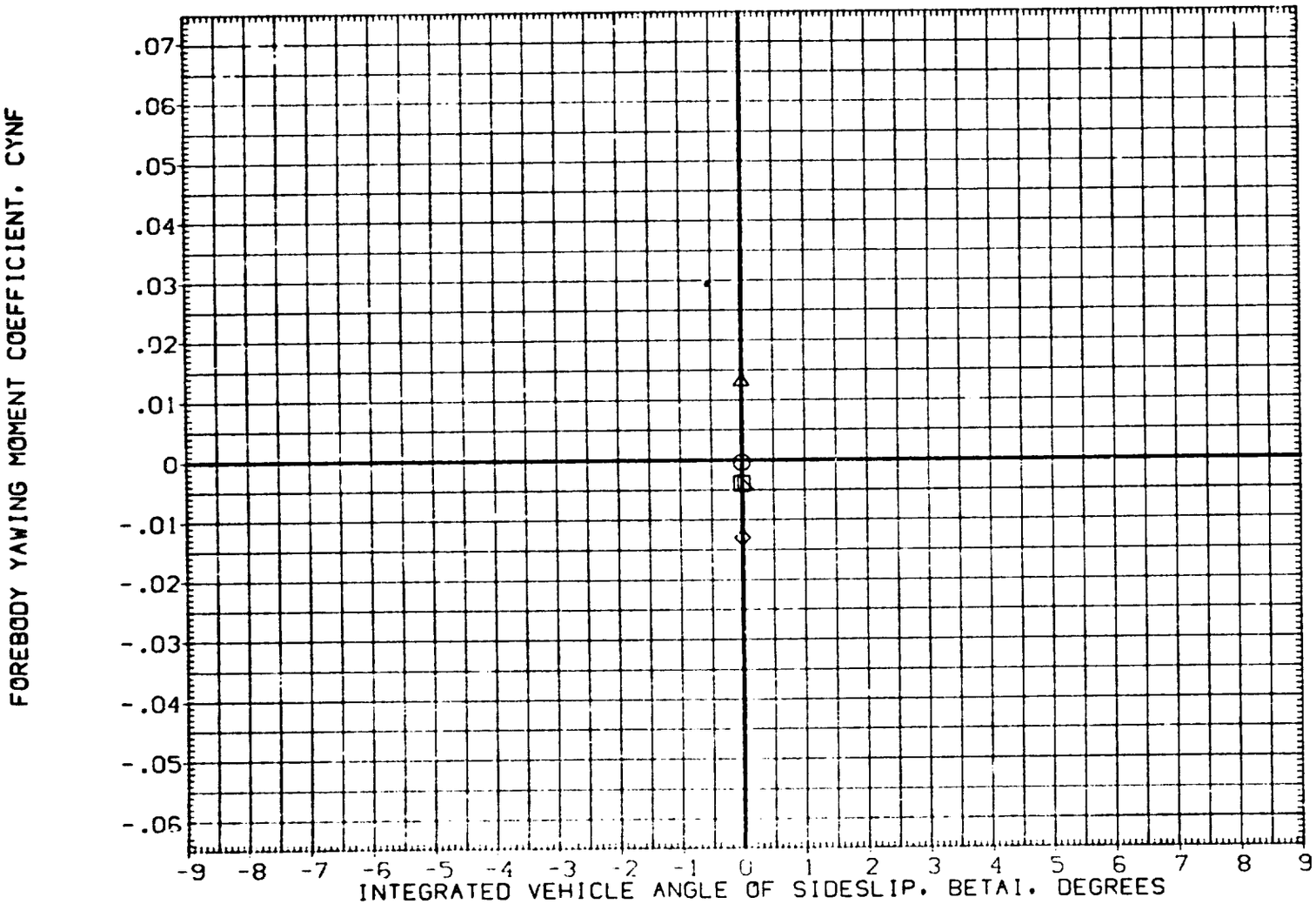


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

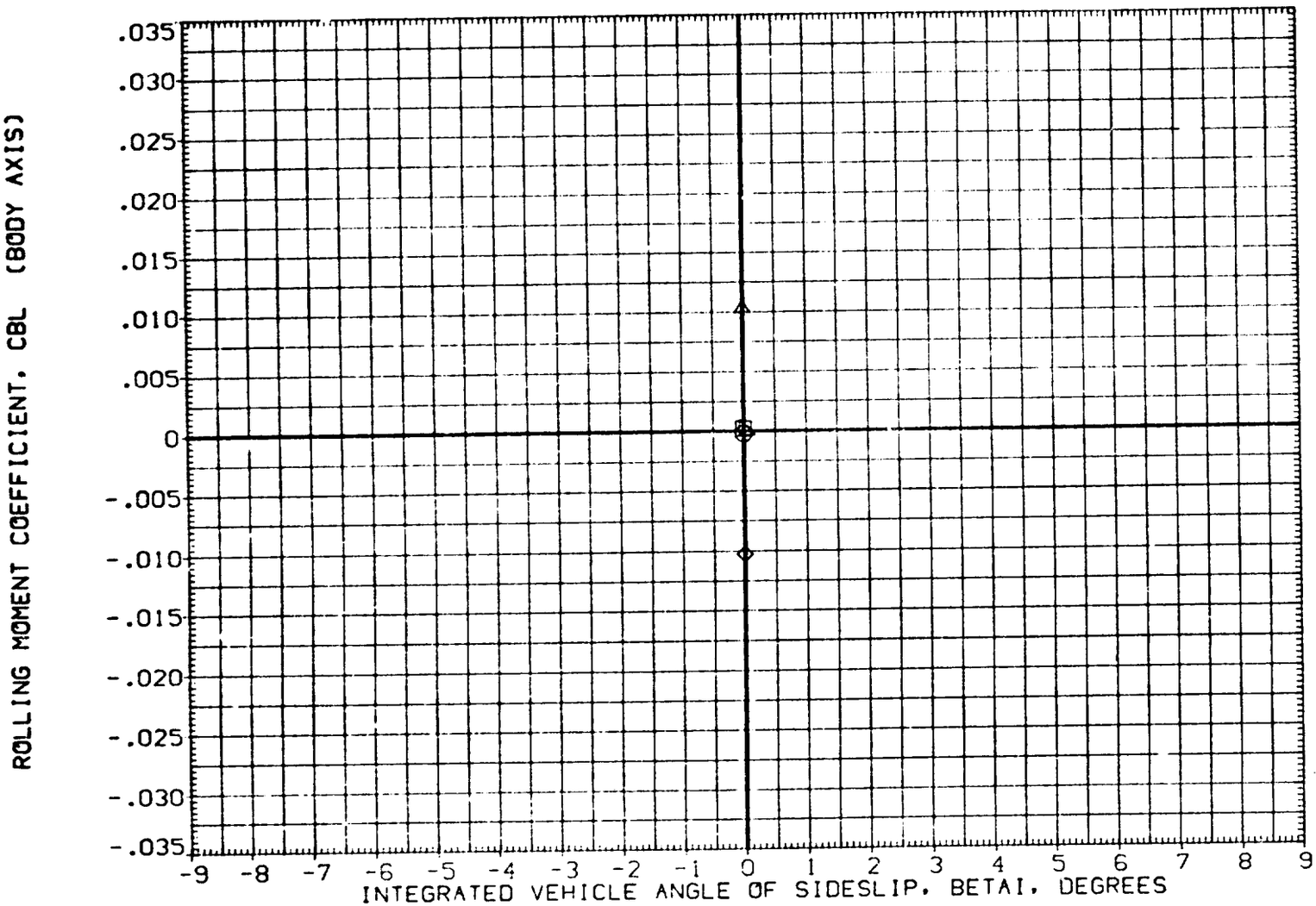


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC46)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◁▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

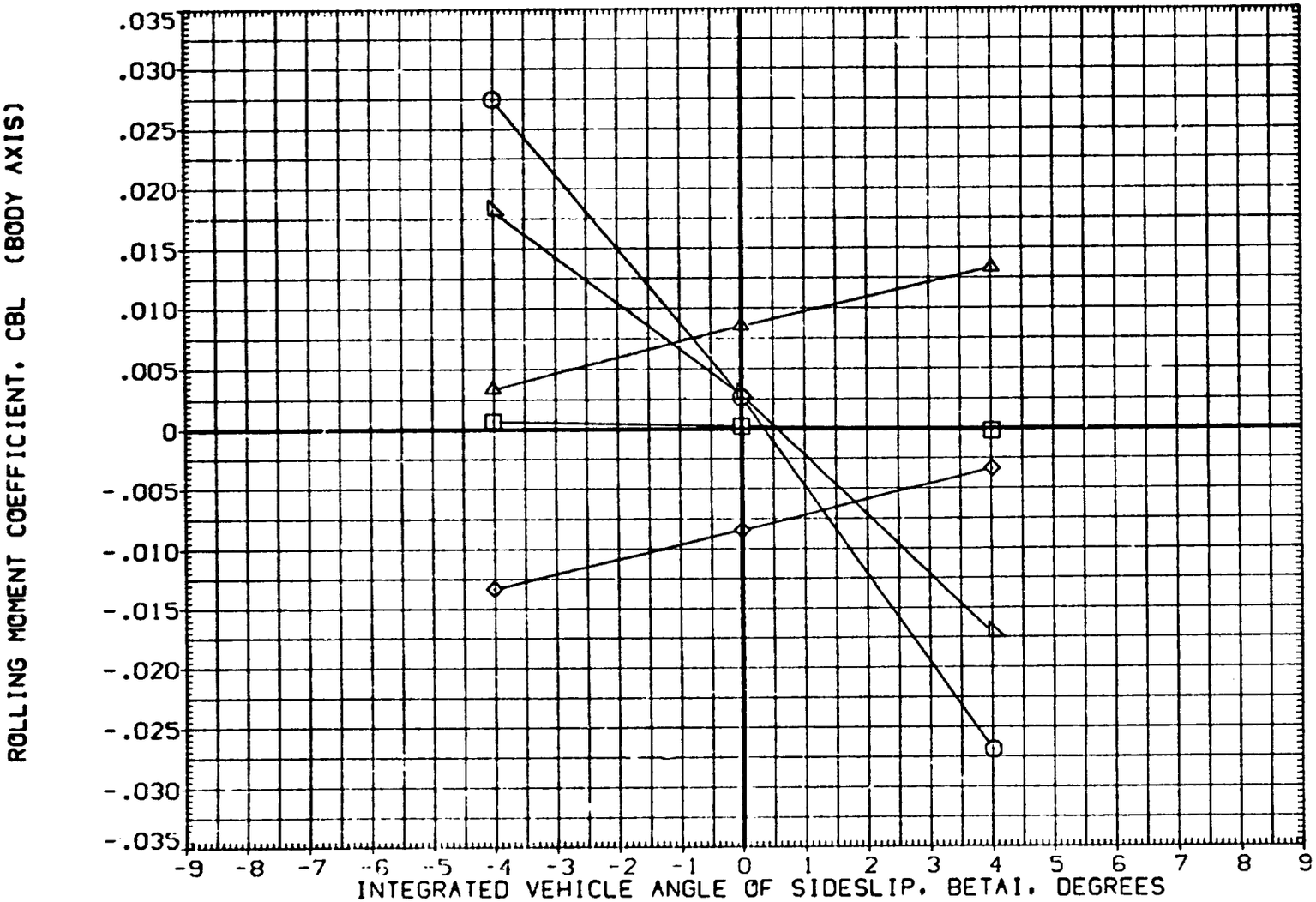


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	◁	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

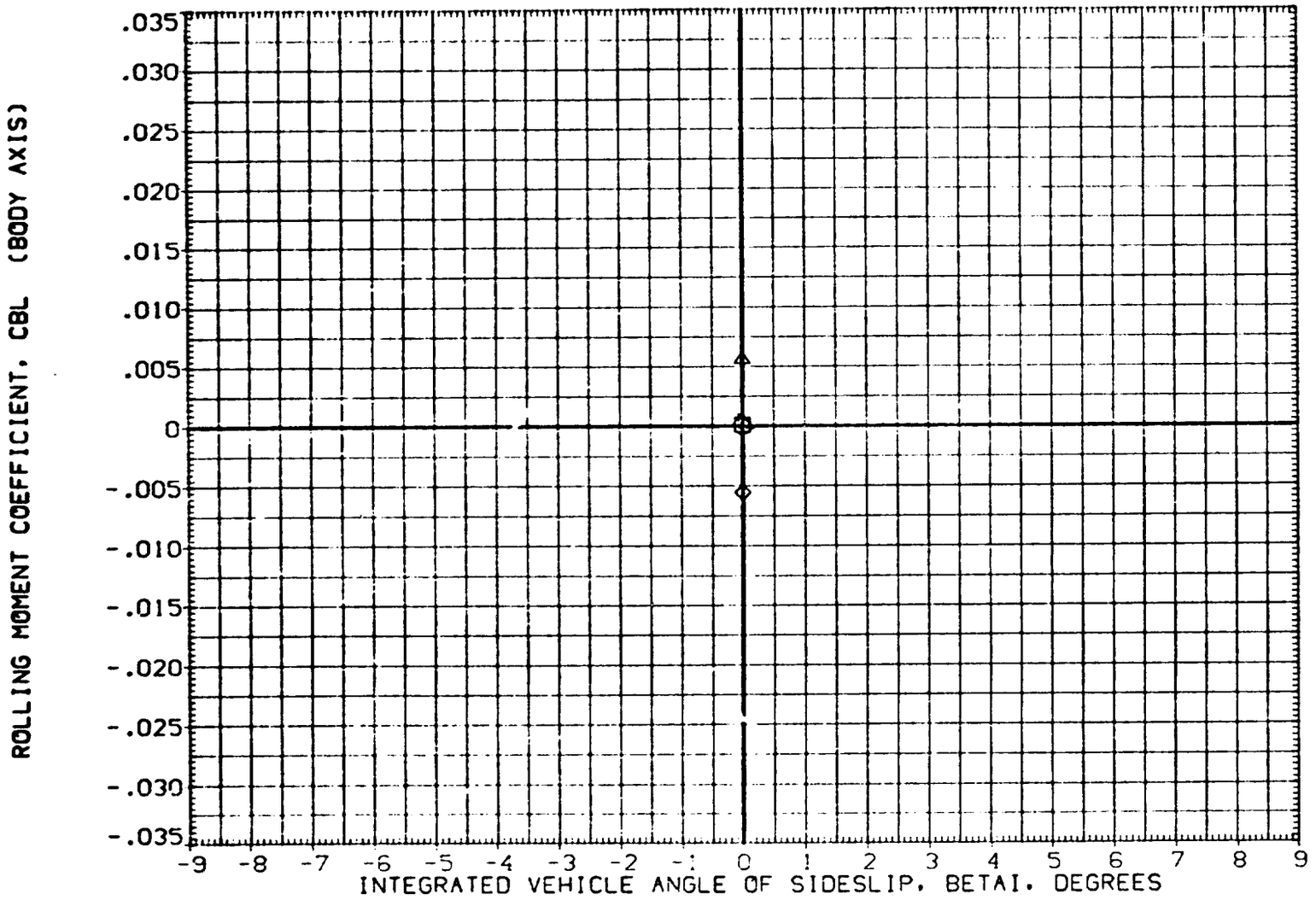


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE1046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LET146)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

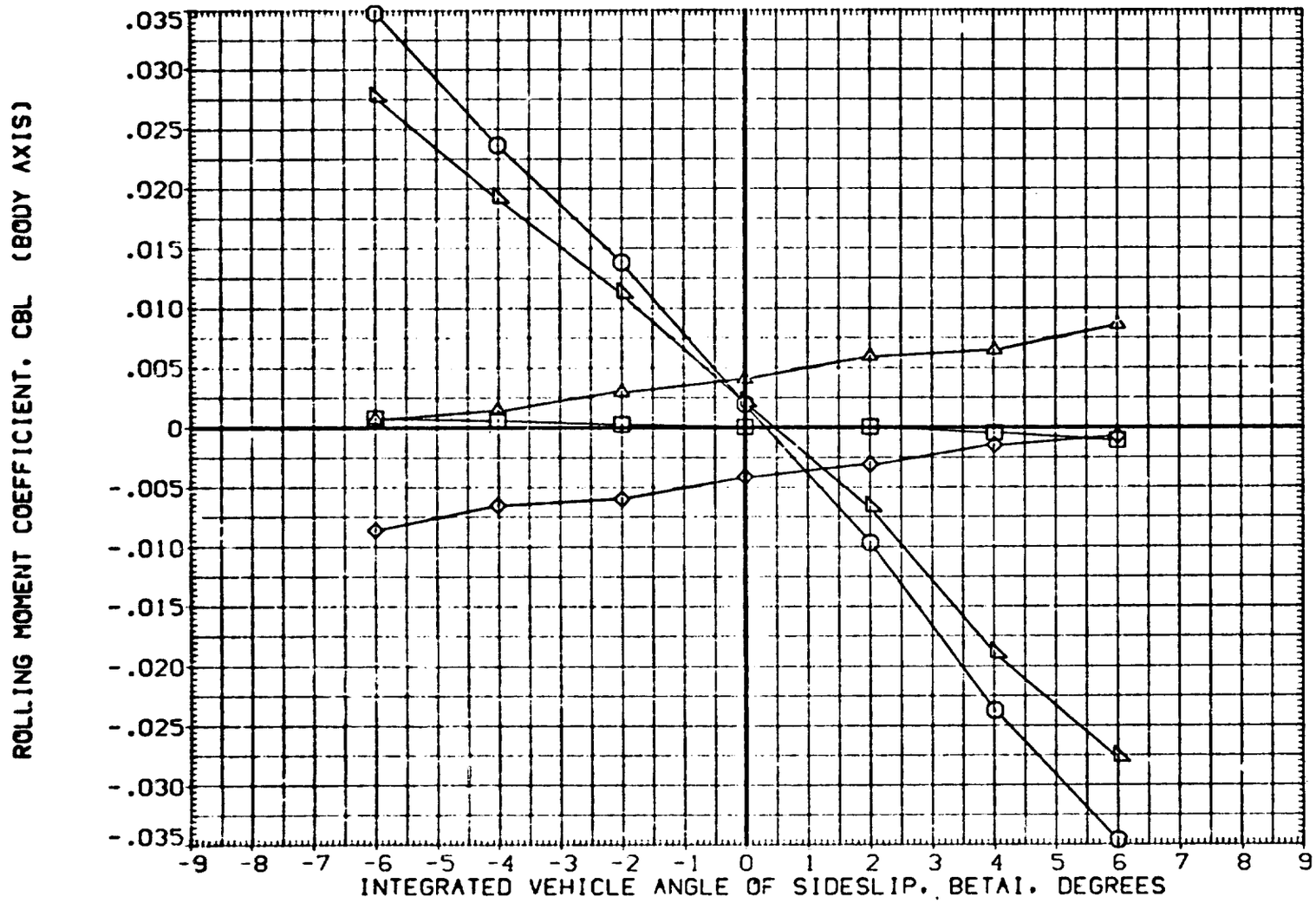


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	▷	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

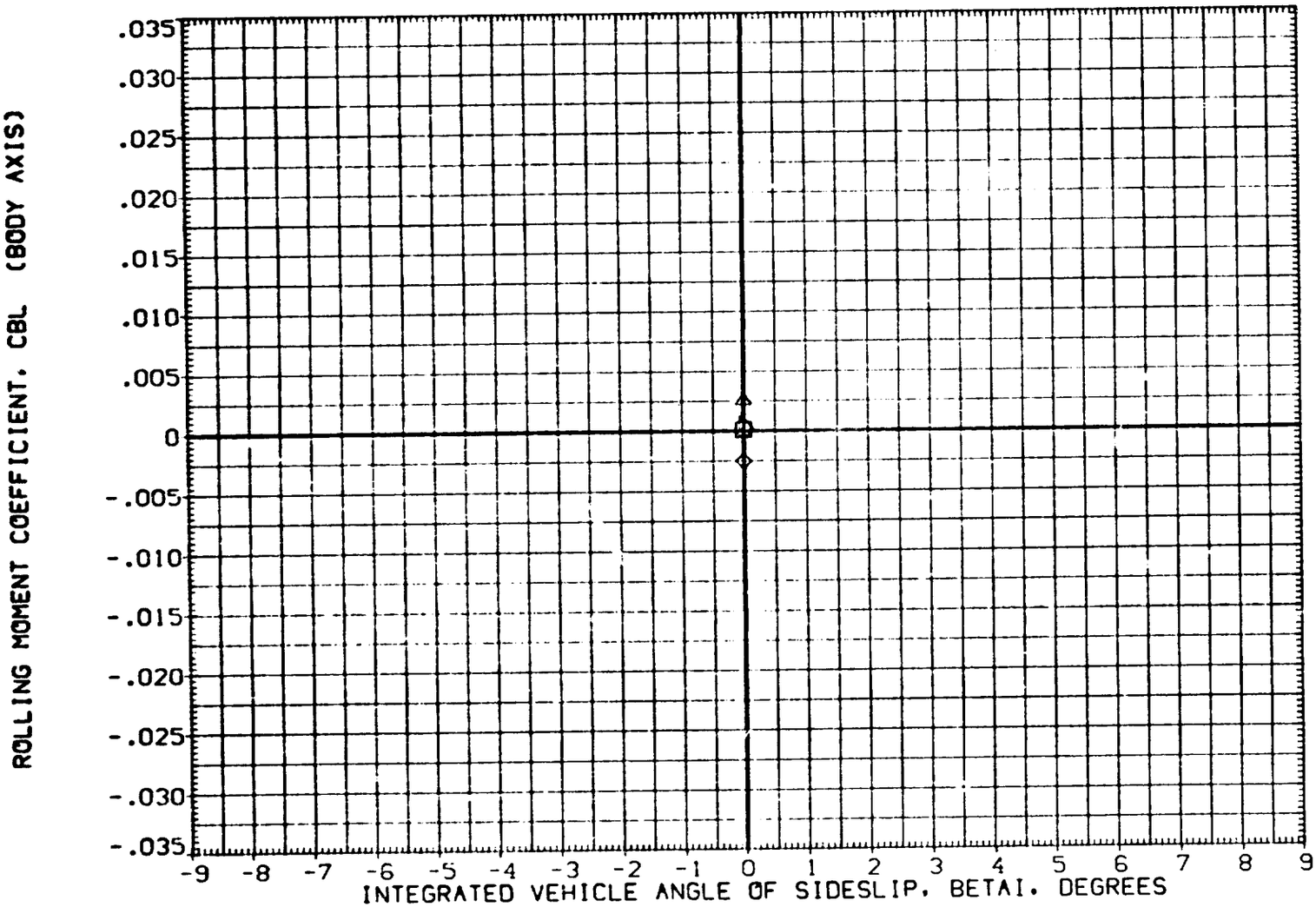


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◇	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

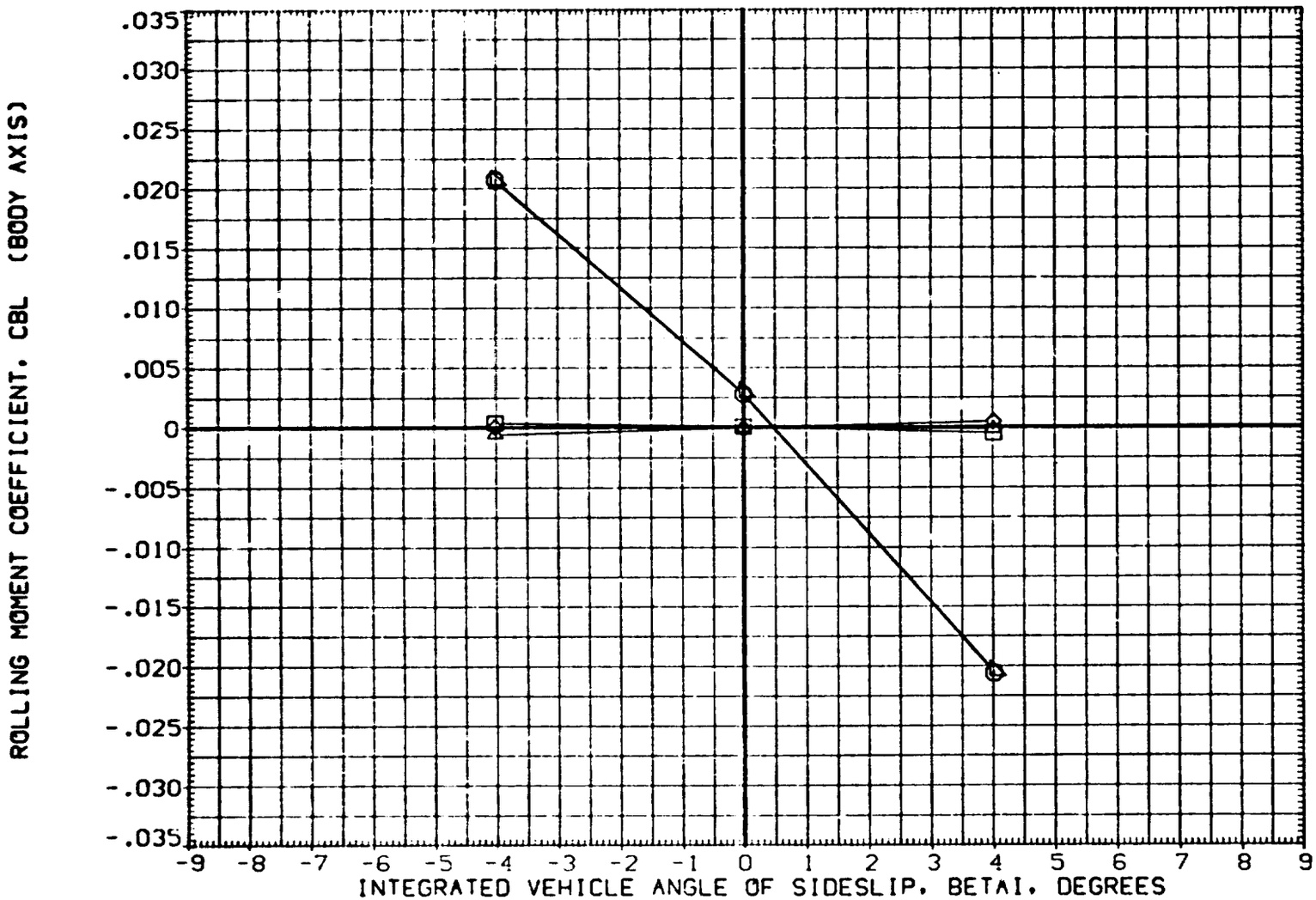


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

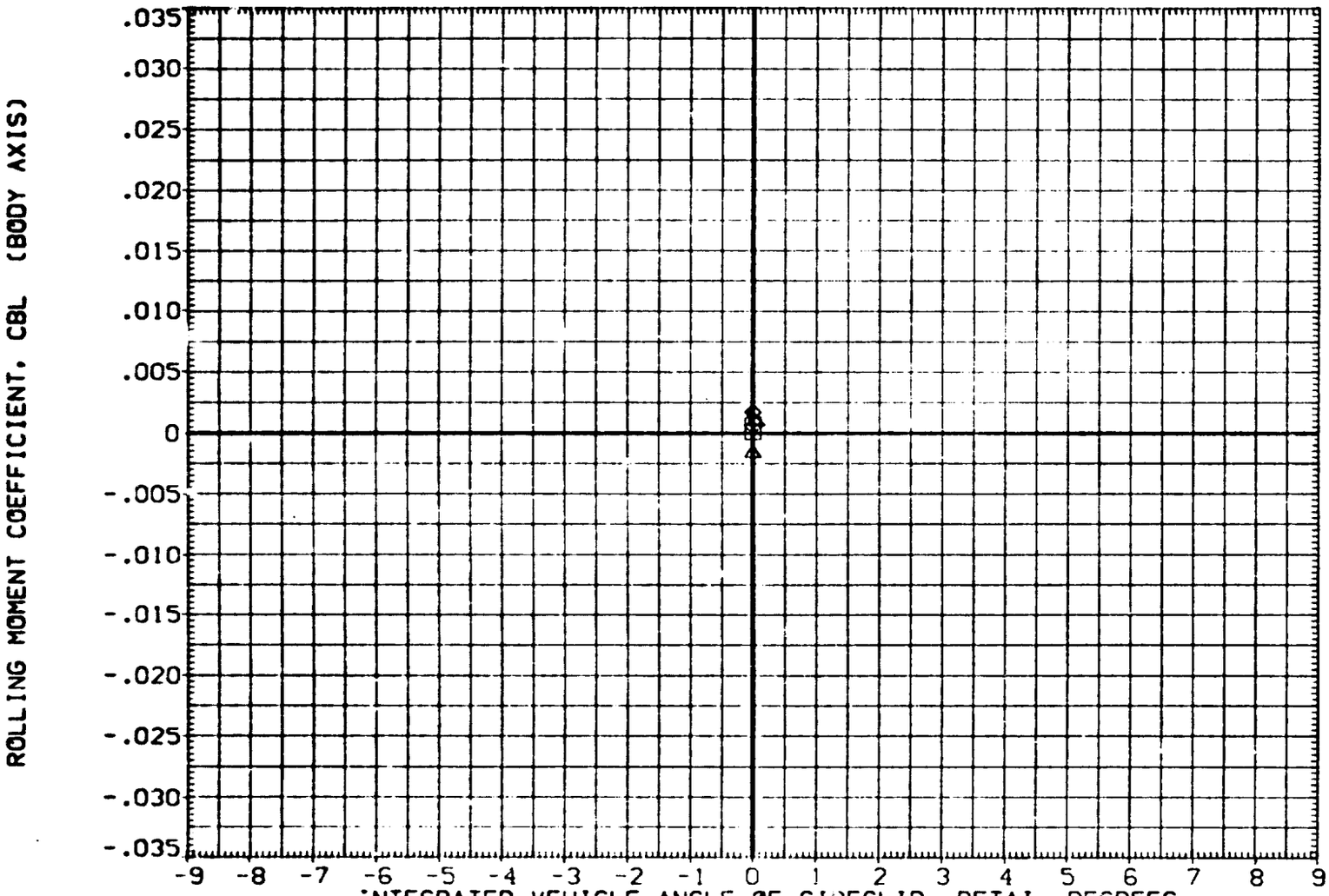


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET046)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(1A81) LVAP R LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

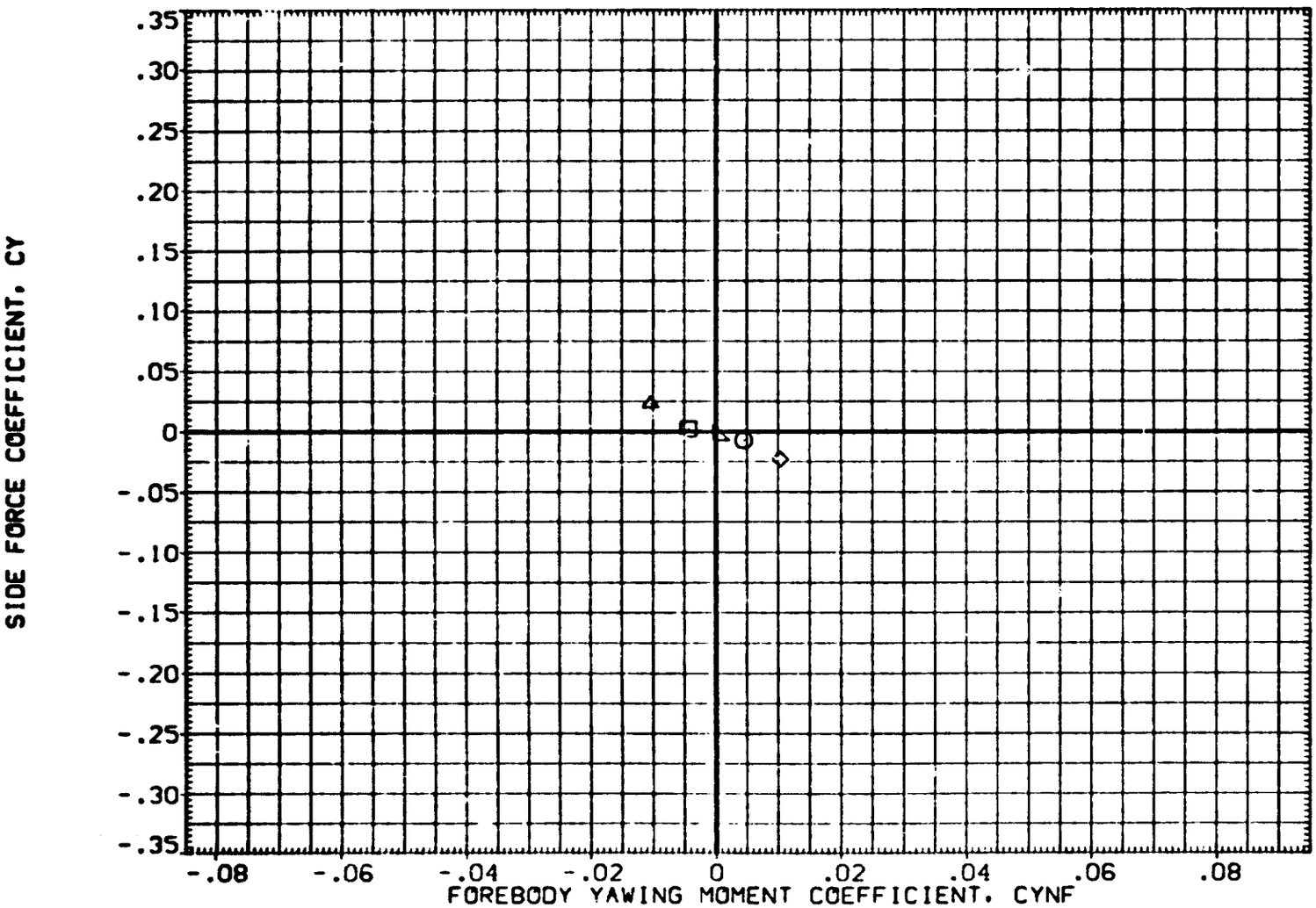


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	⊗	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

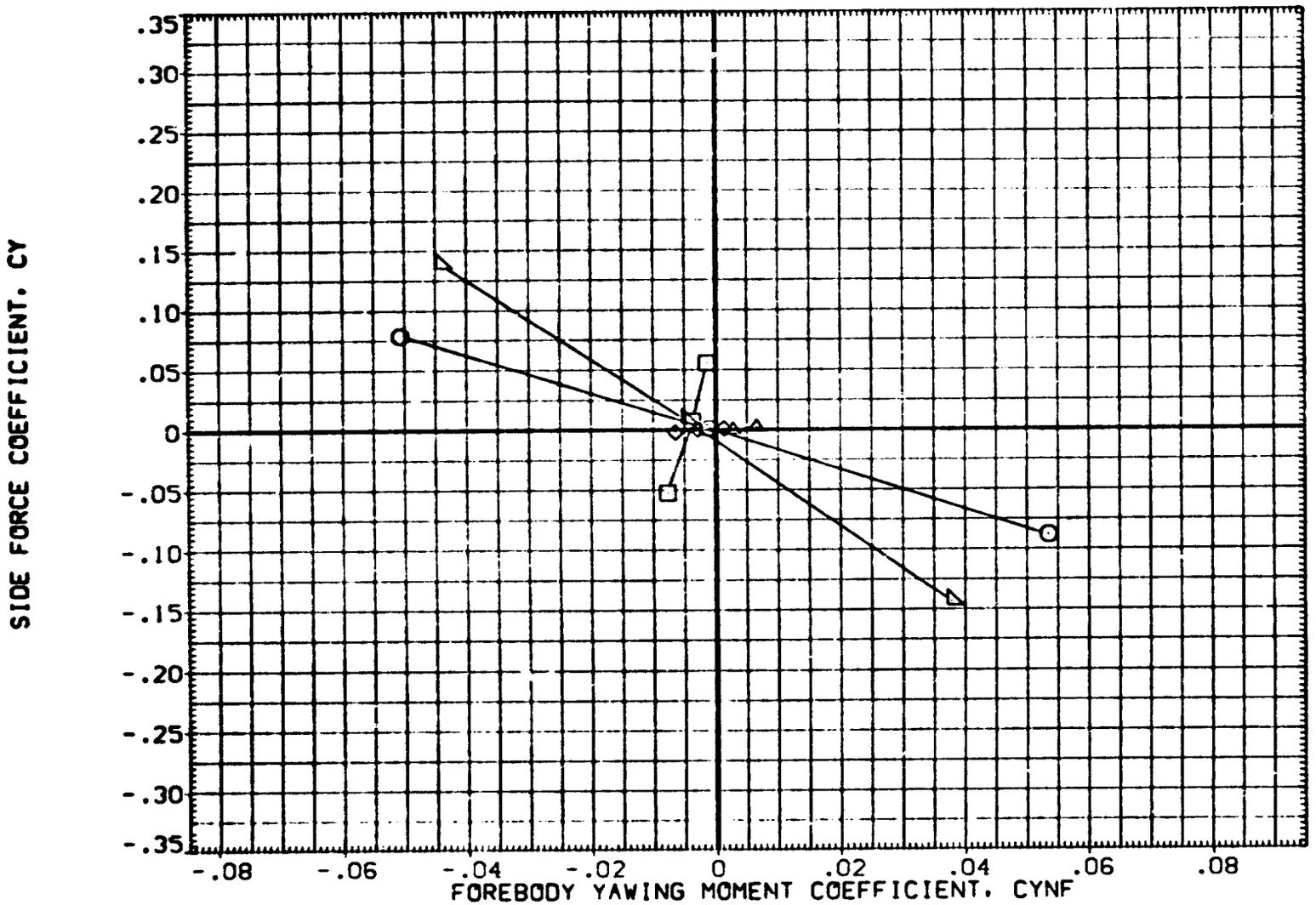


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)ALPHA= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	◇	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETL46)	⊗	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETR46)	○	AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

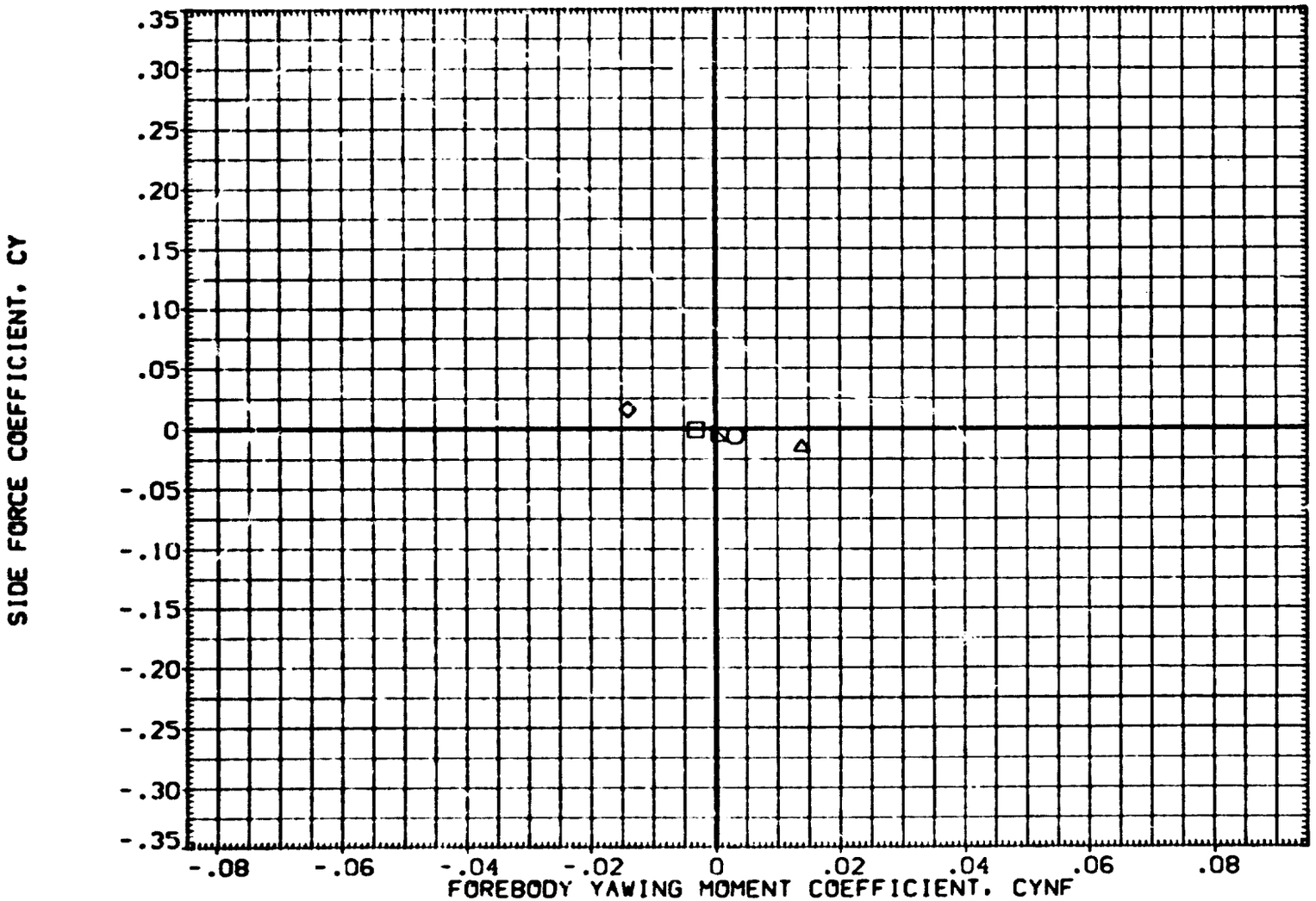


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)ALPHA1= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LET046)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LET146)	○	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	▽	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

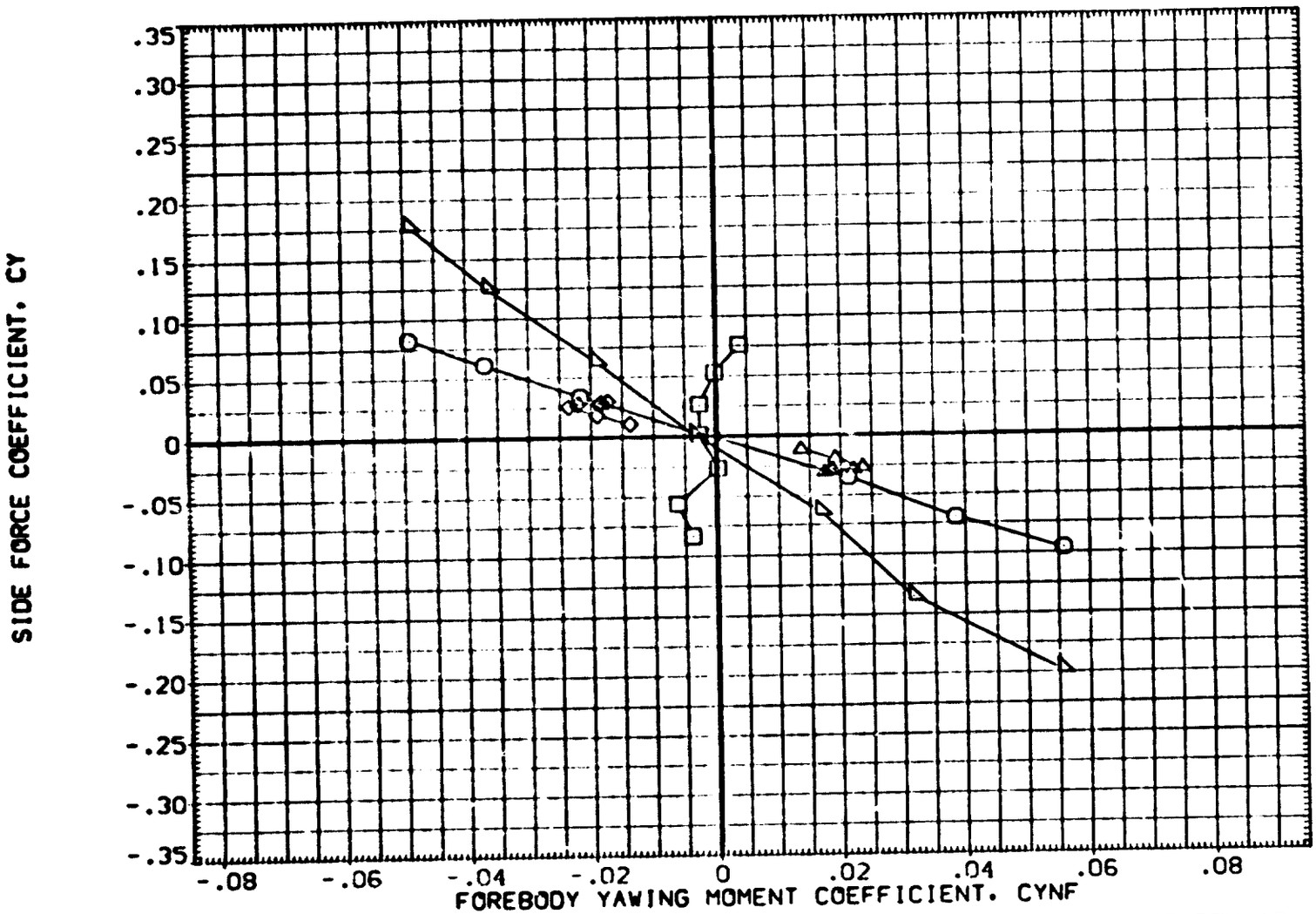


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET04S)		AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IAB1) LVAP L SRB - ALL ML SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

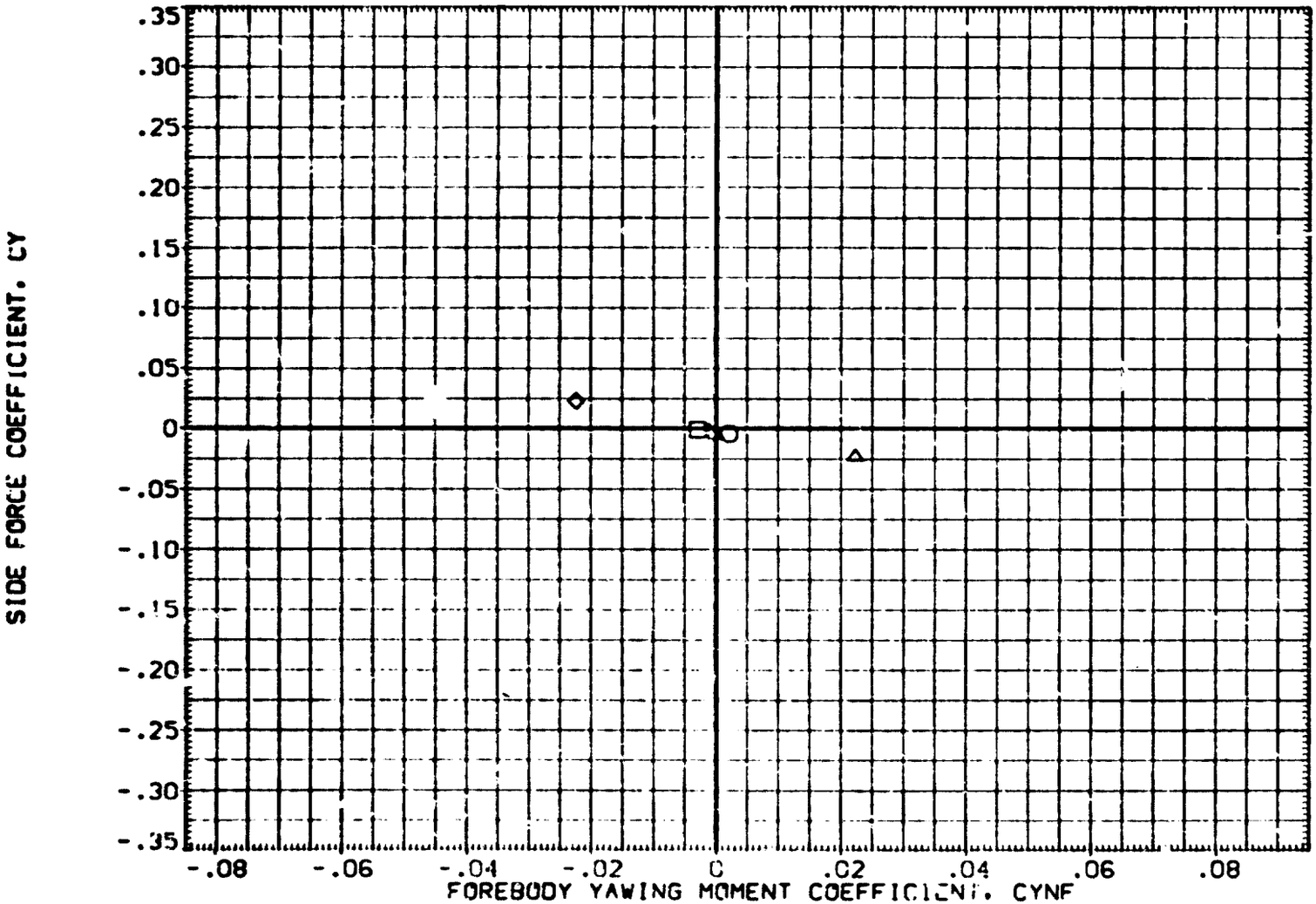


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

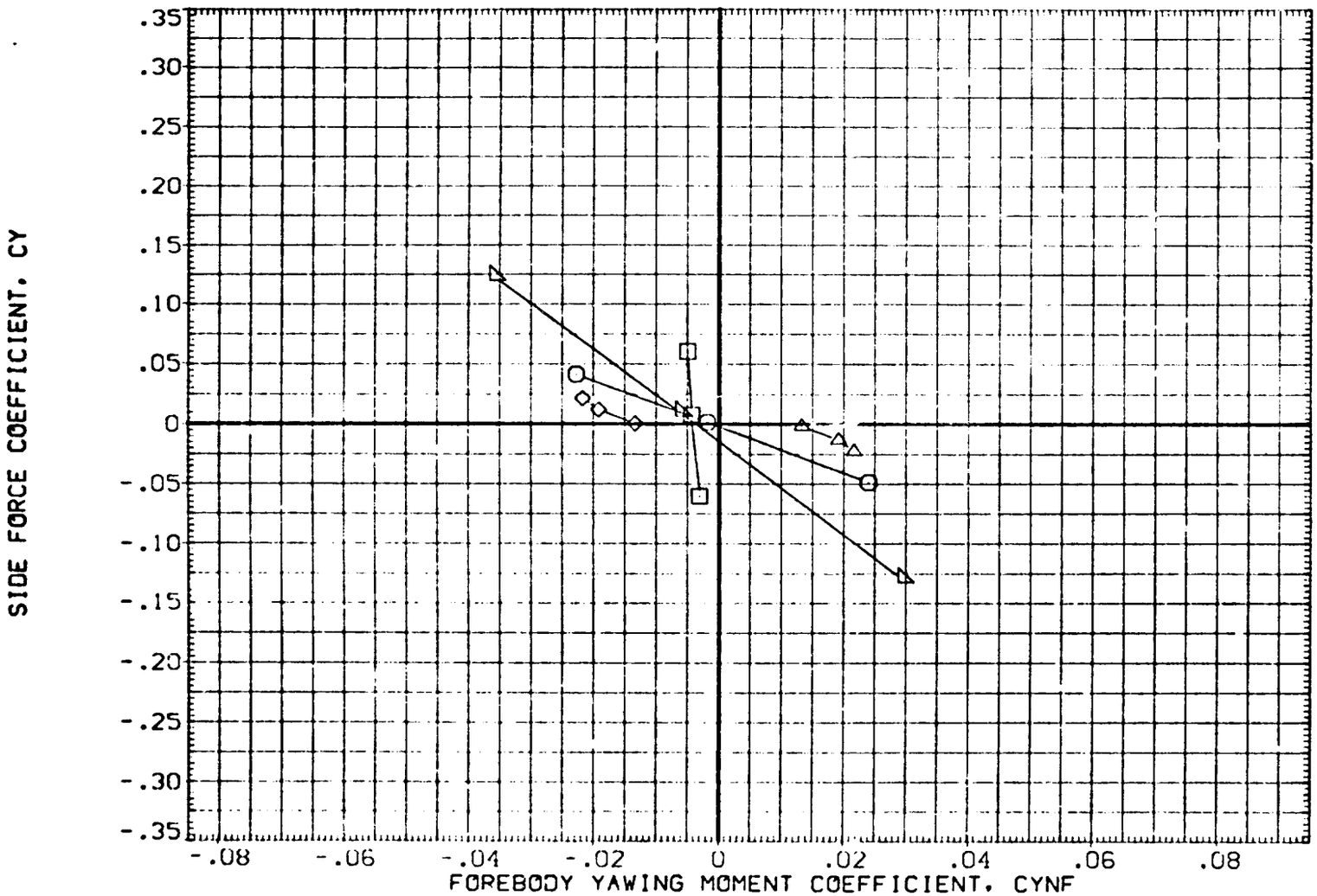


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◇	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

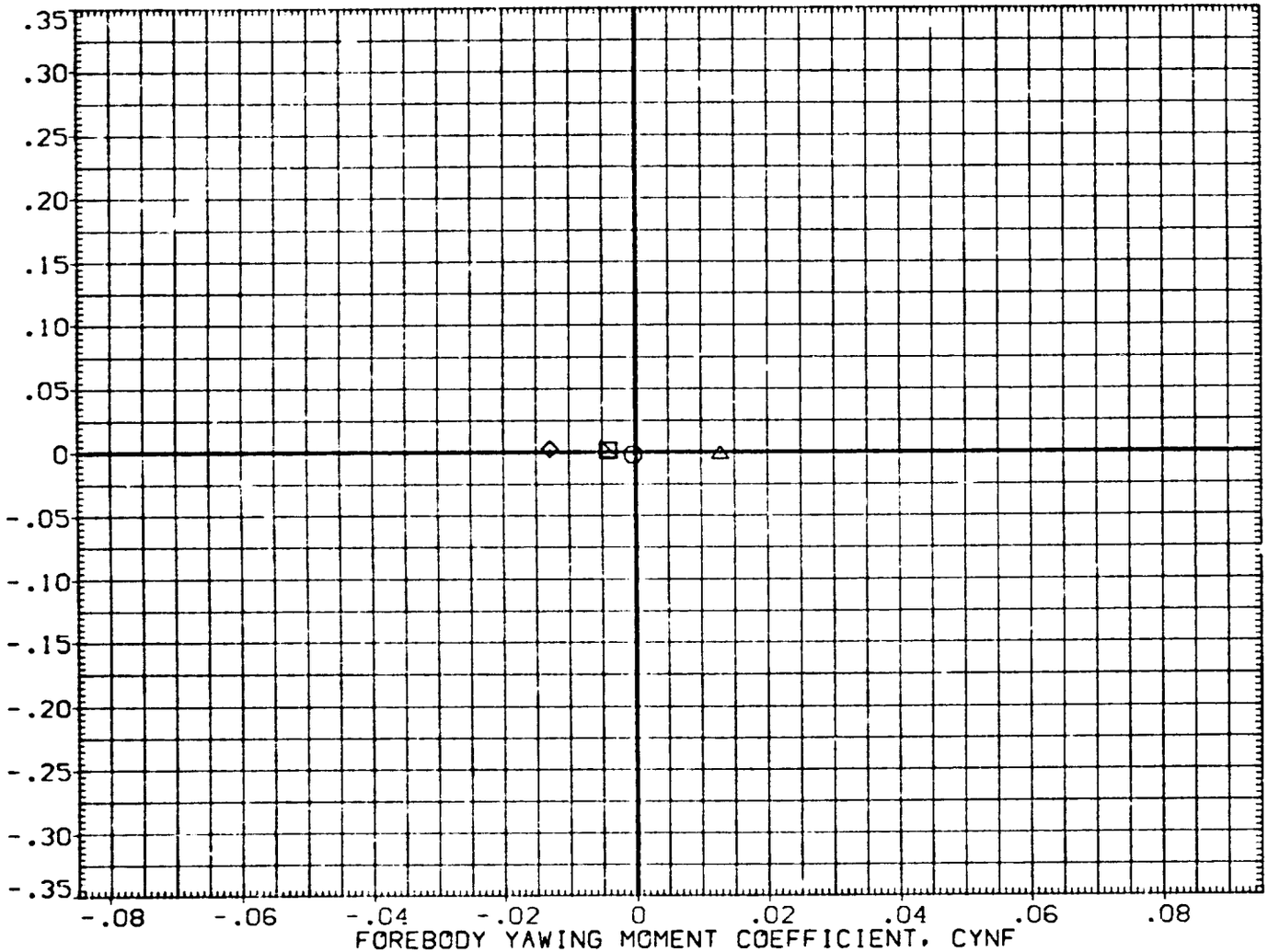


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046) □	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46) ◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46) ⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46) ⊠	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46) △	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

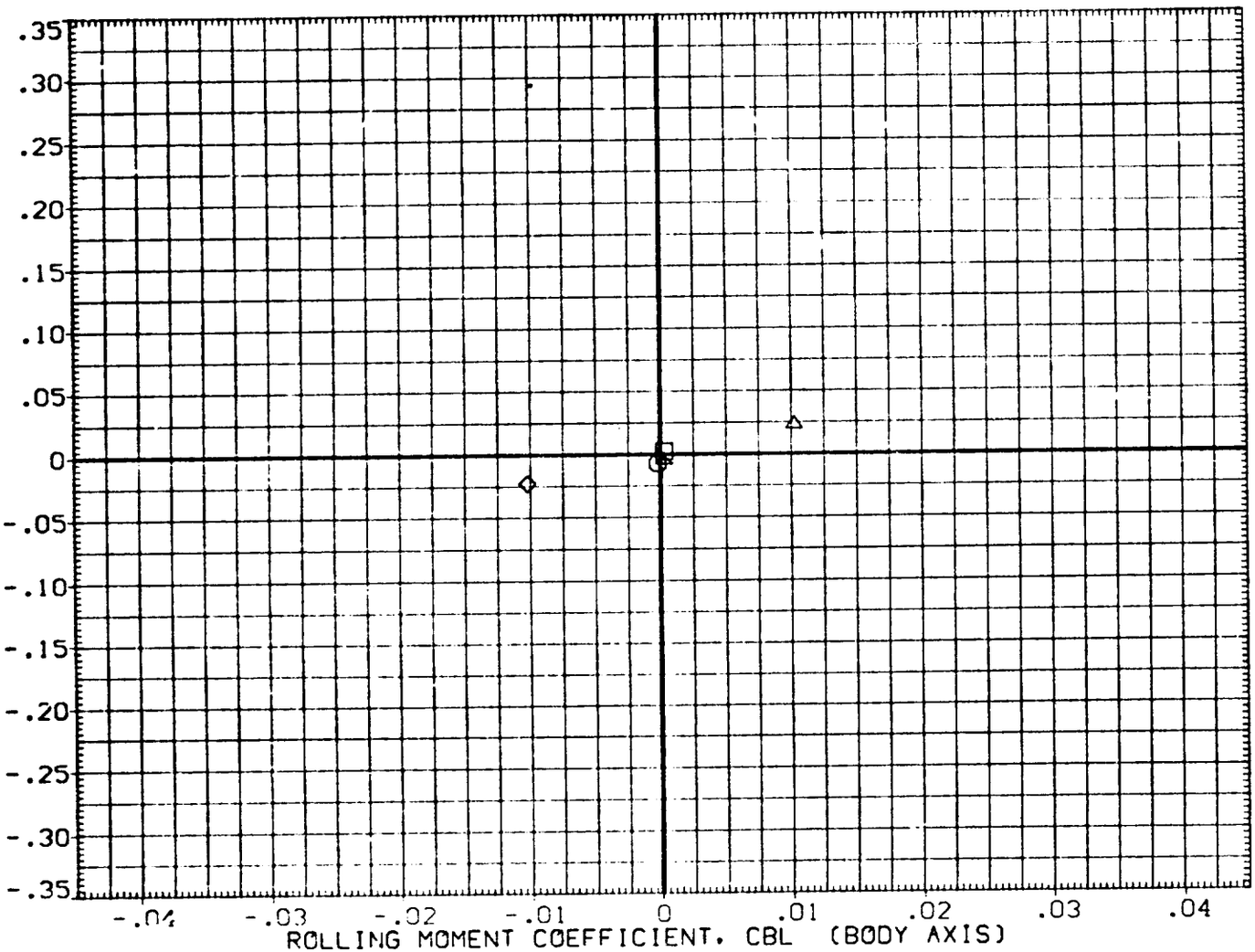


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL45)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◁	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

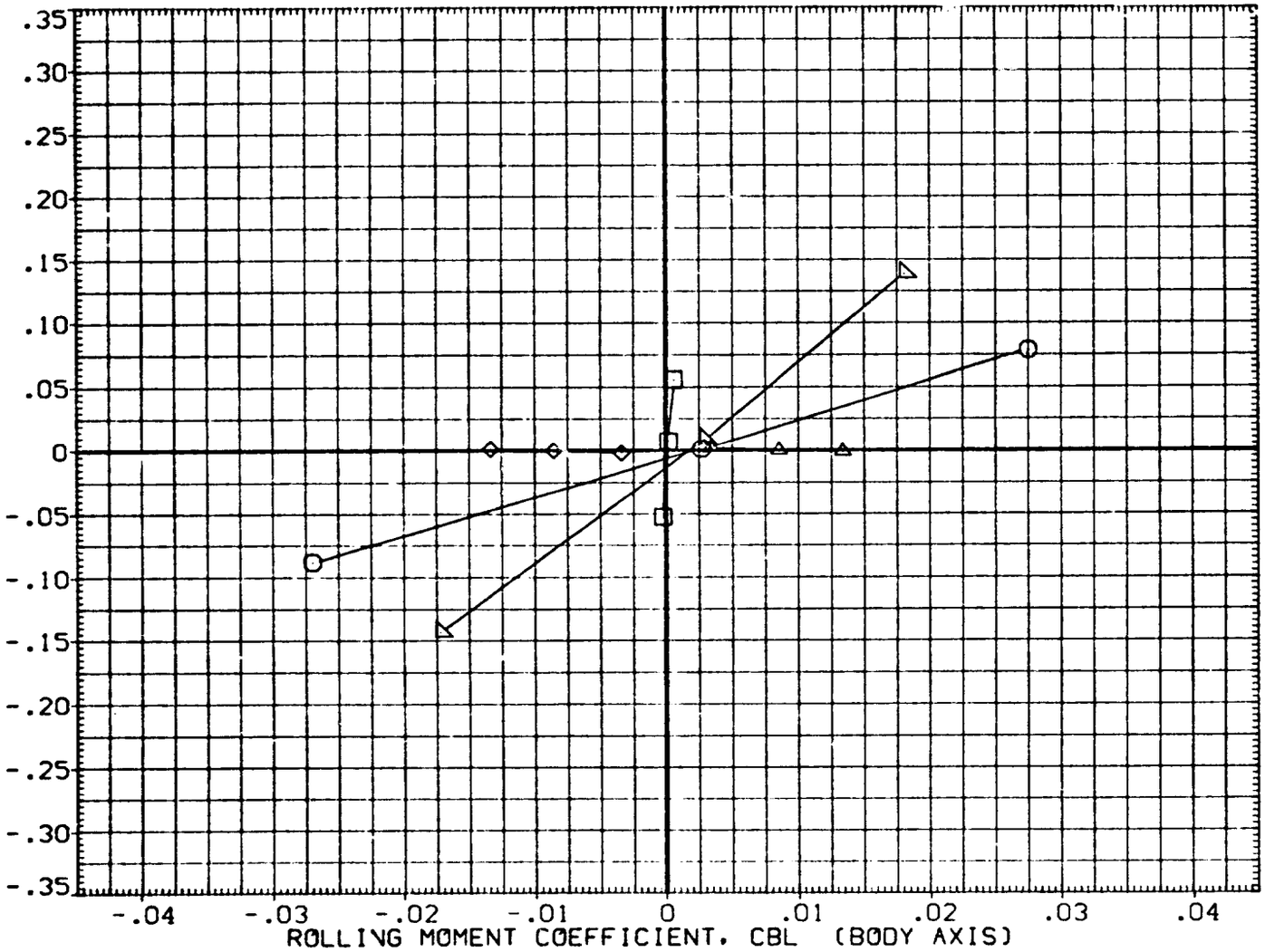


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

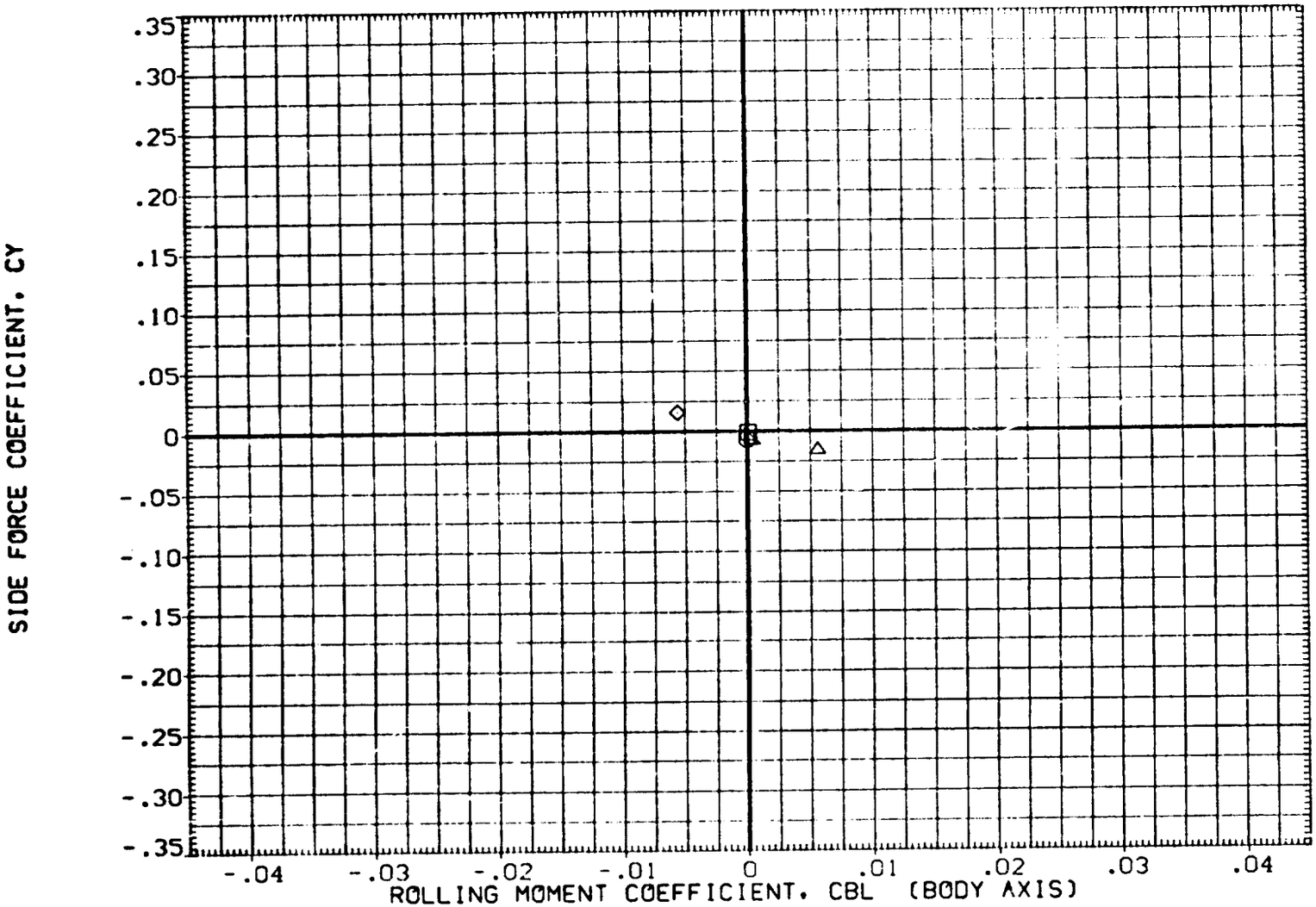


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

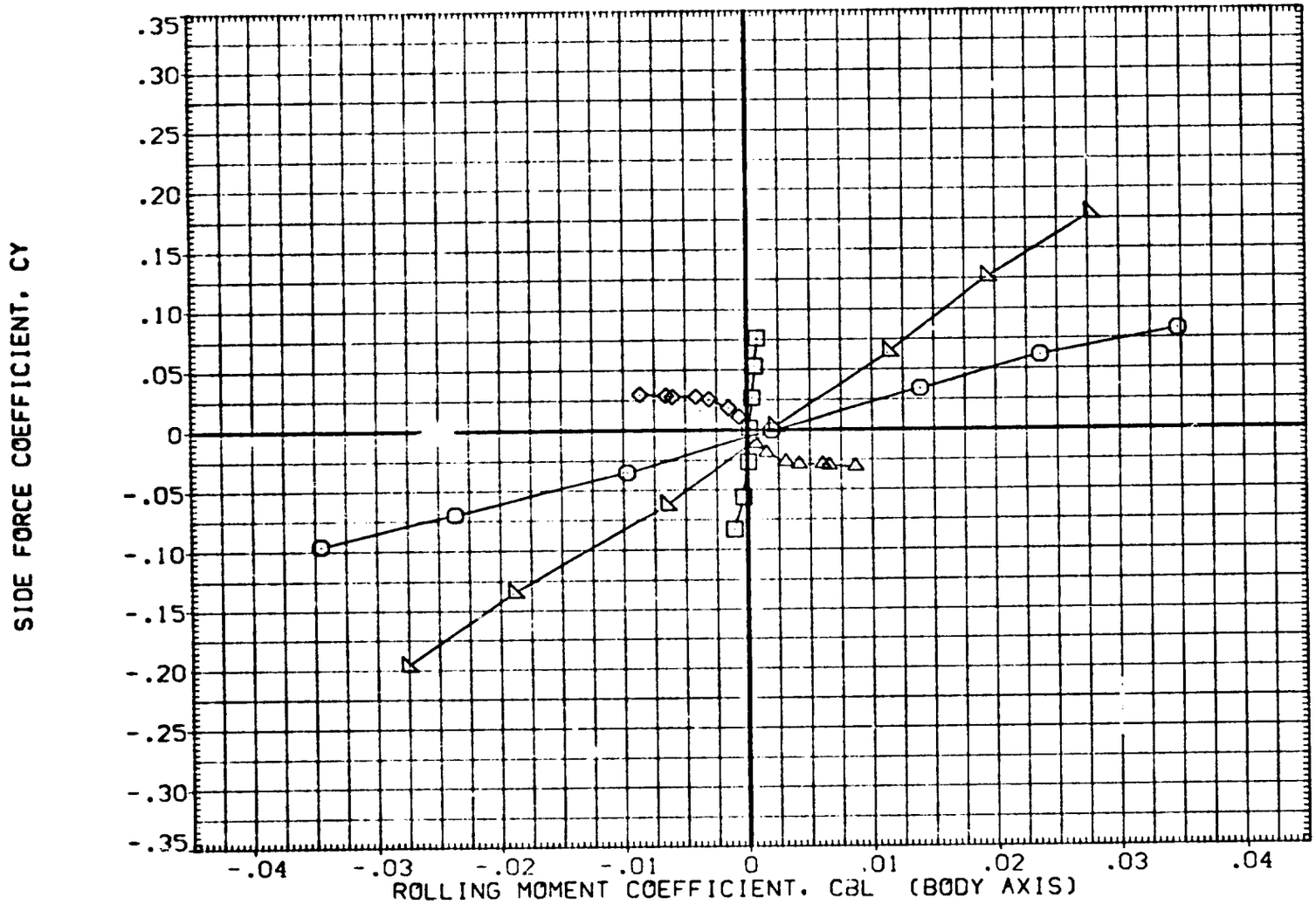


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

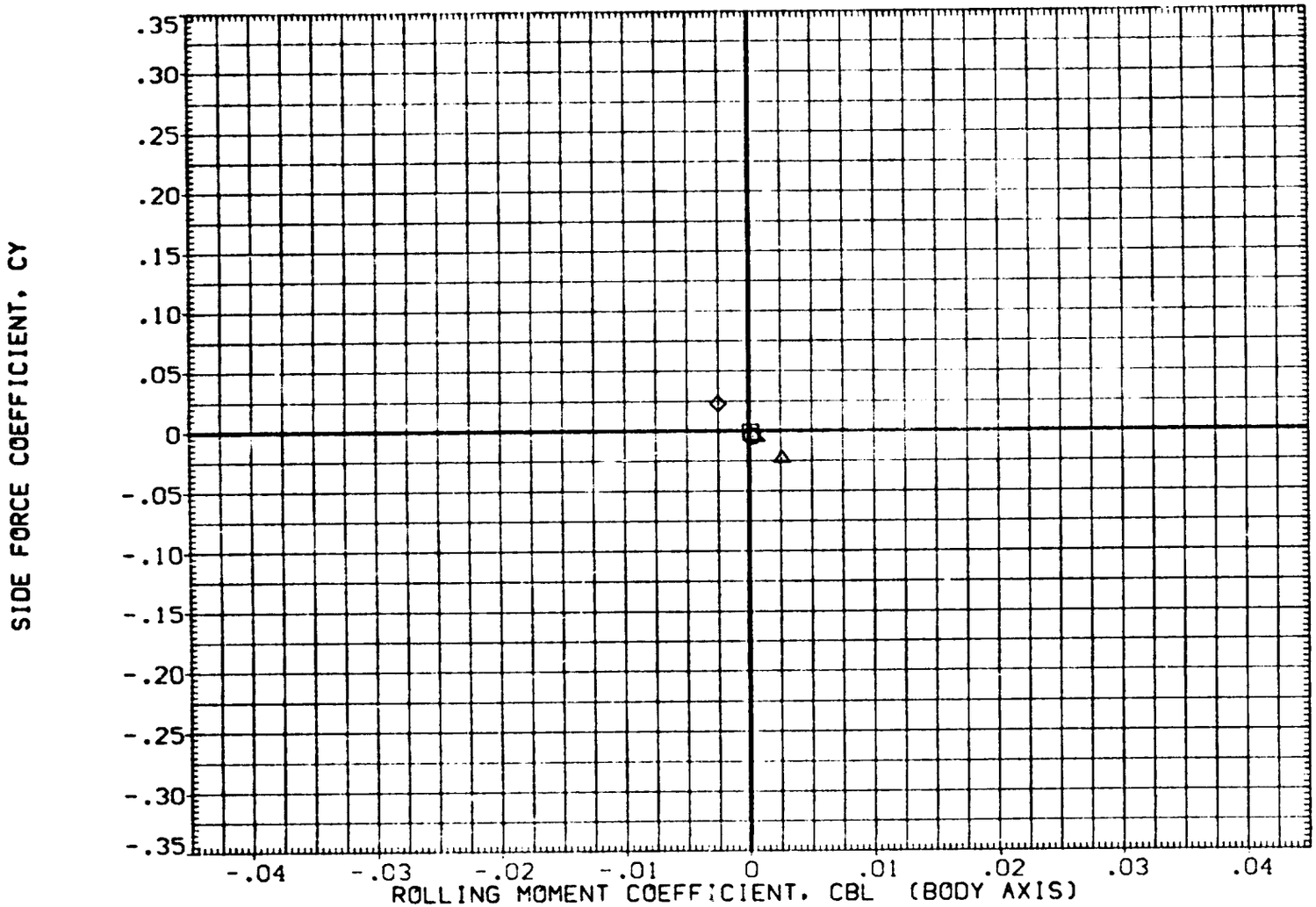


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)	AMES97-C19(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

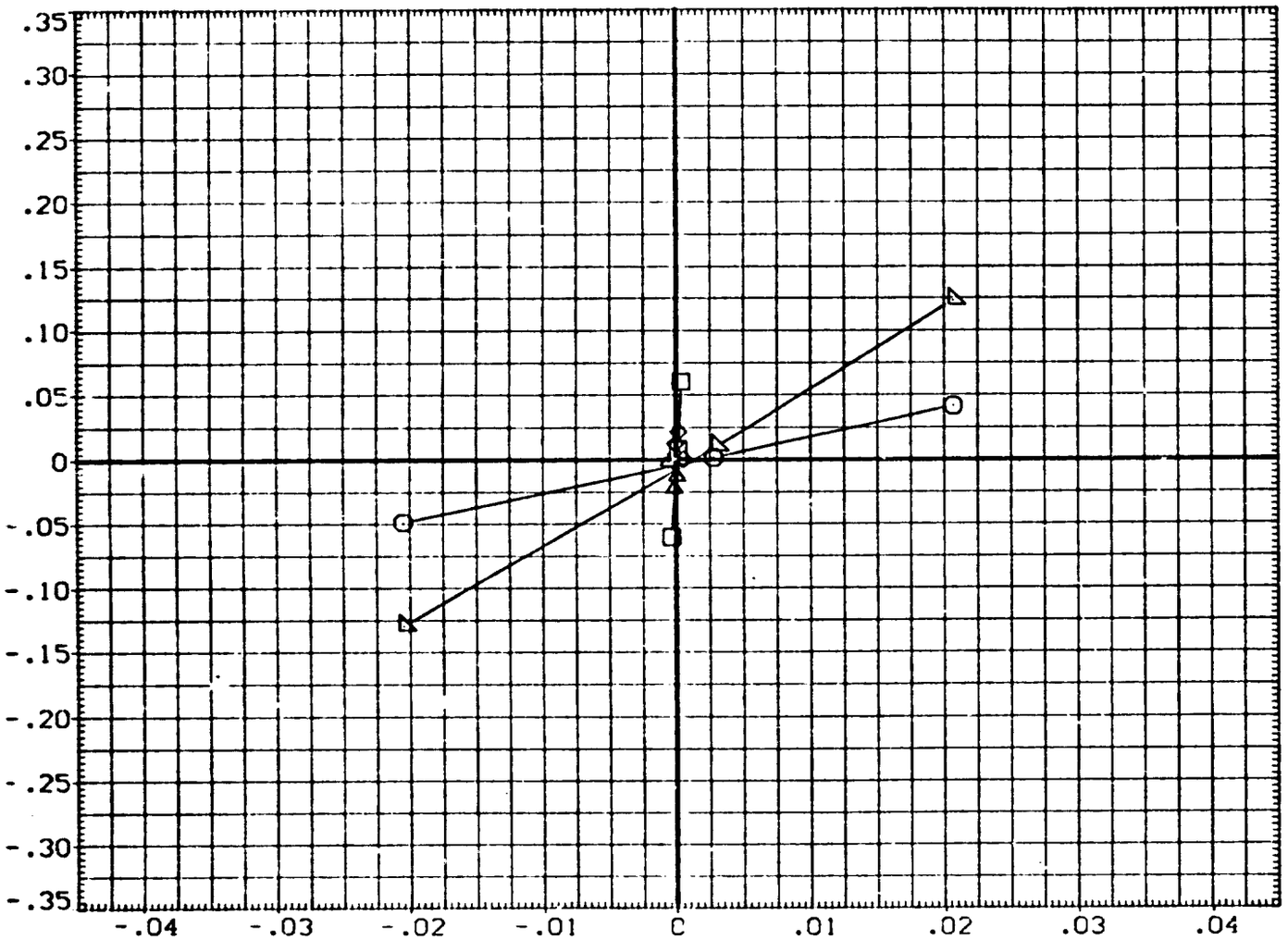


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET046)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(LETT46)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETL46)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	1.550	.000
(LETR46)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	1.550	.000
(LETI46)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMPP	976.0000	IN. XT
YMPP	.0000	IN. YT
ZMPP	400.0000	IN. ZT
SCALE	.0300	

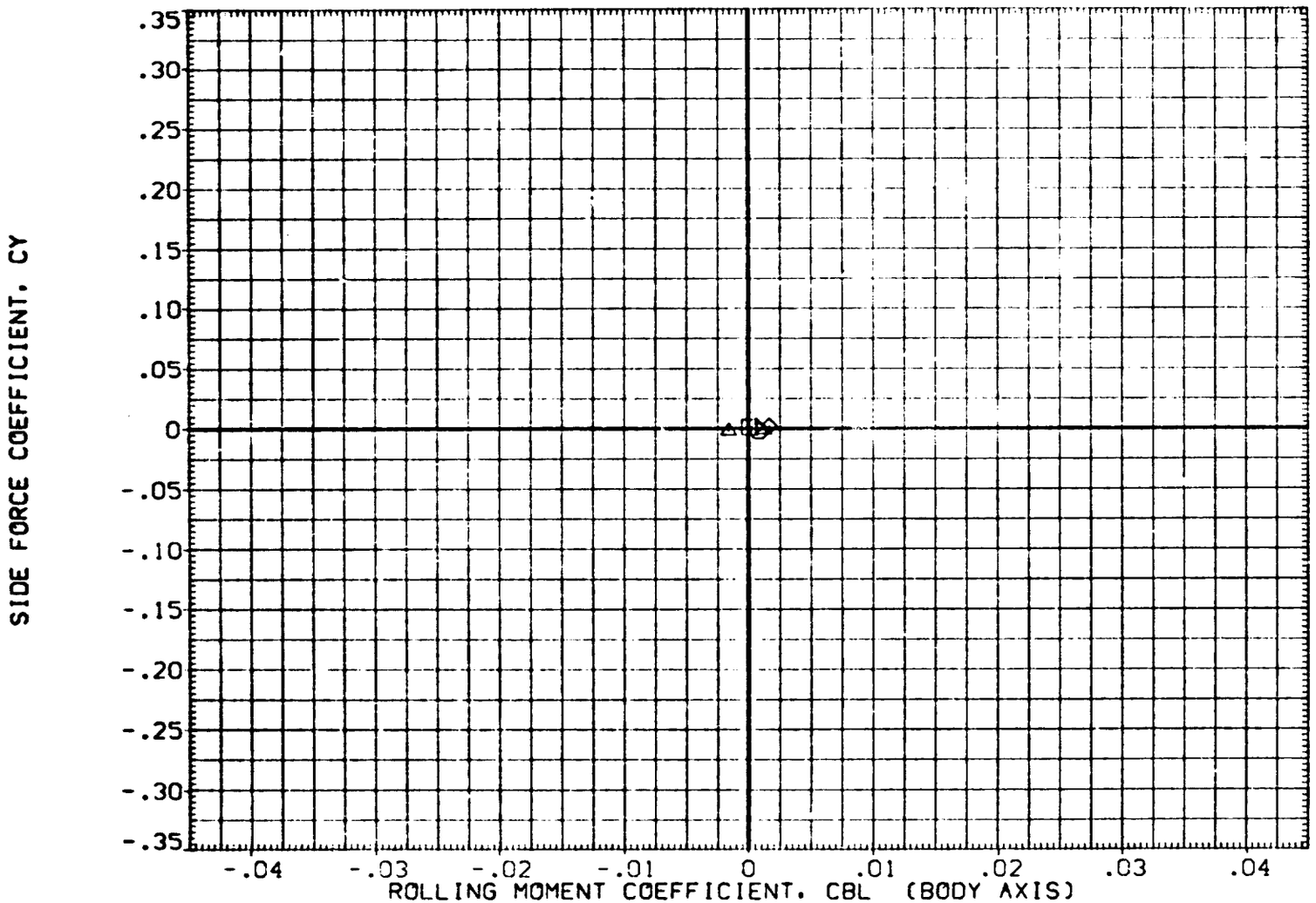


FIG. 20 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=1.55 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO3G)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT3G)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL3G)	AMES97-019(IAC1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR3G)	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI3G)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

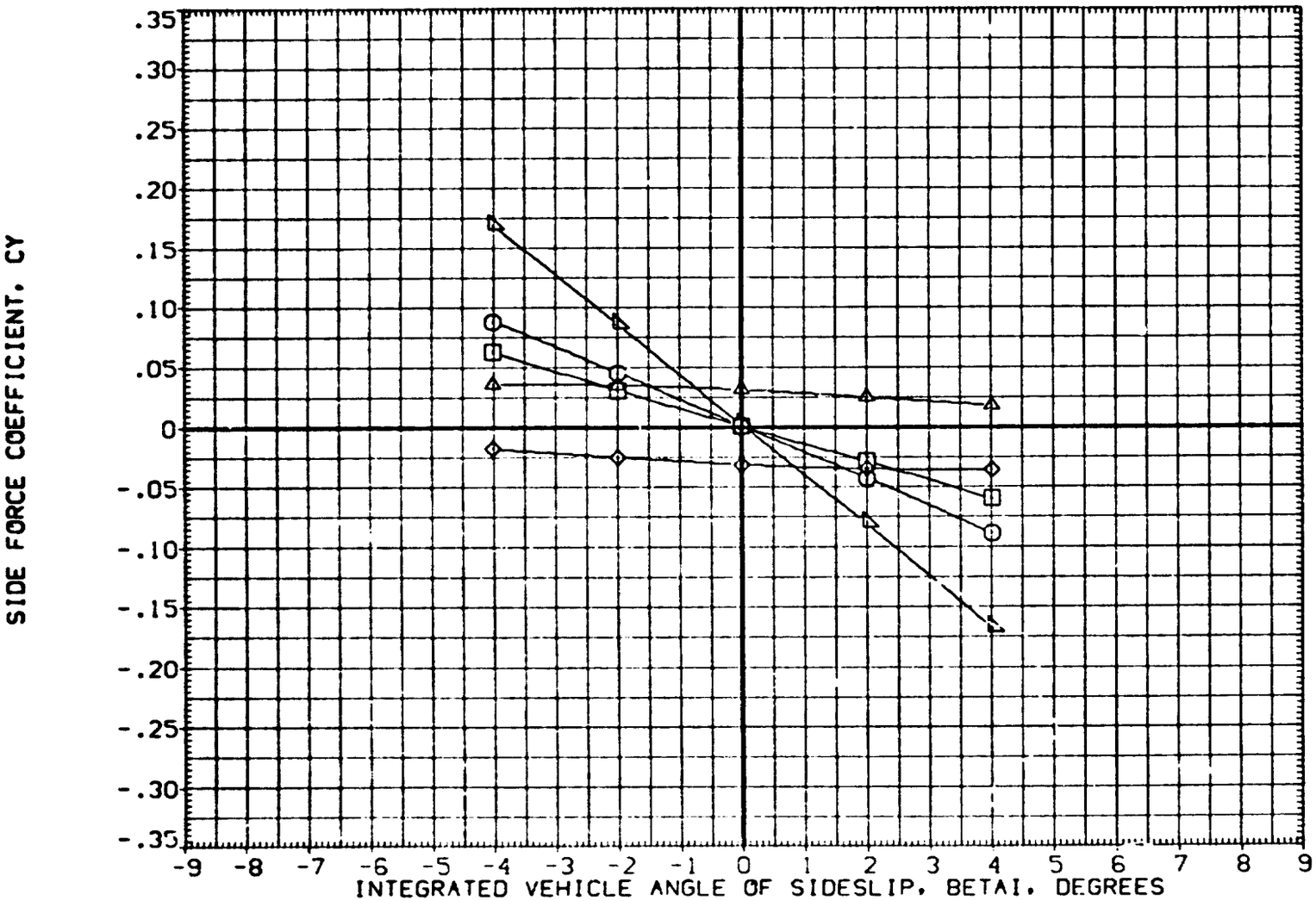


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(LETO36)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED
(LETT36)	AMES97-019([A81) LVAP TANK - ALL HL SEALED
(LETL36)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED
(LETR36)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED
(LETI36)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPDBRK
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000
8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

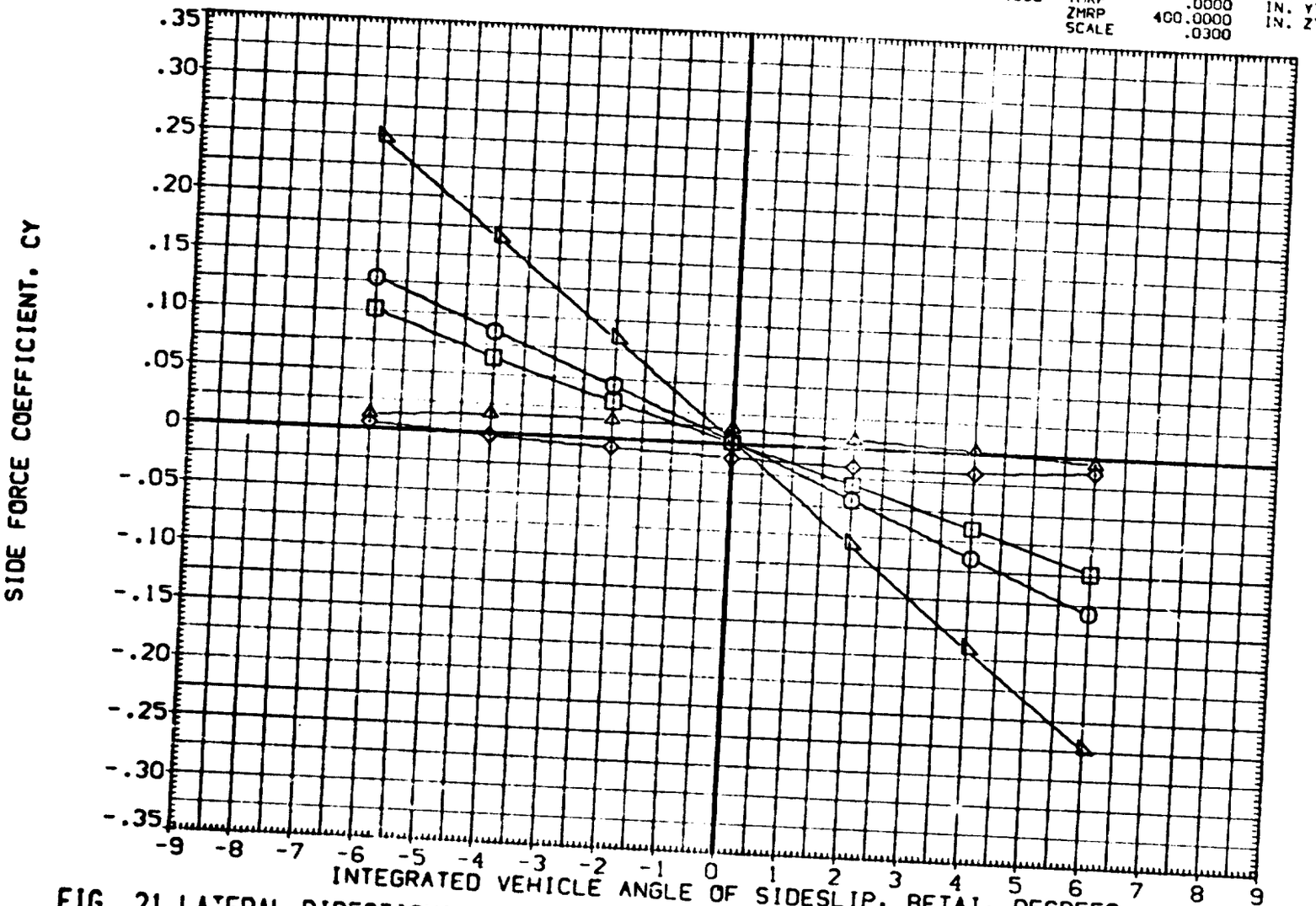


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET036)		AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IABI) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

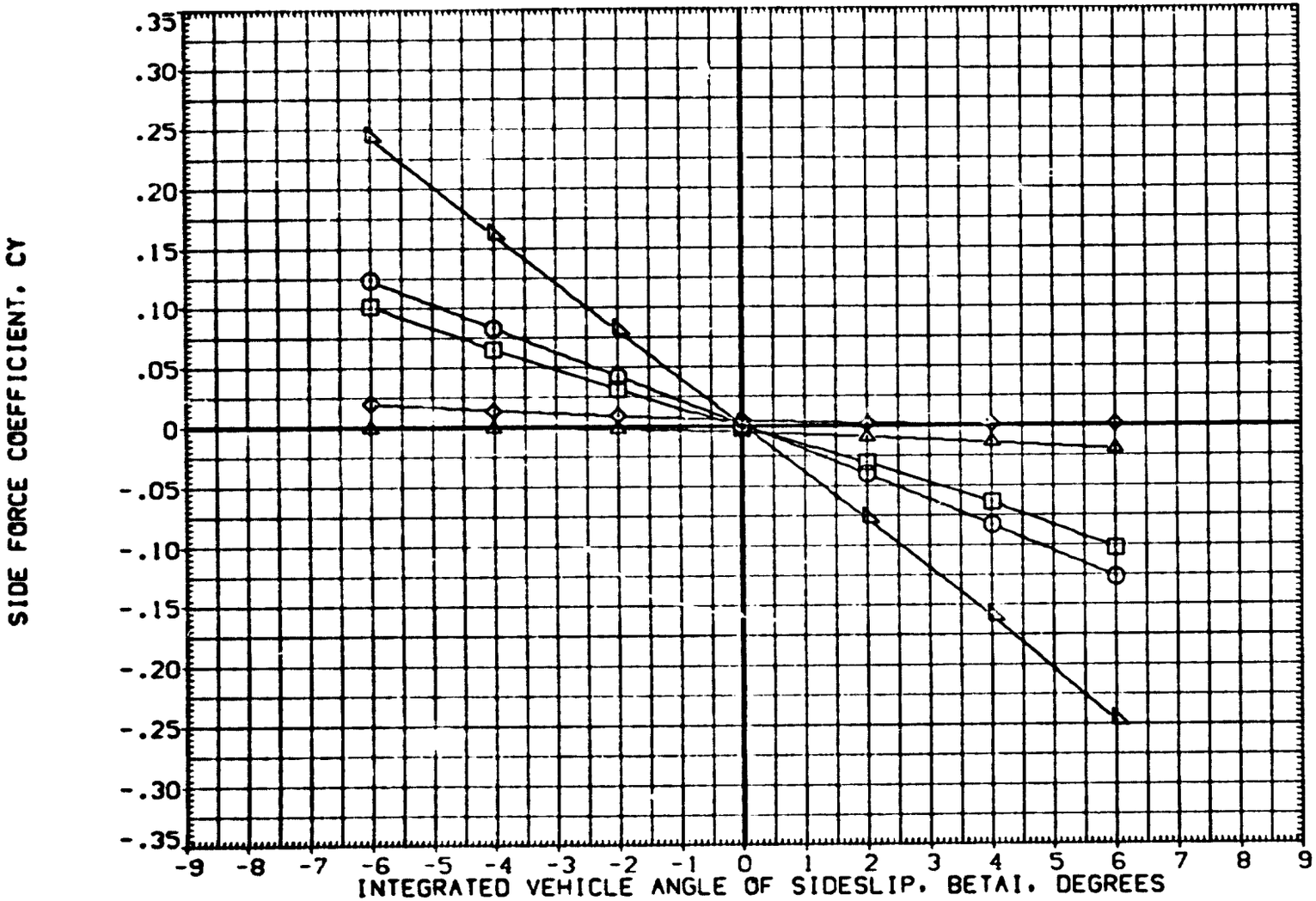


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO36)	◇	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	△	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	○	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

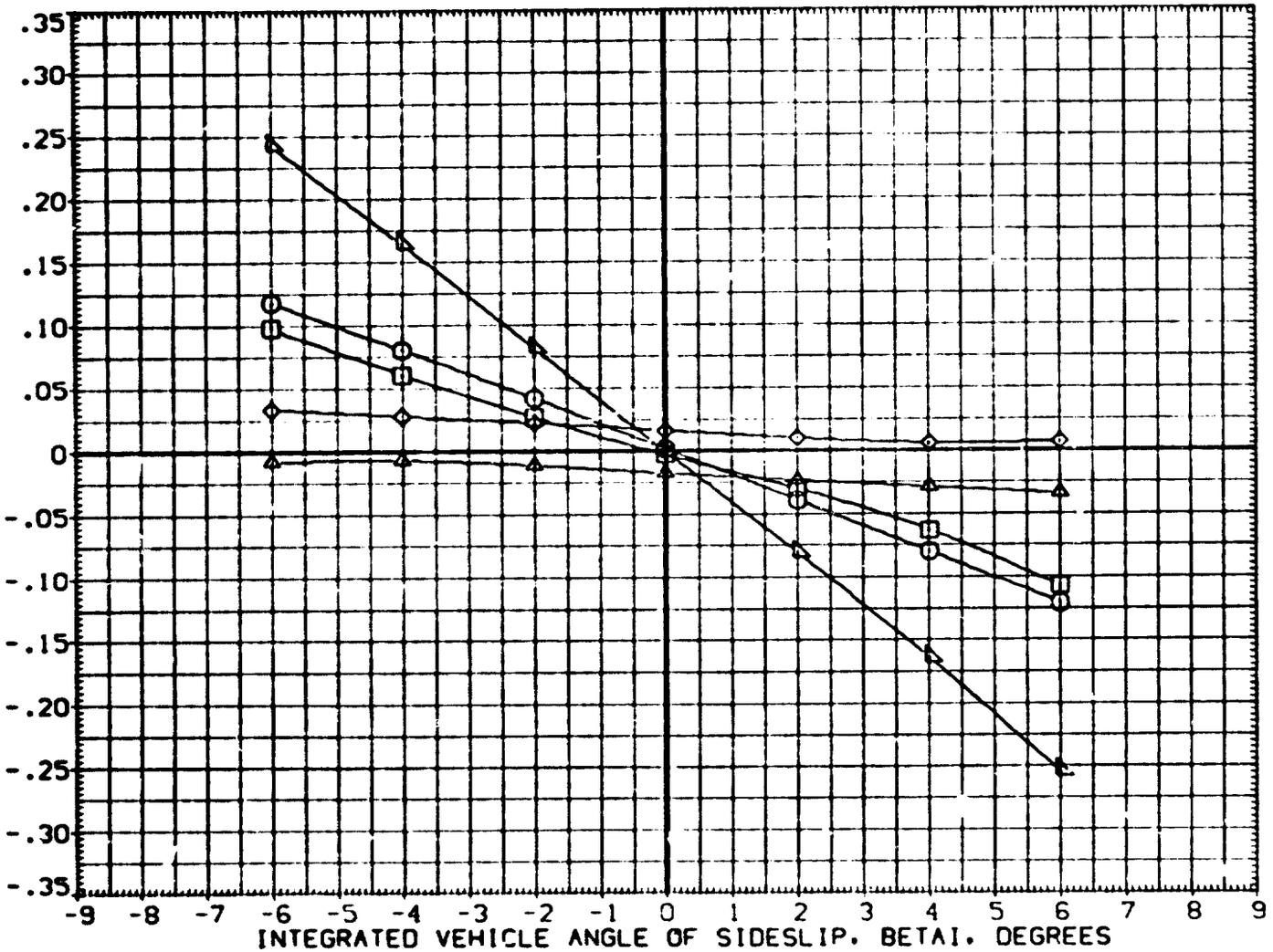


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	◇	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	□	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	▽	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	△	AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	⊗	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

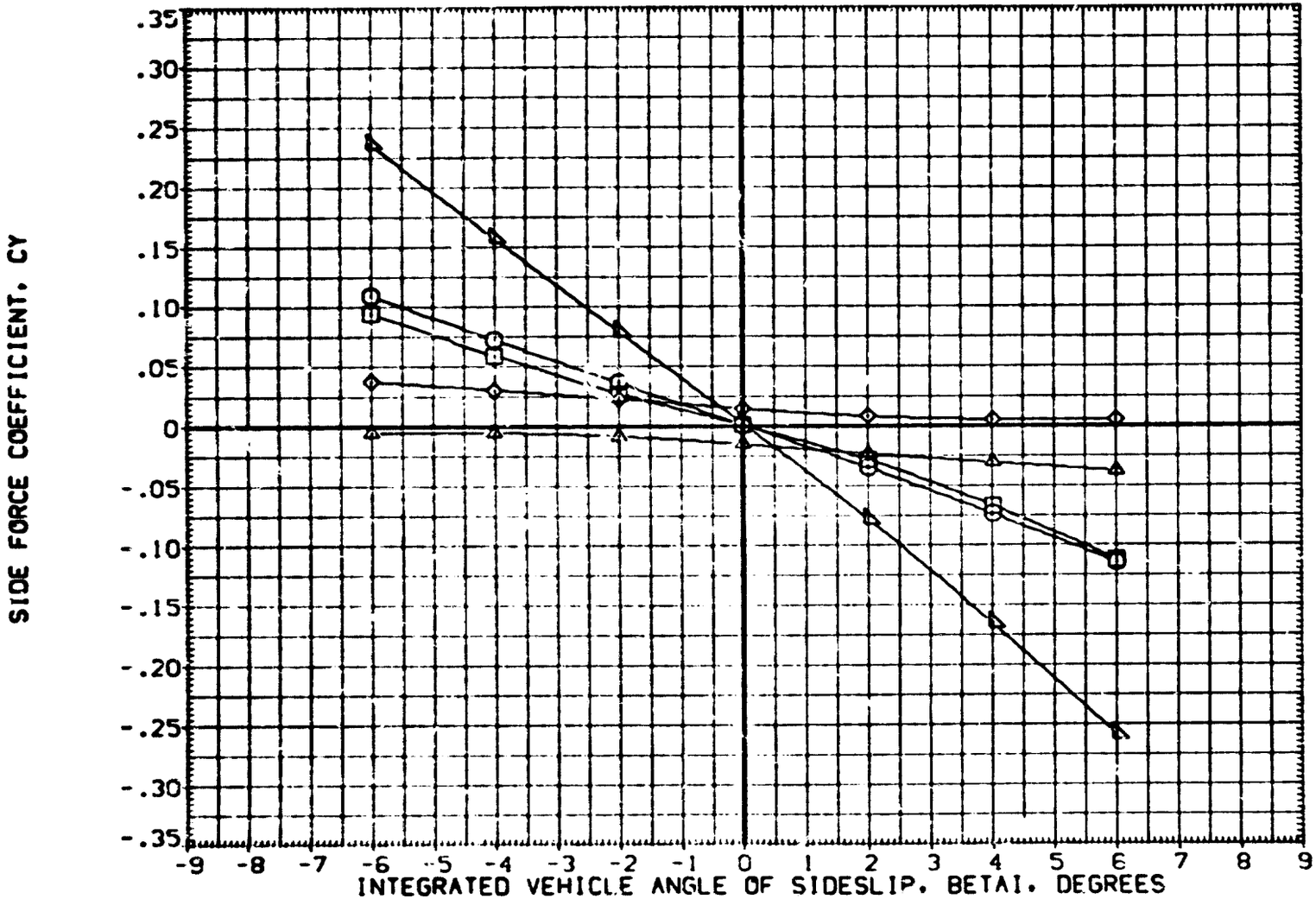


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

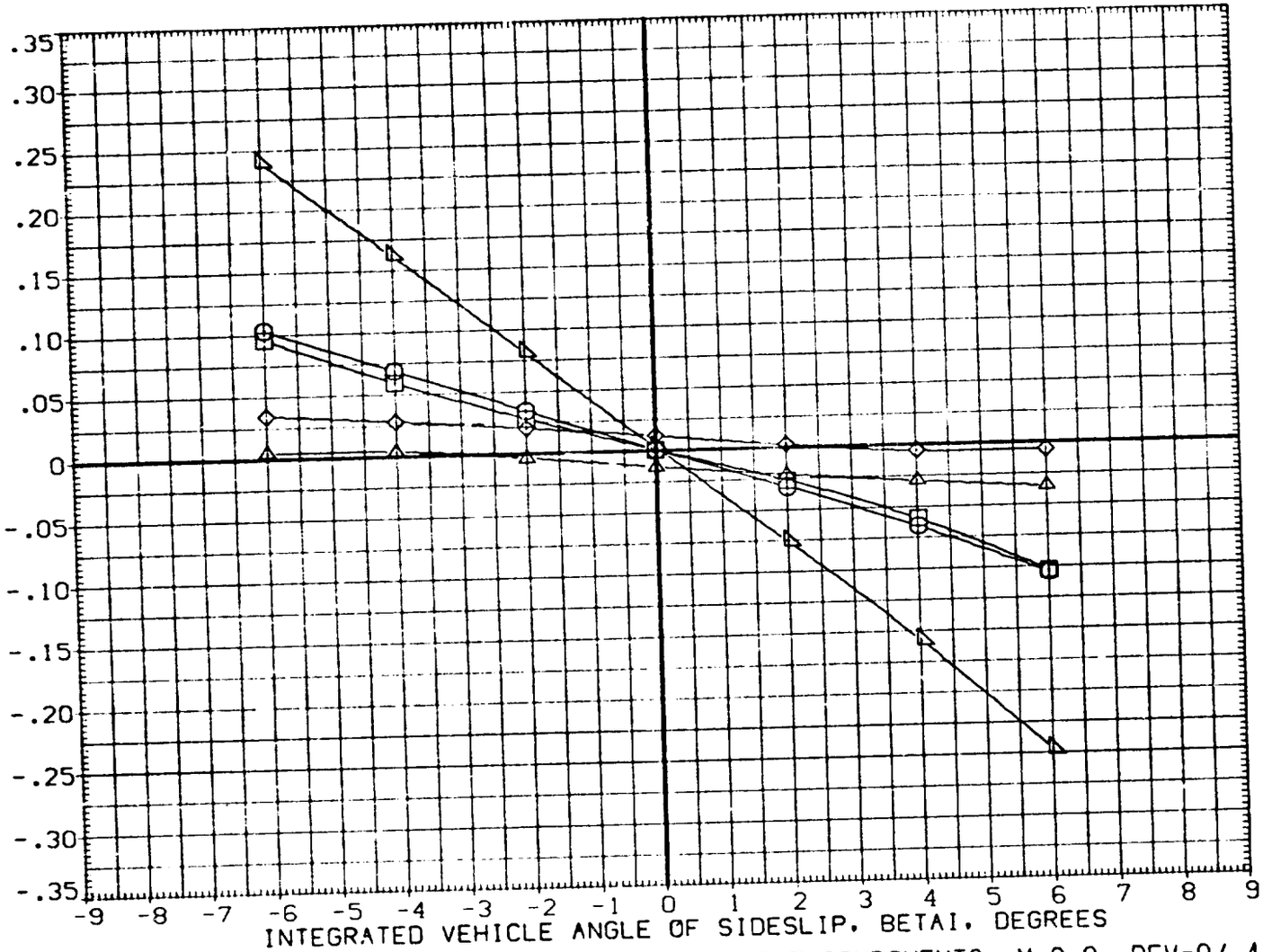


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL35)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

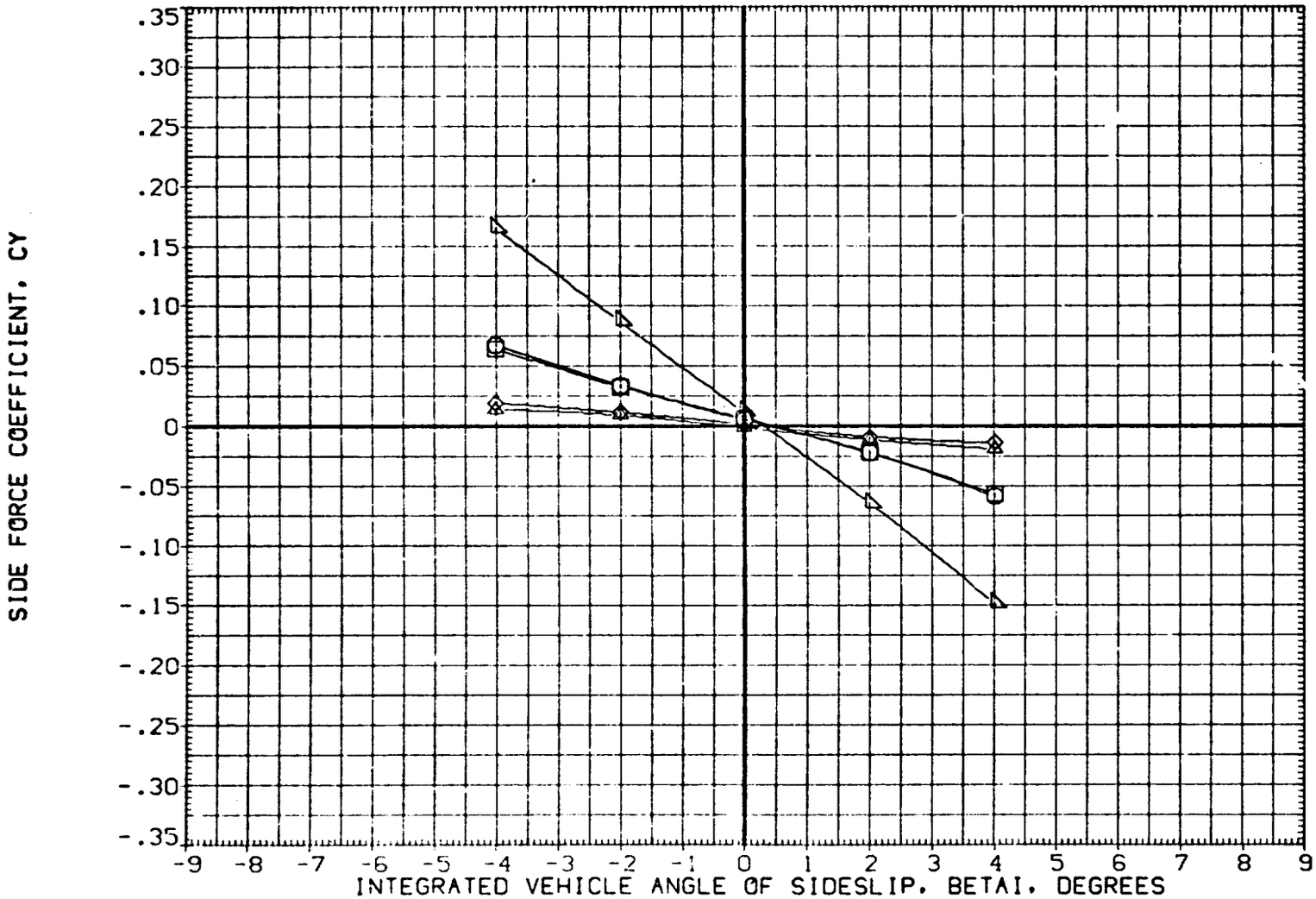


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

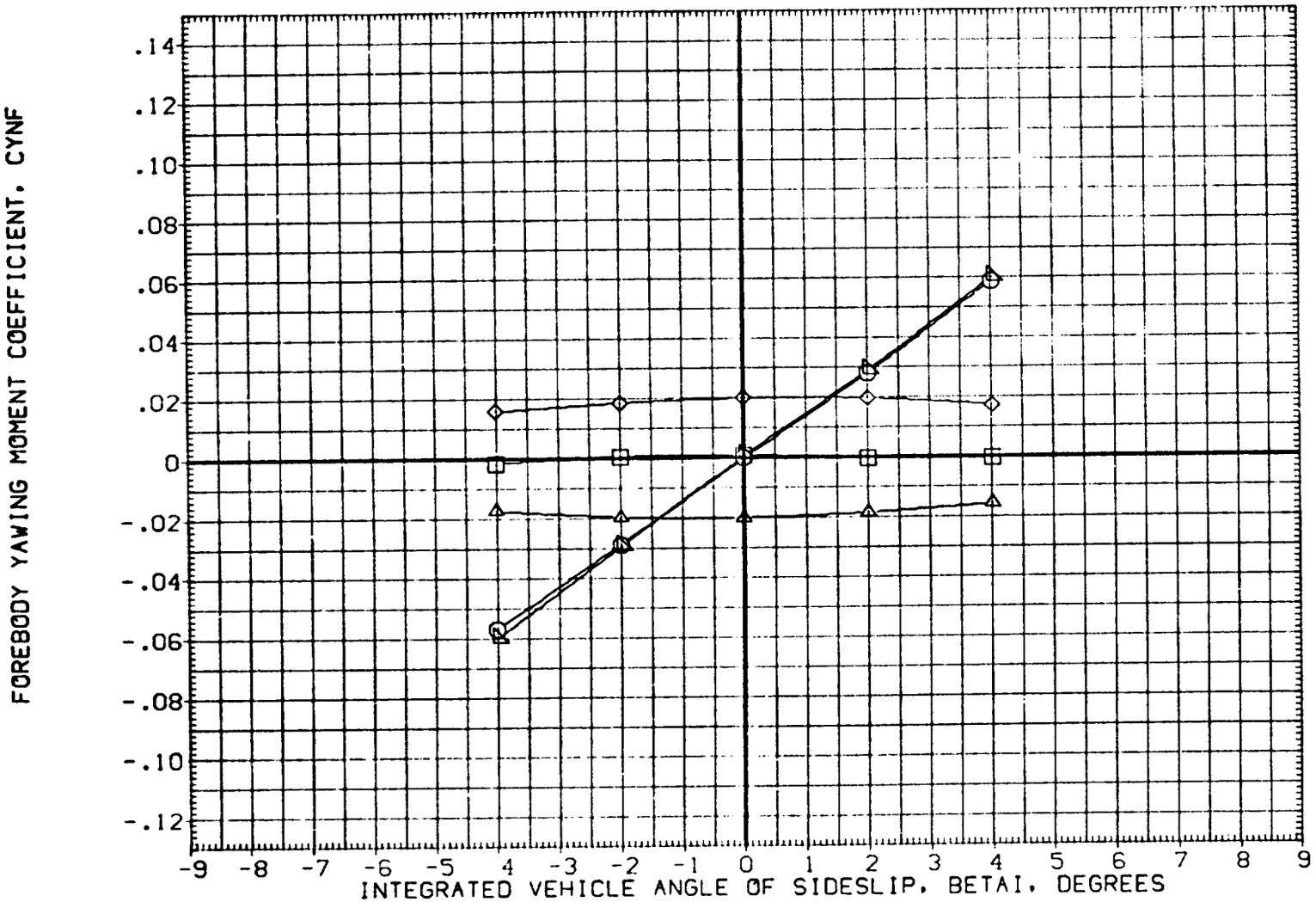


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	▷	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

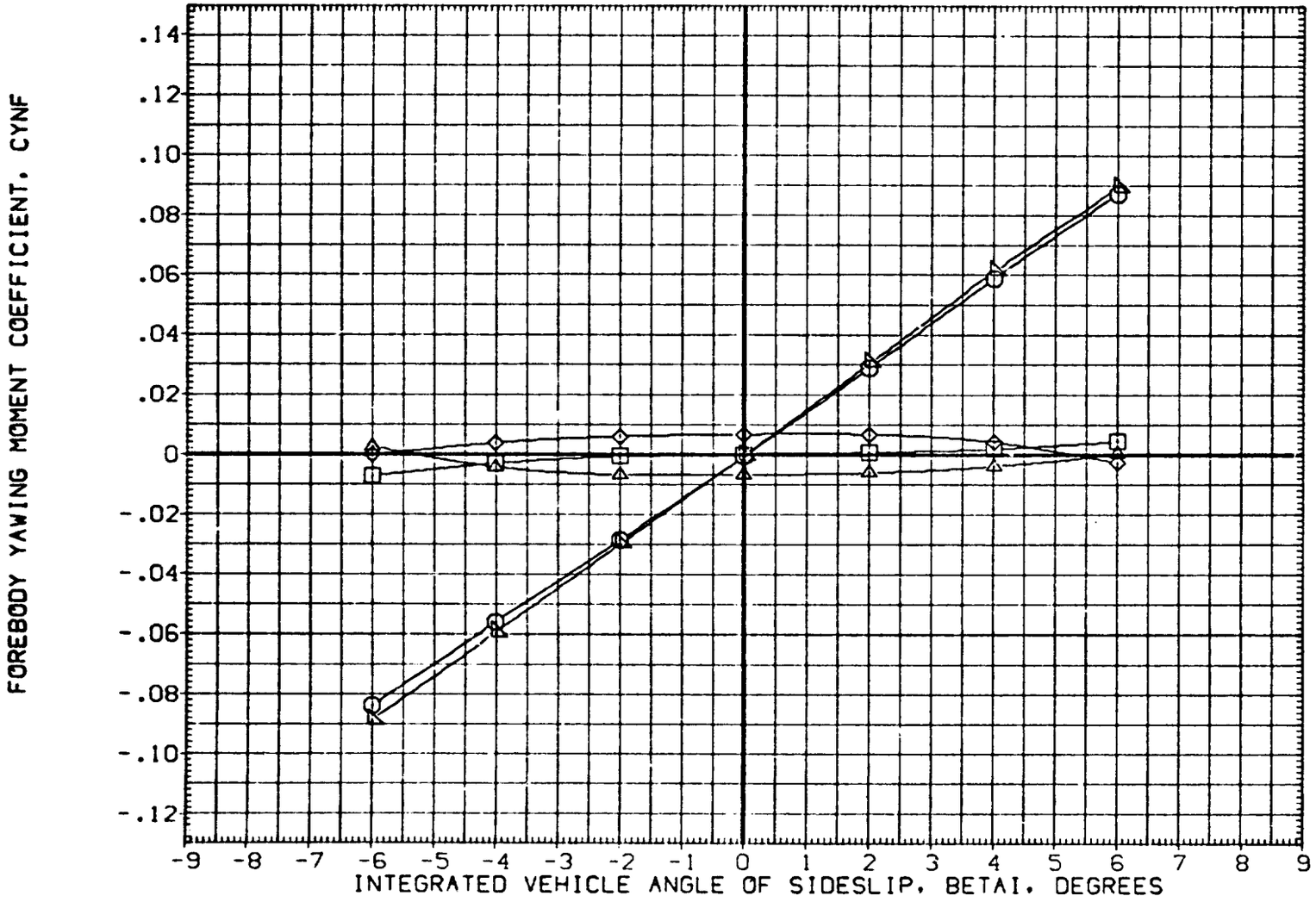


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

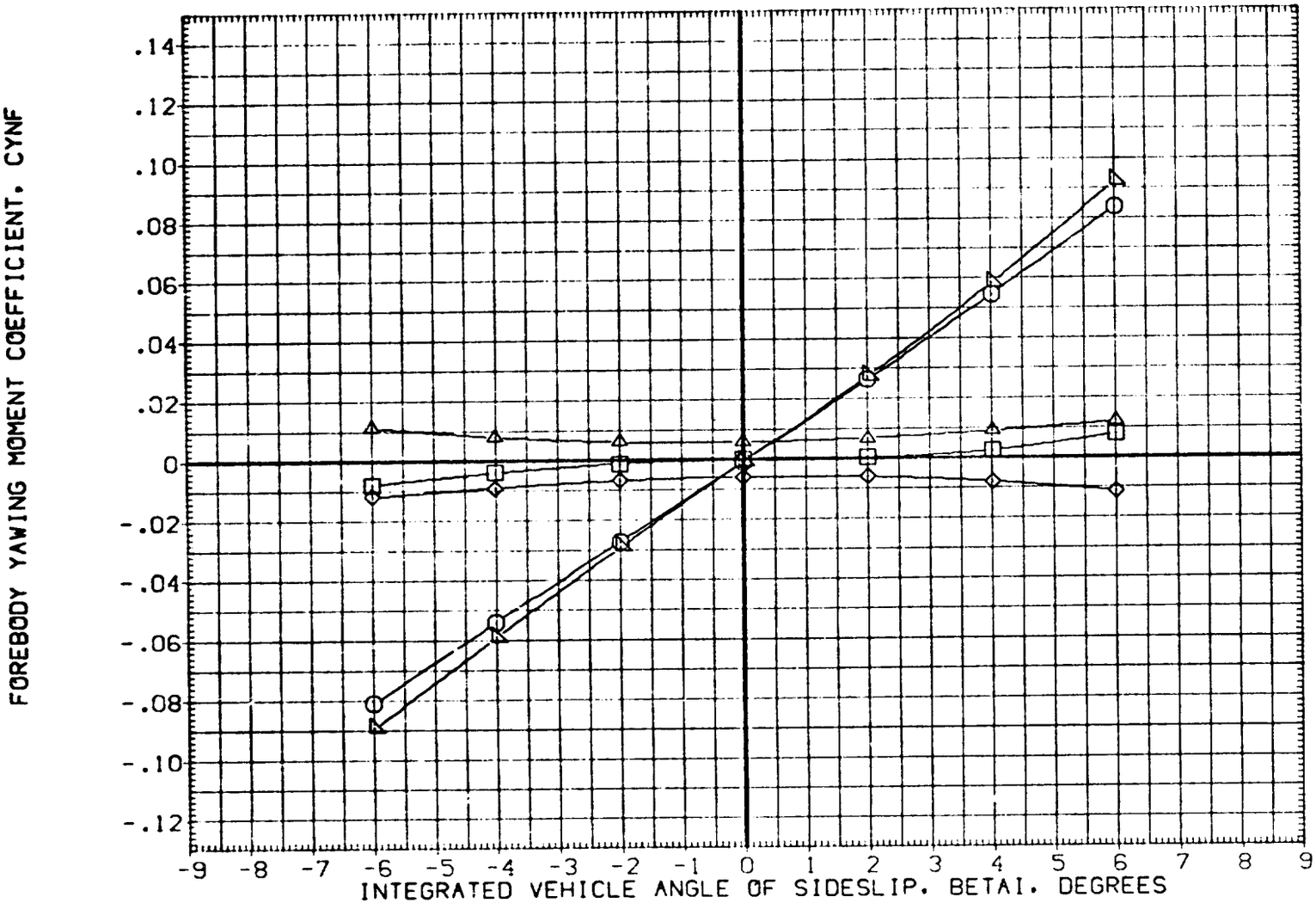


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

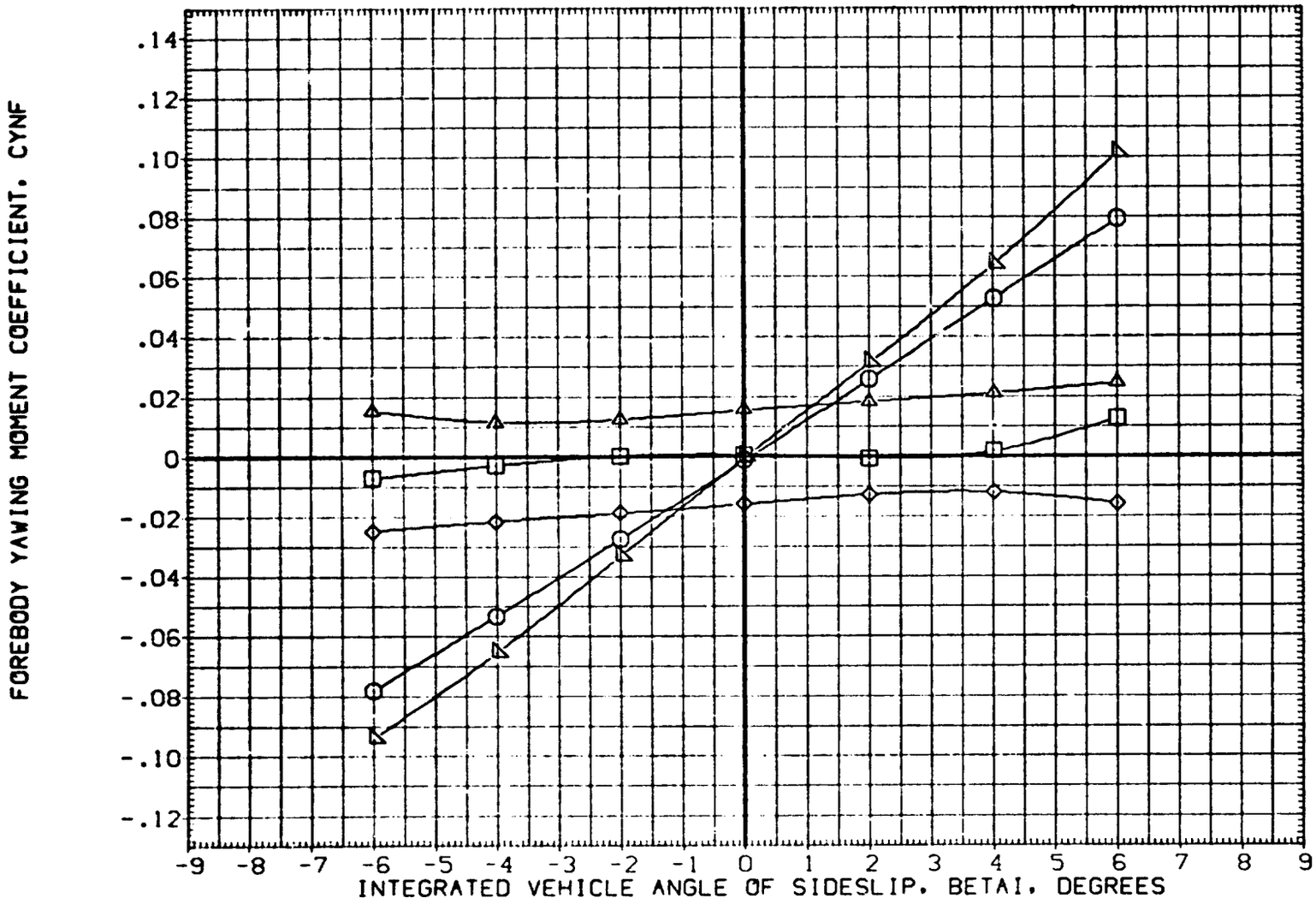


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

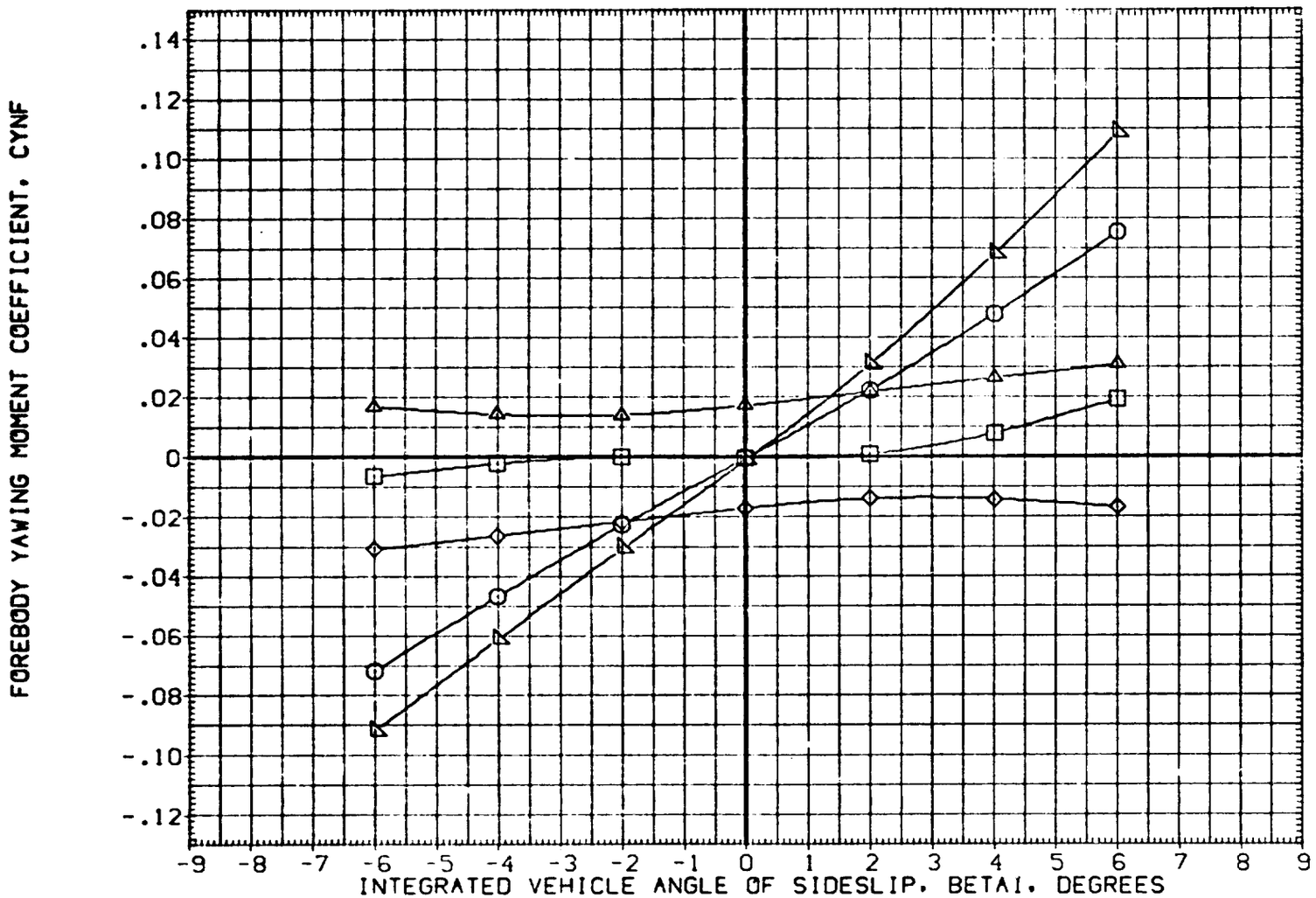


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

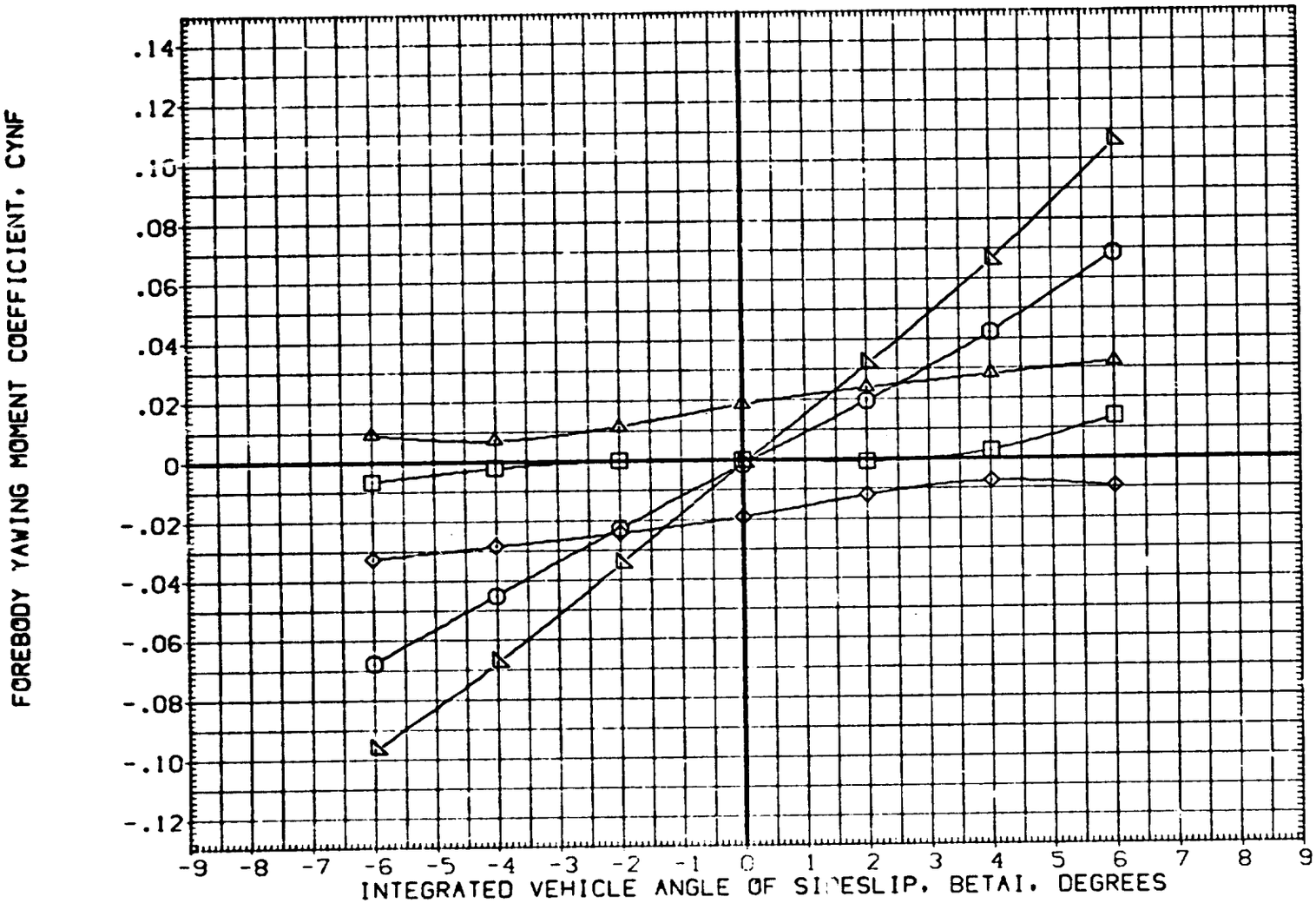


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET036)	○	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	□	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	◇	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	▽	AMES97-019([AB1]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	△	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

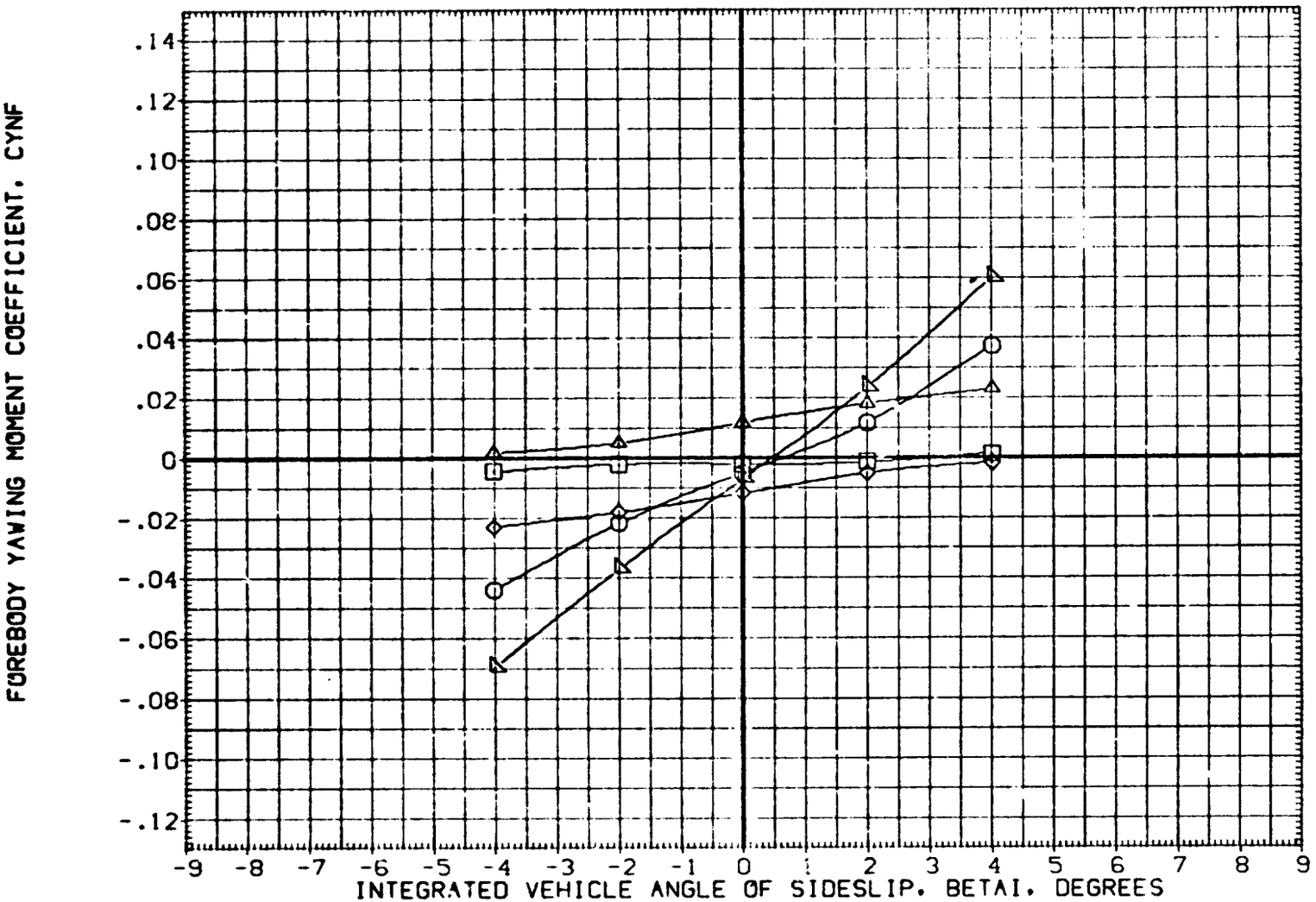


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO36)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

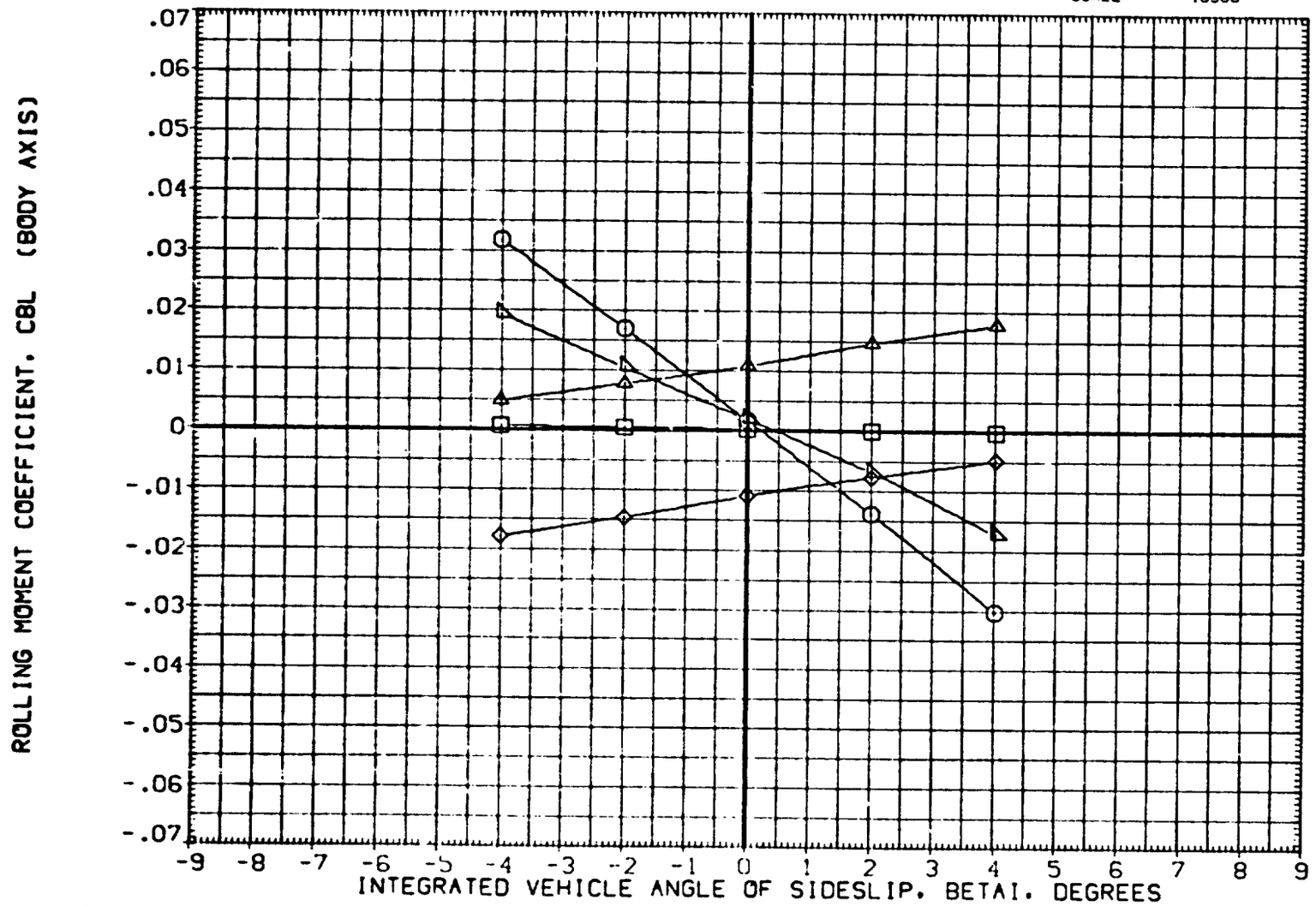


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

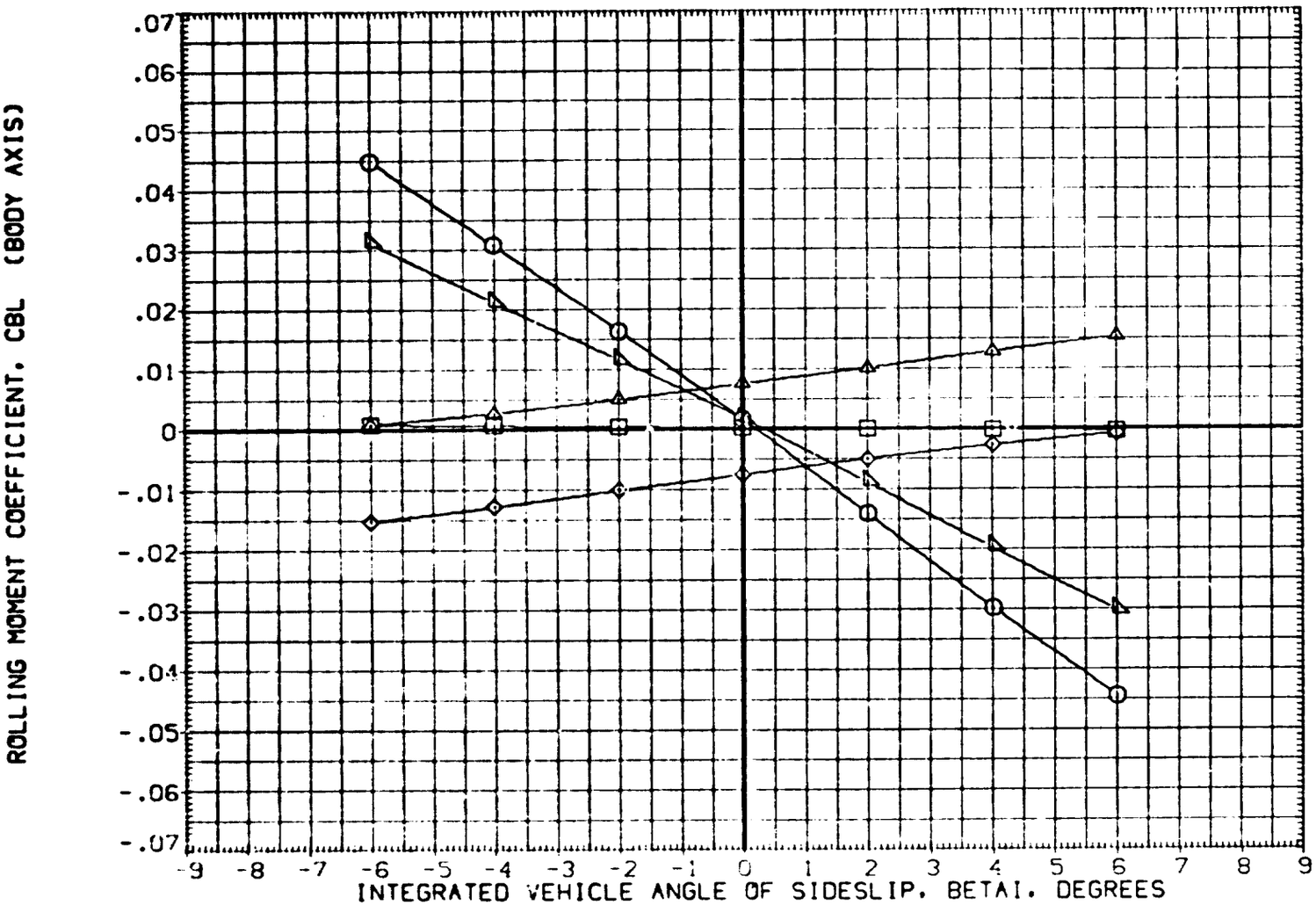


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET036)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	△	AMES97-019([A91]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	▷	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

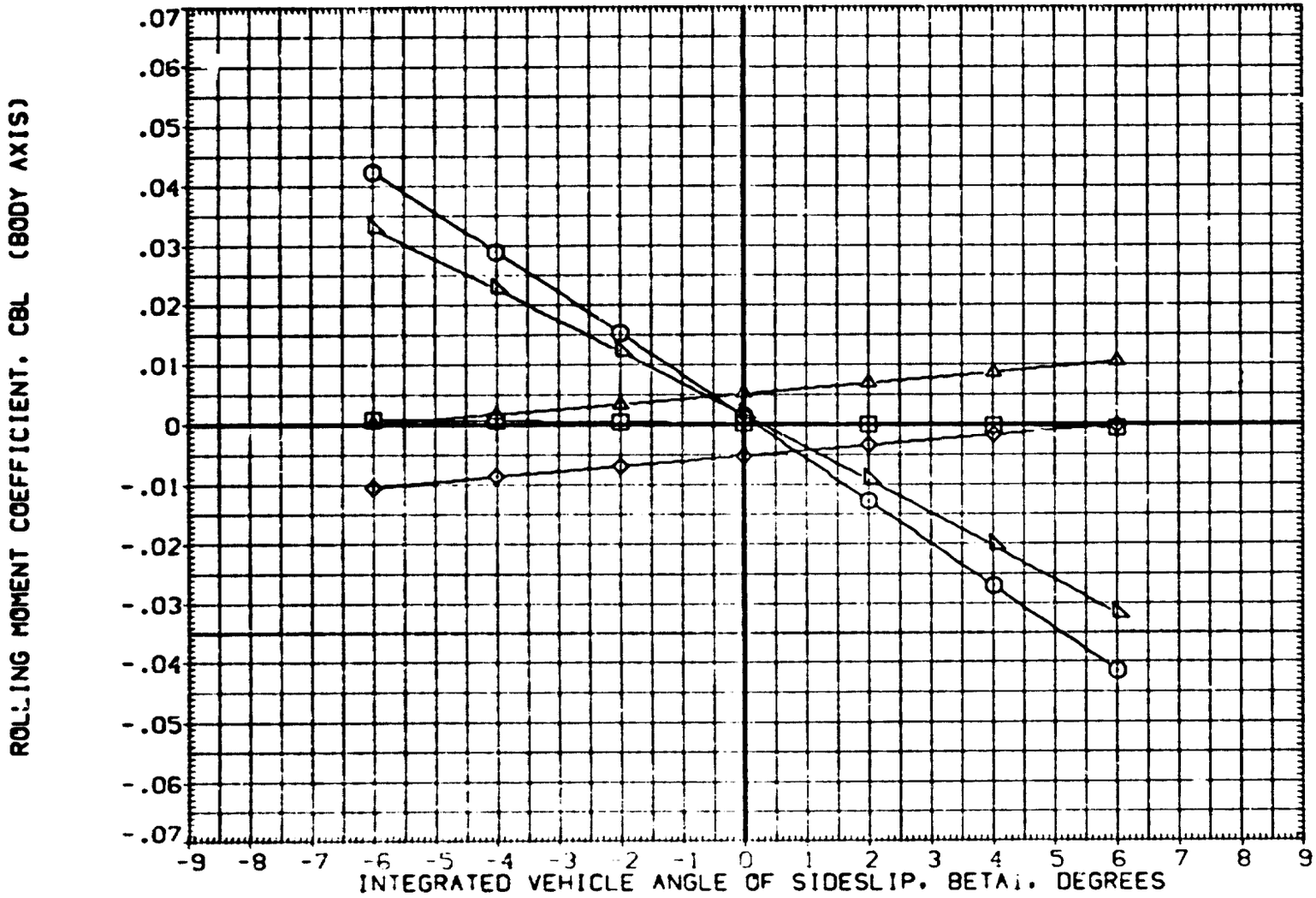


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETOJ6)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETTJ6)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETLJ6)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETRJ6)	⋈	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETIJ6)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

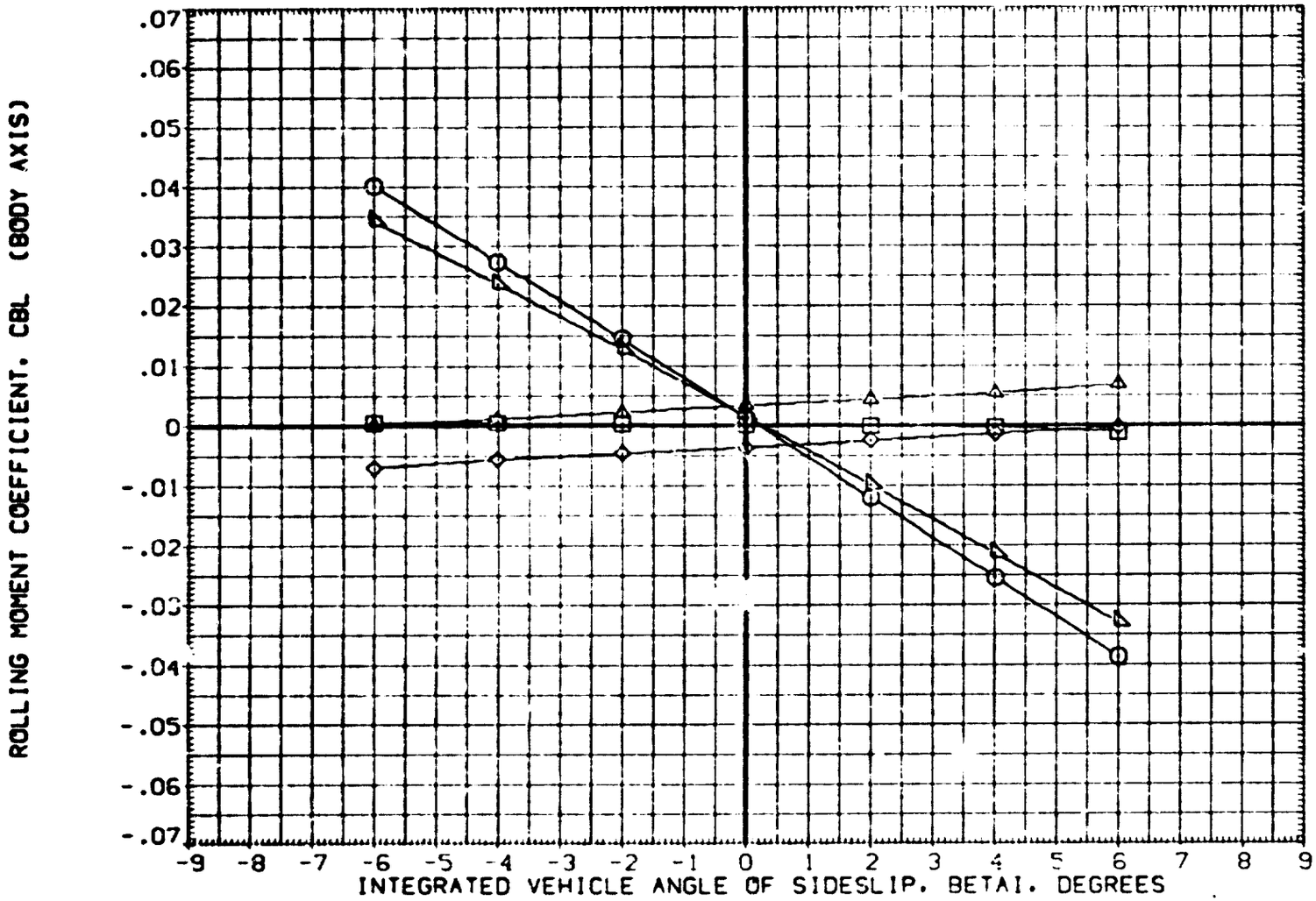


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO36)		AMES97-019(1AB1) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(1AB1) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(1AB1) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1257.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

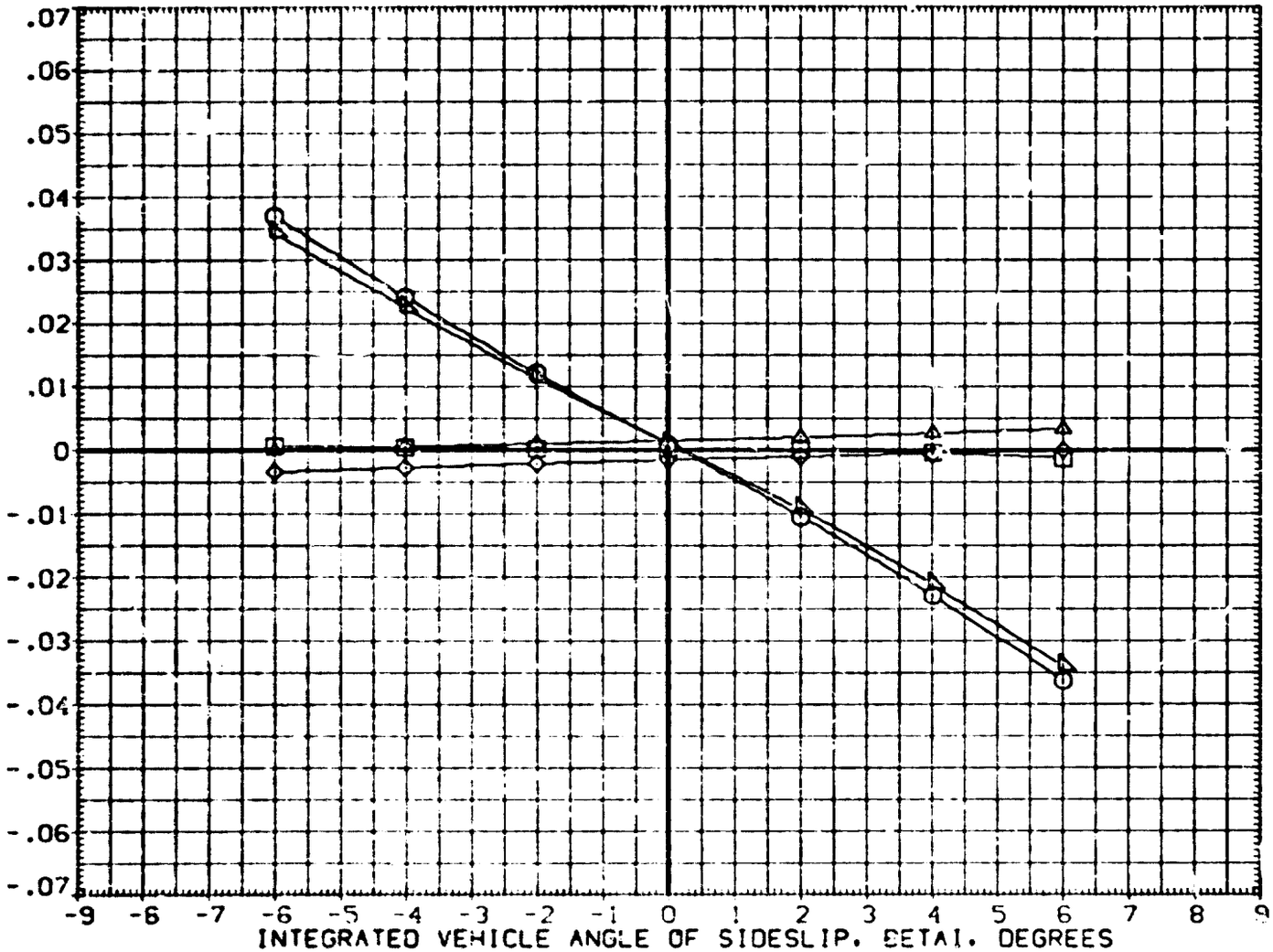


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(S)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

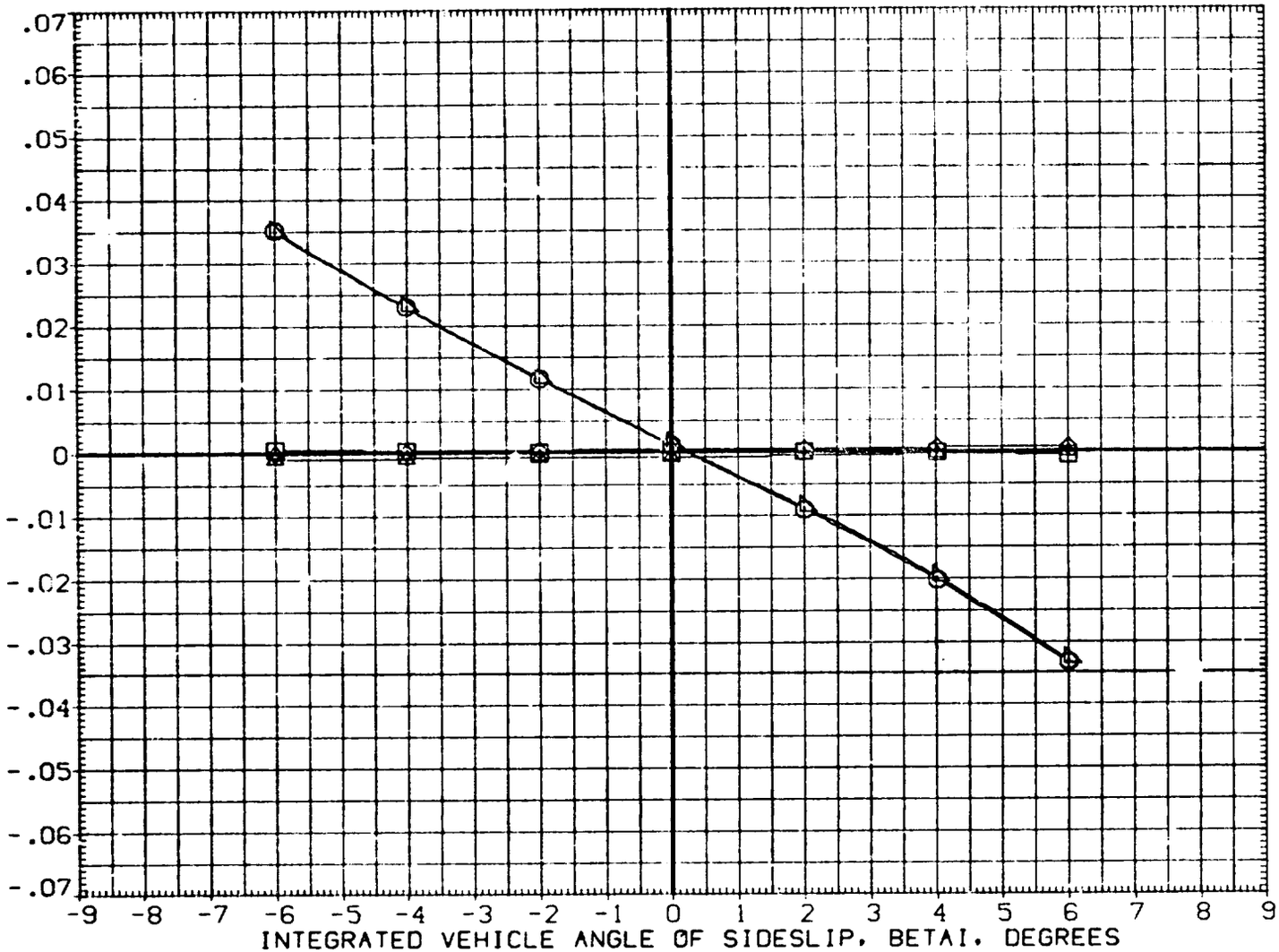


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)ALPHAI = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IL	ELV-OB	MACH	SPDBRK
(LETO36)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

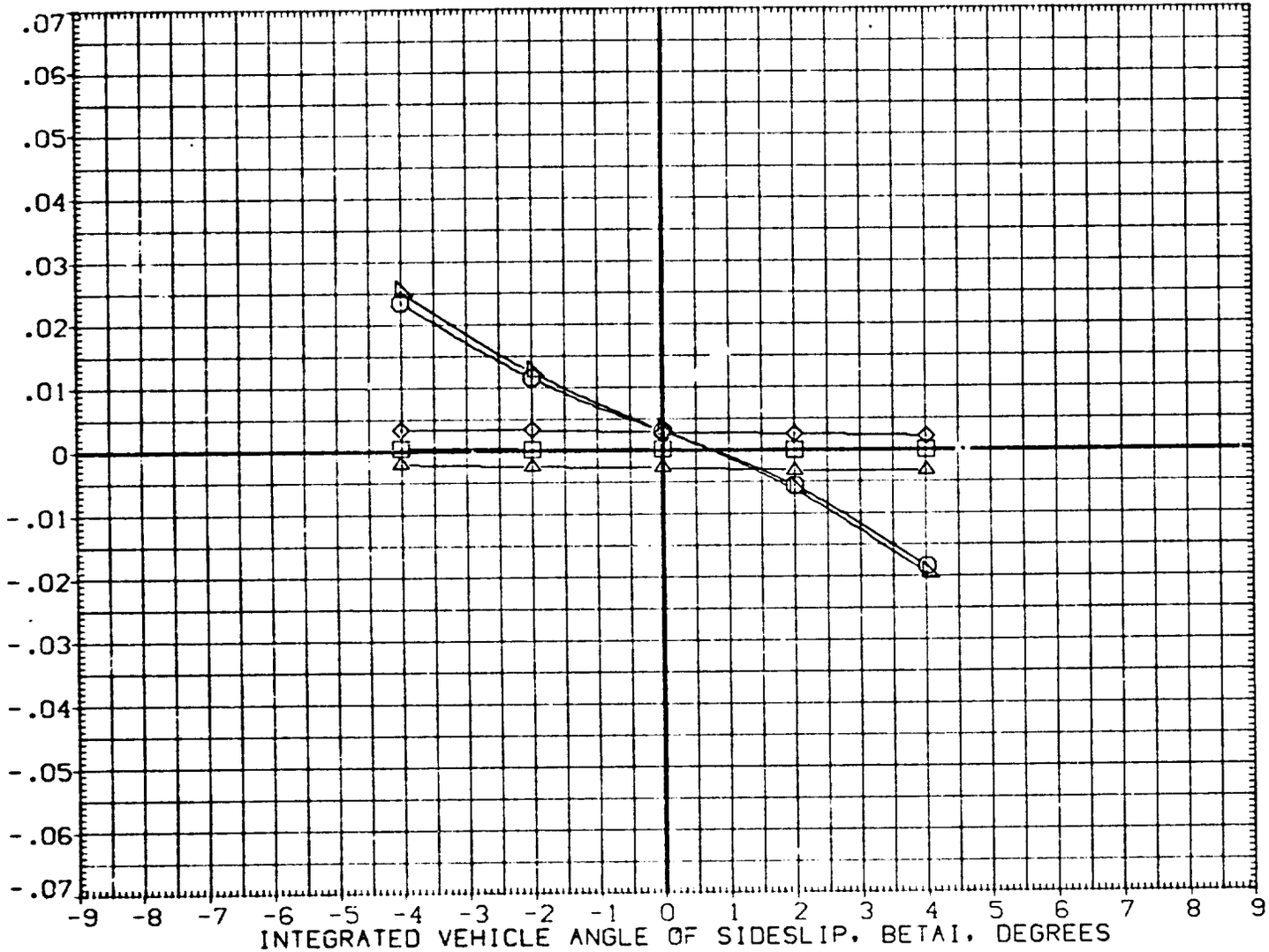


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

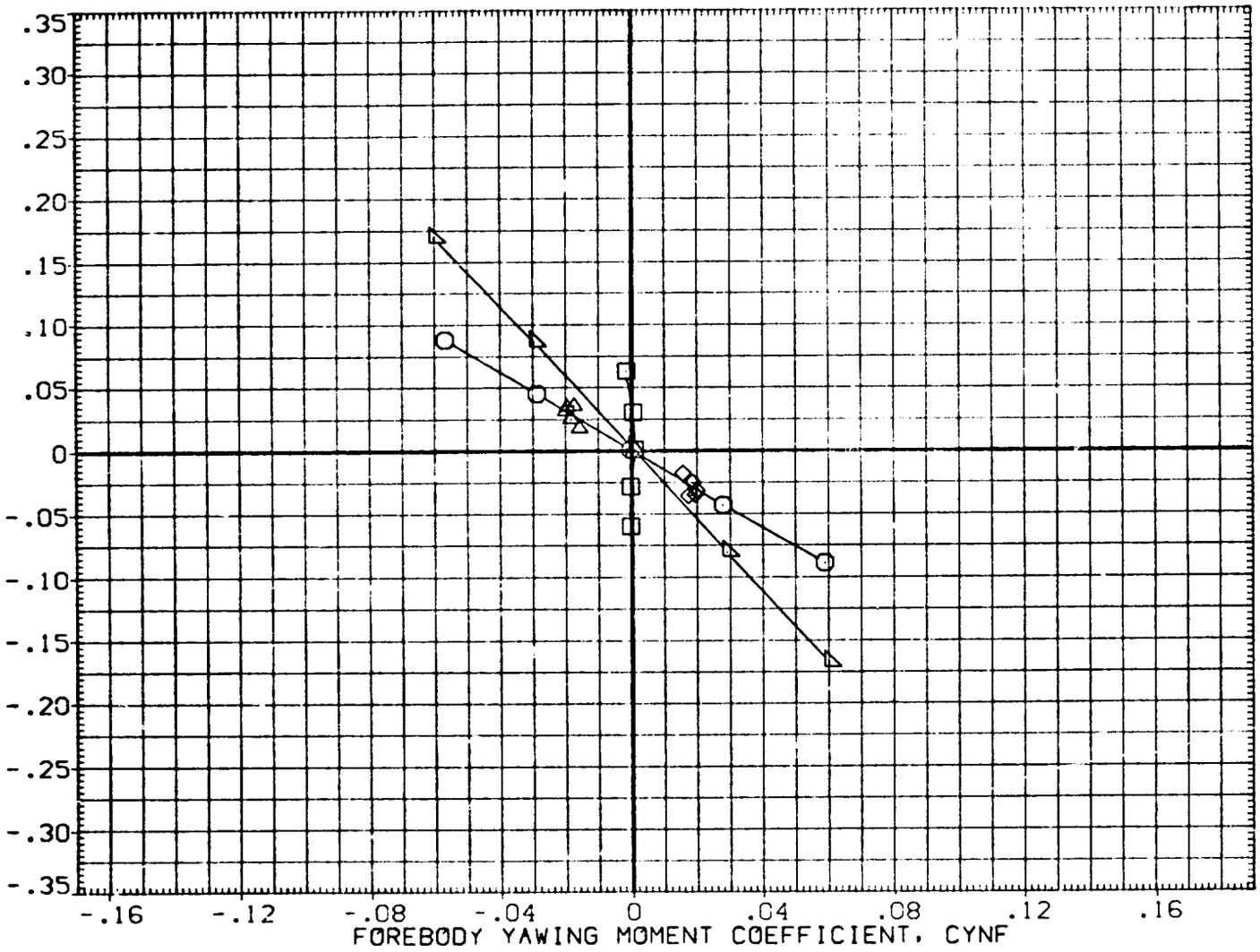


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

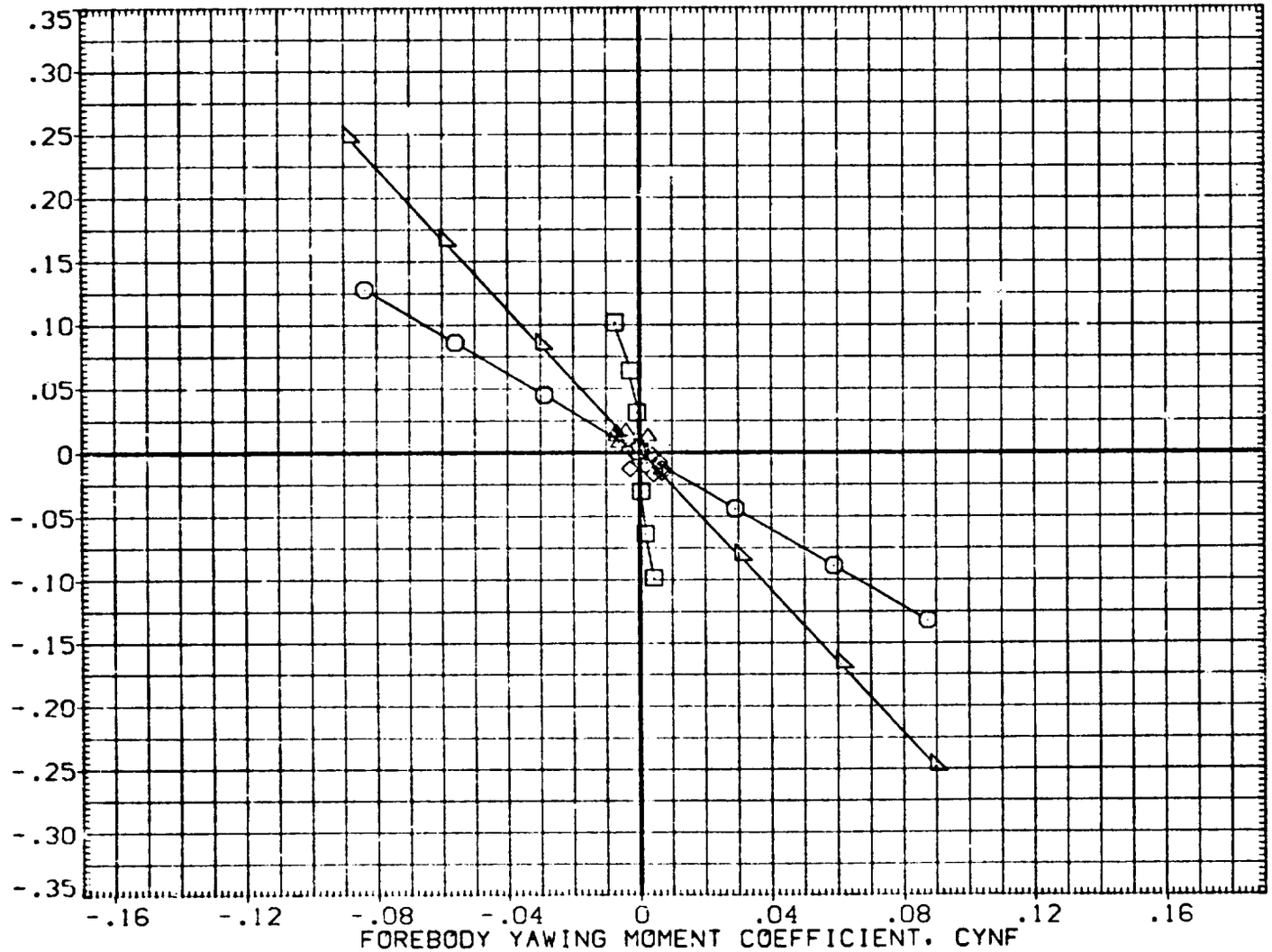


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)ALPHA(= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

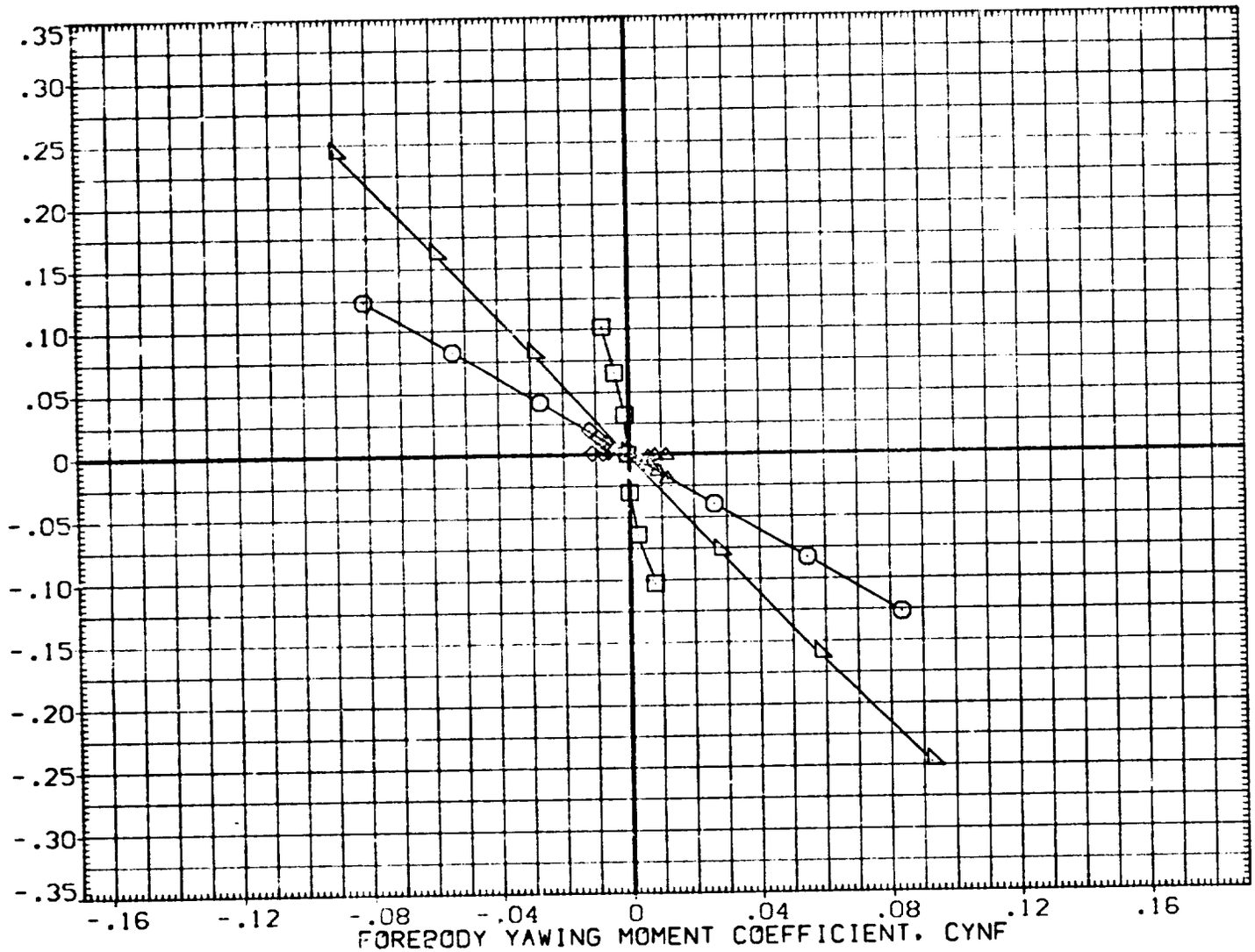


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL35)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

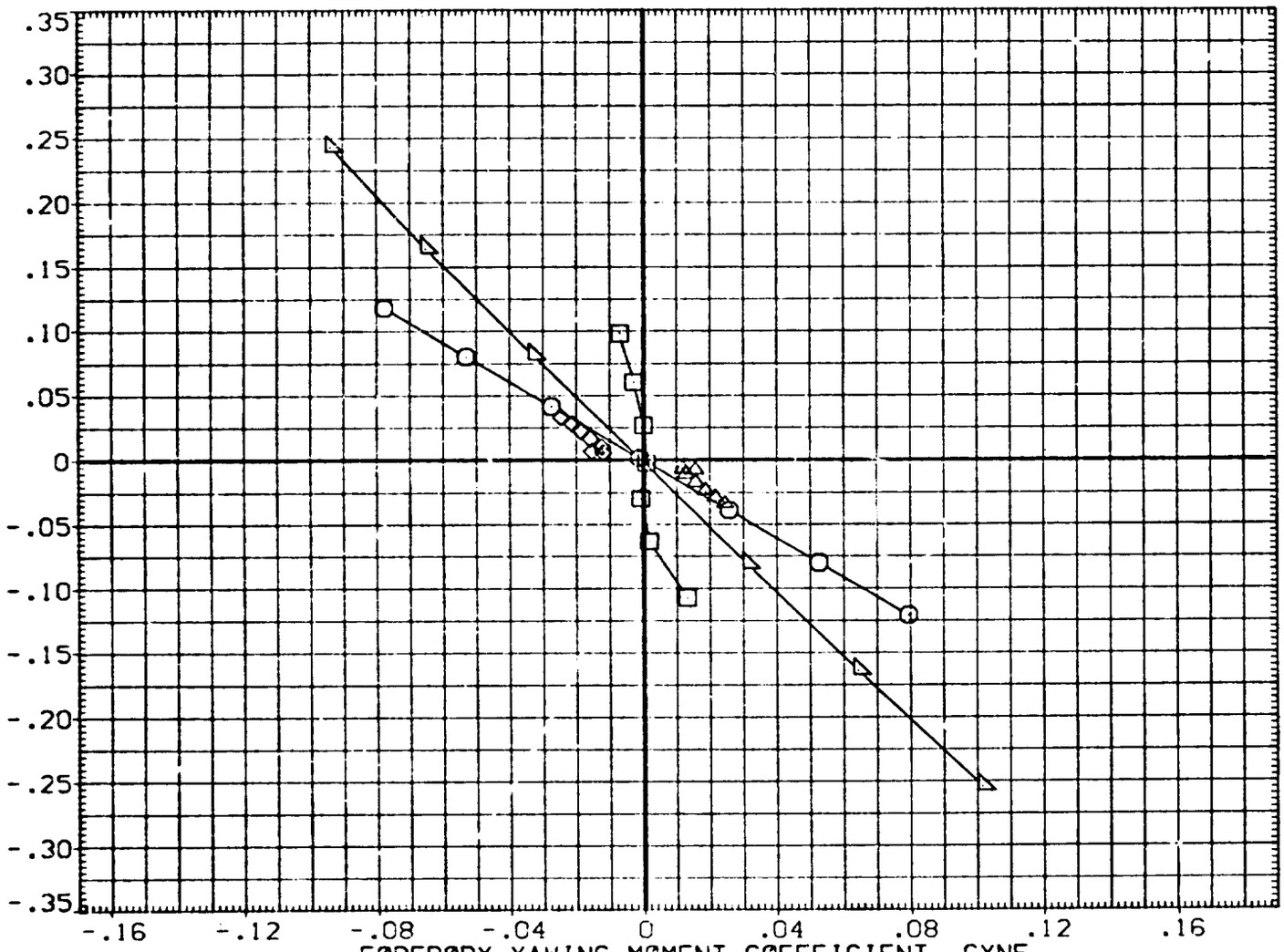


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(LET036)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL35)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	△	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	▽	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

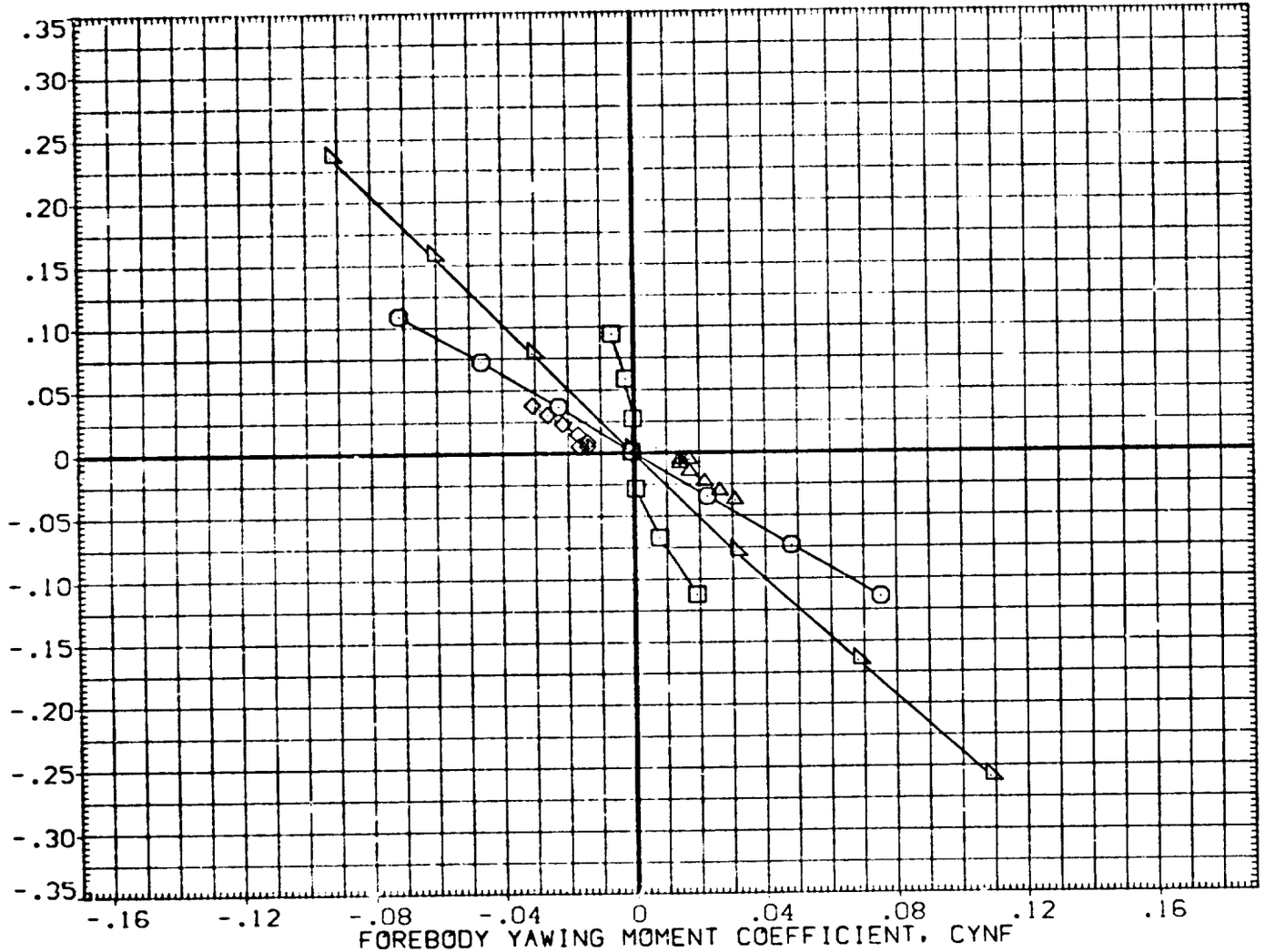


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE1036)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

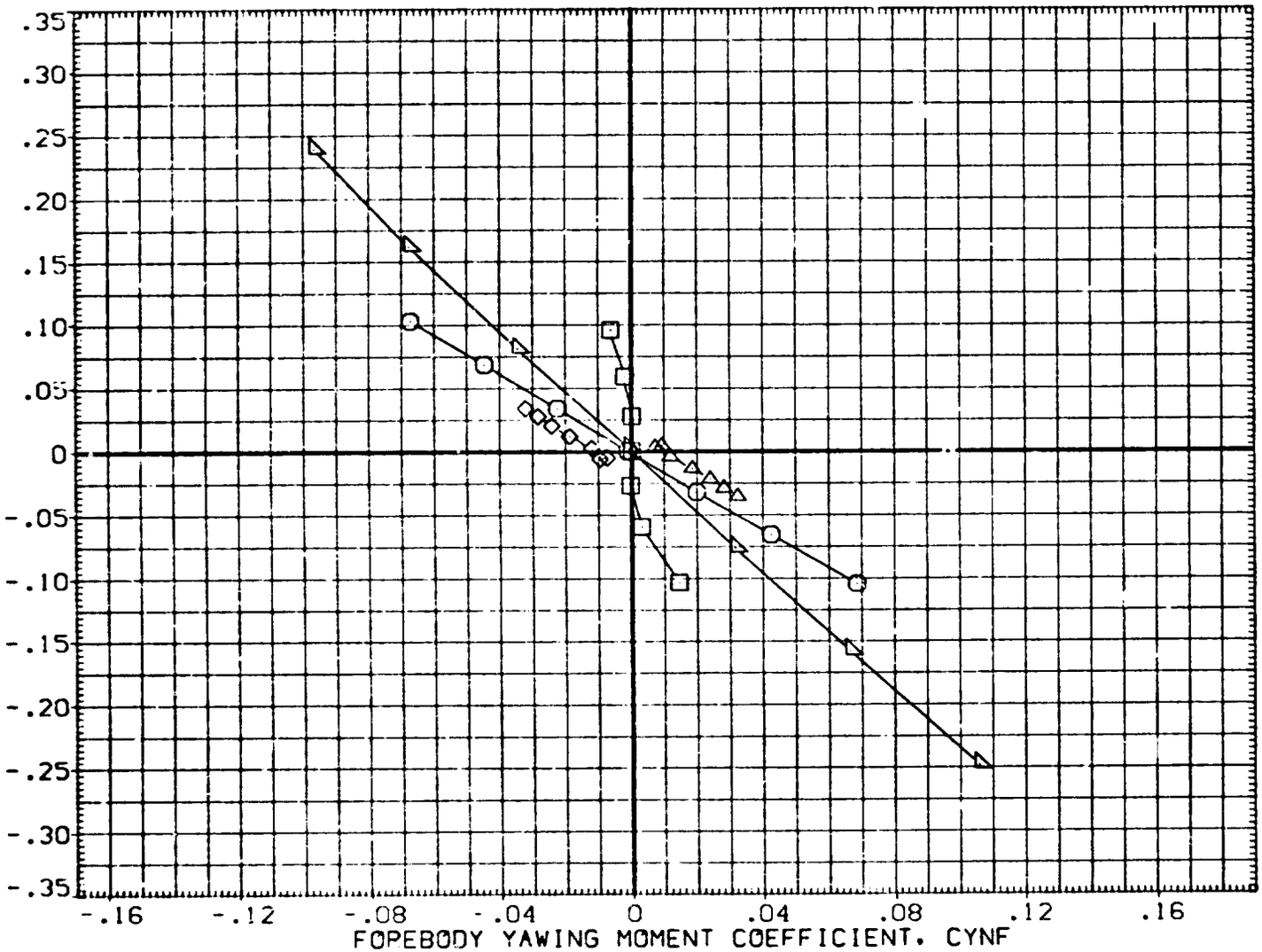


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LET136)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

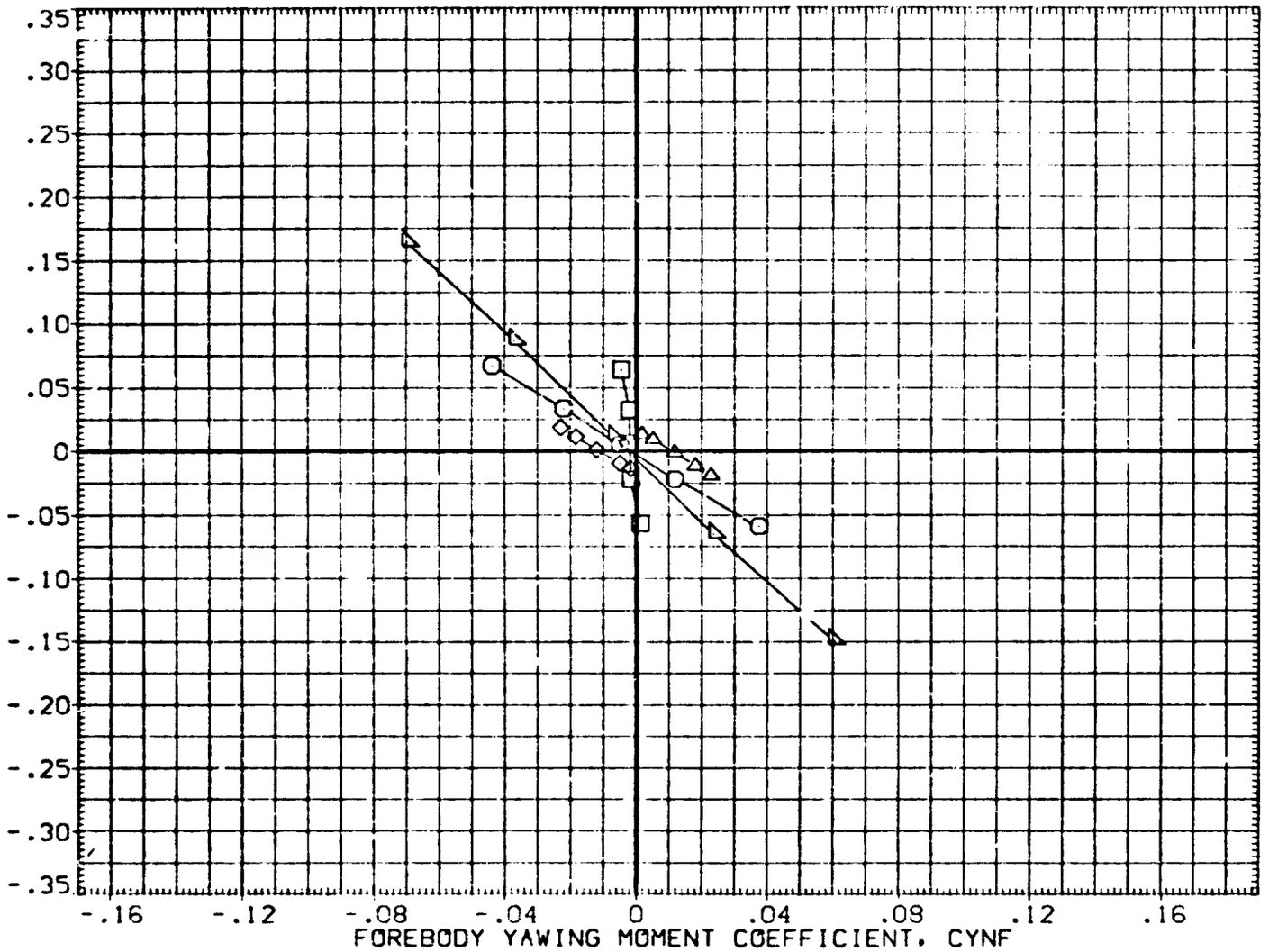


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET036)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

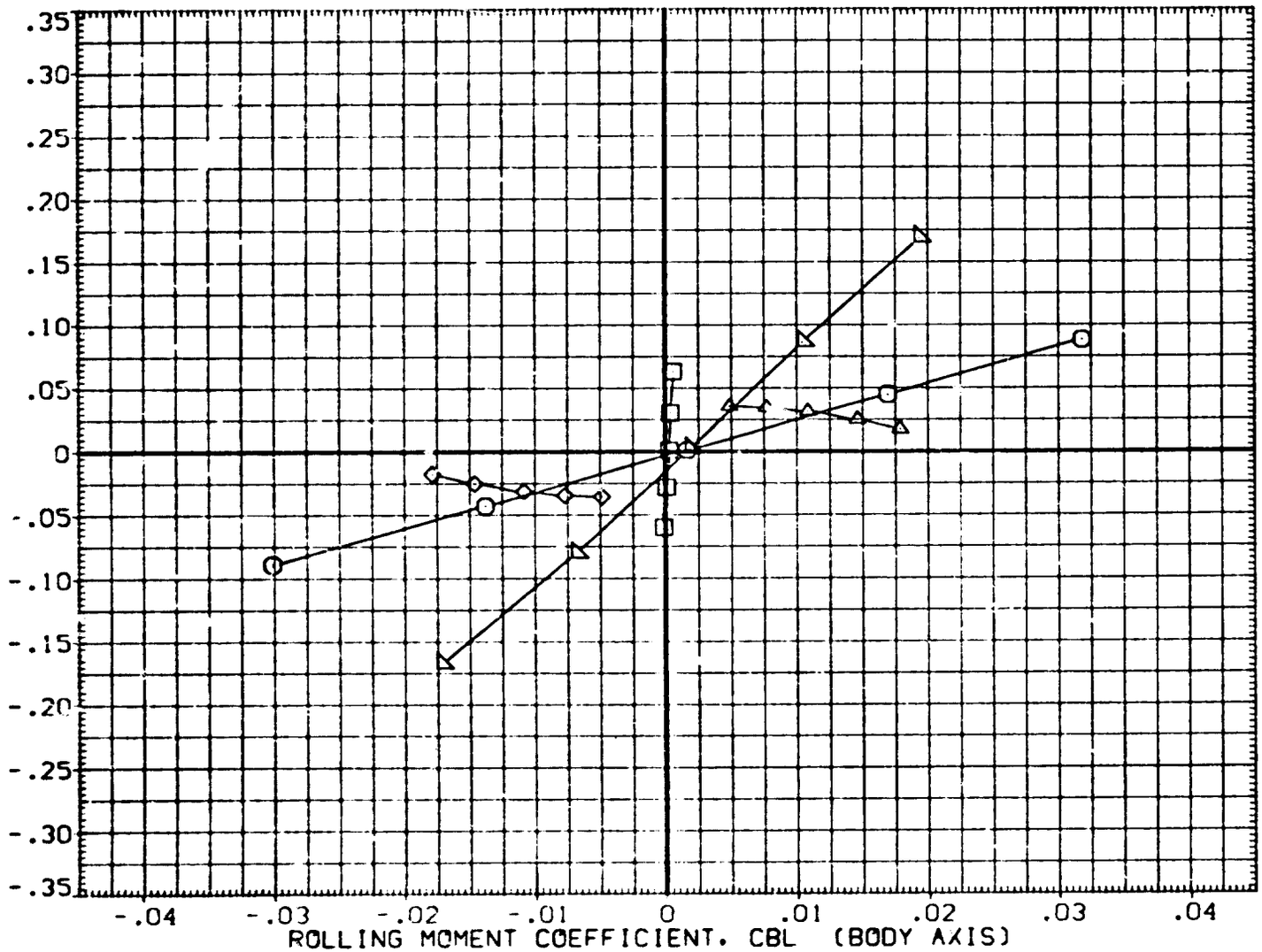


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(A)ALPHA(= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETQ36)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

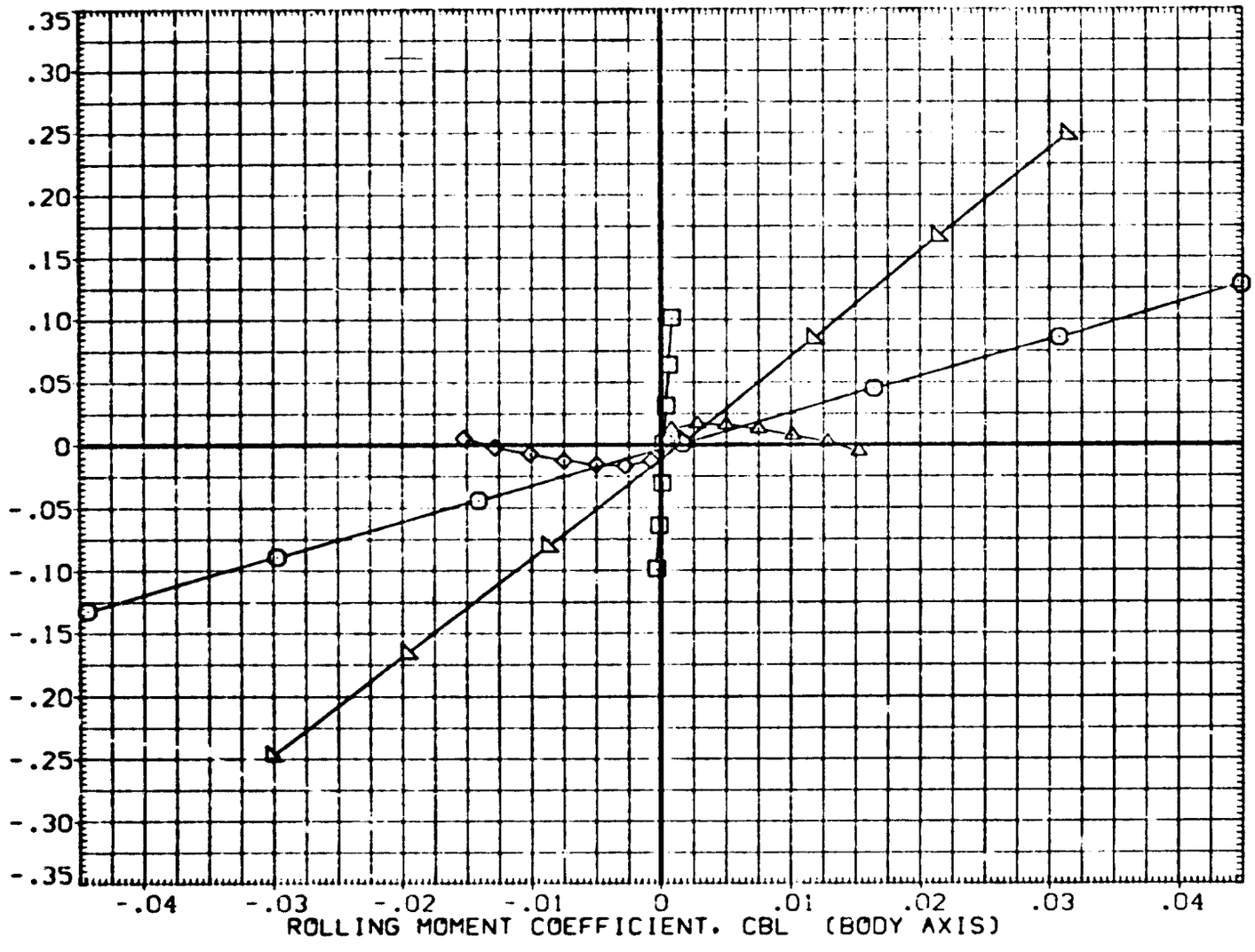


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)		AMES97-019(1AB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)		AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)		AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)		AMES97-019(1AB1) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)		AMES97-019(1AB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

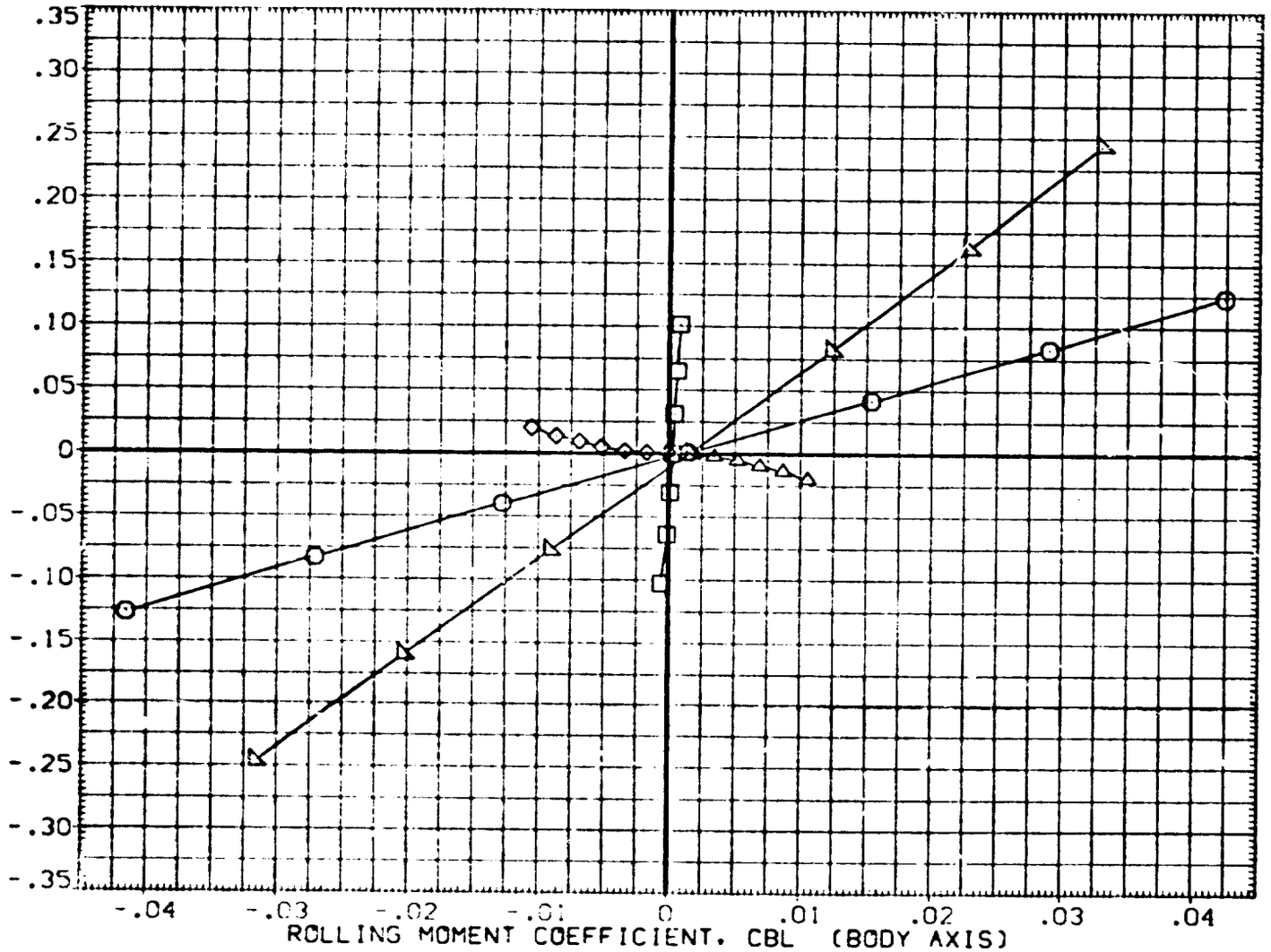


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(C)ALPHA[= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO36)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

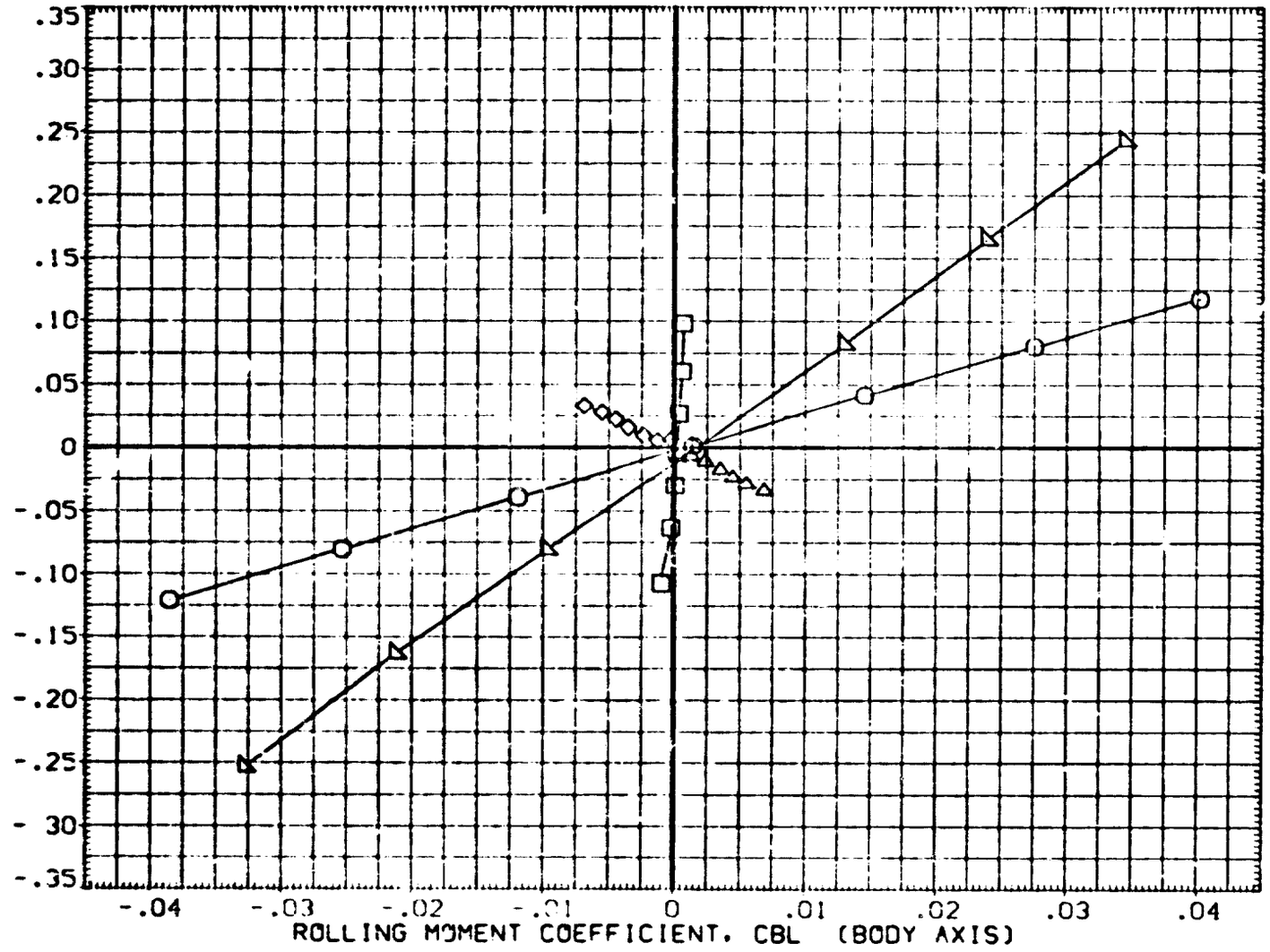


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(D)ALPHA(= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC36)	AMES97-019(IA01) LVAP ORBITER-ALL HL SEALED	0.000	-4.000	2.000	.000
(LETT36)	AMES97-019(IA01) LVAP TANK - ALL HL SEALED	0.000	-4.000	2.000	.000
(LETL36)	AMES97-019(IA01) LVAP L-SRB - ALL HL SEALED	0.000	-4.000	2.000	.000
(LETR36)	AMES97-019(IA01) LVAP R-SRB ALL HL SEALED	0.000	-4.000	2.000	.000
(LEI136)	AMES97-019(IA01) LVAP INT VEH ALL HL SEALED	0.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

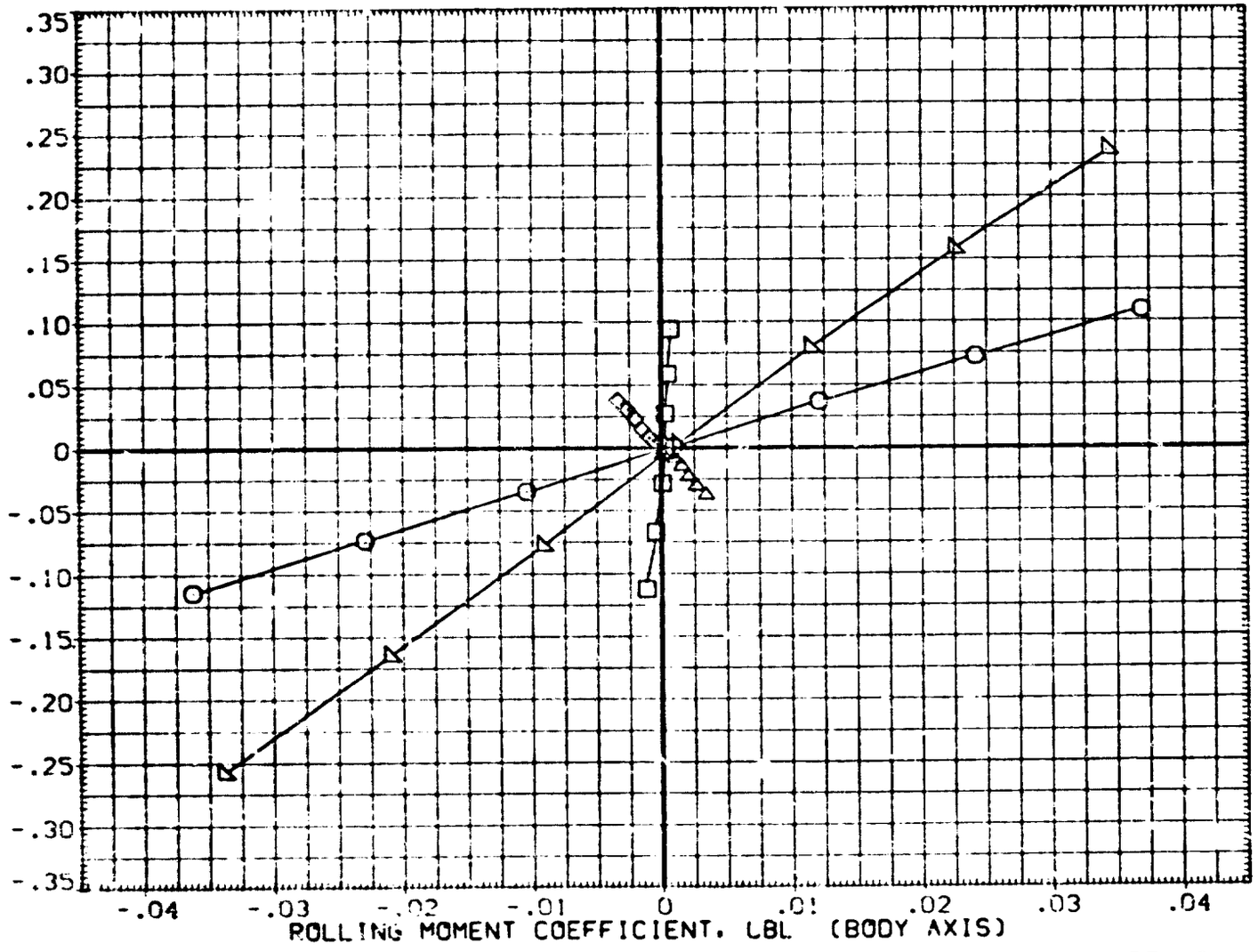


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(E)ALPHA1= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

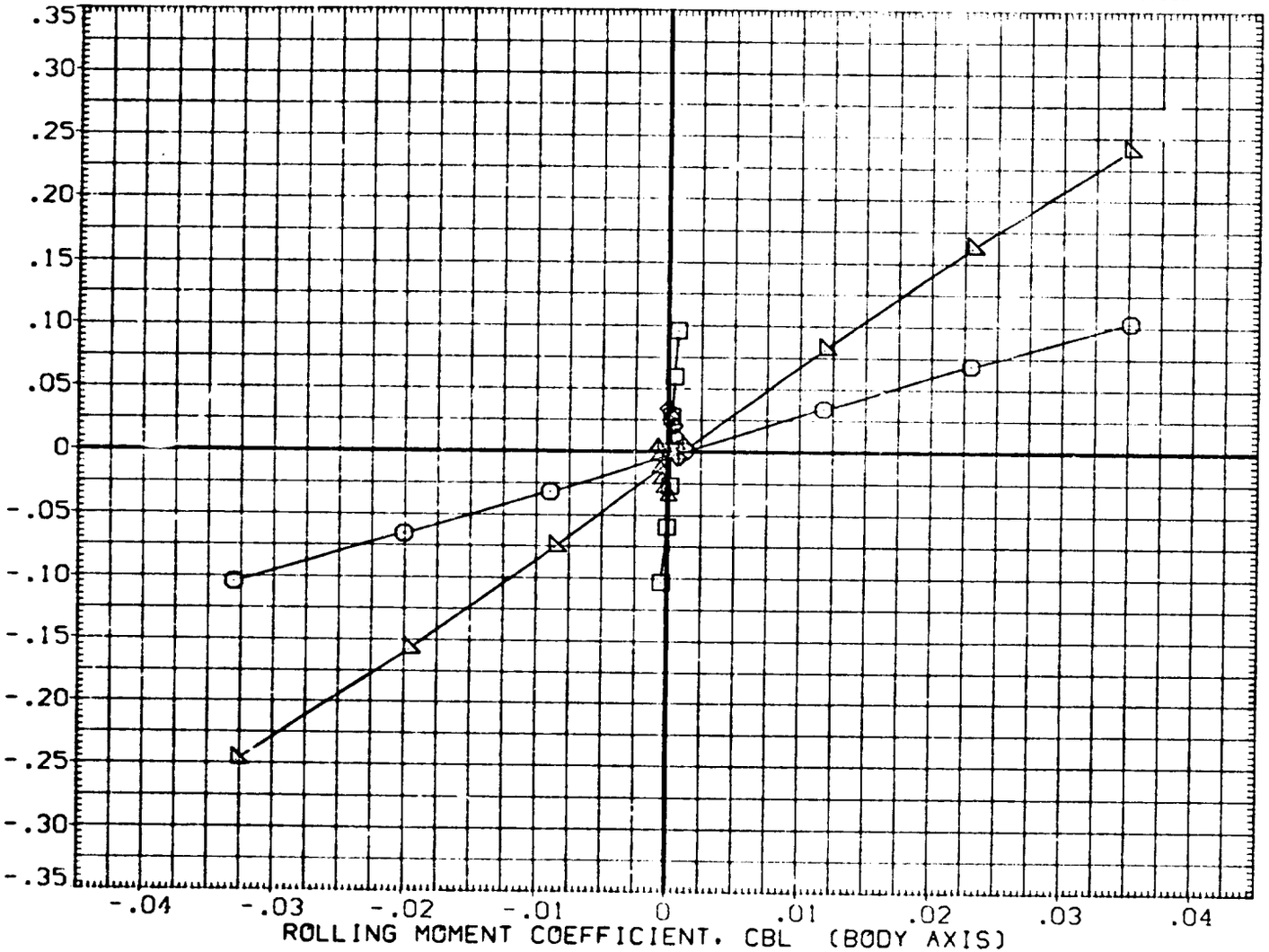


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET036)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(LETT36)	⊡	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETL36)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETR36)	△	AMES97-019(IAB1) LVAP R-SRB - ALL HL SEALED	8.000	-4.000	2.000	.000
(LETI36)	◁	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

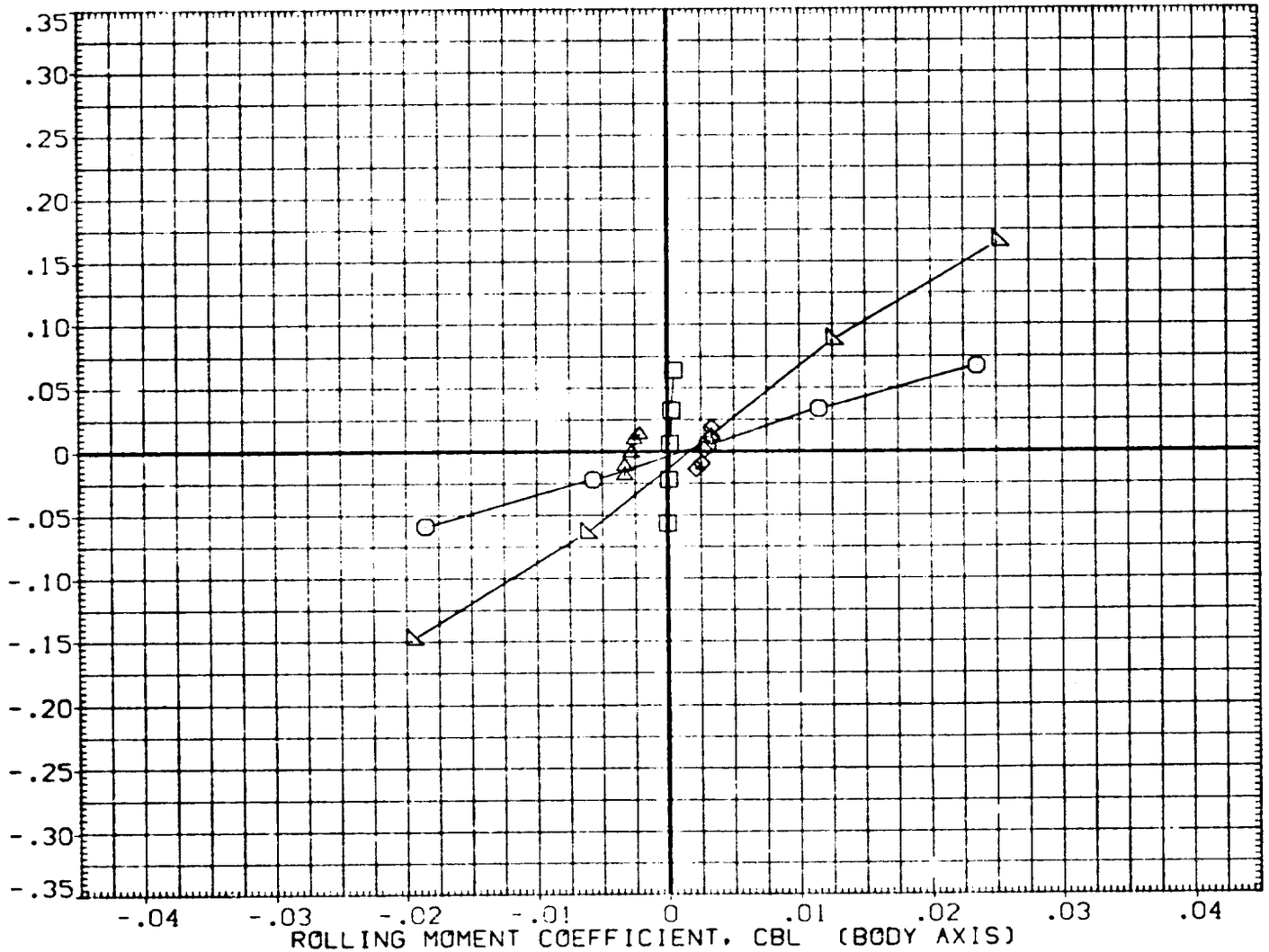


FIG. 21 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO40)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

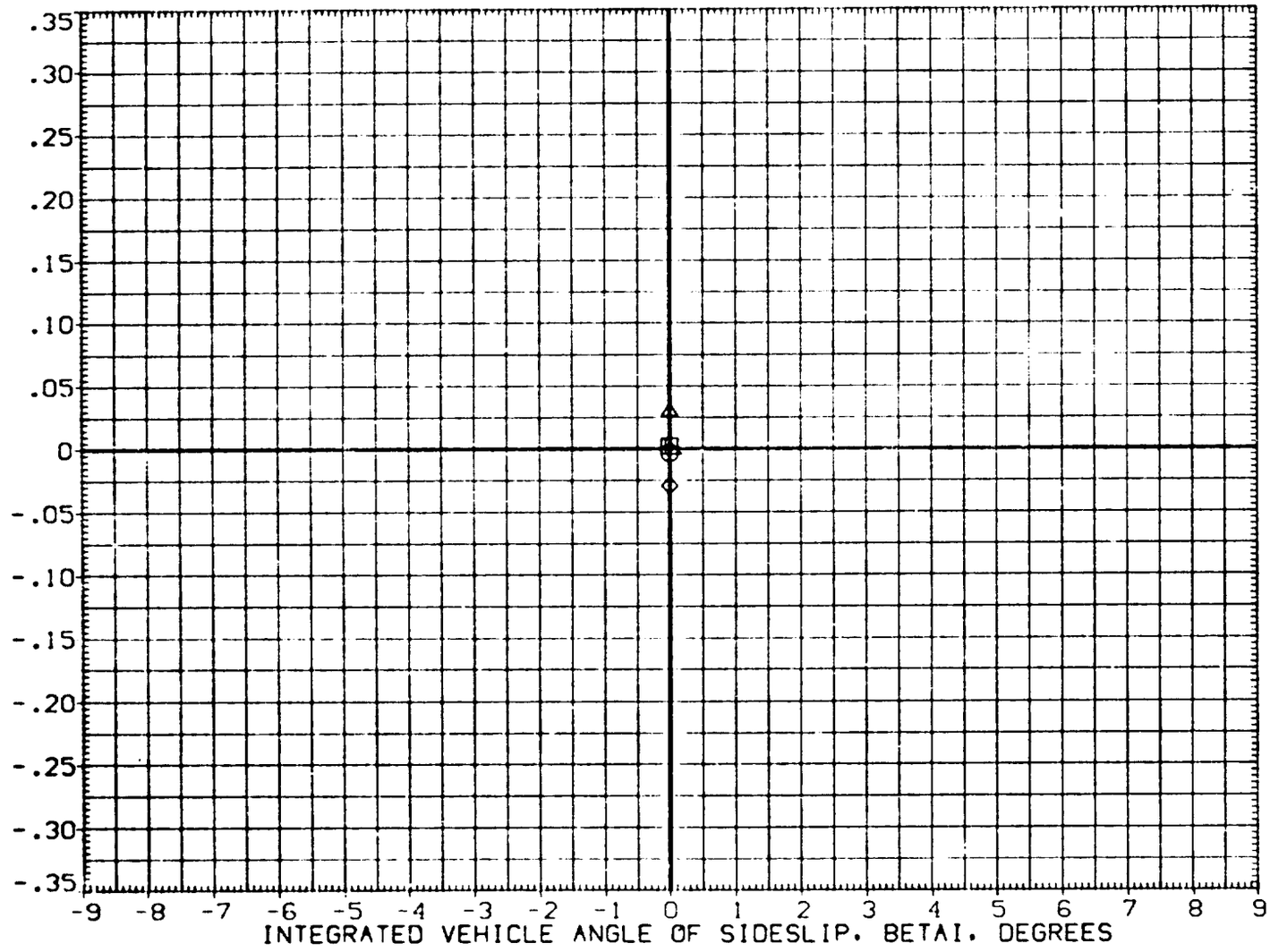


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	○	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019([AR1]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	▽	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

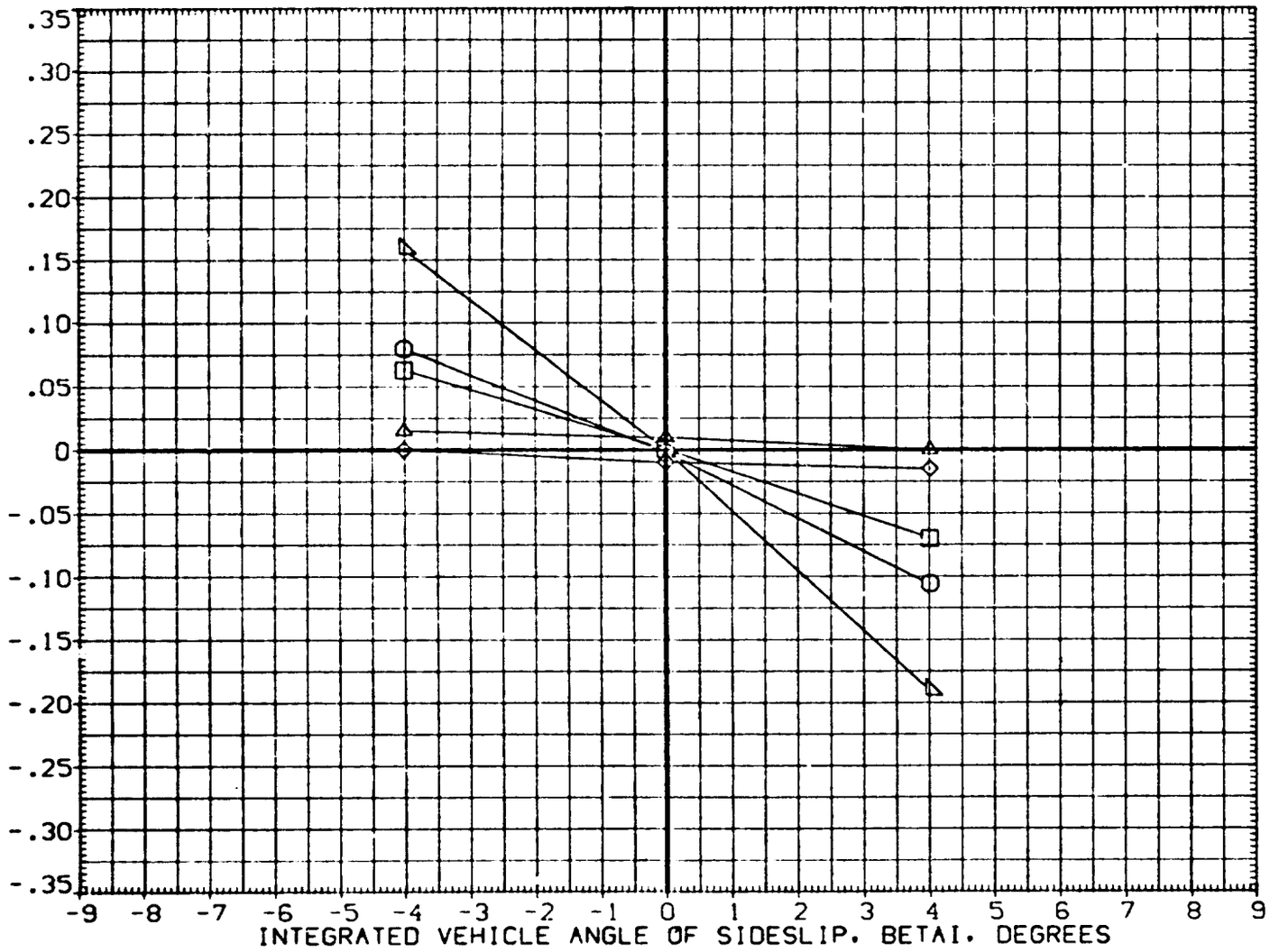


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	000	.000	2.000	.000
(LETT40)	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

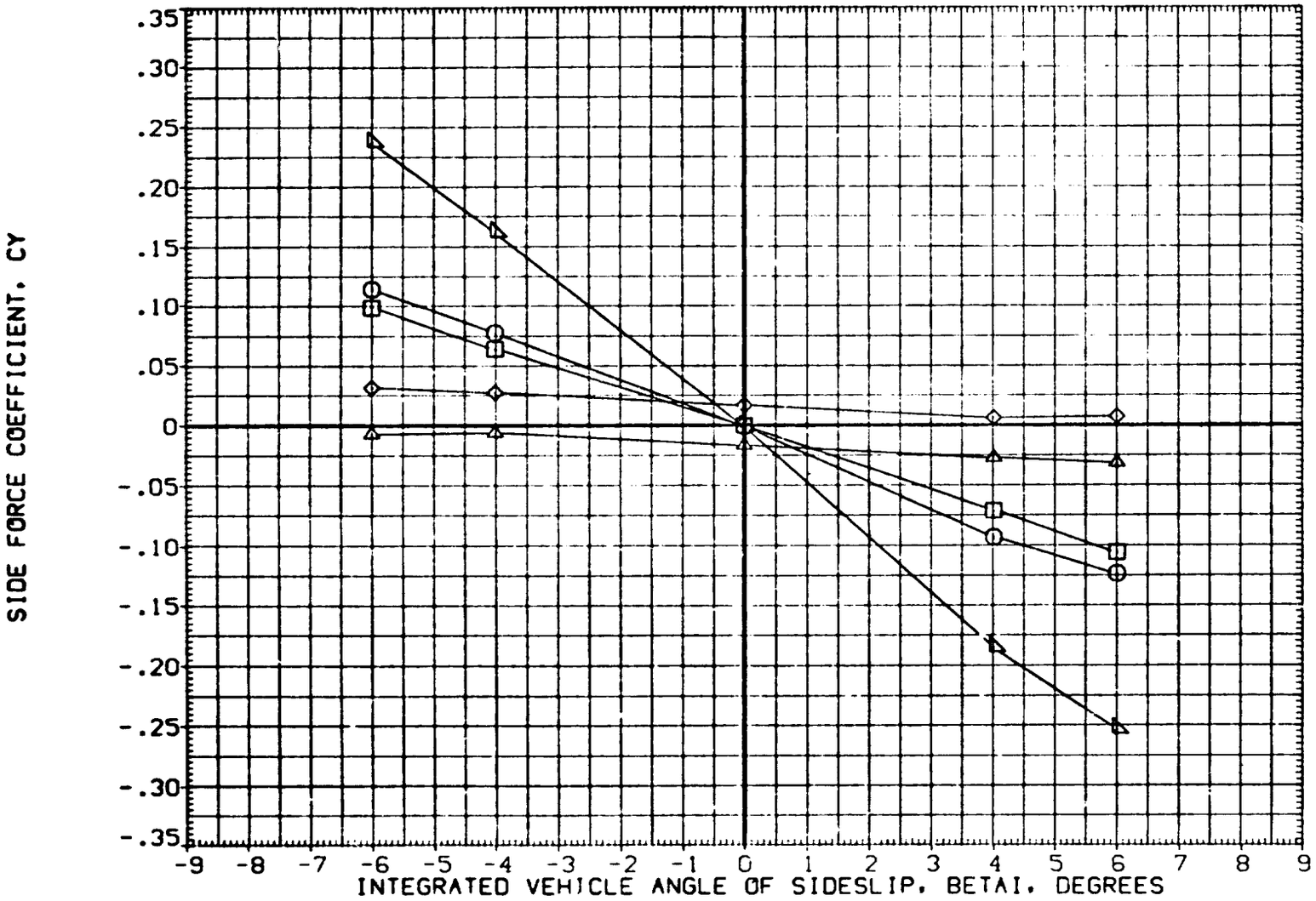


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

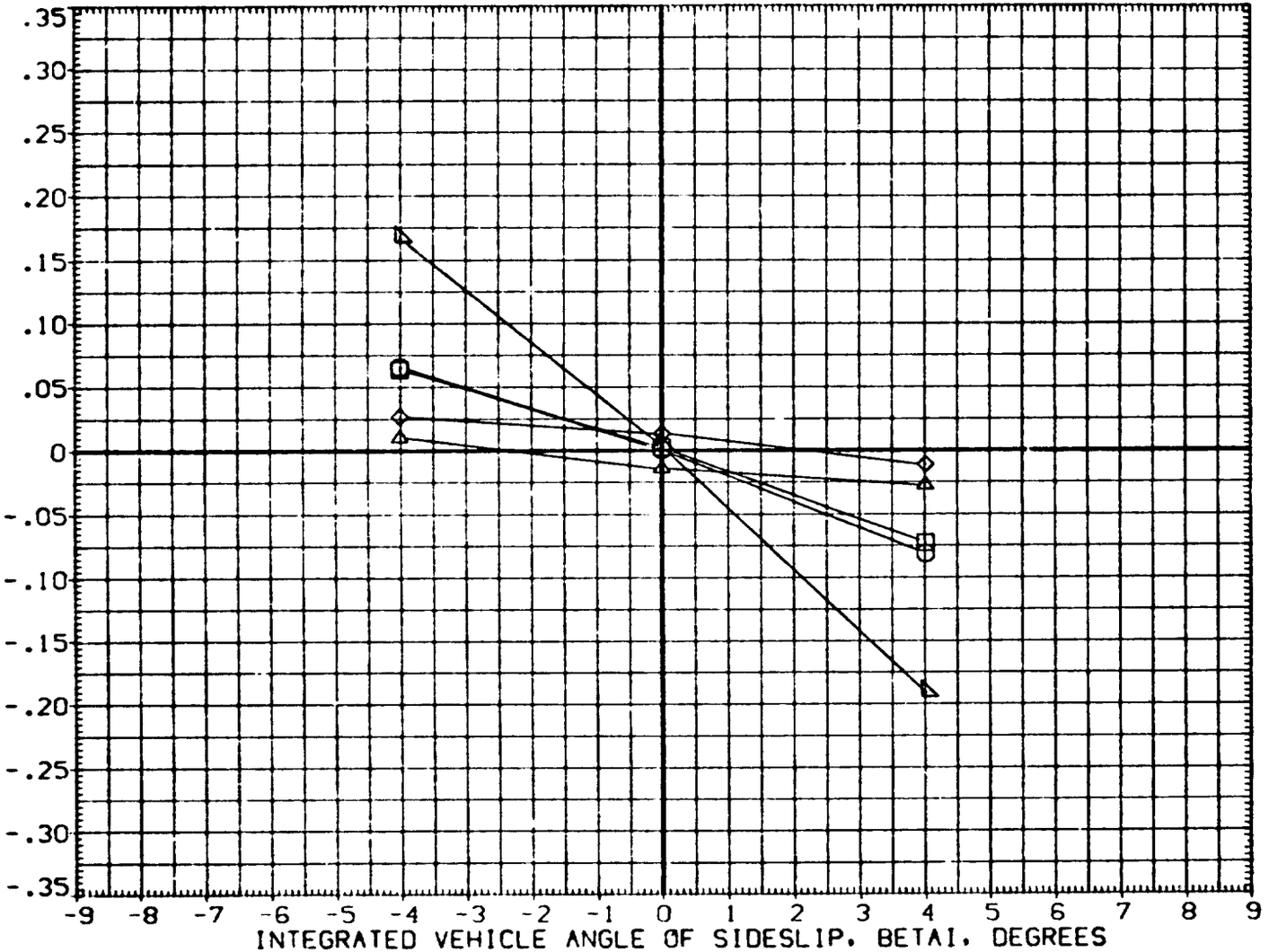


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	□	AMES37-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

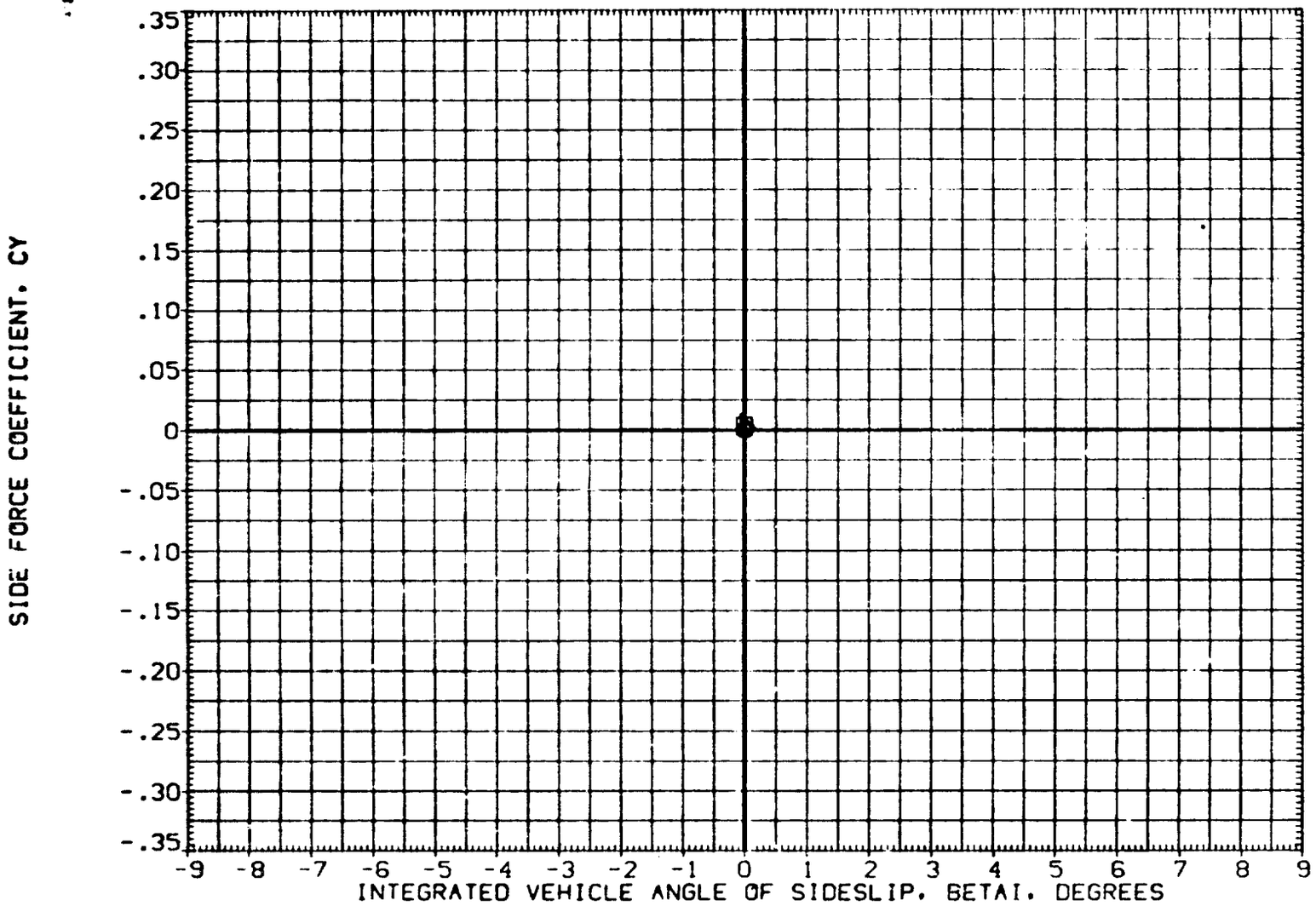


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	○	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

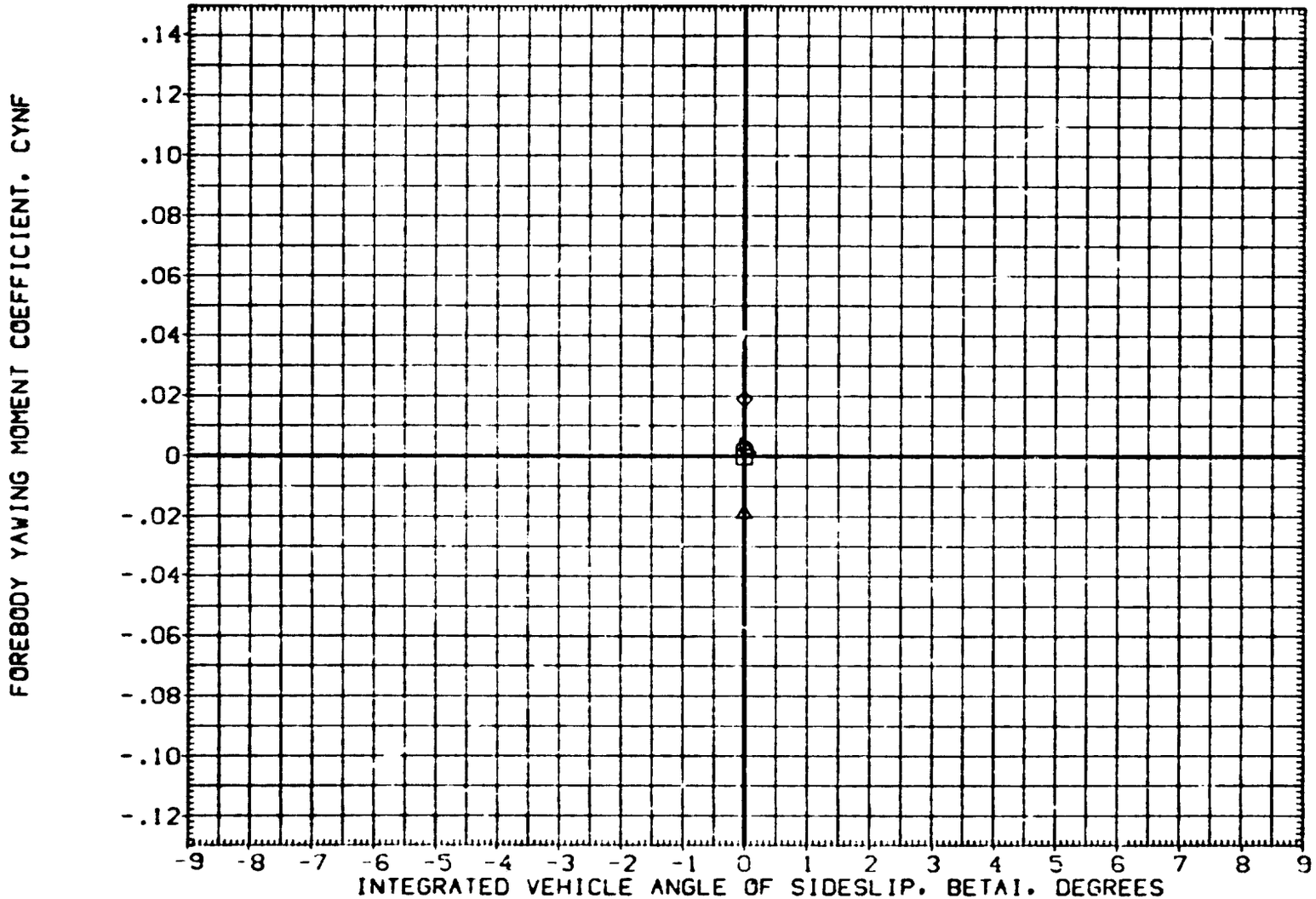


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

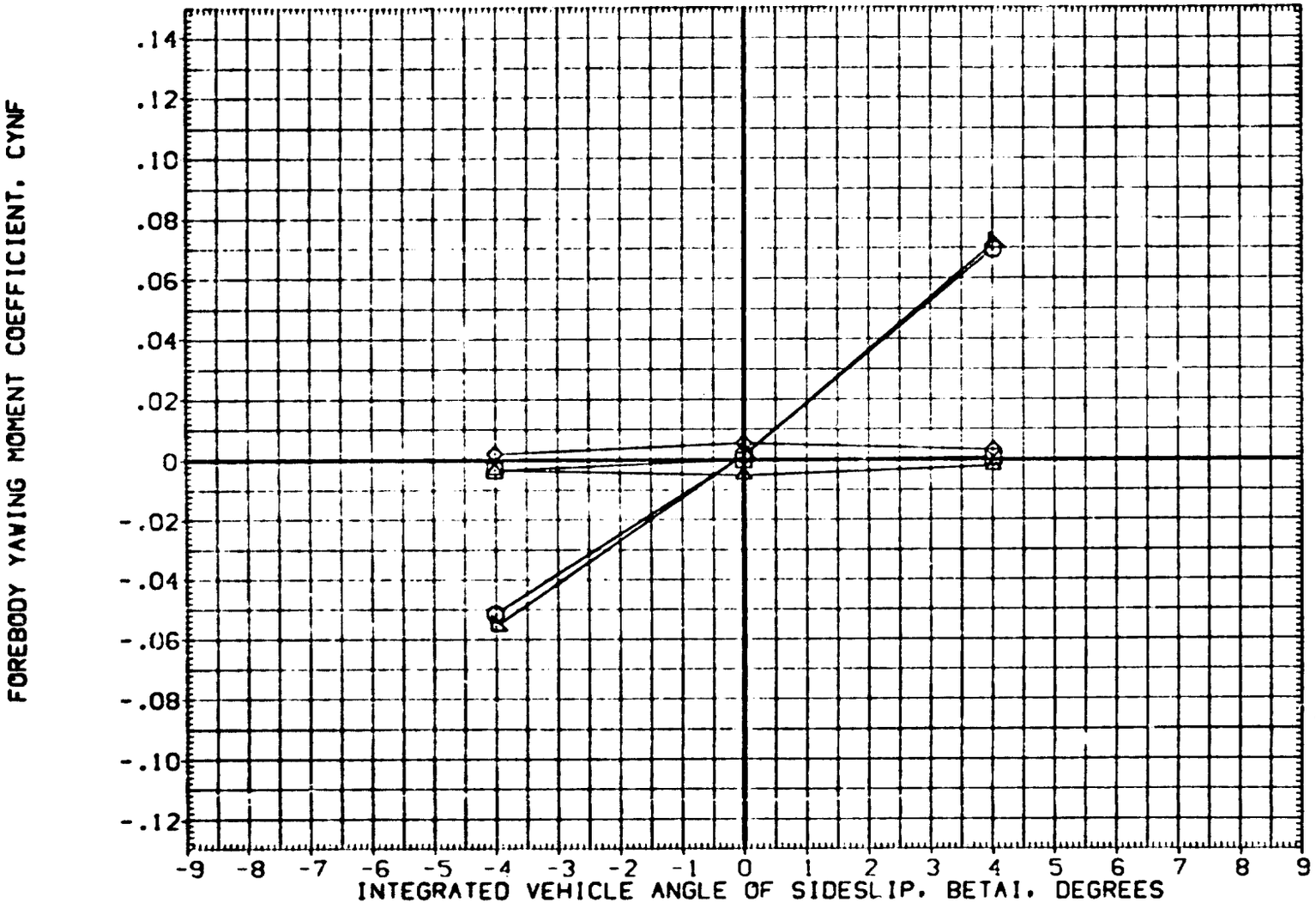


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET040)		AMES97-019(1A8:) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(1A8:) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

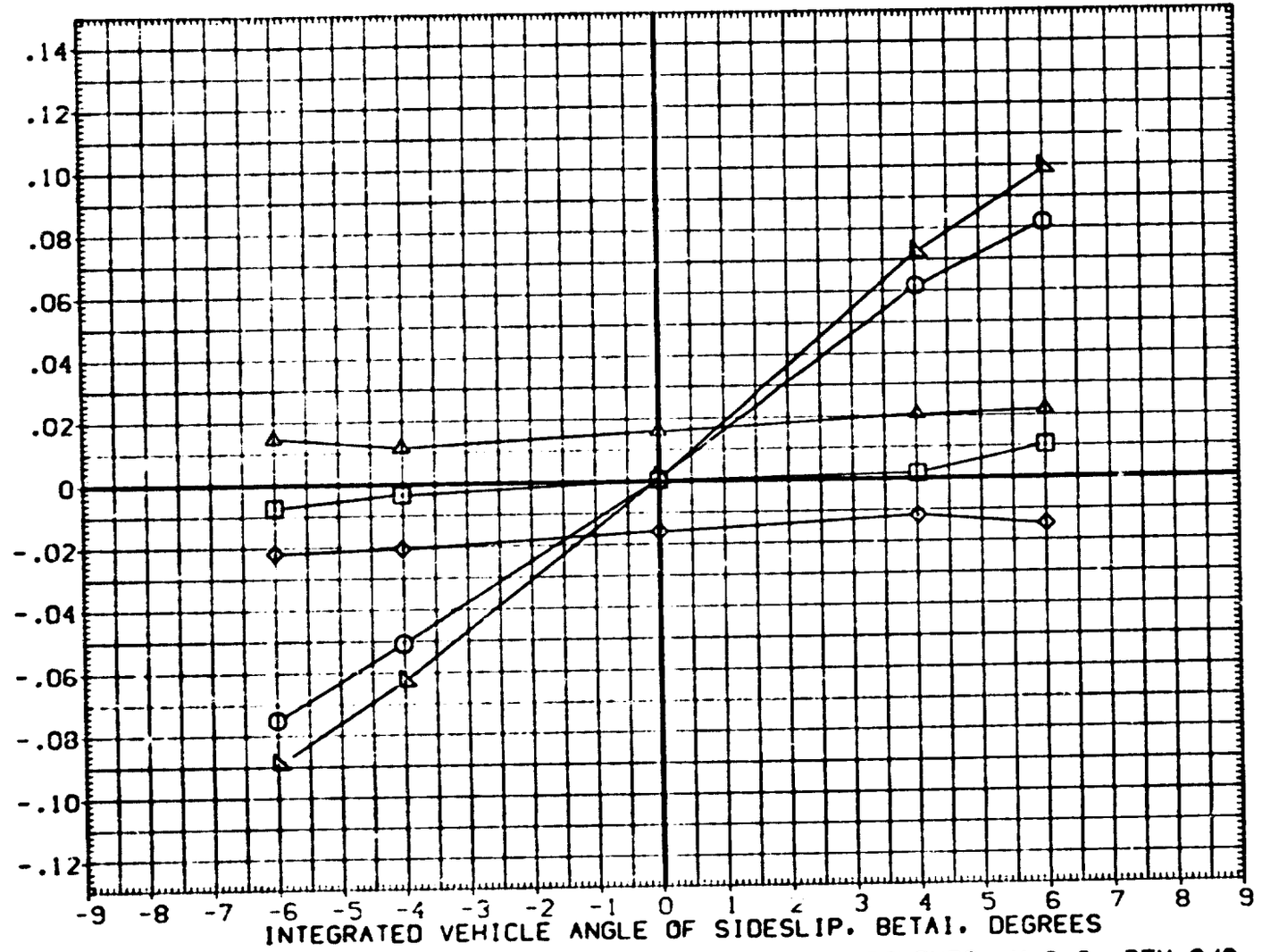


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(LETT4C)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

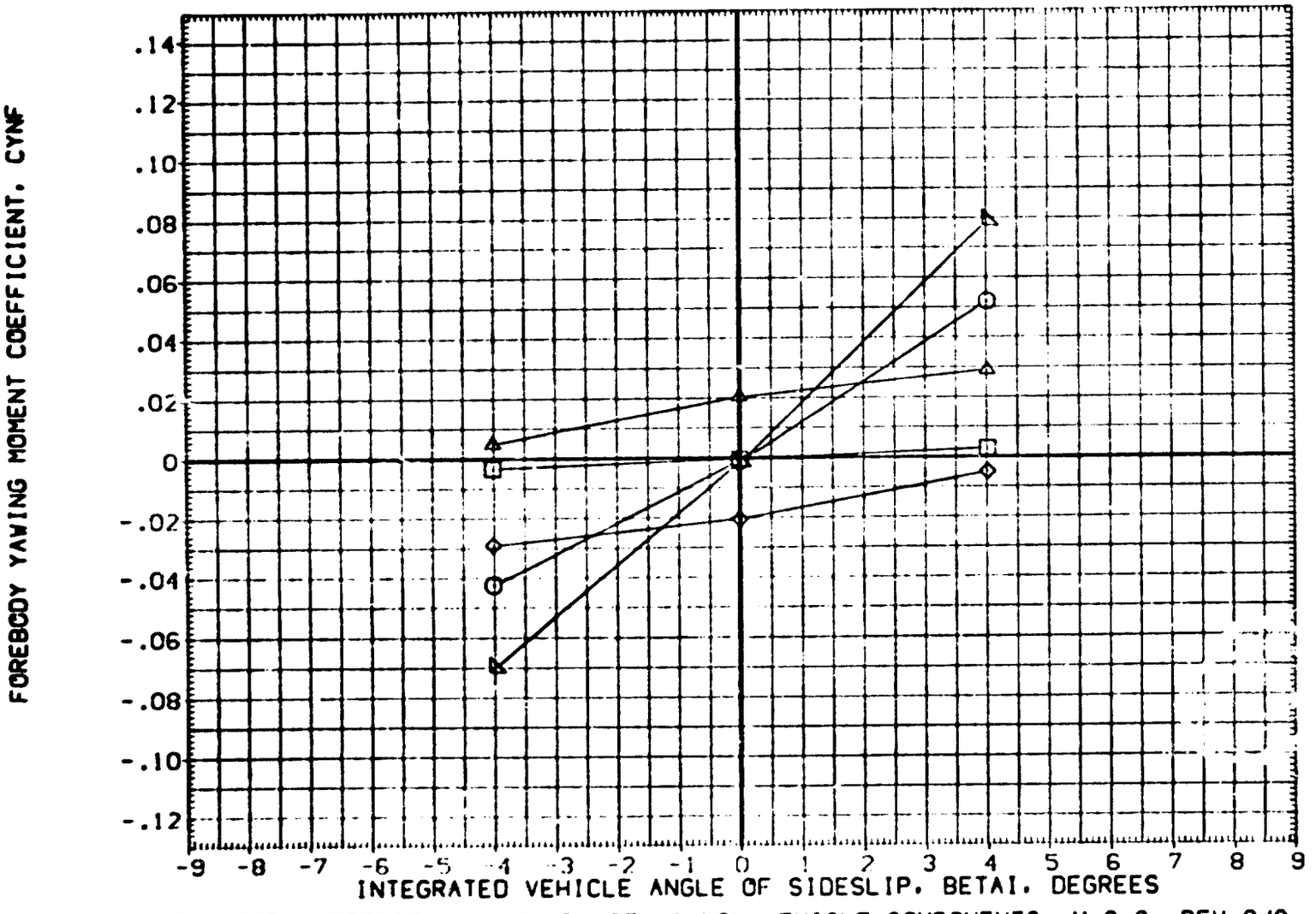


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETC40)	AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(LETT40)	AMES97-019(1A81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)	AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)	AMES97-019(1A81) LVAP R-SRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)	AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

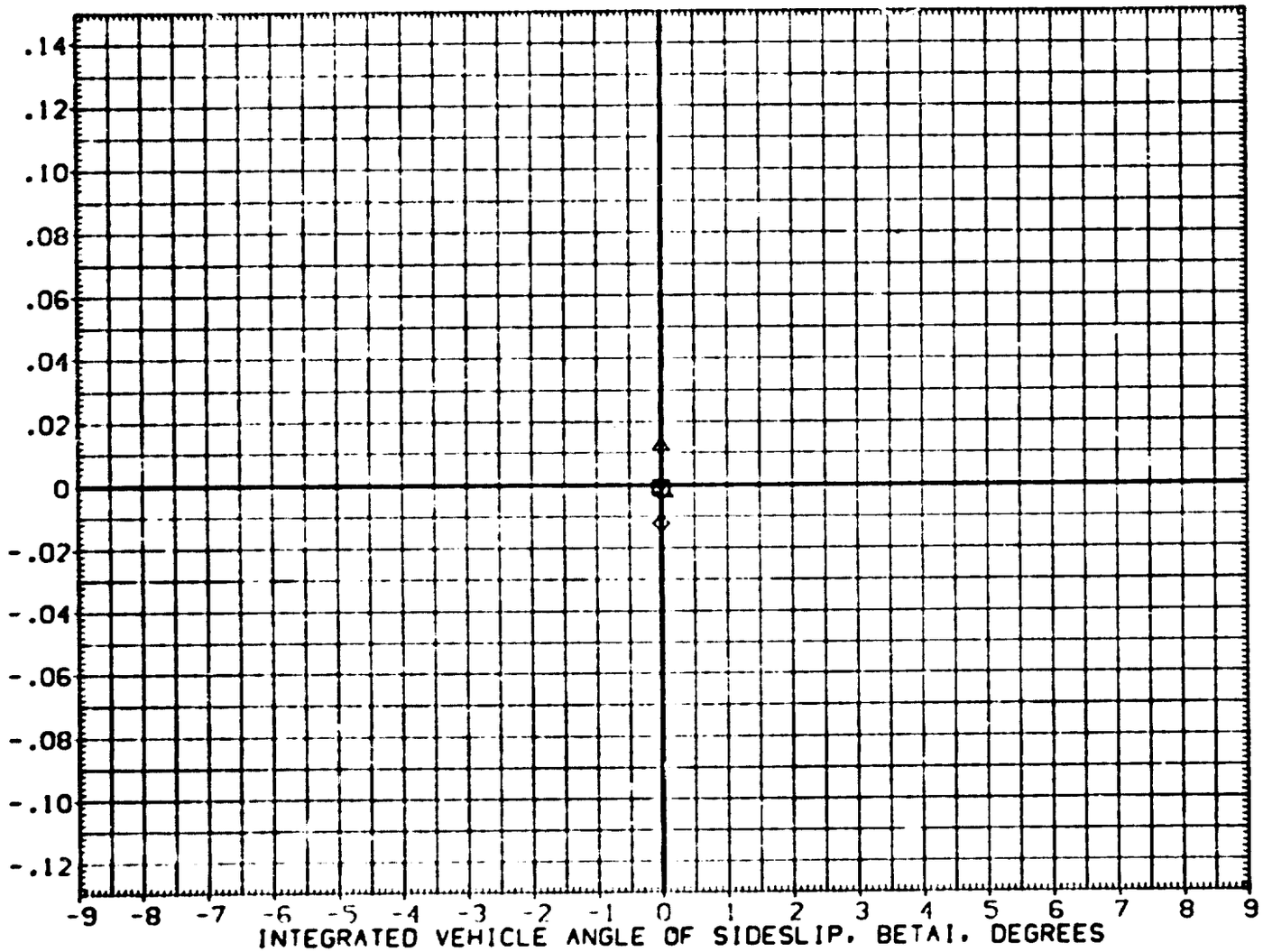


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)ALPHAI= E.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPOBRK
(LET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)		AMES97 019(IA81) LVAP R SRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION

SREF	2590.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

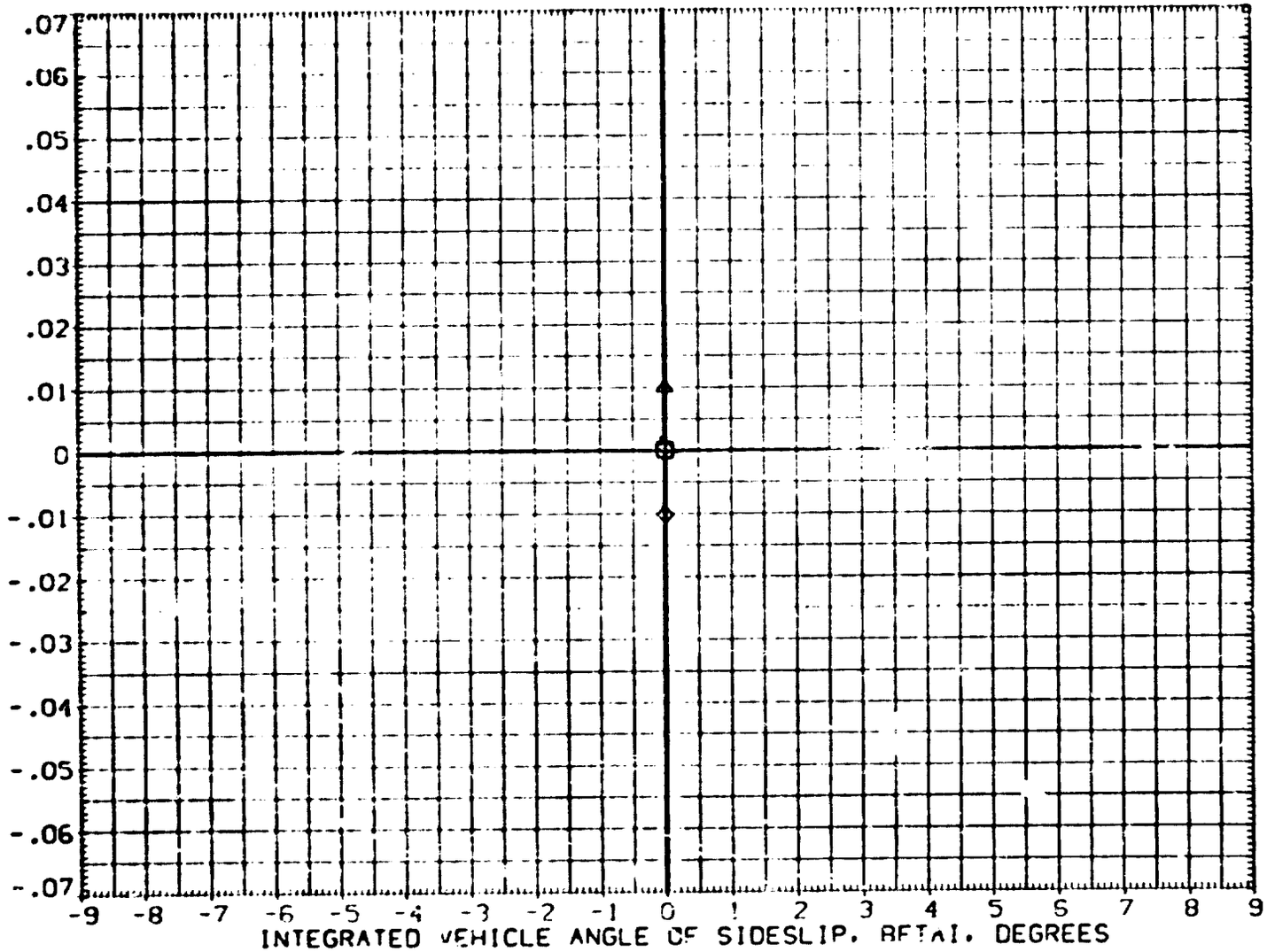


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET040)	□	AMES97-C19([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	⋈	AME397-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	⋈	AME597-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LET140)	▷	AME597-013([A81]) LVAP INT ZLH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

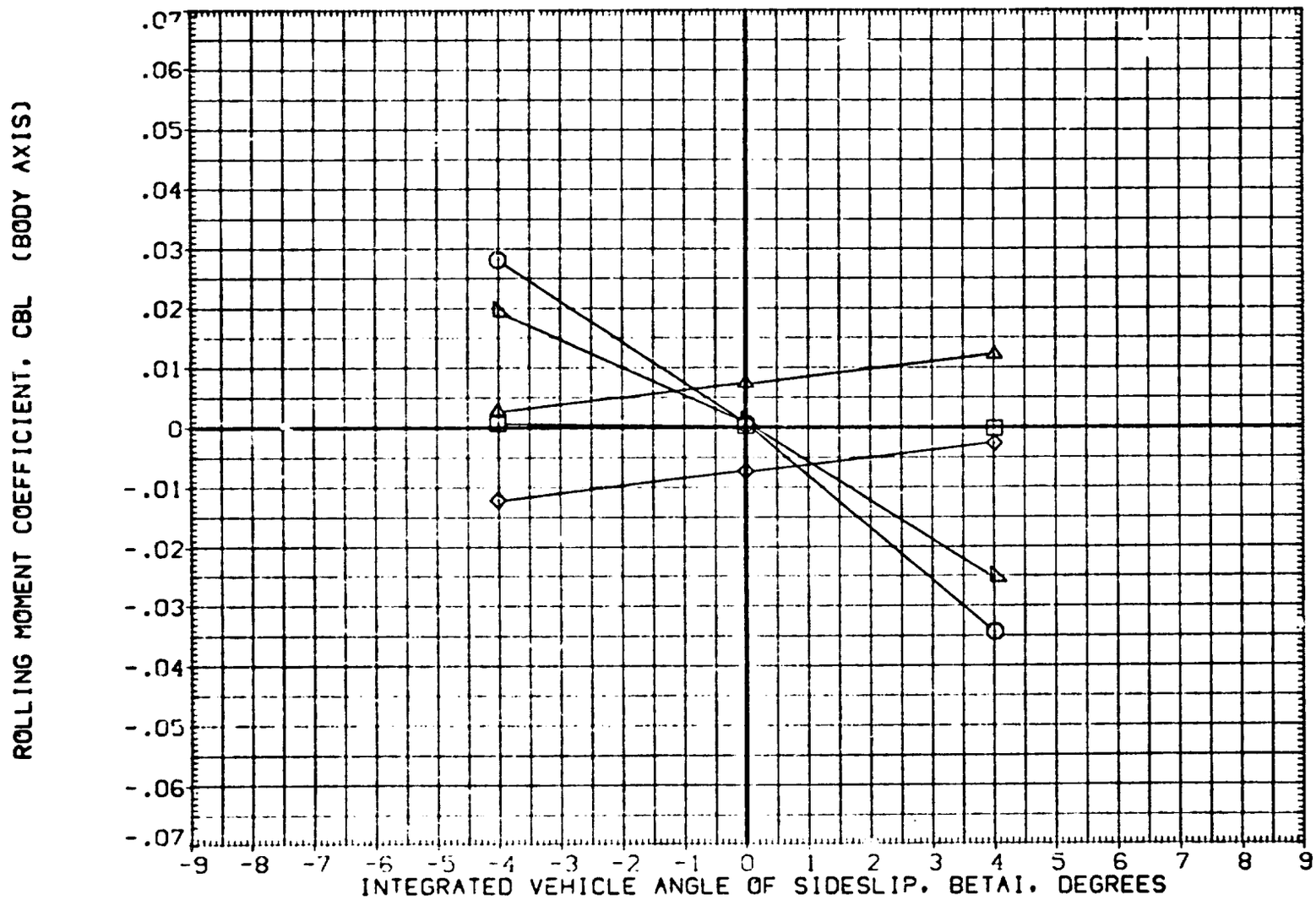


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=C/O

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC40)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

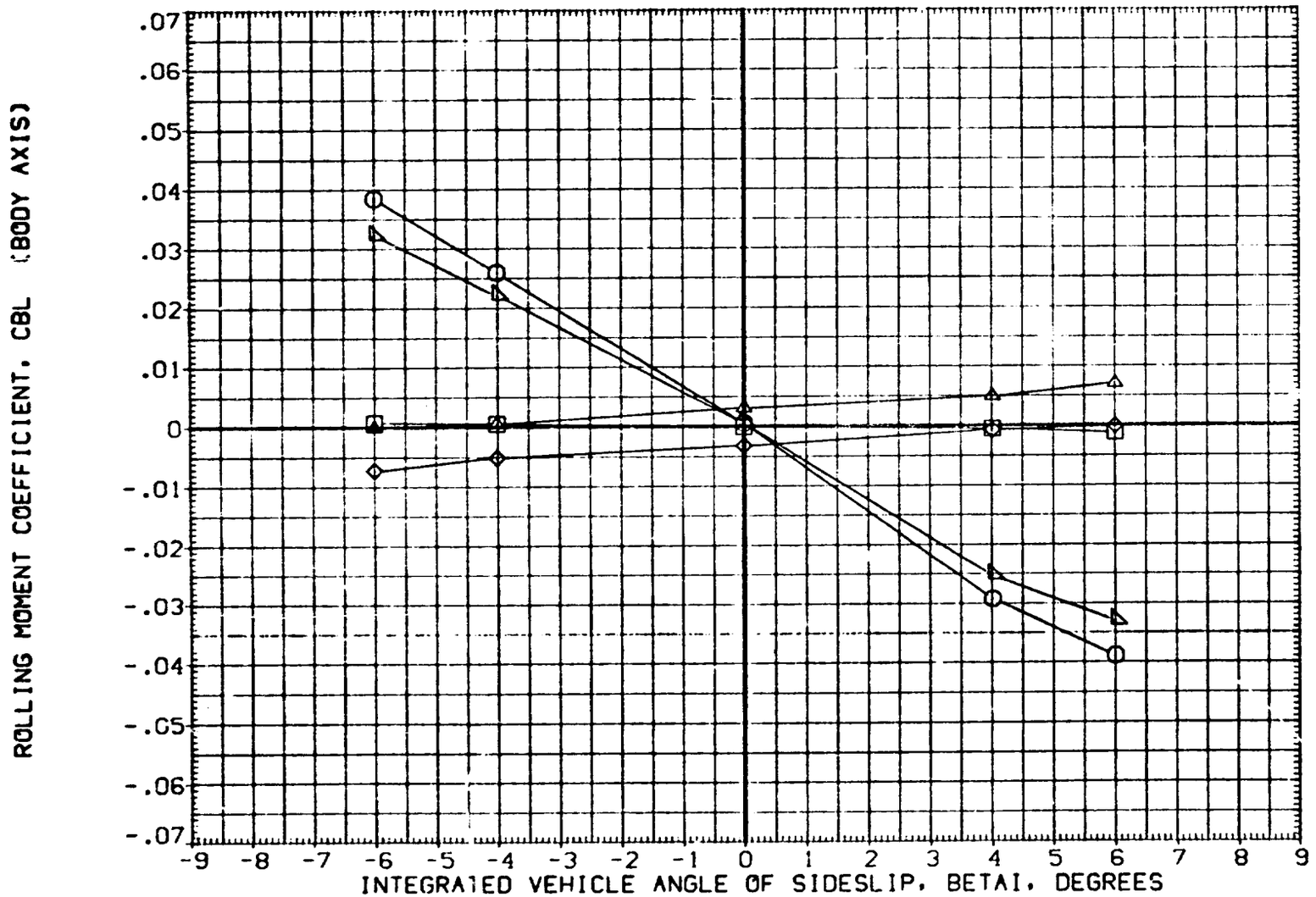


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(IA81) LVAP ORDITER+ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	576.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

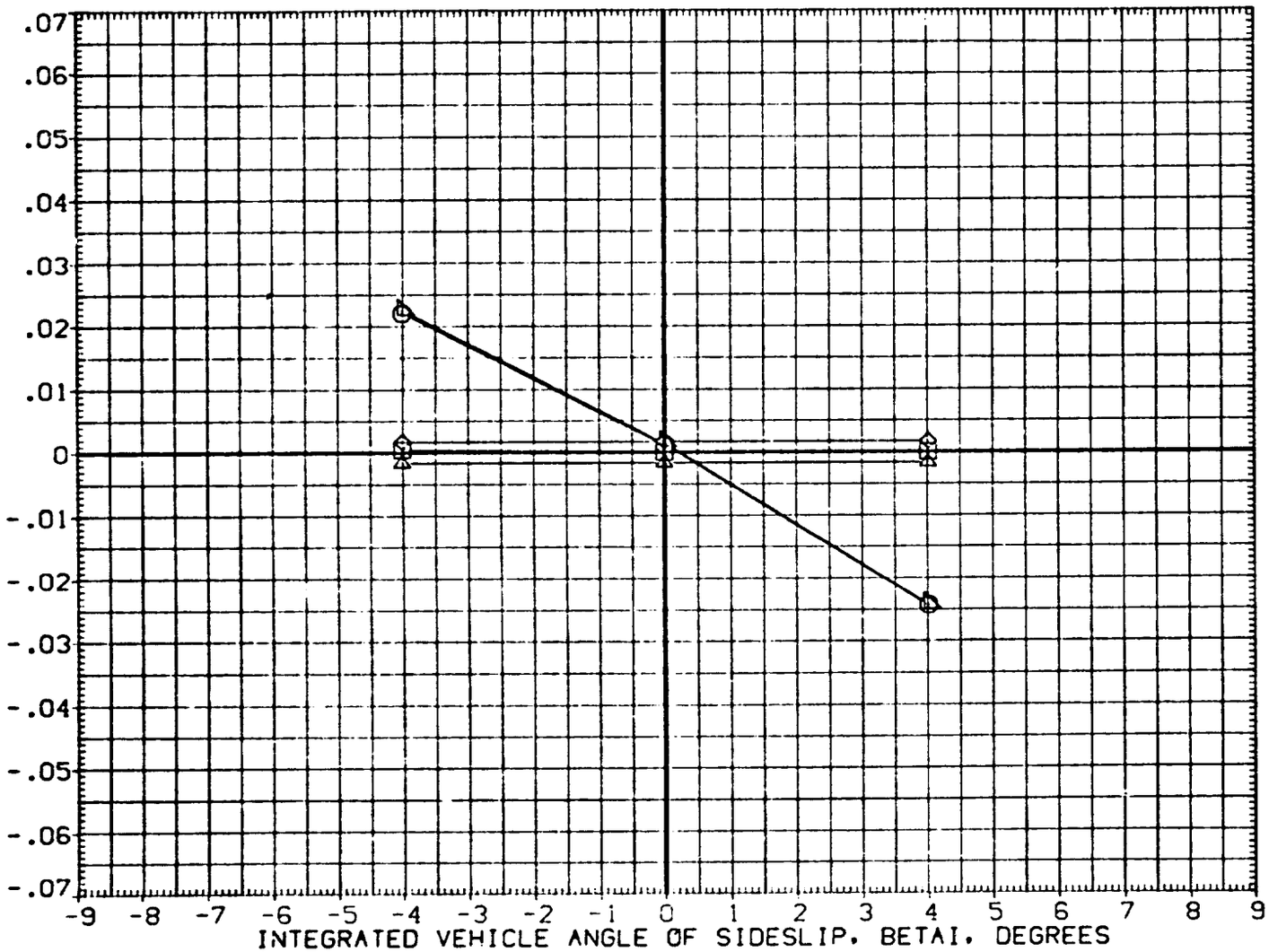


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

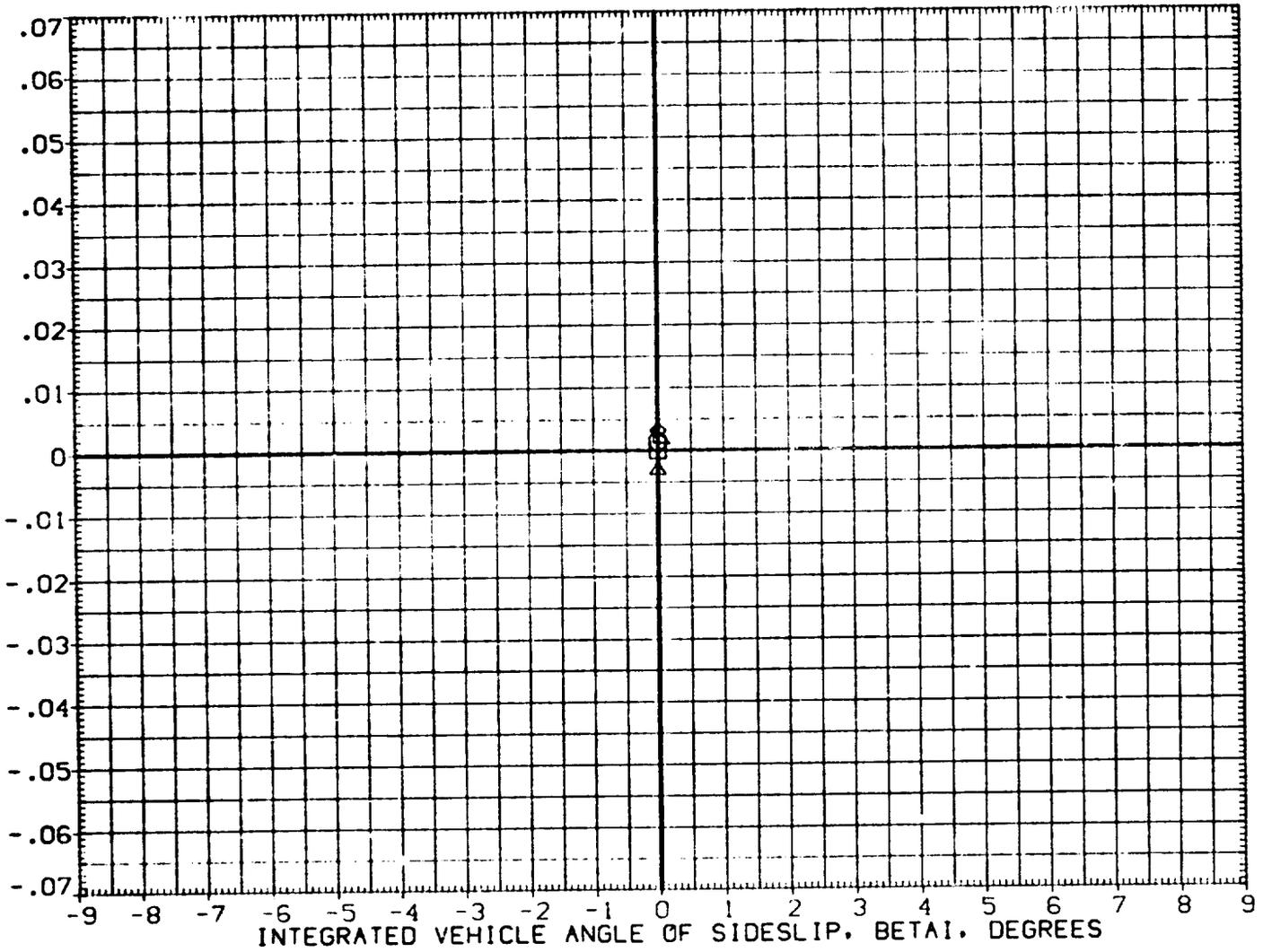


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	◸	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

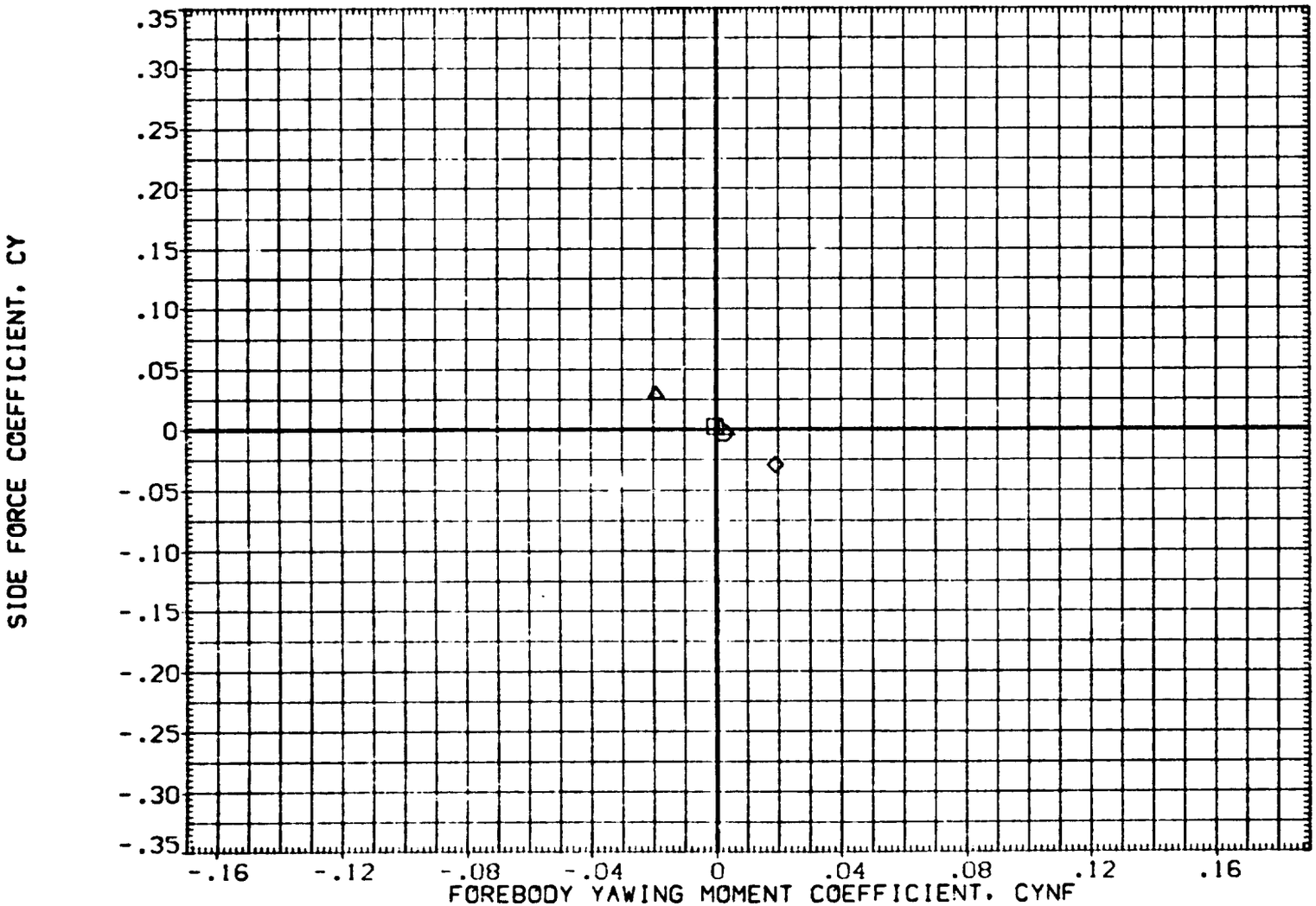


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET040)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	⊠	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	◁	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	◁	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

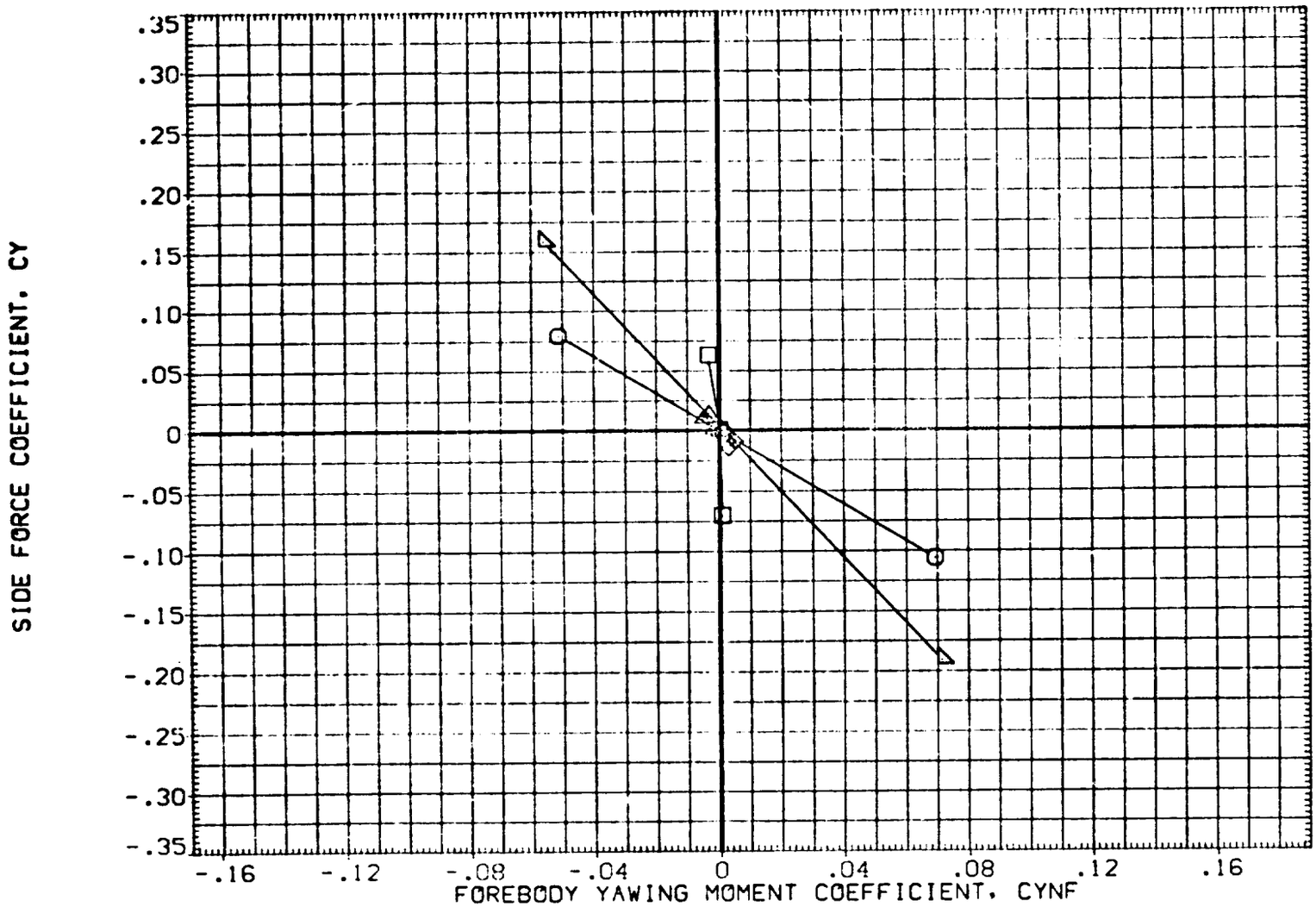


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

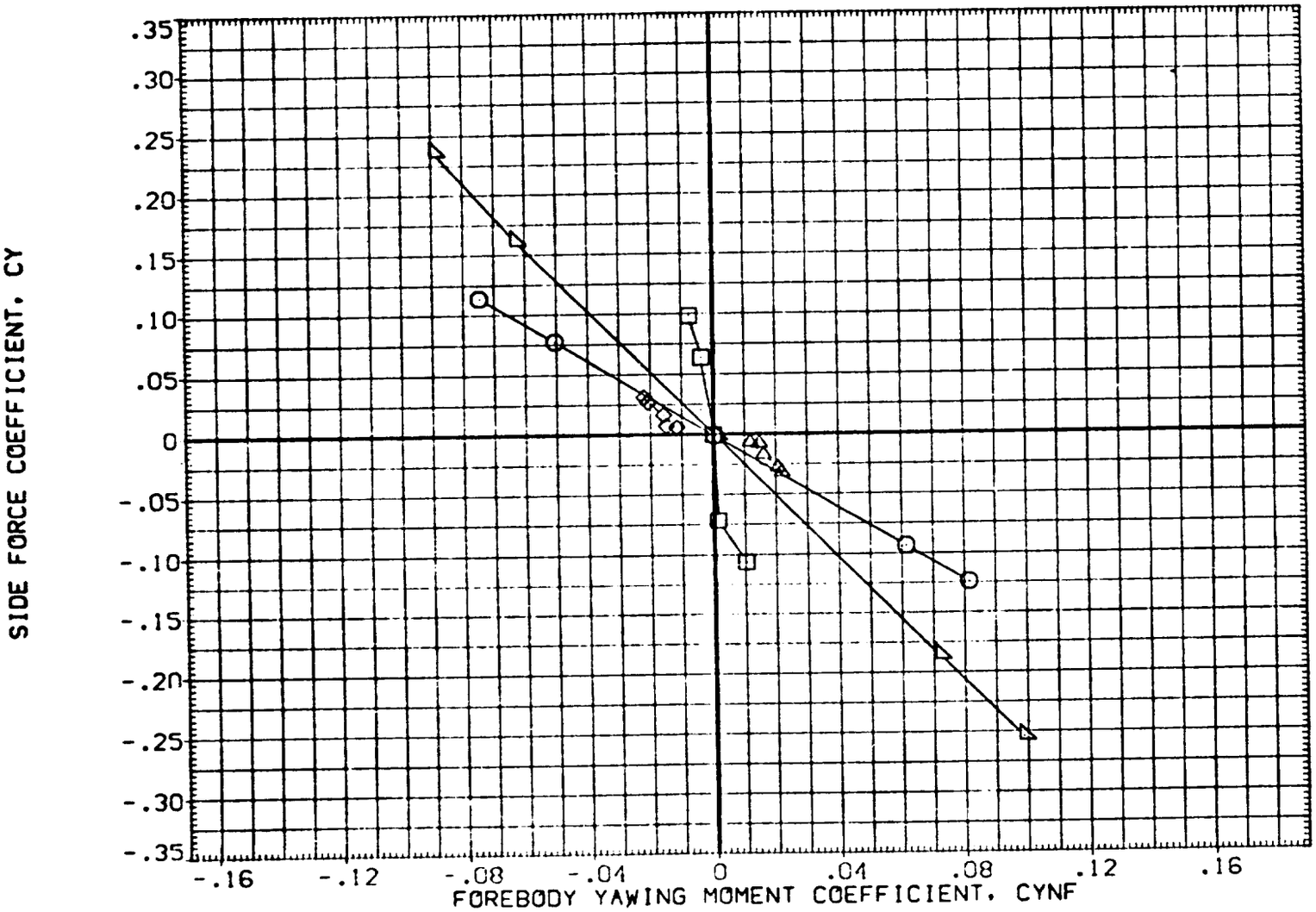


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET040)	AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

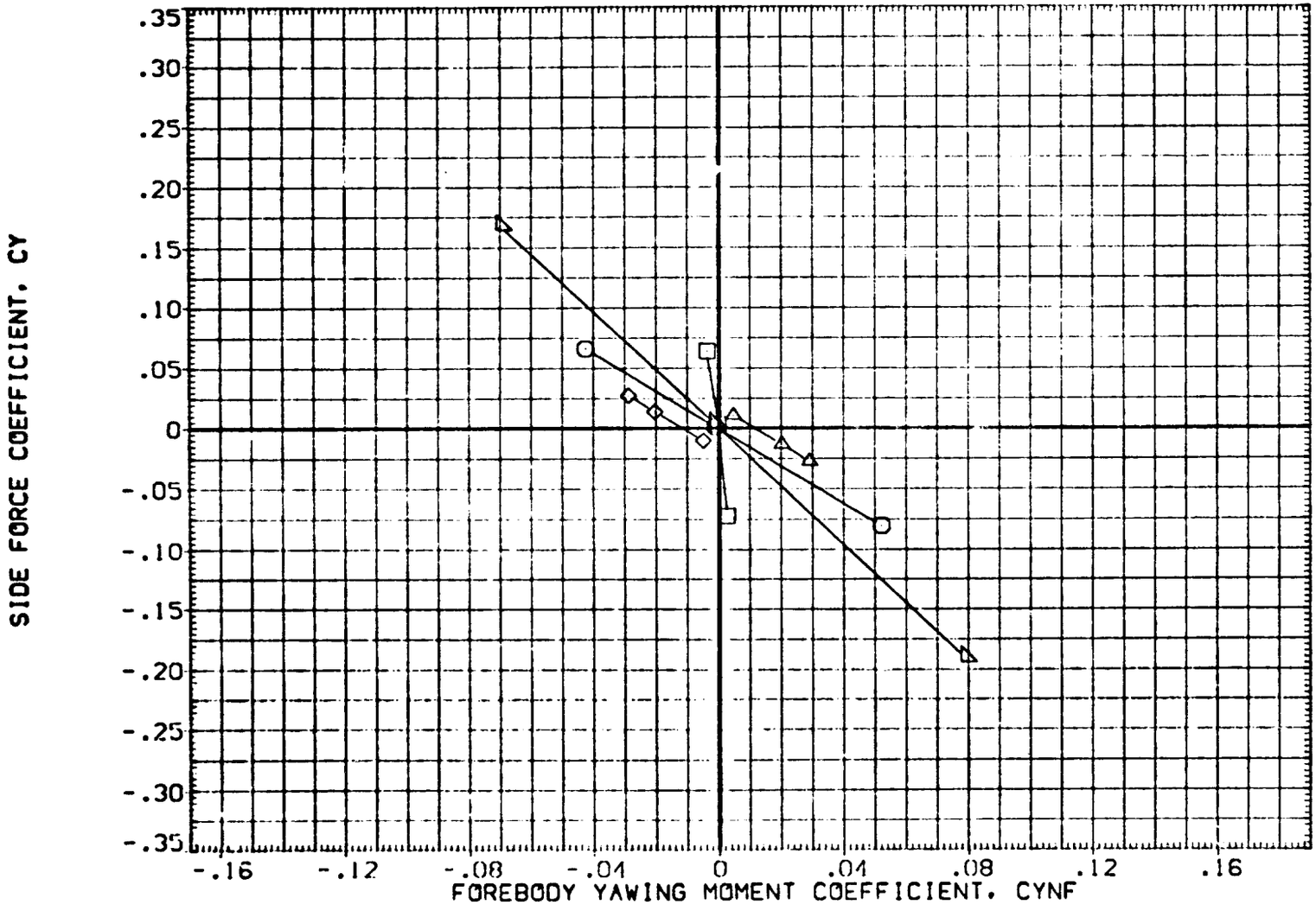


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

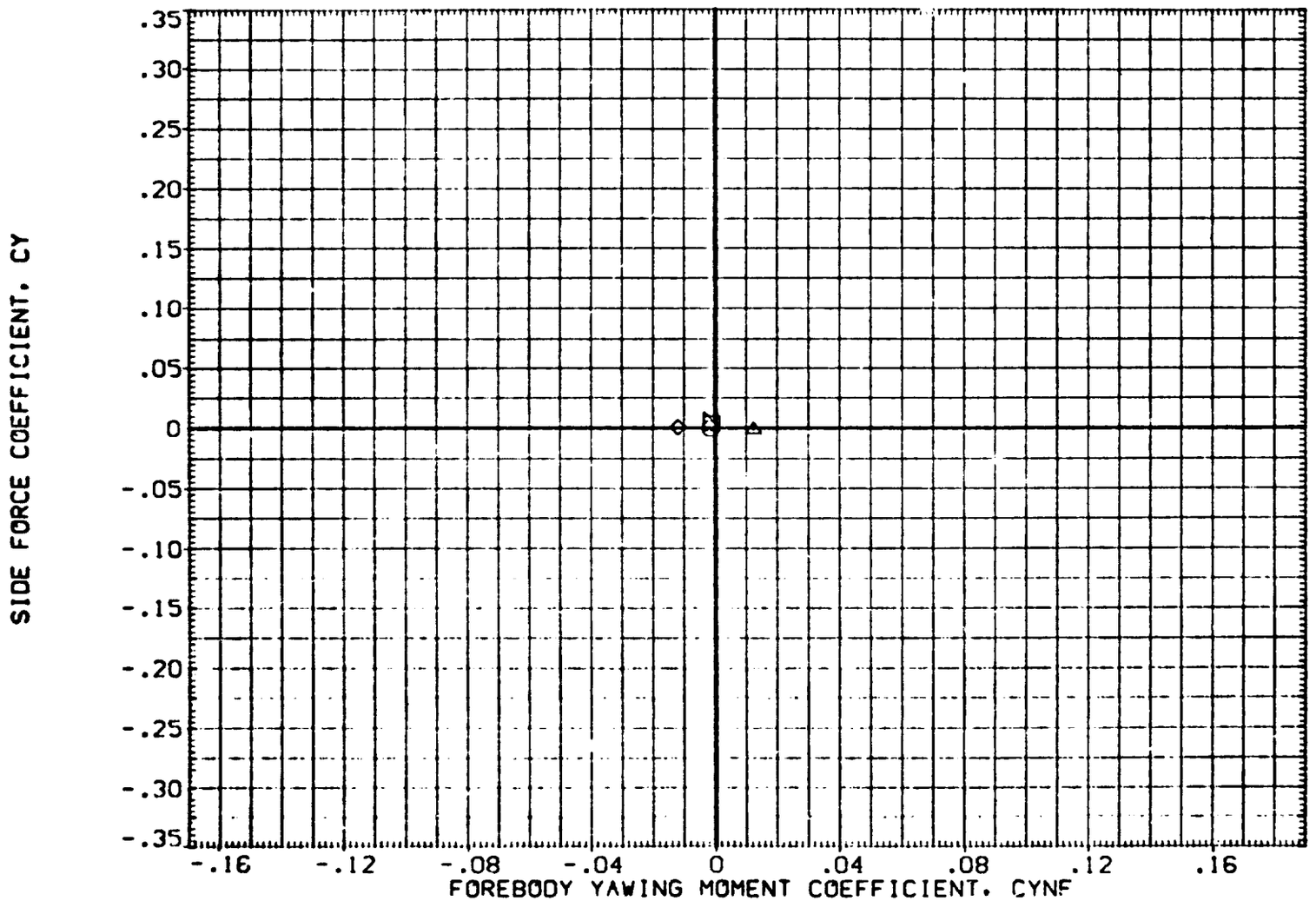


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(LET040)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	⊠	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	⊠	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

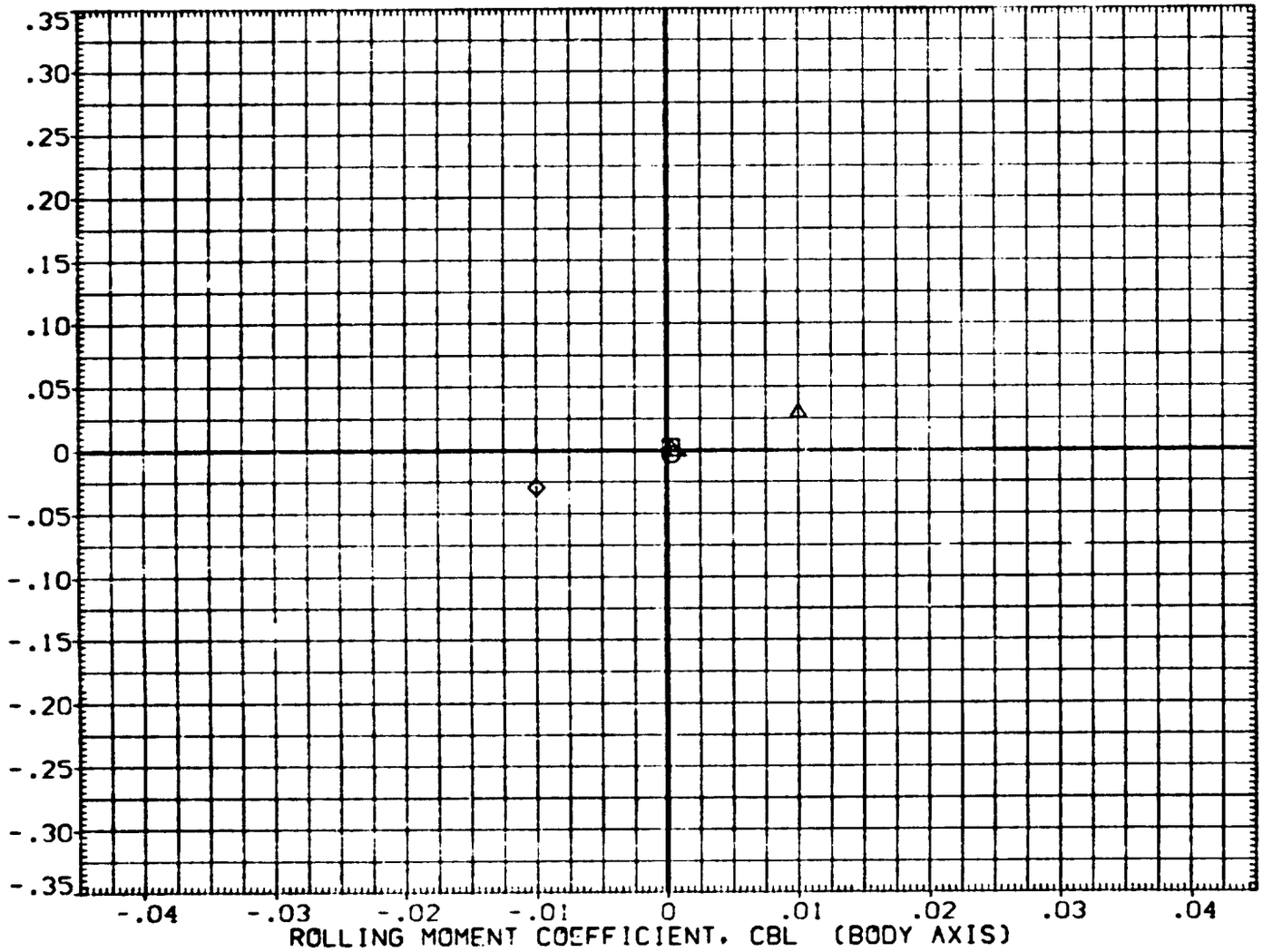


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

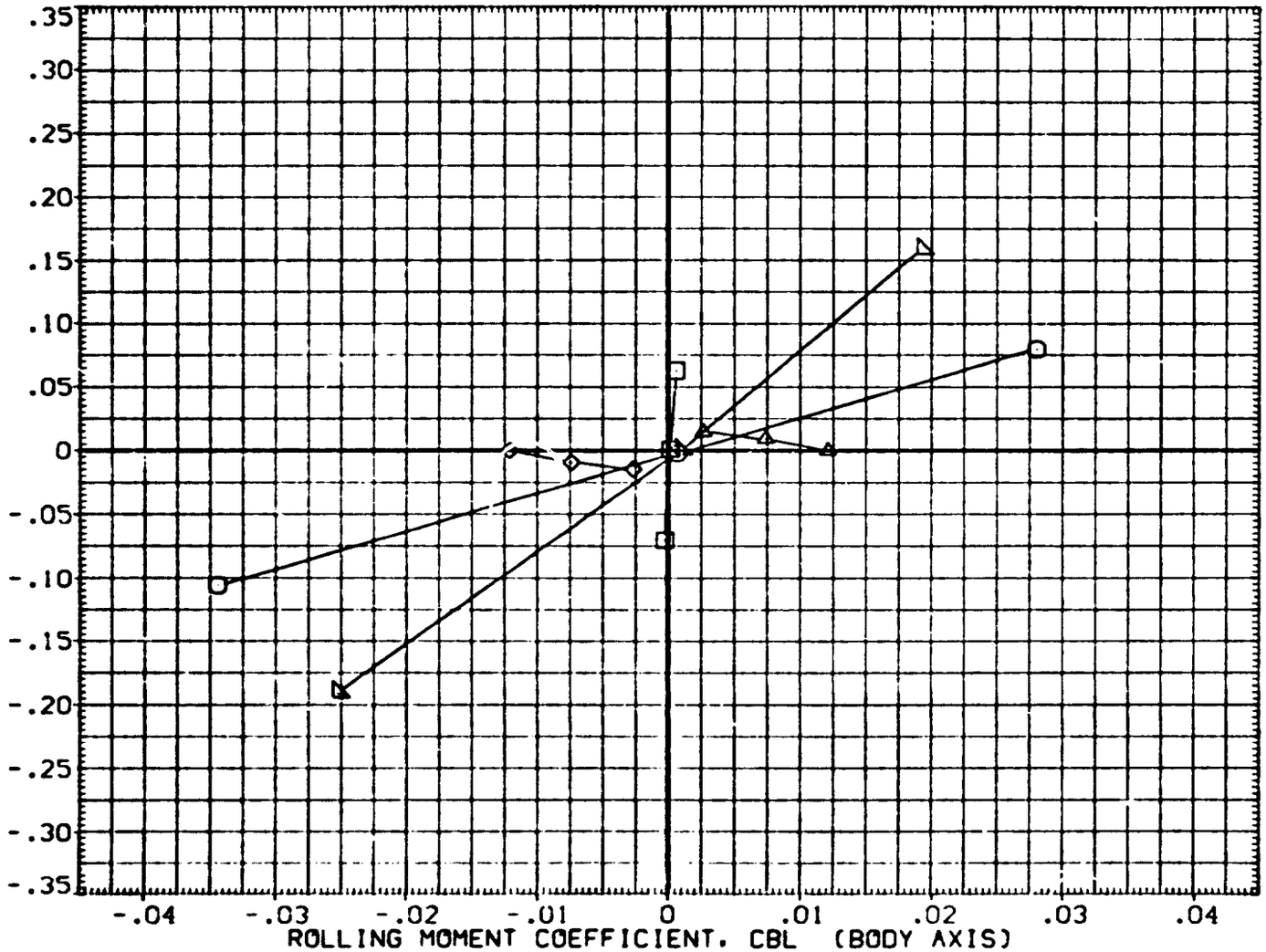


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(LETT40)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)	△	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

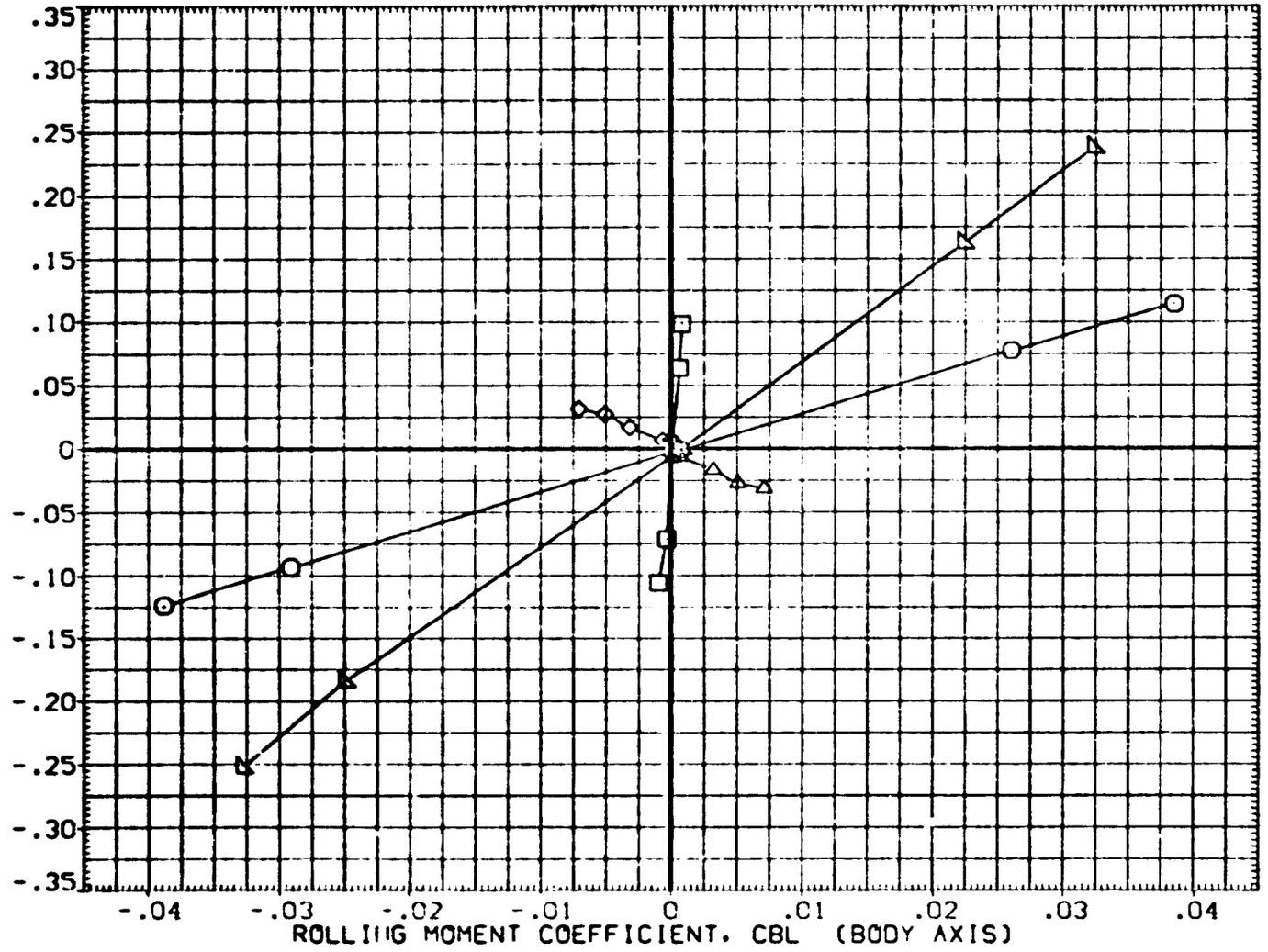


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(LETT40)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(LETL4C)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(LETR40)		AMES97-019([A81]) LVAP R-SRB ALL HL SEALED	.000	.000	2.000	.000
(LETI40)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

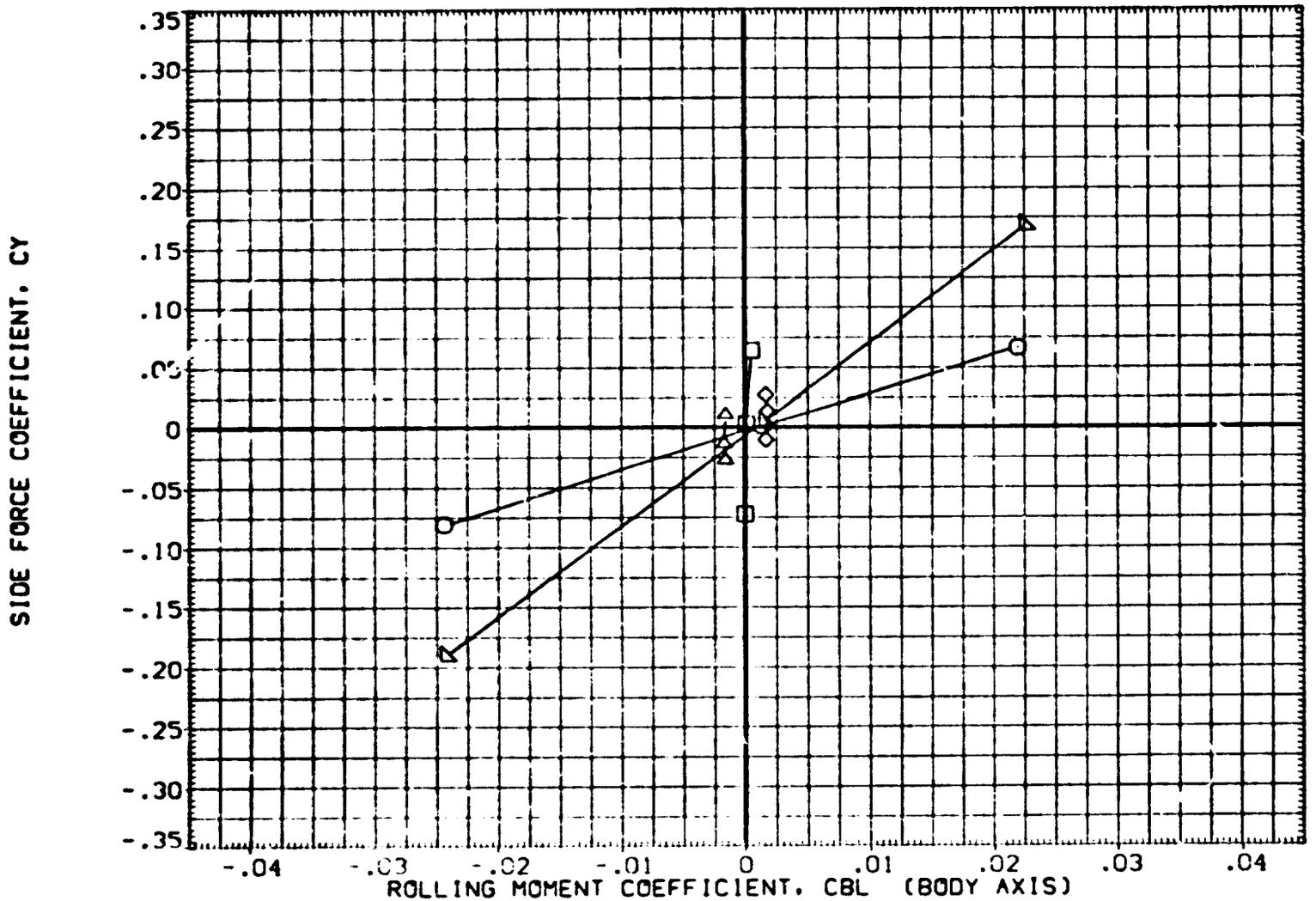


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET040)	□	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000
(LETT40)	▽	AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	.000	.000	2.000	.000
(LETL40)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	.000	.000	2.000	.000
(LETR40)	◁	AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	.000	.000	2.000	.000
(LETI40)	△	AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

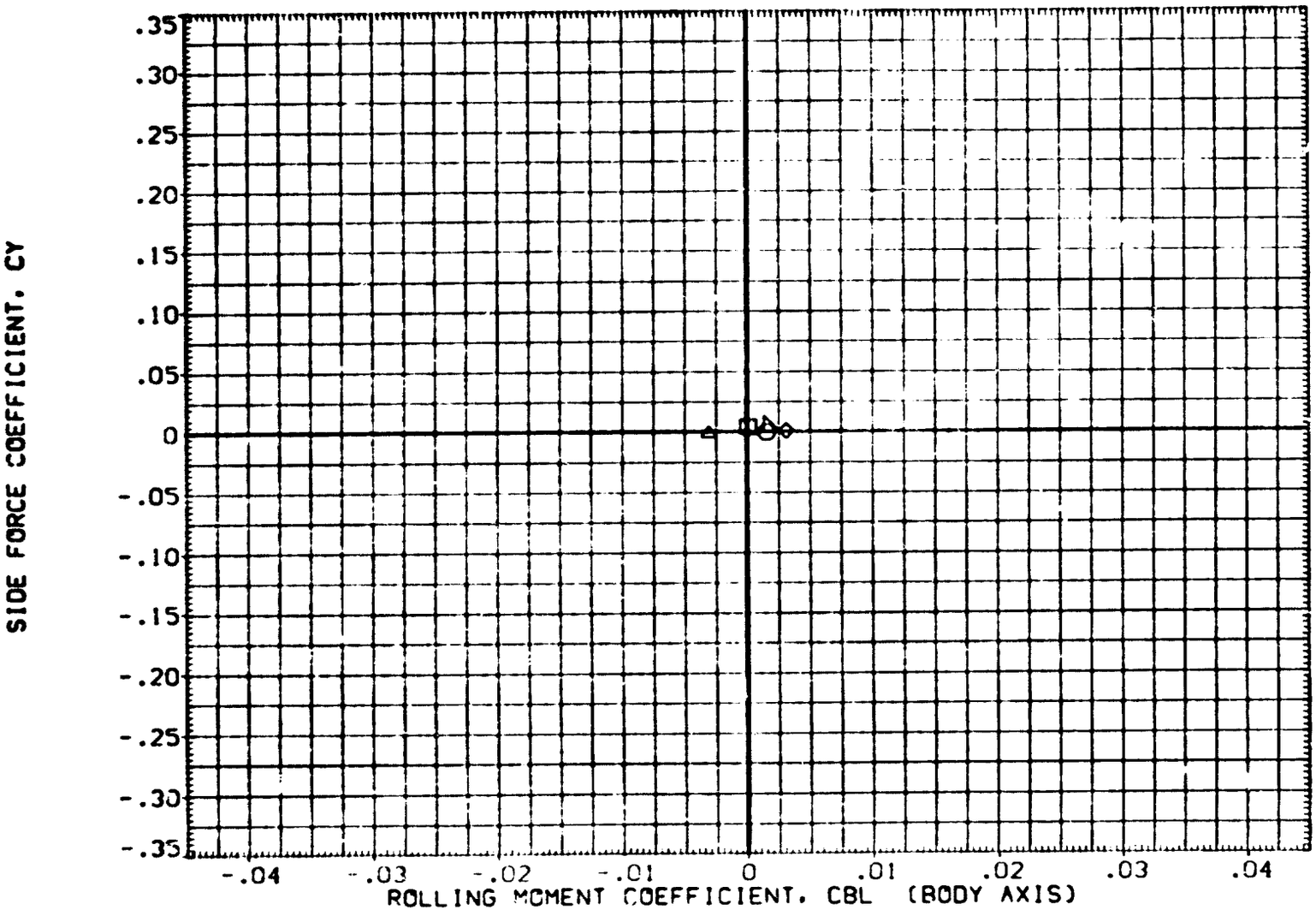


FIG. 22 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

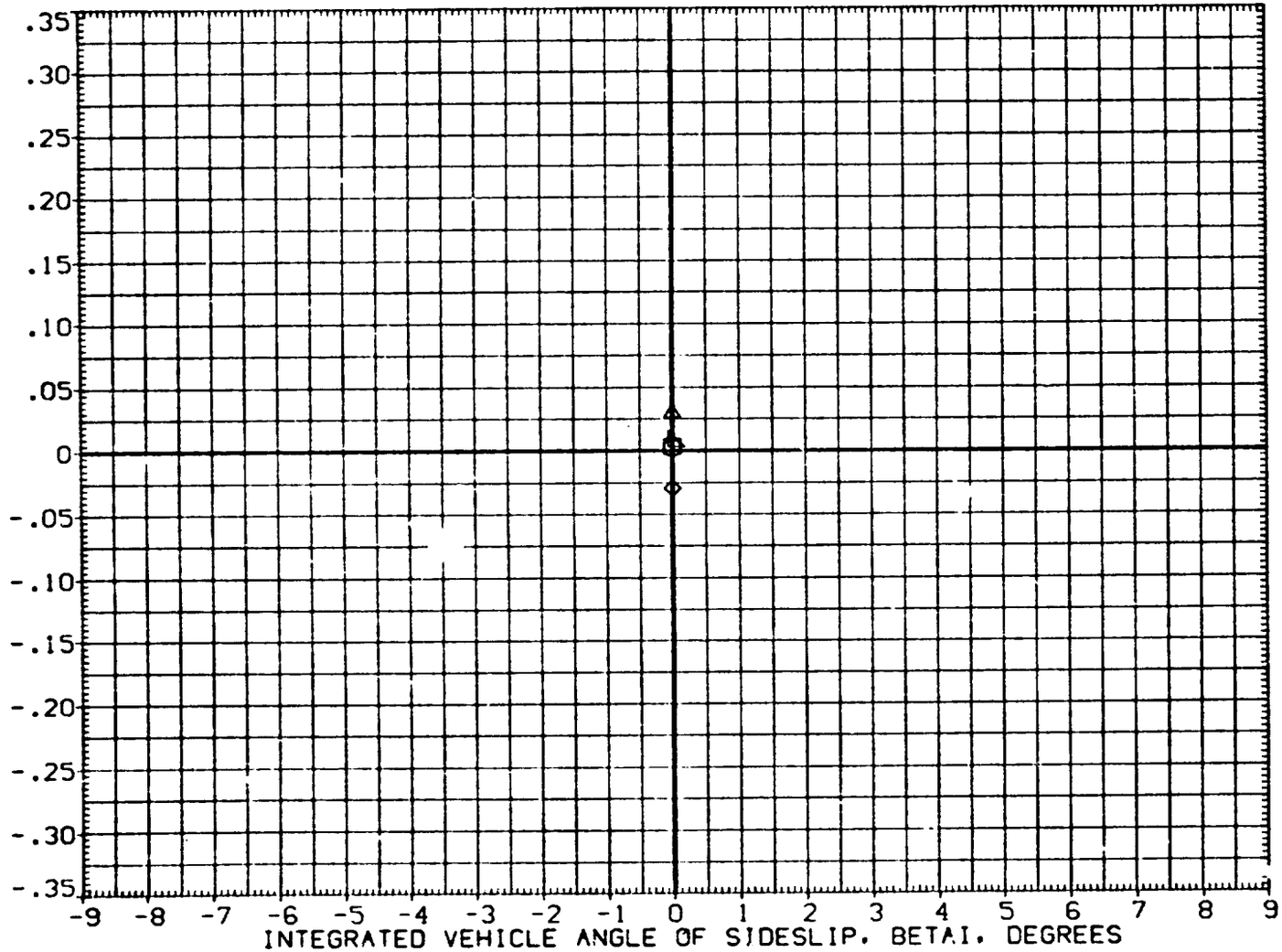


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

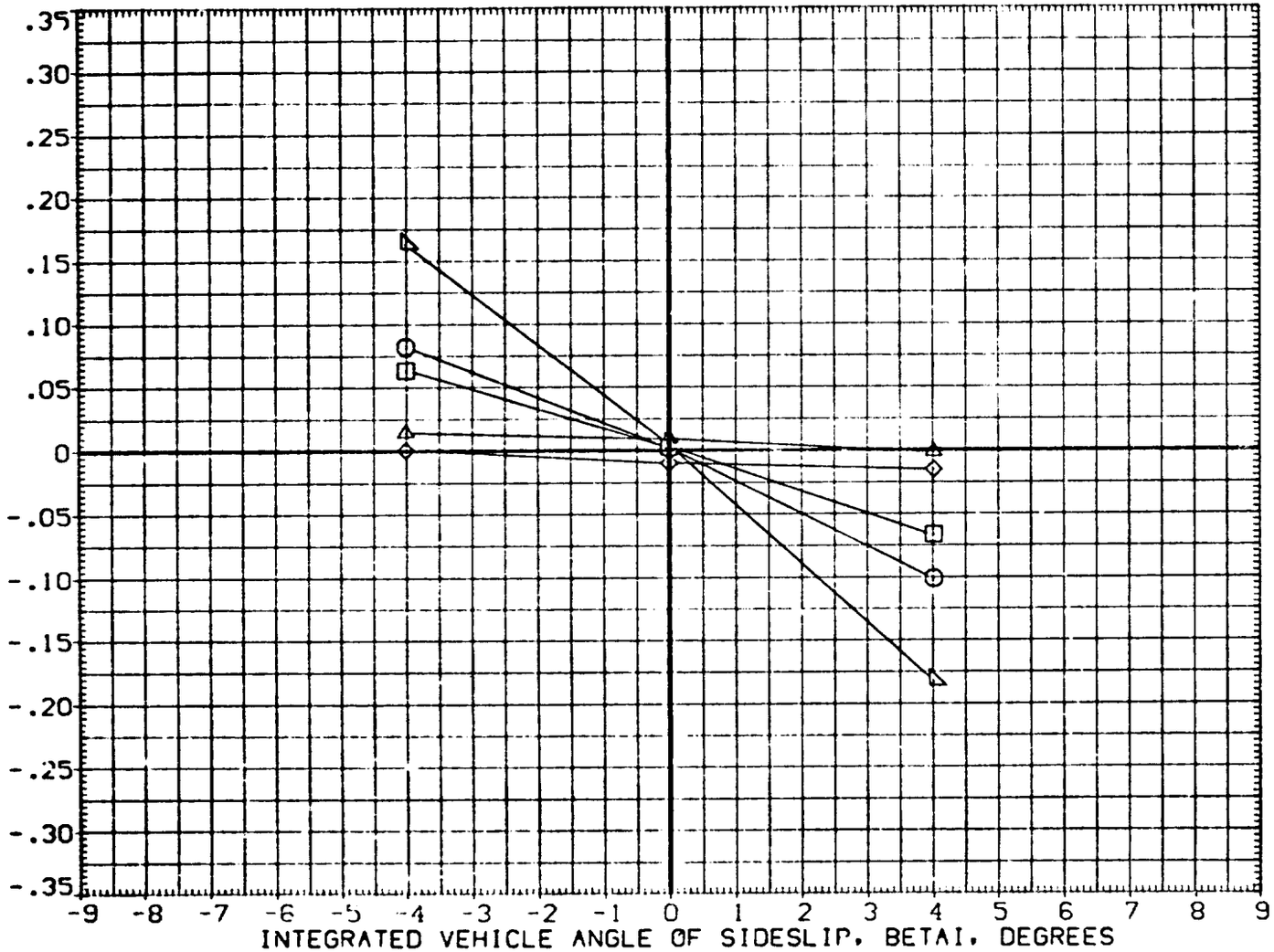


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

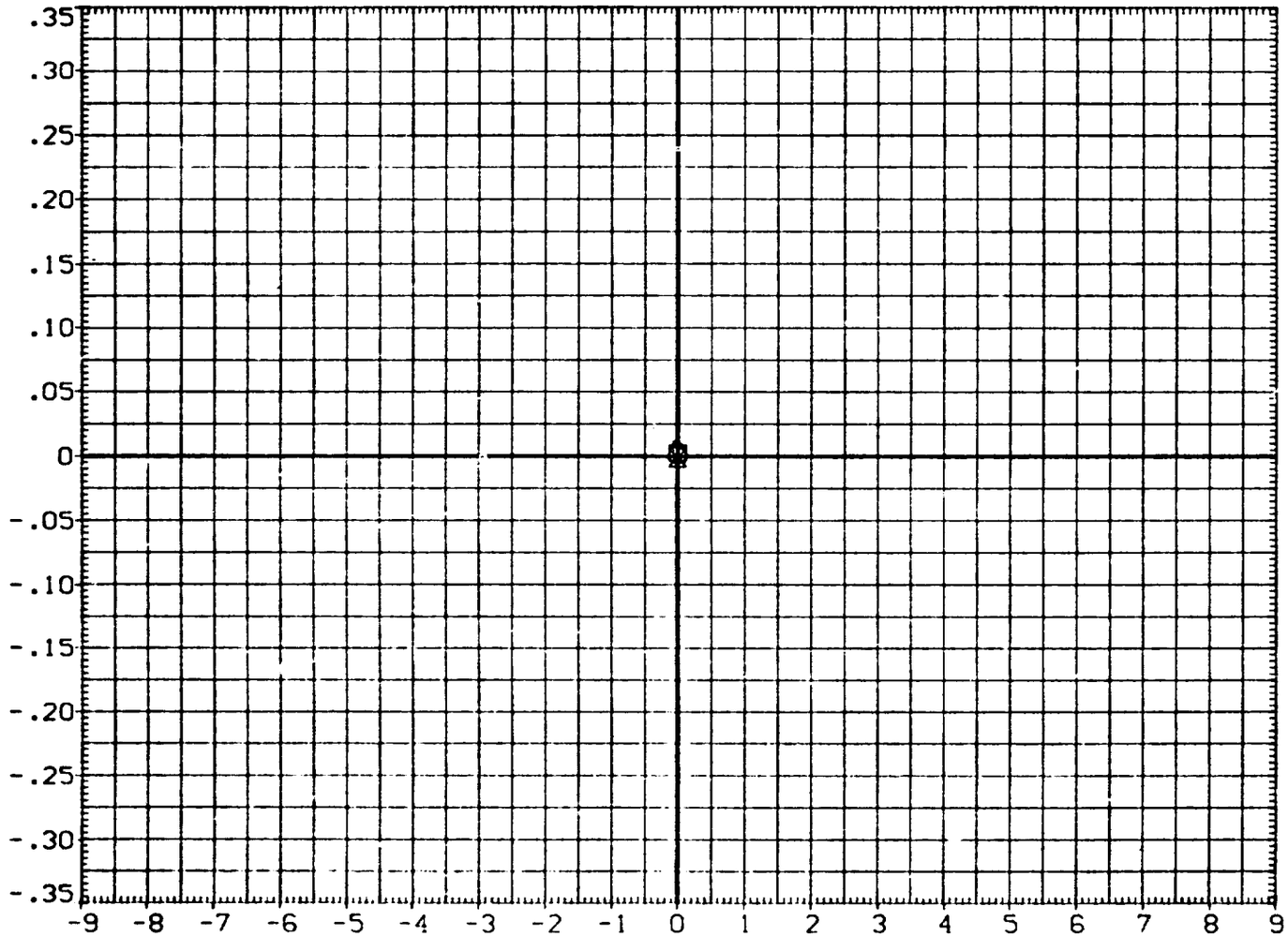


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

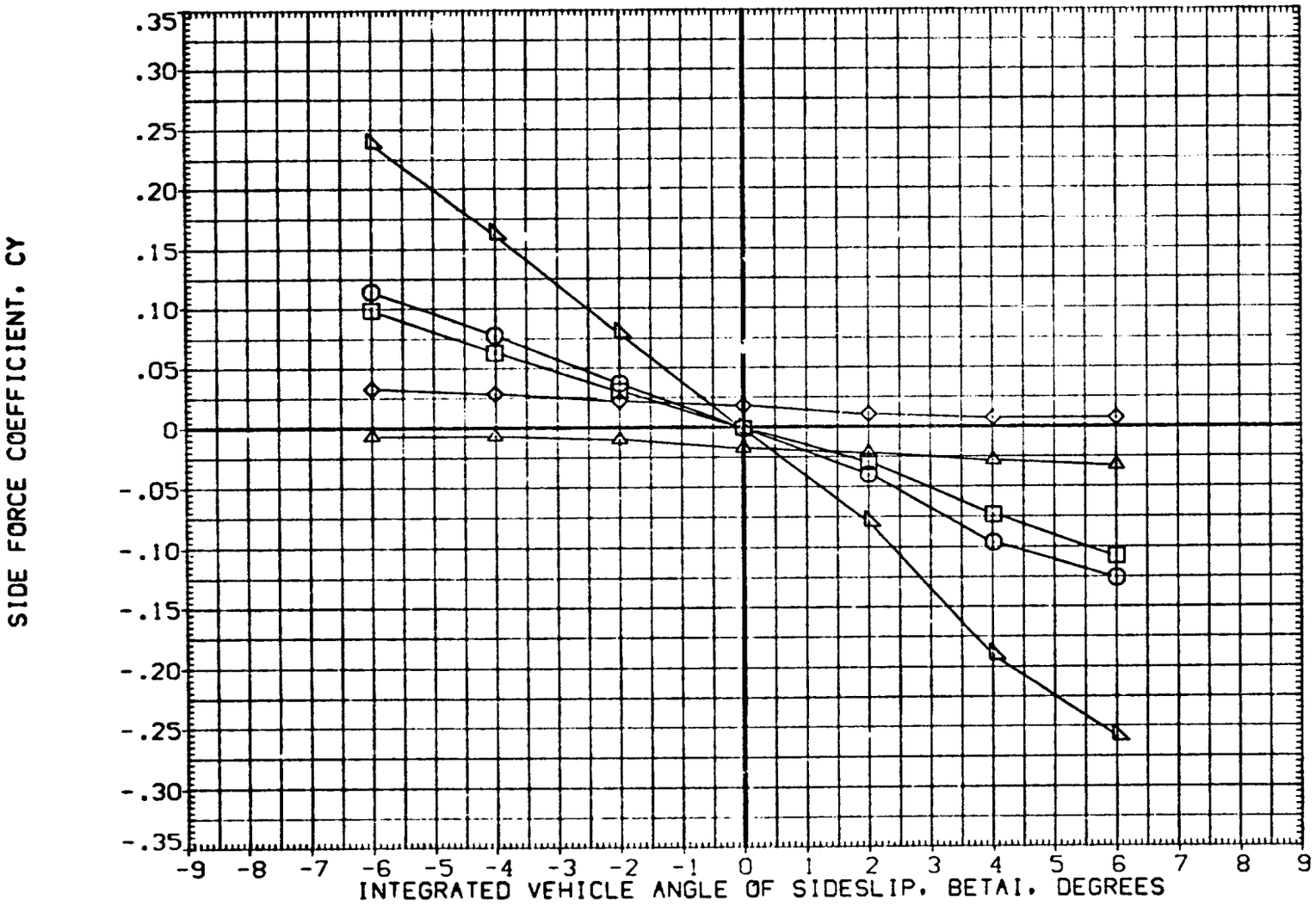


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

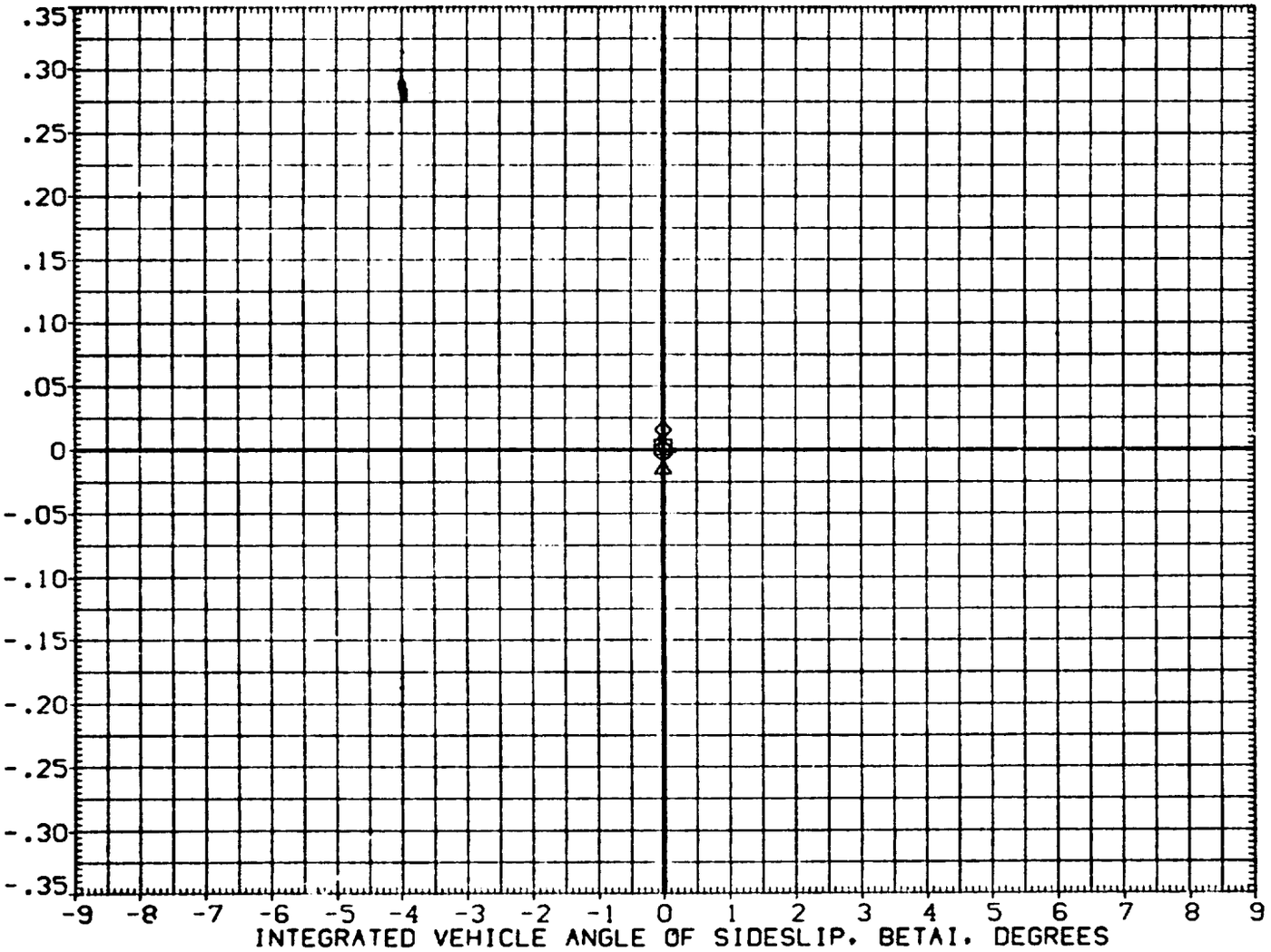


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

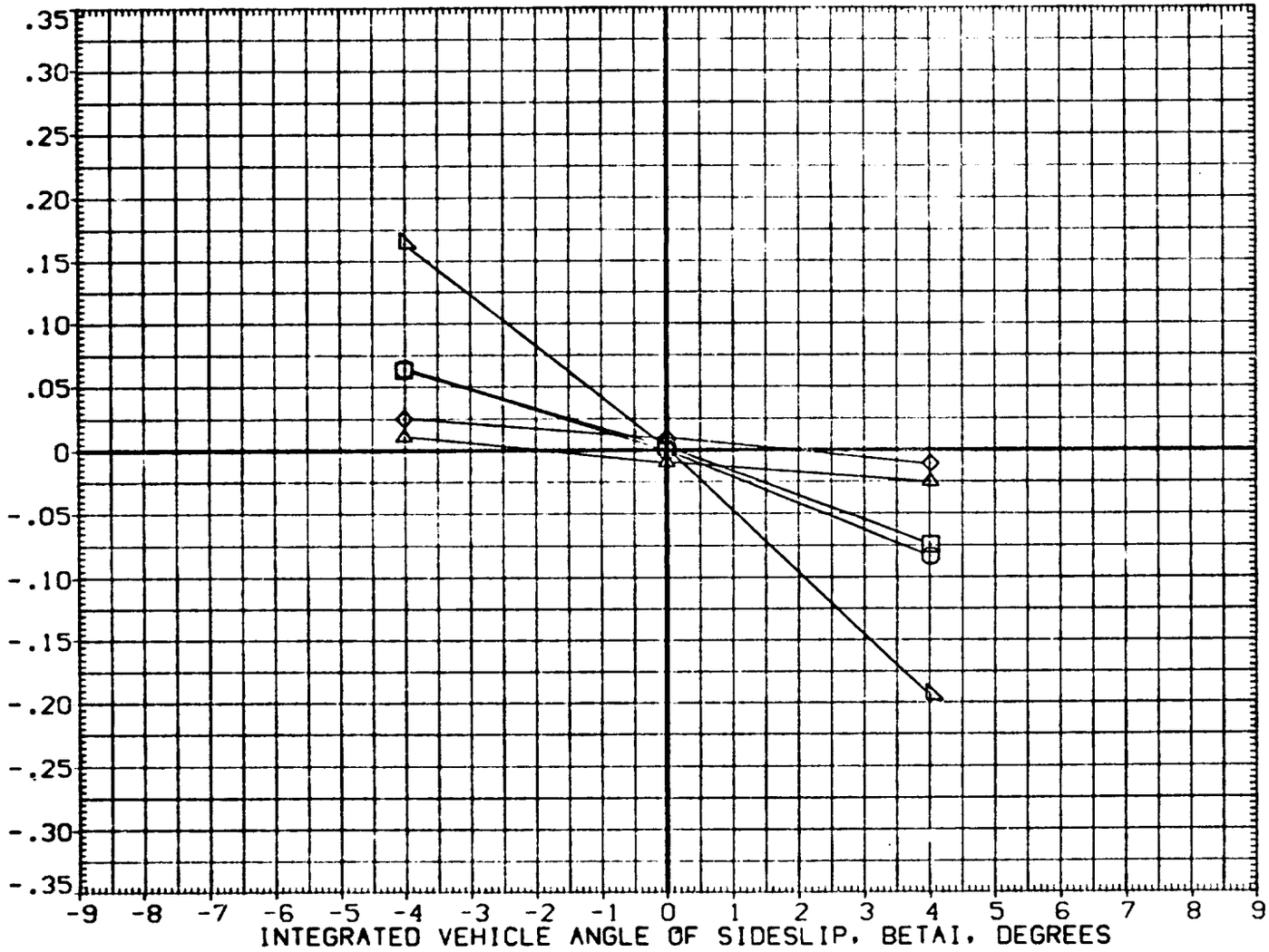


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

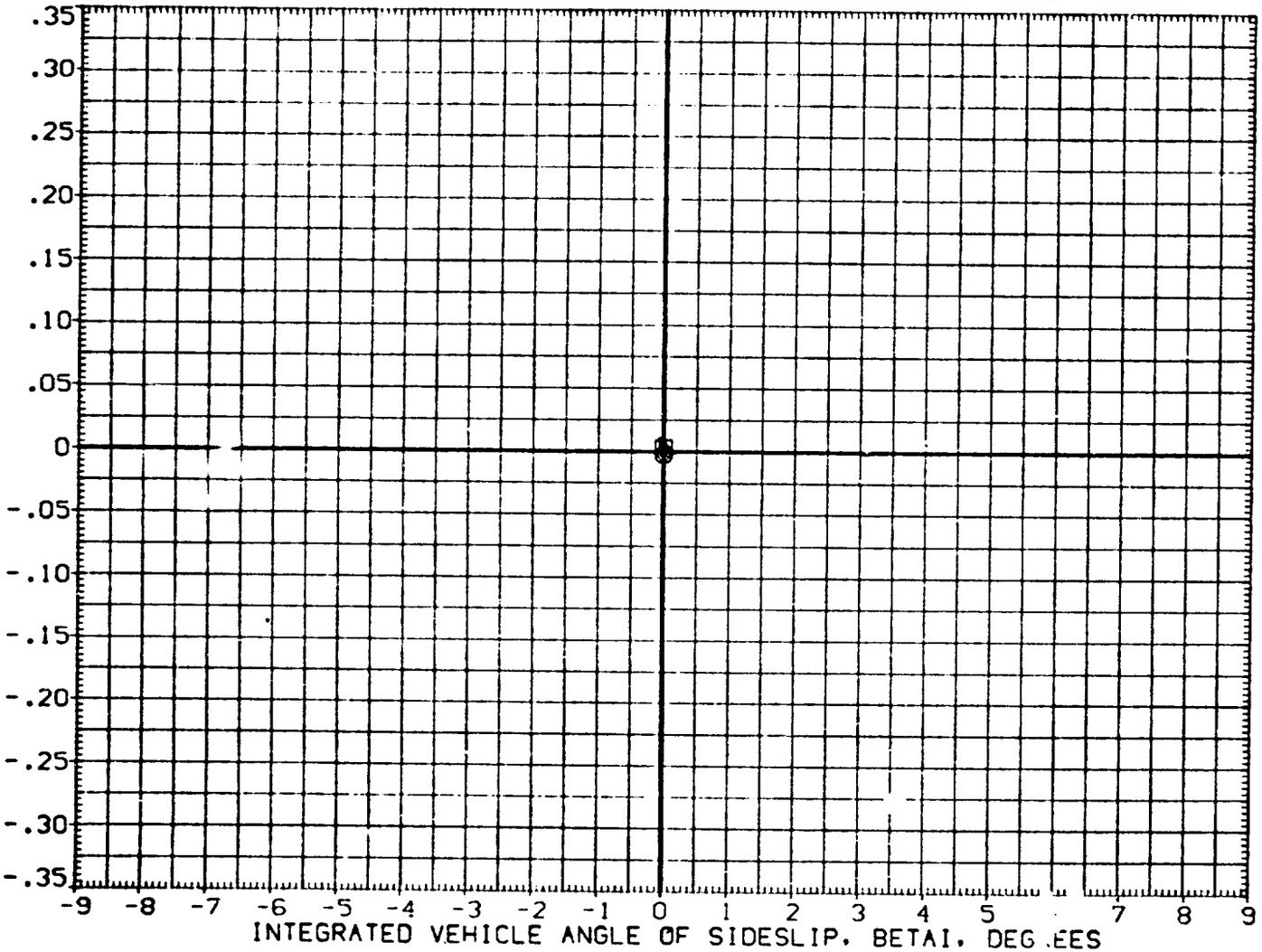


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPCBRK
(LET044)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

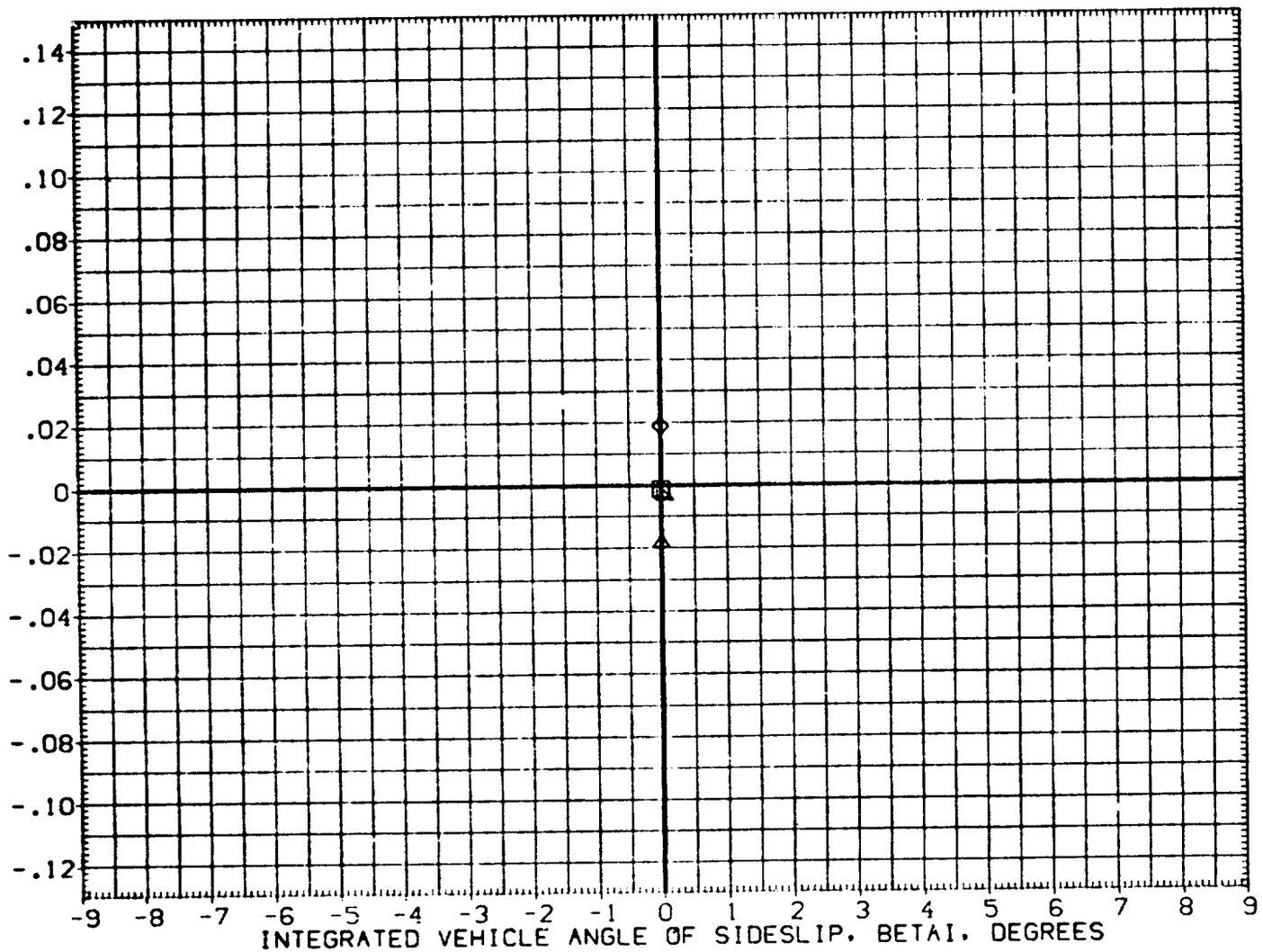


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.3000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

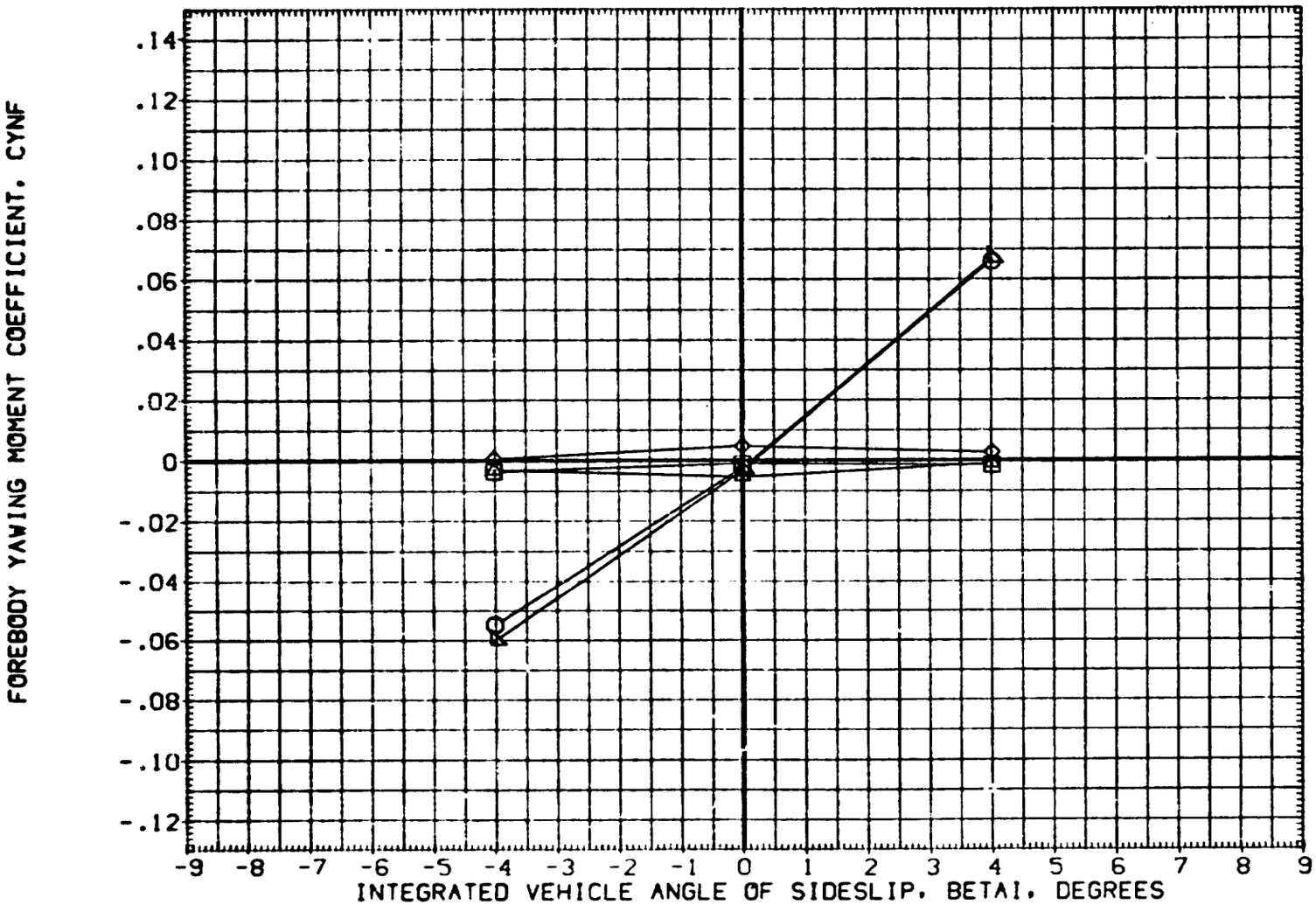


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

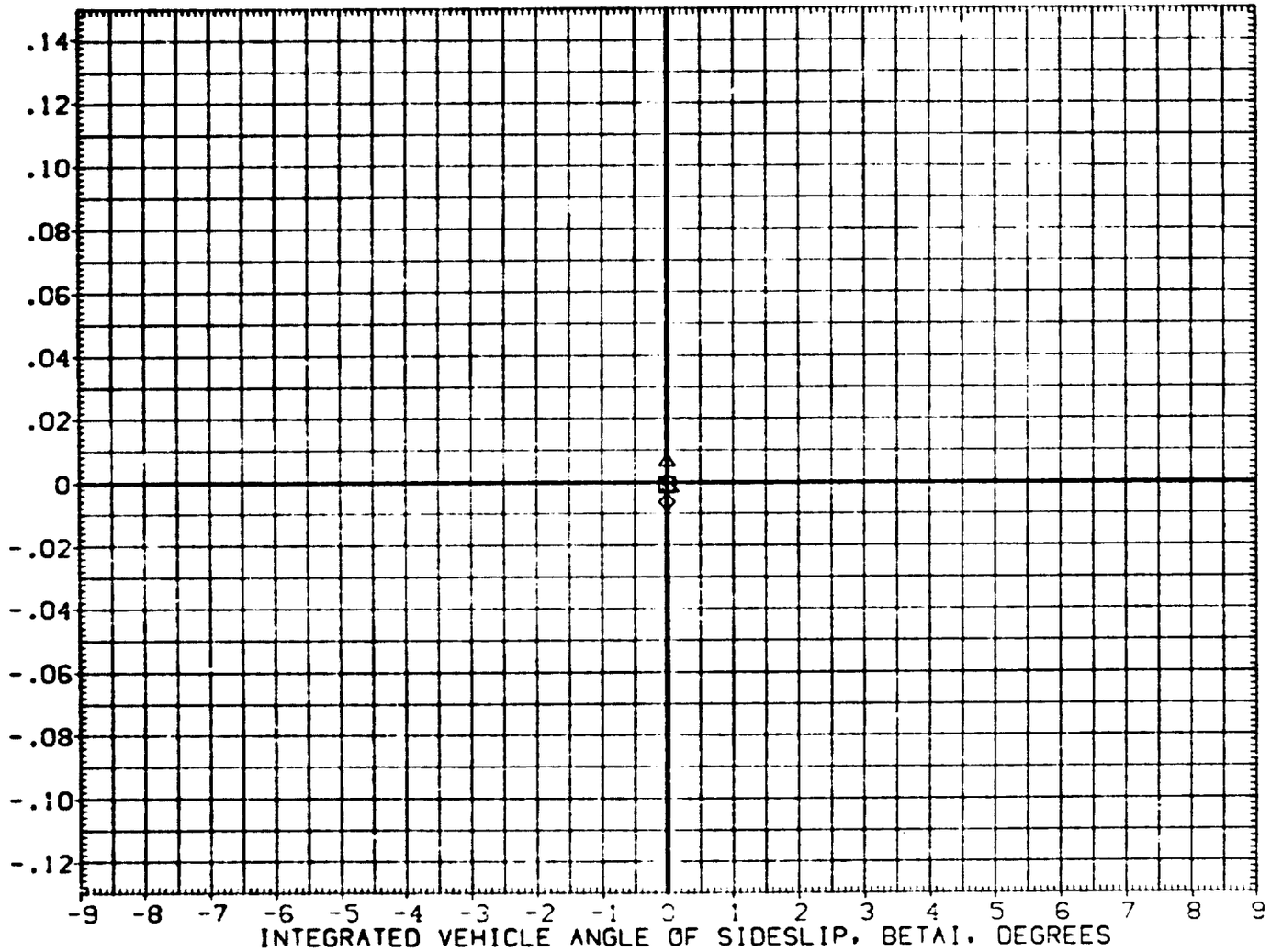


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

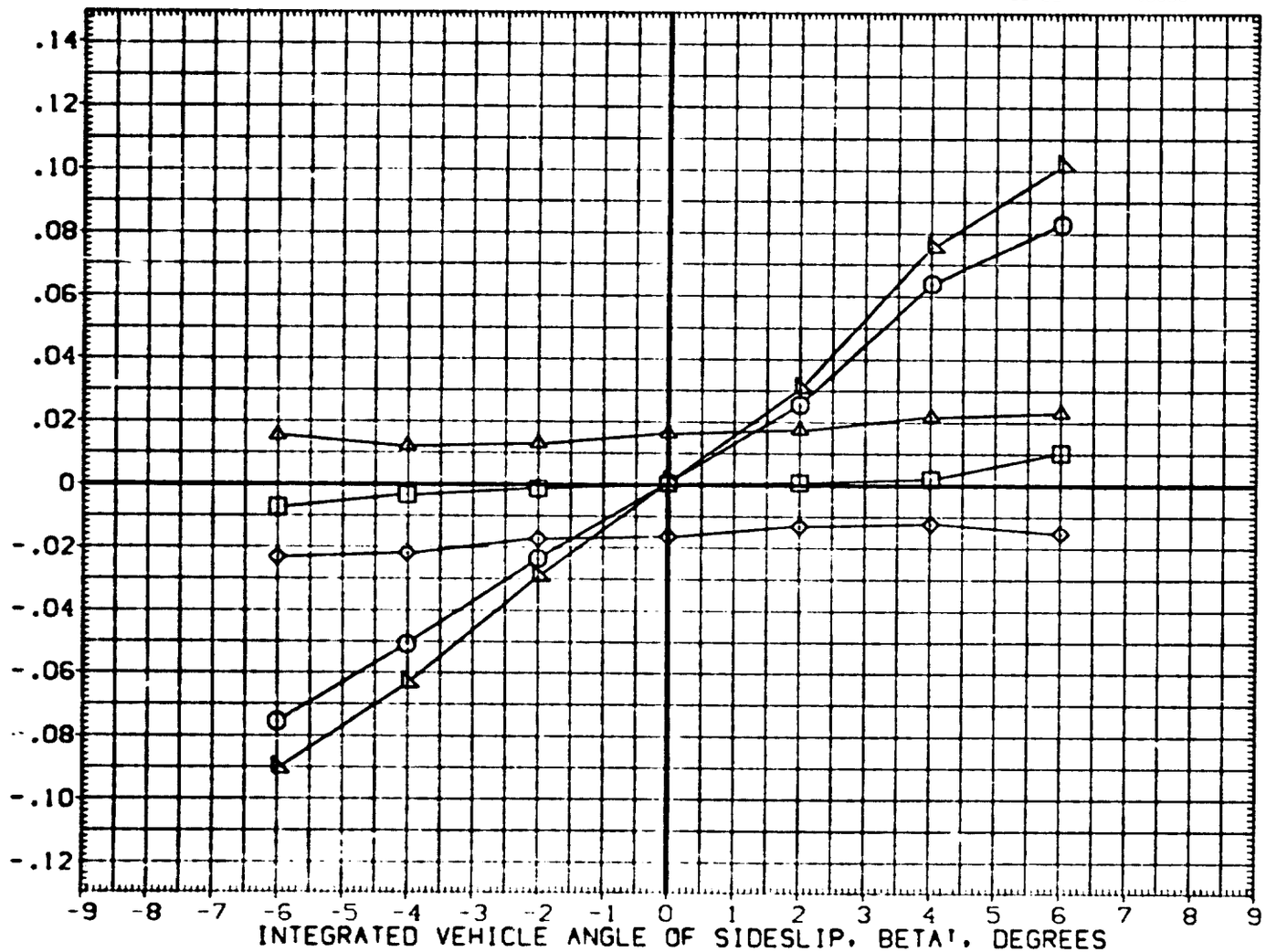


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	▽	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	◁	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

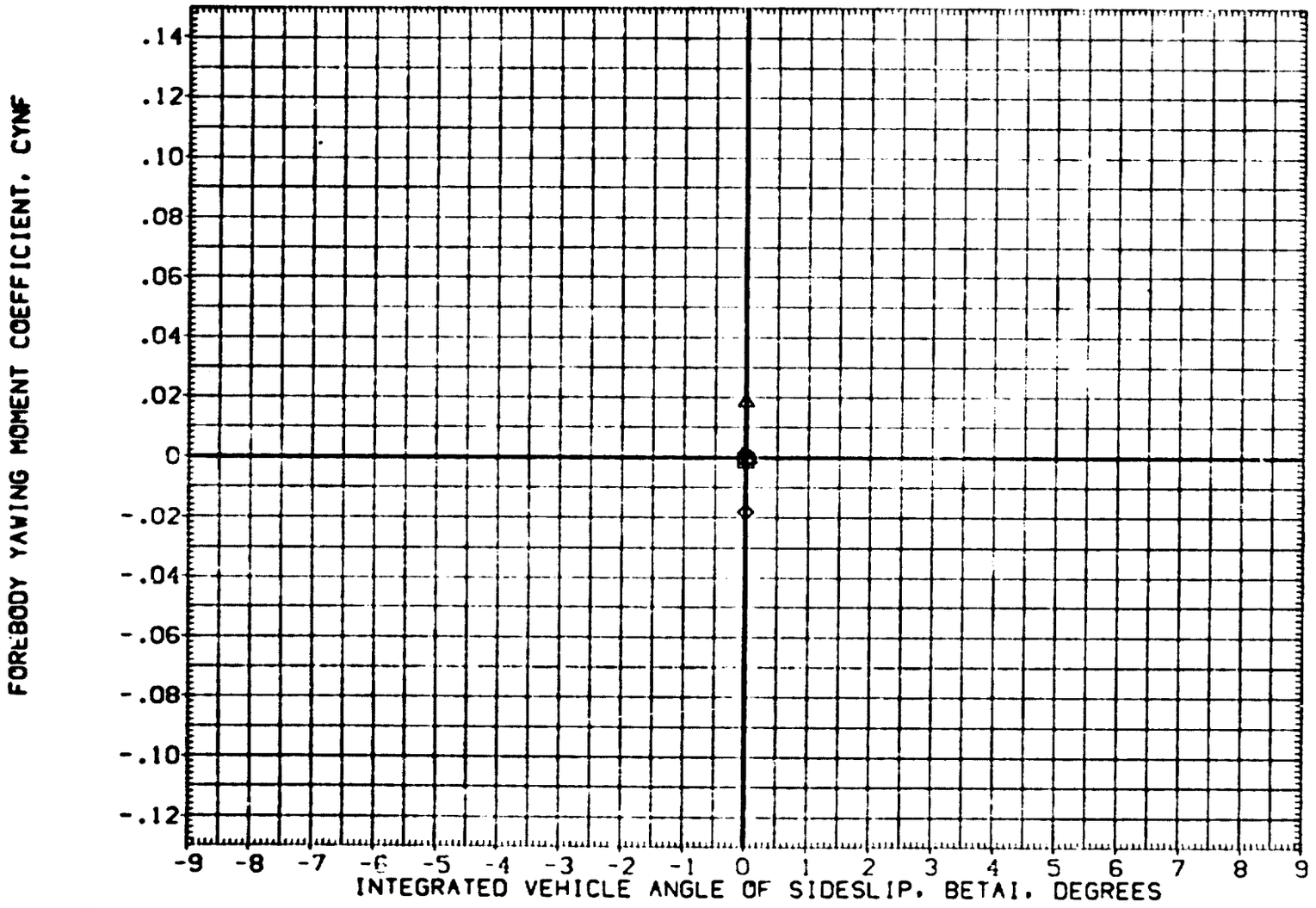


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.000	.000
(LETT44)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	0.000	.000	2.000	.000
(LETL44)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.000	.000
(LETR44)		AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	0.000	.000	2.000	.000
(LETI44)		AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

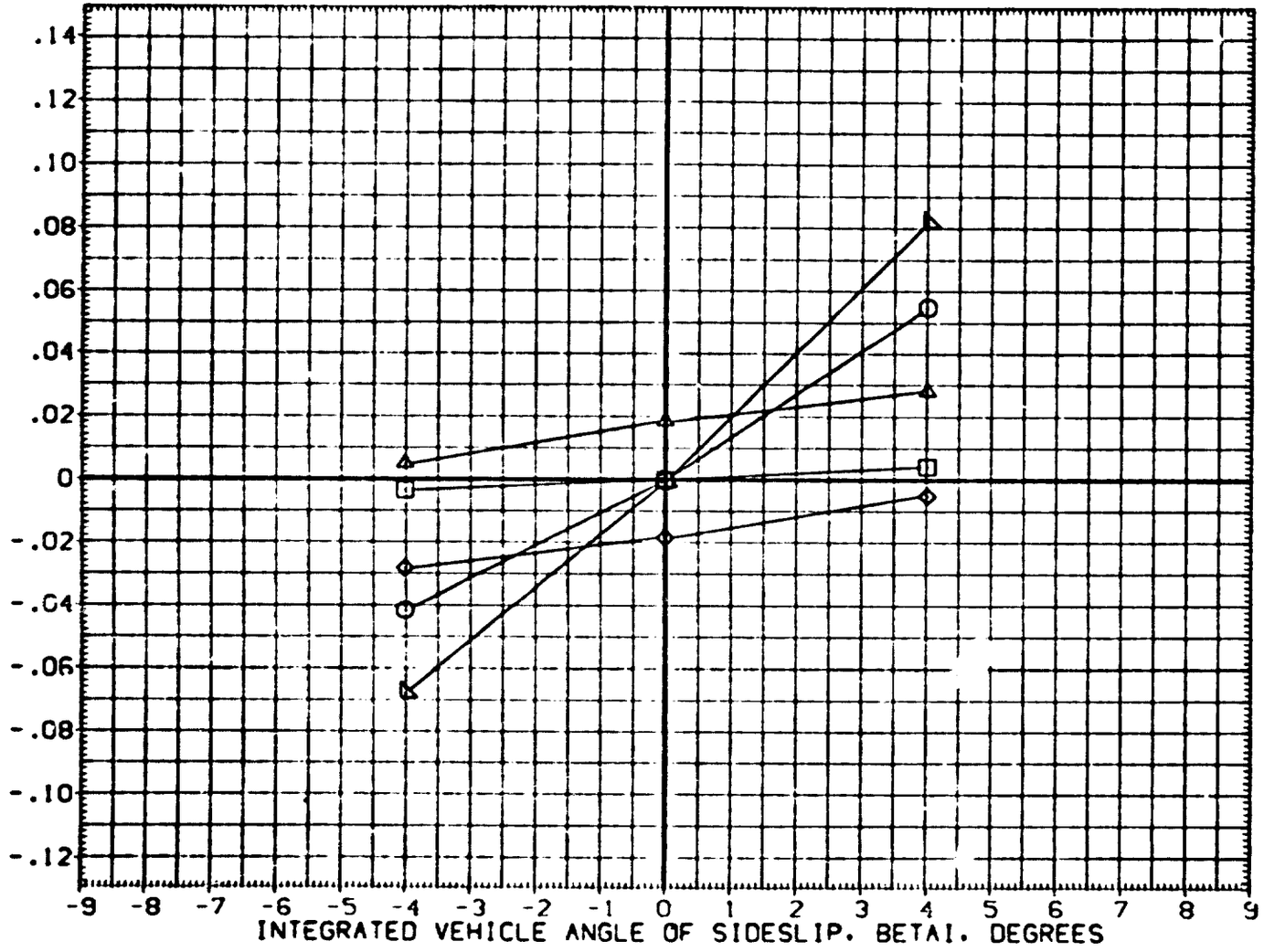


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	0.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	0.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	0.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

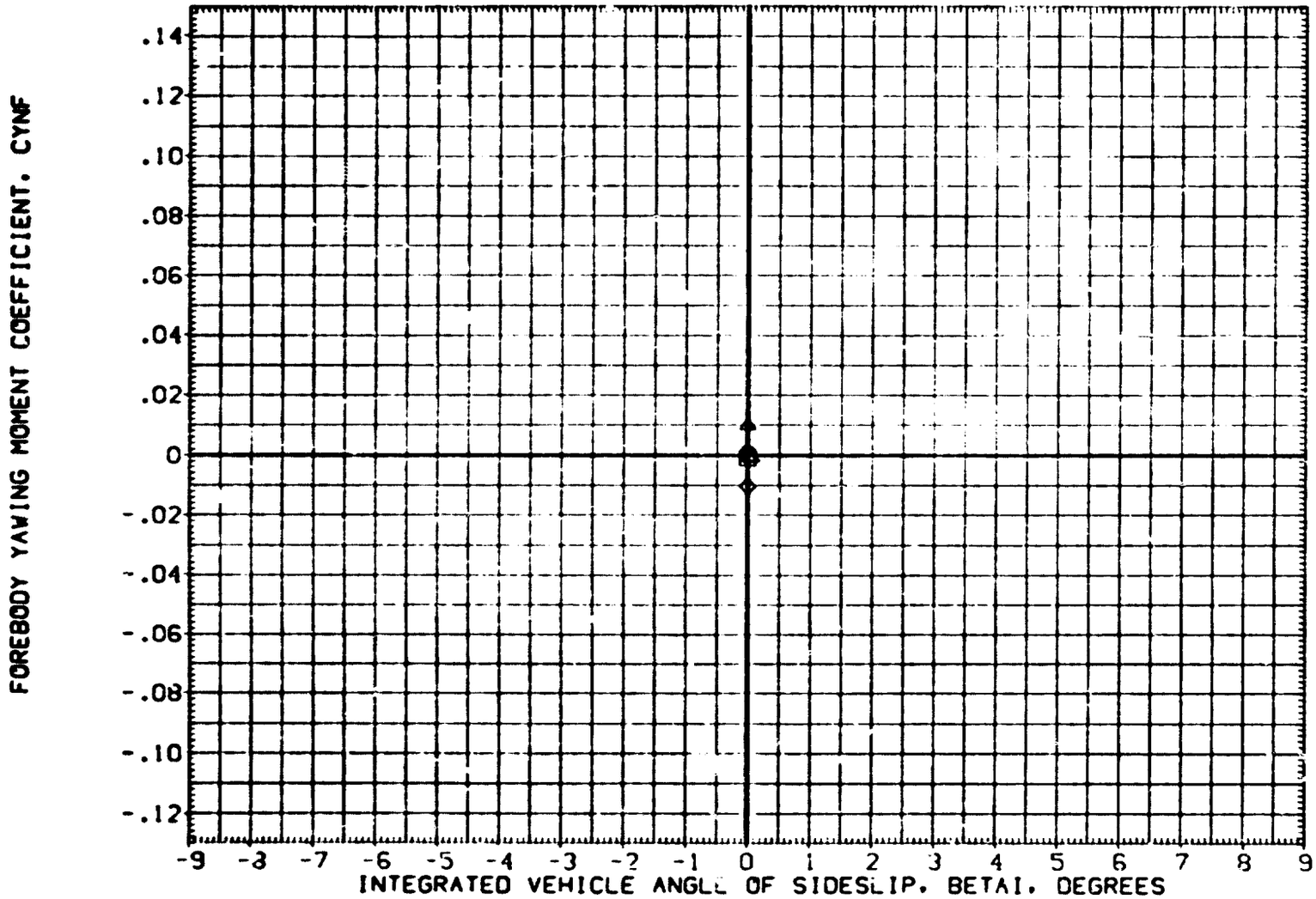


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)ALPHA: 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

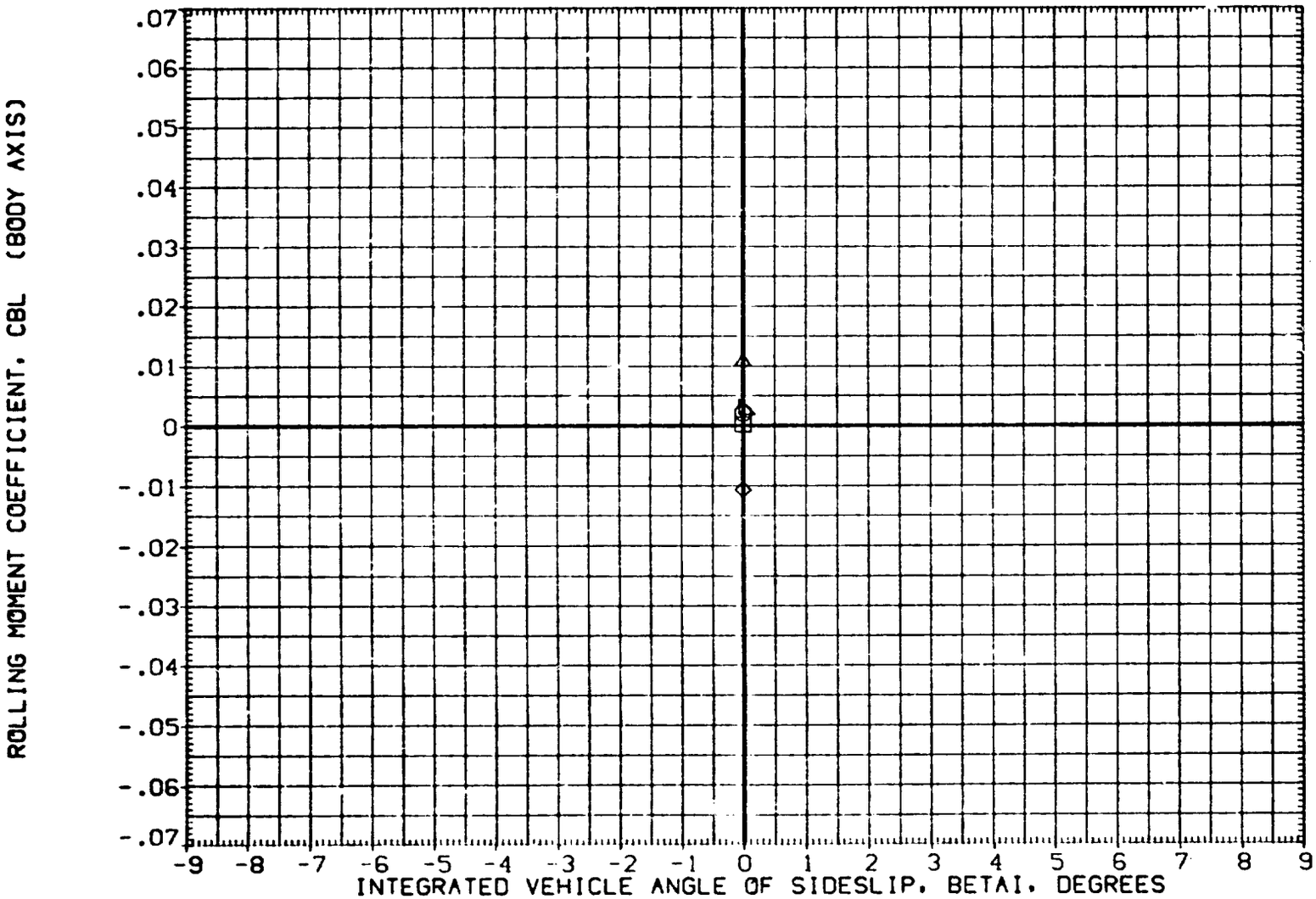


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

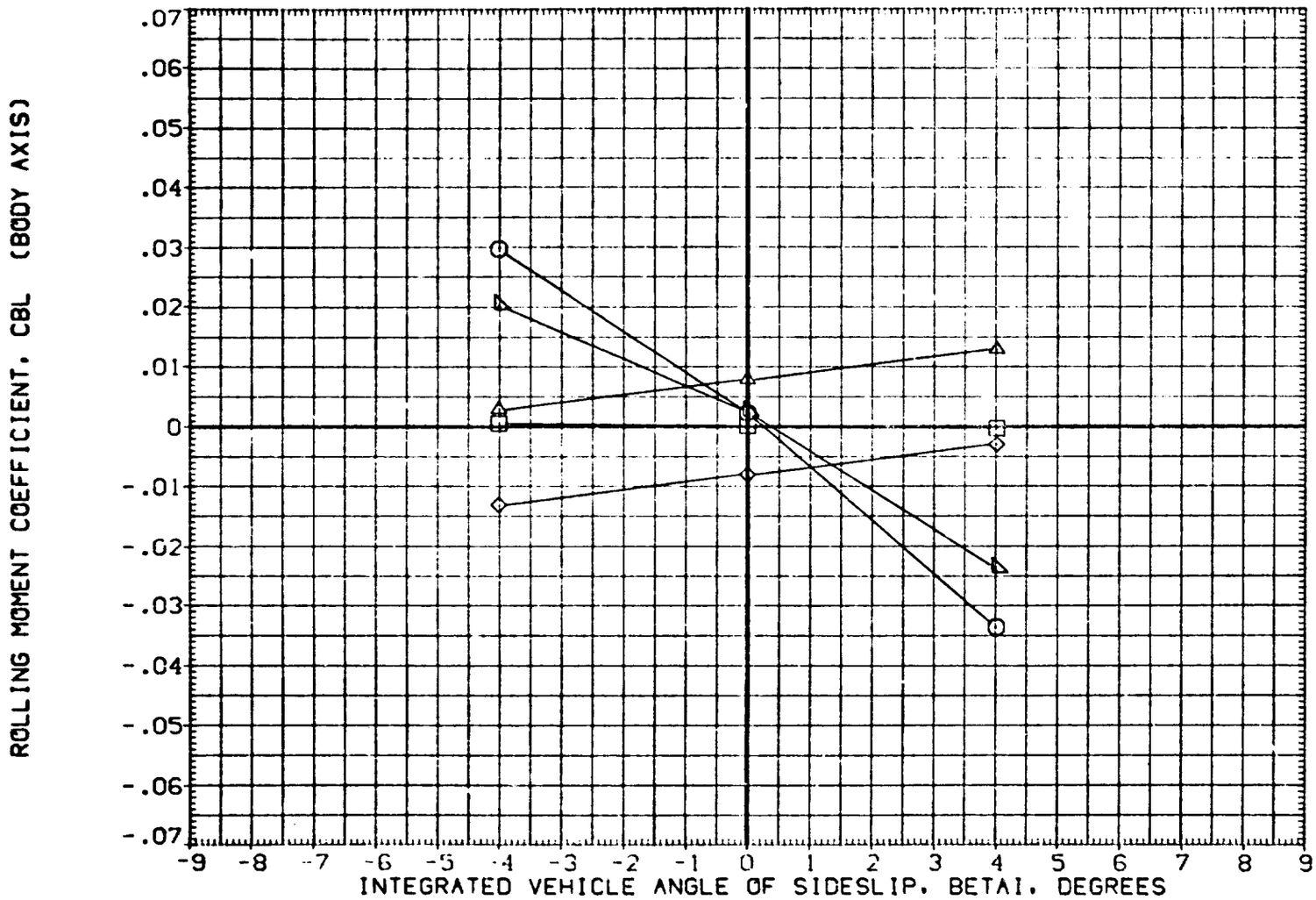


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

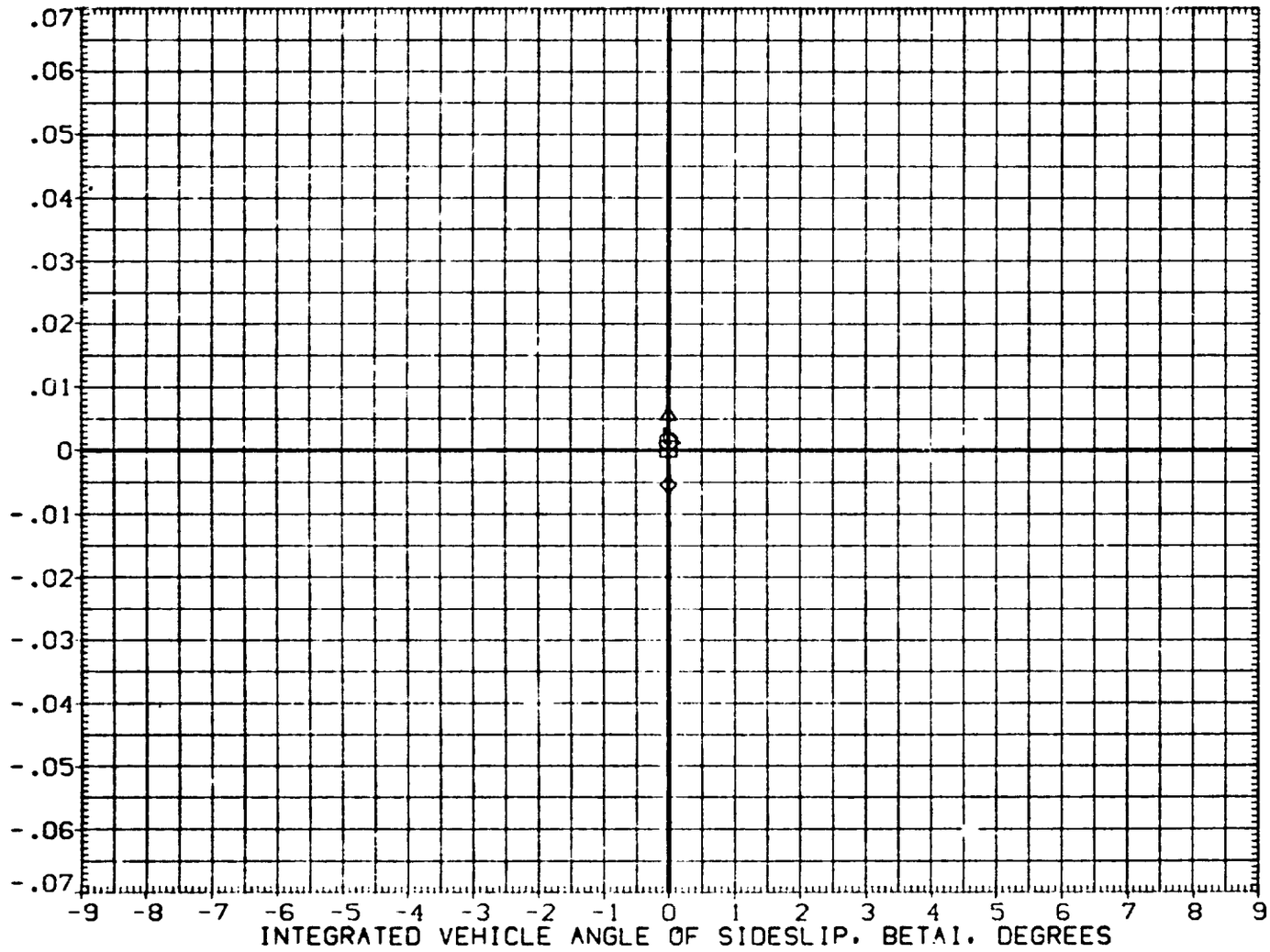


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

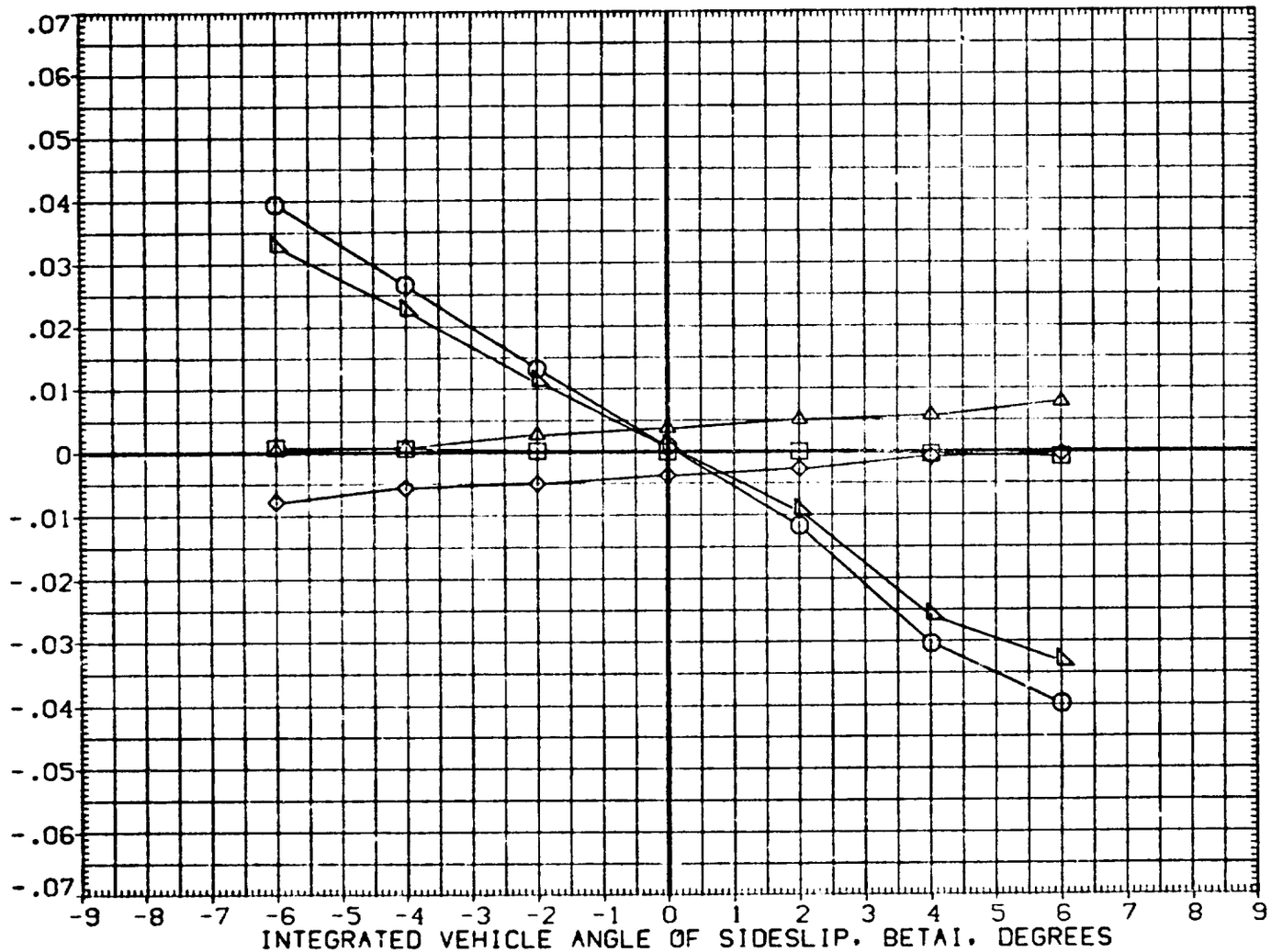


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

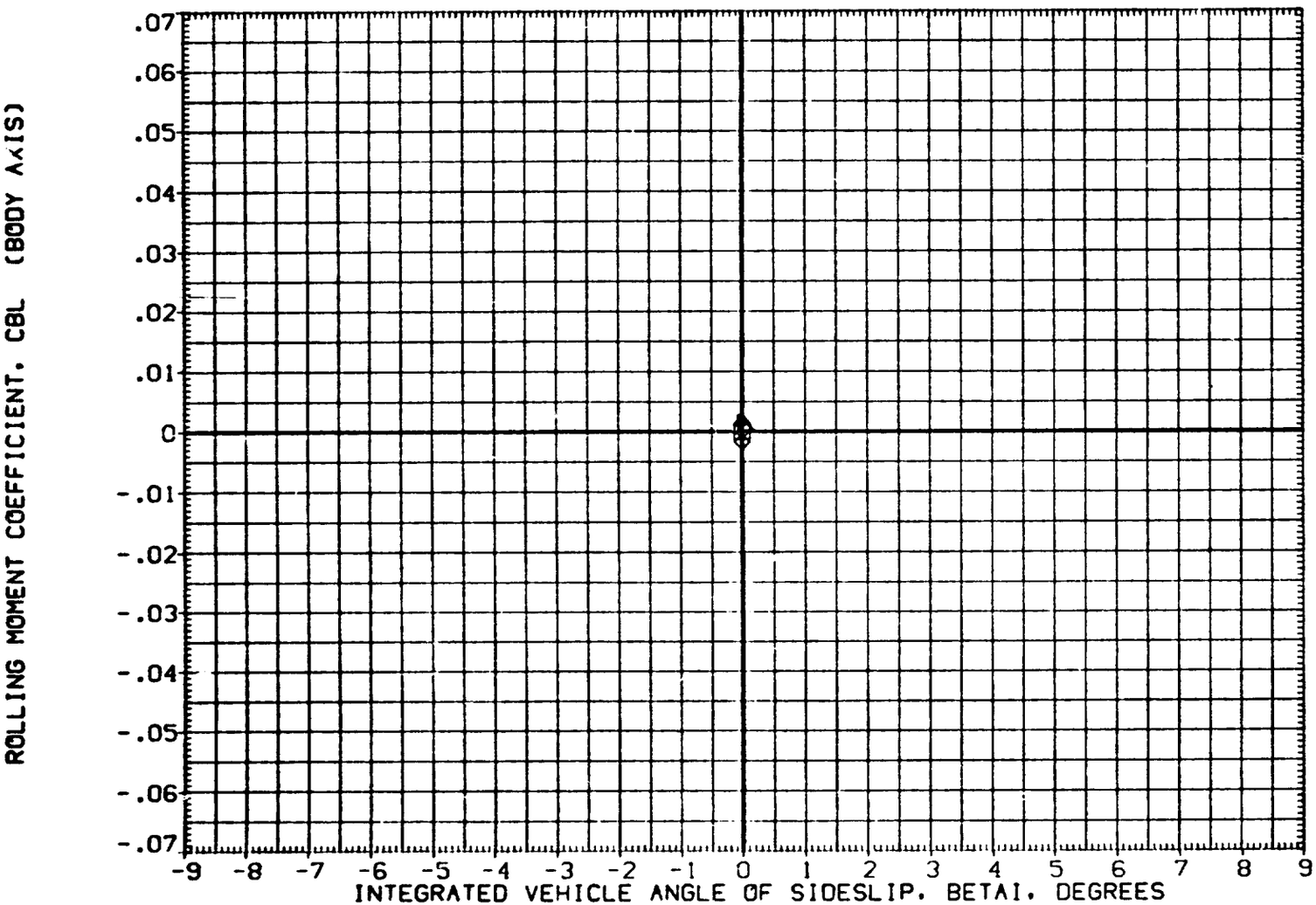


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

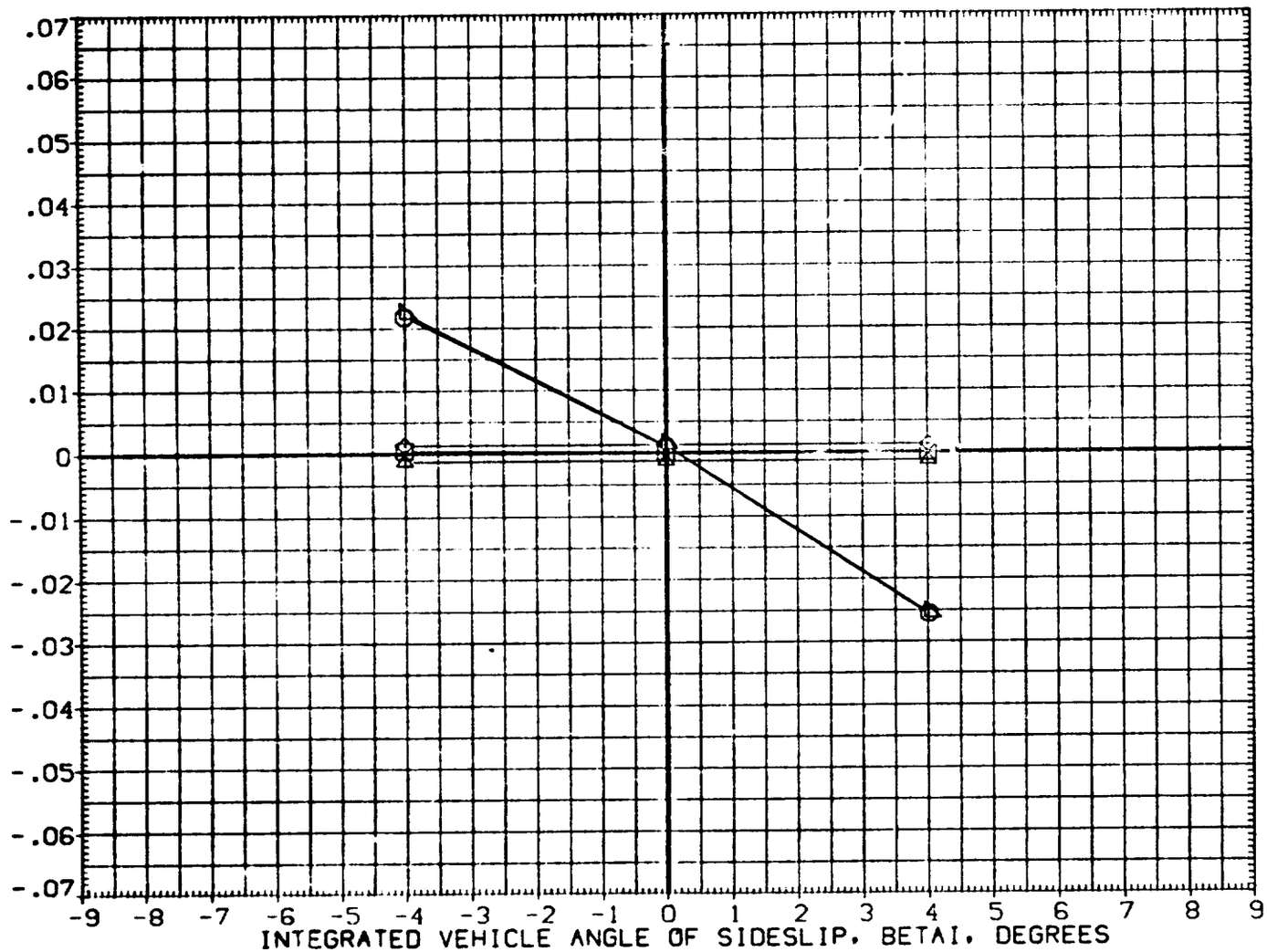


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	⋈	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

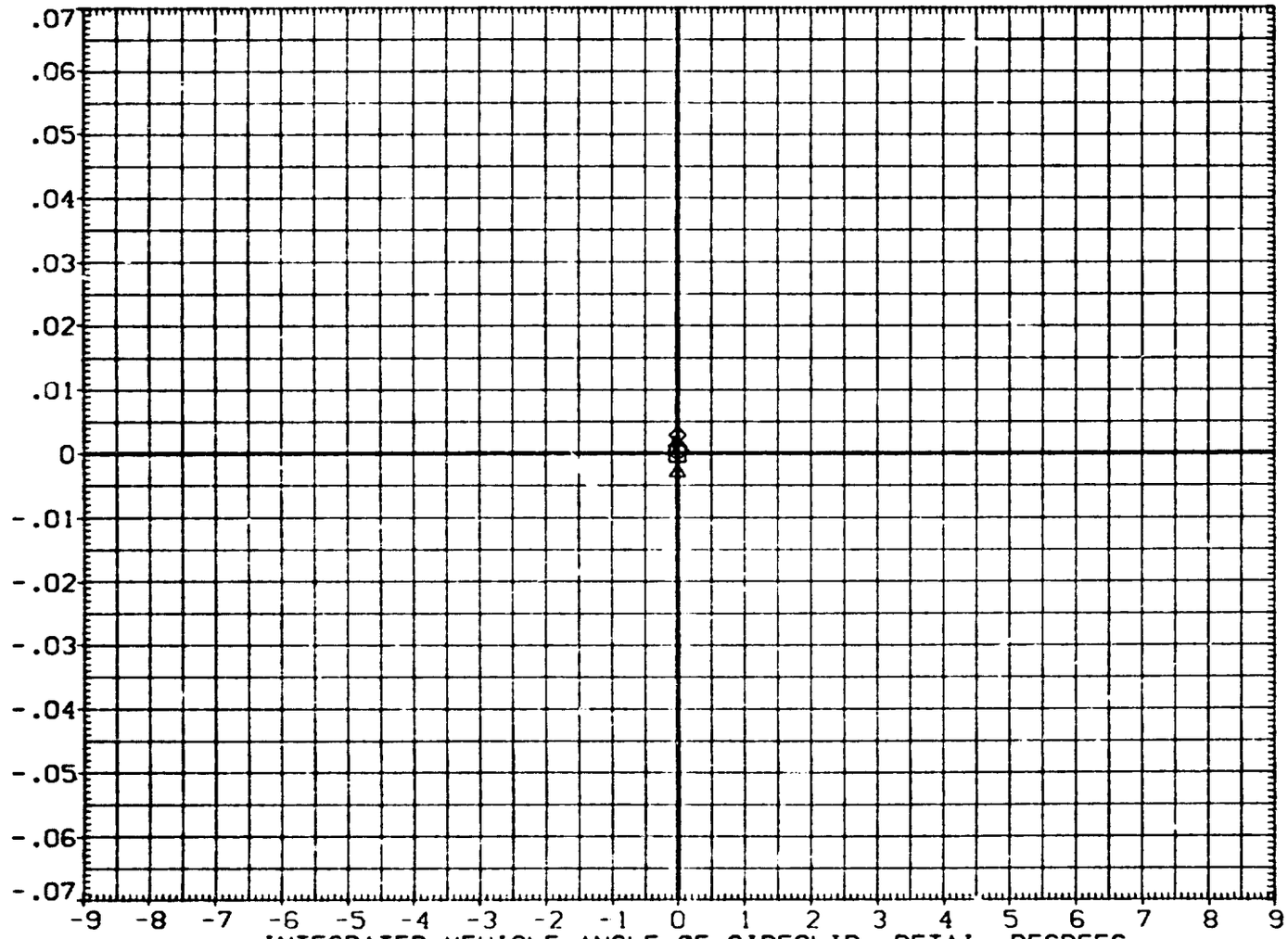


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET044)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	△	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	⊲	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	▷	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

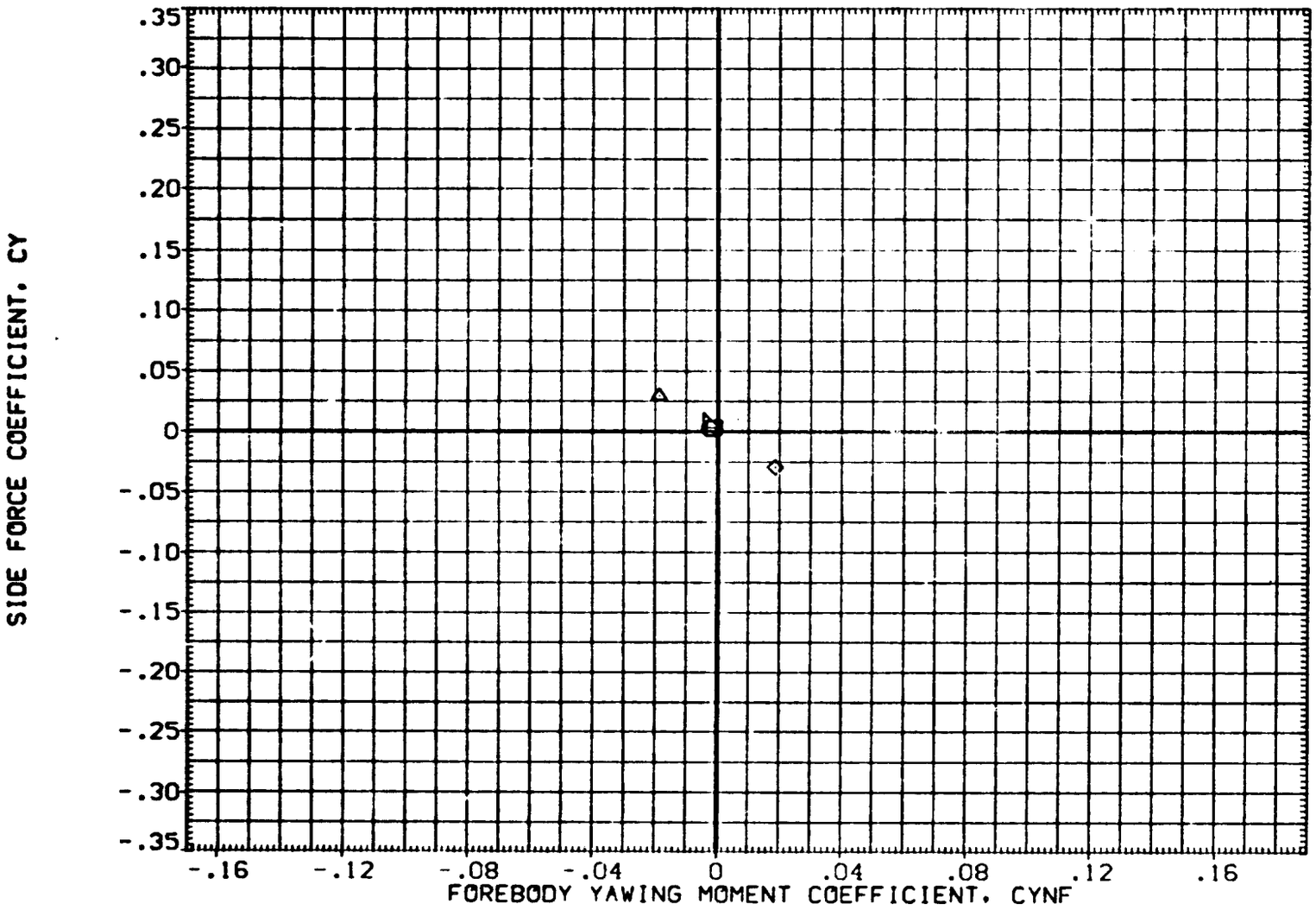


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MAC..	SPOBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⊗	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

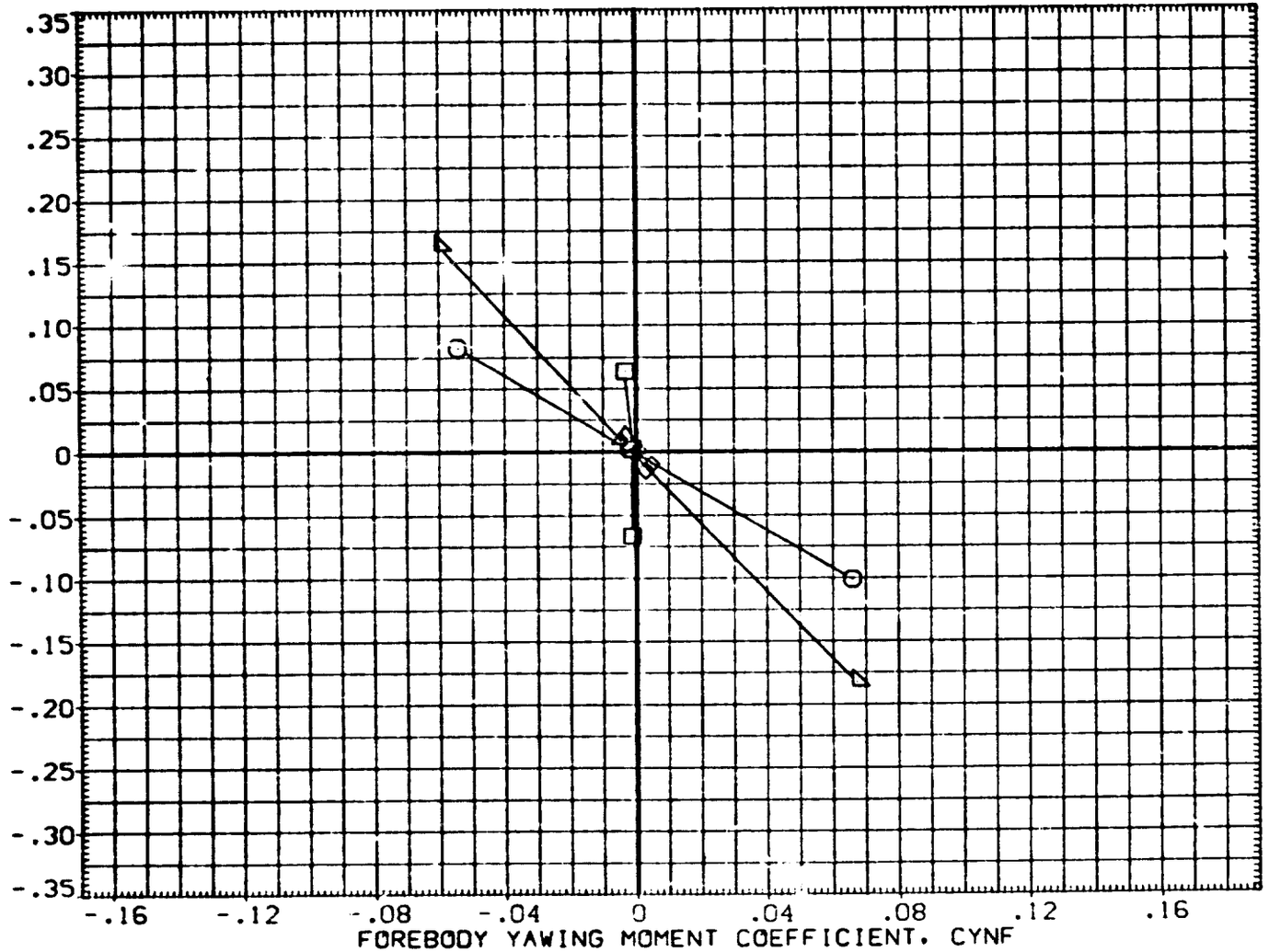


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

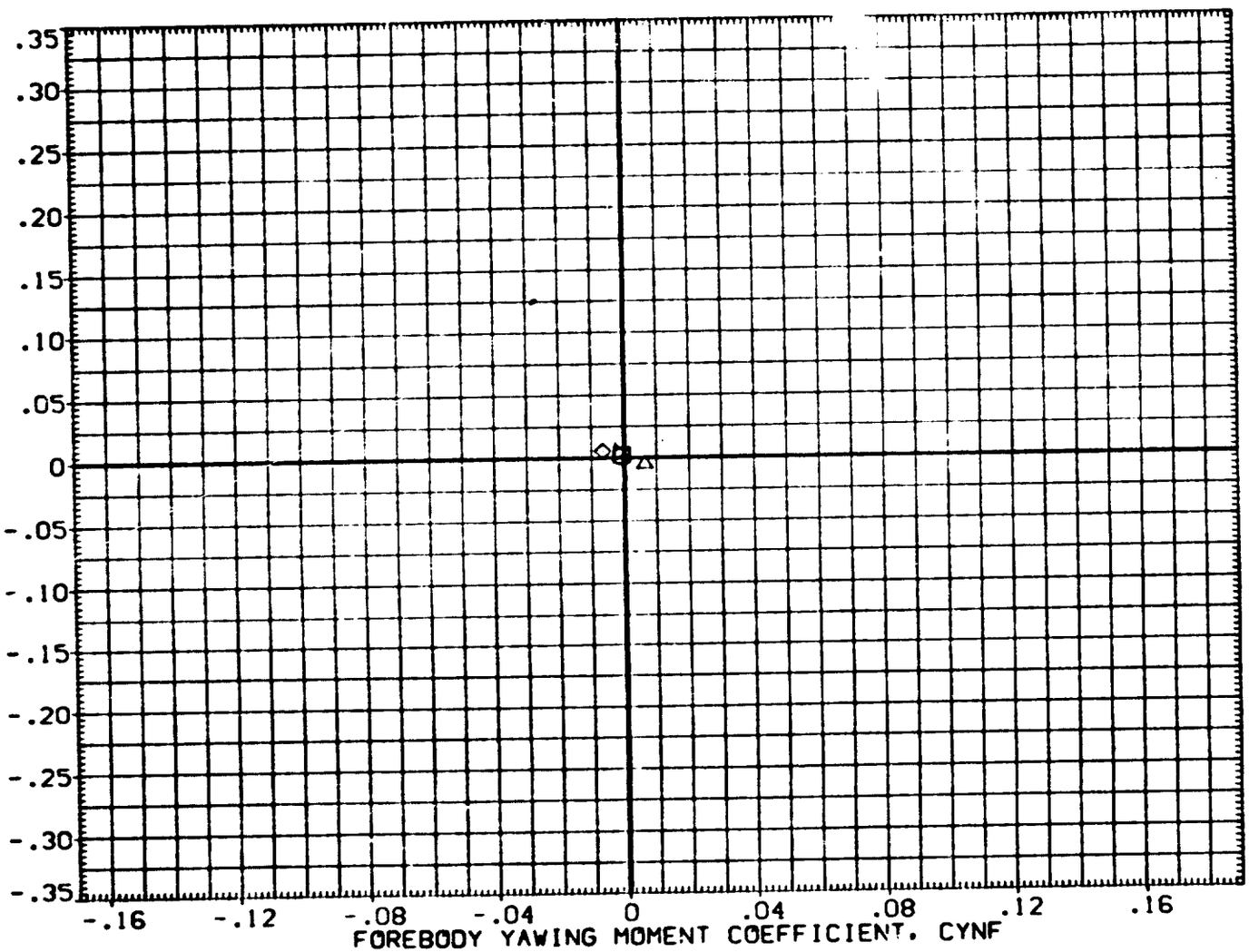


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	▷	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

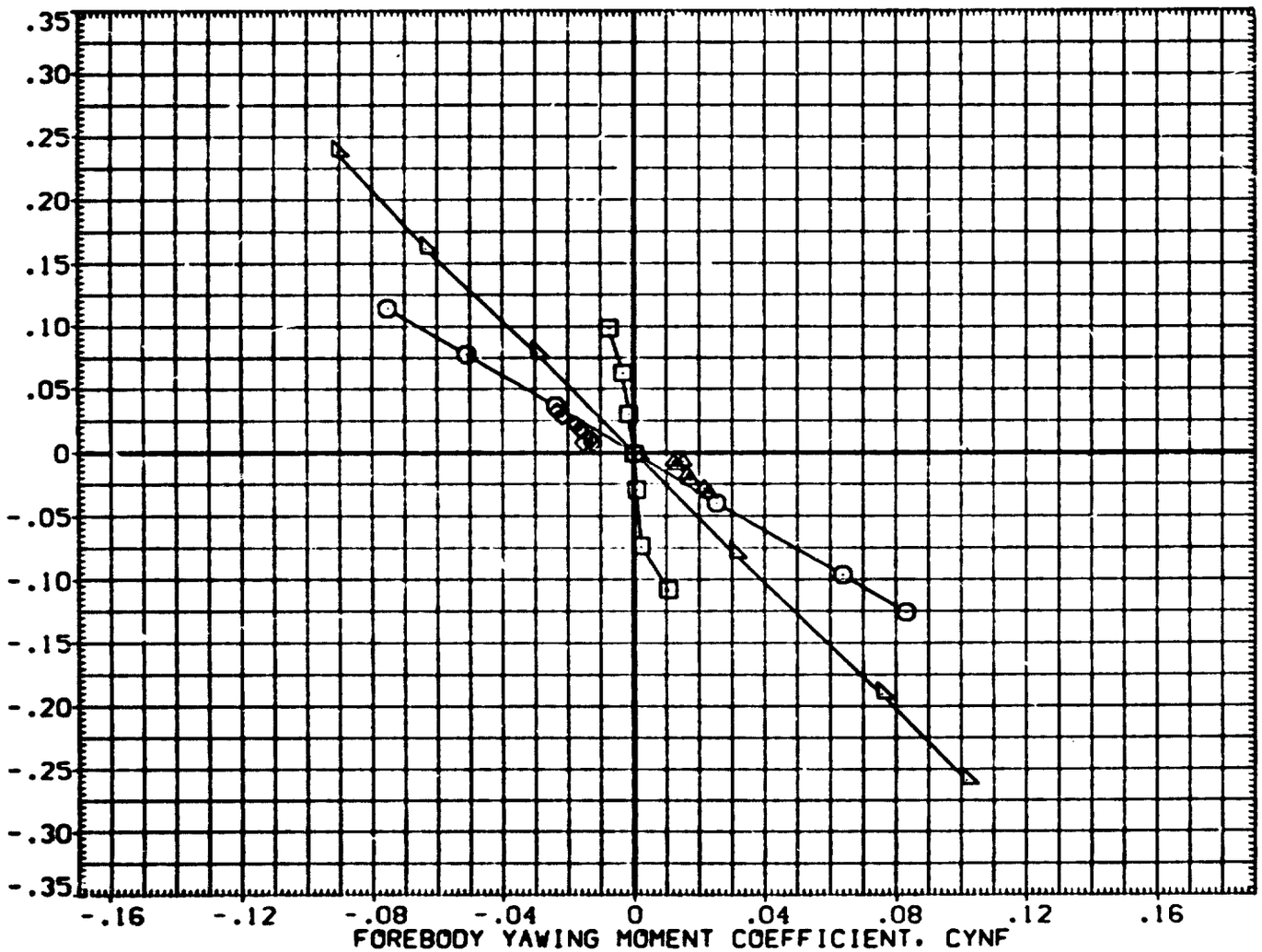


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	0.000	.000	2.000	.000
(LET744)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	0.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	0.000	.000	2.000	.000
(LETR44)	▷	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	0.000	.000	2.000	.000
(LETI44)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. WT
YMRP	.0000	IN. WT
ZMRP	400.0000	IN. WT
SCALE	.0300	

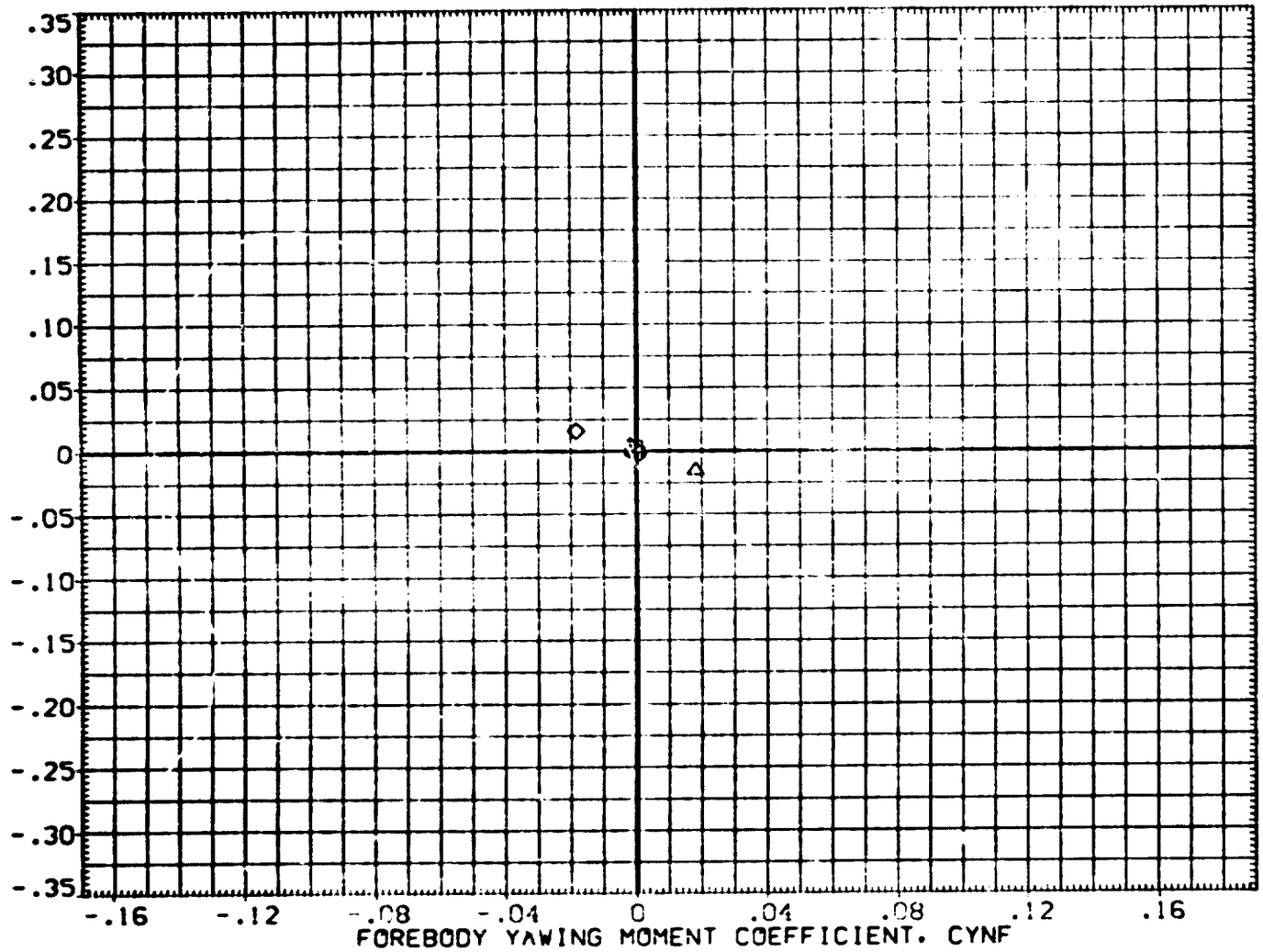


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	○	AMES97-019((AB1) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.000	.000
(LETT44)	□	AMES97-019((AB1) LVAP TANK - ALL ML SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019((AB1) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.000	.000
(LETR44)	▷◁	AMES97-019((AB1) LVAP R-SRB ALL ML SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019((AB1) LVAP INT VEH ALL ML SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

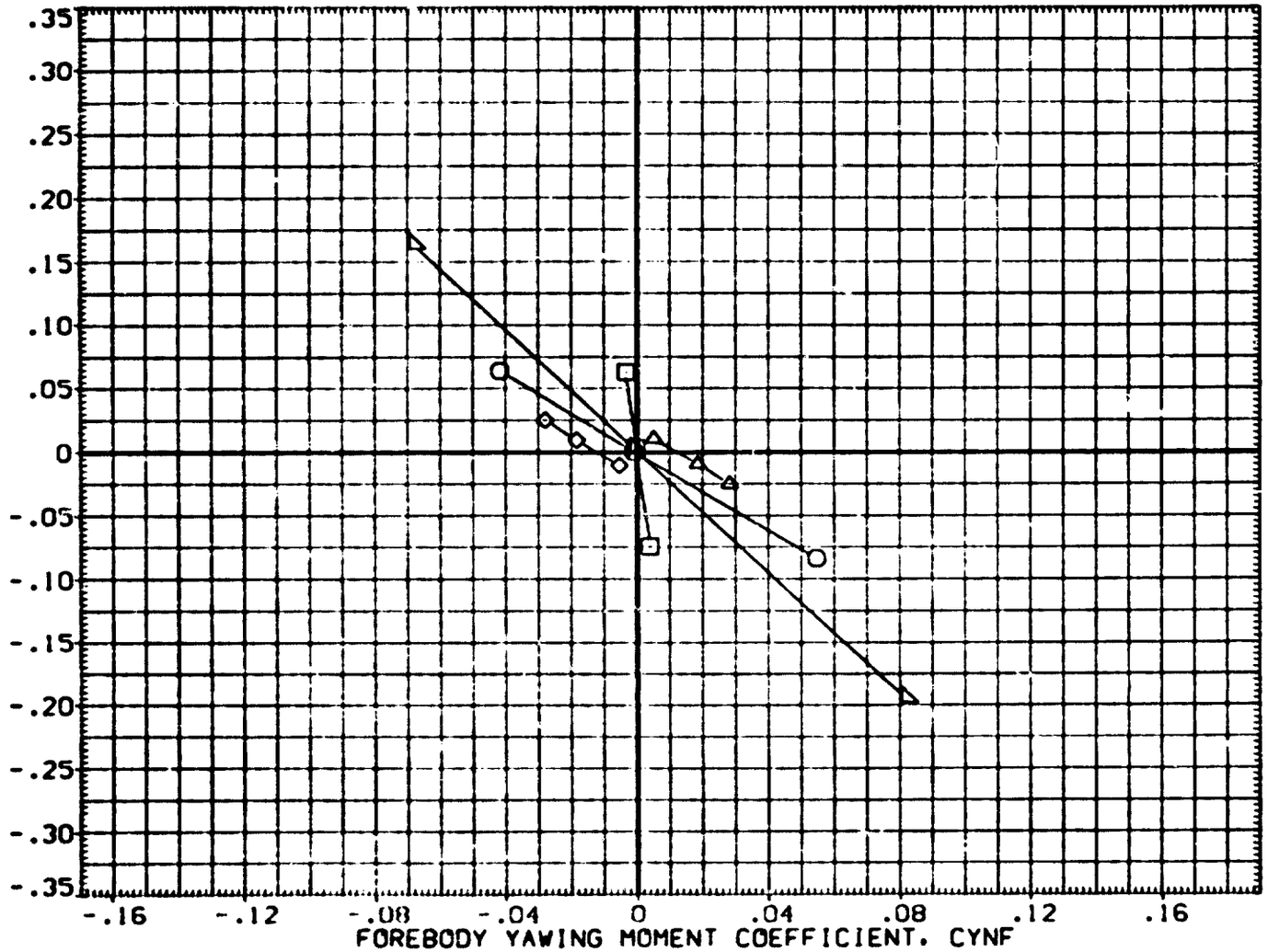


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	□	AMES97-019(IABI) LV.P ORBITER-ALL ML SEALED	0.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	0.000	.000	2.000	.000
(LETL44)	▷	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	0.000	.000	2.000	.000
(LETR44)		AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	0.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	0.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

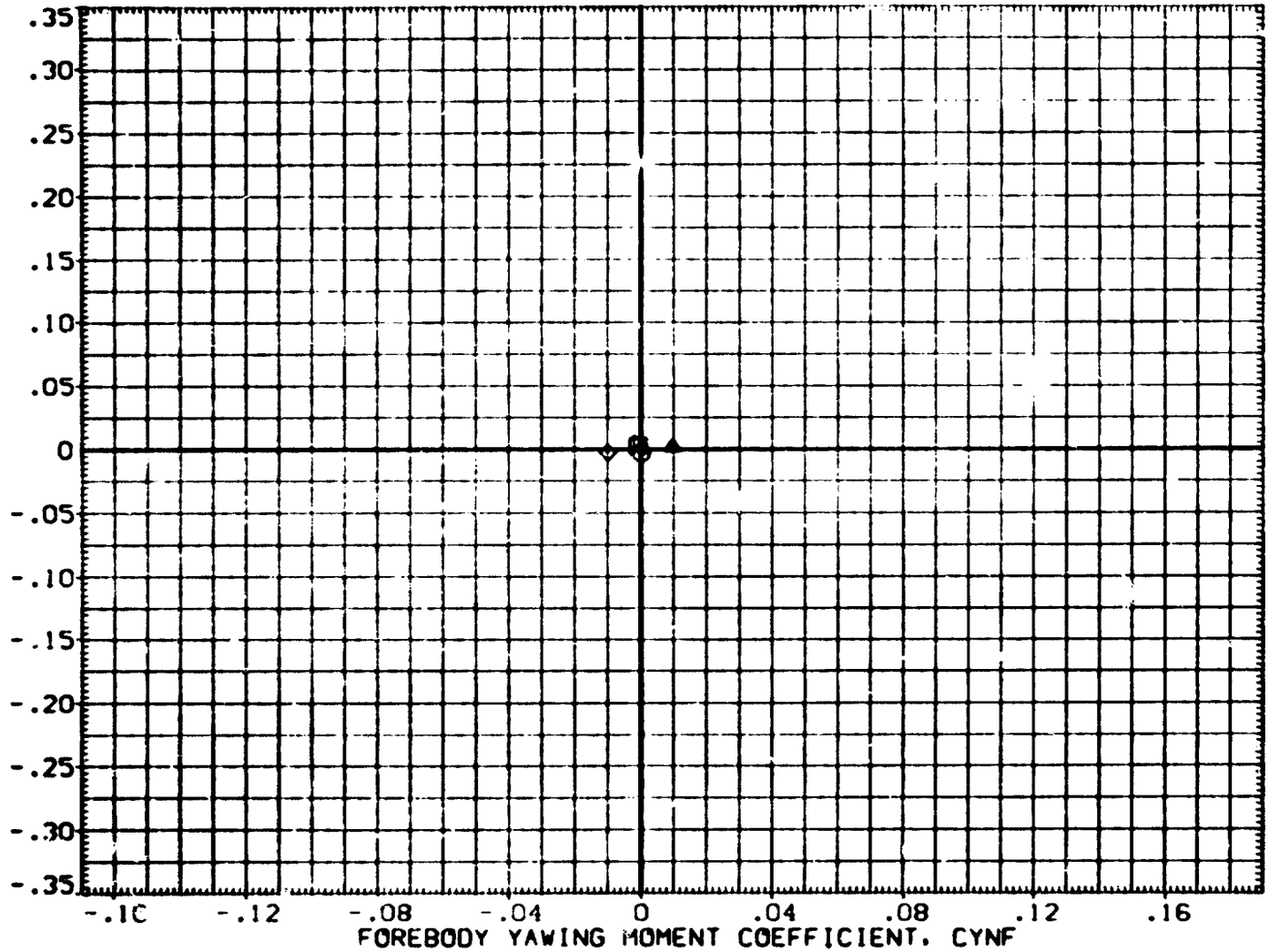


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

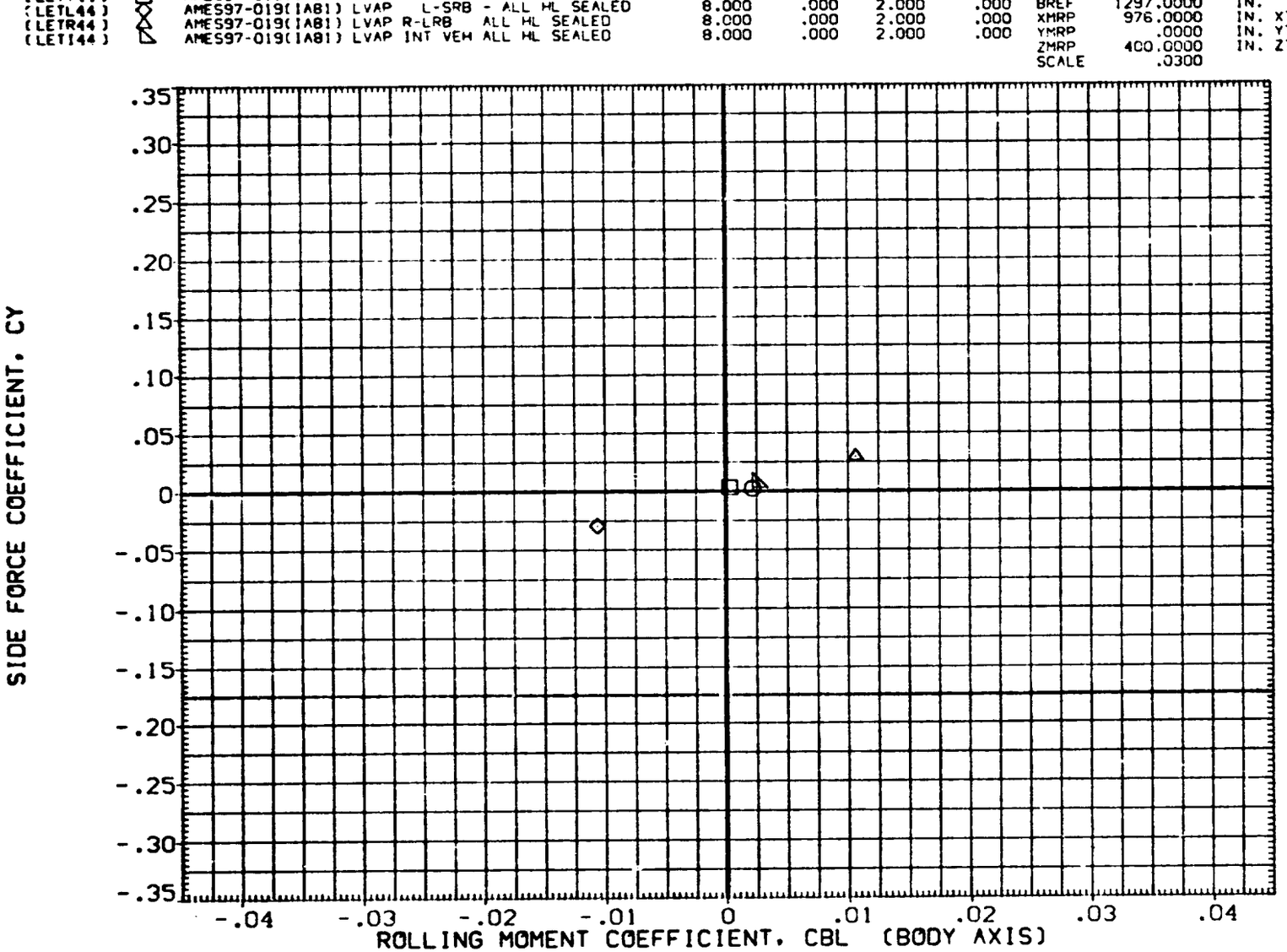


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

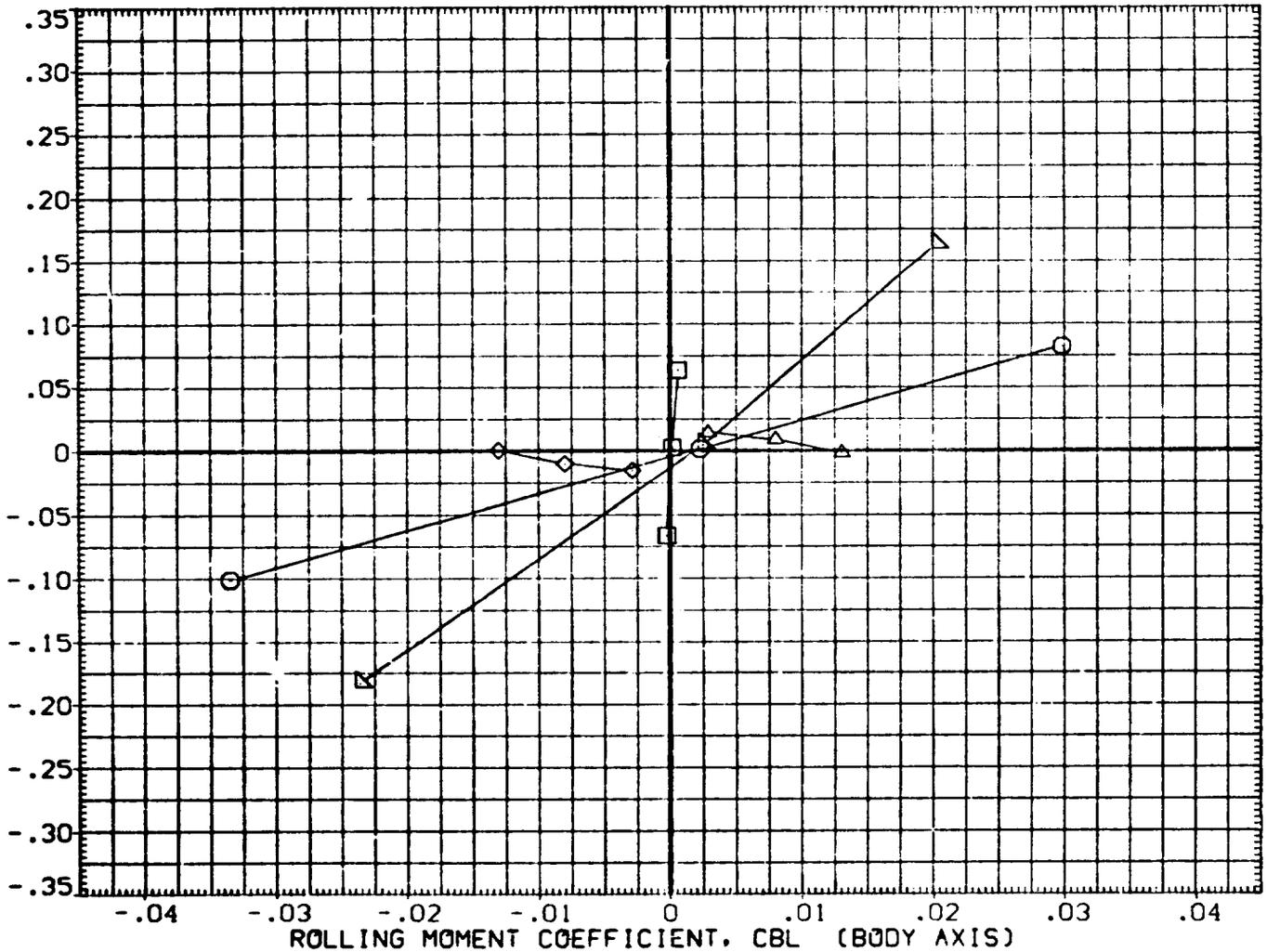


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	◇□	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	◇□	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	◇□	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

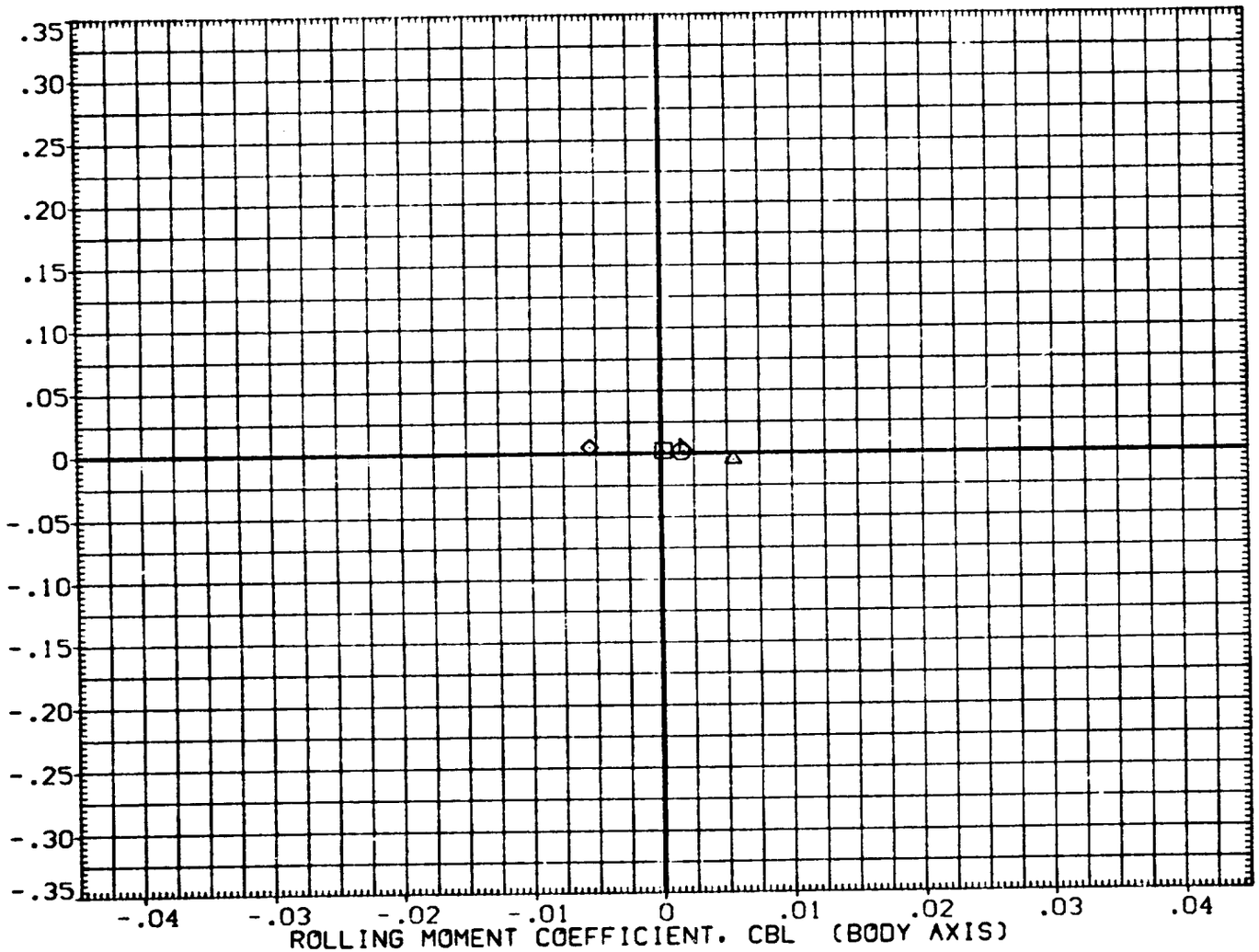


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	▷	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

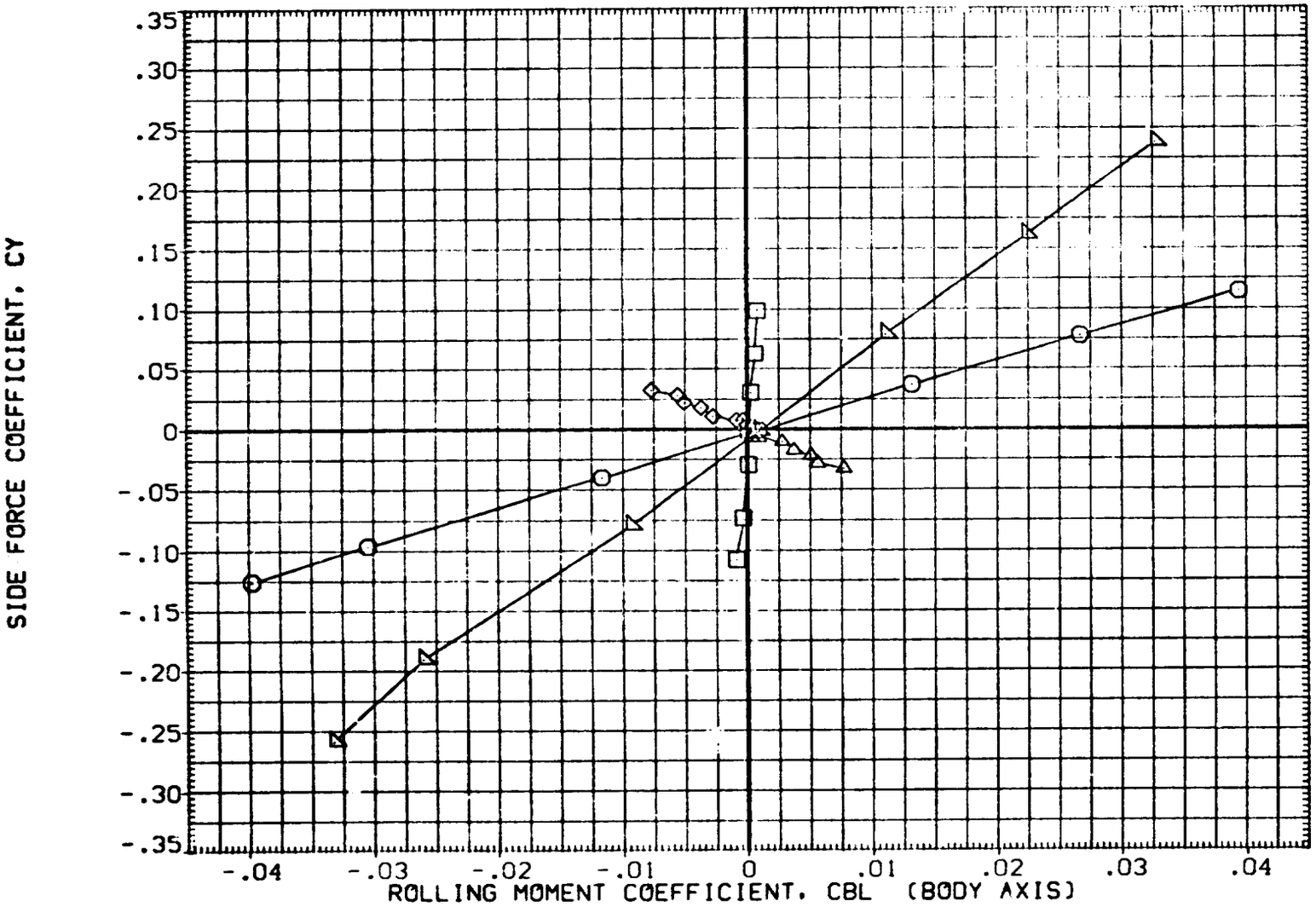


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO44)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

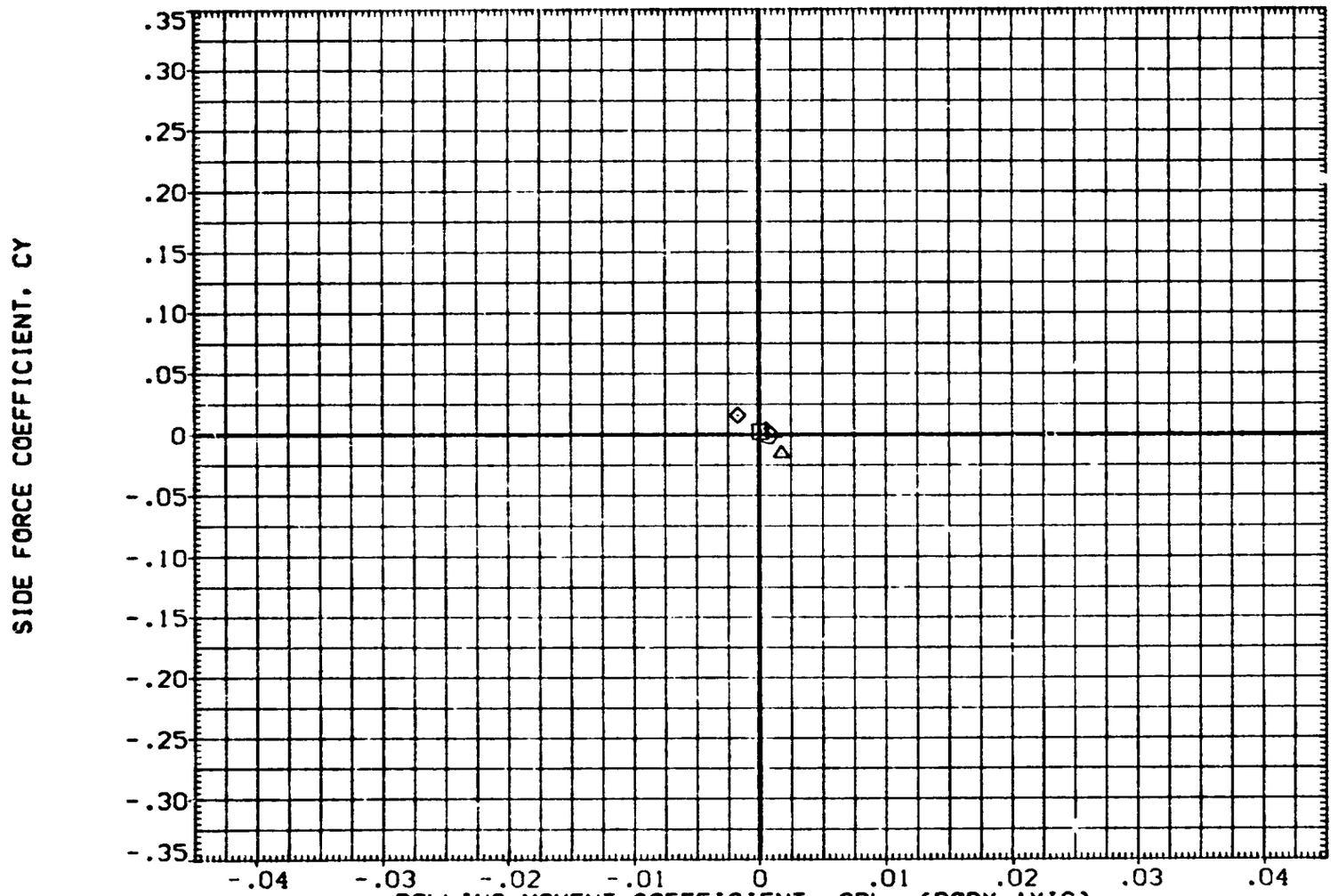


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
PREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

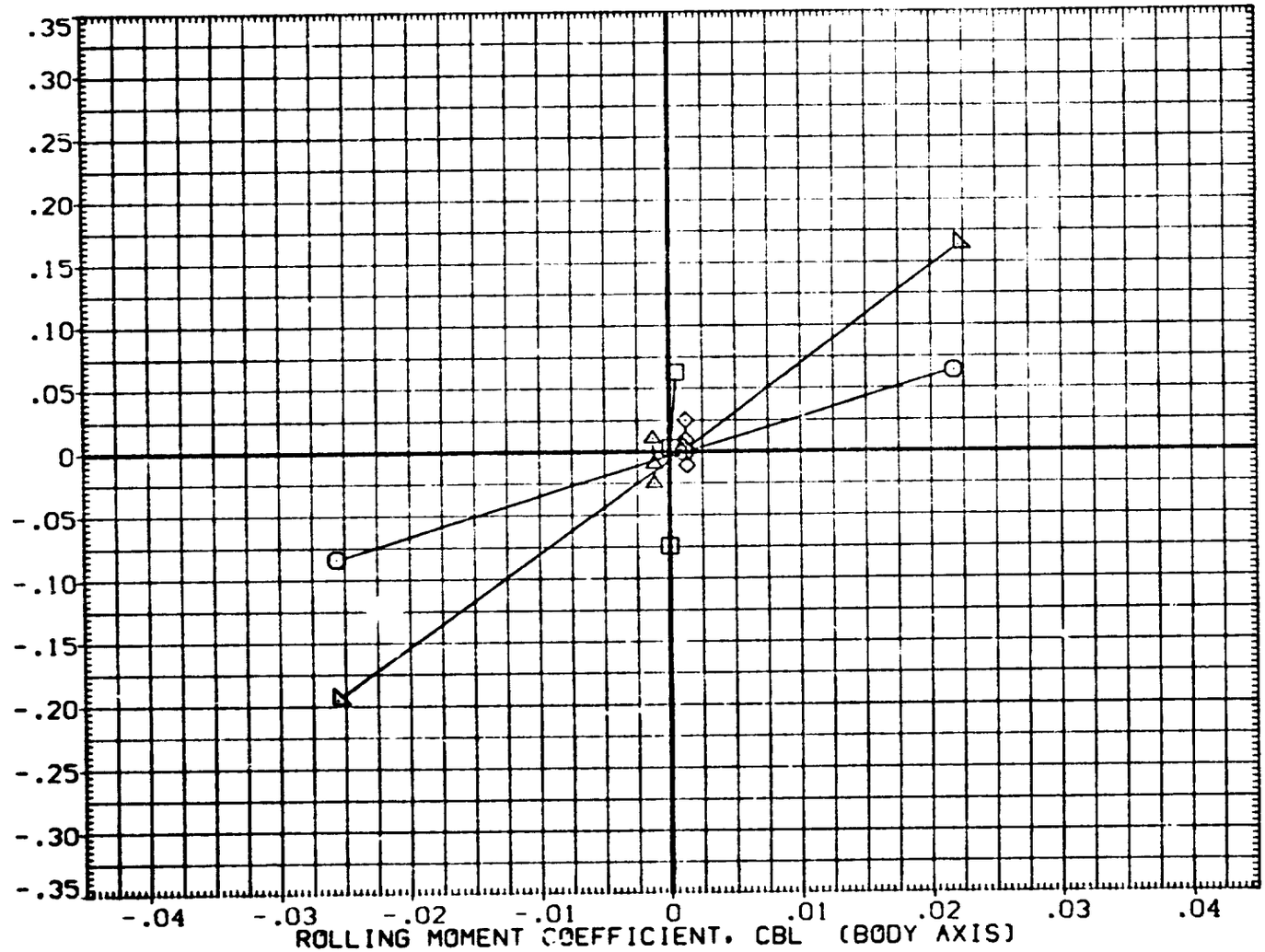


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET044)		AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(LETT44)		AMES97-019([AB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.000	.000
(LETL44)		AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.000	.000
(LETR44)		AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	8.000	.000	2.000	.000
(LETI44)		AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

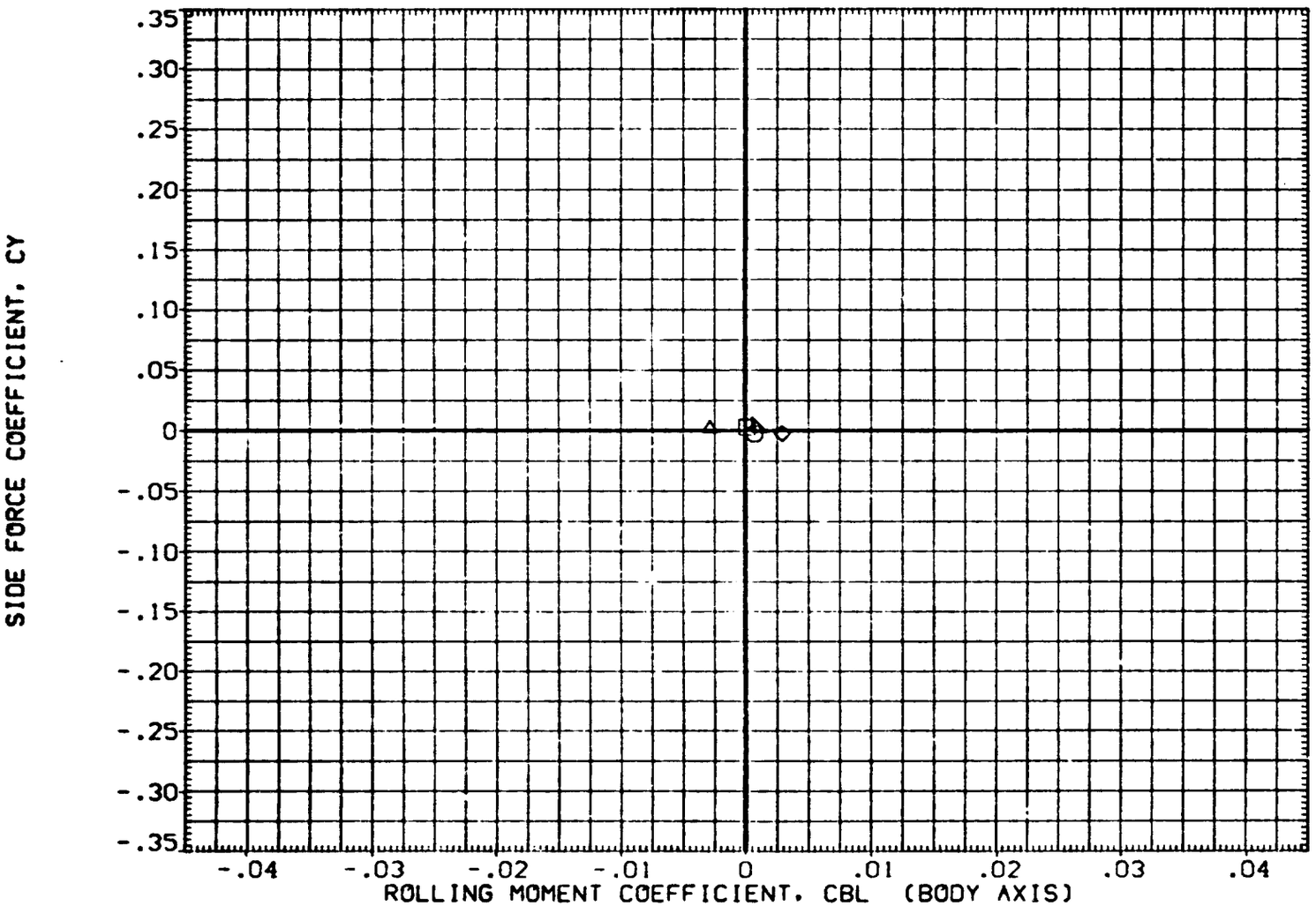


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	⊡	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

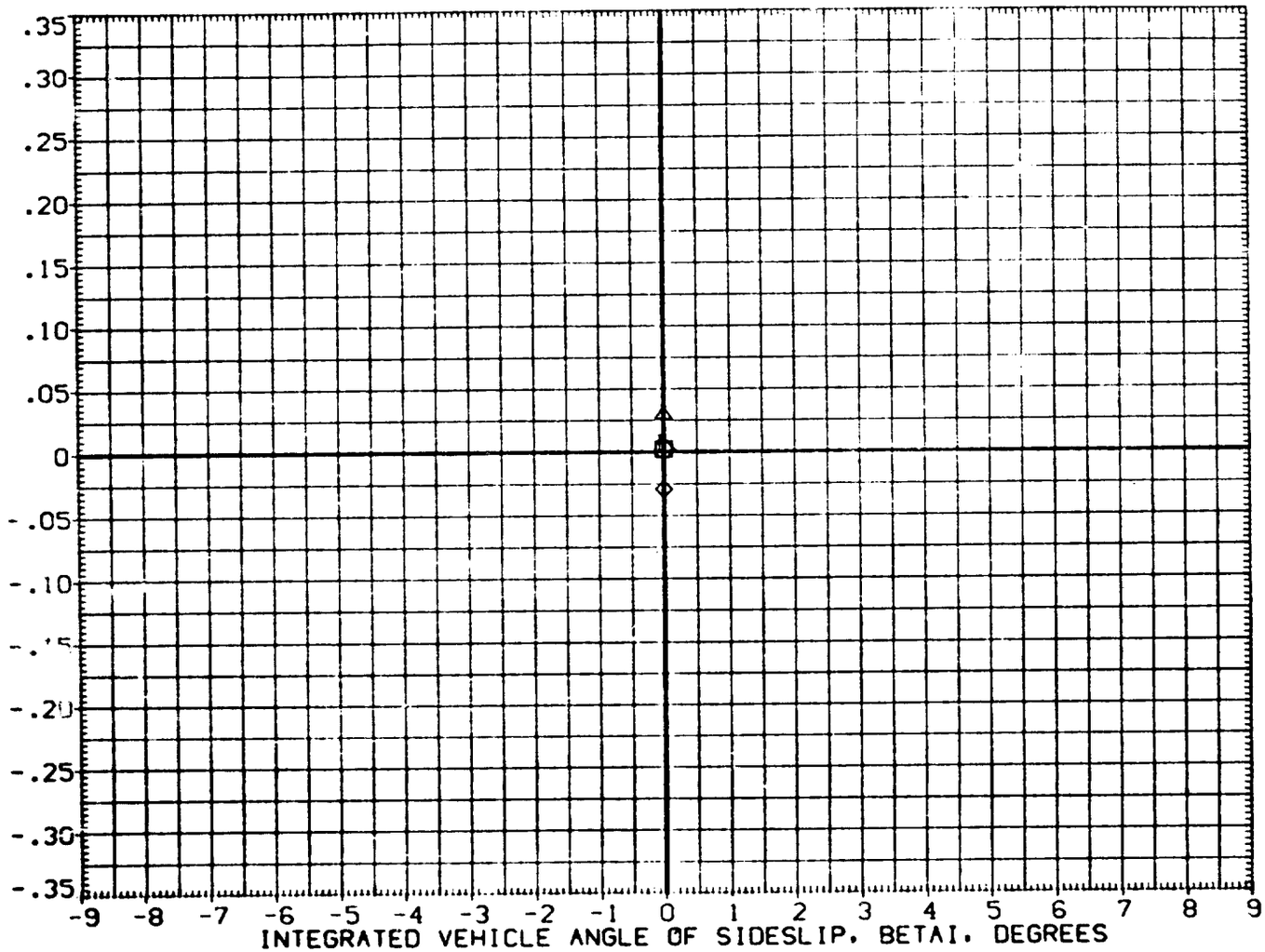


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

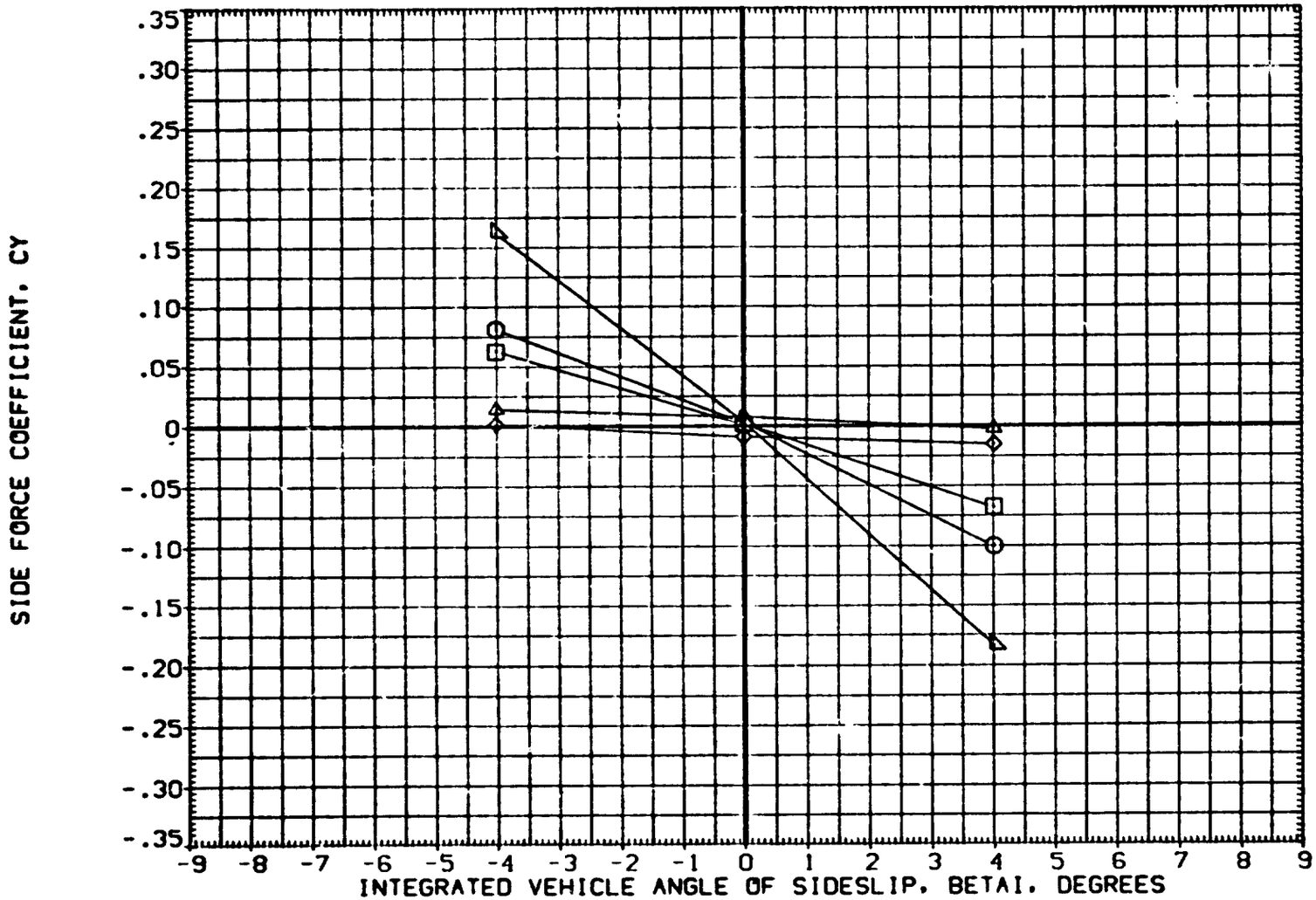


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019([AB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

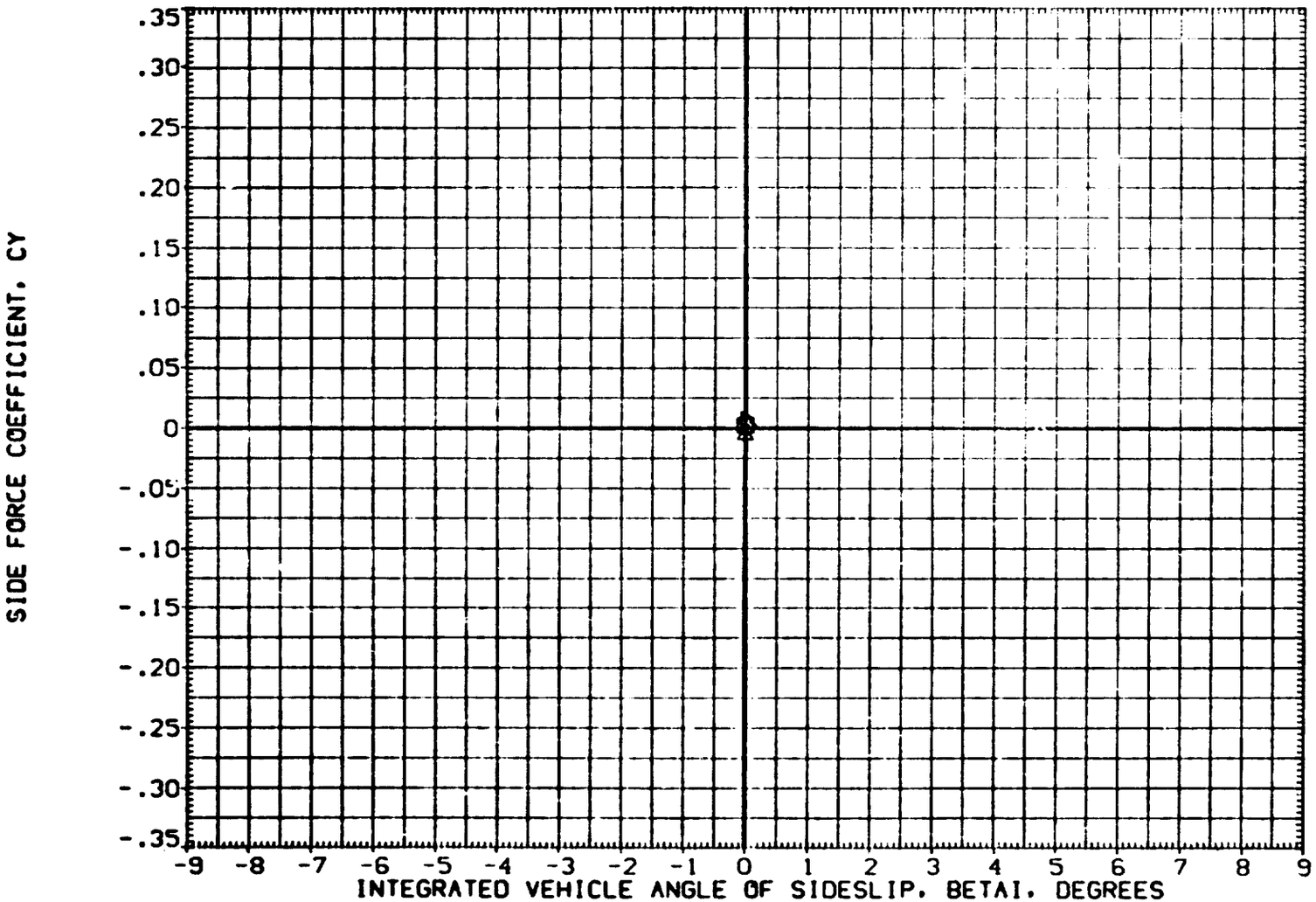


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)ALPHAI= -2.00

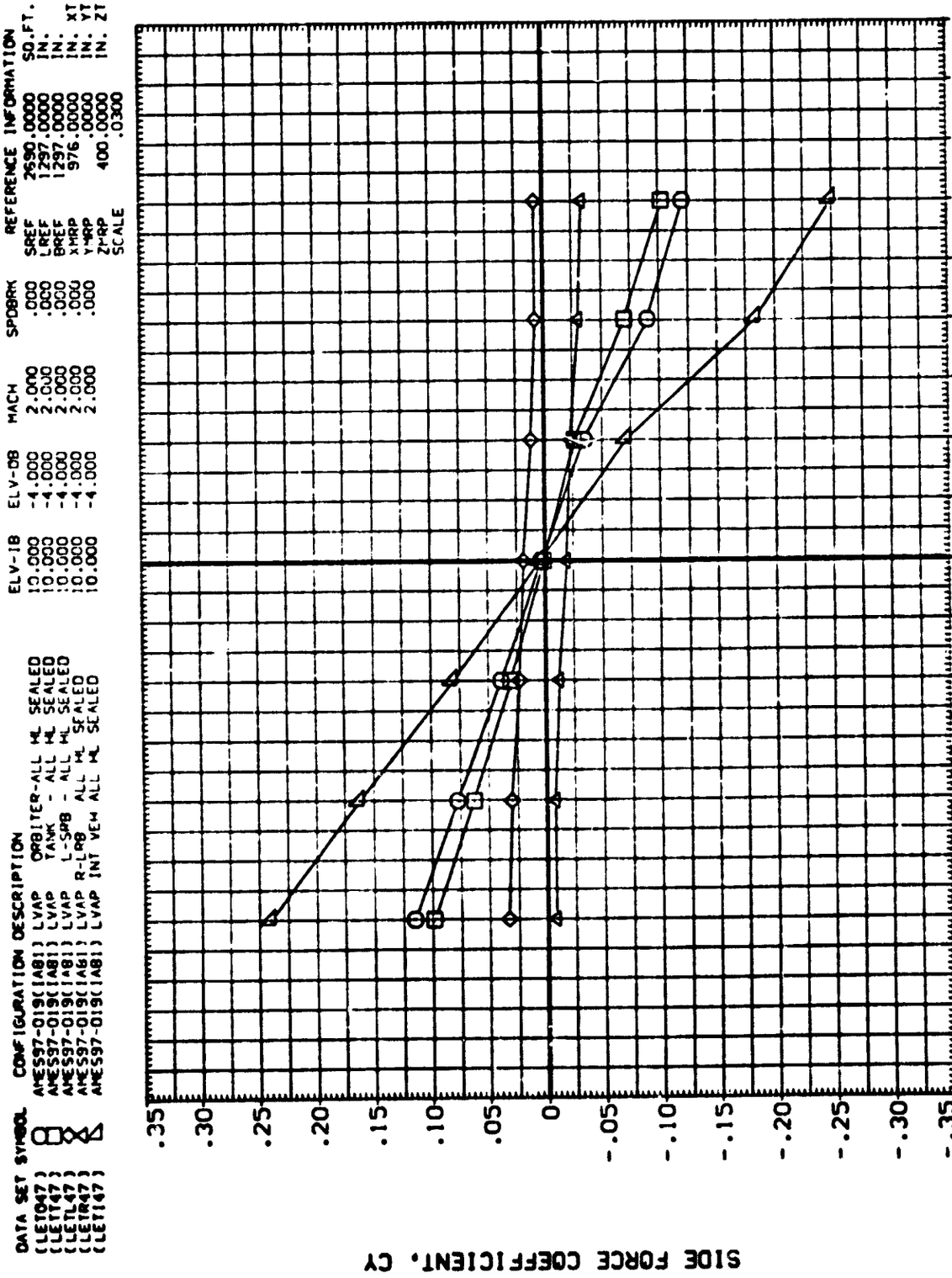


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC47)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	▭	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(1A8:) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	▷	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

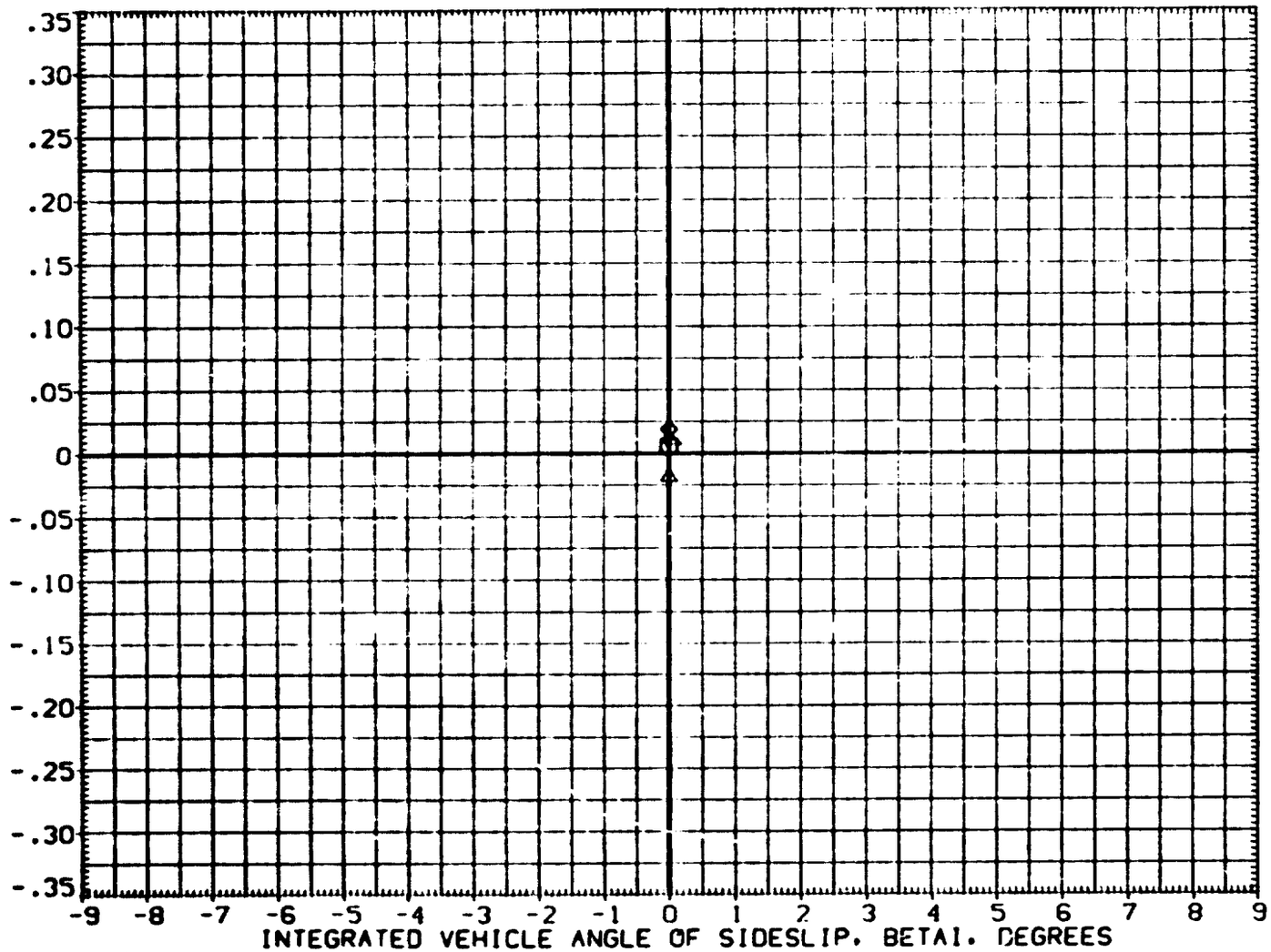


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET047)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

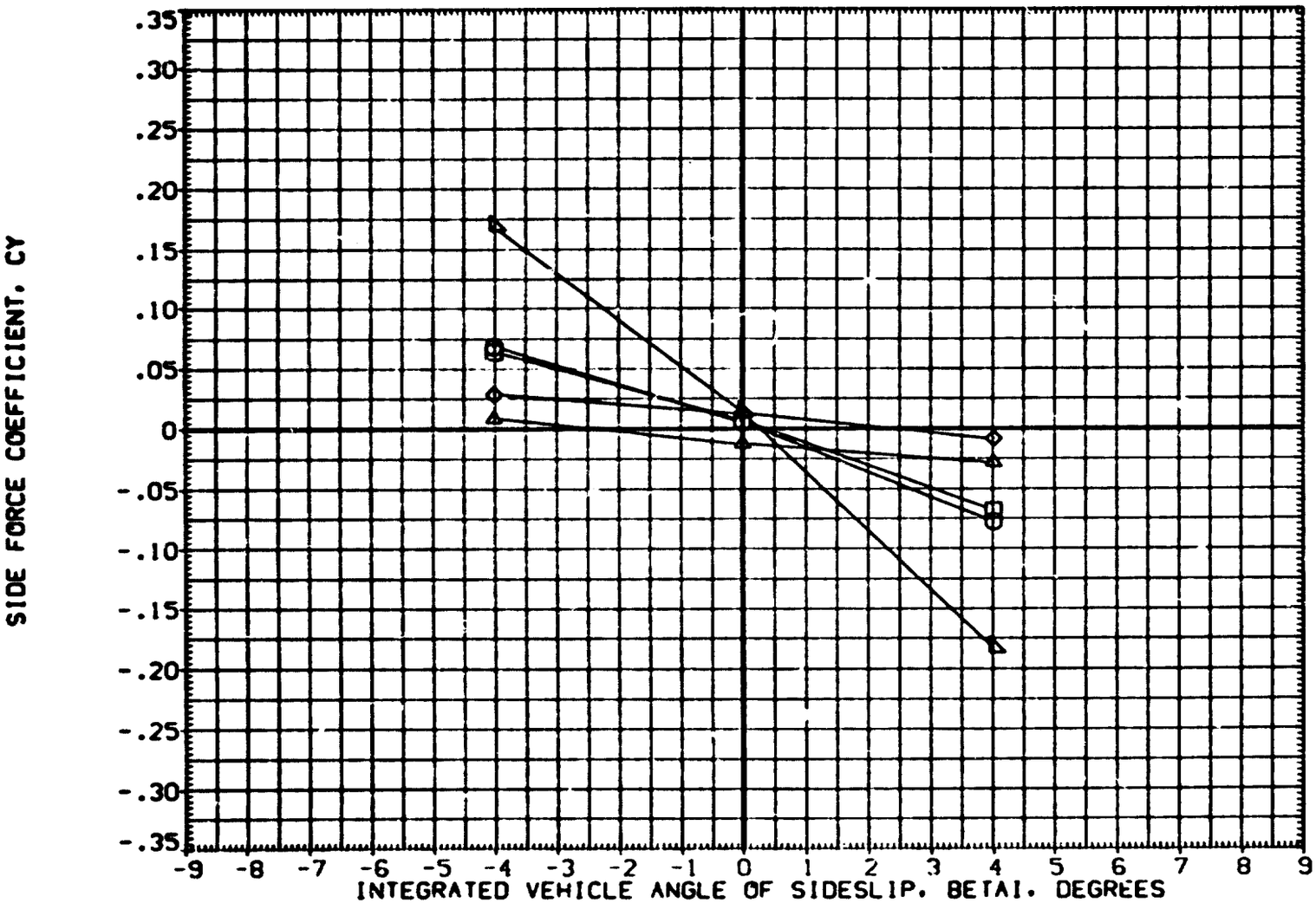


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019([AB1]) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019([AB1]) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019([AB1]) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETR47)	◁	AMES97-019([AB1]) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(LETI47)	▷	AMES97-019([AB1]) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	970.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	450.0000	IN. ZT
SCALE	.0300	

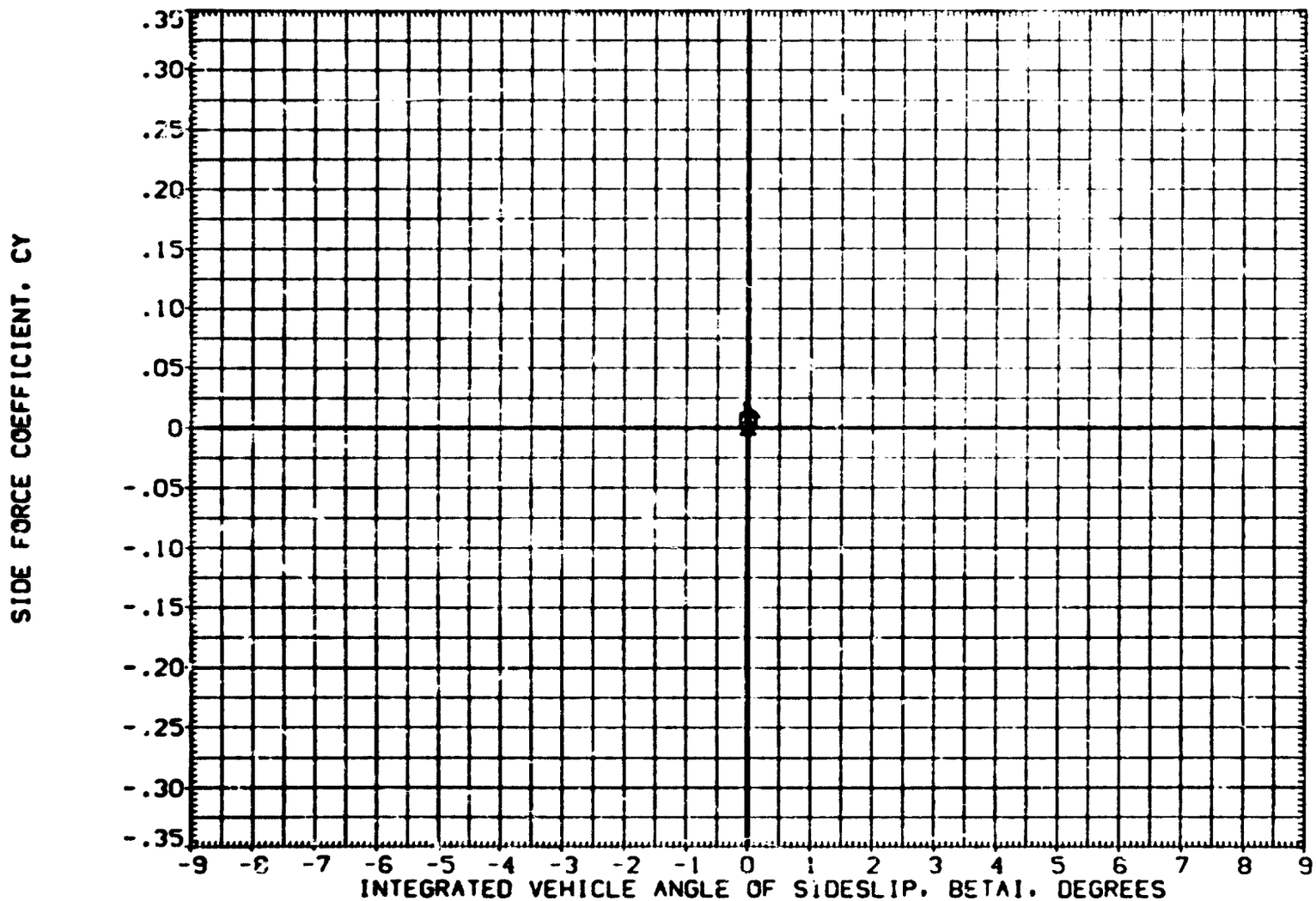


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(S)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

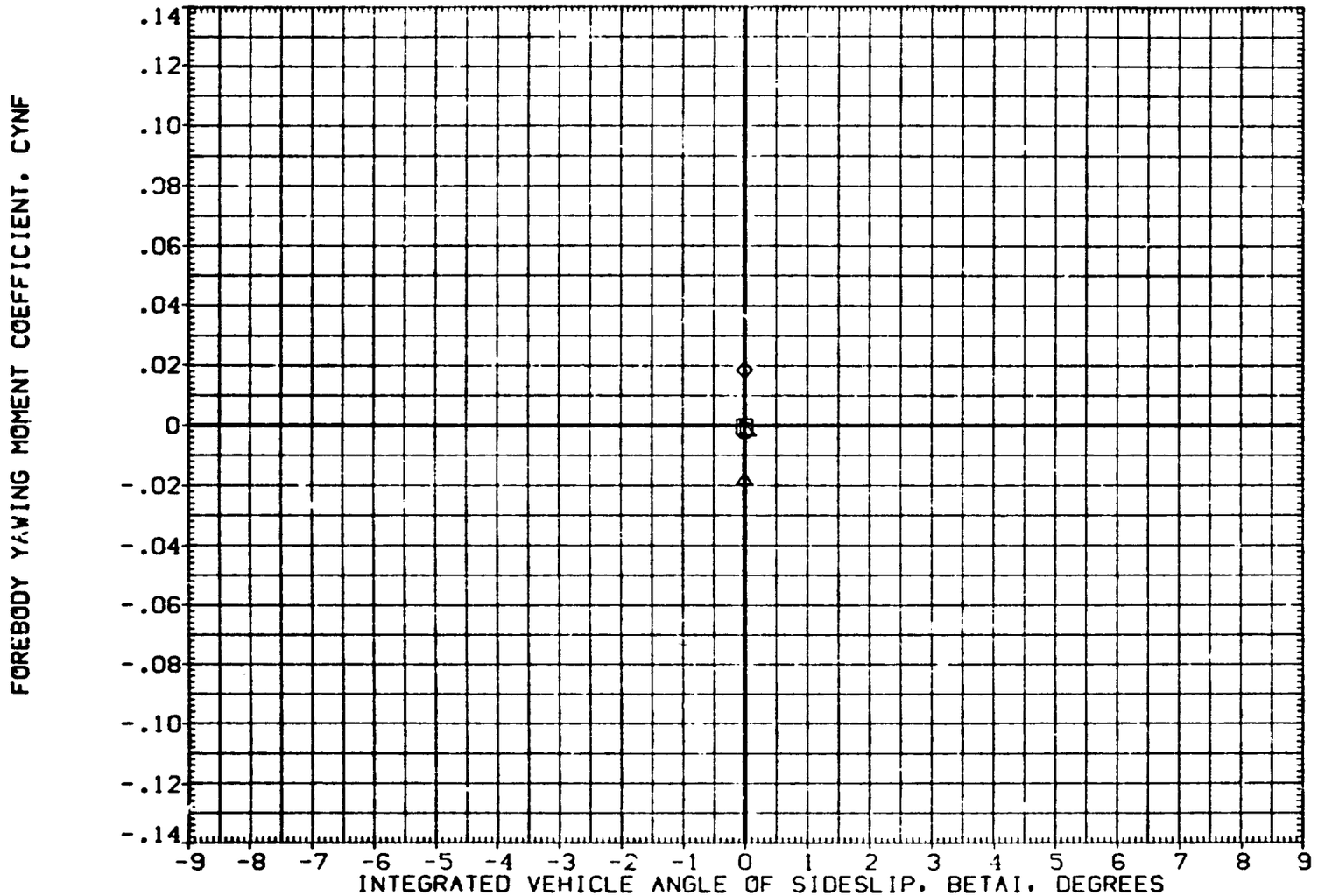


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	AMES97-019([A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

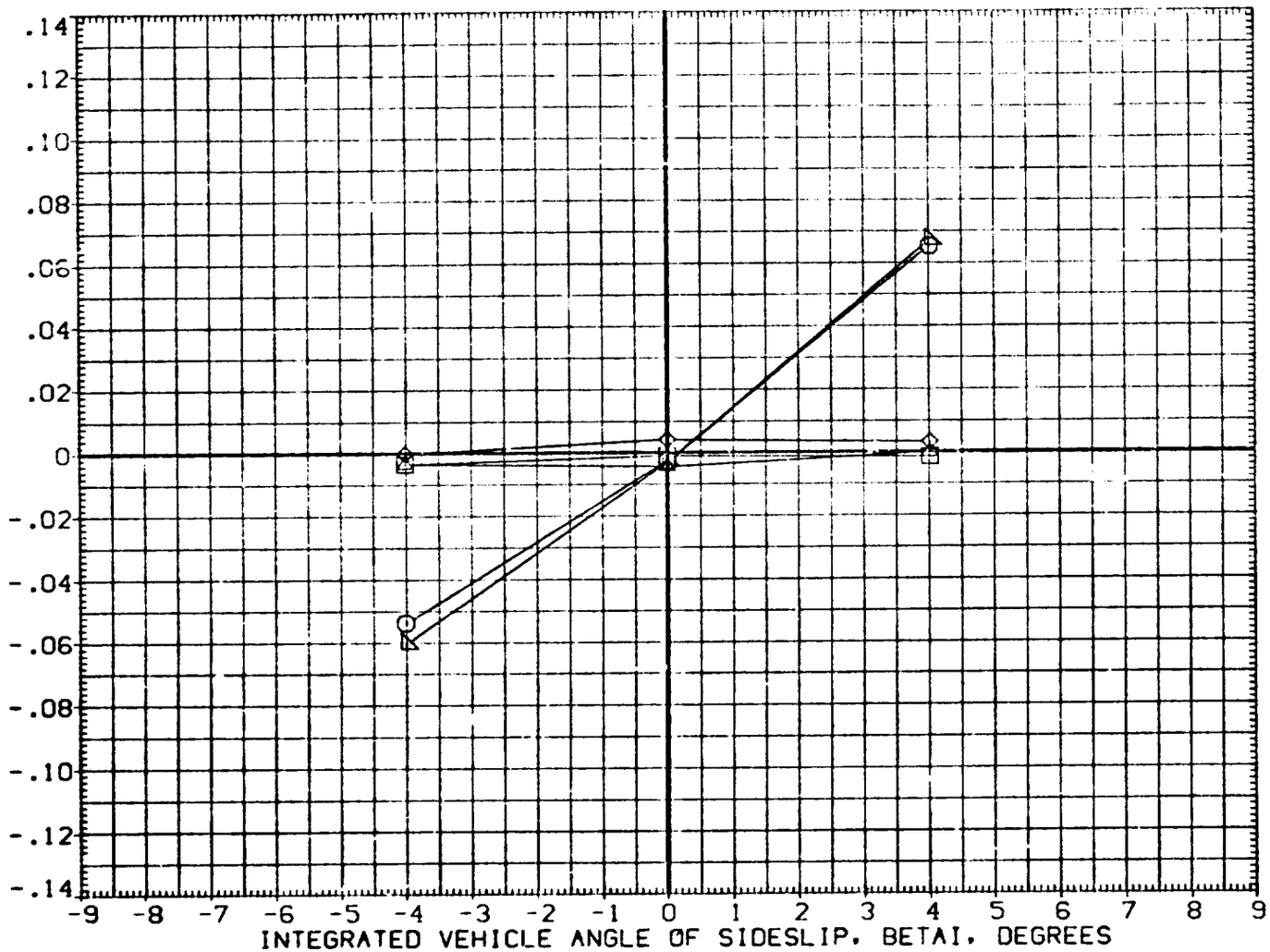


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

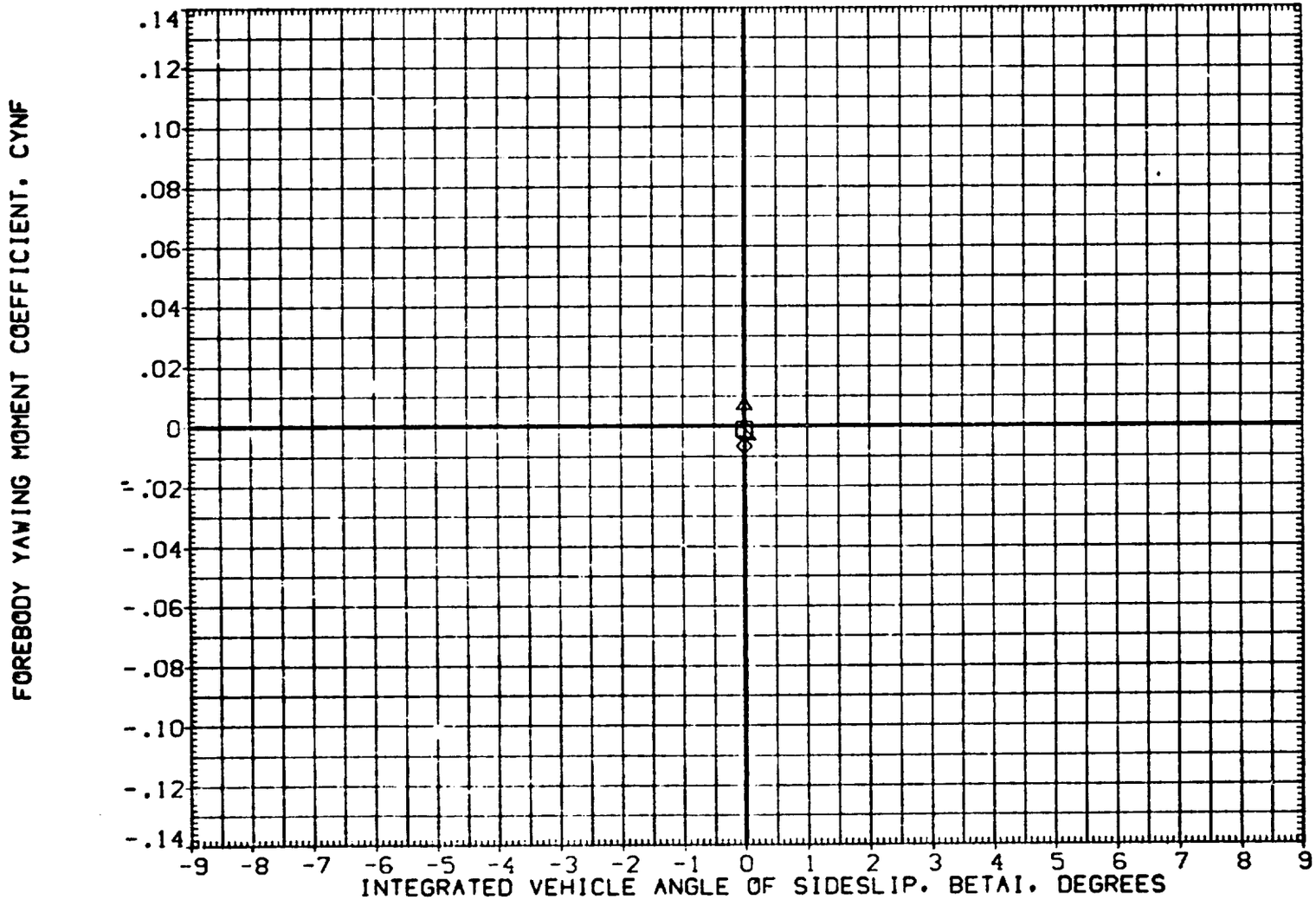


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	⋈	AMES97-019(IA81) LVAP R-LPB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	◁	AMES97-019(IA81) LVAP INT VFH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

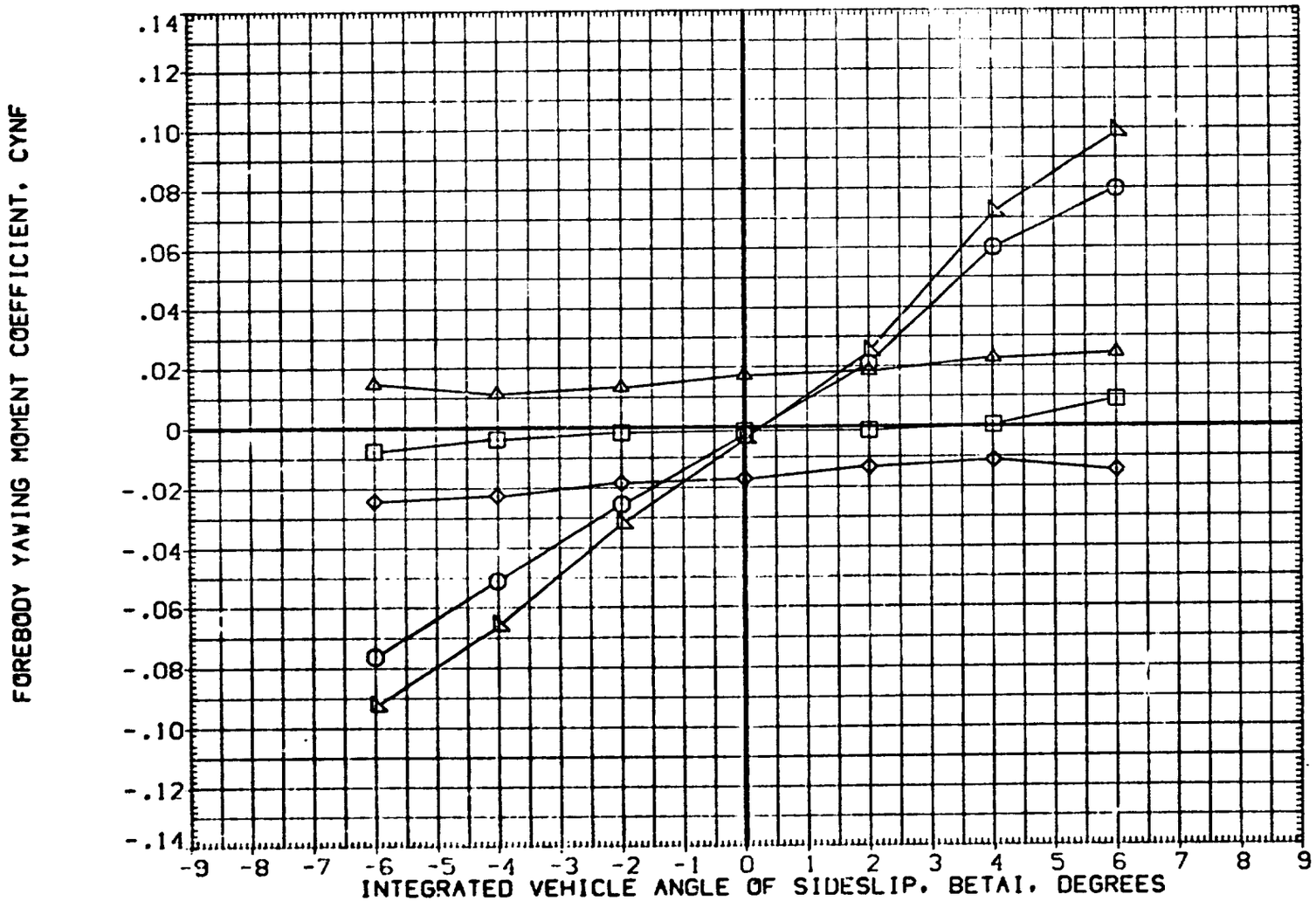


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE1C47)		AMES37-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES37-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LE1R47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

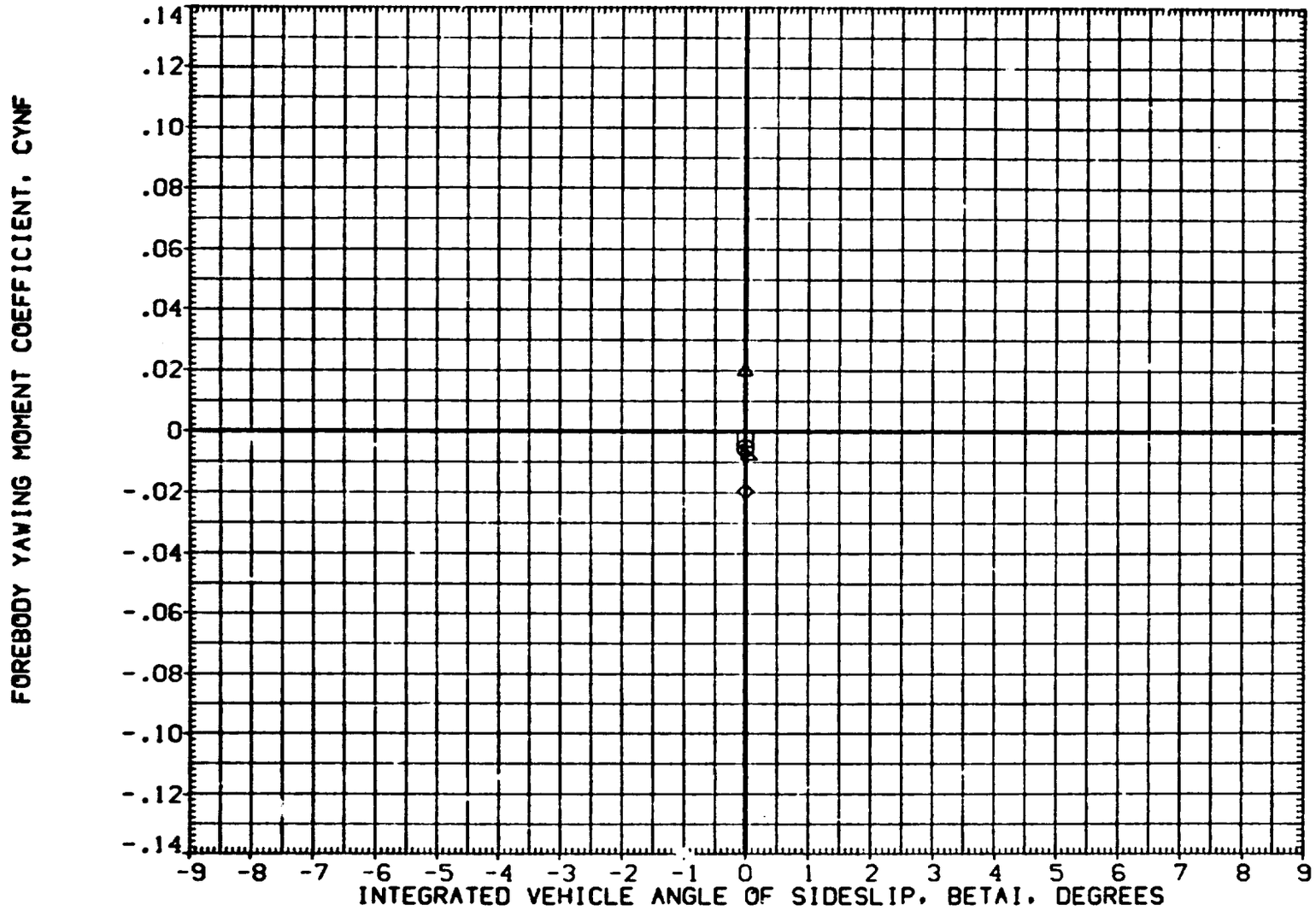


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	▽	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

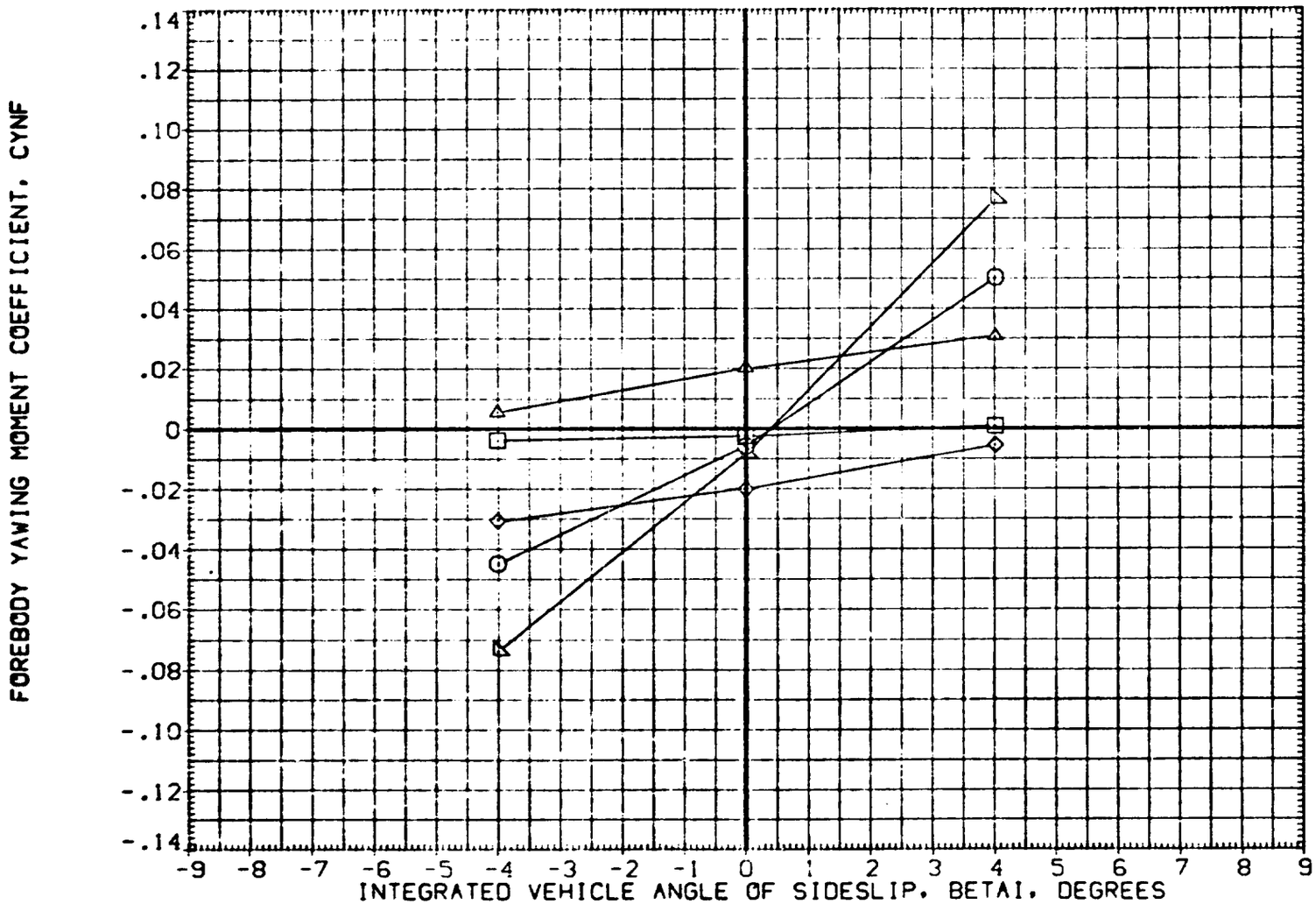


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

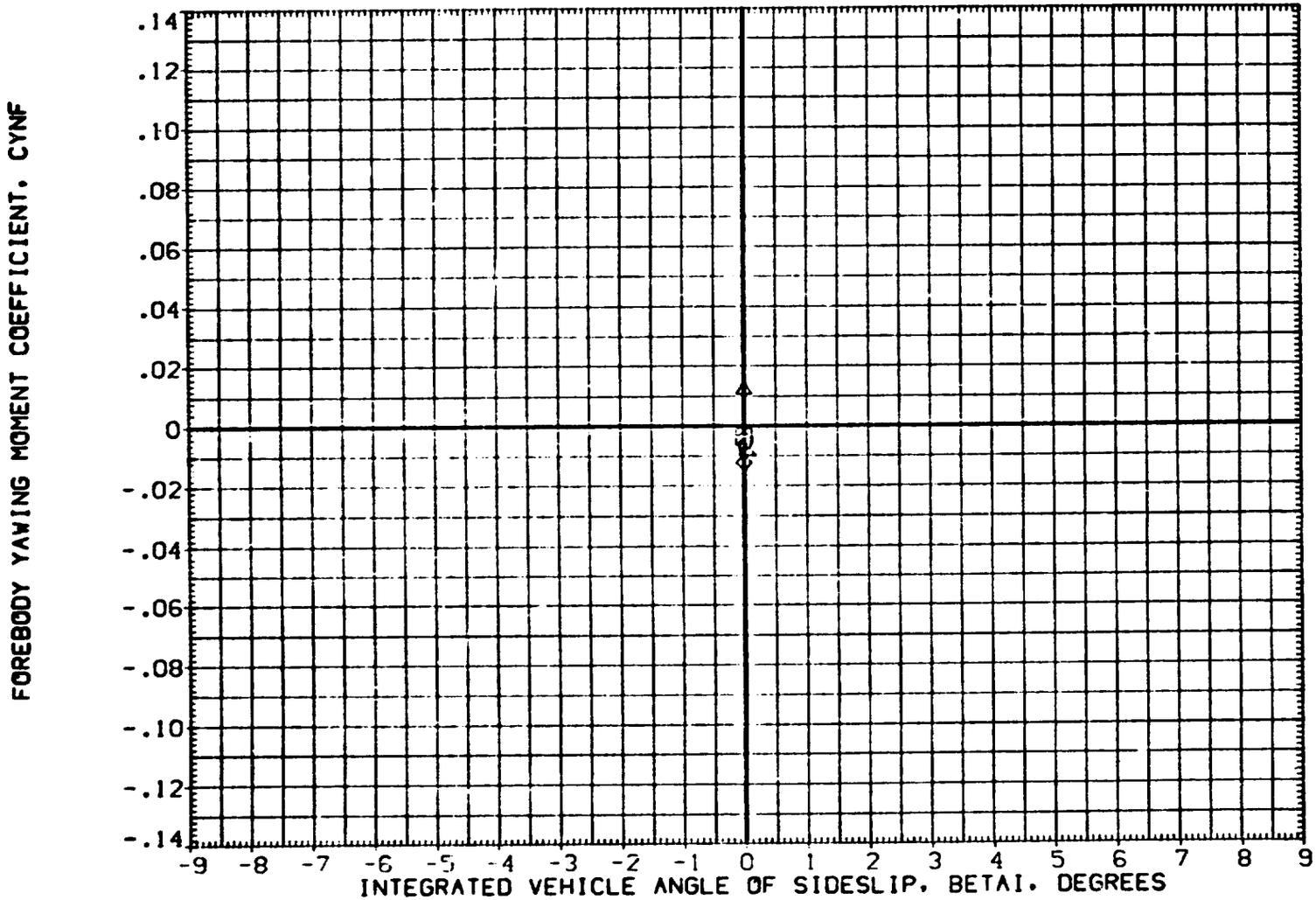


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES37-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LET147)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	⊠	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFURMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

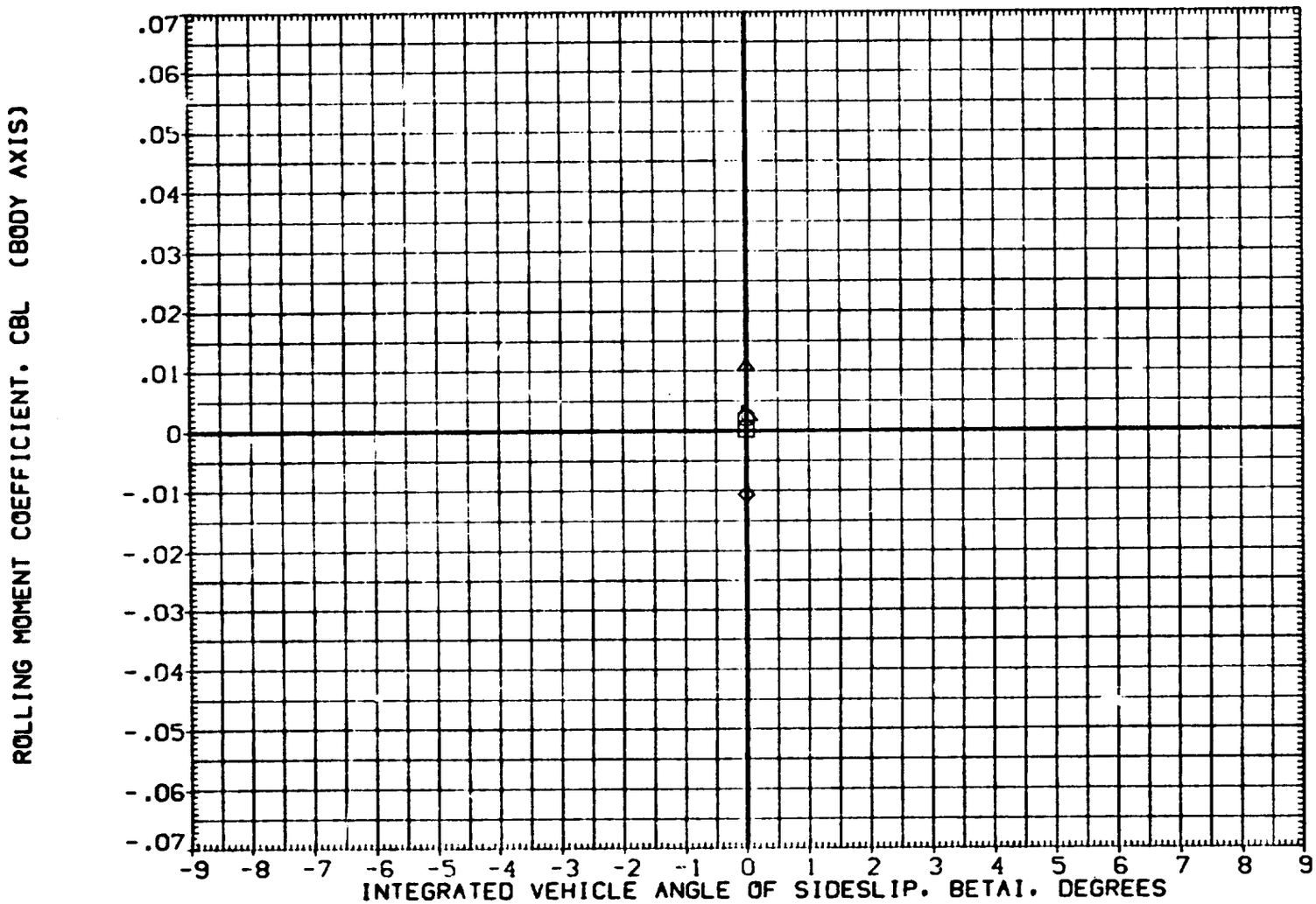


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	◇	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

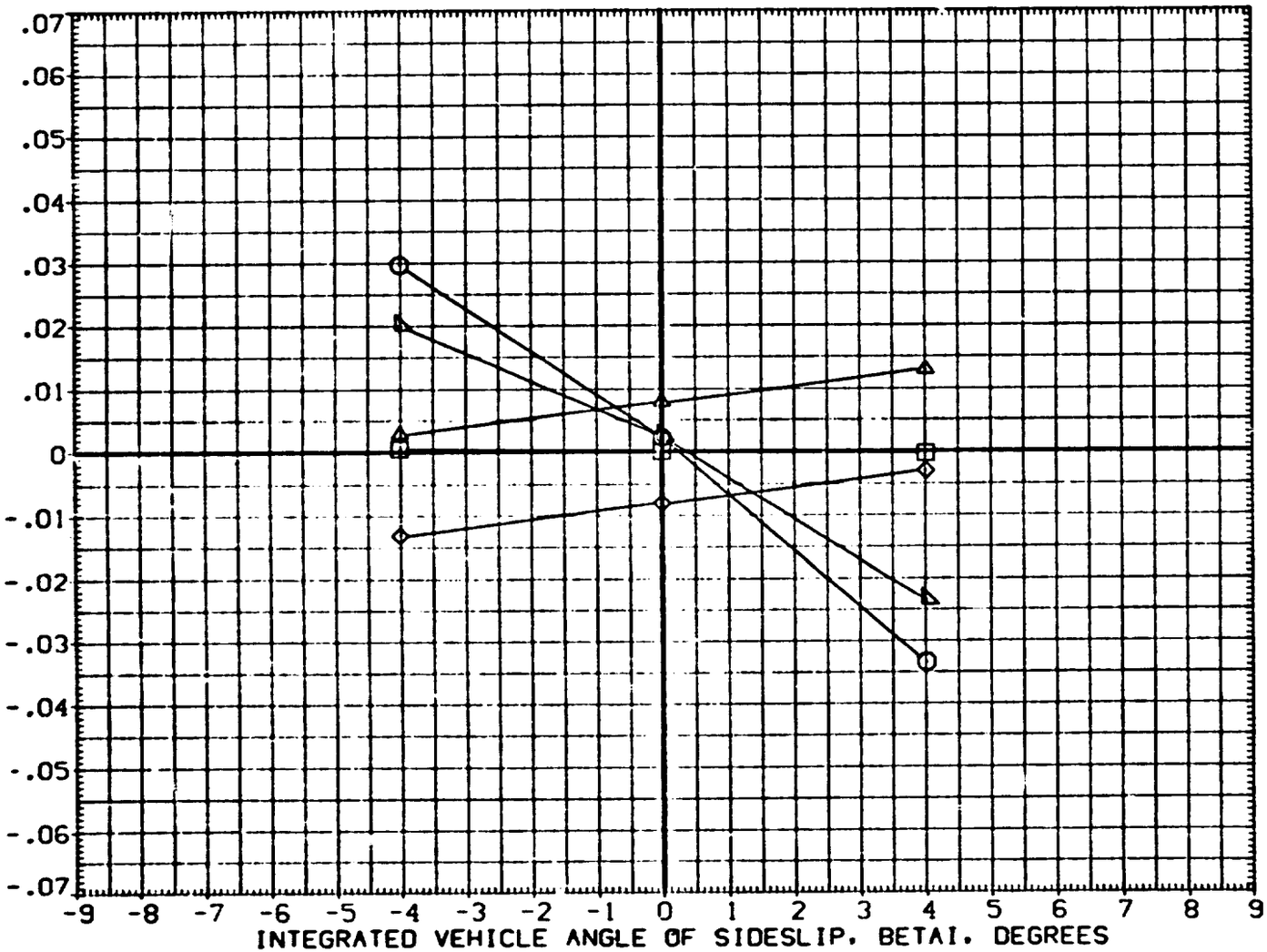


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(LETT47)	▽	AMES97-019(1A81) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(LETI47)	⊿	AMES97-019(1A81) LVAP INT VEH ALL ML SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

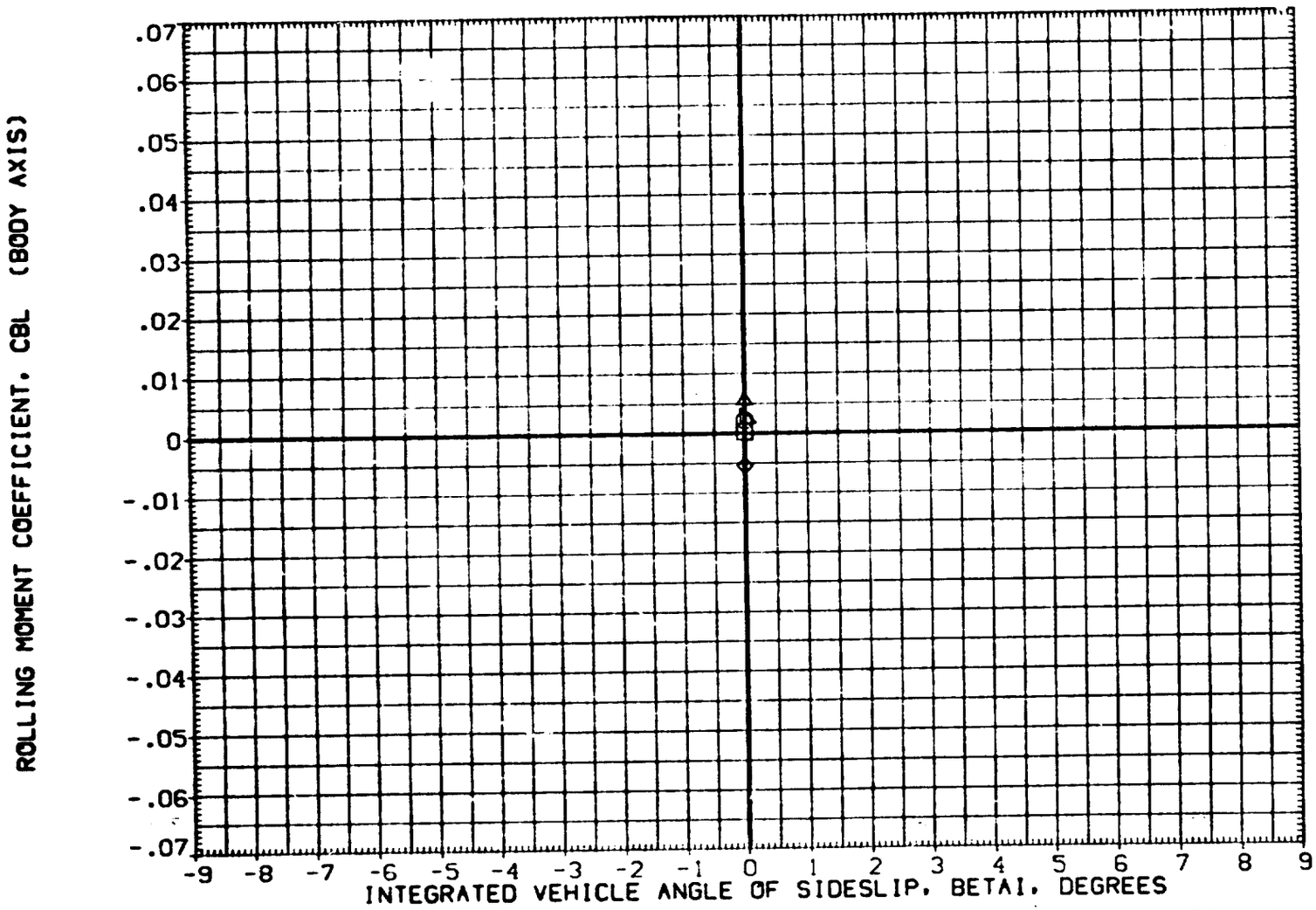


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

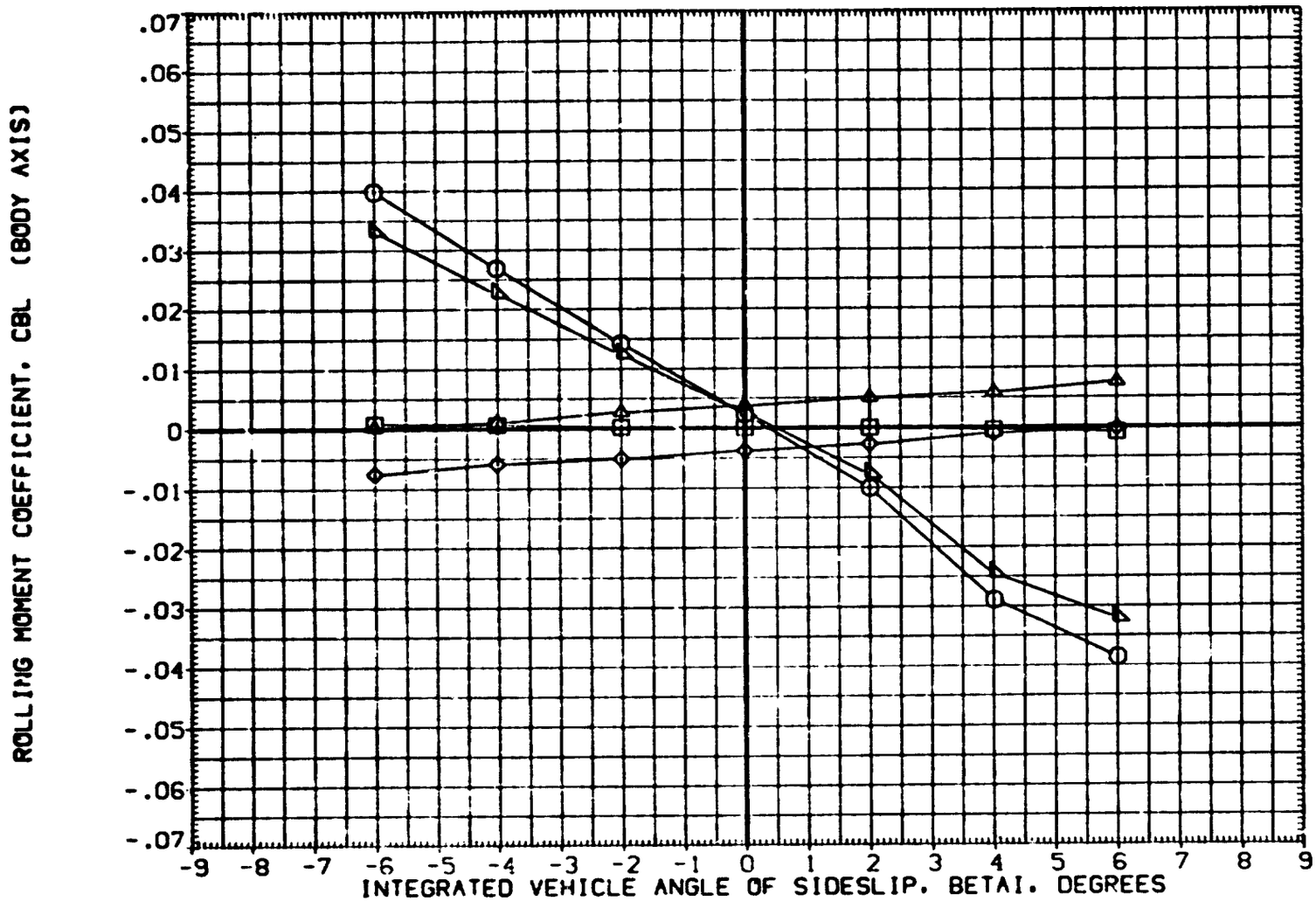


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE7047)	□	AMES97-019(1AB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(1AB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(1AB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

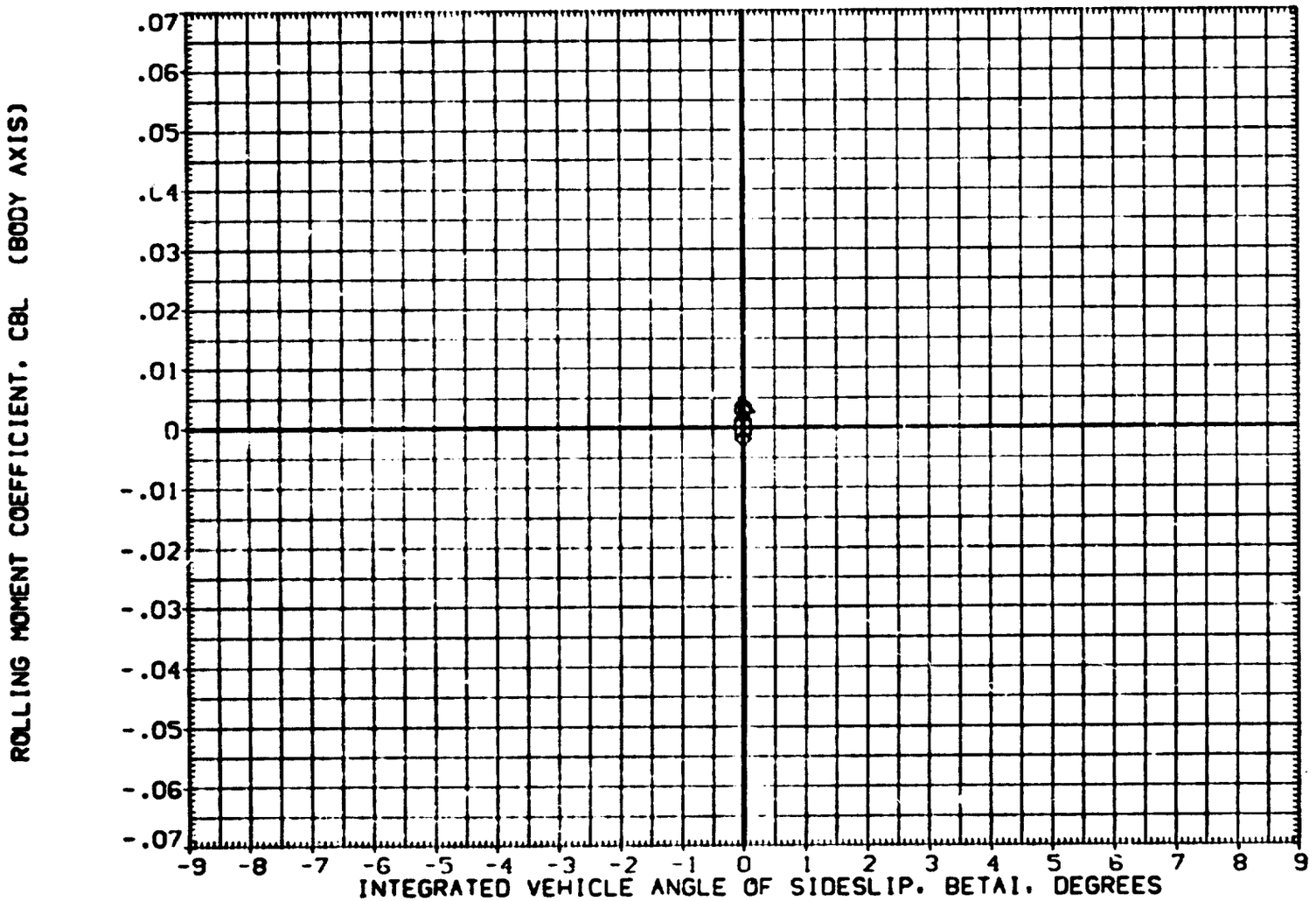


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPJBRK
(LET047)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(1A91) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

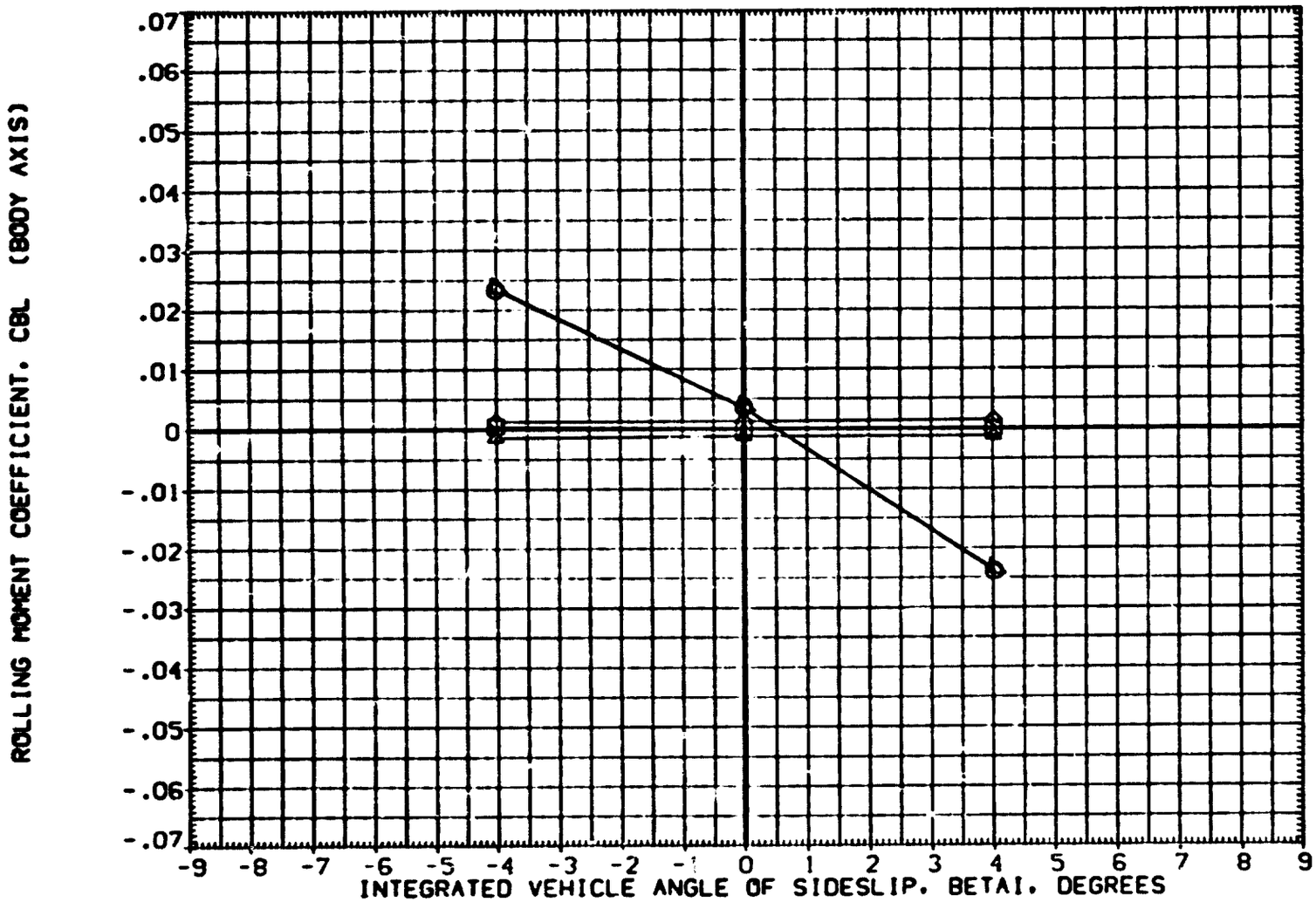


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.0 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET047)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(1A81) LVAP R-SRB ALL ML SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

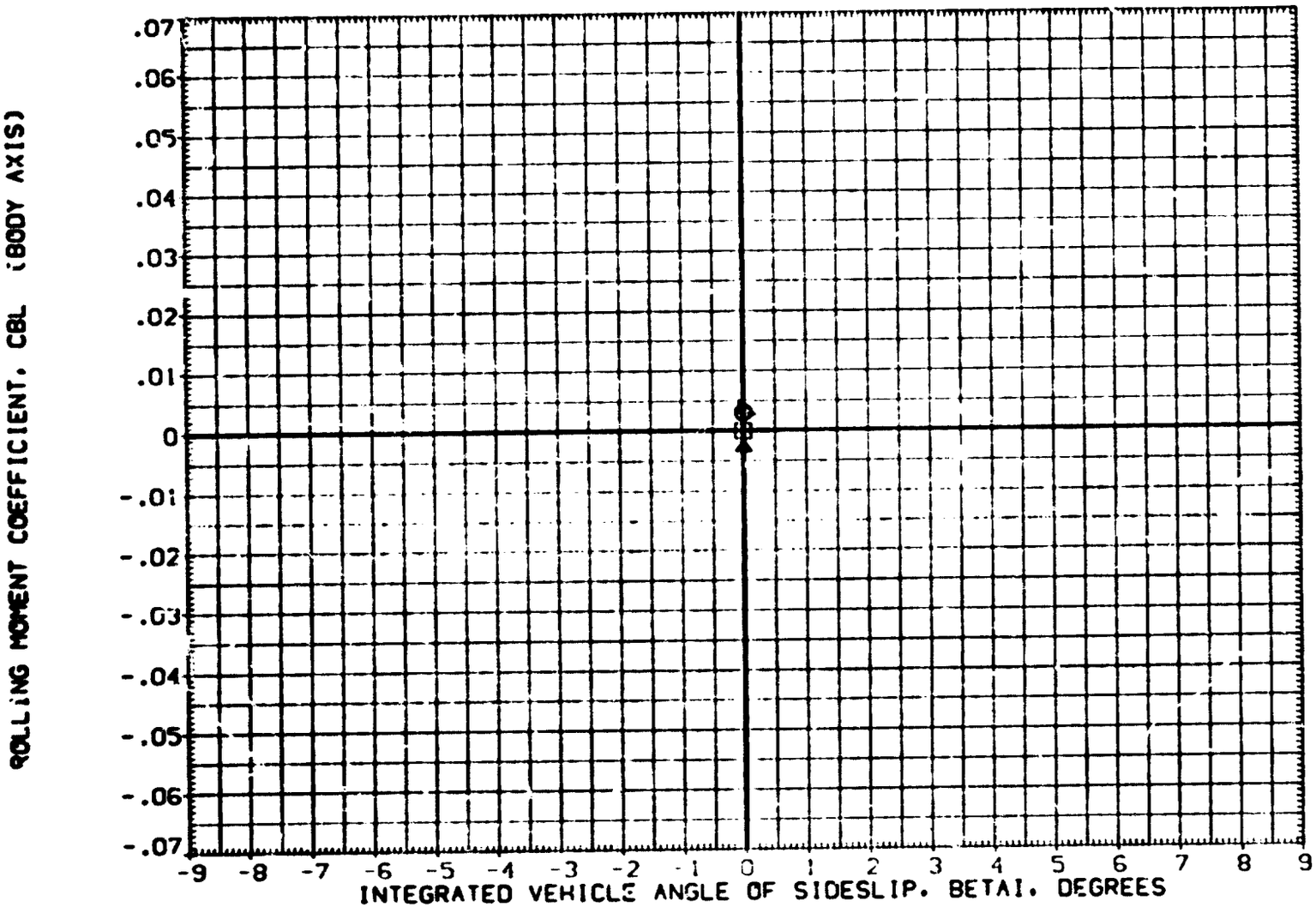


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL H SEALED	10.000	-4.000	2.000	.000
(LETT47)	⋈	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

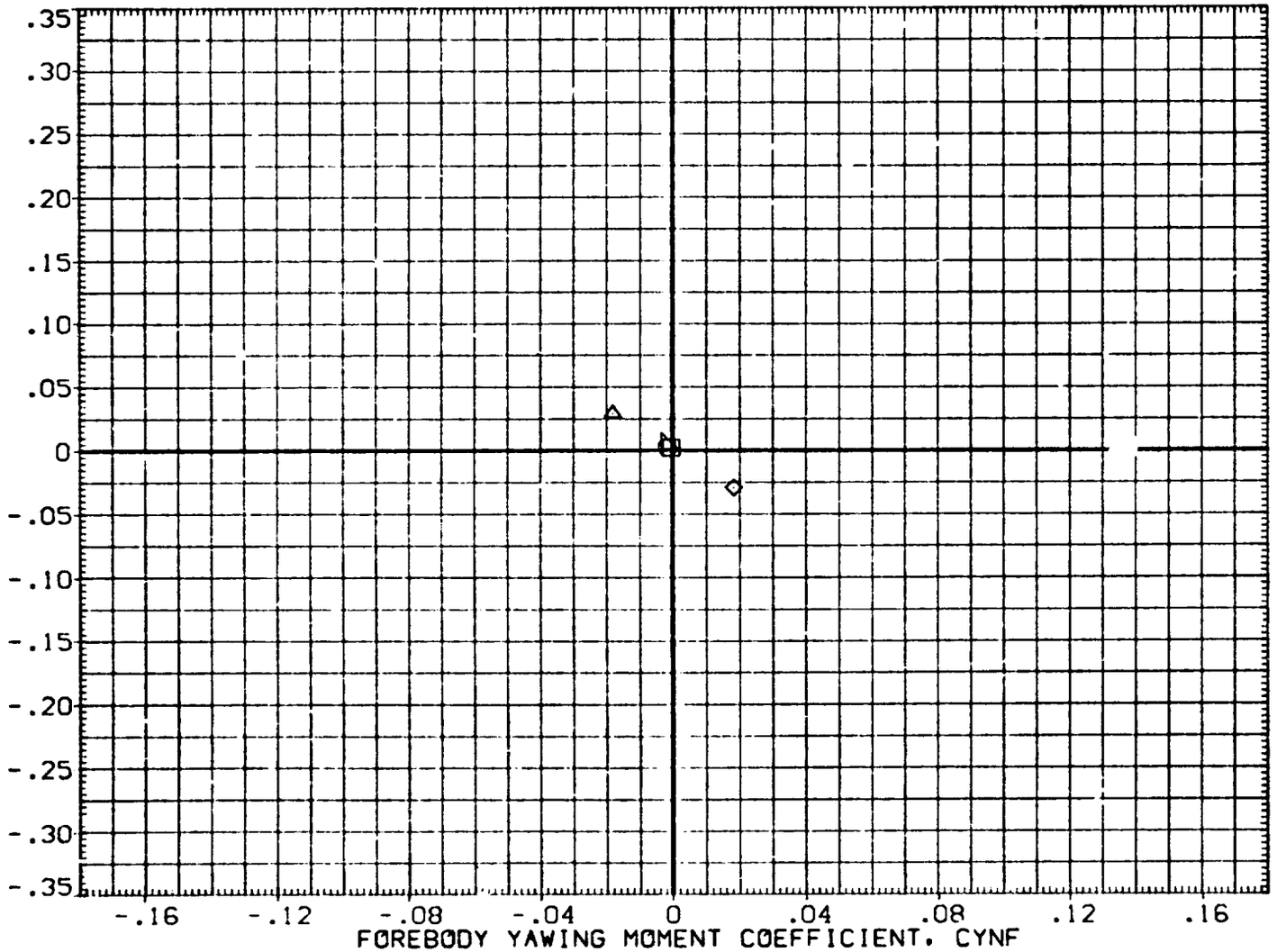


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

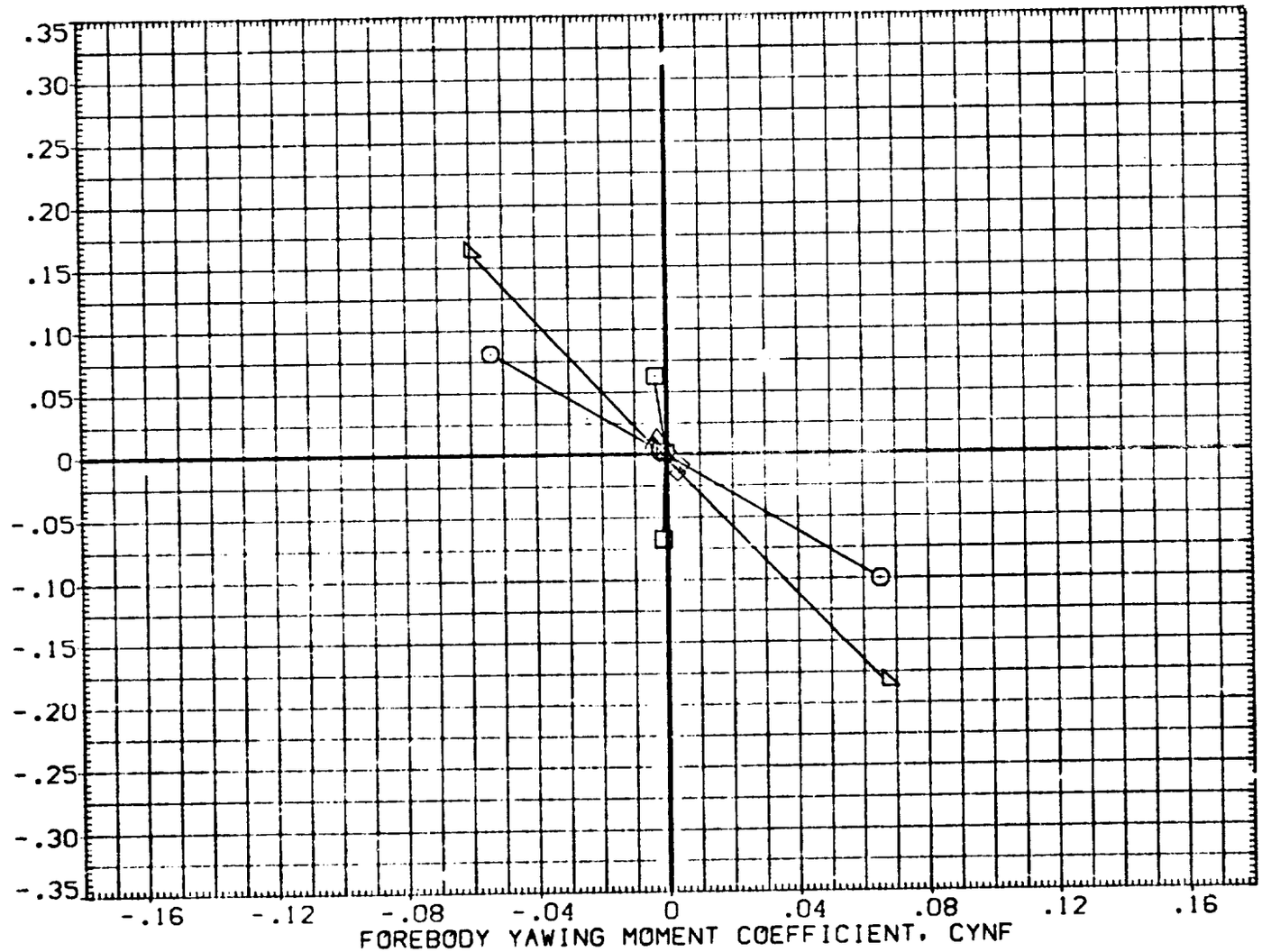


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(B)ALPHA1= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

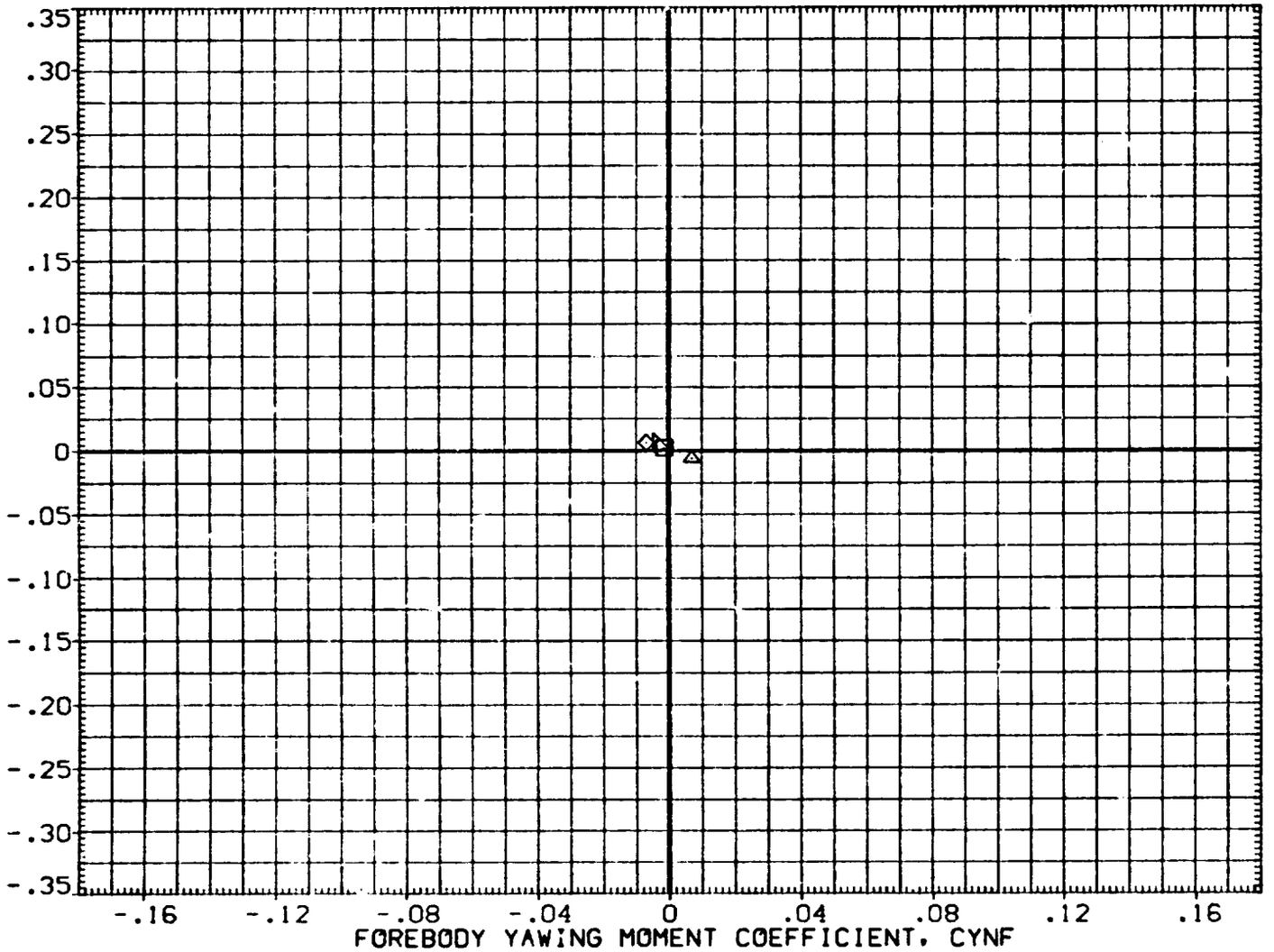


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)ALPHA!= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

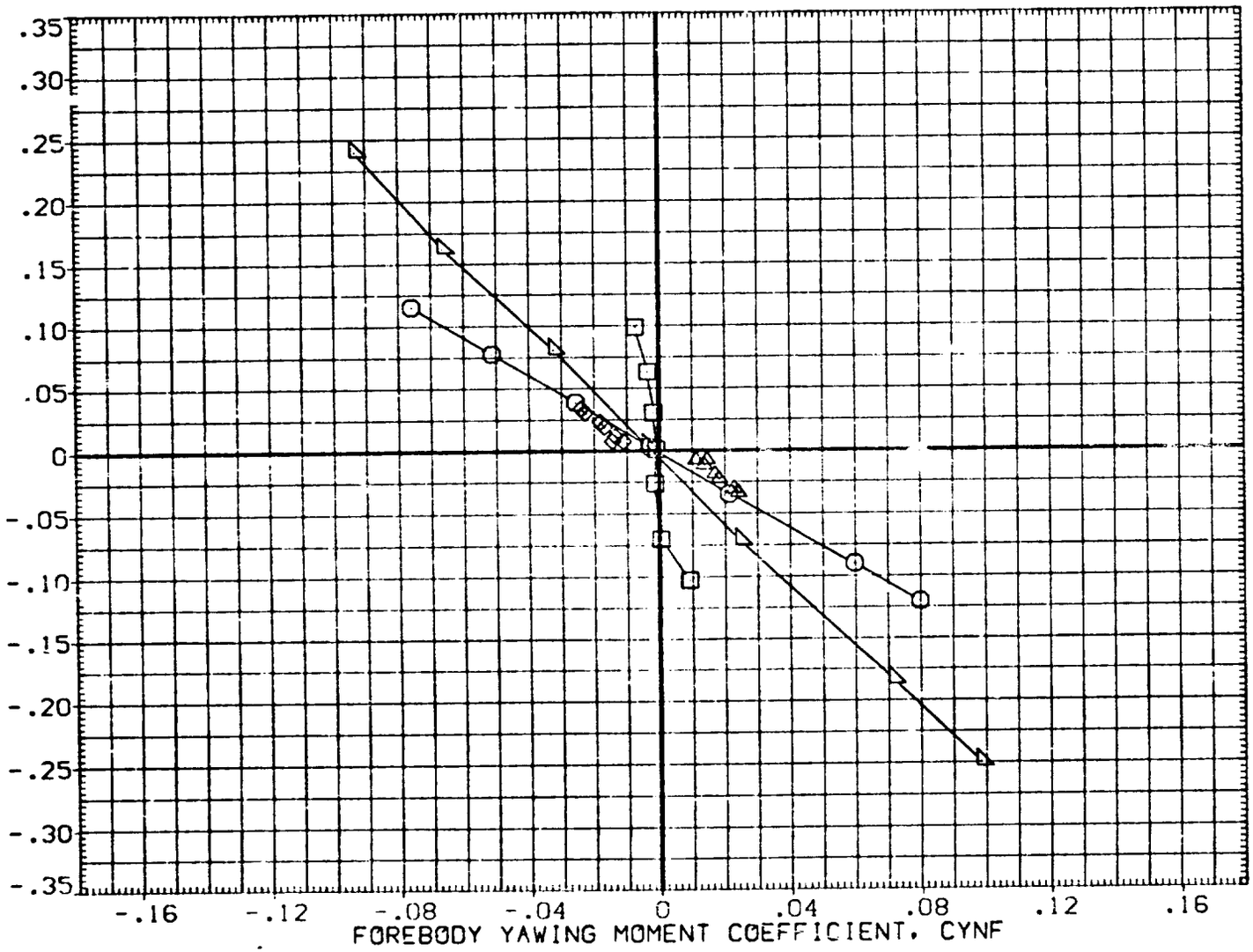


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

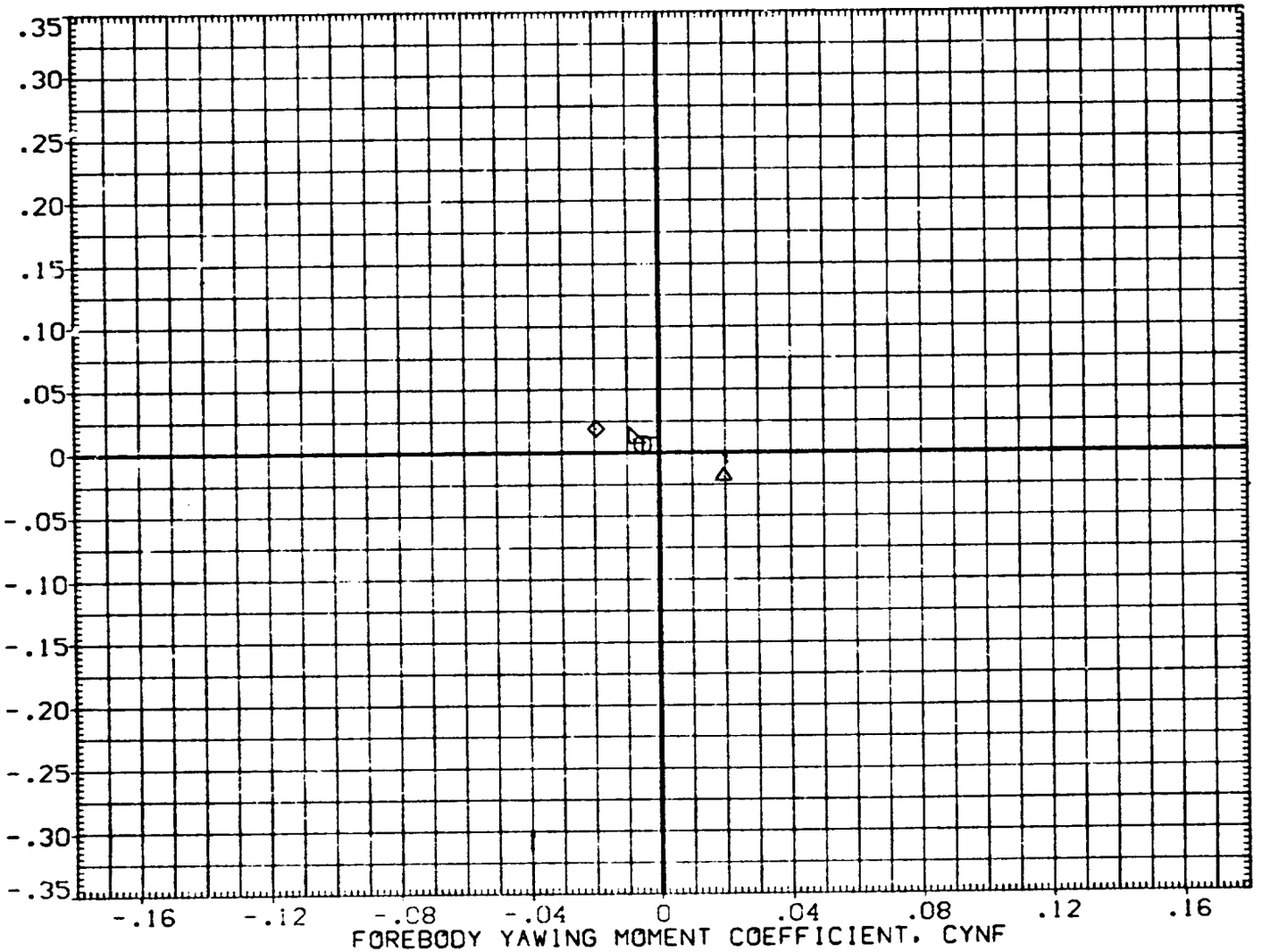


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

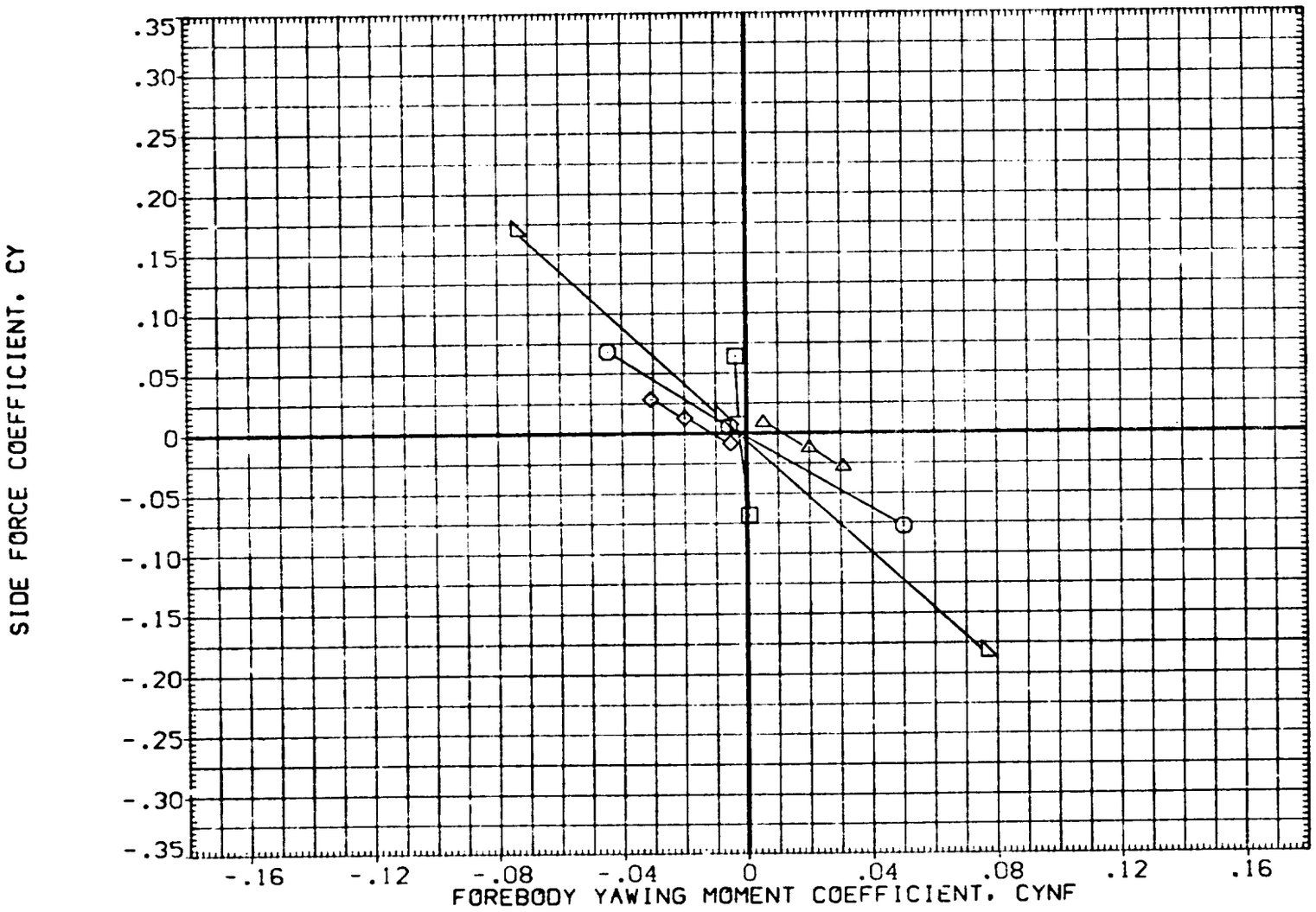


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO47)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

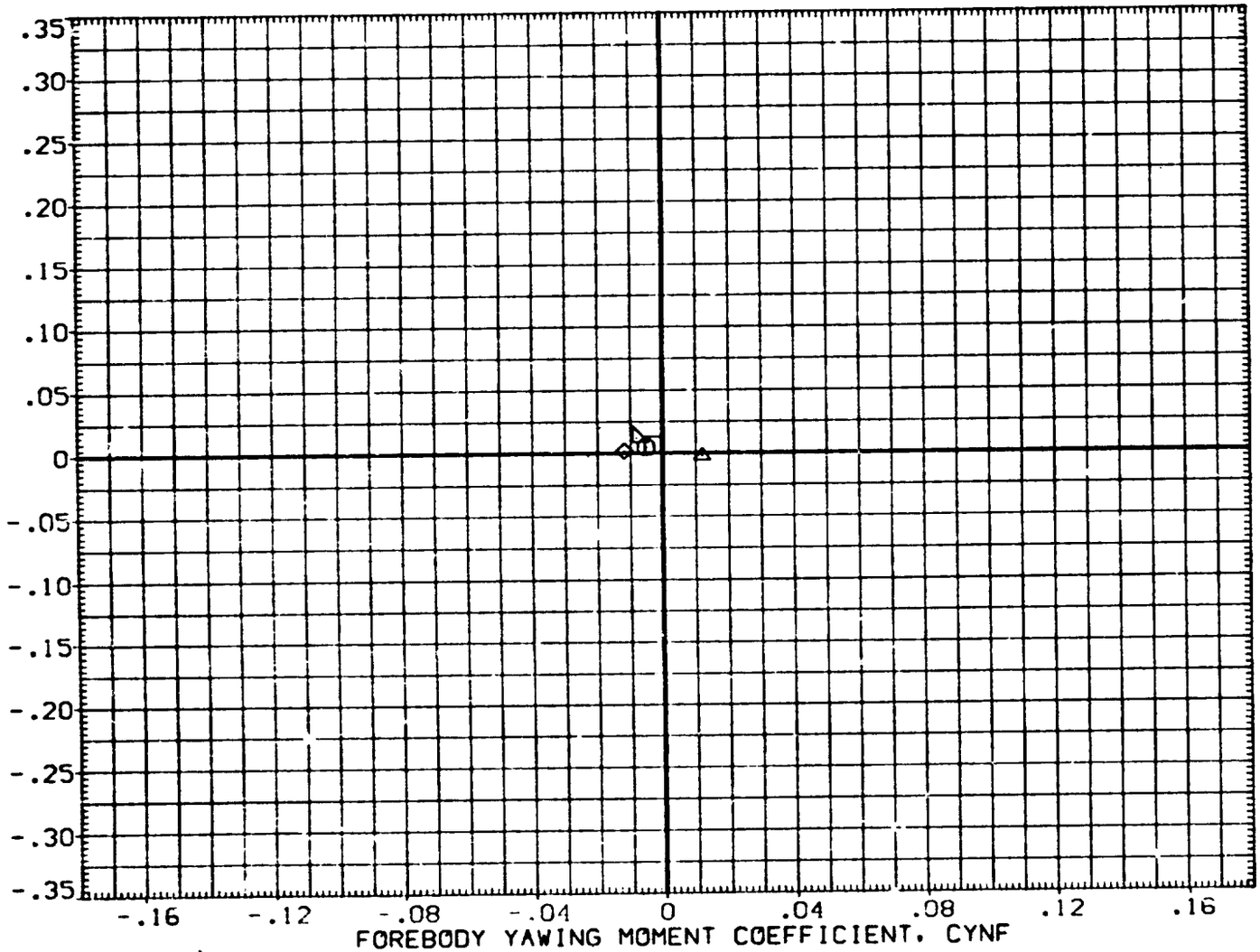


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	4.000	2.000	.000
(LETT47)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

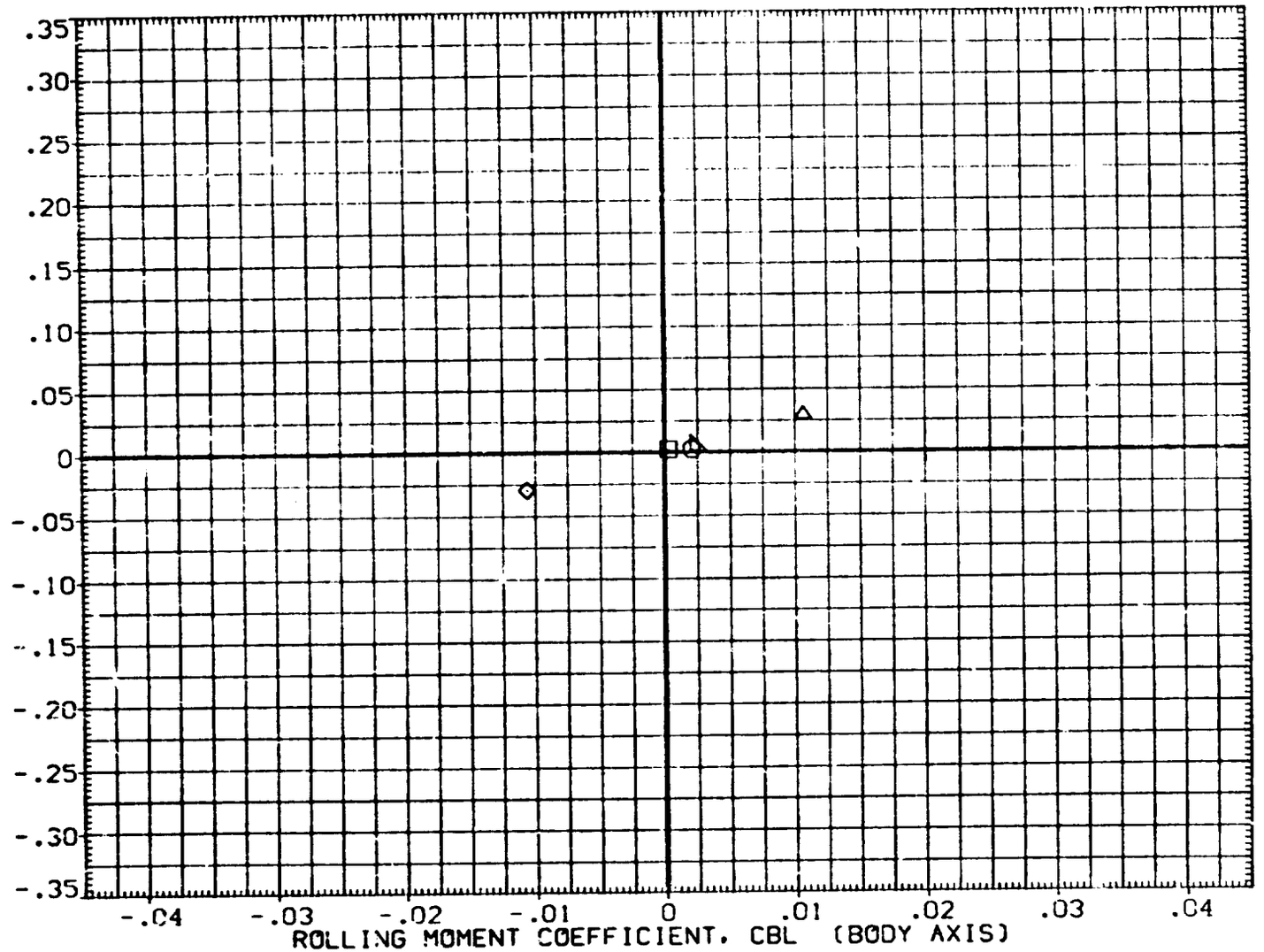


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LE?T47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

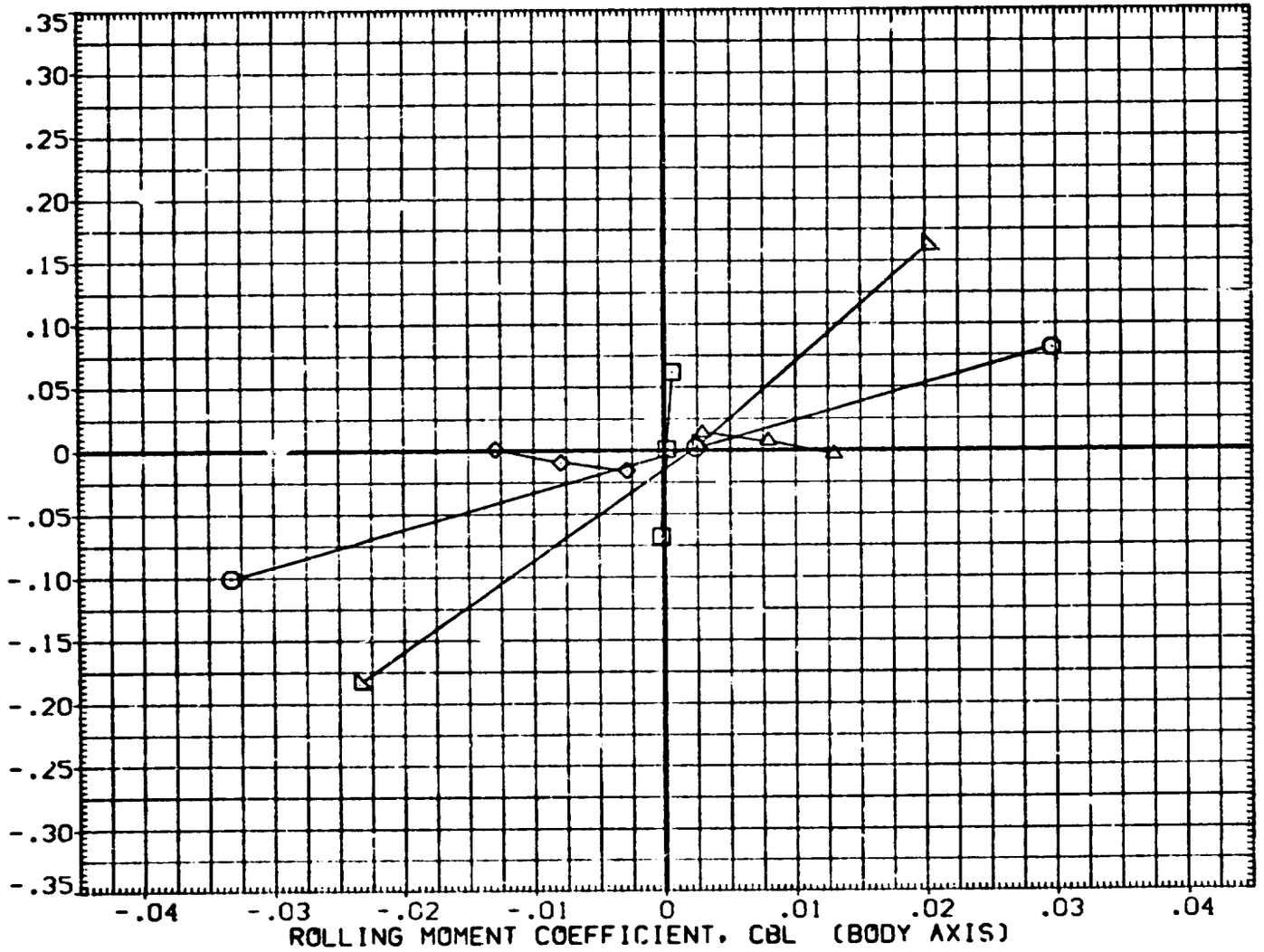


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	○	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	▽	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

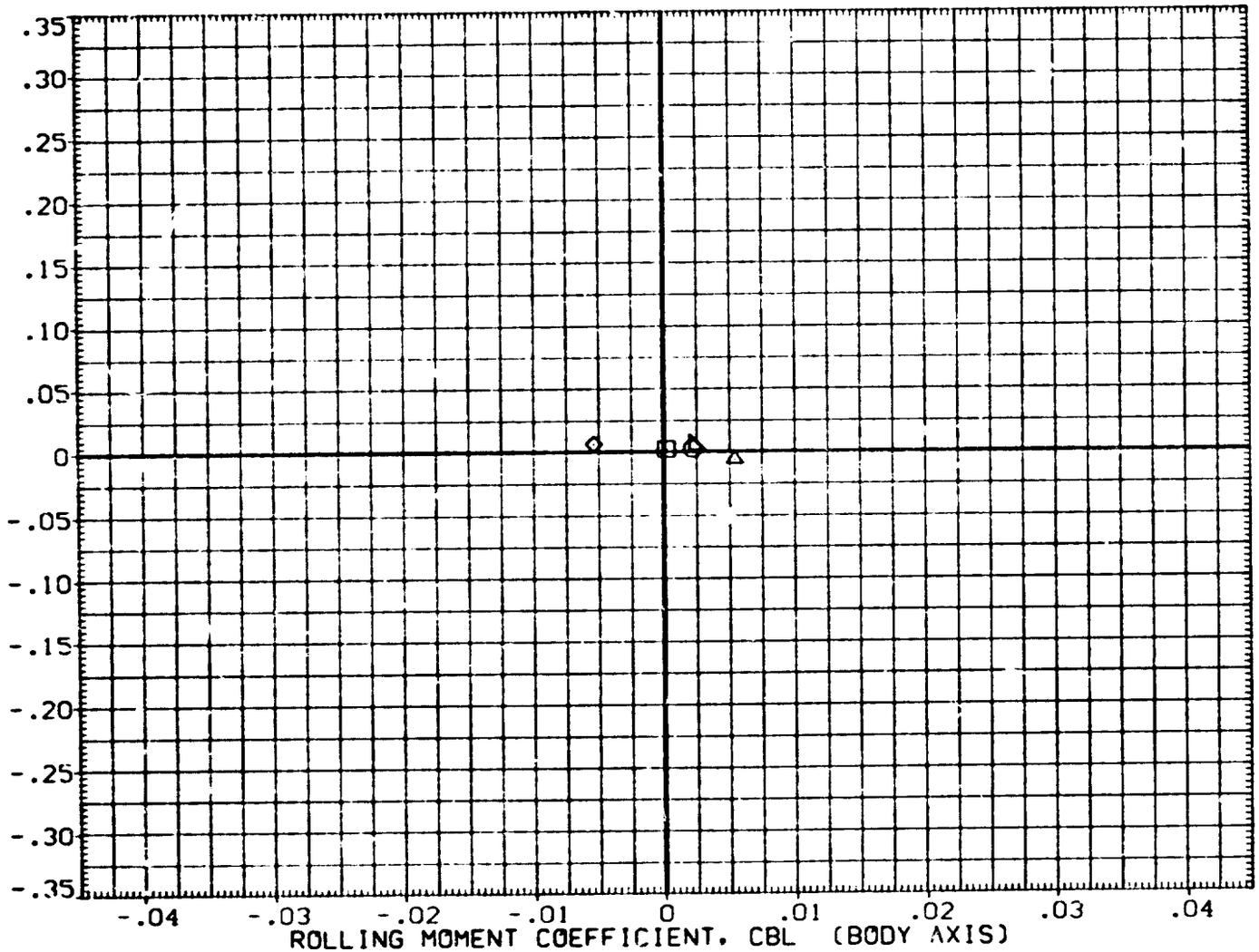


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET047)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

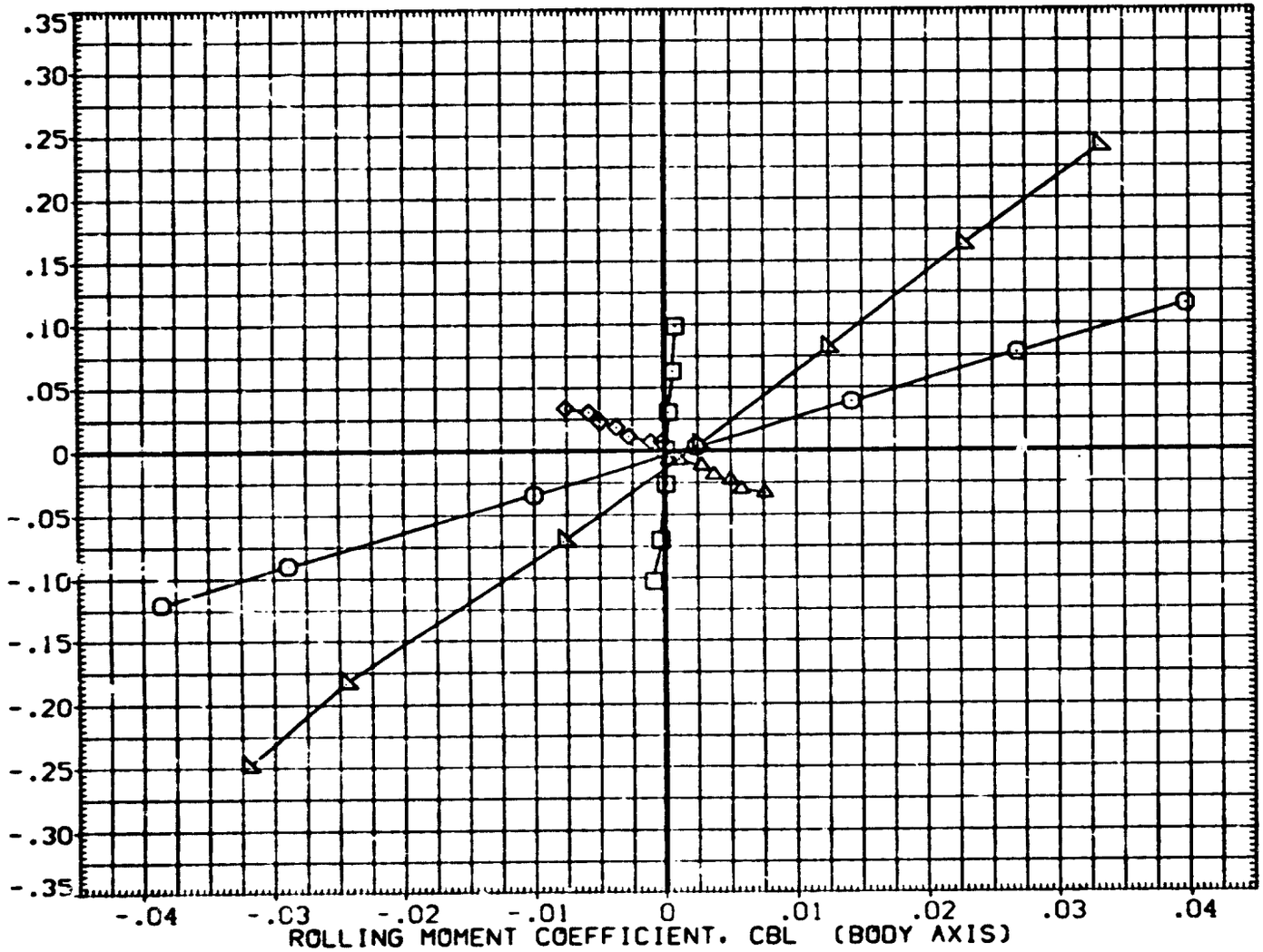


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(D ALPHA) = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	◇	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	▷	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

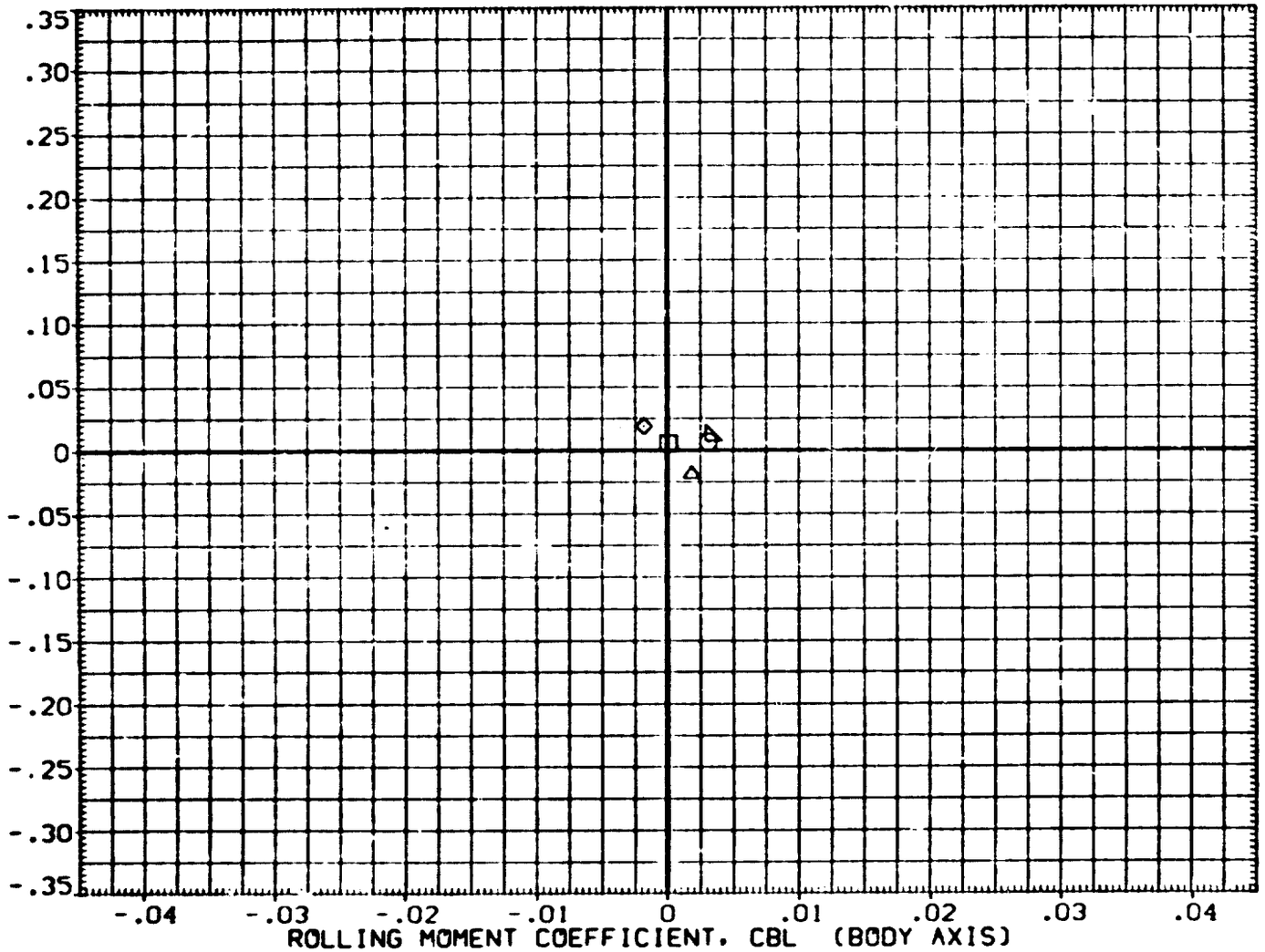


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LET047)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(LETT47)	▽	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETL47)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	10.000	-4.000	2.000	.000
(LETR47)	△	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	10.000	-4.000	2.000	.000
(LETI47)	○	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

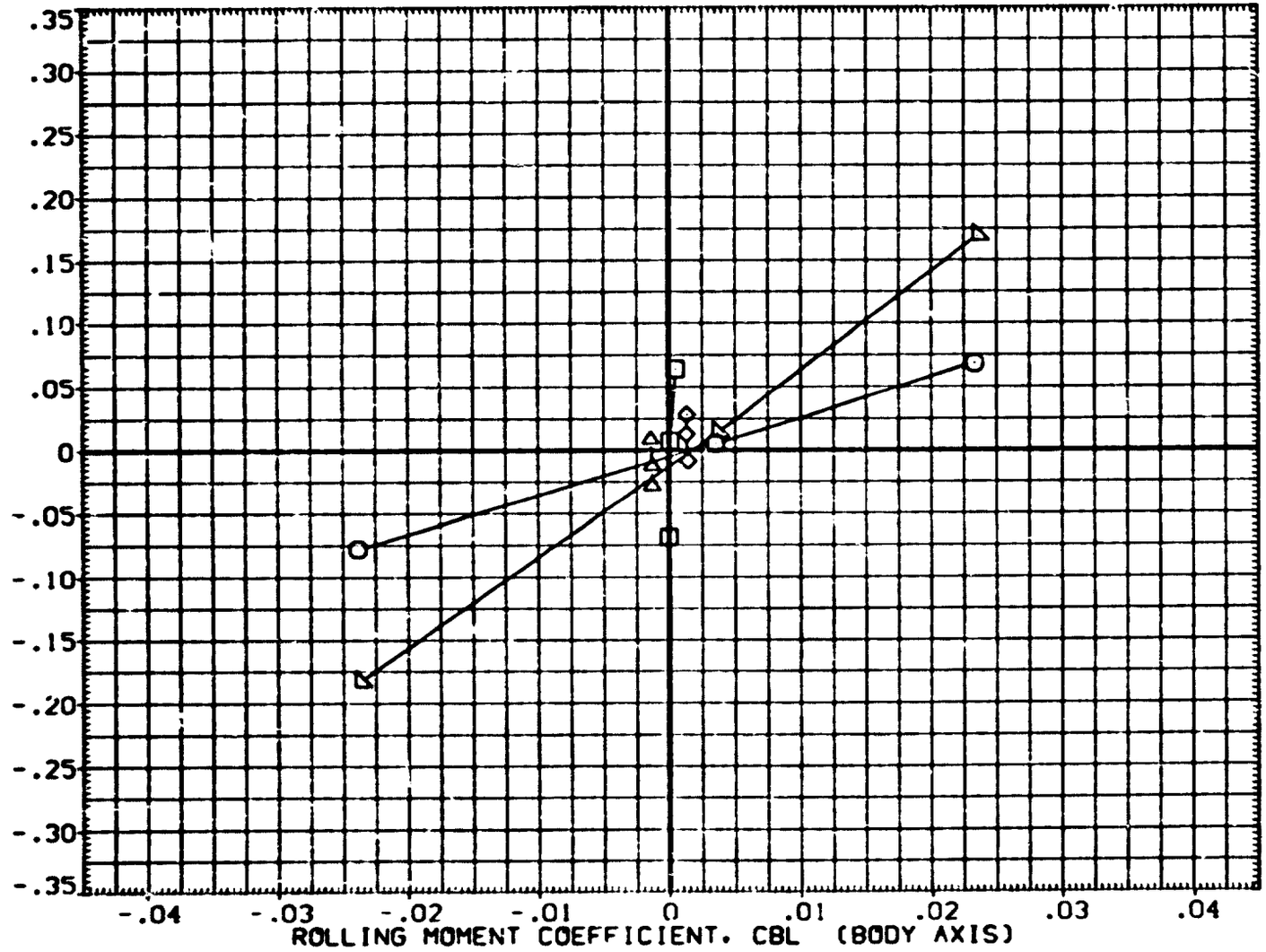


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET047)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(LETT47)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	10.000	-4.000	2.000	.000
(LETL47)	⊲	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	10.000	-4.000	2.000	.000
(LLTR47)		AMES97-019(IA01) LVAP R-LRB ALL ML SEALED	10.000	-4.000	2.000	.000
(LET147)	△	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	10.000	-4.000	2.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

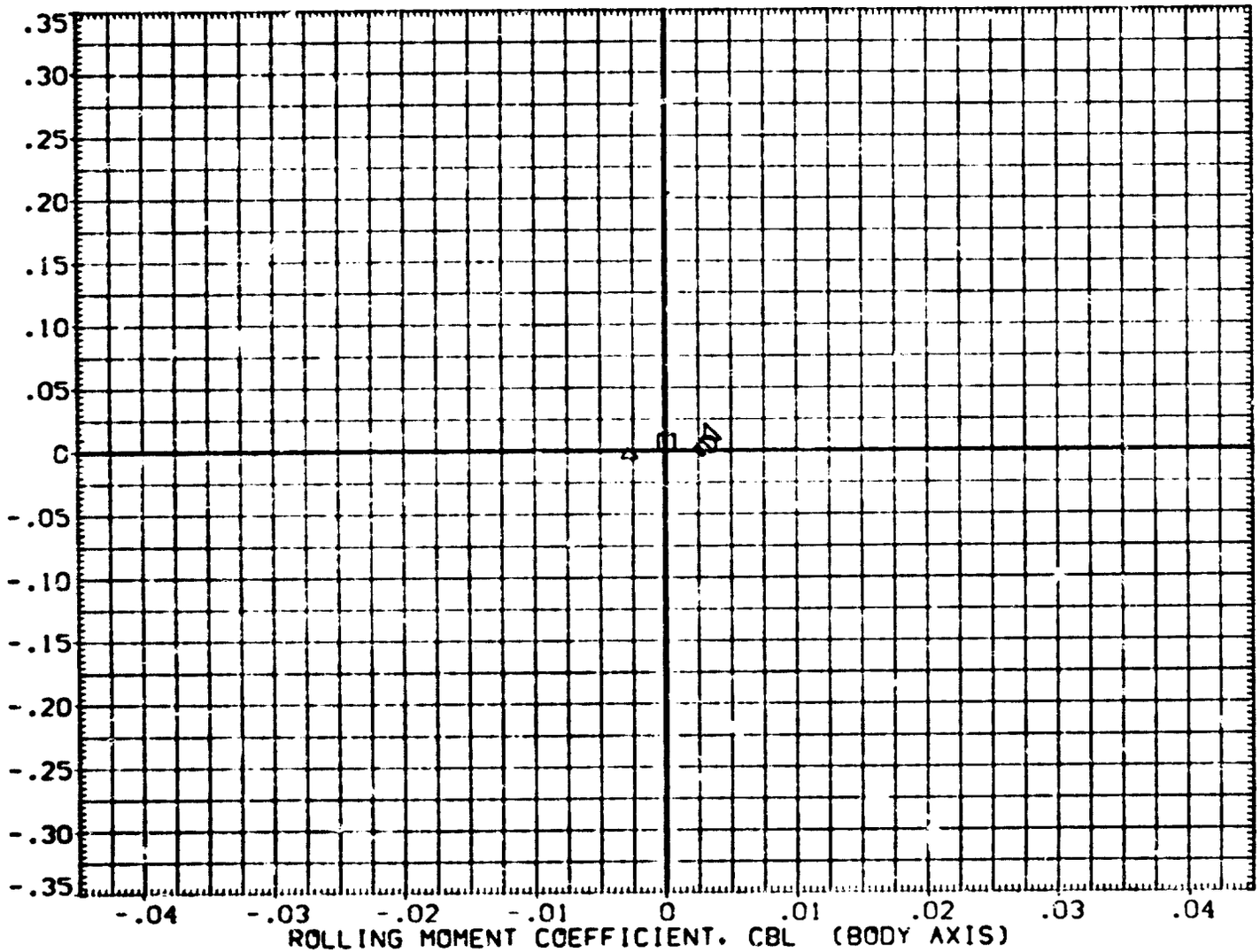


FIG. 24 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.0 DEV=10/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LET137)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	◇	AMES97-019(IA81) LVAP L SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

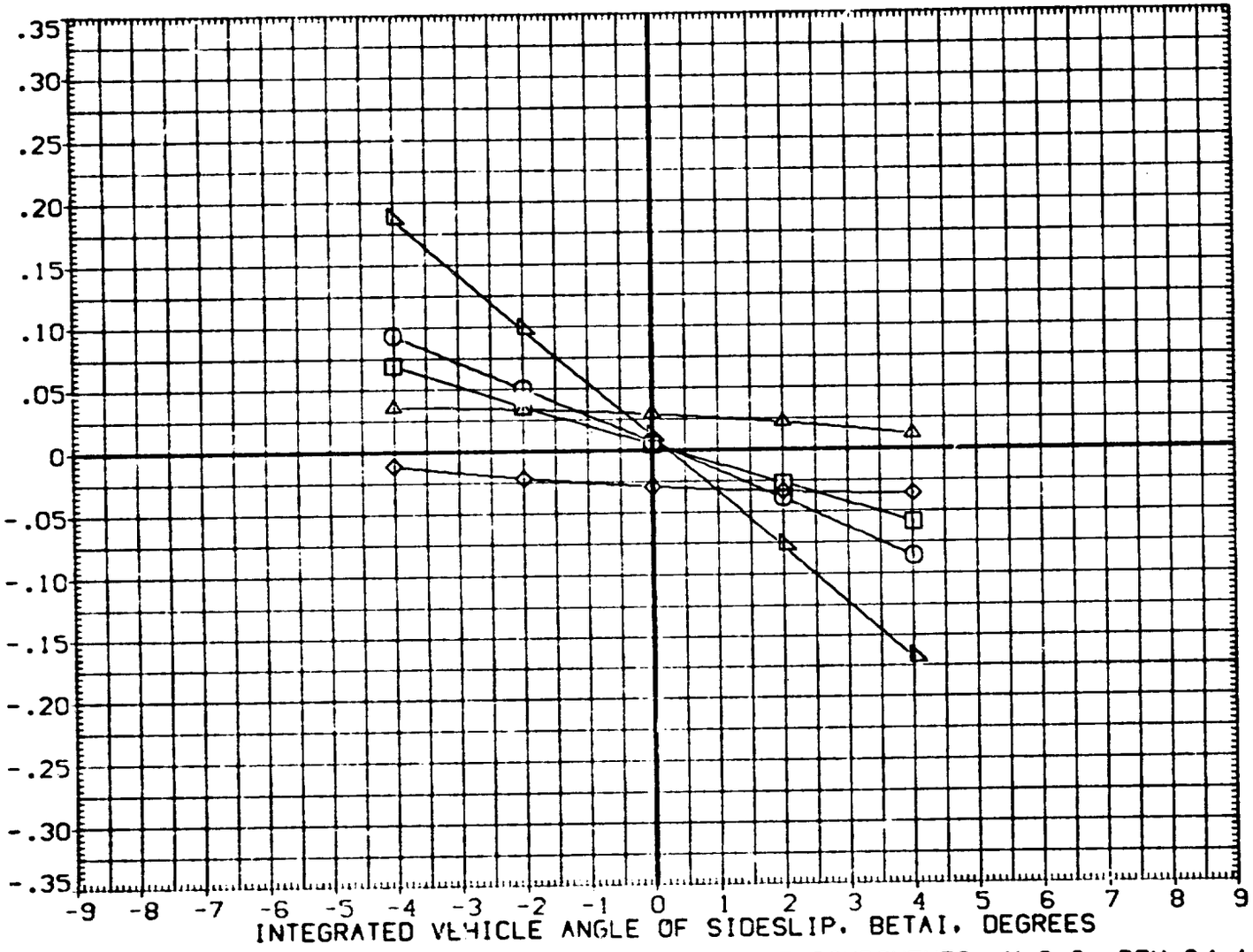


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO37)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

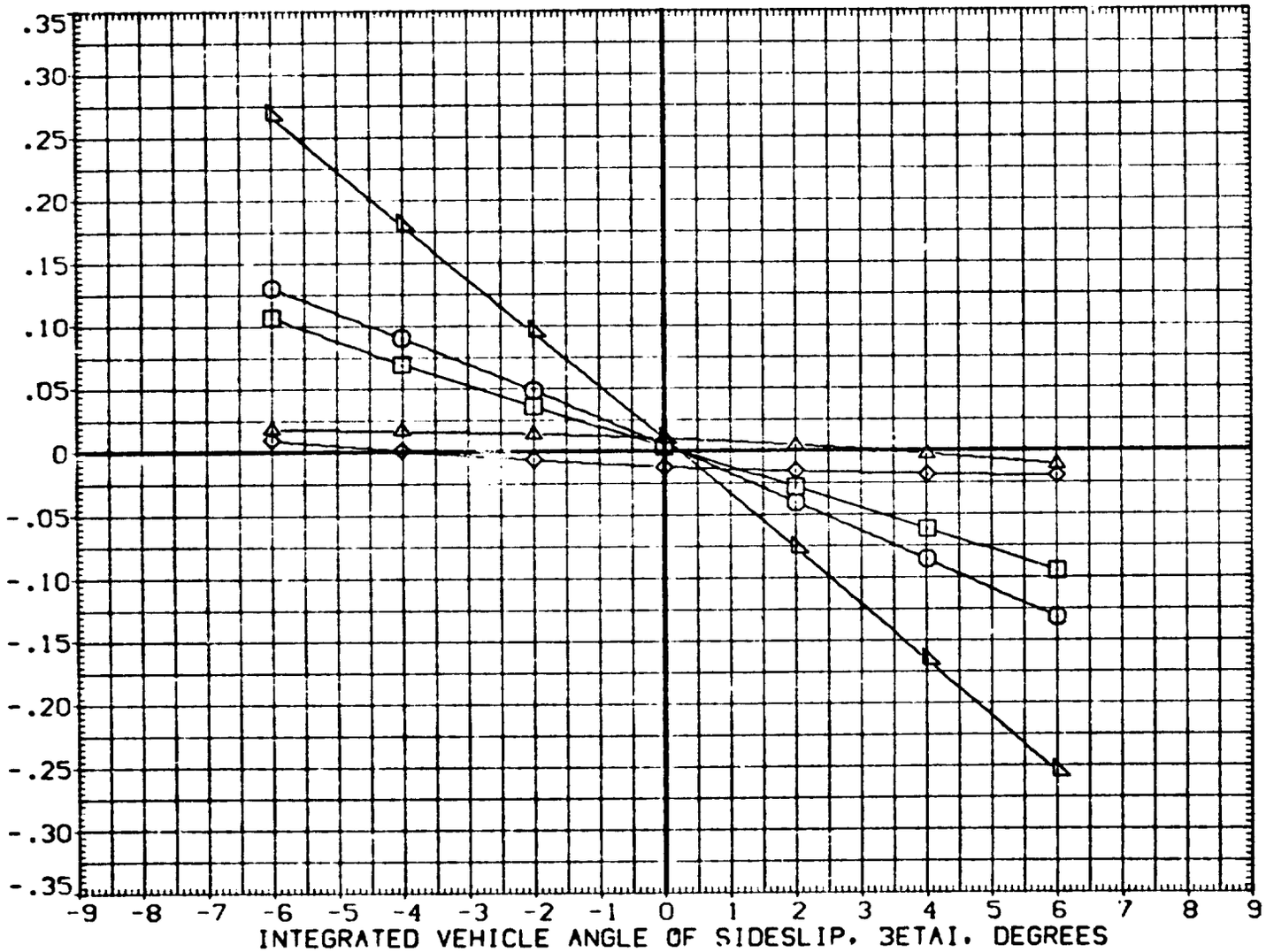


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	□	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	◇	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

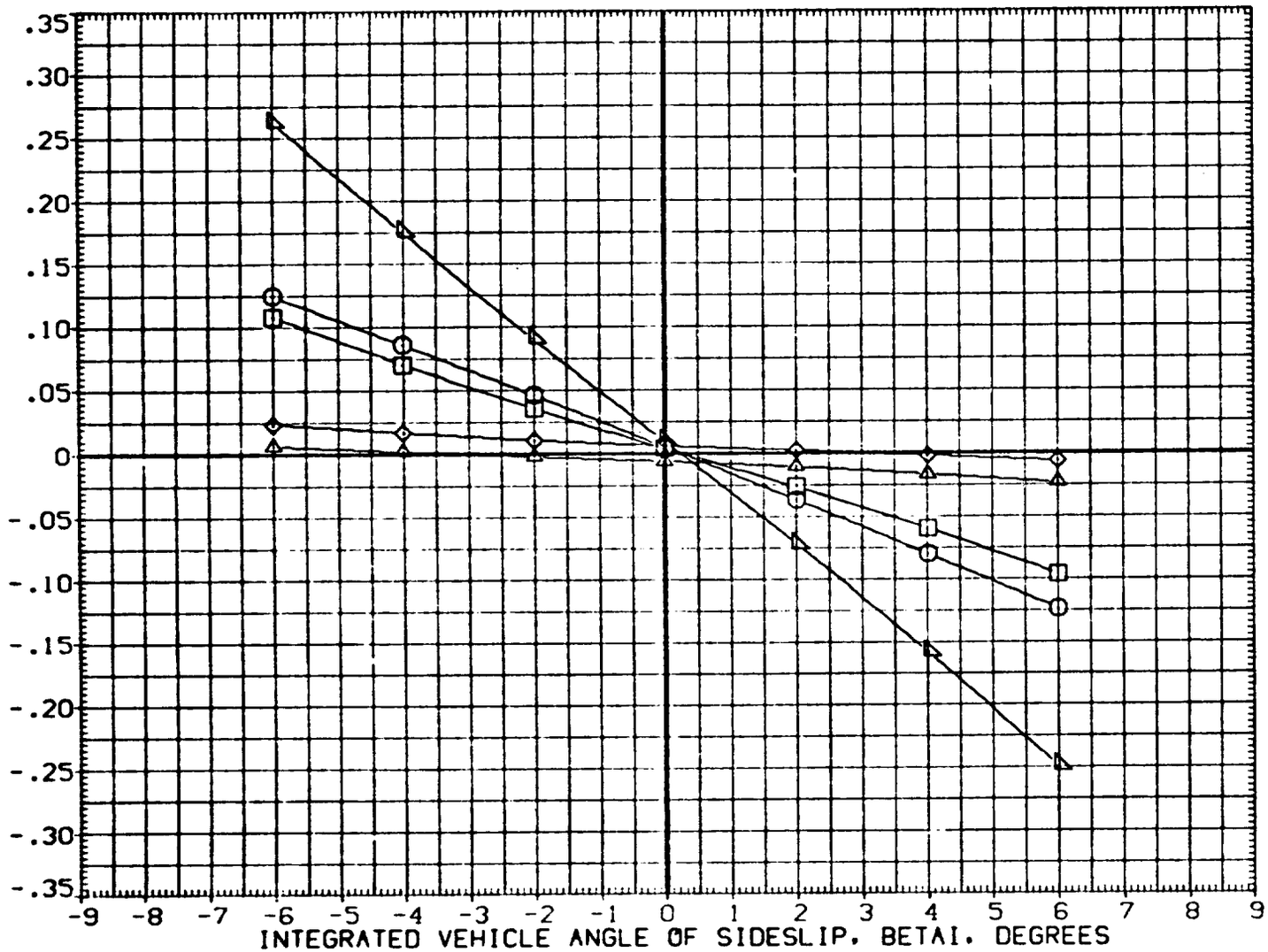


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	9.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

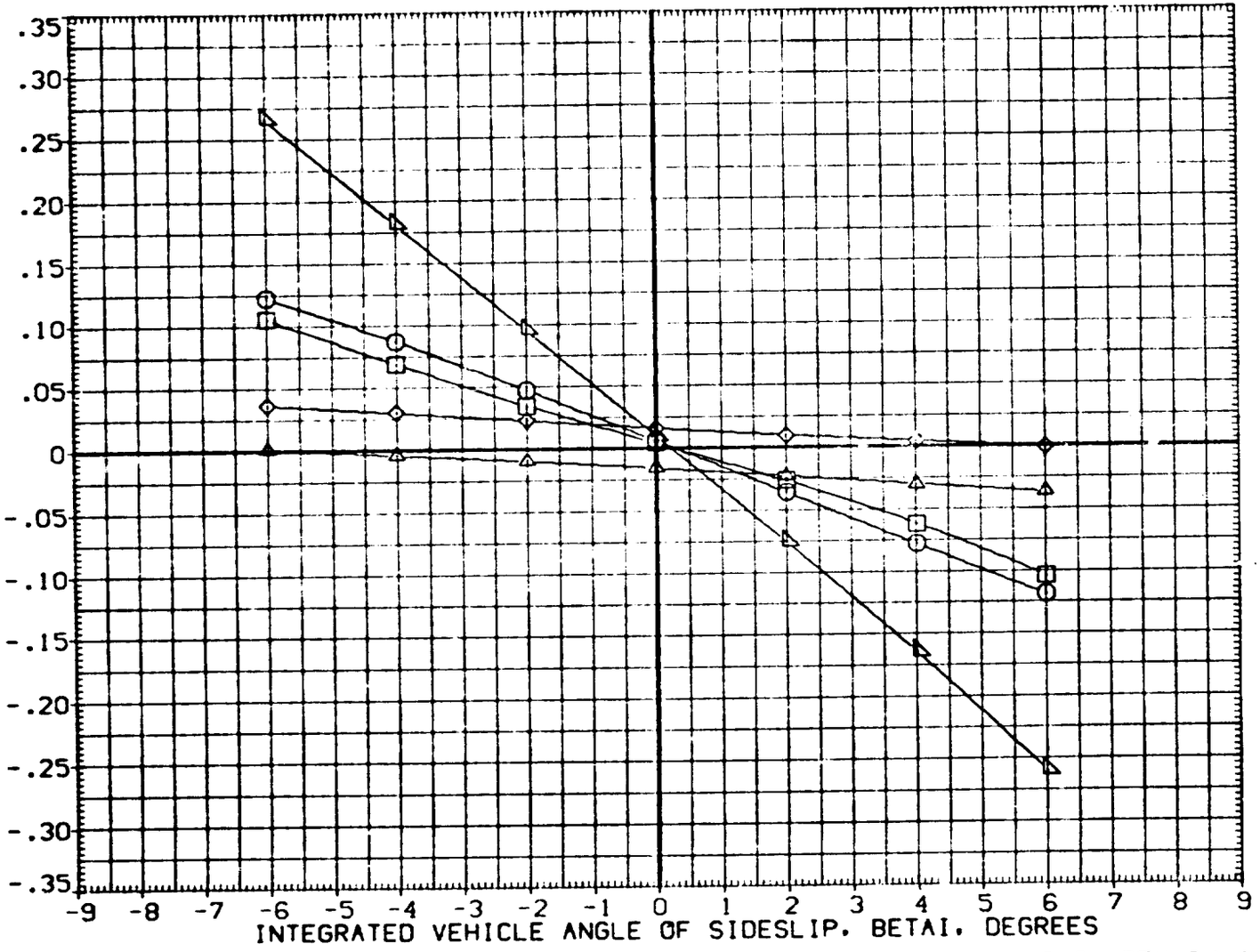


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

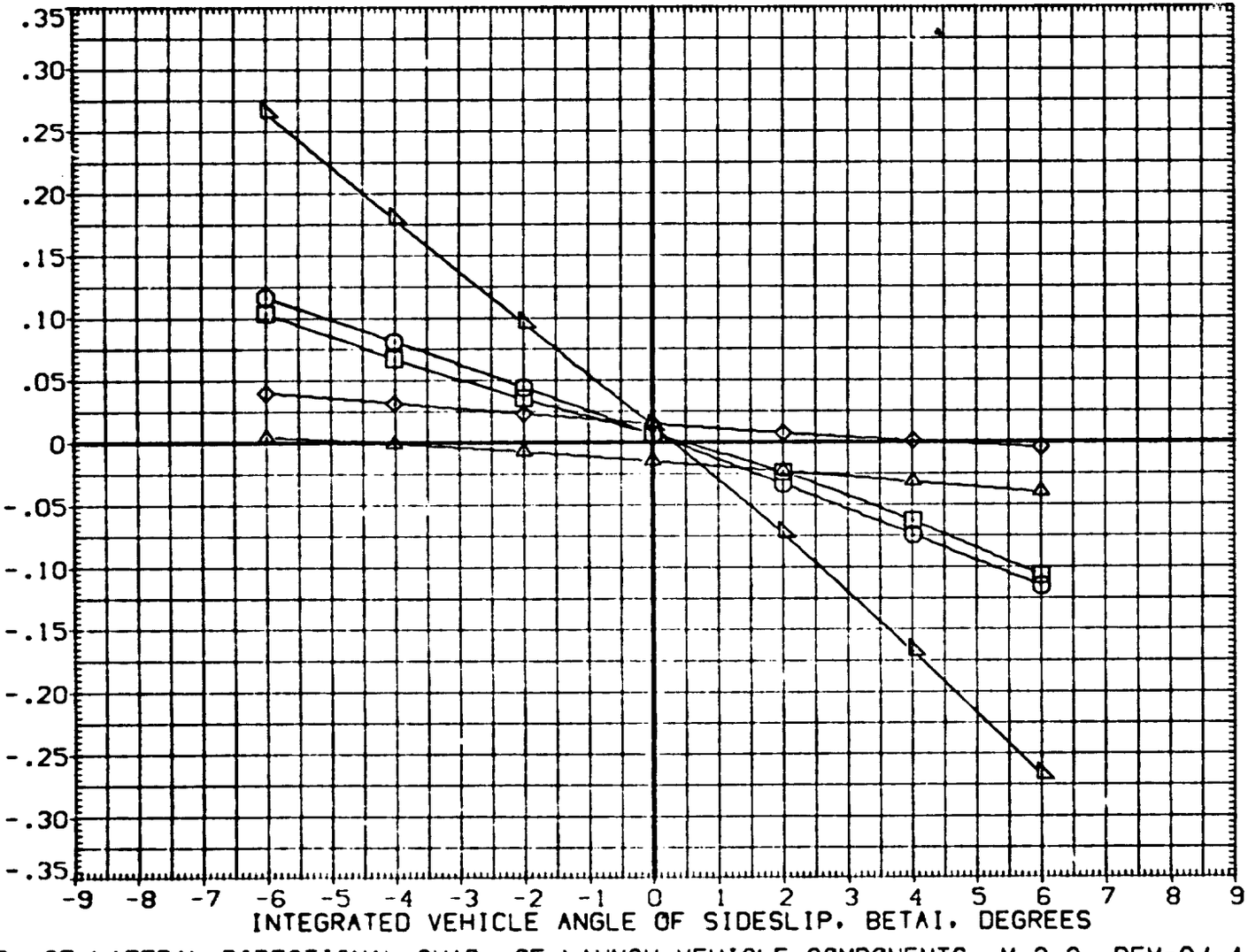


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

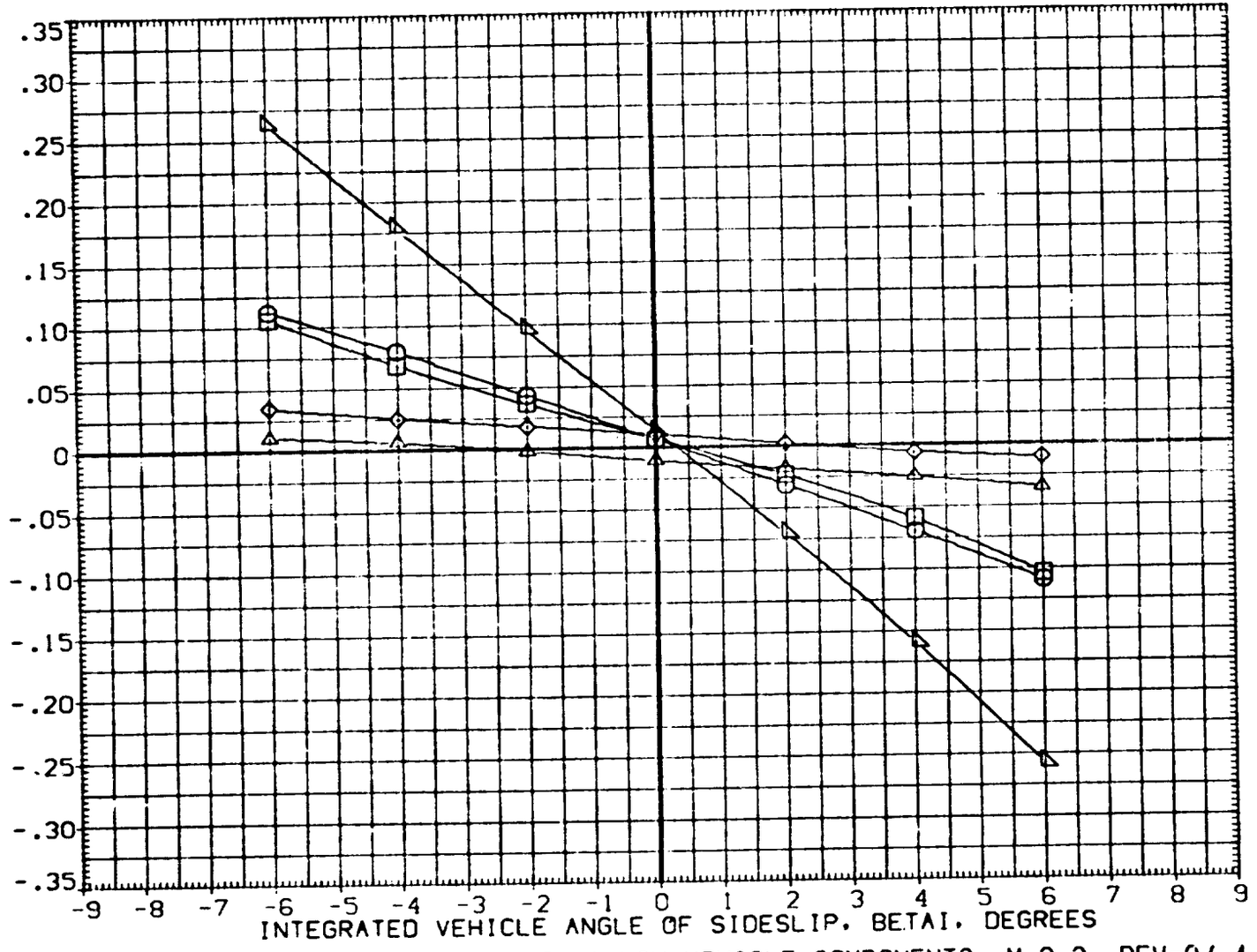


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

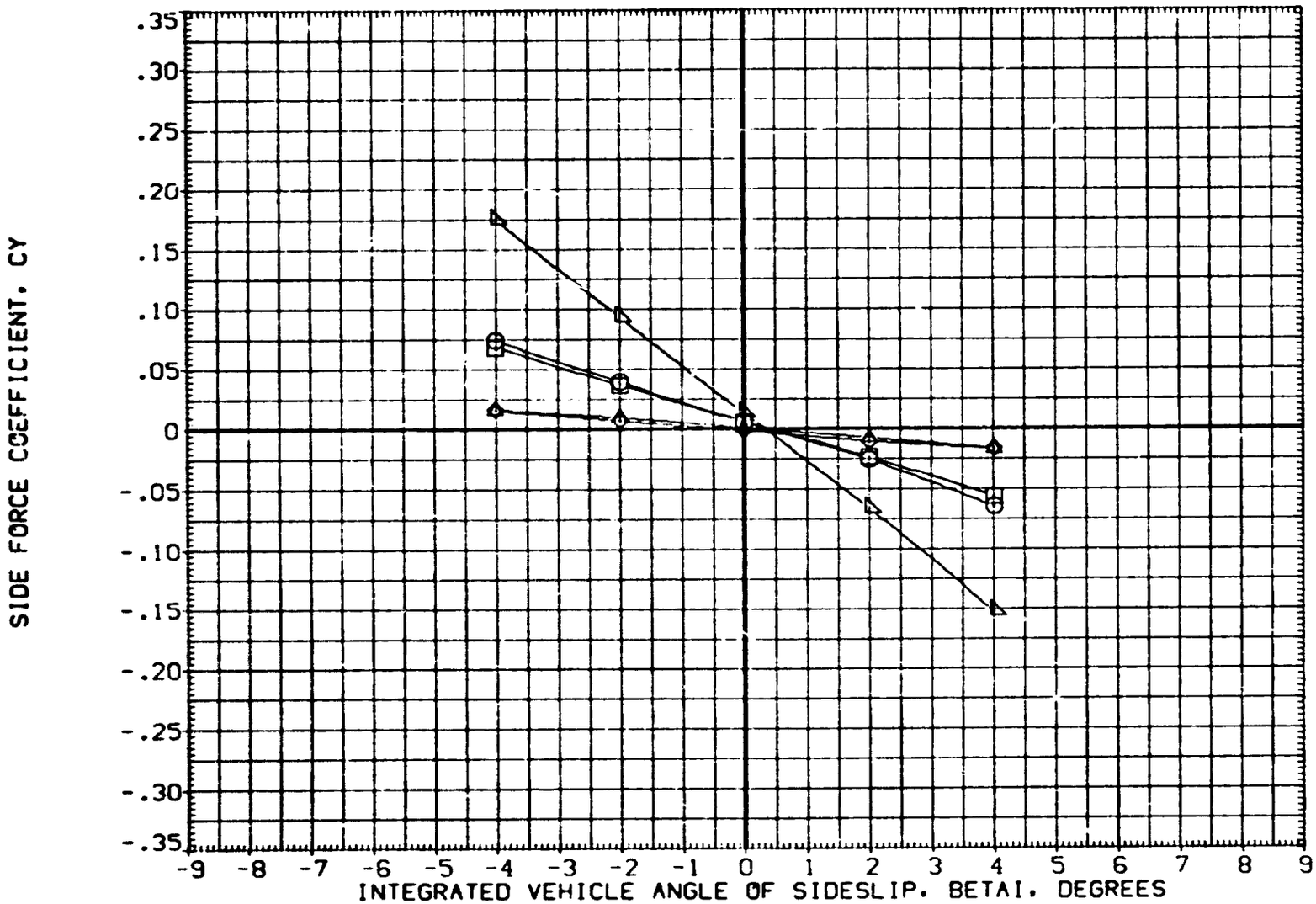


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

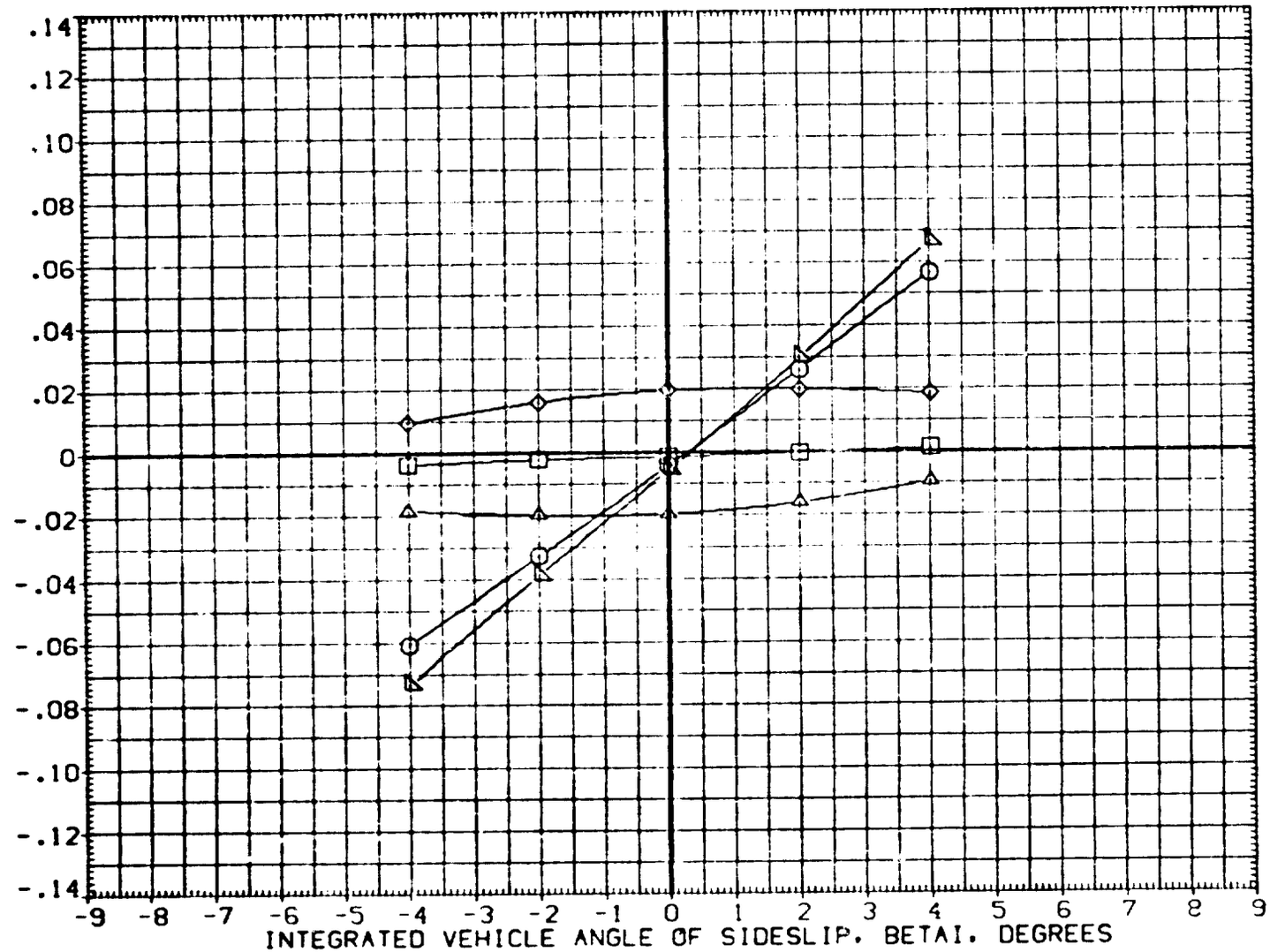


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

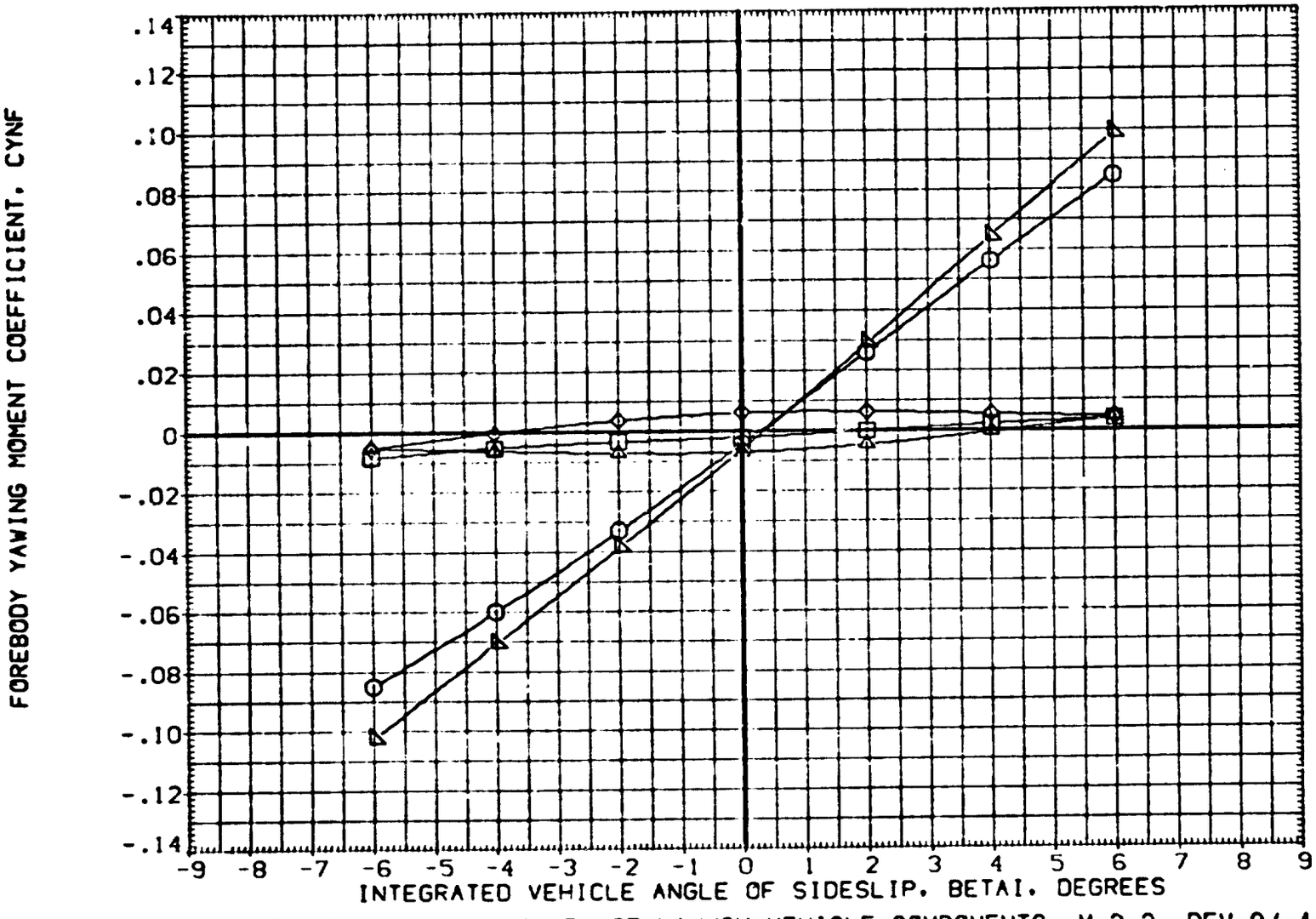


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)		AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IAB1) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IAB1) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IAB1) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IAB1) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

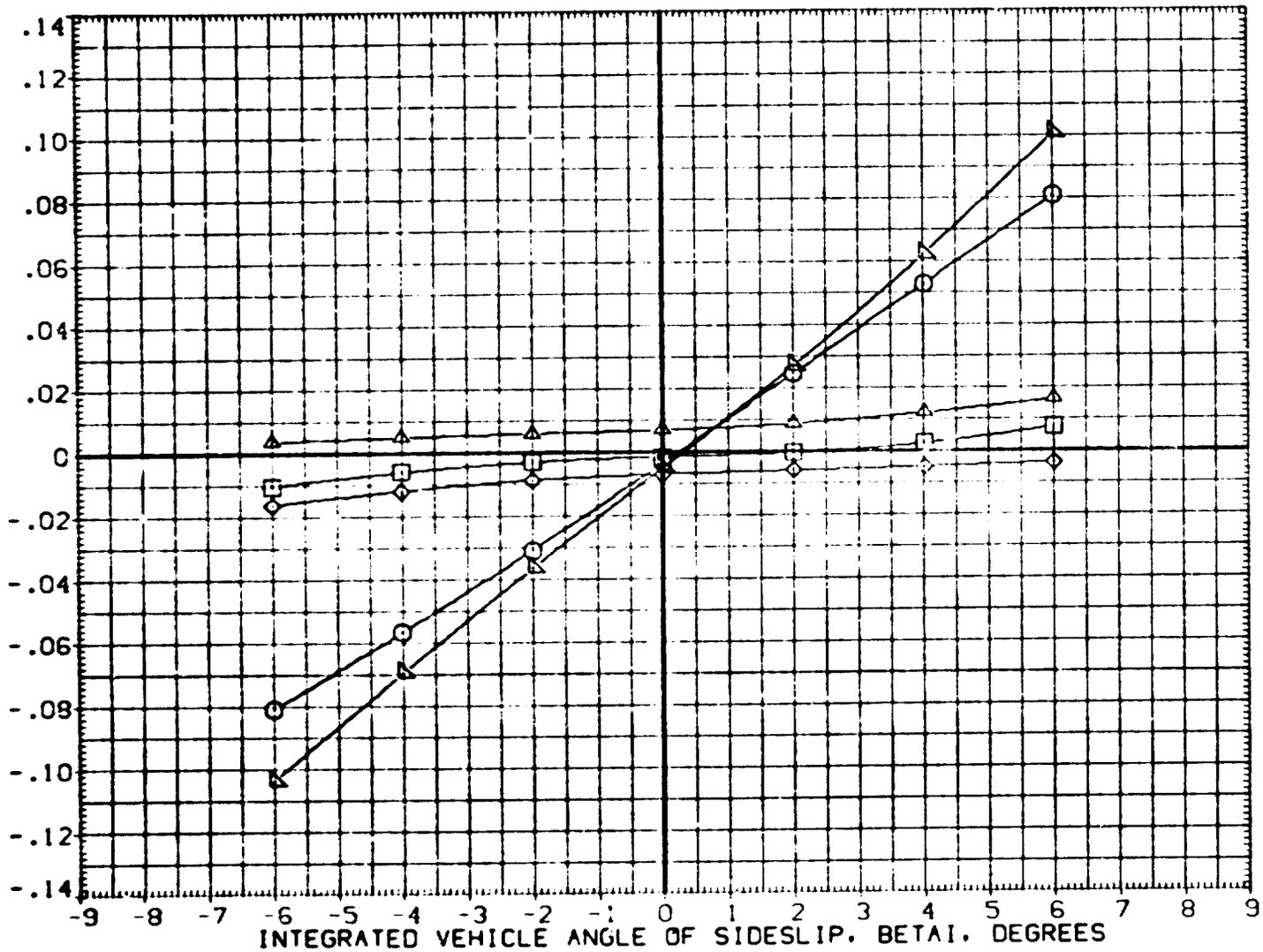


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LE1037)	○	AMES97-019(IABI) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.200	.000
(LET137)	□	AMES97-019(IABI) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.200	.000
(LETL37)	◇	AMES97-019(IABI) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.200	.000
(LETR37)	⋈	AMES97-019(IABI) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IABI) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XF
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

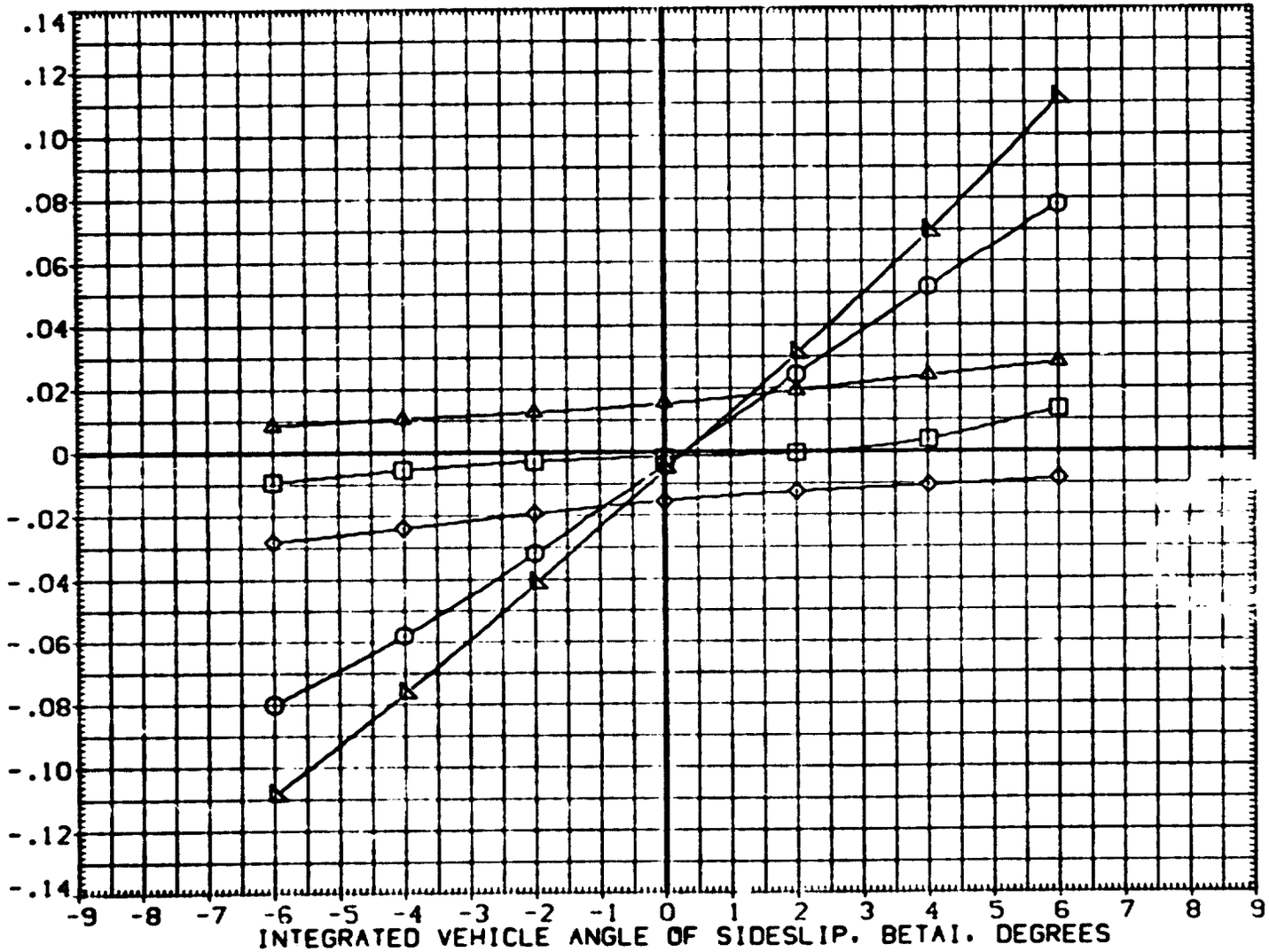


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019 [A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

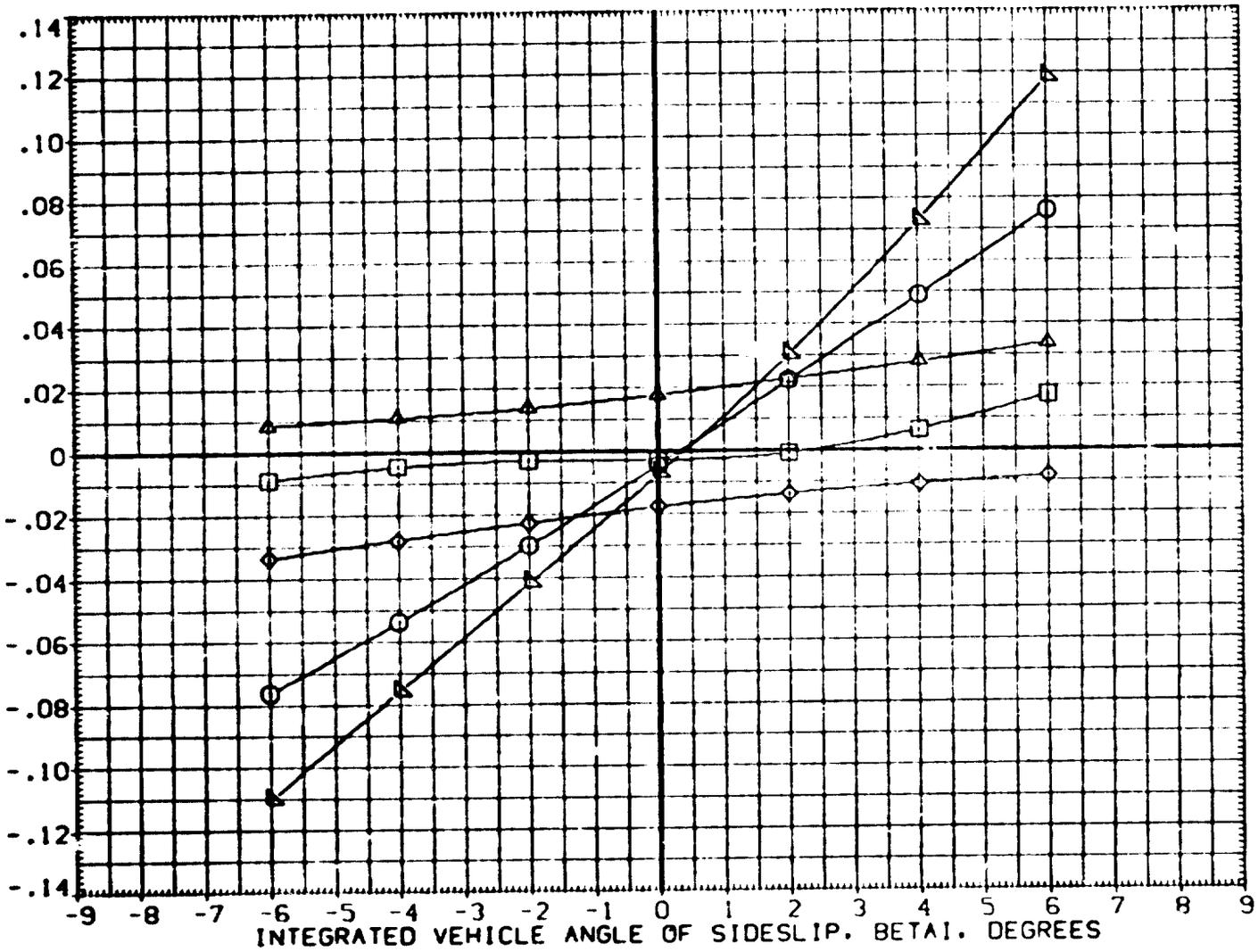


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

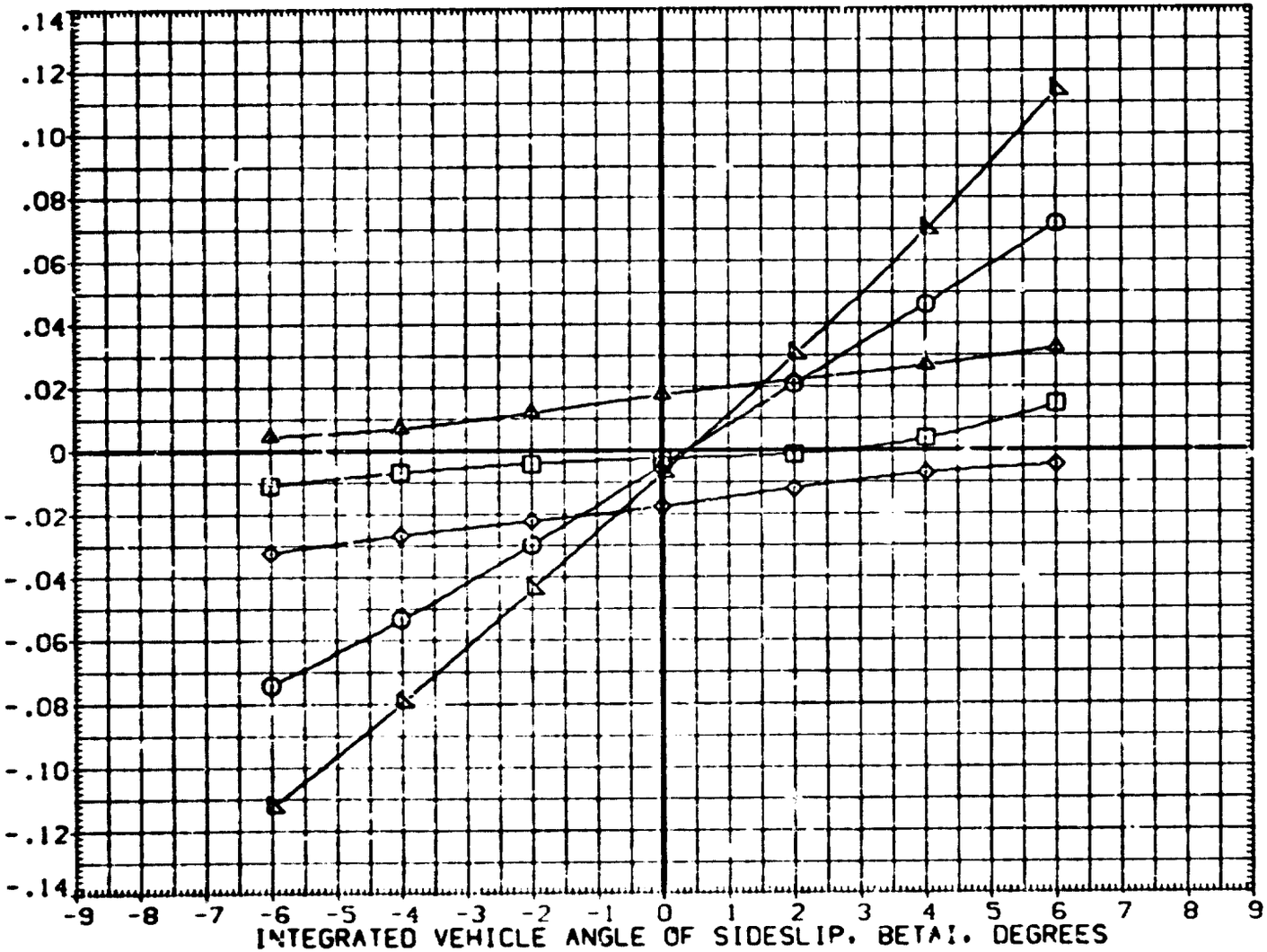


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

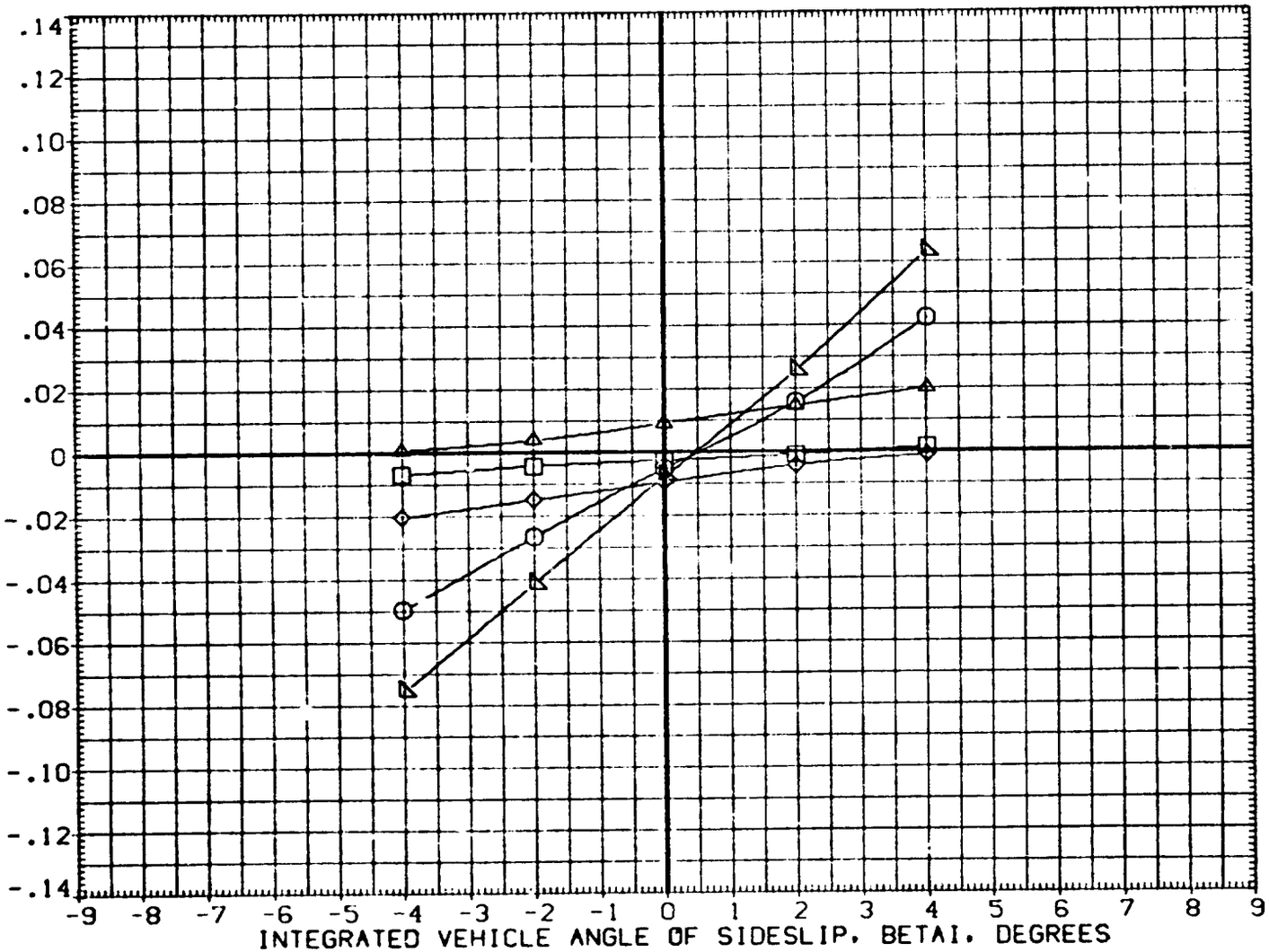


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	△	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

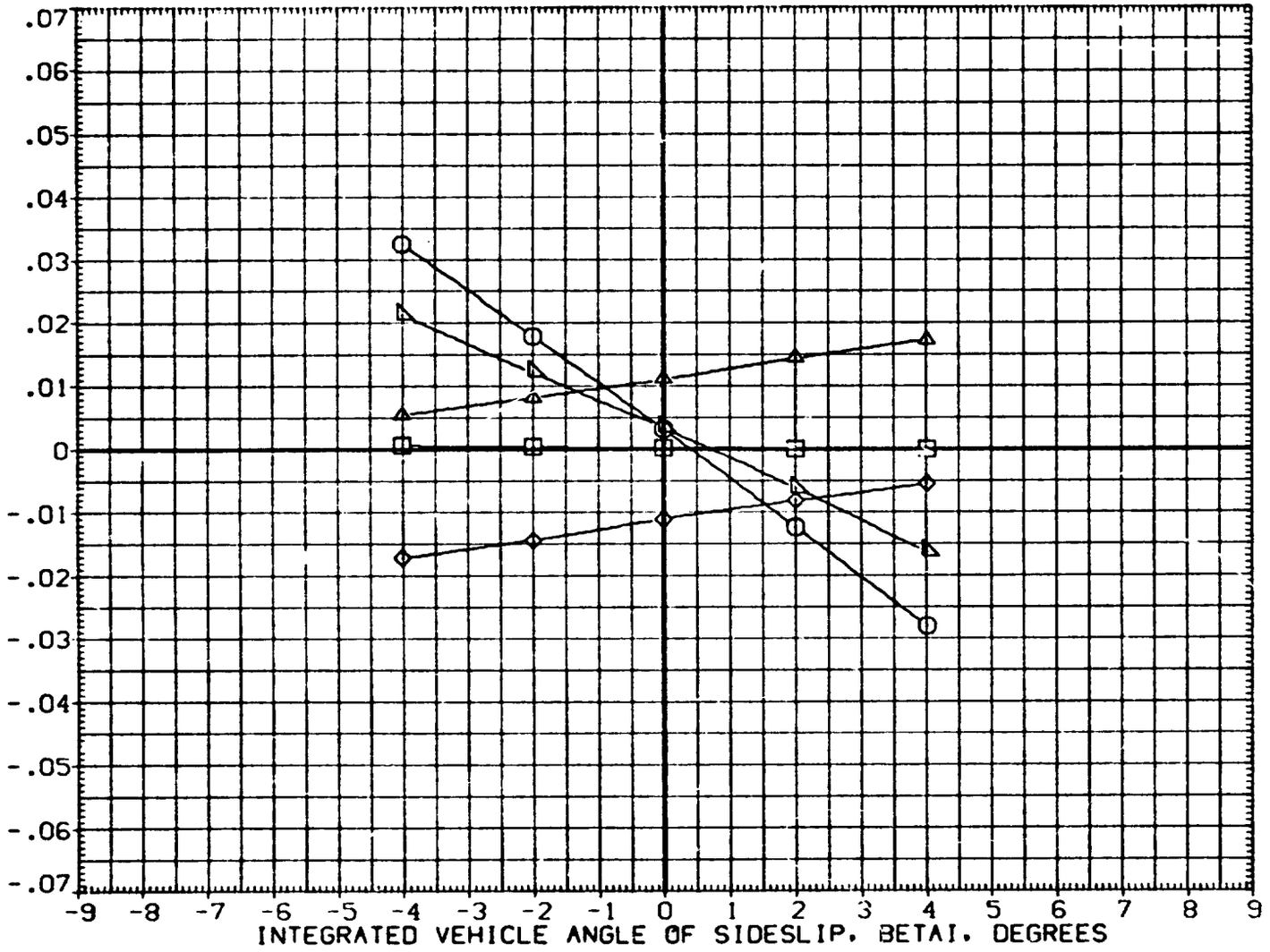


FIG. 23 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

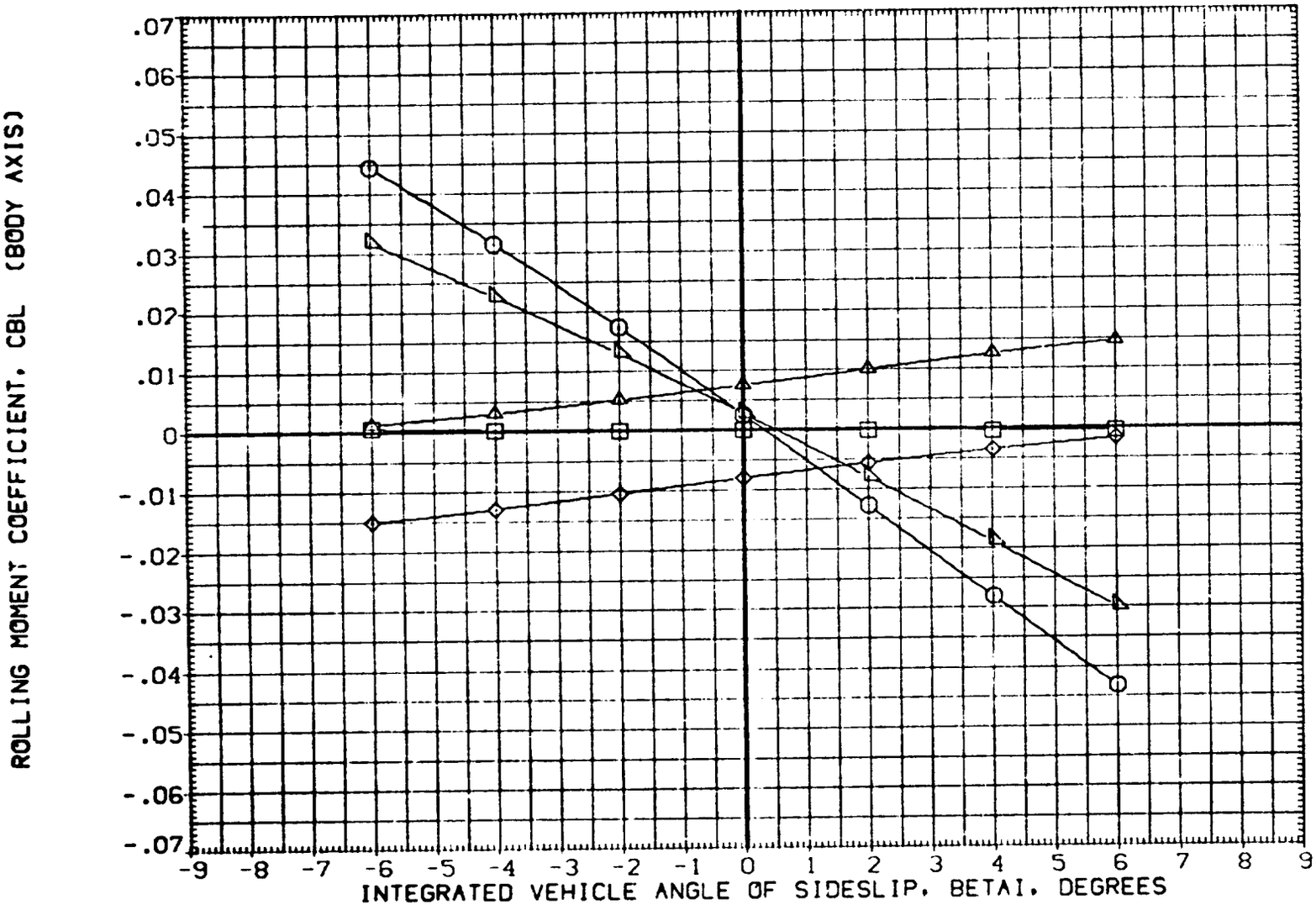


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

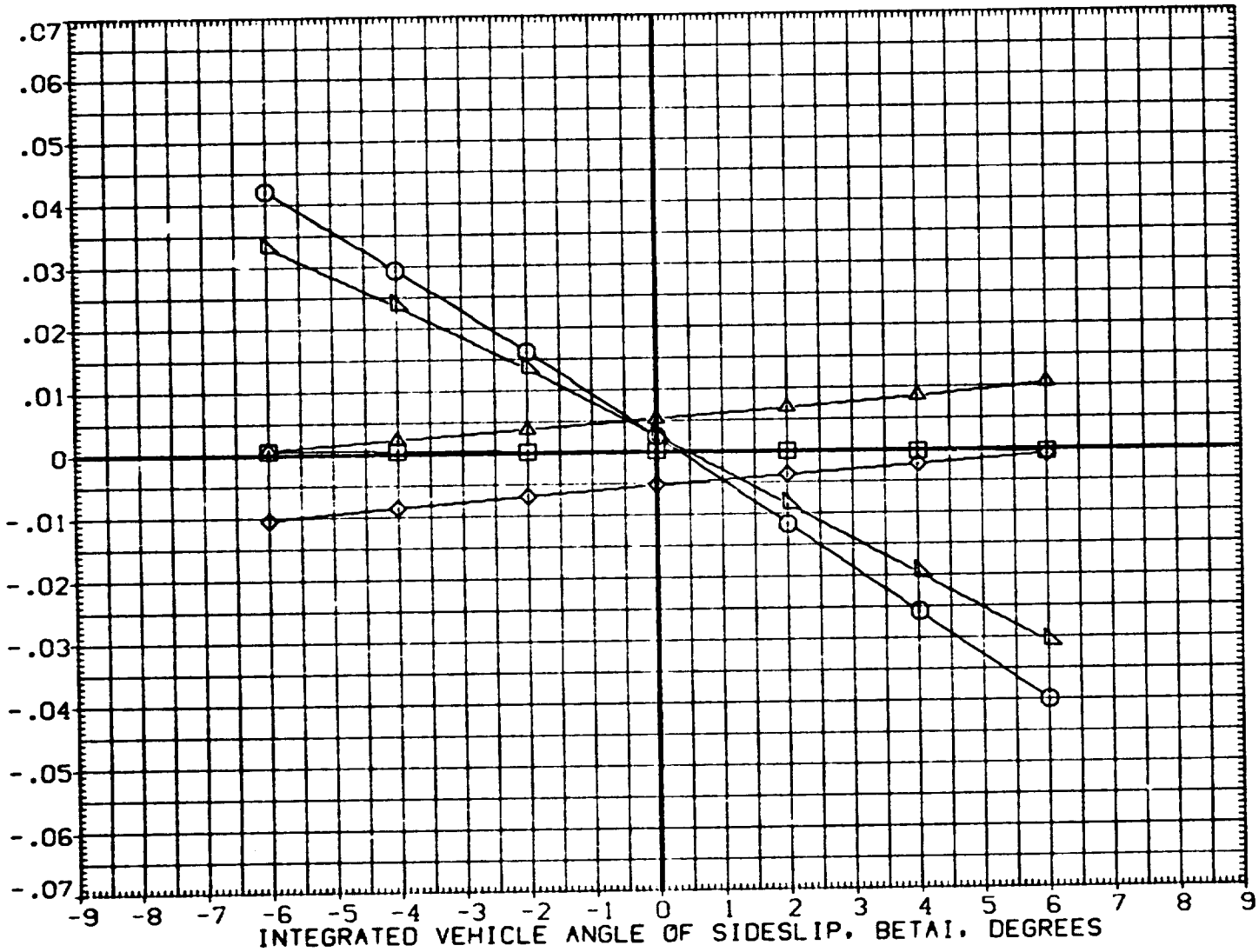


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019(IABI) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

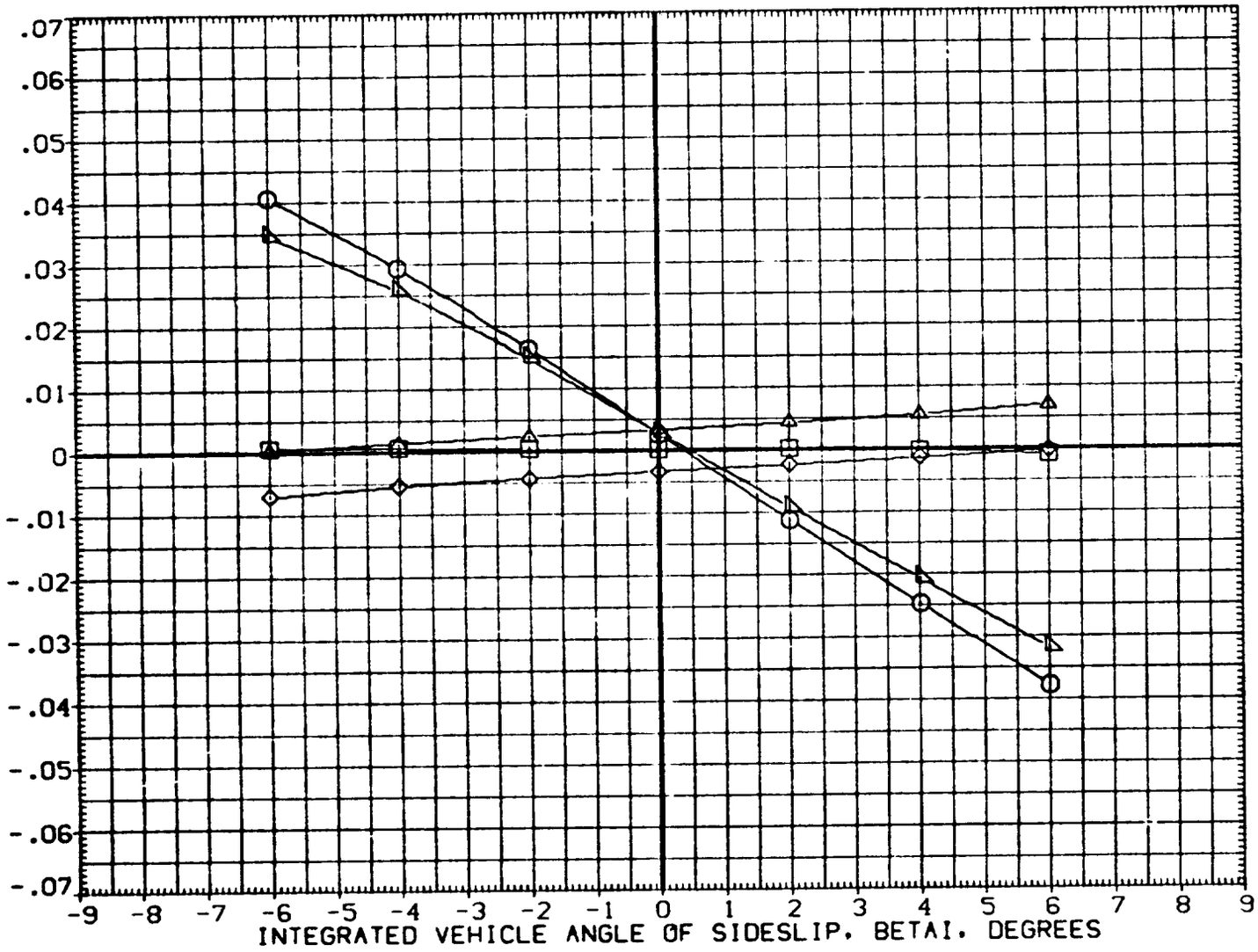


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	▢	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

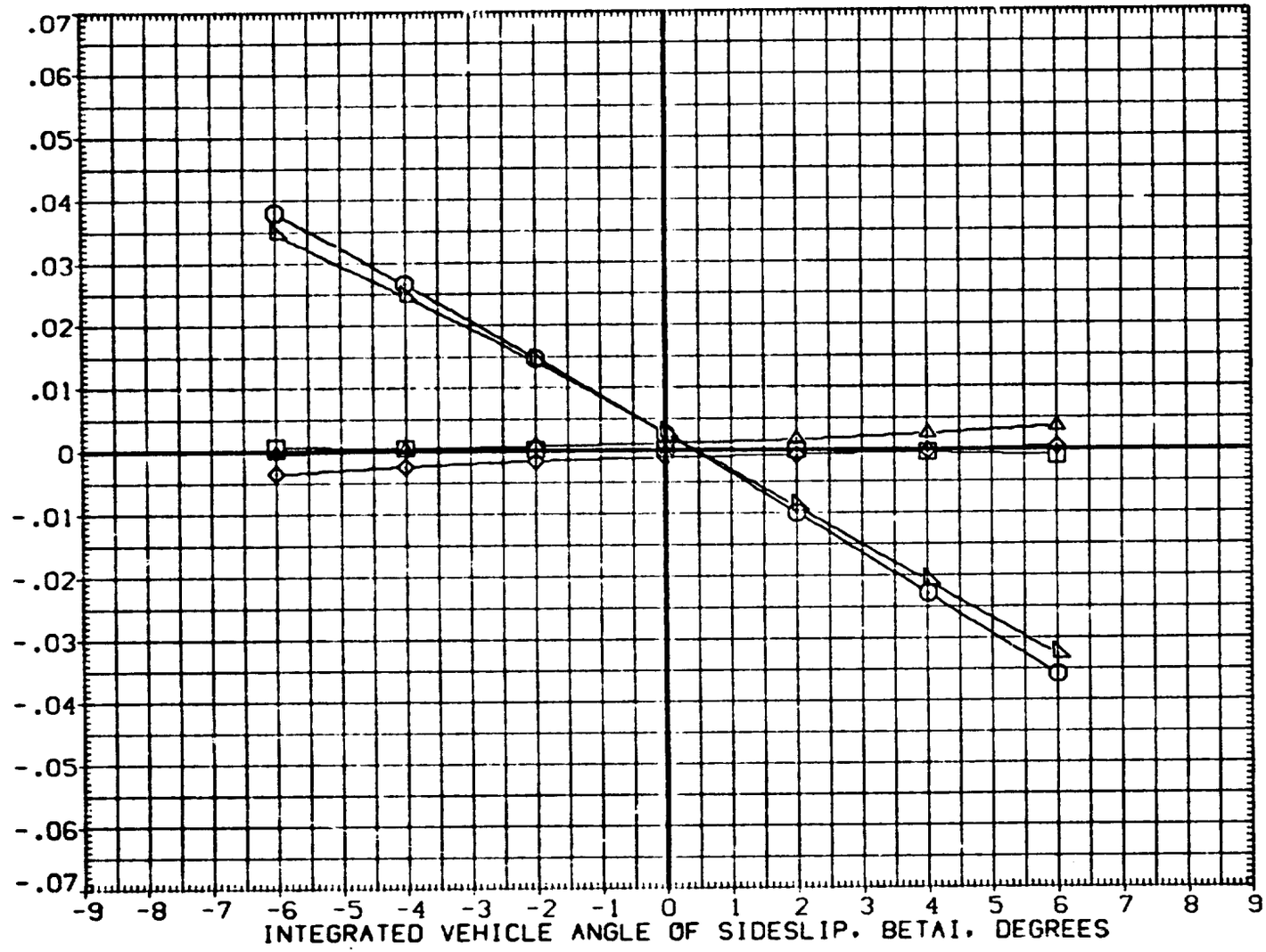


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

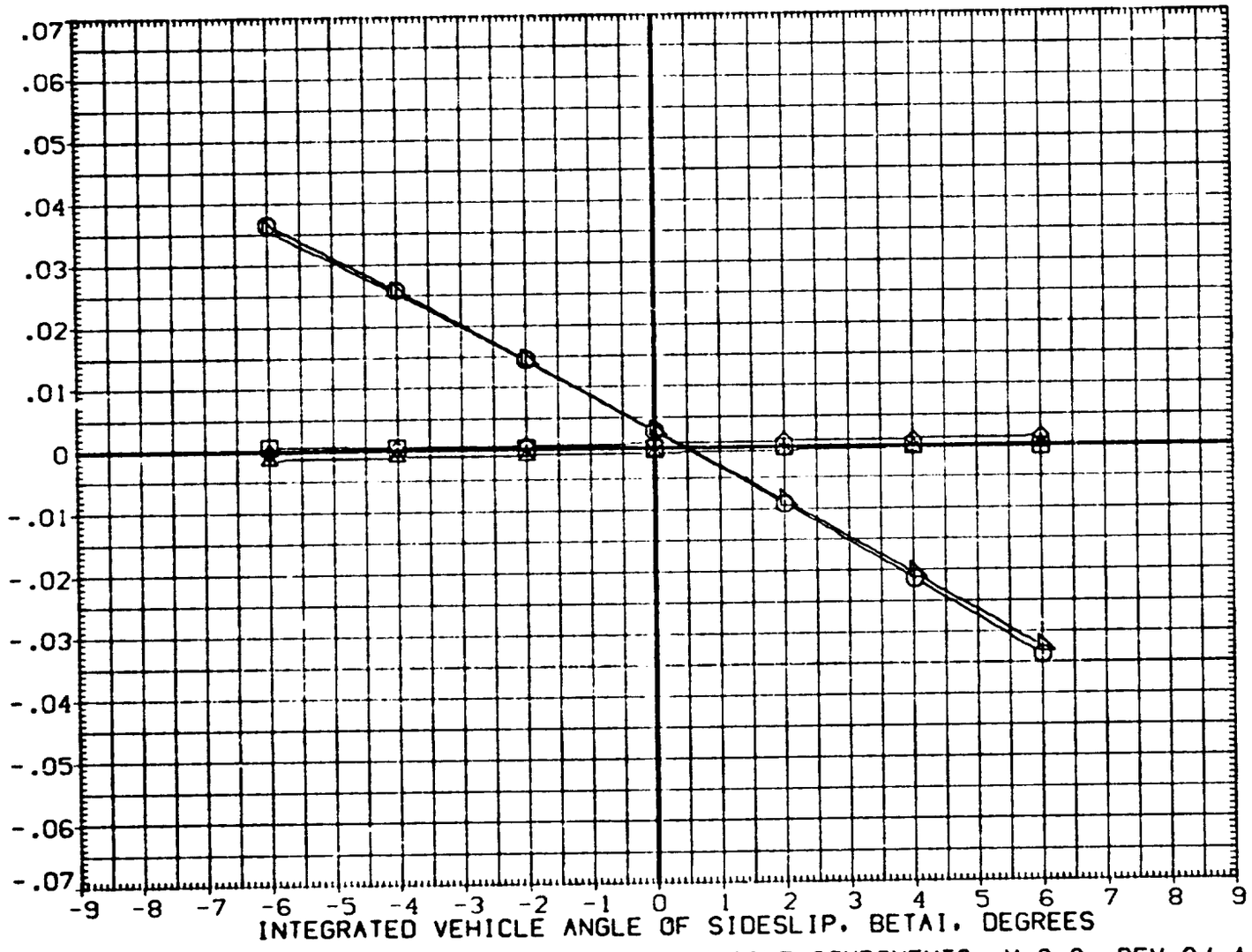


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

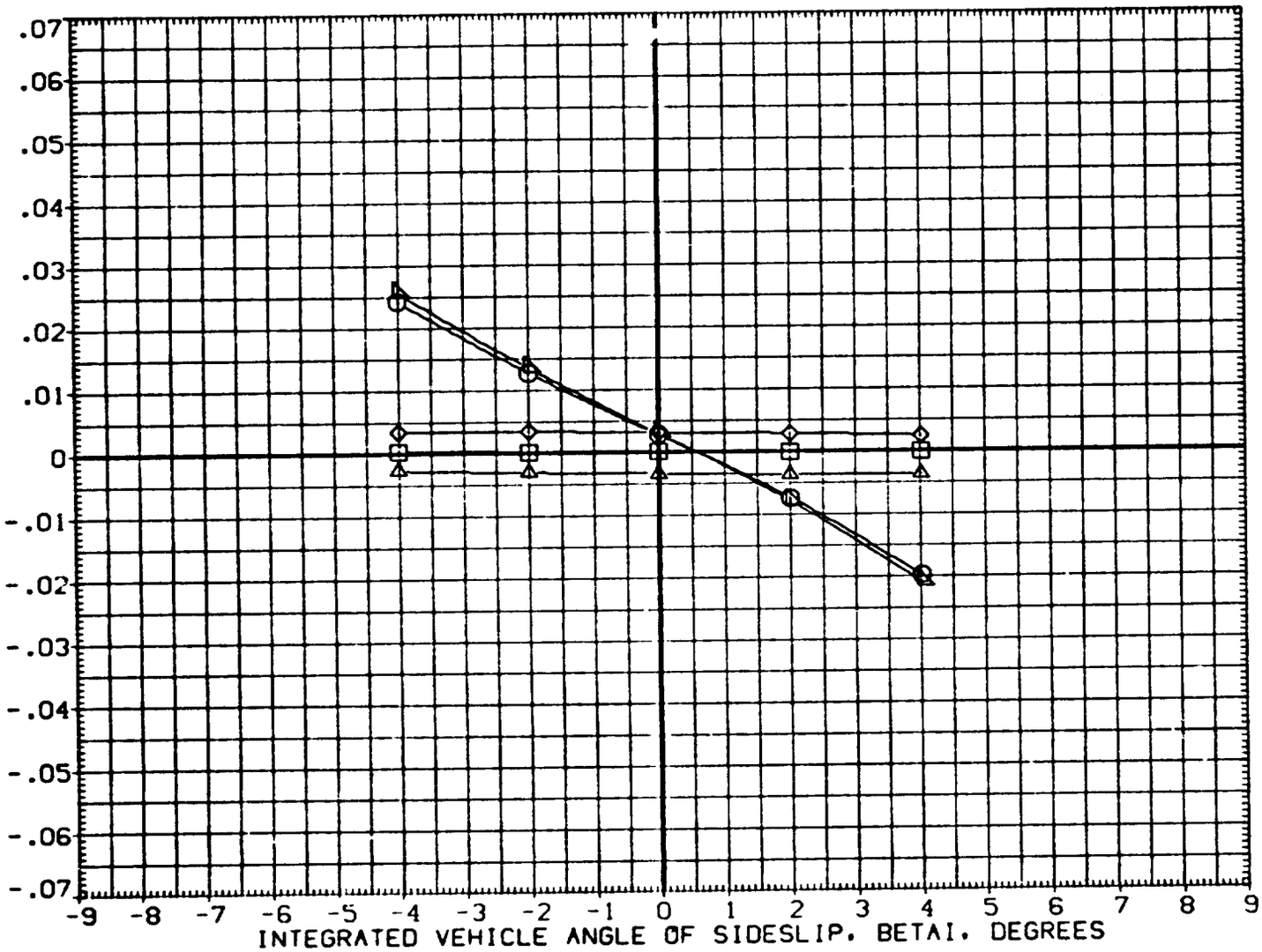


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	◇	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	⋈	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	◺	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

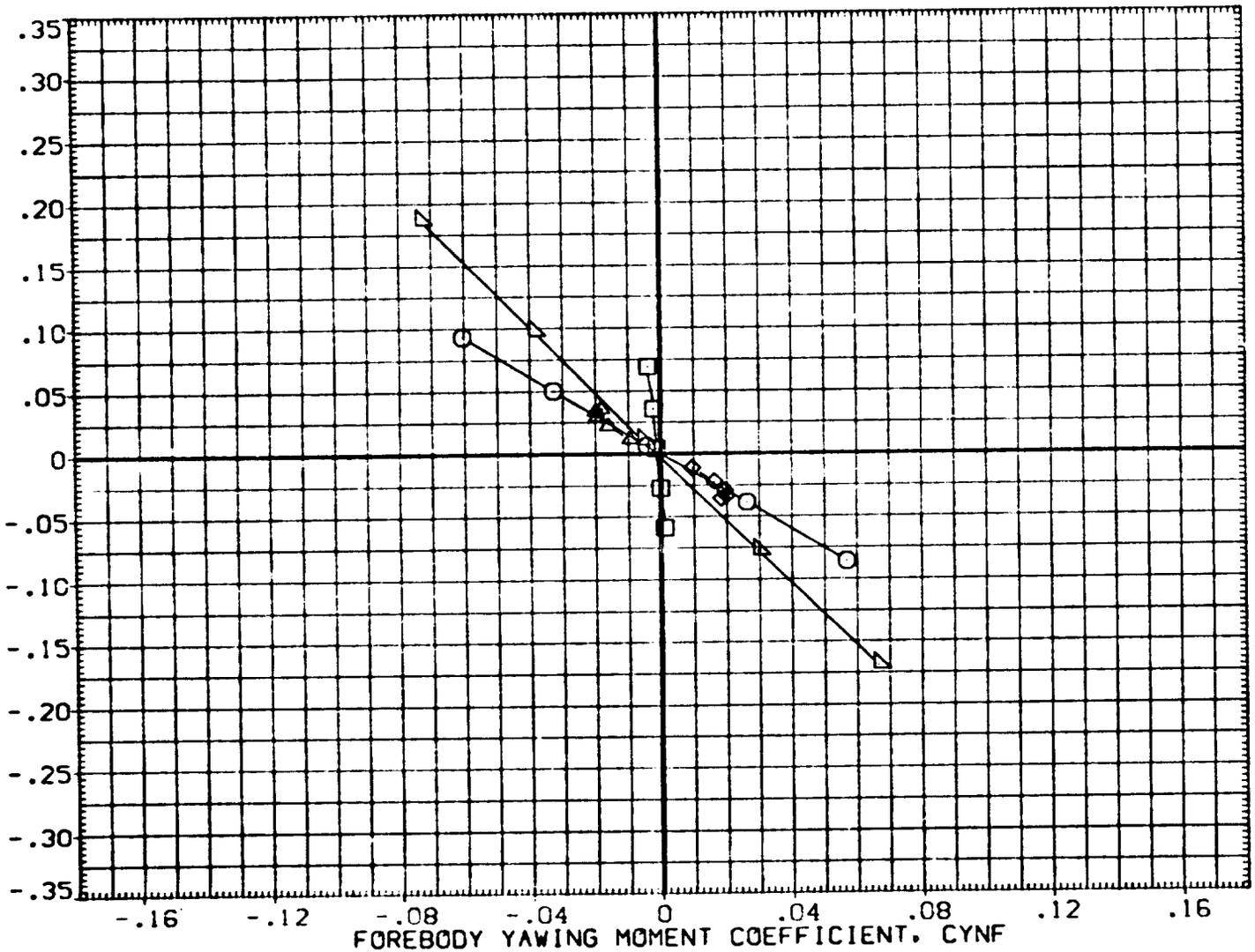


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

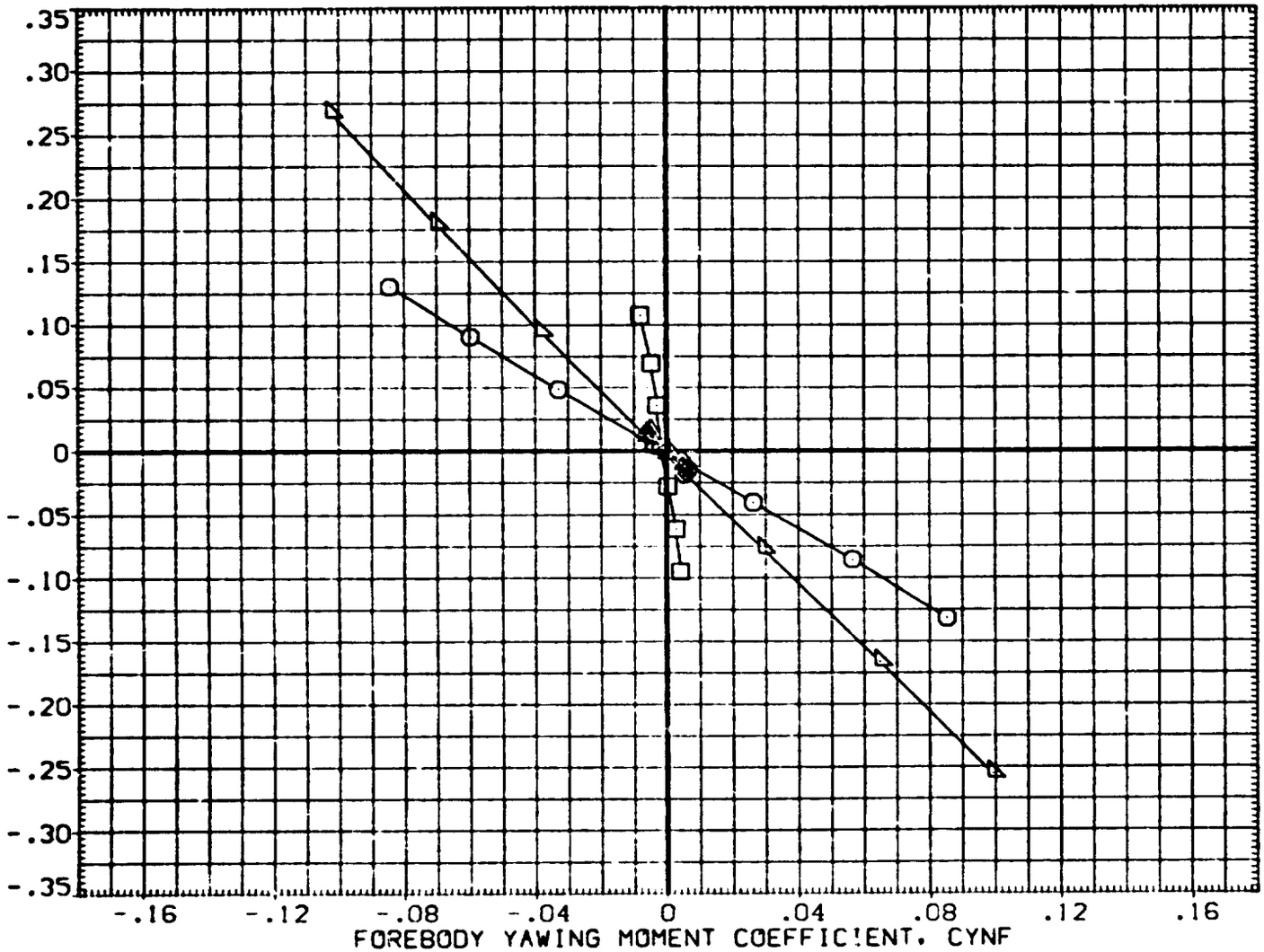


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

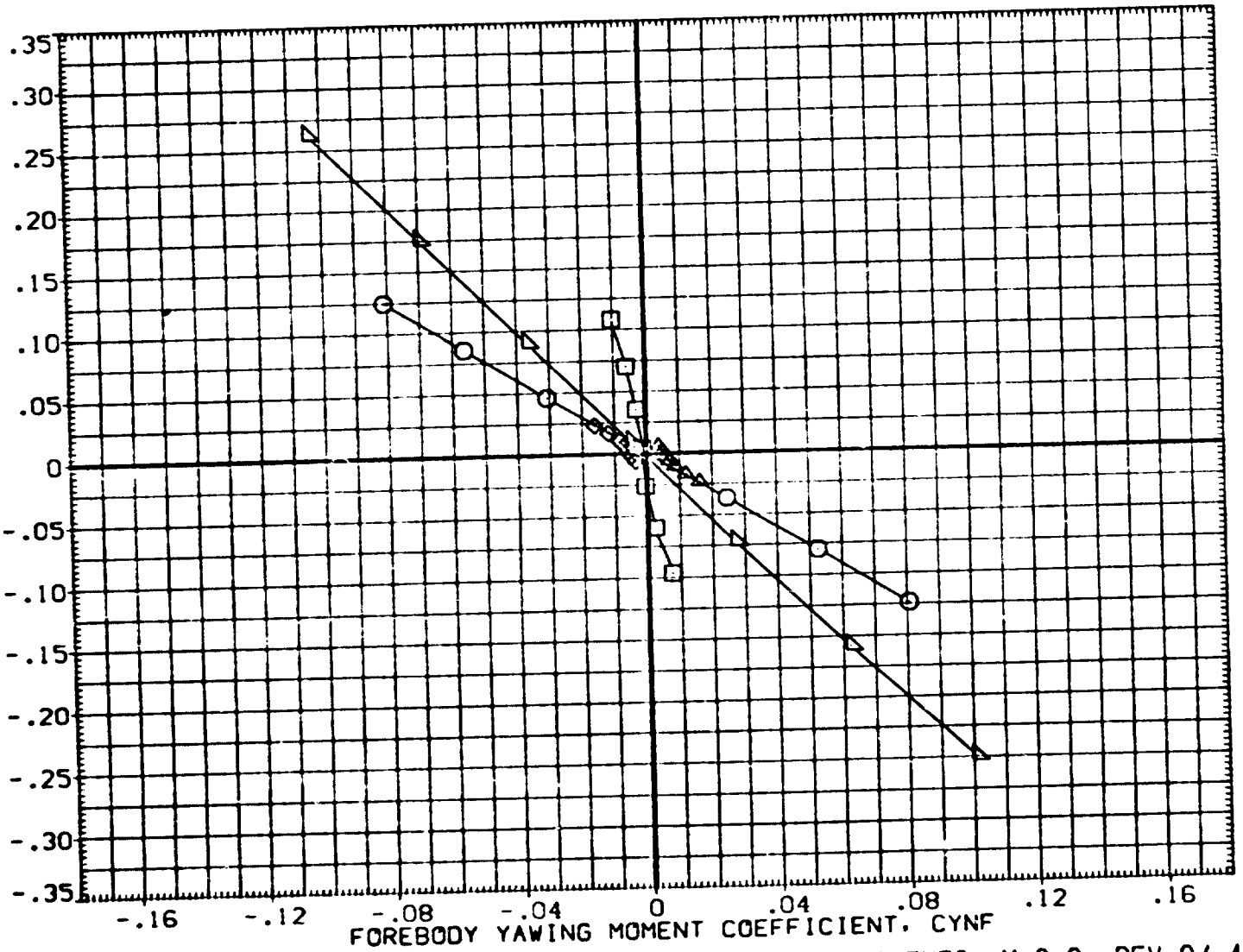


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO37)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	0.000	-4.000	2.200	.000
(LETT37)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	0.000	-4.000	2.200	.000
(LETL37)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	0.000	-4.000	2.200	.000
(LETR37)	▷	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	0.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	0.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

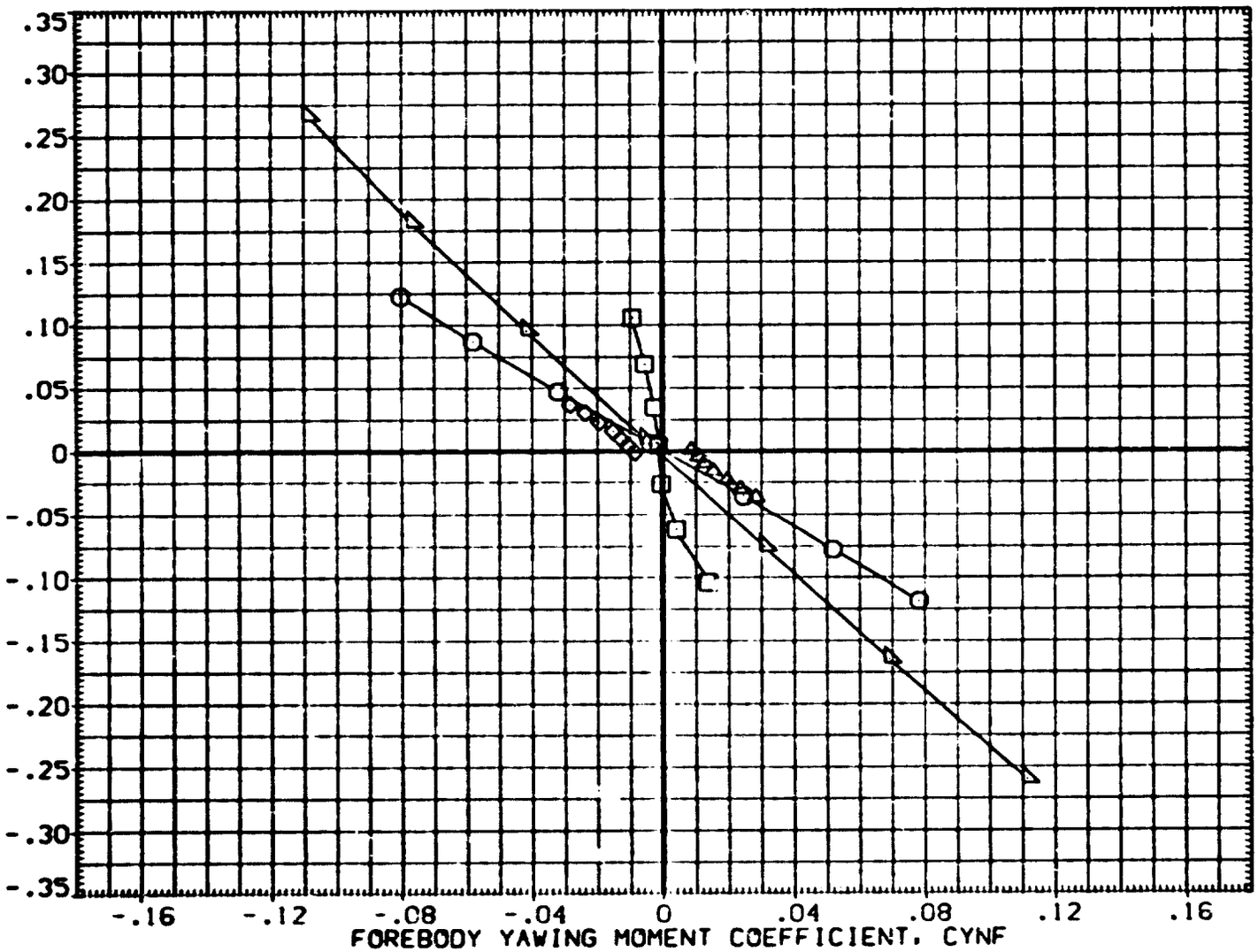


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(LET037)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED
(LETT37)	□	AMES97-019(IA81) LVAP TANK - ALL ML SEALED
(LETL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED
(LETR37)	⋈	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED
(LETI37)	◺	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED

ELV-IB	ELV-OB	MACH	SPDBRK
8.000	-4.000	2.200	.000
8.000	-4.000	2.200	.000
8.000	-4.000	2.200	.000
8.000	-4.000	2.200	.000
8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

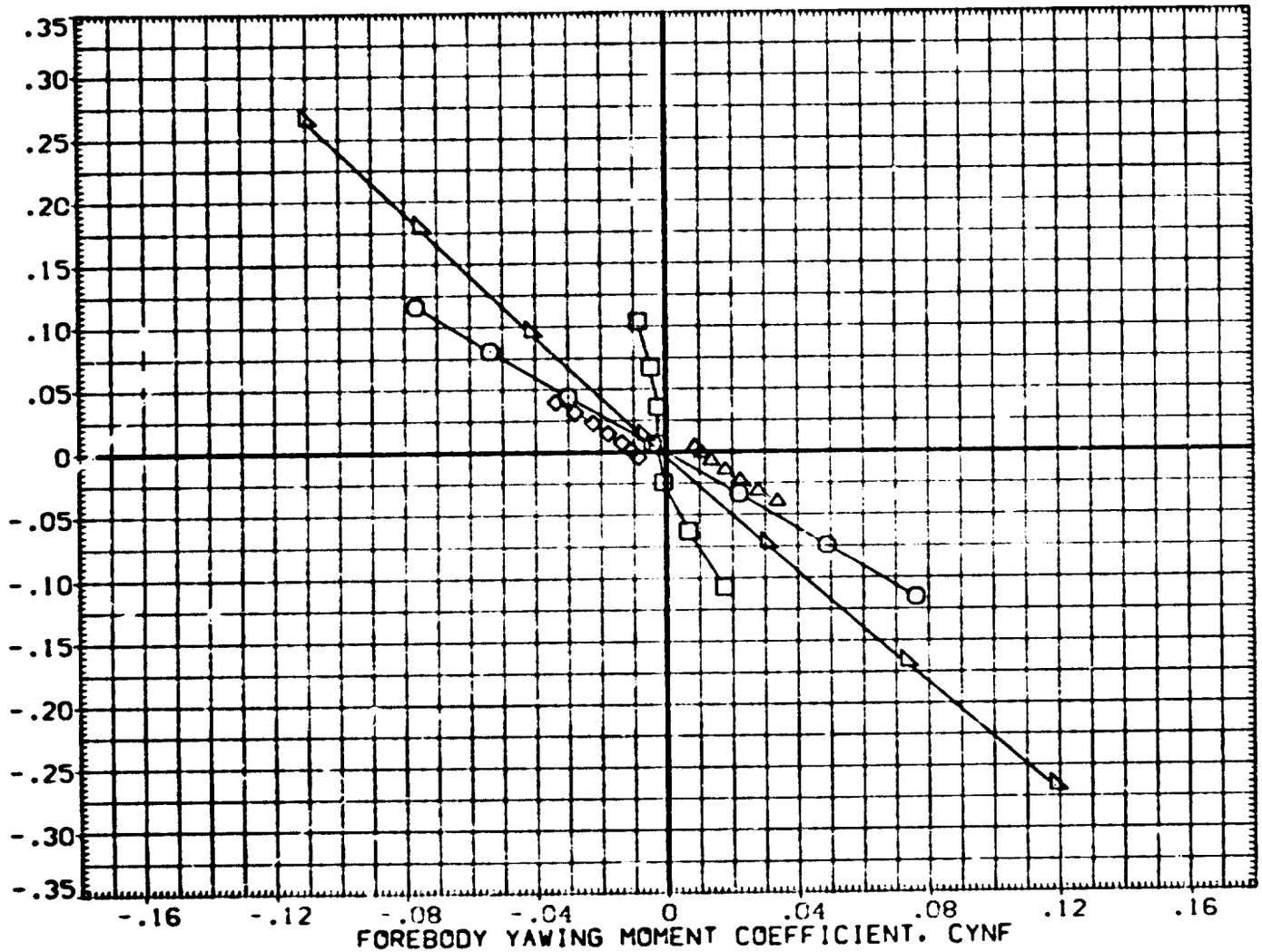


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)ALPHA1= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LET137)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⊠	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	▷	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	▽	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

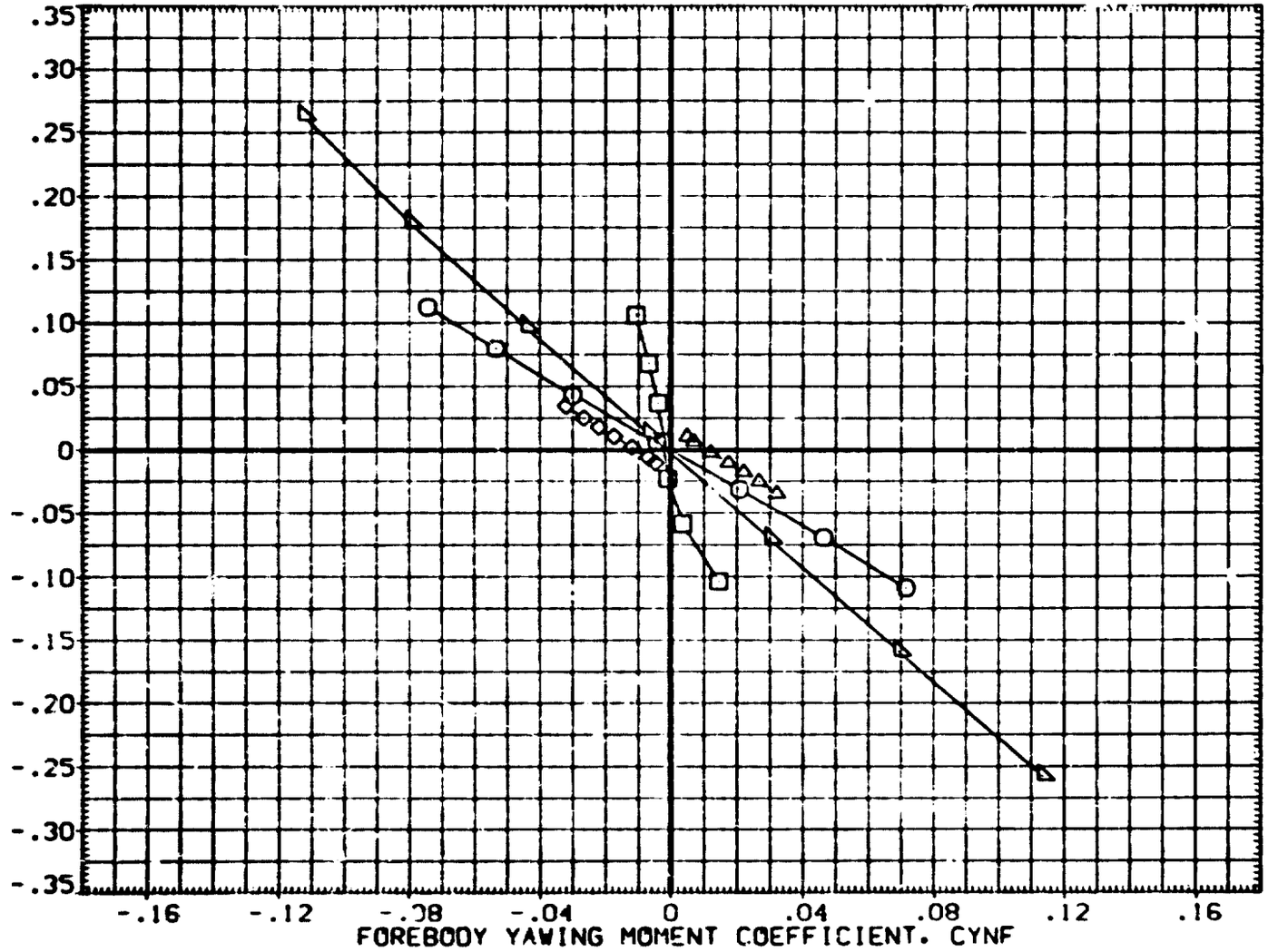


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET03/)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019([A81]) LVAP R-SRB ALL HL SEALED	6.000	-4.000	2.200	.000
(LETI37)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

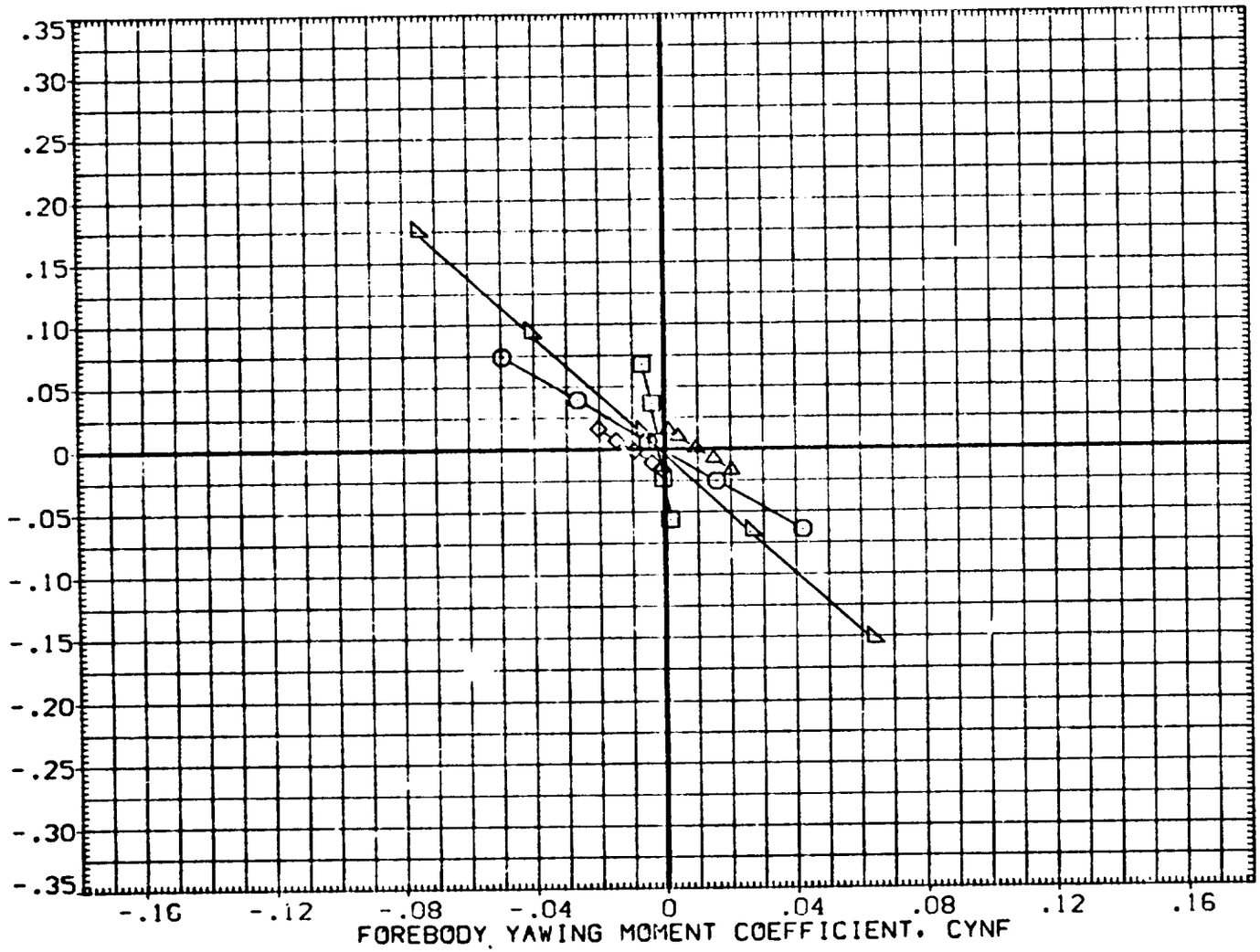


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

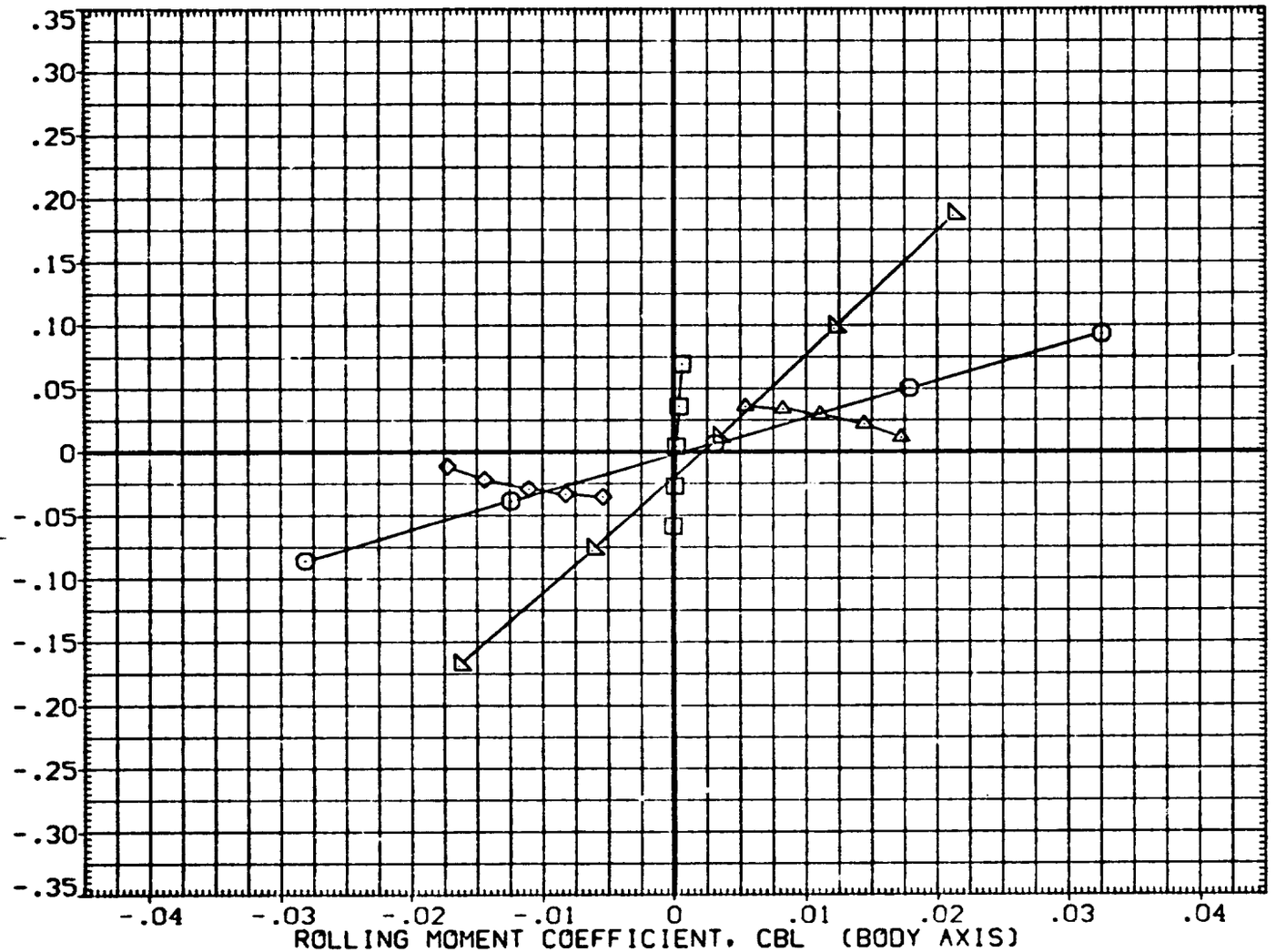


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOARK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

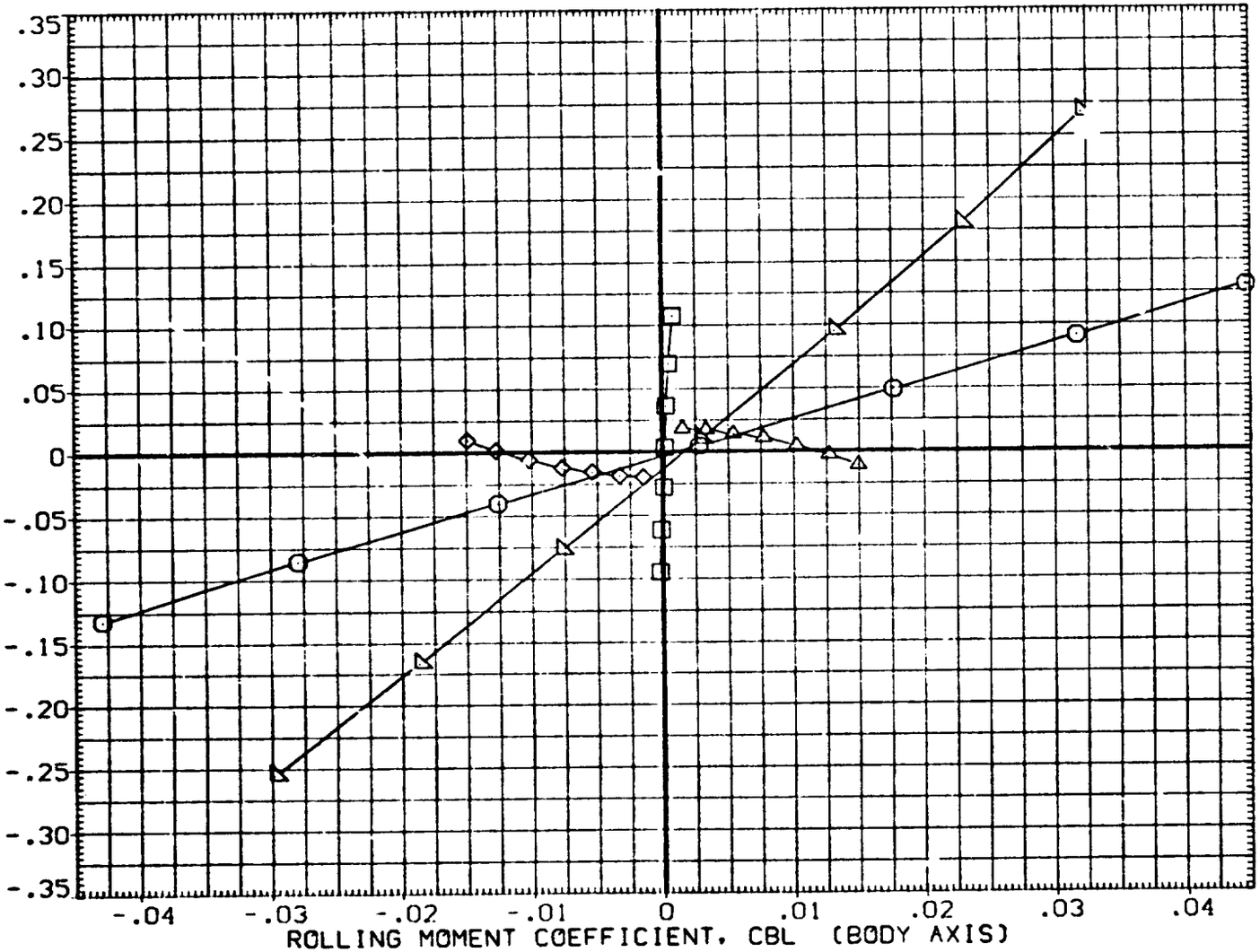


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019((A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019((A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019((A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019((A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019((A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

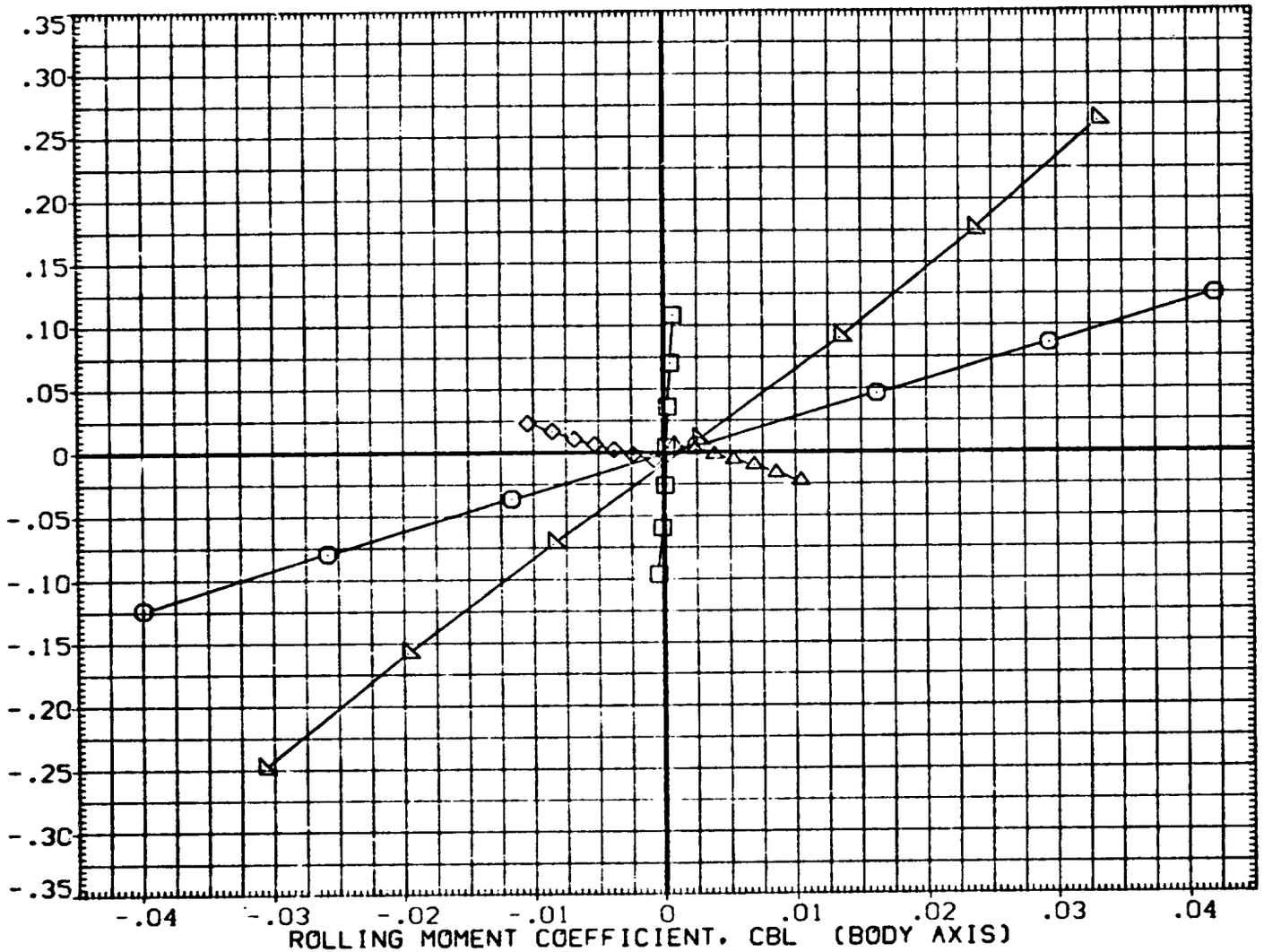


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET037)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

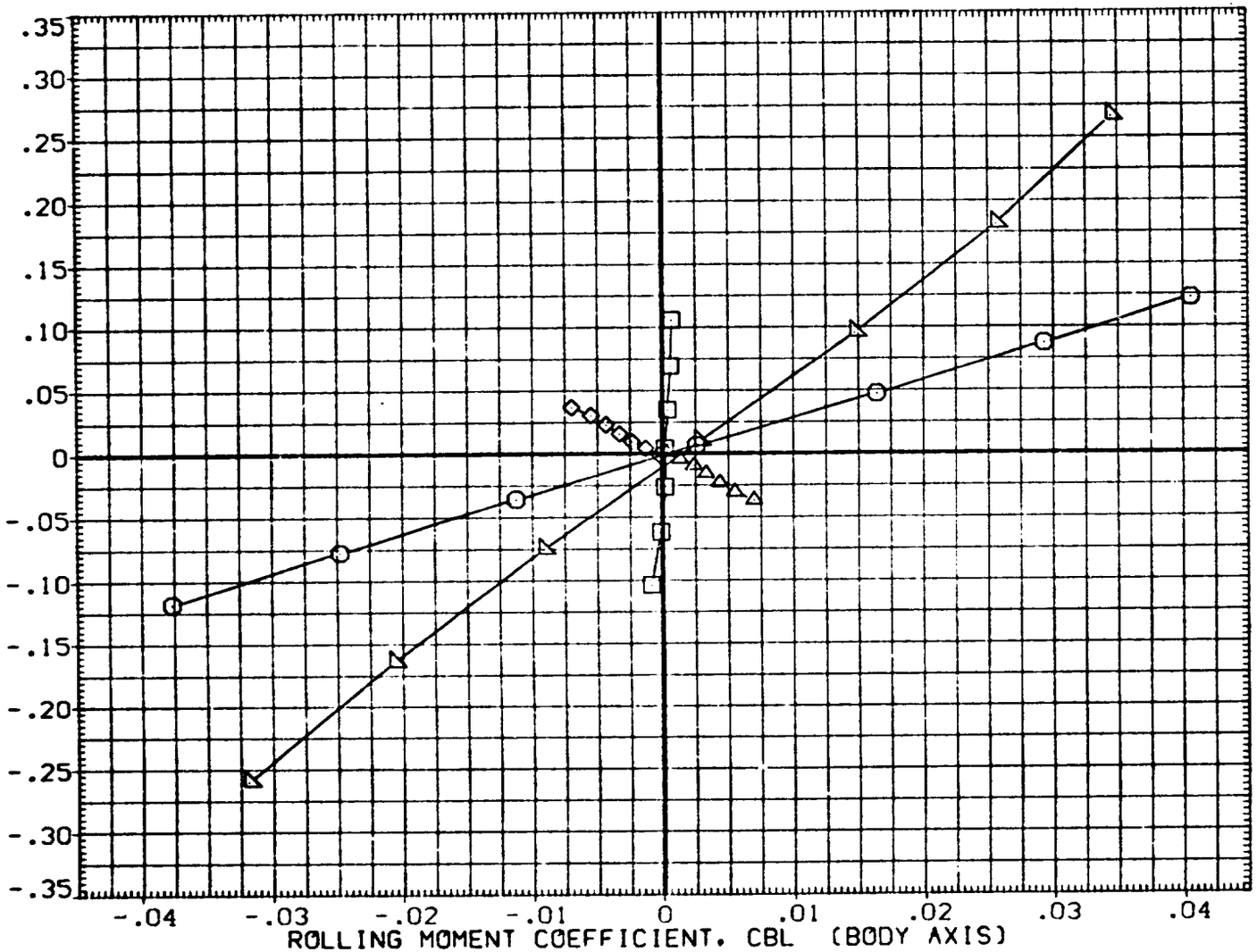


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

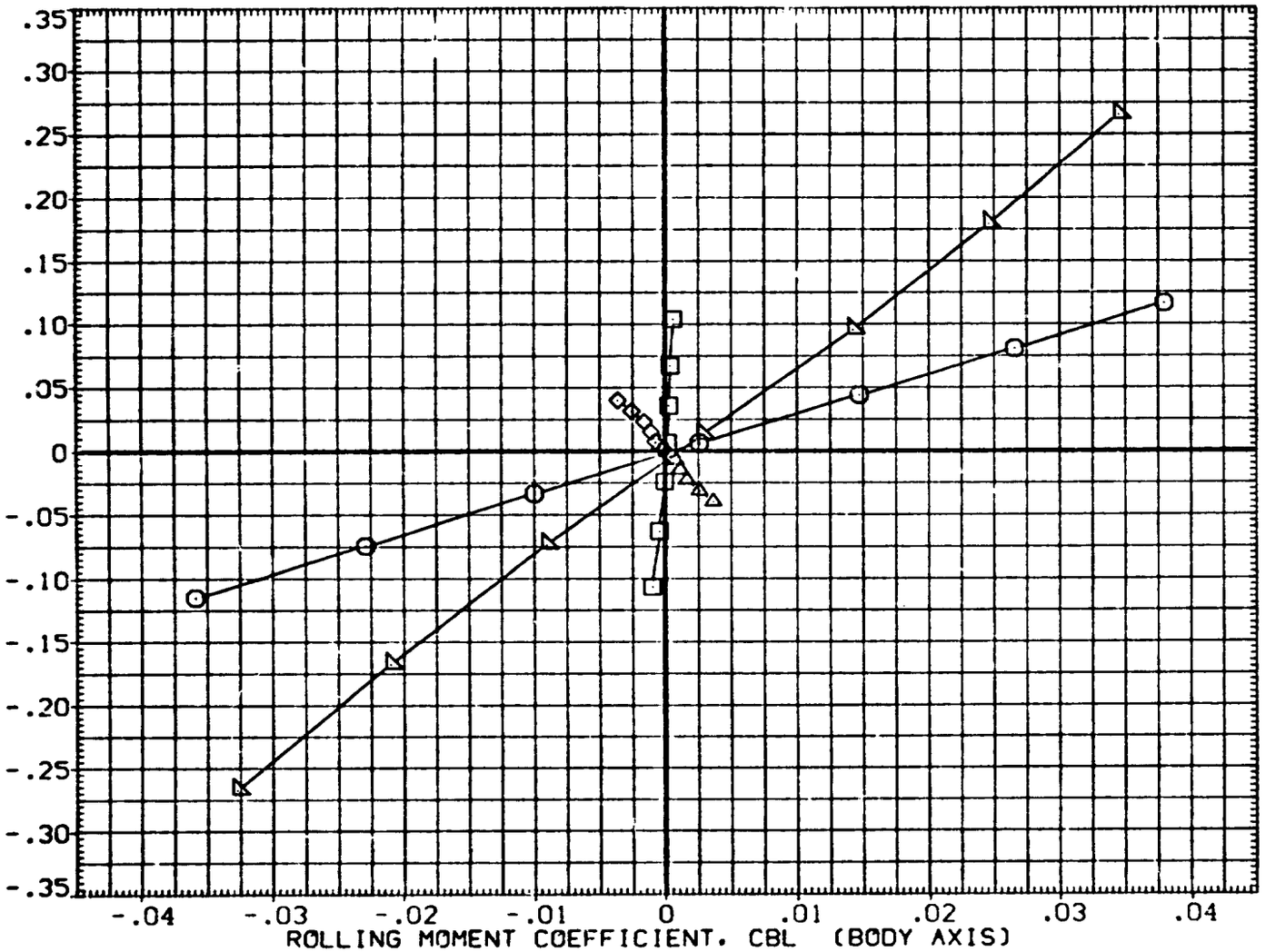


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(E)ALPHAI = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO37)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

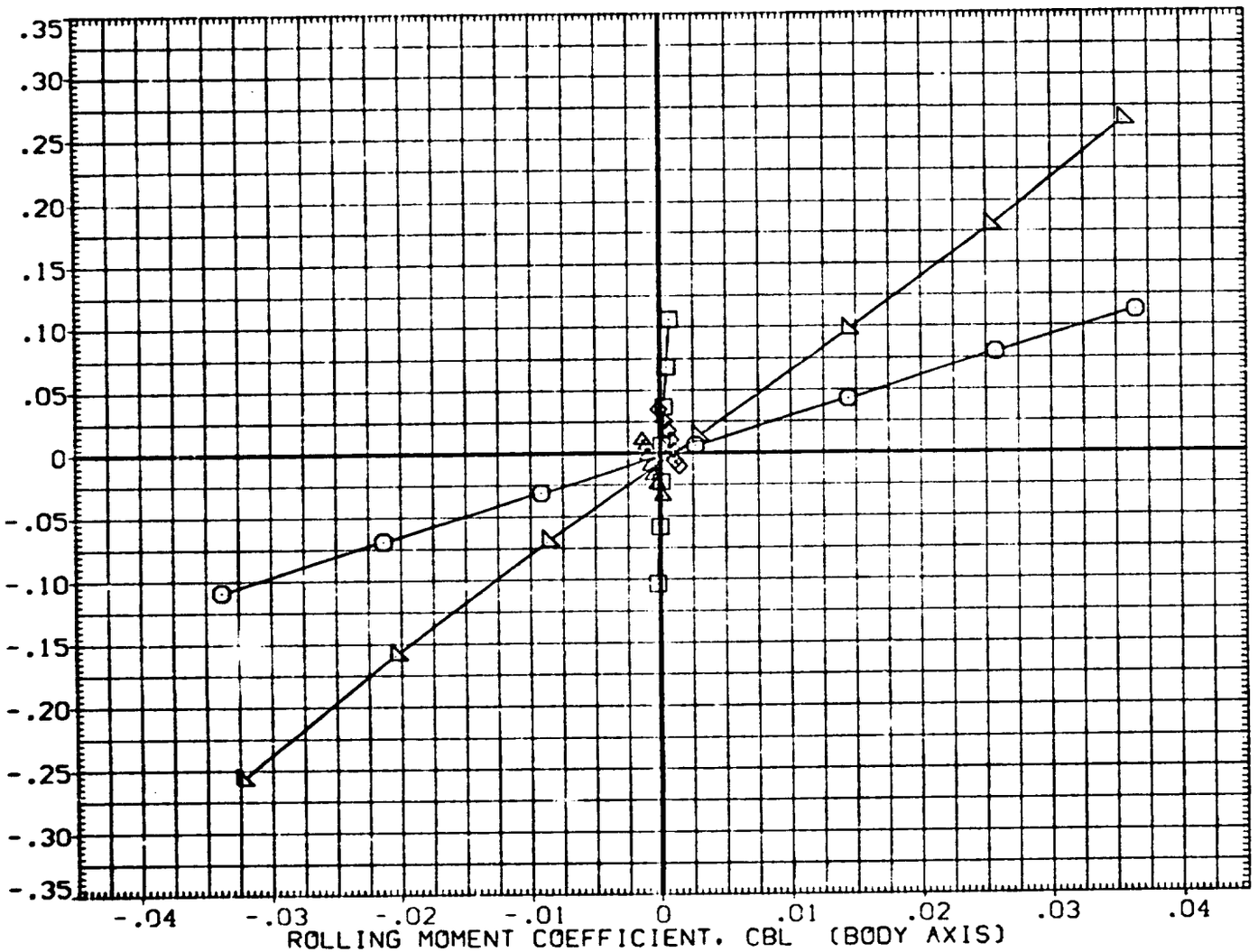


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET037)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(LETT37)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETL37)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.200	.000
(LETR37)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.200	.000
(LETI37)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

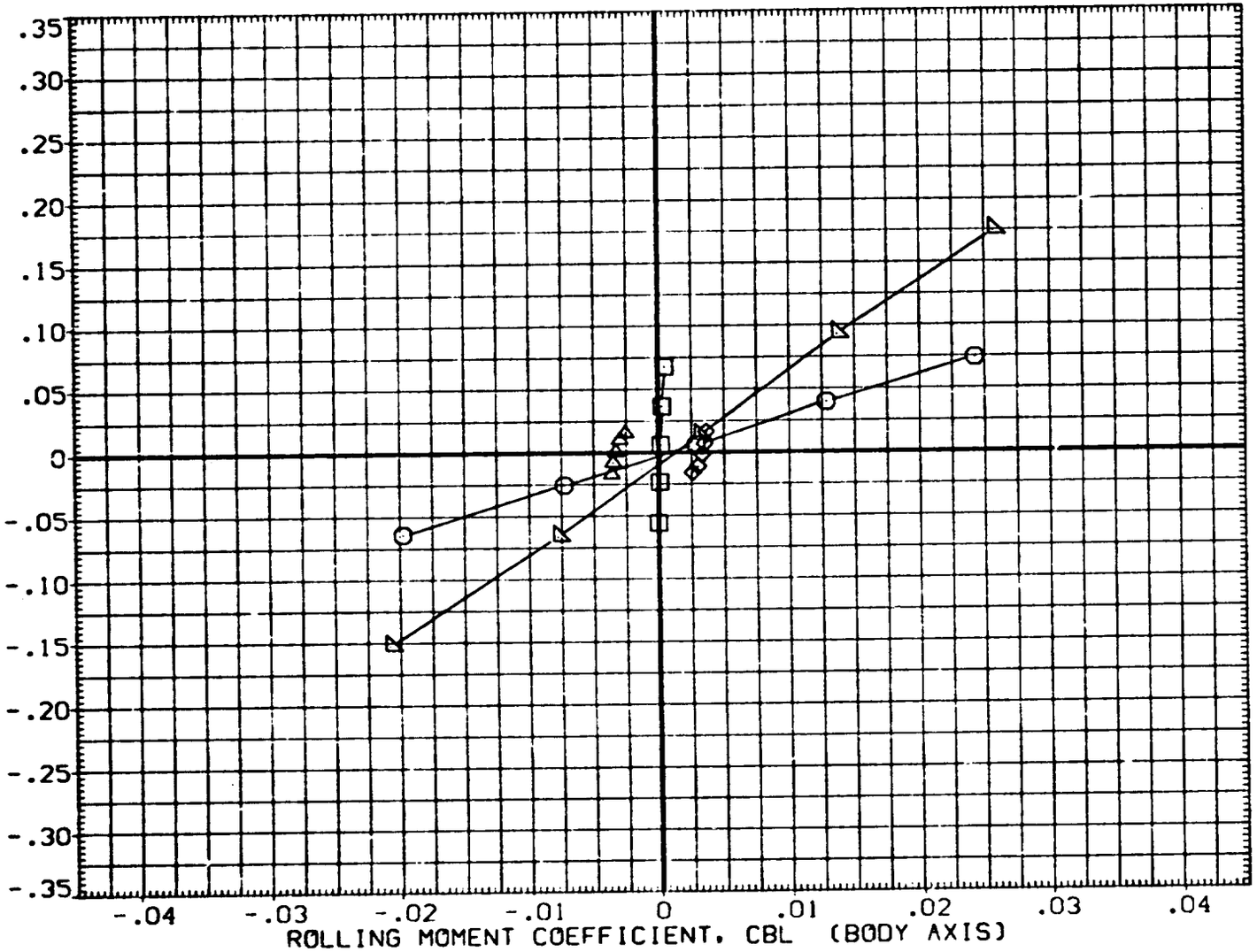


FIG. 25 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-013(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

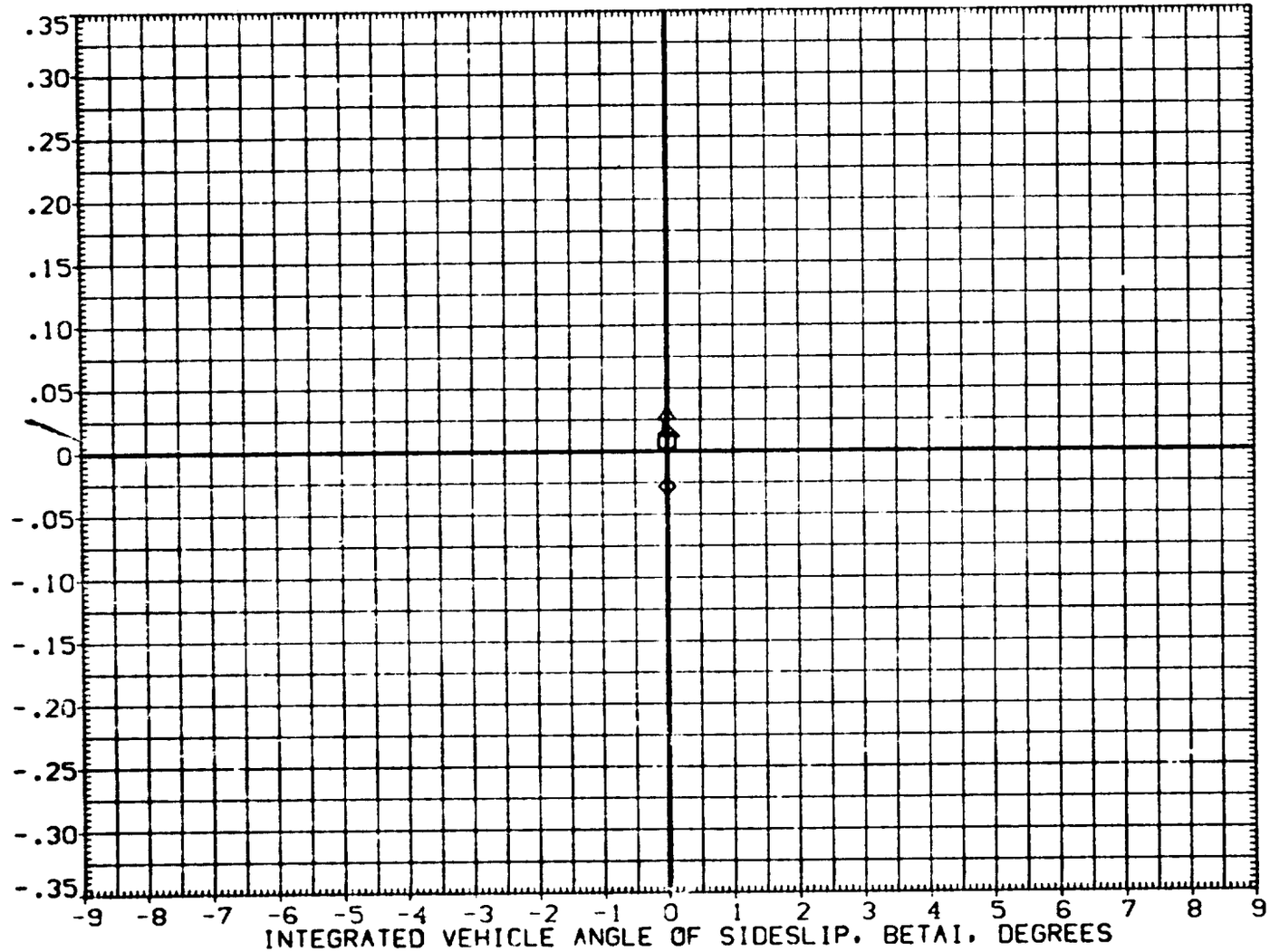


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

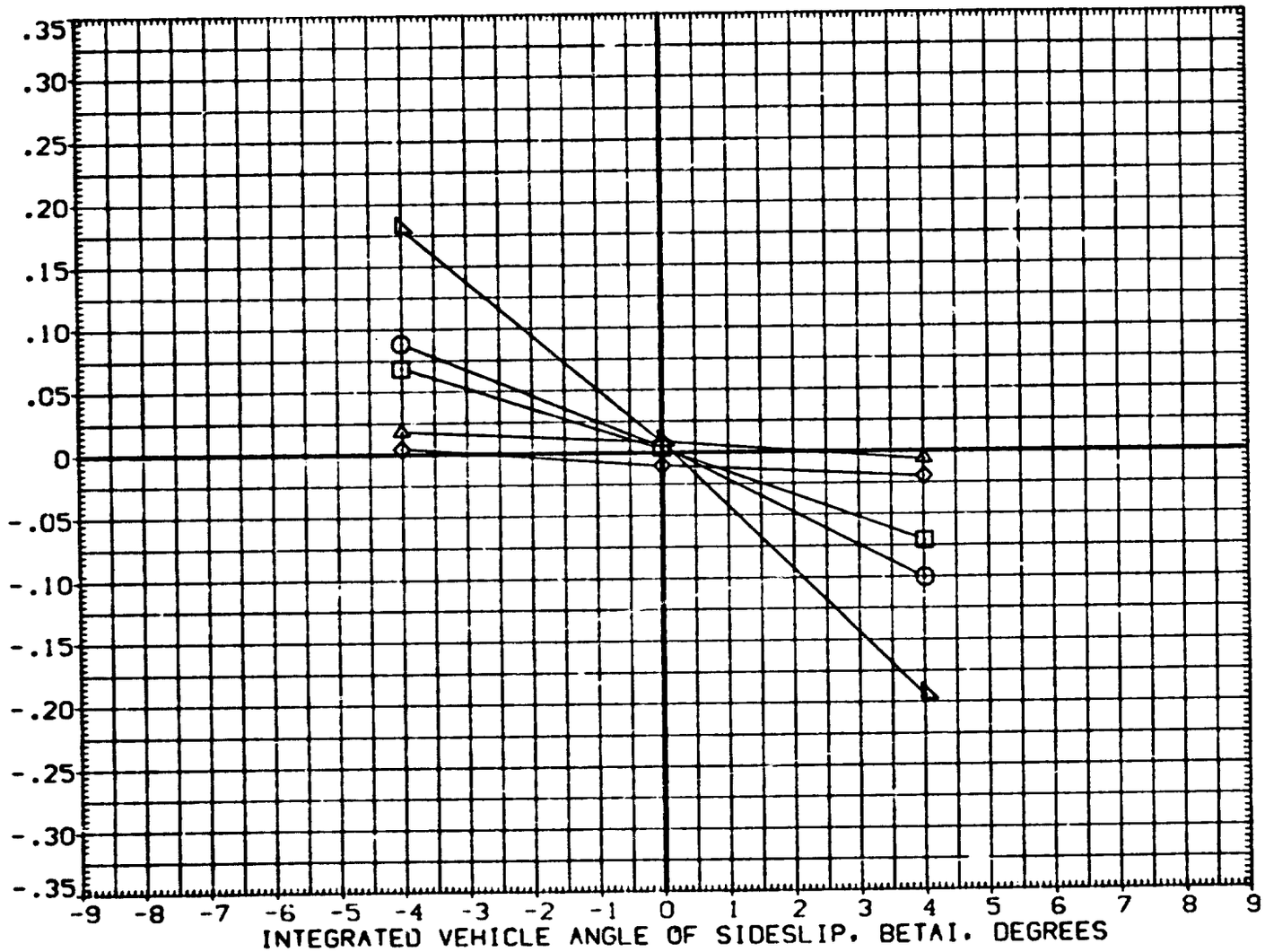


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET04I)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT4I)	□	AMES97-019(IAH1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL4I)	◇	AMES97-019(IA91) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR4I)	◇	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI4I)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

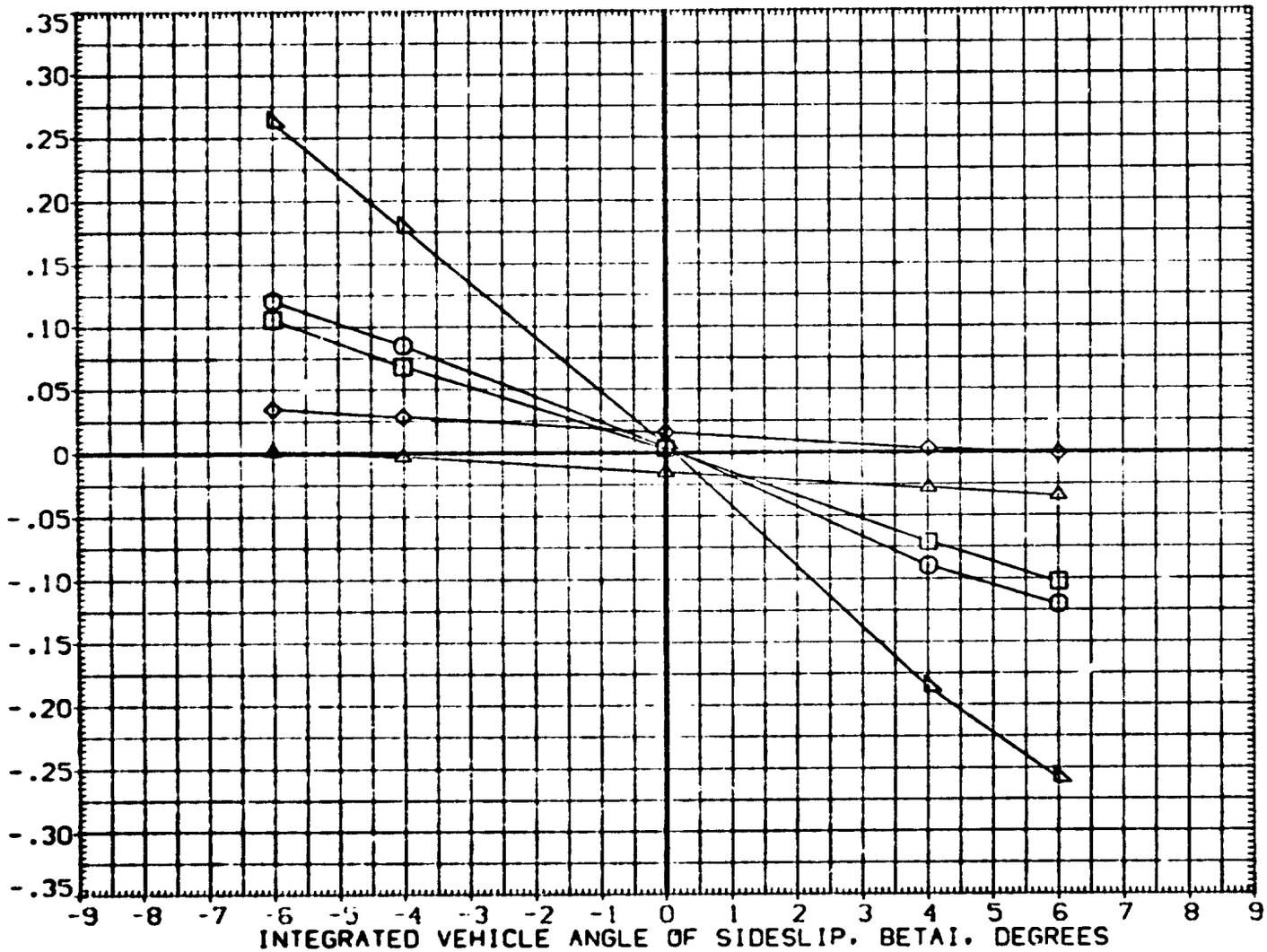


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET041)	□	AMES97-019(1AB1) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(LETT41)	◻	AMES97-019(1AB1) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(LETL41)	◇	AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(LETR41)	◇	AMES97-019(1AB1) LVAP R-LRB ALL ML SEALED	.000	.000	2.200	.000
(LETI41)	△	AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

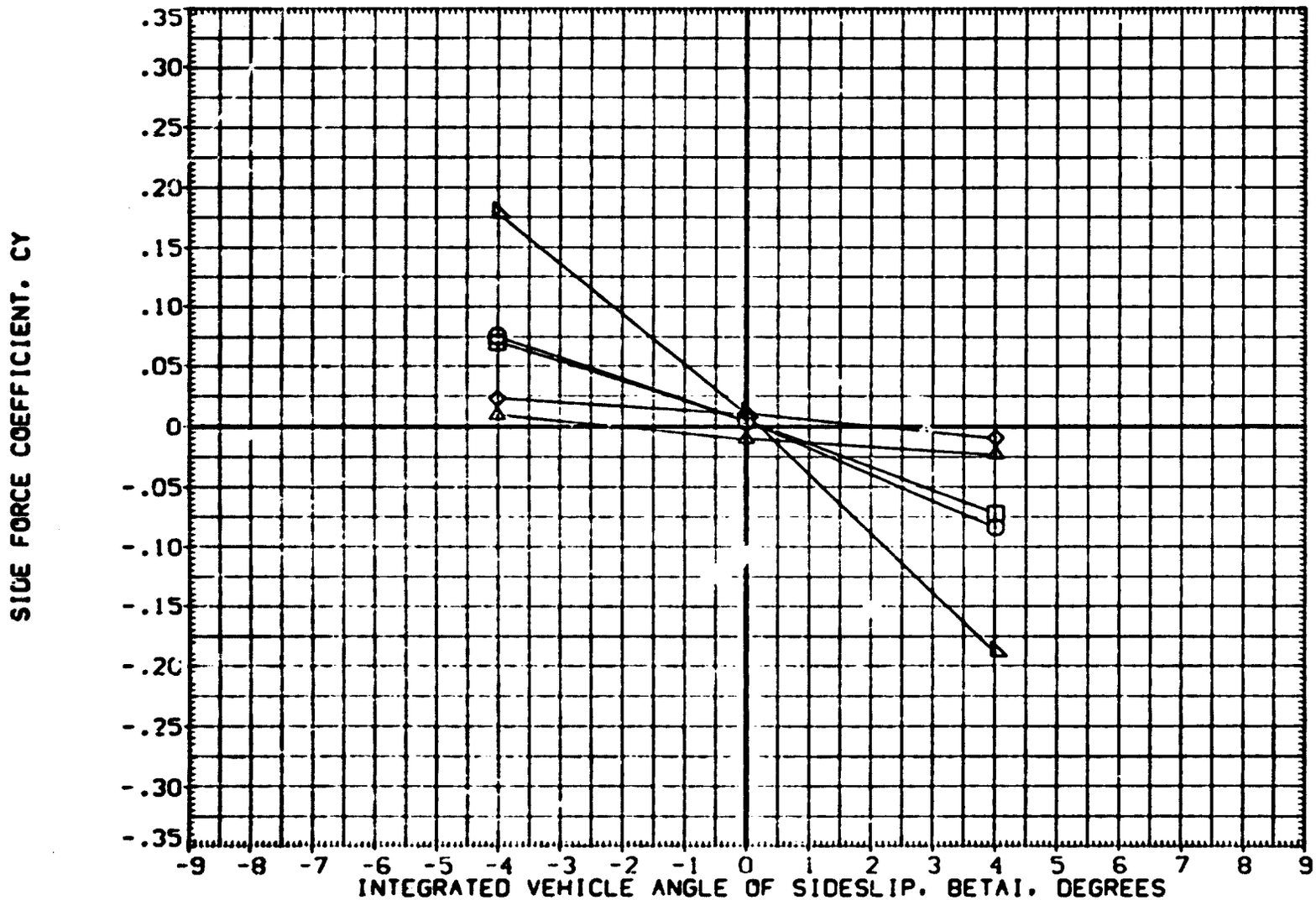


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET04( )		AMES97-019((A81)) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(LETT4( )		AMES97-019((A81)) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(LETL4( )		AMES97-019((A81)) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(LETR4( )		AMES97-019((A81)) LVAP R-SRB ALL ML SEALED	.000	.000	2.200	.000
(LETI4( )		AMES97-019((A81)) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

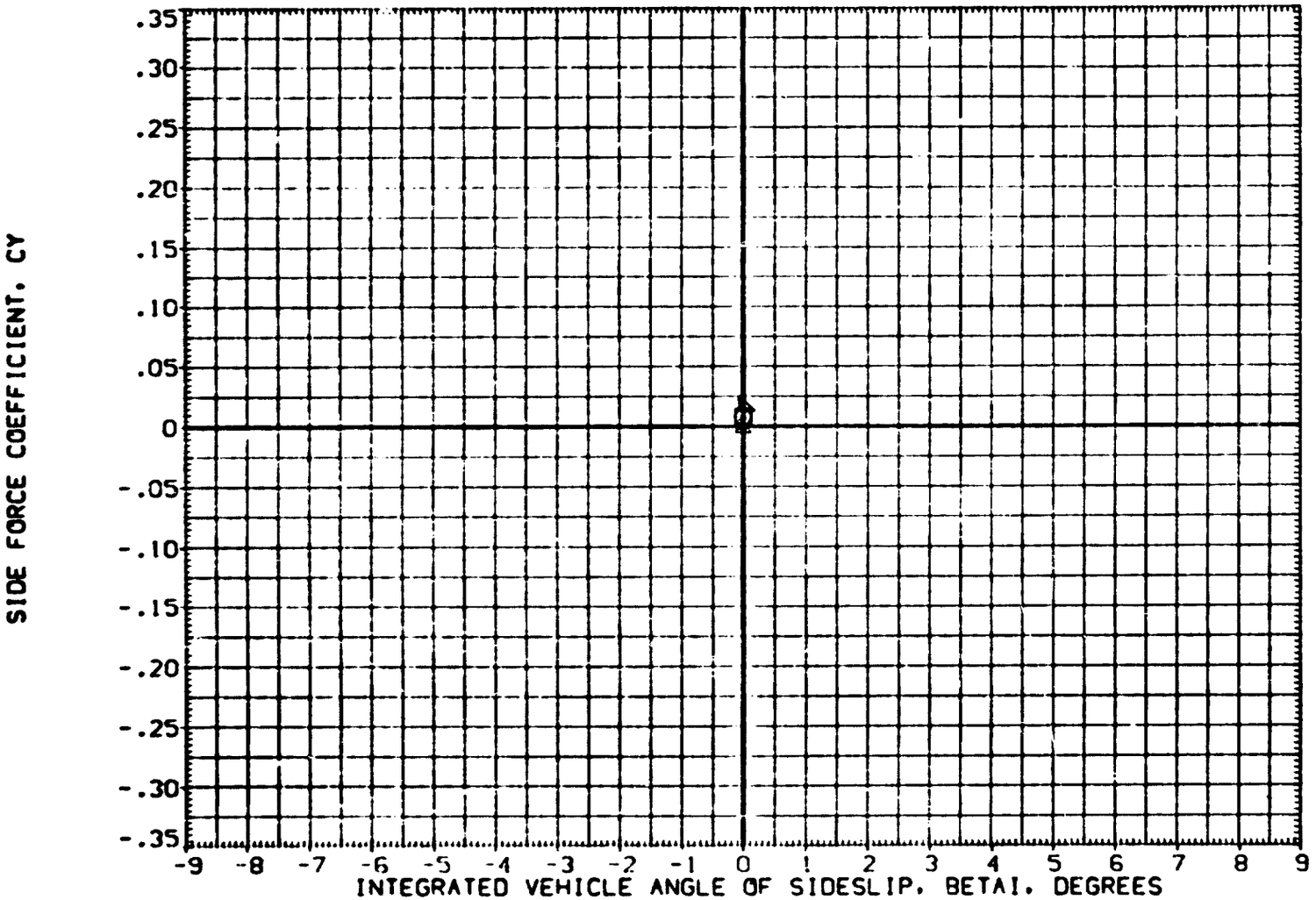


FIG. 2C LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(LET041)	○	AMES97-019(1AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LET141)	□	AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LET241)	⊠	AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LET041)	◁	AMES97-019(1AB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LET141)		AMES97-019(1AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

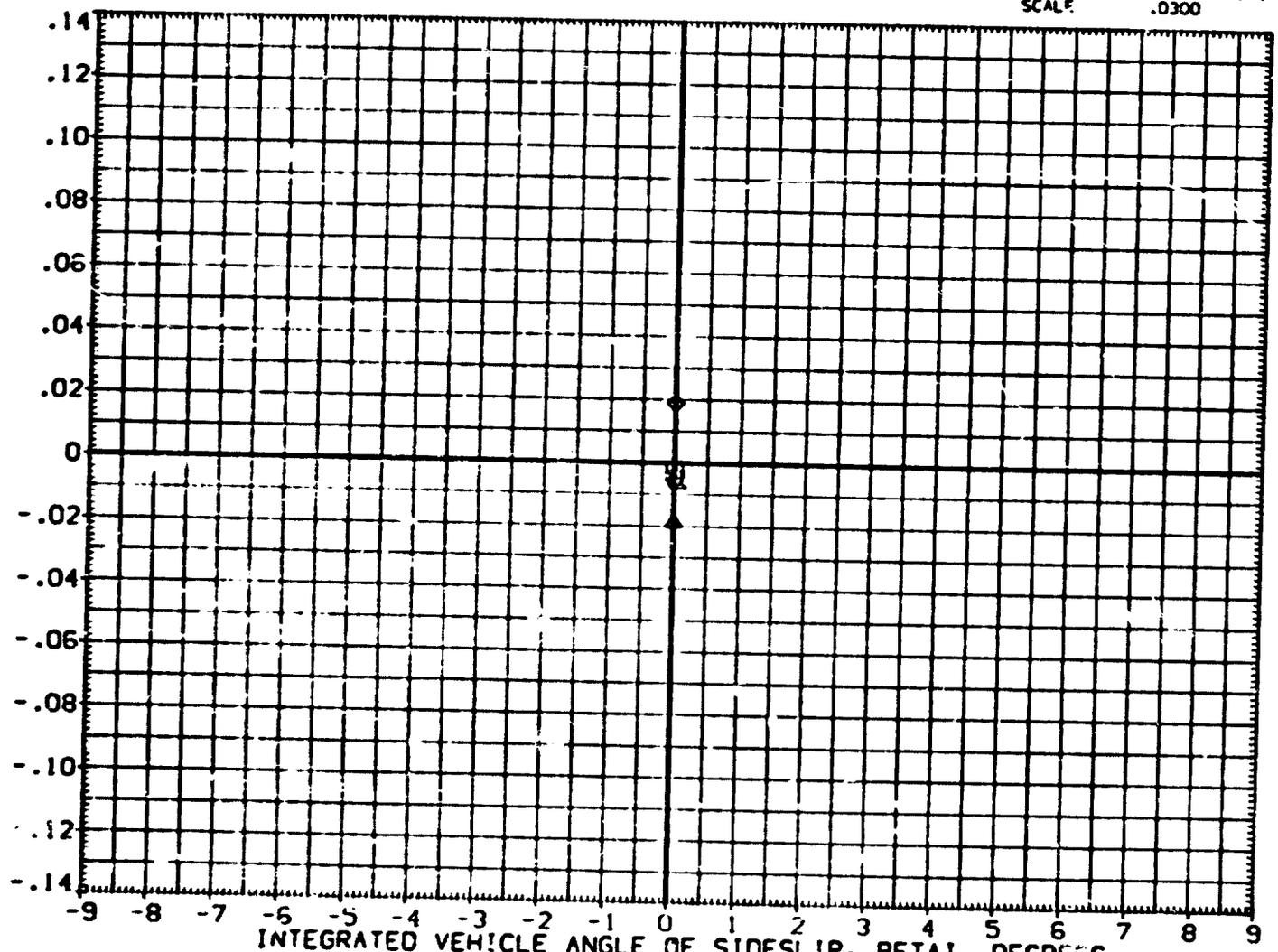


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO4I)		AMES97-019(IA8I) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT4I)		AMES97-019(IA8I) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL4I)		AMES97-019(IA8I) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR4I)		AMES97-019(IA8I) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI4I)		AMES97-019(IA8I) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

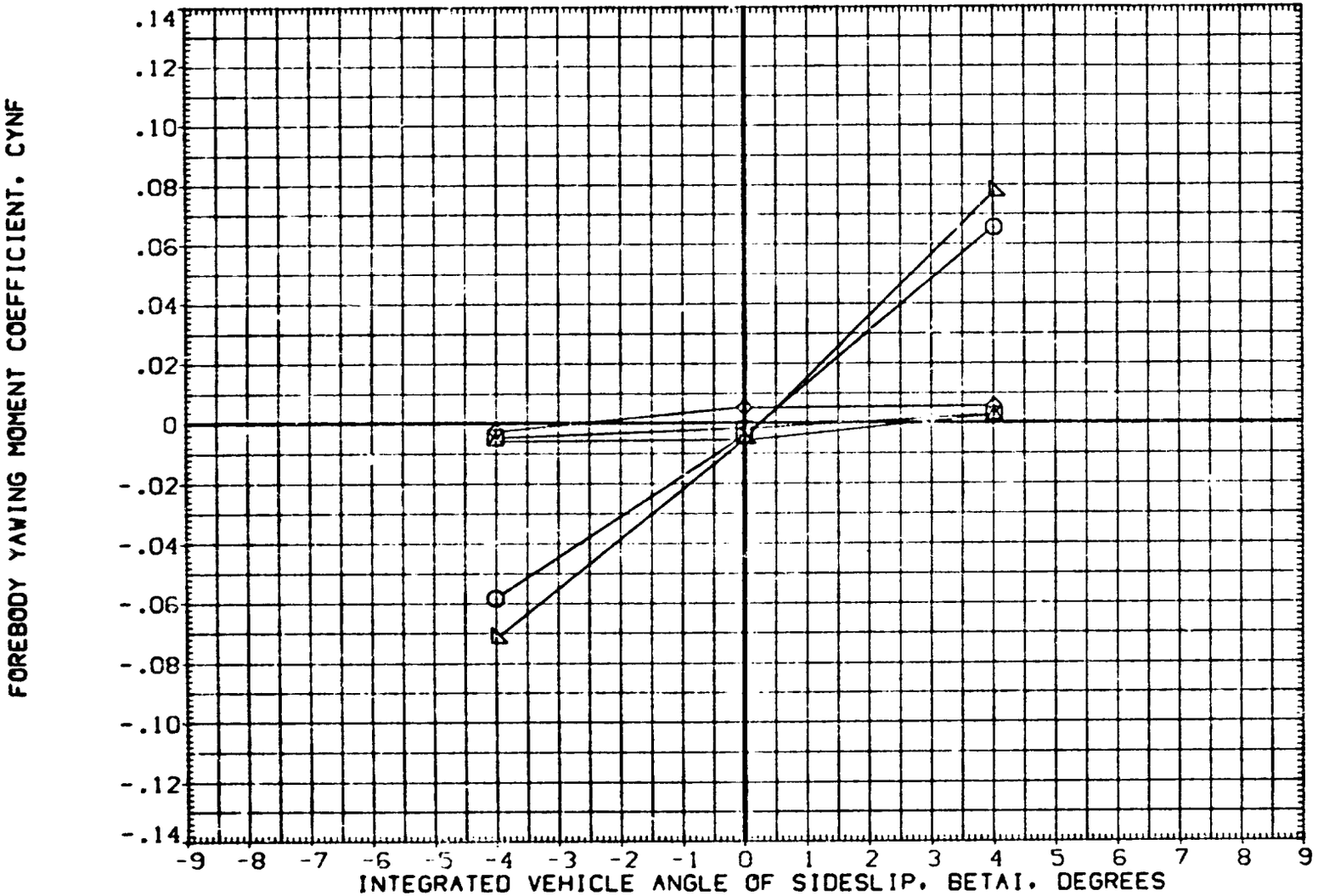


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET04I)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LET14I)	◇	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL4I)	◁	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR4I)	◁	AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI4I)	◁	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

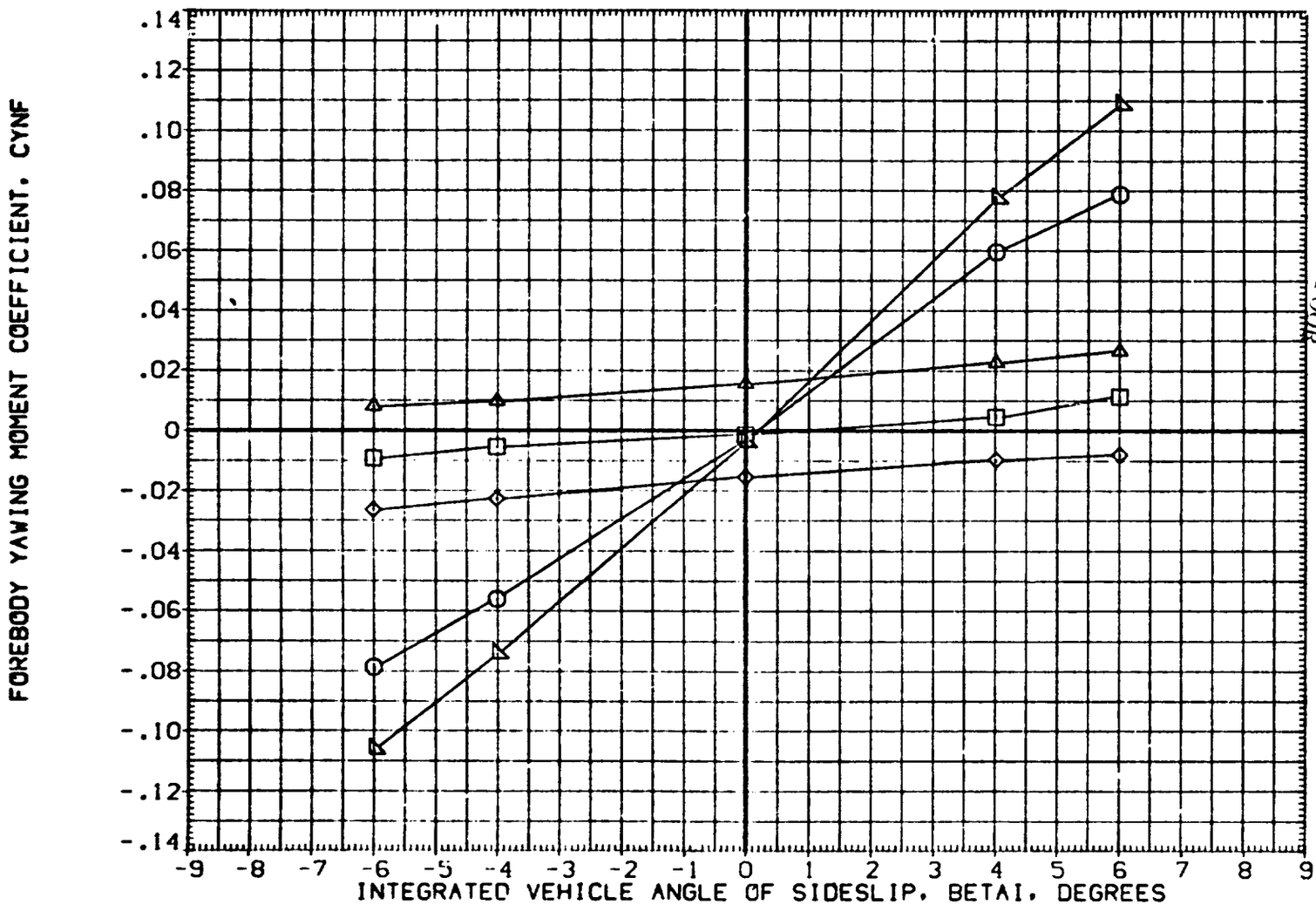


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LET741)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	◺	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

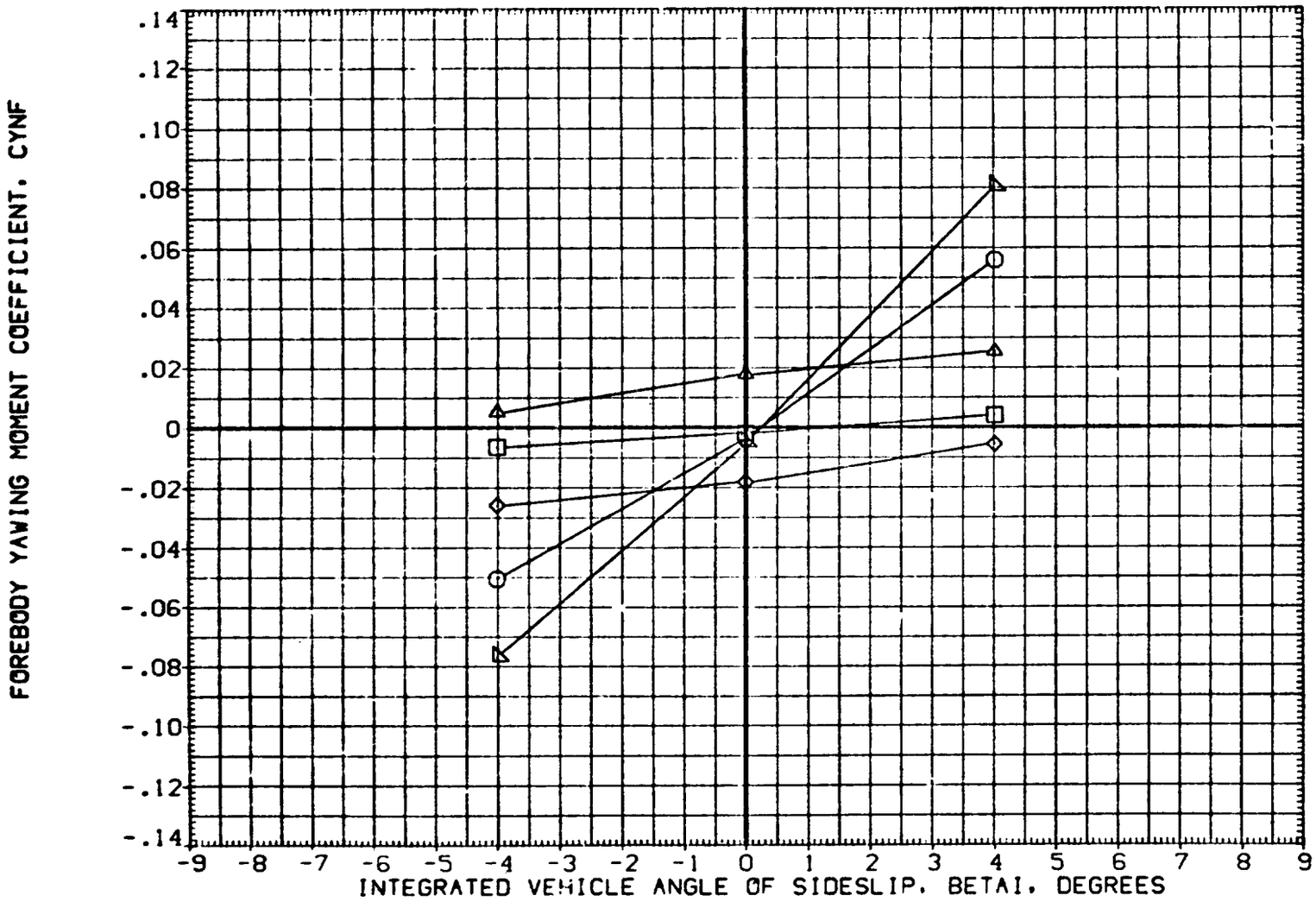


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

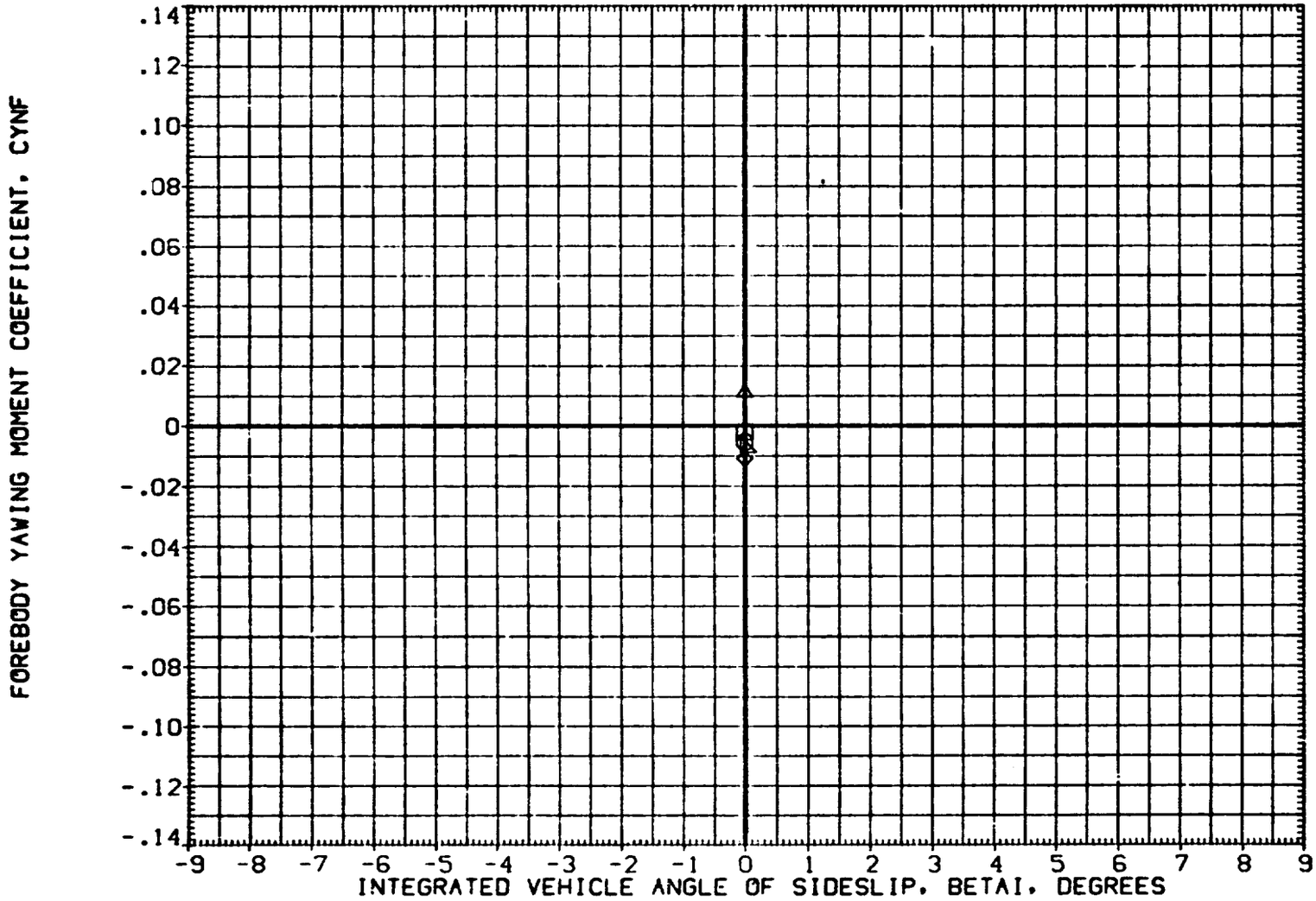


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

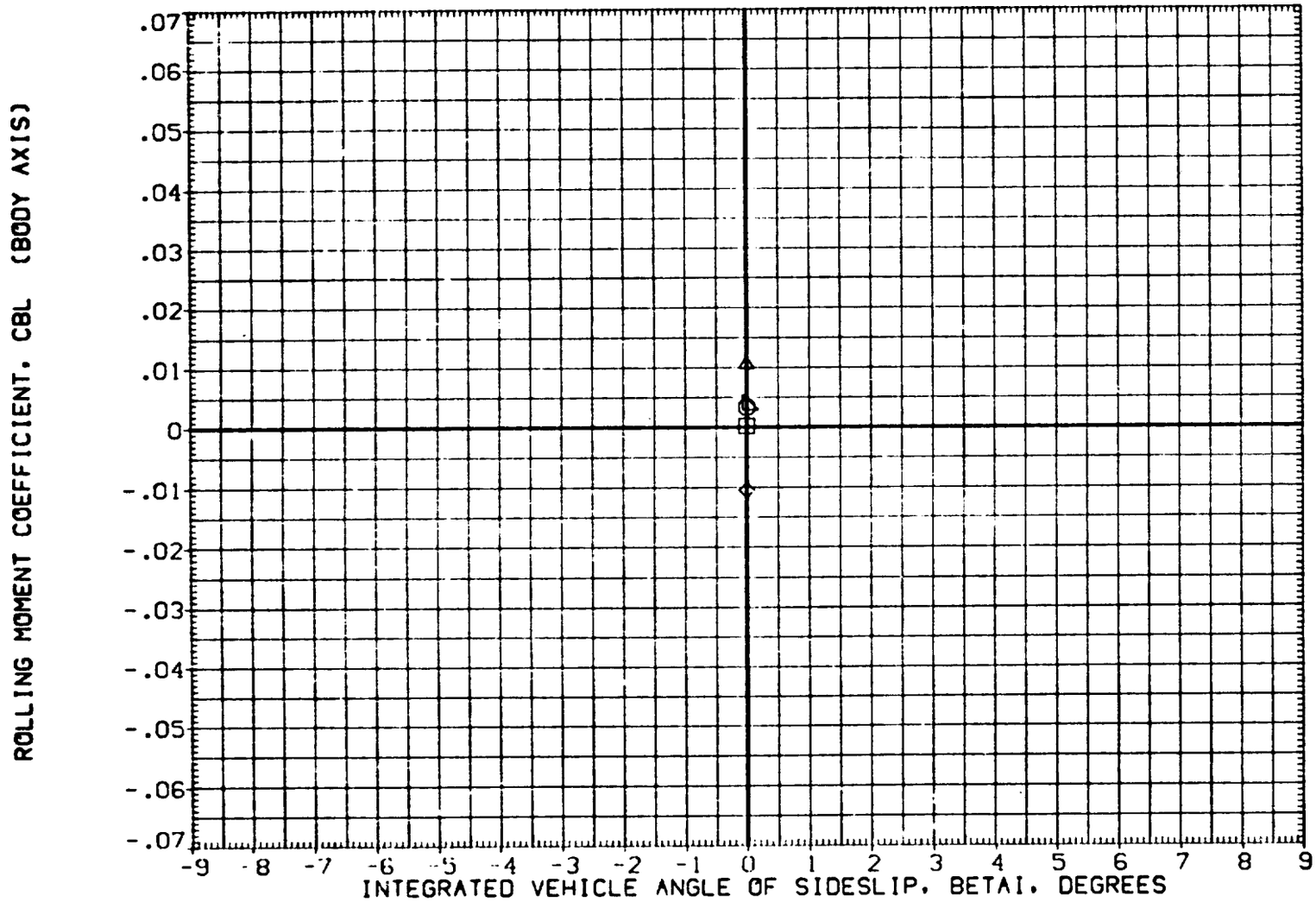


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	○	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	□	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	◇	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	☆	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

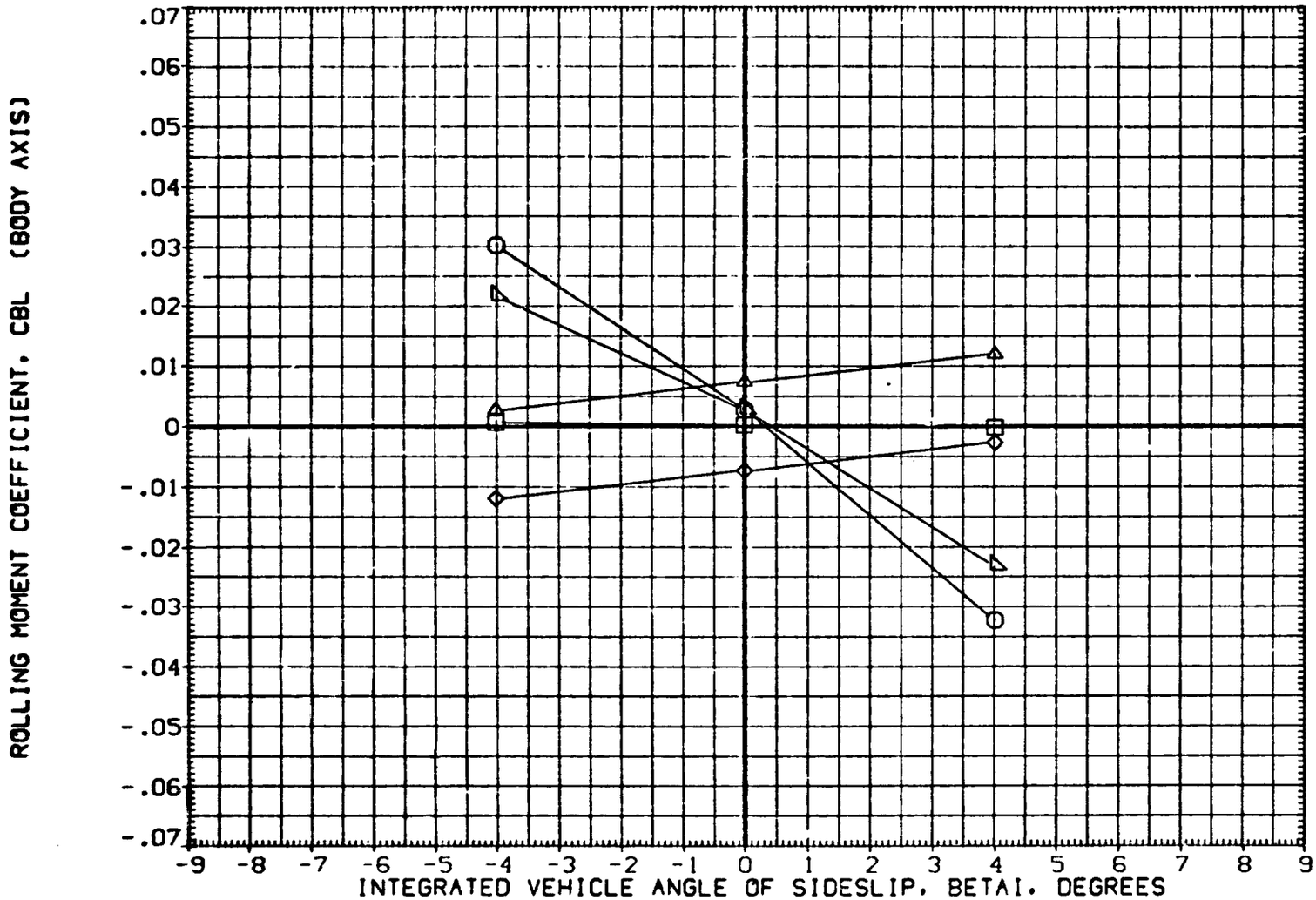


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

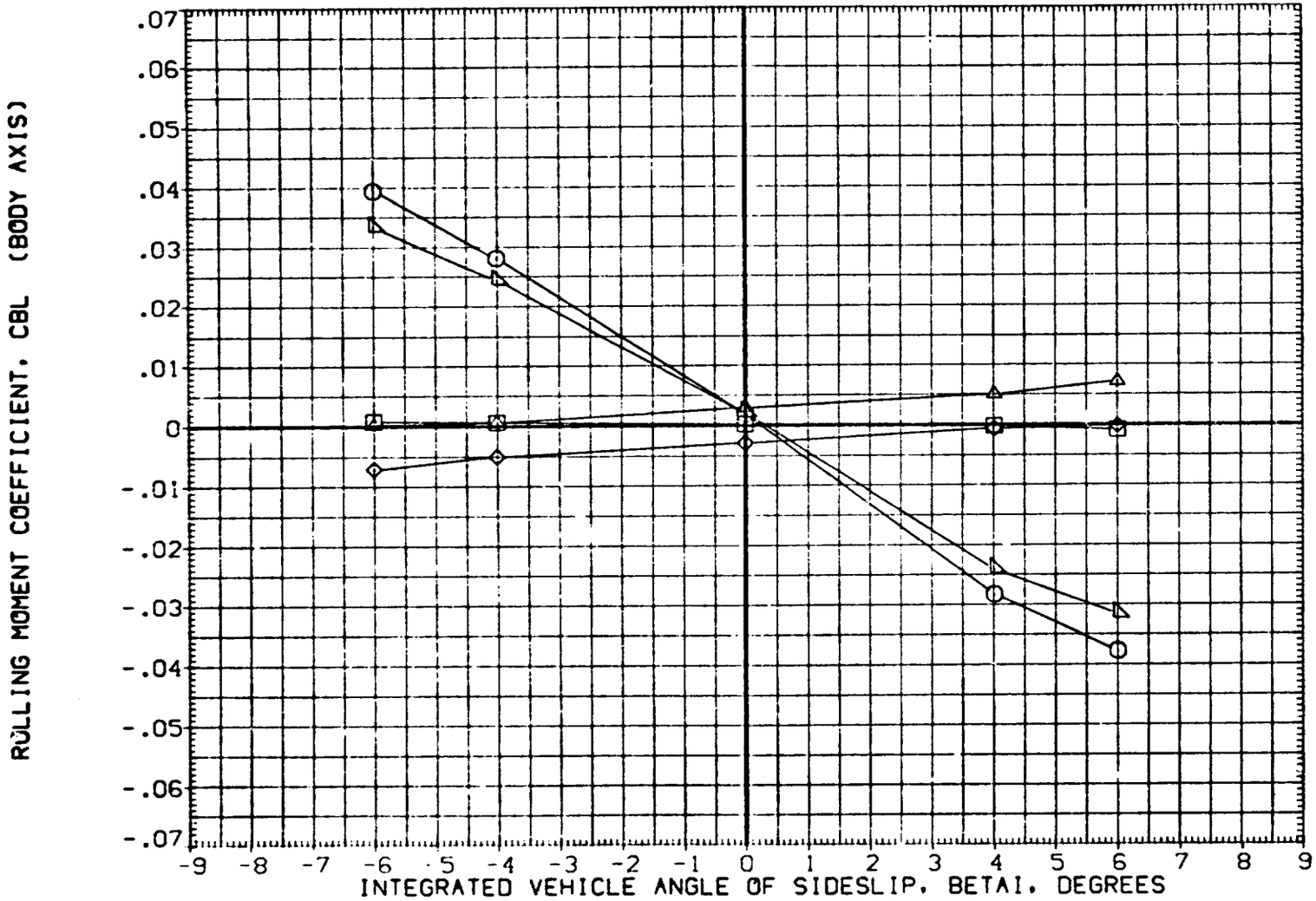


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	□	AMES97-019(1AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	◇	AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	△	AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(1AB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(1AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

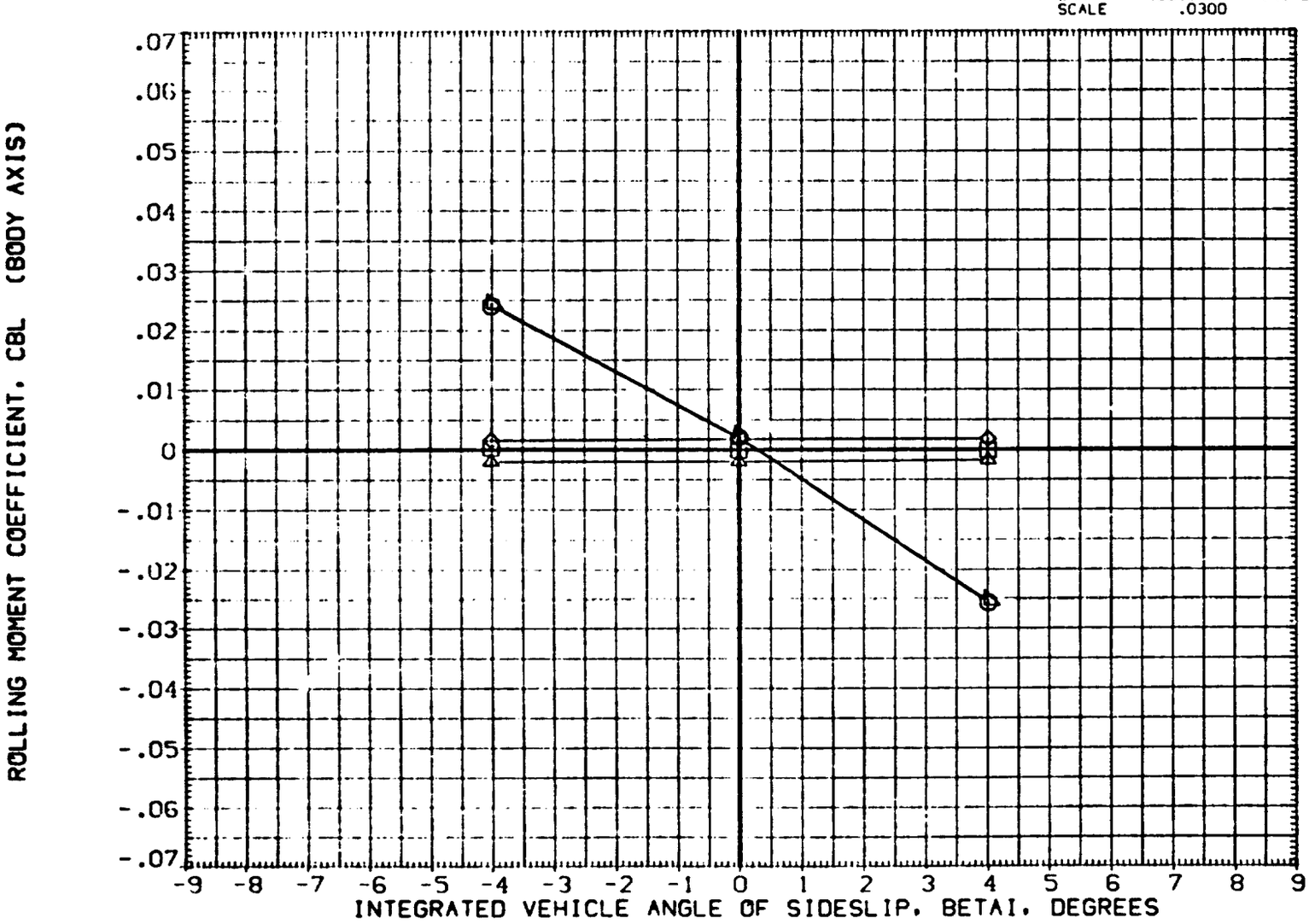


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	⊠	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

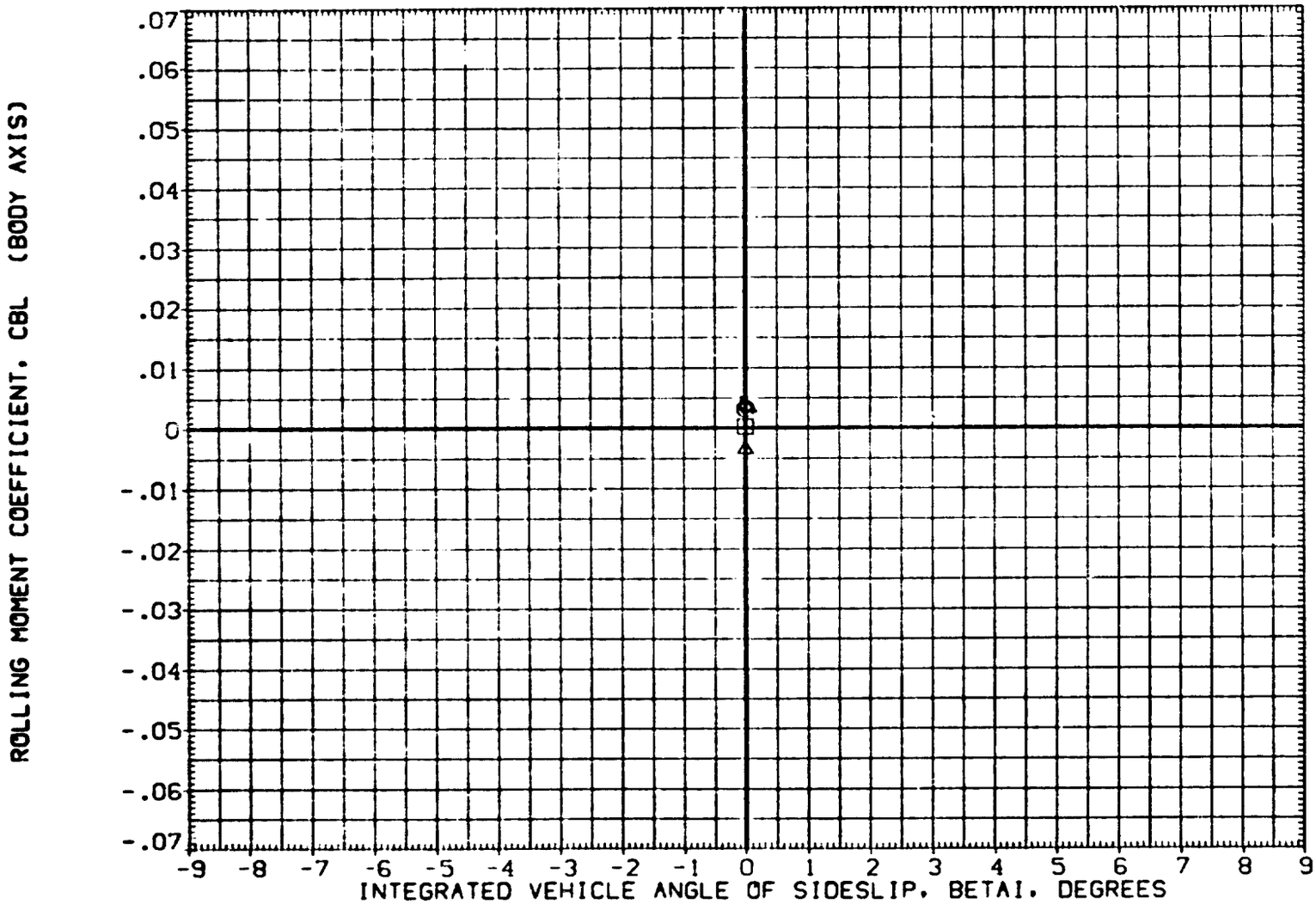


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO41)		AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019([AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019([AB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

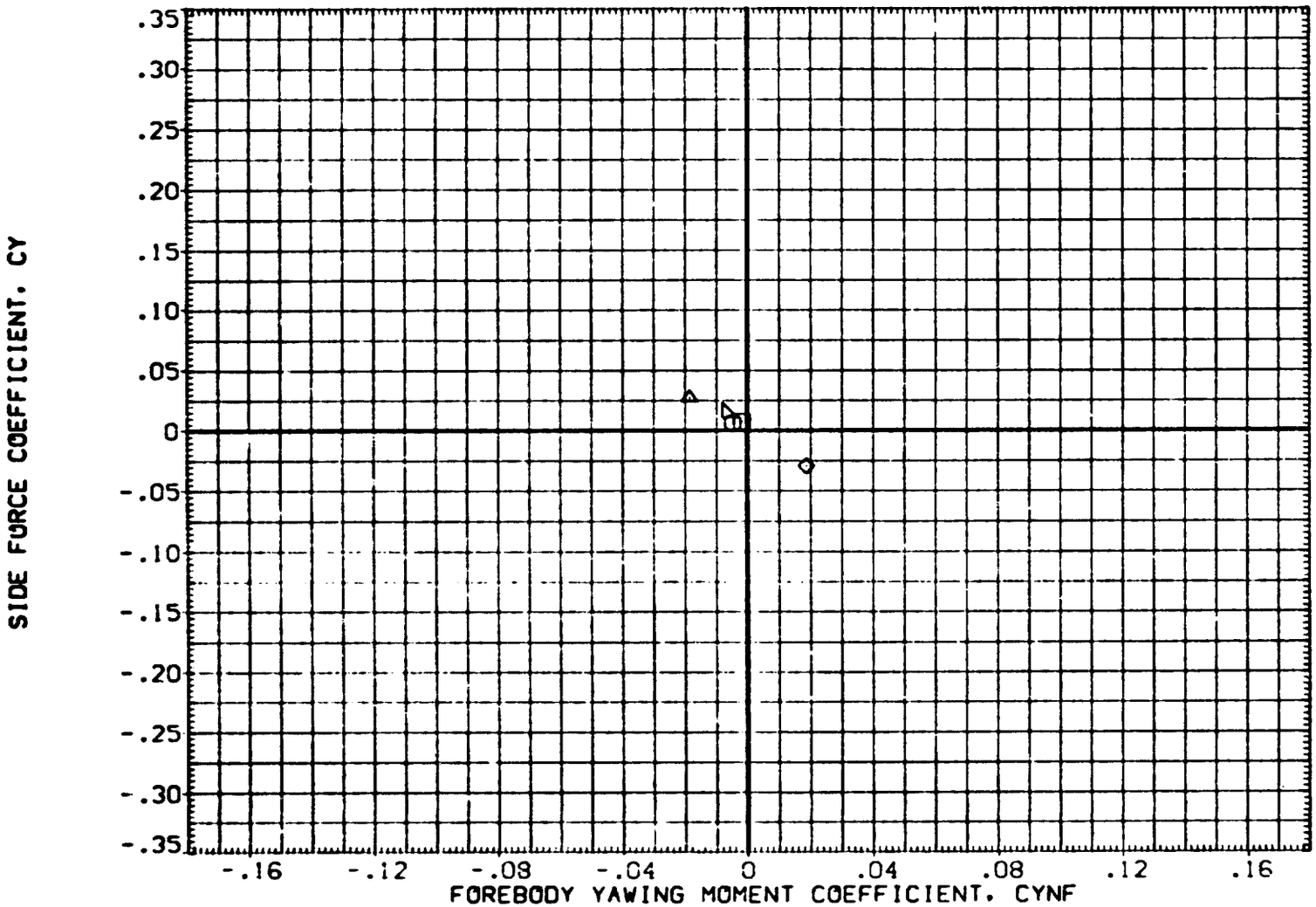


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)ALPHA= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET04I)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(LETT4I)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(LETL4I)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(LETR4I)		AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	.000	.000	2.200	.000
(LETI-.)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

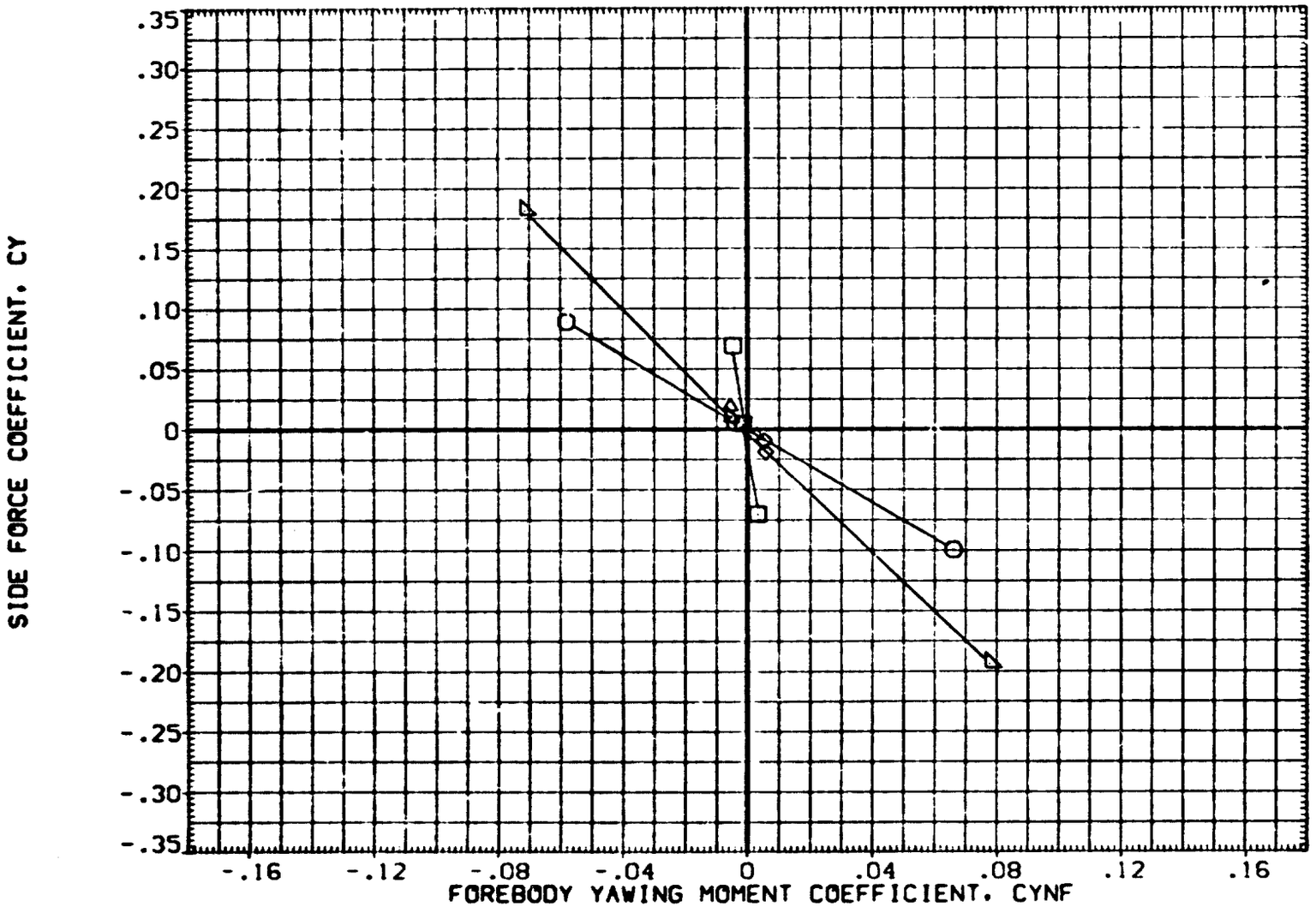


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET04I)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(LETT4I)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(LETL4I)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(LETR4I)		AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	.000	.000	2.200	.000
(LETI4I)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

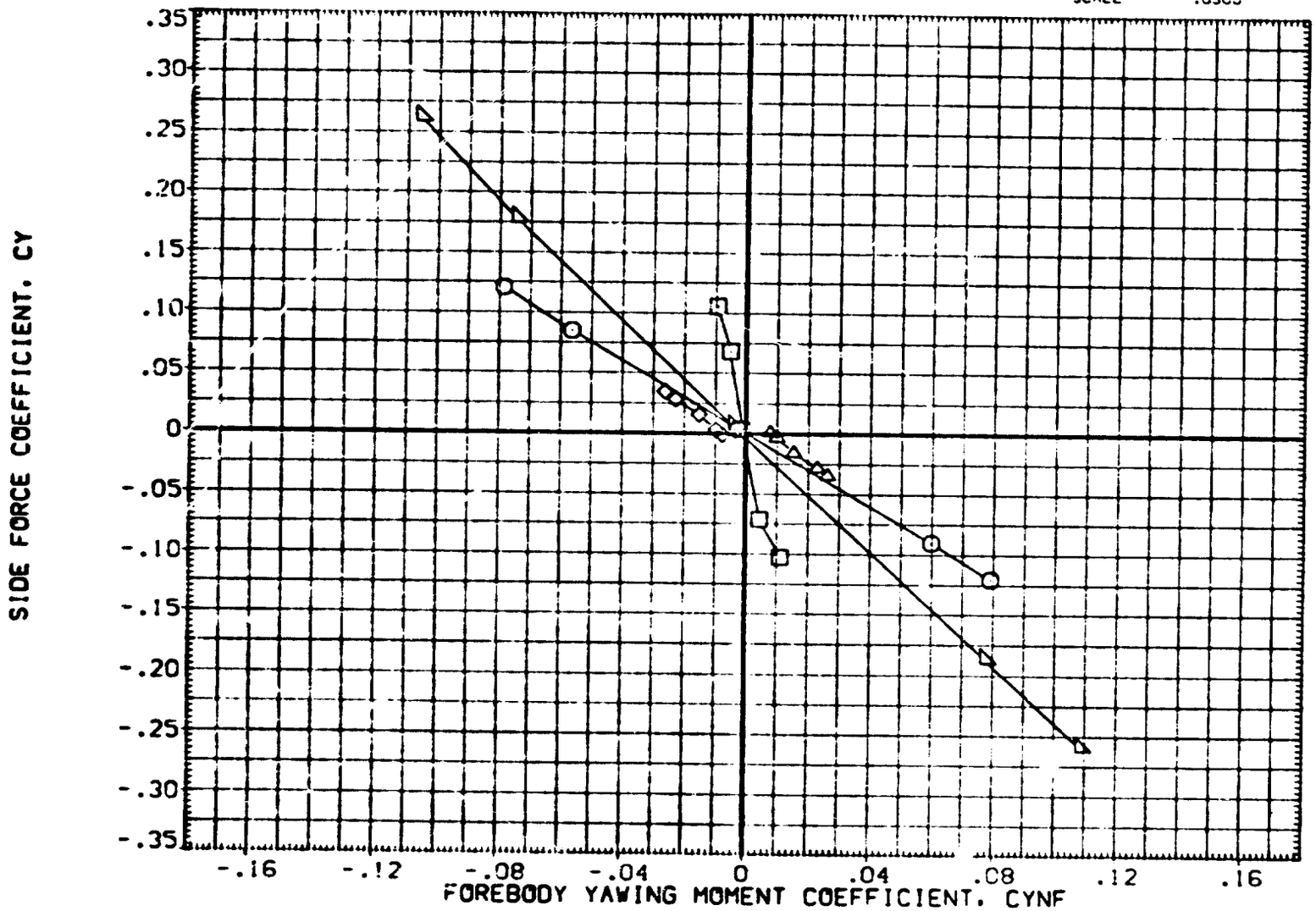


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETC41)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

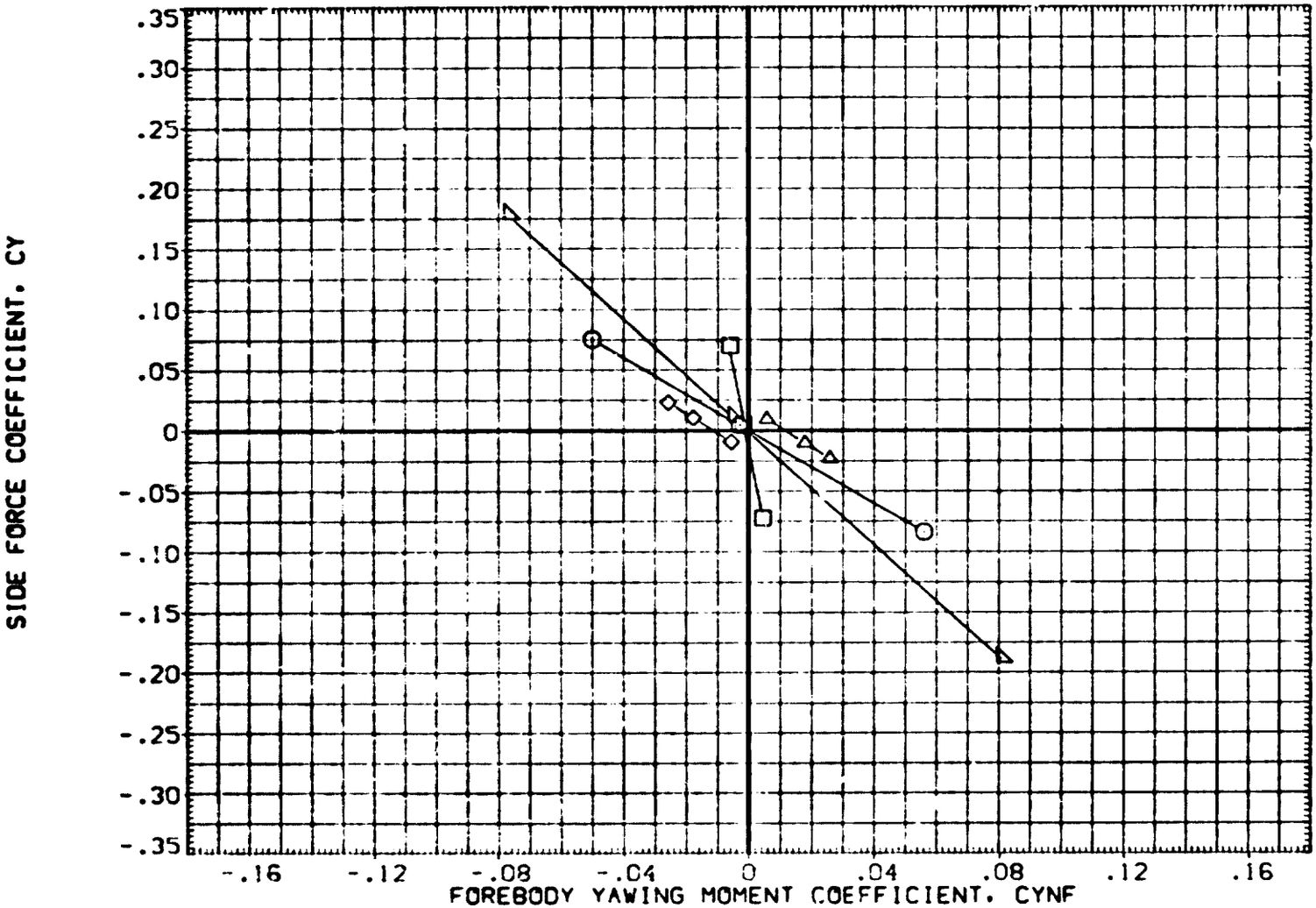


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET04I)		AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.200	.000
(LETT4I)		AMES97-019(1A81) LVAP TANK - ALL ML SEALED	.000	.000	2.200	.000
(LETL4I)		AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.200	.000
(LETR4I)		AMES97-019(1A81) LVAP R-SRB ALL ML SEALED	.000	.000	2.200	.000
(LETI4I)		AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

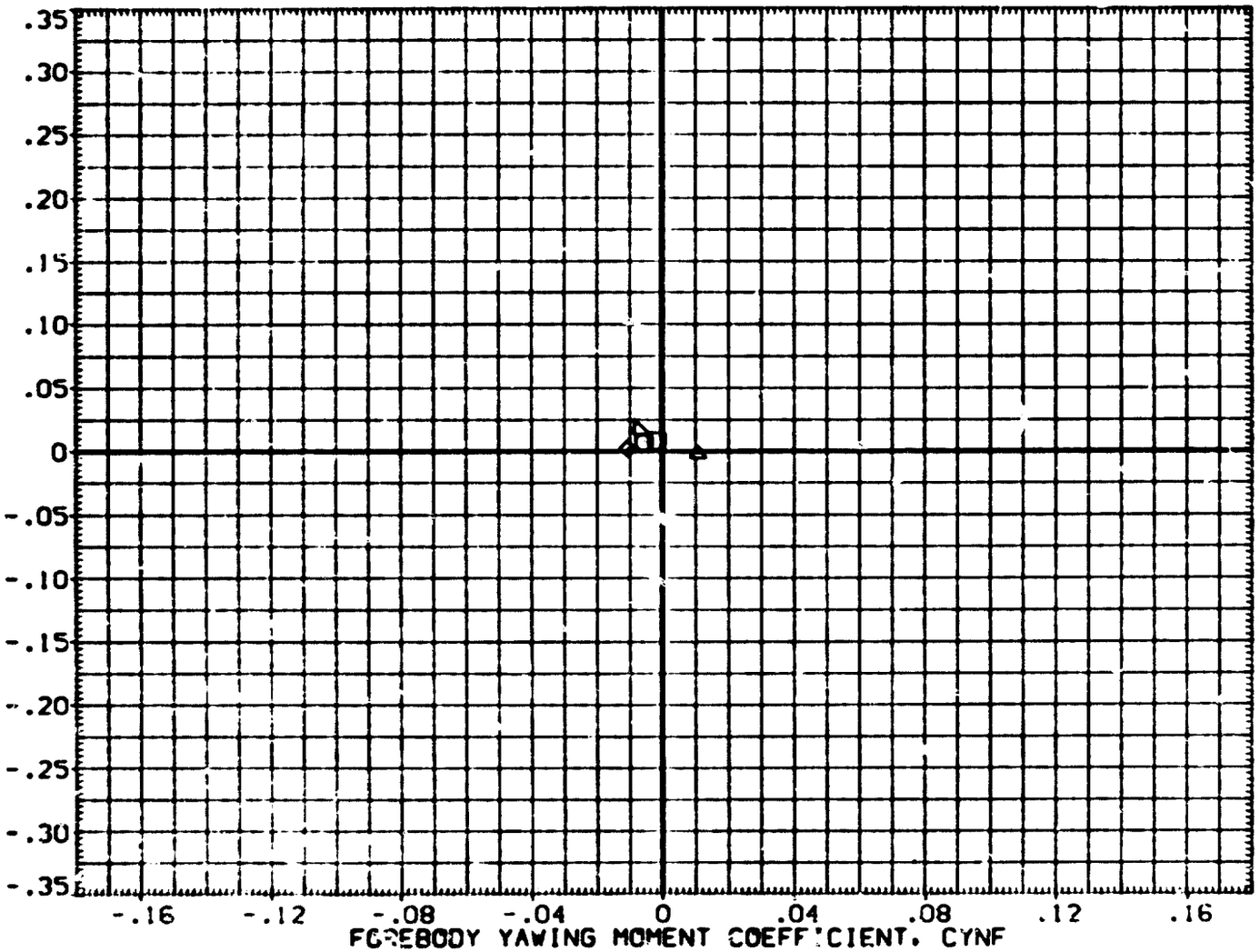


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LET141)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

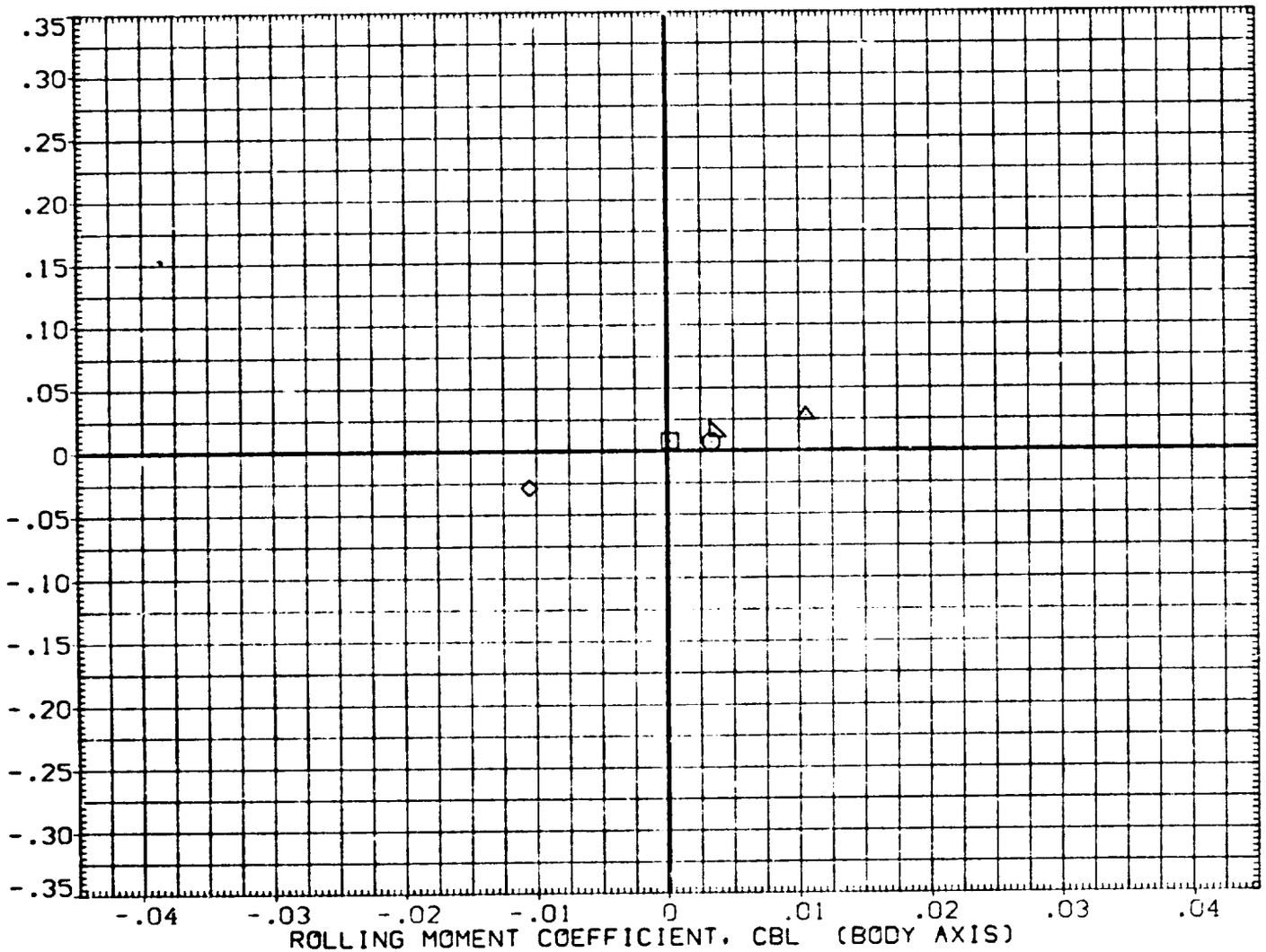


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	▽	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)	▷	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LET141)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

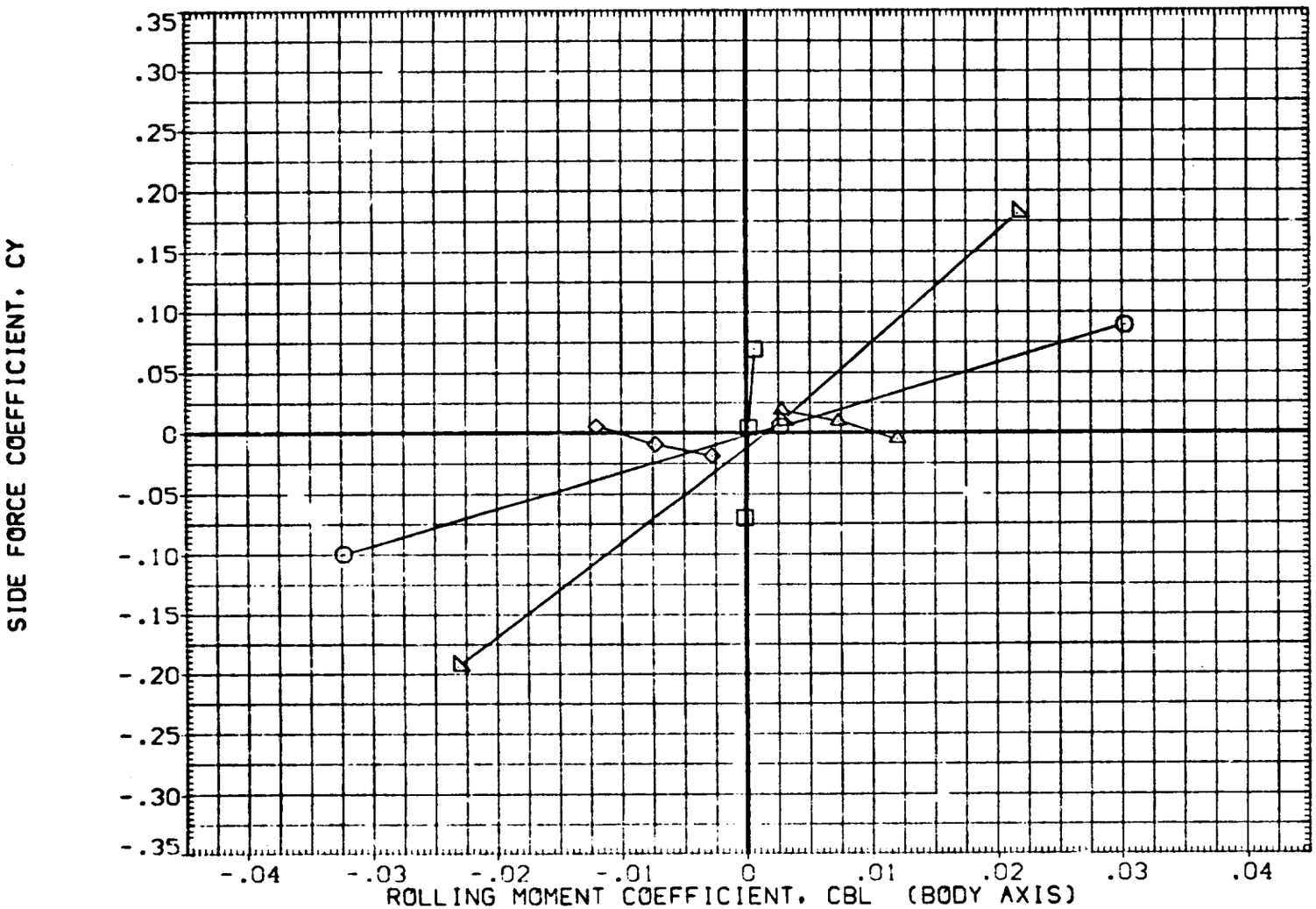


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(B)ALPHA= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR 1)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

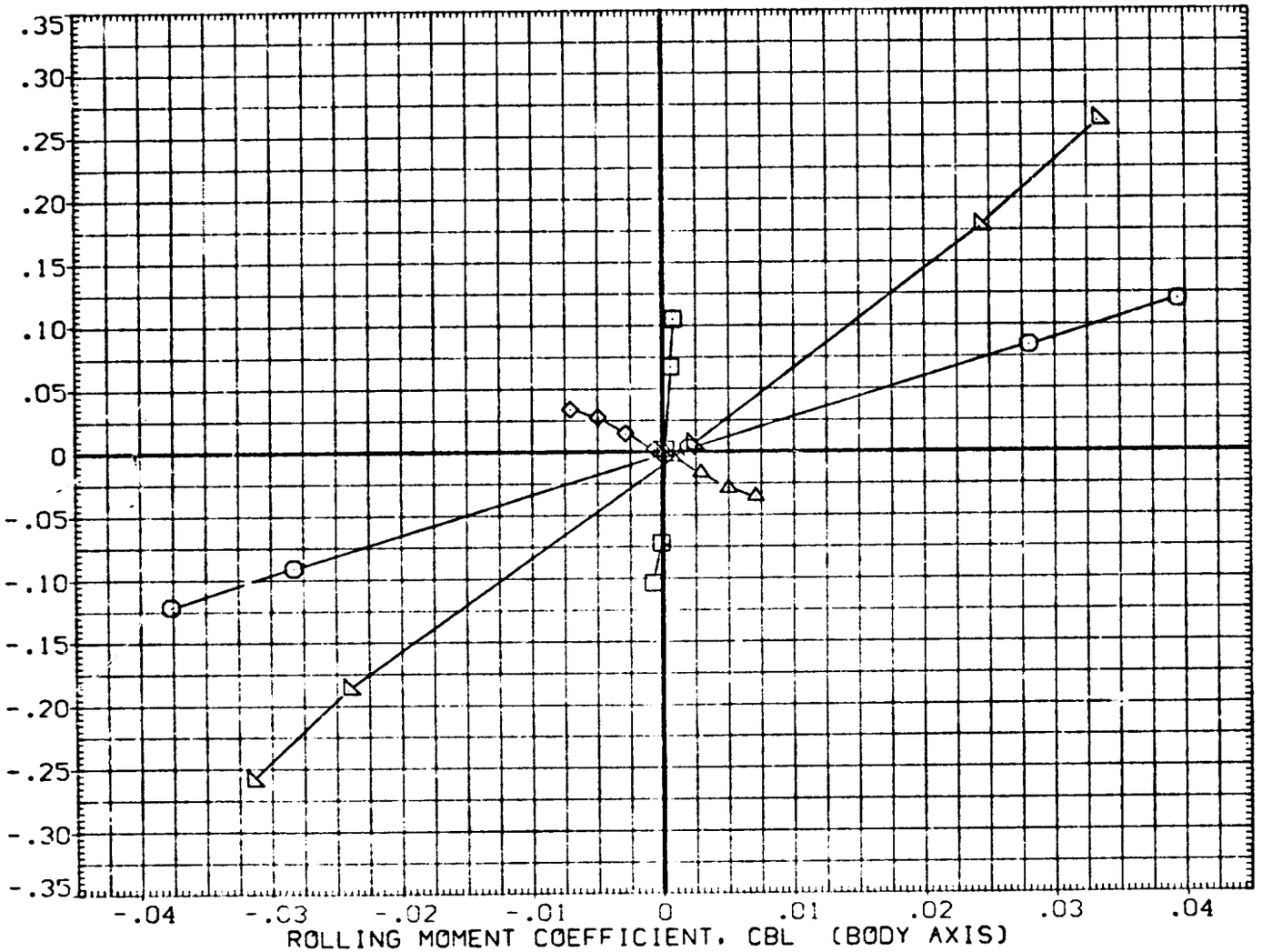


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

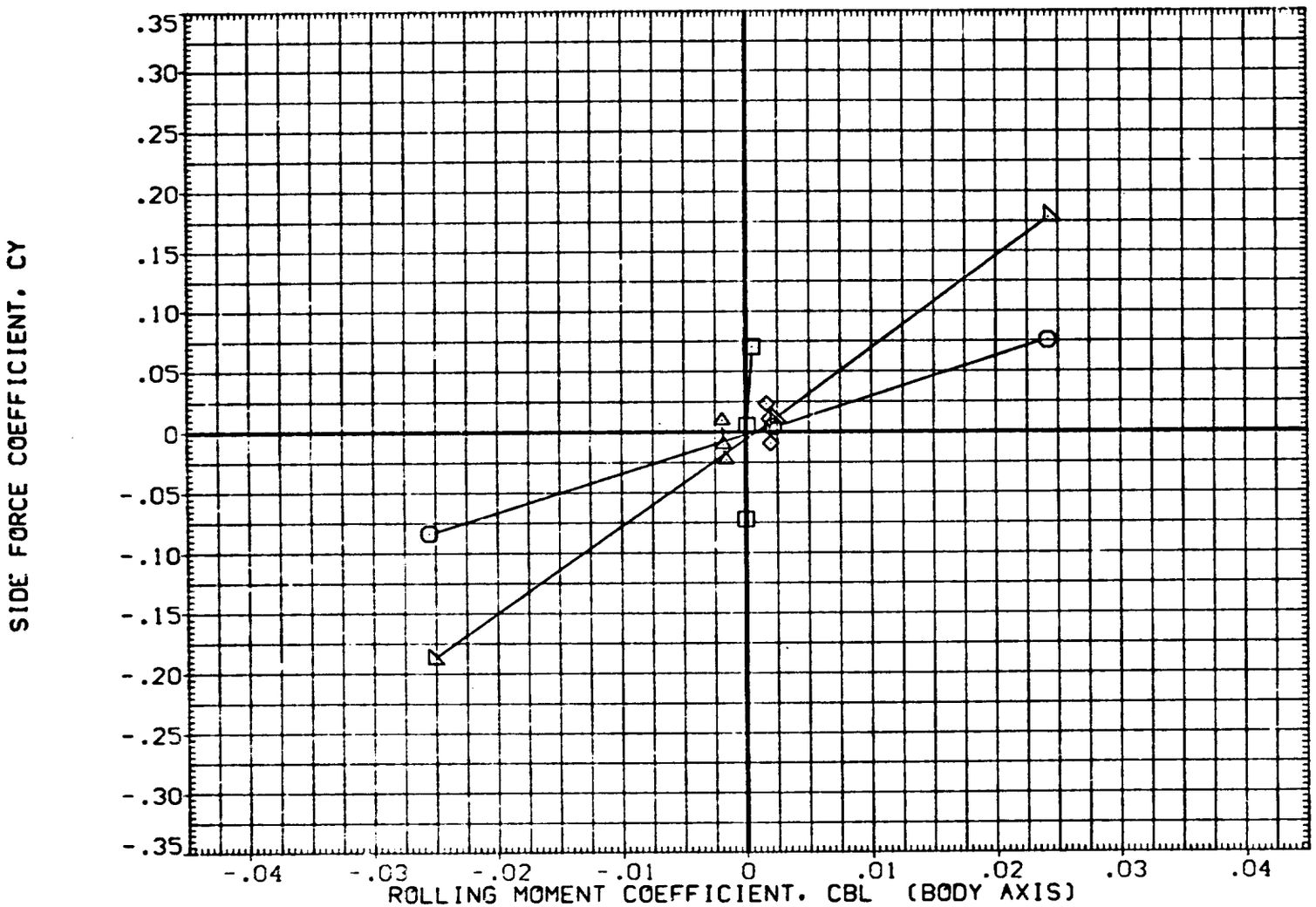


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET041)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(LETT41)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(LETL41)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(LETR41)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.200	.000
(LETI41)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

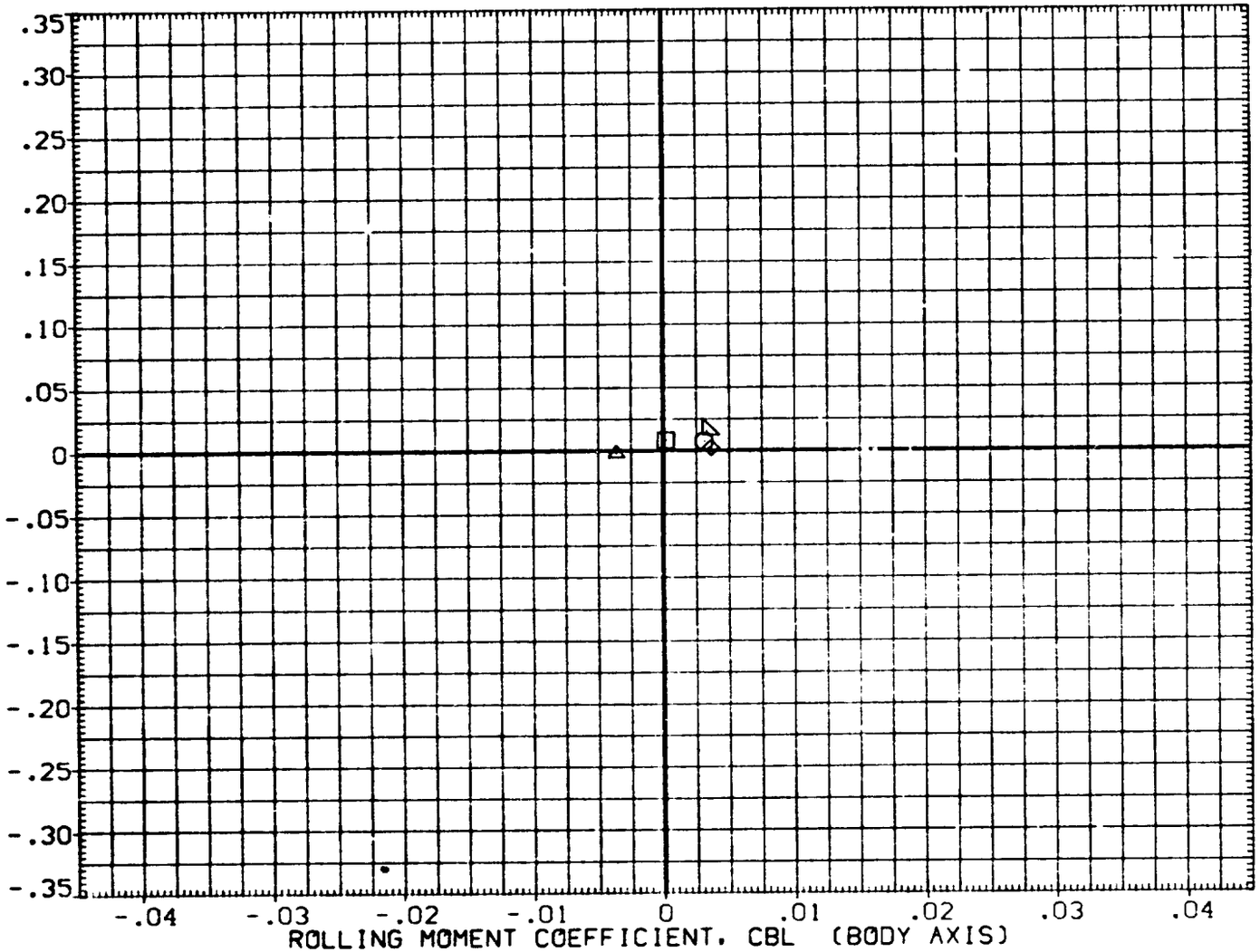


FIG. 26 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

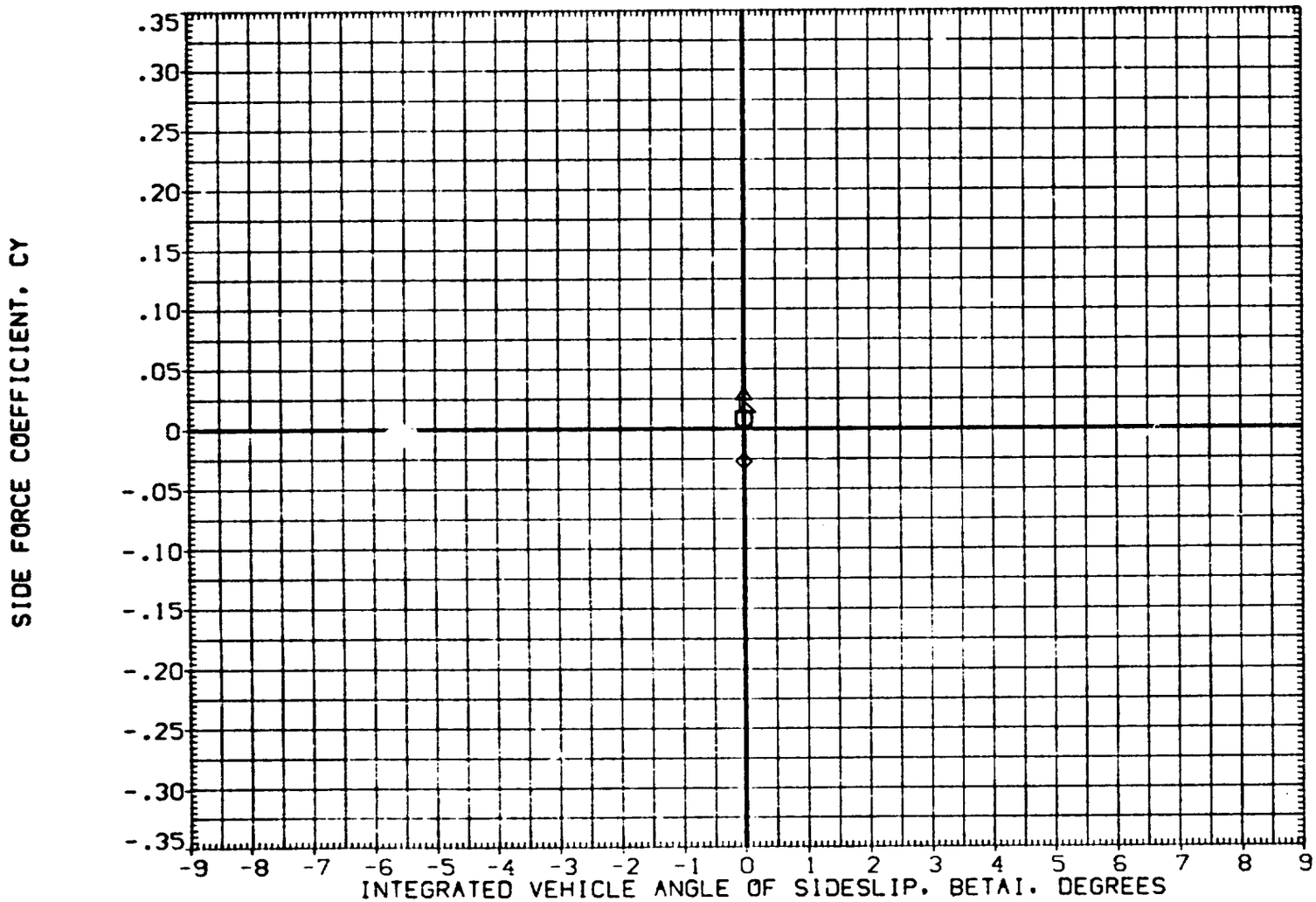


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

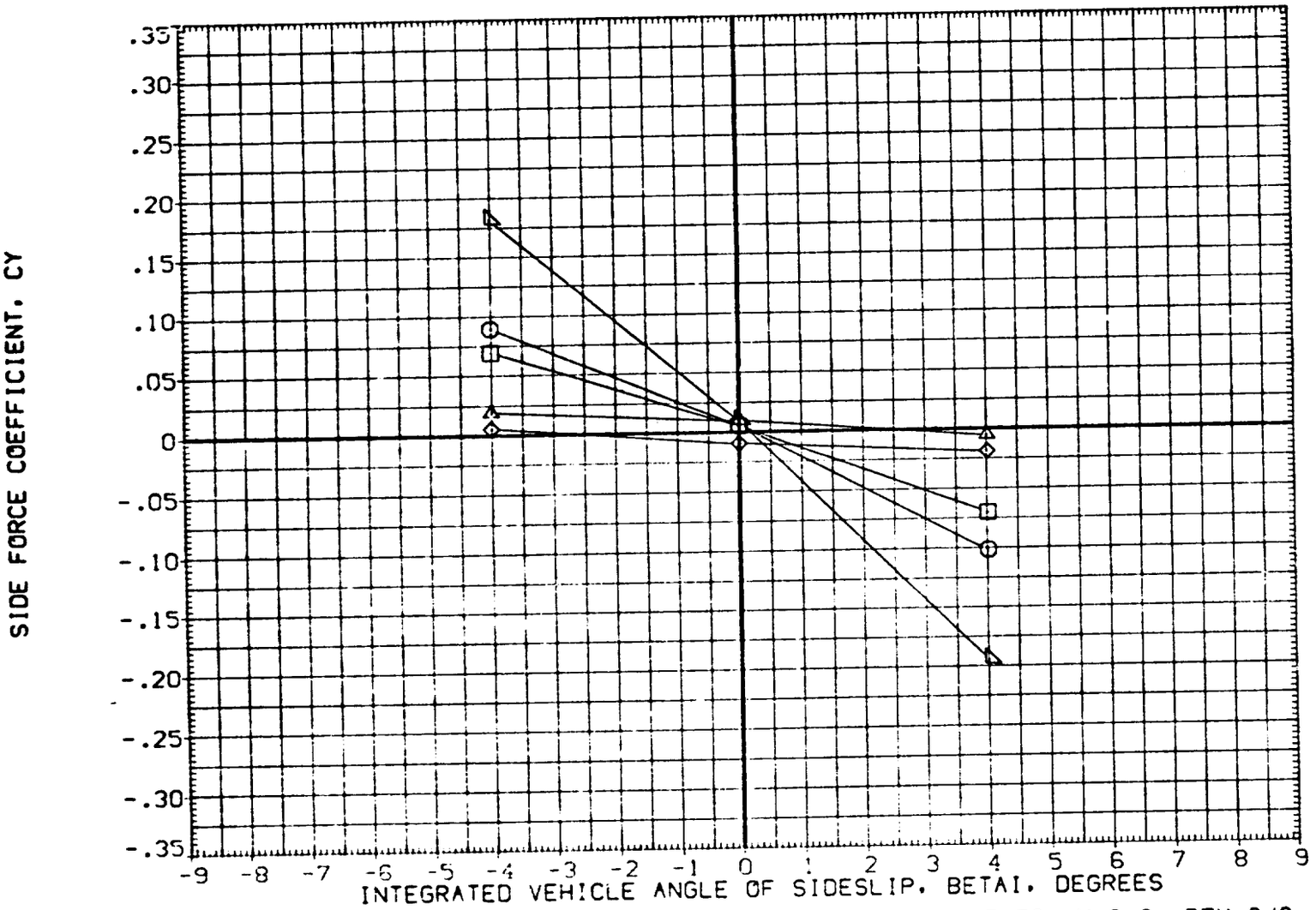


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

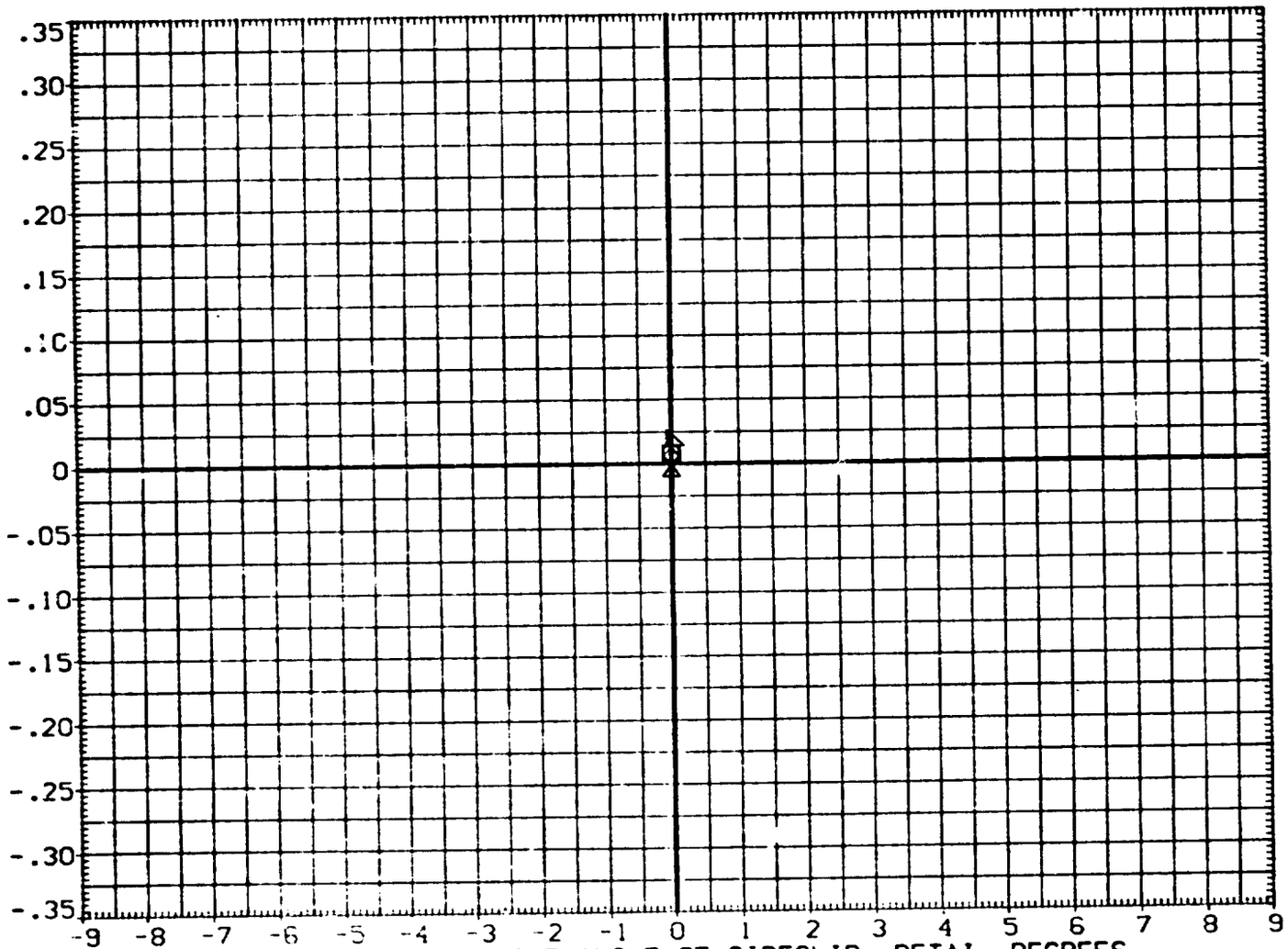


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

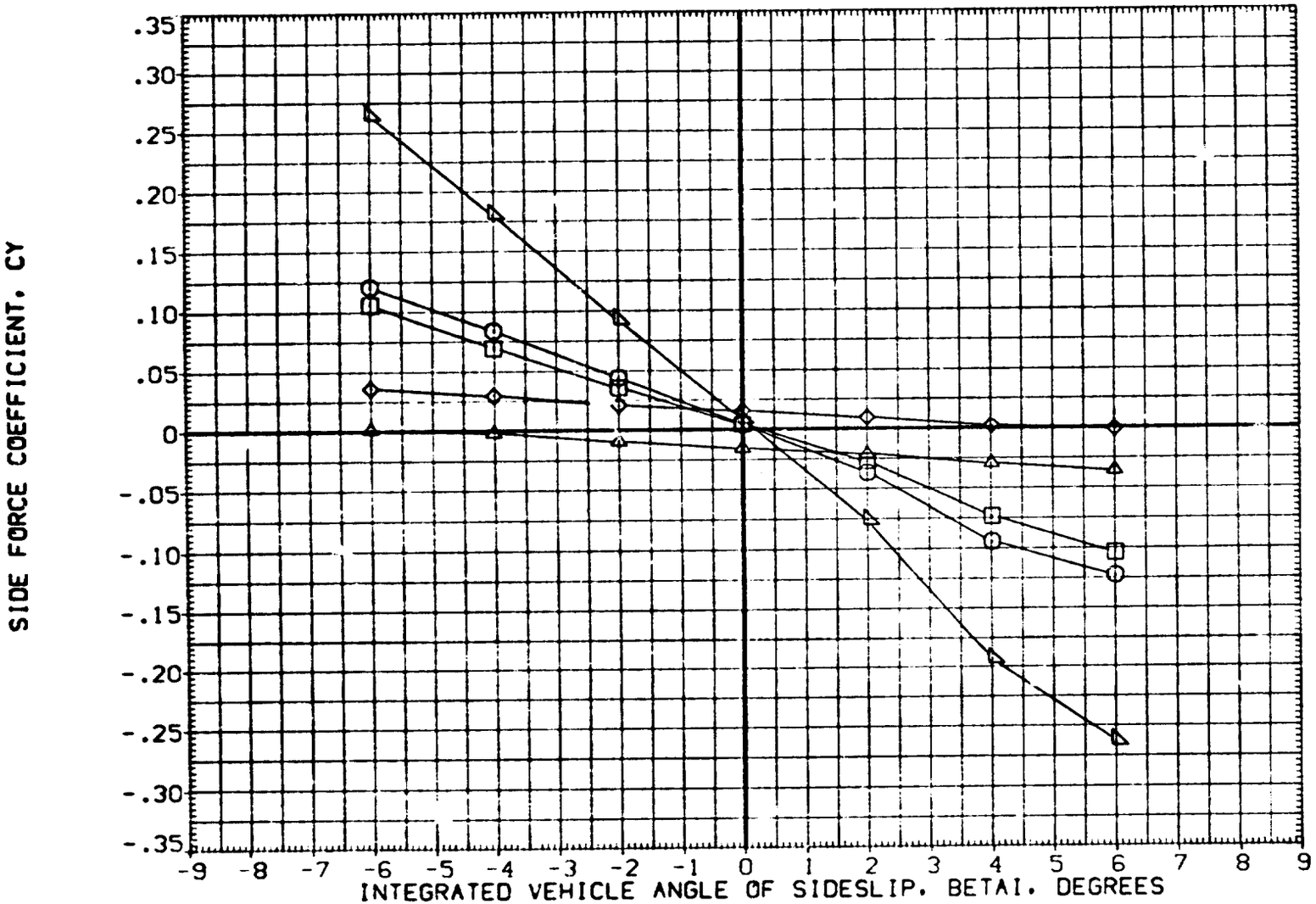


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(O)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

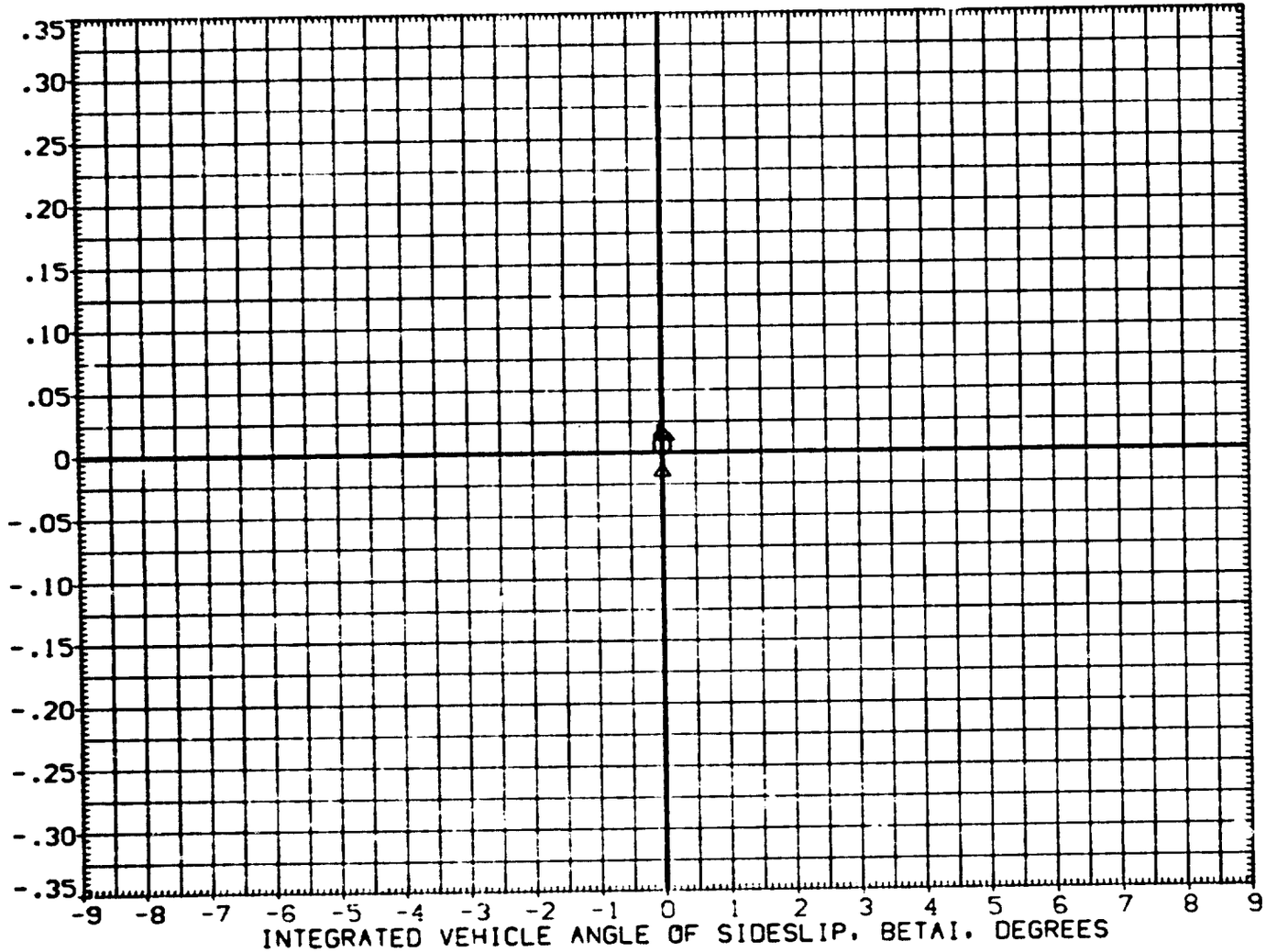


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)ALPHAI= 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

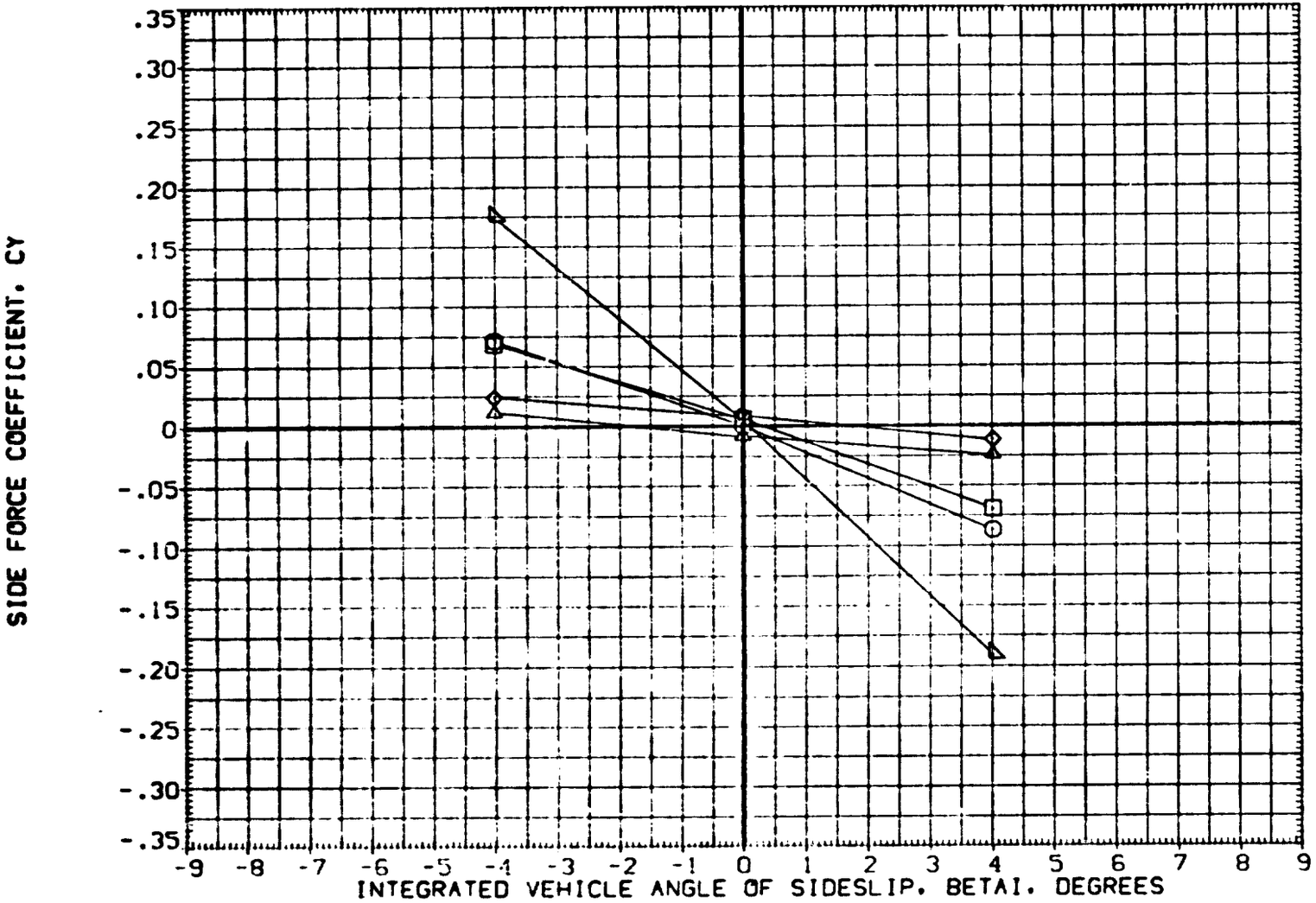


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LET145)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

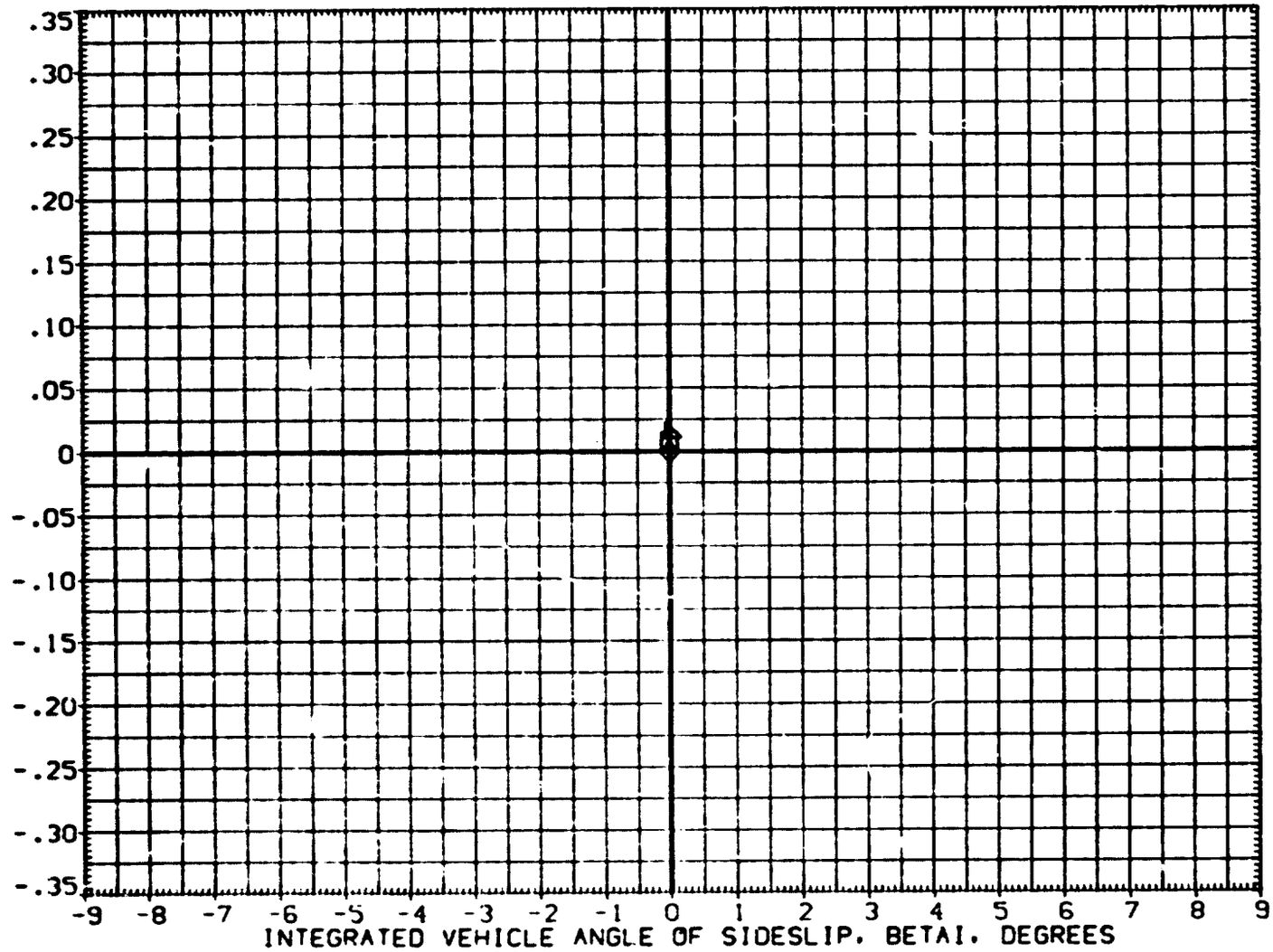


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)		AMES97-019([A81]) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019([A81]) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019([A81]) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019([A81]) LVAP R-SRB ALL ML SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019([A81]) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

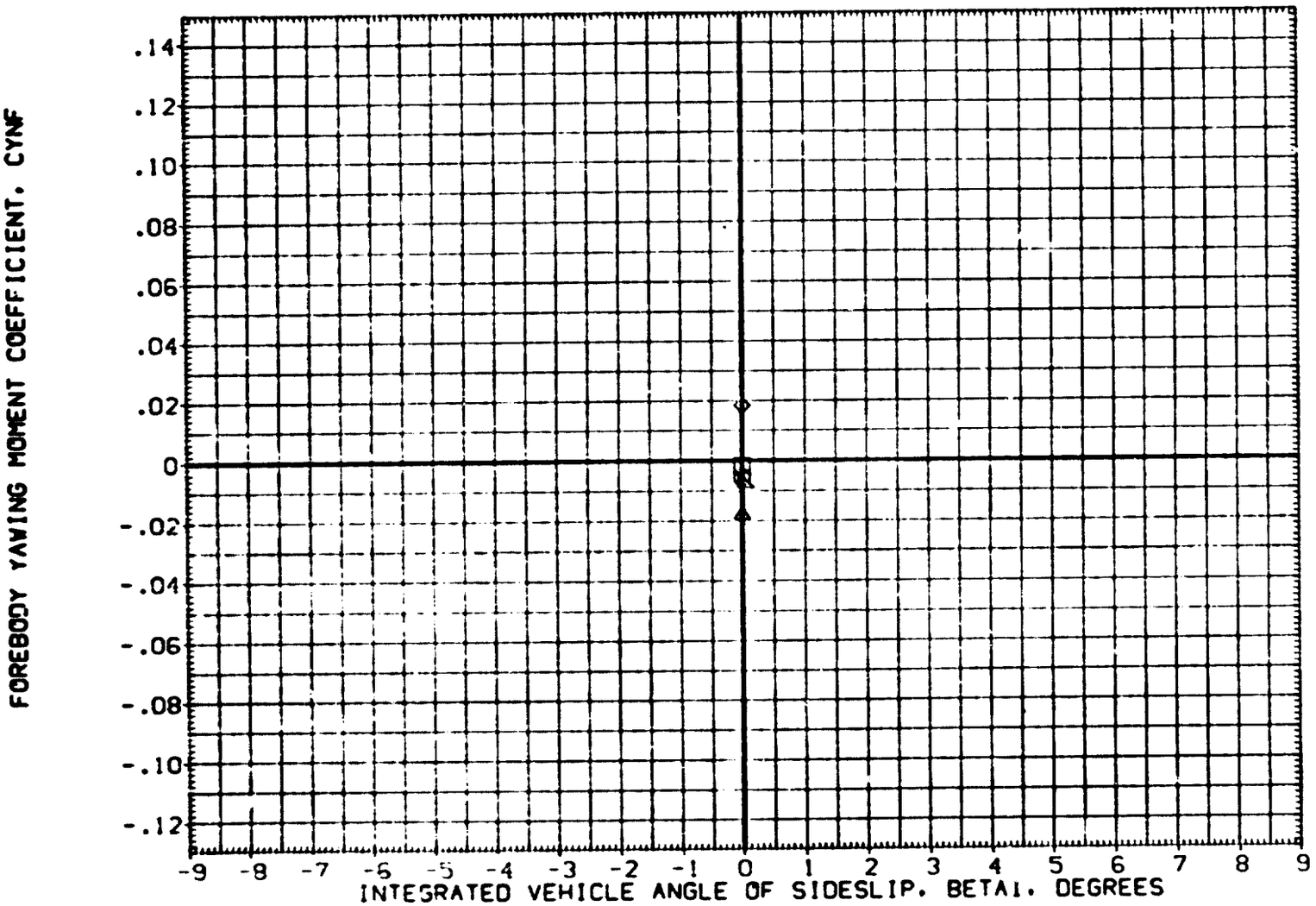


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LETD45)		AMES97-019([AR1]) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019([AB1]) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019([AB1]) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019([AB1]) LVAP R-SRB ALL ML SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019([AB1]) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

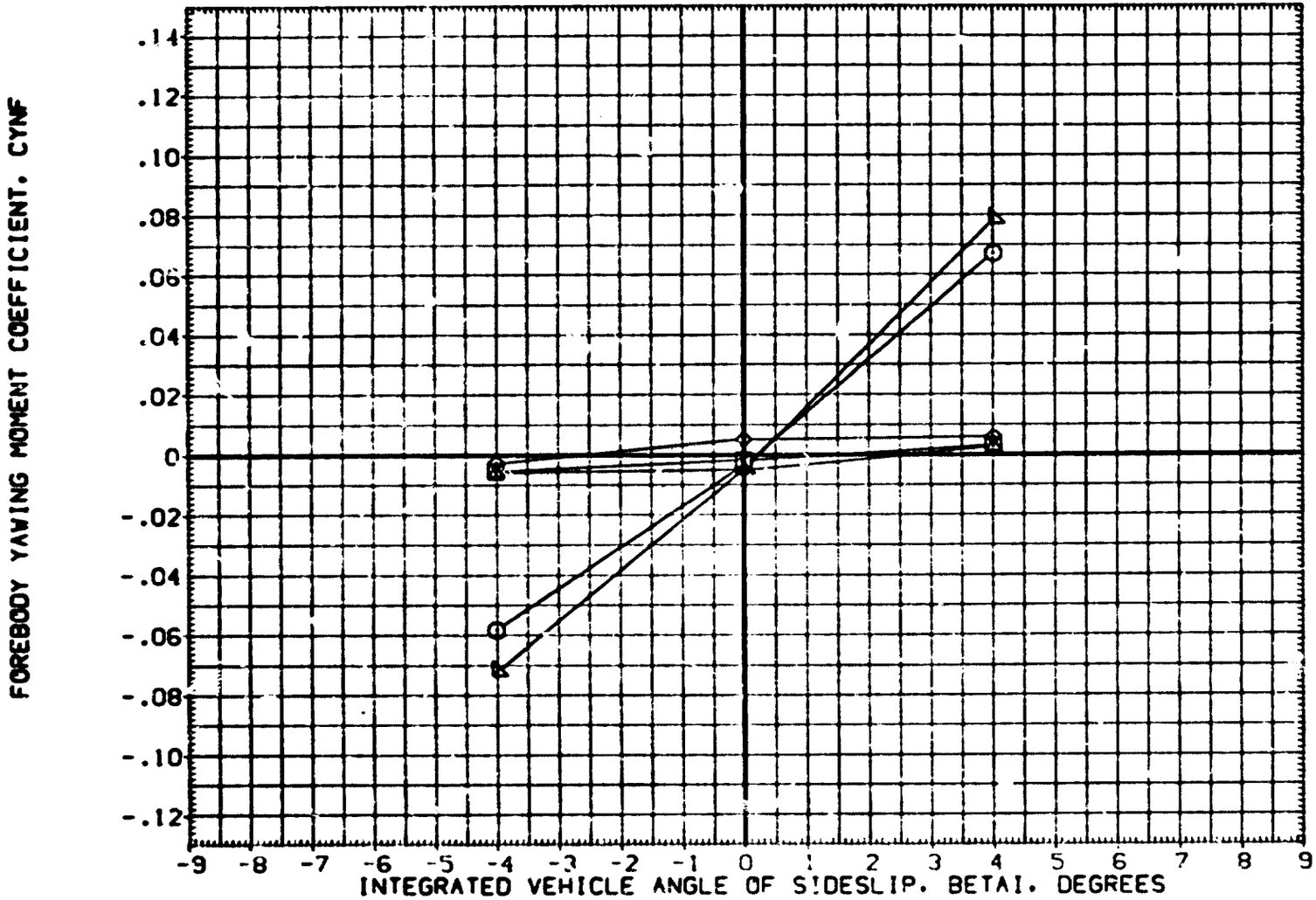


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO45)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

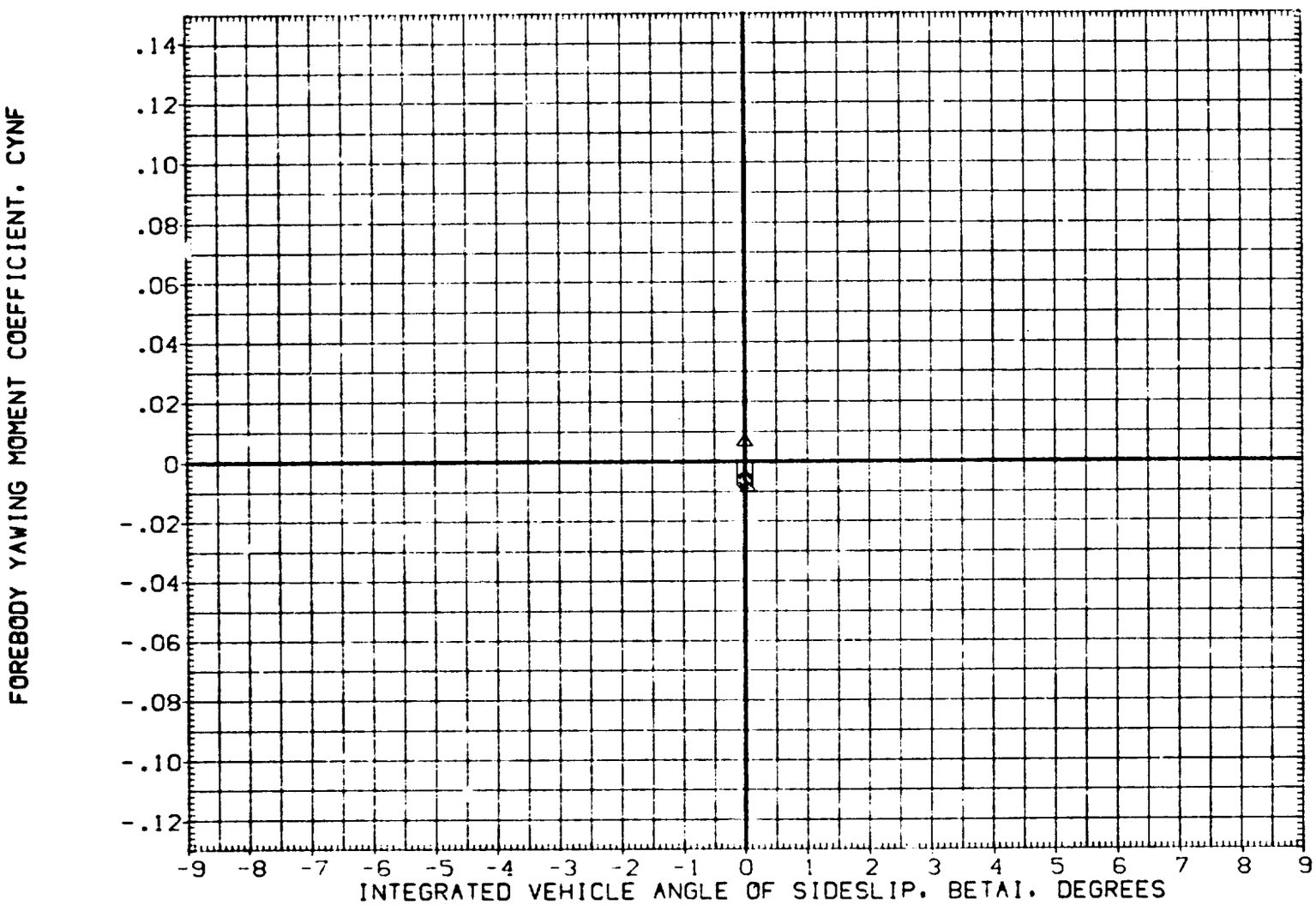


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

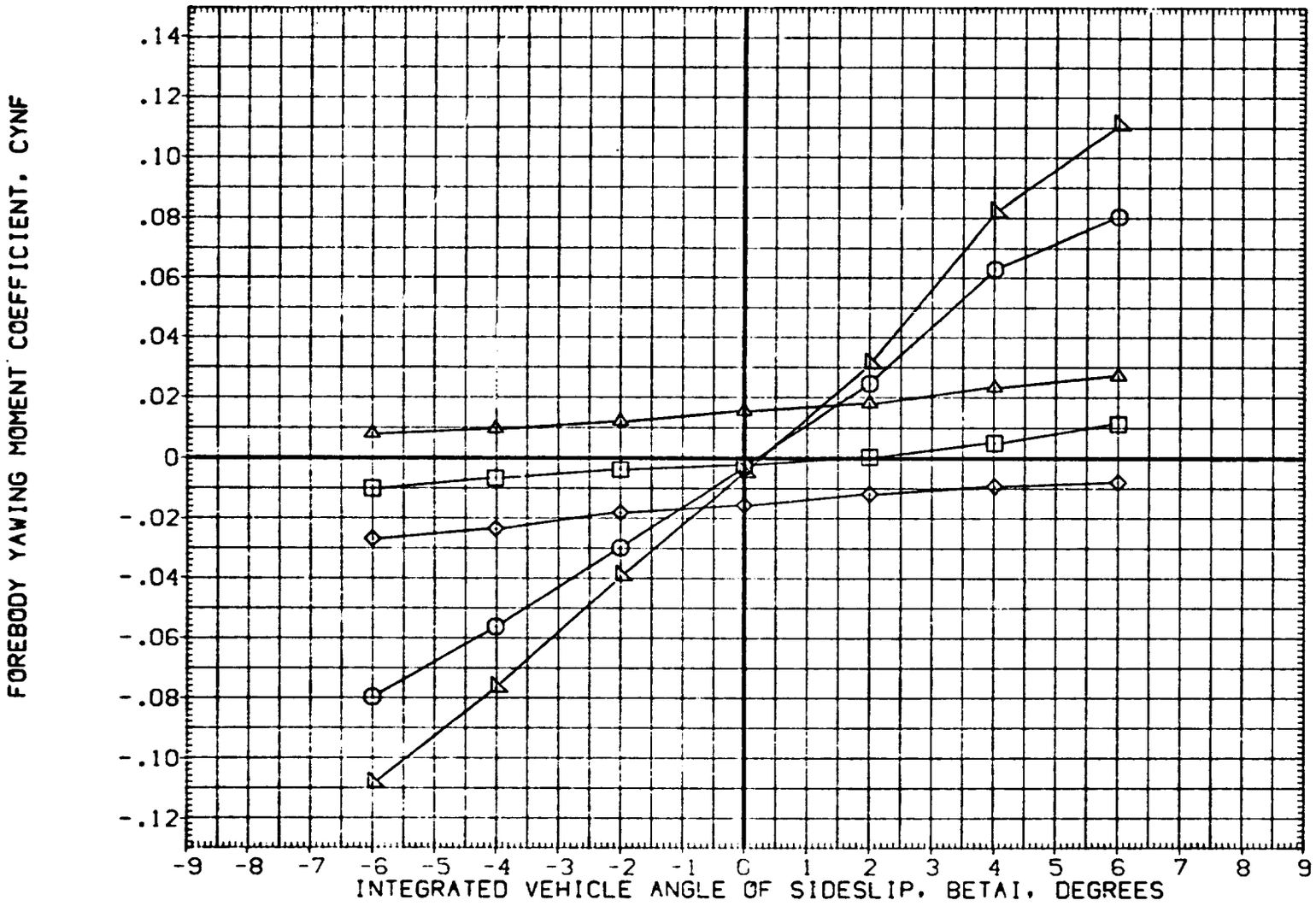


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

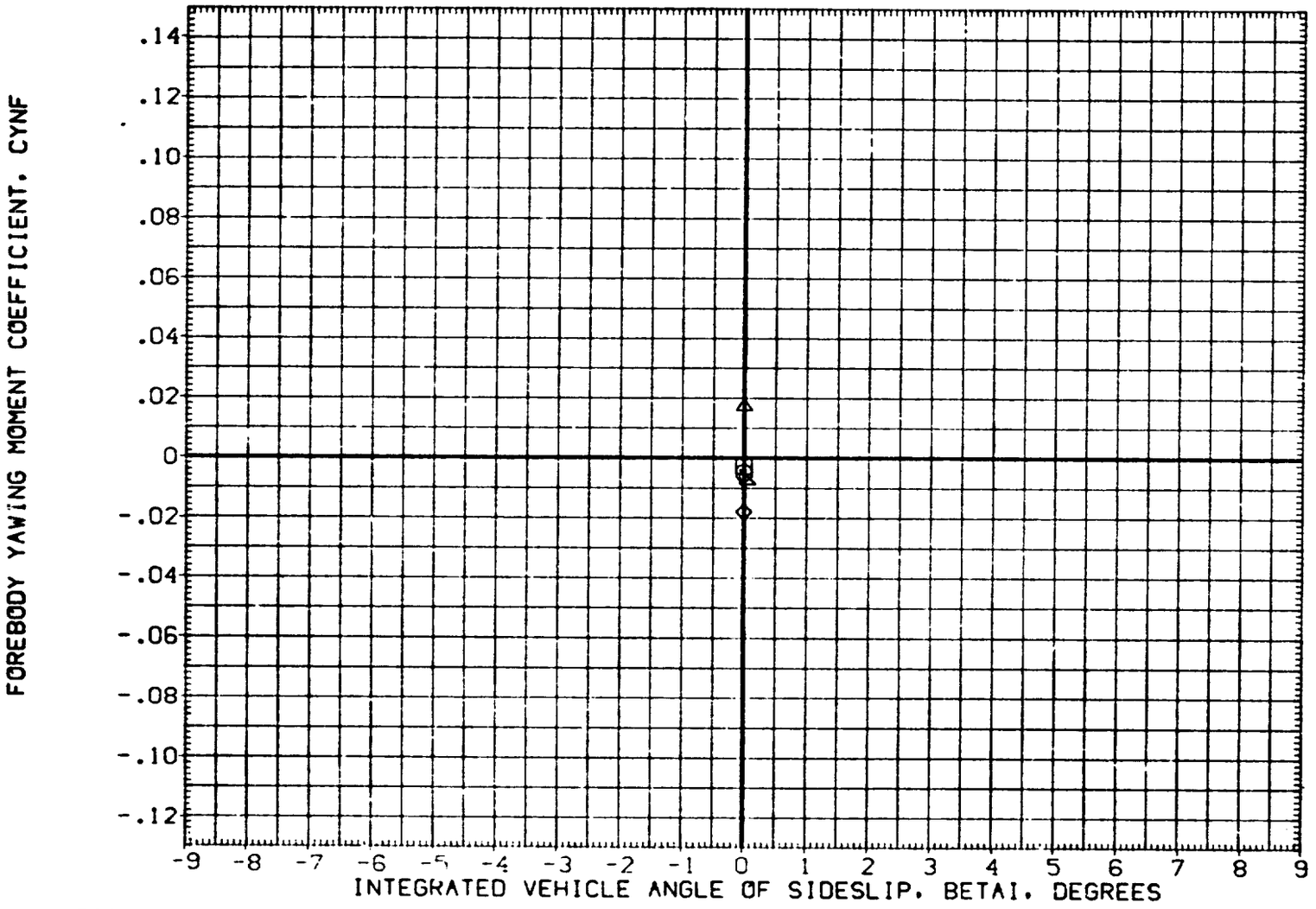


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◫	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	⊠	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	⊔	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

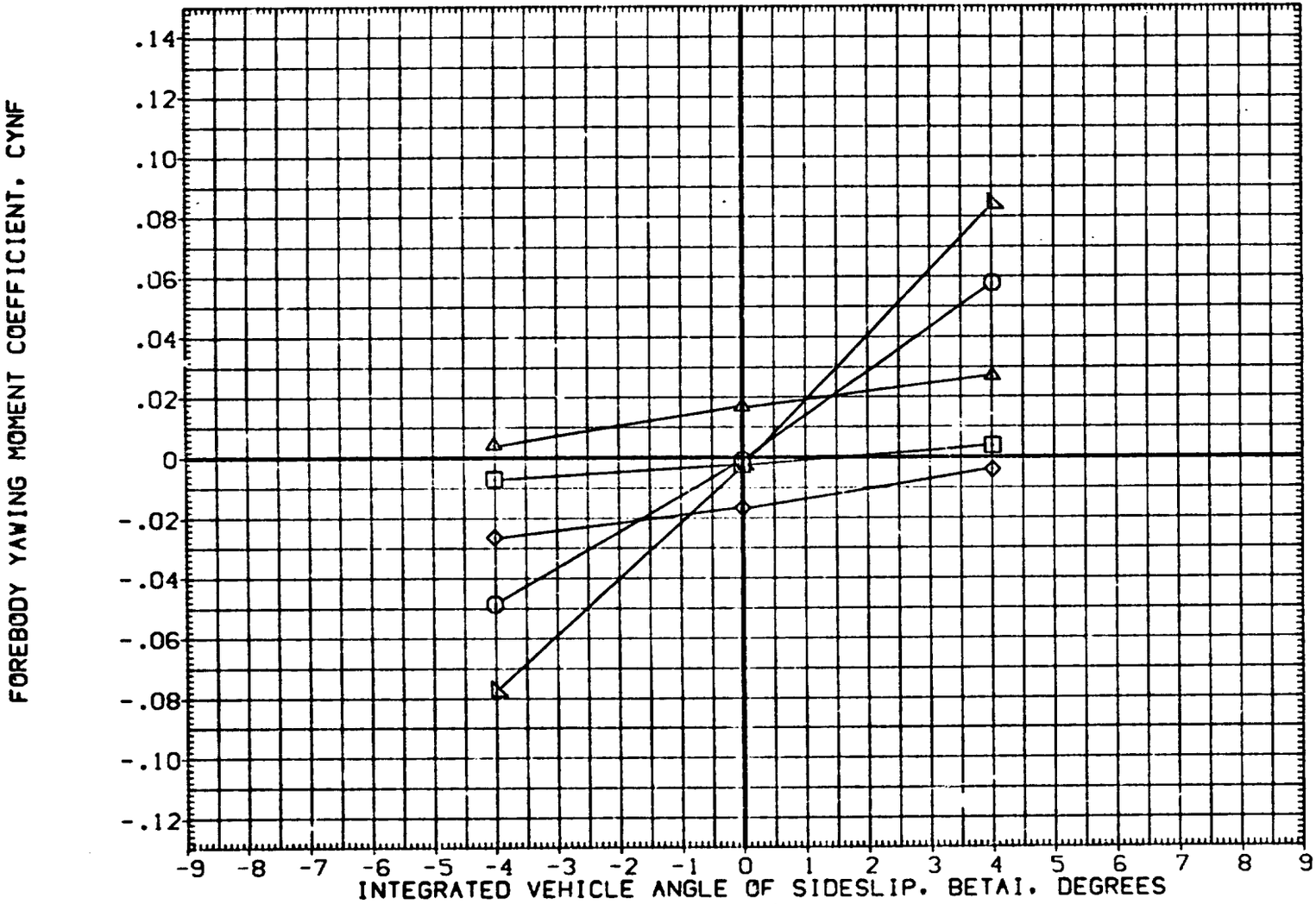


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	▽	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

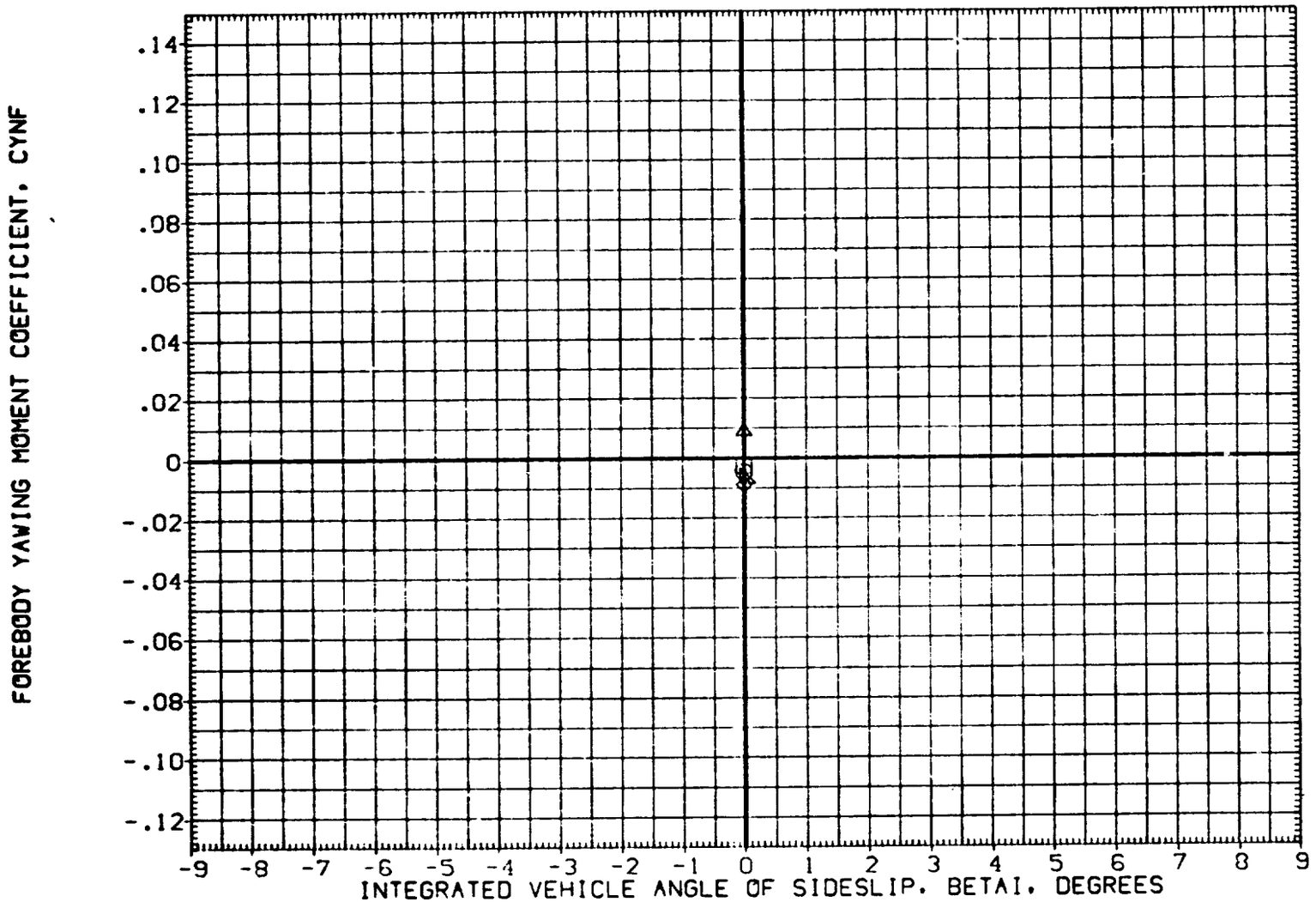


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

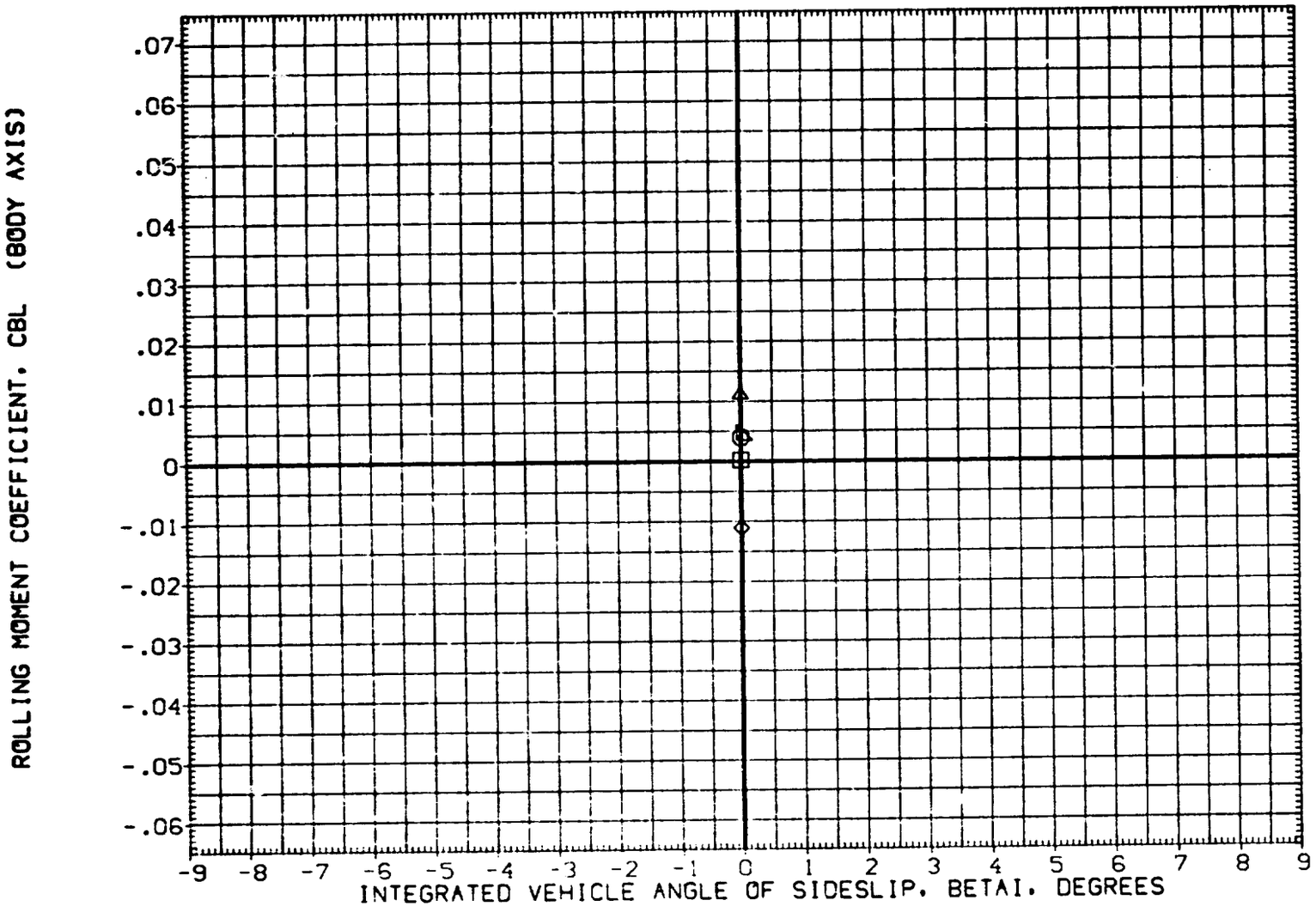


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

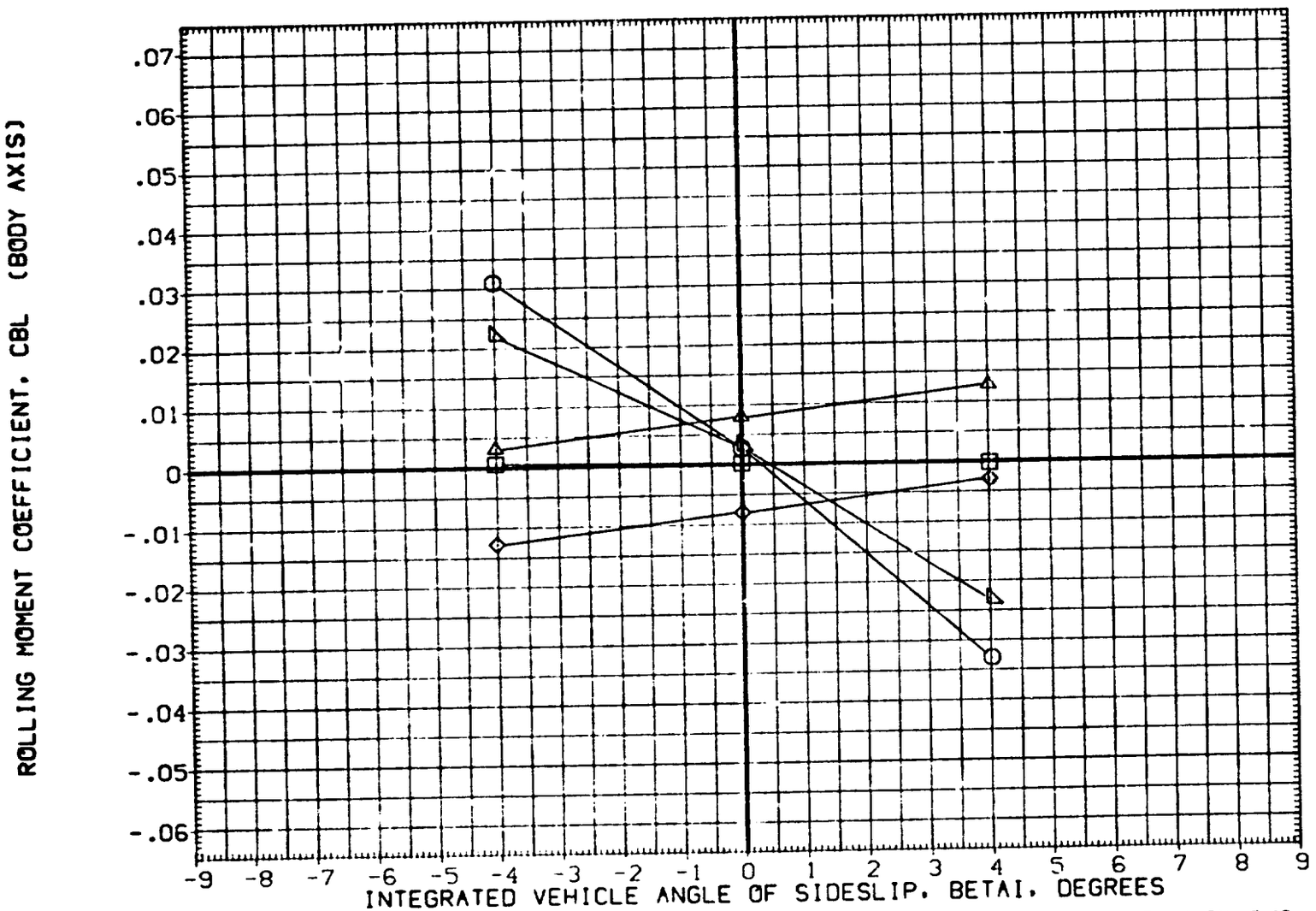


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LET145)	◇	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⊠	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	⊠	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

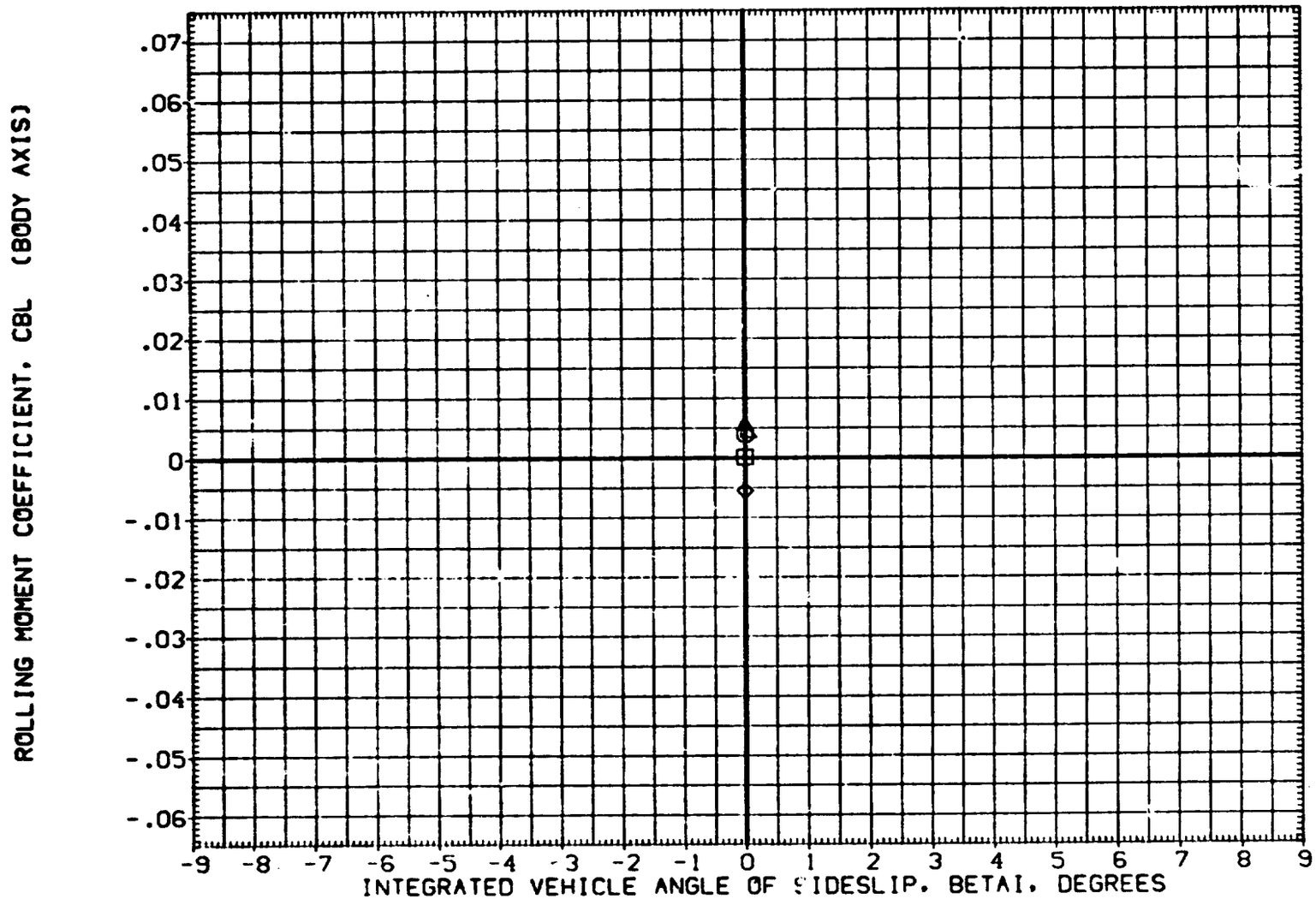


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	▽	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

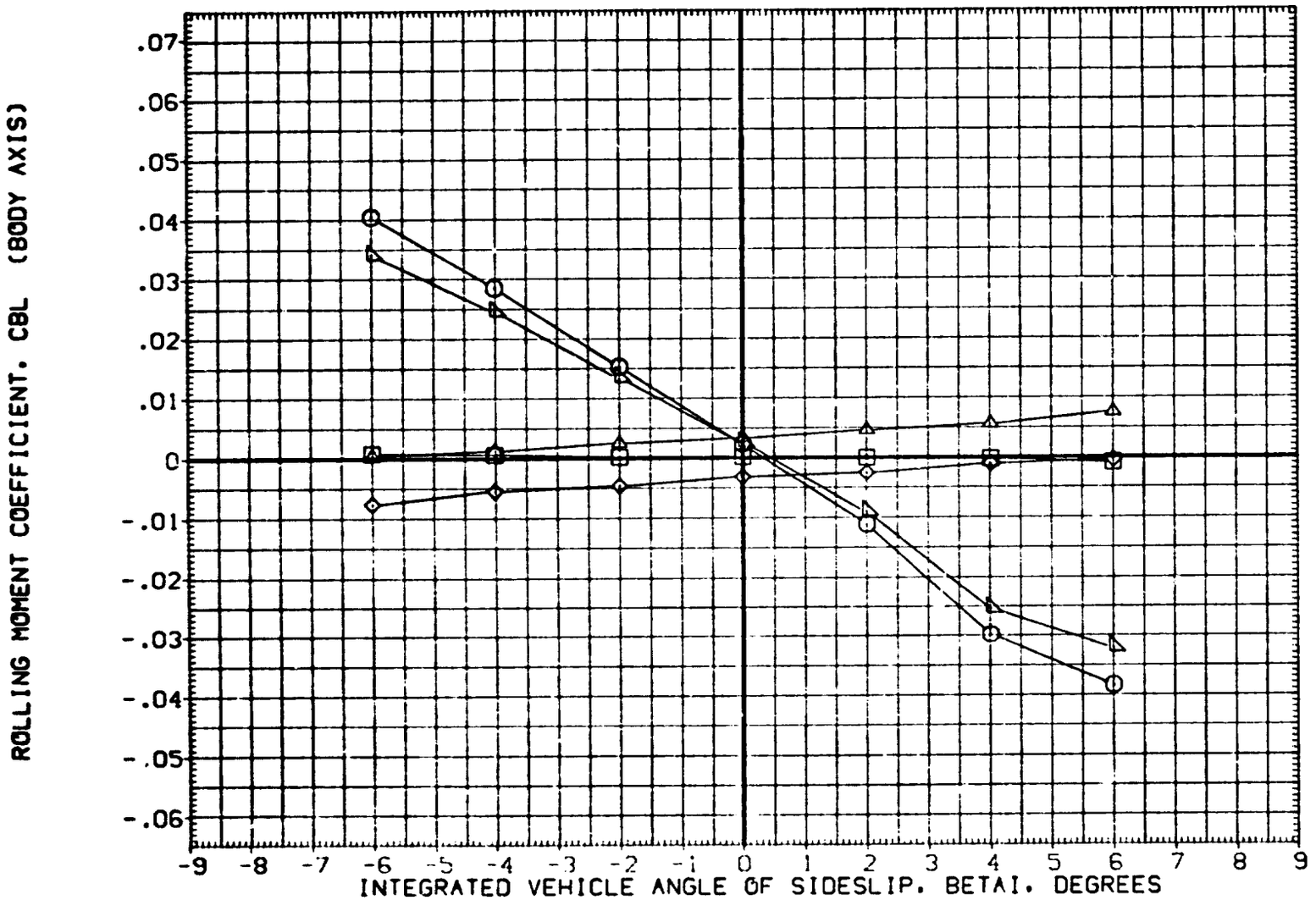


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

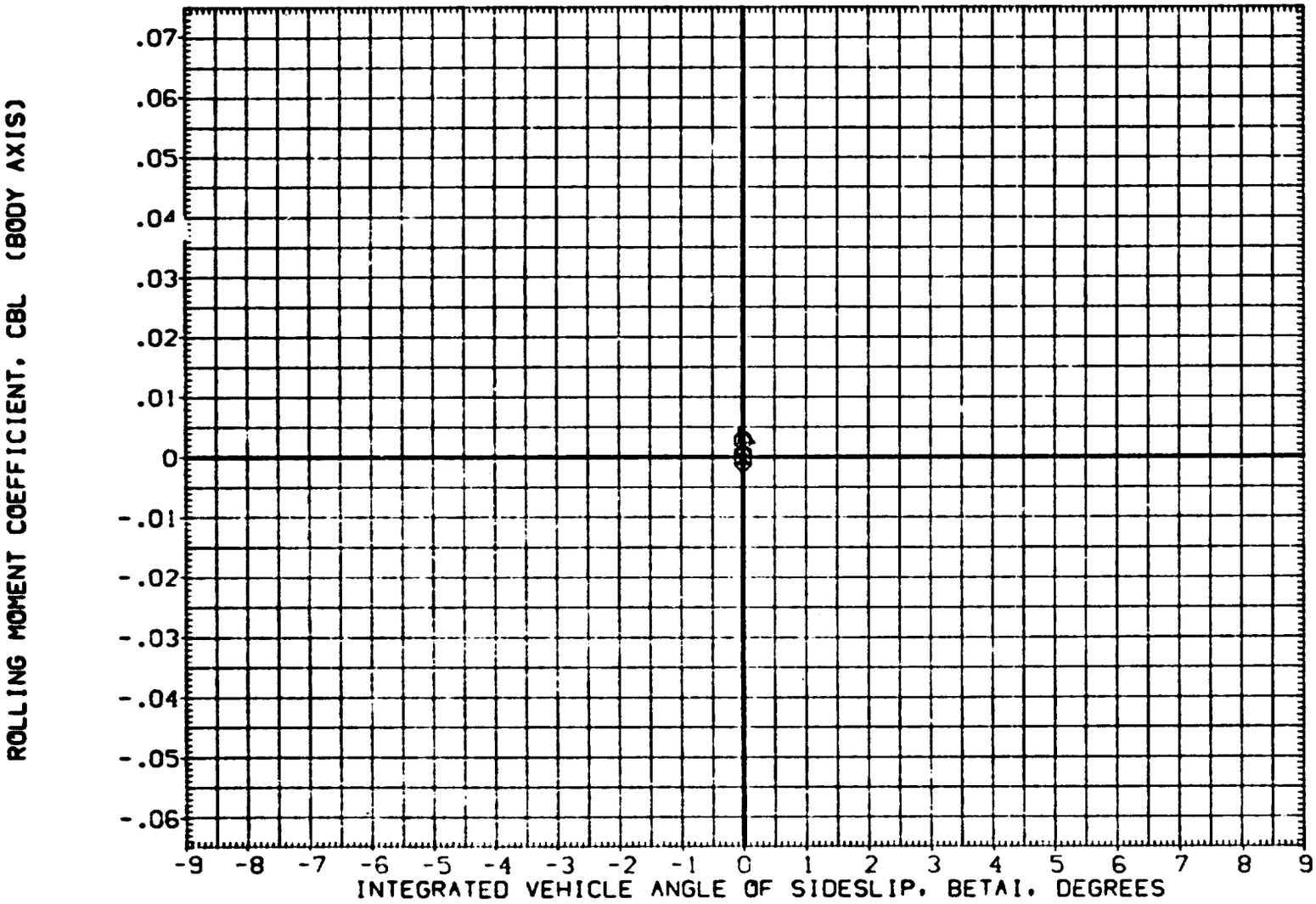


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LET145)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

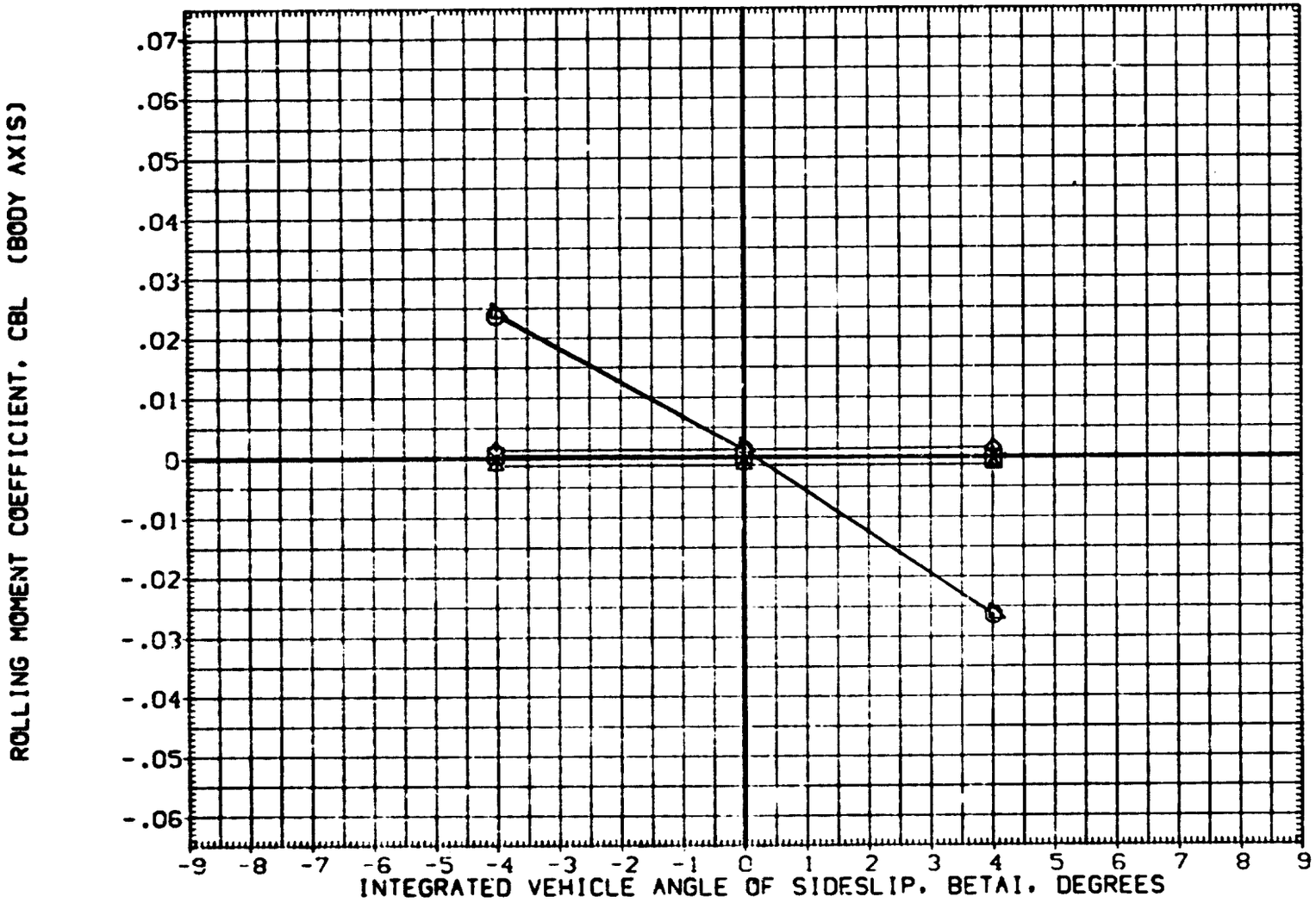


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

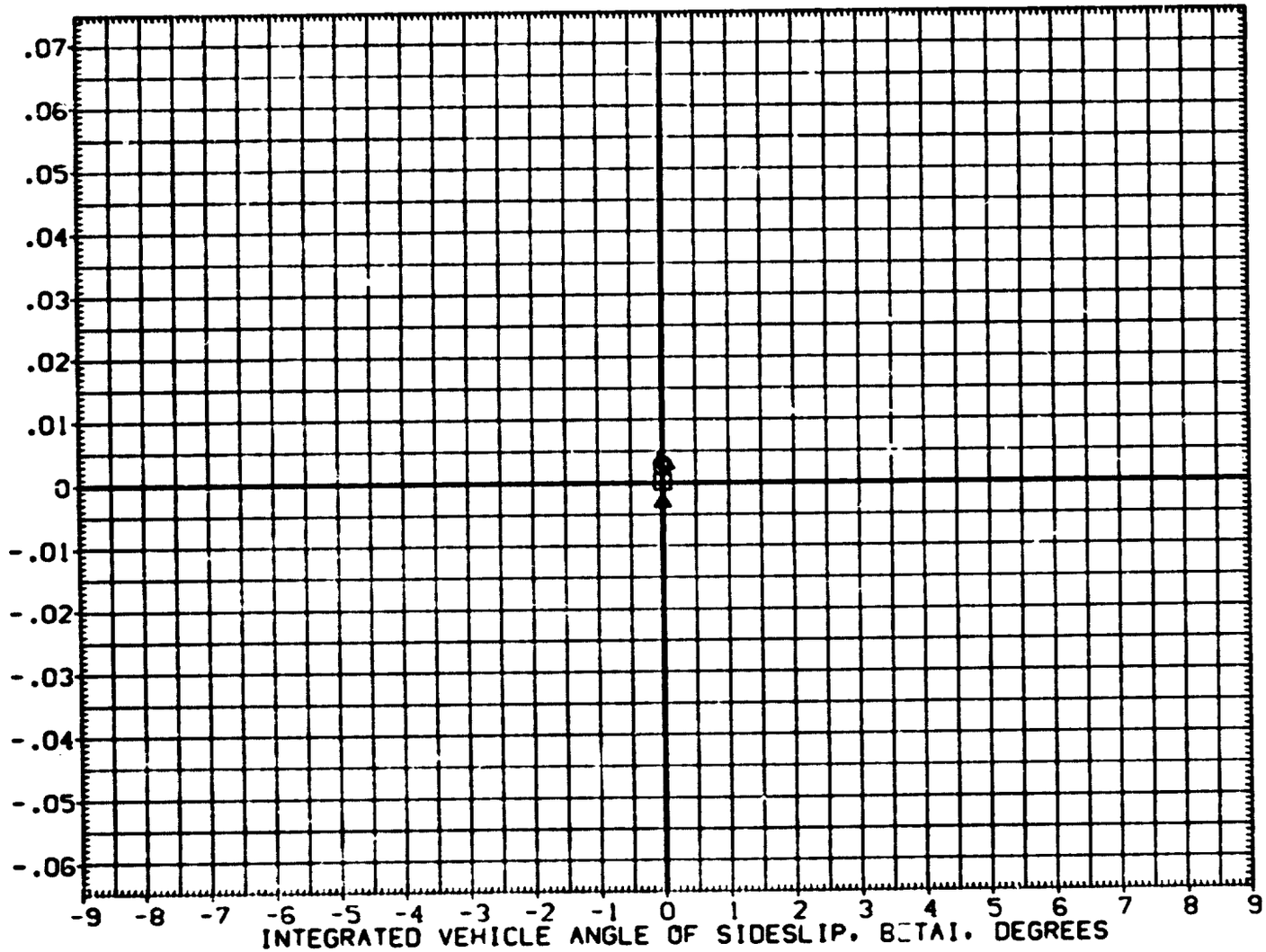


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO45)		AMES97-019(1AR1) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(1AB1) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(1AB1) LVAP R-LPB ALL ML SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

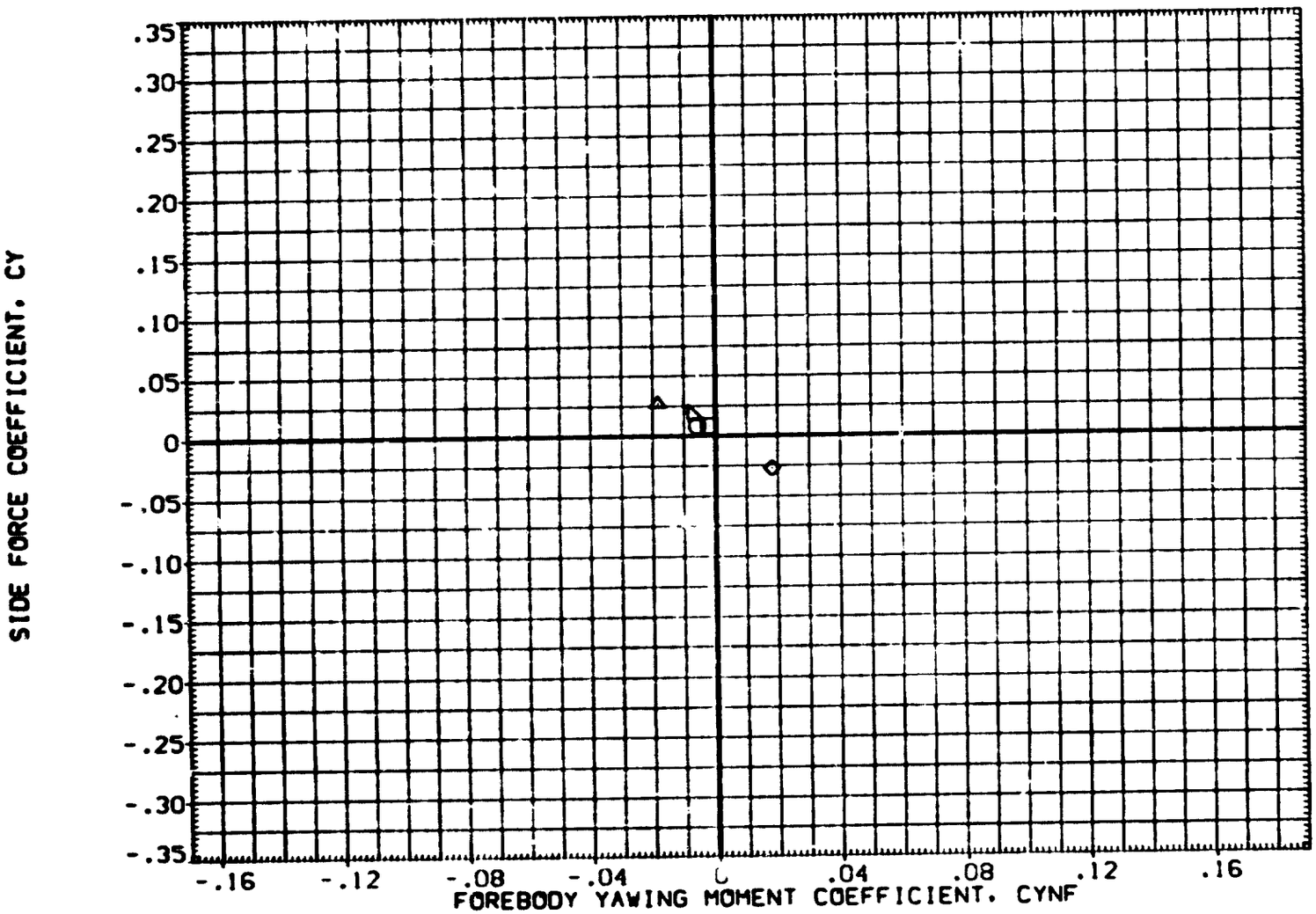


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)ALPHA= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⊲	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	⊳	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

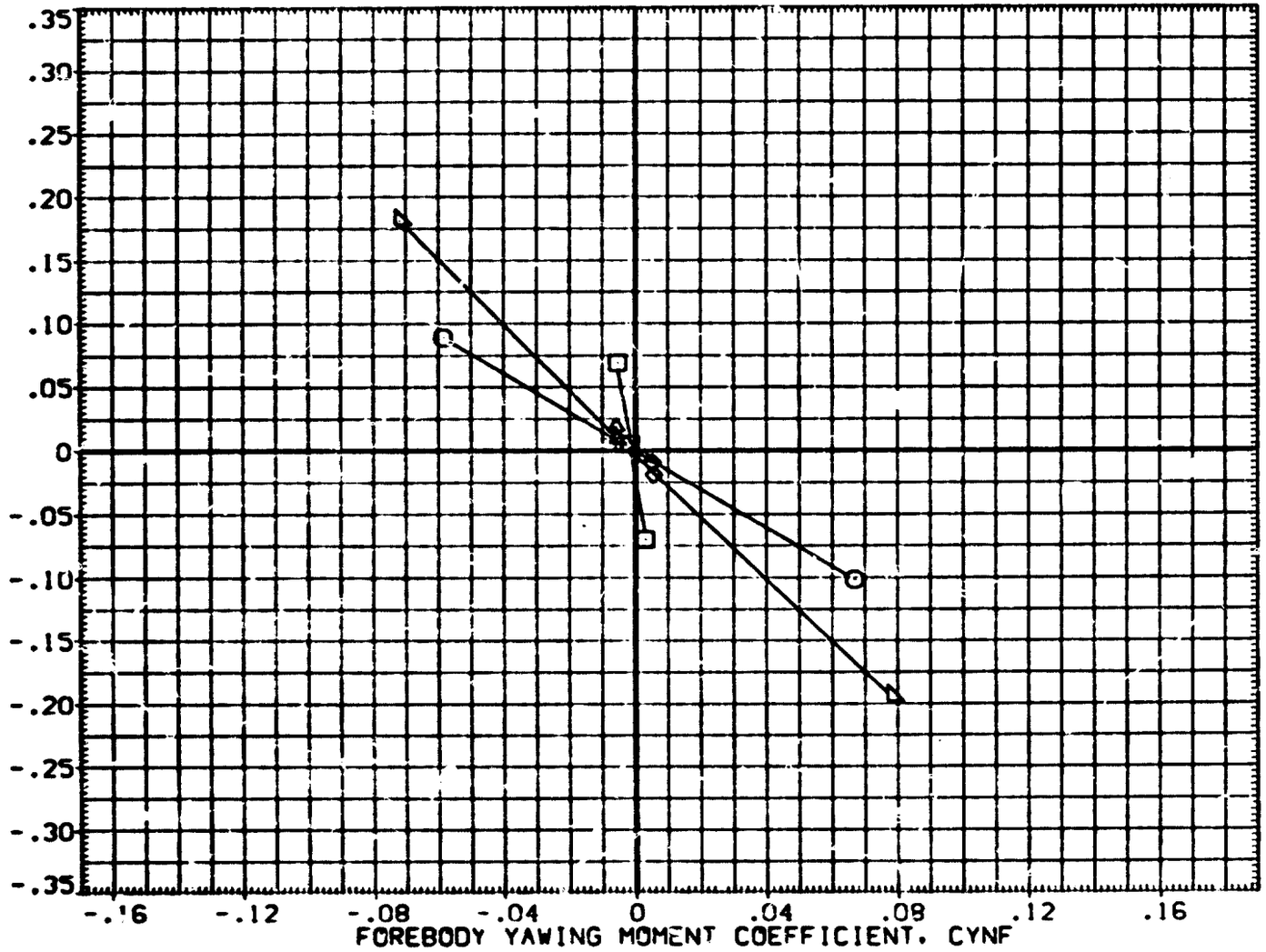


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

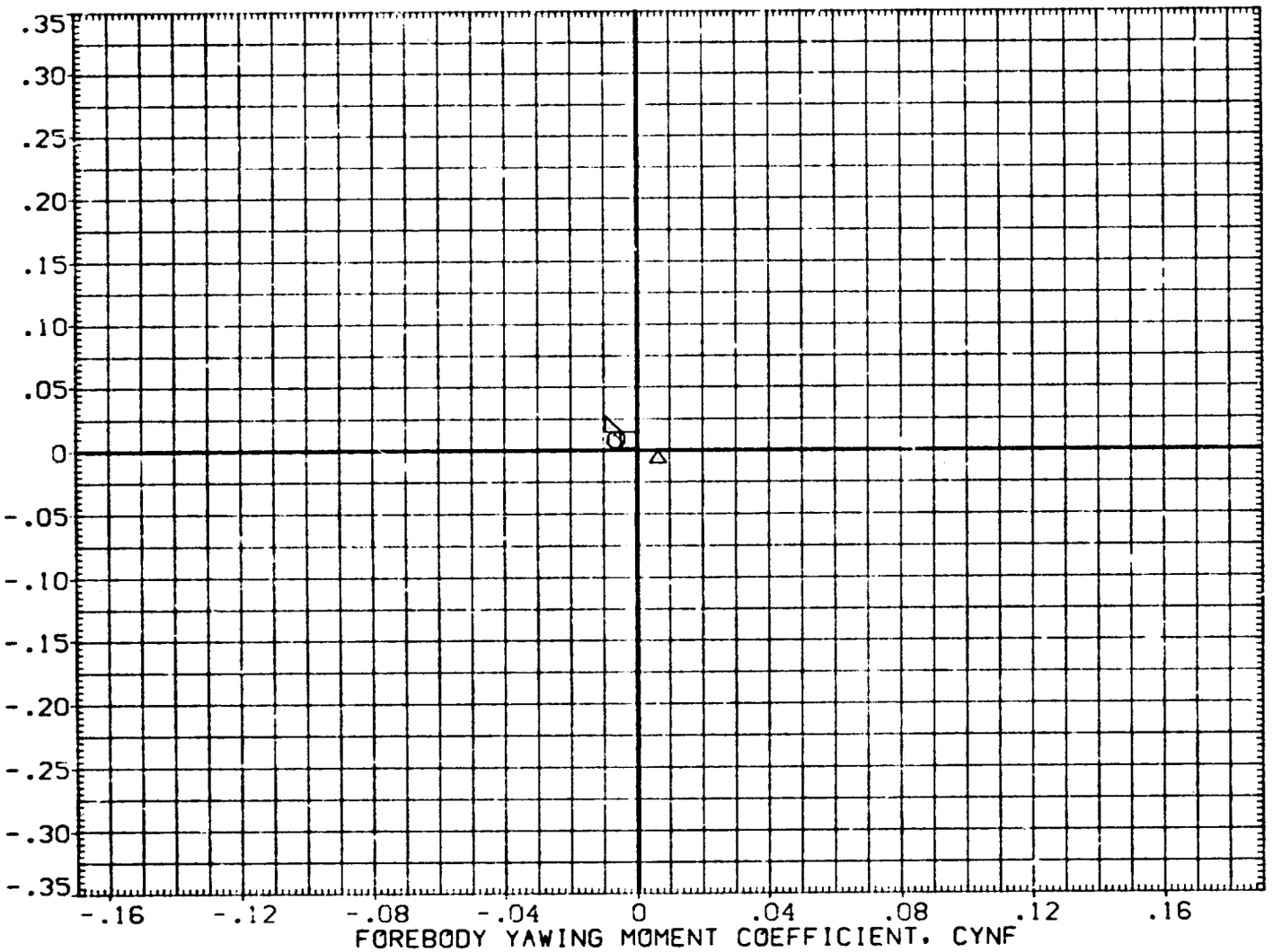


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	○	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	⋈	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

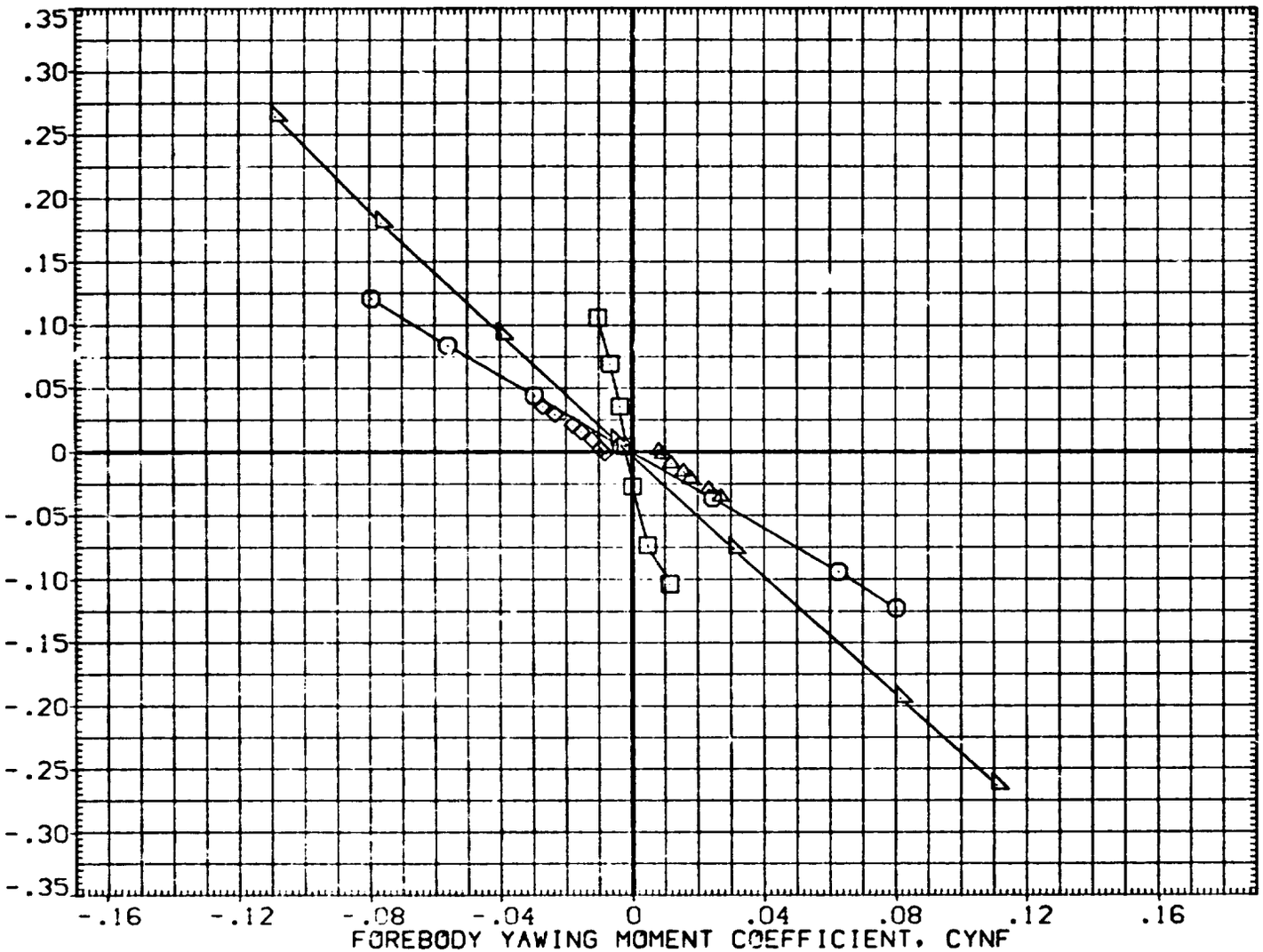


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019(IA8.) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

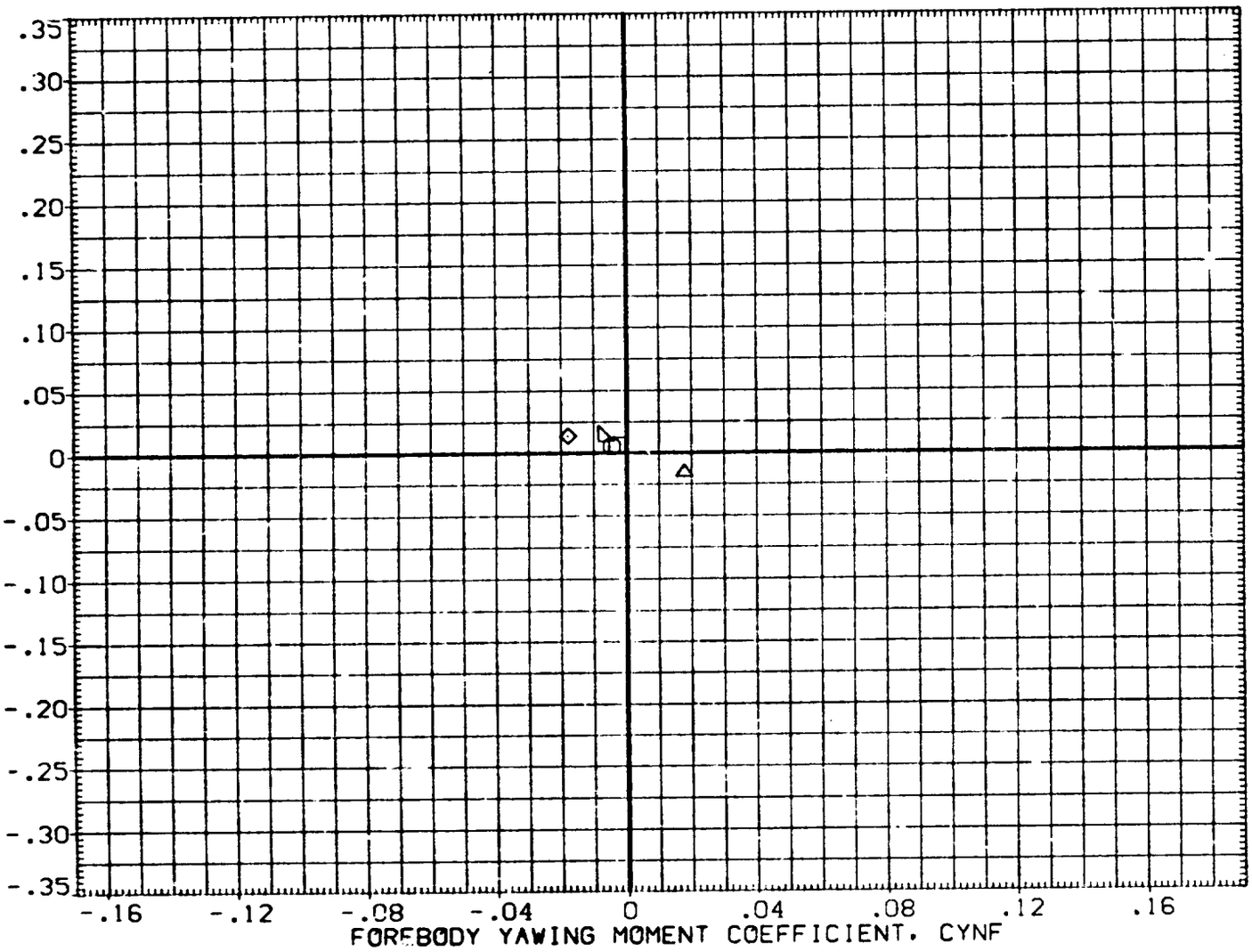


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	1ACH	SPDBRK
(LET045)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LET145)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	△	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	◁	AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

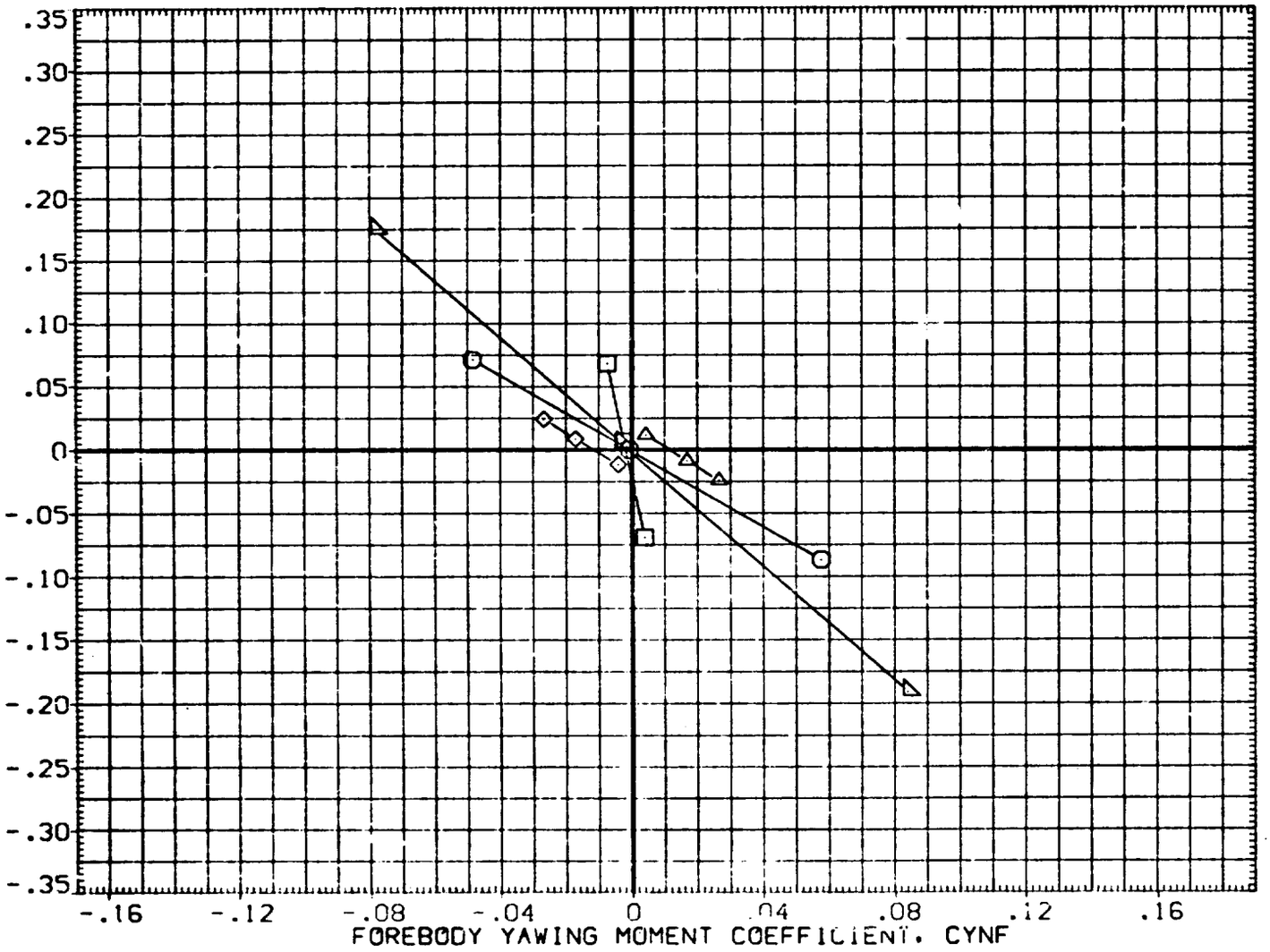


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)ALPHA(= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

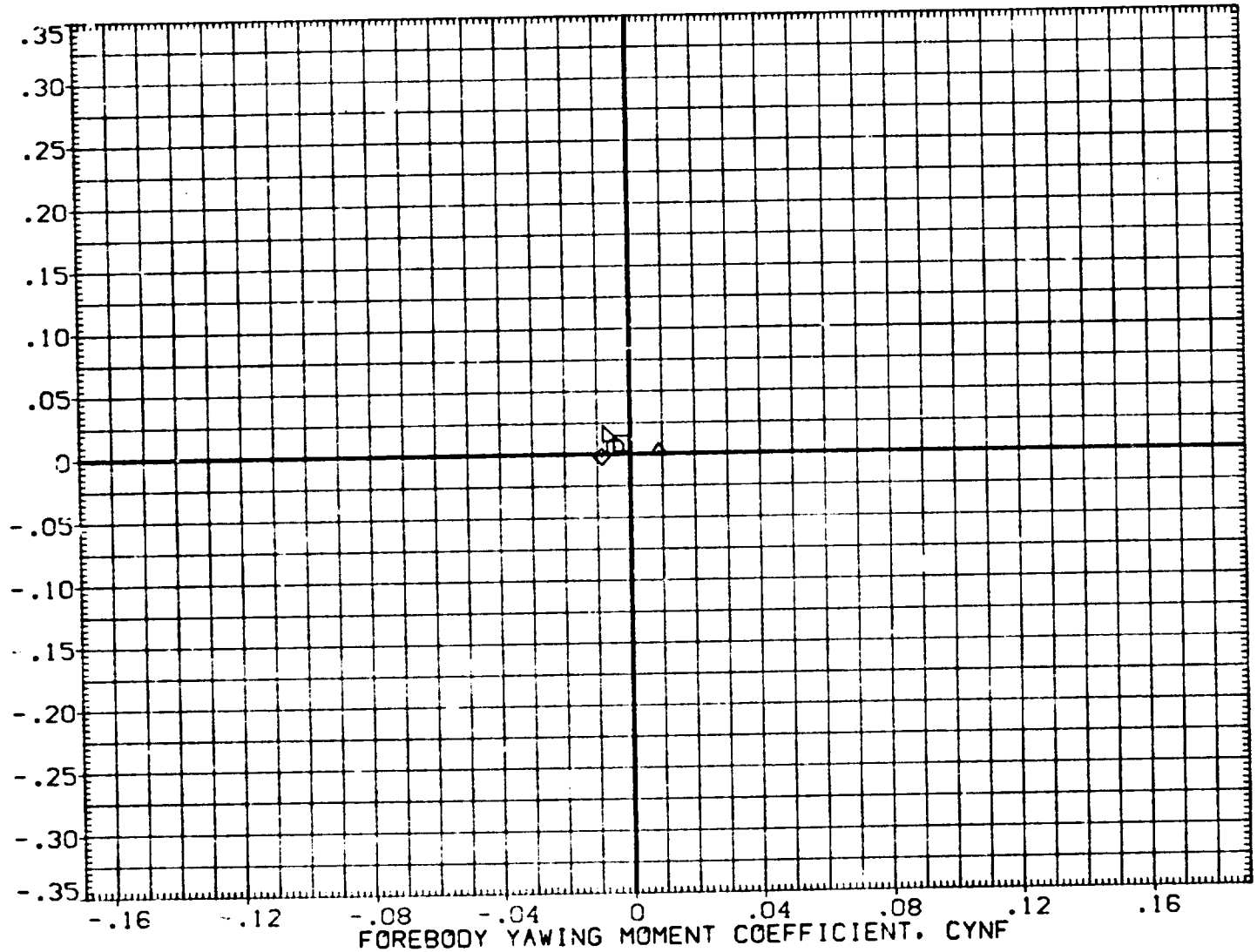


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	◺	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

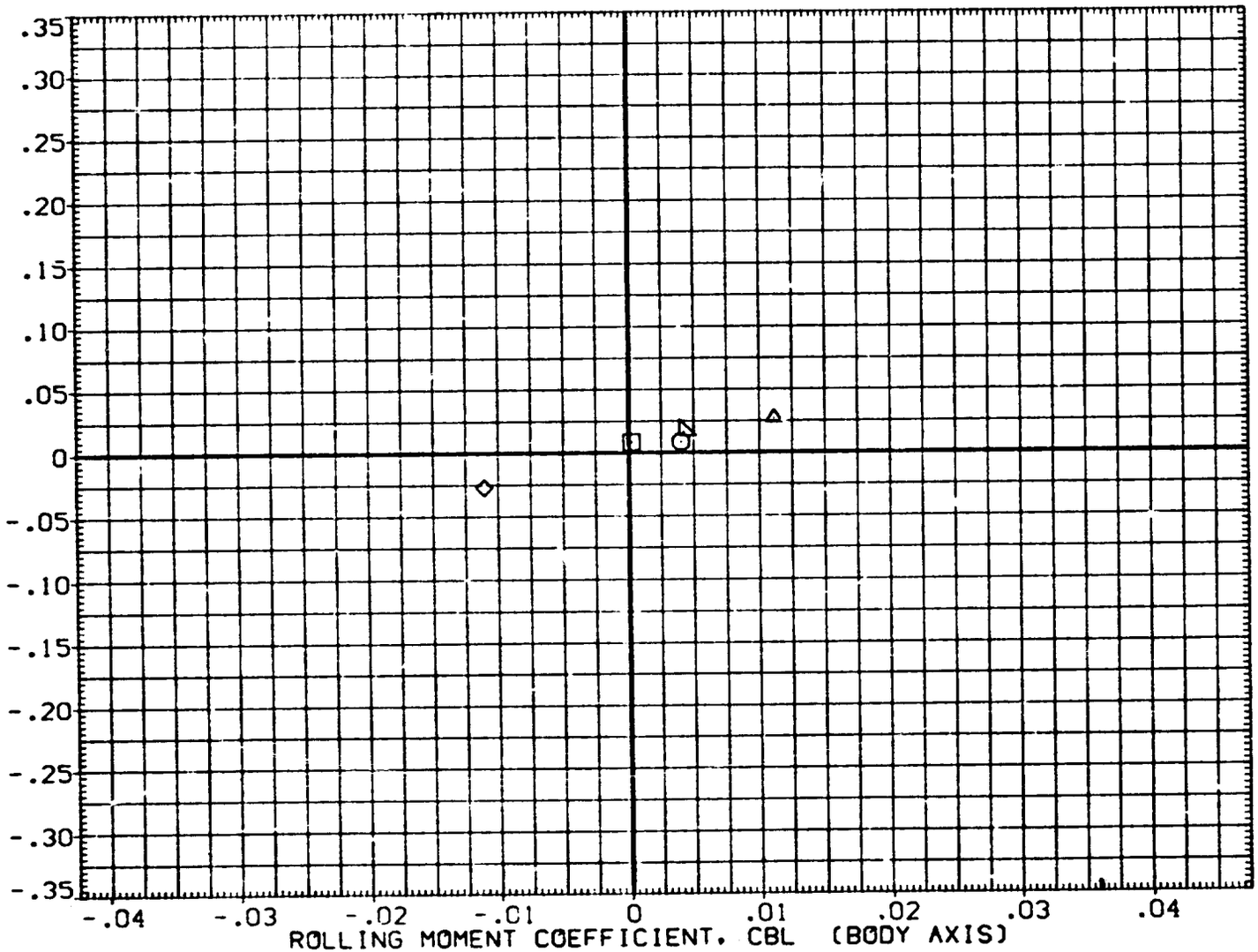


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	○	AMES97-019(1A81) LVAP ORBITER ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	▷	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

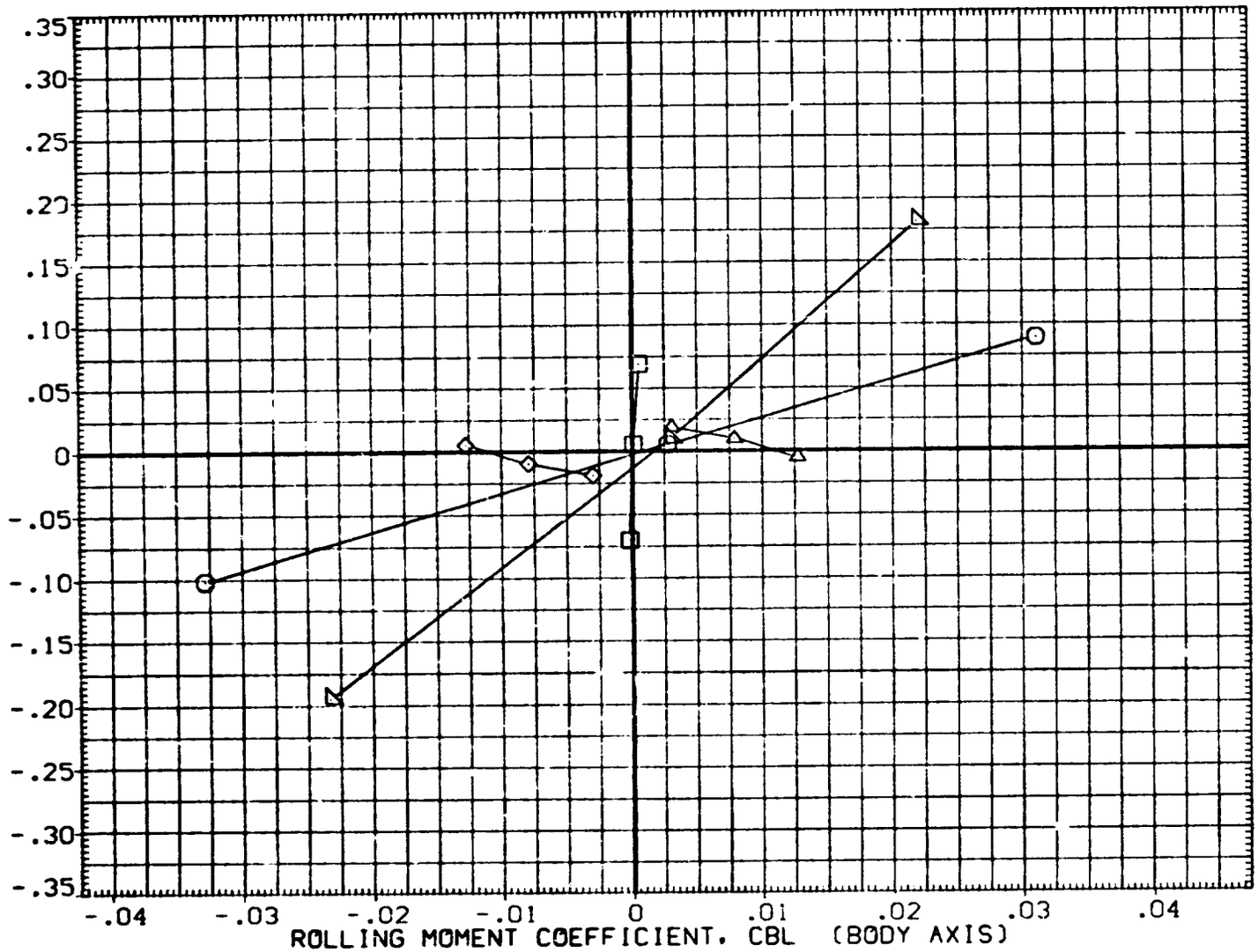


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	◇	AMES97-C19(IABI) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	□	AMES97-019(IABI) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⋈	AMES97-019(IABI) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	⋈	AMES97-019(IABI) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	△	AMES97-019(IABI) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

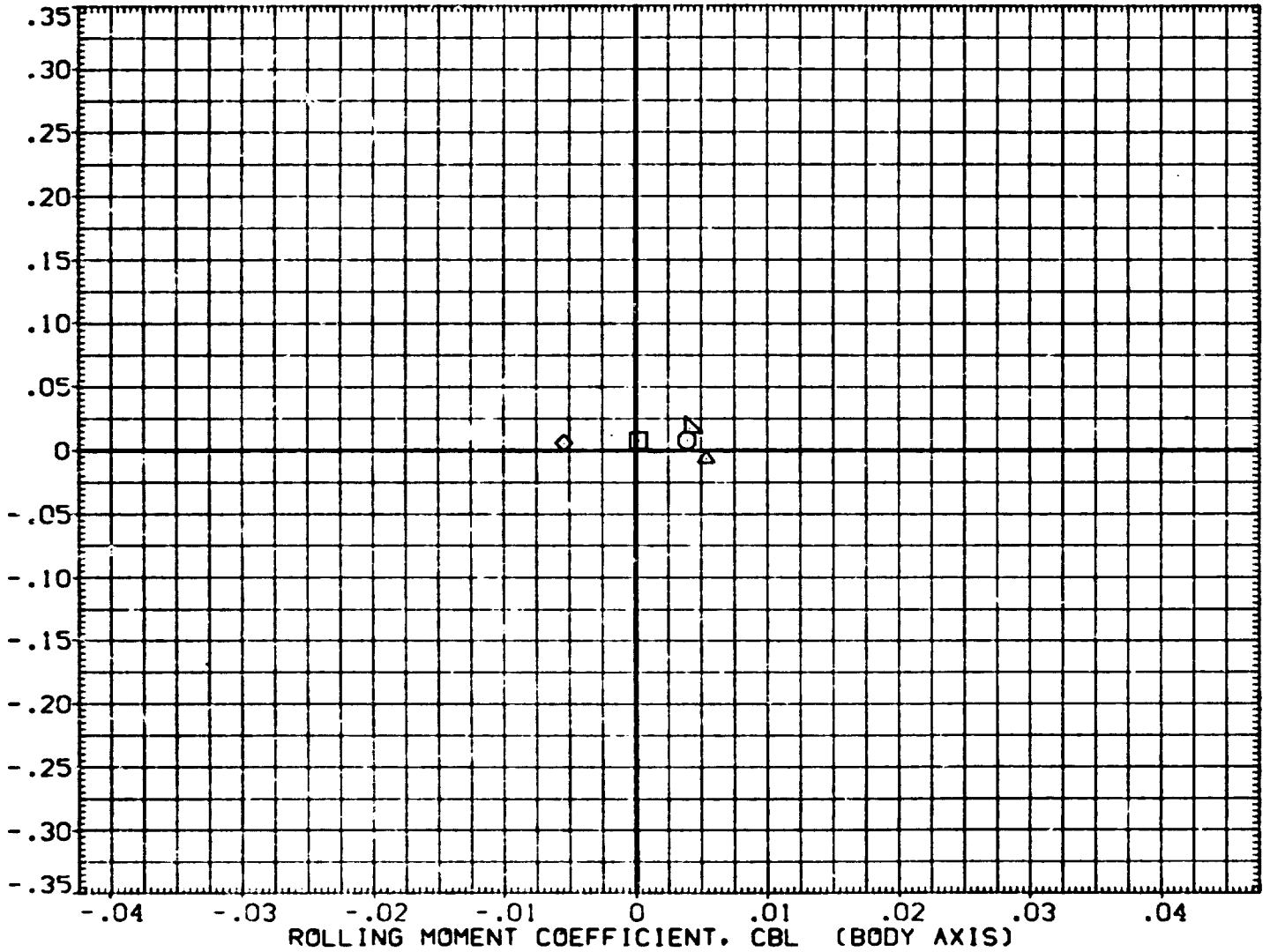


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(C) ALPHA1= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

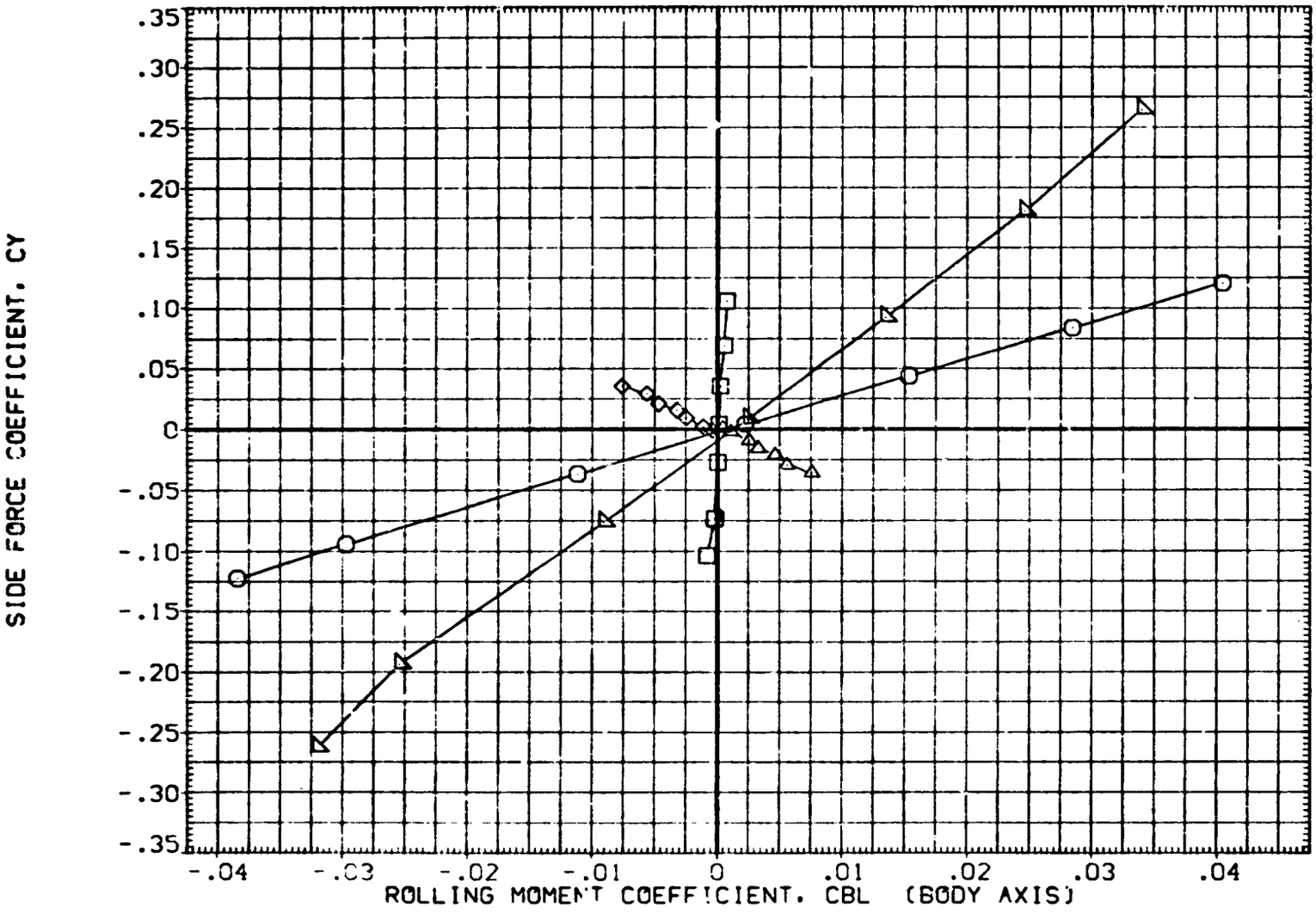


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET045)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LET145)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

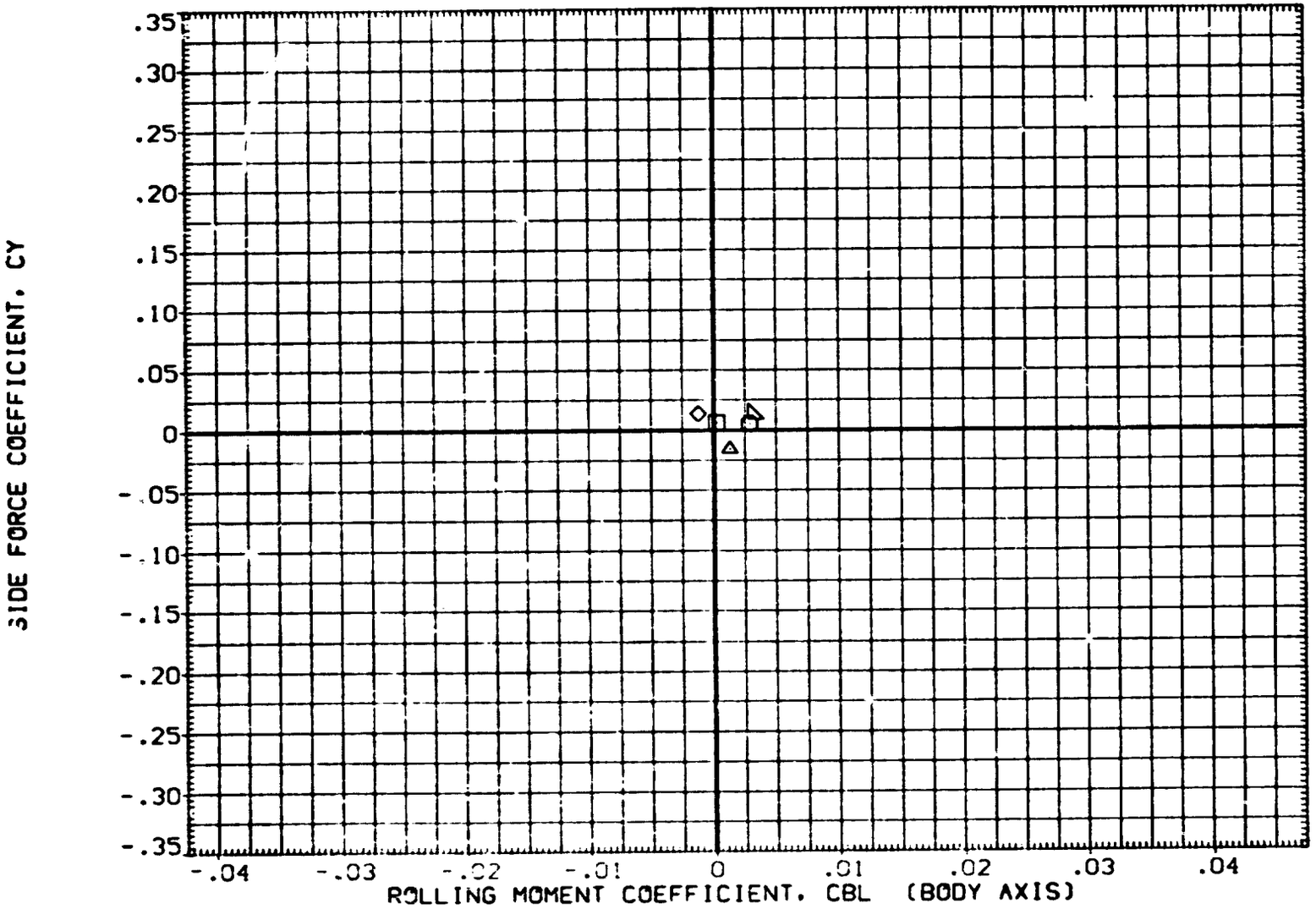


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETD45)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	8.000	.000	2.200	.000
(LETL45)	⊠	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	8.000	.000	2.200	.000
(LETR45)	△	AMES97-019([AB1]) LVAP R-LRB ALL HL SEALED	8.000	.000	2.200	.000
(LETI45)	▽	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

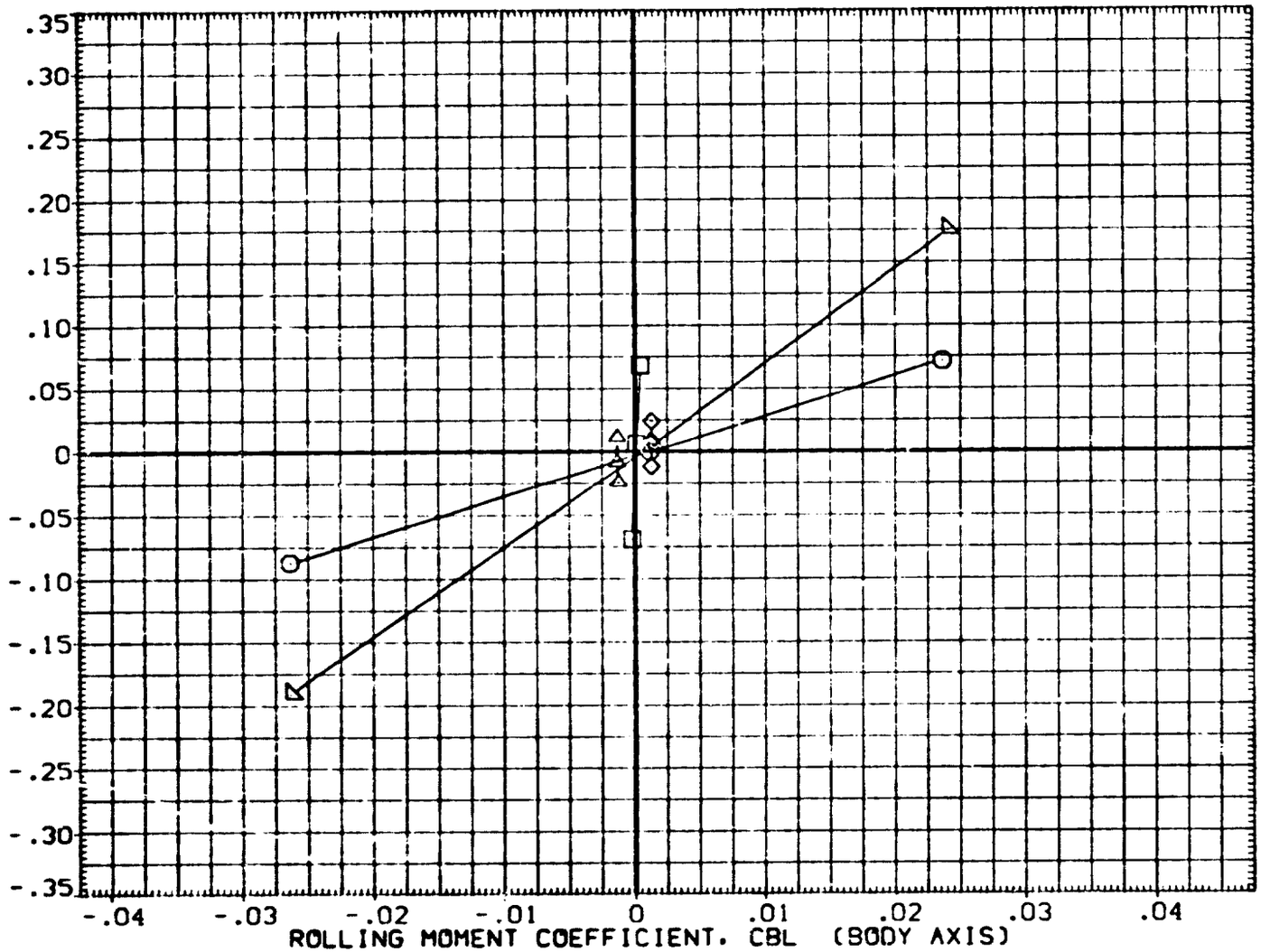


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET045)	□	AMES97-019([AB1) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.200	.000
(LETT45)	◇	AMES97-019([AB1) LVAP TANK - ALL ML SEALED	8.000	.000	2.200	.000
(LETL45)	⊠	AMES97-019([AB1) LVAP L-SRB - ALL ML SEALED	8.000	.000	2.200	.000
(LETR45)	◇	AMES97-019([AB1) LVAP R-LRB ALL ML SEALED	8.000	.000	2.200	.000
(LETI45)	◇	AMES97-019([A31) LVAP INT VEH ALL ML SEALED	8.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1237.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

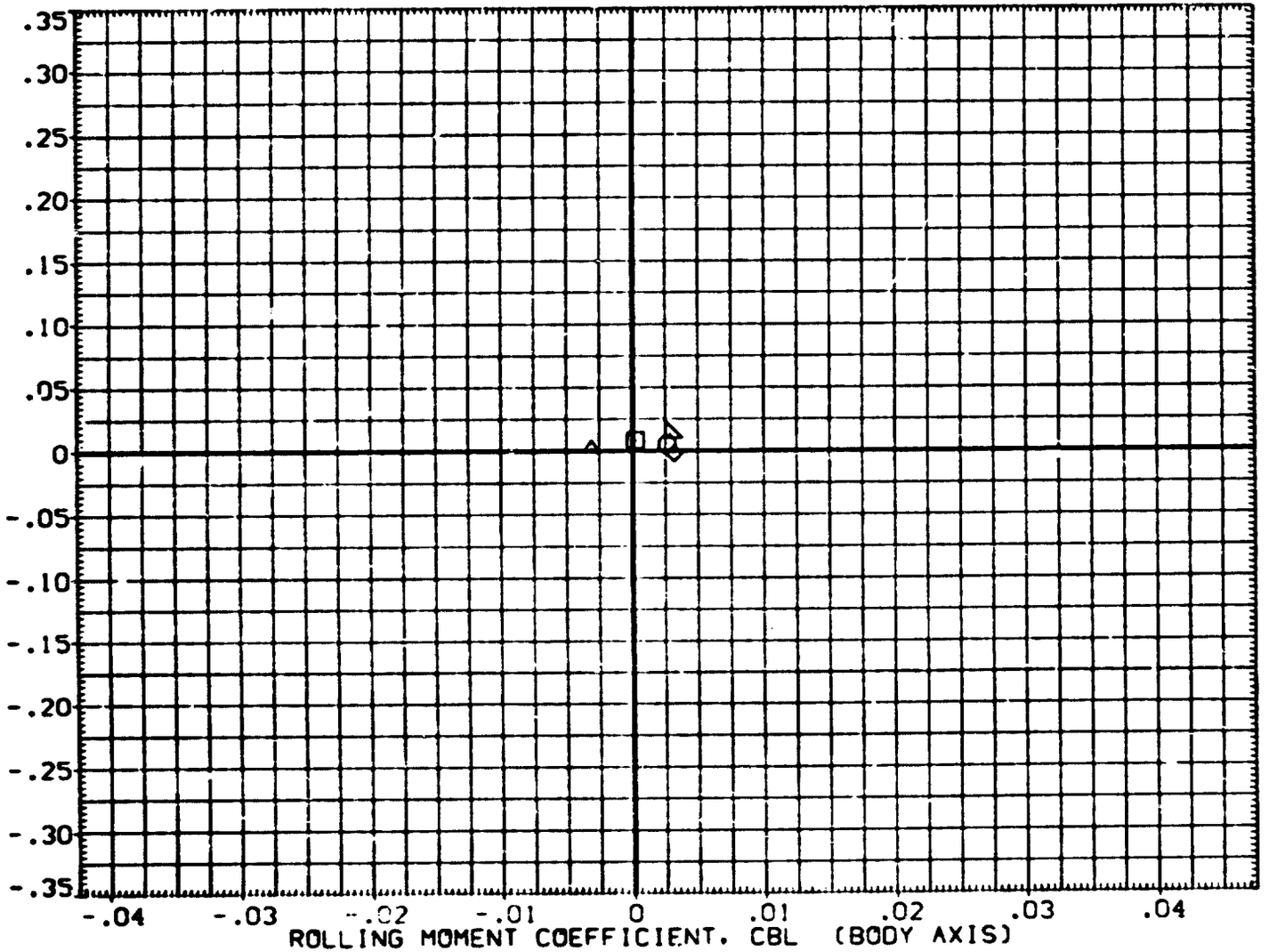


FIG. 27 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.2 DEV=8/0

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LETO30)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT30)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL30)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR30)		AMES97-019(1A81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI30)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

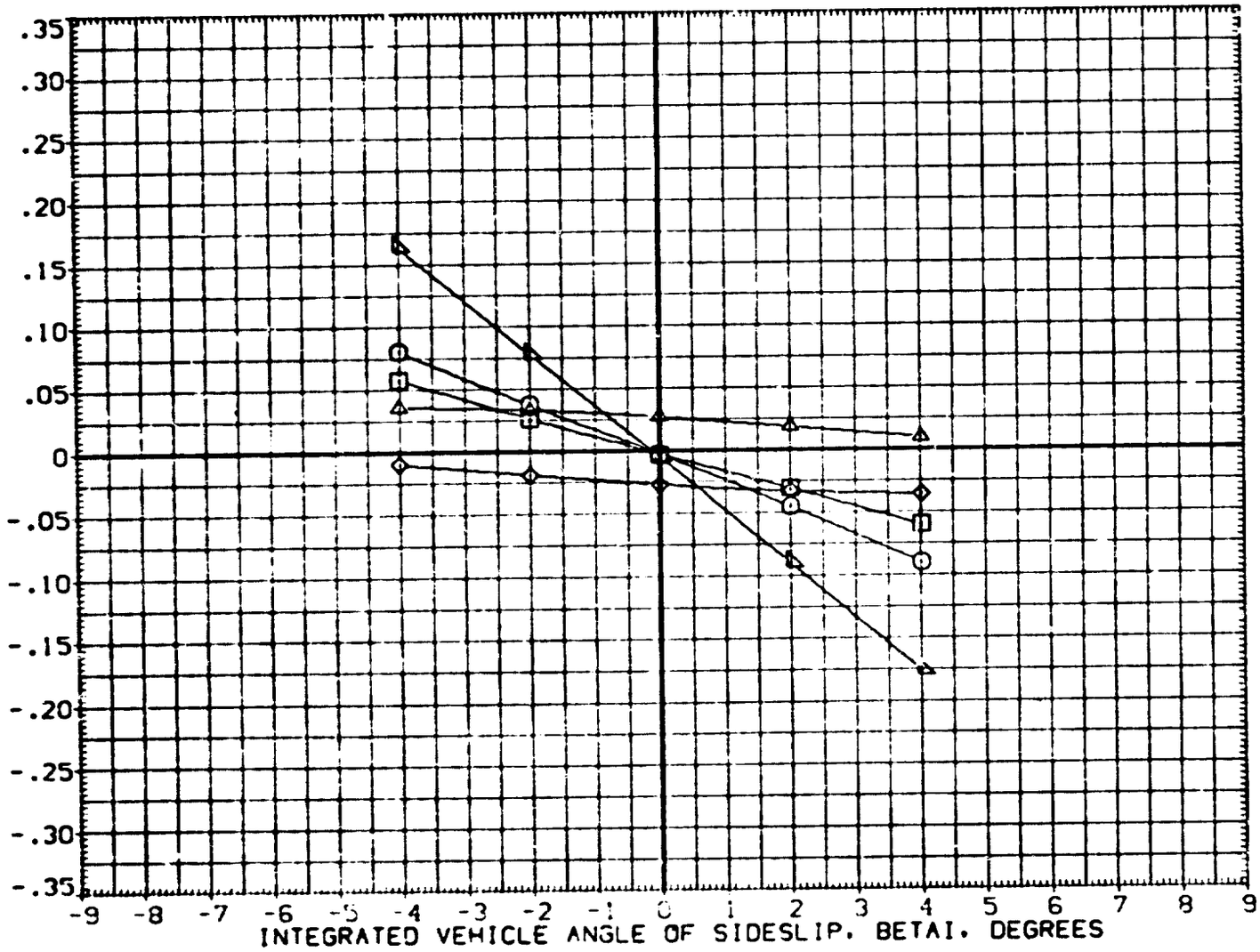


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO3B)	○	AMES97-019(1AB1) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT3B)	□	AMES97-019(1AR1) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL3B)	◇	AMES97-019(1AB1) LVAP L-SRB - ALL ML SEALED	R.000	4.000	2.500	.000
(LETR3B)	△	AMES97-019(1AB1) LVAP R-SRB ALL ML SEALED	8.000	-1.000	2.500	.000
(LETI3B)		AMES97-019(1AB1) LVAP INT VEH ALL ML SEALED	8.000	-1.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

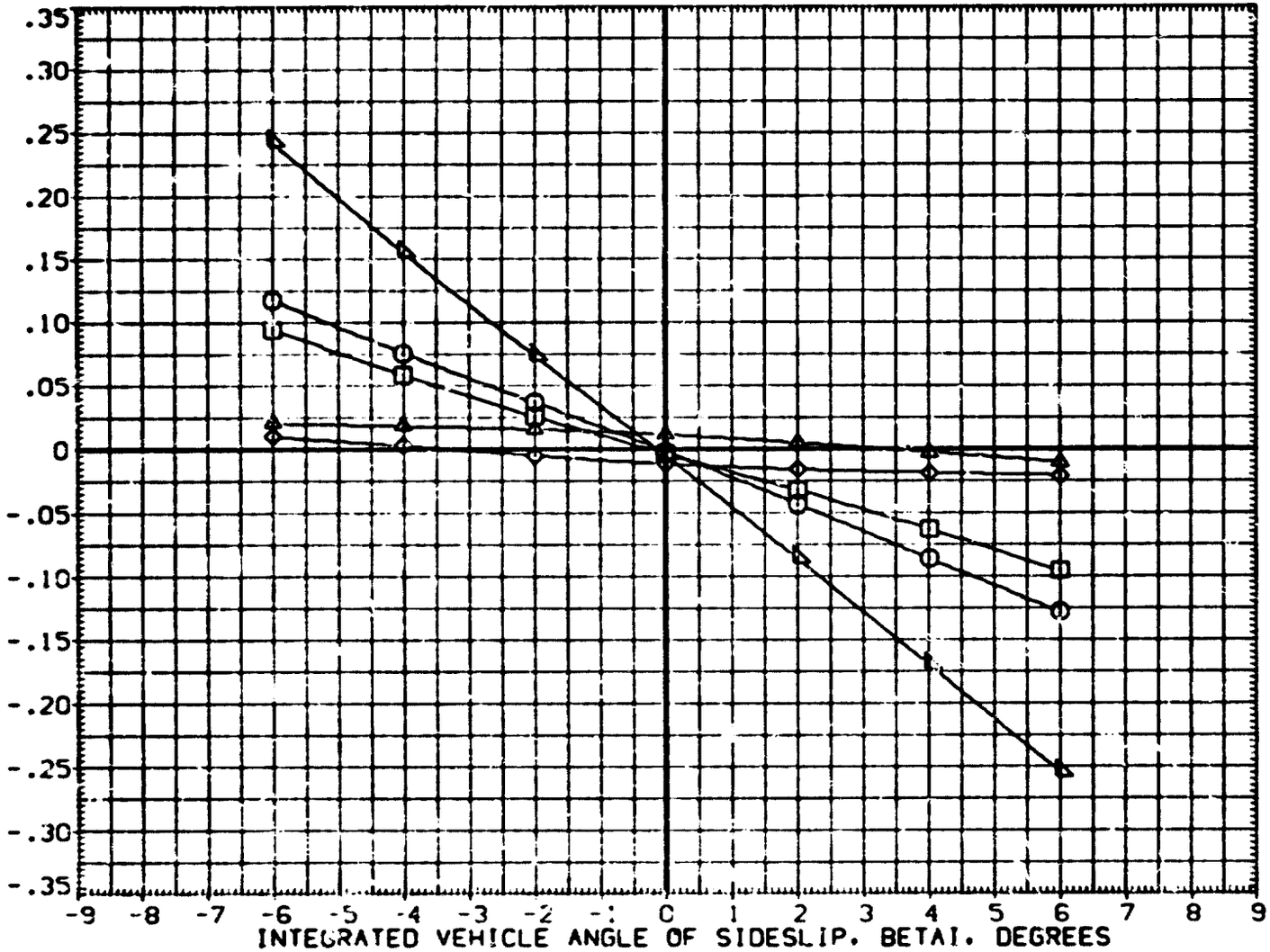


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=B/-4

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	AMES97-019(1AB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	AMES97-019(1AB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	AMES97-019(1AB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	AMES97-019(1AB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	AMES97-019(1AB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

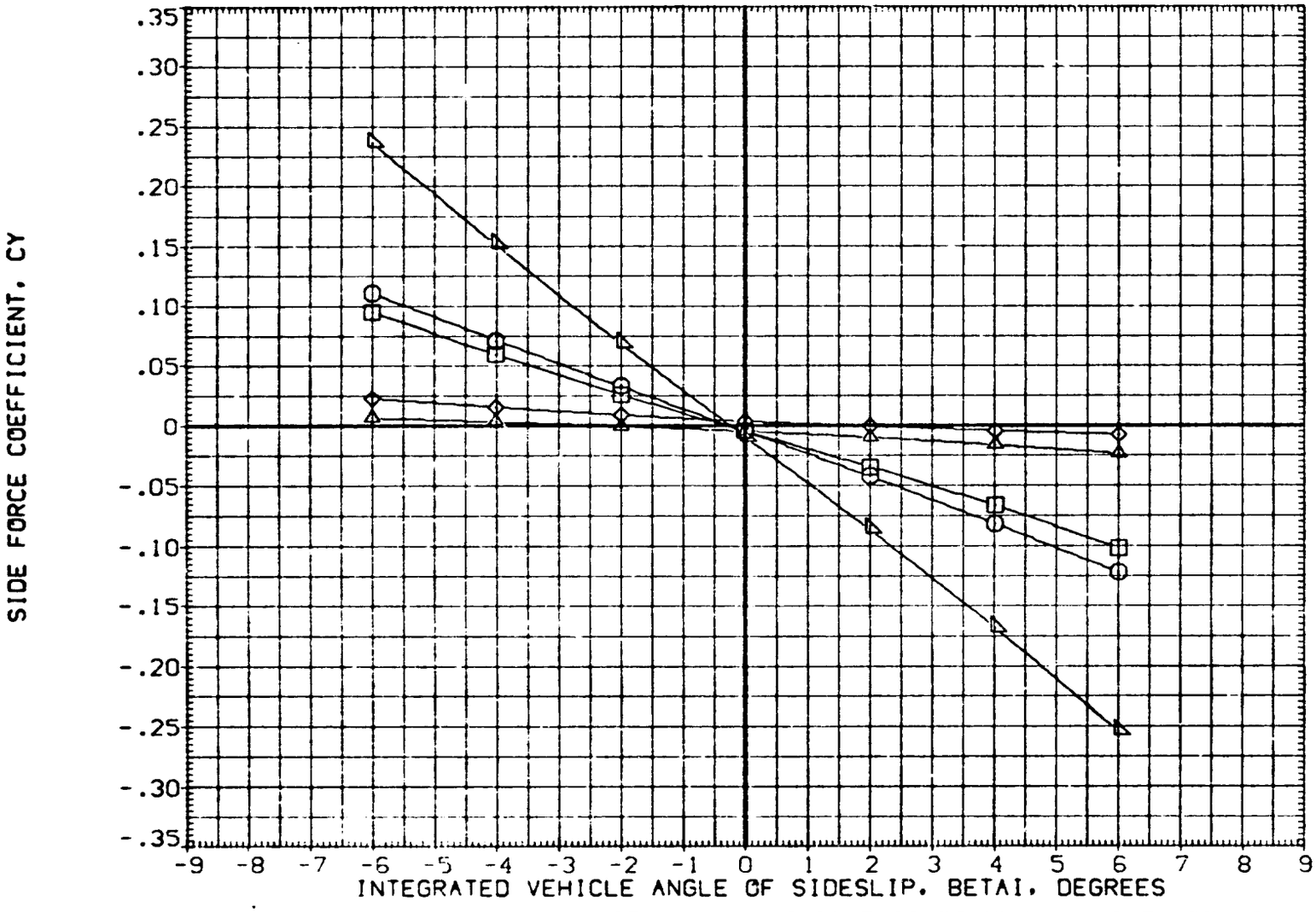


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

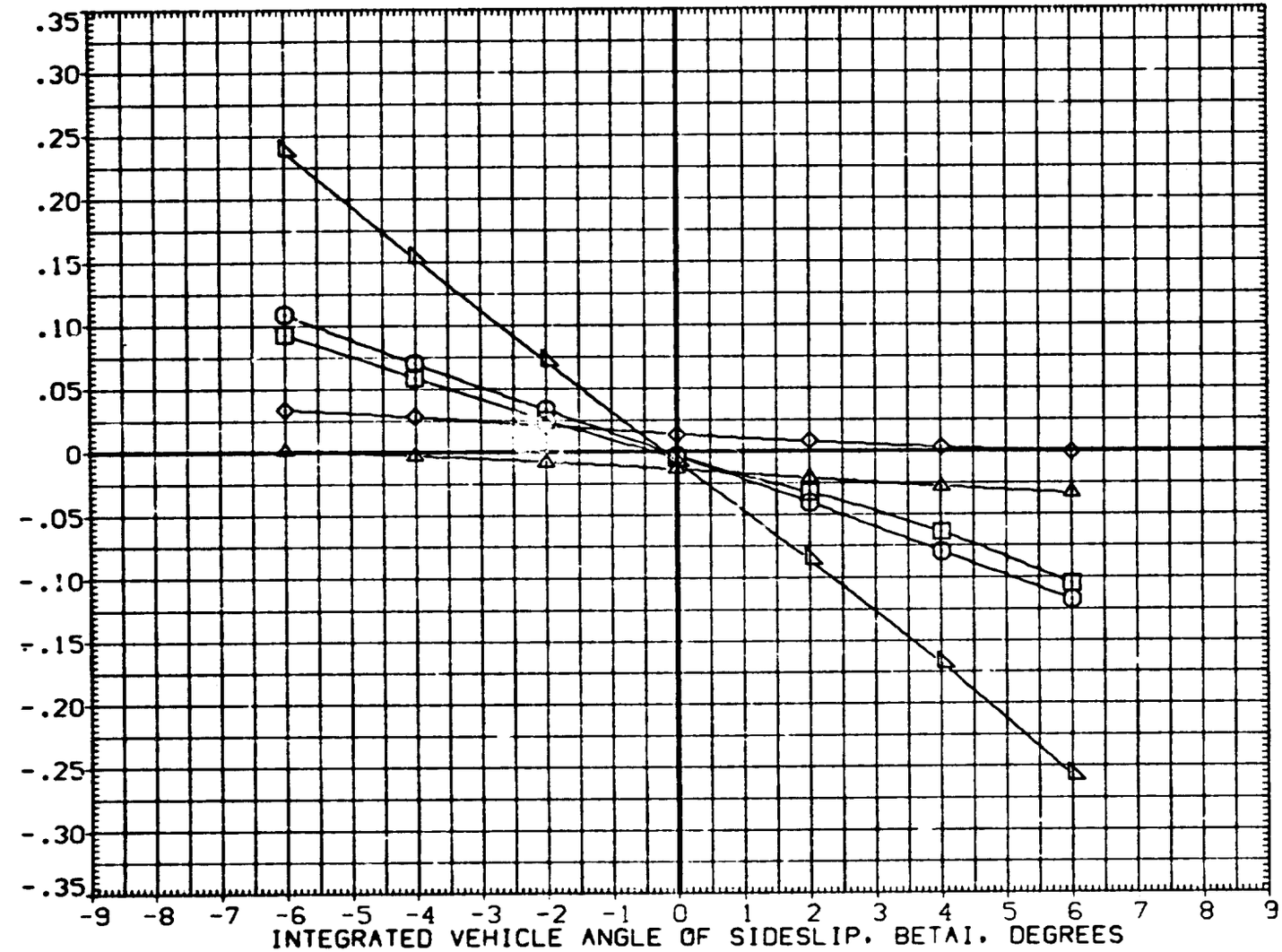


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	▽	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

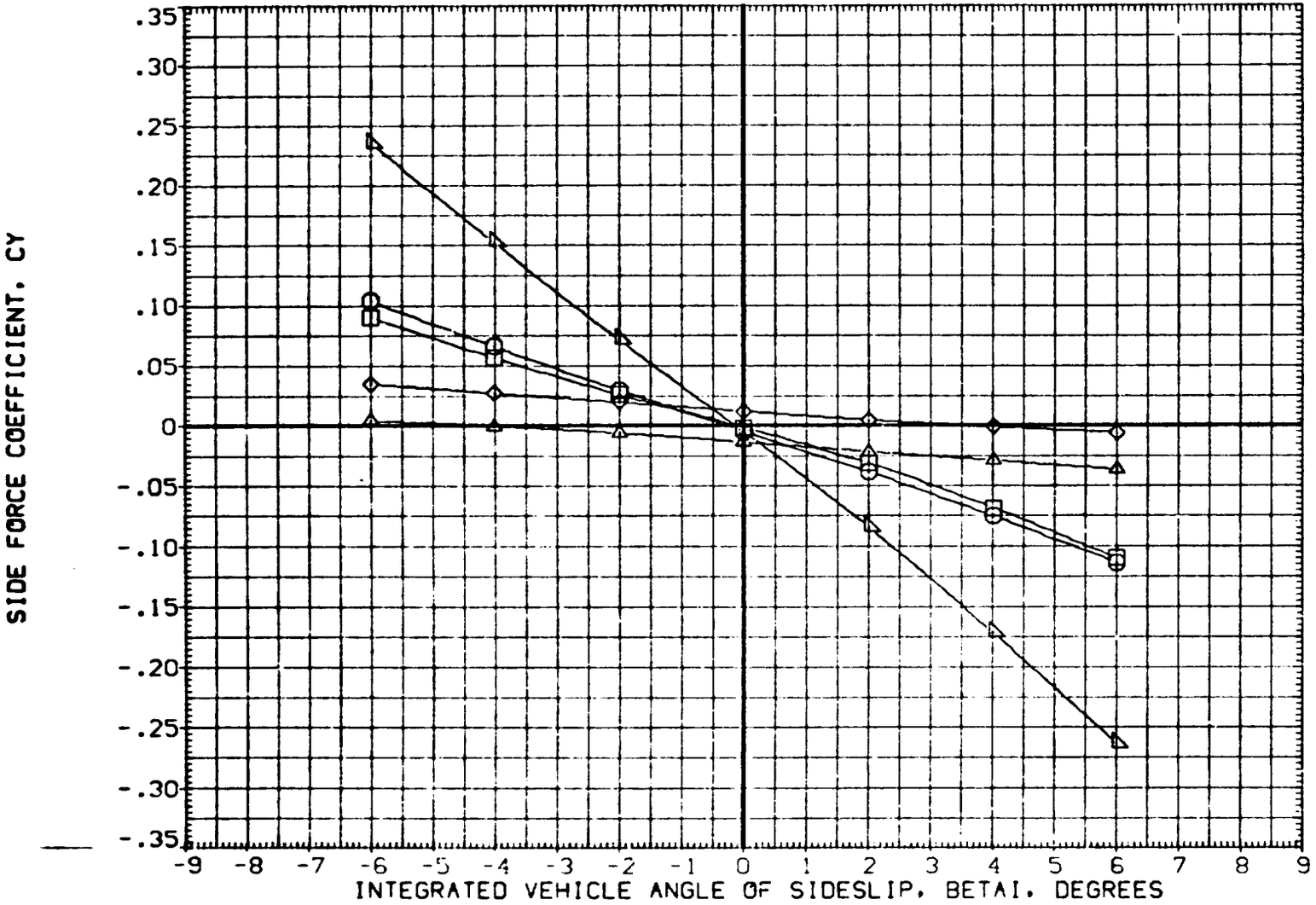


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	◇	AMES97-019([A81]) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

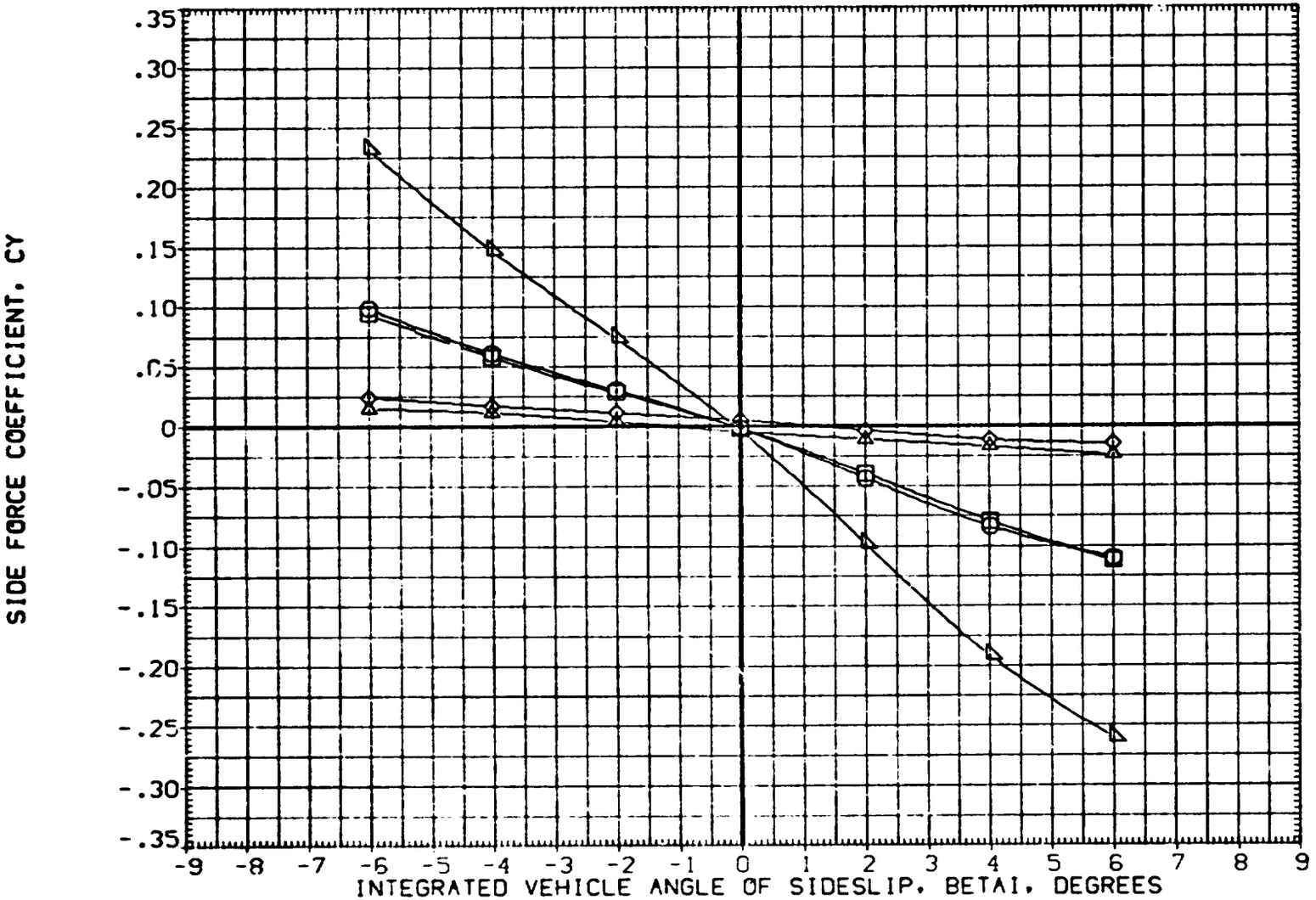


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	6.000	-4.000	2.500	.000
(LETT38)	⊡	AMES97-019([A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⋈	AMES97-019([A8:) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	◇	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

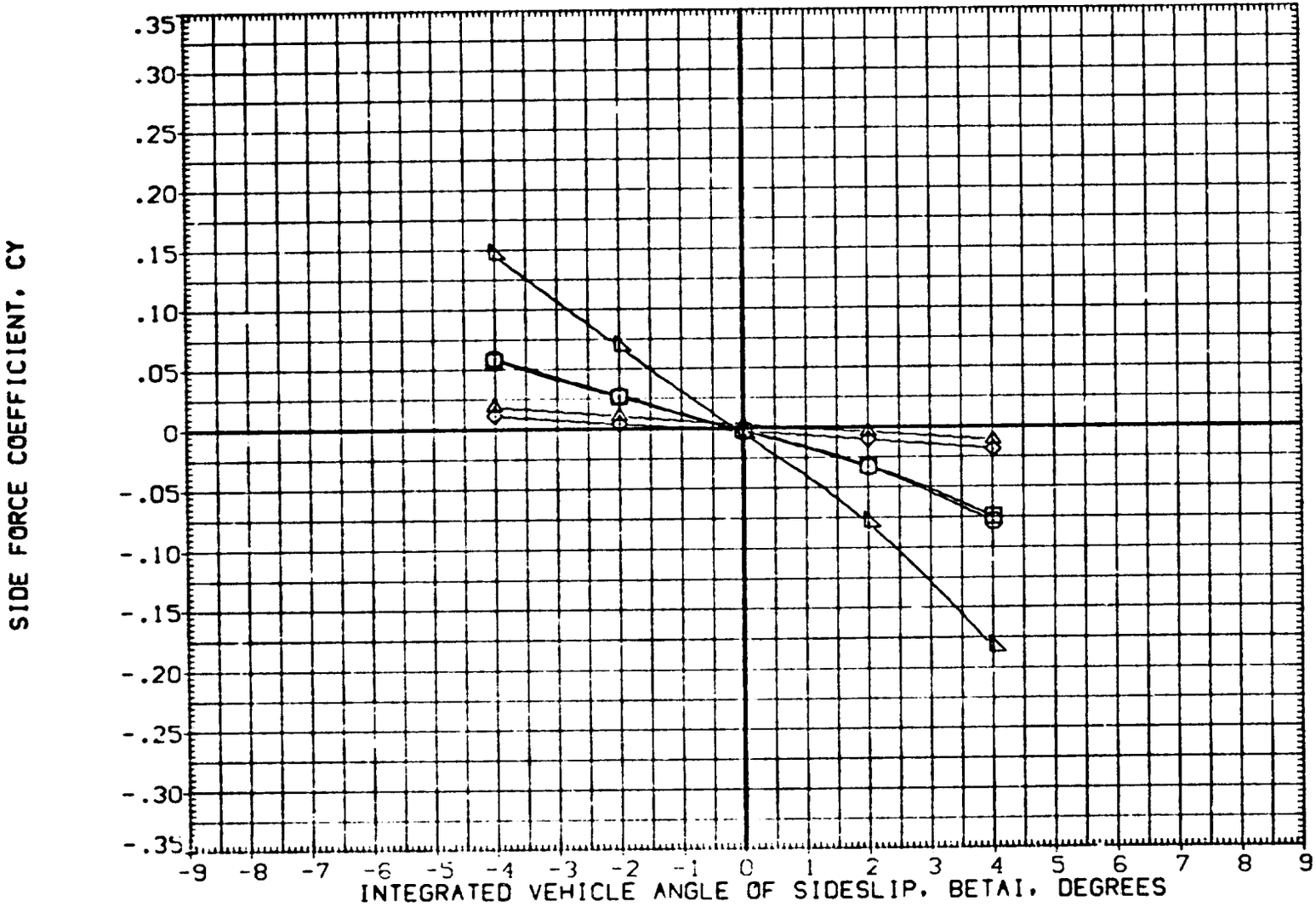


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION					REFERENCE		
(LETO38)	○	AMES97-019([A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000	SREF	2690.0000	SQ.FT.
(LETT38)	□	AMES97-019([A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000	LREF	1297.0000	IN.
(LETL38)	◇	AMES97-019([A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000	BREF	1297.0000	IN.
(LETR38)	△	AMES97-019([A81) LVAP R-SRB ALL ML SEALED	8.000	-4.000	2.500	.000	XMRP	976.0000	IN. XT
(LETI38)	▽	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000	YMRP	.0000	IN. YT
							ZMRP	400.0000	IN. ZT
							SCALE	.0300	

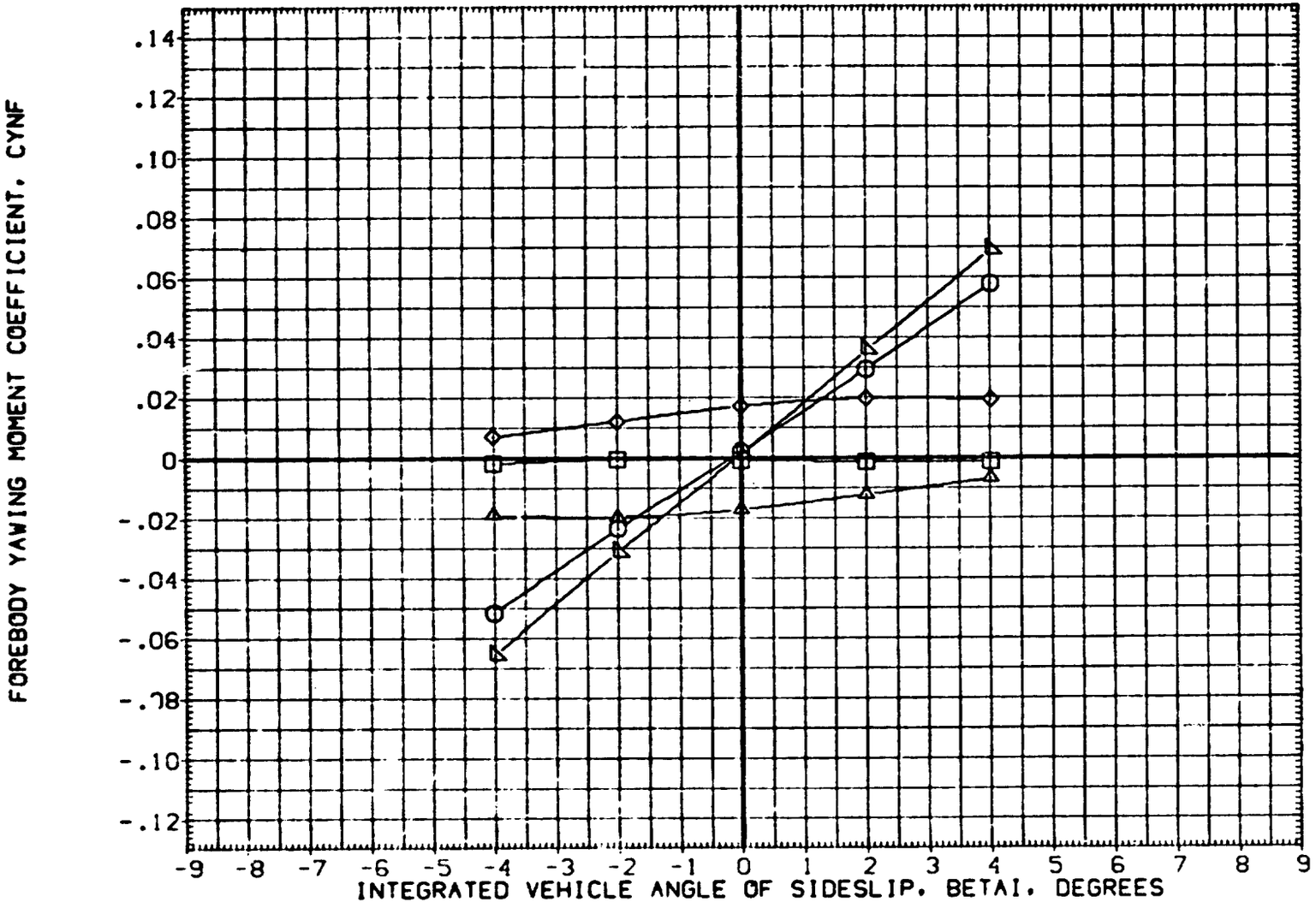


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)ALPHA[-6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	□	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⋈	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR36)	◁	AMES97-019(1A81) LVAP R-LPB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	◁	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

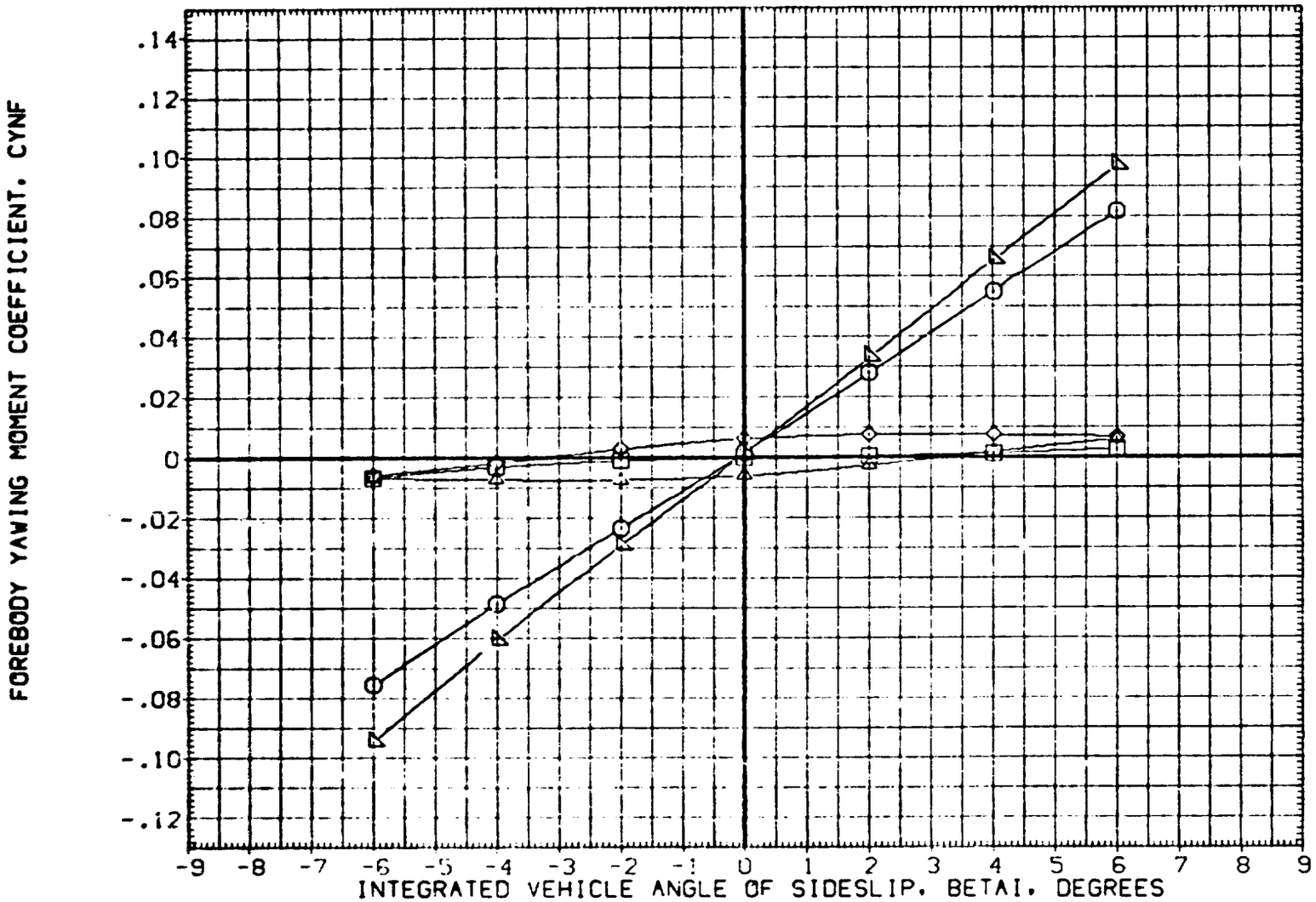


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)ALPHAI= -4.00

DA	SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)		□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL38)		▷	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		◁	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

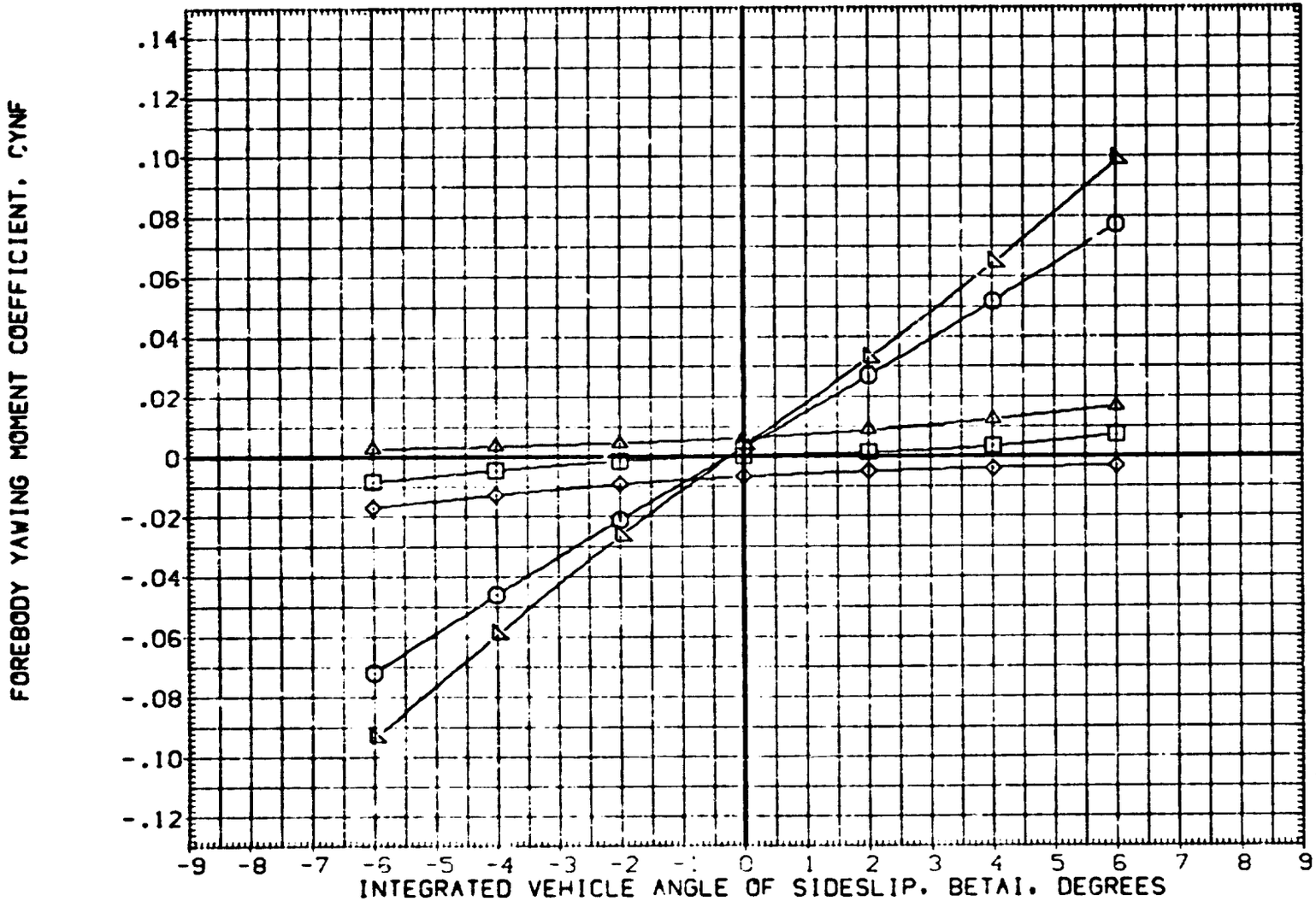


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO38)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	9.000	-4.000	2.500	.000
(LETT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL38)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

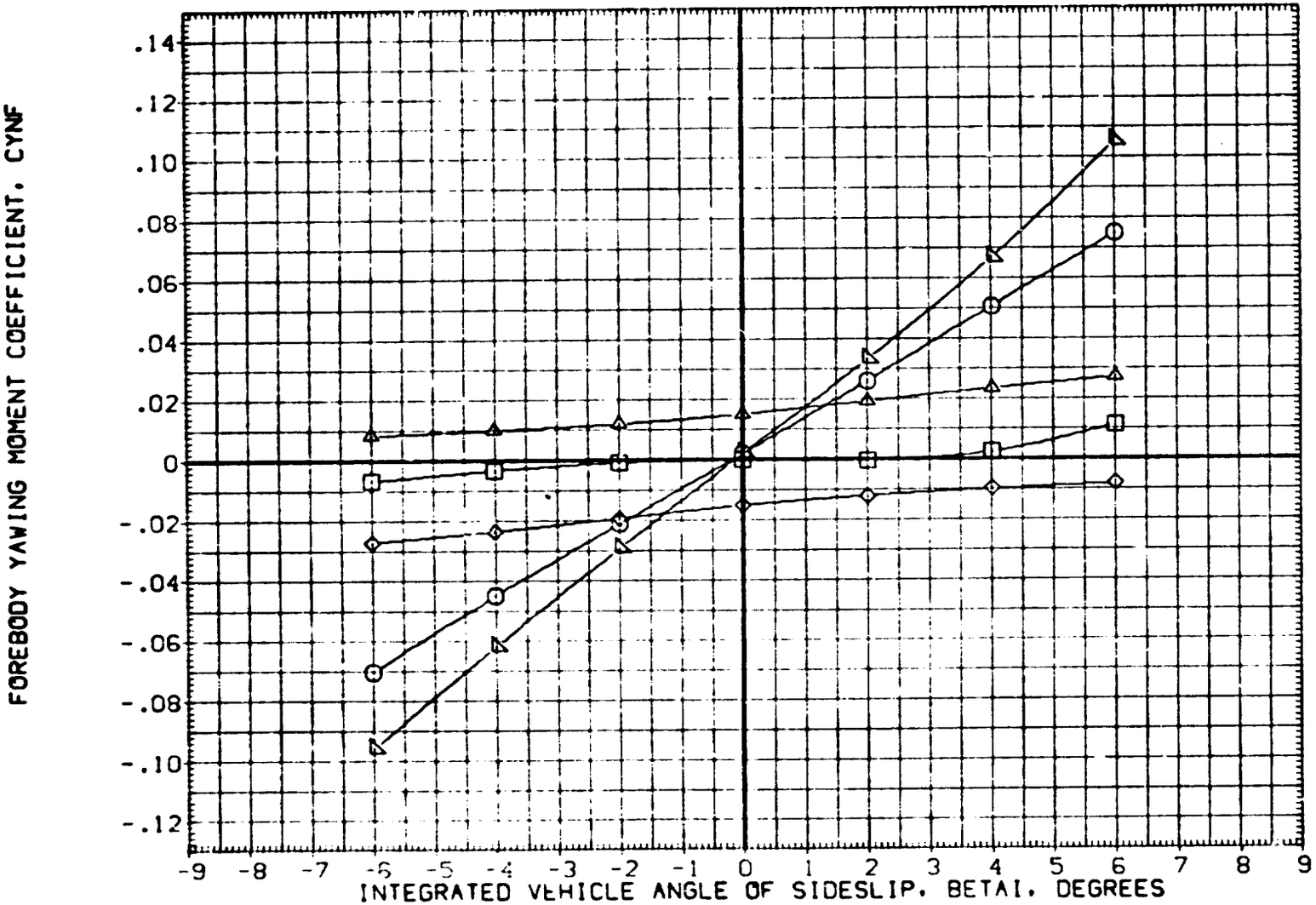


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET038)	□	AMES37-019(1A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES37-019(1A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL38)	⊠	AMES37-019(1A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETP38)	◁	AMES37-019(1A81) LVAP R-SRB ALL ML SEALED	8.000	-4.000	2.500	.000
(LETI38)	▷	AMES37-019(1A81) LVAP INT VEH ALL ML SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

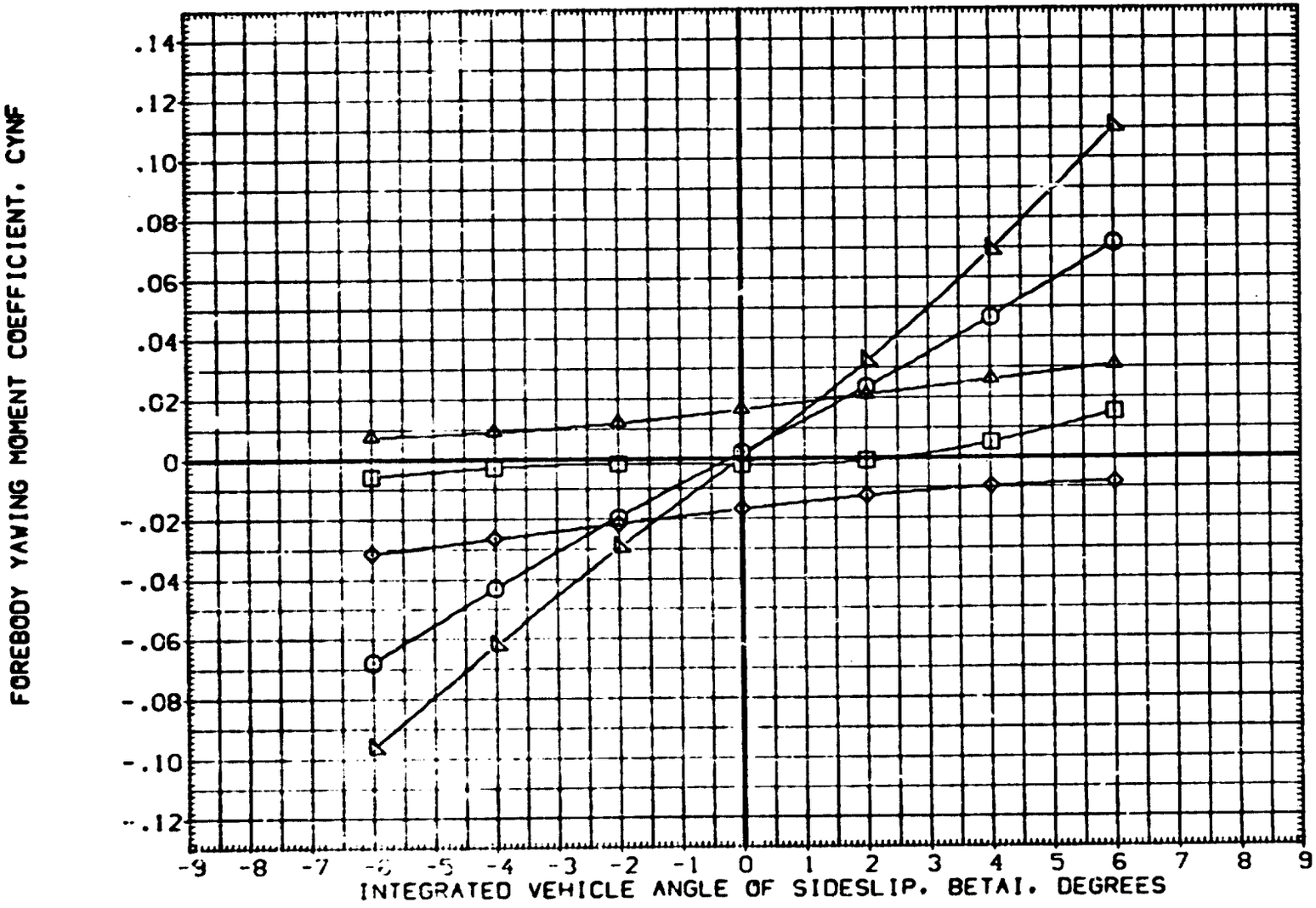


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)		AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.500	.000
(LETT30)		AMES97-019(IA81) LVAP TANK - ALL ML SEALED	0.000	-4.000	2.500	.000
(LETL30)		AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	0.000	-4.000	2.500	.000
(LETR30)		AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	0.000	-4.000	2.500	.000
(LETI30)		AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	0.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

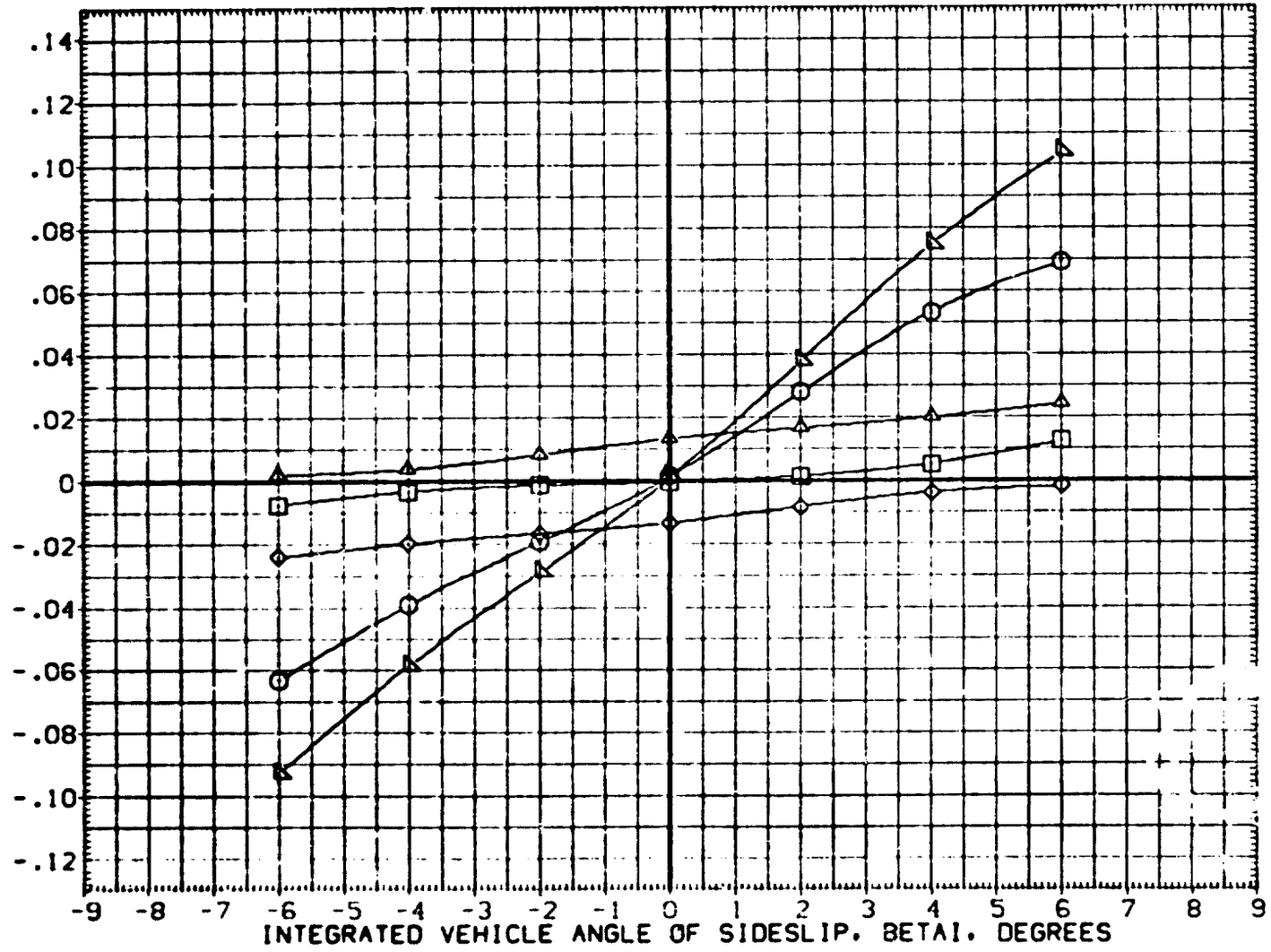


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)	□	AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT30)	◇	AMES97-019(1A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL30)	⊠	AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETR30)	◁	AMES97-019(1A81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(LETI30)	▷	AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

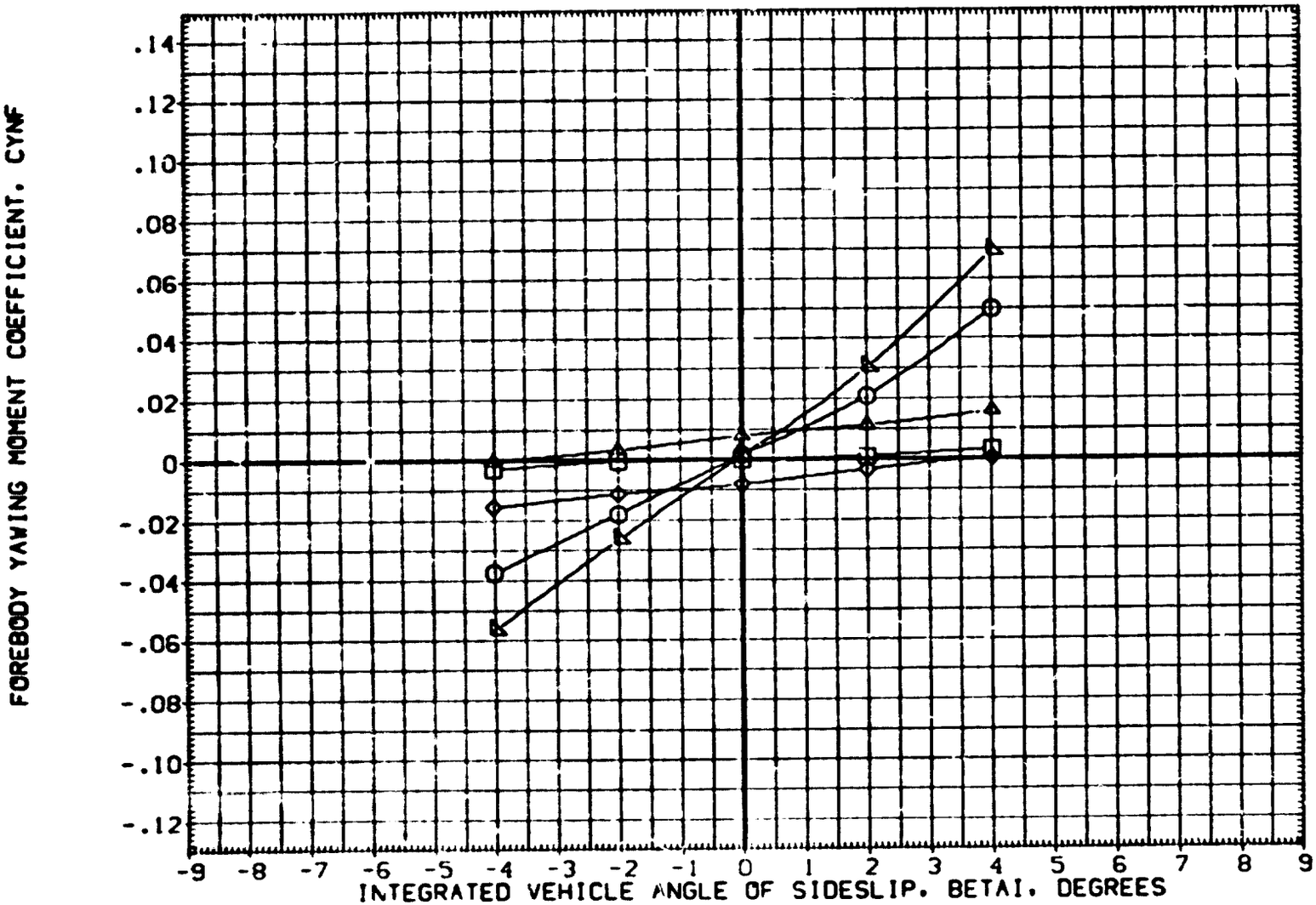


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO3B) □	AMES97-019(1A81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT3B) ○	AMES97-019(1A81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL3B) ⊠	AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETR3B) ◁	AMES97-019(1A81) LVAP R-SRB ALL ML SEALED	8.000	-4.000	2.500	.000
(LETI3B) ▷	AMES97-019(1A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

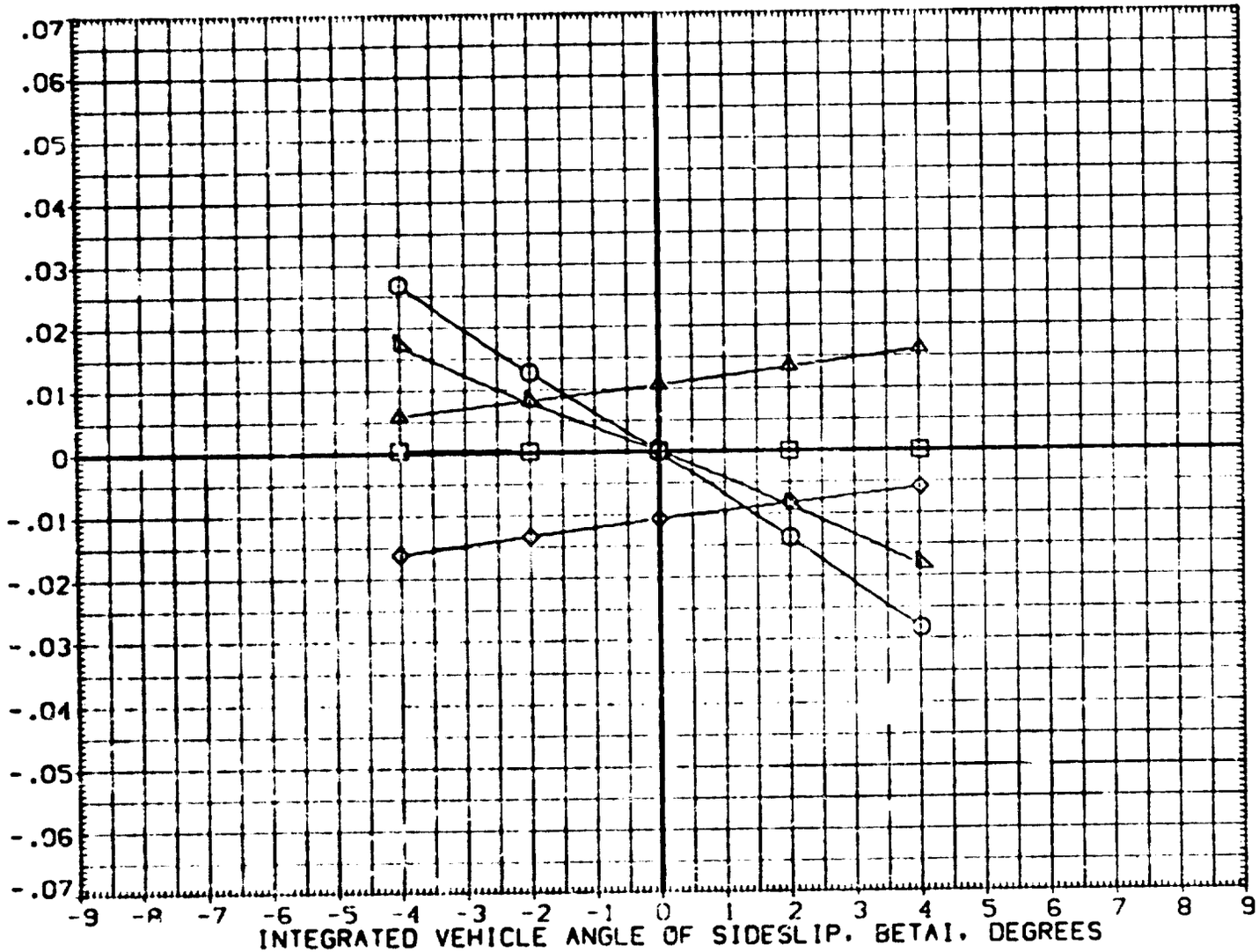


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL38)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	⋈	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

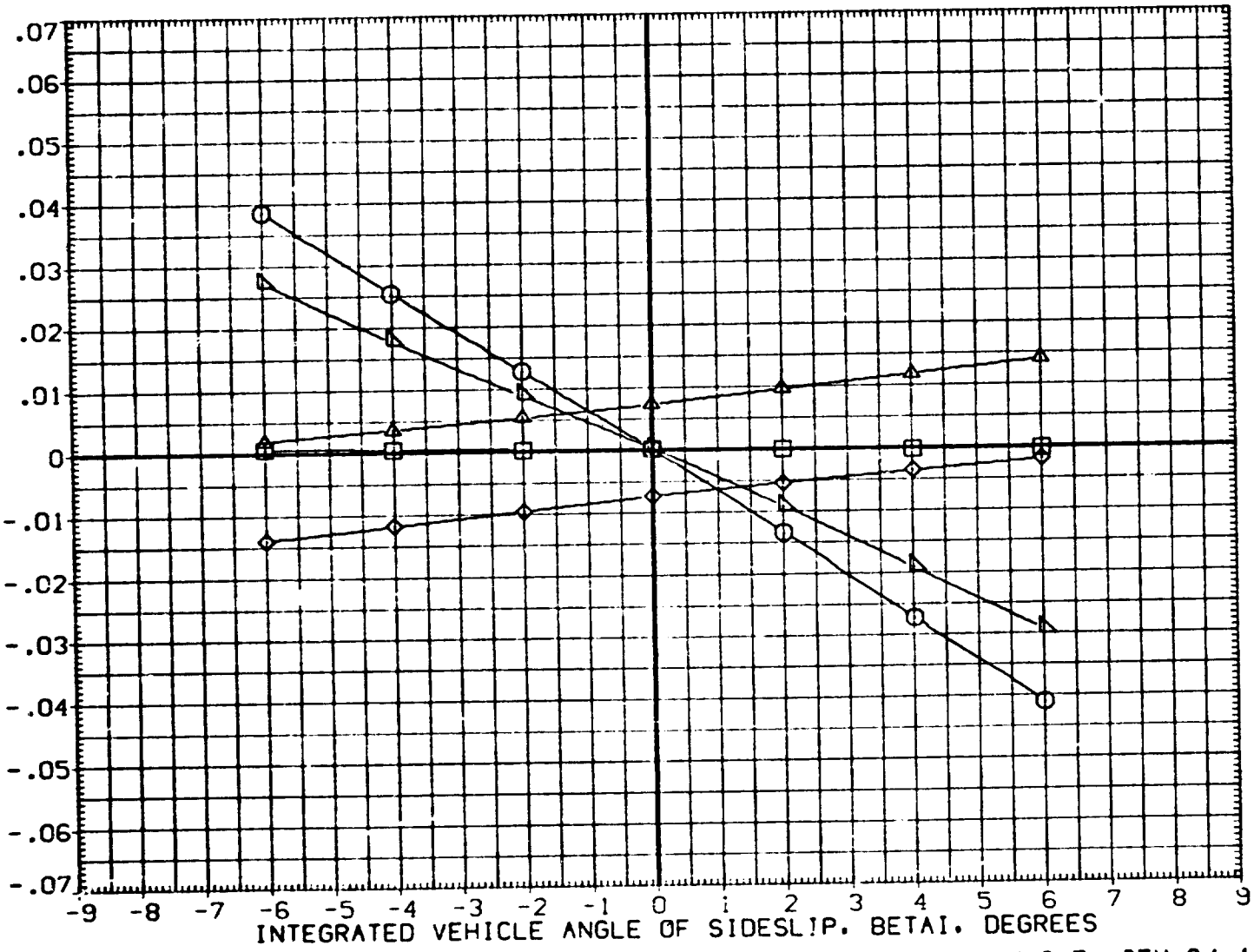


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		AMES97 019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR3R)		AMES97-019(IA81) LVAP R LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

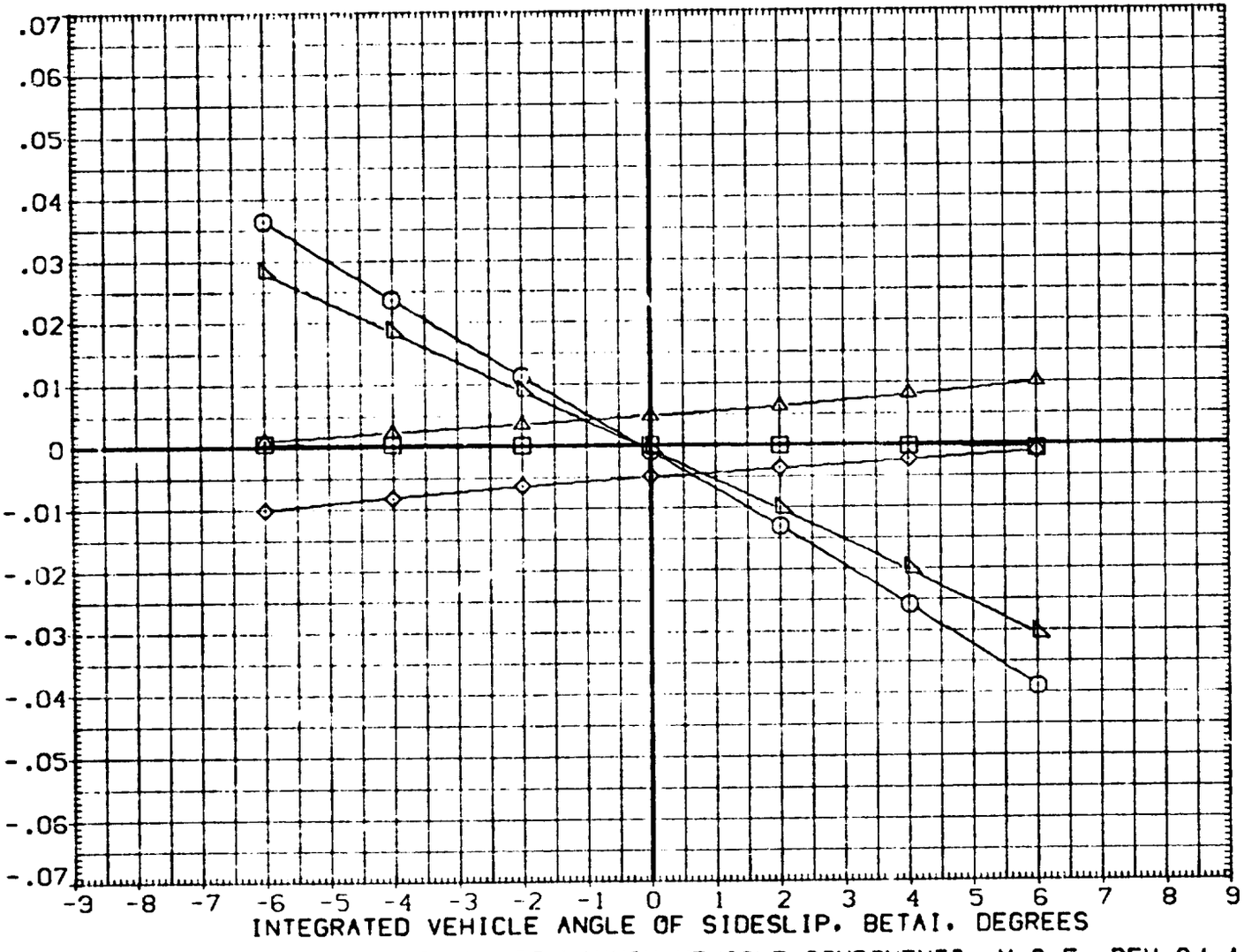


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS. M=2.5 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

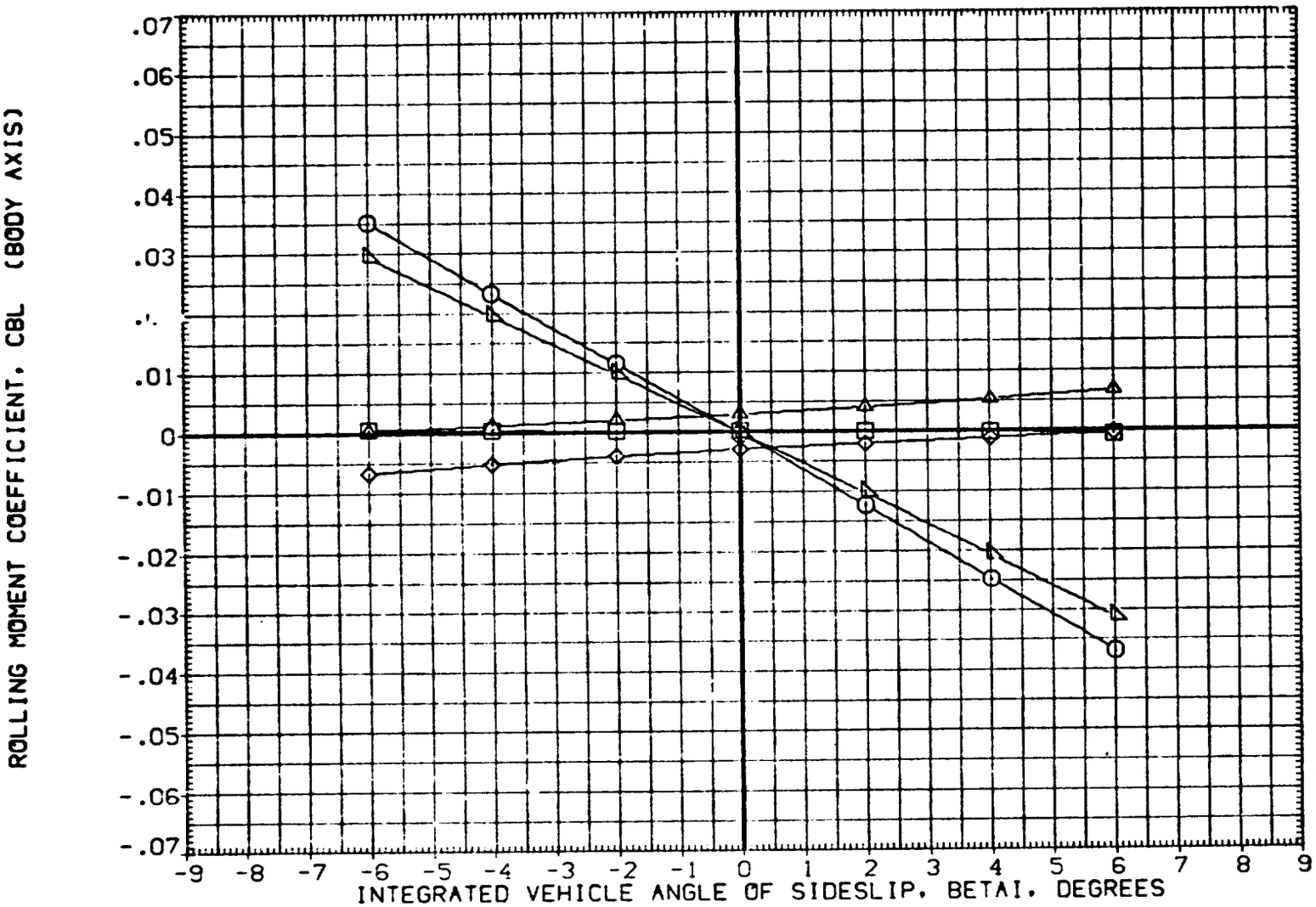


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)ALPHAI= .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(LET038)	AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED
(LETT38)	AMES97-019(1A81) LVAP TANK - ALL HL SEALED
(LETL39)	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED
(LETR38)	AMES97-019(1A81) LVAP R-SRB ALL HL SEALED
(LETI38)	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPDBRK
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

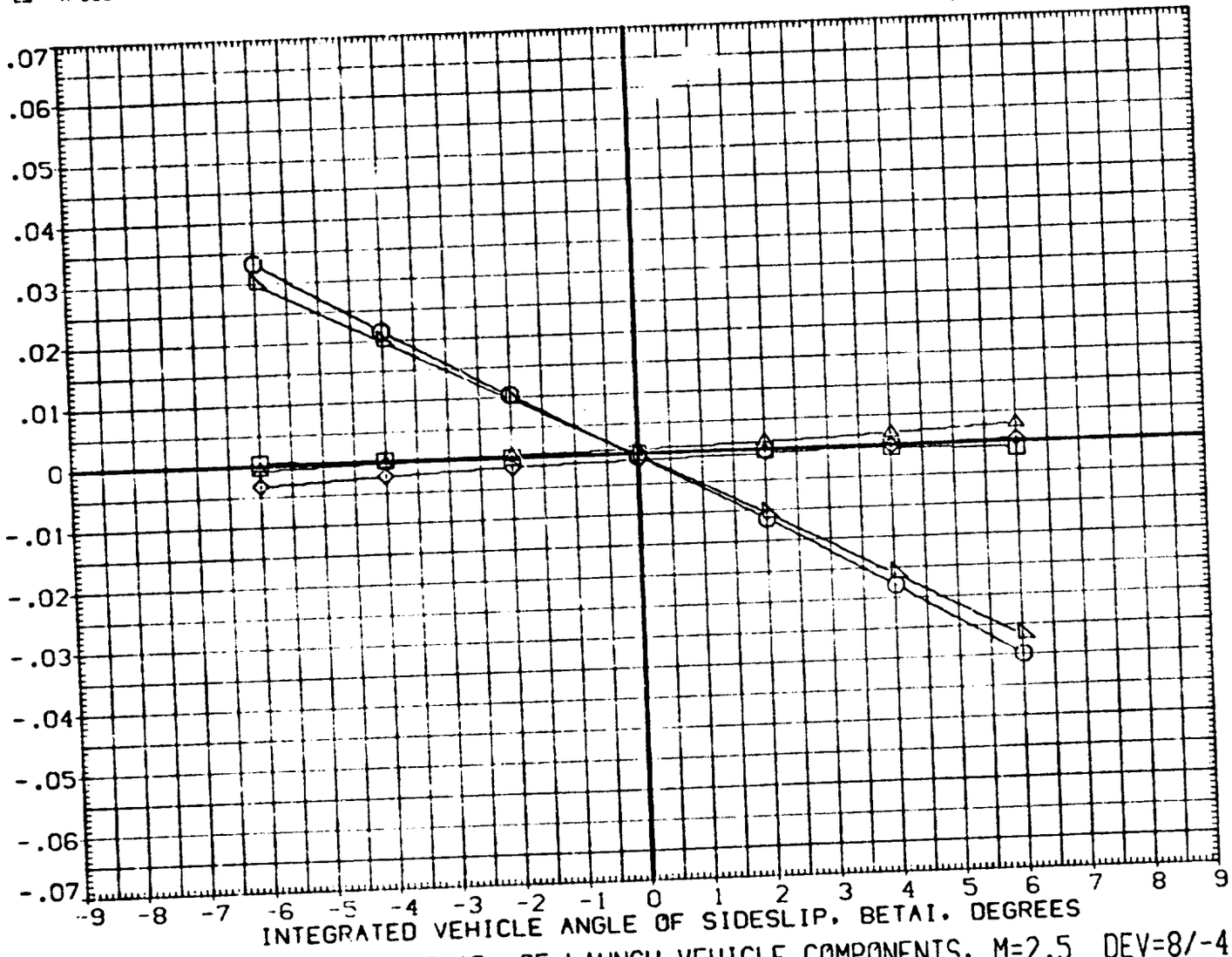


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL38)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

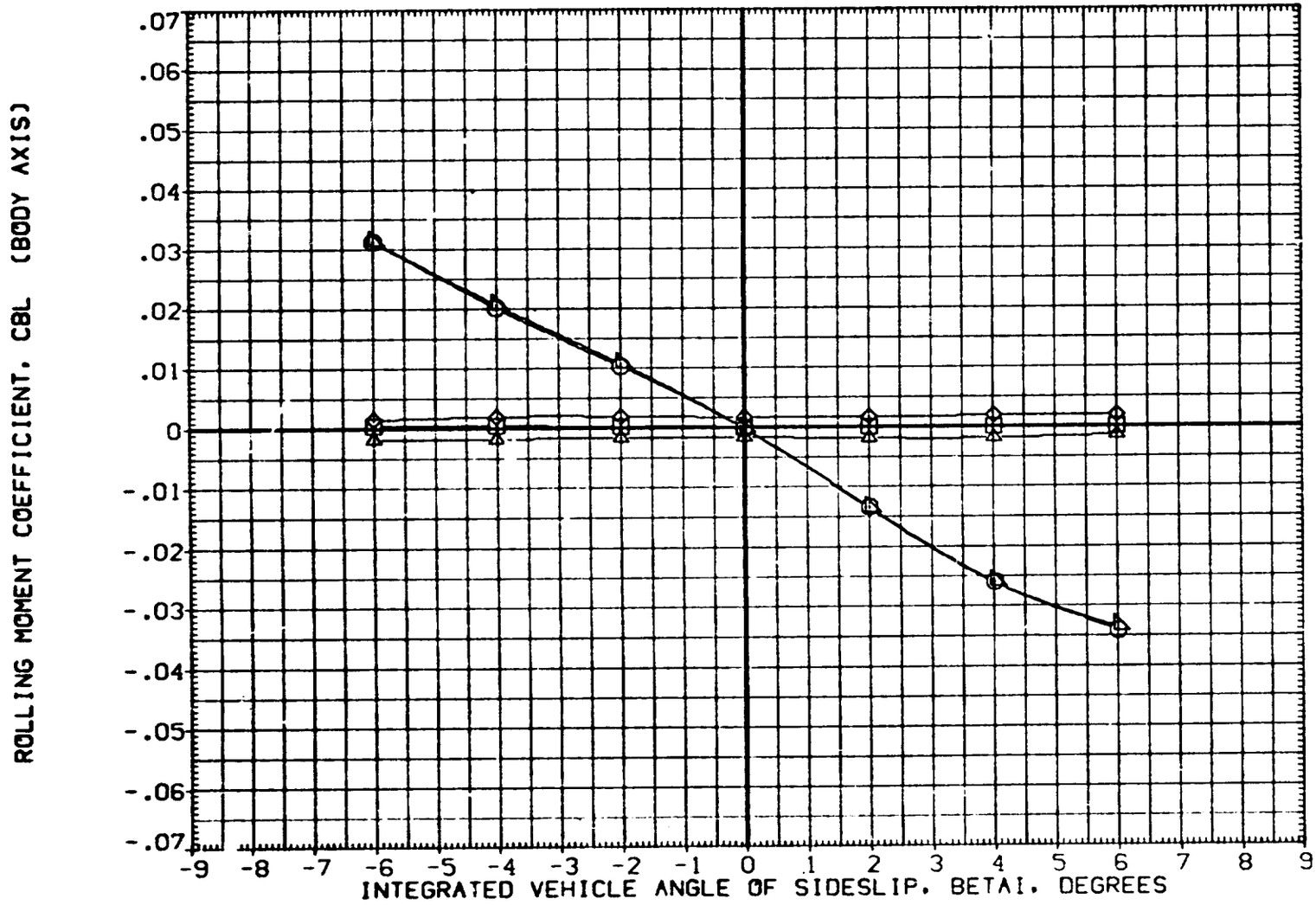


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL38)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LET'38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

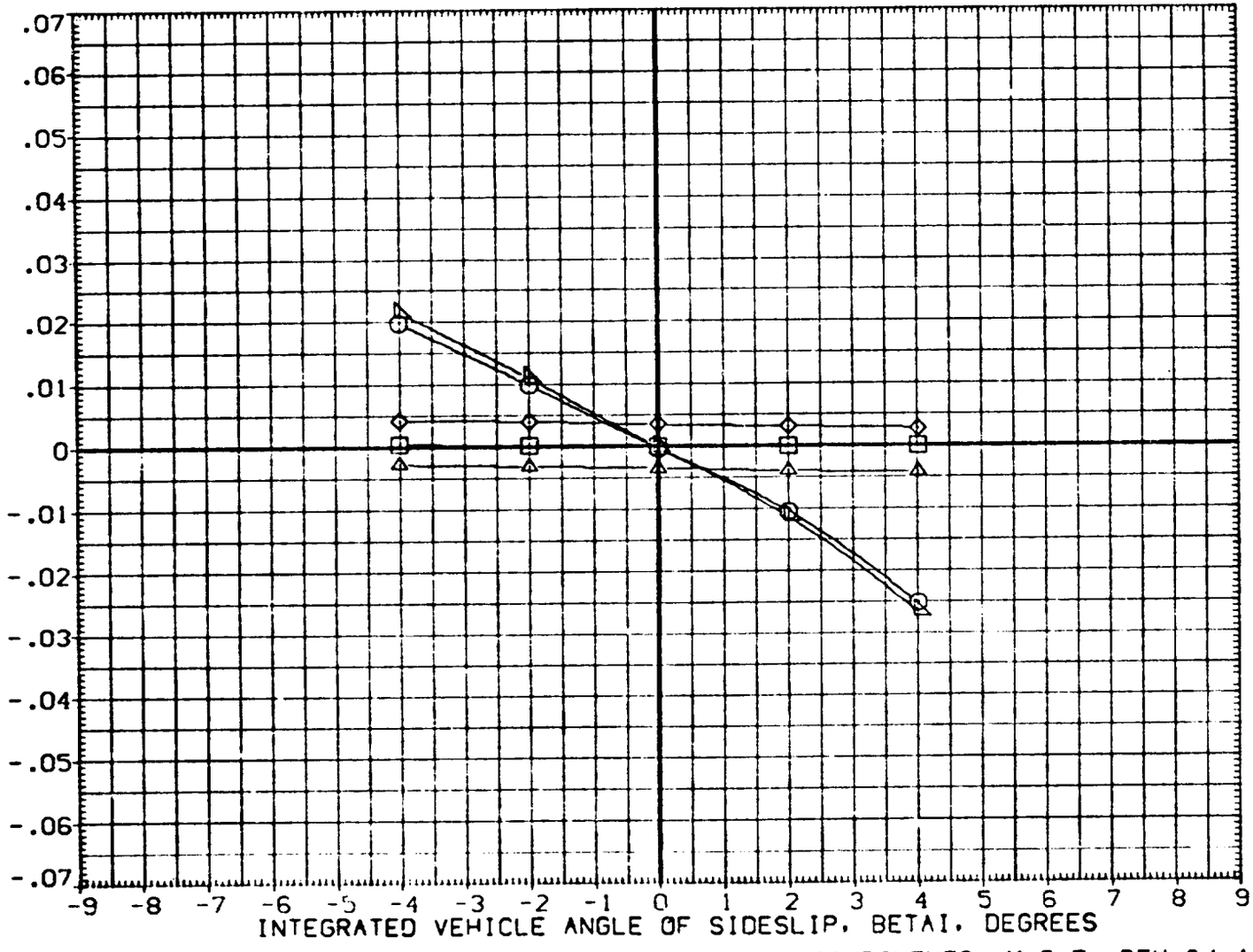


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET038)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

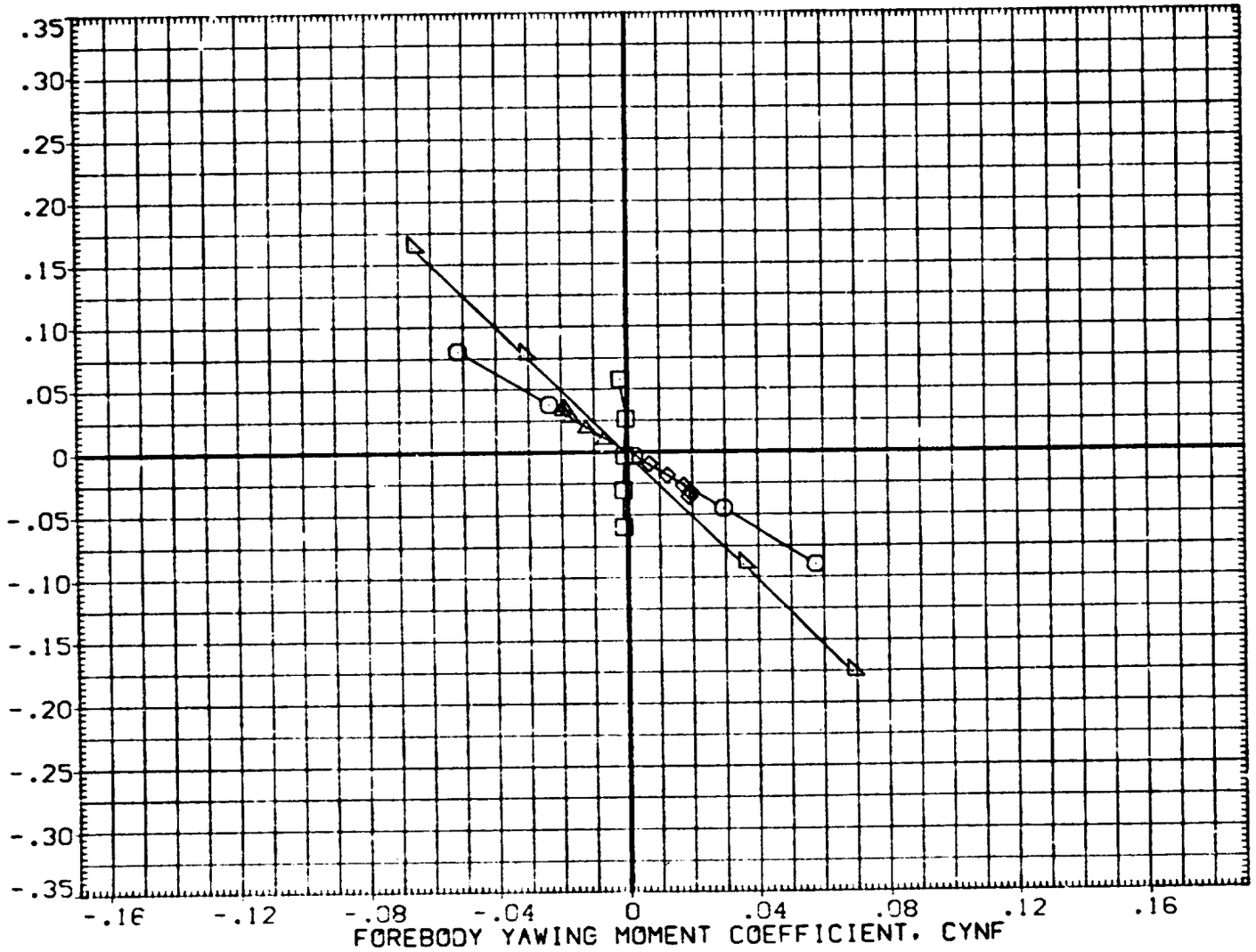


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET038)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⊠	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	▽	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

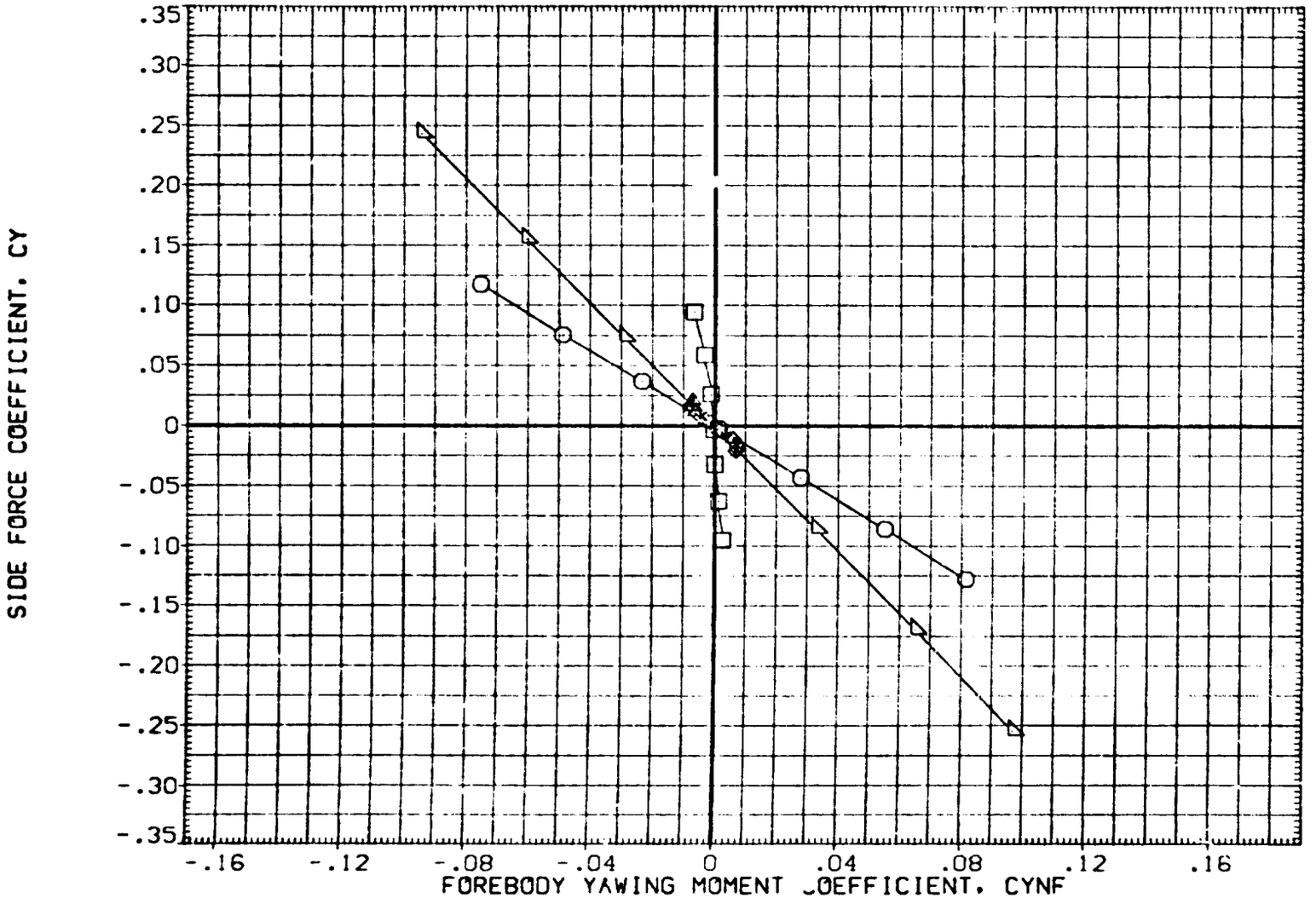


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LEIL39)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	▽	AMES97-019(IA81) LVAP R-LPB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

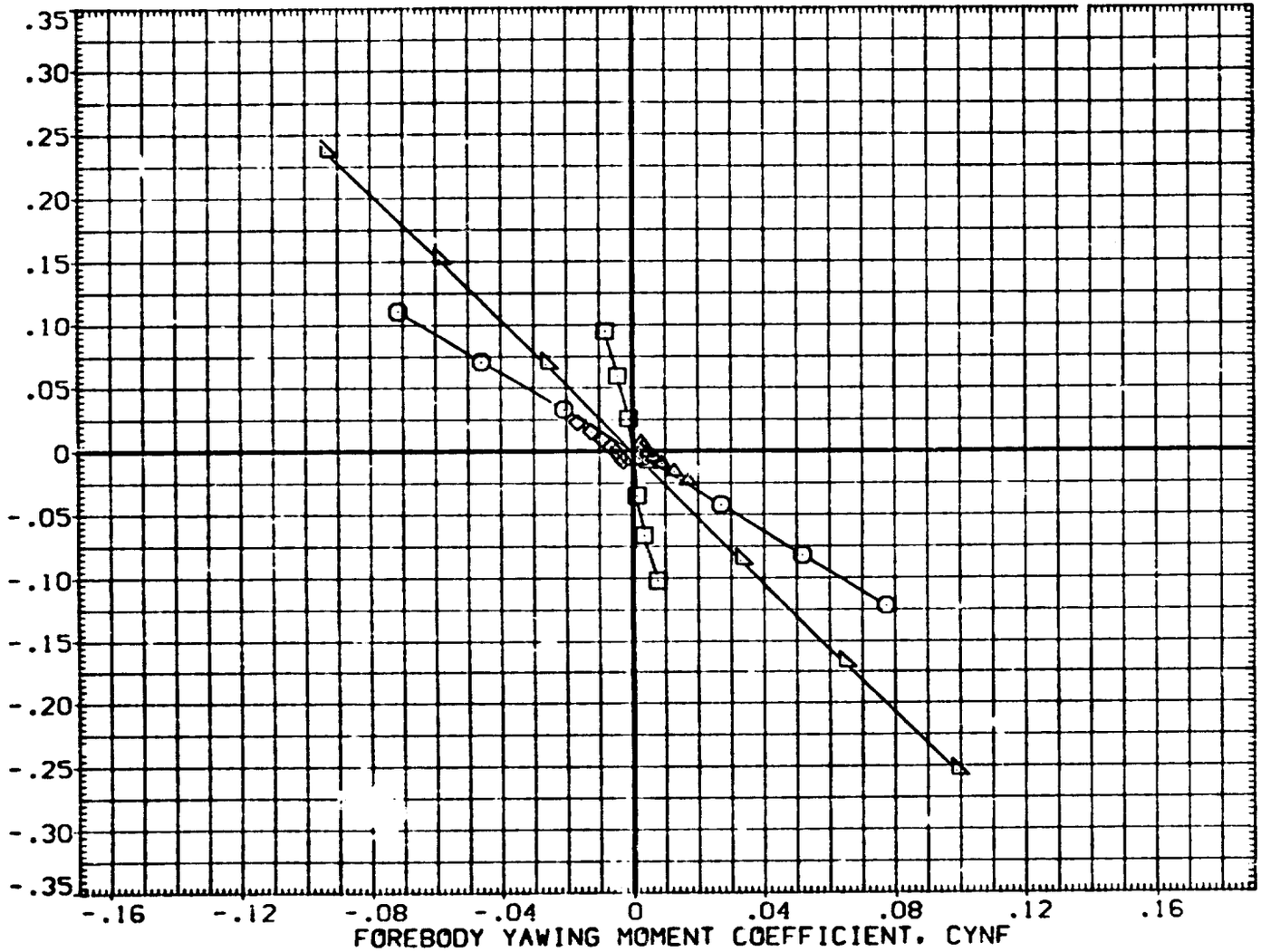


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT30)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL30)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR30)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI30)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0310	

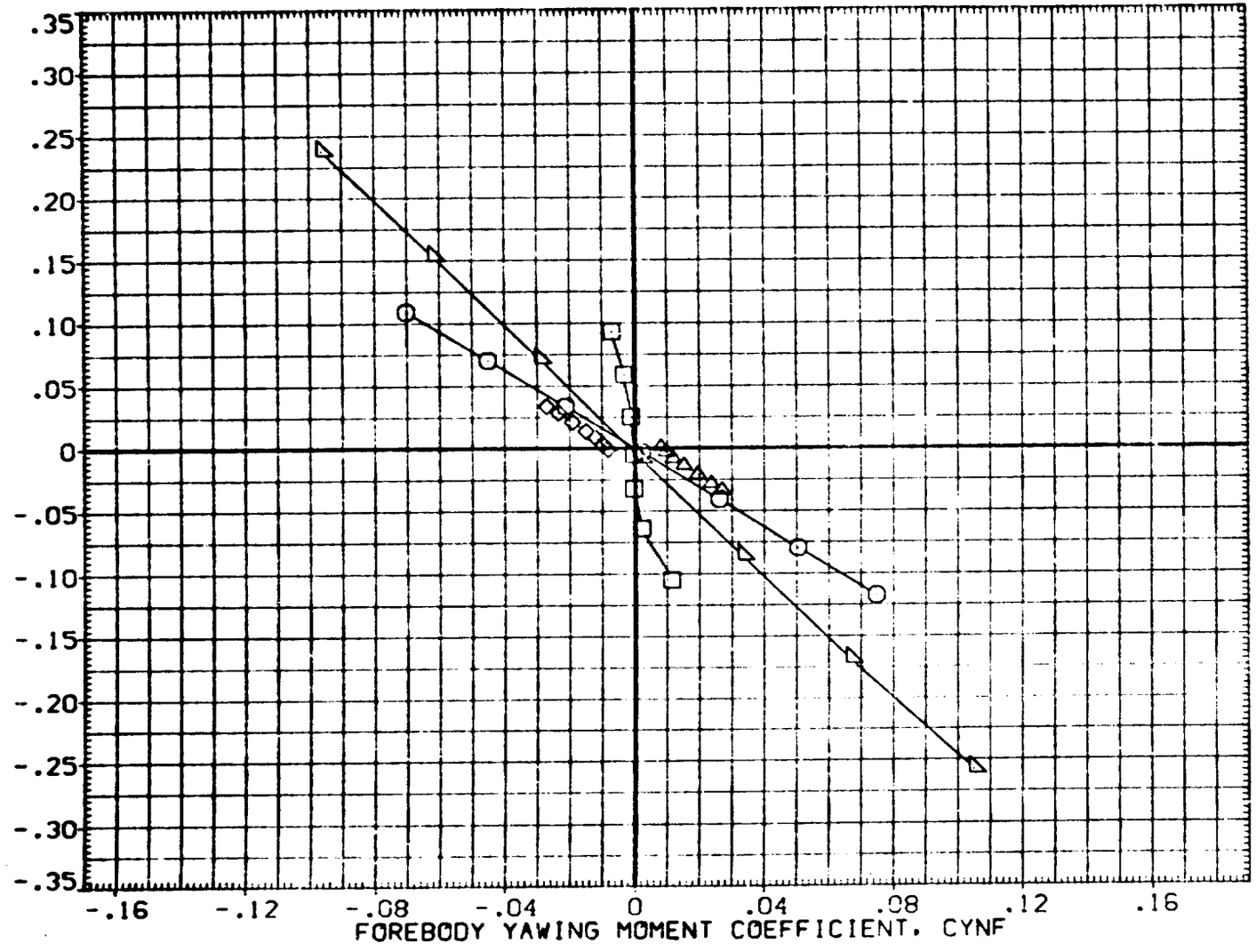


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT30)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL30)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR30)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI30)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0300	IN. ZT
SCALE	.0300	

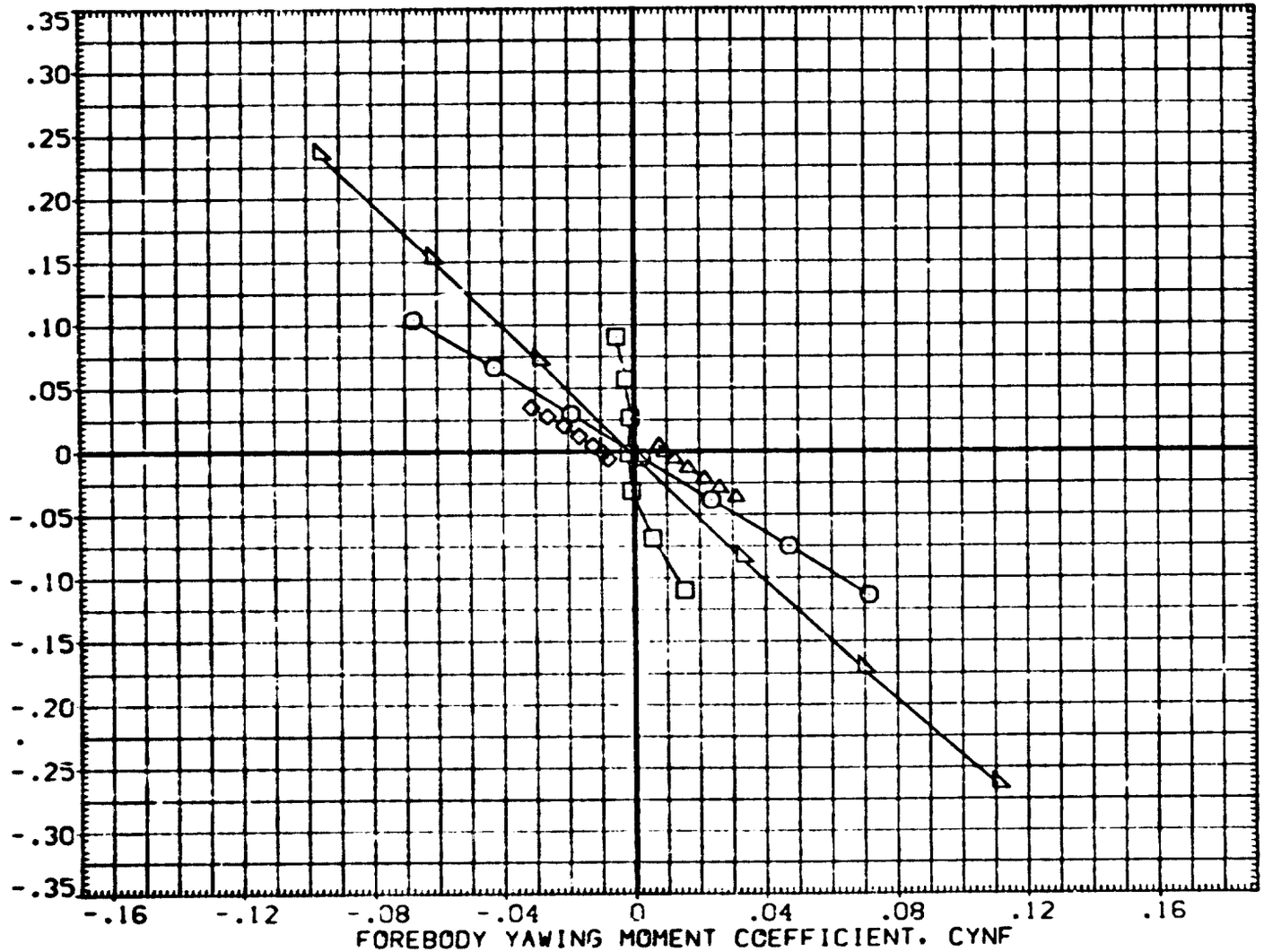


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(LET030)		AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED
(LETT30)		AMES97-019([A81]) LVAP TANK - ALL HL SEALED
(LETL30)		AMES97-019([A81]) LVAP L-SPB - ALL HL SEALED
(LETR30)		AMES97-019([A81]) LVAP R-LRB ALL HL SEALED
(LETI30)		AMES97-019([A81]) LVAP INT VEH ALL HL SEALED

ELV-IB	ELV-OB	MACH	SPOBRK
6.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000
8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

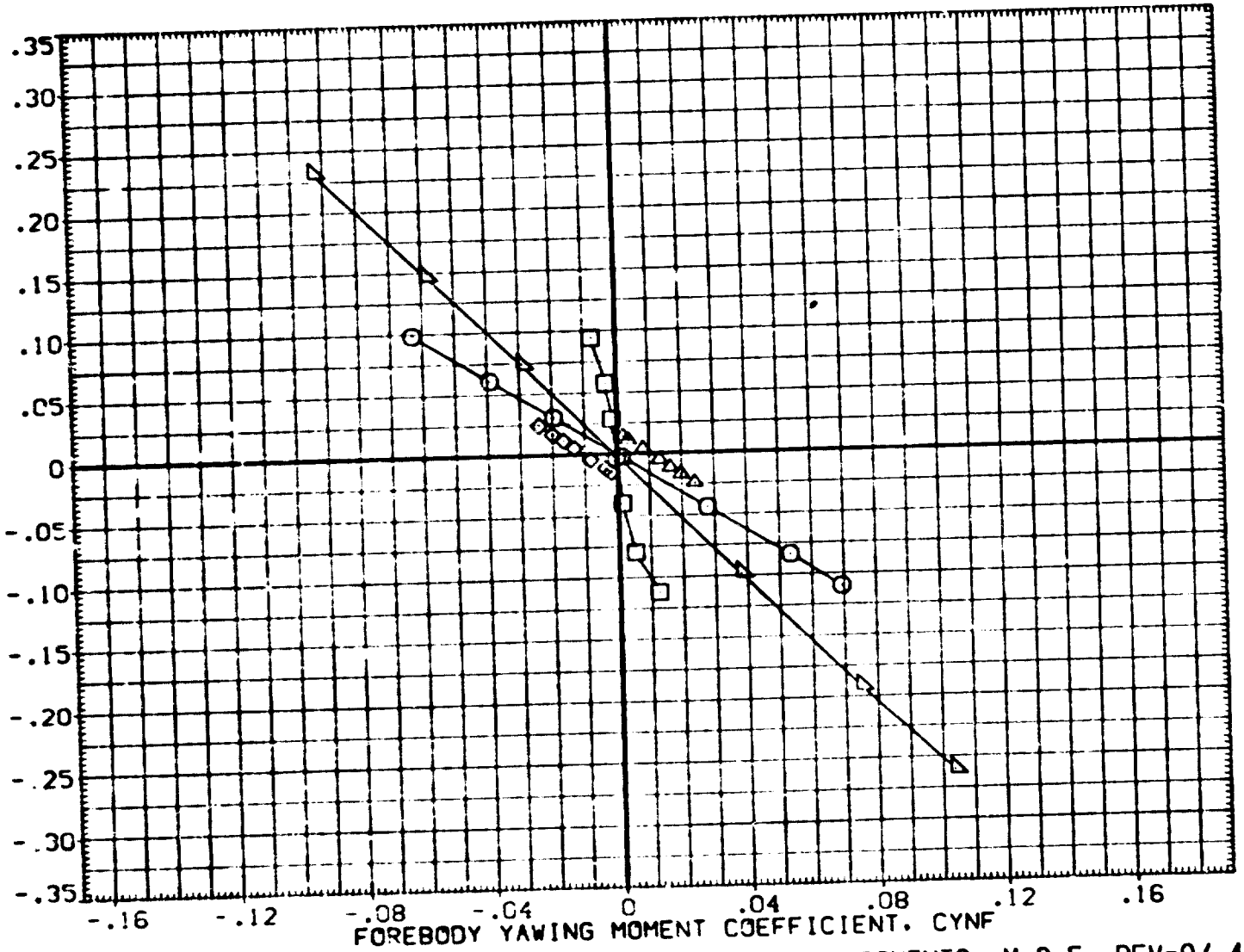


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT30)	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL30)	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETR30)	AMES97-019(IA81) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(LETI30)	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

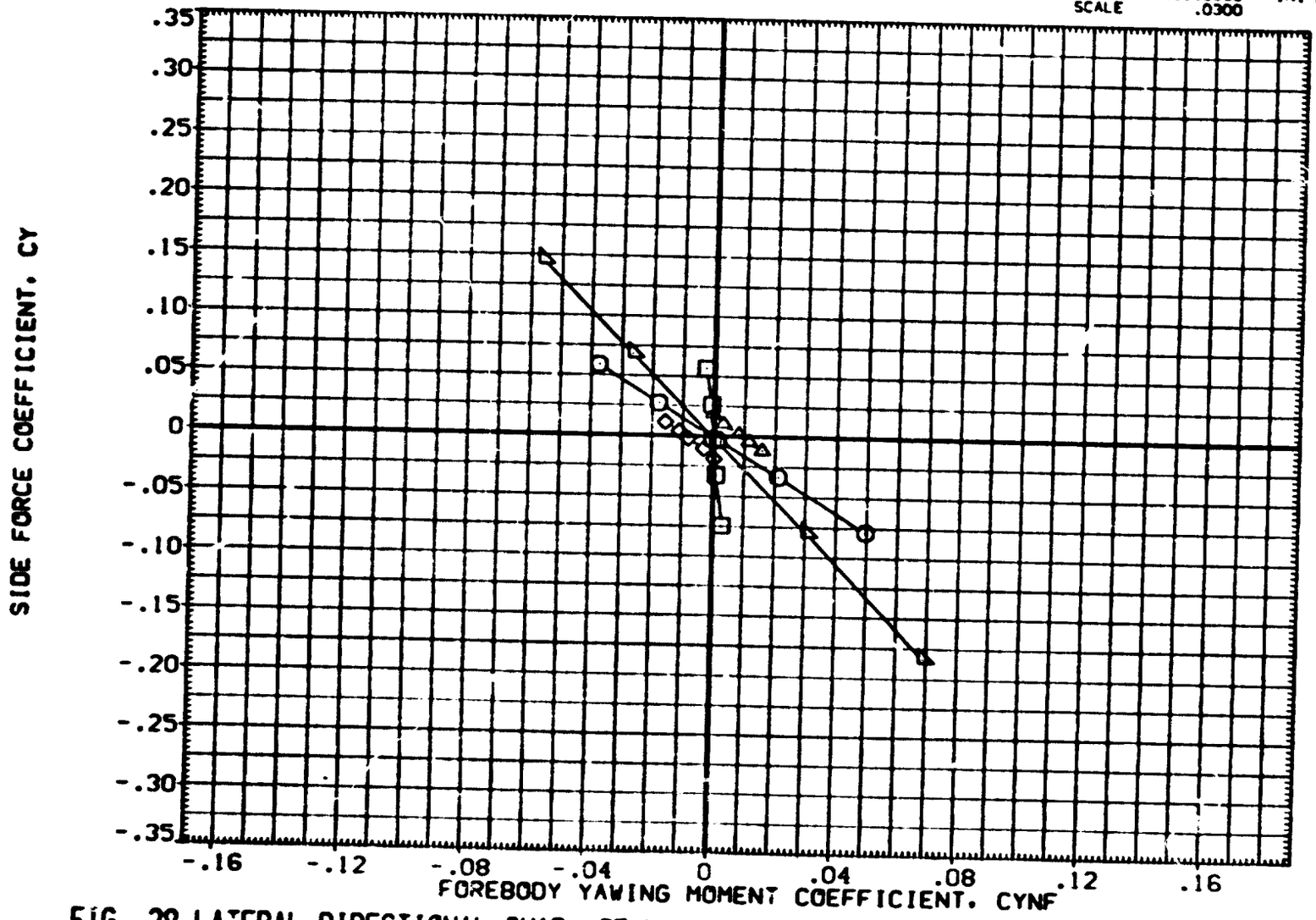


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(LETO3B)	AMES97-019([ABI]) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(LETT3B)	AMES97-019([ABI]) LVAP TANK - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETL3B)	AMES97-019([ABI]) LVAP L-SRB - ALL ML SEALED	8.000	-4.000	2.500	.000
(LETR3B)	AMES97-019([ABI]) LVAP R-LRB ALL ML SEALED	8.000	-4.000	2.500	.000
(LETI3B)	AMES97-019([ABI]) LVAP INT VEH ALL ML SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

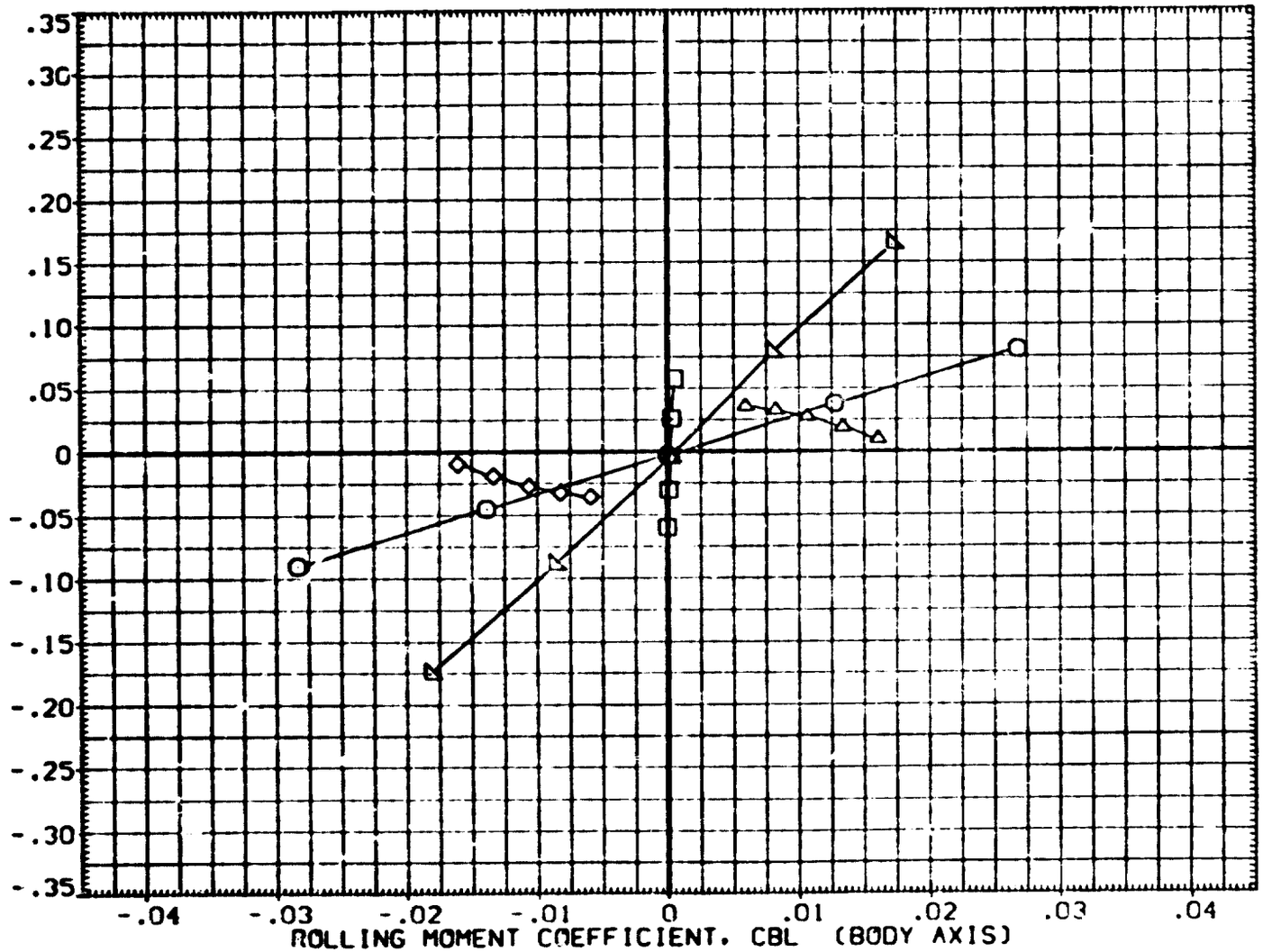


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

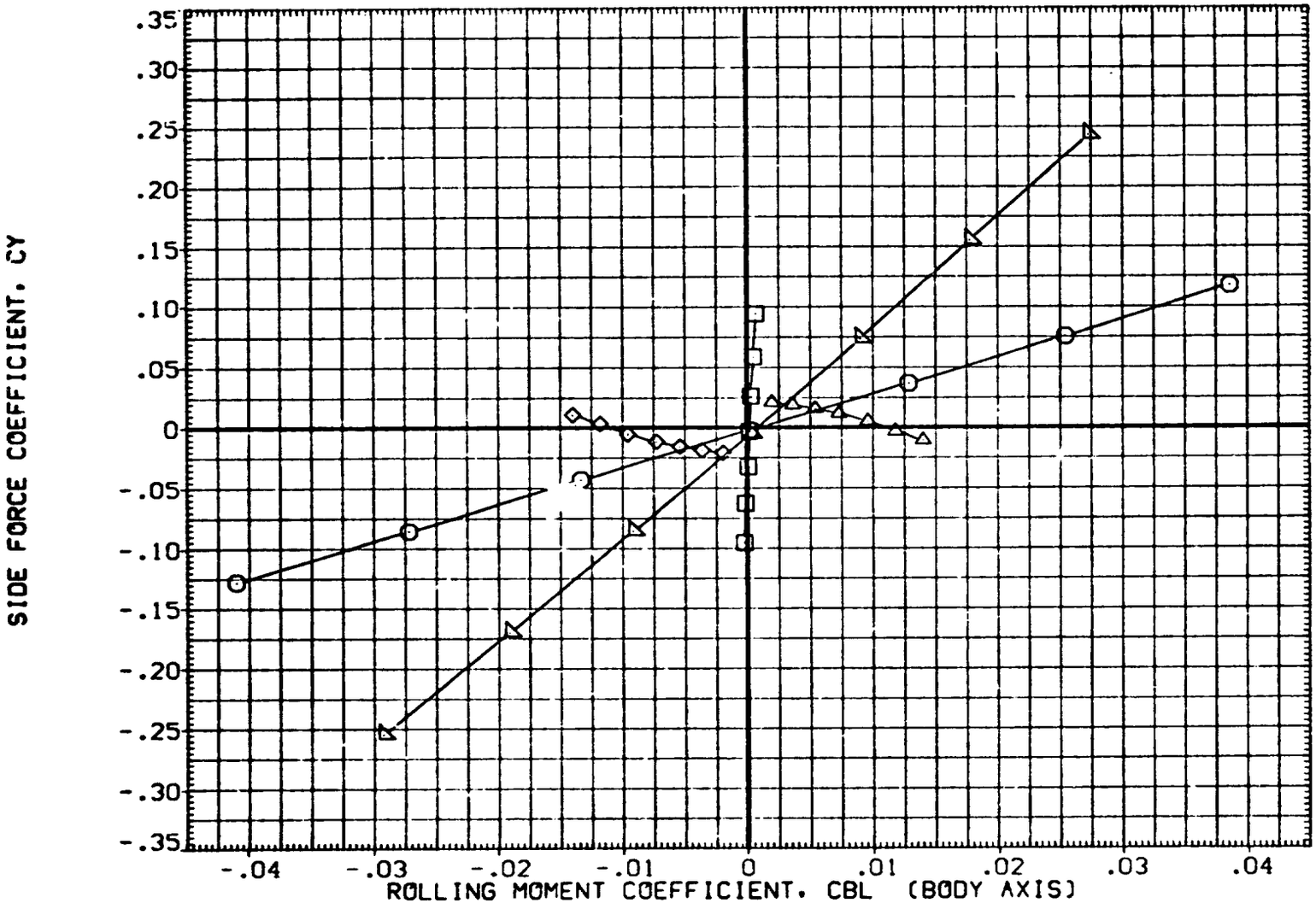


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO38)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	○	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

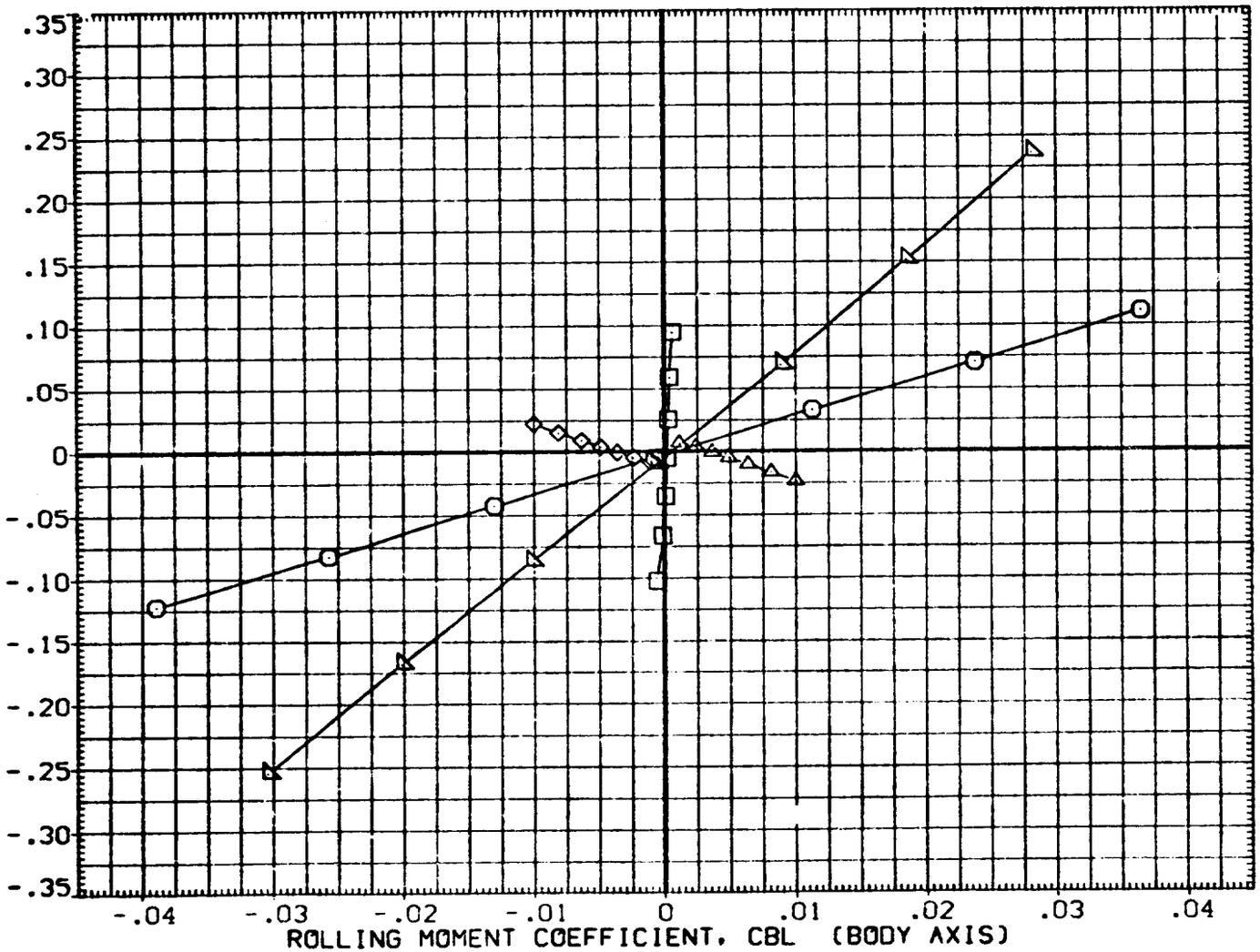


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(C)ALPHAI= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

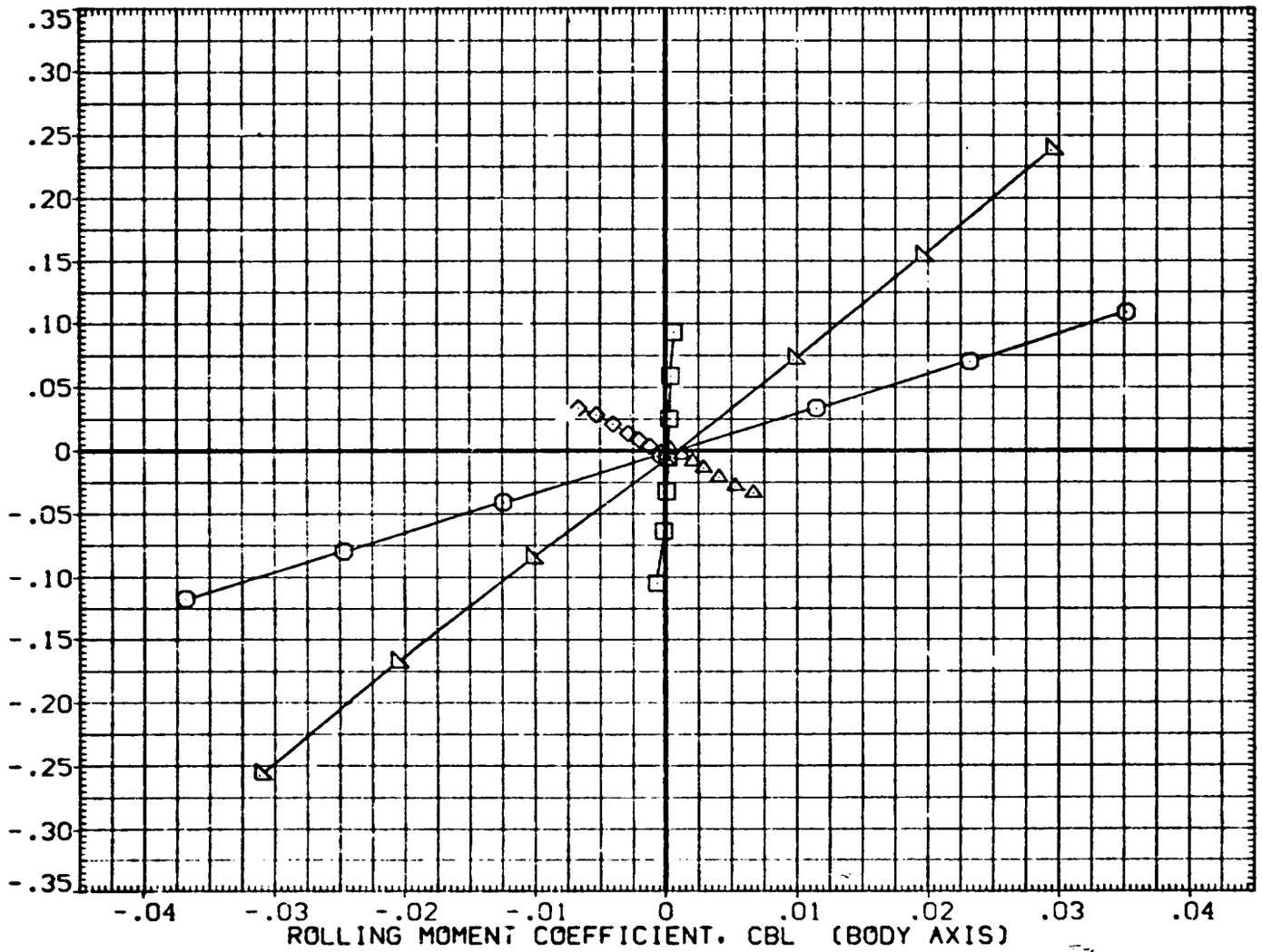


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(D)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

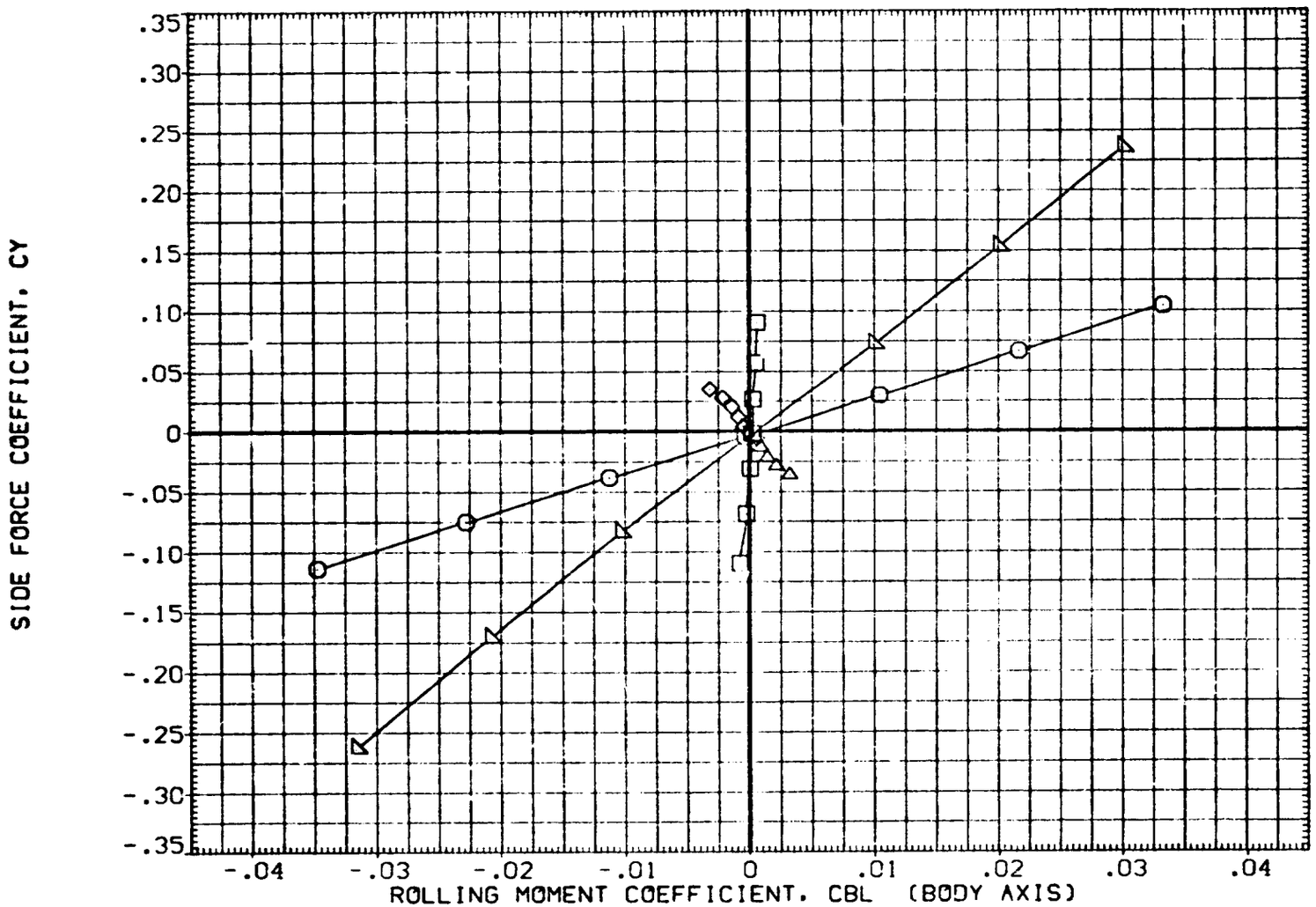


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(E)ALPHAI= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET038)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(LETT38)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)	⋈	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR38)	▷	AMES97-019(IA81) LVAP R-LPB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI38)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

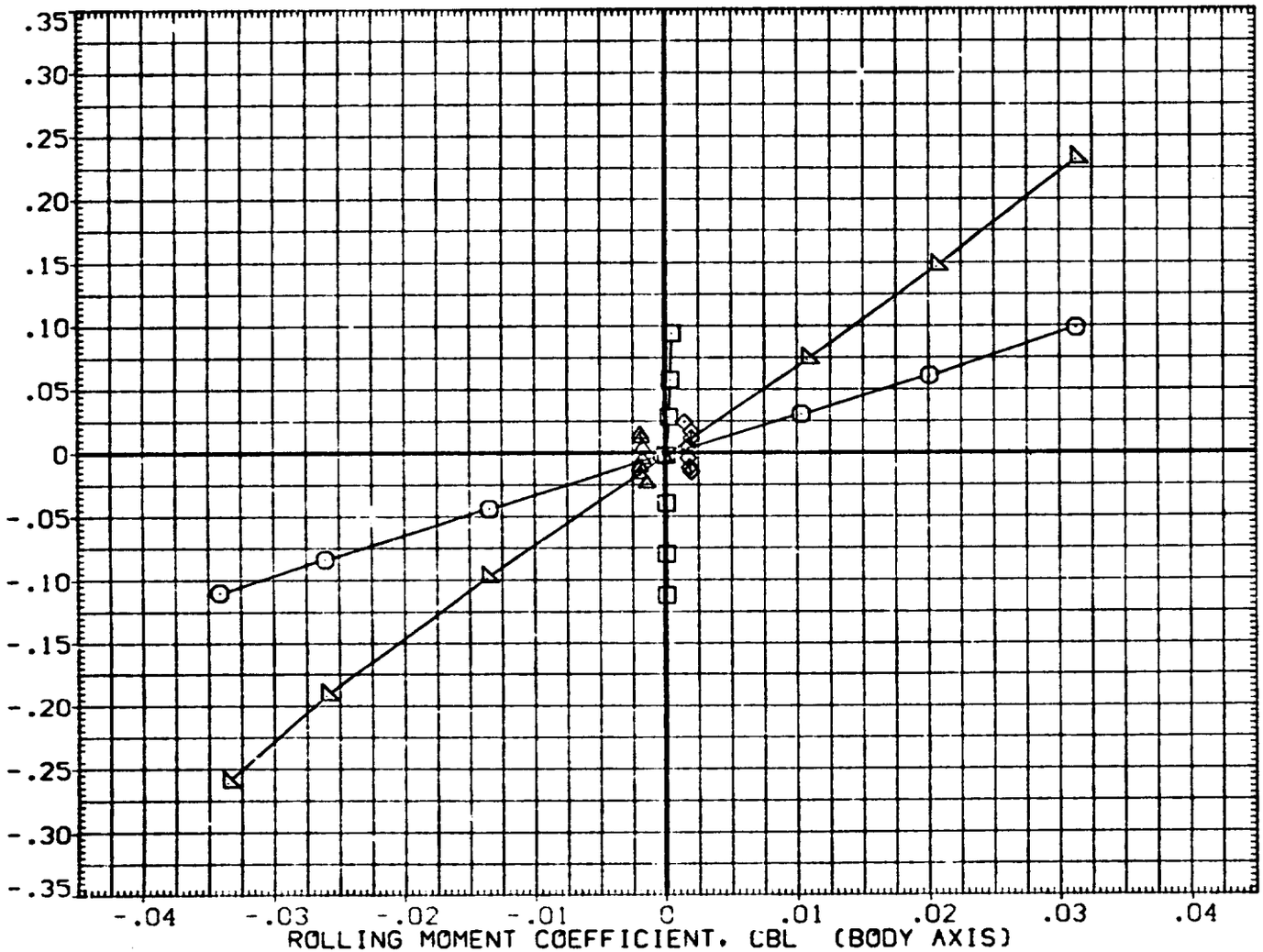


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(F)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO30)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	9.000	-4.000	2.500	.000
(LETT30)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETL39)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	8.000	-4.000	2.500	.000
(LETR30)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	8.000	-4.000	2.500	.000
(LETI30)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

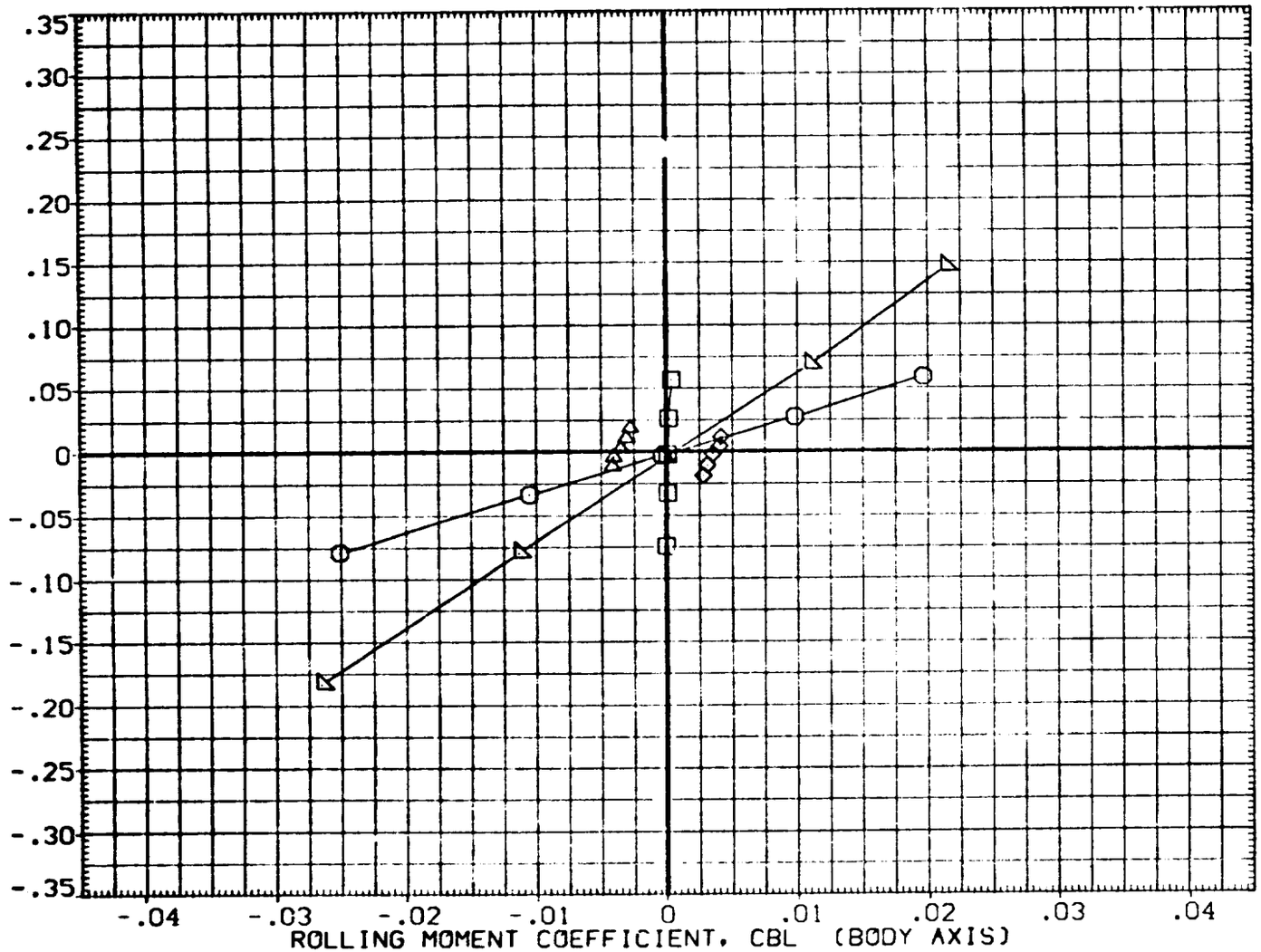


FIG. 28 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=8/-4

(G)ALPHAI= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LETO42)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

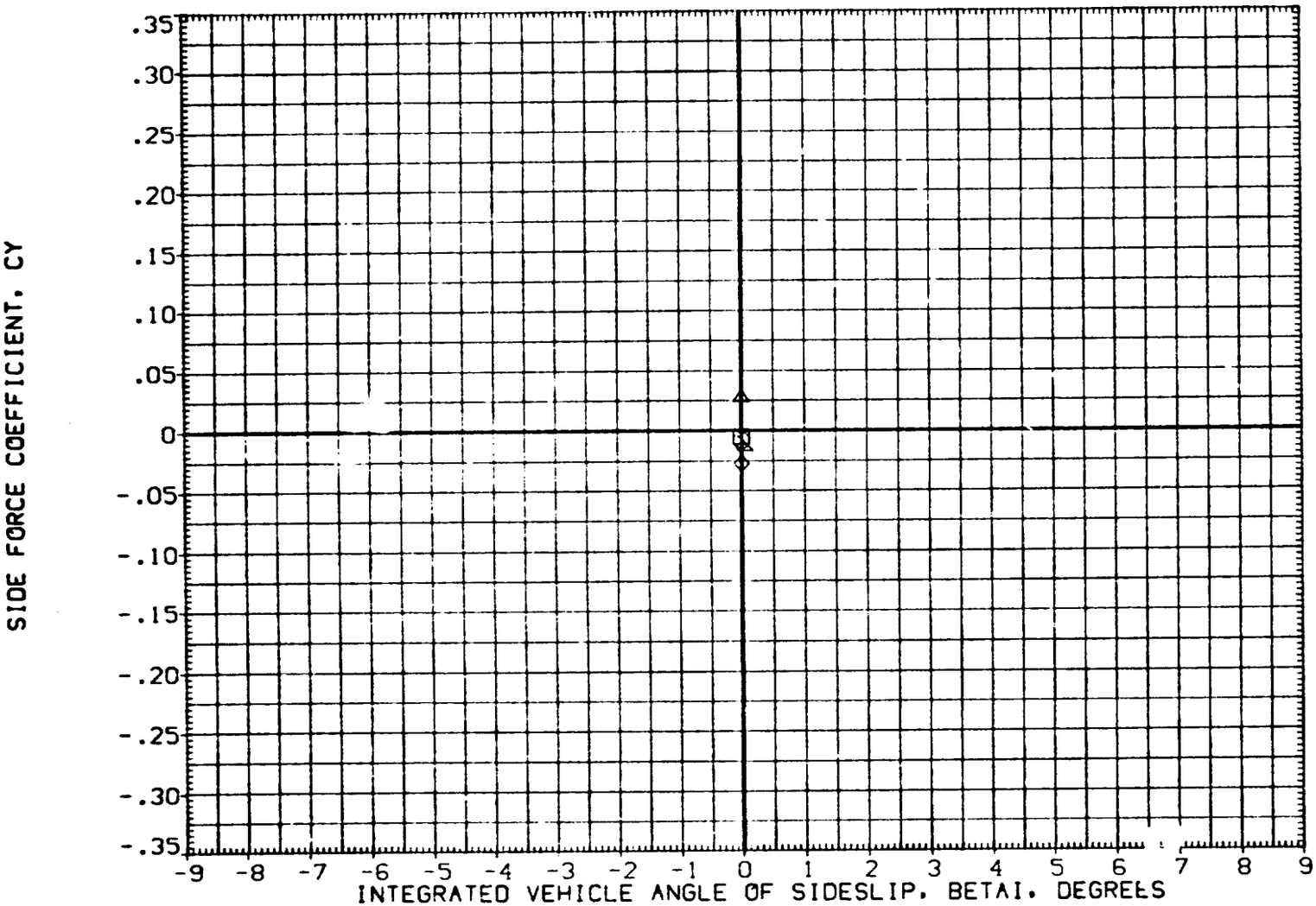


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)ALPHAI= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET042)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	AMES97-019([A81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	AMES97-019([A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	AMES97-019([A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	AMES97-019([A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

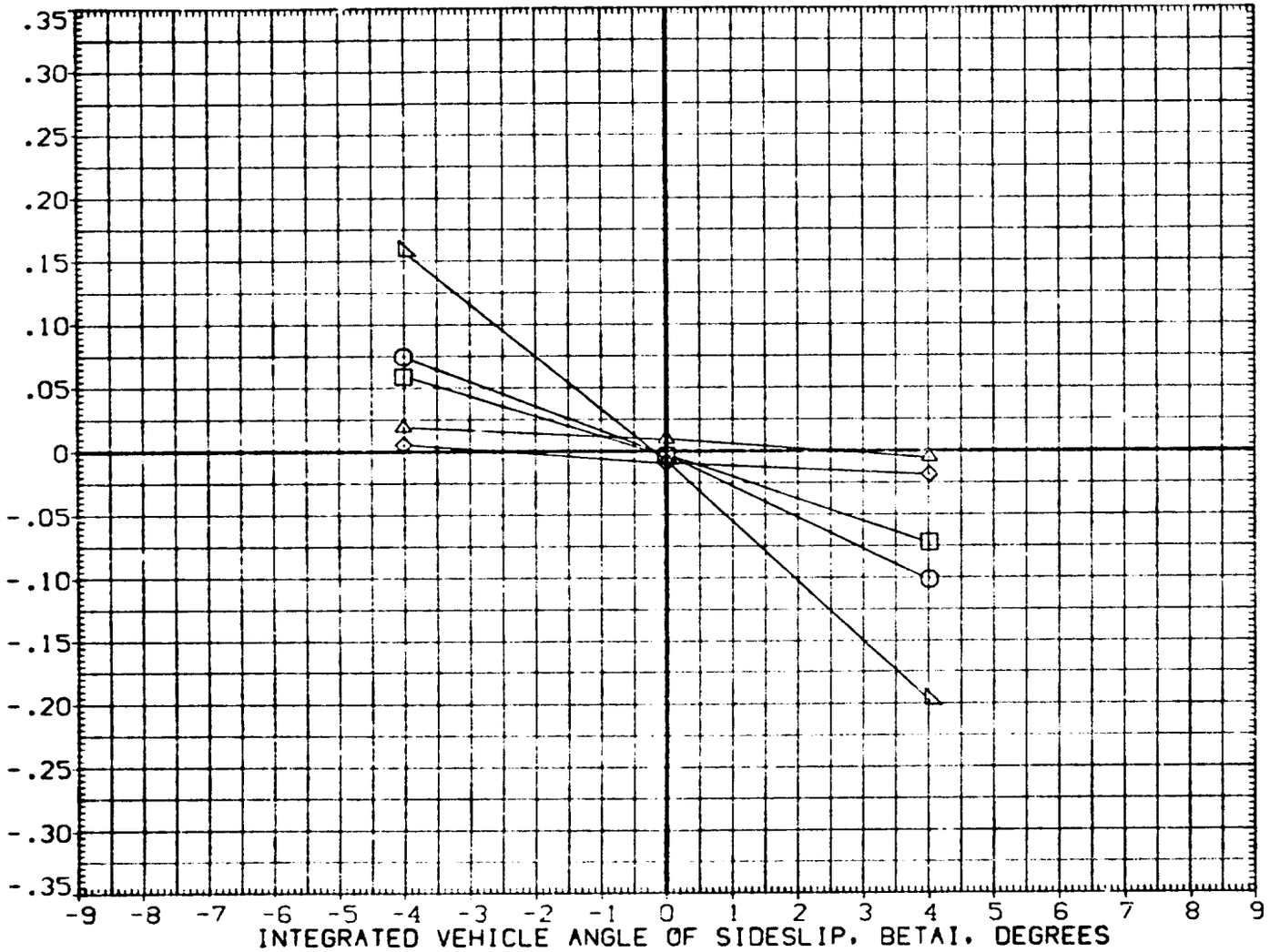


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(1A81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

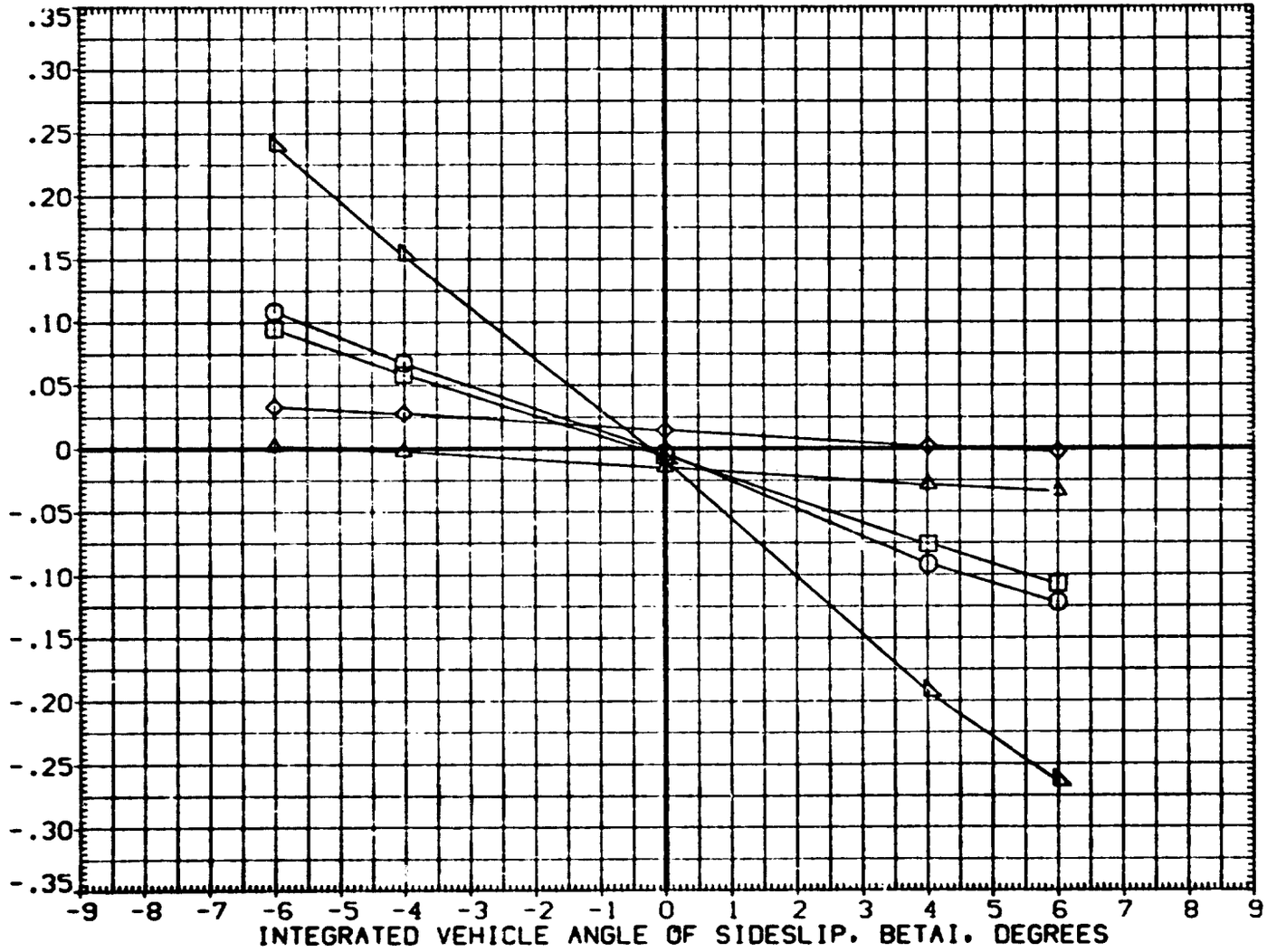


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC42)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	▣	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	◁	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

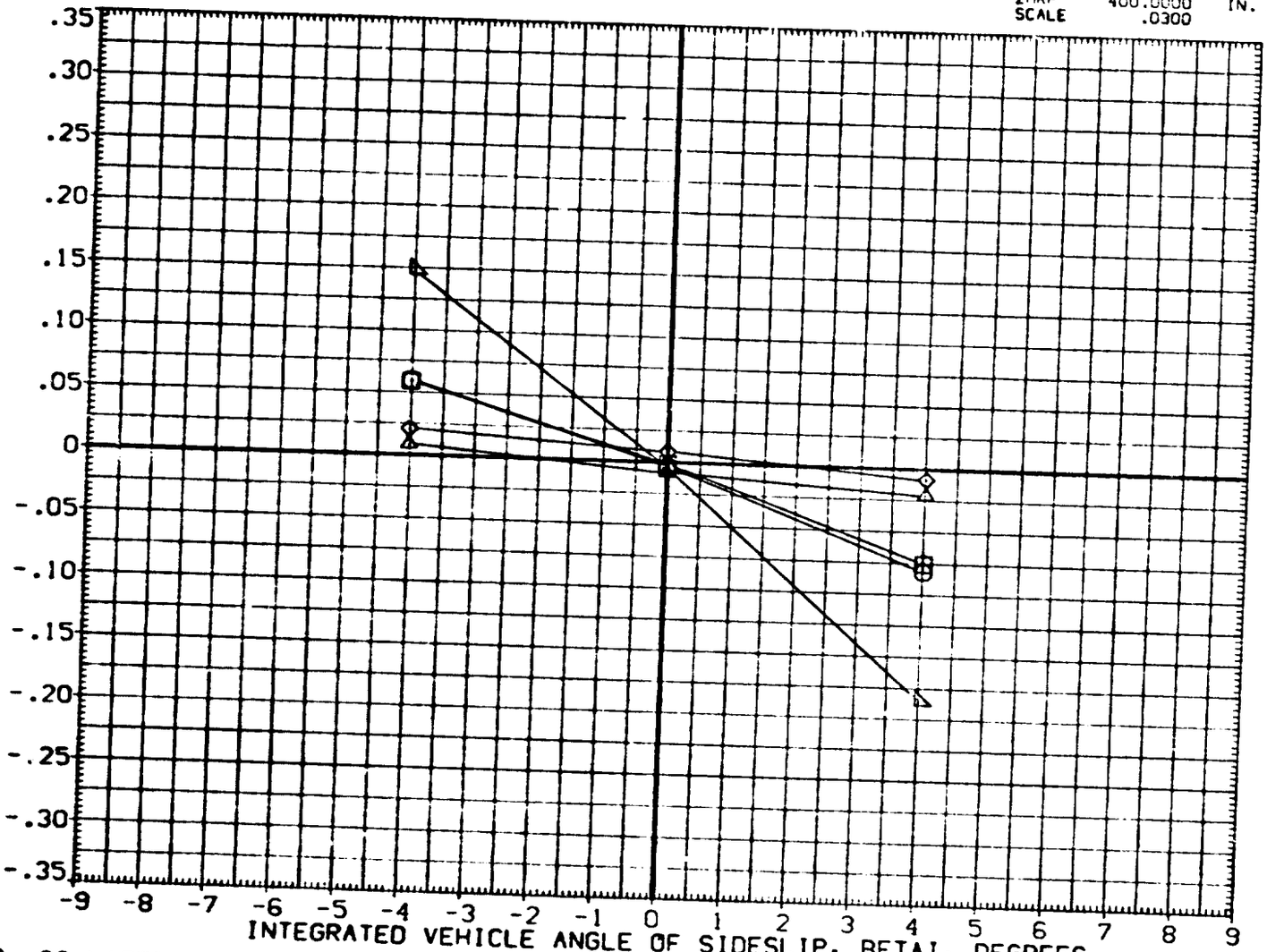


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019(IA81) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(LETL42)	△	AMES97-019(IA81) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019(IA81) LVAP R-SRB ALL ML SEALED	.000	.000	2.500	.000
(LETI42)	⊿	AMES97-019(IA81) LVAP INT VEH ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

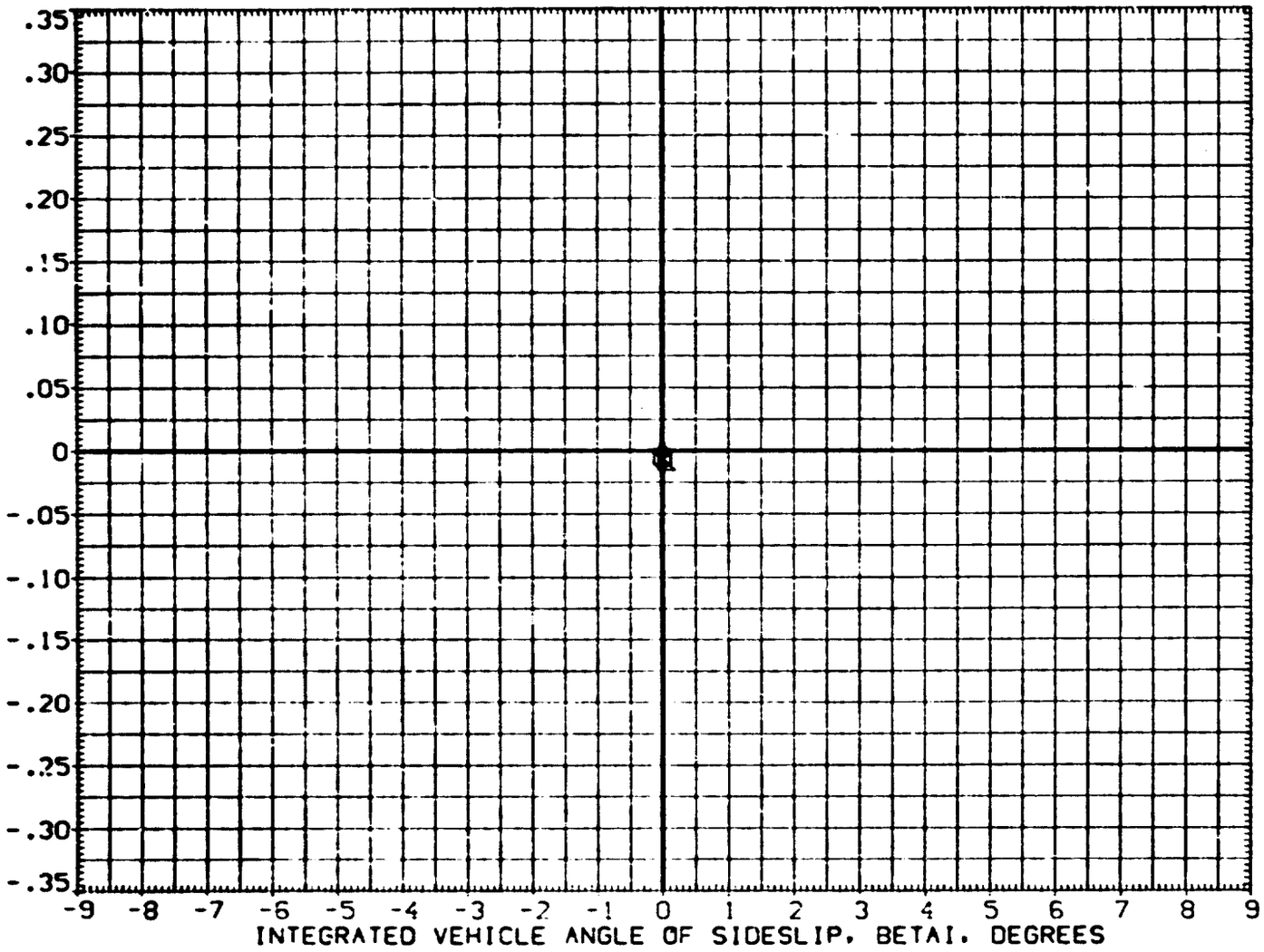


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETD42)	□	AMES97-019([AB1]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019([AB1]) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⋈	AMES97-019([AB1]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019([AB1]) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019([AB1]) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

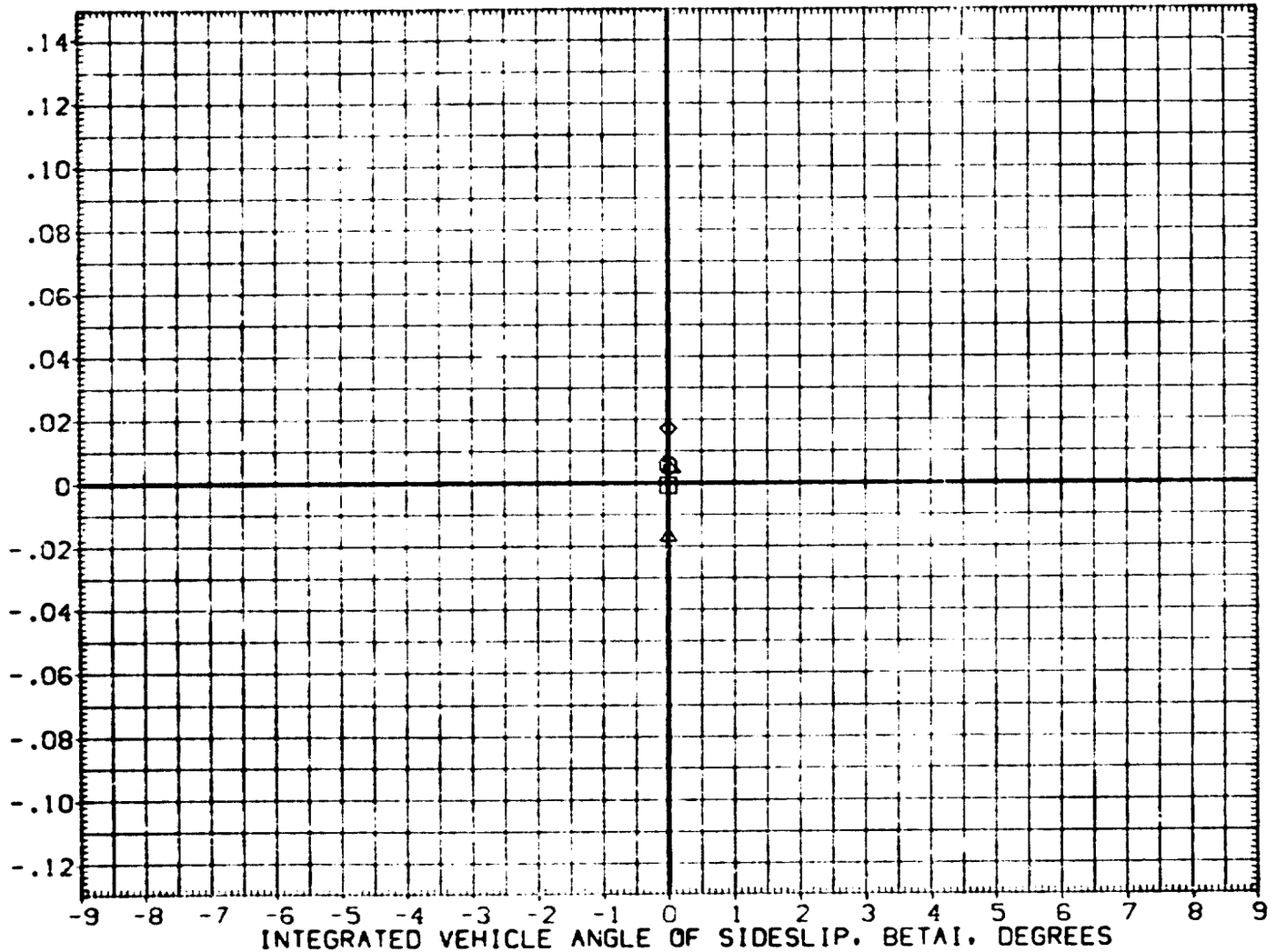


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	○	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⋈	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019([A81]) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

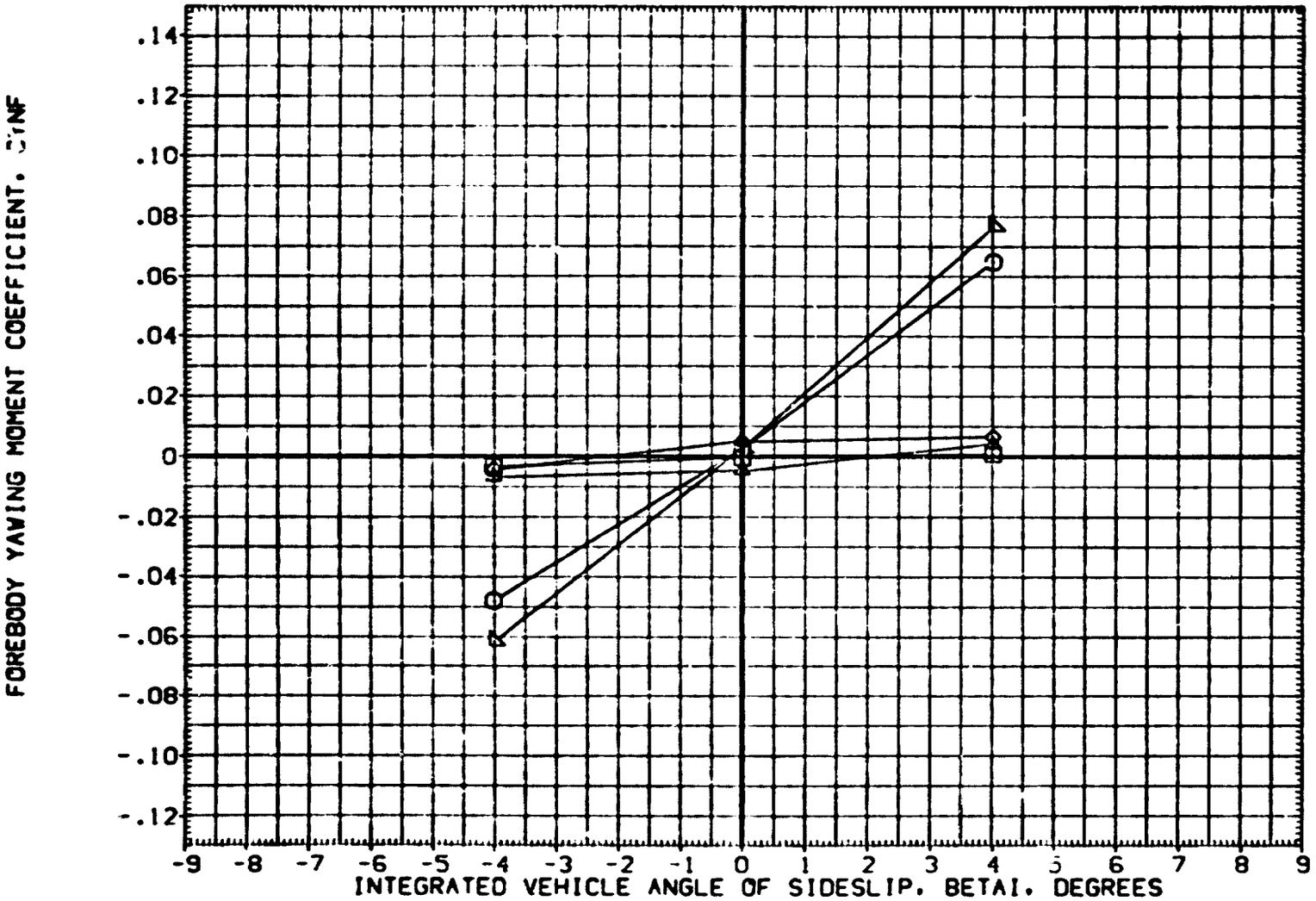


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO42)	□	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⋈	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	▷	AMES97-019(IAB1) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

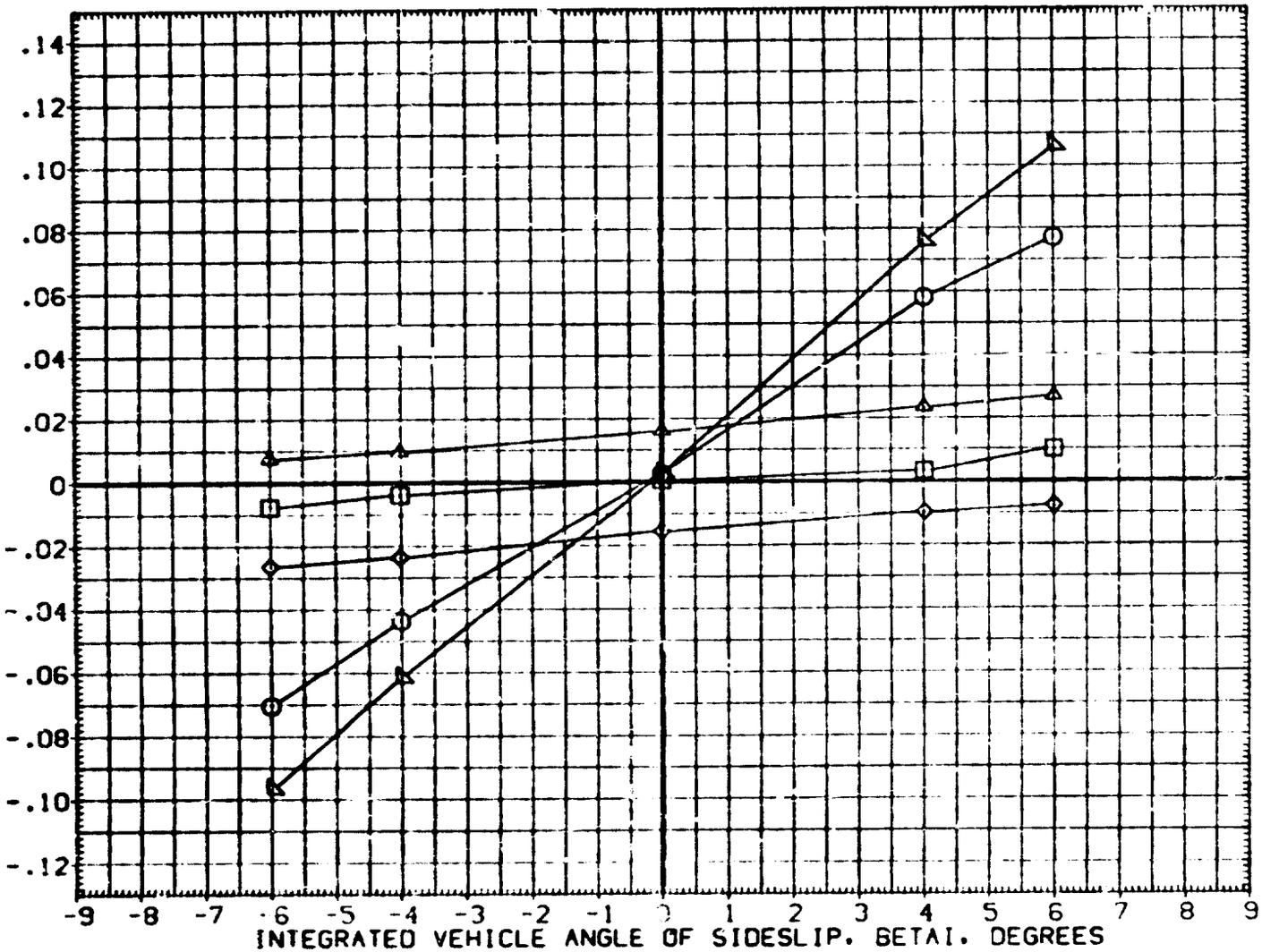


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

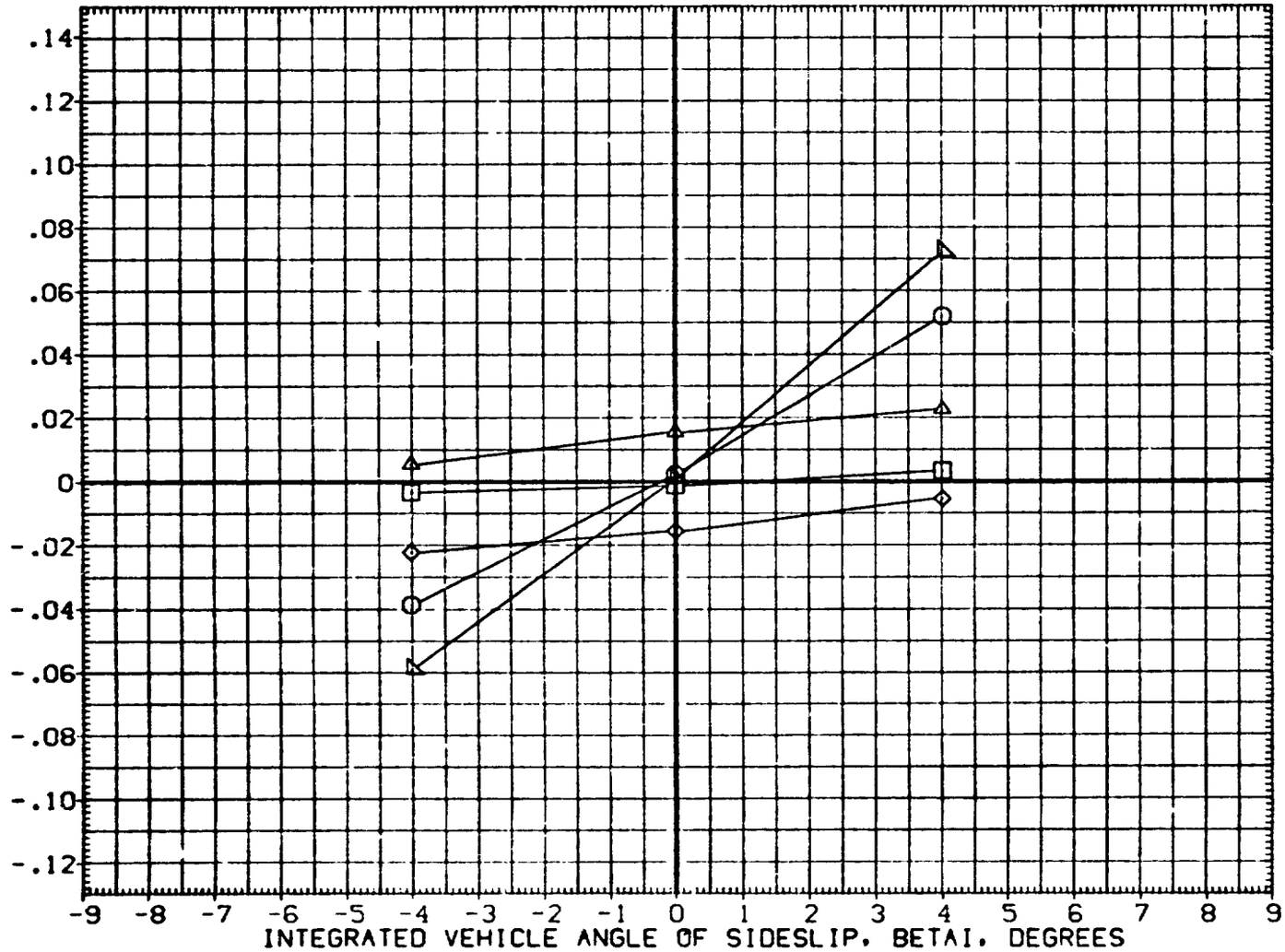


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)ALPHAI= 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

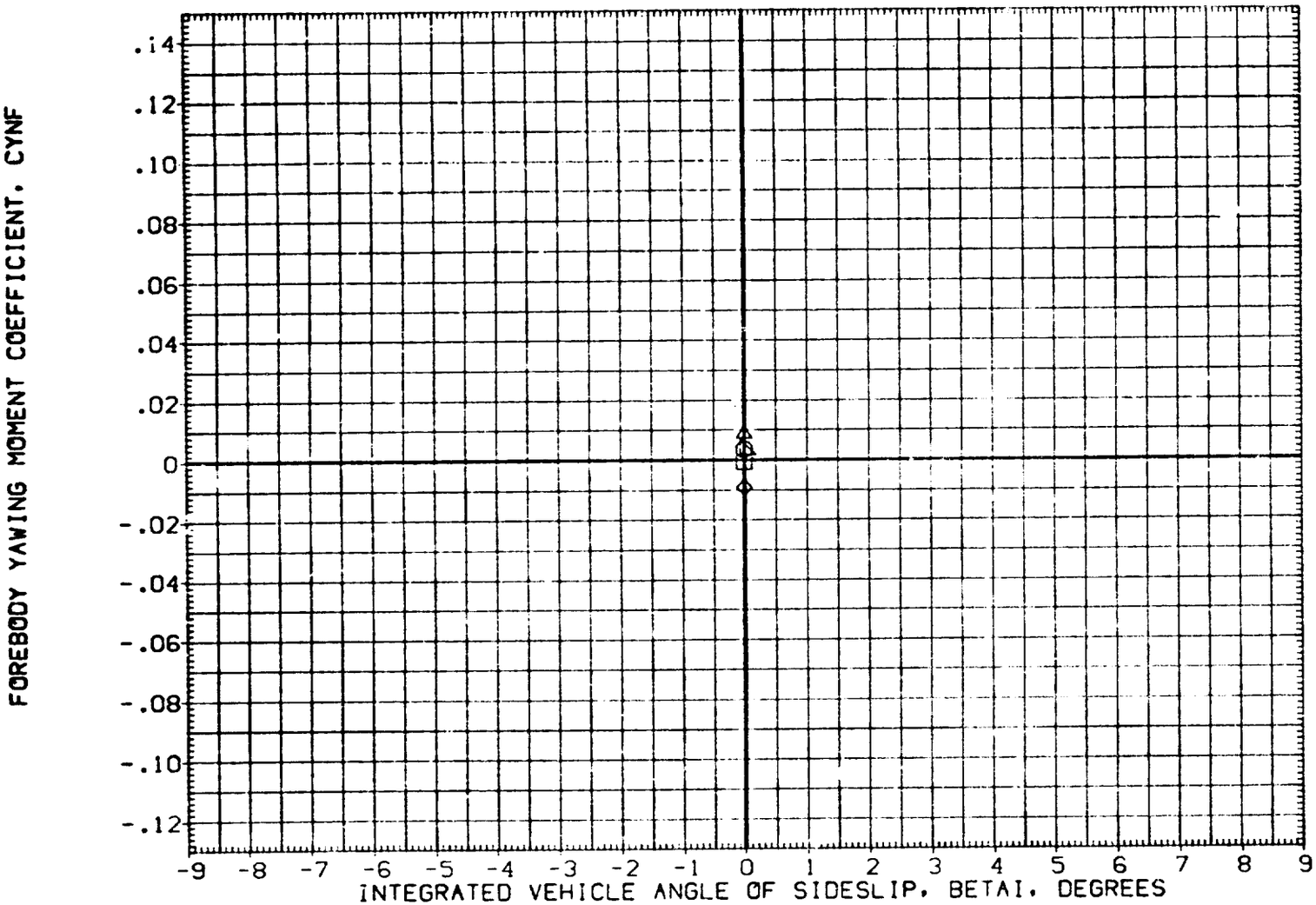


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

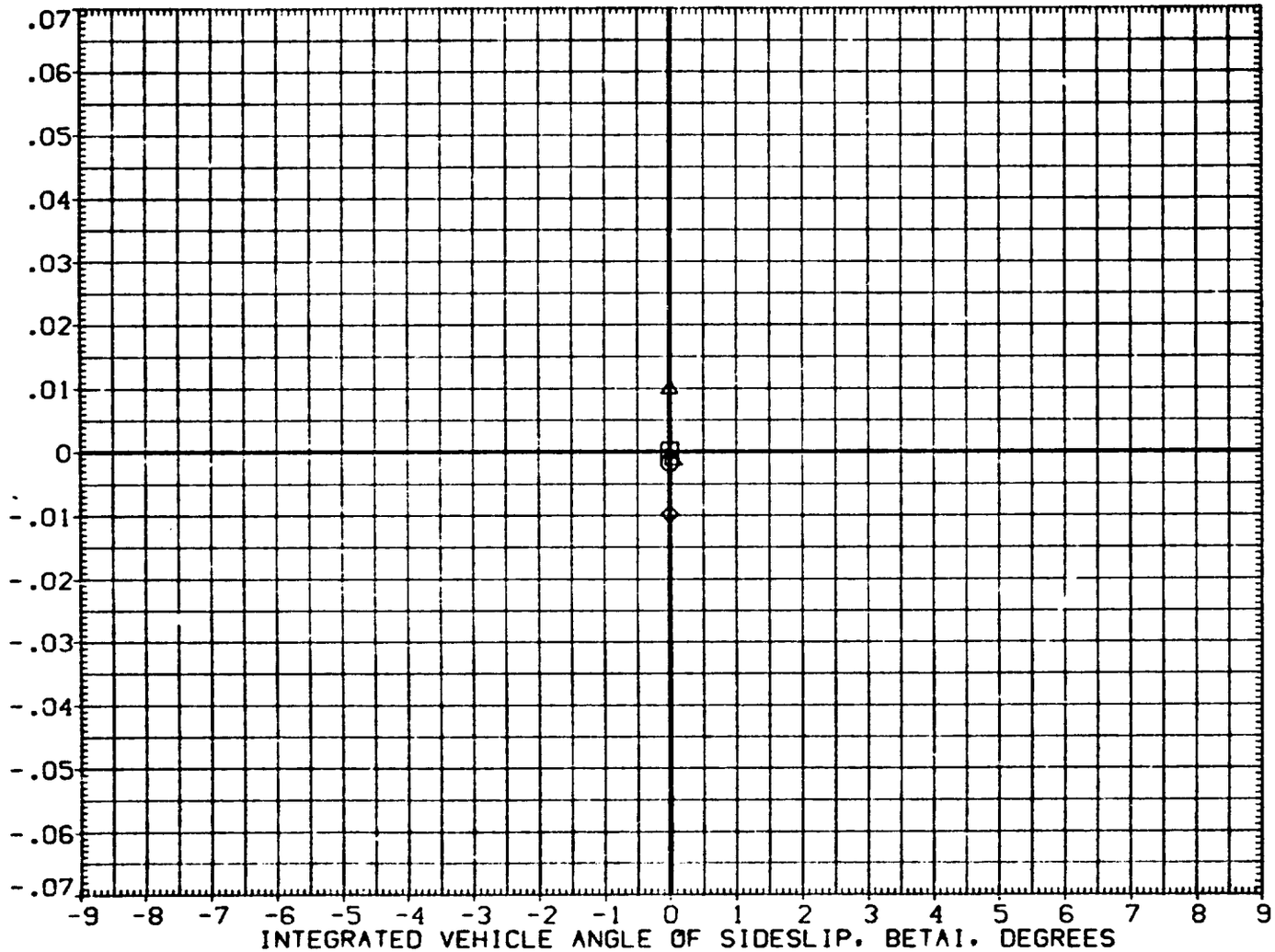


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC42)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	⋈	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

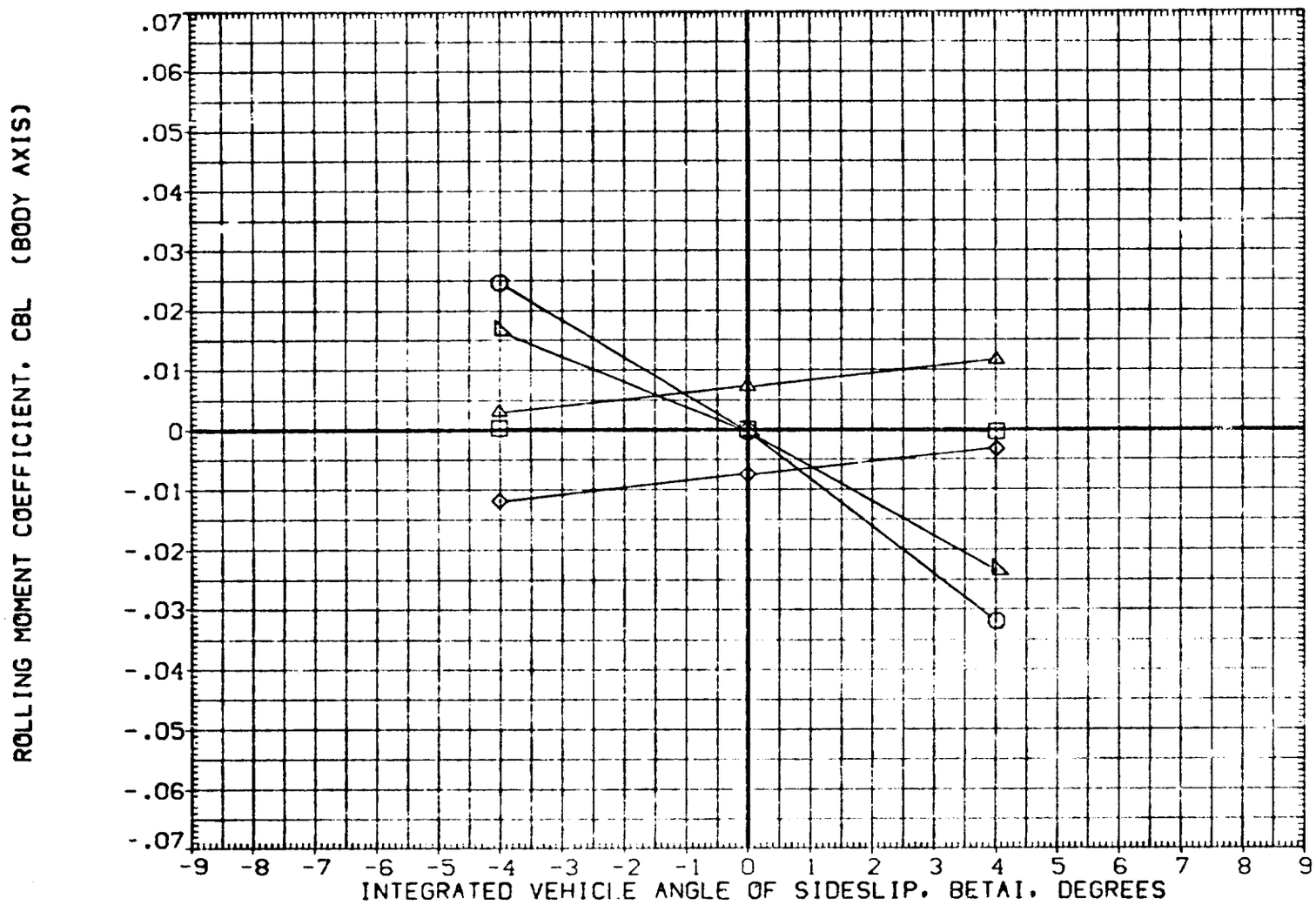


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	⊠	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

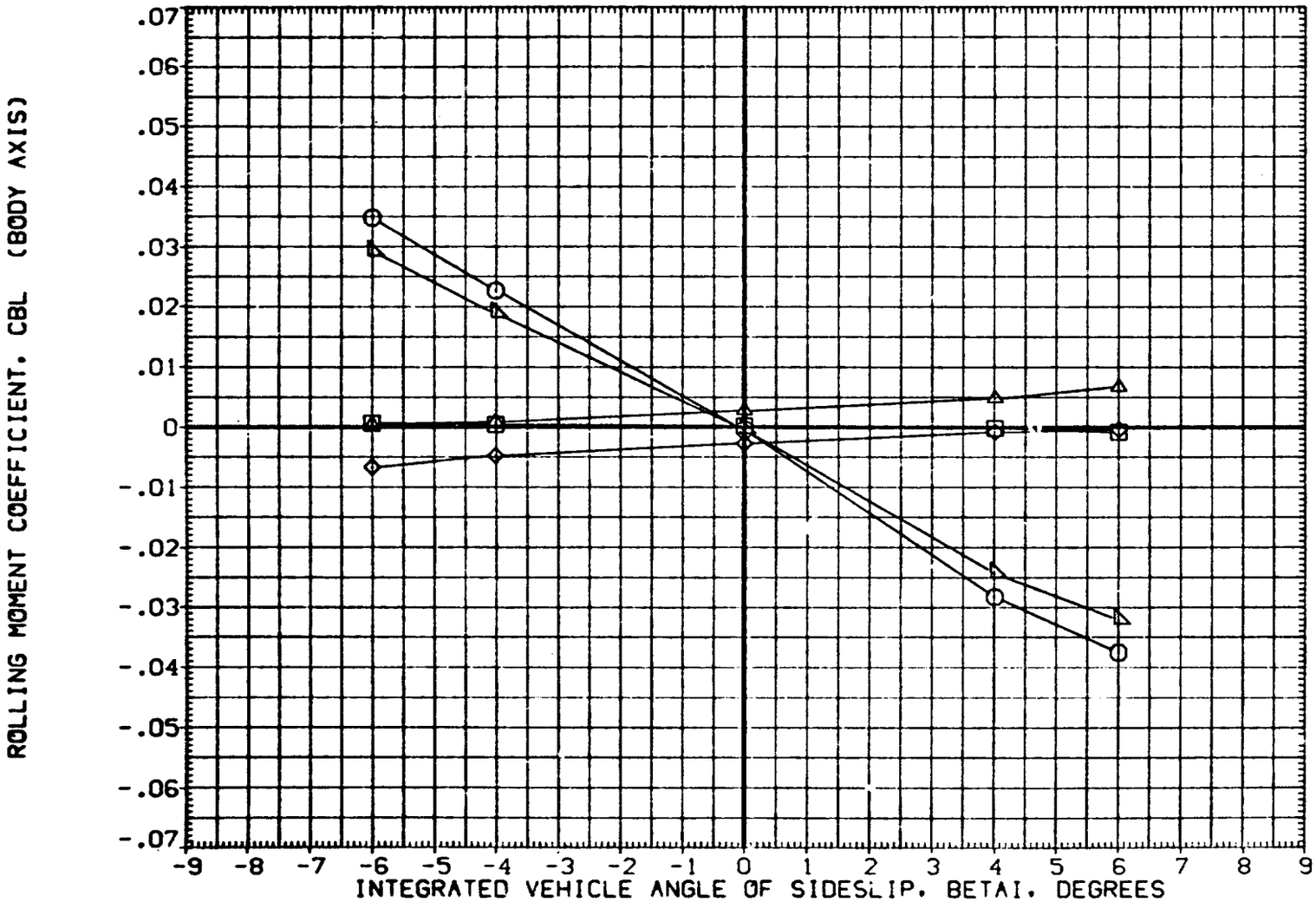


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

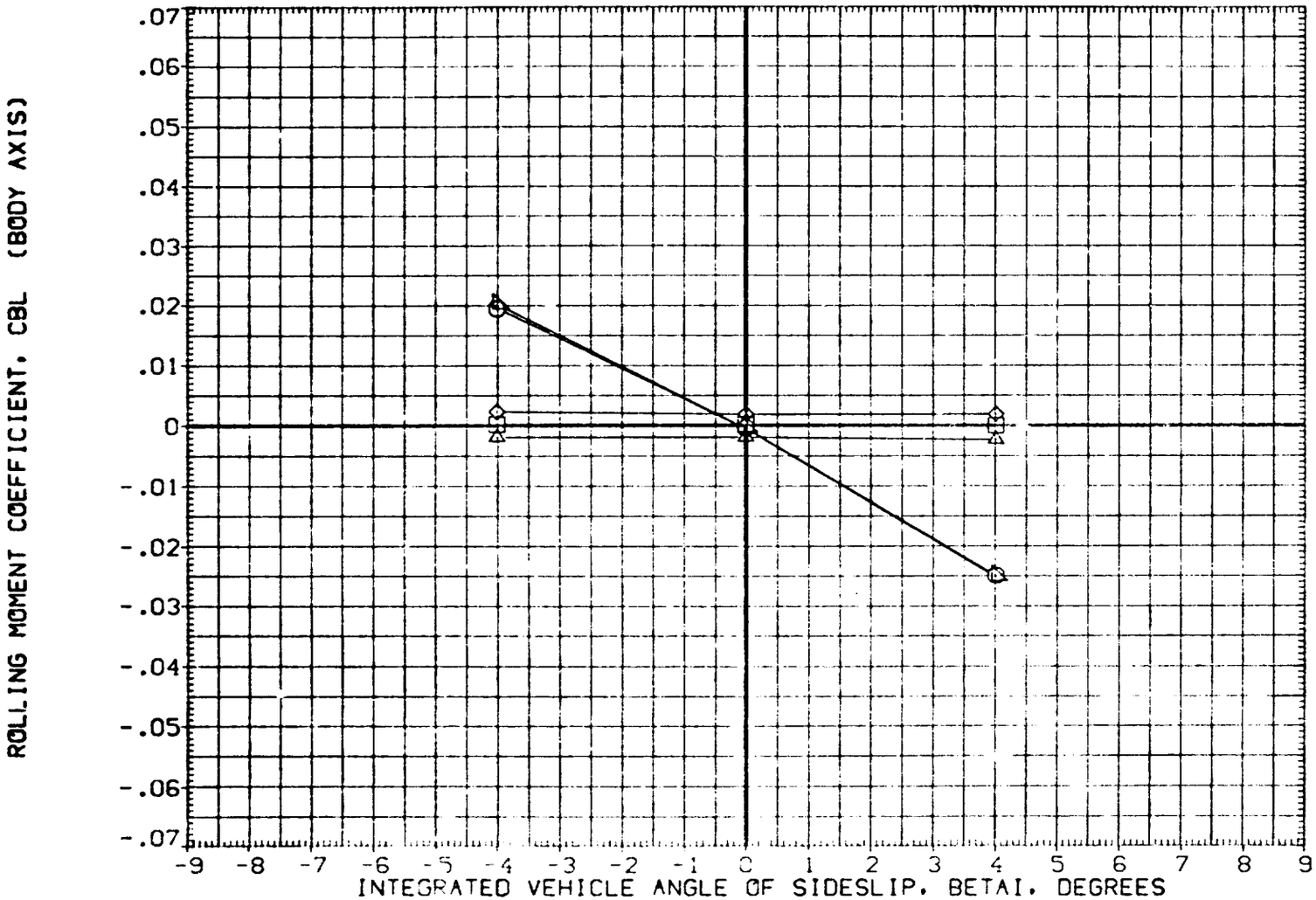


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

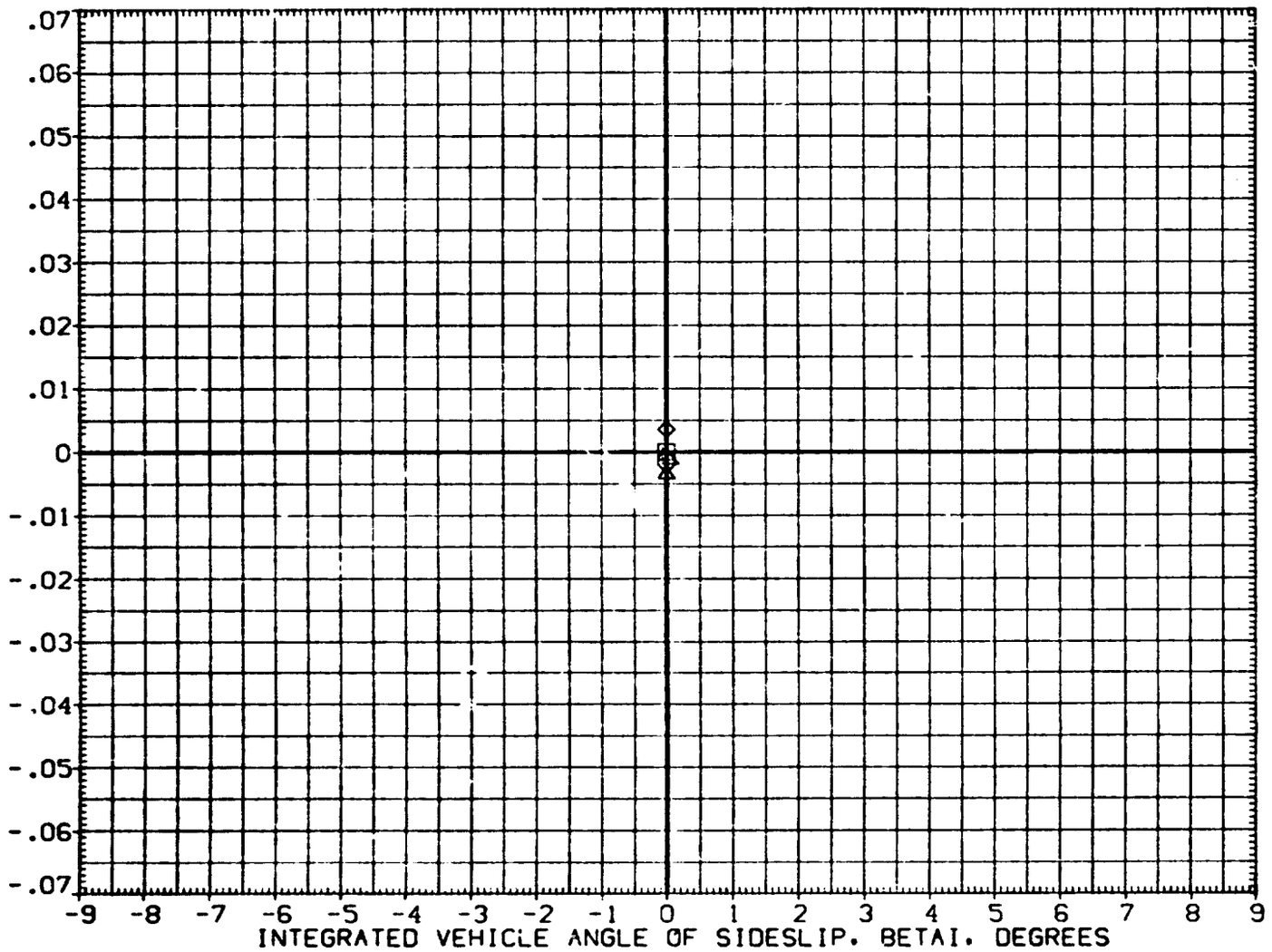


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

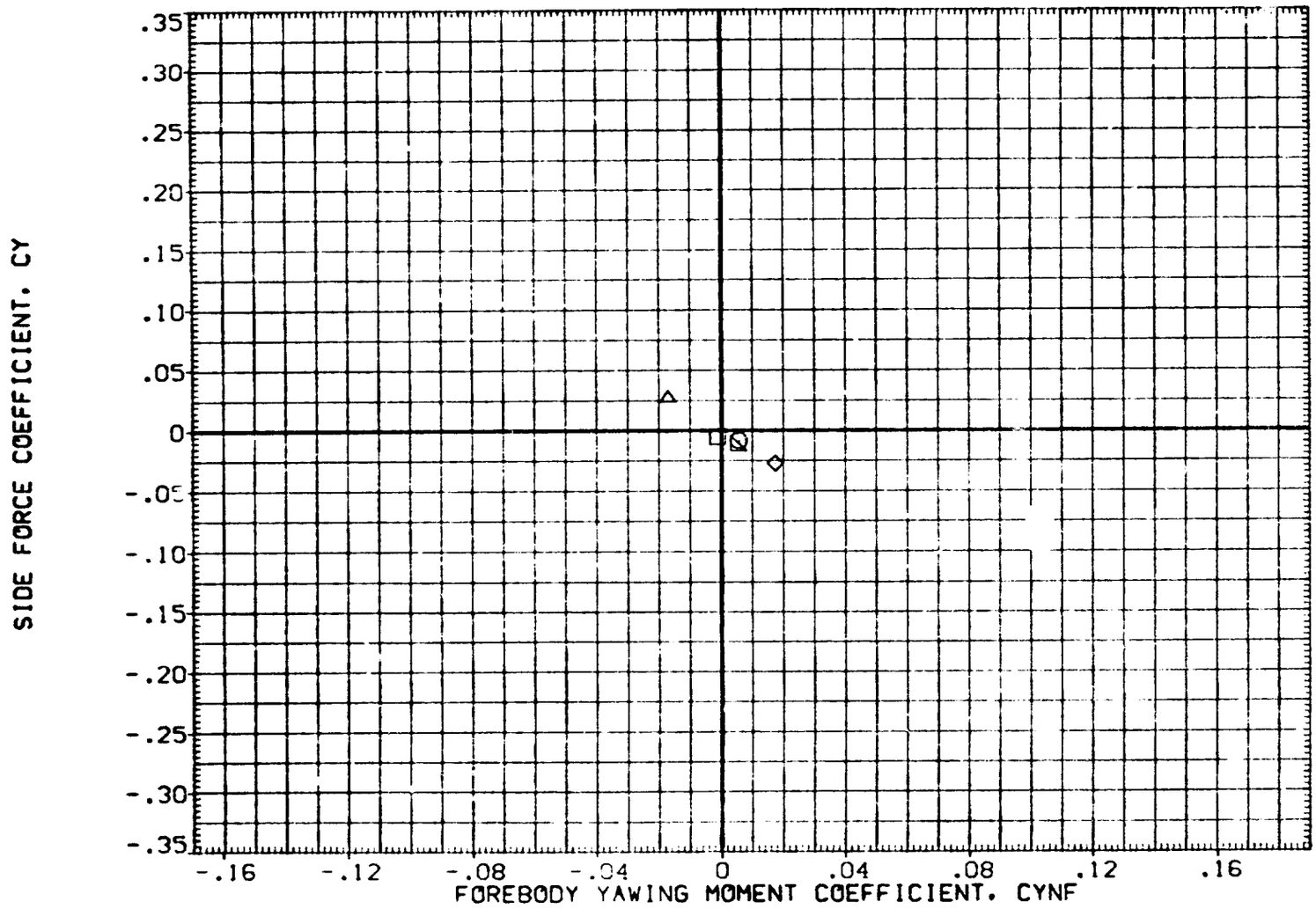


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(LET042)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⊠	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	▷	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

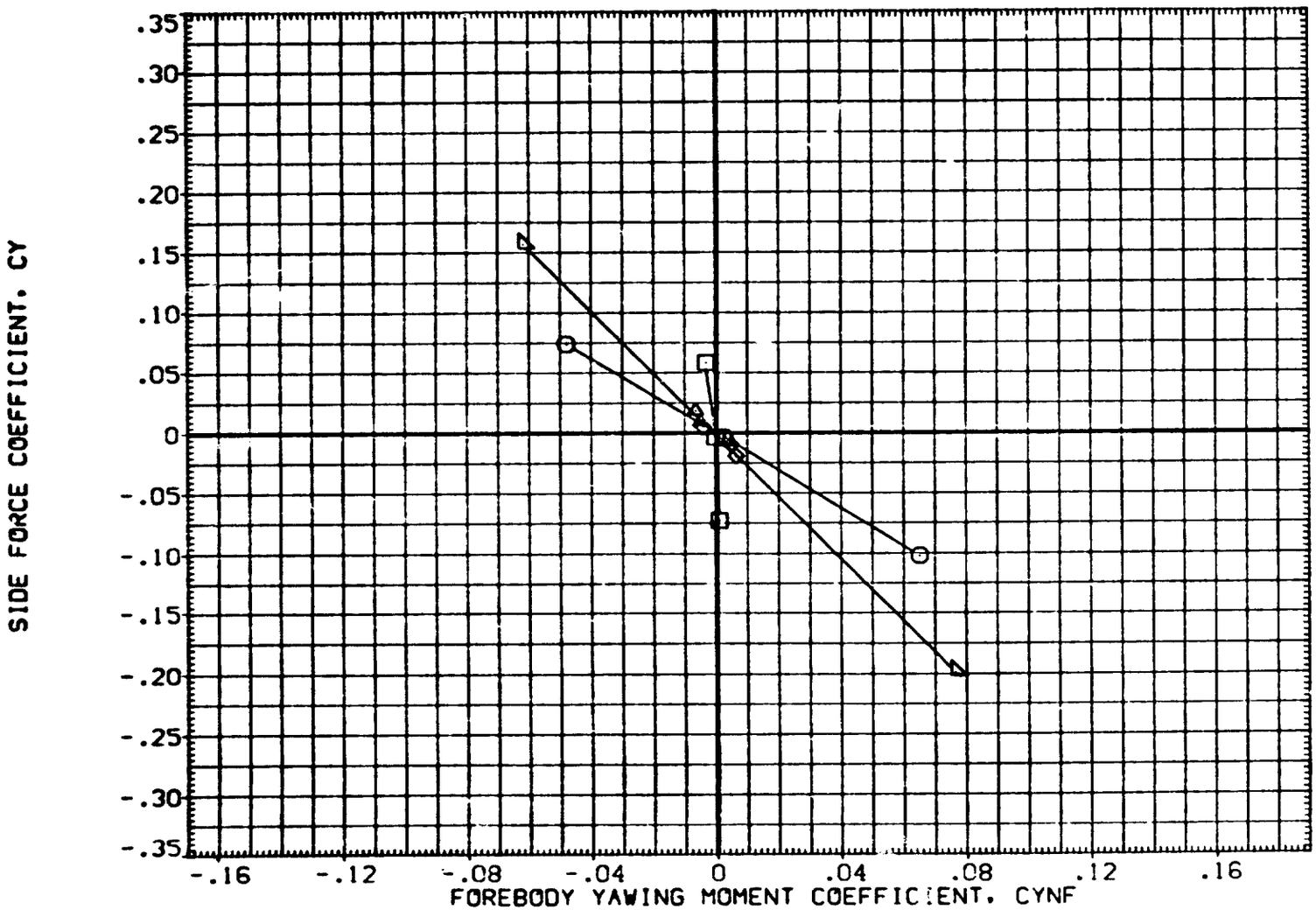


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)ALPHAI= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	AMES97-019(IAB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	AMES97-019(IAB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	AMES97-019(IAB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

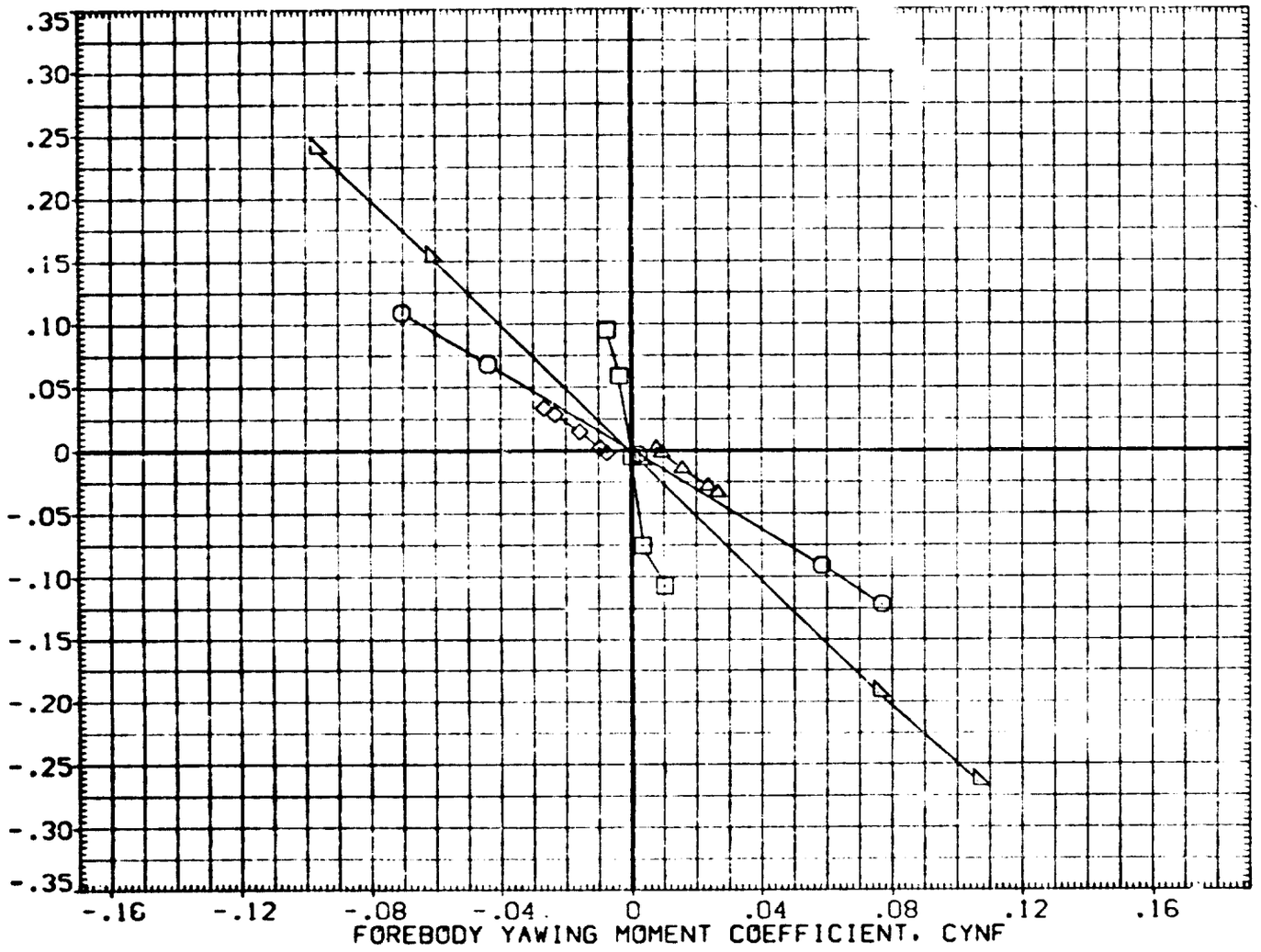


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	□	AMES97-019([A81]) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	△	AMES97-019([A81]) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	⏢	AMES97-019([A81]) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

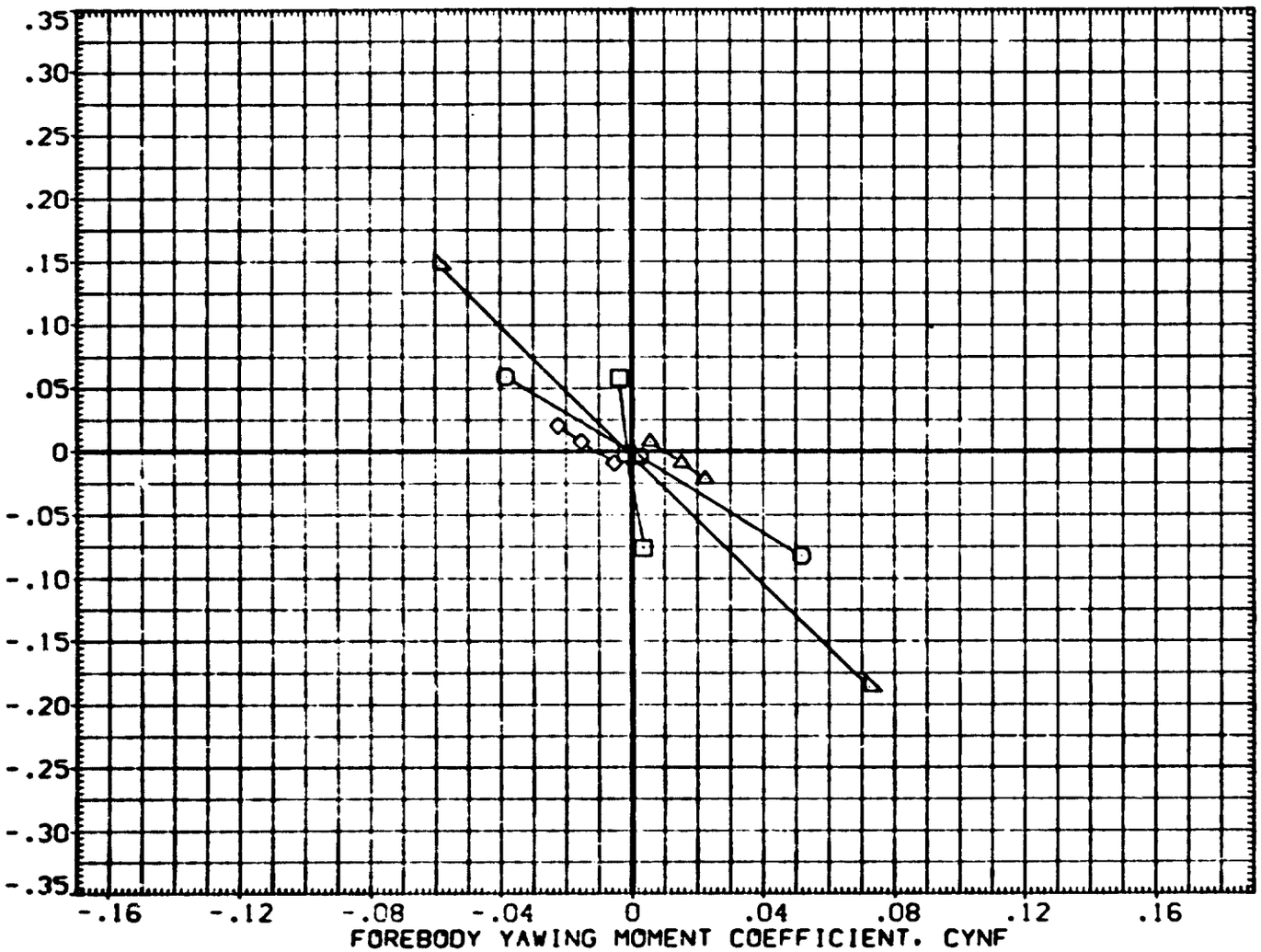


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETC42)	□	AMES97-019([AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019([AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⊠	AMES97-019([AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	⊡	AMES97-019([AB1) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019([AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. X'
YMRP	.0000	IN. Y'
ZMRP	400.0000	IN. Z'
SCALE	.0300	

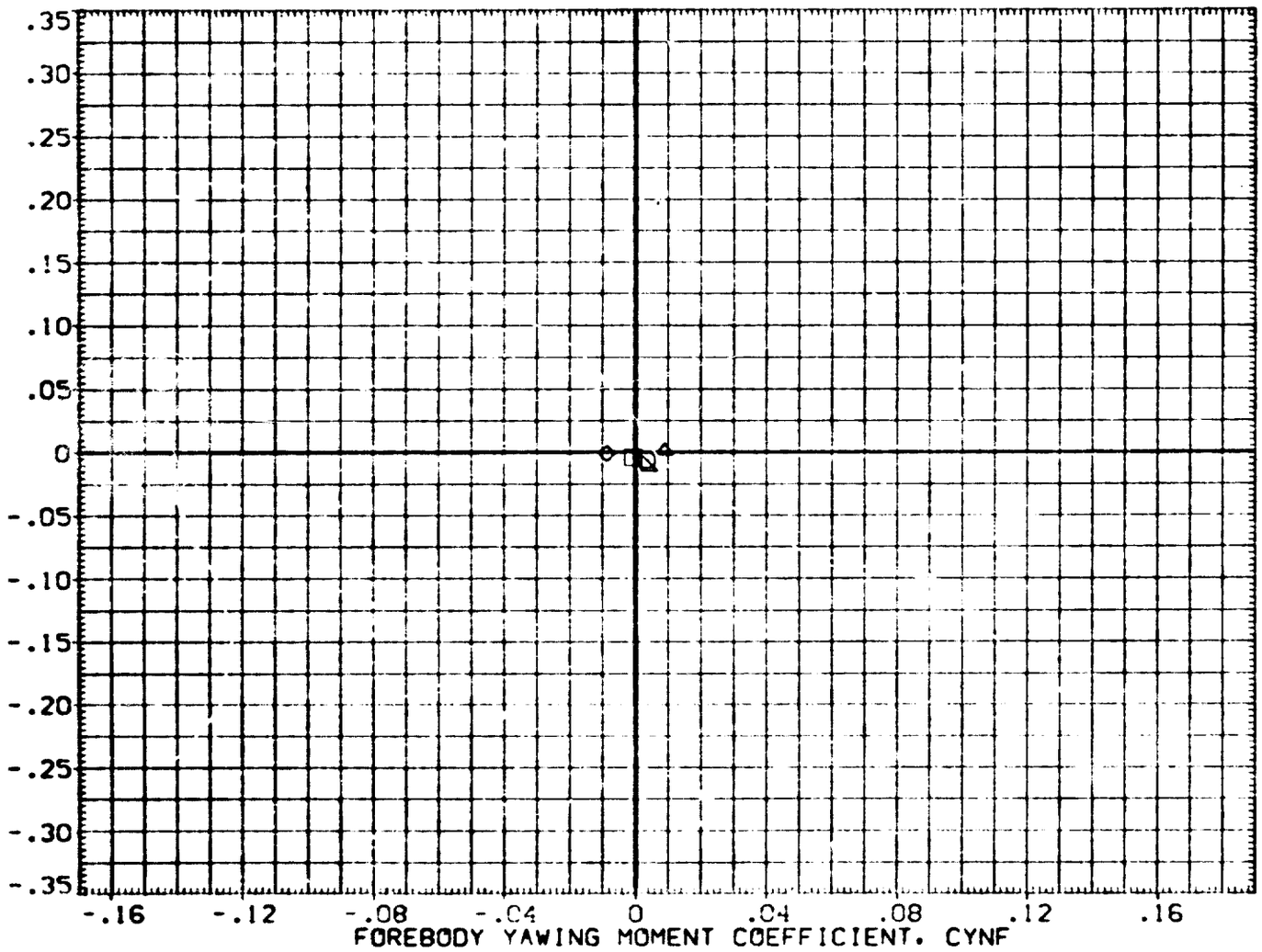


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019((A81)) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019((A81)) LVAP TANK - ALL ML SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019((A81)) LVAP L-SRB - ALL ML SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019((A81)) LVAP R-SRB ALL ML SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019((A81)) LVAP INT VEH ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

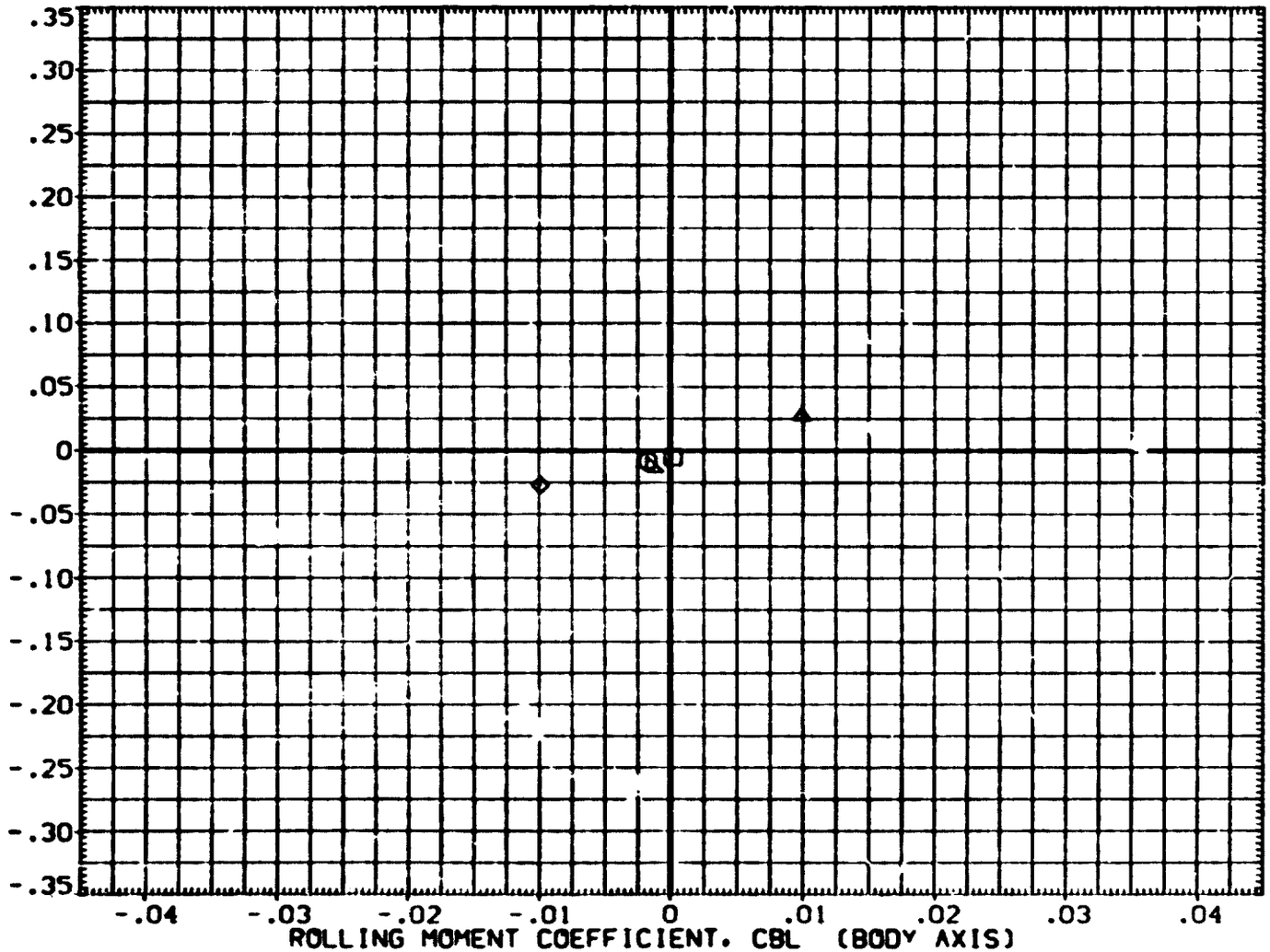


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(A)ALPHAI= -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)	□	AMES97-019((AB1) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	⊡	AMES97-019((AB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	⋈	AMES97-019((AB1) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019((AB1) LVAP R-LRL ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019((AB1) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

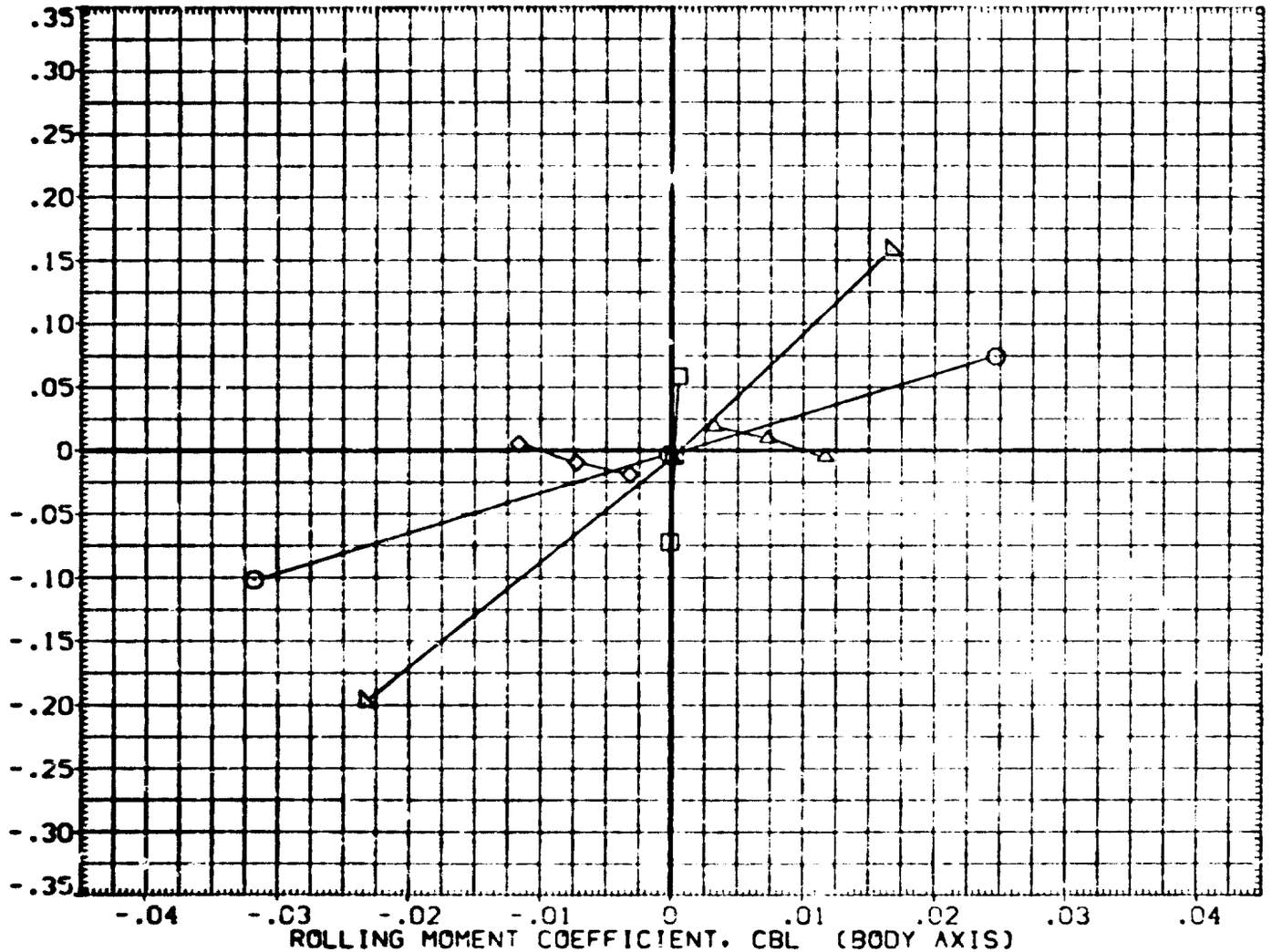


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(B)ALPHAI= -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LET042)		AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)		AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)		AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)		AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)		AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

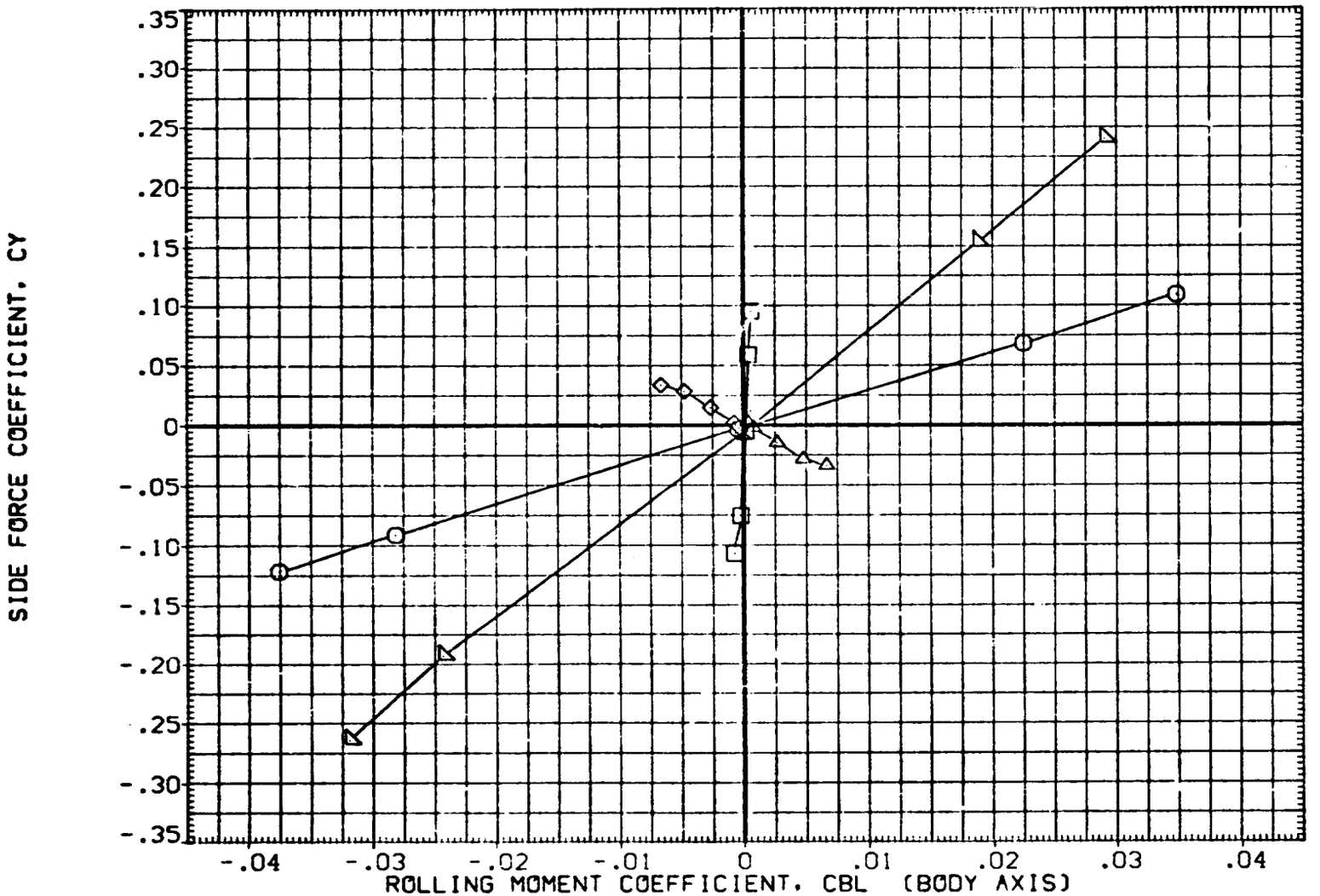


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(C)ALPHAI= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETG42)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	⊡	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	◁	AMES97-019(IA81) LVAP R-SRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

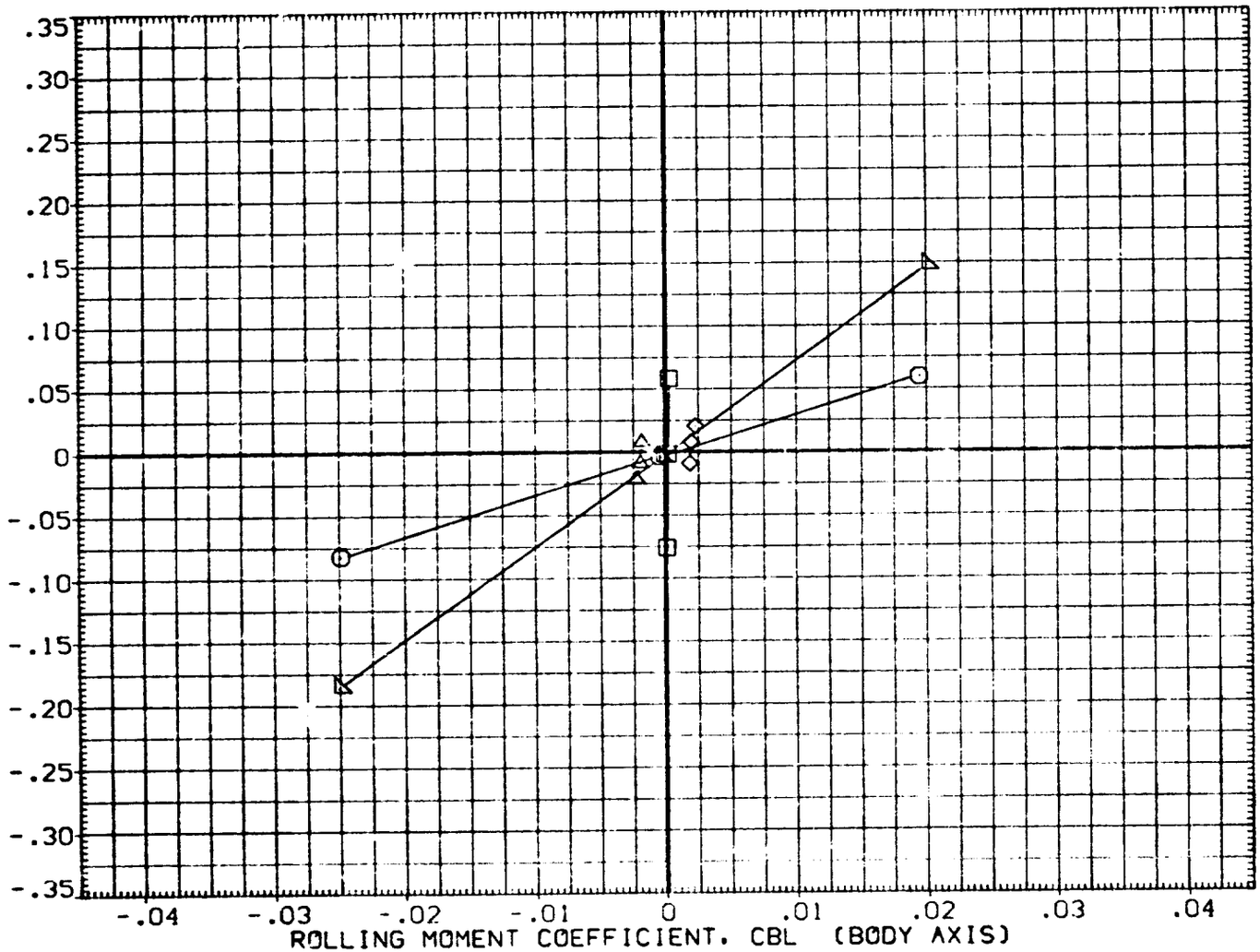


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(D)ALPHAI= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(LETO42)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000
(LETT42)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000
(LETL42)	◇	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000
(LETR42)	△	AMES97-019(IA81) LVAP R-LRB ALL HL SEALED	.000	.000	2.500	.000
(LETI42)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

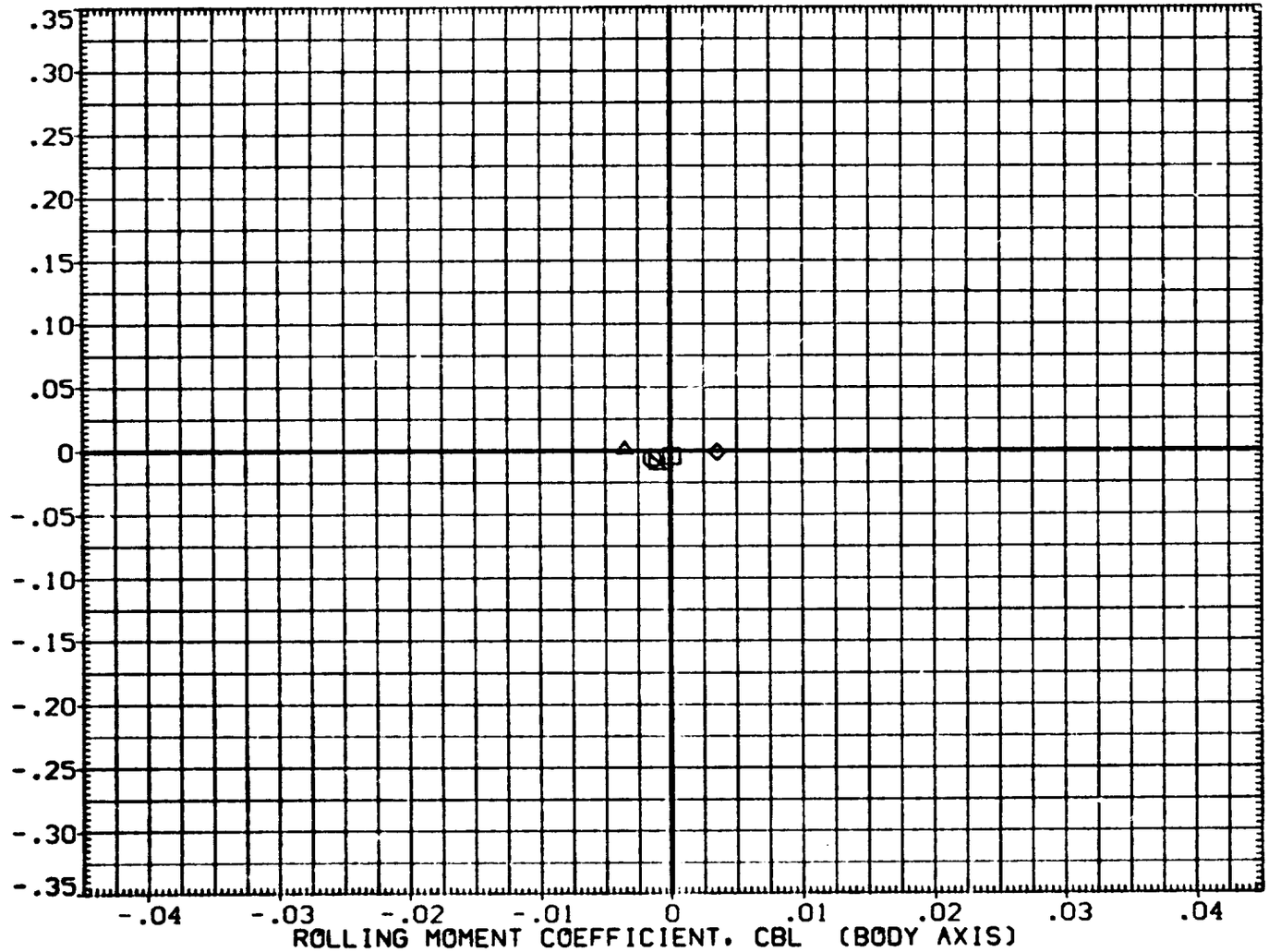


FIG. 29 LATERAL-DIRECTIONAL CHAR. OF LAUNCH VEHICLE COMPONENTS, M=2.5 DEV=0/0

(E)ALPHAI= 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

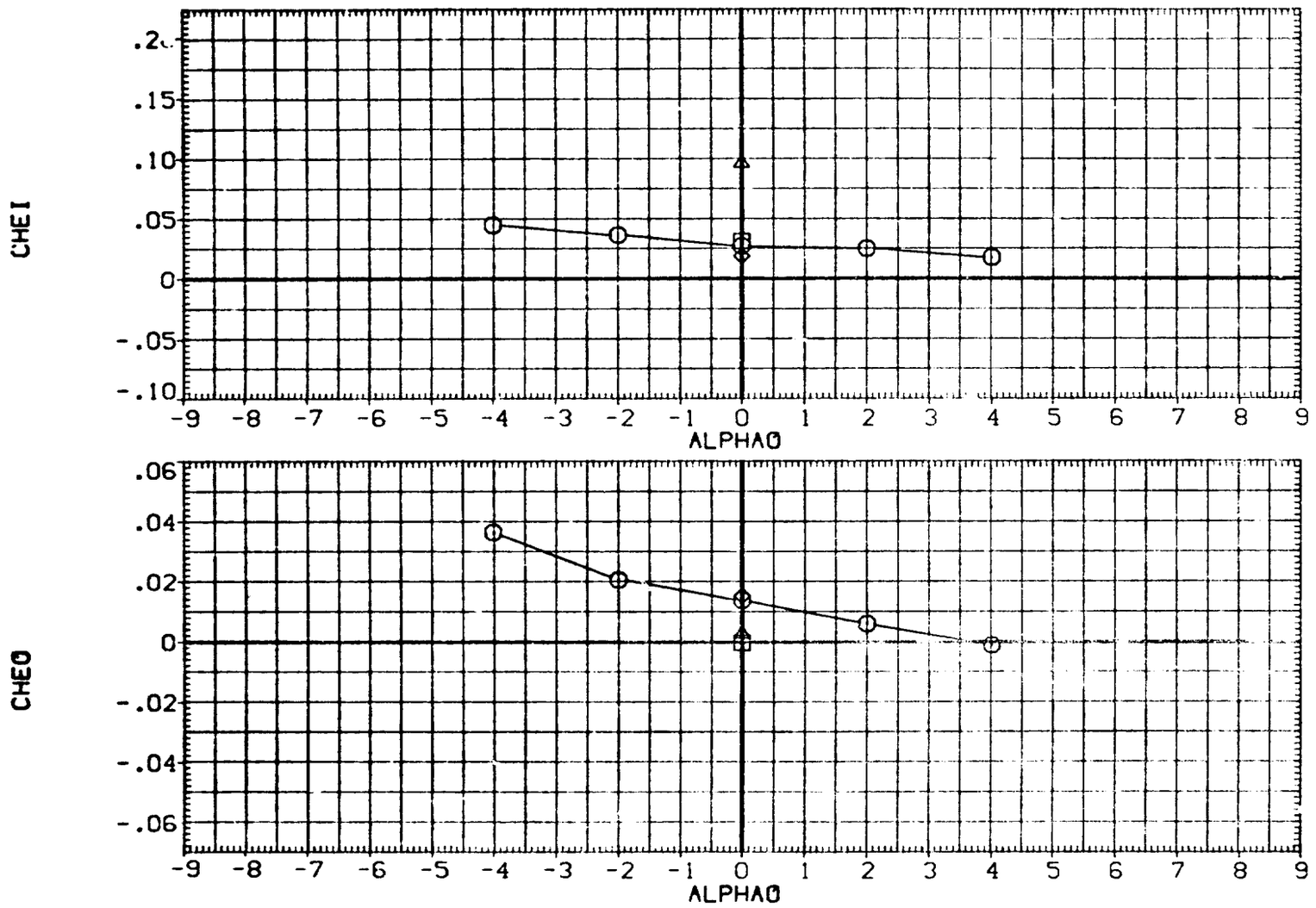


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(A)BETA0 = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)	○	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)	□	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)	⊠	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)	△	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

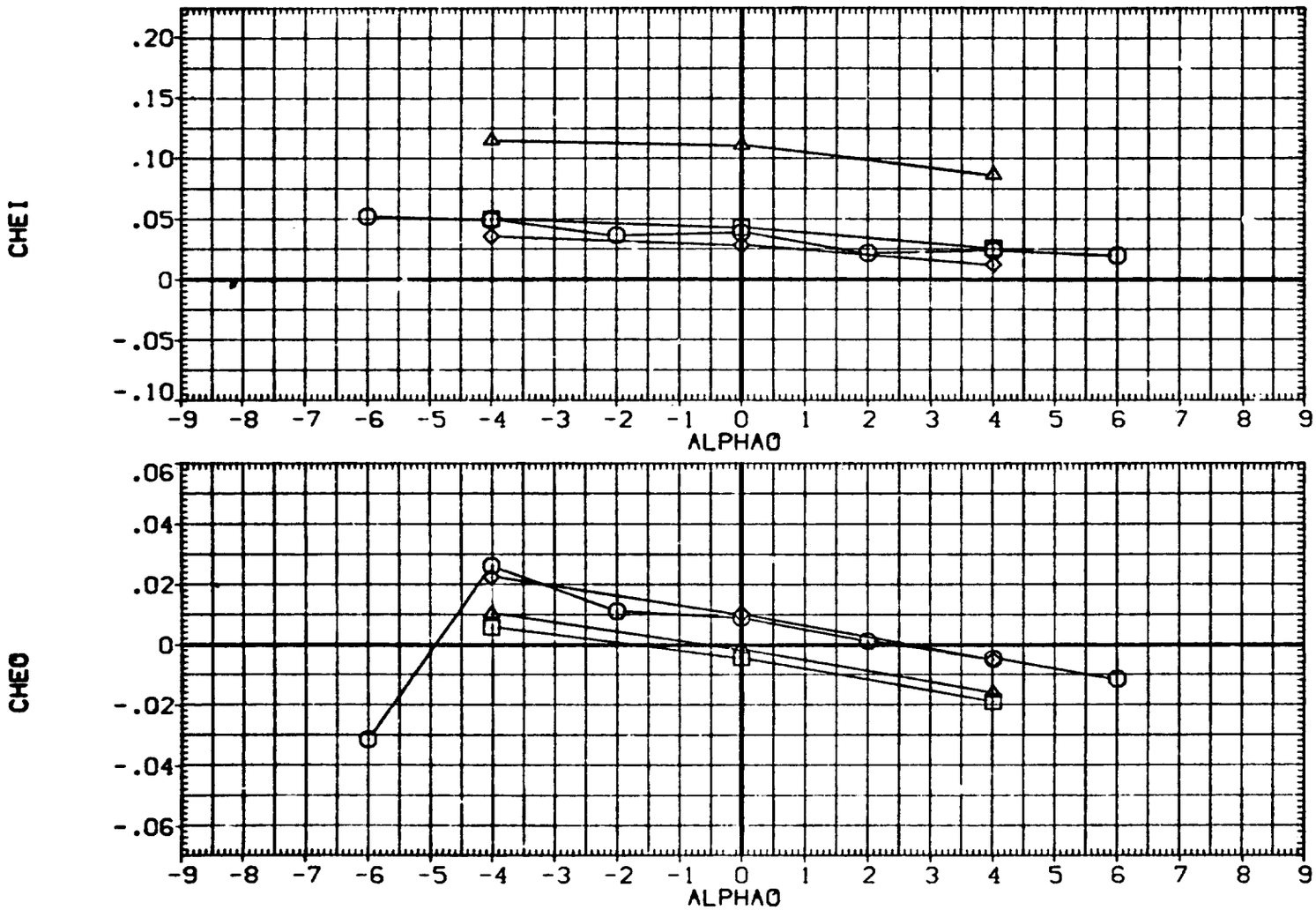


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(B)BETA0 = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)	□	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)	◇	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)	⋈	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)	△	DATA NOT AVAILABLE		.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

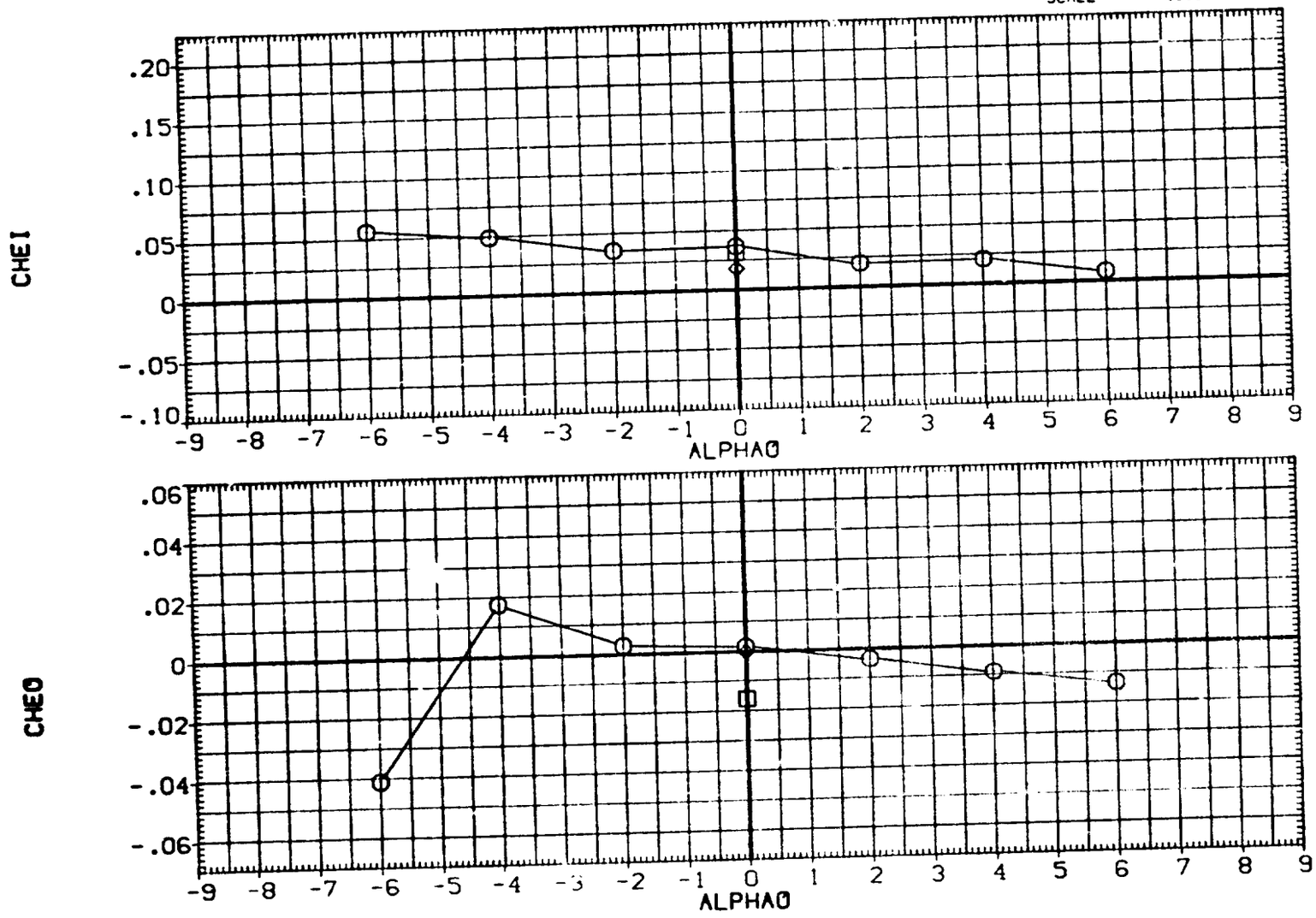


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(C)BETA0 = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)	◇	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)	△	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

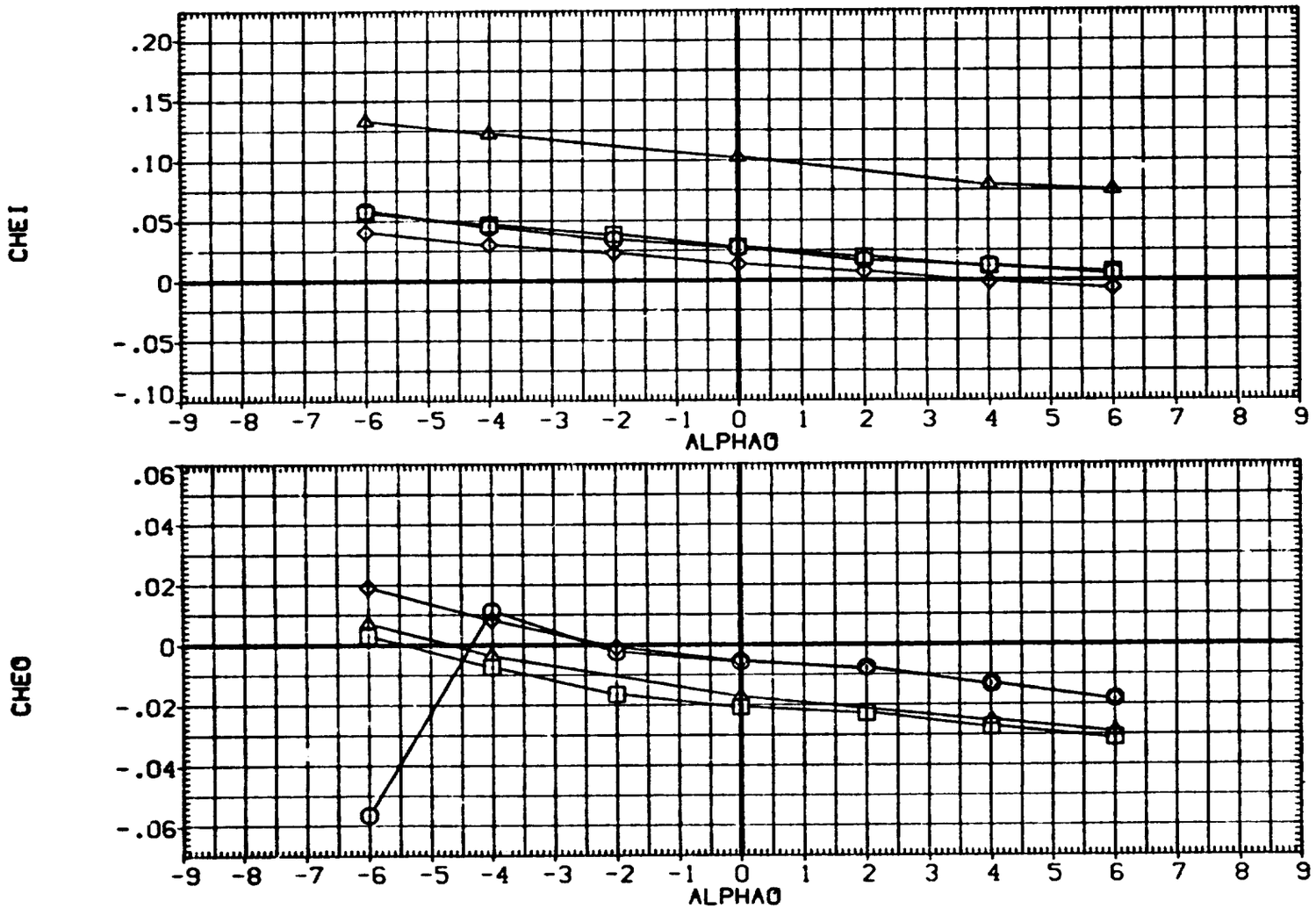


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(D)BET.0 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)	○	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)	□	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)	⊠	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)	△	DATA NOT AVAILABLE		.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

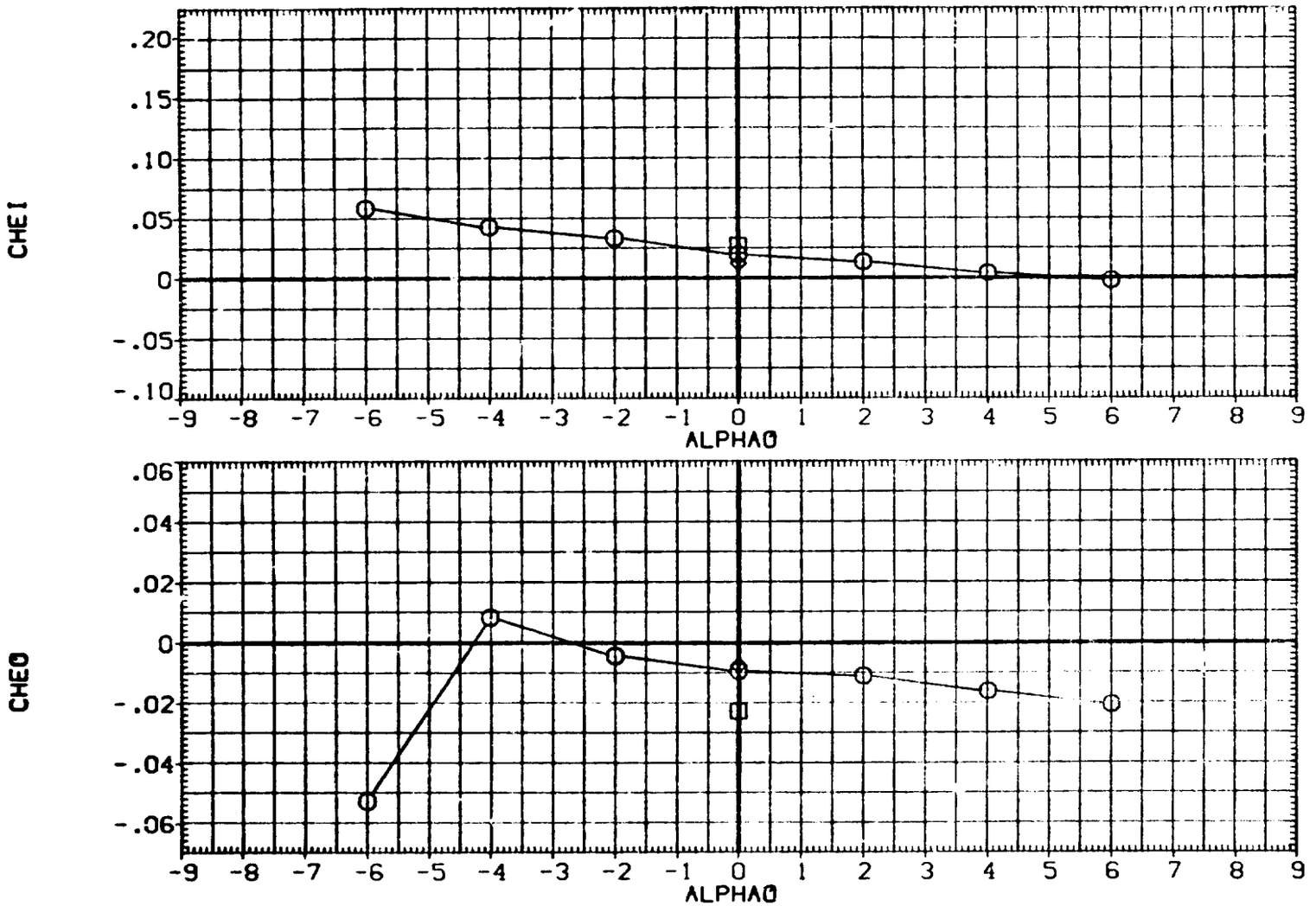


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(E)BET.0 = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)	○	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)	□	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)	◇	AMES57-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)	△	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

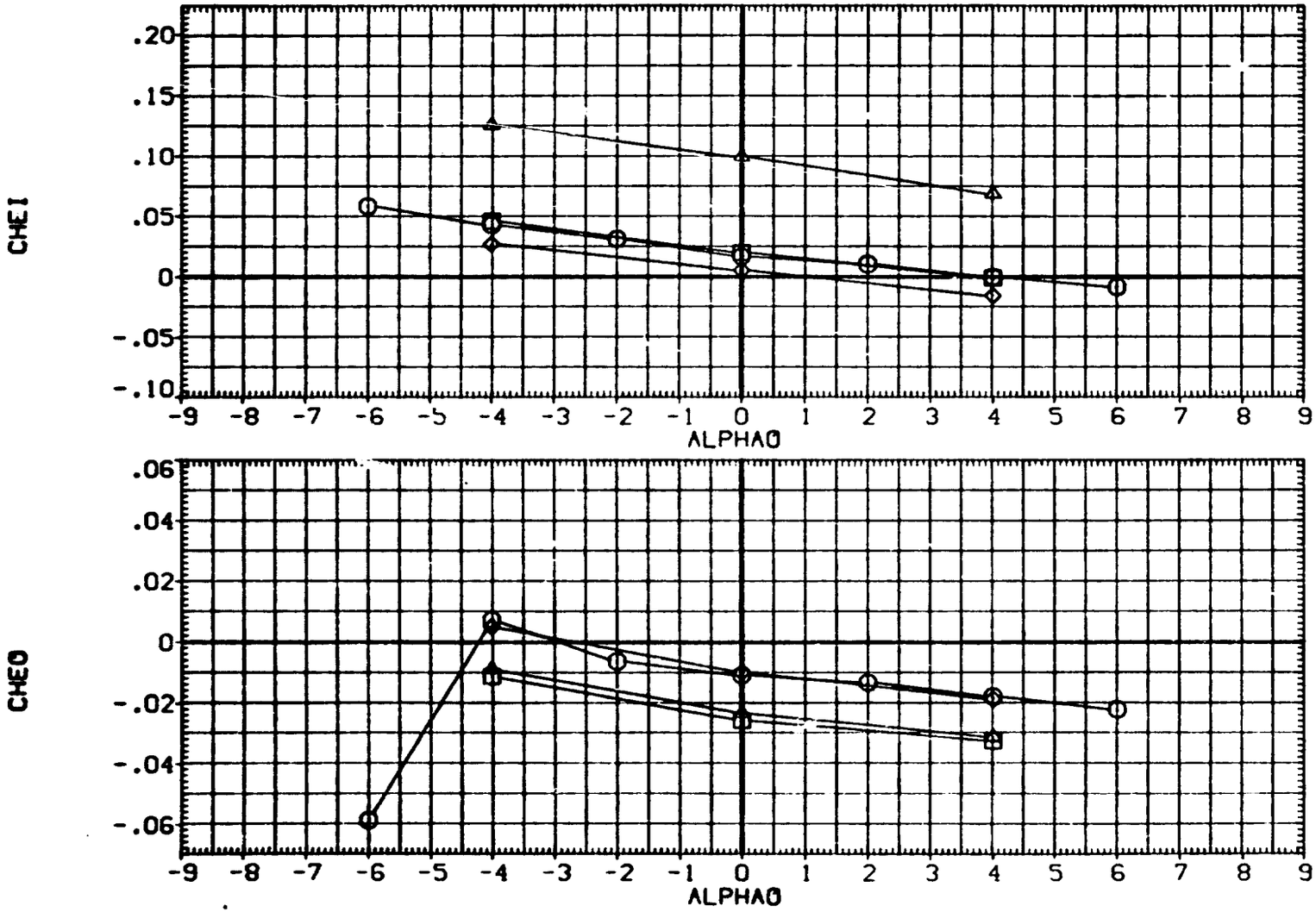


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(F)BET.0 = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH35)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	1.550	.000
(METH43)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	1.550	.000
(METH46)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	1.550	.000
(METH39)		AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	1.550	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

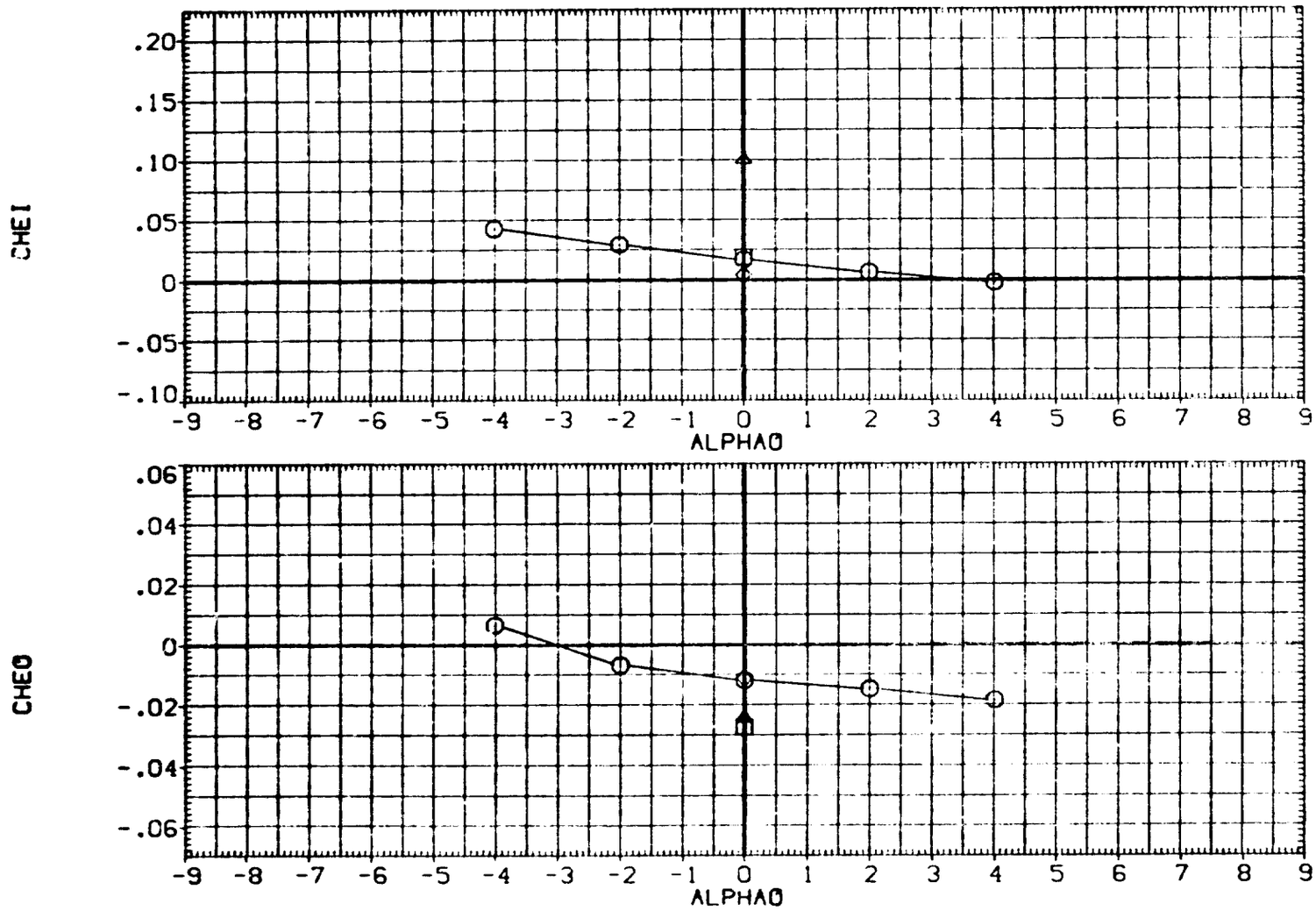


FIG. 30 ELEVON HINGE MOMENT COEFFICIENTS, M=1.55

(G)BET 0 = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH36)	□	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METH44)	◇	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METH47)	⋈	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH40)	⋈	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

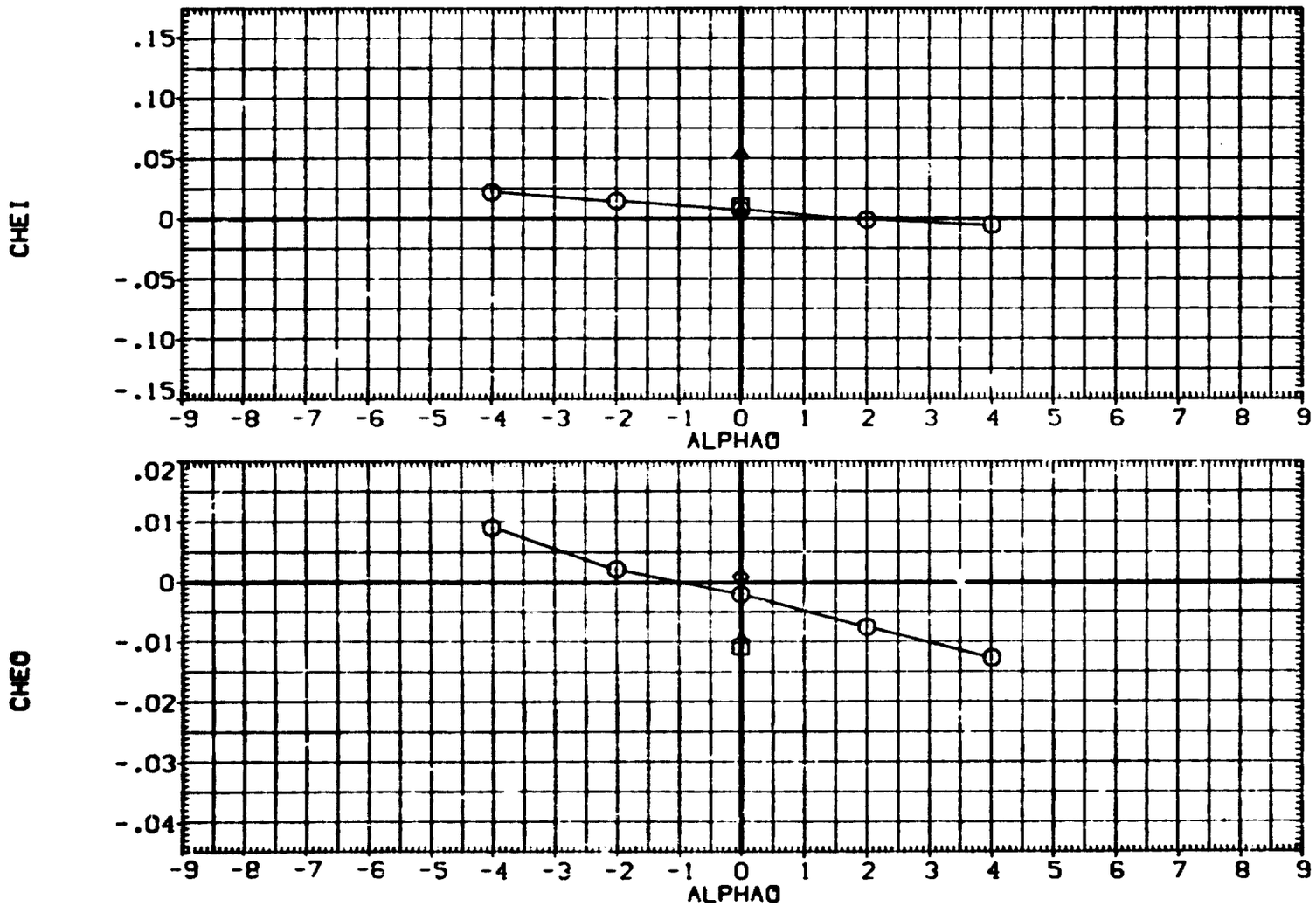


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(A)BETAO = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(METHJ6)	○	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METH44)	□	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METH47)	⊠	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH40)	△	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

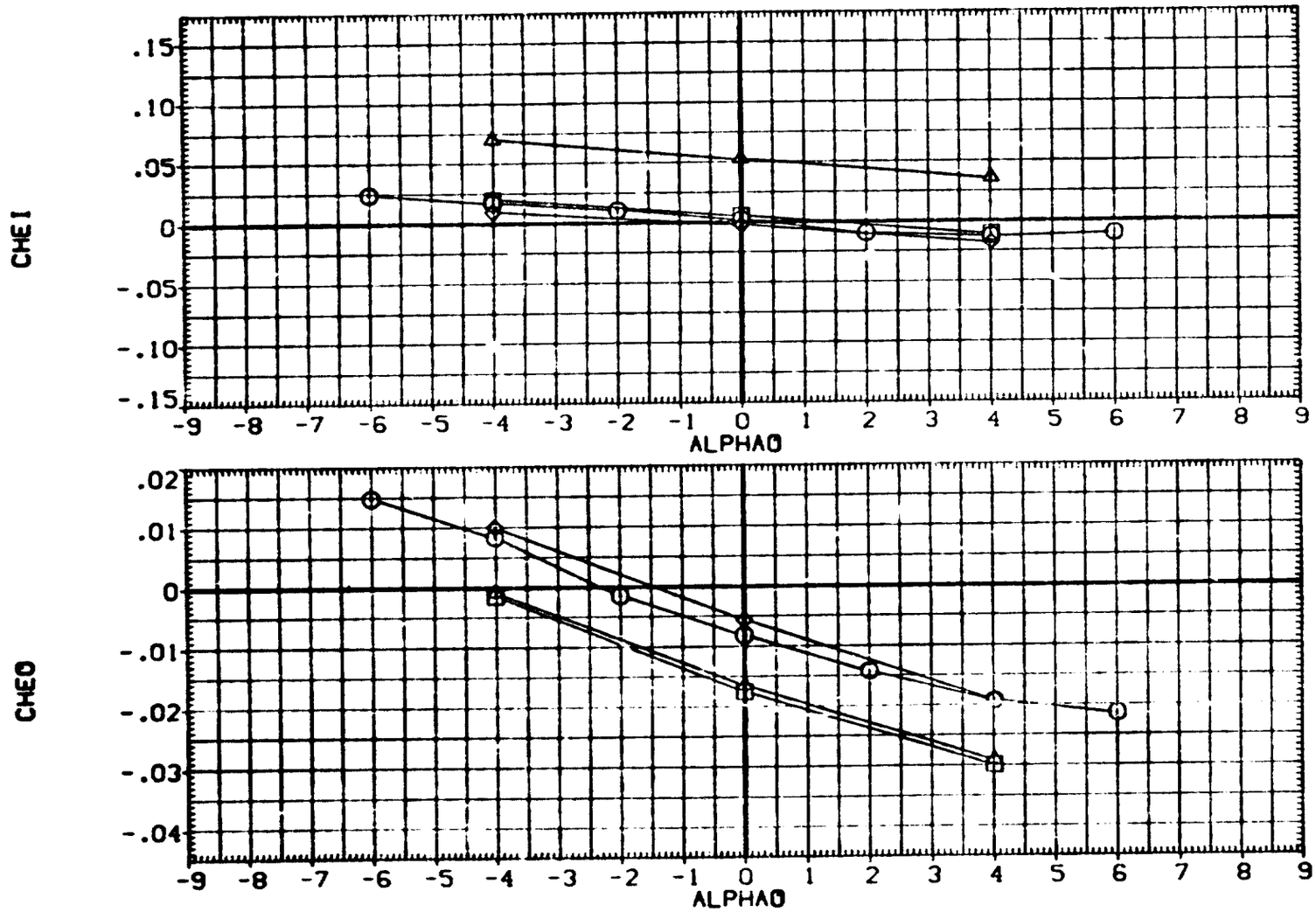


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(B)BETA0 = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH36)		AMES97-019([ABI) LVAP	ORBITER-ALL HL SEALED	0.000	-4.000	2.000	.000
(METH44)		AMES97-019([ABI) LVAP	ORBITER-ALL HL SEALED	0.000	.000	2.000	.000
(METH47)		AMES97-019([ABI) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH40)		DATA NOT AVAILABLE		.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

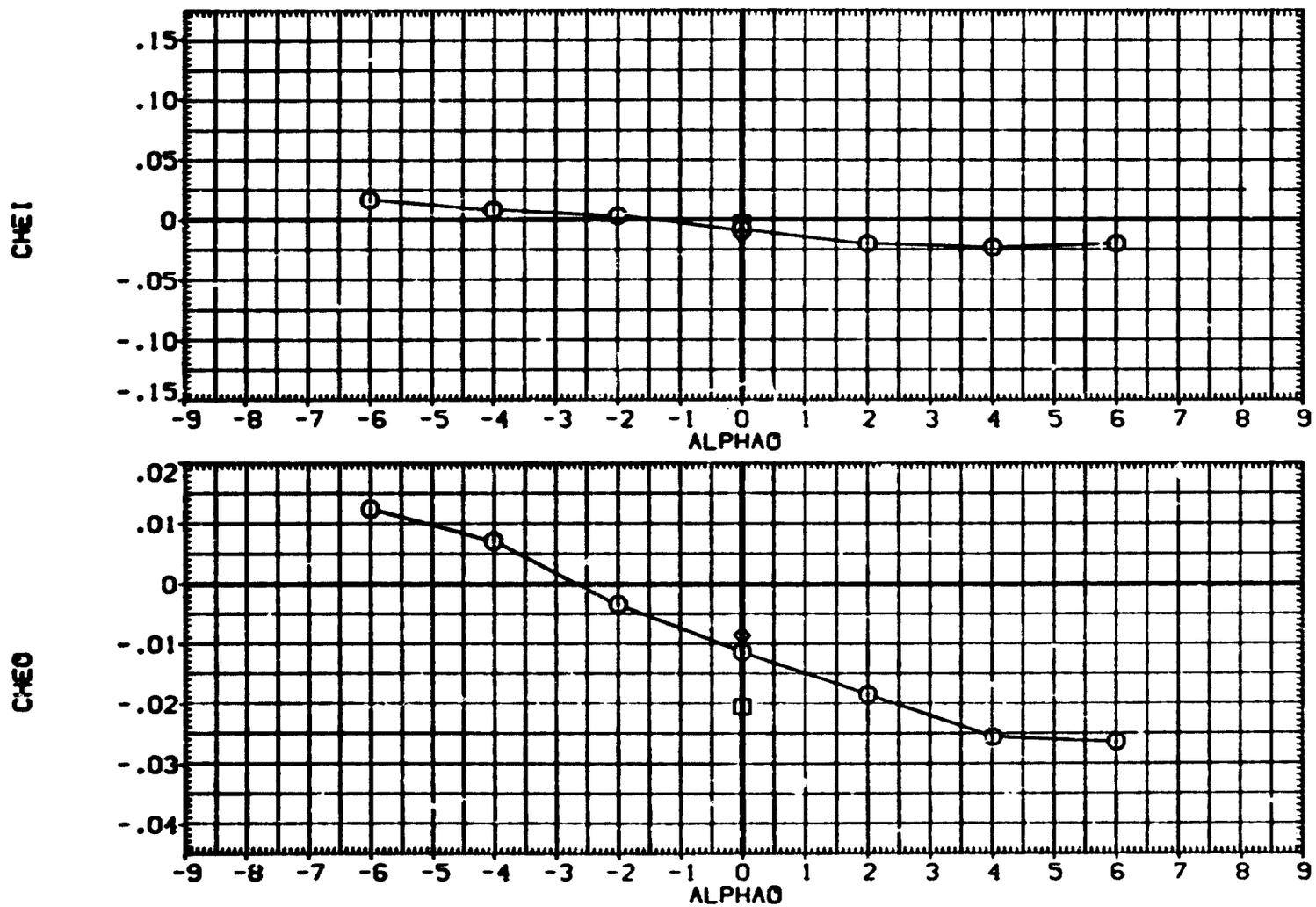


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(C)BETAO = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH436)	AMES97-019([A8]) LVAP ORBITER-ALL HL SEALED	3.000	-4.000	2.000	.000
(METH444)	AMES97-019([A8]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METH447)	AMES97-019([A8]) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH460)	AMES97-019([A8]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

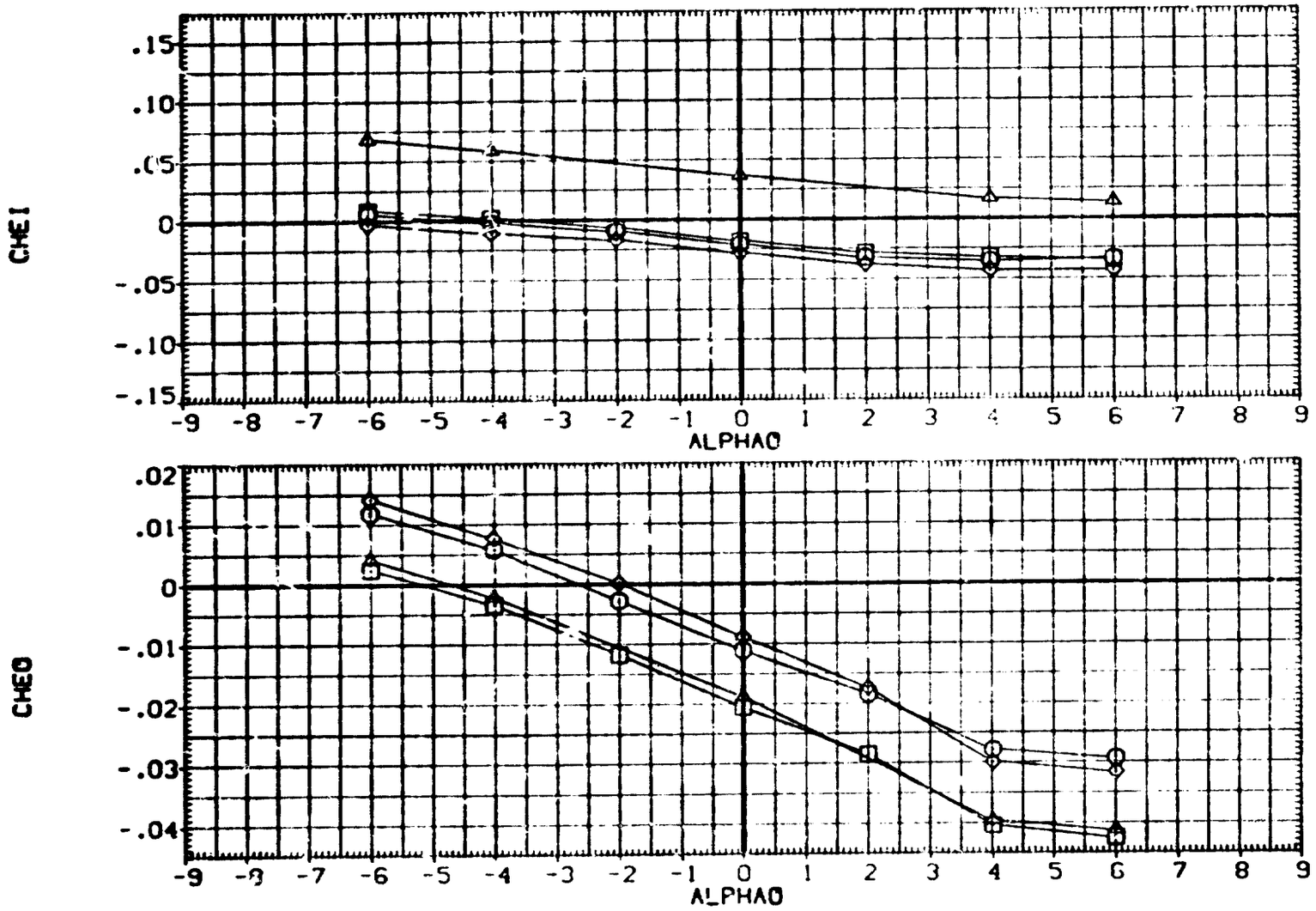


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(D)BETAO = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	SPDBRK
(METH36) ○	AMES97-019(IA11) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METH44) □	AMES97-019(IA61) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METH47) ⊠	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH40) △	DATA NOT AVAILABLE	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

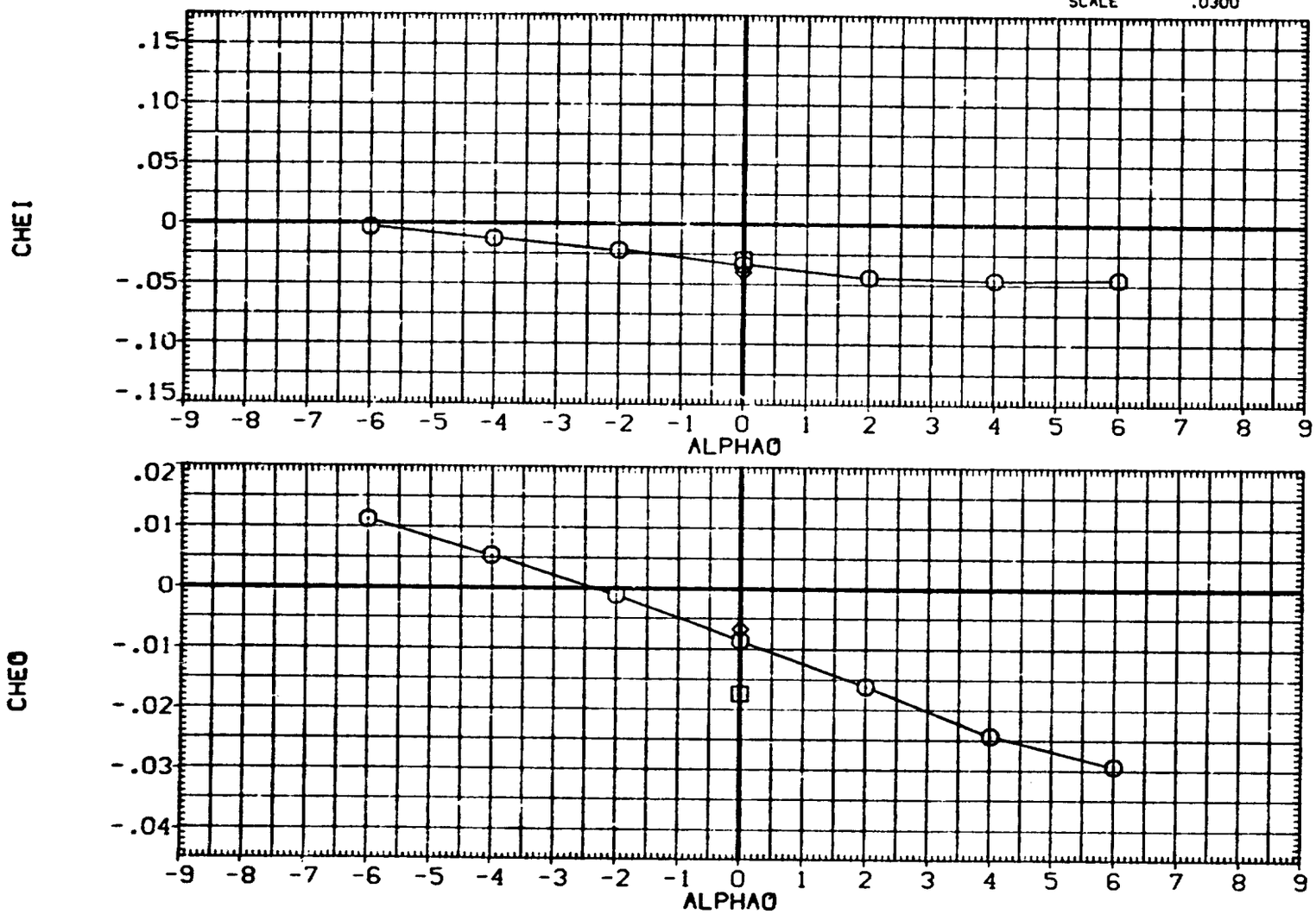


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(E)BET\0 = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH36)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.000	.000
(METH44)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.000	.000
(METH47)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	2.000	.000
(METH40)	AMES97-019([A81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

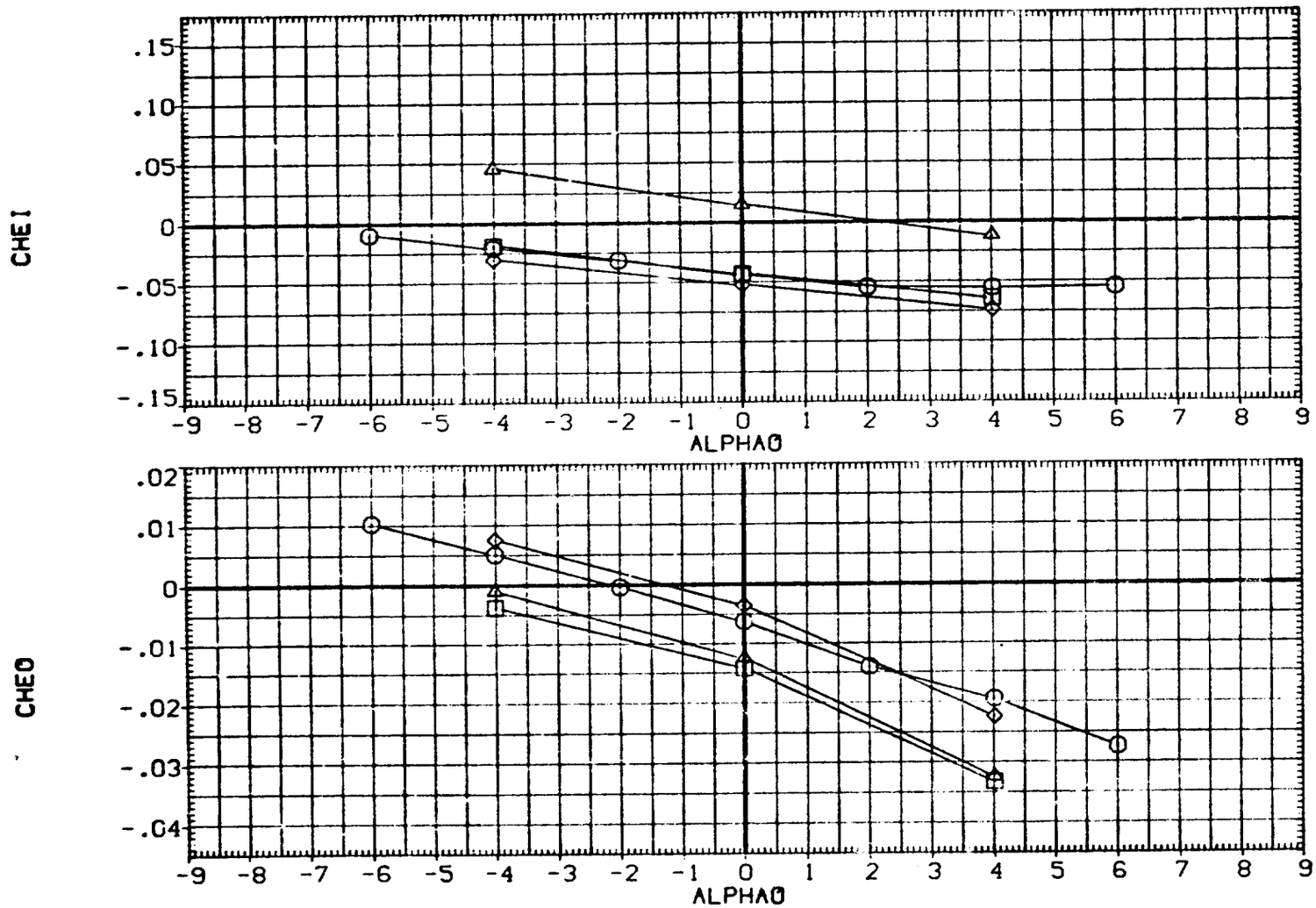


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(F)BETA0 = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH36)	□	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.000	.000
(METH44)	○	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	.000	2.000	.000
(METH47)	◇	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	10.000	-4.000	2.000	.000
(METH40)	△	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	.000	.000	2.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

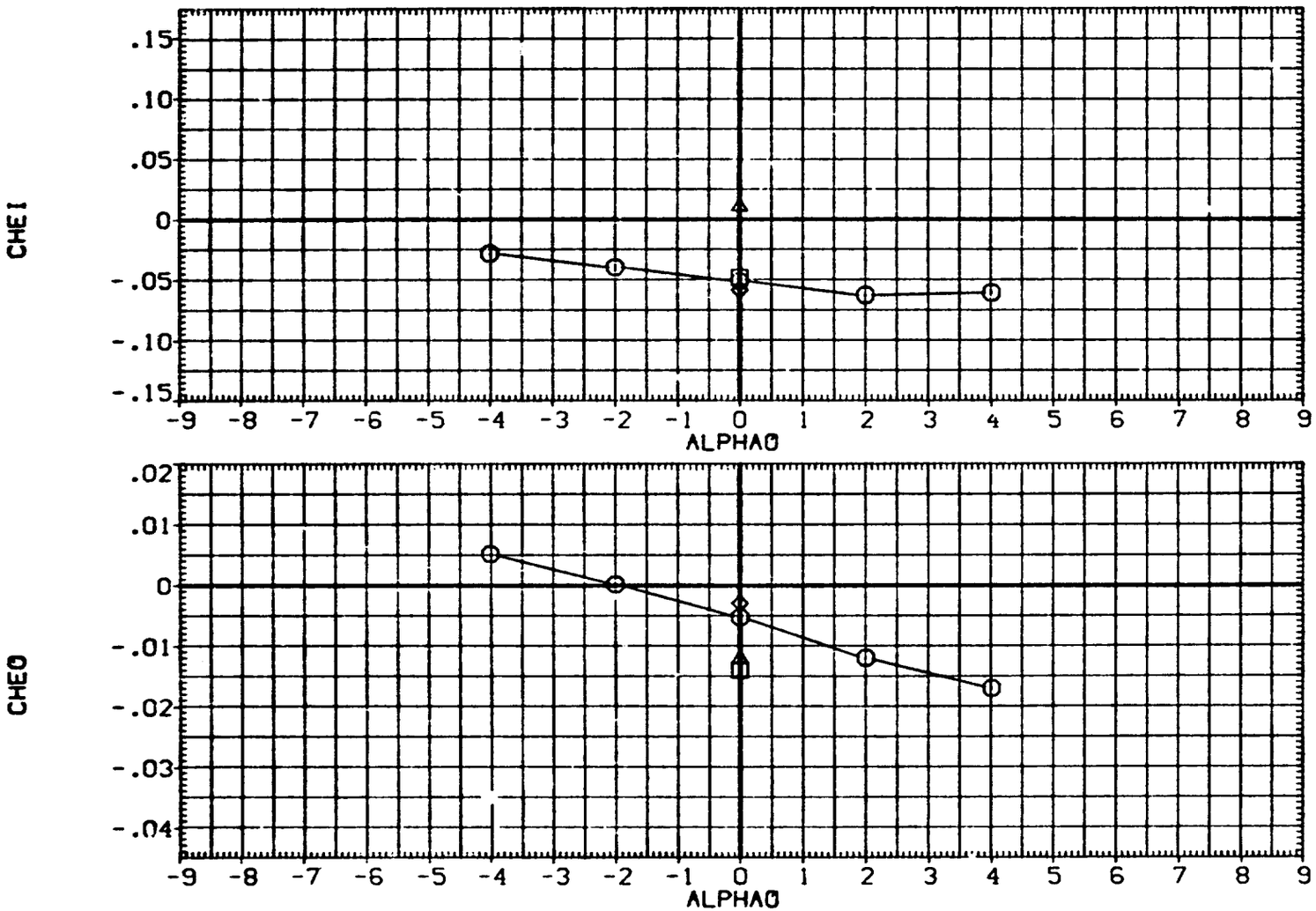


FIG. 31 ELEVON HINGE MOMENT COEFFICIENTS, M=2.0

(G)BET 0 = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH37) □	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45) ⊡	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41) ◇	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

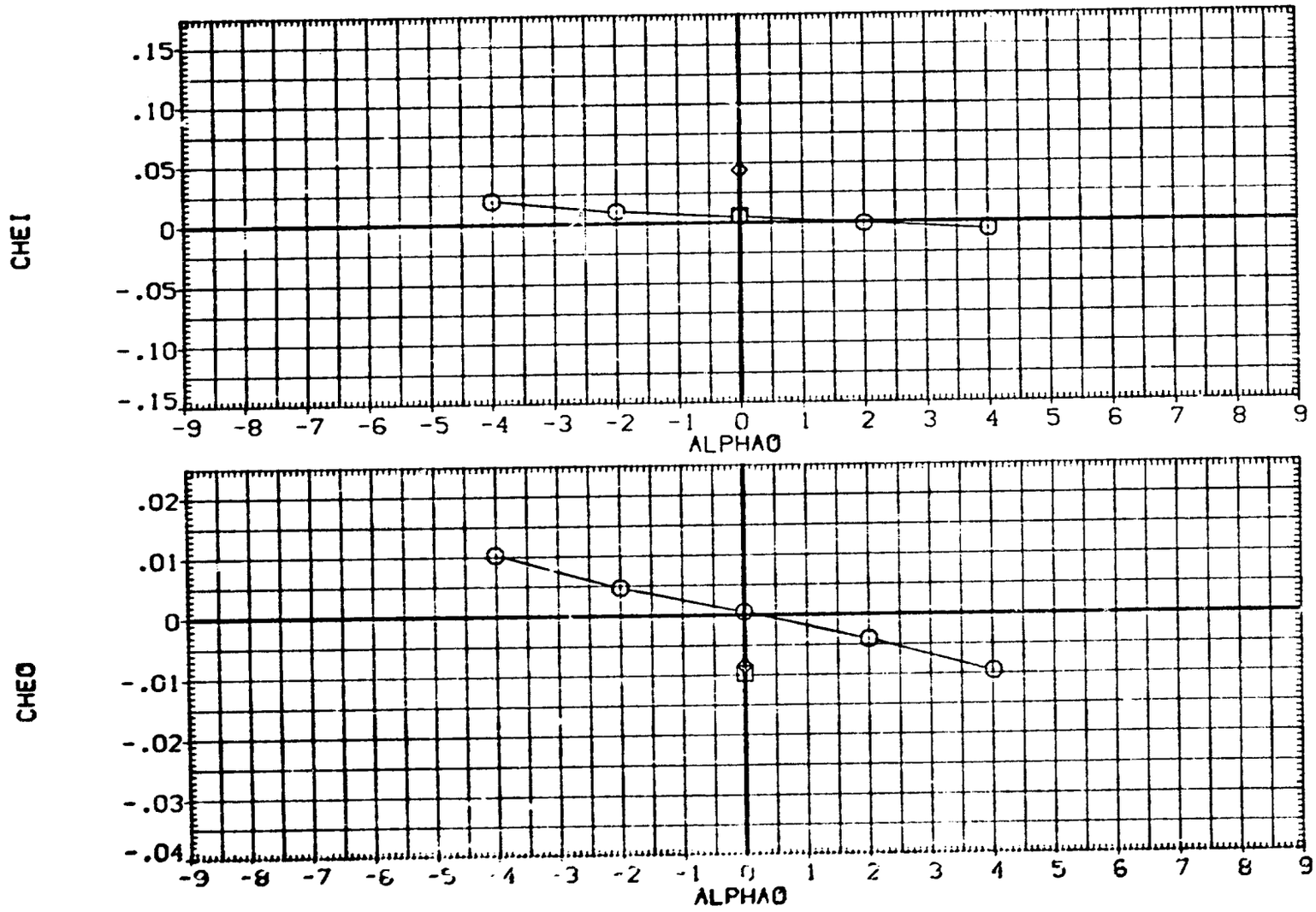


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(A)BETAO = -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH37)	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45)	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41)	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

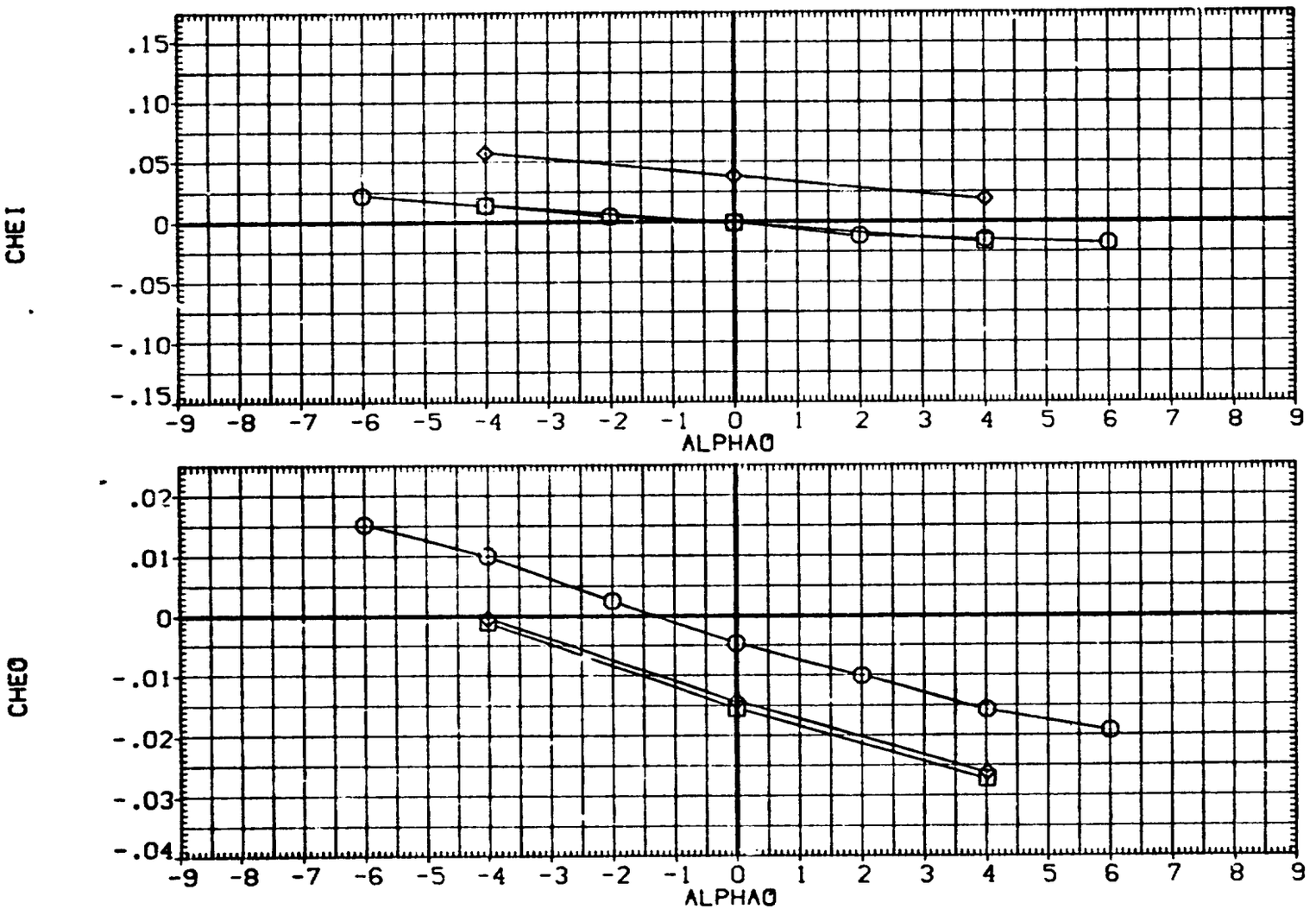


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(B)BET.0 = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(METH37)	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45)	AMES97-019(IA81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41)	DATA NOT AVAILABLE		.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

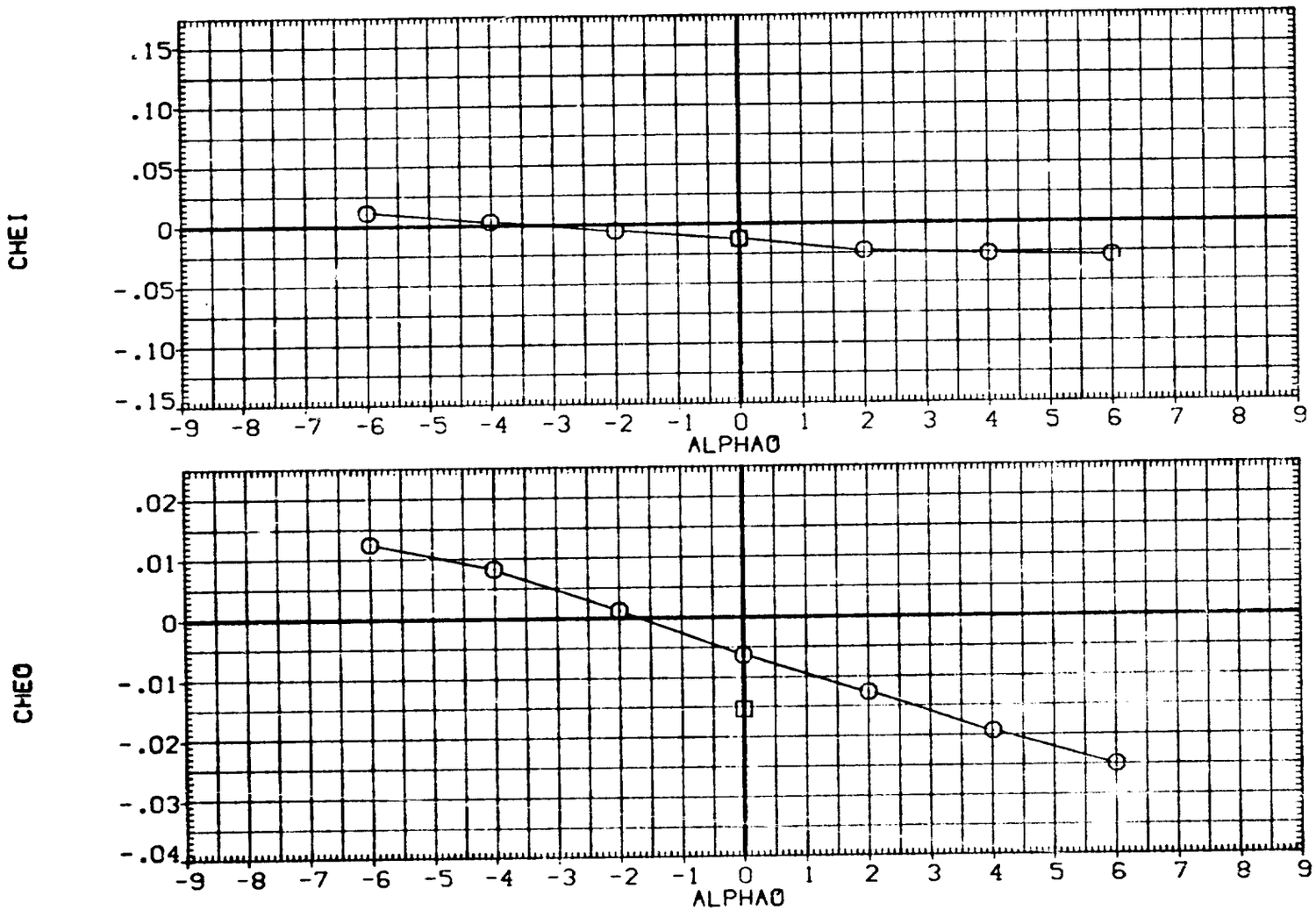


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(C)BETA0 = -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPCBRK
(METH37)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41)	◇	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0600	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

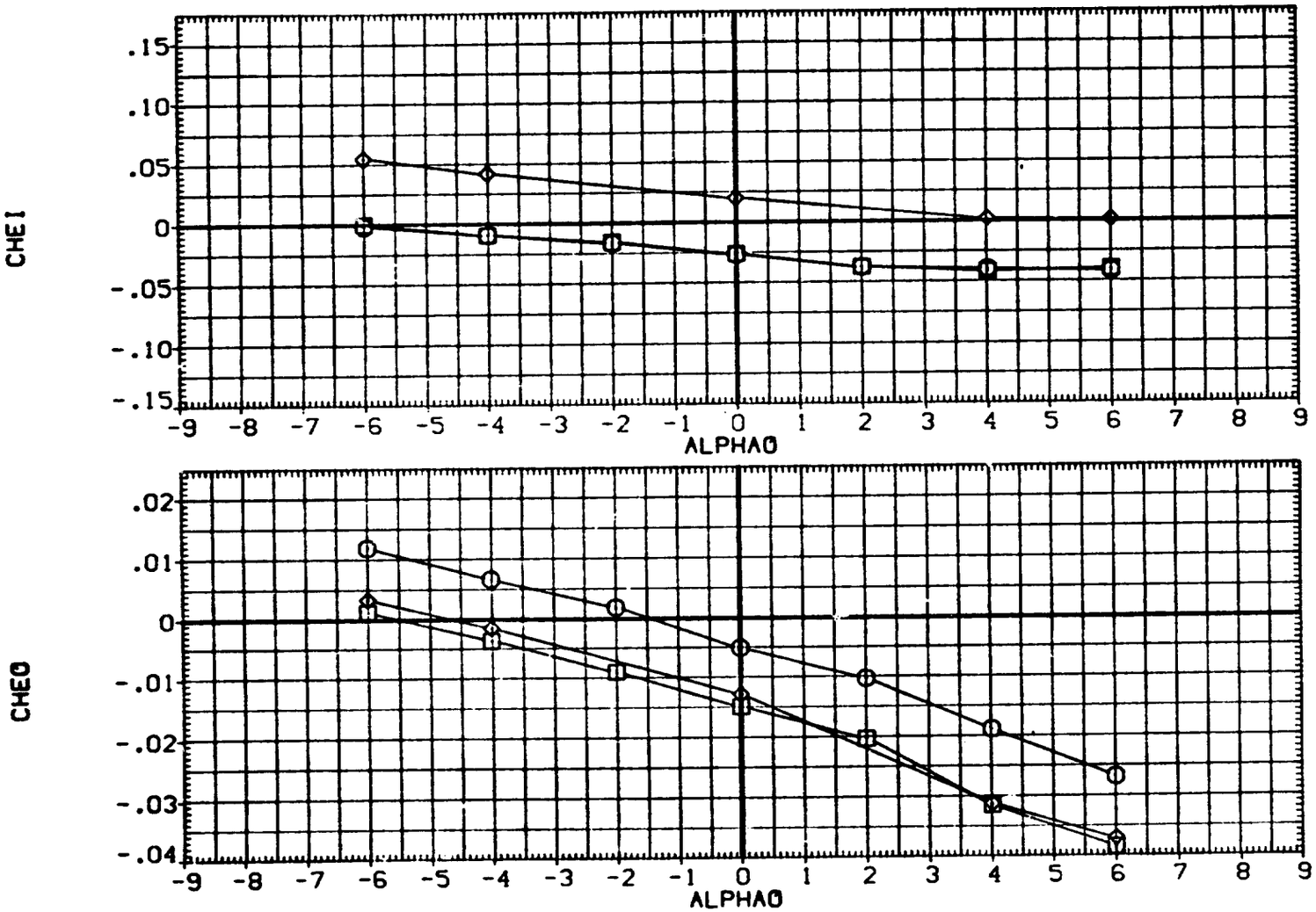


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(D)BET.0 = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METHJ7) □	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45) ○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41) ◇	DATA NOT AVAILABLE	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

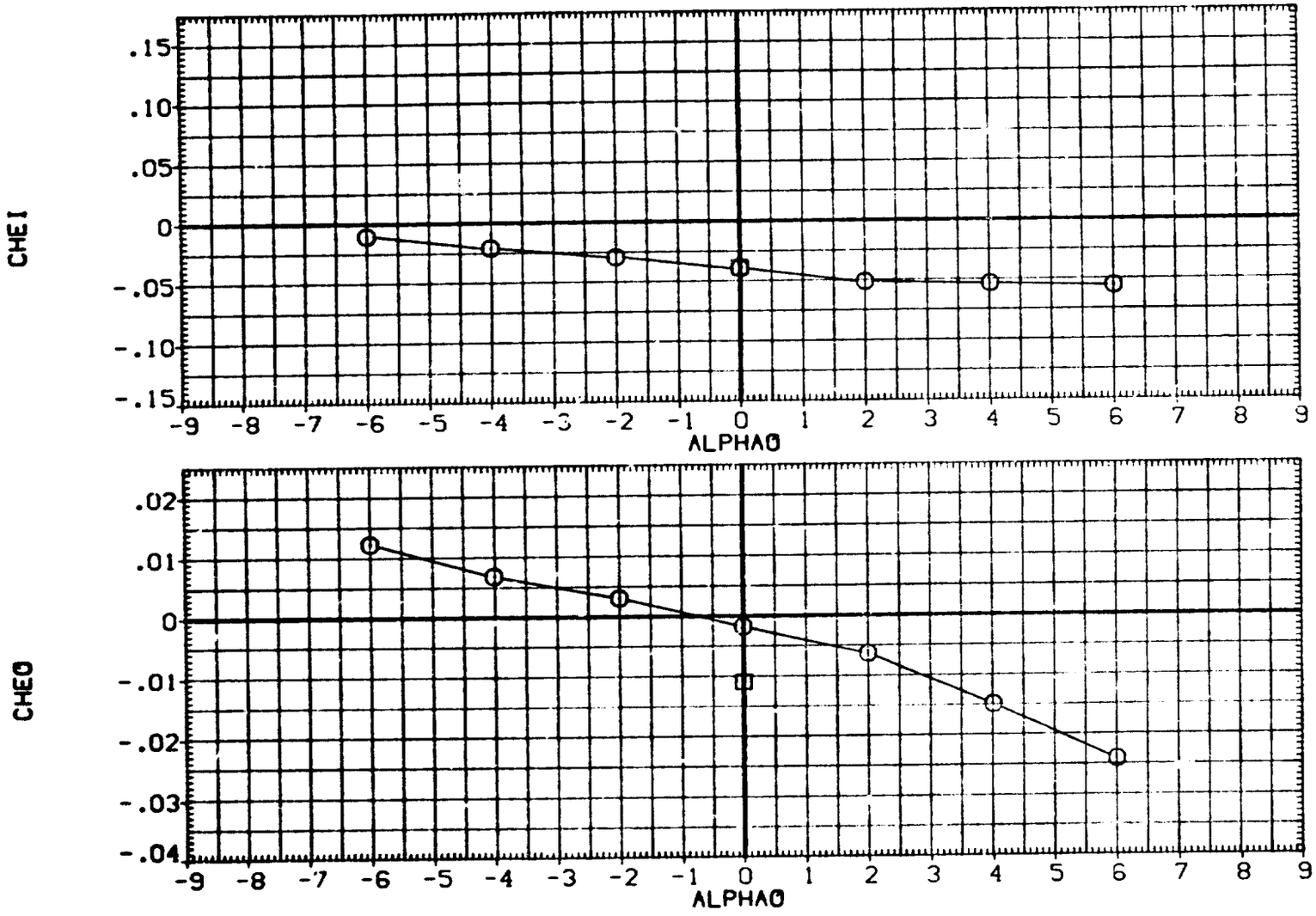


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(E)BET.0 = 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH37)	□	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45)	○	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41)	◇	AMES97-019([A81]) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

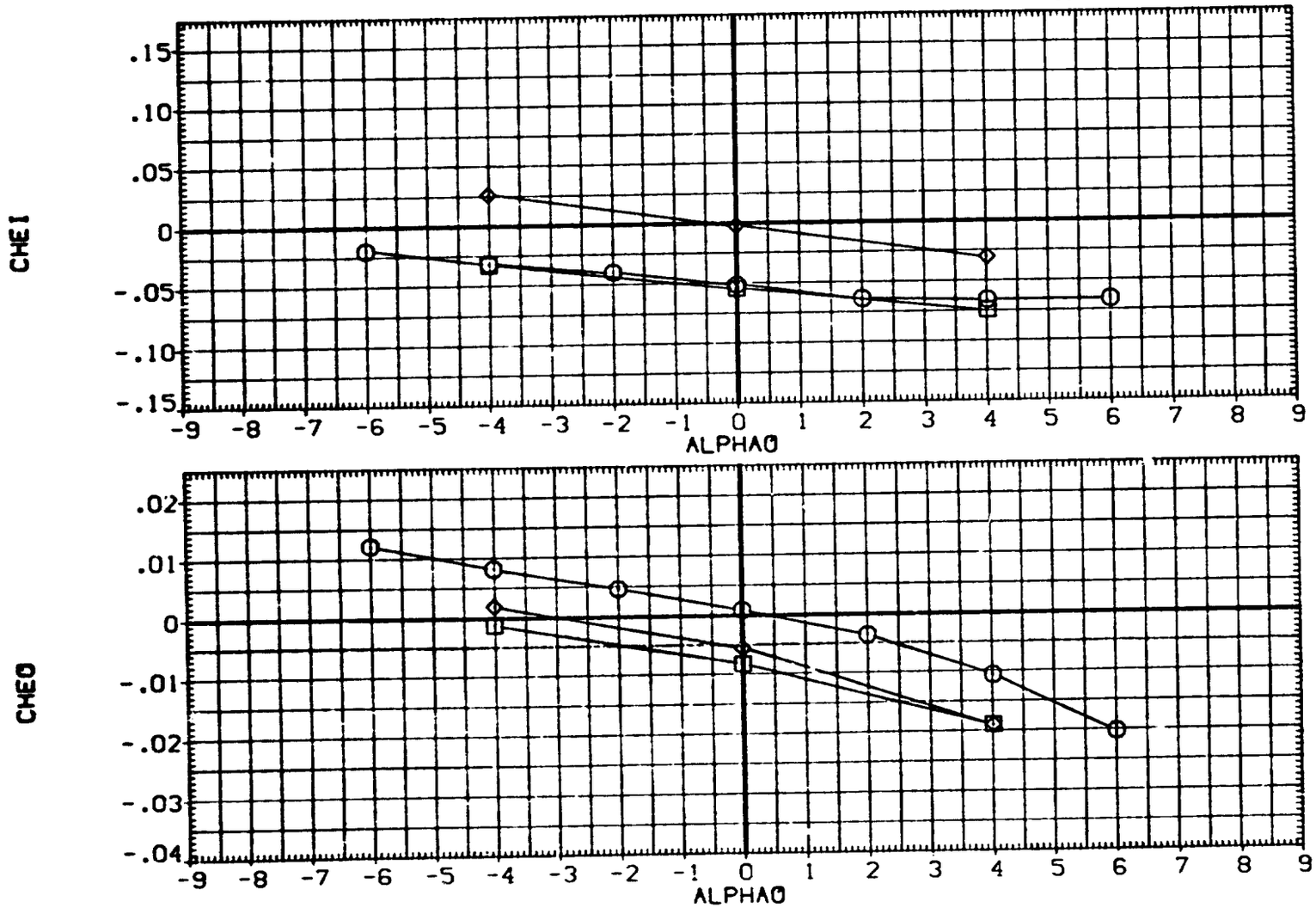


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(F)BET.0 = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH37)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.200	.000
(METH45)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	2.200	.000
(METH41)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

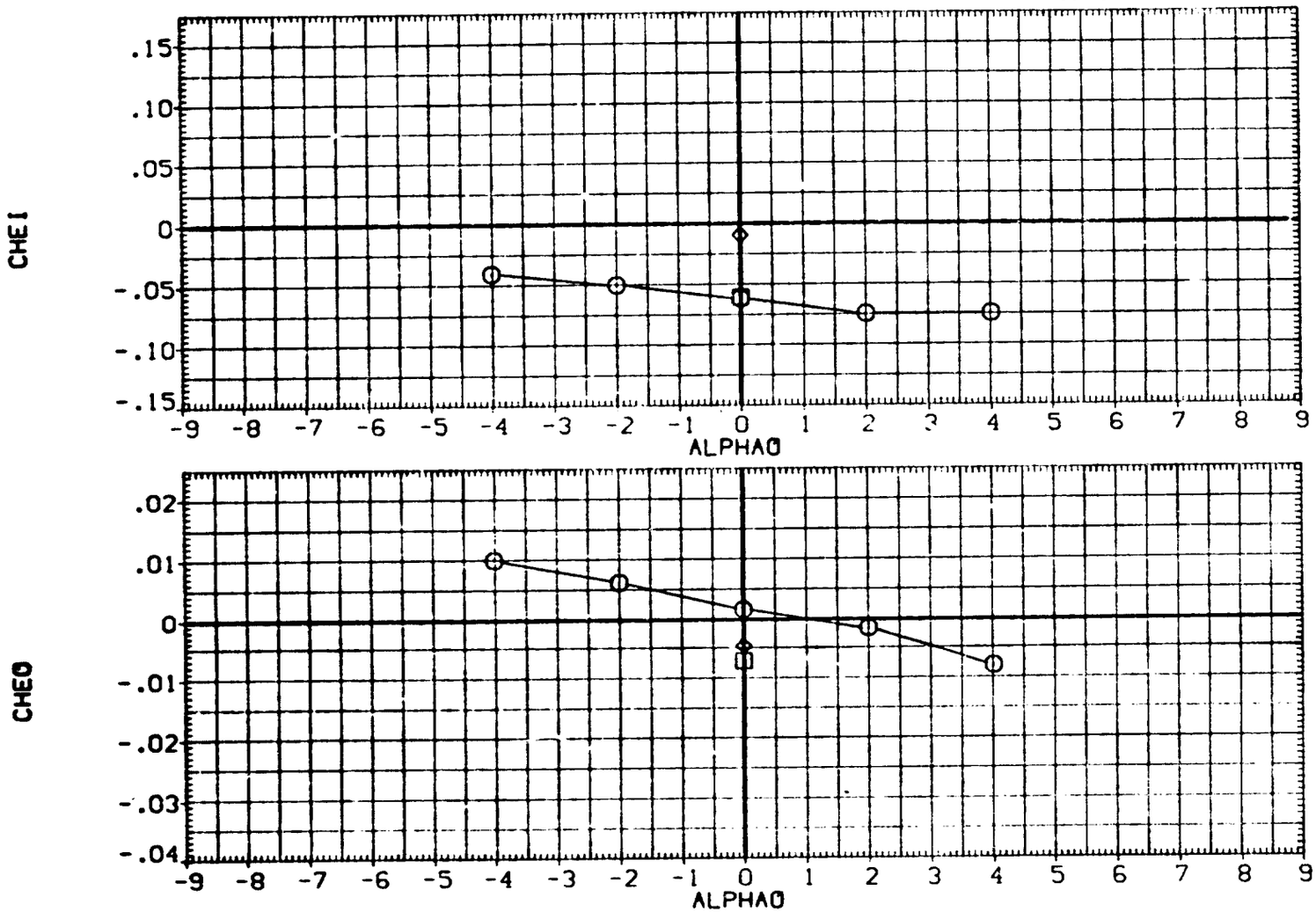


FIG. 32 ELEVON HINGE MOMENT COEFFICIENTS, M=2.2

(G)BETAO = 6.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38)	8	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	0.000	-4.000	2.500	.000
(METH42)	8	AMES97-019(IAB1) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

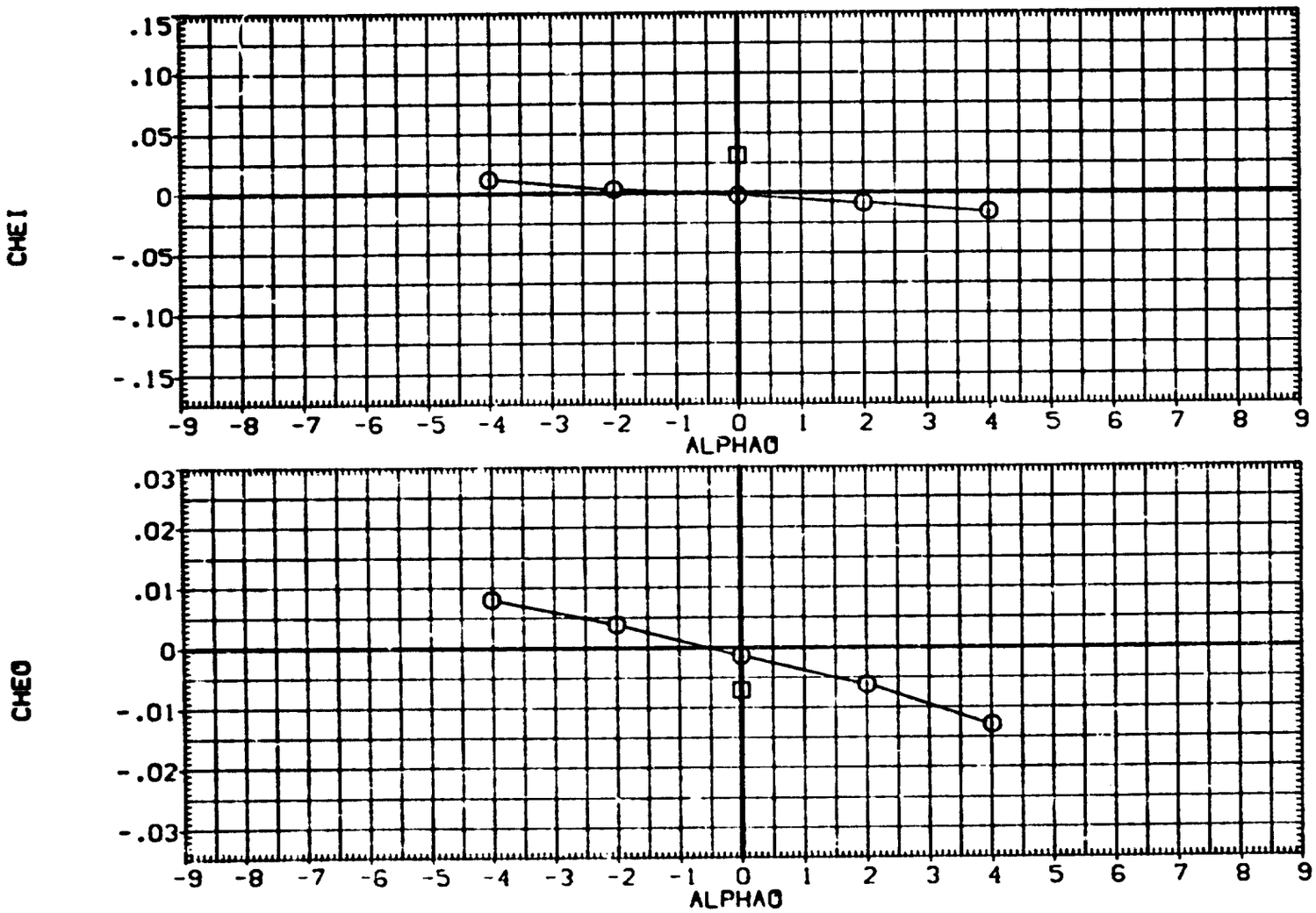


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(A)BETAO = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38)	8	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METH42)	8	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

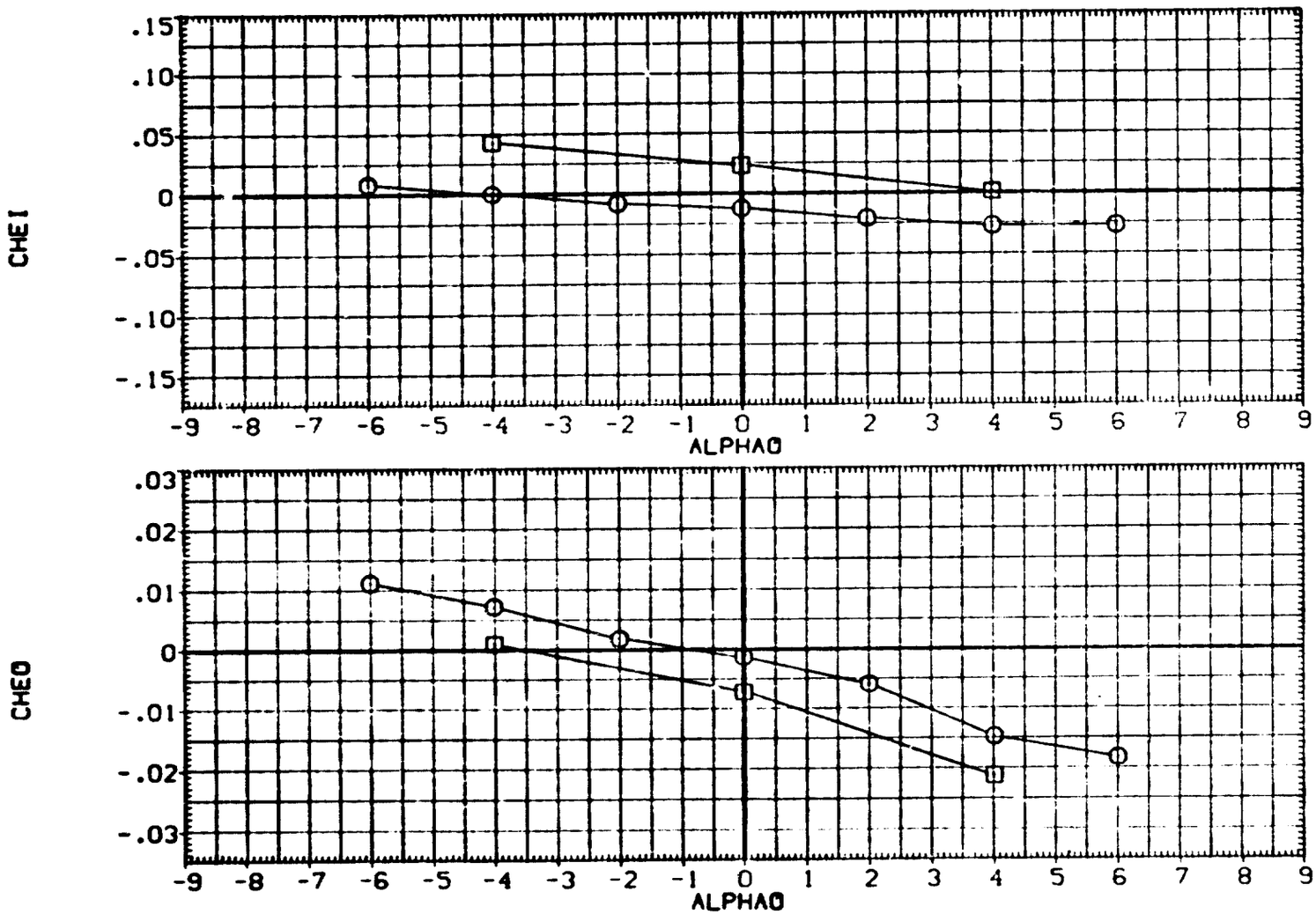


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(B)BET.AO = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH30)	8	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METH42)		DATA NOT AVAILABLE	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

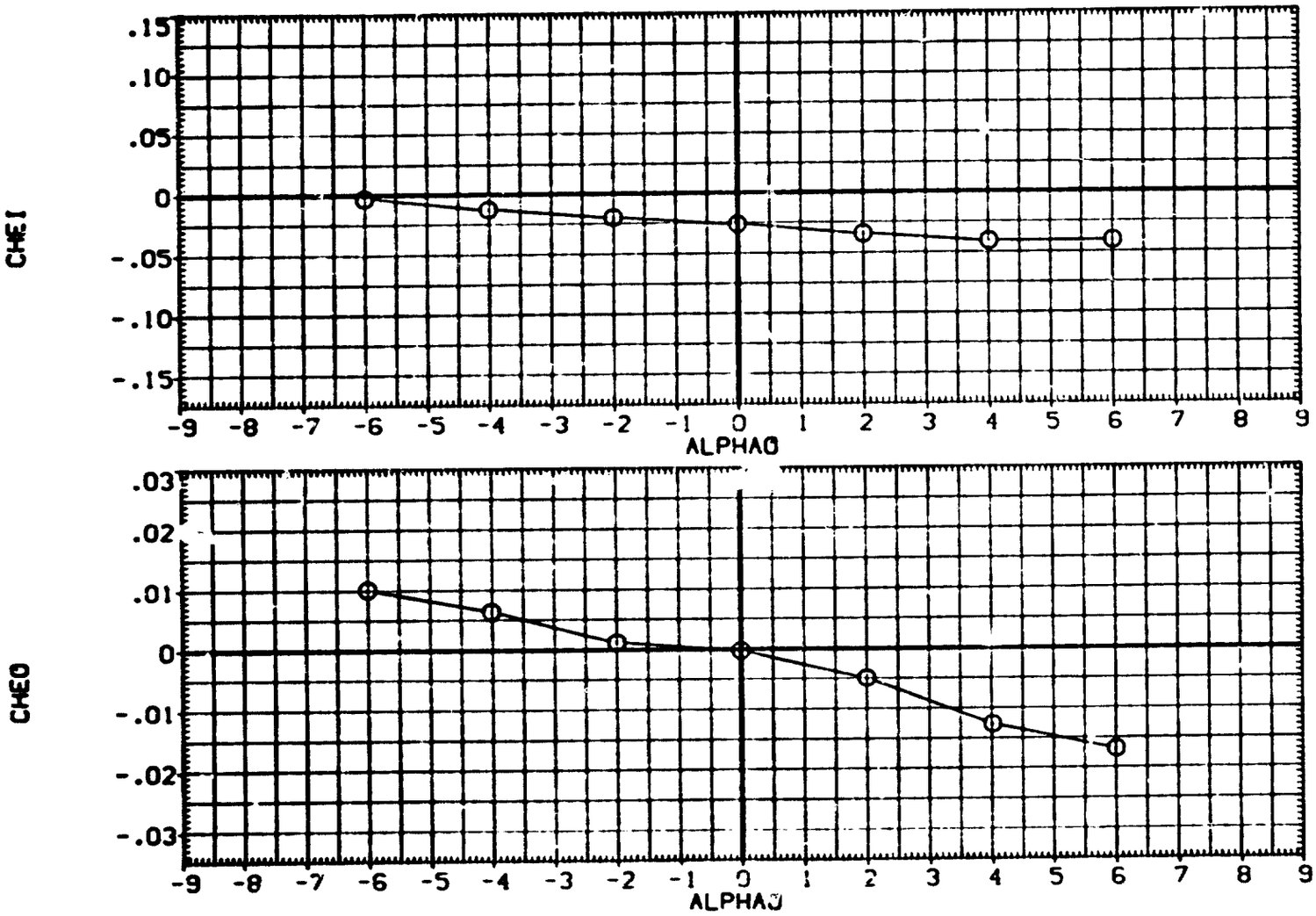


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(C)BETAO = -2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38)	AMES97-019([A6]) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(METH42)	AMES97-019([A8]) LVAP ORBITER-ALL ML SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

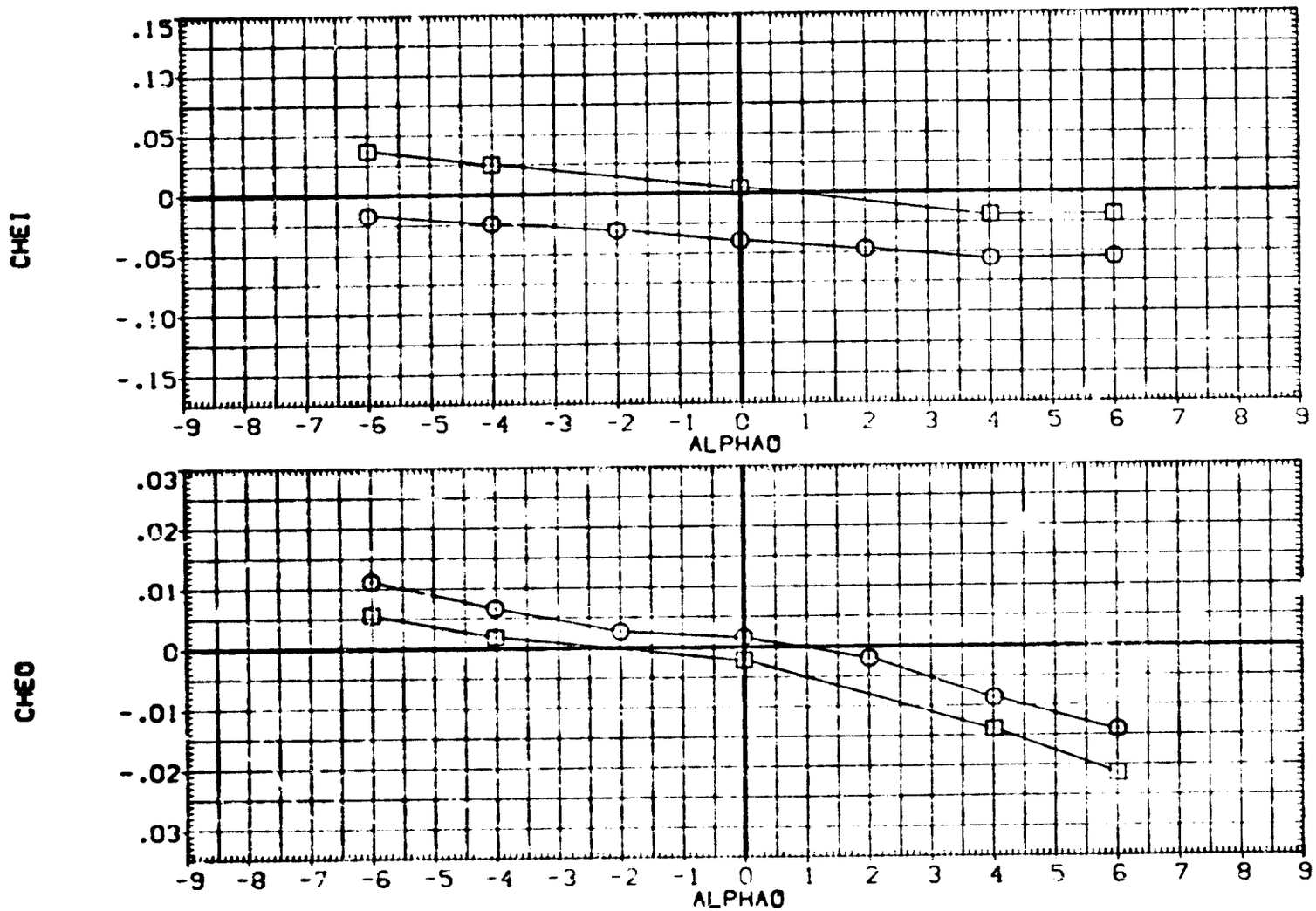


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(D)BETAO = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38) ☐	AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED	8.000	-4.000	2.500	.000
(METH42)	DATA NOT AVAILABLE	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

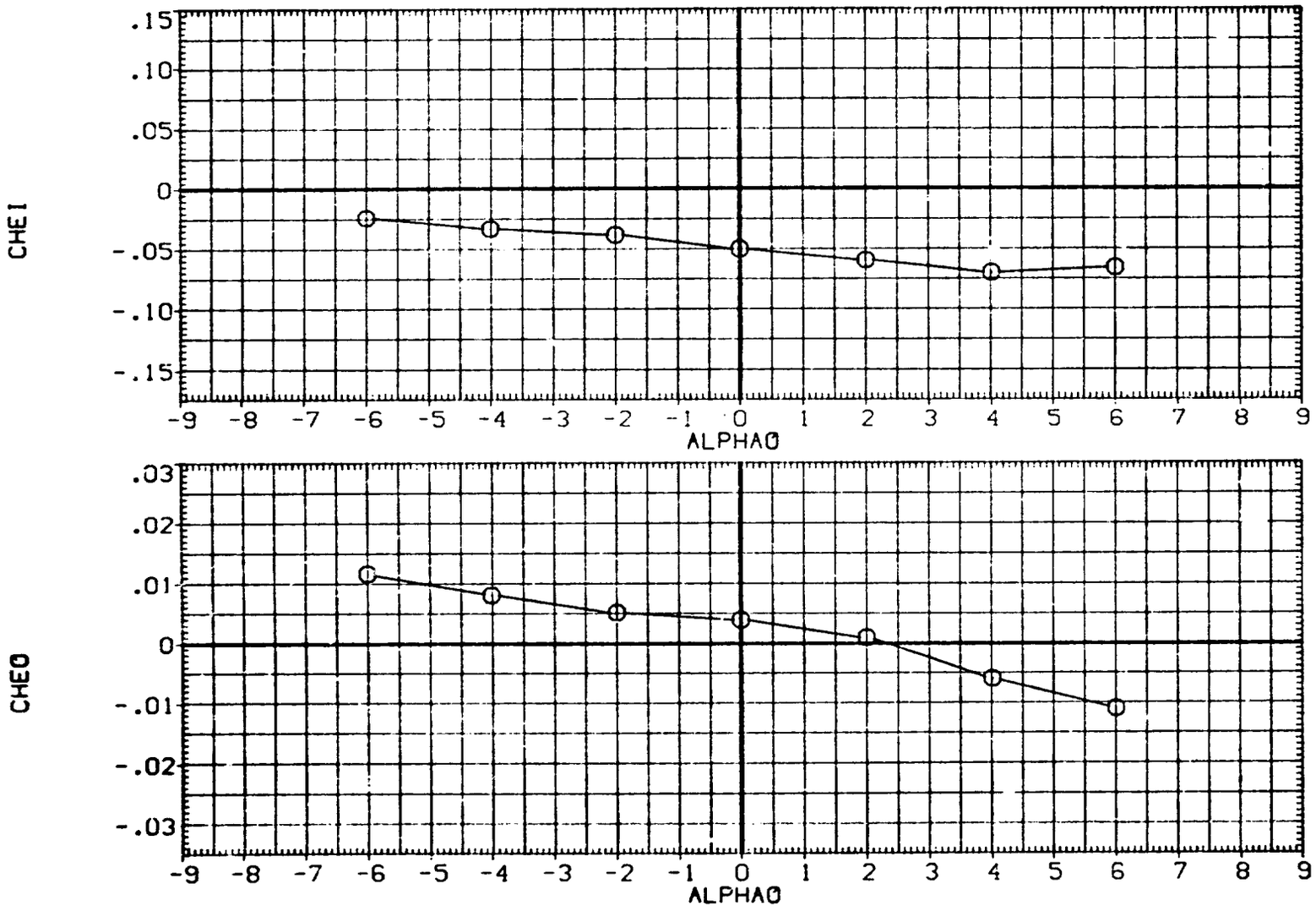


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(E)BET.0 = 2.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38) □	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	2.500	.000
(METH42) □	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

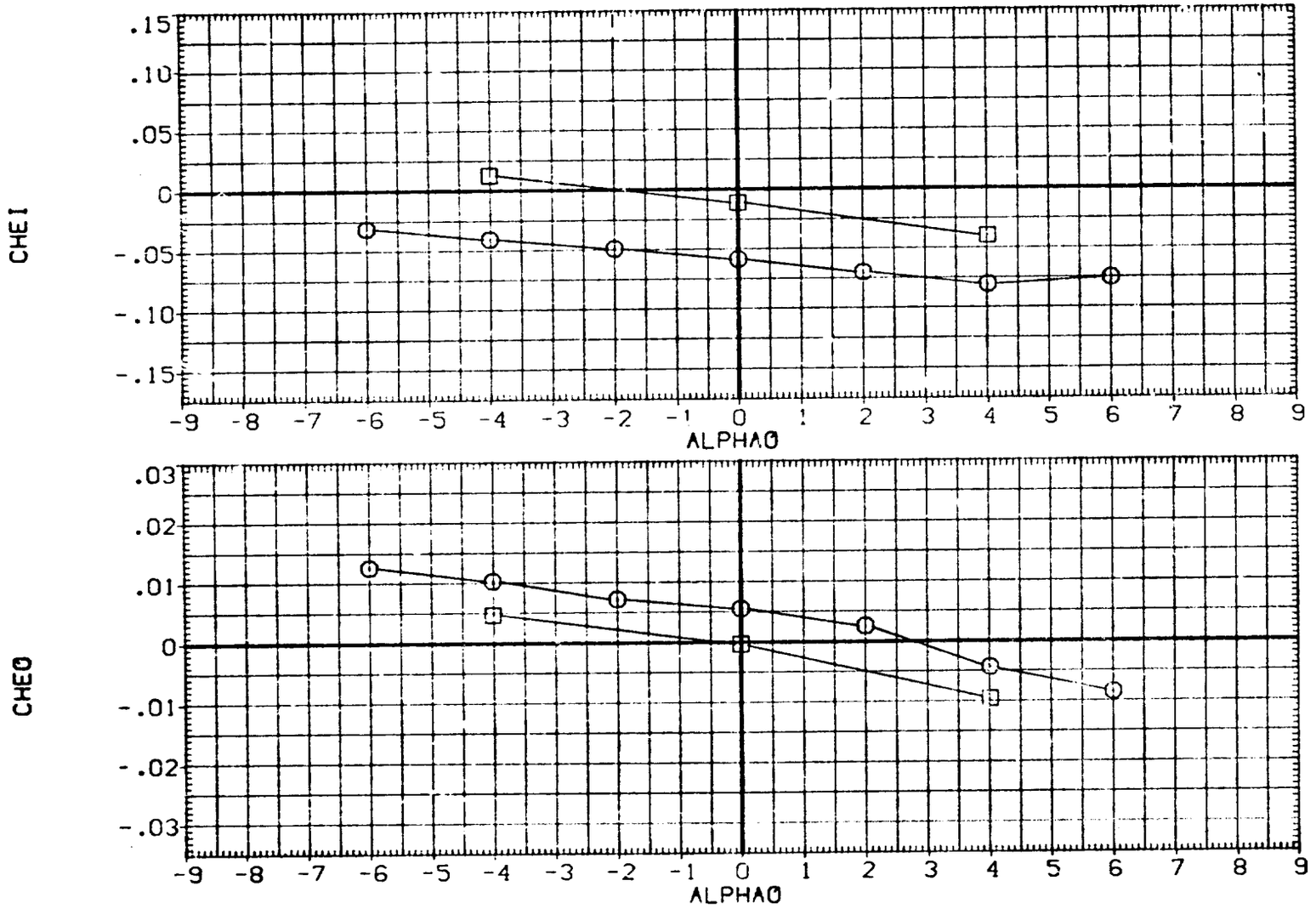


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(F)BETA0 = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(METH38)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	6.000	-4.000	2.500	.000
(METH42)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

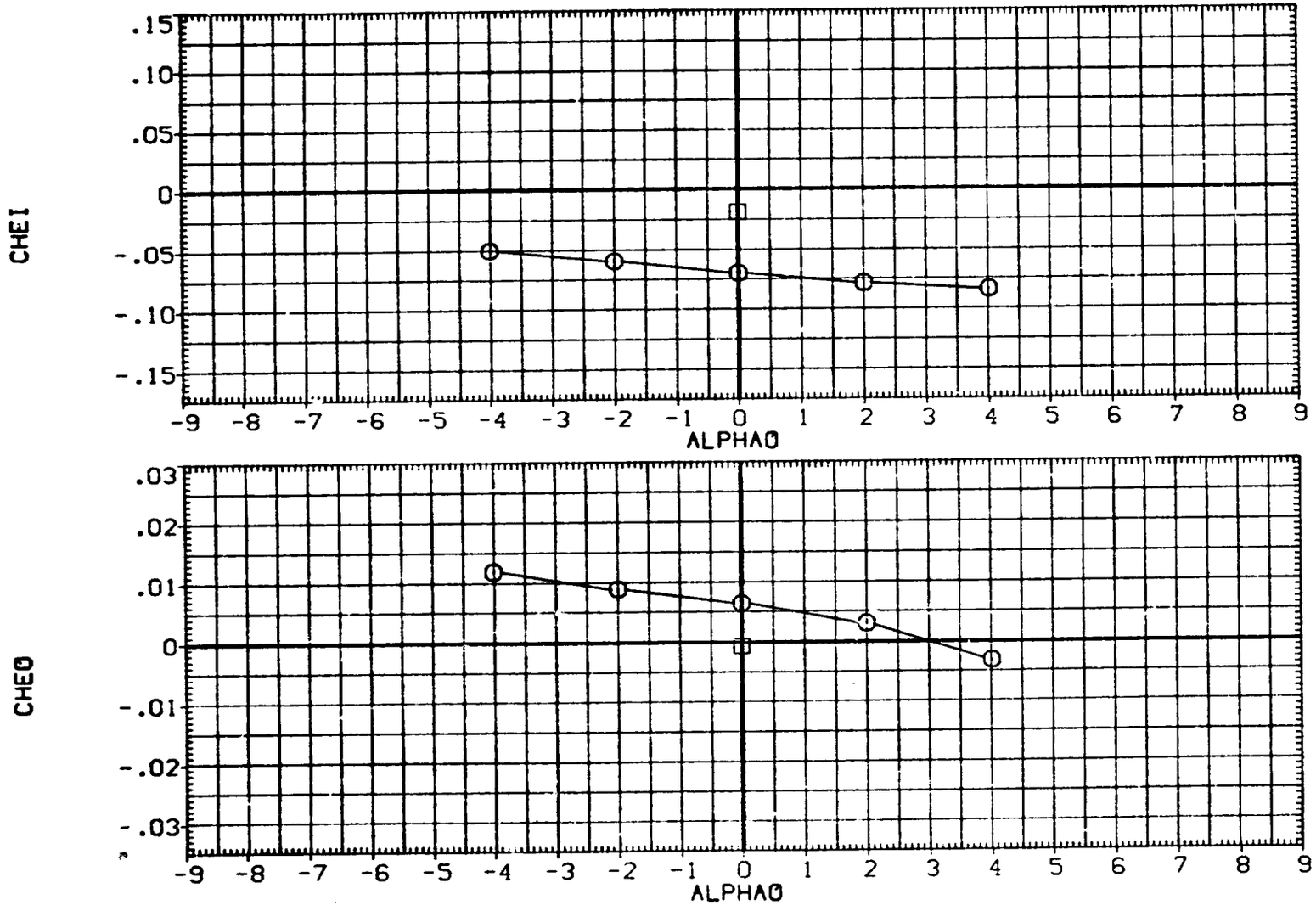


FIG. 33 ELEVON HINGE MOMENT COEFFICIENTS, M=2.5

(G)BET\0 = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(SET039)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(SET040)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(SET041)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(SET042)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

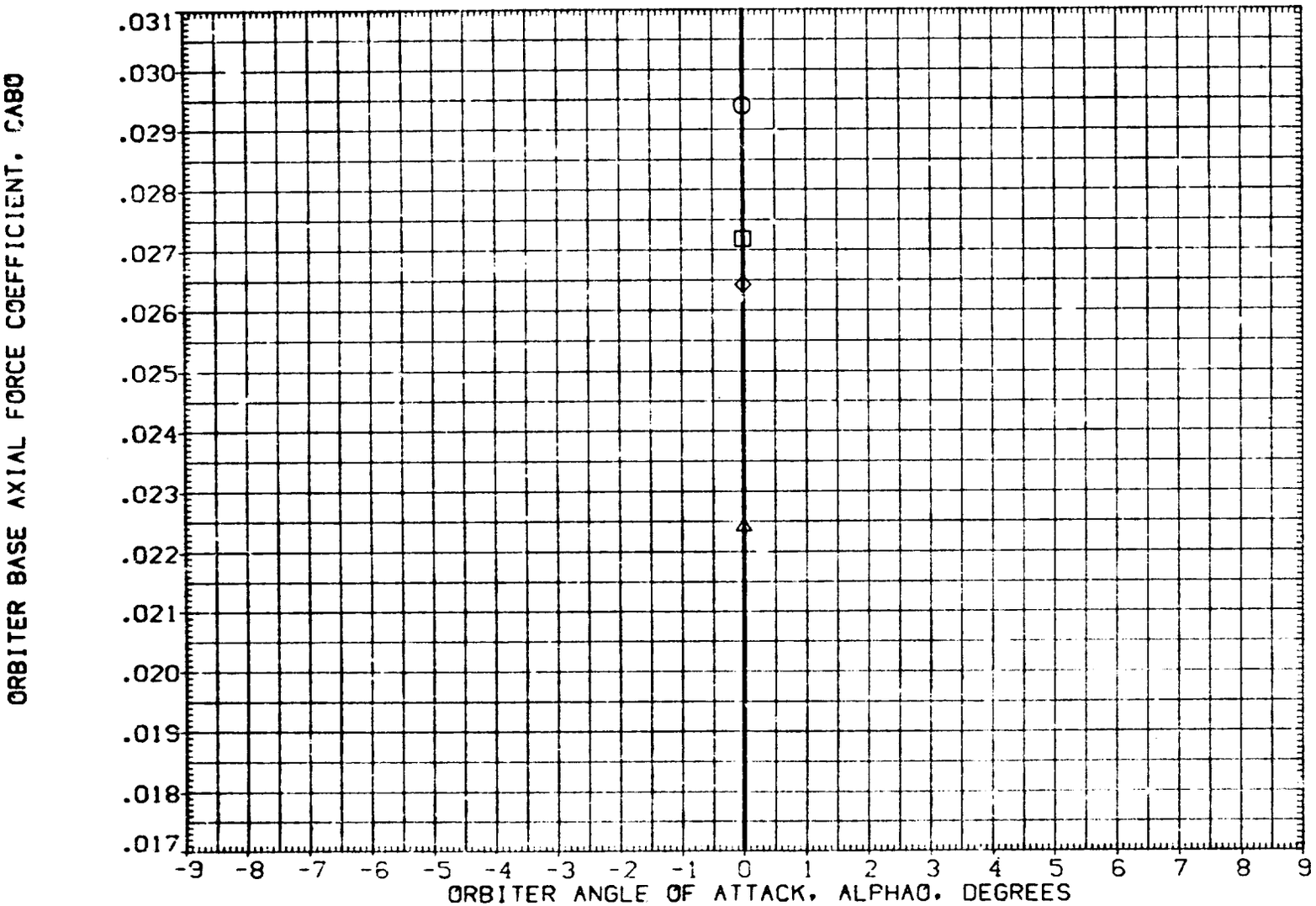


FIG. 34 ORBITER BASE AXIAL FORCE COEFFICIENT

(A)BETAO = -6.00

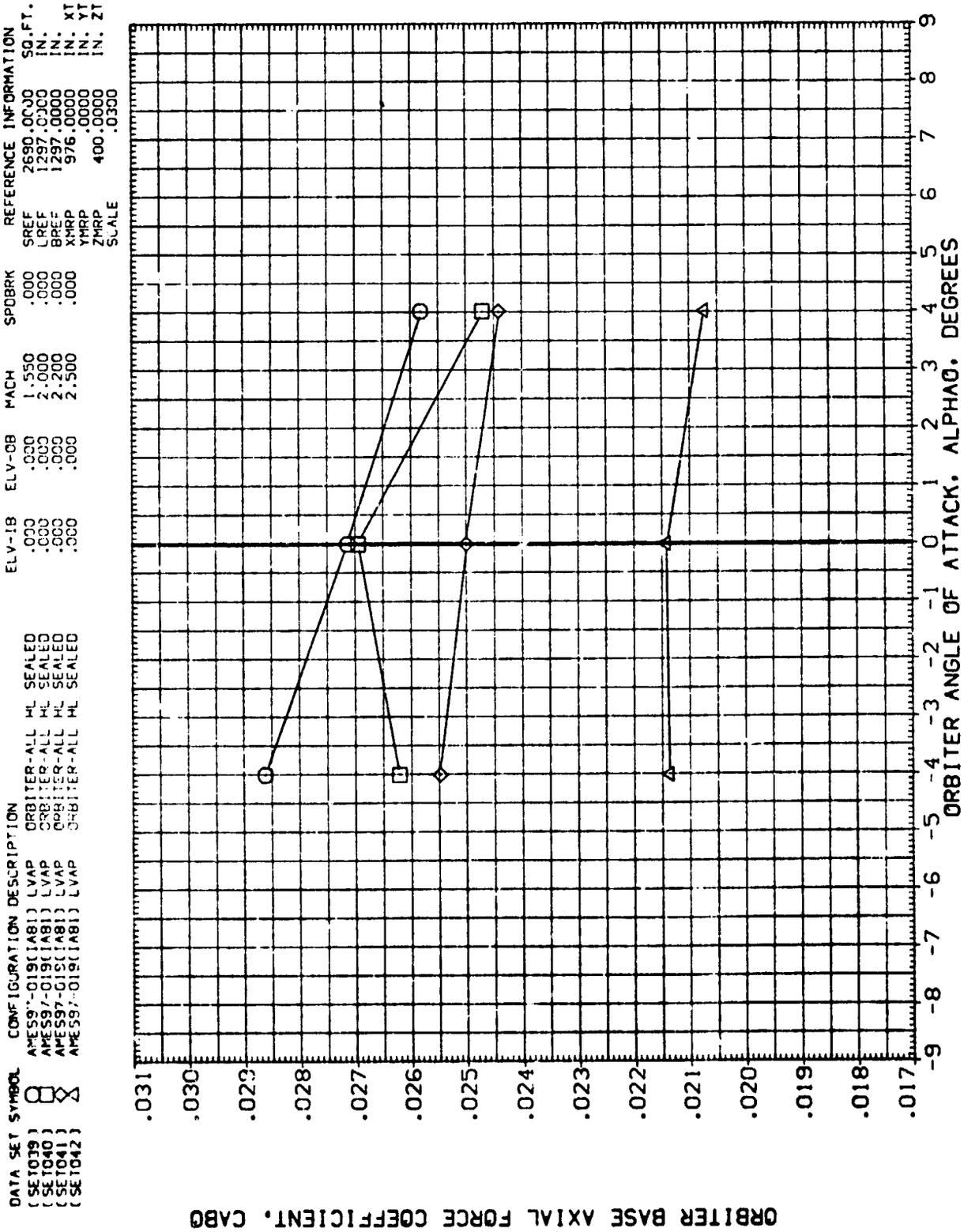


FIG. 34 ORBITER BASE AXIAL FORCE COEFFICIENT

(B)BET0 = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPOBRK
(SET039)	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(SET040)	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(SET041)	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(SET042)	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

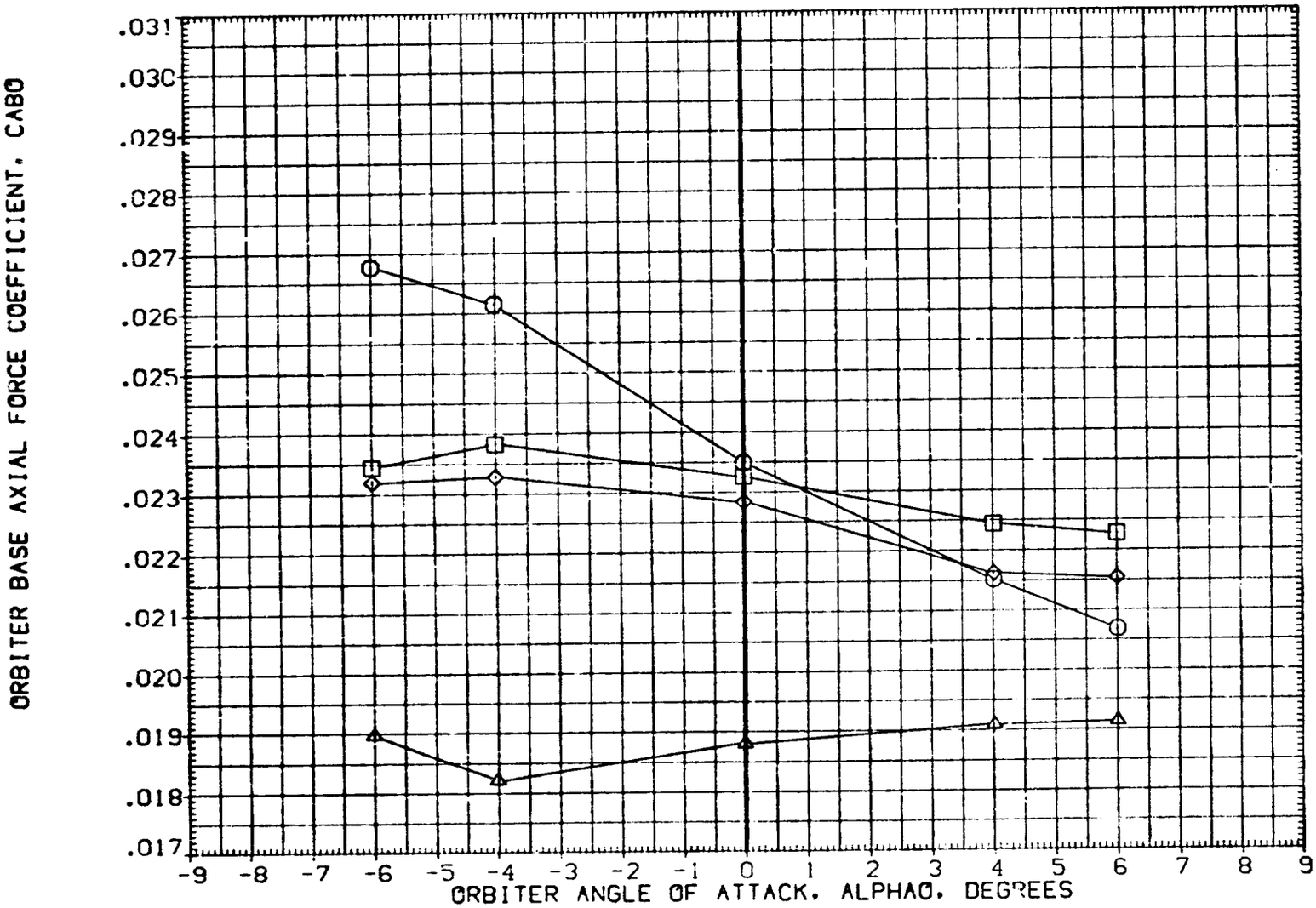


FIG. 34 ORBITER BASE AXIAL FORCE COEFFICIENT

(C)BET\0 = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(SET039)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(SET040)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(SET041)	◇	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(SET042)	△	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

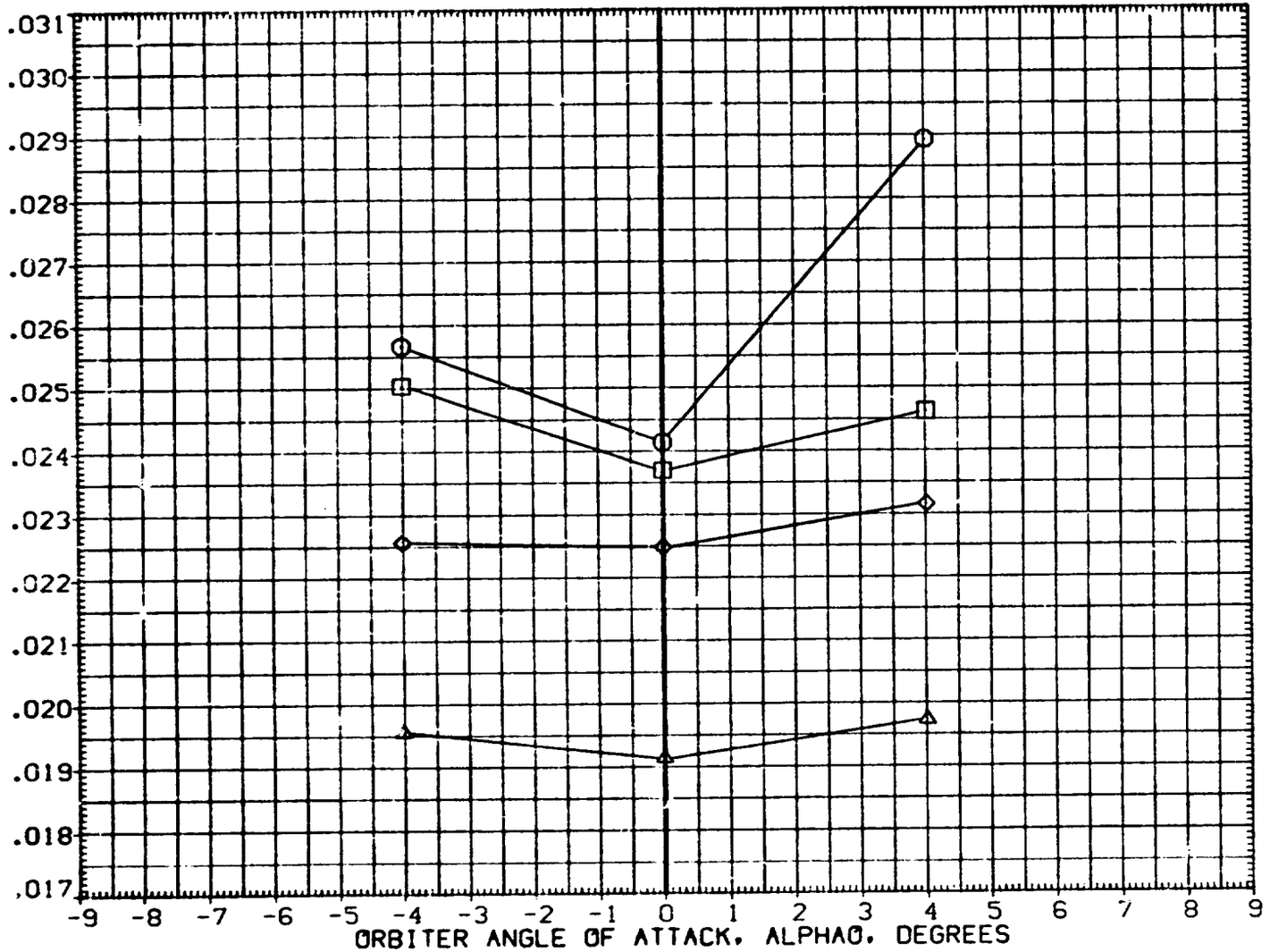


FIG. 34 ORBITER BASE AXIAL FORCE COEFFICIENT

(D)BETA0 = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(SET039)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	1.550	.000
(SET040)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.000	.000
(SET041)	◇	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.200	.000
(SET042)	△	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

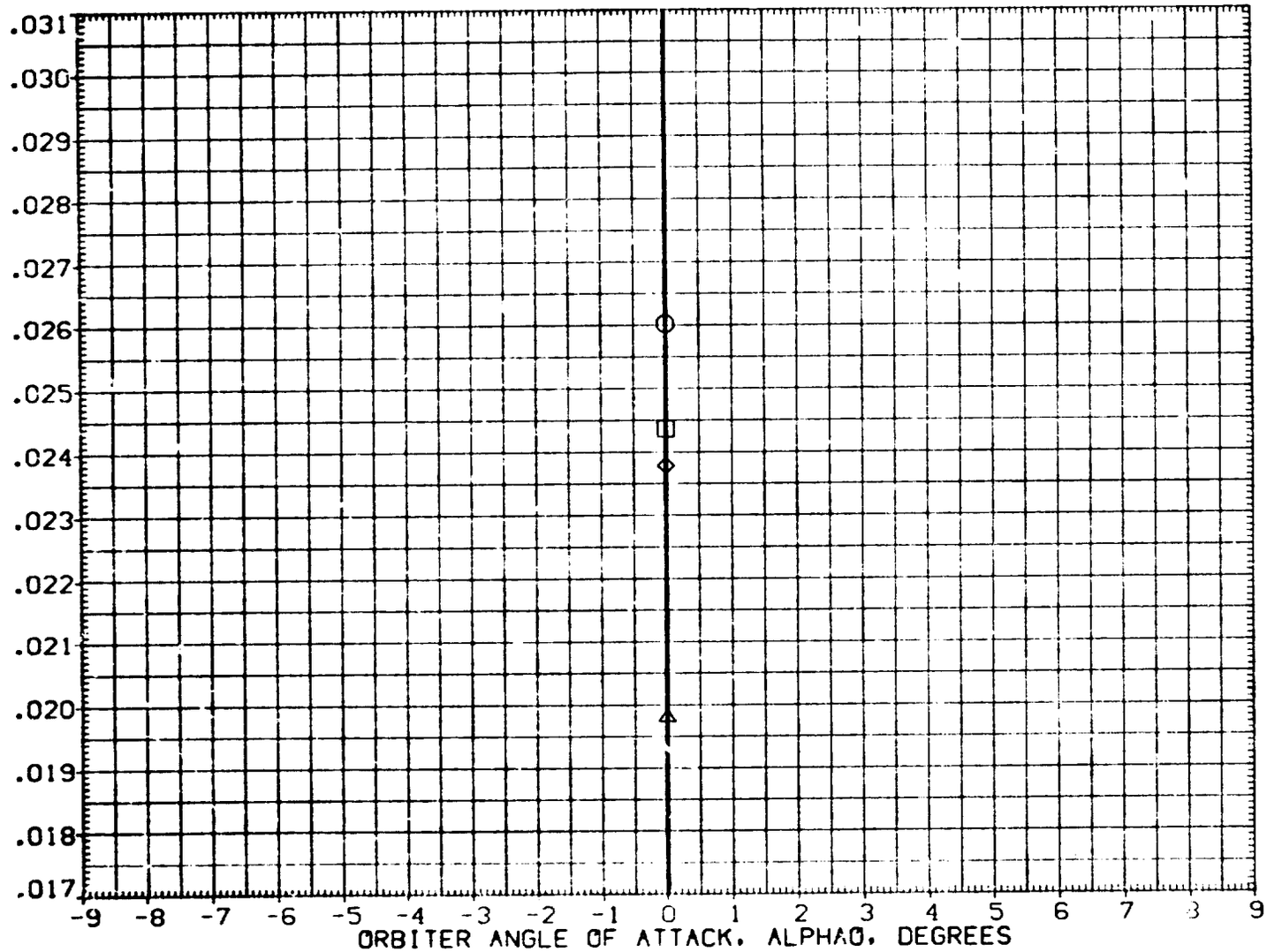


FIG. 34 ORBITER BASE AXIAL FORCE COEFFICIENT

(E)BET 0 = 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(SETT39)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(SETT40)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(SETT41)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(SETT42)	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

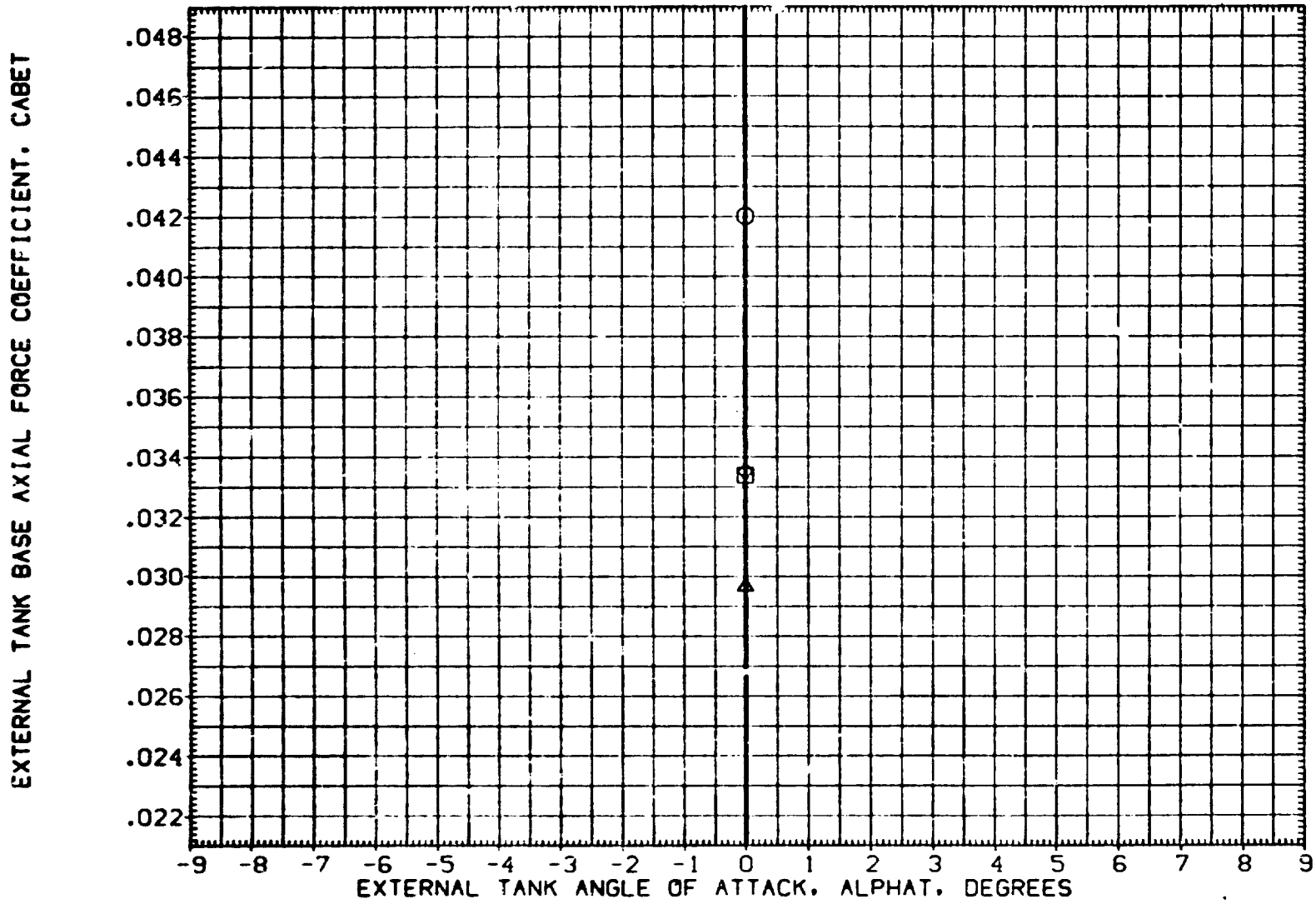


FIG. 35 EXTERNAL TANK BASE AXIAL FORCE COEFFICIENT

(A)BET.T = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(SETT39)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(SETT40)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(SETT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(SETT42)	△	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

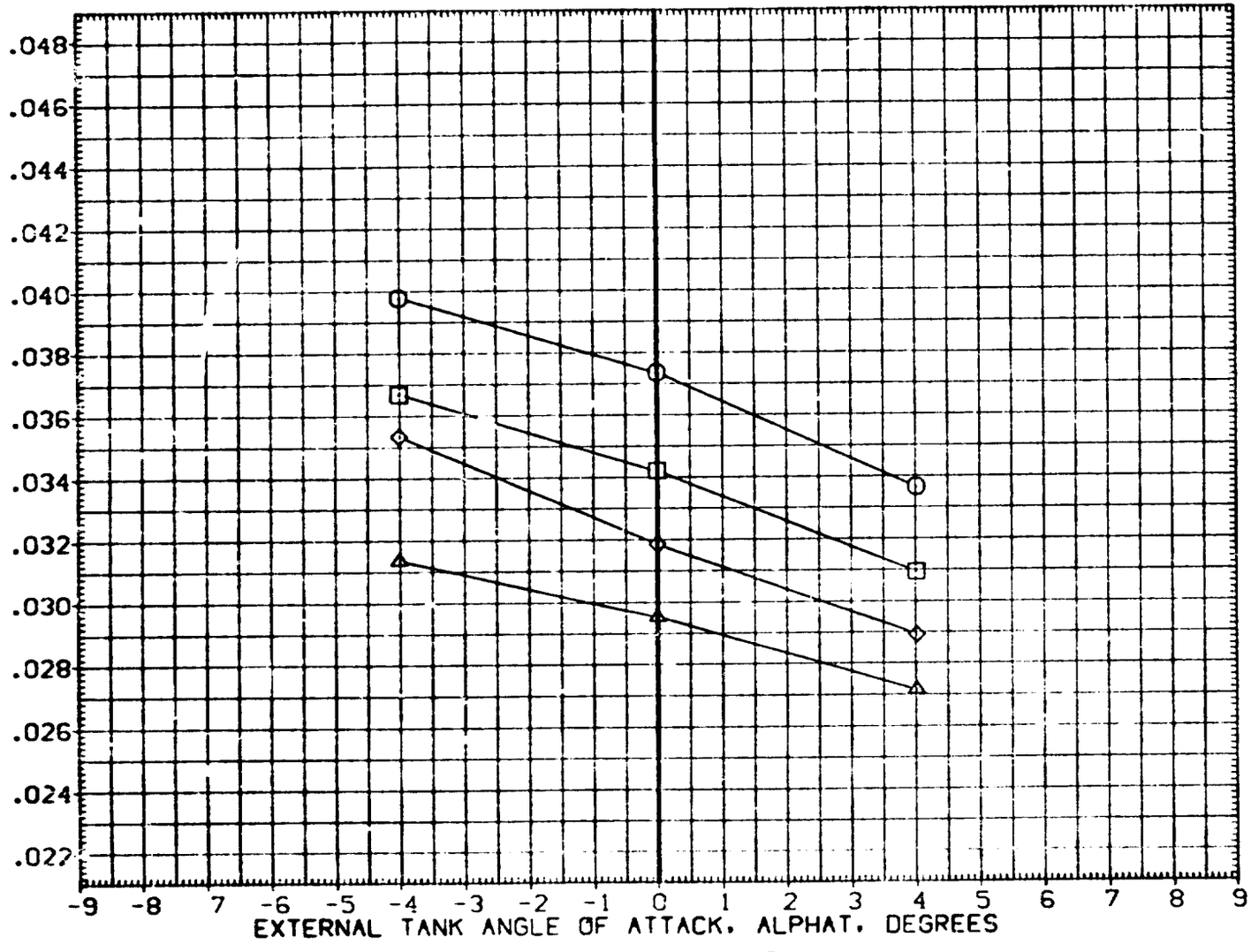


FIG. 35 EXTERNAL TANK BASE AXIAL FORCE COEFFICIENT

(B)BETAT = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(SETT39)	○	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(SETT40)	□	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(SETT41)	◇	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(SETT42)	△	AMES97-019(1A81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

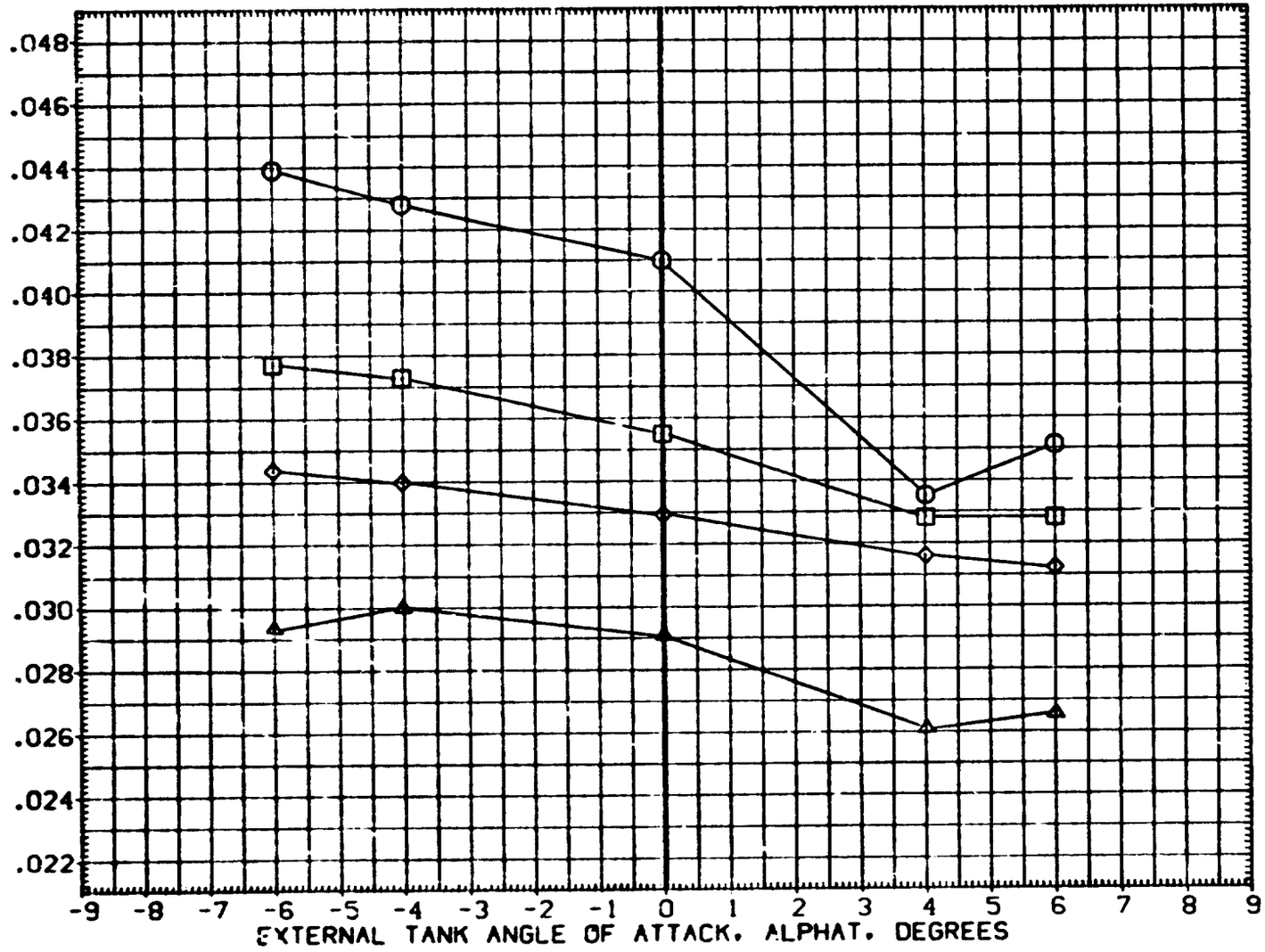


FIG. 35 EXTERNAL TANK BASE AXIAL FORCE COEFFICIENT .

(C)BET = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(SETT39)	□	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(SETT40)	○	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(SETT41)	◇	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(SETT42)	△	AMES97-019(IAB1) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

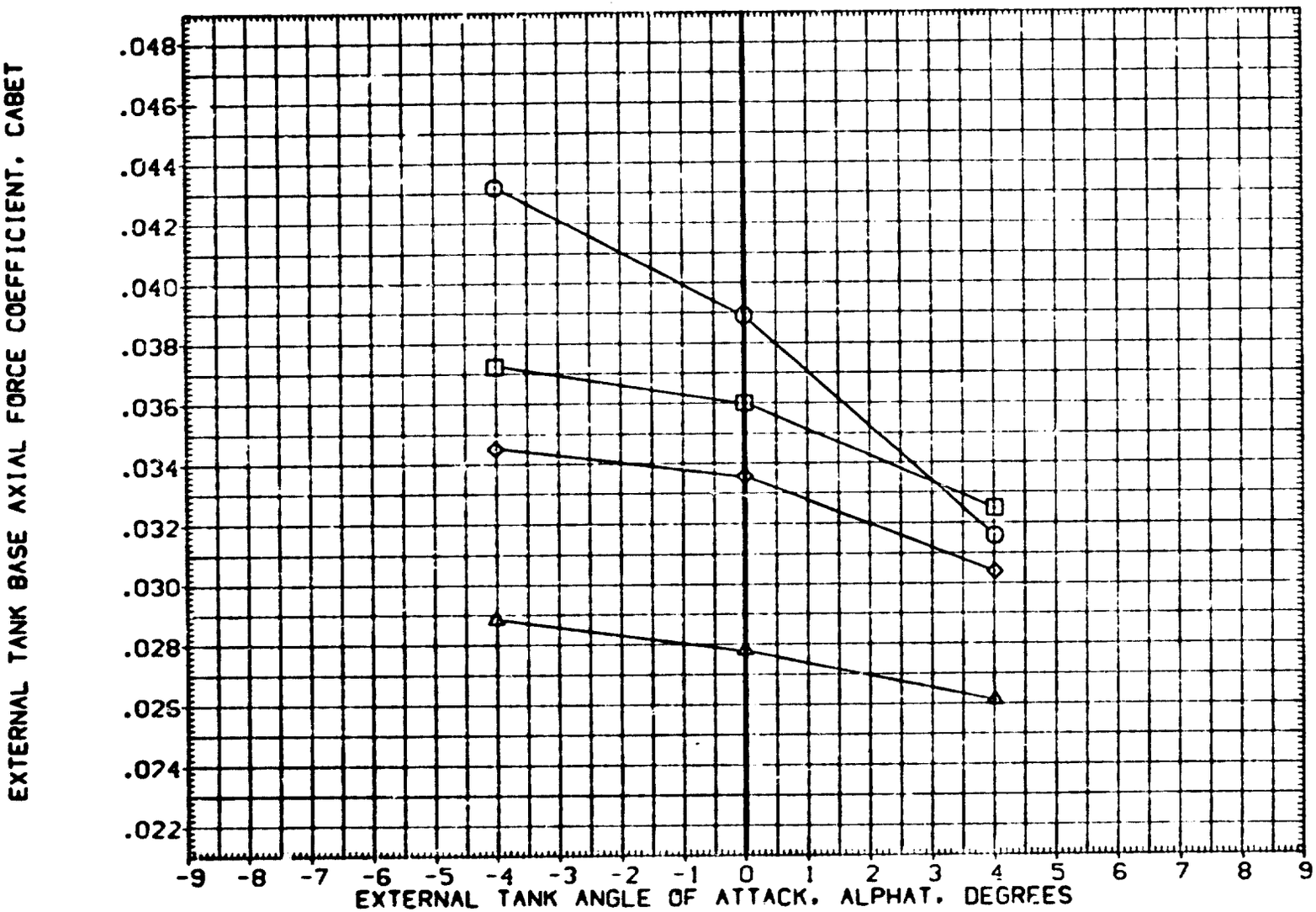


FIG. 35 EXTERNAL TANK BASE AXIAL FORCE COEFFICIENT

(D)BET.T = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPDBRK
(SETT39)	○	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	1.550	.000
(SETT40)	□	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.000	.000
(SETT41)	◇	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.200	.000
(SETT42)	△	AMES97-019(IA81) LVAP TANK - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

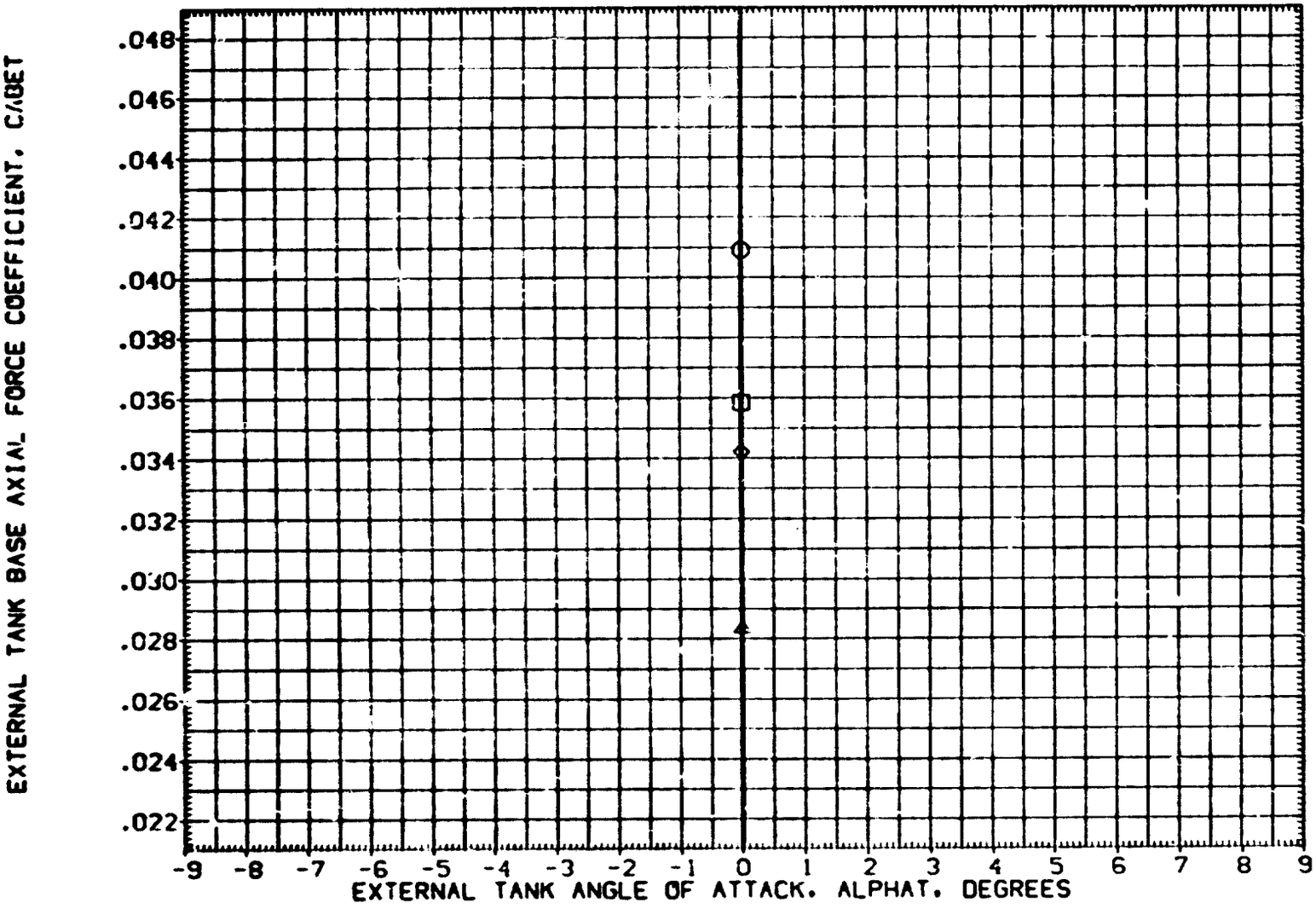


FIG. 35 EXTERNAL TANK BASE AXIAL FORCE COEFFICIENT

(E)BETAT = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPOBRK
(SETL39)	□	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(SETL40)	◇	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(SETL41)	△	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(SETL42)	⊠	AMES97-019([A81]) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	76.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

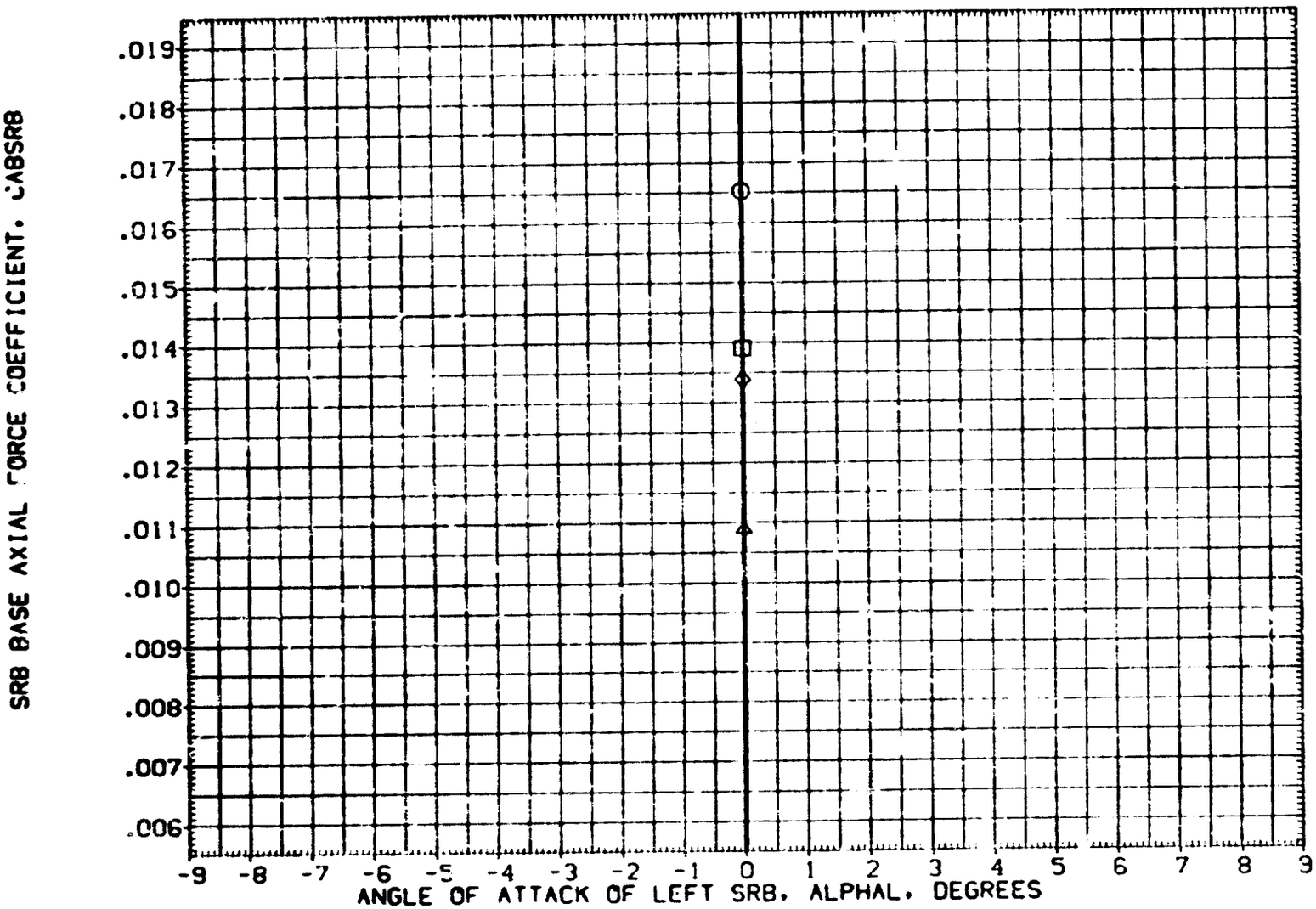


FIG. 3C LEFT SRB BASE AXIAL FORCE COEFFICIENT

(A)BETAL = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SPDBRK
(SETL39)	○	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(SETL40)	□	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(SETL41)	◇	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(SETL42)	△	AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

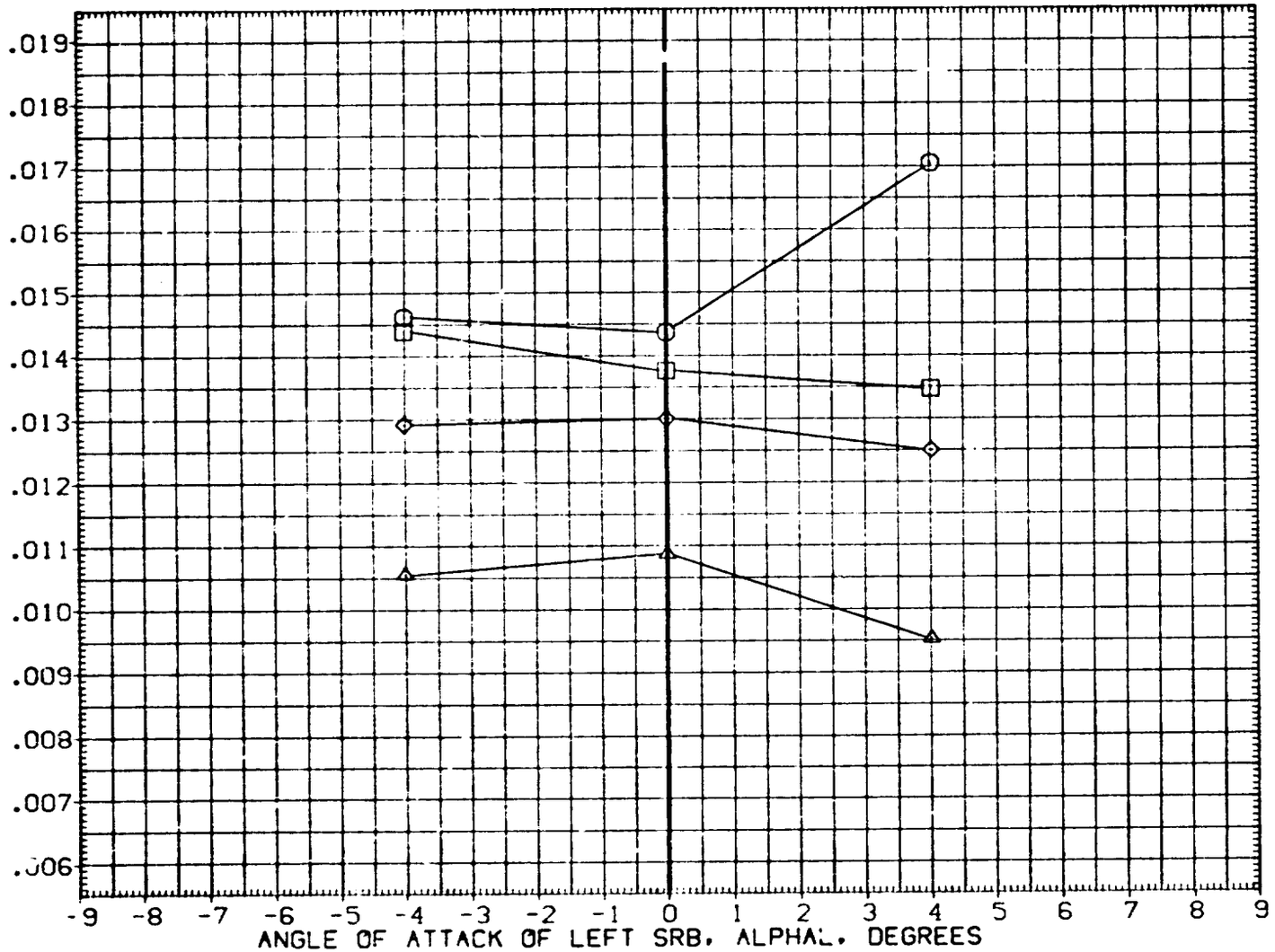


FIG. 36 LEFT SRB BASE AXIAL FORCE COEFFICIENT

(B)BETAL = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	SPLBRK
(SETL39)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(SETL40)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(SETL41)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(SETL42)	AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

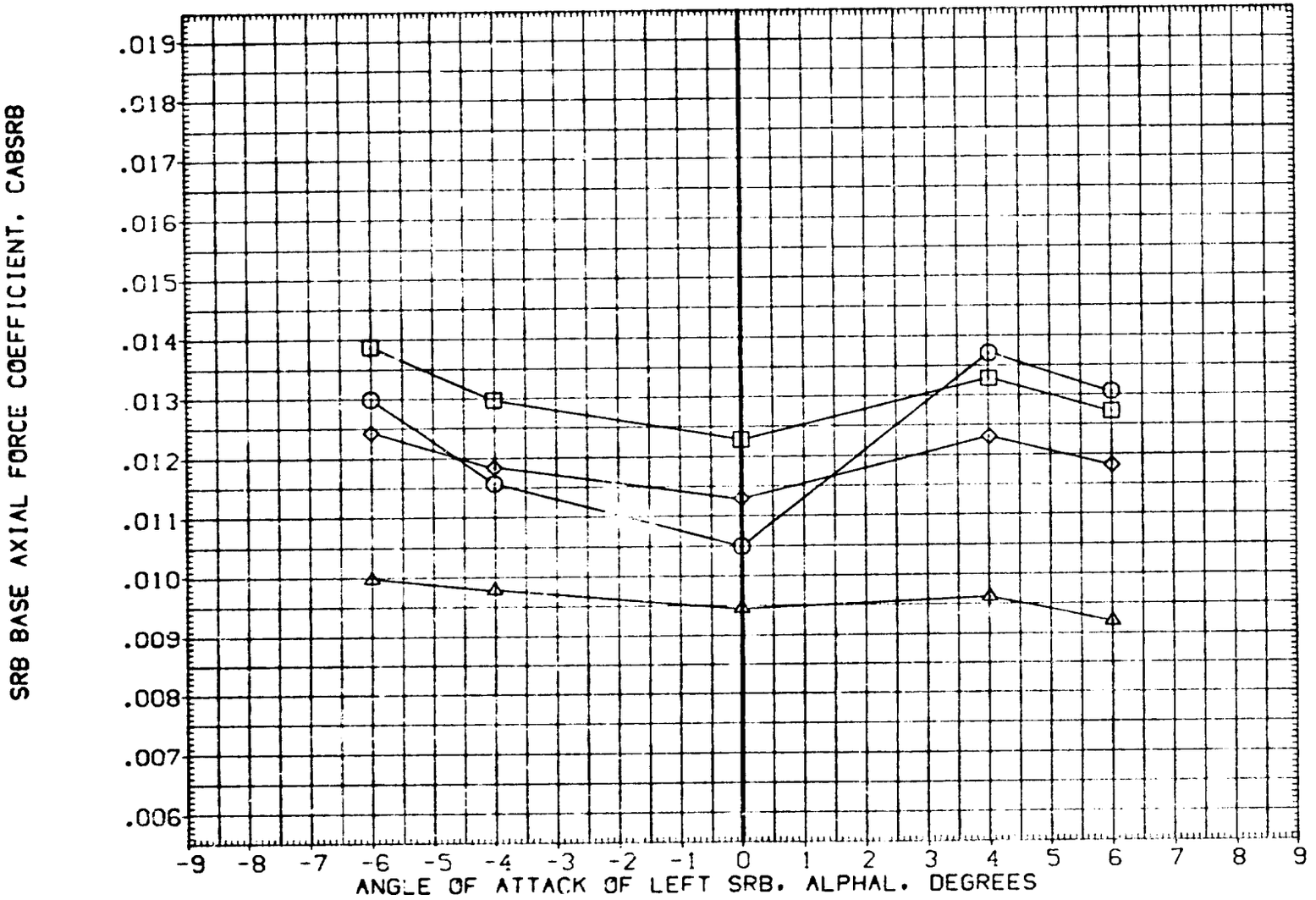


FIG. 36 LEFT SRB BASE AXIAL FORCE COEFFICIENT

(C)BETAL = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(SETL39)	○	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(SETL40)	□	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(SETL41)	◇	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.300	.000
(SETL42)	△	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

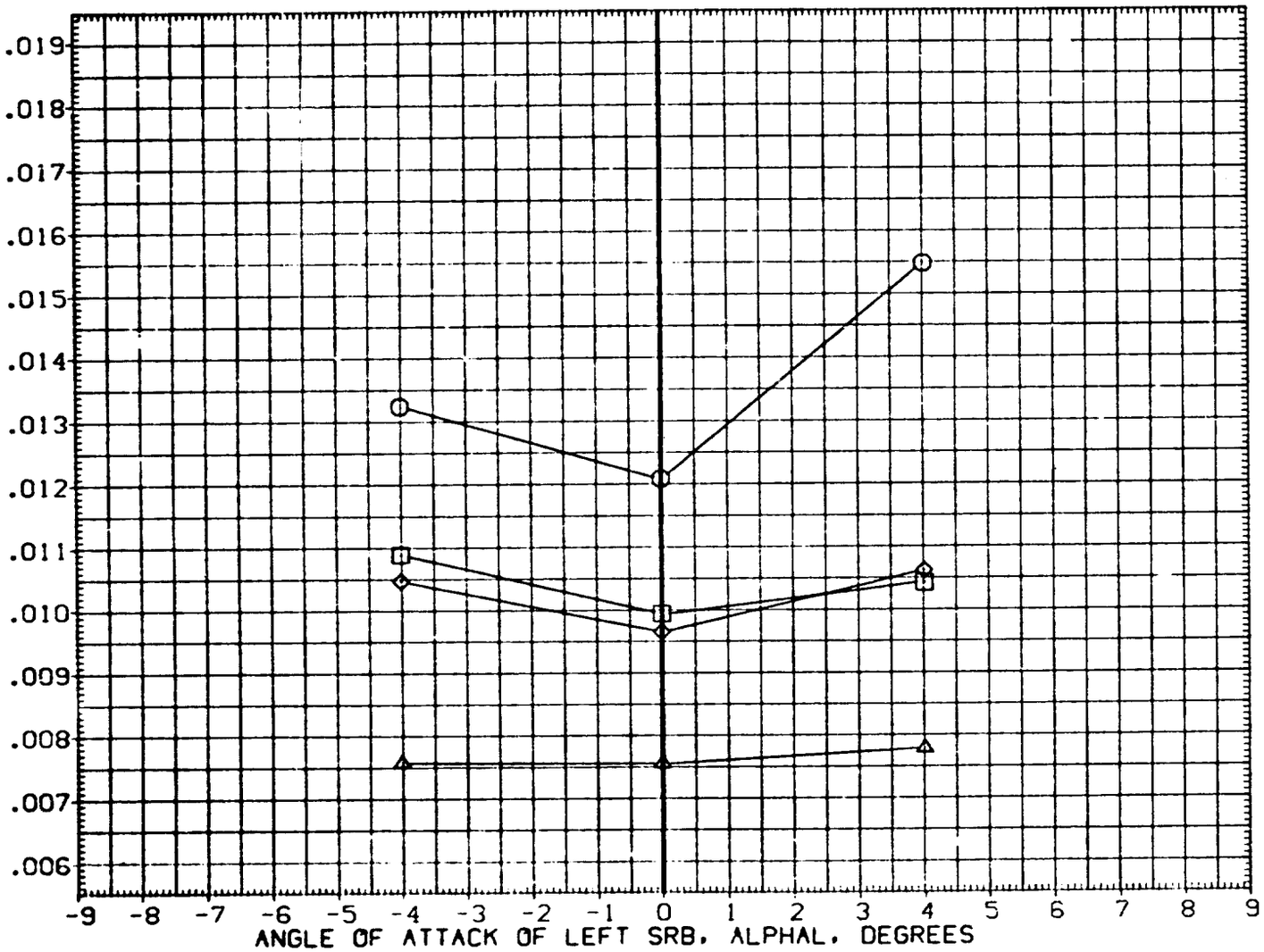


FIG. 3G LEFT SRB BASE AXIAL FORCE COEFFICIENT

(D)BETAL = 4.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(SETL39)	○	AMES97-019(IA8↓) LVAP	L-SRB - ALL HL SEALED	.000	.000	1.550	.000
(SETL40)	□	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.000	.000
(SETL41)	◇	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.200	.000
(SETL42)	△	AMES97-019(IA81) LVAP	L-SRB - ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	973.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

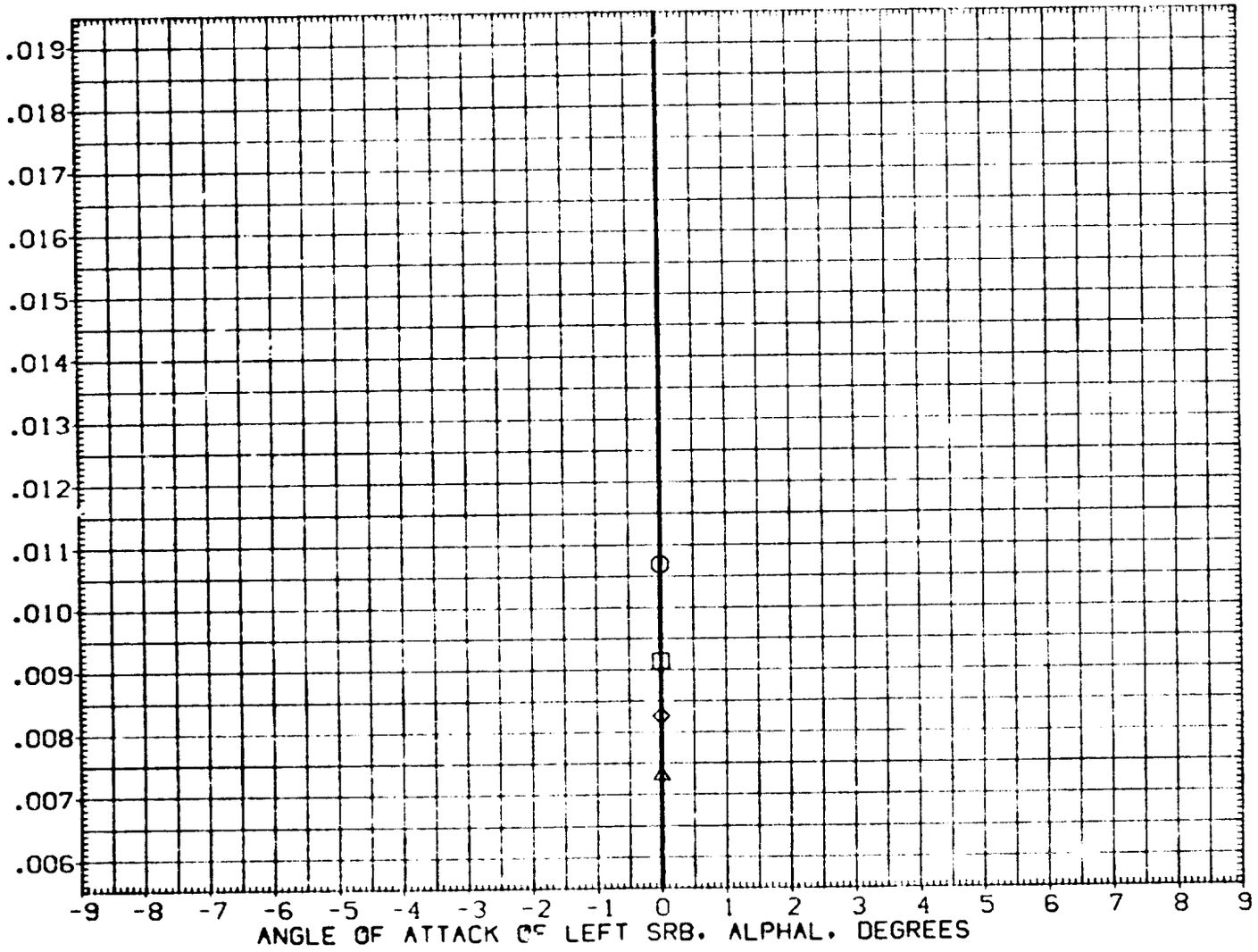


FIG. 36 LEFT SRB BASE AXIAL FORCE COEFFICIENT

(E)BETAL = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPOBRK
(SETR39)	○	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	1.550	.000
(SETR40)	□	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.000	.000
(SETR41)	◇	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.200	.000
(SETR42)	△	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

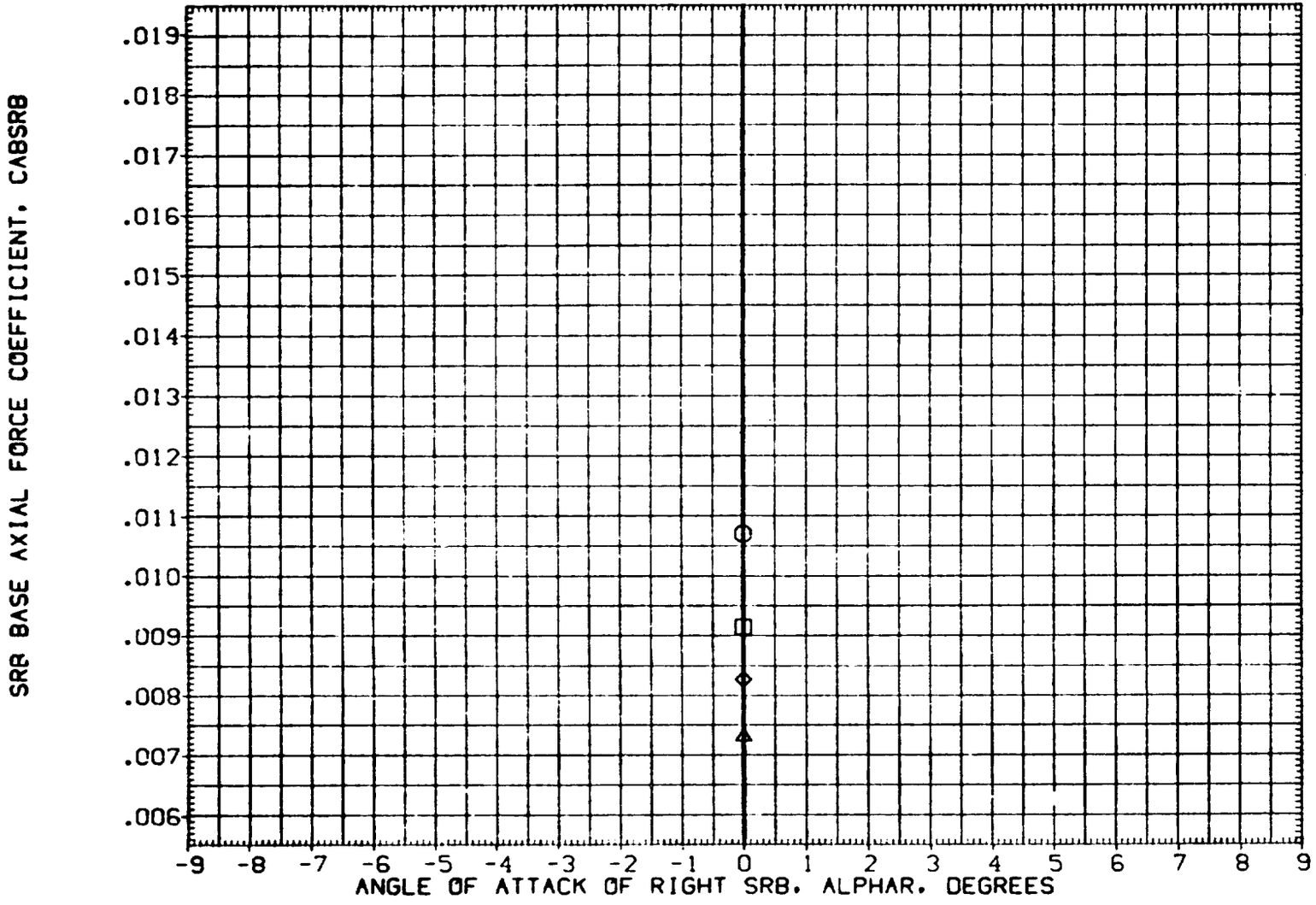


FIG. 37 RIGHT SRB BASE AXIAL FORCE COEFFICIENT

(A)BETAR = -6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(SETR39)	○	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	1.550	.000
(SETR40)	□	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.000	.000
(SETR41)	◇	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.200	.000
(SETR42)	△	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

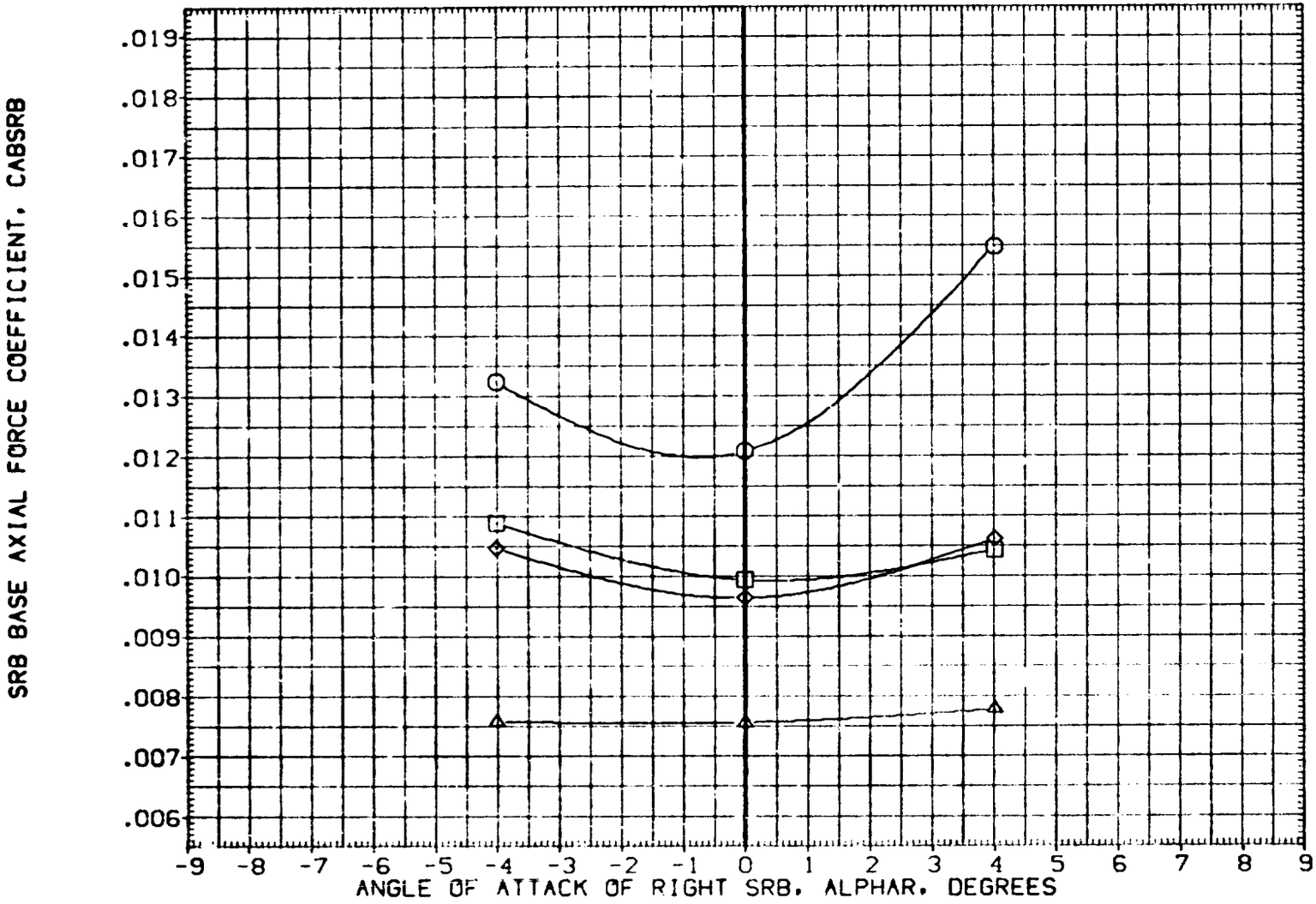


FIG. 37 RIGHT SRB BASE AXIAL FORCE COEFFICIENT

(B)BETAR = -4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPDBRK
(SETR39)	○	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	1.550	.000
(SETR40)	□	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.000	.000
(SETR41)	◇	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.200	.000
(SETR42)	△	AMES97-019(IA81) LVAP R-LRB	ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

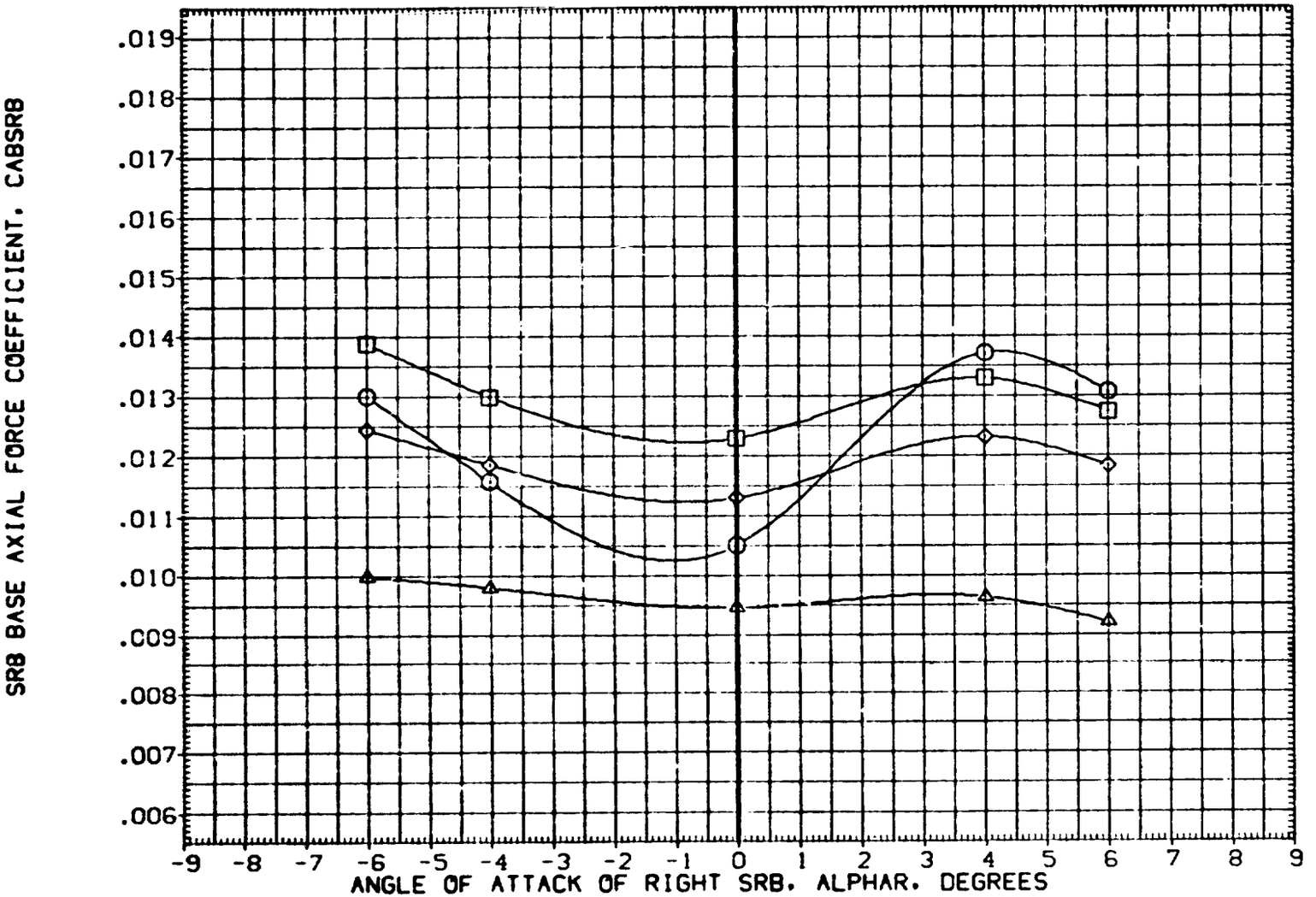


FIG. 37 RIGHT SRB BASE AXIAL FORCE COEFFICIENT

(C)BETAR = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPOBRK
(SETR39)	○	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	1.550	.000
(SETR40)	□	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.000	.000
(SETR41)	◇	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.200	.000
(SETR42)	△	AMES97-019([A81]) LVAP R-LRB	ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

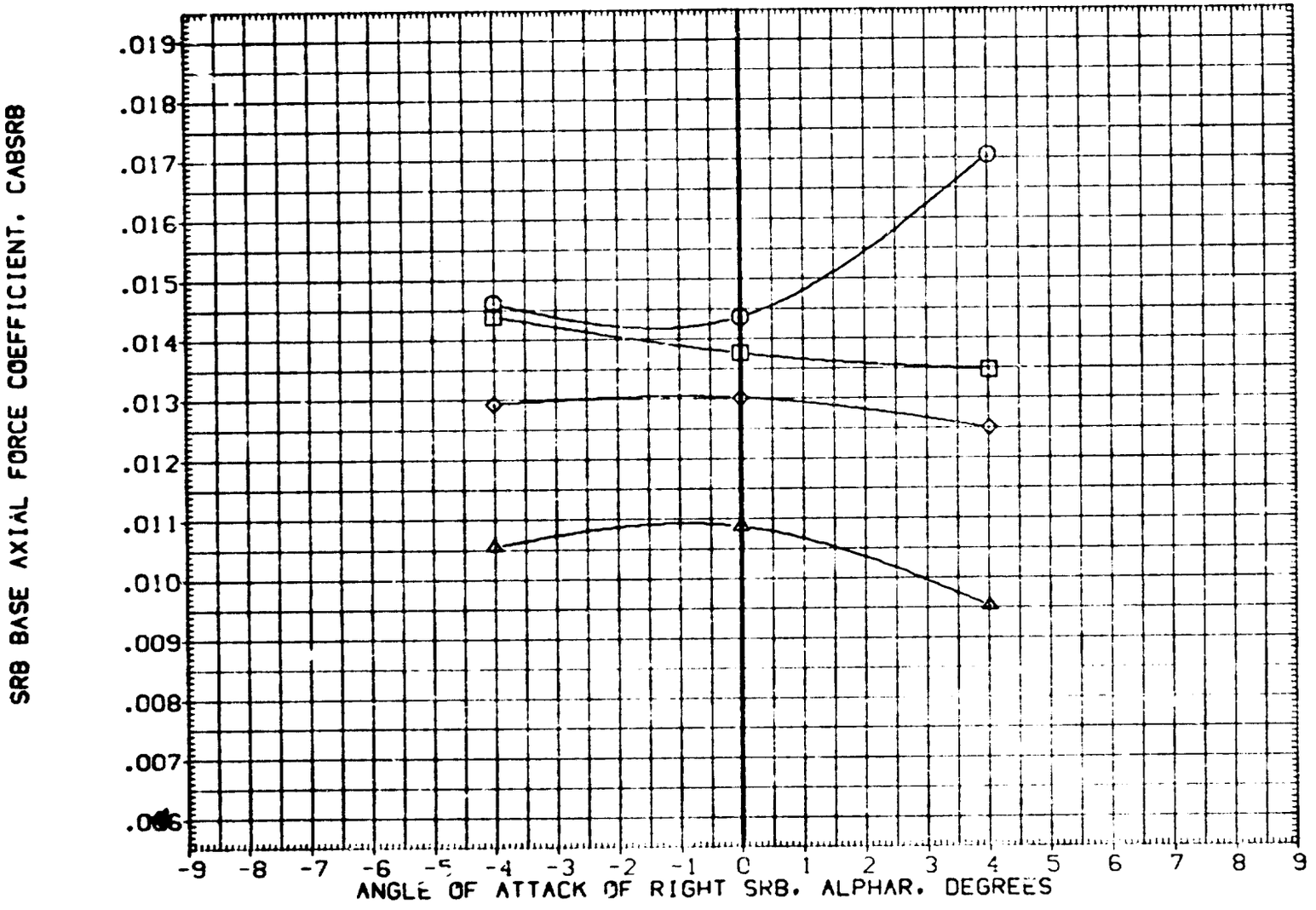


FIG. 37 RIGHT SRB BASE AXIAL FORCE COEFFICIENT

(D)BETAR = 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	SPOBRK
(SETR39)	○	AMES97-019(IAB1) LVAP R-LRB	ALL HL SEALED	.000	.000	1.550	.000
(SETR40)	□	AMES97-019(IAB1) LVAP R-LRB	ALL HL SEALED	.000	.000	2.000	.000
(SETR41)	◇	AMES97-019(IAB1) LVAP R-LRB	ALL HL SEALED	.000	.000	2.200	.000
(SETR42)	△	AMES97-019(IAB1) LVAP R-LRB	ALL HL SEALED	.000	.000	2.500	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

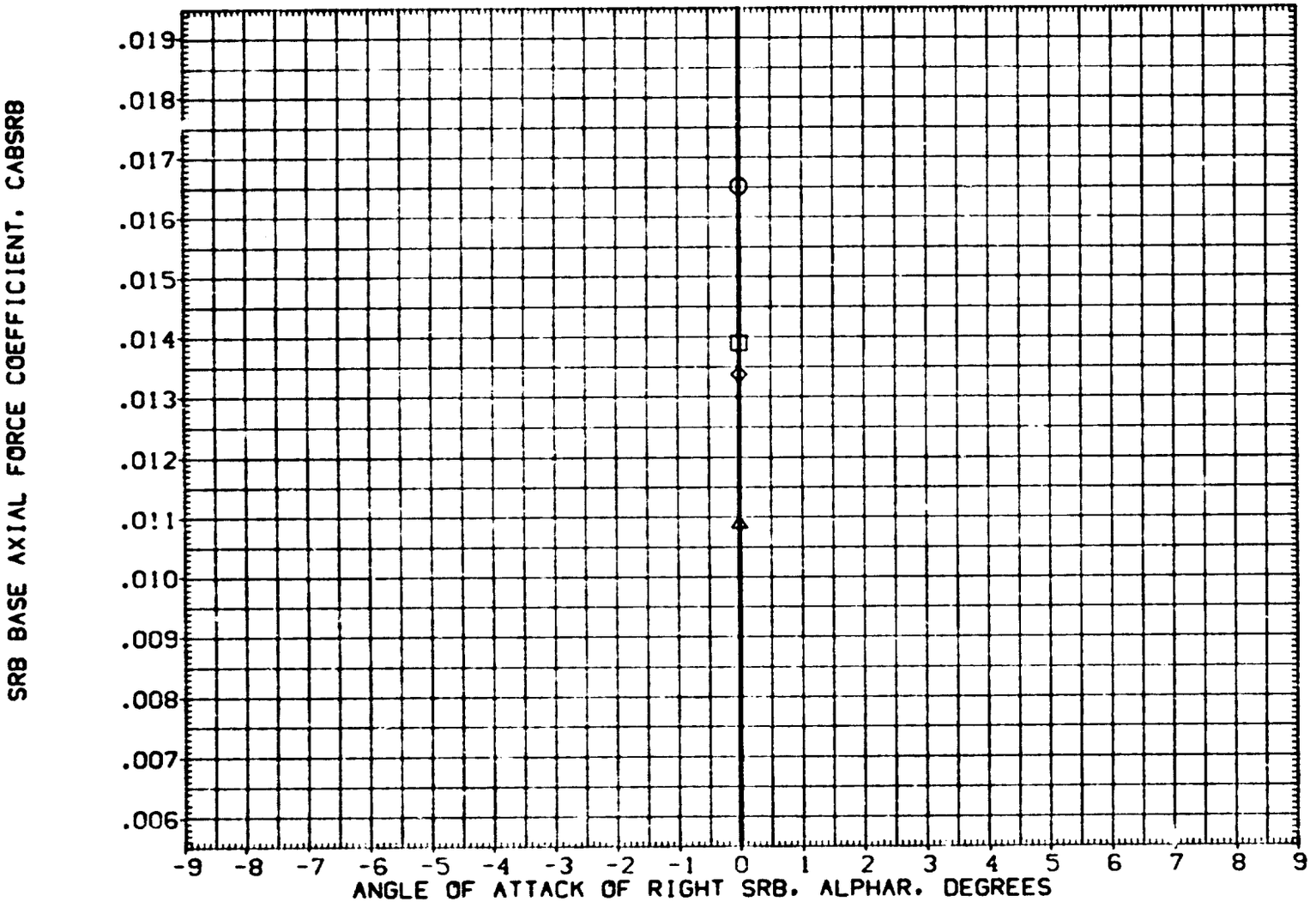


FIG. 37 RIGHT SRB BASE AXIAL FORCE COEFFICIENT

(E)BETAR = 6.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETAI	SPDBRK
(UET135)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	.000	.000
(UET143)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	.000	.000
(UET146)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	.000	.000
(UET139)		AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

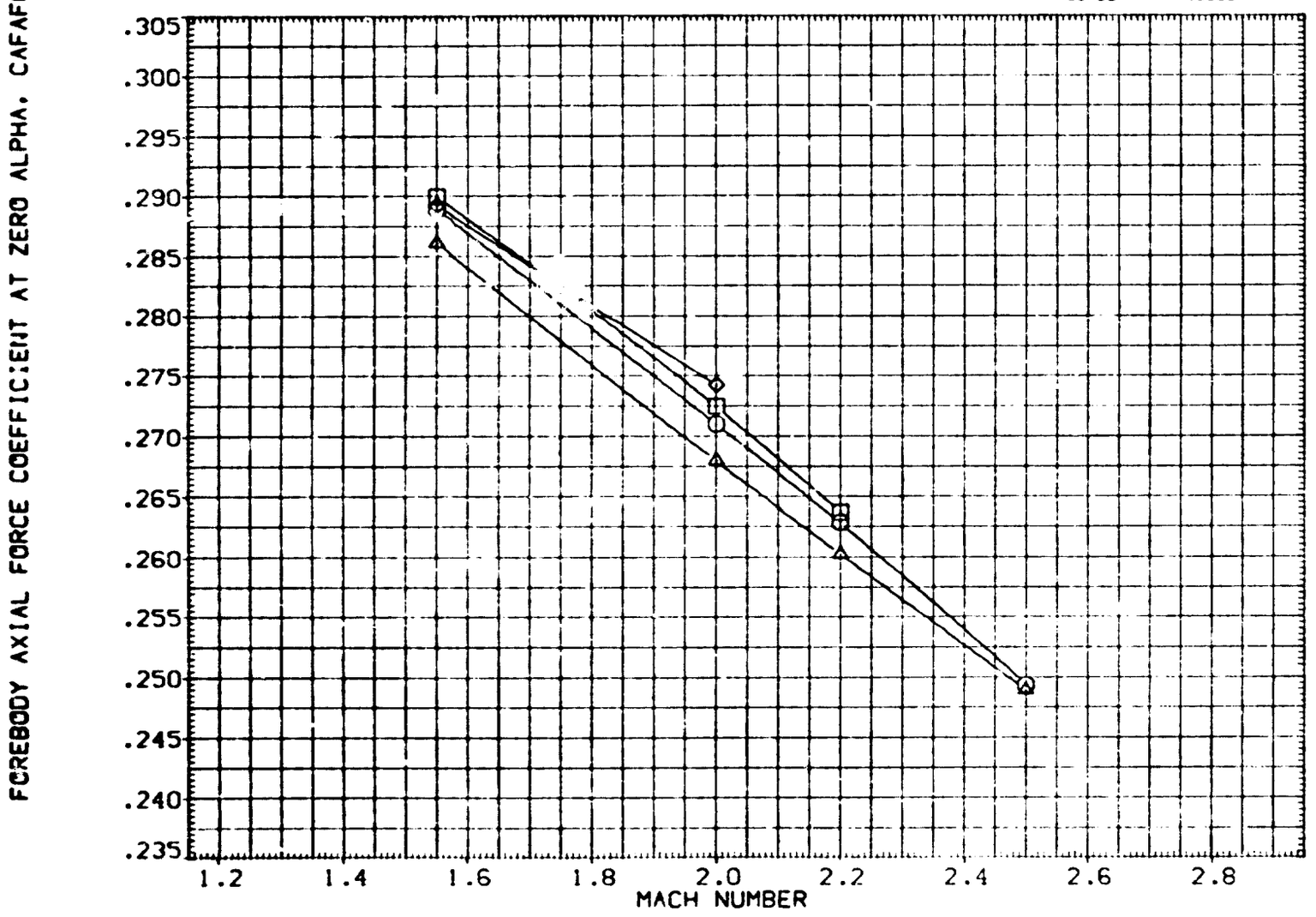


FIG. 38 SUMMARY, FOREBODY AXIAL FORCE COEFFICIENT AT ALPHA=0.0 DEG.

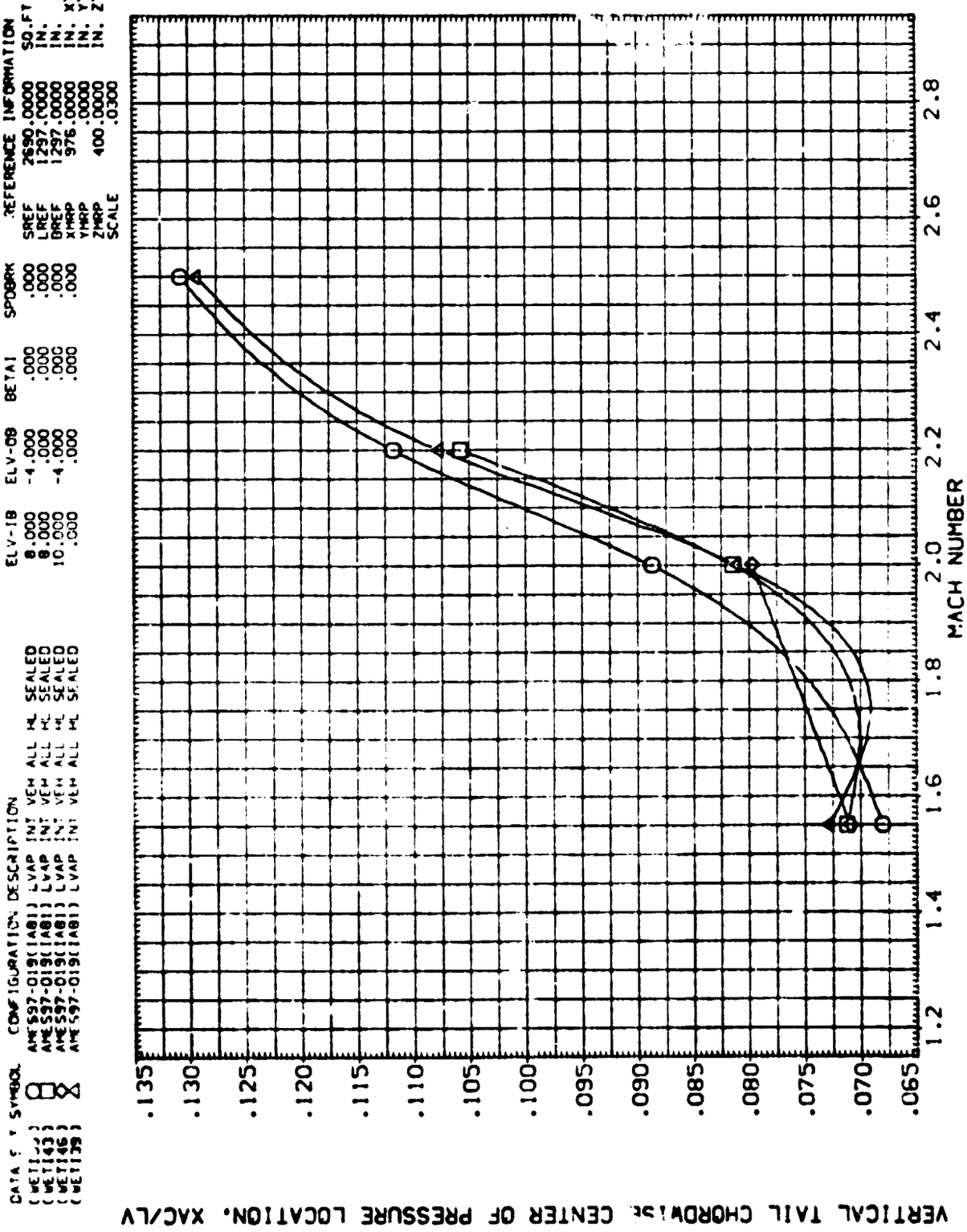


FIG. 39 SUMMARY. LONGITUDINAL AERODYNAMIC CENTER LOCATION

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETA	SPDBRK
(VET135)	○	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	-4.000	.000	.000
(VET143)	□	AMES97-019([A81) LVAP INT VEH ALL ML SEALED	8.000	.000	.000	.000
(VET146)	△	AMES97-019([A81) VAP INT VEH ALL ML SEALED	10.000	-4.000	.000	.000
(VET139)	⋈	AMES97-019([A81) VAP INT VEH ALL ML SEALED	.000	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

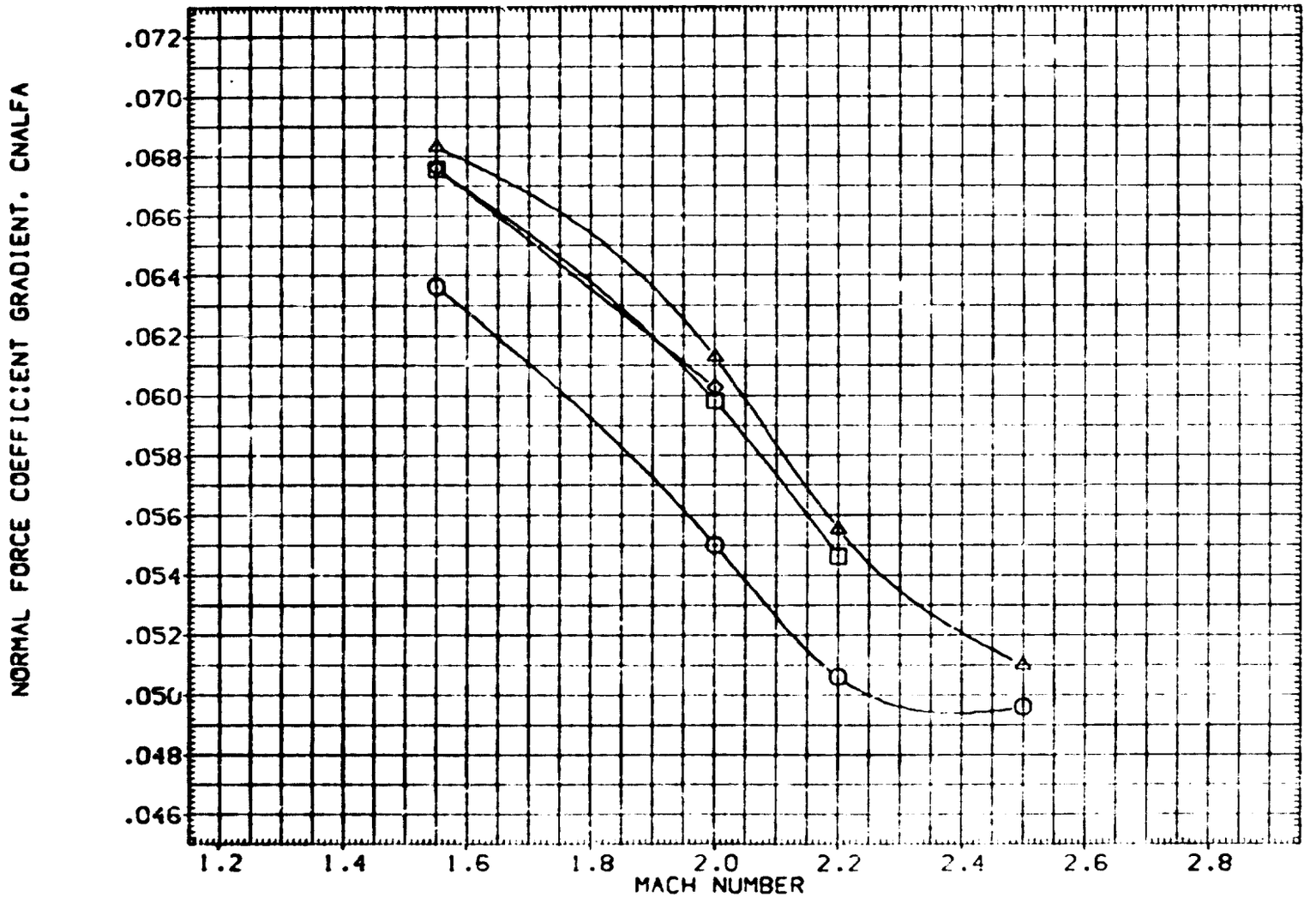


FIG. 40 SUMMARY, NORMAL FORCE COEFFICIENT SLOPE AT BETA=0.0 DEG.

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHAI	SPDBRK
(4ET(35)	□	AMES97-019C(ABI) LVAP INT VEH ALL HL SEALED	8.000	-4.000	.000	.000
(4ET(43)	⊠	AMES97-019C(ABI) LVAP INT VEH ALL HL SEALED	8.000	.000	.000	.000
(4ET(46)	◇	AMES97-019C(ABI) LVAP INT VEH ALL HL SEALED	10.000	-4.000	.000	.000
(4ET(39)	△	AMES97-019C(ABI) LVAP INT VEH ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

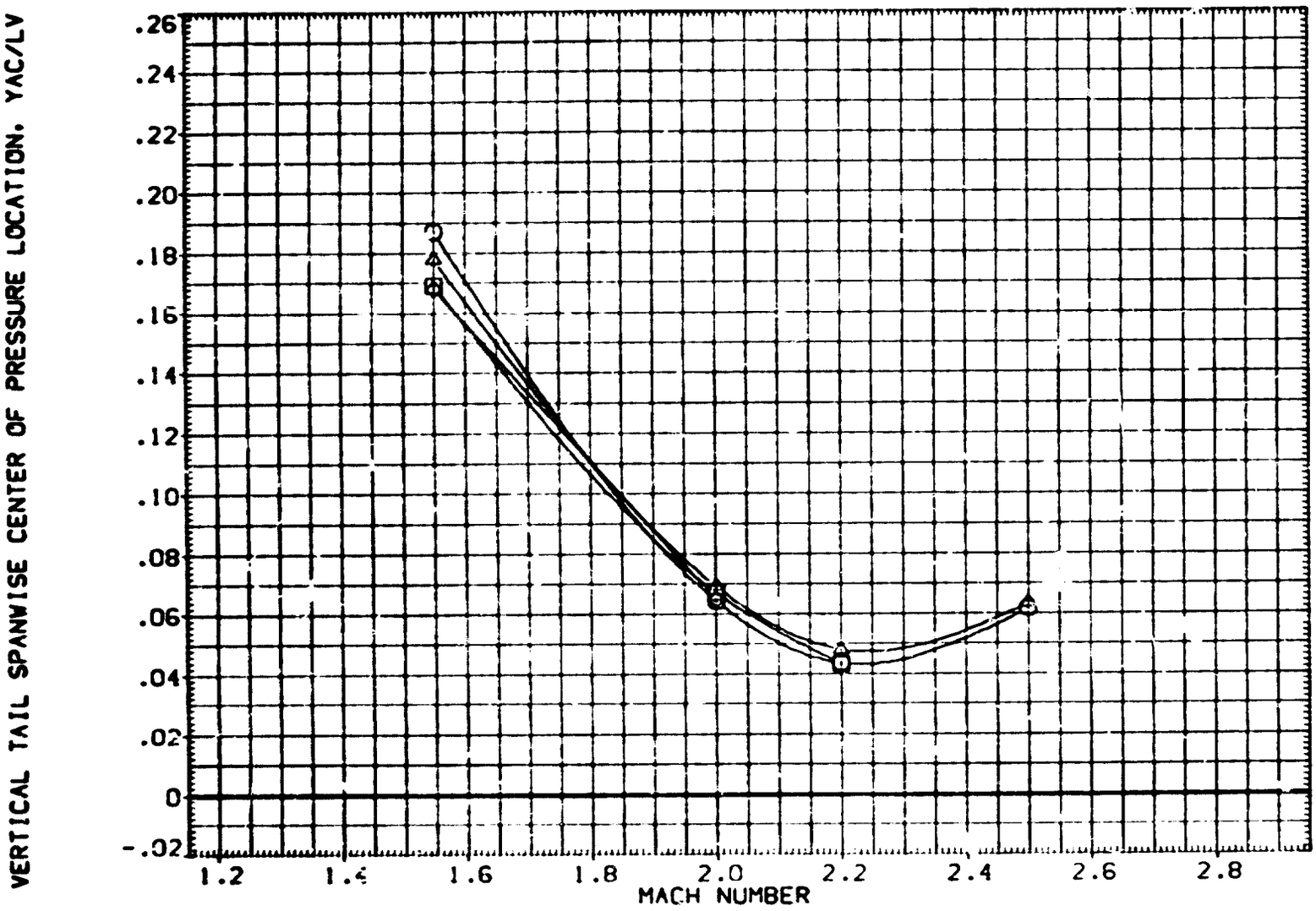


FIG. 41 SUMMARY, DIRECTIONAL AERODYNAMIC CENTER LOCATION

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHAI	SPDBRK
(3ETI35)	○	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	-4.000	.000	.000
(3ETI43)	□	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	8.000	.000	.000	.000
(3ETI46)	◇	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	.000	.000
(3ETI39)	△	AMES97-019(IA81) LVAP INT VEH ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

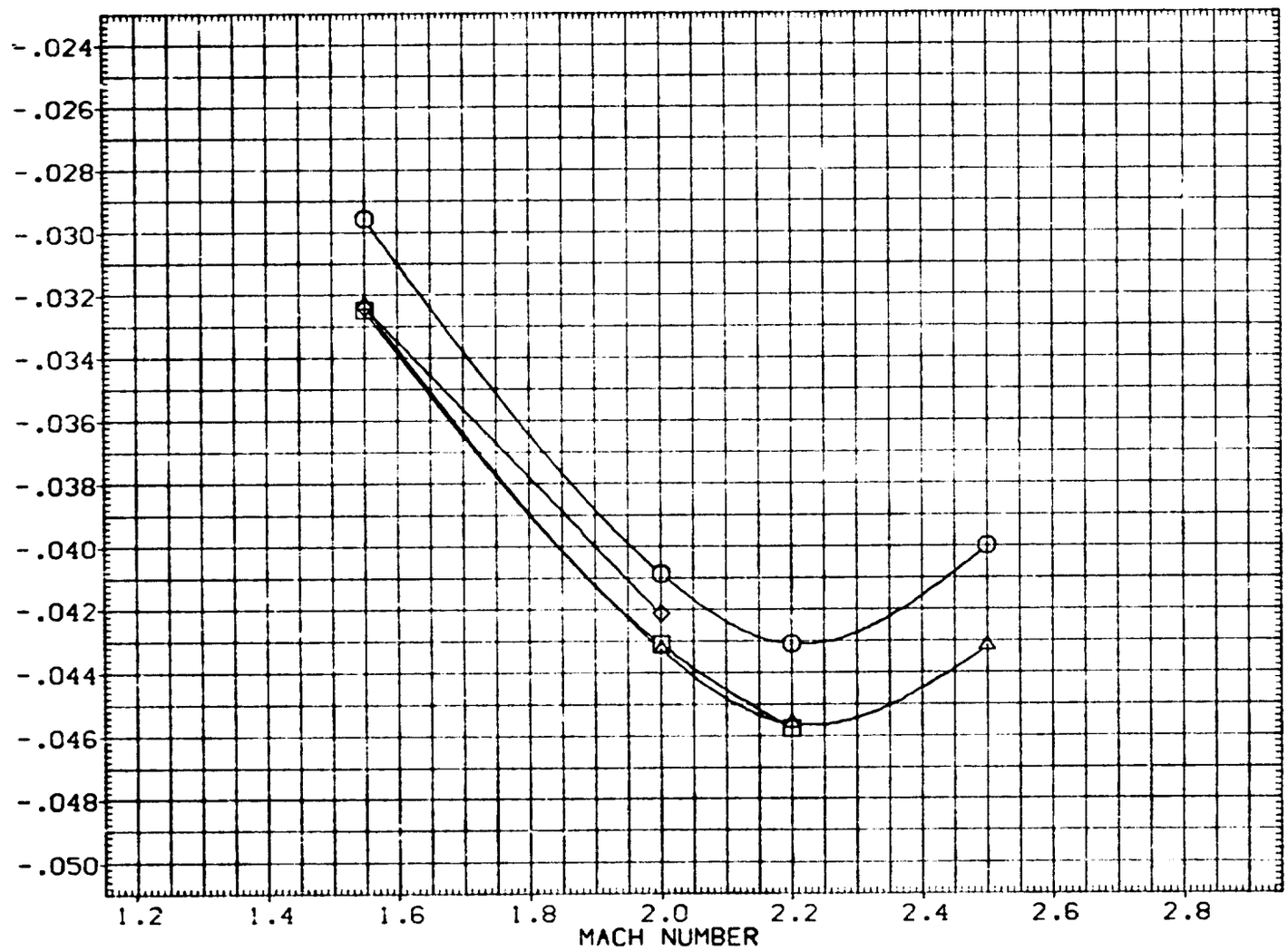


FIG. 42 SUMMARY, SIDE FORCE COEFFICIENT SLOPE AT ALPHA=0.0 DEG.

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	BETAI	SPOBRK
(OETH35)	○	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	□	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH45)	◇	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	△	AMES97-019([A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

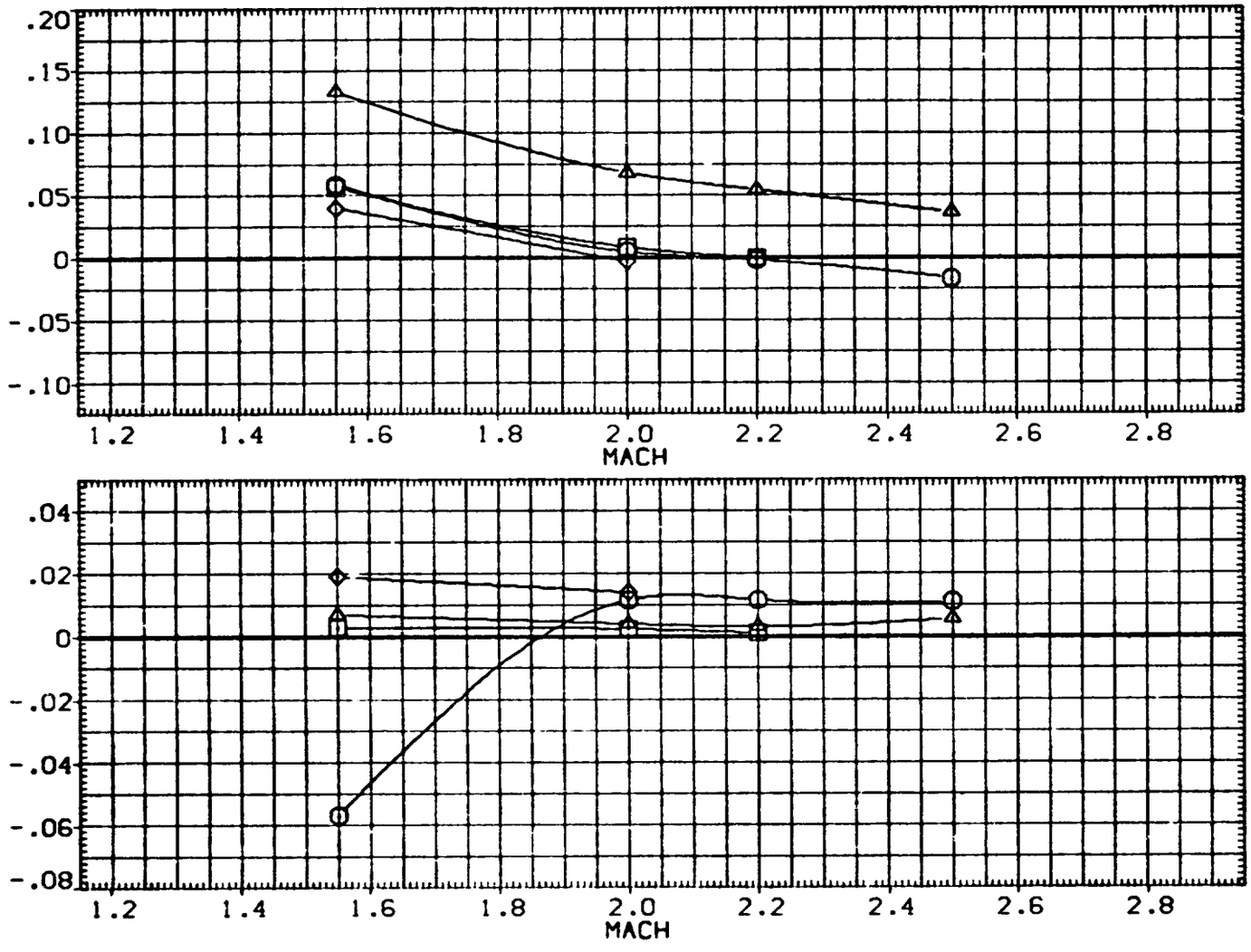


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(A)ALPHAO= -6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETAI	SPDBRK
(OETH35)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH46)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

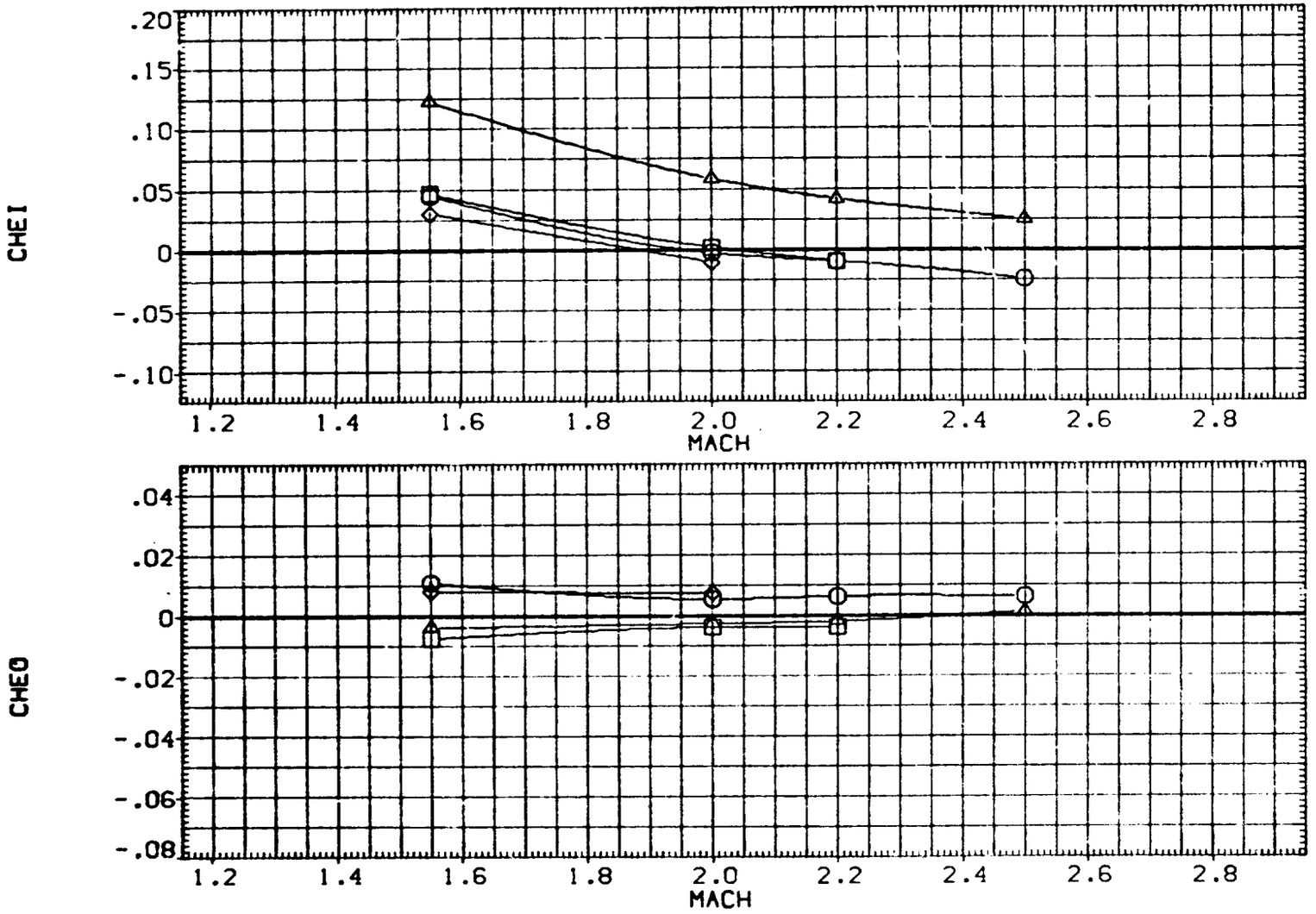


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(B)ALPHAO= -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETAI	SPDBRK
(OETH35)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH46)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

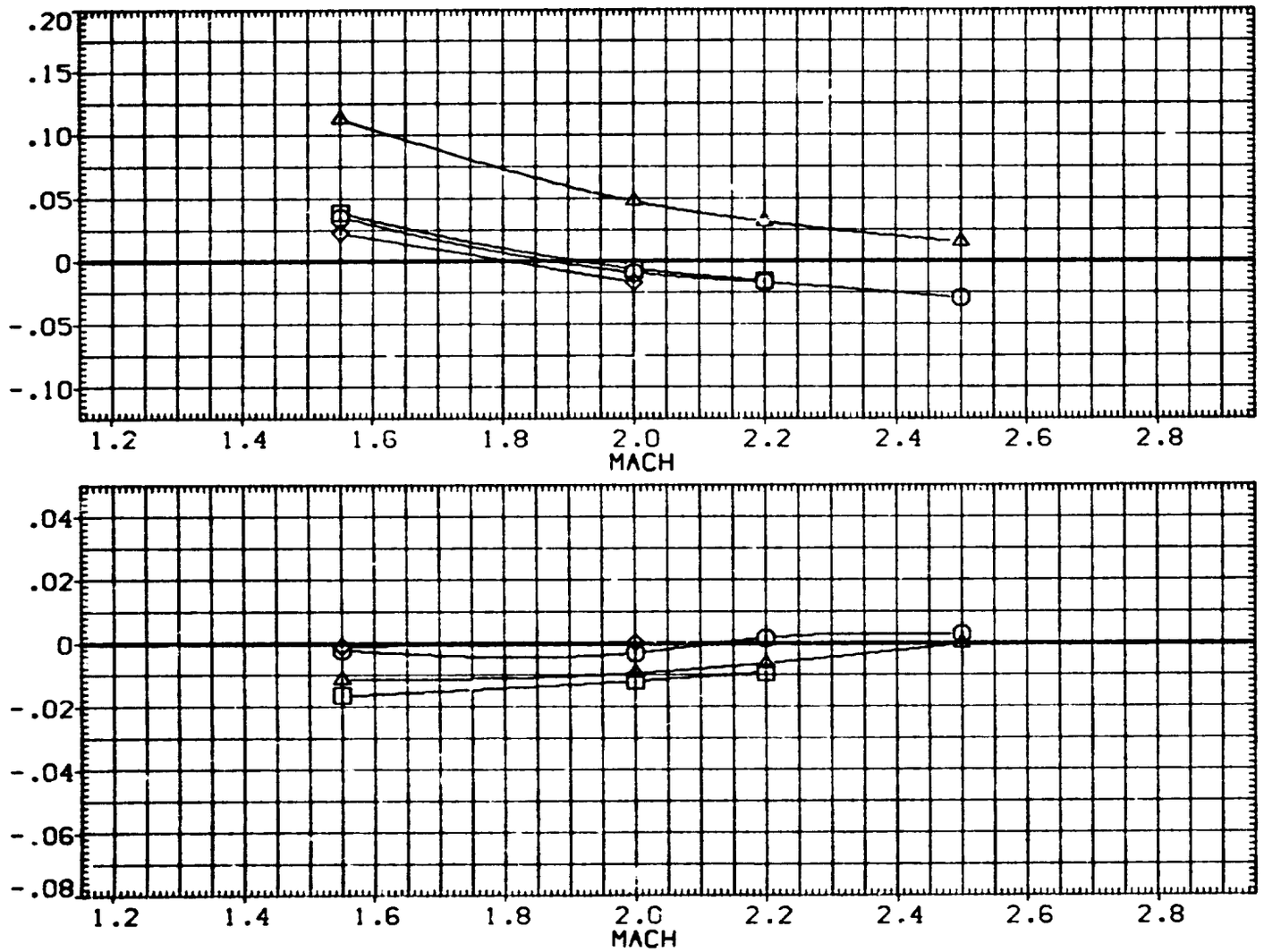


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(C)ALPHA0= -2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	BETAI	SPDBRK
(OETH35)	□	AMES97-019([A81]) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	□	AMES97-019([A81]) LVAP	ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH46)	◇	AMES97-019([A81]) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	△	AMES97-019([A81]) LVAP	ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

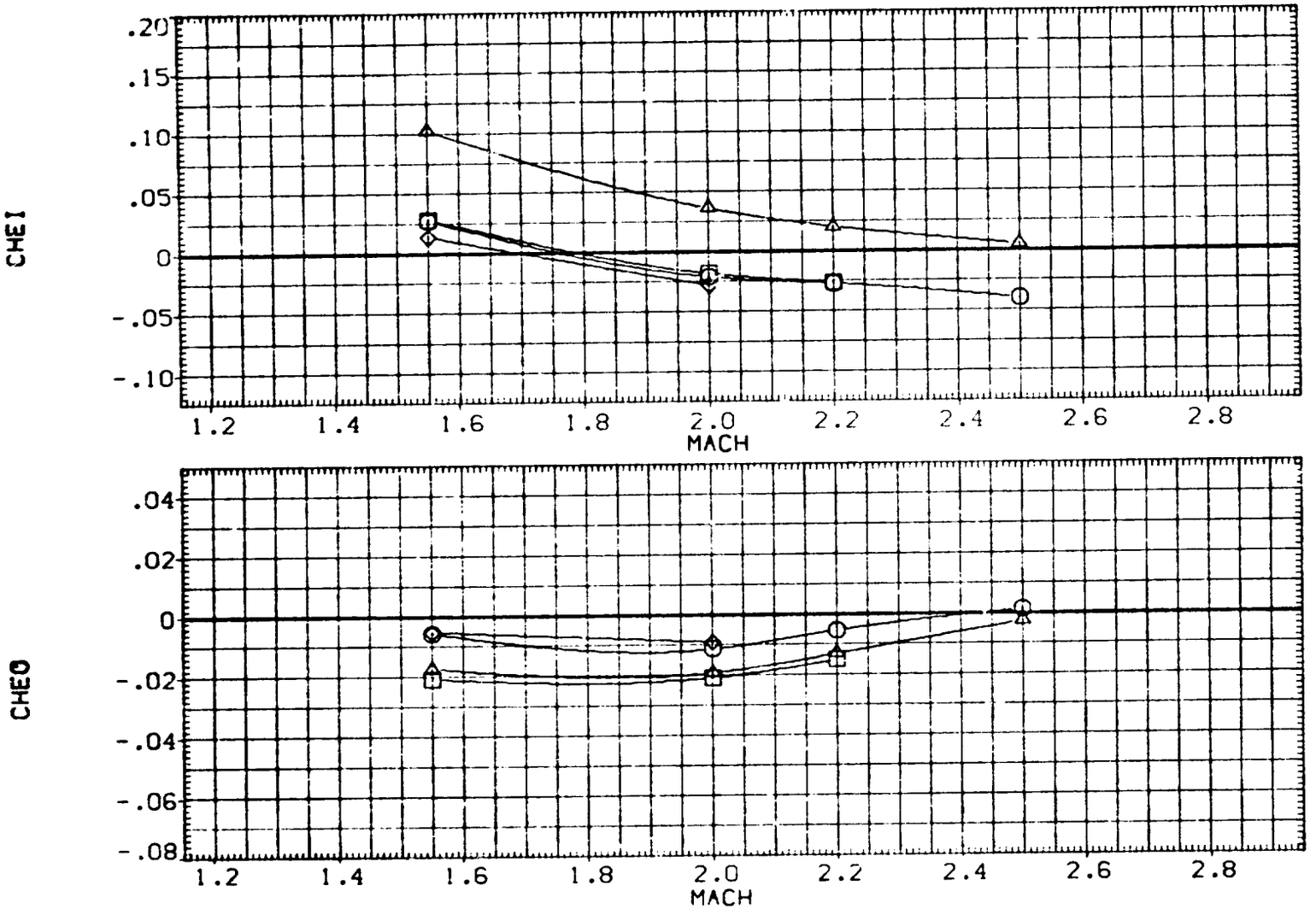


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(D)ALPHAO= .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETAI	SPOBRK
(OETH35)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH45)	⊗	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	△	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

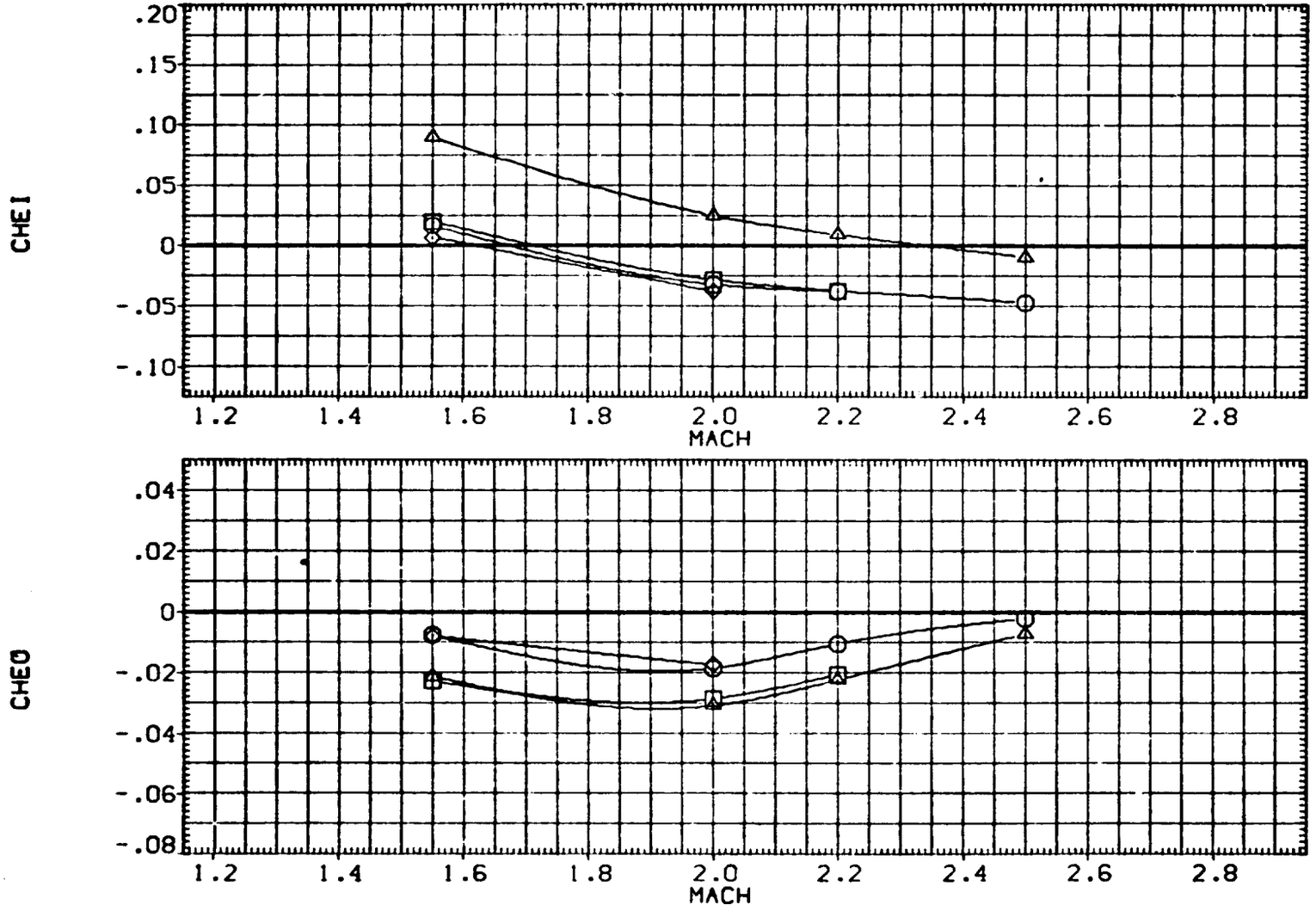


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(E)ALPHAO= 2.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETA1	SPDBRK
(OETH35)	○	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	□	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH45)	⊠	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	△	AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

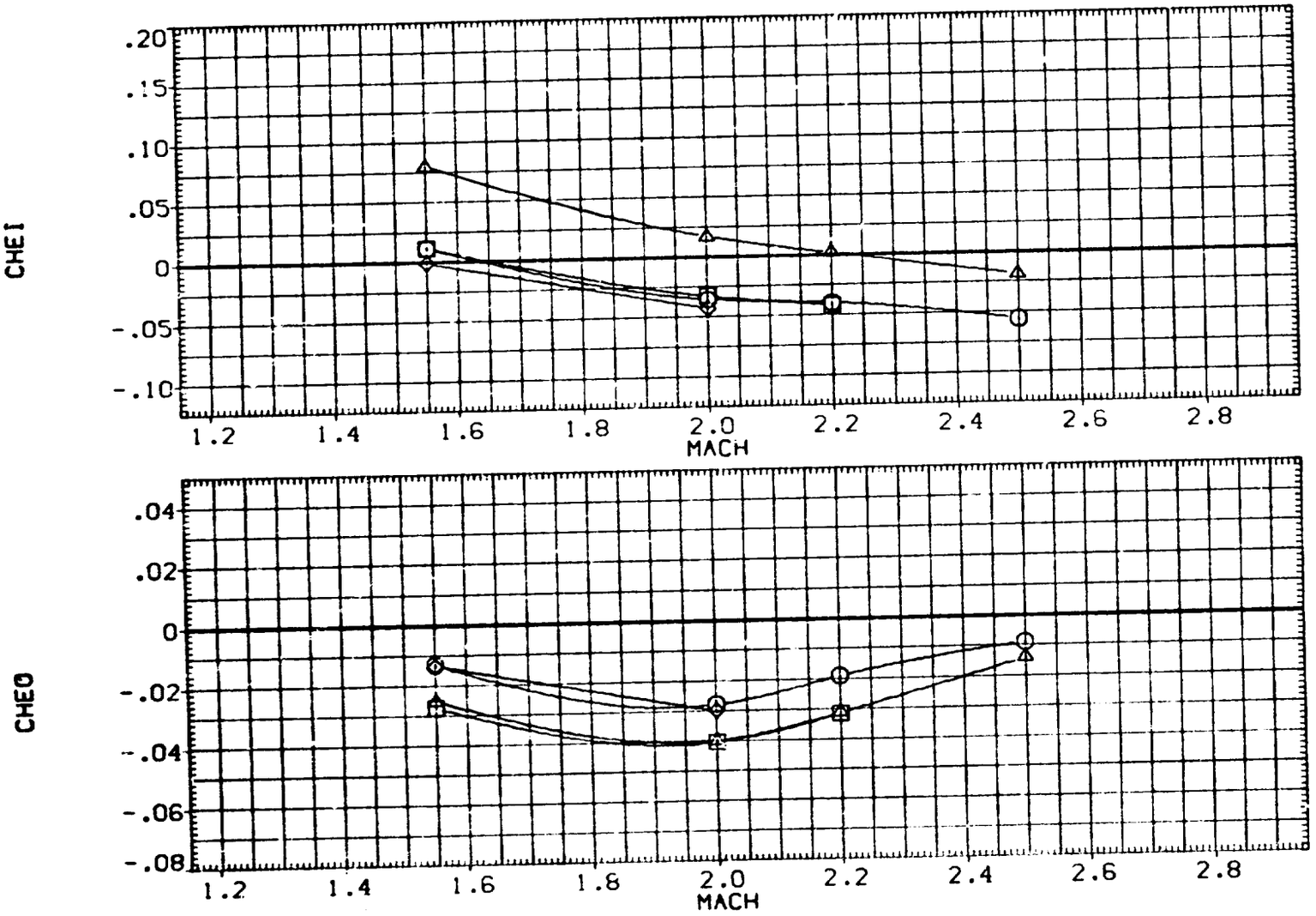


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(F)ALPHAO= 4.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	BETAI	SPDBRK
(OETH35)	□	AMES97-019(1A81) LVAP	ORBITER-ALL HL SEALED	8.000	-4.000	.000	.000
(OETH43)	◻	AMES97-019(1A81) LVAP	ORBITER-ALL HL SEALED	8.000	.000	.000	.000
(OETH46)	◇	AMES97-019(1A81) LVAP	ORBITER-ALL HL SEALED	10.000	-4.000	.000	.000
(OETH39)	△	AMES97-019(1A81) LVAP	ORBITER-ALL HL SEALED	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

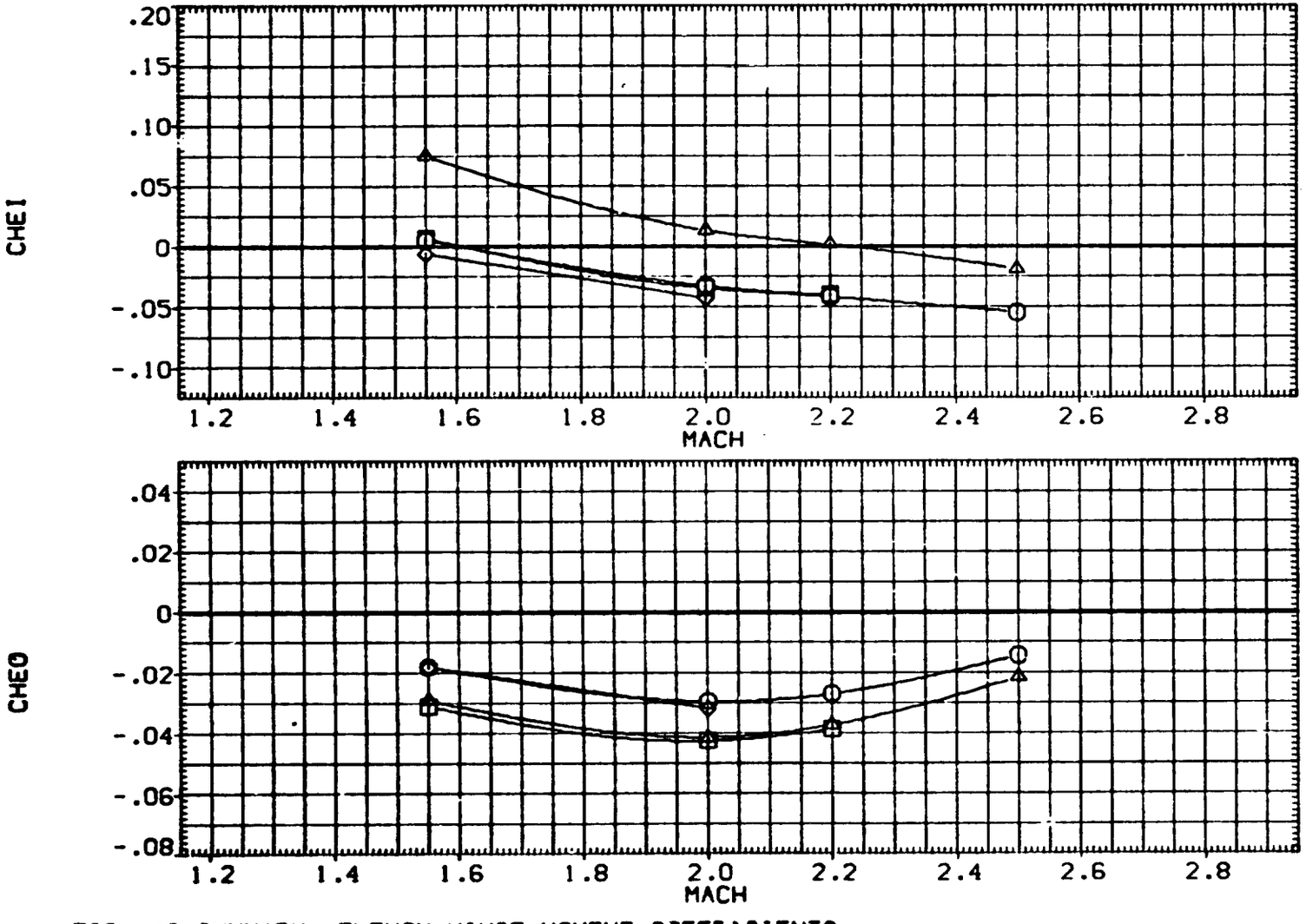


FIG. 43 SUMMARY, ELEVON HINGE MOMENT COEFFICIENTS

(G)ALPHAG= 6.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	BETAI	SPOBRK
(OET135) □	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	9.000	-4.000	.000	.000
(OET143) ○	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	8.000	.000	.000	.000
(OET146) ◇	AMES97-019(1A81) LVAP INT VEH ALL HL SEALED	10.000	-4.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1297.0000	IN.
BREF	1297.0000	IN.
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0300	

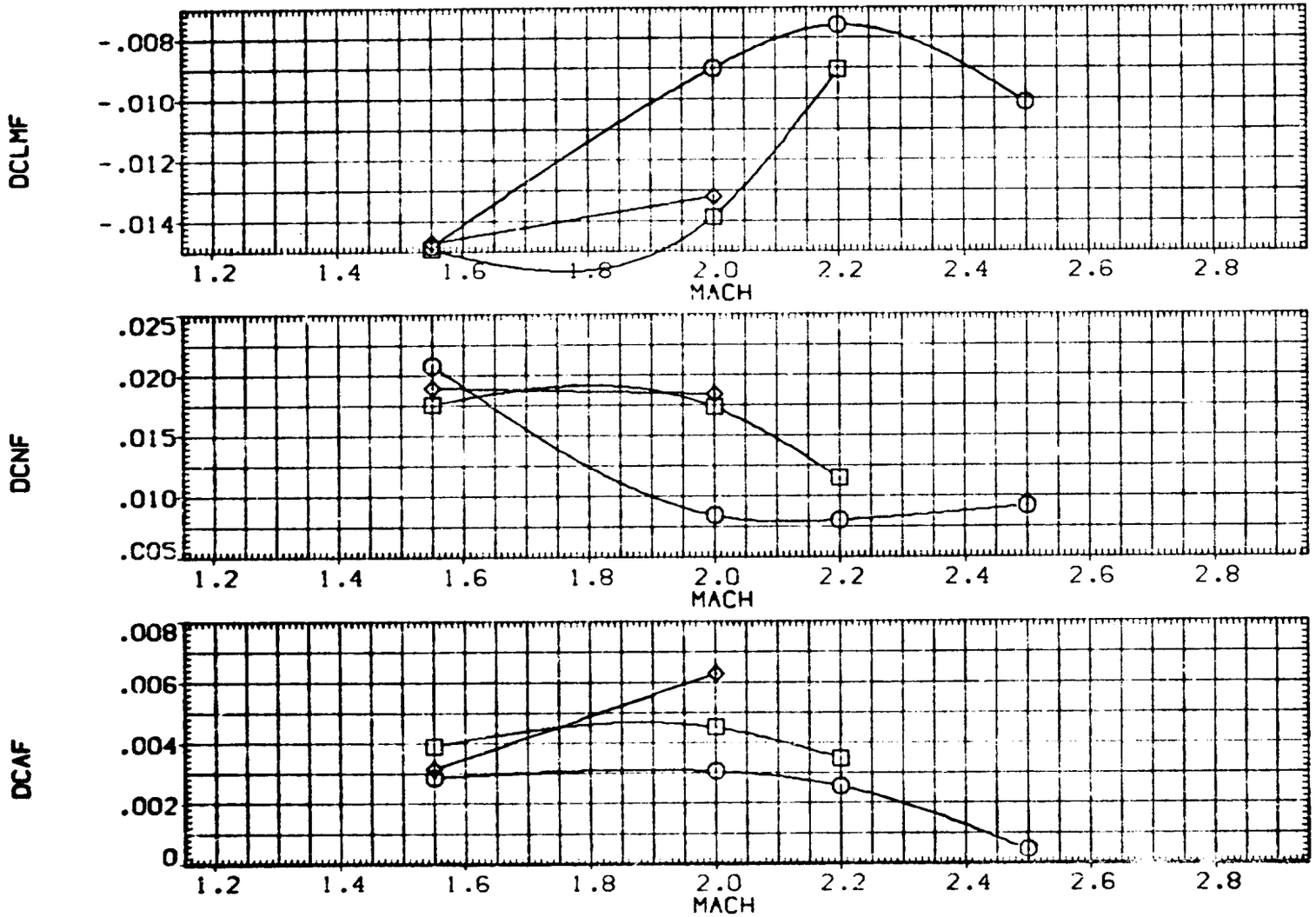


FIG. 44 SUMMARY, ELEVON EFFECTIVENESS, ALPHA=0.0, BETA=0.0

(A)ALPHAI= .00

APPENDIX

TABULATED SOURCE DATA

VOLUME 1			(Force)
VOLUME 3	Pages	1-728	(Pressure)
VOLUME 4	Pages	729-1459	(Pressure)
VOLUME 5	Pages	1460-2163	(Pressure)

Tabulations of plotted data may be obtained from Data Management Services upon request.

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RET030) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.500 RN/L = 3.000

RUN NO. 100/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.230	-6.381	-.12765	.13605	.12352	.15580	-.00510	.00330	-.00110	.01975
.215	-4.330	-.11787	.12645	.11112	.14590	-.00800	.00570	-.00180	.01945
.182	-.116	.00017	.10945	.03089	.12960	-.00660	.00470	-.00150	.02015
.186	4.056	.07694	.09945	-.02911	.11970	-.00510	.00400	-.00140	.02025
.209	8.267	.16136	.09304	-.09863	.11410	-.00600	.00350	-.00150	.02106
.218	10.355	.18852	.09075	-.11621	.11070	-.00750	.00370	-.00170	.01995
	GRADIENT	.02323	-.00322	-.01673	-.00313	.00023	-.00020	.00005	.00010

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RET031) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.200 RN/L = 3.000

RUN NO. 101/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.117	-6.403	-.09646	.14014	.11283	.16150	.00920	-.00600	.00390	.02136
-.139	-4.308	-.05977	.13144	.08265	.15390	.00910	-.00590	.00400	.02246
-.174	-.147	.01320	.11764	.02252	.14070	.00990	-.00670	.00380	.02306
-.167	4.050	.10942	.10734	-.05352	.12900	.00810	-.00570	.00340	.02166
-.139	8.292	.21125	.10234	-.13420	.12570	.00930	-.00660	.00380	.02336
-.118	10.383	.23559	.10134	-.14962	.12350	.00200	-.00330	.00250	.02216
	GRADIENT	.02025	-.00288	-.01630	-.00298	-.00012	.00002	-.00007	-.00010

AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED (RET032) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.000 RN/L = 3.000

RUN NO. 102/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.079	-6.373	-.11082	.14475	.12711	.16540	-.00030	.00040	.00090	.02065
.053	-4.277	-.07320	.13724	.09511	.15970	-.00010	.00020	.00110	.02246
.011	-.098	.01790	.12364	.01945	.14630	.00160	-.00100	.00150	.02266
.020	4.129	.14614	.11424	-.08022	.13630	.00220	-.00220	.00190	.02206
.053	8.392	.26867	.11254	-.17325	.13570	.00210	-.00260	.00220	.02316
.074	10.494	.29450	.11174	-.18907	.13490	-.00170	-.00170	.00160	.02315
	GRADIENT	.02610	-.00274	-.02086	-.00213	.00027	-.00029	.00010	-.00005

AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED (RET033) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 1.550 RN/L = 3.000

RUN NO. 103/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.428	-6.390	-.16005	.14583	.15989	.17190	-.00330	.00230	-.00110	.02607
.401	-4.271	-.09069	.14014	.11304	.16500	-.00730	.00500	-.00090	.02495
.348	-.036	.05584	.13274	-.00603	.15630	-.00170	.00080	.00080	.02356
.366	4.233	.22815	.12014	-.13158	.15030	.00090	-.00100	.00140	.02216
.403	8.510	.35177	.12333	-.21974	.14930	-.00050	-.00040	.00060	.02037
	GRADIENT	.03855	-.00141	-.02877	-.00173	.00095	-.00071	.00027	-.00032

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RET034) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 115/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.403	-6.292	-.13353	.12143	.12225	.14830	-.00400	.00290	.00010	.02687
.378	-4.209	-.05392	.11653	.06746	.14060	-.00300	.00200	.00070	.02607
.358	-2.124	.00734	.11353	.01268	.13690	-.00150	.00070	.00090	.02537
.342	-.027	.08700	.11084	-.04705	.13490	-.00160	.00040	.00070	.02406
.346	2.059	.17295	.11024	-.11058	.13260	-.00060	-.00010	.00120	.02256
.356	3.707	.24974	.10894	-.16467	.13010	.00020	-.00110	.00140	.02116
.369	6.242	.31566	.10794	-.20992	.12950	.00140	-.00190	.00140	.02156
	GRADIENT	.03953	-.00093	-.02929	-.00156	.00036	-.00035	.00008	-.00063

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RET035) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 112/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.333	-3.794	-.09705	.12202	.09315	.15090	.08430	-.05560	.02990	.02888
-6.319	-1.683	-.12297	.12343	.11435	.15160	.03930	-.02590	.01480	.02817
-6.299	2.522	-.14443	.12054	.12691	.14530	-.05570	.03680	-.01690	.02476
	GRADIENT	-.00716	-.00030	.00501	-.00097	-.02223	.01467	-.00743	-.00067

RUN NO. 116/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.215	-5.870	-.01689	.12082	.03504	.15100	.10310	-.06260	.03810	.03018
-4.211	-3.827	-.05314	.11813	.04385	.14580	.08100	-.05190	.02780	.02767
-4.194	.385	-.08687	.11693	.06966	.14280	-.00500	.00330	.00020	.02587
-4.155	4.561	-.04635	.11664	.05301	.14110	-.08530	.05240	-.02660	.02446
-4.139	6.623	-.04135	.11603	.04643	.14230	-.11390	.07440	-.04030	.02627
	GRADIENT	-.00158	-.00018	.00110	-.00056	-.01983	.01244	-.00649	-.00038

AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED (RET035) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 117/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.110	-5.871	.05508	.11772	-.02086	.14600	.09290	-.05520	.03590	.03028
-2.109	-1.724	.02293	.11563	.00113	.14160	.03690	-.02350	.01370	.02597
-2.081	2.471	.01878	.11434	.00324	.13820	-.04540	.02850	-.01350	.02386
-2.052	6.607	.03550	.11303	-.01138	.14050	-.10890	.06520	-.03800	.02727
	GRADIENT	-.00099	-.00031	.00050	-.00081	-.01952	.01240	-.00648	-.00050

RUN NO. 118/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.004	-5.872	.13685	.11562	-.08399	.14610	.08480	-.05000	.03470	.03048
.007	-3.835	.10739	.11433	-.07474	.14040	.05240	-.03700	.02350	.02607
.019	.354	.05508	.11274	-.05289	.13710	-.00130	.00030	.00080	.02436
.011	4.021	.11032	.11313	-.06561	.13820	-.06370	.03550	-.02240	.02507
.022	6.587	.11546	.11143	-.07238	.13950	-.09760	.05960	-.03520	.02807
	GRADIENT	-.00165	-.00014	.00110	-.00026	-.01509	.00868	-.00549	-.00012

RUN NO. 119/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
2.066	-5.888	.21765	.11322	-.14411	.14380	.07890	-.04680	.03410	.03058
2.063	-1.746	.18603	.11114	-.12096	.13520	.03110	-.01950	.01280	.02406
2.078	2.459	.18667	.11064	-.12341	.13320	-.03330	.01980	-.01120	.02256
2.104	6.587	.20206	.11063	-.13548	.13980	-.09000	.05410	-.03600	.02817
	GRADIENT	.00063	-.00012	-.00058	-.00048	-.01532	.00935	-.00571	-.00036

RUN NO. 120/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
4.193	-5.872	.28342	.11122	-.19109	.14220	.05780	-.03860	.03190	.03099
4.191	-3.831	.27086	.10993	-.18122	.13550	.04410	-.02870	.02070	.02567
4.197	.361	.25733	.10974	-.16993	.13140	.00020	-.00110	.00140	.02166
4.208	4.030	.26610	.10803	-.17904	.13440	-.04660	.02350	-.01990	.02537
4.216	6.589	.27384	.10792	-.18646	.13760	-.07710	.04450	-.03330	.02968
	GRADIENT	-.00457	-.00032	.00026	-.00013	-.01085	.00705	-.00486	.00008

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET035) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 121/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.319	-3.811	.33300	.10734	-.22329	.13200	.03790	-.01900	.01830	.02466
6.315	-1.716	.32798	.10664	-.22066	.13090	.02410	-.01500	.01140	.02426
6.316	.374	.32428	.10924	-.21565	.13120	.00230	-.00250	.00160	.02196
6.321	2.475	.32966	.10684	-.22303	.13030	-.02440	.01310	-.00950	.02346
6.324	4.539	.32591	.10663	-.22033	.13440	-.03940	.01790	-.01780	.02777
	GRADIENT	-.00060	-.00006	.00017	.00020	-.00972	.00488	-.00446	.00026

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RE1036) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 129,.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 122/ 0 'N/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.354	-4.160	-.06575	.12553	.07400	.15050	.09190	-.05900	.03300	.02497
-6.341	-2.050	-.07771	.12634	.08382	.15030	.04650	-.02930	.01730	.02396
-6.322	.062	-.08981	.12474	.09323	.14930	-.00050	.00070	.00110	.02356
-6.302	2.174	-.09493	.12224	.08725	.14540	-.04600	.03010	-.01500	.02316
-6.286	4.251	-.07837	.12154	.08045	.14600	-.09510	.06240	-.03210	.02446
	GRADIENT	-.00155	-.00057	.00078	-.00066	-.02216	.01426	-.00772	-.00009

RUN NO. 123/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.273	-6.2 7	-.00942	.11893	.02816	.14730	.13380	-.08750	.04690	.02837
-4.265	-4.183	-.02739	.11943	.04244	.14550	.09060	-.05880	.03220	.02607
-4.235	.039	-.05057	.11944	.06120	.14370	.00070	.00000	.00130	.02426
-4.200	4.234	-.03770	.11533	.04727	.14060	-.09420	.06230	-.03160	.02527
-4.192	6.302	-.03561	.11333	.04257	.13900	-.13900	.09170	-.04670	.02567
	GRADIENT	-.00123	-.00049	.00058	-.00058	-.02195	.01439	-.00758	-.000 0

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET036) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 124/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.186	-6.258	.03646	.11263	-.00924	.14070	.12870	-.08460	.04430	.02907
-2.175	-2.080	.00406	.11383	.01622	.14020	.04390	-.02820	.01590	.02637
-2.146	2.137	-.00187	.11014	.02017	.13490	-.04320	.02820	-.01380	.02476
-2.124	6.280	.01399	.10773	.00277	.13340	-.13310	.08900	-.04370	.02567
	GRADIENT	-.00141	-.00088	.00094	-.00126	-.02065	.01337	-.00704	-.00038

RUN NO. 125/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.096	-6.268	.08679	.10773	-.04879	.13510	.12340	-.08130	.04200	.02737
-.095	-4.207	.06971	.10863	-.03534	.13650	.08500	-.05580	.02890	.02787
-.084	.007	.04348	.10644	-.01540	.13090	.00200	-.00100	.00140	.02446
-.062	4.192	.05524	.10523	-.02695	.13090	-.09330	.05530	-.02650	.02557
-.055	6.267	.06300	.10333	-.03623	.12650	-.12540	.08300	-.04030	.02527
	GRADIENT	-.00161	-.00040	.00100	-.00068	-.02004	.01323	-.00661	-.00028

RUN NO. 126/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.985	-6.257	.13205	.10303	-.08419	.13020	.11380	-.07480	.03850	.02717
1.981	-2.089	.10495	.10353	-.06491	.13080	.03790	-.02380	.01260	.02727
1.994	2.124	.10230	.10244	-.06200	.12720	-.03710	.02370	-.01110	.02476
2.005	6.266	.11269	.09883	-.07440	.12440	-.11970	.07890	-.03790	.02557
	GRADIENT	-.00063	-.00026	.00069	-.00085	-.01780	.01127	-.00563	-.00059

RUN NO. 127/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
4.105	-6.249	.18483	.09993	-.12326	.12630	.10720	-.07010	.03660	.02537
4.105	-4.195	.18240	.10173	-.12239	.12870	.07260	-.04680	.02410	.02697
4.105	.015	.16685	.09904	-.11040	.12360	.00120	-.00110	.00120	.02456
4.102	4.191	.17116	.09783	-.11548	.12420	-.06820	.04440	-.02110	.02637
4.104	6.248	.17420	.09663	-.11930	.12180	-.10850	.07170	-.03460	.02517
	GRADIENT	-.00134	-.00047	.00083	-.00054	-.01679	.01088	-.00539	-.00007

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET036) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 128/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.207	-4.161	.24348	.09943	-.16869	.12610	.06970	-.04580	.02460	.02667
6.210	-2.065	.23645	.09873	-.16409	.12590	.03460	-.02240	.01170	.02717
6.220	.028	.23785	.09814	-.16378	.12300	.00530	-.00520	.00310	.02486
6.219	2.132	.23497	.09903	-.16203	.12440	-.02270	.01210	-.00600	.02537
6.217	4.196	.23403	.09623	-.16218	.12270	-.06220	.03970	-.01970	.02647
	GRADIENT	-.00097	-.00029	.00072	-.00040	-.01535	.00983	-.00508	-.00011

AMES97-019(IA8.) LVAP ORBITER-ALL HL SEALED (RET037) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 129/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.357	-4.340	-.05475	.12103	.06471	.14810	.10030	-.06530	.03490	.02707
-6.346	-2.232	-.06037	.12034	.06869	.14490	.05450	-.03570	.01940	.02456
-6.330	-.129	-.06803	.12024	.07568	.14320	.00940	-.00620	.00410	.02296
-6.316	1.982	-.06454	.11804	.07118	.14030	-.03850	.02560	-.01210	.02226
-6.303	4.052	-.06298	.11784	.06790	.14090	-.08720	.05720	-.02840	.02306
	GRADIENT	-.00098	-.00041	.00042	-.00091	-.02229	.01459	-.00753	-.00049

RUN NO. 130/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.273	-6.424	-.00642	.11483	.02586	.14350	.14010	-.09030	.04770	.02867
-4.268	-4.362	-.02365	.11623	.03974	.14280	.09890	-.06470	.03440	.02657
-4.242	-.145	-.03508	.11414	.04875	.13740	.00910	-.00610	.00390	.02326
-4.216	4.041	-.02899	.11234	.04088	.13480	-.08660	.05720	-.02840	.02246
-4.212	6.106	-.03058	.11274	.03362	.13760	-.13400	.08890	-.04390	.02486
	GRADIENT	-.00063	-.00046	.00014	-.00095	-.02207	.01451	-.00747	-.00049

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETO37) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 131/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.199	-6.426	.03304	.10993	-.00566	.13730	.13280	-.08630	.04490	.02737
-2.186	-2.253	.00816	.10863	.01317	.13430	.05100	-.03410	.01790	.02567
-2.171	1.947	.00129	.10594	.01772	.12940	-.03580	.02390	-.01130	.02346
-2.158	6.083	.00804	.10533	.00857	.13170	-.12600	.08220	-.04080	.02537
	GRADIENT	-.00164	-.00064	.00109	-.00117	-.02067	.01381	-.00695	-.00053

RUN NO. 132/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.138	-6.431	.07074	.10443	-.03589	.13190	.13010	-.08470	.04300	.02747
-.135	-4.375	.05430	.10443	-.02369	.13130	.09390	-.06240	.03160	.02687
-.128	-.174	.03539	.10244	-.00850	.12890	.00940	-.00640	.00380	.02436
-.113	4.000	.04191	.10094	-.01538	.12470	-.07770	.05190	-.02480	.02376
-.090	6.061	.04895	.10063	-.02436	.12680	-.12010	.07890	-.03810	.02517
	GRADIENT	-.00148	-.00042	.00094	-.00079	-.02049	.01365	-.00573	-.00037

RUN NO. 133/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.916	-6.431	.10894	.09853	-.06572	.12610	.12440	-.08130	.04050	.02757
1.916	-2.268	.08071	.09813	-.04519	.12560	.04950	-.03320	.01640	.02647
1.931	1.934	.08064	.09714	-.04468	.12080	-.03210	.02120	-.00960	.02366
1.943	6.065	.08966	.09603	-.05516	.12220	-.11670	.07680	-.03630	.02617
	GRADIENT	-.00002	-.00047	.00012	-.00114	-.01942	.01295	-.00619	-.00067

RUN NO. 134/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
4.018	-6.417	.15736	.09503	-.10253	.12070	.11910	-.08630	.03870	.02567
4.022	-4.361	.15328	.09673	-.10046	.12320	.08530	-.05730	.02770	.02647
4.025	-.168	.13237	.09444	-.08395	.11790	.00940	-.00570	.00370	.02346
4.034	3.991	.13822	.09343	-.09131	.11840	-.08890	.04800	-.02120	.02497
4.038	6.064	.14269	.09253	-.09506	.11870	-.10990	.07210	-.03410	.02607
	GRADIENT	-.00191	-.00039	.00110	-.00058	-.01846	.01237	-.00595	-.00018

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET037) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT	ELV-IB =	8.000	ELV-OB =	-4.000
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT	RUDDER =	.000	SPDBRK =	.000
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT	MACH =	2.200	RN/L =	2.500
SCALE =	.0300						

PARAMETRIC DATA

RUN NO. 135/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.134	-4.334	.20563	.09453	-.14066	.12080	.07930	-.05300	.02610	.02627
6.130	-2.240	.19083	.09283	-.13056	.11950	.04310	-.02890	.01400	.02667
6.130	-.154	.19004	.09164	-.12895	.11560	.00870	-.00660	.00360	.02396
6.134	1.951	.19180	.09194	-.13131	.11660	-.02420	.01480	-.00680	.02466
6.135	3.996	.19329	.09123	-.13343	.11680	-.06350	.04190	-.01960	.02557
	GRADIENT	-.00114	-.00036	.00066	-.00052	-.01692	.01120	-.00538	-.00016

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET038) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT	ELV-IB =	8.000	ELV-OB =	-4.000
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT	RUDDER =	.000	SPDBRK =	.000
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT	MACH =	2.500	RN/L =	2.500
SCALE =	.0300						

PARAMETRIC DATA

RUN NO. 136/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.289	-3.981	-.04638	.11984	.05813	.14340	.08030	-.05170	.02670	.02356
-6.280	-1.881	-.05172	.11914	.06232	.14030	.03450	-.02180	.01180	.02116
-6.268	.215	-.05155	.11925	.06147	.13880	-.00740	.00520	-.00160	.01955
-6.259	2.322	-.05277	.11865	.05120	.13740	-.05260	.03400	-.01620	.01875
-6.250	4.369	-.05070	.11915	.05787	.13890	-.09860	.06310	-.03110	.01975
	GRADIENT	-.00047	-.00009	-.00008	-.00057	-.02128	.01365	-.00687	-.00048

RUN NO. 137/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.232	-6.049	-.00846	.11294	.02761	.13730	.11930	-.07660	.03920	.02436
-4.224	-3.999	-.02086	.11264	.03741	.13660	.07620	-.04900	.02560	.02396
-4.198	.210	-.02708	.11105	.04147	.13070	-.00580	.00410	-.00120	.01965
-4.182	4.367	-.02474	.11145	.03732	.13230	-.09430	.06020	-.02990	.02085
-4.175	6.419	-.02583	.11204	.03609	.13370	-.13750	.08730	-.04400	.02166
	GRADIENT	-.00047	-.00014	-.00001	-.00052	-.02038	.01305	-.00663	-.00037

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RET038) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 138/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.171	-6.052	.01976	.10614	.00451	.13040	.11240	-.07230	.03690	.02426
-2.155	-1.900	.00622	.10514	.01526	.12710	.03120	-.01970	.01070	.02196
-2.141	2.289	.00324	.10425	.01623	.12460	-.04780	.03060	-.01480	.02055
-2.131	6.395	.00781	.10394	.00909	.12620	-.13010	.09250	-.04160	.02226
	GRADIENT	-.00071	-.00021	.00023	-.00055	-.01896	.01201	-.00609	-.00034

RUN NO. 139/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.107	-6.062	.04694	.10034	-.01712	.12480	.11020	-.07110	.03560	.02446
-.104	-4.014	.03385	.10024	-.00669	.12380	.07020	-.04510	.02330	.02356
-.095	.177	.00360	.09674	.00099	.11790	-.00620	.00420	-.00140	.02116
-.081	4.323	.03470	.09734	-.01024	.11900	-.08870	.05470	-.02670	.02156
-.076	6.389	.04046	.09694	-.01674	.11950	-.12500	.07940	-.03920	.02256
	GRADIENT	.00010	-.00035	-.00042	-.00058	-.01870	.01197	-.00600	-.00023

RUN NO. 140/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.937	-6.052	.07679	.09464	-.04032	.11890	.10570	-.06920	.03360	.02426
1.942	-1.905	.05782	.09408	-.02554	.11600	.02860	-.01910	.00990	.02196
1.953	2.279	.06184	.09285	-.02938	.11320	-.04270	.02880	-.01280	.02055
1.968	6.390	.07371	.09154	-.04216	.11440	-.12030	.07640	-.03710	.02286
	GRADIENT	.00096	-.00033	-.00106	-.00067	-.01704	.01073	-.00542	-.00034

RUN NO. 141/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.403	-6.044	.11832	.09104	-.07259	.11470	.10100	-.06520	.03210	.02305
3.401	-4.060	.10385	.09114	-.06166	.11420	.06310	-.04060	.02070	.02306
3.409	.180	.08750	.08804	-.05564	.10990	-.00600	.00390	-.00140	.02166
3.415	3.721	.10865	.09584	-.06824	.10770	-.07730	.04920	-.02390	.02186
3.418	6.394	.11803	.08744	-.07476	.11020	-.11390	.07190	-.03520	.02276
	GRADIENT	.00965	-.00068	-.00078	-.00084	-.01789	.01151	-.00571	-.00016

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET078) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPDBRK =	.000
MACH =	2.500	RN/L =	2.500

RUN NO. 142/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.122	-4.040	.14257	.08784	-.09279	.11170	.05890	-.03780	.01980	.02386
6.126	-1.890	.14046	.08644	-.09106	.10910	.02580	-.01670	.00920	.02266
6.130	.192	.14432	.08574	-.09424	.10770	-.00550	.00320	-.00130	.02196
6.133	2.291	.14752	.08534	-.09734	.10690	-.03800	.02390	-.01200	.02156
6.136	3.707	.15257	.08254	-.10254	.10430	-.07080	.04460	-.02260	.02176
	GRADIENT	.00134	-.00058	-.00127	-.00086	-.01634	.01039	-.00536	-.00028

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET039) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	.000	ELV-OB =	.000
RUDDER =	.000	SPDBRK =	.000
MACH =	1.550	RN/L =	2.500

RUN NO. 143/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.293	.406	-.15319	.12093	.14051	.14780	-.00650	.00430	-.00060	.02687
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 144/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.229	-3.806	-.05038	.11833	.05955	.14690	.07720	-.04990	.02650	.02857
-4.210	.382	-.08438	.11643	.08599	.14260	-.00690	.00420	-.00030	.02617
-4.235	3.933	-.06923	.11493	.07251	.14080	-.08710	.05330	-.02670	.02587
	GRADIENT	-.00260	-.00044	.00181	-.00080	-.02120	.01332	-.00686	-.00036

RUN NO. 145/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.028	-5.881	.11219	.11592	-.06171	.14520	.08250	-.04960	.03390	.02228
-.024	-3.844	.10244	.11323	-.05615	.14220	.05010	-.03560	.02280	.02637
-.022	.347	.07124	.11144	-.03238	.13480	-.00570	.00280	-.00050	.02336
.001	3.898	.08655	.11114	-.04478	.13520	-.06670	.03720	-.02300	.02406
.014	5.597	.09250	.11193	-.05192	.13860	-.10160	.06120	-.03710	.02667
	GRADIENT	-.00221	-.00027	.00159	-.00066	-.01636	.00940	.00591	-.00039

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETO39) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPOBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 146/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.553	-3.877	.24843	.10973	-.15212	.13450	.04280	-.02320	.02020	.02577
3.564	.361	.23718	.10884	-.15213	.13070	-.00290	.00080	.00050	.02186
3.575	3.908	.24710	.10583	-.16320	.13390	-.05000	.02520	-.02070	.02807
	GRADIENT	-.00025	-.00036	-.00006	-.00010	-.01188	.00620	-.00523	.00026

RUN NO. 147/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.255	.393	.30200	.10365	-.19610	.12920	-.00160	-.00020	.00060	.02355
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETO40) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 148/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.299	.072	-.10576	.12244	.10733	.14580	-.00330	.00250	.00020	.02336
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 149/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.312	-4.221	-.04492	.11663	.05732	.14290	.08360	-.05410	.02950	.03627
-4.288	.038	-.06591	.11724	.07555	.14110	-.00250	.00210	.00040	.02386
-4.260	3.604	-.05450	.11243	.06815	.13740	-.08510	.05870	-.03110	.02497
	GRADIENT	-.00136	-.00051	.00074	-.00069	-.02275	.01487	-.00772	-.00018

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET040) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 150/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.077	-6.251	.07025	.10603	-.03469	.13320	.11870	-.07790	.04000	.02717
-.075	-4.195	.05257	.10733	-.02099	.13440	.08090	-.05290	.02720	.02707
-.072	.017	.02465	.10484	.00145	.12810	-.00120	.00100	.00050	.02326
-.054	3.568	.03697	.10264	-.01095	.12620	-.05540	.05620	-.02650	.02356
-.044	6.274	.04833	.10164	-.02315	.12610	-.12740	.09380	-.04000	.02446
	GRADIENT	-.00216	-.00060	.00142	-.00107	-.02136	.01402	-.00690	-.00047

RUN NO. 151/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.465	-4.189	.17010	.10093	-.11063	.12620	.07080	-.04550	.02350	.02527
3.478	.022	.15359	.09784	-.09759	.12040	.00000	-.00070	.00110	.02256
3.487	3.575	.16033	.09484	-.10588	.11900	-.07310	.04720	-.02200	.02416
	GRADIENT	-.00134	-.00078	.00069	-.00094	-.01848	.01190	-.00584	-.00016

RUN NO. 152/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.162	.040	.21903	.09704	-.14727	.11930	.00050	-.00140	.00150	.02226
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET041) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 153/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.332	-.112	-.03558	.11374	.09188	.14290	.00670	-.00440	.00320	.02316
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETO41) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 154/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.327	-4.351	-.03889	.11463	.05349	.14040	.09550	-.06250	.03260	.02577
-4.302	-.140	-.04971	.11274	.06195	.13610	.00920	-.00620	.00380	.02336
-4.281	3.415	-.04360	.10964	.05373	.13230	-.08440	.05560	-.02720	.02266
	GRADIENT	-.00067	-.00064	.00009	-.00104	-.02308	.01515	-.00767	-.00041

RUN NO. 155/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.145	-6.442	.05590	.10273	-.02316	.12950	.12850	-.08330	.04190	.02677
-.137	-4.372	.04017	.10303	-.01063	.12830	.09170	-.05060	.03020	.02527
-.130	-.176	.02037	.10134	.00548	.12430	.00830	-.00570	.00330	.02296
-.117	3.384	.00783	.09814	-.00330	.12040	-.07830	.05220	-.02460	.02226
-.112	6.096	.03856	.09844	-.01185	.12330	-.12190	.07960	-.03300	.02396
	GRADIENT	-.00189	-.00062	.00103	-.00102	-.02186	.01450	-.00705	-.00039

RUN NO. 156/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.395	-4.359	.13905	.09584	-.08771	.12070	.08330	-.05520	.02660	.02486
3.403	-.170	.11711	.09854	-.06997	.11440	.00780	-.00550	.00320	.02186
3.411	3.387	.12393	.09014	-.07852	.11290	-.07080	.04700	-.02140	.02276
	GRADIENT	-.00205	-.00074	.00127	-.00102	-.01994	.01315	-.00618	-.00028

RUN NO. 157/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.079	-.145	.17416	.09015	-.11444	.11170	.00720	-.00560	.00310	.02156
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET042) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 158/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.275	.222	-.06747	.11895	.07540	.13810	-.00790	.00540	-.00170	.01915
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 159/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.238	-3.999	-.03608	.11254	.05162	.13390	.07470	-.04810	.02480	.02136
-4.215	.197	-.04193	.11075	.05503	.12890	-.00790	.00540	-.00170	.01815
-4.201	3.750	-.04033	.10915	.05087	.12860	-.09570	.06110	-.02990	.01945
	GRADIENT	-.00057	-.00044	-.00007	-.00070	-.02192	.01405	-.00704	-.00026

RUN NO. 160/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.088	-6.077	.03379	.09954	-.00504	.12200	.11060	-.07130	.03530	.02246
-.087	-4.025	.01882	.09894	.00669	.12040	.06890	-.04410	.02270	.02146
-.082	.174	.00753	.09585	.01550	.11460	-.00720	.00470	-.00150	.01875
-.071	3.720	.02018	.09445	.00247	.11350	-.08650	.05510	-.02660	.01905
-.067	6.427	.02604	.09545	-.00373	.11640	-.12630	.08020	-.03920	.01995
	GRADIENT	.00009	-.00058	-.00049	-.00091	-.02001	.01277	-.00635	-.00032

RUN NO. 161/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.400	-4.002	.08803	.08975	-.04756	.11060	.06130	-.03920	.01990	.02085
3.413	.178	.08155	.08685	-.04220	.10590	-.00670	.00420	-.00150	.01905
3.420	3.721	.09545	.08435	-.05603	.10390	-.07730	.04900	-.02350	.01955
	GRADIENT	.00089	-.00070	-.00103	-.00089	-.01790	.01139	-.00560	-.00018

RUN NO. 162/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.075	.198	.12803	.08365	-.08040	.10280	-.00650	.00370	-.00140	.01915
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL ML SEALED (RET043) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPOBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 163/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.c39	.408	-.12707	.12223	.11638	.14840	-.00720	.00450	-.00040	.02617
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 164/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.227	-3.808	-.02598	.11863	.03700	.14550	.07750	-.05050	.02700	.02687
-4.204	.384	-.05901	.11783	.06208	.14340	-.00630	.00370	.00000	.02557
-4.169	3.933	-.04247	.11614	.04851	.14030	-.08640	.05270	-.02630	.02416
	GRADIENT	-.00230	-.00032	.00162	-.00067	-.02114	.01032	-.00687	-.00035

RUN NO. 165/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.122	.375	.01525	.11474	.00571	.13960	-.00570	.00290	.00010	.02486
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 166/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.030	-5.879	.13961	.11542	-.08736	.14560	.09140	-.06830	.03400	.03018
-.027	-3.845	.12851	.11473	-.07934	.14030	.06030	-.03830	.02330	.02557
-.030	-1.739	.10306	.11354	-.06563	.13740	.03030	-.01660	.01240	.02386
-.019	.351	.09706	.11264	-.05621	.13600	-.00630	.00300	-.00020	.02335
-.003	2.455	.10551	.11384	-.06295	.13570	-.04280	.02610	-.01280	.02186
.009	3.897	.11408	.11214	-.07016	.13640	-.06630	.03720	-.02270	.02426
.019	6.597	.11870	.11213	-.07615	.13930	-.10110	.06090	-.03690	.02717
	GRADIENT	-.00181	-.00024	.00119	-.00050	-.01657	.00980	-.00594	-.00026

RUN NO. 167/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
2.072	.352	.10523	.11054	-.12075	.13270	-.00530	.00260	.00030	.02216
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED (RET043) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 168/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.555	-3.814	.27382	.10993	-.18509	.13490	.04170	-.02280	.02010	.02497
3.560	.365	.26154	.11004	-.17420	.13120	-.00370	.00120	.00080	.02116
3.578	3.907	.26793	.10703	-.18232	.13280	-.05060	.02580	-.02070	.02577
	GRADIENT	-.00093	-.00036	.00043	-.00029	-.01192	.00628	-.00526	.00007

RUN NO. 169/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.256	.389	.32577	.10964	-.21822	.13080	-.00190	-.00010	.00070	.02116
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IAB1) LVAP ORBITER-ALL HL SEALED (RET044) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 170/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.299	.071	-.03450	.12434	.08818	.14730	.00260	-.00230	.00220	.02296
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 171/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.258	-4.163	-.02398	.11823	.03880	.14330	.08610	-.05630	.03100	.02507
-4.231	.037	-.04583	.11894	.05683	.14280	.00190	-.00180	.00210	.02386
-4.258	3.599	-.03544	.11474	.04522	.13880	-.09000	.05890	-.02980	.02406
	GRADIENT	-.00159	-.00043	.00093	-.00057	-.02261	.01479	-.00780	-.00013

RUN NO. 172/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.161	.037	-.00253	.11304	.02163	.13570	.00100	-.00100	.00160	.02365
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES9T-019(IA81) LVAP ORBITER-ALL HL SEALED (RET044) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 173/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.093	-6.250	.08873	.10773	-.05116	.13450	.11870	-.07830	.04090	.02677
-.091	-4.198	.07193	.10923	-.07839	.13610	.08130	-.05350	.02800	.02687
-.090	-2.083	.05525	.10823	-.02619	.13500	.03810	-.02470	.01370	.02677
-.077	.009	.04701	.10664	-.01857	.13070	-.00110	.00070	.00060	.02386
-.067	2.124	.04952	.10674	-.02105	.13010	-.04290	.02750	-.01280	.02336
-.059	3.572	.05753	.10434	-.02960	.12900	-.08620	.05590	-.02710	.02466
-.053	6.276	.06570	.10364	-.03910	.12840	-.12830	.08460	-.04060	.02476
	GRADIENT	-.00168	-.00055	.00127	-.00037	-.03095	.01375	-.00689	-.00041

RUN NO. 174/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.987	.023	.10201	.10284	-.06155	.12660	-.00070	.00010	.00070	.02376
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 175/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.466	-4.234	.18543	.10243	-.12535	.12980	.08970	-.04580	.03360	.02637
3.479	.019	.17349	.10024	-.11595	.12390	-.00080	.00010	.00090	.02386
3.485	3.581	.17792	.09663	-.12233	.12220	-.07650	.04380	-.03330	.02557
	GRADIENT	-.00102	-.00074	.00045	-.00085	-.01854	.01212	-.00598	-.00012

RUN NO. 176/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.167	.048	.24593	.09894	-.16705	.12340	-.00190	.00030	.00070	.02446
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES37-019(IA81) LVAP ORBITER-ALL HL SEALED (RETO45) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 177/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.332	-.120	-.05582	.12104	.07350	.14350	.00840	-.00570	.00400	.02246
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 178/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.288	-4.351	-.02103	.11573	.03684	.14260	.09540	-.06290	.03340	.02687
-4.320	-.149	-.03269	.11424	.04625	.13790	.00950	-.00580	.00400	.02366
-4.300	3.413	-.02922	.11154	.03950	.13400	-.08540	.05640	-.02760	.02246
	GRADIENT	-.00098	-.00053	.00040	-.00111	-.02321	.01531	-.00783	-.00057

RUN NO. 179/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.199	-.165	.00184	.10834	.01812	.13240	.00890	-.00620	.00400	.02406
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 180/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.116	-6.442	.07521	.10403	-.04029	.13210	.12870	-.08430	.04290	.02807
-.115	-4.378	.05722	.10413	-.02692	.13140	.09090	-.06080	.03090	.02727
-.112	-2.264	.04368	.10343	-.01649	.13000	.04920	-.03330	.01710	.02657
-.108	-.175	.03766	.10334	-.01078	.12730	.00720	-.00520	.00330	.02396
-.100	1.938	.04115	.10174	-.01455	.12490	-.03530	.02340	-.01060	.02316
-.095	3.383	.04504	.10004	-.01928	.12370	-.07950	.05310	-.02500	.02366
-.089	6.028	.05072	.10153	-.02623	.12700	-.12250	.08040	-.03850	.02547
	GRADIENT	-.00145	-.00049	.00094	-.00104	-.02145	.01435	-.00704	-.00055

RUN NO. 181/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.933	-.155	.07836	.09774	-.04298	.12170	.00600	-.00460	.00290	.02396
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET045) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 182/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.402	-4.411	.15489	.09683	-.10263	.12280	.08050	-.05450	.02660	.02597
3.403	-.163	.13513	.09544	-.08630	.11810	.00360	-.00330	.00240	.02266
3.408	3.392	.13901	.09314	-.09208	.11730	-.07380	.04900	-.02240	.02416
	GRADIENT	-.00212	-.00047	.00135	-.00072	-.01972	.01323	-.00626	-.00025

RUN NO. 183/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.072	-.153	.19129	.09264	-.13035	.11600	.00530	-.00460	.00270	.02336
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET046) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 184/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.268	.417	-.12586	.12243	.11550	.15000	-.00720	.00450	-.00030	.02757
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 185/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.270	-3.851	-.02616	.11903	.03725	.14680	.07630	-.04970	.02680	.02777
-4.251	.391	-.05817	.11893	.06243	.14530	-.00710	.00420	.00000	.02637
-4.215	3.923	-.04313	.11764	.04941	.14240	-.08710	.05320	-.02650	.02476
	GRADIENT	-.00235	-.00017	.00171	-.00056	-.02097	.01322	-.00684	-.00039

RUN NO. 186/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.110	.392	.01478	.11523	.00626	.14130	-.00620	.00330	.00000	.02607
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET046) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 187/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.014	-5.856	.13844	.11612	-.08639	.14740	.08130	-.04820	.03390	.03128
-.012	-3.894	.12690	.11533	-.07827	.14180	.06010	-.03620	.02310	.02647
-.017	-1.729	.10639	.11433	-.06329	.13940	.02970	-.01910	.01240	.02307
-.008	.358	.09680	.11424	-.05526	.13840	-.00640	.00320	-.00020	.02416
.002	2.458	.10326	.11364	-.06153	.13710	-.04210	.02560	-.01260	.02346
.017	3.895	.11291	.11313	-.06912	.13960	-.06690	.03740	-.02290	.02547
.028	6.518	.11824	.11323	-.07512	.14090	-.10100	.06050	-.03690	.02767
	GRADIENT	-.00175	-.00026	.00115	-.00046	-.01646	.00971	-.00590	-.00020

RUN NO. 188/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
2.074	.362	.18574	.11224	-.12078	.13520	-.00460	.00210	.00020	.02296
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 189/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.563	-3.860	.27336	.11083	-.18432	.13550	.04270	-.02350	.02040	.02567
3.565	.374	.26081	.11144	-.17313	.13320	-.00300	.00060	.00070	.02176
3.578	3.899	.26885	.10803	-.18247	.13470	-.04920	.02480	-.02020	.02667
	GRADIENT	-.00066	-.00034	.00032	-.00025	-.01181	.00621	-.00521	.00009

RUN NO. 190/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.314	.393	.32575	.11044	-.21818	.13300	-.00160	-.00040	.00080	.02256
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET047) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 191/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.283	.072	-.08259	.12494	.08693	.14880	.00190	-.00170	.00200	.02386
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 192/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.315	-4.217	-.02331	.11963	.03857	.14530	.08630	-.05640	.03120	.02567
-4.282	.044	-.04447	.12024	.05590	.14490	.00190	-.00170	.00200	.02466
-4.245	3.589	-.03402	.11614	.04450	.14060	-.08880	.05810	-.02960	.02446
	GRADIENT	-.00149	-.00043	.00087	-.00059	-.02234	.01461	-.00776	-.00016

RUN NO. 193/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.148	.035	-.00112	.11424	.02080	.13870	.00220	-.00200	.00210	.02446
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 194/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.077	-6.234	.08892	.10903	-.05089	.13630	.11940	-.07890	.04120	.02727
-.076	-4.257	.07301	.10943	-.03924	.13730	.08240	-.05450	.02850	.02787
-.074	-2.080	.05539	.10963	-.02671	.13710	.04030	-.02670	.01470	.02747
-.070	.011	.03853	.10824	-.01960	.13290	.00310	-.00280	.00230	.02466
-.060	2.115	.05188	.10914	-.02248	.13250	-.03730	.02300	-.01100	.02436
-.050	3.551	.05857	.10643	-.02976	.13190	-.07980	.05230	-.02530	.02547
-.026	6.169	.06804	.10653	-.03963	.13200	-.12180	.08090	-.03920	.02547
	GRADIENT	-.00182	-.00037	.00129	-.00078	-.02017	.01320	-.00669	-.00042

RUN NO. 195/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.992	.010	.10515	.10444	-.06450	.12900	.00680	-.00540	.00310	.02456
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RET047) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 196/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.472	-4.227	.18870	.10413	-.12733	.13050	.07230	-.04760	.02480	.02637
3.475	.017	.17778	.10154	-.11878	.12590	.00500	-.00520	.00320	.02436
3.480	3.492	.17698	.09863	-.12226	.12480	-.06810	.04380	-.02080	.02617
	GRADIENT	-.00131	-.00071	.00071	-.00075	-.01810	.01177	-.00588	-.00004

RUN NO. 197/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.220	.042	.24352	.10033	-.16848	.12530	.00480	-.00520	.00320	.02497
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL30) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.500 RN/L = 3.000

RUN NO. 100/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
.345	-7.004	-.05810	.01650	.03190	-.03370	.02200	-.01124	.00970	.02220
.321	-4.823	-.03870	.00960	.03200	-.01640	.00990	-.00745	.00950	.02250
.336	-.374	-.01390	.00710	.03420	.01310	-.01430	-.00257	.00890	.02530
.412	4.014	.00630	.00480	.03680	.00920	-.01550	.00143	.00980	.02700
.468	8.441	.03760	-.00580	.03730	-.01190	-.00170	.00752	.00900	.02830
.493	10.654	.05720	-.01260	.03740	-.02080	.00370	.01139	.00860	.02880
	GRADIENT	.00509	-.00054	.00054	.00291	-.00288	.00101	.00003	.00051

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL31) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	.000	ELV-OB =	.000
RUDDER =	.000	SPOBRK =	55.000
MACH =	2.200	RN/L =	3.000

RUN NO. 101/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.003	-7.146	-.06410	.01810	.03570	-.03730	.02570	-.01246	.01270	.02300
-.030	-4.898	-.04260	.01080	.03580	-.01780	.01180	-.00826	.01210	.02370
-.024	-.412	-.01590	.00850	.03810	.01510	-.01430	-.00304	.01150	.02660
.088	4.028	.00560	.00530	.04090	.01280	-.01830	.00145	.01210	.02880
.170	8.520	.03710	-.00330	.04210	-.01380	-.00150	.00753	.01170	.03040
.208	10.759	.05810	-.01050	.04190	-.02410	.00470	.01164	.01130	.03060
	GRADIENT	.00551	-.00062	.00057	.00343	-.00338	.00109	-.00000	.00057

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL32) (03 OCT 75)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	.000	ELV-OB =	.000
RUDDER =	.000	SPOBRK =	55.000
MACH =	2.000	RN/L =	3.000

RUN NO. 102/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
.229	-7.169	-.06140	.01460	.03900	-.04200	.02760	-.01202	.01430	.02470
.182	-4.904	-.04020	.00790	.03880	-.01920	.01200	-.00783	.01300	.02580
.163	-.360	-.01620	.00890	.04070	.01630	-.01480	-.00306	.01170	.02900
.307	4.093	.00570	.00510	.04330	.01240	-.01920	.00130	.01280	.03050
.402	8.619	.03260	-.00030	.04460	-.01670	-.00090	.00659	.01250	.03210
.442	10.885	.05570	-.00820	.04380	-.02980	.00720	.01122	.01230	.03150
	GRADIENT	.00510	-.00031	.00050	.00353	-.00348	.00101	-.00002	.00052

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL33) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 1.550 RN/L = 3.000

RUN NO. 103/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
.679	-7.209	-.05500	.00870	.04270	-.03790	.01990	-.01075	.01410	.02860
.606	-4.891	-.03730	.00600	.04210	-.01390	.00480	-.00721	.01230	.02980
.497	-.309	-.01740	.00970	.04270	.02580	-.02100	-.00332	.01070	.03200
.646	4.174	.00110	.00860	.04580	.01280	-.01830	.00032	.01330	.03250
.782	8.647	.02440	.00300	.04840	-.01630	-.00180	.00503	.01300	.03540
	GRADIENT	.00424	.00029	.00041	.00297	-.00256	.00083	.00011	.00030

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL34) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 115/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

BETAL	ALPHAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
.609	-6.947	-.05820	.01230	.04380	-.03500	.01760	-.01128	.01410	.02970
.544	-4.703	-.04120	.01020	.04340	-.01040	.00240	-.00791	.01220	.03120
.492	-2.473	-.02910	.01070	.04410	.01080	-.01090	-.00554	.01180	.03230
.459	-.248	-.02030	.01280	.04290	.02740	-.02200	-.00374	.01020	.03270
.515	1.929	-.01350	.01430	.04310	.02330	-.02230	-.00241	.01010	.03300
.580	3.641	-.00460	.01270	.04570	.01500	-.01970	-.00068	.01240	.03330
.630	6.221	.00870	.00680	.04640	.00070	-.01160	.00186	.01240	.03400
	GRADIENT	.00421	.00042	.00016	.00313	-.00270	.00083	-.00008	.00023

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL35) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 112/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-7.069	-3.663	-.10260	.03970	.04990	-.02690	.01950	-.01983	.01660	.03330
-7.011	-1.511	-.07780	.02460	.04600	-.03580	.02200	-.01325	.01440	.03160
-6.779	.605	-.05830	.01220	.04400	-.03640	.01850	-.01132	.01410	.02990
-6.908	2.779	-.03820	.00090	.04540	-.03010	.00980	-.00726	.01510	.03030
-6.647	4.852	-.02190	-.00770	.04420	-.02900	.00710	-.00416	.01440	.02980
	GRADIENT	.00943	-.00556	-.00056	.00007	-.00174	.00175	-.00017	-.00039

RUN NO. 116/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.813	-5.772	-.09020	.03960	.05190	-.00420	.00640	-.01734	.01620	.03570
-4.776	-3.715	-.07400	.02960	.04800	-.00830	.00710	-.01428	.01470	.03330
-4.691	.549	-.04230	.01090	.04310	-.01000	.00220	-.00814	.01220	.03090
-4.586	4.757	-.01560	-.00410	.04370	-.00860	-.00330	-.00293	.01320	.03050
-4.567	6.818	-.00530	-.01110	.04090	-.01260	-.00140	.00095	.01220	.02870
	GRADIENT	.00589	-.00398	-.00051	-.00004	-.00123	.00134	-.00018	-.00033

RUN NO. 117/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.530	-5.789	-.06340	.02360	.05180	.01490	-.00670	-.01219	.01600	.03580
-2.477	-1.623	-.04220	.01910	.04580	.01020	-.00710	-.00810	.01270	.03310
-2.407	2.635	-.01840	.00460	.04480	.01190	-.01470	-.00341	.01350	.03130
-2.358	6.744	-.00080	-.00650	.03910	.00380	-.00960	-.00001	.01070	.02840
	GRADIENT	.00559	-.00341	-.00023	.00040	-.00178	.00110	.00019	-.00042

RUN NO. 118/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.253	-5.797	-.04120	.02620	.05370	.03060	-.01780	-.00781	.01600	.03770
-.237	-3.760	-.03350	.02120	.04970	.02820	-.01730	-.00634	.01440	.03530
-.193	.473	-.01950	.01270	.04320	.02820	-.02270	-.00352	.01050	.03260
-.203	4.655	-.00780	.00440	.04290	.01980	-.01910	-.00131	.01220	.03070
-.197	6.707	-.00230	.00010	.03770	.00970	-.01270	-.00039	.00970	.02800
	GRADIENT	.00305	-.00200	-.00081	-.00111	-.00122	.00060	-.00026	-.00055

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL35) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 119/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
1.957	-5.773	-.02440	.02390	.05410	.03880	-.02650	-.00453	.01580	.03830
1.955	-1.611	-.01570	.01710	.04600	.02630	-.02090	-.00286	.01170	.03430
1.945	2.648	-.00950	.01110	.04450	.01900	-.02140	-.00167	.01240	.03210
1.915	6.744	.00010	.00090	.04050	.00530	-.01120	.00014	.01070	.02980
	GRADIENT	.00146	-.00141	-.00035	-.00171	-.00012	.00028	.00016	-.00052

RUN NO. 120/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
4.159	-5.672	-.00640	.01640	.05290	.02950	-.02560	-.00097	.01540	.03750
4.150	-3.632	-.00340	.01360	.05190	.02290	-.02170	-.00041	.01620	.03570
4.137	.592	-.00240	.01150	.04570	.01330	-.01900	-.00023	.01270	.03300
4.075	4.761	.00190	.00390	.04670	.00450	-.01450	.00053	.01460	.03210
4.071	6.798	.00300	.00230	.04150	-.00290	-.00850	.00066	.01130	.03020
	GRADIENT	.00063	-.00115	-.00062	-.00219	.00085	.00011	-.00019	-.00043

RUN NO. 121/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
6.337	-3.576	.01360	.00610	.05360	.01370	-.01720	.00285	.01730	.03630
6.323	-1.478	.01150	.00670	.04990	.00660	-.01340	.00244	.01460	.03530
6.302	.638	.01030	.00630	.04650	-.00010	-.01110	.00218	.01230	.03420
6.272	2.749	.00930	.00450	.04870	-.00340	-.01020	.00199	.01470	.03400
6.247	4.818	.00650	.00470	.04670	-.00810	-.00810	.00141	.01400	.03270
	GRADIENT	-.00078	-.00024	-.00071	-.00255	.00102	-.00016	-.00031	-.00040

AMES97-019(IA81) LVAP L-SR8 - ALL HL SEALED (RETL36) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 122/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-7.023	-4.071	-.10690	.04690	.04560	-.02710	.02190	-.02059	.01610	.02950
-6.998	-1.946	-.08800	.03410	.04320	-.03480	.02530	-.01699	.01520	.02800
-6.970	.196	-.06330	.01700	.04020	-.04180	.02830	-.01225	.01440	.02580
-6.928	2.342	-.04480	.00510	.03870	-.04320	.02420	-.00871	.01430	.02440
-6.896	4.448	-.02750	-.00630	.03470	-.04400	.02140	-.00532	.01210	.02260
	GRADIENT	.00947	-.00635	-.00123	-.00198	-.00010	.00182	-.00042	-.00082

RUN NO. 123/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.814	-6.170	-.09230	.04430	.04590	.00010	.00380	-.01775	.01440	.03150
-4.790	-4.103	-.07740	.03460	.04420	-.00770	.00820	-.01490	.01450	.02970
-4.745	.154	-.04330	.01120	.03930	-.01900	.01150	-.00843	.01250	.02640
-4.672	4.402	-.01470	-.00700	.03500	-.02290	.00810	-.00288	.01130	.02370
-4.648	6.519	-.00400	-.01380	.03350	-.01650	-.00090	-.00075	.00990	.02360
	GRADIENT	.00737	-.00489	-.00108	-.00179	-.00001	.00141	-.00038	-.00071

RUN NO. 124/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.574	-6.166	-.06230	.03240	.04660	.01550	-.00840	-.01186	.01360	.03300
-2.549	-1.978	-.04000	.01720	.04330	.00400	-.00290	-.00765	.01320	.03010
-2.503	2.271	-.01800	.00250	.03820	-.00190	-.00360	-.00345	.01200	.02620
-2.452	6.477	.00080	-.00950	.03440	-.00080	-.01080	.00021	.00940	.02500
	GRADIENT	.00518	-.00346	-.00120	-.00139	-.00016	.00099	-.00028	-.00092

RUN NO. 125/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.330	-6.145	-.04060	.02650	.04800	.03260	-.02310	-.00758	.01390	.03410
-.330	-4.088	-.03250	.02060	.04630	.02720	-.02000	-.00605	.01360	.03270
-.297	.134	-.01990	.01270	.04120	.01600	-.01470	-.00369	.01220	.02900
-.286	4.345	-.00630	.00220	.03580	.00590	-.01150	-.00113	.01010	.02570
-.279	6.458	-.00090	-.00150	.03450	.00750	-.01620	-.00005	.00870	.02580
	GRADIENT	.00311	-.00218	-.00125	-.00253	.00101	.00058	-.00041	-.00083

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL38) (03 OCT 75)

REFERENCE DATA

SREF = 2880.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 126/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
1.884	-6.082	-.01990	.02020	.04850	.03800	-.03070	-.00359	.01380	.03470
1.875	-1.919	-.01240	.01410	.04430	.02280	-.02130	-.00219	.01330	.03100
1.863	2.307	-.00610	.00810	.03940	.00780	-.01380	-.00108	.01170	.02770
1.856	6.498	-.00010	.00230	.03560	.00630	-.01780	.00006	.00910	.02650
	GRADIENT	.00149	-.00142	-.00116	-.00355	.00177	.00027	-.00038	-.00078

RUN NO. 127/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
4.098	-6.016	-.00137	.01320	.04920	.03470	-.03220	.00010	.01380	.03540
4.087	-3.965	.00020	.01130	.04740	.02810	-.02810	.00038	.01410	.03330
4.063	.245	.00260	.00790	.04330	.01100	-.01790	.00070	.01300	.03030
4.011	4.404	.00350	.00410	.03760	-.00520	-.00710	.00075	.01100	.02660
4.011	6.496	.00370	.00360	.03640	-.00470	-.01060	.00083	.00960	.02680
	GRADIENT	.00039	-.00086	-.00117	-.00398	.00251	.00004	-.00037	-.00080

RUN NO. 128/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
6.2[illegible]	-3.908	.01770	.00450	.04900	.01720	-.02160	.00374	.01390	.03510
6.288	-1.816	.01710	.00430	.04690	.00890	-.01640	.00361	.01380	.03310
6.260	.274	.01460	.00490	.04410	-.00180	-.00960	.00304	.01340	.03070
6.239	2.375	.01350	.00420	.04050	-.01200	-.00310	.00271	.01250	.02800
6.214	4.432	.01050	.00480	.03770	-.01540	-.00090	.00216	.01050	.02720
	GRADIENT	-.00086	.00002	-.00139	-.00413	.00262	-.00019	-.00039	-.00100

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL37) (03 OCT 75)

REFERENCE DATA

SREF = 2680.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 129/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.961	-4.240	-.10190	.04630	.04160	-.01630	.01260	-.01956	.01430	.02730
-6.948	-2.144	-.08640	.03540	.03990	-.02840	.02100	-.01667	.01390	.02600
-6.937	-.026	-.06630	.02100	.03680	-.03670	.02480	-.01281	.01320	.02360
-6.910	2.116	-.04980	.00990	.03630	-.04190	.02510	-.00974	.01360	.02270
-6.886	4.215	-.03240	-.00180	.03390	-.04480	.02370	-.00632	.01290	.02100
	GRADIENT	.00829	-.00575	-.00090	-.00333	.00124	.00158	-.00015	-.00075

RUN NO. 130/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.755	-6.330	-.08930	.04520	.04351	.00720	-.00260	-.01709	.01240	.03110
-4.756	-4.272	-.07730	.03640	.04140	-.00230	.00320	-.01476	.01260	.02880
-4.728	-.049	-.04800	.01430	.03680	-.01790	.01160	-.00887	.01190	.02490
-4.673	4.186	-.01880	-.00350	.03350	-.02370	.00990	-.00366	.01100	.02250
-4.651	6.272	-.00790	-.01030	.02950	-.02500	.00900	-.00155	.00840	.02110
	CRADIENT	.00692	-.00472	-.00093	-.00253	.00079	.00131	-.00019	-.00074

RUN NO. 131/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.543	-6.316	-.06180	.03450	.04500	.02070	-.01340	-.01177	.01190	.03310
-2.538	-2.155	-.04060	.01870	.04030	.00680	-.00530	-.00778	.01180	.02850
-2.521	2.089	-.02130	.00520	.03660	-.00170	-.00310	-.00413	.01130	.02530
-2.493	6.230	-.00400	-.00650	.03080	-.00940	-.00180	-.00075	.00810	.02270
	GRADIENT	.00457	-.00320	-.00088	-.00201	.00052	.00087	-.00012	-.00076

RUN NO. 132/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.347	-6.285	-.04170	.02880	.04730	.03570	-.02690	-.00781	.01310	.03420
-.350	-4.240	-.03340	.02240	.04520	.02910	-.02280	-.00620	.01350	.03170
-.348	-.048	-.01970	.01210	.03880	.01530	-.01450	-.00371	.01140	.02740
-.344	4.147	-.00790	.00300	.03460	.00380	-.00990	-.00145	.01020	.02440
-.324	6.220	-.00160	-.00180	.03140	-.00170	-.00790	-.00022	.00830	.02310
	GRADIENT	.00304	-.00231	-.00126	-.00302	.00154	.00057	-.00039	-.00087

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL37) (03 OCT 75)

REFERENCE DATA

SREF = 2080.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 133/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
1.831	-6.243	-.02270	.02350	.04790	.04140	-.03410	-.00407	.01290	.03500
1.806	-2.099	-.01140	.01340	.04340	.02390	.02260	-.00190	.01340	.03000
1.795	2.113	-.00540	.00750	.03830	.00740	-.01350	-.00089	.01170	.02660
1.788	6.262	.00230	.00040	.03160	-.00450	-.00850	.00049	.00850	.02310
	GRADIENT	.00142	-.00140	-.00121	-.00392	.00216	.00024	-.00040	-.00081

RUN NO. 134/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
4.030	-6.178	-.00310	.01580	.04850	.03470	-.03260	-.00020	.01290	.03560
4.022	-4.131	-.00040	.01290	.04640	.02600	-.02700	.00025	.01300	.03340
3.992	.053	.00250	.00860	.04150	.01060	-.01740	.00077	.01250	.02900
3.968	4.207	.00530	.00410	.03610	-.00630	-.00680	.00115	.01090	.02520
3.961	6.281	.00700	.00210	.03180	-.01120	-.00450	.00140	.00840	.02340
	GRADIENT	.00068	-.00106	-.00124	-.00387	.00242	.00011	-.00025	-.00098

RUN NO. 135/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
6.213	-4.098	.01850	.00470	.04700	.01570	-.01970	.00395	.01270	.03430
6.203	-2.002	.01830	.00420	.04480	.00600	-.01380	.00387	.01260	.03220
6.180	.079	.01650	.00400	.04200	-.00280	-.00820	.00347	.01240	.02960
6.166	2.187	.01510	.00360	.03940	-.01180	-.00290	.00313	.01160	.02780
6.152	4.239	.01300	.00400	.03640	-.01740	-.00020	.00262	.01030	.02610
	GRADIENT	-.00068	-.00010	-.00127	-.00403	.00239	-.00016	-.00028	-.00100

DATE 21 OCT 75 — 1A81B - FORCE SOURCE DATA TABULATION — (RETL38) (03 OCT 75)

AMES97-019(1AP1) LVAP L-SRB - ALL HL SEALED

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPDBRK =	.000
MACH =	2.500	RN/L =	2.500

RUN NO. 136/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.827	-3.877	-.09150	.04200	.03710	-.01520	.01050	-.01764	.01190	.02520
-6.828	-1.779	-.07620	.03060	.03470	-.02490	.01640	-.01463	.01100	.02370
-6.820	.319	-.06090	.01940	.03300	-.03420	.02180	-.01179	.01060	.02240
-6.797	2.438	-.04700	.01040	.03190	-.04040	.02420	-.00915	.01070	.02120
-6.783	4.503	-.03330	.00100	.02970	-.04260	.02310	-.00646	.00980	.01990
	GRADIENT	.00694	-.00487	-.00084	-.00335	.00157	.00133	-.00021	-.00062

RUN NO. 137/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.650	-5.955	-.08010	.04200	.04010	.00590	-.00270	-.01534	.01090	.02920
-4.654	-3.907	-.06830	.03280	.03700	-.00180	.00150	-.01308	.01090	.02610
-4.646	.306	-.04120	.01230	.03310	-.01770	.01040	-.00791	.01000	.02310
-4.614	4.488	-.01920	-.00240	.02940	-.02420	.01080	-.00372	.00830	.02110
-4.592	6.551	-.00980	-.00830	.02710	-.02590	.00980	-.00189	.00760	.01950
	GRADIENT	.00585	-.00419	-.00091	-.00267	.00111	.00112	-.00031	-.00060

RUN NO. 138/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.473	-5.941	-.05670	.03310	.04210	.01980	-.01400	-.01080	.01100	.03110
-2.483	-1.797	-.03610	.01670	.03620	.00540	-.00570	-.00684	.01000	.02620
-2.471	2.403	-.01960	.00470	.03250	-.00400	-.00200	-.00377	.00950	.02300
-2.495	6.520	-.00490	-.00560	.02820	-.01030	-.00090	-.00089	.00790	.02030
	GRADIENT	.00393	-.00286	-.00088	-.00224	.00088	.00073	-.00012	-.00076

RUN NO. 139/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.298	-5.915	-.03770	.02750	.04380	.03210	-.02560	-.00706	.01140	.03240
-.304	-3.877	-.03000	.02090	.04140	.02610	-.02190	-.00559	.01170	.02970
-.318	.307	-.01640	.00970	.03510	.01210	-.01370	-.00303	.00980	.02530
-.309	4.461	-.00630	.00200	.03100	.00150	-.00890	-.00113	.00840	.02260
-.304	6.526	-.00100	-.00200	.02870	-.00260	-.00730	-.00019	.00790	.02080
	GRADIENT	.00284	-.00227	-.00125	-.00295	.00156	.00053	-.00040	-.00085

AMES97-019(1A81) LVAP L-SRB - ALL HL SEALED (RETL38) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 140/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
1.860	-5.866	-.01950	.02180	.04440	.03560	-.03100	-.00343	.01120	.03320
1.820	-1.738	-.00950	.01150	.03930	.02010	-.02090	-.00157	.01100	.02830
1.817	2.442	-.00360	.00620	.03440	.00470	-.01180	-.00059	.00980	.02460
1.813	6.562	.00330	-.00010	.02850	-.00520	-.00780	.00067	.00770	.02080
	GRADIENT	.00141	-.00127	-.00117	-.00368	.00218	.00023	-.00029	-.00089

RUN NO. 141/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.403	-5.839	-.00030	.01350	.04520	.02680	-.02570	.00028	.01070	.03450
3.376	-3.862	.00280	.00940	.04210	.01980	-.02150	.00088	.01090	.03120
3.362	.379	.00350	.00740	.03770	.00600	-.01380	.00095	.01050	.02720
3.344	3.913	.00620	.00370	.03160	-.00790	-.00560	.00129	.00870	.02290
3.340	6.584	.00820	.00160	.02850	-.01190	-.00380	.00167	.00740	.02110
	GRADIENT	.00043	-.00072	-.00134	-.00355	.00204	.00005	-.00028	-.00106

RUN NO. 142/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.181	-3.833	.02050	.00260	.04310	.01030	-.01500	.00432	.01070	.03240
6.170	-1.684	.01940	.00220	.04070	.00230	-.01030	.00403	.01100	.02970
6.163	.403	.01680	.00320	.03810	-.00460	-.00680	.00349	.01040	.02770
6.147	2.505	.01510	.00300	.03620	-.01320	-.00170	.00313	.00980	.02640
6.143	3.925	.01440	.00290	.03190	-.01850	.00050	.00286	.00840	.02350
	GRADIENT	-.00084	.00007	-.00135	-.00371	.00201	-.00020	-.00028	-.00106

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL39) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 143/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.974	.604	-.01340	.00970	.04250	-.03500	.01780	-.01099	.01380	.02870
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 144/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.819	-3.694	-.07130	.02630	.04700	-.00870	.00700	-.01374	.01460	.03240
-4.737	.543	-.04090	.00820	.04230	-.01040	.00260	-.00786	.01200	.03030
-4.691	4.125	-.01610	-.00500	.04380	-.00670	-.00450	-.00302	.01380	.03000
	GRADIENT	.00706	-.00401	-.00043	.00024	-.00146	.00137	-.00012	-.00031

RUN NO. 145/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.315	-5.807	-.04230	.02530	.05270	.03020	-.01760	-.00814	.01630	.03640
-.306	-3.771	-.03340	.01910	.04890	.02790	-.01700	-.00640	.01400	.03490
-.260	.465	-.01840	.01060	.04310	.02700	-.02180	-.00351	.01040	.03270
-.240	4.034	-.00970	.00440	.04240	.01890	-.01950	-.00175	.01200	.03040
-.217	6.721	-.00120	-.00130	.03790	.00940	-.01280	-.00016	.00990	.02800
	GRADIENT	.00305	-.00189	-.00085	-.00112	-.00035	.00060	-.00027	-.00057

RUN NO. 146/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.490	-3.66[illegible]	-.00200	.01130	.05130	.02340	-.02140	-.00027	.01630	.03500
3.484	.58[illegible]	-.00260	.01070	.04630	.01410	-.01900	-.00030	.01310	.03320
3.426	4.141	.00170	.00330	.04690	.00350	-.01400	.00046	.01500	.03190
	GRADIENT	.00045	-.00099	-.00058	-.00253	.00093	.00009	-.00019	-.00040

RUN NO. 147/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.227	.654	.01000	.00560	.04690	-.00080	-.01050	.00206	.01300	.03390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES37-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL40) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 148/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.970	.195	-.06060	.01390	.03900	-.03990	.02590	-.01181	.01450	.02450
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 149/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.860	-4.147	-.07140	.02890	.04270	-.00750	.00790	-.01378	.01460	.02810
-4.818	.140	-.04080	.00820	.03860	-.01750	.01080	-.00796	.01320	.02540
-4.753	3.759	-.01690	-.00660	.03460	-.02160	.00780	-.00333	.01130	.02330
	GRADIENT	.00690	-.00450	-.00102	-.00180	.00001	.00132	-.00041	-.00061

RUN NO. 150/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.337	-6.136	-.03790	.02310	.04760	.03160	-.02200	-.00714	.01390	.03370
-.333	-4.081	-.02970	.01720	.04560	.02650	-.01940	-.00567	.01380	.03180
-.312	.140	-.01600	.00990	.04030	.01600	-.01470	-.00345	.01220	.02810
-.298	3.704	-.00580	.00070	.03530	.00690	-.01130	-.00104	.01010	.02520
-.276	6.452	-.00010	-.00280	.03460	.00790	-.01580	.00006	.00900	.02560
	GRADIENT	.00306	-.00211	-.00132	-.00252	.00104	.00059	-.00047	-.00085

RUN NO. 151/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.428	-3.962	.00220	.00890	.04680	.02790	-.02800	.00065	.01350	.03330
3.417	.248	.00410	.00580	.04300	.01340	-.01950	.00098	.01300	.03000
3.383	3.790	.00600	.00190	.03670	-.00540	-.00730	.00122	.01050	.02620
	GRADIENT	.00049	-.00090	-.00129	-.00427	.00265	.00007	-.00038	-.00091

RUN NO. 152/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.186	.287	.01580	.00310	.04310	.00060	-.01150	.00320	.01270	.03040
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

DATE 21 OCT 75 IA81B - FORCE SOURCE DATA TABULATION (RETL41) (03 OCT 75)

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT
SCALE =	.0300		

PARAMETRIC DATA

ELV-IB =	.000	ELV-OB =	.000
RUDDER =	.000	SPDBRK =	.000
MACH =	2.200	RN/L =	2.500

RUN NO. 153/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.967	-.017	-.06420	.01790	.03570	-.03690	.02520	-.01250	.01270	.02300
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 154/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.834	-4.265	-.07140	.03100	.04000	-.00110	.00210	-.01378	.01250	.02710
-4.805	-.053	-.04230	.01050	.03580	-.01650	.01080	-.00824	.01210	.02370
-4.751	3.553	-.01860	-.00440	.03250	-.02400	.01040	-.00368	.01090	.02160
	GRADIENT	.00676	-.00454	-.00096	-.00295	.00109	.00129	-.00025	-.00071

RUN NO. 155/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.378	-6.297	-.03840	.02520	.04630	.03560	-.02710	-.00723	.01340	.03290
-.376	-4.239	-.03070	.01910	.04390	.02810	-.02210	-.00576	.01310	.03080
-.374	-.055	-.01740	.00920	.03780	.01530	-.01450	-.00332	.01130	.02650
-.364	3.528	-.00F10	.00080	.03340	.00340	-.00960	-.00116	.00990	.02350
-.355	6.247	-.00070	-.00300	.03100	-.00140	-.00780	-.00007	.00810	.02290
	GRADIENT	.00317	-.00236	-.00135	-.00318	.00162	.00059	-.00041	-.00094

RUN NO. 156/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.372	-4.139	.00150	.01030	.04560	.02520	-.02590	.00058	.01260	.03300
3.352	.040	.00440	.00630	.04080	.01170	-.01780	.00110	.01210	.02870
3.328	3.591	.00680	.00230	.03520	-.00420	-.00790	.00143	.01060	.02460
	GRADIENT	.00069	-.00103	-.00134	-.00379	.00232	.00011	-.00025	-.00108

RUN NO. 157/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
8.106	.070	.01750	.00220	.04110	.00140	-.01040	.00366	.01180	.02930
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

DATE 21 OCT 75 IA81B - FORCE SOURCE DATA TABULATION (RETL42) (03 OCT 75)

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 158/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.838	.318	-.05920	.01700	.03200	-.03310	.02140	-.01147	.01010	.02190
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 159/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.683	-3.910	-.06670	.03030	.03590	-.00100	.00080	-.01276	.01040	.02550
-4.678	.287	-.03980	.01000	.03220	-.01680	.00990	-.00767	.00980	.02240
-4.646	3.864	-.01880	-.00380	.02780	-.02340	.01040	-.00366	.00770	.02010
	GRADIENT	.00617	-.00440	-.00104	-.00291	.00126	.00117	-.00034	-.00070

RUN NO. 160/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.291	-5.936	-.03560	.02480	.04270	.03350	-.02650	-.00665	.01090	.03180
-.307	-3.891	-.02840	.01850	.04000	.02700	-.02260	-.00527	.01090	.02910
-.319	.301	-.01530	.00800	.03420	.01290	-.01440	-.00291	.00930	.02490
-.311	3.850	-.00520	.00040	.02970	.00230	-.00920	-.00101	.00760	.02210
-.307	6.558	-.00110	-.00260	.02820	-.00240	-.00720	-.00022	.00730	.02090
	GRADIENT	.00300	-.00234	-.00133	-.00320	.00174	.00055	-.00042	-.00091

RUN NO. 161/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.351	-3.816	.00380	.00740	.04070	.02210	-.02280	.00107	.00980	.03090
3.346	.362	.00480	.00540	.03670	.00880	-.01520	.00115	.00950	.02720
3.332	3.898	.00680	.00230	.03080	-.00510	-.00690	.00143	.00780	.02300
	GRADIENT	.00038	-.00066	-.00127	-.00352	.00205	.00005	-.00025	-.00102

RUN NO. 162/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
8.084	.394	.01700	.00190	.03680	-.00120	-.00860	.00357	.00920	.02760
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL43) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 163/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.934	.614	-.05870	.01290	.04400	-.03380	.01660	-.01137	.01370	.03030
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 164/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.778	-3.694	-.07440	.03030	.04840	-.00710	.00580	-.01434	.01460	.03380
-4.694	.550	-.04270	.01140	.04370	-.00940	.00159	-.00819	.01240	.03130
-4.602	4.130	-.01850	-.00240	.04390	-.00810	-.00390	-.00345	.01310	.03080
	GRADIENT	.00715	-.00419	-.00059	-.00014	-.00123	.00139	-.00020	-.00039

RUN NO. 165/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.473	.511	-.03210	.01270	.04430	.01140	-.01160	-.00610	.01150	.03280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 166/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.287	-5.804	-.04510	.02880	.05380	.03080	-.01800	-.00862	.01570	.03810
-.275	-3.766	-.03640	.02300	.04950	.02890	-.01800	-.00686	.01390	.03560
-.246	-1.657	-.03080	.02050	.04640	.02940	-.01990	-.00580	.01210	.03430
-.238	.477	-.02280	.01470	.04340	.02730	-.02250	-.00431	.00990	.03350
-.219	2.599	-.01690	.01060	.04360	.02550	-.02360	-.00313	.01150	.03210
-.205	4.036	-.01040	.00620	.04280	.01880	-.01960	-.00182	.01190	.03090
-.198	6.721	-.00390	.00120	.03800	.00950	-.01280	-.00061	.00930	.02870
	GRADIENT	.00330	-.00218	-.00083	-.00117	-.00039	.00064	-.00025	-.00058

RUN NO. 167/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
1.951	.529	-.01380	.01500	.04340	.02250	-.02230	-.00253	.01010	.03330
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SR8 - ALL HL SEALED (RETL43) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 168/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.515	-3.614	-.00750	.01650	.05260	.02290	-.02170	-.00120	.01600	.03660
3.501	.598	-.00440	.01290	.04620	.01410	-.01970	-.00060	.01240	.03380
3.443	4.141	.00030	.00490	.04660	.00470	-.01500	.00022	.01450	.03210
	GRADIENT	.00100	-.00148	-.00080	-.00234	.00085	.00018	-.00021	-.00058

RUN NO. 169/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.241	.657	.00770	.00790	.04700	.00090	-.01200	.00167	.01240	.03460
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SR6 ALL HL SEALED (RETL44) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 170/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.935	.202	-.06390	.01810	.04040	-.03920	.02520	-.01238	.01390	.02650
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 171/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.773	-4.078	-.07580	.03390	.04450	-.00560	.00630	-.01458	.01390	.03060
-4.735	.152	-.04450	.01230	.03980	-.01730	.01020	-.00859	.01270	.02710
-4.730	3.755	-.01860	-.00430	.03590	-.02090	.00760	-.00358	.01150	.02440
	GRADIENT	.00731	-.00488	-.00110	-.00198	.00019	.00140	-.00031	-.00079

RUN NO. 172/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.528	.155	-.03100	.01110	.04130	.00100	-.00310	-.00597	.01220	.02910
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) L/AP L-SRB - ALL HL SEALED (RETL44) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 173/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.330	-6.123	-.04150	.02700	.04830	.03260	-.02330	-.00783	.01350	.03480
-.324	-4.075	-.03330	.02120	.04660	.02780	-.02060	-.00626	.01320	.03340
-.316	-1.958	-.02680	.01680	.04390	.02150	-.01730	-.00505	.01220	.03170
-.290	.137	-.02080	.01330	.04140	.01690	-.01540	-.00393	.01190	.02950
-.292	2.268	-.01320	.00720	.03970	.00990	-.01270	-.00250	.01130	.02740
-.286	3.713	-.00680	.00240	.03580	.00750	-.01190	-.00123	.00970	.02610
-.276	6.466	-.00190	-.00120	.03480	.00790	-.01630	-.00023	.00850	.02630
	GRADIENT	.00335	-.00237	-.00135	-.00265	.00112	.00063	-.00039	-.00095

RUN NO. 174/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
1.874	.204	-.01090	.01260	.04200	.01590	-.01820	-.00191	.01230	.02970
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 175/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.448	-3.994	-.00010	.01140	.04760	.02620	-.02750	.00026	.01400	.03360
3.437	.256	.00160	.00850	.04360	.01050	-.01790	.00052	.01270	.03090
3.404	3.810	.00420	.00410	.03670	-.00630	-.00730	.00092	.01010	.02660
	GRADIENT	.00055	-.00093	-.00138	-.00415	.00258	.00008	-.00049	-.00089

RUN NO. 176/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.211	.304	.01390	.00550	.04390	-.00320	-.00910	.00297	.01300	.03080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL45) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-1B = 8.000 ELV-0B = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 177/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.938	-.020	-.06720	.02180	.03700	-.03560	.02420	-.01296	.01260	.02440
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 178/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.765	-4.262	-.07540	.03570	.04110	-.00070	.00200	-.01443	.01270	.02840
-4.798	-.054	-.04620	.01480	.03700	-.01640	.01060	-.00895	.01190	.02510
-4.758	3.556	-.02040	-.00250	.03350	-.02410	.01030	-.00398	.01120	.02230
	GRADIENT	.00703	-.00489	-.00097	-.00301	.00109	.00134	-.00019	-.00078

RUN NO. 179/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.553	-.061	-.03130	.01200	.03800	.00160	-.00310	-.00599	.01110	.02690
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 180/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.318	-6.294	-.04170	.02930	.04720	.03620	-.02760	-.00781	.01320	.03400
-.325	-4.240	-.03370	.02290	.04500	.02900	-.02300	-.00632	.01330	.03170
-.329	-2.136	-.02550	.01650	.04180	.02170	-.01820	-.00475	.01220	.02960
-.324	-.049	-.01980	.01250	.03890	.01540	-.01470	-.00365	.01120	.02770
-.320	2.074	-.01340	.00770	.03710	.00900	-.01180	-.00248	.01090	.02620
-.320	3.533	-.00820	.00350	.03430	.00300	-.00960	-.00157	.01010	.02420
-.320	6.186	-.00190	-.00150	.03130	-.00160	-.00800	-.00033	.00800	.02330
	GRADIENT	.00319	-.00241	-.00132	-.00327	.00169	.00060	-.00039	-.00093

RUN NO. 181/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
1.813	.020	-.00680	.01090	.04020	.01480	-.01770	-.00150	.01240	.02780
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL45) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 182/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.403	-4.182	-.00070	.01320	.04620	.02580	-.02690	.00023	.01280	.03340
3.371	.058	.00210	.00890	.04140	.00980	-.01700	.00061	.01210	.02930
3.337	3.606	.00410	.00470	.03570	-.00640	-.00680	.00088	.01050	.02520
	GRADIENT	.00062	-.00109	-.00134	-.00412	.00257	.00008	-.00029	-.00105

RUN NO. 183/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.118	.080	.01510	.00480	.04180	-.00290	-.00830	.00323	.01190	.02990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL46) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 184/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-6.914	.622	-.05930	.01360	.04460	-.03430	.01720	-.01151	.01410	.03050
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 185/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-4.818	-3.740	-.07450	.03080	.04860	-.00760	.00650	-.01438	.01490	.03370
-4.752	.554	-.04450	.01230	.04400	-.00910	.00170	-.00859	.01260	.03140
-4.647	4.117	-.01890	-.00190	.04400	-.00810	-.00360	-.00350	.01350	.03050
	GRADIENT	.00707	-.00417	-.00060	-.00007	-.00128	.00138	-.00019	-.00041

RUN NO. 186/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-2.462	.515	-.03170	.01250	.04460	.01150	-.01130	-.00604	.01190	.03270
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP L-SRB - ALL HL SEALED (RETL48) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 187/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
-.271	-5.783	-.04430	.02840	.05360	.03020	-.01740	-.00841	.01580	.03780
-.257	-3.820	-.03640	.02320	.04950	.02900	-.01770	-.00686	.01420	.03530
-.230	-1.652	-.03070	.02070	.04660	.02860	-.01900	-.00576	.01240	.03420
-.223	.479	-.02140	.01400	.04340	.02770	-.02240	-.00397	.01050	.03290
-.205	2.603	-.01490	.00970	.04410	.02480	-.02290	-.00266	.01190	.03220
-.193	4.031	-.00900	.00540	.04300	.01830	-.0.880	-.00158	.01210	.03090
-.185	6.641	-.00310	.00100	.03800	.00910	-.01230	-.00050	.00970	.02830
	GRADIENT	.00353	-.00232	-.00079	-.00121	-.00035	.00068	-.00025	-.00054

RUN NO. 188/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
1.955	.537	-.01450	.01550	.04350	.02300	-.02230	-.00260	.01050	.03300
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 189/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
3.532	-3.658	-.00480	.01490	.05210	.02260	-.02150	-.00065	.01610	.03600
3.510	.610	-.00350	.01240	.04590	.01370	-.01940	-.00045	.01250	.03340
3.447	4.137	.00080	.00460	.04650	.00390	-.01430	.00031	.01420	.03230
	GRADIENT	.00070	-.00130	-.00074	-.00239	.00091	.00012	-.00026	-.00048

RUN NO. 190/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLMF	CA	CY	CYNF	CBL	CABT	CAF
6.302	.662	.00840	.00730	.04650	.00110	-.01210	.00184	.01220	.03430
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(!A81) LVAP L-SRB - ALL HL SEALED (RETL47) (03 OCT 75)

REFERENCE DATA

SREF = 2680.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 191/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
-6.932	.209	-.06450	.01860	.04080	-.03900	.02500	-.01251	.01410	.02670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 192/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
-4.834	-4.130	-.07580	.03430	.04450	-.00510	.00590	-.01458	.01400	.03050
-4.783	.163	-.04390	.01250	.04000	-.01680	.00990	-.00846	.01200	.02720
-4.719	3.749	-.01810	-.00440	.03590	-.02080	.00750	-.00349	.01170	.02420
	GRADIENT	.00733	-.00492	-.00109	-.00202	.00023	.00141	-.00029	-.00080

RUN NO. 193/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
-2.510	.153	-.03070	.01140	.04150	.00210	-.00370	-.00586	.01240	.02910
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 194/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
-.310	-6.104	-.04110	.02700	.04830	.03380	-.02420	-.00768	.01340	.03490
-.308	-4.131	-.03420	.02190	.04680	.02930	-.02170	-.00641	.01320	.03360
-.289	-1.952	-.02620	.01710	.04430	.02280	-.01830	-.00492	.01260	.03170
-.279	.140	-.02180	.01440	.04200	.01800	-.01610	-.00402	.01210	.02990
-.279	2.252	-.01390	.00810	.03930	.01110	-.01300	-.00257	.01170	.02760
-.273	3.683	-.00790	.00340	.03650	.00750	-.01100	-.00145	.01010	.02640
-.251	6.348	-.00100	-.00170	.03520	.00810	-.01540	-.00009	.00880	.02640
	GRADIENT	.00326	-.00230	-.00128	-.00279	.00135	.00062	-.00035	-.00093

RUN NO. 195/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
1.899	.182	-.01100	.01320	.04260	.01880	-.01960	-.00195	.01250	.03010
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP L-SRB - ALL ML SEALED (RETL47) : 03 OCT 75)

REFERENCE DATA

SREF = 2880.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-1B = 10.000 ELV-0B = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 196/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
3.454	-3.979	.00000	.01110	.04780	.02900	-.02980	.00030	.01380	.03400
3.440	.247	.00180	.00860	.04410	.01350	-.01930	.00060	.01300	.03110
3.405	3.705	.00470	.00400	.03720	-.00390	-.00770	.00102	.01060	.02660
	GRADIENT	.00060	-.00091	-.00136	-.00426	.00286	.00009	-.00041	-.00095

RUN NO. 197/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAL	BETAL	CNF	CLNF	CA	CY	CYNF	CBL	CABT	CAF
6.270	.290	.01410	.00540	.04430	.00030	-.01090	.00295	.01300	.03130
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP TANK - ALL ML SEALED (RETT30) (03 OCT 75)

REFERENCE DATA

SREF = 2880.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-1B = .000 ELV-0B = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.500 RN/L = 3.000

RUN NO. 100/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAT	ALPHAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
.256	-7.065	-.23130	.10200	.04870	.13060	-.00470	-.00180	.00020	.02860
.242	-4.874	-.17980	.10190	.04130	.13230	-.00680	-.00070	.00010	.03040
.208	-.420	-.08010	.10190	.02980	.13130	-.00660	-.00060	.00010	.02940
.208	4.037	.00420	.10070	.02830	.12880	-.00370	-.00170	.00010	.02810
.224	9.550	.09210	.10100	.02630	.12720	-.00590	.00040	.00020	.02620
.229	10.744	.14440	.10000	.01460	.12590	-.00270	-.00120	.00090	.02590
	GRADIENT	.02065	-.00013	-.00146	-.00039	.00035	-.00011	-.00000	-.00026

DATE 21 OCT 75 1A81B - FORCE SOURCE DATA TABULATION

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT31) (03 OCT 75)

REFERENCE DATA

SREF =	2890.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-1B =	.000	ELV-09 =	.000
RUDDER =	.000	SPOBRK =	55.000
MACH =	2.200	RN/L =	3.000

RUN NO. 101/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAT	ALPHAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
-.138	-7.200	-.23580	.10440	.04500	.13970	.00890	-.00190	.00030	.03530
-.155	-4.949	-.18380	.10430	.03950	.14000	.00850	-.00190	.00020	.03570
-.190	-.466	-.08720	.10470	.03310	.13910	.00790	-.00170	.00020	.03440
-.187	4.055	-.01600	.10330	.03640	.13620	.01000	-.00250	.00020	.03290
-.160	8.627	.09620	.10290	.03410	.13520	.01070	-.00260	.00050	.03230
-.154	10.844	.14180	.10120	.02250	.13270	.01170	-.00200	.00130	.03150
	GRADIENT	.01974	-.00011	-.00034	-.00042	.00017	-.00007	-.00000	-.00031

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT32) (03 OCT 75)

REFERENCE DATA

SREF =	2890.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-1B =	.000	ELV-08 =	.000
RUDDER =	.000	SPOBRK =	55.000
MACH =	2.000	RN/L =	3.000

RUN NO. 102/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAT	ALPHAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
.069	-7.249	-.23780	.10520	.03830	.14380	.00250	-.00010	.00030	.03860
.047	-4.976	-.18330	.10530	.03290	.14340	.00170	-.00020	.00020	.03810
.011	-.435	-.08750	.10620	.03090	.14240	.00080	-.00040	.00020	.03590
.010	4.142	-.01120	.10380	.04010	.13850	.00370	-.00030	.00010	.03470
.040	8.753	.07090	.10380	.04580	.13770	.00820	-.00320	.00070	.03390
.042	10.993	.12540	.10140	.03610	.13500	.00830	-.00130	.00160	.03360
	GRADIENT	.01887	-.00016	.00079	-.00054	.00022	-.00008	-.00001	-.00037

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT33) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 1.550 RN/L = 3.000

RUN NO. 103/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

BETAT	ALPHAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.439	-7.312	-.23700	.10700	.03090	.15240	.00000	-.00190	.00070	.04540
.415	-5.031	-.17560	.10740	.02000	.15210	.00240	-.00380	.00020	.04470
.367	-.398	-.09060	.10850	.03080	.15190	-.00060	-.00260	.00010	.04340
.388	4.237	-.03300	.10720	.05470	.14360	.00110	-.00390	.00010	.03640
.423	8.870	.04400	.10600	.06540	.14260	.00240	-.00450	.00090	.03660
	GRADIENT	.01243	-.00028	.00516	-.00179	.00037	-.00028	.00000	-.00151

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT34) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 115/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

BETAT	ALPHAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
.416	-7.056	-.21380	.11150	.01680	.15370	.00170	-.00360	.00020	.04220
.390	-4.826	-.16750	.10890	.01760	.15260	.00400	-.00460	.00020	.04370
.377	-2.586	-.12490	.10940	.02190	.15130	.00040	-.00390	.00010	.04190
.361	-.336	-.08760	.10860	.02930	.14950	-.00070	-.00320	.00010	.04090
.360	1.906	-.05520	.10980	.04070	.14950	-.00100	-.00200	.00010	.03970
.375	3.686	-.02910	.10760	.05140	.14340	.00080	-.00400	.00010	.03580
.385	6.358	-.00140	.10870	.06250	.14460	.00170	-.00410	.00010	.03590
	GRADIENT	.01613	-.00009	.00399	-.00092	-.00038	.00015	-.00001	-.00082

DATE 21 OCT 75 IA81B - FORCE SOURCE DATA TABULATION (RETT35) (03 OCT 75)

AMES97-019(IA81) LVAP TANK - ALL HL SEALED

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPDBRK =	.000
MACH =	1.550	RN/L =	2.500

RUN NO. 112/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.111	-3.952	-.23910	.10860	.03060	.15050	.06110	-.00310	.00070	.04190
-7.101	-1.755	-.22650	.10850	.02260	.15220	.03060	-.00300	.00040	.04370
-6.901	.386	-.21740	.10760	.01650	.15300	.01620	-.00850	.00020	.04540
-7.066	2.618	-.21080	.10830	.01540	.15280	-.03180	-.00170	.00000	.04450
-6.843	4.769	-.19980	.10820	.01160	.15270	-.05540	-.00610	-.00020	.04450
	GRADIENT	.00432	-.00005	-.00207	.00023	-.01355	-.00021	-.00010	.00027

RUN NO. 116/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.839	-6.115	-.20140	.11050	.03790	.15350	.08330	.00240	.00090	.04300
-4.830	-3.981	-.18790	.11010	.02980	.15070	.05990	-.00180	.00060	.04060
-4.811	.396	-.16790	.10910	.01810	.15230	.00400	-.00450	.00020	.04320
-4.748	4.751	-.15770	.10900	.01690	.15280	-.05170	-.00970	-.00020	.04380
-4.711	6.897	-.14940	.10970	.01630	.15640	-.08050	-.01000	-.00040	.04670
	GRADIENT	.00346	-.00013	-.00148	.00024	-.01267	-.00090	-.00009	.00037

RUN NO. 117/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.566	-6.117	-.15510	.11030	.04250	.15310	.08110	.00390	.00080	.04280
-2.568	-1.787	-.13460	.11030	.02850	.15090	.02680	-.00220	.00040	.04060
-2.533	2.578	-.12100	.11030	.02210	.15030	-.03200	-.00290	.00000	.04000
-2.474	6.886	-.10590	.11180	.01850	.15560	-.08940	-.00510	-.00130	.04380
	GRADIENT	.00312	.00000	-.00147	-.00014	-.01347	-.00016	-.00009	-.00014

RUN NO. 118/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.284	-6.116	-.11670	.10900	.05220	.15040	.07710	.00460	.00080	.04140
-.287	-3.985	-.10310	.11000	.04260	.14860	.05220	.00070	.00060	.03860
-.278	.369	-.08390	.11070	.02990	.15180	-.00300	-.00120	.00010	.04110
-.261	4.707	-.08060	.11180	.03160	.15070	-.05910	-.00400	-.00090	.03890
-.240	6.850	-.06970	.11530	.02650	.15660	-.09550	.00190	-.00160	.04130
	GRADIENT	.00259	.00021	-.00127	.00024	-.01280	-.00054	-.00017	.00003

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT35) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 119/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.924	-6.138	-.08560	.10880	.06250	.14830	.07400	.00660	.00070	.03950
1.913	-1.807	-.06040	.10950	.04460	.14810	.02790	-.00330	.00030	.03860
1.948	2.558	-.05180	.10890	.04180	.14530	-.03030	-.00230	-.00010	.03640
1.993	6.833	-.04370	.11650	.03970	.15650	-.10240	.00970	-.00210	.04000
	GRADIENT	.00197	-.00014	-.00064	-.00064	-.01333	.00023	-.00009	-.00050

RUN NO. 120/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
4.186	-6.133	-.04900	.10740	.06790	.14490	.08150	.00400	.00070	.03750
4.175	-3.984	-.03820	.10880	.05940	.14260	.06060	-.00400	.00040	.03380
4.182	.380	-.02990	.10700	.05310	.14310	.00080	-.00390	.00010	.03610
4.228	4.718	-.03040	.11000	.05760	.14350	-.06830	.00150	.00000	.03350
4.248	6.856	-.02970	.11270	.05830	.15010	-.10420	.00700	-.00050	.03740
	GRADIENT	.00090	.00014	-.00021	.00010	-.01481	.00063	-.00005	-.00003

RUN NO. 121/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.433	-3.968	-.00470	.10980	.06610	.14330	.06640	-.00670	.00040	.03350
6.432	-1.782	-.00200	.10850	.06390	.14250	.03210	-.00520	.00030	.03400
6.440	.395	-.00140	.10930	.06390	.14510	-.00090	-.00[illegible]	.00020	.03580
6.462	2.582	.00250	.108[illegible]0	.06280	.14020	-.03470	-.00[illegible]	.00000	.03220
6.473	4.740	-.00300	.10980	.06600	.14300	-.06690	-.00120	-.00020	.03320
	GRADIENT	.00036	-.00002	-.00006	-.00013	-.01531	.00070	-.00007	-.00011

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT36) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 460.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 122/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.089	-4.341	-.26190	.10660	.05110	.14390	.06870	-.00200	.00070	.03730
-7.083	-2.145	-.25100	.10610	.04360	.14270	.03400	.00010	.00050	.03660
-7.064	.056	-.24090	.10630	.03780	.14350	.00070	.00050	.00030	.03720
-7.029	2.266	-.23180	.10740	.03560	.14390	-.03140	-.00100	.00000	.03650
-6.999	4.437	-.22810	.10770	.03610	.14500	-.06600	-.00060	-.00010	.03730
	GRADIENT	.00395	.00016	-.00173	.00015	-.01524	.00008	-.00010	-.00000

RUN NO. 123/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.862	-6.520	-.22230	.10800	.05530	.14410	.11040	-.00760	.00090	.03610
-4.860	-4.364	-.20930	.10680	.04650	.14400	.06950	-.00270	.00060	.03720
-4.829	.037	-.18690	.10680	.03370	.14360	-.00030	.00070	.00020	.03680
-4.765	4.424	-.17670	.10710	.03300	.14490	-.06910	.00100	-.00020	.03780
-4.745	6.584	-.16970	.10590	.03070	.14380	-.10710	.00400	-.00030	.03790
	GRADIENT	.00371	.00003	-.00154	.00010	-.01577	.00042	-.00009	.00007

RUN NO. 124/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.625	-6.529	-.16620	.10680	.05080	.14270	.11120	-.00910	.00090	.03590
-2.614	-2.169	-.14520	.10630	.03790	.14260	.03470	-.00160	.00040	.03630
-2.577	2.232	-.13030	.10870	.03040	.14480	-.03470	.00080	.00000	.03610
-2.532	6.557	-.12130	.10660	.02860	.14380	-.11180	.00810	-.00060	.03720
	GRADIENT	.00339	.00055	-.00170	.00050	-.01577	.00055	-.00009	-.00005

RUN NO. 125/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.387	-6.539	-.11490	.10700	.04890	.14130	.10920	-.00820	.00080	.03430
-.386	-4.384	-.10400	.10650	.04190	.14130	.06880	-.00360	.00060	.03480
-.377	.012	-.08890	.10660	.03200	.14130	-.00280	.00100	.00020	.03470
-.338	4.379	-.08300	.10730	.03060	.14350	-.06910	.00240	-.00030	.03620
-.323	6.529	-.07650	.10930	.02740	.14500	-.11910	.01550	-.00110	.03570
	GRADIENT	.00240	.00009	-.00129	.00025	-.01574	.00069	-.00010	.00016

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT36) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 126/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.831	-6.517	-.06800	.10560	.04780	.13810	.10410	-.00780	.00070	.03250
1.831	-2.171	-.05170	.10460	.03710	.13680	.03010	-.00030	.00030	.03220
1.850	2.208	-.04540	.10760	.03360	.14060	-.03200	.00120	.00000	.03300
1.870	6.506	-.03640	.11180	.02840	.14370	-.12380	.02220	-.00140	.03190
	GRADIENT	.00144	.00069	-.00080	.00087	-.01418	.00034	-.00007	.00018

RUN NO. 127/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
4.088	-6.519	-.02620	.10590	.04990	.13700	.10640	-.00750	.00070	.03110
4.088	-4.371	-.02320	.10530	.04740	.13710	.06610	-.00260	.00050	.03180
4.090	.009	-.01410	.10440	.04090	.13630	.00130	.00030	.00020	.03190
4.105	4.357	-.00810	.10600	.03890	.13890	-.06540	.00410	-.00010	.03290
4.114	6.484	-.00760	.10870	.03840	.14160	-.11330	.01720	-.00060	.03290
	GRADIENT	.00173	.00008	-.00097	.00021	-.01507	.00077	-.00007	.00013

RUN NO. 128/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.333	-4.337	.02070	.10510	.04960	.13630	.07080	-.00560	.00050	.03120
6.341	-2.153	.02590	.10410	.04650	.13560	.03550	-.00270	.00030	.03150
6.354	.019	.02790	.10470	.04520	.13620	.00680	-.00270	.00010	.03150
6.362	2.208	.02870	.10570	.04500	.13770	-.02500	-.00140	.00000	.03200
6.358	4.368	.02600	.10590	.04490	.13900	-.06370	.00220	-.00010	.03310
	GRADIENT	.00062	.00015	-.00050	.00034	-.01513	.00078	-.00007	.00020

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT37) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 129/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.024	-4.530	-.24960	.10580	.05320	.14240	.07840	-.00440	.00060	.03660
-7.014	-2.331	-.24110	.10610	.04800	.13950	.03960	-.00160	.00040	.03340
-7.003	-.140	-.23190	.10510	.04250	.14000	.00650	-.00120	.00020	.03490
-6.980	2.060	-.22560	.10380	.04050	.13900	-.02640	-.00120	.00000	.03520
-6.959	4.208	-.22000	.10410	.03890	.13930	-.05850	-.00020	-.00010	.03520
	GRADIENT	.00342	-.00026	-.00165	-.00031	-.01554	.00040	-.00008	-.00005

RUN NO. 130/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.814	-6.714	-.21380	.10690	.05720	.14220	.12080	-.00810	.00090	.03530
-4.815	-4.557	-.19990	.10690	.04830	.14180	.07990	-.00490	.00060	.03490
-4.790	-.156	-.18220	.10700	.03770	.14000	.00710	-.00170	.00020	.03300
-4.739	4.203	-.16990	.10570	.03490	.13950	-.06380	.00250	-.00010	.03380
-4.731	6.358	-.16630	.10610	.03340	.14070	-.09960	.00360	-.00030	.03460
	GRADIENT	.00343	-.00014	-.00153	-.00026	-.01640	.00084	-.00008	-.00013

RUN NO. 131/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.602	-6.705	-.15680	.10470	.05110	.13910	.12170	-.01160	.00080	.03440
-2.585	-2.352	-.13570	.10610	.03880	.13890	.04150	-.00330	.00030	.03280
-2.571	2.023	-.12740	.10620	.03360	.13960	-.02690	-.00030	.00000	.03340
-2.545	6.324	-.11990	.10610	.03060	.13980	-.10050	.00680	-.00040	.03370
	GRADIENT	.00190	.00002	-.00119	.00016	-.01563	.00069	-.00007	.00014

RUN NO. 132/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.412	-6.708	-.10610	.10420	.04670	.13680	.11940	-.01100	.00080	.03260
-.406	-4.563	-.09420	.10430	.03980	.13670	.07950	-.00680	.00060	.03240
-.401	-.183	-.08290	.10600	.03190	.13830	.00610	-.00140	.00020	.03230
-.376	4.159	-.07870	.10520	.03030	.13830	-.06380	.00380	-.00010	.03310
-.349	6.293	-.07260	.10630	.02680	.14010	-.10860	.01400	-.00100	.03380
	GRADIENT	.00178	.00010	-.00109	.00018	-.01643	.00122	-.00008	.00008

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT37) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 133/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.761	-6.705	-.05950	.10250	.04320	.13390	.11650	-.01020	.00070	.03140
1.774	-2.367	-.04160	.10400	.03340	.13420	.04060	-.00290	.00030	.03020
1.794	2.006	-.03800	.10510	.03130	.13610	-.02450	-.00080	.00000	.03100
1.816	5.284	-.03080	.10870	.02670	.14000	-.11320	.01880	-.00110	.03130
	GRADIENT	.00082	.00025	-.00048	.00043	-.01489	.00048	-.00007	.00018

RUN NO. 134/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.998	-6.692	-.01500	.10200	.04350	.13250	.11920	-.01240	.00070	.03050
4.010	-4.543	-.01130	.10230	.04180	.13150	.07810	-.00770	.00050	.02920
4.013	-.181	-.00300	.10300	.03540	.13330	.00940	-.00260	.00010	.03030
4.036	4.146	.00010	.10250	.03380	.13300	-.06190	.00420	-.00010	.03050
4.047	6.293	-.00190	.10540	.03500	.13690	-.11060	.01620	-.00030	.03150
	GRADIENT	.00131	.00002	-.00092	.00017	-.01611	.00137	-.00007	.00015

RUN NO. 135/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.256	-4.515	.02820	.10190	.04450	.13100	.07670	-.00740	.00050	.02910
6.255	-2.338	.03550	.10210	.03970	.13170	.04220	-.00440	.00030	.02960
6.252	-.168	.03520	.10350	.03870	.13260	.00930	-.00260	.00020	.02910
6.266	2.020	.03560	.10330	.03890	.13260	-.02350	-.00070	.00000	.02930
6.269	4.152	.03580	.10310	.03780	.13310	-.05760	.00160	-.00010	.03000
	GRADIENT	.00071	.00017	-.00066	.00024	-.01541	.00100	-.00007	.00007

DATE 21 OCT 75 IA81B - FORCE SOURCE DATA TABULATION (RETT3B) (23 OCT 75)

AMES97-019(IA8:) LVAP TANK - ALL HL SEALED

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPDBRK =	.000
MACH =	2.500	RN/L =	2.500

RUN NO. 136/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.906	-4.126	-.24580	.10160	.05660	.13420	.05980	-.00180	.00050	.03260
-6.902	-1.948	-.23780	.10190	.05130	.13350	.02620	-.00020	.00030	.03160
-6.888	.234	-.23160	.10110	.04830	.13080	-.00520	-.00110	.00020	.02970
-6.873	2.421	-.22450	.10110	.04540	.13070	-.03620	-.00150	.00000	.02960
-6.857	4.549	-.22040	.10210	.04450	.13200	-.06860	-.00130	-.00010	.02990
	GRADIENT	.00295	.00001	-.00139	-.00033	-.01470	-.00001	-.00007	-.00034

RUN NO. 137/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.739	-6.277	-.20730	.10300	.05710	.13580	.09890	-.00620	.00070	.03280
-4.730	-4.142	-.19440	.10210	.04970	.13410	.06010	-.00260	.00050	.03200
-4.701	.230	-.17900	.10210	.04100	.13180	-.00670	-.00040	.00010	.02970
-4.675	4.545	-.17230	.10280	.03900	.13240	-.06980	.00010	-.00010	.02960
-4.660	6.680	-.16590	.10210	.03660	.13240	-.10520	.00170	-.00030	.03030
	GRADIENT	.00255	.00008	-.00123	-.00020	-.01495	.00031	-.00007	-.00028

RUN NO. 138/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.555	-6.274	-.15040	.10300	.04910	.13400	.10000	-.00950	.00060	.03100
-2.538	-1.961	-.13360	.10270	.03310	.13210	.02580	-.00120	.00030	.02940
-2.520	2.384	-.12700	.10140	.03540	.13070	-.03980	.00190	.00000	.02930
-2.502	6.649	-.11900	.10150	.03160	.13140	-.11190	.00750	-.00060	.02990
	GRADIENT	.00152	-.00030	-.00085	-.00032	-.01510	.00071	-.00007	-.00012

RUN NO. 139/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.372	-6.286	-.09630	.10230	.04190	.13220	.09940	-.00790	.00060	.02990
-.372	-4.156	-.08870	.10240	.03660	.13180	.06140	-.00330	.00040	.02940
-.365	.200	-.07930	.10140	.03000	.13060	-.00050	.00030	.00010	.02820
-.338	4.498	-.07780	.10180	.03040	.12990	-.07350	.00360	-.00020	.02810
-.331	6.631	-.07420	.10240	.02790	.13160	-.11840	.01400	-.00090	.02920
	GRADIENT	.00126	-.00007	-.00072	-.00022	-.01559	.00087	-.00007	-.00015

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT38) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 140/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.783	-6.278	-.04870	.10140	.03720	.13030	.09550	-.00570	.00060	.02890
1.789	-1.969	-.03880	.10240	.03030	.12940	.02610	-.00110	.00030	.02700
1.810	2.374	-.03620	.10100	.02930	.12770	-.03610	-.00010	.00000	.02670
1.830	6.621	-.03140	.10510	.02580	.13240	-.12250	.01880	-.00100	.02730
	GRADIENT	.00060	-.00032	-.00023	-.00039	-.01432	.00023	-.00007	-.00007

RUN NO. 141/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.370	-6.270	-.00610	.10160	.03710	.12910	.09890	-.00790	.00050	.02750
3.369	-4.206	.00250	.10070	.03140	.12800	.06090	-.00340	.00040	.02730
3.375	.196	.00460	.10050	.02870	.12710	-.00490	-.00060	.00010	.02660
3.395	3.896	.00370	.09920	.02990	.12540	-.07540	.00520	.00000	.02620
3.404	6.635	-.00090	.10350	.03210	.12990	-.12160	.01680	-.00020	.02640
	GRADIENT	.00016	-.00018	-.00020	-.00032	-.01676	.00105	-.00005	-.00014

RUN NO. 142/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.211	-4.185	.04530	.10030	.03090	.12750	.05980	-.00310	.00040	.02720
6.218	-1.956	.04520	.10080	.03070	.12690	.02510	-.00040	.00020	.02610
6.224	.205	.04270	.10060	.03150	.12650	-.00500	-.00010	.00010	.02590
6.230	2.385	.04070	.10030	.03180	.12540	-.03750	.00120	.00000	.02510
6.235	3.882	.04020	.09880	.03160	.12470	-.07080	.00290	-.00010	.02590
	GRADIENT	-.00072	-.00016	.00012	-.00034	-.01574	.00066	-.00006	-.00018

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT39) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 143/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.062	.419	-.21430	.10800	.01680	.15320	.00120	-.00360	.00020	.04520
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 144/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.848	-3.960	-.18610	.11060	.02910	.15080	.05930	-.00270	.00060	.04020
-4.832	.393	-.16690	.10980	.01730	.15270	.00250	-.00380	.00020	.04290
-4.832	4.119	-.15510	.10870	.01560	.15250	-.05140	-.00920	-.00020	.04380
	GRADIENT	.00385	-.00023	-.00170	.00022	-.01368	-.00079	-.00010	.00045

RUN NO. 145/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.324	-6.124	-.11480	.10970	.05020	.15210	.07900	.00330	.00080	.04240
-.323	-3.994	-.10260	.11080	.04170	.14840	.053 0	.00000	.00060	.03760
-.327	.354	-.08610	.10860	.02990	.15020	-.00140	-.00280	.00010	.04160
-.273	4.085	-.08060	.11130	.03180	.15060	-.05600	-.00600	-.00060	.03930
-.249	6.864	-.07000	.11420	.02680	.15640	-.09380	.00030	-.00160	.04220
	GRADIENT	.00275	.00005	-.00127	.00028	-.01351	-.00074	-.00015	.00023

RUN NO. 146/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.538	-4.027	-.03600	.10940	.05810	.14350	.05970	-.00420	.00040	.03410
3.552	.379	-.02590	.10850	.05170	.14290	.00010	-.00380	.00010	.03440
3.598	4.102	-.02530	.10840	.05560	.14070	-.06320	-.00260	-.00030	.03230
	GRADIENT	.00135	-.00013	-.00034	-.00034	-.01507	.00019	-.00009	-.00021

RUN NO. 147/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.379	.411	.00050	.10950	.06280	.14500	.00090	-.00420	.00010	.03050
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-013(IA81) LVAP TANK - ALL HL SEALED (RETT40) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 148/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.023	.065	-.23110	.10680	.03600	.14460	.00210	-.00020	.00030	.03780
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 149/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.836	-4.398	-.19950	.10720	.04460	.14430	.06880	-.00350	.00060	.03710
-4.868	.032	-.17870	.10690	.03150	.14450	.00160	-.00010	.00020	.03760
-4.813	3.786	-.16900	.10680	.03080	.14410	-.06660	.00070	-.00020	.03730
	GRADIENT	.00376	-.00005	-.00172	-.00002	-.0.650	.00052	-.00010	.00003

RUN NO. 150/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.361	-6.518	-.10780	.10670	.04640	.13980	.10810	-.00840	.00080	.03310
-.359	-4.372	-.09750	.10690	.03980	.14120	.06960	-.00420	.00060	.03430
-.360	.017	-.08300	.10660	.02990	.14230	-.00050	.00020	.00010	.03570
-.320	3.752	-.07590	.10650	.02870	.14270	-.06630	.00080	-.00030	.03620
-.303	6.530	-.06830	.10880	.02460	.14450	-.11430	.01320	-.00120	.03570
	GRADIENT	.00268	-.00005	-.00139	.00019	-.01671	.00063	-.00011	.00024

RUN NO. 151/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.452	-4.368	-.01840	.10630	.04590	.13750	.06920	-.00380	.00050	.03120
3.471	.014	-.00660	.10440	.03860	.13760	.00260	-.00030	.00010	.03320
3.498	3.755	-.00460	.10510	.03900	.13810	-.06750	.00250	-.00010	.03300
	GRADIENT	.00173	-.00016	-.00087	.00007	-.01679	.00078	-.00007	.00023

RUN NO. 152/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
8.292	.032	.02780	.10580	.04460	.13860	.00380	-.00110	.00010	.03280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT41) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 153/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.003	-.125	-.23210	.10590	.04320	.14040	.00850	-.00220	.00020	.03450
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 154/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.865	-4.538	-.19670	.10500	.04800	.14150	.07720	-.00490	.00060	.03650
-4.841	-.151	-.17910	.10600	.03770	.14020	.00730	-.00180	.00020	.03420
-4.805	3.571	-.17100	.10390	.03550	.13830	-.06180	.00220	-.00010	.03440
	GRADIENT	.00319	-.00012	-.00157	-.00039	-.01711	.00087	-.00009	-.00027

RUN NO. 155/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.425	-6.718	-.10640	.10340	.04630	.13770	.11980	-.01110	.00080	.03430
-.412	-4.555	-.09430	.10510	.03940	.13750	.07760	-.00630	.00060	.03240
-.404	-.184	-.08240	.10630	.03180	.13930	.00590	-.00150	.00020	.03300
-.378	3.544	-.07680	.10410	.03010	.13780	-.06340	.00330	-.00010	.03370
-.371	6.329	-.07200	.10590	.02660	.14020	-.10760	.01240	-.00090	.03430
	GRADIENT	.00218	-.00011	-.00117	.00005	-.01738	.00118	-.00009	.00016

RUN NO. 156/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.376	-4.544	-.01090	.10380	.04090	.13270	.07790	-.00660	.00050	.02890
3.390	-.185	-.00080	.10440	.03470	.13620	.00840	-.00200	.00010	.03180
3.410	3.545	.00230	.10210	.03320	.13320	-.06290	.00360	-.00010	.03110
	GRADIENT	.00165	-.00020	-.00097	.00008	-.01737	.00126	-.00007	.00028

RUN NO. 157/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.193	-.159	.03700	.10530	.03730	.13650	.00800	-.00190	.00020	.03120
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

..MES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT42) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPOBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 158/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-6.879	.241	-.22890	.10220	.04790	.13100	-.00500	-.00130	.00020	.02880
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 159/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.735	-4.139	-.19310	.10310	.04940	.13480	.06100	-.00320	.00050	.03170
-4.711	.215	-.17810	.10240	.04080	.13240	-.00630	-.00040	.00010	.03000
-4.686	3.924	-.17060	.10250	.03860	.13150	-.06990	.00040	-.00010	.02900
	GRADIENT	.00281	-.00008	-.00136	-.00041	-.01621	.00045	-.00007	-.00034

RUN NO. 160/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.349	-6.300	-.09360	.10340	.04130	.13310	.10100	-.00810	.00060	.02970
-.352	-4.166	-.08620	.10310	.03580	.13280	.06190	-.00400	.00040	.02970
-.347	.195	-.07640	.10240	.02910	.13160	-.00840	.00030	.00010	.02920
-.323	3.895	-.07520	.10120	.02990	.12910	-.07360	.00310	-.00020	.02790
-.319	6.667	-.07040	.10270	.02620	.13130	-.11740	.01290	-.00100	.02960
	GRADIENT	.00139	-.00023	-.00076	-.00045	-.01679	.00088	-.00007	-.00022

RUN NO. 161/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.360	-4.144	.00260	.10220	.03060	.12980	.06090	-.00370	.00030	.02760
3.375	.195	.00580	.10230	.02820	.12890	-.00480	-.00090	.00010	.02660
3.397	3.895	.00650	.10040	.02860	.12680	-.07310	.00330	.00000	.02640
	GRADIENT	.00049	-.00022	-.00026	-.00037	-.01663	.00086	-.00004	-.00015

RUN NO. 162/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.157	.212	.04230	.10170	.03090	.12830	-.00470	-.00050	.00010	.02660
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT43) (7 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 163/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
-7.047	.420	-.21300	.10890	.01640	.15390	.00320	-.00460	.00030	.04500
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 164/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
-4.832	-3.960	-.18400	.11100	.02870	.15080	.03860	-.00230	.00060	.03990
-4.816	.397	-.16710	.10960	.01750	.15280	.00310	-.00460	.00020	.04320
-4.794	4.118	-.15430	.10970	.01540	.15200	-.05240	-.00500	-.00020	.04230
	GRADIENT	.00368	-.00017	-.00167	.00016	-.01371	-.00082	-.00010	.00032

RUN NO. 165/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
-2.580	.395	-.12300	.11040	.02120	.15150	-.00040	-.00390	.00010	.04110
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 166/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
-.318	-6.119	-.11320	.10990	.04960	.15010	.07820	.00360	.00080	.04020
-.322	-3.994	-.10220	.11050	.04130	.14830	.05260	.00040	.00060	.03780
-.326	-1.796	-.09100	.10970	.03390	.14830	.02450	-.00220	.00040	.03860
-.518	.369	-.08440	.11030	.02920	.15000	-.00260	-.00230	.00010	.03970
-.280	2.555	-.07680	.11160	.02820	.15090	-.03660	.00040	.00000	.03930
-.257	4.086	-.07960	.11000	.03170	.14840	-.05640	-.00640	-.00050	.03840
-.236	6.057	-.07080	.11430	.02780	.15540	-.09010	-.00110	-.00140	.04110
	GRADIENT	.00298	.00005	-.00127	.00016	-.01360	-.00050	-.00012	.00010

RUN NO. 167/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLNF	CA	CY	CYNF	CBL	CABT
1.927	.364	-.05330	.11110	.04100	.15010	.00210	-.00400	.00010	.03900
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT43) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 168/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.541	-3.965	-.03540	.10940	.05770	.14250	.06030	-.00430	.00040	.03310
3.554	.381	-.02510	.10790	.05140	.14300	.00040	-.00360	.00010	.03510
3.599	4.100	-.02410	.10760	.05390	.14090	-.06280	-.00260	-.00030	.03330
	GRADIENT	.00143	-.00023	-.00050	-.00019	-.01522	.00021	-.00009	.00004

RUN NO. 169/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.382	.406	-.00020	.10950	.06300	.14480	.00050	-.00370	.00010	.03530
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT44) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 170/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.017	.064	-.22750	.10660	.03430	.14330	.00320	-.00080	.00030	.03670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 171/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.830	-4.341	-.19660	.10700	.04290	.14300	.06950	-.00360	.00060	.03600
-4.811	.032	-.17740	.10680	.03060	.14310	.00380	-.00140	.00020	.03630
-4.814	3.776	-.16990	.10660	.03050	.14310	-.05980	-.00290	-.00020	.03650
	GRADIENT	.00332	-.00005	-.00156	.00001	-.01590	.00021	-.00010	.00006

RUN NO. 172/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.598	.034	-.13020	.10640	.02990	.14270	.00280	-.00120	.00020	.03630
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT44) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 173/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.378	-6.520	-.10770	.10710	.04590	.14060	.10820	-.00850	.00080	.03350
-.373	-4.376	-.09610	.10650	.03880	.14090	.06880	-.00380	.00060	.03440
-.372	-2.171	-.08620	.10580	.03260	.13950	.03360	-.00160	.00030	.03370
-.363	.010	-.08250	.10640	.02950	.14090	-.00100	.00030	.00010	.03450
-.345	2.213	-.07720	.10820	.02760	.14290	-.03330	.00090	.00000	.03470
-.327	3.758	-.07700	.10650	.02860	.14160	-.06780	.00150	-.00030	.03510
-.310	6.539	-.06990	.10920	.02520	.14410	-.11600	.01350	-.00110	.03490
	GRADIENT	.00232	.00013	-.00126	.00024	-.01641	.00064	-.00010	.00011

RUN NO. 174/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.836	.019	-.04320	.10600	.03180	.13890	.00210	-.00070	.00010	.03290
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 175/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.455	-4.413	-.01840	.10480	.04510	.13650	.06830	-.00370	.00050	.03170
3.473	.010	-.00740	.10450	.03840	.13600	.00200	.00000	.00010	.03150
3.499	3.764	-.00390	.10440	.03830	.13690	-.06960	.00360	-.00010	.03250
	GRADIENT	.00179	-.00005	-.00085	.00004	-.01681	.00089	-.00007	.00009

RUN NO. 176/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.305	.039	.02900	.10470	.04440	.13660	.00370	-.00110	.00010	.03190
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT45) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 177/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.000	-.136	-.23040	.10490	.04280	.13940	.00890	-.00200	.00030	.03450
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 178/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.824	-4.536	-.19620	.10450	.04800	.14020	.07680	-.00540	.00060	.03570
-4.859	-.162	-.17910	.10510	.03760	.13930	.00770	-.00170	.00020	.03420
-4.825	3.569	-.17220	.10410	.03580	.13850	-.06100	.00190	-.00010	.03440
	GRADIENT	.00299	-.00004	-.00153	-.00021	-.01697	.00090	-.00009	-.00017

RUN NO. 179/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.604	-.179	-.12980	.10510	.03400	.13860	.00880	-.00220	.00020	.03350
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 180/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.385	-6.719	-.10430	.10300	.04650	.13600	.12010	-.01170	.00080	.03300
-.380	-4.562	-.09240	.10320	.03960	.13580	.07900	-.00740	.00060	.03260
-.377	-2.361	-.08480	.10390	.03480	.13580	.04210	-.00420	.00030	.03190
-.377	-.185	-.08170	.10510	.03200	.13720	.00710	-.00210	.00020	.03210
-.358	2.013	-.07800	.10520	.03130	.13780	-.02750	.00030	.00000	.03260
-.350	3.542	-.07540	.10370	.02980	.13660	-.06330	.00360	-.00010	.03290
-.342	6.262	-.06950	.10660	.02590	.13970	-.10700	.01230	-.00090	.03310
	GRADIENT	.00199	.00013	-.00113	.00019	-.01714	.00128	-.00008	.00006

RUN NO. 181/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.794	-.163	-.03780	.10400	.03120	.13540	.00710	-.00260	.00020	.03140
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT45) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 182/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.390	-4.591	-.00970	.10160	.04070	.13080	.07690	-.00770	.00050	.02920
3.391	-.177	-.00170	.10300	.03470	.13310	.00870	-.00260	.00020	.03010
3.404	3.546	.00090	.10170	.03260	.13160	-.06120	.00330	-.00010	.02990
	GRADIENT	.00132	.00002	-.00101	.00011	-.01693	.00135	-.00007	.00009

RUN NO. 183/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.190	-.166	.03600	.10330	.03750	.13260	.00840	-.00250	.00020	.02930
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT46) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 184/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.029	.432	-.21360	.10810	.01680	.15390	.00070	-.00370	.00020	.04580
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 185/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.878	-4.002	-.18280	.11020	.02830	.15070	.05750	-.00220	.00060	.04050
-4.863	.402	-.16350	.10900	.01670	.15280	.00330	-.00450	.00020	.04380
-4.810	4.107	-.15570	.10870	.01530	.15230	-.05320	-.00800	-.00020	.04360
	GRADIENT	.00337	-.00019	-.00164	.00021	-.01361	-.00071	-.00010	.00039

RUN NO. 186/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.575	.401	-.12430	.10920	.02140	.15130	-.00040	-.00360	.00010	.04210
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP TANK - ALL HL SEALED (RETT46) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 187/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.306	-6.101	-.11270	.10920	.04910	.15030	.07710	.00400	.00080	.04110
-.308	-4.047	-.10030	.10940	.04050	.14800	.05320	.00000	.00060	.03860
-.317	-1.786	-.09240	.10830	.03420	.14820	.02490	-.00270	.00030	.03990
-.307	.376	-.08320	.10910	.02900	.15040	-.00290	-.00210	.00010	.04130
-.283	2.558	-.07910	.11130	.02850	.15010	-.03420	-.00040	.00000	.03880
-.257	4.090	-.08150	.10930	.03170	.14830	-.05650	-.00660	-.00040	.03900
-.235	6.789	-.07310	.11330	.02810	.15540	-.09250	-.00040	-.00140	.04210
	GRADIENT	.00253	.00015	-.00118	.00014	-.01348	-.00050	-.00011	-.00001

RUN NO. 188/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.933	.377	-.05270	.10800	.04100	.14790	-.00090	-.00270	.00010	.03990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 189/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.556	-4.014	-.03370	.10830	.05720	.14280	.06000	-.00430	.00040	.03450
3.564	.389	-.02280	.10710	.05050	.14320	.00160	-.00410	.00010	.03610
3.603	4.094	-.02180	.10690	.05280	.14100	-.06120	-.00330	-.00040	.03410
	GRADIENT	.00150	-.00018	-.00057	-.00021	-.01490	.00012	-.00010	-.00004

RUN NO. 190/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.447	.411	.00230	.10850	.06180	.14470	.00020	-.00390	.00010	.03620
	GRADIENT	.00090	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT47) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 191/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-7.019	.064	-.22940	.10500	.03490	.14280	.00300	-.00070	.00030	.03780
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 192/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-4.905	-4.400	-.19860	.10610	.04310	.14310	.06940	-.00360	.00060	.03700
-4.874	.042	-.17840	.10600	.03070	.14320	.00160	-.00060	.00020	.03720
-4.812	3.775	-.17090	.10610	.03050	.14310	-.06180	-.00170	-.00020	.03700
	GRADIENT	.00342	-.00000	-.00158	.00000	-.01602	.00025	-.00010	.00000

RUN NO. 193/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-2.585	.033	-.12800	.10650	.02910	.14260	.00310	-.00150	.00020	.03610
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 194/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
-.363	-6.508	-.10630	.10670	.04520	.14030	.10830	-.00850	00080	.03360
-.361	-4.438	-.09570	.10590	.03850	.14030	.06990	-.00440	.00060	.03440
-.357	-2.167	-.08610	.10510	.03260	.13900	.03340	-.00190	.00030	.03390
-.356	.015	-.08070	.10600	.02890	.14020	.00060	-.00110	.00010	.03420
-.339	2.206	-.07680	.10780	.02740	.14220	-.02950	-.00130	.00000	.03440
-.319	3.741	-.07660	.10600	.02840	.14130	-.06430	-.00030	-.00030	.03530
-.284	6.428	-.06880	.10750	.02510	.14290	-.10860	.01120	-.00100	.03540
	GRADIENT	.00233	.00015	-.00126	.00025	-.01591	.00043	-.00010	.00010

RUN NO. 195/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
1.849	.007	-.04090	.10530	.03190	.13760	.00490	-.00260	.00010	.03230
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP TANK - ALL HL SEALED (RETT47) (03 OCT 75)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 196/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
3.467	-4.411	-.01530	.10510	.04390	.13580	.06870	-.00380	.00050	.03070
3.476	.008	-.00640	.10370	.03860	.13470	.00630	-.00240	.00010	.03100
3.495	3.673	-.00410	.10370	.03820	.13600	-.06210	.00040	-.00010	.03230
	GRADIENT	.00141	-.00018	-.00072	.00002	-.01611	.00051	-.00007	.00019

RUN NO. 197/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAT	BETAT	CNF	CAF	CLMF	CA	CY	CYNF	CBL	CABT
6.364	.033	.02880	.10460	.04460	.13540	.00780	-.00340	.00010	.03080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH30) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 2.500 RN/L = 3.000

RUN NO. 100/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
.230	-6.381	.07670	.00600	-.02300	.09970	-.01190	.01790
.215	-4.330	.02670	.00210	-.03480	.06150	-.00310	.00520
.182	-.116	-.00260	-.00200	-.00450	.00190	.00740	-.00940
.196	4.056	-.02540	-.01130	.05040	-.07590	.03020	-.04150
.209	8.267	-.03460	-.03380	.07810	-.11270	.08400	-.11780
.218	10.355	-.03420	-.03390	.07880	-.11300	.09420	-.12800
	GRADIENT	-.00621	-.00160	.01015	-.01638	.00397	-.00557

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH31) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPOBRK = 55.000
MACH = 2.200 RN/L = 3.000

RUN NO. 101/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.117	-6.403	.05360	.00380	-.09810	.15186	-.00810	.01200
-.139	-4.308	.03920	-.00120	-.07720	.11640	.00380	-.00500
-.174	-.147	.01470	-.01290	-.03280	.04740	.03180	-.04460
-.167	4.050	-.00330	-.02830	.00860	-.01190	.07120	-.09950
-.139	8.292	-.01530	-.04160	.03690	-.05220	.11050	-.15210
-.118	10.383	-.01830	-.03580	.03750	-.05580	.09940	-.13510
	GRADIENT	-.00508	-.00324	.01027	-.01535	.00807	-.01131

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH32) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPOBRK = 55.000
MACH = 2.000 RN/L = 3.000

RUN NO. 102/ 0 RN/L = 3.03 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
.079	-6.373	.06390	.00450	-.12530	.18920	-.00960	.01420
.053	-4.277	.05310	-.00090	-.10260	.15560	.00390	-.00480
.011	-.098	.02960	-.01910	-.05450	.08410	.04770	-.06680
.020	4.129	.01120	-.03660	-.01500	.02620	.09560	-.13220
.053	8.392	-.00040	-.04090	.01550	-.01590	.11430	-.15530
.074	10.494	-.00300	-.03920	.02970	-.03270	.10990	-.14910
	GRADIENT	-.00498	-.00425	.01042	-.01539	.01091	-.01515

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH33) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = 55.000
MACH = 1.550 RN/L = 3.000

RUN NO. 103/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
.428	-6.390	.13530	.00850	-.22830	.36360	-.01180	.02030
.401	-4.271	.11990	-.00410	-.20730	.32720	.02200	-.02620
.348	-.036	.09440	.06160	-.16780	.26230	.06310	-.00150
.366	4.233	.07350	-.02490	-.12880	.20230	.08140	-.10630
.403	8.510	.05200	-.03470	-.09080	.14280	.10320	-.13790
	GRADIENT	-.00546	-.00247	.00923	-.01469	.00698	-.00944

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH34) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 115/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

BETAO	ALPHAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
.403	-6.292	.05710	.02080	-.08570	.14270	-.03930	.06010
.378	-4.209	.04630	.00890	-.06410	.11030	-.01010	.01900
.358	-2.124	.03760	.00020	-.04450	.08210	.01420	-.01400
.342	-.027	.02810	-.00420	-.02470	.05270	.02910	-.03330
.346	2.059	.01910	-.00700	-.00720	.02640	.03790	-.04490
.356	3.707	.01210	-.01200	.01250	-.00030	.04980	-.06180
.369	6.242	.00700	-.01700	.02310	-.01610	.06110	-.07810
	GRADIENT	-.00434	-.00245	.00950	-.01382	.00719	-.00964

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH35) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.050 RN/L = 2.500

RUN NO. 112/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-6.333	-3.794	.05230	-.04690	-.08110	.13350	-.06200	.01510
-6.319	-1.683	.05800	-.05720	-.08710	.14510	-.04480	-.01250
-6.08[illegible]	.391	.05970	-.06170	-.08440	.14410	-.03970	-.02200
-6.2[illegible]9	2.522	.06100	-.06460	-.08410	.14510	-.03590	-.02870
-6.[illegible]42	4.587	.05960	-.06610	-.08000	.13960	-.03310	-.03300
	GRADIENT	.00084	-.00219	.00025	.00058	.00318	-.00536

RUN NO. 116/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-4.215	-5.870	.04520	.03420	-.07910	.12440	-.06230	.09650
-4.211	-3.827	.05036	.02390	-.08350	.13380	-.03990	.06380
-4.194	.385	.04580	.00820	-.06390	.10970	-.01120	.01940
-4.155	4.561	.04380	.00560	-.05380	.09760	-.00710	.01270
-4.139	6.623	.04430	.00380	-.05300	.09730	-.00340	.00720
	GRADIENT	-.00078	-.00218	.00354	-.00432	.00391	-.00610

RUN NO. 117/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-2.110	-5.871	.03650	.02140	-.06260	.09920	-.03510	.05650
-2.109	-1.724	.03590	.00300	-.05010	.08600	.00670	-.00370
-2.081	2.471	.03330	-.00400	-.03540	.06870	.01780	-.02180
-2.052	6.607	.02880	-.00660	-.02370	.05250	.02430	-.03100
	GRADIENT	-.00062	-.00167	.00350	-.00412	.00265	-.00431

RUN NO. 118/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
.004	-5.872	.02820	.01390	-.04870	.07700	-.01580	.02970
.007	-3.836	.03950	.00850	-.06070	.09920	-.00470	.01320
.019	.354	.02540	-.00630	-.02170	.04710	.03000	-.03640
.011	4.521	.01650	-.01060	-.00180	.01830	.04000	-.05060
.022	6.587	.01710	-.01210	.00220	.01490	.04790	-.05610
	GRADIENT	-.00263	-.00229	.00705	-.00968	.00535	-.00764

DATE 21 OCT 75

!A81B - FORCE SOURCE DATA TABULATION (RETH35) (12 OCT 74)

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED

PARAMETRIC DATA

ELV-1B = 8.000 ELV-0B = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

RUN NO. 119/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEC	CHMI	CHM2	CHM3	CHM4
2.066	-5.888	.02440	.00560	-.03710	.06150	.00220	.00330
2.063	-1.746	.01850	-.00430	-.01660	.03510	.02900	-.03330
2.078	2.458	.01230	-.01150	.01190	.00040	.04430	-.05580
2.104	6.587	.00410	-.01510	.03770	-.03360	.05240	-.06750
	GRADIENT	-.00147	-.00171	.00678	-.00825	.00364	-.00535

RUN NO. 120/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
4.193	-5.872	.01790	-.00170	-.02300	.04080	.01950	-.02110
4.191	-3.831	.02420	-.00540	-.03110	.05530	.02870	-.03410
4.197	.361	.00970	-.01410	.01500	-.00530	.05040	-.06440
4.208	4.530	-.00240	-.01820	.04860	-.05090	.03950	-.07770
4.216	6.589	-.00330	-.01920	.05340	-.05670	.06110	-.08030
	GRADIENT	-.00318	-.00153	.00953	-.01270	.00369	-.00522

RUN NO. 121/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
6.319	-3.811	.01690	-.01260	-.01610	.03310	.04510	-.05770
6.315	-1.716	.00440	-.01470	.01560	-.01120	.05250	-.06720
6.316	.374	.00380	-.01930	.02490	-.02110	.06180	-.08110
6.321	2.475	-.00480	-.02150	.05020	-.05500	.06650	-.08810
6.324	4.539	-.01050	-.02300	.06250	-.07300	.07020	-.09320
	GRADIENT	-.00306	-.00132	.00918	-.01226	.00307	-.00440

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH36) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 122/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-6.354	-4.160	.02610	.01580	-.04560	.07160	-.03840	.05420
-6.341	-2.050	.01830	.01320	-.02650	.04480	-.03440	.04760
-6.322	.062	.00570	.01270	-.00140	.00700	-.03470	.04750
-6.302	2.174	-.00210	.01210	.02250	-.02460	-.03370	.04580
-6.286	4.251	-.00930	.01120	.04410	-.05340	-.03120	.04240
	GRADIENT	-.00433	-.00049	.01085	-.01518	.00072	-.00121

RUN NO. 123/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-4.273	-6.247	.02400	.01030	-.04210	.06610	-.02440	.03470
-4.265	-4.183	.01850	.00970	-.03050	.04900	-.02520	.03490
-4.235	.039	-.00200	.00680	.01970	-.02170	-.02040	.02720
-4.200	4.234	-.02060	.00580	.07260	-.09320	-.01910	.02490
-4.192	6.302	-.02840	.00580	.09730	-.12570	-.01910	.02490
	GRADIENT	-.00465	-.00046	.01225	-.01689	.00073	-.00119

RUN NO. 124/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-2.186	-6.258	.01530	.00320	-.02360	.03890	-.00690	.01000
-2.175	-2.080	.00360	-.00250	.00790	-.00420	.00120	-.00360
-2.146	2.137	-.02160	-.00050	.07660	-.09820	-.00390	.00340
-2.124	6.280	-.04010	.00060	.13100	-.17110	-.00640	.00700
	GRADIENT	-.00598	.00047	.01629	-.02229	-.00121	.00166

RUN NO. 125/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-.096	-6.268	.00750	-.00060	-.00080	.01620	.00380	-.00440
-.095	-4.207	.00330	-.00740	.00580	-.00250	.01730	-.02480
-.094	.007	-.02060	-.01070	.07400	-.09460	.02130	-.03210
-.062	4.192	-.04420	-.00560	.13620	-.18040	.00860	-.01410
-.055	6.267	-.05150	-.00500	.16290	-.21440	.00730	-.01640
	GRADIENT	-.00568	.00021	.01553	-.02118	-.00103	.00127

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RETH38) (12 OCT 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPOBRK =	.000
MACH =	2.000	RN/L =	2.500

RUN NO. 126/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
1.985	-6.257	.00050	-.00620	.00860	-.00800	.01600	-.02210
1.981	-2.089	-.01950	-.01810	.06830	-.08770	.04200	-.06010
1.994	2.124	-.04460	-.01590	.13780	-.18240	.03320	-.04910
2.005	6.266	-.06370	-.01160	.19200	-.25570	.02300	-.03460
	GRADIENT	-.00596	.00052	.01650	-.02248	-.00209	.00261

RUN NO. 127/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
4.105	-6.249	-.00420	-.01180	.01990	-.02410	.02970	-.04150
4.105	-4.195	-.01150	-.01880	.04090	-.05230	.04700	-.06590
4.105	.015	-.03530	-.02800	.11280	-.14820	.06550	-.09350
4.102	4.191	-.05580	-.01910	.18060	-.23640	.05060	-.06970
4.104	6.248	-.06120	-.01700	.13610	-.25730	.04690	-.06390
	GRADIENT	-.00528	-.00004	.01666	-.02195	.00043	-.00046

RUN NO. 128/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
6.207	-4.161	-.00960	-.02090	.04460	-.05420	.06310	-.08400
6.210	-2.065	-.01920	-.02600	.07370	-.09290	.07640	-.10240
6.220	.028	-.03280	-.02910	.11380	-.14670	.08310	-.11220
6.219	2.132	-.04520	-.02950	.14690	-.19220	.08400	-.11350
6.217	4.196	-.05490	-.02790	.17250	-.22740	.07910	-.10700
	GRADIENT	-.00558	-.00084	.01574	-.02132	.00190	-.00274

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH37) (12 OCT 7[illegible])

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	8.000	ELV-OB =	-4.000
RUDDER =	.000	SPOBRK =	.000
MACH =	2.200	RN/L =	2.500

RUN NO. 129/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-6.357	-4.340	.02490	.01660	-.04070	.06560	-.03200	.04860
-6.345	-2.232	.01380	.01320	-.01810	.03190	-.02670	.03990
-6.330	-.129	-.00010	.01270	.01040	-.01040	-.02630	.03900
-6.316	1.382	-.00900	.01340	.03830	-.04720	-.02740	.04080
-6.303	4.053	-.01890	.01310	.06660	-.08550	-.02770	.04070
	GRADIENT	-.00526	-.00032	.01290	-.01816	.00038	-.00071

RUN NO. 130/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-4.273	-6.424	.02230	.01130	-.03360	.05590	-.01860	.02990
-4.268	-4.362	.01690	.01120	-.02550	.04240	-.01990	.03110
-4.242	-.145	-.00770	.00740	.03370	-.04140	-.01340	.02080
-4.216	4.041	-.03020	.00880	.09230	-.12250	-.01740	.02510
-4.212	6.106	-.04040	.01040	.12030	-.16060	-.02030	.03070
	GRADIENT	-.00561	-.00029	.01402	-.01962	.00030	-.00060

RUN NO. 131/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-2.199	-6.426	.01290	.00590	-.01640	.02930	-.00570	.01160
-2.186	-2.253	-.00290	.00210	.02140	-.02430	-.00030	.00240
-2.171	1.947	-.02820	.00360	.08920	-.11740	-.00430	.00790
-2.158	6.083	-.04960	.00670	.14670	-.19630	-.01090	.01760
	GRADIENT	-.00602	.00036	.01614	-.02217	-.00095	.00131

RUN NO. 132/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHMM
-.138	-6.431	.00680	.00230	-.00350	.01040	.00520	-.00280
-.135	-4.375	.00130	-.00340	.01410	-.01280	.01480	-.01820
-.128	-.174	-.02530	-.00480	.08200	-.10720	.01130	-.01910
-.113	4.000	-.05040	.00130	.14610	-.19650	-.00020	.00150
-.090	8.061	-.06130	.00190	.17590	-.23720	-.00220	.00410
	GRADIENT	-.00617	.00056	.01576	-.02193	-.00179	.00235

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH37) (12 OCT)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 133/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
1.916	-6.431	.00120	-.00230	.01300	-.01180	.01580	-.01810
1.916	-2.268	-.02140	-.01220	.07400	-.09540	.03330	-.04550
1.931	1.934	-.05100	-.00610	.14930	-.20030	.01750	-.02360
1.943	6.065	-.07430	-.00120	.20610	-.28030	.00780	-.00900
	GRADIENT	-.00704	.00145	.01792	-.02496	-.00376	.00521

RUN NO. 134/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
4.018	-6.417	-.00450	-.00790	.02590	-.03040	.02790	-.03580
4.022	-4.361	-.01280	-.01480	.04800	-.06070	.04390	-.05870
4.025	-.168	-.03830	-.01910	.12090	-.15920	.04910	-.06820
4.034	3.991	-.06610	-.01050	.19650	-.26260	.02840	-.03890
4.038	6.064	-.07490	-.00800	.21480	-.28970	.02440	-.03240
	GRADIENT	-.00638	.00051	.01778	-.02417	-.00185	.00235

RUN NO. 135/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.134	-4.334	-.01640	-.01820	.05910	-.07560	.05410	-.07230
6.130	-2.240	-.02730	-.02470	.08930	-.11660	.06830	-.09300
6.130	-.154	-.04110	-.02730	.12910	-.17020	.07030	-.09760
6.134	1.951	-.05500	-.02470	.16600	-.22100	.06380	-.08850
6.135	3.996	-.06590	-.02080	.19450	-.26030	.05330	-.07420
	GRADIENT	-.00608	-.00025	.01667	-.02273	-.00029	.00002

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH38) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 136/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHE'	CHEO	CHM1	CHM2	CHM3	CHM4
-6.289	-3.981	.00930	.01180	-.01270	.02200	-.02440	.03620
-6.280	-1.881	-.00310	.01070	.01410	-.01720	-.02330	.03410
-6.268	.215	-.01630	.01190	.04270	-.05900	-.02520	.03700
-6.259	2.322	-.02310	.01230	.06470	-.08780	-.02640	.03870
-6.250	4.369	-.03250	.01320	.08910	-.12160	-.02840	.04160
	GRADIENT	-.00496	00021	.01216	-.01712	-.00053	.00074

RUN NO. 137/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.232	-6.049	.01310	.00870	-.01900	.03220	-.01590	.02450
-4.224	-3.999	.00140	.00790	.00220	-.00090	-.01550	.02340
-4.198	.210	-.02480	.00720	.06620	-.09110	-.01470	.02190
-4.182	4.367	-.04130	.01100	.10690	-.14820	-.02180	.03280
-4.175	6.419	-.05140	.01240	.13240	-.18380	-.02430	.03670
	GRADIENT	-.00511	.00037	.01252	-.01761	-.00075	.00112

RUN NO. 138/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-2.171	-6.052	.00450	.00440	-.00190	.00640	-.00630	.01070
-2.155	-1.900	-.02010	.00150	.05370	-.07380	-.00280	.00430
-2.141	2.289	-.03960	.00580	.10480	-.14440	-.01190	.01770
-2.131	6.395	-.06070	.00940	.15450	-.21520	-.01810	.02750
	GRADIENT	-.00466	.00103	.01220	-.01685	-.00217	.00320

RUN NO. 139/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.107	-6.062	-.00120	-.00100	.01390	-.01510	.00540	-.00630
-.104	-4.014	-.01210	-.00110	.04050	-.05260	.00400	-.00510
-.095	.177	-.04060	.00200	.10350	-.14410	-.00330	.00530
-.081	4.323	-.05960	.00590	.15220	-.21180	-.01040	.01630
-.076	6.389	-.07200	.00660	.18000	-.25200	-.01100	.01780
	GRADIENT	-.00570	.00084	.01340	-.01910	-.00173	.00257

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RETH38) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.500 RN/L = 2.500

RUN NO. 140/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
1.937	-5.052	-.00740	-.00590	.02970	-.03710	.01810	-.02400
1.942	-1.906	-.03430	-.00440	.09370	-.12800	.01090	-.01530
1.953	2.279	-.06040	.00150	.15180	-.21220	-.00170	.00330
1.968	6.390	-.08020	.00330	.19700	-.27710	-.00350	.00680
	GRADIENT	-.00624	.00141	.01388	-.02012	-.00301	.00444

RUN NO. 141/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.403	-6.044	-.01370	-.01060	.04420	-.05790	.03000	-.04060
3.401	-4.060	-.02610	-.01250	.07860	-.10480	.03130	-.04380
3.409	.180	-.05540	-.00640	.15340	-.20880	.01590	-.02210
3.415	3.721	-.07760	-.00250	.20570	-.28330	.00890	-.01140
3.418	6.394	-.09320	-.00160	.21780	-.30100	.00850	-.01010
	GRADIENT	-.00663	.00129	.01638	-.02299	-.00290	.00420

RUN NO. 142/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.122	-4.040	-.02700	-.01830	.08520	-.11220	.04700	-.06530
6.126	-1.890	-.04080	-.01630	.12040	-.16120	.04270	-.05960
6.130	.192	-.05500	-.01400	.16150	-.21650	.03550	-.04940
6.133	2.291	-.06680	-.01080	.18960	-.25640	.02790	-.03860
6.136	3.707	-.07290	-.00890	.20550	-.27840	.02440	-.03330
	GRADIENT	-.00601	.00126	.01583	-.02184	-.00305	.00432

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RETH39) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 143/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.293	.406	.13360	.00910	-.23990	.37360	-.01160	.02070
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 144/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.229	-3.806	.11470	.01030	-.21580	.33060	-.00570	.01610
-4.210	.382	.12370	-.00350	-.21710	.34080	.02110	-.02460
-4.235	3.933	.12700	-.00730	-.21760	.34460	.02770	-.03510
	GRADIENT	.00161	-.00230	-.00023	.00183	.00438	-.00671

RUN NO. 145/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.028	-5.881	.09690	.00280	-.18390	.28090	.01620	-.01340
-.024	-3.844	.11130	-.00160	-.20290	.31430	.02640	-.02790
-.022	.347	.10110	-.01900	-.17070	.27190	.06340	-.08140
.001	3.898	.09900	-.02290	-.16020	.25920	.07580	-.09870
.014	6.597	.09990	-.02470	-.16140	.26130	.07990	-.10460
	GRADIENT	-.00161	-.00279	.00558	-.00721	.00645	-.00925

RUN NO. 146/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.553	-3.877	.08910	-.01460	-.16130	.25040	.05640	-.07100
3.564	.361	.08140	-.02490	-.13060	.21200	.08250	-.10740
3.575	3.908	.07260	-.03000	-.10730	.17980	.09350	-.12350
	GRADIENT	-.00211	-.00199	.00695	-.00907	.00481	-.00680

RUN NO. 147/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.255	.393	.07430	-.02930	-.11760	.19200	.09140	-.12070
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH40) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 148/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.299	.072	.06960	.00510	-.11860	.18820	-.01110	.01620
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 149/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.312	-4.221	.07210	.00060	-.12630	.19840	.00130	-.00070
-4.288	.038	.06020	-.00100	-.09740	.15760	.00300	-.00400
-4.260	3.604	.04880	-.00030	-.07000	.11880	.00100	-.00120
	GRADIENT	-.00297	-.00012	.00718	-.01015	-.00002	-.00009

RUN NO. 150/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.077	-6.251	.05270	-.00840	-.09120	.14390	.02880	-.03720
-.075	-4.195	.05240	-.01570	-.08670	.13910	.04470	-.06050
-.072	.017	.03630	-.01840	-.04860	.08490	.04720	-.06560
-.054	3.568	.01600	-.01240	-.00250	.01850	.03180	-.04420
-.044	6.274	.01030	-.01230	.01820	-.00790	.03180	-.04410
	GRADIENT	-.00466	.00039	.01079	-.01545	-.00159	.00200

RUN NO. 151/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.465	-4.189	.03790	-.02680	-.05610	.09400	.07370	-.10050
3.478	.022	.01930	-.03670	-.01020	.02950	.09600	-.13270
3.487	3.575	-.00530	-.03050	.05420	-.05950	.07810	-.10860
	GRADIENT	-.00553	-.00053	.01411	-.01963	.00071	-.00125

RUN NO. 152/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
8.162	.040	.01300	-.04130	.00200	.01100	.11150	-.15290
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETHM1) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = .000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 153/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.332	-.112	.05600	.00410	-.09660	.15260	-.00870	.01280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 154/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.327	-4.351	.06040	.00100	-.10680	.16720	.00030	.00070
-4.302	-.140	.04430	-.00070	-.07290	.11720	.00380	-.00450
-4.281	3.415	.03020	.00200	-.04050	.07070	-.00160	.00360
	GRADIENT	-.00389	.00011	.00852	-.01241	-.00021	.00032

RUN NO. 155/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.145	-6.442	.04470	-.00670	-.07570	.12040	.02580	-.03250
-.137	-4.372	.03900	-.01300	-.06260	.10170	.03690	-.04990
-.130	-.176	.02170	-.01250	-.02650	.04830	.03140	-.04390
-.117	3.384	.00190	-.00560	.01930	-.01740	.01630	-.02200
-.112	6.096	-.00970	-.00450	.04900	-.05880	.01500	-.01950
	GRADIENT	-.00476	.00093	.01050	-.01528	-.00262	.00353

RUN NO. 156/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.395	-4.359	.02310	-.02360	-.03240	.05560	.06620	-.08980
3.403	-.170	.00540	-.02830	.01420	-.00880	.07140	-.09970
3.411	3.387	-.02080	-.01880	.08150	-.10220	.04890	-.06770
	GRADIENT	-.00563	.00057	.01460	-.02023	-.00213	.00270

RUN NO. 157/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.079	-.145	.00140	-.03730	.02810	-.02670	.09510	-.13240
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH42) (12 OCT 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1297.0000 IN.	YMRP =	.0000 IN. YT		
BREF =	1297.0000 IN.	ZMRP =	400.0000 IN. ZT		
SCALE =	.0300				

PARAMETRIC DATA

ELV-IB =	.000	ELV-OB =	.000
RUDDER =	.000	SPDBRK =	.000
MACH =	2.500	RN/L =	2.500

RUN NO. 158/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.275	.222	.03810	.00640	-.06370	.10180	-.01190	.01830
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 159/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.238	-3.999	.04360	.00150	-.07380	.11750	-.00090	.00240
-4.215	.197	.02520	.00200	-.03820	.06340	-.00300	.00500
-4.201	3.750	.01490	.00470	-.01670	.03150	-.00750	.01220
	GRADIENT	-.00372	.00040	.00740	-.01115	-.00084	.00125

RUN NO. 160/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.088	-6.077	.03130	-.00680	-.04820	.07960	.02140	-.02820
-.087	-4.025	.02410	-.00680	-.03290	.05700	.01860	-.02540
-.082	.174	.00440	-.00170	.00150	.00290	.00750	-.00920
-.071	3.720	-.00980	-.00010	.03600	-.04580	.00520	-.00540
-.067	6.427	-.02090	-.00080	.05780	-.07870	.00690	-.00770
	GRADIENT	-.00439	.00088	.00887	-.01326	-.00176	.00262

RUN NO. 161/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.400	-4.002	.00490	-.01880	.00550	-.00070	.04810	-.06680
3.413	.178	-.01620	-.01170	.05710	-.07330	.03030	-.04210
3.420	3.721	-.03440	-.00820	.09780	-.13210	.02530	-.03360
	GRADIENT	-.00507	.00138	.01196	-.01702	-.00299	.00435

RUN NO. 162/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.075	.198	-.01860	-.02170	.06960	-.08830	.05320	-.07490
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH43) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 163/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.289	.408	.05820	.00460	-.09120	.14940	-.00080	.00540
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 164/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.227	-3.808	.04960	.00570	-.08620	.13580	.00350	.00220
-4.204	.384	.04770	-.00710	-.06940	.11700	.02980	-.03690
-4.169	3.933	.04690	-.01010	-.05980	.10660	.03400	-.04410
	GRADIENT	-.00035	-.00207	.00343	-.00379	.00401	-.00608

RUN NO. 165/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-2.122	.375	.03860	-.01600	-.04910	.08770	.05400	-.07000
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 166/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.030	-5.879	.03240	-.00010	-.05830	.09070	.02260	-.02280
-.027	-3.845	.04280	-.00480	-.06850	.11130	.03360	-.03840
-.030	-1.739	.02960	-.01710	-.03680	.06640	.06320	-.08030
-.019	.351	.02870	-.02060	-.02800	.05670	.07000	-.09060
-.003	2.455	.02600	-.02350	-.01920	.04530	.07720	-.10070
.009	3.897	.02020	-.02560	-.00640	.02660	.08140	-.10690
.019	6.597	.01970	-.02730	-.00240	.02200	.08590	-.11320
	GRADIENT	-.00248	-.00247	.00723	-.00970	.00564	-.00810

RUN NO. 167/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
2.072	.352	.01980	-.02280	-.01000	.02980	.07730	-.10070
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH43) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 168/ 0 RN/L = 2.51 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
3.555	-3.814	.02730	-.01760	-.03570	.06290	.06500	-.08260
3.560	.365	.01210	-.02730	.00870	.00340	.08820	-.11550
3.578	3.907	.00130	-.03160	.04140	-.04000	.09800	-.12960
	GRADIENT	-.00338	-.00183	.01000	-.01335	.00431	-.00614

RUN NO. 169/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
6.256	.389	.00690	-.03110	.01960	-.01270	.09680	-.12790
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH44) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 170/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-8.299	.071	.00910	.00330	-.00780	.01700	-.00550	.00880
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 171/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-4.258	-4.163	.02160	-.00010	-.03470	.05640	.00460	-.00470
-4.231	.037	.00350	-.00240	.01240	-.00900	.00830	-.01080
-4.258	3.599	-.01500	-.00290	.06090	-.07600	.00810	-.01090
	GRADIENT	-.00470	-.00037	.01228	-.01701	.00046	-.00082

RUN NO. 172/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHMI	CHM2	CHM3	CHM4
-2.161	.037	-.00520	-.01100	.03640	-.04160	.02830	-.03930
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH44) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 173/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.093	-6.250	.01110	-.00960	-.01330	.02430	.03240	-.04200
-.091	-4.198	.00630	-.01670	-.00030	.00660	.04720	-.06390
-.090	-2.083	-.00310	-.02030	.03060	-.02370	.05450	-.07490
-.077	.009	-.01790	-.02000	.06780	-.08570	.05190	-.07190
-.067	2.124	-.02980	-.01710	.10100	-.13080	.04310	-.06010
-.059	3.572	-.04010	-.01420	.13060	-.17060	.03690	-.05110
-.053	6.276	-.04850	-.01420	.15560	-.20420	.03700	-.05130
	GRADIENT	-.00604	.00038	.01678	-.02281	-.00156	.00195

RUN NO. 174/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
1.987	.023	-.02800	-.02830	.09680	-.12480	.07280	-.10110
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 175/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.466	-4.234	-.00670	-.02740	.03500	-.04170	.07760	-.10500
3.479	.019	-.03110	-.03760	.10610	-.13720	.09940	-.13690
3.485	3.581	-.05770	-.03140	.17930	-.23700	.08080	-.11220
	GRADIENT	-.00650	-.00057	.01841	-.02491	.00056	-.00113

RUN NO. 176/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.167	.048	-.03520	-.04240	.11470	-.14930	.11470	-.15710
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETHM5) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 177/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
-6.332	-.120	.00090	.00200	.00560	-.00470	-.00350	.00560
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 178/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
-4.288	-4.351	.01670	.00050	-.02700	.04360	.00320	-.00270
-4.320	-.149	-.00690	-.00270	.02840	-.03530	.00920	-.01190
-4.300	3.413	-.02730	-.00110	.08380	-.11110	.00470	-.00580
	GRADIENT	-.00567	-.00022	.01424	-.01989	.00023	-.00045

RUN NO. 179/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
-2.199	-.165	-.01470	-.00840	.05110	-.06580	.02210	-.03050
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 180/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
-.116	-6.442	.00690	-.00780	-.00610	.01300	.02760	-.03540
-.115	-4.378	.00110	-.01450	.01130	-.01020	.03950	-.05400
-.112	-2.264	-.01120	-.01530	.04410	-.05530	.04060	-.05580
-.108	-.175	-.02480	-.01460	.07680	-.10160	.03690	-.05150
-.100	1.938	-.03840	-.01100	.11050	-.14880	.02830	-.03930
-.095	3.383	-.05020	-.00850	.14140	-.19160	.02270	-.03110
-.089	6.028	-.06110	-.00700	.17010	-.23120	.02190	-.02890
	GRADIENT	-.00656	.00081	.01650	-.02305	-.00229	.00310

RUN NO. 181/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
1.933	-.155	-.03740	-.02000	.10840	-.14580	.05190	-.07200
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH45) (12 OCT 7[illegible])

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 8.000 ELV-OB = .000
RUDDER = .000 SPDBRK = .000
MACH = 2.200 RN/L = 2.500

RUN NO. 182/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.402	-4.411	-.01180	-.02470	.04570	-.05750	.07070	-.09540
3.403	-.163	-.03810	-.02890	.11630	-.15440	.07600	-.10480
3.408	3.392	-.06660	-.01920	.19230	-.25890	.05410	-.07330
	GRADIENT	-.00700	.00065	.01872	-.02571	-.00202	.00267

RUN NO. 183/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.072	-.153	-.04030	-.03870	.12430	-.16460	.09820	-.13700
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH46) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 184/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.268	.417	.04160	.02090	-.05750	.09910	-.03750	.05840
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 185/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.270	-3.851	.03590	.02270	-.05610	.09210	-.03350	.05620
-4.251	.391	.03120	.00870	-.03630	.06750	-.00940	.01800
-4.215	3.923	.02810	.00620	-.02330	.05140	-.00600	.01220
	GRADIENT	-.00101	-.00216	.00423	-.00525	.00361	-.00577

RUN NO. 186/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-2.110	.382	.02320	-.00040	-.01650	.03970	.01460	-.01500
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(1A81) LVAP ORBITER-ALL HL SEALED (RETH46) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1287.0000 IN. YMRP = .0000 IN. YT
BREF = 1287.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPOBRK = .000
MACH = 1.550 RN/L = 2.500

RUN NO. 187/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
-.014	-5.856	.01920	.01570	-.02880	.04800	-.01450	.02980
-.012	-3.634	.02800	.00990	-.03760	.06560	-.00380	.01370
-.017	-1.729	.01590	-.00110	-.00760	.02350	.02200	-.02310
-.008	.358	.01390	-.00520	.00470	.00920	.03080	-.03610
.002	2.458	.01120	-.00810	.01700	-.00580	.03740	-.04540
.017	3.895	.00510	-.00970	.03250	-.02740	.04110	-.05080
.028	6.518	.00420	-.01160	.03720	-.03300	.04490	-.05660
	GRADIENT	-.00255	-.00237	.00835	-.01090	.00549	-.00777

RUN NO 188/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
2.074	.362	.00630	-.00800	.02520	-.01900	.03990	-.04790
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 189/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
3.563	-3.860	.01360	-.00350	-.00900	.02260	.02920	-.03270
3.565	.374	-.00100	-.01300	.04390	-.04480	.05140	-.06440
3.578	3.899	-.01310	-.01740	.07810	-.09120	.06080	-.07820
	GRADIENT	-.00344	-.00181	.01127	-.01471	.00411	-.00502

RUN NO. 190/ 0 RN/L = 2.52 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHMM
6.314	.393	-.00630	-.01830	.05320	-.05940	.06260	-.08090
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AMES97-019(IA81) LVAP ORBITER-ALL HL SEALED (RETH47) (12 OCT 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 191/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-6.283	.072	-.00200	.01510	.02370	-.02570	-.03130	.04640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 192/ 0 RN/L = 2.55 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-4.315	-4.217	.01160	.01150	-.01250	.02400	-.02180	.03330
-4.282	.044	-.00900	.00890	.04310	-.05210	-.01780	.02660
-4.245	3.589	-.02730	.00840	.09420	-.12150	-.01690	.02549
	GRADIENT	-.00498	-.00040	.01365	-.01861	.00064	-.00103

RUN NO. 193/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-2.148	.035	-.01620	.00100	.06500	-.08130	.00130	-.00030
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 194/ 0 RN/L = 2.54 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
-.077	-6.234	.00420	.00180	.00560	-.00140	.00580	-.00400
-.076	-4.257	-.00120	-.00460	.02360	-.02480	.01890	-.02350
-.074	-2.080	-.01250	-.00840	.05570	-.06810	.02470	-.03310
-.070	.011	-.02810	-.00830	.09560	-.12370	.02340	-.03170
-.060	2.115	-.04050	-.00650	.12660	-.16710	.01740	-.02390
-.050	3.551	-.05020	-.00360	.15770	-.20790	.01170	-.01530
-.026	6.169	-.05840	-.00300	.18240	-.24080	.01100	-.01400
	GRADIENT	-.00635	.00016	.01706	-.02342	-.00103	.00119

RUN NO. 195/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
1.992	.010	-.03780	-.01720	.12410	-.16190	.04490	-.06210
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000

AME597-019(IA81) LVAM ORBITER-ALL HL SEALED (RETH47) (12 OCT 74)

REFERENCE DATA

SREF = 2990.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1297.0000 IN. YMRP = .0000 IN. YT
BREF = 1297.0000 IN. ZMRP = 400.0000 IN. ZT
SCALE = .0300

PARAMETRIC DATA

ELV-IB = 10.000 ELV-OB = -4.000
RUDDER = .000 SPDBRK = .000
MACH = 2.000 RN/L = 2.500

RUN NO. 196/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
3.472	-4.227	-.01440	-.01650	.05810	-.07250	.04750	-.06400
3.475	.017	-.04130	-.02690	.13090	-.17220	.06910	-.09590
3.480	3.492	-.06660	-.02090	.20460	-.27120	.05370	-.07460
	GRADIENT	-.00675	-.00064	.01891	-.02566	.00096	-.00160

RUN NO. 197/ 0 RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

ALPHAO	BETAO	CHEI	CHEO	CHM1	CHM2	CHM3	CHM4
6.220	.042	-.04300	-.03150	.13770	-.18070	.08380	-.11540
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000