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—SPACE SHUTTLE—

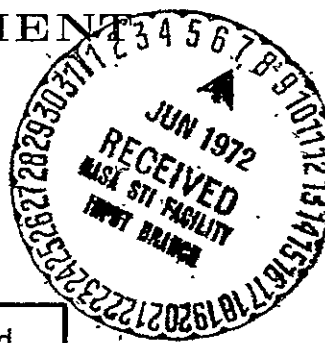
**DIRECTIONAL AND LATERAL
STABILITY AND INTERFERENCE
EFFECTS OF CRUISE ENGINE
LOCATION ON A 0.015 SCALE
SPACE SHUTTLE BOOSTER**

by

R. Buchholz, LMSC/HREC

NSRDC 7x10 FOOT
TRANSONIC WIND TUNNEL

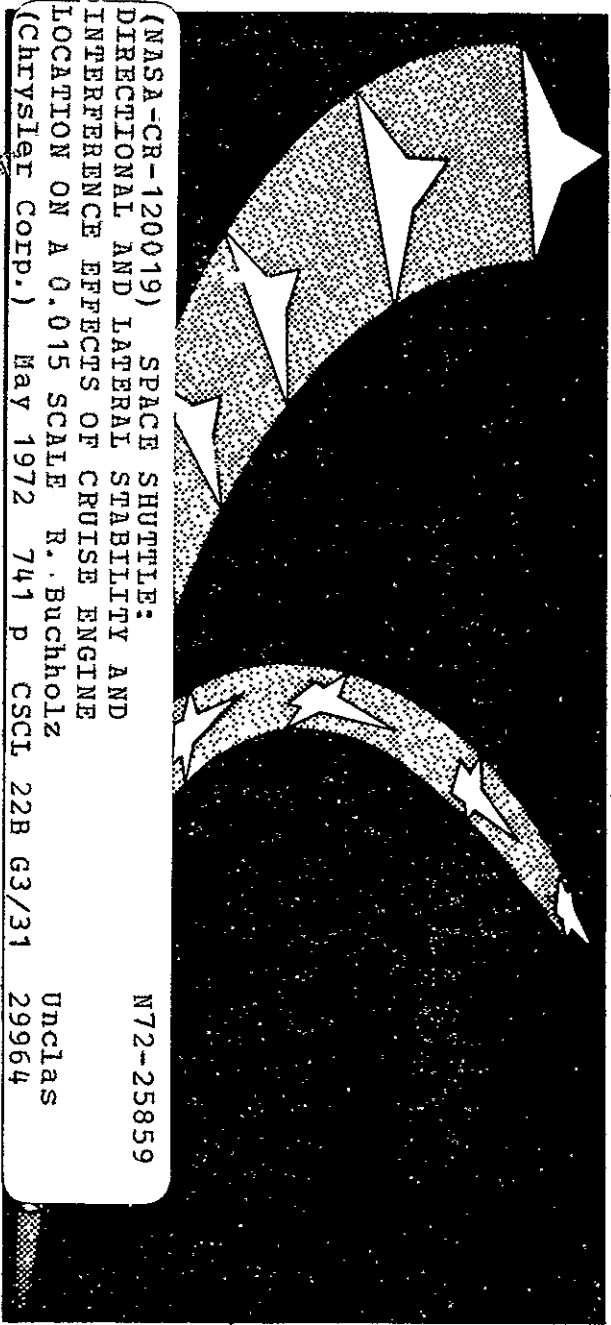
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SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
MARSHALL SPACE FLIGHT CENTER

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DIRECTIONAL AND LATERAL STABILITY AND
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LOCATION ON A 0.015 SCALE R. Buchholz
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SADSAC/SPACE SHUTTLE
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: MSFC PARAMETRIC BOOSTER (0.015 SCALE)

TEST PURPOSE: OBTAIN DATA FOR USE IN EVALUATING DIRECTIONAL AND LATERAL
STABILITY AND THE INTERFERENCE EFFECTS OF CRUISE ENGINE
LOCATION.

TEST FACILITY: NSRDC 7 x 10 FT TRANSONIC WIND TUNNEL

TESTING AGENCY: LOCKHEED MISSILES AND SPACE COMPANY - HUNTSVILLE

TEST NO. & DATE: NSRDC 3310; August 1971

FACILITY COORDINATOR: Dale Chadock

PROJECT ENGINEER(S): Robert Buchholz (LMSC/HREC)

DATA MANAGEMENT SERVICES

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V. W. Sparks Jim Ziler

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FOR J. D. Kemp Supervisor
Aero Thermo Data Group

CONTRACT NAS 8-4016

AMENDMENT 158

DRL 297-84a

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DIRECTIONAL AND LATERAL STABILITY AND INTERFERENCE EFFECTS
OF CRUISE ENGINE LOCATION ON A 0.015 SCALE SPACE SHUTTLE BOOSTER

By Robert Buchholz

S U M M A R Y

This report presents the results obtained from a wind tunnel test to improve space shuttle booster baseline lateral-directional stability, control characteristics, and cruise engine location optimization. Tests were conducted in the Naval Ship Research and Development Center's (NSRDC) 7 x 10-foot Transonic Wind Tunnel. The model employed was a 0.015-scale replica of a space shuttle booster.

The three major objectives of this test were to determine the following:

- o Force, static stability, and control effectiveness characteristics for varying angles of positive and negative wing dihedral and various combinations of wing tip and centerline dorsal fins.
- o Force and static stability characteristics of cruise engines location on the body below the high aerodynamic canard.
- o Control effectiveness for the low-mounted wing configuration.

The wing dihedral study was conducted at a cruise Mach number of 0.40 and simulated altitude of 10,000 feet. Portions of the test were conducted to determine the control surfaces stability and control characteristics over the Mach number range of 0.4 to 1.2. The aerodynamic characteristics determined are based on a unit Reynolds number of $\approx 2 \times 10^6$ per foot. Boundary layer trip strips were employed to induce boundary layer transition.

NOMENCLATURE
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C _p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m ² , psf
q	Q(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
<u>Reference & C.G. Definitions</u>		
A _b		base area; m ² , ft ²
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
$\frac{l}{c}$ _{REF}	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
<u>SUBSCRIPTS</u>		
b		base
l		local
s		static conditions
t		total conditions
∞		free stream

NOMENCLATURE (Continued)

Body-Axis System

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

Stability-Axis System

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

NOMENCLATURE (Continued)

SURFACE DEFINITIONS

δ_a	AILRON	aileron, total aileron deflection angle, degrees, (left aileron - right aileron)/2
δ_c	CANARD	canard, surface deflection angle, positive deflection, trailing edge down; degrees
δ_e	ELEVON	elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_r	RUDDER	rudder, surface deflection angle, positive deflection, trailing edge to the left; degrees

The following names were given to the parameters used:

<u>Parameter</u>	<u>SADSAC Name</u>
Engine Location	ENGLOC
Vertical Areas	VCLARA
Dorsal End Plates	DOREPL
Roll Out of Tip Fins	ROLFIN
Inverted Tip Fins	INVTIP

CONFIGURATIONS INVESTIGATED

The following components were utilized during the test:

- B1 Baseline MDAC booster body 256-19A-X
- C2 Booster small canard
- D1 Booster dorsal fin
- D2 Booster small dorsal fin
- F1 Booster canard trailing edge flap ($C_F = 20\% \bar{c}$)
- F2 Booster canard trailing edge flap ($C_F = 40\% \bar{c}$)
- G1 Dummy body mounted engine pods, high location
- G2 Dummy body mounted engine pods, low location
- G5 Dummy sidebody mounted engine pods, high location.
- G6 Dummy sidebody mounted engine pods, low location.
- T1 Dorsal tail end-plate. Trailing edge flush with dorsal tip trailing edge.
- T2 Dorsal tail end-plate. Trailing edge flush with dorsal tip trailing edge.
- V1 Booster wing tip vertical fin.
- V2 Booster wing tip extension.
- V3 Identical to V1 except rolled out 40°
- V4 Identical to V1 except mounted inverted
- V5 Twin ventral fins constructed of sheet aluminum. Trailing edge of fin mounted flush with booster base. Rolled out 10° from vertical.
- W1 Baseline booster wing 256-14.

Combination of the configuration components are shown in Table II entitled Data Set Collations.

TEST FACILITY DESCRIPTION

The test program was conducted in the NSRDC 7 x 10-foot Transonic Wind Tunnel, which is a closed-loop continuous flow tunnel with a Mach number range from $M = 0.40$ to $M = 1.20$ at simulated altitudes from sea level to 40,000 feet. Reynolds number can be varied between 1×10^6 and 3×10^6 per foot by adjusting the settling chamber total pressure. A detailed description of the test facility is presented in Reference 1.

MODEL DESCRIPTION

The baseline model was a modified version of the 0.015-scale McDonnell-Douglas model (256-14 booster configuration). A sketch of a similar model showing overall dimensions is included as Figure 2. Four different wing dihedral angles were tested, $\pm 7^\circ 40'$ and $\pm 15^\circ$. These angles were achieved by having two different wings with dihedrals of $7^\circ 40'$ and 15° . These wings could be mounted upright or inverted to give either positive or negative dihedral. The wings could also be mounted in either high or low position. Dummy cruise engine pods were mounted on the sides of the body in two positions under the high-mounted aerodynamic canard to evaluate power-off interference effects. A sketch of the dummy engine pods is included as Figure 3. The model had deflectable elevons, canard trailing edge flaps, dorsal fin and wingtip rudders. Deflection angles were obtained by replacing the control surfaces with a separate surface set to the desired angle.

Four pressure tubes were utilized in the model base region to measure base pressures and were located as shown in Figure 4. Pressure measurements made by these tubes were used to calculate the axial force coefficient (C_{ax}).

Boundary layer transition strips were applied to the model as shown in Figure 5. Wing, body, and canard grit size was determined by the method of Braslow and Knox (Reference 2) for a tunnel Reynold's number of 2×10^6 per foot.

DATA REDUCTION

Aerodynamic forces and moments acting on the model were converted to non-dimensional coefficients and cruise efficiency ratio (L/D) as presented below:

$$C_N = \frac{\text{normal force}}{qS}, \quad \text{normal force coefficient}$$

$$C_A = \frac{\text{axial force}}{qS}, \quad \text{axial force coefficient}$$

$$C_Y = \frac{\text{side force}}{qS}, \quad \text{side force coefficient}$$

$$C_{IM} = \frac{\text{pitching moment}}{qSl}, \quad \text{pitching moment coefficient}$$

$$C_{YN} = \frac{\text{yawing moment}}{qSb}, \quad \text{yawing moment coefficient}$$

$$C_{BL} = \frac{\text{rolling moment}}{qSb}, \quad \text{rolling moment coefficient}$$

$$C_L = \frac{\text{lift}}{qS}, \quad C_N \cos \alpha - C_A \sin \alpha, \quad \text{lift force coefficient}$$

$$C_D = \frac{\text{drag}}{qS}, \quad C_A \cos \alpha + C_N \sin \alpha, \quad \text{drag force coefficient}$$

$L/D = C_L/C_D$, lift-to-drag ratio

$C_{AB} = \frac{\text{base force}}{qS}$, base axial force coefficient

$CAF = C_A - C_{AB}$, forebody axial force coefficient

These data were corrected for tunnel flow angularities and sting deflections. Axial force data was corrected for weight tares. Base pressure coefficients were calculated individually and averaged to calculate the base axial force coefficient.

Model reference dimensions used in the data reduction are:

Reference Area (S_{ref})	1.355 ft ²
Reference Lengths ($l_{ref} = b_{ref}$)	3.453 ft
Balance Location	
body station Bl	2.694 ft
Moment Reference Center	
body station (c.g.) = (XMRP)	2.594 ft
water line (above ϕ) = (ZMRP)	0.01875 ft
Base Area (A_b)	
high wing	0.195 ft ²
low wing	0.201 ft ²

REFERENCES

1. Thomas, Walter, S., "The David Taylor Model Basin 7 x 10-Foot Transonic Wind Tunnel Facility," Aero Report 985, Naval Ship Research and Development Center, Carderock, Md., July 1960.
2. Braslow, A. L., and E. C. Knox, "Simplified Method for Determination of Critical Height of Distributed Roughness Particles for Boundary Layer Transition at Mach Numbers from 0 to 5," NACA TN 4363, September 1958.

TABLE I.

TEST CONDITIONS
TEST NSRDC 3310

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. ft. ft.)	STAGNATION TEMPERATURE (degrees Fahrenheit)
.40	2.65×10^6	198	
.70	1.80×10^6	290	
.80	2.03×10^6	286	
.90	2.10×10^6	325	
1.00	2.10×10^6	360	

BALANCE UTILIZED: TSB-6

CAPACITY:

NF 1000 lbs.
SF 1600 lbs.
AF 150 lbs.
PM 1250 in.-lbs.
YM 1250 in.-lbs.
RM 1000 in.-lbs.

ACCURACY:

+5 lbs.
± 5 lbs.
± 7.5 lbs.
± 6.25 in.-lbs.
± 6.25 in.-lbs.
± 5 in.-lbs.

COEFFICIENT
TOLERANCE:

± .0186
± .0186
± .0028
± .00056
± .00056
± .00045

At $M=0.4$

COMMENTS:

TABLE II.

TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	PARAMETERS/VALUES					MACH NUMBERS						
		a	b	δ_c	δ_e	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	Γ_w	0.4	0.7	0.8	0.9	1.0		
RN4 001	B1CZF1W1V2	A	O	0	0	0	-	1	1	1	3°	0°	-7°40'	7						
002	↓	O	A											8						
003	↓	G												9						
004	↓	15	Y											10						
005	B1CZF1W1V2D1	A	O				0							11	15	19	23	27		
006	↓	O	A											12	16	20	24	28		
007	↓	G												13	17	21	25	29		
008	↓	15	Y											14	18	22	26			
009	B1CZF1W1V1D1	A	O											30						
010	↓	O	A											31						
011	↓	G												32						
012	↓	15	Y											33						
013	B1CZF1W1V1	A	O											34						
014	↓	O	A											35						
015	↓	G												36						
016	↓	15	Y				Y						Y	37						
017	B1CZF1W1V2	A	C										15°	38						
018	↓	O	A											39						
019	↓	G												40						
020	↓	15	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	41						

1	7	13	19	25	31	37	43	49	55	61	67	75	76
NA	SLM	CBL	CYN	CV	CL	CD	L/D	CAB					17
2	10	12	14	16	18	20	22	24	26	28	30	32	34

COEFFICIENTS:

a or B

SCHEDULES

$\alpha A = -4, 7, 8, 10, 15, 18$

$\beta A = -6, 3, 11, 6$

IDPVAR(1) | IDPVAR(2) | NDV

TABLE II. (Continued)

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TEST NSRDC 3310 DATA SET COLLATION SHEET

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PRETEST

POSTTEST

PARAMETERS/VALUES | MACH NUMBERS

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES				NO. of RUNS	PARAMETERS/VALUES																			
		α	β	δ_c	δ_i	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	Γ_w	0.4	0.7	0.8	0.9	1.0										
RN4021	B1CZF1W1V1D1	A	0	0	0	0	0	1	1	1	3°	0°	7°40'	48°														
022		0	A											49°														
023		6												50°														
024	↓	15	Y											51°														
025	B1CZF1W1V1G6	A	0											52°	56°	60°	64°	68°										
026		0	A											53°	57°	61°	65°	69°										
027		6												54°	58°	62°	66°	70°										
028	↓	15	Y											55°	59°	63°	67°	71°										
029	B1CZF1W1V2D1	A	0											74°														
030		0	A											75°														
031		6												76°														
032	↓	15	Y				Y							77°														
033	B1CZF1W1V2	A	0				-							78°														
034		0	A				-							79°														
035		6					-							80°														
036	↓	15	Y				-							81°														
037	B1CZF1W1V1D1	A	0				0							73°														
038		0	A											84°														
039		6												85°														
↓ 041	↓	15	Y	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	86°														

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CV	CA	CLM	CDL	CYN	CY	CL	CD	L/D	CAB				13
CF	CP(1)	CP(3)											

COEFFICIENTS: CA = -4, 0, 7, 4, 6, 8, 10, 15, 18 → IDPVAR(1) | IDPVAR(2) | NDV

α or β

SCHEDULES: CB = -6, -3, 0, 3, 6

TABLE II. (Continued)
 TEST NSRDC 3310 DATA SET COLLATION SHEET

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PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	SCHEDULES (OR ALTERNATE INDEPENDENT VARIABLES)											
		a	B	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	μ_w	Γ_w	0.4						
041	B1CZF1W1V2D1T1	A	0	0	0	0	0	1	1	2	3°	0°	7°40'	88/0						
042		0	A											89/0						
043		6												90/0						
044	Y	15	Y											91/0						
045	31CZF1W1V2D1T2	A	0											92/0						
046		0	A											93/0						
047		6												94/0						
048	Y	15	Y				Y							95/0						
049	B1CZF1W1V2	A	0				-							97/0						
050		0	A				-							98/0						
051		6					-							99/0						
052	Y	15	Y	Y			-							100/0						
053	31CZF1W1V1	A	0	-20			0							102/0						
054		0	A											103/0						
055		6												104/0						
056		15	Y	Y										105/0						
057		A	0	-10										106/0						
058		0	A											107/0						
059		6												108/0						
060	Y	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	109/0						

1	7	13	19	25	31	37	43	49	55	61	67	7576
CV	-A	CLM	CIL	CYN	CY	CL	CD	CL/D	CAB			15
C.F.F.	F.B.(1)	F.B.(3)										

COEFFICIENTS:

CA = -4, 0, 2, 4, 6, 8, 10, 15, 18

a or B

SCHEDULES

CB = -6, -3, 0, 3, 6

IDPVAR(1) IDPVAR(2) NDV

TABLE II. (Continued)

TEST NSRDC3310 DATA SET COLLATION SHEET

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PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS						
		α	β	δ_c	δ_e	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	Γ_w	0.4	
061	31CZF1W1V1	A	0	10	0	0	0	1	1	2	3°	0°	7°46'	110/0	
062	↓	0	A											111/0	
063	↓	6												112/0	
064	↓	15	Y	Y	Y									113/0	
065	31CZF2W1V1	A	0		20									114/0	
066	↓	0	A											115/0	
067	↓	6												116/0	
068	↓	15	Y	Y	Y									117/0	
069	31CZF1W1V1	A	0	20	0									119/0	
070	↓	0	A											120/0	
071	↓	6												121/0	
072	↓	15	Y	Y	Y									122/0	
073	↓	A	0	30	0									123/0	
074	↓	0	A											124/0	
075	↓	6												125/0	
076	↓	15	Y	Y	Y	Y								126/0	
077	↓	A	0	0	0	10								127/0	
078	↓	0	A											128/0	
079	↓	6												129/0	
080	↓	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	130/0	

1	7	13	19	25	31	37	43	49	55	61	67	7576
CE	CLM	CLBL	LYN	CY	CL	CD	L/D	CAR				13
SE	EP(1)	EP(3)										

COEFFICIENTS:

α or β

SCHEDULES

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 18$

$\beta A = -6, -3, 0, 3, 6$

IDPVAR(1) | IDPVAR(2) | NDV

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TABLE II. (Continued)
 TEST NSRDC 3310 DATA SET COLLATION SHEET

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PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	PARAMETERS/VALUES (OR APPROX.)					
		a	B	δ_c	δ_e	δ_a	δ_r		CND POS	WNG POS	\tilde{u}_c	\tilde{u}_w	\tilde{u}_w	0.4
44081	R1C2F1W1V1	A	0	0	0	20	0	1	1	2	3°	0°	7°40'	131/0
082		0	A											137/0
083		6												133/0
084		15	Y			Y	Y							134/0
085		A	0			0	-5							135/0
086		0	B											136/0
087		6												137/0
088		15					Y							138/0
089		0					-10							139/0
090		6												140/0
091	Y	15	Y	Y			V		Y			Y		141/0
092	S1C2F1W1V2D1	A	0	-20			0		1				-7°40'	142/0
093		0	A											143/0
094		6												144/0
095		15	Y	Y										145/0
096		A	0	-10										150/0
097		0	A											151/0
098		6												152/0
099	Y	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	153/0

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CV	CA	CLM	CEL	CYN	CY	CL	CD	L/D	CAR				
	S.P.(1)	R.P.(1)											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 18$ IDPVAR(1) IDPVAR(2) NDV
 a or B $\beta A = -6, -3, 0, 3, 6$
 SCHEDULES $\beta B = -6, 0, 6$

TABLE II. (Continued) -
 TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	PARAMETERS/VALUES				MACH NUMBERS						
		a	B	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	Γ_w	0.4					
101	B1CZF1W1VZD1	A	0	10	0	0	0	1	1	1	3°	0°	7°40'	154	0				
102		0	A											155	0				
103		6												156	0				
104		15	Y											157	0				
105	B1CZF2W1VZD1	A	0		20									158	0				
106		0	A											159	0				
107		6												160	0				
108		15	Y	Y										161	0				
109	B1CZF1W1VZD1	A	0	20	0									162	0				
110		0	A											163	0				
111		6												164	0				
112		15	Y	Y										165	0				
113		A	0	30										166	0				
114		0	A											167	0				
115		6												168	0				
116		15	Y	Y		Y								169	0				
117		A	0	0		10								170	0				
118		0	A											171	0				
119		6												172	0				
Y 119	Y	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	173	0				

1	7	13	19	25	31	37	43	49	55	61	67	7576
CA	ICA	CLM	CRL	CYN	CY	CL	CD	L/O	CAB			13
FE	EP(1)	BP(3)										

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 18$ → IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES
 $\beta A = -6, -3, 0, 3, 6$

TABLE II. (Continued)

TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (IF ALL ARE INDEPENDENT VARIABLES)							
		α	β	δ_e	δ_c	δ_a	δ_r		CND POS	WVC POS	M_c	M_w	Γ_w	0	4	
120	31C2F1W1VZD1	A	0	0	0	20	0	1	1	1	3°	0°	-7°40'	170	0	
121		0	A											171	0	
122		6												172	0	
123		15	Y			Y	Y							173	0	
124		0	B			0	5							174	0	
125		6												175	0	
126		15												176	0	
127		0					10							177	0	
128		6												178	0	
129	Y	15	Y				Y							179	0	
130	51C2F1W1VZV5D1	A	0				0							185	0	
131		0	A											186	0	
132		6												187	0	
133	Y	15	Y											188	0	
134	31C2F1W1V3	A	0											181	0	
135		0	A											182	0	
136		6												183	0	
137	Y	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	184	0	

1	7	13	19	25	31	37	43	49	55	61	67	75	76
Y	LA	CLM	CL	CYN	CY	CL	CO	L/D	CAR				13
PF	EO(1)	EP(3)											

COEFFICIENTS: α A = -4, 0, 2, 4, 6, 8, 10, 15, 18 IDPVAR(1) IDPVAR(2) NDV
 α or β RA = -6, -3, 0, 3, 6
 SCHEDULES BR = -6, 0, 1

TABLE II. (Continued)
 TEST NSRDC 3310 DATA SET COLLATION SHEET

2/7

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PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	PARAMETERS/VALUES MACH NUMBERS												
		a	B	δ_c	δ_e	δ_a	δ_r		CMD POS	WING POS	i_c	i_w	Γ_w	0.4	0.7	0.8	0.9				
RN4 138	31CZF1W1V4	A	0	0	0	0	0	-1	1	1	3°	0°	-7°40'	191	0						
139		D	A											192	0						
140		6												193	0						
141	↓	15	↓				Y							194	0						
142	R1CZF1W1	A	0				-						7°40'	200	0						
143		0	A				-							201	0						
144		6					-							202	0						
145	↓	15	↓				-							203	0						
146	31CZF1W1V1G5	A	0				0							205	0	209	212	215			
147		0	A				-							206	0	210	213	216			
148		6					-							207	0	211	214	217			
149	↓	15	↓	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	208	0	0	0	0			
150	31CZF1W1V4	A	0										7°40'	219	0						
151		0	A											220	0						
152		6												221	0						
153	↓	15	↓	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	222	0						

1	7	13	19	25	31	37	43	49	55	61	67	7576
LN	CA	CLM	CEL	CYN	CY	CL	CD	L/D	CAB			13
C.A.F.	P.P.L.I.	F.P.L.S.										

COEFFICIENTS: 2 A = -4, 0, 2, 4, 6, 8, 10, 15, 18 IDPVAR(1) IDPVAR(2) NDV

a or B

SCHEDULES 3 A = -6, -3, 0, 3, 6

TABLE II. (Continued)
 TEST NSRDC 3210 DATA SET/RUN NUMBER
 COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		α	β	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	i_w		0.4	0.5	0.7	0.8	0.9	1.0	1.125
RN3001	BIC2F2WIV1	A	0	0	0	0	0	5	1	1	3°	0°			5	9	13	17	21	
002	↓	0	A					5							6	10	14	18	22	
003	↓	6	A					5							7	11	15	19	23	
004	↓	15	A					5							8	12	16	20	24	
193	BIC2F2WIVIG2	0	A					1					445							
194	↓	6	A					1					446							
195	↓	15	A					1					447							
200	↓	A	0					5					439	440	441		442	444		
202	BIC2F2WIVIG1	A	0					1					461							
203	↓	0	A					1					462							
204	↓	6	A					1					463							
205	↓	15	A	↓	↓	↓	↓	1	↓	↓	↓	↓	464							

TEST RUN NUMBERS

1	7	13	19	25	31	37	43	49	55	61	67	75	76
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COEFFICIENTS: Alpha Schedule A: -4, 0, 2, 4, 6, 8, 10, 15, 20
 a or B Beta Schedule A: -6, -3, 0, 3, 6
 SCHEDULES

TABLE II. (Continued)

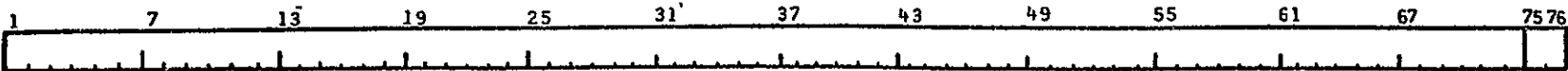
TEST NSRDC-3110 DATA SET COLLATION SHEET

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PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		α	B	δ_e	δ_r	S_e	S_r		ENO POS	WING POS	i_c	i_w	T_w				
RN2001	BIC2FIWIVI	A	0	0	0	0	0	1	1	1	3°	0°	7°40'				0.4
002		0	A														38
003		6	A														39
004		15	A	↓	↓	↓	↓		↓	↓	↓	↓	↓				40
017		A	0	0	0	0	0	1	2	3°	0°	7°40'					41
018		0	A														815
019		6	A														816
020		15	A	↓	↓	↓	↓		↓	↓	↓	↓	↓				817
209	BIC2FIWIV2DI	A	0	0	0	0	0	1	2	3	0	7°40'					818
210		0	A														811
211		6	A														812
212		15	A	↓	↓	↓	↓		↓	↓	↓	↓	↓				813
517	BIC2FIWIVI	A	0	0	0	0	0	1	1	3°	0°	15°					814
518		0	A														501
519		6	A														502
520		15	A	↓	↓	↓	↓		↓	↓	↓	↓	↓				503
525	BIC2FIWIV2DI	A	0	0	0	0	0	1	1	3°	0°	15°					504
526		0	A														514
527		6	A														515
528		15	A	↓	↓	↓	↓		↓	↓	↓	↓	↓				516



COEFFICIENTS: Alpha Schedule A : -4, 0, 2, 4, 6, 8, 10, 15, 20 => IDPVAR(1) IDPVAR(2) NDV

α or β Beta Schedule A : -6, -3, 0, 3, 6

SCHEDULES _____

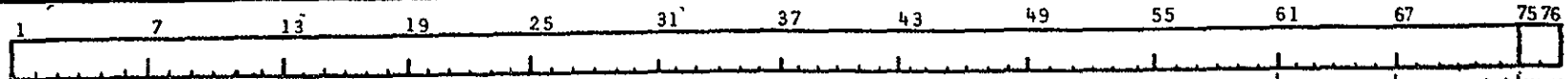
TABLE II. (Continued)
 TEST NSRDC-3110 DATA SET COLLATION SHEET

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PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		α	β	δ_c	δ_e	δ_a	δ_r		END POS	WING POS	i_c	i_w	T_w						
RN2553	BIC2FIWIV2	A	0	0	0	0	-	1	1	3°	0°	7'40"							0.4
54	↓	0	A																426
55	↓	6	A																427
56	↓	15	A																428
57	BIC2FIWIVI	A	0				0												429
58	↓	0	A																557
59	↓	6	A																558
60	↓	15	A																559
61	BIC2FIWIVID2	A	0																560
62	↓	0	A																847
63	↓	6	A																848
64	↓	15	A																849



COEFFICIENTS: Alpha Schedule: A -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) IDV
 α or β Beta Schedule: A -6, -3, 0, 3, 6
 SCHEDULES

TABLE III.
DIMENSIONAL DATA

MODEL COMPONENT: BODY - B1

GENERAL DESCRIPTION: Baseline MDAC booster body, 256-19A-X
X = total length is 229 vs 241.7 for 19A

DRAWING NUMBER: NSRDC A152011-A

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>229 ft</u>	<u>3.453 ft</u>
Max. Width	<u>34 ft</u>	<u>0.51 ft</u>
Max. Depth	<u>34 ft</u>	<u>0.51 ft</u>
Fineness Ratio	_____	_____
Area		
Max. Cross-Sectional	<u>907.92 ft²</u>	<u>0.204 ft²</u>
Planform	_____	_____
Wetted	_____	_____
Base	high wing <u>866.67 ft²</u>	<u>0.195 ft²</u>
	low wing <u>893.21 ft²</u>	<u>0.201 ft²</u>

TABLE III. (Continued)

MODEL COMPONENT: C2

GENERAL DESCRIPTION: Power - small canard

DRAWING NUMBER: NSRDL A152018-5

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	<u>2235 ft²</u>	<u>0.503 ft²</u>
Wetted		
Span (equivalent)	<u>72.6 ft</u>	<u>1.09 ft</u>
Aspect Ratio	<u>2.36</u>	<u>2.36</u>
Rate of Taper		
Taper Ratio	<u>.118</u>	<u>.118</u>
Dihedral Angle, degrees	<u>0</u>	<u>0</u>
Incidence Angle, degrees	<u>3° 15'</u>	<u>3° 15'</u>
Aerodynamic Twist, degrees	<u>0</u>	<u>0</u>
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	<u>53°</u>	<u>53°</u>
Trailing Edge	<u>0</u>	<u>0</u>
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	<u>55. ft</u>	<u>.825 ft</u>
Tip, (equivalent)	<u>6.47 ft</u>	<u>.097 ft</u>
MAC, inches		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	<u>64A010</u>	<u>64A010</u>
Tip	<u>64A010</u>	<u>64A010</u>

EXPOSED DATA

Area	<u>750 ft²</u>	<u>0.169 ft²</u>
Span, (equivalent)	<u>38.8 ft</u>	<u>0.541 ft</u>
Aspect Ratio	<u>2</u>	<u>2</u>
Taper Ratio	<u>0.2</u>	<u>0.2</u>
Chords		
Root	<u>32.2 ft</u>	<u>0.481 ft</u>
Tip	<u>6.46 ft</u>	<u>0.097 ft</u>
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE III. (Continued)

MODEL COMPONENT: DI

GENERAL DESCRIPTION: Booster Large Dorsal Fin

DRAWING NUMBER: NSPDC A152016-1

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1926 ft²</u>	<u>0.149 ft²</u>
Span (equivalent)	<u>55.4 ft</u>	<u>.831 ft</u>
Inb'd equivalent chord	<u>48.8 ft</u>	<u>.731 ft</u>
Outb'd equivalent chord	<u>22.2 ft</u>	<u>.333 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>55°</u>	<u>55°</u>
Tailing Edge	<u>73.5°</u>	<u>43.5°</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment. (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE III. (Continued)

MODEL COMPONENT: D2

GENERAL DESCRIPTION: BOOSTER SMALL DORSAL FIN

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1450 FT²</u>	<u>.326 FT²</u>
Span (equivalent)	<u>36.1 FT.</u>	<u>.541 FT</u>
Inb'd equivalent chord	<u>48.8 FT</u>	<u>.731 FT</u>
Outb'd equivalent chord	<u>31.5 FT</u>	<u>.473 FT</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>55°</u>	<u>55°</u>
Tailing Edge	<u>43.5°</u>	<u>43.5°</u>
Hingeline	_____	_____
Area Moment (Normal to hinge line)	_____	_____

TABLE III. (continued)

MODEL COMPONENT: F1 FOR CANARD C2

GENERAL DESCRIPTION: Booster canard trailing edge flap
(20% chord - exposed area)

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>150 ft²</u>	<u>0.0338 ft²</u>
Span (equivalent)	<u>38.8 ft</u>	<u>0.581 ft</u>
Inb'd equivalent chord	<u>6.45 ft</u>	<u>0.0968 ft</u>
Outb'd equivalent chord	<u>1.295 ft</u>	<u>0.0194 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
At Outb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
Sweep Back Angles, degrees		
Leading Edge	<u>14°55'</u>	<u>14°55'</u>
Trailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>---</u>	<u>---</u>
Area Moment (Normal to hinge line)	<u>---</u>	<u>---</u>

TABLE III. (Continued)

MODEL COMPONENT: FZ WITH CANARDS C2

GENERAL DESCRIPTION: _____

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>300 ft²</u>	<u>0.0676 ft²</u>
Span (equivalent)	<u>38.0 ft</u>	<u>0.581 ft</u>
Inb'd equivalent chord	<u>12.9 ft</u>	<u>0.1936 ft</u>
Outb'd equivalent chord	<u>2.59 ft</u>	<u>0.0388 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
At Outb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
Sweep Back Angles, degrees		
Leading Edge	<u>28°</u>	<u>28°</u>
Tailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE III. (Continued)

MODEL COMPONENT: T1 DORSAL END-PLATE

GENERAL DESCRIPTION: END-PLATE TRAILING EDGE.
FLUSH WITH DORSAL TIP TRAILING EDGE

DRAWING NUMBER _____

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length	<u>333.33 IN.</u>	<u>5.0 IN.</u>
Max Width	<u>166.7 IN.</u>	<u>2.5 IN.</u>
Max Depth	_____	_____
Fineness Ratio	_____	_____
Area	_____	_____
Max Cross-Sectional	_____	_____
Planform	_____	_____
Wetted	_____	_____
Base	_____	_____

TABLE III. (Continued)

MODEL COMPONENT: T2 DORSAL END-PLATE

GENERAL DESCRIPTION: END-PLATE TRAILING EDGE
FLUSH WITH DORSAL TIP TRAILING EDGE

DRAWING NUMBER _____

DIMENSION:

FULL SCALE

MODEL SCALE

Length

266.7 IN.

4.0 IN.

Max Width

166.7 IN.

2.5 IN.

Max Depth

Fineness Ratio

Area

Max Cross-Sectional

Planform

Wetted

Base

MODEL COMPONENT: VI

GENERAL DESCRIPTION: Powder wing tip vertical fin

(Dimensions given are for each tip)

DRAWING NUMBER: NSRDC A-152027-1, A

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	1010 ft ²	.226 ft ²
Wetted		
Semi-Span (equivalent)	38.30 ft	.582 ft
Aspect Ratio	1.5	1.5
Rate of Taper		
Taper Ratio	.467	.467
Dihedral Angle, degrees	29°	29°
Incidence Angle, degrees	3°	3°
Aerodynamic Twist, degrees	0	0
Toe-In Angle	0	0
Cant Angle	0	0
Sweep Back Angles, degrees		
Leading Edge	40°	40°
Trailing Edge	19° 31'	19° 31'
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	35.35 ft	3.30 ft
Tip, (equivalent)	16.50 ft	.297 ft
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	64A010	64A010
Tip	64A009	64A009

EXPOSED DATA

Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE III. (Continued)

MODEL COMPONENT: √2

GENERAL DESCRIPTION: BOOSTER WING TIP EXTENSION

(DIMENSIONS ARE FOR EACH TIP)

DRAWING NUMBER: _____

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	<u>634 FT.²</u>	<u>0.143 FT.²</u>
Wetted		
Span (equivalent)	<u>20.9 FT.</u>	<u>.314 FT.</u>
Aspect Ratio	<u>0.712</u>	<u>0.712</u>
Rate of Taper		
Taper Ratio	<u>0.70</u>	<u>0.70</u>
Dihedral Angle, degrees	<u>7°40' & 15"</u>	<u>7°40' & 15"</u>
Incidence Angle, degrees	<u>0°3'</u>	<u>0°3'</u>
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	<u>40°</u>	<u>40°</u>
Trailing Edge	<u>19°31'</u>	<u>19°31'</u>
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	<u>35.35 FT.</u>	<u>.530 FT.</u>
Tip, (equivalent)	<u>25.2 FT.</u>	<u>.378 FT.</u>
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	<u>64A010</u>	<u>64A010</u>
Tip	<u>64A010</u>	<u>64A010</u>

EXPOSED DATA

Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE III. (Continued)

MODEL COMPONENT: V3

GENERAL DESCRIPTION: Identical to V1, except rolled out
40° 20'.

(Dimensions are for each tip)

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1010 ft.²</u>	<u>.226 ft.²</u>
Span (equivalent)	<u>38.80 ft.</u>	<u>.582 ft.</u>
Inb'd equivalent chord	<u>35.35 ft.</u>	<u>.530 ft.</u>
Outb'd equivalent chord	<u>16.50 ft.</u>	<u>.247 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>40°</u>	<u>40°</u>
Trailing Edge	<u>19° 31'</u>	<u>19° 31'</u>
Hingeline	_____	_____
Area Moment (Normal to hinge line)	_____	_____

TABLE III. (Continued)

MODEL COMPONENT: V4

GENERAL DESCRIPTION: Identical to V1 except mounted inverted.

(Dimensions are for each tip)

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1010 ft.²</u>	<u>.266 ft.²</u>
Span (equivalent)	<u>38.80 ft.</u>	<u>5.82 ft.</u>
Inb'd equivalent chord	<u>35.35 ft.</u>	<u>.530 ft.</u>
Outb'd equivalent chord	<u>16.50 ft.</u>	<u>.247 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>40°</u>	<u>40°</u>
Tailing Edge	<u>19°31'</u>	<u>19°31'</u>
Hingeline	_____	_____
Area Moment (Normal to hinge line)	_____	_____

TABLE III. (Continued)

MODEL COMPONENT: V5

GENERAL DESCRIPTION: Twin ventral fins constructed of sheet aluminum. Trailing edge of fin mounted flush with booster base. Rolled out 10° from vertical
(Dimensions are for each fin)

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>502.2 ft.²</u>	<u>.113 ft.²</u>
Span (equivalent)	<u>17.2 ft.</u>	<u>.258 ft.</u>
Inb'd equivalent chord	<u>38.9 ft.</u>	<u>.583 ft.</u>
Outb'd equivalent chord	<u>19.5 ft.</u>	<u>.292 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.0</u>	<u>0.0</u>
At Outb'd equiv. chord	<u>0.0</u>	<u>0.0</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45°</u>	<u>45°</u>
Trailing Edge	<u>0°</u>	<u>0°</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE III. (Continued)

MODEL COMPONENT: W1

GENERAL DESCRIPTION: Baseline booster wing 256-1A

DRAWING NUMBER: NSRDL A152024-1

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	6020 ft ²	1.355 ft ²
Wetted	—	—
Span (equivalent)	120.67 ft	11.01 ft
Aspect Ratio	2.42	2.12
Rate of Taper	—	—
Taper Ratio	.547	.547
Dihedral Angle, degrees	7°45' 15"	7°40' 15"
Incidence Angle, degrees	0° 3'	0° 3'
Aerodynamic Twist, degrees	—	—
Toe-In Angle	0°	0°
Cant Angle	—	—
Sweep Back Angles, degrees		
Leading Edge	40°	40°
Trailing Edge	12°31'	12°31'
0.25 Element Line	—	—
Chords:		
Root (Wing Sta. 0.0)	64.55 ft	9.69 ft
Tip, (equivalent)	35.4 ft	5.3 ft
MAC	—	—
Fus. Sta. of .25 MAC	—	—
W.P. of .25 MAC	—	—
B.L. of .25 MAC	—	—
Airfoil Section		
Root	64A010	64A010
Tip	64A010	64A010

EXPOSED DATA

Area	862	3960 ft ²	.891 ft ²
Span, (equivalent)	4322	86.8 ft	1.30 ft
Aspect Ratio	7.2	1.89	1.89
Taper Ratio	—	.627	.627
Chords	567		
Root		56.4 ft	.845 ft
Tip		35.4	.53 ft
MAC		—	—
Fus. Sta. of .25 MAC		—	—
W.P. of .25 MAC		—	—
B.L. of .25 MAC		—	—

TABLE IV
INDEX OF MODEL FIGURES

<u>FIGURES</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1	Axis System	45
2	General Arrangement of a Typical High Wing-High Canard Configuration	46
3	Configuration and Location of Dummy Engine Pods	47
4	Location and Identification of Base Pressure Tubes	48
5	Typical Transition Grit Installation on Body, Wing, and Canard	49

TABLE V.
INDEX OF DATA FIGURES

TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
Effect of Dihedral on Longitudinal Characteristics, Canard Incidence = 3 Degrees	(A)	Dihedral	1-78
Effect of Dihedral on Lateral-Directional Characteristics, Canard Incidence = 3 Degrees	(B)	Dihedral	79-186
Effect of Dummy Cruise Engine Location on Longitudinal Characteristics, Canard Incidence = 3 Degrees	(C)	Configuration	187-231
Effect of Dummy Cruise Engine Location on Lateral-Directional Characteristics, Canard Incidence = 3 Degrees	(D)	Configuration	232-276
Effect of Dummy Cruise Engine Location on Lateral-Directional Derivatives at Angle of Attack	(E)	Engine Location*	277-291
Effect of Dummy Cruise Engine Location on Longitudinal Derivatives, BETA = 0	(F)	Engine Location	292-296
Effect of Dummy Cruise Engine Location on Lateral-Directional Derivatives	(G)	Engine Location Angle of Attack	297-305
Longitudinal Effects of Elevon Deflection for Negative Dihedral, BETA = 0	(C) (H)	ELEVTR	306-334
Lateral-Directional Effects of Elevon Deflection for Negative Dihedral	(D)	ELEVTR Angle of Attack	335-343
Lateral-Directional Derivatives for Elevon Deflection, Negative Dihedral	(E)	ELEVTR	344-346

TABLE V.
(Continued)

TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
Longitudinal Effects of Aileron Deflection for Negative Dihedral, BETA = 0	(C) & (I)	AILRON Angle of Attack	347-383
Lateral-Directional Effects of Aileron Deflection for Negative Dihedral	(D)	AILRON Angle of Attack	384-392
Lateral-Directional Derivatives for Aileron Deflection for Negative Dihedral	(E)	AILRON	393-395
Longitudinal Effects of Rudder Deflection for Negative Dihedral, BETA = 0	(J)	Rudder	396-401
Lateral-Directional Effects of Rudder Deflection for Negative Dihedral	(D)	Rudder Angle of Attack	402-410
Lat-Directional Derivatives for Rudder Deflection for Negative Dihedral	(E)	Rudder	411-413
Longitudinal Effects of Elevon Deflection for Low Wing, BETA = 0	(C) & (H)	ELEVTR	414-442
Lateral-Directional Effects of Elevon Deflection for Low Wing	(D)	ELEVTR Angle of Attack	443-451
Lateral-Directional Derivatives for Elevon Deflection for Low Wing	(E)	ELEVTR	452-454
Longitudinal Effects of Aileron Deflection for Low Wing, BETA = 0	(C) & (I)	AILRON	455-491

TABLE V
(Continued)

TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
Lateral-Directional Effects of Aileron Deflection for Low Wing	(D)	AILRON Angle of Attack	492-500
Lateral-Directional Derivatives for Aileron Deflection for Low Wing	(E)	AILRON	501-503
Longitudinal Effects of Rudder Deflection for Low Wing, BETA = 0	(C) & (J)	Rudder	504-536
Lateral-Directional Effects of Rudder Deflection for Low Wing	(D)	Rudder Angle of Attack	537-548
Lateral-Directional Derivatives for Rudder Deflection for Low Wing	(E)	Rudder	546-548
Effect of Dihedral on Lateral-Directional Derivatives	(E)	Dihedral	549-566
Effect of Increasing Vertical Area on Longitudinal Characteristics High Wing Positive Dihedral	(C)	Configuration	567-575
Effect of Increasing Vertical Area on Lateral-Directional Characteristics, High Wing Positive Dihedral	(D)	Configuration Angle of Attack	576-584
Effect of Increasing Vertical Area on Lateral-Directional Derivatives High Wing Positive Dihedral	(E) *	Configuration	585-587
Effect of Increasing Vertical Area on Longitudinal Characteristics High Wing Negative Dihedral	(C)	Configuration	588-596

TABLE V
(Continued)

TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
Effect of Increasing Vertical Area on Lateral- Directional Characteristics High Wing Negative Dihedral	(D)	Configuration Angle of Attack	597-605
Effect of Increasing Vertical Area on Lateral- Directional Derivatives High Wing Negative Dihedral	(E) *	Configuration	606-608
Effect of Increasing Vertical Area on Longitu- dinal Characteristics Low Wing Positive Dihedral	(C)	Configuration	609-617
Effect of Increasing Vertical Area on Lateral- Directional Characteristics Low Wing Positive Dihedral	(D)	Configuration Angle of Attack	618-626
Effect of Increasing Vertical Area on Lateral- Directional Derivatives Low Wing Positive Dihedral	(E) *	Configuration	627-629
Effect of Mach Number on Longitudinal Deriva- tives for a Configuration with Negative Dihedral	(F)	Mach Number	630-632
Effect of Mach Number on Lateral-Directional Derivatives for a Configuration with Negative Dihedral	(G)	Angle of Attack	633-641
Effect of Dorsal End-Plates on Longitudinal Characteristics, $BETA = 0$	(C)	Configuration	642-650
Effect of Dorsal End-Plates on Lateral- Directional Characteristics	(D)	Configuration Angle of Attack	651-659
Effect of Dorsal End-Plates on Lateral- Directional Derivatives	(E) *	Configuration	660-662

TABLE V
(Continued)

TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
Effect of Roll Out of Tip Fins on Longitudinal Characteristics, BETA = 0	(C)	Angle of Attack	663-671
Effect of Roll Out of Tip Fins on Lateral-Directional Characteristics	(D)	Angle of Attack	672-680
Effect of Roll Out of Tip Fins on Lateral-Directional Derivatives	(E) *	Configuration	681-683
Effect of Inverted Tip Fins on Longitudinal Characteristics, BETA = 0	(C)	Configuration	684-692
Effect of Inverted Tip Fins on Lateral-Directional Characteristics	(D)	Configuration Angle of Attack	693-701
Effect of Inverted Tip Fins on Lateral-Directional Derivatives	(E) *	Configuration	702-704
Effect of Inverted Tip Fins on Longitudinal Characteristics, BETA = 0	(C)	Dihedral	705-713
Effect of Inverted Tip Fins on Lateral-Directional Derivatives	(E)	Dihedral	714-716
Effect of Ventral Fins on Longitudinal Characteristics, BETA = 0	(C)	Angle of Attack	717-725
Effect of Ventral Fins on Lateral-Directional Characteristics	(D)	Angle of Attack	726-734
Effect of Ventral Fins on Lateral-Directional Derivatives	(E) *	Configuration	735-737

TABLE V
(Concluded)

PLOTTED COEFFICIENTS SCHEDULE:

- (A) CN, CA, CIM, CL, CD, L/D, CAB, versus ALPHA
CL versus CIM, CD
D(CL), D(CIM), CDAO, DCIM/DCL versus DIHDRL
- (B) CBL, CYN, CY versus BETA
DCBL/DBETA, DCYN/DBETA, DCY/DBETA versus DIHDRL
- (C) CN, CA, CIM, CL, CD, L/D, CAB versus ALPHA
CL versus CIM, CD
- (D) CBL, CYN, CY versus BETA
- (E) D(CBL), D(CY), D(CYN) versus ALPHA
- (F) D(CL), D(CIM), CDAO, DCIM/DCL versus MACH
- (G) D(CBL), D(CYN), D(CY) versus MACH
- (H) CL, CIM, CD, L/D, CAB versus ELEVTR
- (I) CBL, CYN, CY, CD, CIM, L/D, CAB versus ALLRON
- (J) CBL, CYN, CY, CD, CIM, L/D versus RUDDER

* NOTE: On plots which show the effect of engine location, vertical area, dorsal end-plates, roll out of tip fins, and inverted tip fins on lateral directional derivatives, a numerical designation was utilized. The following is the code used:

Component	Numerical Designation
W1	1.
V1	.1
V2	.2
V3	.3
V4	.4
V2V5	.5
D1	.01
D2	.02
T1	.001
T2	.002
G1	1.000
G2	2.000
G5	5.000
G6	6.000

So that: Configuration W1V1D1 would be 1.110

W1V2D1 would be 1.210

W1V2D1T2 would be 1.212

W1V2V5D1 would be 1.510

MODEL FIGURES

44
F. 1, C. 1

Notes:

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

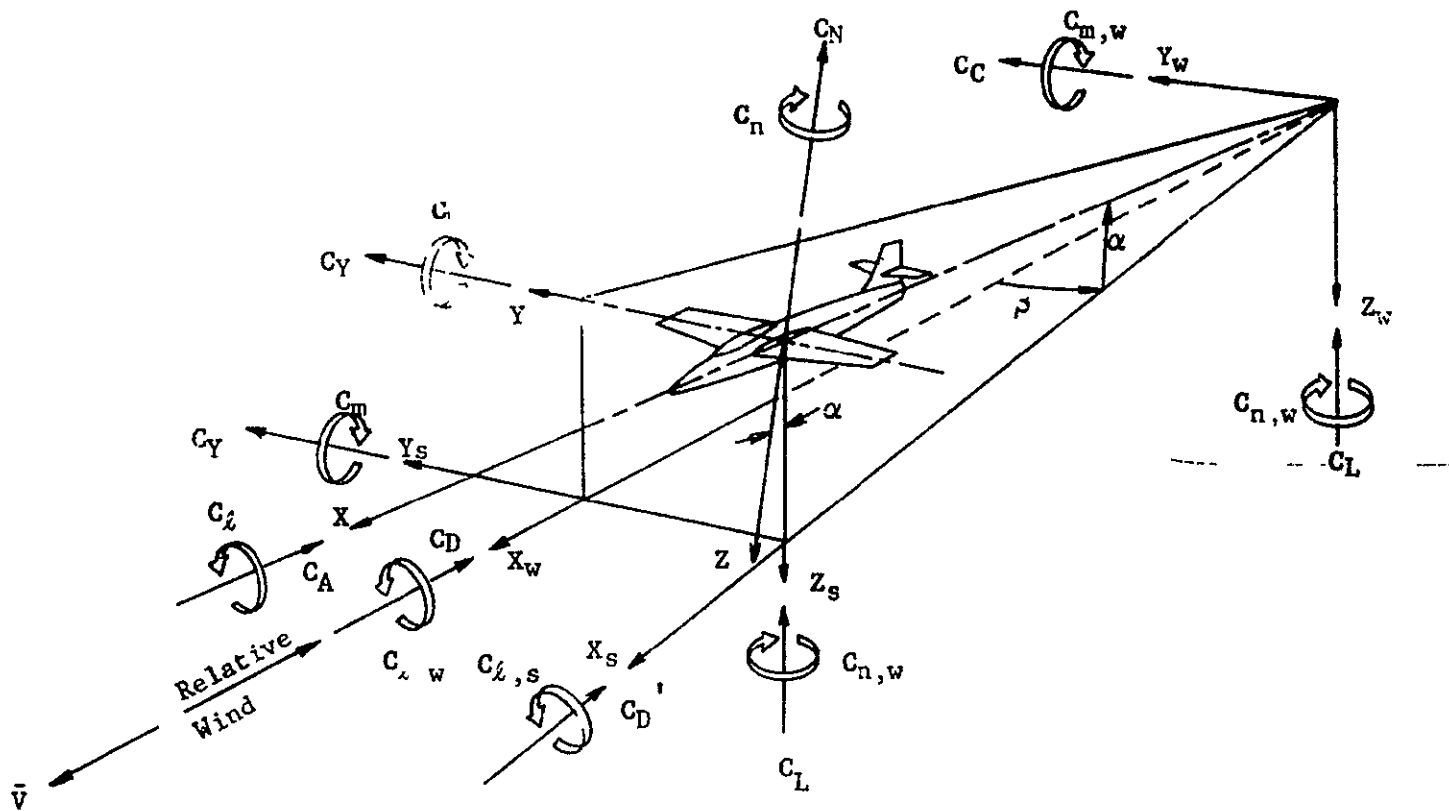


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

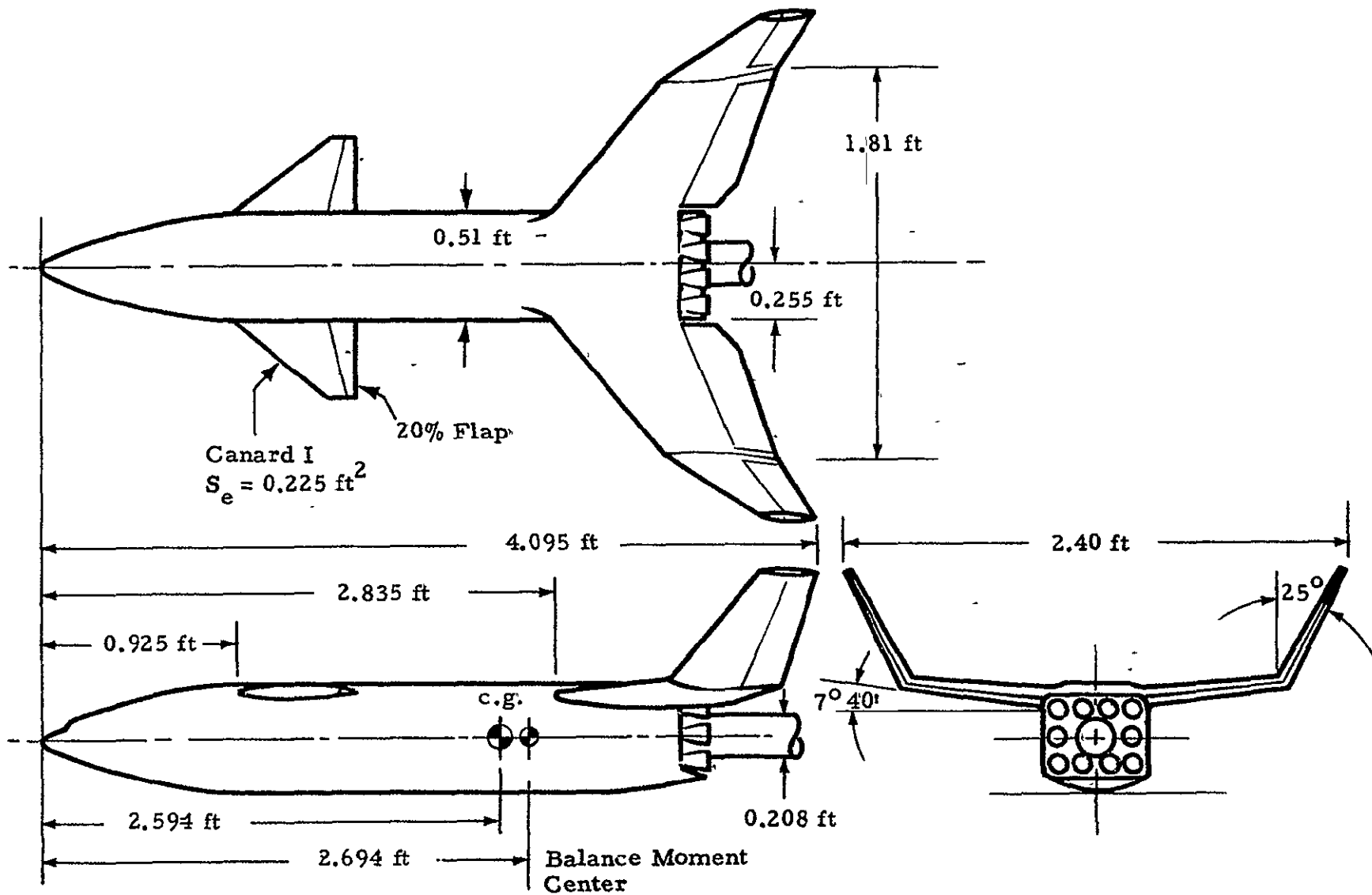


Fig. 2- General Arrangement of a Typical High Wing - High Canard Configuration

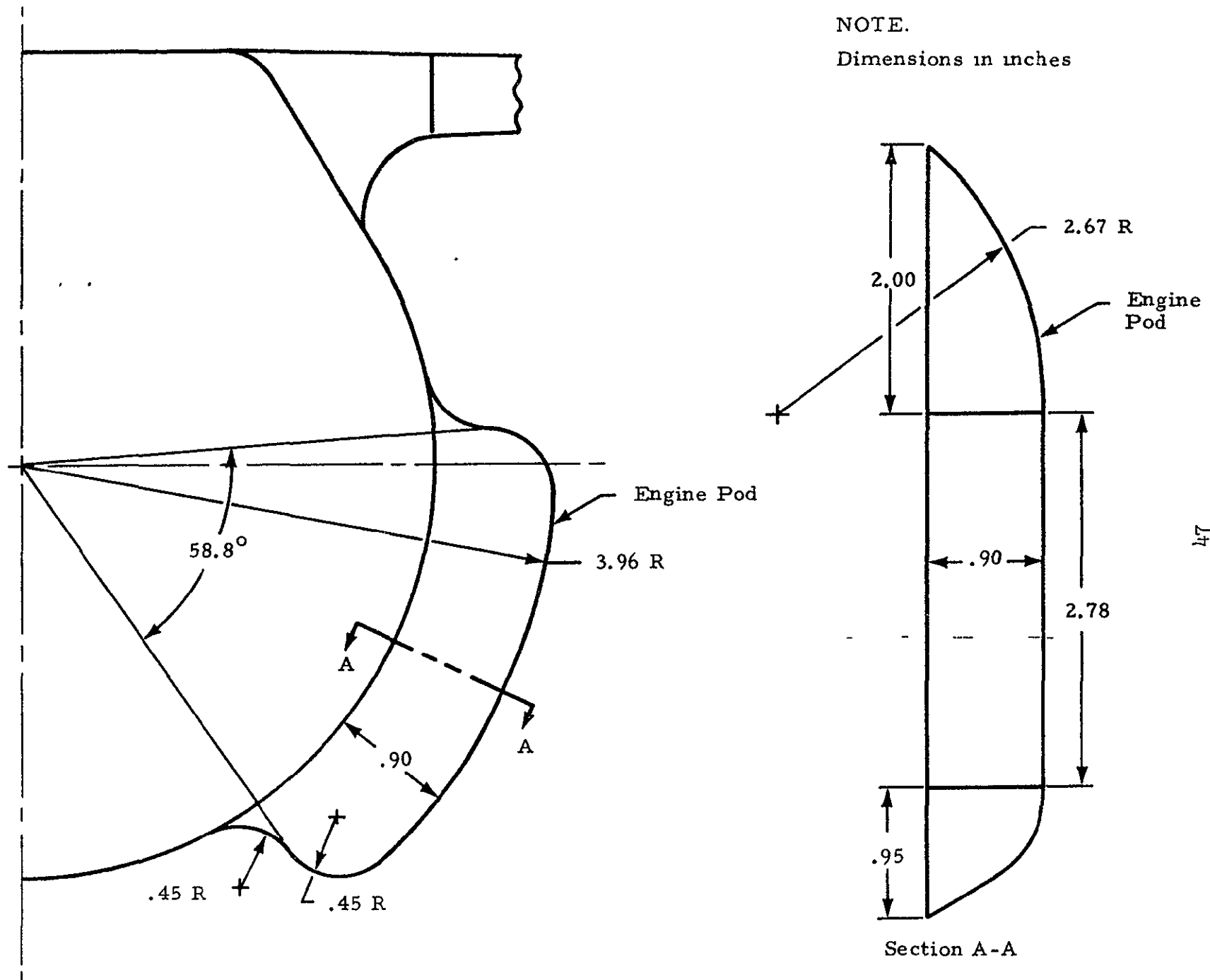


Fig. 3 - Configuration and Location of Dummy Engine Pods

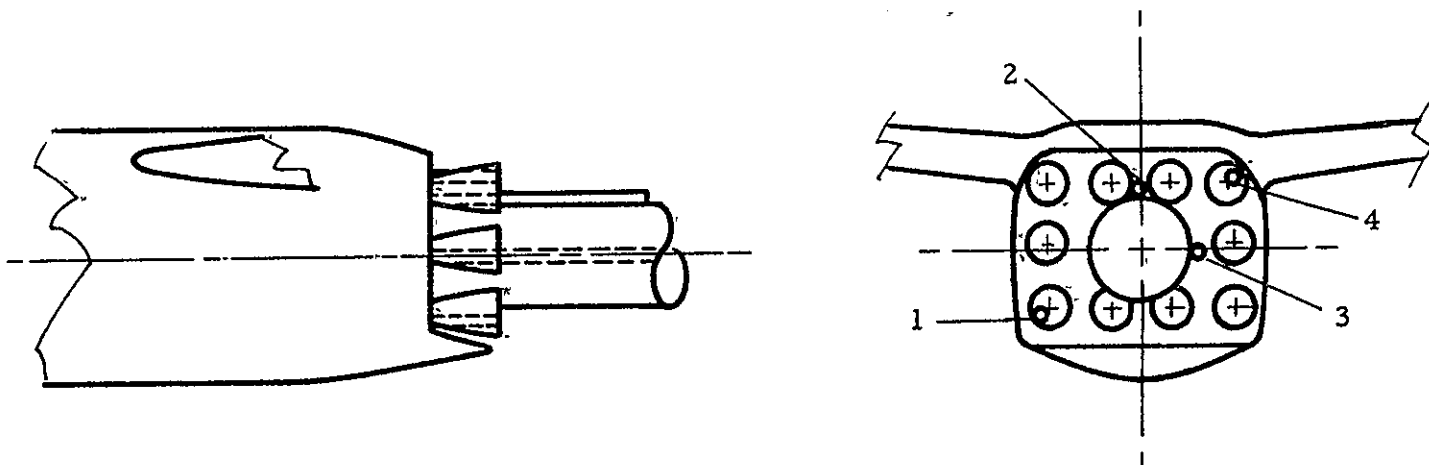


Fig. 4 - Location and Identification of Base Pressure Tubes

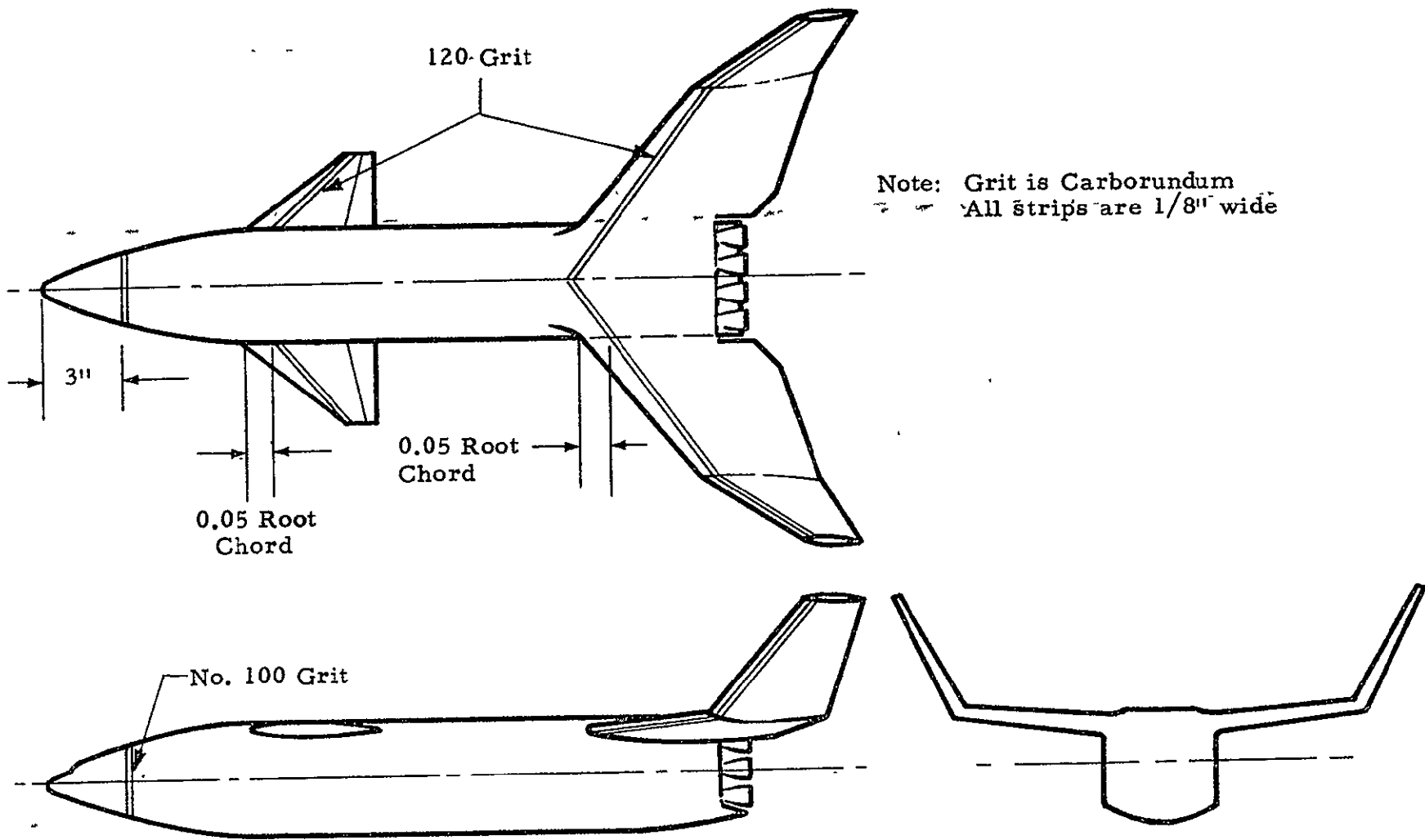
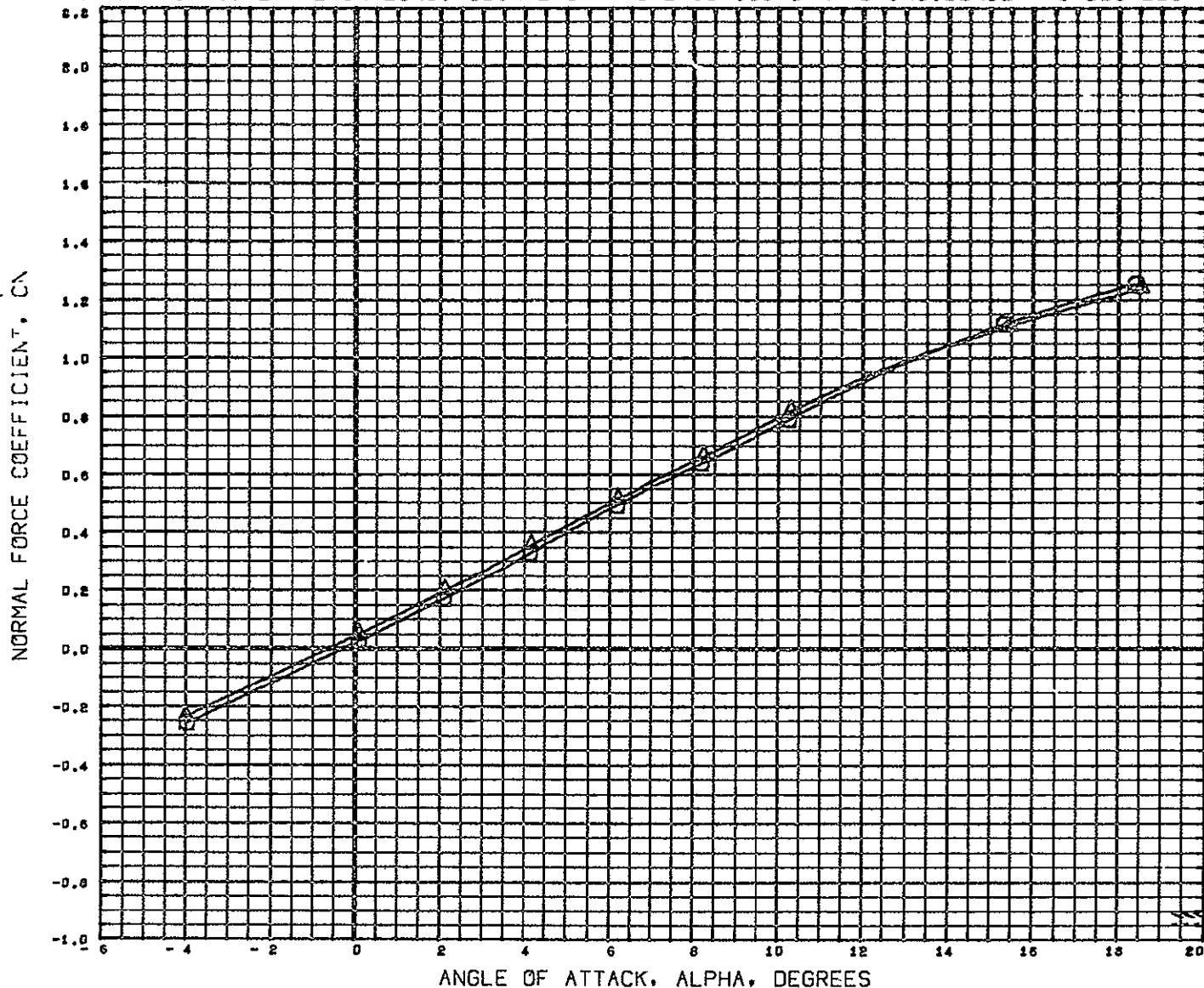


Fig. 5 - Typical Transition Grit Installation on Body, Wing and Canard

D A T A F I G U R E S

Tabulations of the plotted data and corresponding source data are available from SADSAC Operations.

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

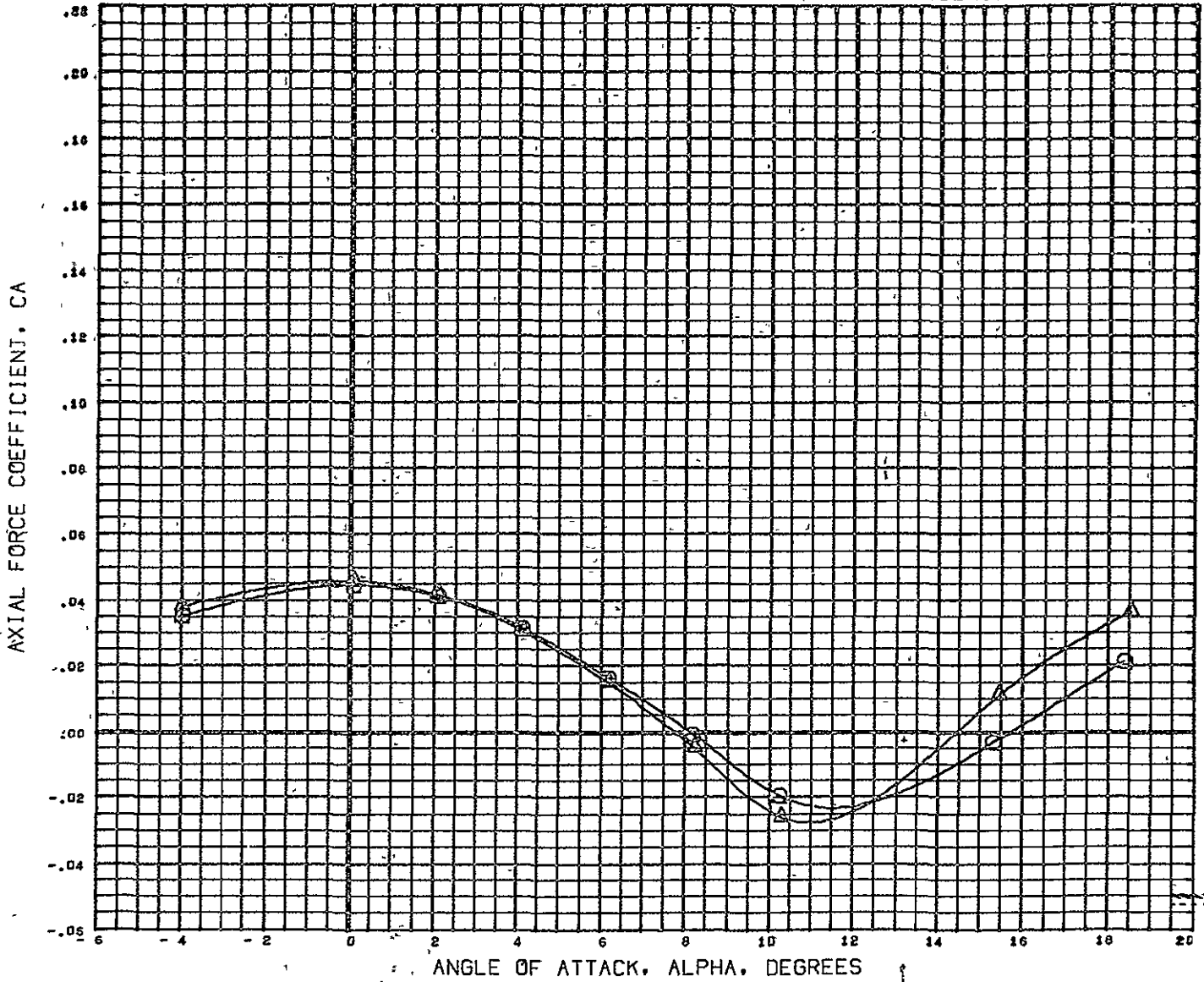


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(RN4001)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	-7.668	1.000	1.000	0.000	LREF 3.4530 FEET
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MACH .38

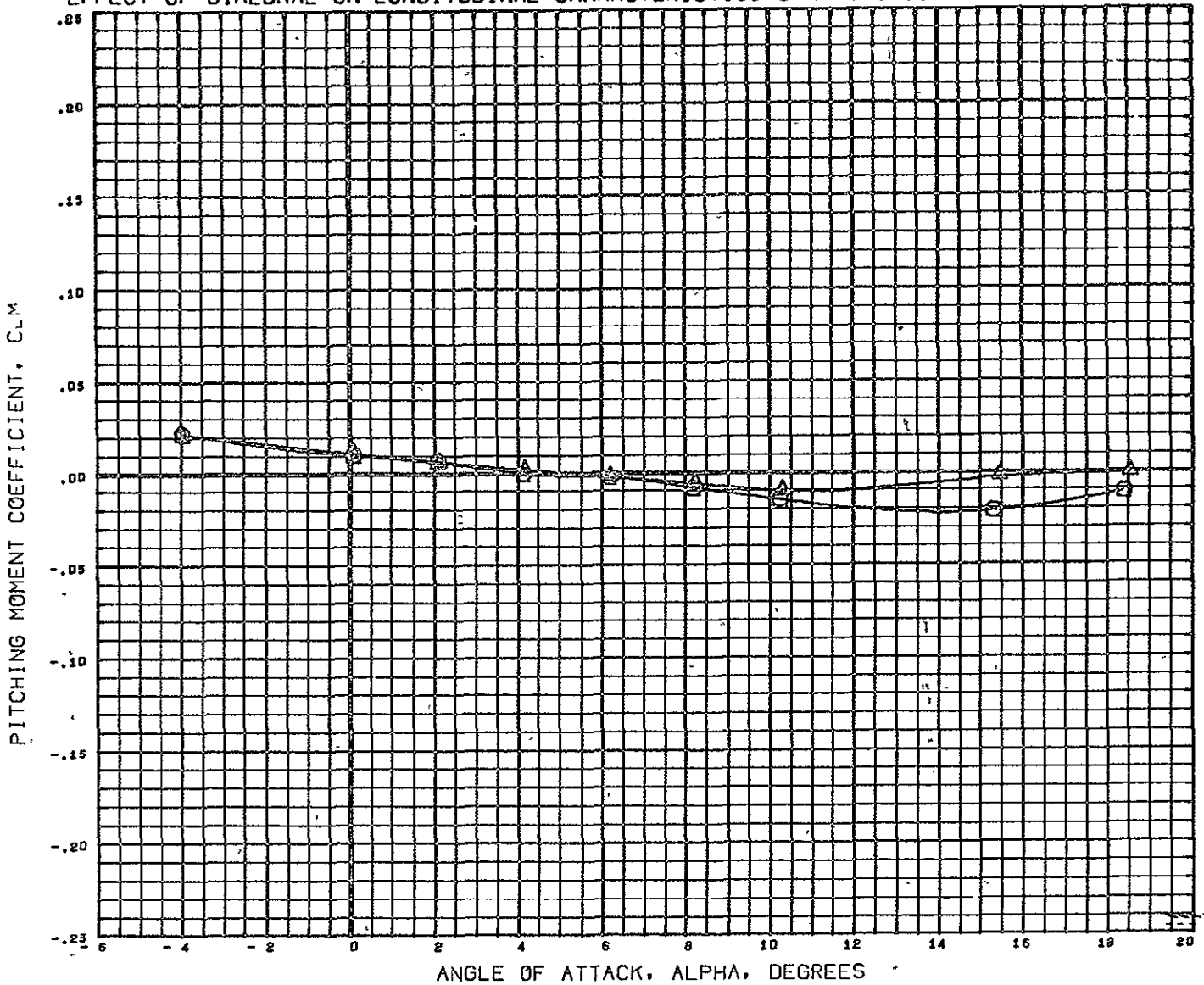
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



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(RN4001)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
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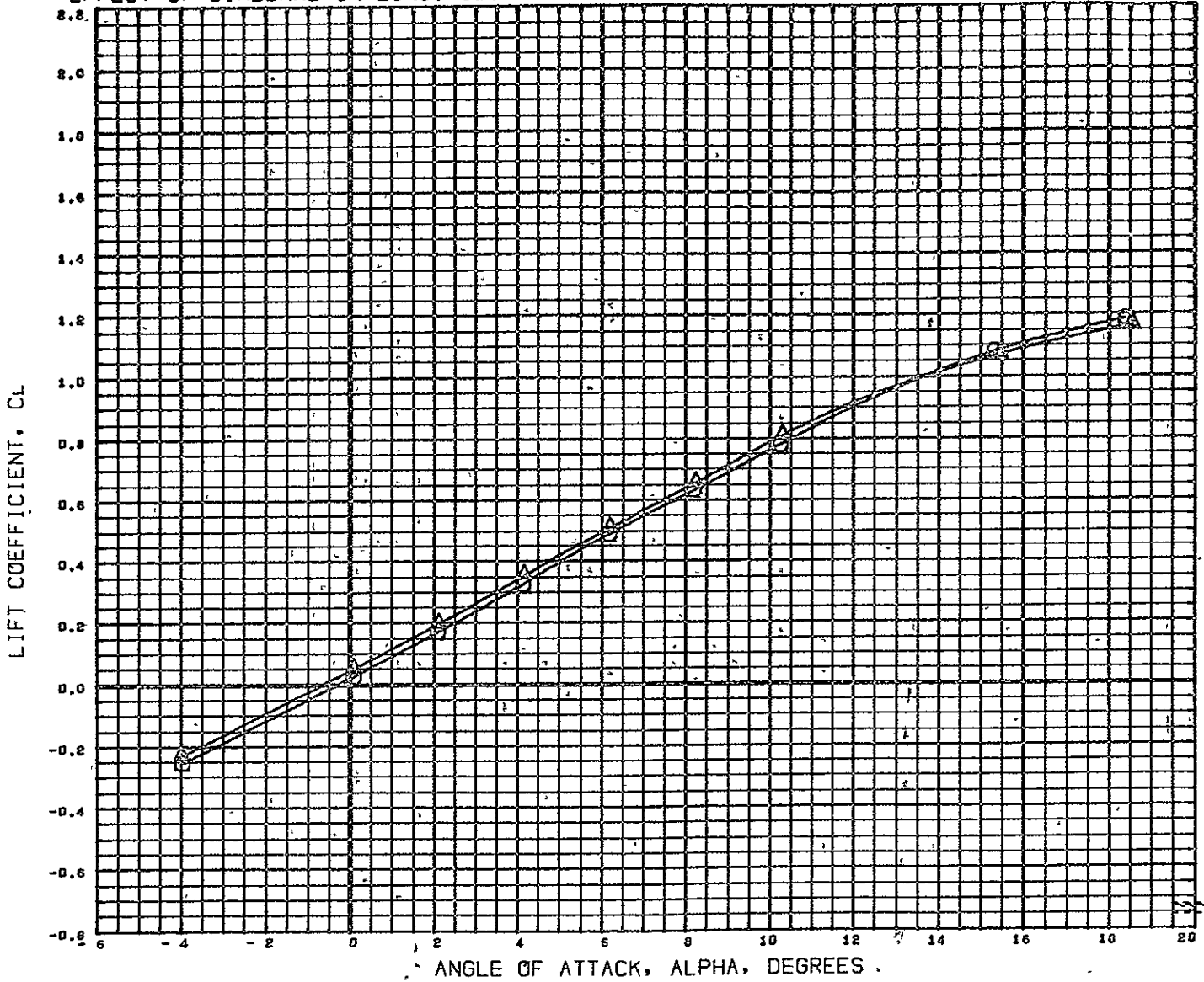
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MACH .38

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

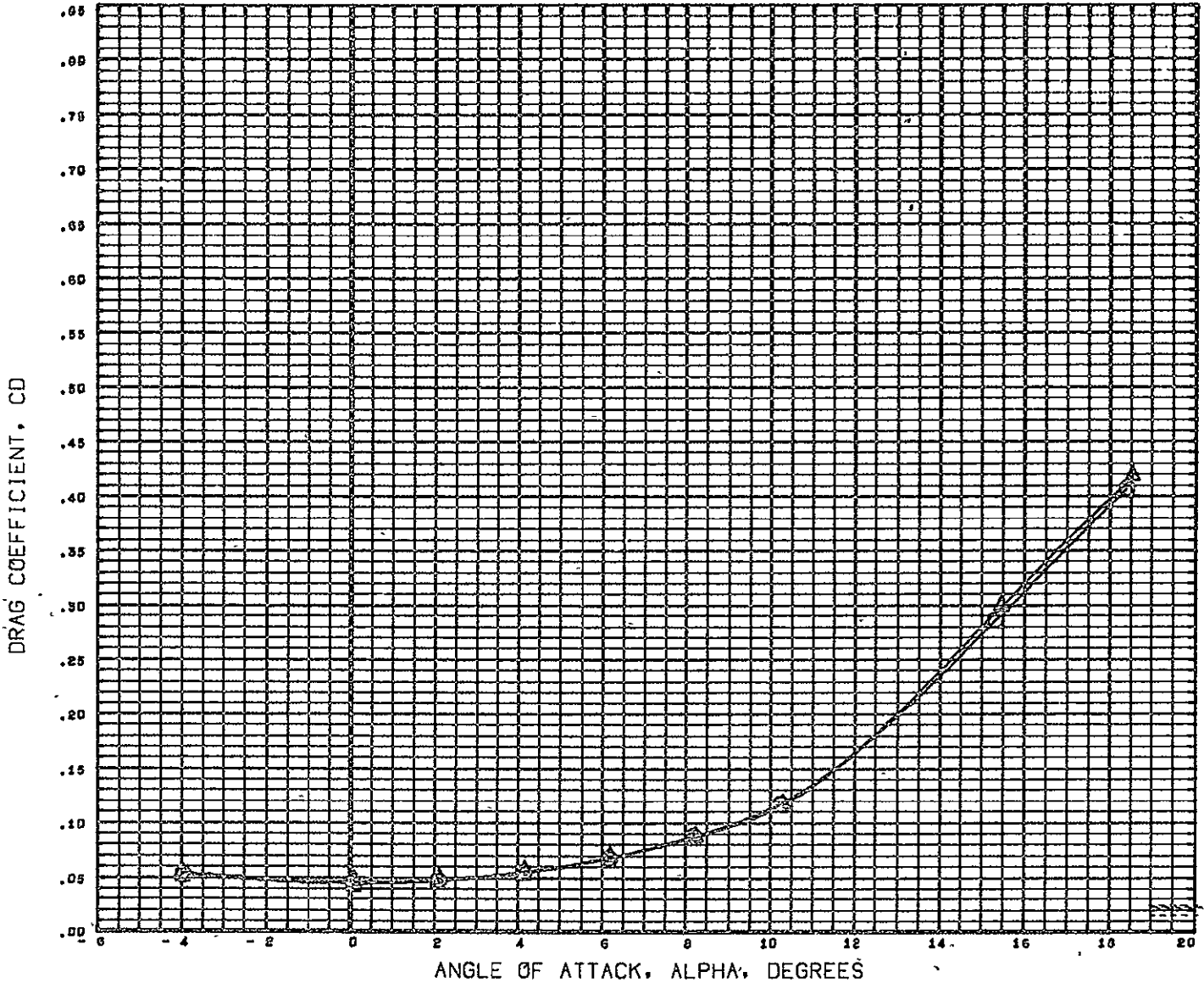


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PAGE 4

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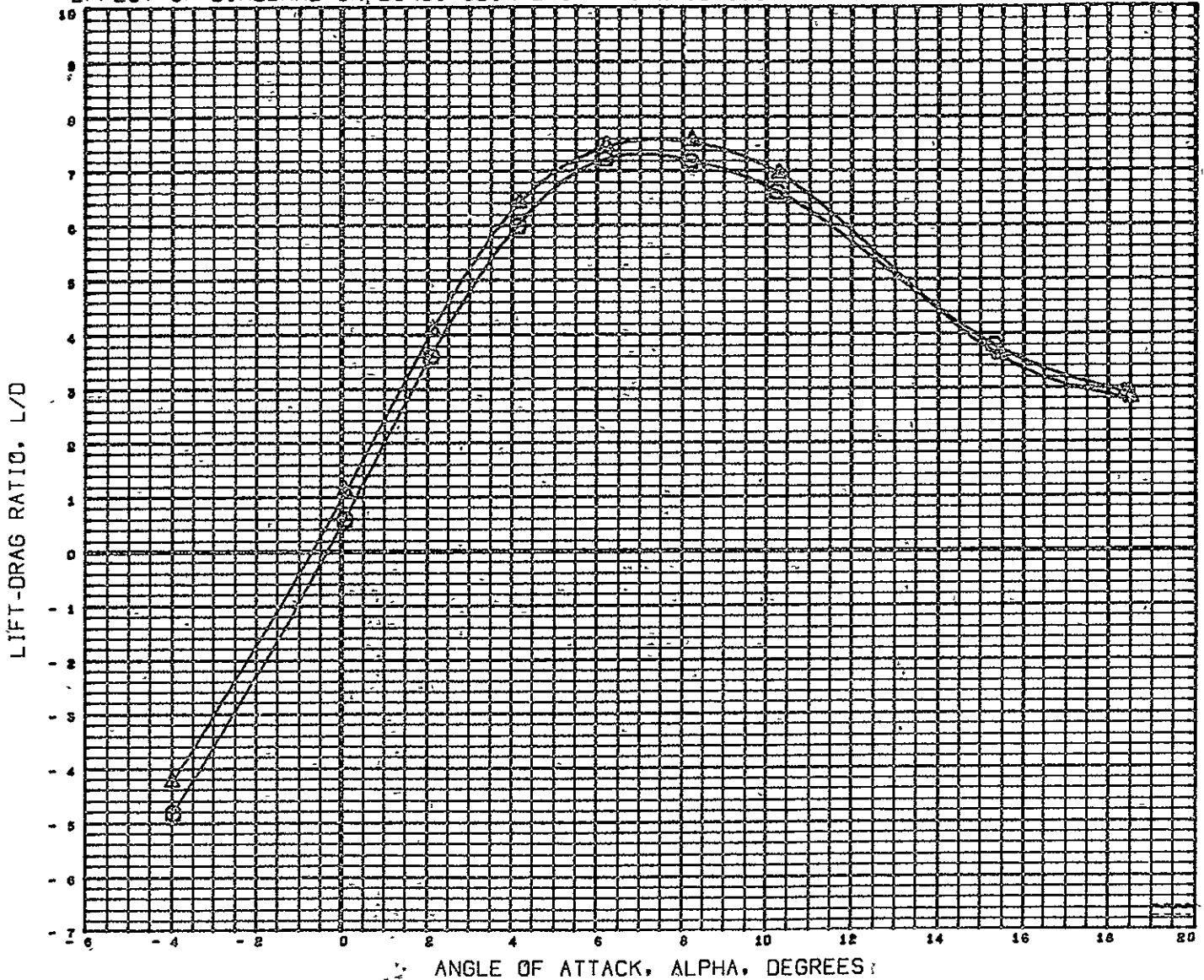


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PAGE 5

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



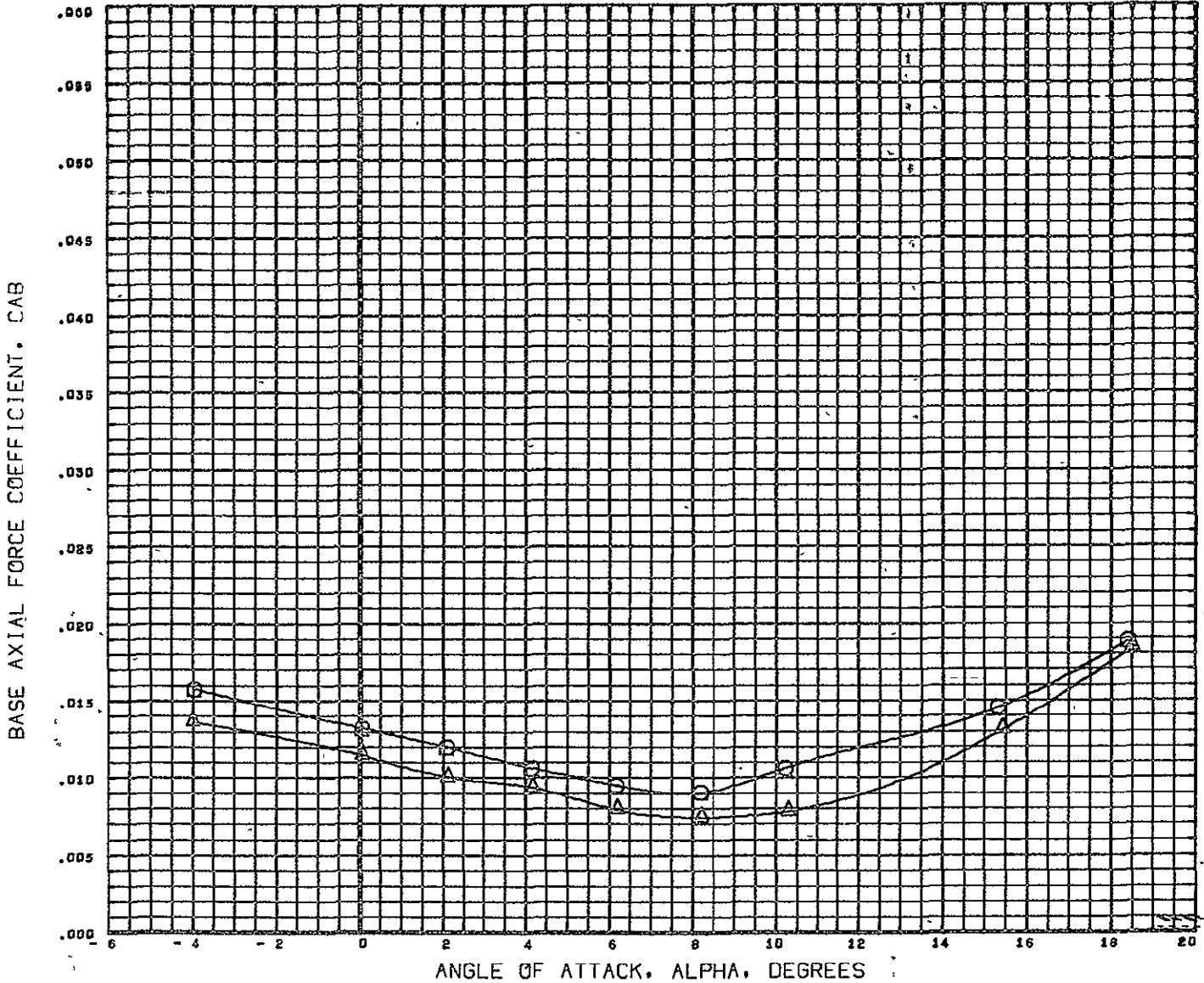
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(RN4001)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
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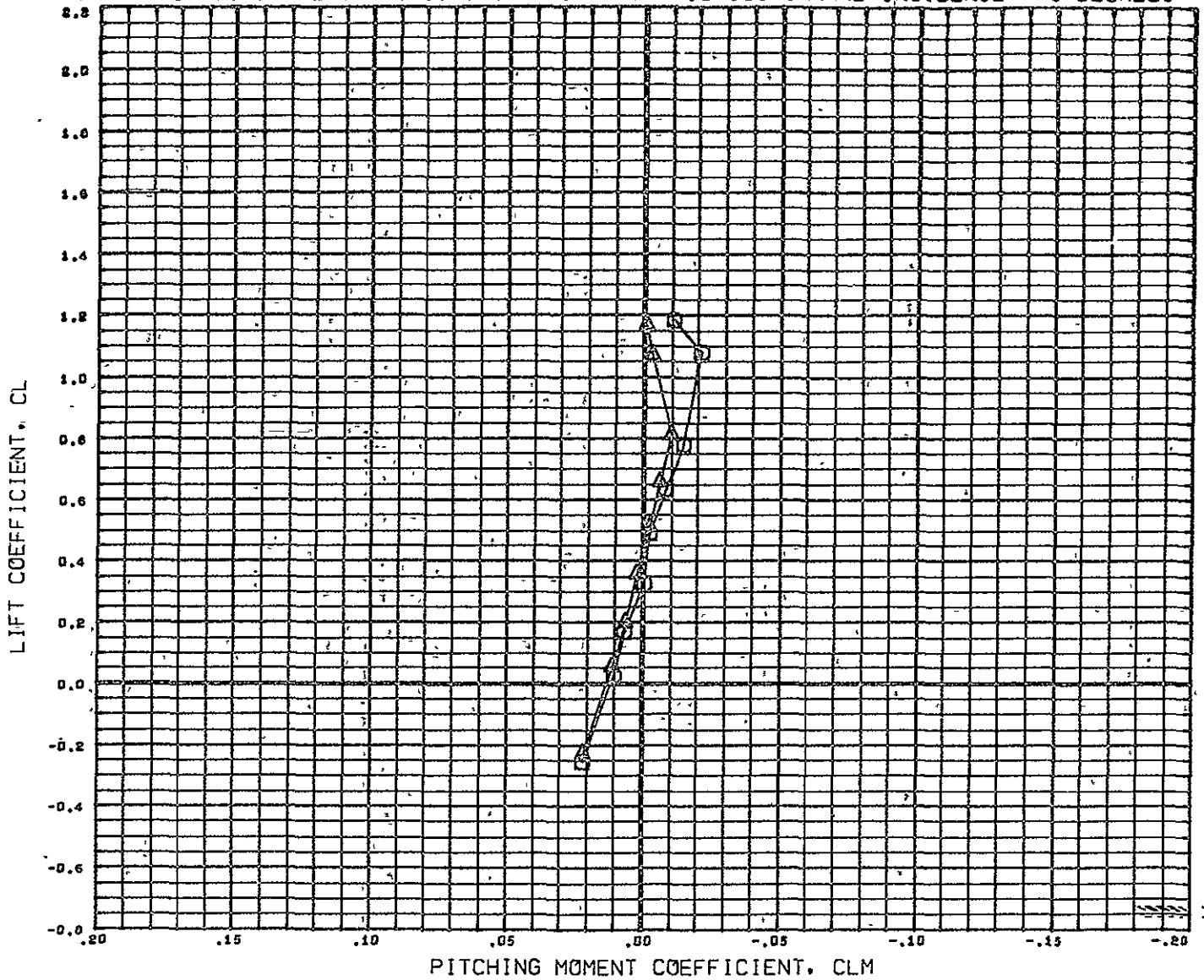
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



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(RN4001)	NSRDC-331D, NSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

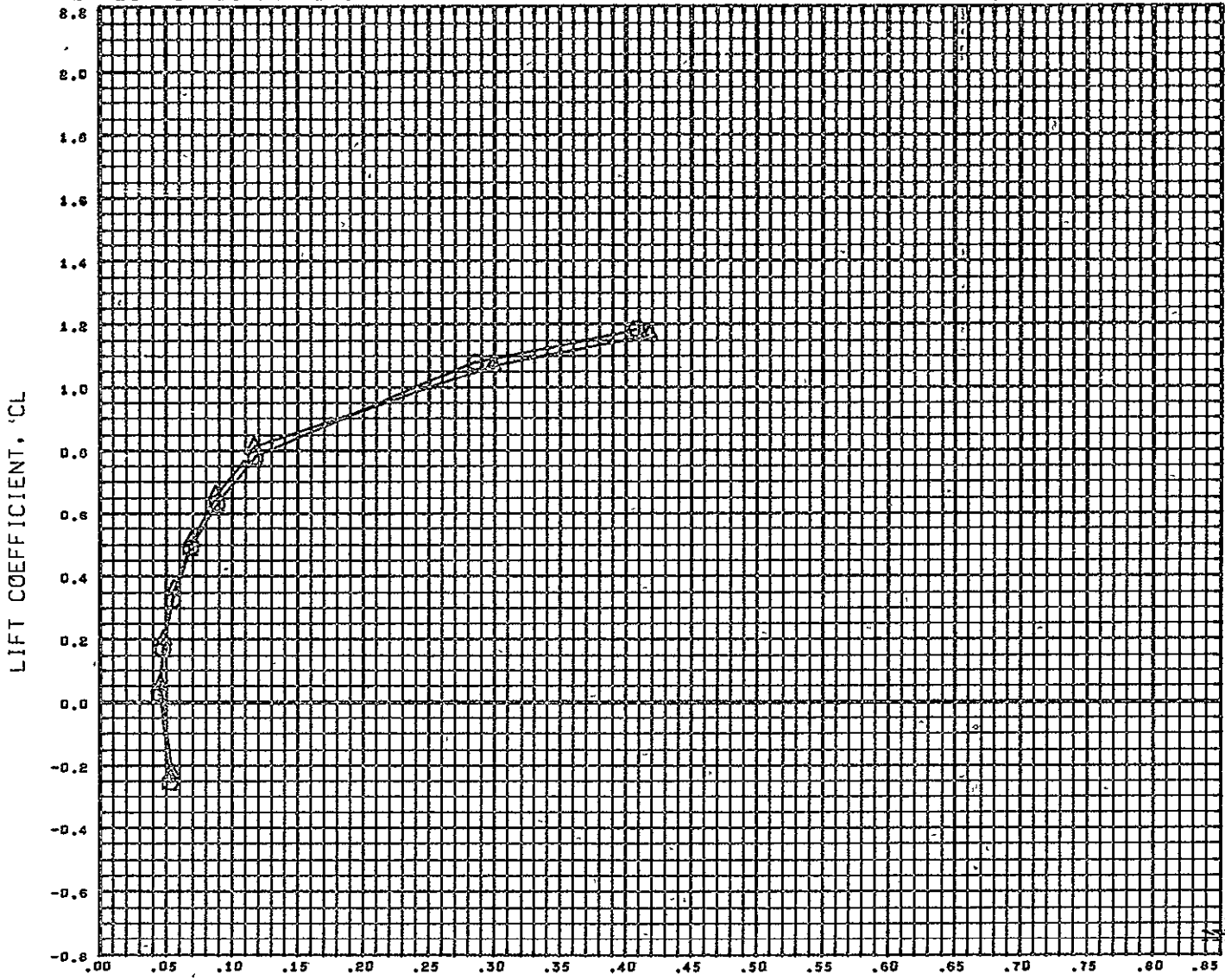


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(RN4001)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	LREF 3,4530 FEET
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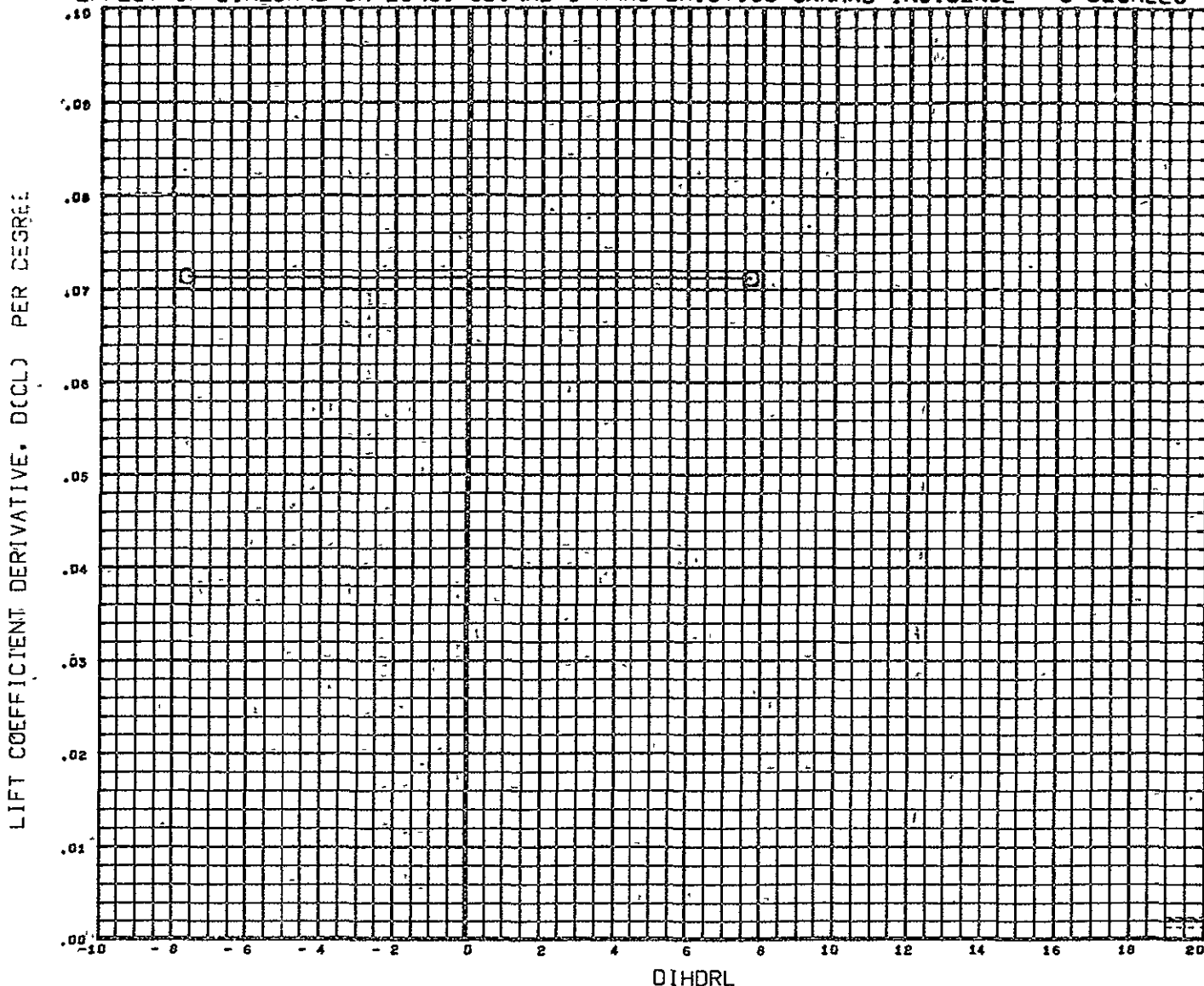
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(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
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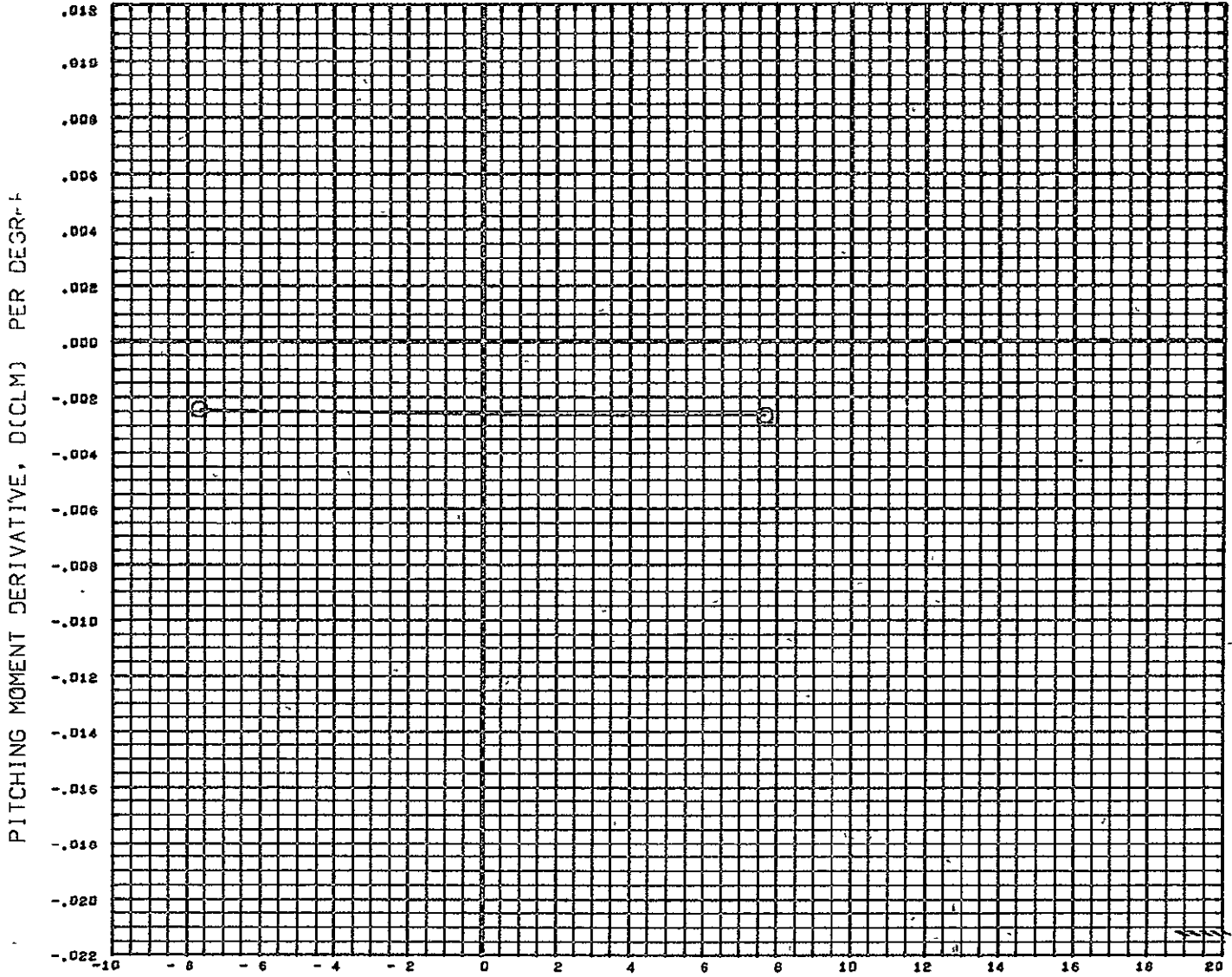
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



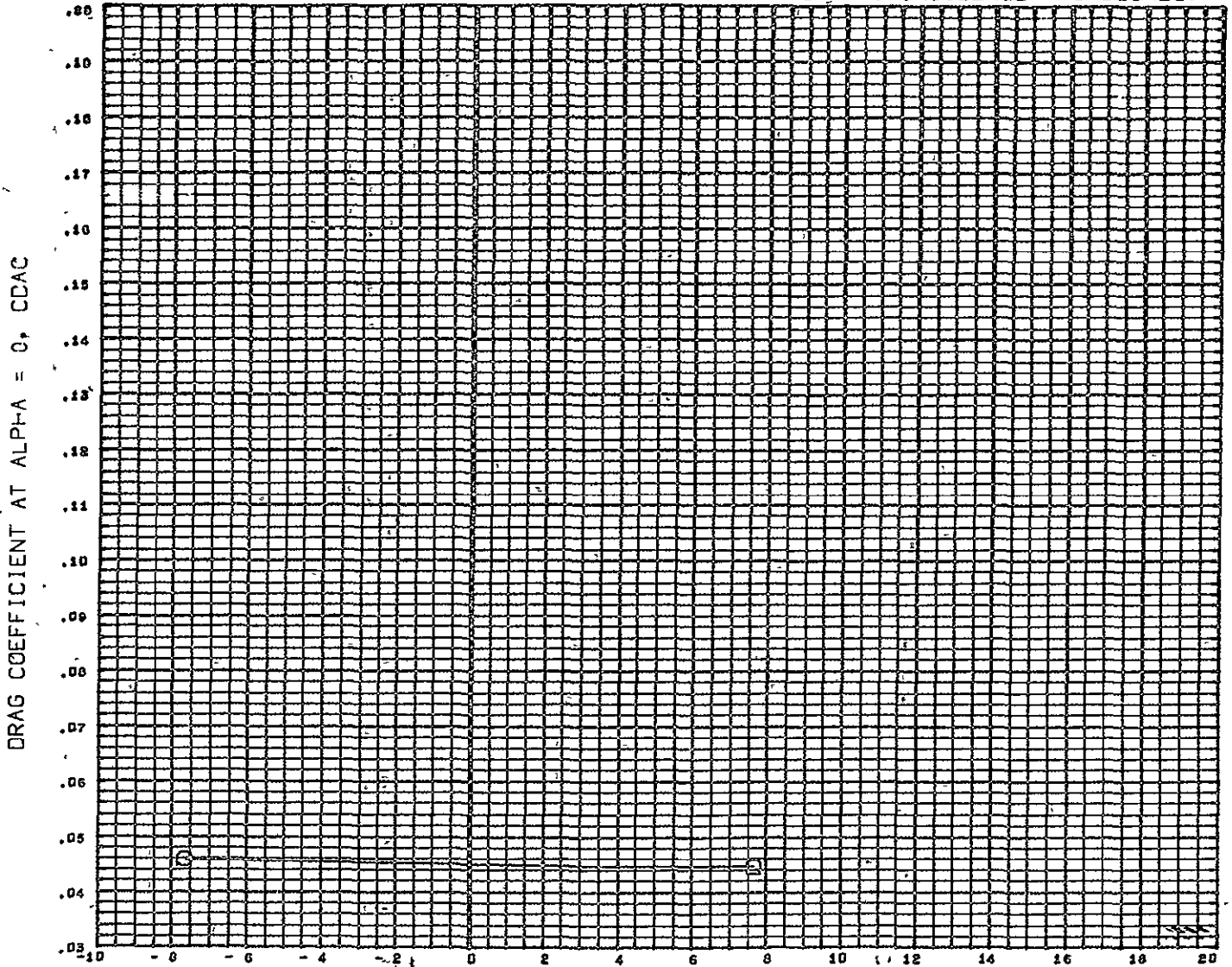
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										YHRP	0.0000	FEET
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		DATA HIST. CODE		MCI								

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



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		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
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		DATA HIST	CODE	HCI								

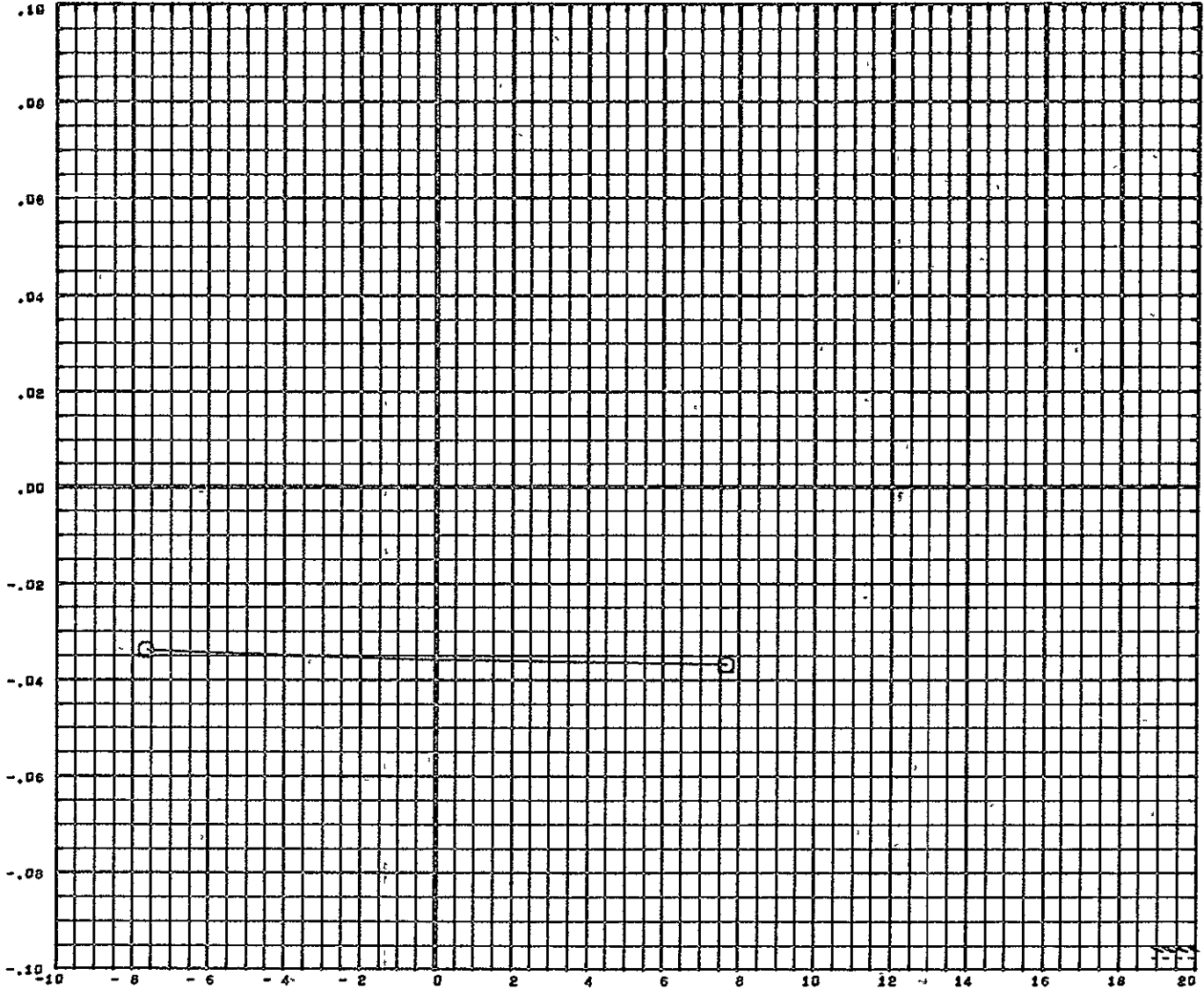
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DIHEDRAL DATA SOURCE			REFERENCE INFORMATION			
		BETA	INCIDW	INCIDC	WNGPOS	DATASET	DIHEDRAL	DATASET	DIHEDRAL	SREF	FEET	SQ.FT.
○	0.380	0.000	0.000	3.000	1.000	AN2553	7.660	AN4001	7.660	1.3550	3.4530	3.4530
		0.000	0.000	0.000	0.000					2.5950	0.0000	0.0187
		0.000	0.000	0.000	1.000					0.0150		0.0150
		DATA HIST. CODE HF										

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

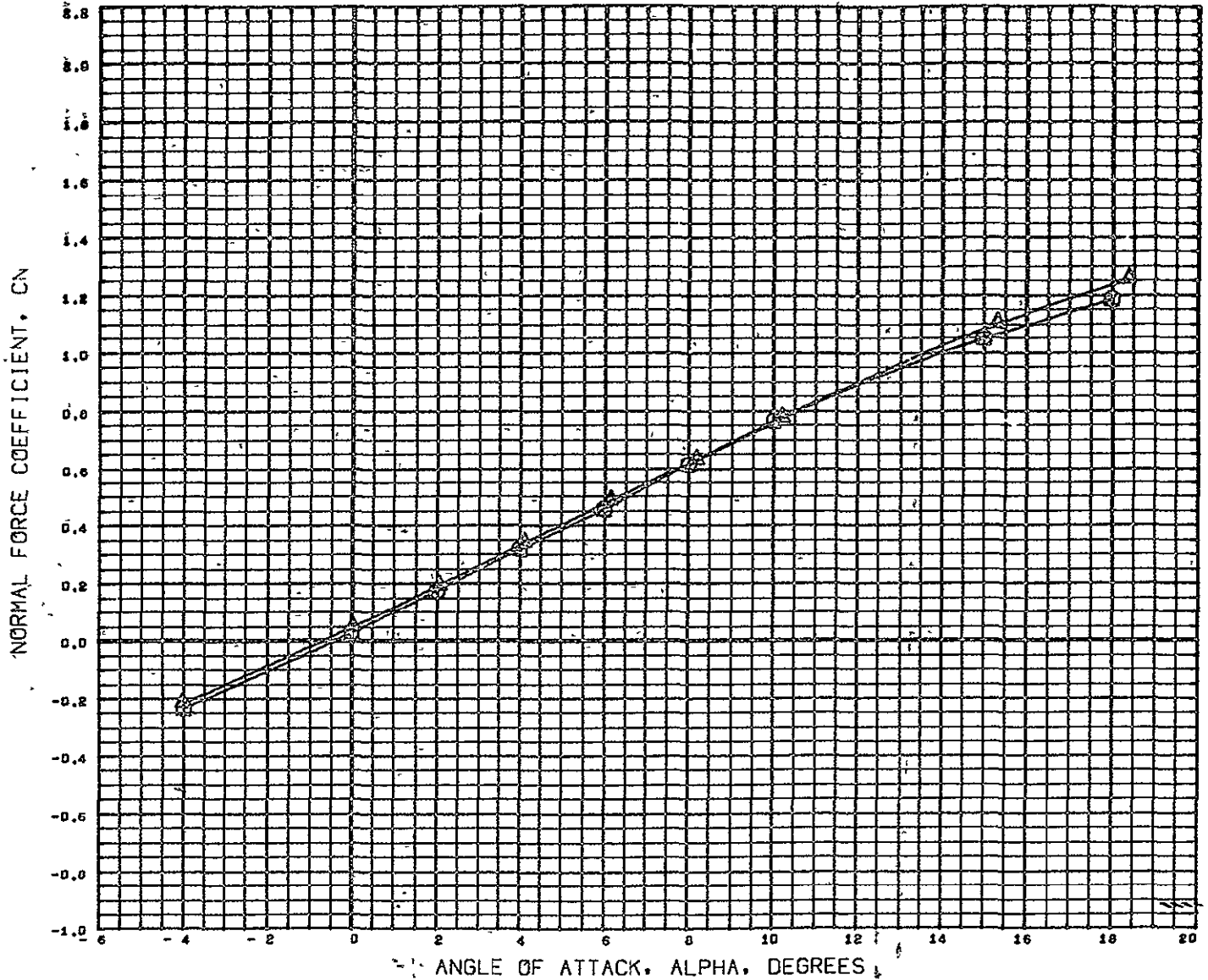
DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO LIFT, $\partial C_{m} / \partial C_{L}$



DIHEDRAL

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
D	0.400	ALPHA	0.000	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE		HCI		ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

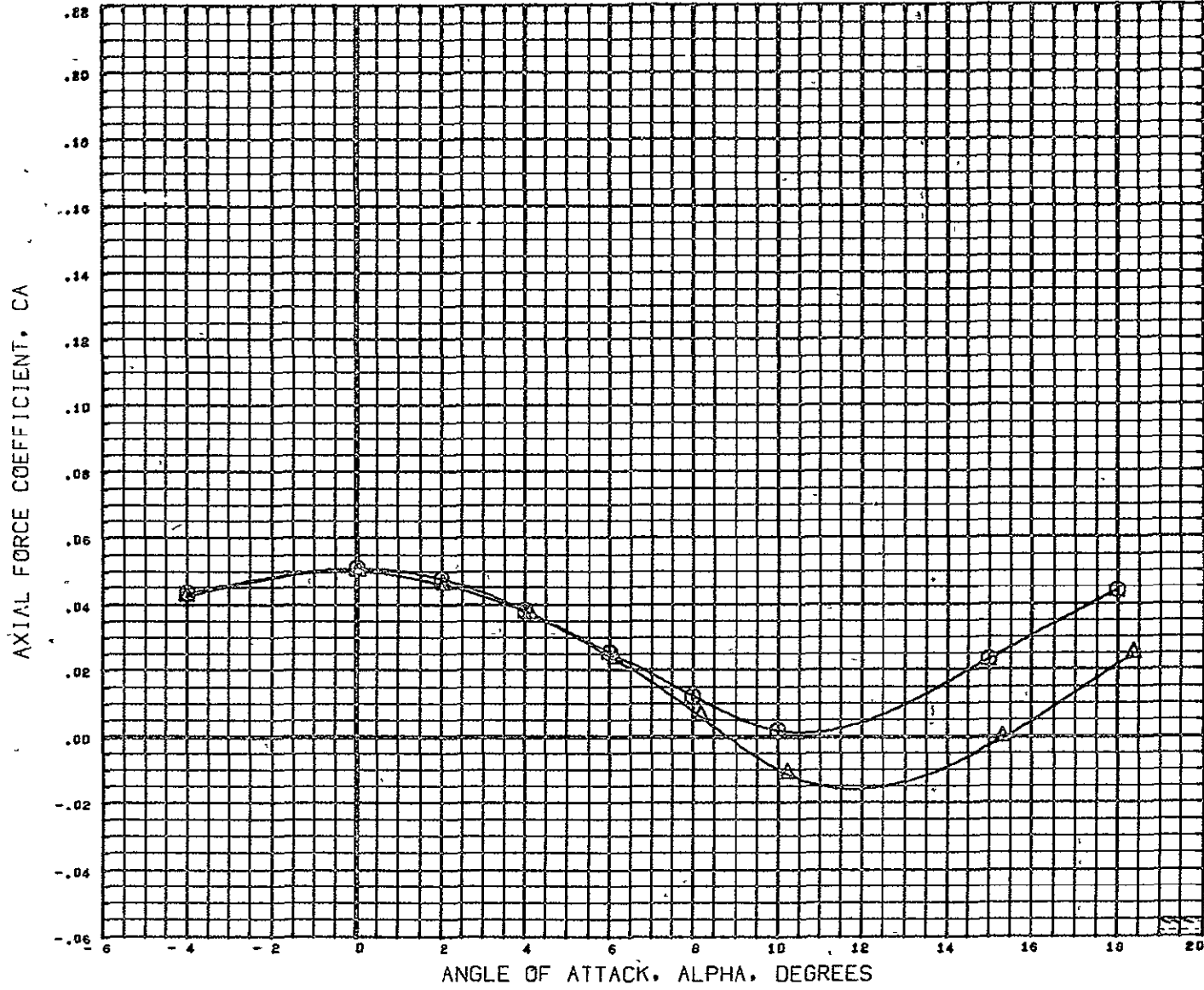


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(HN2525)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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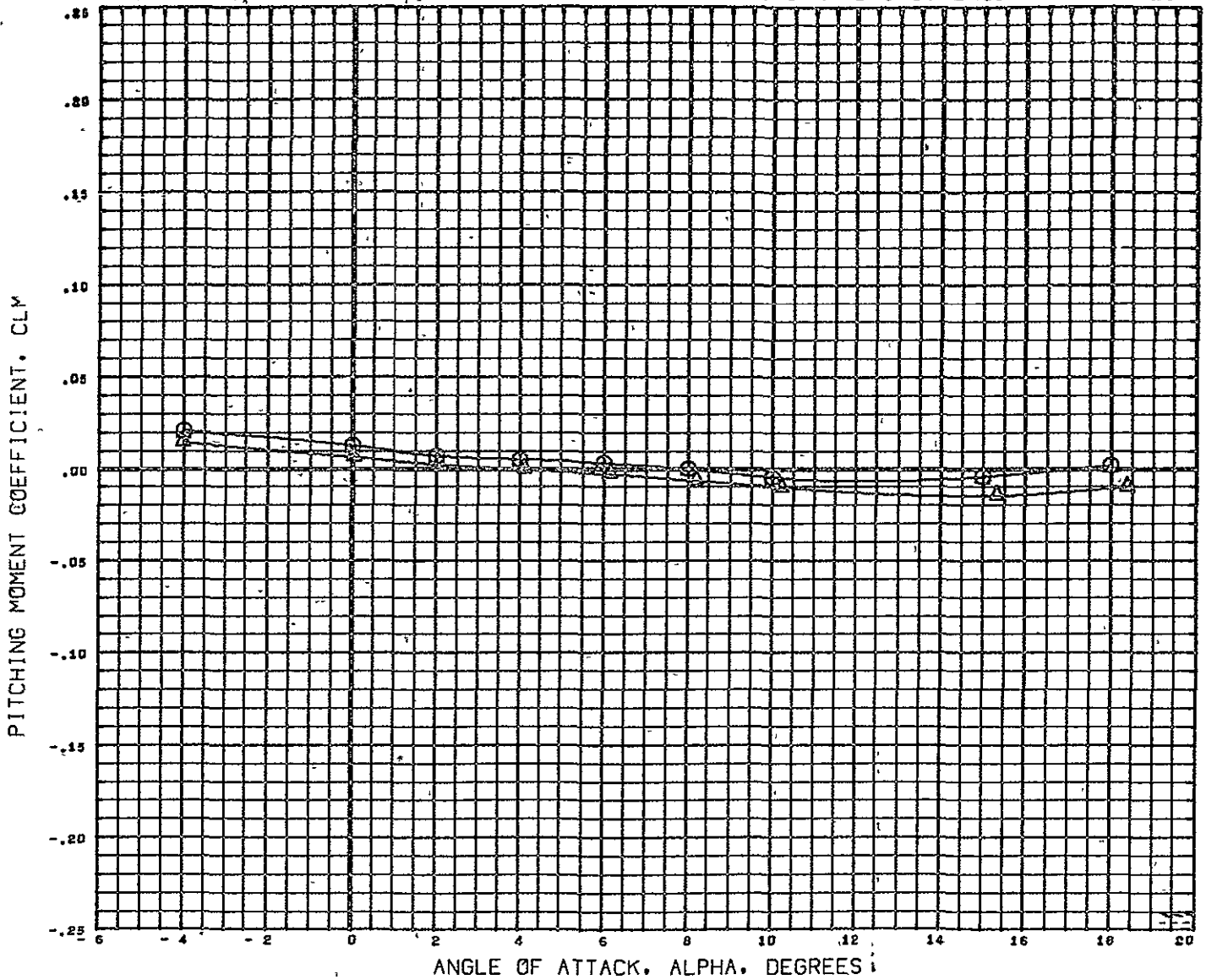
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4DD5)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT
(HN2525)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

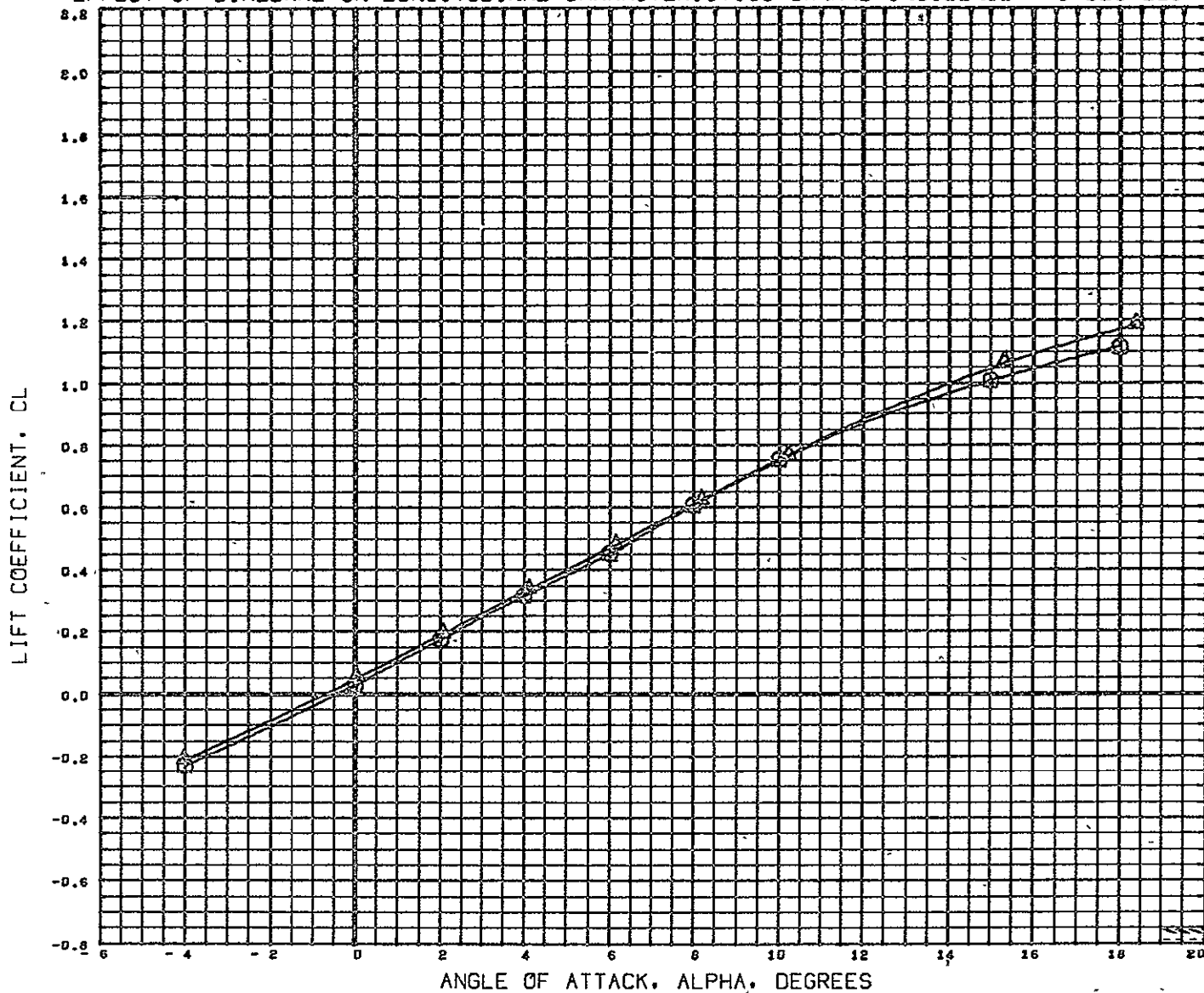


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(GN4005) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.650	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
(HN2525) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

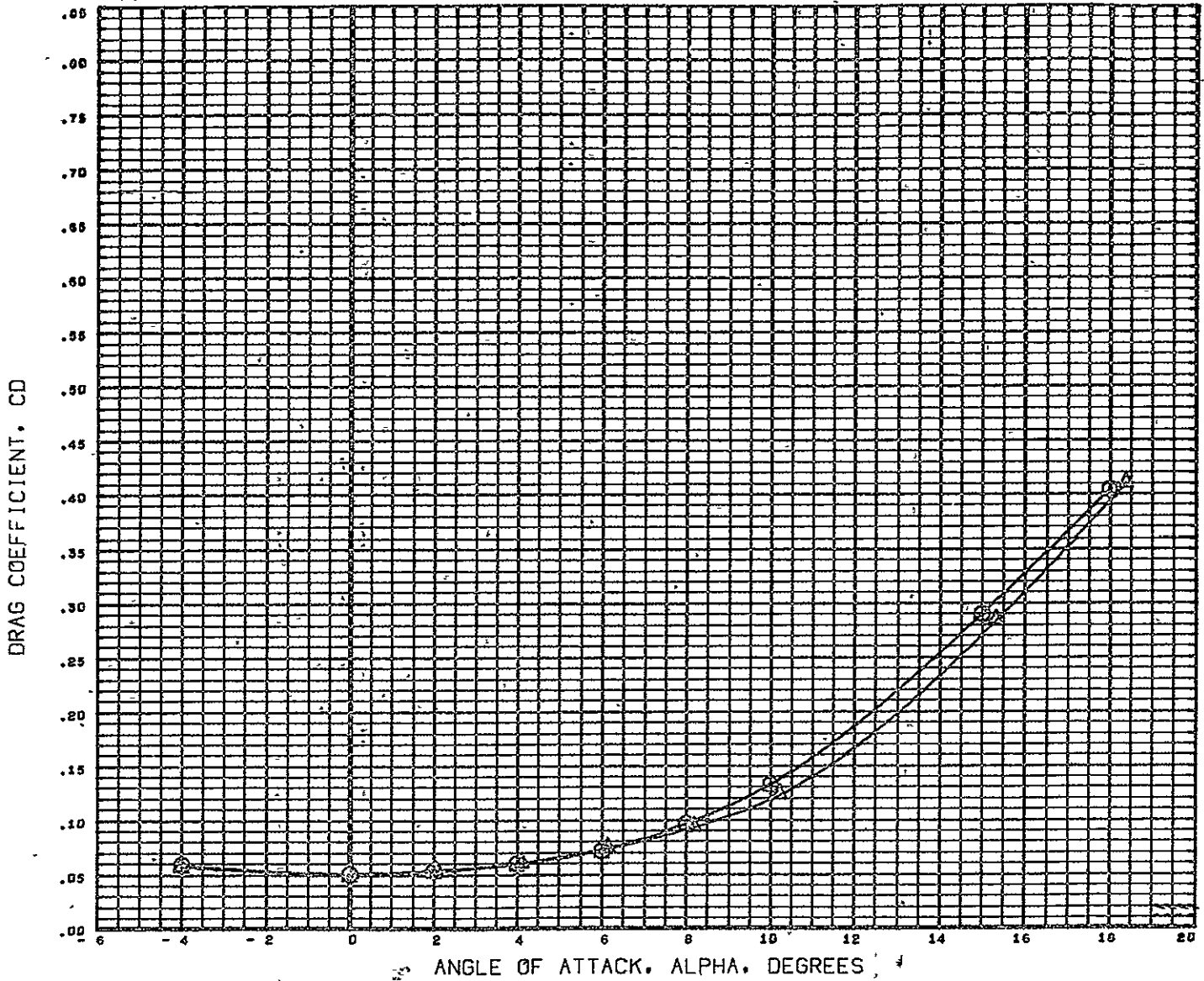


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(HN2525)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0197 FEET
						SCALE 0.0150 SCALE

MACH .40

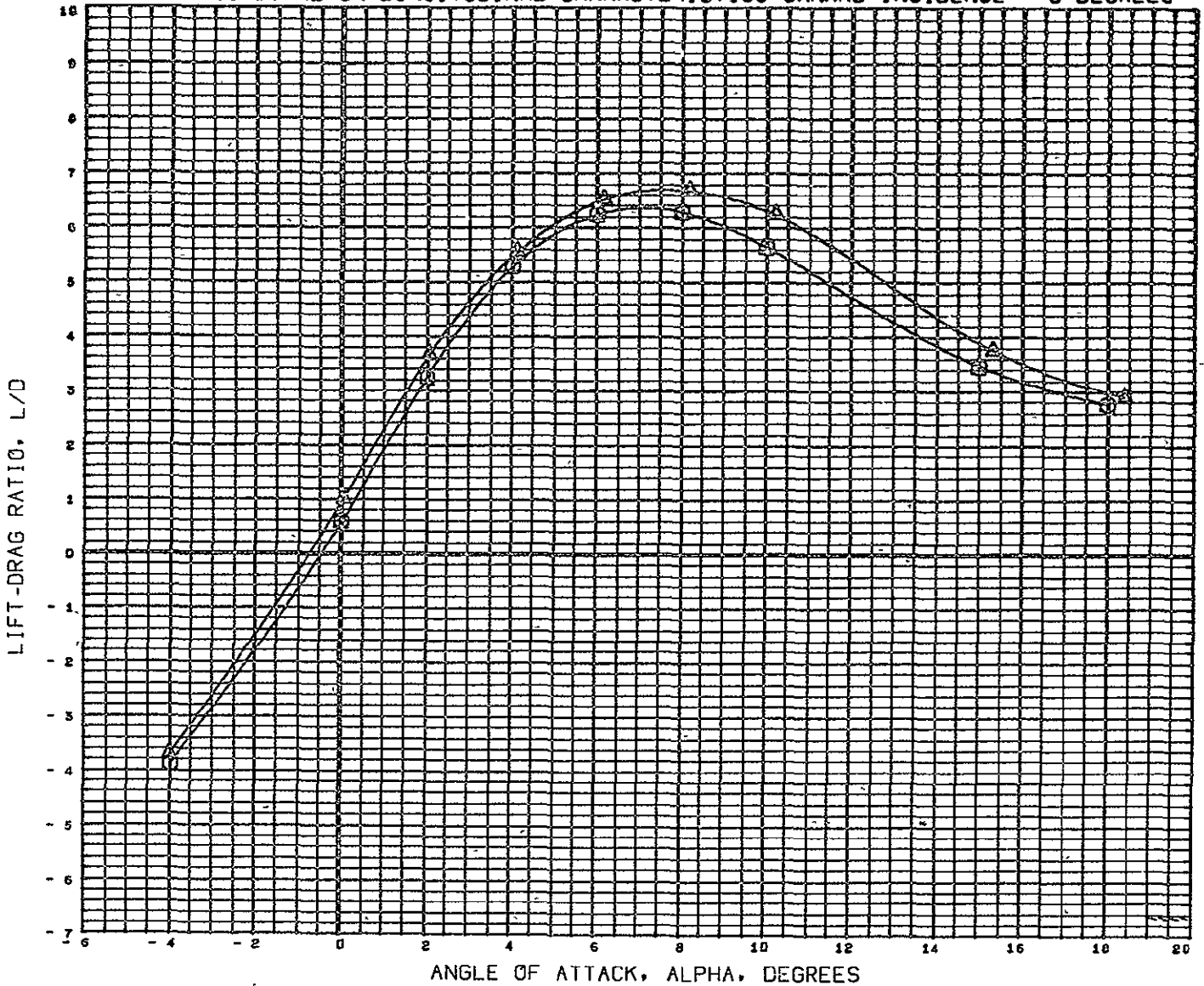
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2525)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

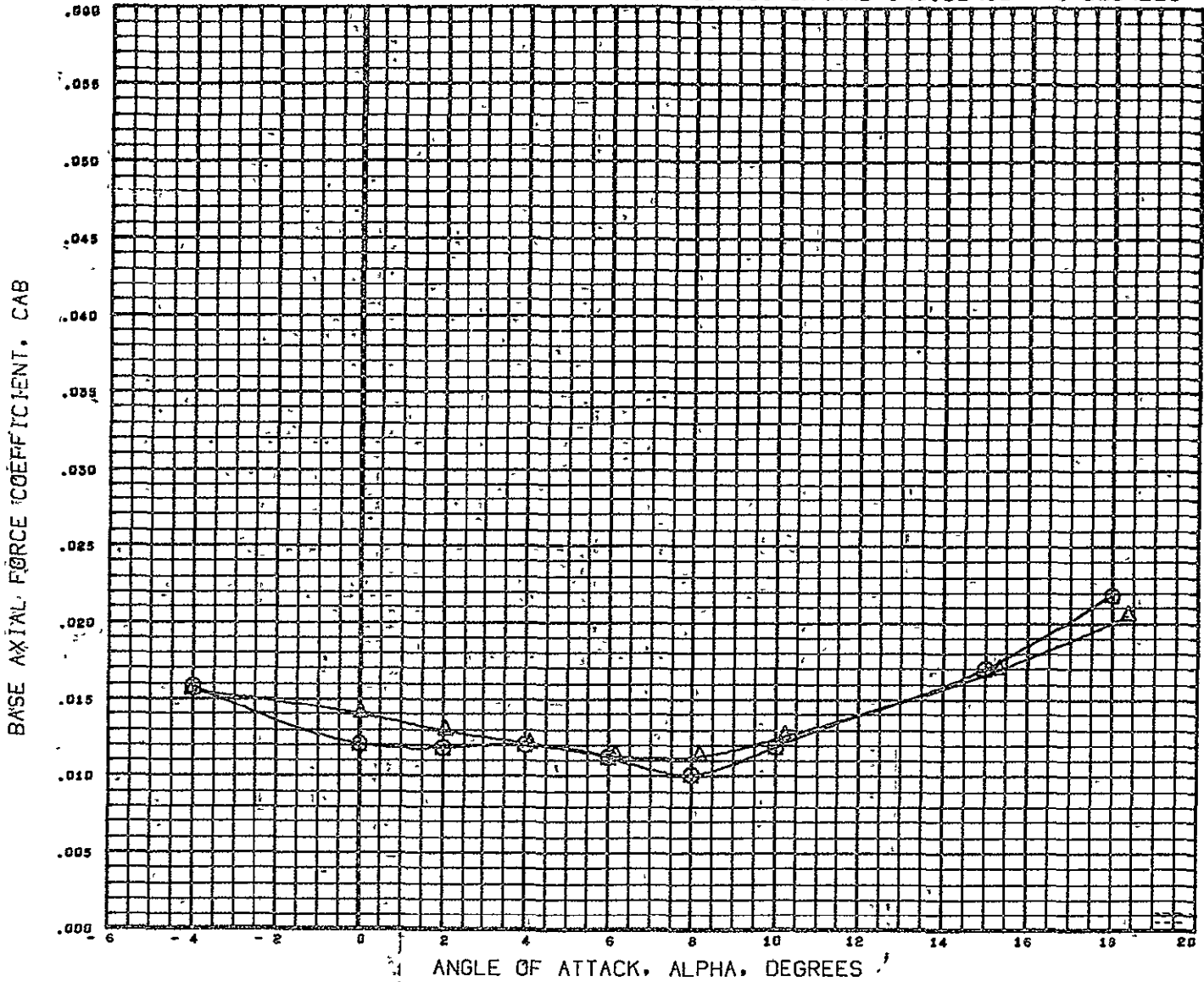
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CANARD POS	WING POS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(HN2525)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

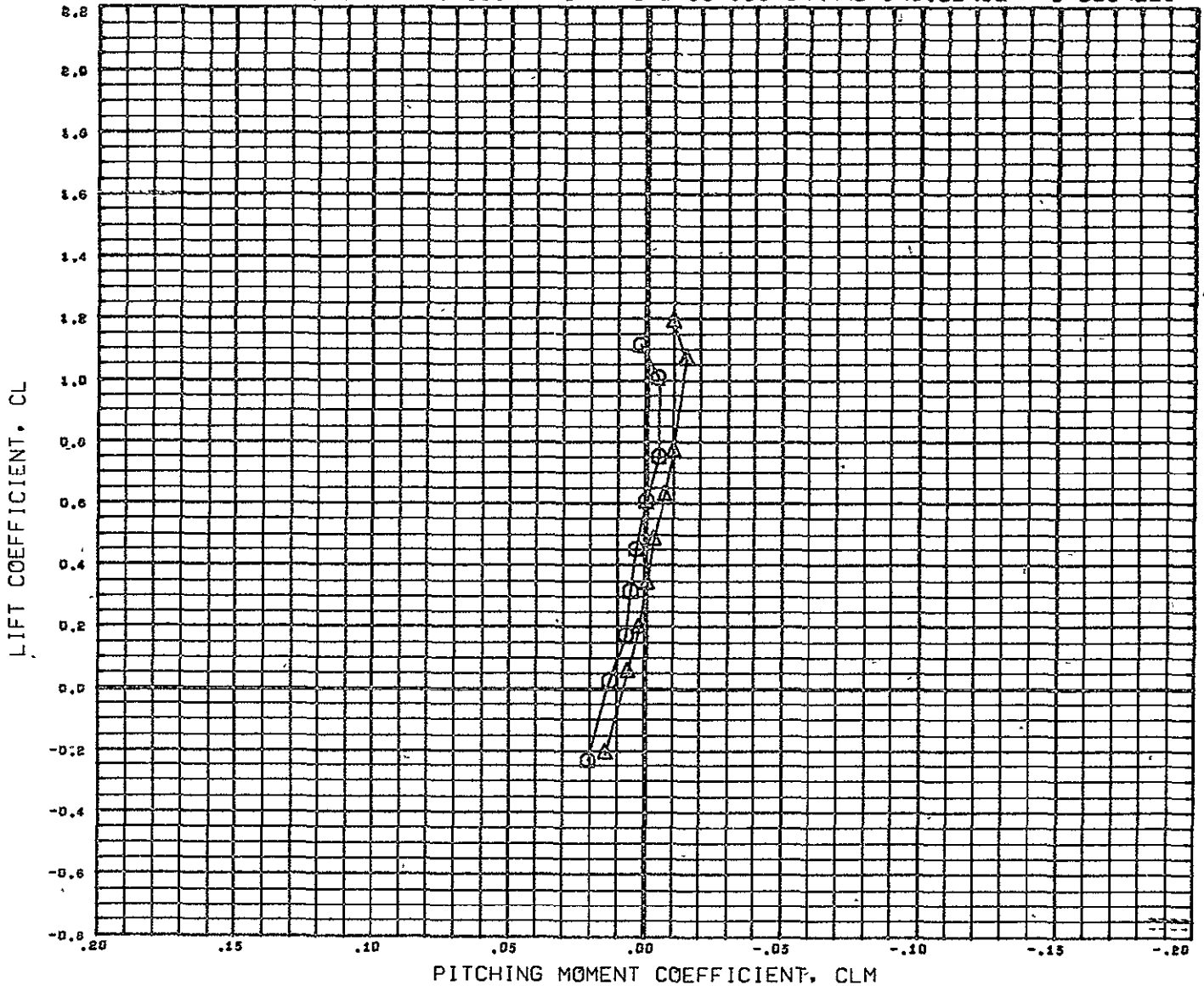


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	.DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2925)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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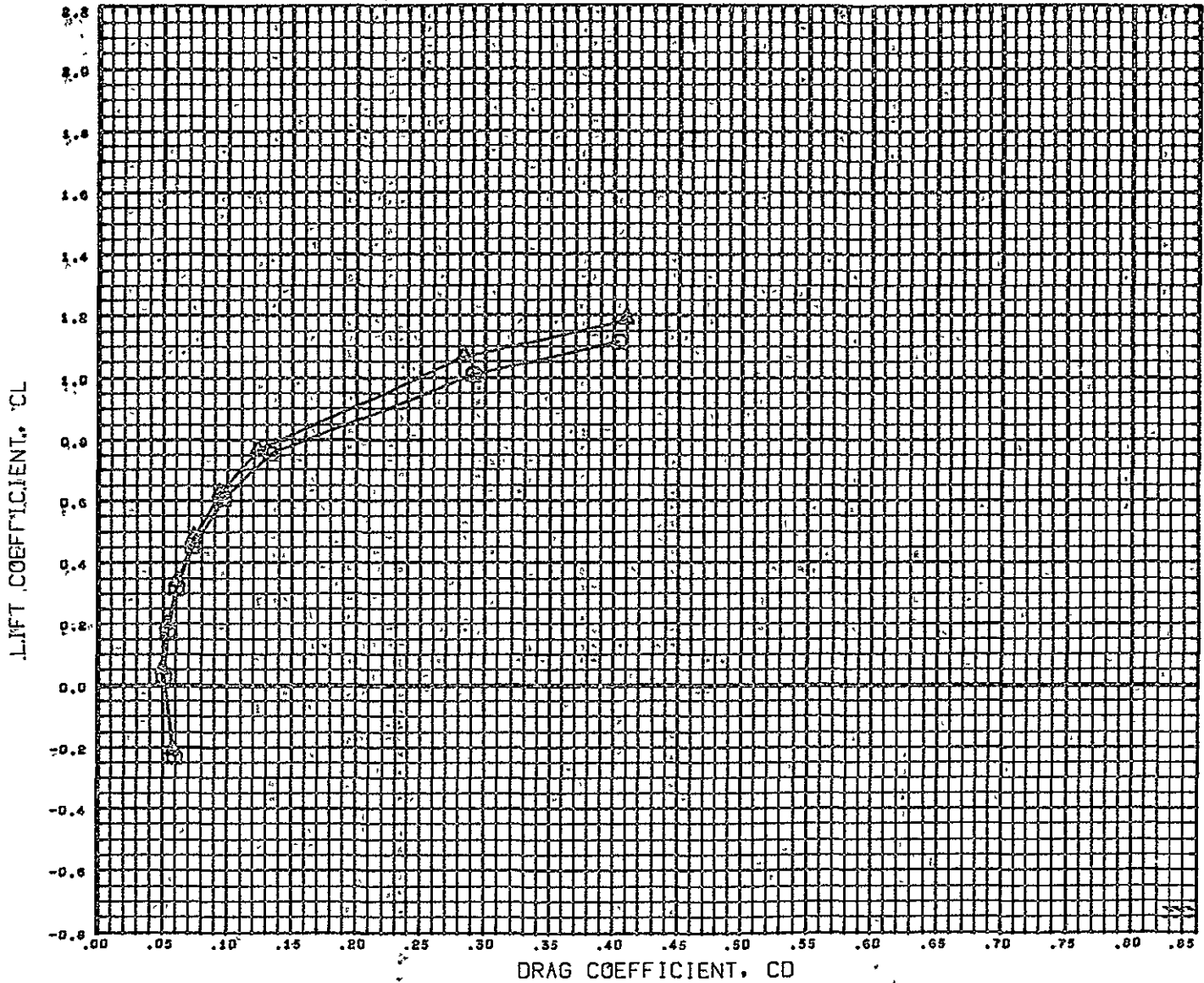
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2525)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

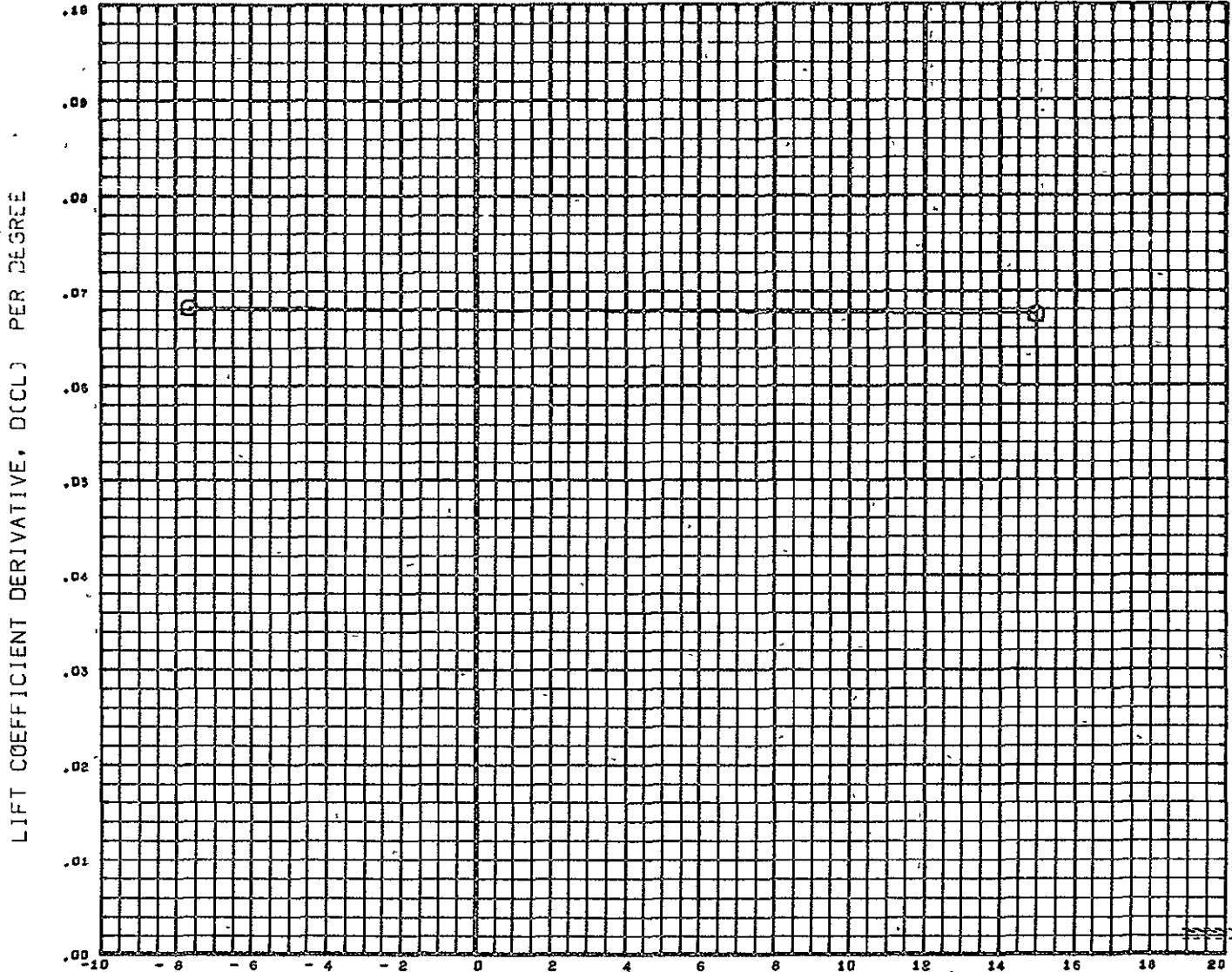


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(N2525)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

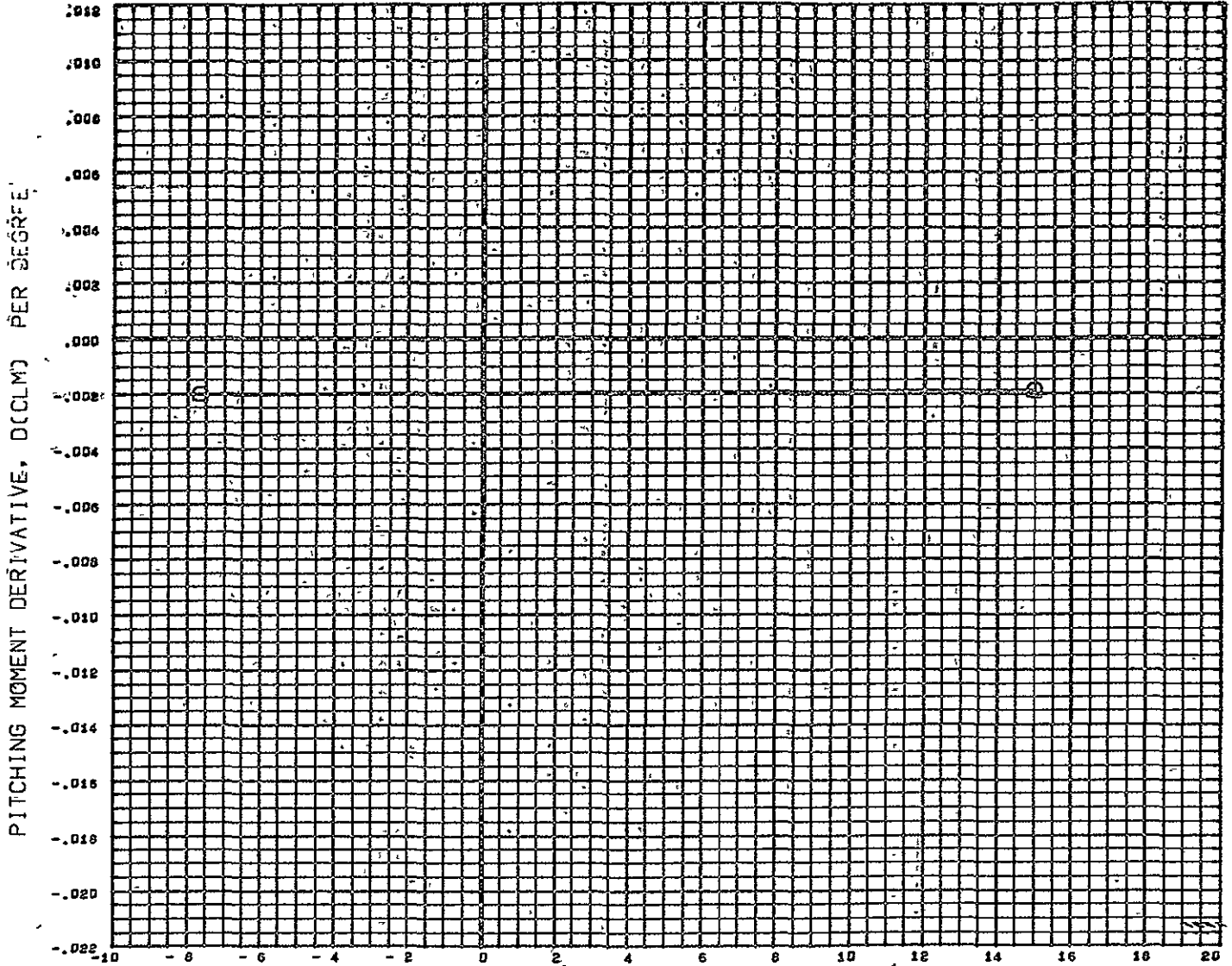
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



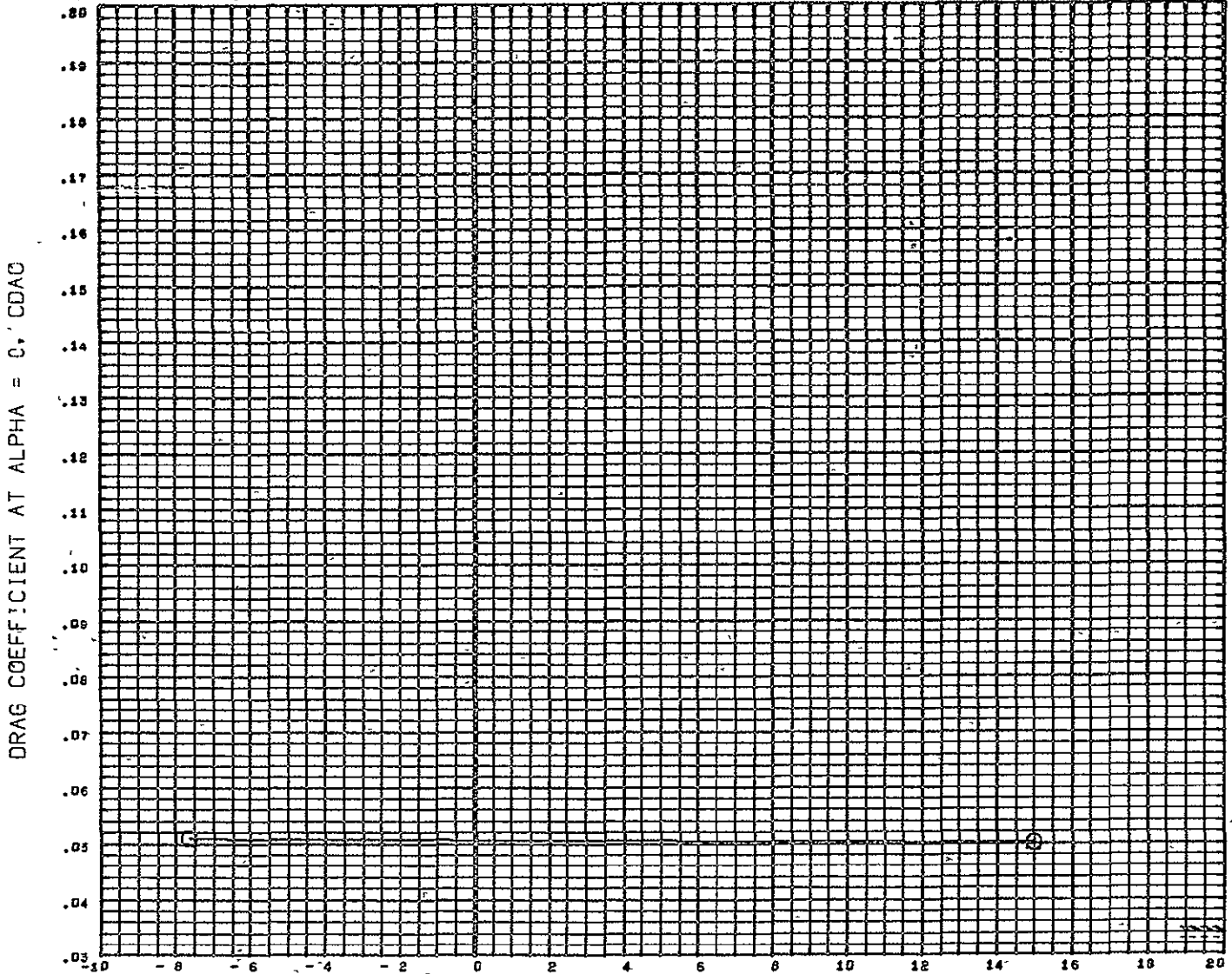
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
0	0.400	BETA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	80.FT.
		INCIDW	0.000	AILRON	0.000	PN4005	- 7.660	PN2525	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	MCI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	HACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	BETA	0.000	INCIDC	3.000	DATASET	DINHRL	DATASET	DINHRL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	PN4005	- 7.660	PN2525	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	NCI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

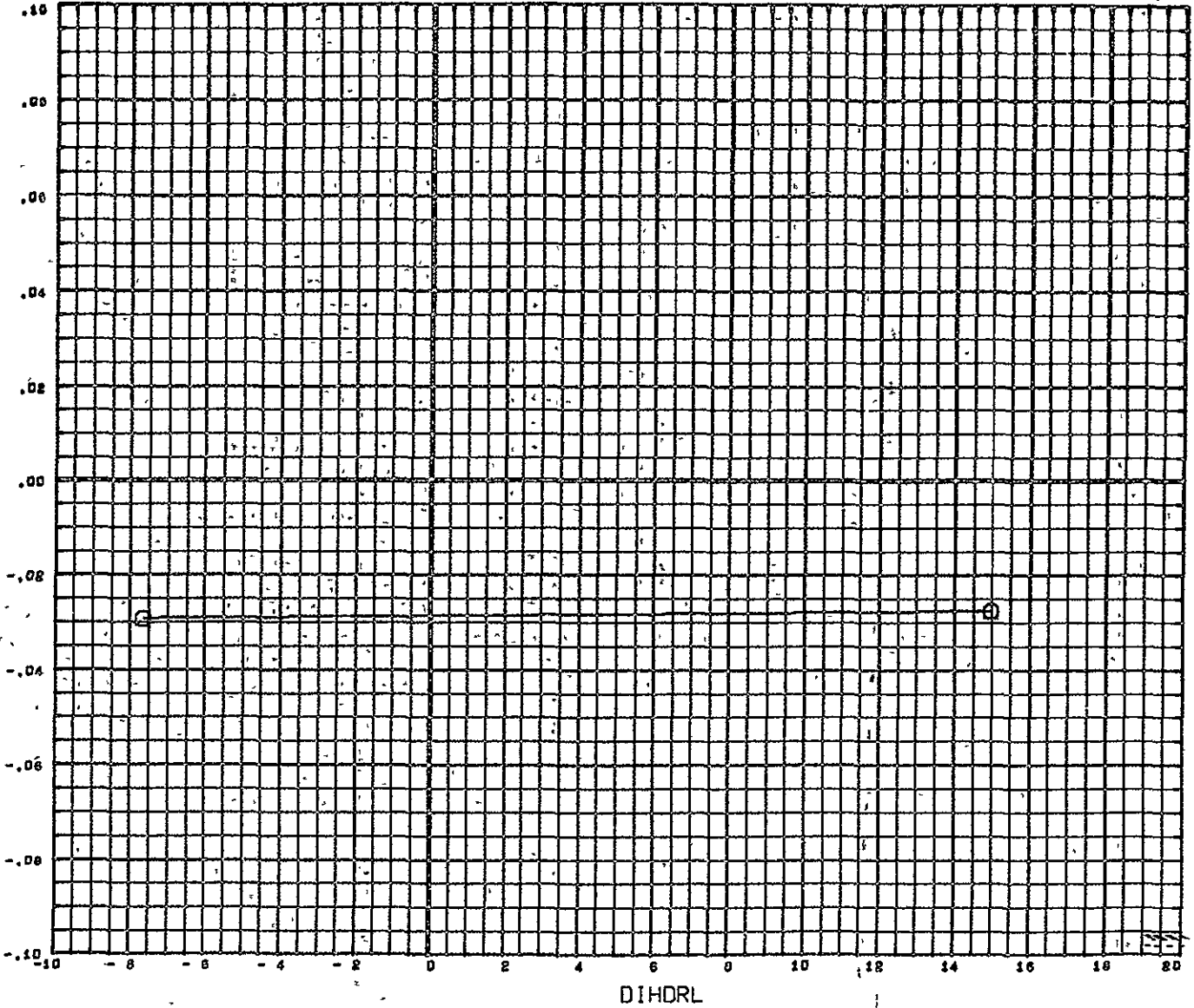


DIHDRL

SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION												
		BETA	INCIDC	AILRON	ELEVTR	DIHDRL	DIHDRL	DIHDRL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	sq.FT.	FEET	FEET	FEET	FEET	SCALE
O	0.399	0.000	3.000	0.000	0.000	DN4005	7.660	AN2525	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150					
		INCIDW	0.000	WNGPOS	1.000																
		CANARD	0.000																		
		RUDDER	0.000																		
		CNDPOS	1.000																		
		DATA HIST. CODE		MF#A																	

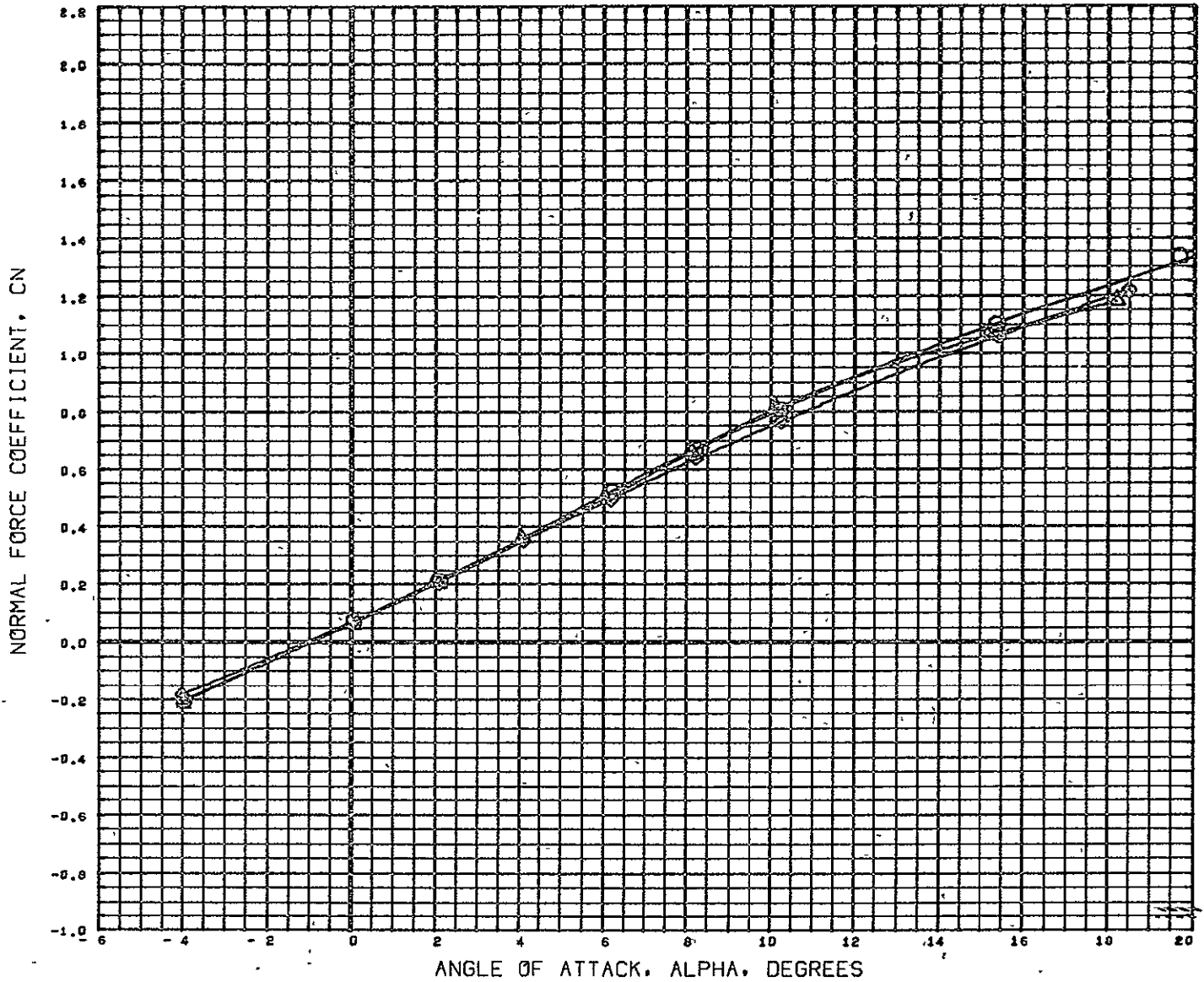
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD, INCIDENCE = 3 DEGREES

DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO CLIFF: CG. V/CG.



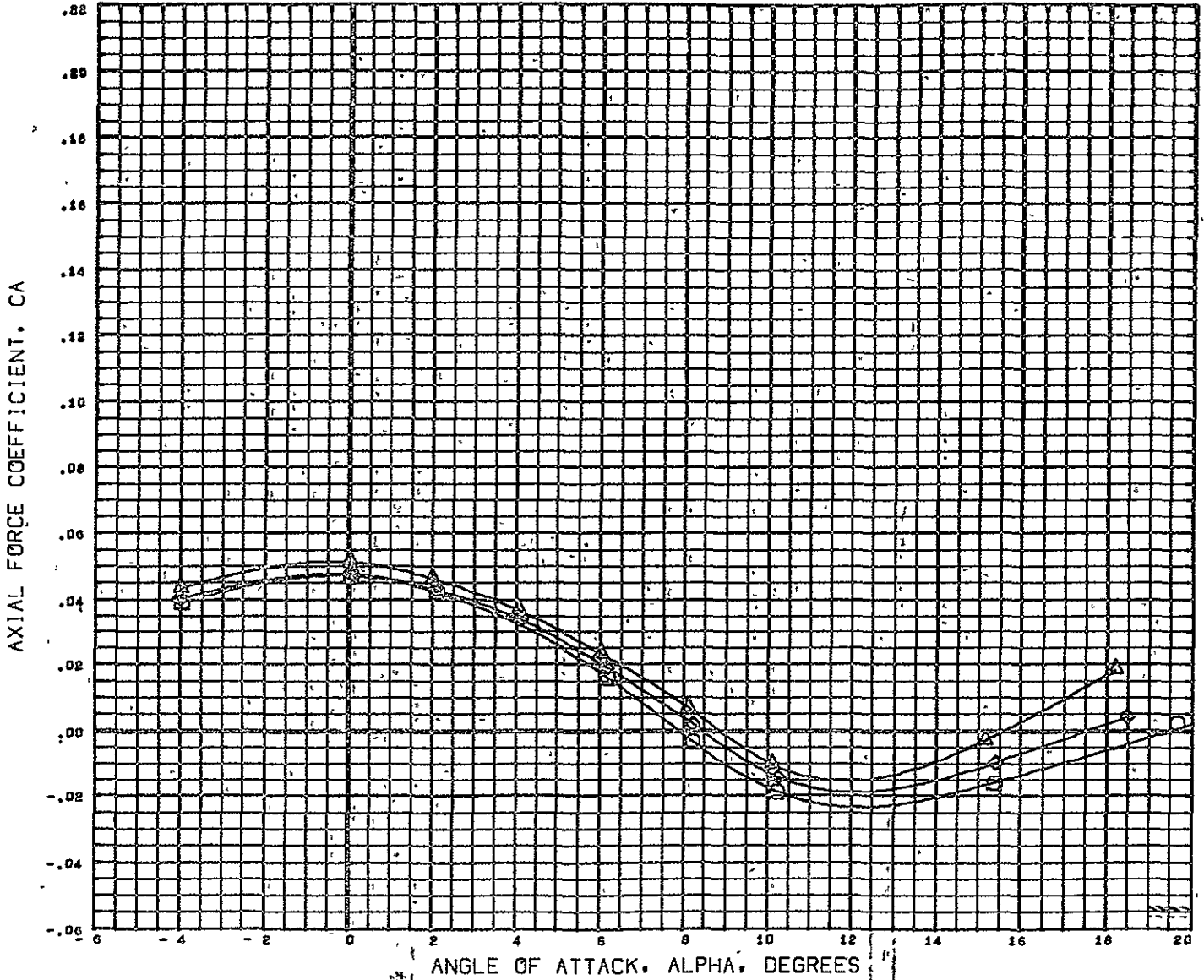
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	0.400	ALPHA	0.000	BETA	0.000	SREF	1.3550	80. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		AILERON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MCI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



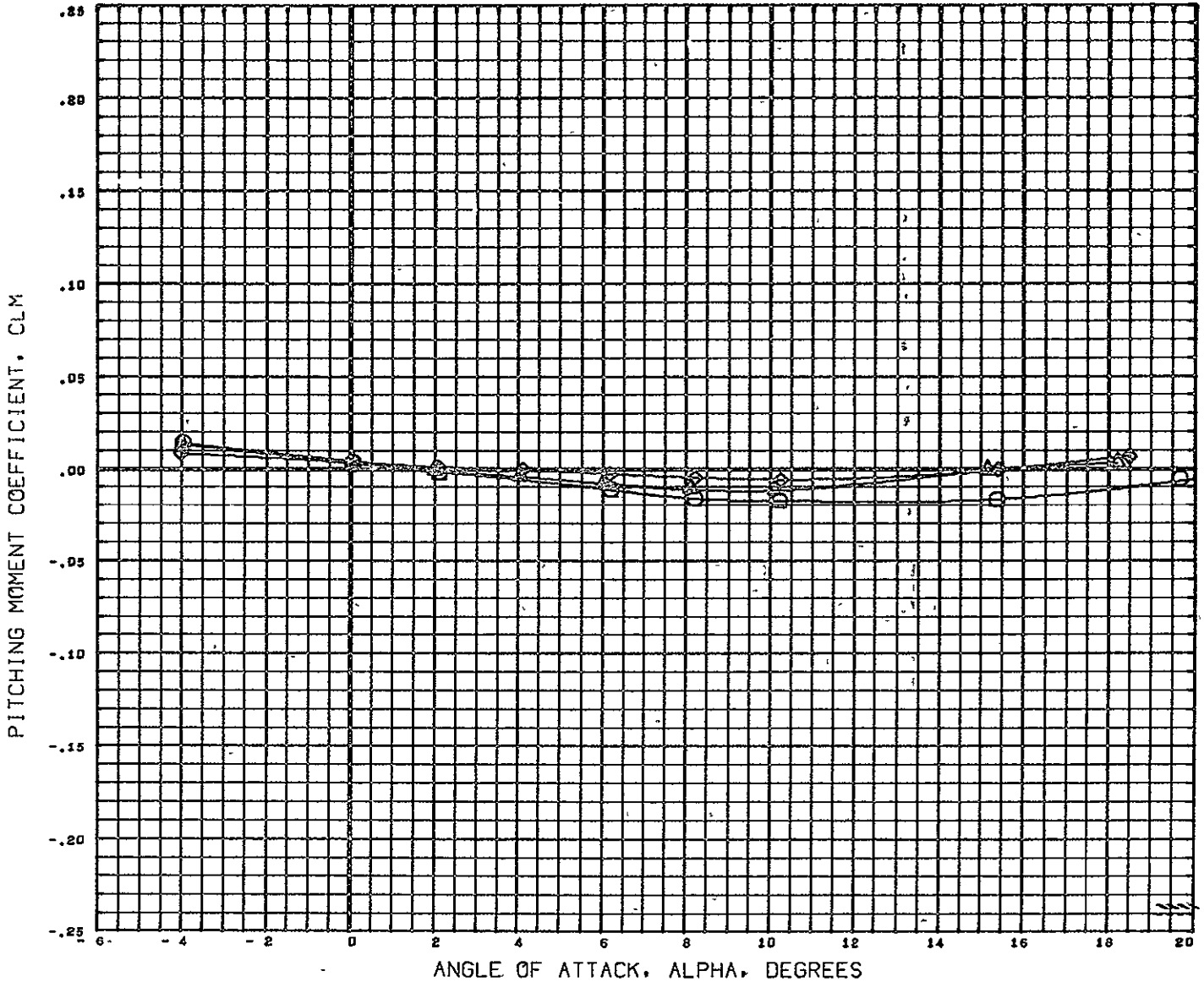
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2517)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{HN2001}	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
{RN4013}	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
{HN2517}	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

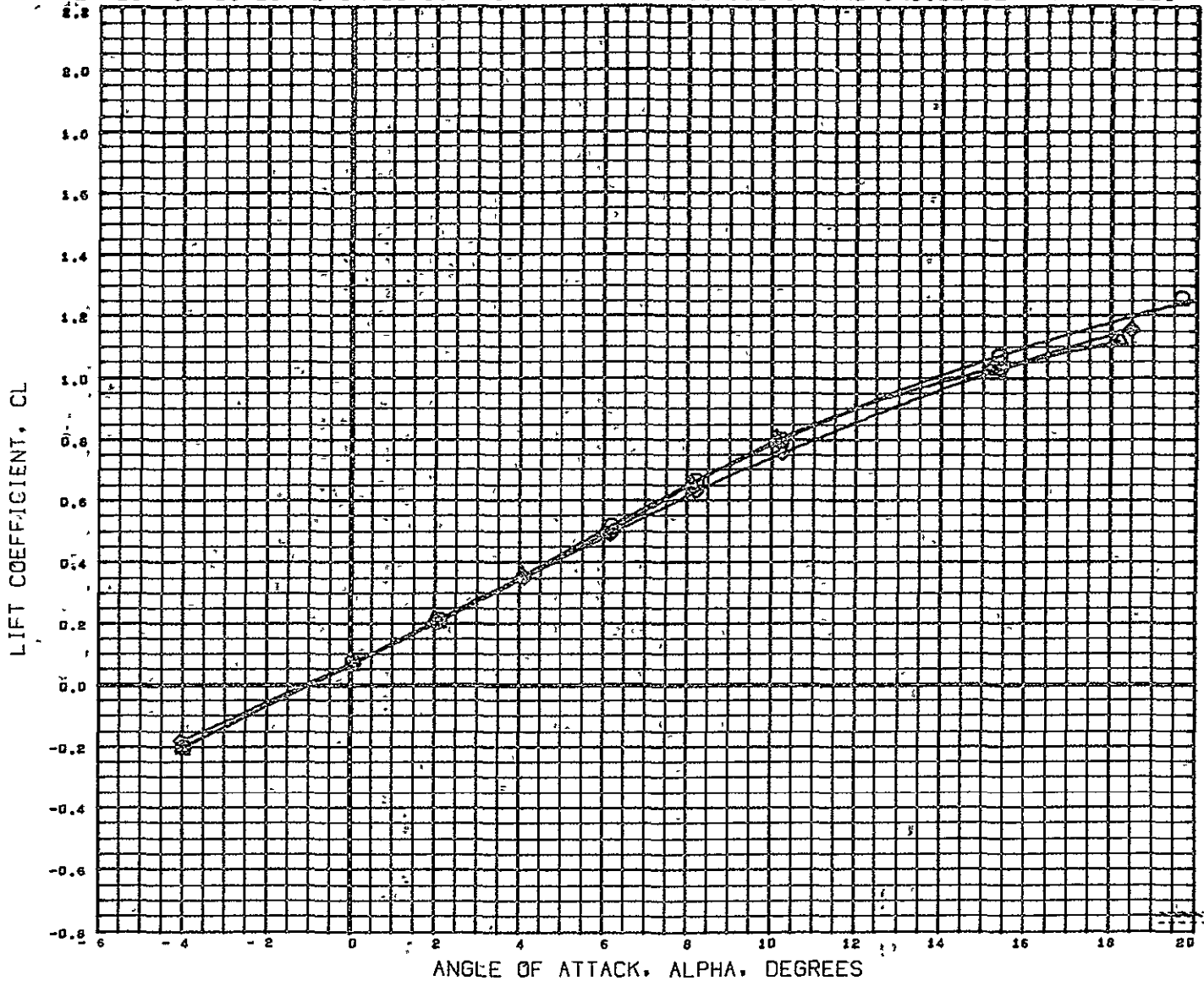


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4013)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2517)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

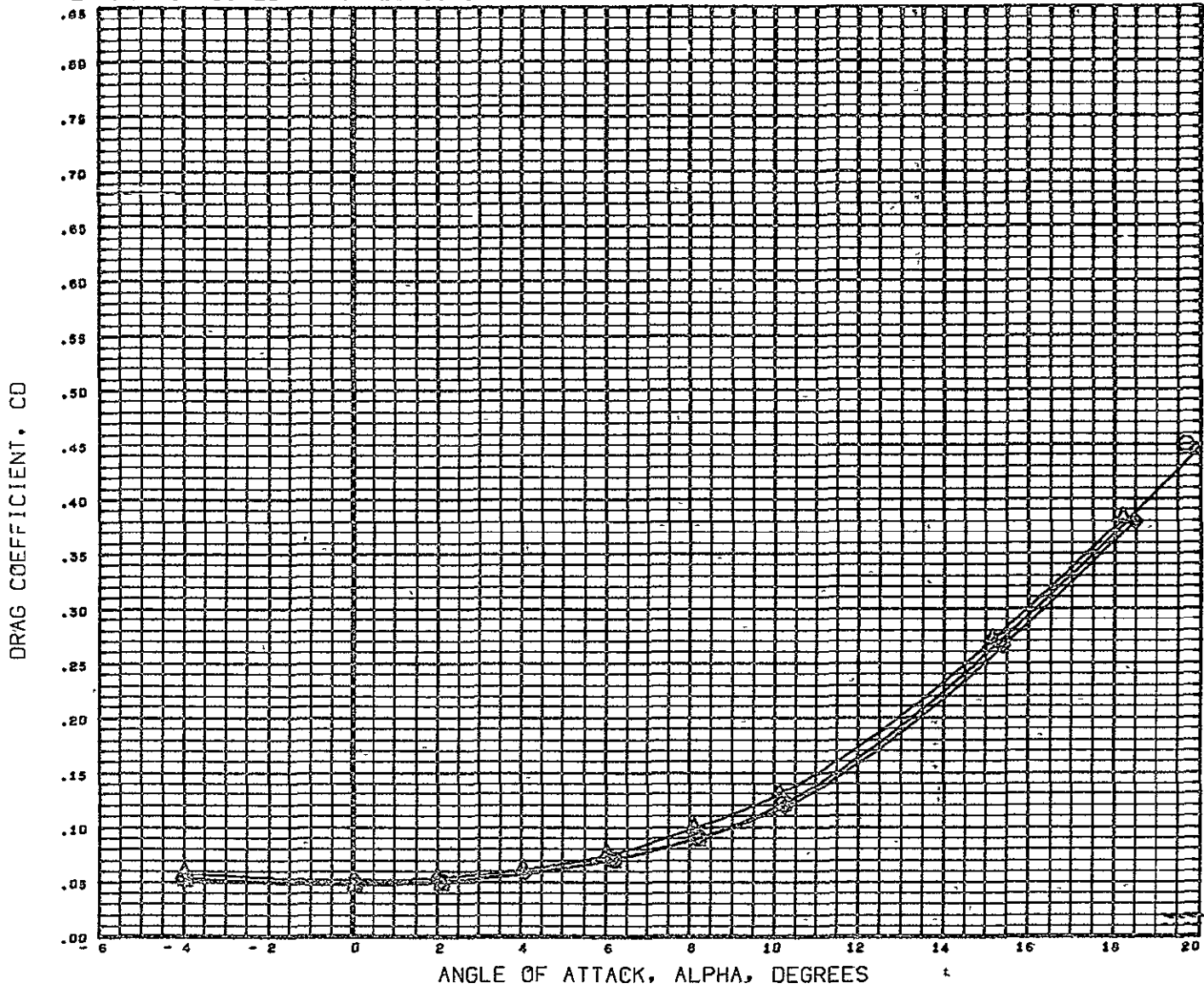


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4013)	NSRDC-3310,NSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2317)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

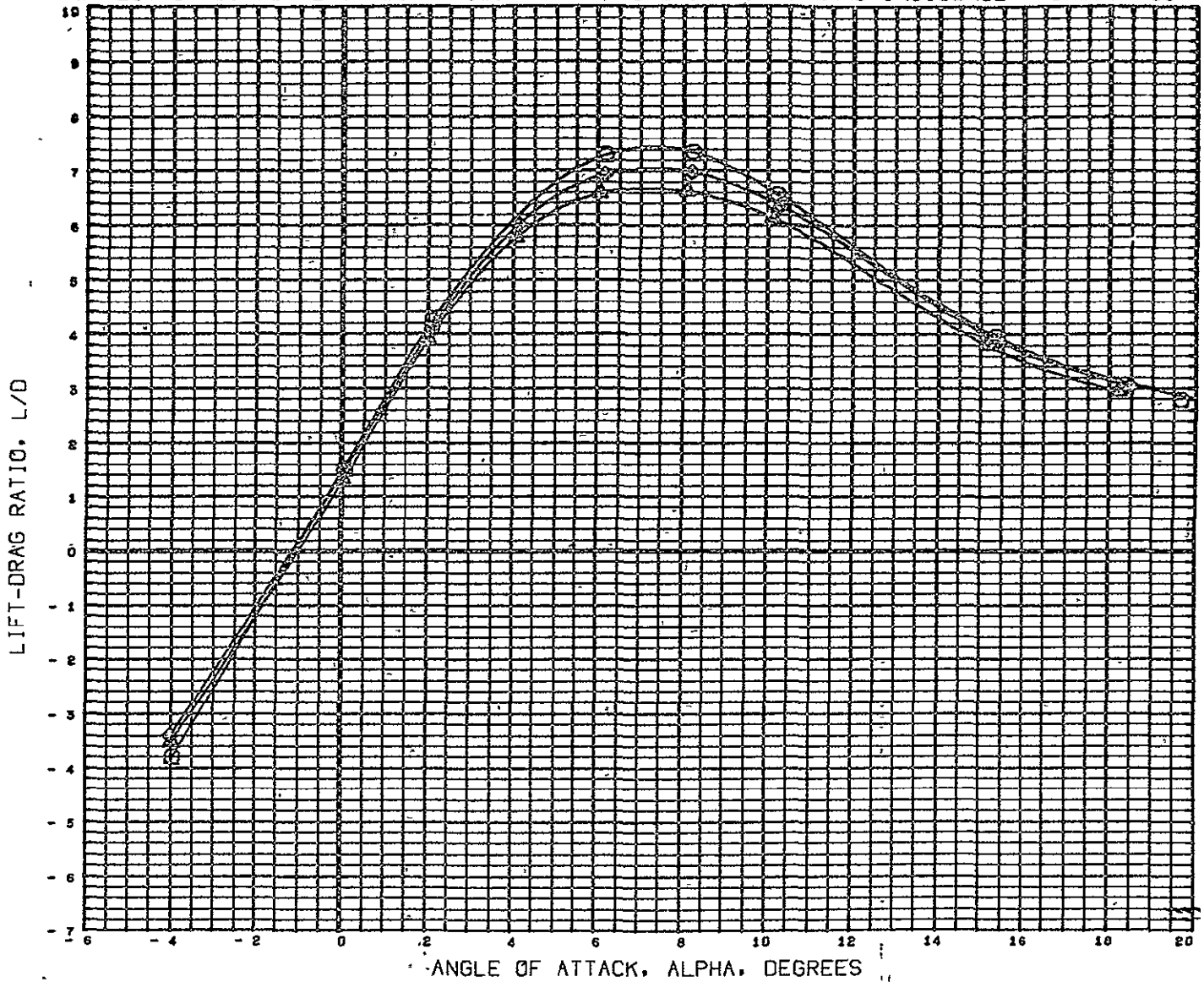
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1,000	1,000	0.000	SREF 1.3550 SQ.FT.
(RN4013)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1,000	1,000	0.000	LREF 3.4530 FEET
(HN2517)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	1,000	1,000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0167 FEET SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

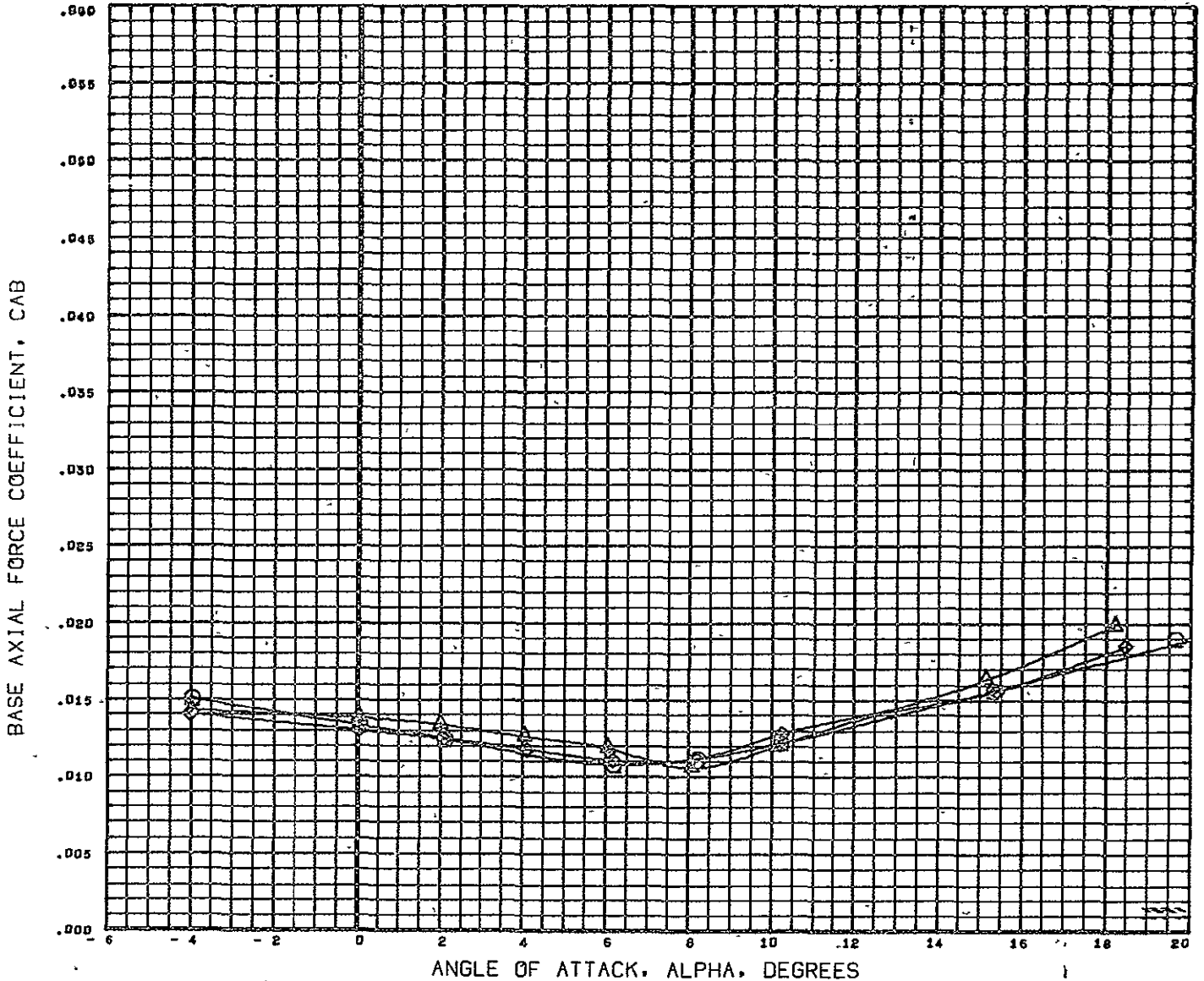


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{HN2001}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
{RN4013}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
{HN2517}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0 0150 SCALE

MACH .38

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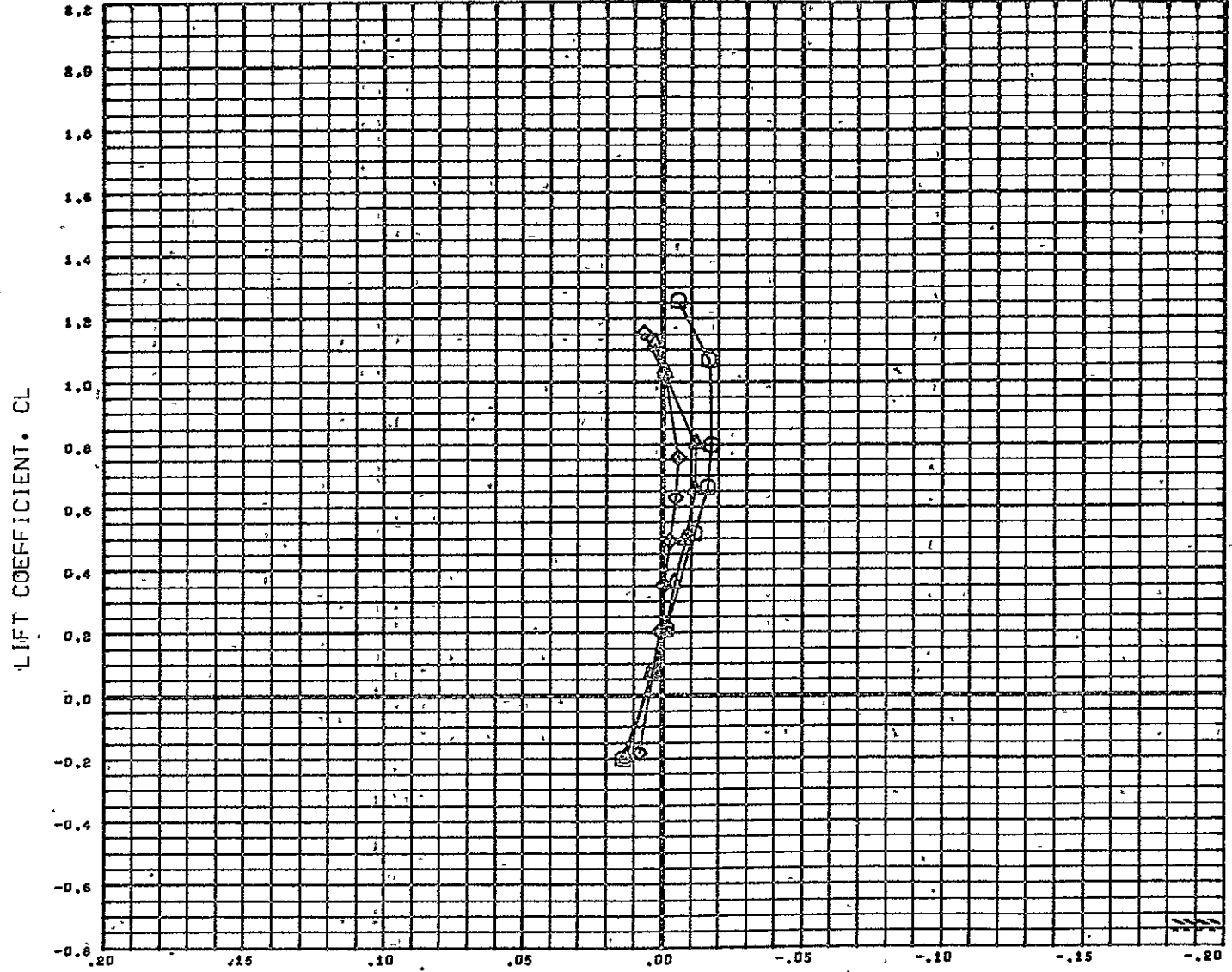
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 11.3550 SQ.FT
(RN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 31.4530 FEET
(HN2517)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 31.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

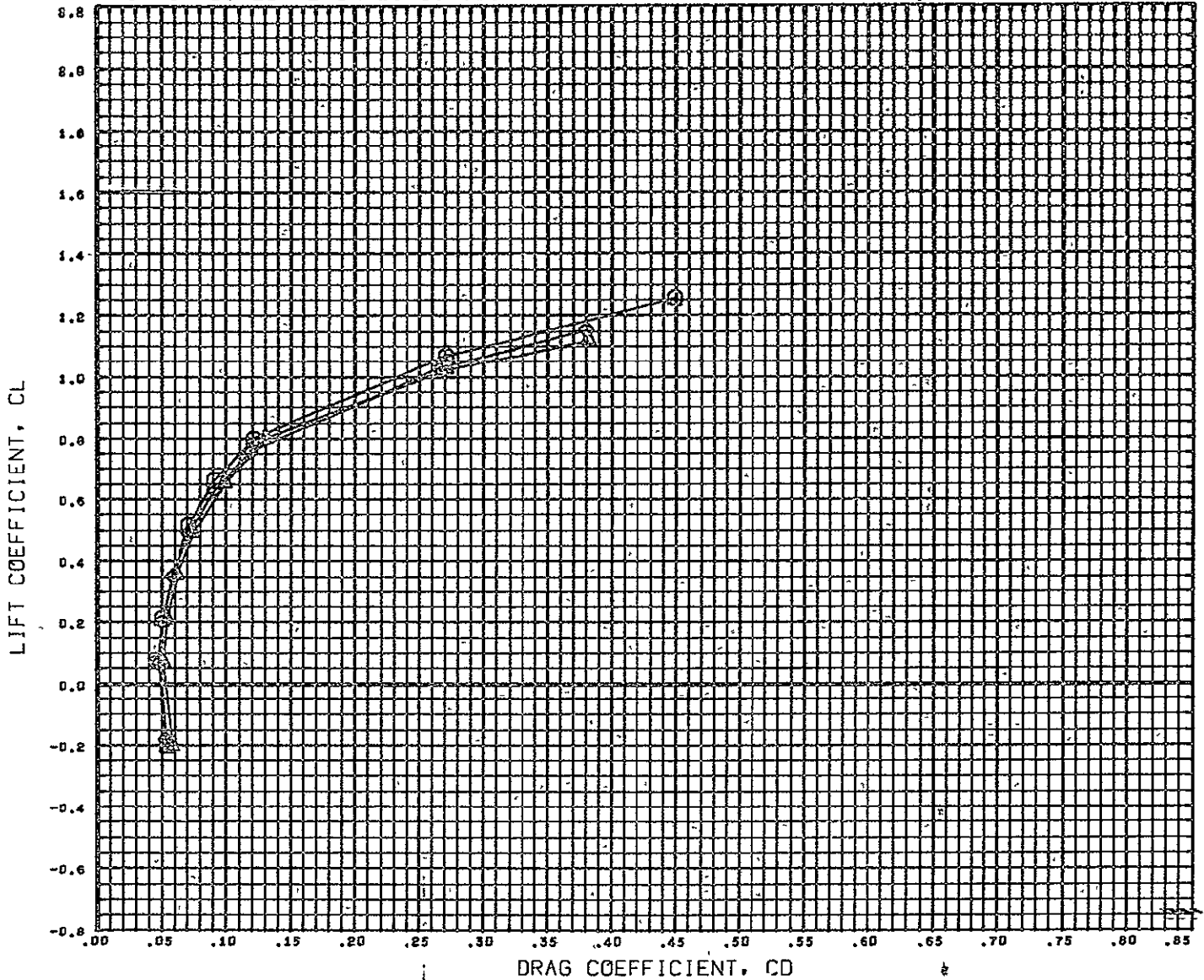
MACH .38

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001) ○	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4013) △	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2517) ◇	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

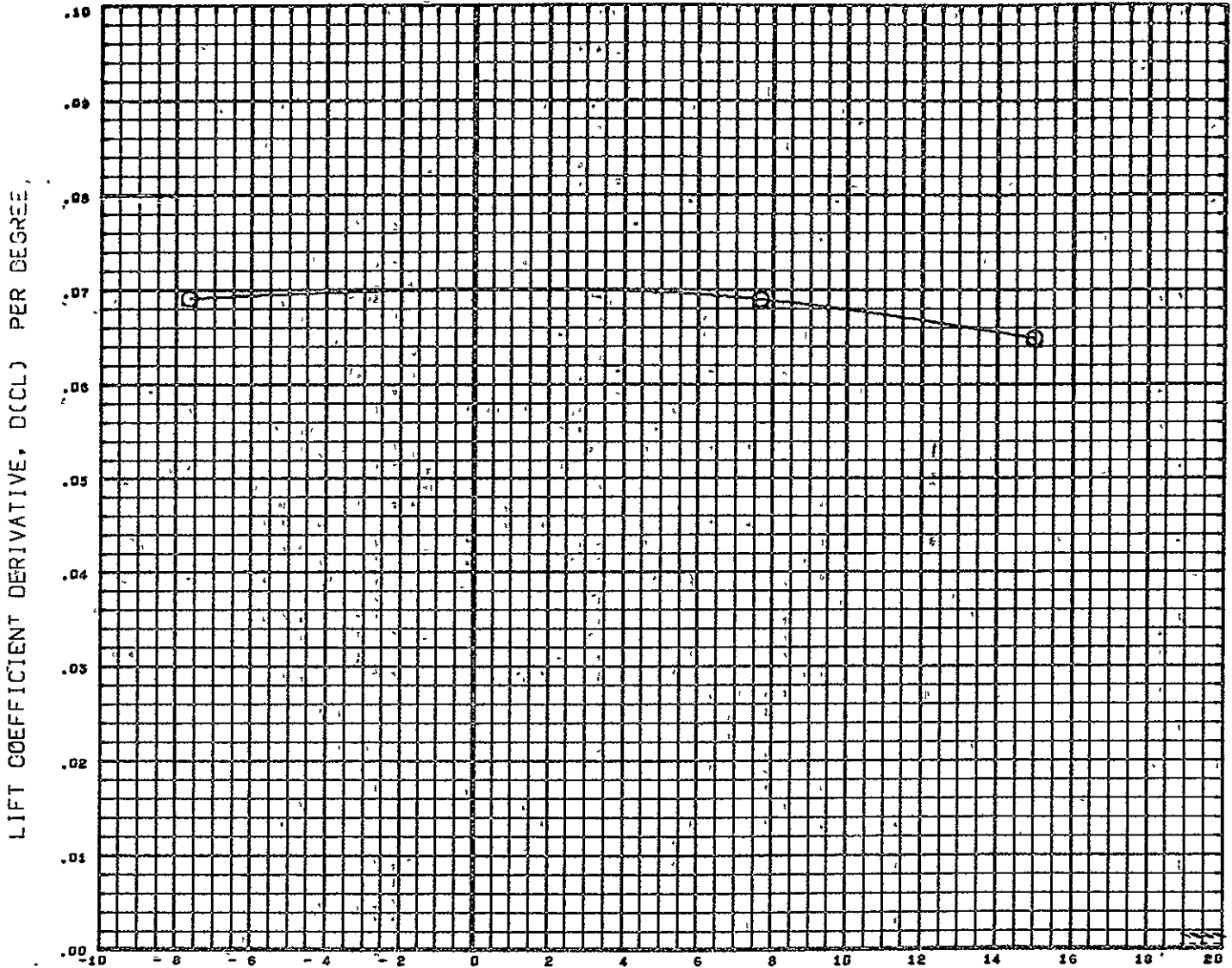


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2517)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	1.000	0.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0 0150 SCALE

MACH .38

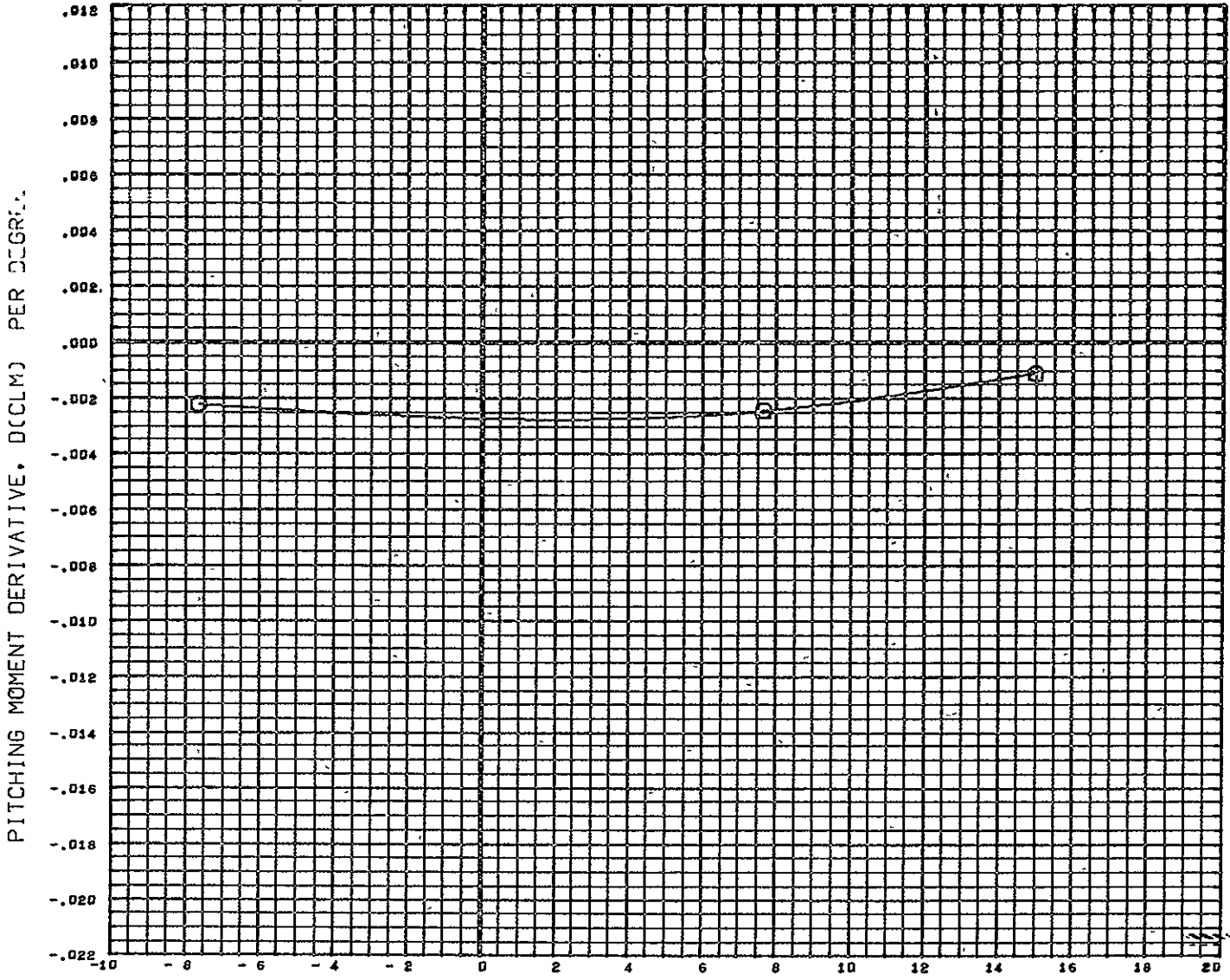
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



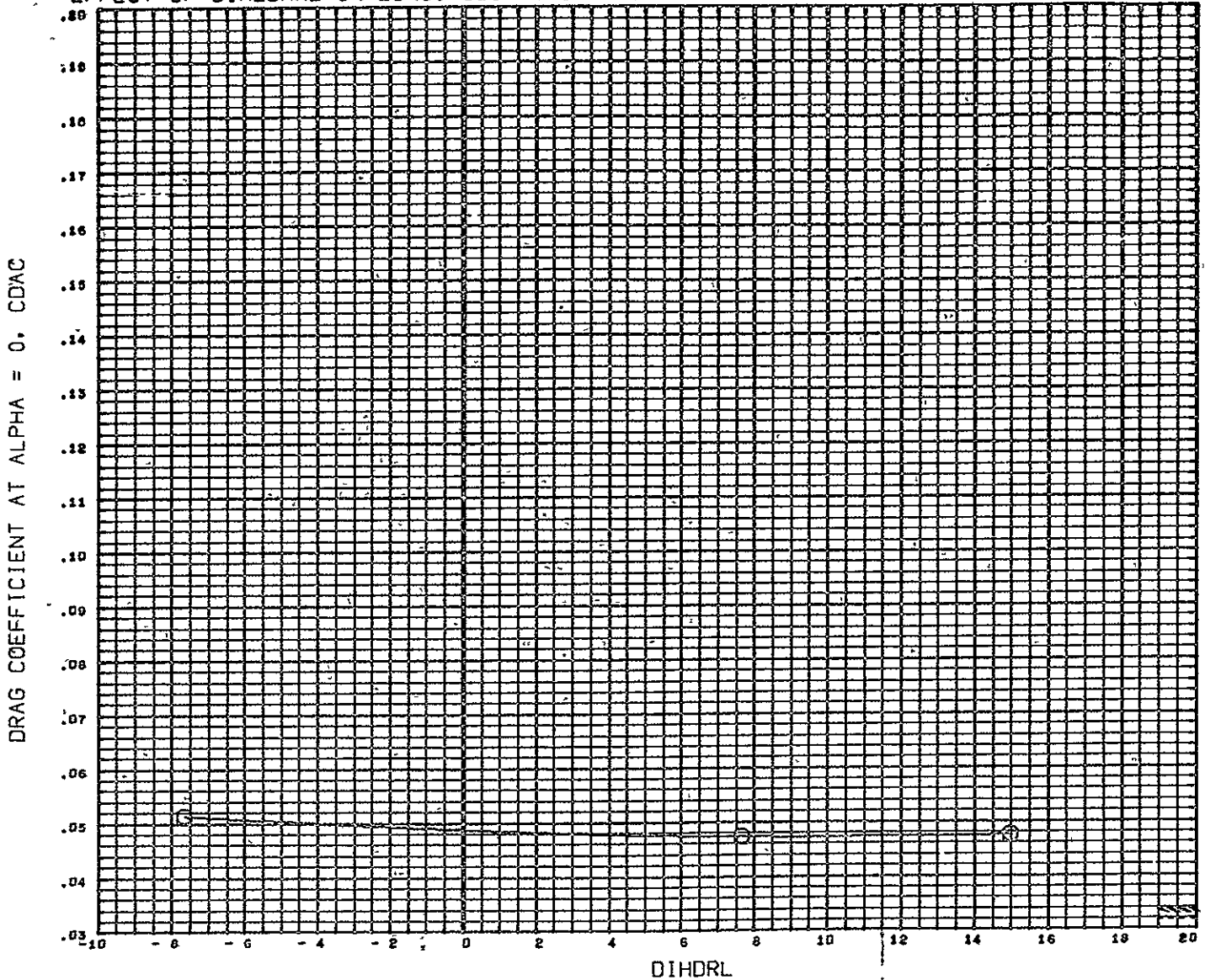
SYMBOL	HACH	PARAMETRIC VALUES				DIHDL DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	BETA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	88.FT.
		INCIDW	0.000	AILRON	0.000	PN4013	7.660	PN2001	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTP	0.000	PN2517	15.000			BREF	3.4530	FEET
		RUDDER	0.000	WNGROS	1.000					XHRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE		MCI						ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
		BETA	INCIDC	3.000	DATASET	DIHRL	DATASET	DIHRL	SREF	SQ.FT.
○	0.400	0.000	0.000	3.000	PN4013	- 7.660	PN2001	7.660	1.3550	FEET
		0.000	0.000	0.000	PN2517	15.000			3.4530	FEET
		0.000	0.000	0.000					3.4530	FEET
		0.000	0.000	1.000					2.5950	FEET
		1.000							0.0000	FEET
									0.0187	FEET
									0.0150	SCALE
		DATA HIST. CODE	MCI							

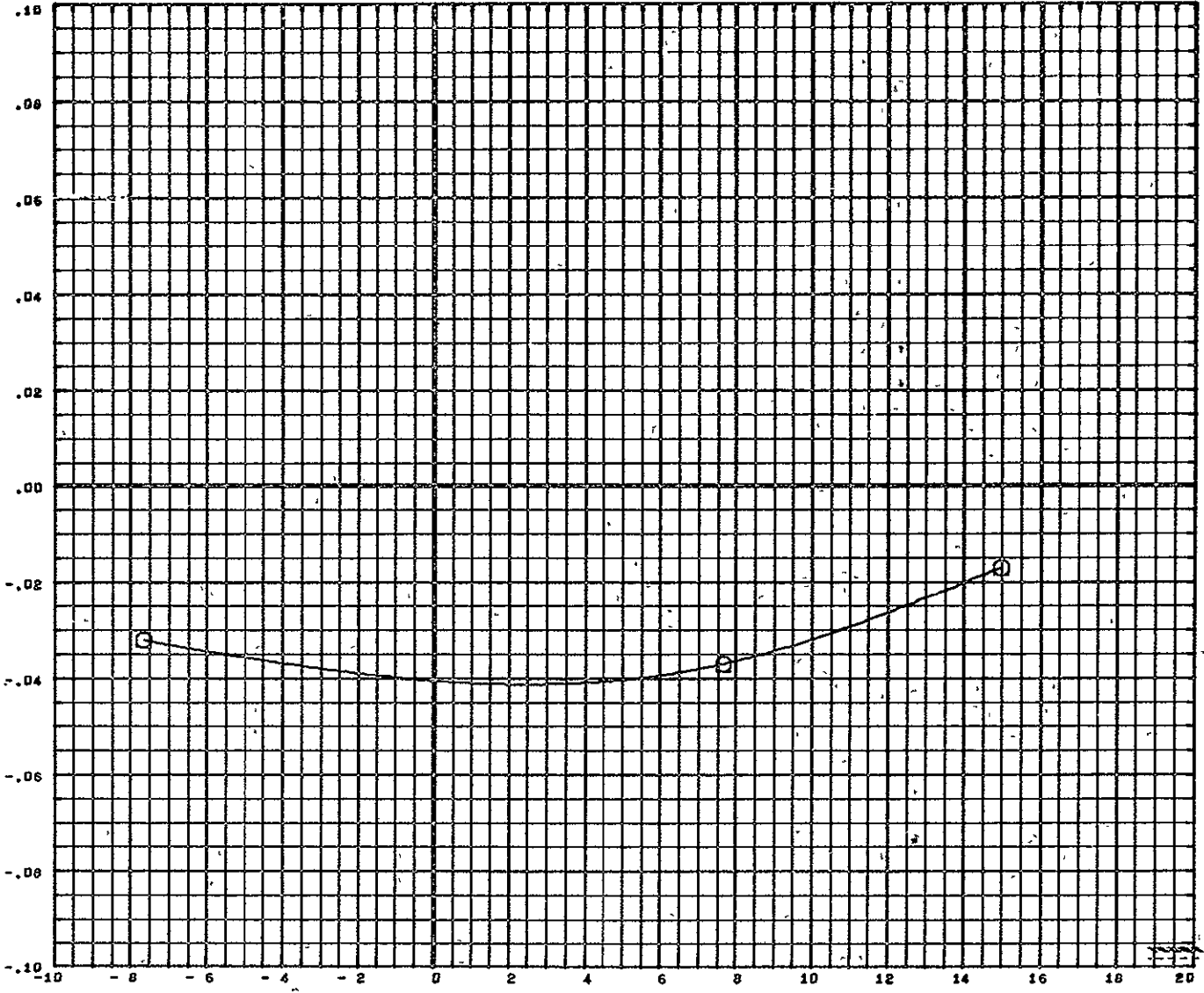
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.402	BETA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT
		INCIDW	0.000	AILRON	0.000	AN4013	- 7.660	AN2001	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	AN2517	15.000			BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XNRP	2.5950	FEET
		CNDPOS	1.000							YHRP	0.0000	FEET
		DATA HIST. CODE	MF							ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE

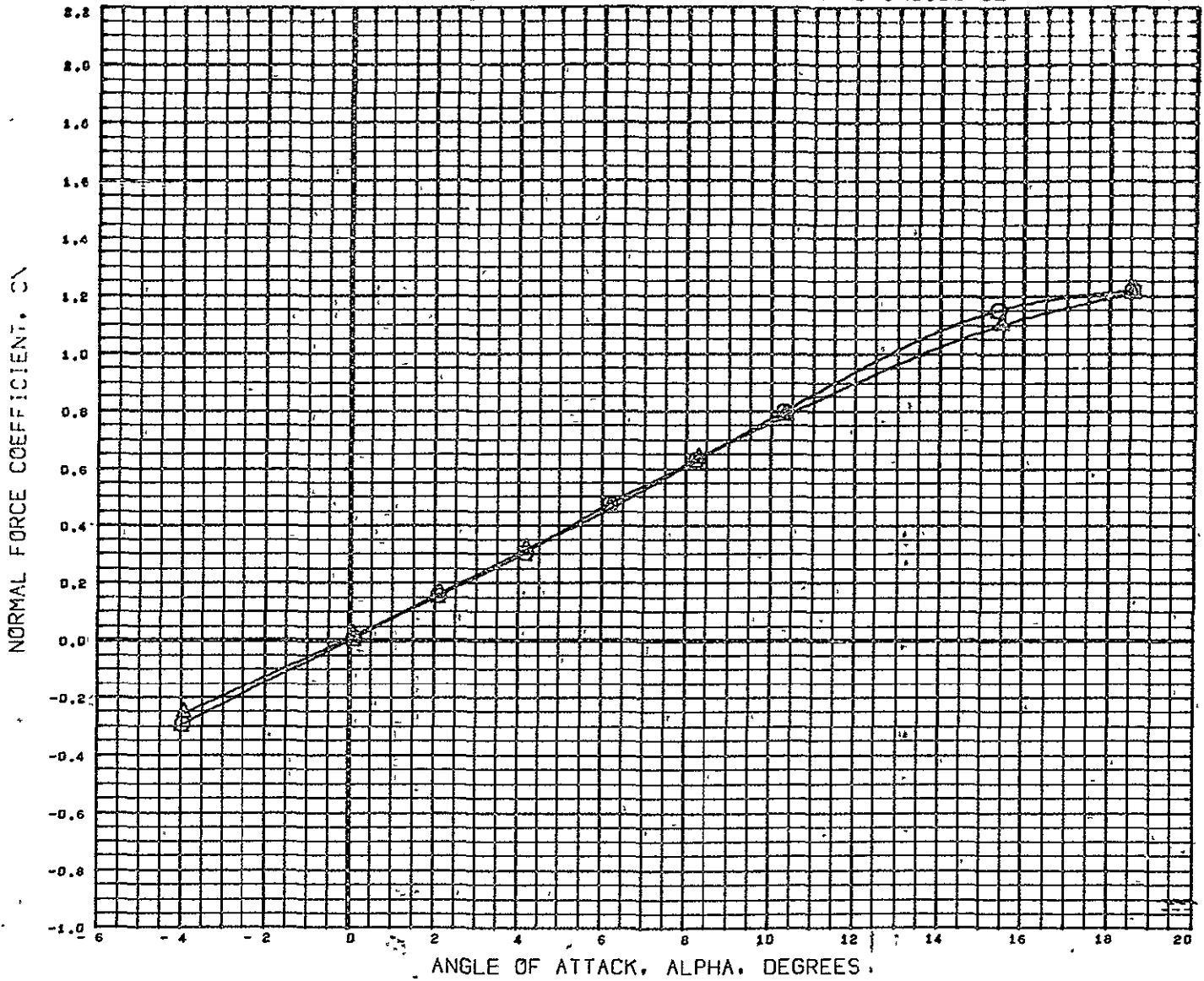
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO LIFT, $\partial C_{M}/\partial C_{L}$



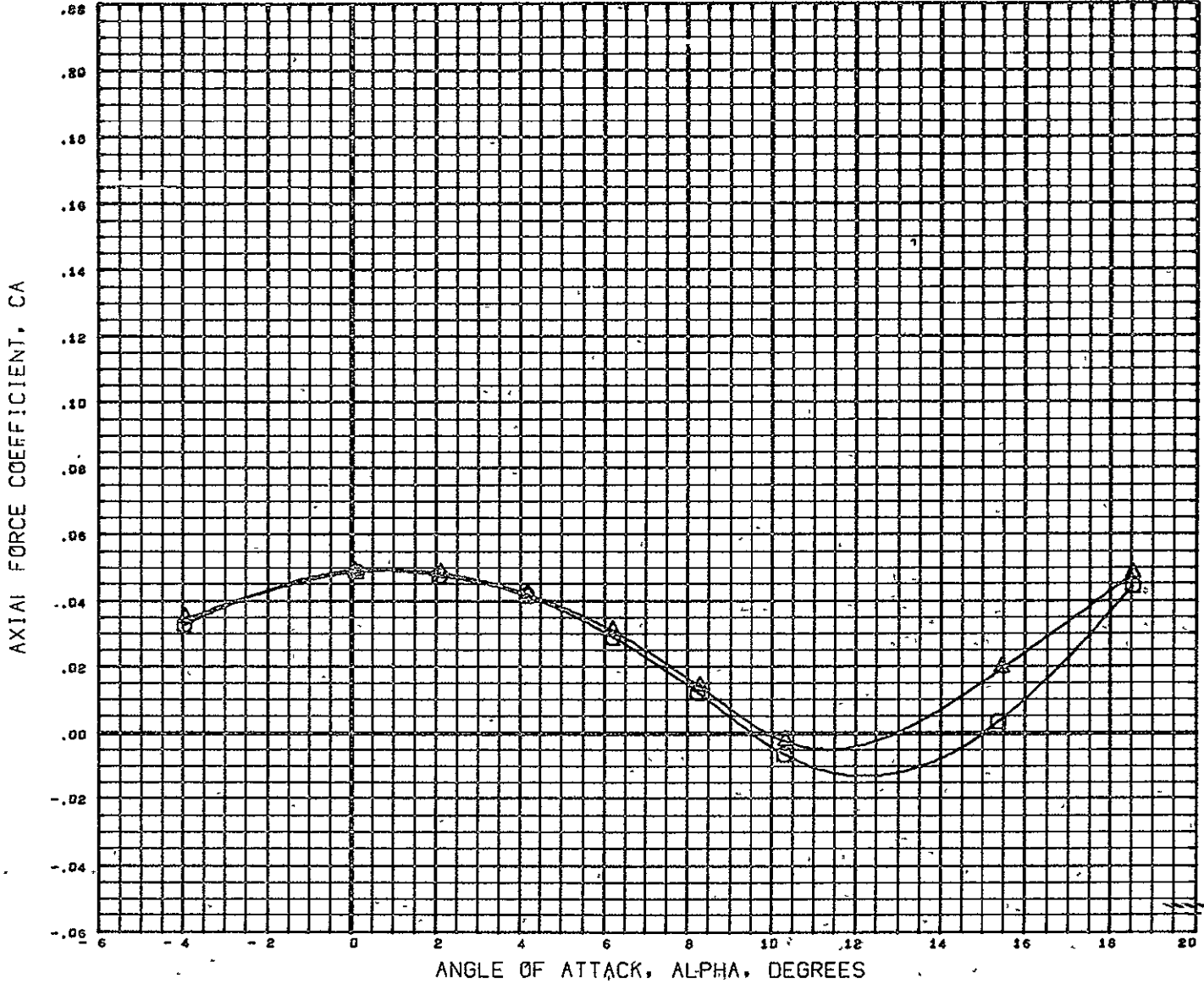
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.400	ALPHA	0.000	BETA	0.000	SREF	1.3550	sq. FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE		HCI		ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049) \odot	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4033) \triangle	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

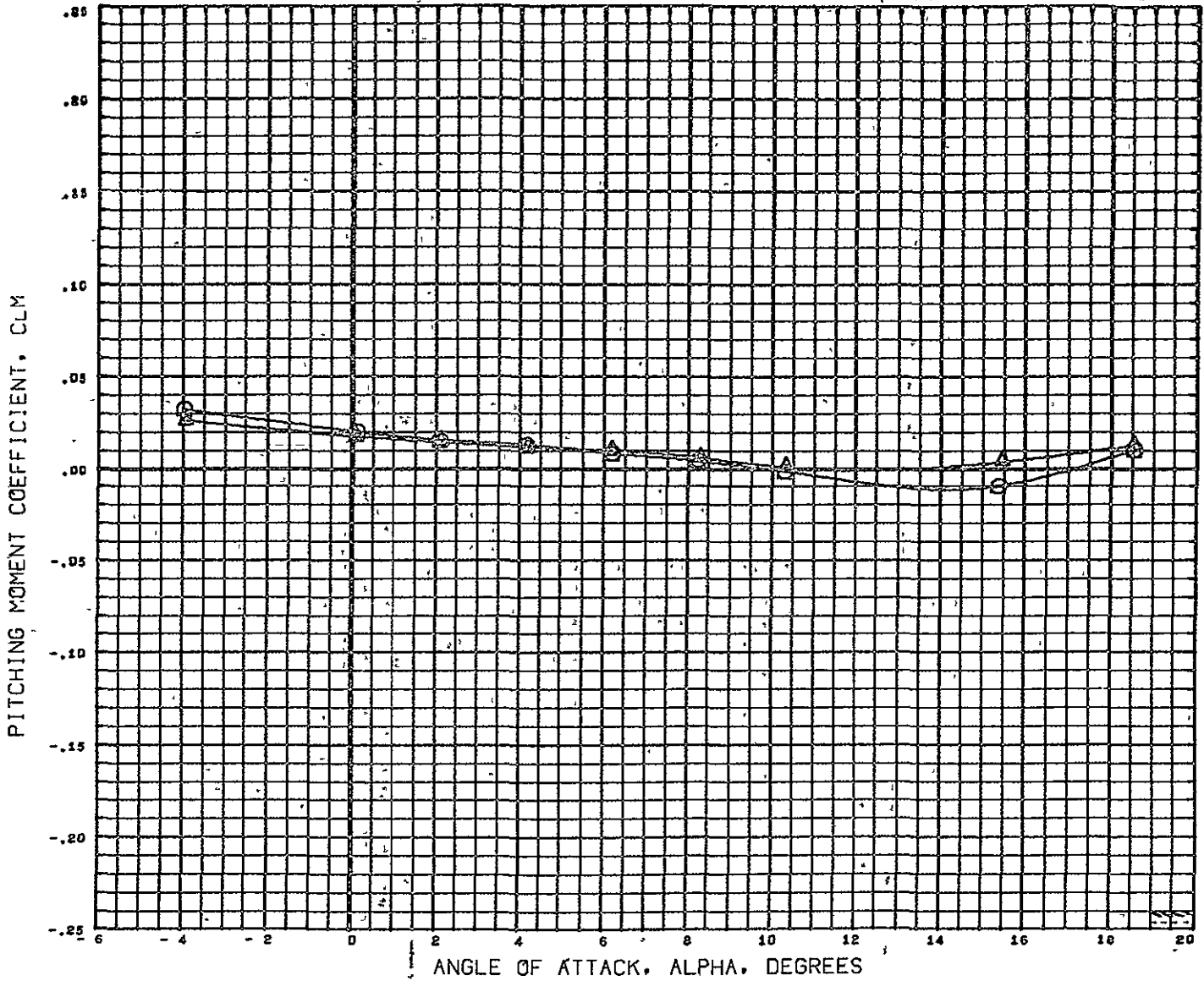


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4033)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2' 5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

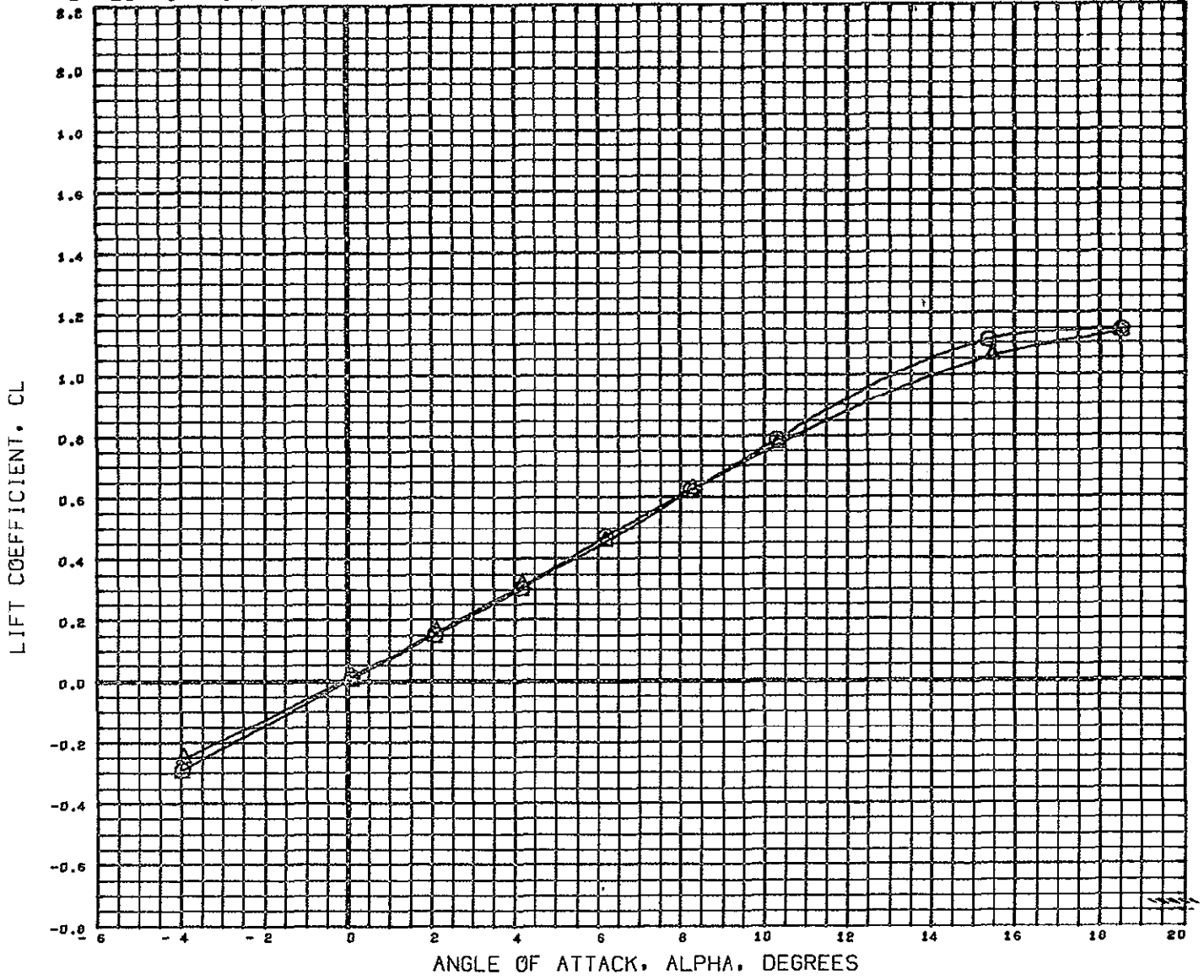
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4033)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

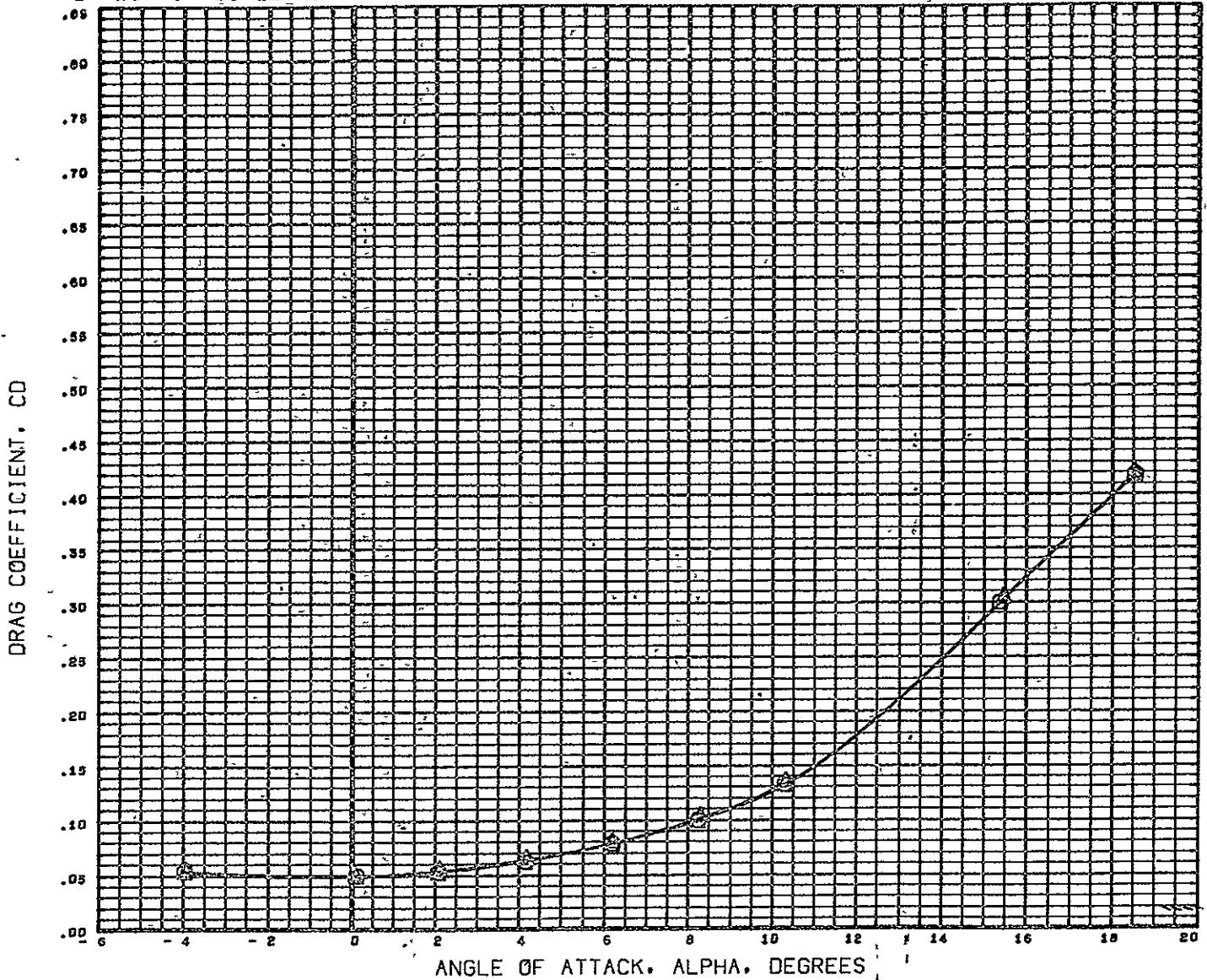
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4033)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

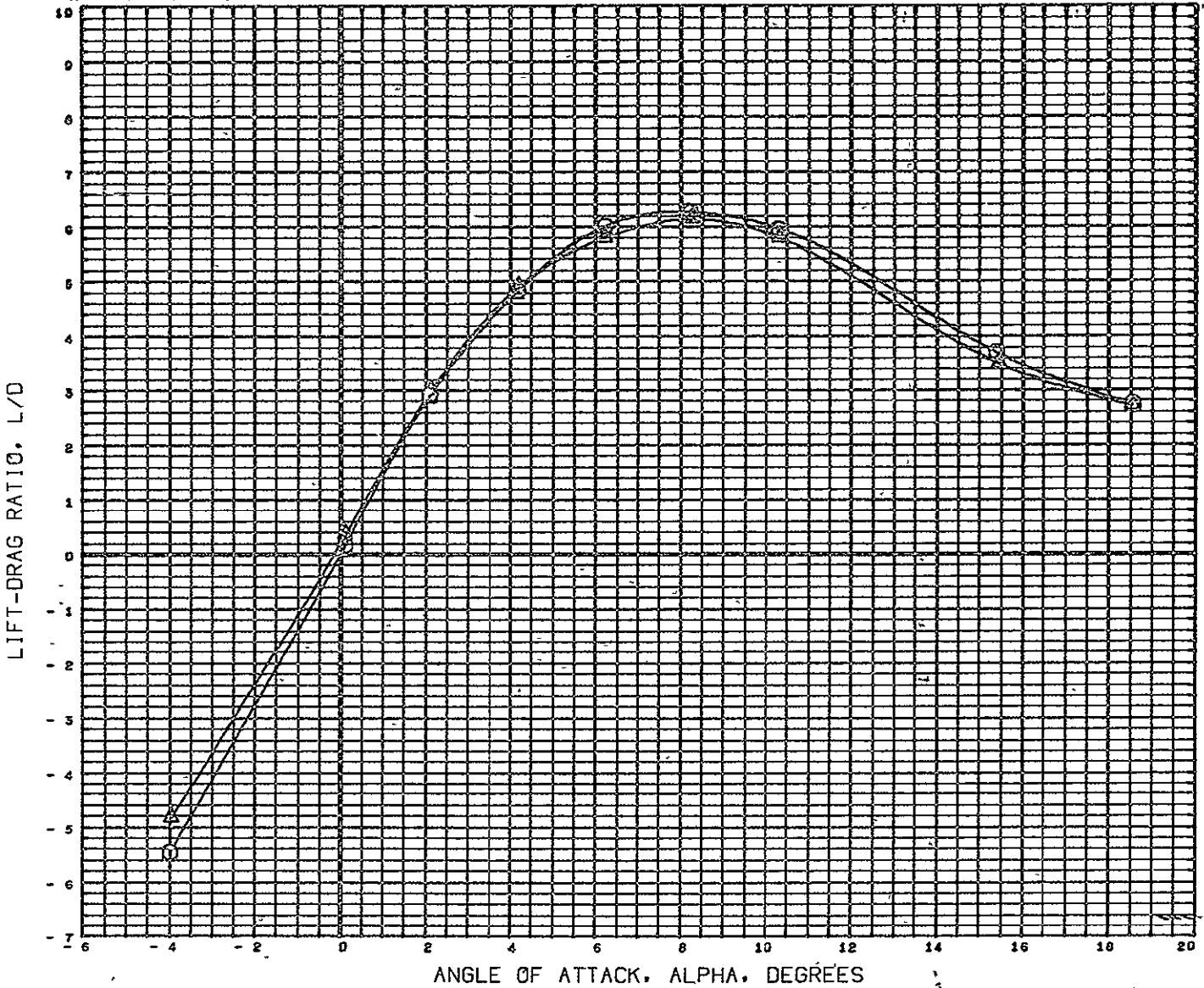


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	7.660	-1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4033)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE -0.0150 SCALE

MACH .40

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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

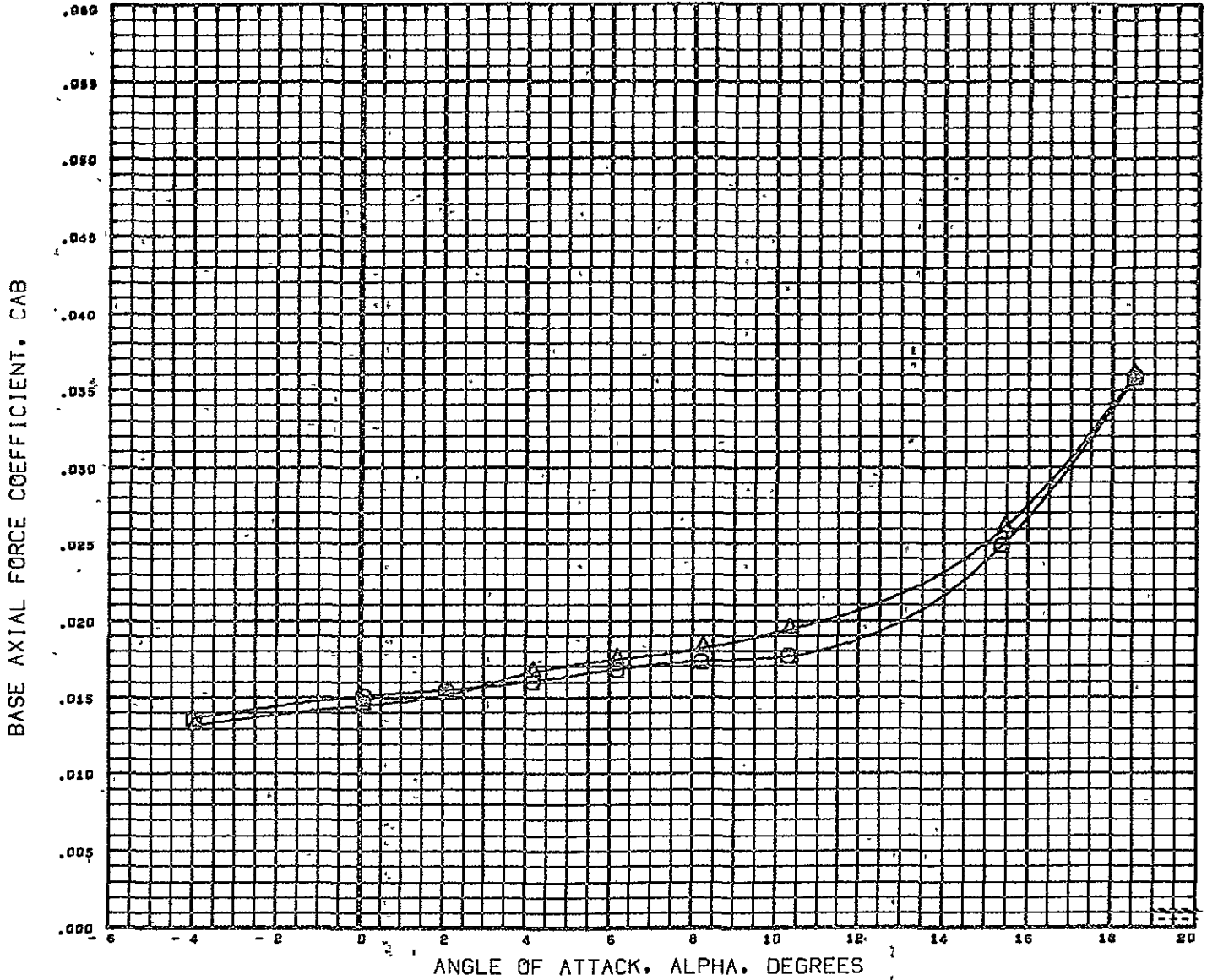


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4033)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

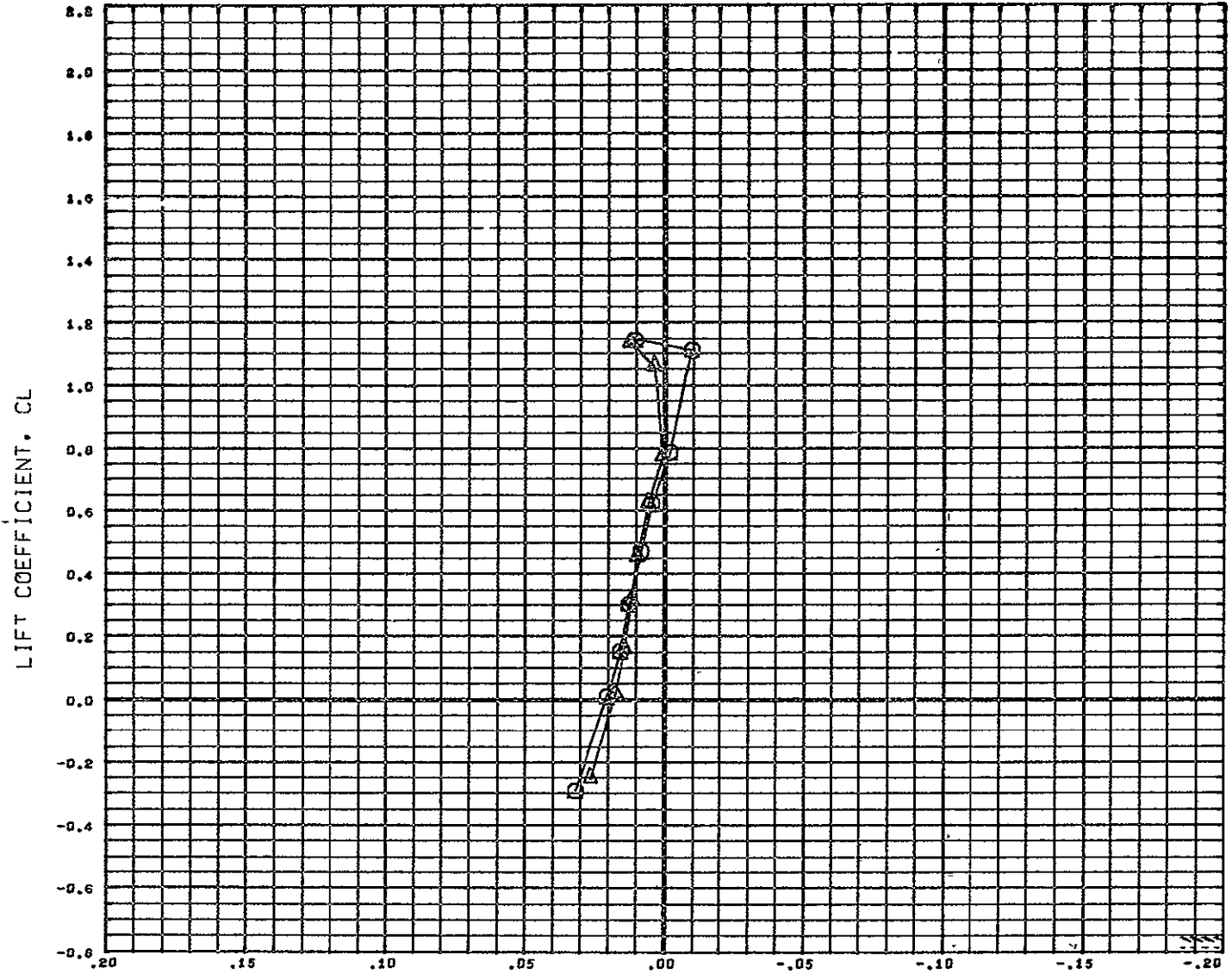
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4049)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF	1.3550 SQ.FT.
(RN4033)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XNRP	2.5950 FEET
						YNRP	0.0000 FEET
						ZNRP	0.0187 FEET
						SCALE	0.0150 SCALE

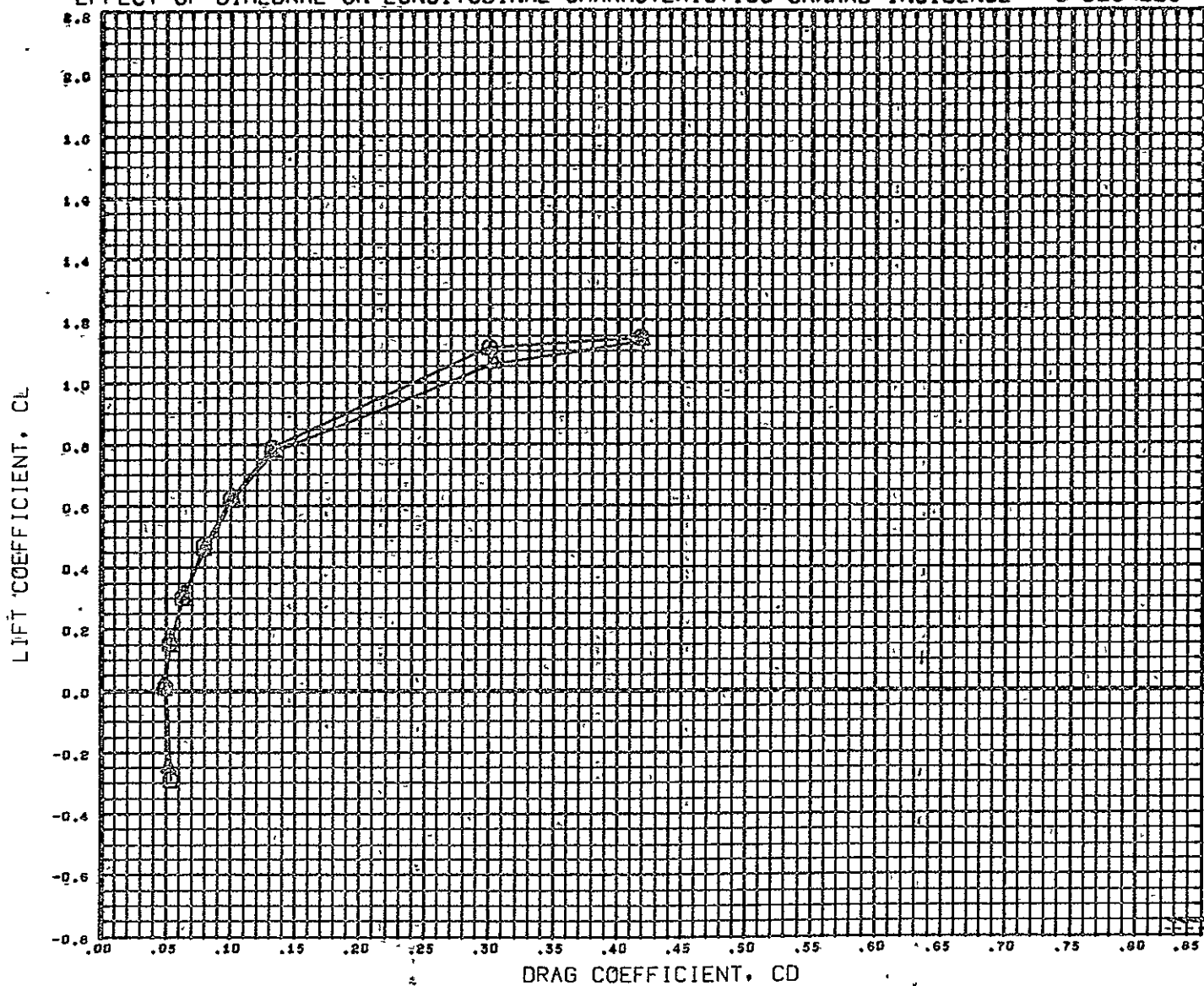
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION	
(RN4049)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1,000	2,000	0,000	SREF	1.3550 SQ.FT.
(RN4033)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1,000	2,000	0,000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XNRP	2.5950 FEET
						YNRP	0.0000 FEET
						ZNRP	0.0167 FEET
						SCALE	0.0150 SCALE

MACH .40

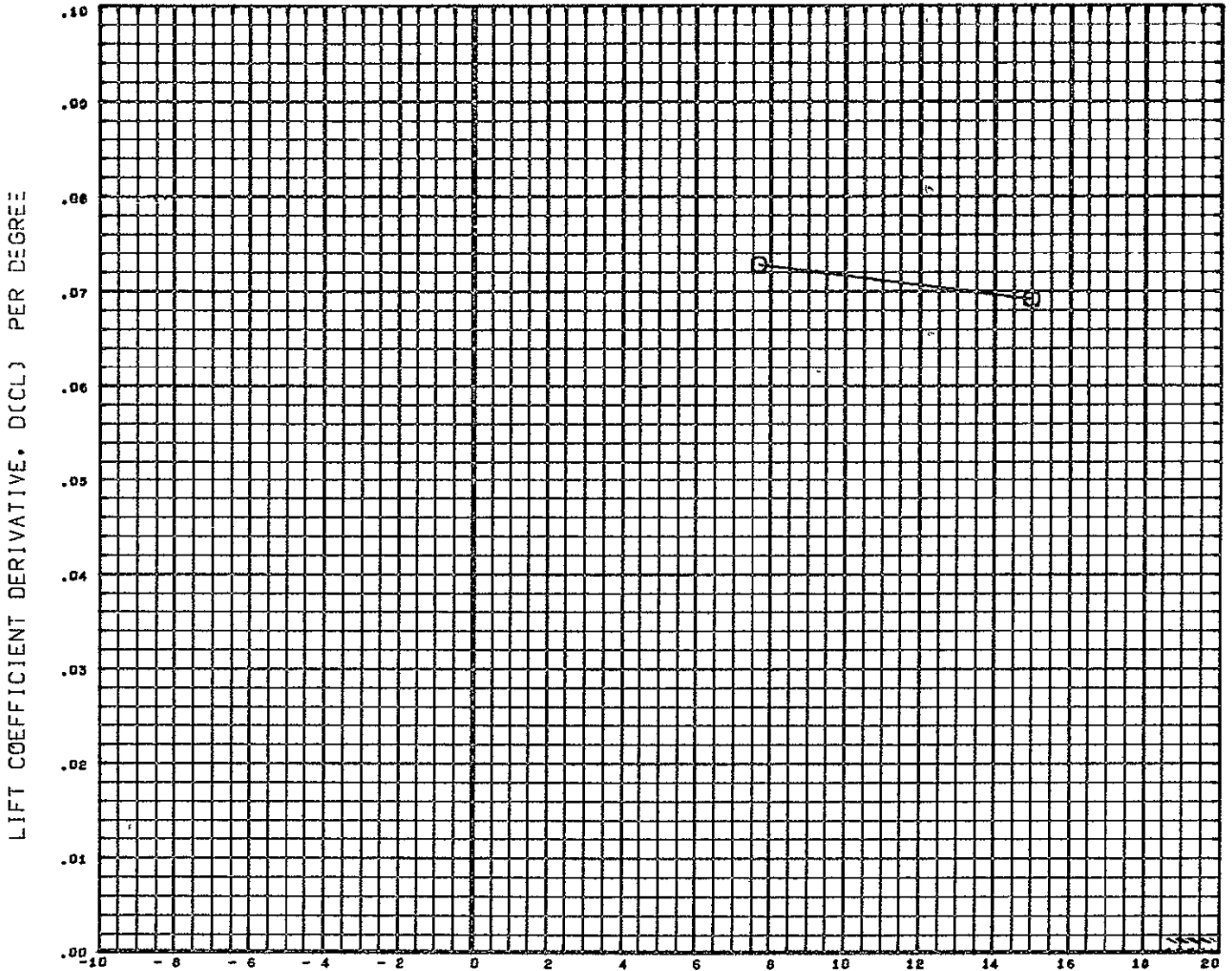
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049) □	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE
(RN4033) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1.000	2.000	0.000	

MACH 0.40

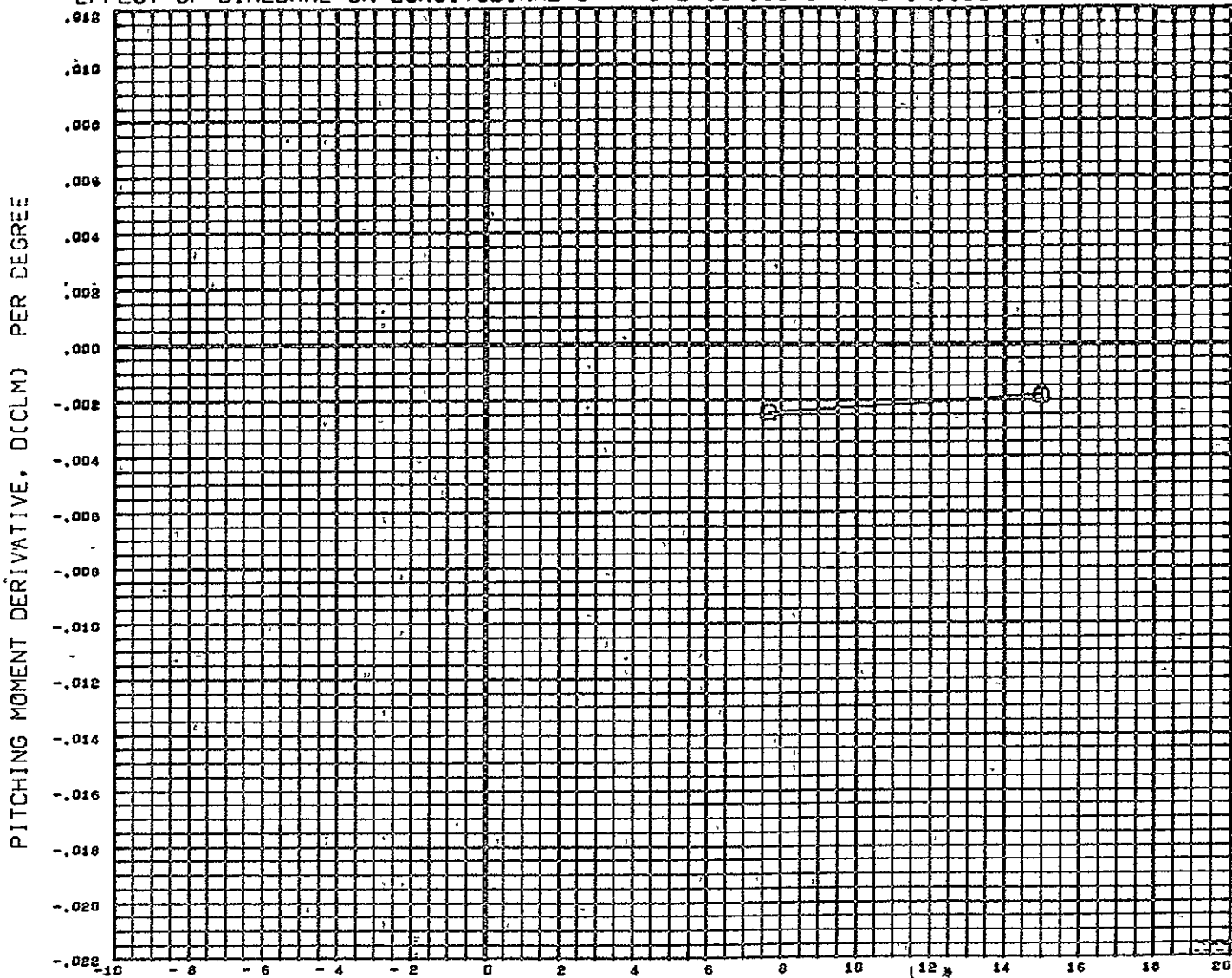
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	BETA	0.000	INCIDC	3.000	DATASET	DIHRL	DATASET	DIHRL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	PN4049	7.660	PN4033	15.000	LREF	3.4830	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					XMRP	2.5950	FEET
										YMRP	0.0000	FEET
										ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

DATA HIST. CODE MCI

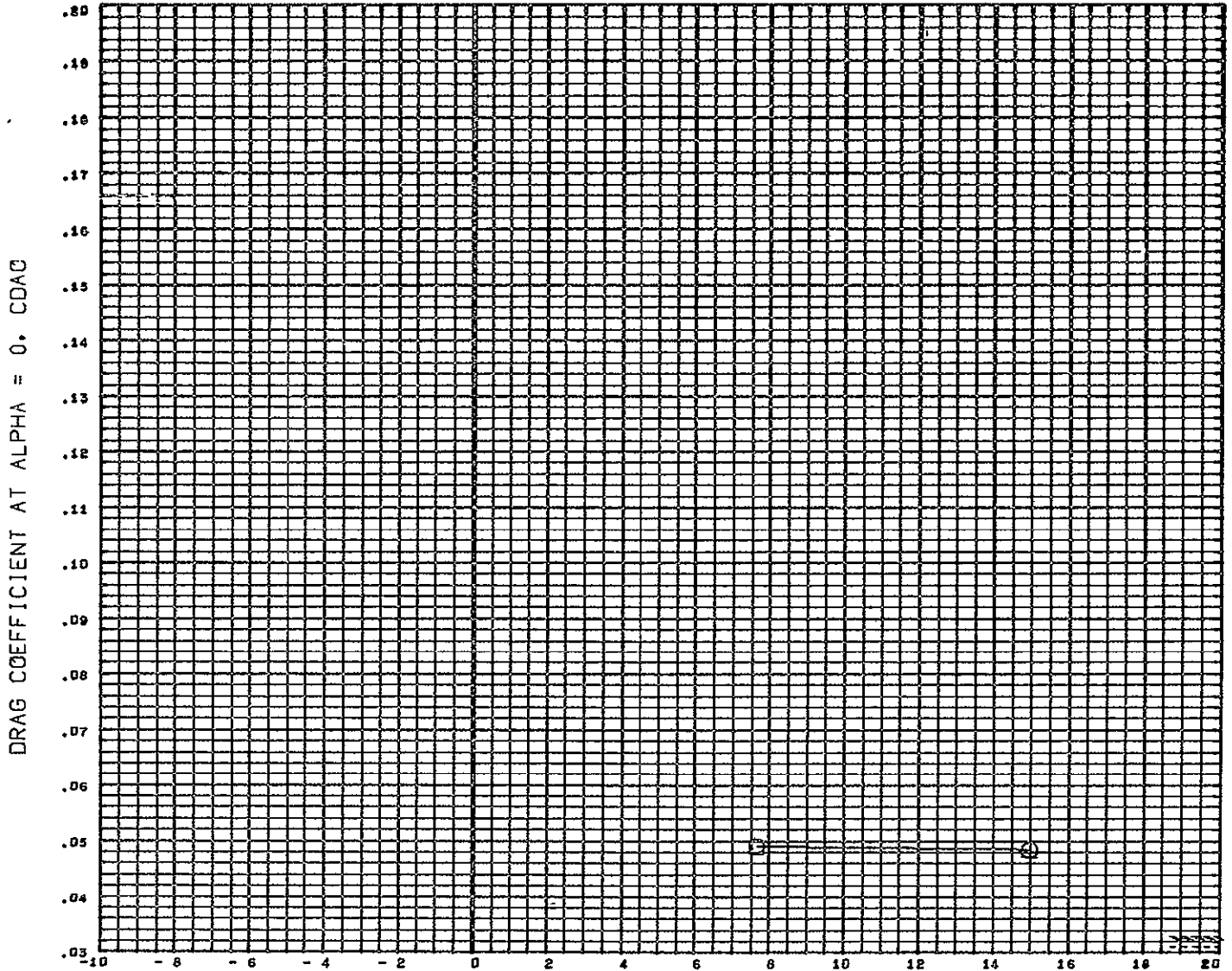
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		BETA	INCIDC	AILRON	CNDPOS	DIHDL	DATASET	DIHDL	SREF	SCALE	SQ.FT.
○	0.400	0.000	3.000	0.000	1.000	PN4049	7.660	PN4033	15.000	1.3550	
		INCIDW	0.000	AILRON	0.000					3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					2.5950	FEET
										0.0000	FEET
										0.0187	FEET
										0.0150	SCALE

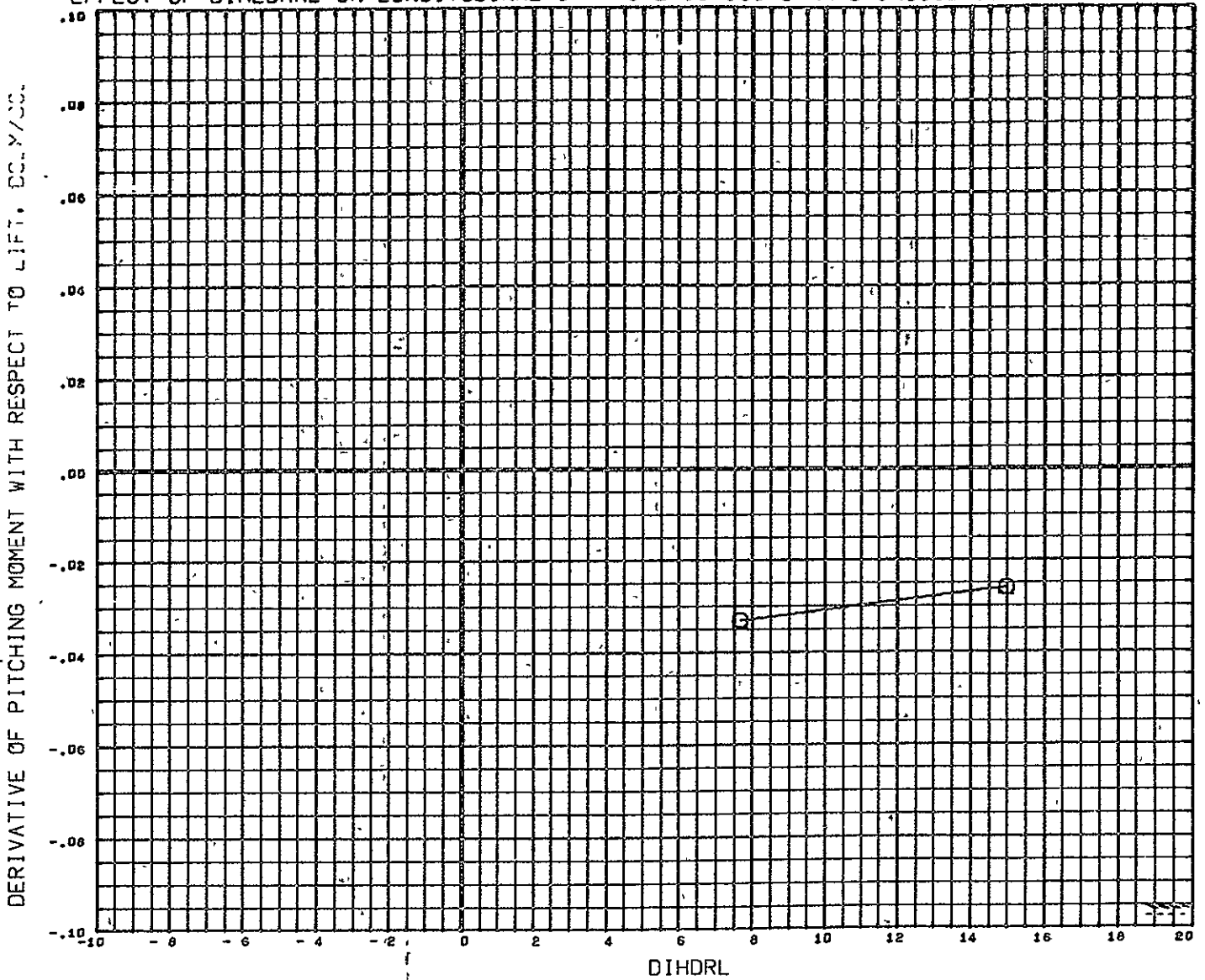
DATA HIST. CODE HCI

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



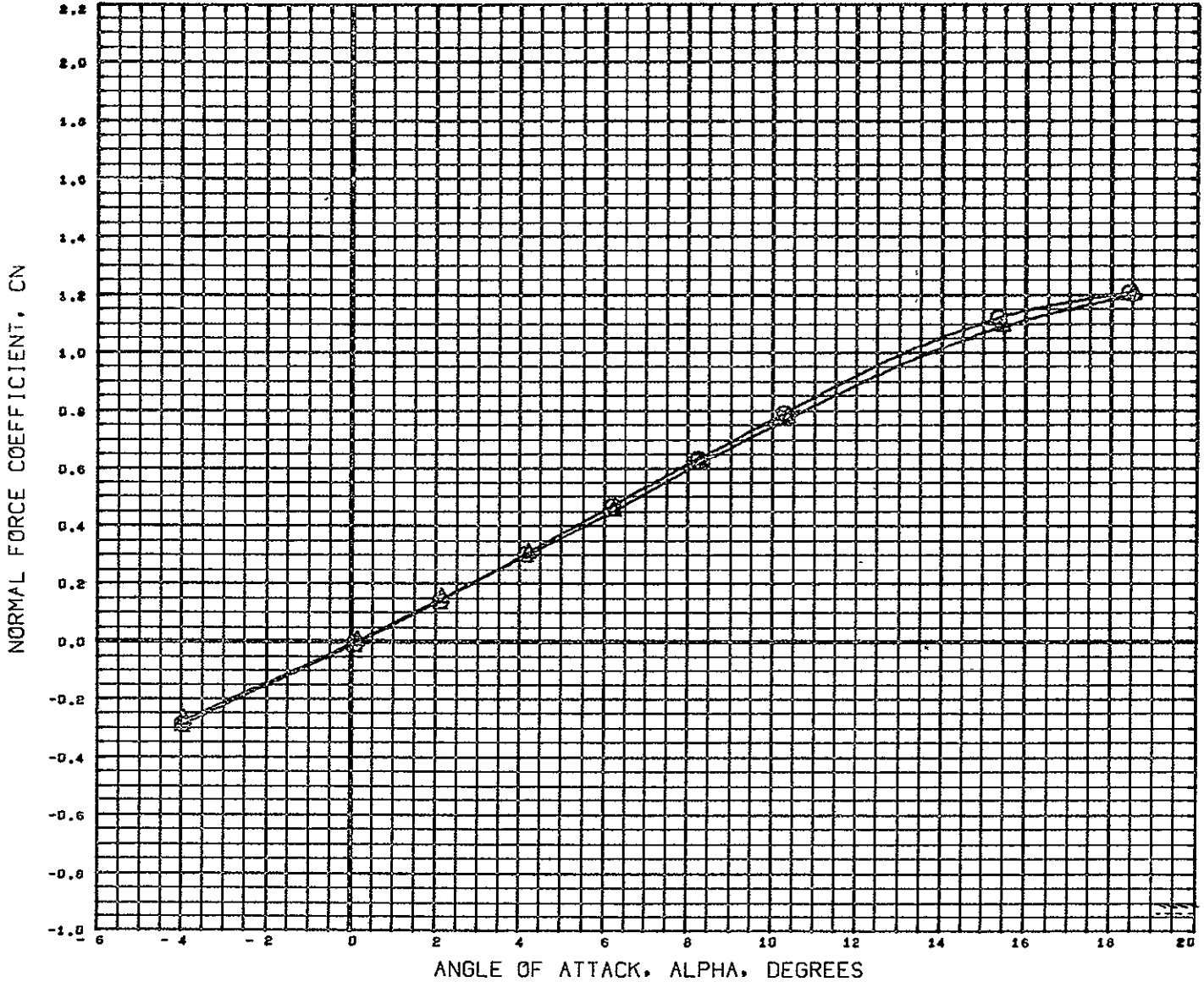
		PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
SYMBOL	MACH	BETA	INCIDC	AILRON	DIHDRL	DIHDRL	DIHDRL	SREF			
○	0.401	0.000	3.000	0.000	AN4049	7.660	AN4033	15.000	1.3550	50. FT.	
		INCIDW	AILTRN	ELEVTR					3.4530	FEET	
		CANARD	ELEVTR						3.4530	FEET	
		WNGPOS	CNDPOS	1.000					2.5950	FEET	
									0.0000	FEET	
									0.0187	FEET	
									0.0150	SCALE	
		DATA HIST. CODE	MF								

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.400	ALPHA	0.000	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HCI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

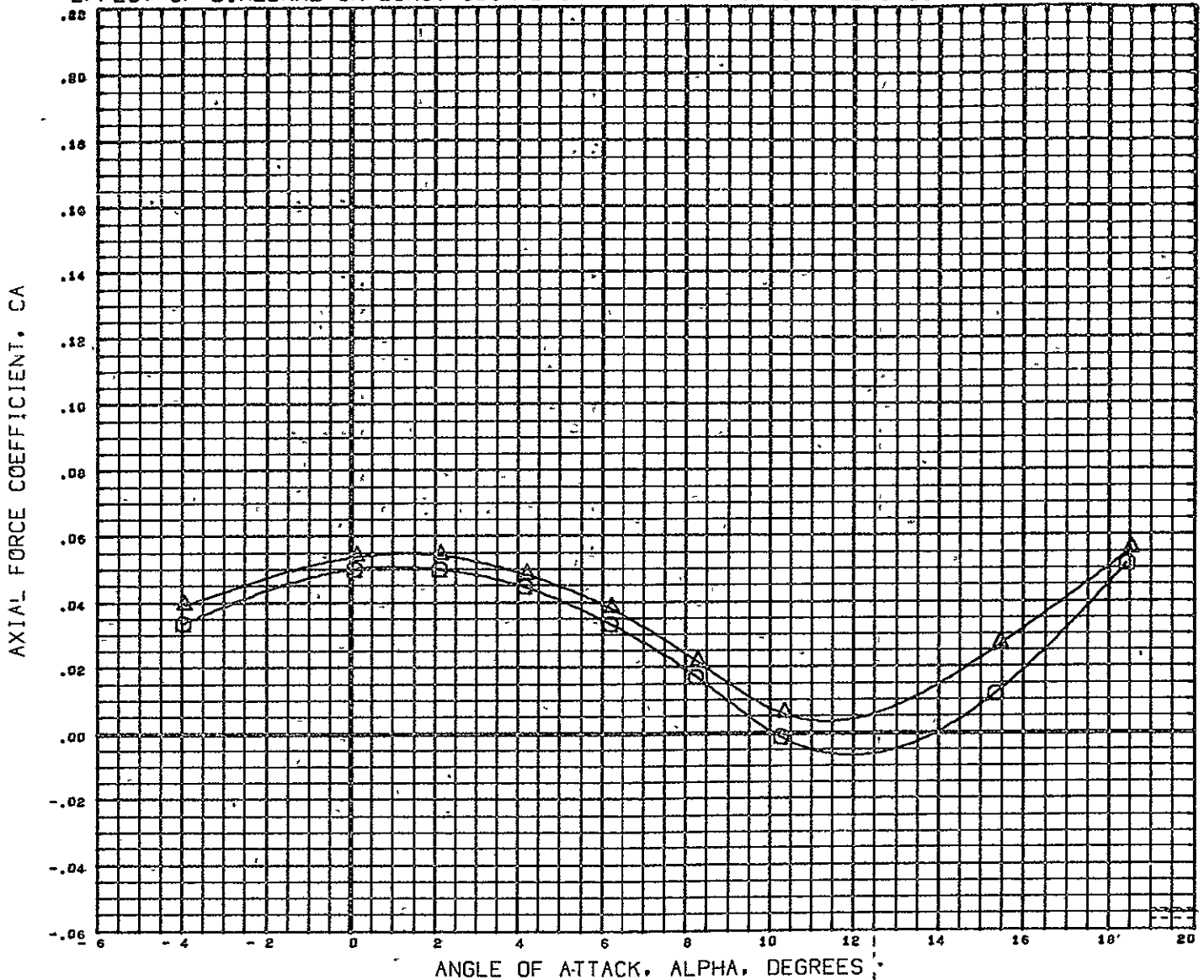


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGFOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(ON4029)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

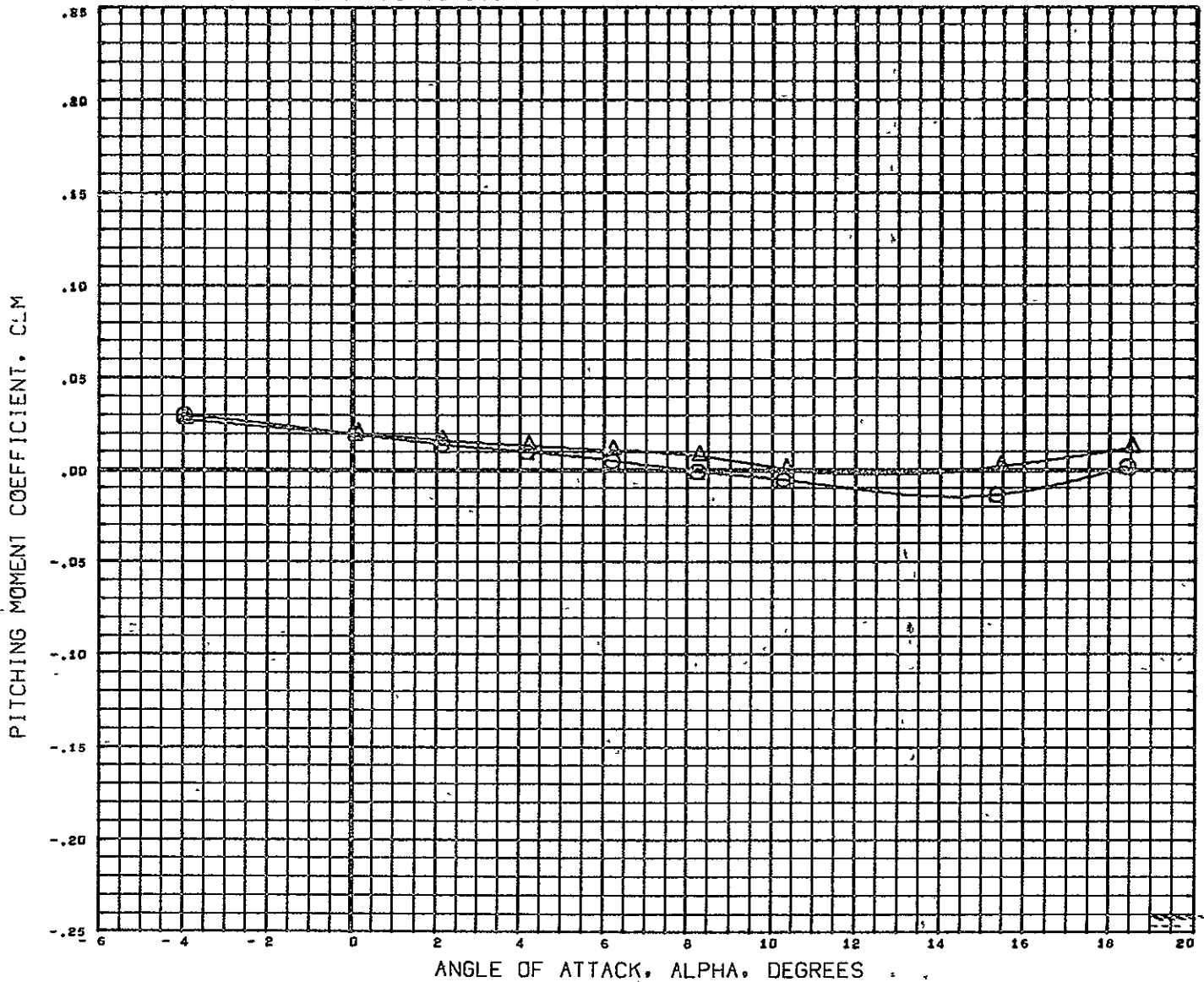
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(ON4029)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0107 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

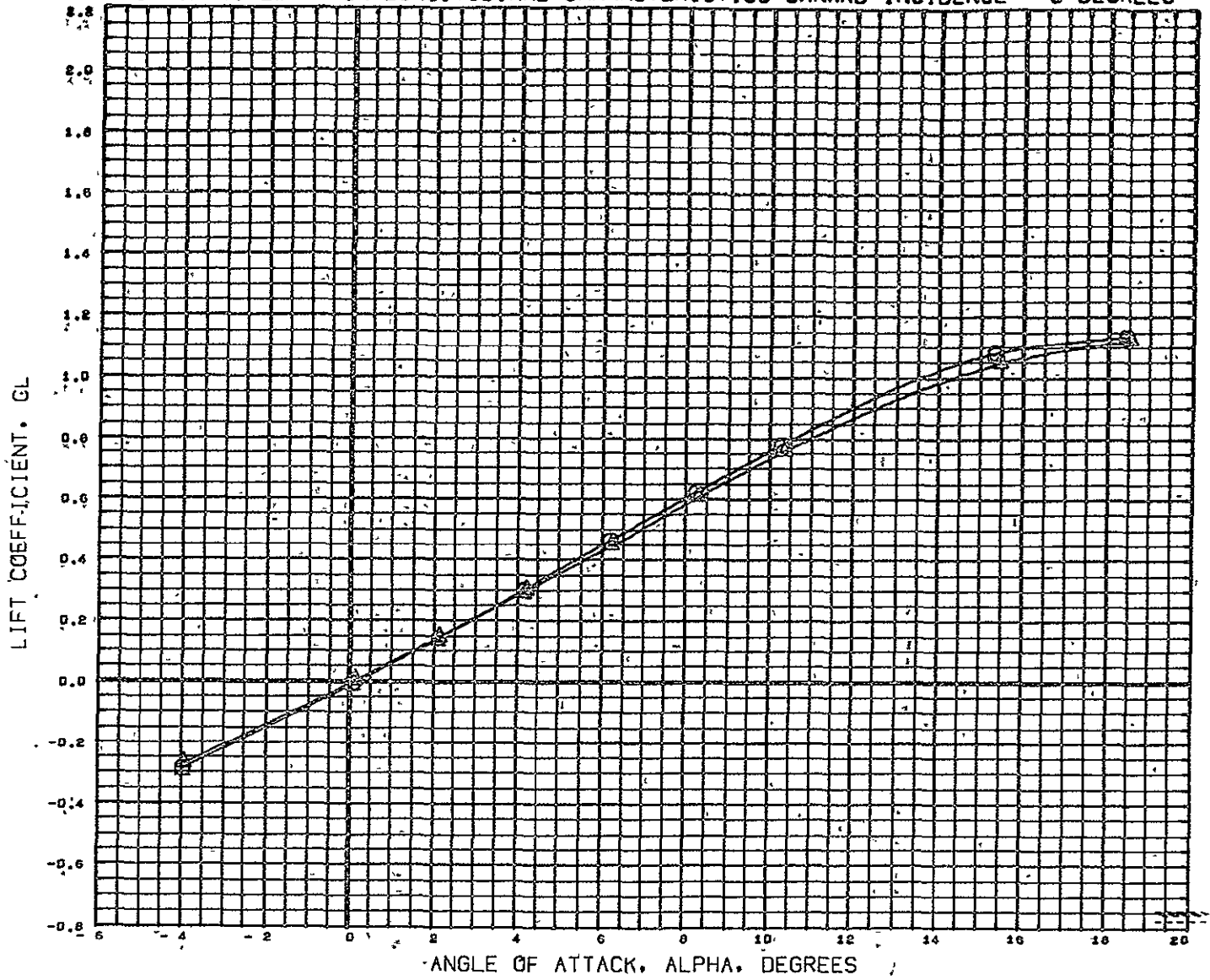


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(ON4029)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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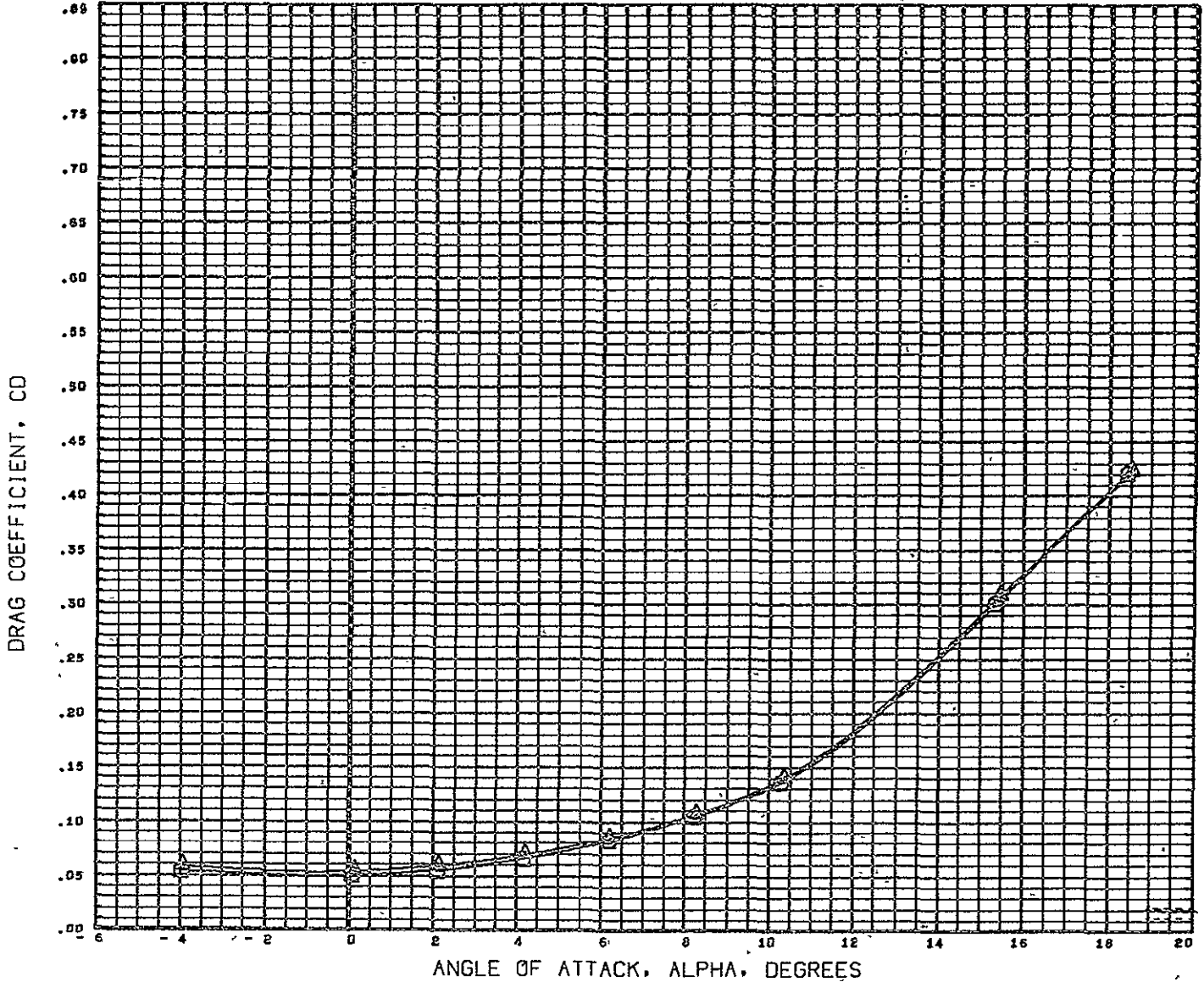
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3310, MSFC/LNSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 50 FT
(ON4029)	NSRDC-3310, MSFC/LNSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

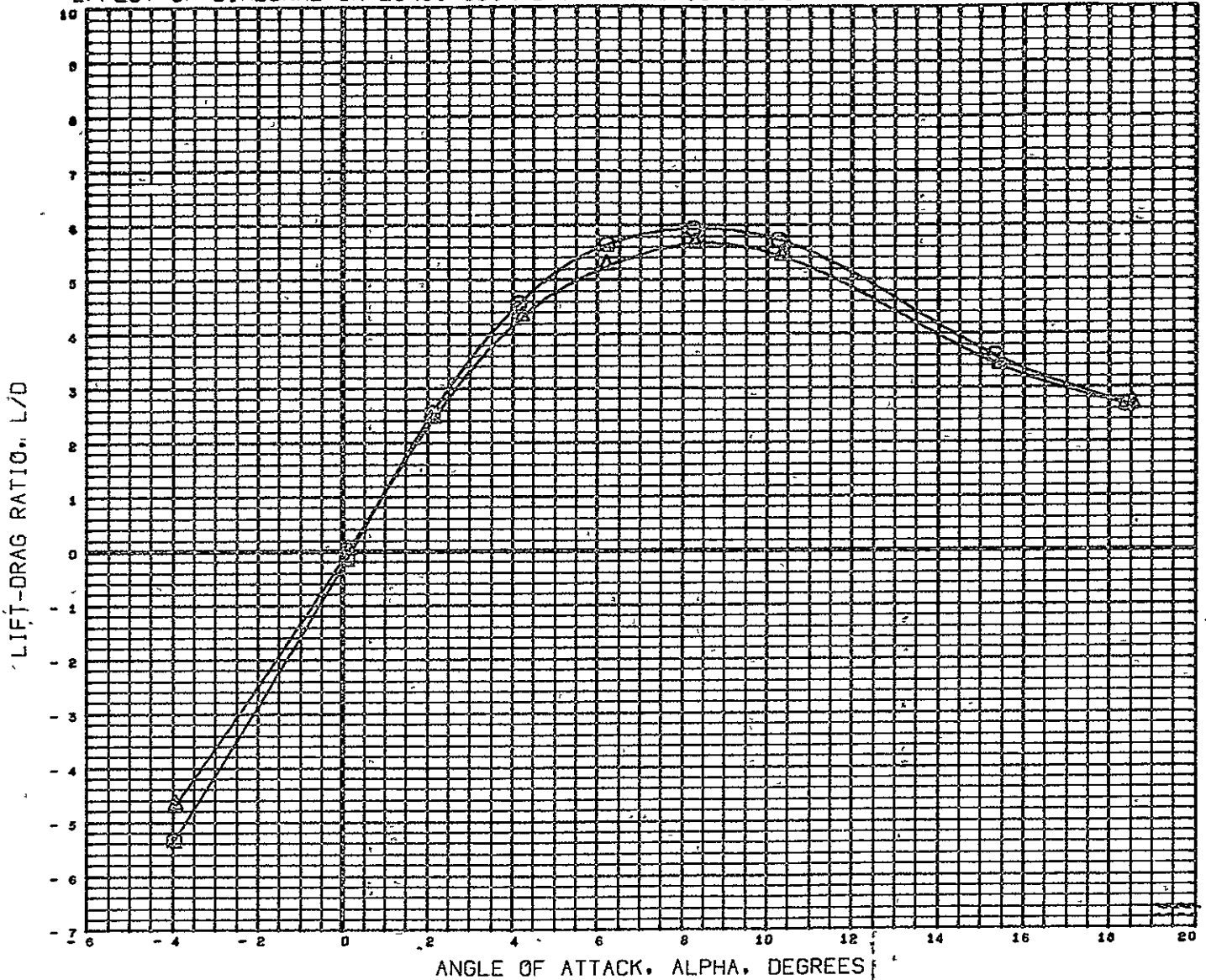


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(ON4029)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

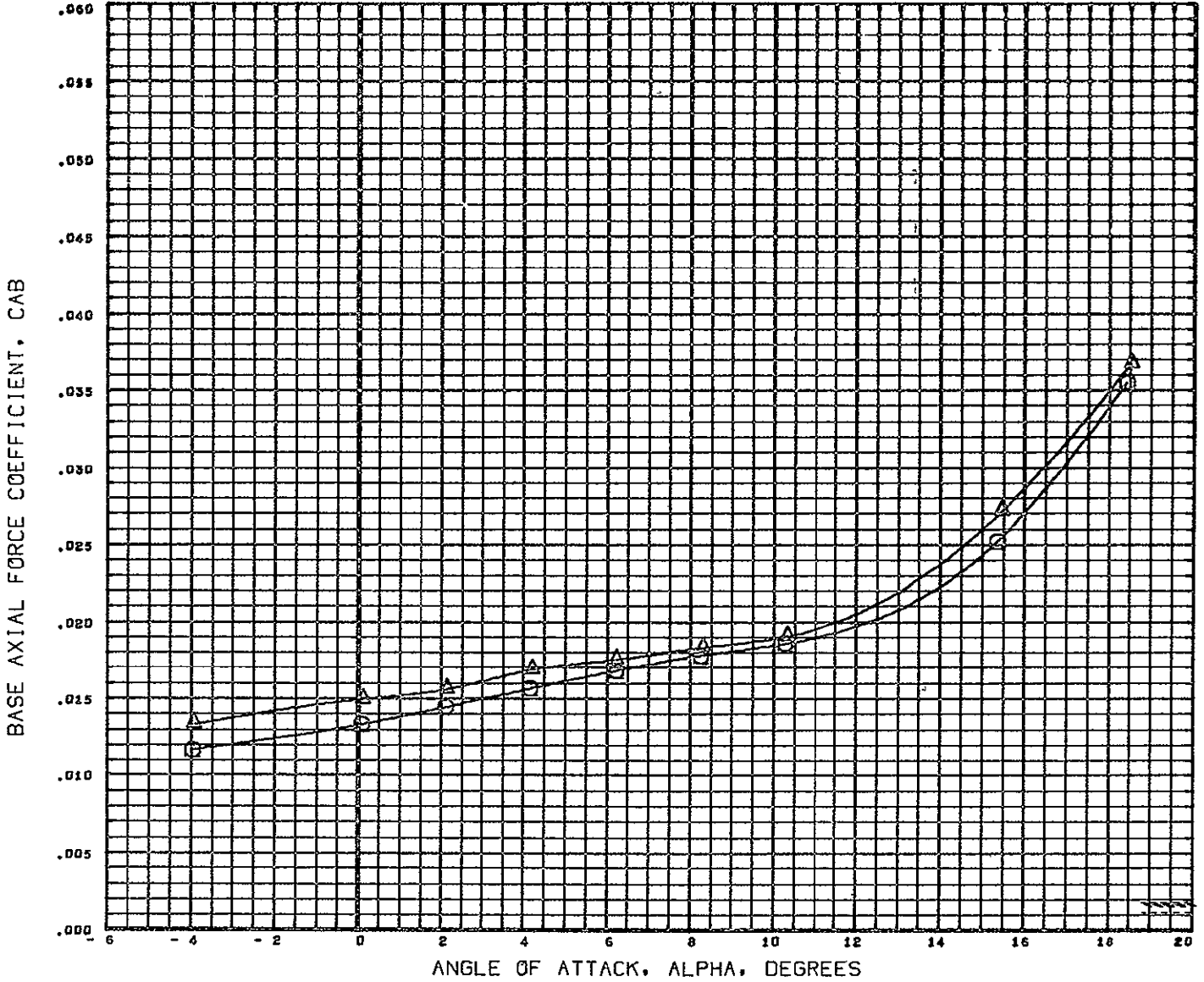
PAGE 57

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



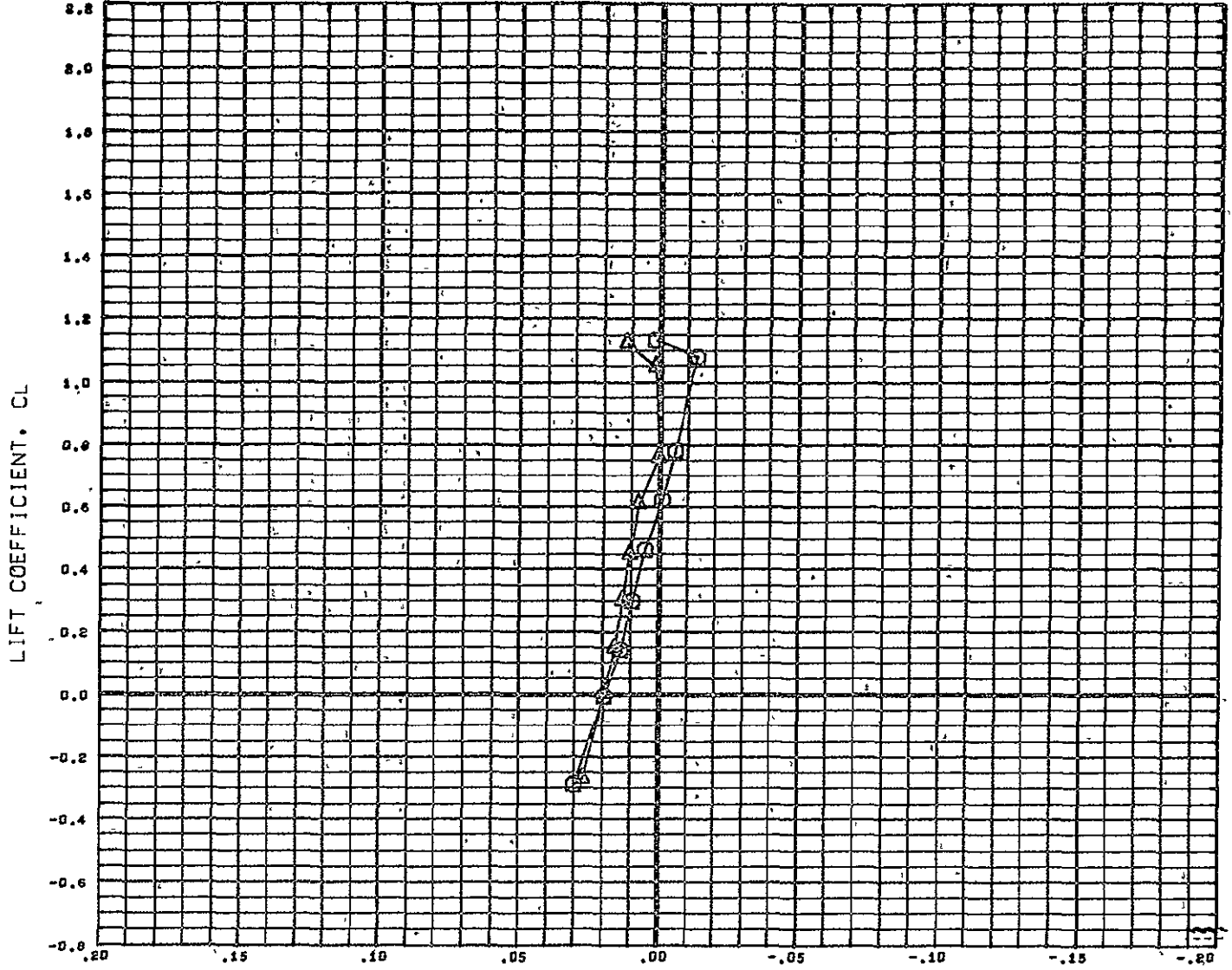
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(ON4029)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(ON4029)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

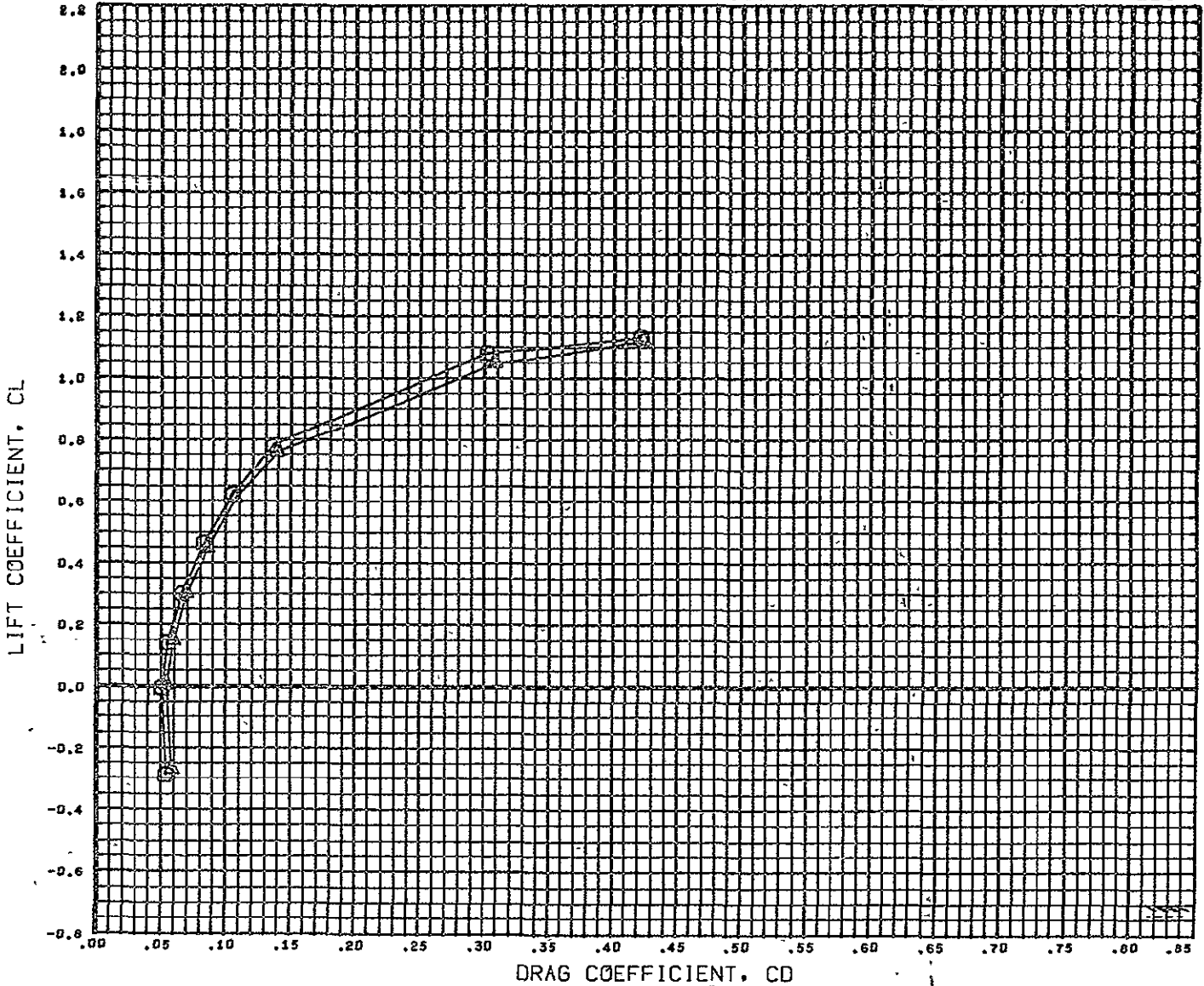
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(ON4029)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

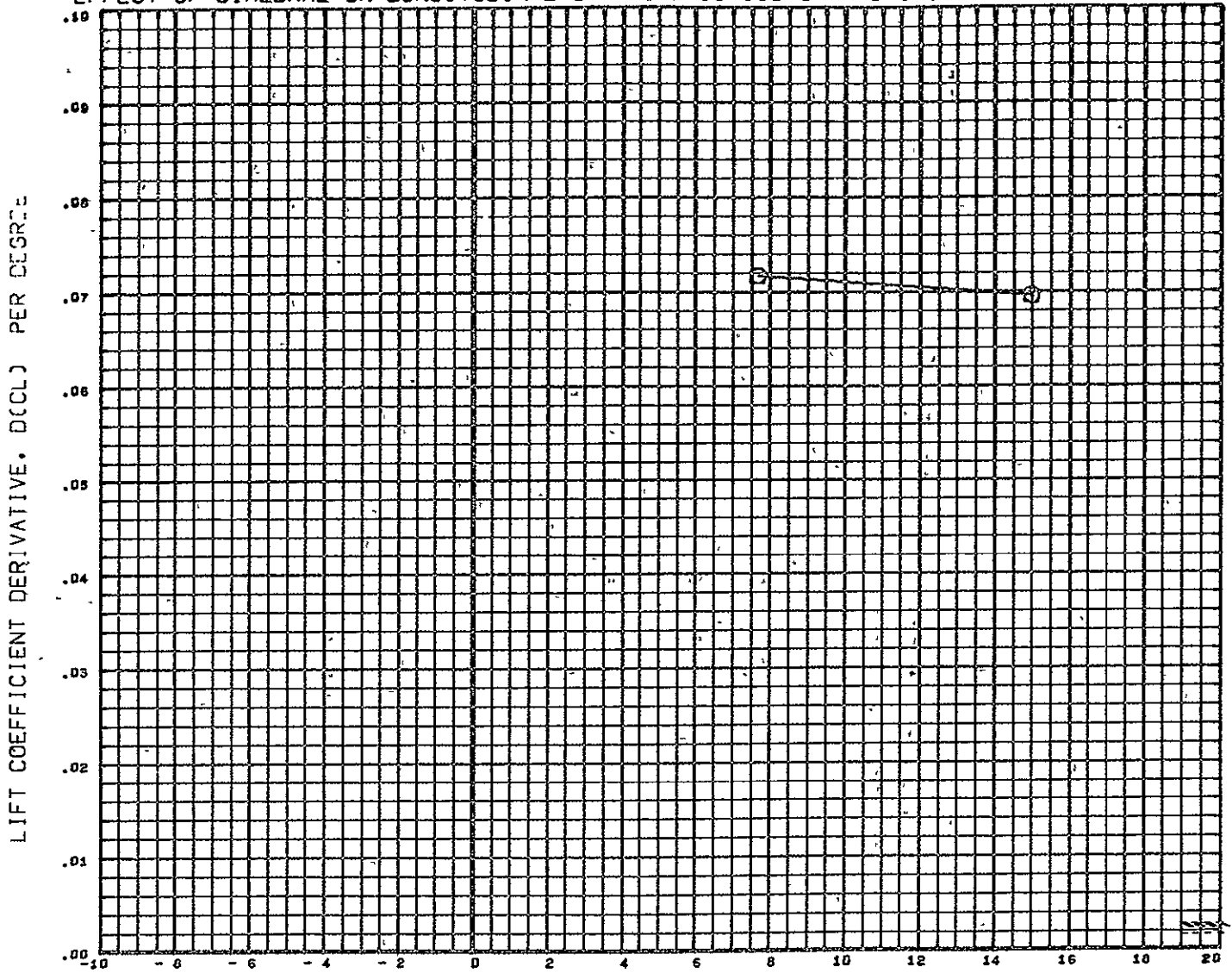
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(ON4029)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	1.000	2.000	0.000	LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

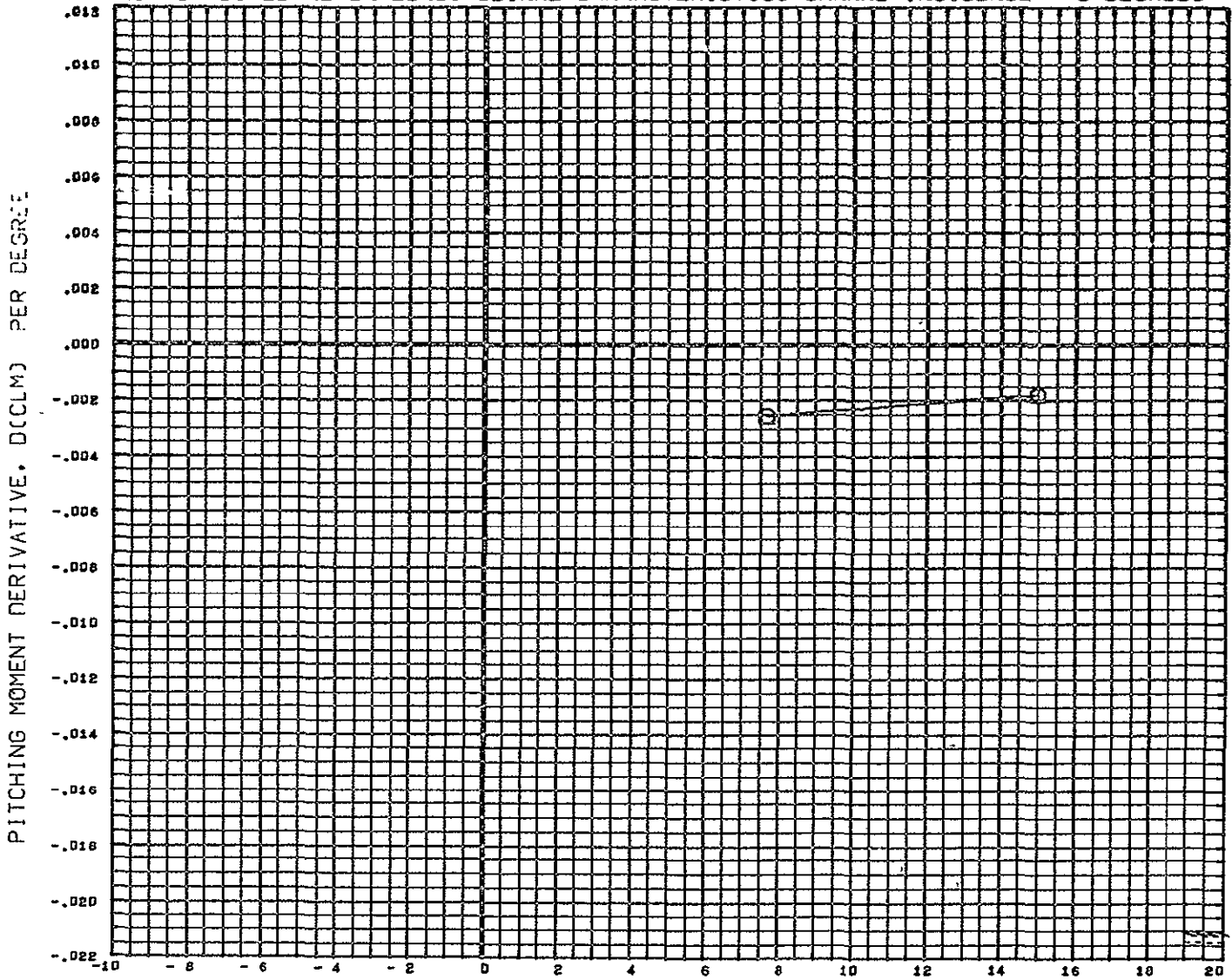
MACH .38

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



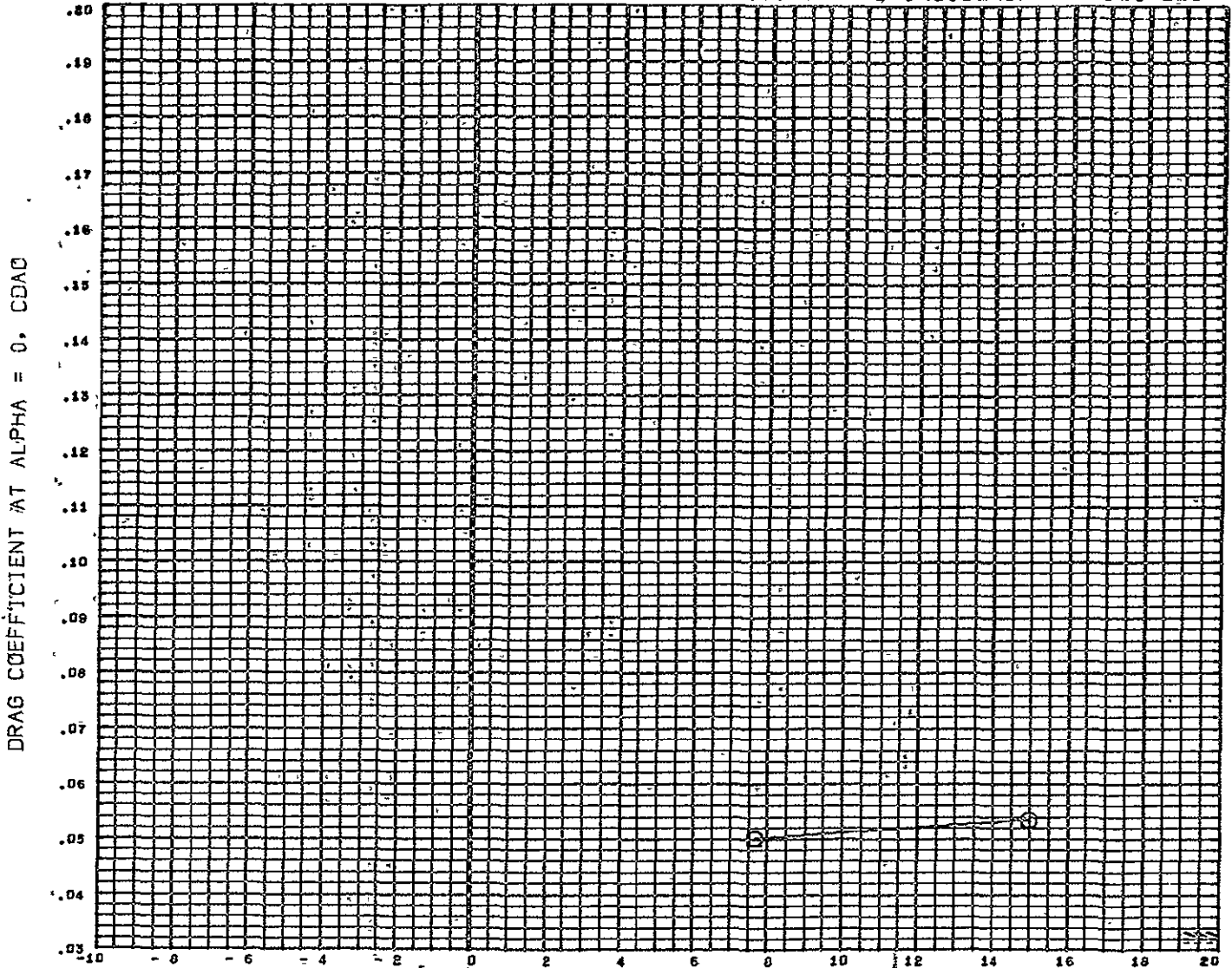
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION						
		BETA	INCIDC	AILRON	ELEVTR	WNGPOS	DIHDL	DIHDL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE
○	0.400	0.017	3.000	0.000	0.000	2.000	7.660	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150
		INCIDW	0.000	PN2209	PN4029										
		CANARD	0.000												
		RUDDER	0.000												
		CNDPOS	1.000												
		DATA HIST. CODE	HCI												

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



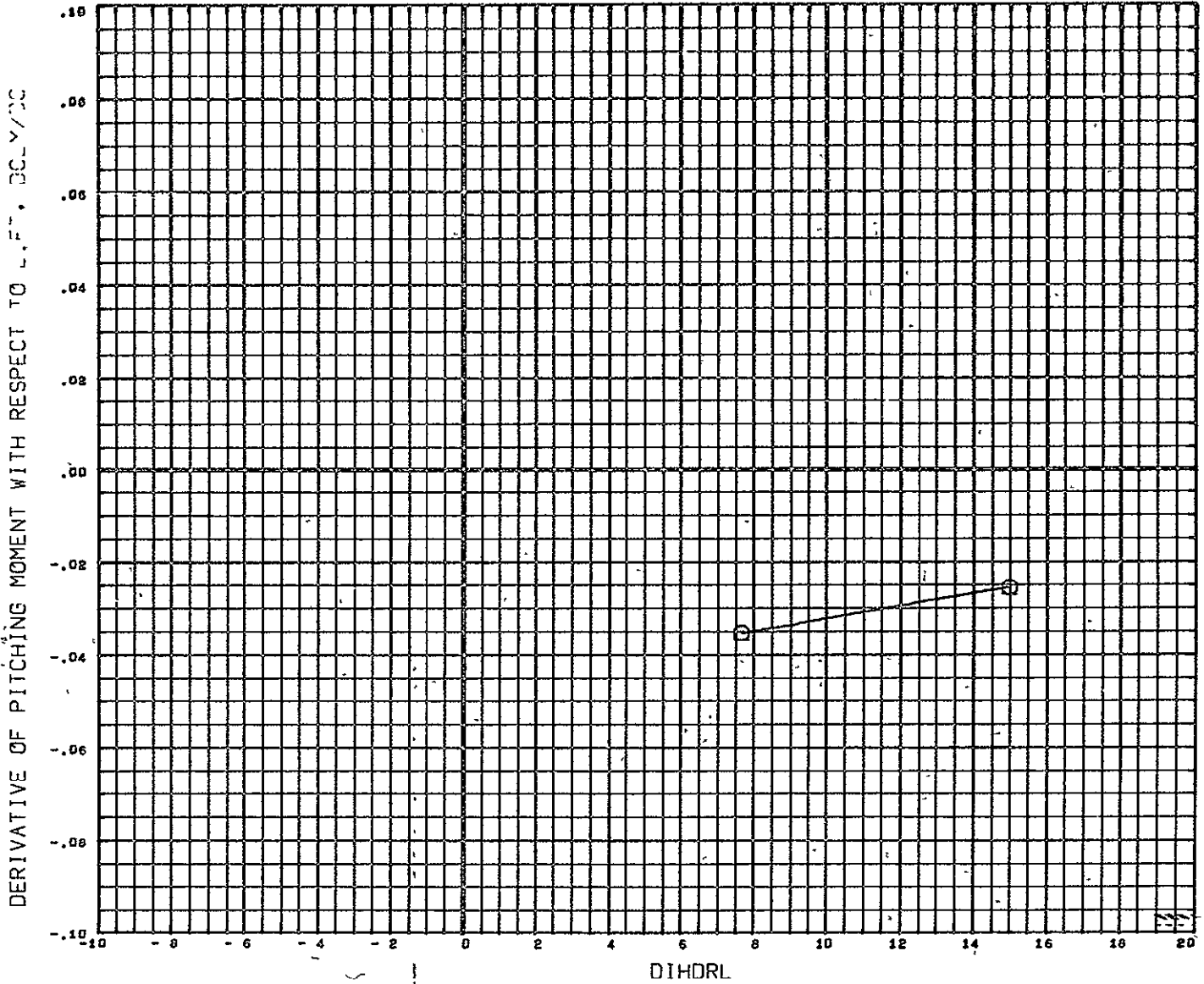
SYMBOL	MACH	PARAMETRIC VALUES				DIHDL			REFERENCE INFORMATION		
○	0.400	BETA	- 0.017	INCIDC	3.000	DIHDL	DIHDL	DIHDL	SREF	1.3550	50.FT.
		INCIDW	0.000	AILRON	0.000	PN2209	7.660	PN4029	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000				BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000				XMRP	2.5950	FEET
		CNDPOS	1.000						YMRP	0.0000	FEET
		DATA HIST. CODE	HCI						ZMRP	0.0187	FEET
									SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
D	0.383	BETA	0.017	INGIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ. FT.
		INCIDW	0.000	AILRON	0.000	AN2209	7.660	AN4029	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000					XNRP	2.5950	FEET
		CNDPOS	1.000							YNRP	0.0000	FEET
		DATA HIST. CODE	HF							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

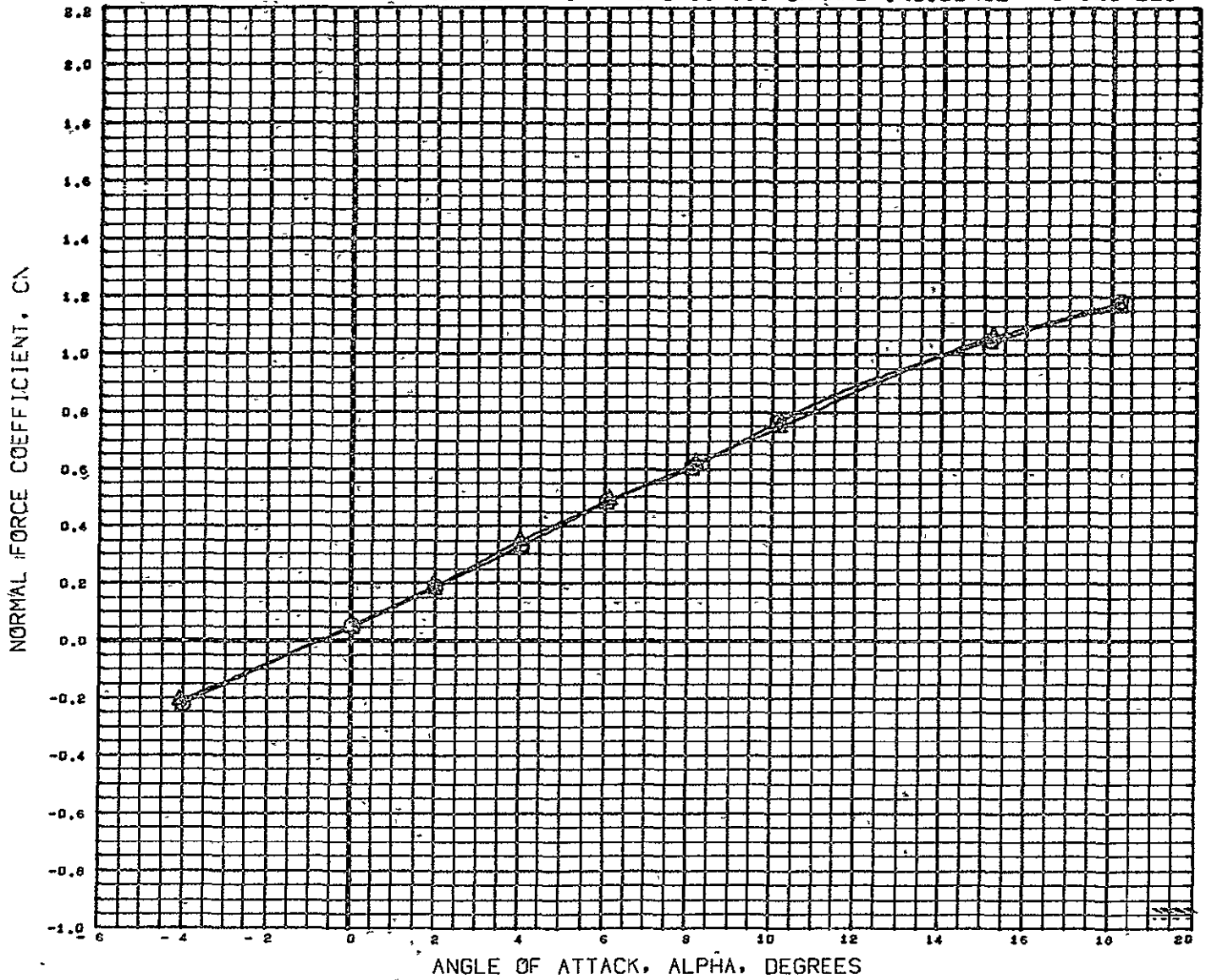
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.400	ALPHA	0.000	BETA	- 0.017
		INCIDC	3.000	INCIDW	0.000
		AILRON	0.000	CANARD	0.000
		ELEVTR	0.000	RUDDER	0.000
		WNGPOS	2.000	CNDPOS	1.000
		DATA HIST. CODE HCI			

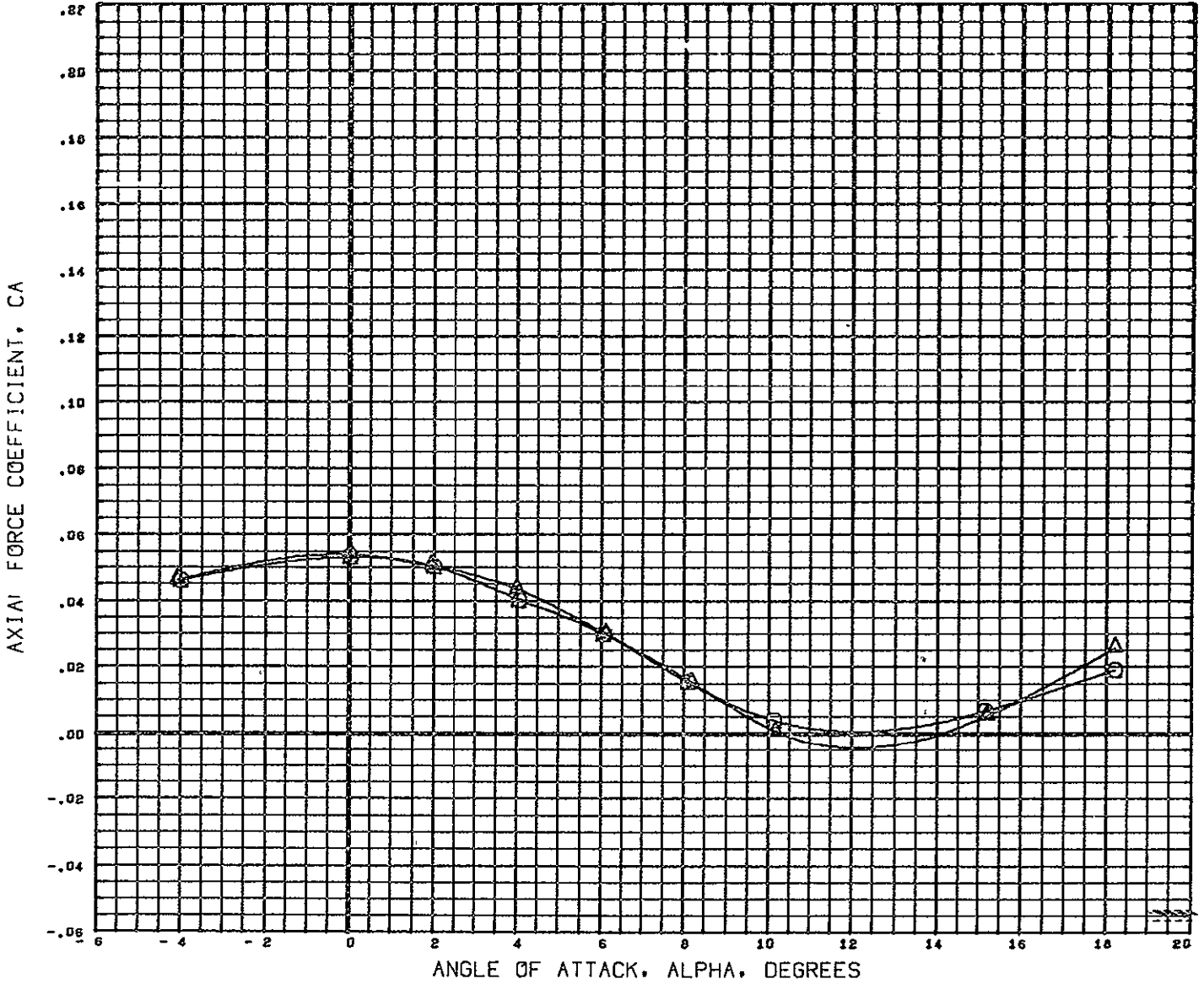
REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XHRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0107	FEET
SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(QN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

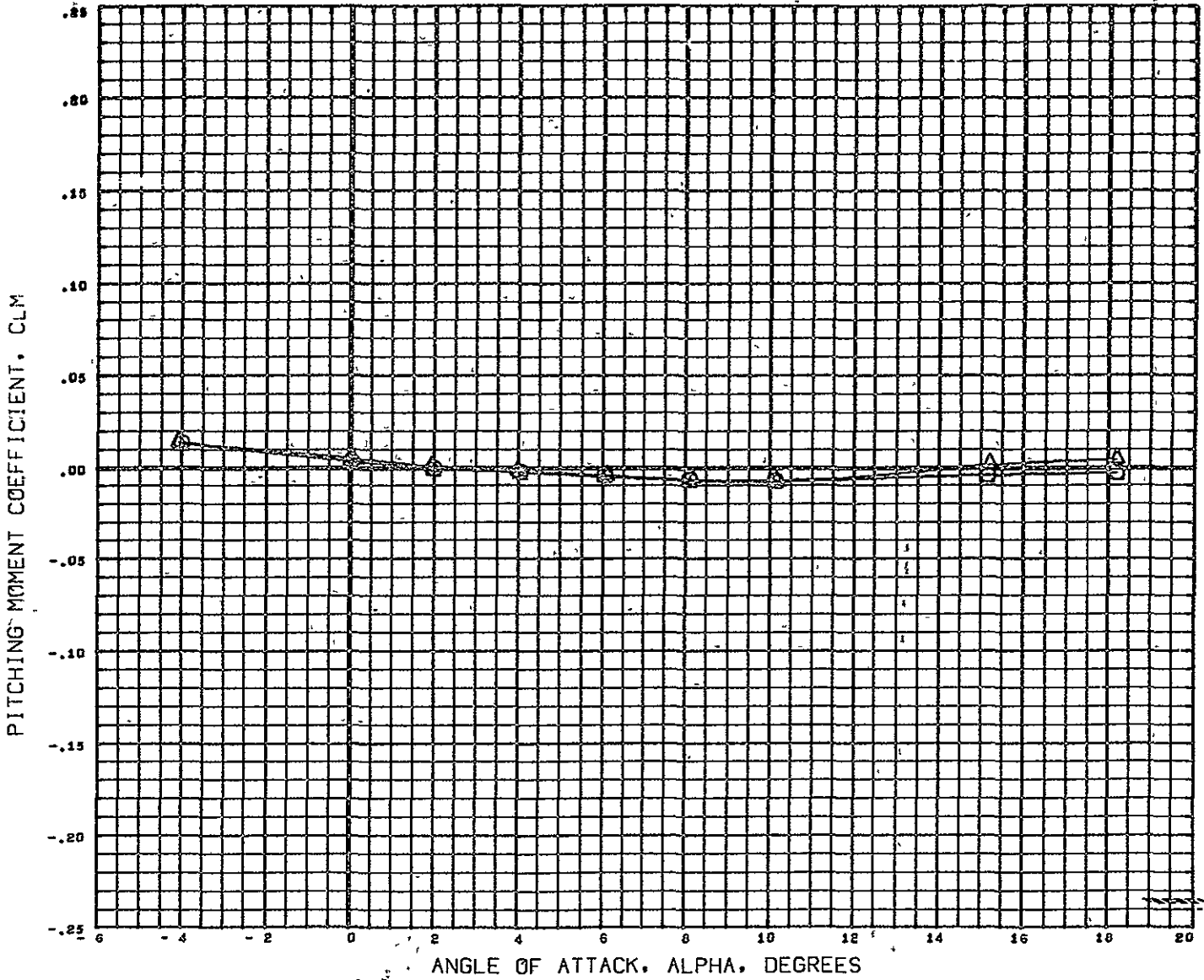
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4821)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(ON4809)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

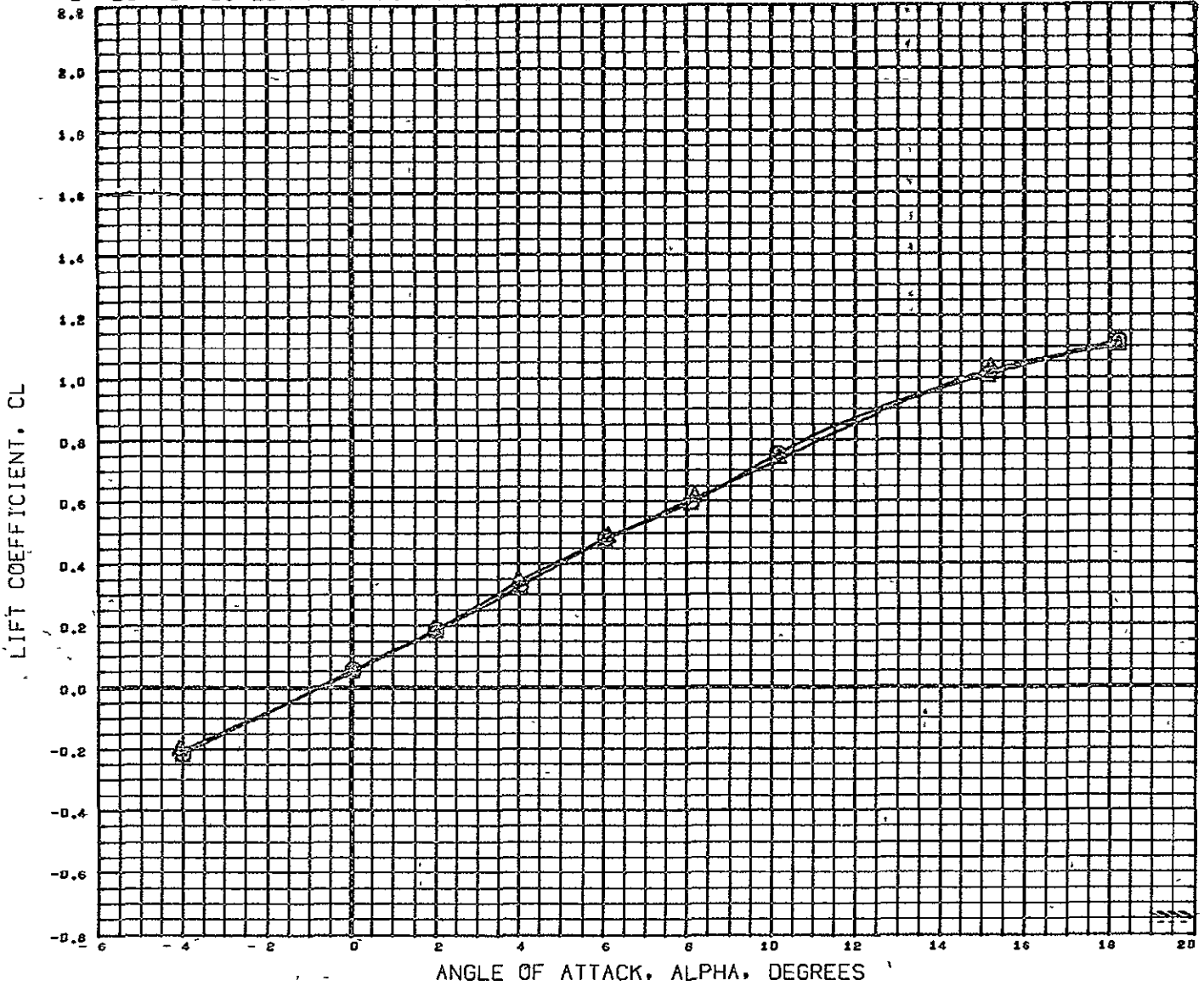
MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4021) \odot	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 36. FT.
(ON4009) \triangle	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

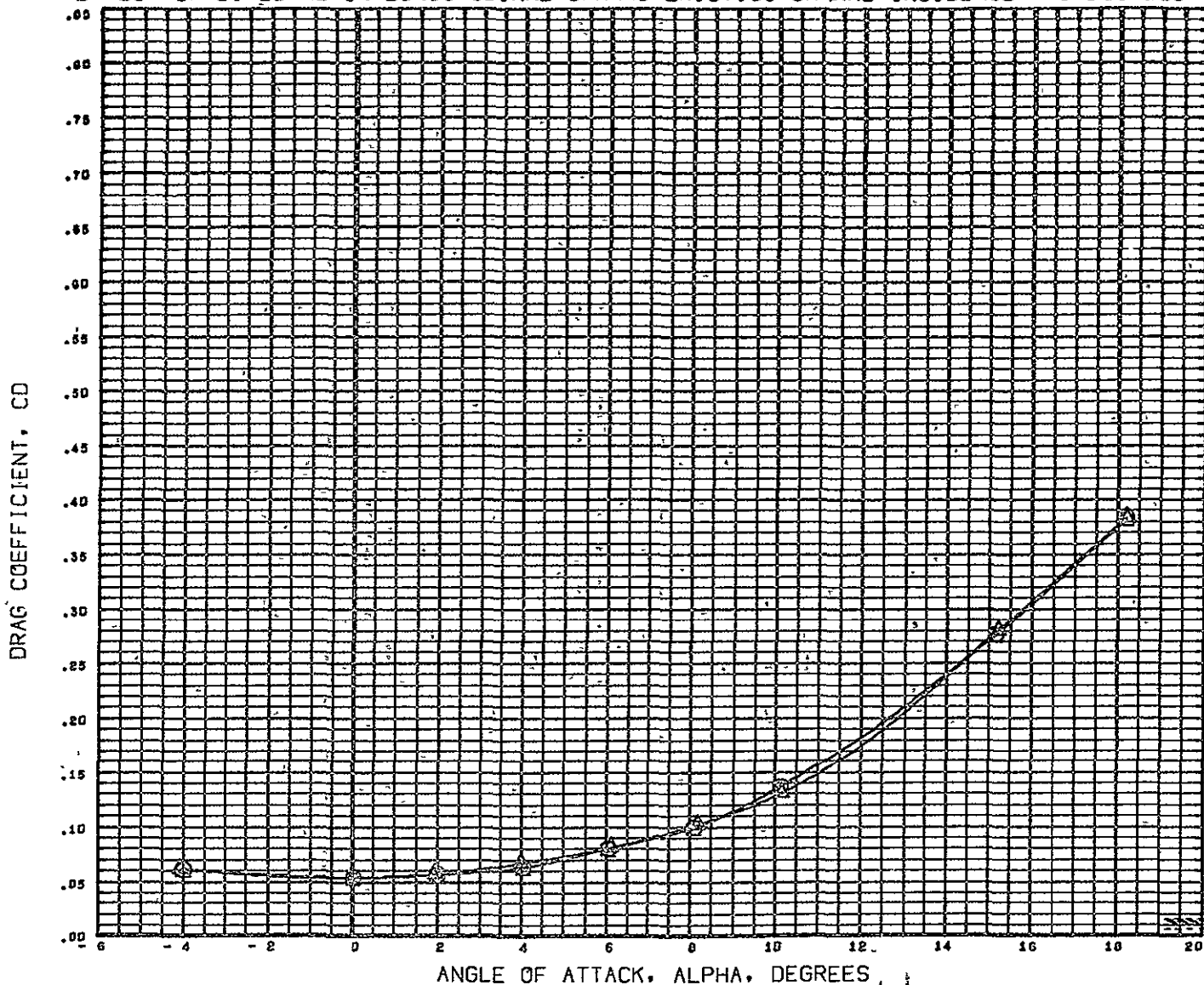


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4021)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1,000	1,000	0,000	SREF	1,3550 SQ.FT.
(ON4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1,000	1,000	0,000	LREF	3,4530 FEET
						BREF	3,4530 FEET
						XNRP	2,5950 FEET
						YNRP	0,0000 FEET
						ZNRP	0,0187 FEET
						SCALE	0 0150 SCALE

MACH .40

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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

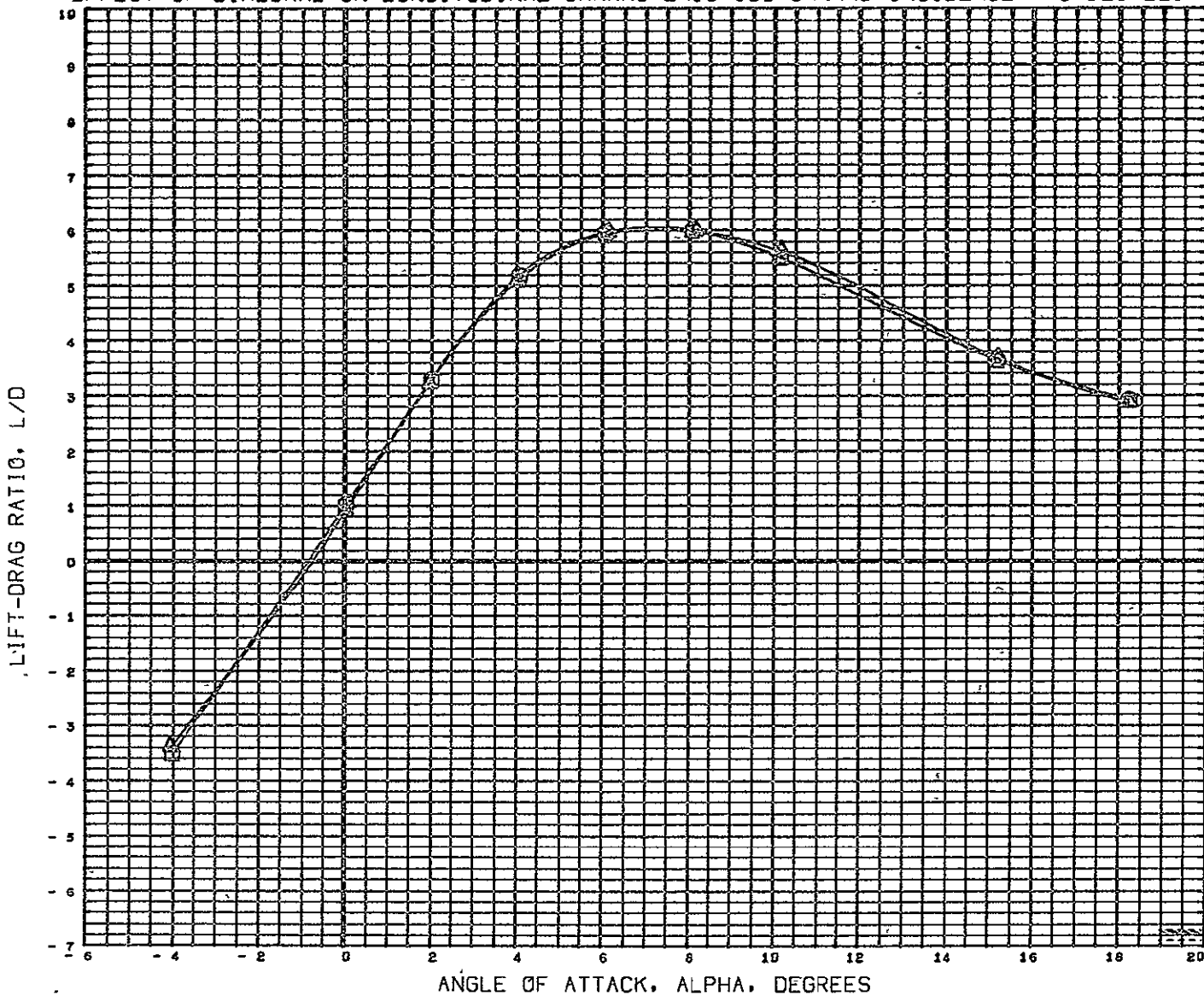


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(ON4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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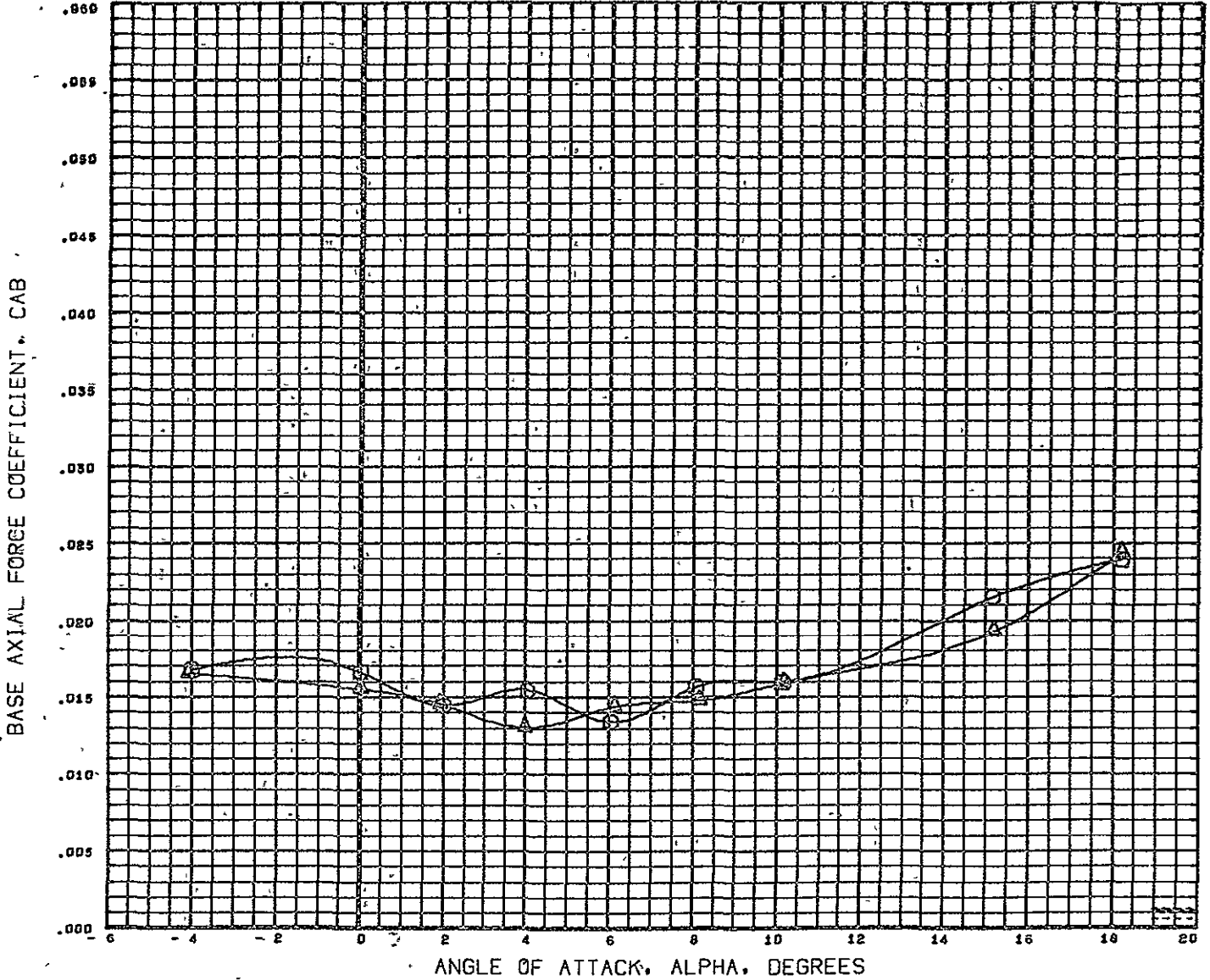
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CANPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(ON4009)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(ON4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

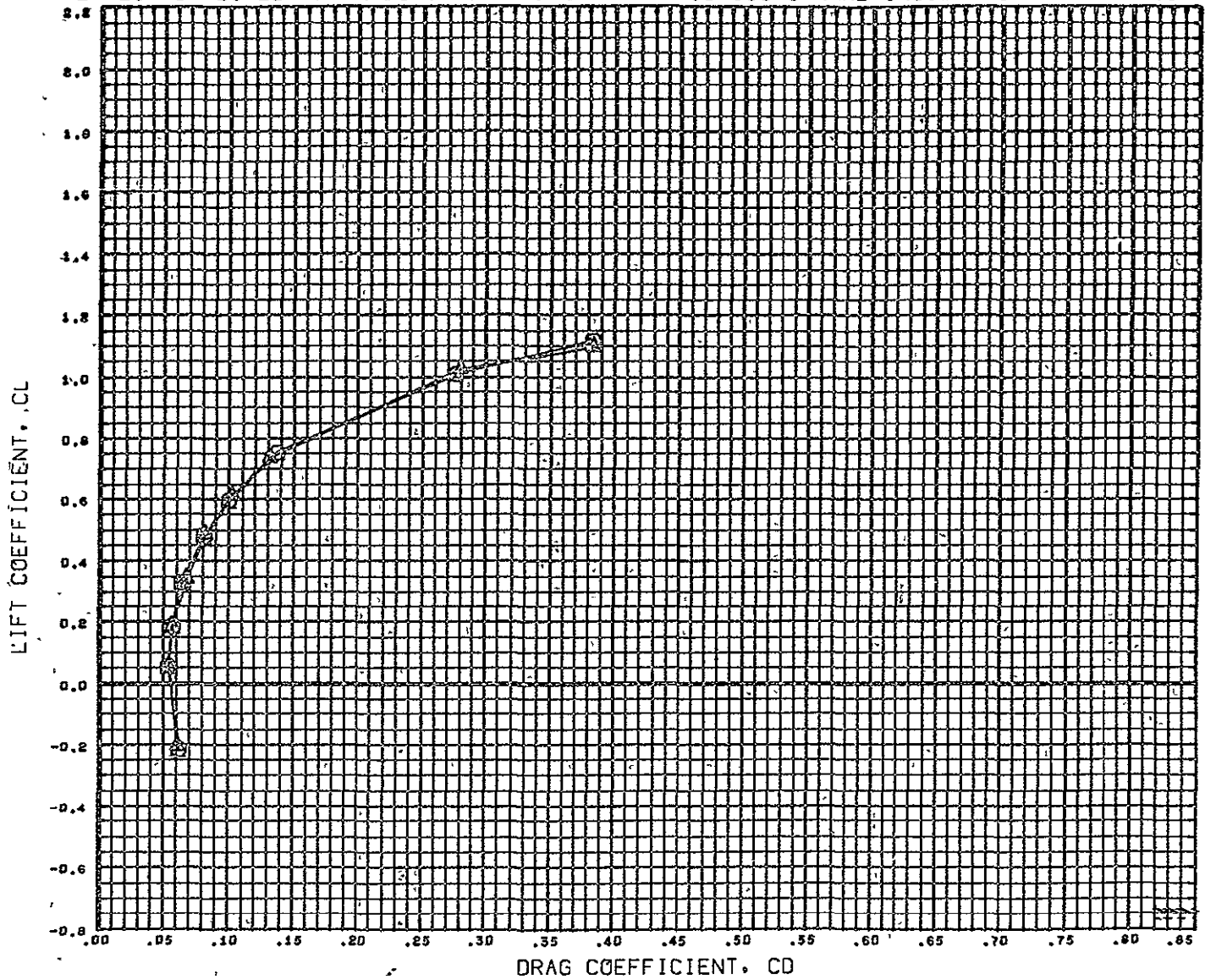
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNBPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(ON4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

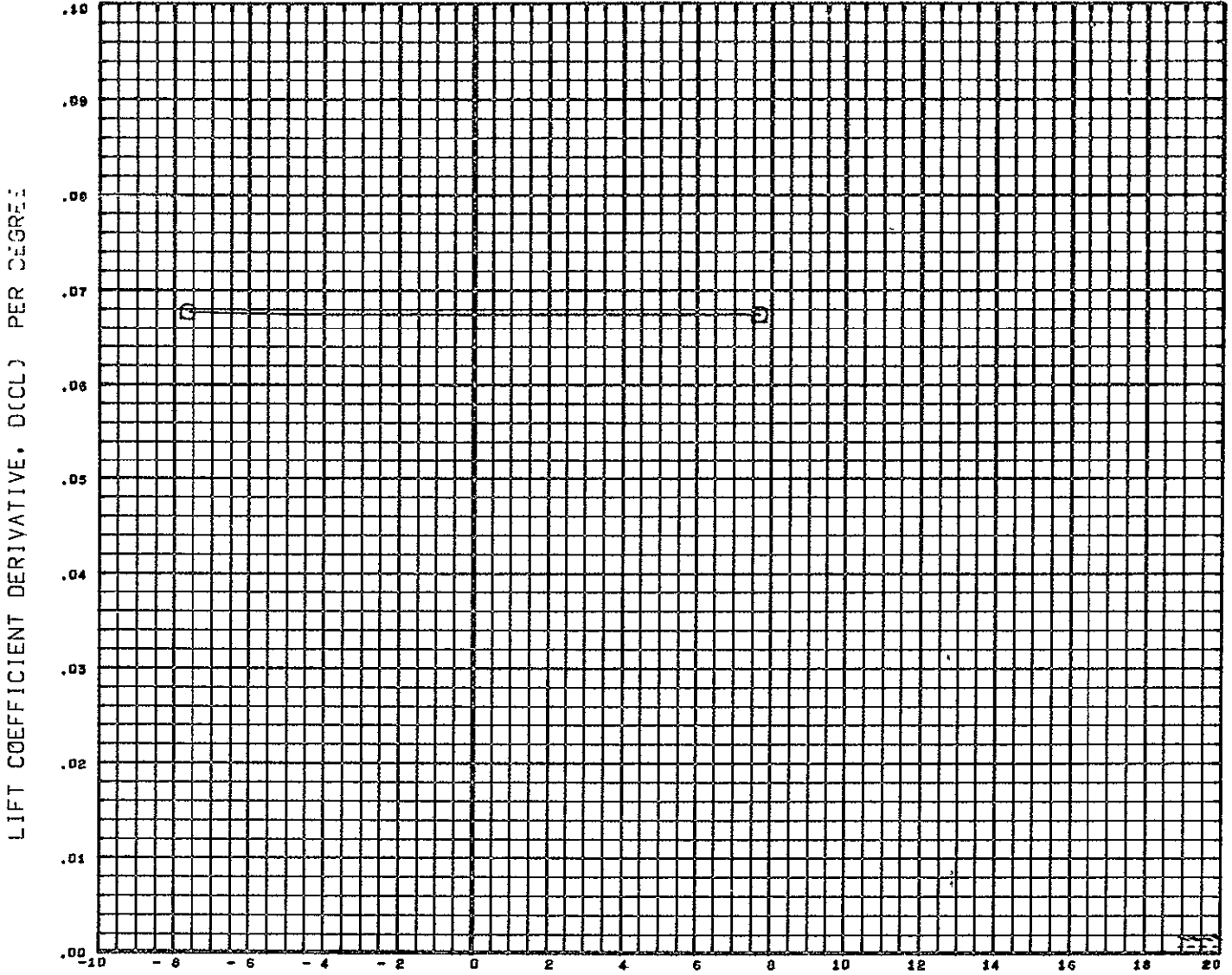


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4021)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(ON4009)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

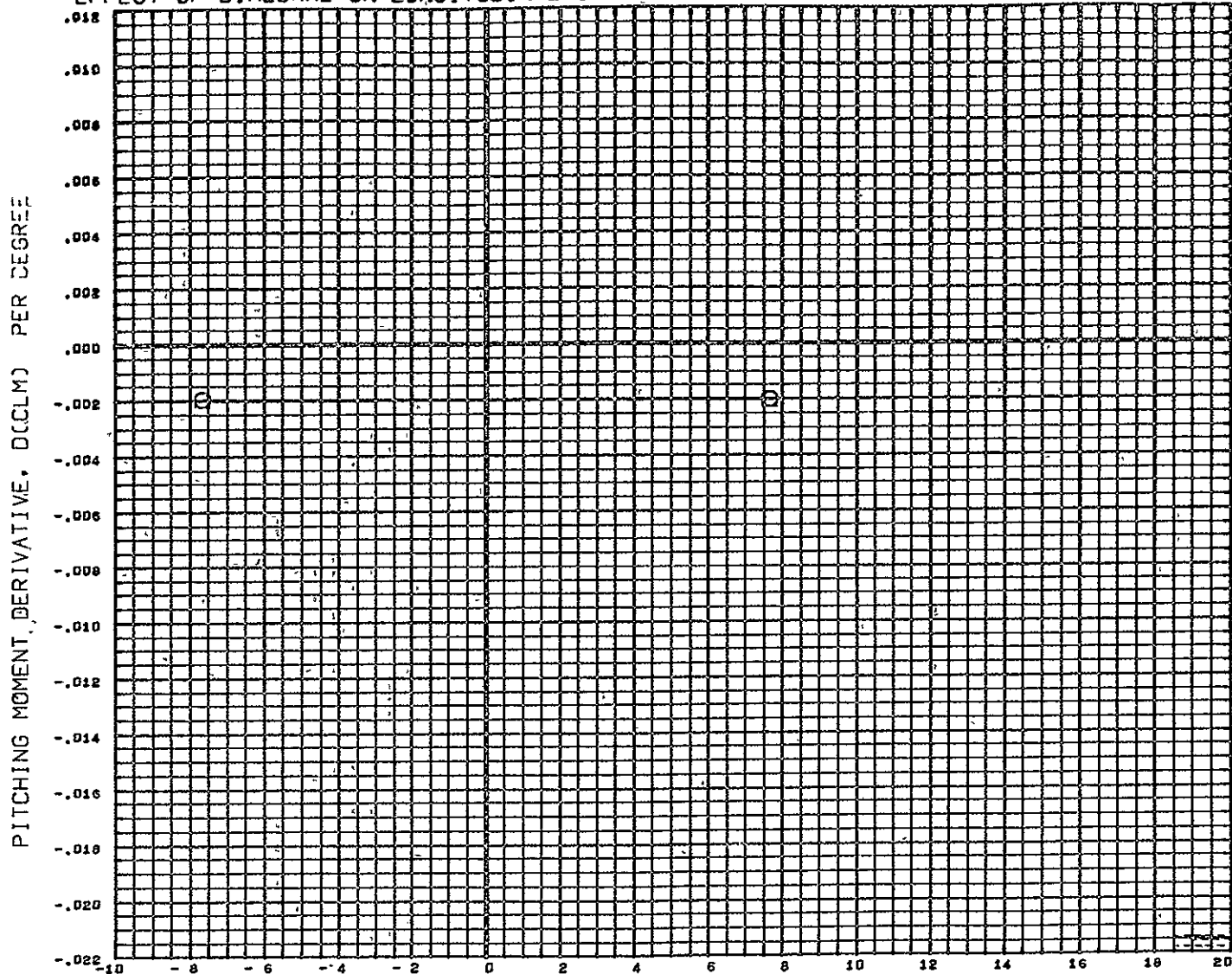
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EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



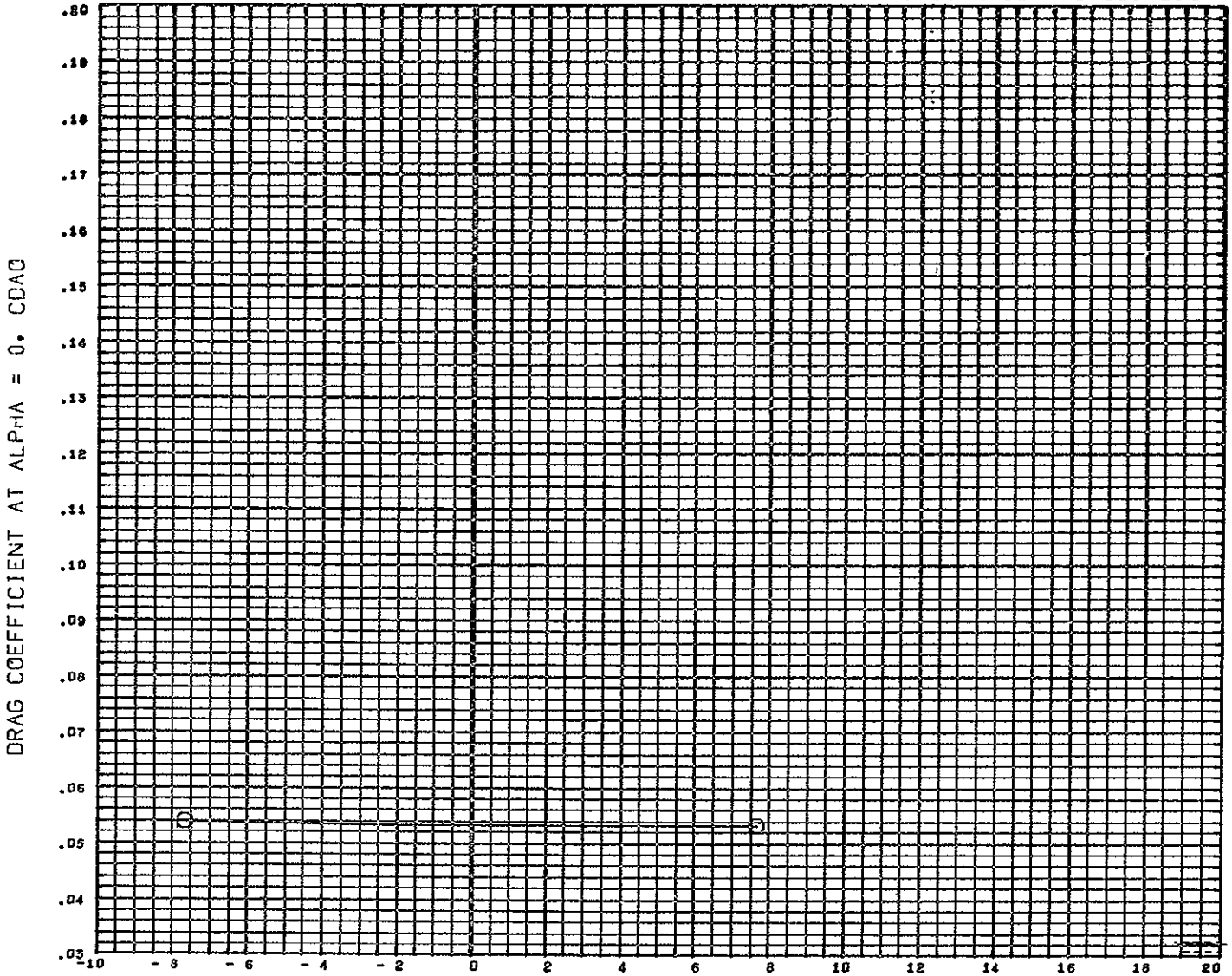
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION							
		BETA	INCIDC	AILRON	WNGPOS	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XNRP	YNRP	ZNRP	SCALE	SQ.FT.
○	0.400	0.000	3.000	0.000	1.000	PN4021	7.660	PN4009 - 7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	FEET
		INCIDW	0.000	0.000	0.000											FEET
		CANARD	0.000	0.000	0.000											FEET
		RUDDER	0.000	0.000	1.000											FEET
		CNDPOS	1.000													FEET
		DATA HIST. CODE		NCI												SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION																
		BETA	INCIDW	AILRON	ELEVTR	WNGPOS	DIHRL	DATASET	DIHRL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE									
0	0.400	0.000	0.000	0.000	0.000	1.000	PN4021	7.660	PN4009	- 7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	SQ.FT	FEET	FEET	FEET	FEET	FEET	FEET	SCALE

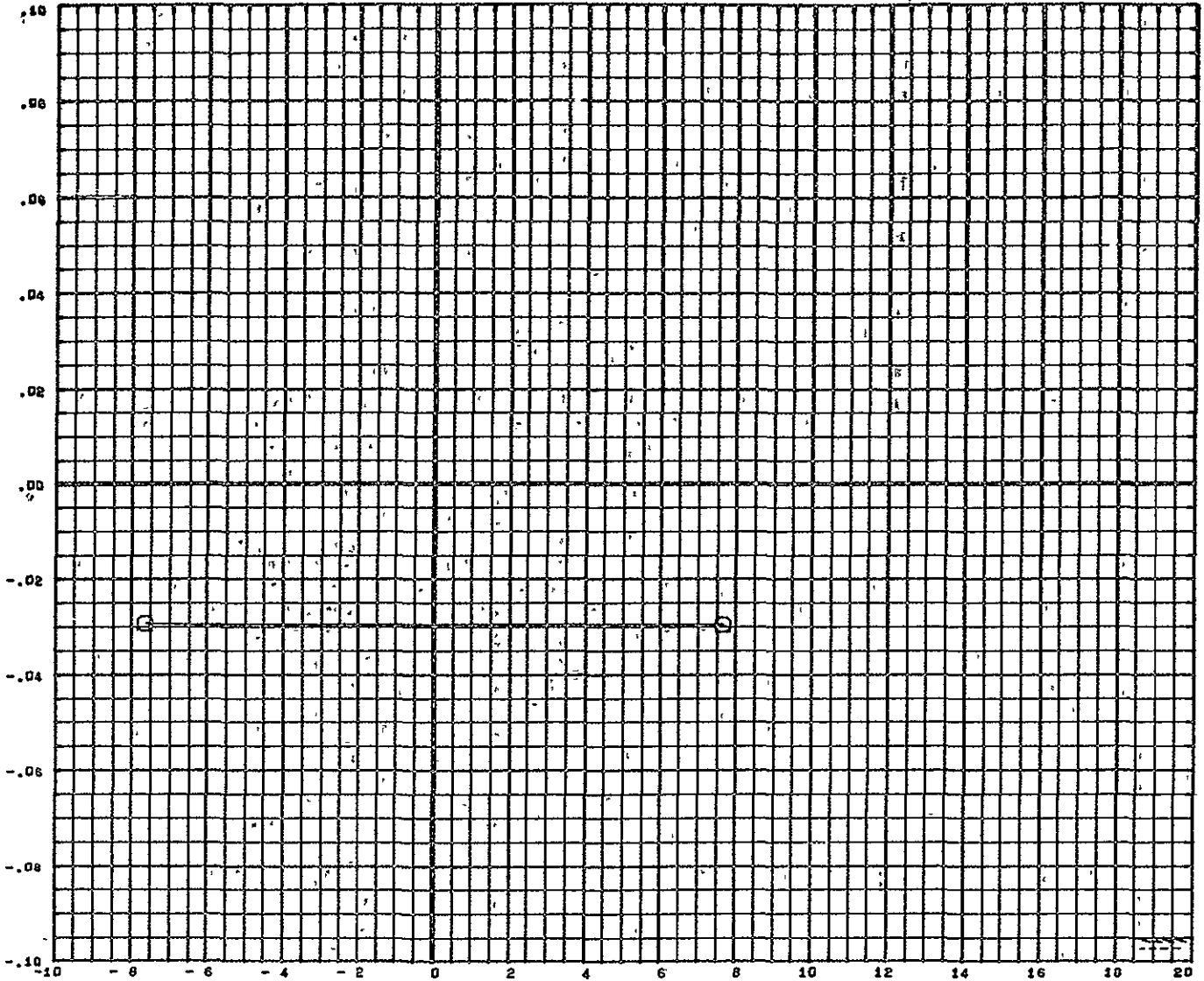
EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
Q	0.403	BETA	0.000	INCIDC	3.000	DIHDL	DIHDL	SREF	1.3550	SQ.FT
		INCIDW	0.000	AILRON	0.000	AN4021	AN4009	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000			BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000			XNRP	2.5950	FEET
		CNDPOS	1.000					YNRP	0.0000	FEET
		DATA HIST. CODE	MF					ZNRP	0.0187	FEET
								SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LONGITUDINAL CHARACTERISTICS CANARD INCIDENCE = 3 DEGREES

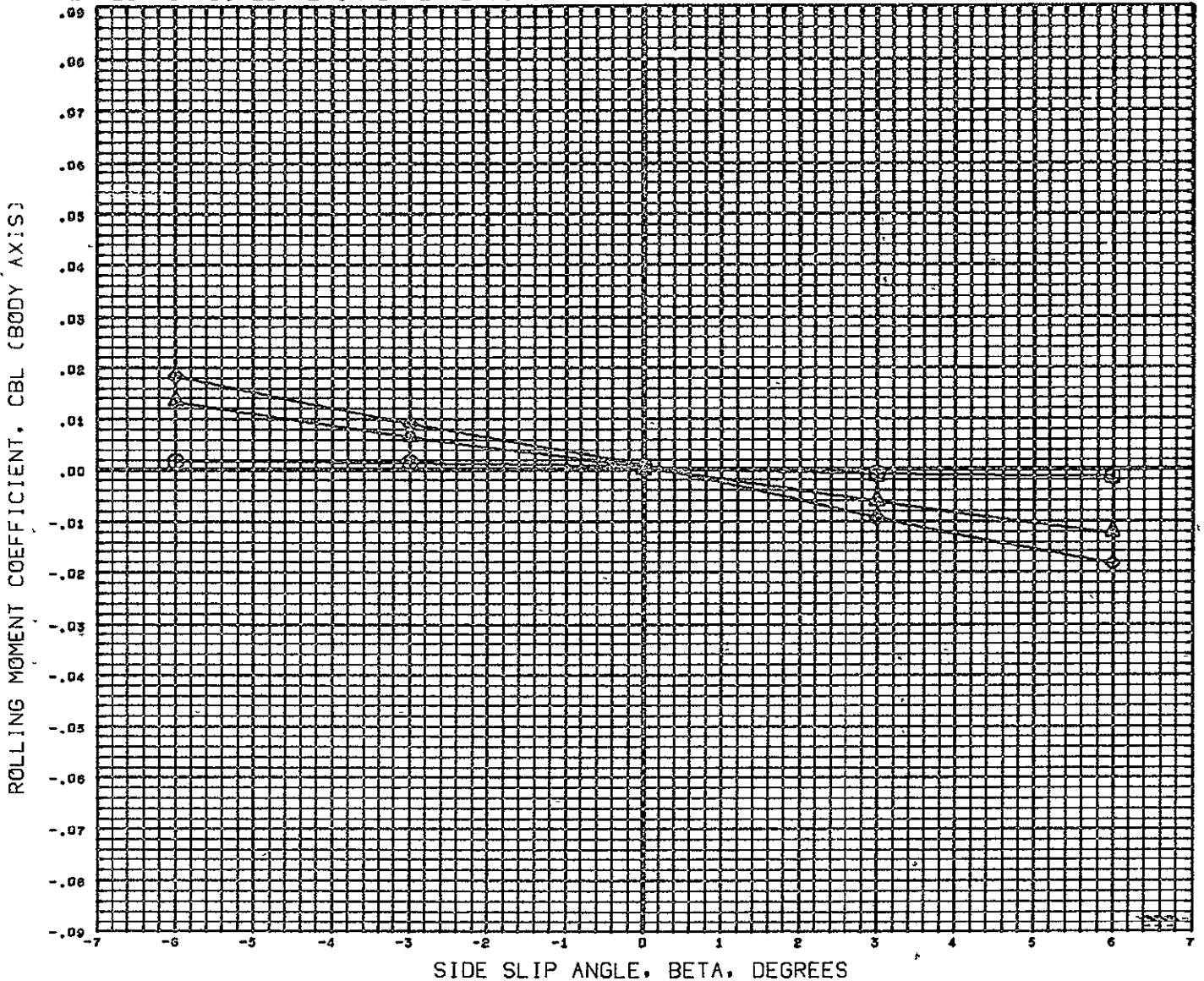
DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO LIFT, DC, V/DC



DIHDL

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
70	0.400	ALPHA	0.000	BETA	0.000	SREF	1.3550	88.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	MCI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

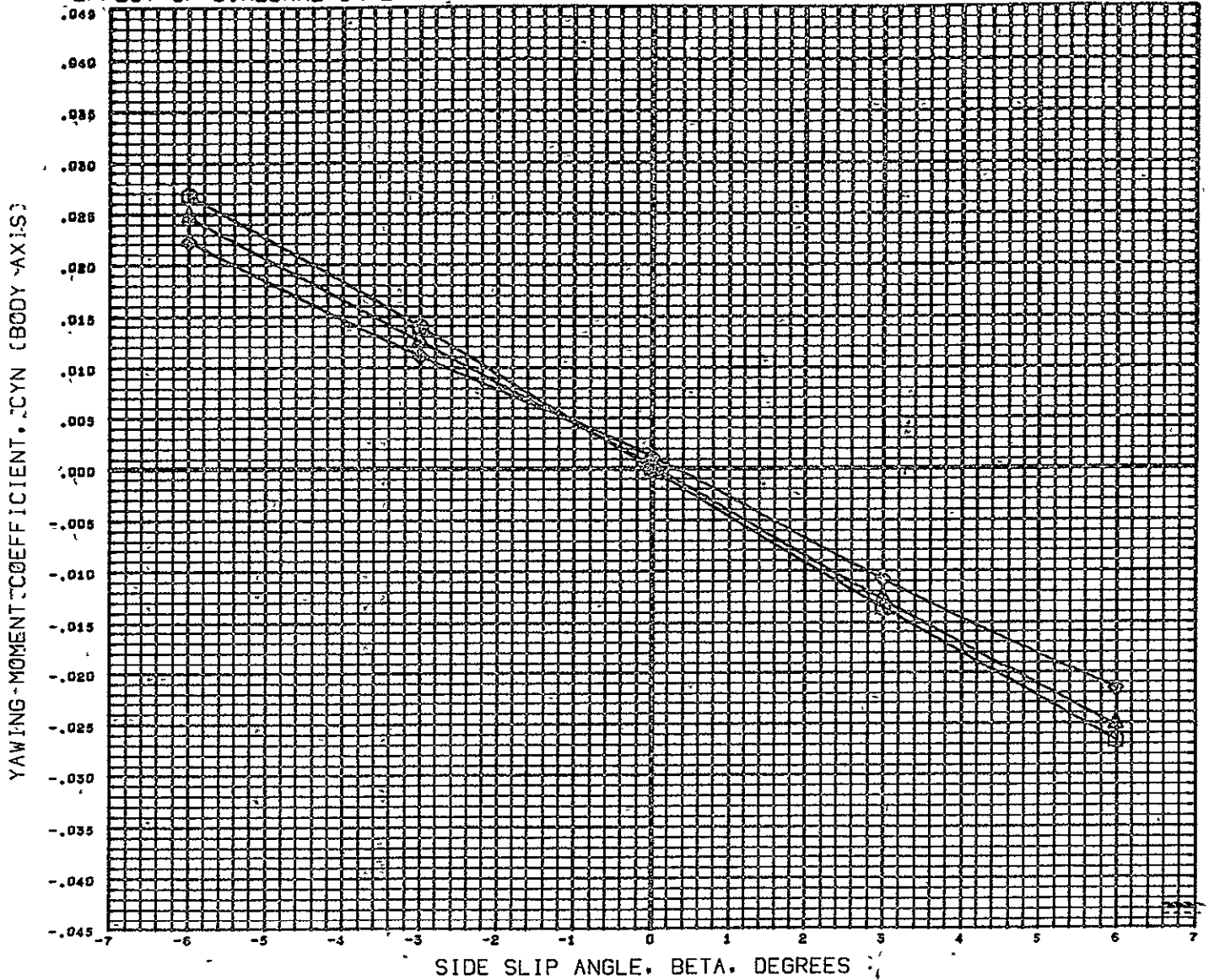


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS.	WNGPOS	REFERENCE INFORMATION
(FN4002)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	0.000	-7.660	1.000	1.000	AREF 1 3550 SQ.FT.
(FN2554)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	0.037	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4018)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	1.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

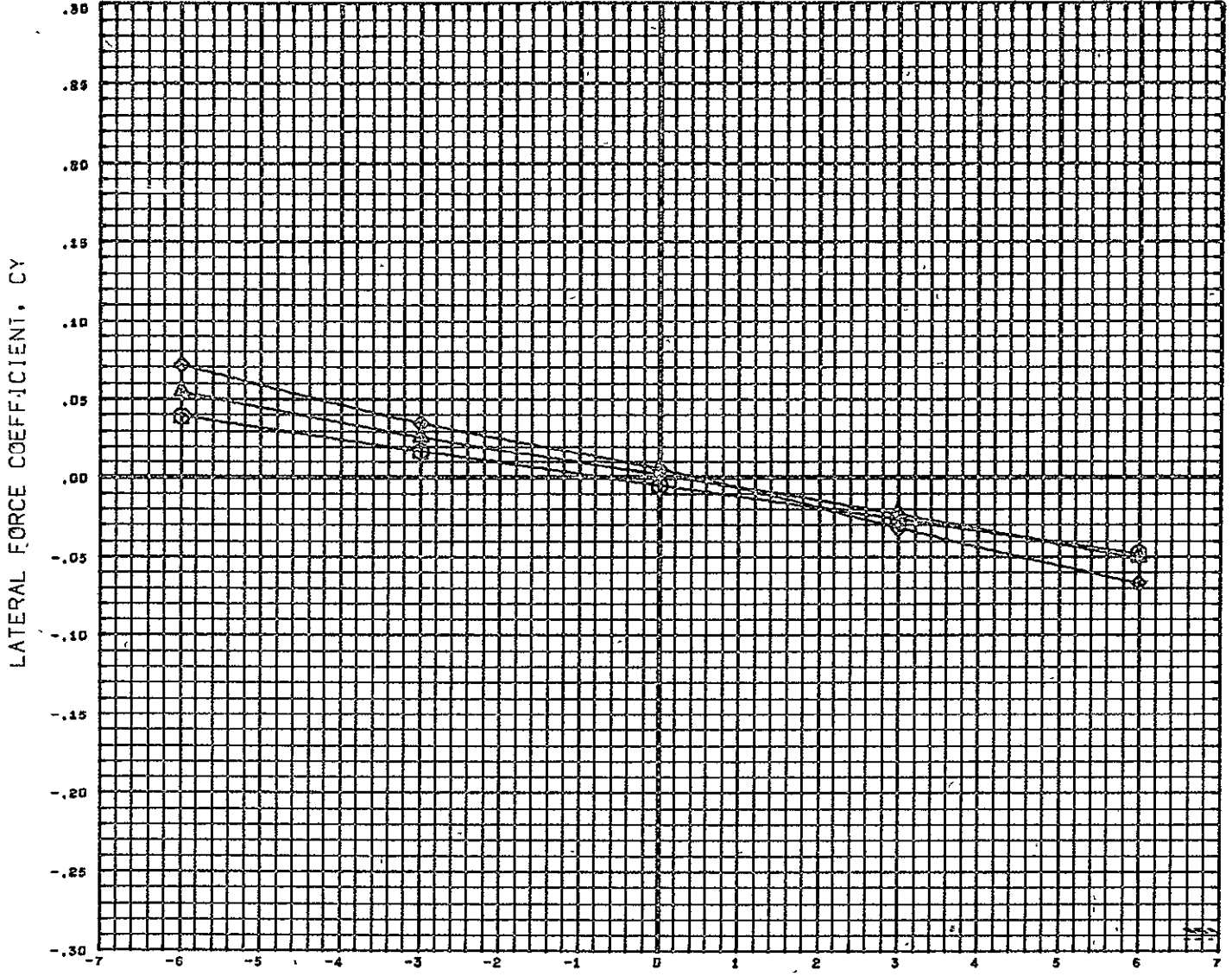
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EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4002) ○	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT.
(FN2554) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1V2W1	0.037	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4016) ◇	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	1.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

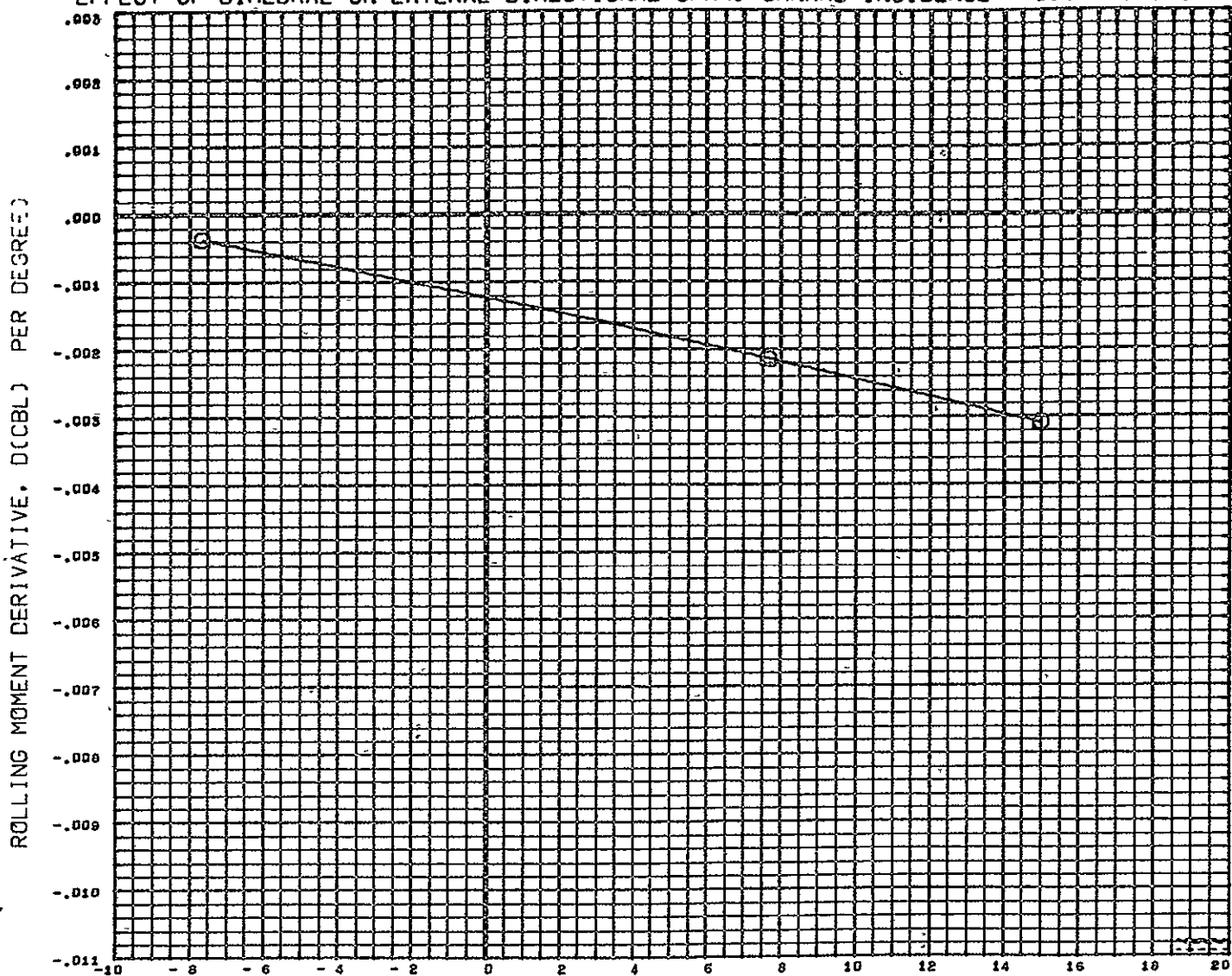
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4002)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2554)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1V2W1	0.037	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4018)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	-1.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

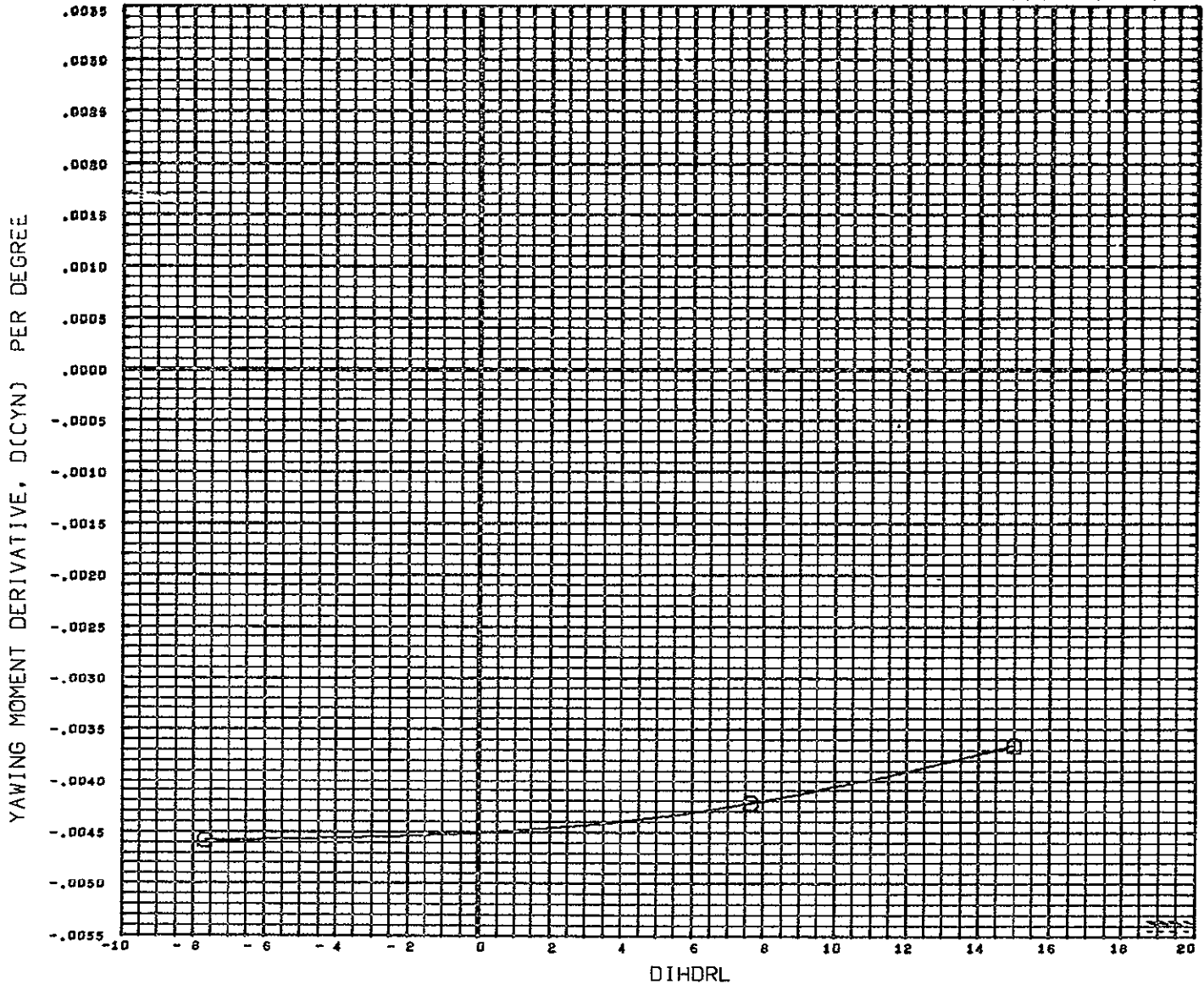
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION														
		ALPHA	INCIDC	AILRON	ELEVTR	DIHDRL	DIHDRL	DIHDRL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE	SQ FT.							
0	0.400	0.000	3.000	0.000	0.000	FN4002	7.660	FN2554	7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	FEET	FEET	FEET	FEET	FEET	SCALE	SCALE
		CANARD	0.000	ELEVTR	0.000	FN4018	15.000																
		WNGPOS	1.000	CNDPOS	1.000																		
		DATA HIST. CODE	MI																				

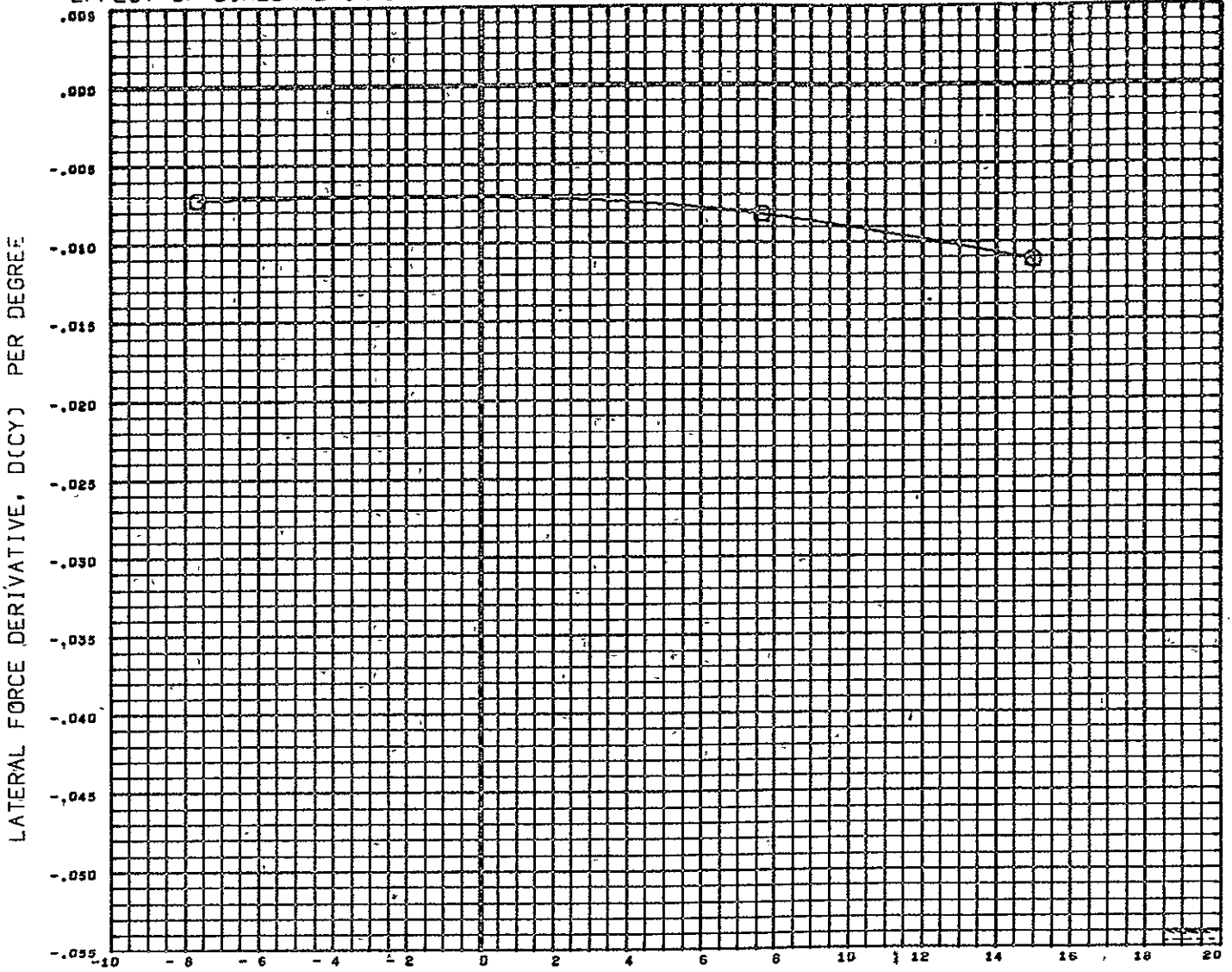
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
		ALPHA	INCIDC	AILRON	INCIDW	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	SQ.FT
○	0.400	0.000	3.000	0.000	0.000	FN4002	7.660	FN2554	7.660	1.3550	3.4530	FEET
		0.000	0.000	0.000	0.000	FN4018	15.000			3.4530	2.5950	FEET
		1.000	1.000	1.000	1.000					0.0000	0.0187	FEET
										SCALE	0.0150	SCALE

DATA HIST. CODE NI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

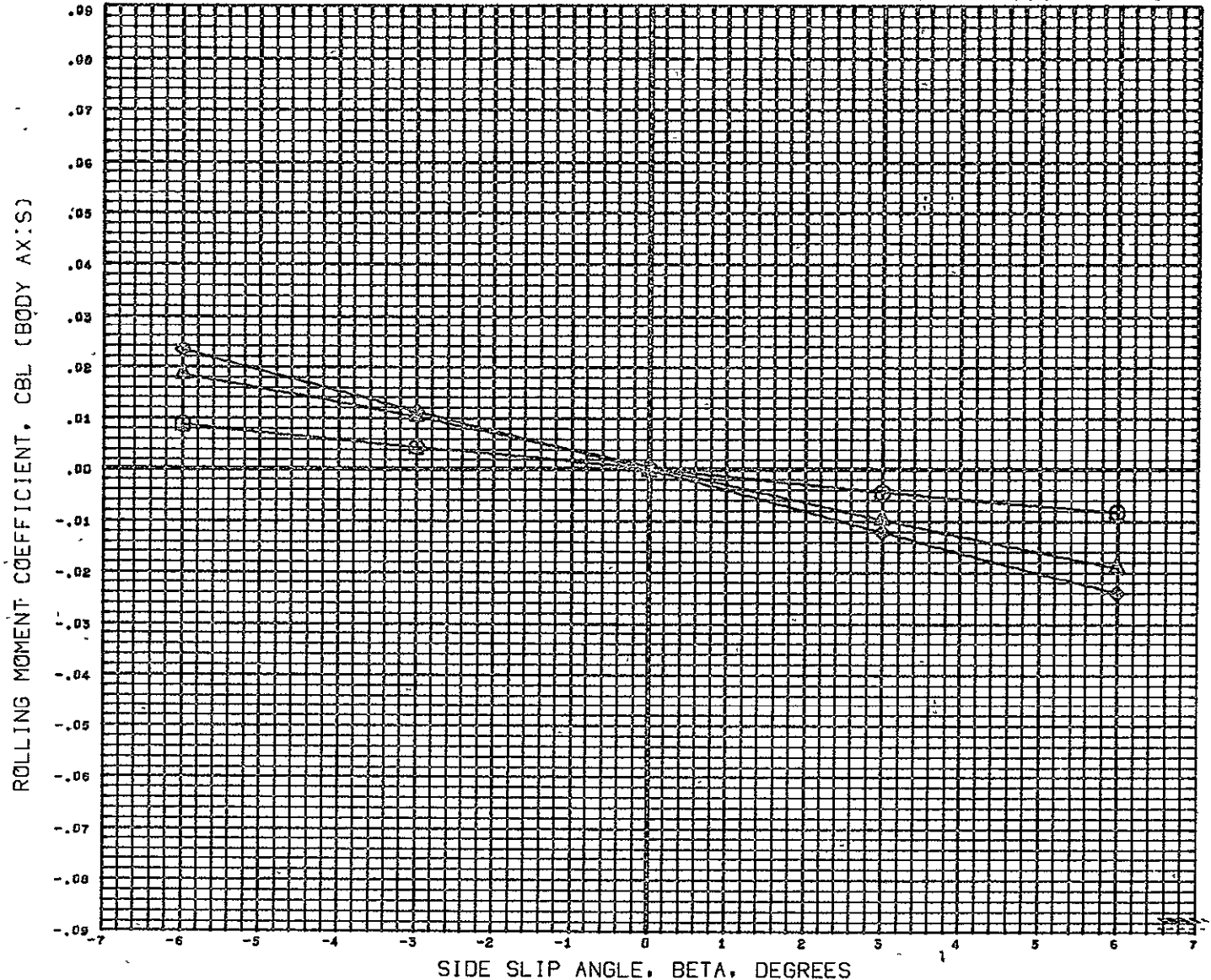


DIHDL

SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
DI	0.400	ALPHA	0.000	INCIDC	3.000	DIHDL	DIHDL	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4002	7.660	FN2554	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN4010	15.000		BREF	3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000				XHRP	2.5950	FEET
									YHRP	0.0000	FEET
									ZHRP	0.0187	FEET
									SCALE	0.0150	SCALE

DATA HIST. CODE MI

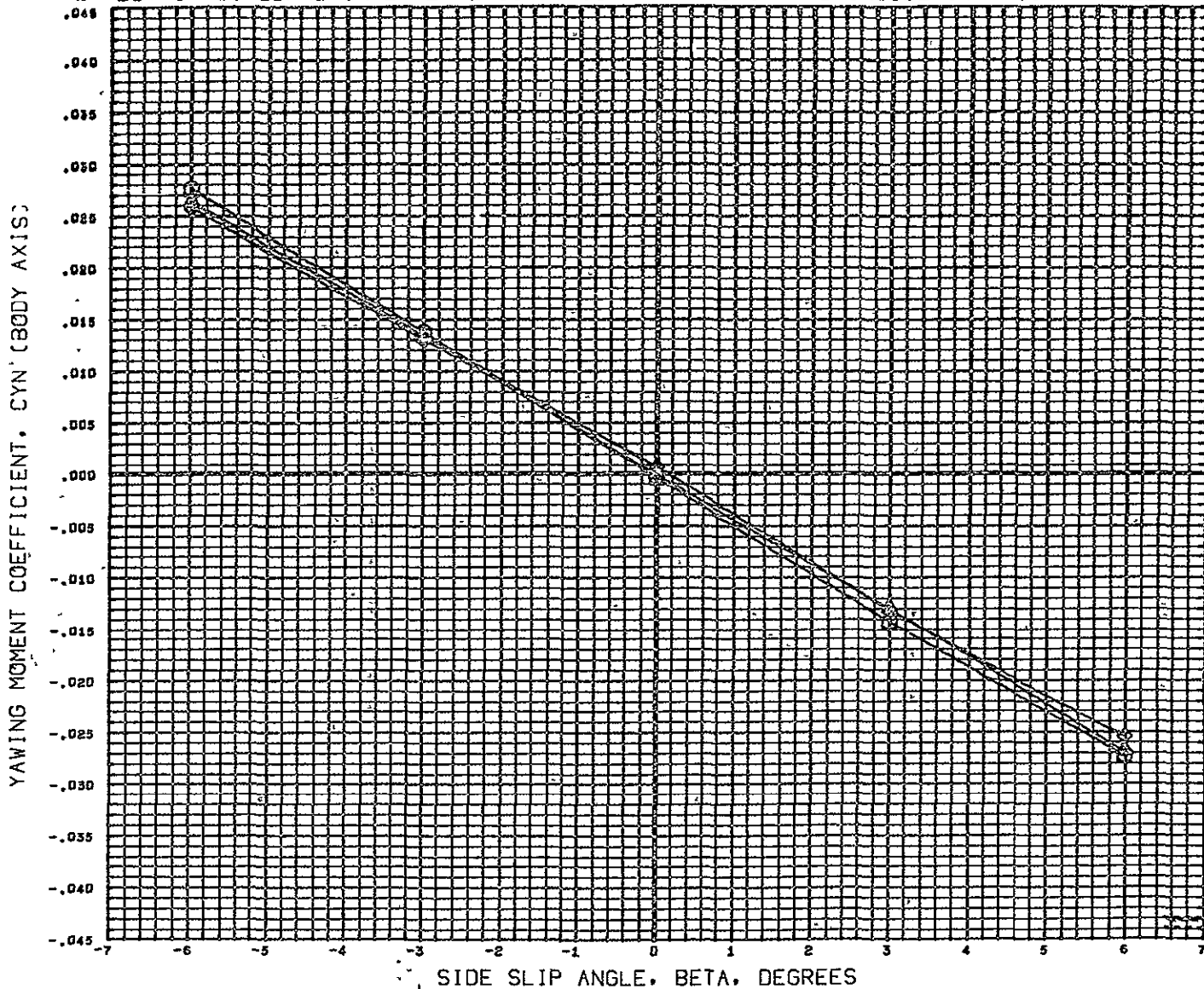
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4003) ○	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT.
(FN2555) △	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1V2W1	6.143	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4019) ◇	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	1.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

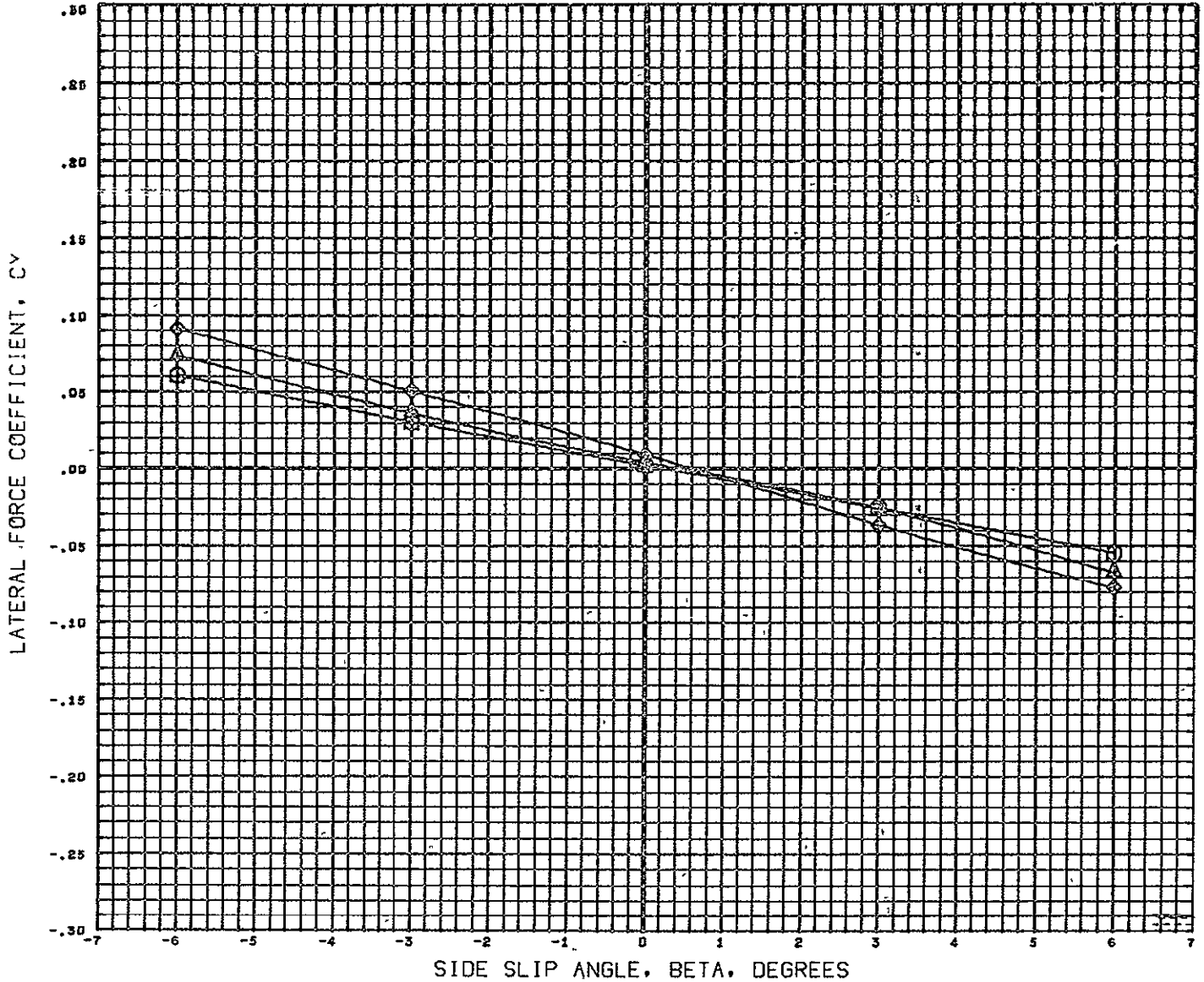
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4003)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2555)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	6.143	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4019)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	1.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

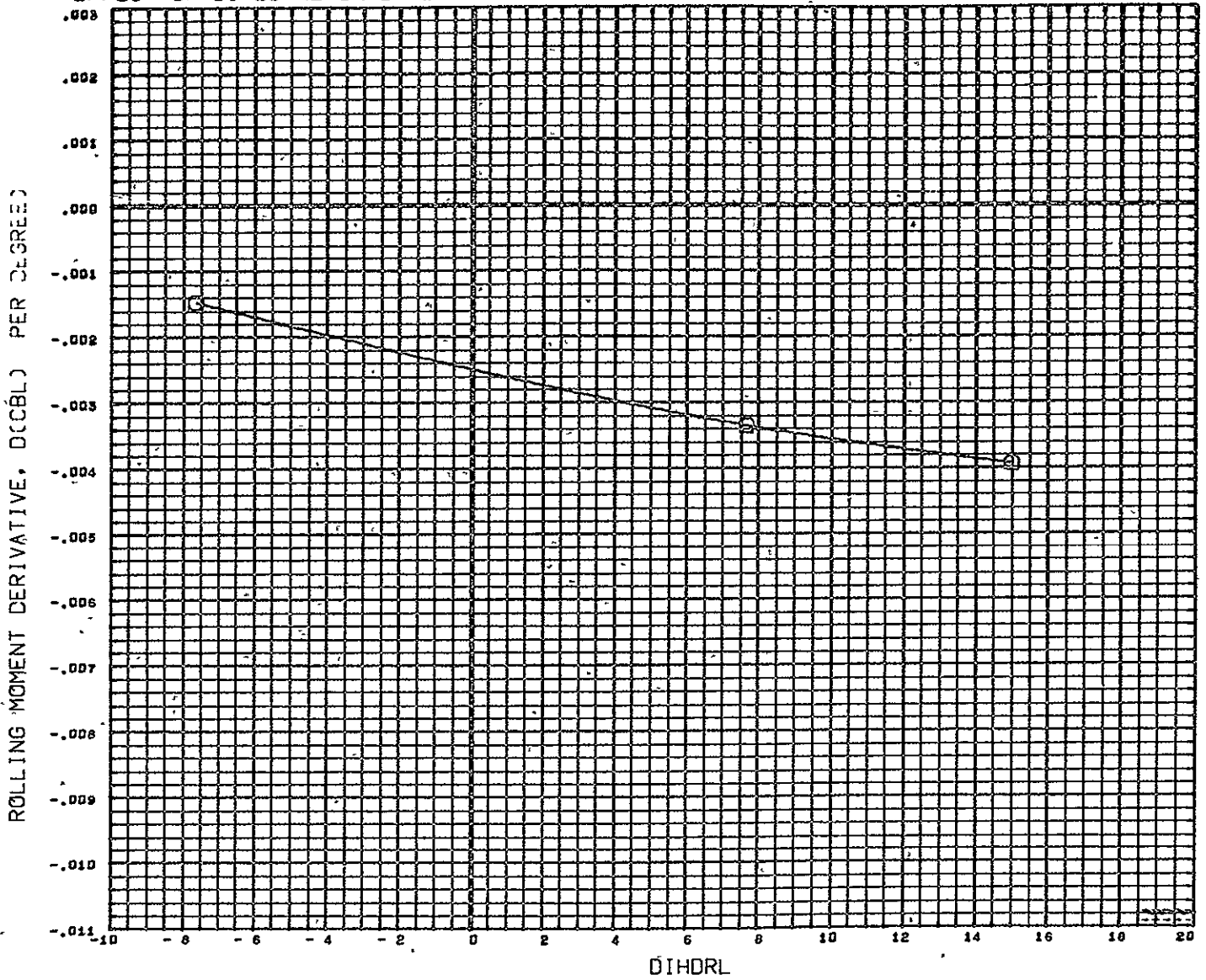
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRL	CNDPOS	WNGPOS ¹	REFERENCE INFORMATION
(FN4003) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2555) △	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1V2W1	6.143	7.660	1.000	1.000	LREF 3.4330 FEET
(FN4019) ◇	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	1.000	BREF 3.4330 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

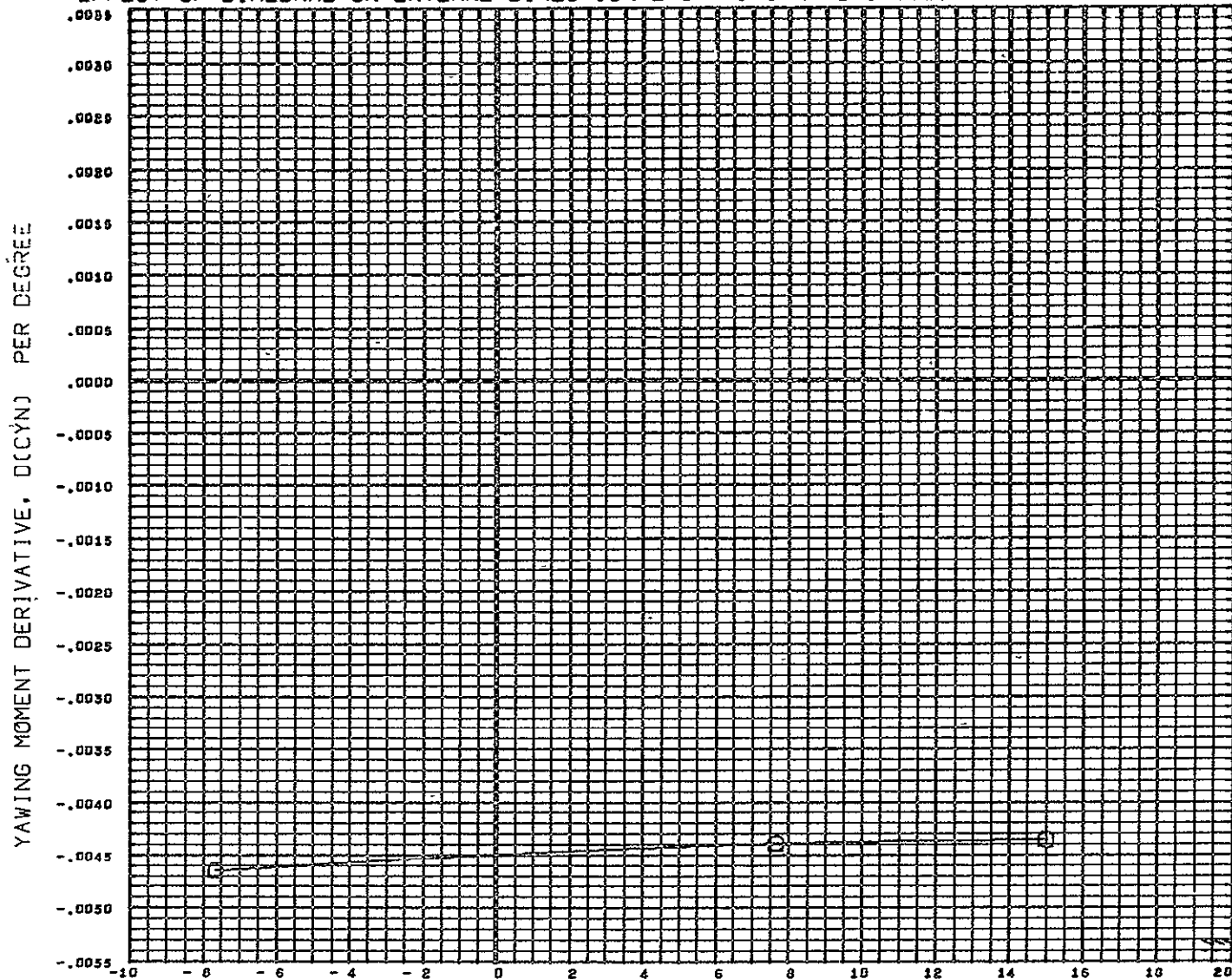
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDC	AILRON	ELEVTR	DIHDRL	DIHDRL	DIHDRL	SREF	SCALE	
○	0.400	6.000	3.000	0.000	0.000	FN4003	7.660	FN2555	7.660	1.3550	sq.ft.
		INCIDW	0.000	AILRON	0.000	FN4003	15.000			3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN4019				3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000					2.5950	FEET
										0.0000	FEET
										0.0187	FEET
										0.0150	SCALE

DATA HIST. CODE MI

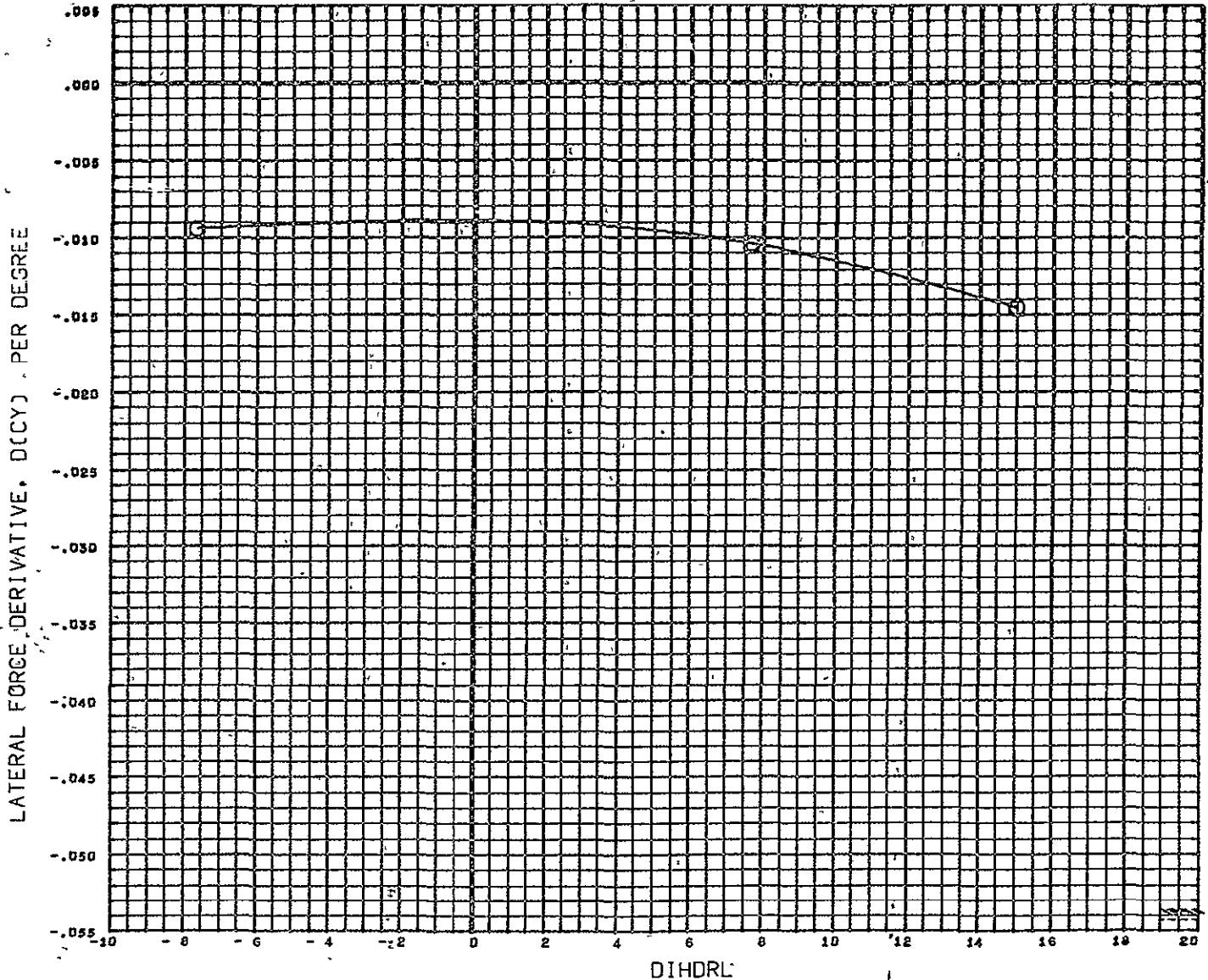
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION																
		ALPHA	INCIDW	AILRON	ELEVTR	CNDPOS	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE									
Q	0.400	6.000	0.000	0.000	0.000	1.000	3.000	FN4003	7.660	FN2555	7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	SQ FT.	FEET	FEET	FEET	FEET	FEET	SCALE

DATA HIST. CODE HI

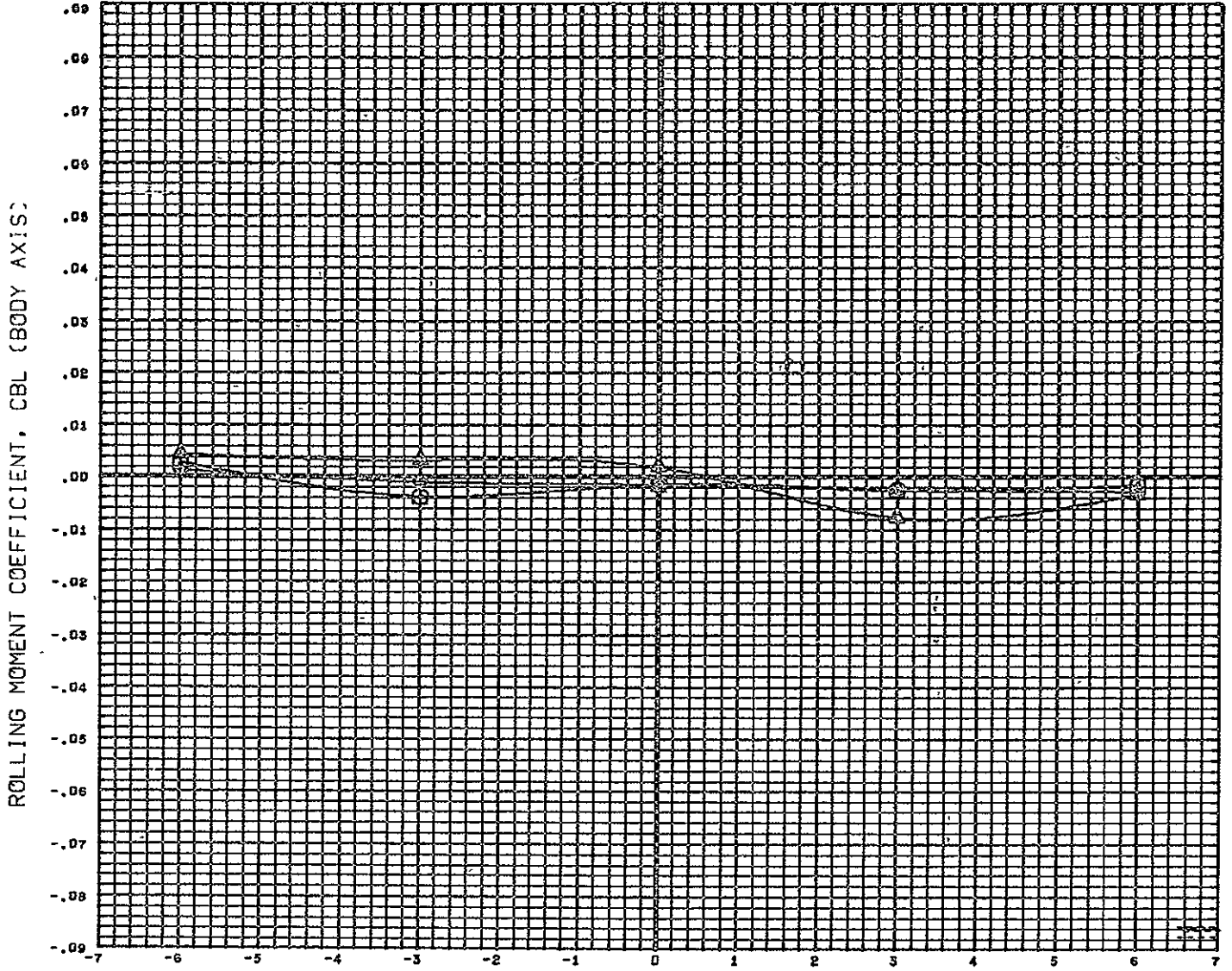
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ. FT.
		INCIDW	0.000	AILRON	0.000	FN4003	7.660	FN2555	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN4019	15.000			BREF	3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000					XHRP	2.5950	FEET
										YHRP	0.0000	FEET
										ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE

DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



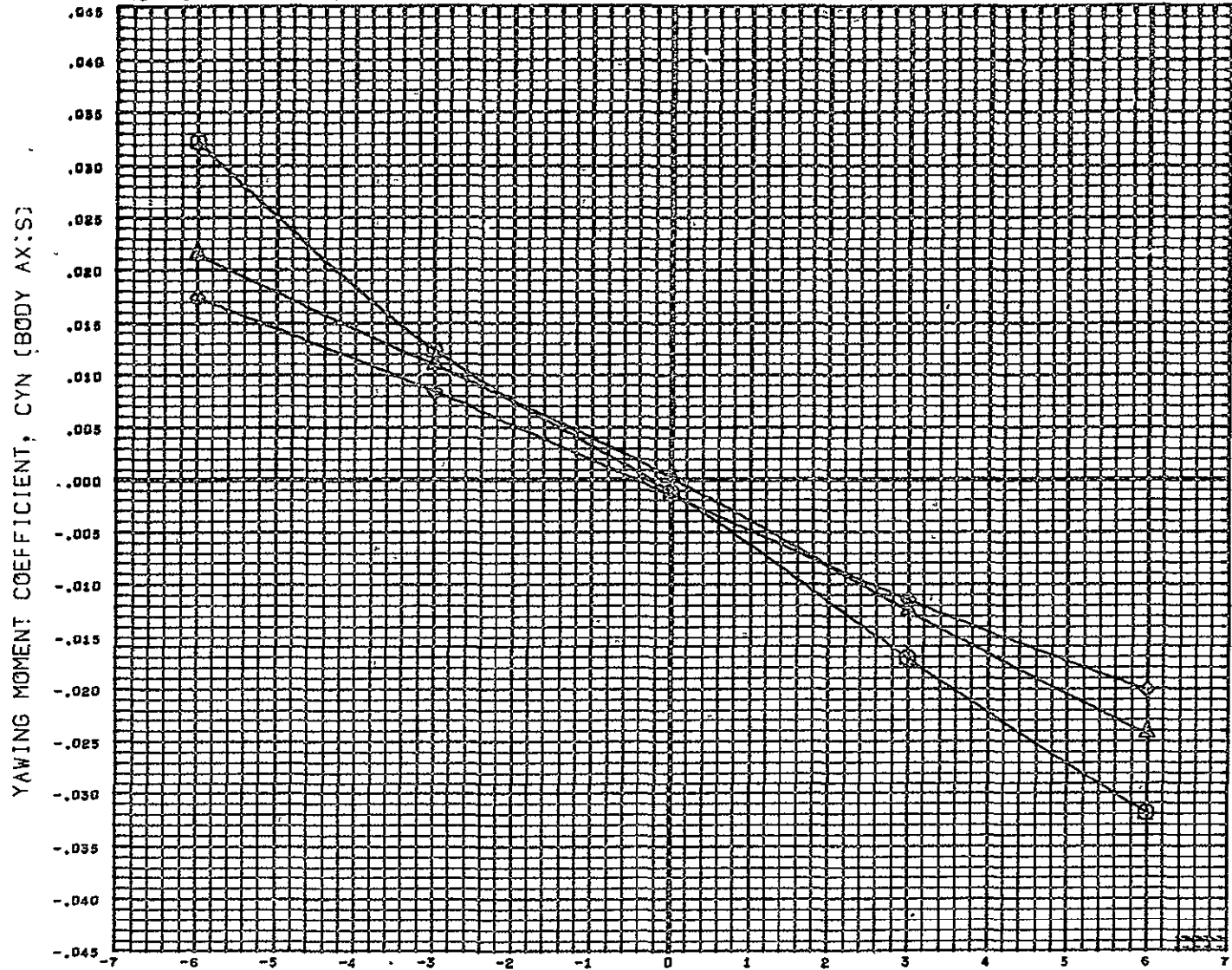
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4004)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2556)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	15.316	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4020)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	1.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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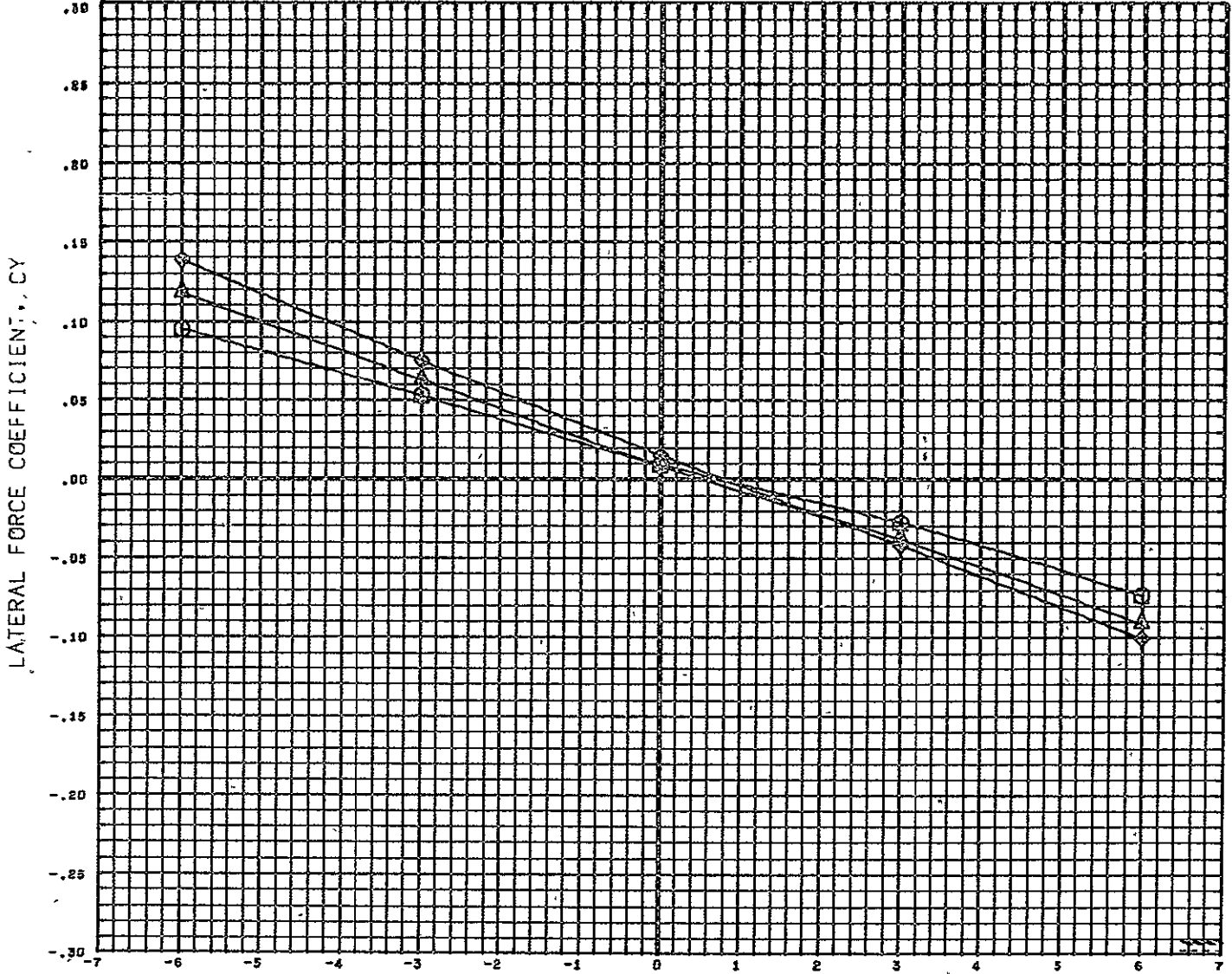
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4004) □	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2556) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1V2W1	15.316	7.660	1.000	1.000	LREF 3.4530 FEET
(FN4020) ◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	1.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

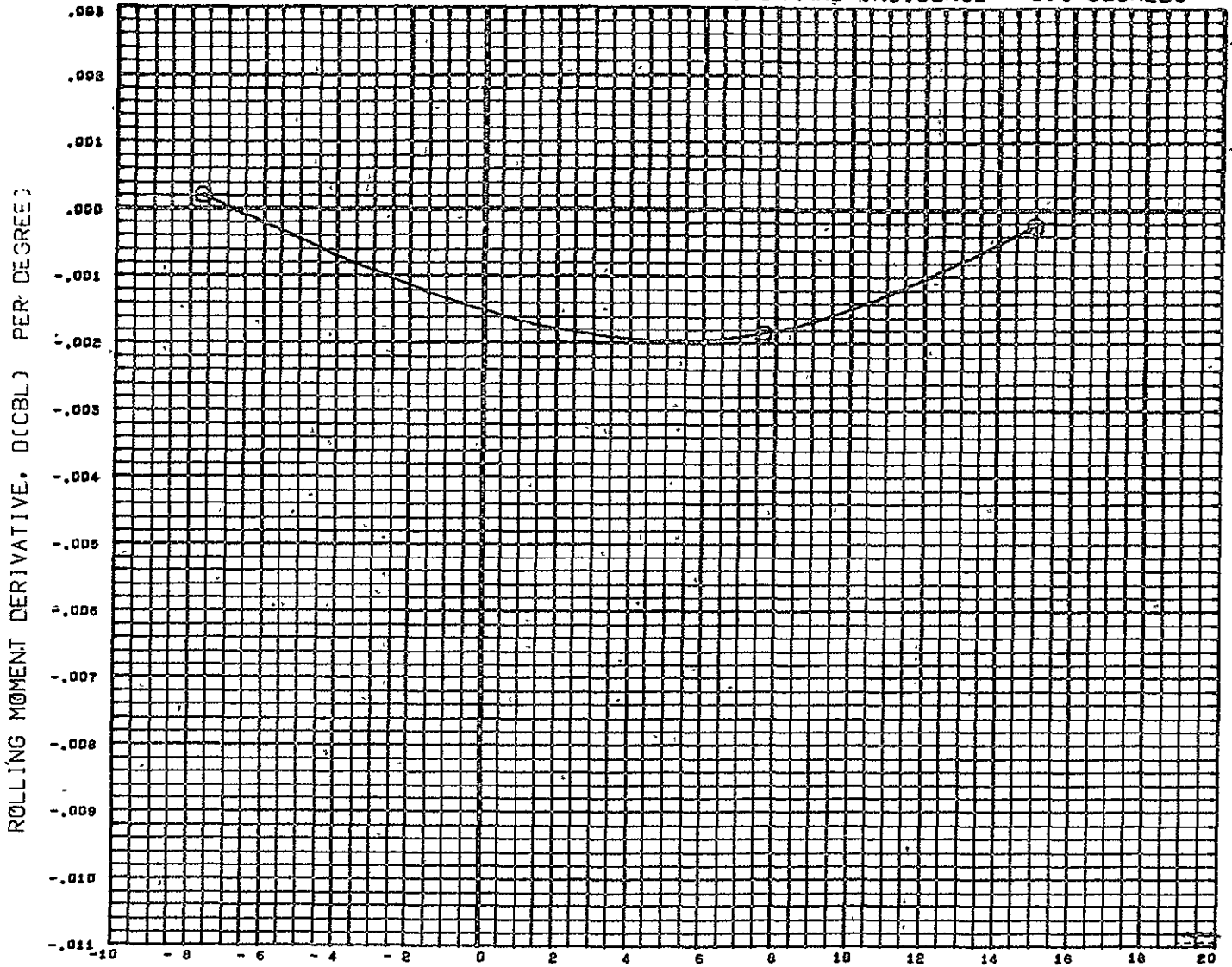
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
{FN4004}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
{FN2556}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	15.316	7.660	1.000	1.000	LREF 3.4530 FEET
{FN4020}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	1.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0 0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

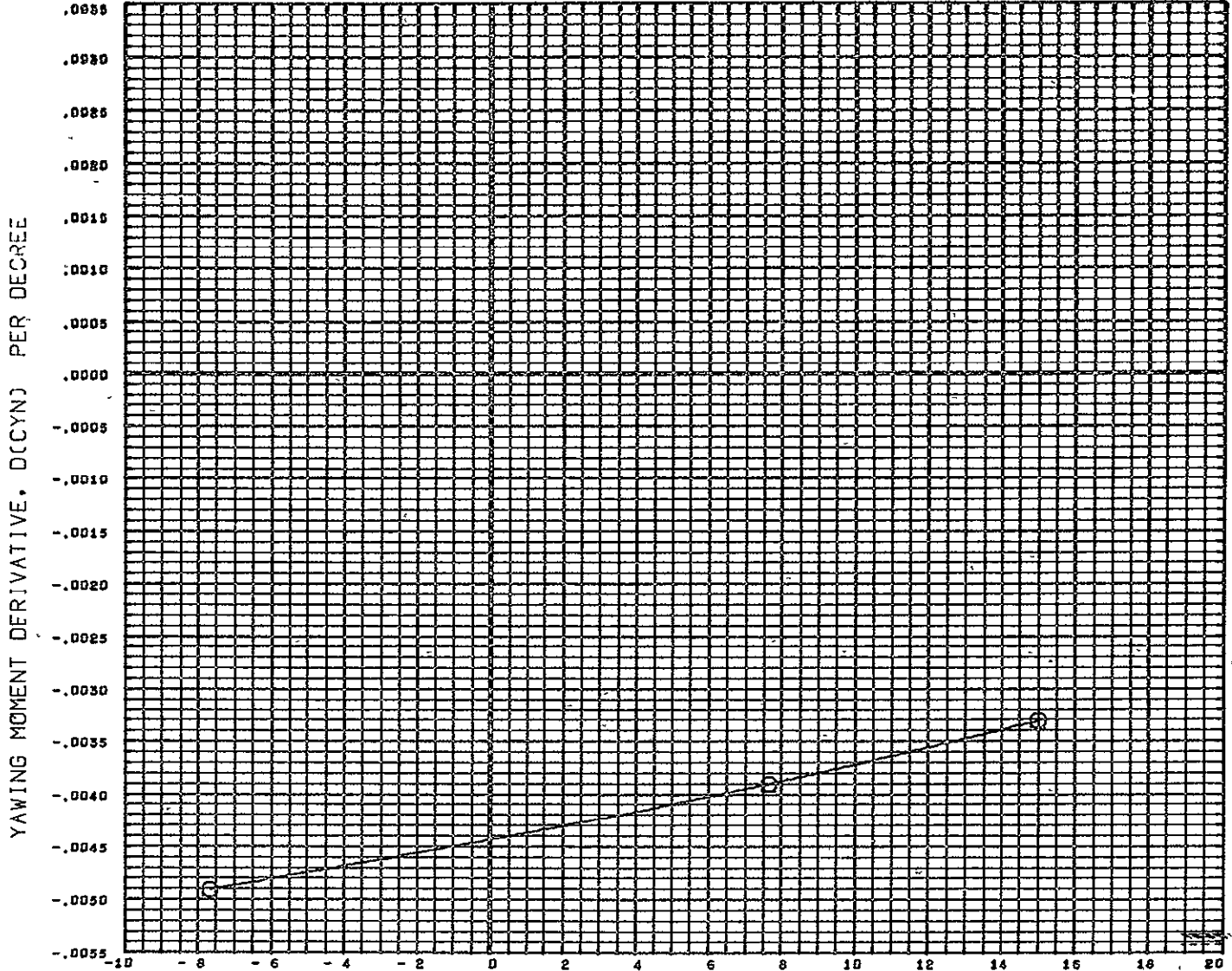


DIHDL

SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	ALPHA	15.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1 3550	SQ. FT.
		INCIDW	0.000	AILRON	0.000	FN4004	- 7.660	FN2556	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN4020	15.000			BREF	3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000					XHRP	2.5950	FEET
										YHRP	0.0000	FEET
										ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE

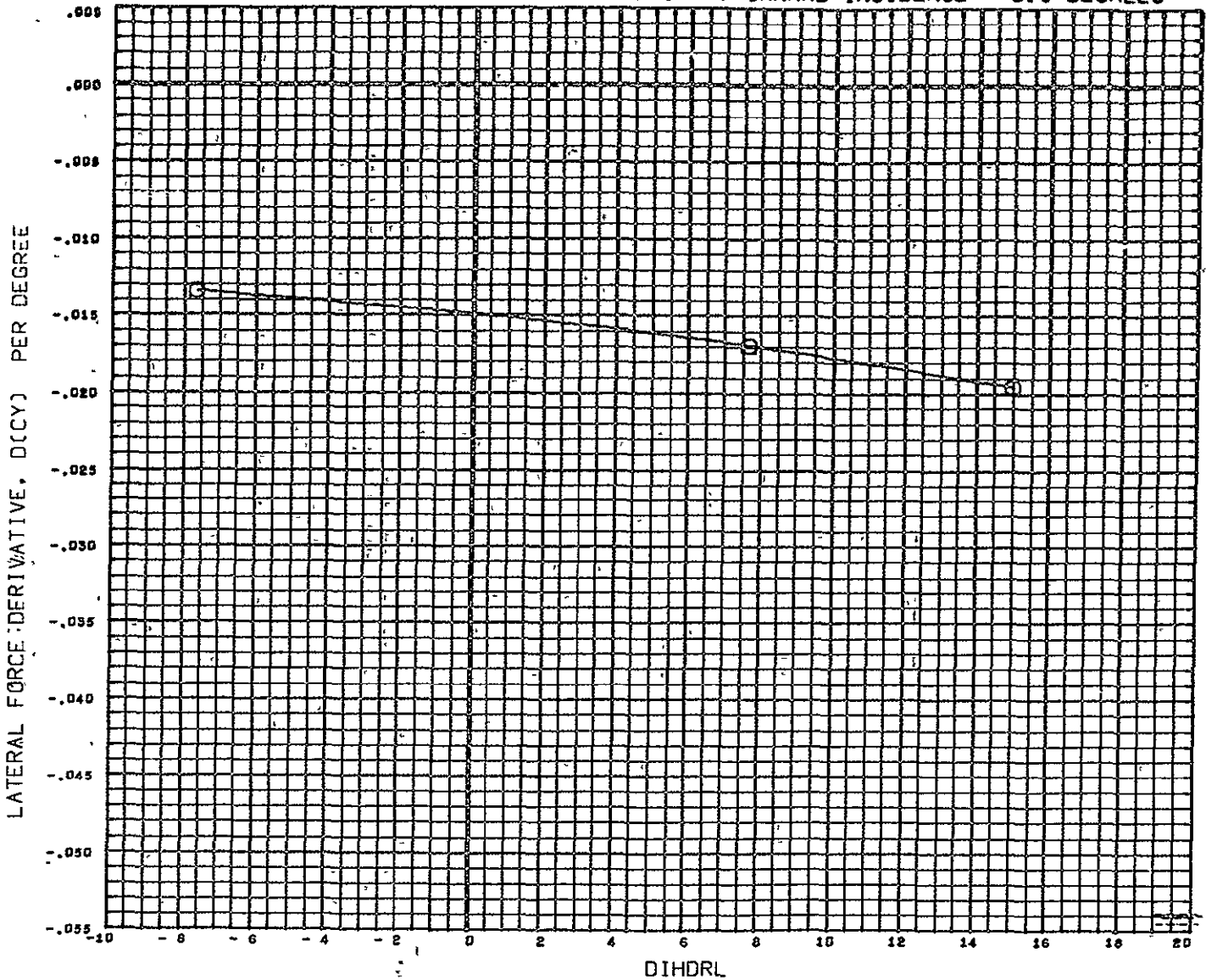
DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



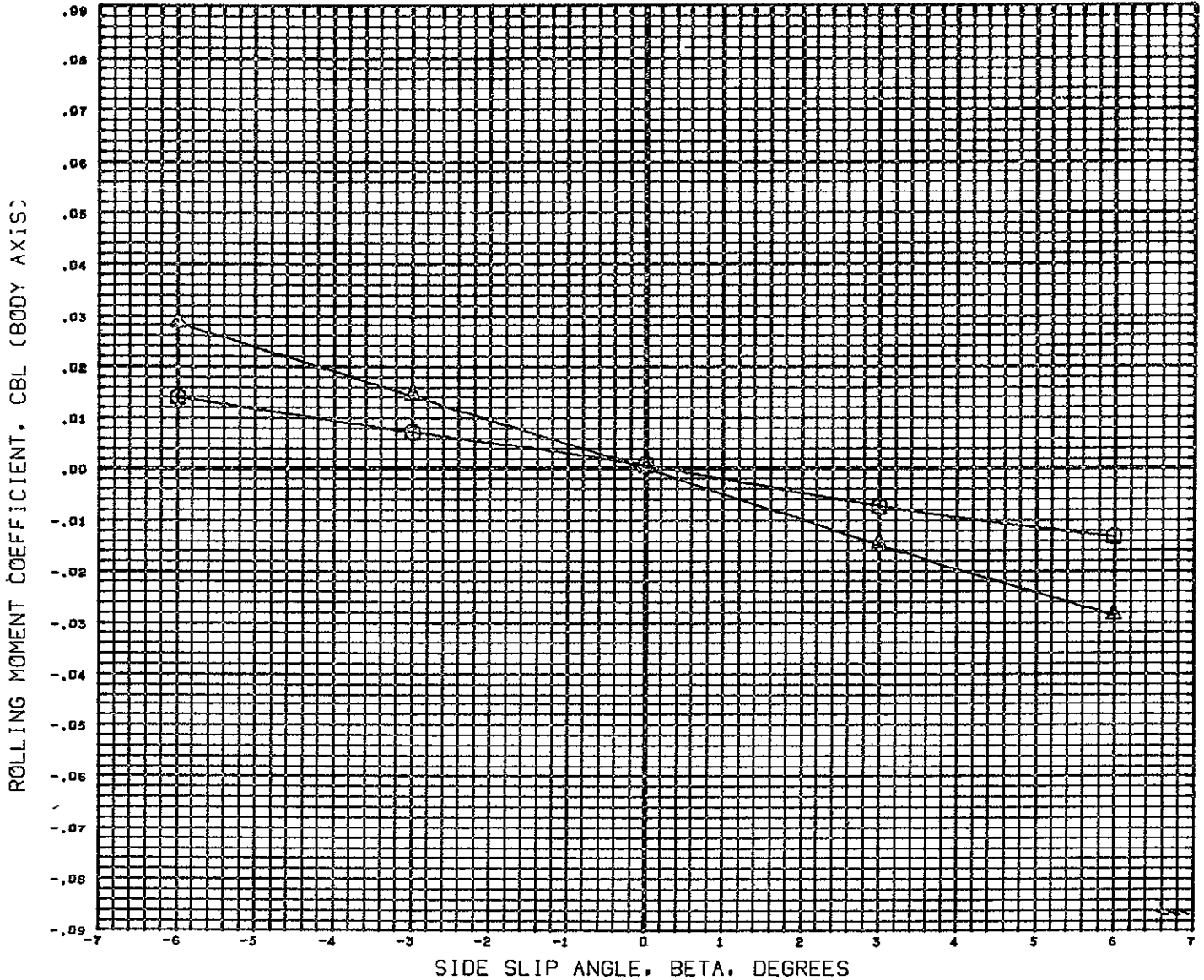
SYMBOL		MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
○		0.400	ALPHA	15.000	INCIDC	3.000	DIHDL		SREF	1.3550	SQ.FT.	
			INCIDW	0.000	AILRON	0.000	DIHDL	7.660	LREF	3.4530	FEET	
			CANARD	0.000	ELEVTR	0.000	DIHDL	15.000	BREF	3.4530	FEET	
			WNGPOS	1.000	CNDPOS	1.000			XMRP	2.5950	FEET	
									YMRP	0.0000	FEET	
									ZMRP	0.0187	FEET	
									SCALE	0.0150	SCALE	
			DATA HIST. CODE	HI								

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	ALPHA	15.000	INCIDC	3.000	DATASET	DIHDRL	DATASET	DIHDRL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4004	7.660	FN2556	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN4020	15.000			BREF	3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000					XNRP	2.5950	FEET
										YNRP	0.0000	FEET
										ZNRP	0.0167	FEET
										SCALE	0.0150	SCALE
		DATA HIST. CODE	HI									

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

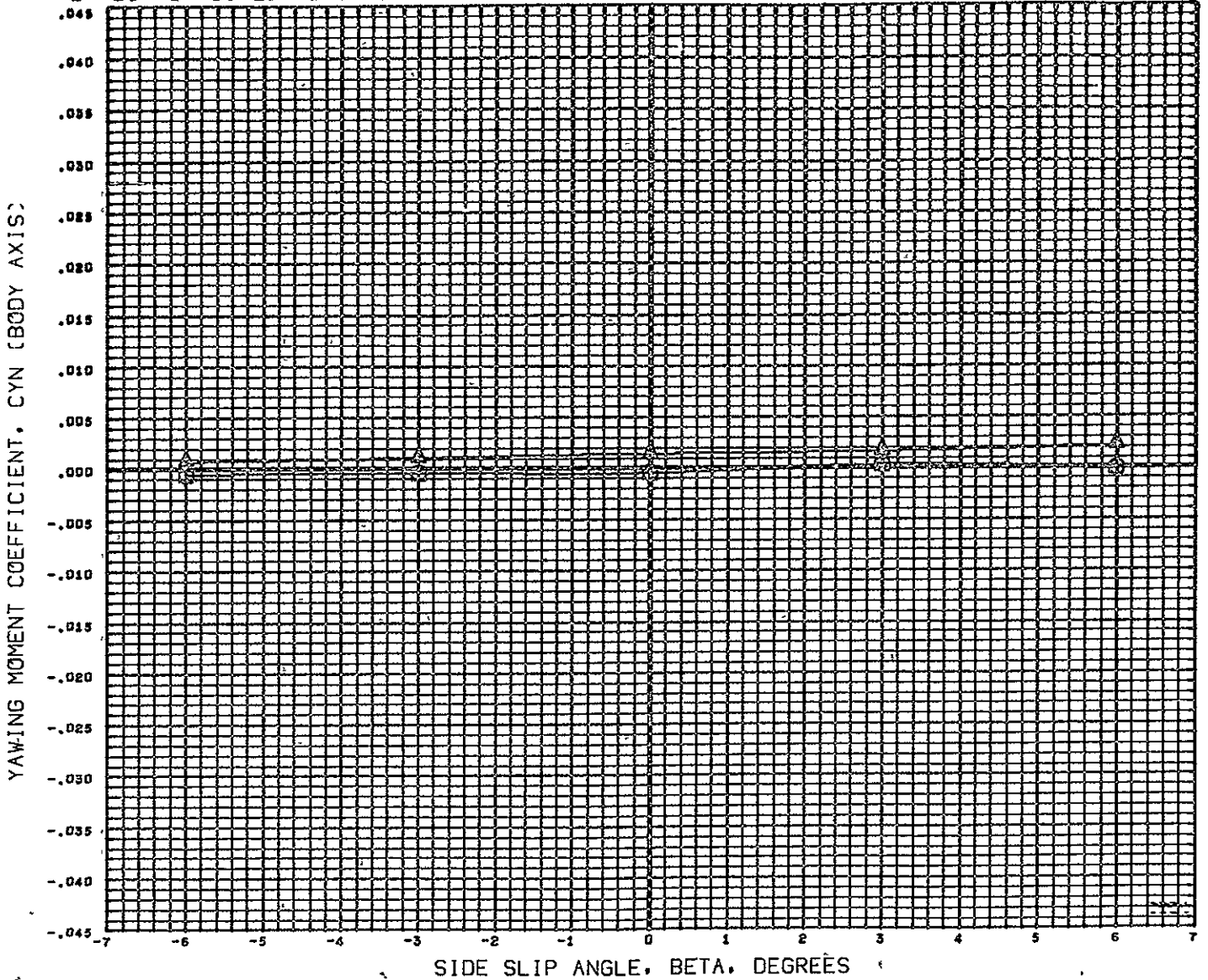


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	0.000	-7.660	1.000	1.000	SREF 1 3550 SQ.FT
(FN2526)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	0.002	15.000	1.000	1.000	LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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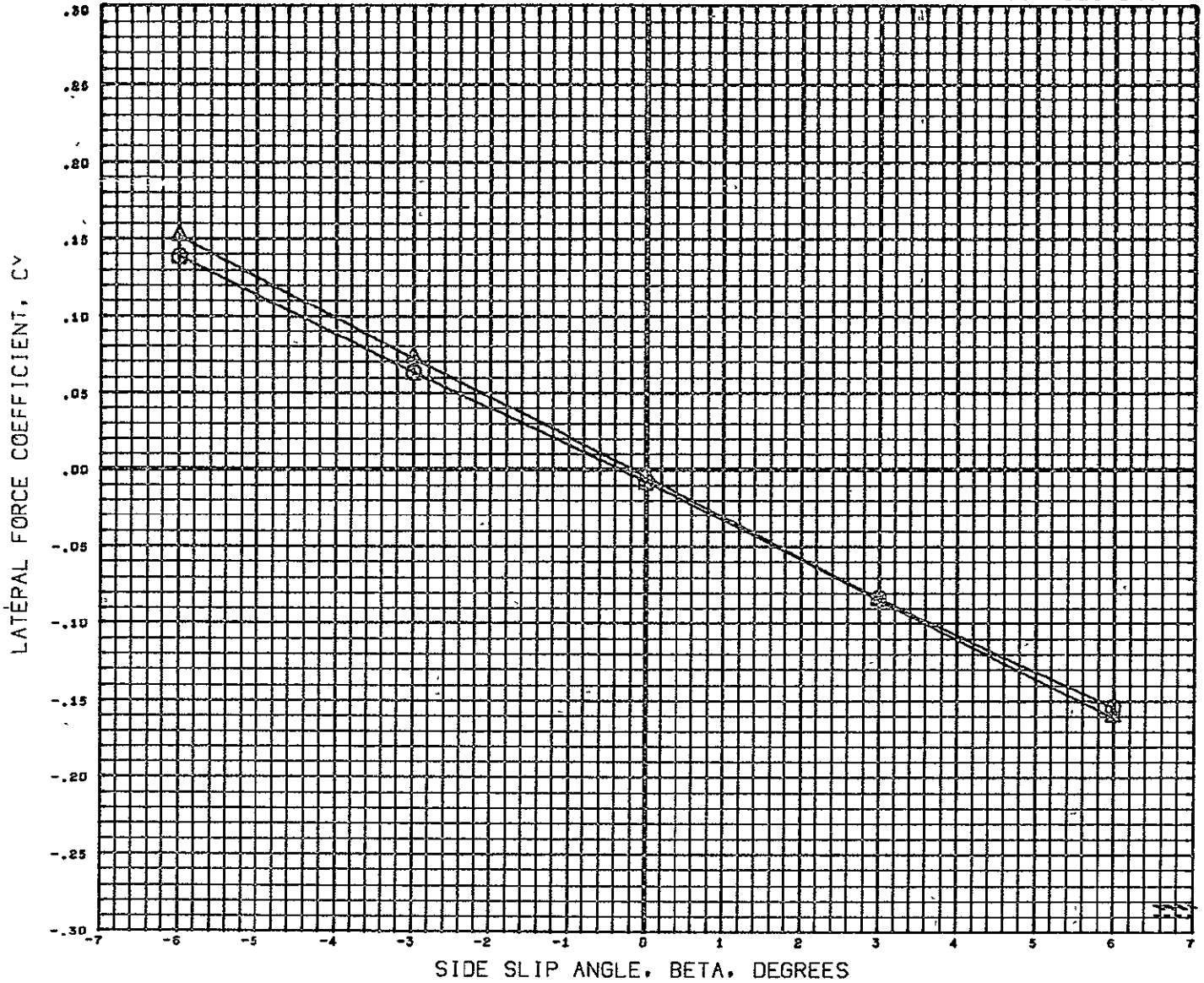
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4006)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ FT.
(FN2526)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V2D1	0.002	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

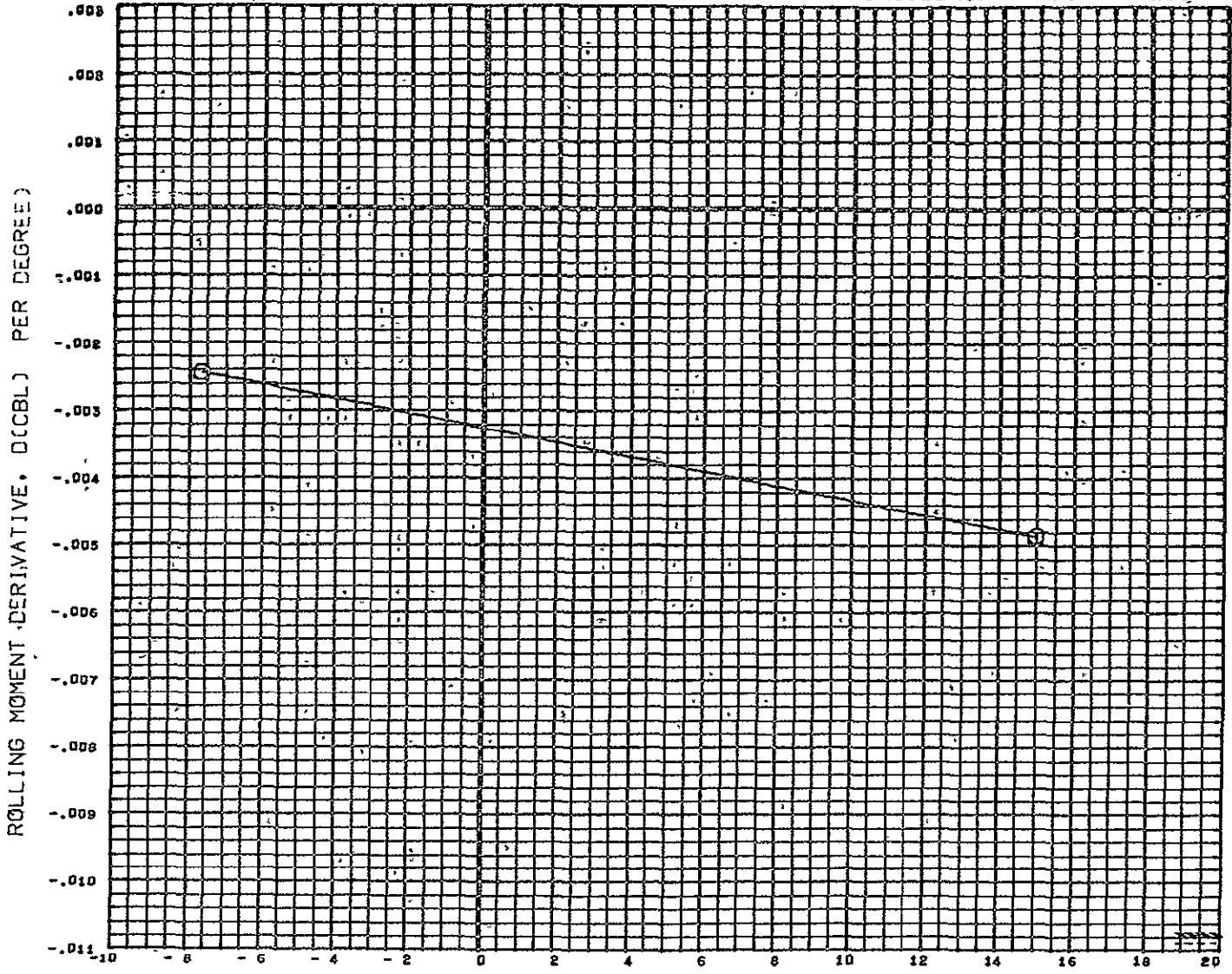
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4006)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT.
(FN2526)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	0.002	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

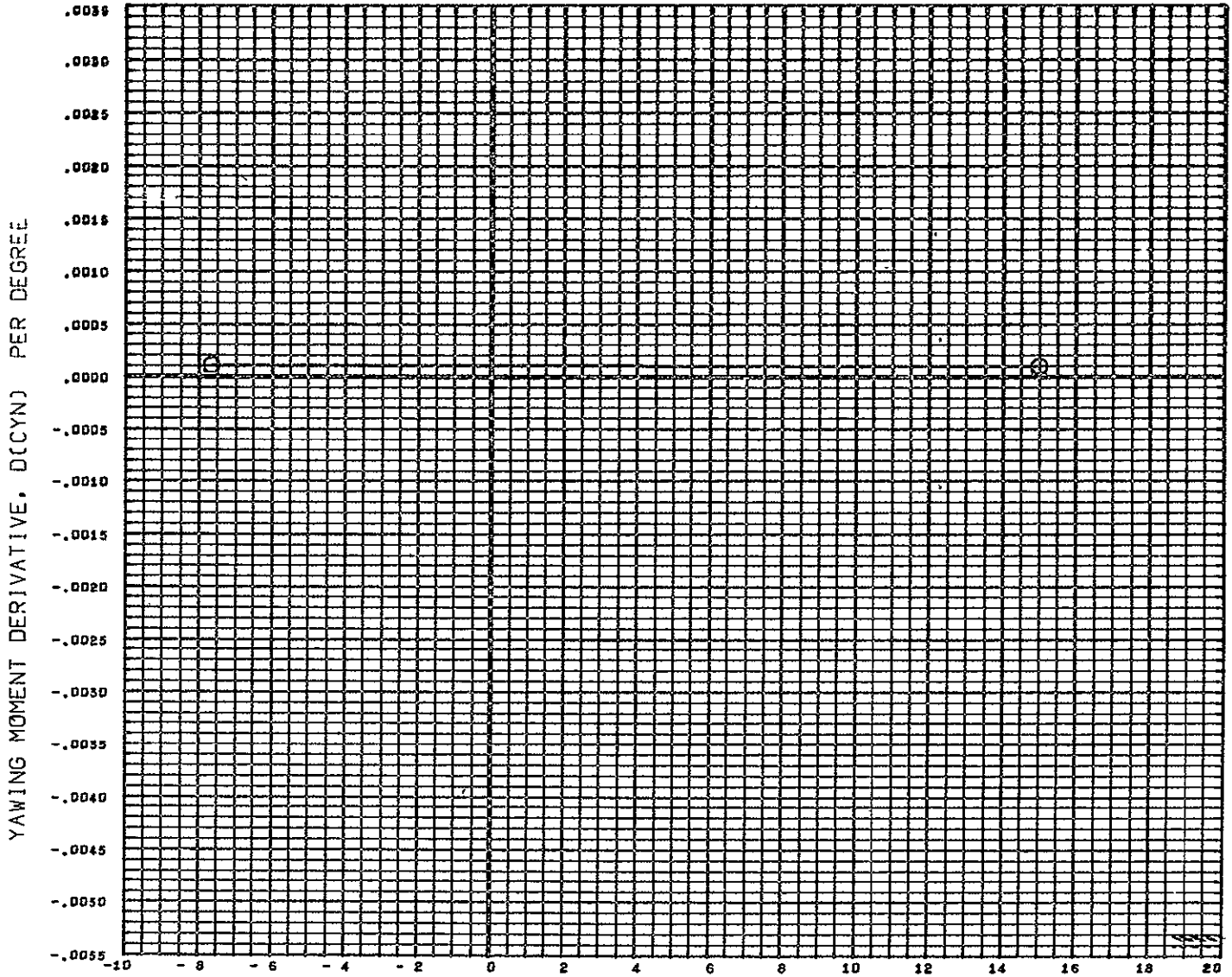
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



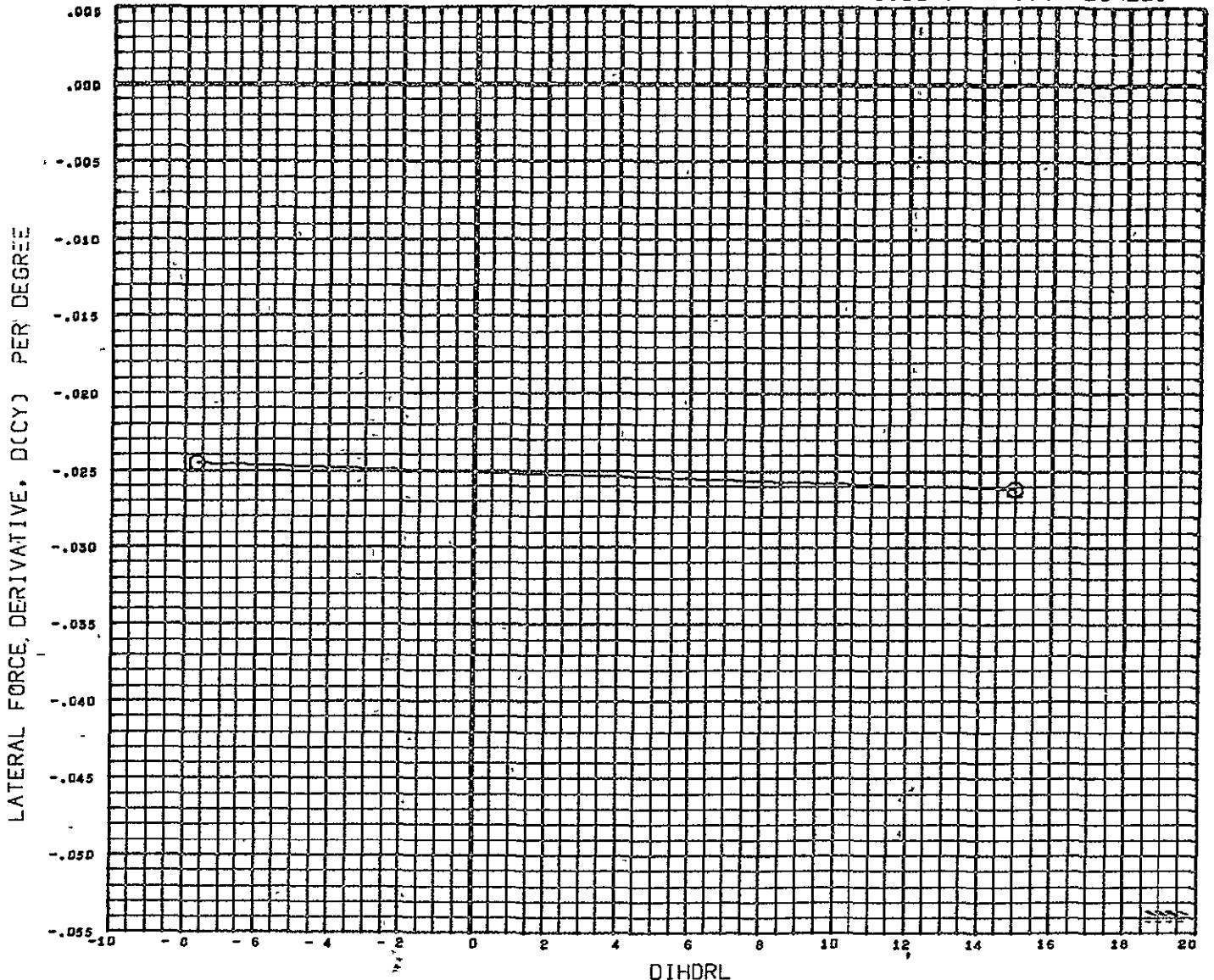
SYMBOL	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION				
D	0.400	ALPHA	0.000	INCIDC	3.000	DATASET	DIHDRL	DATASET	DIHDRL	SREF	1.3550	94.FT.
		INCIDW	0.000	AILRON	0.000	FN4006	7.660	FN2526	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		VENFIN	1.210	WNGPOS	1.000					XHRP	2.5950	FEET
		CNDPOS	1.000							YHRP	0.0000	FEET
		DATA HIST. CODE	HI							ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



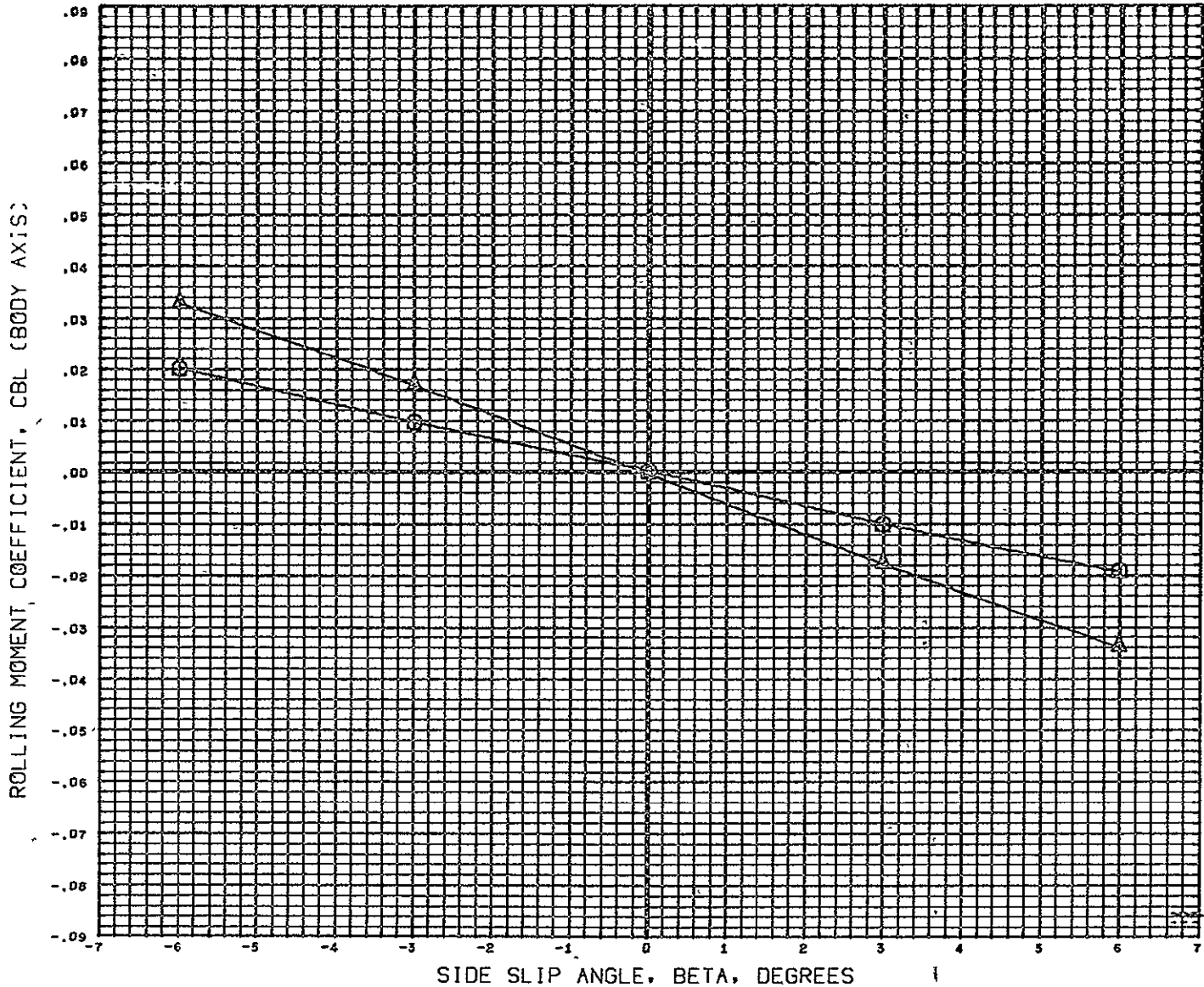
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4006	- 7.660	FN2526	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		VENFIN	1.210	WNGPOS	1.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST	CODE	MI						ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	0.400	ALPHA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ. FT.
		INCIDW	0.000	AILRON	0.000	FN4006	7.660	FN2526	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		VENFIN	1.210	WNGPOS	1.000					XHRP	2.3950	FEET
		CNDPOS	1.000							YHRP	0.0000	FEET
		DATA HIST. CODE	HI							ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE

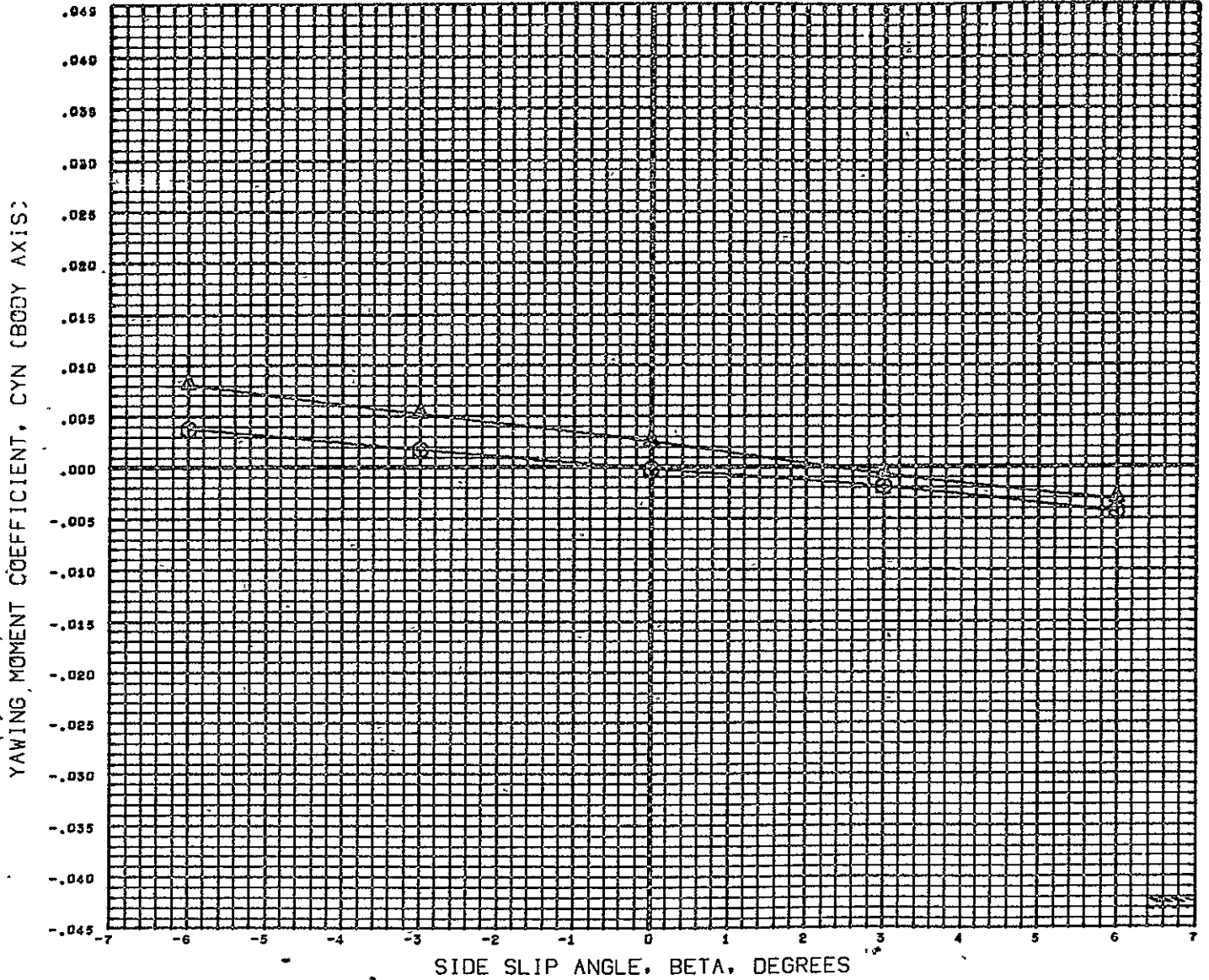
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4007)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT.
(FN2527)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V2D1	6.100	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

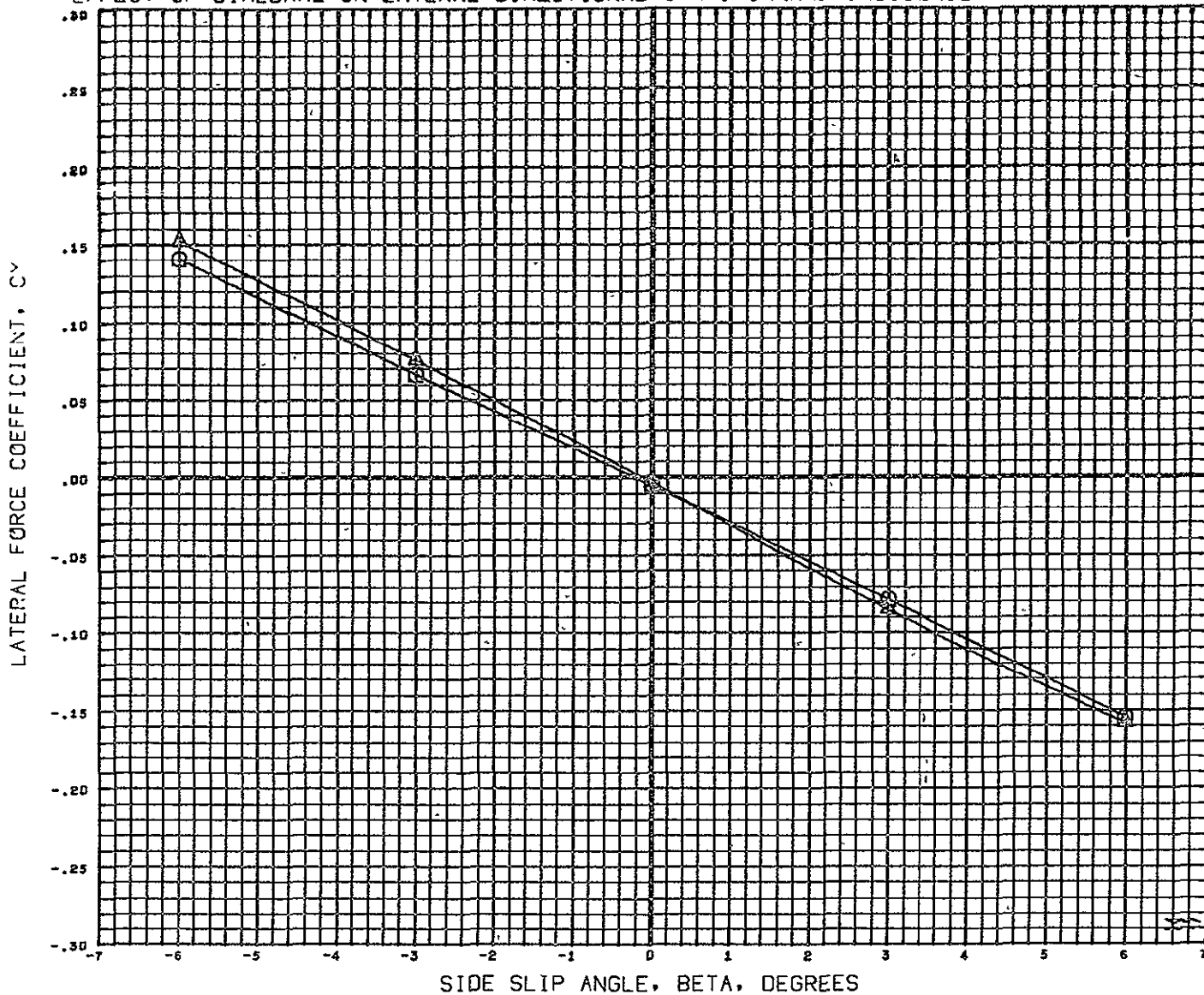


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2527)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	6.100	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

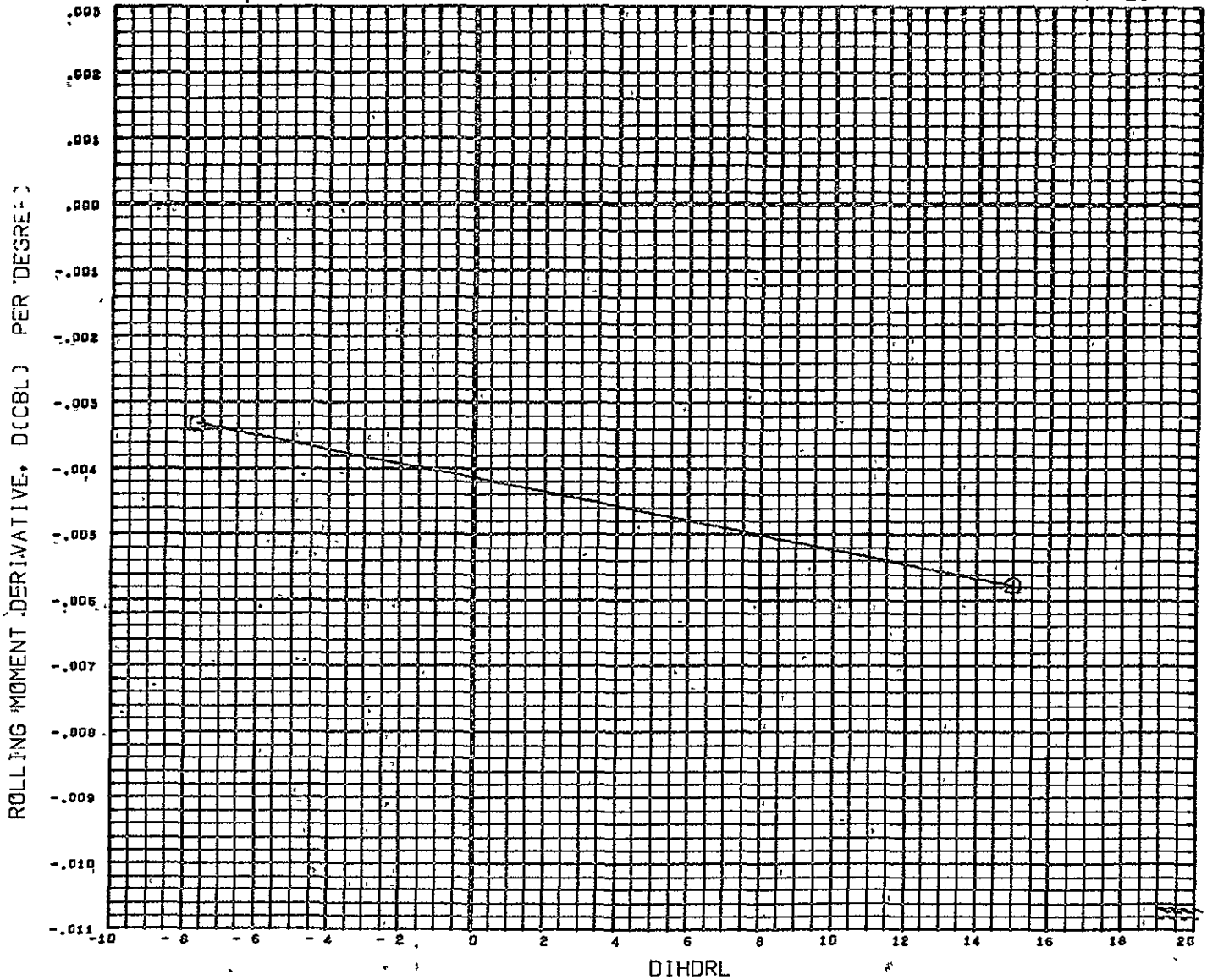


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4007)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	6.000	-7.660	-1.000	1.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET
(FN2527)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	-6.100	15.000	1.000	1.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

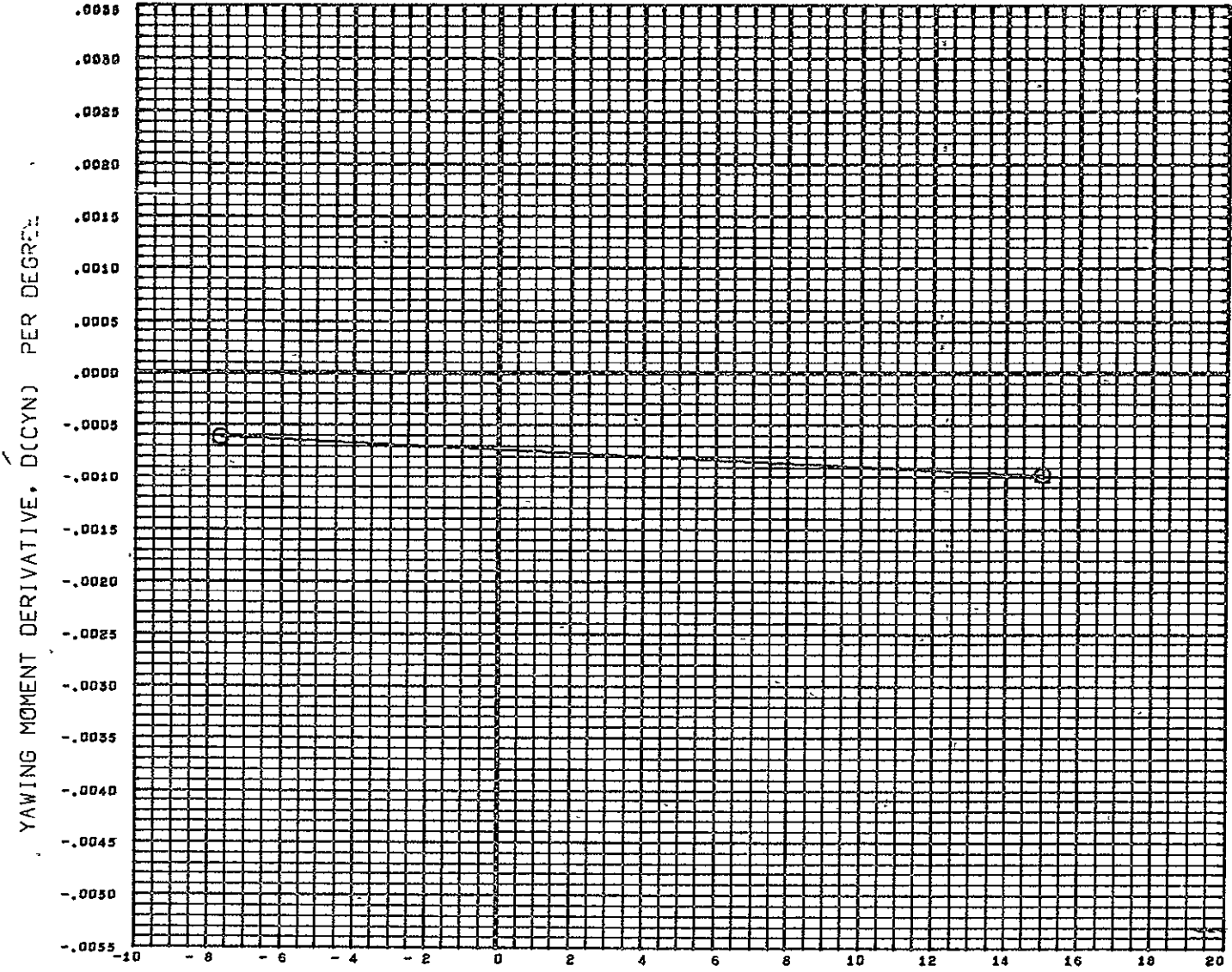
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EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



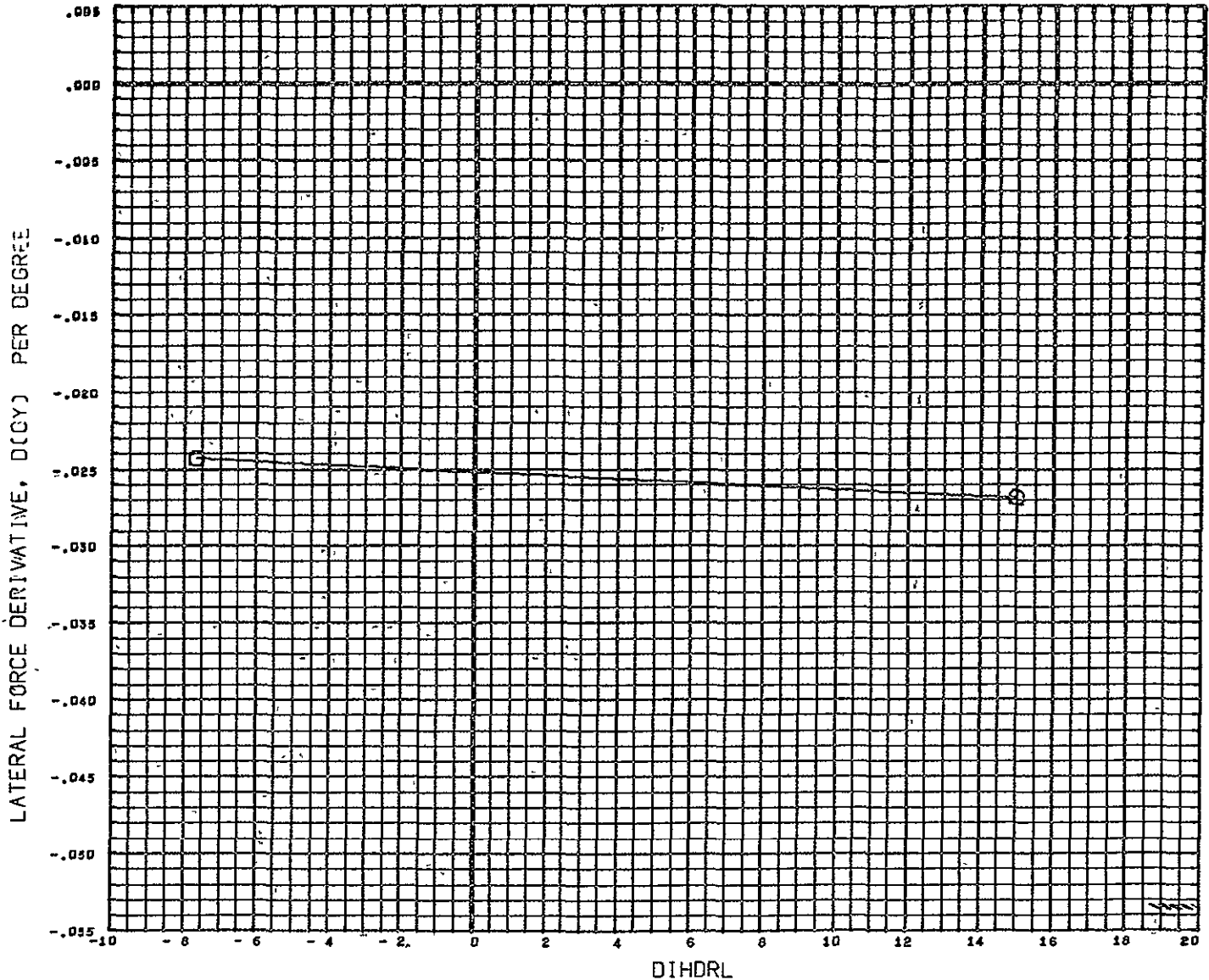
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
O	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT
		INCIDW	0.000	AILRON	0.000	FN4007	- 7.660	FN2527	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		VENFIN	1.210	WNGPOS	1.000					XNRP	2.5950	FEET
		CNDPOS	1.000							YNRP	0.0000	FEET
		DATA HIST. CODE	HI							ZNRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



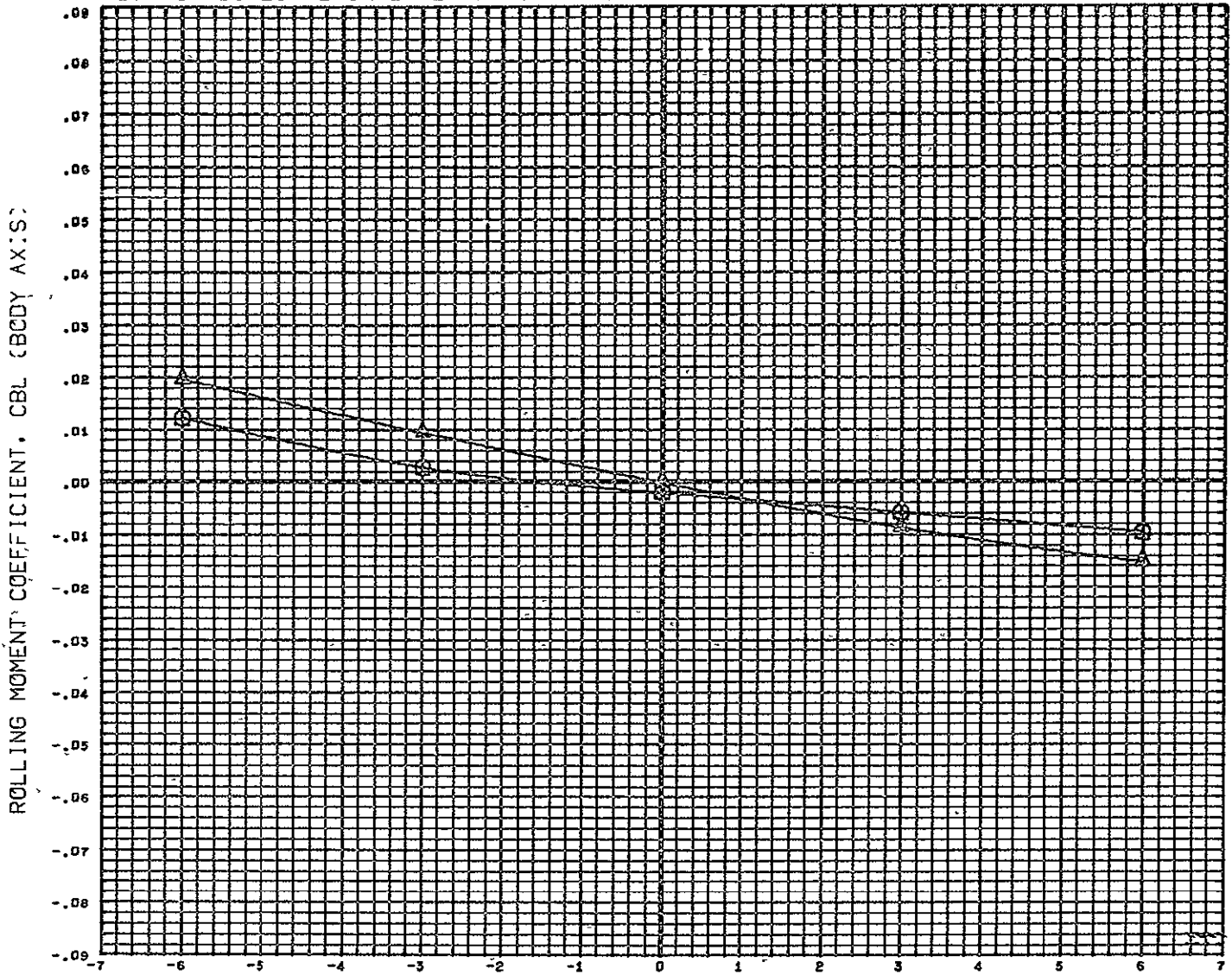
SYMBOL		MACH		PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
○	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.	
		INCIDW	0.000	AILRON	0.000	FN4007	7.660	FN2527	15.000	LREF	3.4530	FEET	
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET	
		VENFIN	1.210	WNGPOS	1.000					XMRP	2.5950	FEET	
		CNDPOS	1.000							YMRP	0.0000	FEET	
		DATA HIST. CODE	MI							ZMRP	0.0187	FEET	
										SCALE	0.0150	SCALE	

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
O	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4007	- 7.660	FN2527	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		VENFIN	1.210	WNGPOS	1.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	MI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



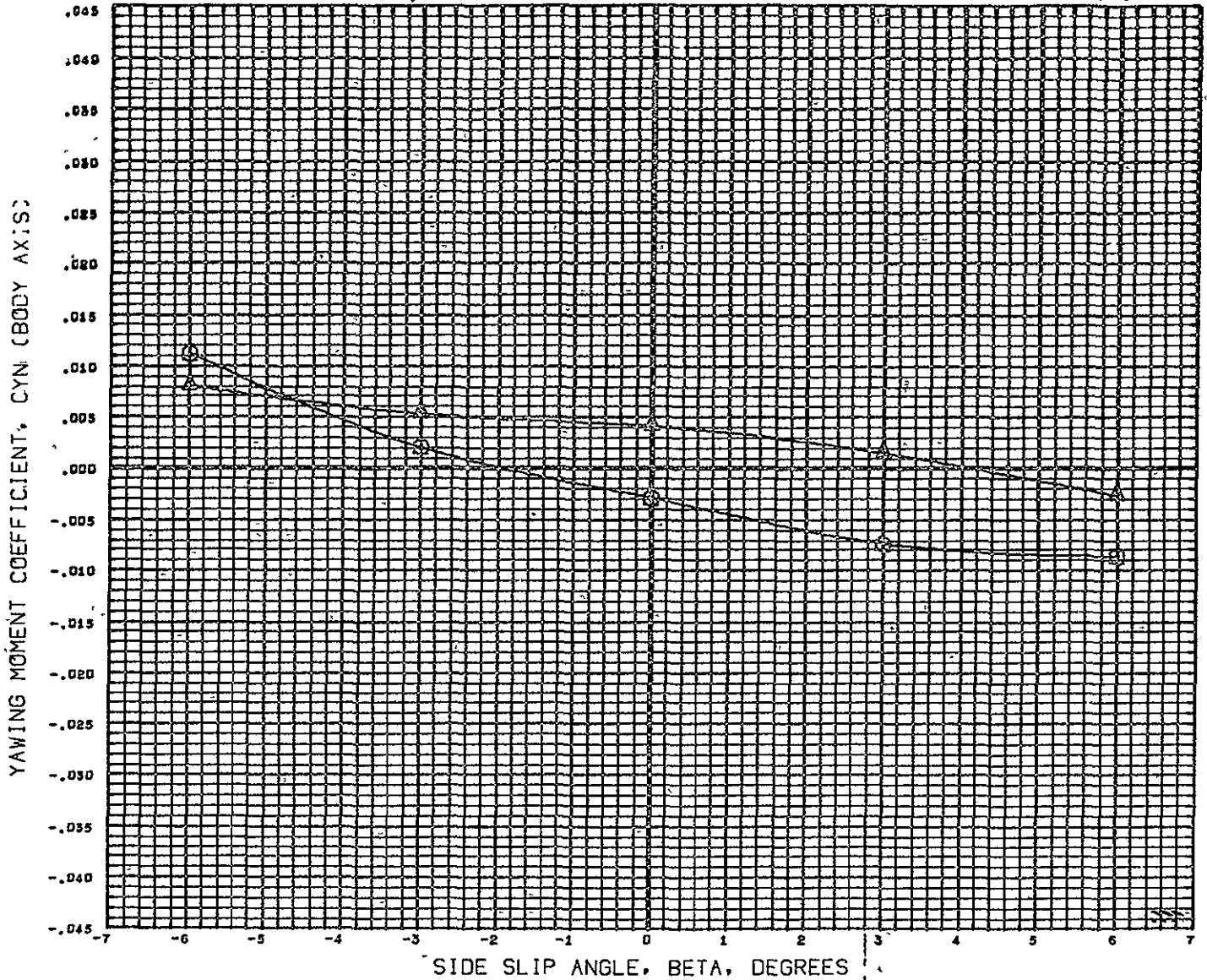
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4008)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT
(FN2528)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.297	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

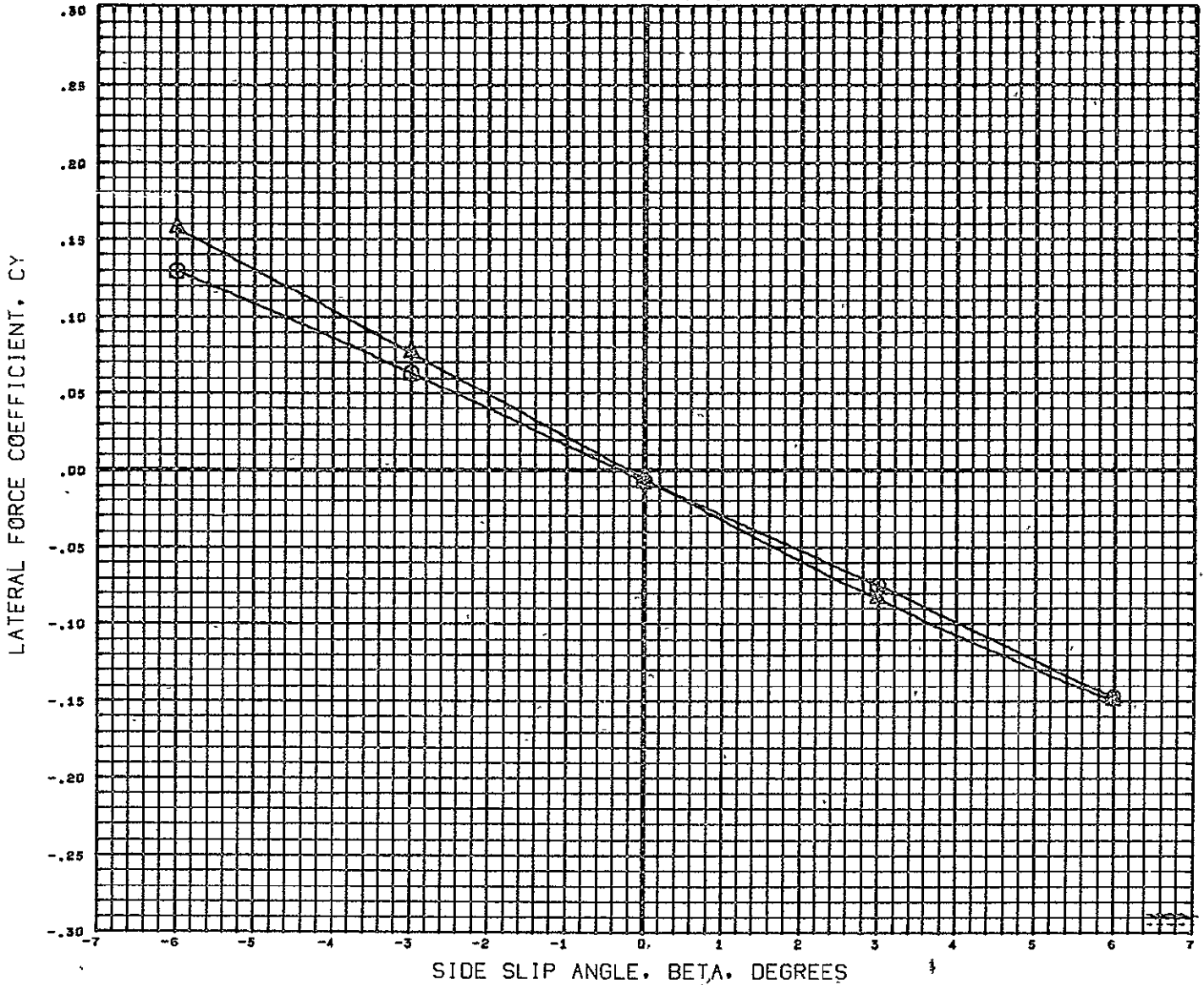
PAGE 109

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4008)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2528)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.297	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

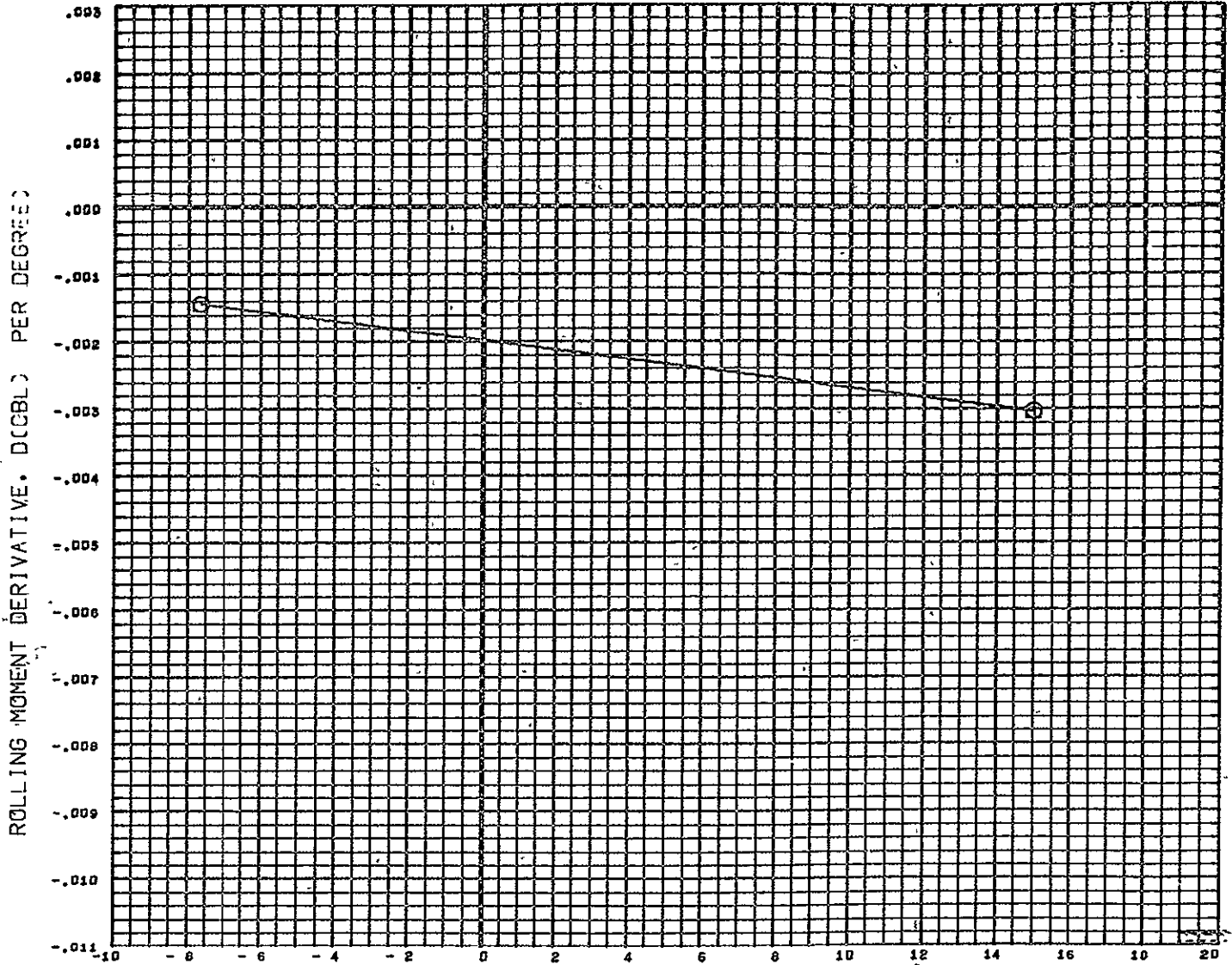
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	-7.660	1.000	1.000	SREF 1.3550 SB FT
(FN2528)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.297	15.000	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZMRP 0.0107 FEET
						SCALE 0.0150 SCALE

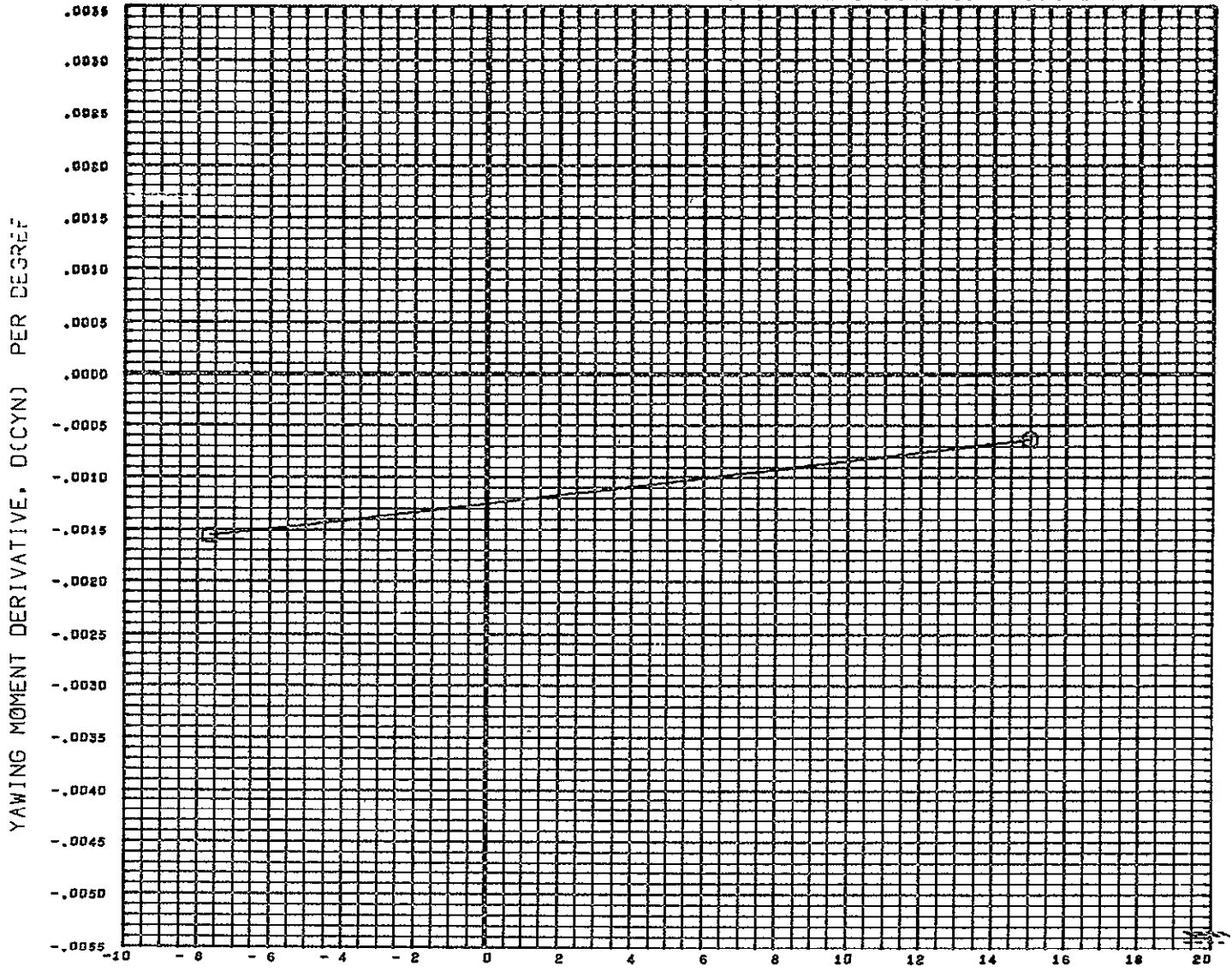
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



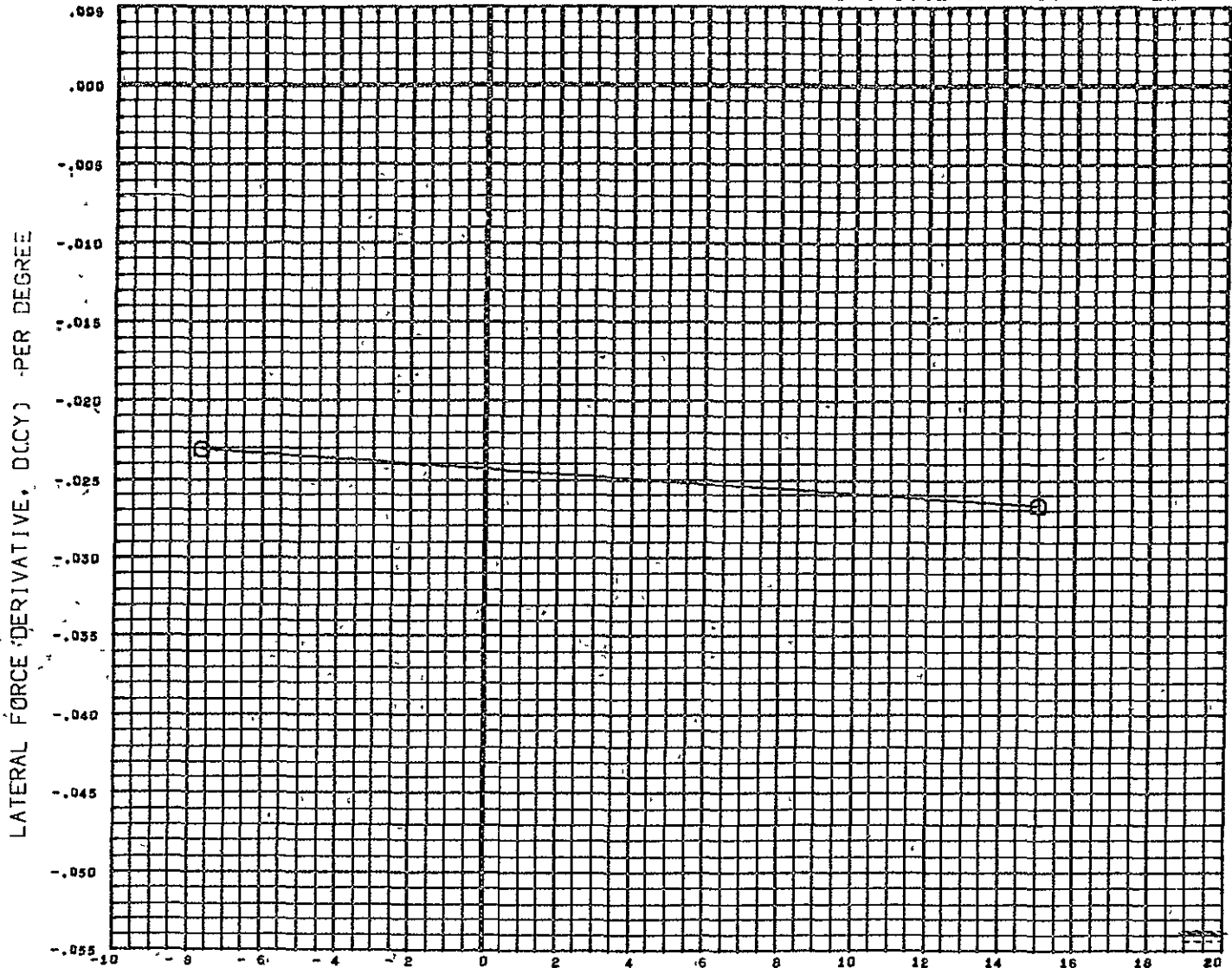
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION														
		ALPHA	INCIDC	AILRON	ELEVTR	WNGPOS	DATASET	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	SQ.FT							
○	0.400	15.000	3.000	0.000	0.000	FN4008	- 7.660	FN2528	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	FEET	FEET	FEET	FEET	FEET	SCALE	SCALE
		0.000	0.000	0.000	1.000																		
		1.210	1.000																				
		CNDPOS	DATA HIST. CODE	MI																			

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



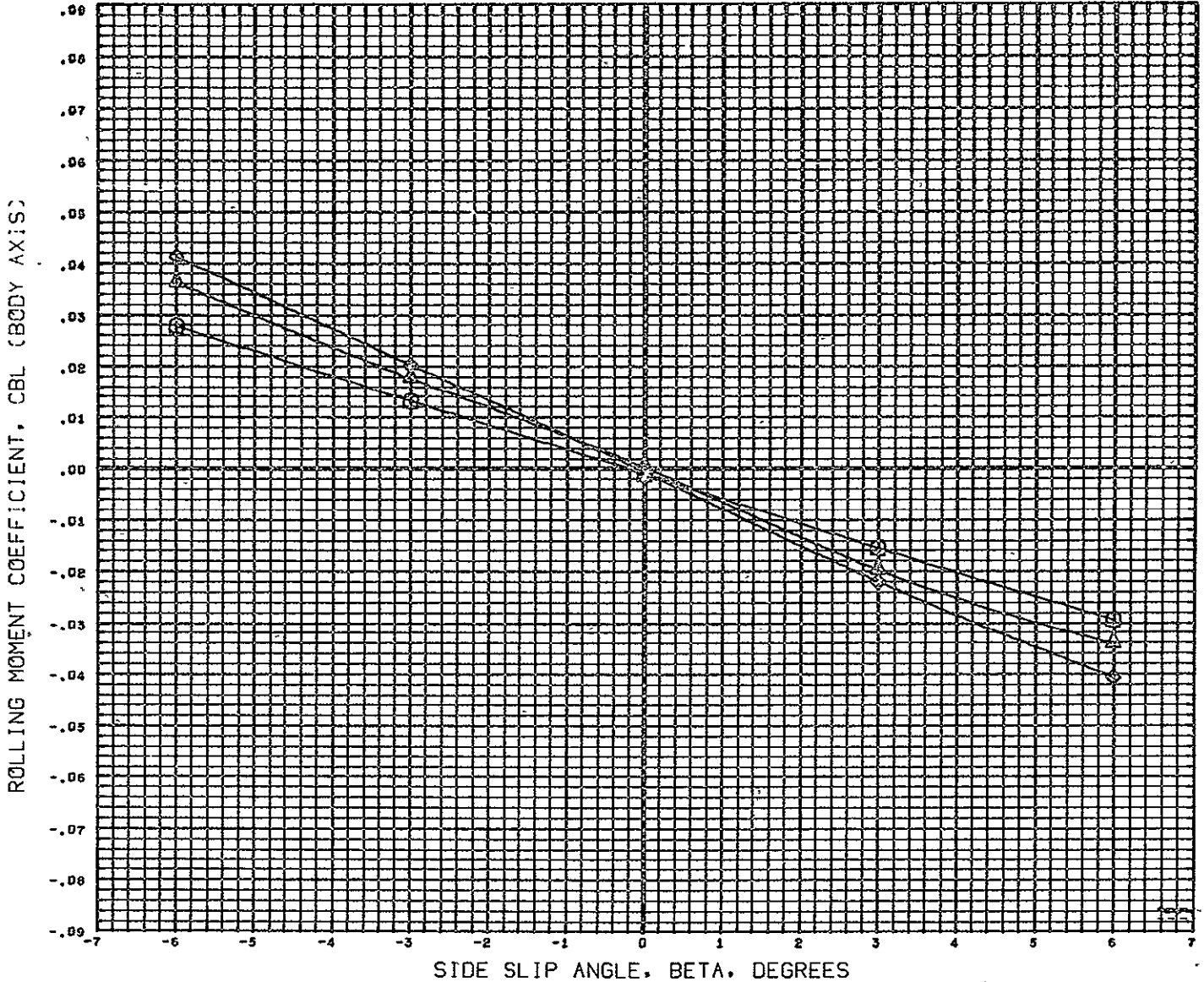
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
		ALPHA	INCIDC	AILRON	ELEVTR	FN4008	D1HDRL	FN2528	D1HDRL	SREF	LREF	BREF	SCALE
○	0.400	15.000	3.000	0.000	0.000	FN4008	- 7.660	FN2528	15.000	1.3550	3.4530	3.4530	0.0150
		CANARD	0.000	ELEVTR	0.000					2.5950	0.0000	0.0187	
		VENFIN	1.210	WNGPOS	1.000								
		CNDPOS	1.000										
		DATA HIST. CODE	NI										

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



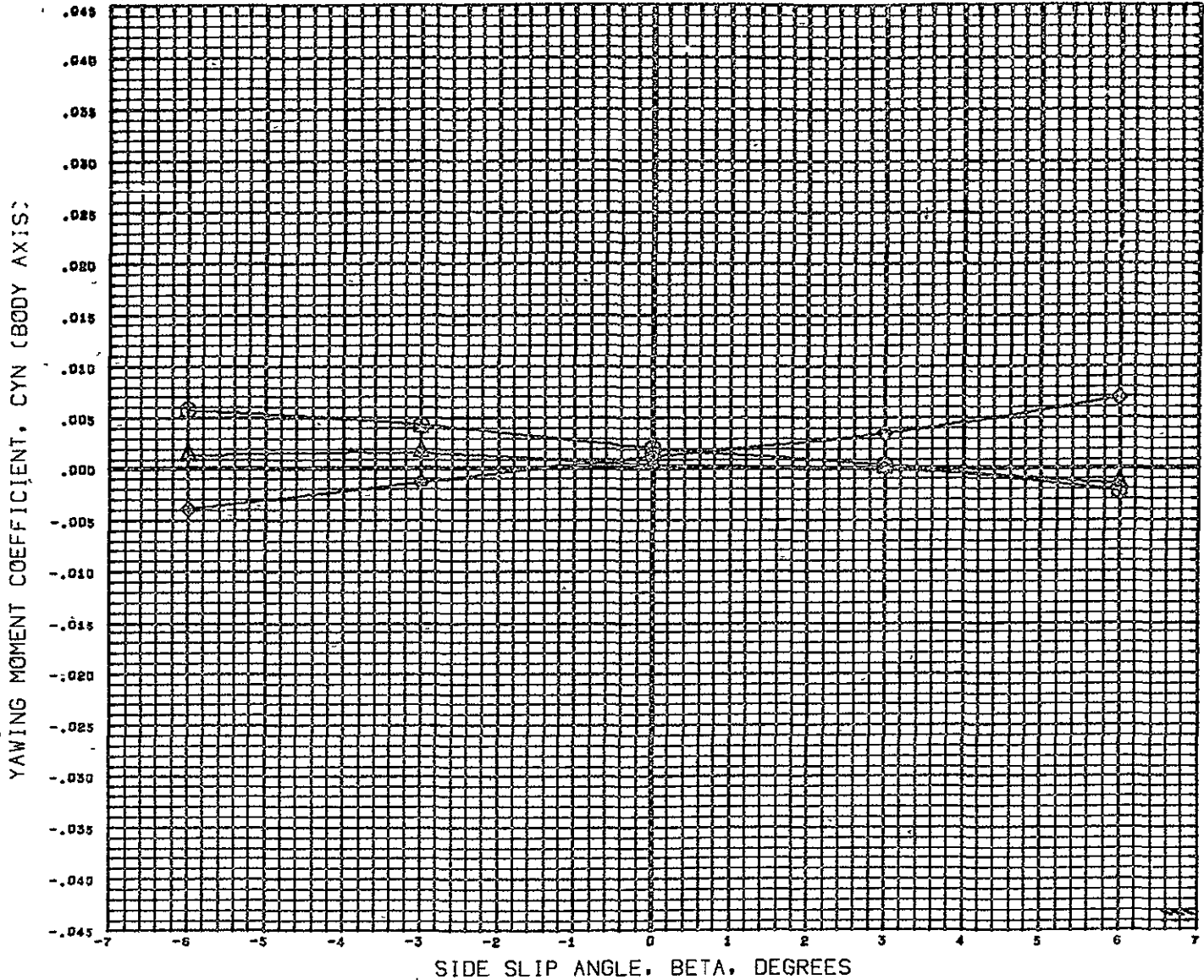
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION																
		ALPHA	INCIDC	AILRON	ELEVTR	WNGPOS	DIHDRL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE											
○	0.400	15.000	3.000	0.000	0.000	1.000	FN4008	- 7.660	FN2528	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	SQ.FT.	FEET	FEET	FEET	FEET	FEET	SCALE	SCALE
		INCIDW	0.000	VENFIN	1.210	CNDPOS	1.000	DATA HIST. CODE	HI																

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4014)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.033	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2518)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.013	15.000	1.000	1.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

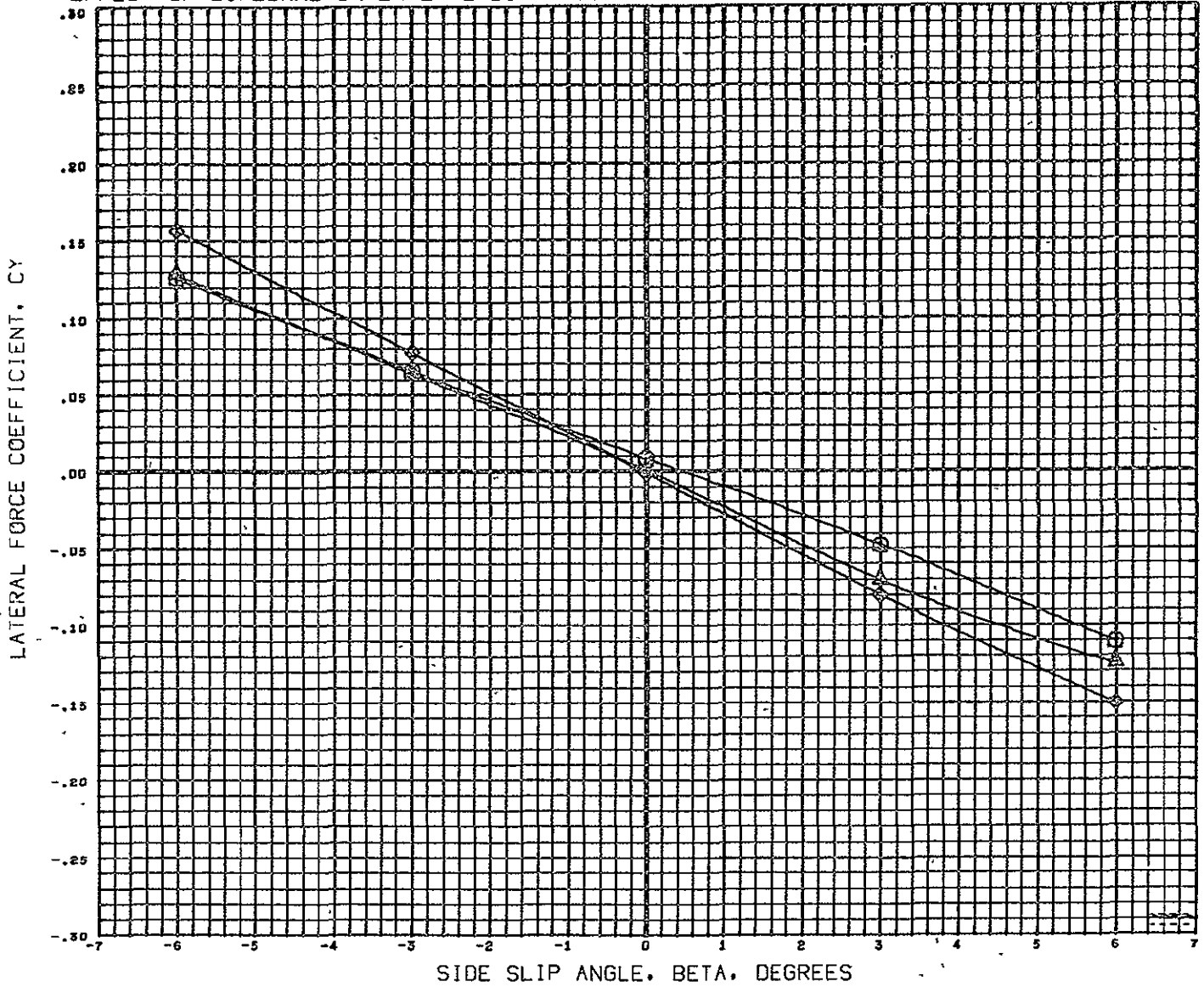
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGFOS	REFERENCE INFORMATION
(FN4014)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.033	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2518)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.013	15.000	1.000	1.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

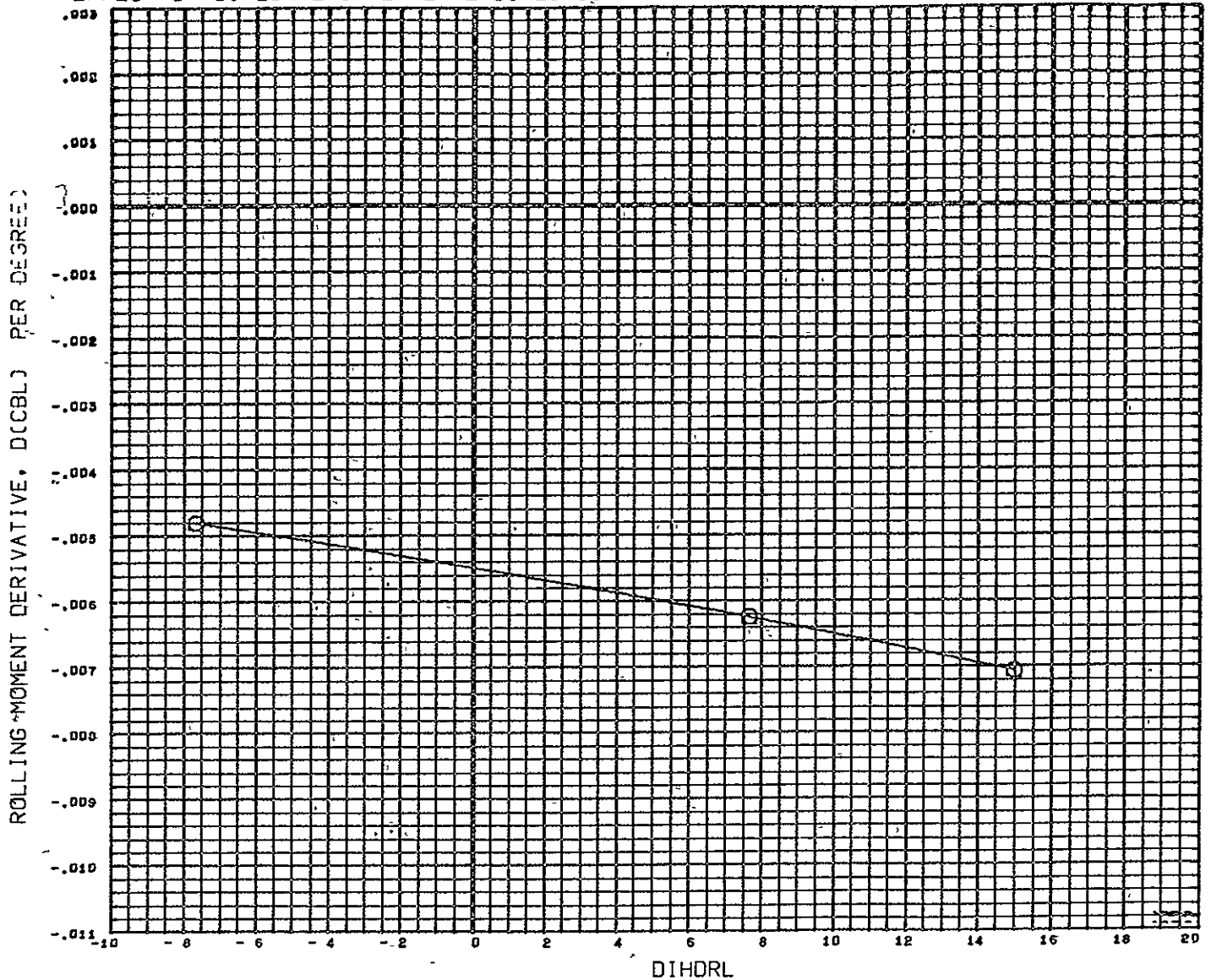
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



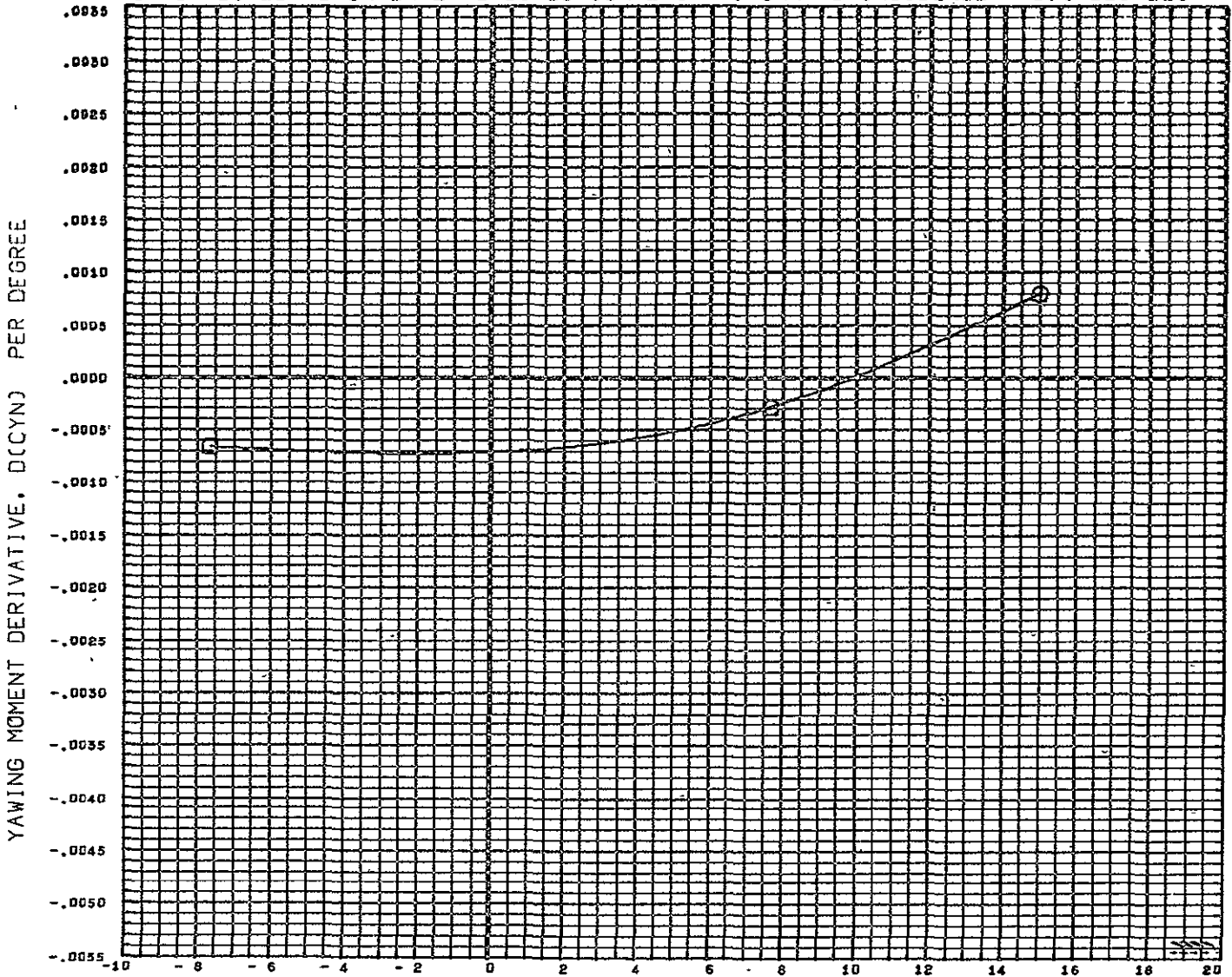
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4014)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	0.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2002)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	0.033	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2518)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	0.013	15.000	1.000	1.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



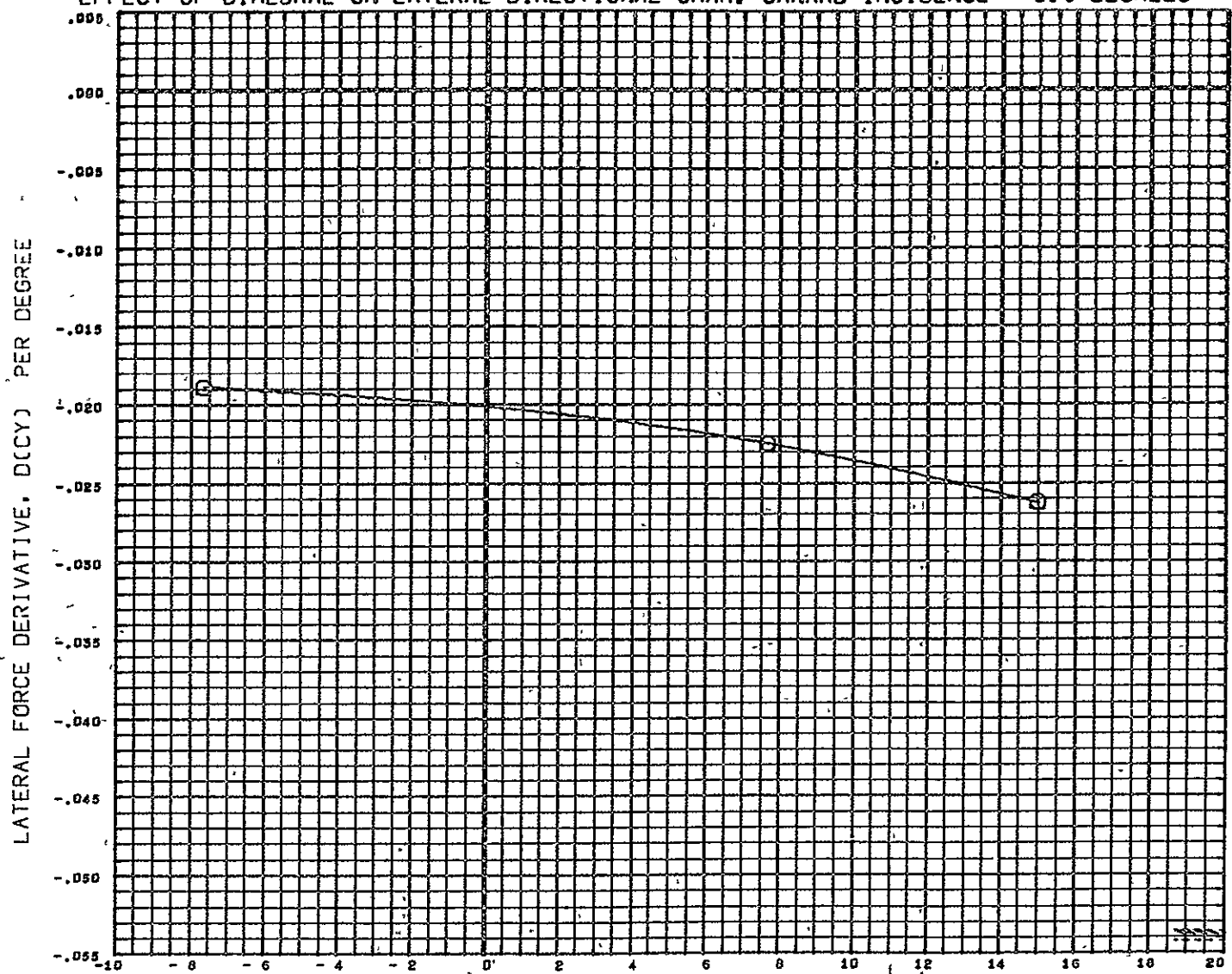
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
○	0.400	ALPHA	0.000	INCIDC	3.000	DIHDRL	DIHDRL	SREF	1.3550	50. FT.	
		INCIDW	0.000	AILRON	0.000	FN4014	7.660	LREF	3.4530	FEET	
		CANARD	0.000	ELEVTR	0.000	FN2518	15.000	BREF	3.4530	FEET	
		ROLFIN	1.100	WNGPOS	1.000			XMRP	2.5950	FEET	
		CNDPOS	1.000					YNRP	0.0000	FEET	
								ZMRP	0.0187	FEET	
		DATA HIST	CODE	HI				SCALE	0.0150	SCALE	

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



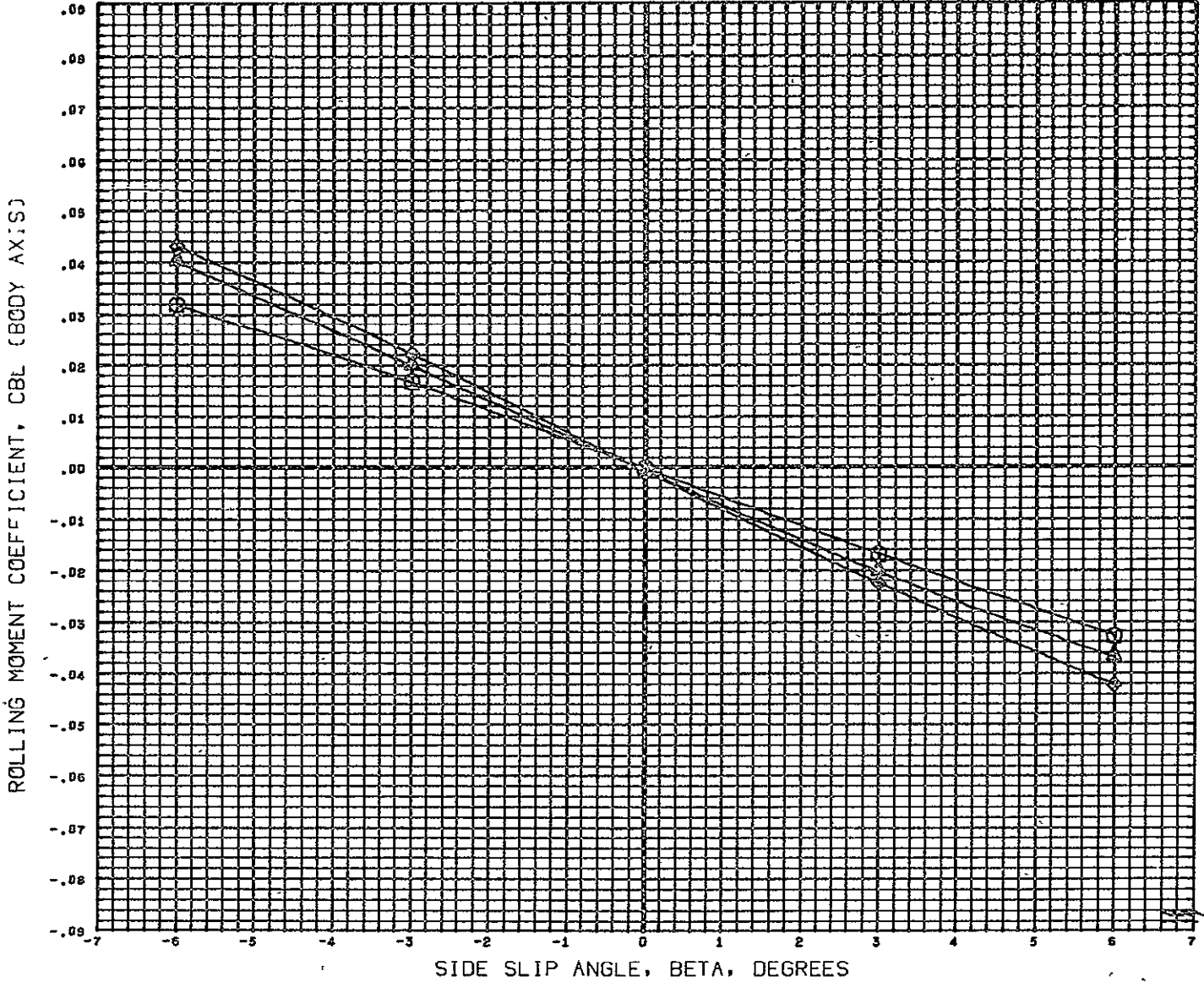
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
○	0.400	ALPHA	0.000	INCIDC	3.000	DIHDL	DIHDL	SREF	1.3550	SR.FT.	
		INCIDW	0.000	AILRON	0.000	FN4014	7.660	LREF	3.4530	FEET	
		CANARD	0.000	ELEVTR	0.000	FN2518	15.000	BREF	3.4530	FEET	
		ROLFIN	1.100	WNGPOS	1.000			XMRP	2.5950	FEET	
		CNDPOS	1.000					YMRP	0.0000	FEET	
		DATA HIST. CODE	MI					ZMRP	0.0187	FEET	
								SCALE	0.0150	SCALE	

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION														
		ALPHA	INCIDC	AILRON	ELEVTR	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE								
D	0.400	0.000	3.000	0.000	0.000	FN4014	7.660	FN2002	7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0167	0.0150	SQ.FT.	FEET	FEET	FEET	FEET	FEET	SCALE
		INCIDW	0.000	AILRON	0.000	FN4014	7.660	FN2002	7.660														
		CANARD	0.000	ELEVTR	0.000	FN2518	15.000																
		ROLFIN	1.100	WNGPOS	1.000																		
		CNDPOS	1.000																				
		DATA HIST. CODE	HI																				

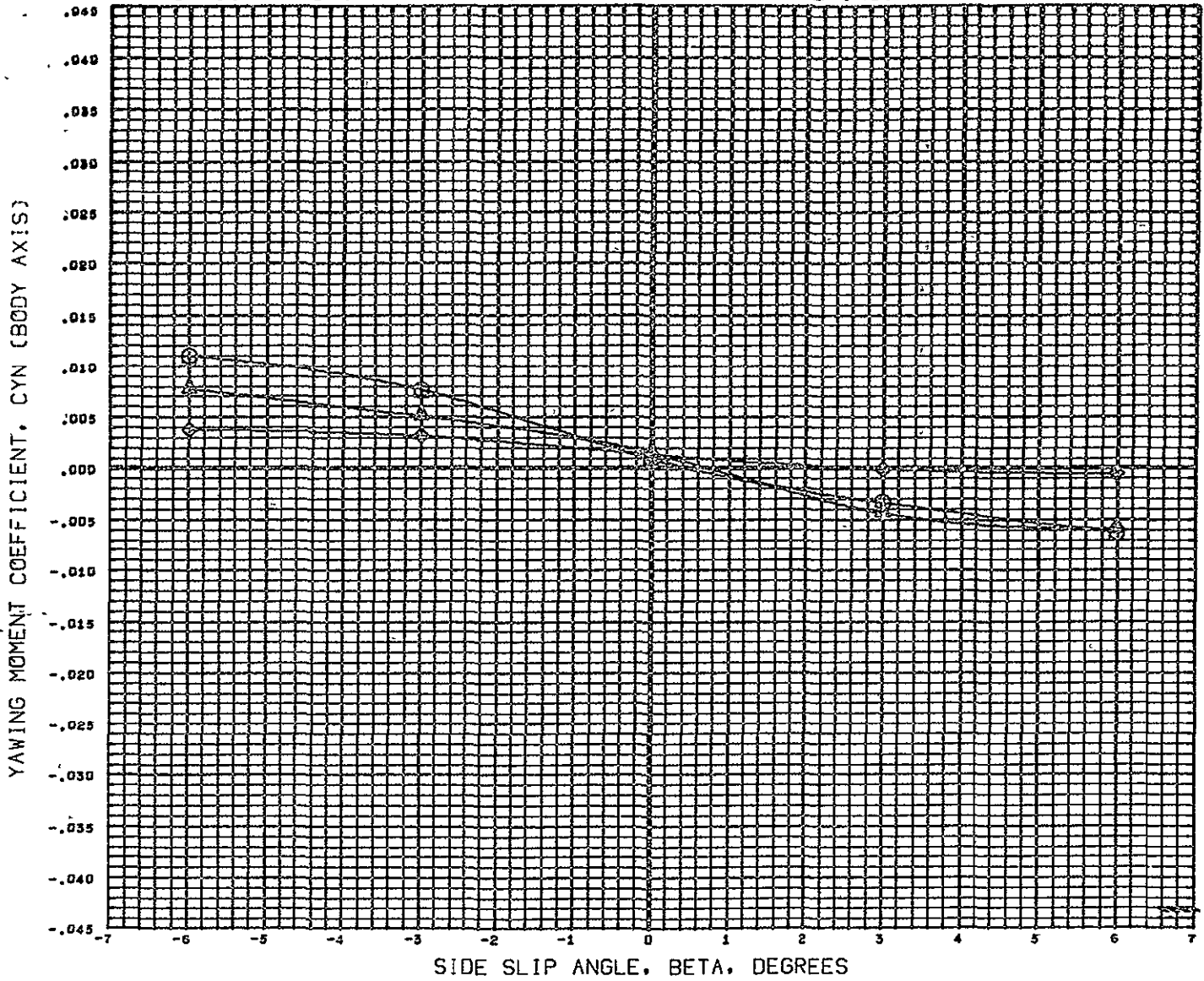
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDROS	WNGPOS	REFERENCE INFORMATION
(FN4015)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2003)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	6.133	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2519)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	6.138	15.000	1.000	1.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

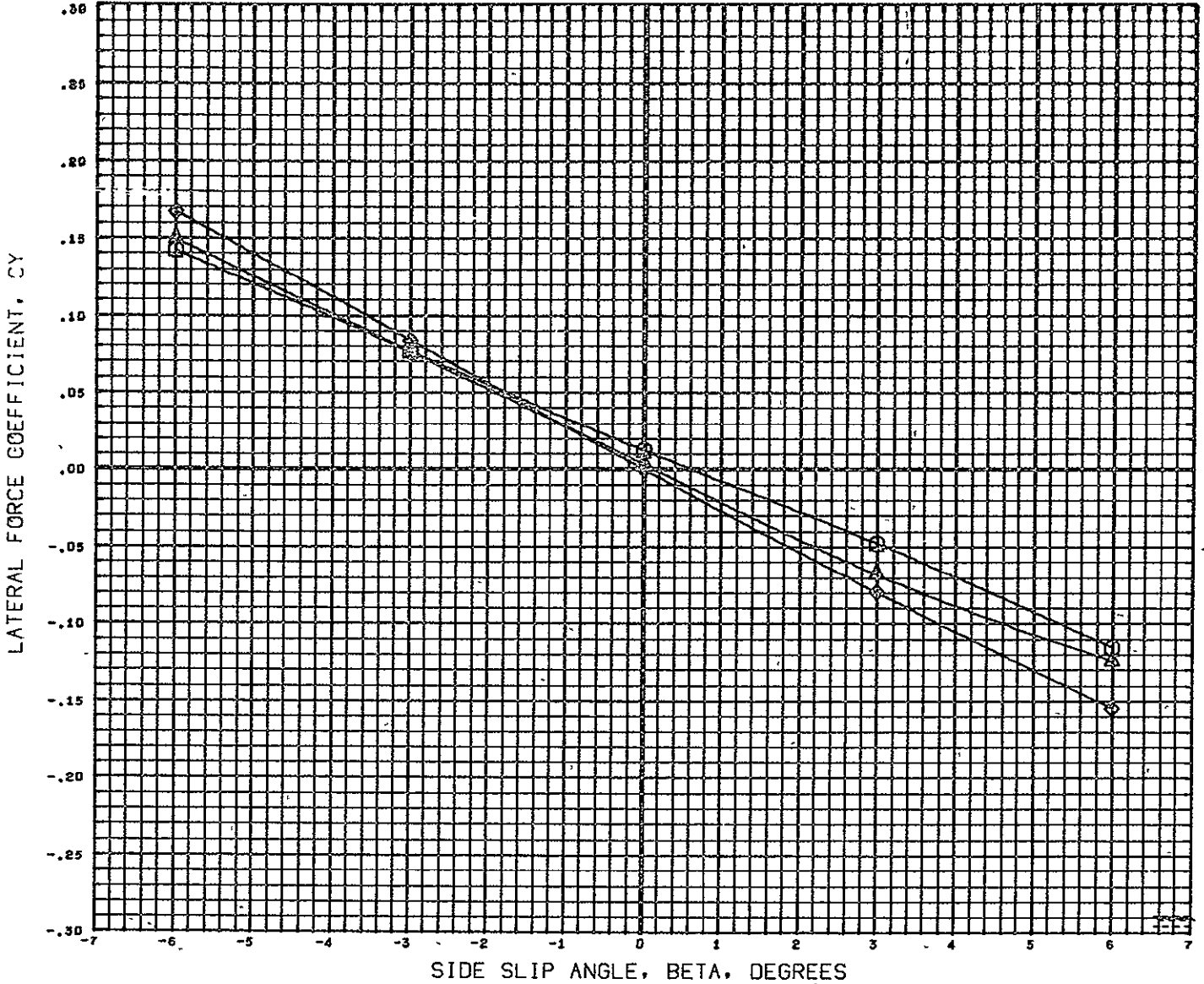


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4015)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ FT.
(FN2003)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	6.133	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2519)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	6.138	15.000	1.000	1.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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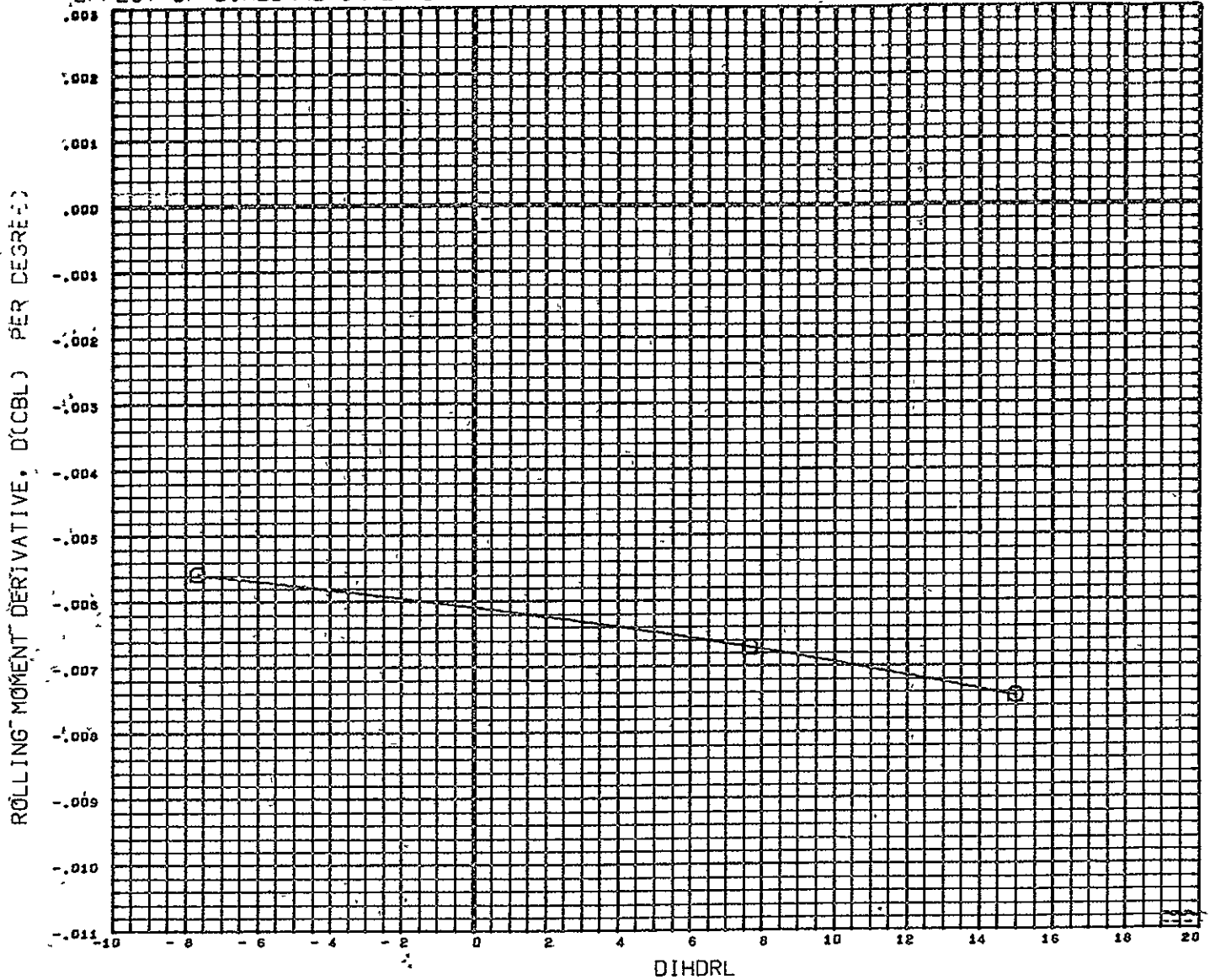
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4015)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	6.000	-7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN2003)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	6.133	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2519)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	6.138	15.000	1.000	1.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

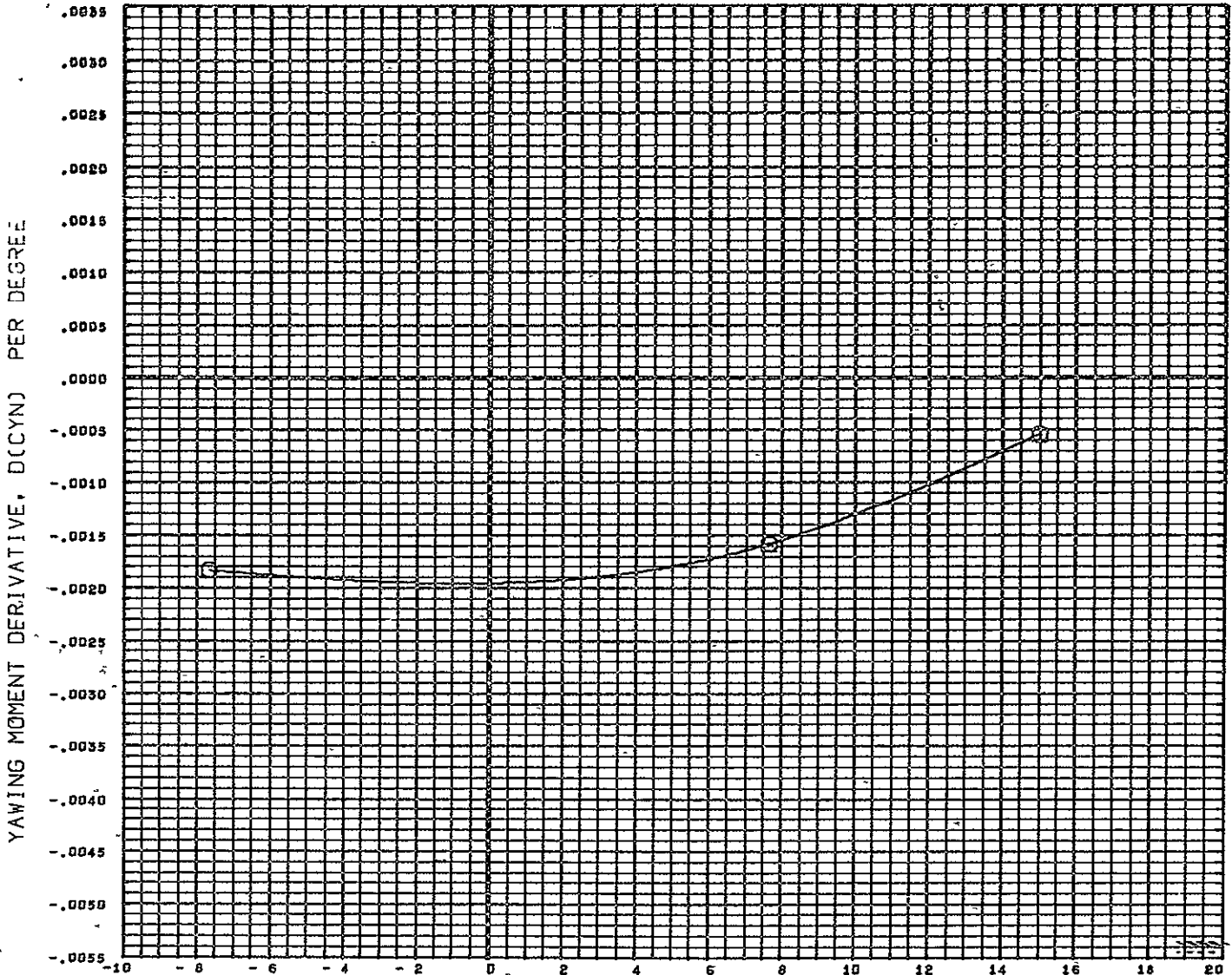
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4015	7.660	FN2003	7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	FN2519	15.000			BREF	3.4530	FEET
		ROLFIN	1.100	WNGPOS	1.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	MI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

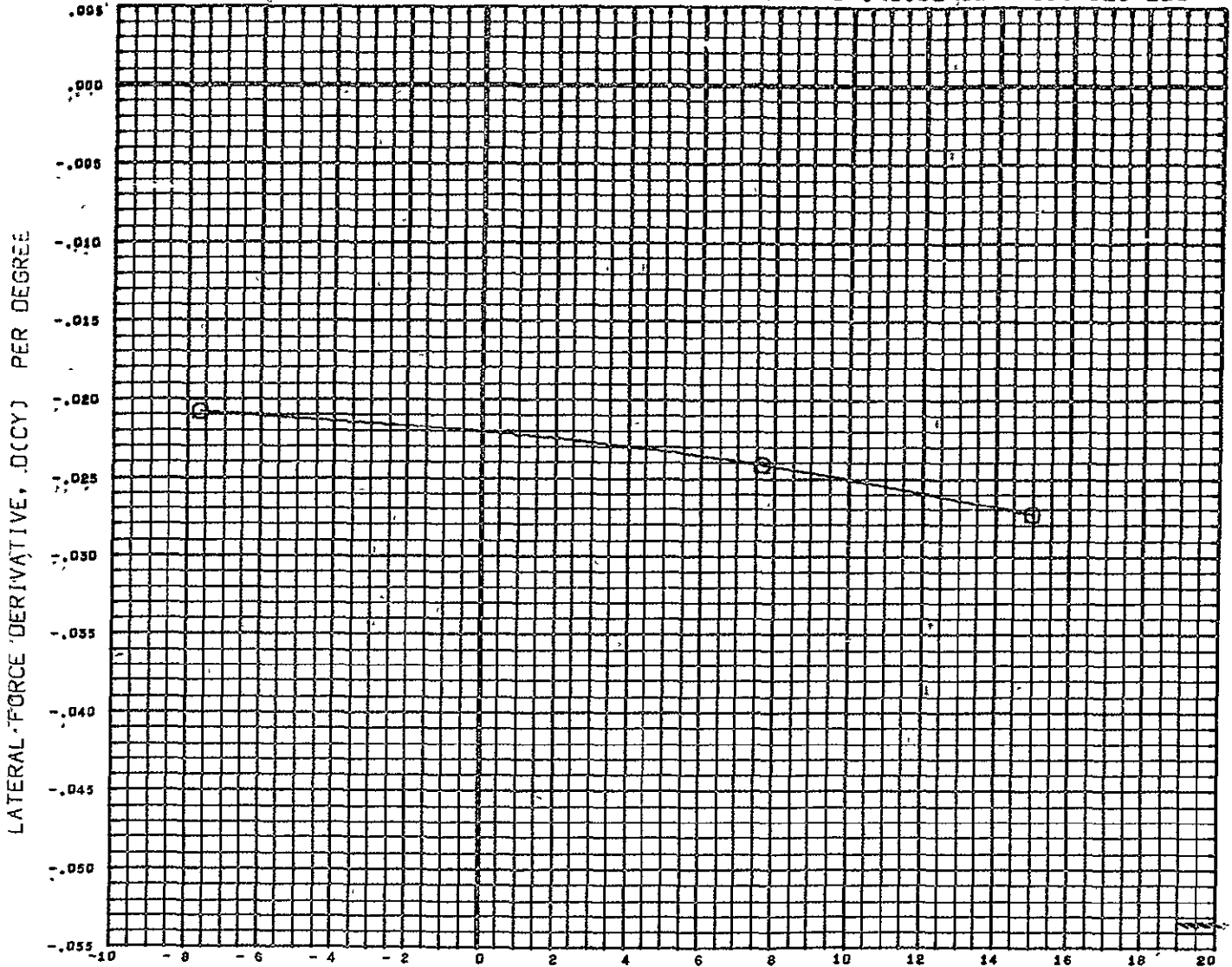
C.4

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



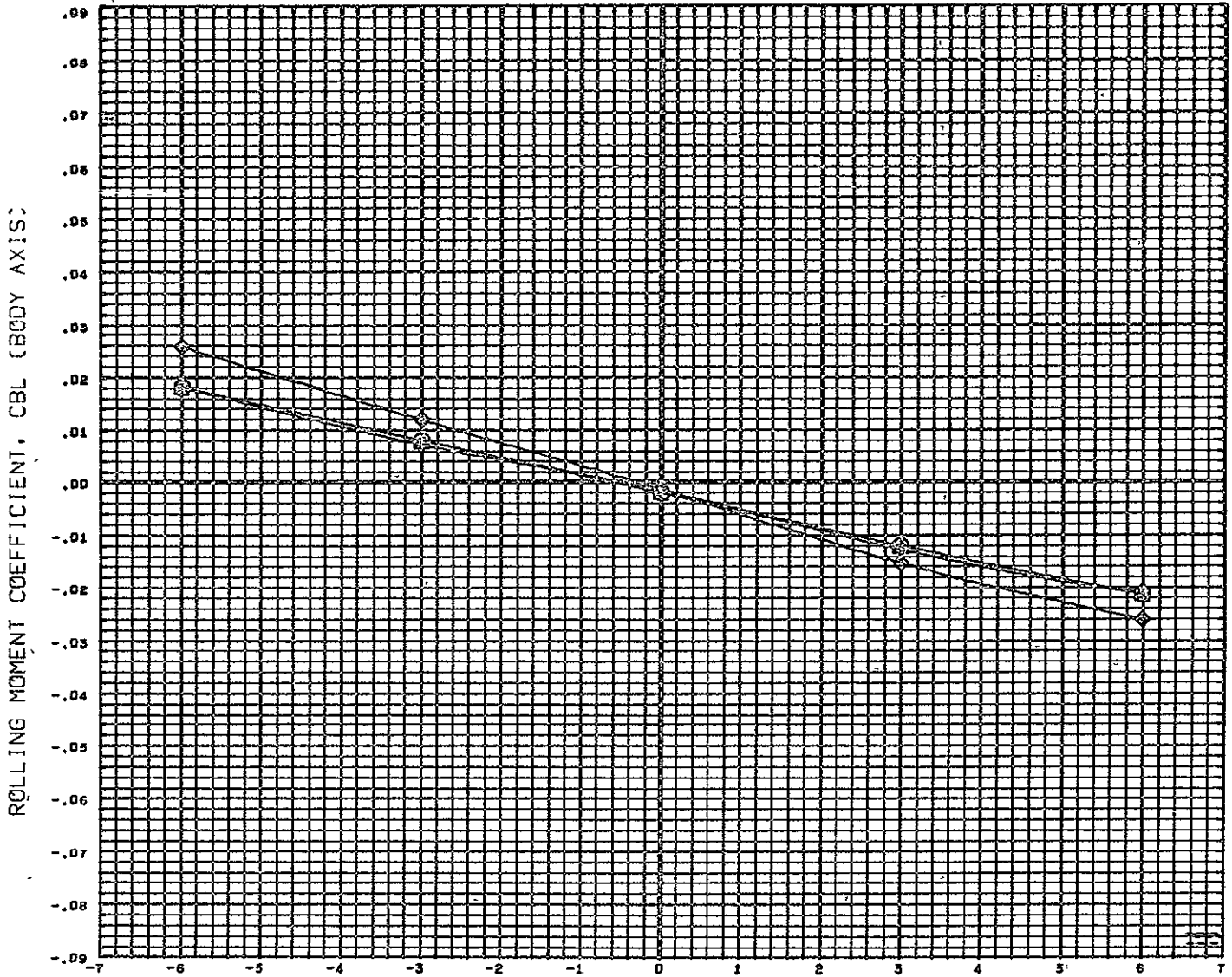
SYMBOL	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION						
		ALPHA	INCIDC	AILRON	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE
○	0.400	6.000	3.000	0.000	7.660	7.660	7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150
		INCIDW	0.000	0.000	FN4015	FN2003								
		CANARD	0.000	0.000	FN2519	15.000								
		ROLFIN	1.100	1.000										
		CNDPOS	1.000											
		DATA-HIST	CODE	HI										

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL		MACH		PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○		0.400		ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ. FT.
				INCIDW	0.000	AILRON	0.000	FN4015	7.660	FN2003	7.660	LREF	3.4530	FEET
				CANARD	0.000	ELEVTR	0.000	FN2519	15.000			BREF	3.4530	FEET
				ROLFIN	1.100	WNGPOS	1.000					XNRP	2.5950	FEET
				CNDPOS	1.000							YNRP	0.0000	FEET
												ZNRP	0.0187	FEET
				DATA HIST. CODE	MI							SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



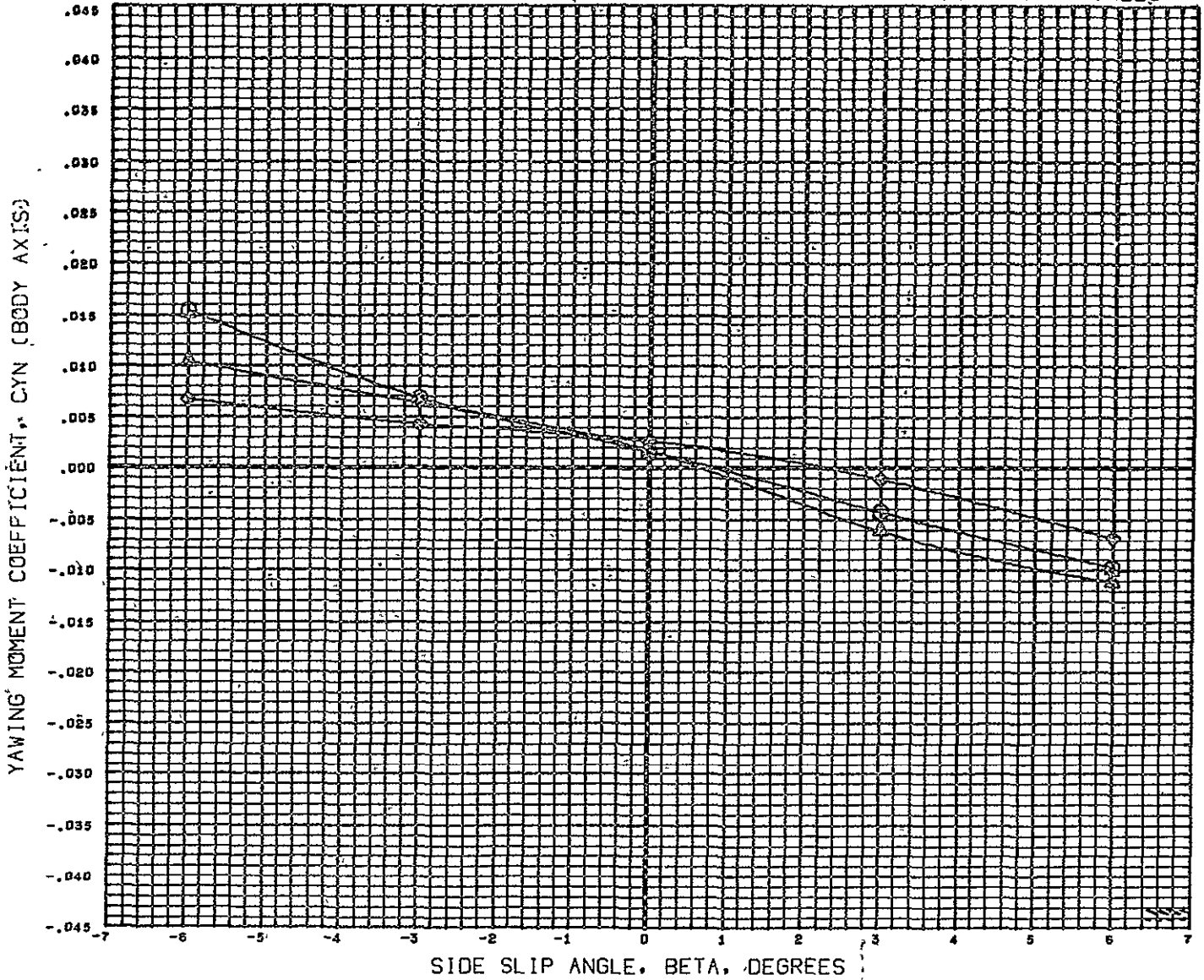
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4016)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	-7.660	1.000	1.000	SREF 1 3550 SQ.FT.
(FN2004)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.392	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2520)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.421	15.000	1.000	1.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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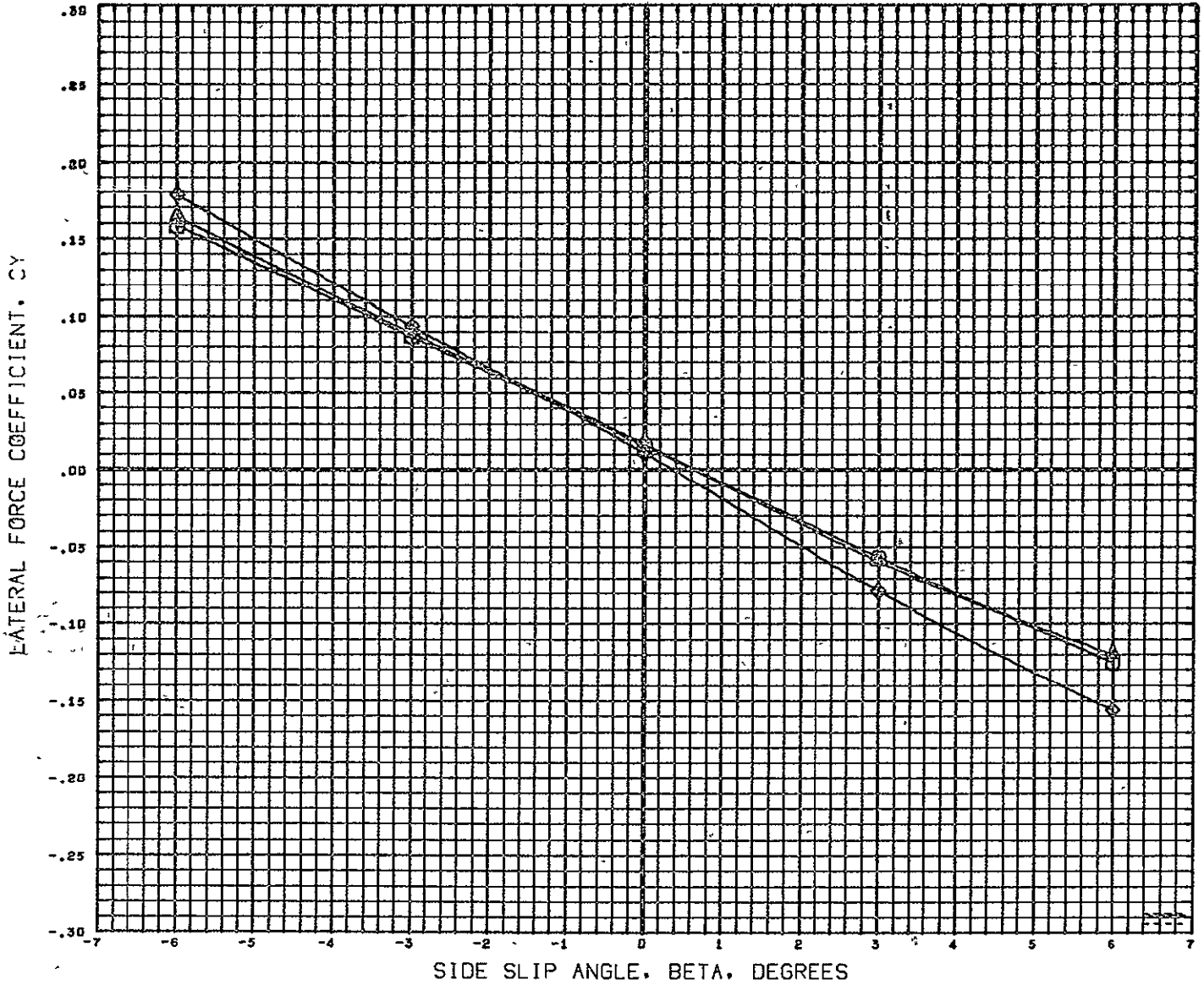
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION	
(FN4016)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	-7.660	1.000	1.000	SREF	1.3550 SQ. FT.
(FN2004)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.392	7.660	1.000	1.000	LREF	3.4530 FEET
(FN2520)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.421	15.000	1.000	1.000	BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0107 FEET
						SCALE	0.0150 SCALE

MACH .40

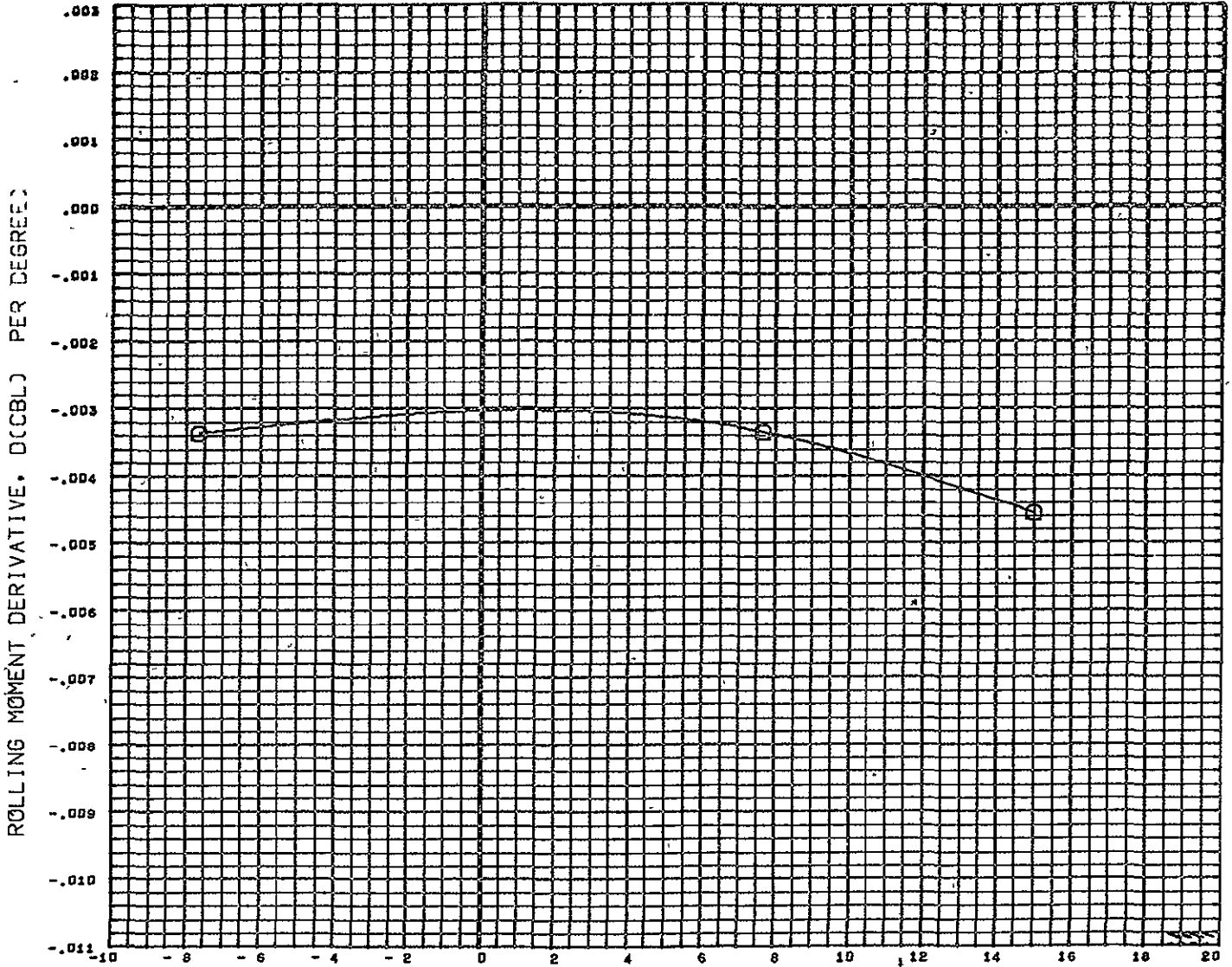
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4016)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	15.000	-7.660	1.000	1.000	SREF 1.3550 SQ. FT.
(FN2004)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	15.392	7.660	1.000	1.000	LREF 3.4530 FEET
(FN2520)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	15.421	15.000	1.000	1.000	BREF 3.4530 FEET XNRF 2.5950 FEET YNRF 0.0000 FEET ZNRF 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

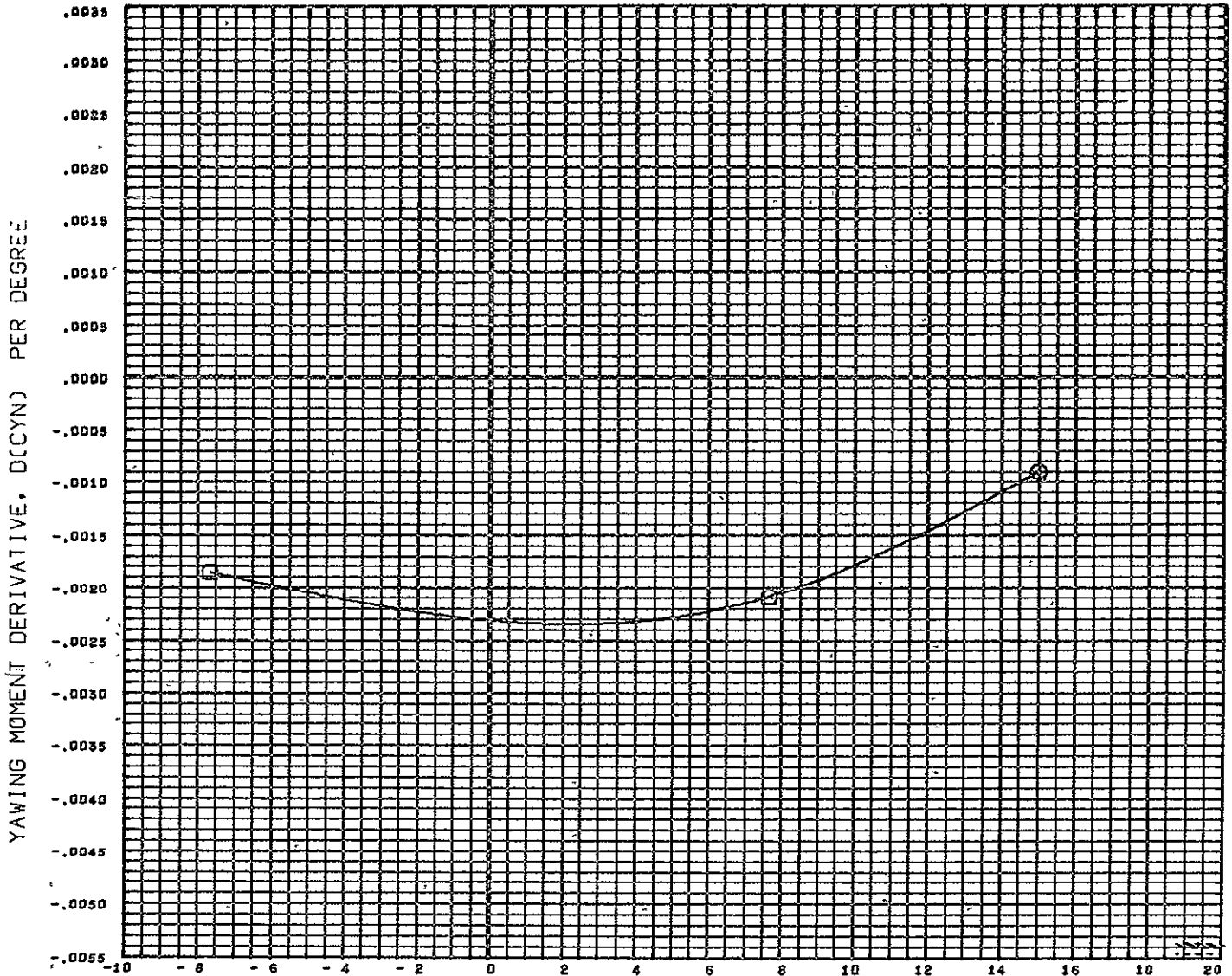
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DIHDL

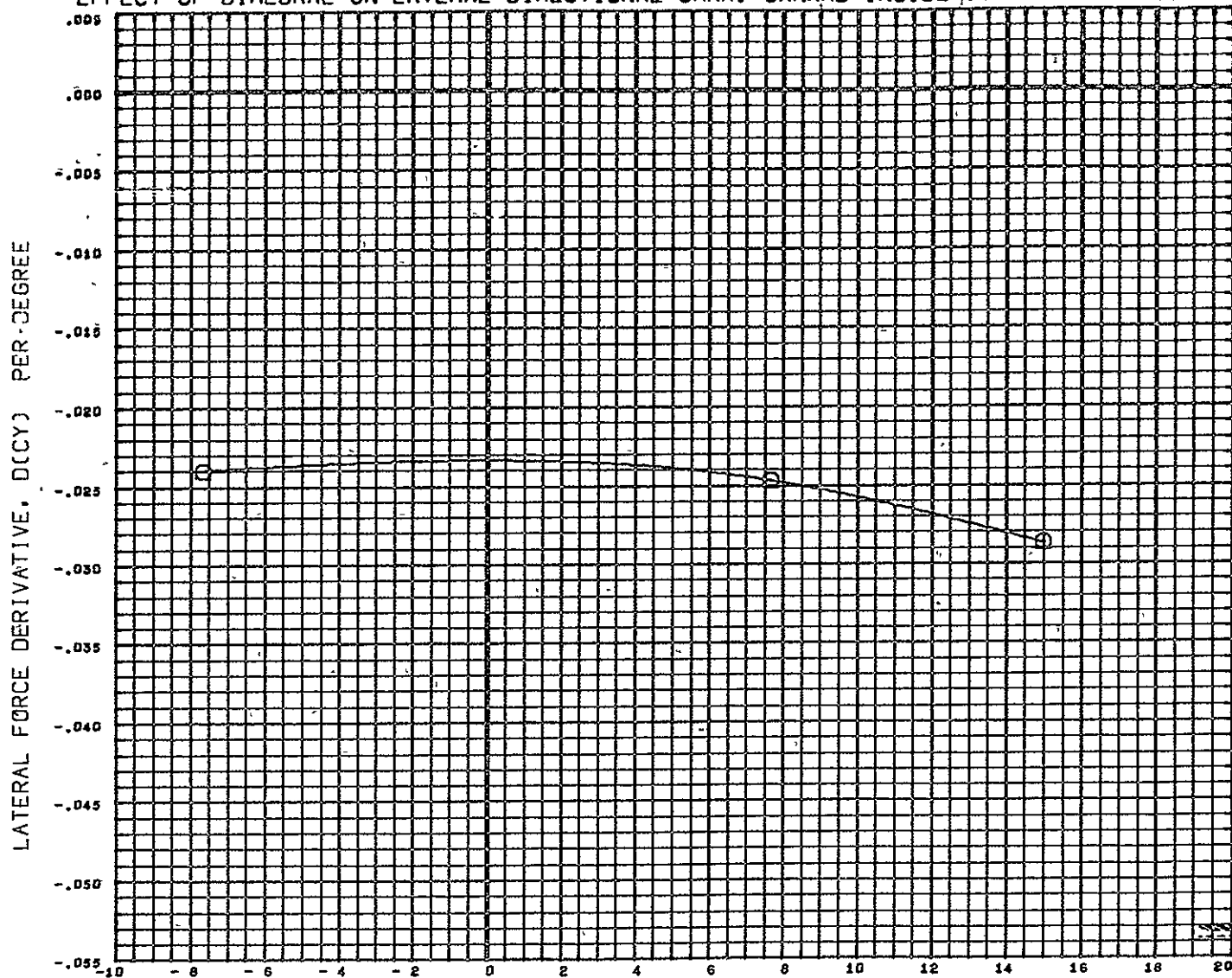
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	15.000	INCIDC	3.000	DATASET	DIHDL	DIHDL	SREF	1 3550	sq.ft.	
		INCIDW	0.000	AILRON	0.000	FN4016	- 7.660	FN2004	LREF	3.4530	FEET	
		CANARD	0.000	ELEVTR	0.000	FN2520	15.000		BREF	3.4530	FEET	
		ROLFIN	1.100	WNGPOS	1.000				XMRP	2.5950	FEET	
		CNDPOS	1.000						YMRP	0.0000	FEET	
		DATA HIST. CODE	MI						ZMRP	0.0187	FEET	
									SCALE	0 0150	SCALE	

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



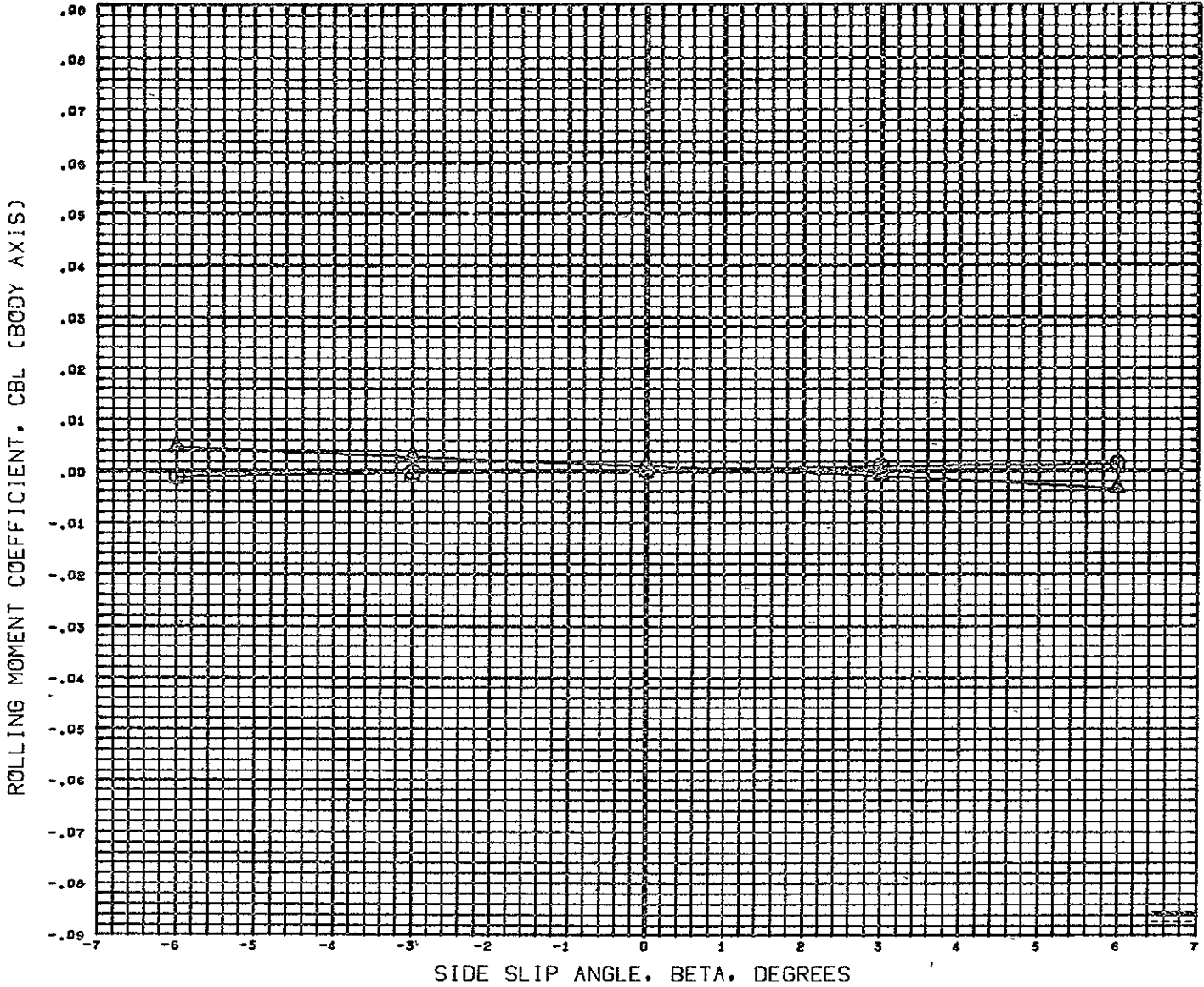
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION															
		ALPHA	INCIDC	AILRON	ELEVTR	WNGPOS	DIHDL	DIHDL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE	UNIT								
○	0.400	15.000	3.000	0.000	0.000	1.000	FN4016	7.660	FN2004	7.660	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	sq.ft.						
		INCIDW	0.000	AILRON	0.000	FN4016	7.660	FN2004	7.660	BREF	3.4530	FEET	XHRP	2.5950	FEET	YHRP	0.0000	FEET	ZHRP	0.0187	FEET	SCALE	0.0150	SCALE
		CANARD	0.000	ELEVTR	0.000	FN2520	15.000																	
		ROLFIN	1 100	WNGPOS	1.000																			
		CNDPOS	1 000																					
		DATA HIST. CODE	MI																					

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
0	0.400	ALPHA	15.000	INCIDC	3.000	FN4016	DIHDL	7.660	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN2520	DIHDL	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000				BREF	3.4530	FEET
		ROLFIN	1.100	WNGPOS	1.000				XMRP	2.5950	FEET
		CNDPOS	1.000						YMRP	0.0000	FEET
		DATA HIST. CODE	MI						ZMRP	0.0107	FEET
									SCALE	0.0150	SCALE

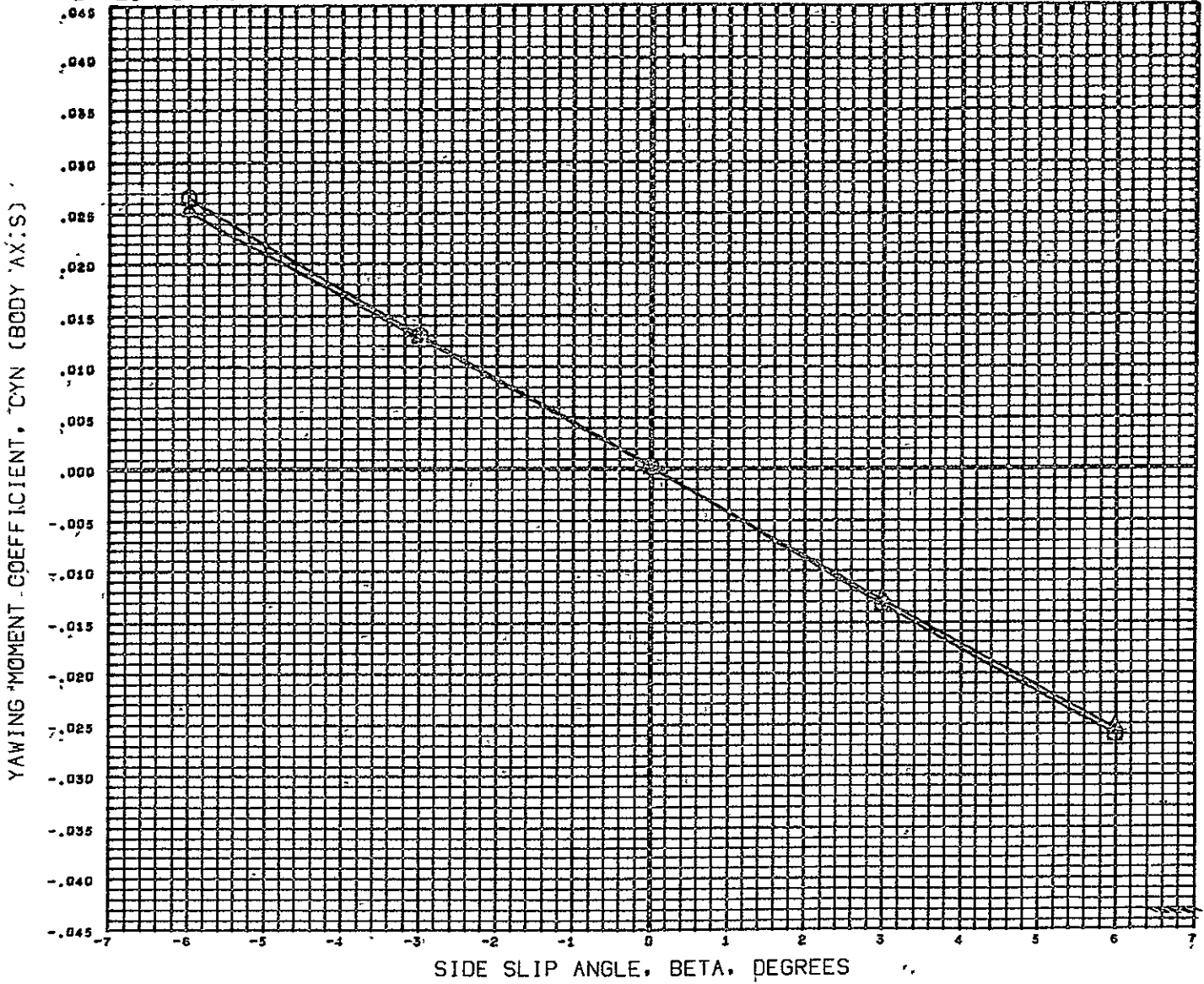
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4050)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2	0.000	7.660	1.000	2.000	SREF 1.3550 SQ FT.
(FN4034)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

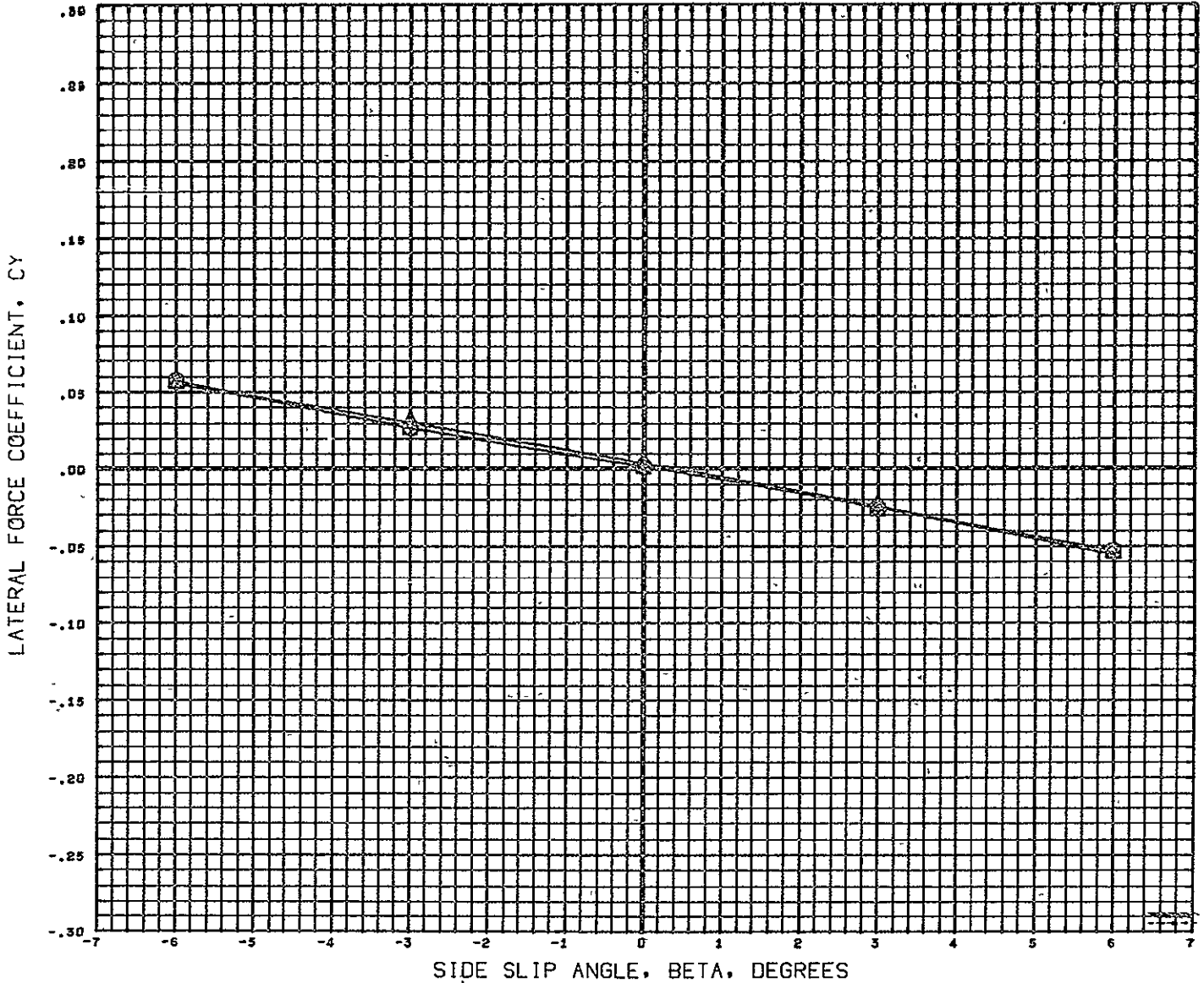
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4050) ○	NSRDC-331D,MSFC/LHSC BOOSTER B1C2F1W1V2	0.000	7.660	1.000	2.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET
(FN4034) △	NSRDC-331D,MSFC/LHSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	2.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

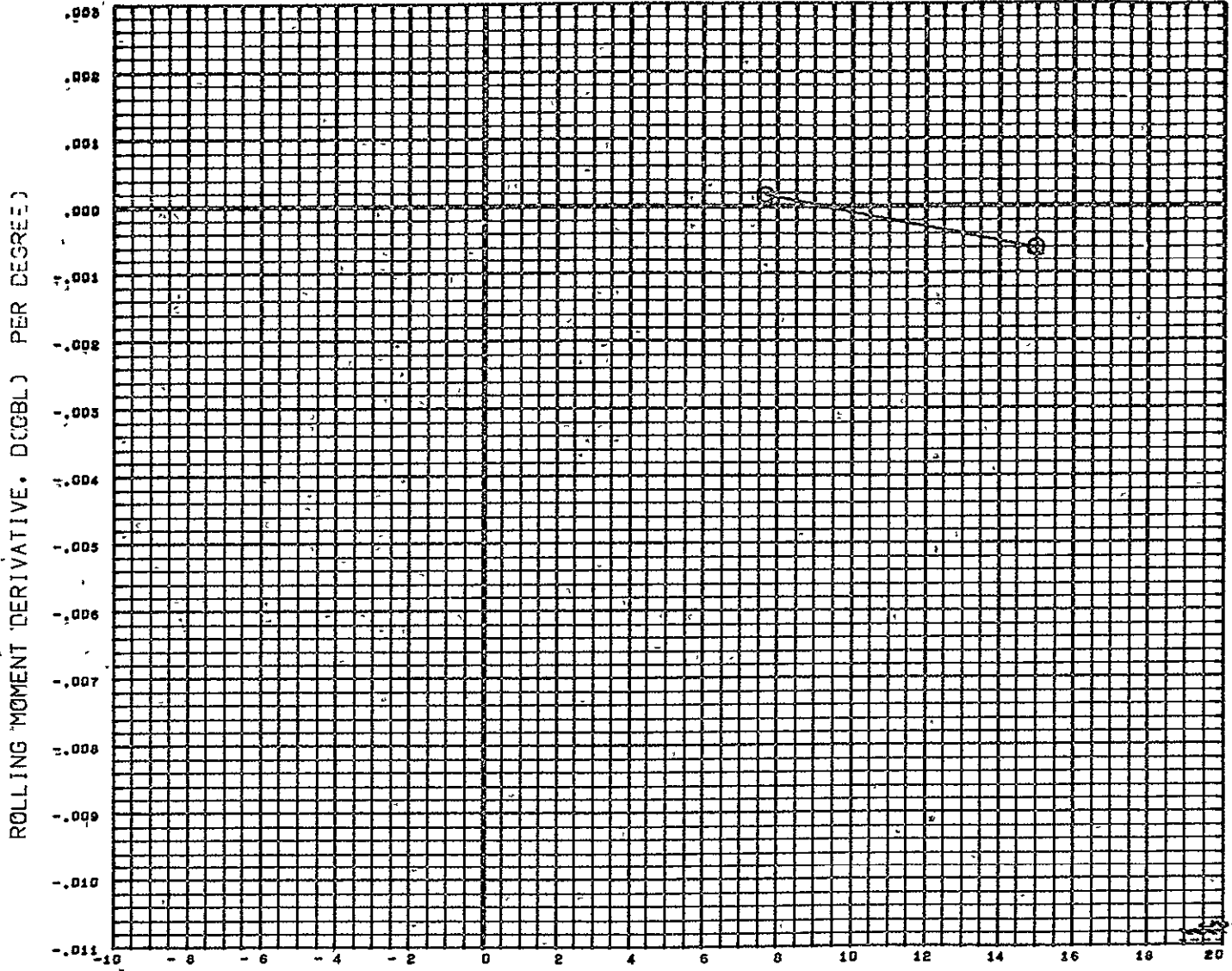


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION	
(FN4050)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	0.000	7.660	1.000	2.000	SREF	1.3550 SQ.FT.
(FN4034)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	0.000	15.000	1.000	2.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

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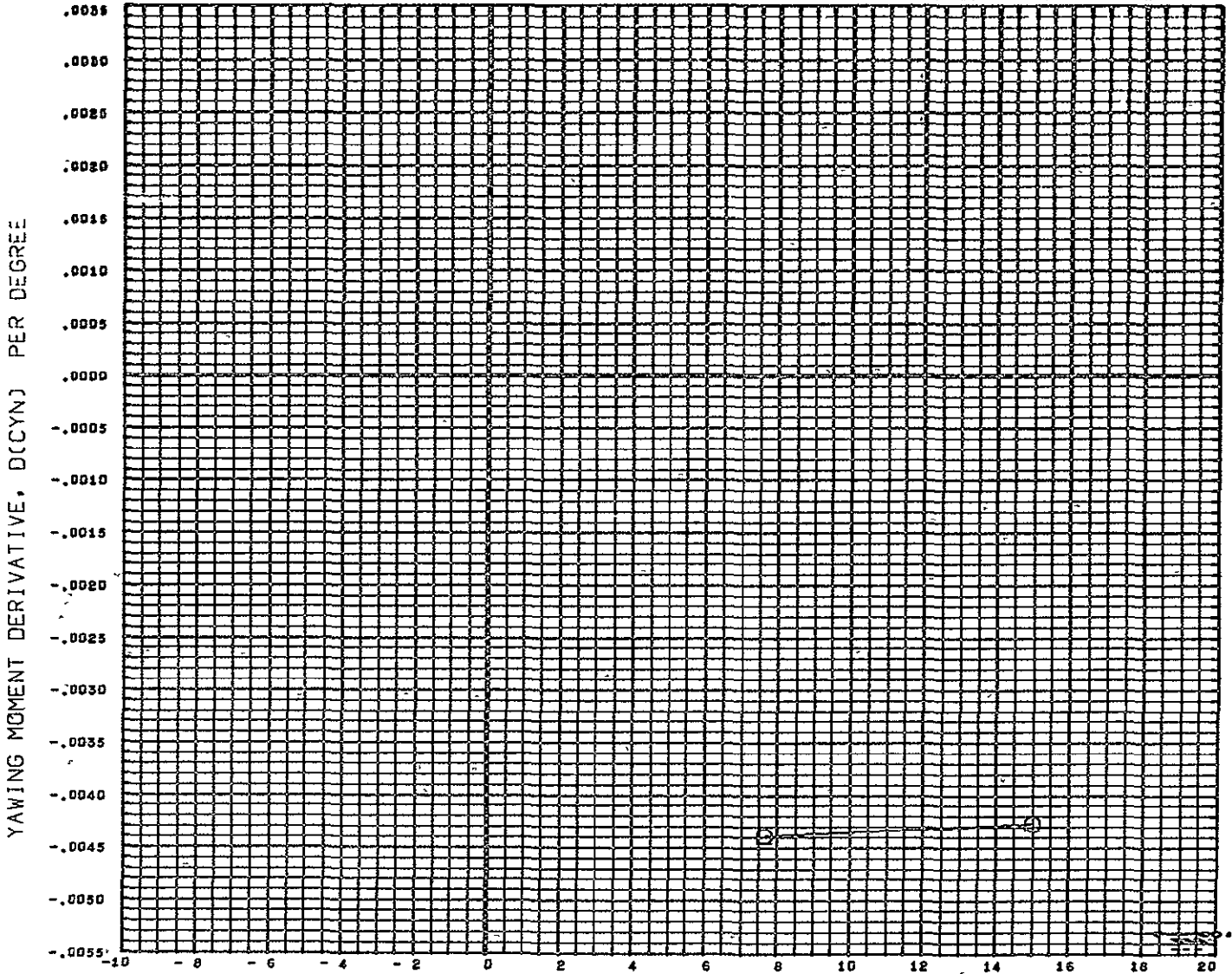
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
Q	0.400	ALPHA	0.000	INCIDC	3.000	DIHDL	DIHDL	DIHDL	SREF	1.3550	SQ.FT
		INCIDW	0.000	AILRON	0.000	FN4050	7.660	FN4034	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000				BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000				XMRP	2.5950	FEET
									YMRP	0.0000	FEET
									ZMRP	0.0187	FEET
									SCALE	0.0150	SCALE

DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDC	AILRON	ELEVTR	DIHDL	DIHDL	DIHDL	SREF	FEET	SCALE
○	0.400	0.000	3.000	0.000	0.000	FN4050	7.660	FN4034	15.000	1.3550	SQ.FT.
		INCIDW	0.000	0.000	0.000					3.4530	FEET
		CANARD	0.000	0.000	0.000					3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					2.5950	FEET
										0.0000	FEET
										0.0187	FEET
										0.0150	SCALE

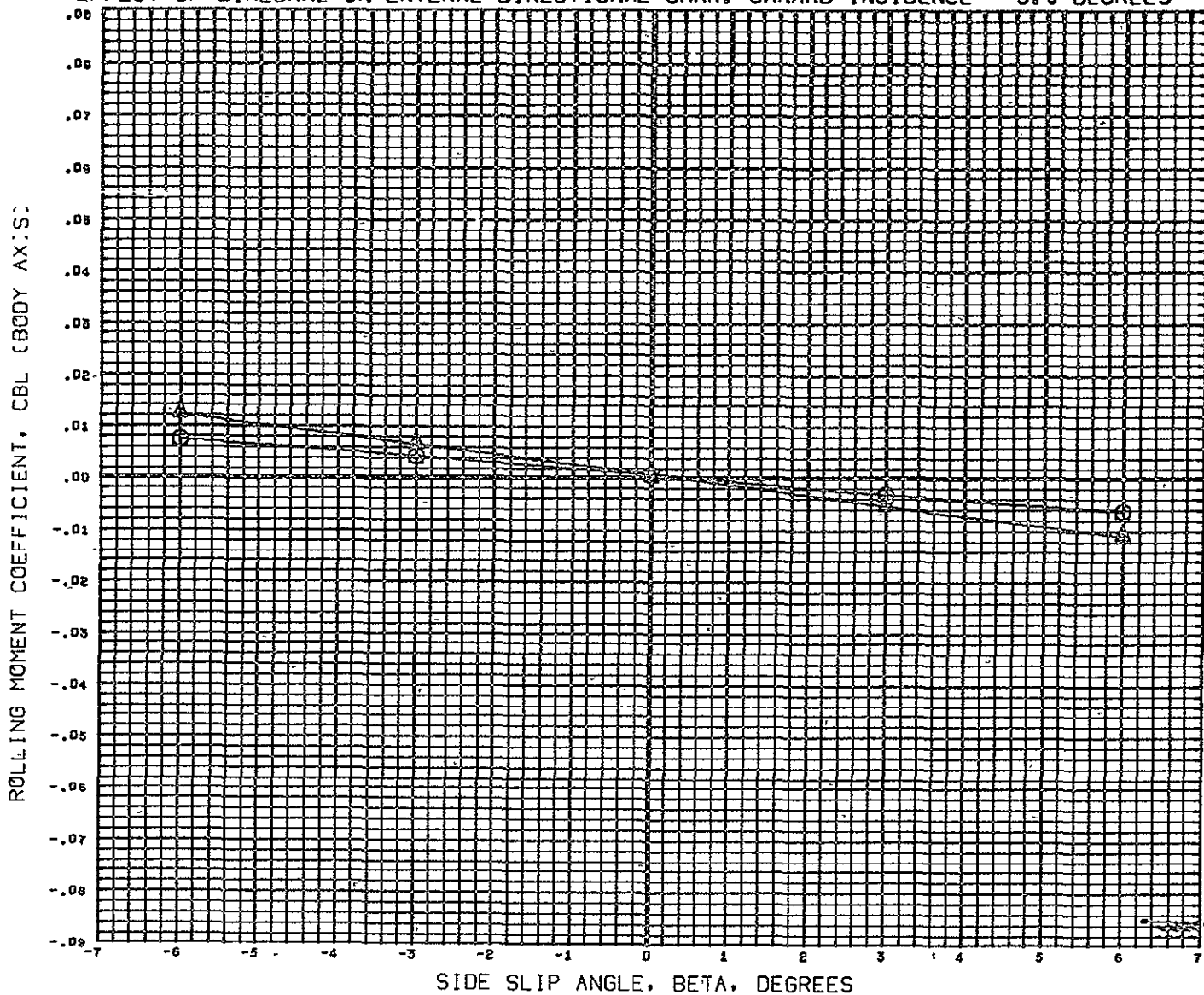
DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION																		
		ALPHA	INCIDW	CANARD	WNGPOS	INCIDC	AILRON	ELEVTR	CNDPOS	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE								
D	0.400	0.000	0.000	0.000	2.000	3.000	0.000	0.000	1.000	7.660	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	SQ.FT.	FEET	FEET	FEET	FEET	FEET	FEET	SCALE	

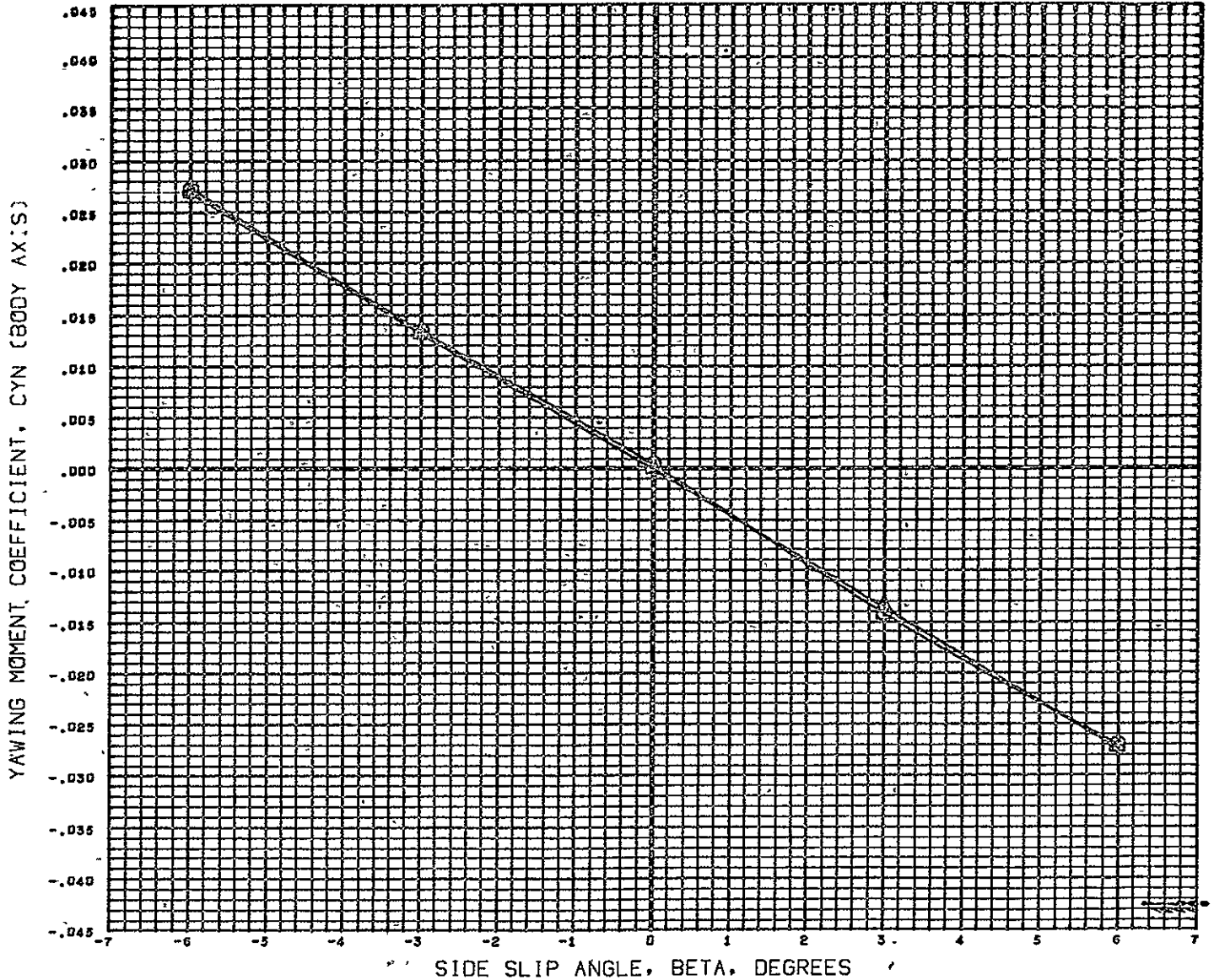
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4051)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	6.000	7.660	1.000	2.000	SREF 1.3550 50 FT
(FN4035)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	2.000	LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

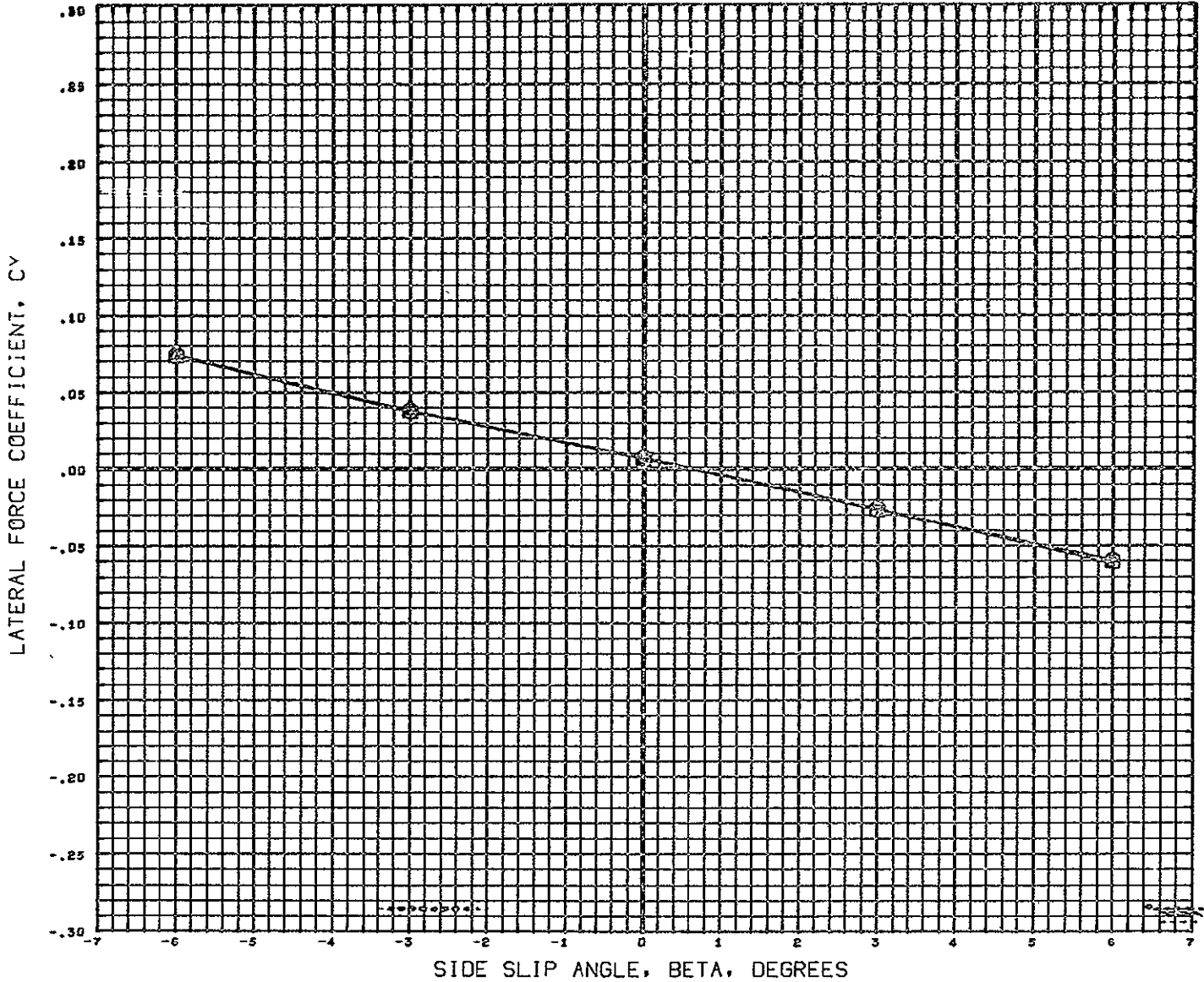
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4051)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	6.000	7.660	1.000	2.000	SREF 1.3550 SQ. FT.
(FN4055)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	2.000	LREF 3.4530 FEET
					1	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

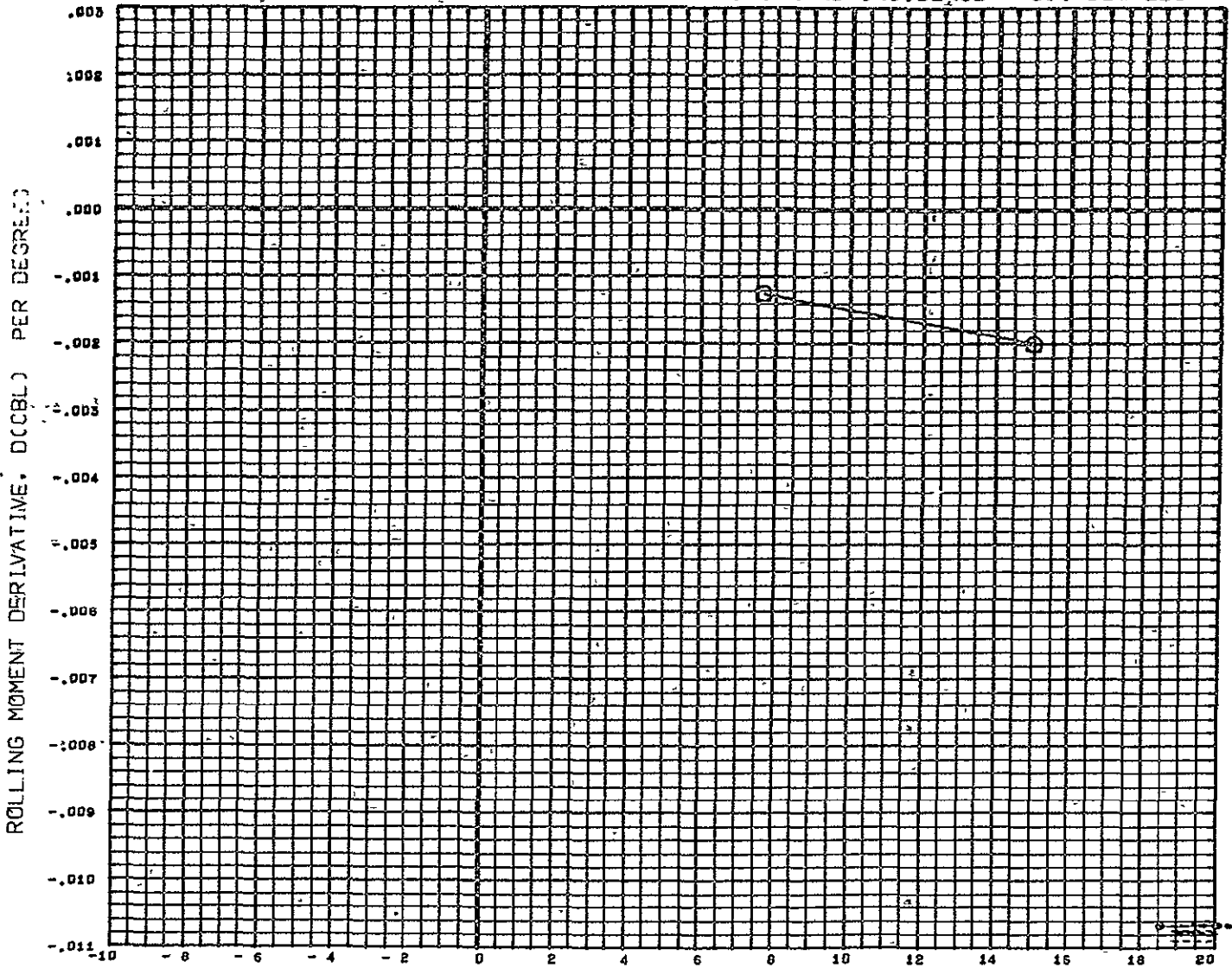


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4051)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	6.000	7.660	1.000	2.000	SREF 1.3550 SQ.FT.
(FN4035)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	6.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

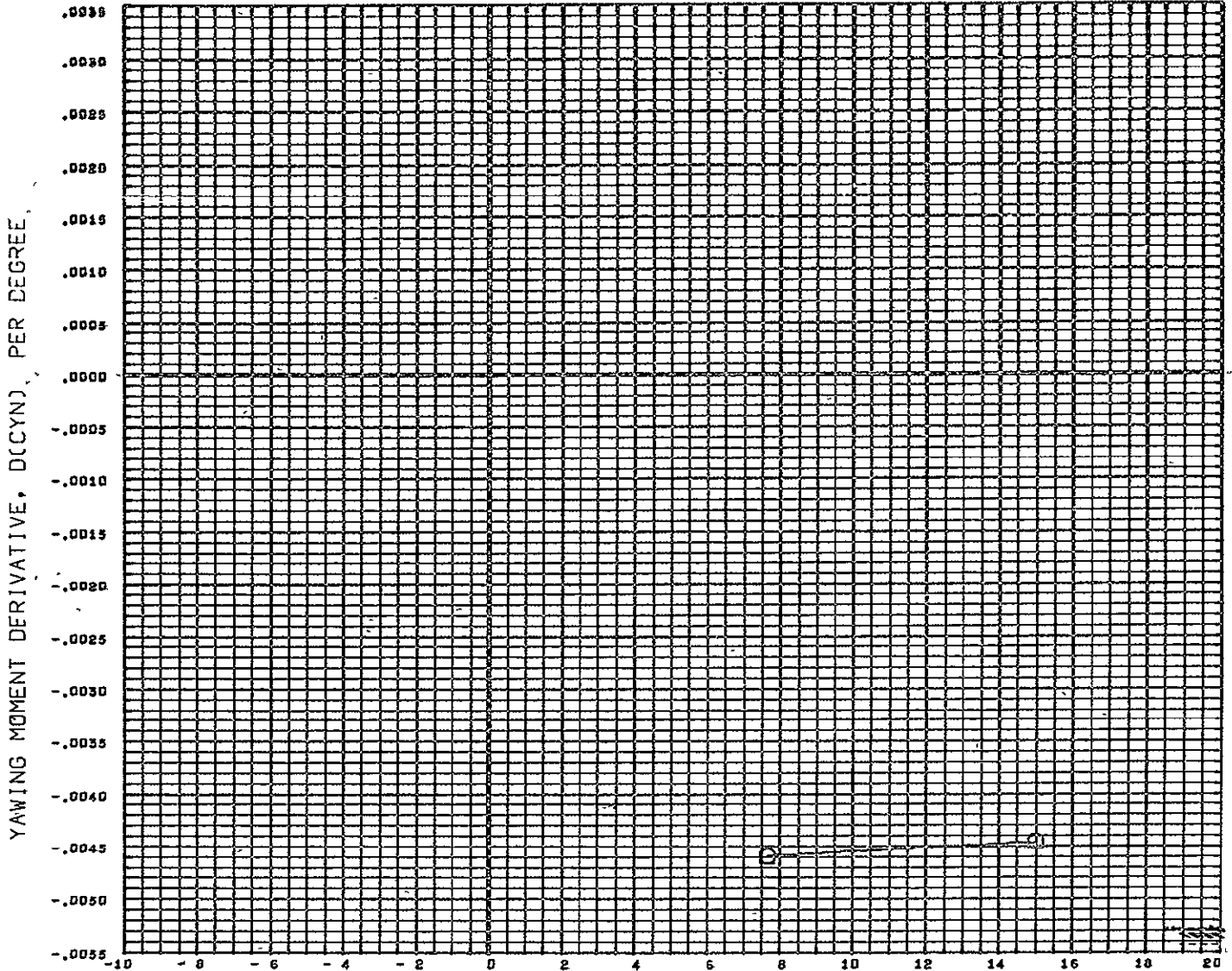
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EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	sq. ft.
		INCIDW	0.000	AILRON	0.000	FN4051	7.660	FN4035	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					XHRP	2.5950	FEET
										YHRP	0.0000	FEET
										ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE
		DATA HIST. CODE	NI									

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
0	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SG.FT.
		INCIDW	0.000	AILRON	0.000	FN4051	7.660	FN4035	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					XNRP	2.5950	FEET
										YNRP	0.0000	FEET
										ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE
		DATA HIST. CODE	MI									

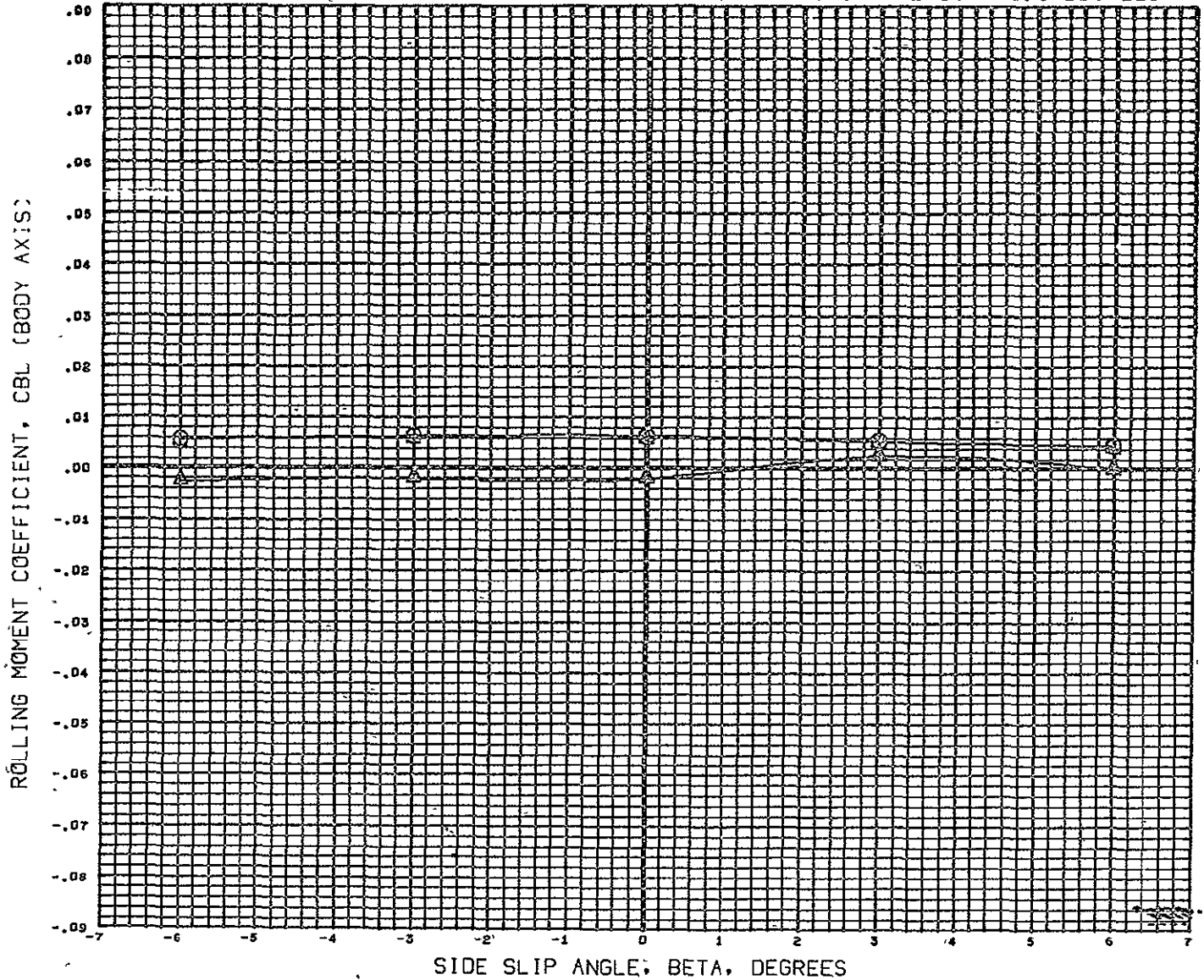
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DIHDL

SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4051	7.660	FN4035	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000					XHRP	2.5950	FEET
										YHRP	0.0000	FEET
										ZHRP	0.0187	FEET
										SCALE	0.0150	SCALE
		DATA HIST. CODE	MI									

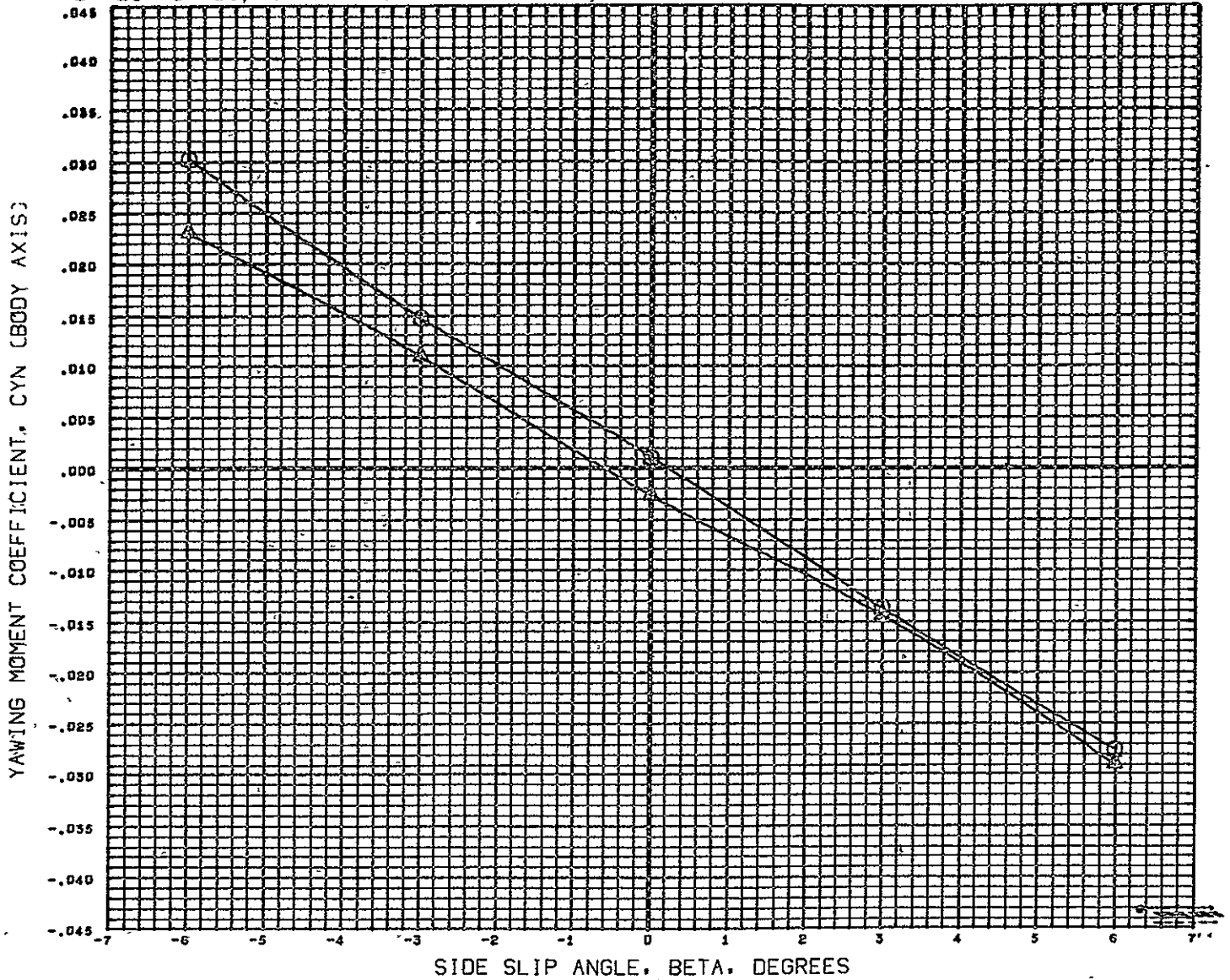
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DINDRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4052)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	15.000	7.660	1.000	2.000	SREF 1.3550 SQ. FT.
(FN4036)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

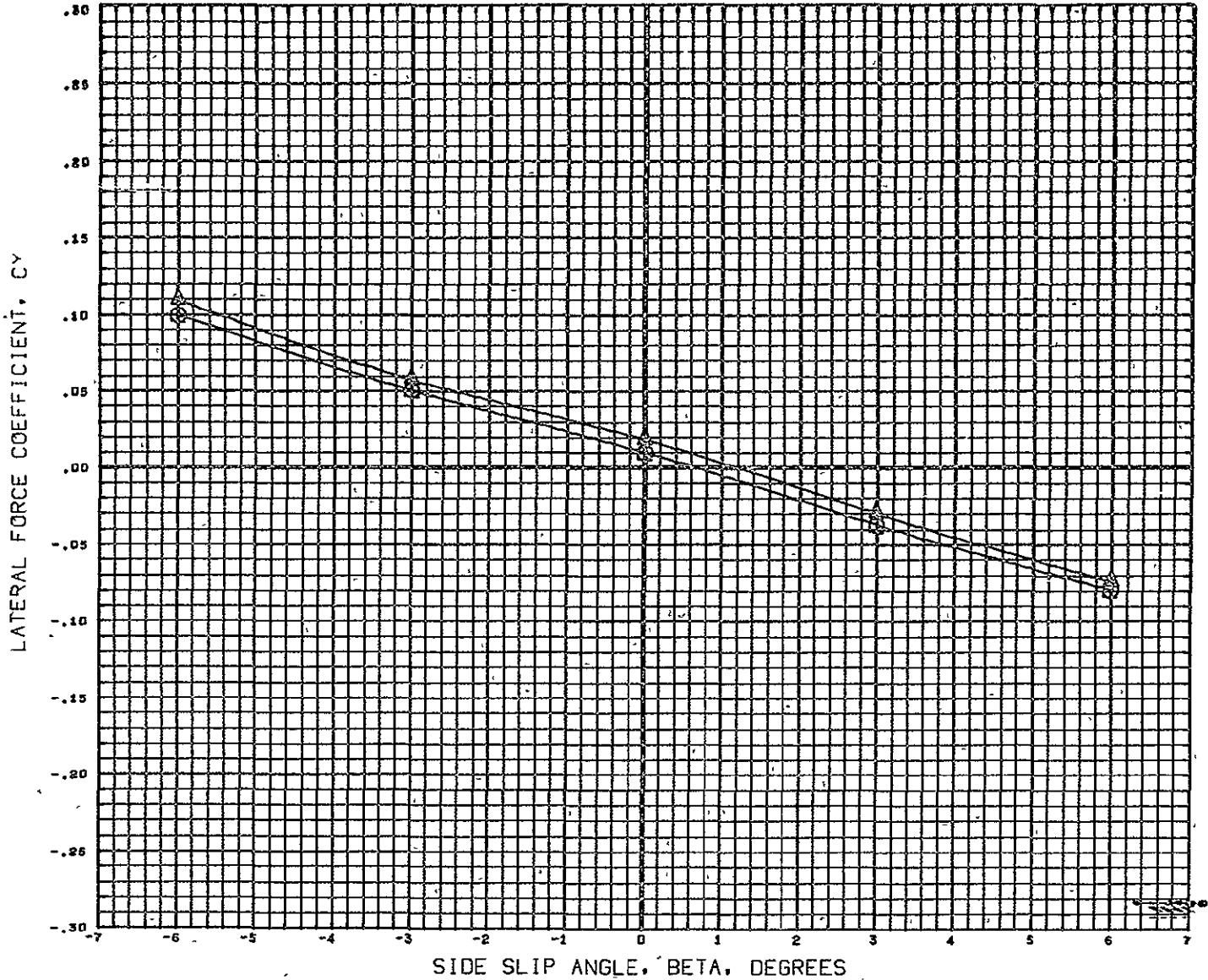
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4052) □	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	7.660	1.000	2.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE
(FN4036) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	2.000	

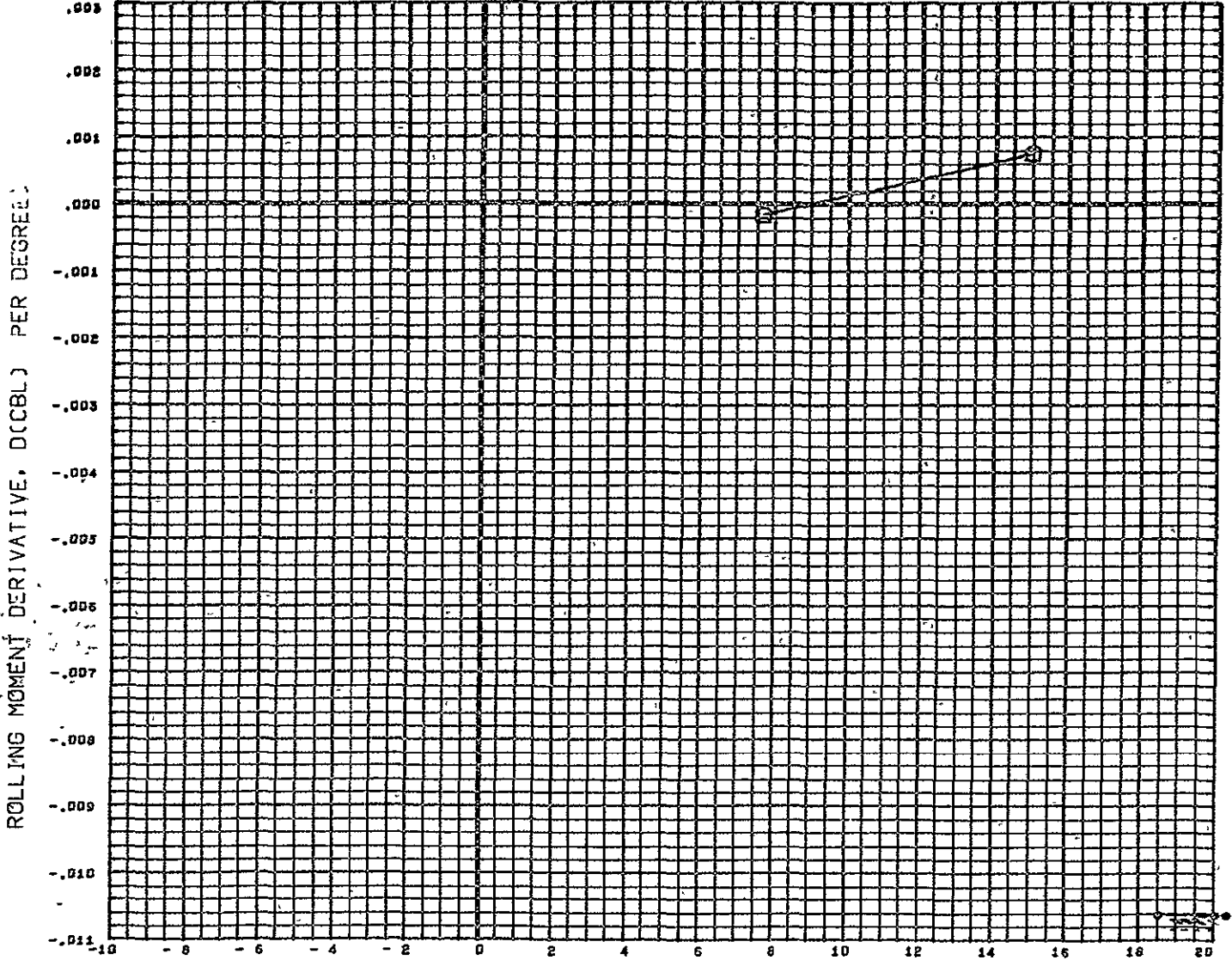
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DINDRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4052)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	7.660	1.000	2.000	SREF 1.3550 SQ.FT.
(FN4036)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

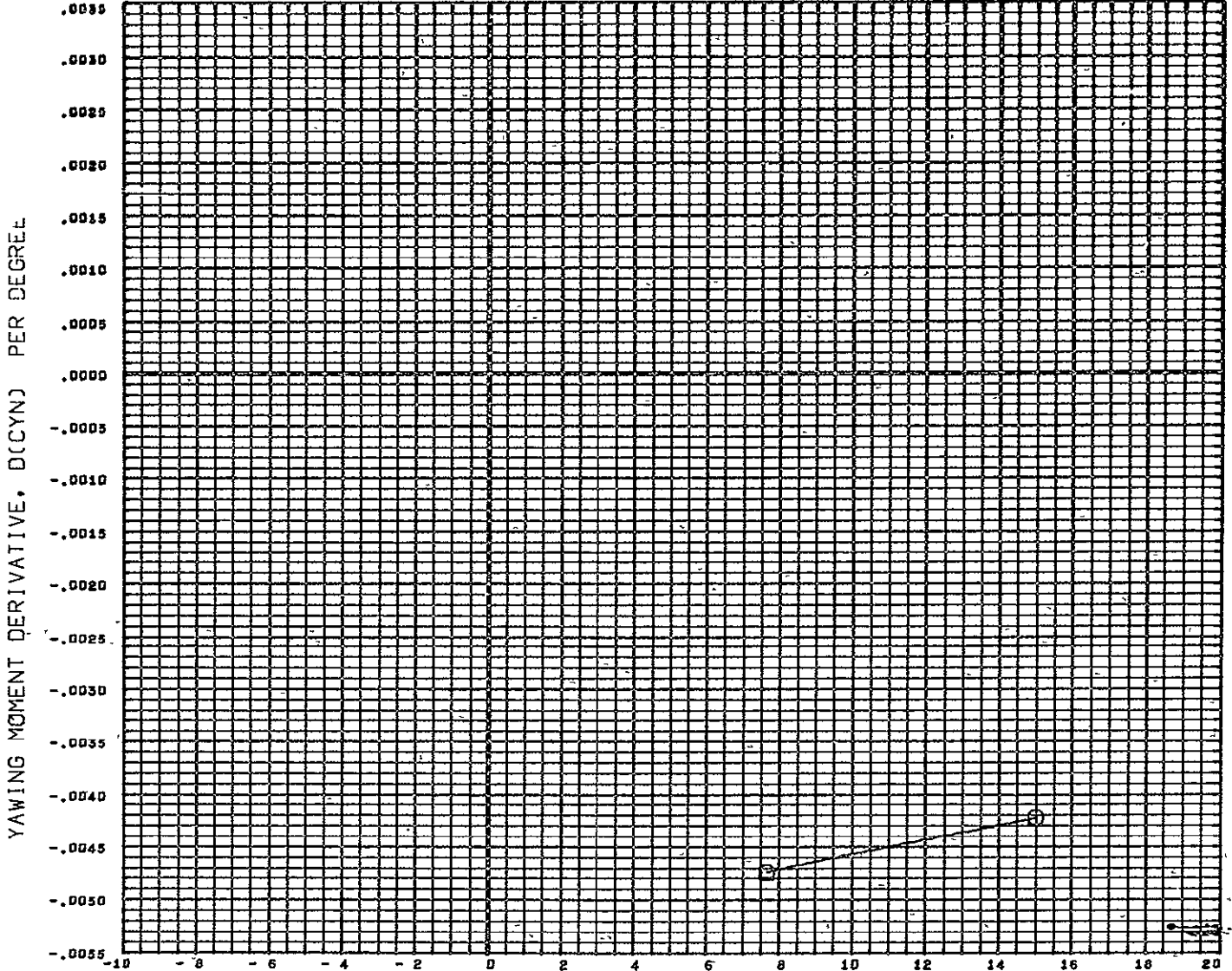


Dihdrl

SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDC	AILRON	ELEVTR	DATASET	Dihdrl	DATASET	Dihdrl	SREF	SCALE
Q	0.400	15.000	3.000	0.000	0.000	FN4052	7.660	FN4036	15.000	1.3550	FEET
		0.000	0.000	0.000	0.000					3.4530	FEET
		0.000	0.000	0.000	0.000					3.4530	FEET
		2.000	1.000							2.5950	FEET
										0.0000	FEET
										0.0187	FEET
										0.0150	SCALE

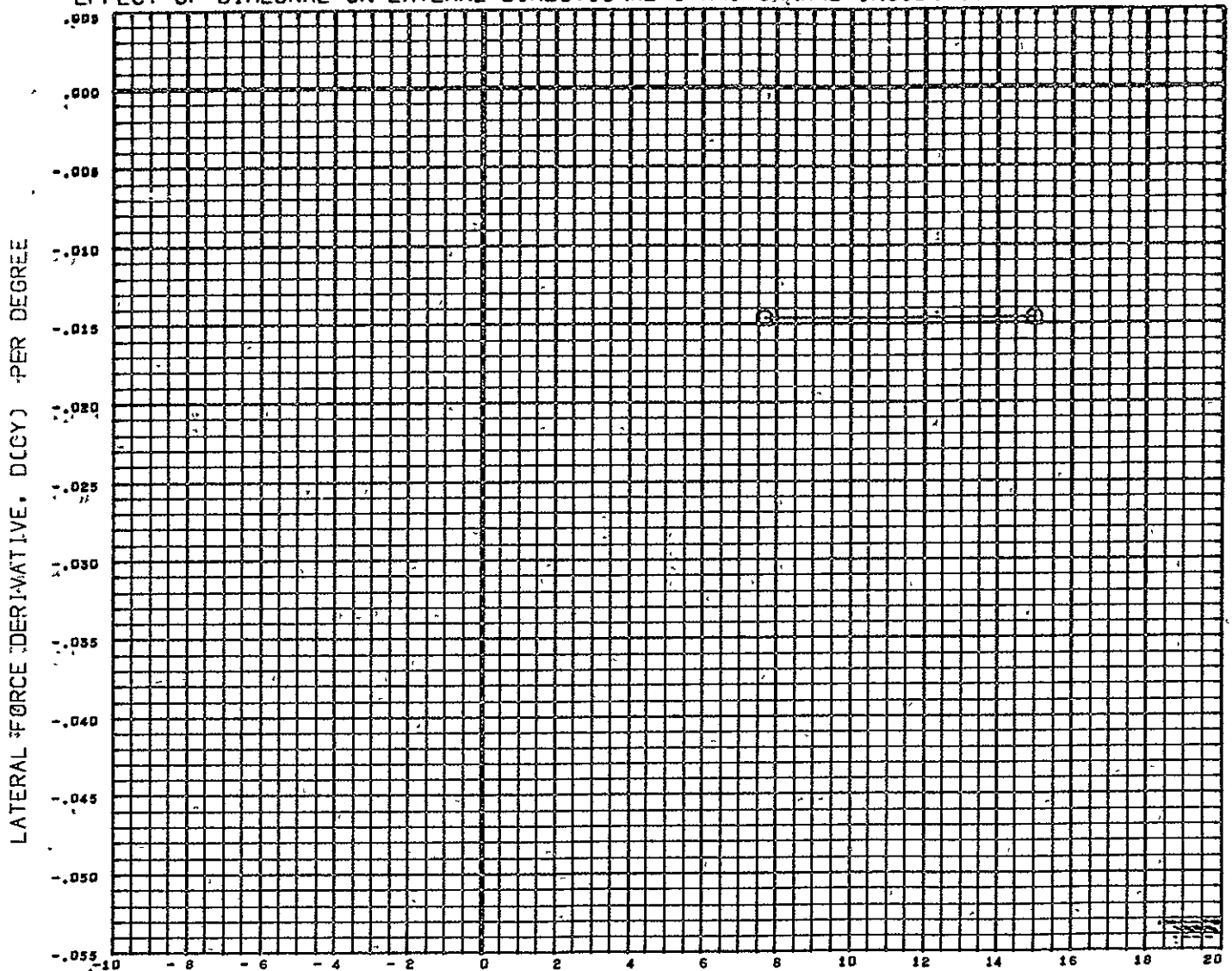
DATA HIST. CODE NI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
□	0.400	ALPHA	15.000	INCIDC	3.000	DIHDL	DIHDL	DIHDL	SREF	1.3550	50.FT.
		INCIDW	0.000	AILRON	0.000	FN4052	7.660	FN4036	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000				BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000				XNRP	2.5950	FEET
									YNRP	0.0000	FEET
									ZNRP	0.0187	FEET
									SCALE	0.0150	SCALE
		DATA HIST. CODE		HI							

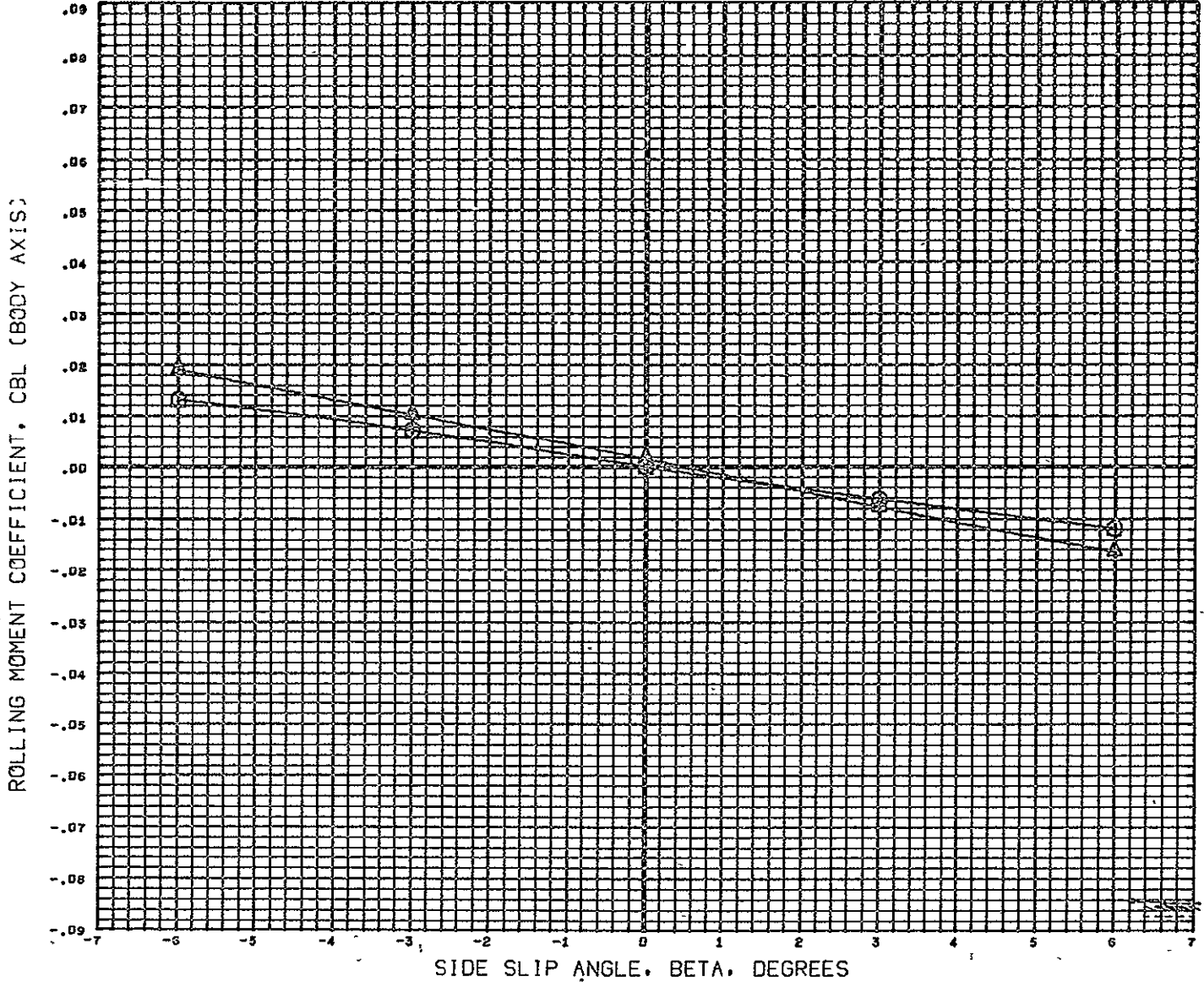
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DIHRL DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDC	INCIDW	CANARD	DIHRL	DIHRL	DIHRL	SREF	LREF	BREF
0	0.400	15.000	3.000	0.000	2.000	7.660	15.000	1.3550	3.4530	3.4530	SE.FT.
		15.000	0.000	0.000	2.000	7.660	15.000	2.5950	2.5950	2.5950	FEET
		15.000	0.000	0.000	2.000	7.660	15.000	0.0000	0.0000	0.0000	FEET
		15.000	0.000	0.000	2.000	7.660	15.000	0.0187	0.0187	0.0187	FEET
		15.000	0.000	0.000	2.000	7.660	15.000	0.0150	0.0150	0.0150	SCALE

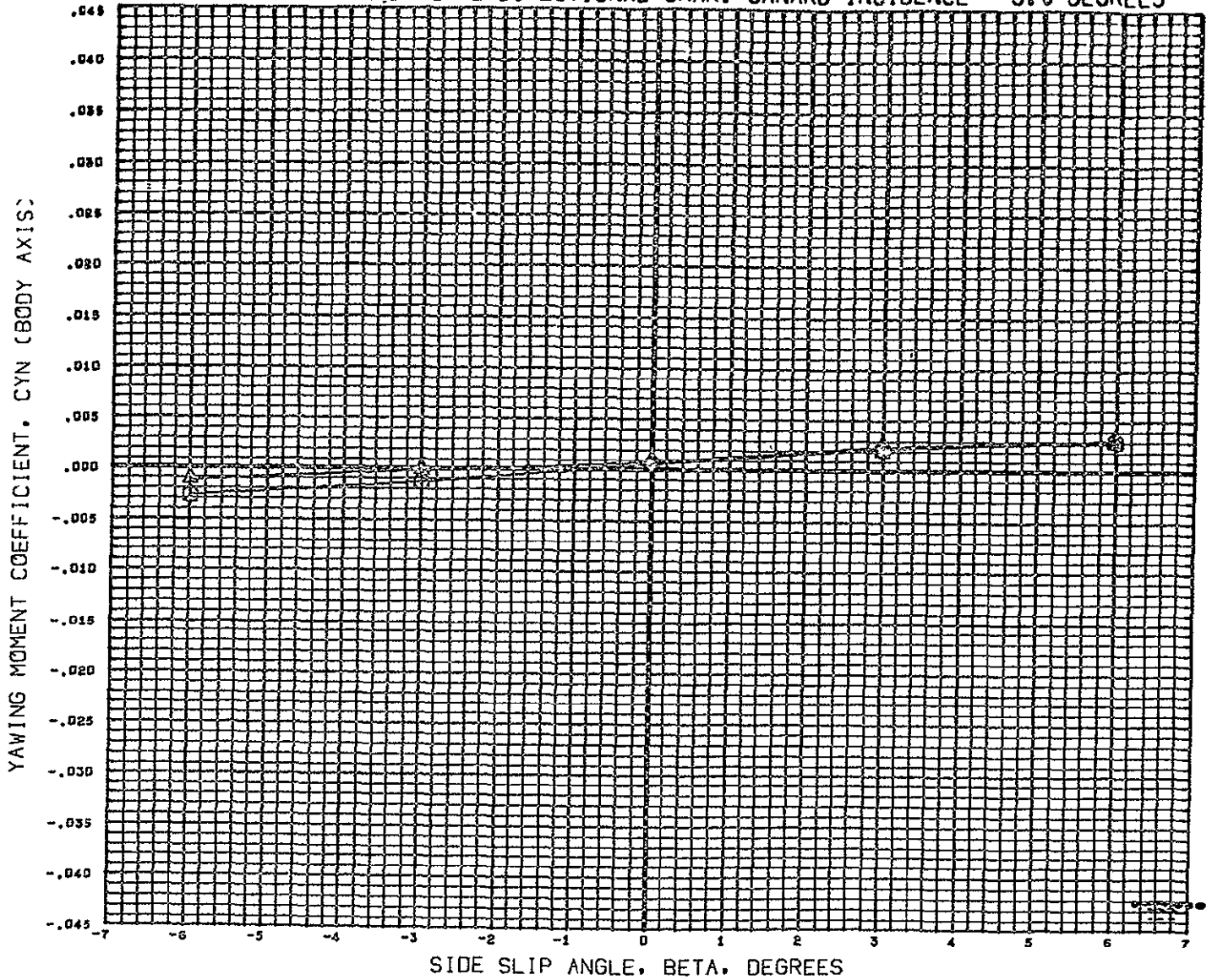
DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2210)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	0.060	7.660	1.000	2.000	SREF 1.3550 SQ.FT
(FN4030)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	0.000	15.000	1.000	2.000	LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

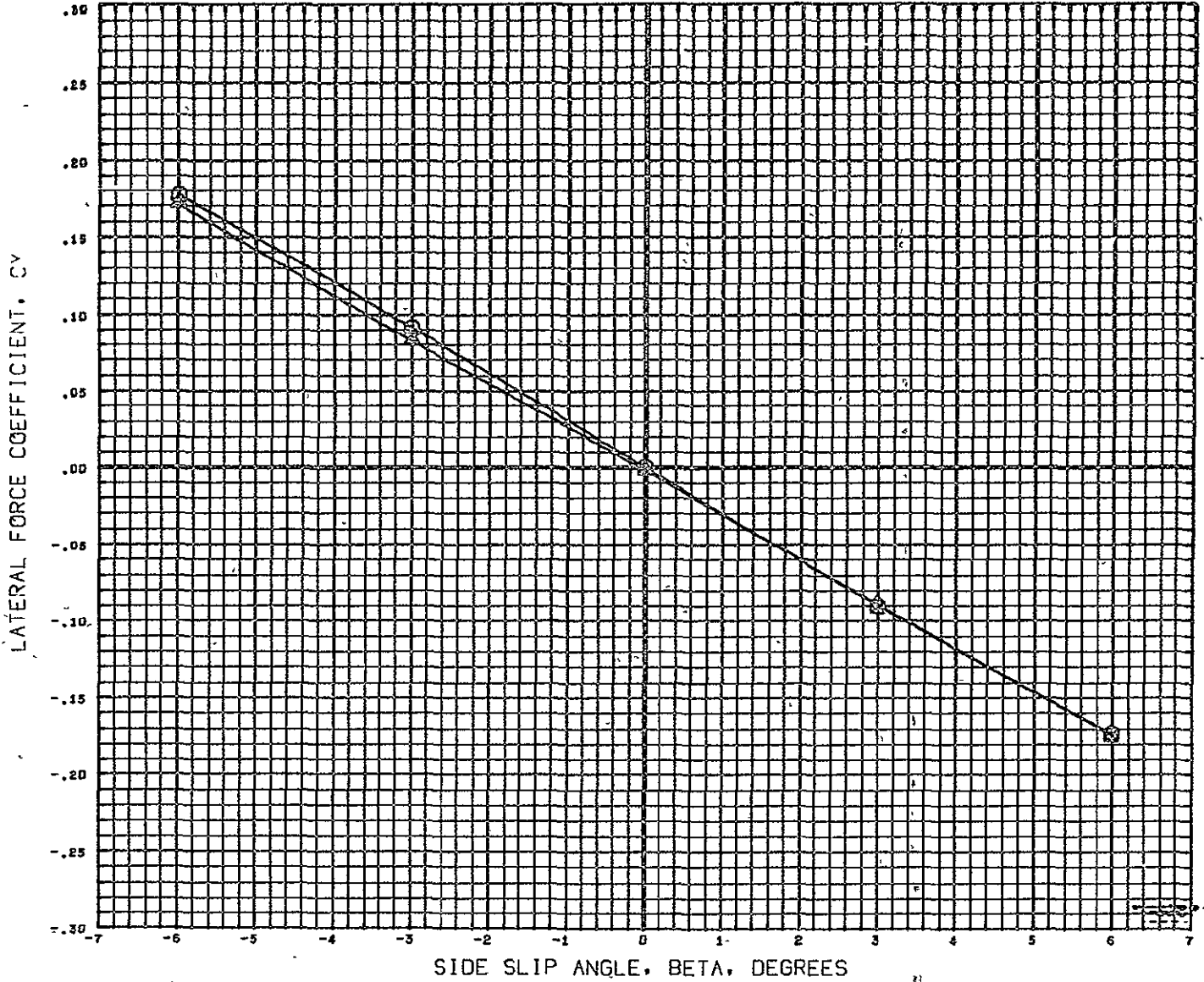
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DINHRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN210)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	0.060	7.660	1.000	2.000	SREF 1.3550 SQ.FT.
(FN4030)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	0.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

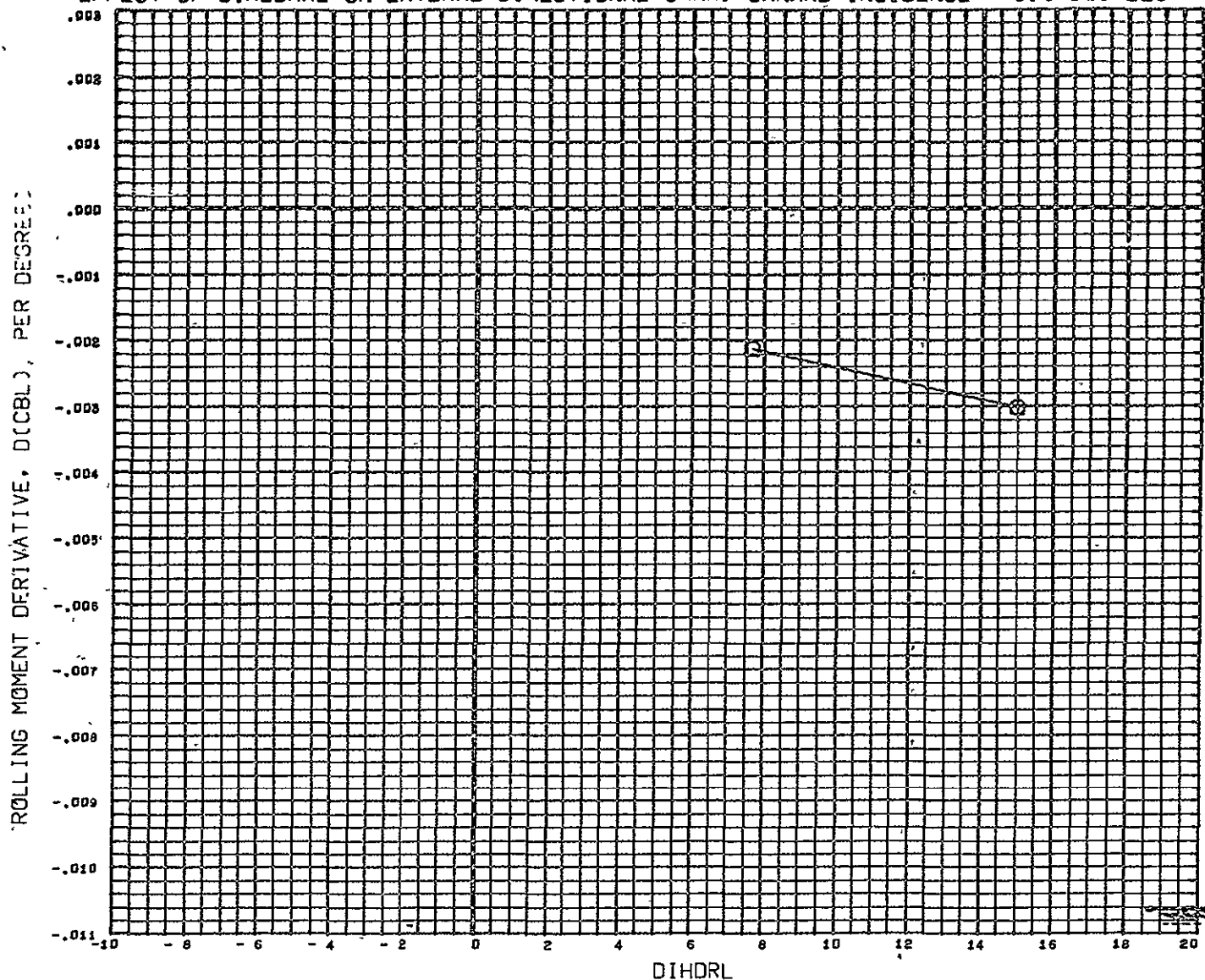
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2210) ○	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V2D1	0.060	7.660	1.000	2.000	SREF 1.3550 SQ FT.
(FN4030) △	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	0.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

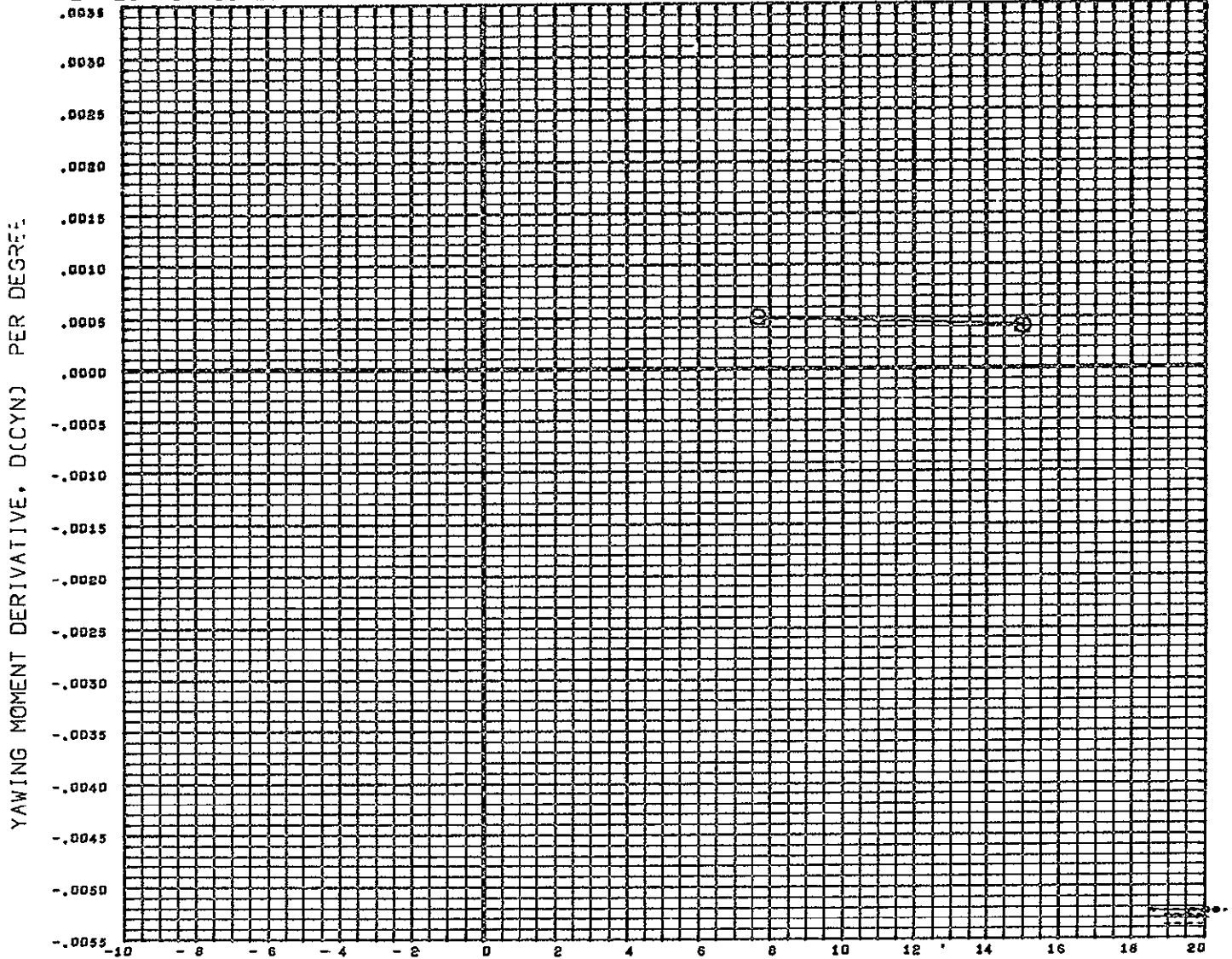
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



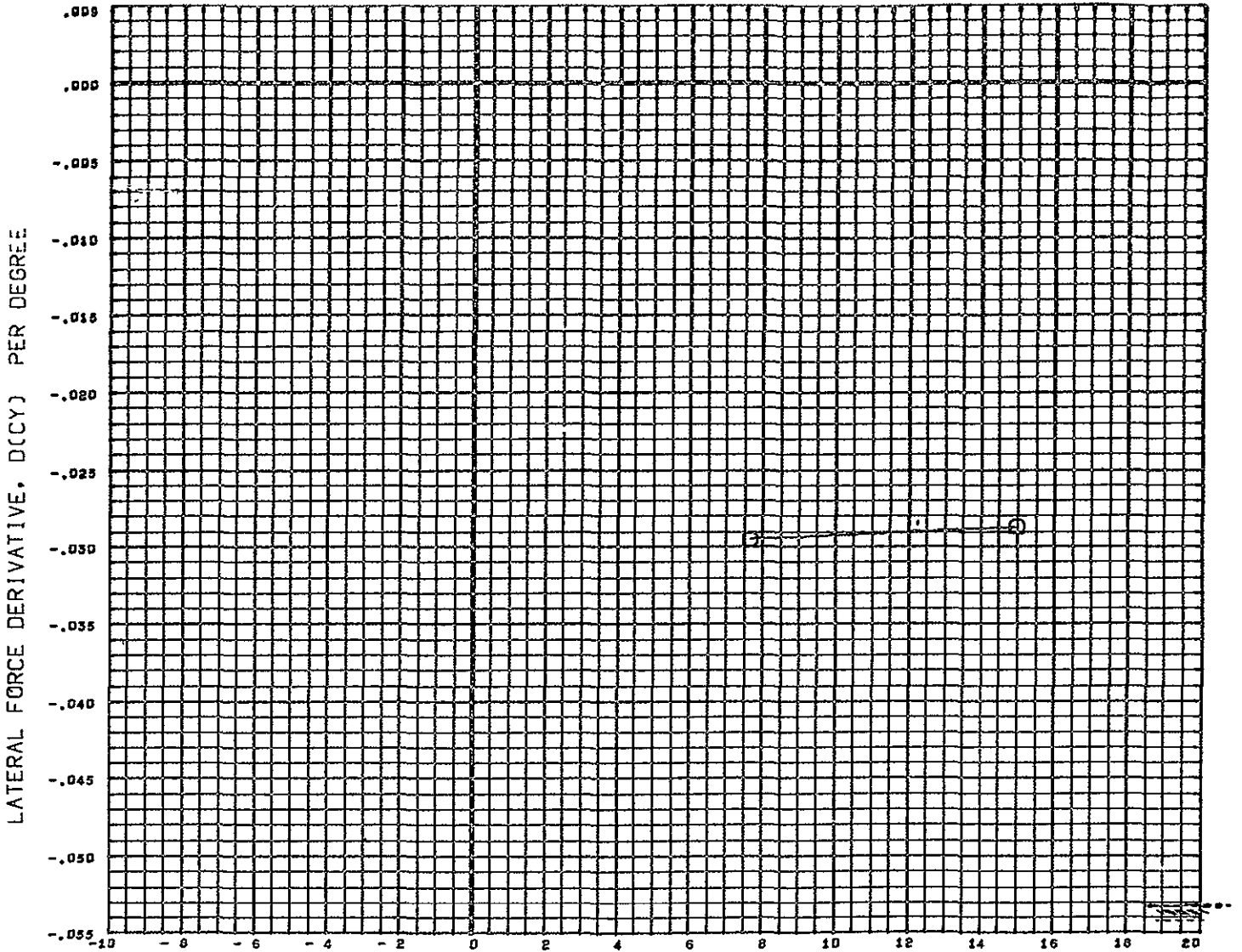
SYMBOL	HACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	0.060	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN2210	7.660	FN4030	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		DOREPL	1.210	WNGPOS	2.000					XNRP	2.5950	FEET
		CNDPOS	1.000							YNRP	0.0000	FEET
		DATA HIST. CODE	MHI							ZNRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



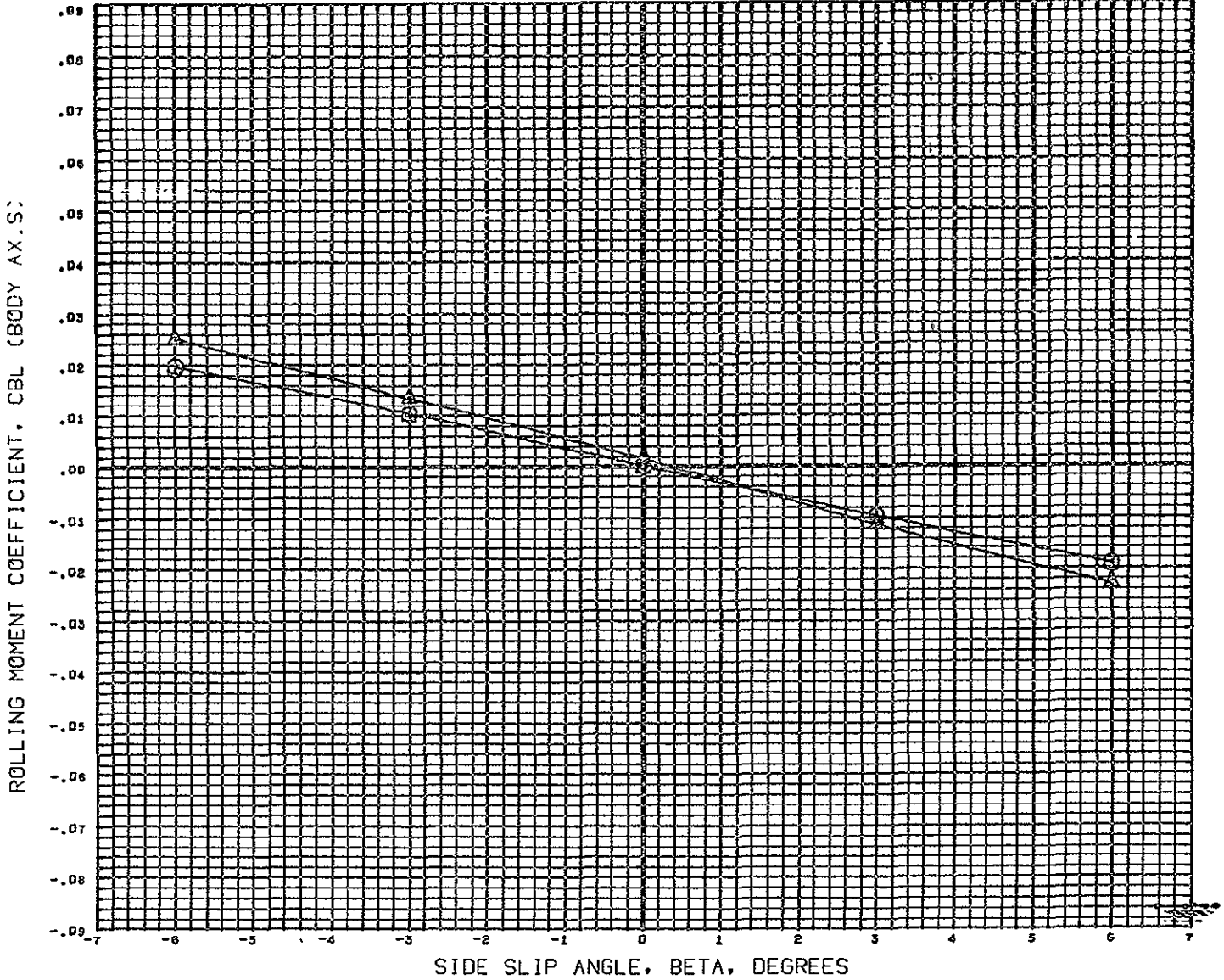
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION							
		ALPHA	INCIDW	AILRON	ELEVTR	DIHDRL	DIHDRL	DIHDRL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE	SQ.FT
Q	0.400	0.060	0.000	0.000	0.000	7.660	7.660	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	
		INCIDC	3.000	FN2210	FN4030	15.000										
		CANARD	0.000													
		DOREPL	1.210	WNGPOS	2.000											
		CNDPOS	1.000													
		DATA HIST. CODE	MHI													

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDW	AILRON	ELEVTR	WNGPOS	DIHDL	DIHDL	DIHDL	SREF	sq.ft.
○	0.400	0.060	0.000	0.000	0.000	2.000	7.660	15.000	1.3550	3.4530	FEET
		0.000	0.000	0.000	0.000				3.4530	2.5950	FEET
		1.210	0.000	0.000	0.000				0.0000	0.0107	FEET
		1.000							0.0150		SCALE
		DATA HIST. CODE		MHI							

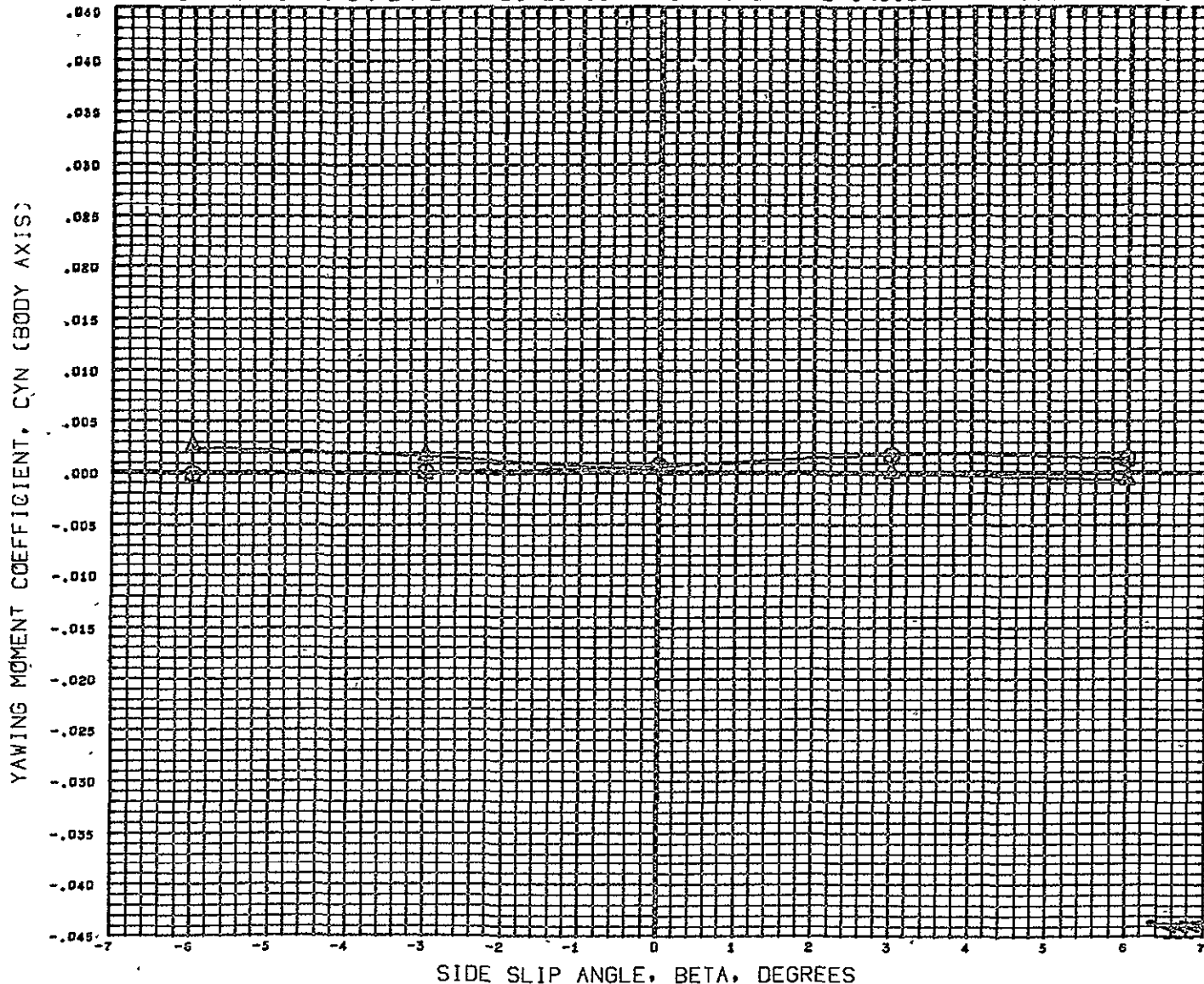
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGEOS	REFERENCE INFORMATION
(FN2211)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V2D1	6.141	7.660	1.000	2.000	SREF 1.3550 SQ.FT.
(FN4031)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	6.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0 0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

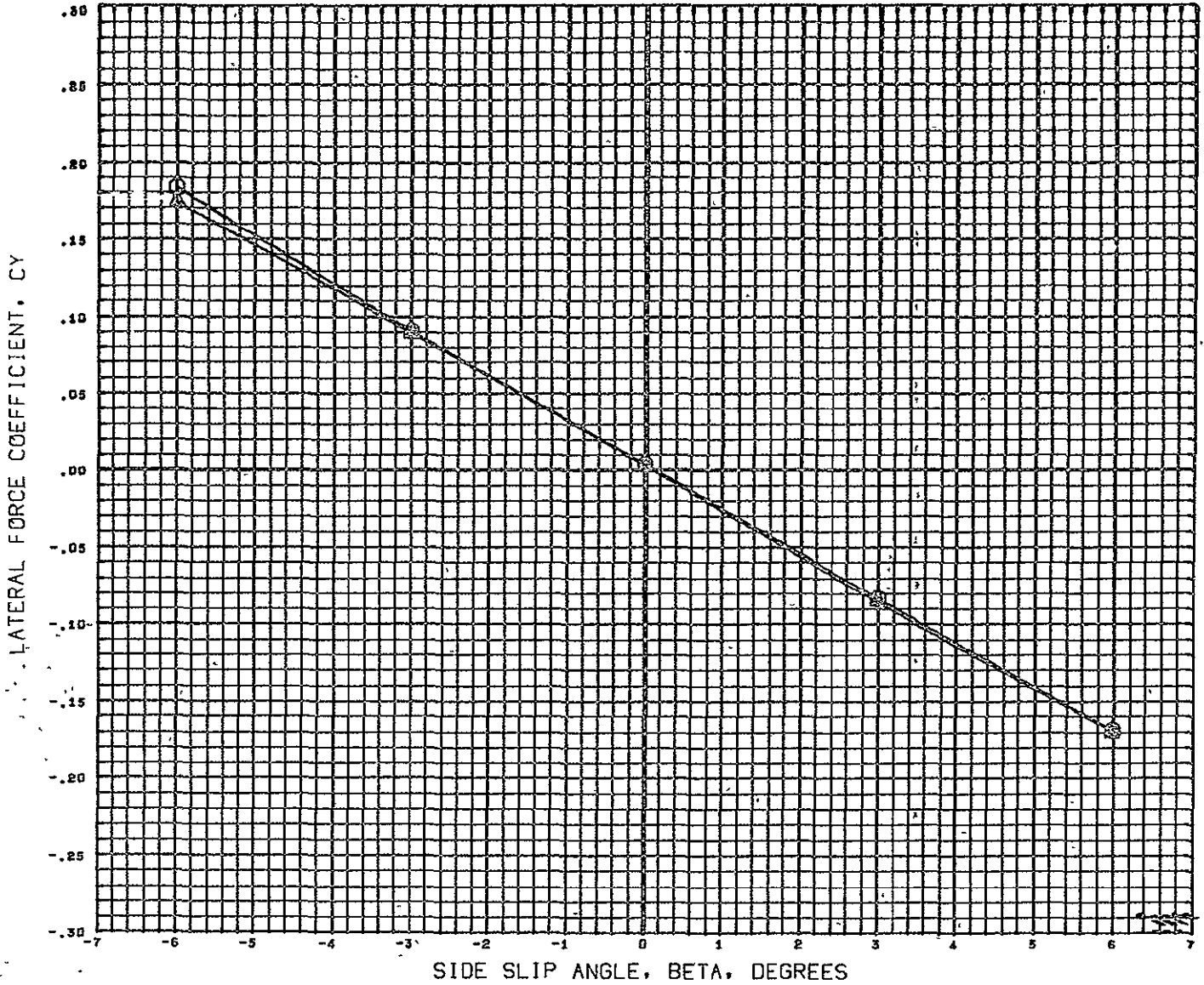


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2211)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	6.141	7.660	1.000	2.000	SREF 1.3550 SQ.FT.
(FN4031)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	6.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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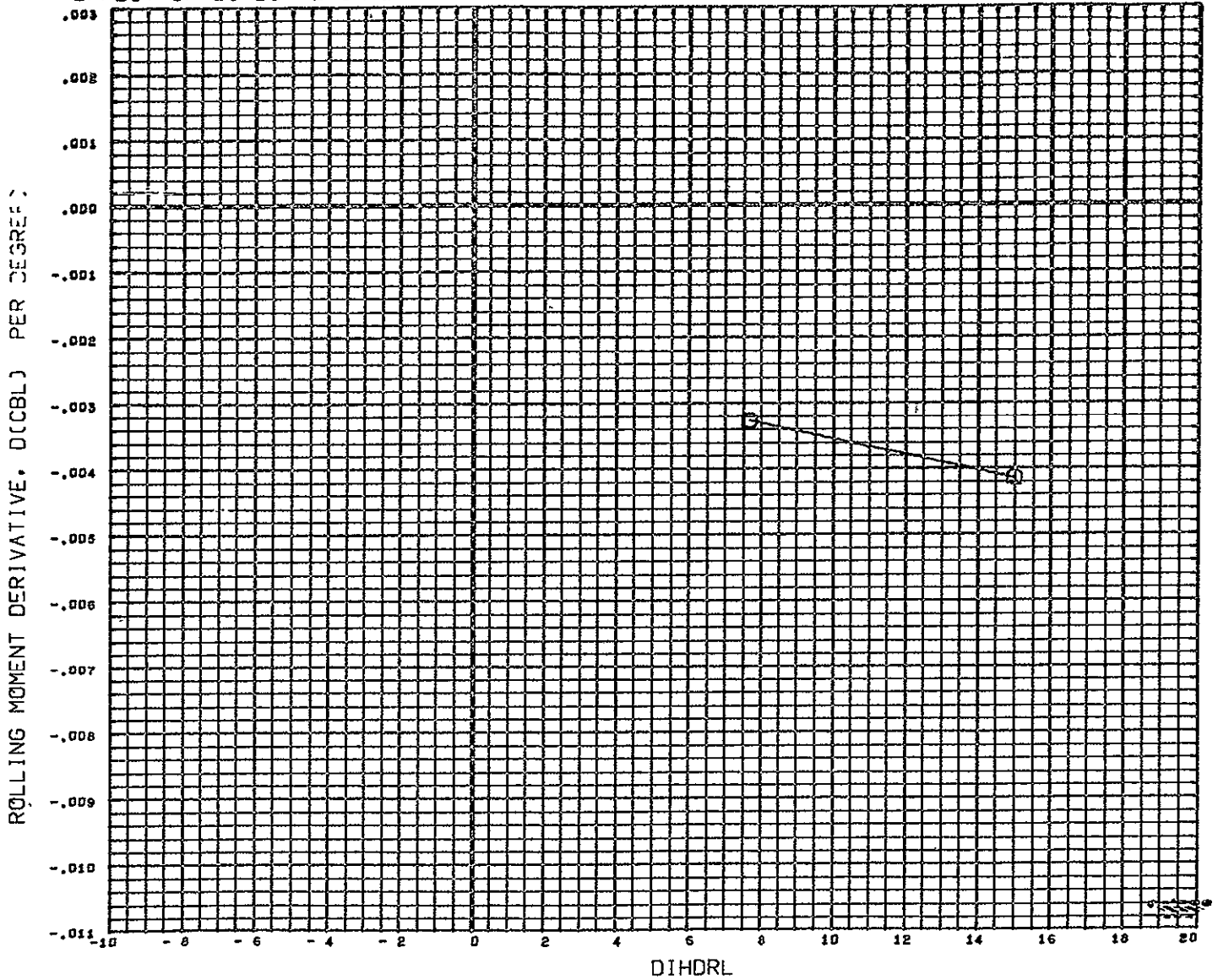
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2211)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V2D1	6.141	7.660	1.000	2.000	SREF 1.3550 SQ.FT
(FN4031)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	6.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHPP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

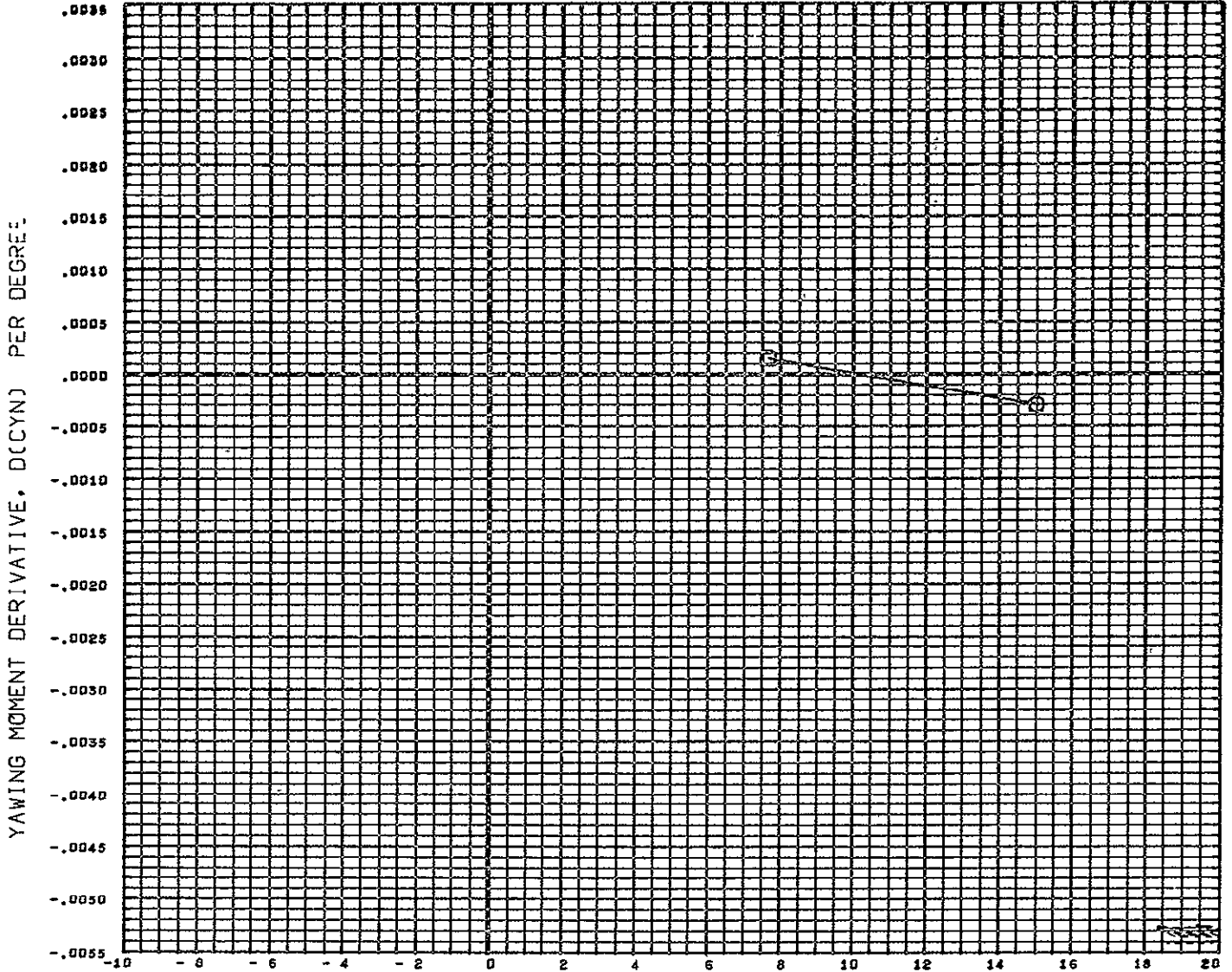
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



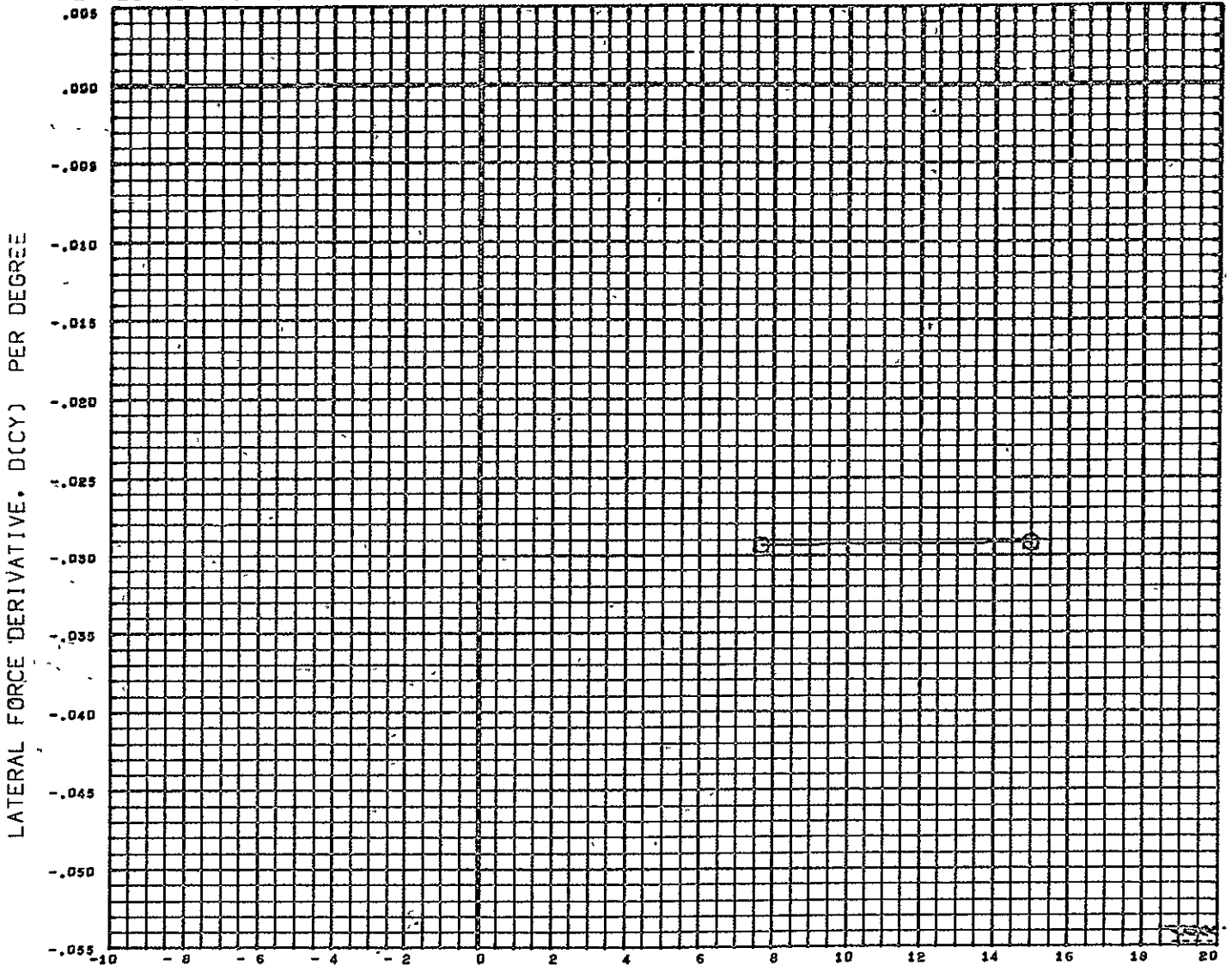
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION						
		ALPHA	INCIDC	AILRON	ELEVTR	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRF	YMRP	ZMRP	SCALE
○	0.400	6.141	3.000	0.000	0.000	7.660	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	
		INCIDW	0.000	AILRON	0.000	FN2211	FN4031								
		CANARD	0.000	ELEVTR	0.000										
		DOREPL	1.210	WNGPOS	2.000										
		CNDPOS	1.000												
		DATA HIST. CODE	HMI												

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



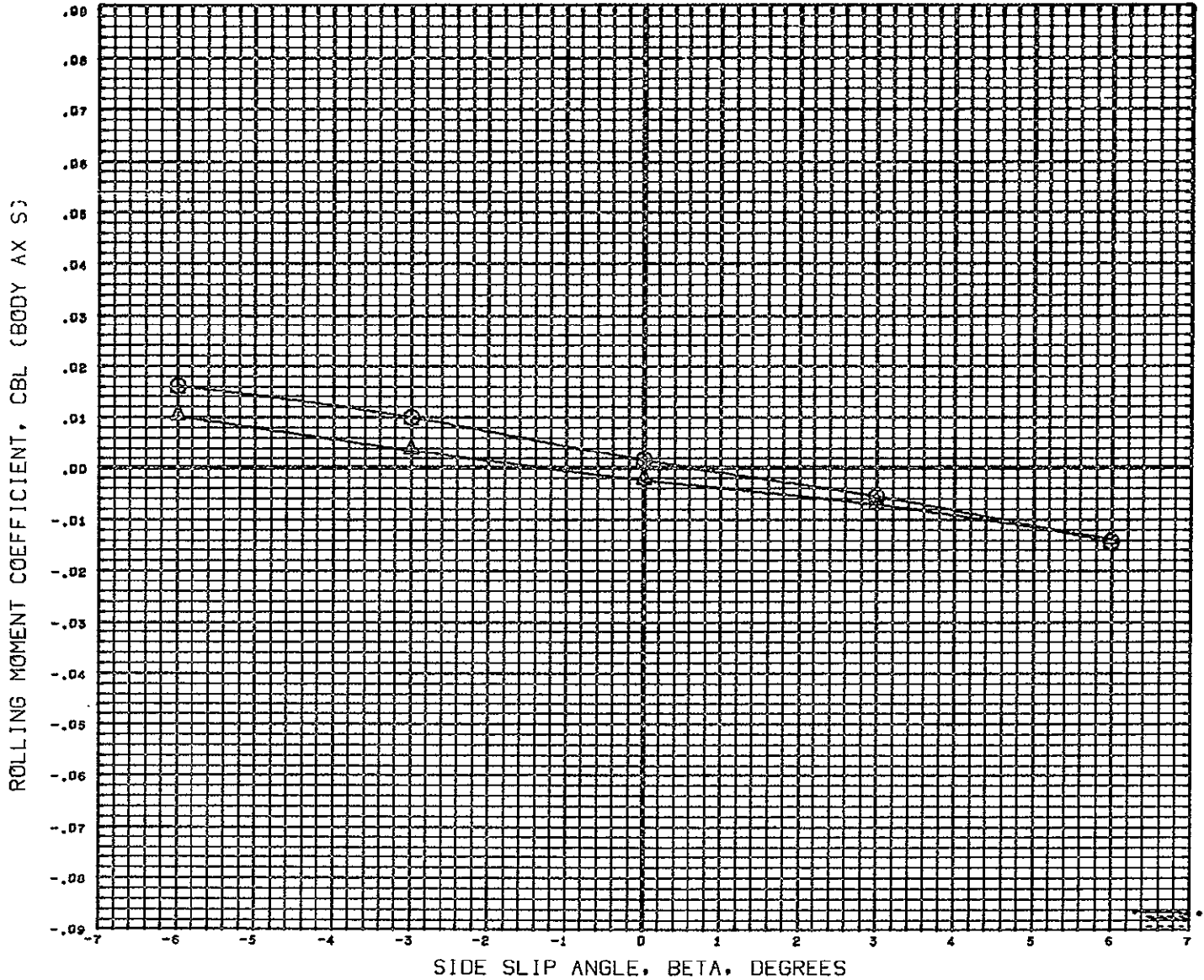
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION						
		ALPHA	INCIDW	INCIDC	AILRON	DIHDL	DIHDL	DIHDL	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE
○	0.400	6.141	0.000	3.000	0.000	7.660	7.660	15.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	HACH	PARAMETRIC VALUES				DIHDL			REFERENCE INFORMATION		
		ALPHA	INCIDC	AILRON	ELEVTR	WNGPOS	DATA SOURCE	DIHDL	DIHDL	SREF	SCALE
D	0.400	6.141	3.000	0.000	0.000	FN2211	7.660	15.000	1.3550		
		INCIDW	0.000	0.000	0.000				3.4530		FEET
		CANARD	0.000	0.000	0.000				3.4530		FEET
		DOREPL	1.210	2.000	0.000				2.5950		FEET
		CNDPOS	1.000						0.0000		FEET
		DATA HIST. CODE	MNI						0.0187		FEET
									SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

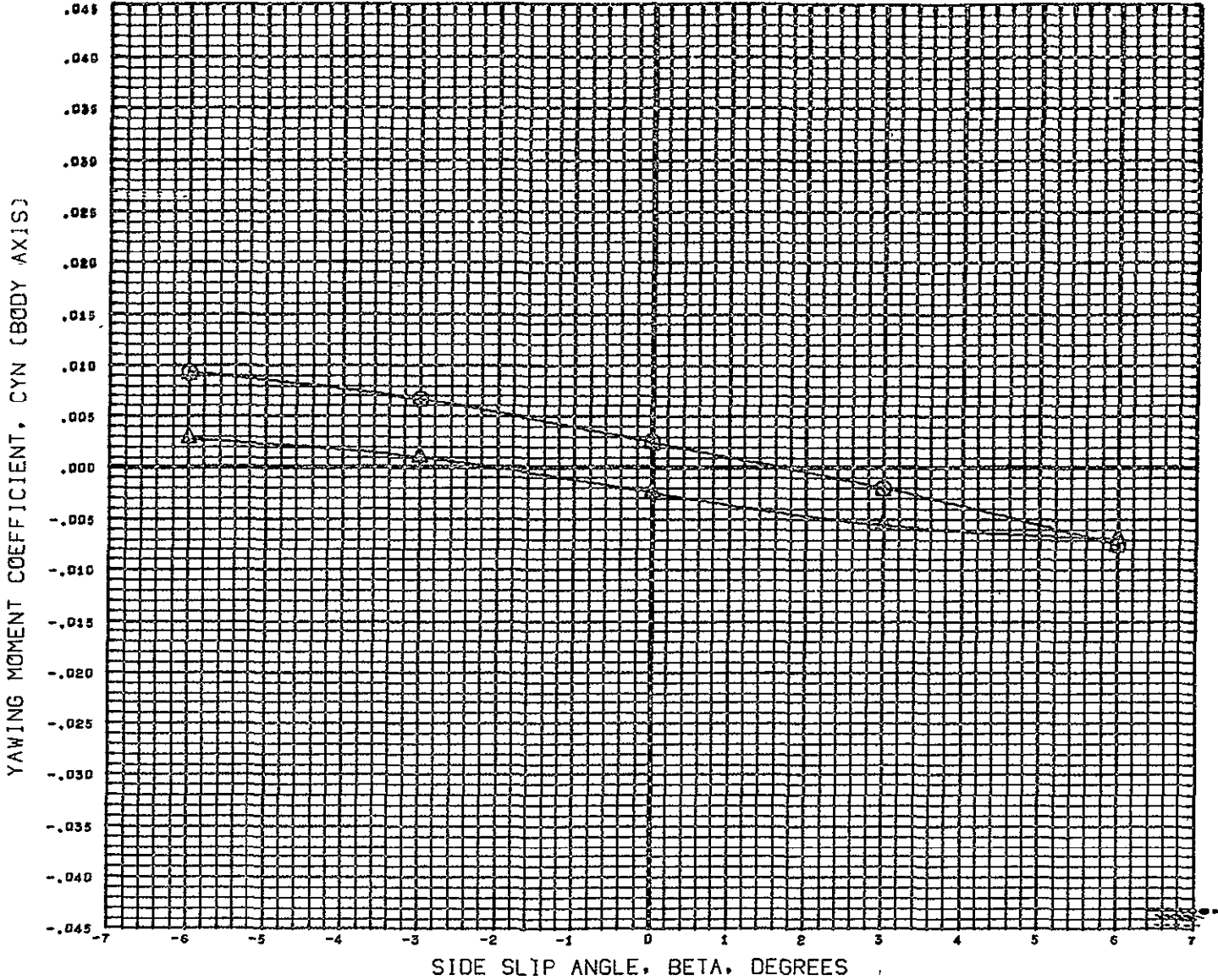


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2212)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V2D1	15.311	7.660	1.000	2.000	SREF 1.3550 SQ.FT
(FN4032)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	15.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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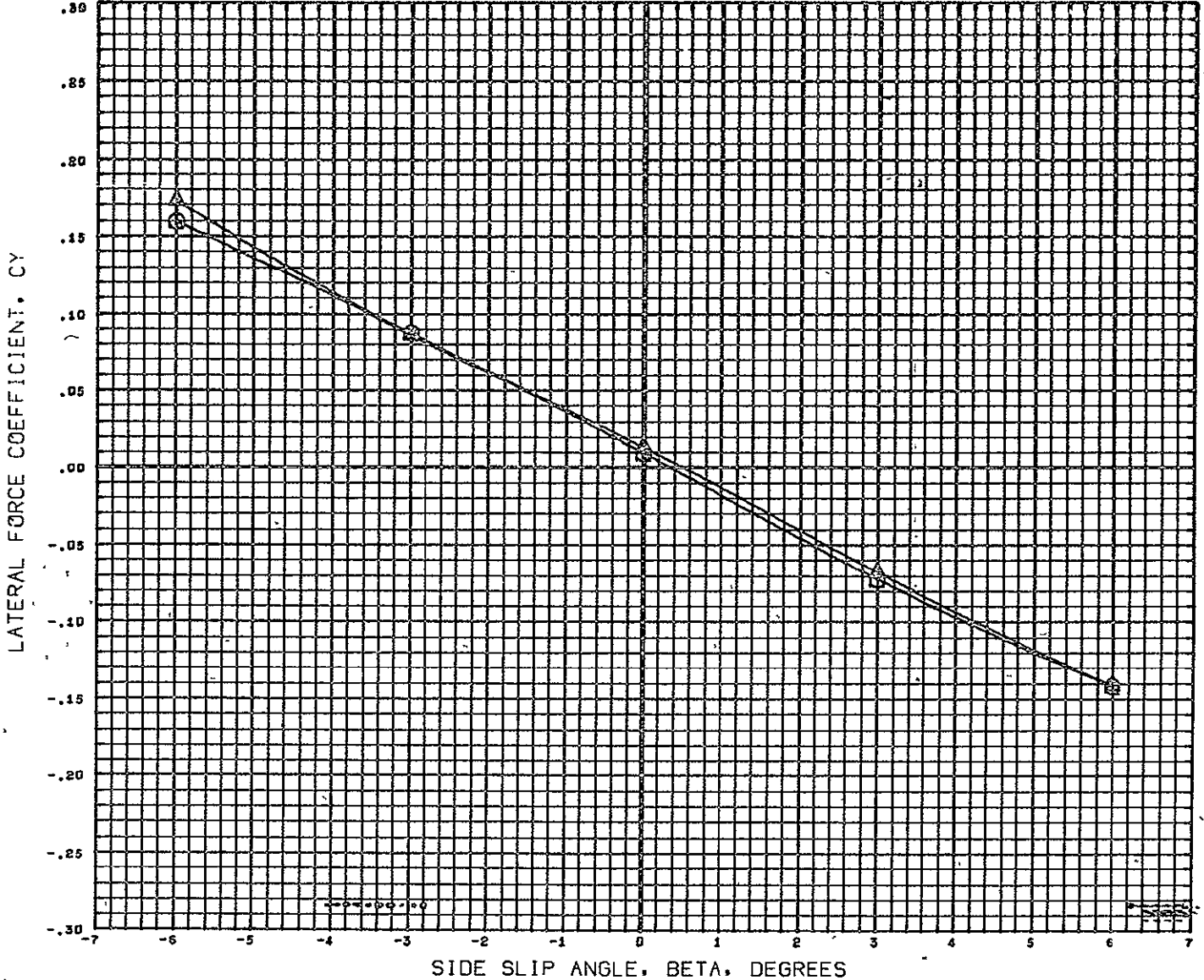
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2212)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.311	7.660	1.000	2.000	SREF 1.3650 SQ.FT.
(FN4032)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	15.000	1.000	2.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

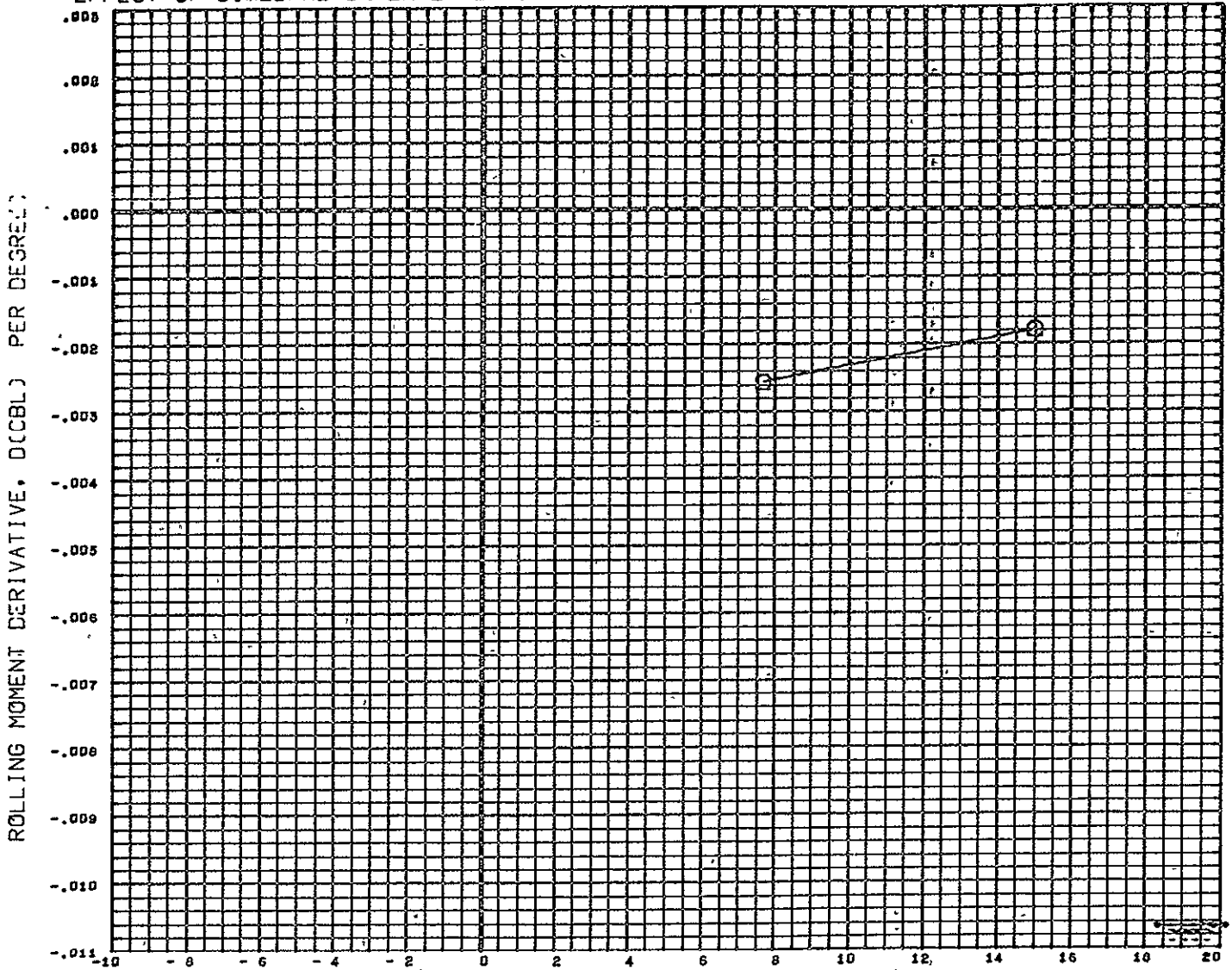
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN2212) □	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.311	7.660	1.000	2.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE
(FN4032) △	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	15.000	15.000	1.000	2.000	

MACH .40

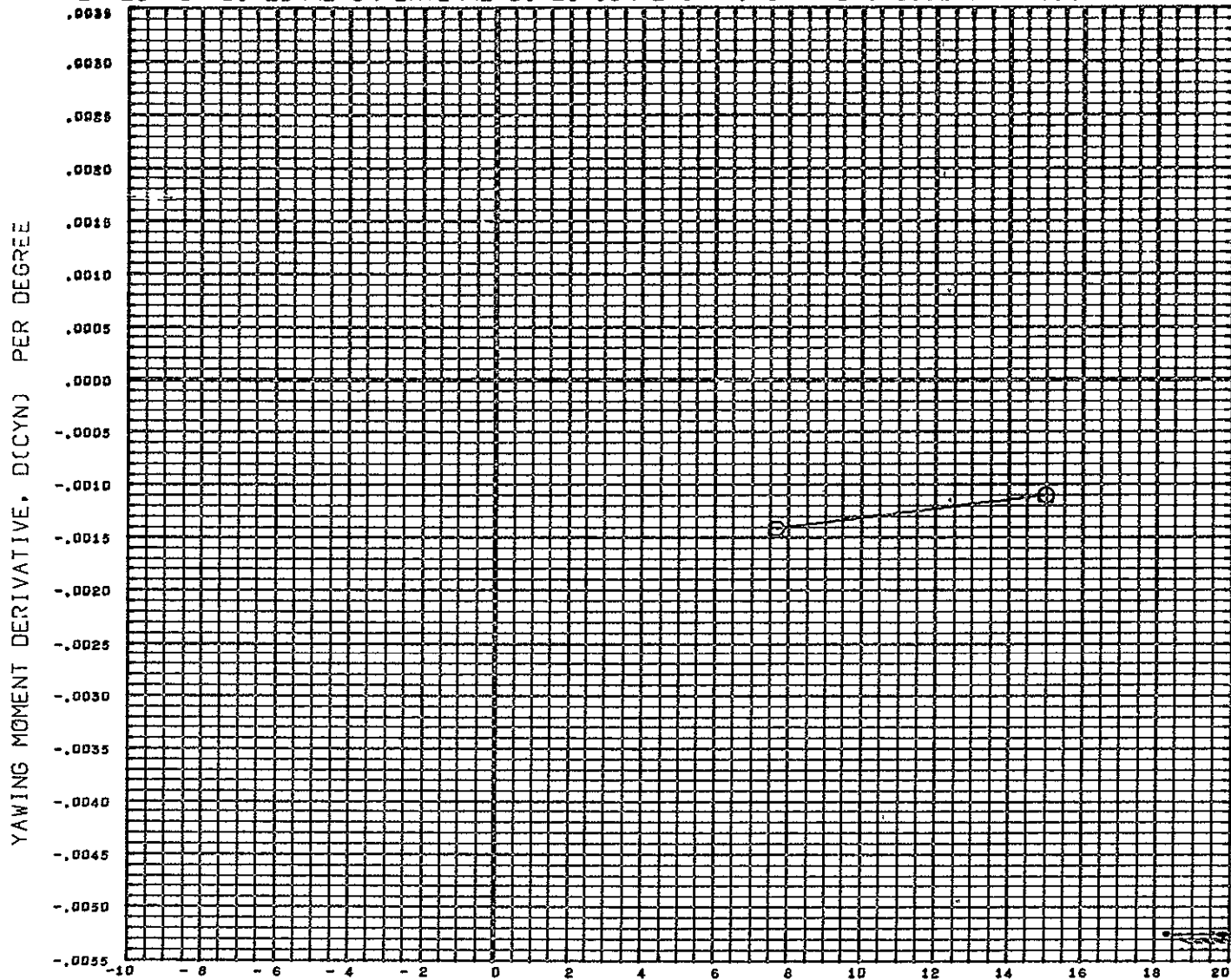
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DIHDRL

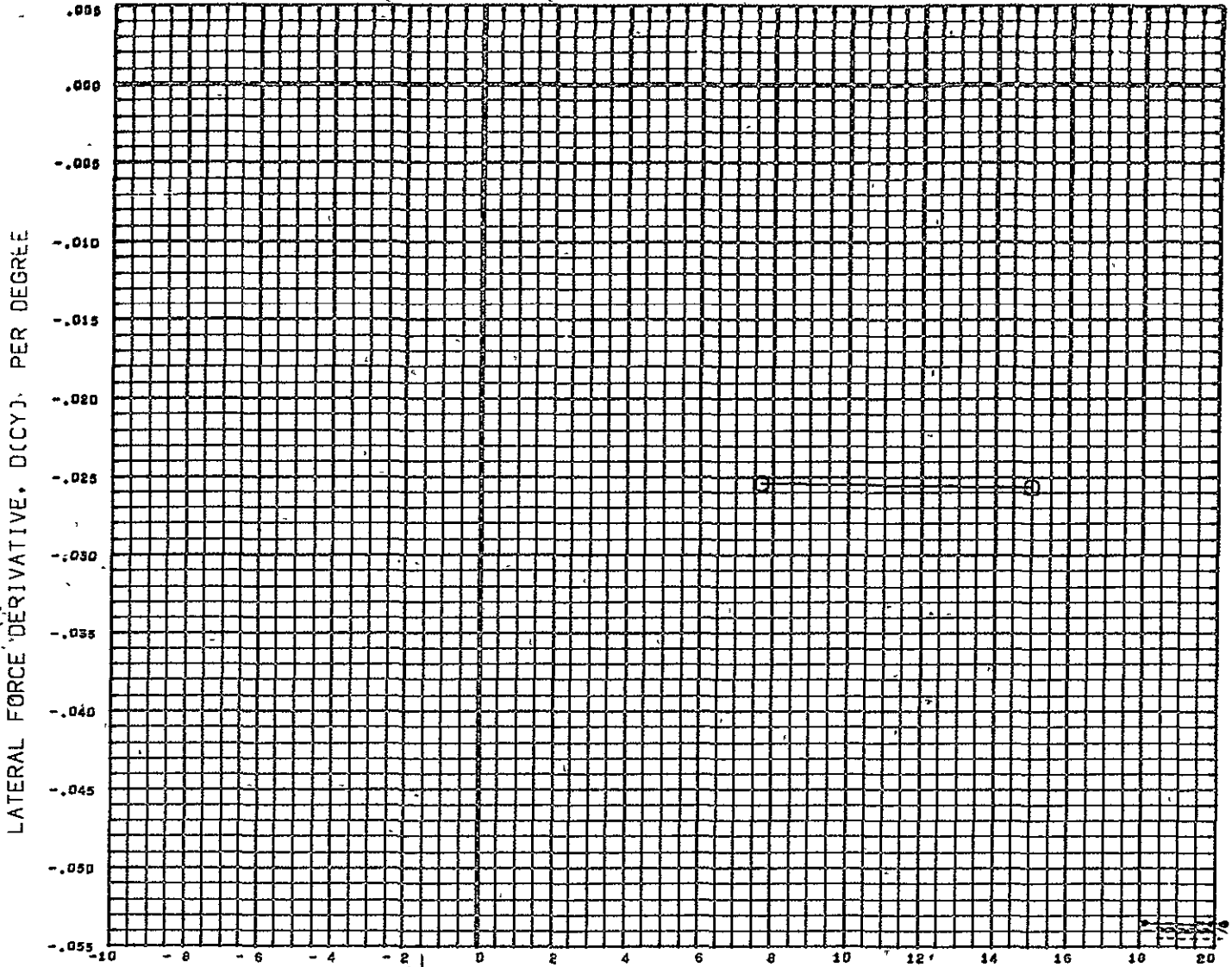
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
0	0.400	ALPHA	15.311	INCIDC	3.000	DATASET	DIHDRL	DATASET	DIHDRL	SREF	1.3550	50. FT.
		INCIDW	0.000	AILRON	0.000	FN2212	7.660	FN4032	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		DOREPL	1.210	WNGPOS	2.000					XNRP	2.5950	FEET
		CNDPOS	1.000							YNRP	0.0000	FEET
		DATA HIST. CODE	NHI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



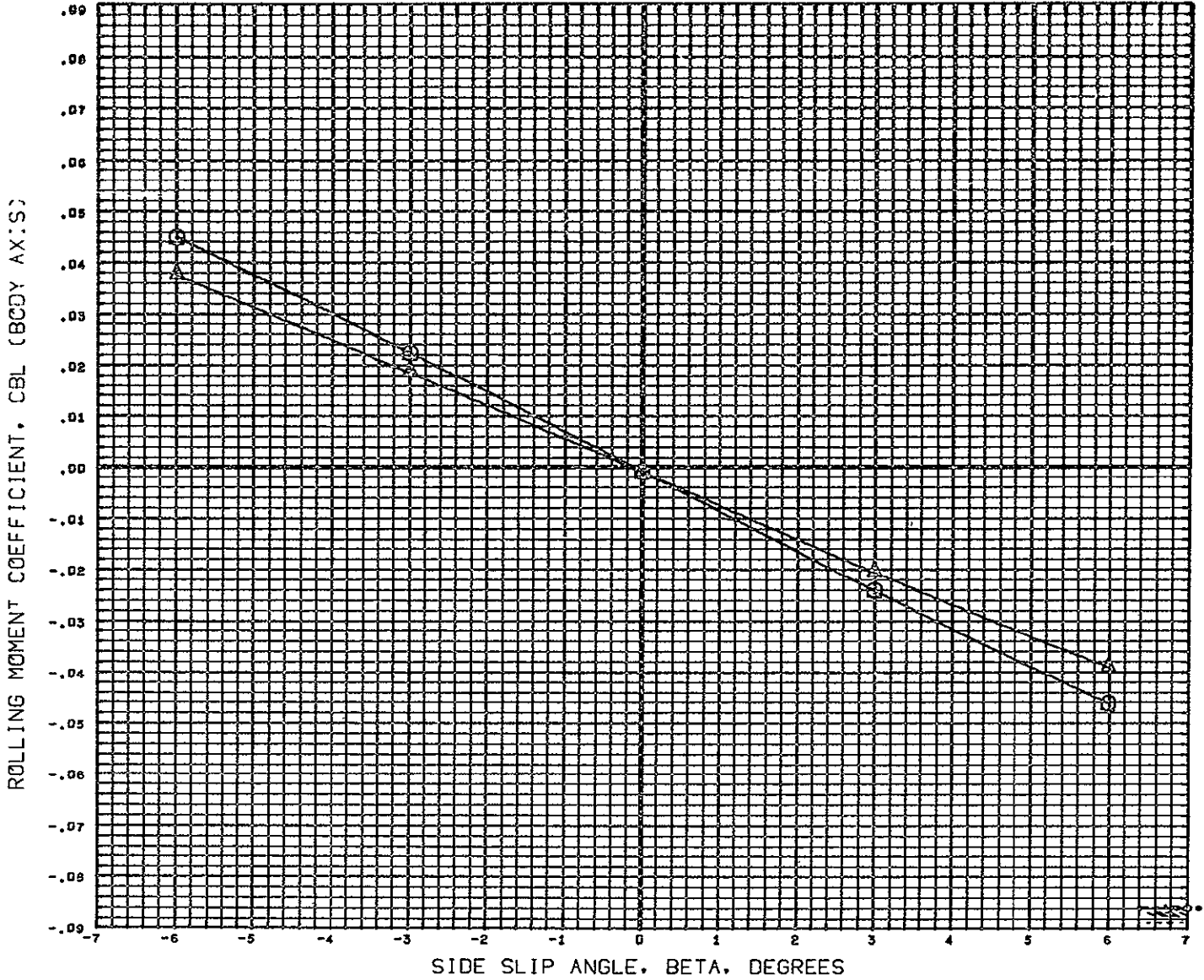
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
○	0.400	ALPHA	15.311	INCIDC	3.000	DIHDL	DIHDL	SREF	1.3550	SQ.FT.	
		INCIDW	0.000	AILRON	0.000	FN2212	7.660	LREF	3.4530	FEET	
		CANARD	0.000	ELEVTR	0.000			BREF	3.4530	FEET	
		DOREPL	1.210	WNGPOS	2.000			XMRP	2.5950	FEET	
		CNDPOS	1.000					YMRP	0.0000	FEET	
								ZMRP	0.0187	FEET	
		DATA HIST	CODE	MMI				SCALE	0.0150	SCALE	

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	HACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	15.311	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	sq.ft.
		INCIDW	0.000	AILRON	0.000	FN2212	7.660	FN4032	15.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		DOREPL	1.210	WNGPOS	2.000					XMRP	2.5950	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	MHI							ZMRP	0.0187	FEET
										SCALE	0.0150	SCALE

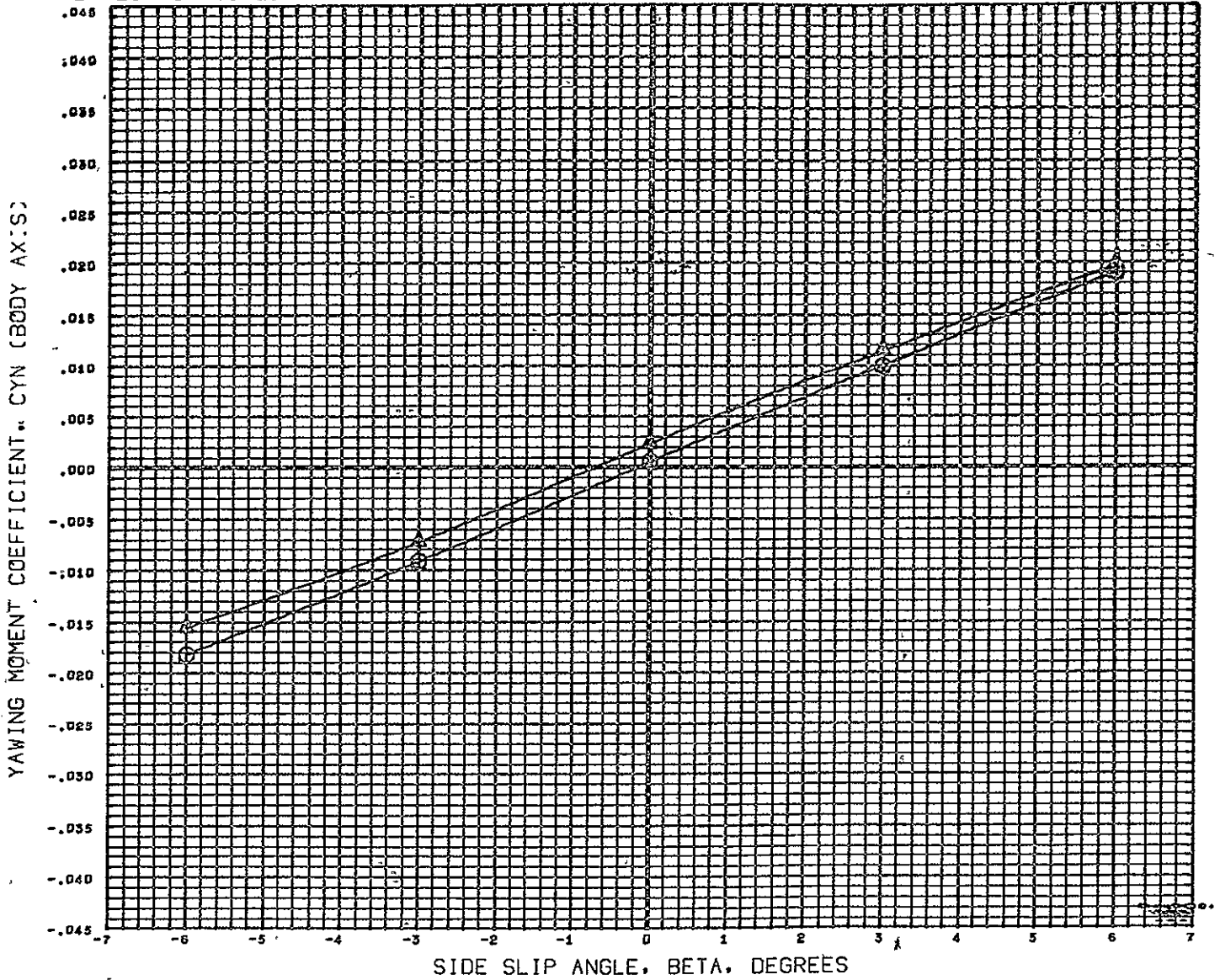
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4022)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	0.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN4010)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	0.000	-7.660	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 0.2162 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

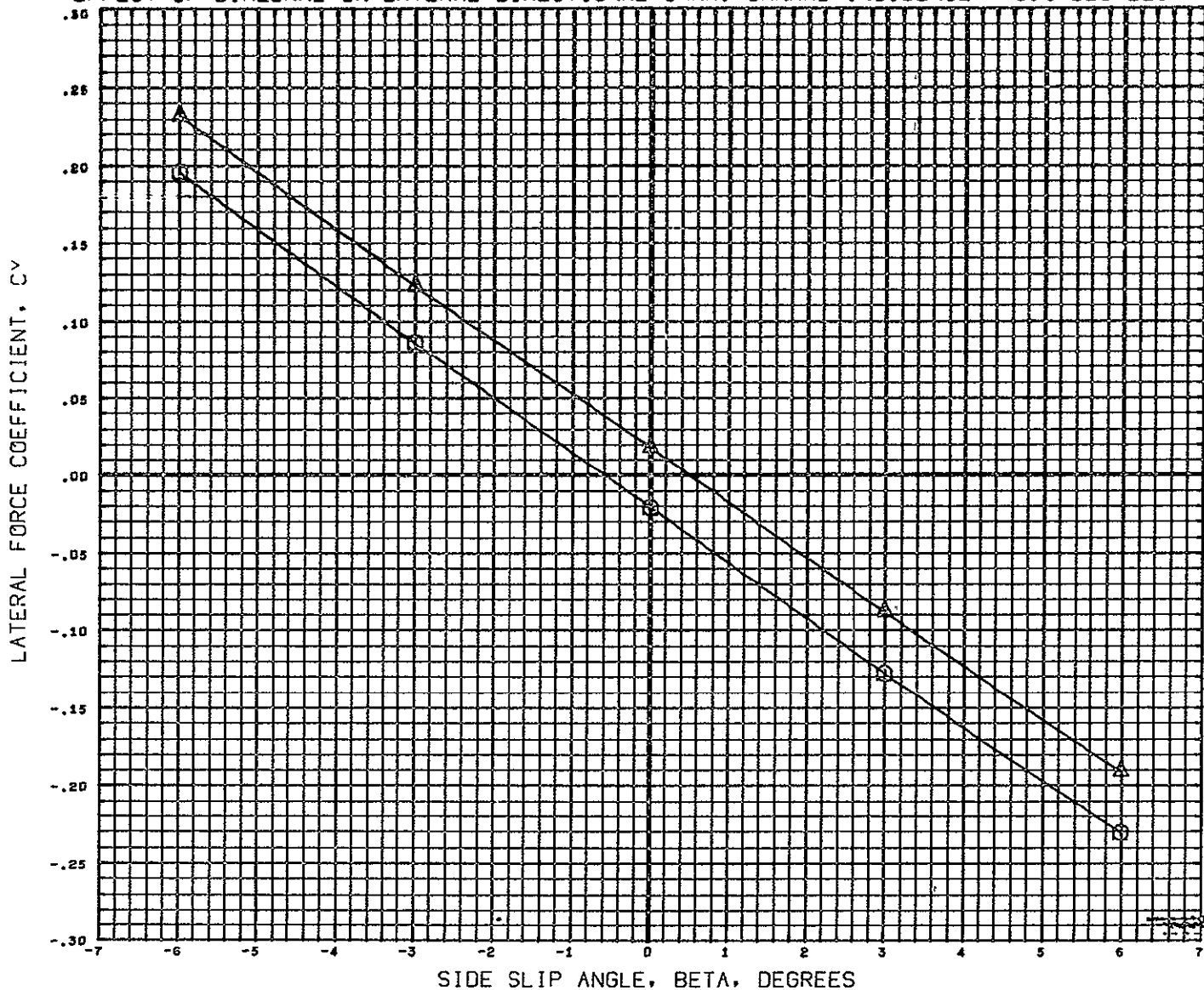


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4022)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	0.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN4010)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	0.000	-7.660	1.000	1.000	LREF 3.4930 FEET
						BREF 3.4930 FEET
						XNRP 0.2162 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

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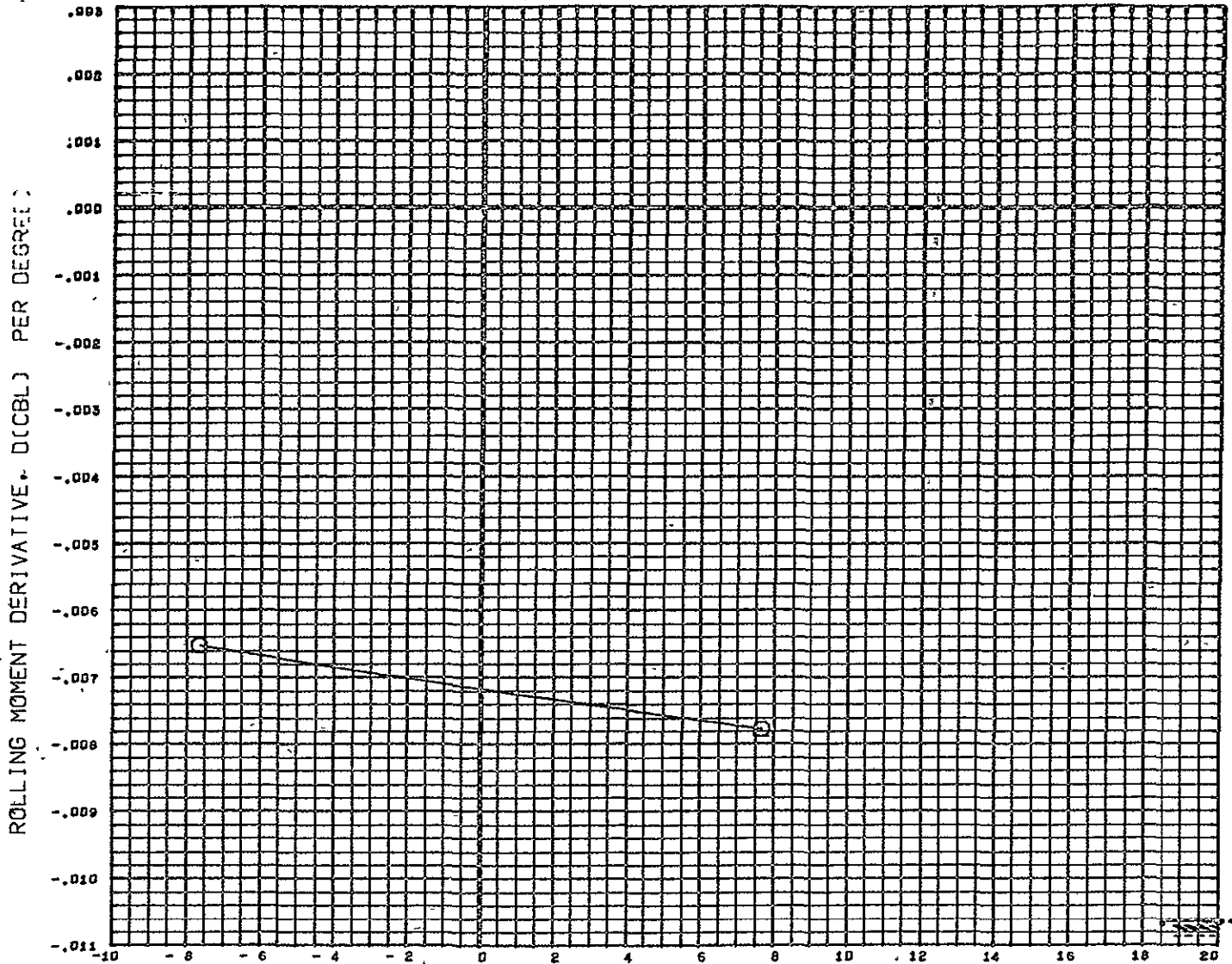
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4022) Δ	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	0.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT
(FN4010) \circ	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	0.000	-7.660	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 0.2162 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



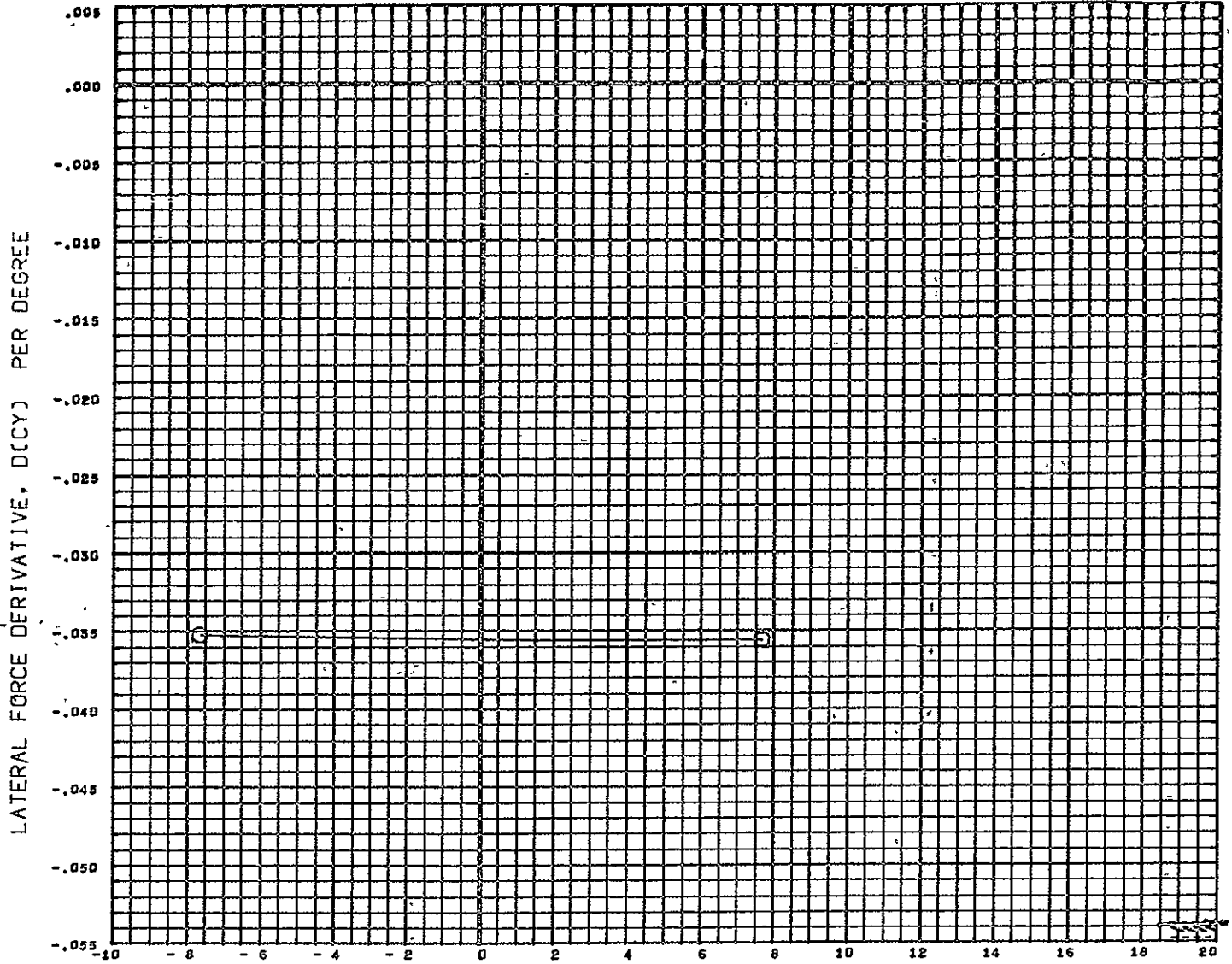
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION		
		ALPHA	INCIDC	INCIDW	AILRON	DIHDL	DIHDL	DIHDL	SREF	FEET	SQ.FT.
D	0.400	0.000	3.000	0.000	0.000	FN4022	7.660	FN4010	7.660	1.3550	
		0.000	0.000	0.000	0.000					3.4530	FEET
		0.000	0.000	0.000	0.000					3.4530	FEET
		0.000	1.000	0.000	1.000					0.2162	FEET
		1.000		0.000						0.0000	FEET
				0.0016						0.0016	FEET
				0.0150						0.0150	SCALE
		DATA HIST. CODE I									

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



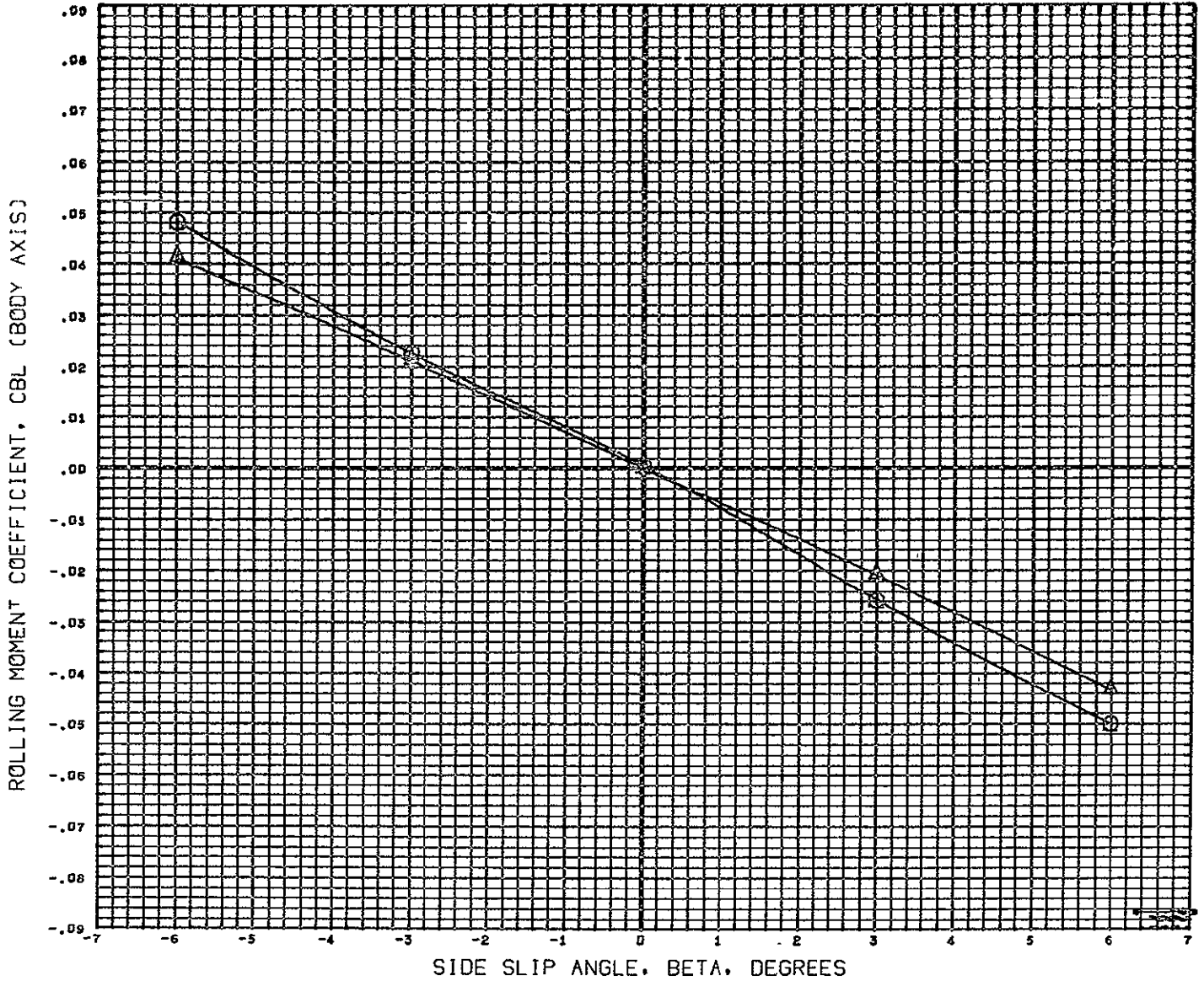
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4022	7.660	FN4010	- 7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XMRP	0.2162	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	1							ZMRP	0.0016	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL		MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
O		0.400	ALPHA	0.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
			INCIDW	0.000	AILRON	0.000	FN4022	7.660	FN4010	- 7.660	LREF	3.4530	FEET
			CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
			RUDDER	0.000	WNGPOS	1.000					XMRP	0.2162	FEET
			CNDPOS	1.000							YMRP	0.0000	FEET
			DATA HIST. CODE	I							ZMRP	0.0016	FEET
											SCALE	0.0150	SCALE

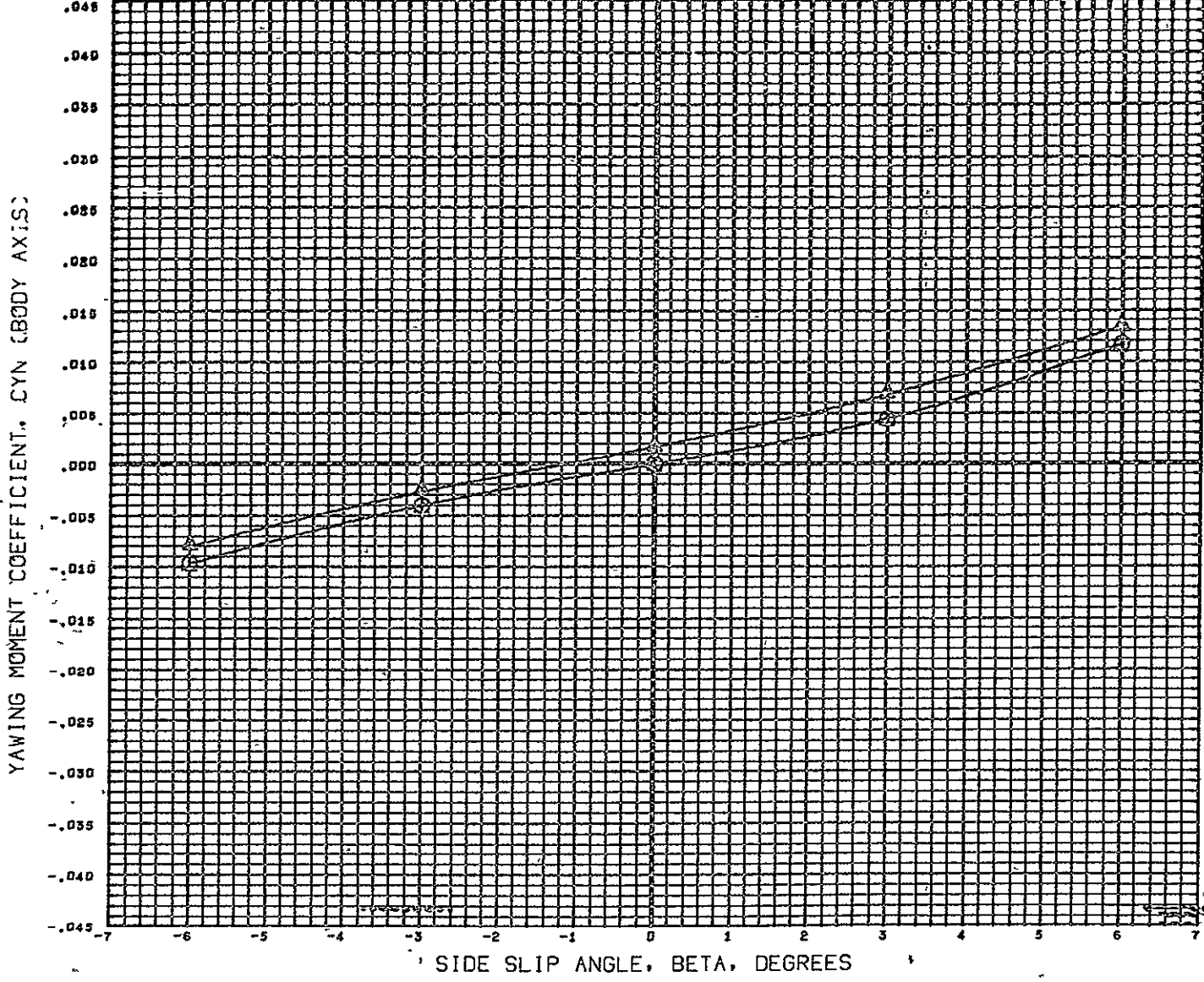
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4023)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	6.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT
(FN4011)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	6.000	-7.660	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 0.2162 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES

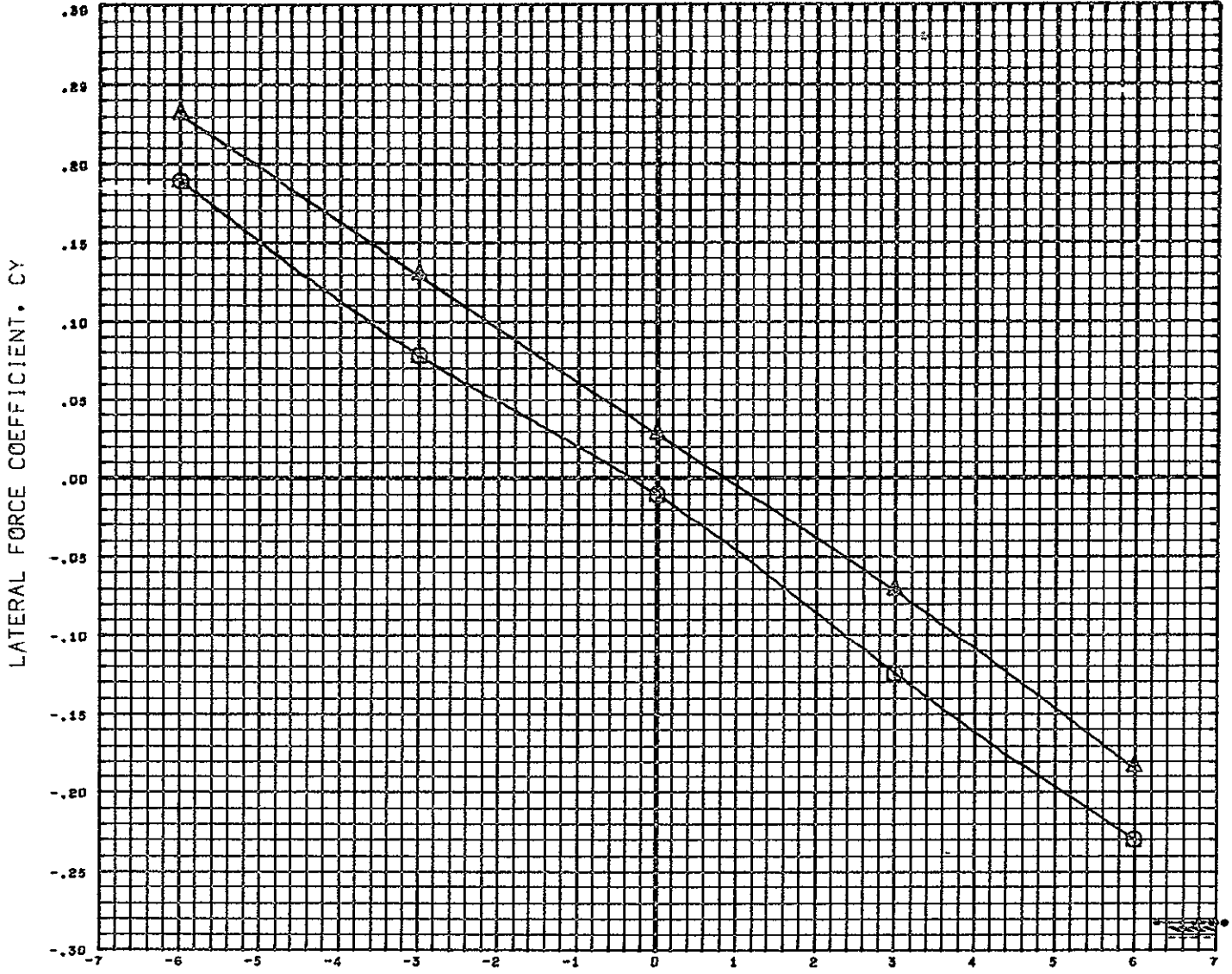


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION	
(FN4023)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	6.000	7.660	1.000	1.000	SREF	1.3550 SQ. FT.
(FN4011)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	6.000	-7.660	1.000	1.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	0.2162 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0016 FEET
						SCALE	0.0150 SCALE

MACH .40

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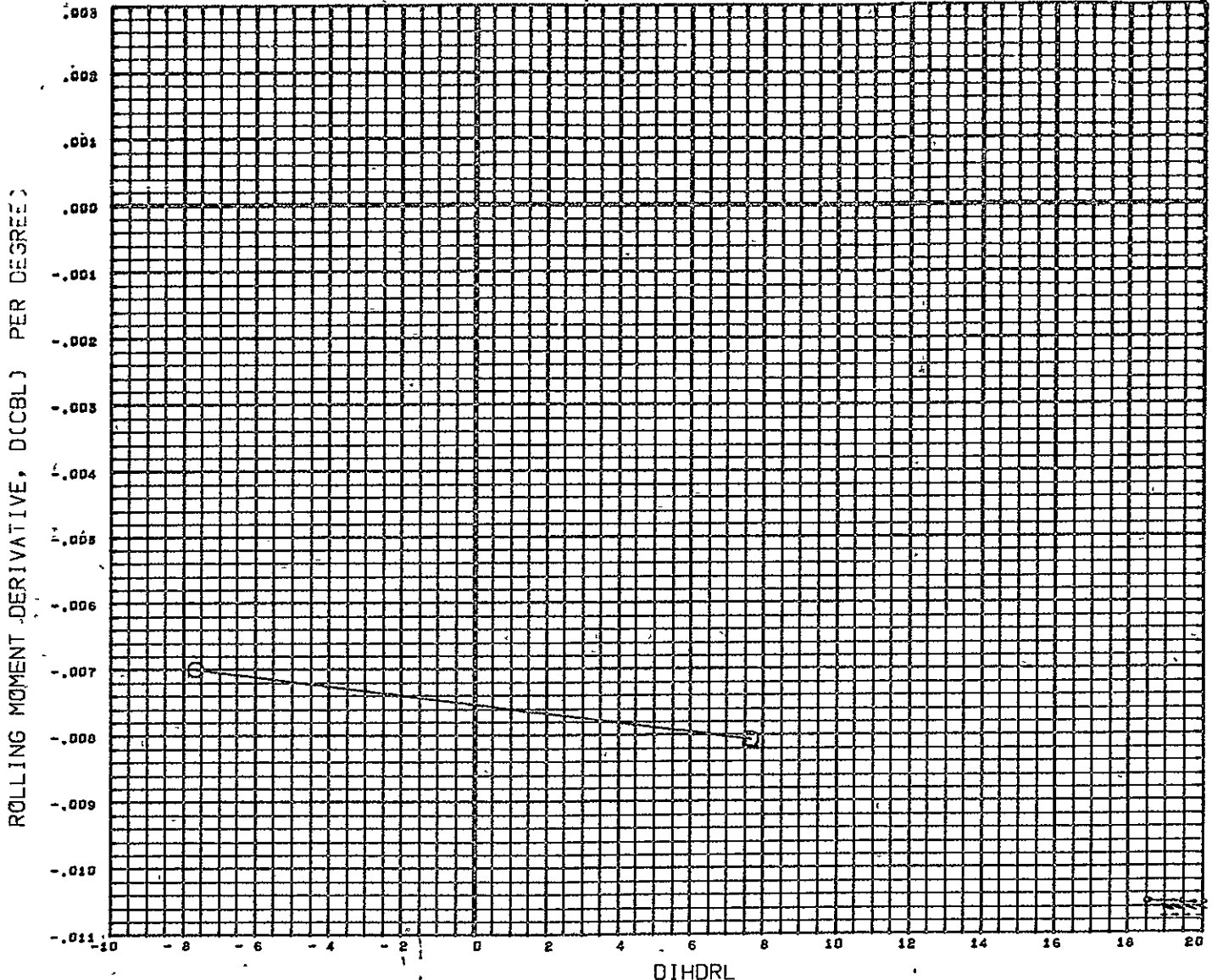
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4023)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	6.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN4011)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	6.000	-7.660	1.000	1.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 0.2162 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0016 FEET
						SCALE 0.0150 SCALE

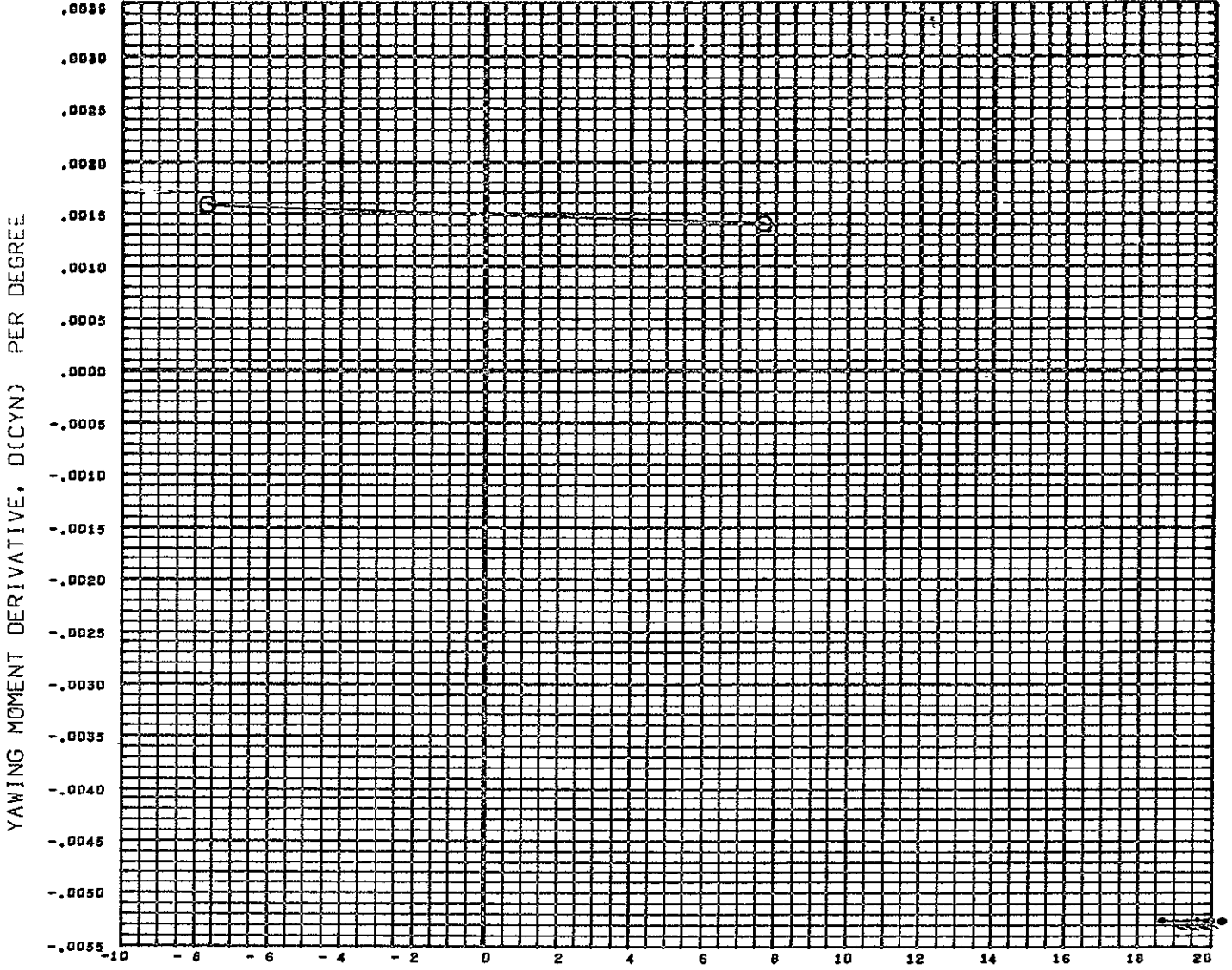
MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



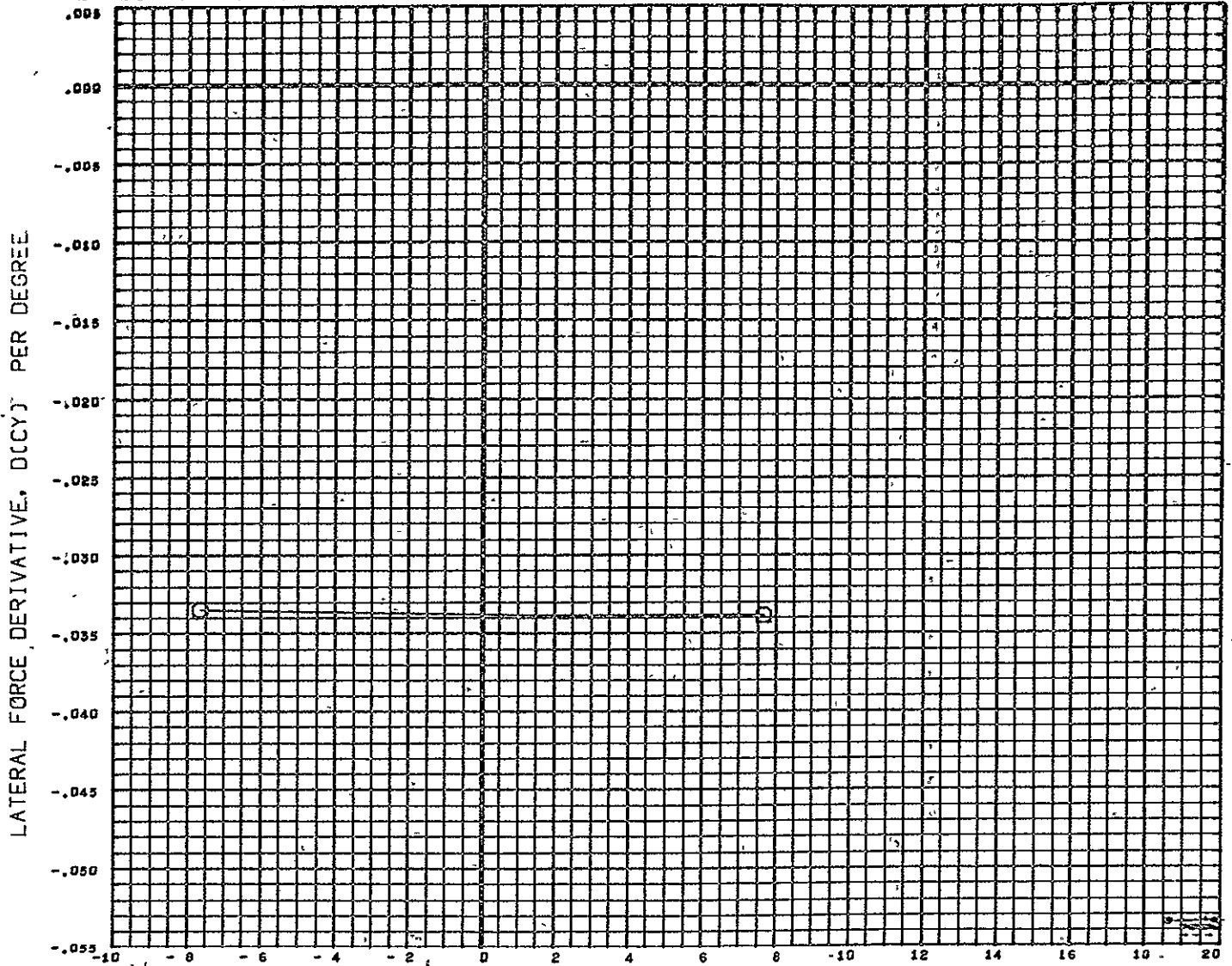
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION							
		ALPHA	INCIDC	AILRON	ELEVTR	WNGPOS	DIHDL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE	sq.ft.	
○	0.400	6.000	3.000	0.000	0.000	1.000	7.660	7.660	1.3550	3.4530	3.4530	0.2162	0.0000	0.0016	0.0150	FEET
		INCIDW	0.000	0.000	0.000											FEET
		CANARD	0.000	0.000	0.000											FEET
		RUDDER	0.000	0.000	0.000											FEET
		CNDPOS	1.000													FEET
		DATA HIST. CODE	I													SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



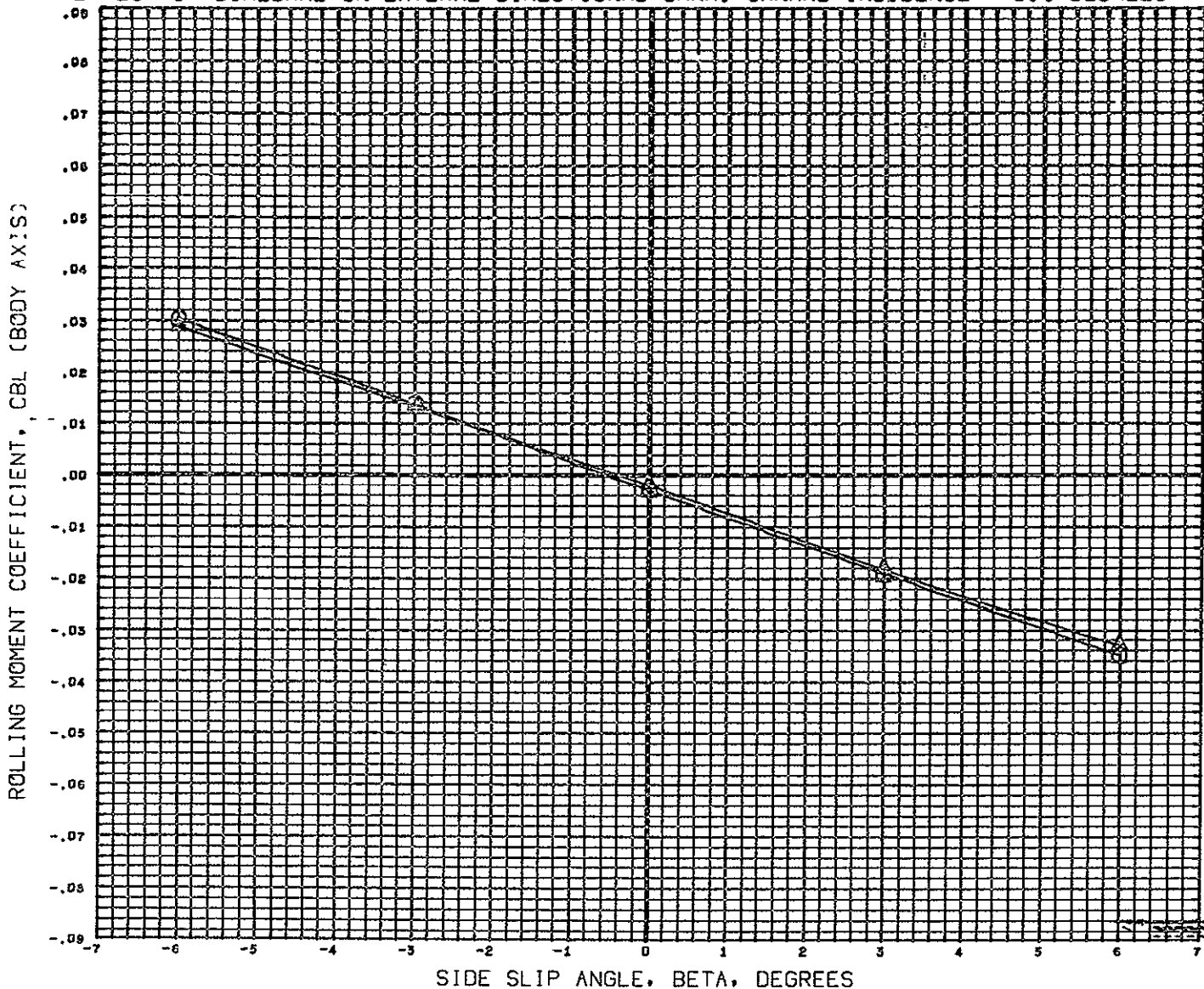
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
Q	0.400	ALPHA	6.000	INCIDC	3.000	DATASET	DIHDRL	DATASET	DIHDRL	SREF	1.3550	Sq FT.
		INCIDW	0.000	AILRON	0.000	FN4023	7.660	FN4011	- 7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XHRP	0.2162	FEET
		CNDPOS	1.000							YHRP	0.0000	FEET
		DATA HIST	CODE	I						ZHRP	0.0016	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DIHDL			REFERENCE INFORMATION																			
		ALPHA	INCIDW	AILRON	ELEVTR	WNGPOS	DATASET	DIHDL	DATASET	DIHDL	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE	SO.FT.										
O	0.400	6.000	0.000	0.000	0.000	3.000	7.660	FN4023	7.660	FN4011	7.660	1.3550	3.4530	3.4530	0.2162	0.0000	0.0016	0.0150	SO.FT.	FEET	FEET	FEET	FEET	FEET	FEET	SCALE	SCALE	

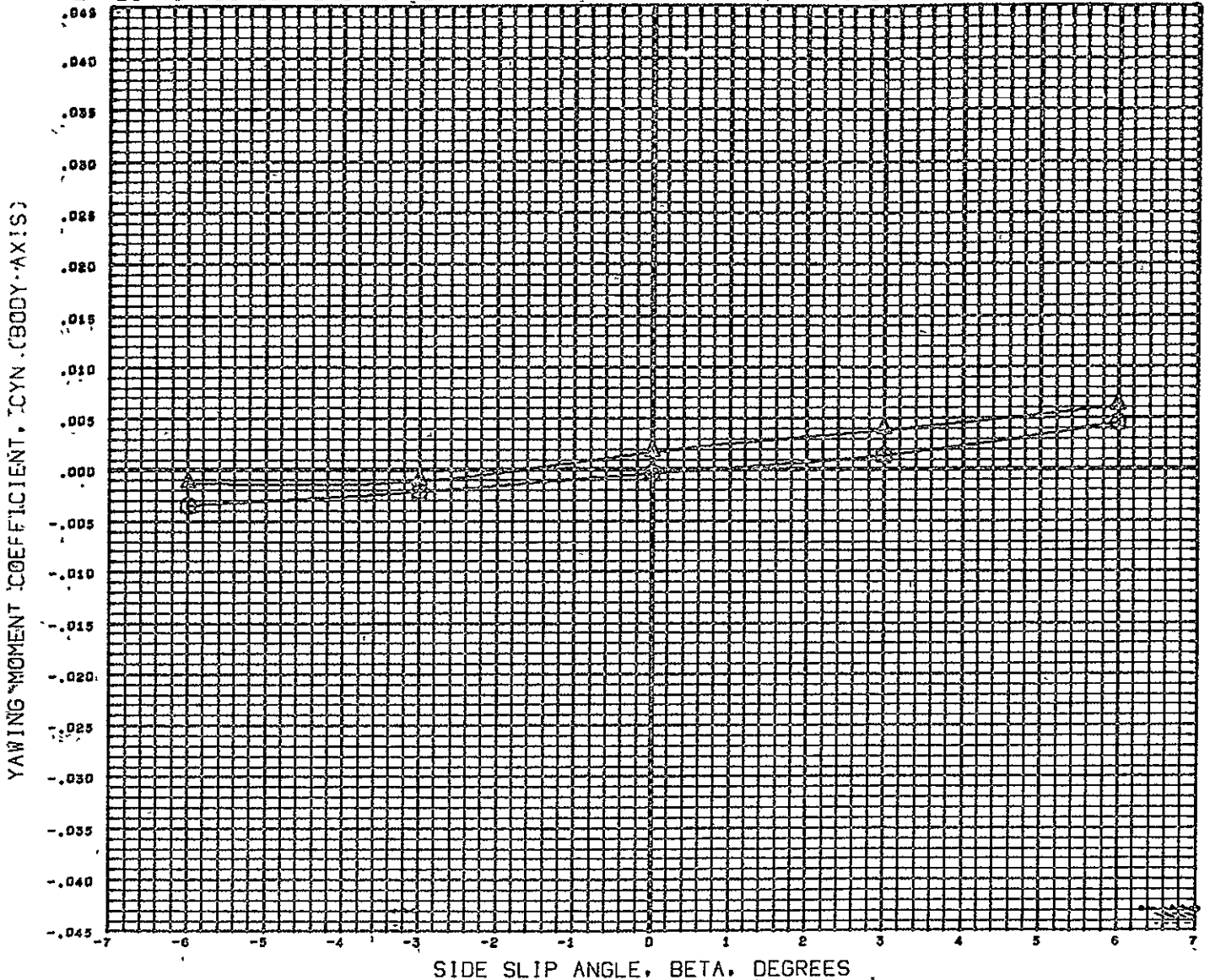
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHRL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4024) \square	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	7.660	1.000	1.000	SREF 1.3550 SQ.FT.
(FN4012) \triangle	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	-7.660	1.000	1.000	LREF 3.4530 FEET BREF 3.4530 FEET XMRP 0.2162 FEET YMRP 0.0000 FEET ZMRP 0.0016 FEET SCALE 0.0150 SCALE

MACH .40

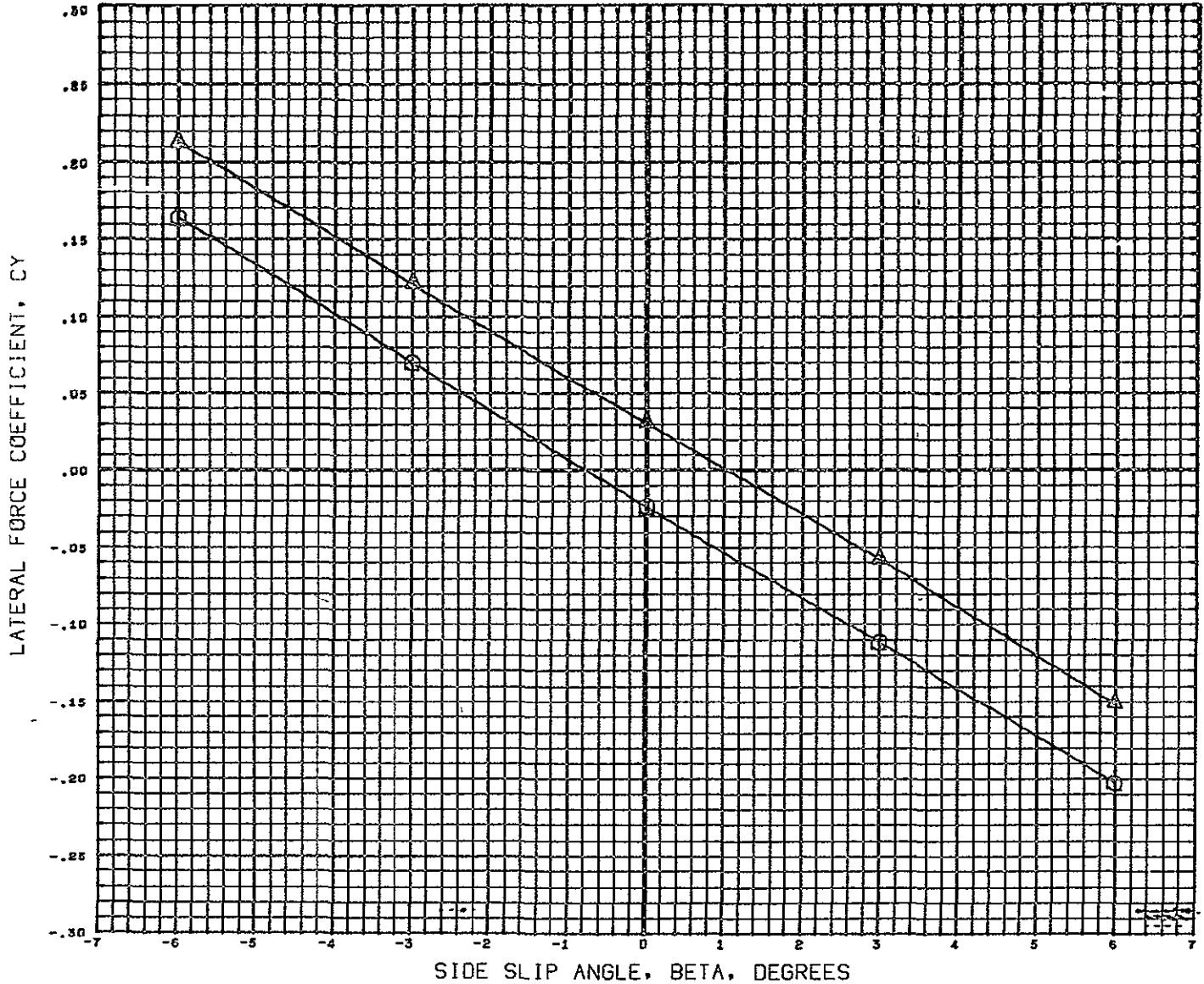
EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHDL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4024)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	7.660	1,000	1,000	SREF 1.3550 SQ.FT.
(FN4012)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	-7.660	1,000	1,000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 0.2162 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



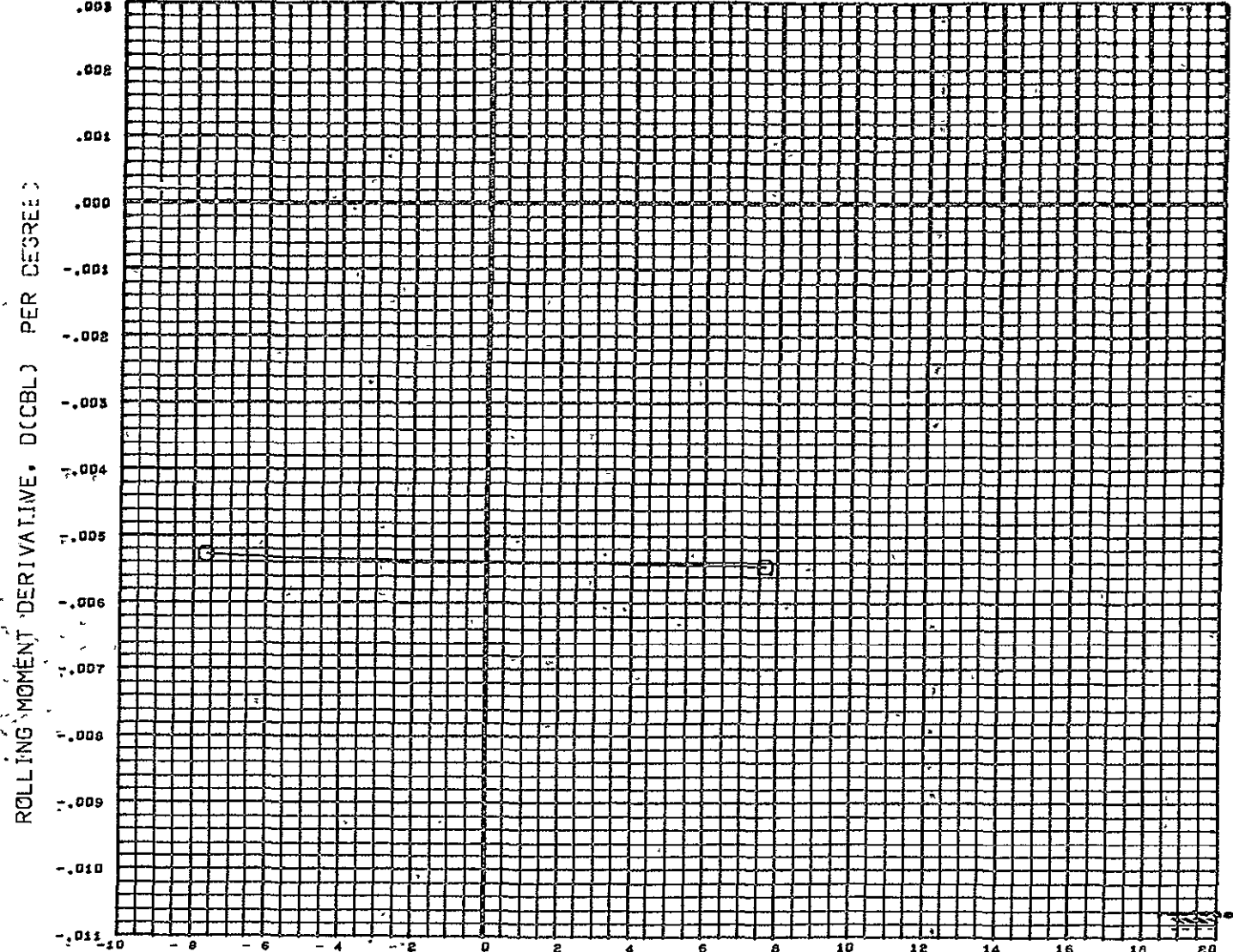
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	DIHEDRAL	CNDPOS	WNGPOS	REFERENCE INFORMATION
(FN4024)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	7.660	1.000	1.000	SREF 1.3550 SE.FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 0.2162 FEET YMRP 0.0000 FEET ZMRP 0.0016 FEET SCALE 0.0150 SCALE
(FN4012)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	15.000	-7.660	1.000	1.000	

MACH .40

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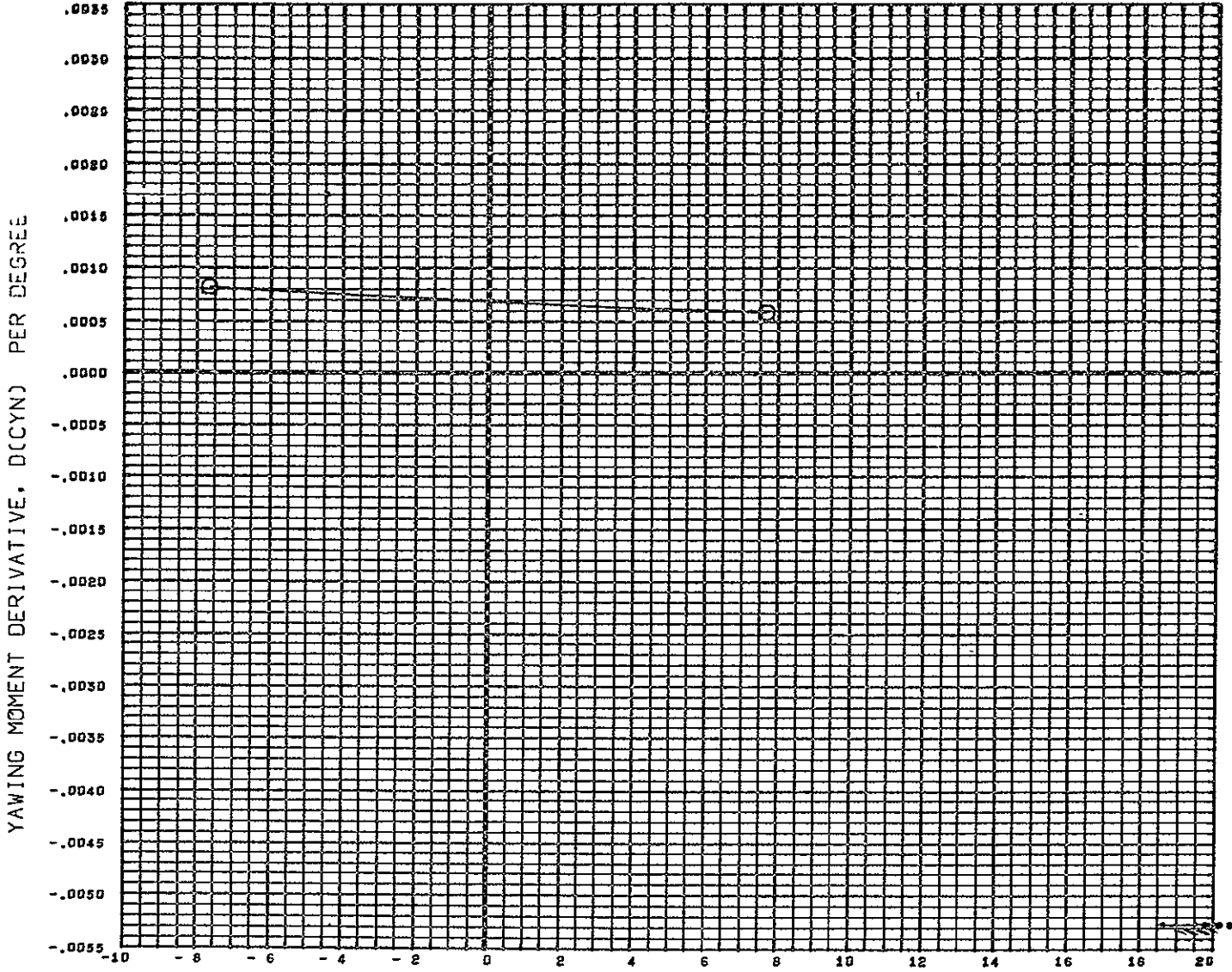
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EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



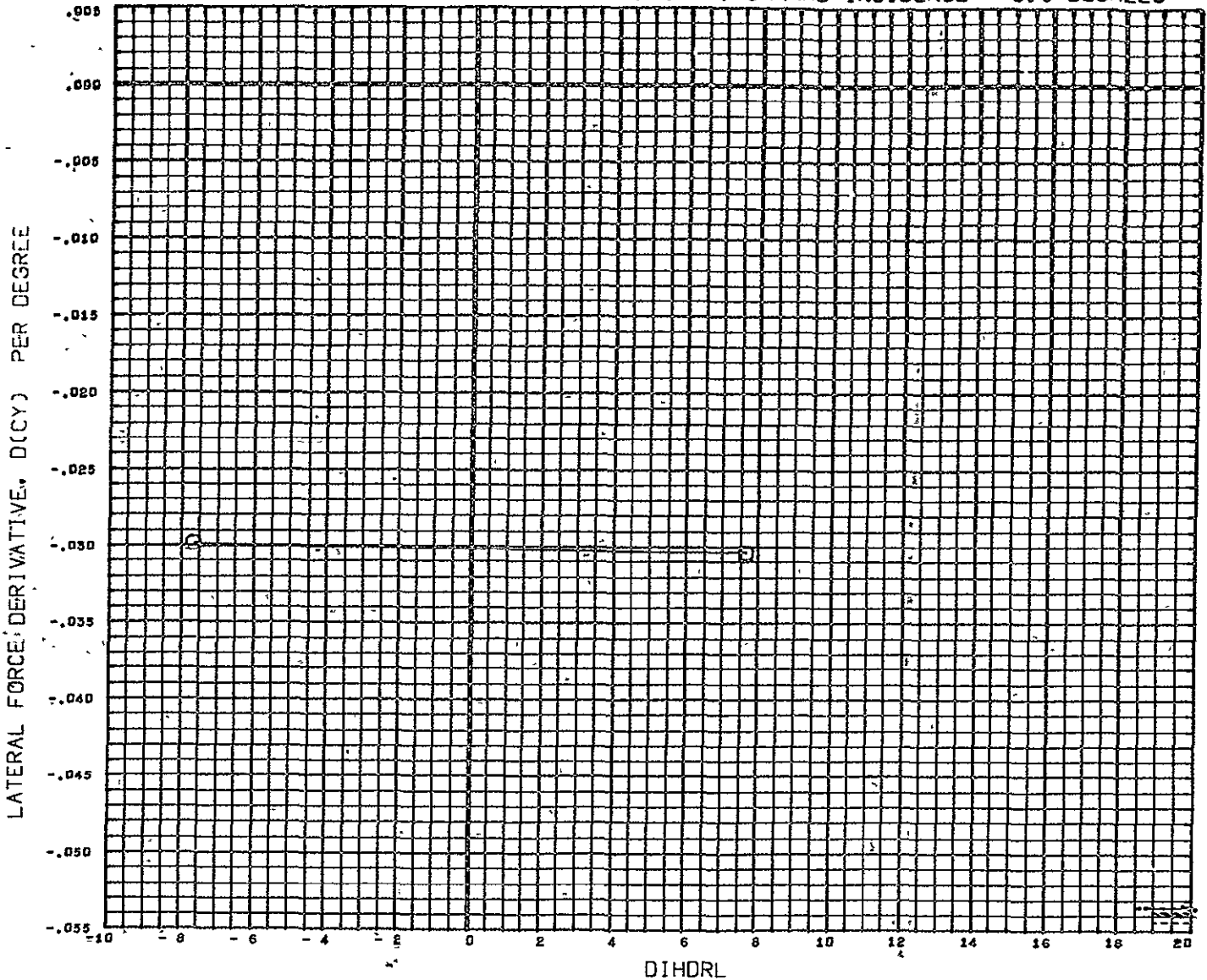
SYMBOL		MACH		PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
D		0.400		ALPHA	15.000	INCIDC	3.000	DATASET	DIHEDRAL	DATASET	DIHEDRAL	SREF	1.3550	SQ.FT.
				INCIDW	0.000	AILRON	0.000	FN4024	7.660	FN4012	- 7.660	LREF	3.4530	FEET
				CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
				RUDDER	0.000	WNGPOS	1.000					XMRP	0.2162	FEET
				CNDPOS	1.000							YMRP	0.0000	FEET
				DATA HIST. CODE	I							ZMRP	0.0016	FEET
												SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



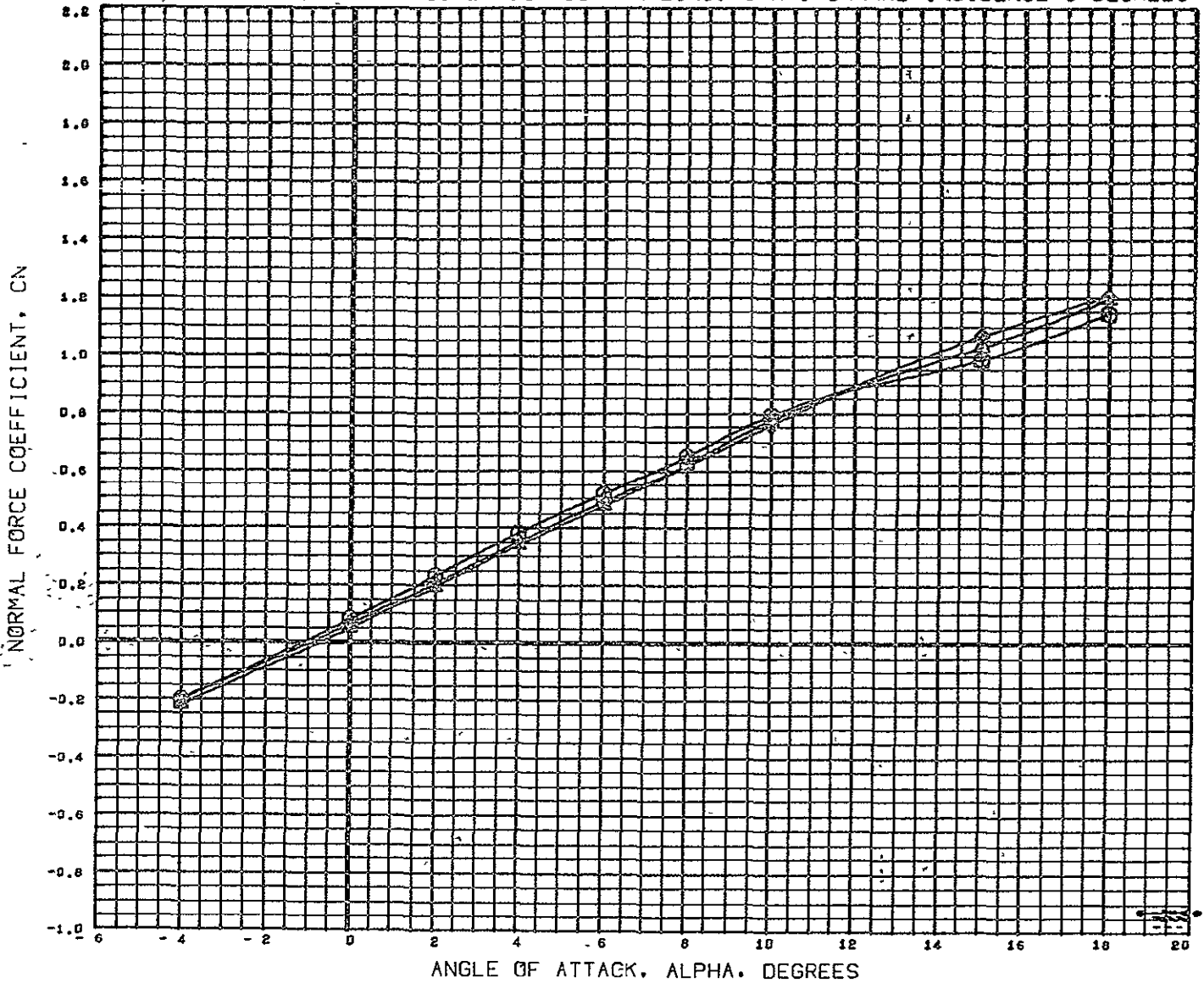
SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	15.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4024	7.660	FN4012	- 7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XNRP	0.2162	FEET
		CNDPOS	1.000							YNRP	0.0000	FEET
		DATA HIST. CODE	I							ZNRP	0.0016	FEET
										SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL-DIRECTIONAL CHAR. CANARD INCIDENCE = 3.0 DEGREES



SYMBOL	MACH	PARAMETRIC VALUES				DATA SOURCE			REFERENCE INFORMATION			
○	0.400	ALPHA	15.000	INCIDC	3.000	DATASET	DIHDL	DATASET	DIHDL	SREF	1.3550	SQ.FT.
		INCIDW	0.000	AILRON	0.000	FN4024	7.660	FN4012	- 7.660	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000					BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000					XMRP	0.2162	FEET
		CNDPOS	1.000							YMRP	0.0000	FEET
		DATA HIST. CODE	I							ZMRP	0.0016	FEET
										SCALE	0.0150	SCALE

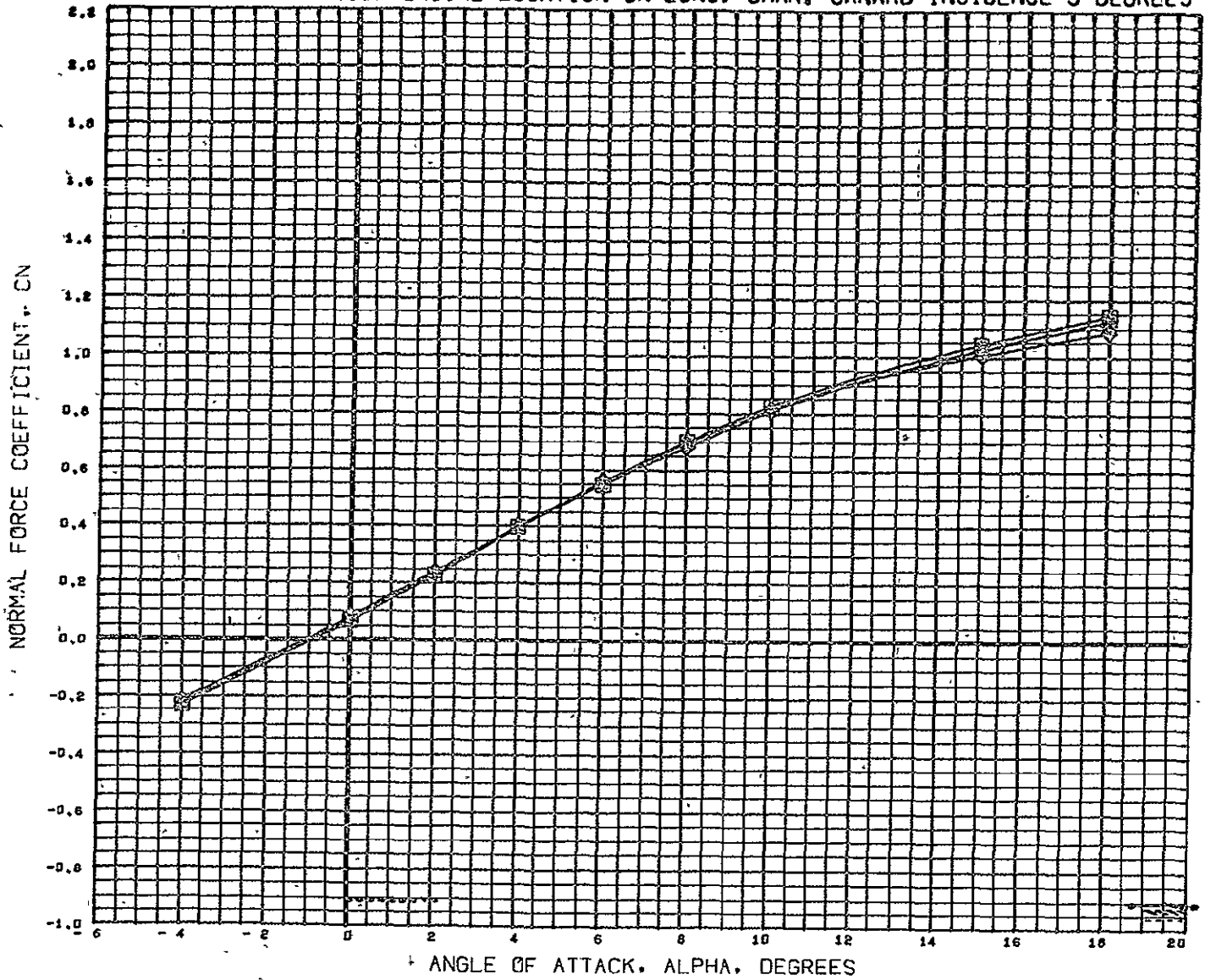
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G1	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1,000	1,000	0,000	XMRP 2,5950 FEET
					YMRP 0,0000 FEET
					ZMRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH .40

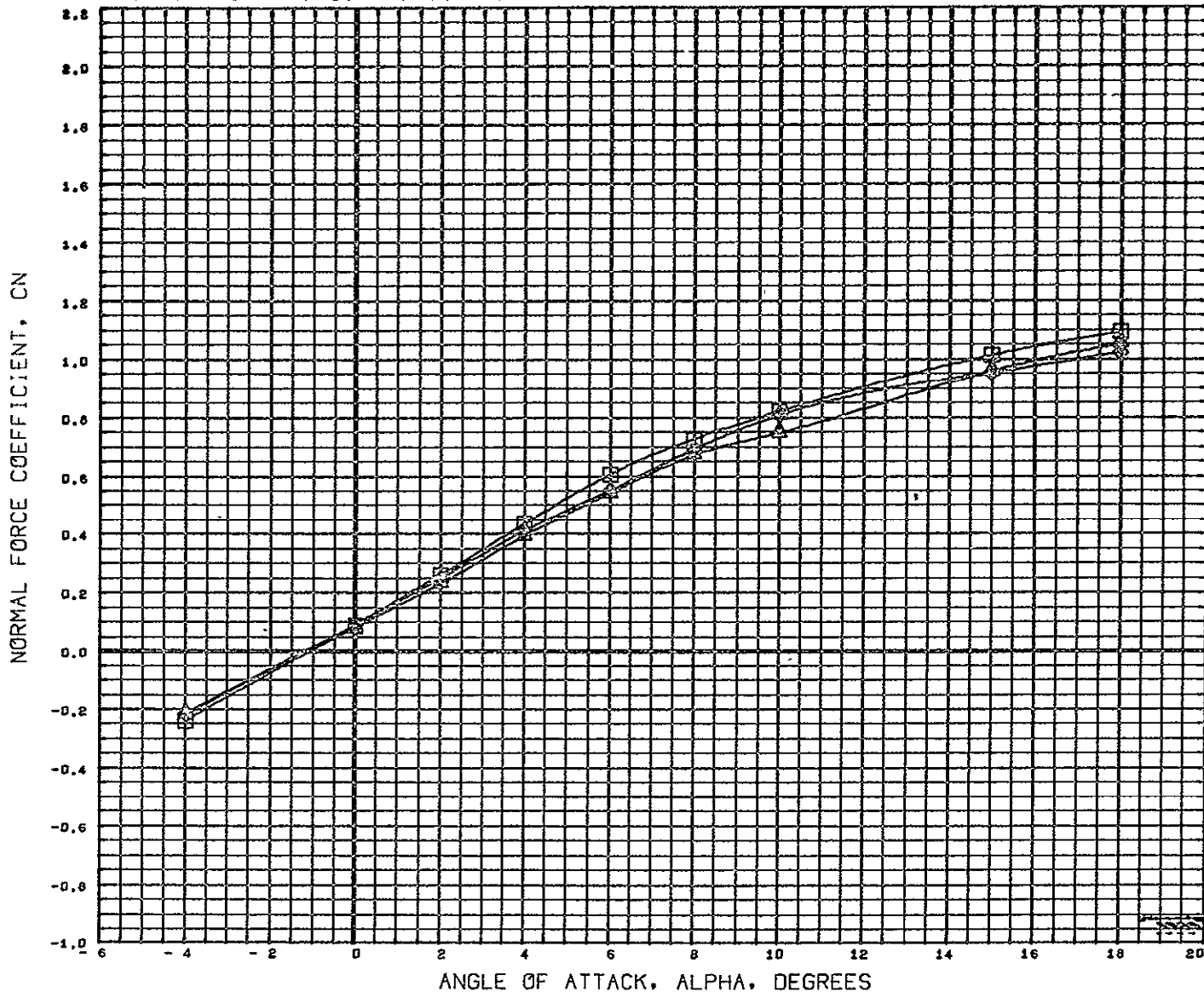
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XMRP 2,5950 FEET
					YNRP 0,0000 FEET
					ZMRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH .70

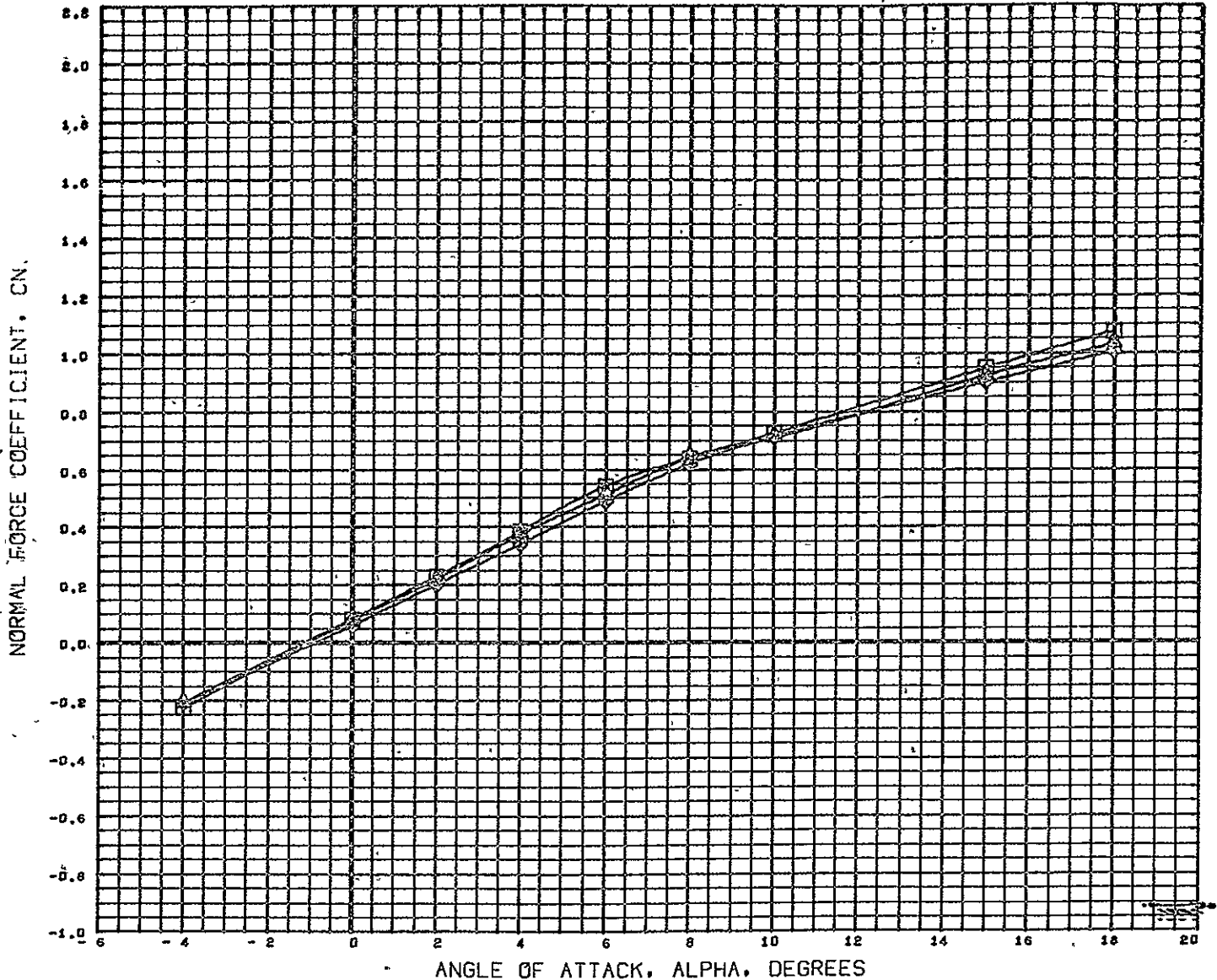
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

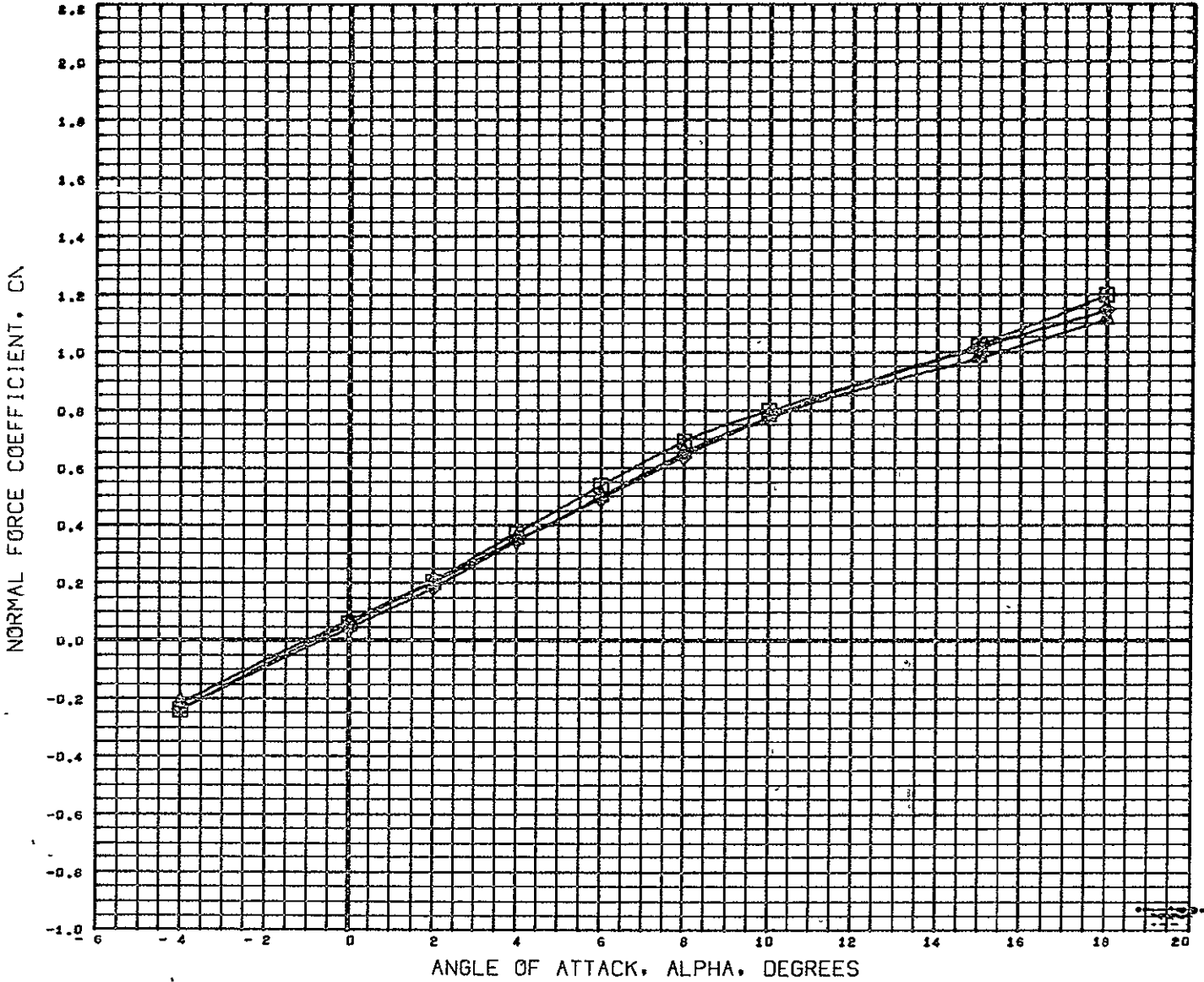
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

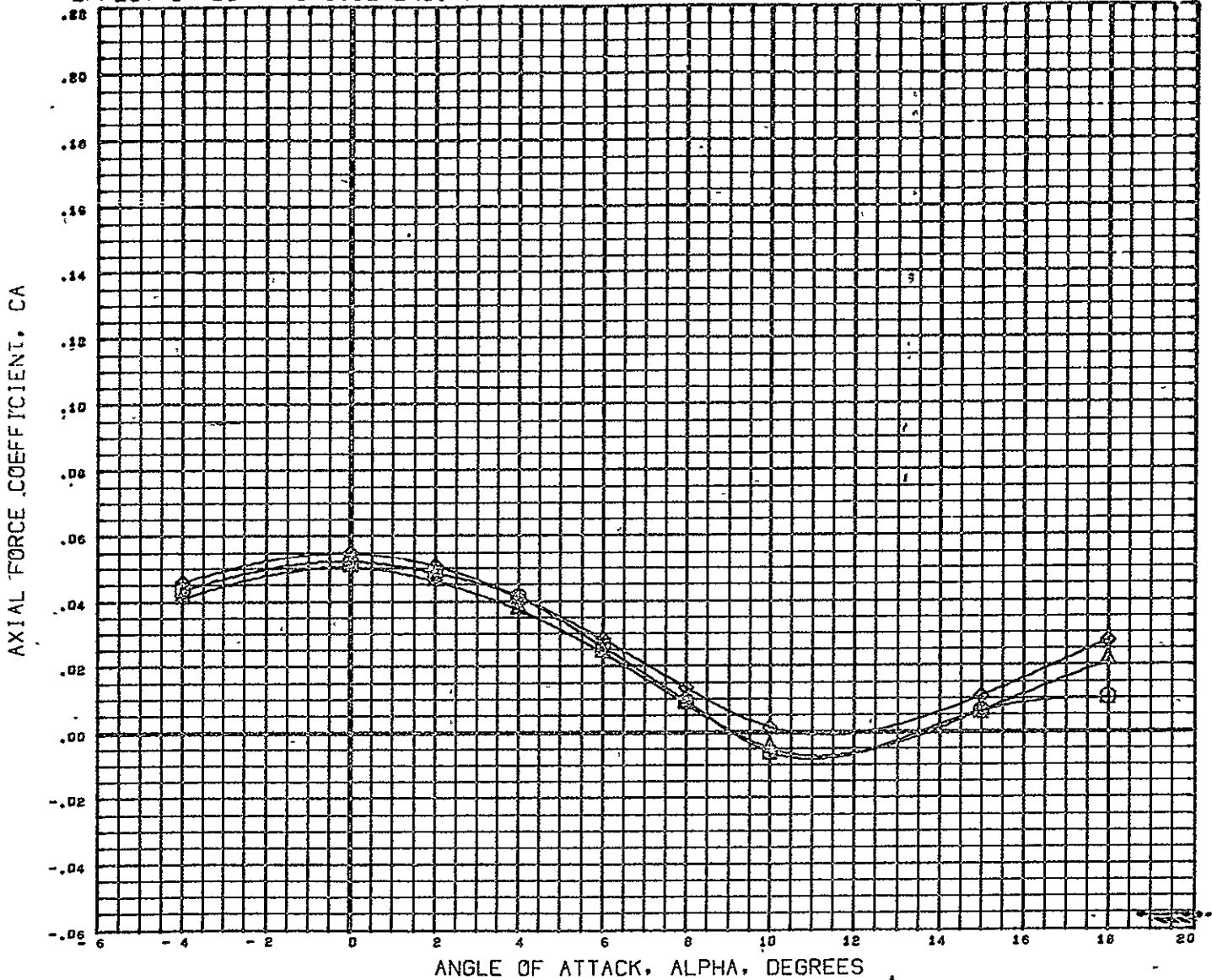


DATA SET SYMBO	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCDW	REFERENCE INFORMATION	
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF	1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF	3.4530 FEET
(EN4025)	NSPDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF	3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XNRP	2.5950 FEET
					YNRP	0.0000 FEET
					ZNRP	0.0187 FEET
					SCALE	0.0150 SCALE

MACH 1.00

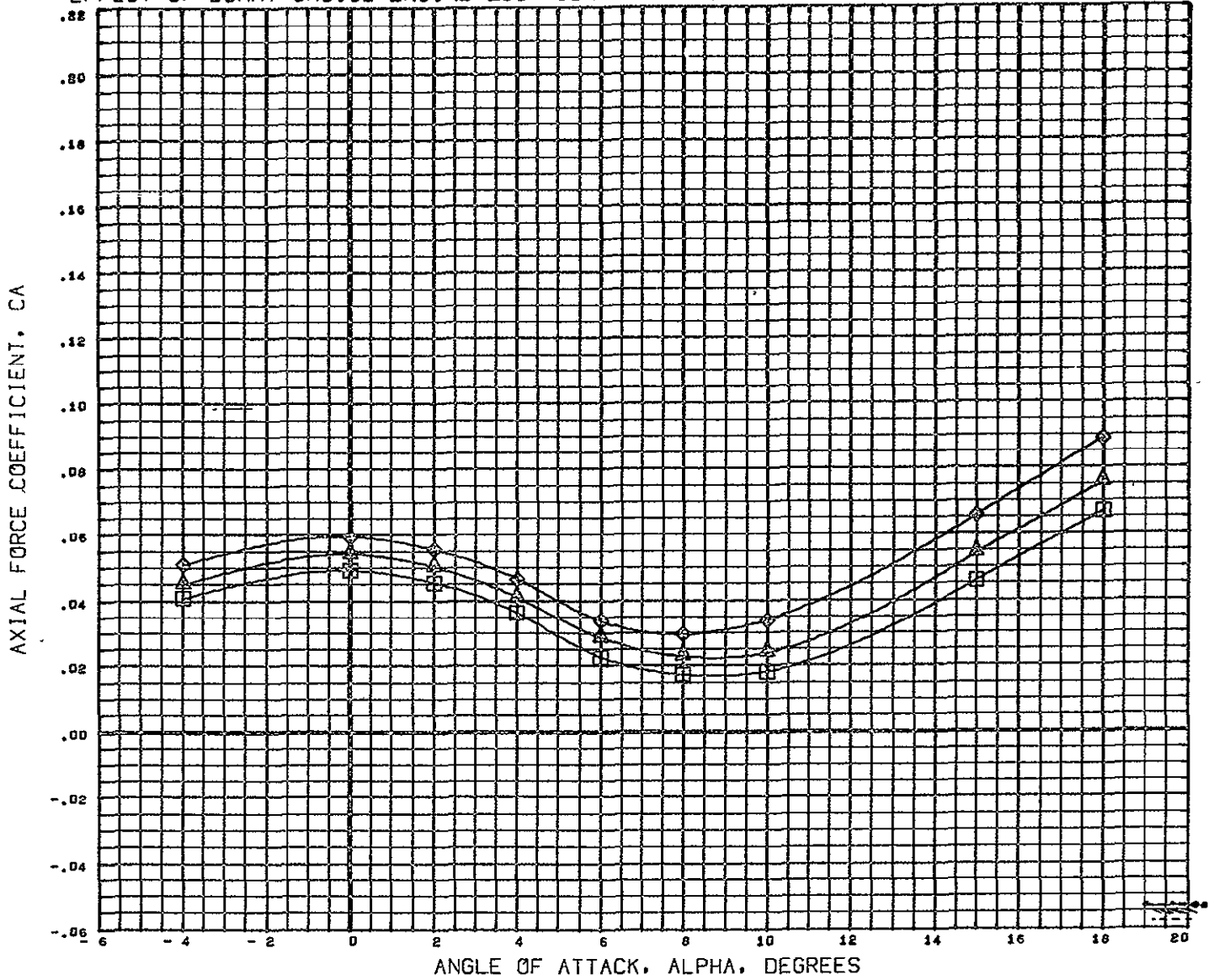
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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD, INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V161	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN5001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

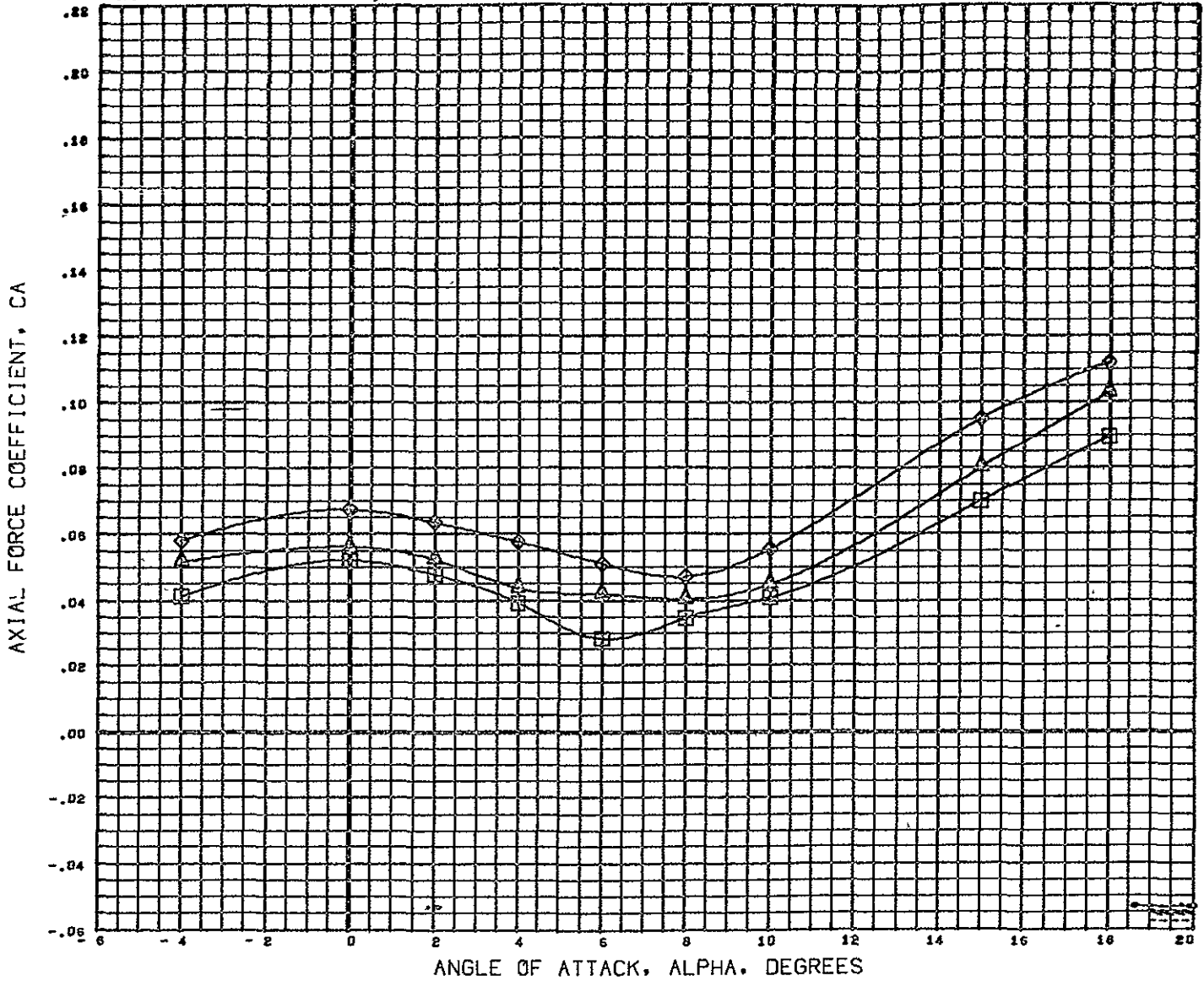
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

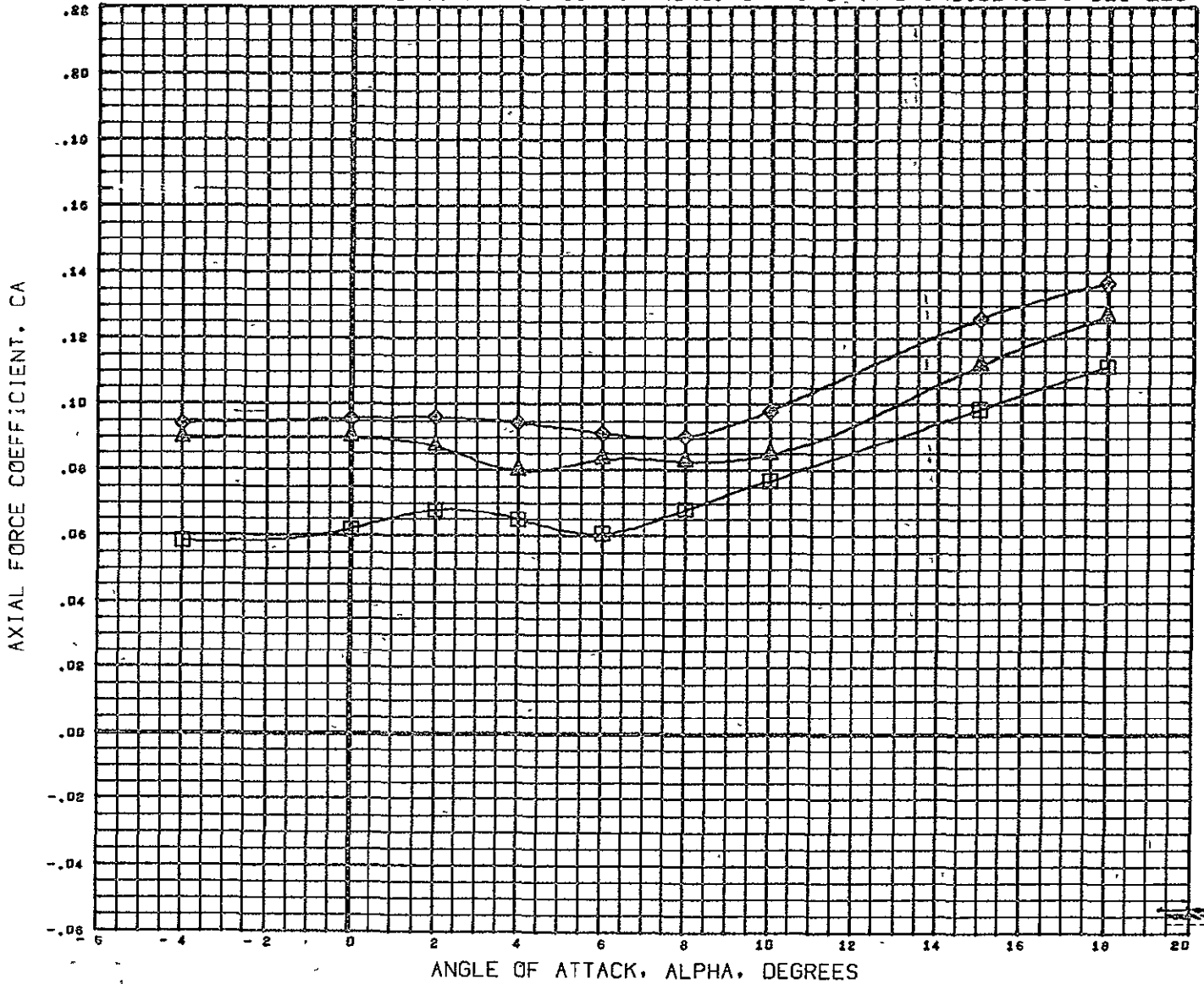
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SE.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

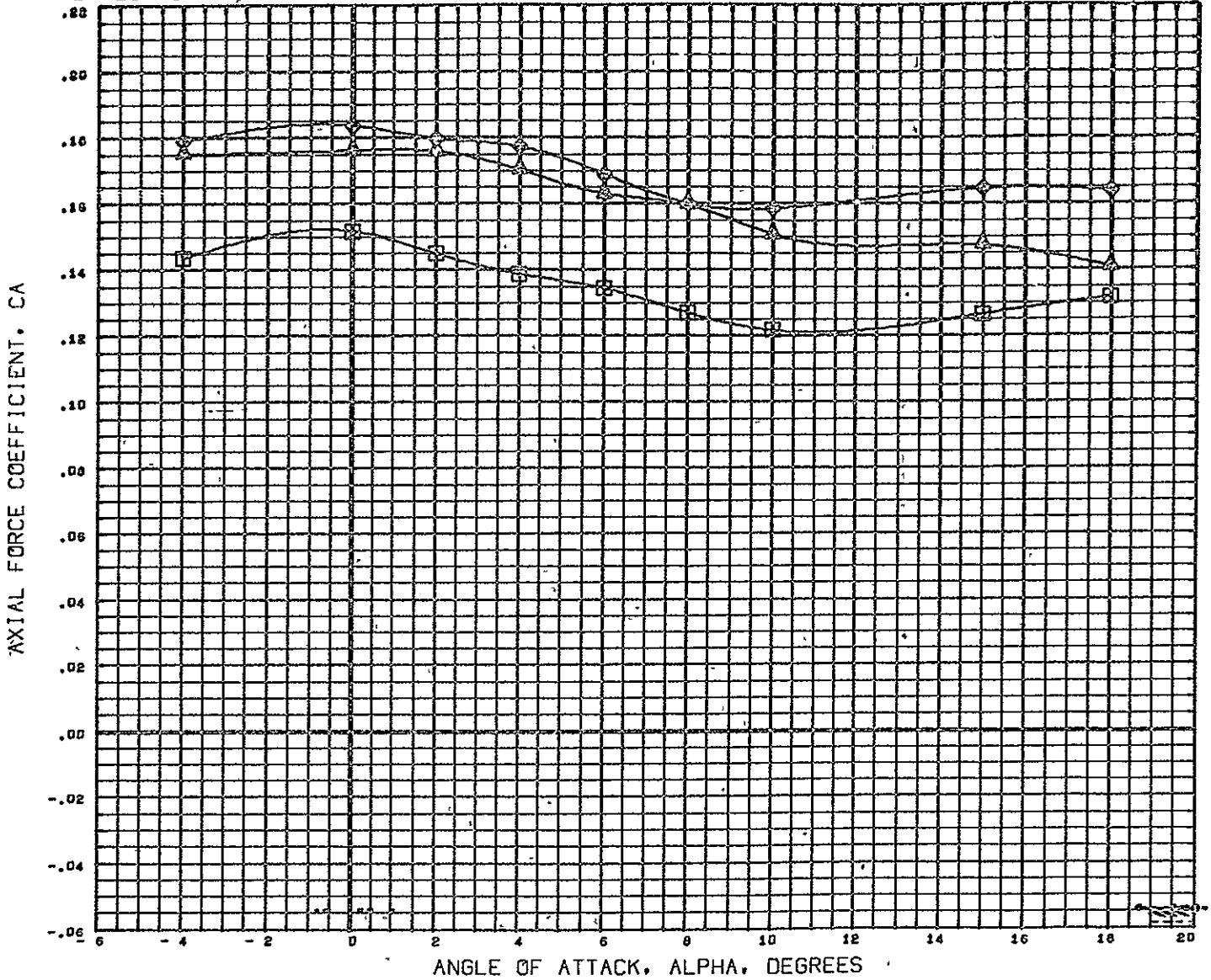
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

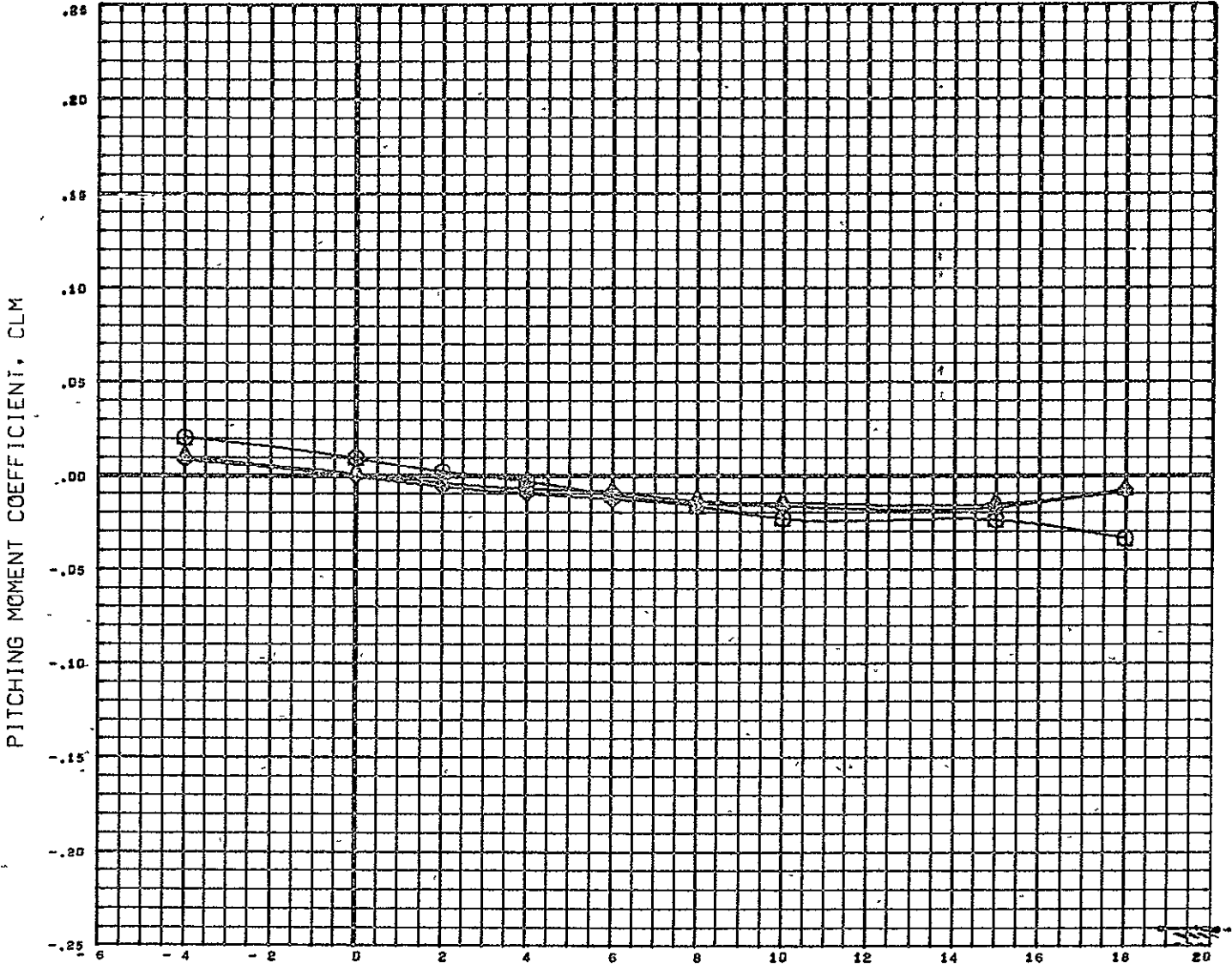
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1 3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XHRP 2,5950 FEET
					YHRP 0,0000 FEET
					ZHRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH 1.00

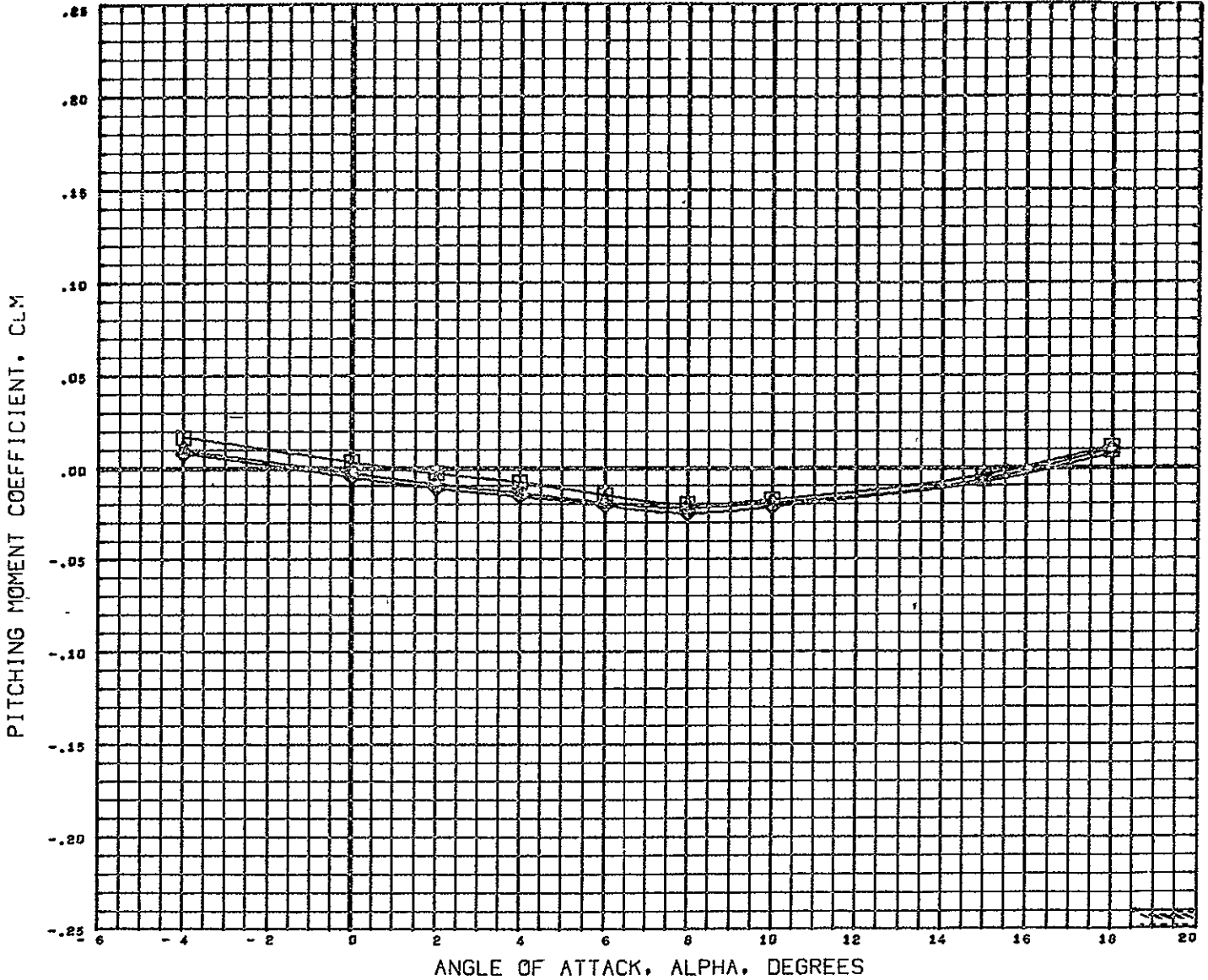
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	2,000	1,000	0,000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3.4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1,000	1,000	0,000	XHRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0167 FEET
					SCALE 0.0150 SCALE

MACH .40

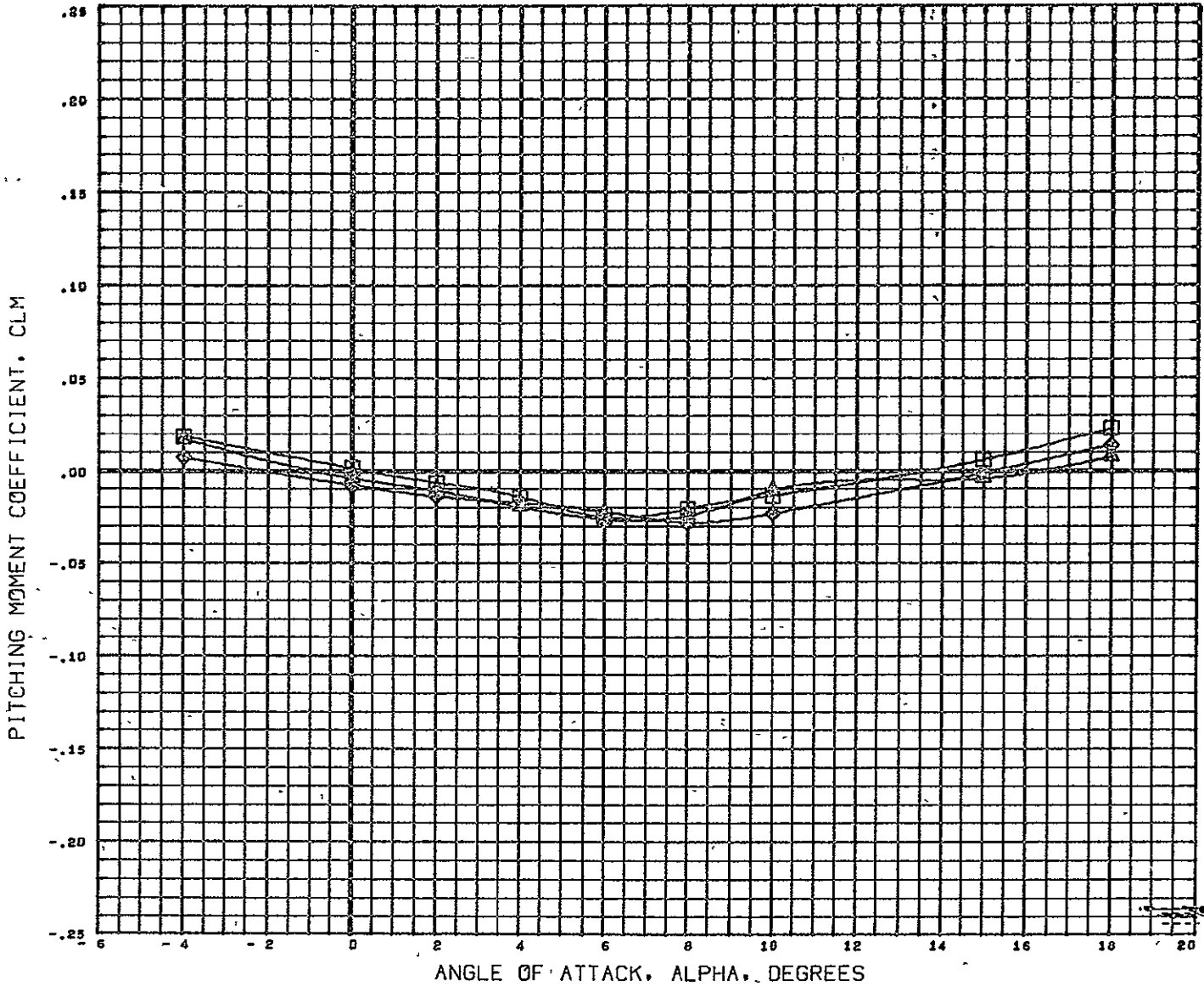
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{EN3202}	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
{EN3200}	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
{EN4025}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
{EN3004}	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

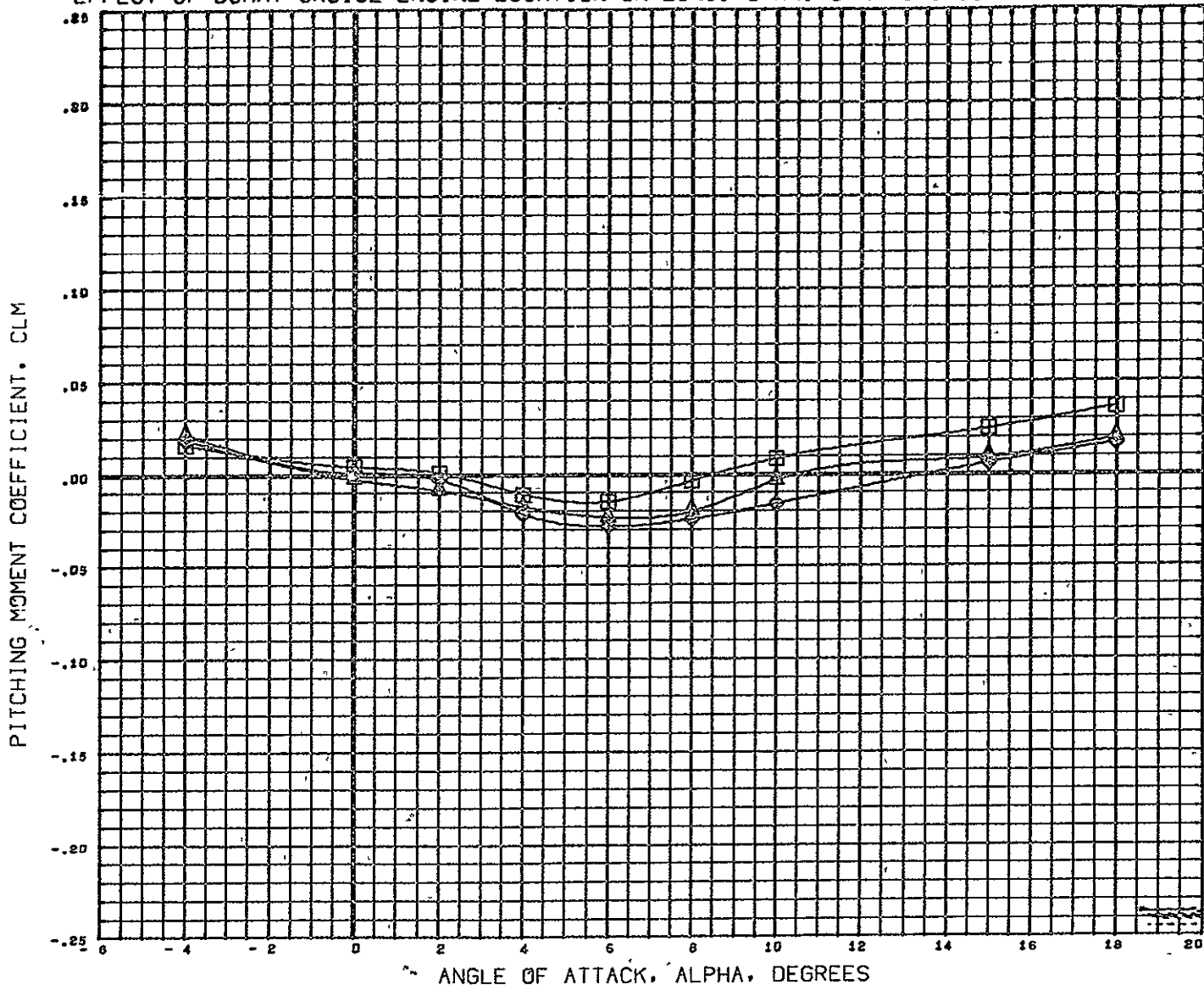
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1,3550 30.FT
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XMRP 2,5950 FEET
					YMRP 0,0000 FEET
					ZMRP 0,0187 FEET
					SCALE 0,0150 SCALE

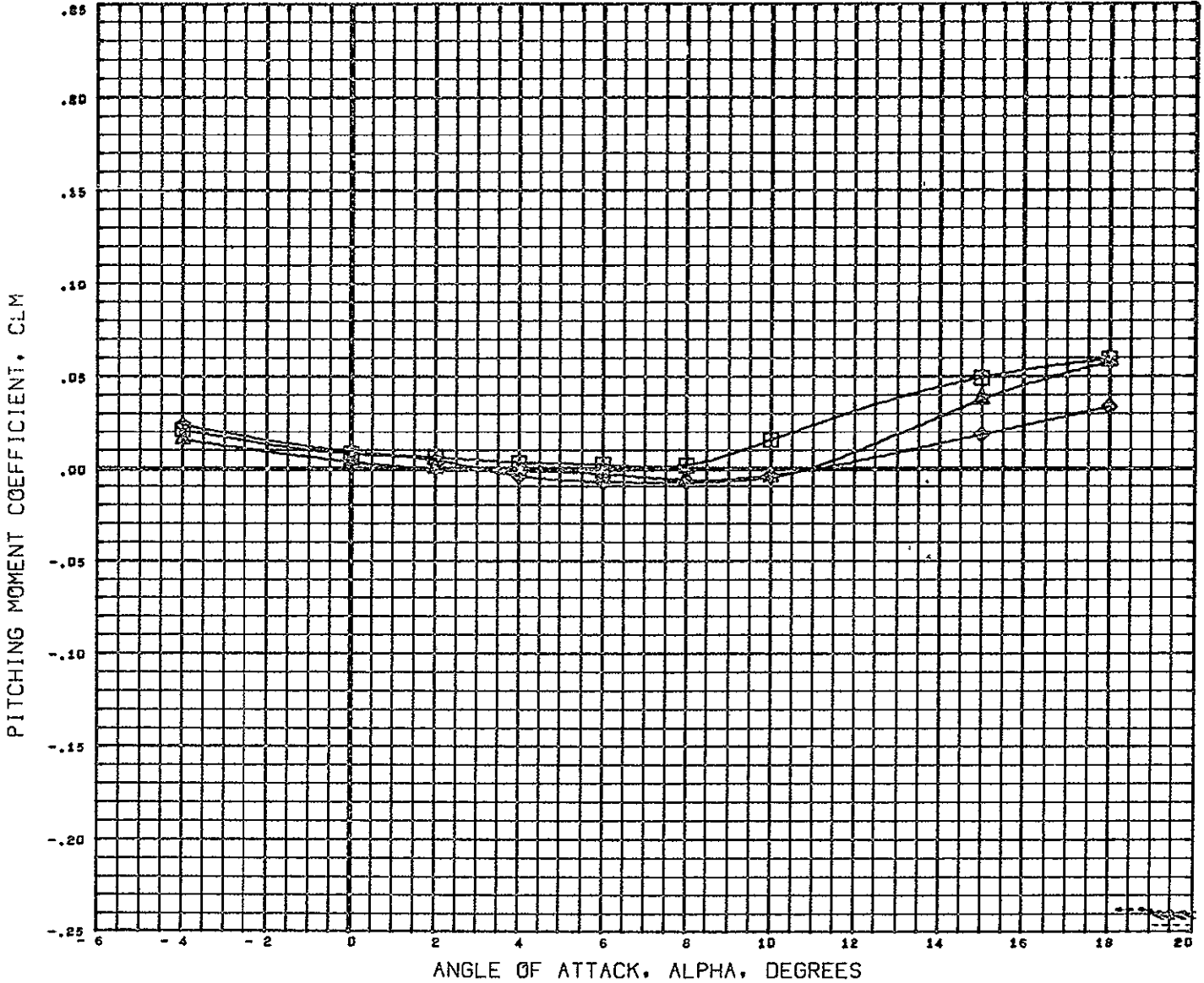
MACH .80

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1C2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1C6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

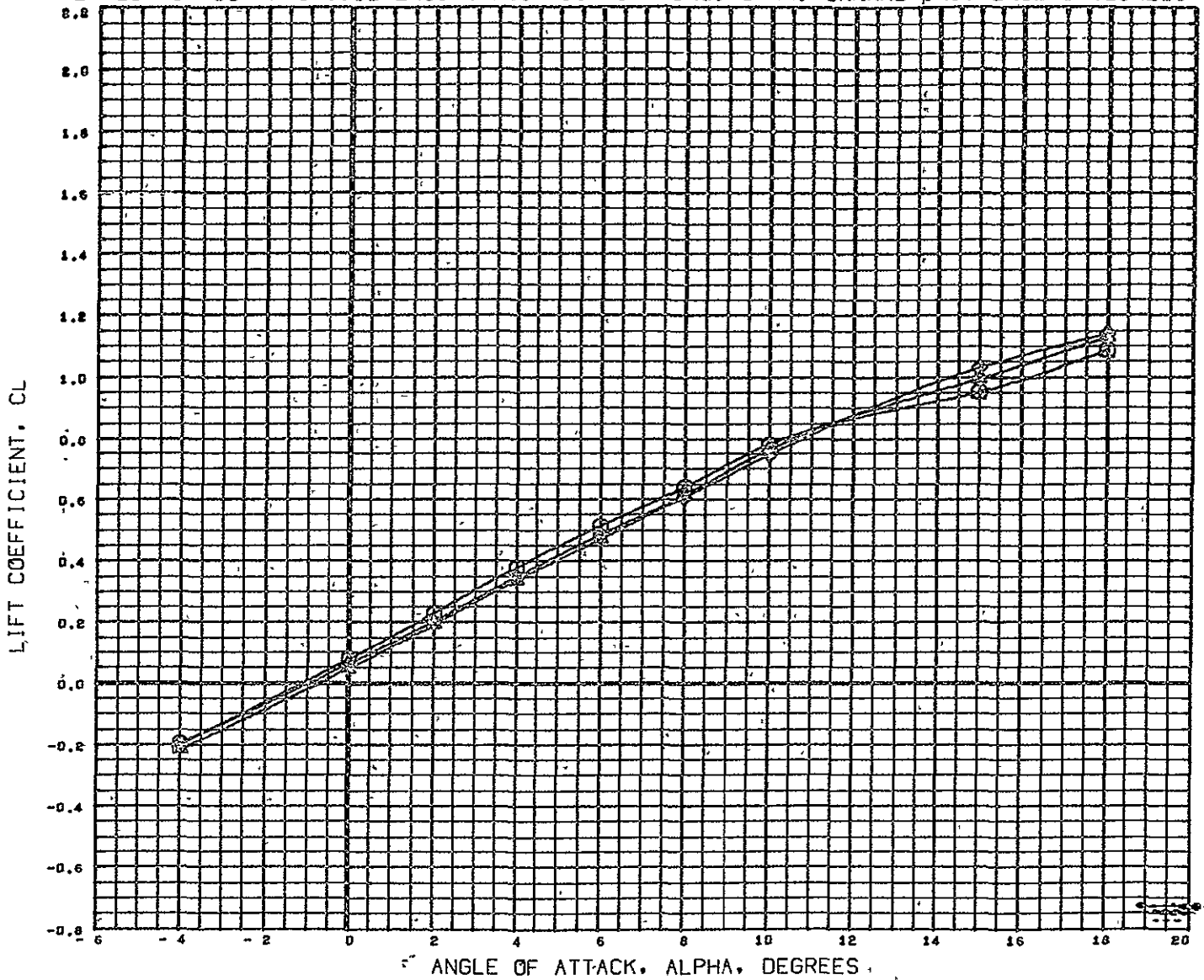


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES.

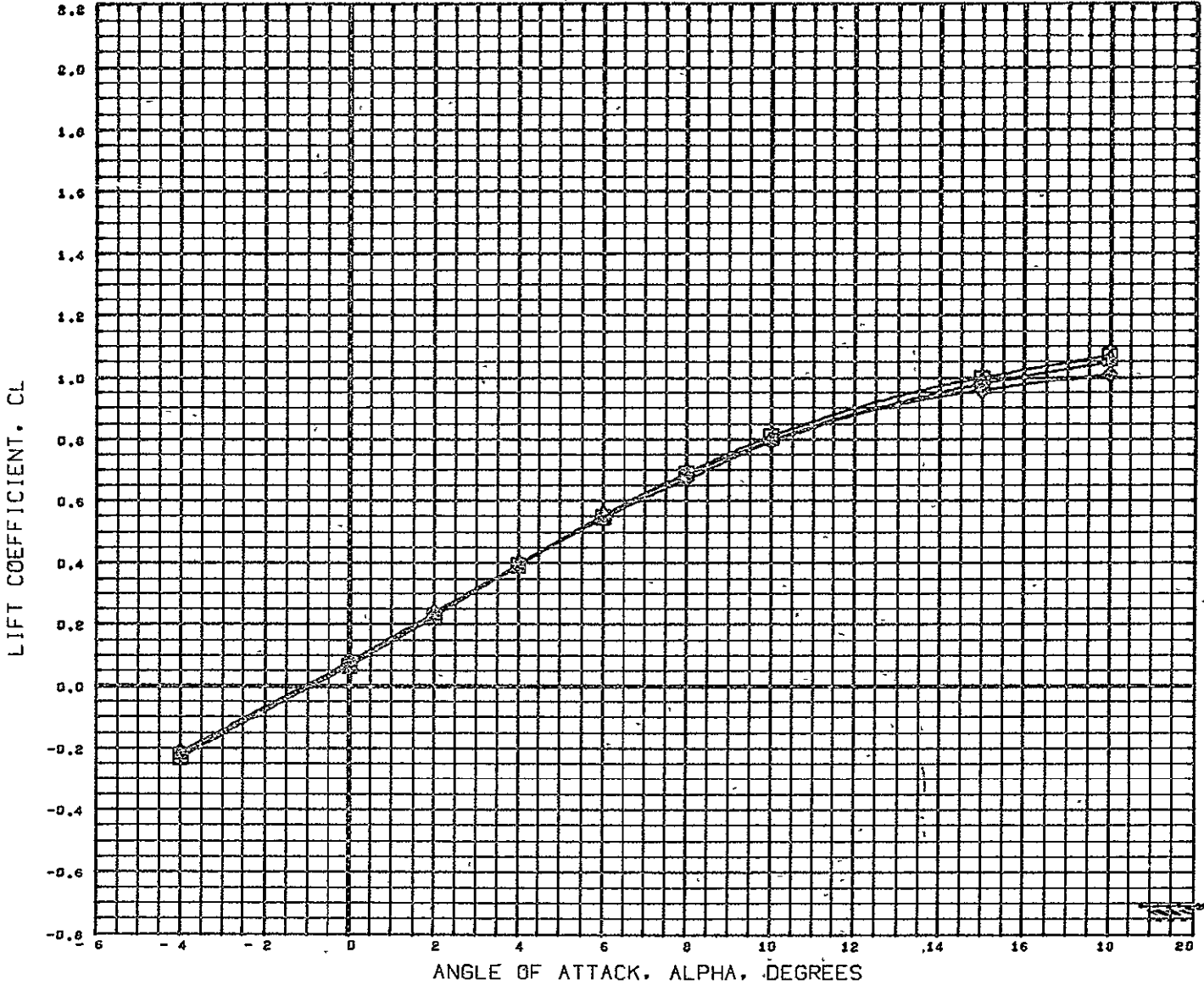


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	2,000	1,000	0,000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3.4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1,000	1,000	0,000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

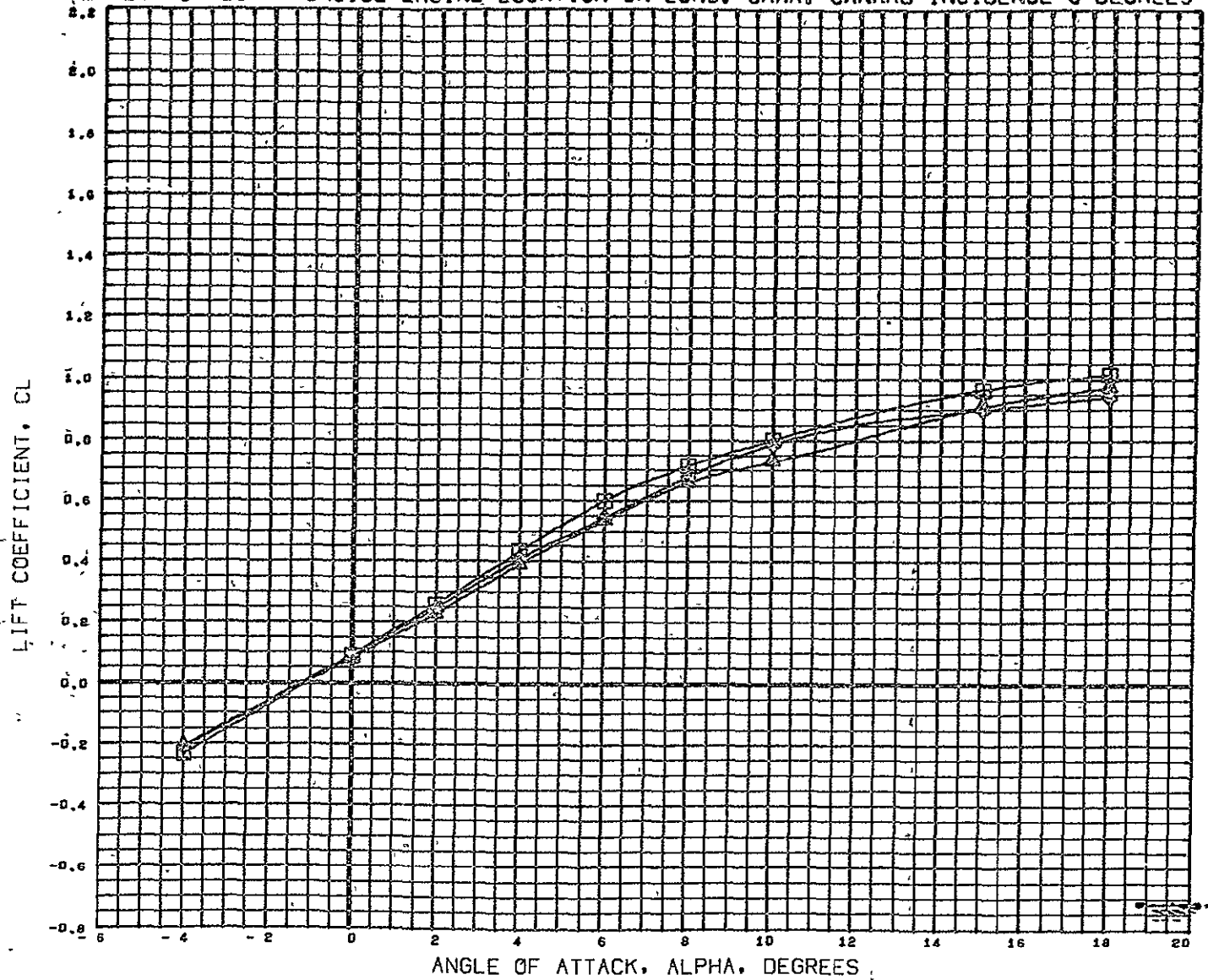


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

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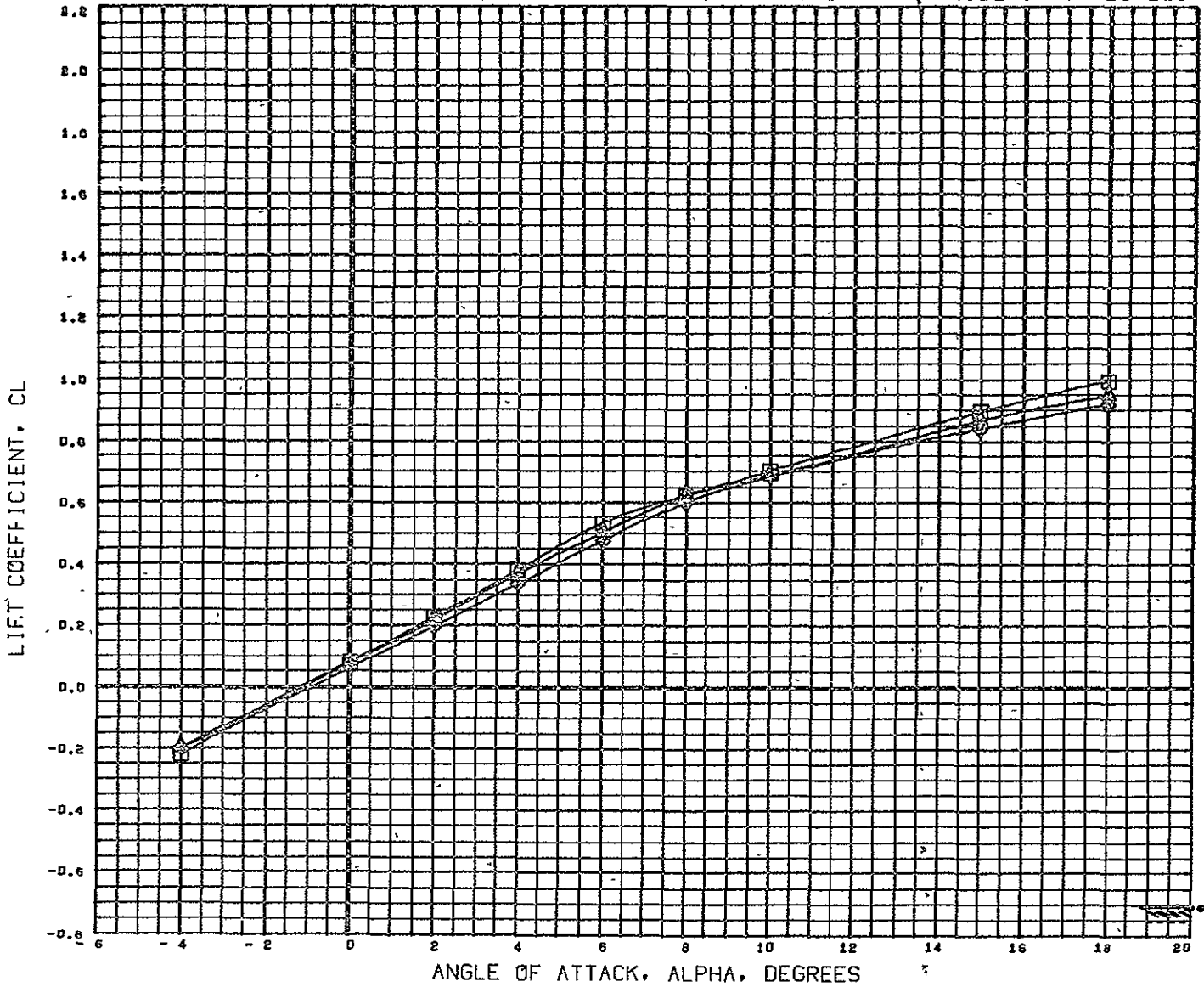
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 0.80

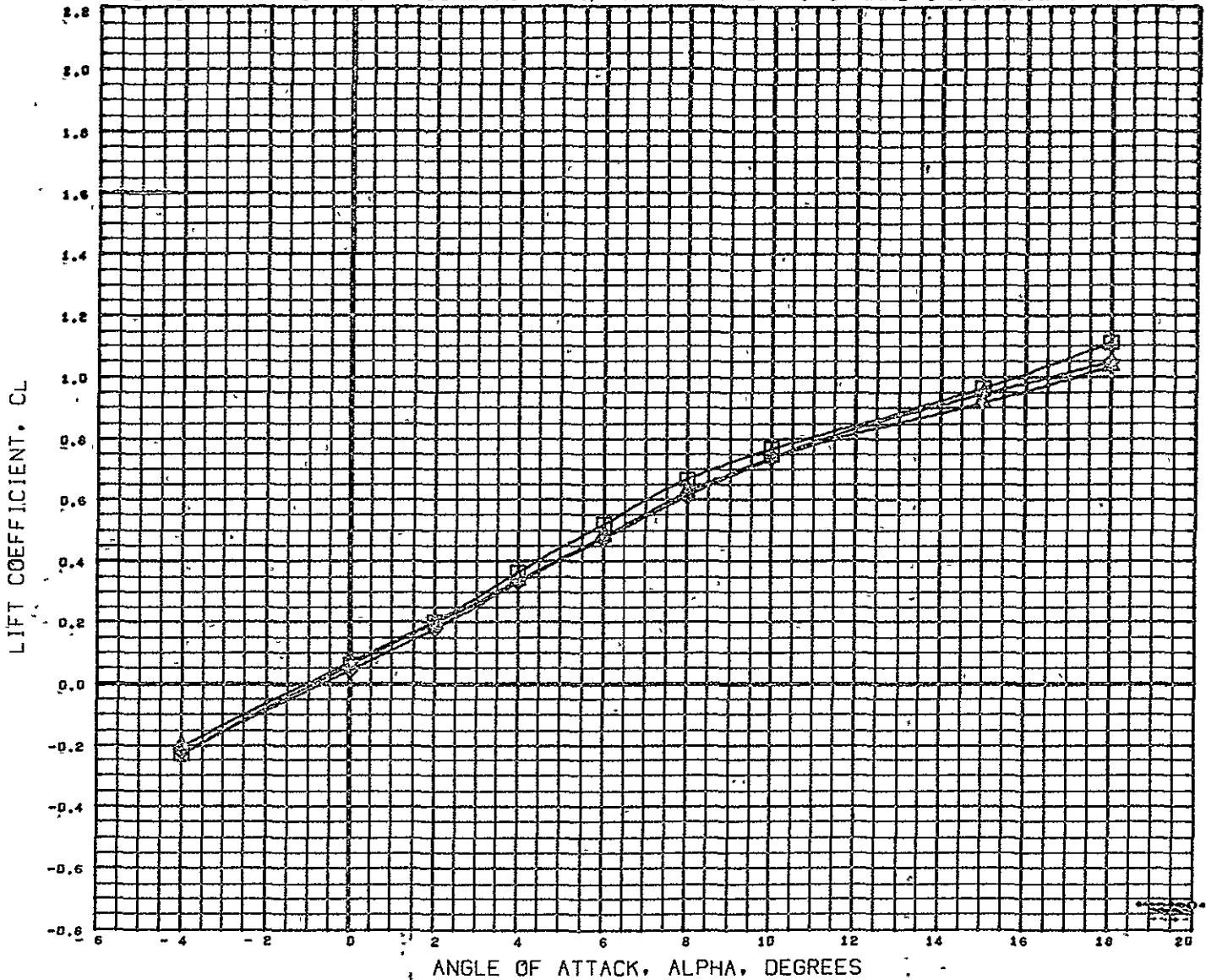
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNCPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ FT
(EN3200)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSFDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3004)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

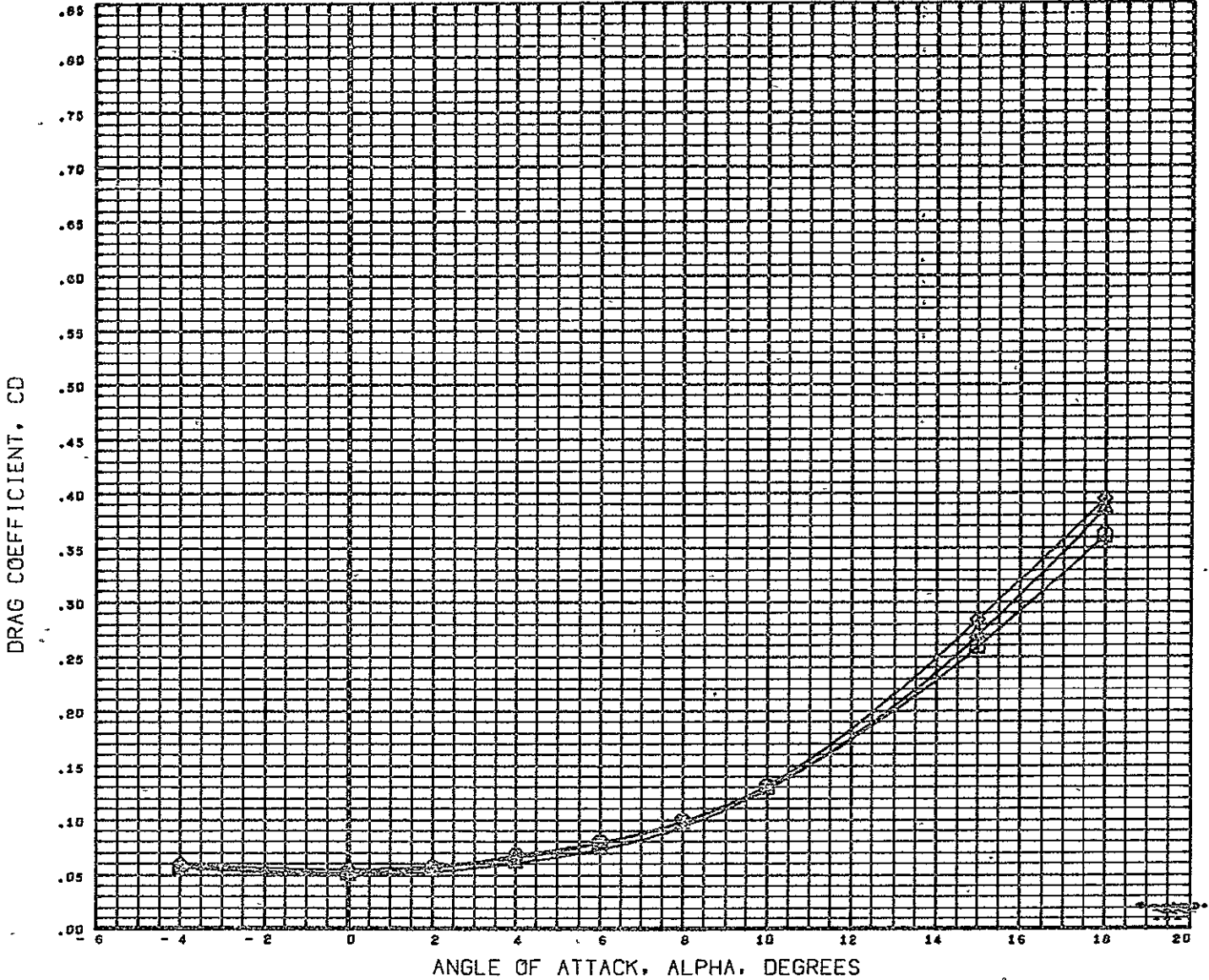


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XHRP 2,5950 FEET
					YHRP 0,0000 FEET
					ZHRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH 1.00

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

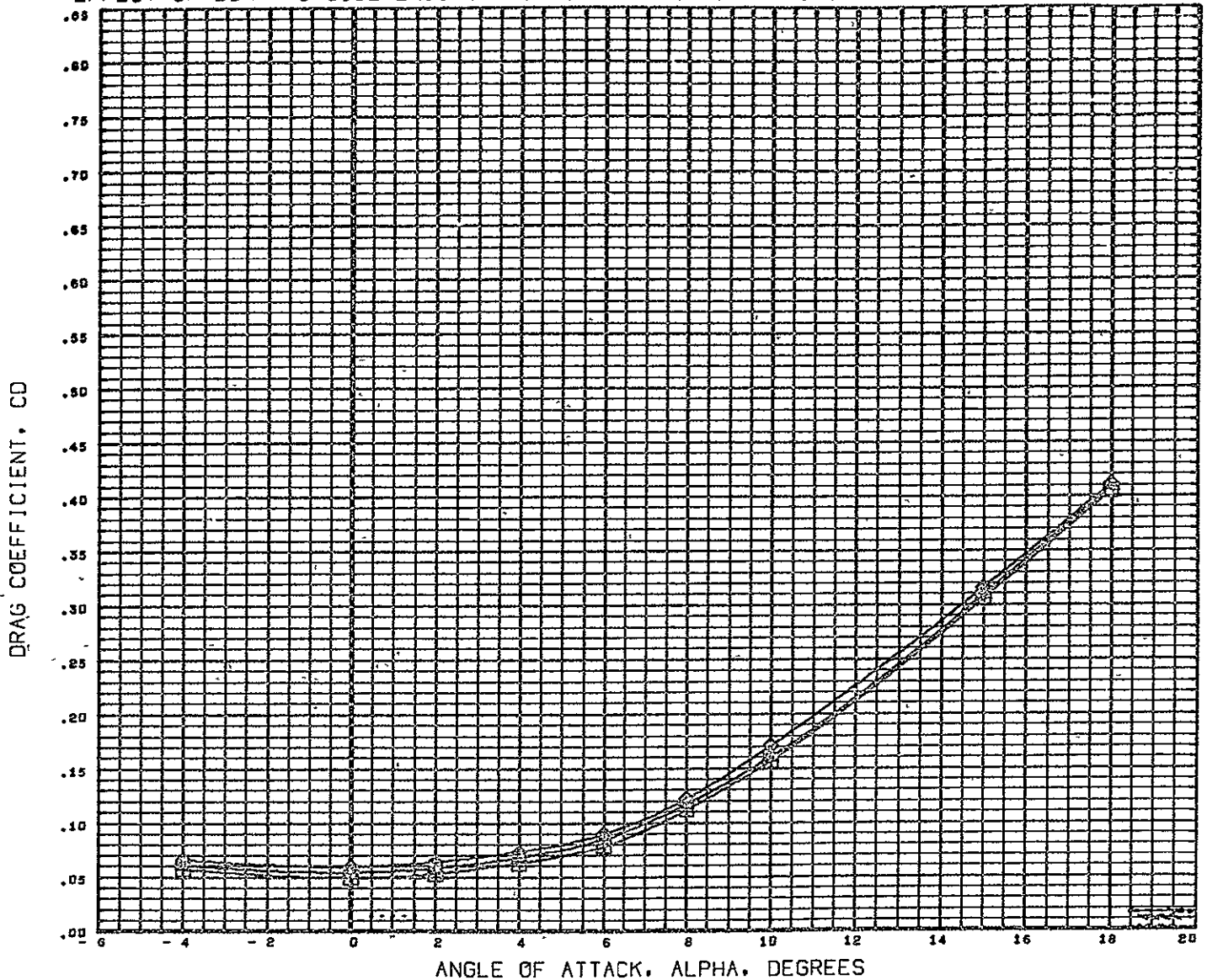


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V161	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0197 FEET
					SCALE 0.0150 SCALE

MACH .40

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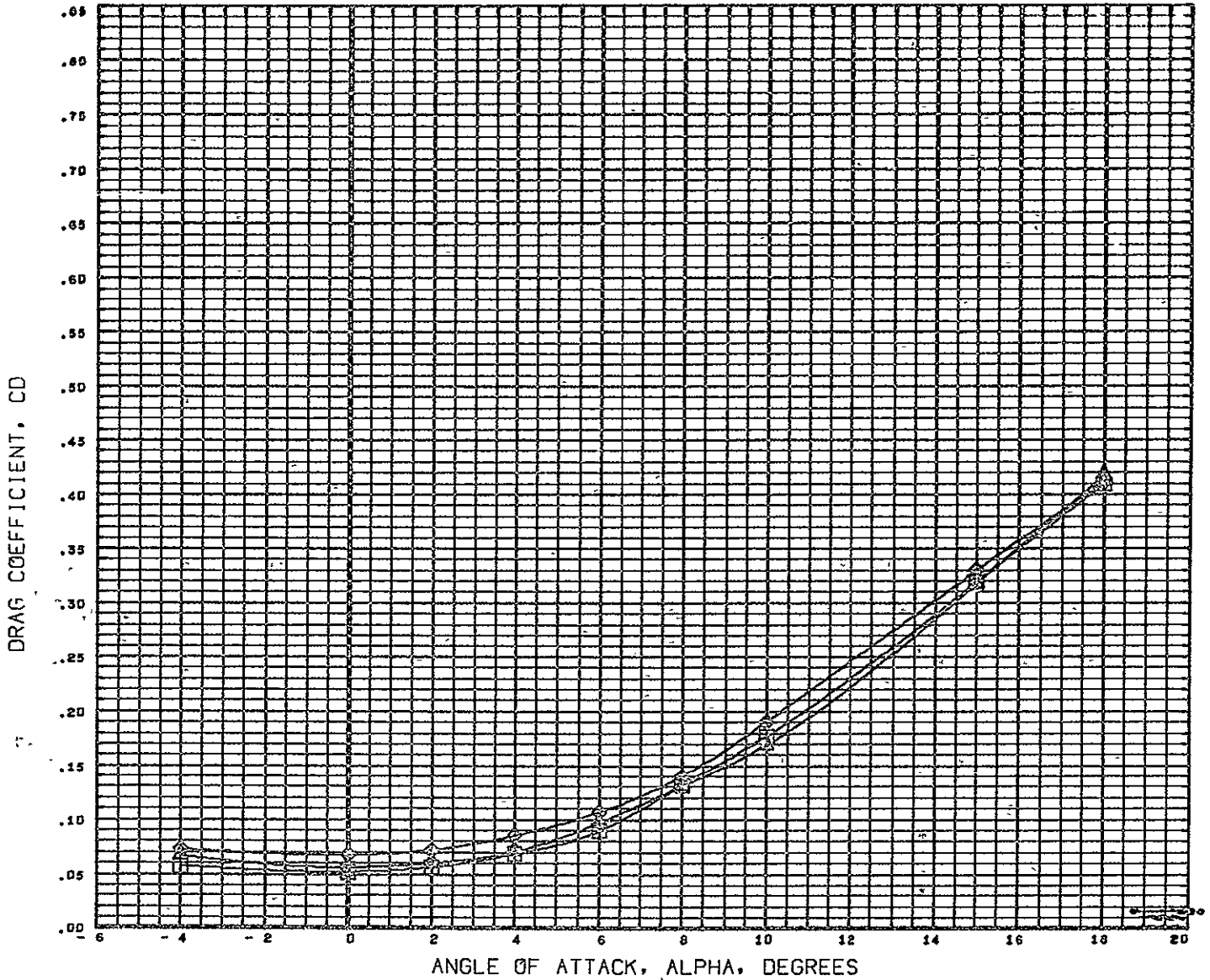
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

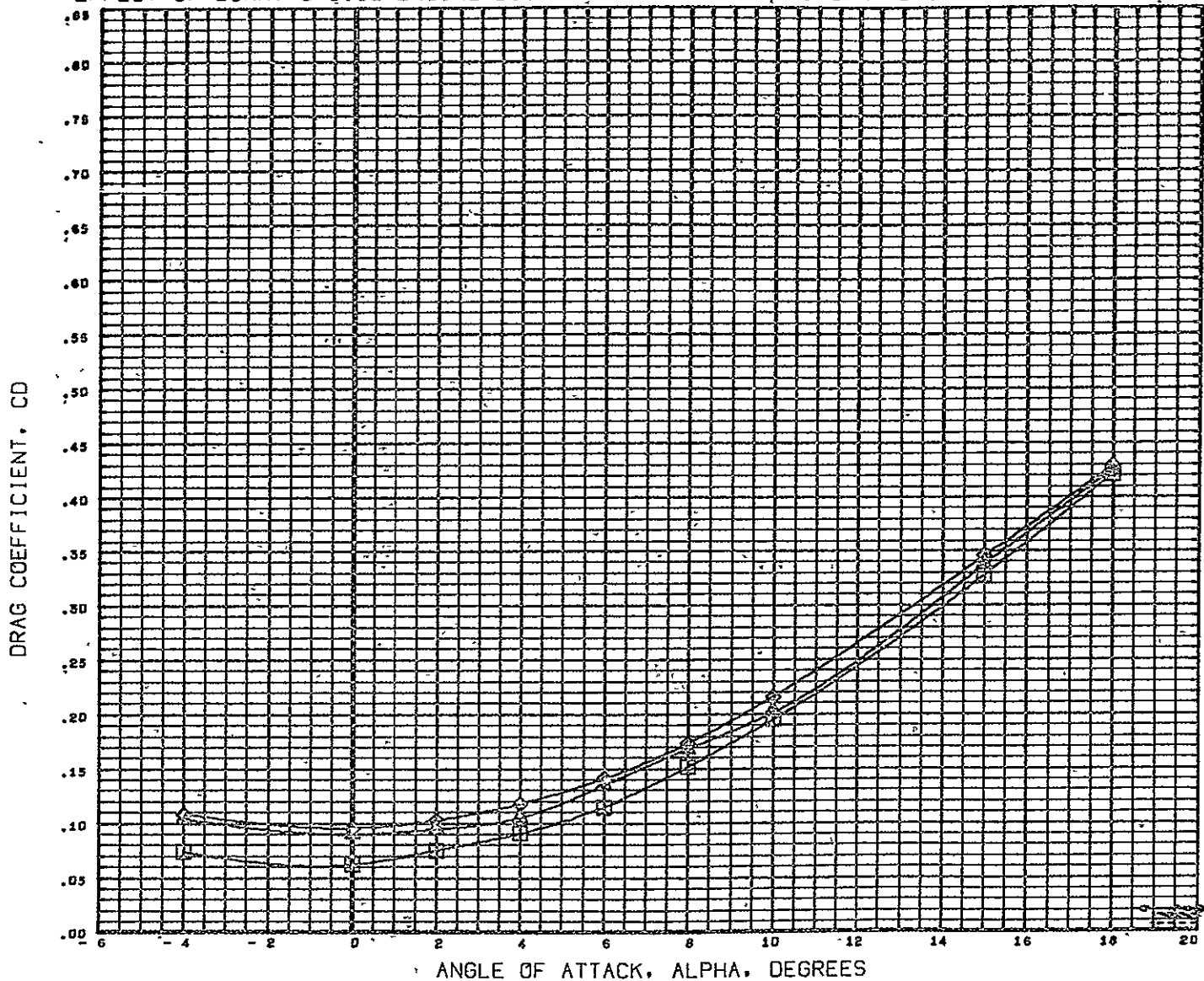
MACH .70

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(EN3200)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

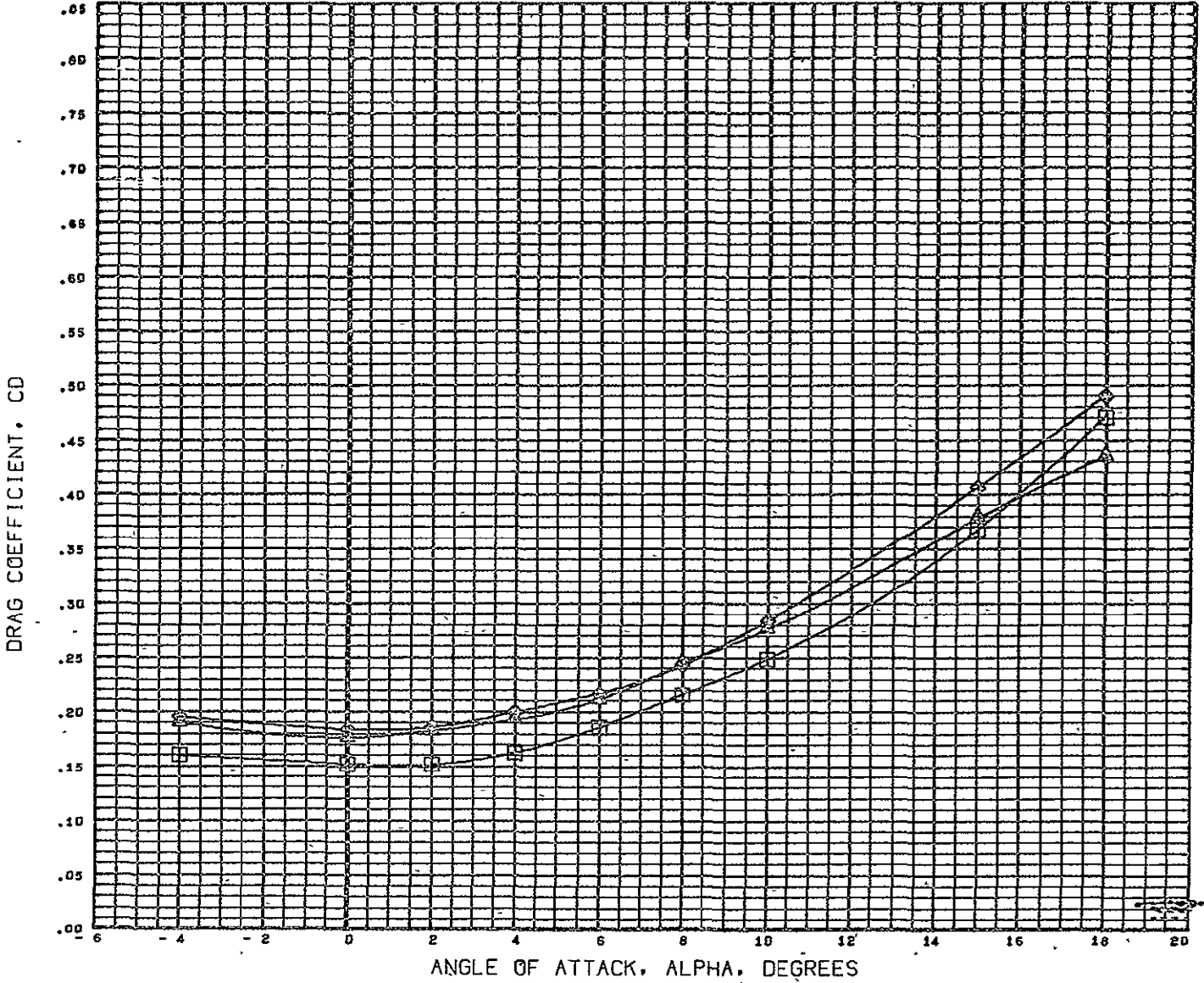
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(EN3200)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

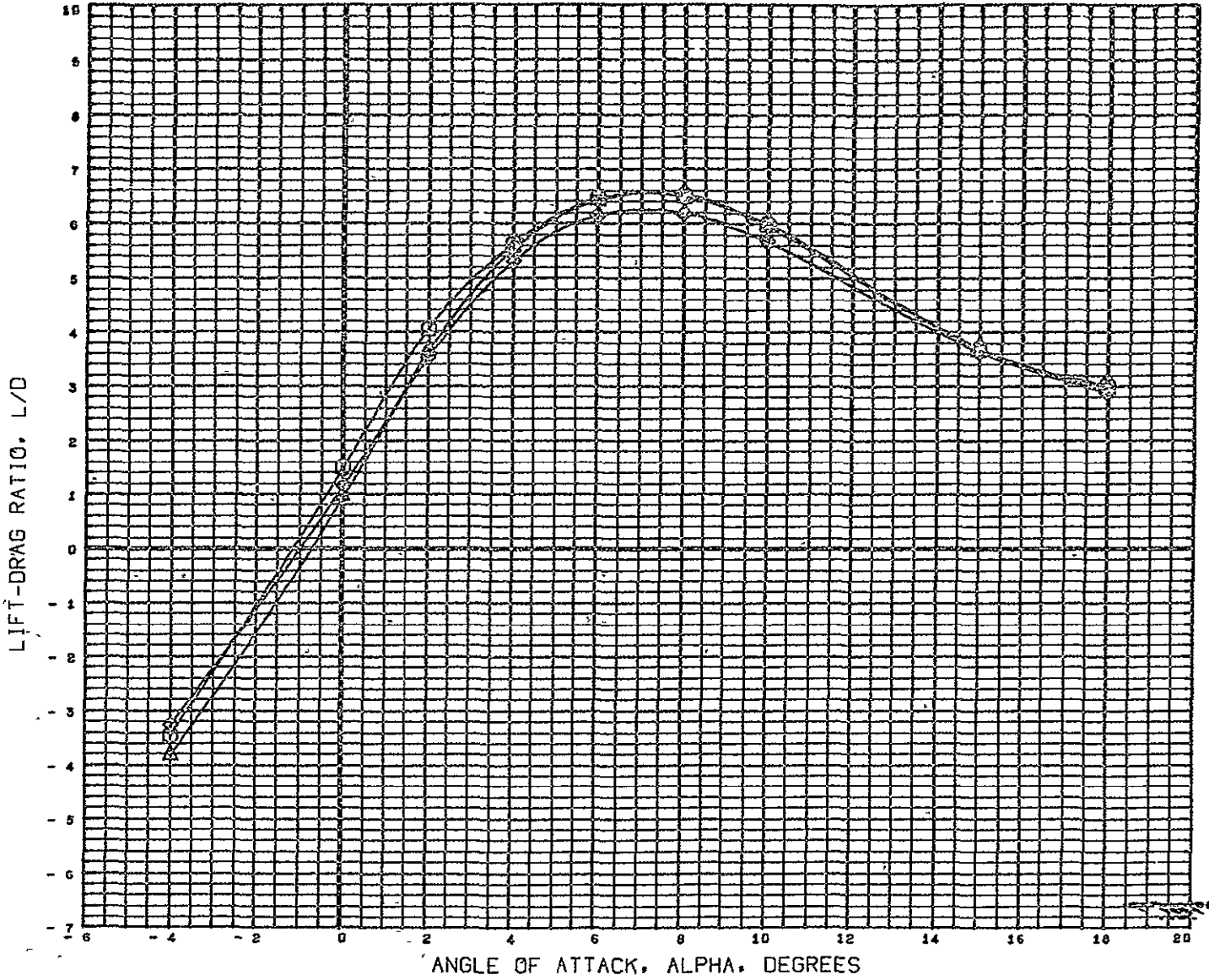


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGFOS	INCIDW	REFERENCE INFORMATION
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(EN3200)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

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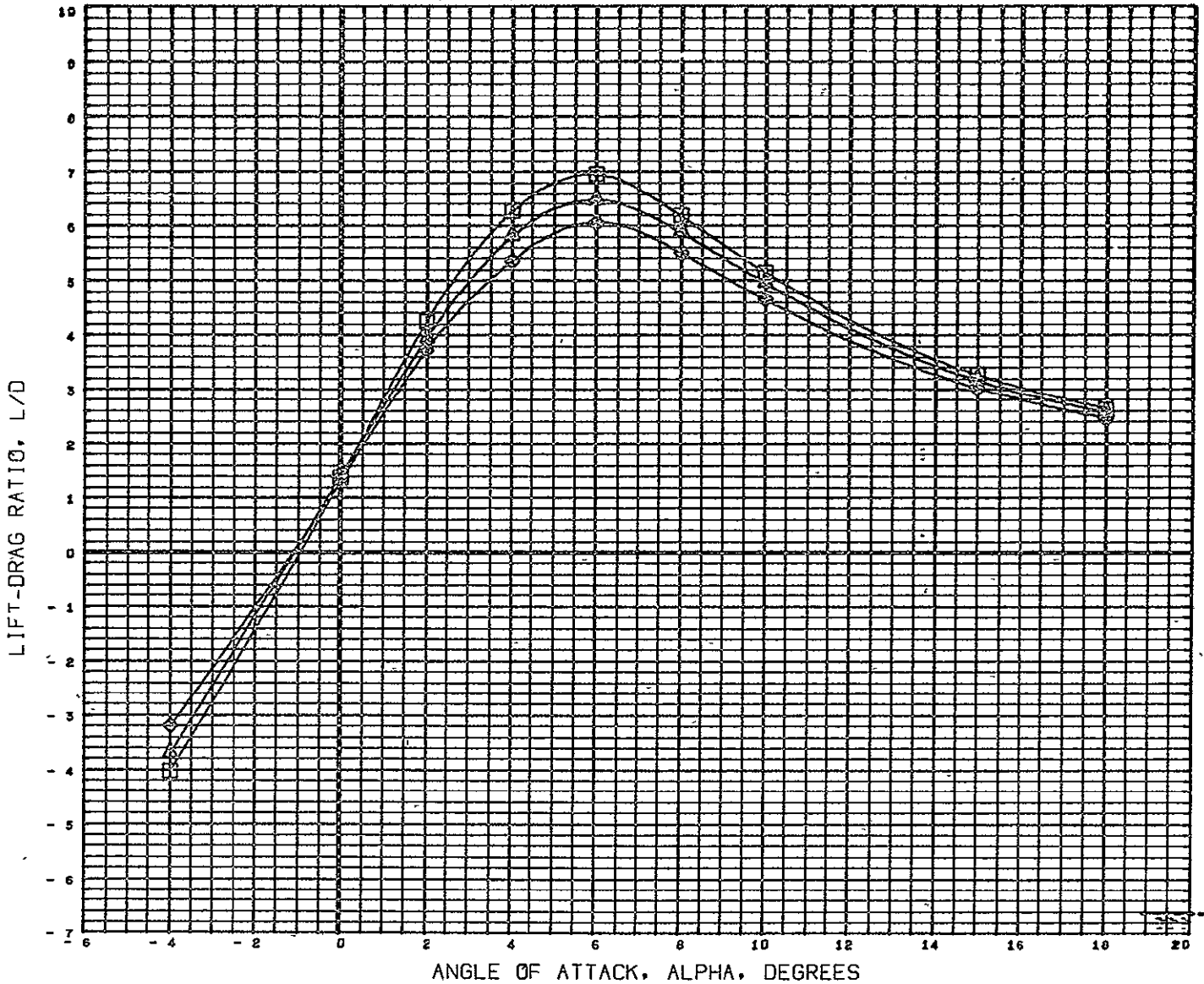
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-321D,MSFC/LMSC BOOSTER B1C2F2W1V1G1	2.000	1.000	0.000	SREF 1 3550 SQ.FT.
(EN3200)	NSRDC-321D,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3,4530 FEET
(EN3205)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3,4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1.000	1.000	0.000	XNRP 2,5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. - CANARD INCIDENCE=3 DEGREES

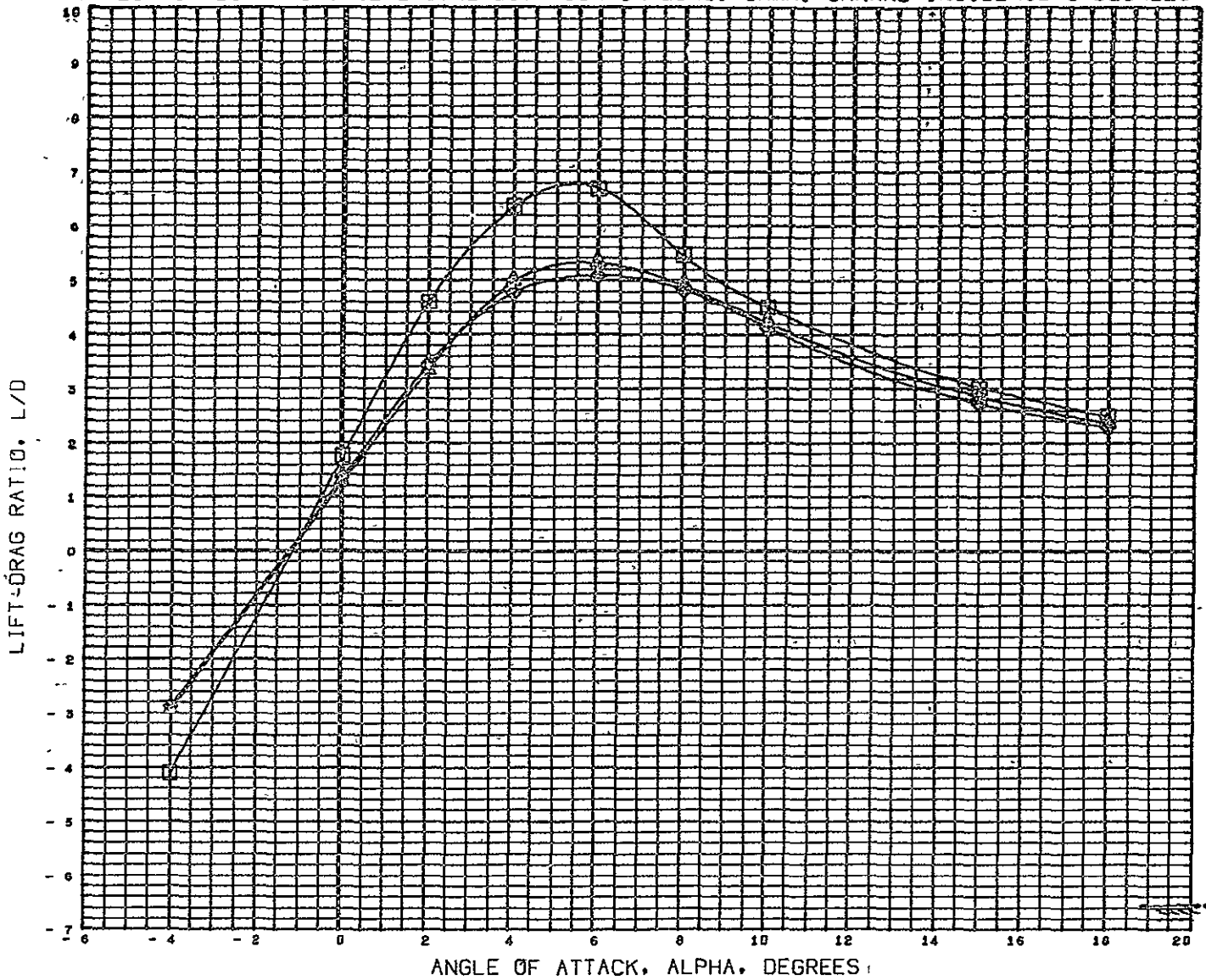


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.4550 SQ. FT.
(EN3200)	NSRDC-3210, MSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

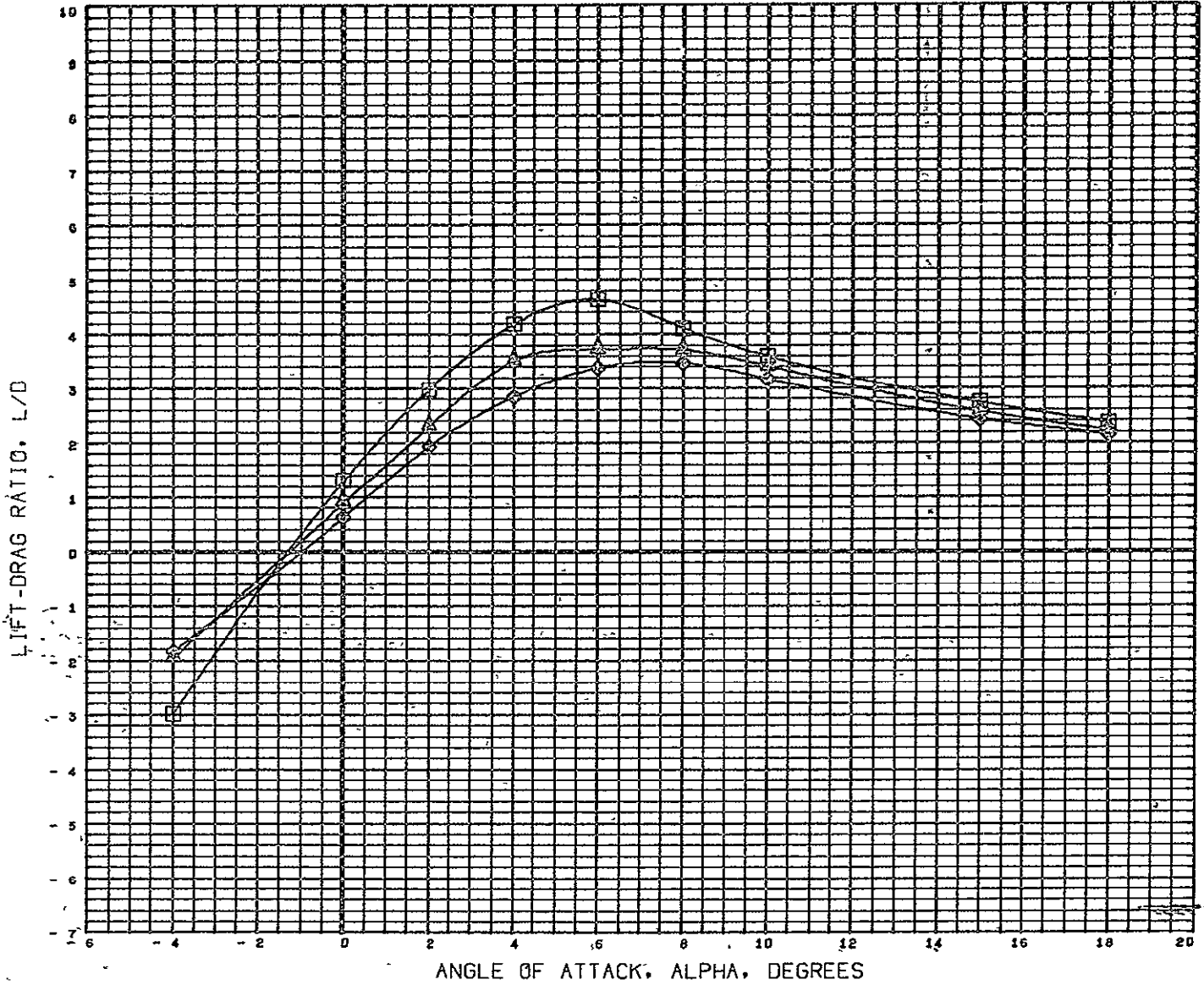


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

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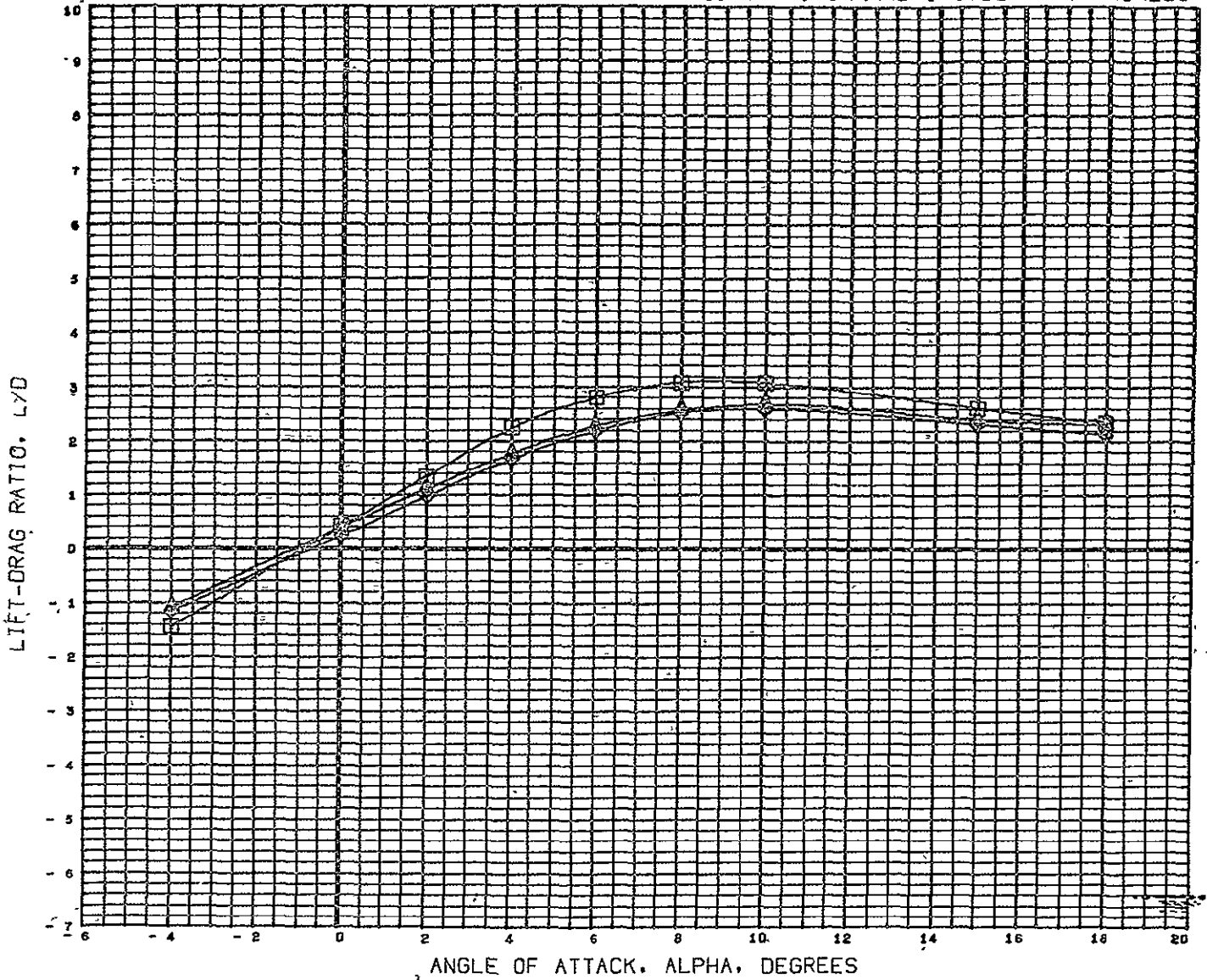
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION-DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1 3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XNRP 2,5950 FEET
					YNRP 0,0000 FEET
					ZHRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH .90

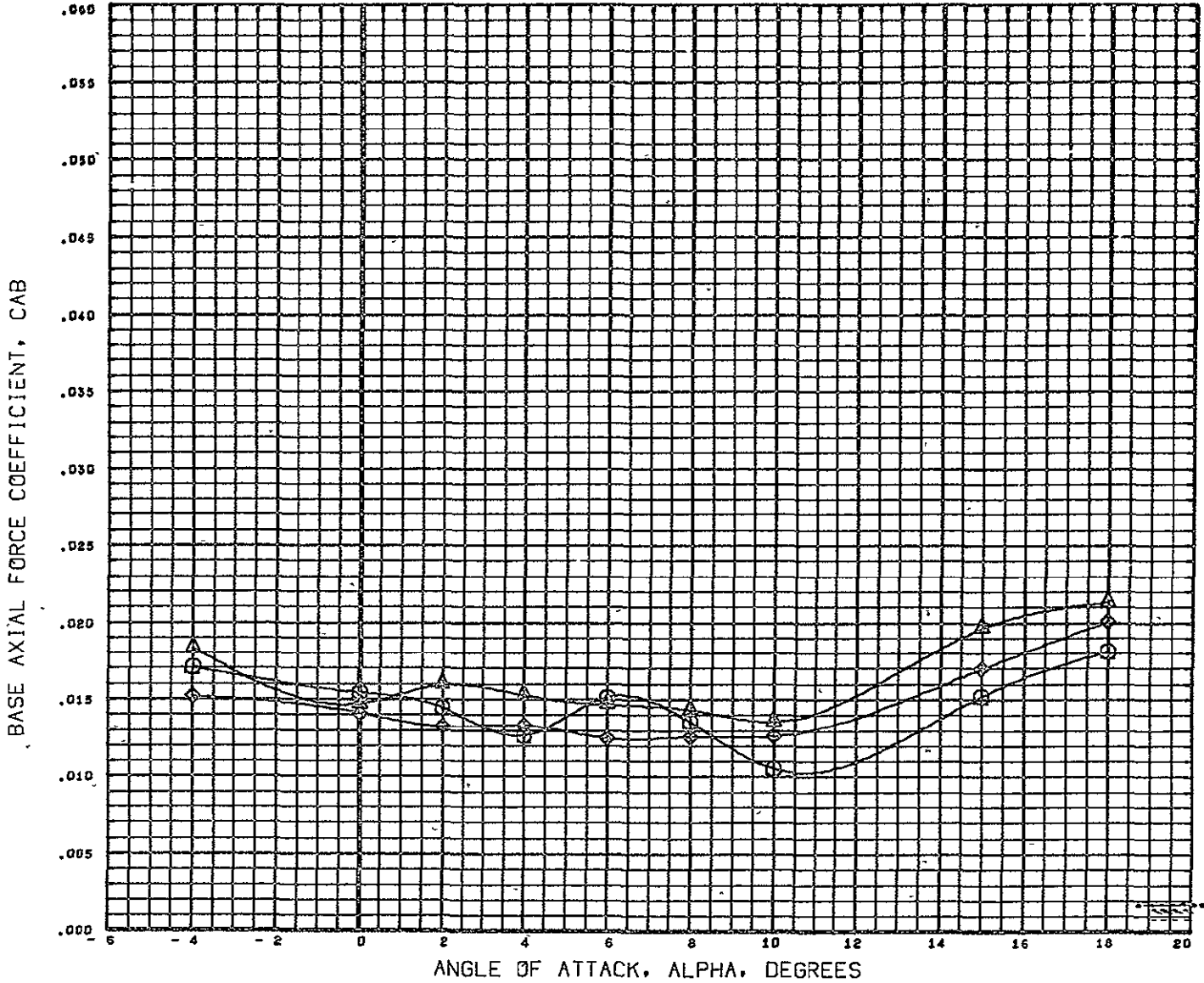
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

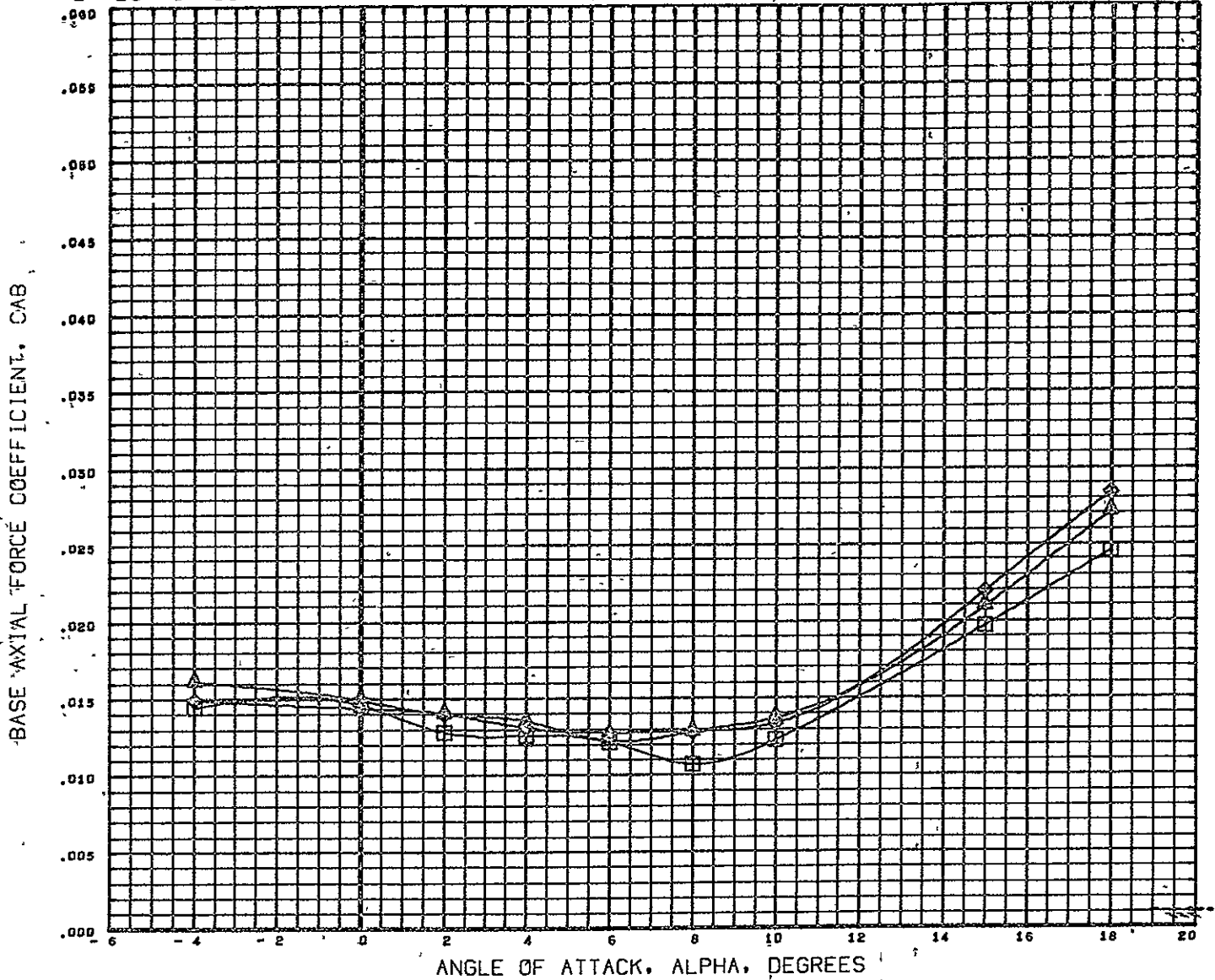


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V161	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

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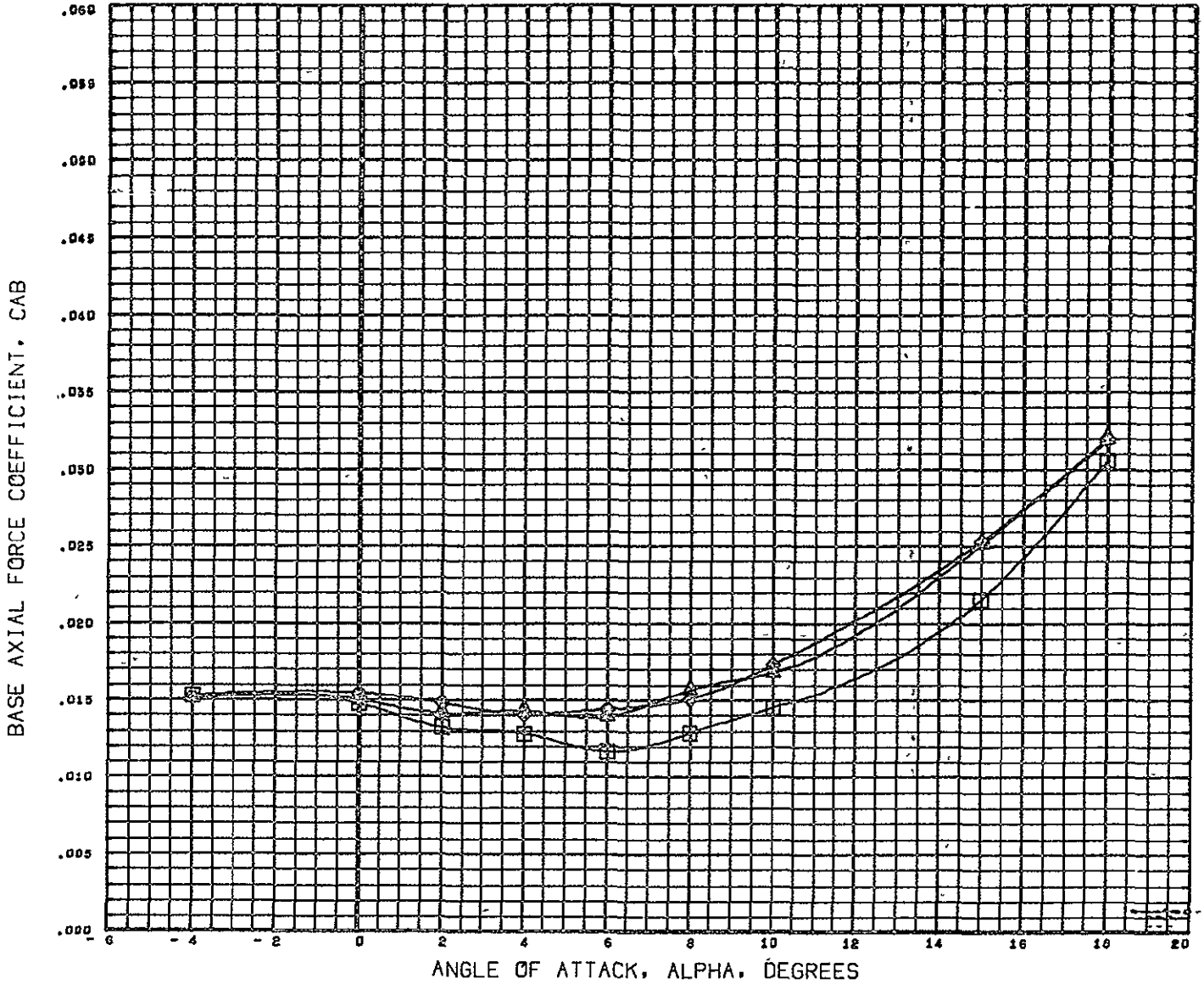
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF	1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF	3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF	3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP	2.5950 FEET
					YMRP	0.0000 FEET
					ZMRP	0.0187 FEET
					SCALE	0.0150 SCALE

MACH .70

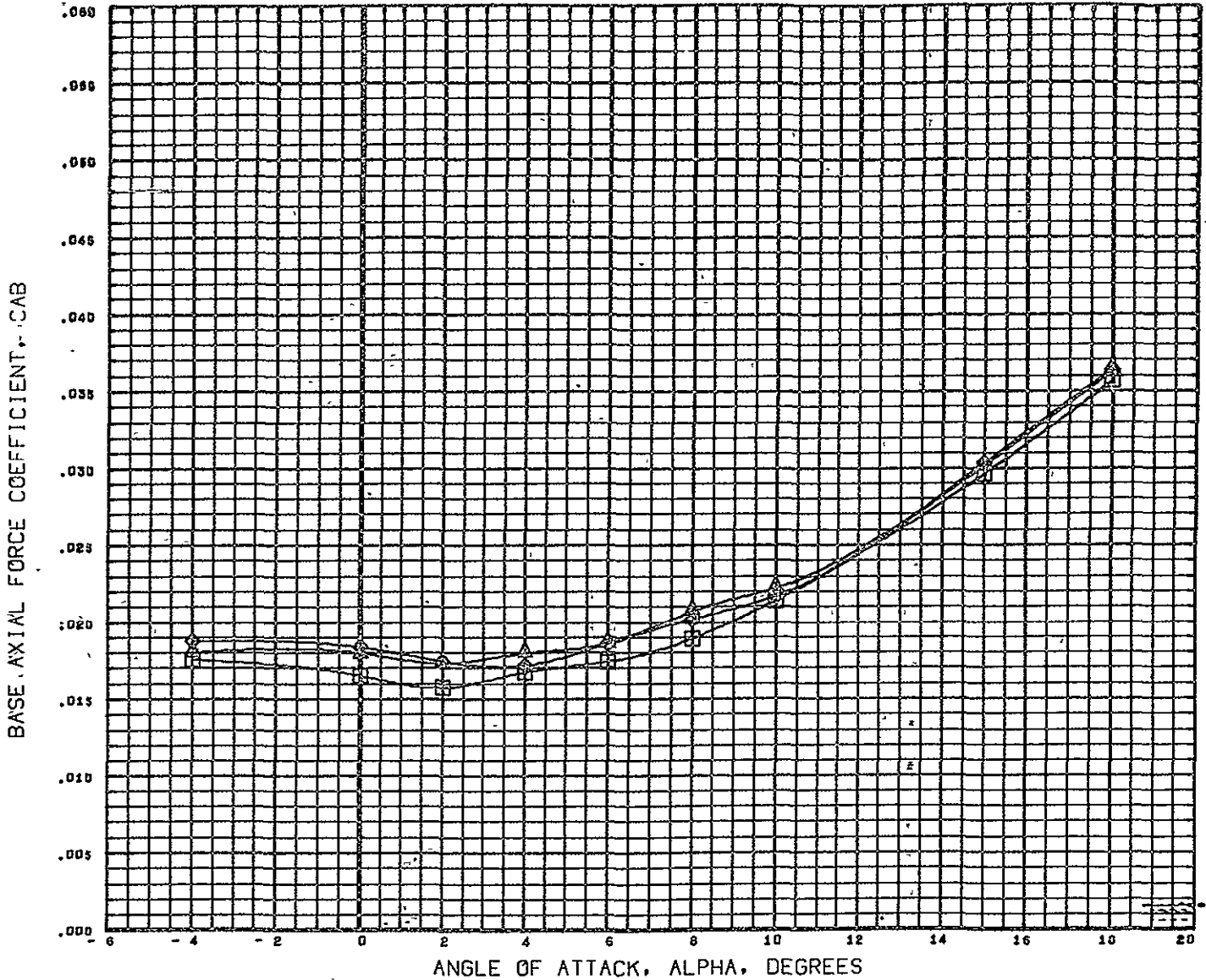
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

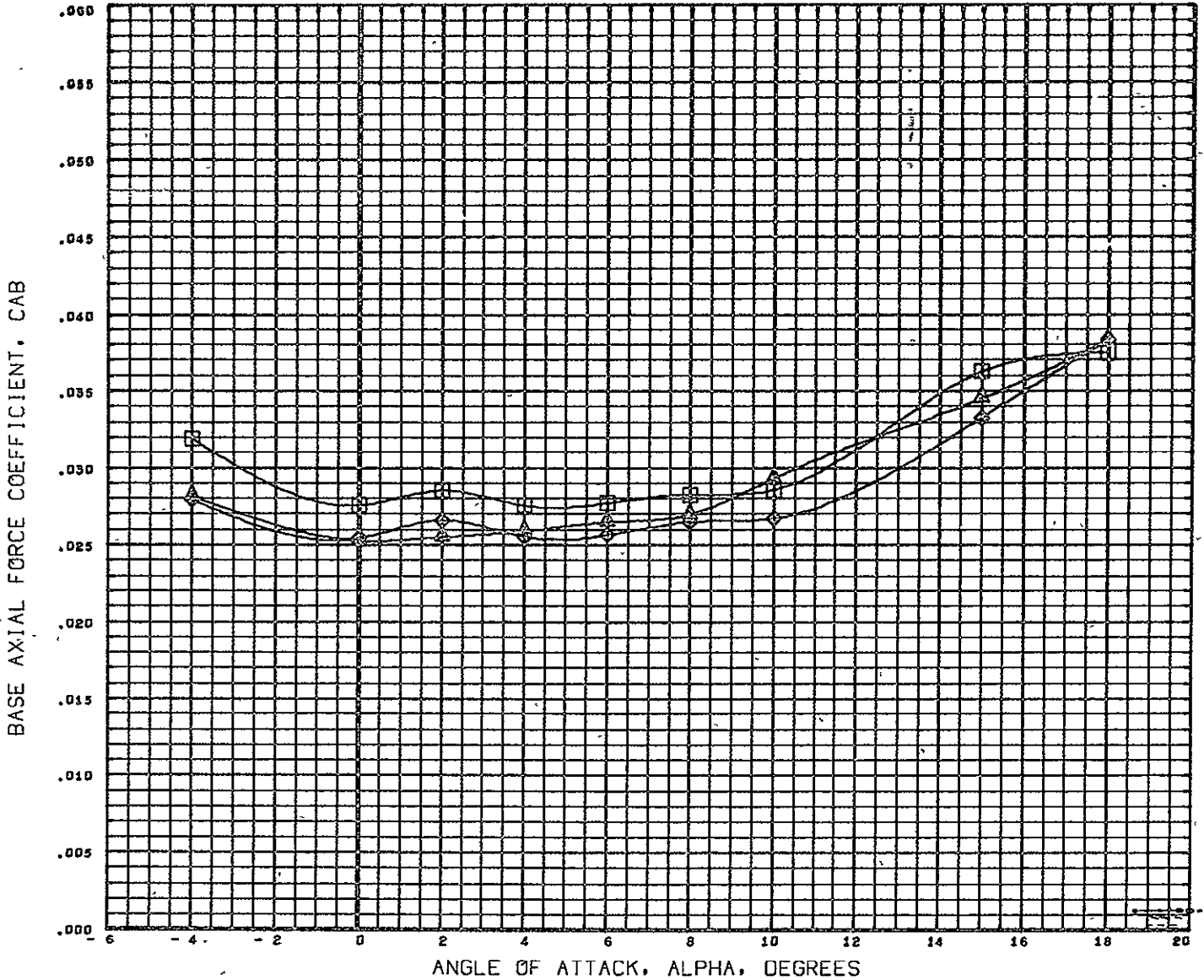
MACH .80

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210, HSEC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, HSEC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, HSEC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

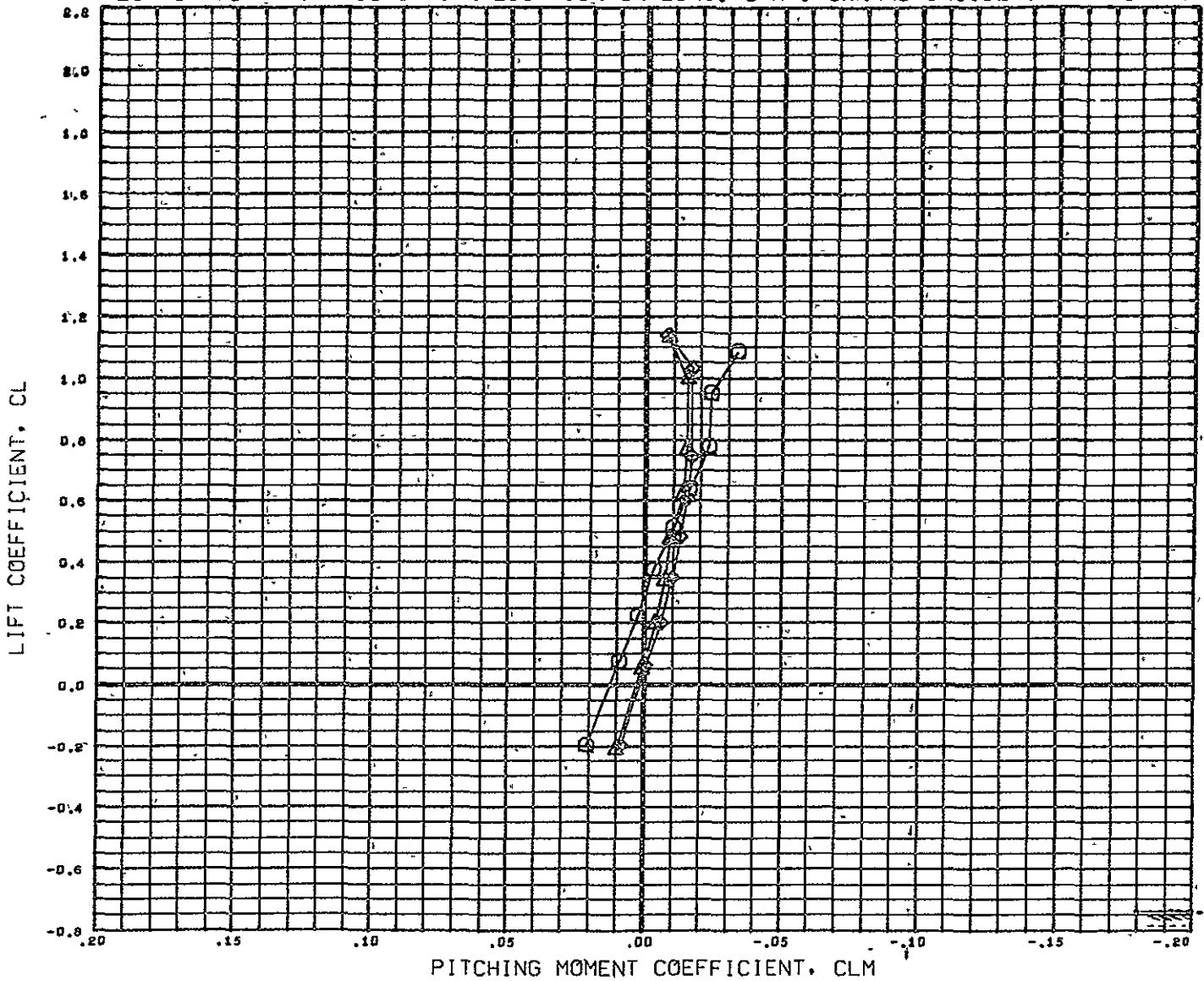
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ FT.
(EN3200)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,NSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

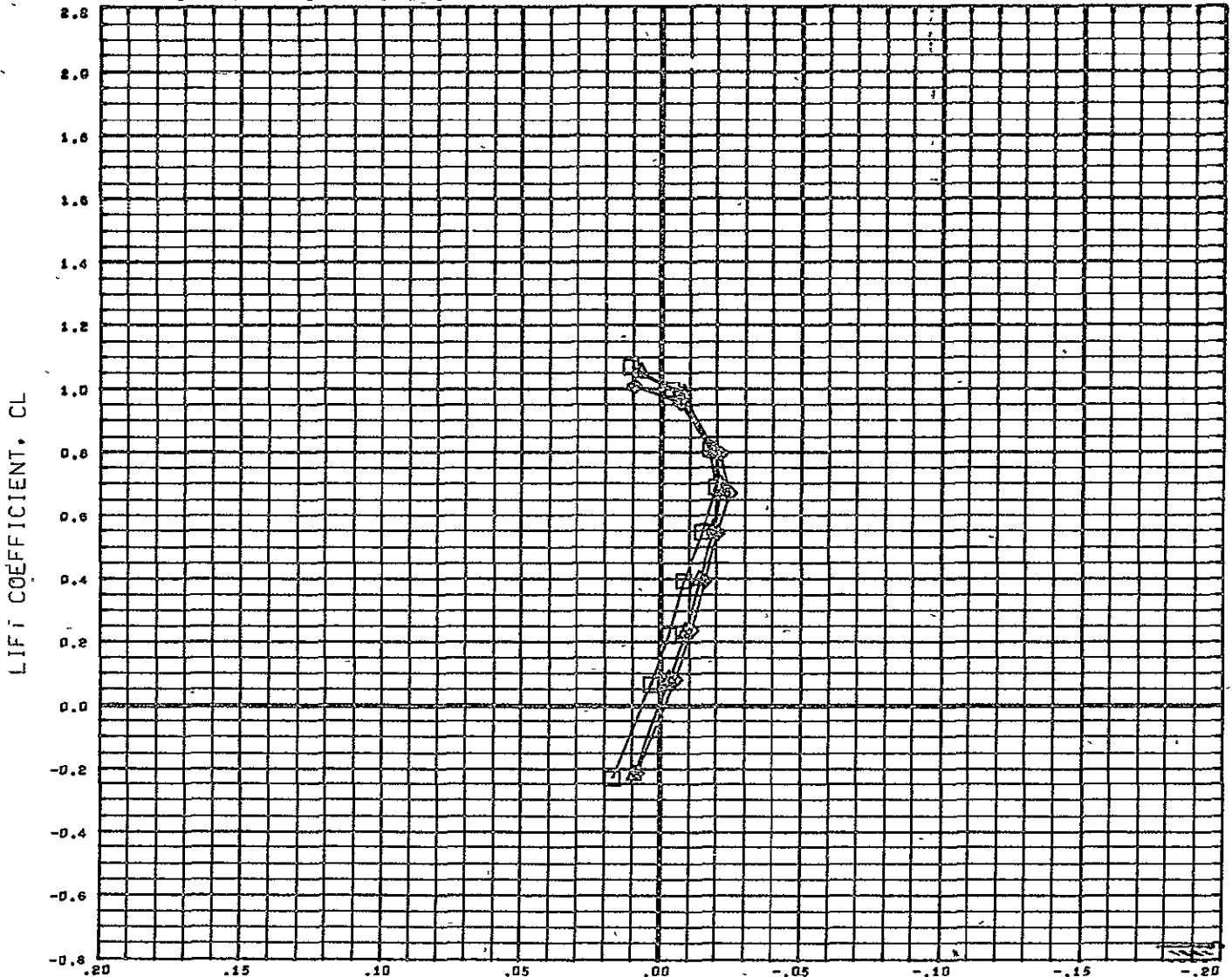
MACH 1.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G1	2,000	1,000	0.000	SREF 1.3550 SQ.FT
(EN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G2	1,000	1,000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	1,000	1,000	0.000	BREF 3.4530 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1,000	1,000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

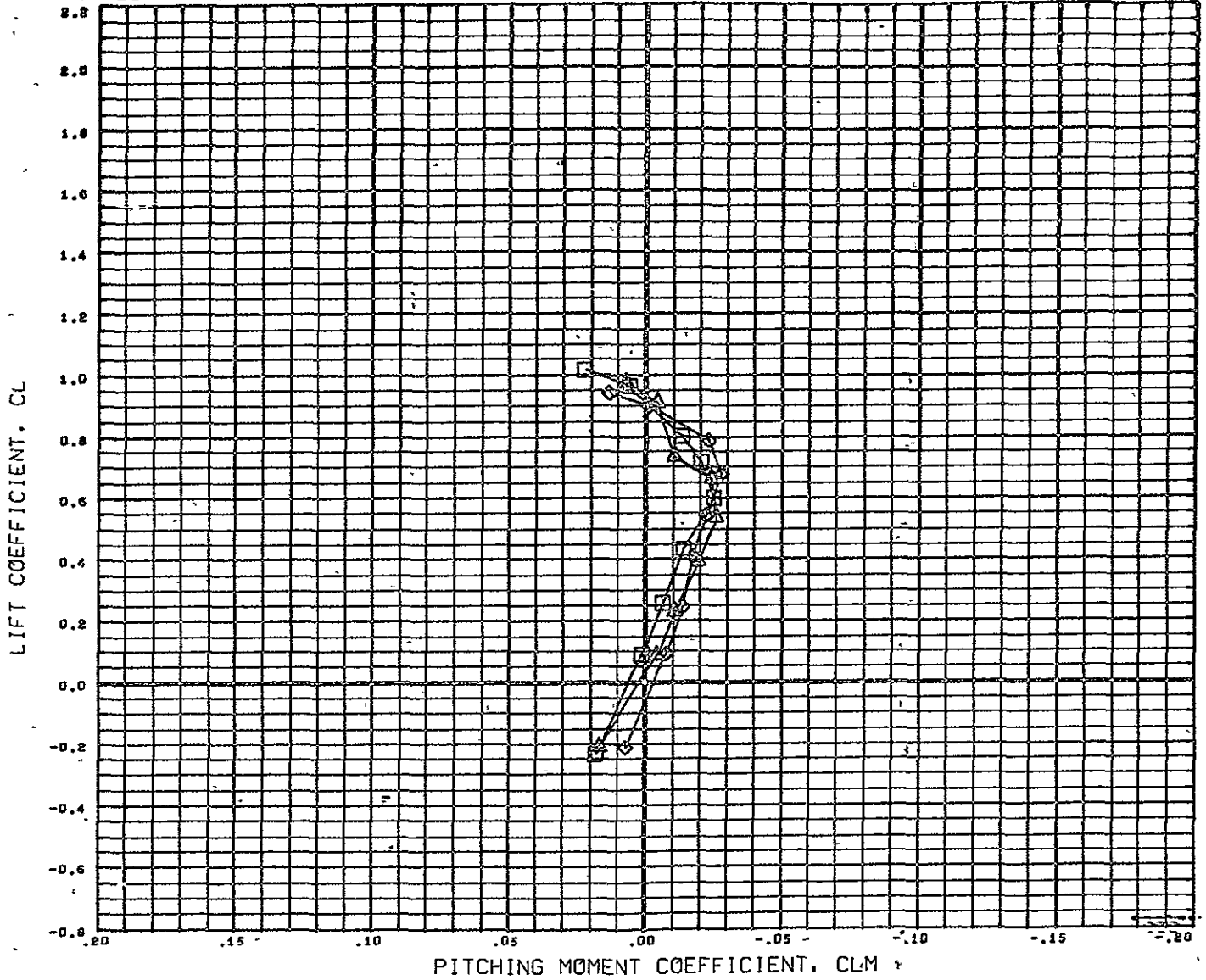
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

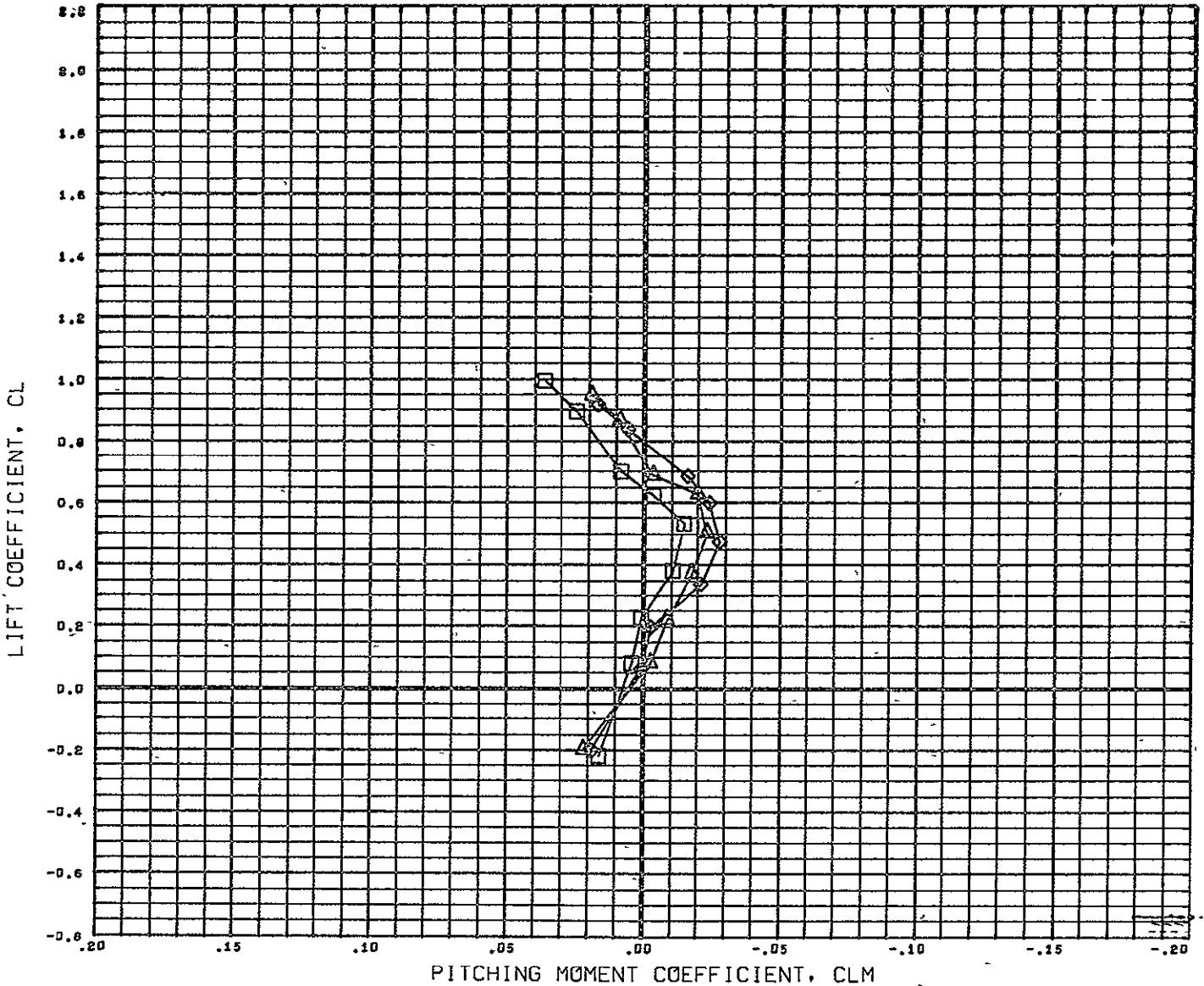
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

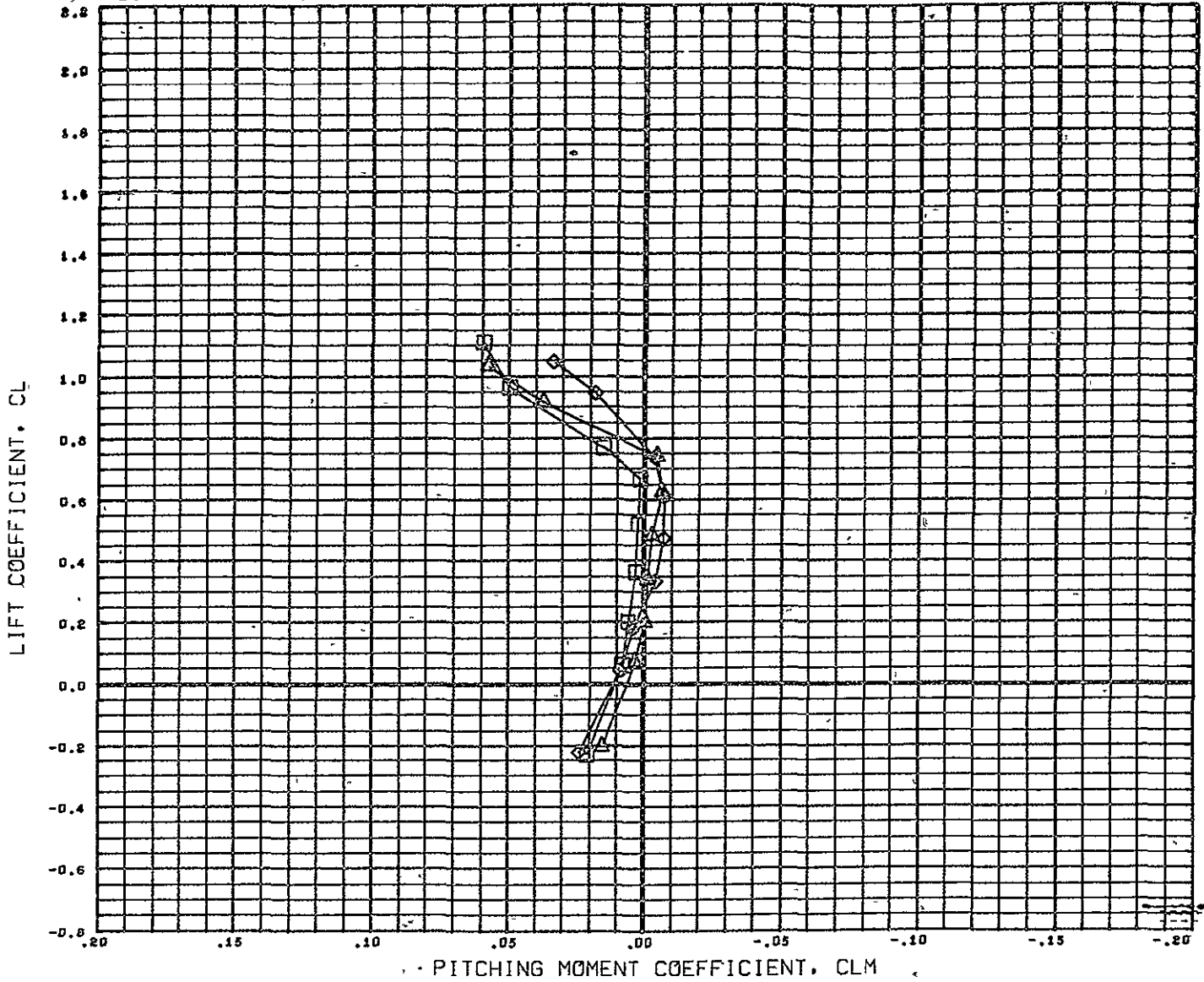
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES

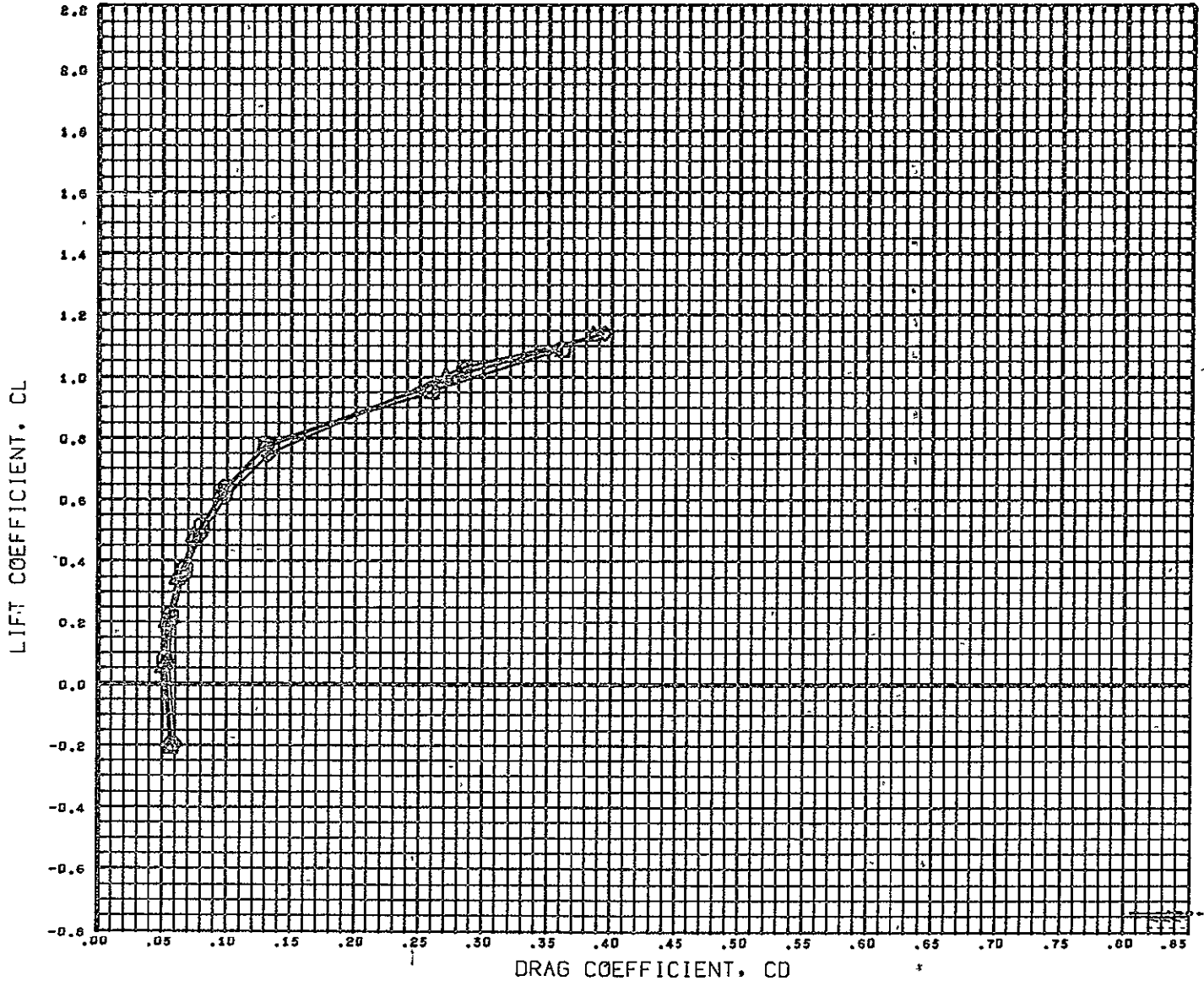


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1 3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0107 FEET
					SCALE 0.0150 SCALE

MACH 1.00

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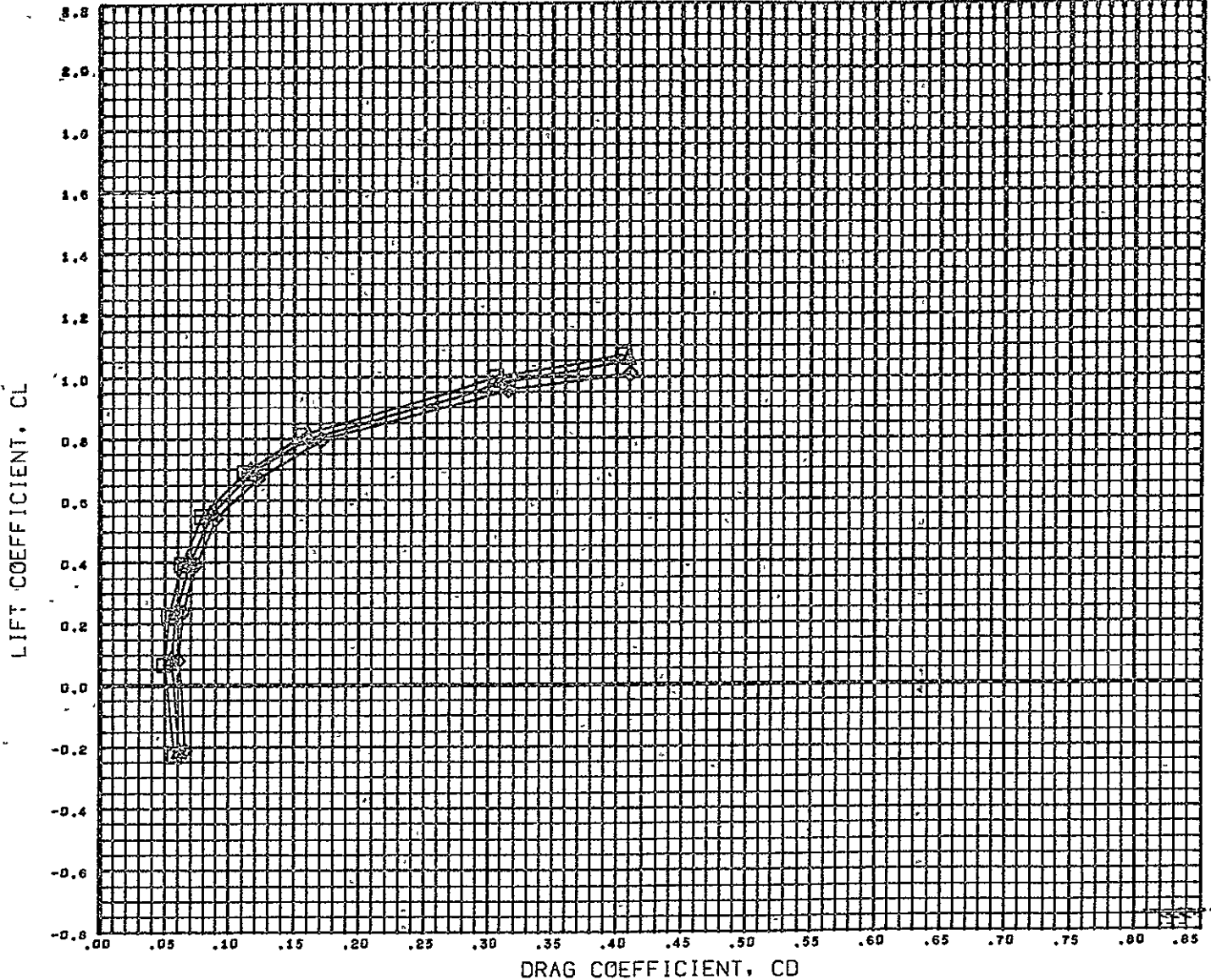
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V161	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(EN3200)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V162	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V166	1.000	1.000	0.000	BREF 3.4630 FEET
(EN3001)	DATA NOT AVAILABLE FOR ALL CONDITIONS	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

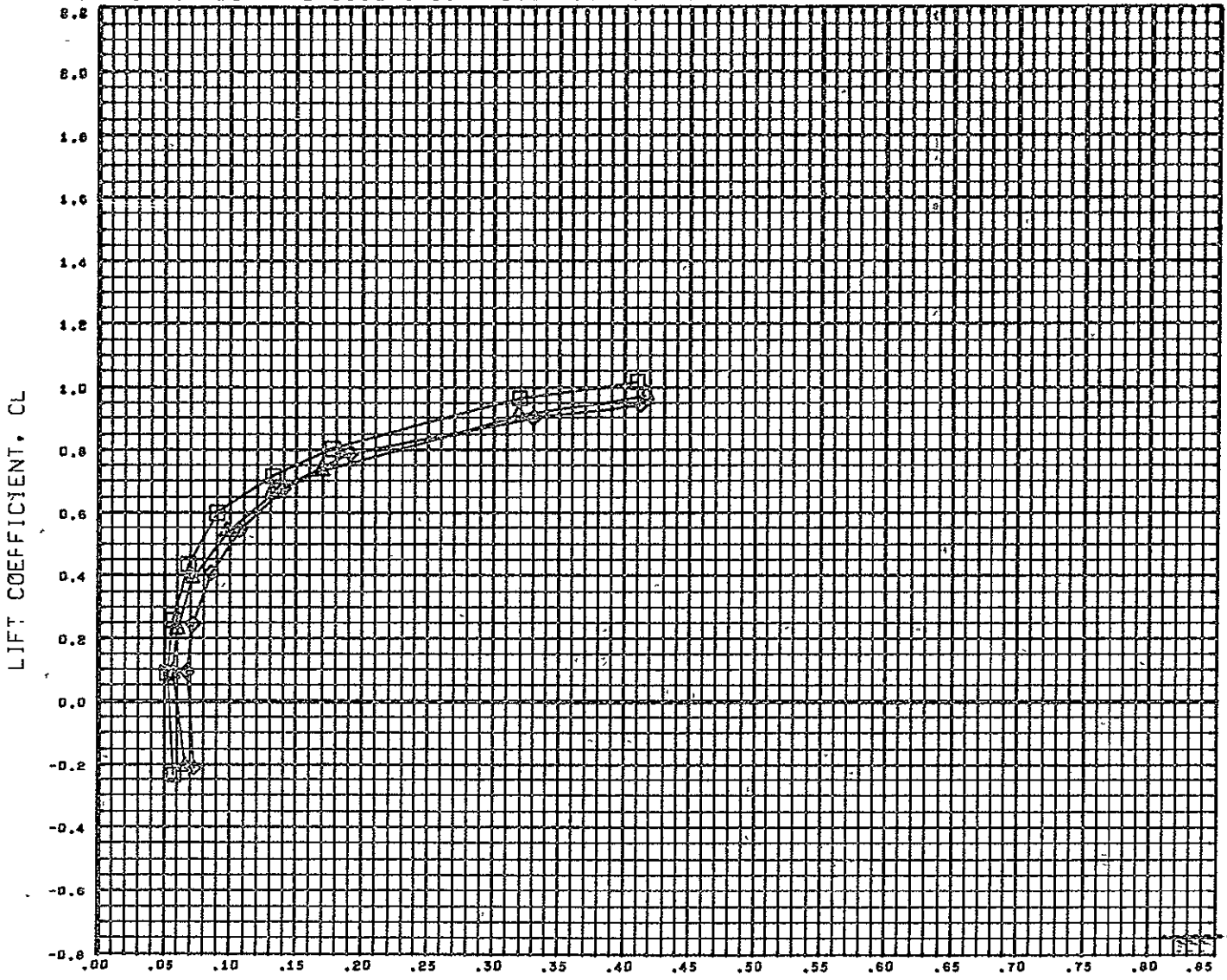
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD, INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE, FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XHRP 2.5950 FEET
					YHRP 0.0000 FEET
					ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



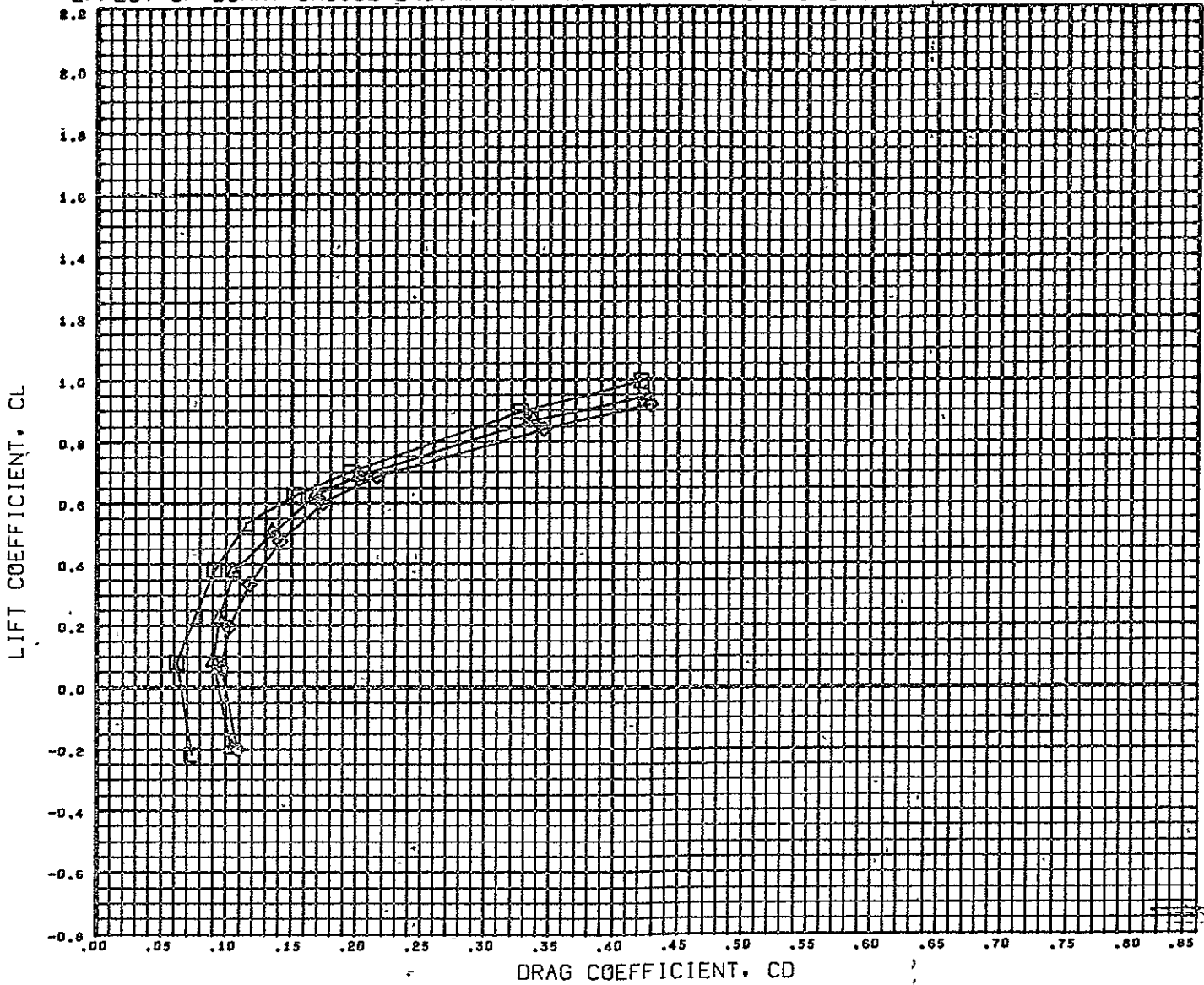
DRAG COEFFICIENT, CD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{EN3202}	DATA NOT AVAILABLE FOR ALL CONDITIONS	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
{EN3200}	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V162	1,000	1,000	0,000	LREF 3,4530 FEET
{EN4025}	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V166	1,000	1,000	0,000	BREF 3,4530 FEET
{EN3001}	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	1,000	1,000	0,000	XNRP 2,5950 FEET
					YNRP 0,0000 FEET
					ZMRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH .80

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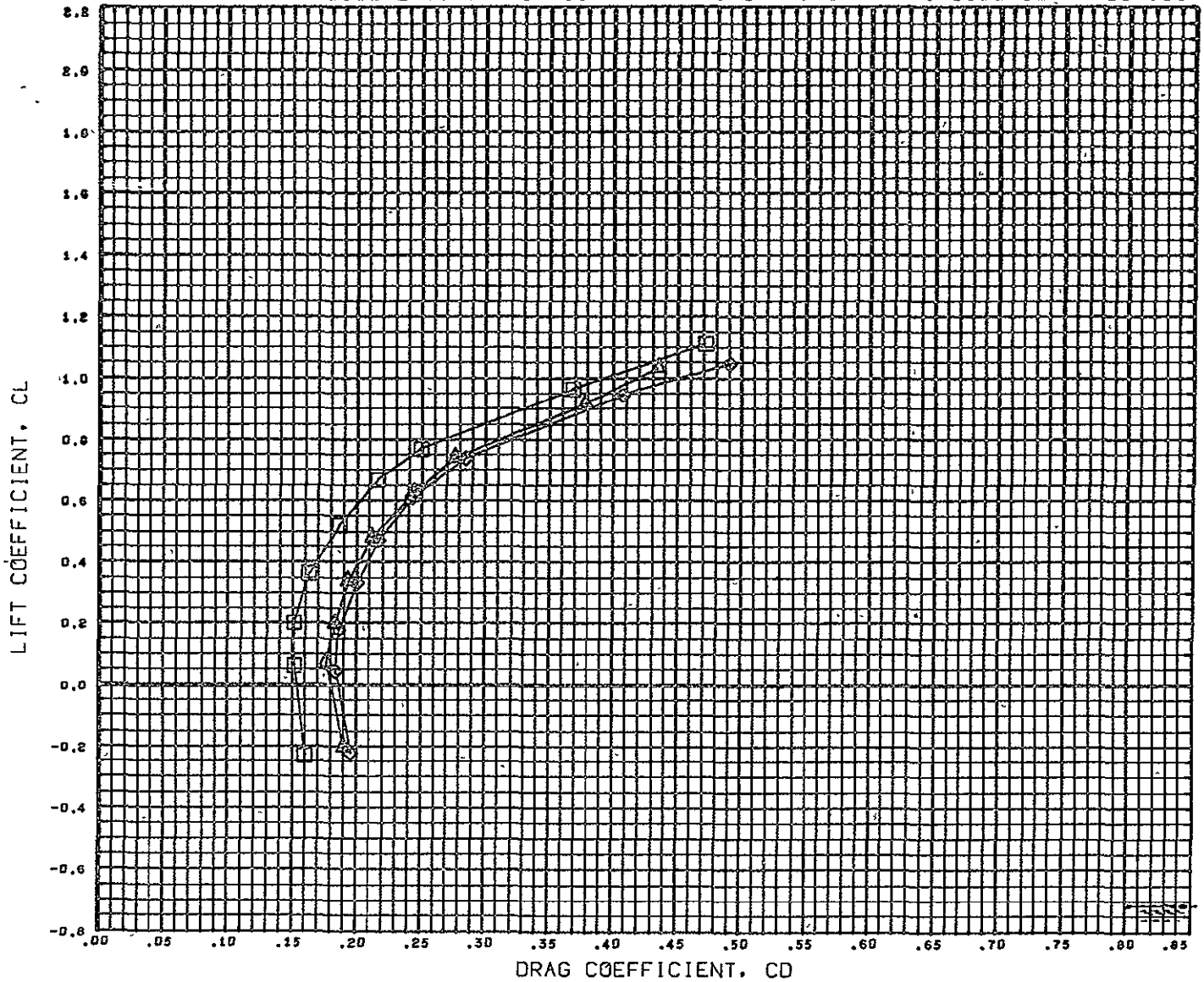
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 13550 SQ.FT.
(EN3200)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XNRP 2.5950 FEET
					YNRP 0.0000 FEET
					ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

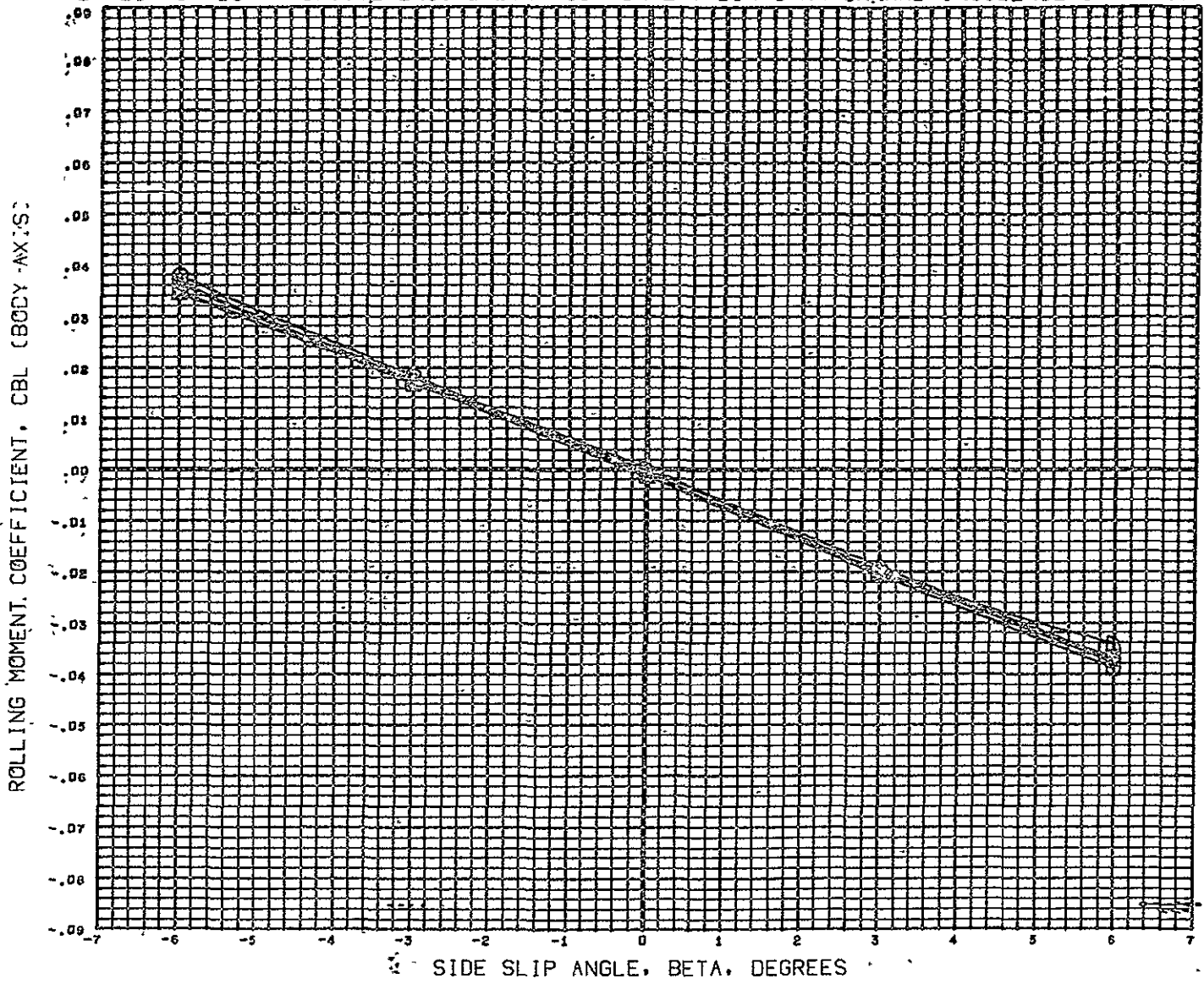
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONG. CHAR. CANARD INCIDENCE=3 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	DATA NOT AVAILABLE FOR ALL CONDITIONS	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(EN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G2	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	1.000	1.000	0.000	XMRP 2.5950 FEET
					YMRP 0.0000 FEET
					ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

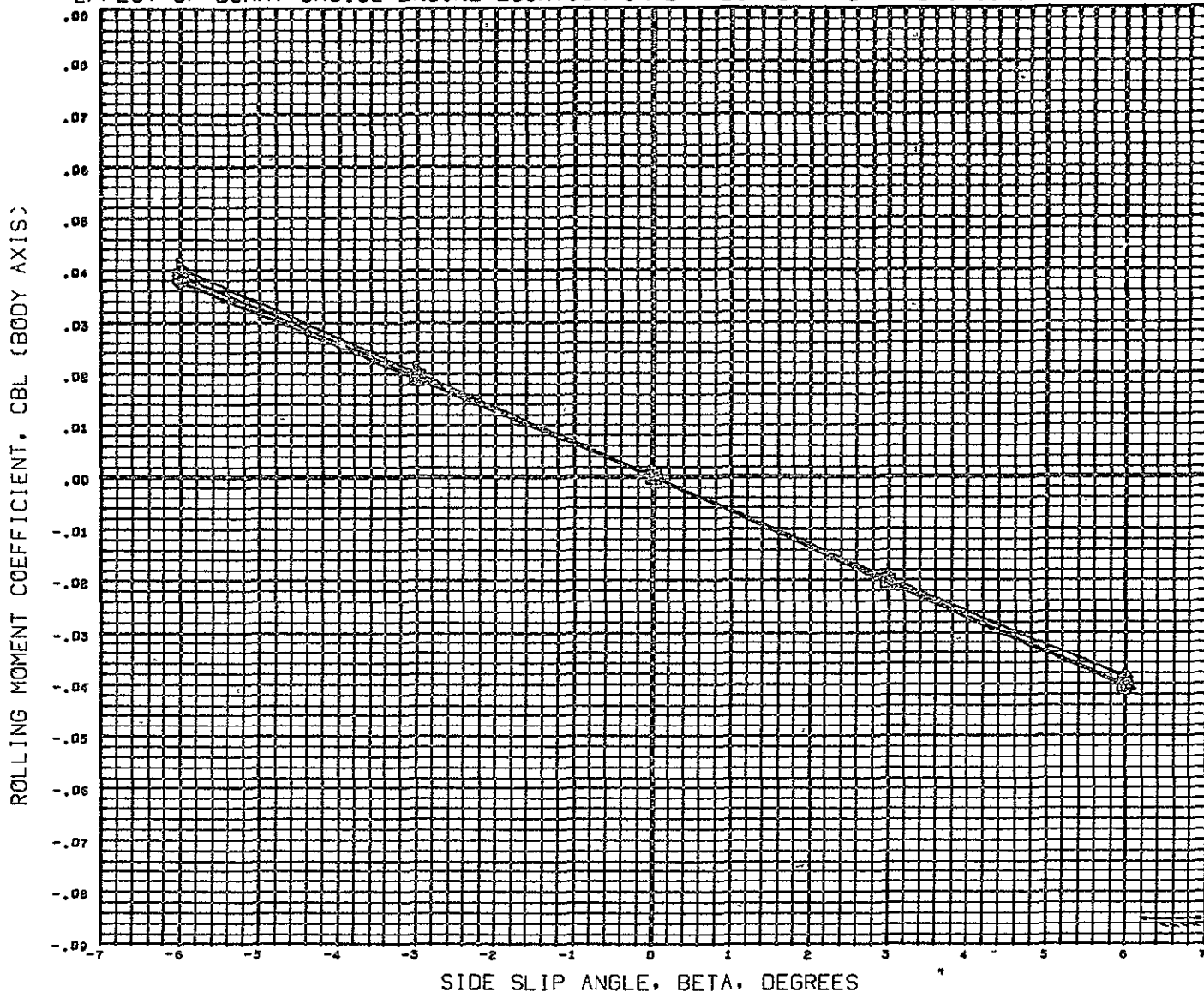
MACH 1.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	0.041	2,000	1,000	SREF 1.3550 SQ.FT.
(DN3193)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	0.000	1,000	1,000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	0.000	1,000	1,000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	0.000	1,000	1,000	XNRP 2.5950 FEET
(DN3002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.017	1,000	- 1,000	YNRP 0.0000 FEET
(DN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.033	1,000	1,000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

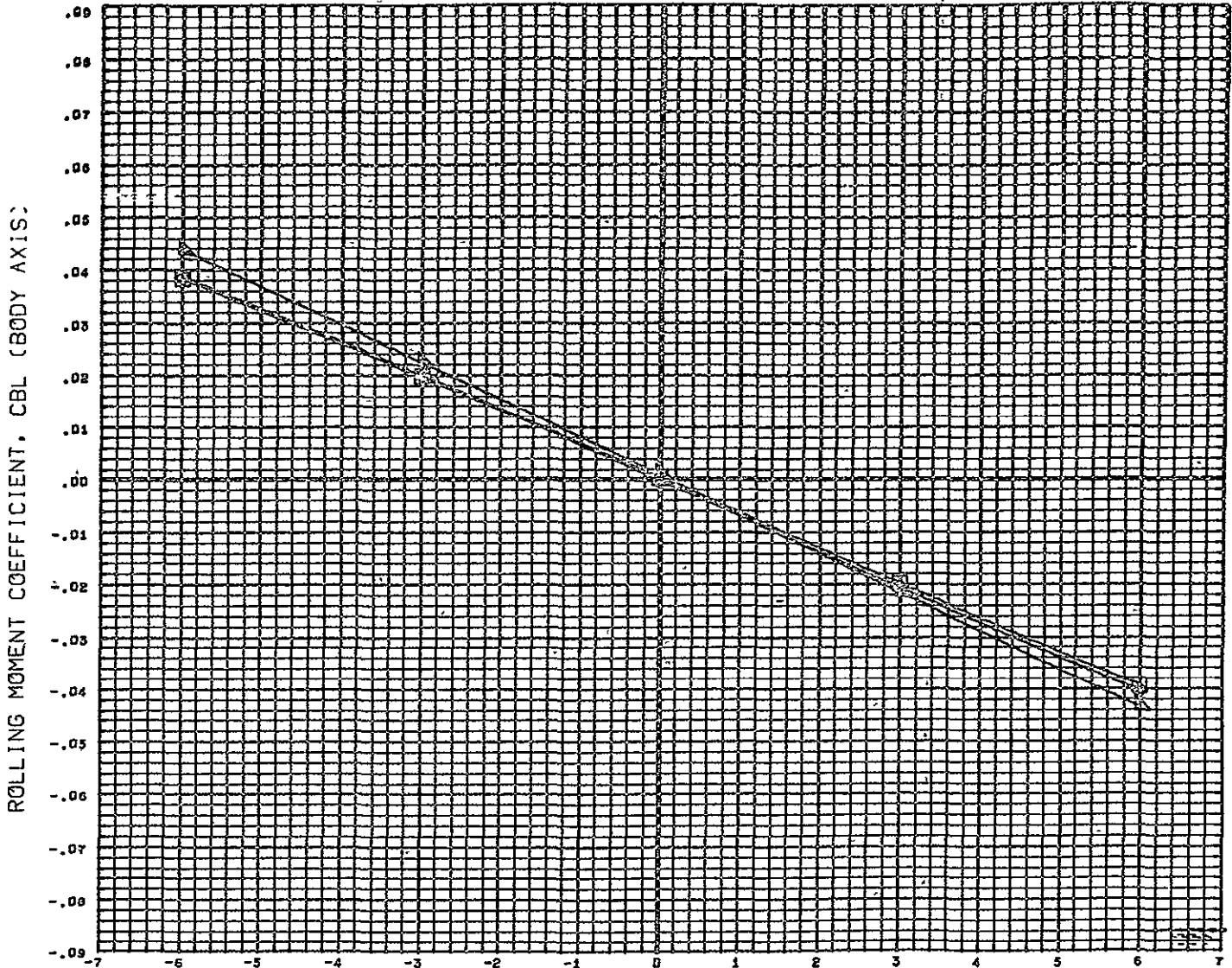


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN5203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ. FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1C5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1C6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

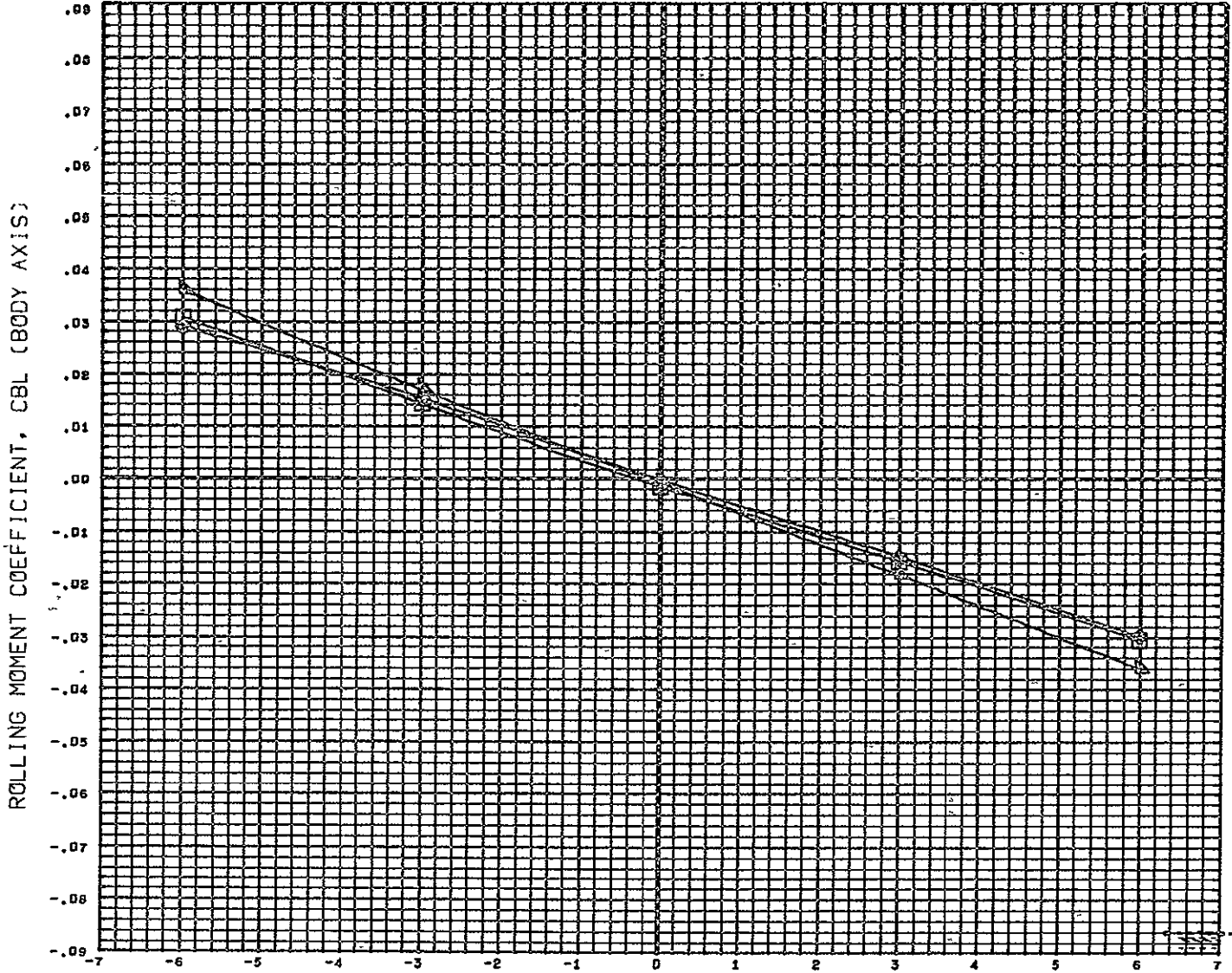
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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

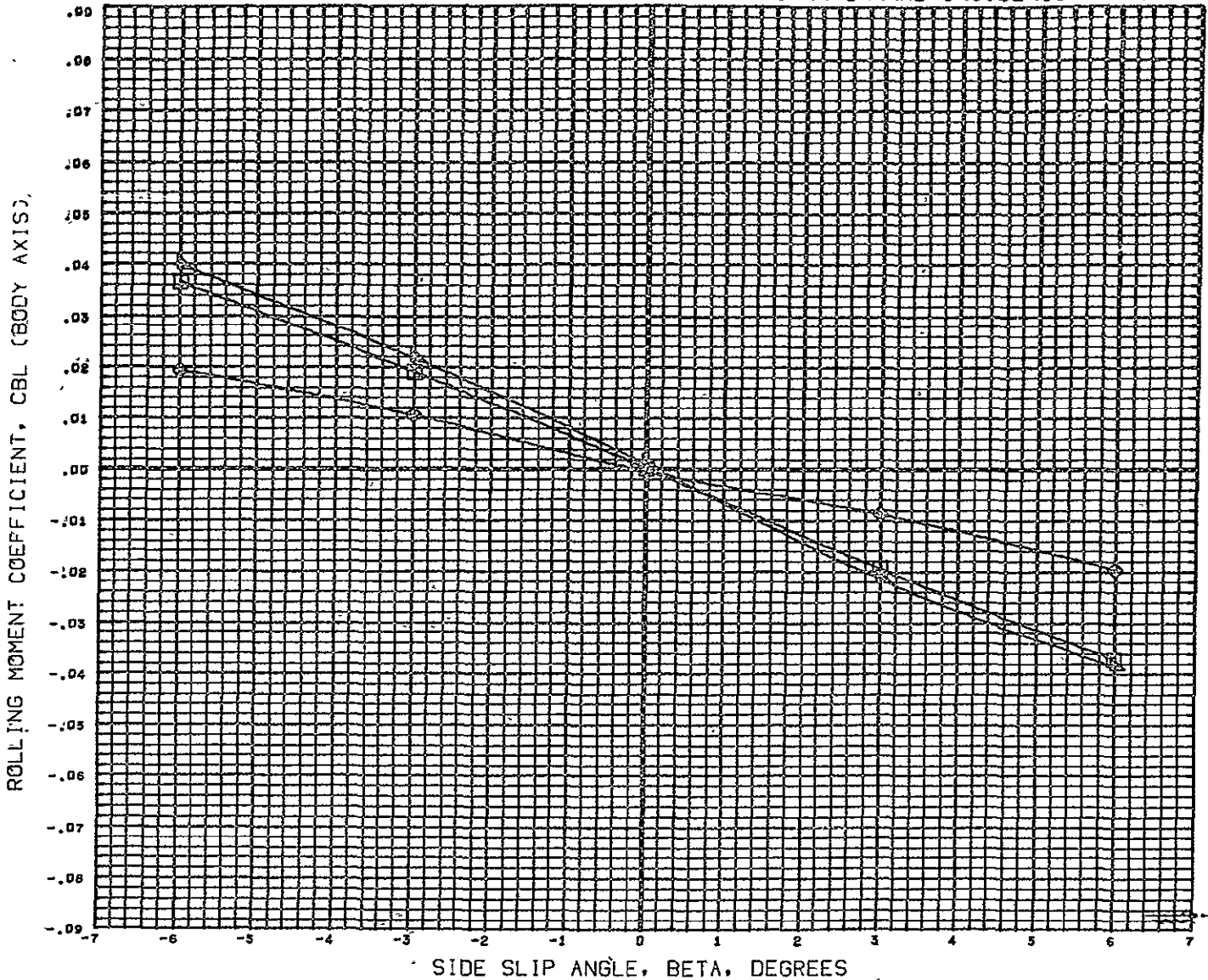


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

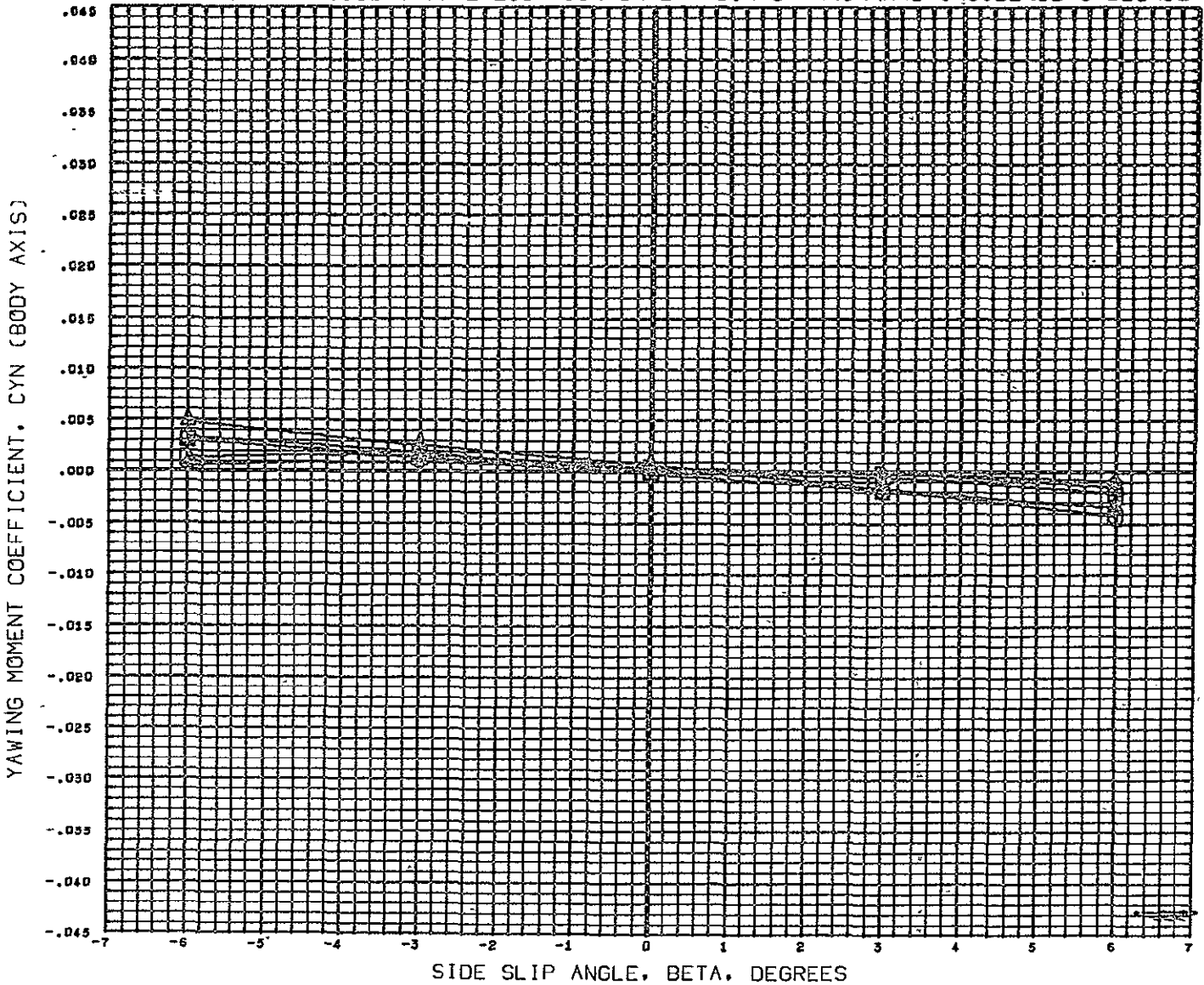
MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN5193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XNRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

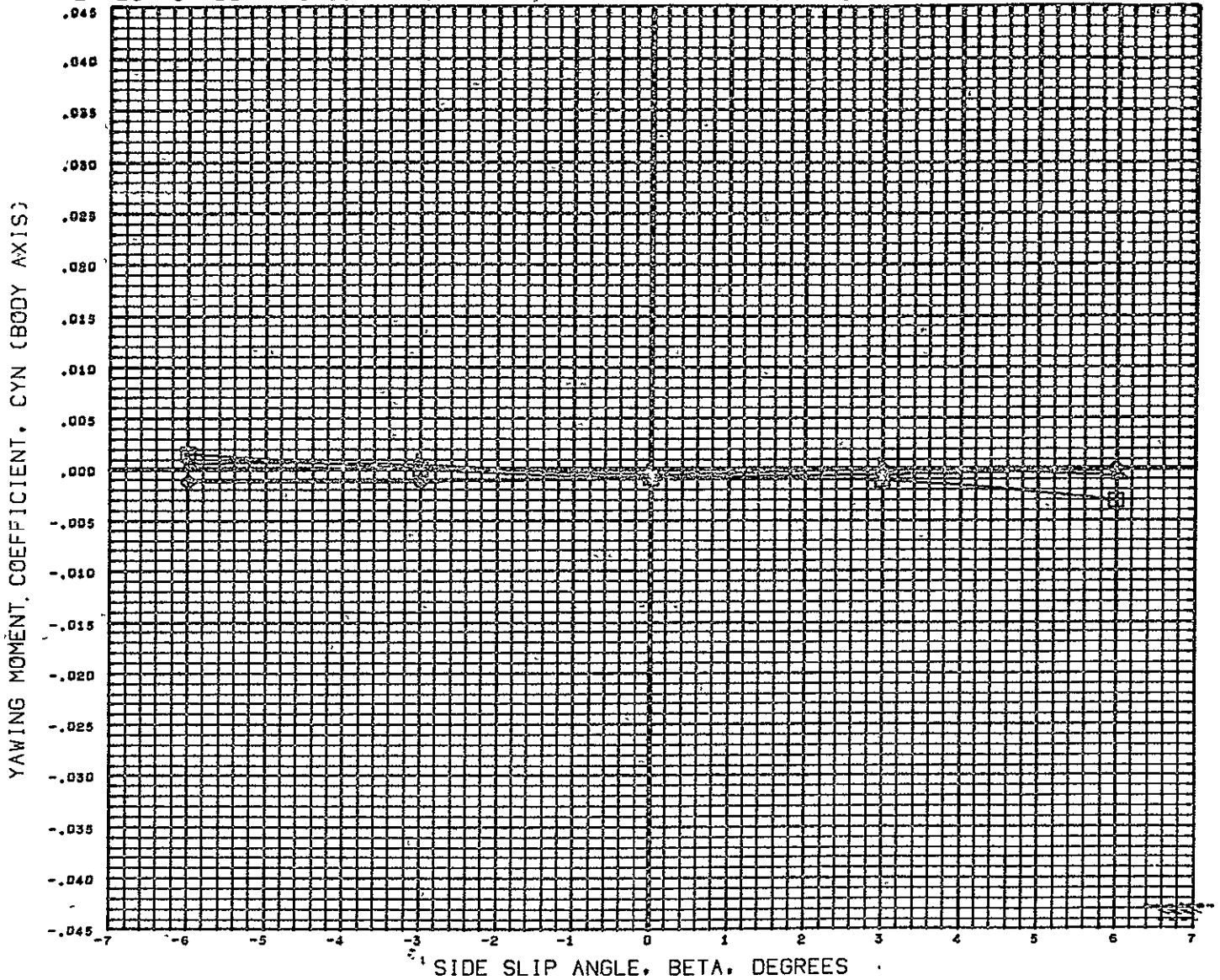
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

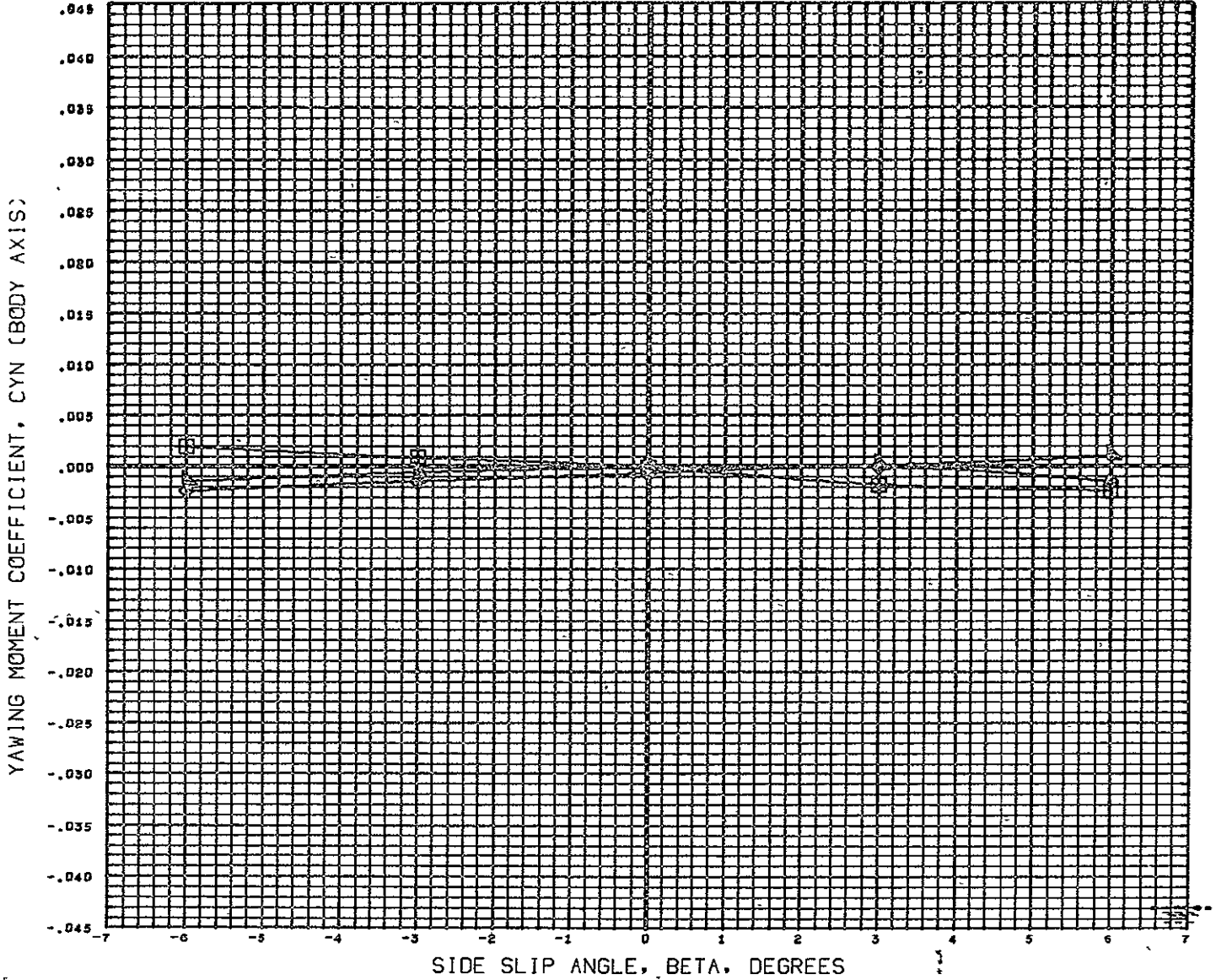
MACH .40

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD, INCIDENCE=3 DEGREE



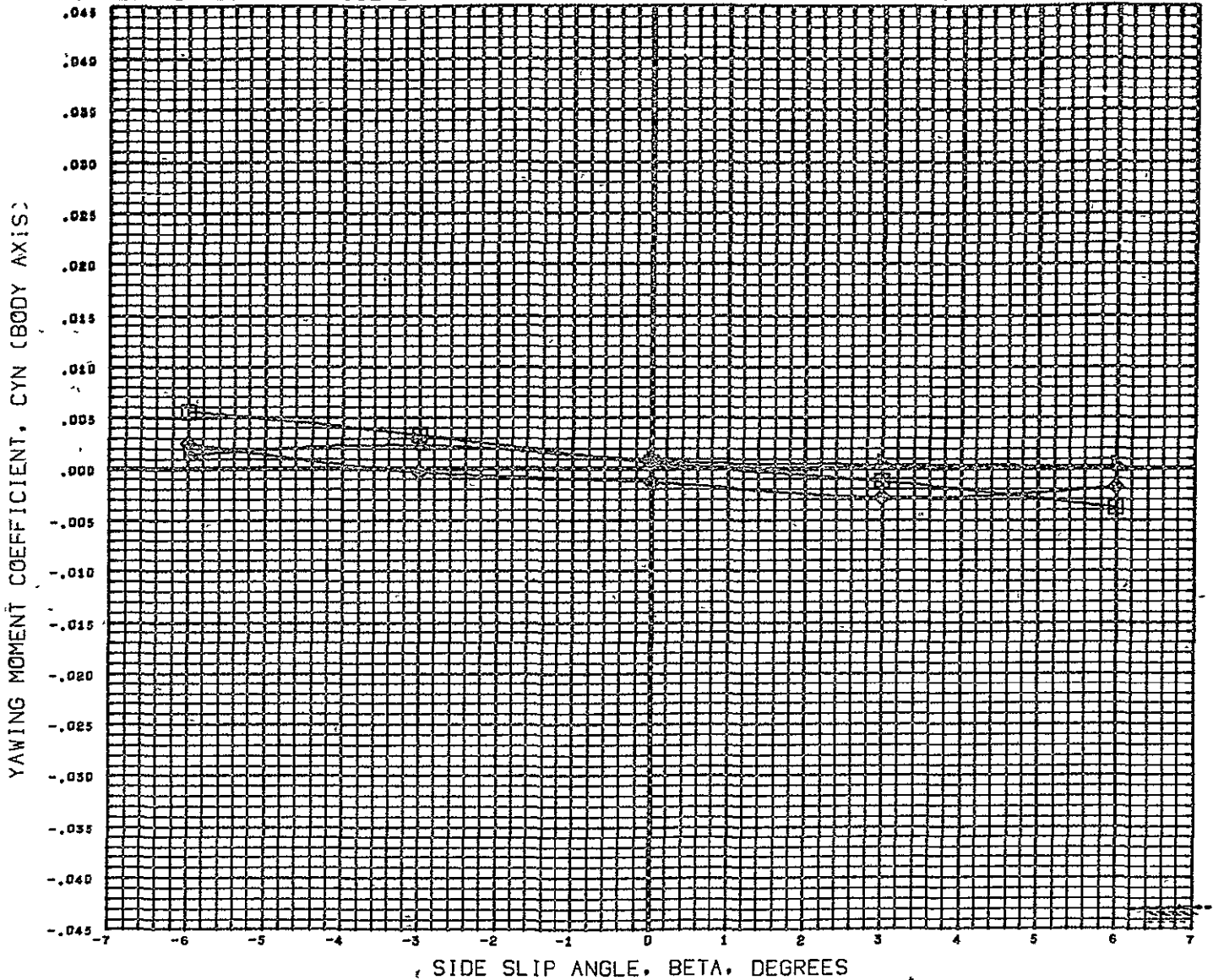
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YNRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD; INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XNRP 2.5950 FEET
(DN3002)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YNRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

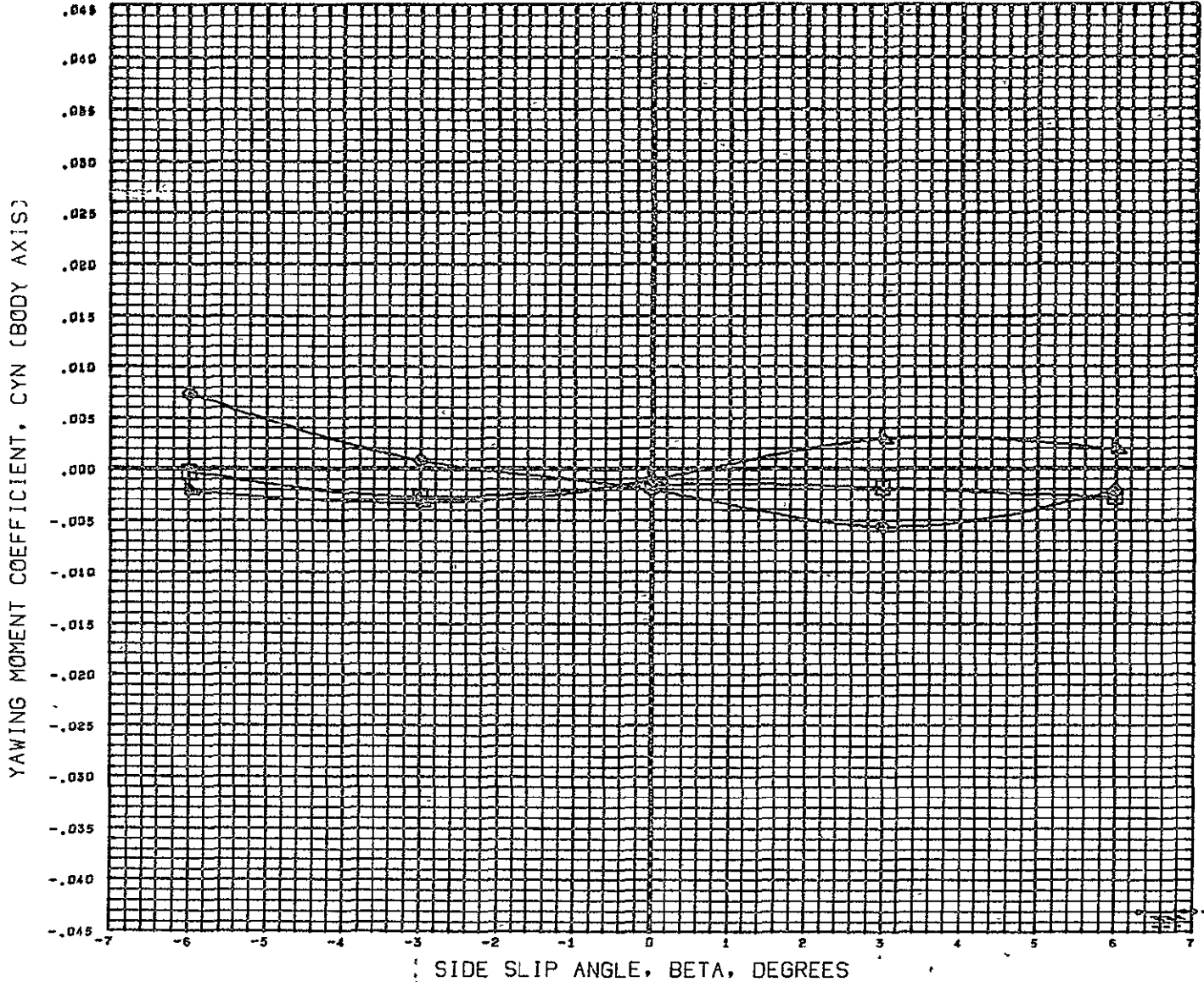
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XHRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YHRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

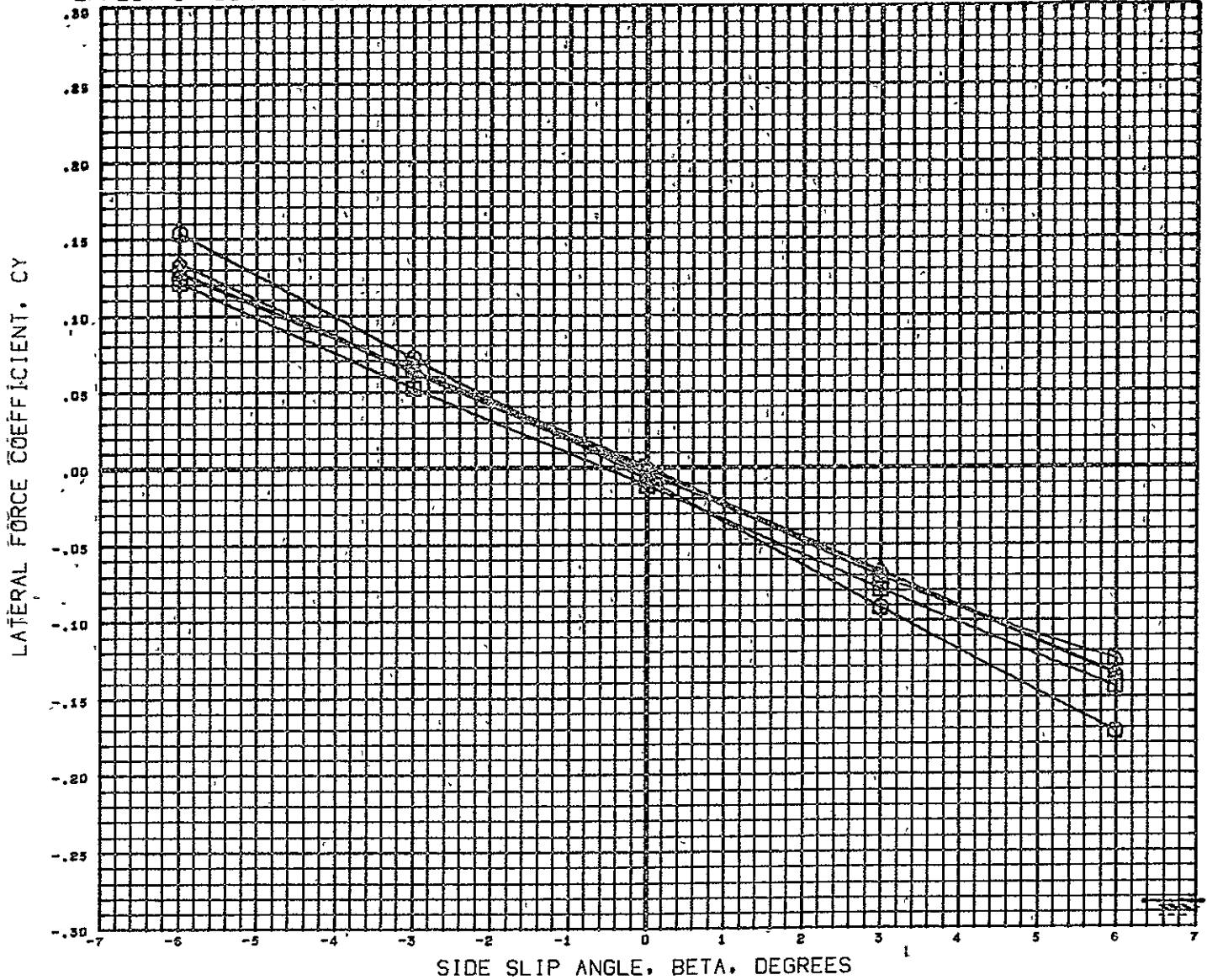


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XMRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YMRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



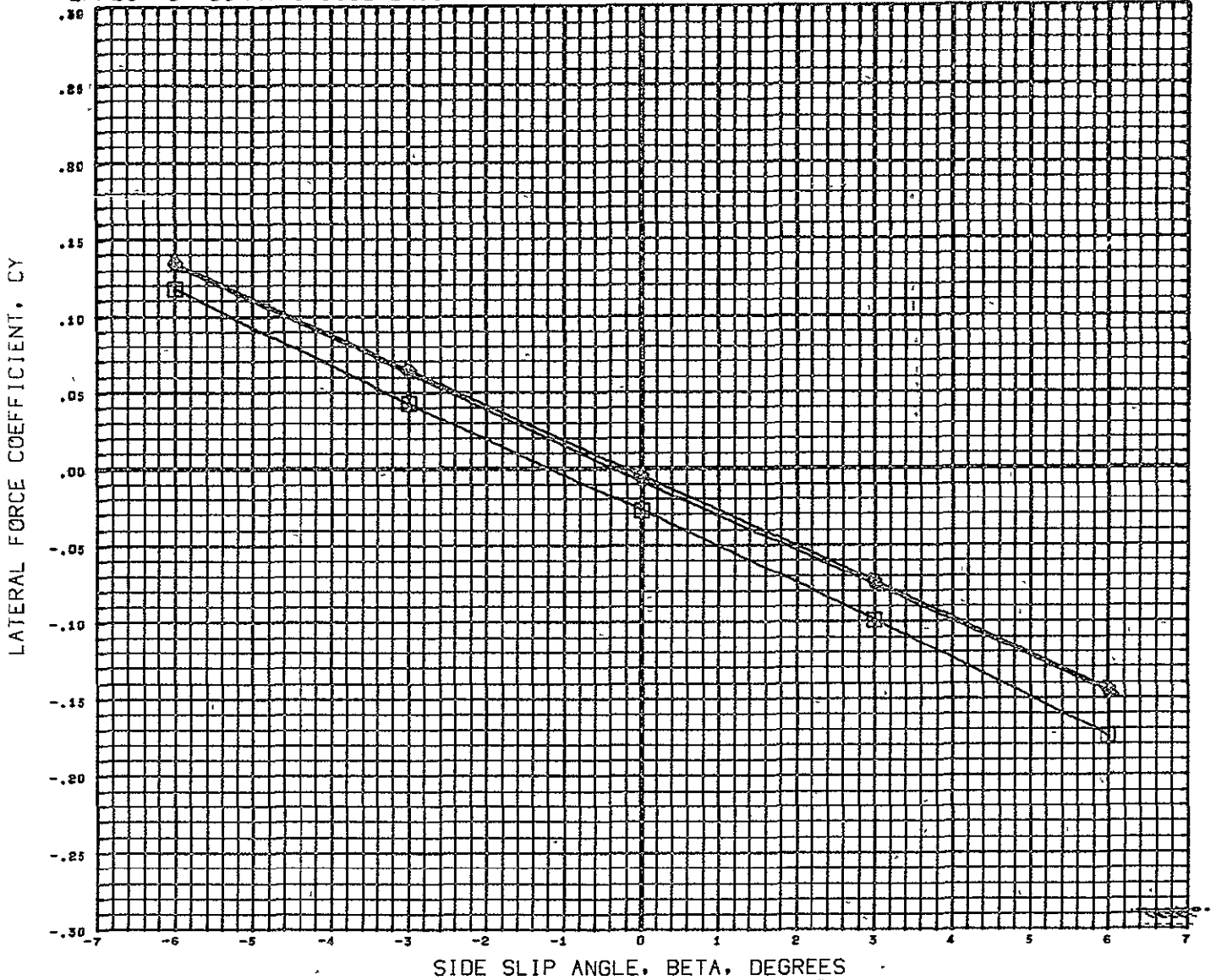
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V161	0.041	2.000	1.000	SREF 1 3550 SQ.FT.
(DN3193)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XNRP 2.5950 FEET
(DN3002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.017	1.000	1.000	YHRP 0.0000 FEET
(DN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.033	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

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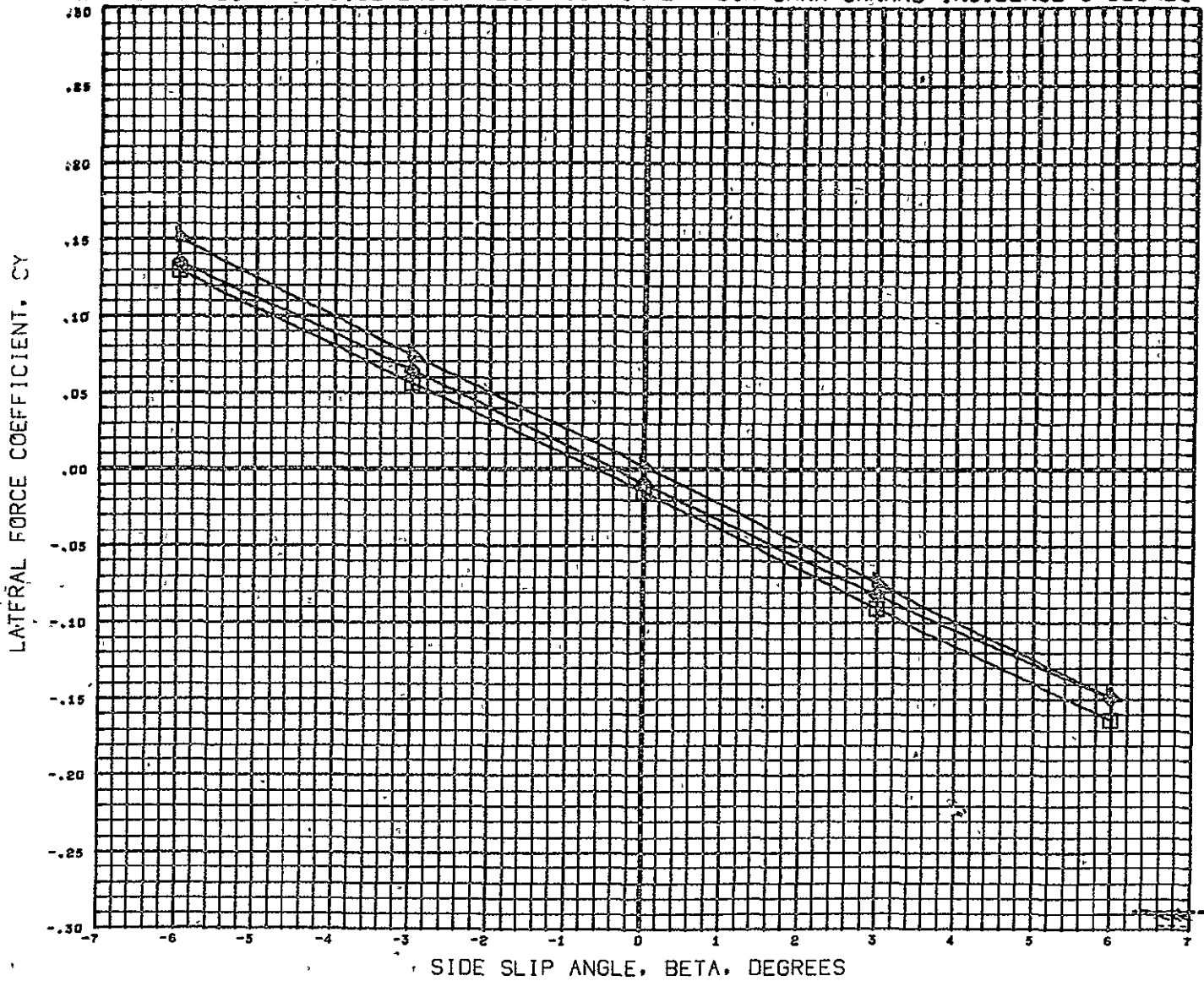
0.6

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3. DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XHRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YHRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

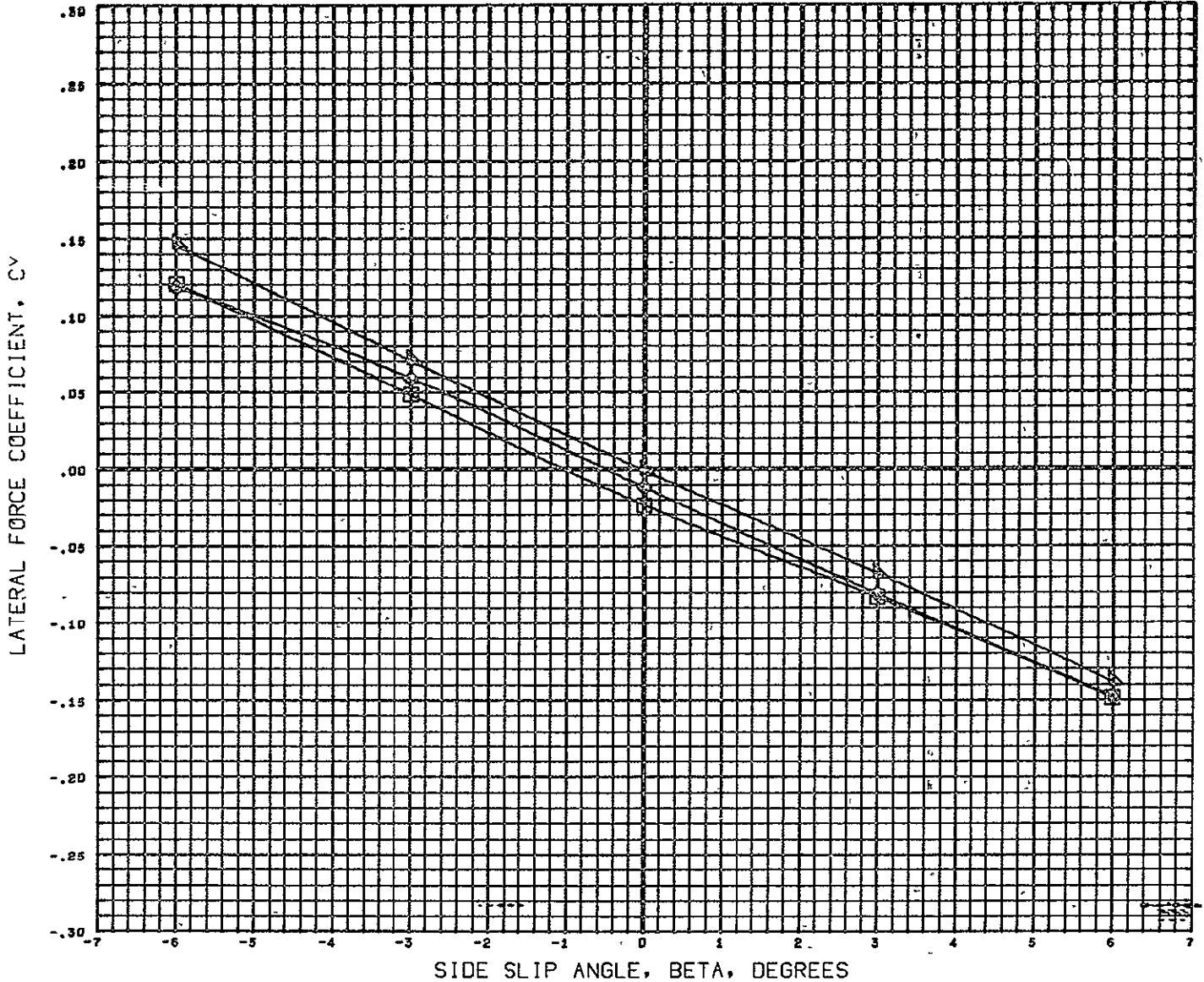
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XNRP 2.5950 FEET
(DN3002)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YNRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

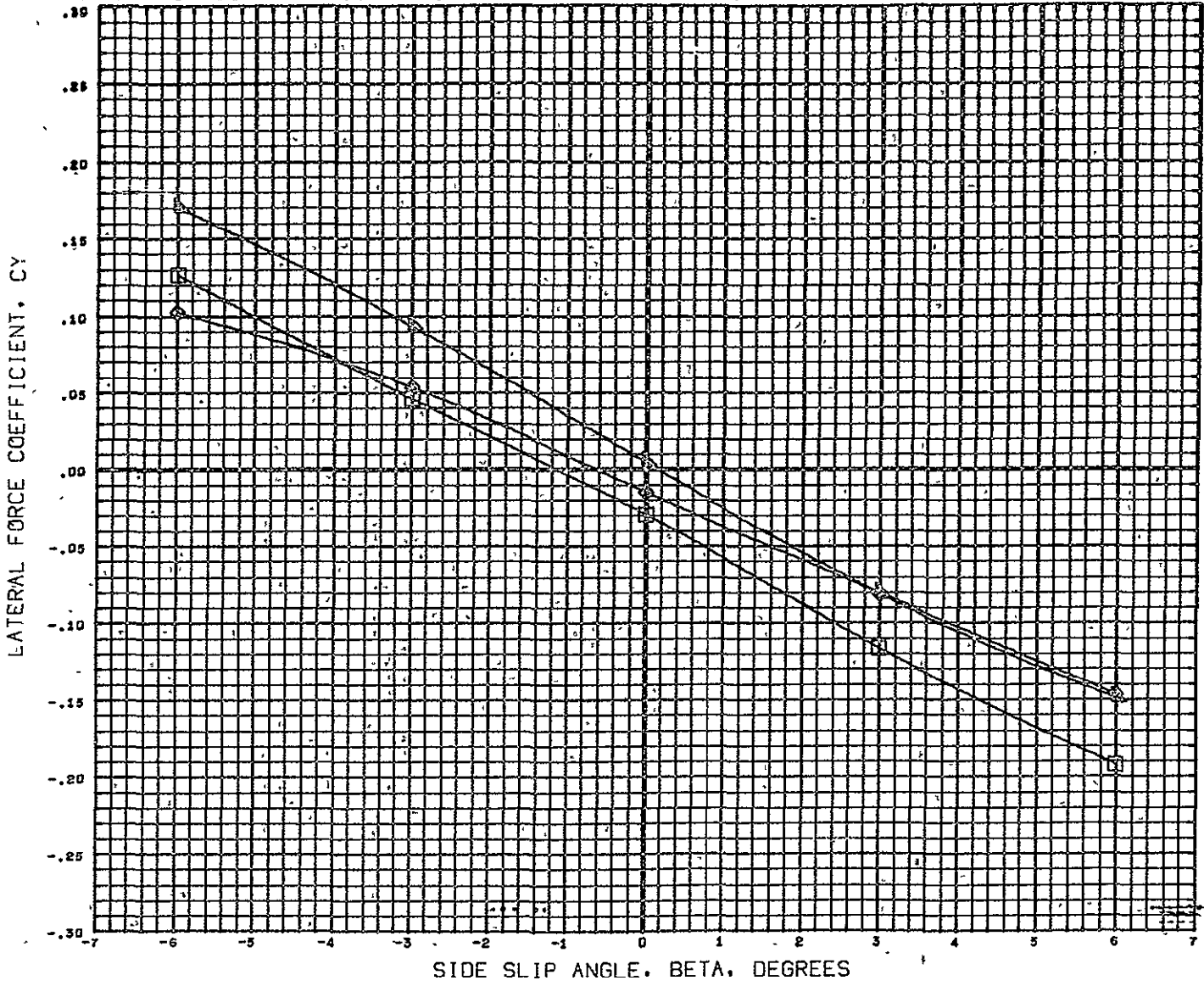
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3950 SQ.FT
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V165	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V166	0.000	1.000	1.000	XHRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YHRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

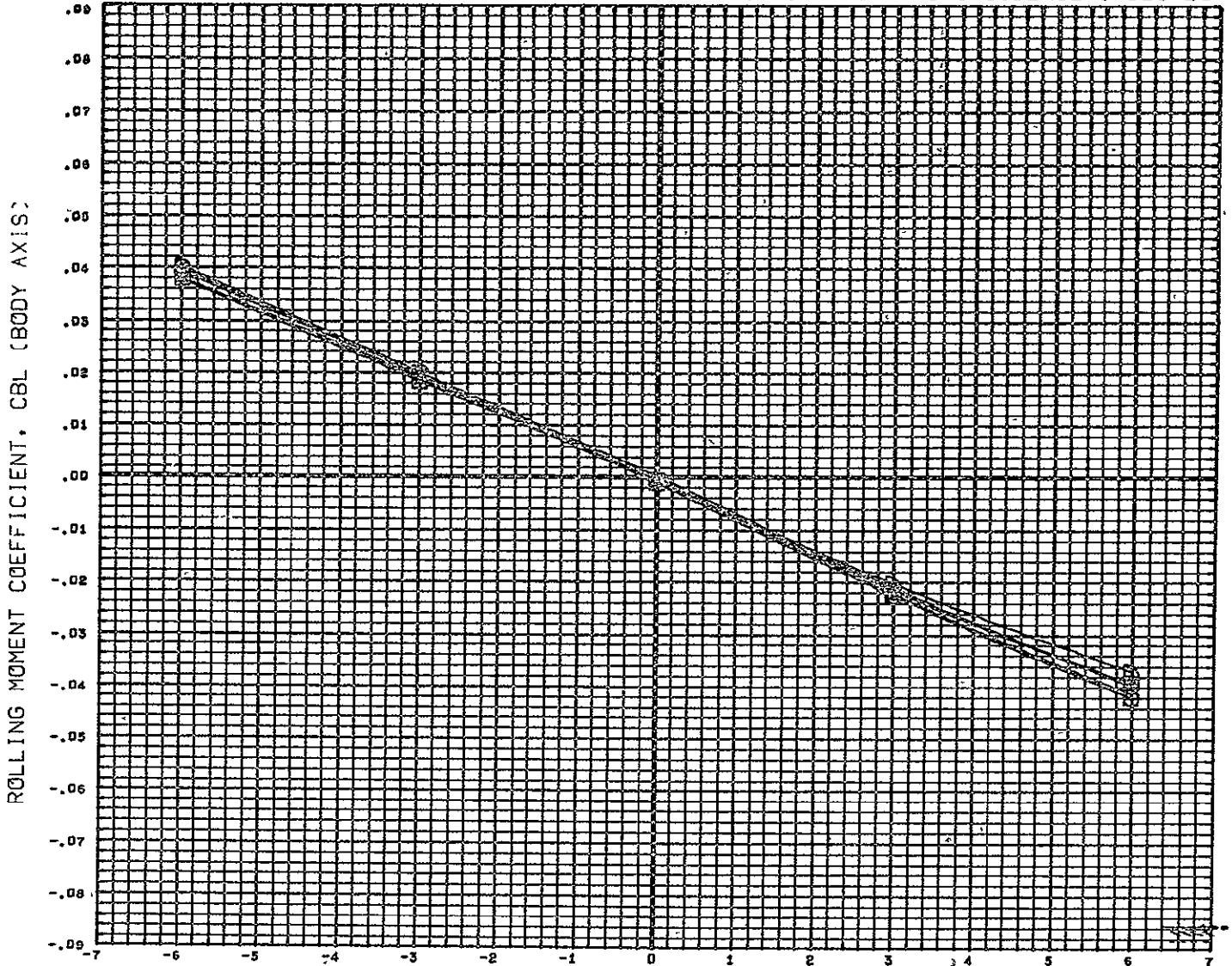
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.041	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	1.000	1.000	LREF 3.4530 FEET
(DN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	0.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	0.000	1.000	1.000	XHRP 2.5950 FEET
(DN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.017	1.000	1.000	YHRP 0.0000 FEET
(DN2002)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.033	1.000	1.000	ZHRP 0.0167 FEET
					SCALE 0.0150 SCALE

MACH 1.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



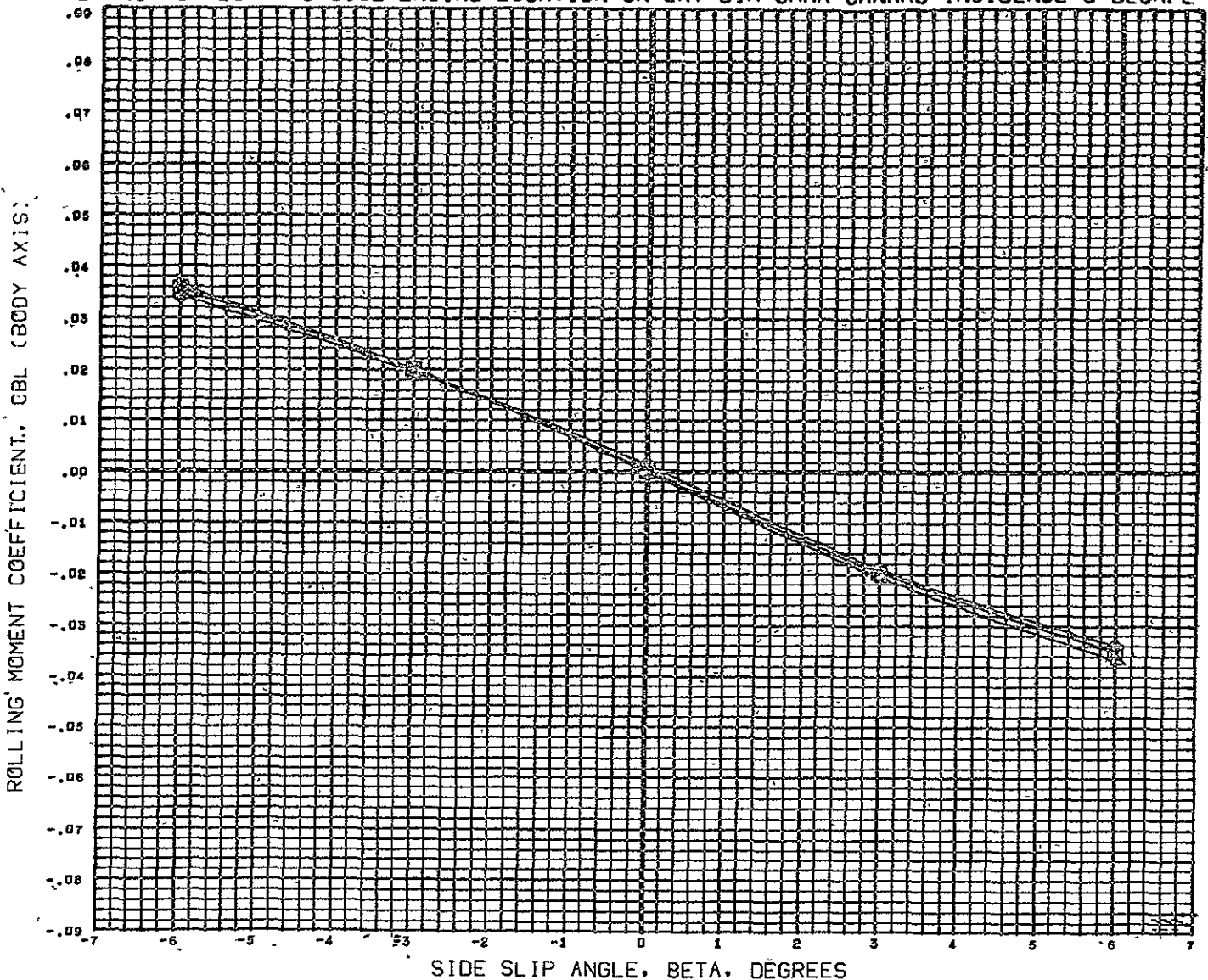
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G1	6.085	2.000	1.000	SREF 1.3550 SR FT.
(DN3194)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G2	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XHRP 2.5950 FEET
(DN3003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.135	1.000	1.000	YHRP 0.0000 FEET
(DN2003)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

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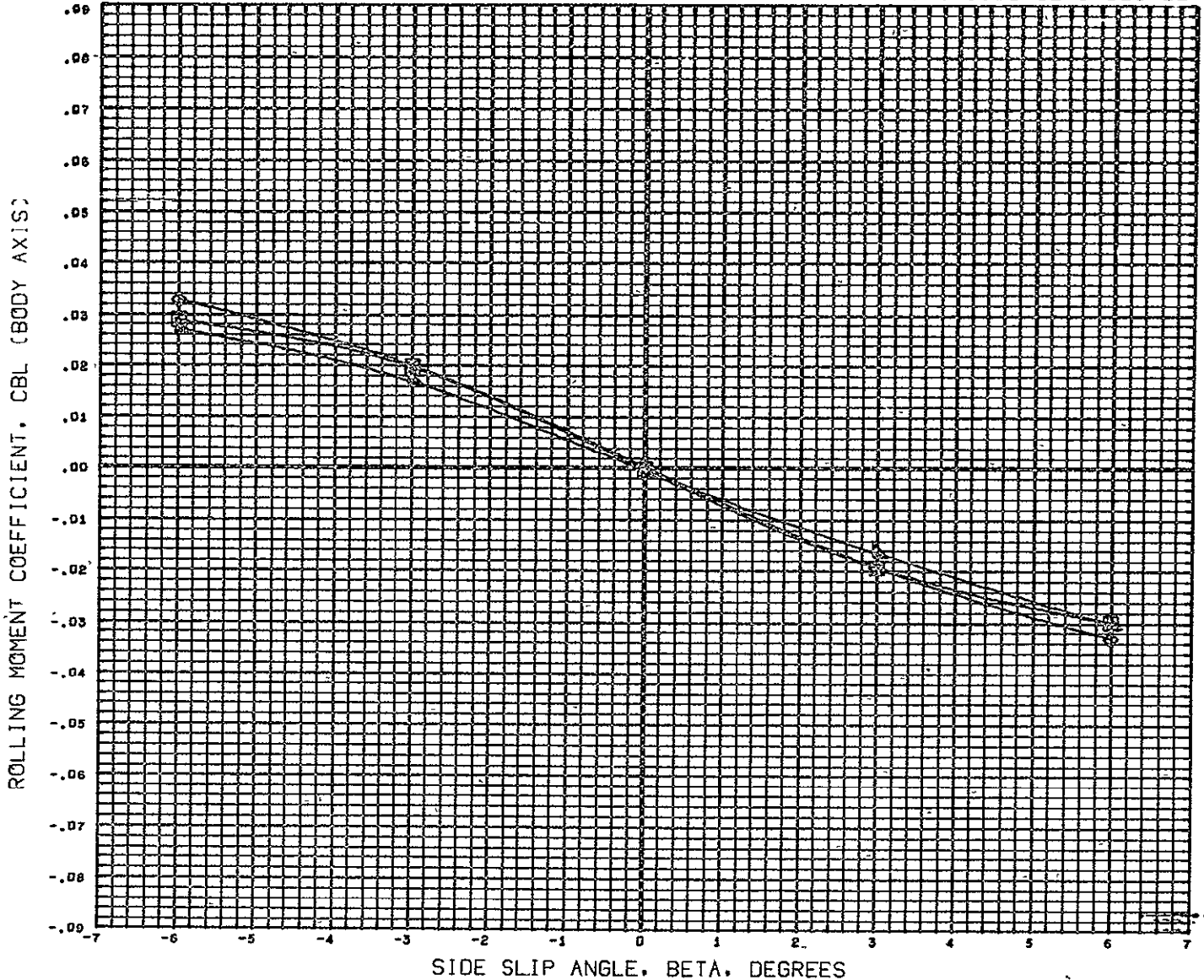
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGRFE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310, NSFC/LNSC BOOSTER B1C2F1W1V165	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310, NSFC/LNSC BOOSTER B1C2F1W1V166	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210, NSFC/LNSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

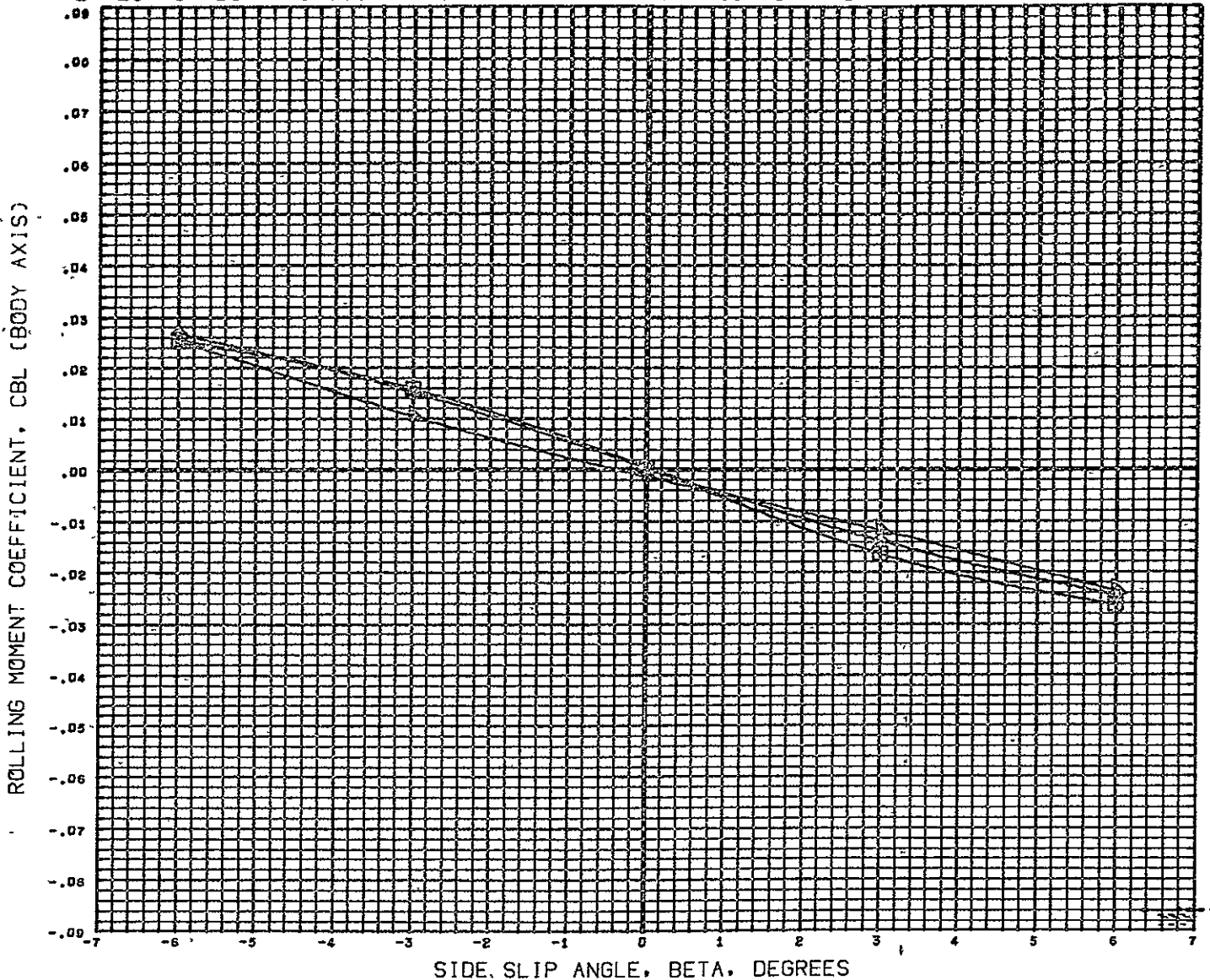
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4827)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

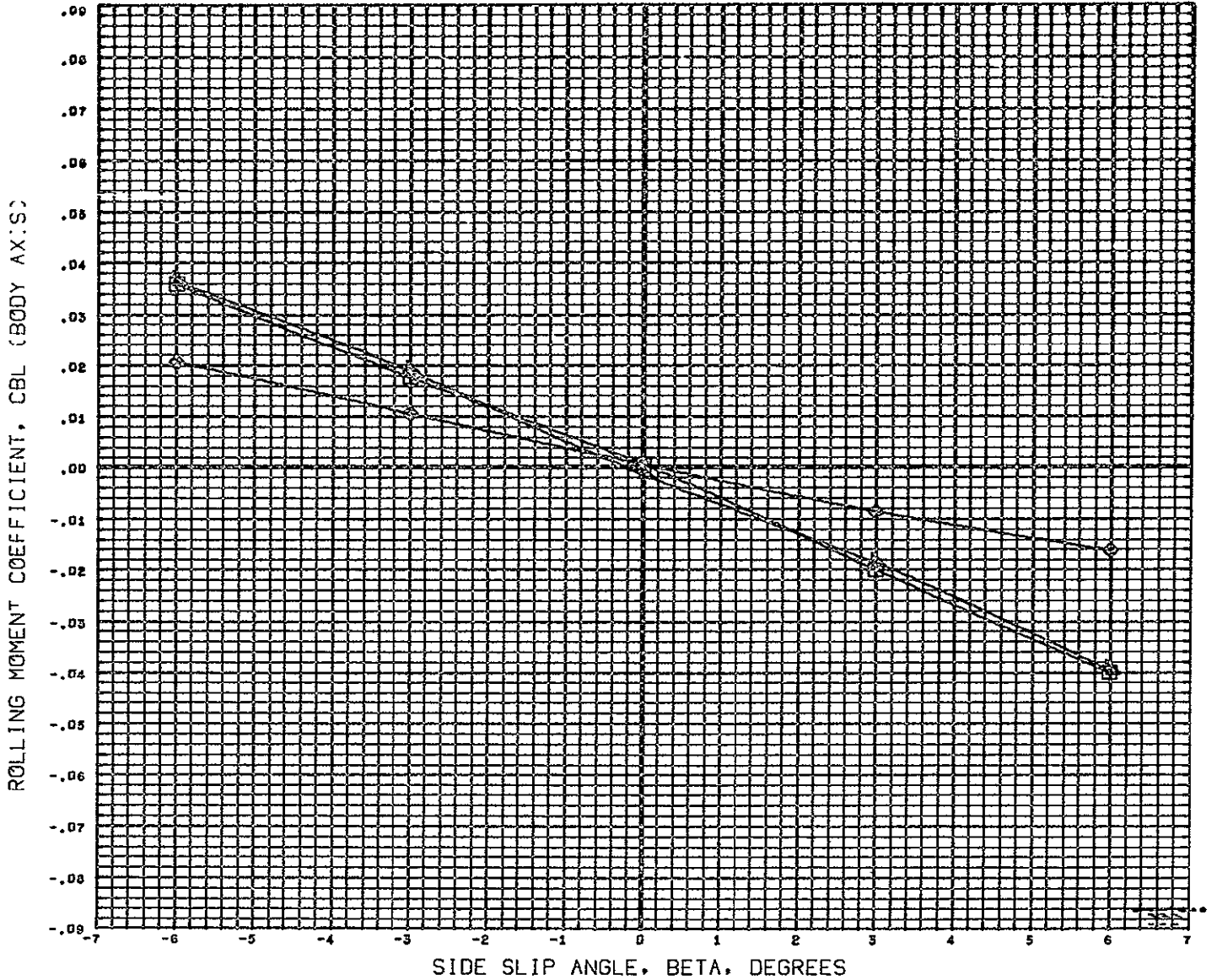


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V165	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V166	6.000	1.000	1.000	XNRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

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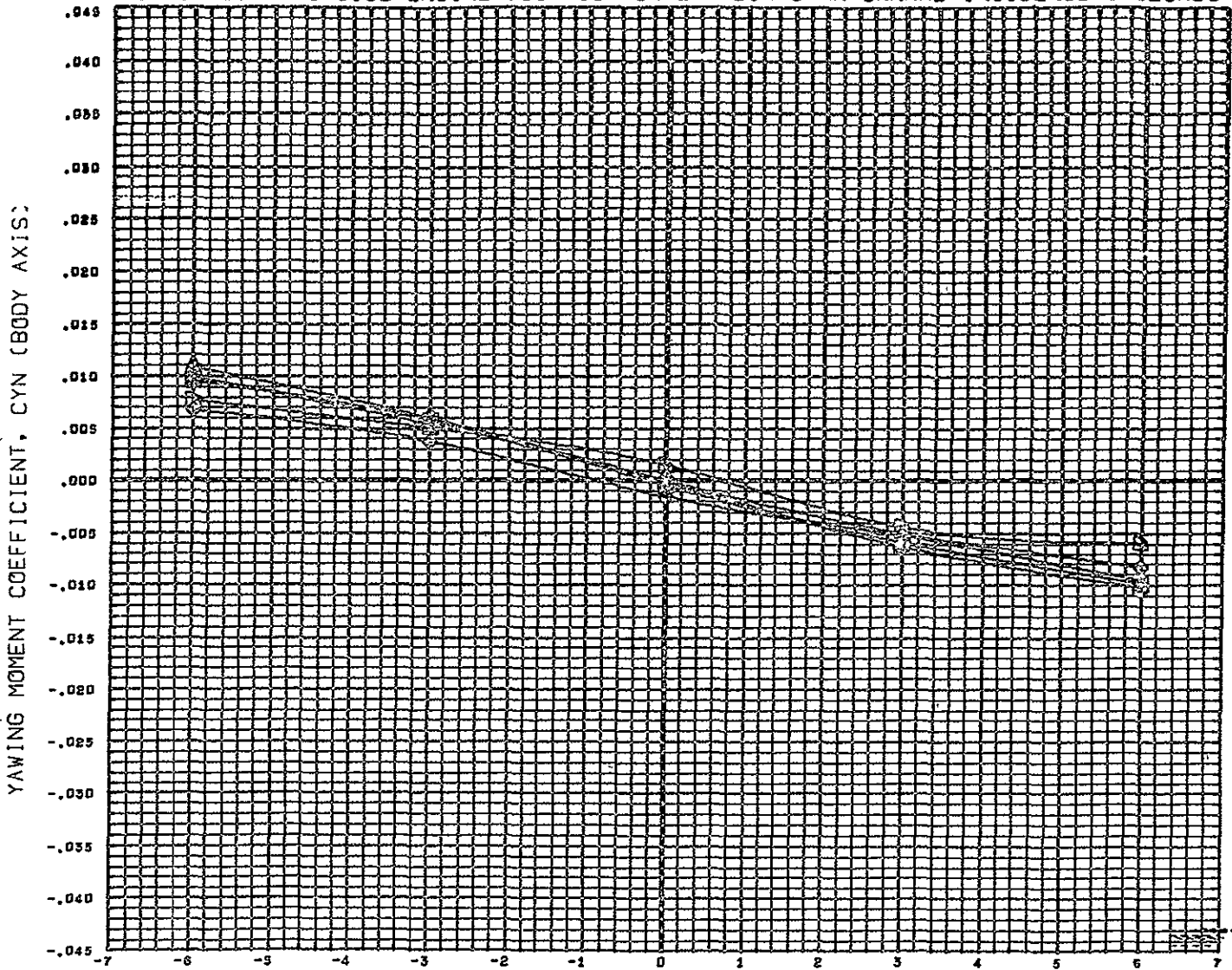
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.095	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XHRP 2.5950 FEET
(DN3003)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YHRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

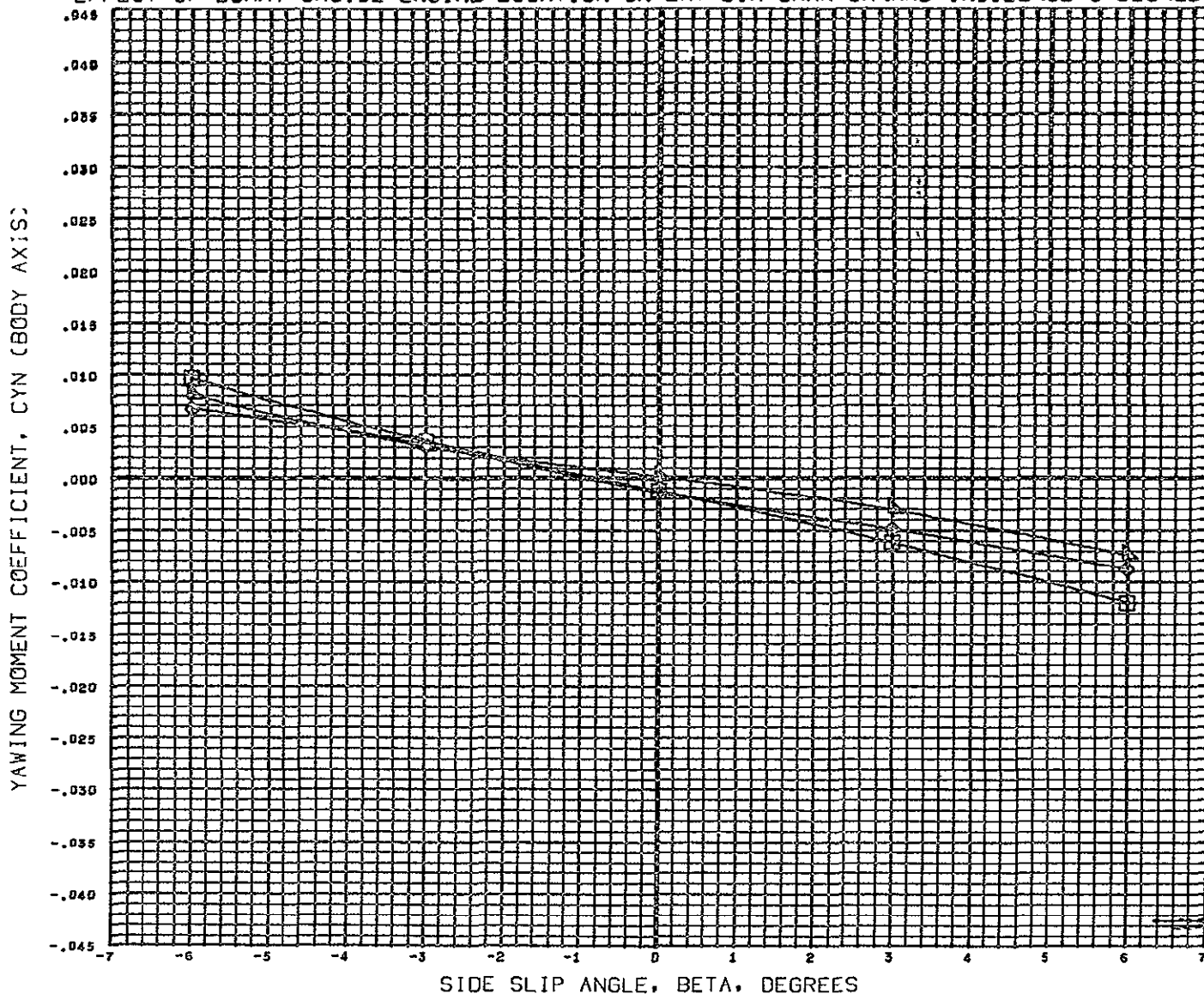
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD 'INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	NSRDC-321D,MSFC/LMSC BOOSTER B1C2F2W1V1C1	6.005	2.000	1.000	SREF 1.3550 SQ.FT
(DN3194)		6.041	1.000	1.000	LREF 3.4530 FEET
(DN4140)		6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)		6.000	1.000	1.000	XNRP 2.5950 FEET
(DN3003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	NSRDC-311D,MSFC/LMSC BOOSTER B1C2F1W1V1	6.133	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

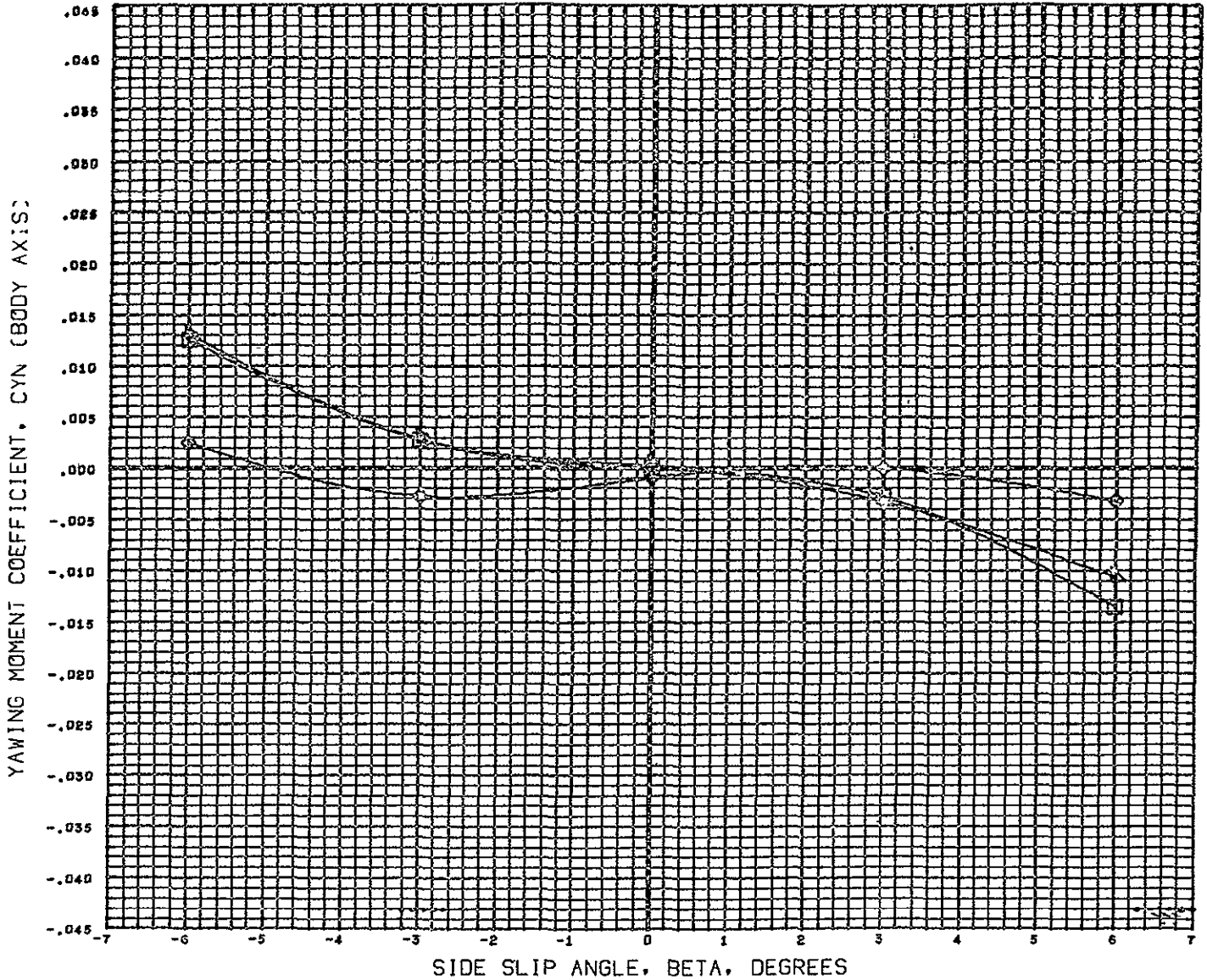
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4140)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

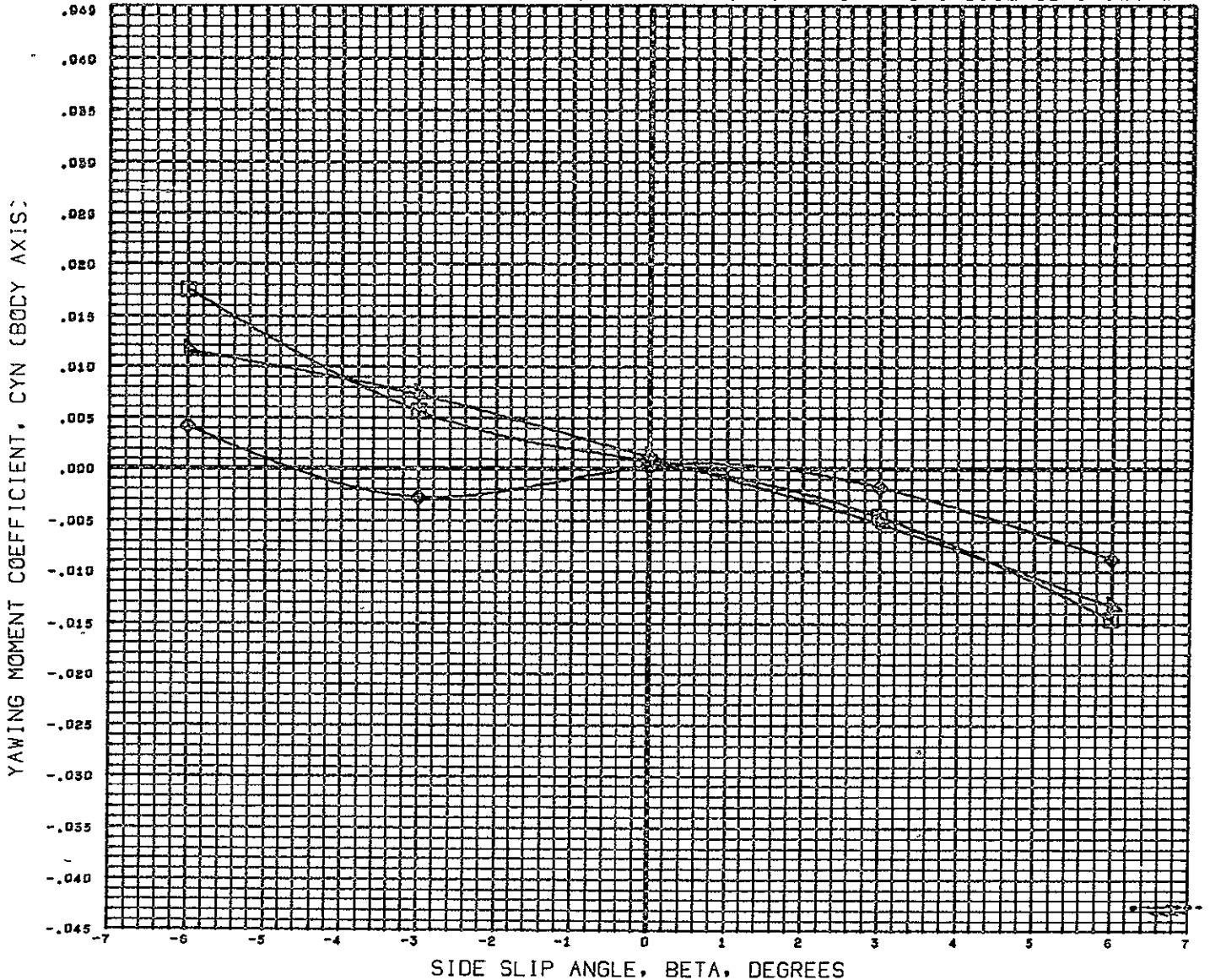
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210,NSFC/LHSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

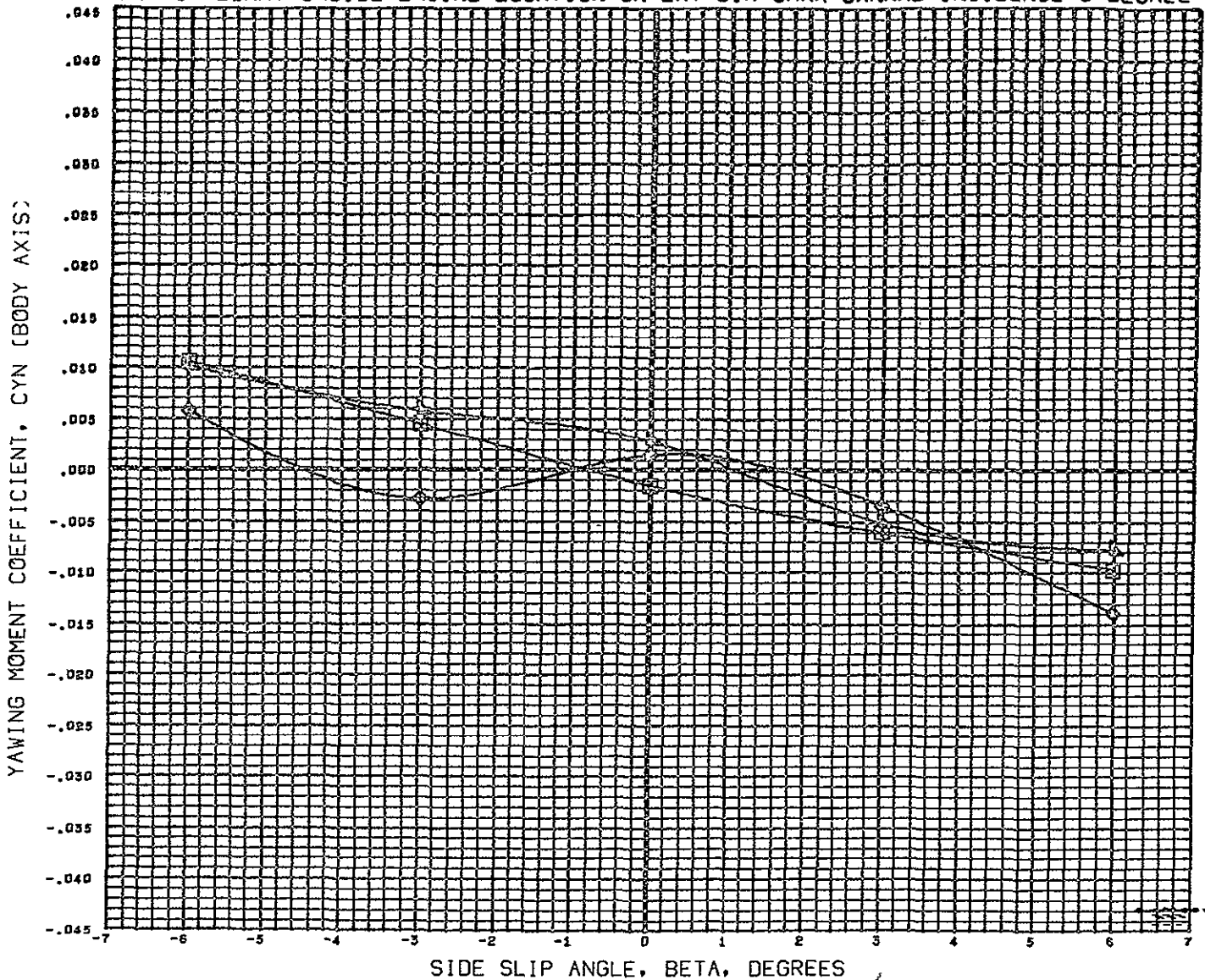
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XNRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

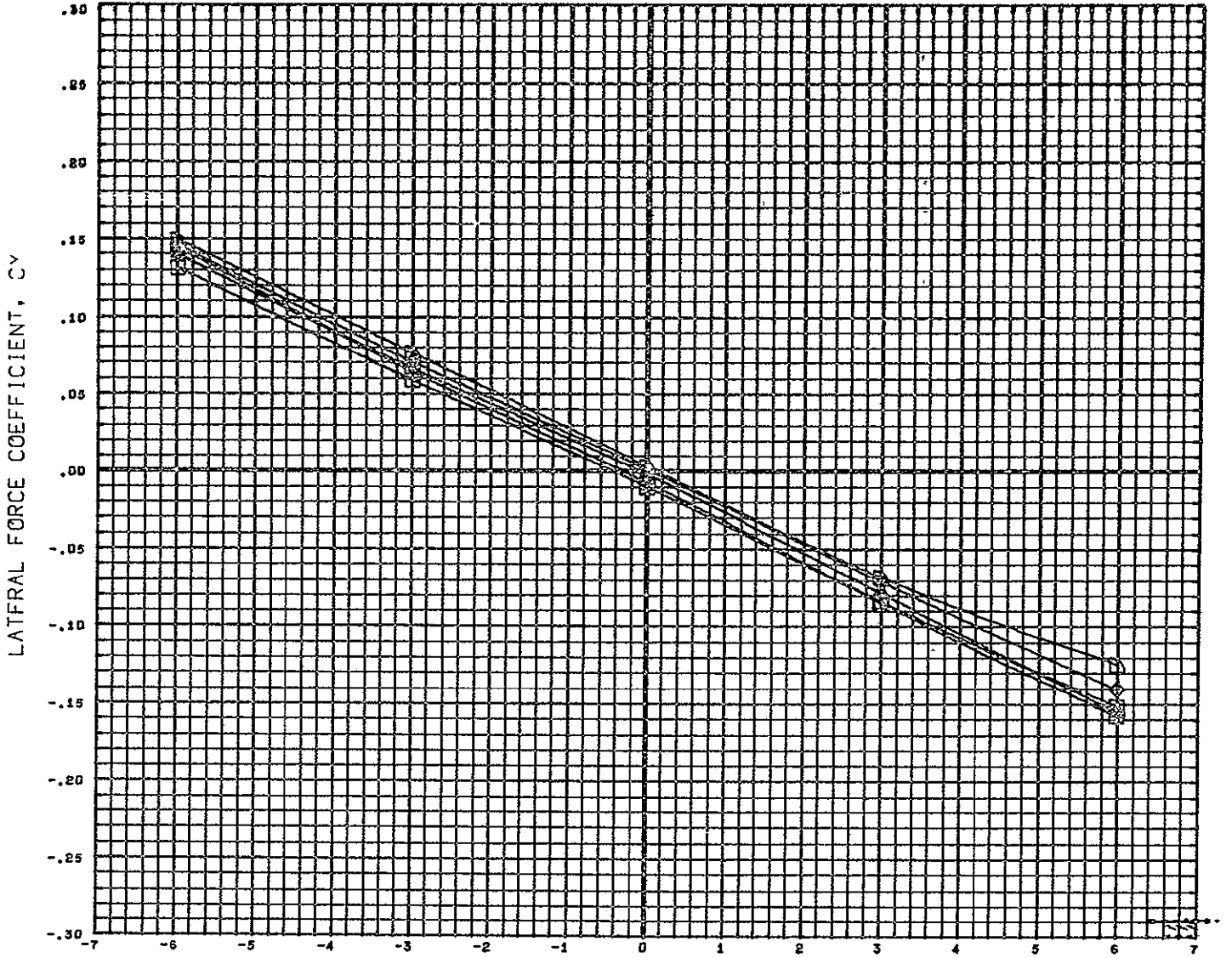
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4140)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V165	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V166	6.000	1.000	1.000	XNRP 2.5950 FEET
(DN3003)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

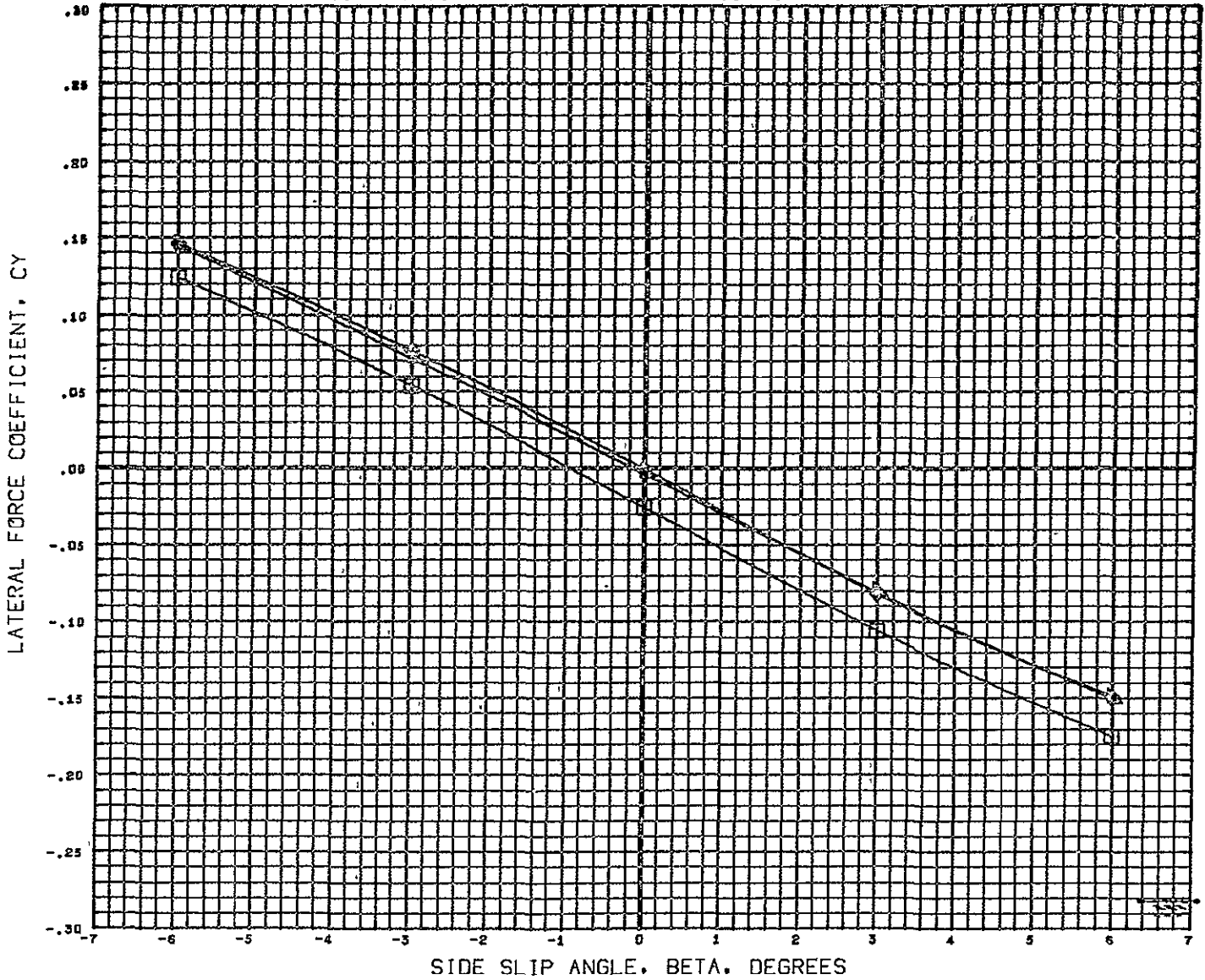


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G1	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1G2	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

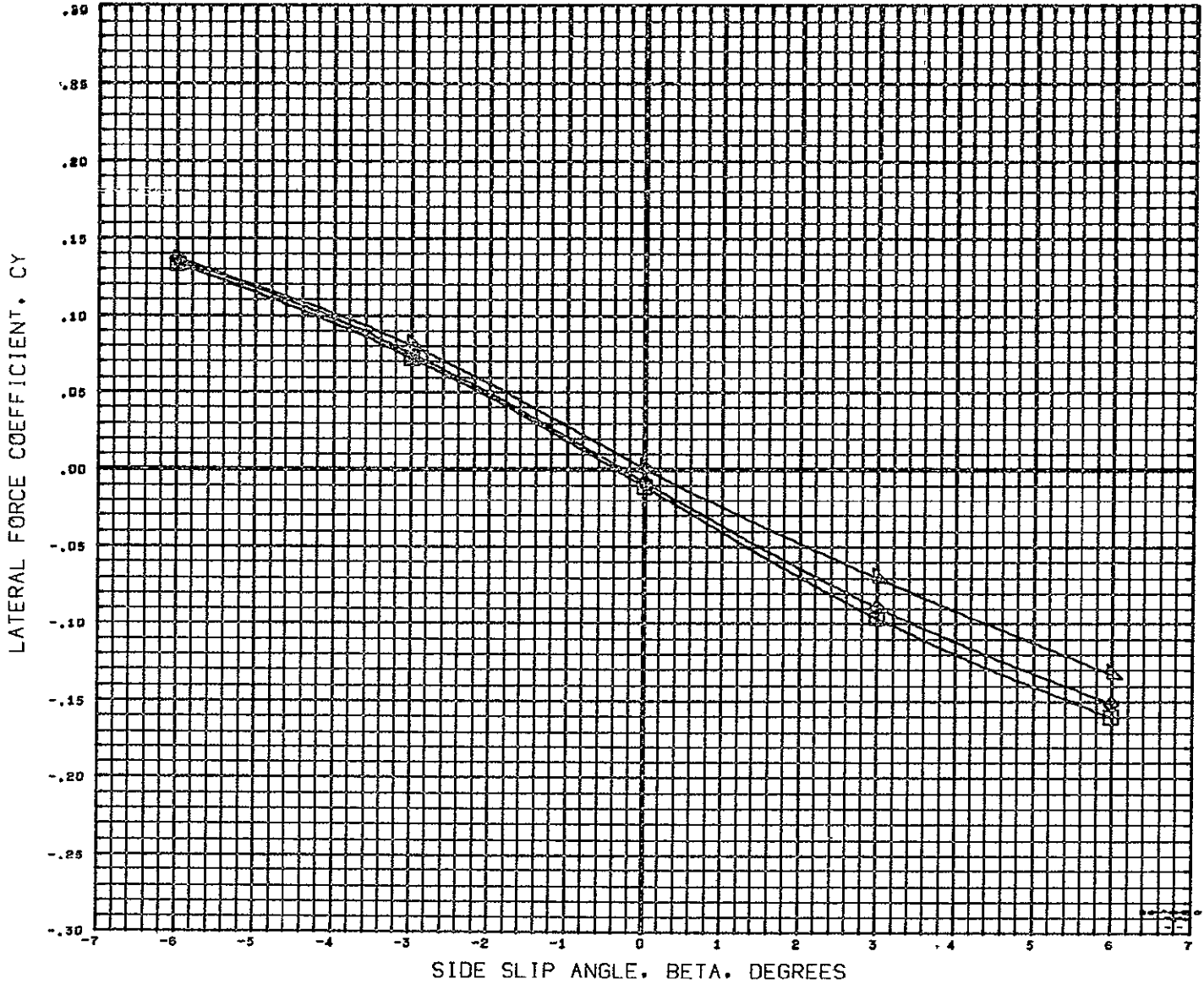
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	XNRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YNRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

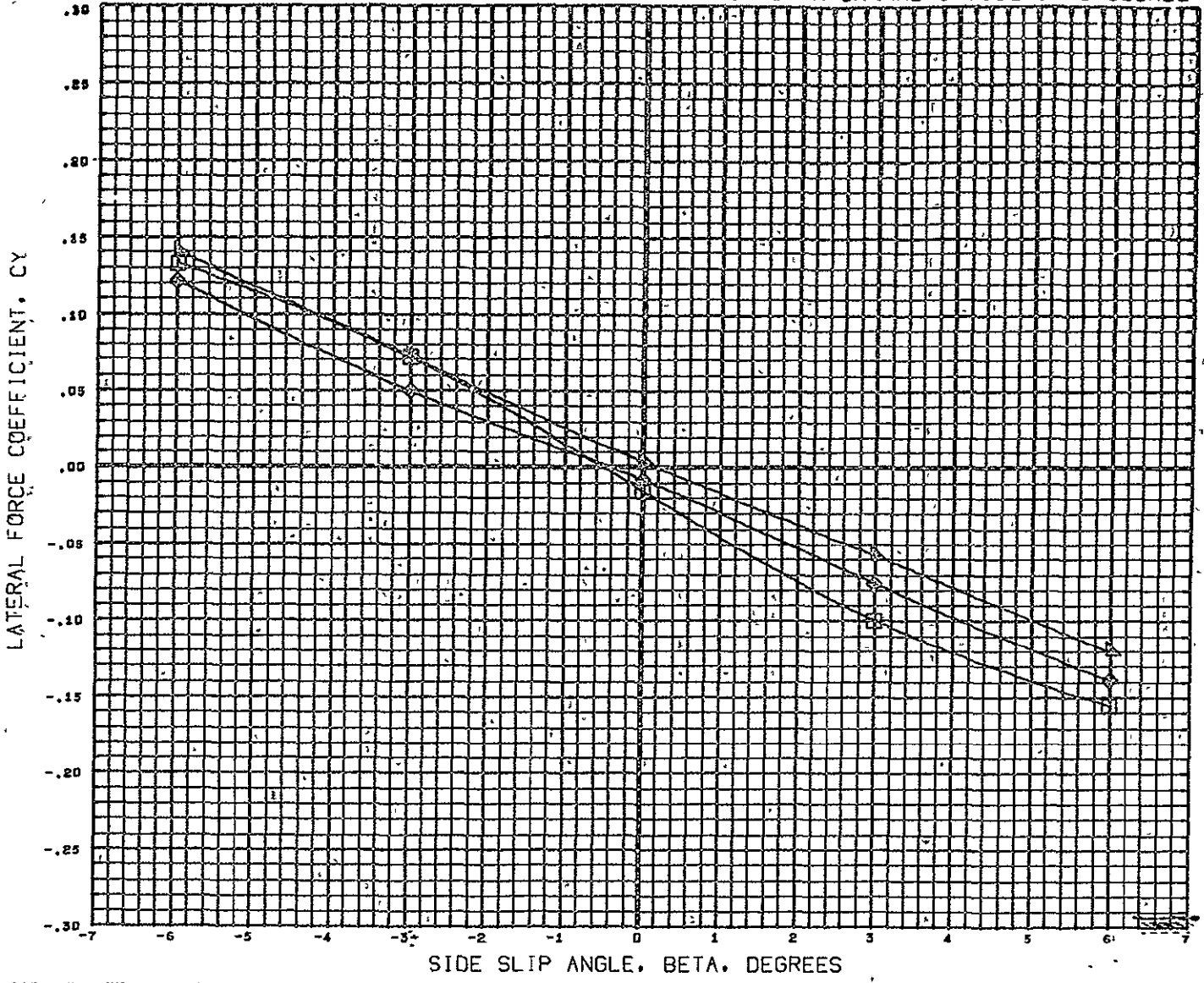
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2 000	1,000	SREF 1.3550 SQ FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1,000	1,000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V165	6.000	1,000	1,000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V166	6.000	1,000	1,000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1	6.135	1,000	1,000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1 000	1,000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

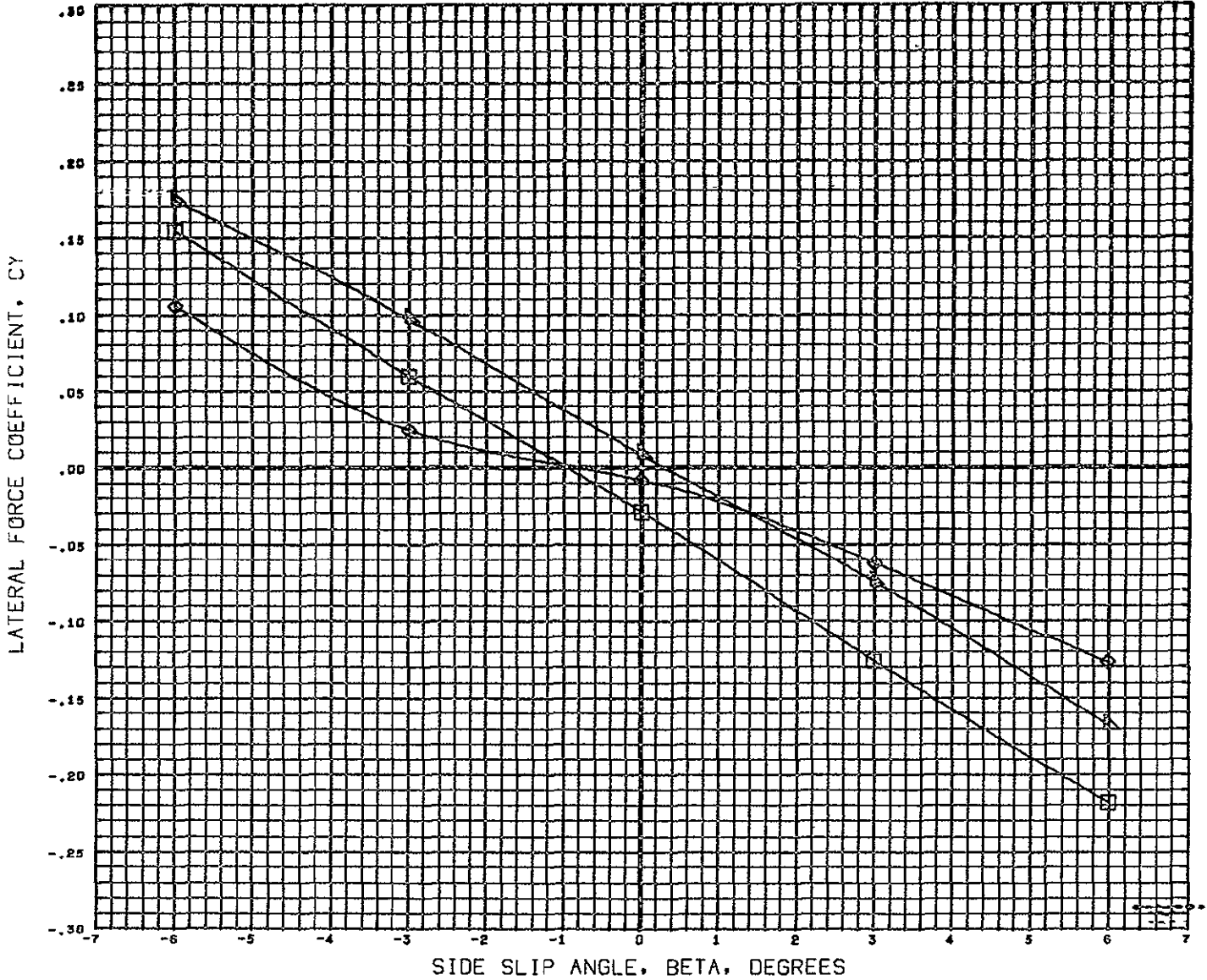
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SR.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G5	6.000	1.000	1.000	XHRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

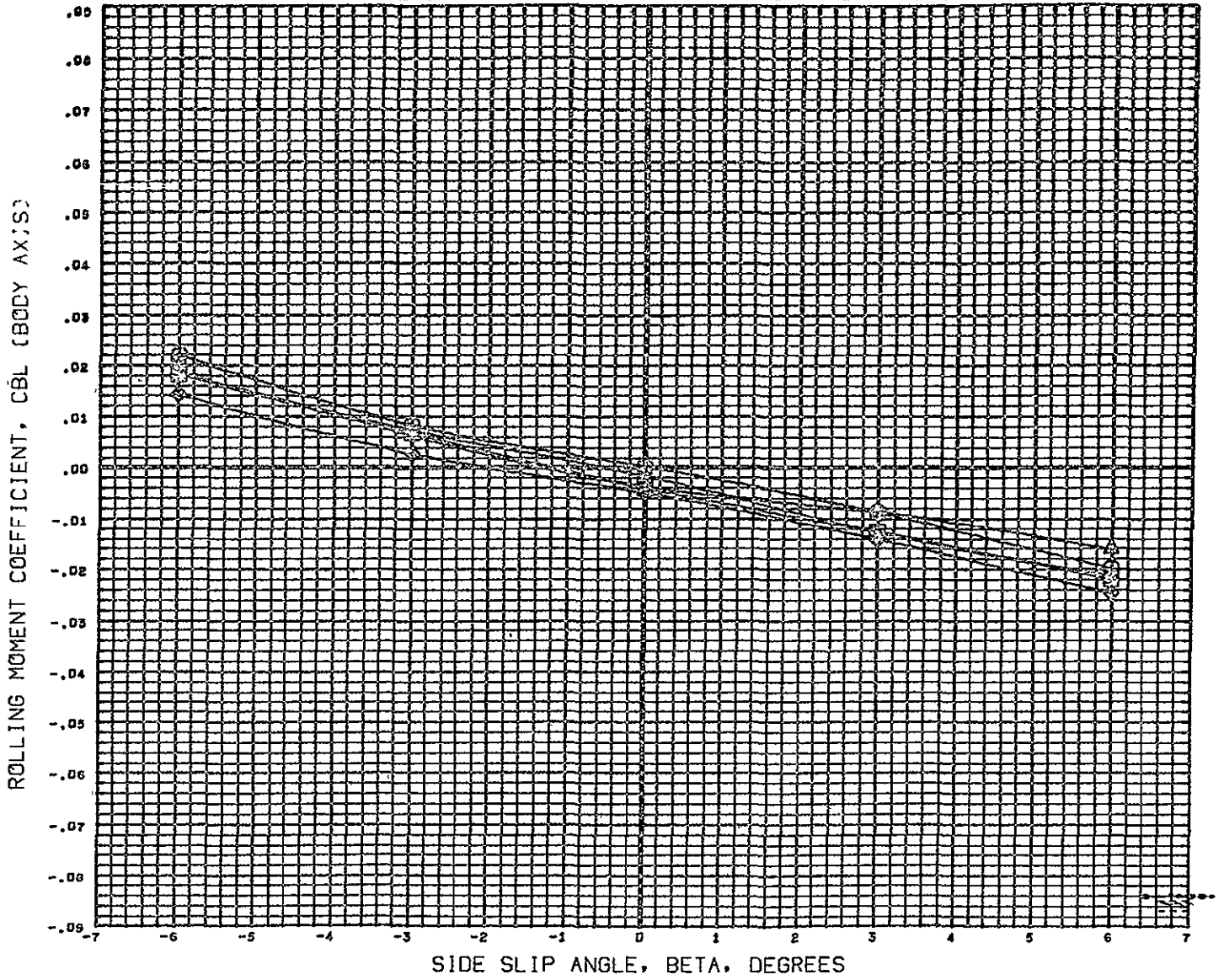
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3204)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.085	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3194)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.041	1.000	1.000	LREF 3.4530 FEET
(DN4148)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V165	6.000	1.000	1.000	BREF 3.4530 FEET
(DN4027)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V166	6.000	1.000	1.000	XMRP 2.5950 FEET
(DN3003)	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	6.135	1.000	1.000	YMRP 0.0000 FEET
(DN2003)	DATA NOT AVAILABLE FOR ALL CONDITIONS	6.133	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

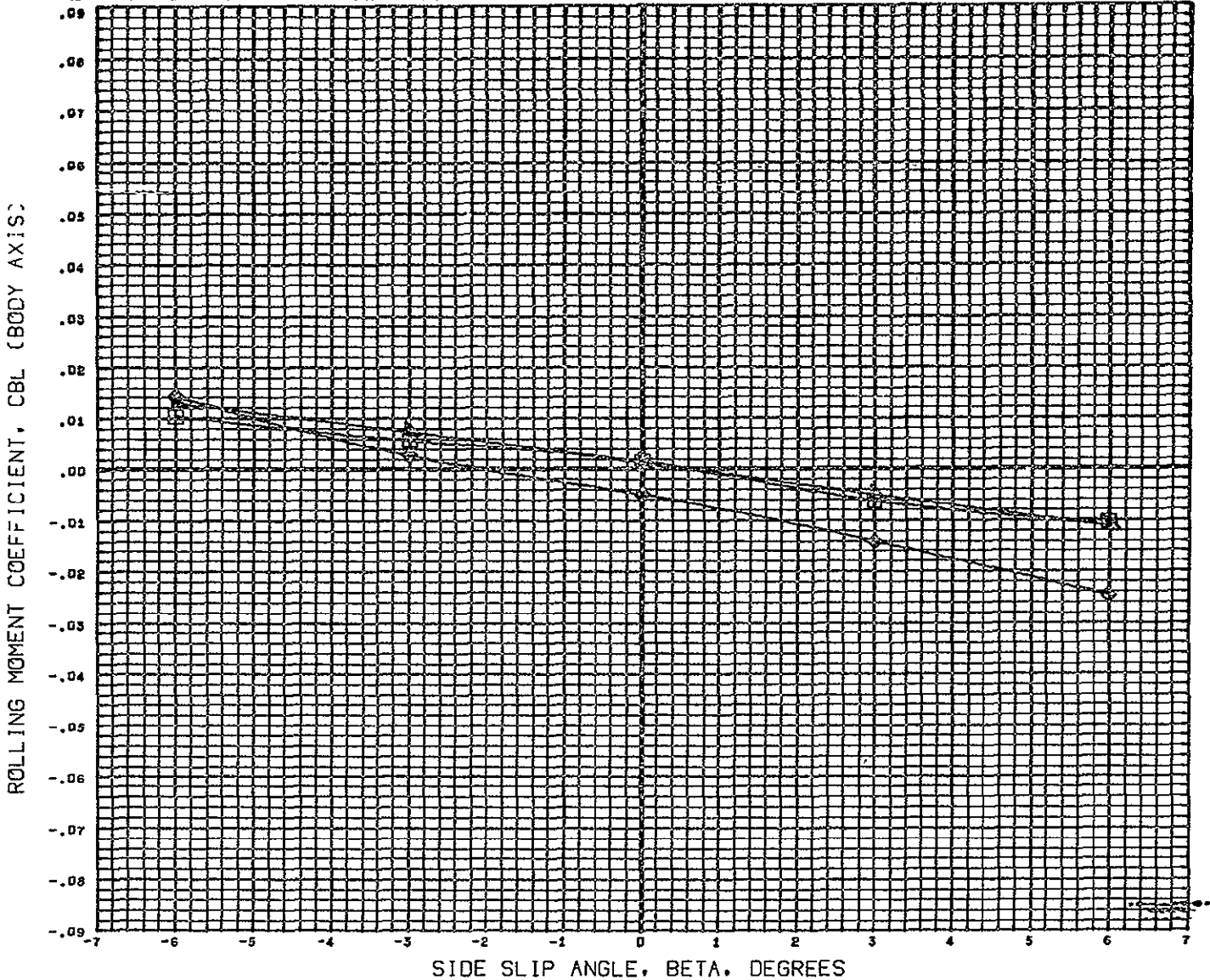
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD, INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1G1	15.112	2.000	1.000	SREF 1.3550 SQ. FT.
(DN3195)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1G2	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XNRP 2.5950 FEET
(DN3004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.440	1.000	1.000	YNRP 0.0000 FEET
(DN2004)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	15.392	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

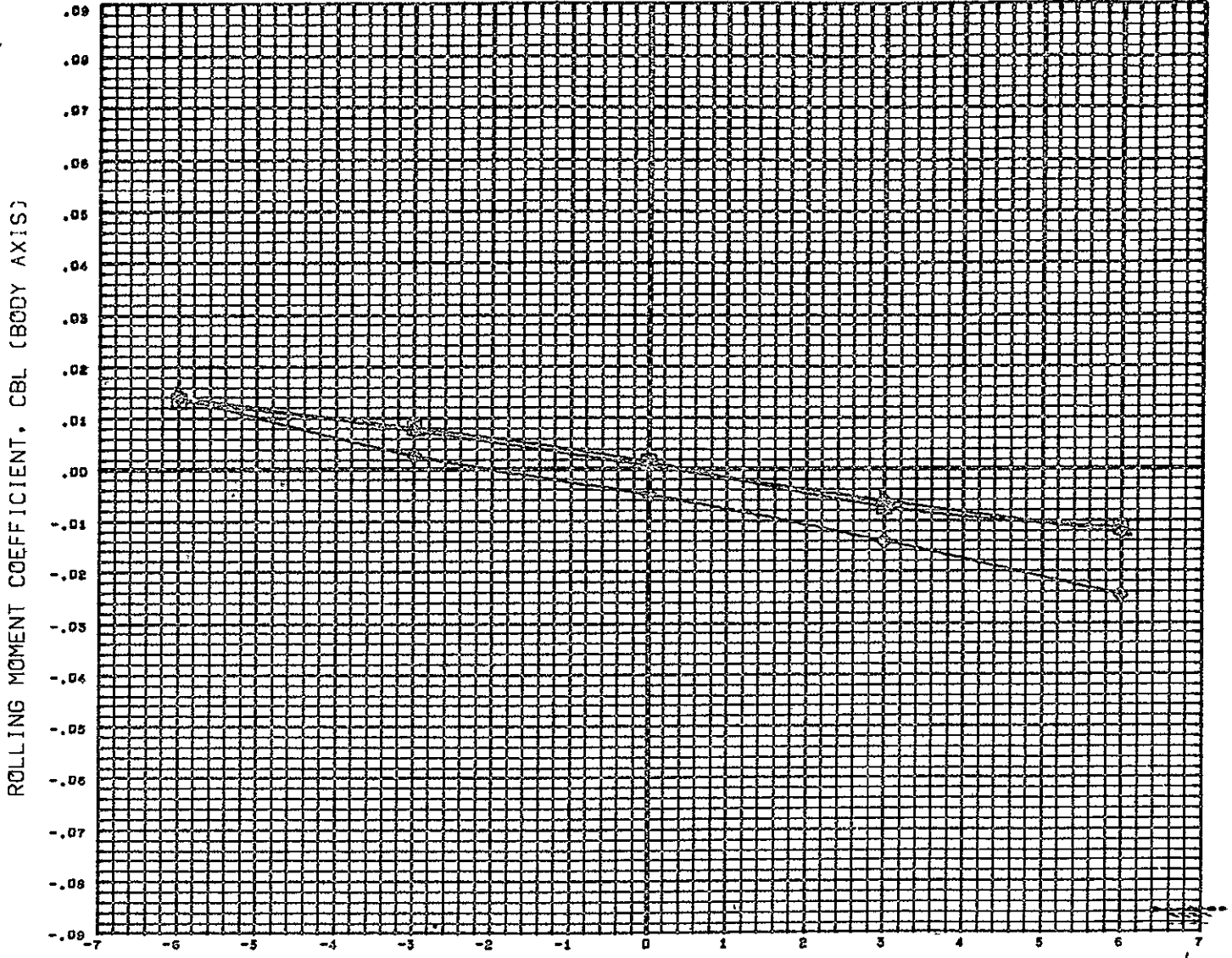
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2,000	1,000	SREF 1.3550 SQ. FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1,000	1,000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V165	15.000	1,000	1,000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V166	15.000	1,000	1,000	XNRP 2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	15.440	1,000	1,000	YNRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1,000	1,000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

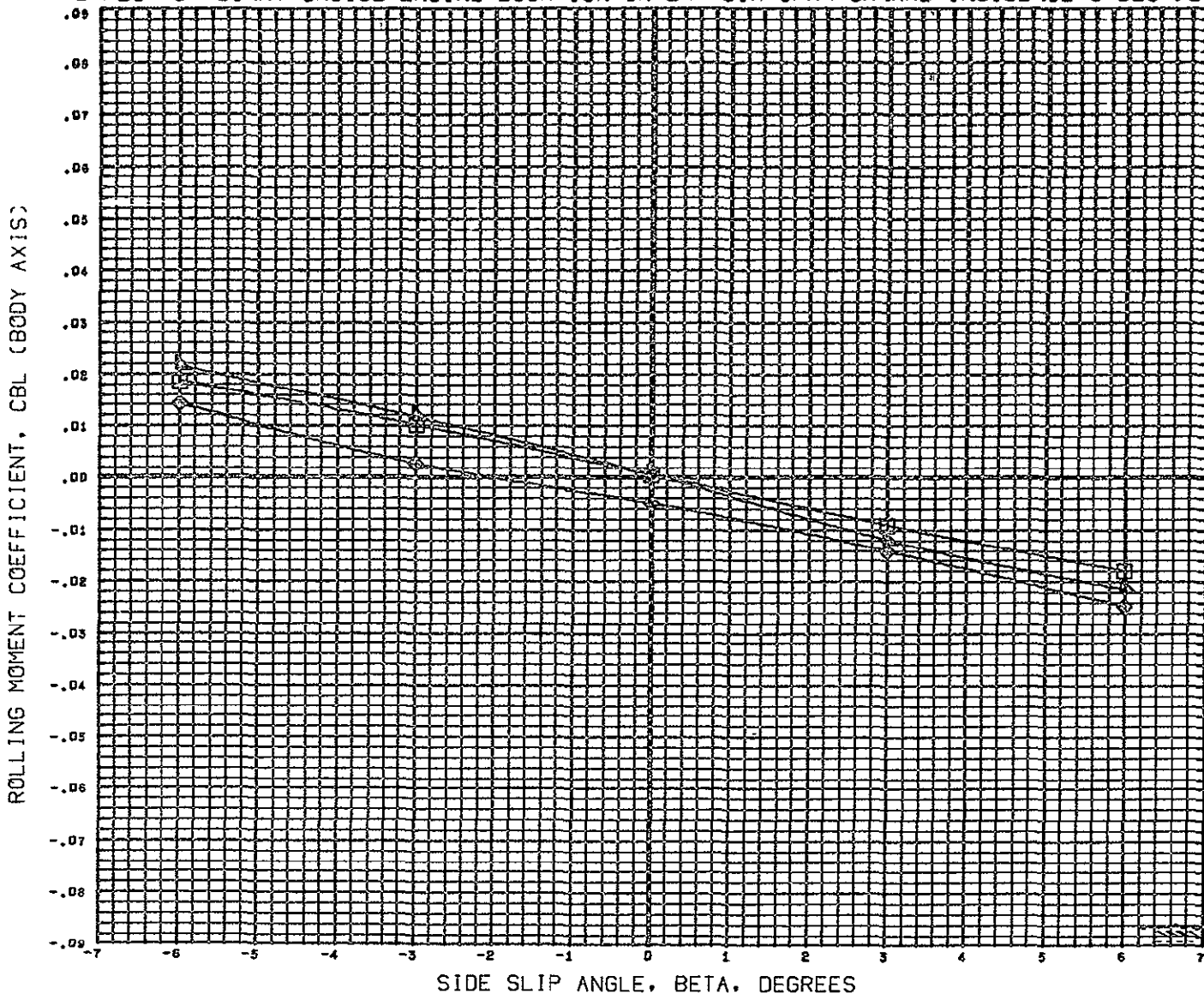
MACH .70

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION	
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF	1.3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF	3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF	3.4530 FEET
(DN4028)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XHRP	2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP	0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZHRP	0.0187 FEET
					SCALE	0.0150 SCALE

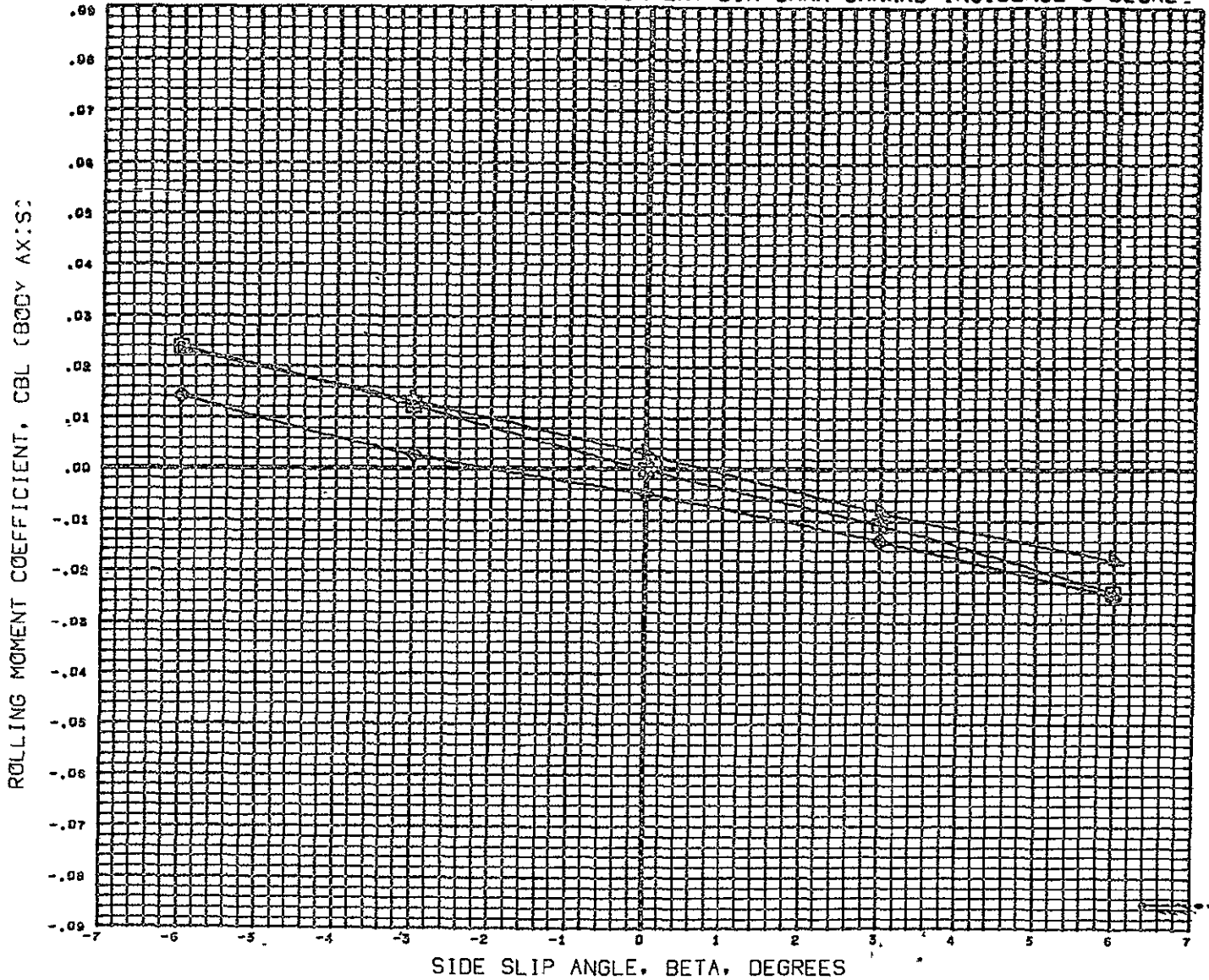
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3295)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XMRP 2.5950 FEET
(DN3004)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YMRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

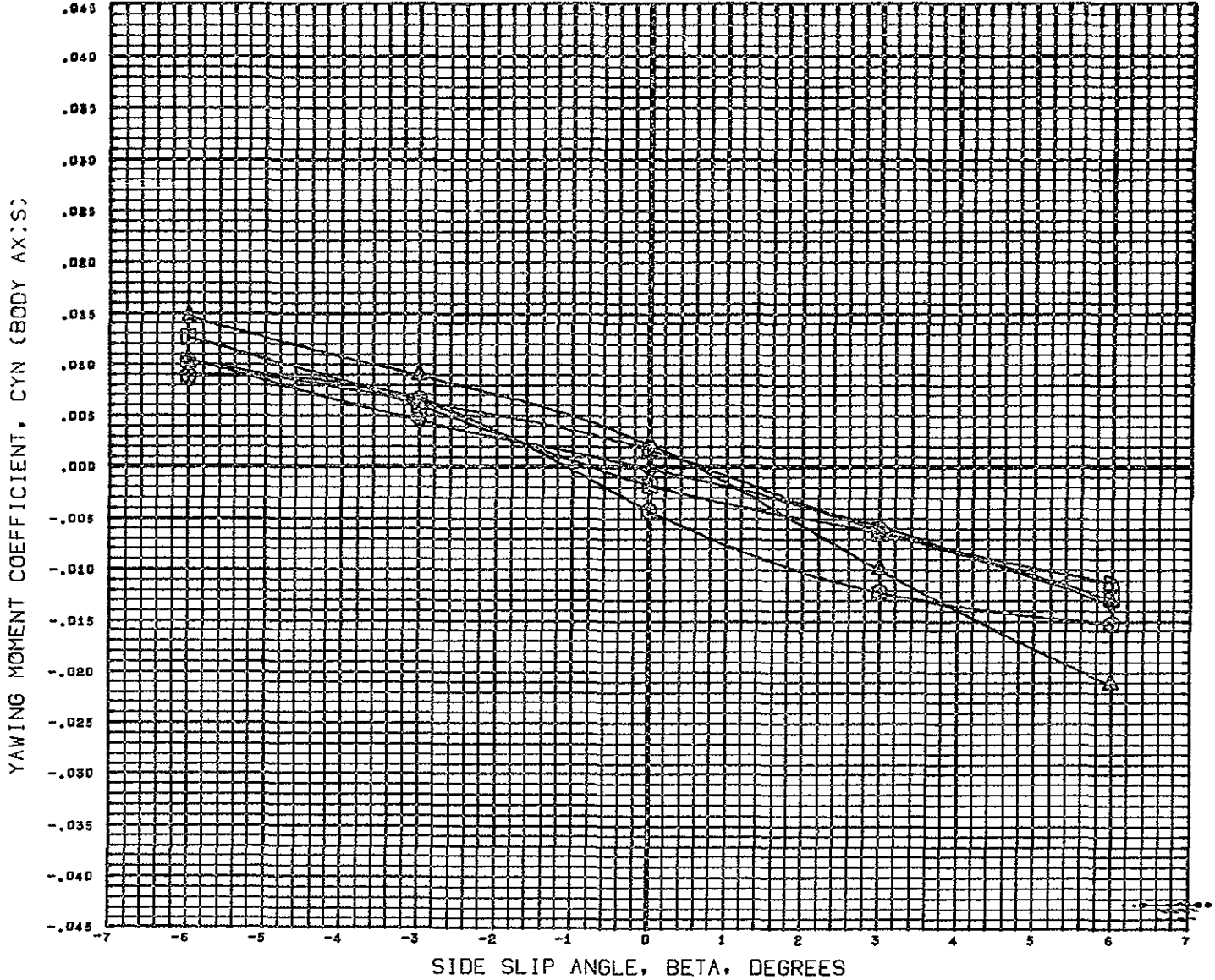
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V165	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V166	15.000	1.000	1.000	XMRP 2.5950 FEET
(DN3004)	NSRDC-3210, NSFC/LHSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YMRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

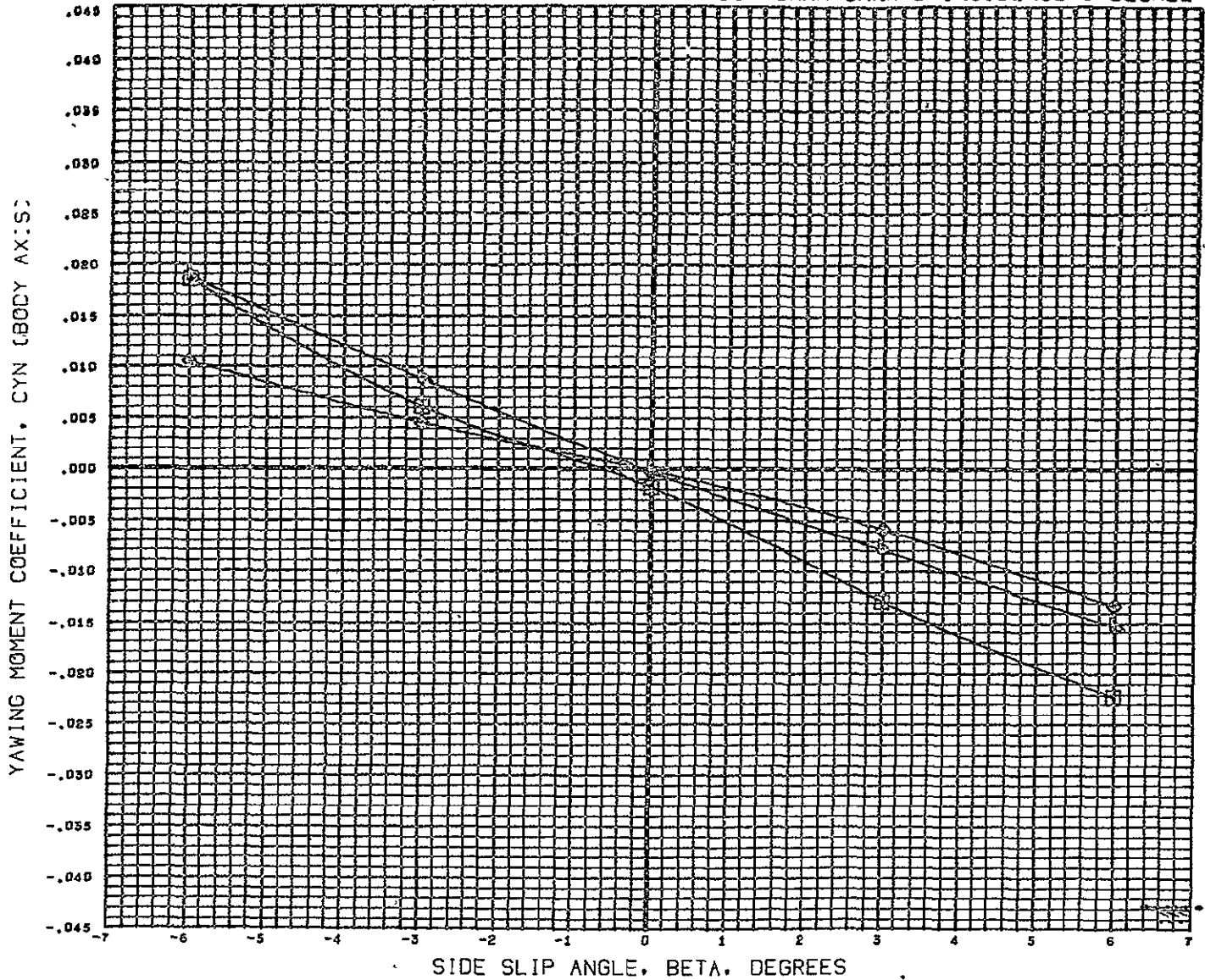
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION	
(DN3205)	D7E2D NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1G1	15.112	2.000	1.000	SREF 1.3550 SQ.FT.	
(DN3195)		15.150	1.000	1.000	LREF 3.4530 FEET	
(DN4149)		15.000	1.000	1.000	BREF 3.4530 FEET	
(DN4028)		15.000	1.000	1.000	XMRP 2.5950 FEET	
(DN3004)		DATA NOT AVAILABLE FOR ALL CONDITIONS	15.440	1.000	1.000	YMRP 0.0000 FEET
(DN2004)		NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	15.392	1.000	1.000	ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

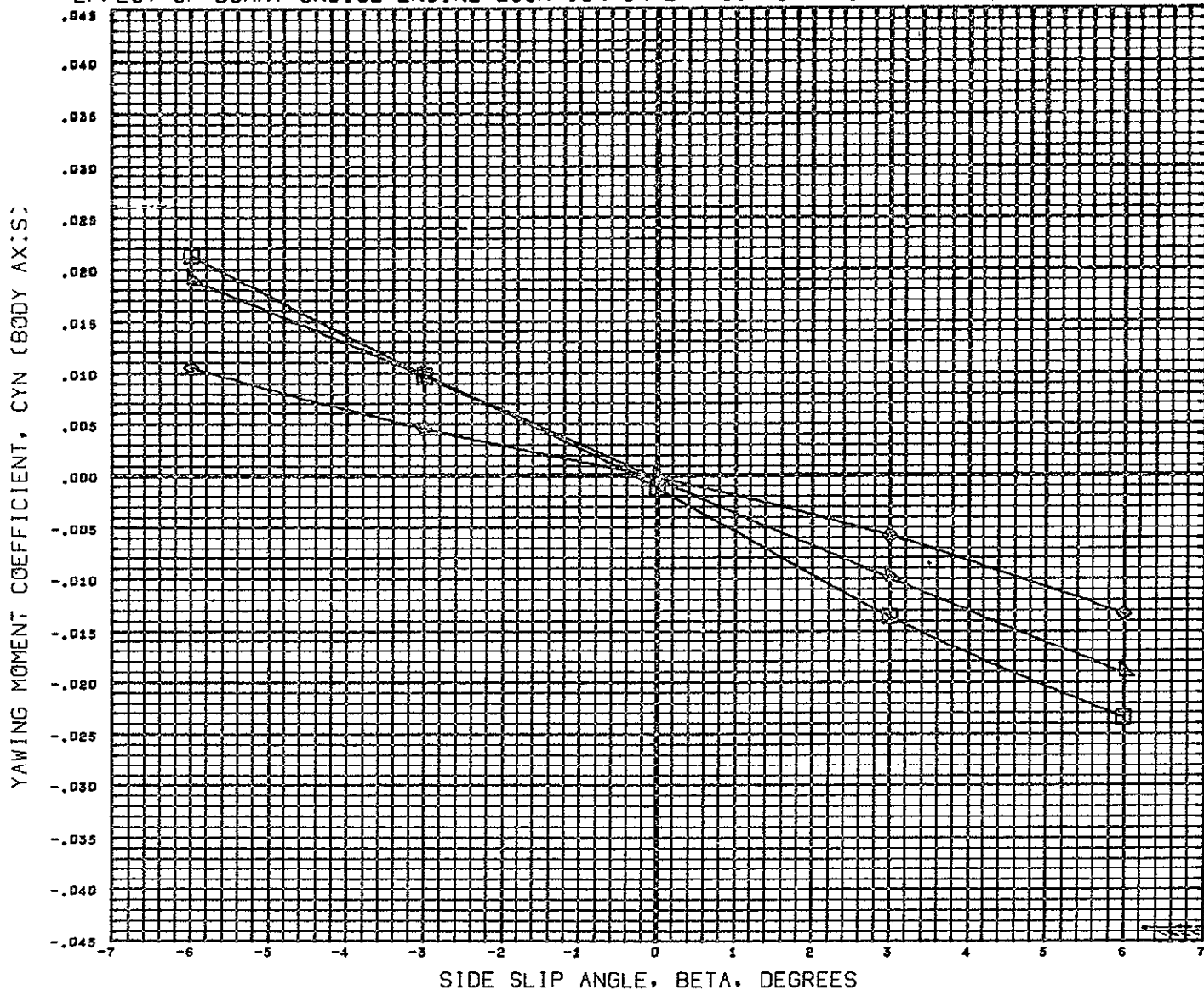
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	15.000	1.000	1.000	XMRP 2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZHRP 0.0197 FEET
					SCALE 0.0190 SCALE

MACH .70

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

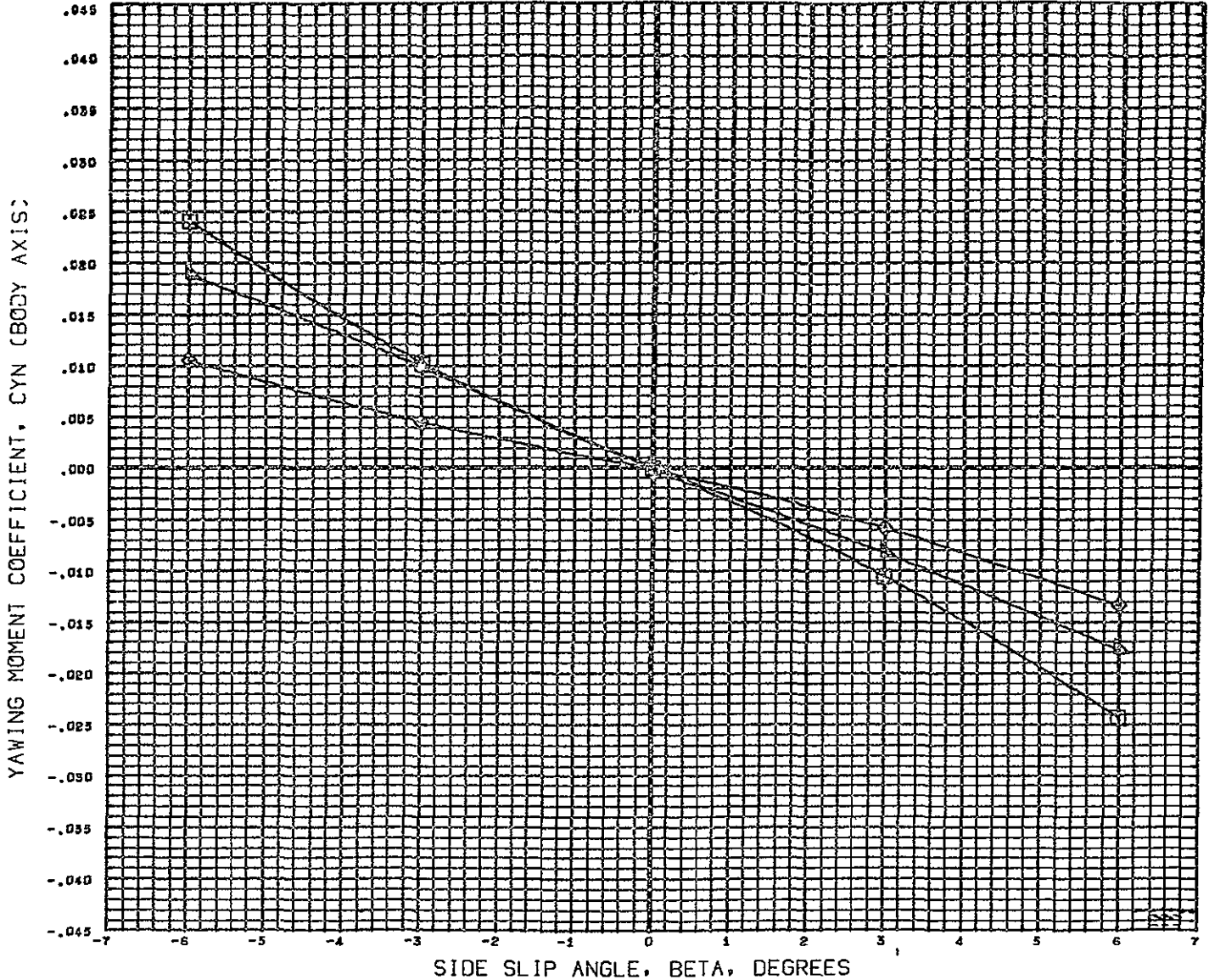


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ FT
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XHRP 2.5950 FEET
(DN3004)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

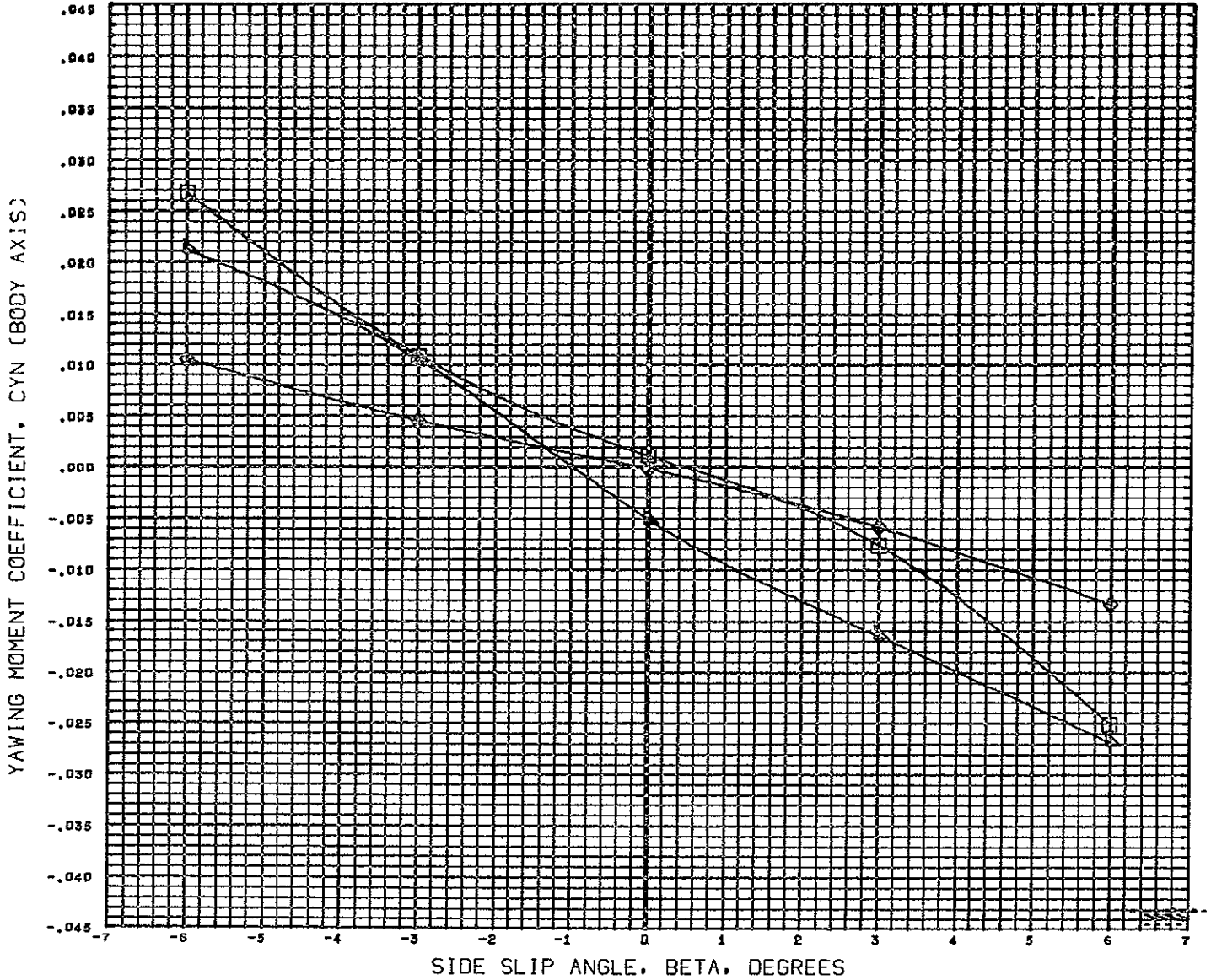


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3196)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XHRP 2.5950 FEET
(DN3604)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZHRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

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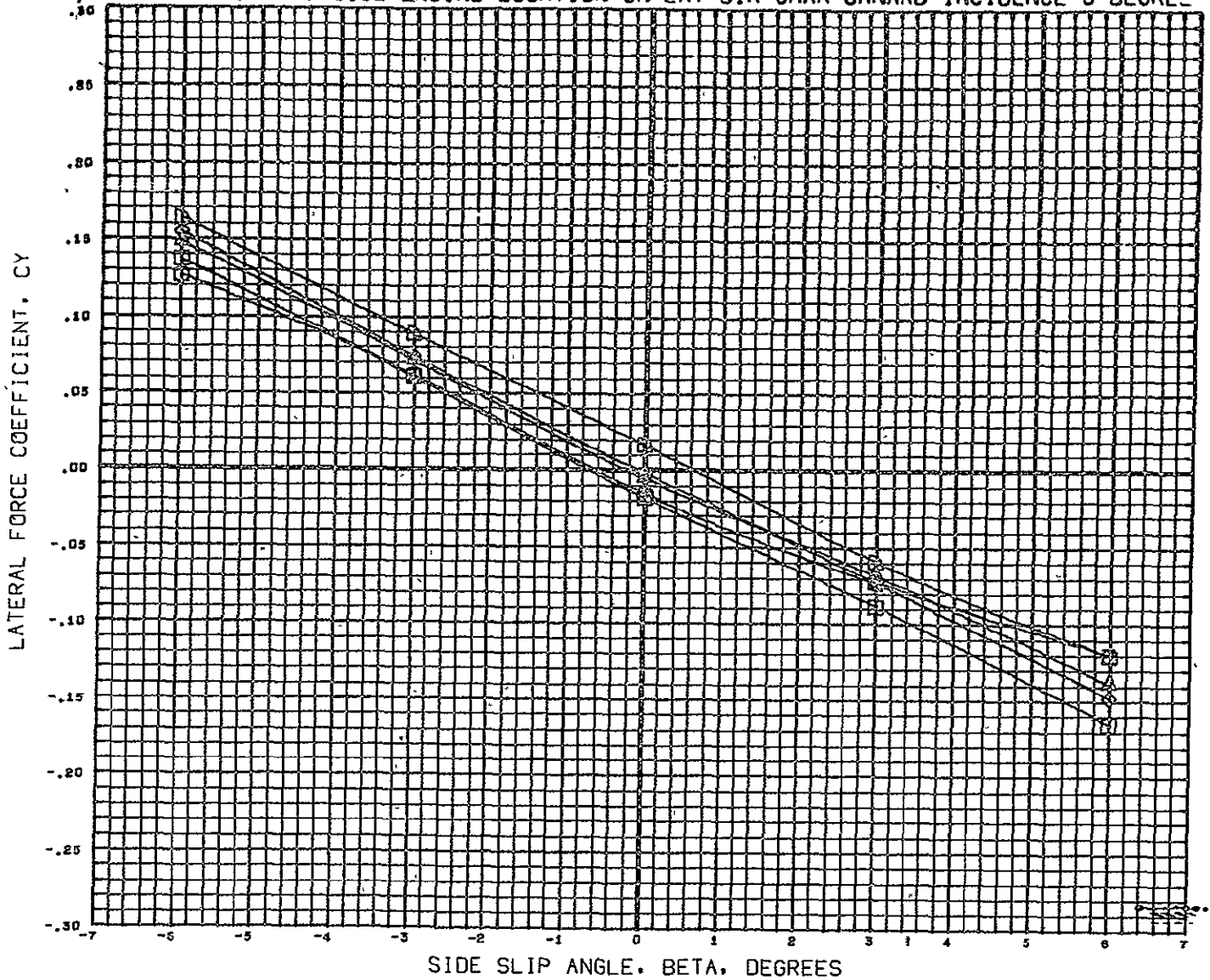
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4026)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XMRP 2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YMRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH 1.00

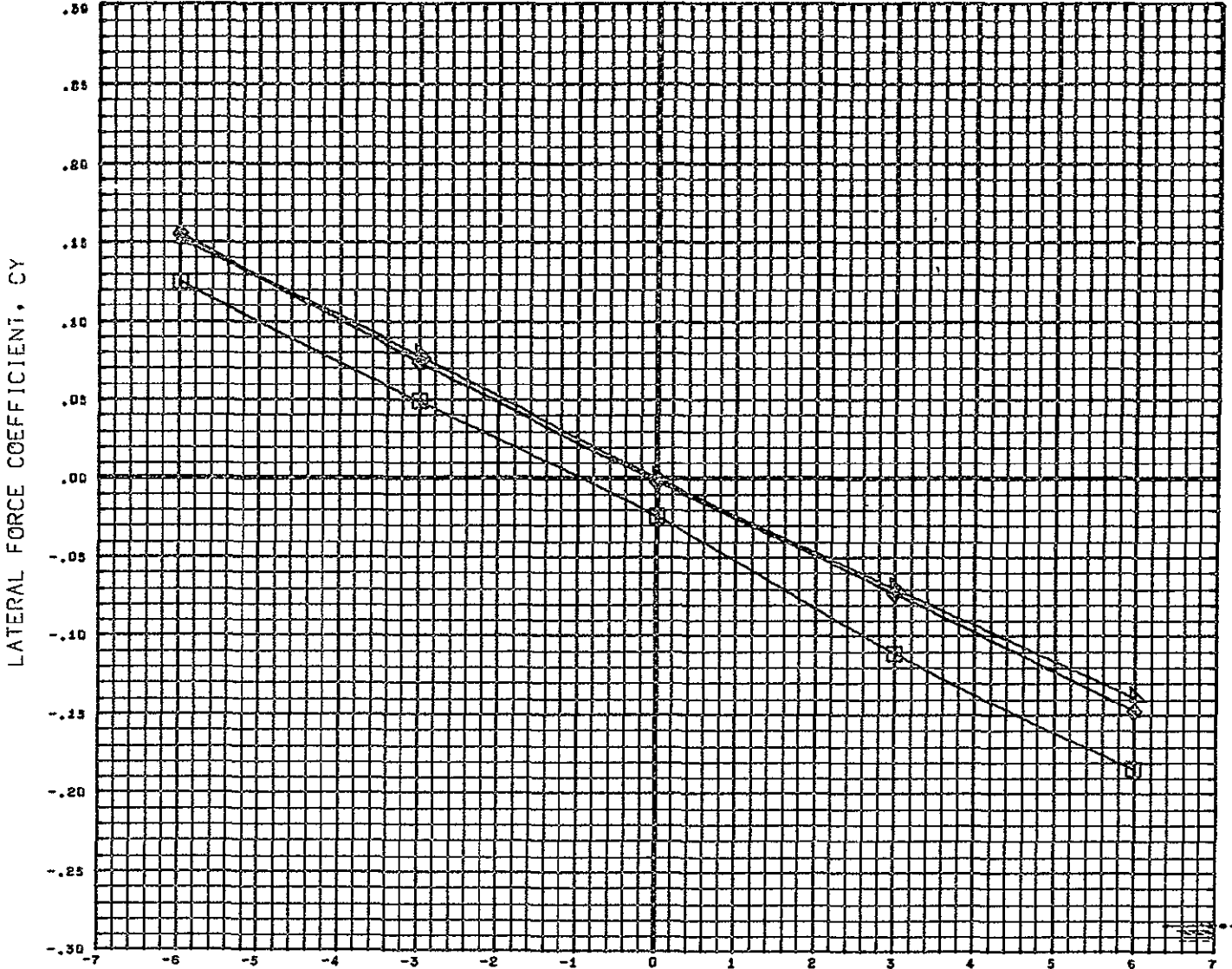
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V161	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3195)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V162	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V165	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V166	15.000	1.000	1.000	XNRP 2.5950 FEET
(DN3004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.440	1.000	1.000	YNRP 0.0000 FEET
(DN2004)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	15.392	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .40

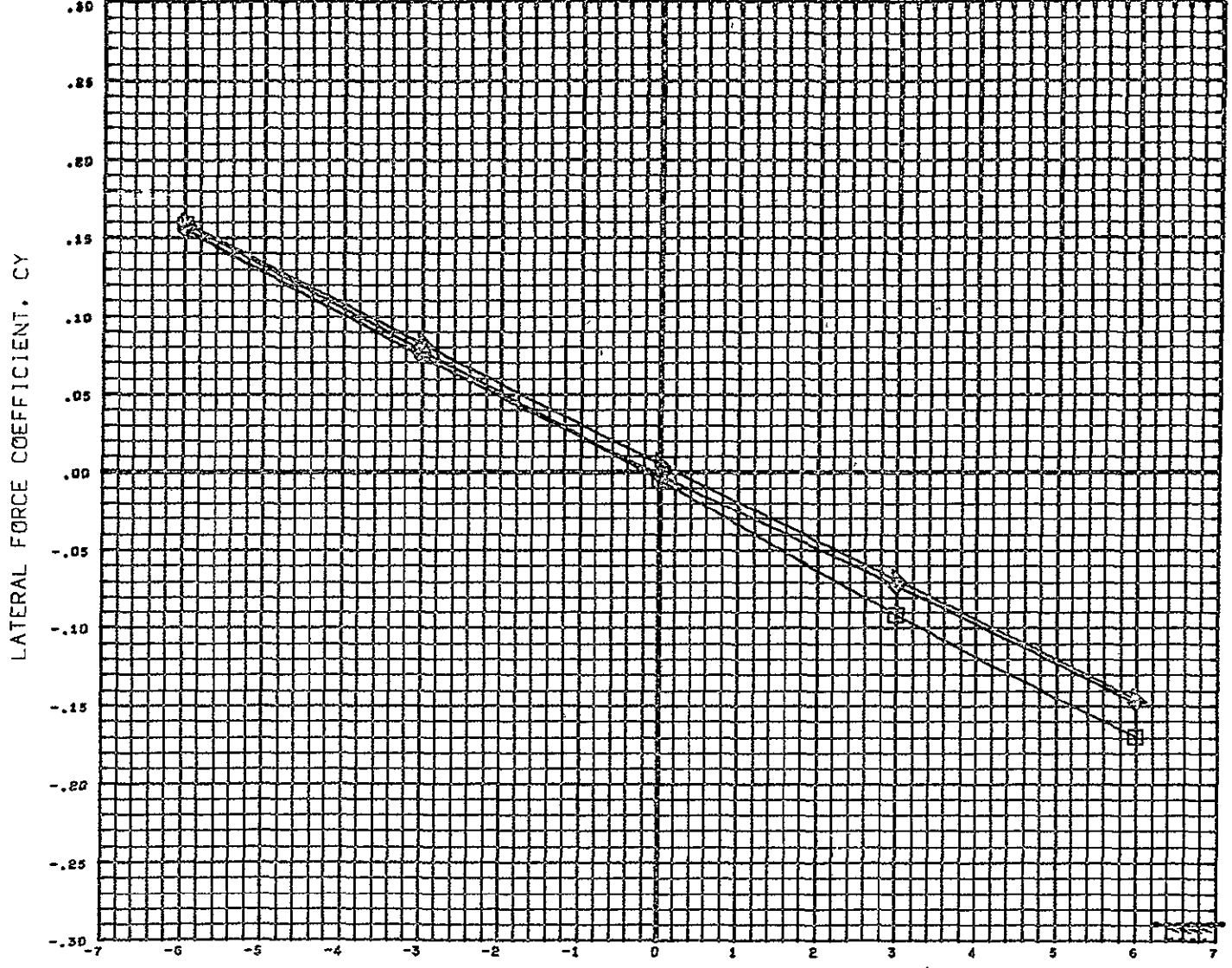
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1 3550 SQ FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	XMRP 2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YMRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .70

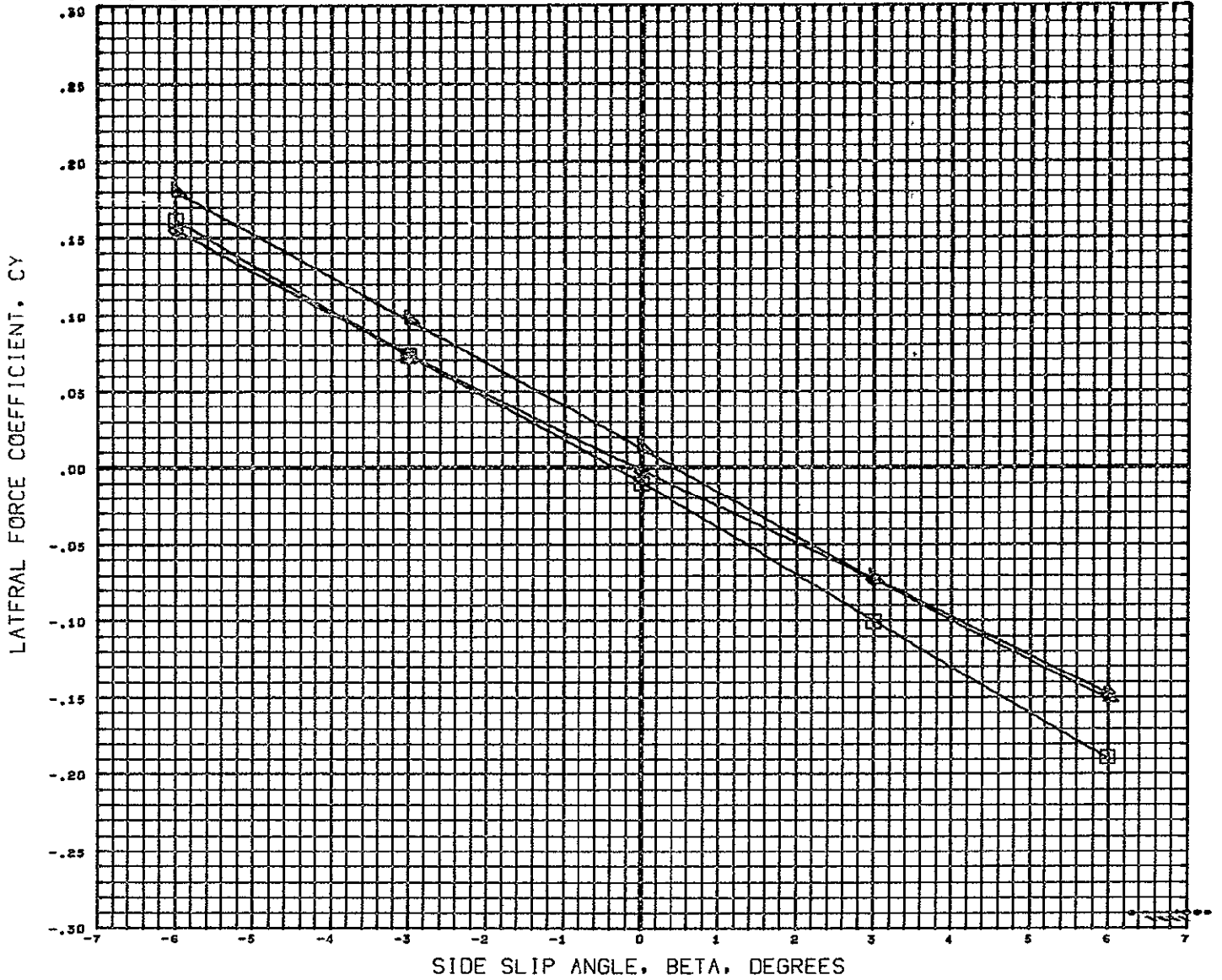
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1.3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3.4530 FEET
(DN4149)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G5	15.000	1.000	1.000	BREF 3.4530 FEET
(DN4028)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1G6	15.000	1.000	1.000	XNRP 2.5950 FEET
(DN3004)	NSRDC-3210,MSFC/LHSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YNRP 0.0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZNRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .80

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

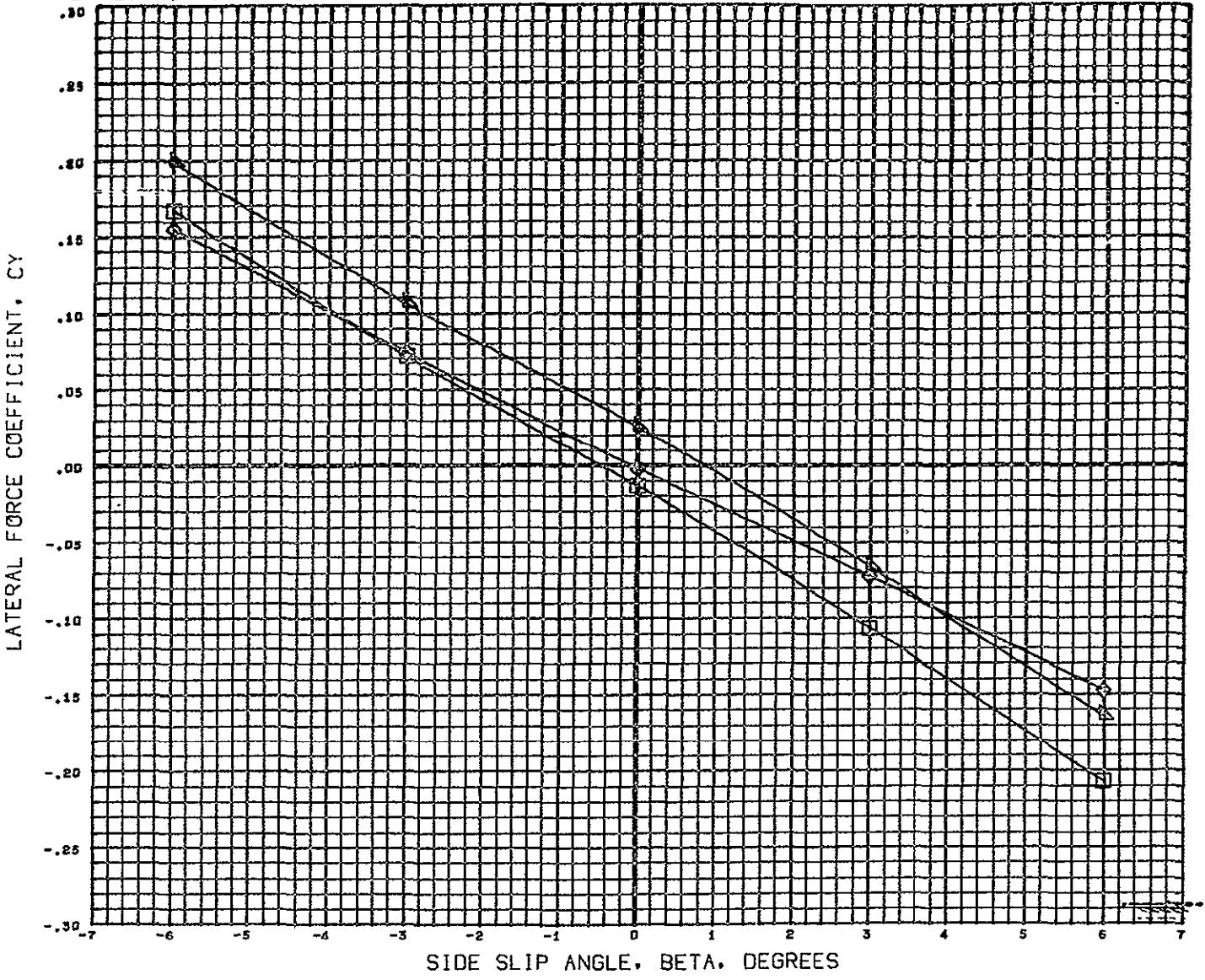


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
{DN3205}	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1 3550 SQ.FT.
{DN3195}	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3 4530 FEET
{DN4149}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	15.000	1.000	1.000	BREF 3 4530 FEET
{DN4028}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	15.000	1.000	1.000	XHRP 2.5950 FEET
{DN3004}	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP 0.0000 FEET
{DN2004}	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZMRP 0.0187 FEET
					SCALE 0.0150 SCALE

MACH .90

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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR CANARD INCIDENCE=3 DEGREE

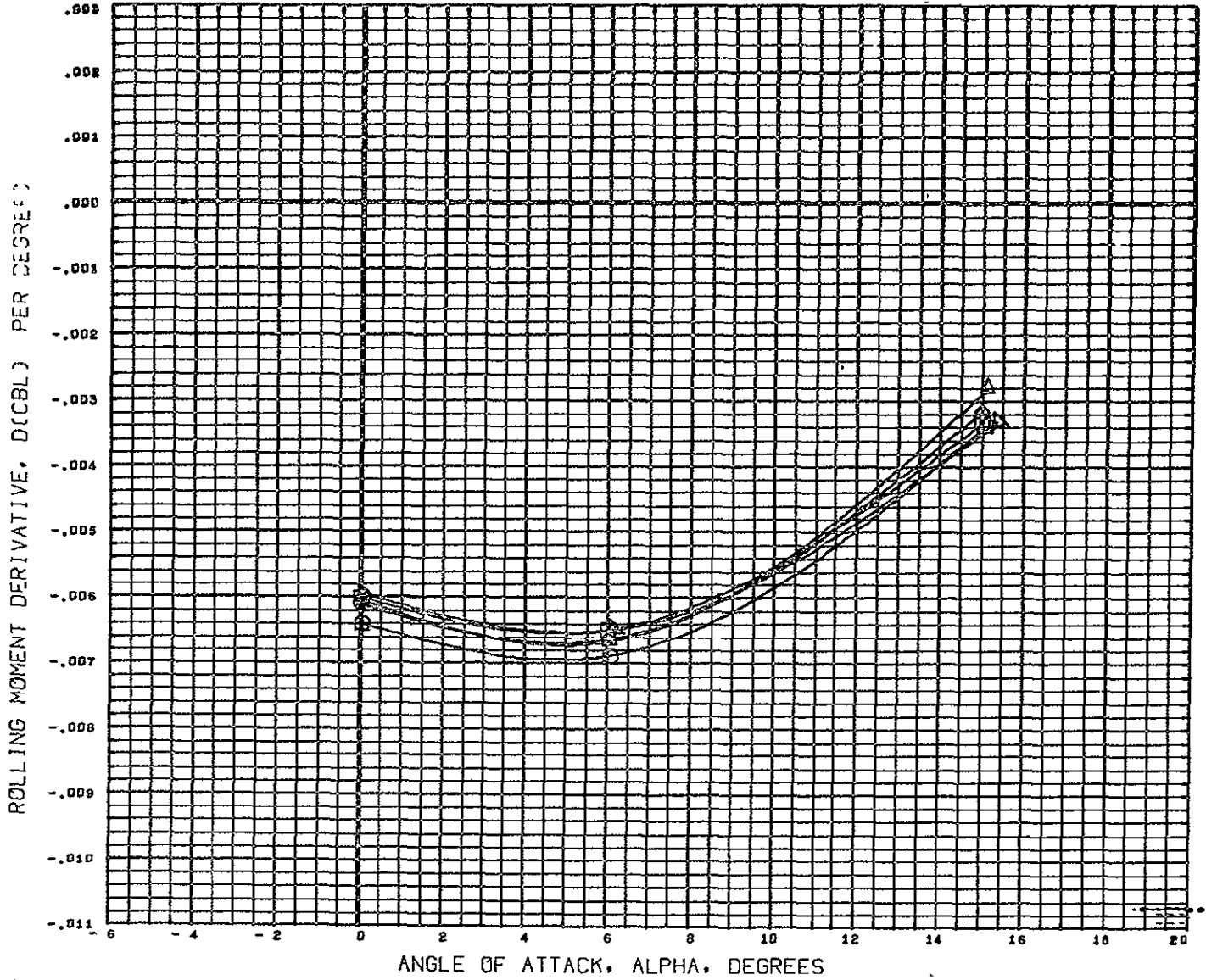


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CNDPOS	WNGPOS	REFERENCE INFORMATION
(DN3205)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.112	2.000	1.000	SREF 1,3550 SQ.FT.
(DN3195)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.150	1.000	1.000	LREF 3,4530 FEET
(DN4149)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V165	15.000	1.000	1.000	BREF 3,4530 FEET
(DN4028)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V166	15.000	1.000	1.000	XNRP 2,5950 FEET
(DN3004)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	15.440	1.000	1.000	YHRP 0,0000 FEET
(DN2004)	DATA NOT AVAILABLE FOR ALL CONDITIONS	15.392	1.000	1.000	ZNRP 0,0187 FEET
					SCALE 0,0150 SCALE

MACH 1.00

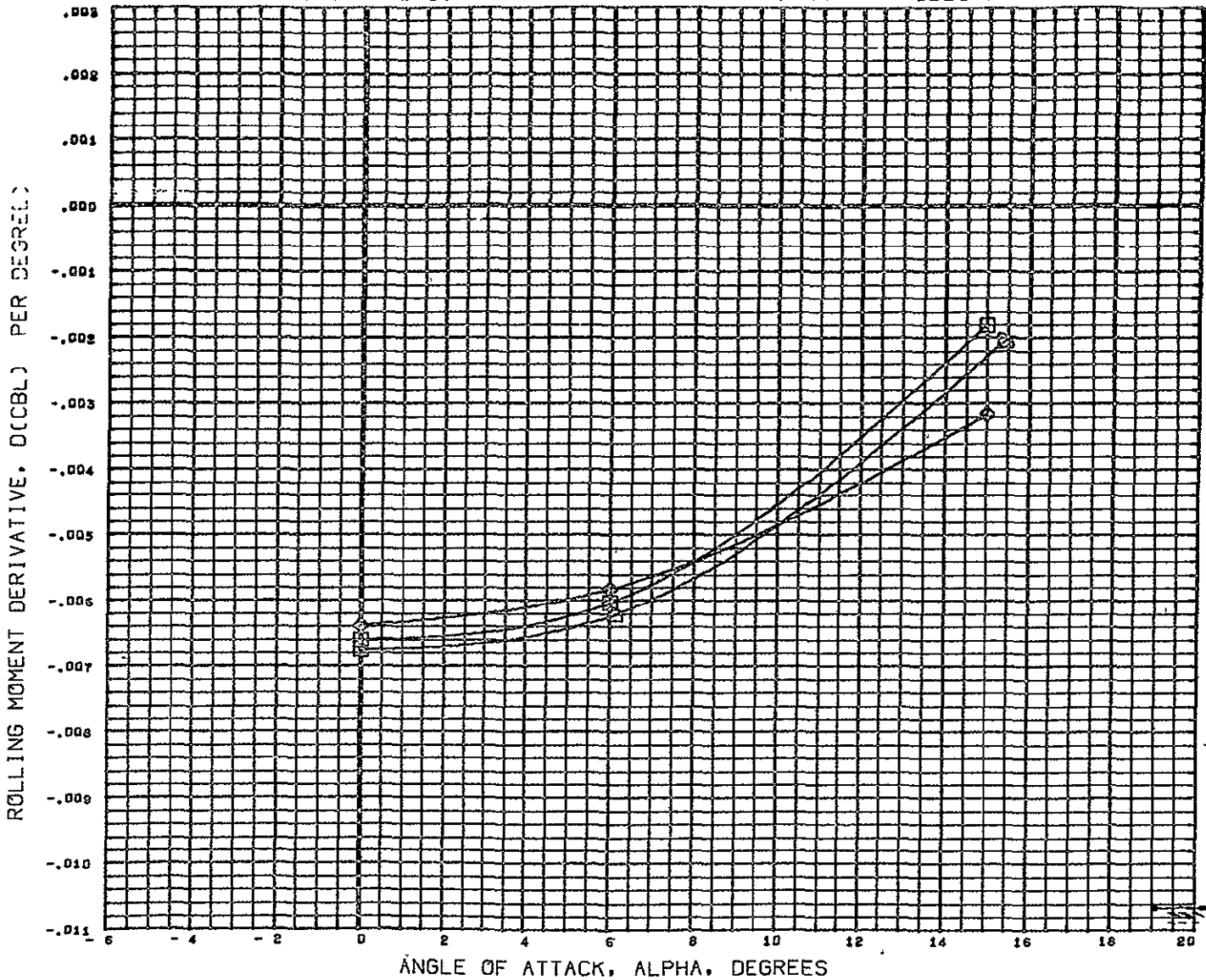
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EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



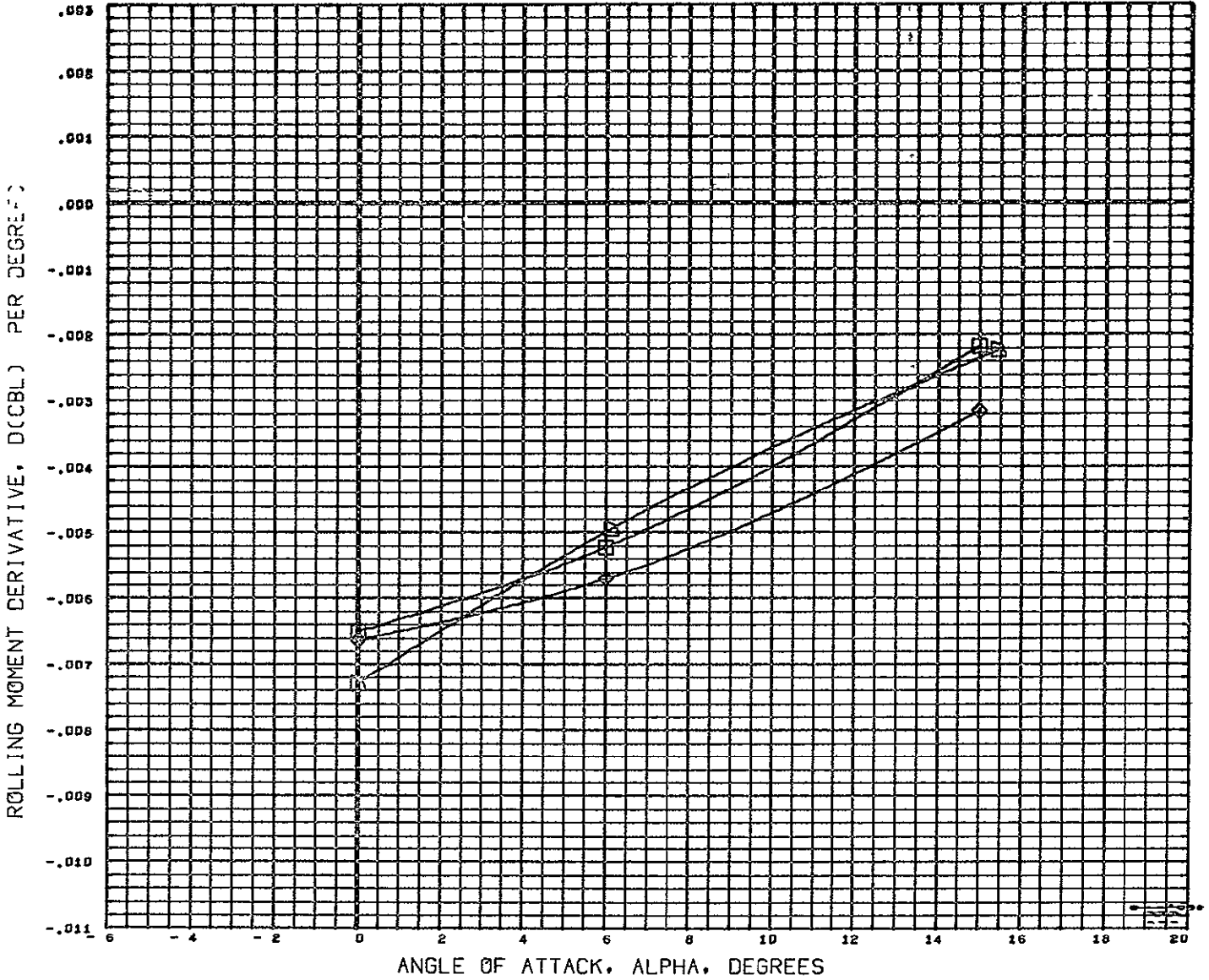
SYMBOL	ENGLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	sq. FT.
◇	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
◇	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
◇	6.000	ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
◇	0.000	CNDPOS	2.000			YNRP	0.0000	FEET
◇	0.000	DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



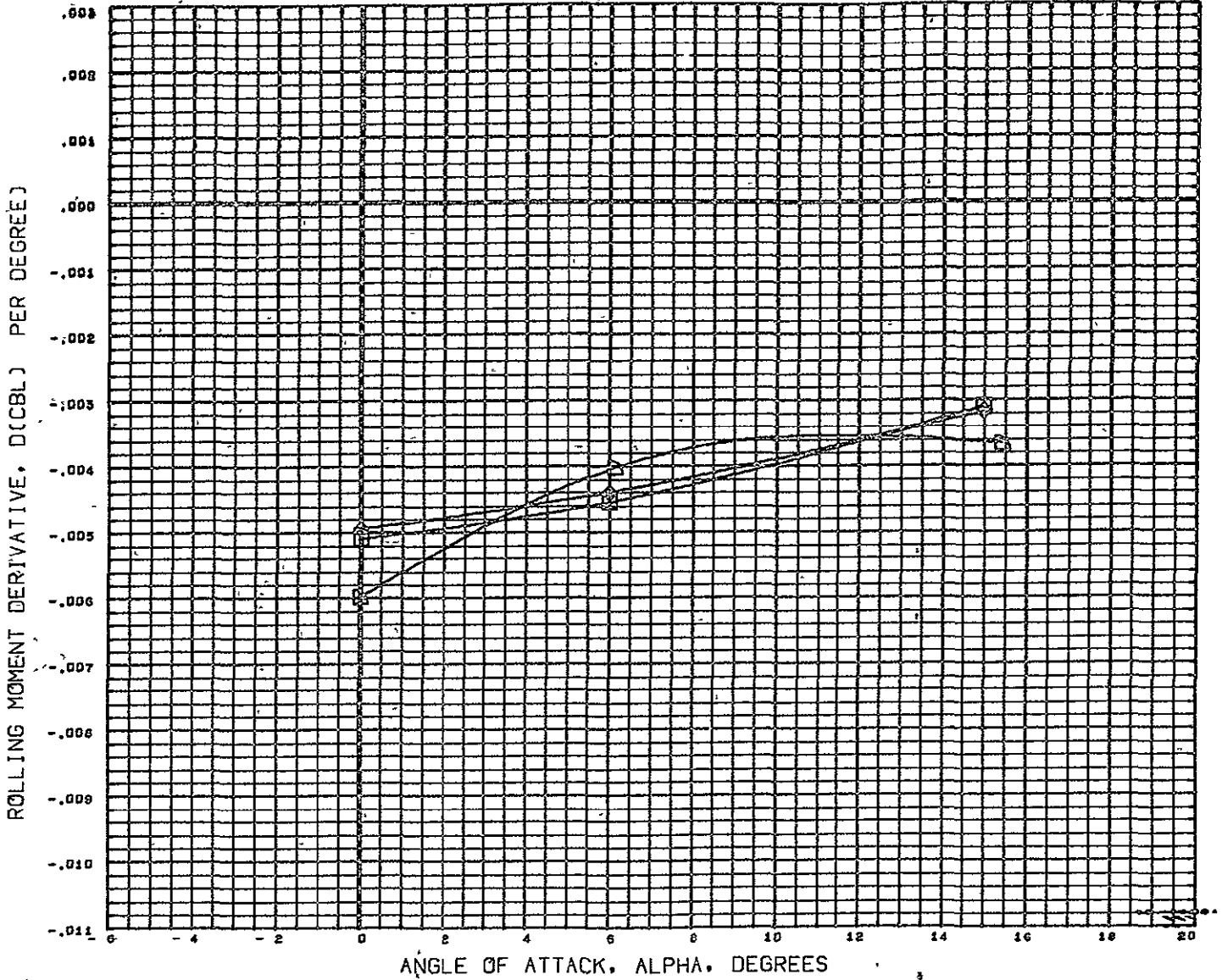
SYMBOL	ENGLC	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	1.000	MACH	0.700	INCIDC	3.000	SREF	1.3550	SQ.FT.
◇	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
○	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
△	6.000	ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
	0.000	CNDPOS	2.000			YMRP	0.0000	FEET
	0.000	DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



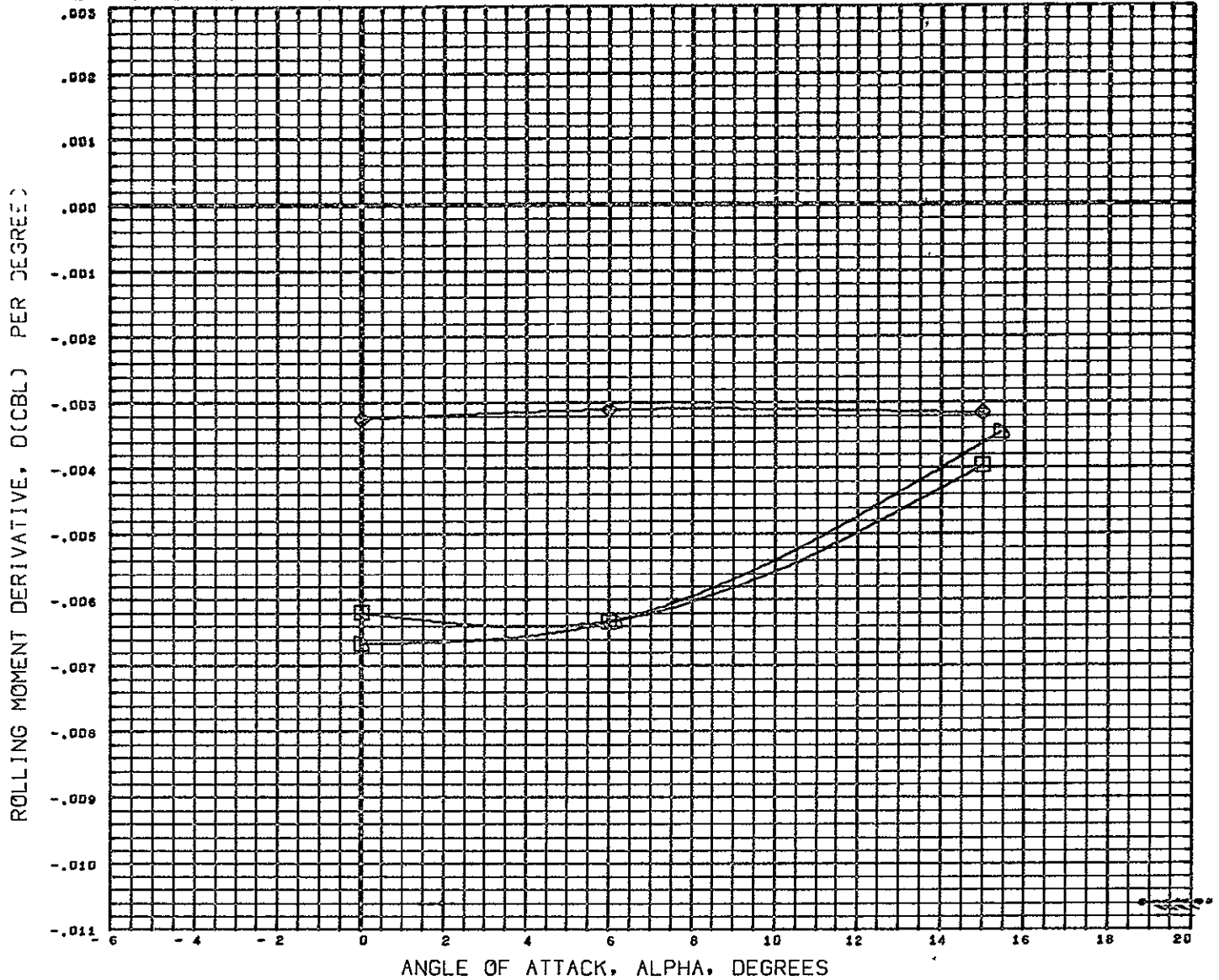
SYMBOL	ENGLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	HACH	0.000	INCIDC	3.000	SREF	1.3550	SQ. FT.
◻	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
○	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
△	6.000	ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
▽	0.000	CNDPOS	2.000			YHRP	0.0000	FEET
◇	0.000	DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLC	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	1.000	MACH	0.900	INCIDC	3.000	SREF	1.3550	SQ.FT.
○	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
△	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
	6.000	ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
	0.000	CNDPOS	2.000			YMRP	0.0000	FEET
	0.000	DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

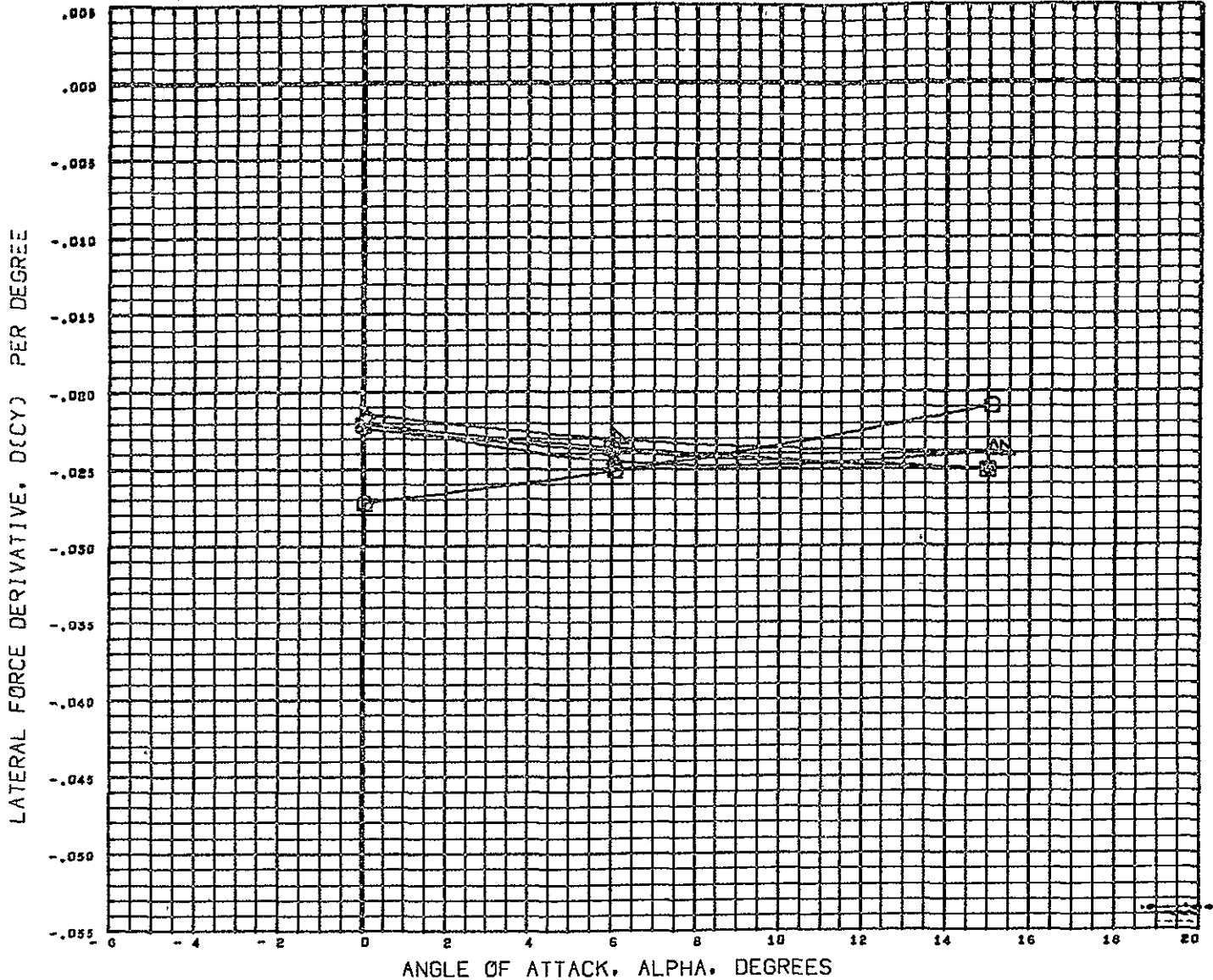
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



ANGLE OF ATTACK, ALPHA, DEGREES

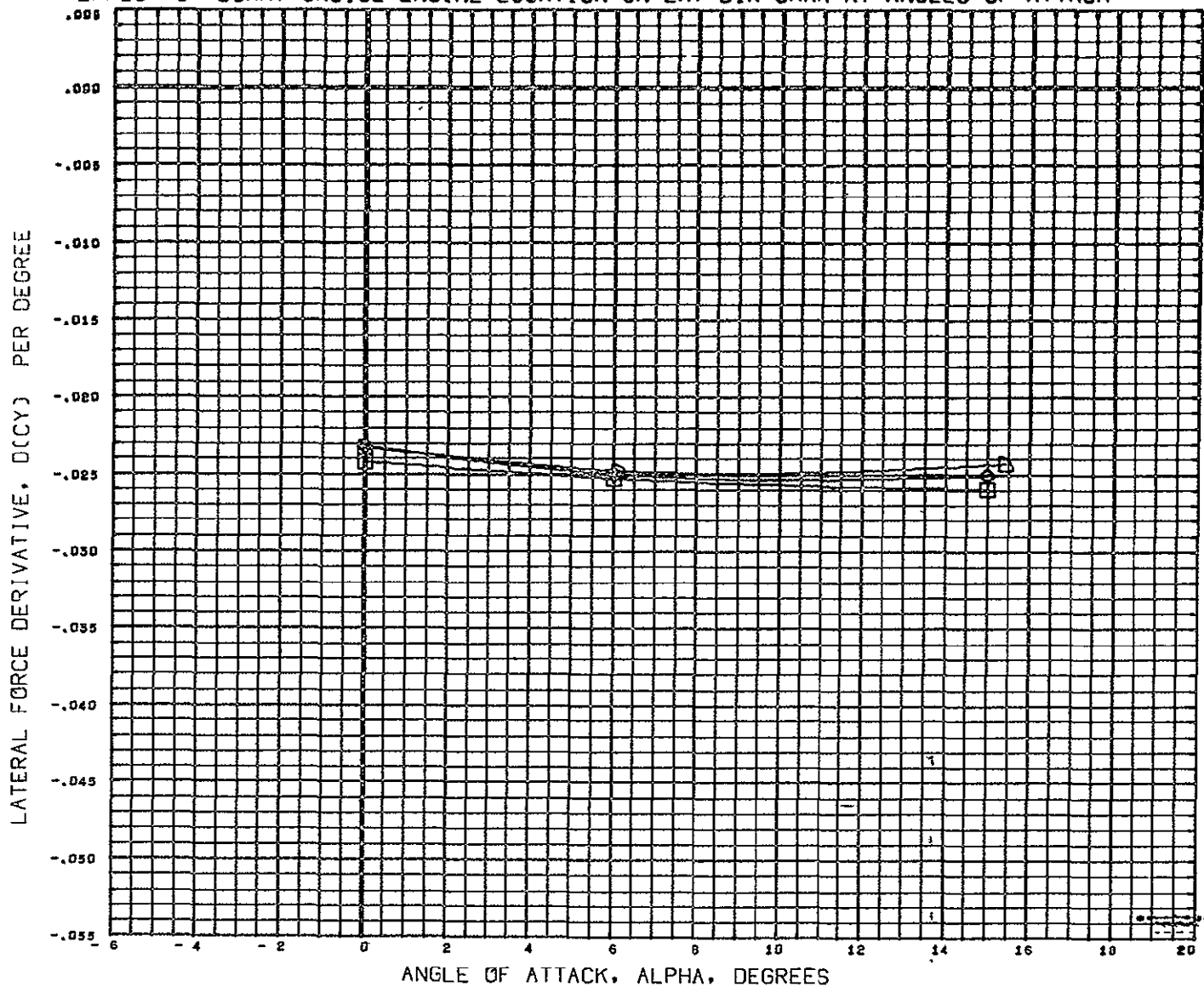
SYMBOL	ENGLLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	MACH	1.000	INCIDC	3.000	SREF	1.3550	SQ. FT.
△	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
□	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
	6.000	ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
	0.000	CNDPOS	2.000			YMRP	0.0000	FEET
	0.000	DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT
◇	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
◇	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
◇	6.000	ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
◇	0.000	CNDPOS	2.000			YMRP	0.0000	FEET
◇	0.000	DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

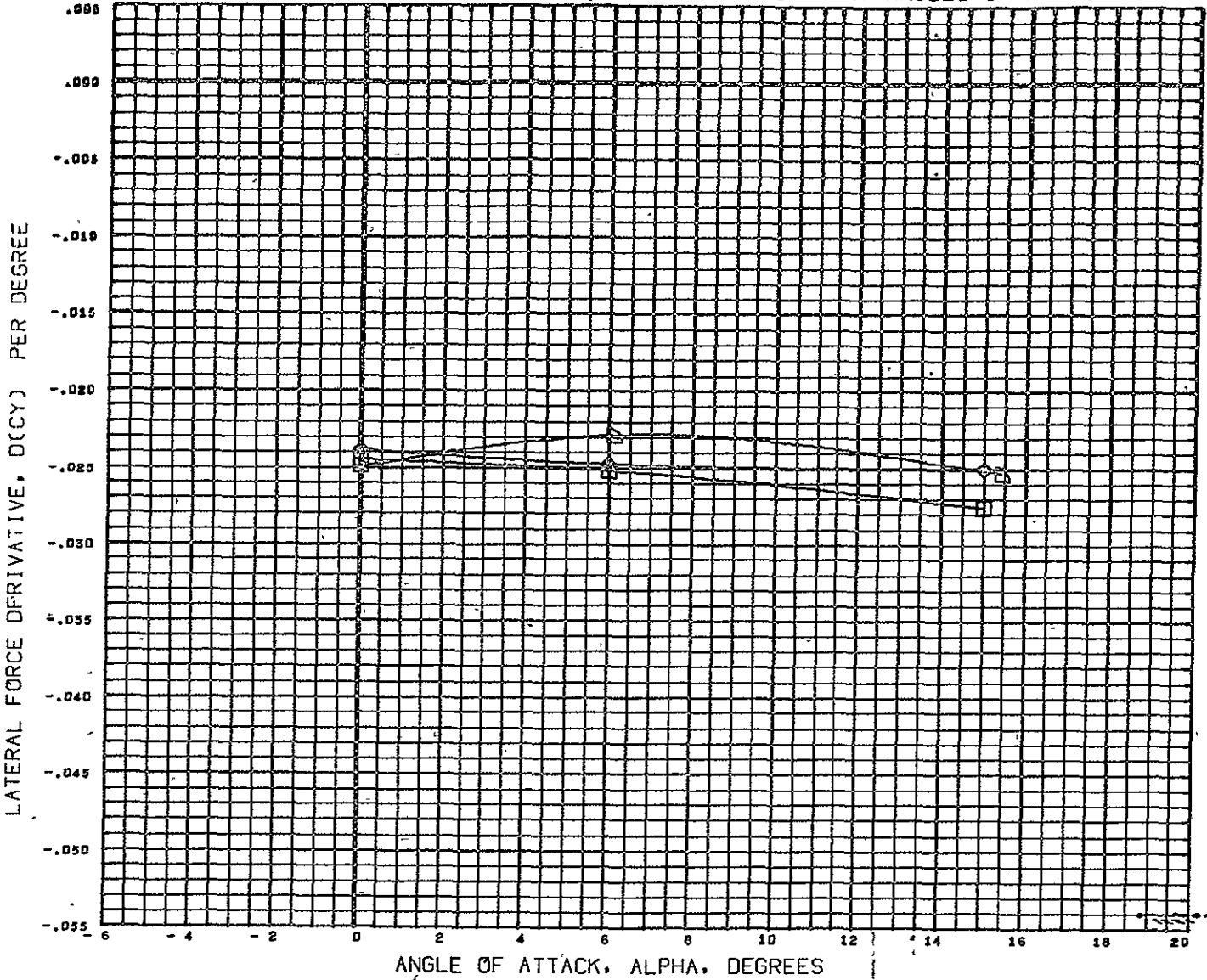
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLOC	PARAMETRIC VALUES			
□	1.000	MACH	0.700	INCIDC	3.000
◇	2.000	INCIDW	0.000	MSFLOW	0.000
◇	5.000	AILRON	0.000	CANARD	0.000
◇	6.000	ELEVTR	0.000	WNGPOS	1.000
◇	0.000	CNDPOS	2.000		
◇	0.000	DATA HIST. CODE	HI		

REFERENCE INFORMATION		
SREF	1.3550	sq. FT
LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0187	FEET
SCALE	0.0150	SCALE

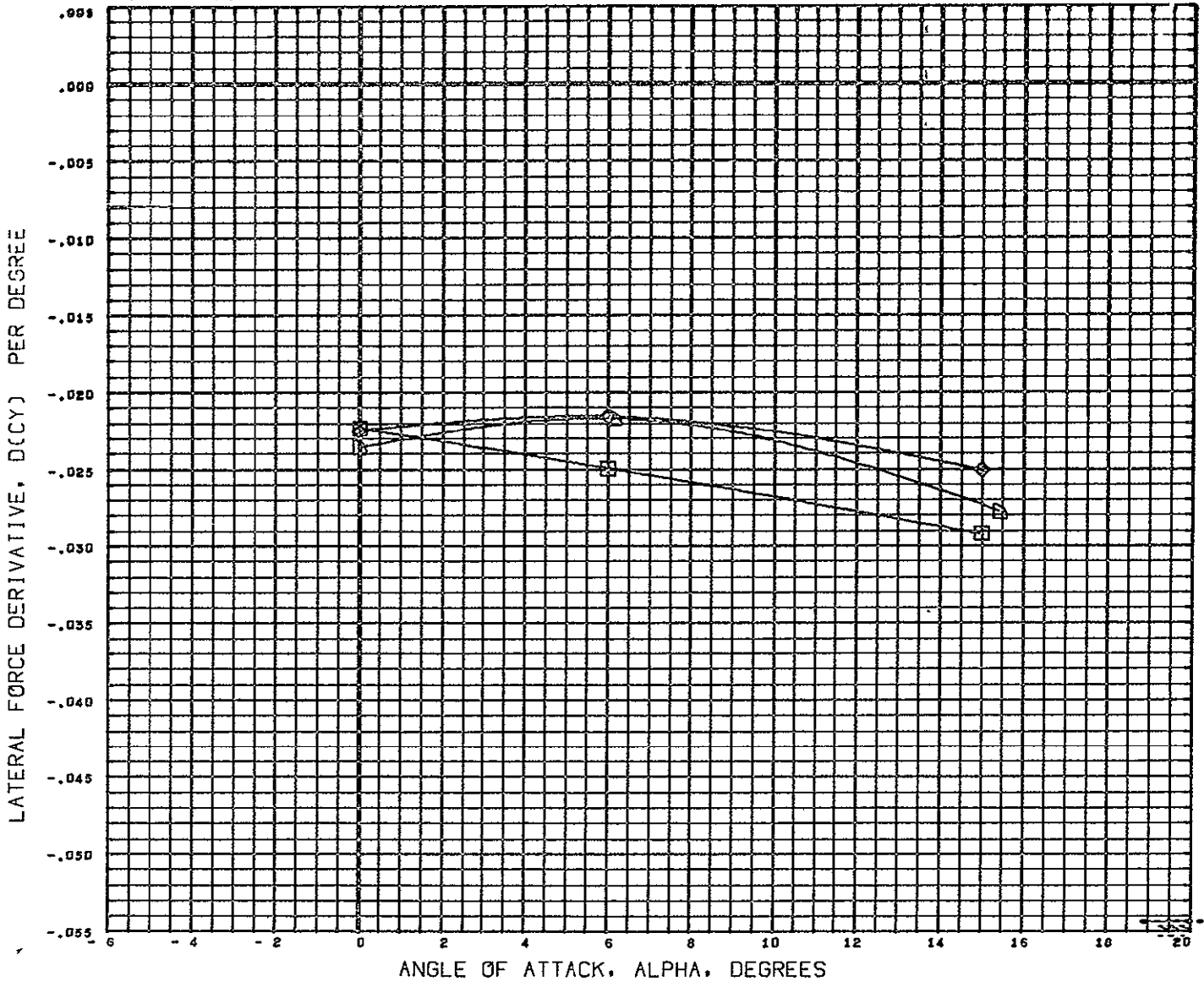
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLOC	PARAMETRIC VALUES			
□	1.000	MACH	0.000	INCIDC	3.000
◇	2.000	INCIDW	0.000	NSFLOW	0.000
◇	5.000	AILRON	0.000	CANARD	0.000
◇	6.000	ELEVTR	0.000	WNGPOS	1.000
◇	0.000	CNDPOS	2.000		
◇	0.000	DATA HIST. CODE	HI	z	

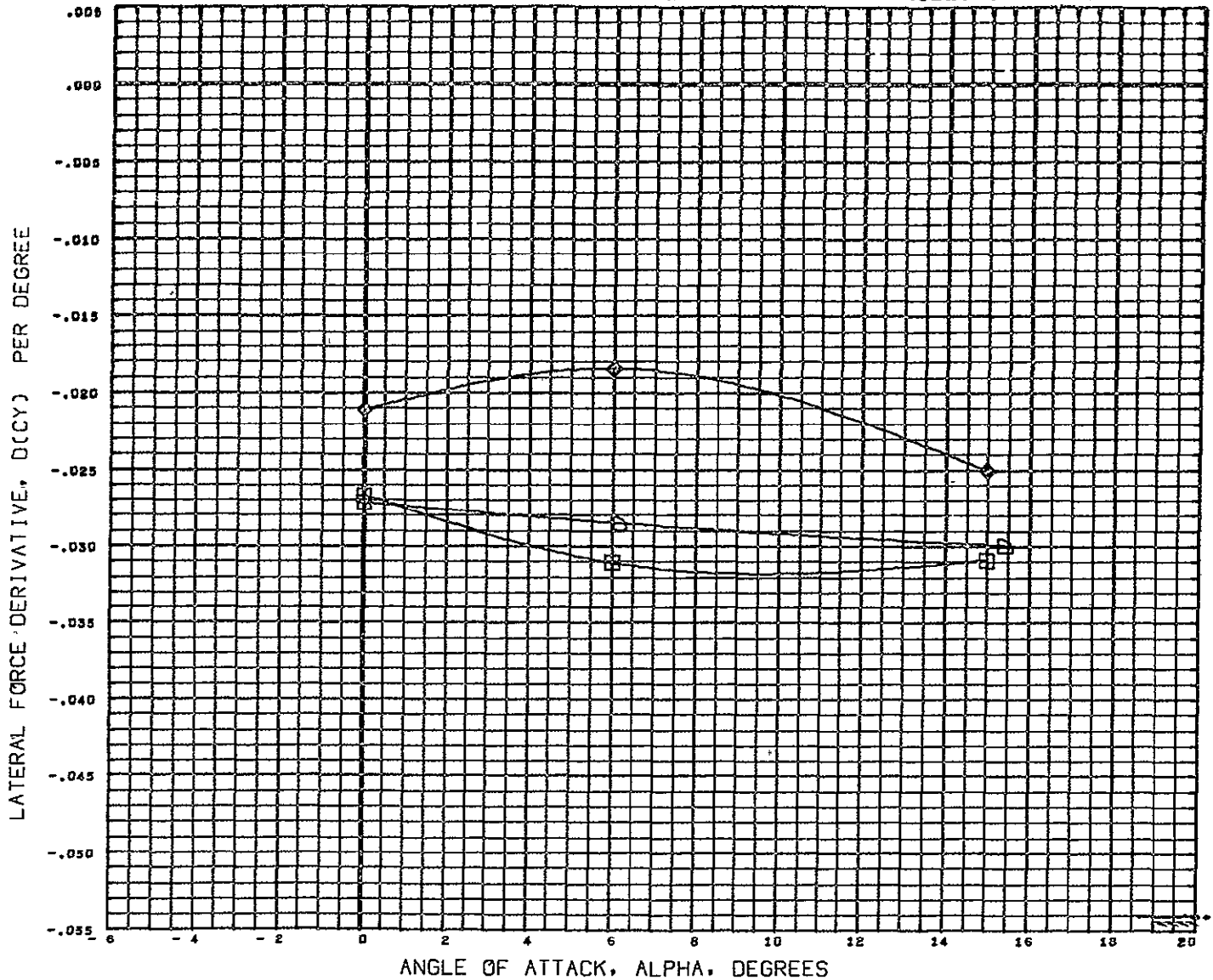
REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0187	FEET
SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	MACH	0.900	INCIDC	3.000	SREF	1.3550	50. FT
□	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
△	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
○	6.000	ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
	0.000	CNDPOS	2.000			YNRP	0.0000	FEET
	0.000	DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

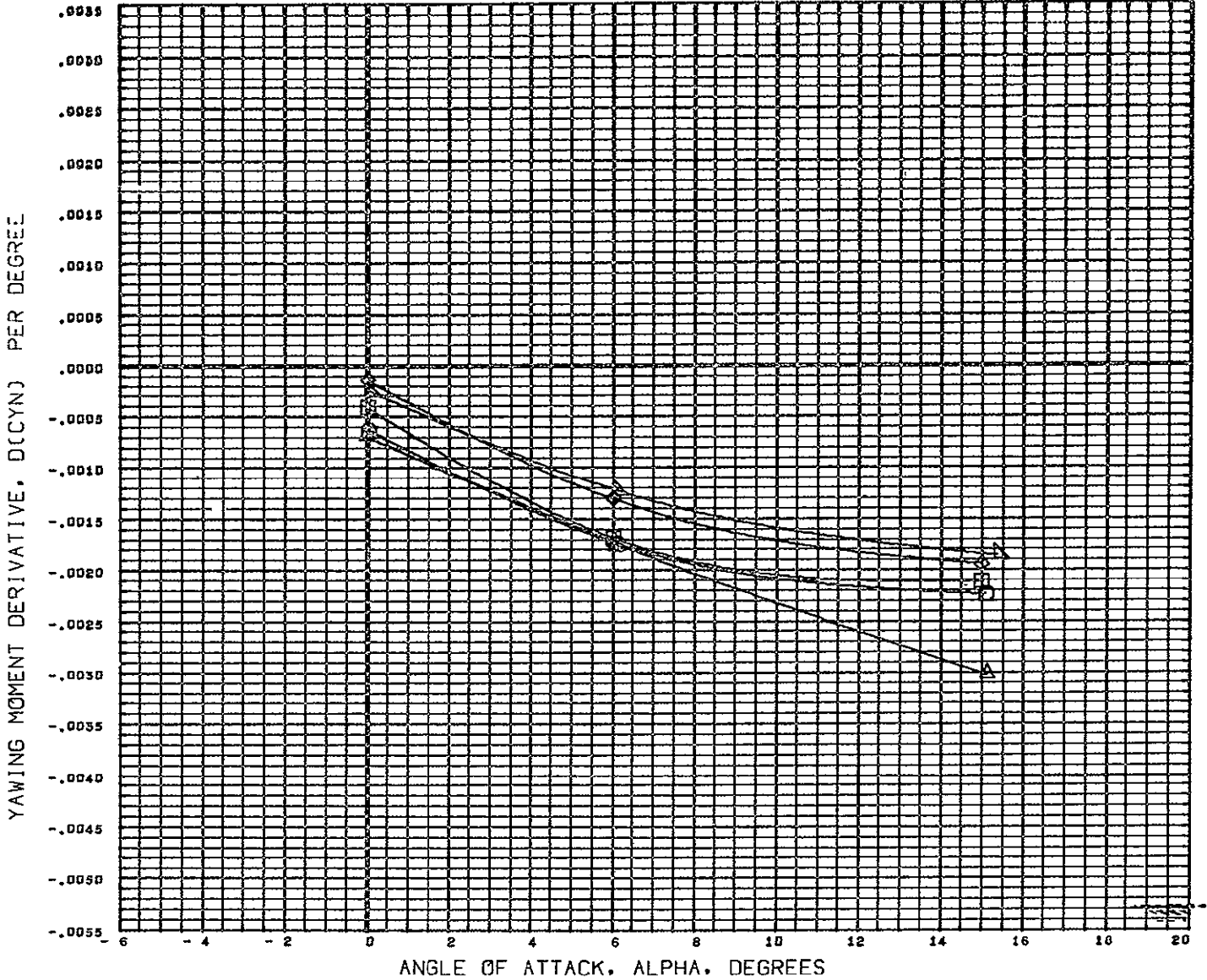
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



SYMBOL	ENGLC	PARAMETRIC VALUES
◇	1.000	MACH 1.000 INCIDC 3.000
□	2.000	INCIDW 0.000 HSFLOW 0.000
○	5.000	AILRON 0.000 CANARD 0.000
△	6.000	ELEVTR 0.000 WNGPOS 1.000
◇	0.000	CNDPOS 2.000
◇	0.000	DATA HIST. CODE HI

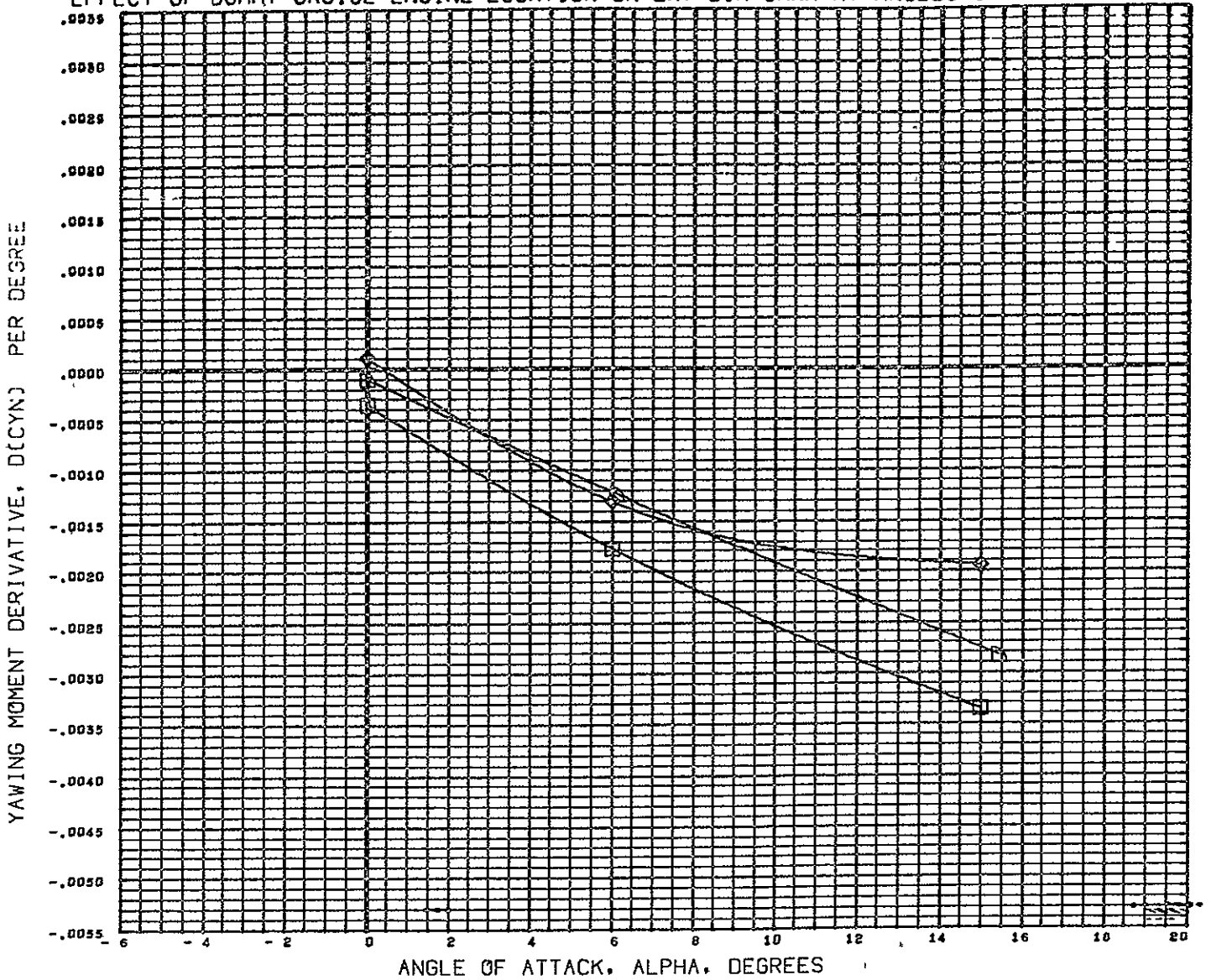
REFERENCE INFORMATION		
SPEF	1.3550	SQ. FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XNRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0187	FEET
SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



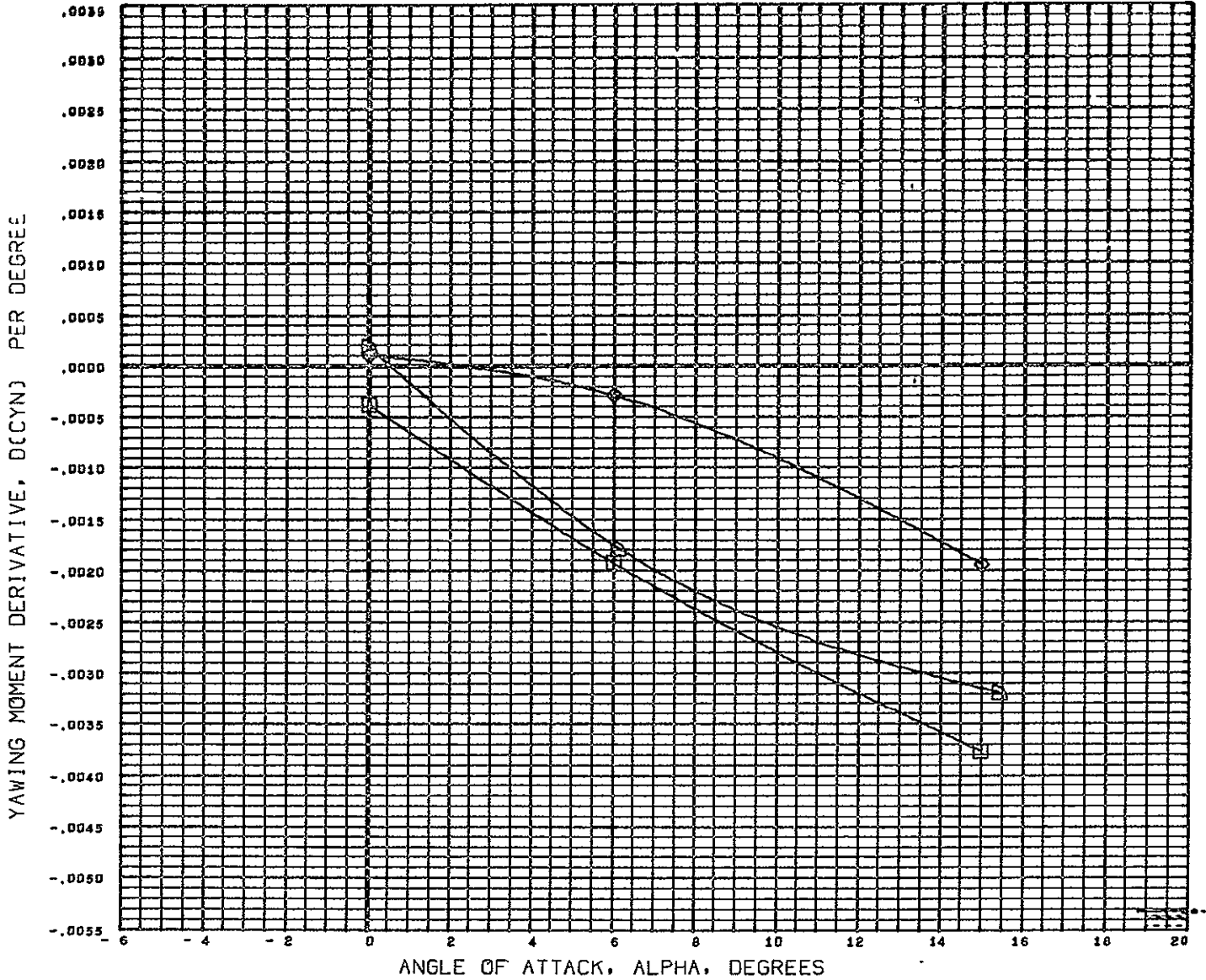
SYMBOL	ENGL0C	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
◇	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
□	6.000	ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
▭	0.000	CNDPOS	2.000			YHRP	0.0000	FEET
▮	0.000	DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



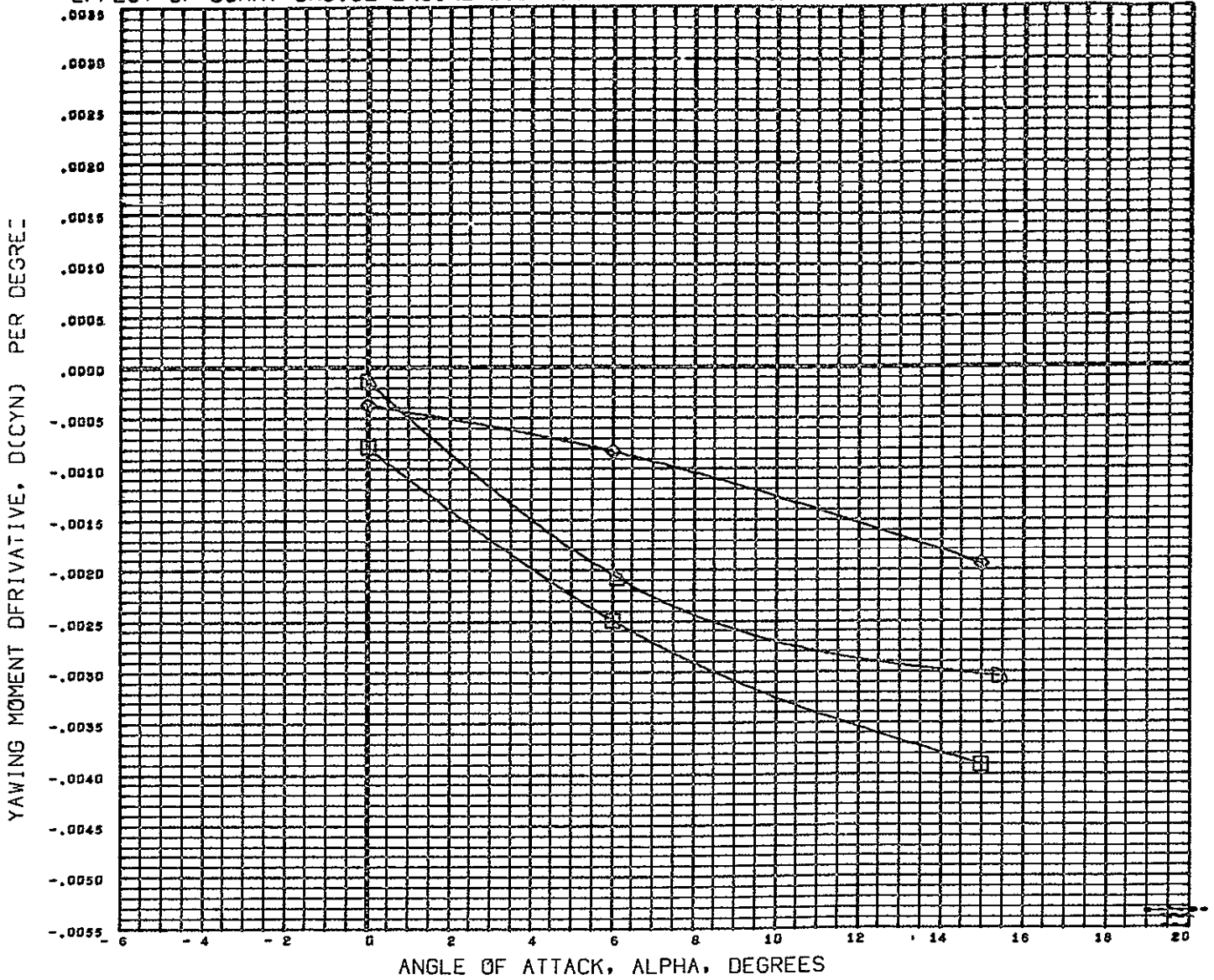
SYMBOL	ENGLLOC	PARAMETRIC VALUES				REFERENCE INFORMATION							
		MACH	INCIDC	MSFLOW	CANARD	WNGPOS	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE
◇	1.000	0.700	3.000	0.000	0.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	FEET
□	2.000	0.000	0.000	0.000	0.000	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	FEET	
○	5.000	0.000	0.000	0.000	0.000	2.5950	2.5950	0.0000	0.0187	0.0150	0.0150	FEET	
△	6.000	0.000	0.000	0.000	1.000	0.0000	0.0000	0.0000	0.0187	0.0150	0.0150	FEET	
+	0.000	2.000	0.000	0.000	0.000	0.0000	0.0000	0.0000	0.0187	0.0150	0.0150	SCALE	
◇	0.000	DATA HIST. CODE	HI										

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



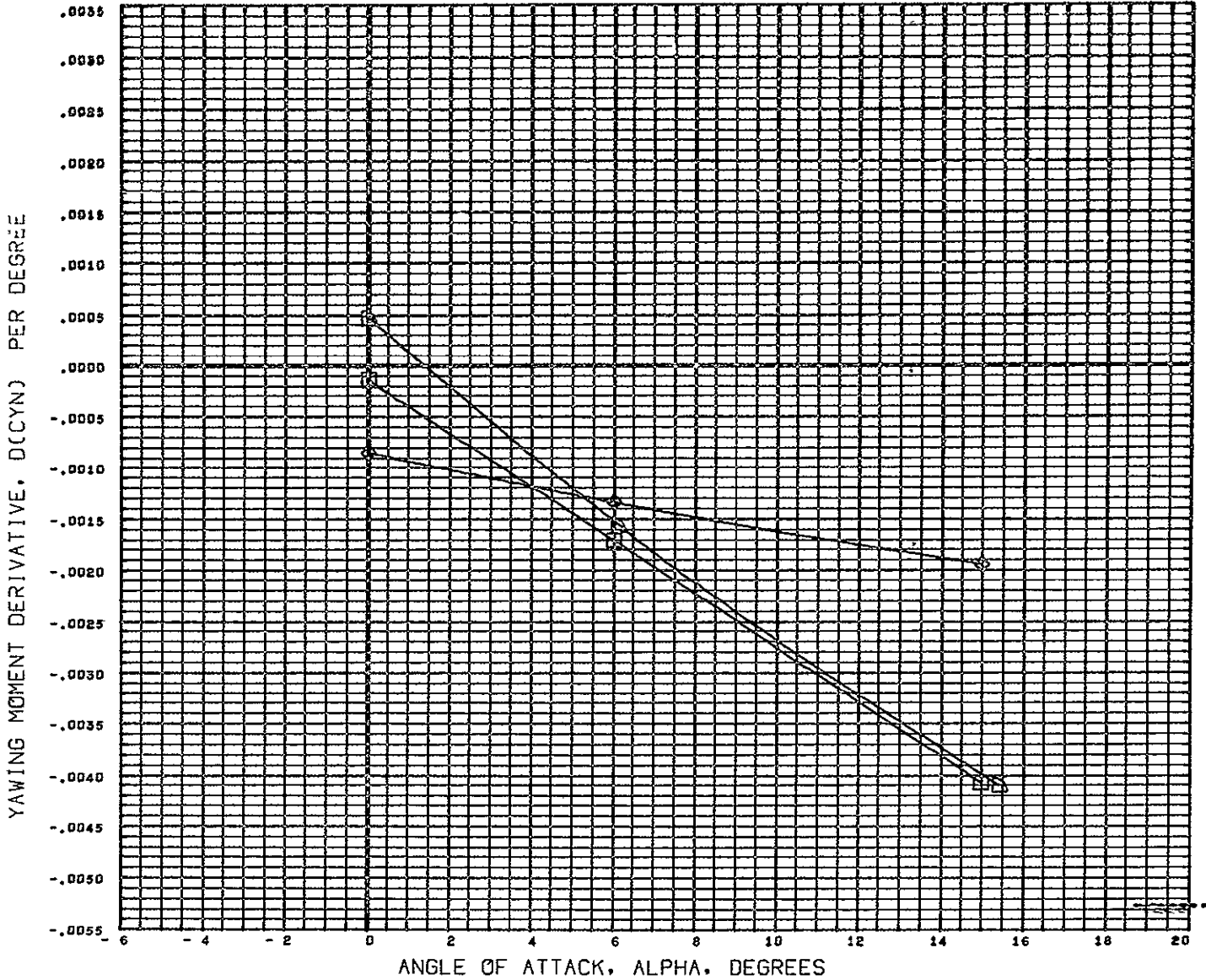
SYMBOL	ENGLLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	MACH	0.000	INCIDC	3.000	SREF	1.3550	sq. FT.
□	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
△	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
○	6.000	ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
	0.000	CNDPOS	2.000			YHRP	0.0000	FEET
	0.000	DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



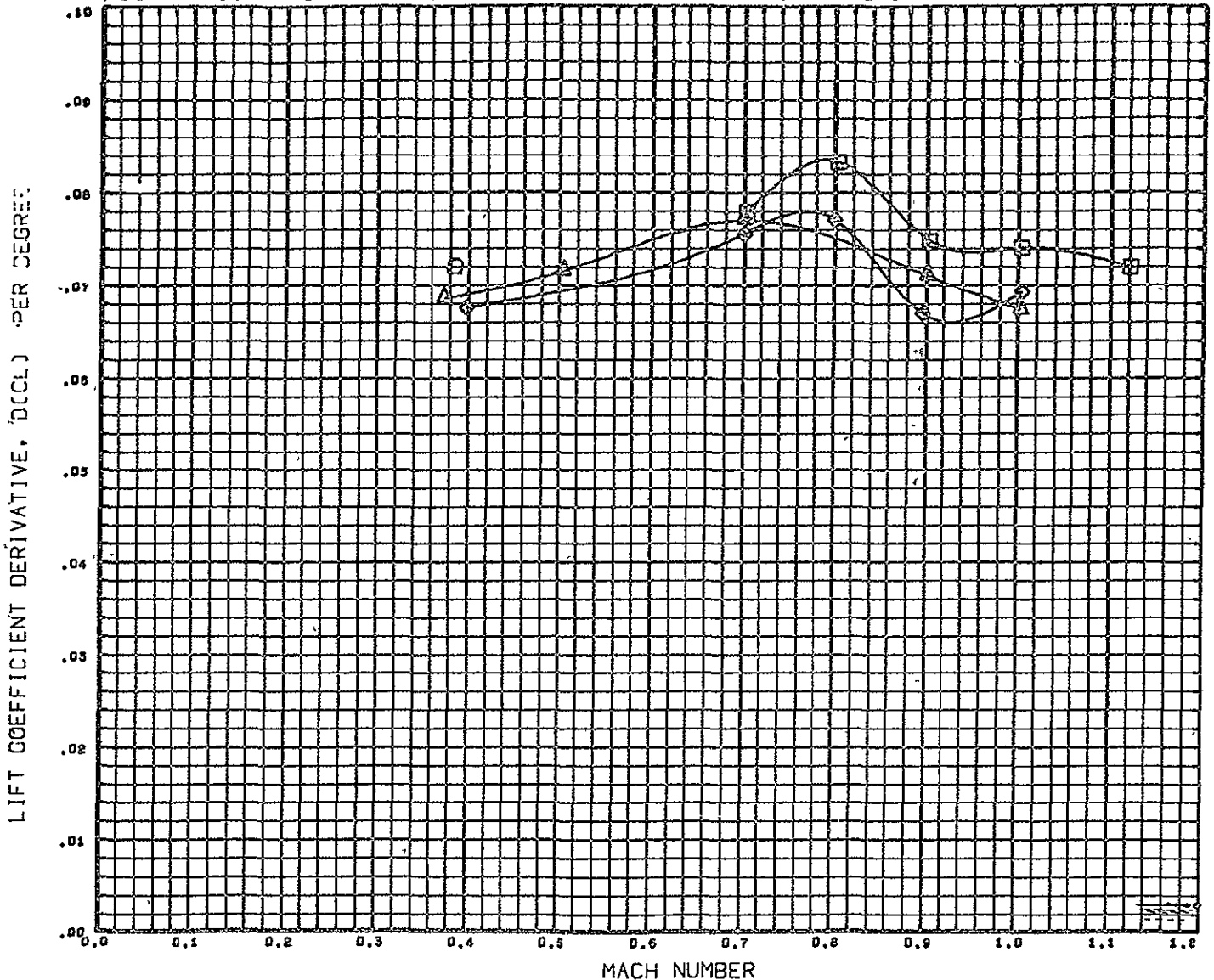
SYMBOL	ENGLC	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	1.000	MACH	0.900	INCIDC	3.000	SREF	1.3550	SQ.FT
◇	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
△	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
○	6.000	ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
×	0.000	CNDPOS	2.000			YHRP	0.0000	FEET
	0.000	DATA HIST. CODE	HI			ZNRP	0.0107	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR CHAR AT ANGLES OF ATTACK



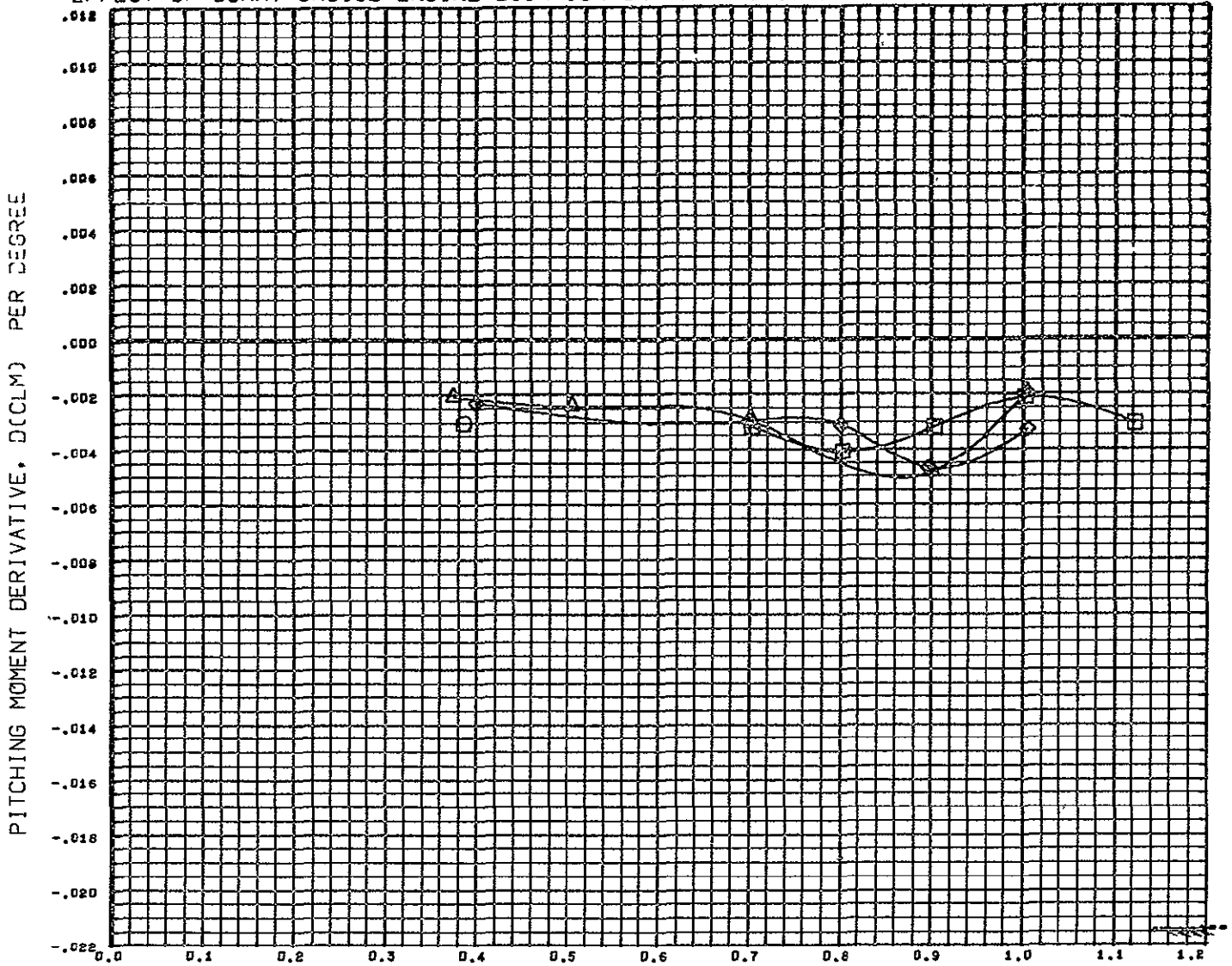
SYMBOL	ENGLLOC	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.000	MACH	1.000	INCIDC	3.000	SREF	1.3550	SQ.FT
□	2.000	INCIDW	0.000	MSFLOW	0.000	LREF	3.4530	FEET
△	5.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
○	6.000	ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
	0.000	CNDPOS	2.000			YHRP	0.0000	FEET
	0.000	DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONGITUDINAL DERIVATIVES BETA = 0



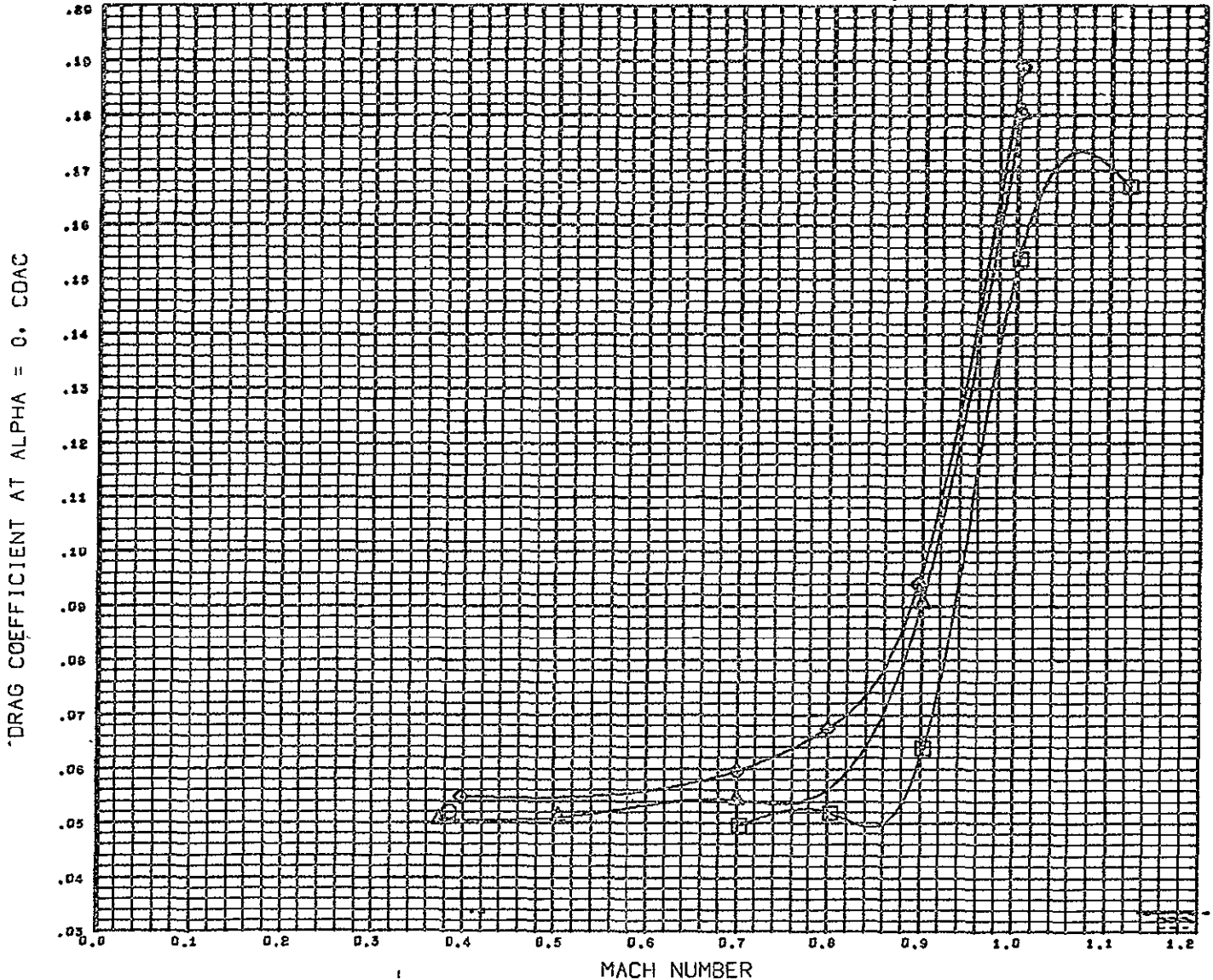
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(SN3202)	NSRDC-3210, MSFC/LHSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(SN3200)	NSRDC-3210, MSFC/LHSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4025)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN5001)	NSRDC-3210, MSFC/LHSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONGITUDINAL DERIVATIVES BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(SN3202)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G1	1,000	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
(SN3200)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1G2	2,000	1,000	1,000	0,000	LREF 3,4530 FEET
(SN4025)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1G6	6,000	1,000	1,000	0,000	BREF 3,4530 FEET
(SN3001)	NSRDC-3210,HSFC/LMSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	XNRP 2,5950 FEET YMRP 0,0000 FEET ZMRP 0,0187 FEET SCALE 0,0150 SCALE

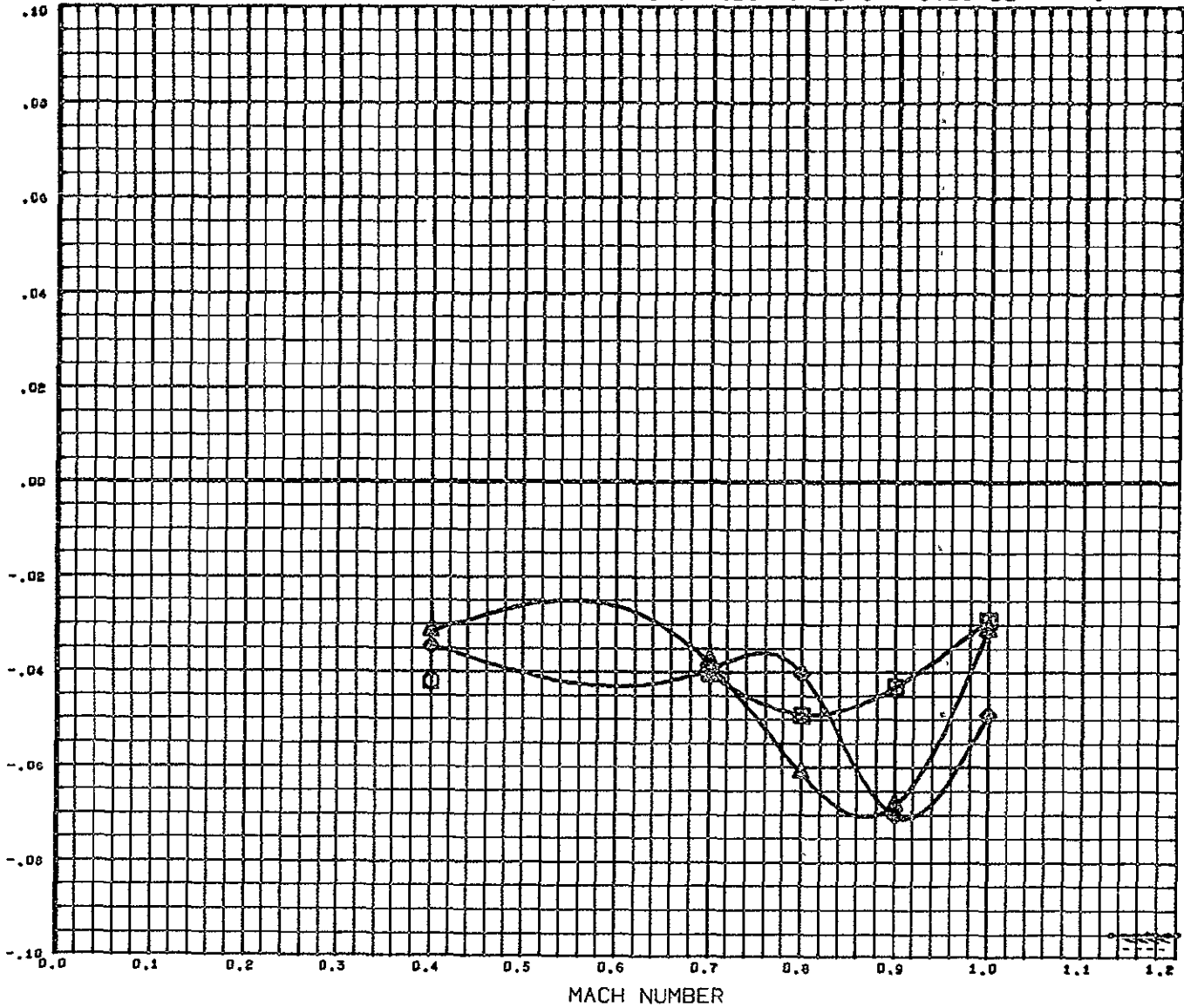
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONGITUDINAL DERIVATIVES BETA = 0



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(AN3202)	○	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1G1	1,000	2,000	1,000	0,000	SREF 1,3550 SQ FT.
(AN3200)	△	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1G2	2,000	1,000	1,000	0,000	LREF 3,4530 FEET
(AN4023)	◇	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1G6	6,000	1,000	1,000	0,000	BREF 3,4530 FEET
(AN3001)	□	NSRDC-3210,HSFC/LHSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	XNRP 2,5950 FEET YNRP 0,0000 FEET ZNRP 0,0187 FEET SCALE 0,0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONGITUDINAL DERIVATIVES BETA = 0

DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO LIFT, DC/M/SEC.

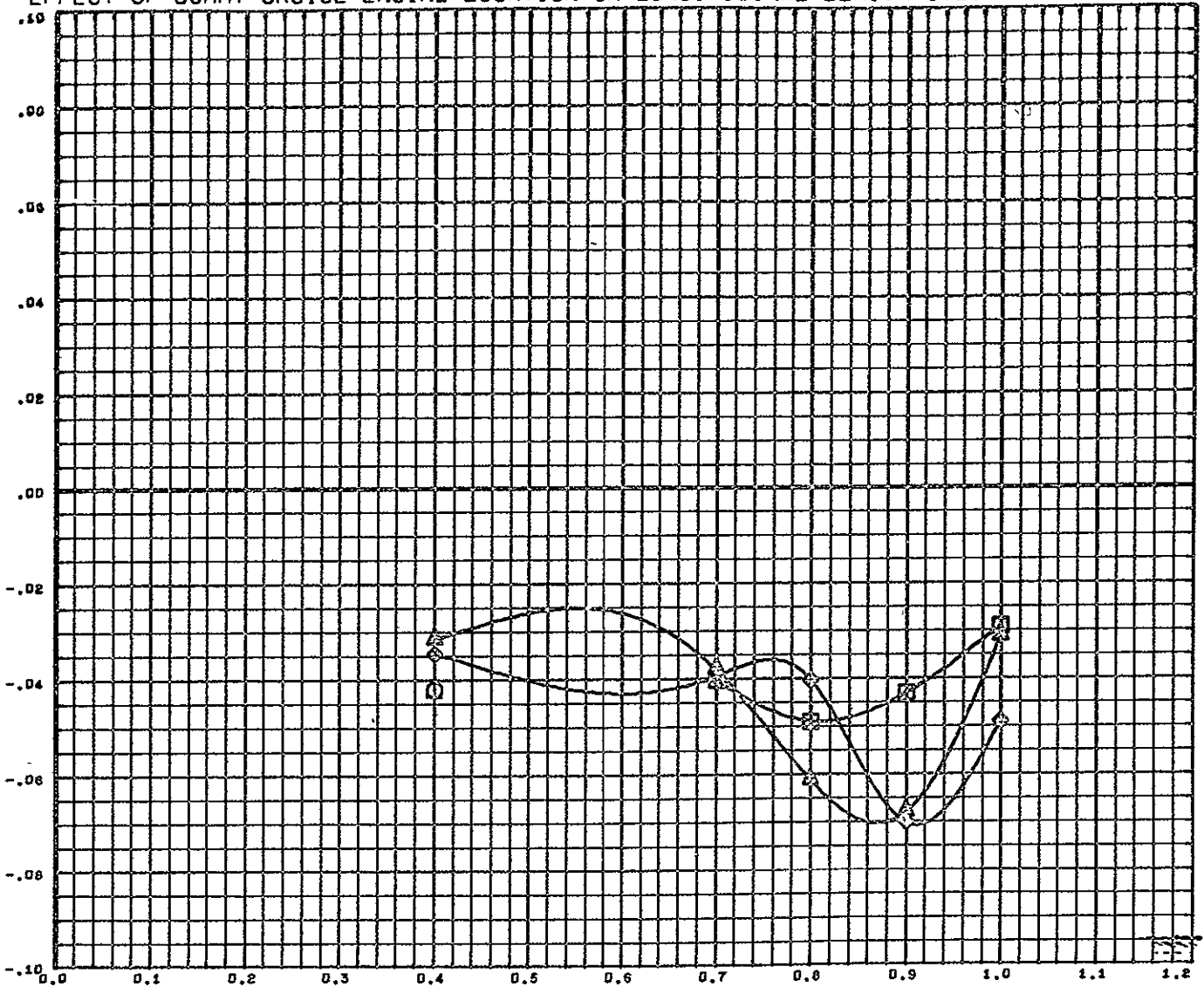


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	1,000	2,000	1,000	0,000	SREF 1,3550 SQ.FT.
(EN3200)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	2,000	1,000	1,000	0,000	LREF 3,4530 FEET
(EN4025)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1H1V1G6	6,000	1,000	1,000	0,000	BREF 3,4530 FEET
(EN3001)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	XMRP 2,5950 FEET YMRP 0,0000 FEET ZMRP 0,0167 FEET SCALE 0,0150 SCALE

ALPHA -4.00 .00 2.00 4.00 6.00 8.00

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LONGITUDINAL DERIVATIVES BETA = 0

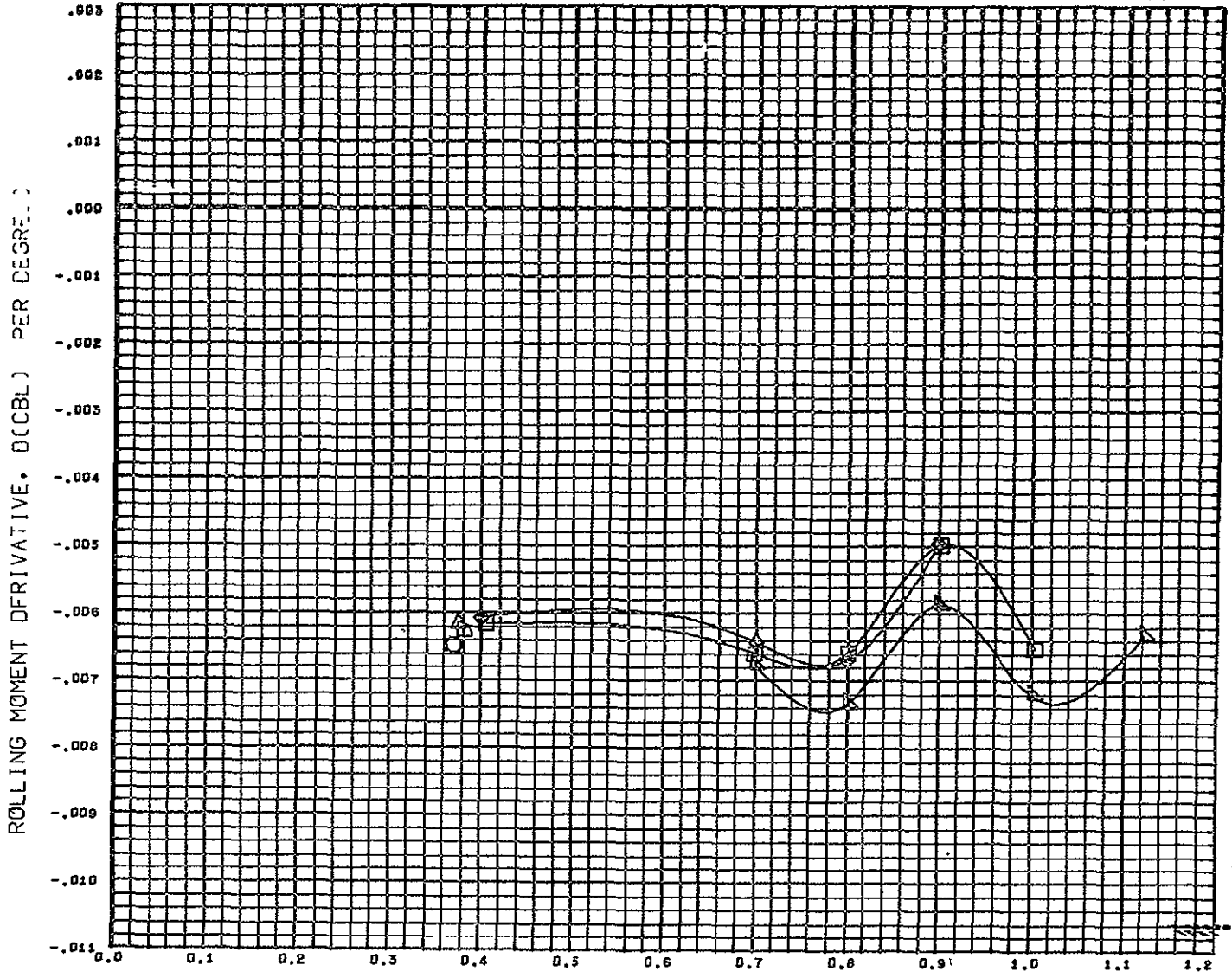
DERIVATIVE OF PITCHING MOMENT WITH RESPECT TO LIFT, DG. / V² C



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGL0C	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN3202)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(EN3200)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(EN4025)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	BREF 3.4530 FEET
(EN3001)	NSRDC-3210, NSFC/LMSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

ALPHA 10.00 15.00 18.00

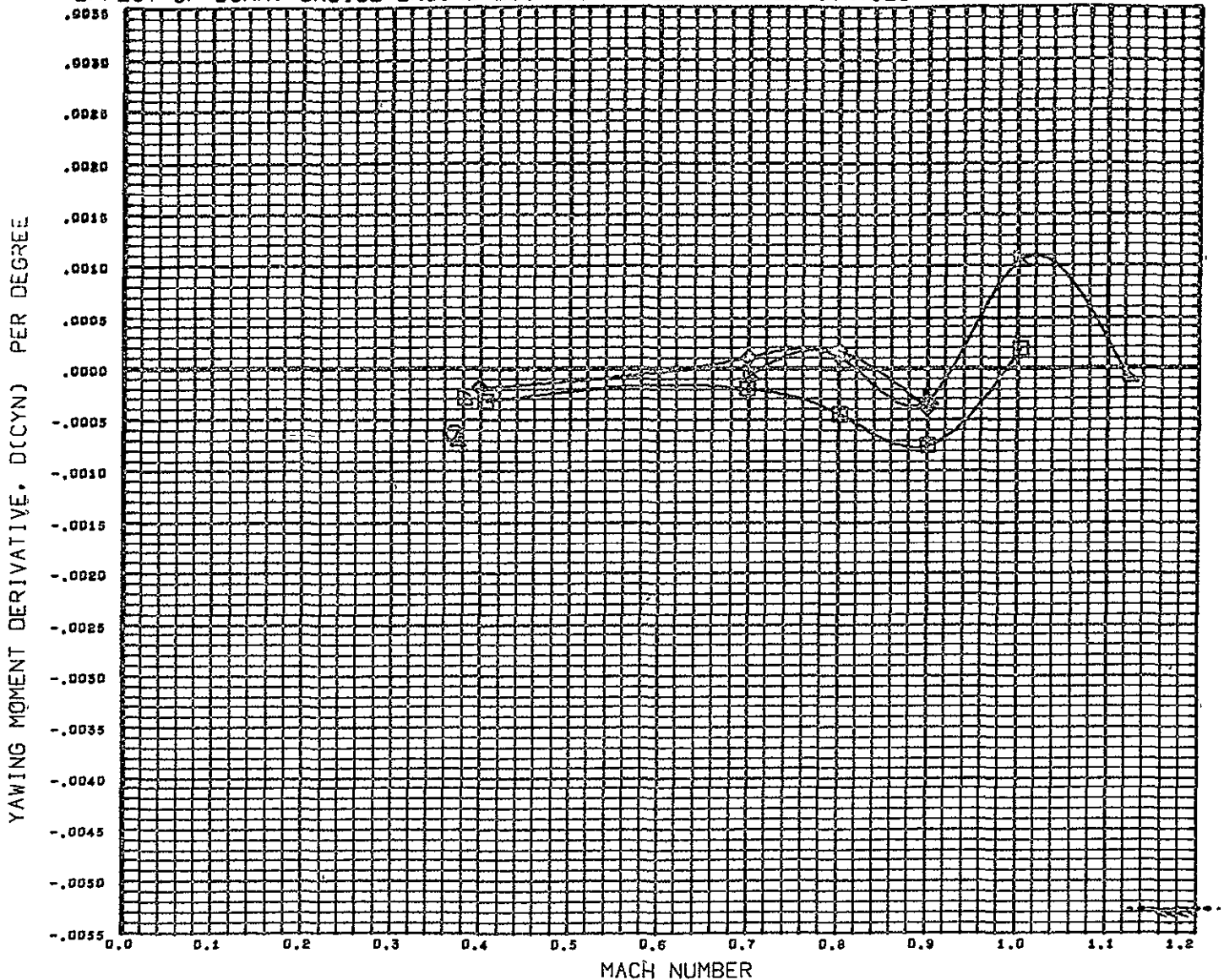
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 0.0 DEG.



MACH NUMBER

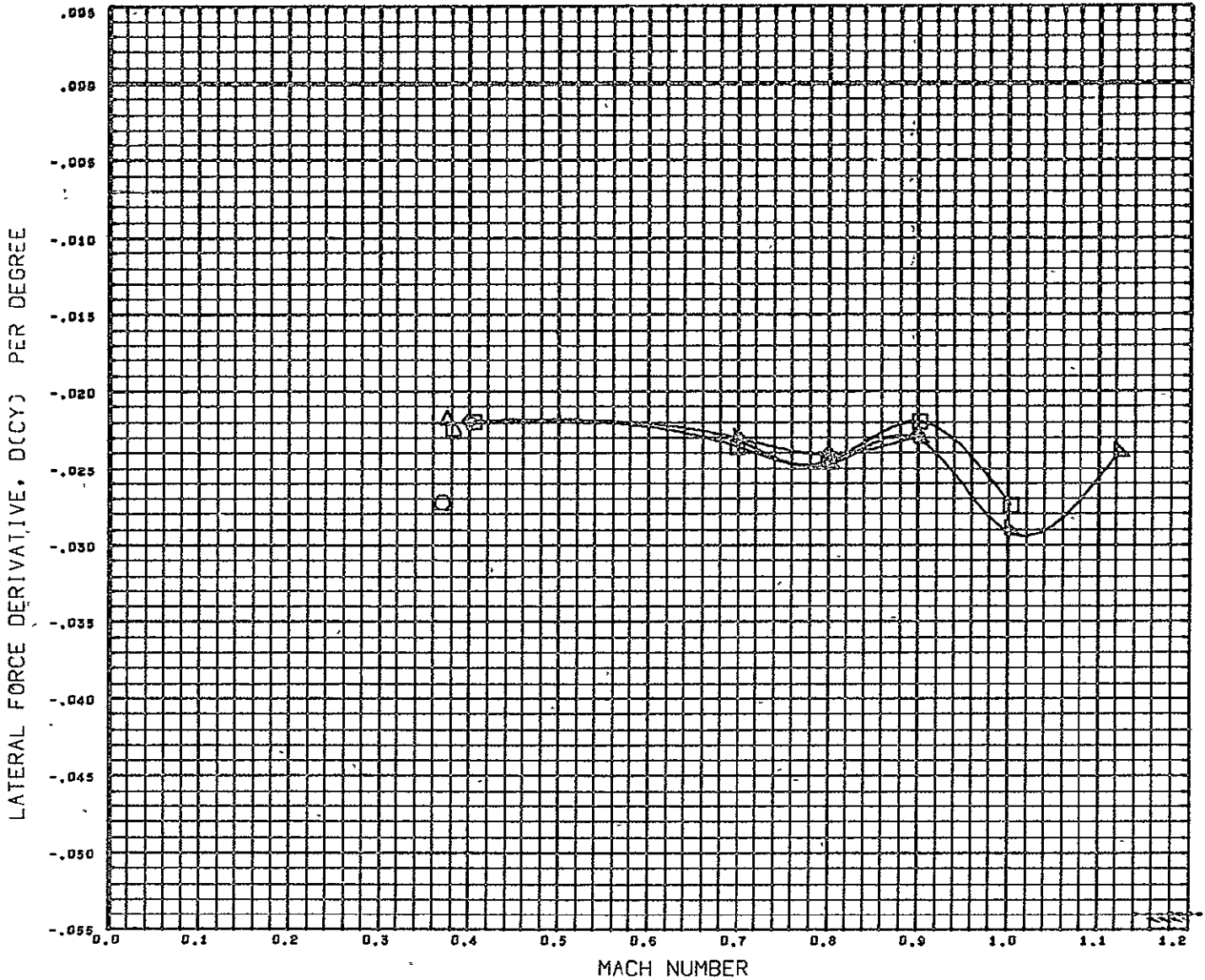
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3203)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(SN3193)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4147)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4026)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	XHRF 2.5950 FEET
(SN3002)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	YHRF 0.0000 FEET
(SN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZHRF 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 0.0 DEG.



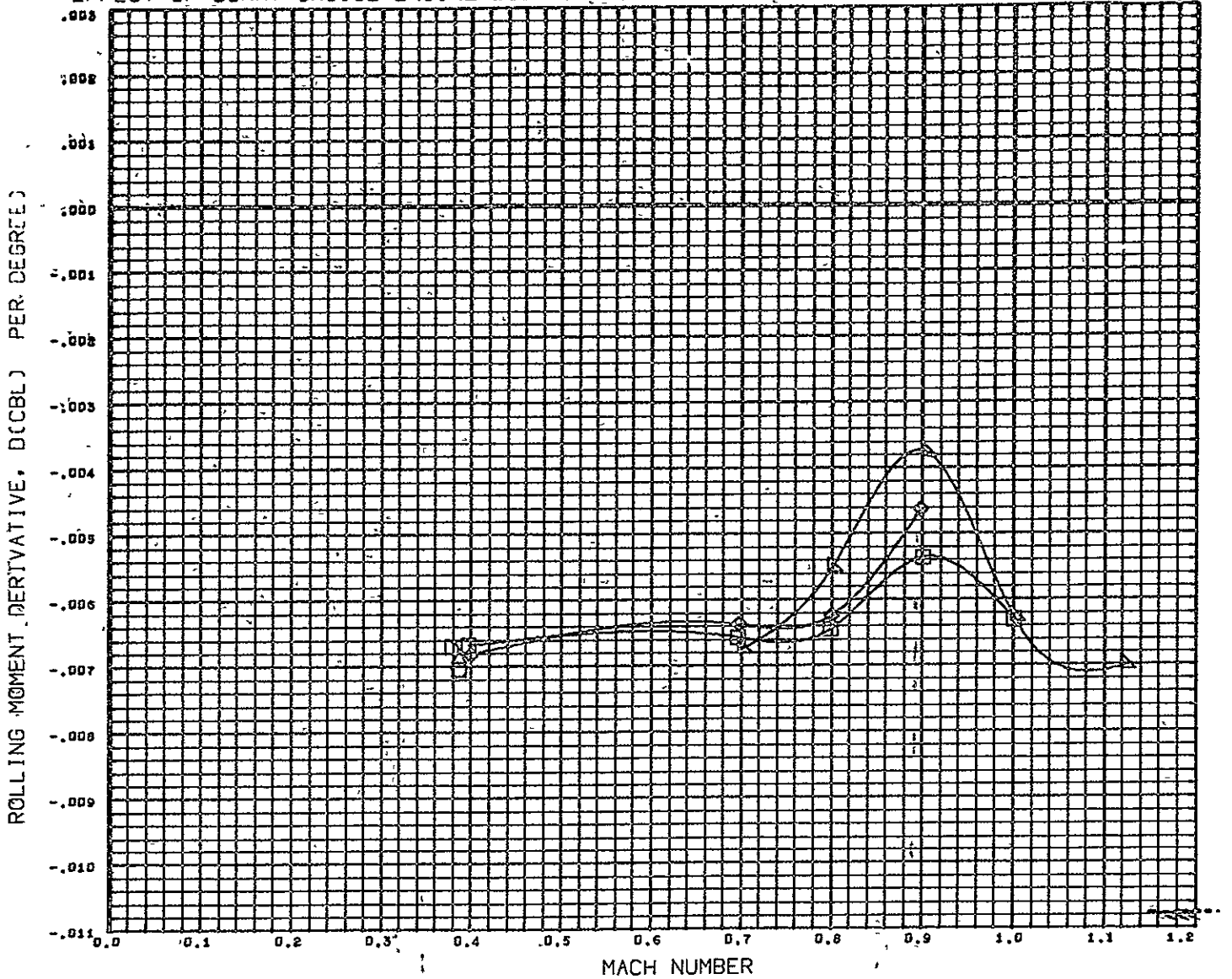
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCLQW	REFERENCE INFORMATION
(SN3203)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(SN3193)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4147)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4026)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	XHRP 2.5950 FEET
(SN3002)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	YHRP 0.0000 FEET
(SN2002)	NSRDC-3110,MSFC/LNSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES $\alpha = 0.0$ DEG.



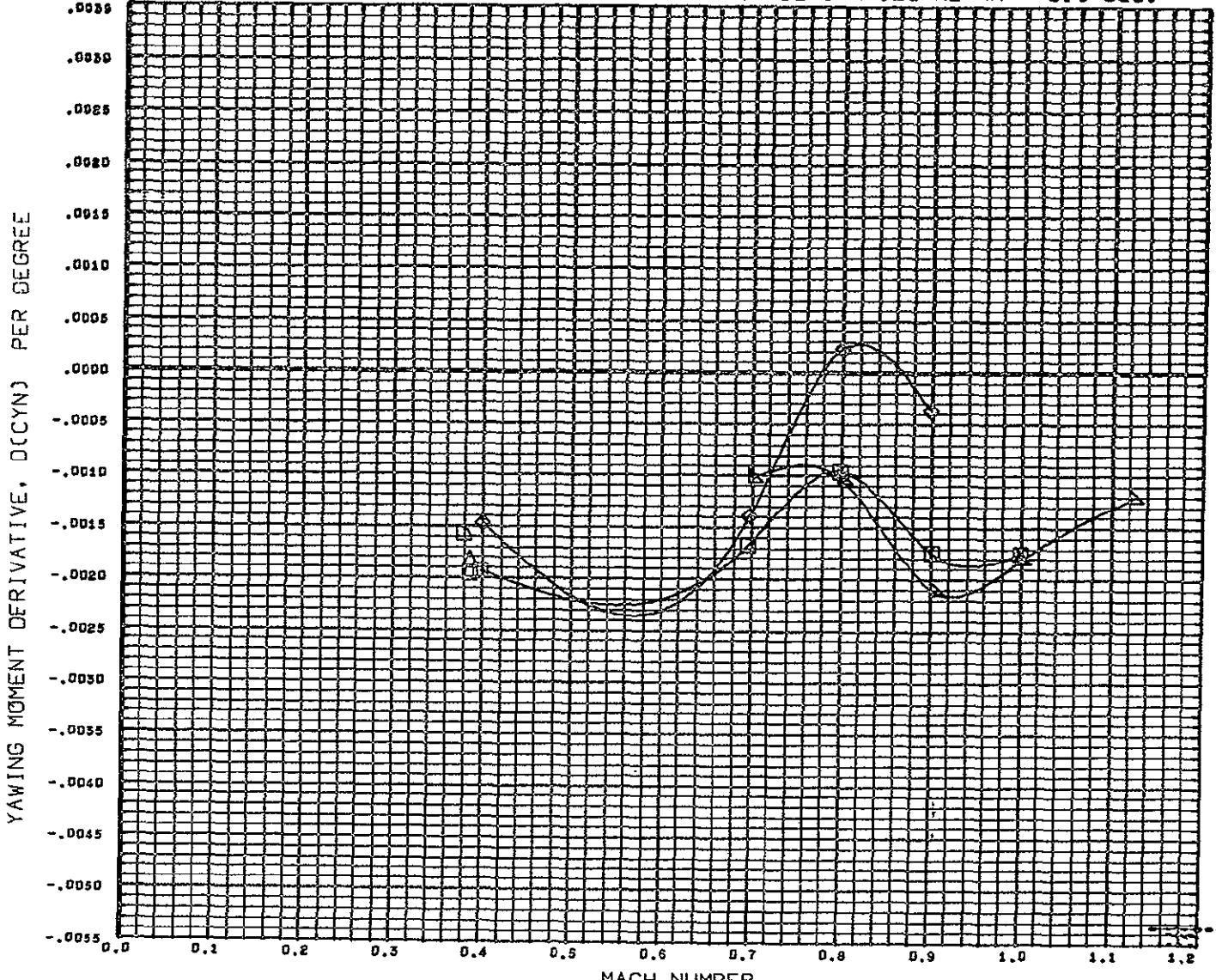
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3203)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1G1	1,000	2,000	1,000	0,000	SREF 1 3550 SQ.FT.
(SN3193)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1G2	2,000	1,000	1,000	0,000	LREF 3,4530 FEET
(SN4147)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G5	5,000	1,000	1,000	0,000	BREF 3,4530 FEET
(SN4026)	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V1G6	6,000	1,000	1,000	0,000	XMRP 2 5950 FEET
(SN3002)	NSRDC-3210,MSFC/LNSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	YMRP 0,0000 FEET
(SN2002)	NSRDC-3110,MSFC/LNSC BOOSTER B1C2F1W1V1	0,000	1,000	1,000	0,000	ZMRP 0,0187 FEET
						SCALE 0,0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3204)	NSRDC-3210, HSFC/LMSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ. FT.
(SN3194)	NSRDC-3210, HSFC/LMSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4140)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1G5	5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4027)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	XHRP 2.5950 FEET
(SN3003)	NSRDC-3210, HSFC/LMSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	YHRP 0.0000 FEET
(SN2003)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

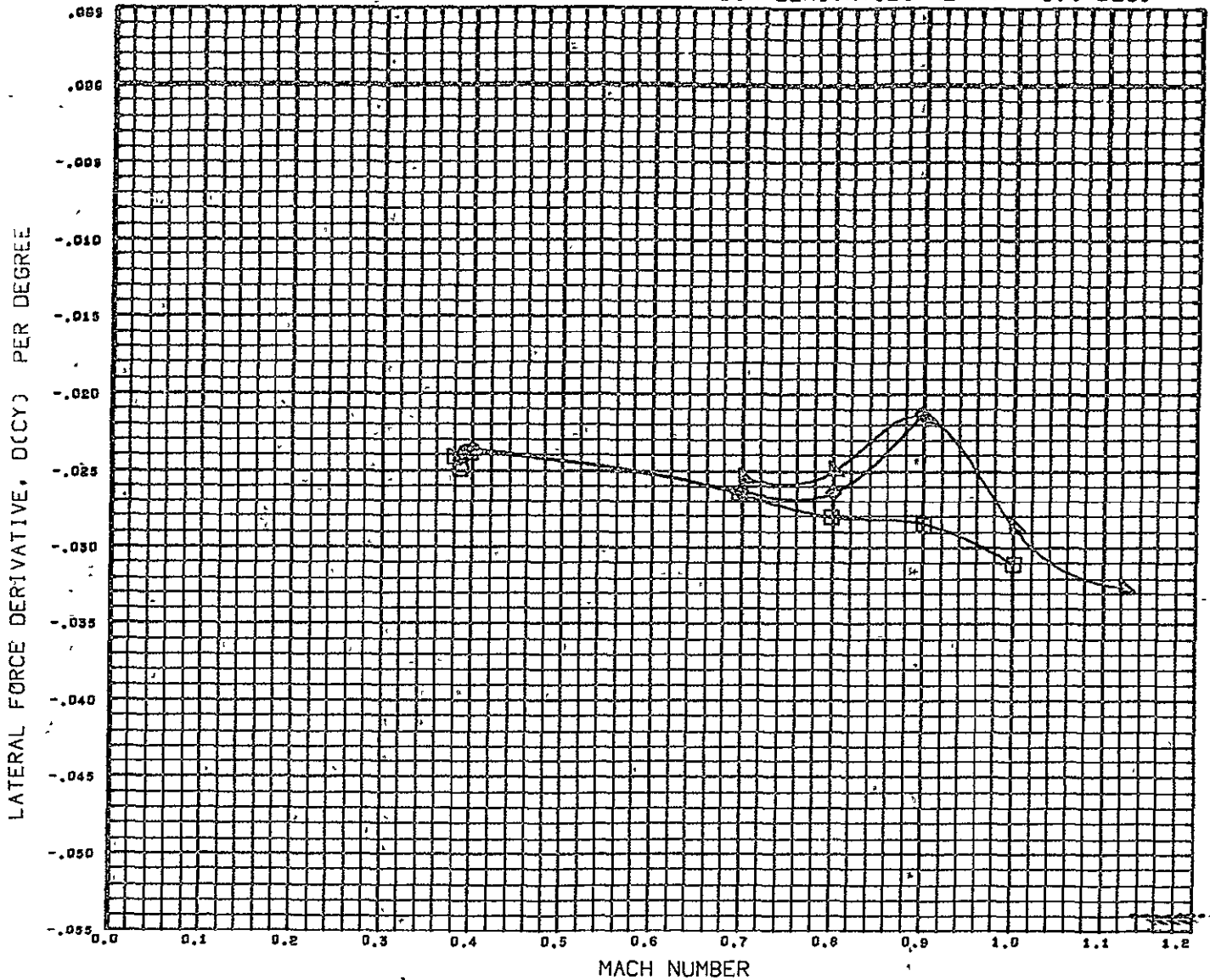
EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3204)	DUMMY CRUISE ENGINE	1.000	2.000	1.000	0.000	SREF 1.3550 SQ.FT
(SN3194)		2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4148)		5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4027)		6.000	1.000	1.000	0.000	XNRP 2.5950 FEET
(SN3003)		0.000	1.000	1.000	0.000	YNRP 0.0000 FEET
(SN2003)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZNRP 0.0187 FEET
						SCALE 0 0150 SCALE

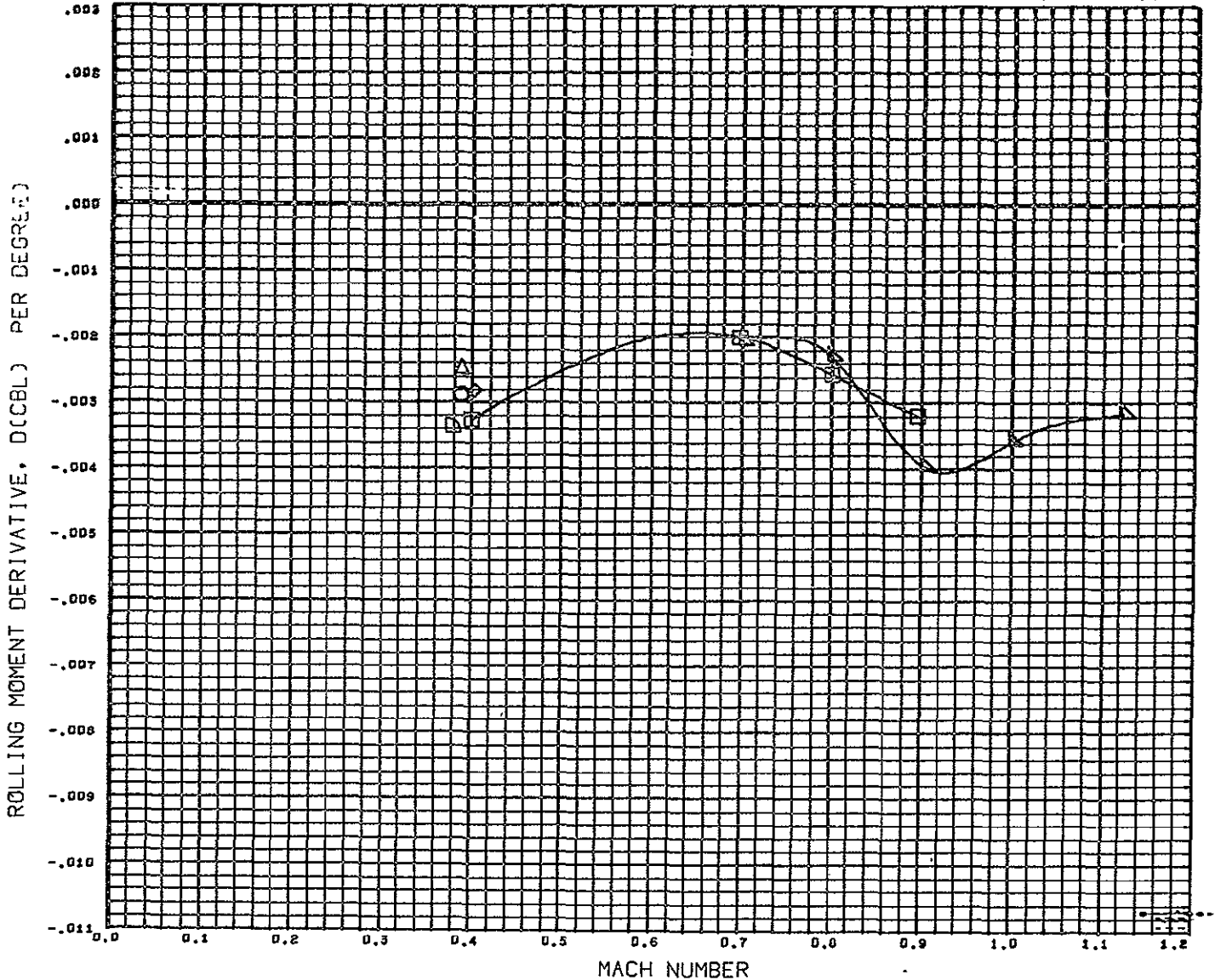
C.7

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 6.0 DEG.



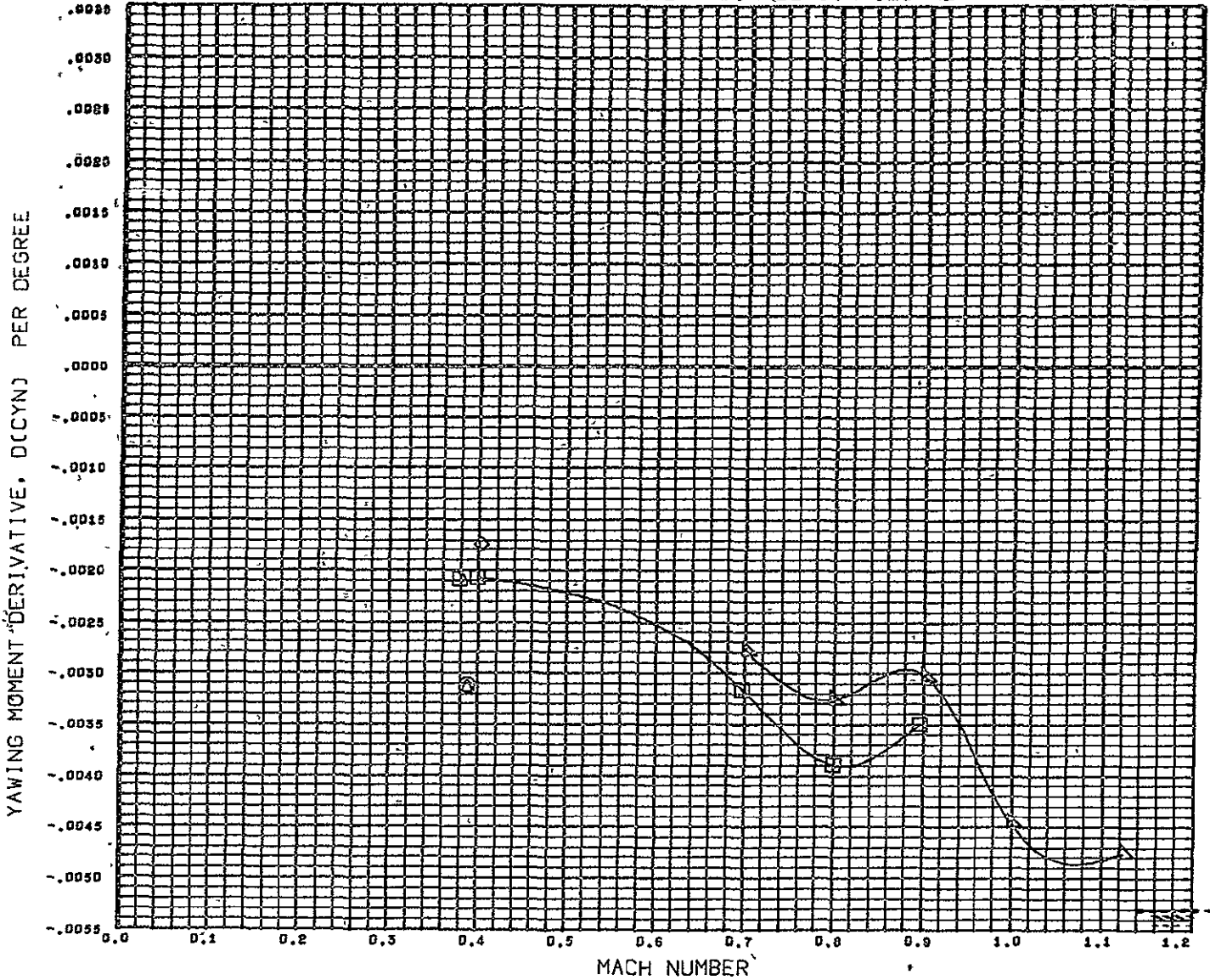
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3204)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V161	1,000	2,000	1,000	0,000	SREF 1.3550 SQ.FT.
(SN3194)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V162	2,000	1,000	1,000	0,000	LREF 3.4530 FEET
(SN4148)	NSRDC-3510,MSFC/LMSC BOOSTER B1C2F1W1V165	5,000	1,000	1,000	0,000	BREF 3.4530 FEET
(SN4027)	NSRDC-3510,MSFC/LMSC BOOSTER B1C2F1W1V166	6,000	1,000	1,000	0,000	XHRP 2.5950 FEET
(SN3003)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	YHRP 0.0000 FEET
(SN2003)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0,000	1,000	1,000	0,000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 15.0 DEG.



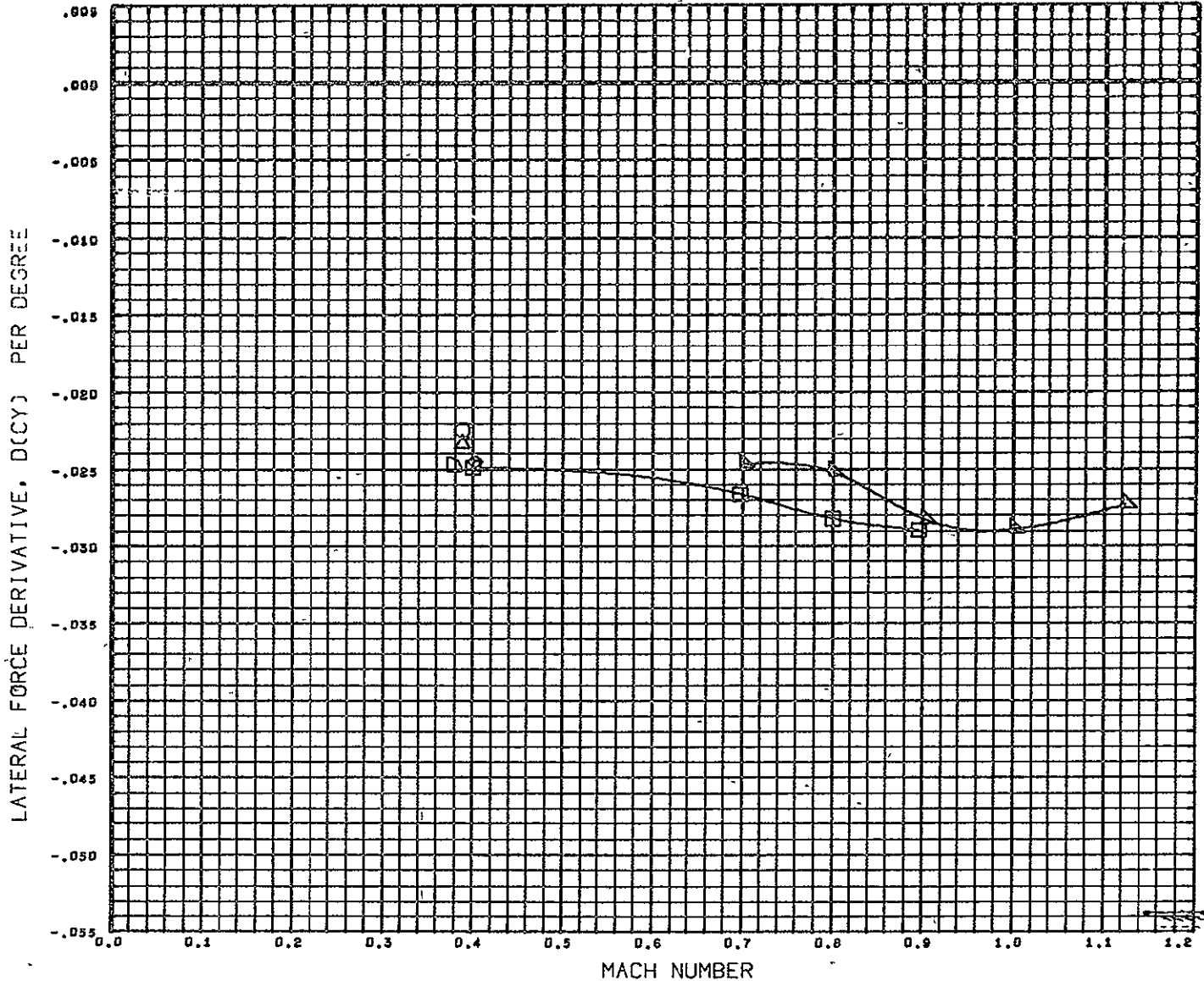
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3205)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(SN3195)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4149)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G5	5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4028)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	XNRP 2.5950 FEET
(SN3004)	NSRDC-3210,MSFC/LMSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	YNRP 0.0000 FEET
(SN2004)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZNRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES ALPHA = 15.0 DEG.



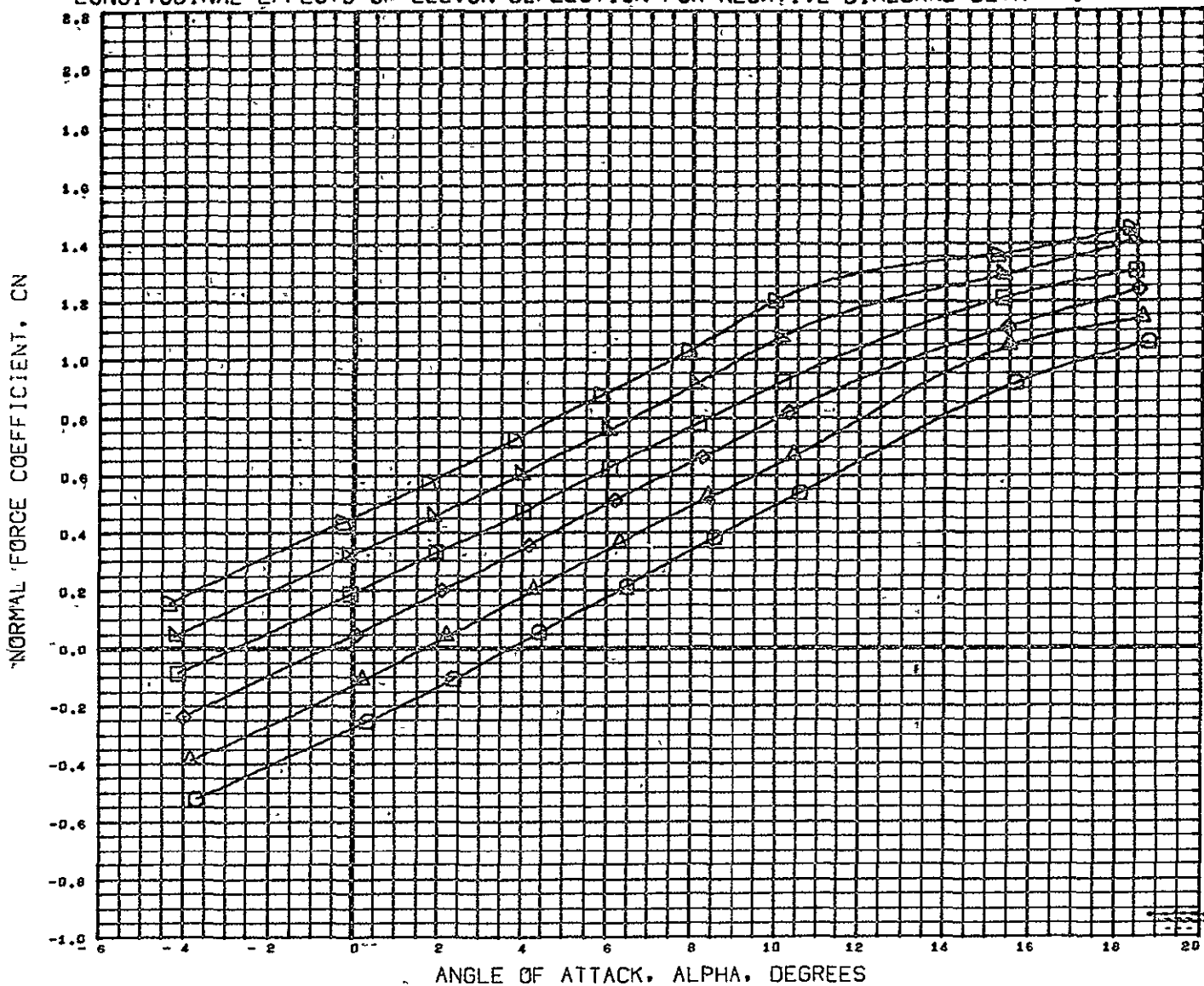
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLLOC	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(SN3205)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1G1	1.000	2.000	1.000	0.000	SREF 1.3550 SQ.FT.
(SN3195)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1G2	2.000	1.000	1.000	0.000	LREF 3.4530 FEET
(SN4149)	NSPDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1G5	5.000	1.000	1.000	0.000	BREF 3.4530 FEET
(SN4028)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1G6	6.000	1.000	1.000	0.000	XHRP 2.5950 FEET
(SN3004)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1	0.000	1.000	1.000	0.000	YMRP 0.0000 FEET
(SN2004)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	0.000	1.000	1.000	0.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DUMMY CRUISE ENGINE LOCATION ON LAT-DIR DERIVATIVES: ALPHA = 15.0 DEG.



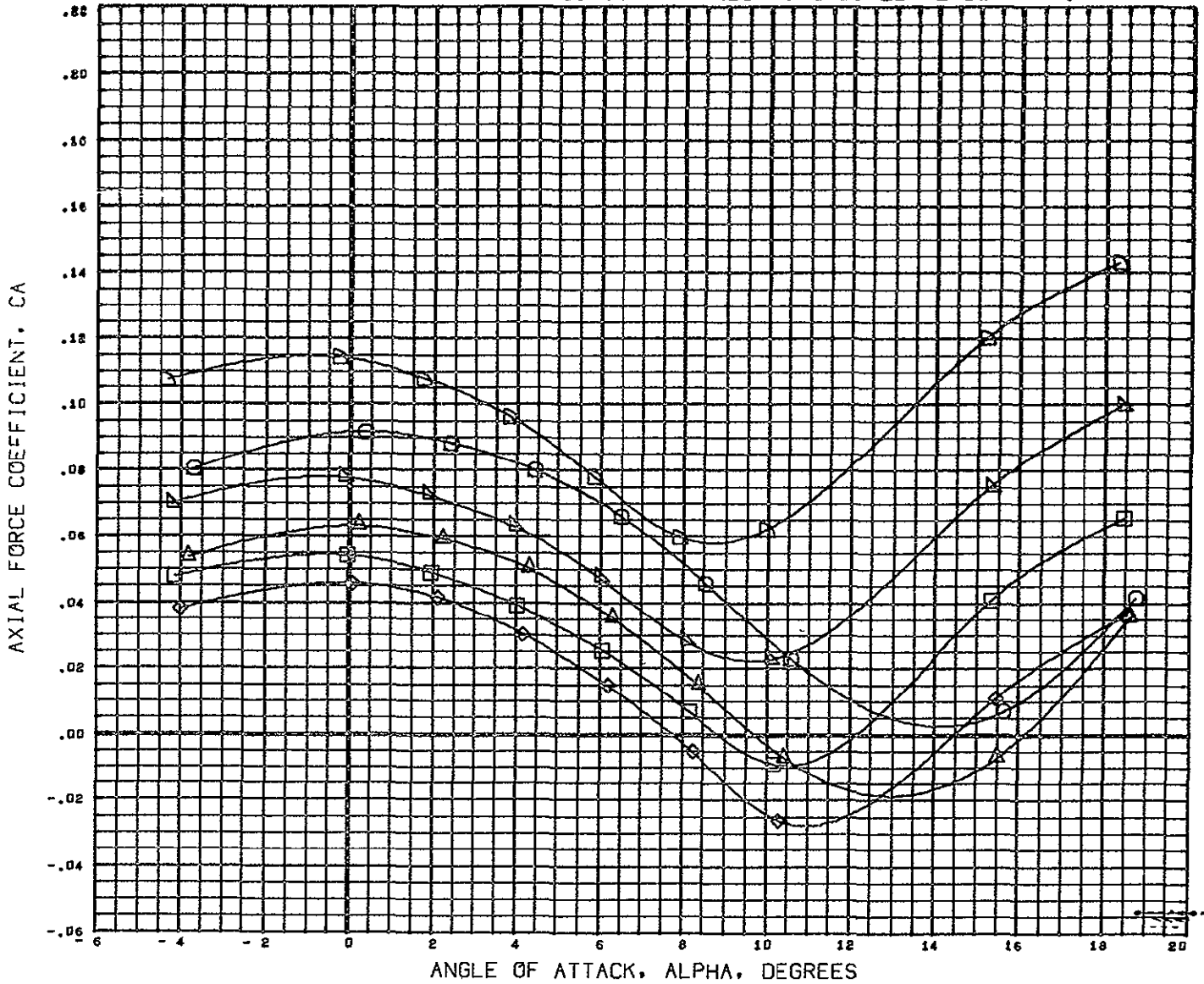
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ENGLC	CNDPOS	WNGPOS	INCDW	REFERENCE INFORMATION
(SN3205)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1G1	1,000	2,000	1,000	0,000	SREF 1,3550 SQ FT
(SN3195)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1G2	2,000	1,000	1,000	0,000	LREF 3,4530 FEET
(SN4149)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1G5	5,000	1,000	1,000	0,000	BREF 3,4530 FEET
(SN4028)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1G6	6,000	1,000	1,000	0,000	XMRP 2,5950 FEET
(SN3004)	NSRDC-3210, MSFC/LMSC BOOSTER B1C2F2W1V1	0,000	1,000	1,000	0,000	YMRP 0,0000 FEET
(SN2004)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	0,000	1,000	1,000	0,000	ZMRP 0,0187 FEET
						SCALE 0,0150 SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(RN4096)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(RN4108)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(RN4112)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

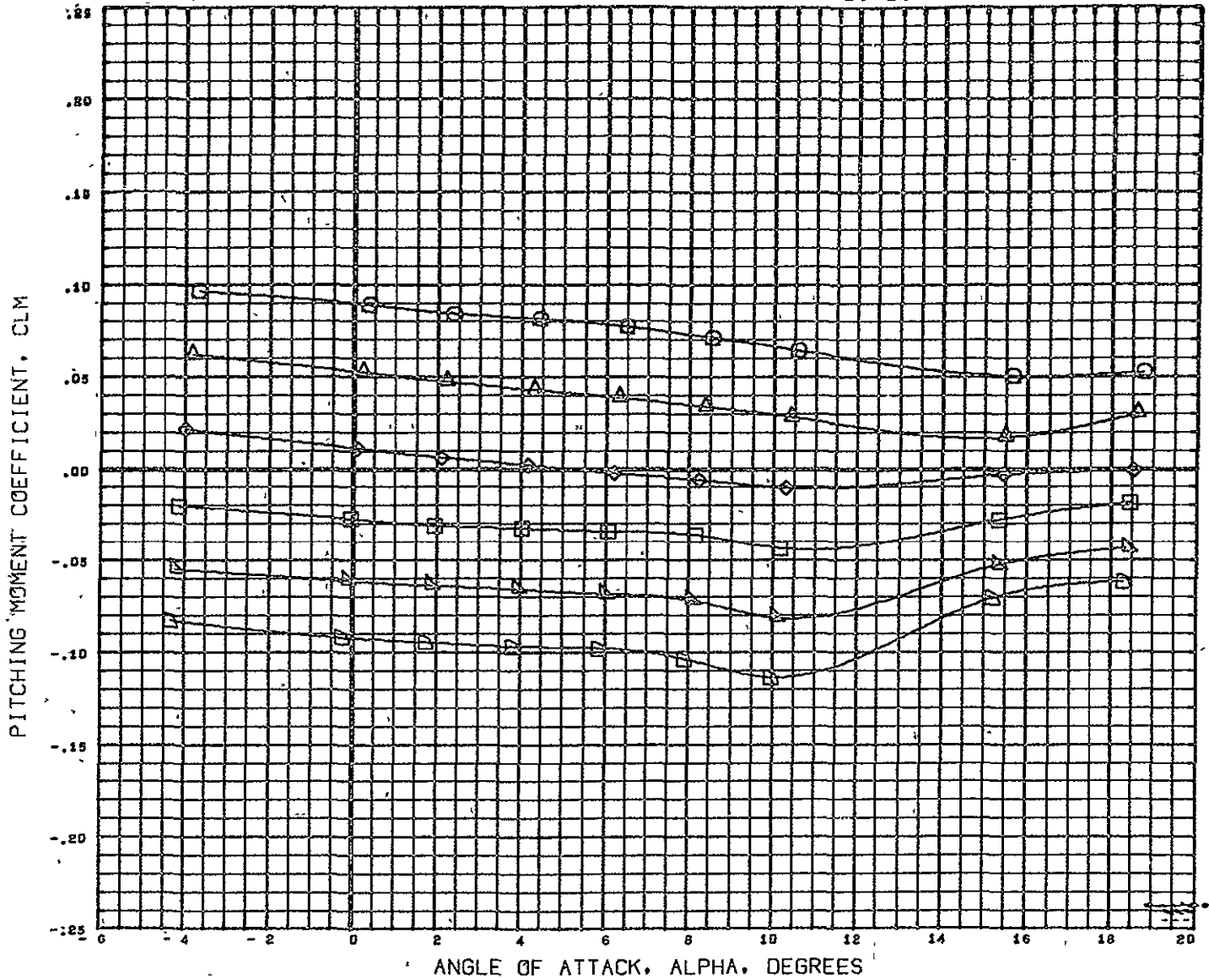


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(RN4096)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(RN4108)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(RN4112)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

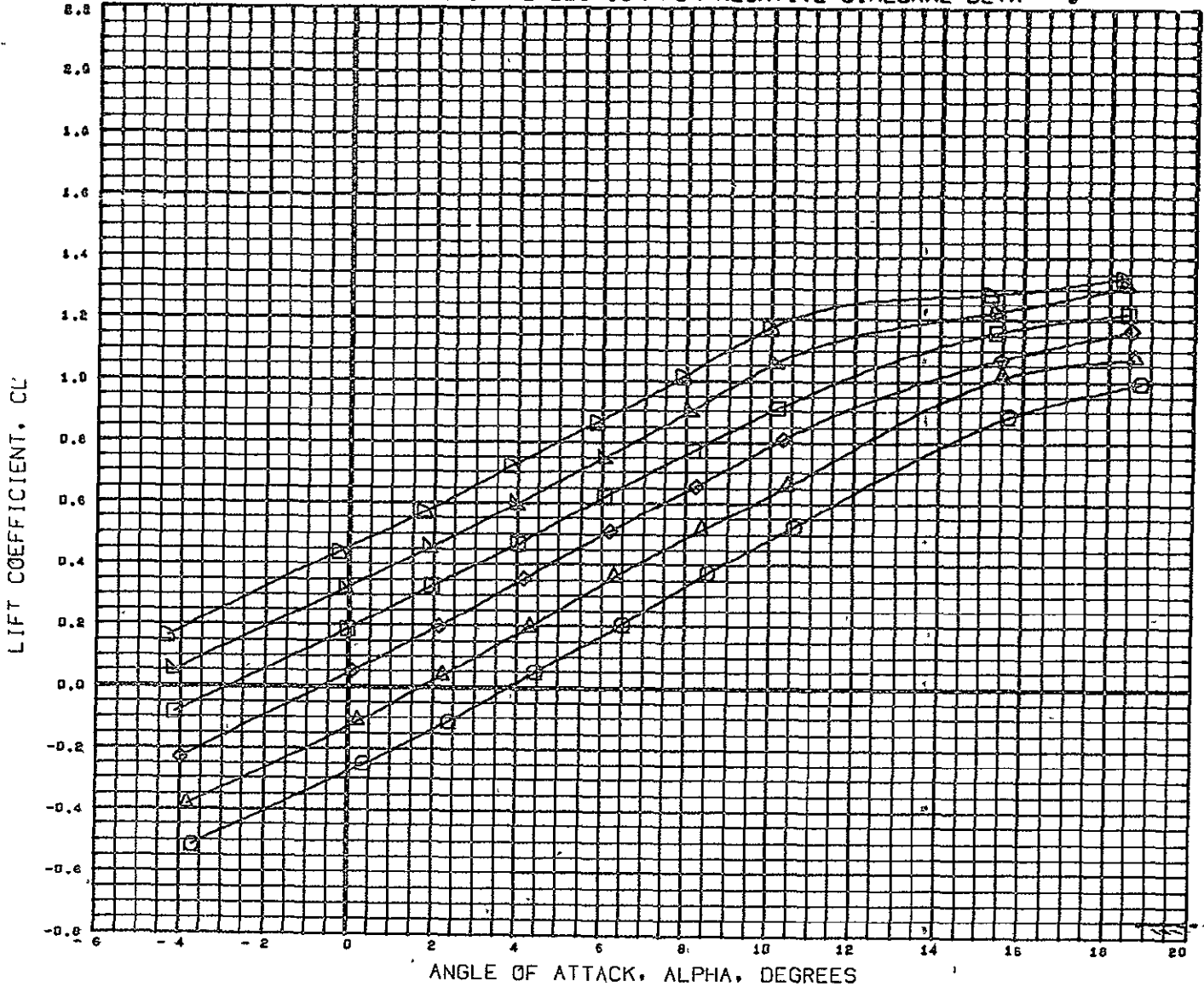
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LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1,3550 SQ.FT.
(RN4096)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3,4530 FEET
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3,4530 FEET
(RN4100)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XNRP 2,5950 FEET
(RN4108)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YNRP 0.0000 FEET
(RN4112)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

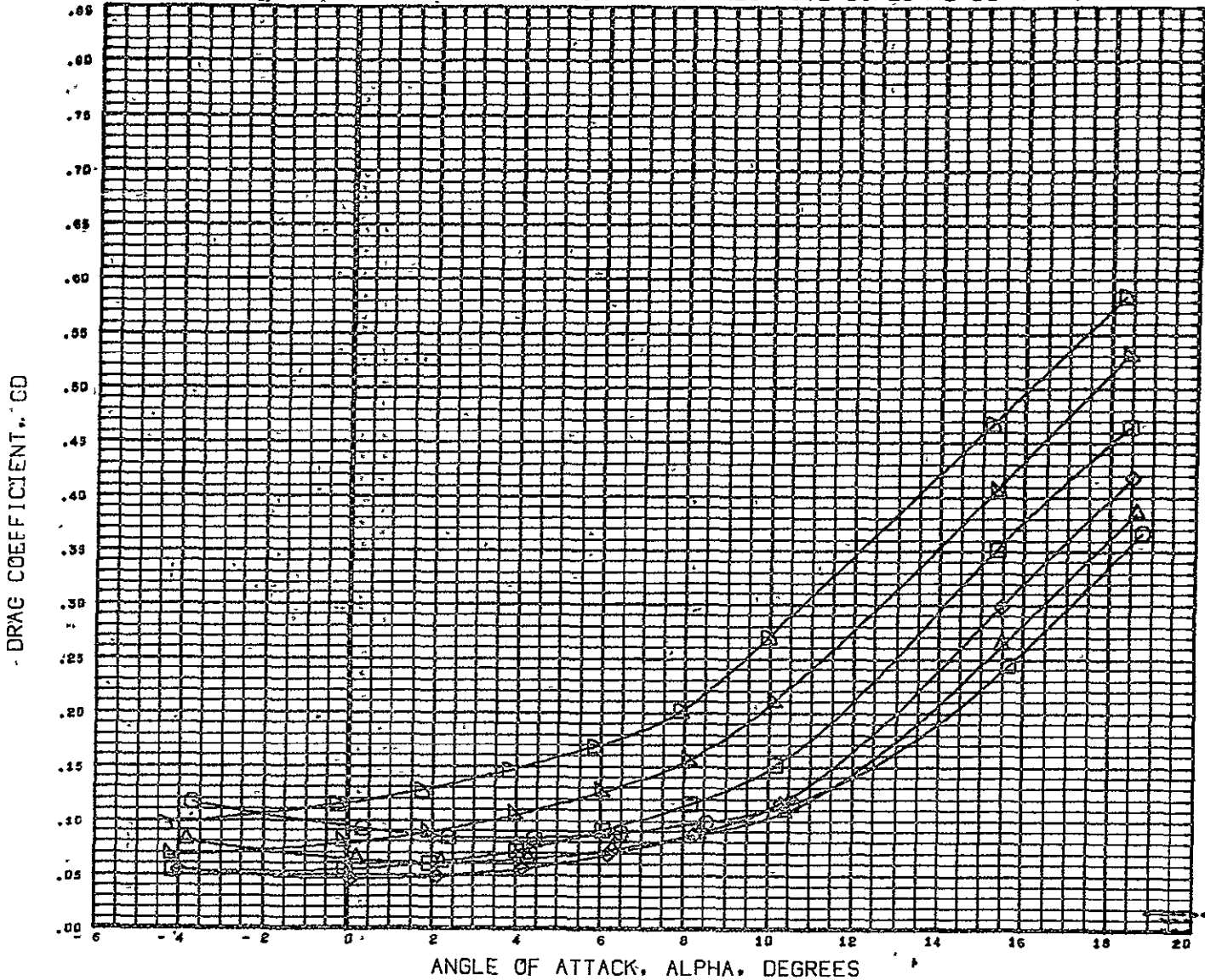
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(RN4096)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XHRP 2.5930 FEET
(RN4106)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YHRP 0.0000 FEET
(RN4112)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

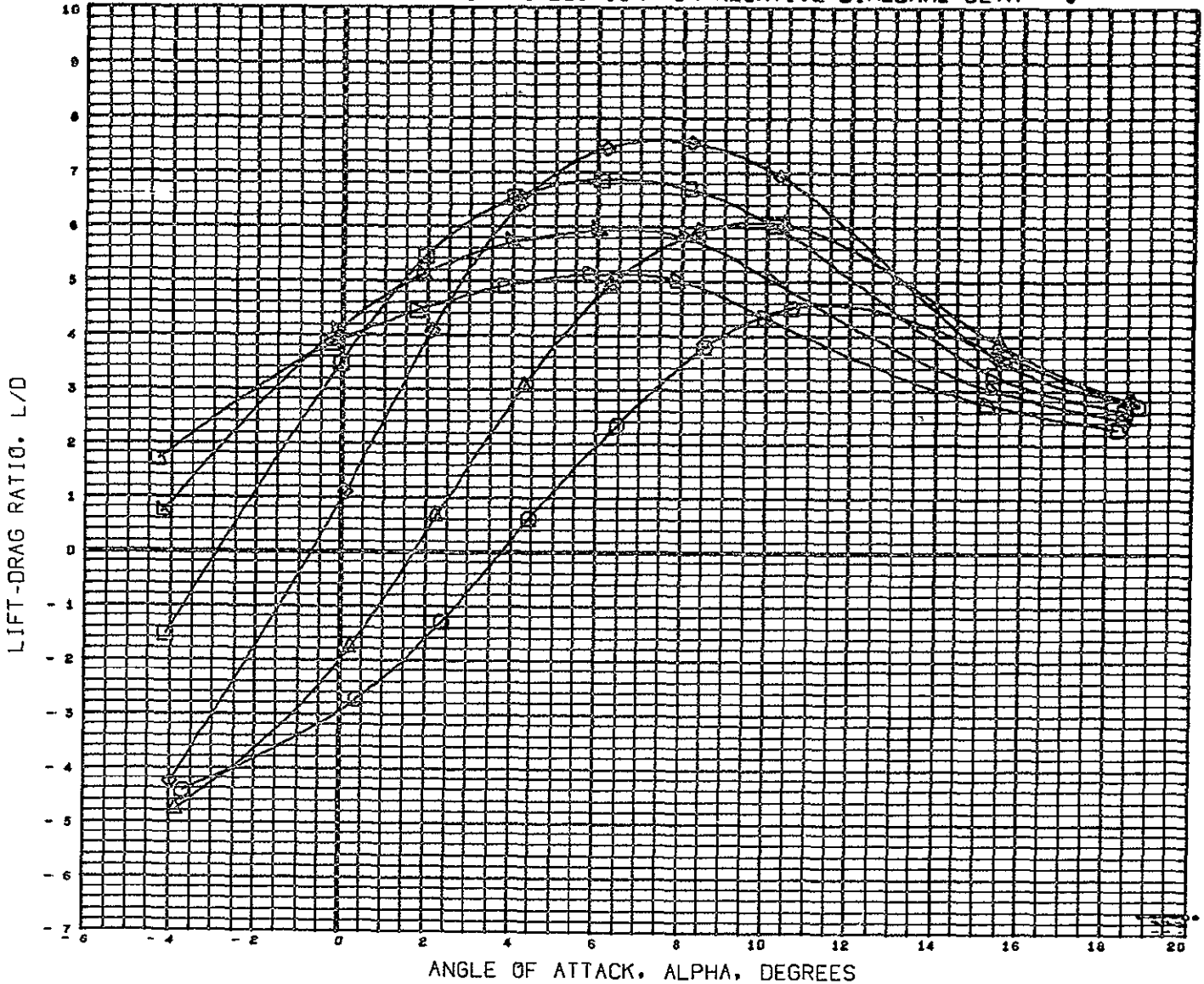
MACH .40

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ. FT.
(RN4096)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XHRP 2.5980 FEET
(RN4106)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(RN4112)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

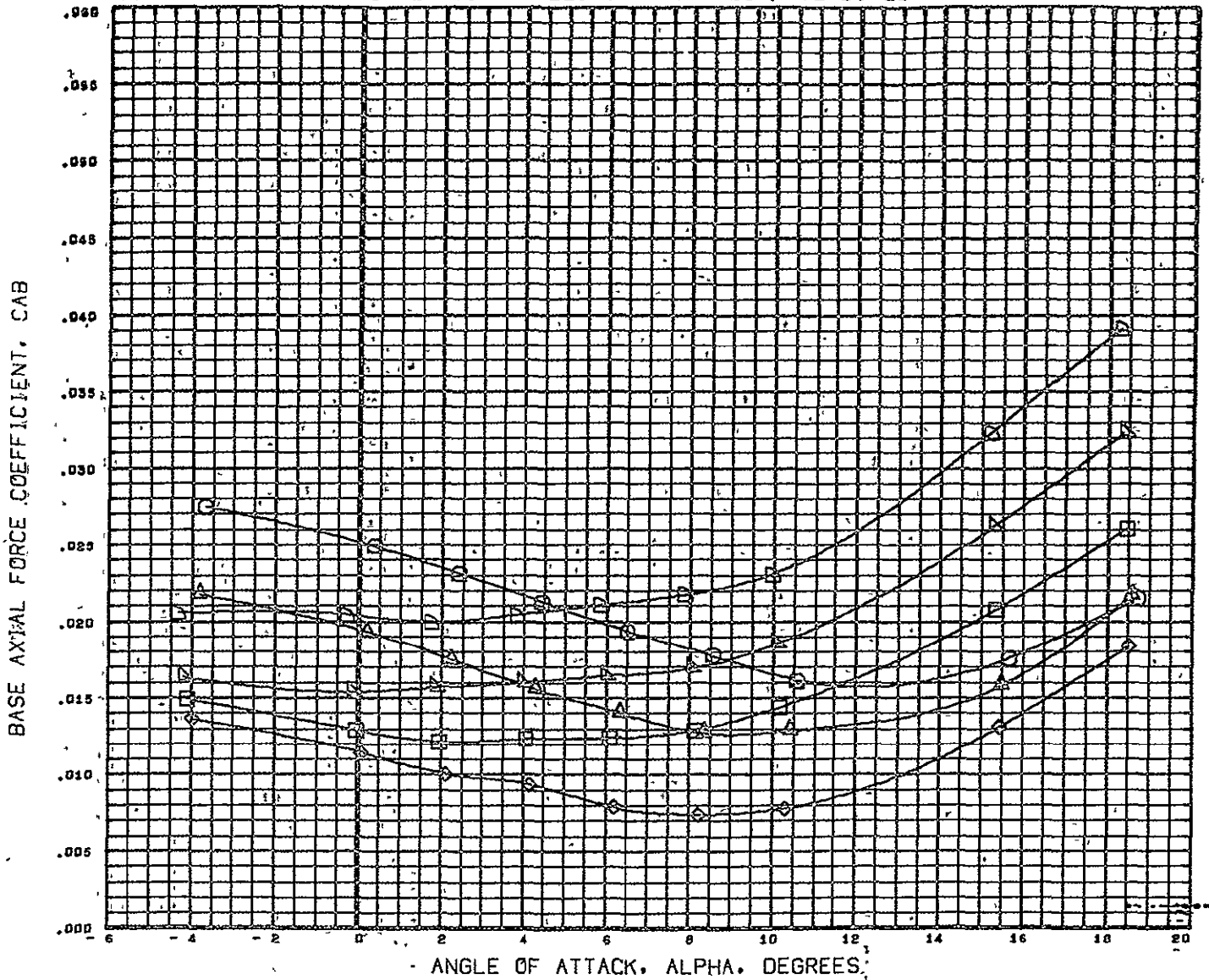
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(RN4096)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XNRP 2.5950 FEET
(RN4108)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YNRP 0.0000 FEET
(RN4112)	NSRDC-331D,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZNRP 0.0187 FEET SCALE 0.0150 SCALE

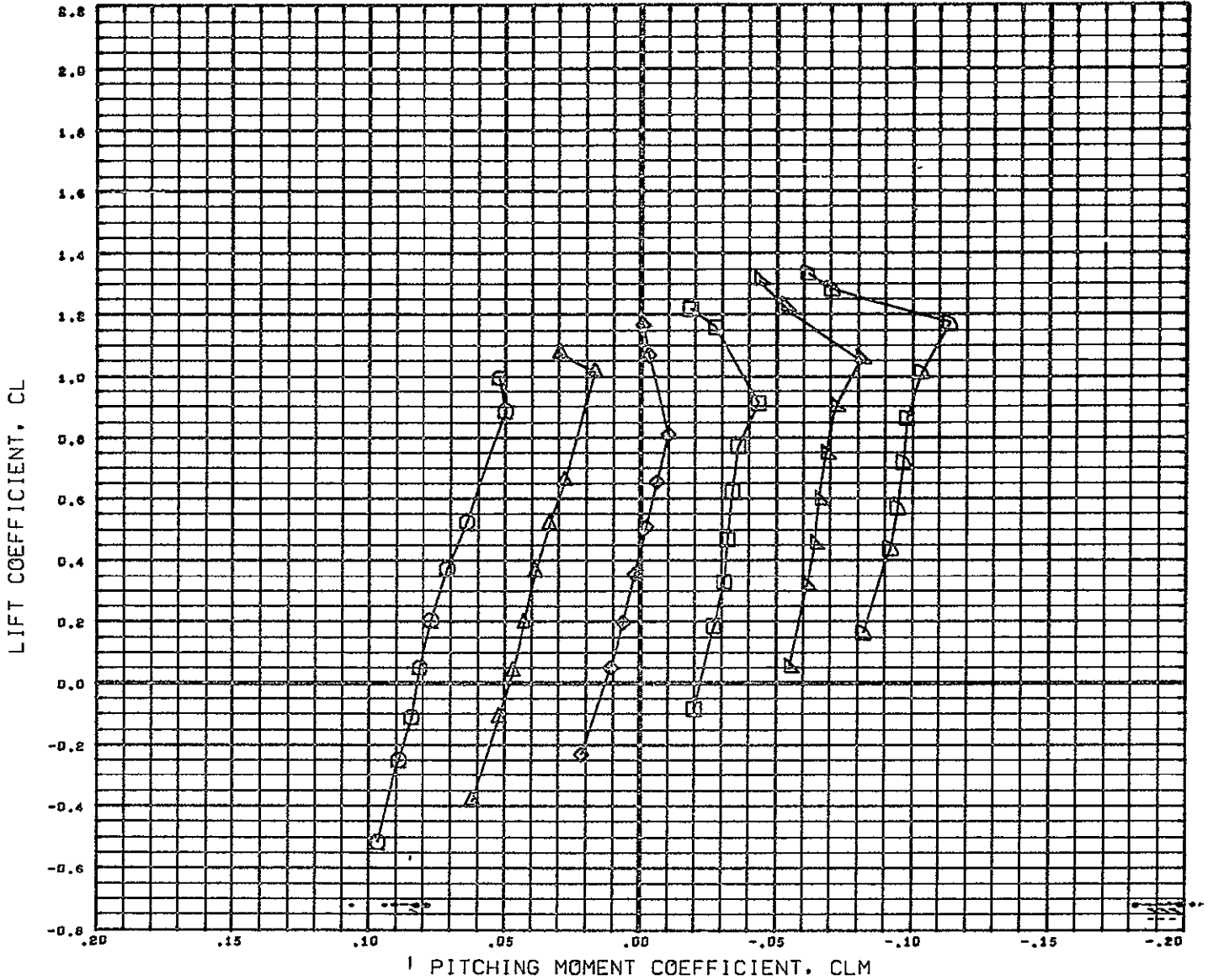
MACH .40

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	-20,000	SREF 1,3550 SQ.FT.
(RN4095)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	-10,000	LREF 3,4530 FEET
(RN4001)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1,000	1,000	0,000	BREF 3,4530 FEET
(RN4100)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	10,000	XHRP 2,5950 FEET
(RN4108)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	20,000	YMRP 0,0000 FEET
(RN4112)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	30,000	ZMRP 0,0187 FEET
						SCALE 0,0150 SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

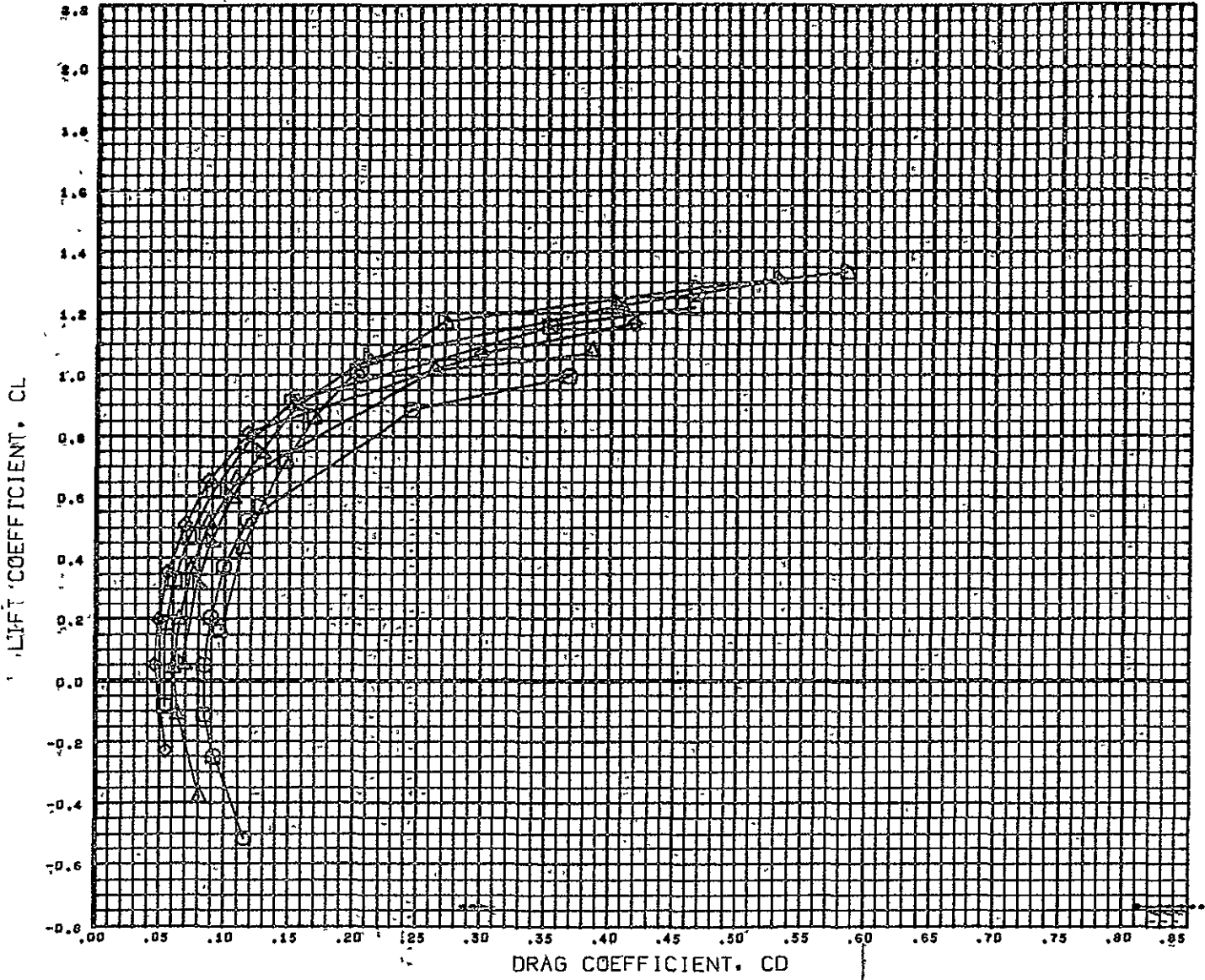


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(RN4096)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XNRP 2.5950 FEET
(RN4108)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YNRP 0.0000 FEET
(RN4112)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

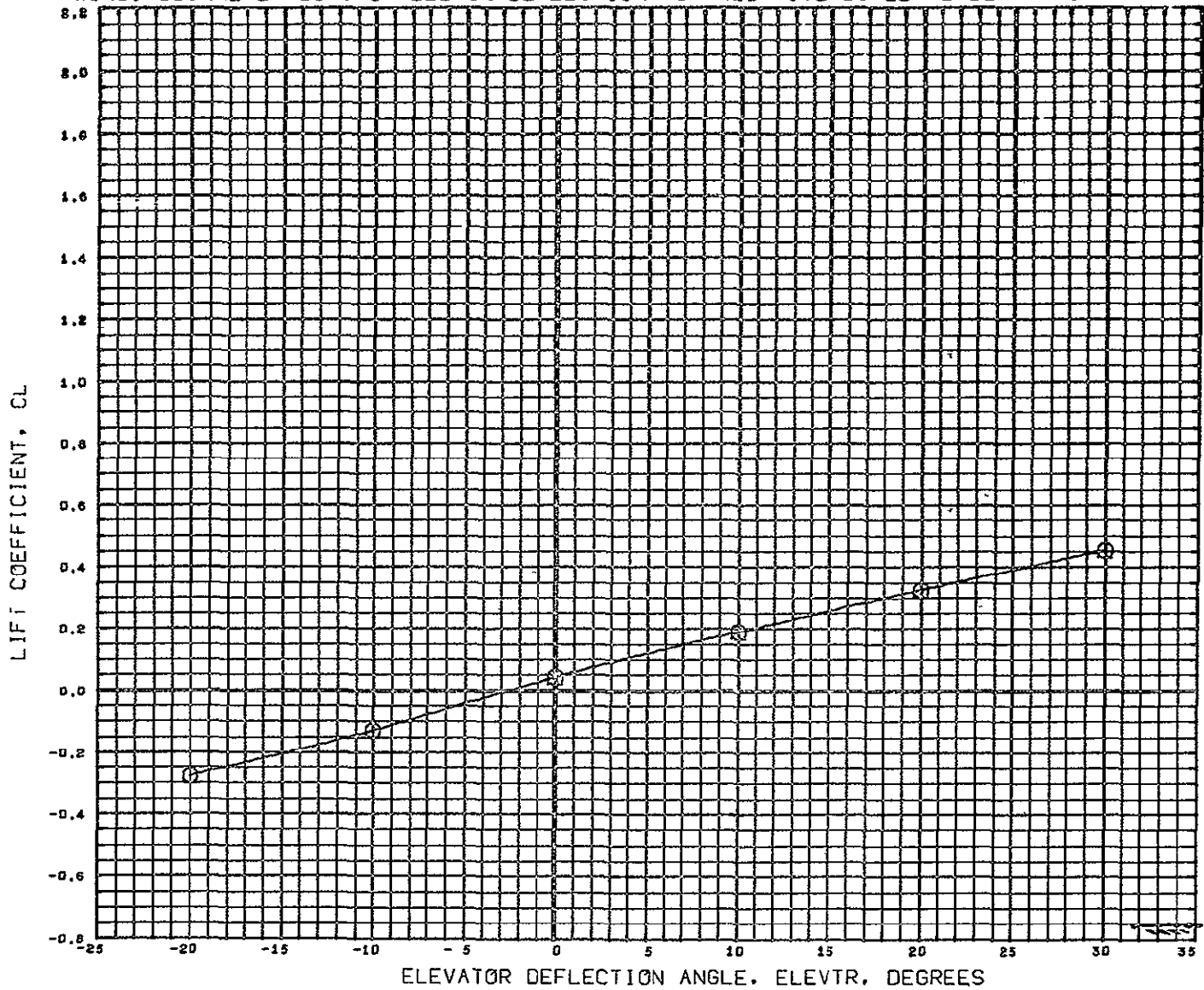


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4092)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	SREF 1.3550 SQ. FT.
(RN4096)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4001)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4100)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(RN4108)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YHRP 0.0000 FEET
(RN4112)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZHRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

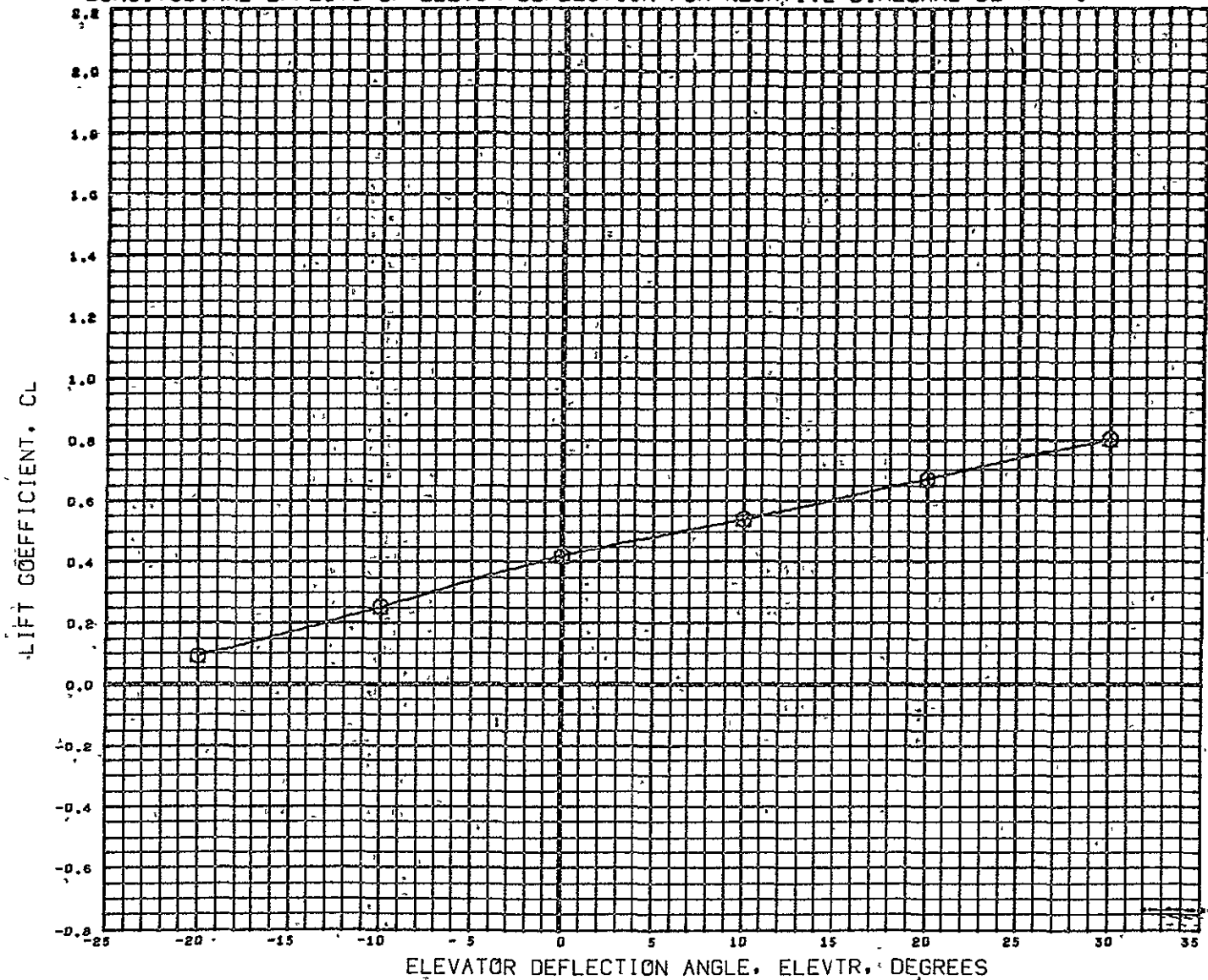
PAGE 314

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



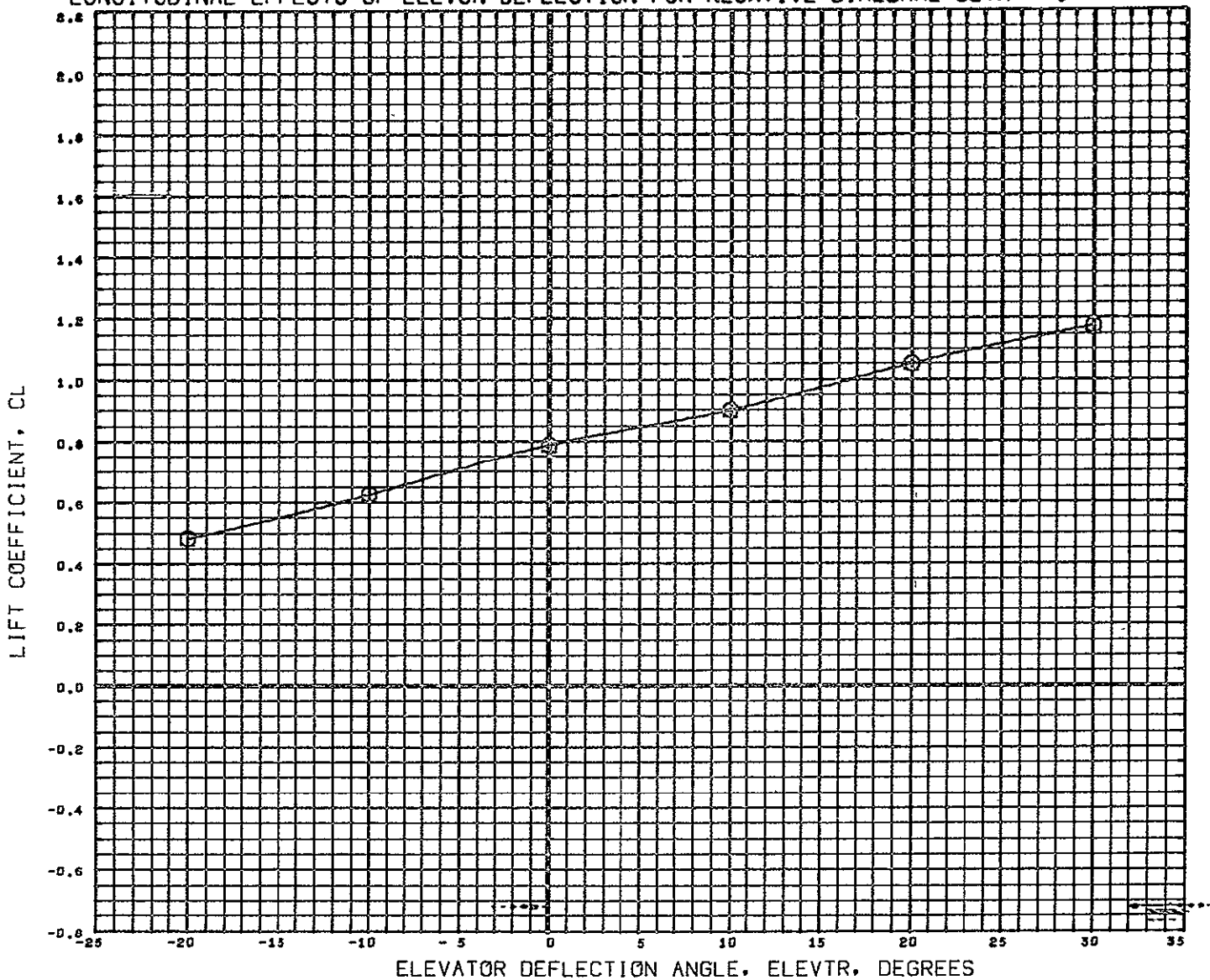
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



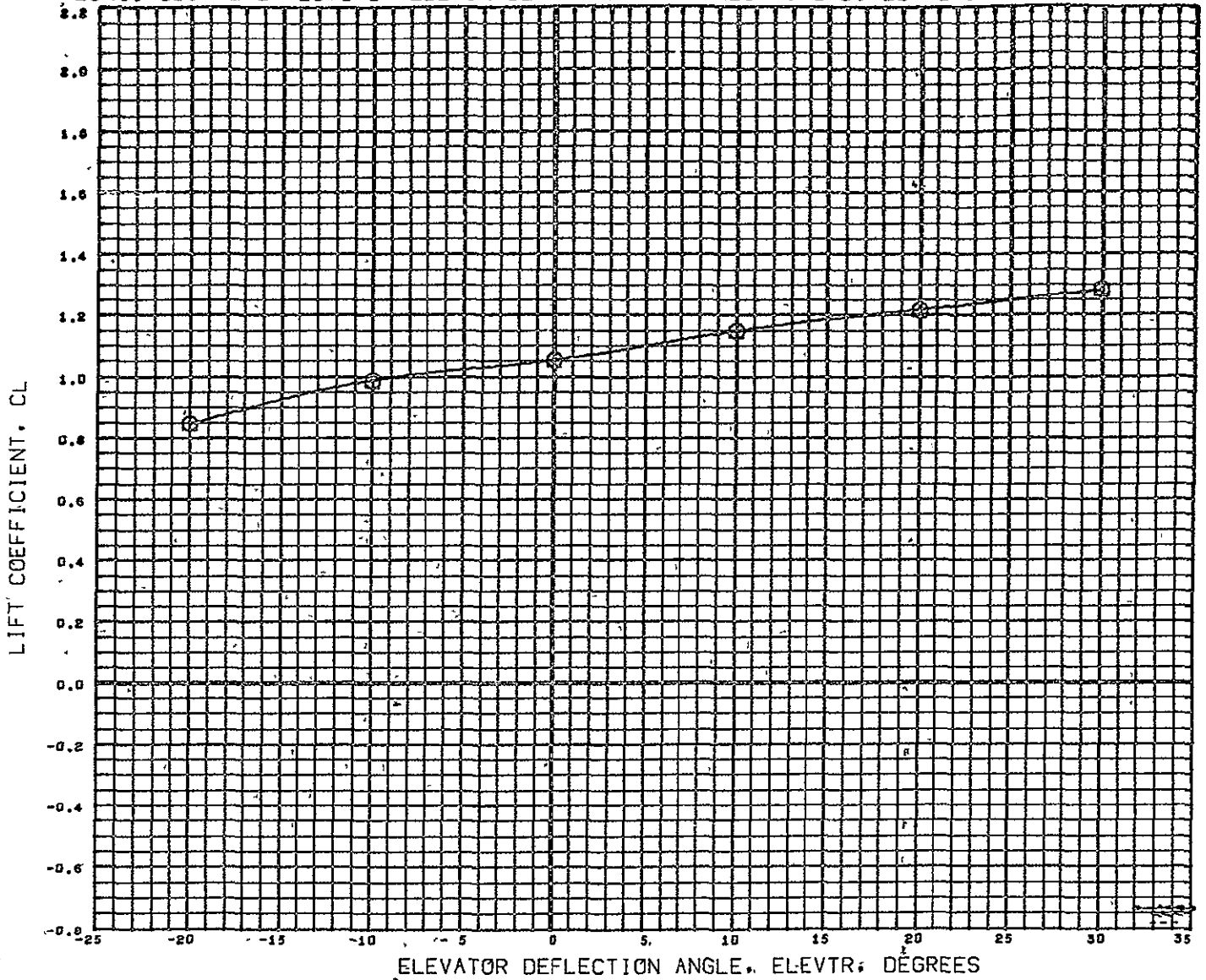
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AIRLN	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



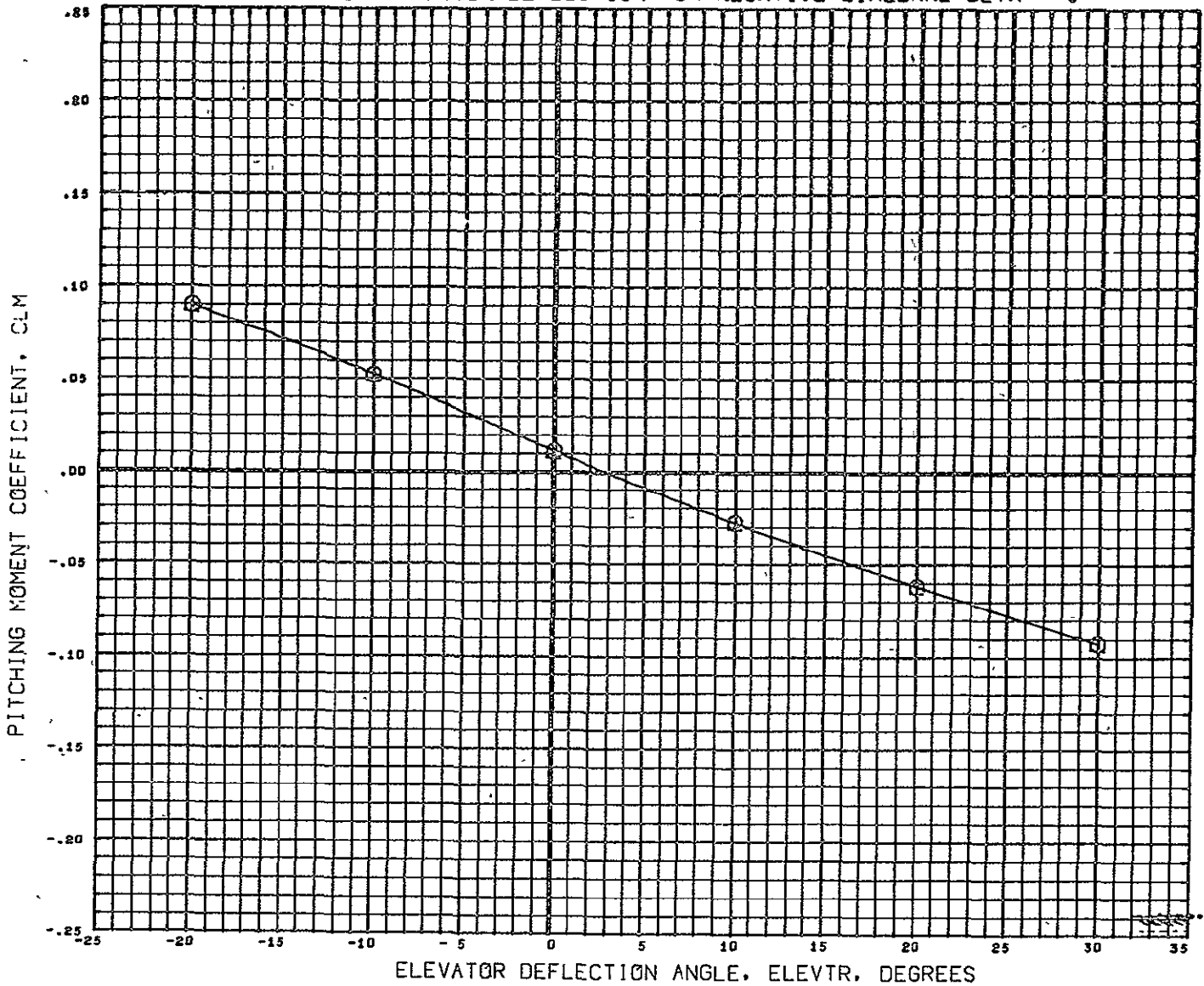
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.000	SREF	1 3550	SQ FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	- 7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

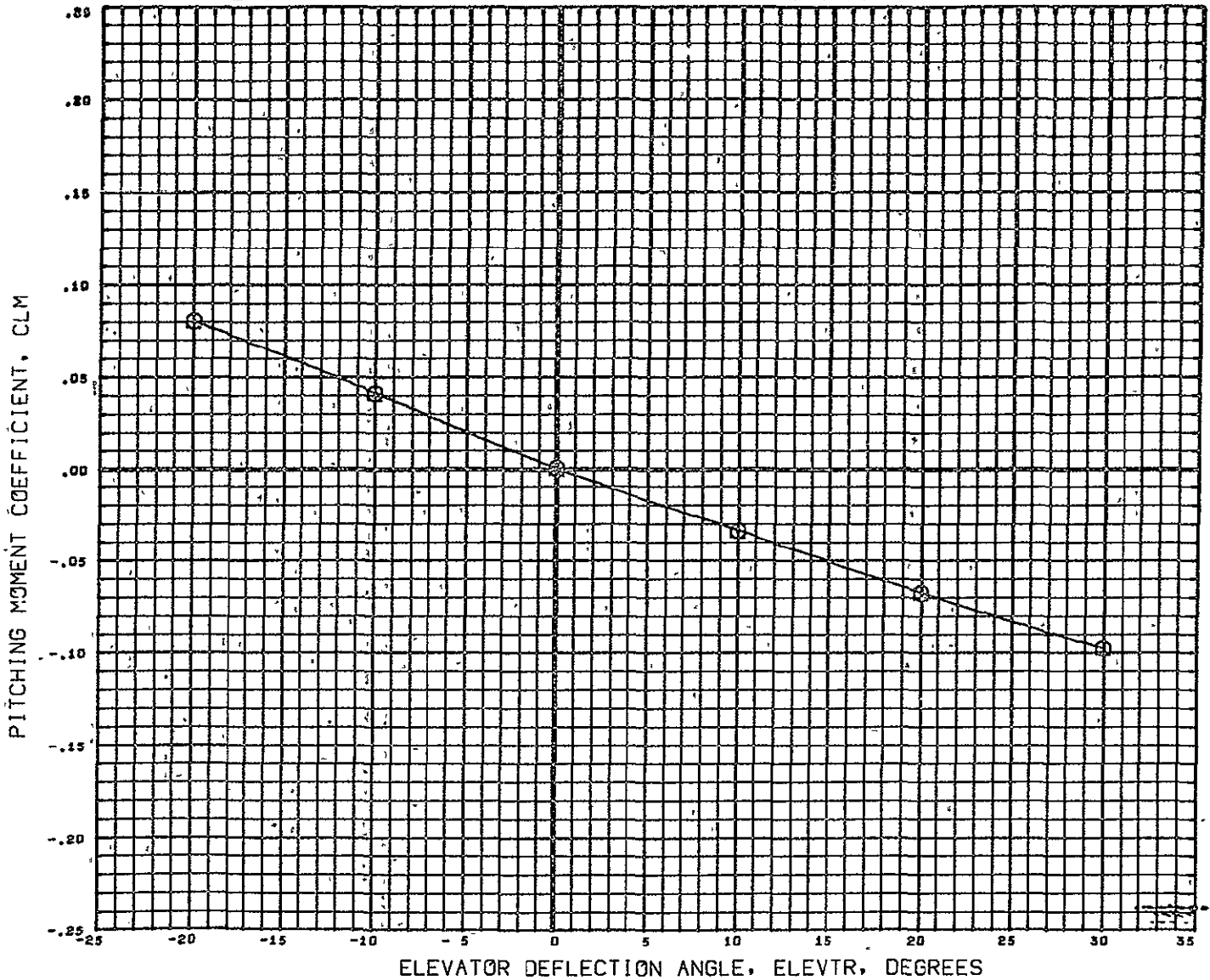
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
○	0.000	MACH	0.400	BETA	0.000
		INCIDC	3.000	INCIDW	0.000
		DIHDL	-7.660	AILRON	0.000
		CANARD	0.000	RUDDER	0.000
		WNGPOS	1.000	CNDPOS	1.000
		DATA HIST. CODE	MI		

REFERENCE INFORMATION		
SREF	1.5550	SQ. FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0187	FEET
SCALE	0.0150	SCALE

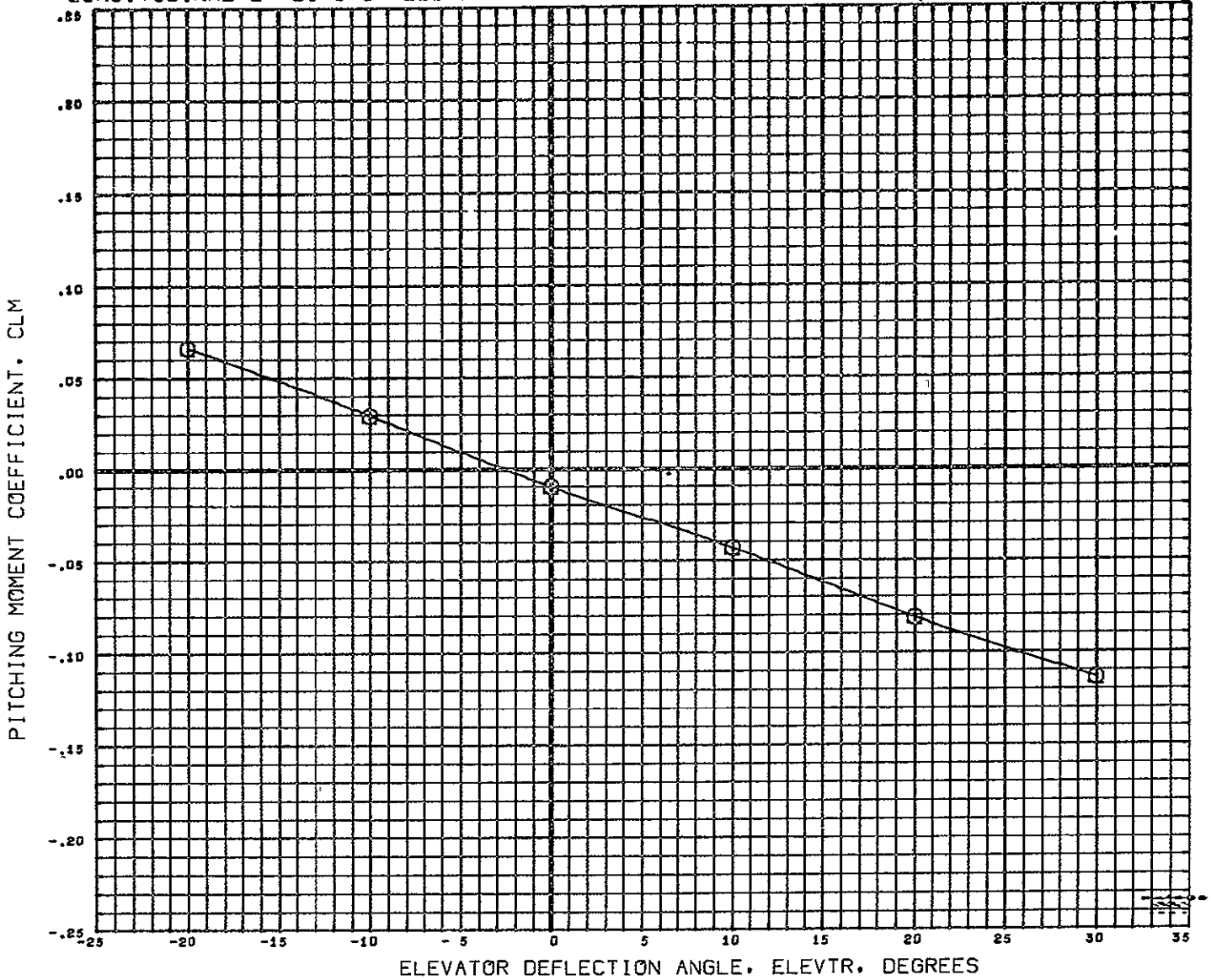
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
Q	5.000	MACH	0.400	BETA	0.000
		INCIDC	3.000	INCIDW	0.000
		DIHDL	-7.660	AILRON	0.000
		CANARD	0.000	RUDDER	0.000
		WNGPOS	1.000	CNDPOS	1.000
		DATA HIST. CODE	HI		

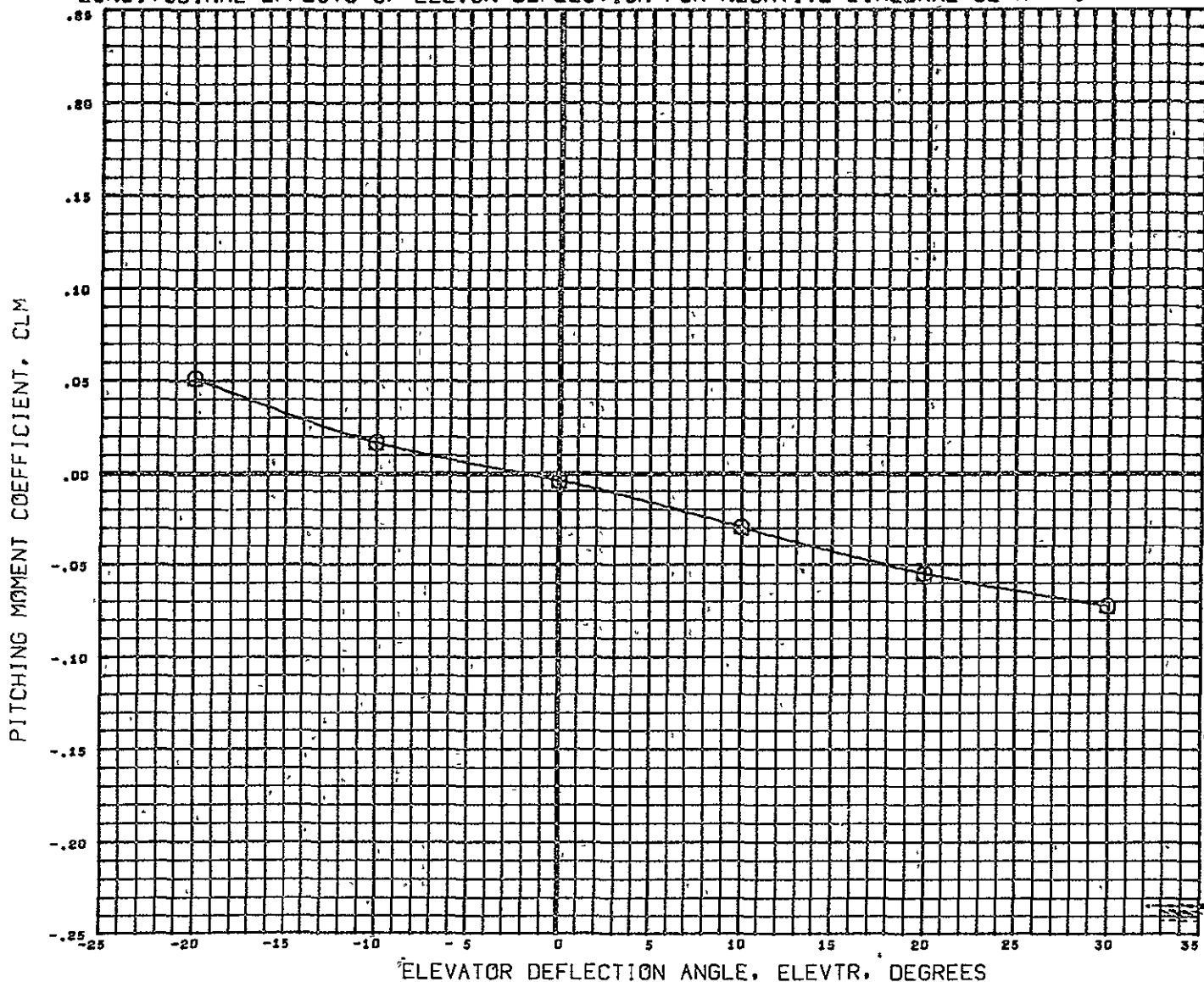
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LREF	3.4530	FEET
BREF	3.4530	FEET
XHRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0187	FEET
SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



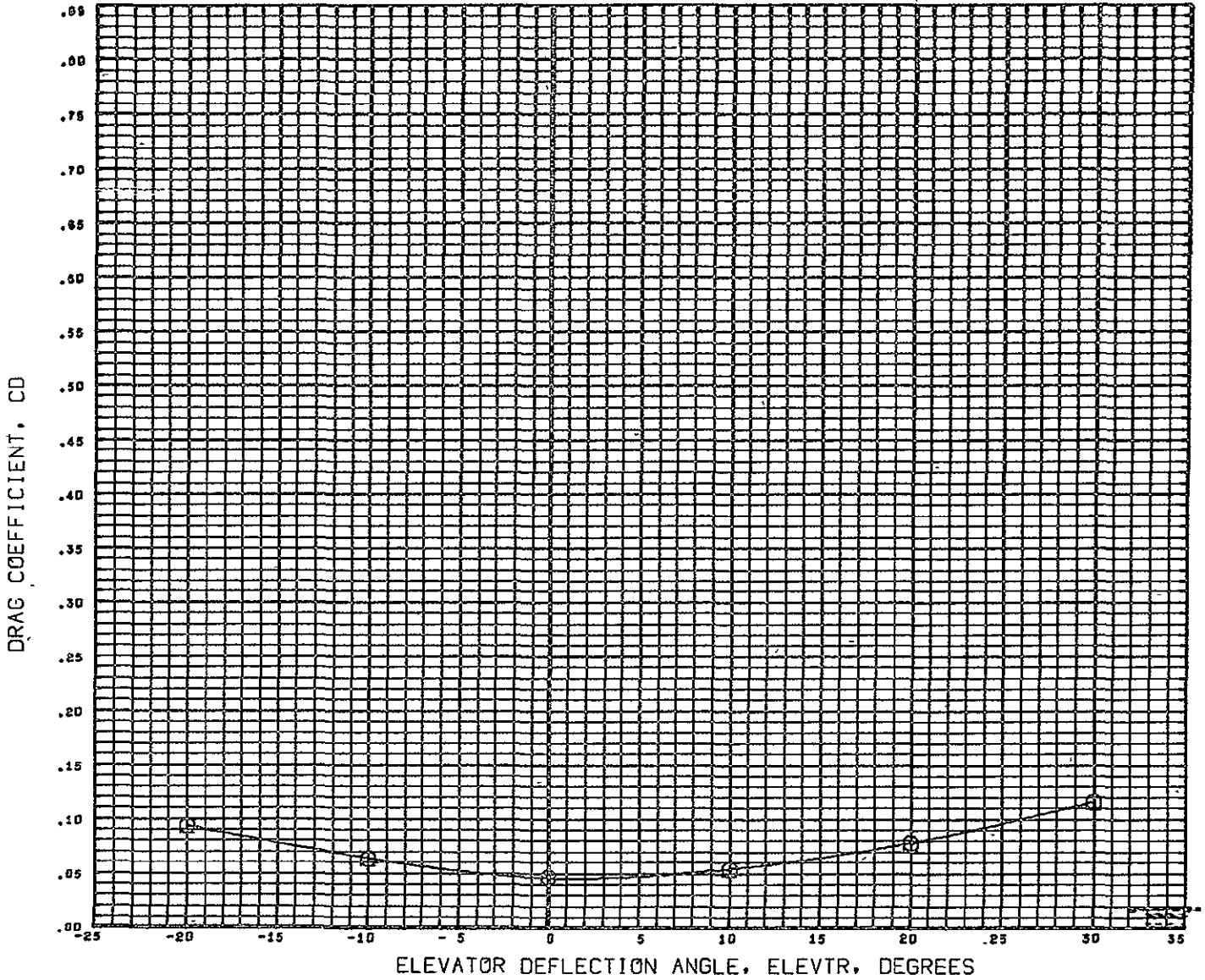
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Q	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



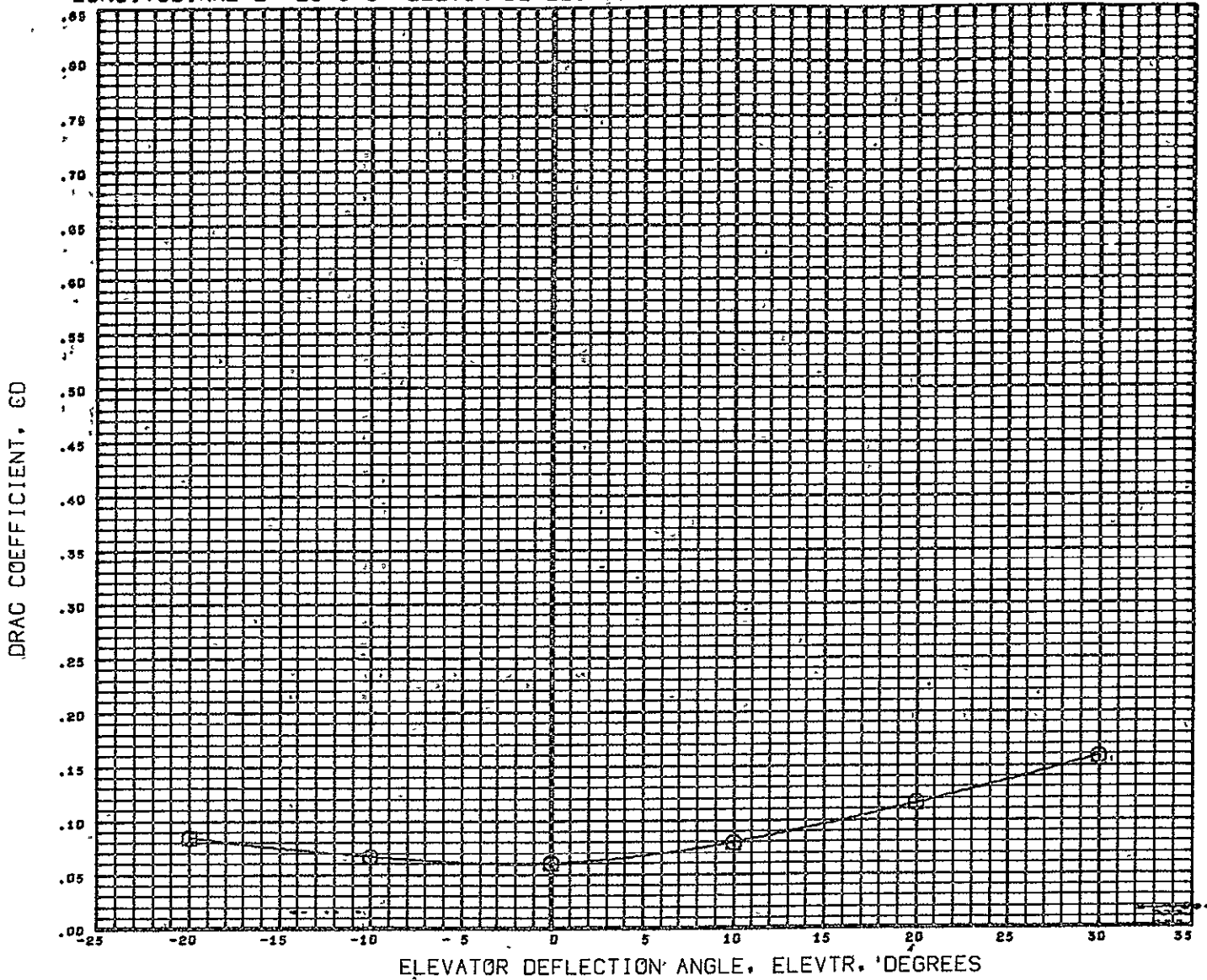
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION	
		MACH	BETA	INCIDW	INCIDC	REF	SCALE
○	15.000	0.400	0.000	0.000	1.3550	SQ.FT.	
		3.000	0.000	0.000	3.4530	FEET	
		7.660	0.000	0.000	3.4530	FEET	
		0.000	0.000	0.000	2.5950	FEET	
		1.000	0.000	0.000	0.0000	FEET	
			1.000	1.000	0.0187	FEET	
					0.0150	SCALE	

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



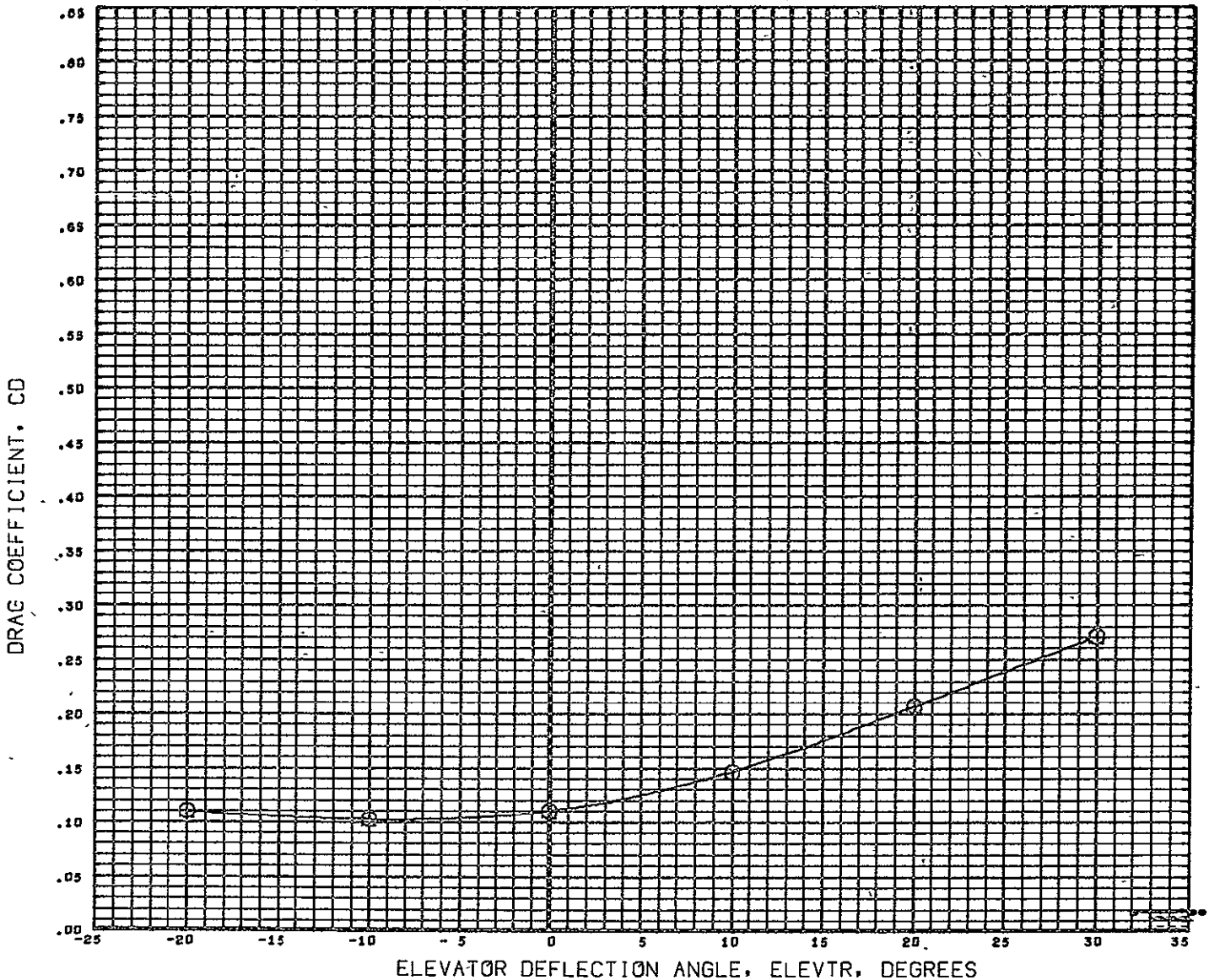
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	88. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



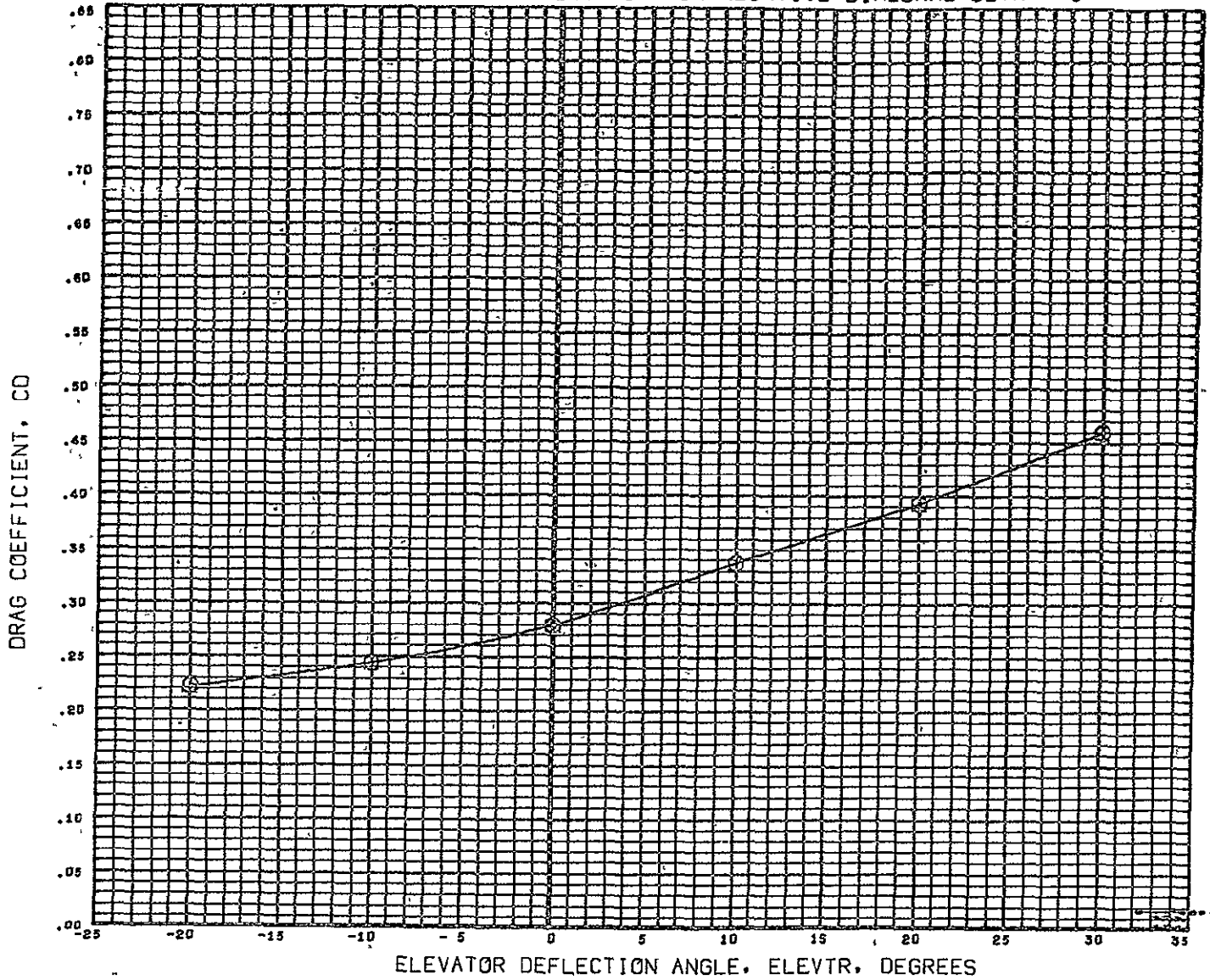
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0 0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	HACH	0.400	BETA	0.000	SREF	1.3550	50.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST	CODE	HI		ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

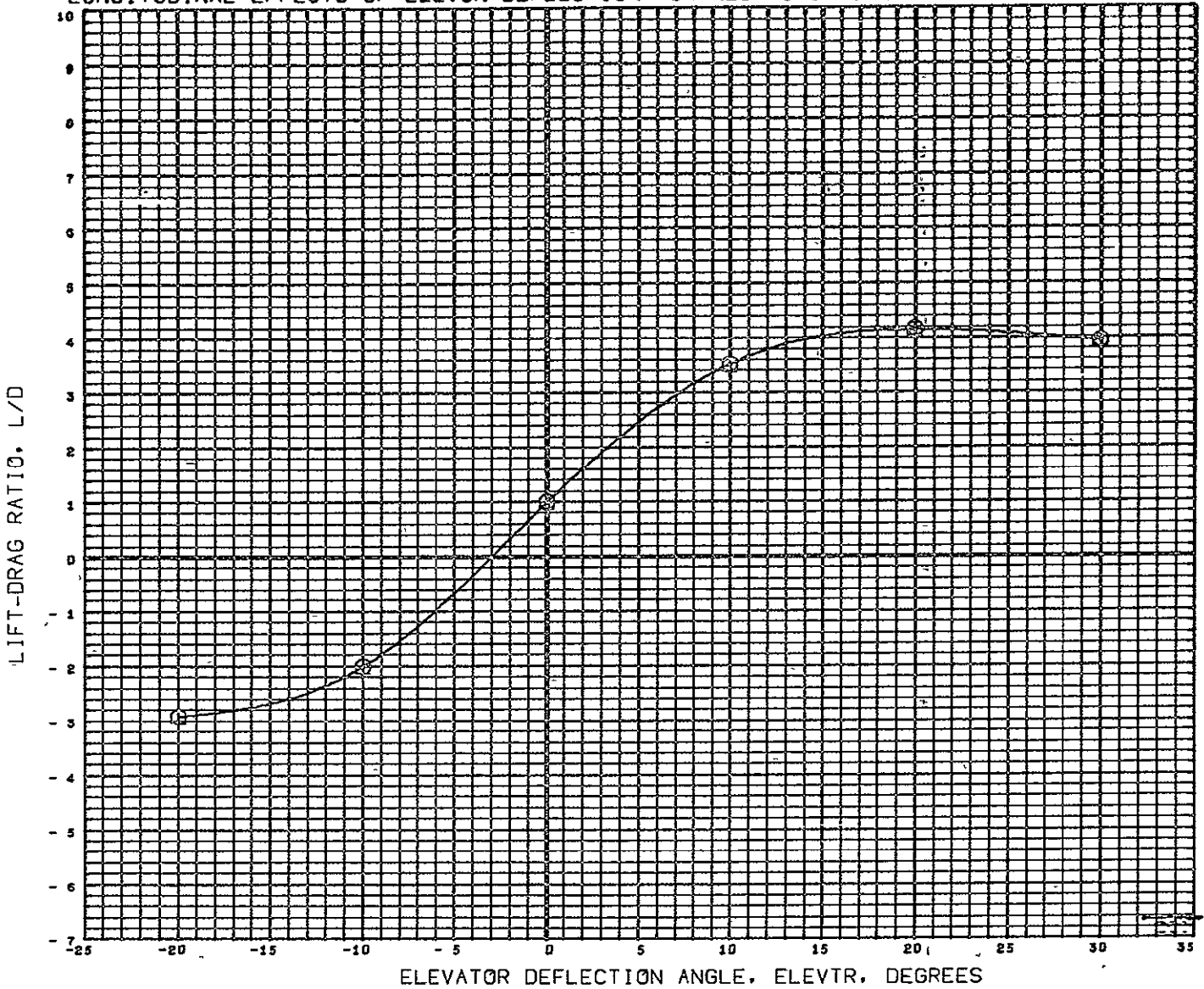
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
□	15.000	MACH	0.400	BETA	0.000
		INCIDC	3.000	INCIDW	0.000
		DIHDL	-7.660	A1LRN	0.000
		CANARD	0.000	RUDDER	0.000
		WNGPOS	1.000	CNDPOS	1.000
		DATA HIST. CODE	MI		

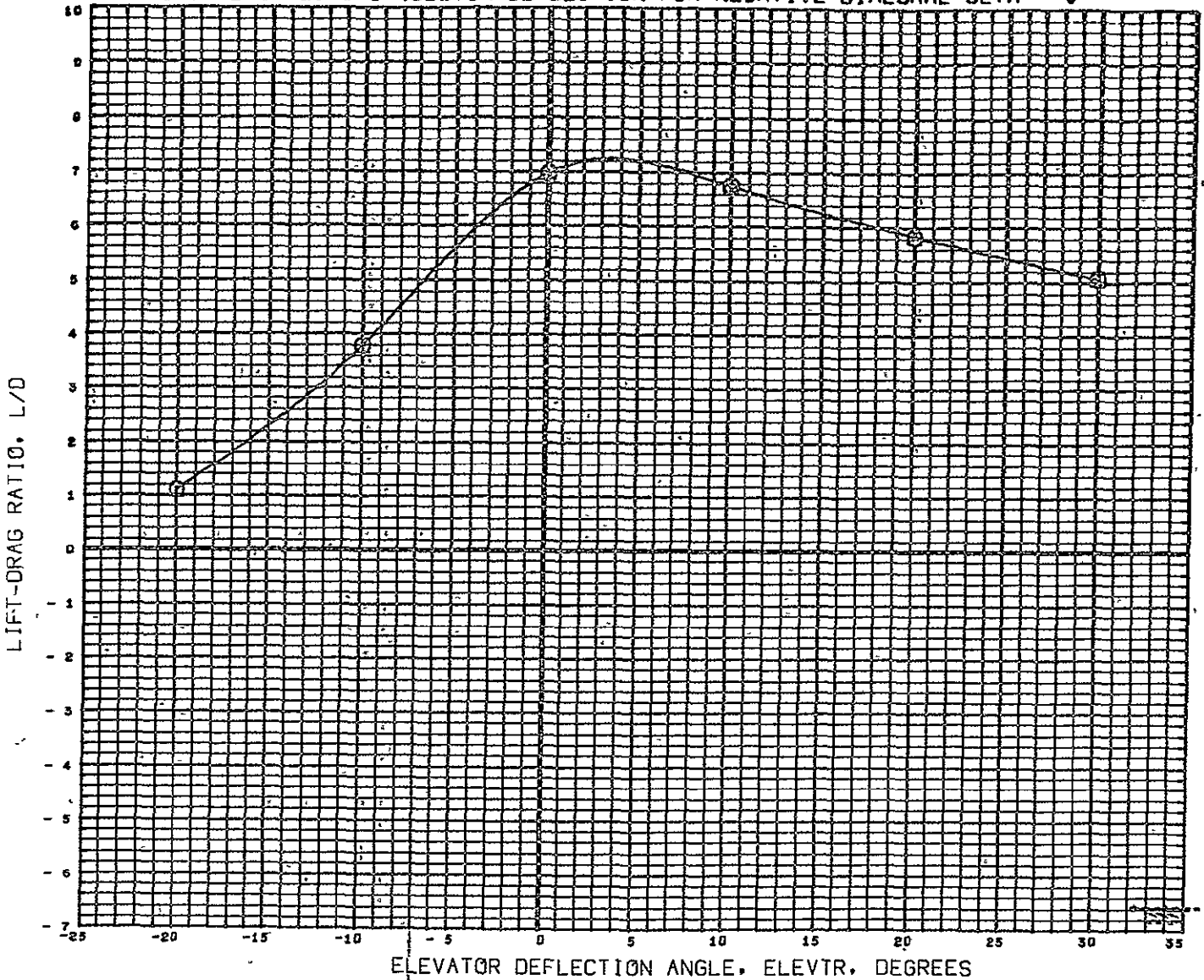
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LREF	3.4530	FEET
BREF	3.4530	FEET
XHRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0187	FEET
SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



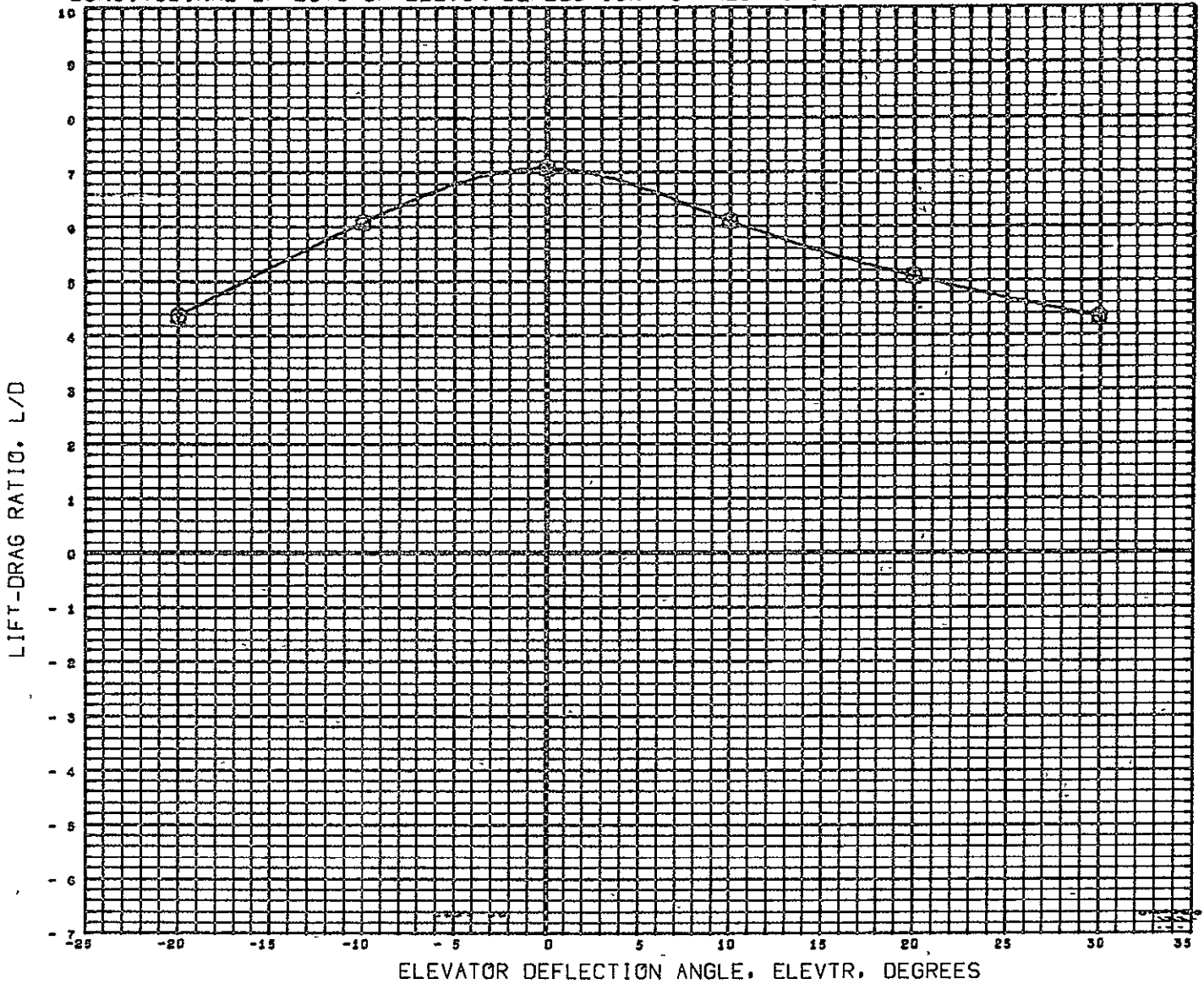
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	- 7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



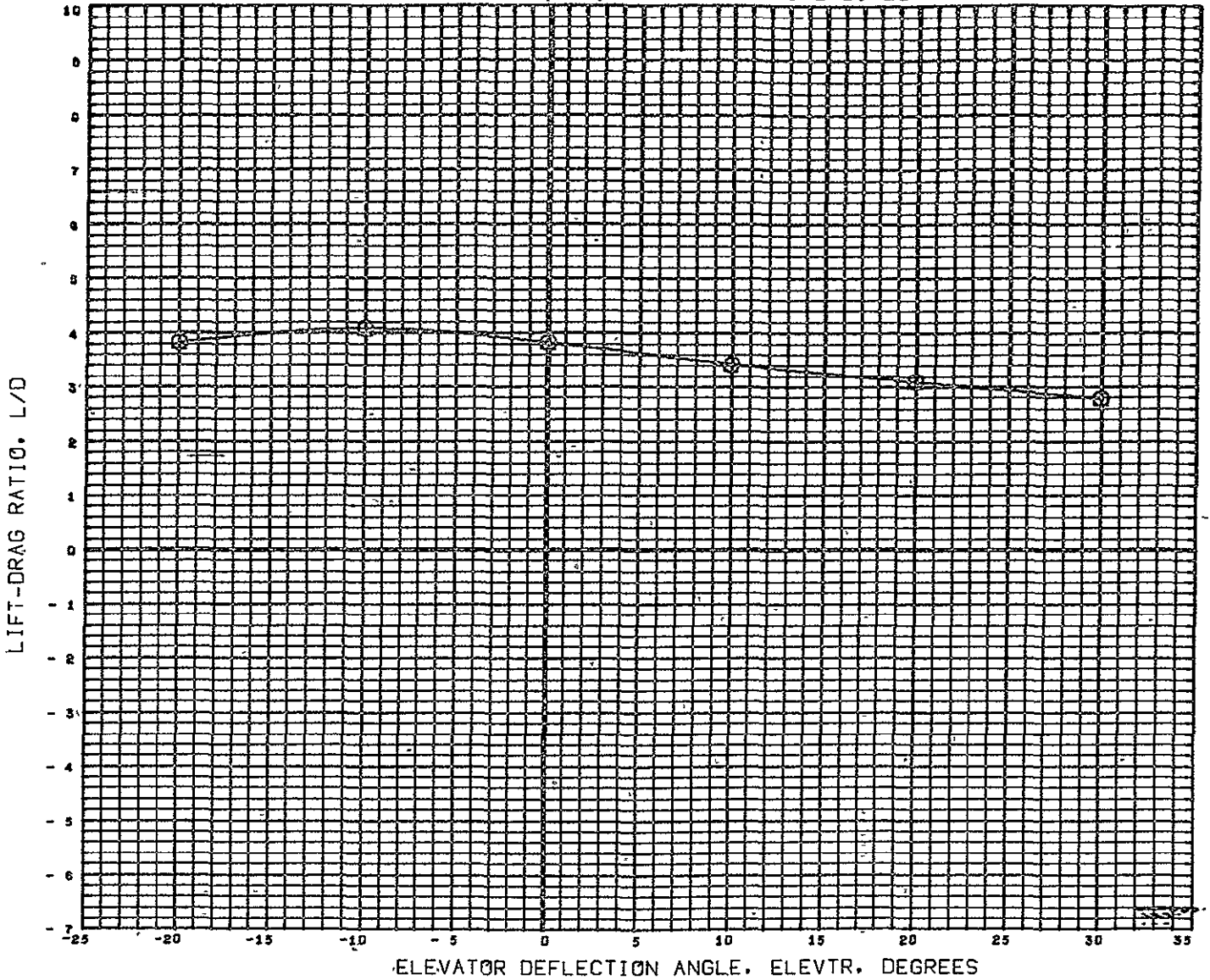
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	HACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



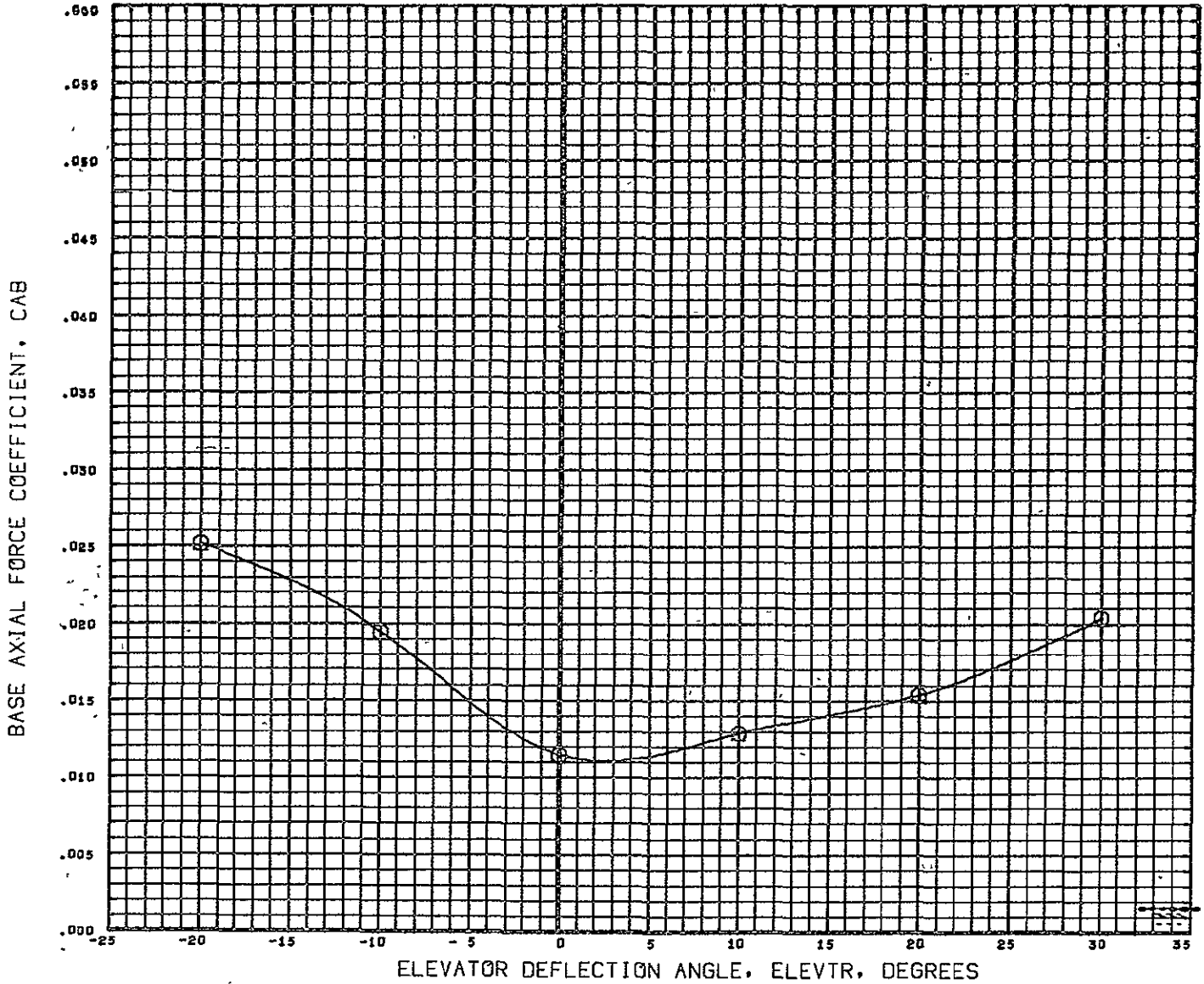
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5930	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



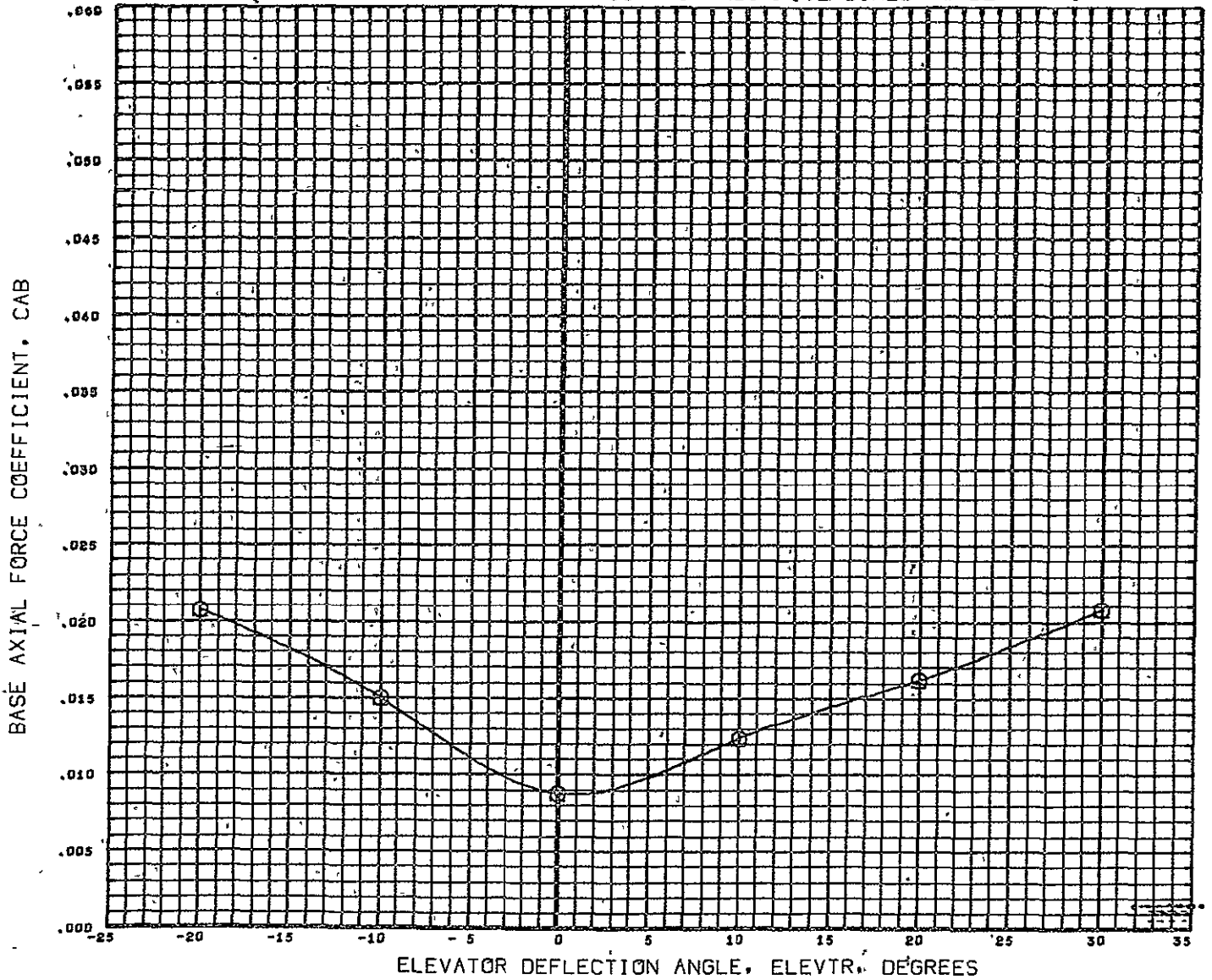
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



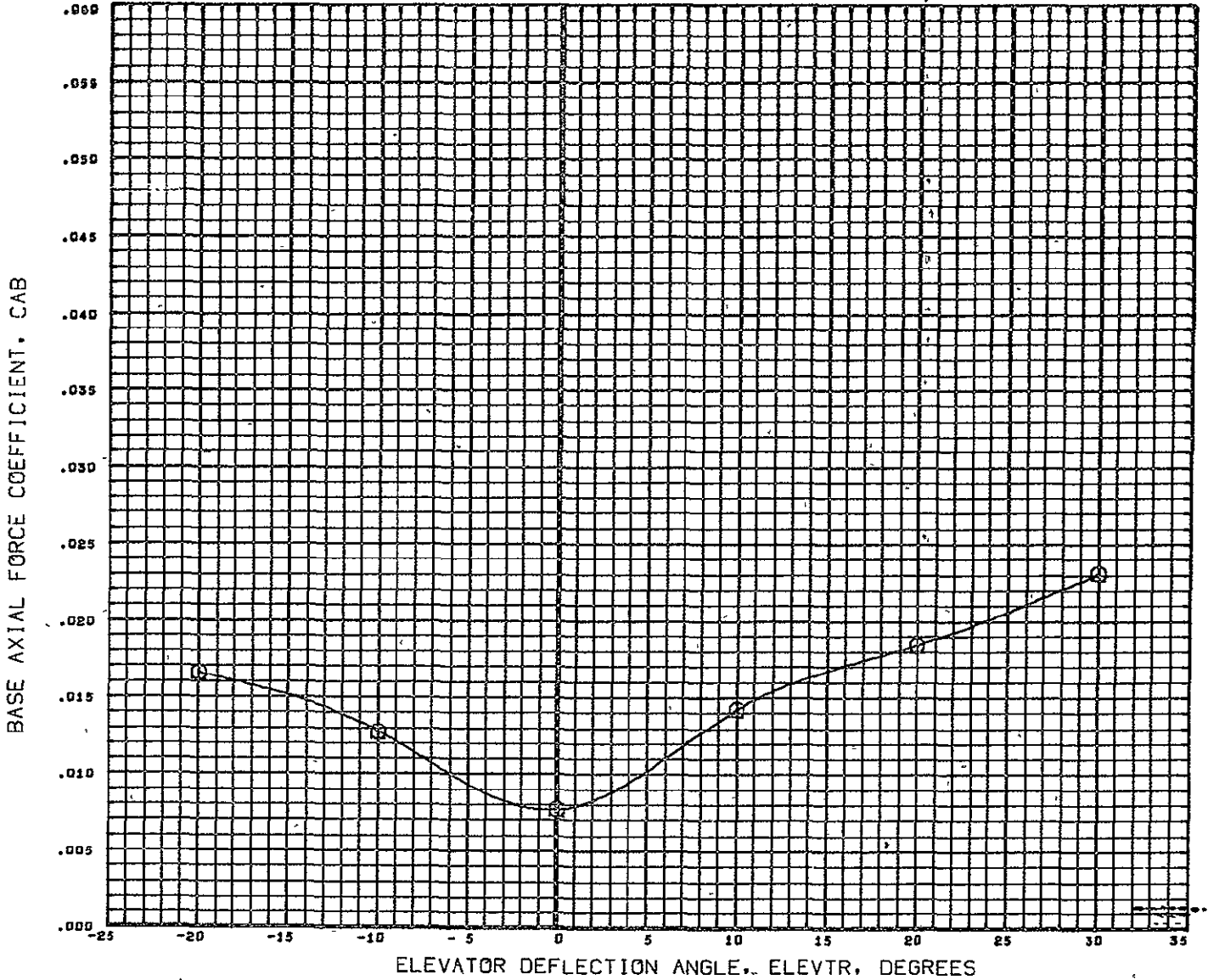
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	M1			ZMRP	0.0107	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



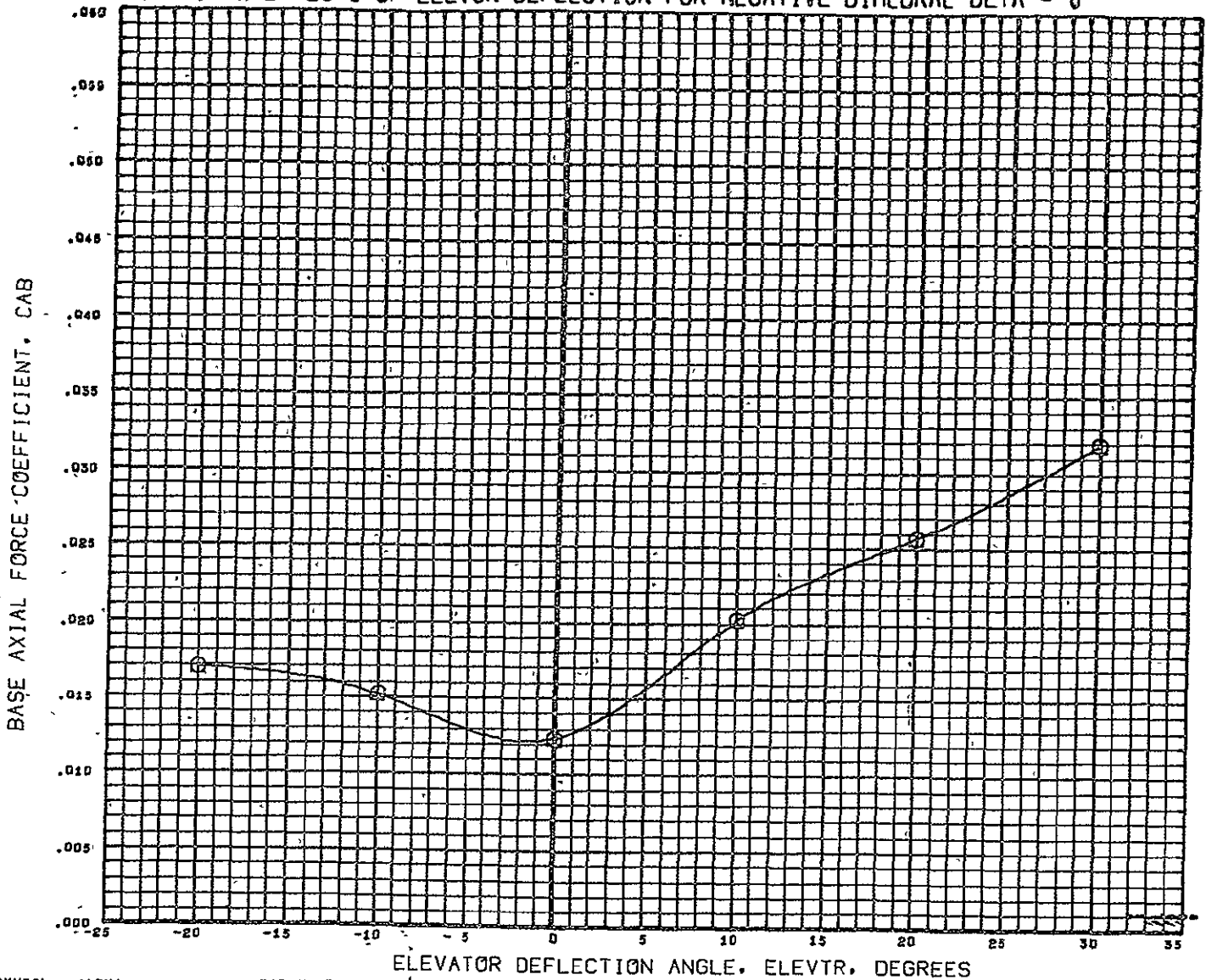
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	.5.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq. ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



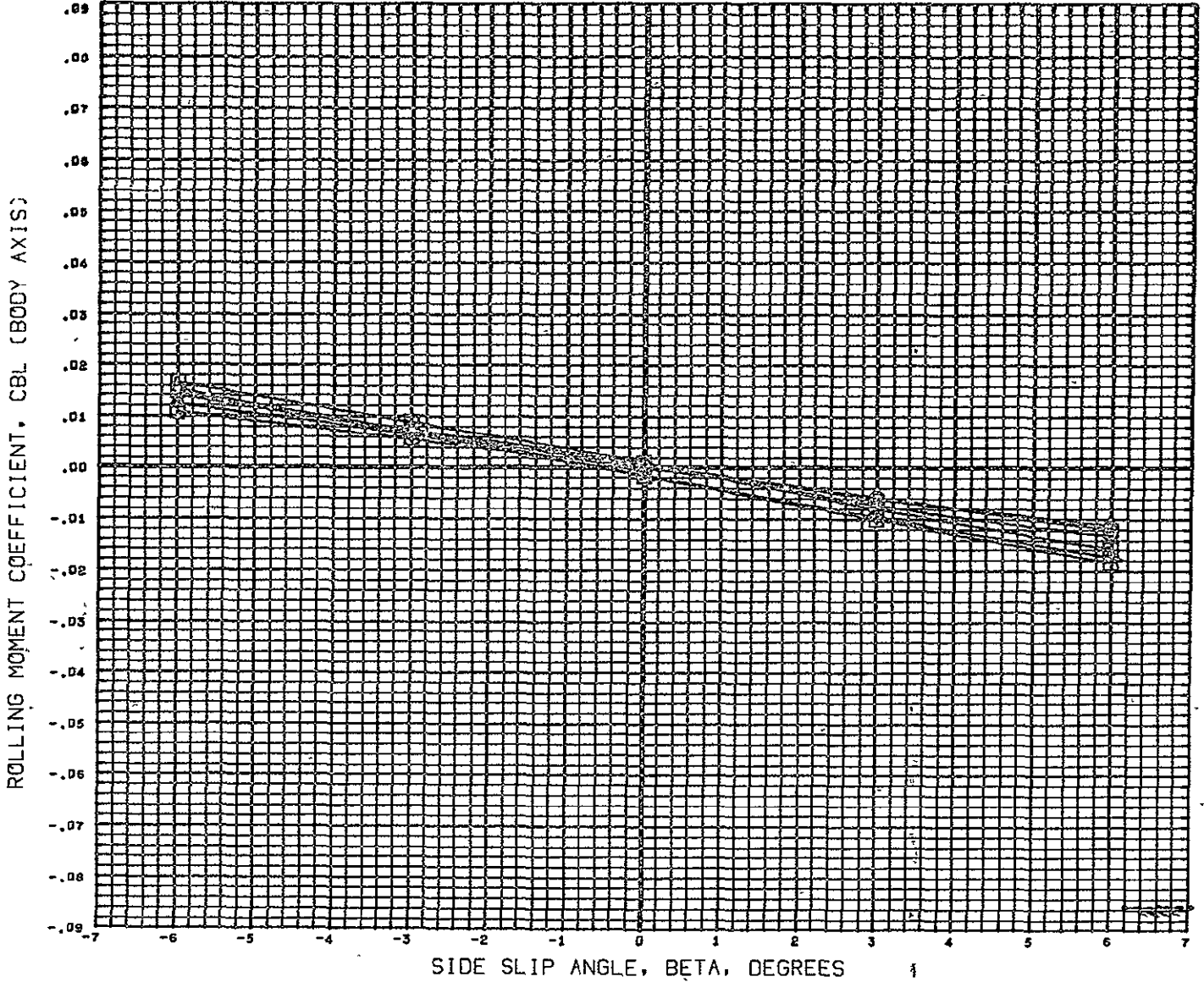
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CAHARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	SG.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	NI			ZHRP	0.0167	FEET
						SCALE	0.0150	SCALE

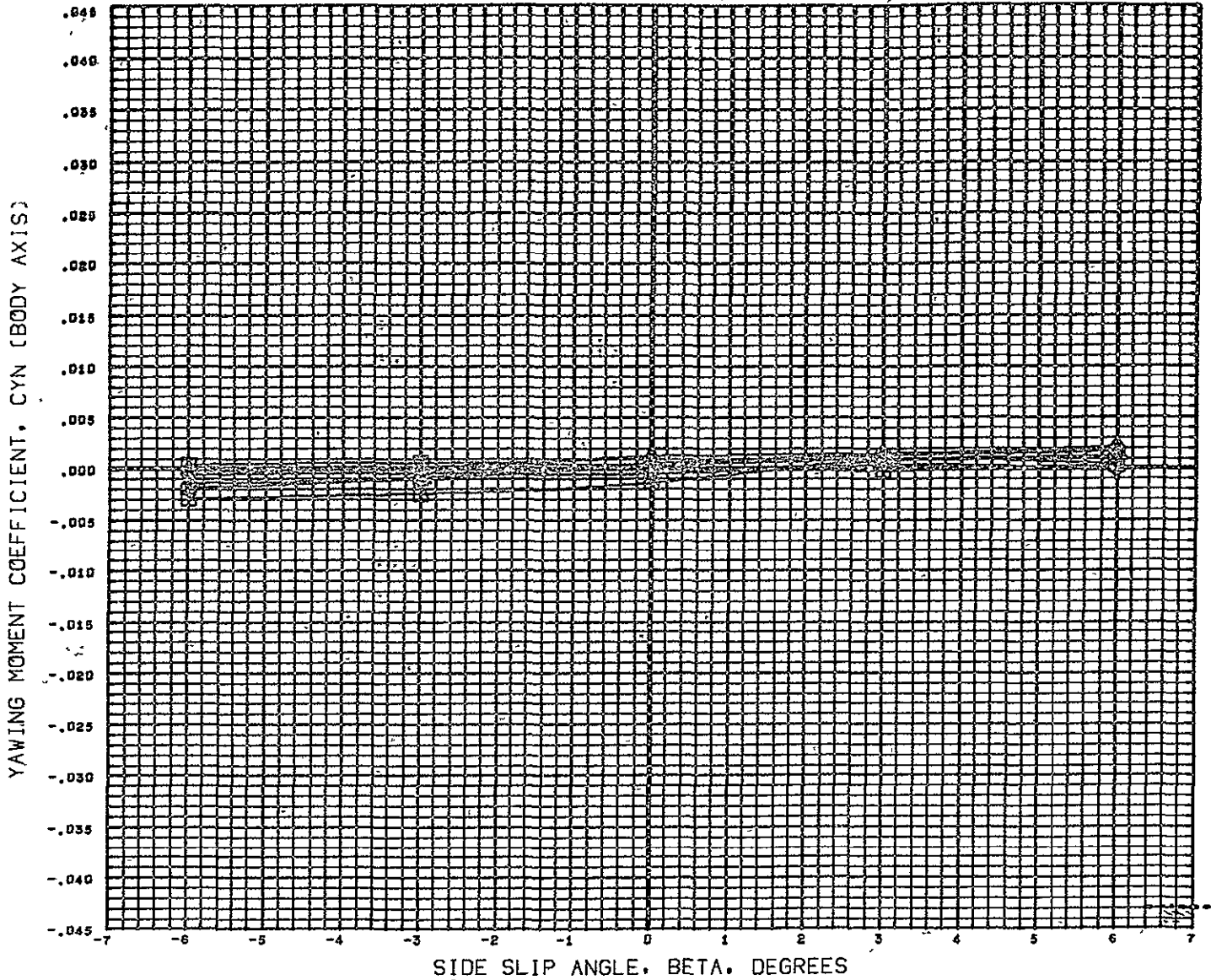
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4093)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(DN4097)		-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4006)		-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4101)		-7.660	1.000	1.000	10.000	XNRP 2.5950 FEET
(DN4109)		-7.660	1.000	1.000	20.000	YNRP 0.0000 FEET
(DN4113)		-7.660	1.000	1.000	30.000	ZNRP 0.0187 FEET
						SCALE 0 0150 SCALE

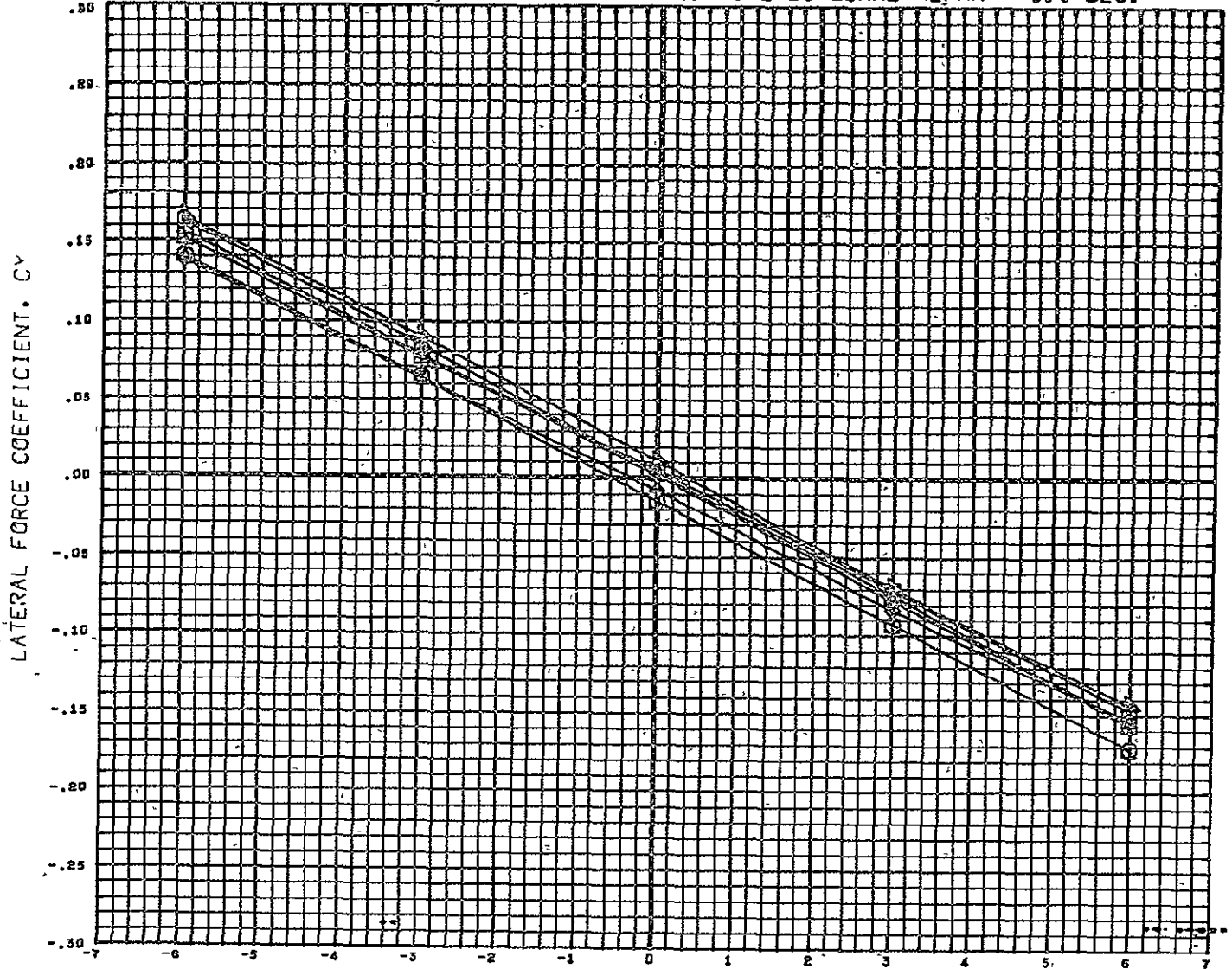
MACH. .40

LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4093)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(DN4097)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(DN4006)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4101)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XHRP 2.5930 FEET
(DN4109)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YHRP 0.0000 FEET
(DN4113)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

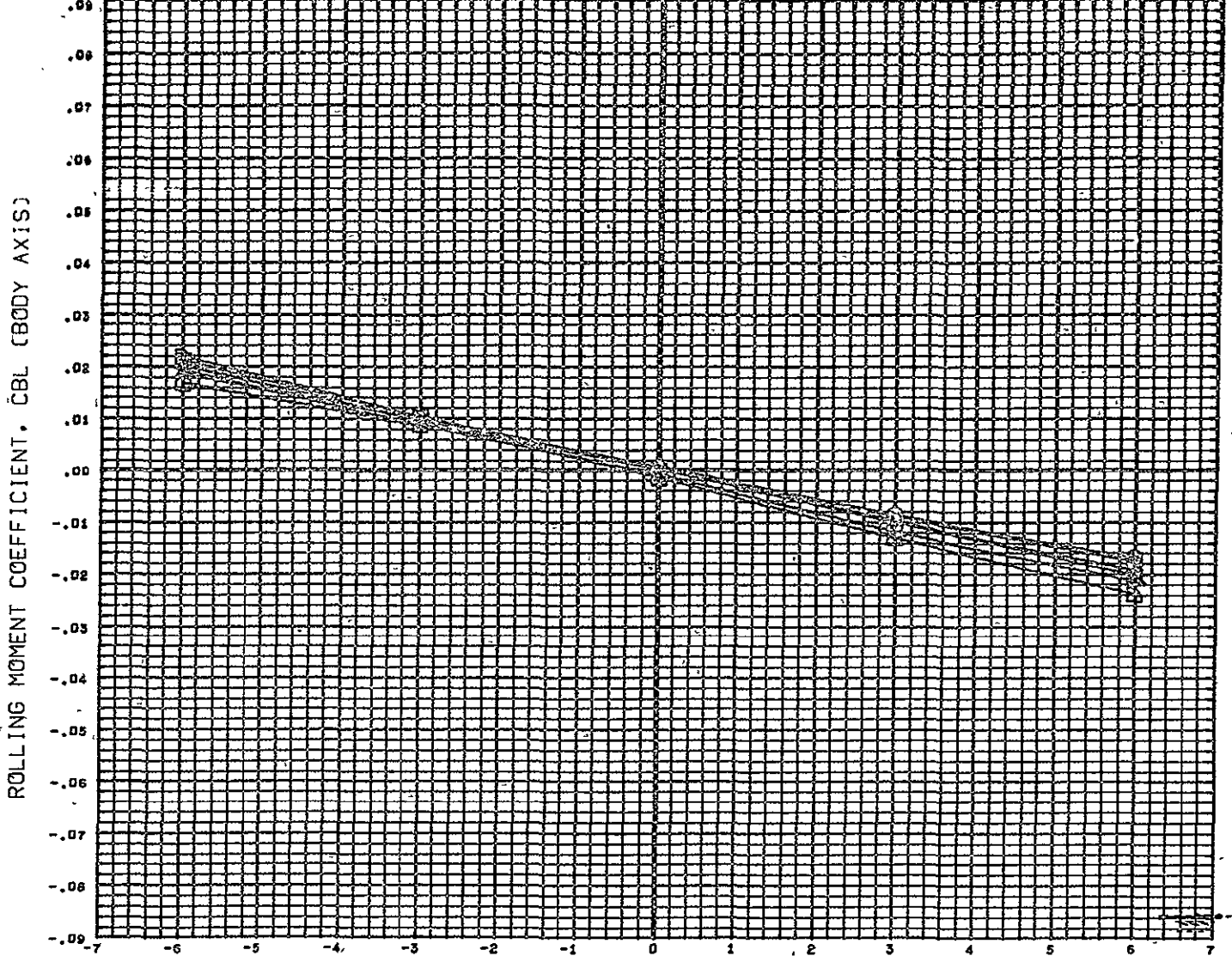
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4093)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SPEF 1.3550 SQ.FT
(DN4097)		-7.660	1.000	-1.000	-10.000	LREF 3.4530 FEET
(GN4006)		-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4101)		-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(DN4109)		-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(DN4113)		-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

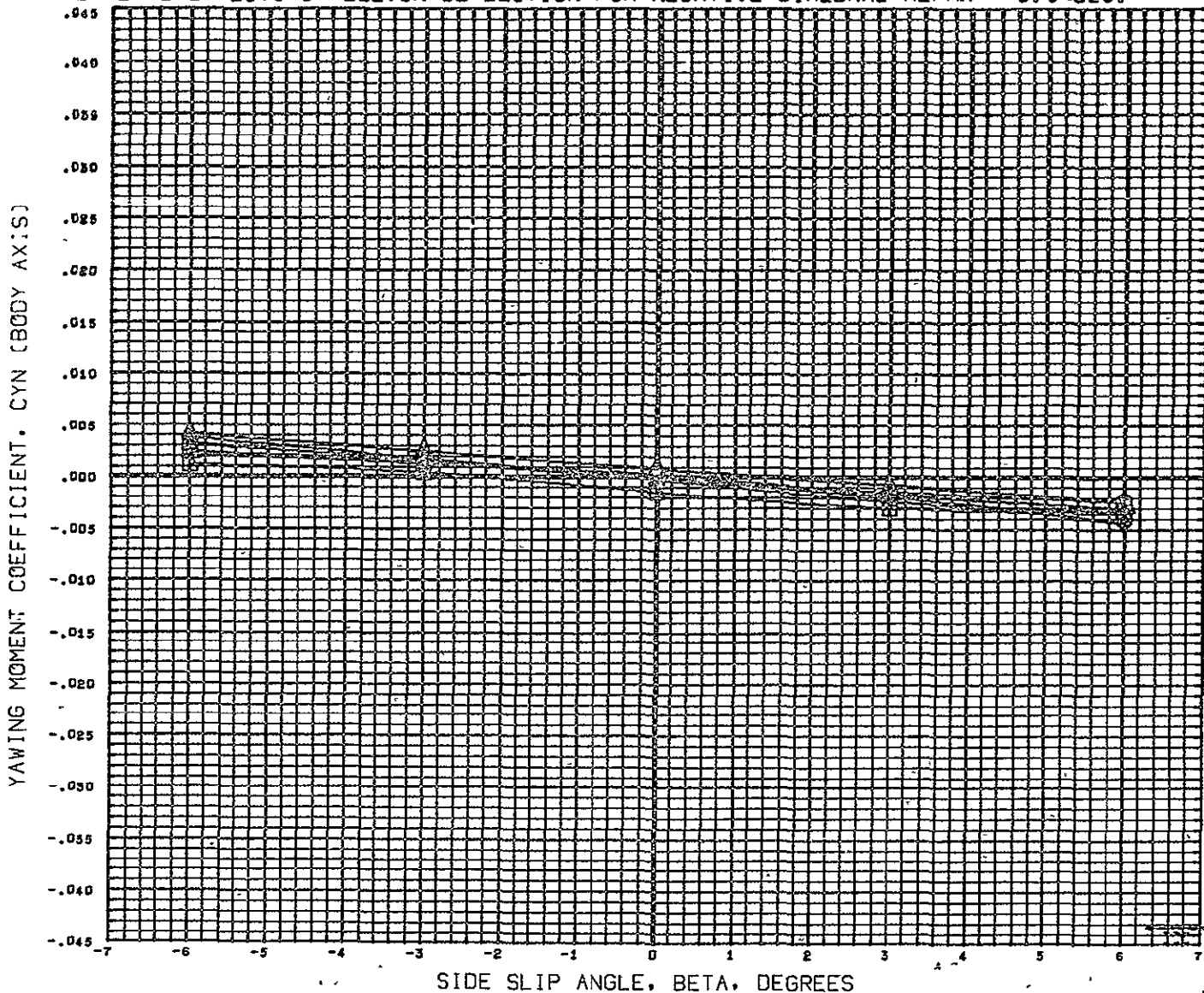
MACH .40

LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4094)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ. FT.
(DN4096)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(DN4007)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4102)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(DN4110)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(DN4114)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

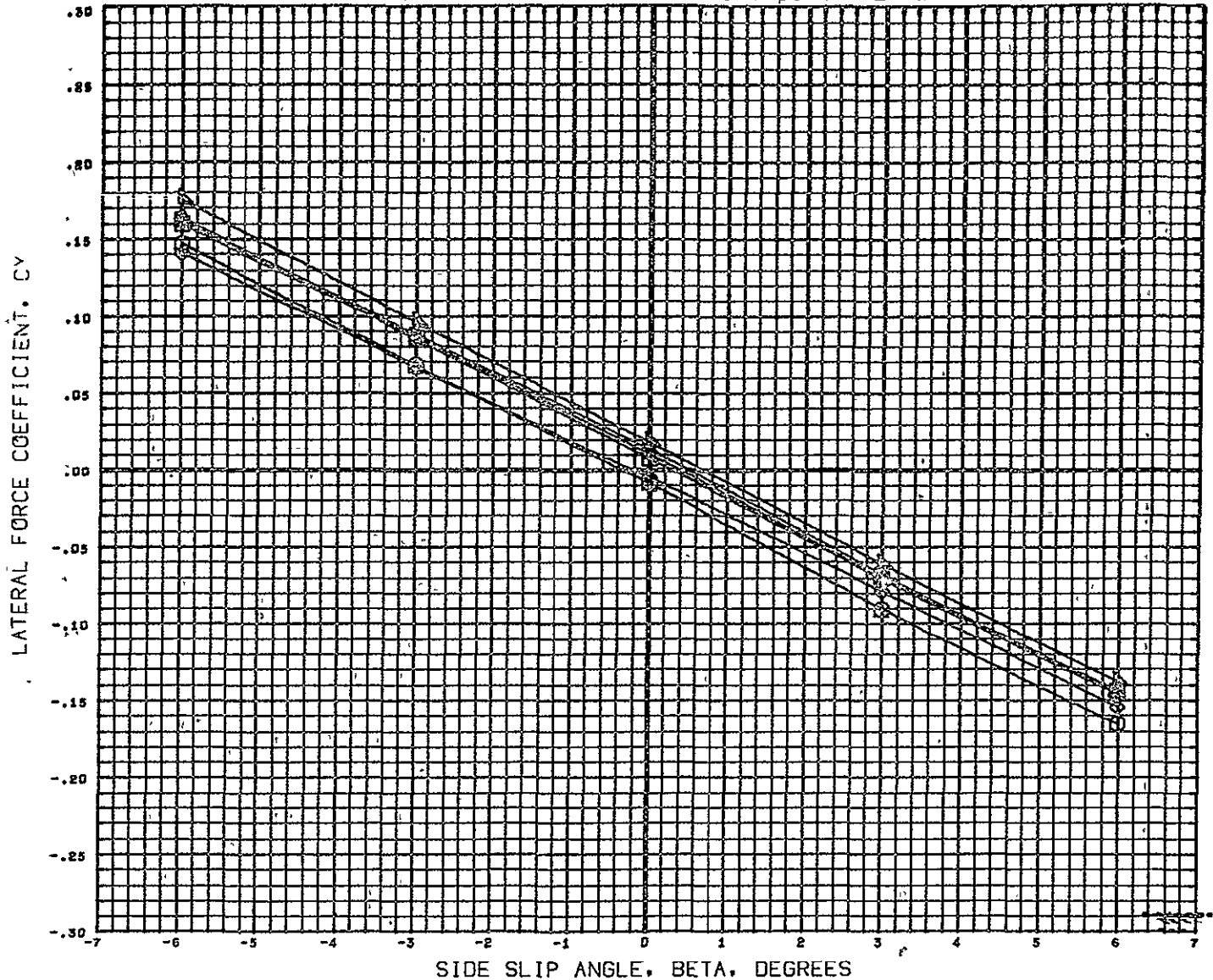
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4094)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3556 SQ. FT
(DN4098)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4007)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4102)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(DN4110)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(DN4114)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

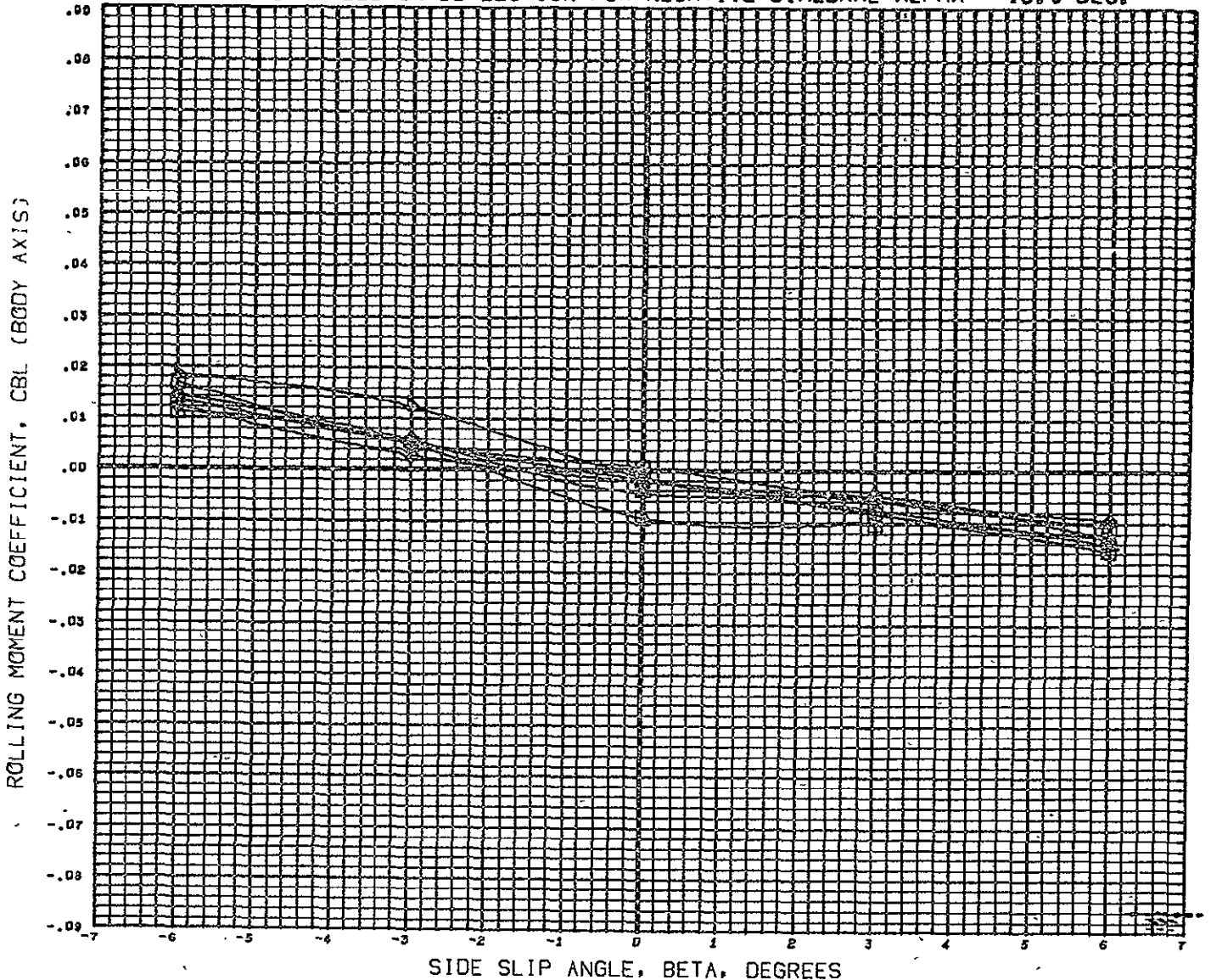
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4094)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(DN4098)		-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4007)		-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4102)		-7.660	1.000	1.000	10.000	XNRP 2.5950 FEET
(DN4110)		-7.660	1.000	1.000	20.000	YNRP 0.0000 FEET
(DN4114)		-7.660	1.000	1.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

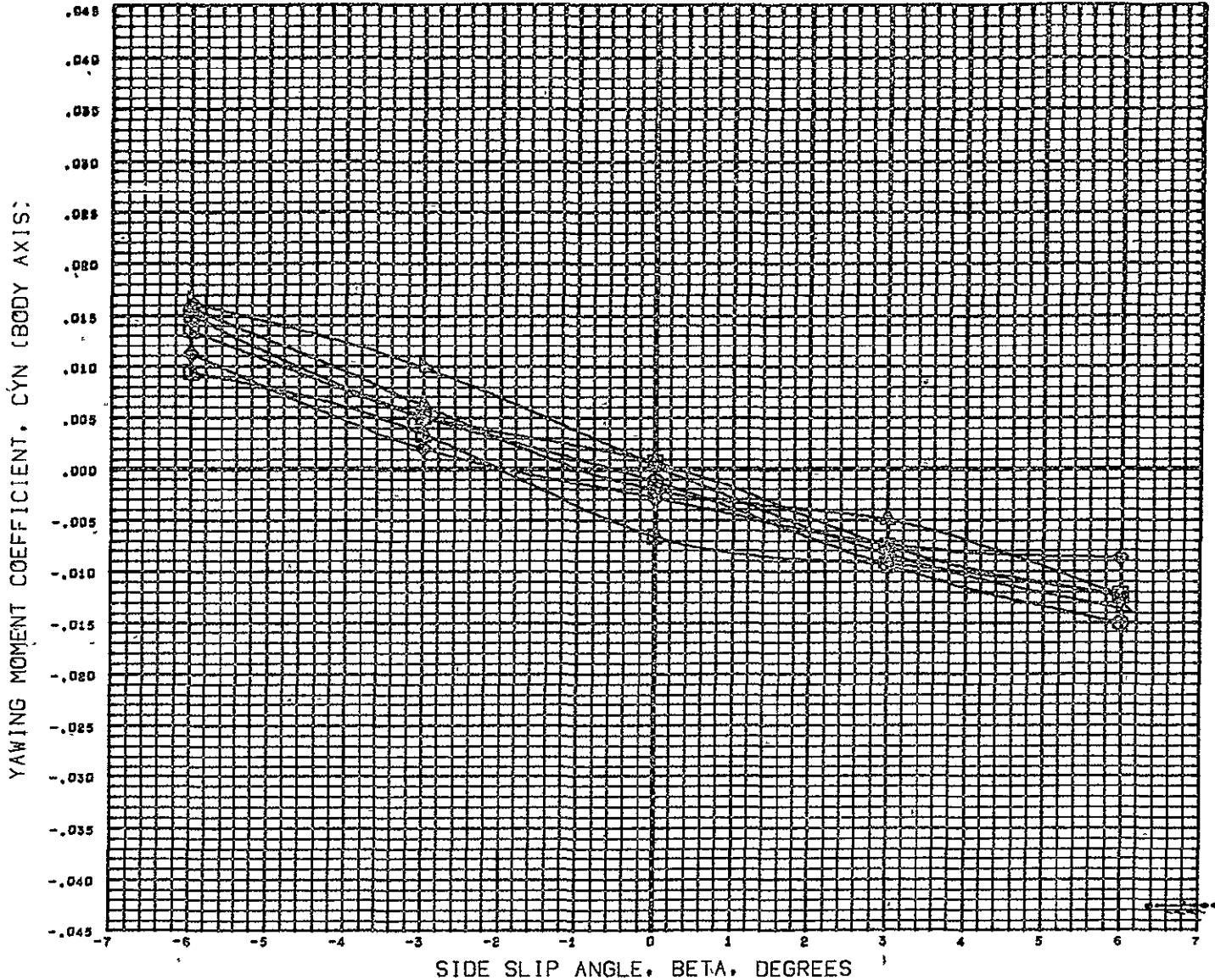
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 15.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4095)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ. FT
(DN4099)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4008)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4103)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XHRP 2.5950 FEET
(DN4111)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YHRP 0.0000 FEET
(DN4115)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZHRP 0.0187 FEET SCALE 0.0150 SCALE

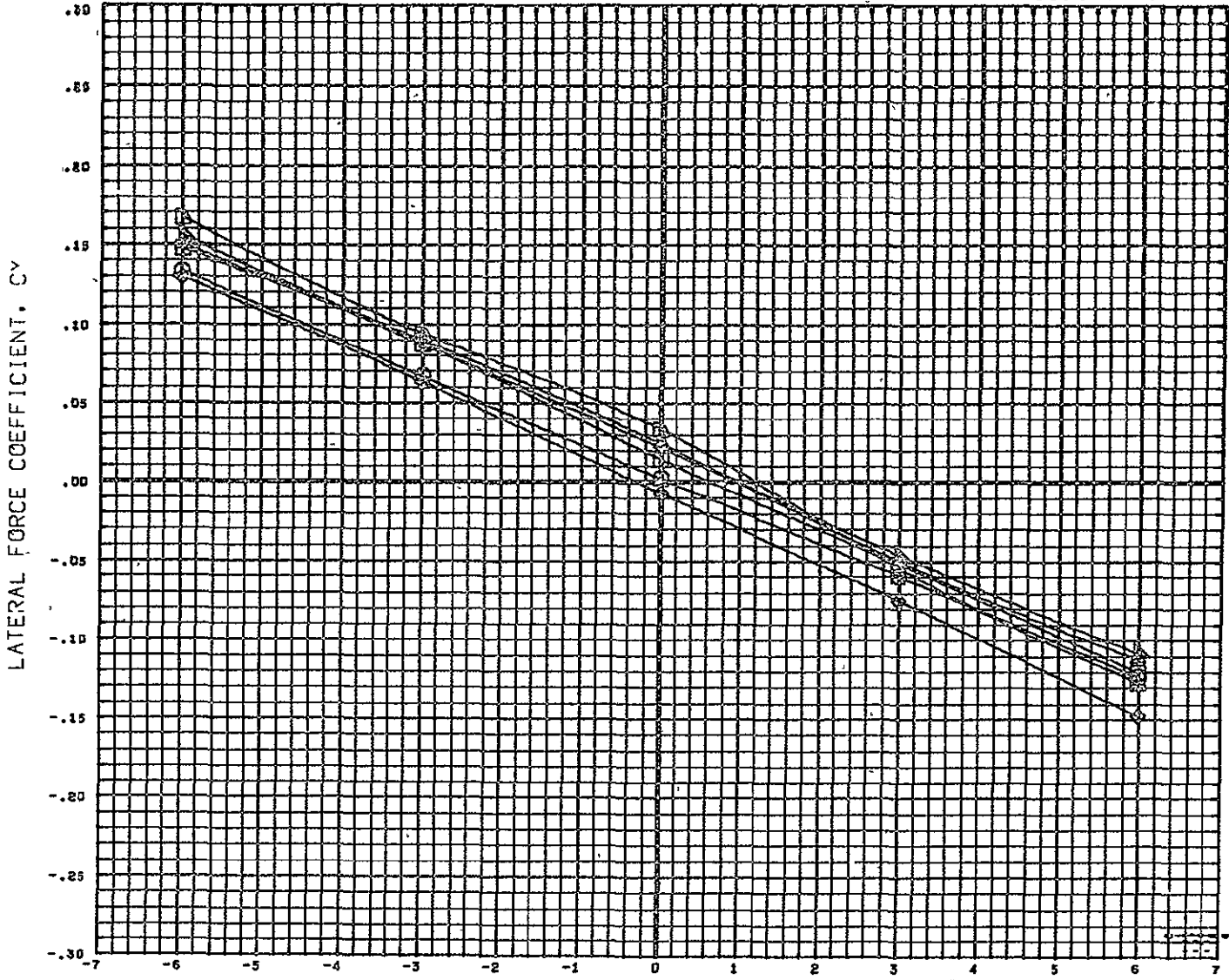
MACH .40

LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 15.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4095)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ. FT.
(DN4099)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4008)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4103)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XHRP 2.5950 FEET
(DN4111)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YHRP 0.0000 FEET
(DN4115)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

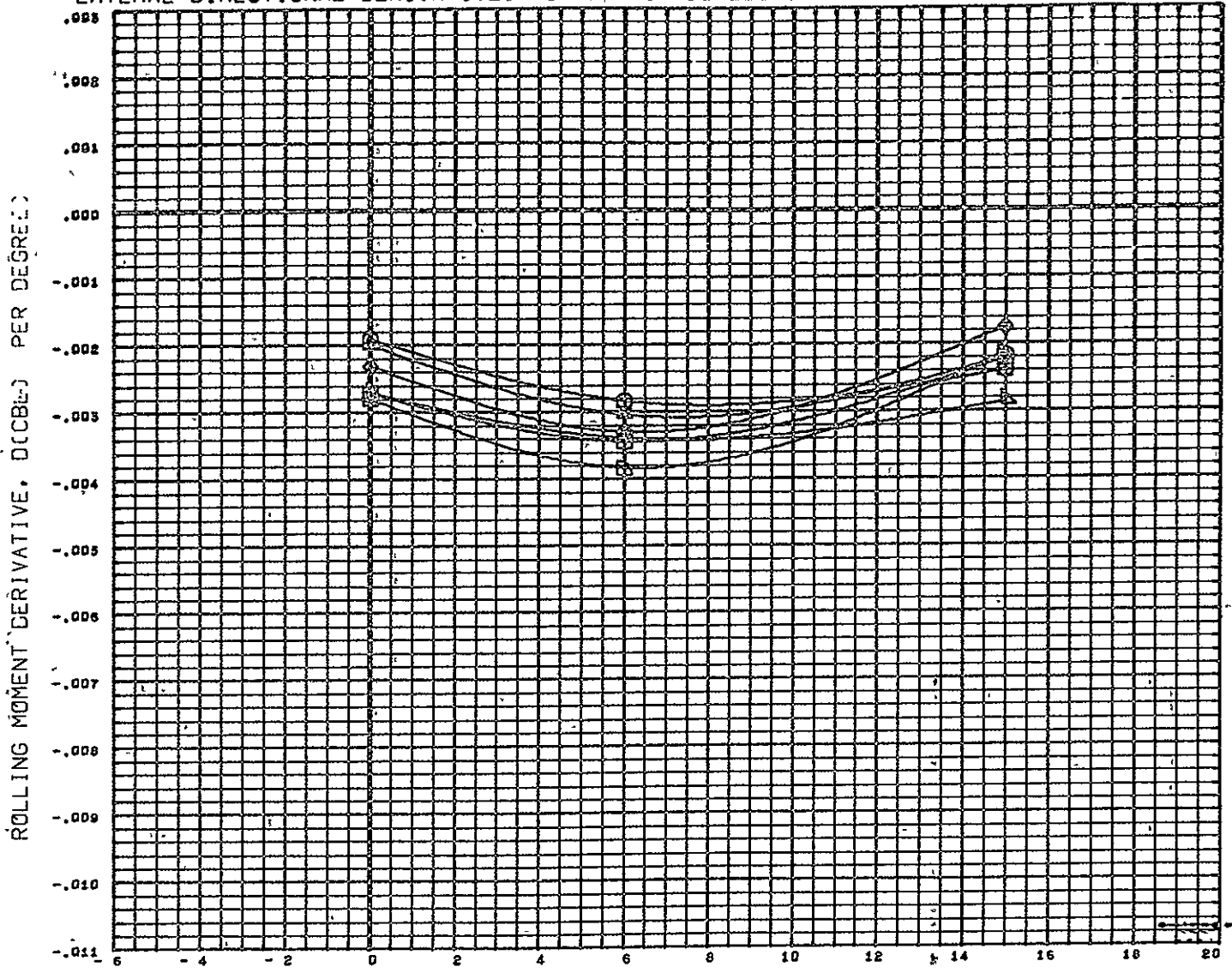
LATERAL EFFECTS OF ELEVON DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 15.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4095)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-20.000	SREF 1.3550 SQ.FT.
(DN4099)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	-10.000	LREF 3.4530 FEET
(GN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4103)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	XMRP 2.5950 FEET
(DN4111)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	YMRP 0.0000 FEET
(DN4115)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION NEGATIVE DIHEDRAL

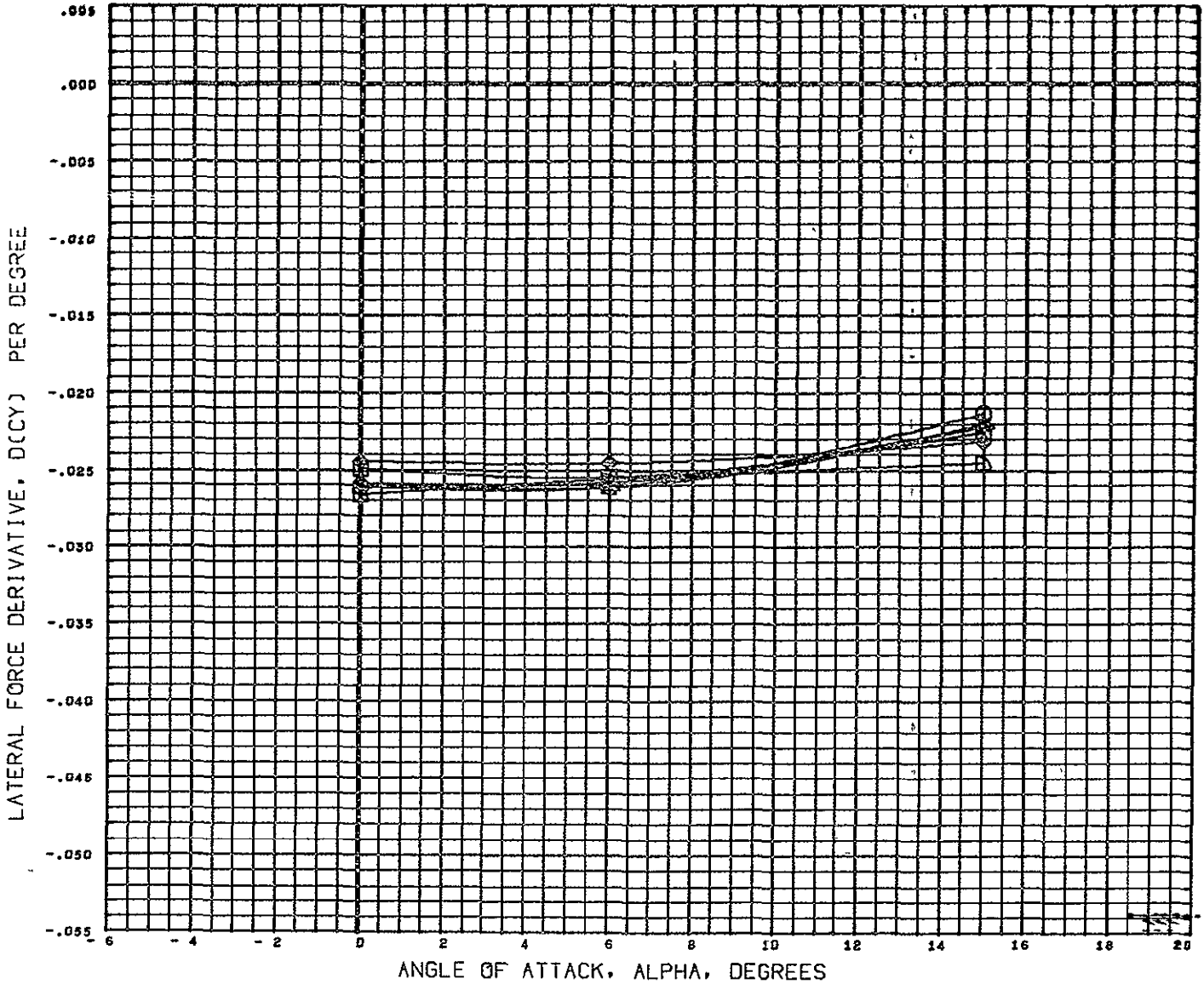


ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	ELEVTR	PARAMETRIC VALUES
○	20.000	MACH 0.400 INCIDC 3.000
◇	10.000	INCIDW 0.000 DIHDRL - 7.660
◇	0.000	AILRON 0.000 CANARD 0.000
◇	10.000	RUDDER 0.000 WNGPOS 1.000
◇	20.000	CNDPOS 1.000
◇	30.000	DATA HIST. CODE HI

REFERENCE INFORMATION		
SREF	1 3550	SQ. FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0167	FEET
SCALE	0.0150	SCALE

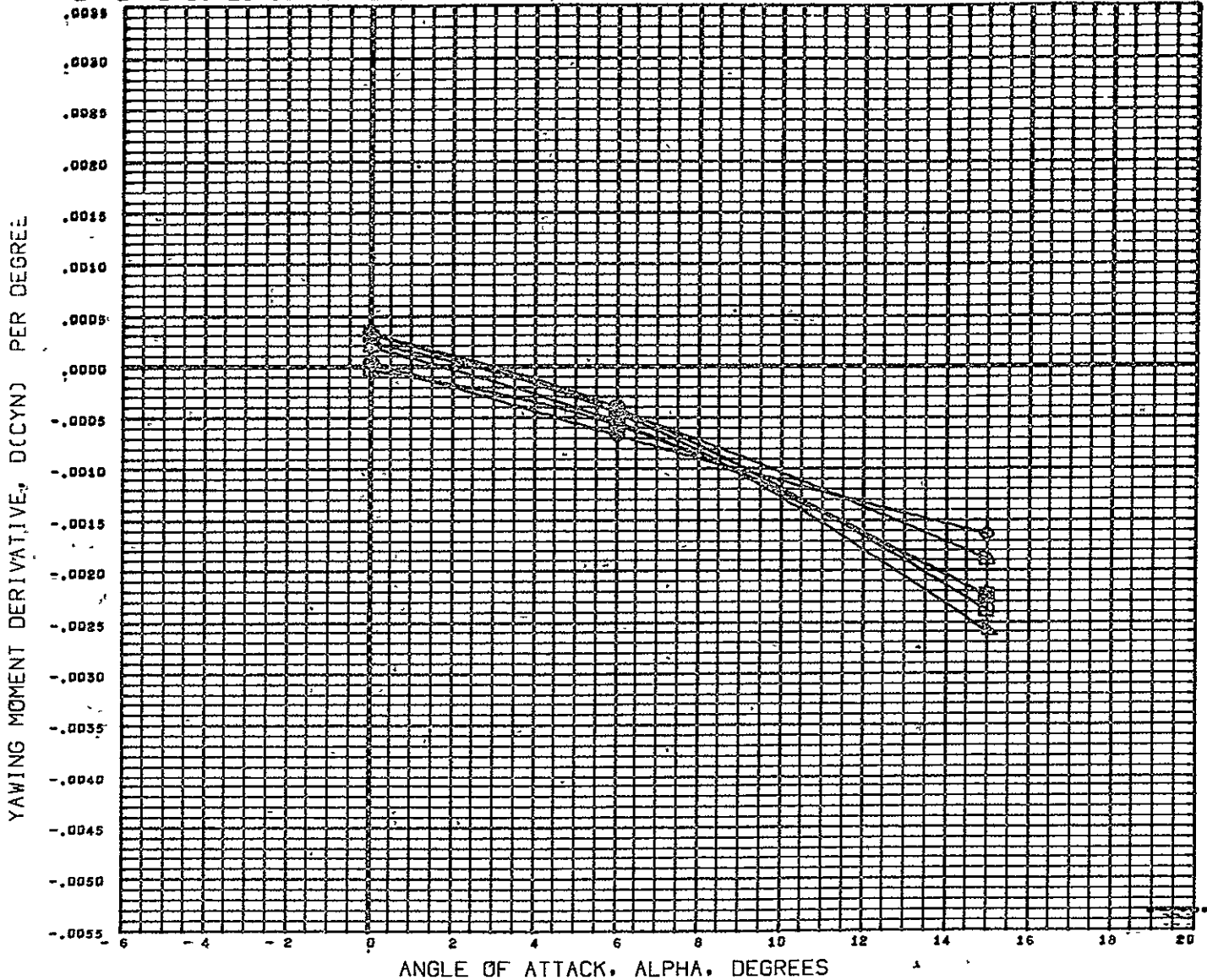
LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION NEGATIVE DIHEDRAL



SYMBOL	ELEVTR	PARAMETRIC VALUES			
□	- 20.000	MACH	0.400	INCIDC	3.000
◇	- 10.000	INCIDW	0.000	DIHDL	- 7.660
◇	0.000	AILRON	0.000	CANARD	0.000
◇	10.000	RUDDER	0.000	WNGPOS	1.000
◇	20.000	CNDPOS	1.000		
◇	30.000	DATA HIST. CODE	MI		

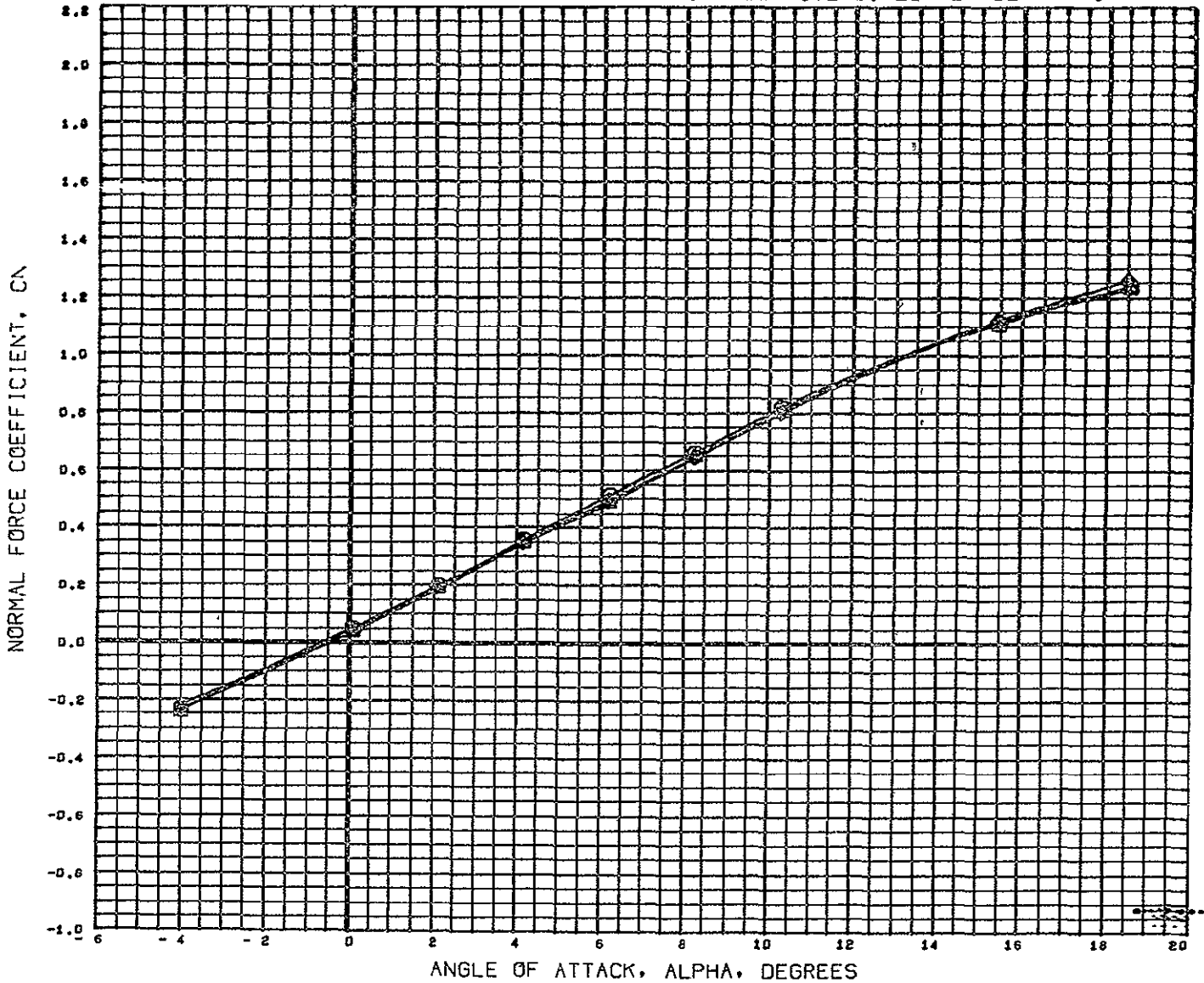
REFERENCE INFORMATION		
SREF	1.3550	50 FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XNRP	2.5950	FEET
YNRP	0.0000	FEET
ZNRP	0.0187	FEET
SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION NEGATIVE DIHEDRAL



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
□	ELEVTR	MACH	INCIDC	DIHDL	SREF	1.3550	sq.ft.	
○	- 20.000	0.400	3.000	- 7.660	LREF	3.4530	FEET	
△	- 10.000	INCIDW	0.000	CANARD	BREF	3.4530	FEET	
◇	0.000	AILRON	0.000	0.000	XHRP	2.5950	FEET	
×	10.000	RUDDER	0.000	WNGPOS	YHRP	0.0000	FEET	
	20.000	CNDPOS	1.000		ZHRP	0.0187	FEET	
	30.000	DATA HIST. CODE	MI		SCALE	0.0150	SCALE	

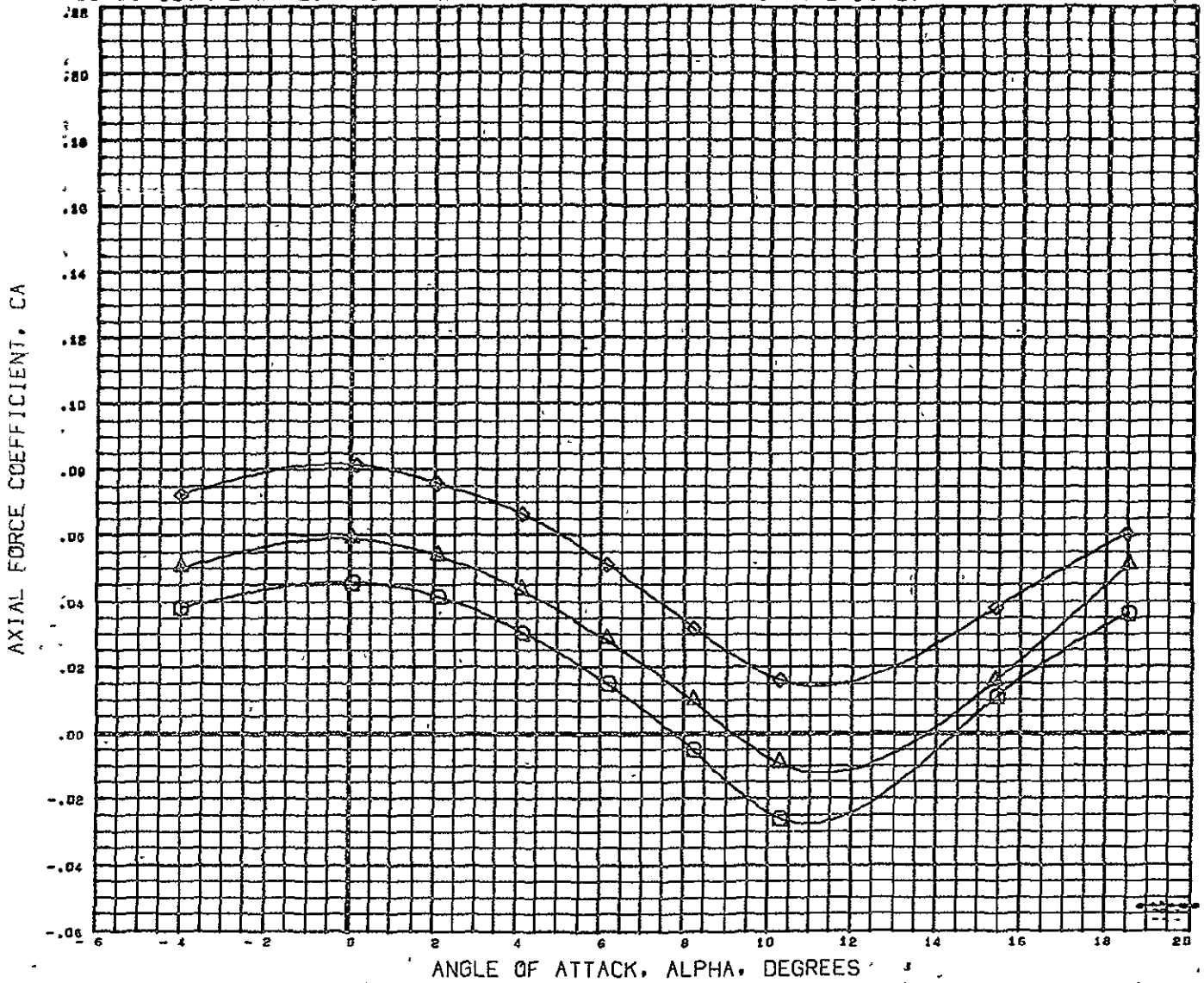
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001) ○	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(RN4116) △	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120) ◇	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

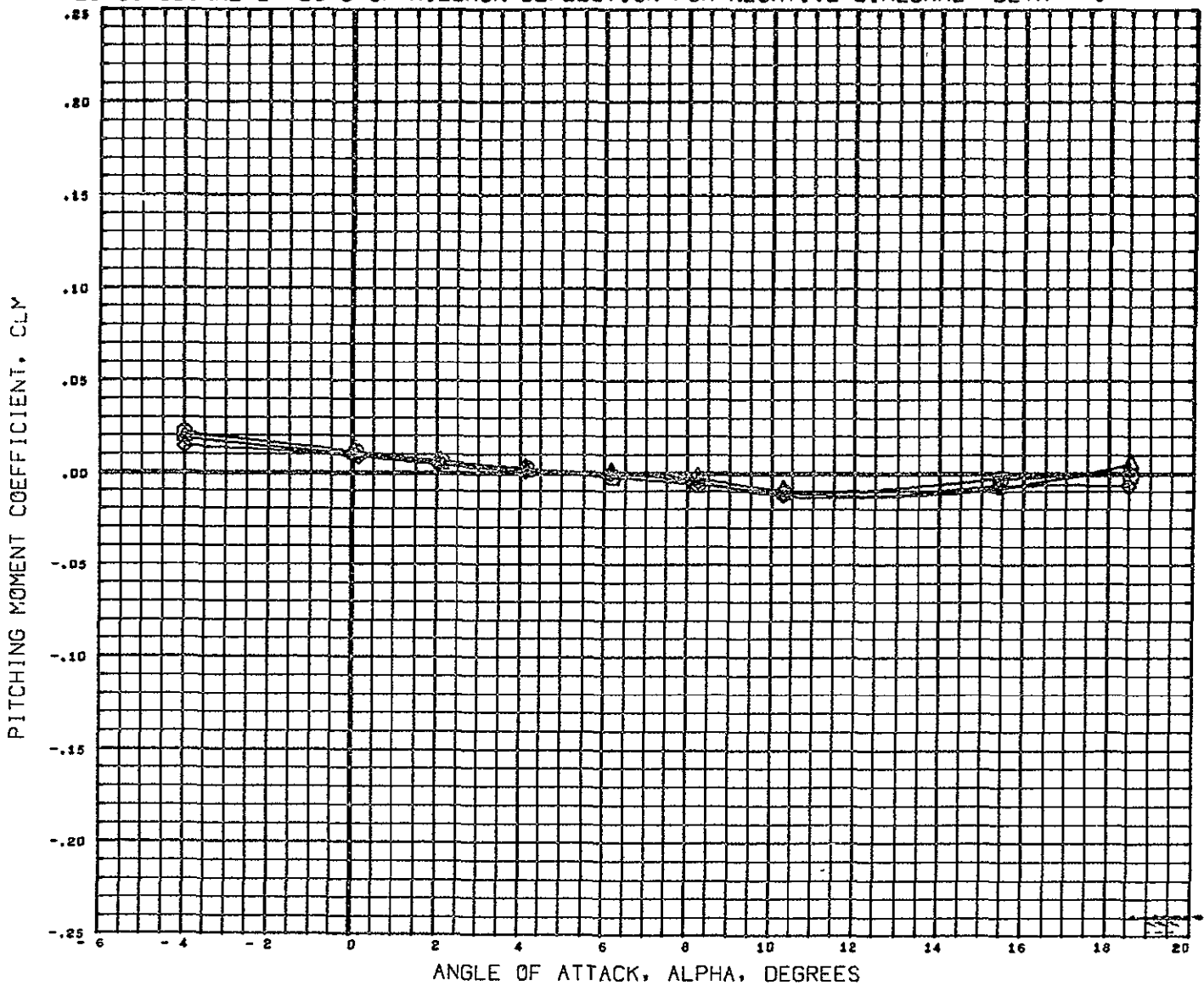
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(RN4116)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

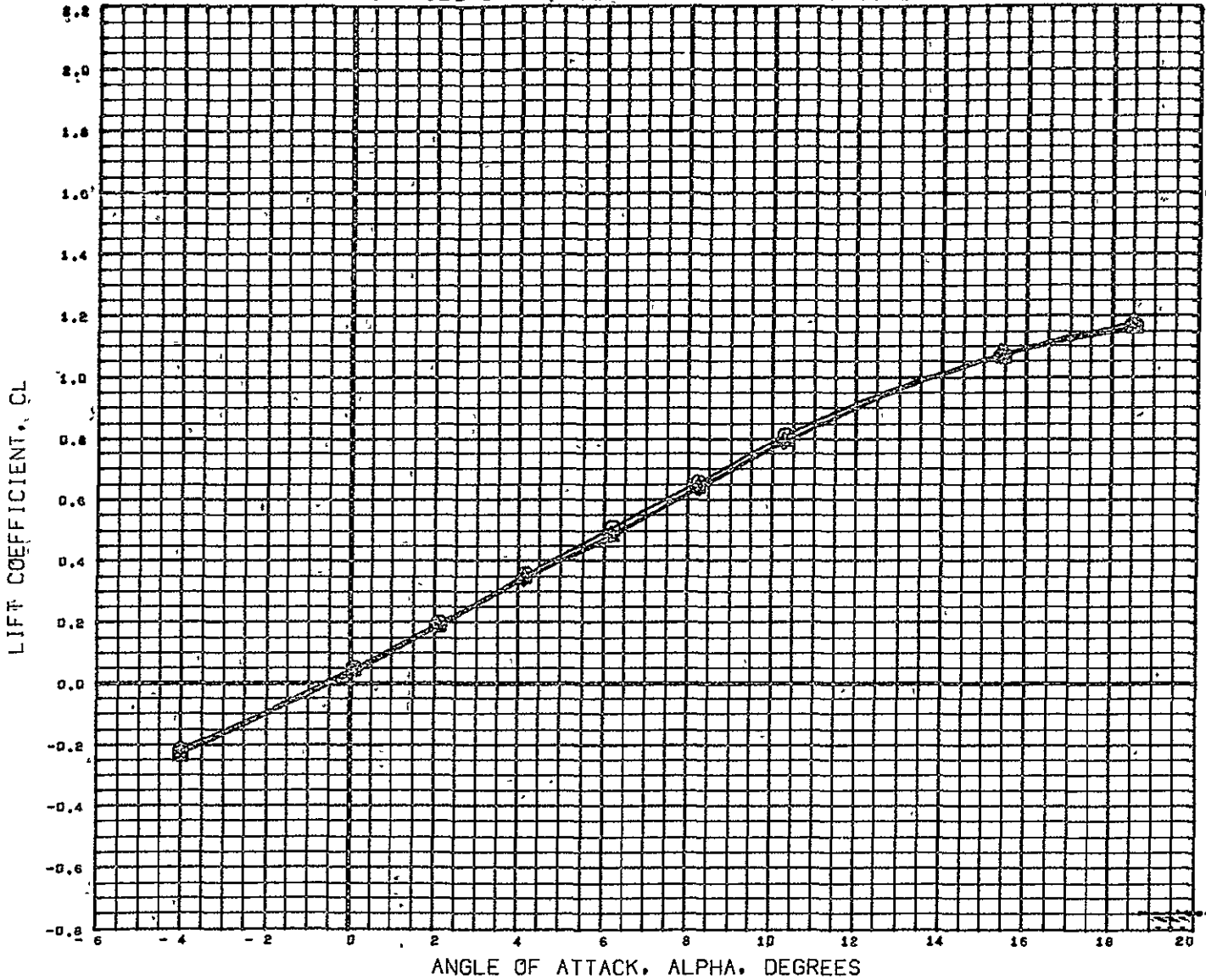
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4116)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4550 FEET
(RN4120)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4550 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

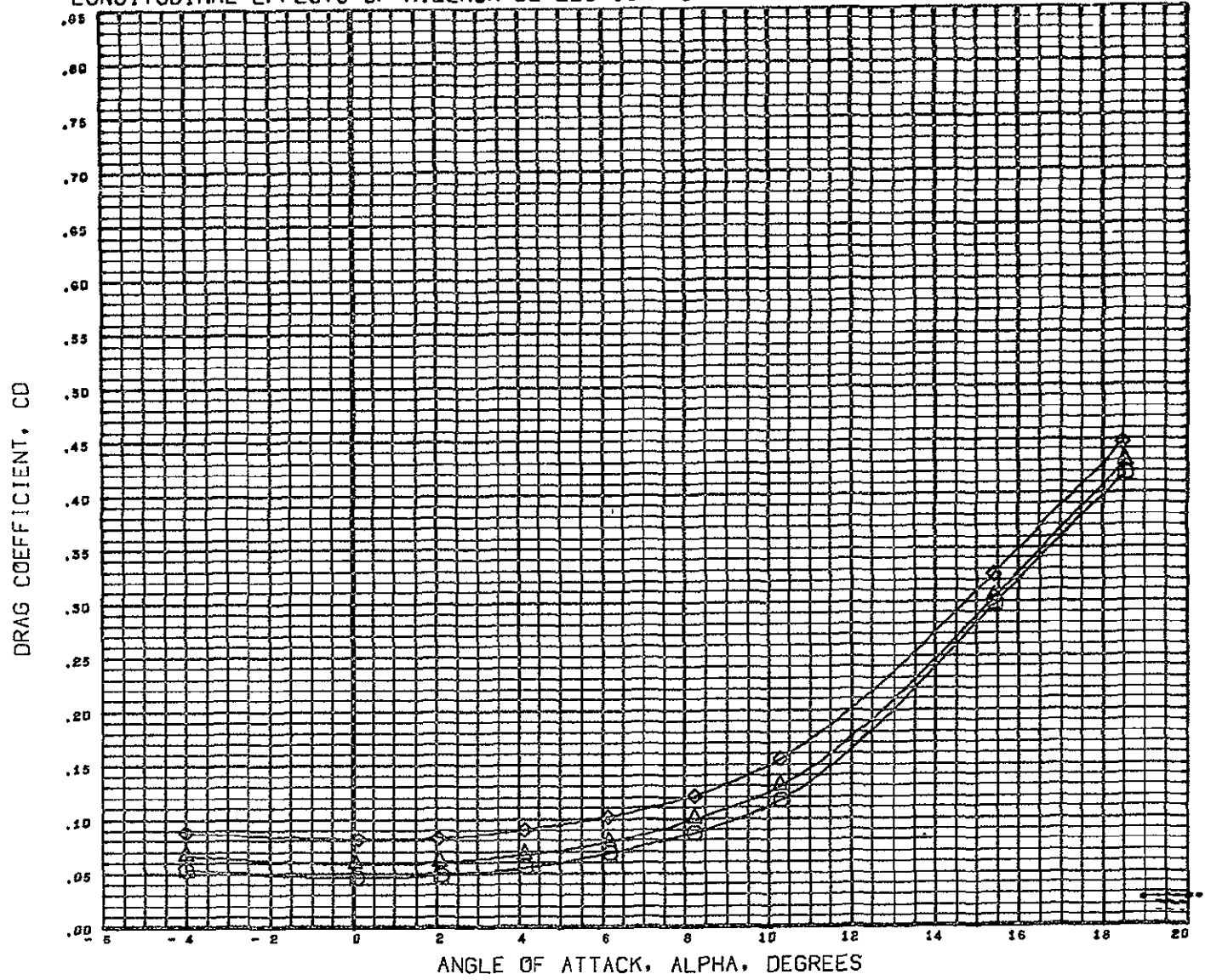


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4116)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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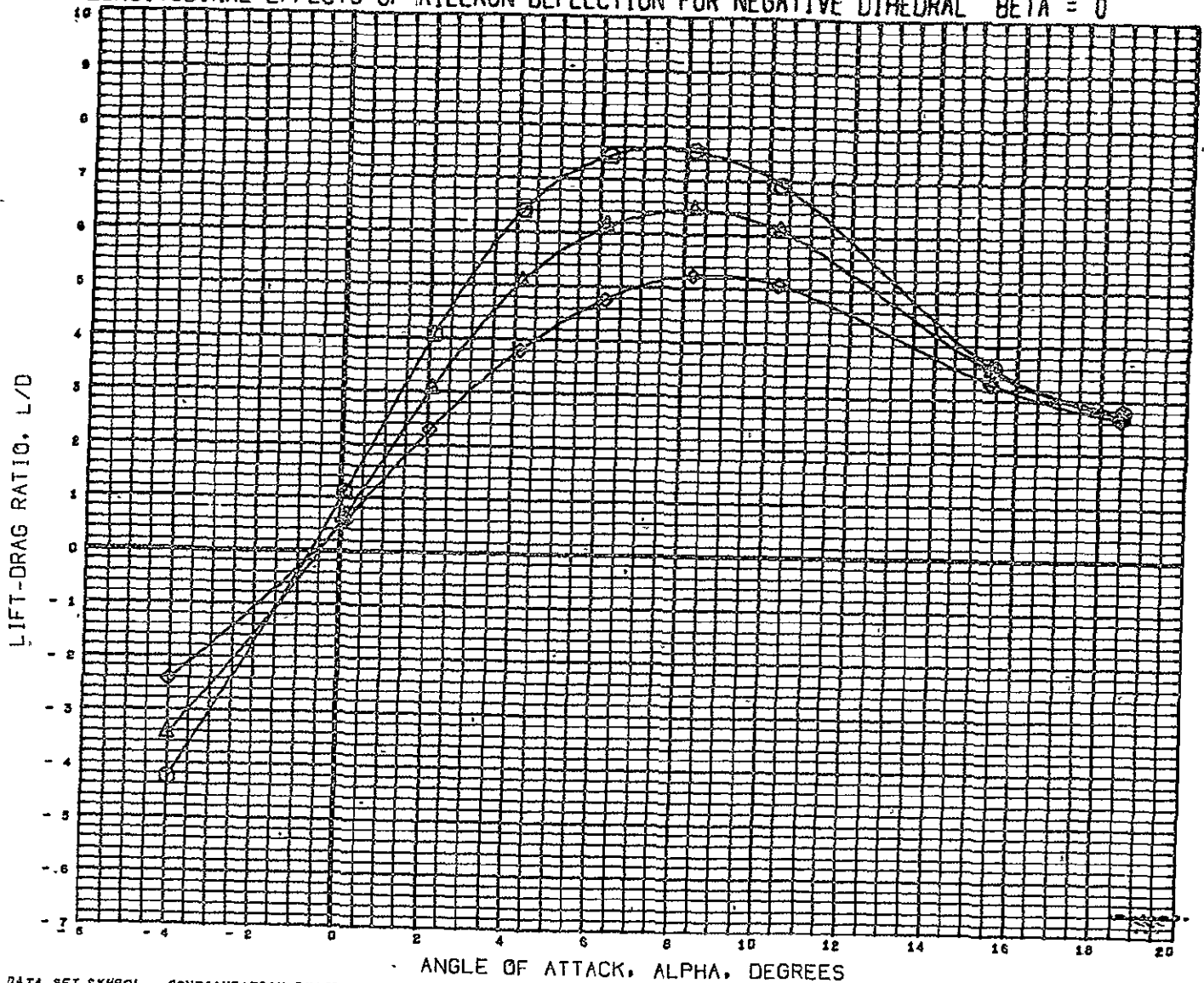
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4116)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

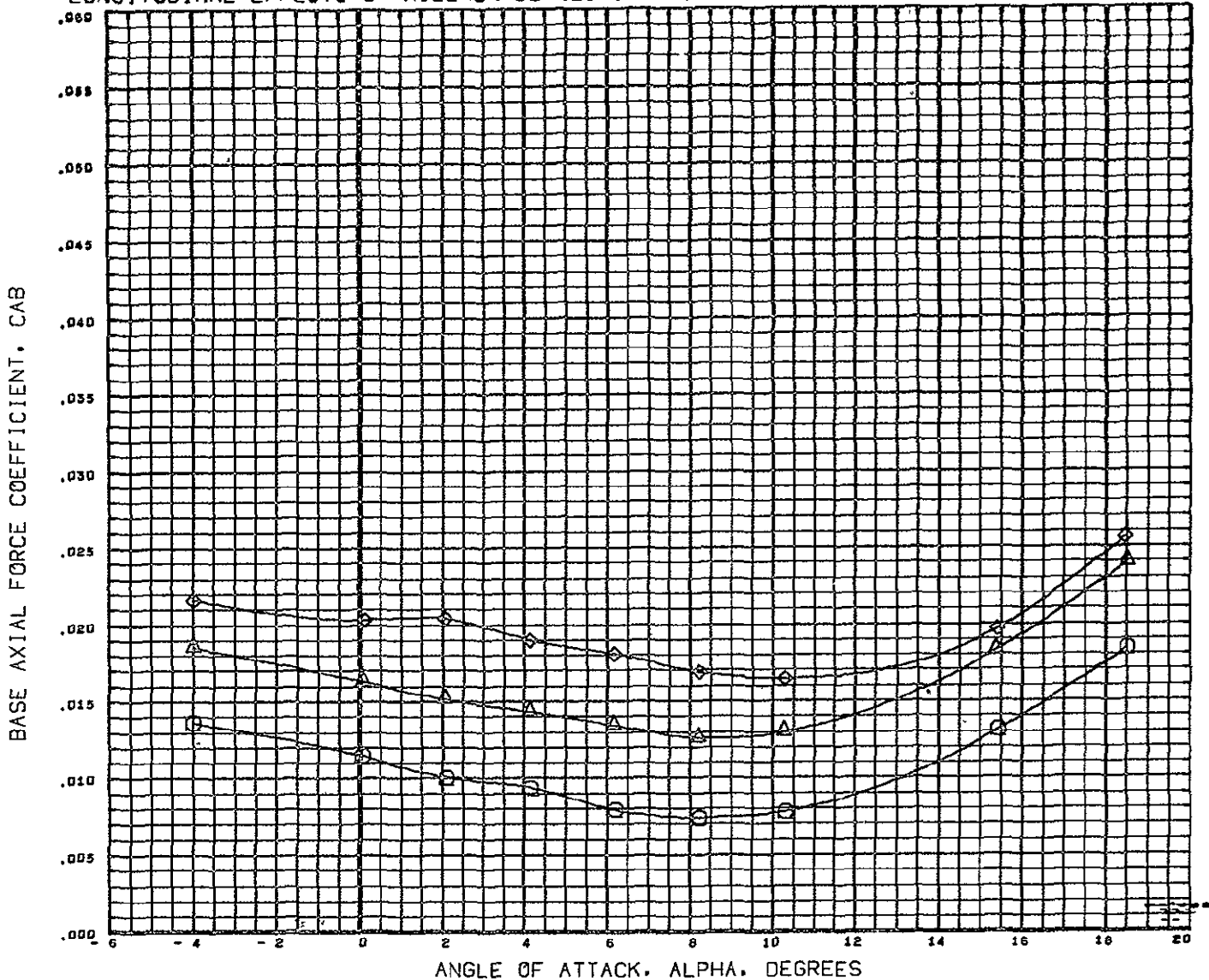
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1,3550 50.FT.
(RN4116)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V201	-7.660	1.000	1.000	10.000	LREF 3,4530 FEET
(RN4120)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V201	-7.660	1.000	1.000	20.000	BREF 3,4530 FEET
						XHRP 2,5950 FEET
						YHRP 0,0000 FEET
						ZHRP 0,0187 FEET
						SCALE 0,0150 SCALE

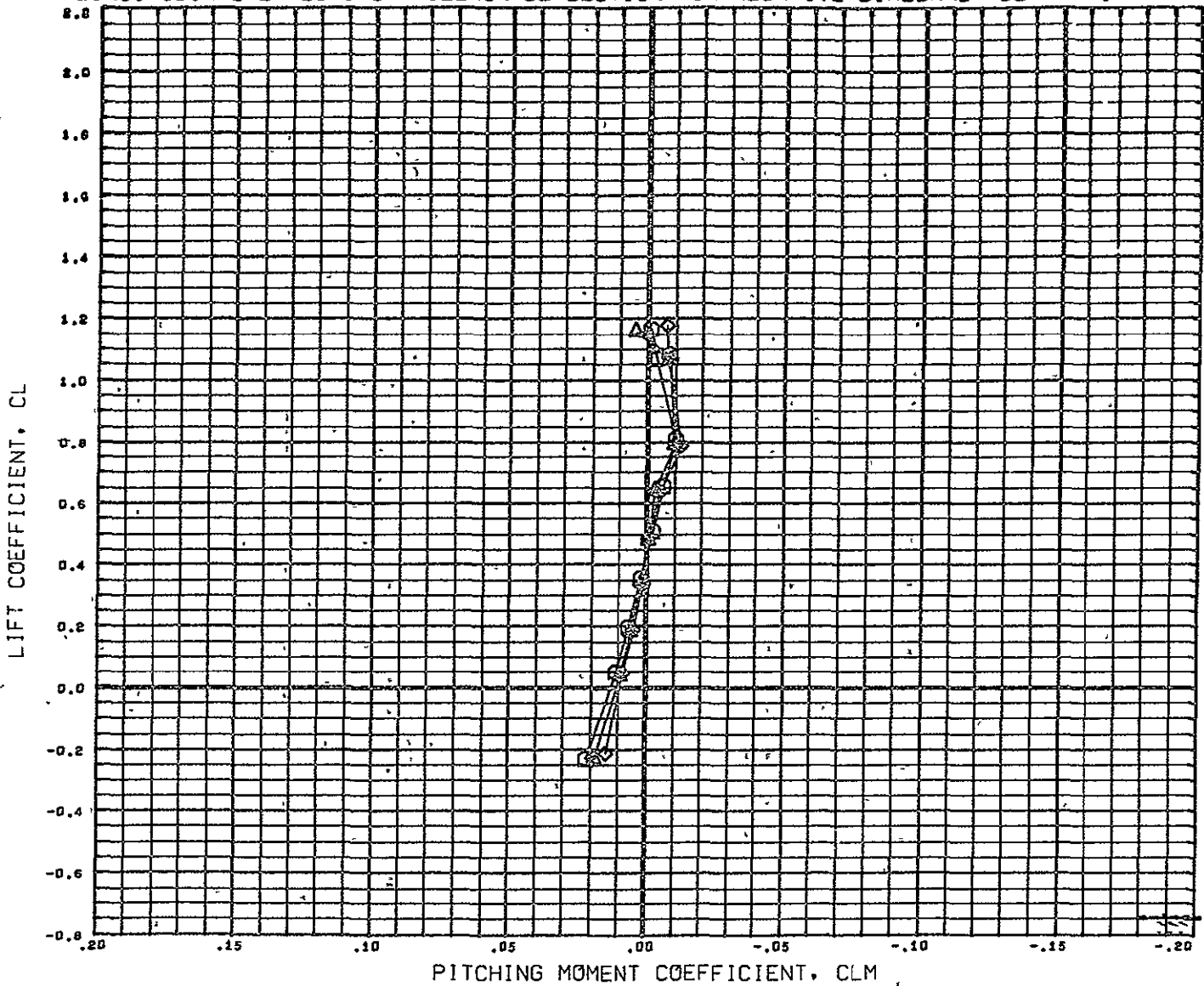
MACH .40

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(RN4116)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

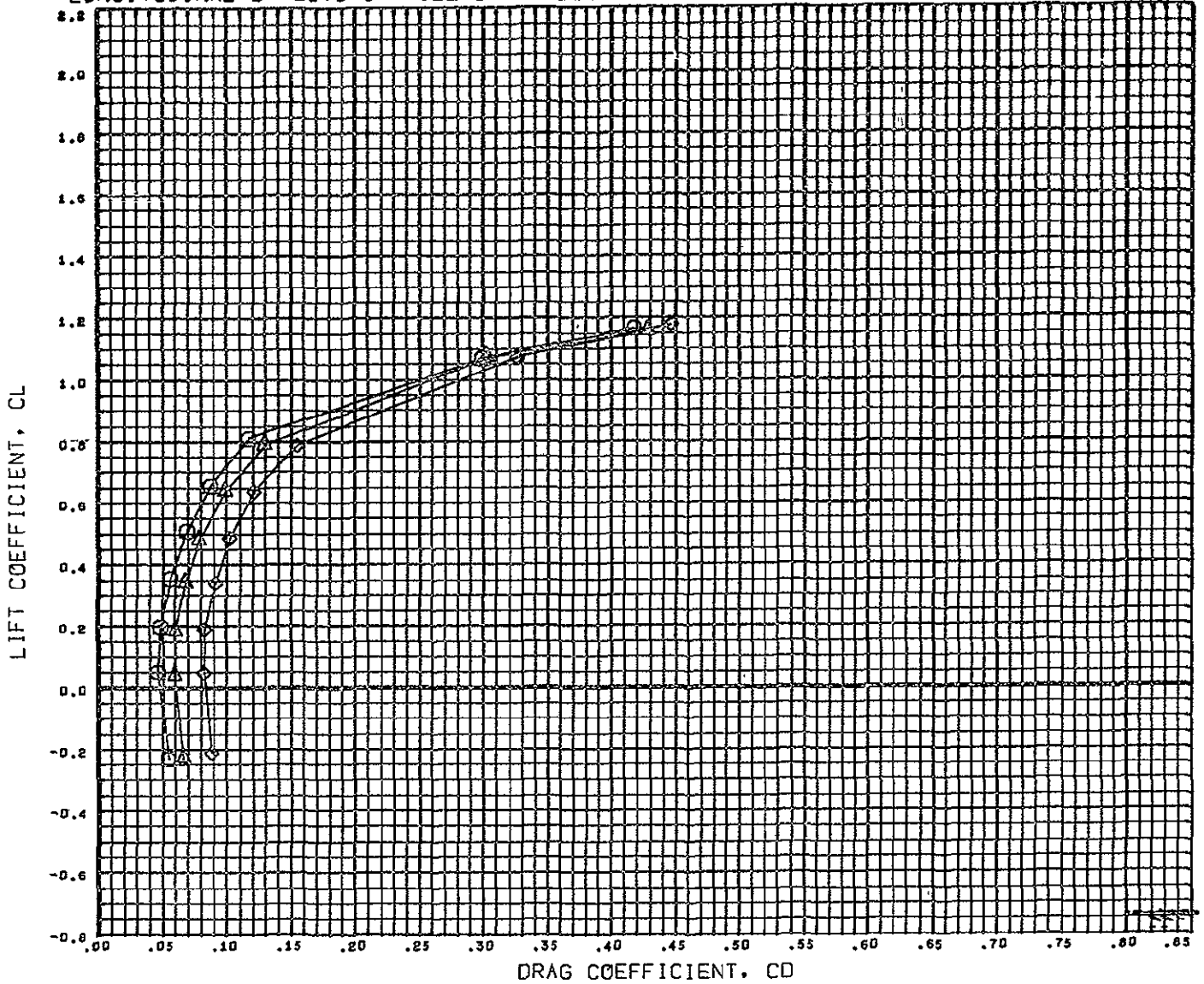


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4116)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0

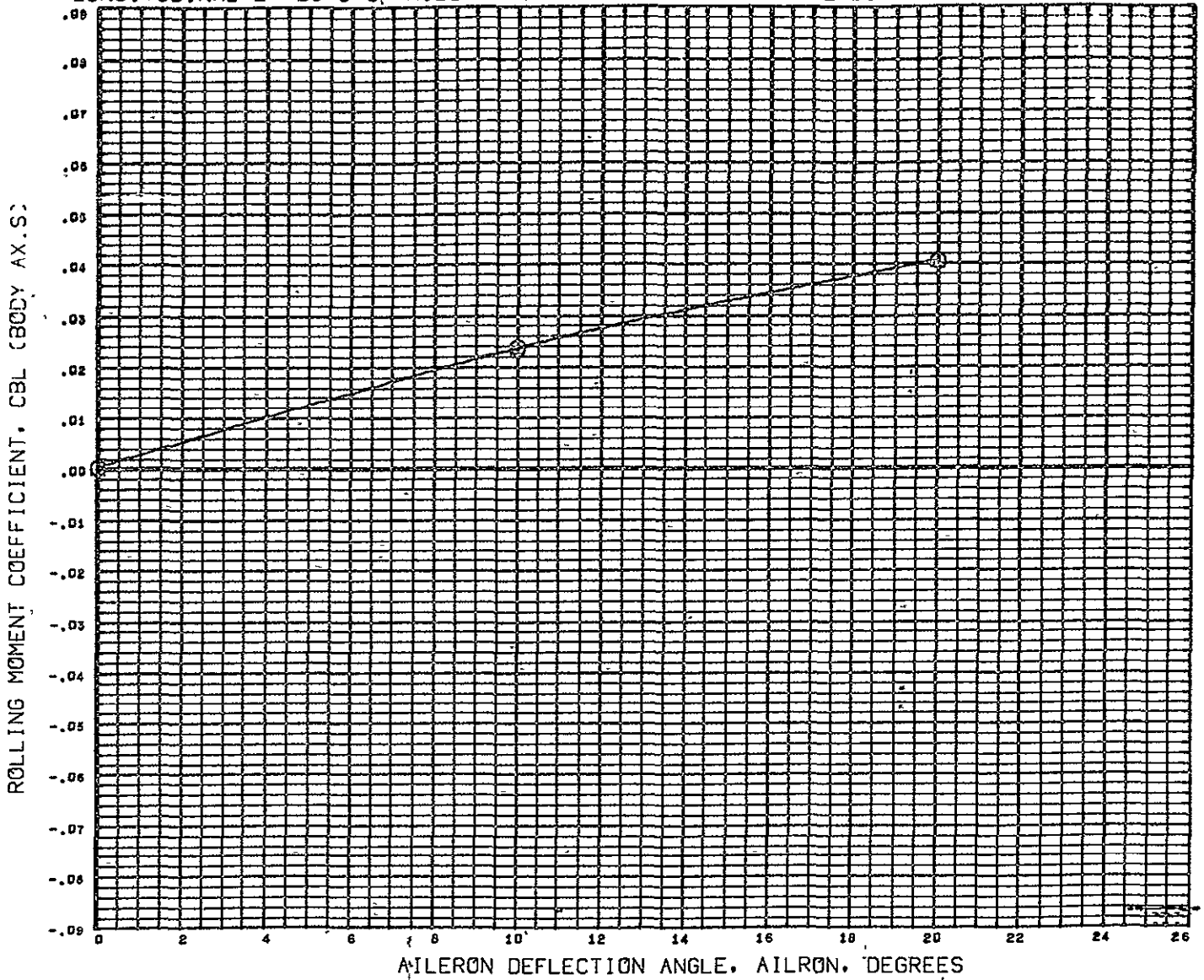


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT
(RN4116)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(RN4120)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

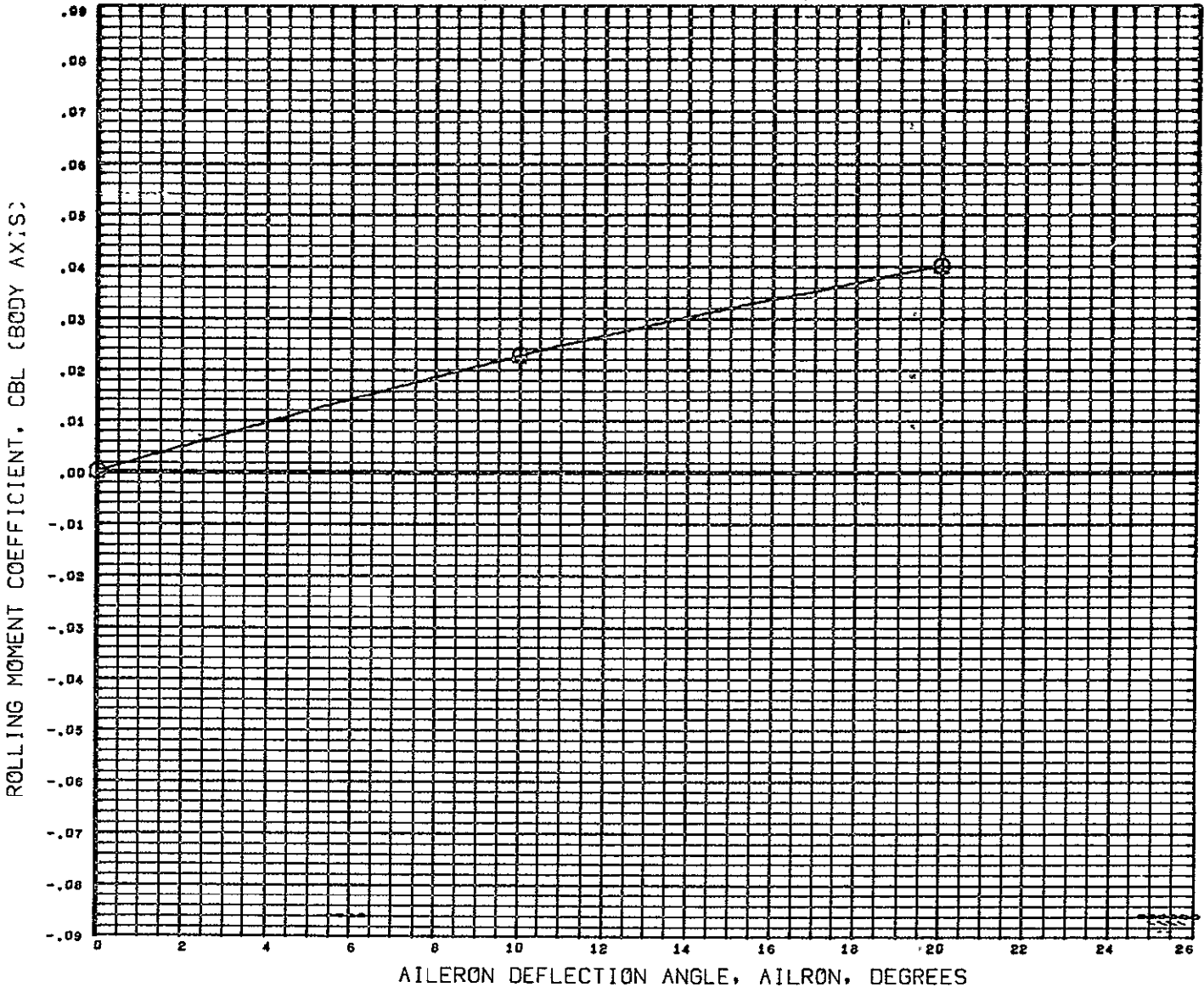
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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



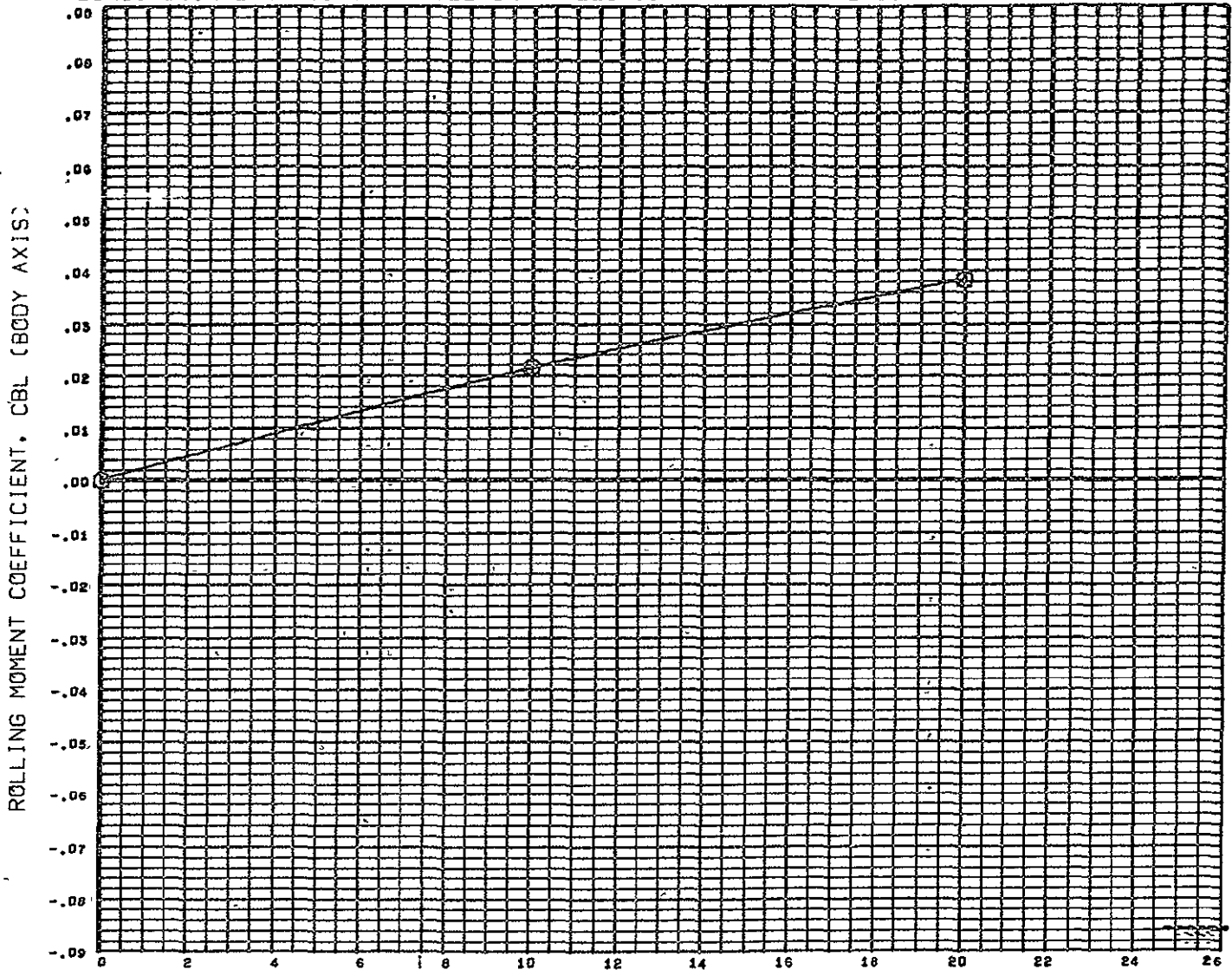
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
D	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	- 7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



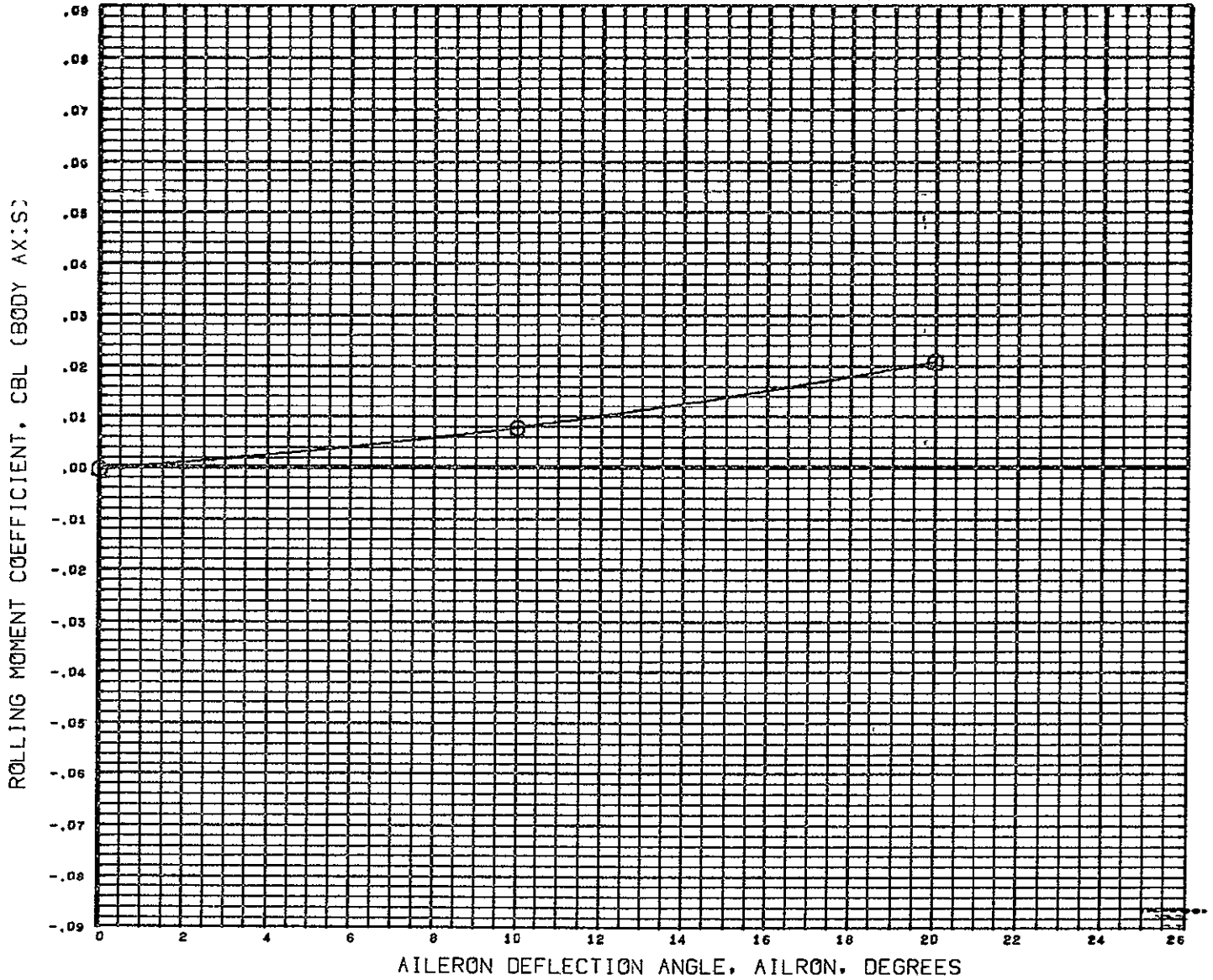
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
		HACH	BETA	INCIDC	INCIDW	SREF	REF	UNIT
○	5.000	0.400	0.000	3.000	0.000	1.3550	3.4530	SQ.FT.
				DIHDL - 7.660	CANARD 0.000	BREF 3.4530		FEET
				ELEVTR 0.000	WNGPOS 1.000	XHRP 2.5950		FEET
				CNDPOS 1.000		YHRP 0.0000		FEET
				DATA HIST. CODE HI		ZHRP 0.0187		FEET
						SCALE 0.0150		SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



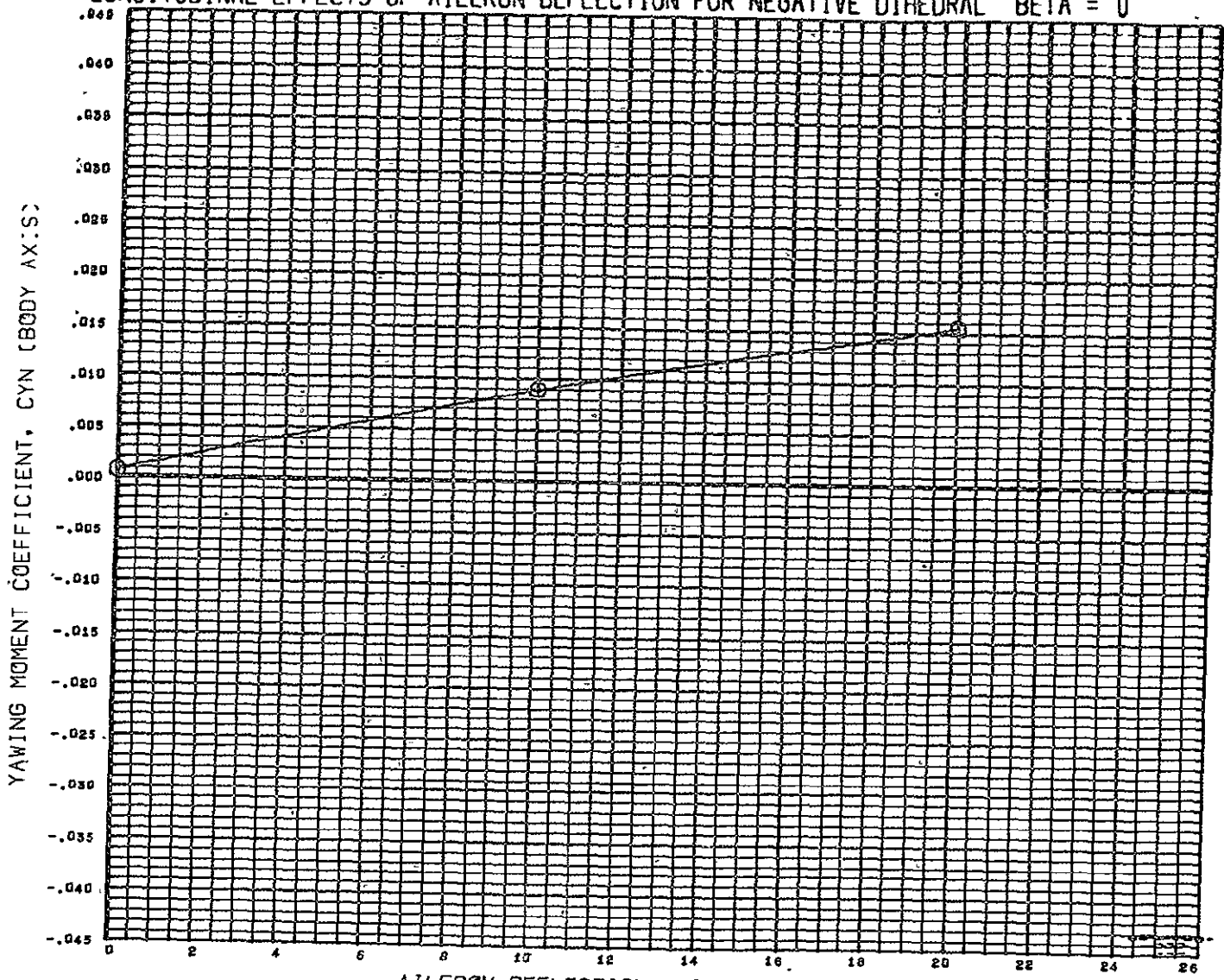
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION			
○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq.ft.	
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET	
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET	
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET	
		CNDPOS	1.000			YMRP	0.0000	FEET	
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET	
						SCALE	0.0150	SCALE	

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



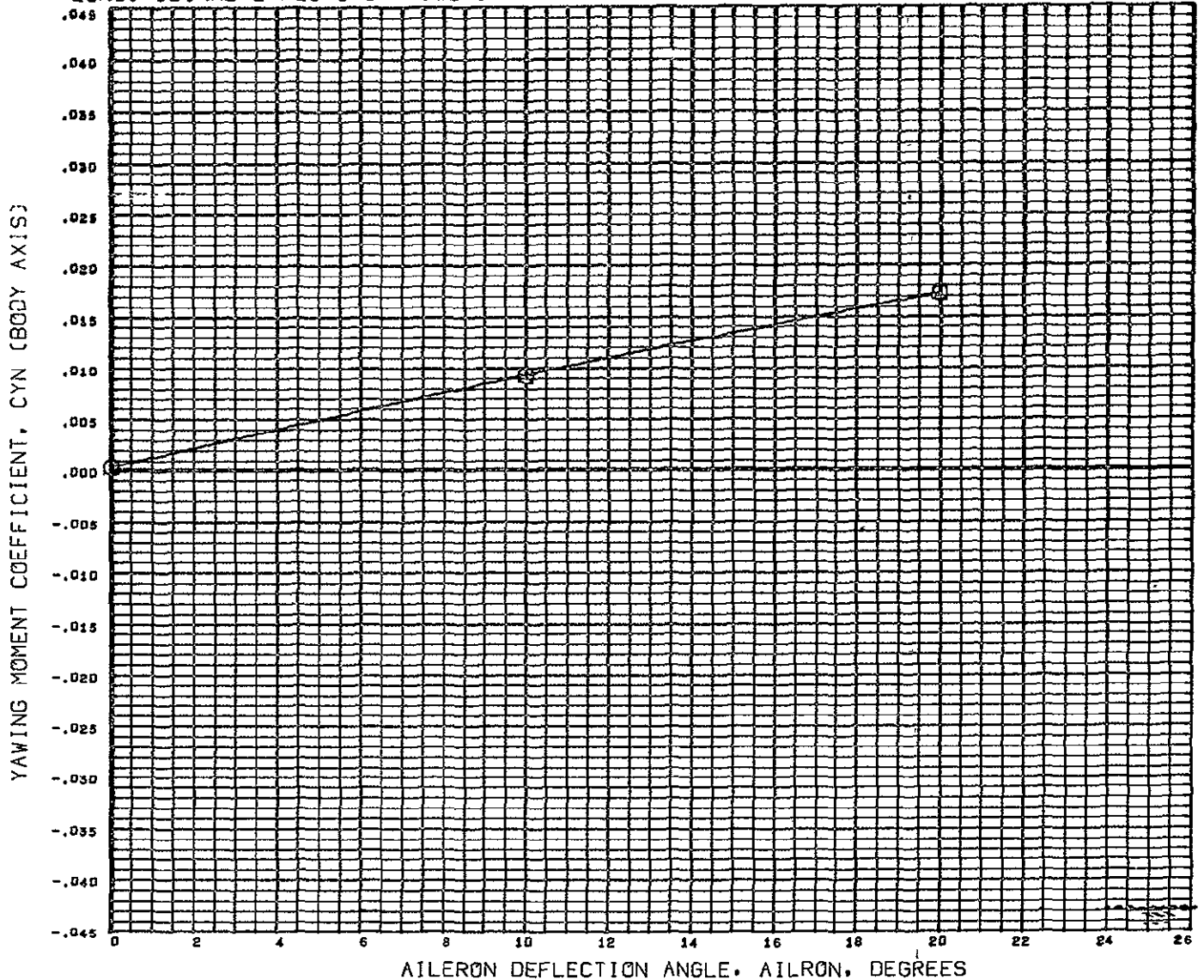
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
0	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.9950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST	CODE	NI		ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

NSRDC-3310-MSFC/LMSC BOOSTER B1C2F1W1V2

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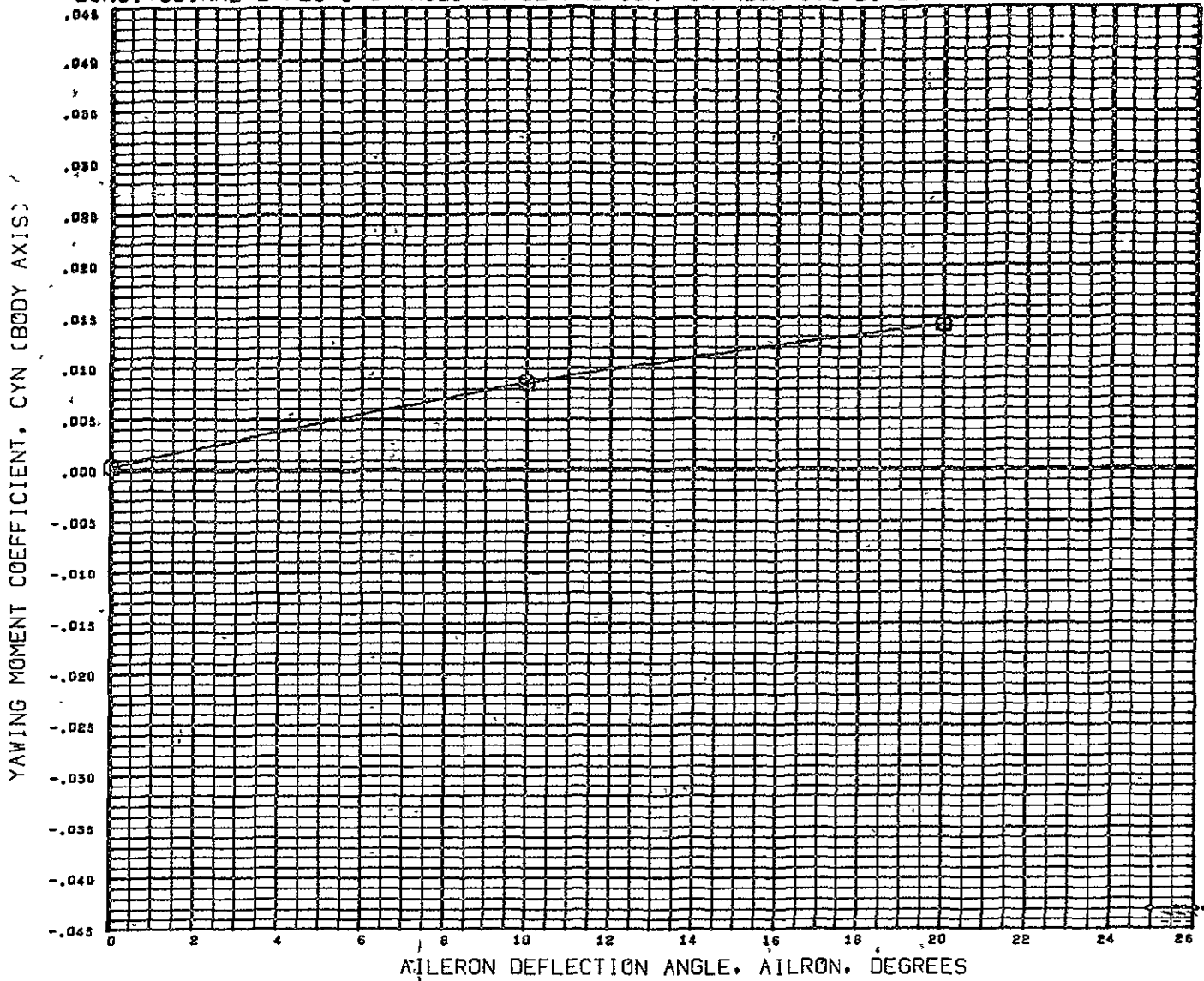
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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



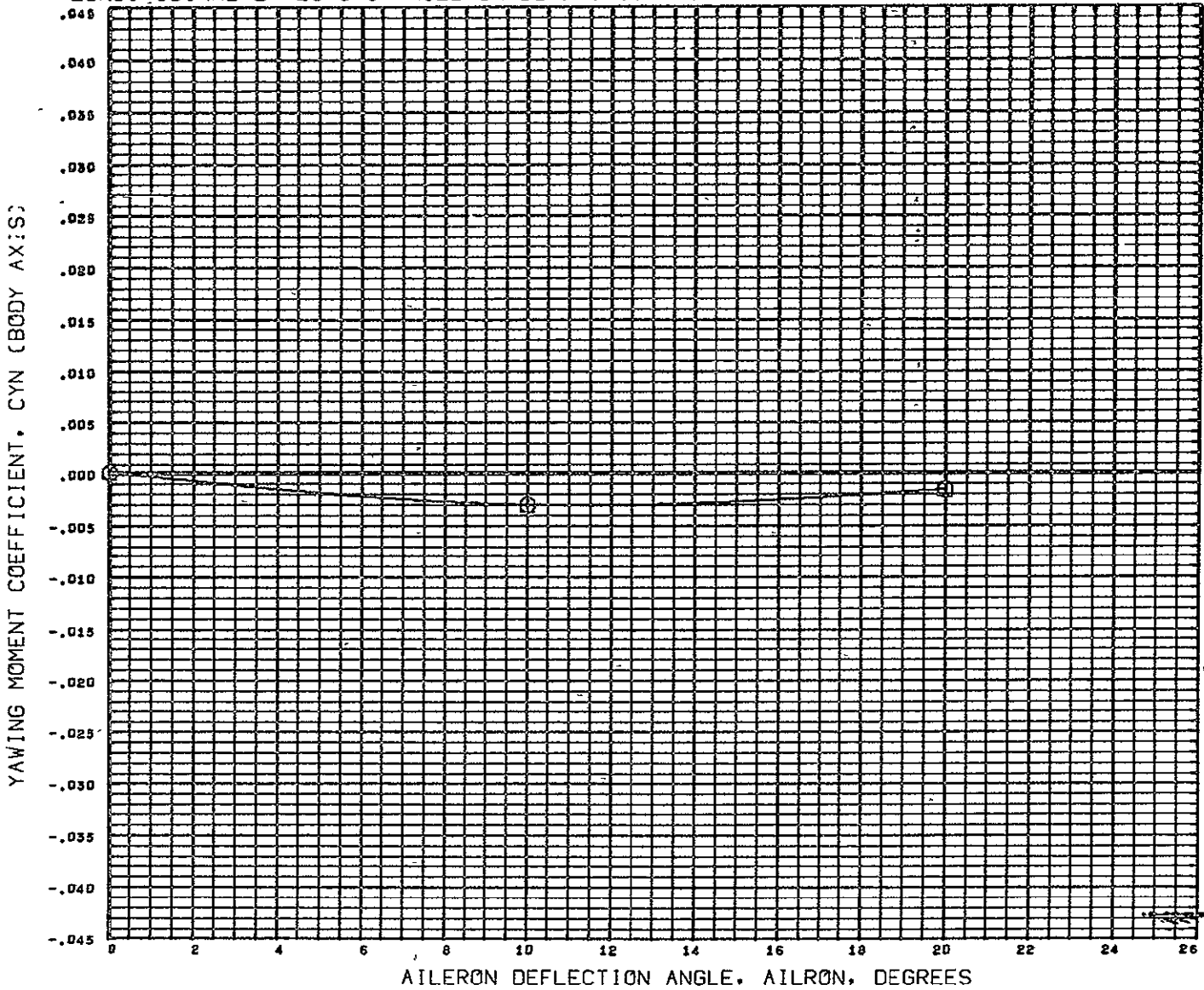
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION			
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq.ft.	
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET	
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET	
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET	
		CNDPOS	1.000			YMRP	0.0000	FEET	
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET	
						SCALE	0.0150	SCALE	

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



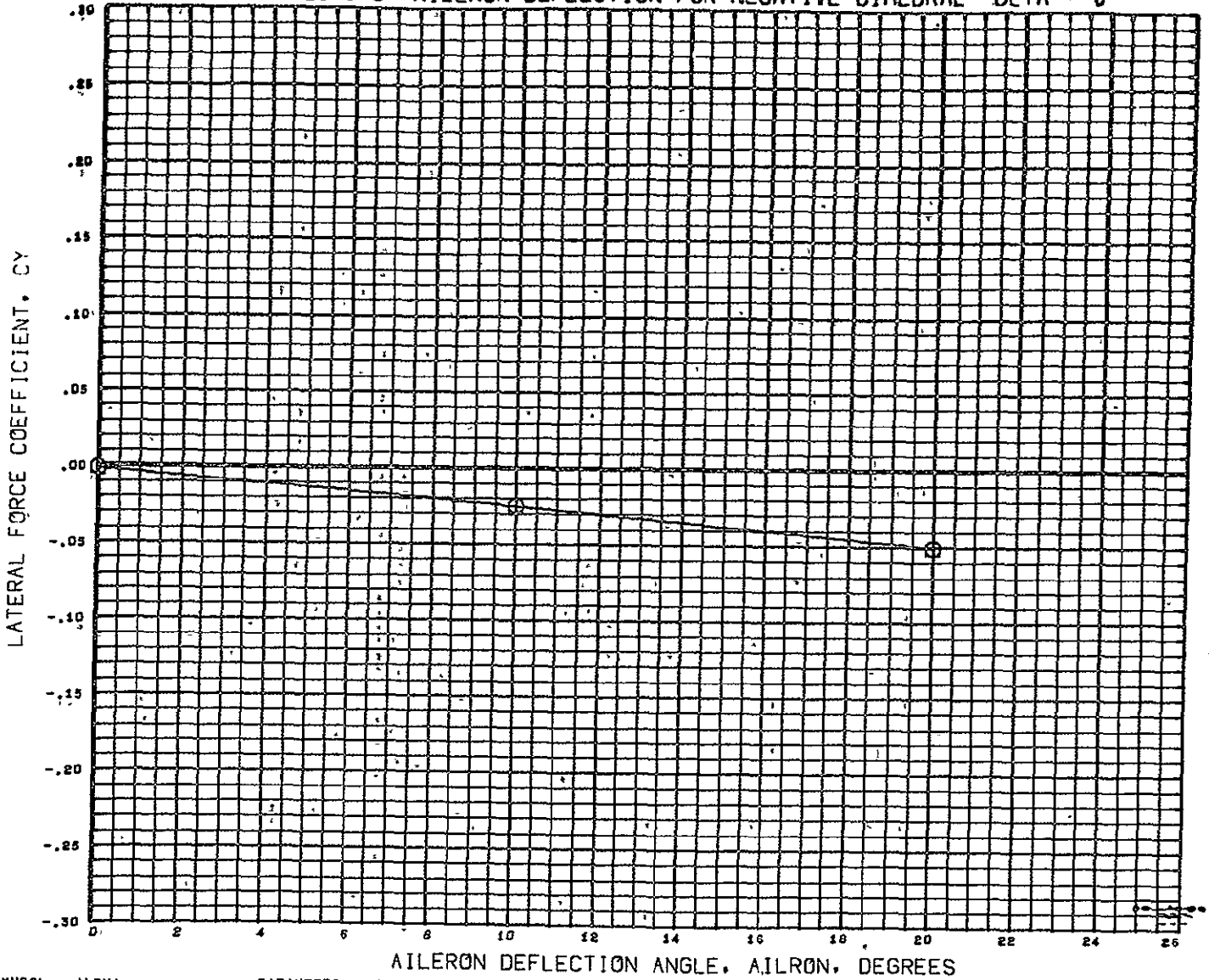
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○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	50. FT.
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



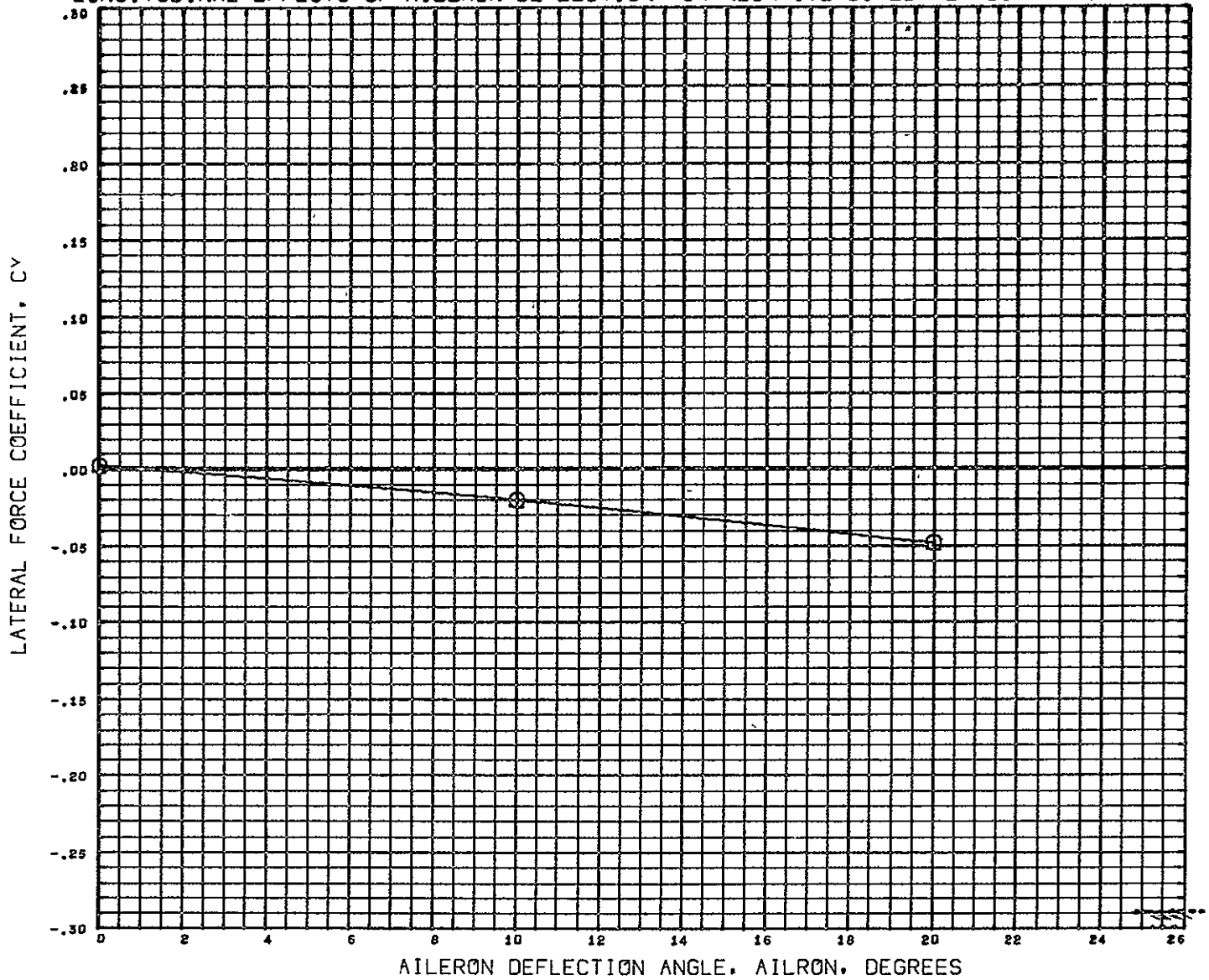
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	HACH	0.400	BETA	0.000	SREF	1.3550	SQ FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION							
		MACH	BETA	INCIDW	CANARD	WNGPOS	SREF	LREF	BREF	XHRP	YHRP	ZHRP	SCALE
○	0.000	0.400	0.000	0.000	0.000	1.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150
		INCIDC	INCIDW	CANARD	WNGPOS								
		7.660	0.000	0.000	1.000								
		ELEVTR	CNDPOS										
		0.000	1.000										
		DATA HIST. CODE	HI										

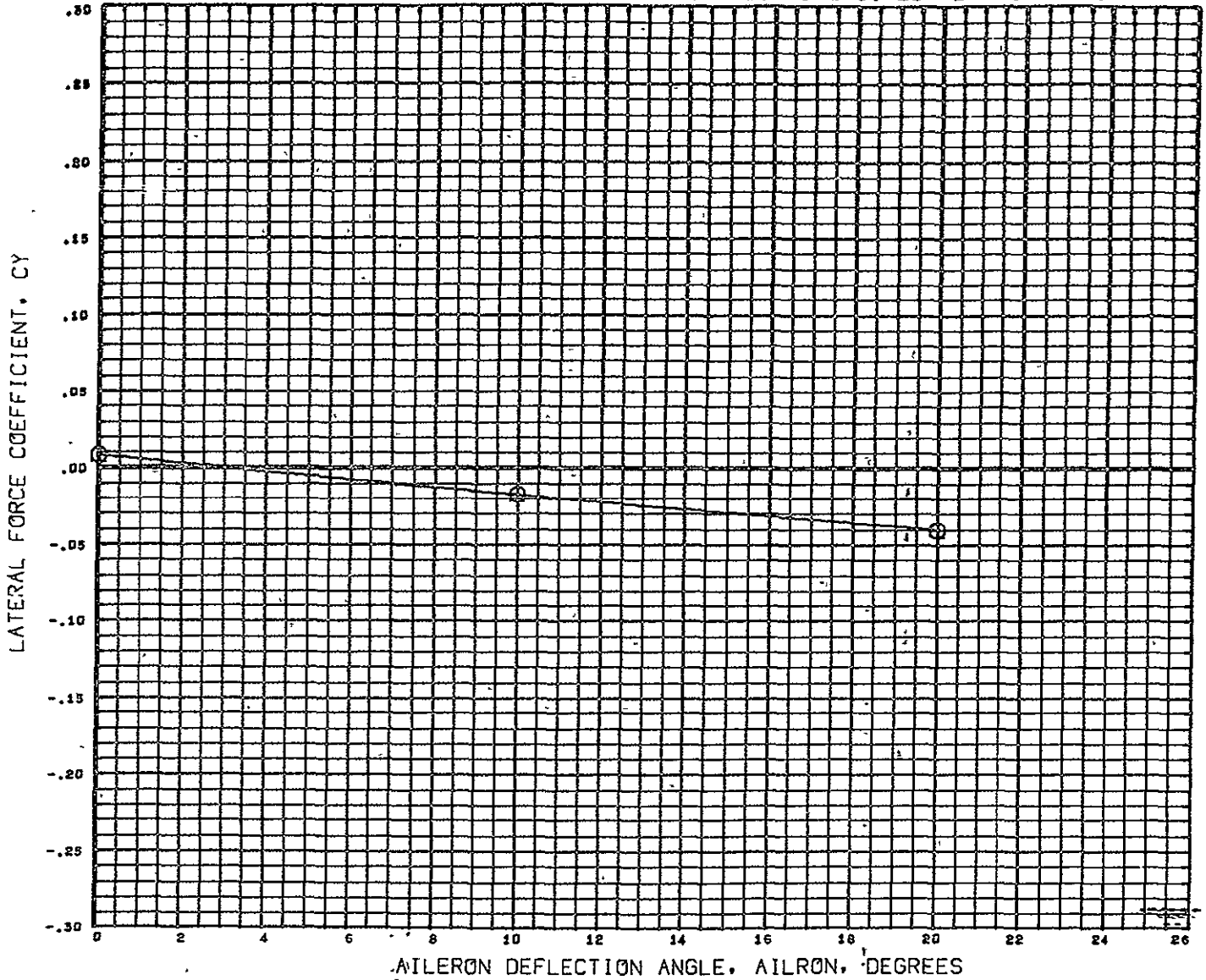
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



AILERON DEFLECTION ANGLE, AILRON, DEGREES

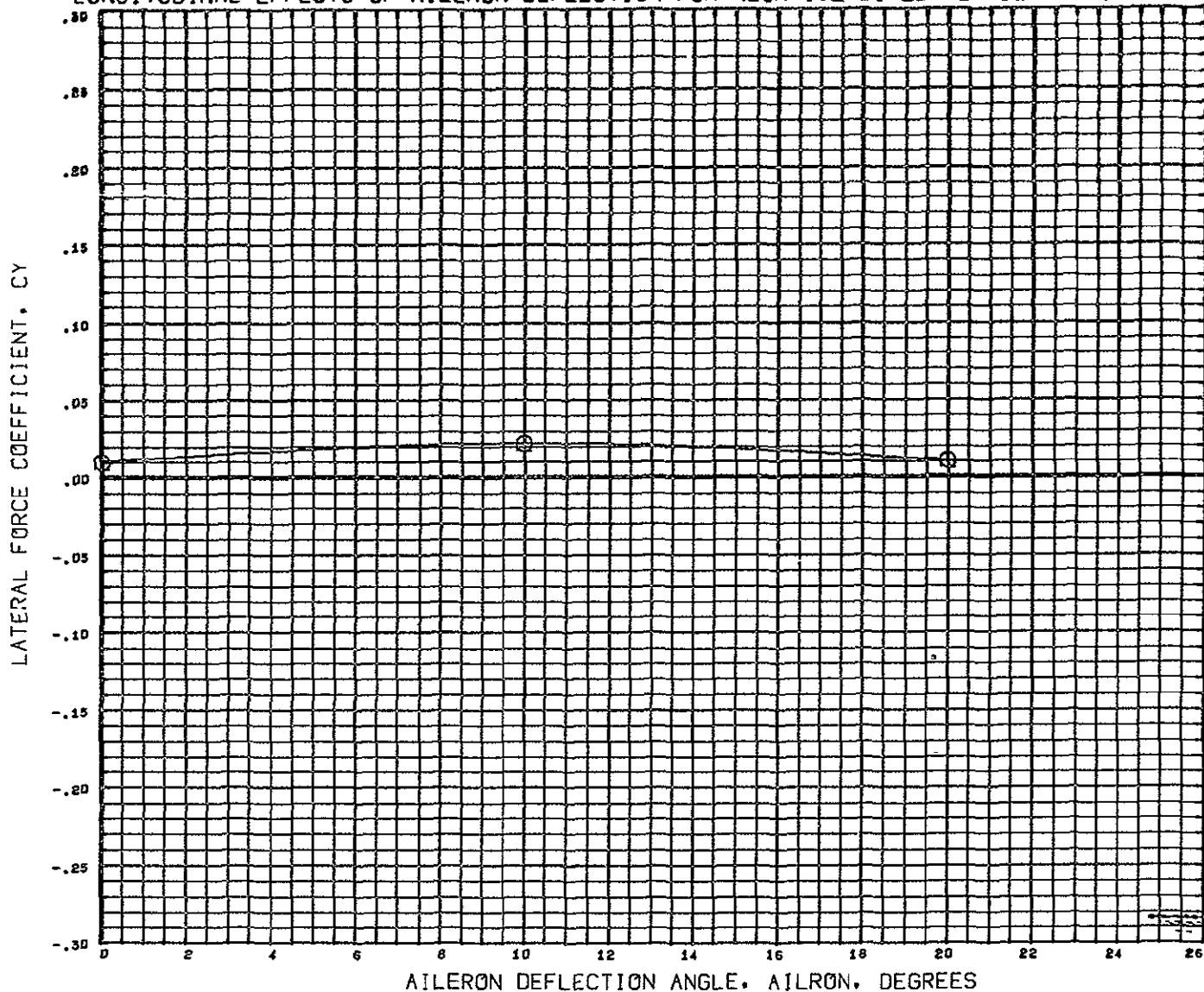
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHEDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



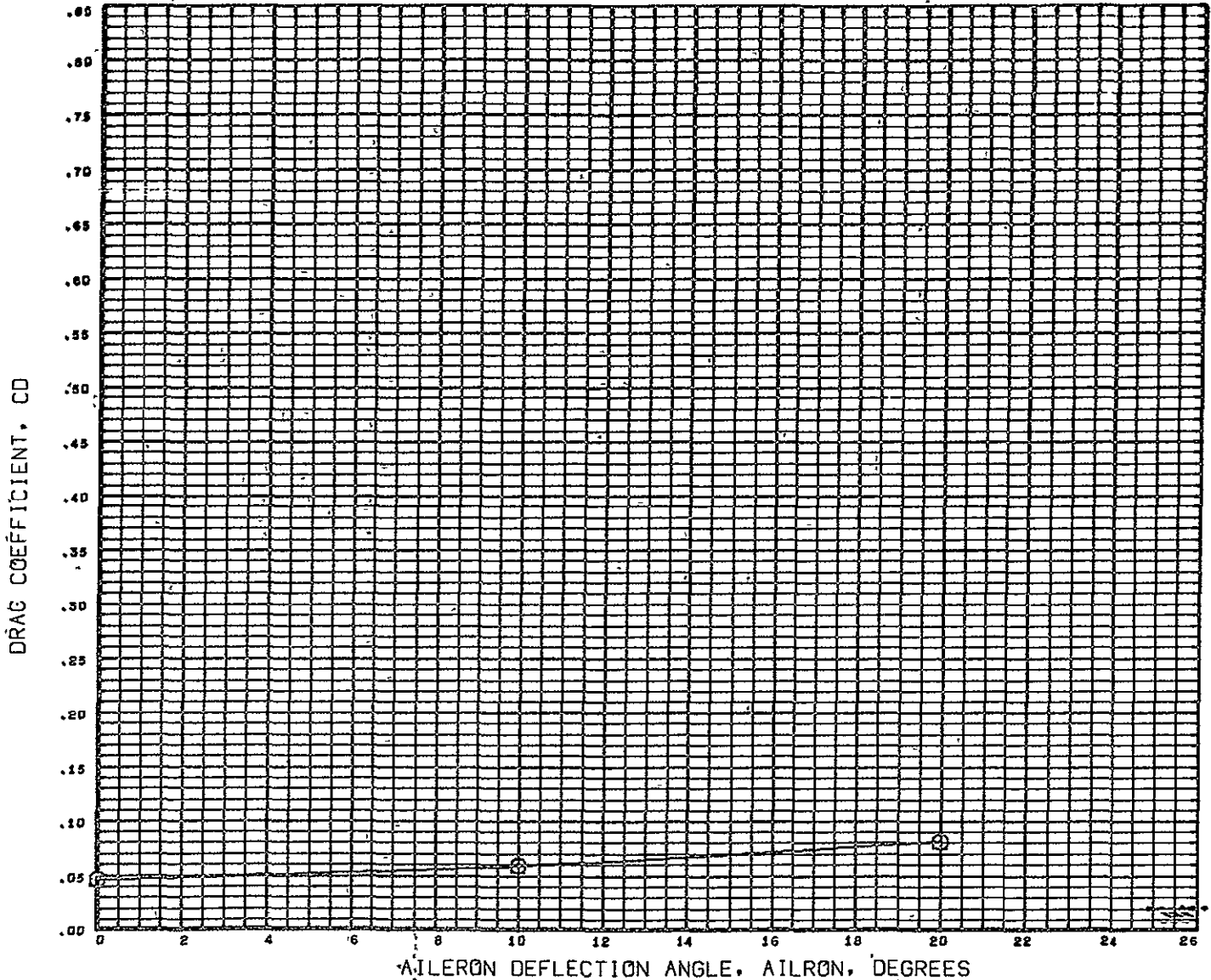
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET	
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET	
		CNDPOS	1.000			YNRP	0.0000	FEET	
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET	
						SCALE	0.0150	SCALE	

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



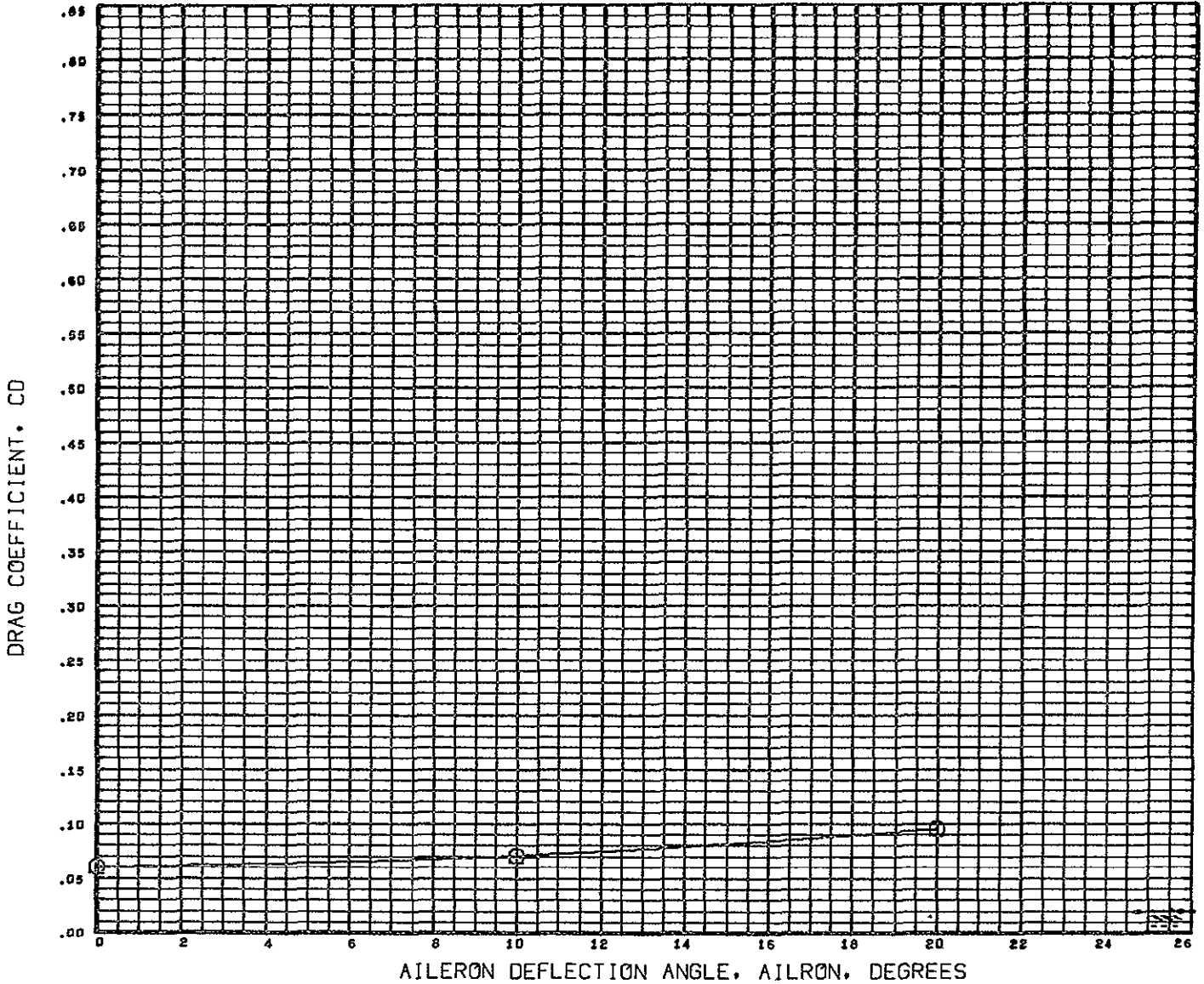
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	80. FT.
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0107	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



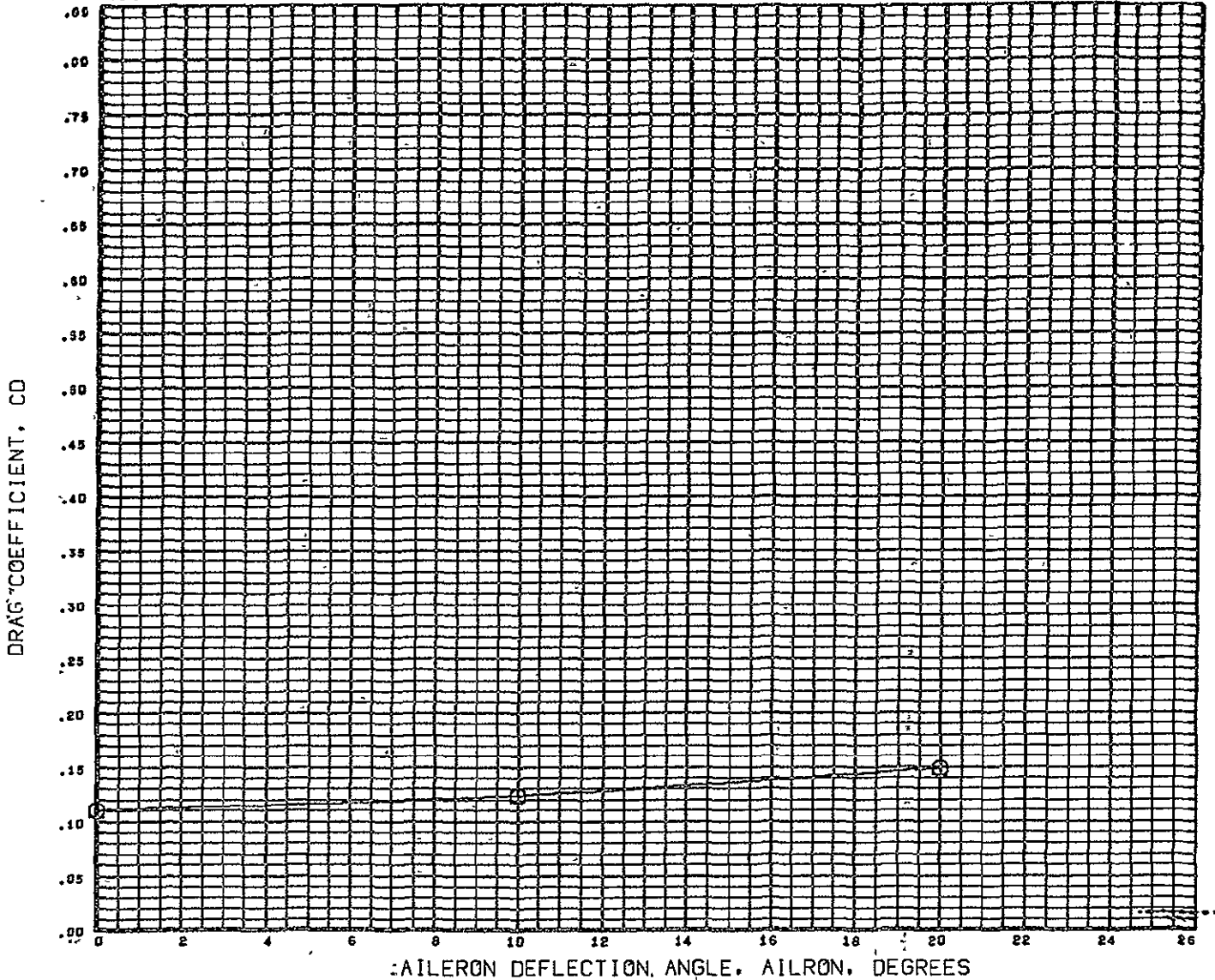
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



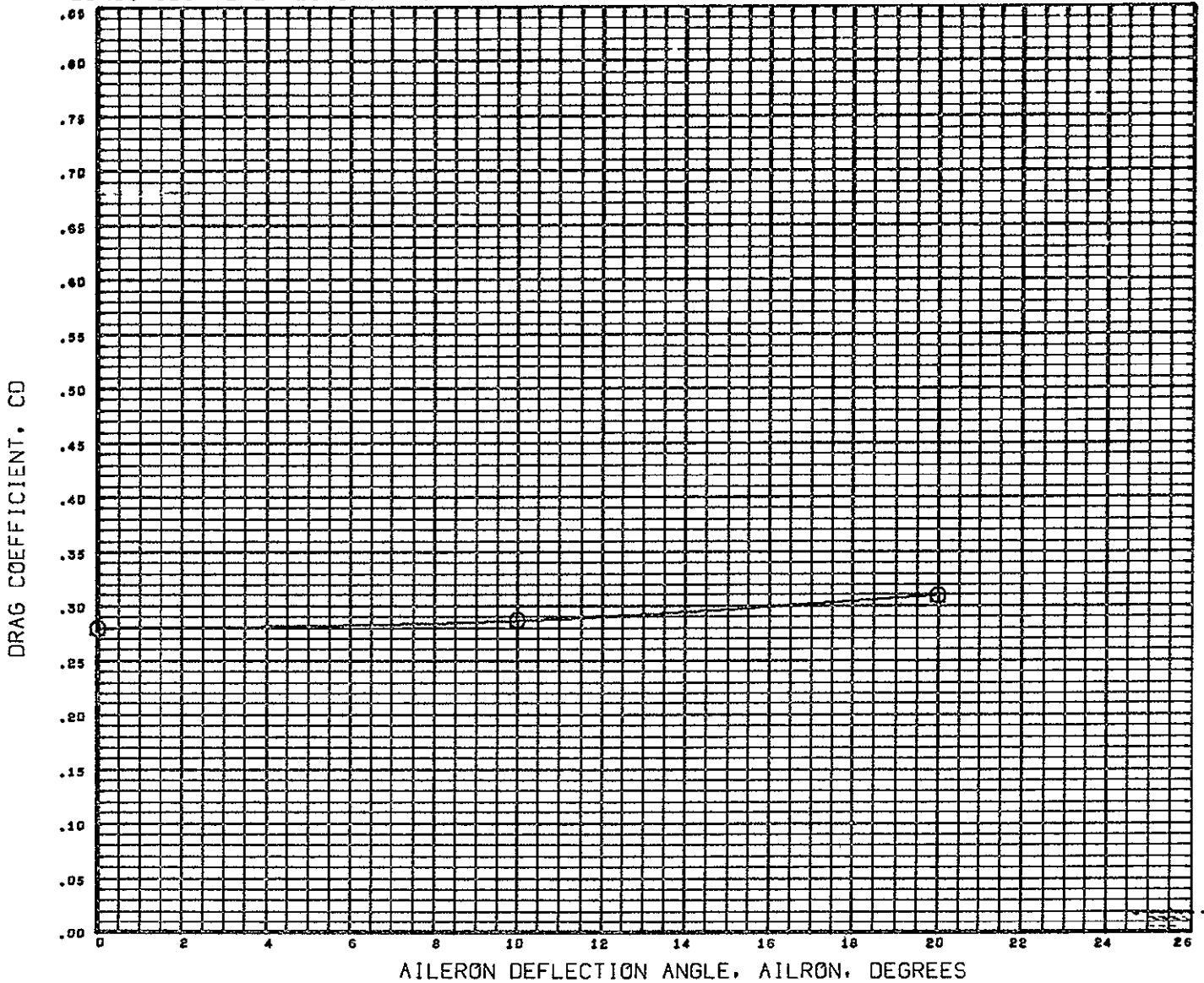
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	- 7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



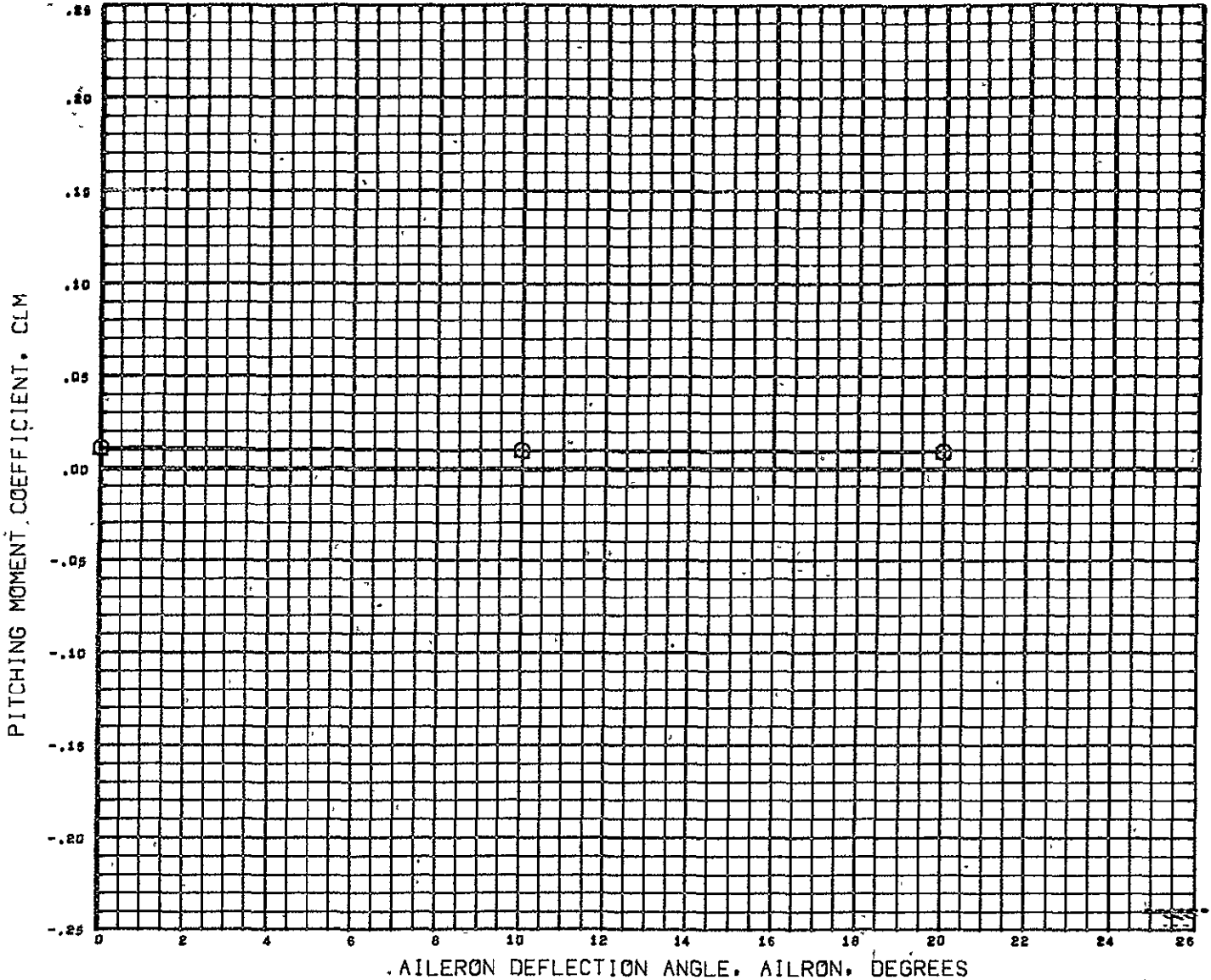
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



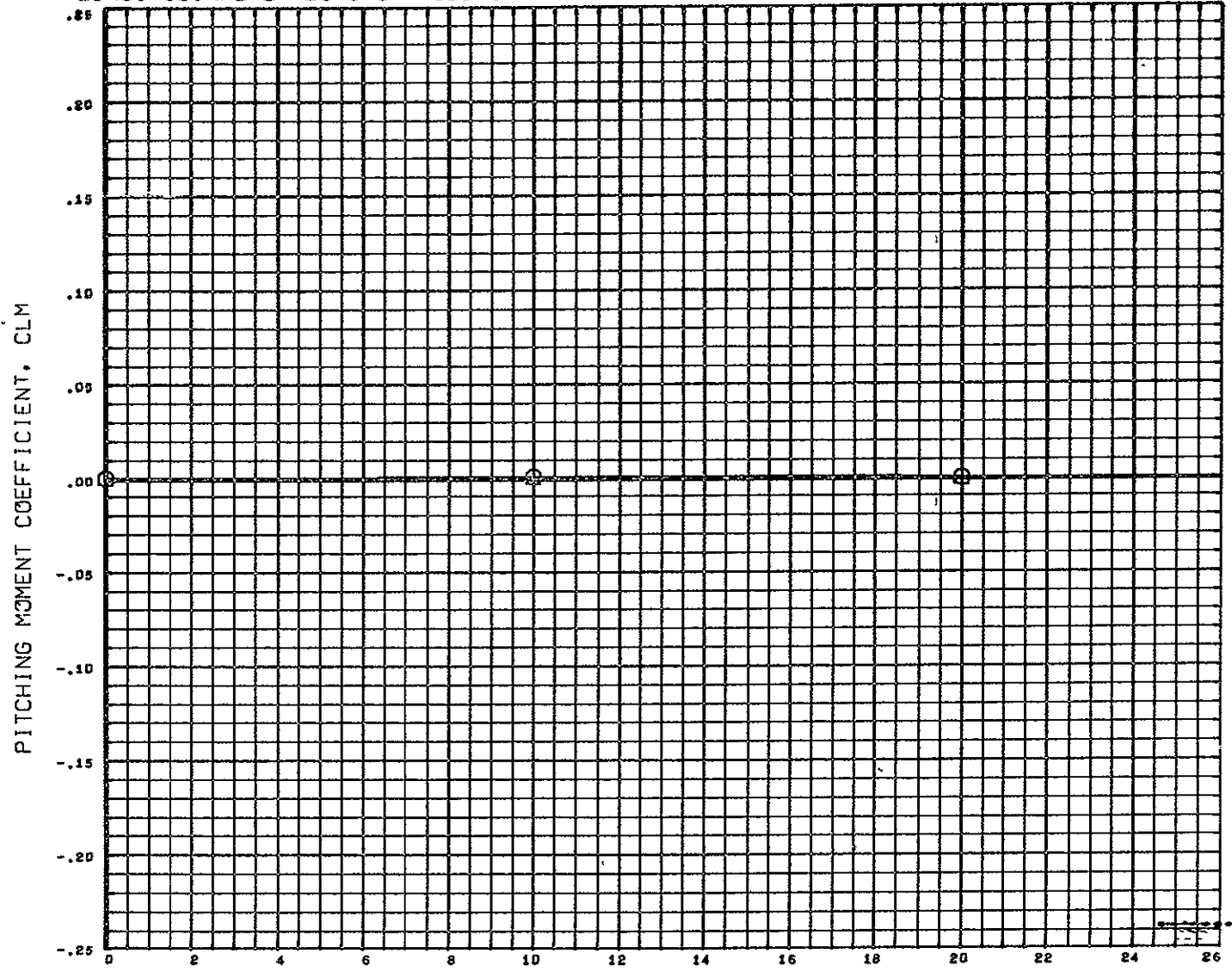
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



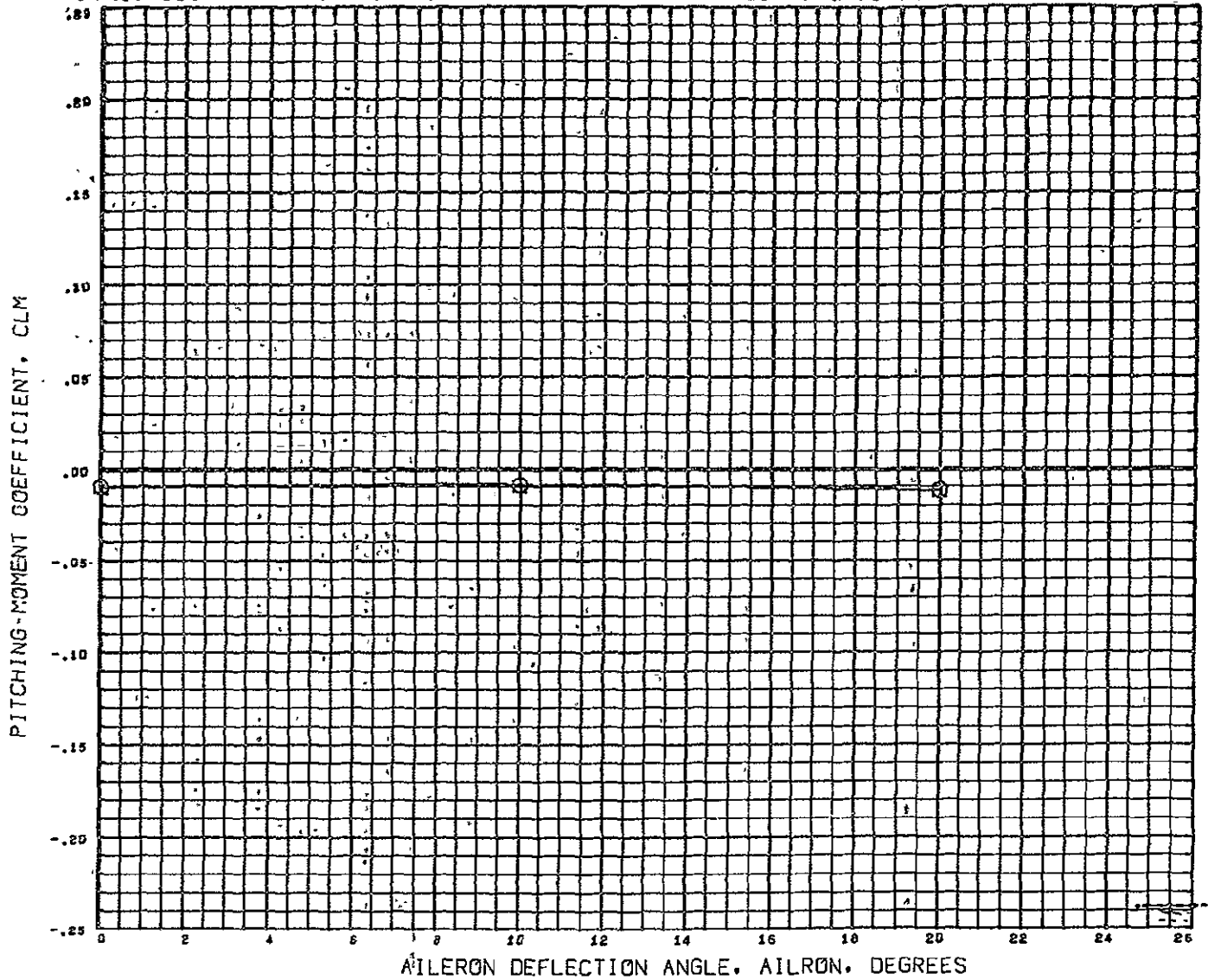
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	HACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
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		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



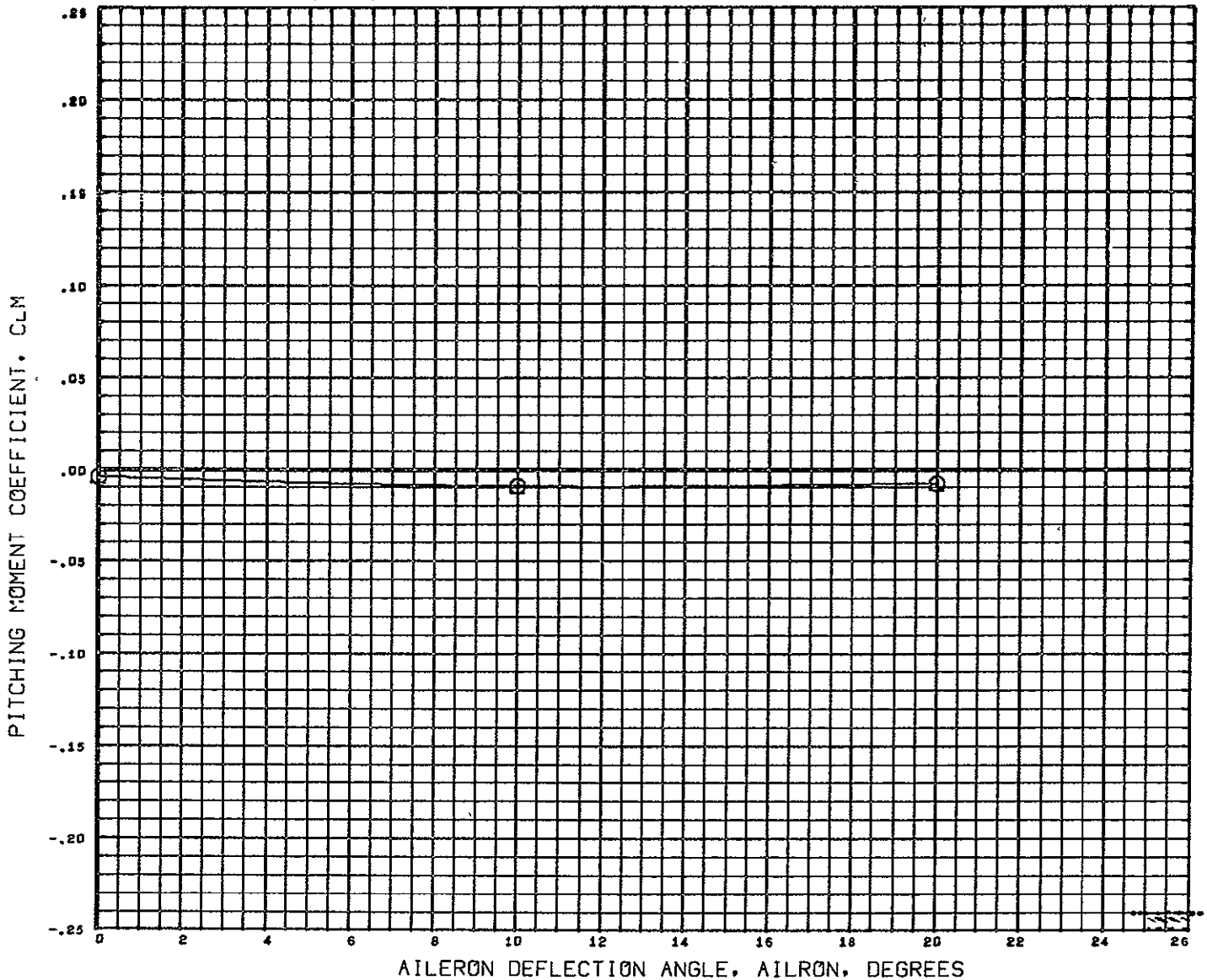
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DIHDL	- 7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



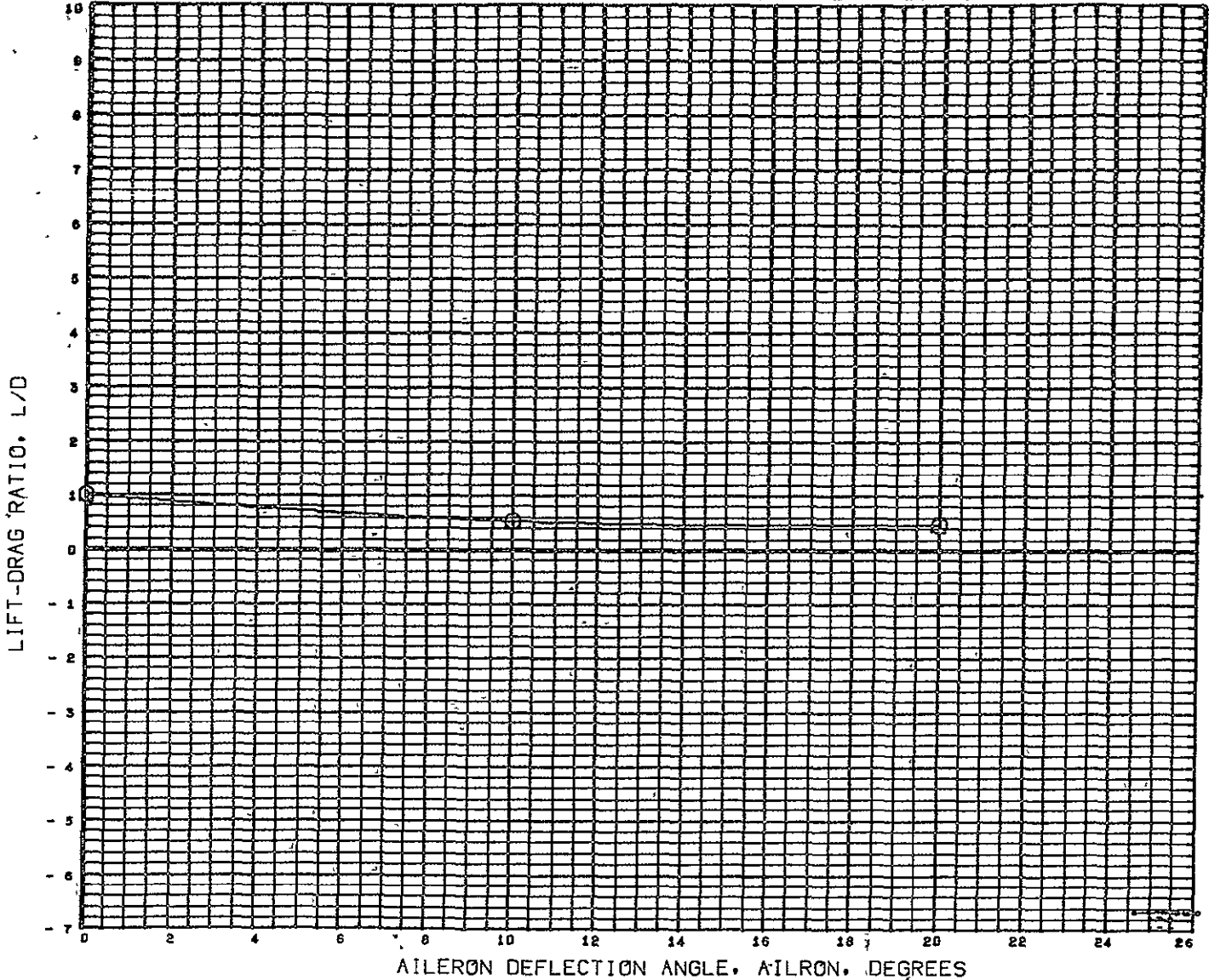
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	50. FT.
		INCIDC	3.000	INCION	0.000	LREF	3.4530	FEET
		DIMDRL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



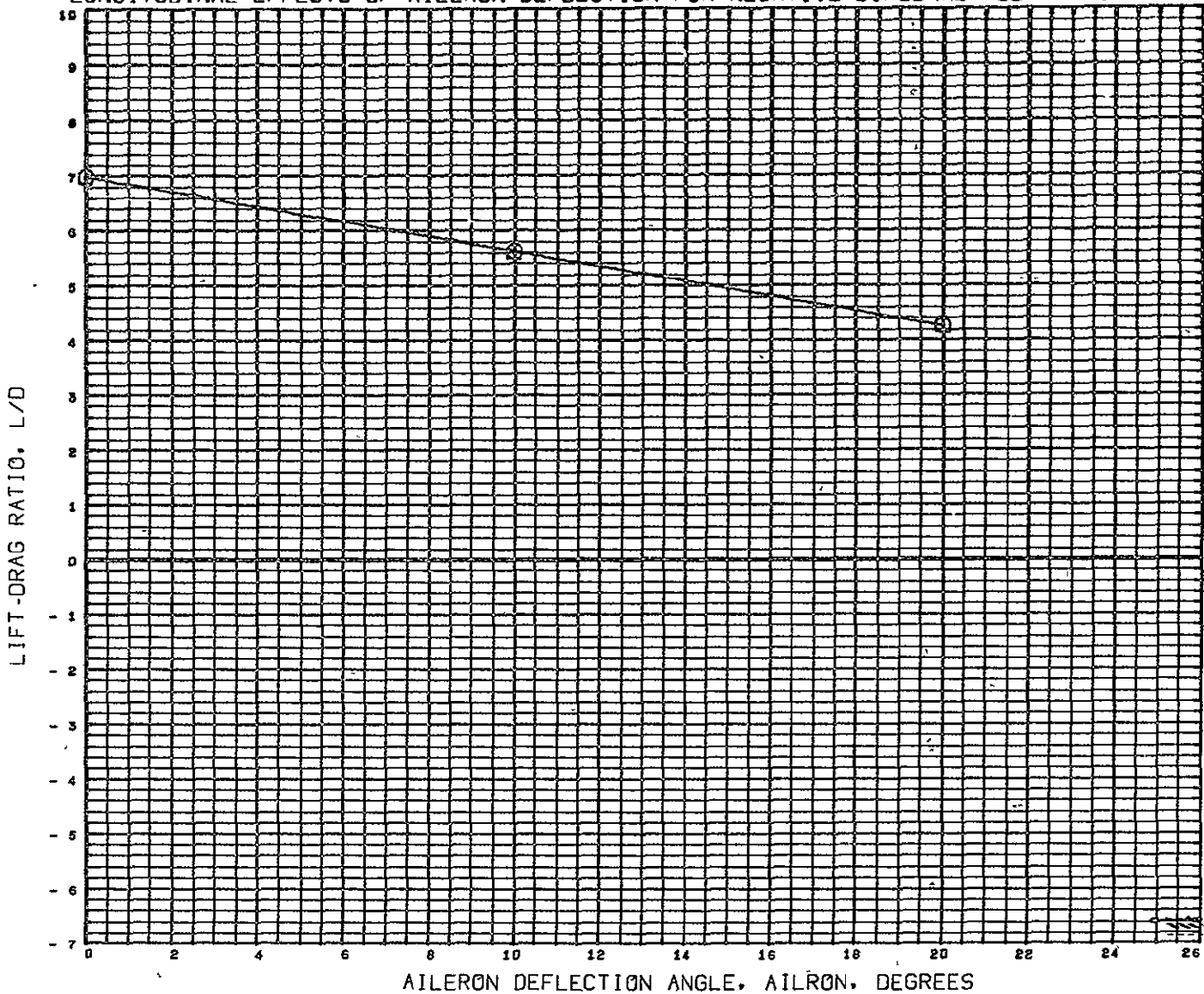
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○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	50 FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



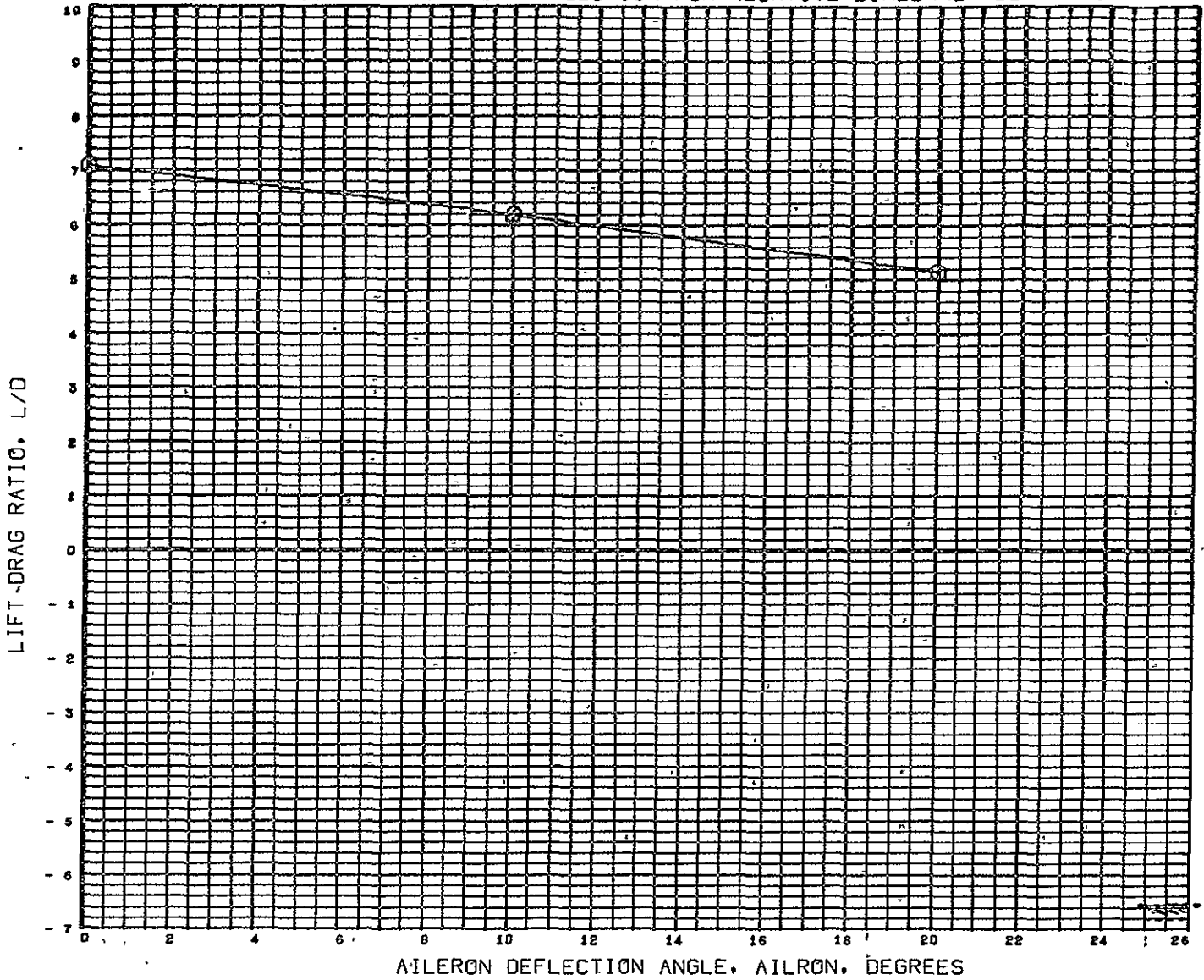
SYMSOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
D	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



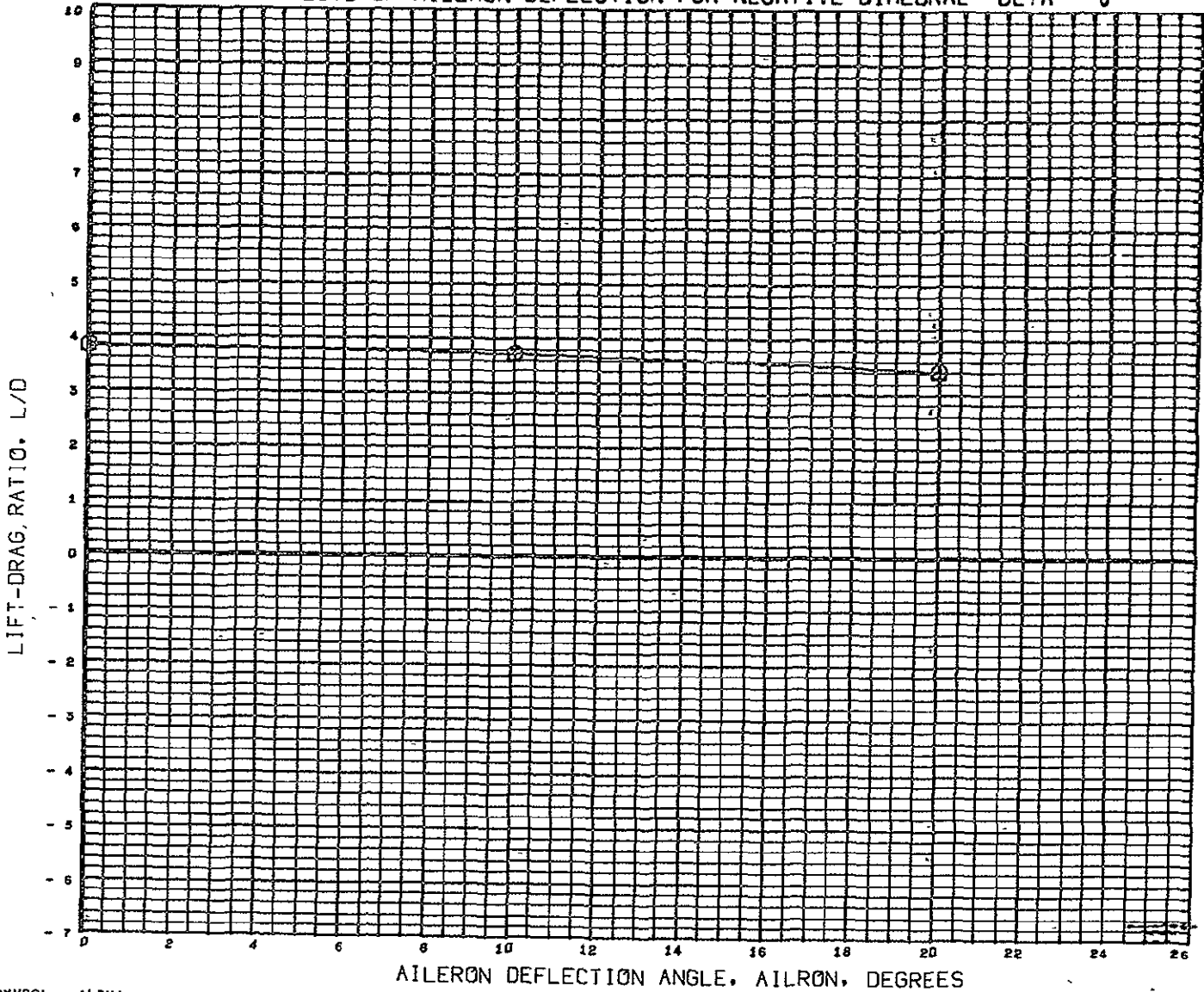
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		MACH	BETA	INCIDW	INCIDC	SCALE	SCALE
Q	5.000	0.400	0.000	0.000	3.4530	FEET	1.3550
		3.000	0.000	0.000	3.4530	FEET	3.4530
		-7.660	CANARD	0.000	2.5950	FEET	2.5950
		0.000	WNGPOS	1.000	0.0000	FEET	0.0000
		1.000			0.0187	FEET	0.0187
		DATA HIST. CODE	HI		0.0150	SCALE	0.0150

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

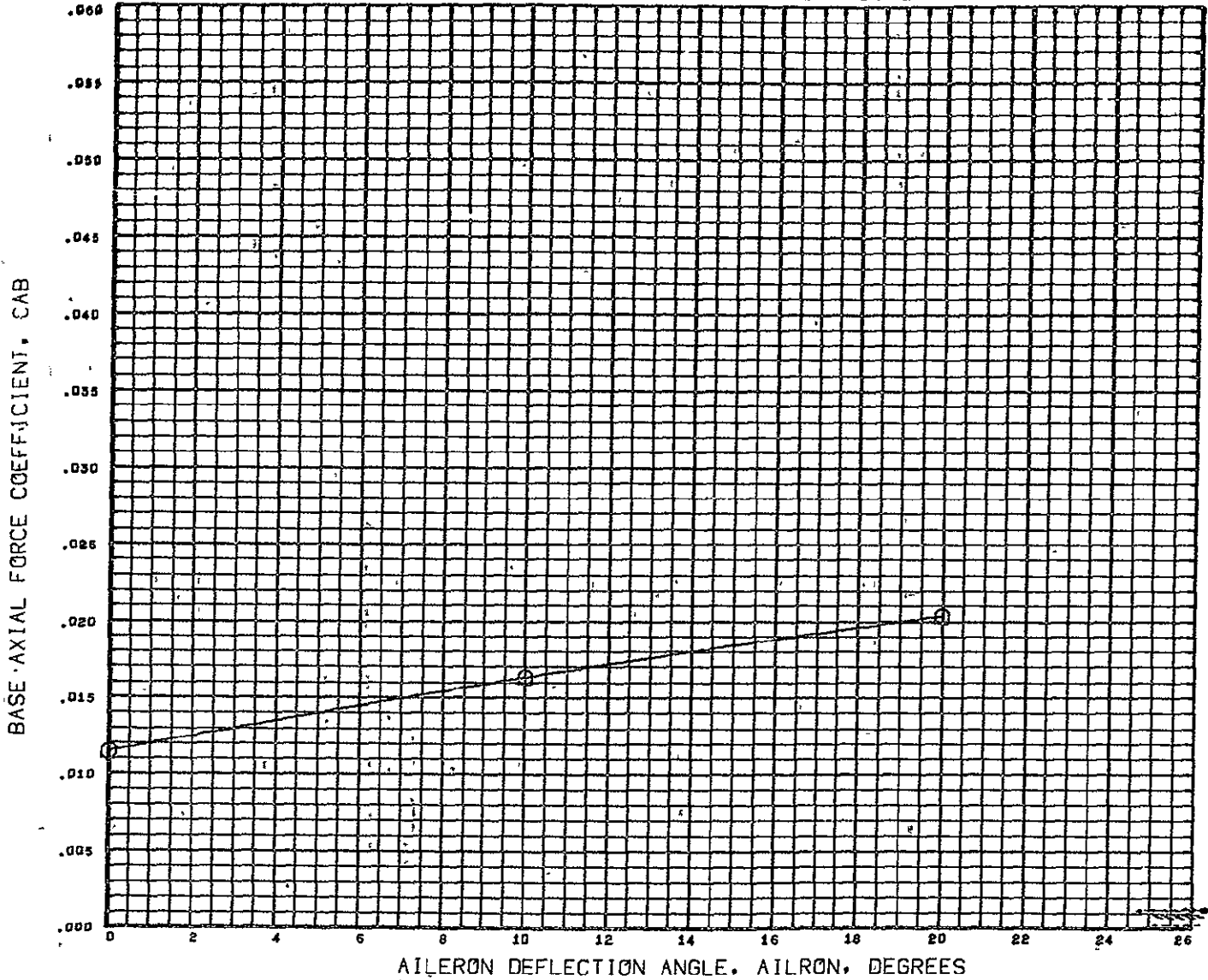
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
○	15.000	MACH	0.400	BETA	0.000
		INCIDC	3.000	INCIDW	0.000
		DIHDRL	-7.660	CANARD	0.000
		ELEVTR	0.000	WNGPOS	1.000
		CNDPOS	1.000		
		DATA HIST. CODE	MI		

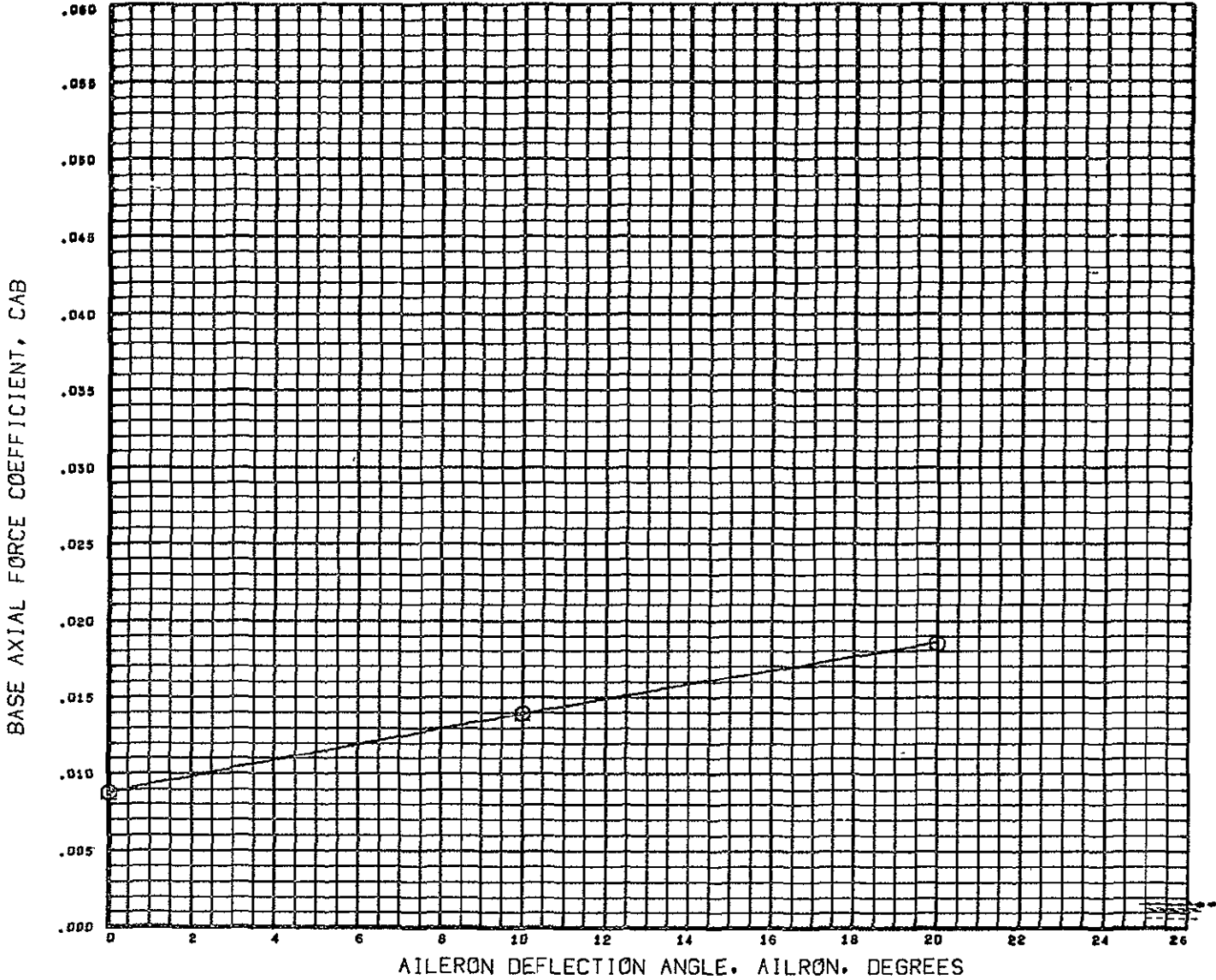
REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	3.4530 FEET
BREF	3.4530 FEET
XMRP	2.5950 FEET
YMRP	0.0000 FEET
ZMRP	0.0187 FEET
SCALE	0.0150 SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



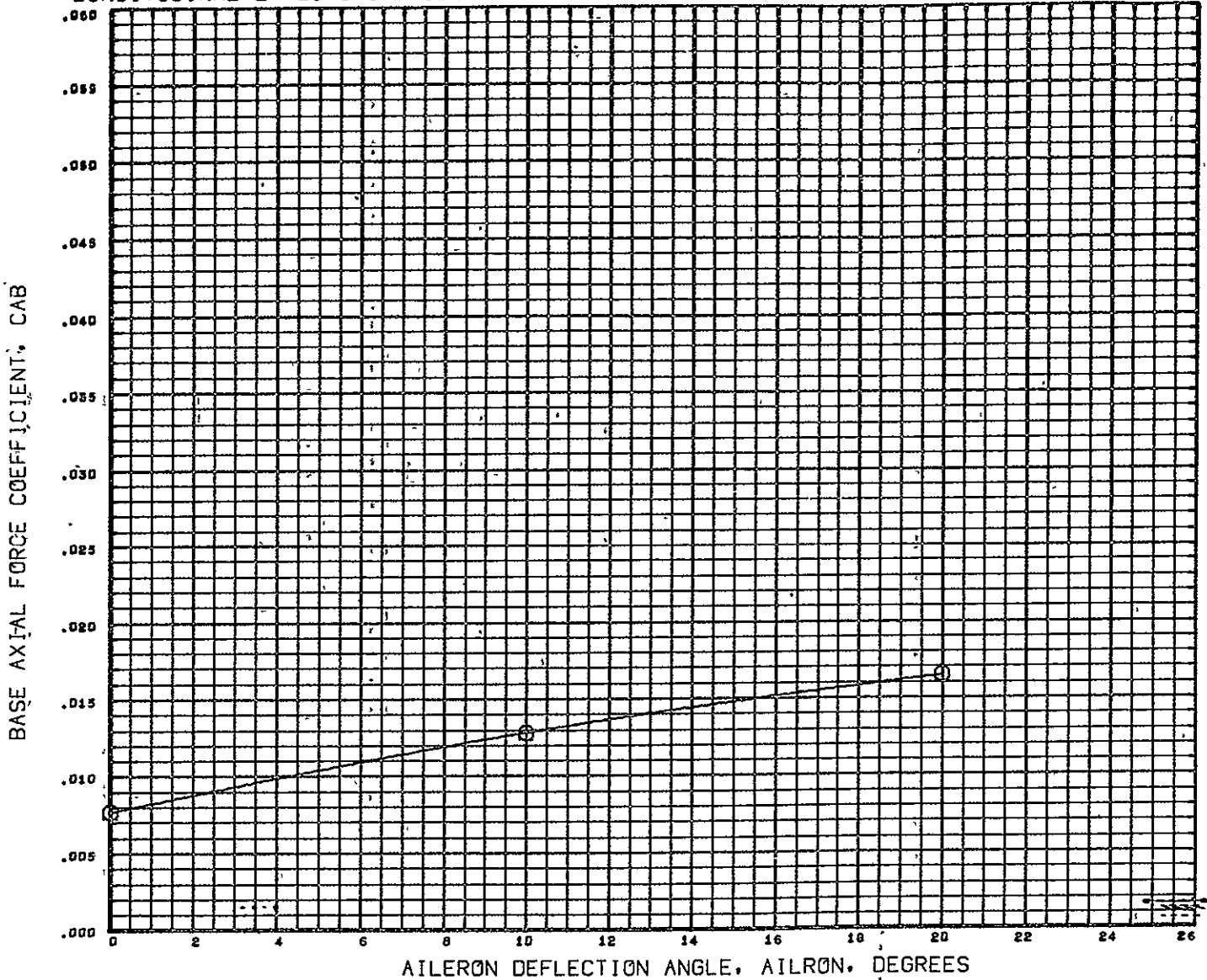
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHEDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
						ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE
		DATA HIST. CODE	MI					

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



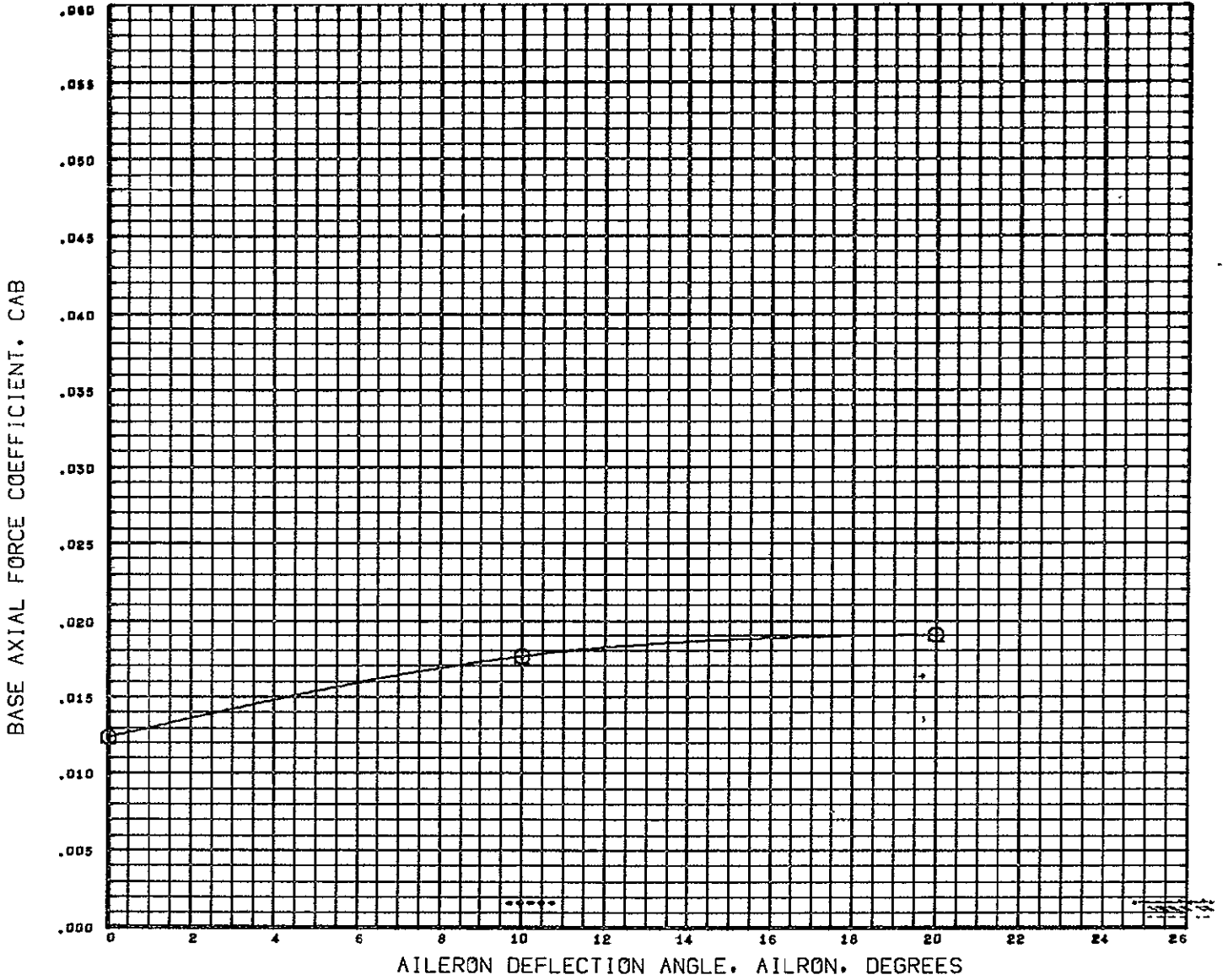
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	- 7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



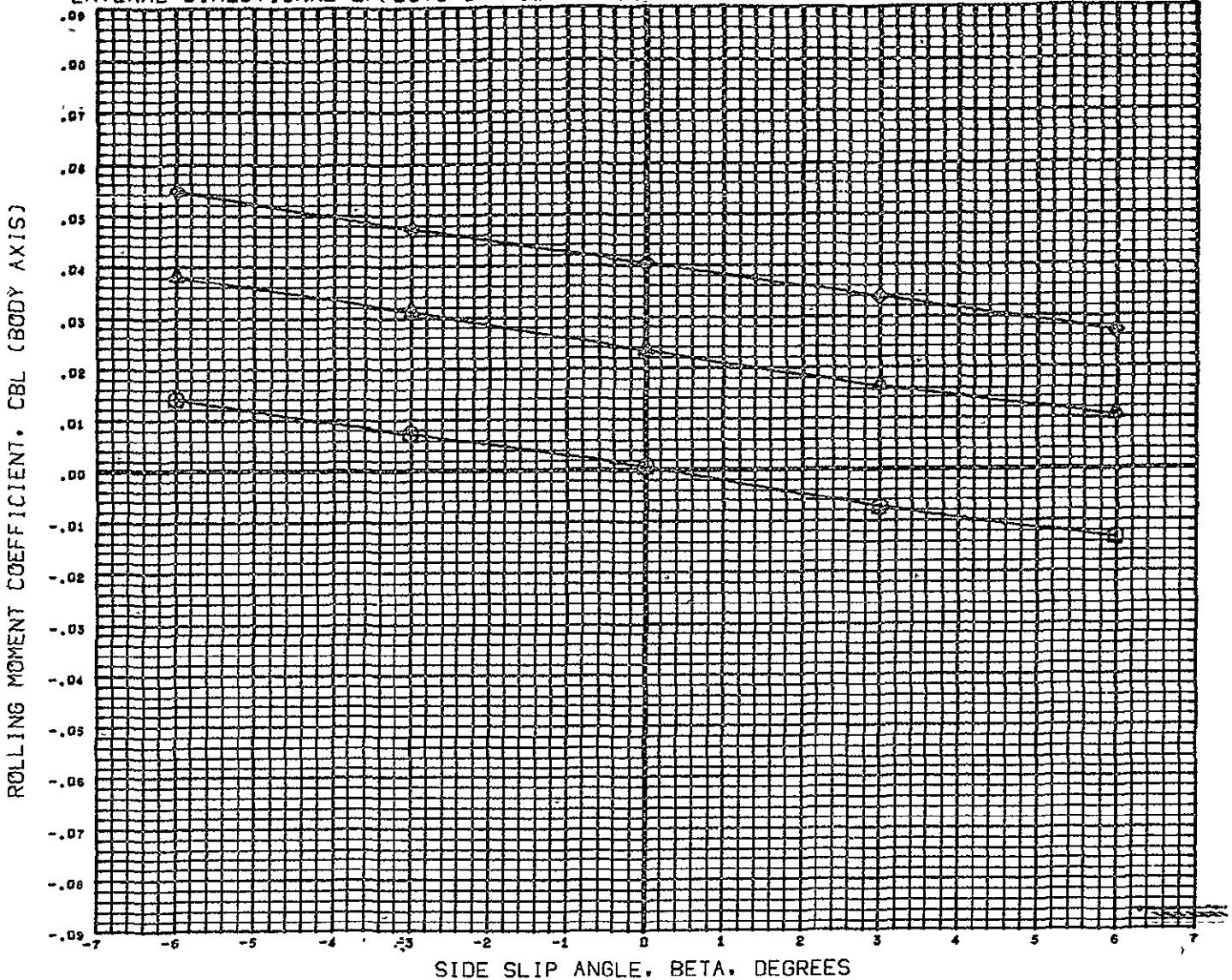
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

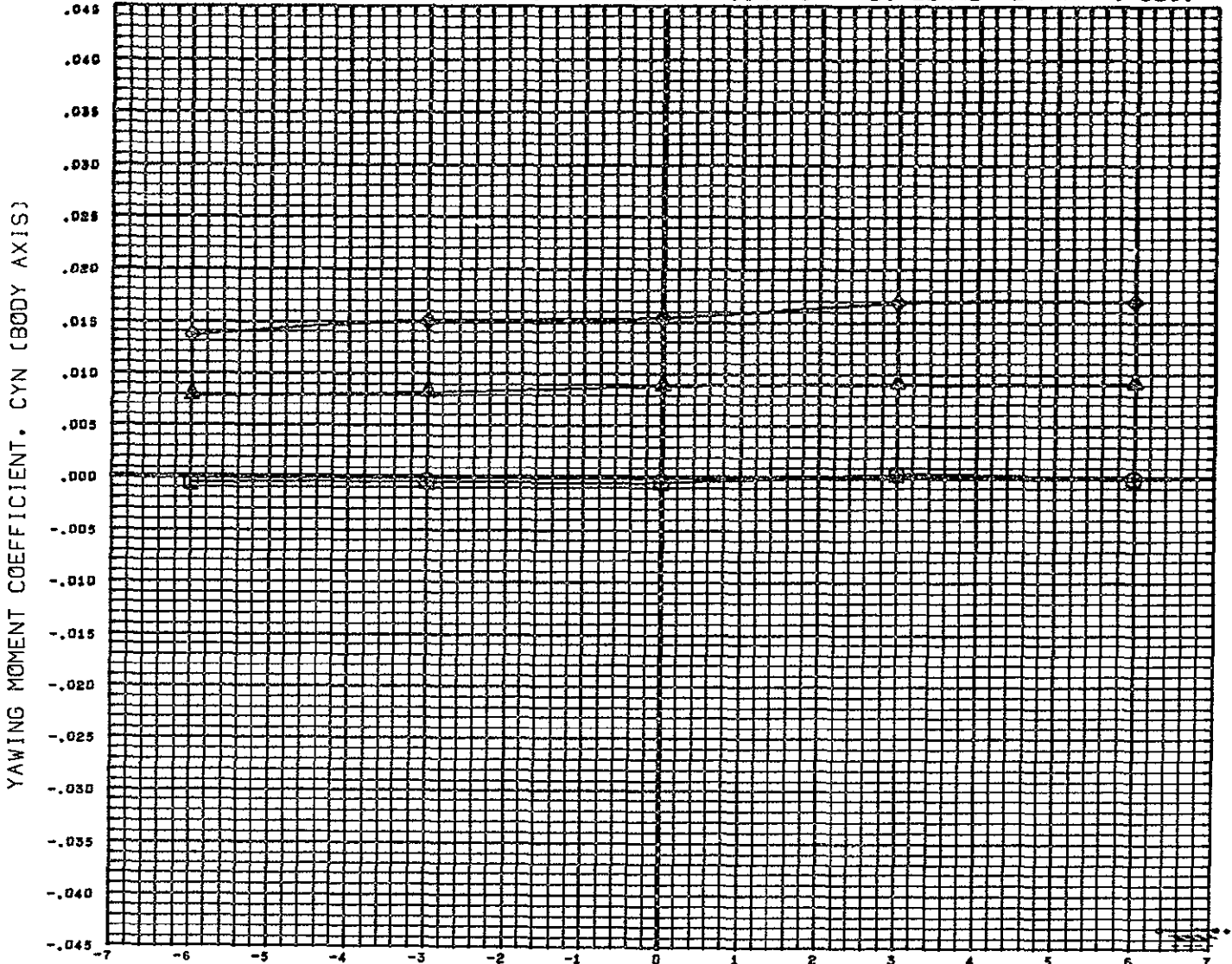
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4117)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(GN4121)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

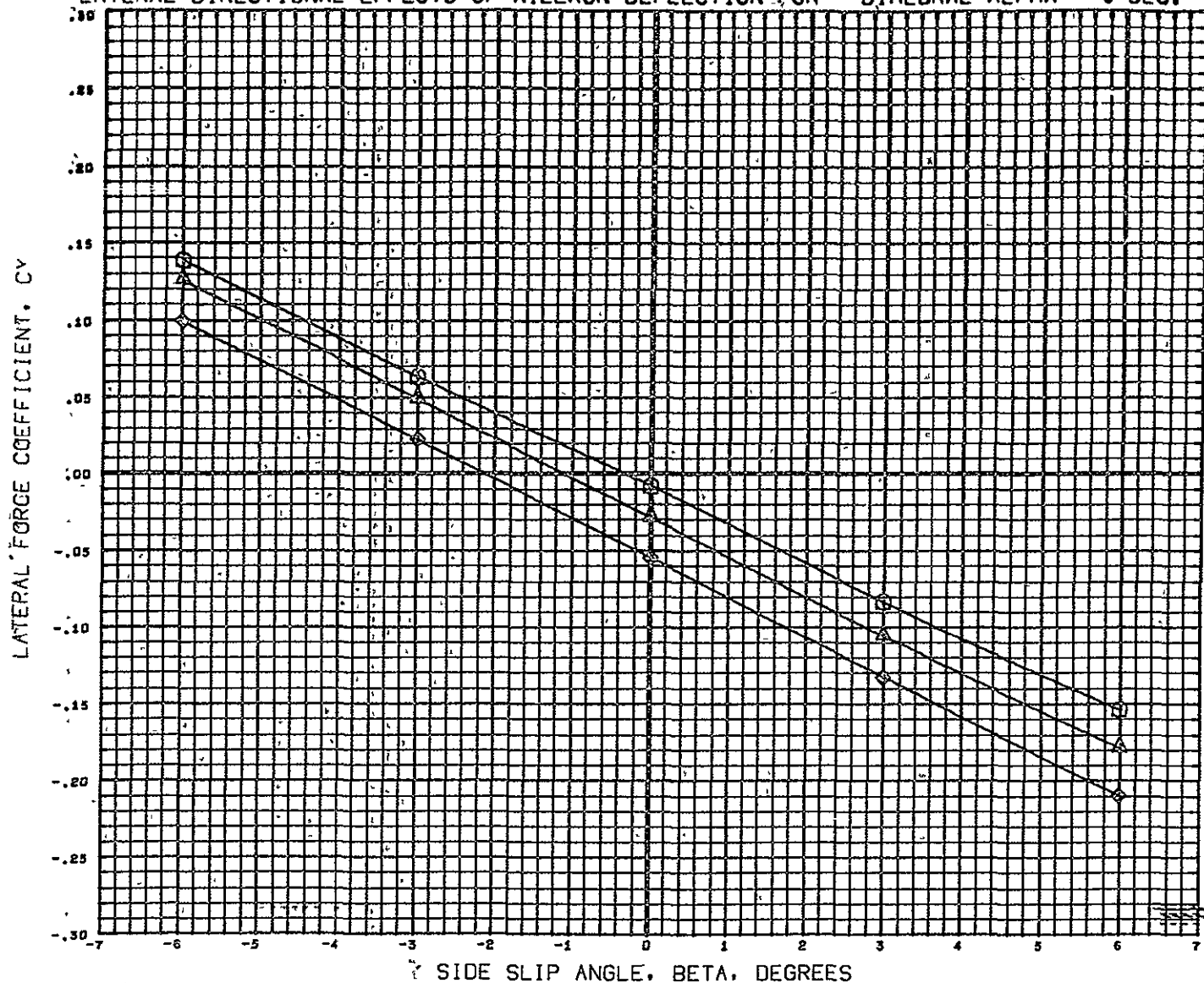
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	0,000	SREF 1.3550 SQ.FT.
(DN4117)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	10,000	LREF 3.4530 FEET
(DN4121)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	20,000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

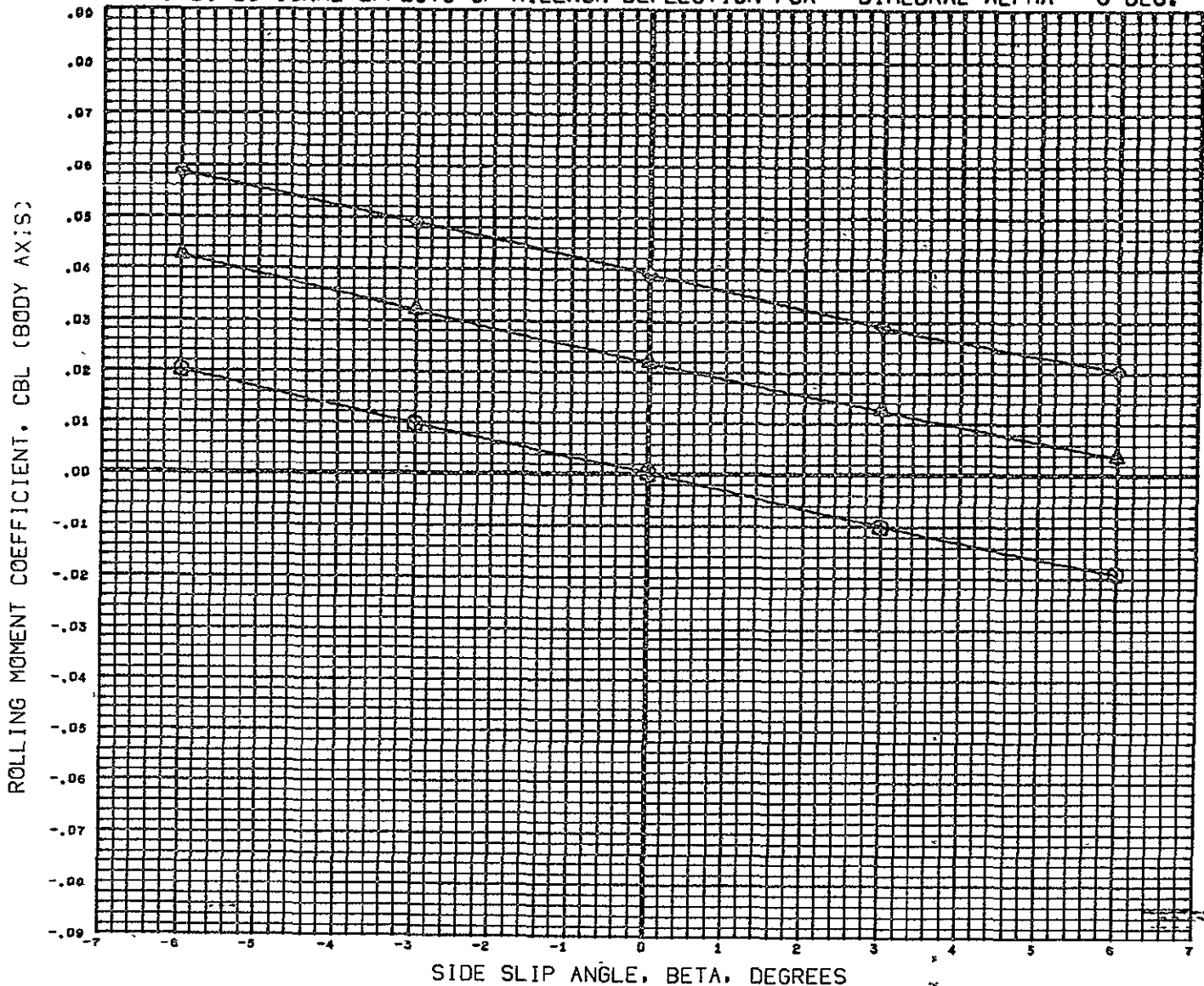
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4117)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4121)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

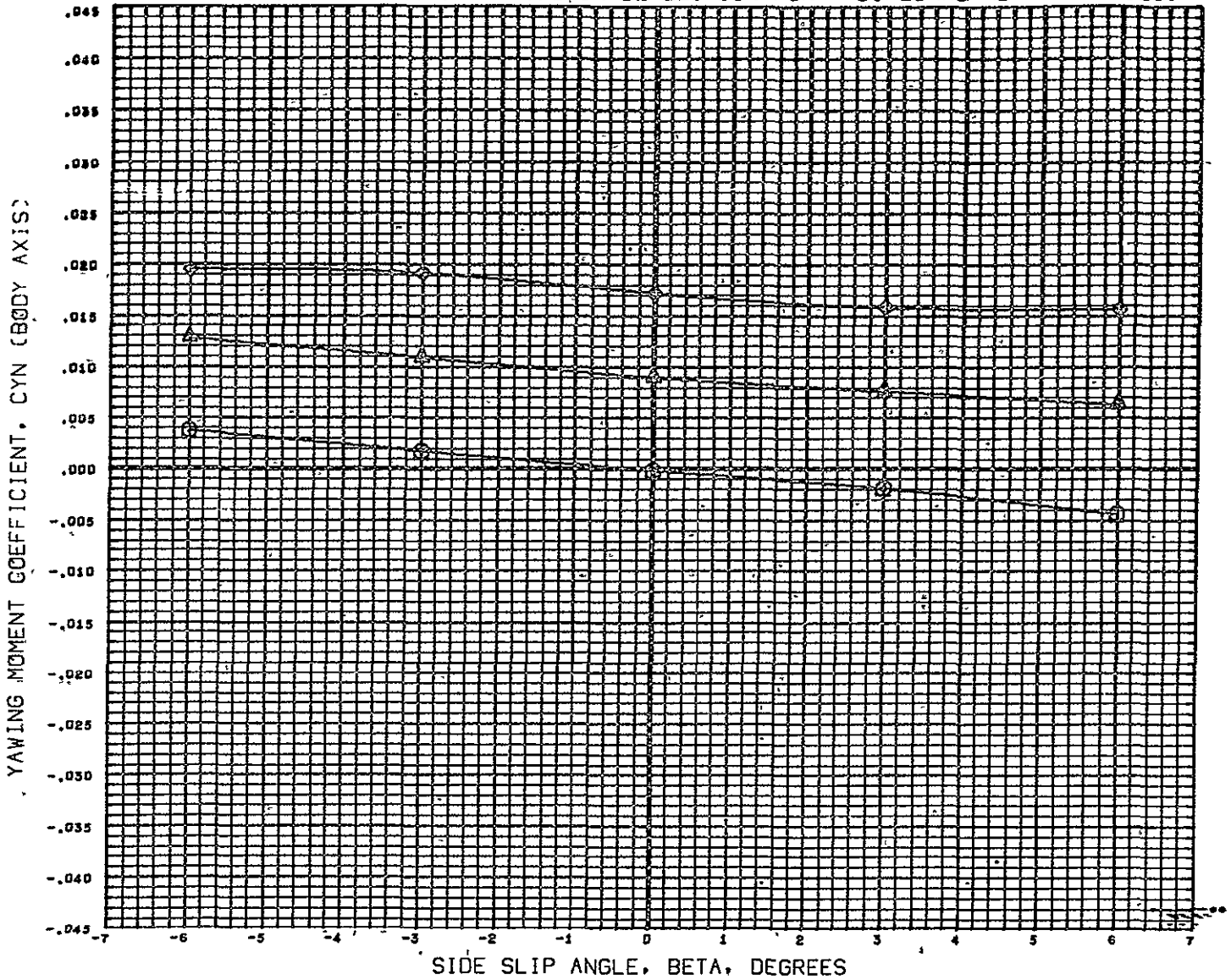
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 6 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4007)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4118)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2E1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4122)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

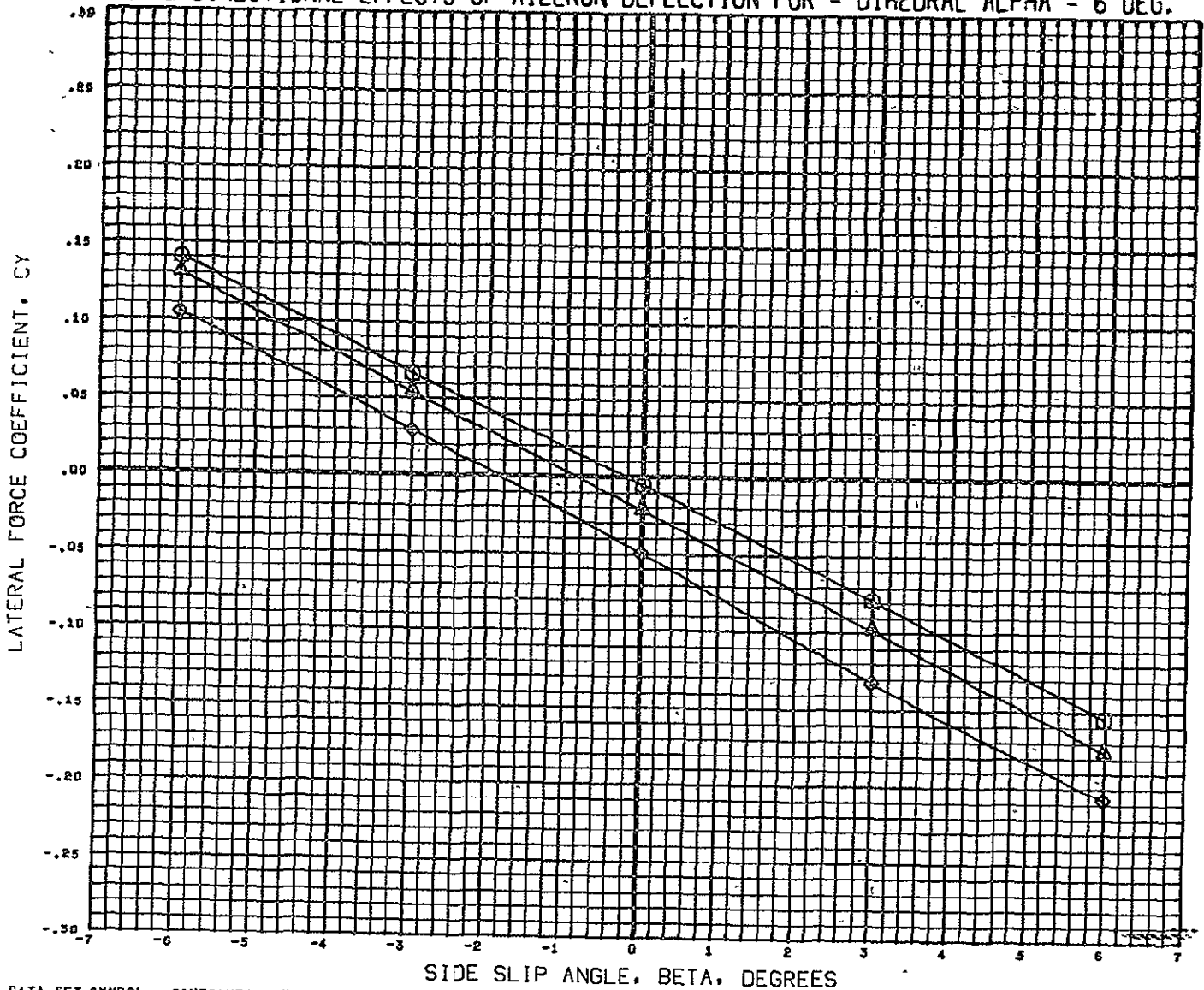
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 6 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4007)	NSPDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4110)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4122)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

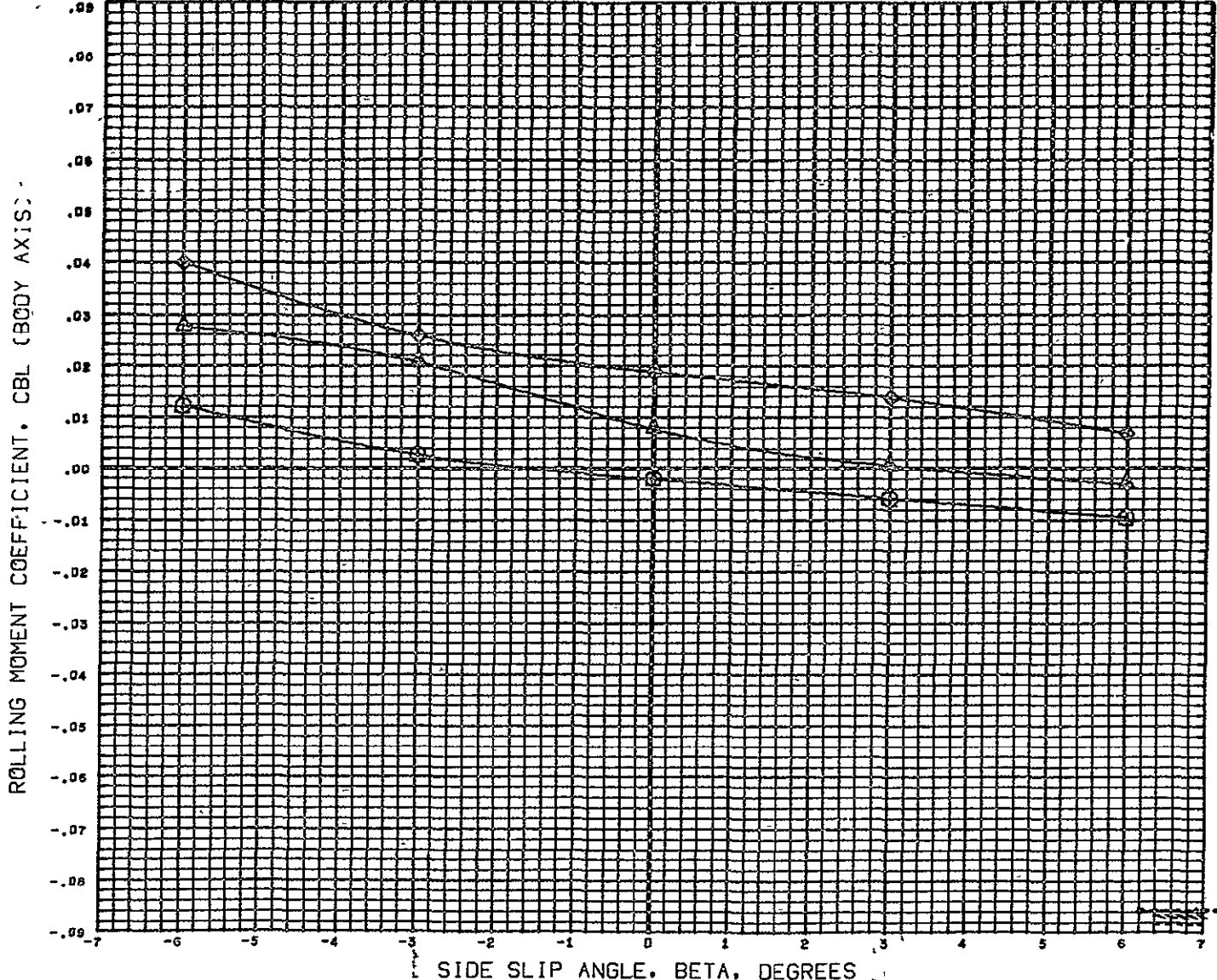
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 6 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V201	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4118)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4122)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

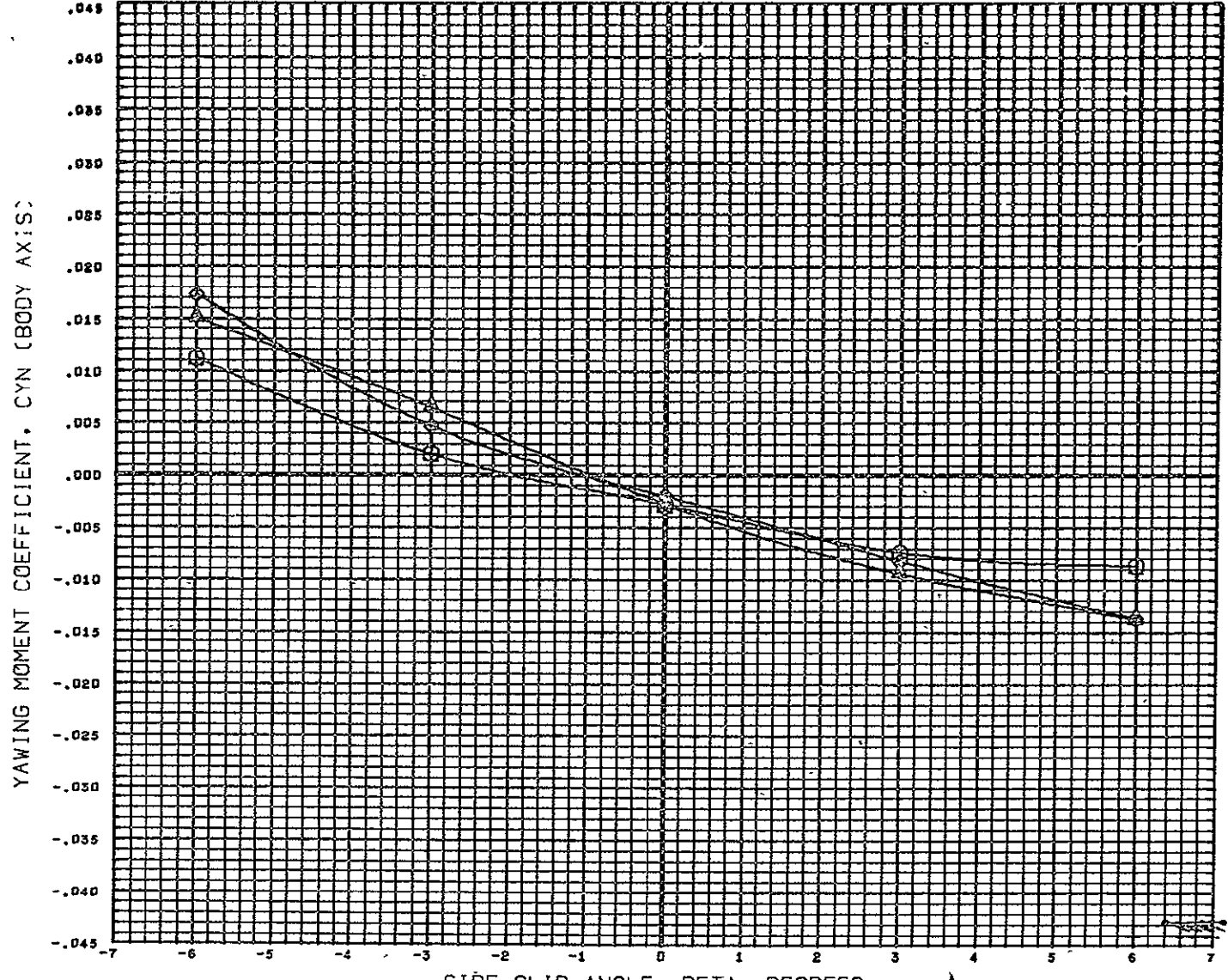
MACH .40

LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 15 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4008)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(DN4119)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4125)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

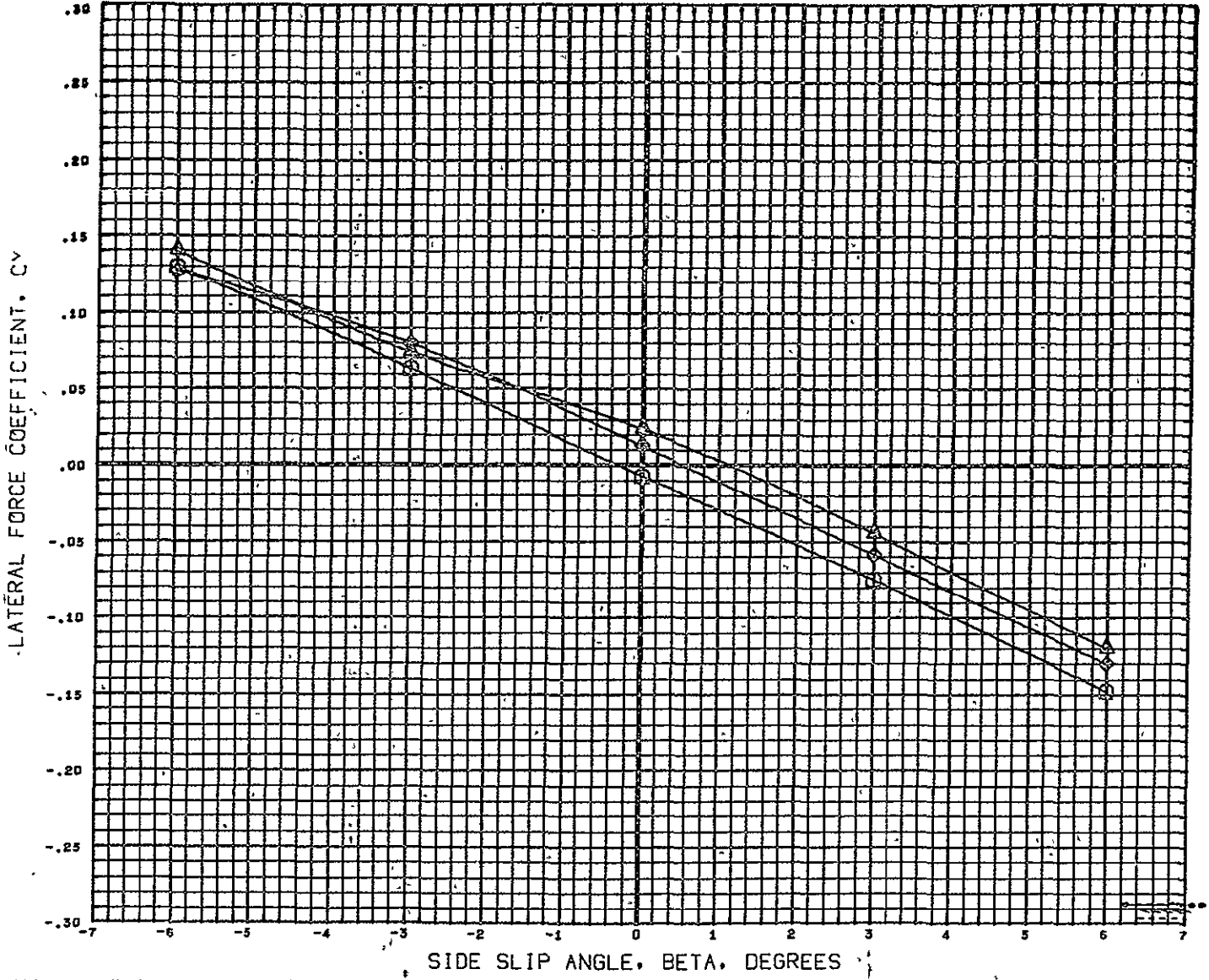
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 15. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4008)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4119)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4123)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

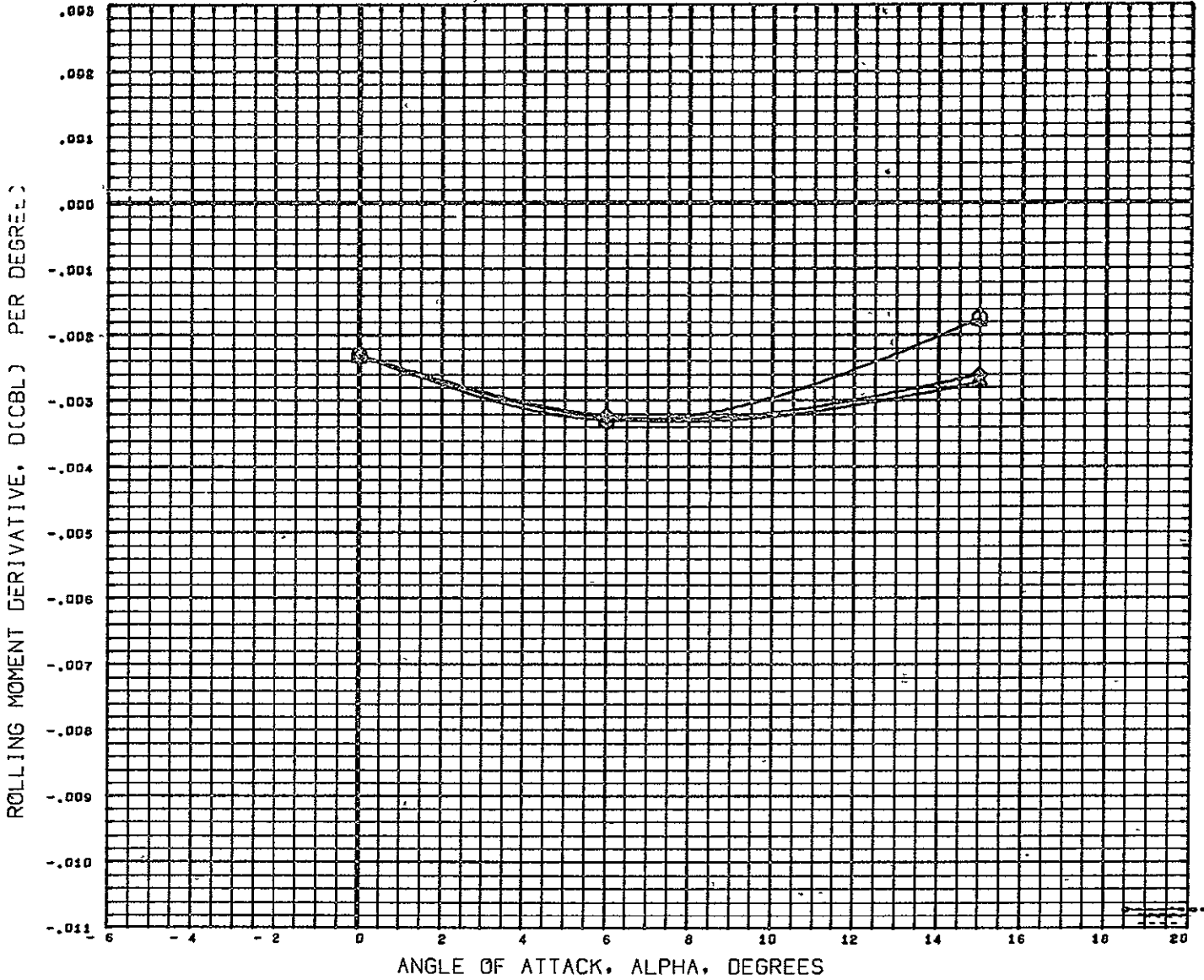
LATERAL-DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR - DIHEDRAL ALPHA = 15 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(GN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4119)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	LREF 3.4530 FEET
(DN4123)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	20.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

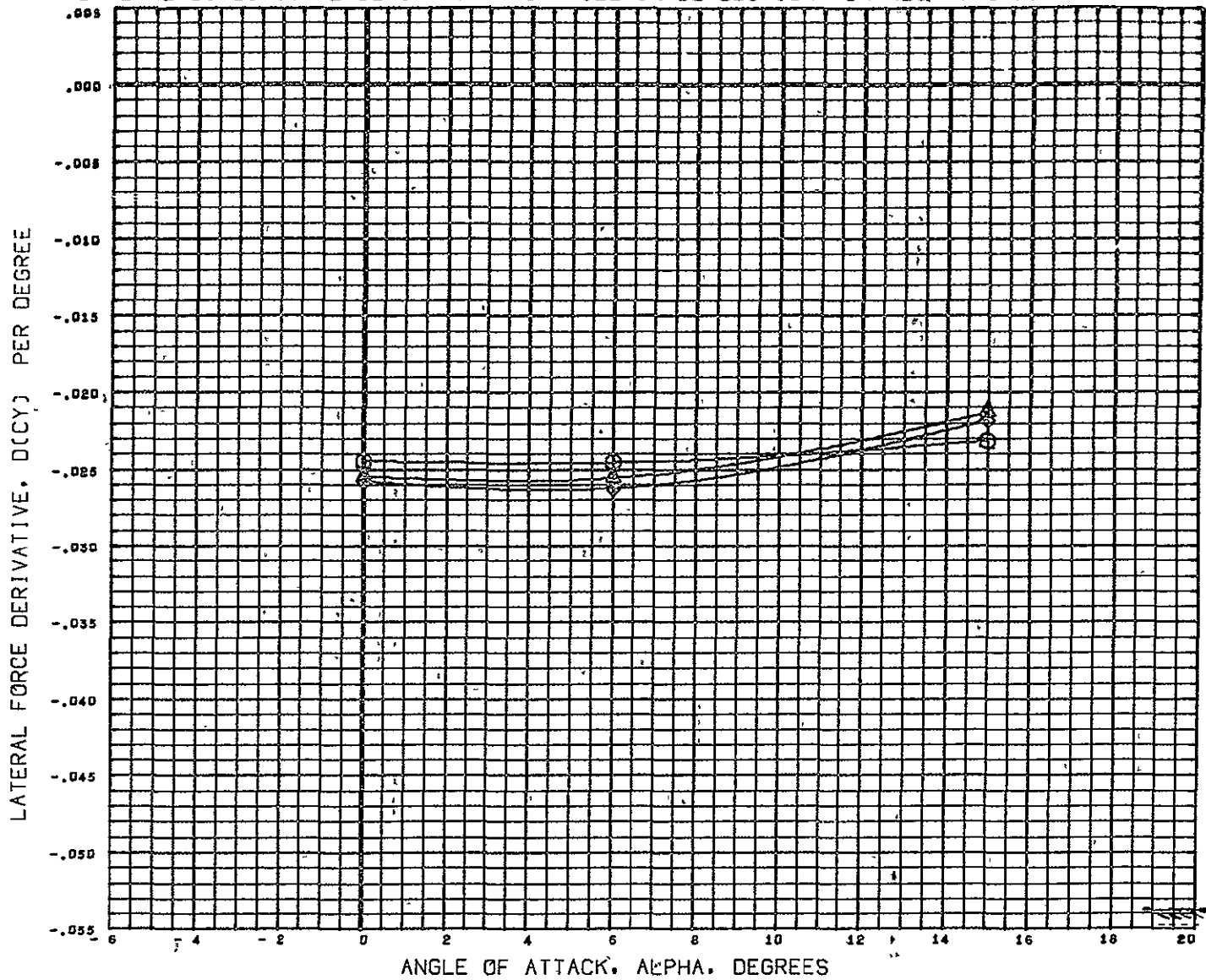
MACH. .40

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR NEGATIVE DIHEDRAL



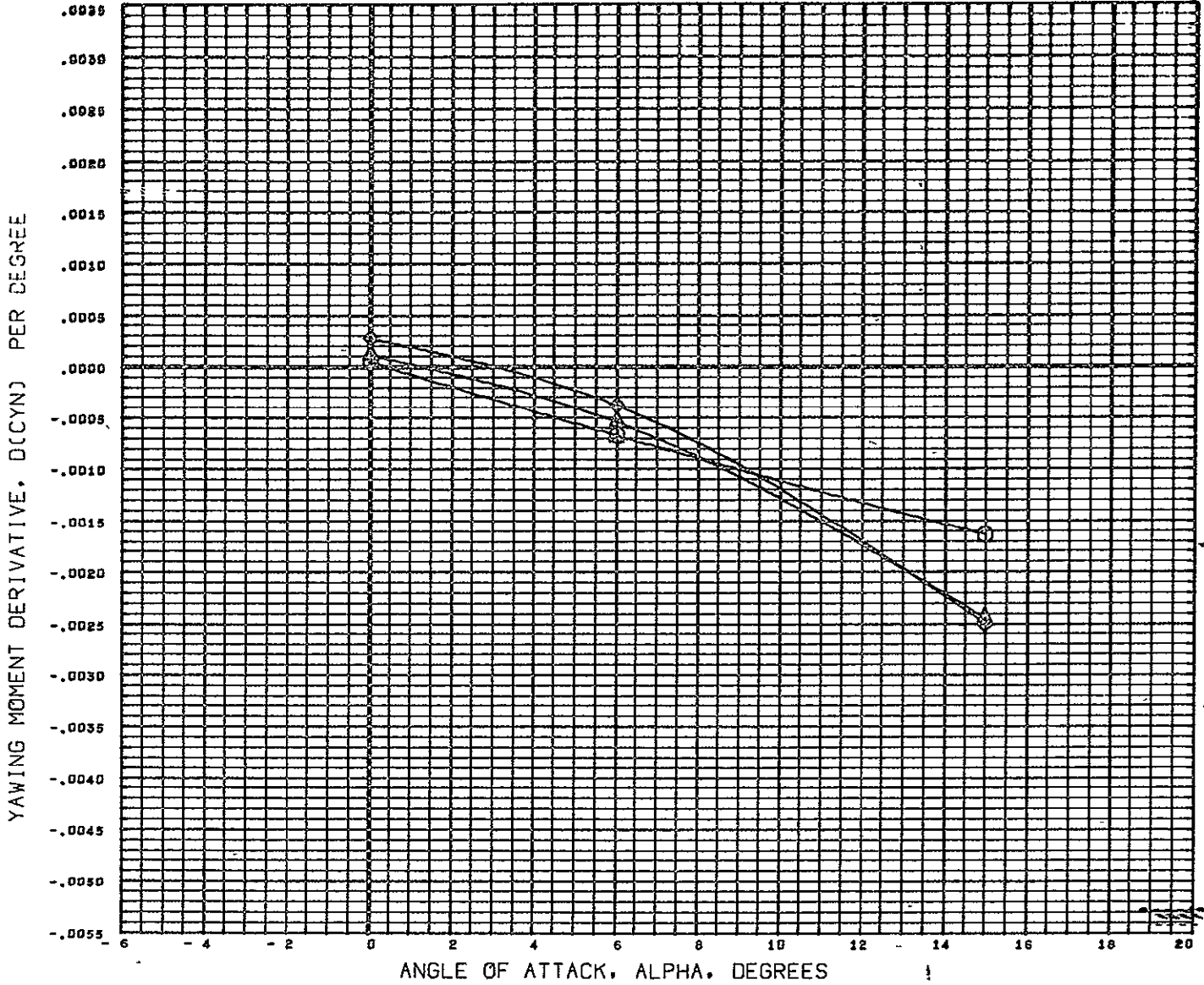
SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	10.000	INCIDW	0.000	DIHDL	-7.660	LREF	3.4530	FEET
◇	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST	CODE	HI		ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR NEGATIVE DIHEDRAL



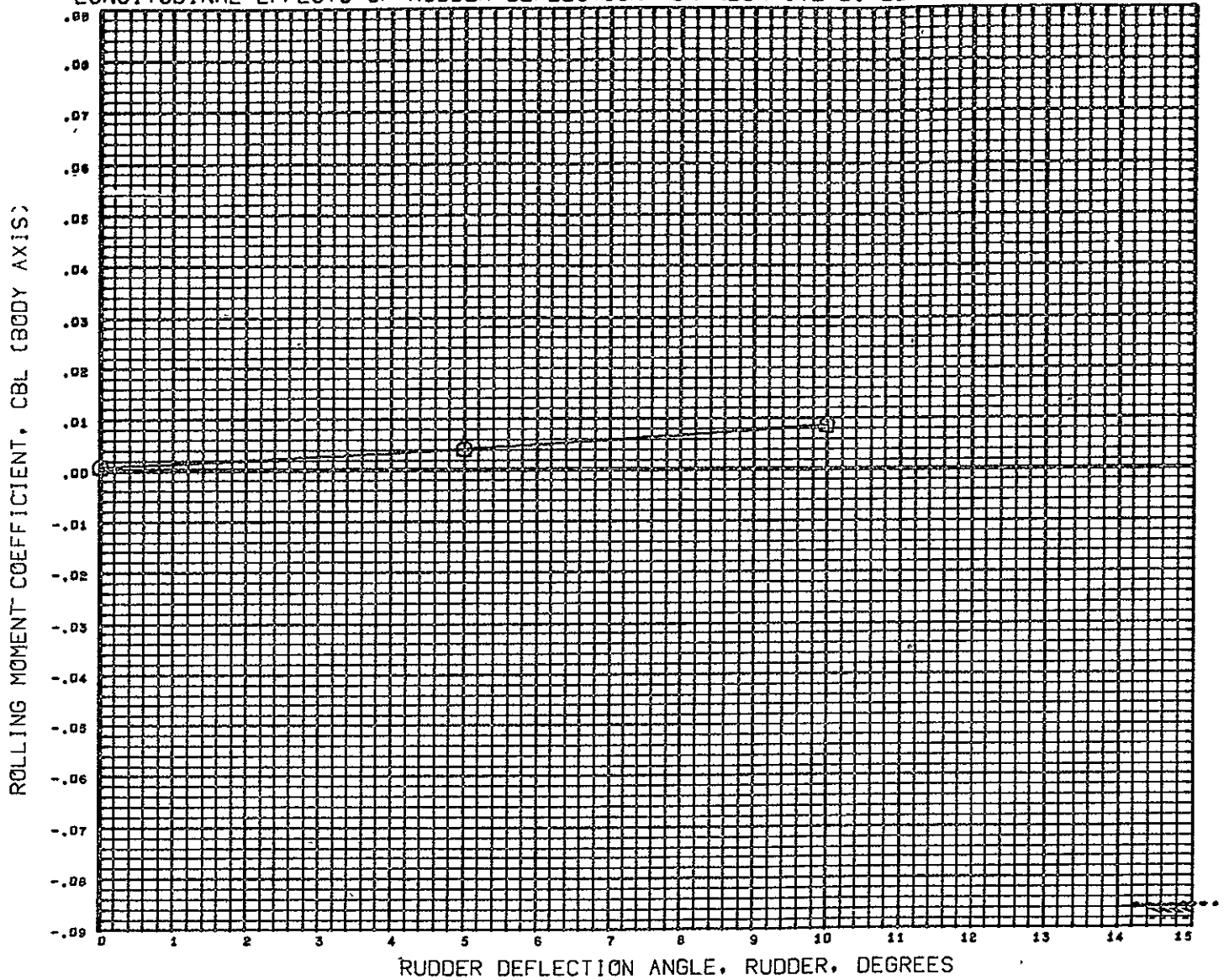
SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ FT.
◇	10.000	INCIDW	0.000	DIHDL	-7.660	LREF	3.4530	FEET
◇	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR NEGATIVE DIHEDRAL



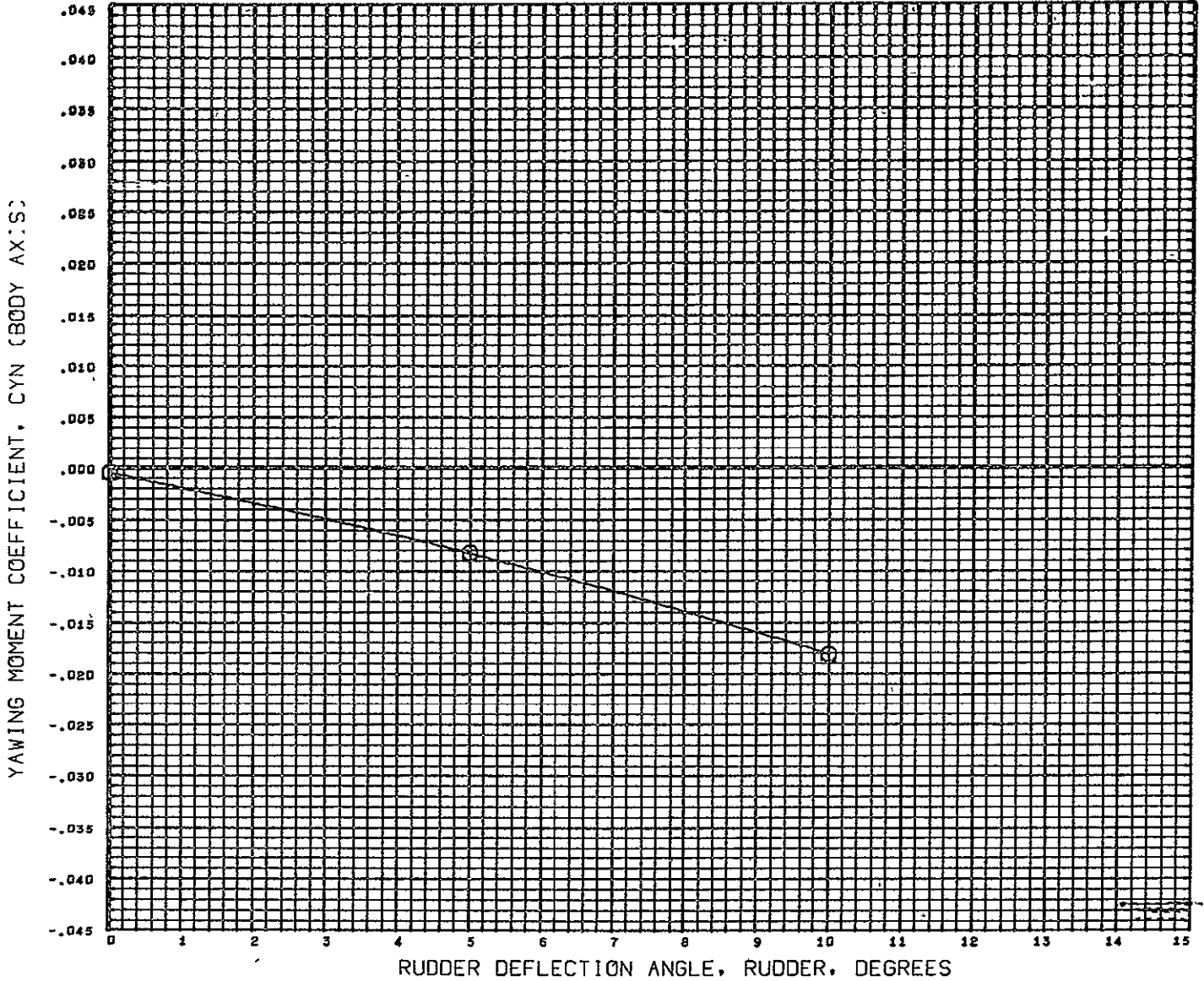
SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	50. FT.
◇	10.000	INCIDW	0.000	DIHDL	-7.660	UREF	3.4530	FEET
◇	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



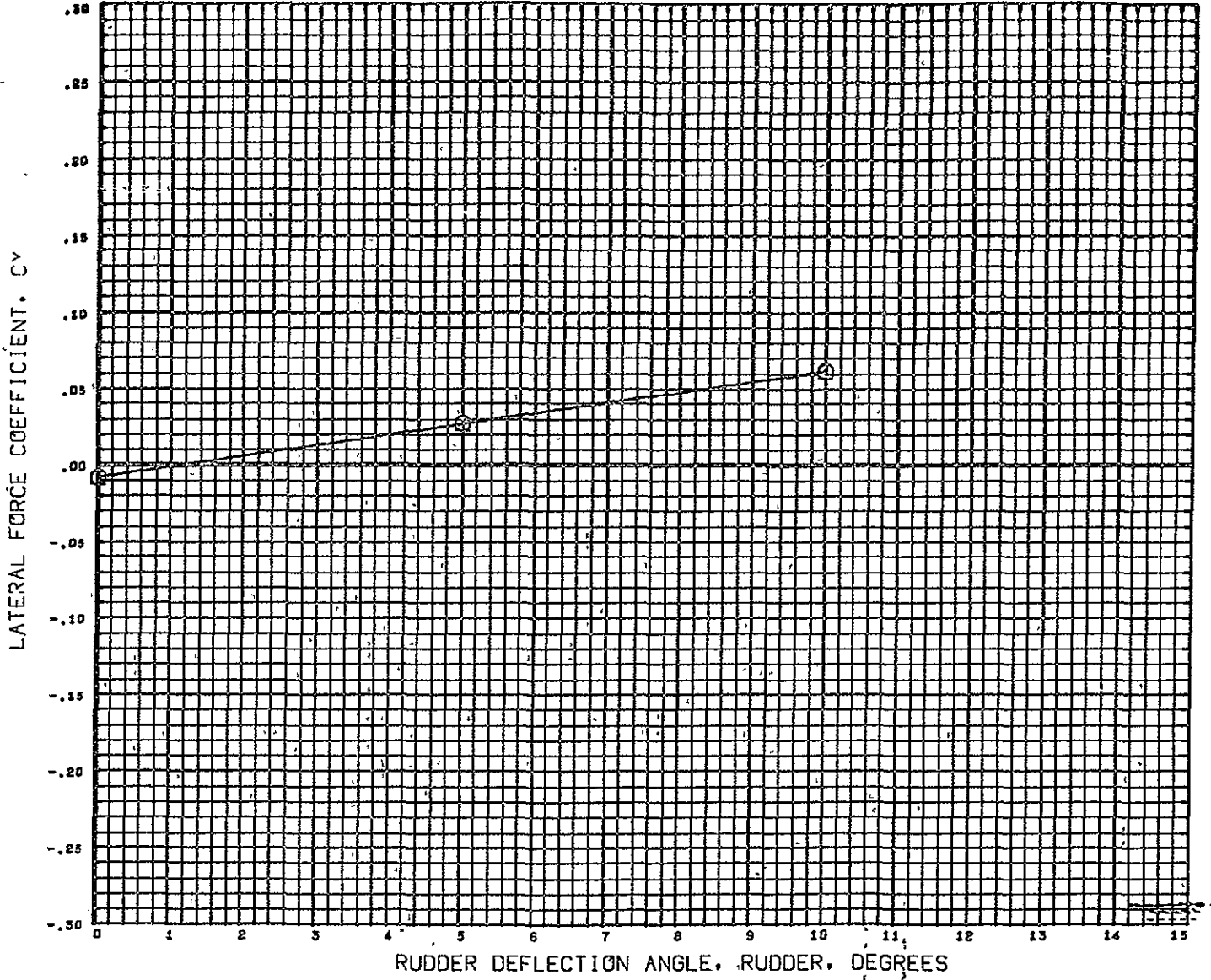
SYMBOL	BETA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	ALPHA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL - BETA = 0



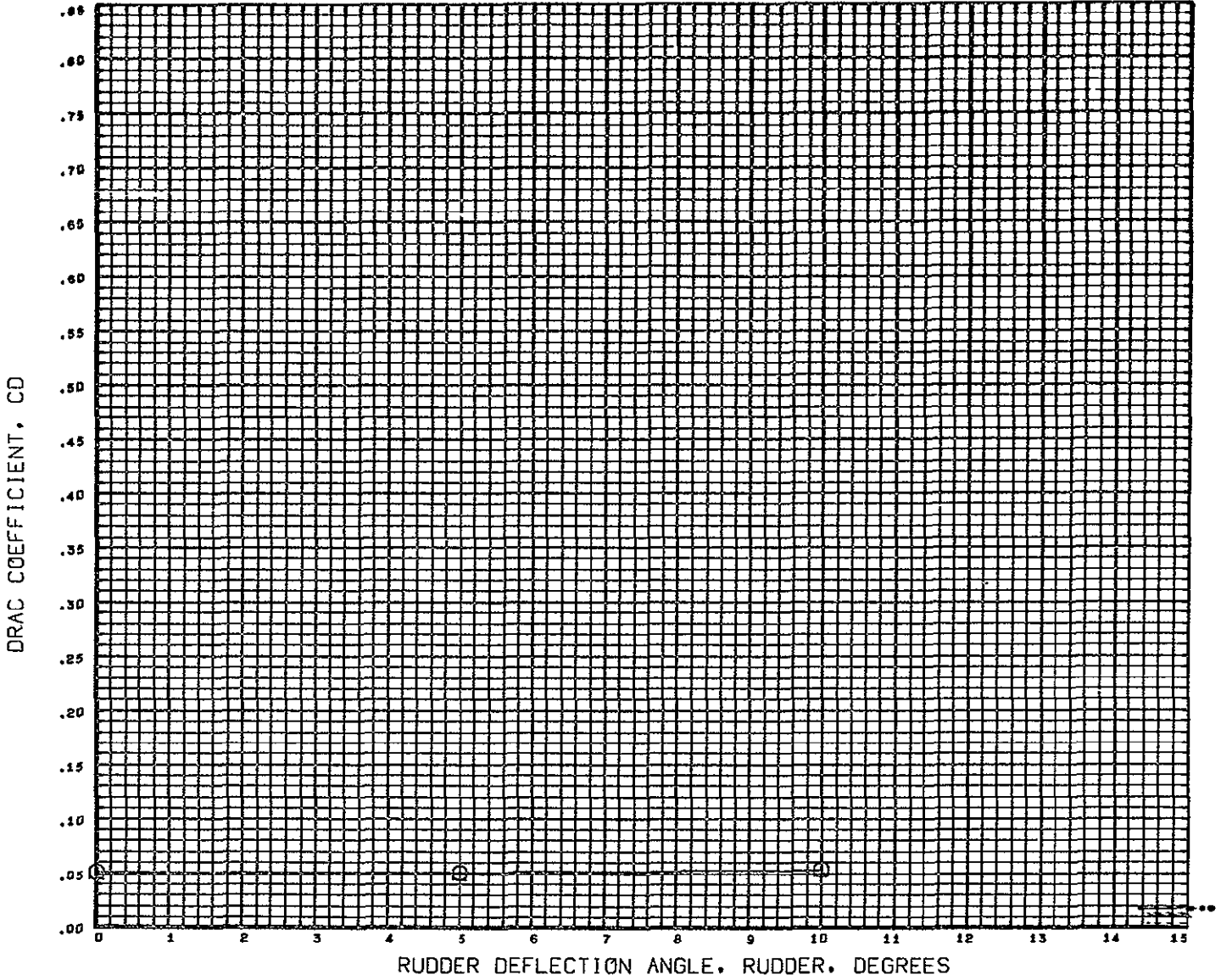
SYMBOL	BETA	PARAMETRIC VALUES				REFERENCE INFORMATION		
		MACH	ALPHA	INCIDW	SREF	FEET	SCALE	
○	0.000	0.400	0.000	0.000	1.3550	30. FT.		
		3.000	0.000	0.000	LREF	3.4530	FEET	
		DIHEDRAL - 7.660	AILRON	0.000	BREF	3.4530	FEET	
		CANARD	ELEVTR	0.000	XMRP	2.5950	FEET	
		WNGPOS	CNDPOS	1.000	YMRP	0.0000	FEET	
		DATA HIST. CODE	HI		ZMRP	0.0187	FEET	
					SCALE	0.0150	SCALE	

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



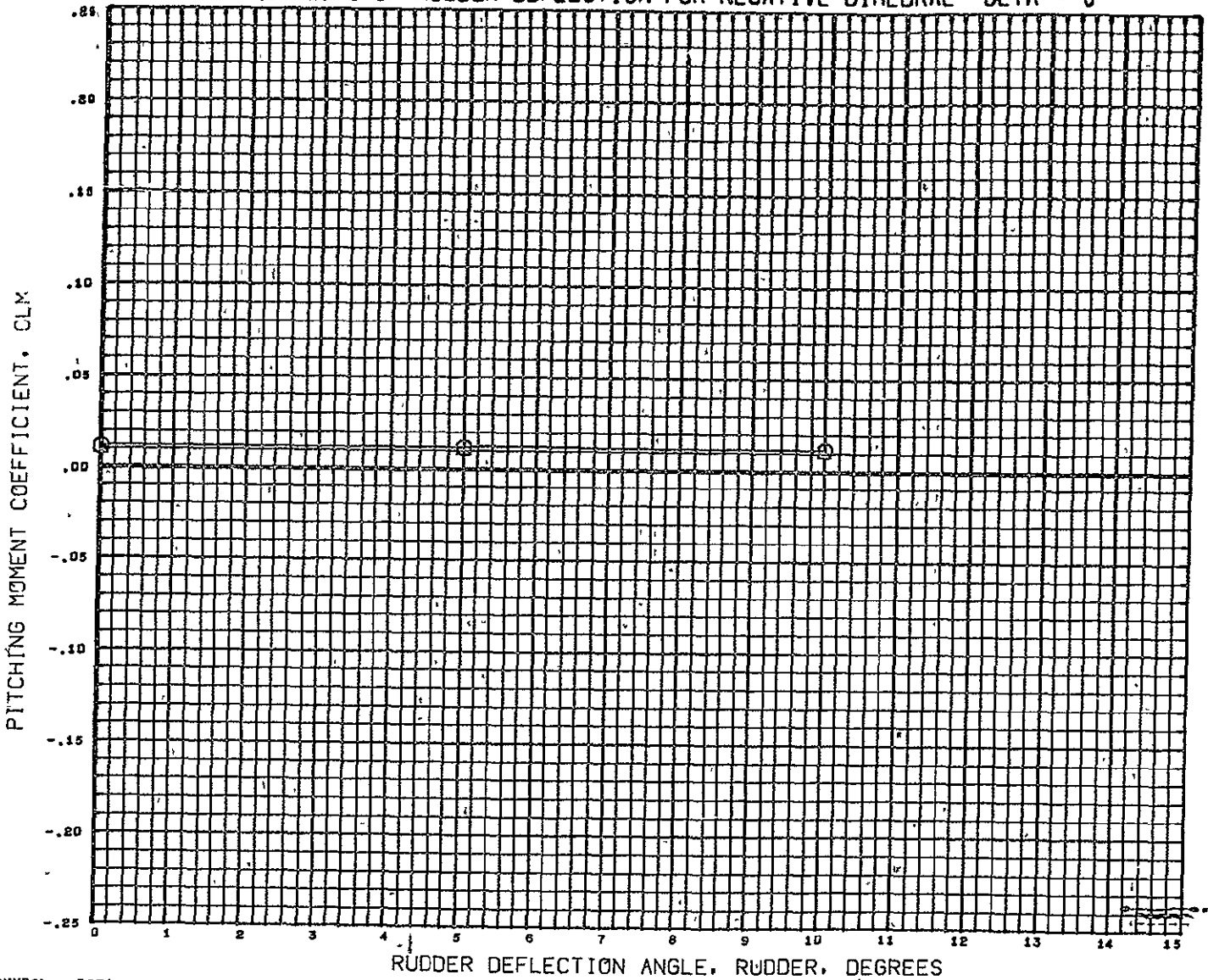
SYMBOL	BETA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	ALPHA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



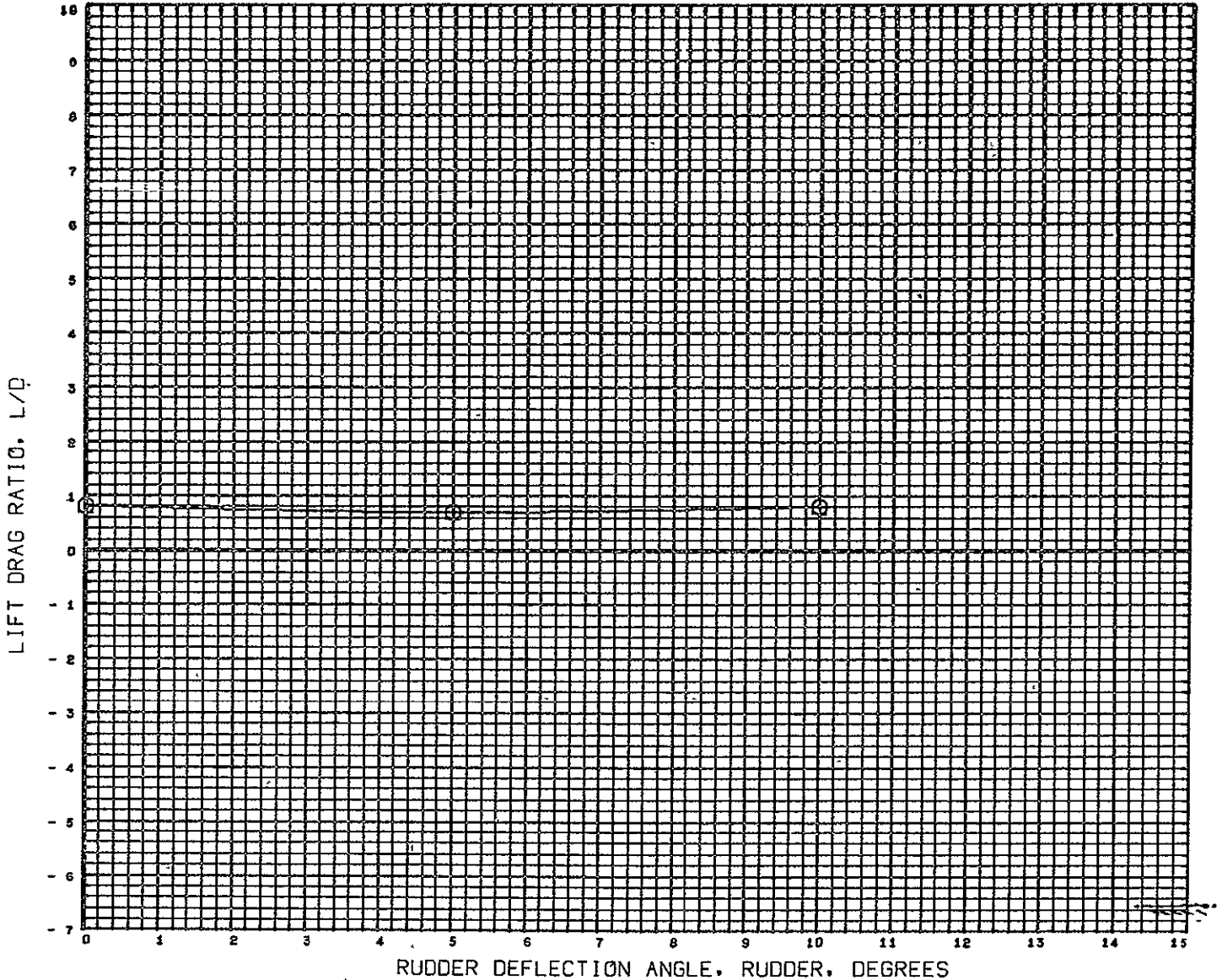
SYMBOL	BETA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	ALPHA	0.000	SREF	1 3550	80.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHEDL	- 7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	YMRF	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRF	0.0000	FEET
		DATA HIST. CODE	MI			ZMRF	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



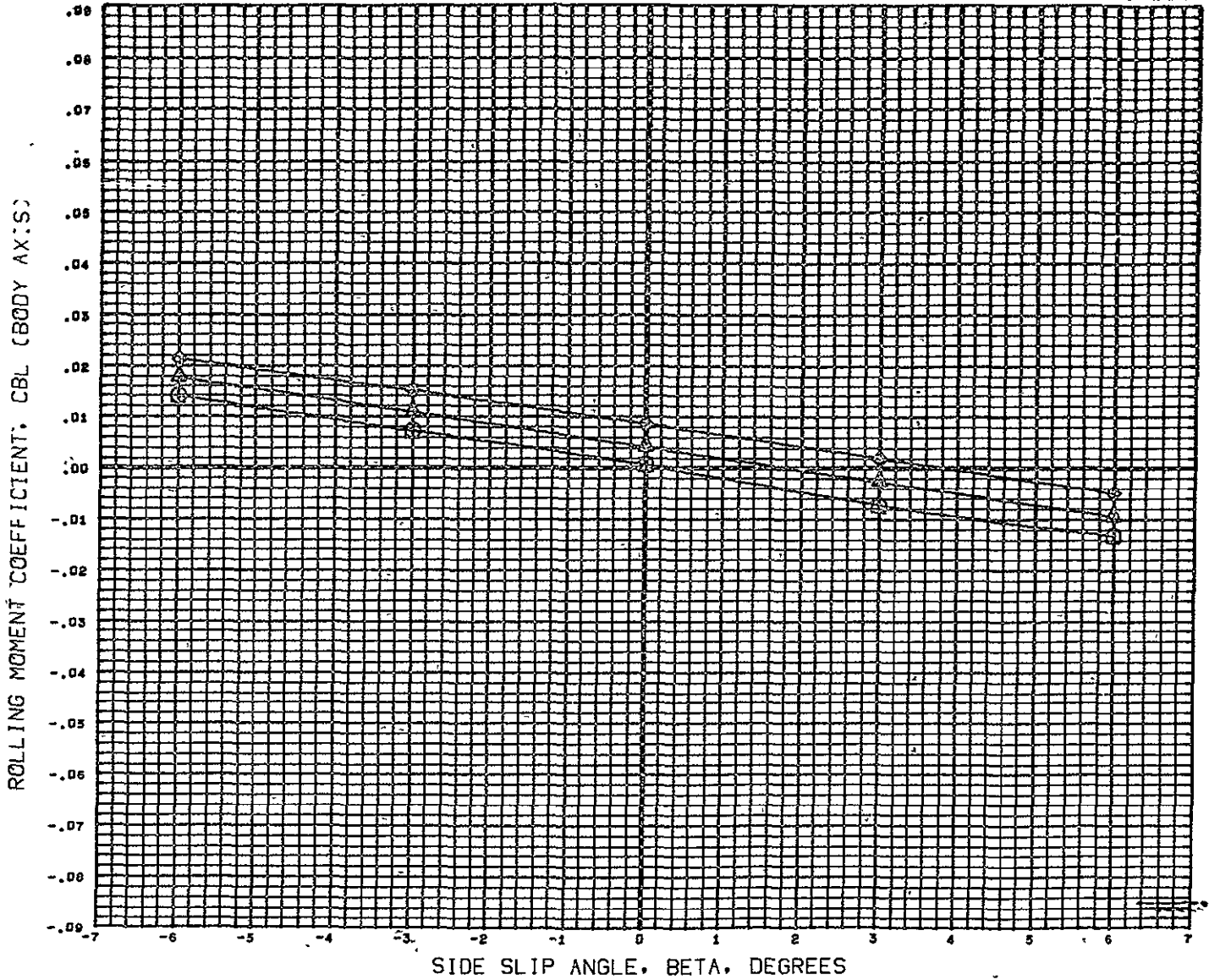
SYMBOL	BETA	PARAMETRIC VALUES				REFERENCE INFORMATION		
0	0.000	MACH	0.400	ALPHA	0.000	SREF	1.3550	59. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	-7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL BETA = 0



SYMBOL	BETA	PARAMETRIC VALUES				1 REFERENCE INFORMATION		
○	0.000	MACH	0.400	ALPHA	0.000	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	- 7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	1.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0 DEG

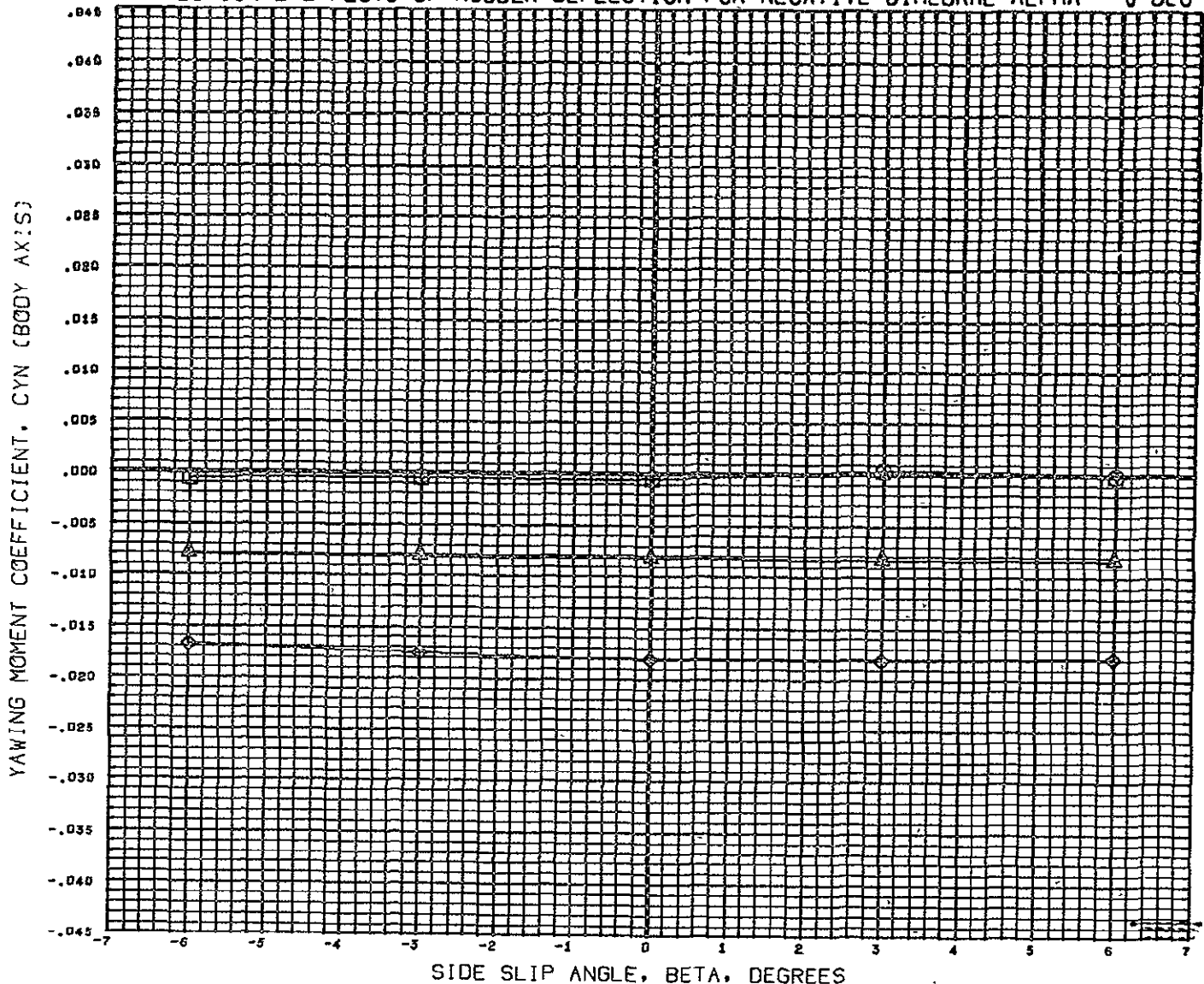


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4006)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ. FT.
(DN4124)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4127)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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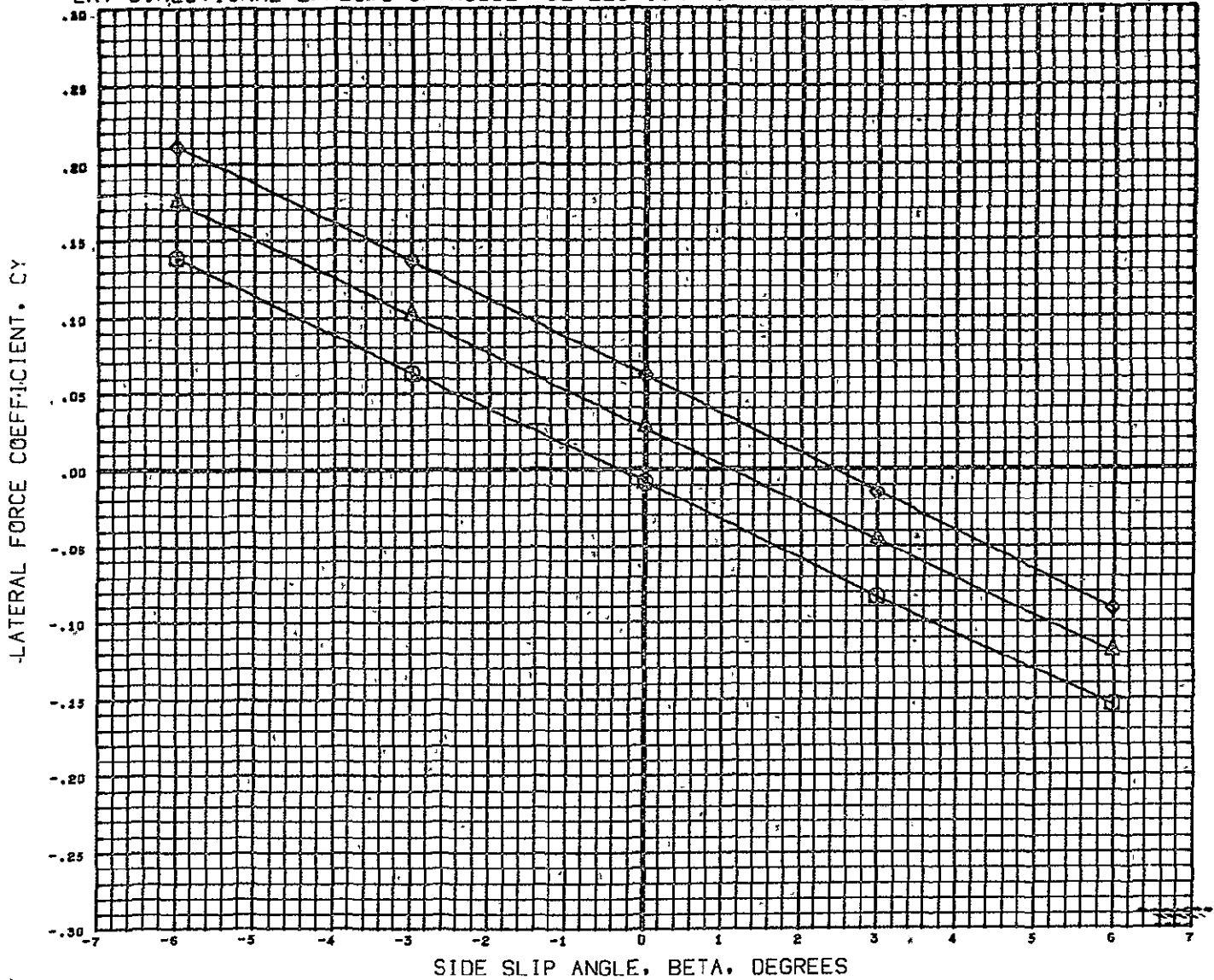
LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4006)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4124)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4127)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

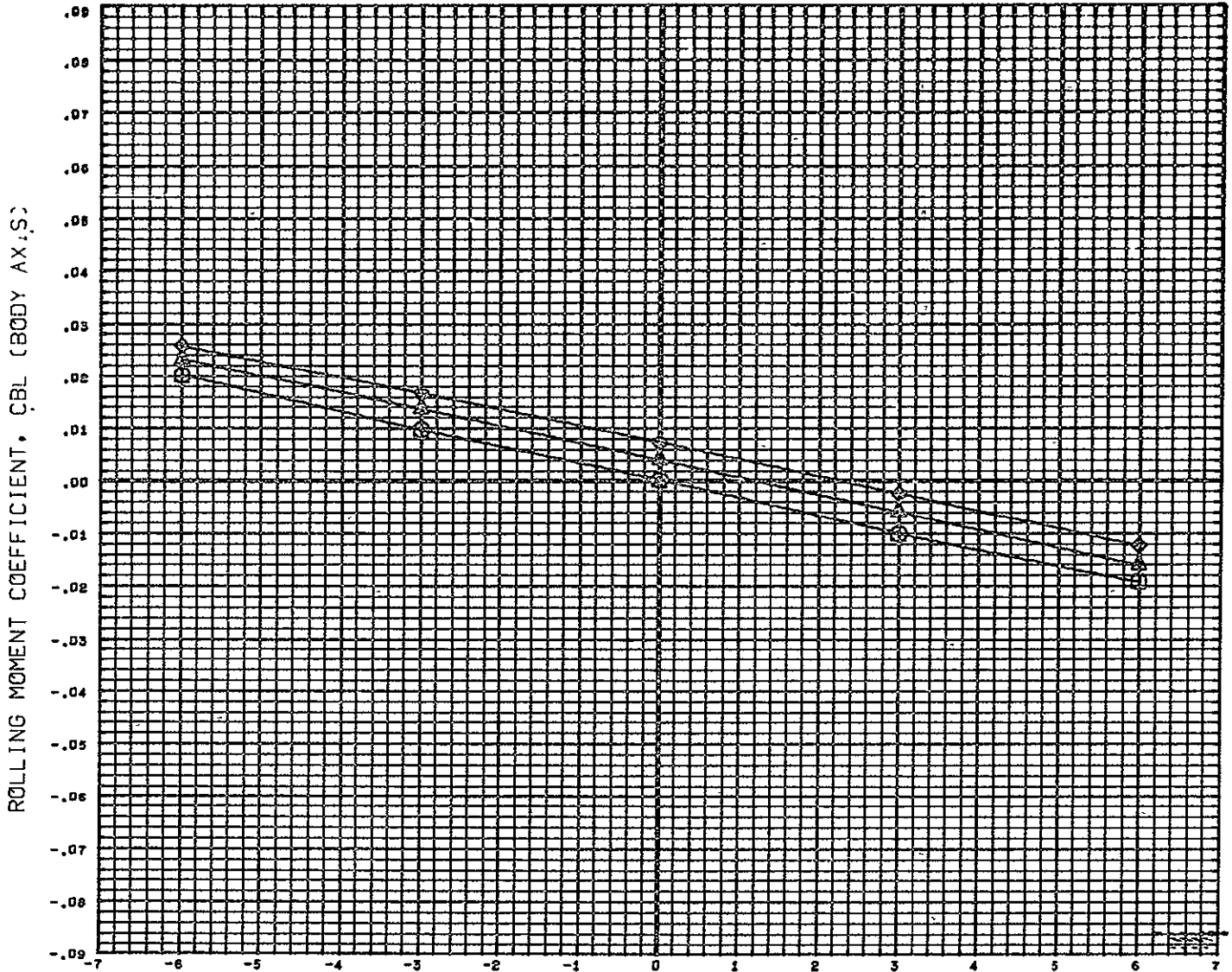
MACH .40

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 59 FT
(DN4124)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4127)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6 DEG

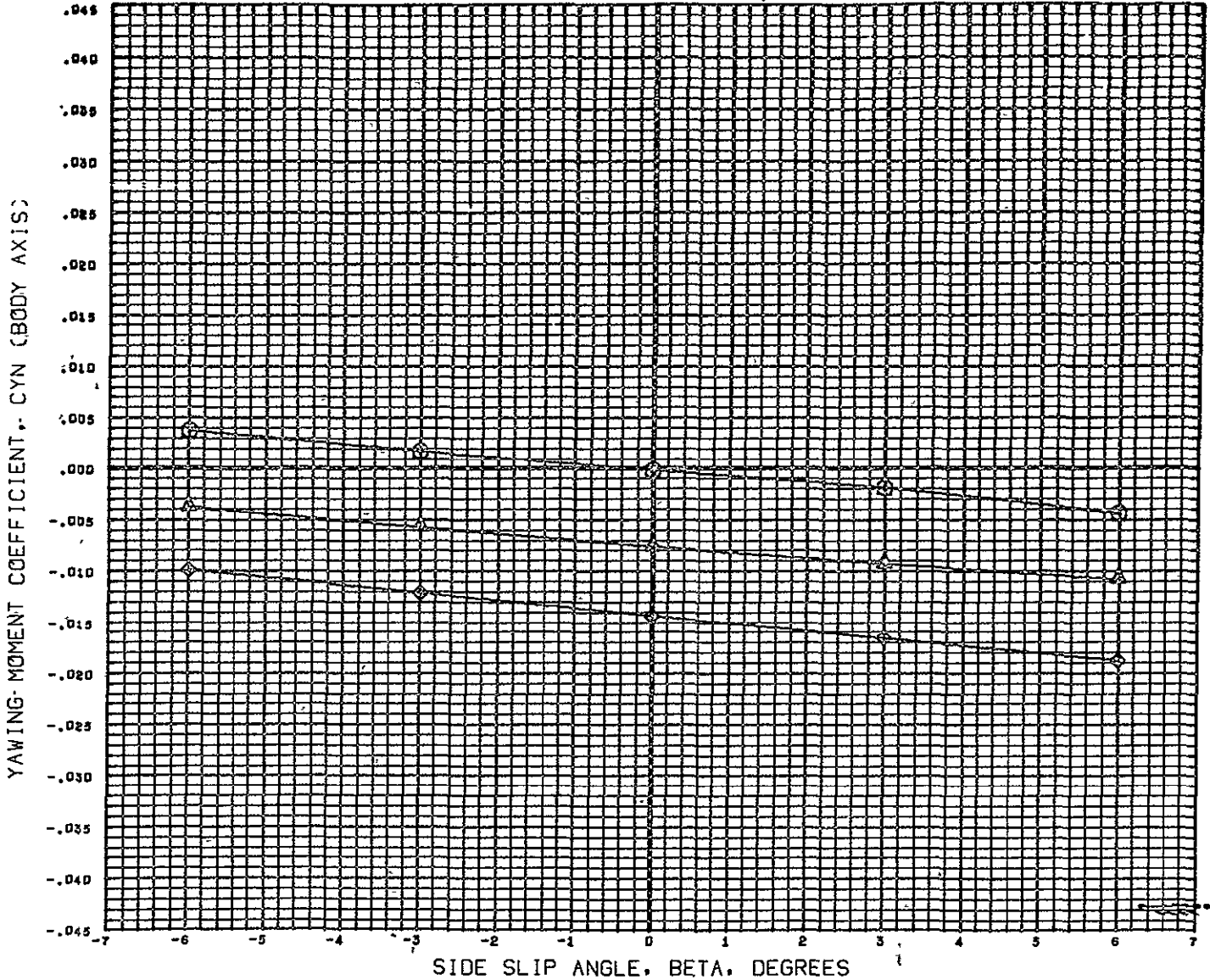


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4007) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4125) △	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4128) ◇	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

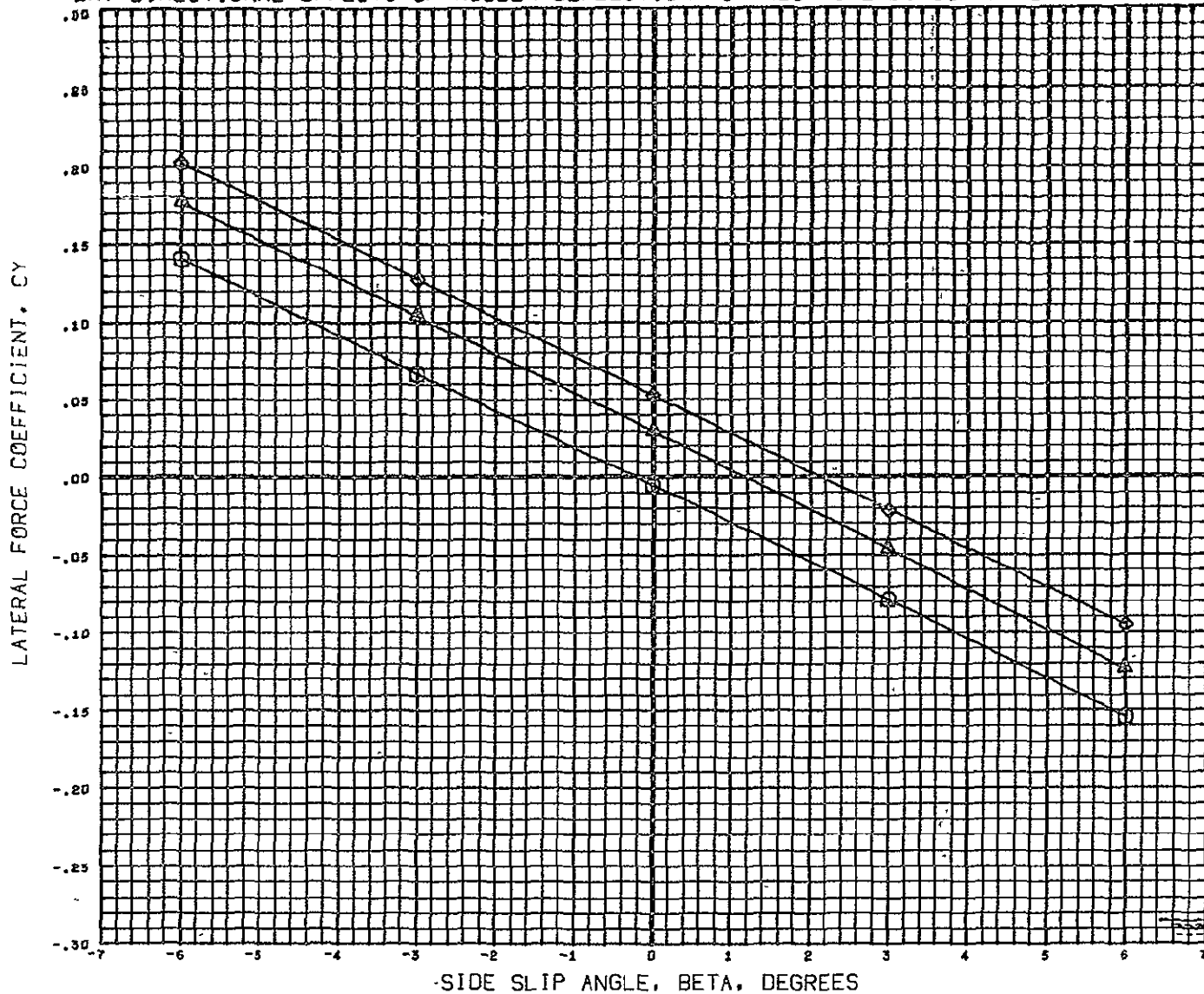
LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4125)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4128)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA = 6 DEG

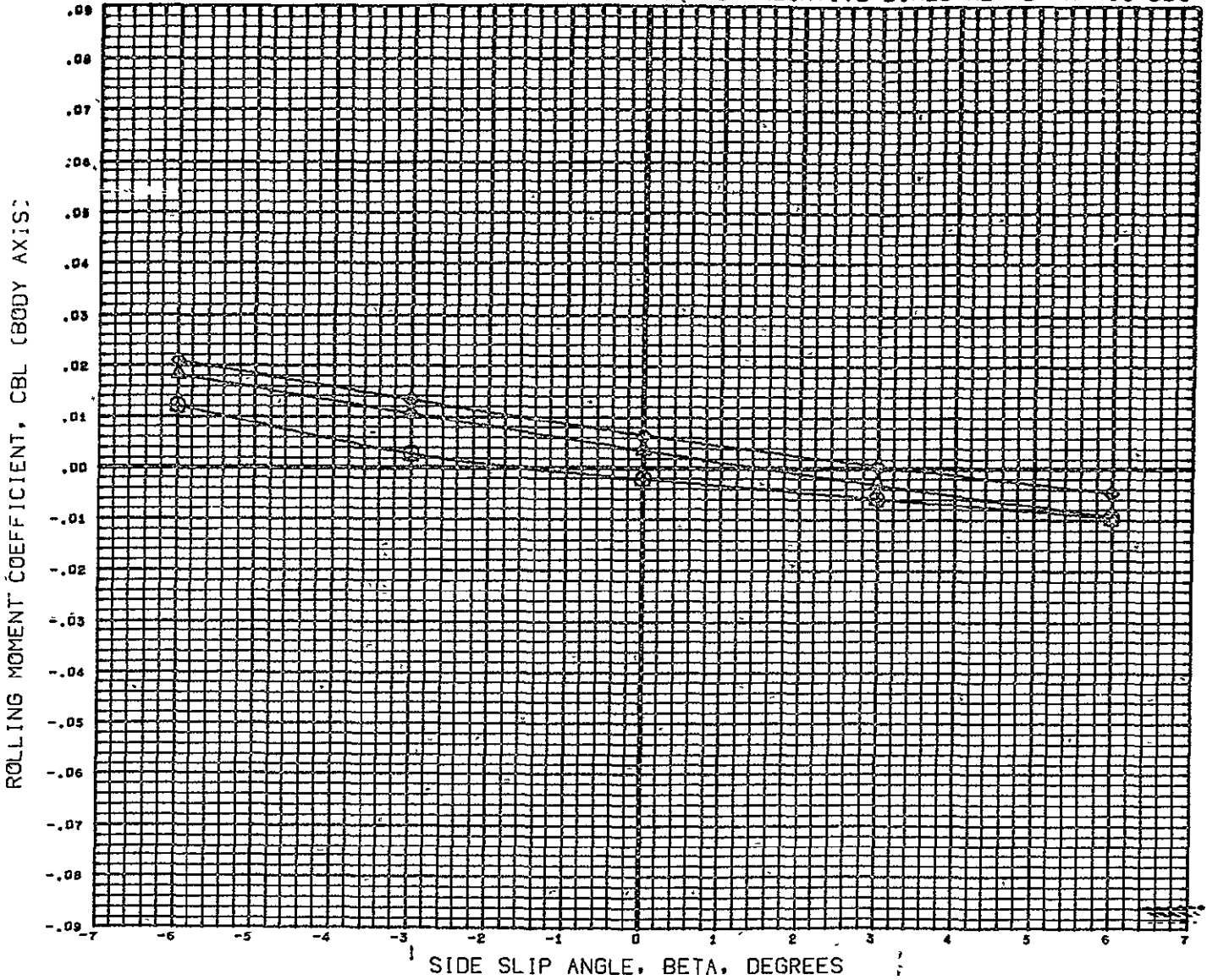


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4007) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4125) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	-1.000	5.000	LREF 3.4530 FEET
(DN4128) ◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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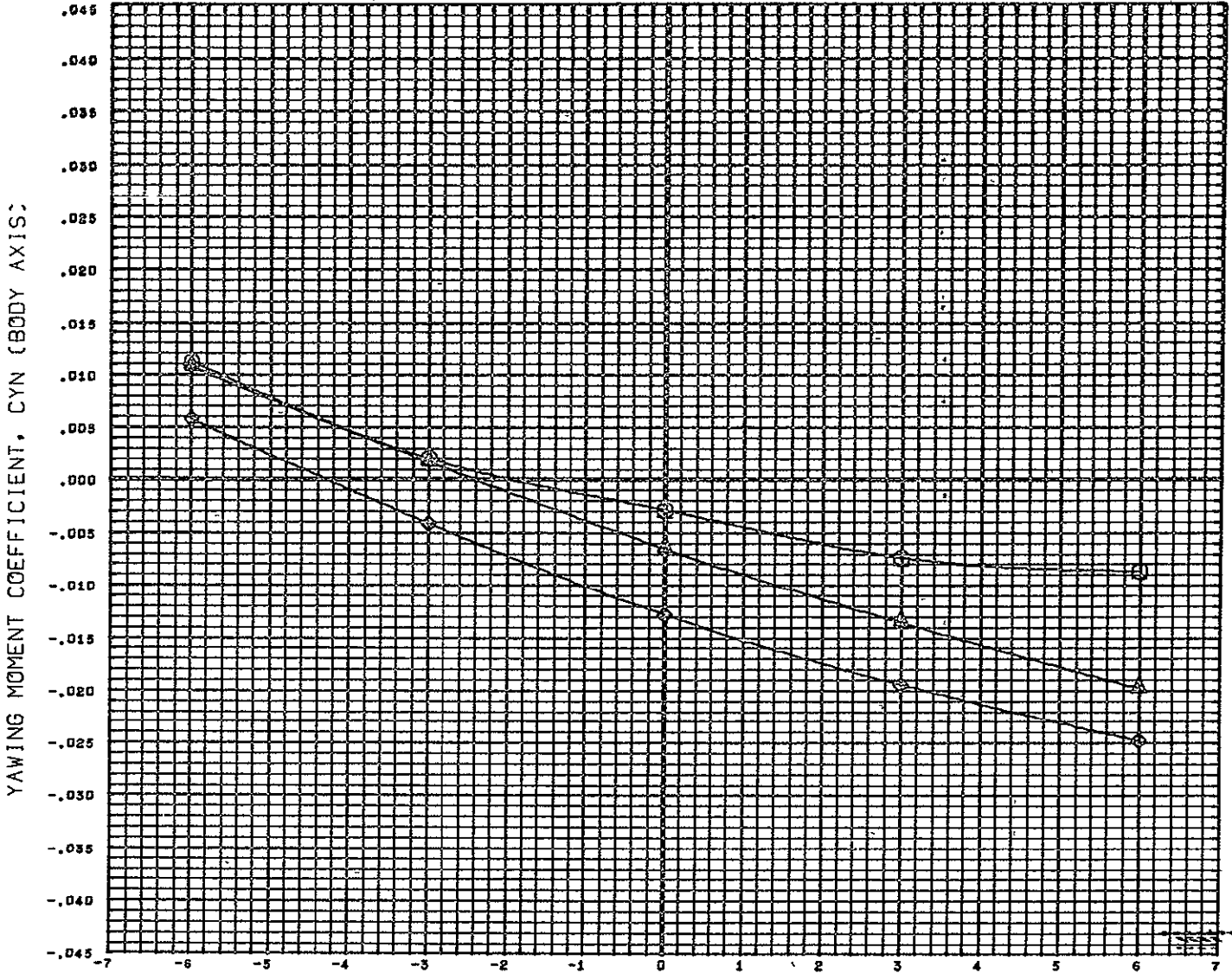
LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA =15 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4126)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3.4530 FEET
(DN4129)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA =15 DEG



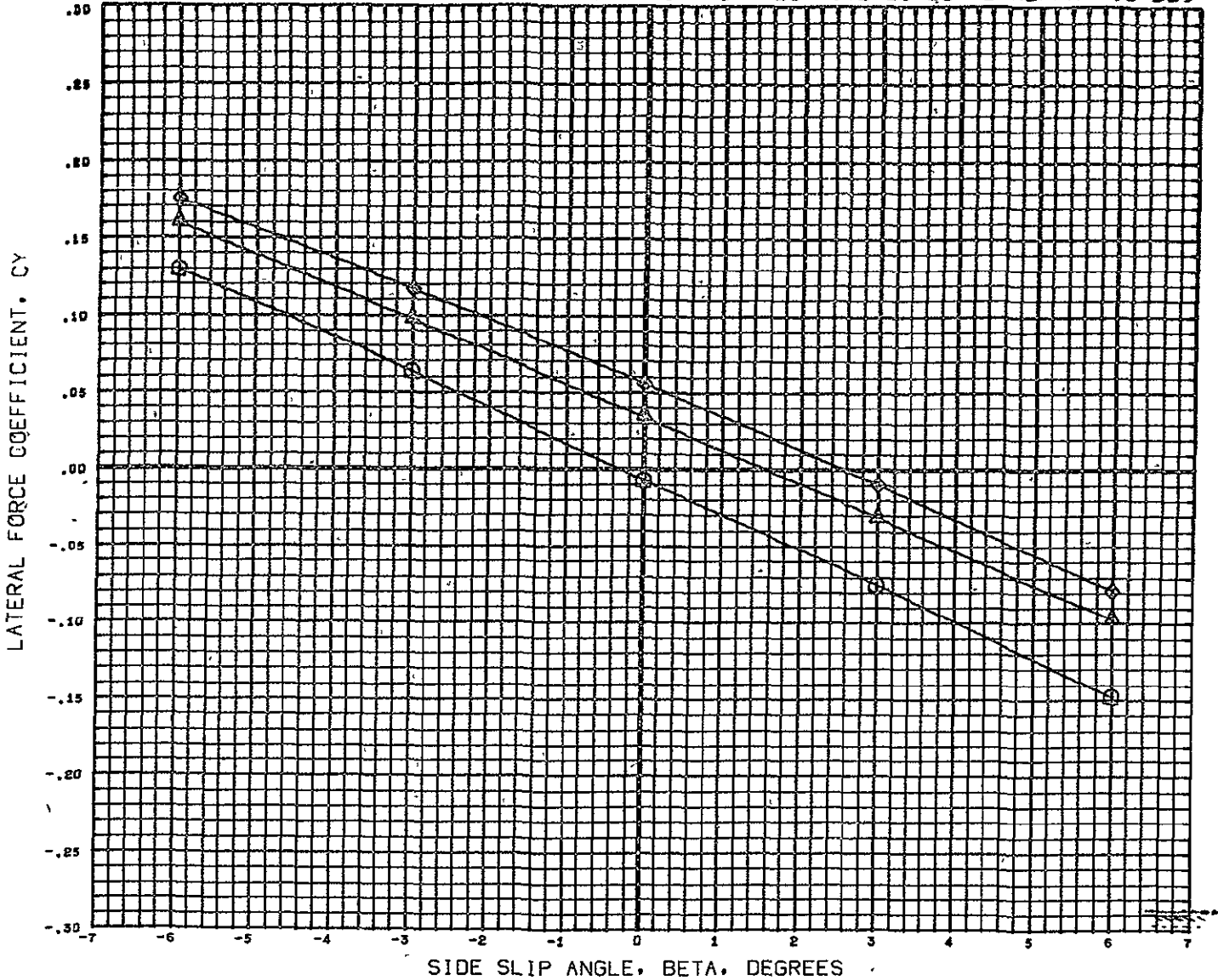
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4008)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT.
(DN4126)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5.000	LREF 3 4530 FEET
(DN4129)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10.000	BREF 3 4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

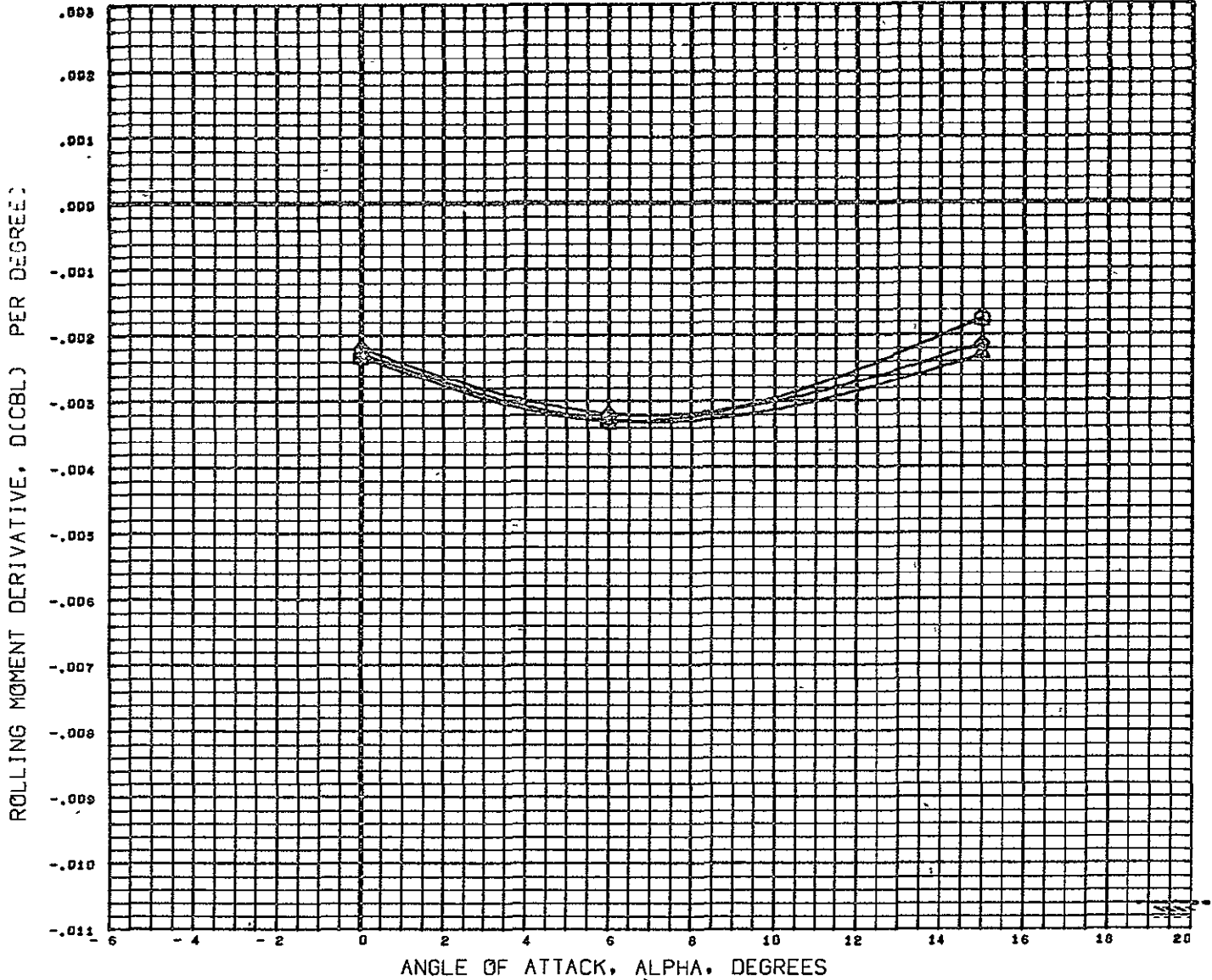
PAGE 409

LAT-DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL ALPHA =15 DEG



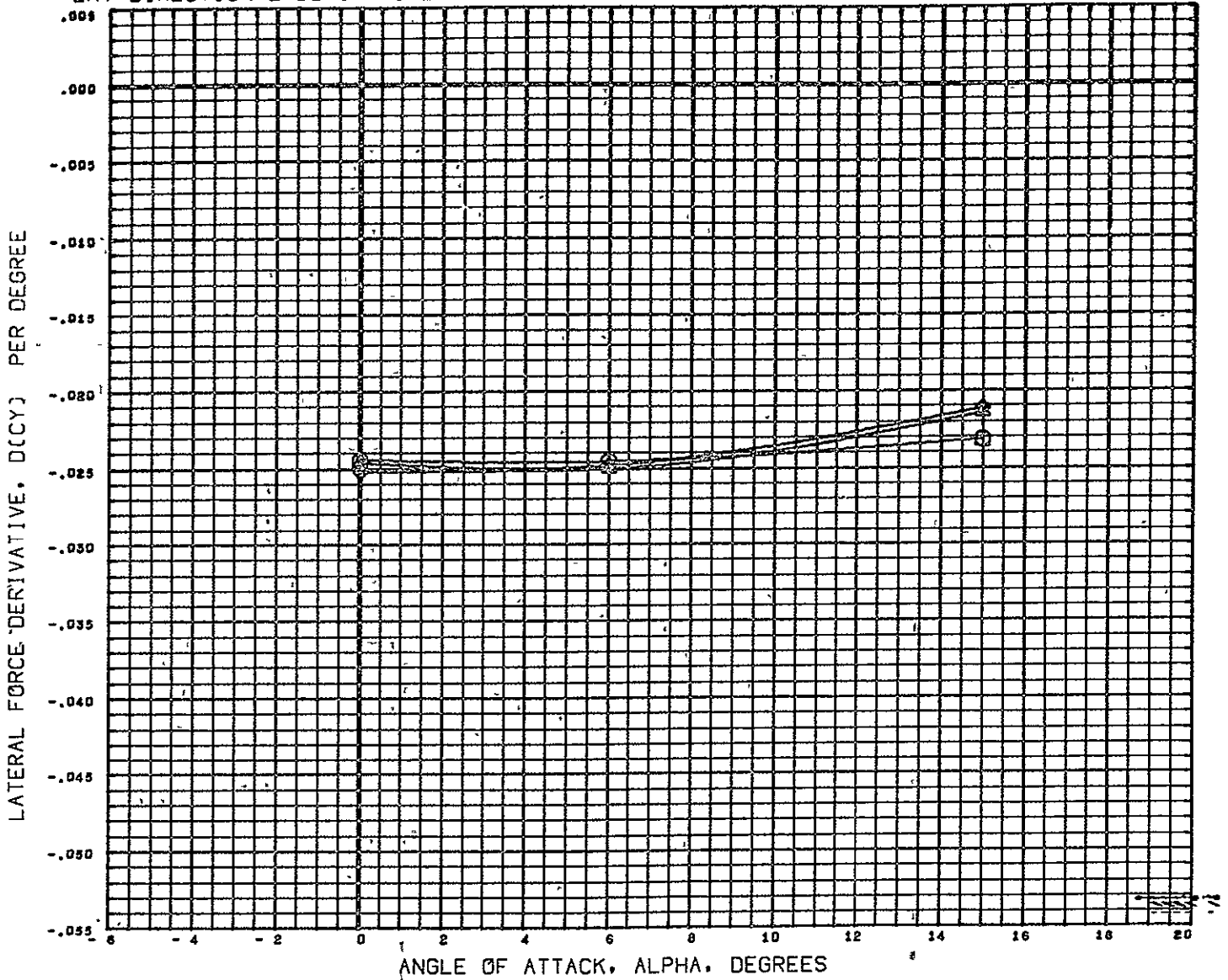
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(DN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10,000	SREF 1,3550 SQ.FT.
(DN4126)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	5,000	LREF 3,4530 FEET
(DN4129)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	10,000	BREF 3,4530 FEET
						XHRP 2,5950 FEET
						YHRP 0,0000 FEET
						ZHRP 0,0187 FEET
						SCALE 0,0150 SCALE

LAT-DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL



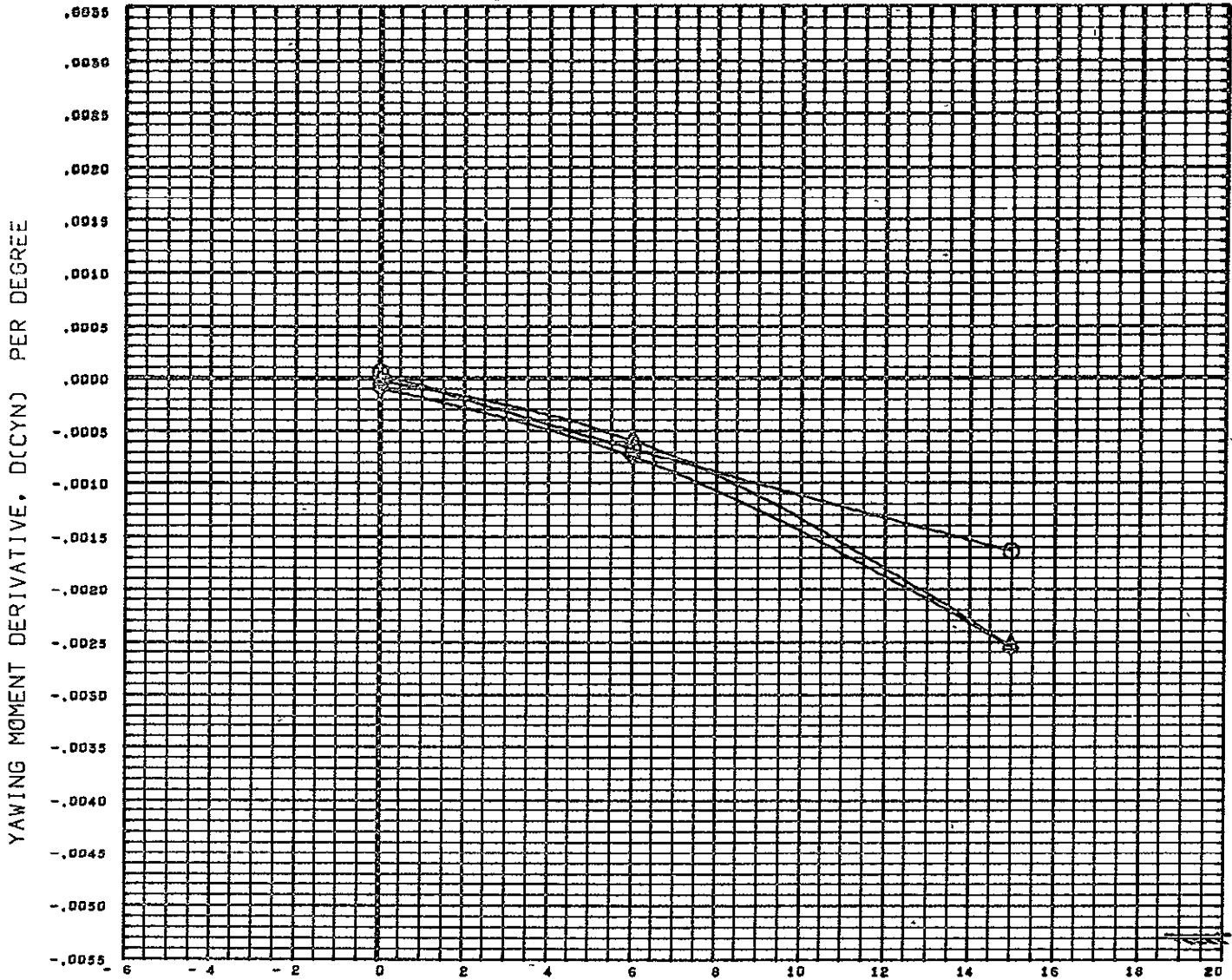
SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	sq. FT
◇	5.000	INCIDW	0.000	DIHDL	-7.660	LREF	3.4530	FEET
◇	10.000	ATLRN	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	NI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LAT-DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL



SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	Sq.FT.
◇	5.000	INCIDW	0.000	DIHDL	-7.660	LREF	3.4530	FEET
◇	10.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
						ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE
		DATA HIST. CODE	MI					

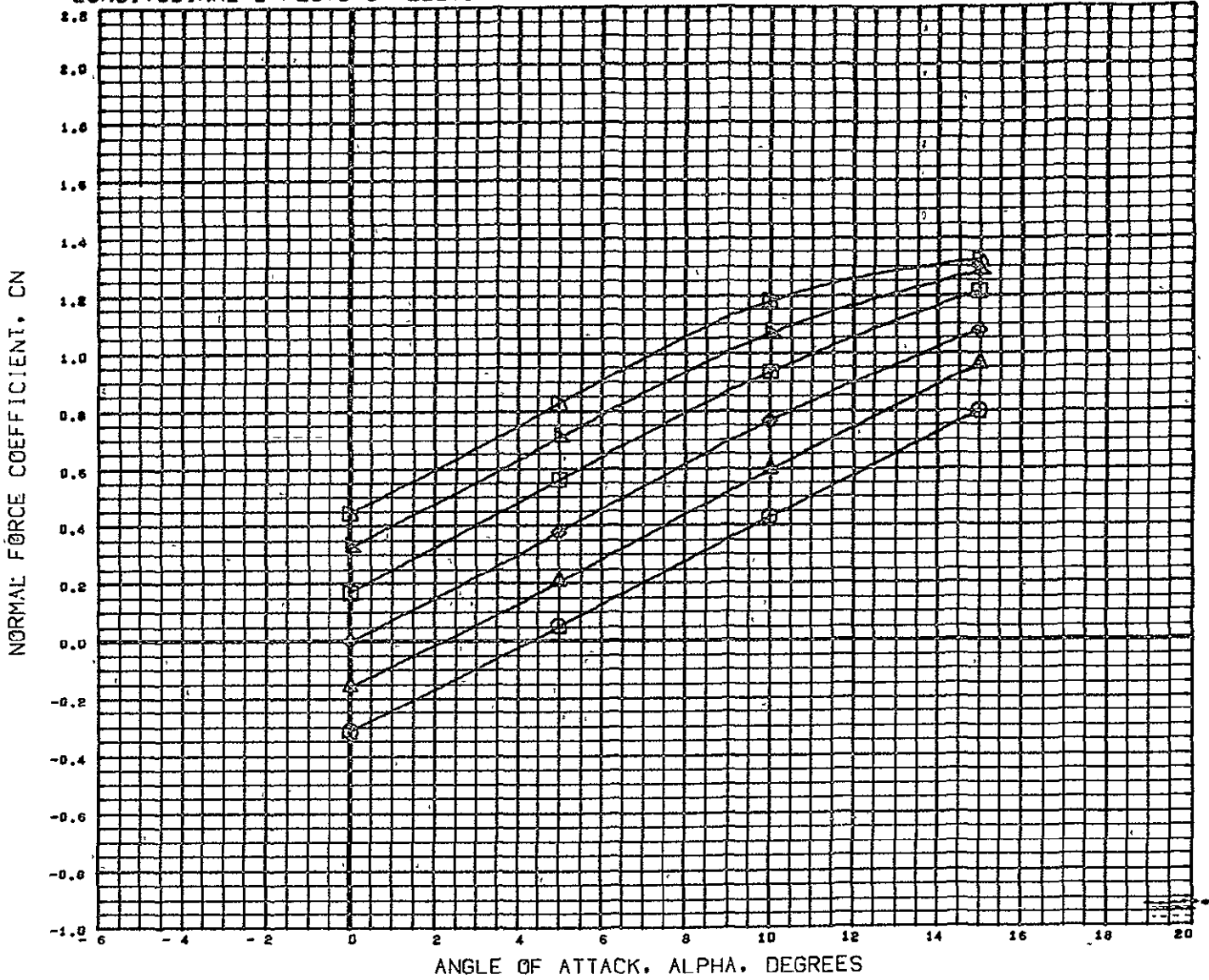
LAT-DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR NEGATIVE DIHEDRAL



ANGLE OF ATTACK, ALPHA, DEGREES

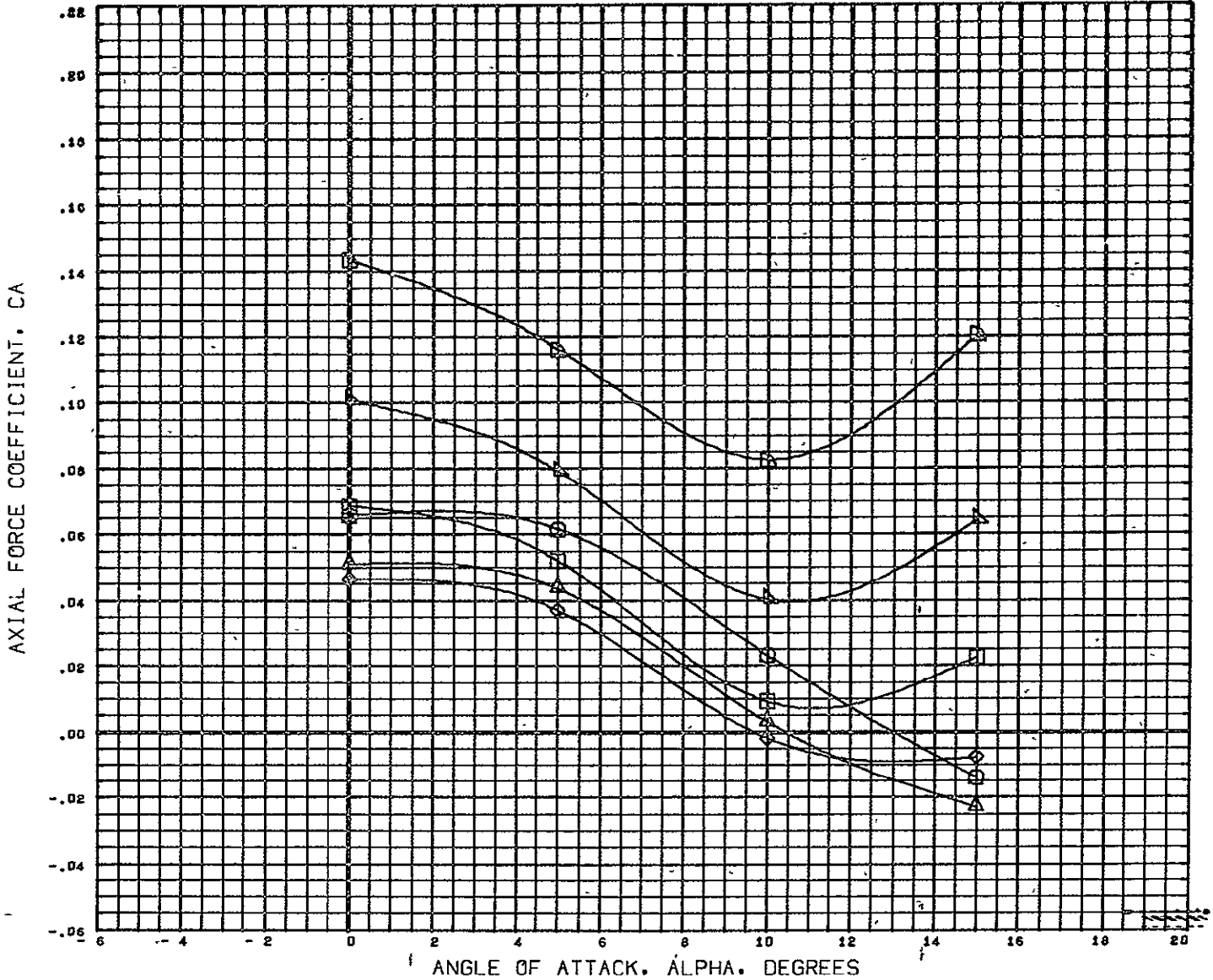
SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	sq.ft.
△	5.000	INCIDW	0.000	DIHDL	- 7.660	LREF	3.4530	FEET
◇	10.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0107	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-331D, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ. FT.
(DN4057)		7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN4061)		7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)		7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(DN4069)		7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(DN4073)		7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET
					SCALE	0.0150 SCALE

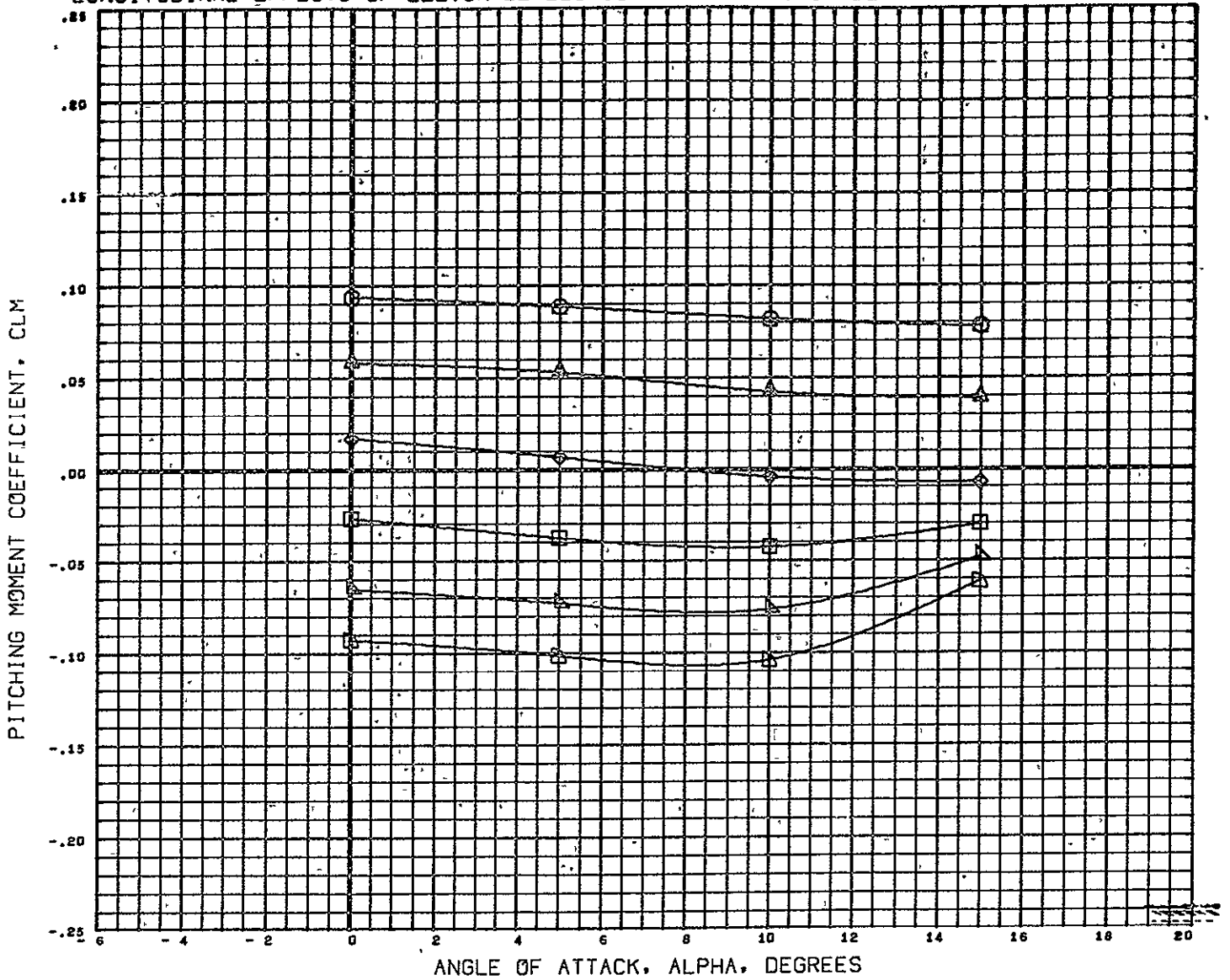
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(DN4057)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(DN4069)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(DN4073)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

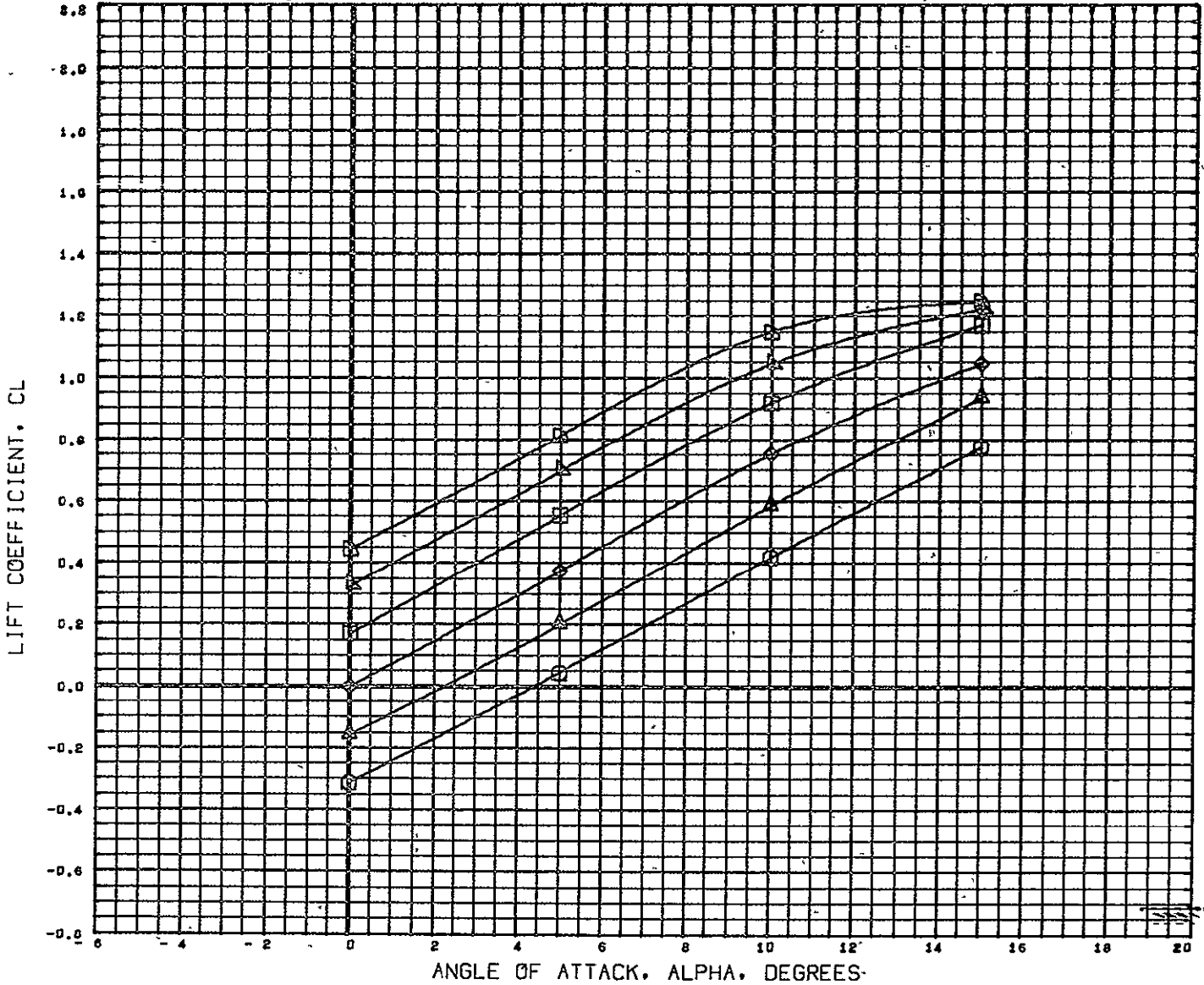
MACH .40

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=1.0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIH(DRL)	CND(POS)	WNG(POS)	ELEV(TR)	REFERENCE INFORMATION	
(DN4053)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF	1.3550 SQ. FT.
(DN4057)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF	3.4530 FEET
(DN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF	3.4530 FEET
(DN4061)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP	2.5950 FEET
(DN4069)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP	0.0000 FEET
(DN4073)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

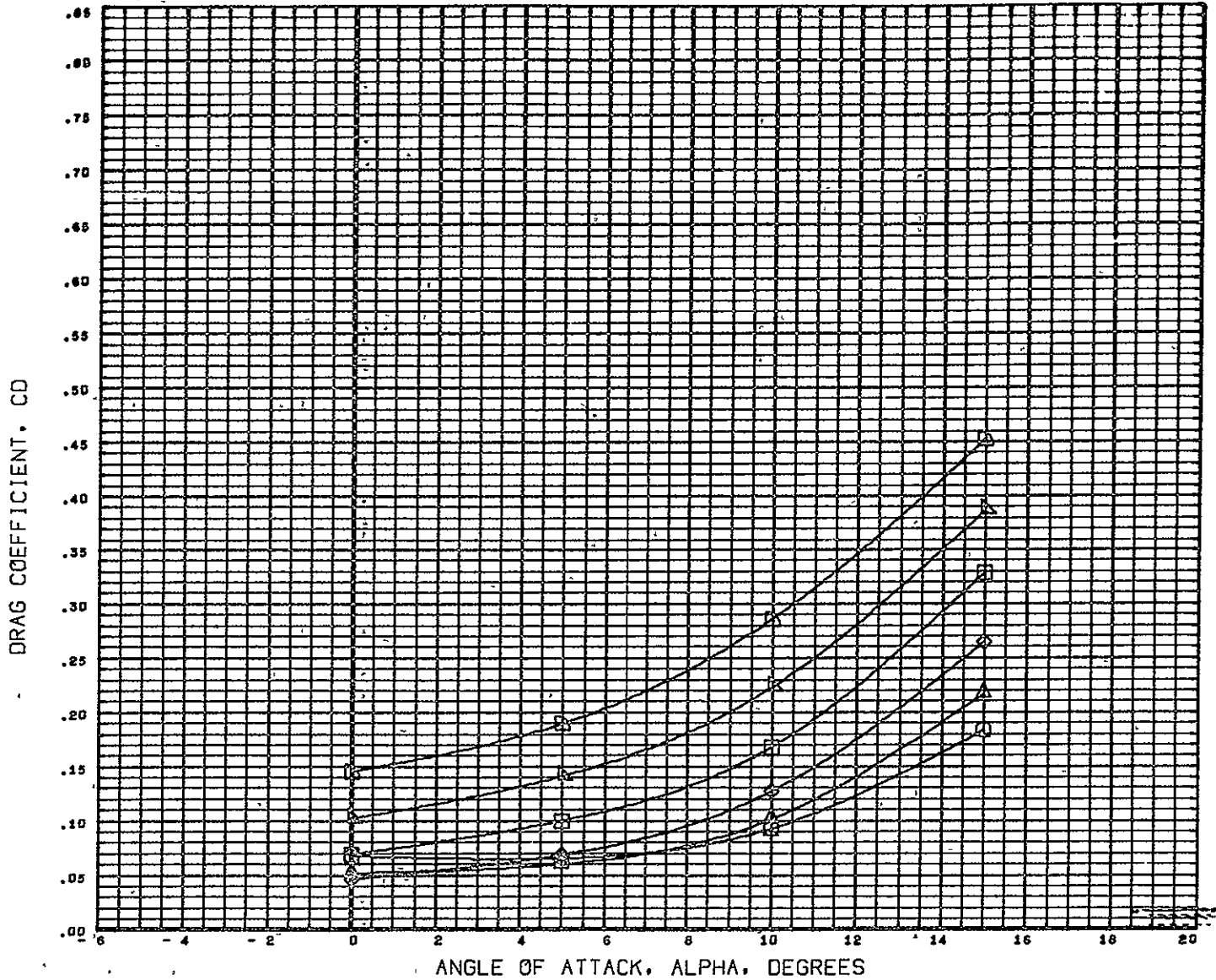
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(DN4057)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(DN4069)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(DN4073)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0107 FEET
						SCALE 0.0150 SCALE

MACH .40

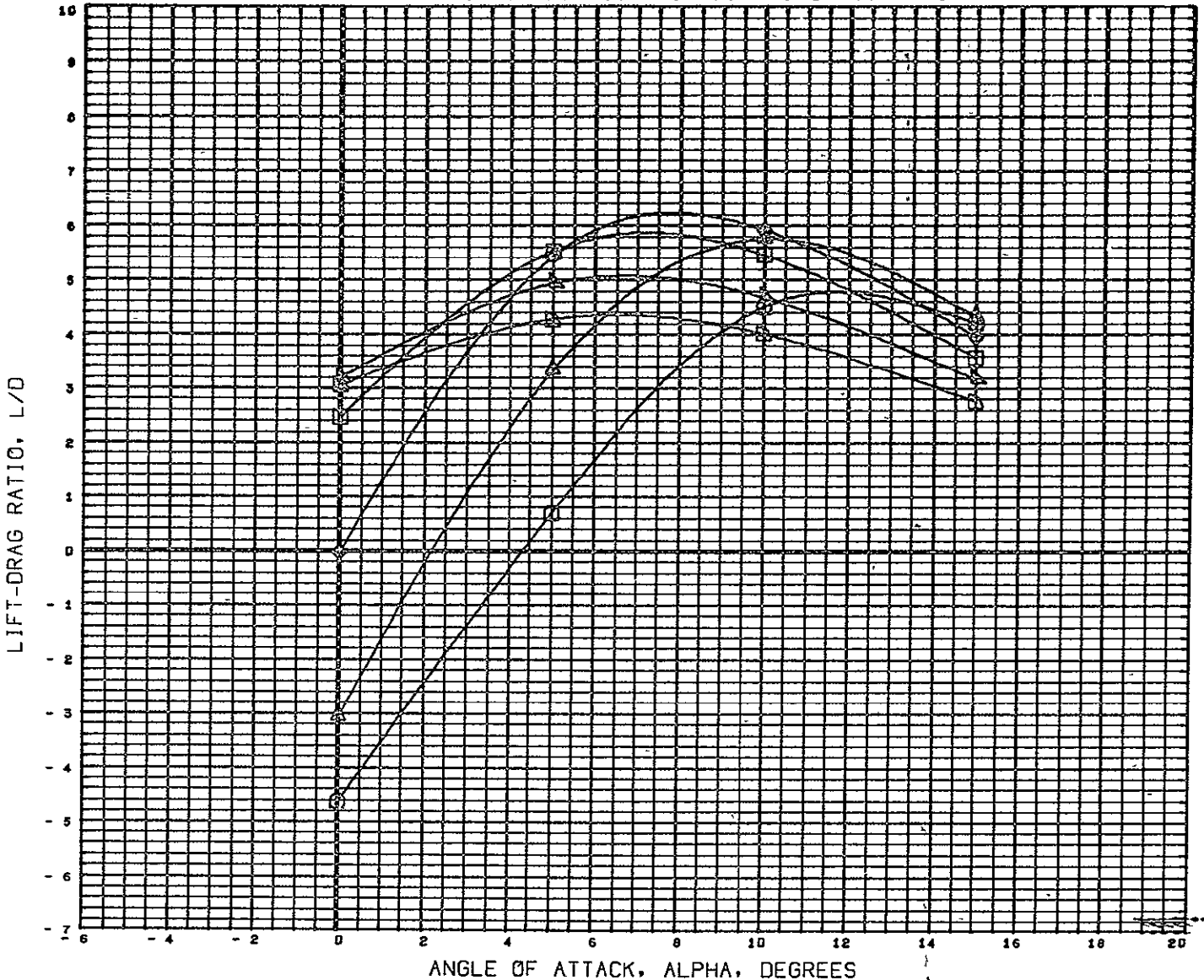
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(DN4057)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(DN4069)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(DN4073)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0

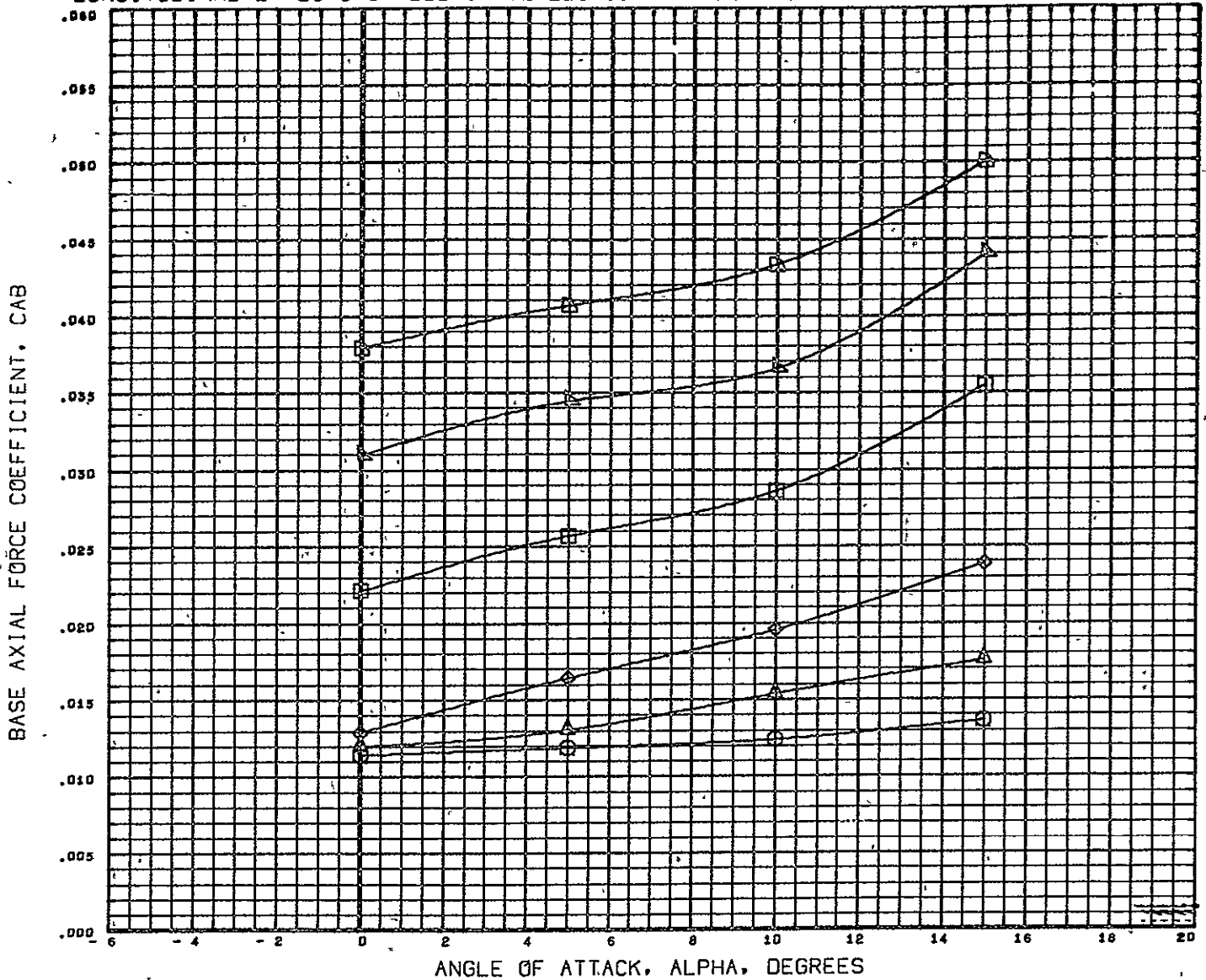


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(DN4057)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XNRF 2.5950 FEET
(DN4069)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YNRF 0.0000 FEET
(DN4073)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZNRF 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

0.9

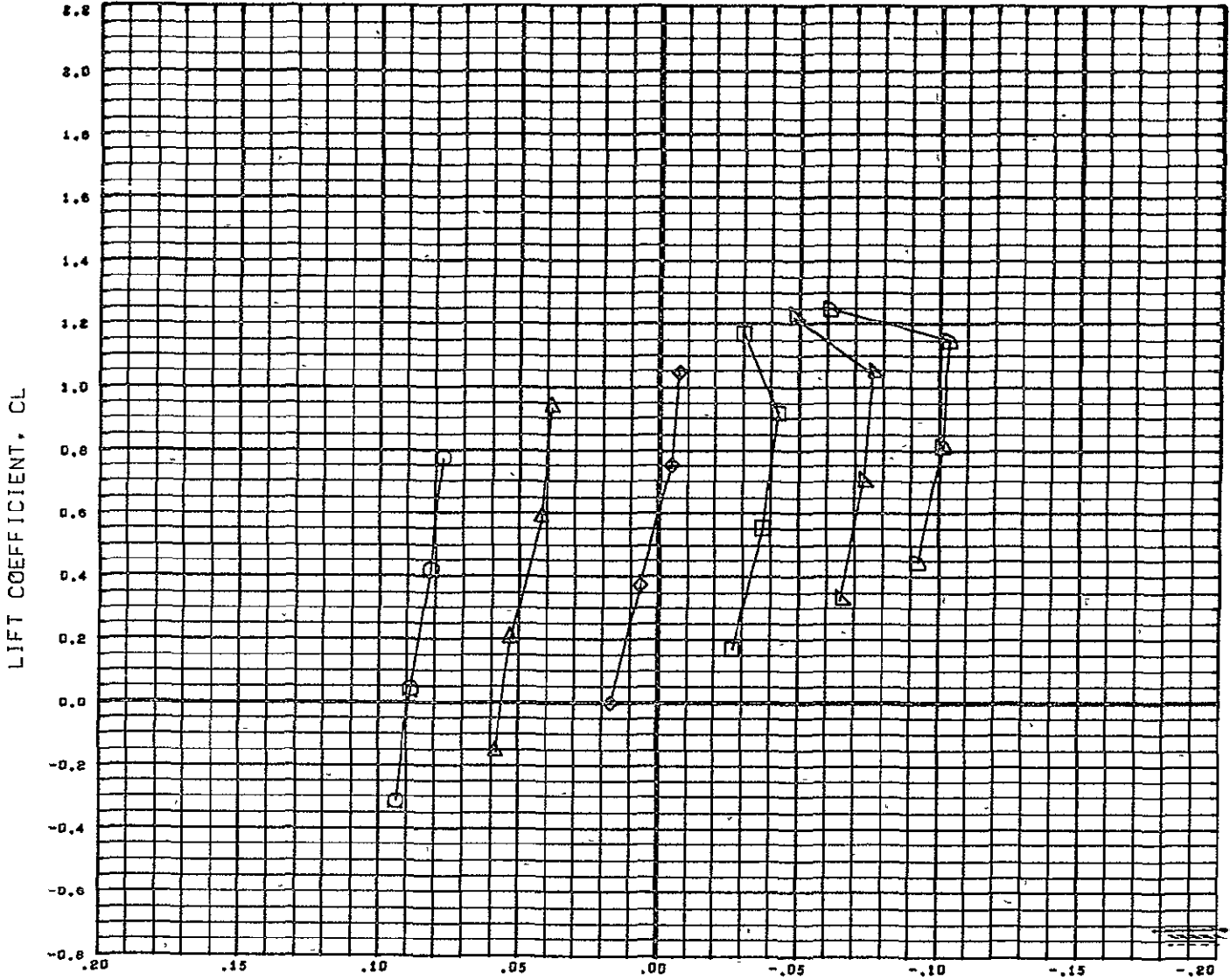
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D/DHRL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ. FT.
(DN4057)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(DN4069)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(DN4073)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

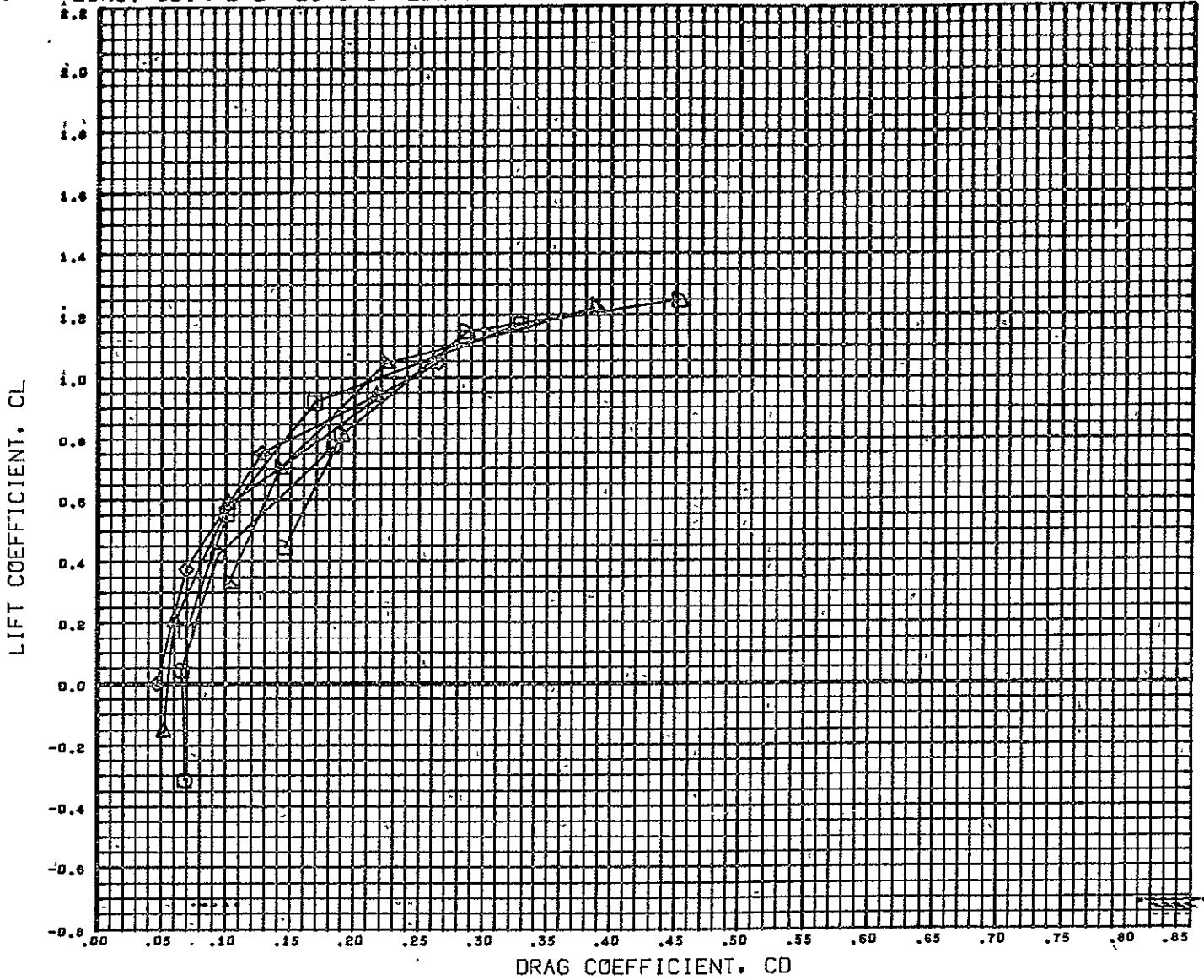
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(DN4057)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(DN4069)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(DN4073)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

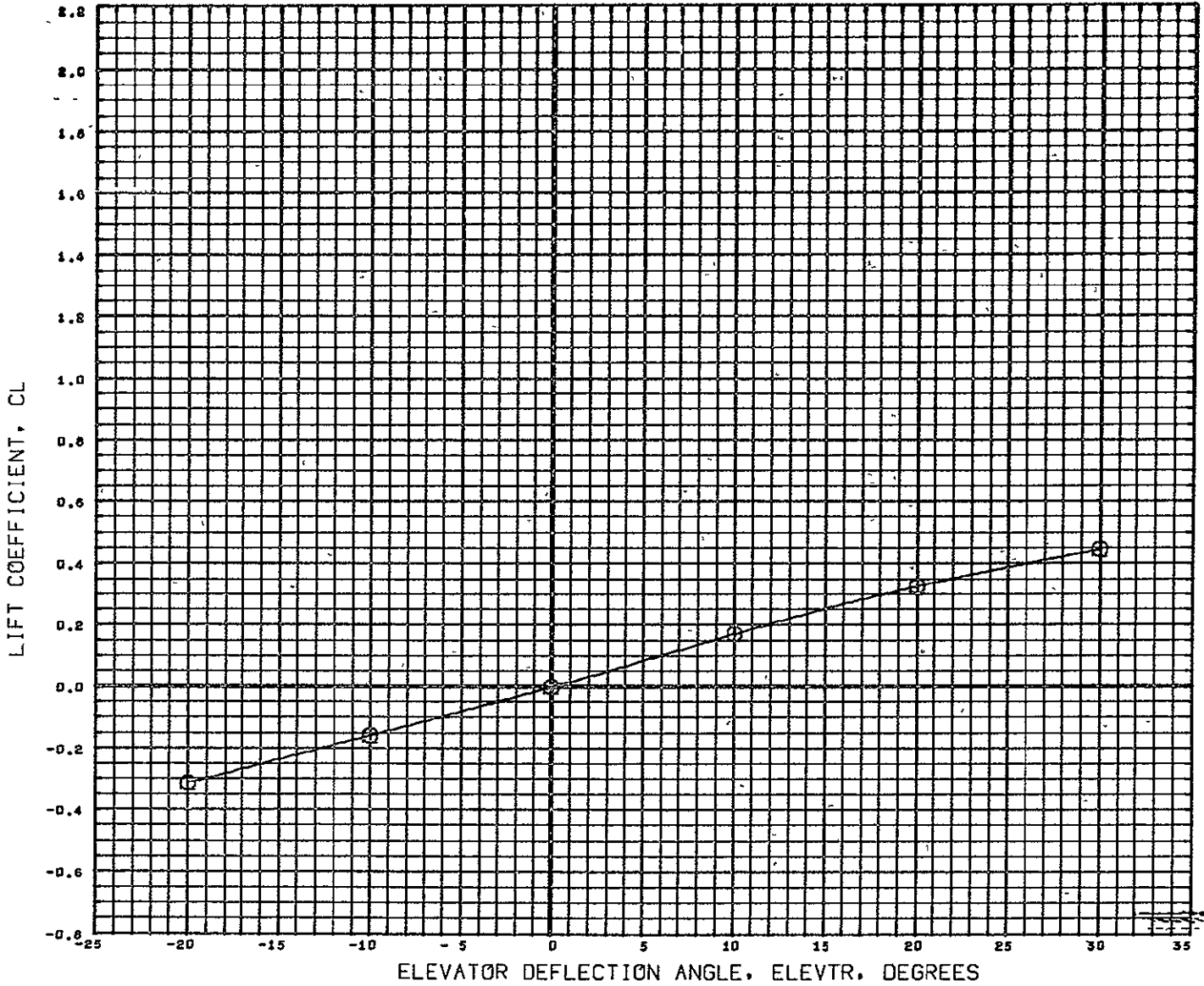
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(DN4053)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT
(DN4057)		7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(DN2017)		7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(DN4061)		7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(DN4069)		7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(DN4073)		7.660	1.000	2.000	30.000	ZMRP 0.0187 FEET
						SCALE 0 0150 SCALE

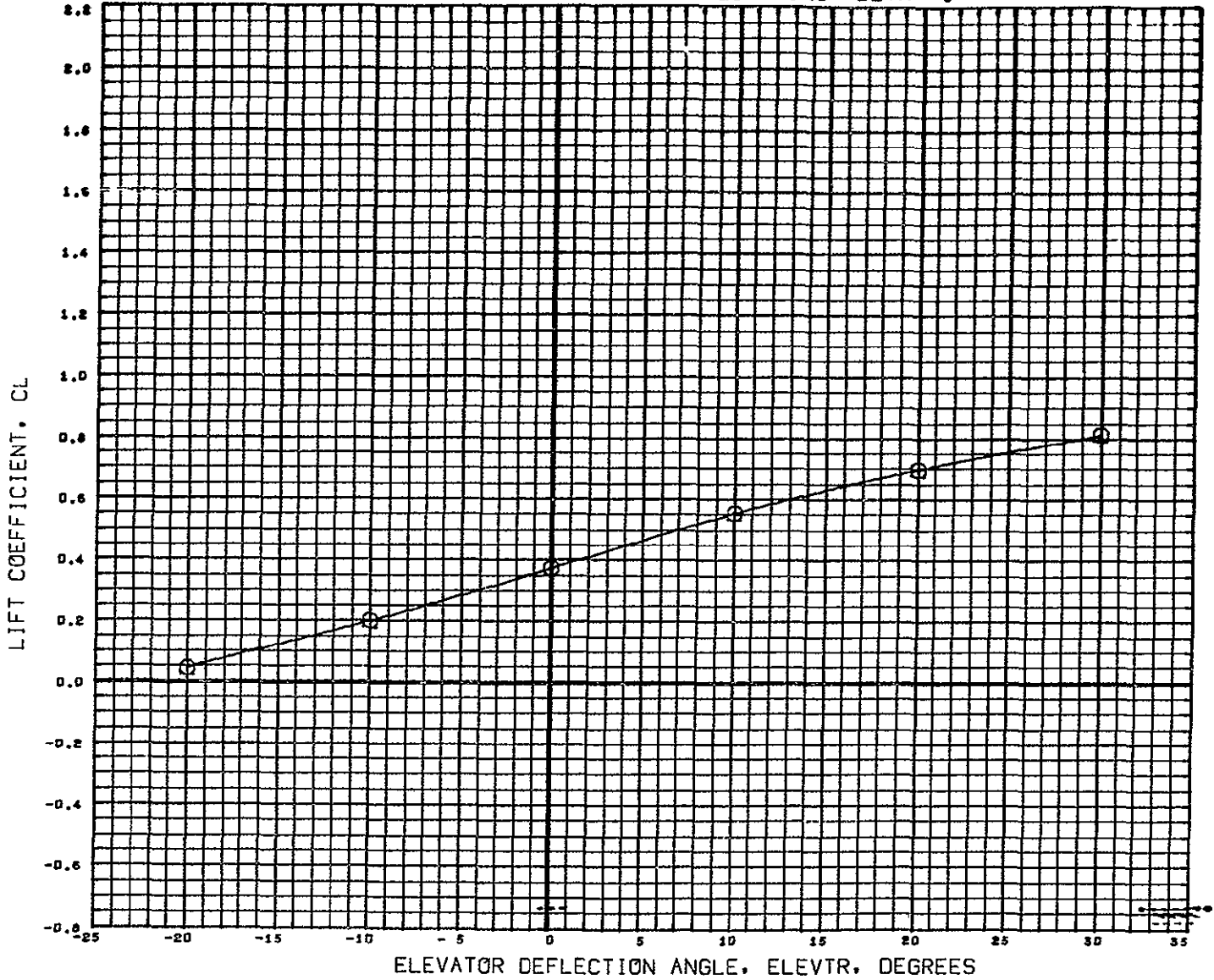
MACH .40

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION			
○	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.	
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET	
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET	
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET	
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET	
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET	
						SCALE	0.0150	SCALE	

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0

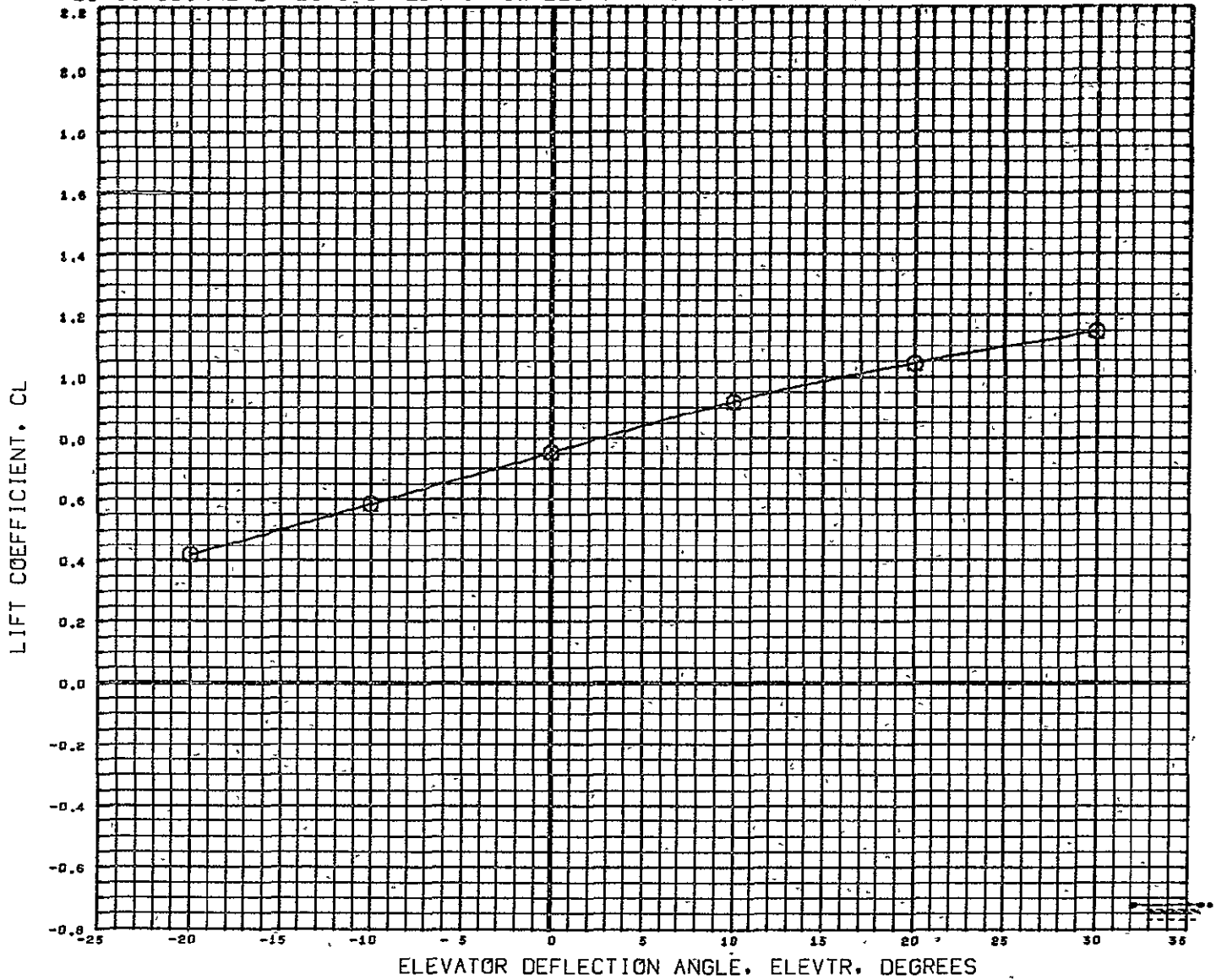


SYMBOL ○ ALPHA 5.000

PARAMETRIC VALUES
 MACH 0.400 BETA 0.000
 INCIDC 3.000 INCIDW 0.000
 DIHDL 7.660 AILRON 0.000
 CANARD 0.000 RUDDER 0.000
 WNGPOS 2.000 CNDPOS 1.000
 DATA HIST. CODE HI

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 3.4530 FEET
 BREF 3.4530 FEET
 XMRP 2.5950 FEET
 YMRP 0.0000 FEET
 ZMRP 0.0167 FEET
 SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0

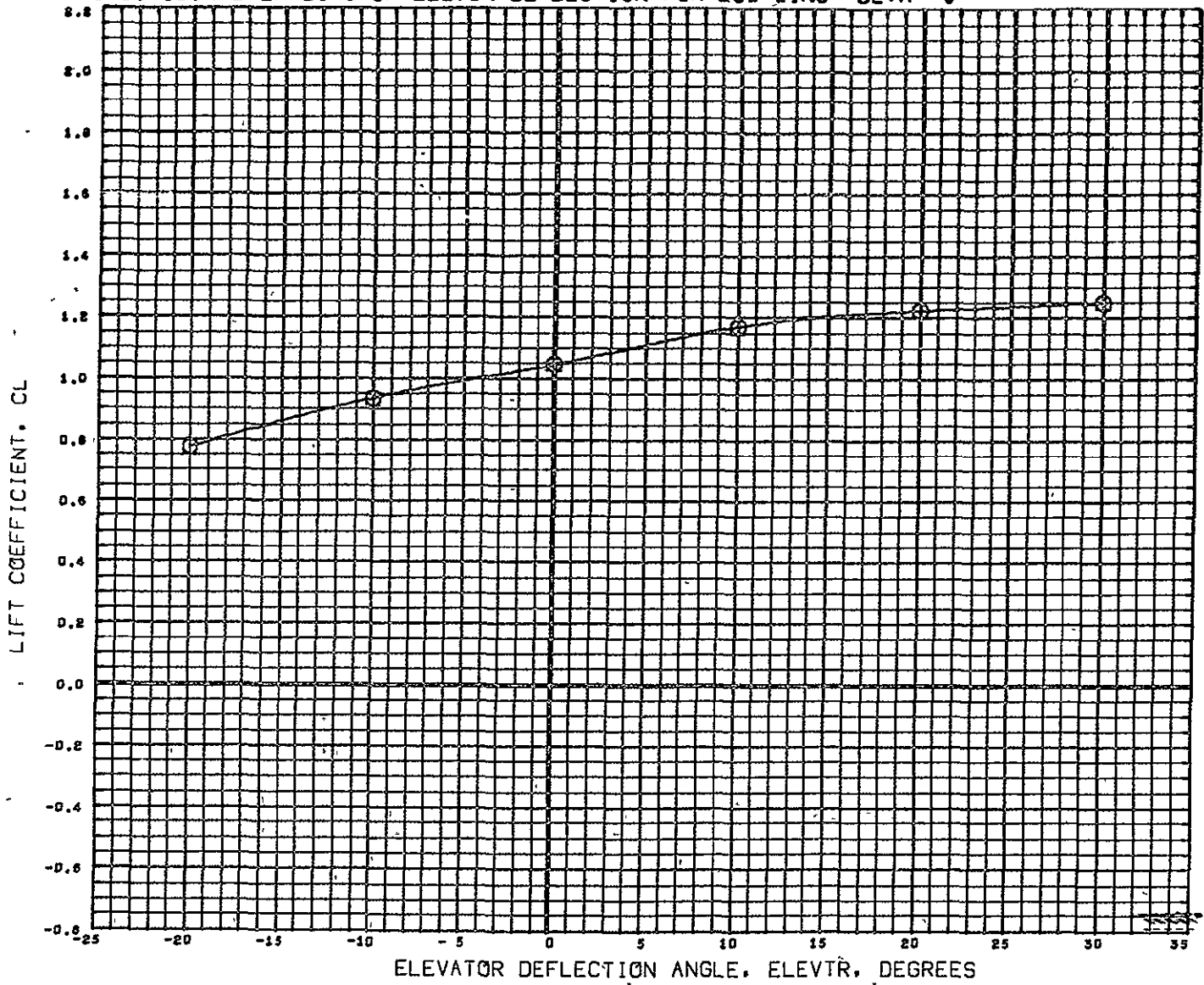


SYMBOL ALPHA
 ○ 10.000

PARAMETRIC VALUES
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 INCIDC 3.000 INCIDW 0.000
 DIHDL 7.660 AILRON 0.000
 CANARD 0.000 RUDDER 0.000
 WNGPOS 2.000 CNDPOS 1.000
 DATA HIST. CODE HI

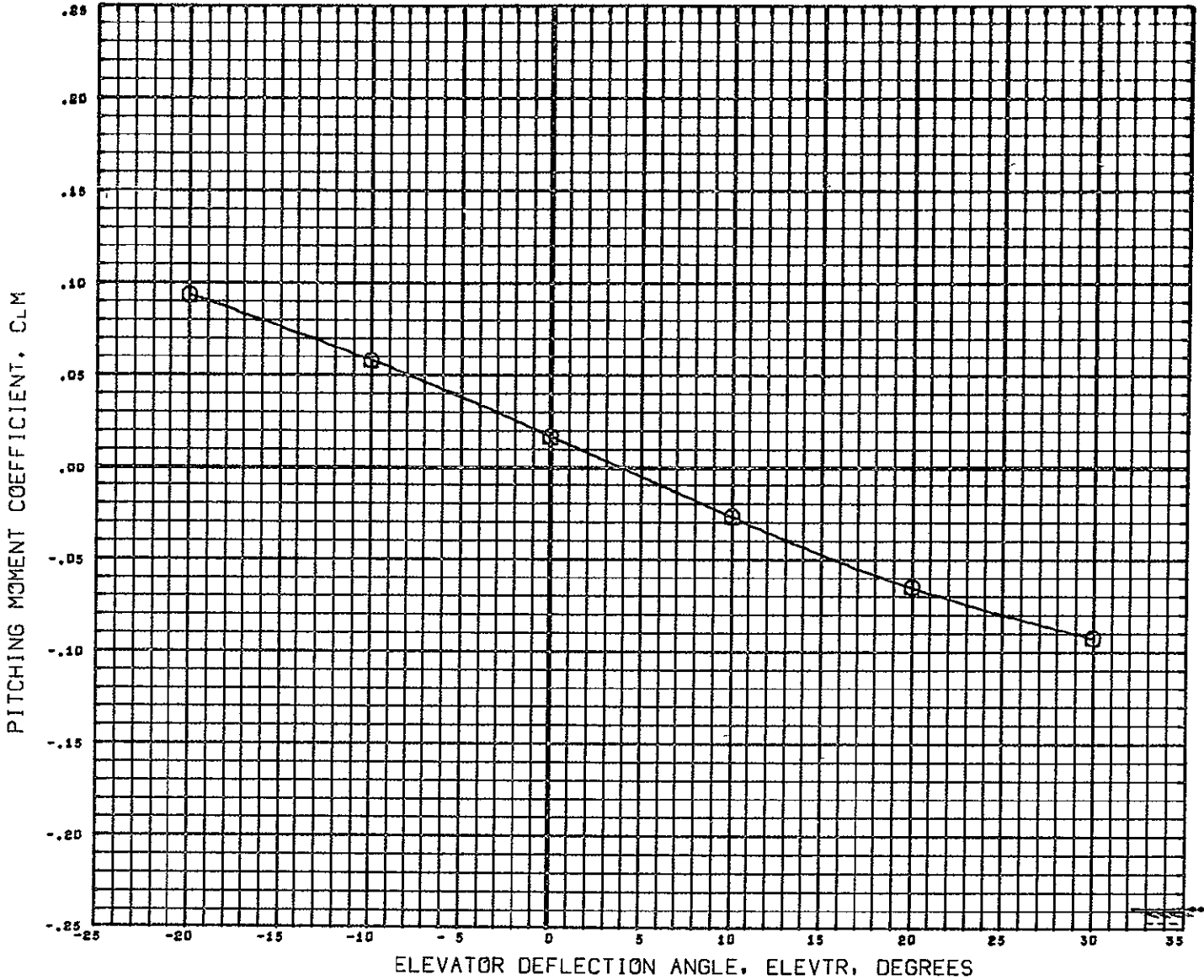
REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 3.4530 FEET
 BREF 3.4530 FEET
 XHRP 2.5950 FEET
 YHRP 0.0000 FEET
 ZHRP 0.0167 FEET
 SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



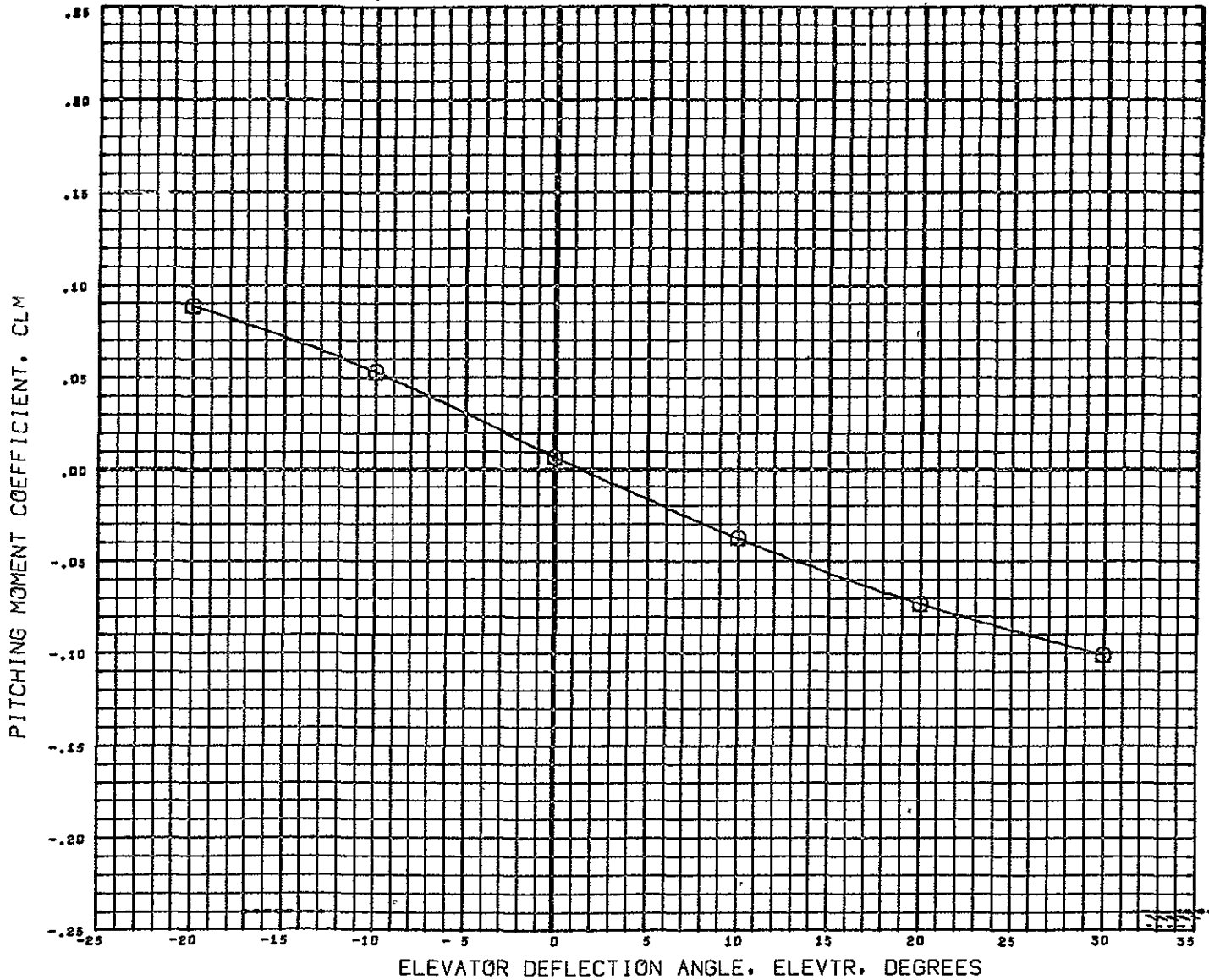
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



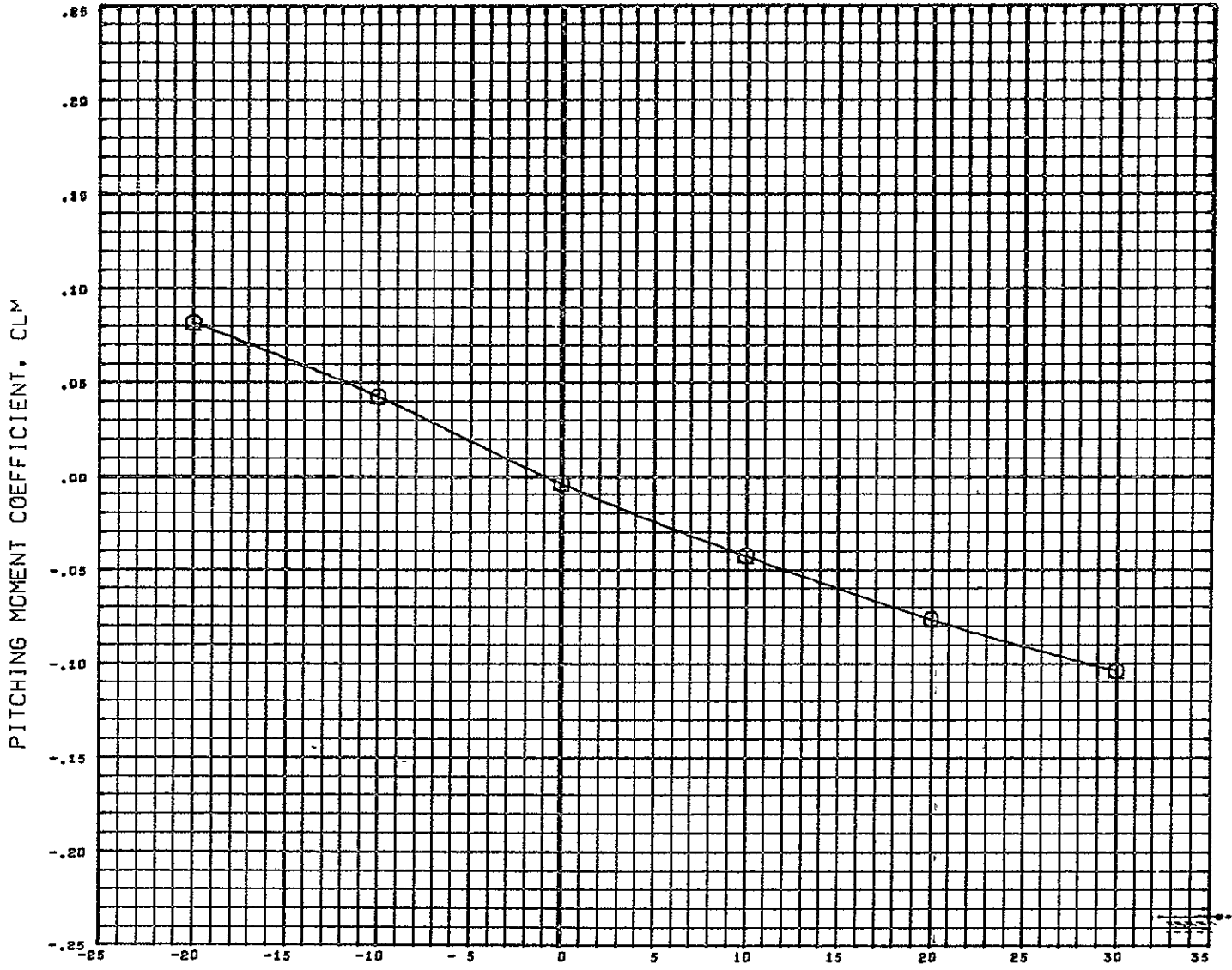
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○	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	90 FT.
		INCIDC	3.000	INCIGW	0.000	LREF	3.4330	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4330	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	50.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

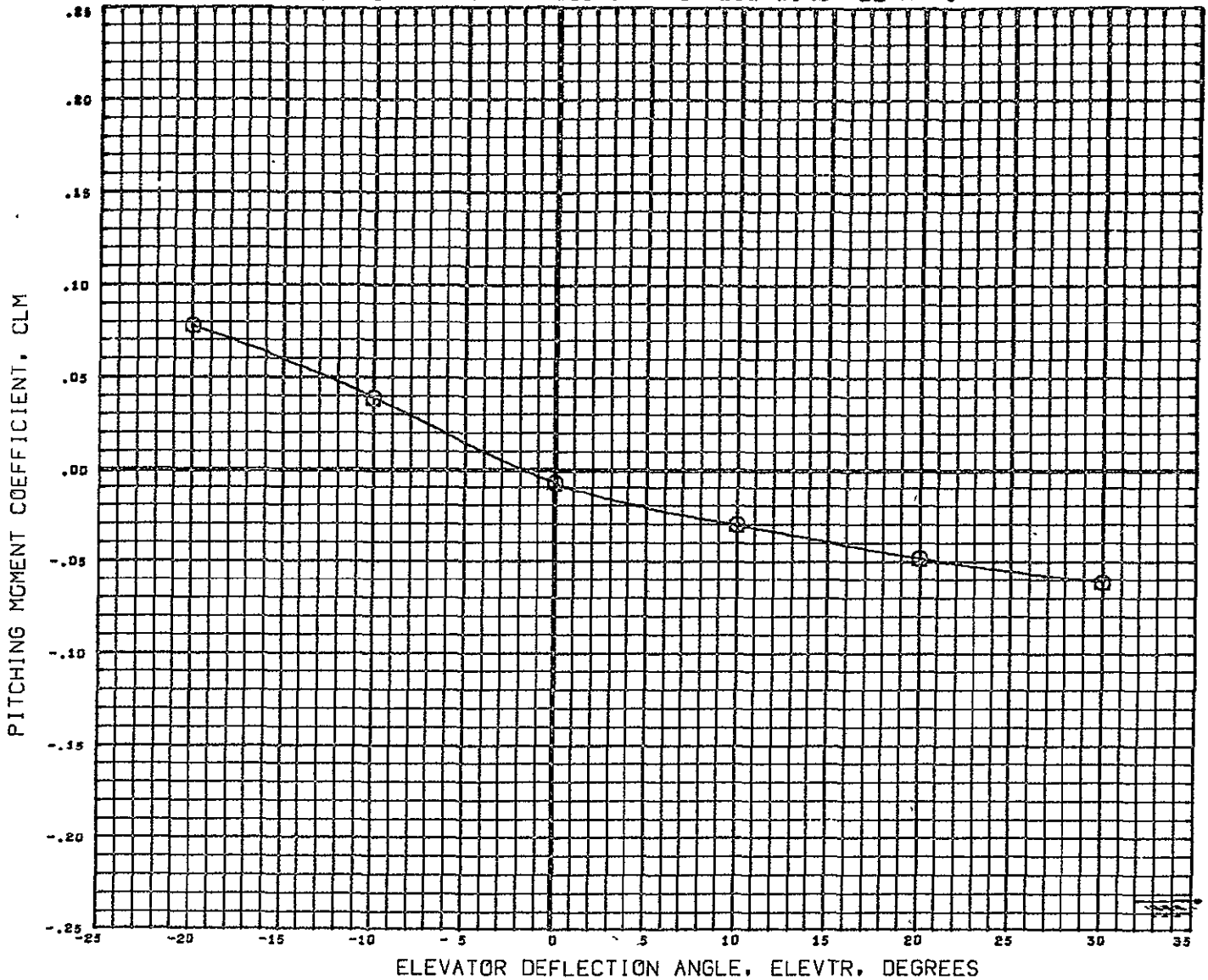
LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



ELEVATOR DEFLECTION ANGLE, ELEVTR. DEGREES

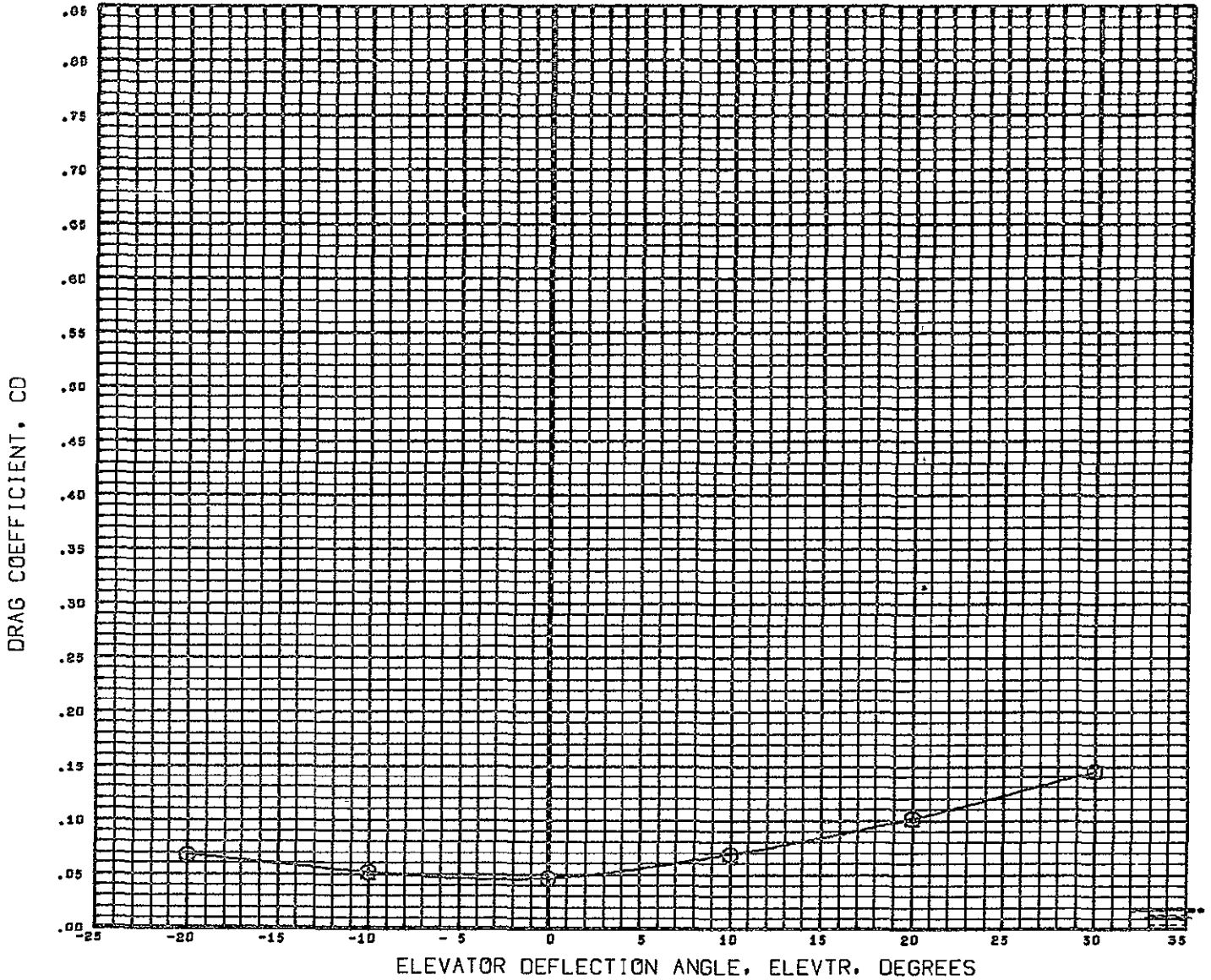
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	NI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



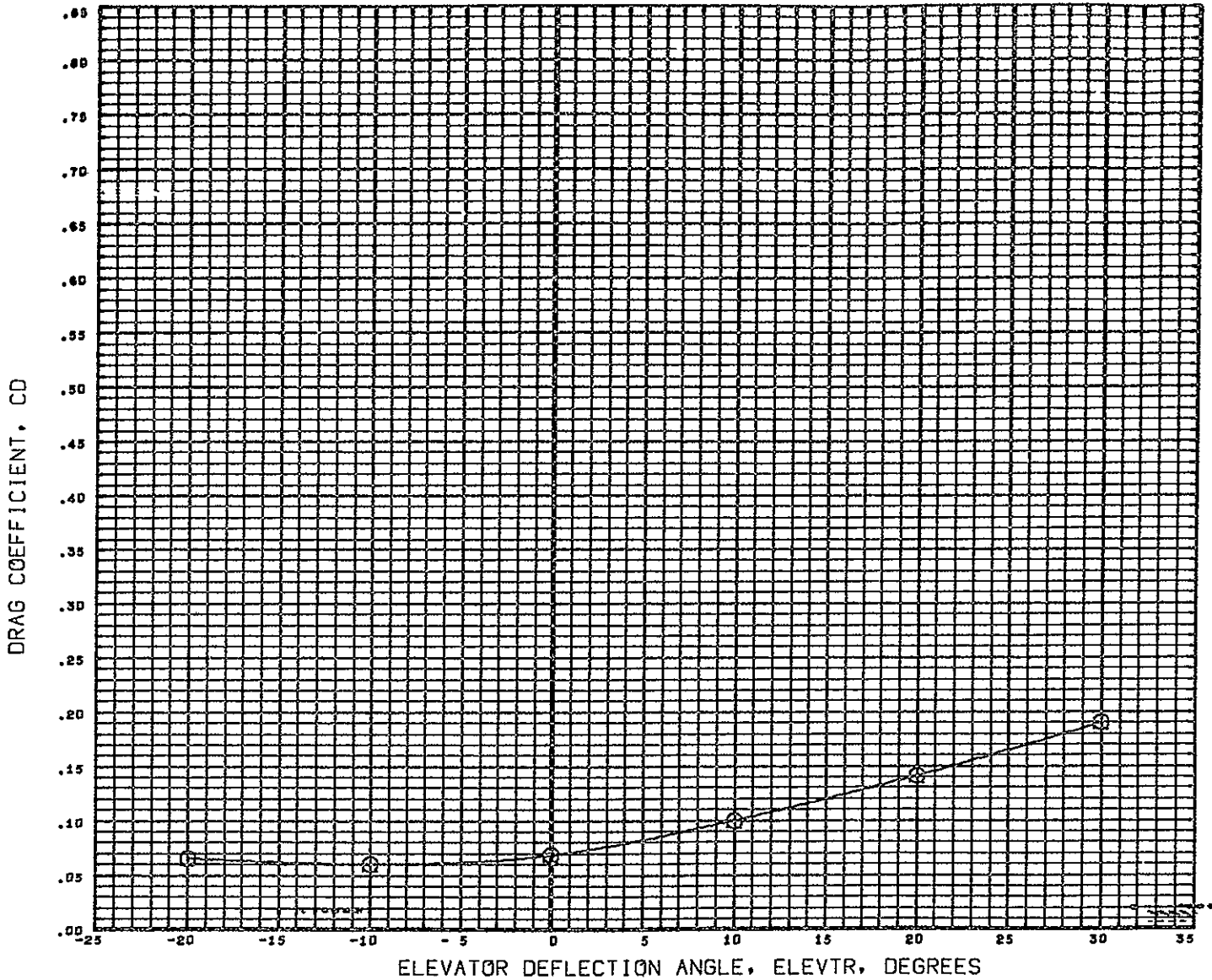
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



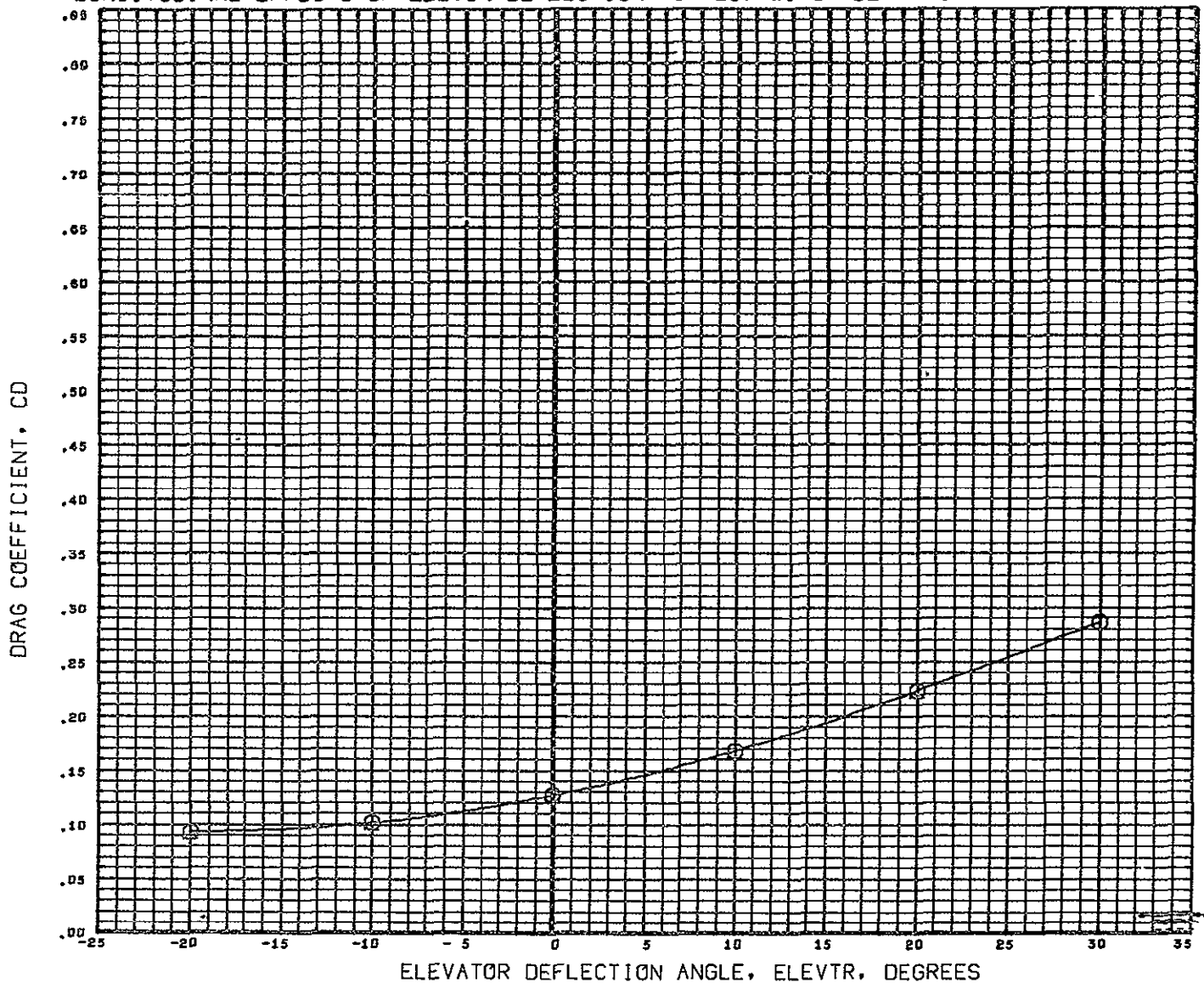
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=0



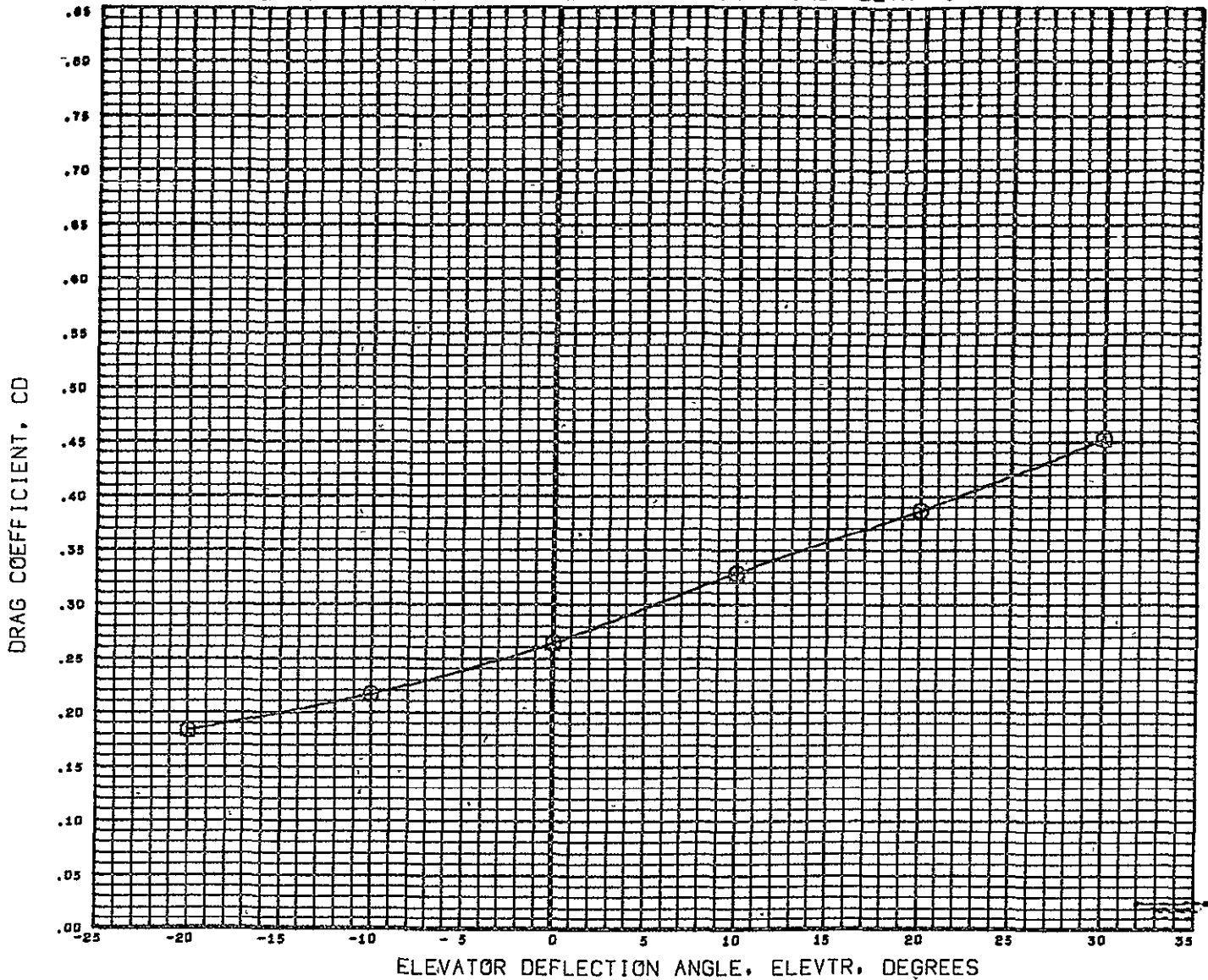
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA°	0.000	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



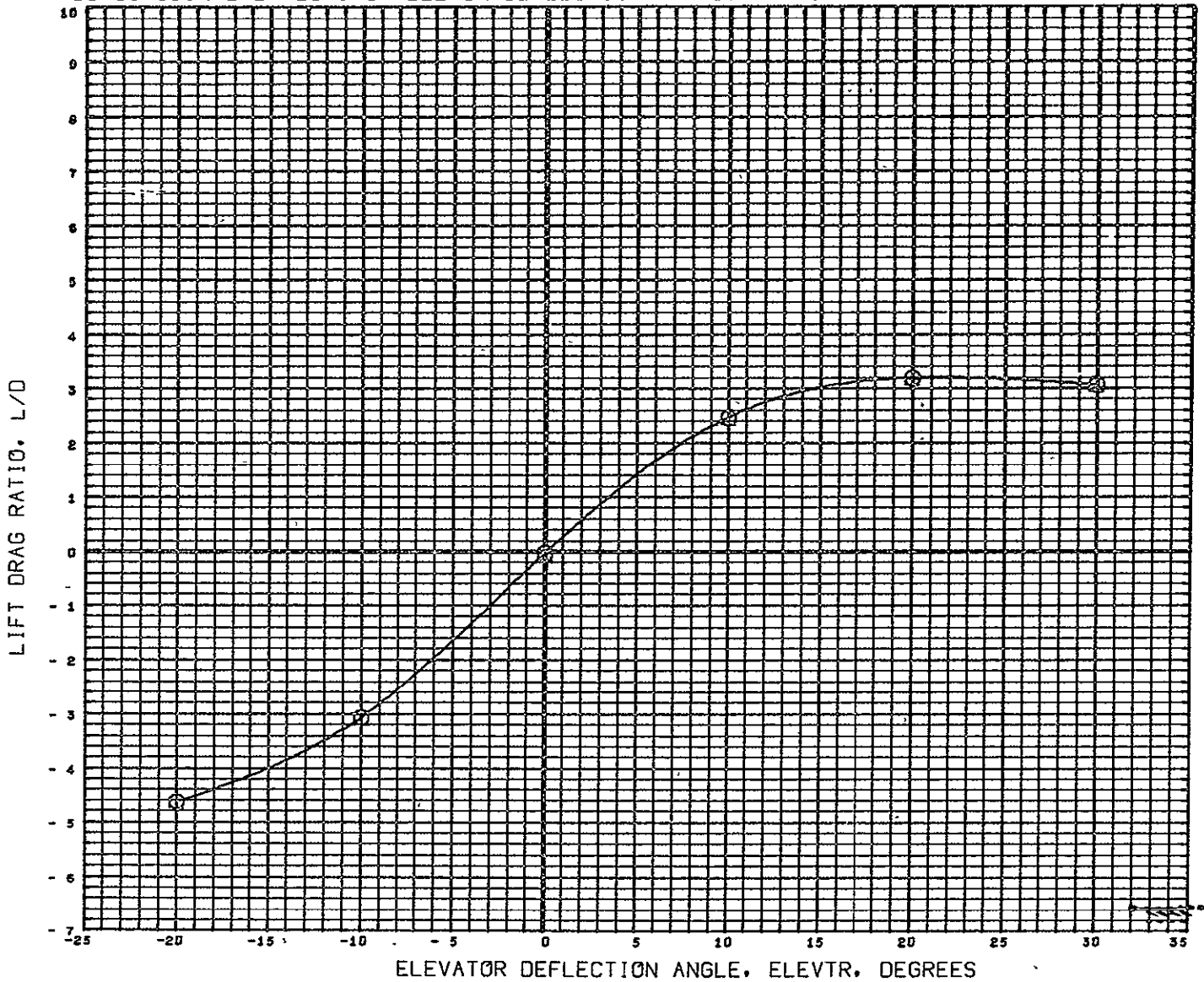
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		BINDRL	7.560	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST	CODE	NI		ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



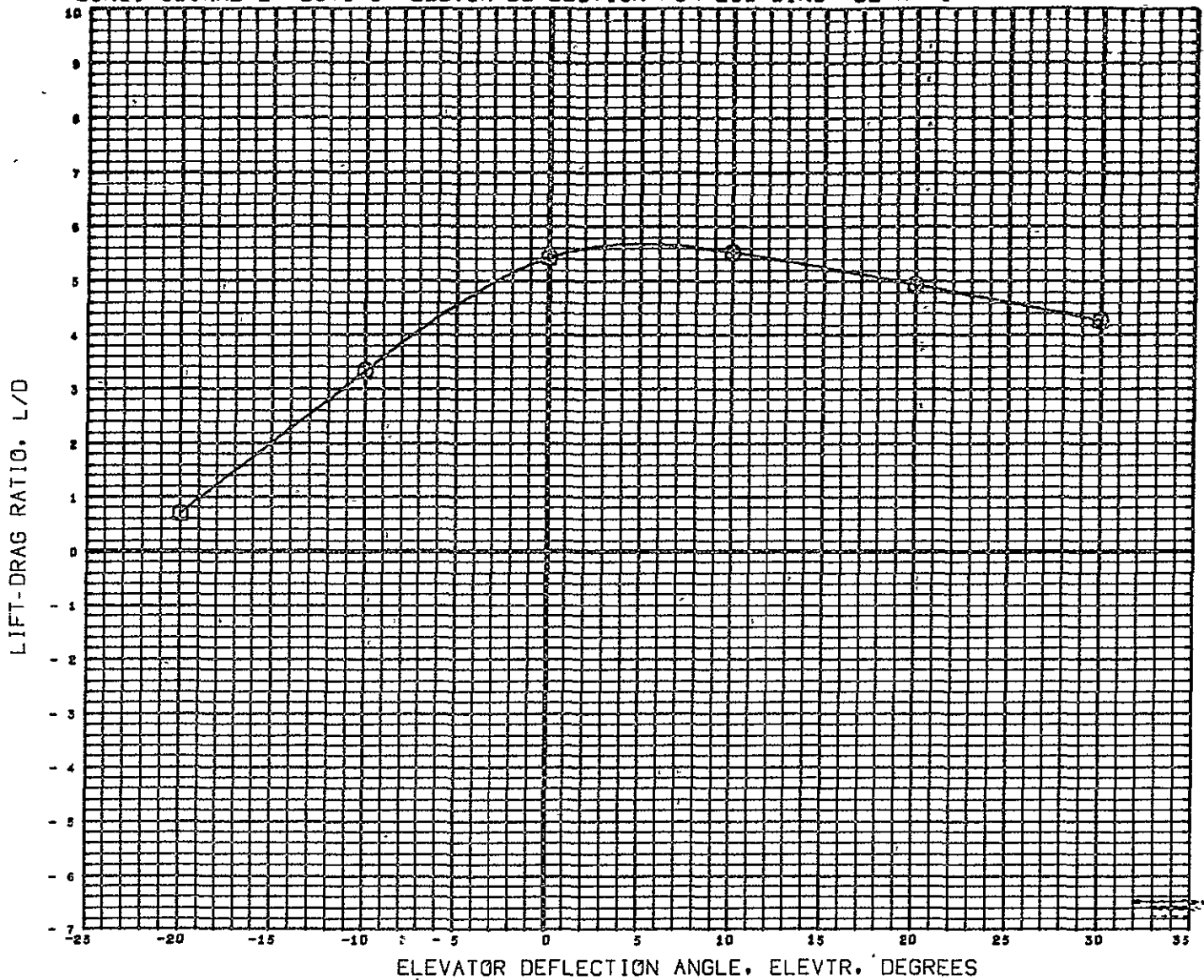
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



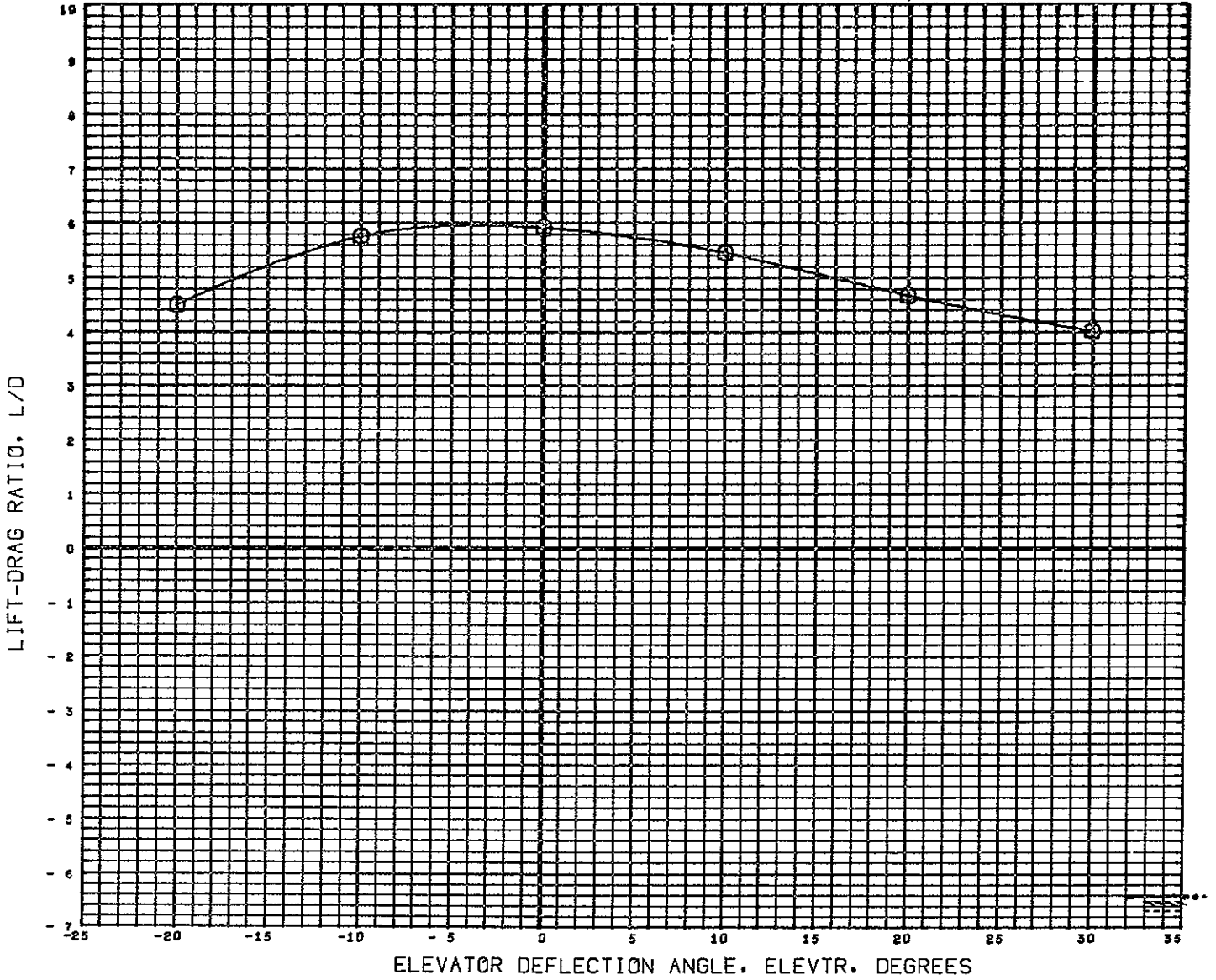
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○	0.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=0



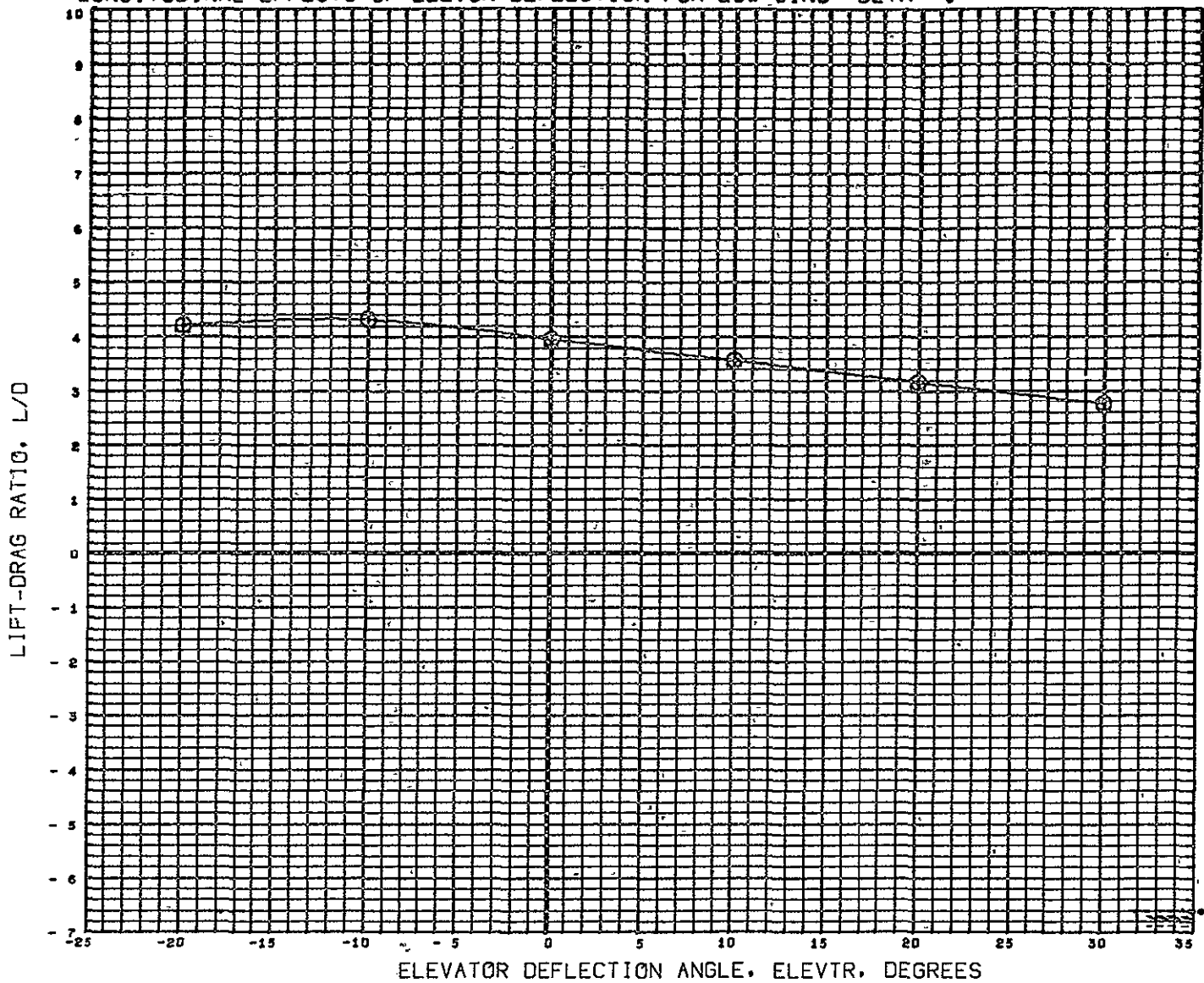
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		DINDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0190	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



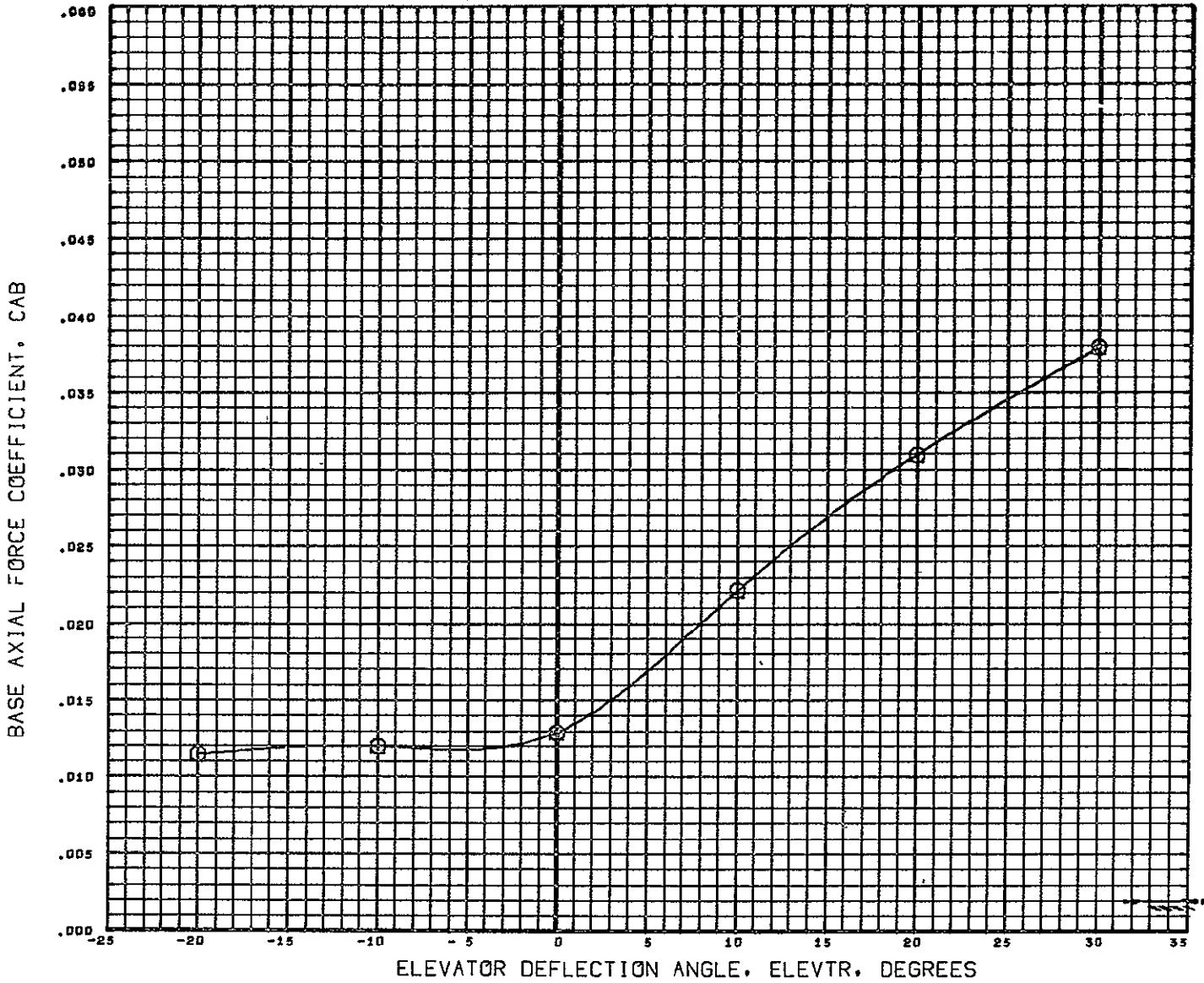
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



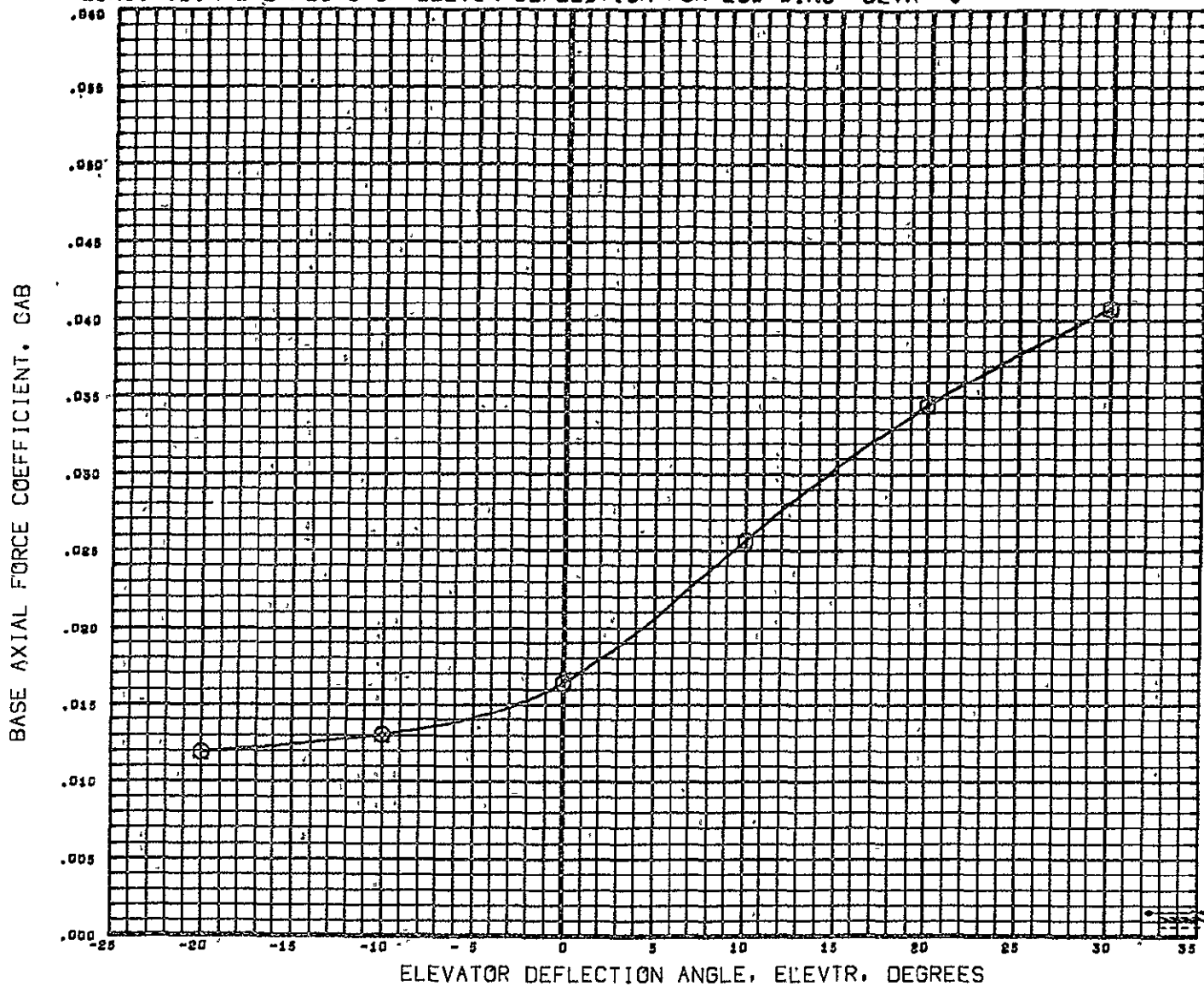
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○	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



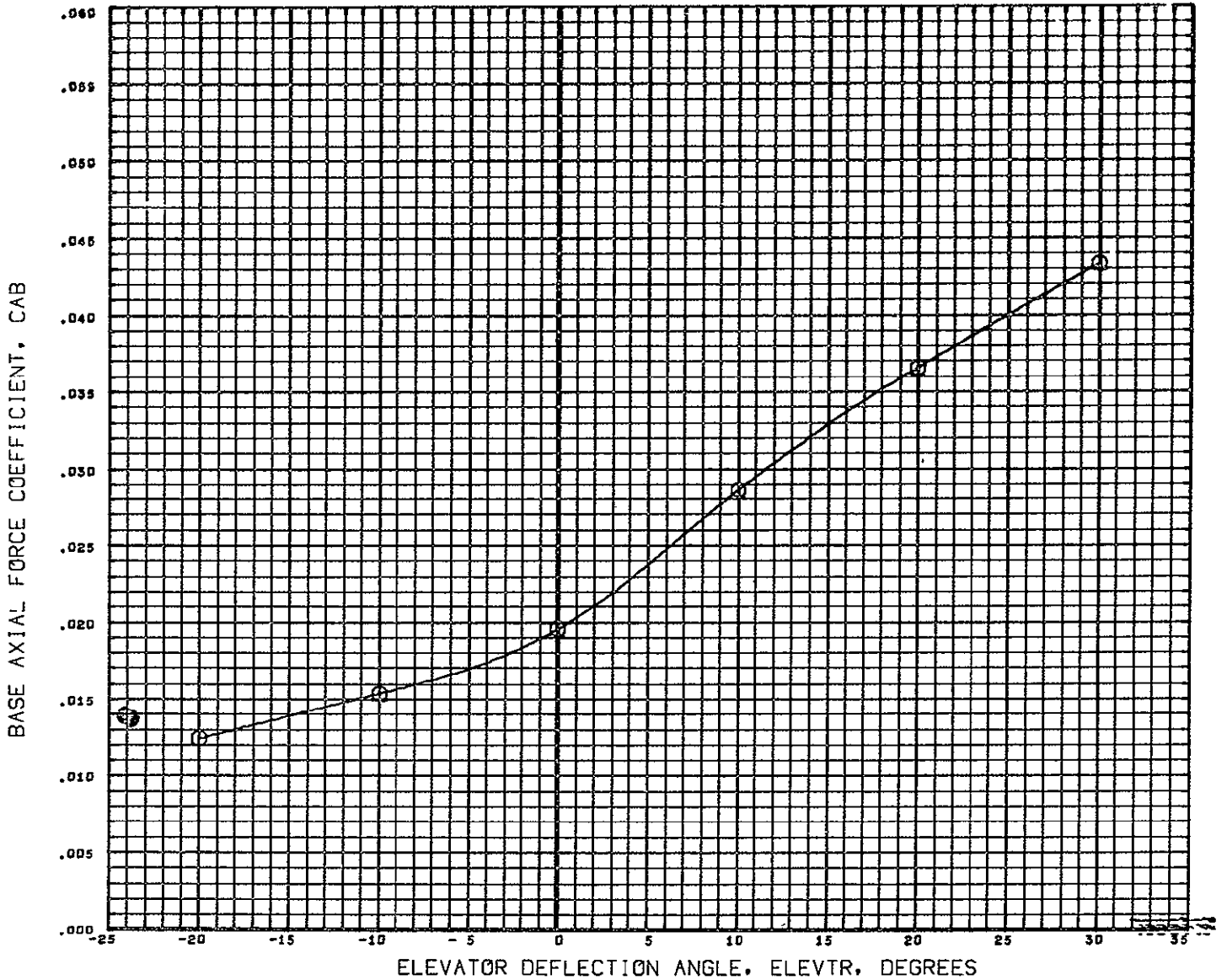
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	HACH	0.400	BETA	0.000	SREF	1.3550	SQ FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



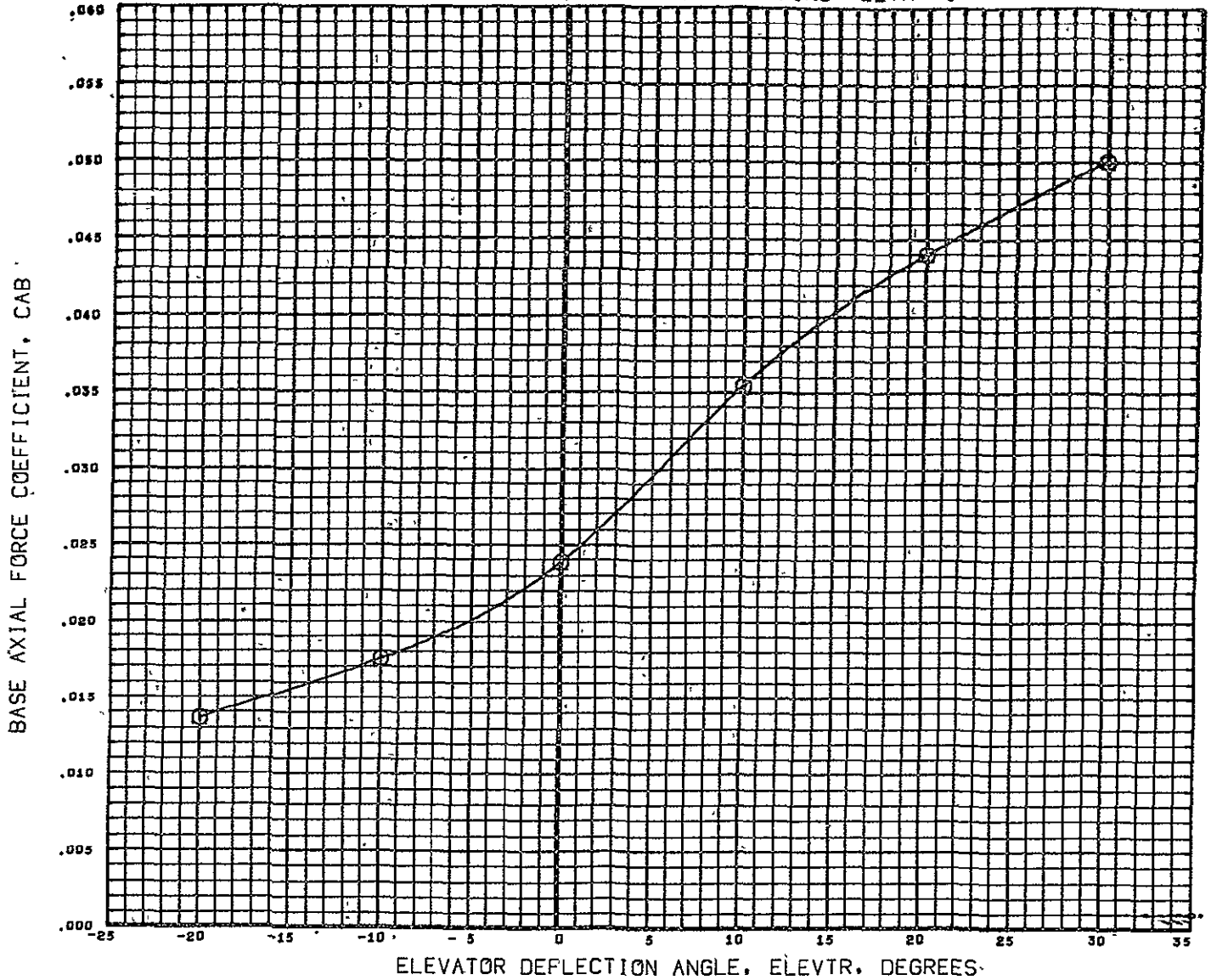
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA=0



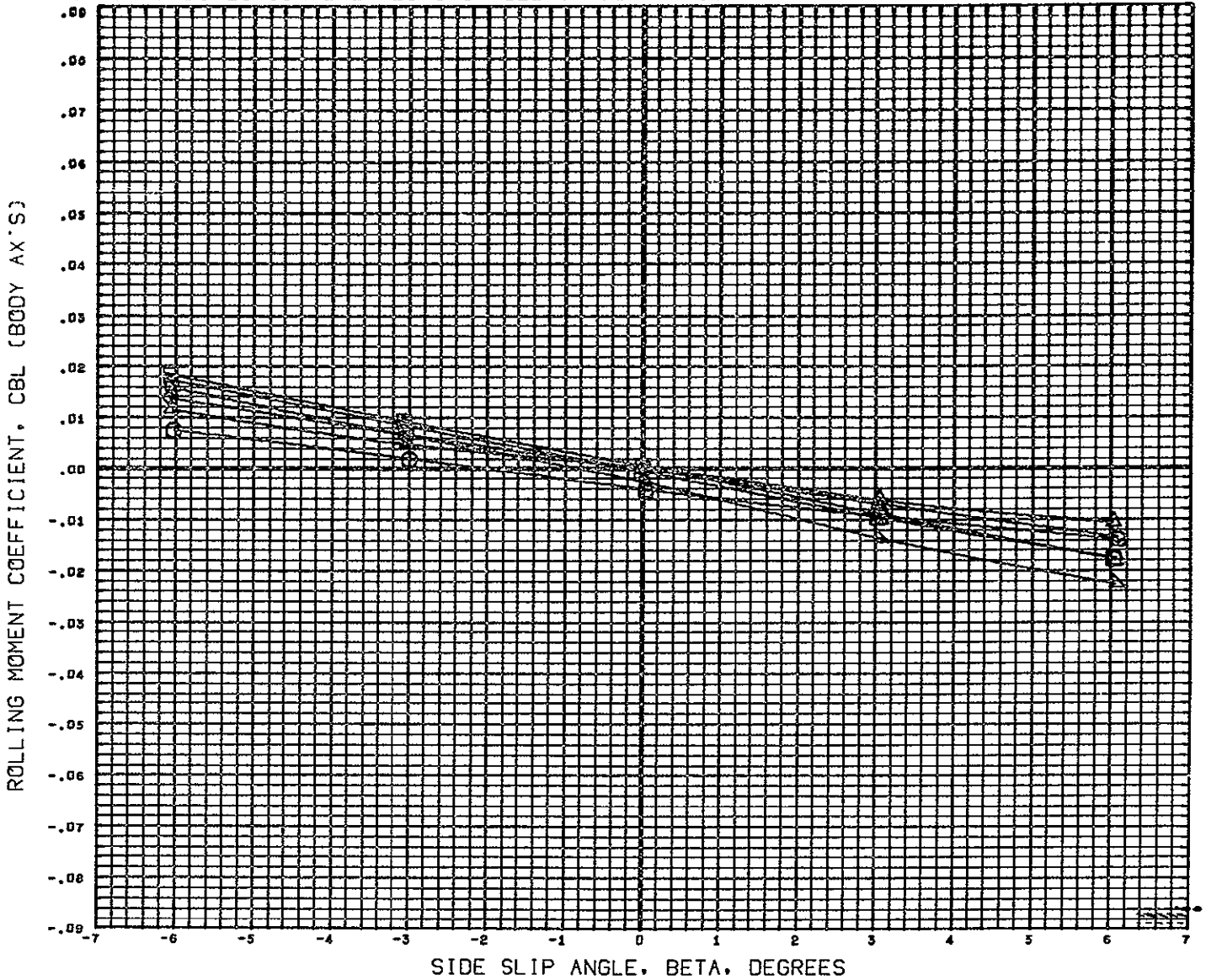
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.000	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING BETA= 0



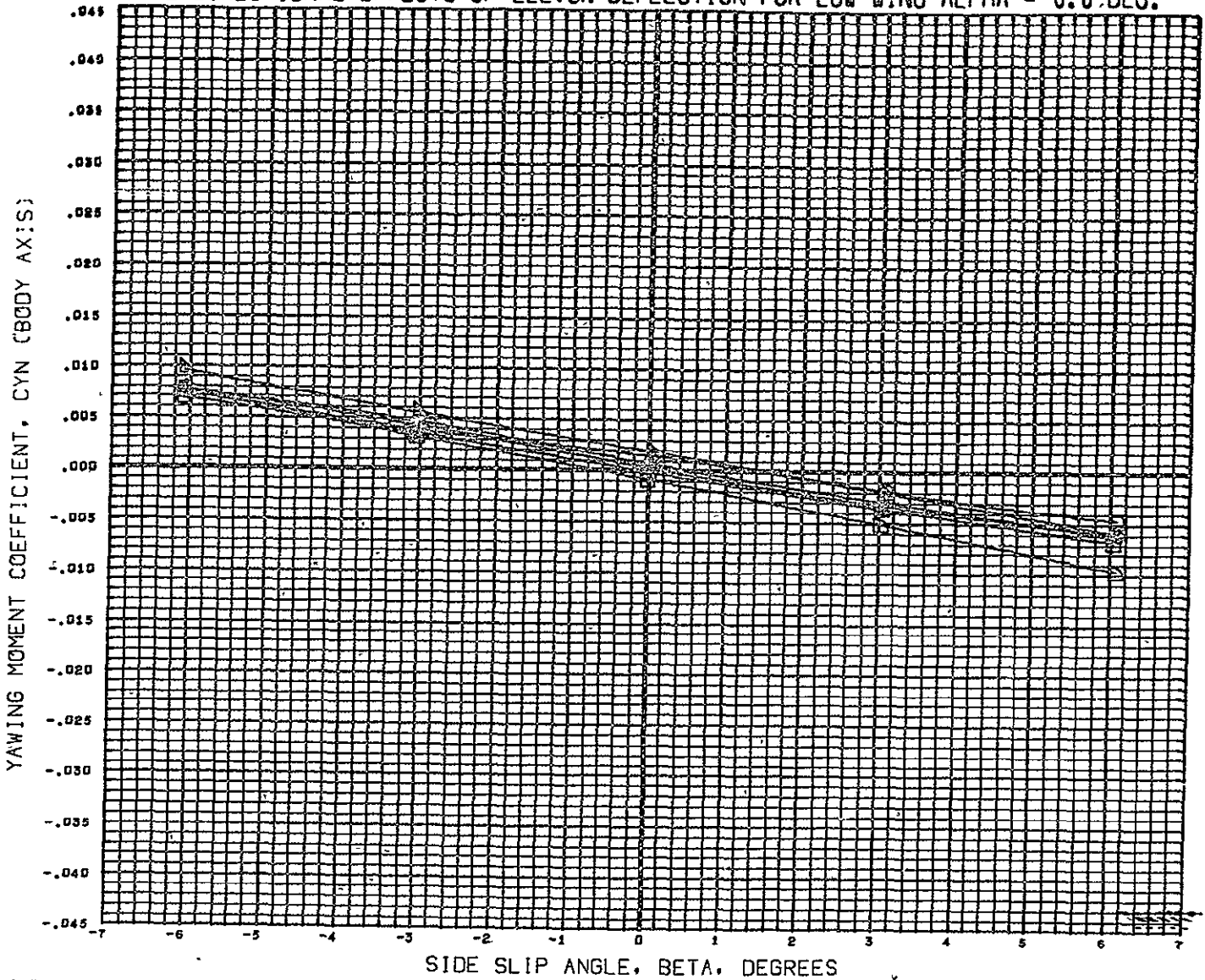
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
1.0	15.000	MACH	0.400	BETA	0.000	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	.DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4054)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT
(RN4058)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2018)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4062)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XNRP 2.5950 FEET
(RN4070)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YNRP 0.0000 FEET
(RN4074)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

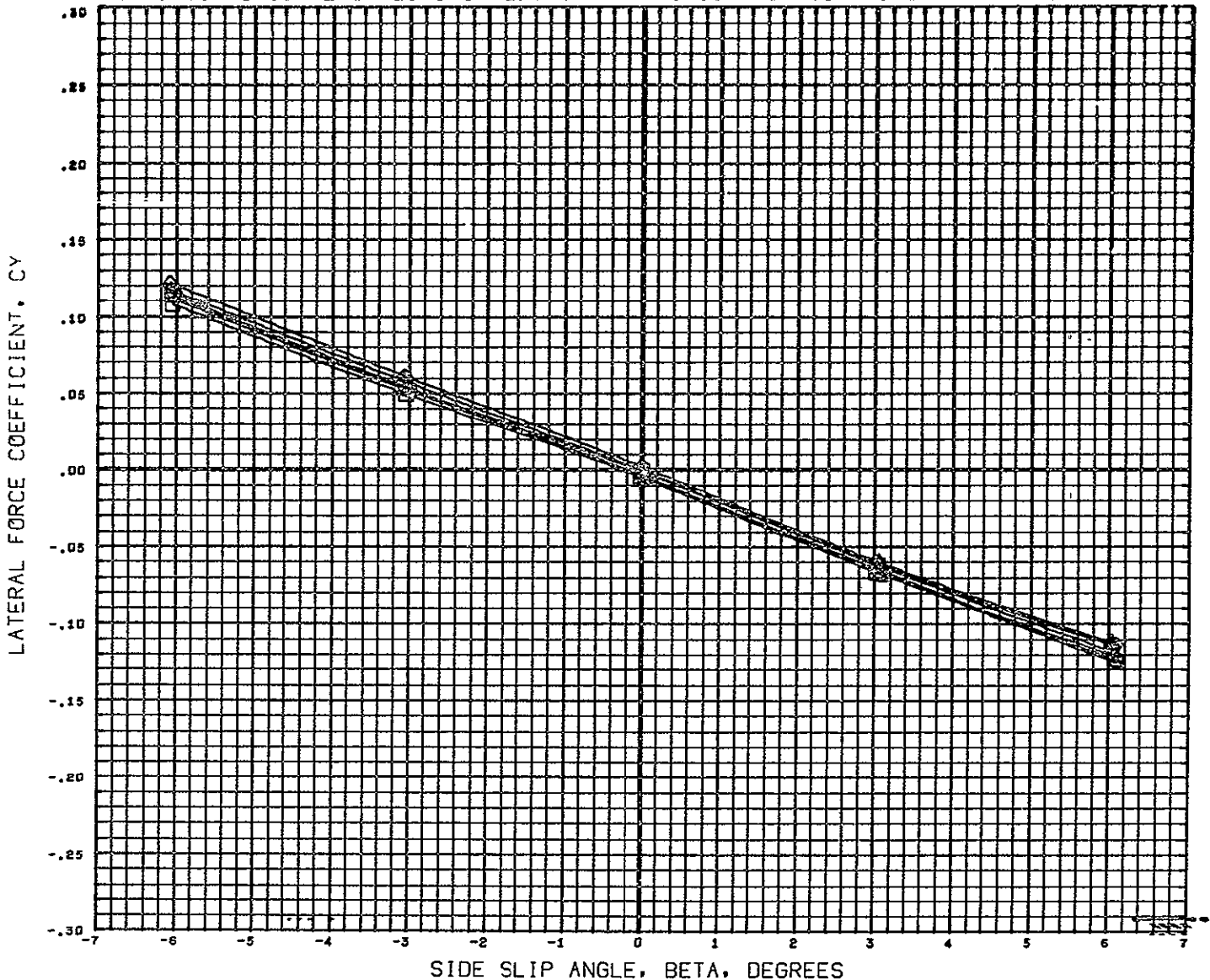
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4054)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(RN4058)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2018)	NSPDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4062)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XNRP 2.5950 FEET
(RN4070)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YNRP 0.0000 FEET
(RN4074)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.

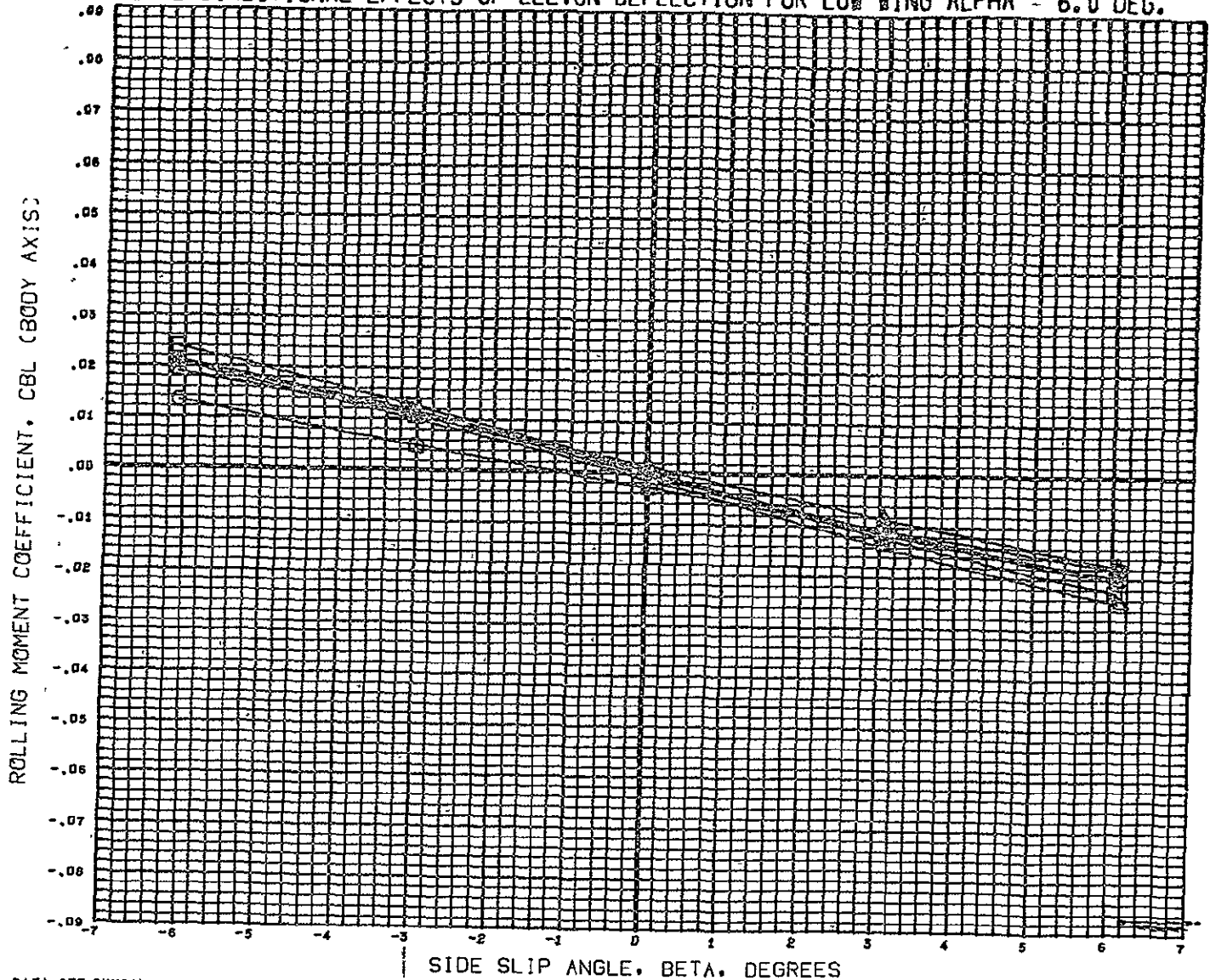


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4054)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 39.FT.
(RN4058)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2018)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4062)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(RN4070)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(RN4074)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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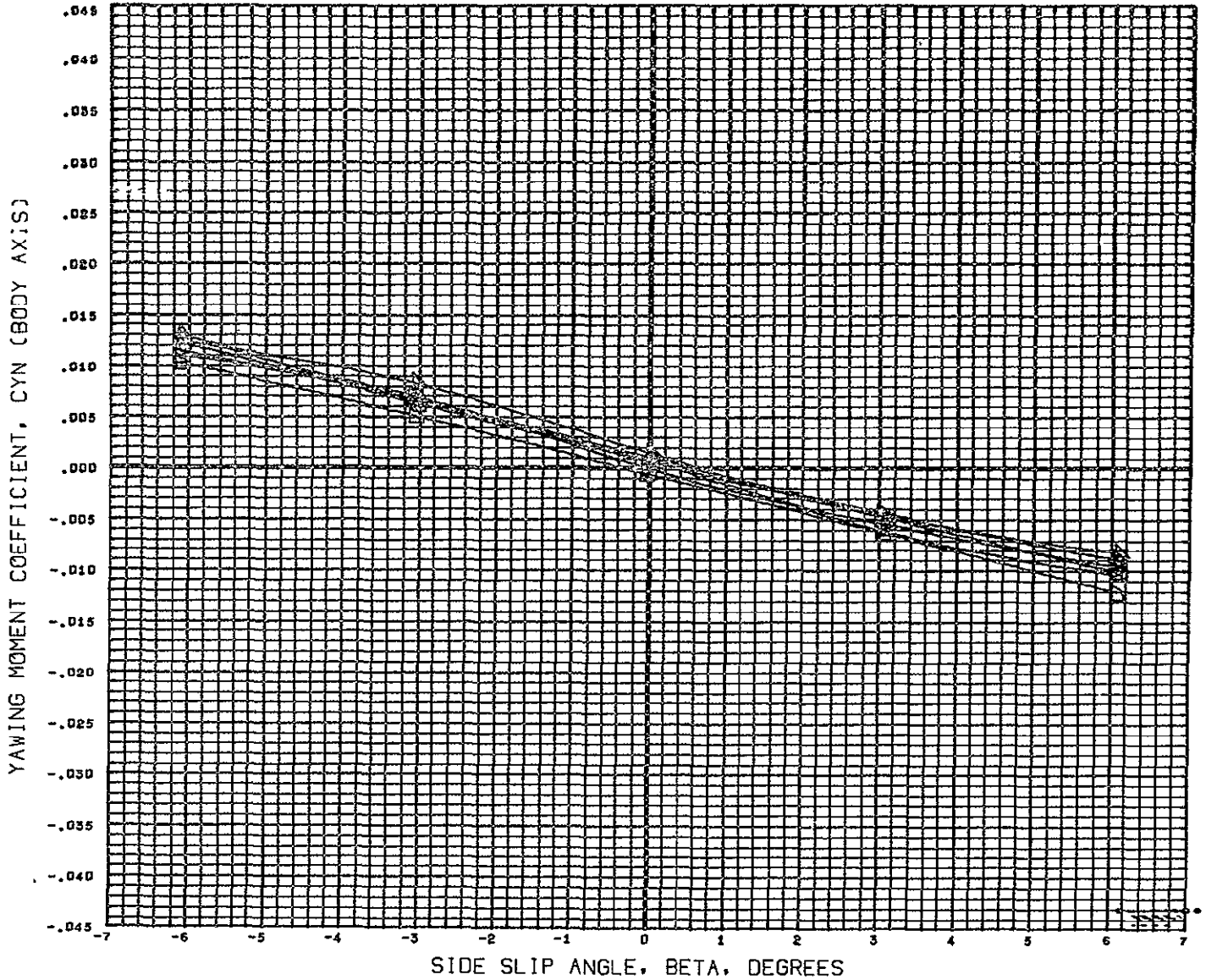
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4055)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(RN4059)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(RN2019)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4063)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.9950 FEET
(RN4071)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(RN4075)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

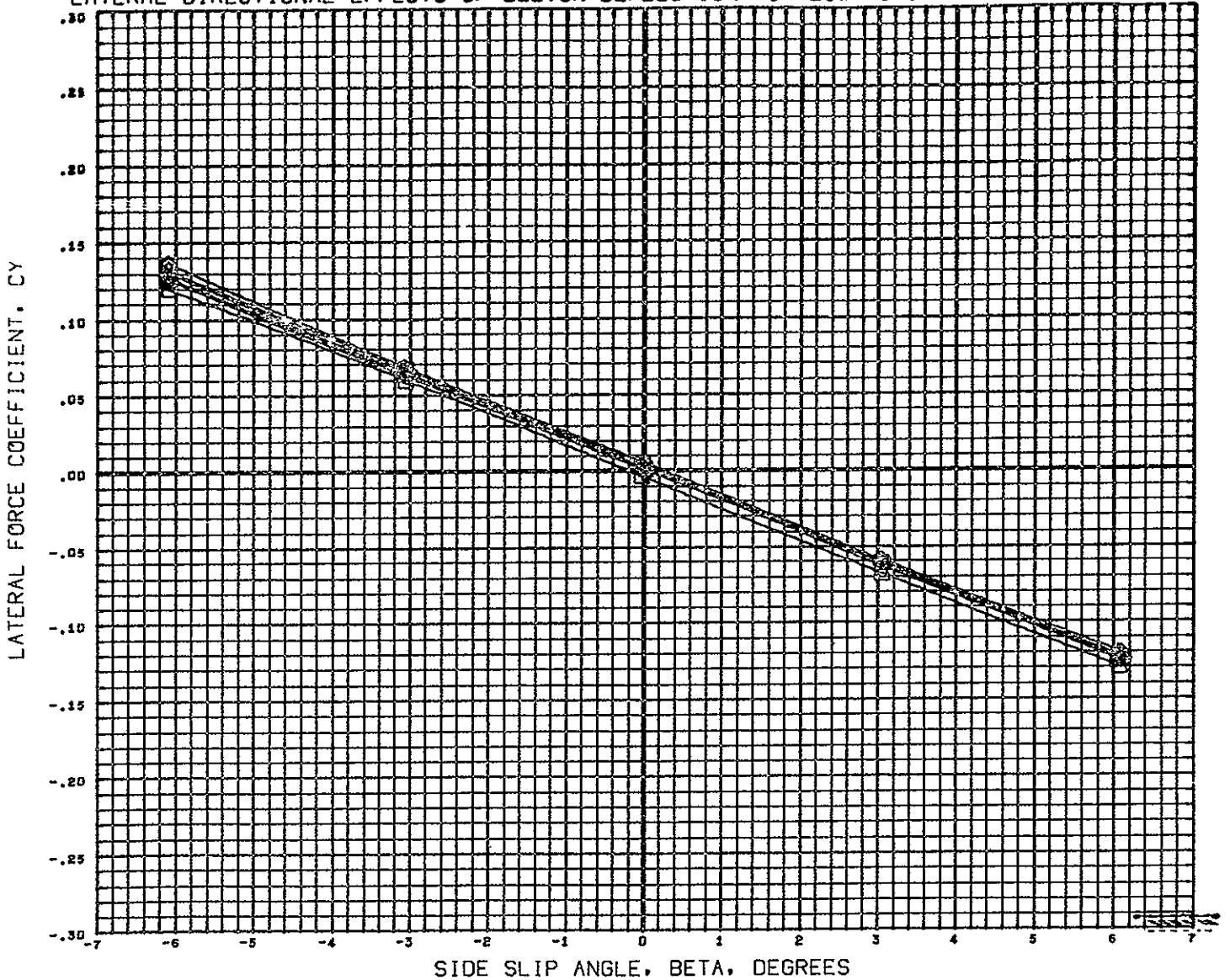
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4055)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(RN4059)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2019)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4063)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(RN4071)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(RN4075)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

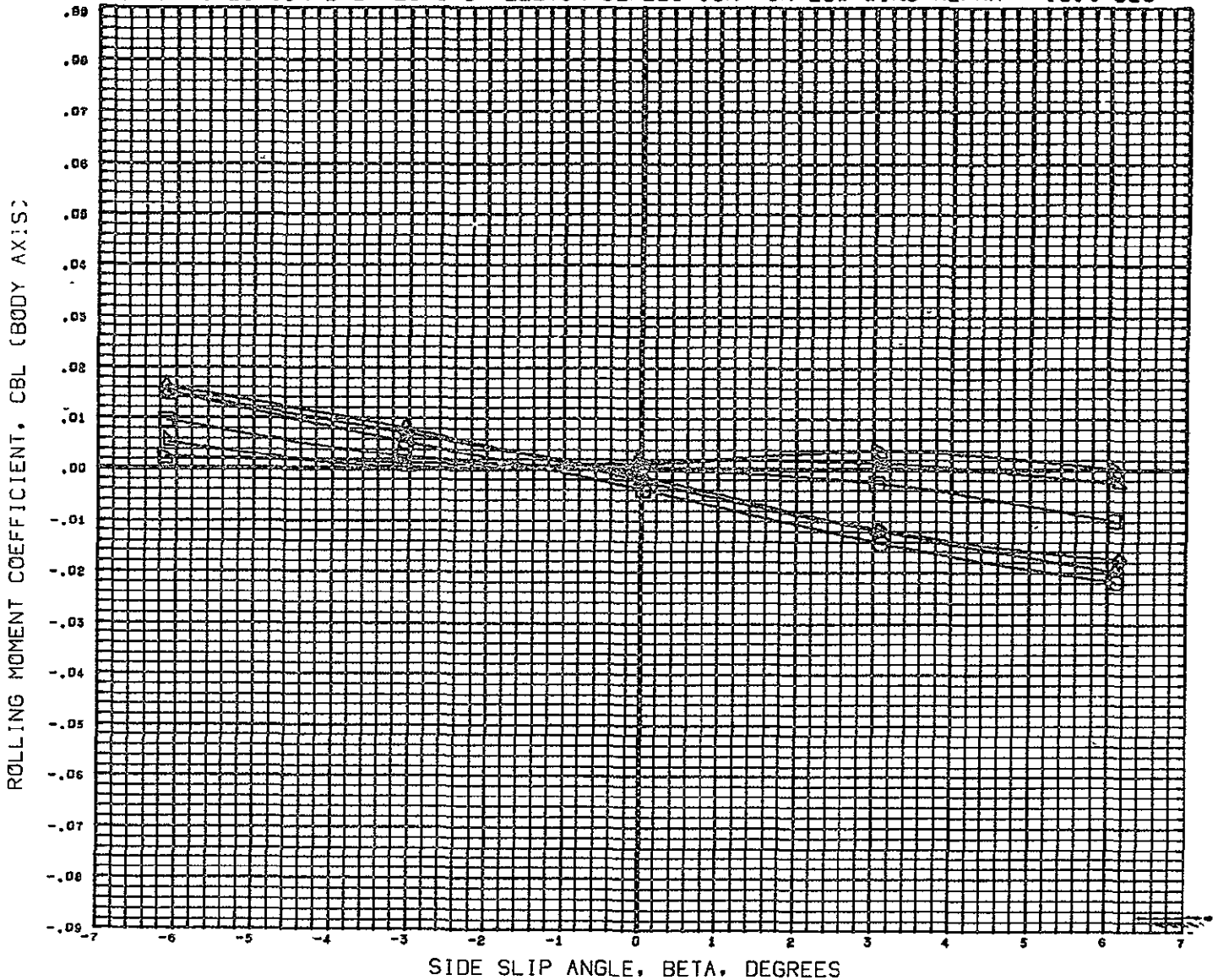
MACH .40

LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4055)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ.FT.
(RN4059)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2019)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4063)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XMRP 2.5950 FEET
(RN4074)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YMRP 0.0000 FEET
(RN4075)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

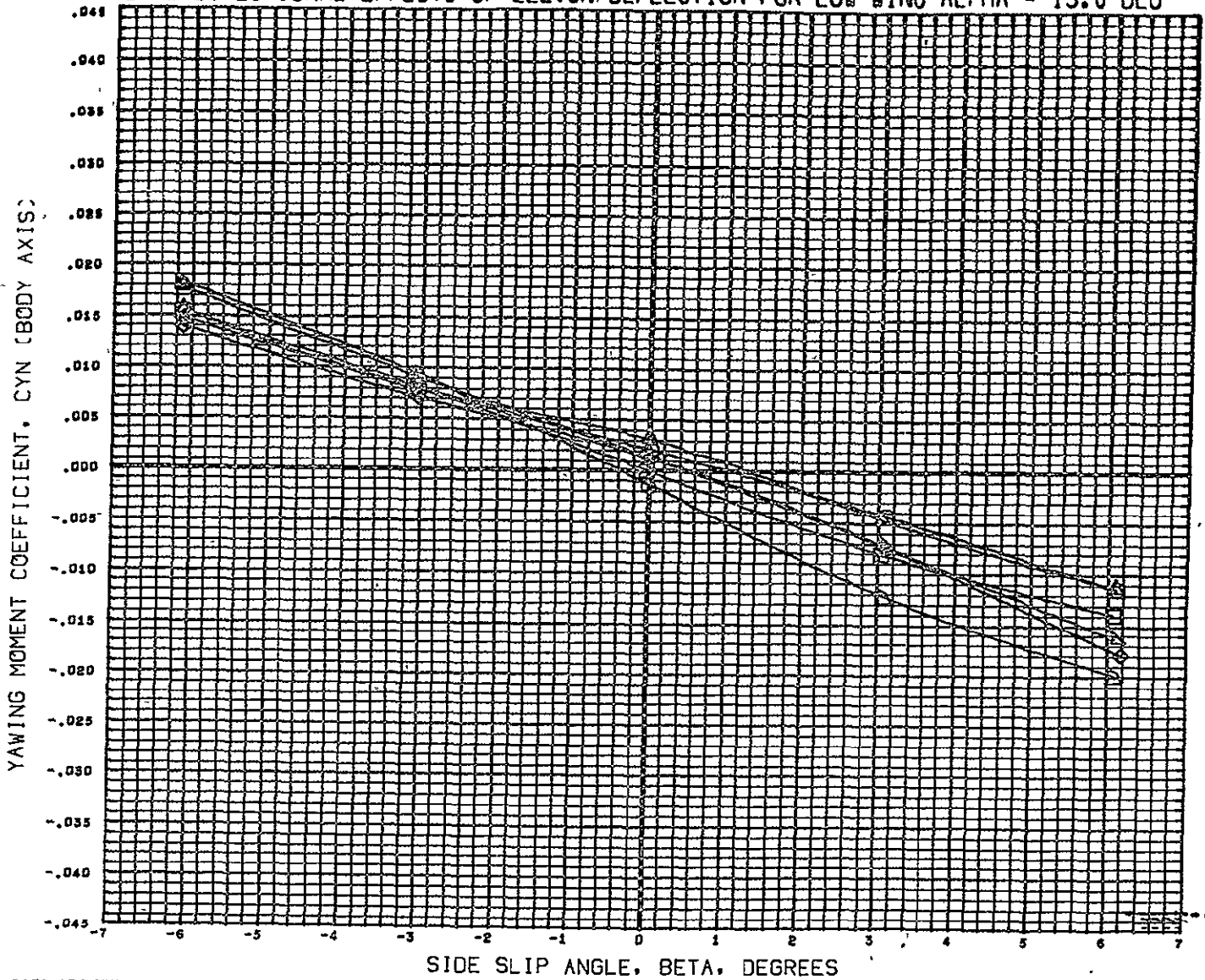
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4056)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ. FT.
(RN4060)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2020)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4064)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(RN4072)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(RN4076)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

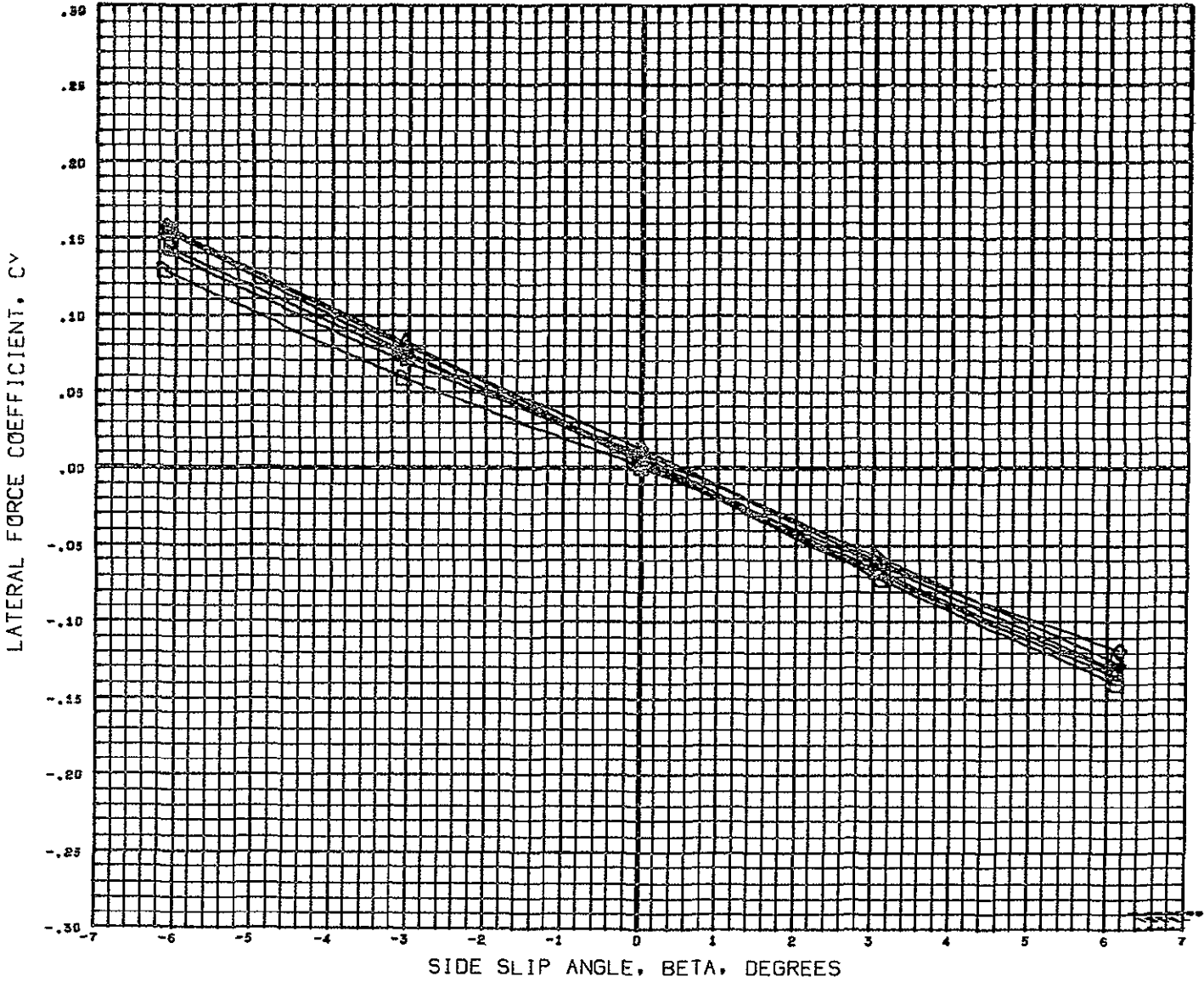
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4056)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-20.000	SREF 1.3550 SQ. FT.
(RN4060)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	LREF 3.4530 FEET
(HN2020)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4064)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XHRP 2.5950 FEET
(RN4072)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YHRP 0.0000 FEET
(RN4076)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

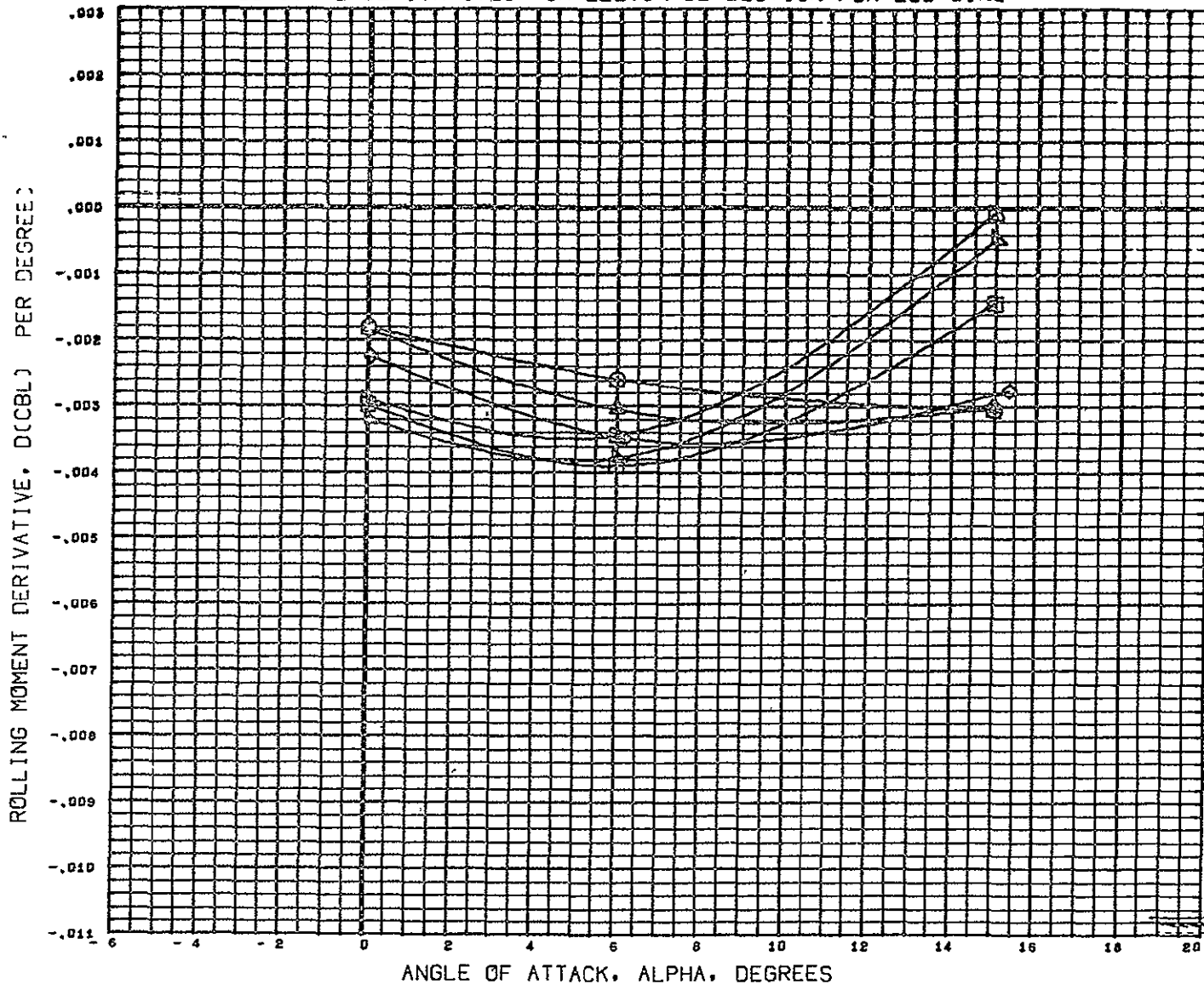
LATERAL DIRECTIONAL EFFECTS OF ELEVON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	ELEVTR	REFERENCE INFORMATION
(RN4056)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	~20.000	SREF 1.3550 SQ. FT.
(RN4060)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	~10.000	LREF 3.4530 FEET
(HN2020)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4064)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	XNRP 2.5950 FEET
(RN4072)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	YNRP 0.0000 FEET
(RN4076)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	30.000	ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

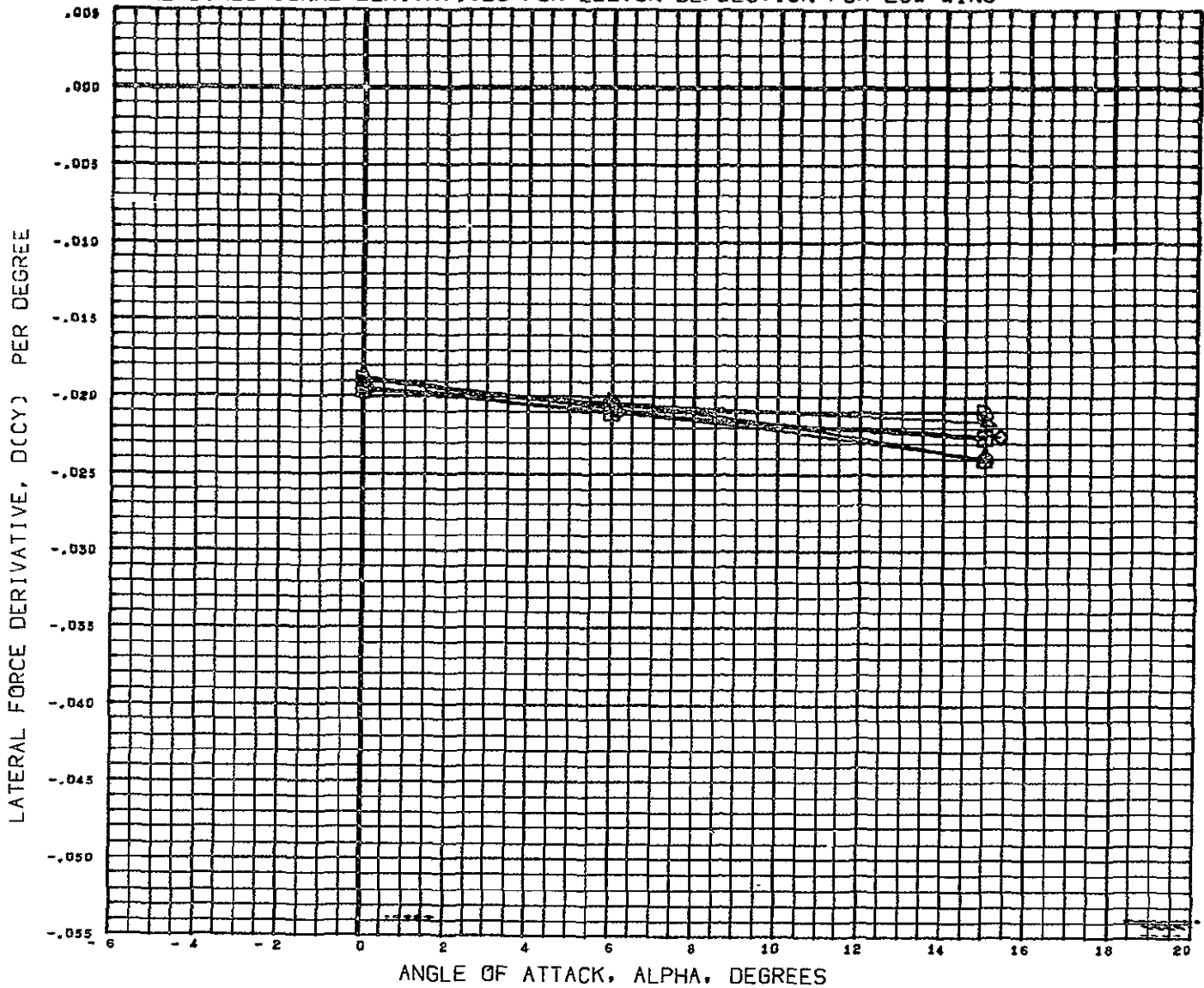
MACH .40

LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION FOR LOW WING



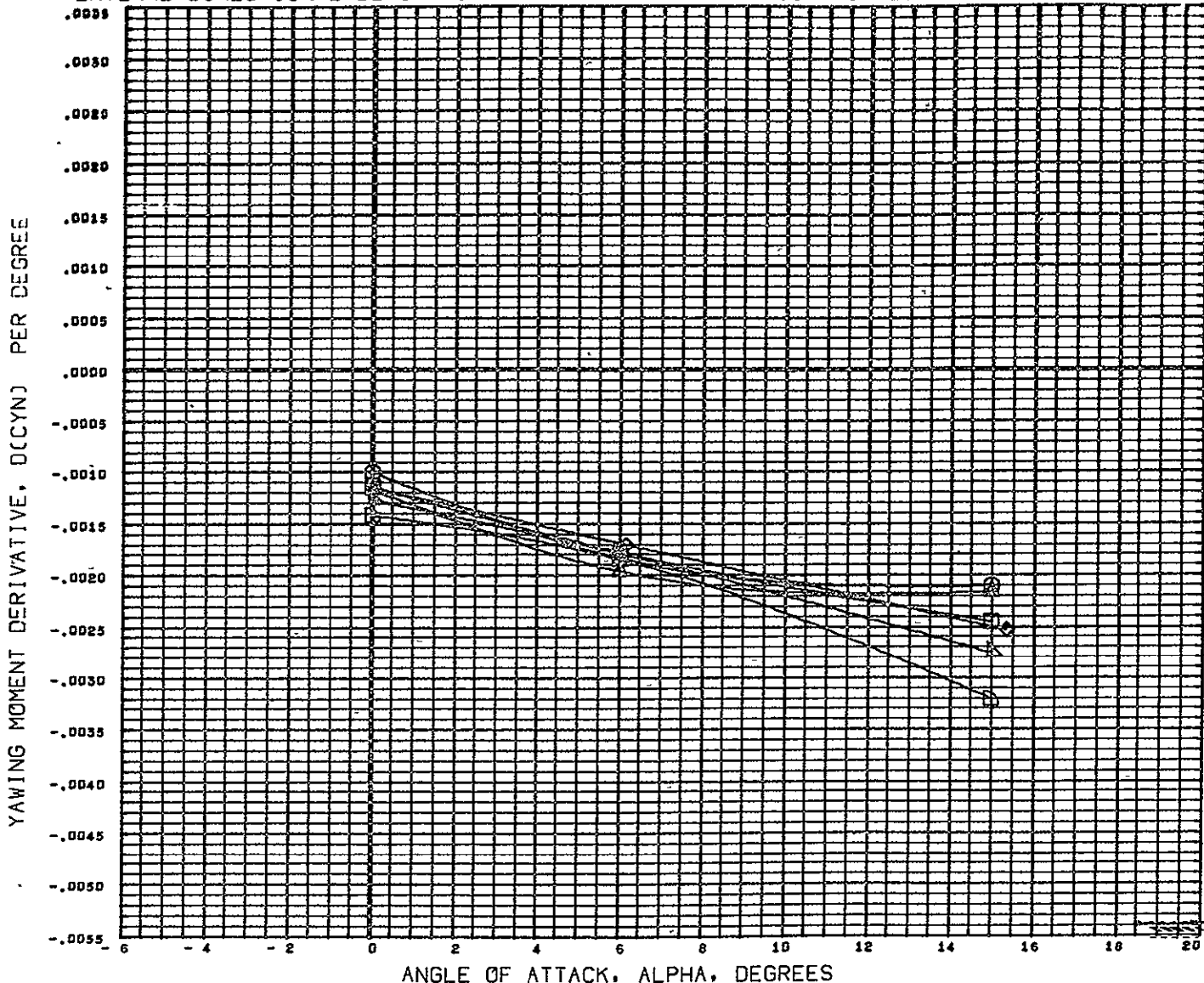
SYMBOL	ELEVTR	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	- 20,000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
□	- 10,000	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◇	0,000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
△	10,000	RUDDER	0.000	WNGPOS	2.000	XMRP	2.5950	FEET
▽	20,000	CNDPOS	1.000			YNRP	0.0000	FEET
	30,000	DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION FOR LOW WING



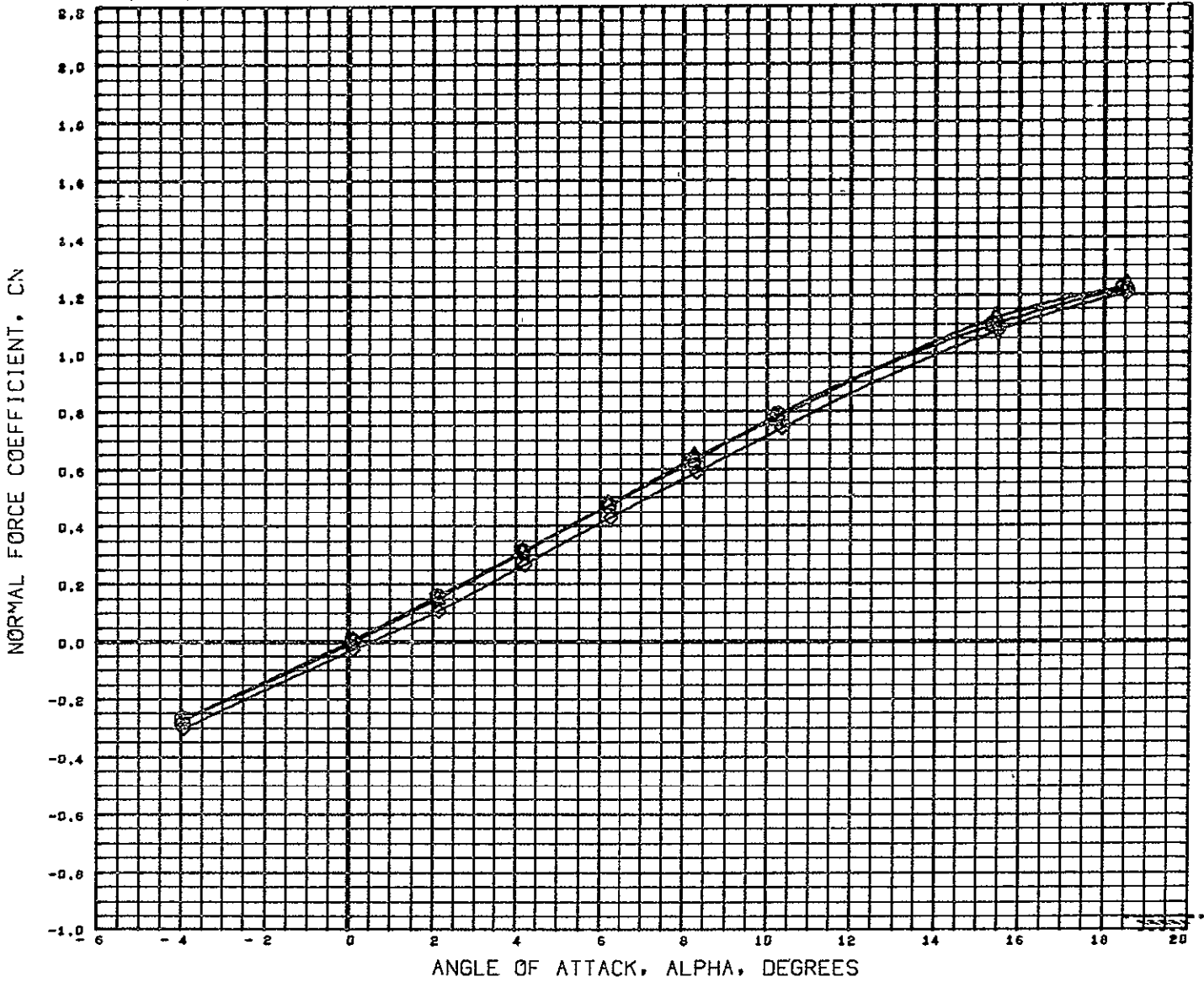
SYMBOL	ELEVTR	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	20.000	<u>HASH</u>	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
◇	10.000	INCIDW	0.000	DIHDRL	7.660	LREF	3.4530	FEET
◇	0.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
◇	10.000	RUDDER	0.000	WNGPOS	2.000	XHRP	2.5950	FEET
◇	20.000	CNDPOS	1.000			YHRP	0.0000	FEET
◇	30.000	DATA HIST. CODE	NI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR ELEVON DEFLECTION FOR LOW WING



SYMBOL	ELEVTR	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	20.000	HACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
◇	10.000	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◊	0.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
◻	10.000	RUDDER	0.000	WNGPOS	2.000	XHRP	2.5950	FEET
◼	20.000	CNDPOS	1.000			YHRP	0.0000	FEET
◽	30.000	DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0

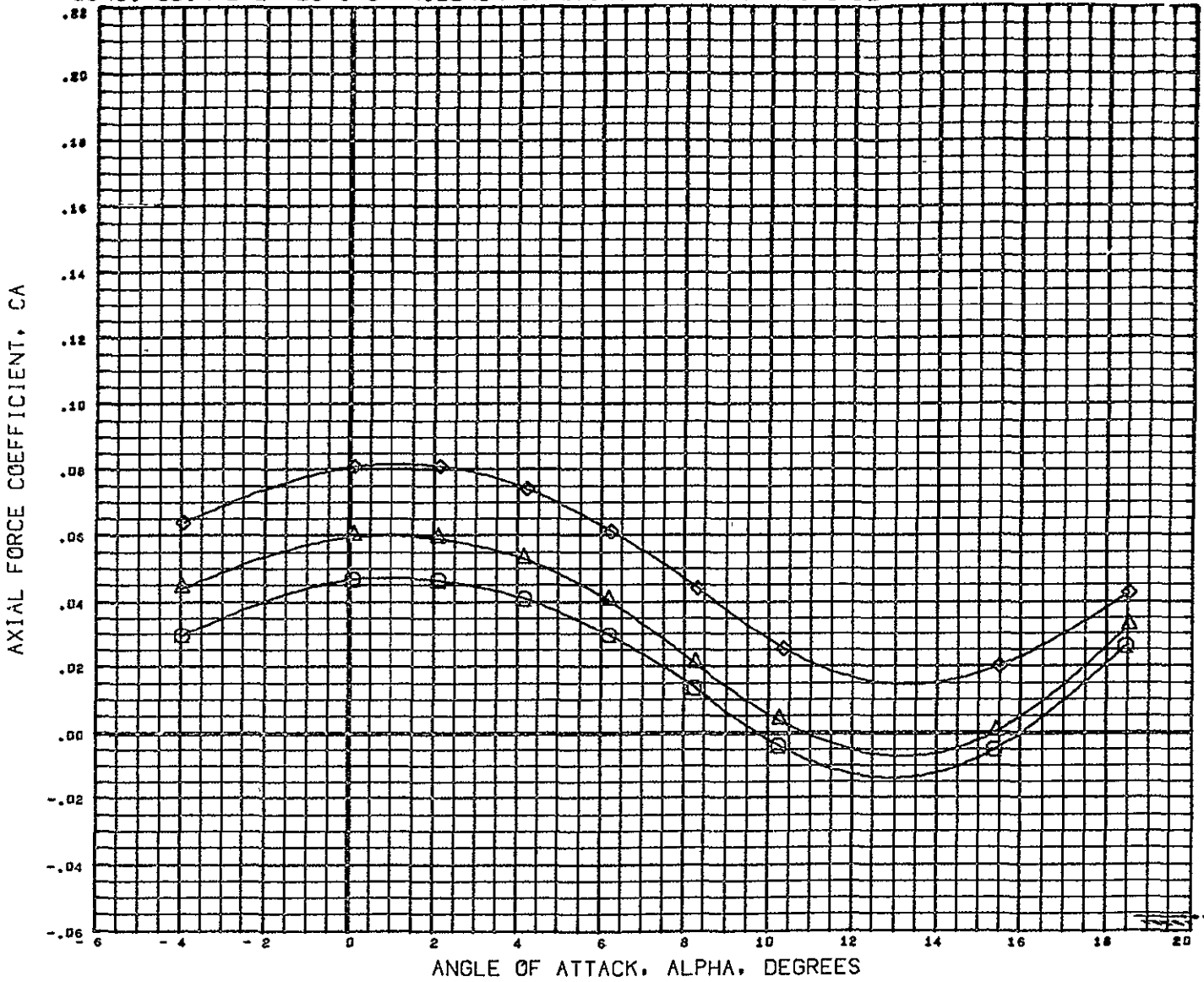


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.090	LREF 3.4530 FEET
(RN4081)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

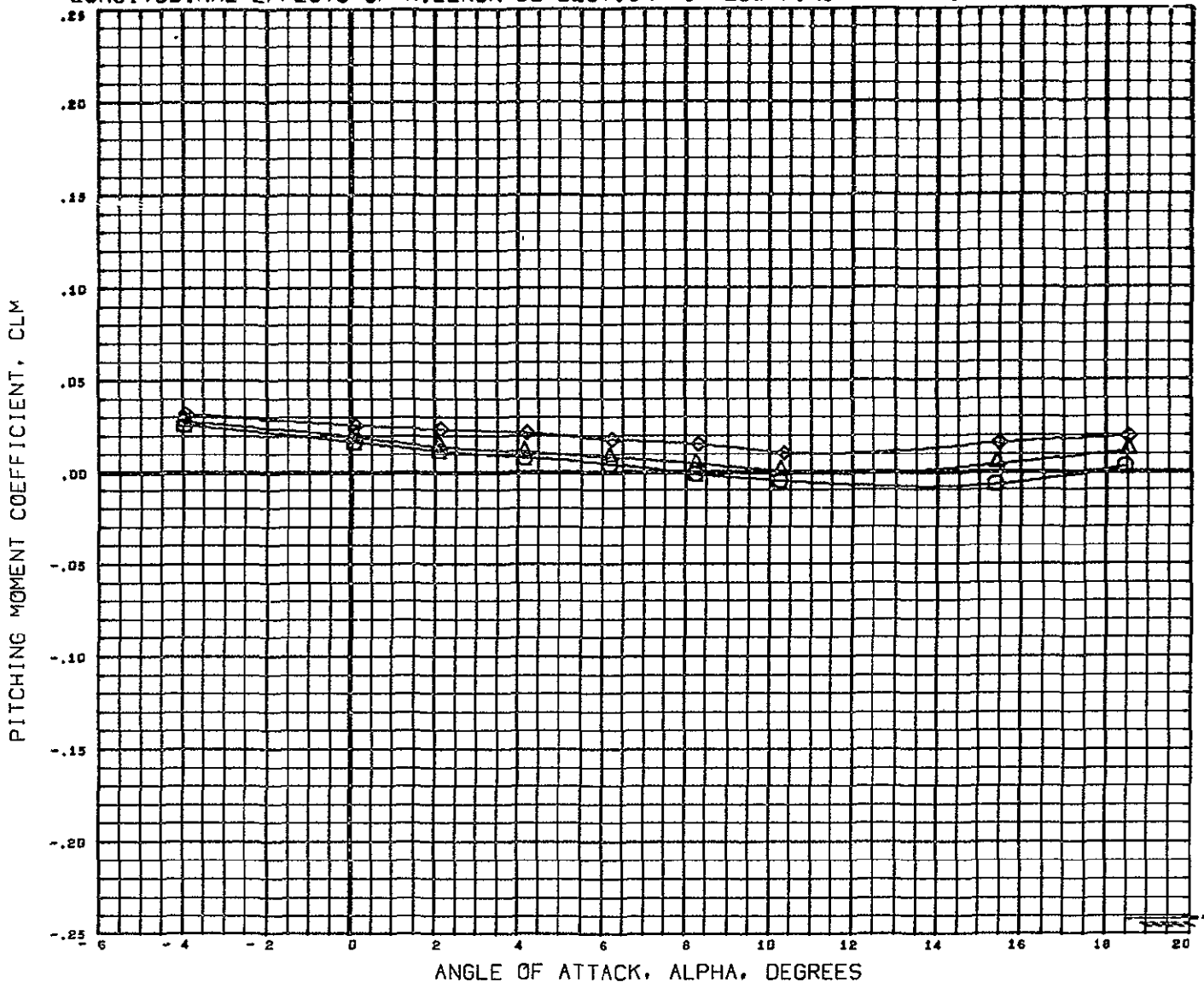
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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2D17)	NSRDC-311D, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT.
(RN4D77)	NSRDC-331D, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4D81)	NSRDC-331D, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0

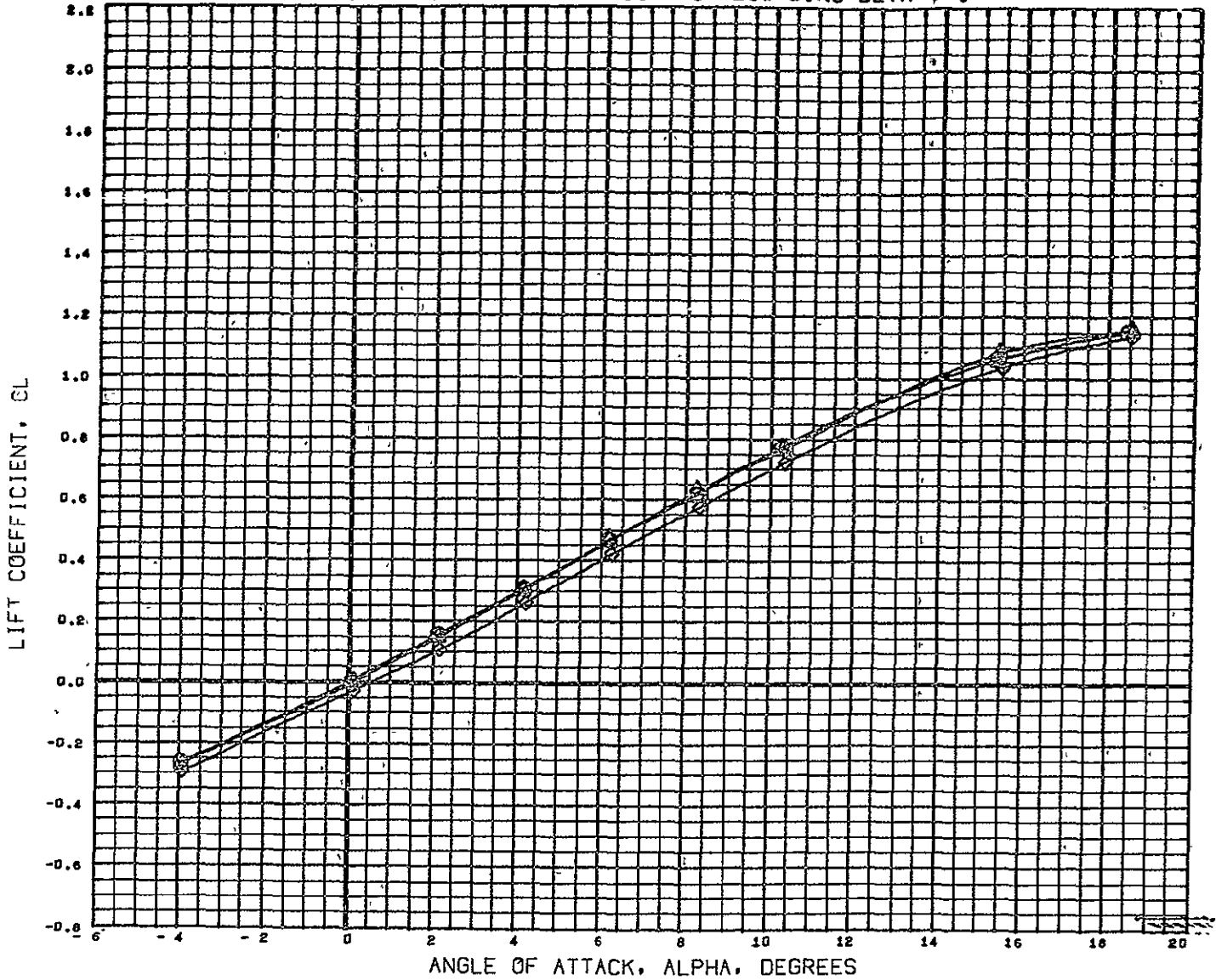


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION	
(HN2017)	○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF	1.3550 SQ.FT.
(RN4077)	△	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF	3.4530 FEET
(RN4081)	◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF	3.4530 FEET
							XHRP	2.5950 FEET
							YHRP	0.0000 FEET
							ZHRP	0.0187 FEET
							SCALE	0.0150 SCALE

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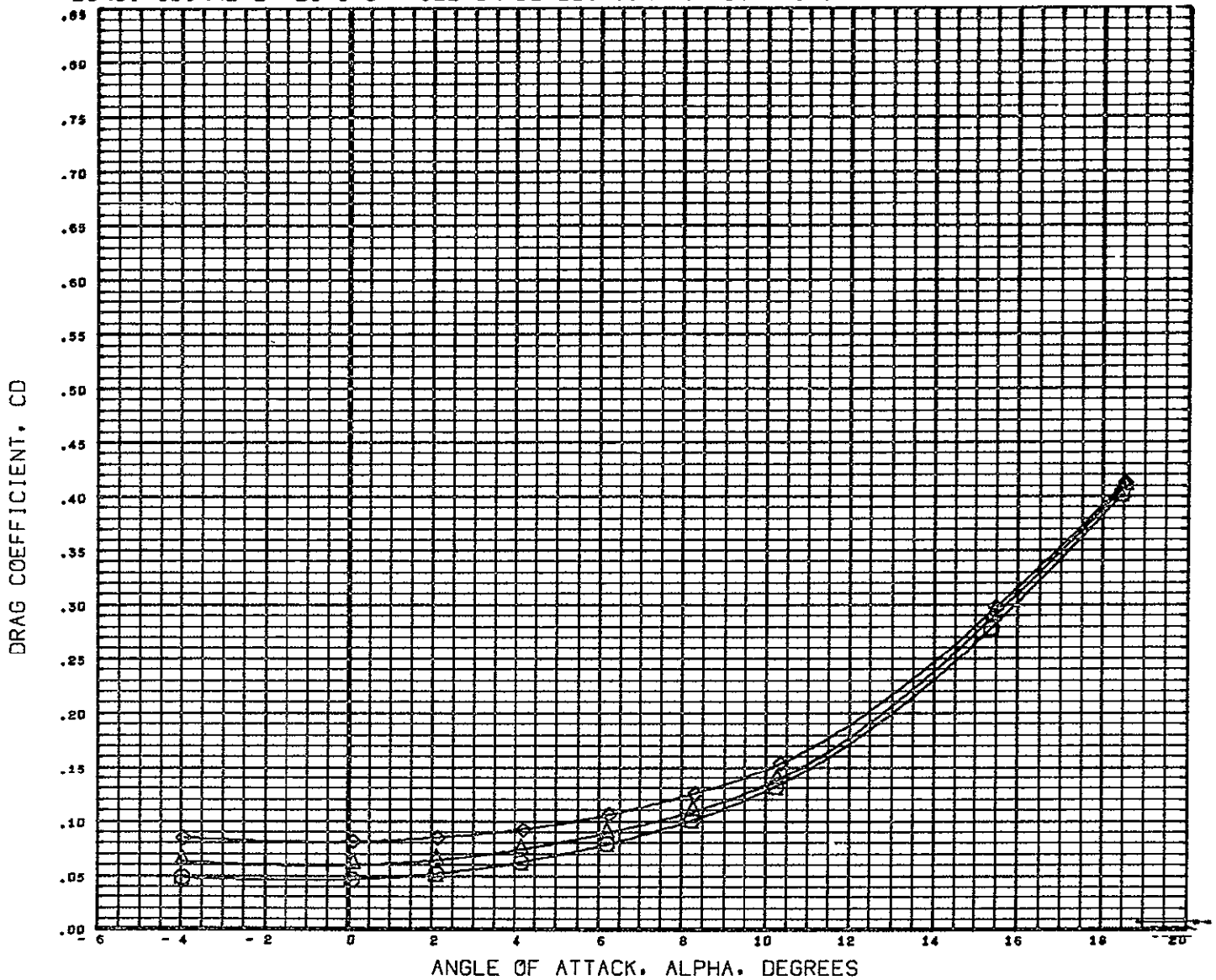
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(NN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4081)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

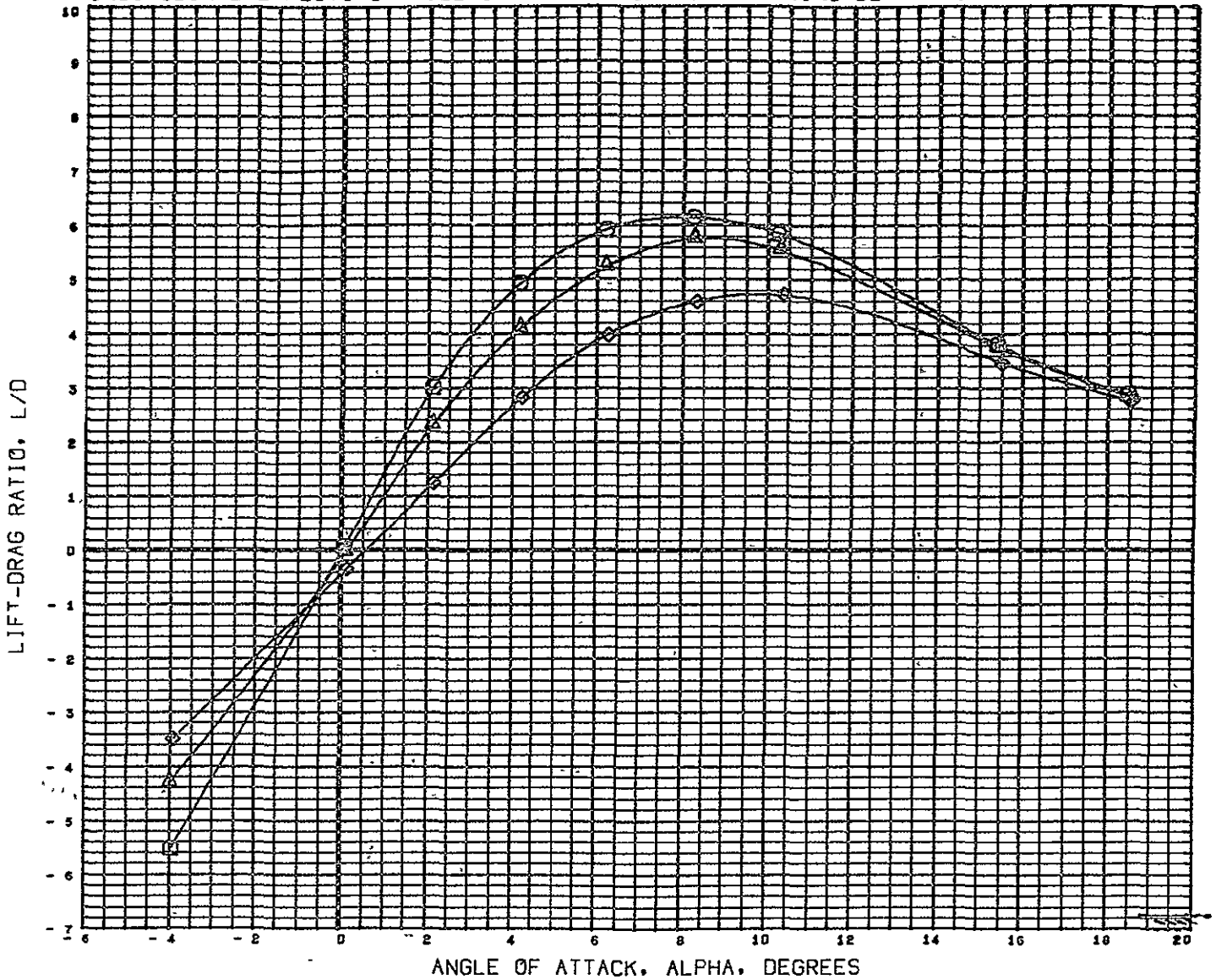
MACH .38

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



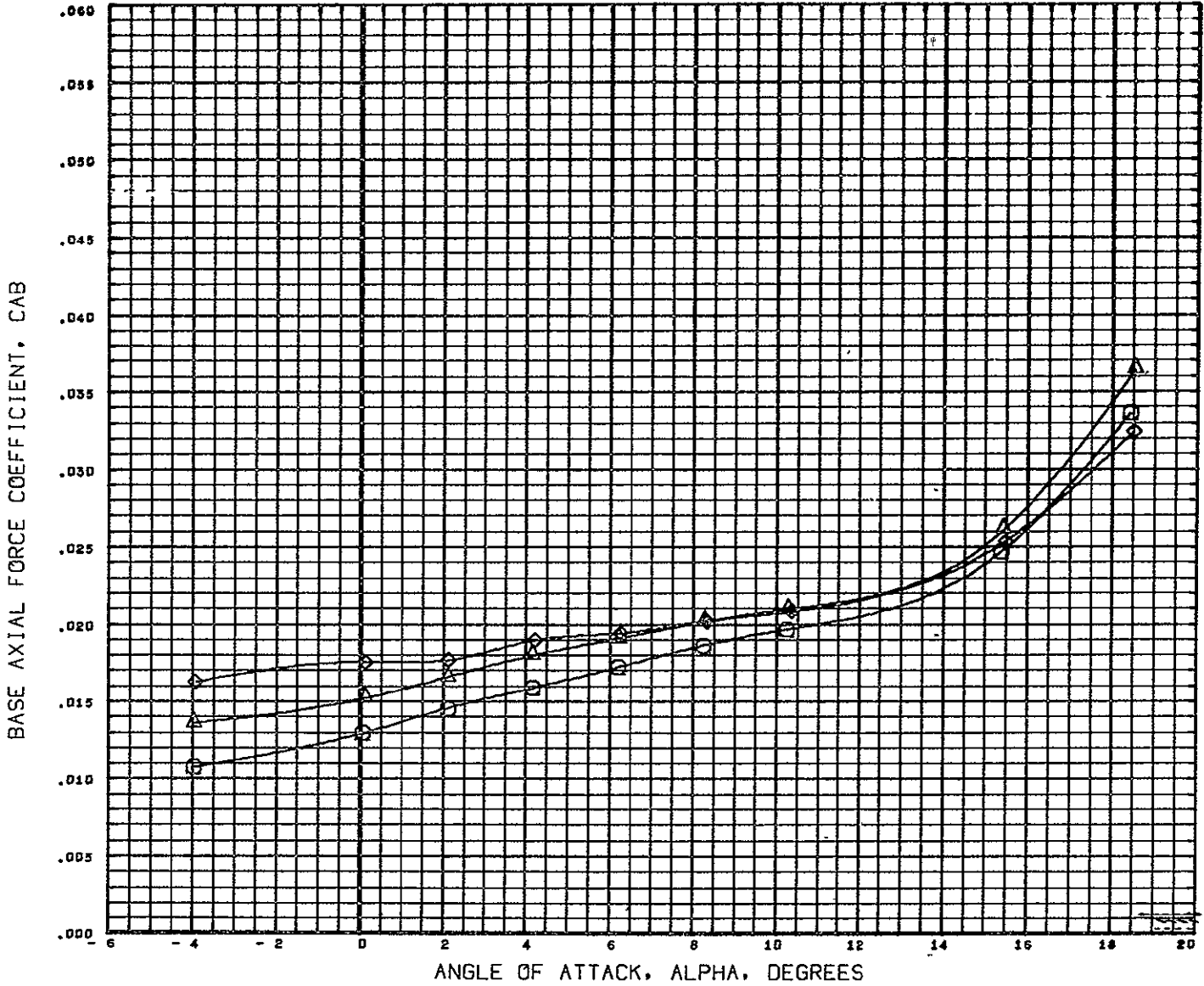
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4081)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET XHRP 2.5050 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	7,660	1,000	2,000	0,000	SREF 1,3550 SQ.FT.
(RN4077)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7,660	1,000	2,000	10,000	LREF 3,4530 FEET
(RN4081)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7,660	1,000	2,000	20,000	BREF 3,4530 FEET
						XMRP 2,5950 FEET
						YMRP 0,0000 FEET
						ZMRP 0,0187 FEET
						SCALE 0,0150 SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0

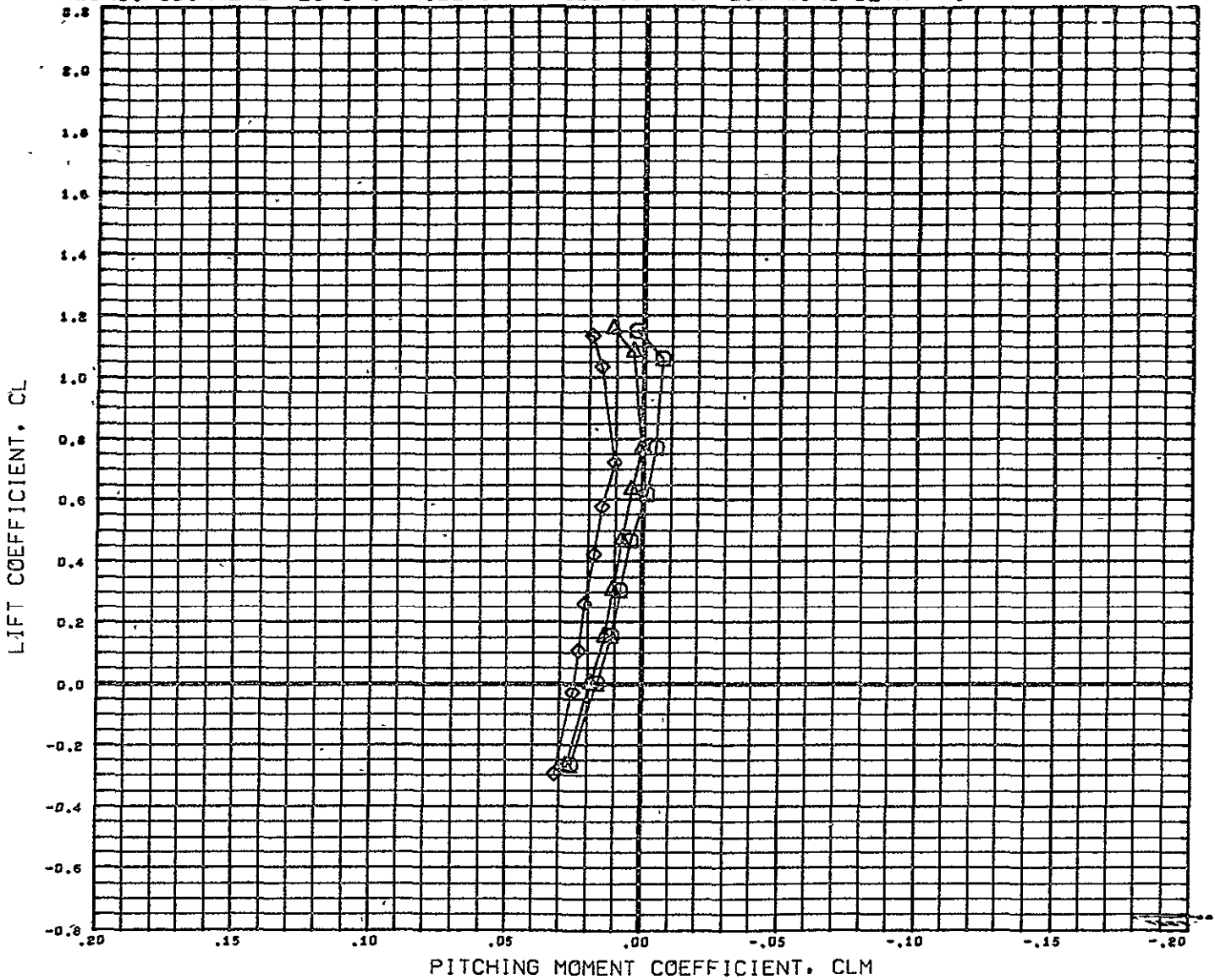


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4081)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0

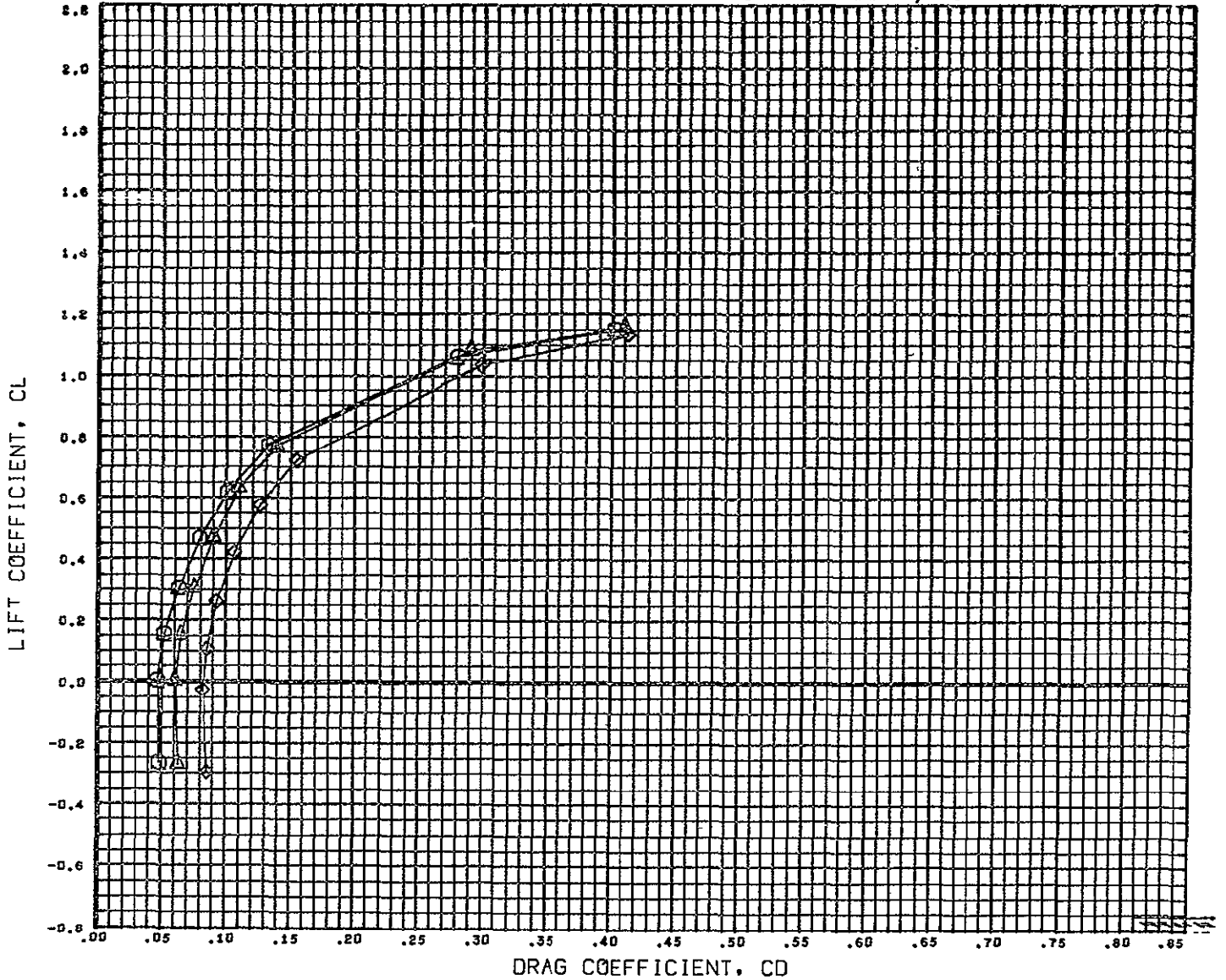


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	○	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	△	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4081)	◇	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
							XHRP 2.5950 FEET
							YHRP 0.0000 FEET
							ZHRP 0.0187 FEET
							SCALE 0.0150 SCALE

MACH .38

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LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA, $\beta = 0$

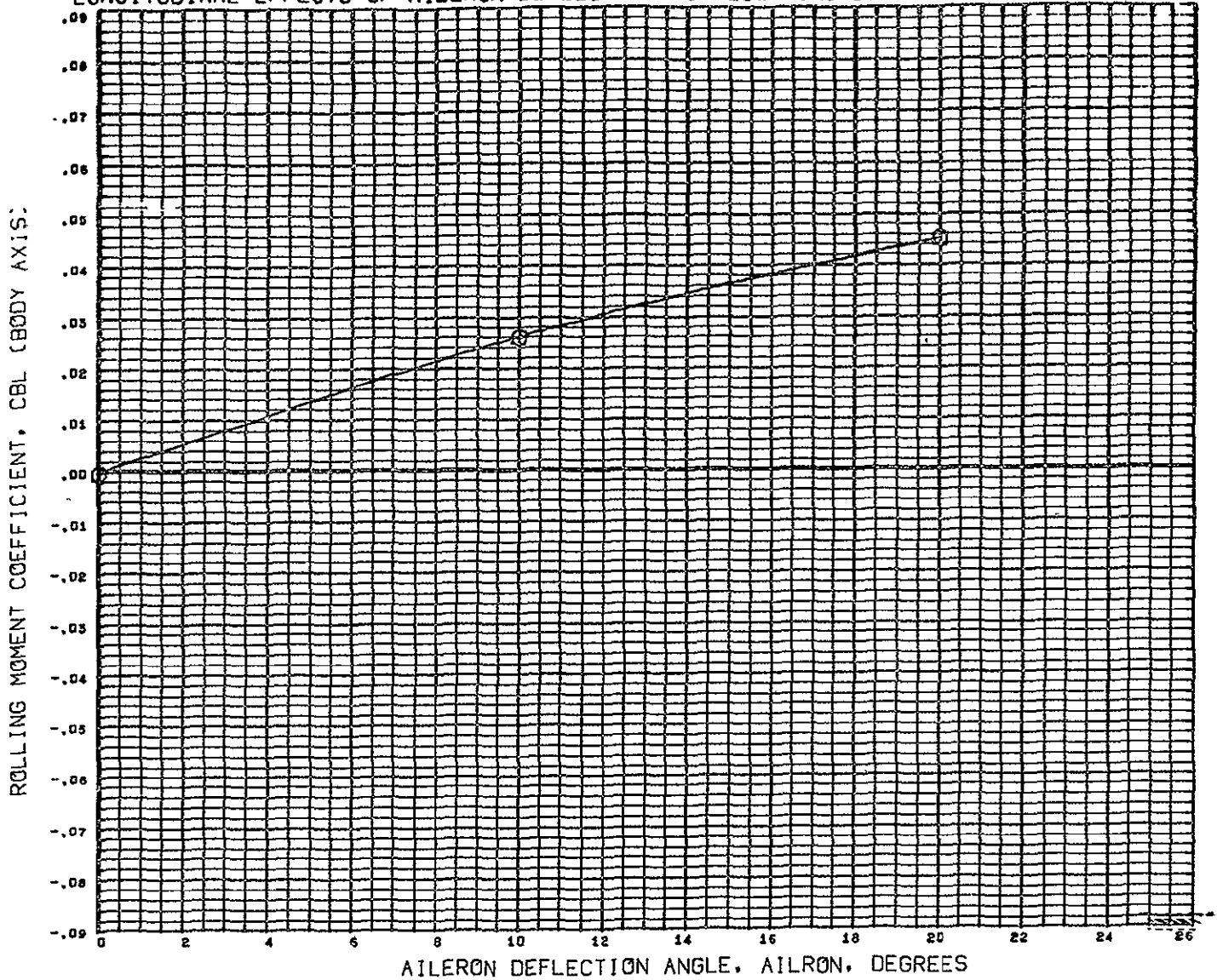


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2017)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4077)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4081)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

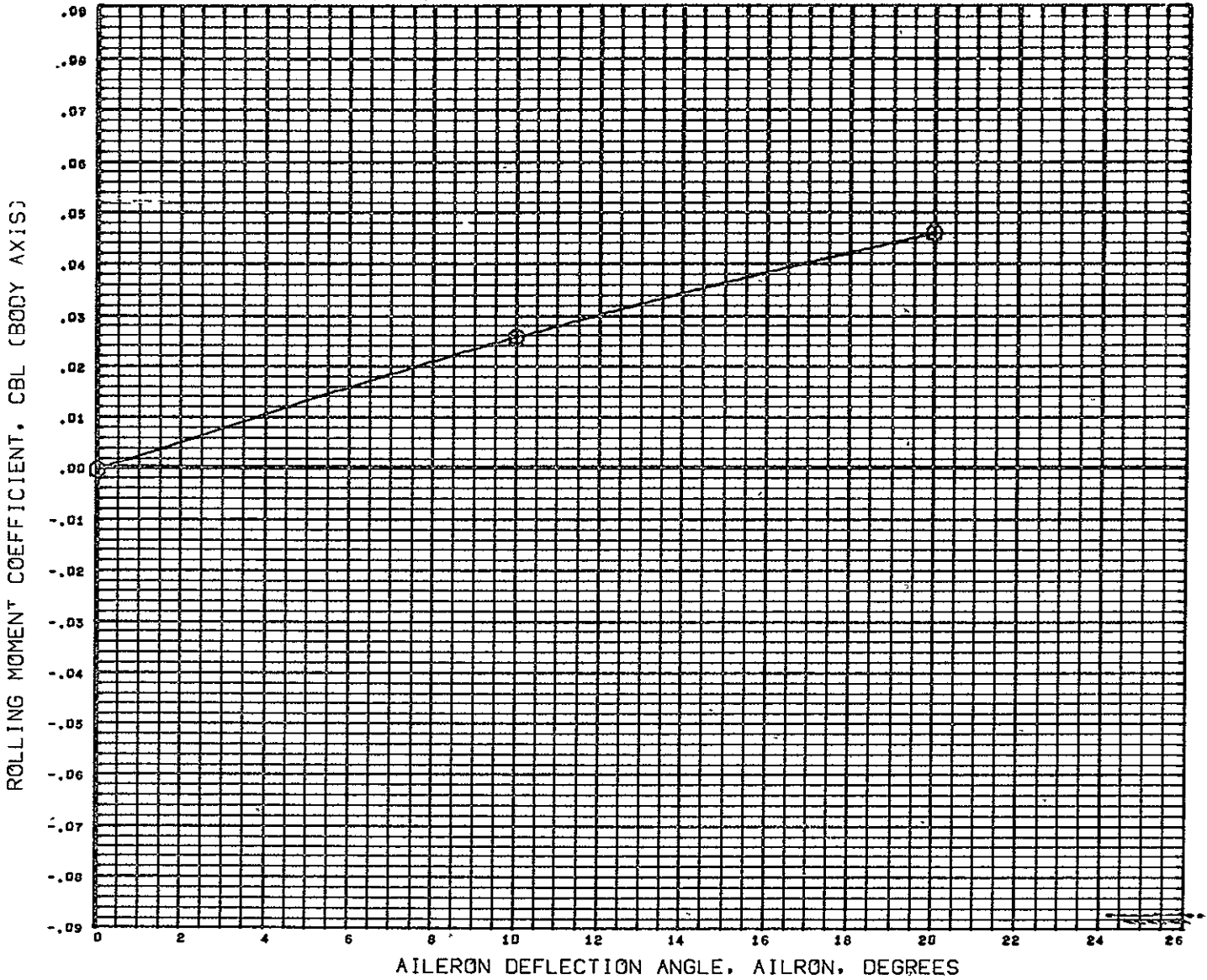
PAGE 463

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	0.000	MACH	0.400	BETA	0.016	SREF	1.5550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



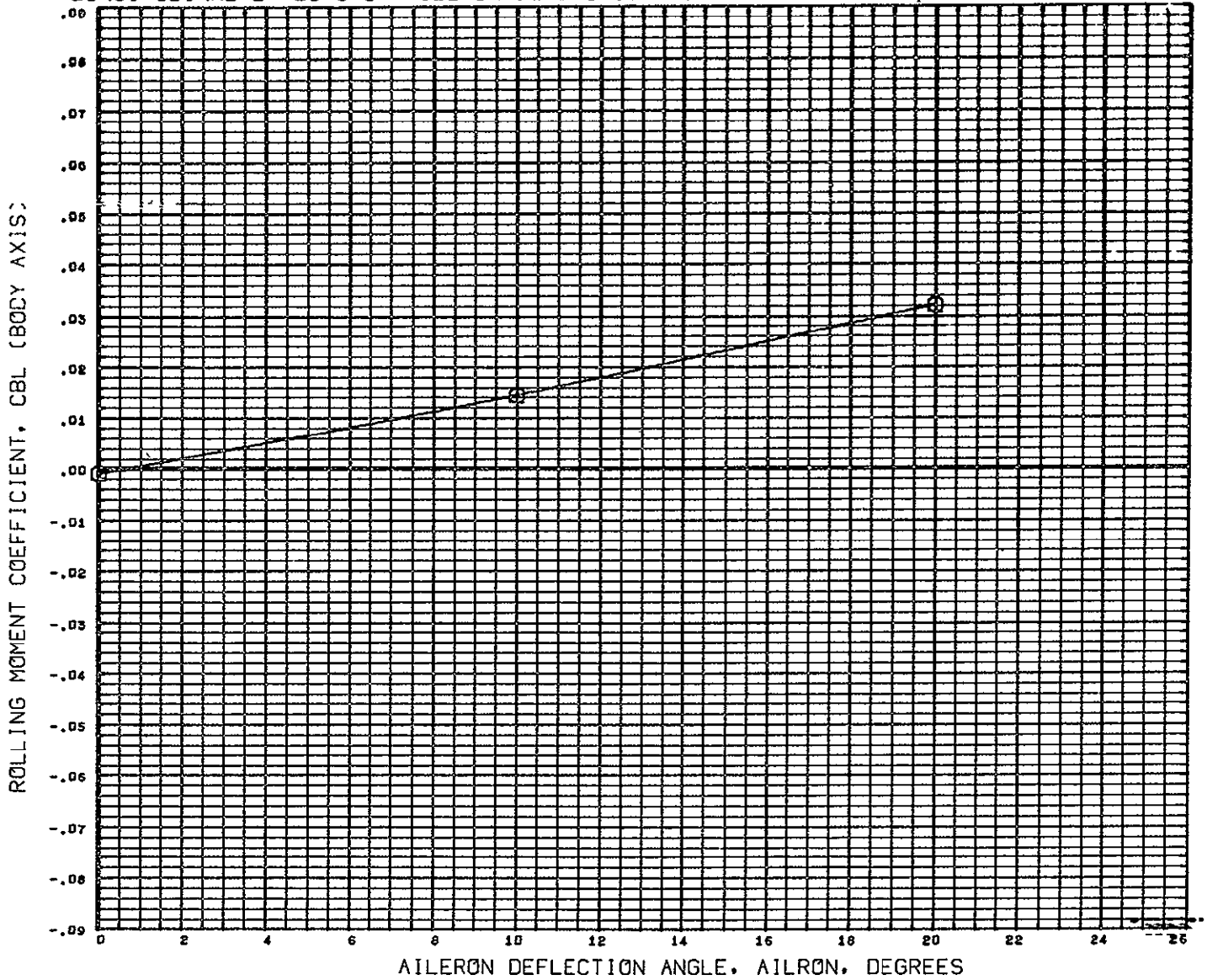
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	5.000	HACH	0.400	BETA	0.016	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
						ZMRP	0.0167	FEET
		DATA HIST. CODE	'HI			SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



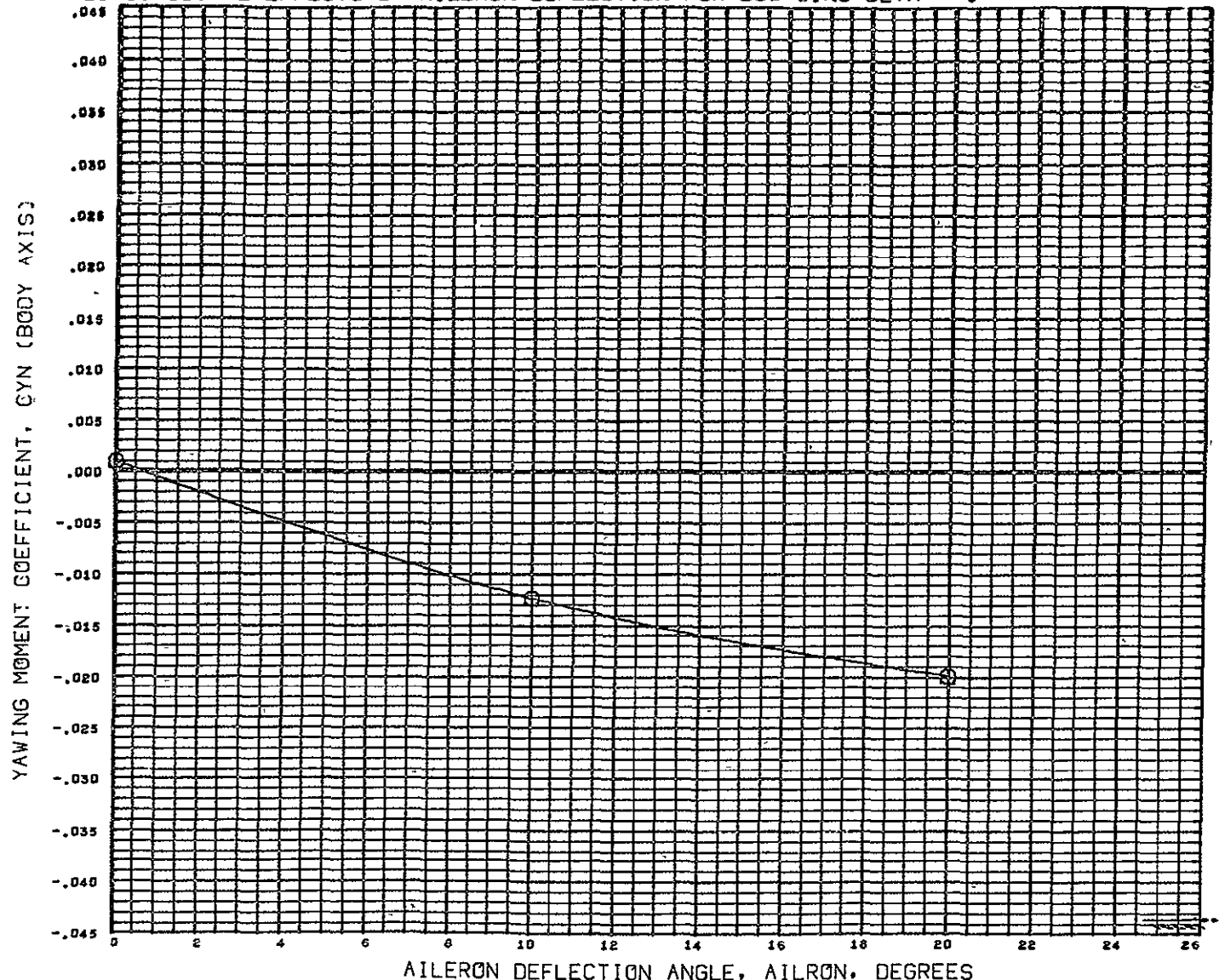
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	50 FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



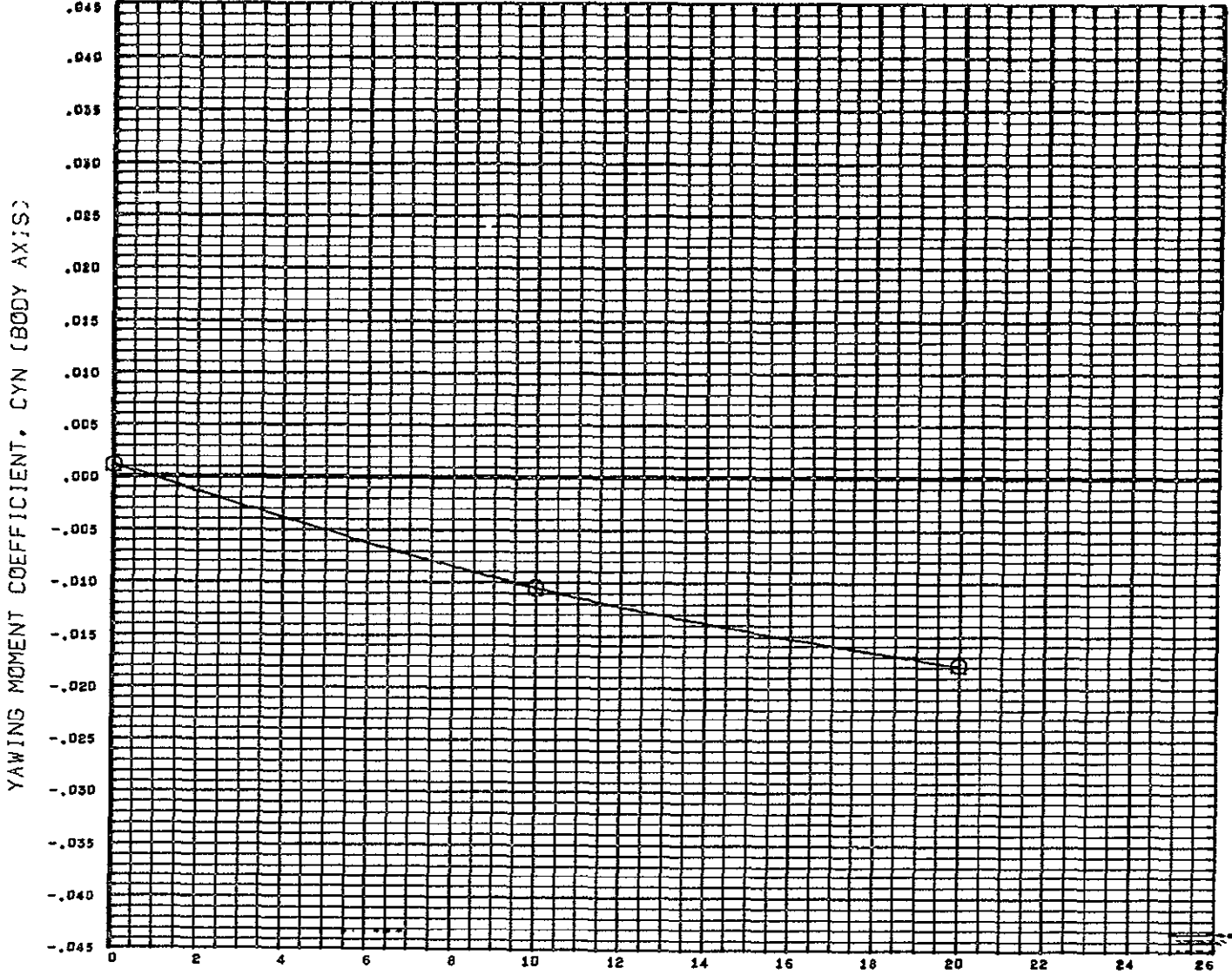
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	HACH	0.400	BETA	0.016	SREF	1.3550	99. FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



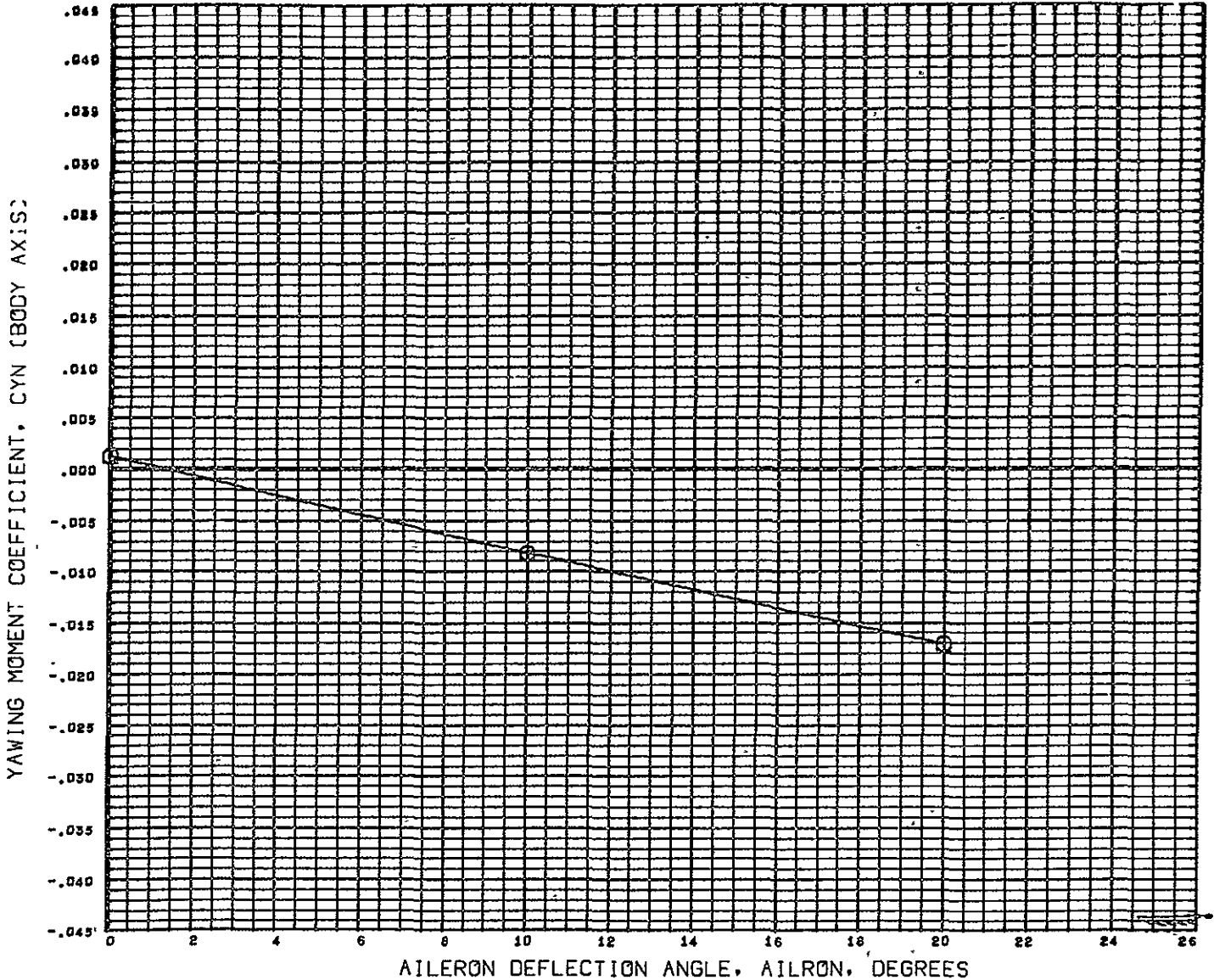
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	NI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



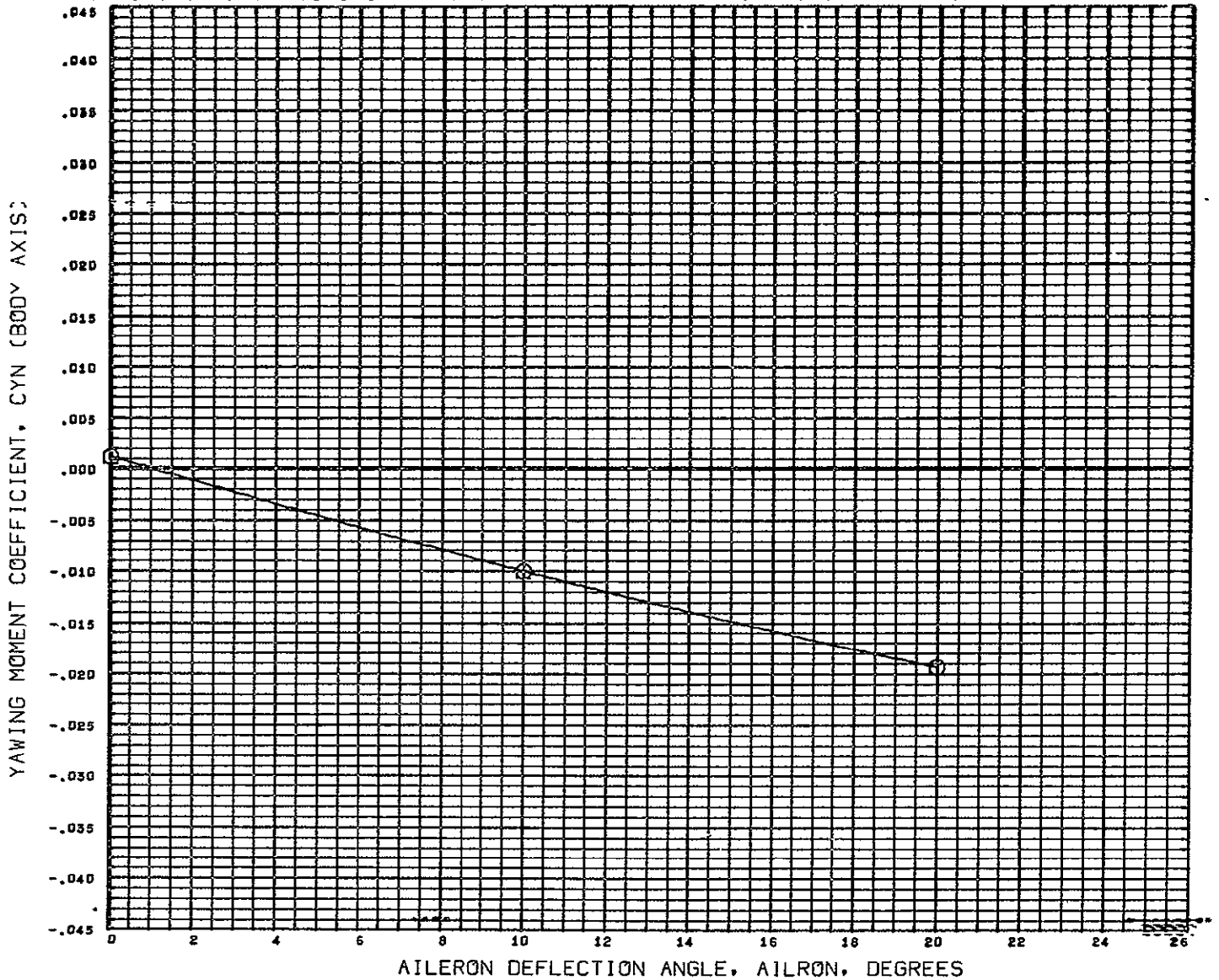
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



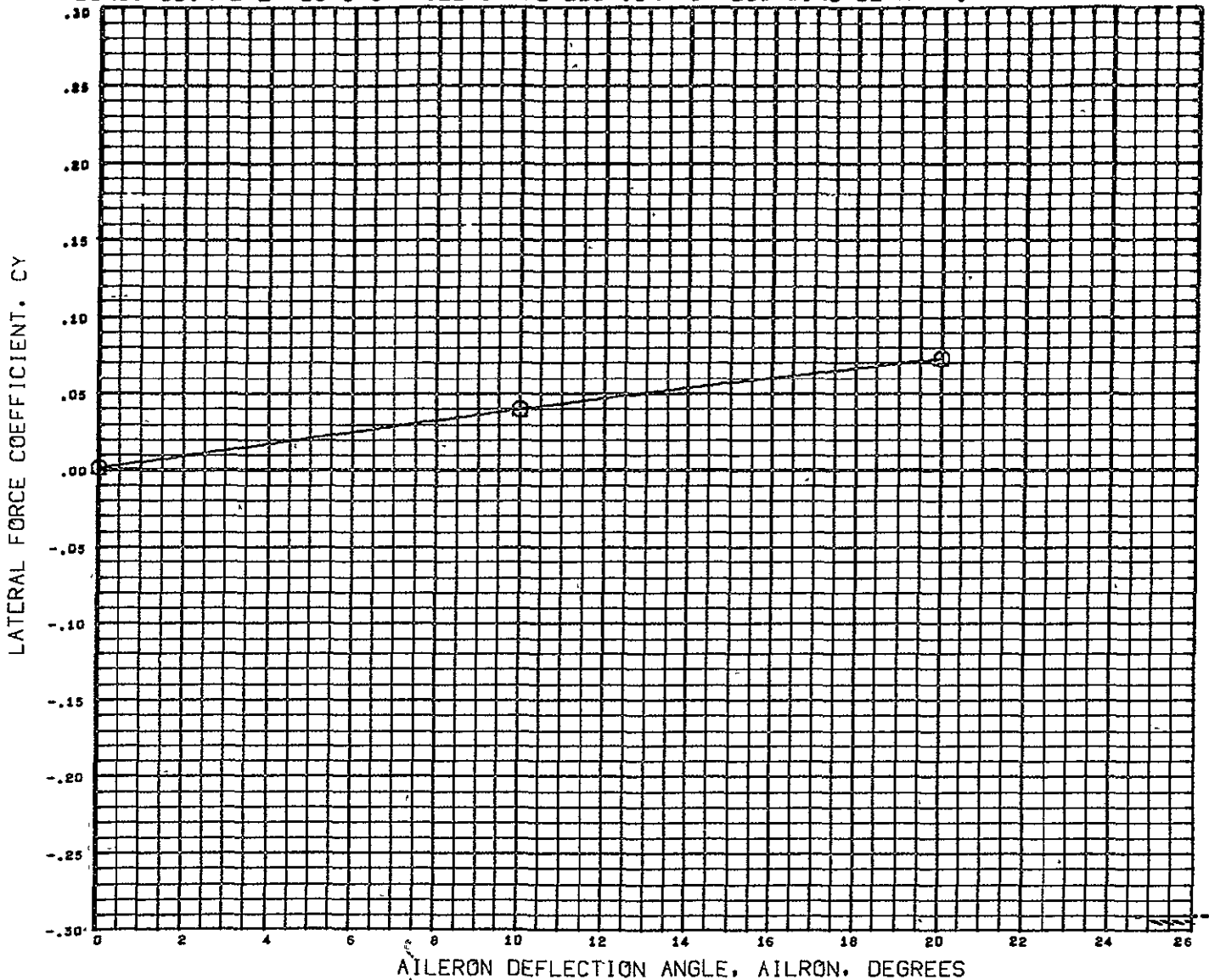
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIRDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



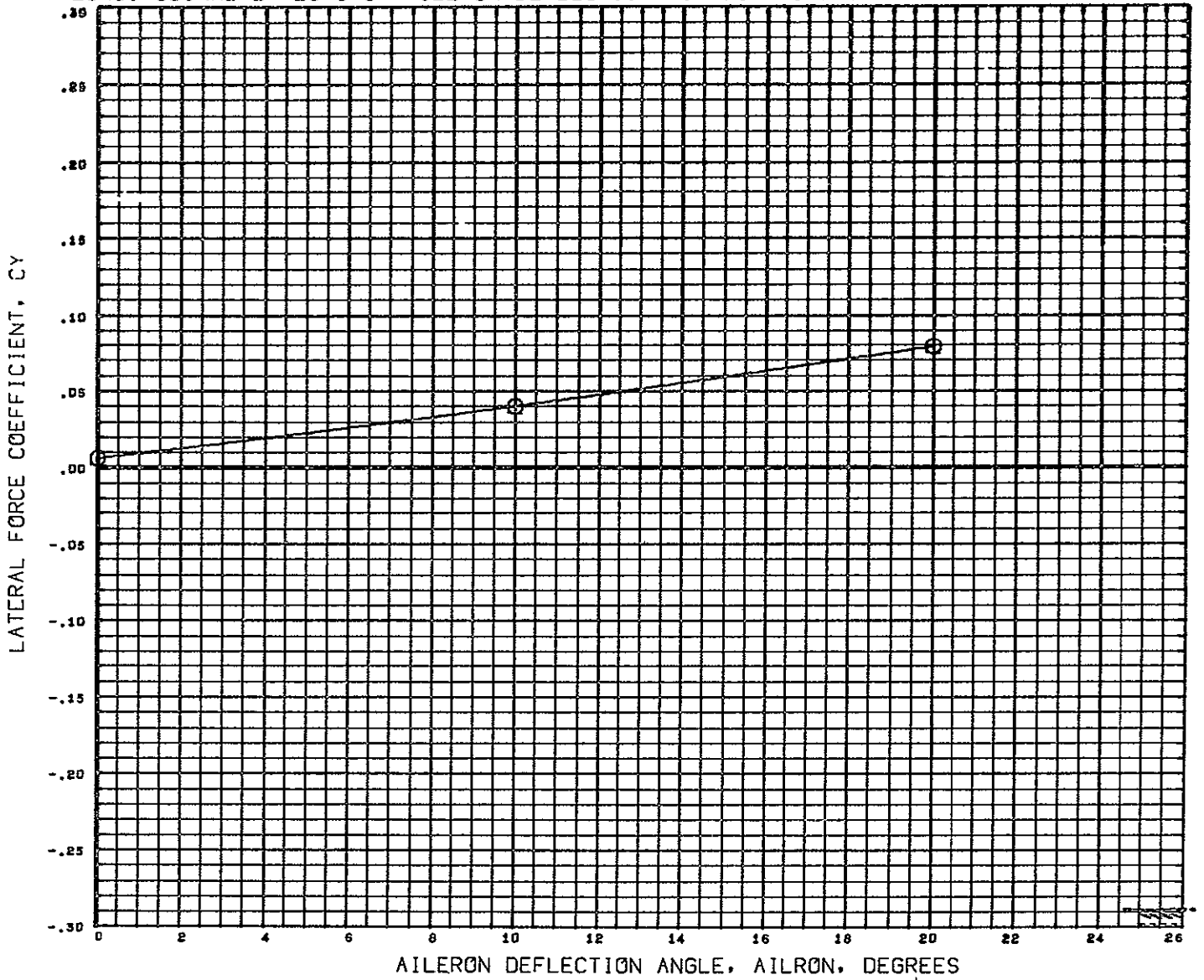
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



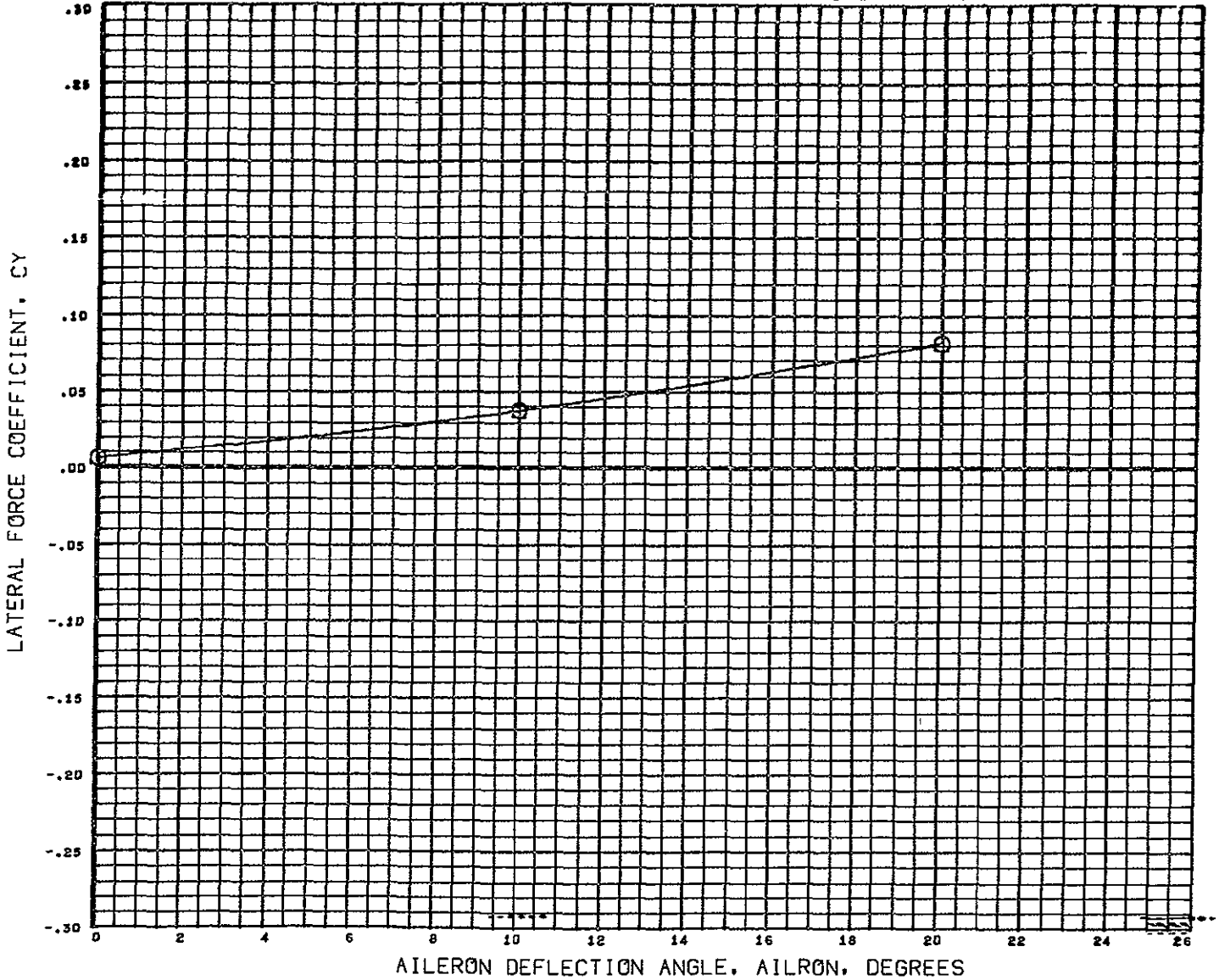
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○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0167	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



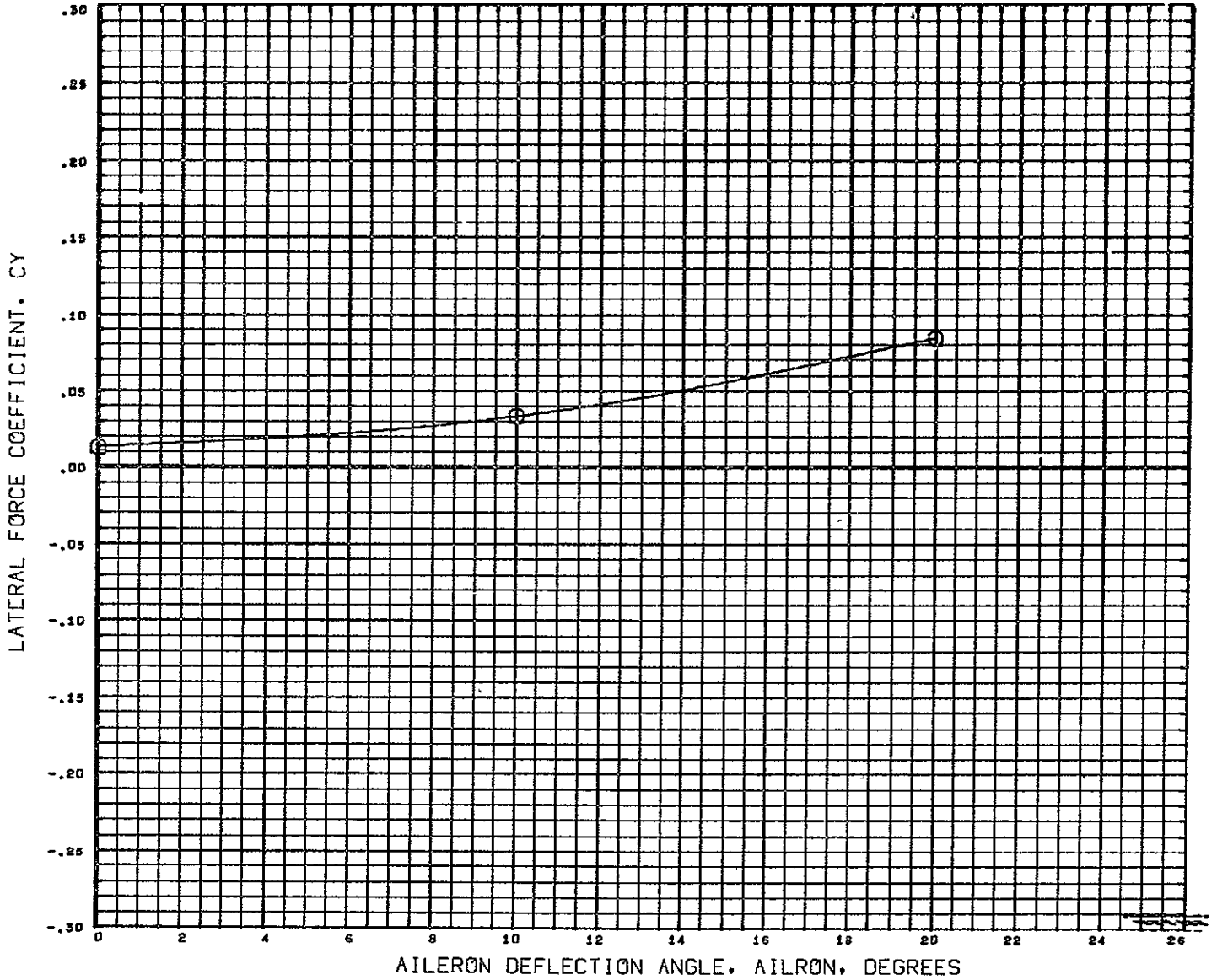
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	YHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	ZHRP	0.0187	FEET
		DATA HIST. CODE	HI			SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



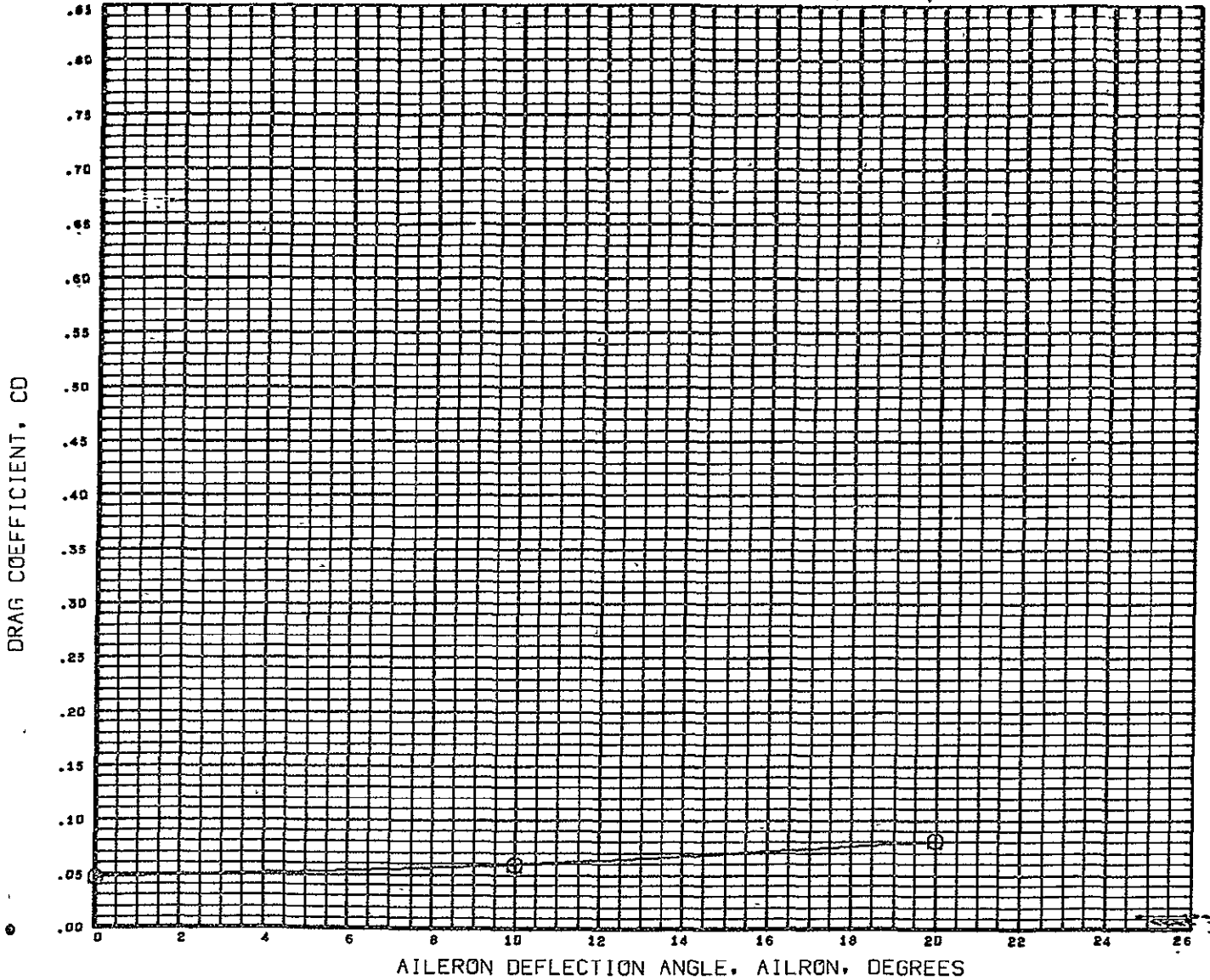
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○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA¹ = 0



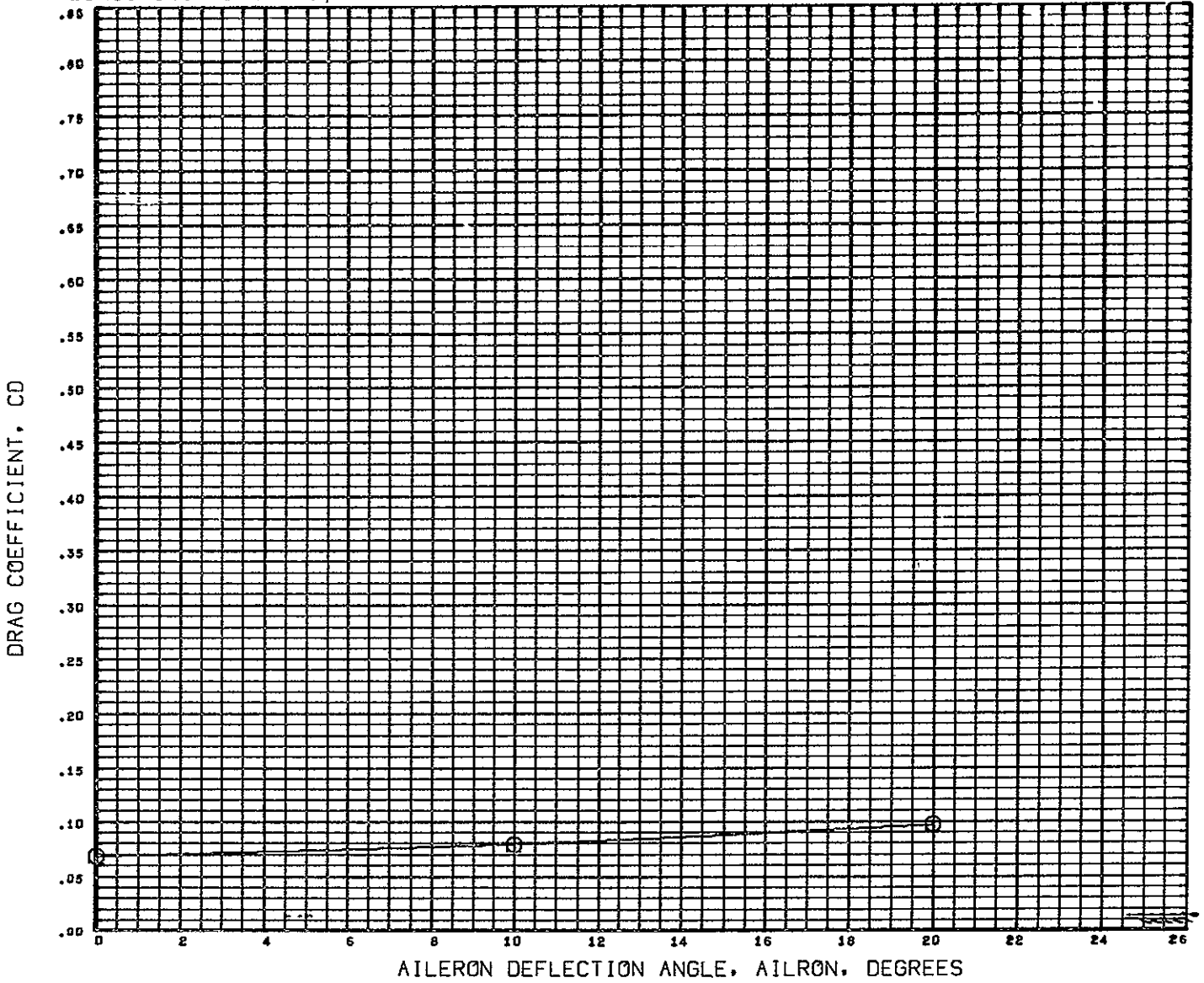
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.016	SREF	1.3550	sq.ft.
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		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



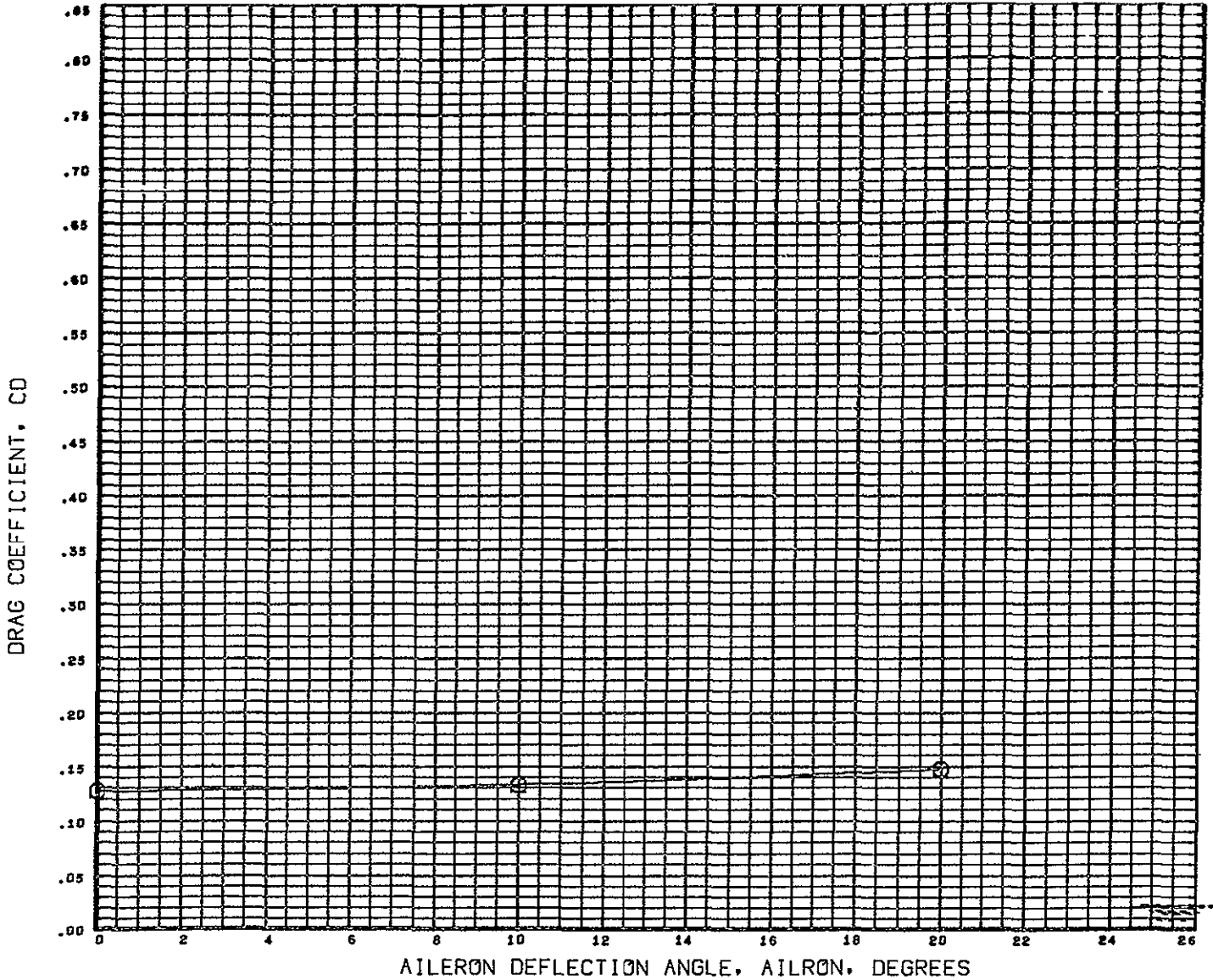
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
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		D1HDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	YNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

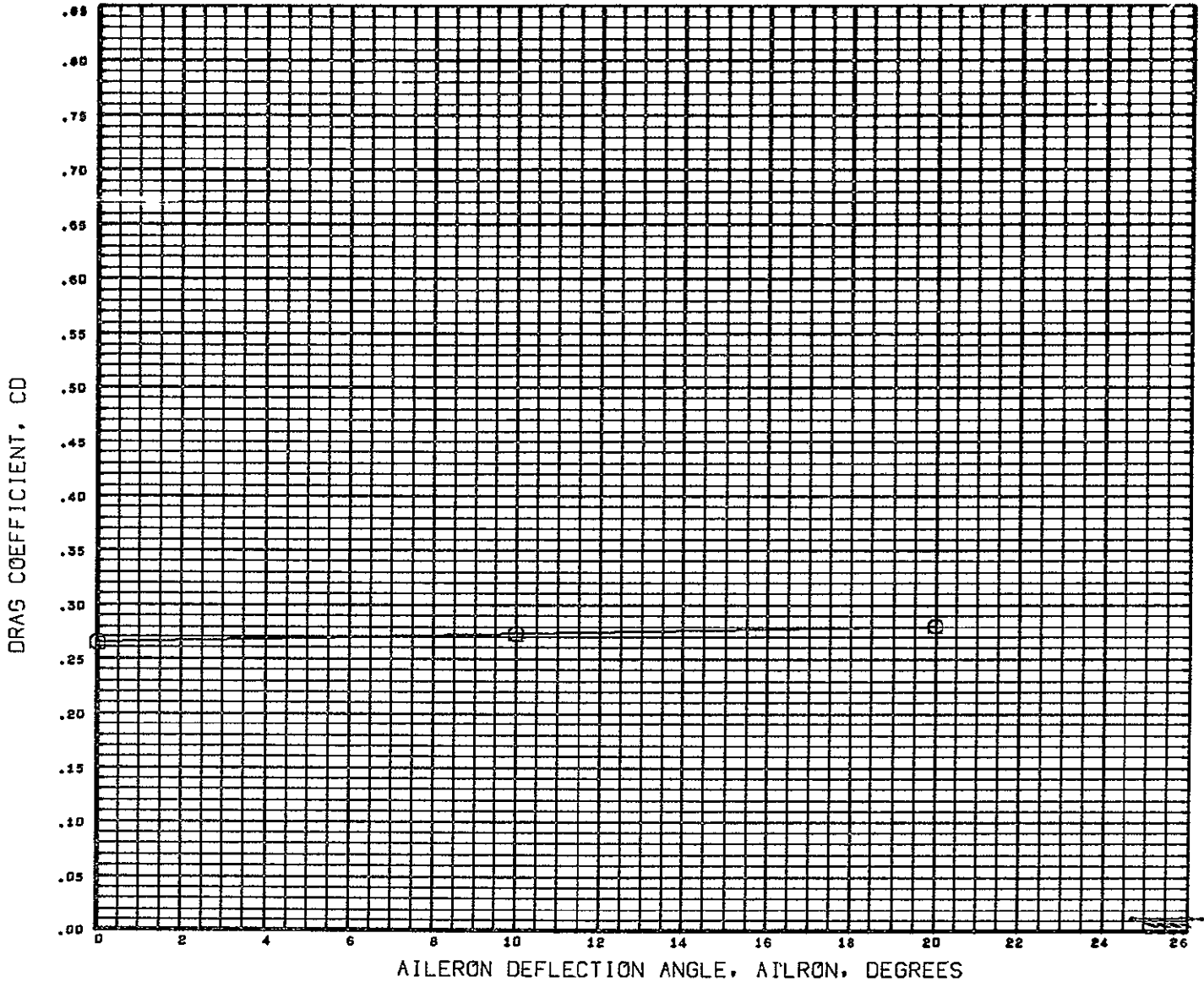
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	Sq. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

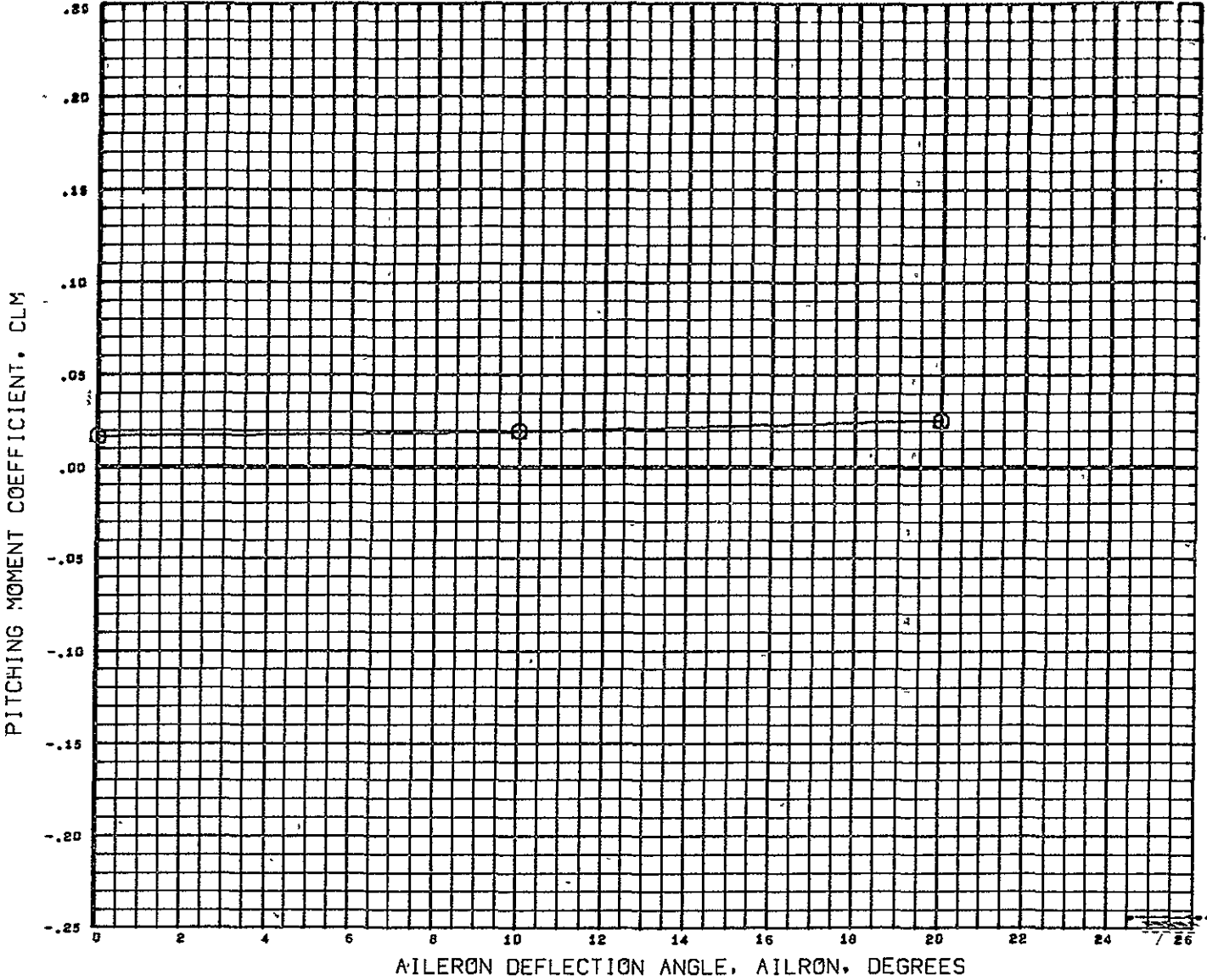
2.10

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



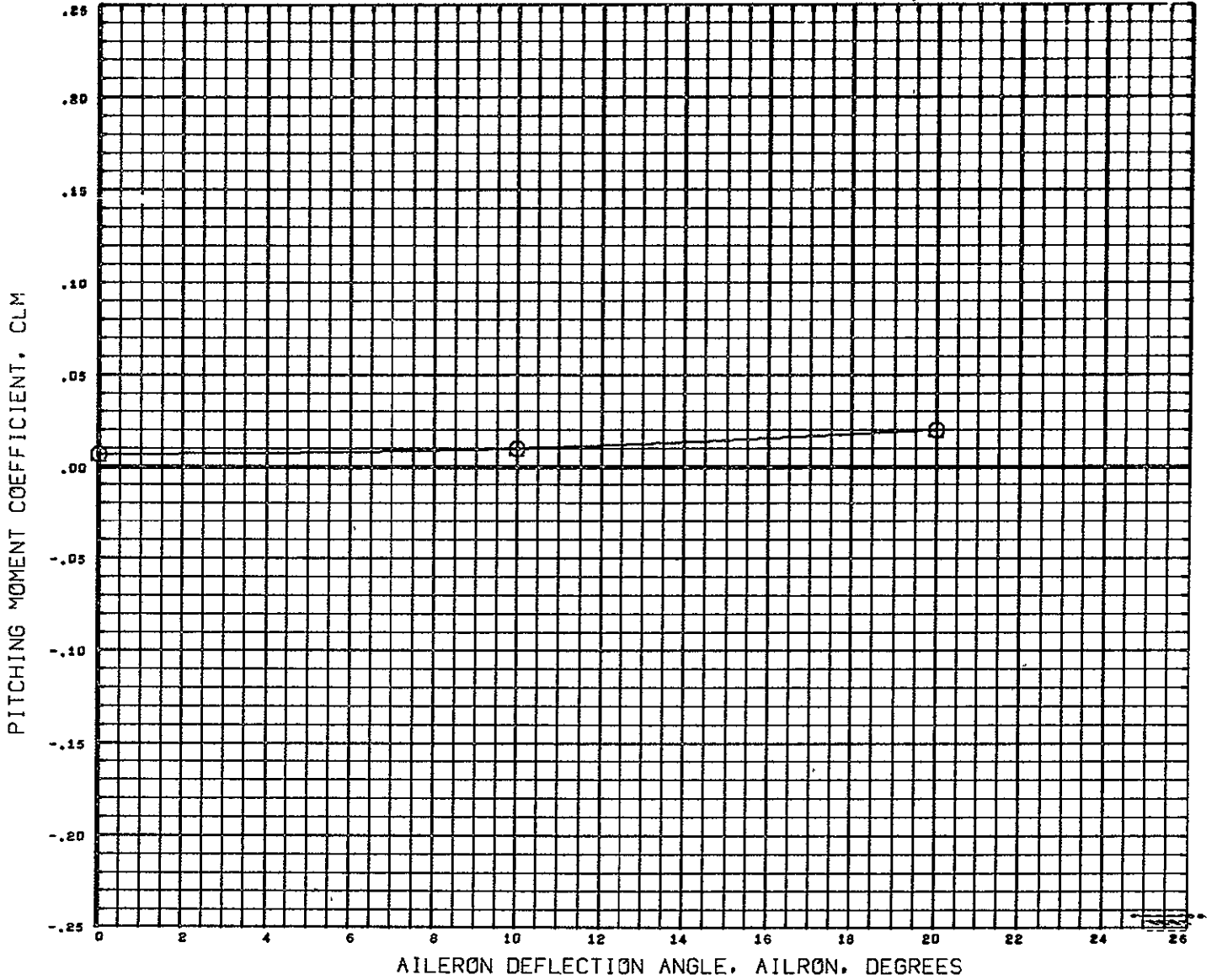
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	15.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	NI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



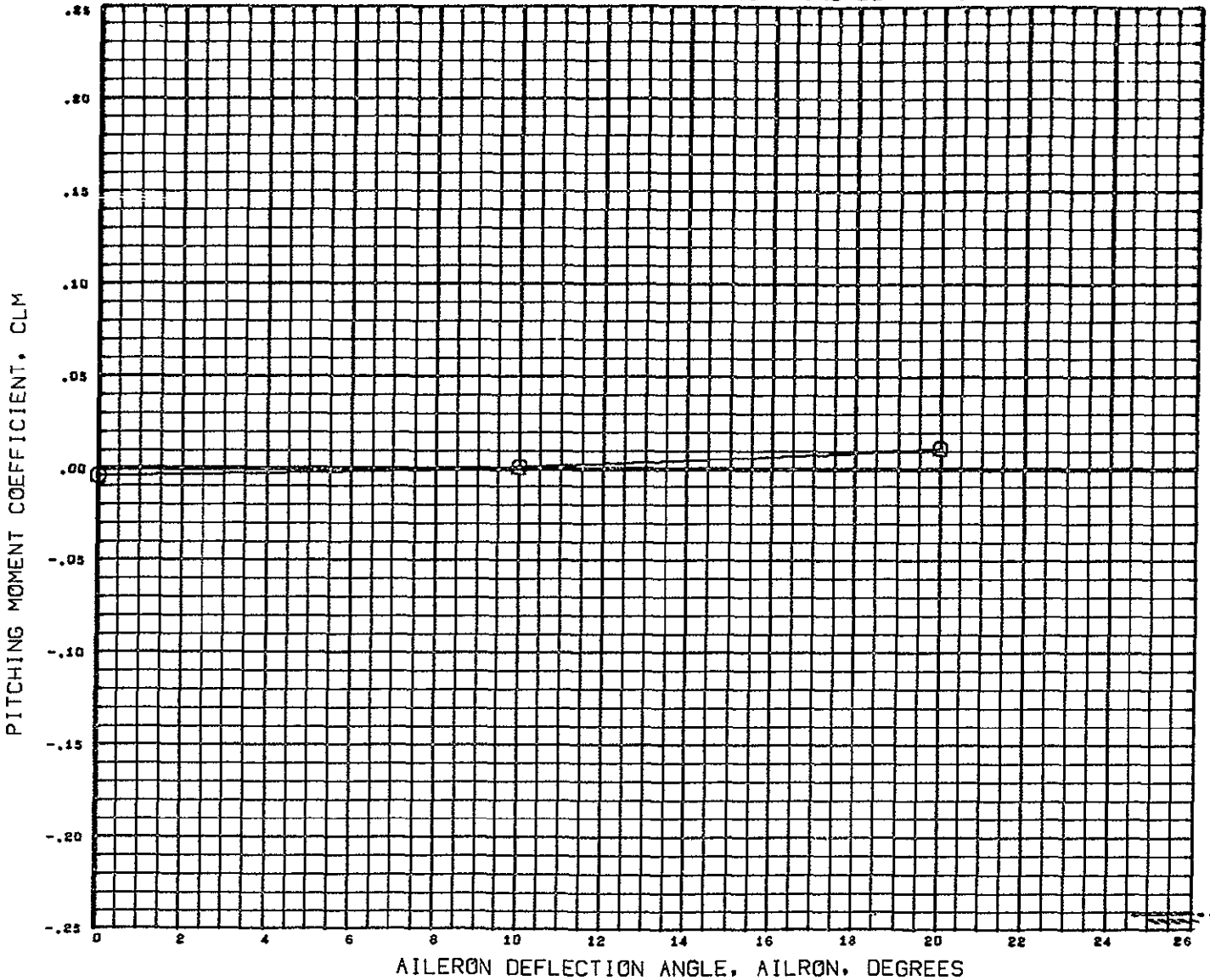
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



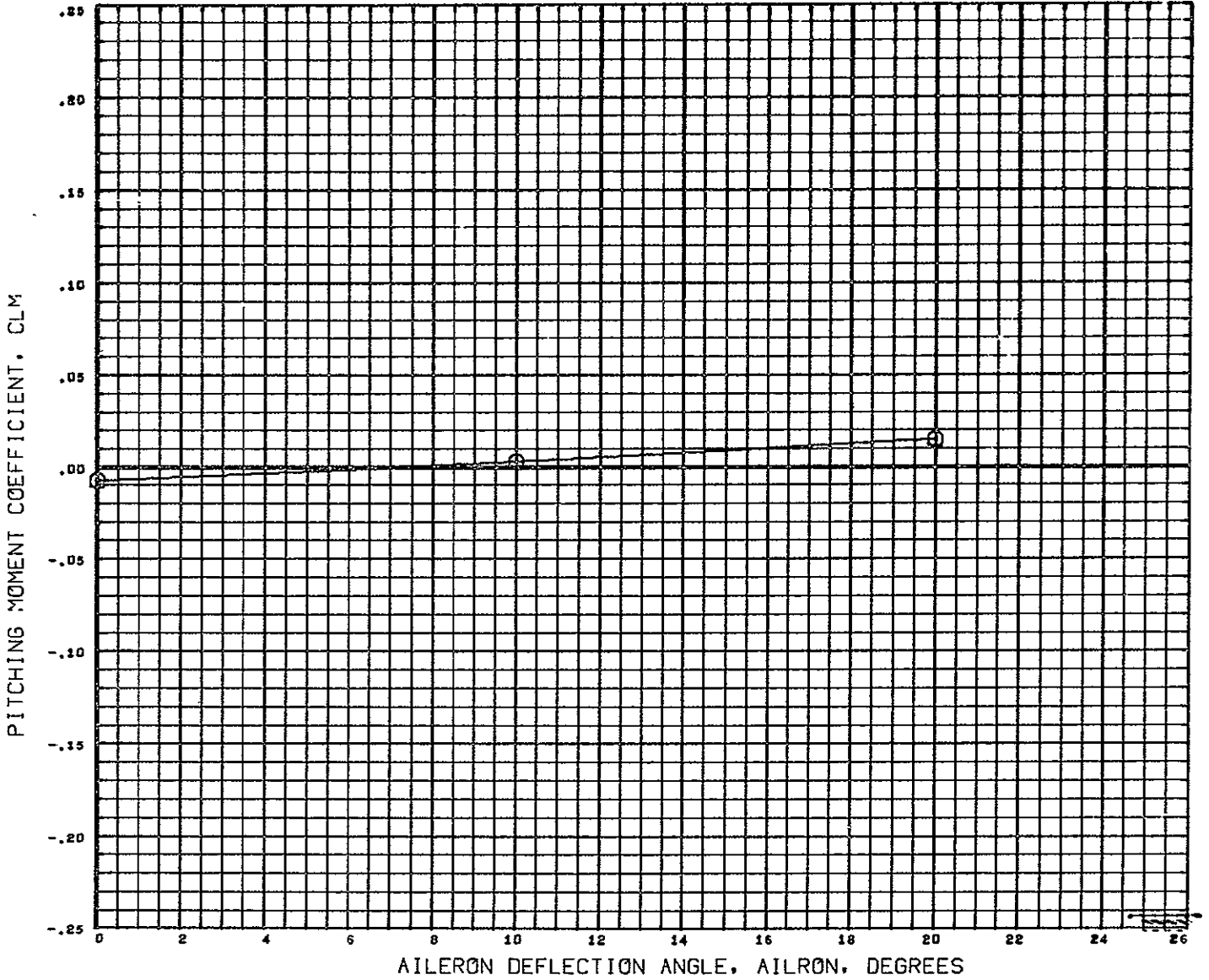
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	HACH	0.400	BETA	0.016	SREF	1.3550	59. FT.
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		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	NI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



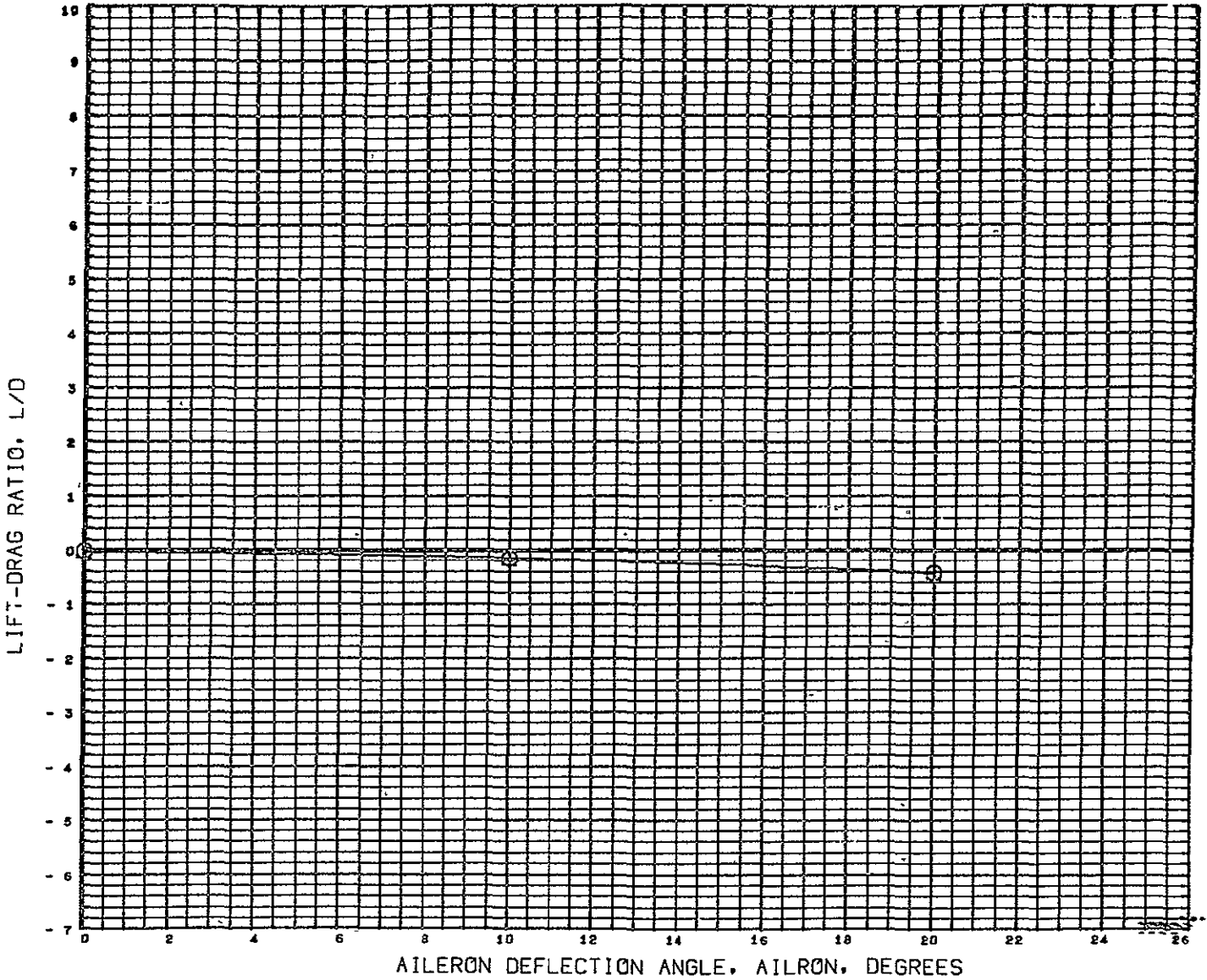
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



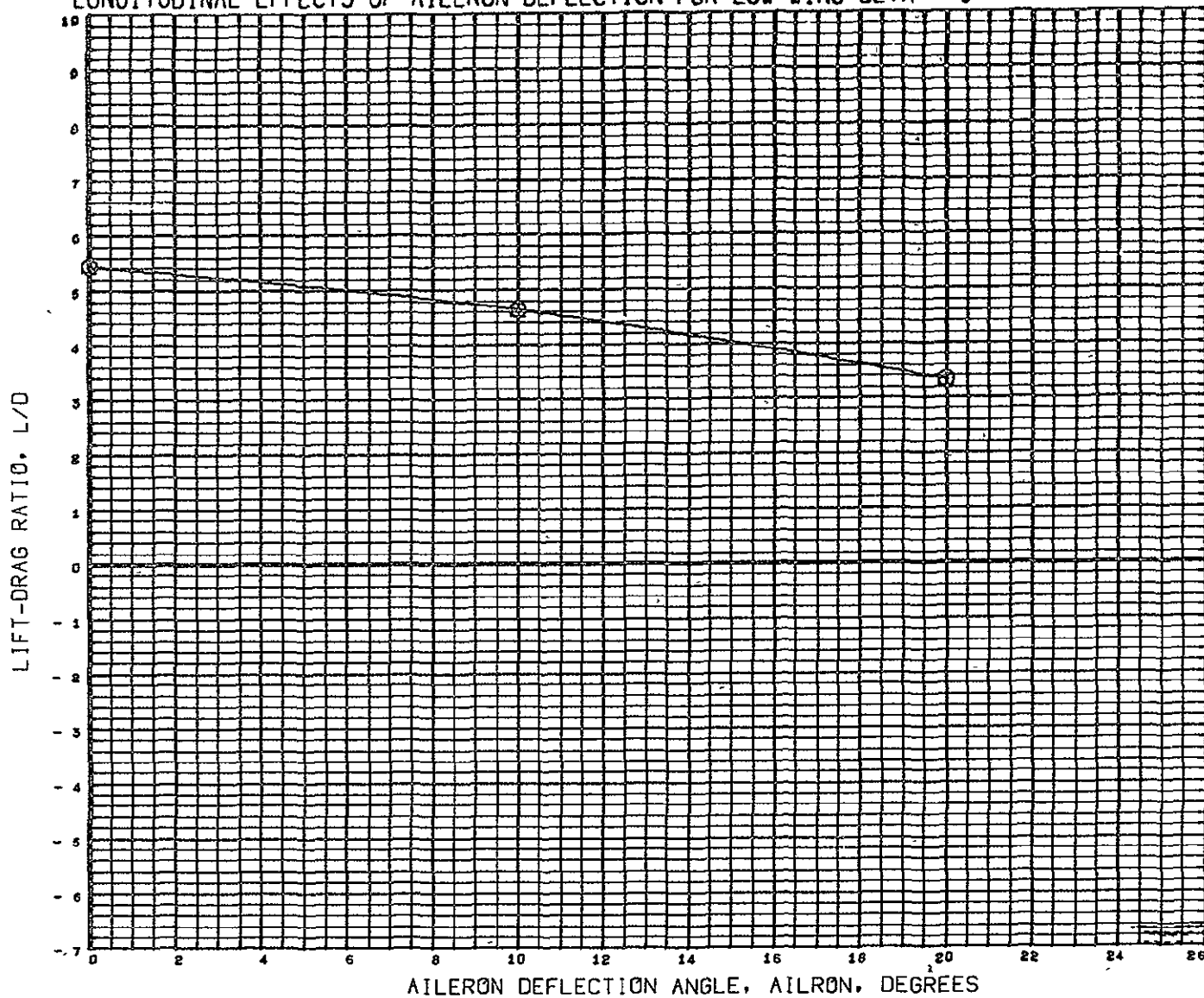
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15 000	MACH	0.400	BETA	0.016	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0 000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0 000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0 0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



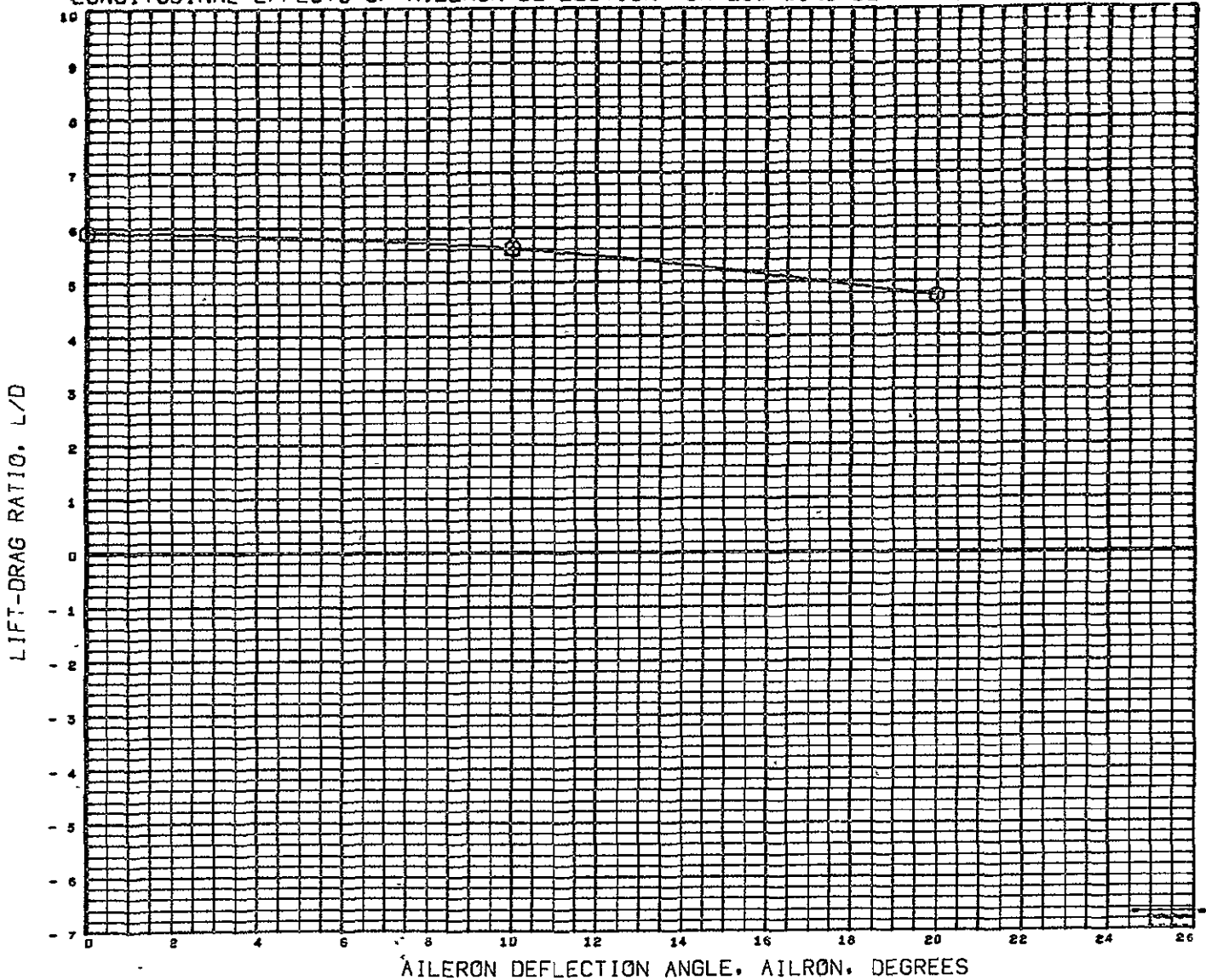
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



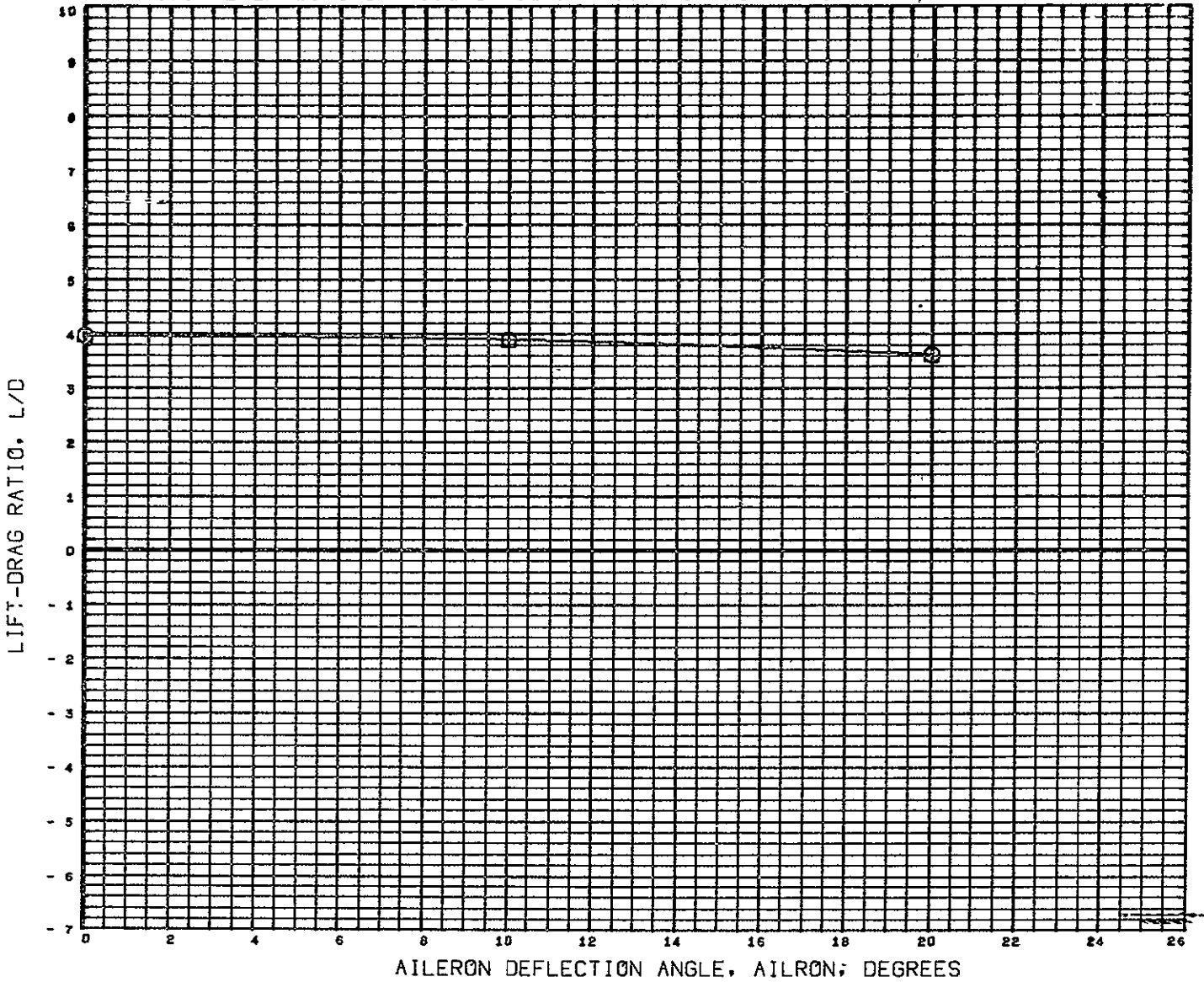
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FRET
		DIMDRL	7.660	CANARD	0.000	BREF	3.4530	FRET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FRET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FRET
		DATA HIST. CODE	HI			ZHRP	0.0187	FRET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



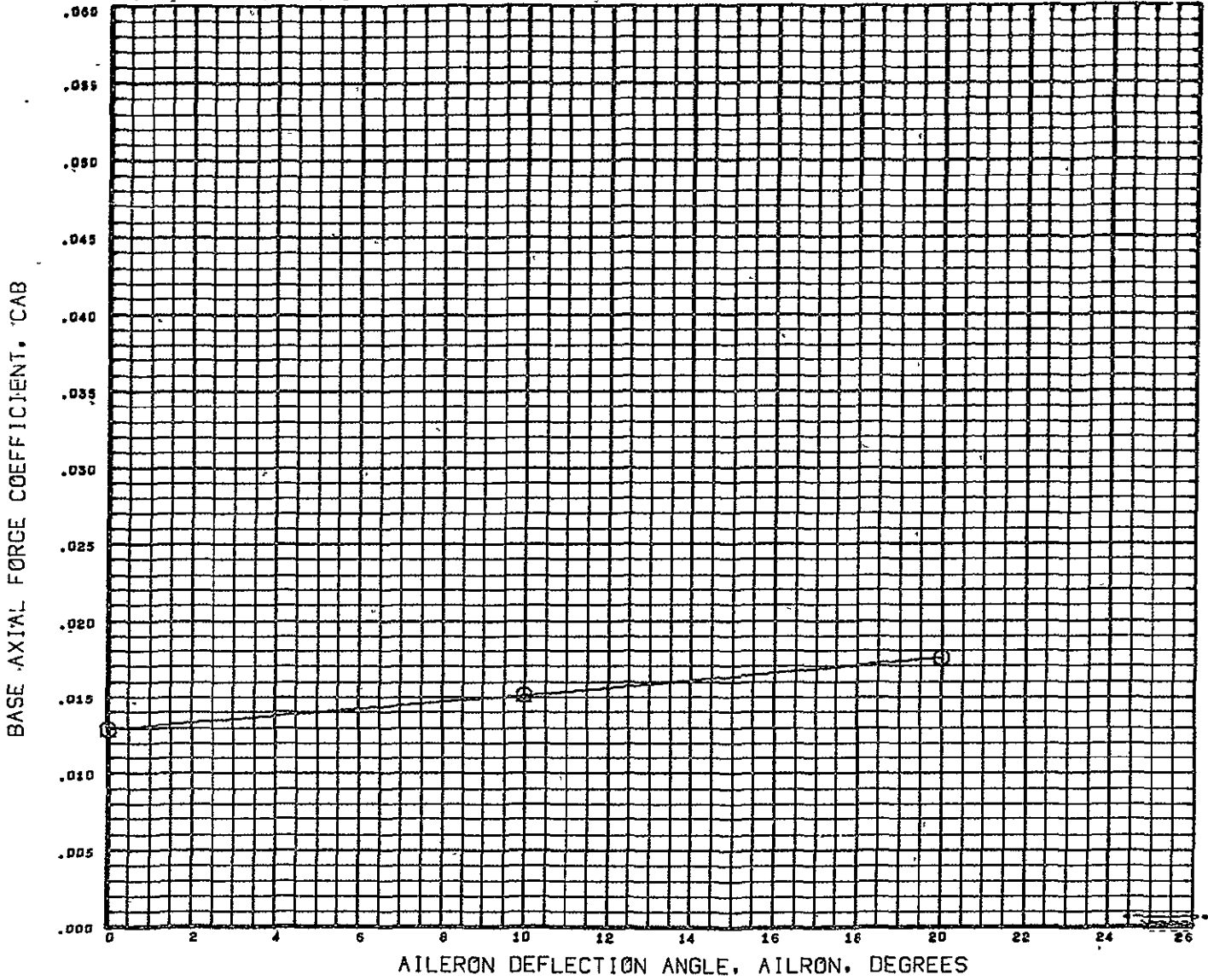
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	HACH	0.400	BETA	0.016	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



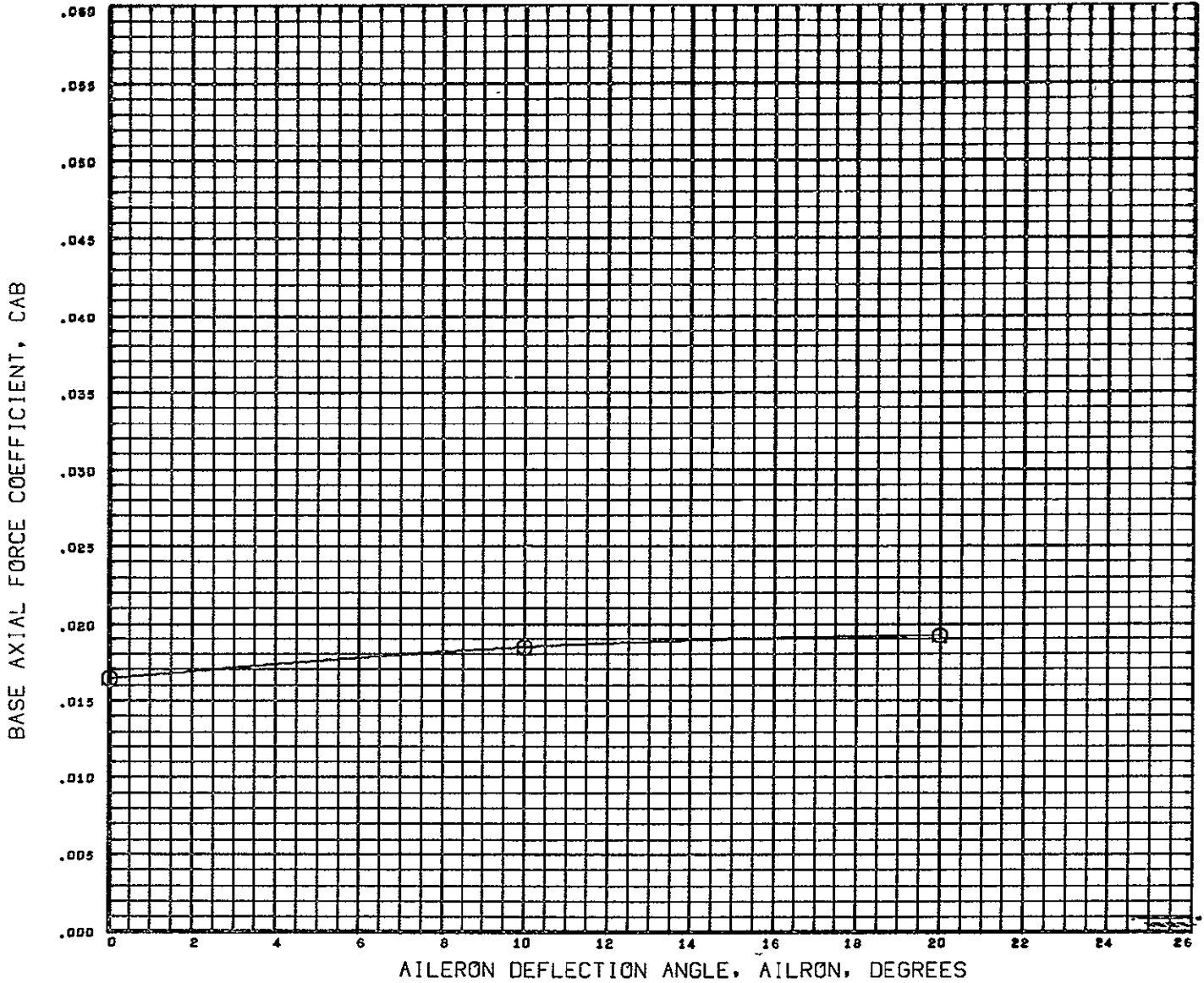
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	HACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



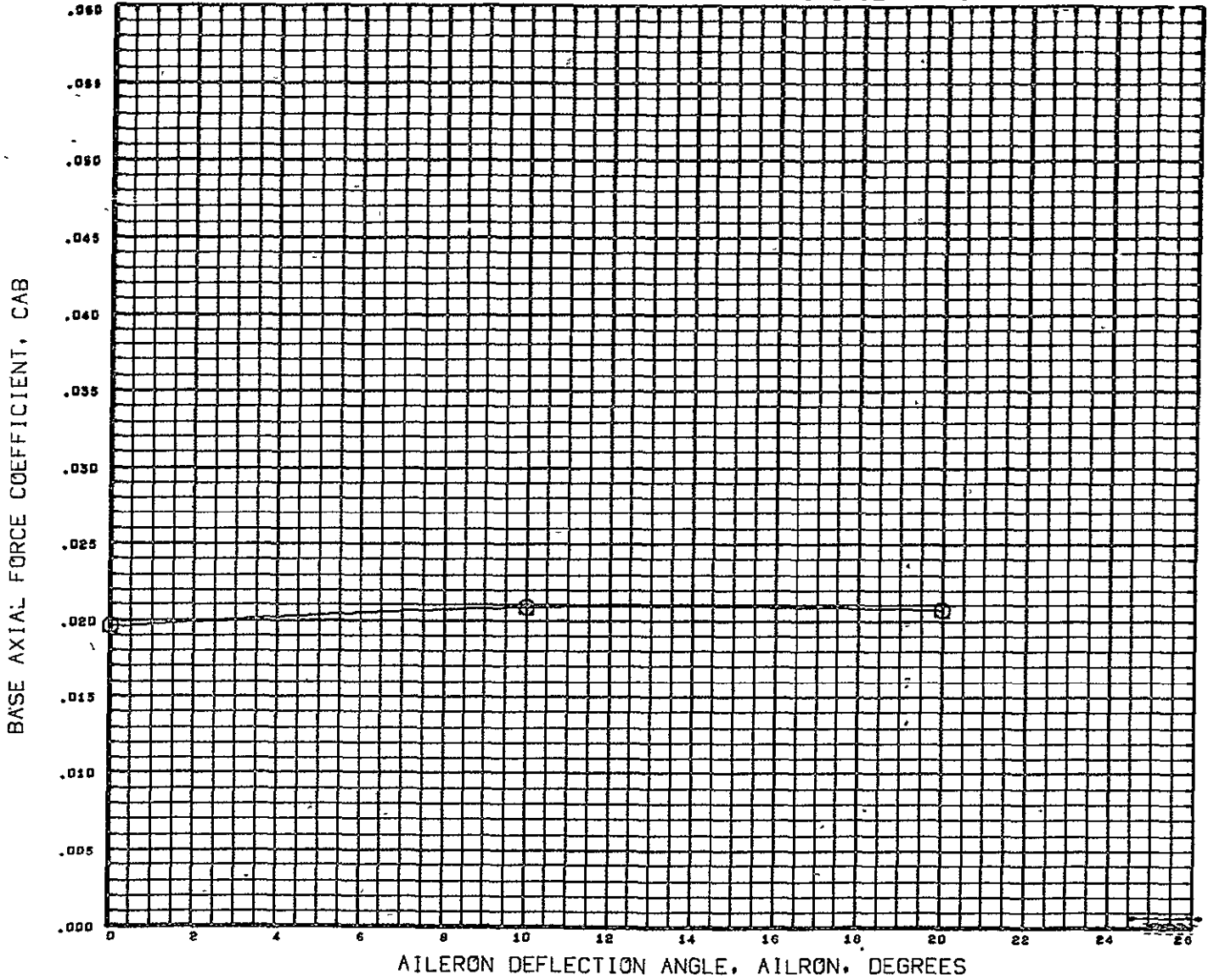
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	HACH	0.400	BETA	0.016	SREF	1.3550	SR.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



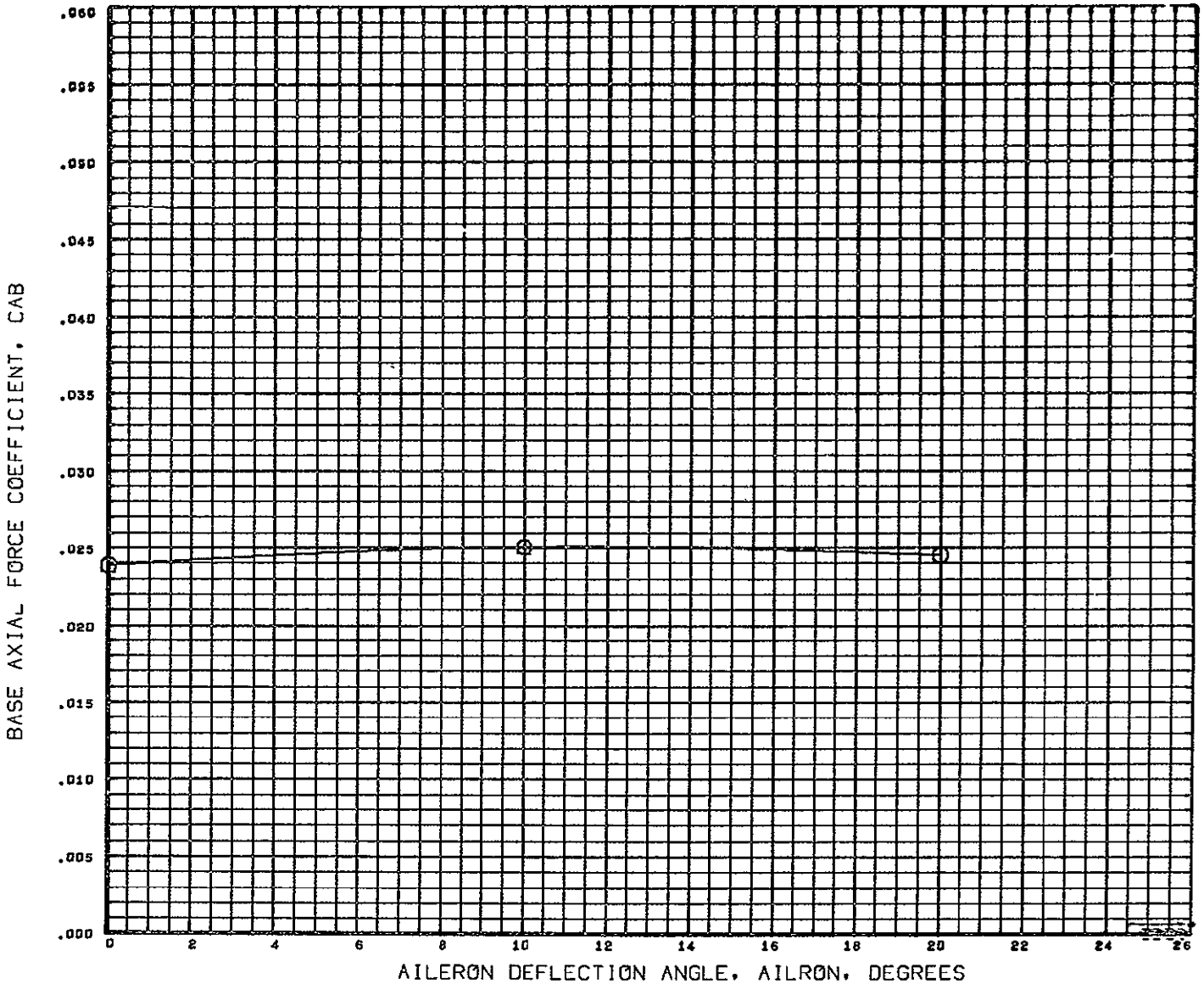
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	NACH	0.400	BETA	0.016	SREF	1.3550	50. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DINDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

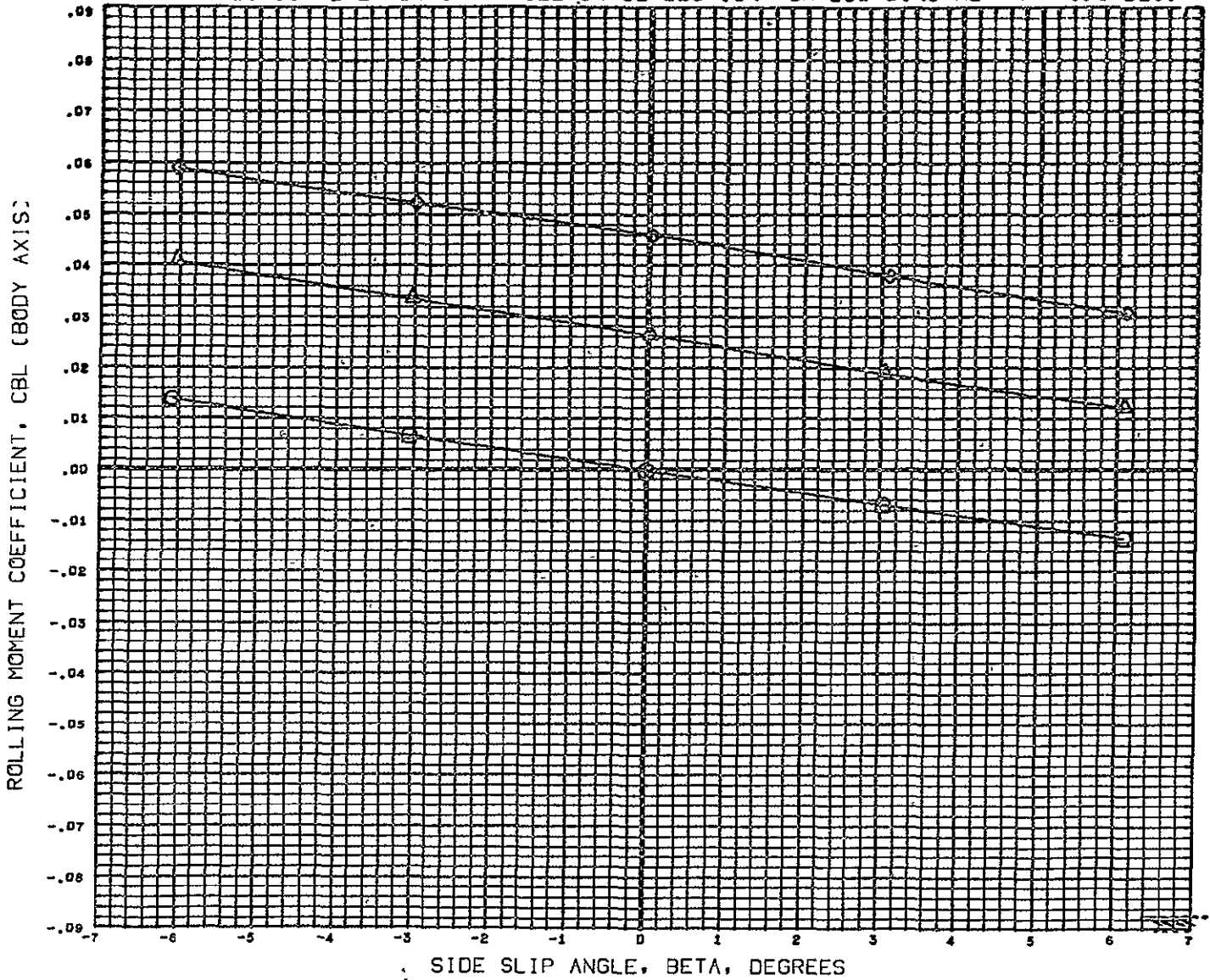
LONGITUDINAL EFFECTS OF AILERON DEFLECTION FOR LOW WING BETA = 0



AILERON DEFLECTION ANGLE, AILERON, DEGREES

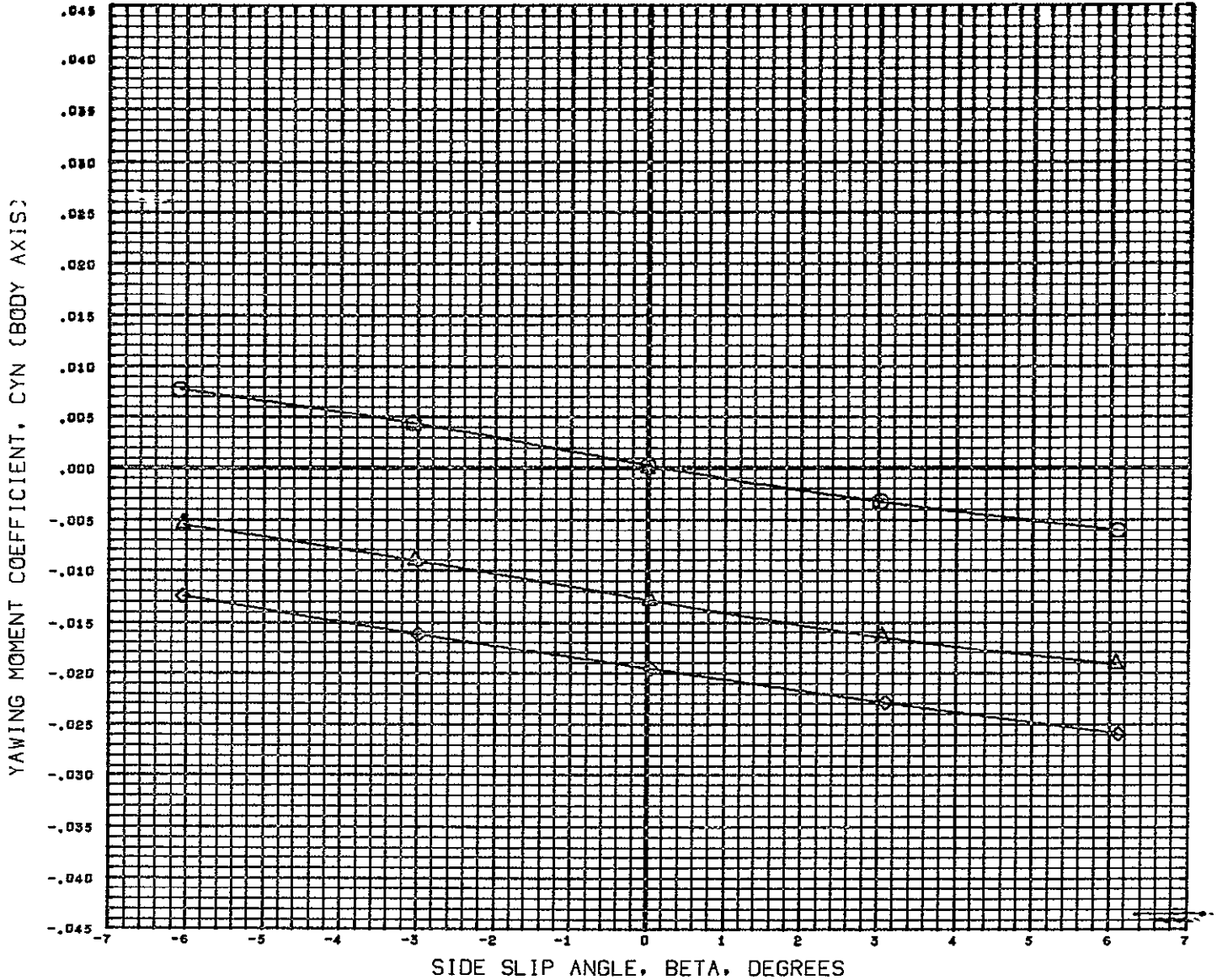
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	15.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	RUDDER	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2018) ○	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1,000	2,000	0.000	SREF 1.3550 SQ.FT.
(RN4078) △	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1,000	2,000	10.000	LREF 3.4530 FEET
(RN4002) ◇	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1,000	2,000	20.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.

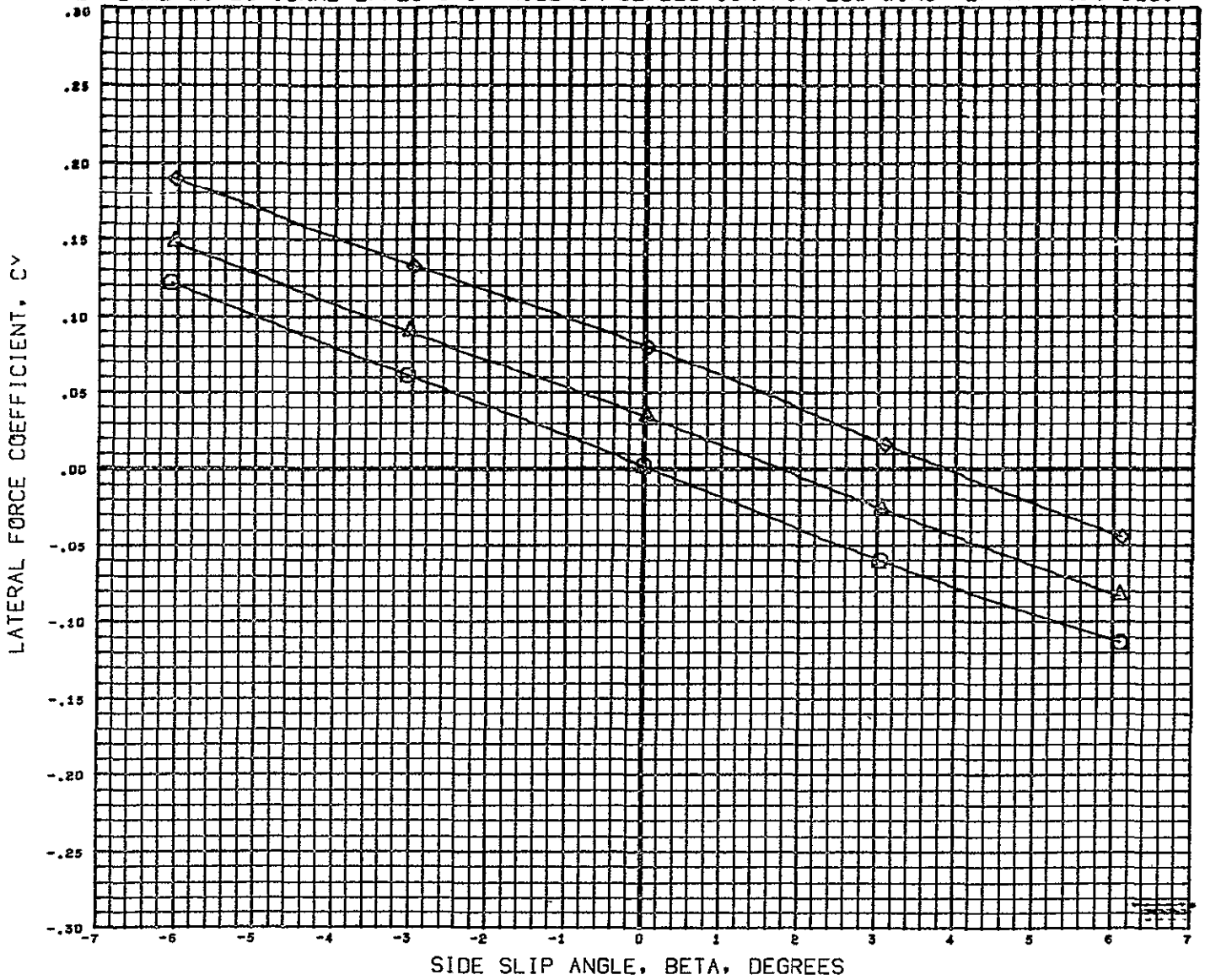


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINHRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2018)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4078)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4082)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.

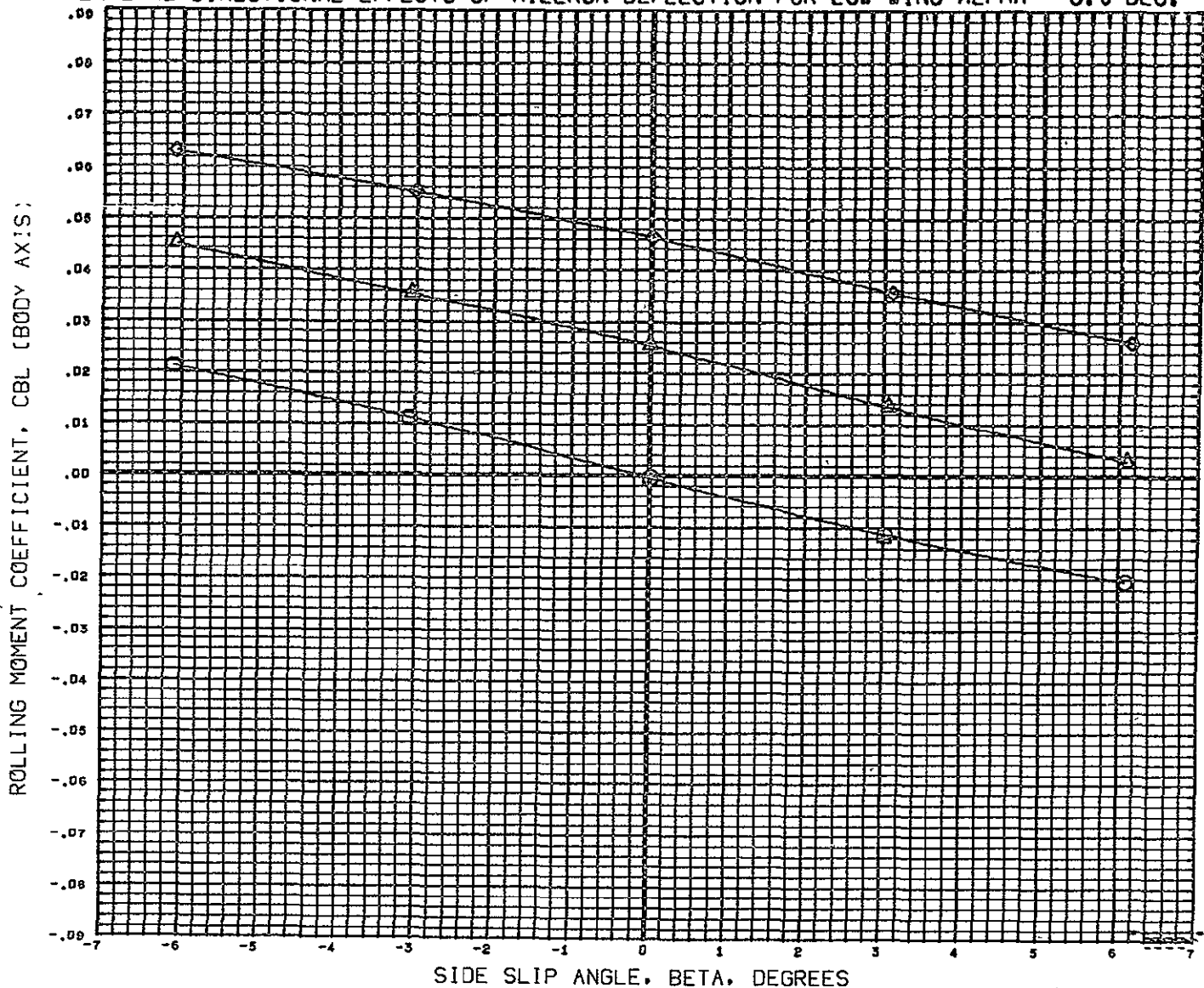


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2018) ○	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4078) △	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4082) ◇	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0167 FEET SCALE 0.0150 SCALE

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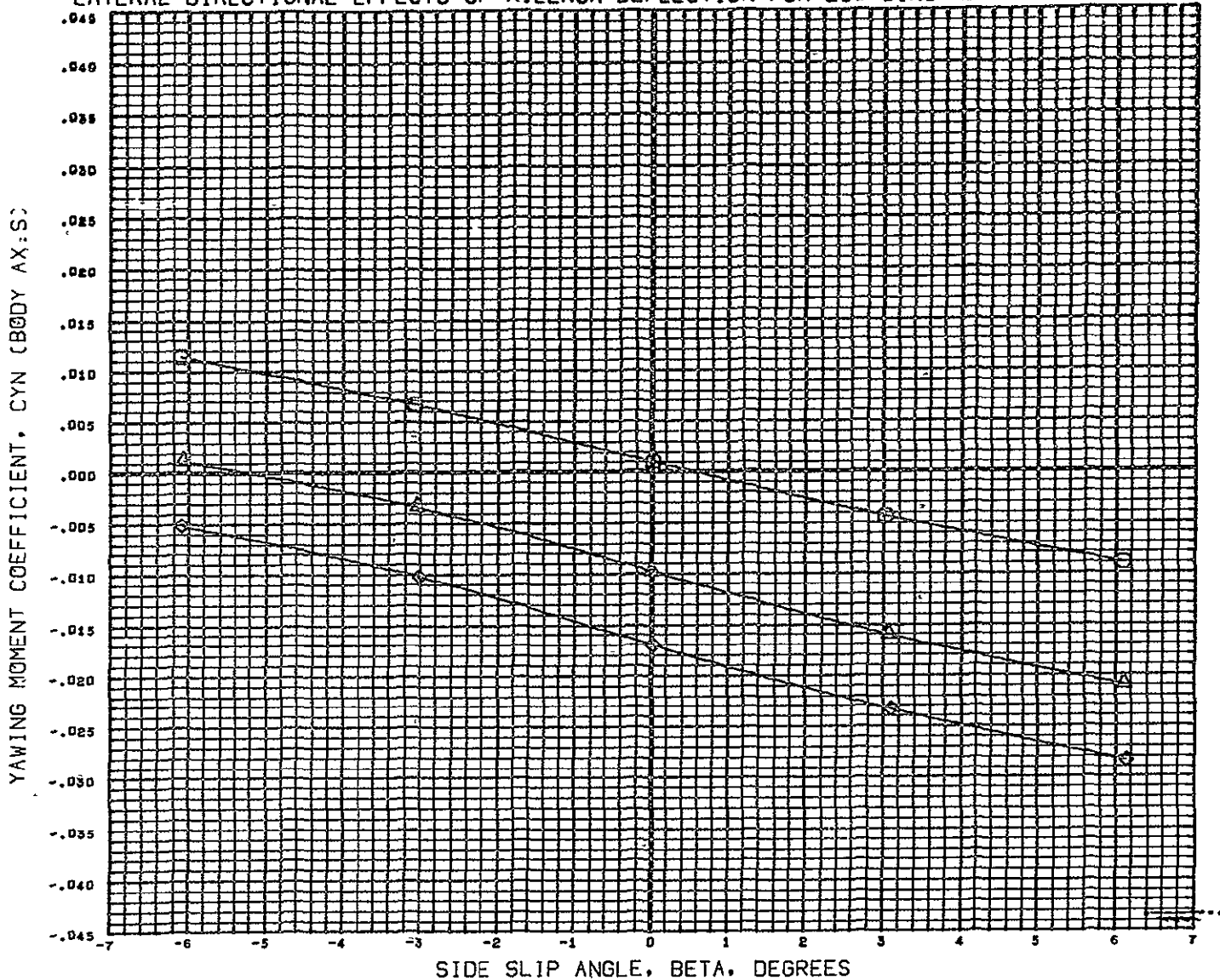
PAGE 494

LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



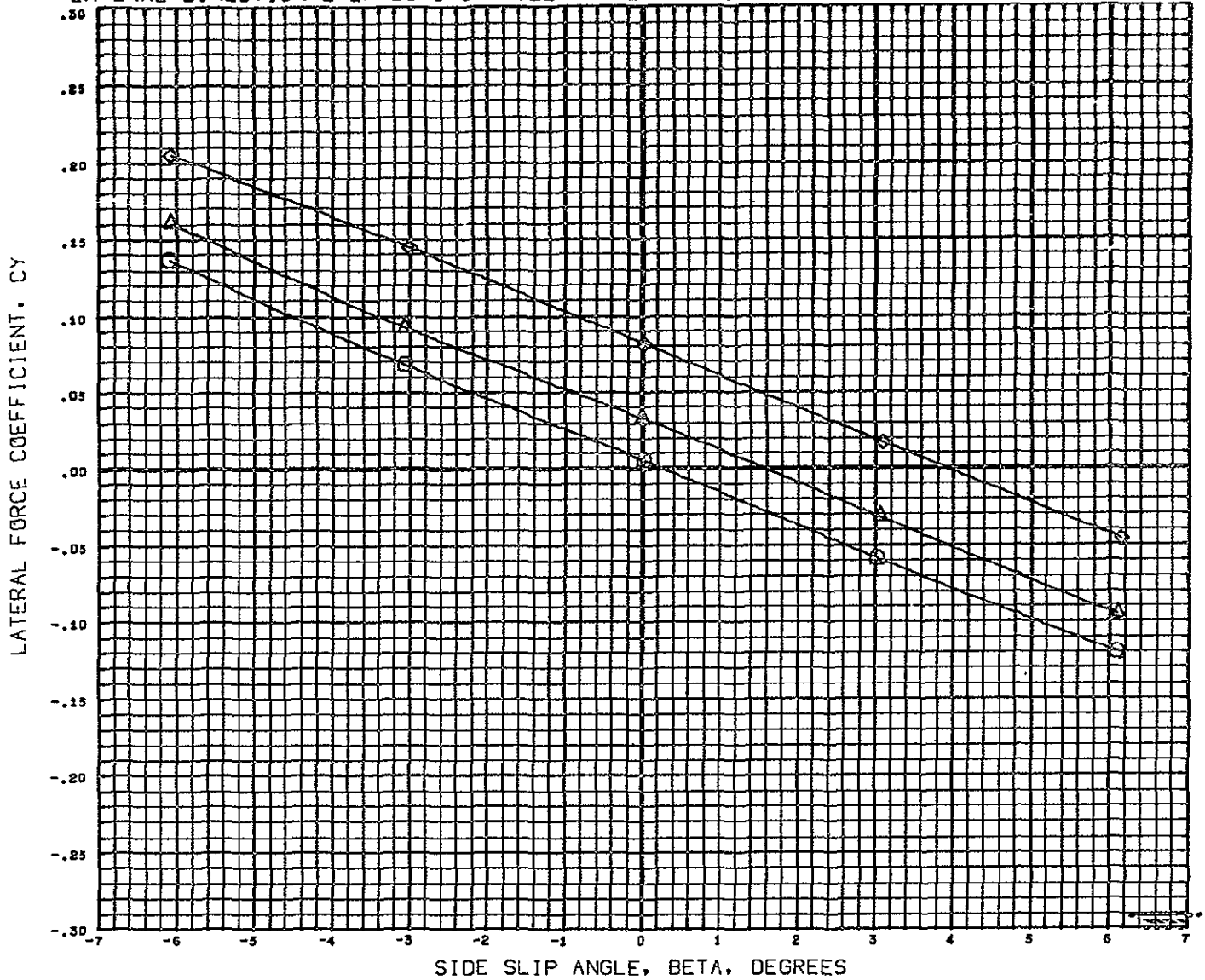
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIRDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2019)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SB.FT.
(RN4079)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4063)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR1	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2019)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4079)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4083)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2FIW1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0107 FEET
						SCALE 0.0150 SCALE

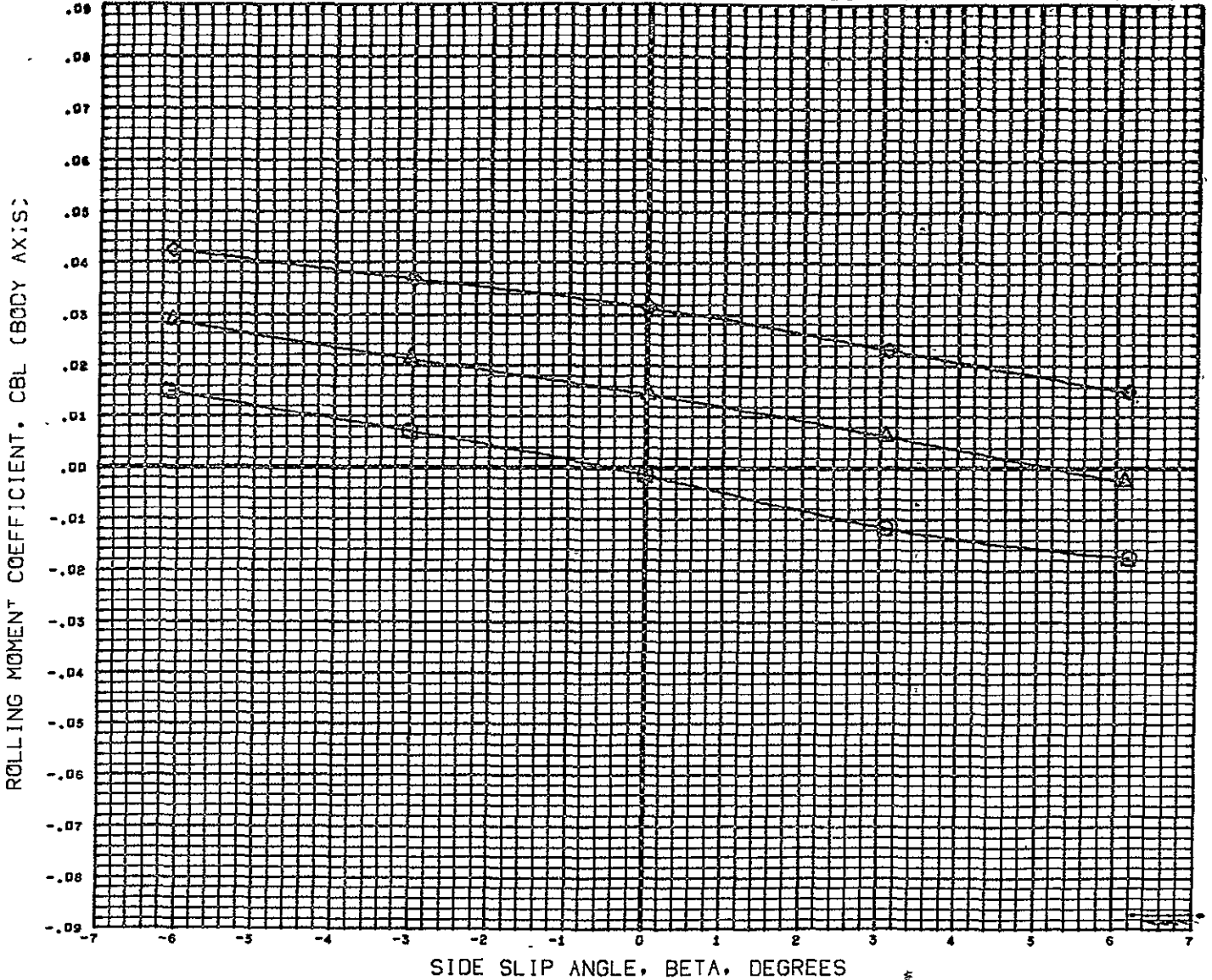
LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2019)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT.
(RN4079)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4083)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

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LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG

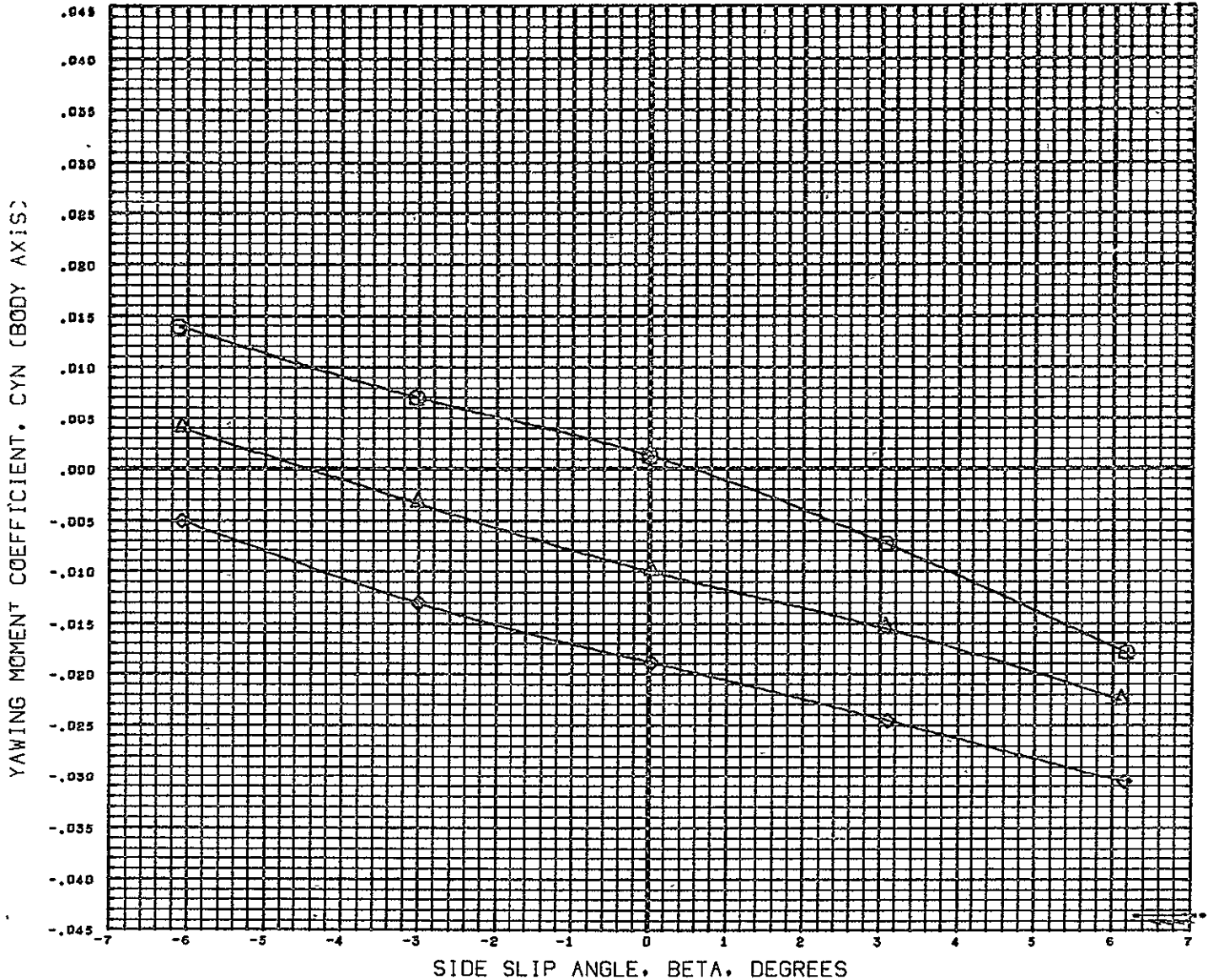


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(RN2020)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4080)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4084)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

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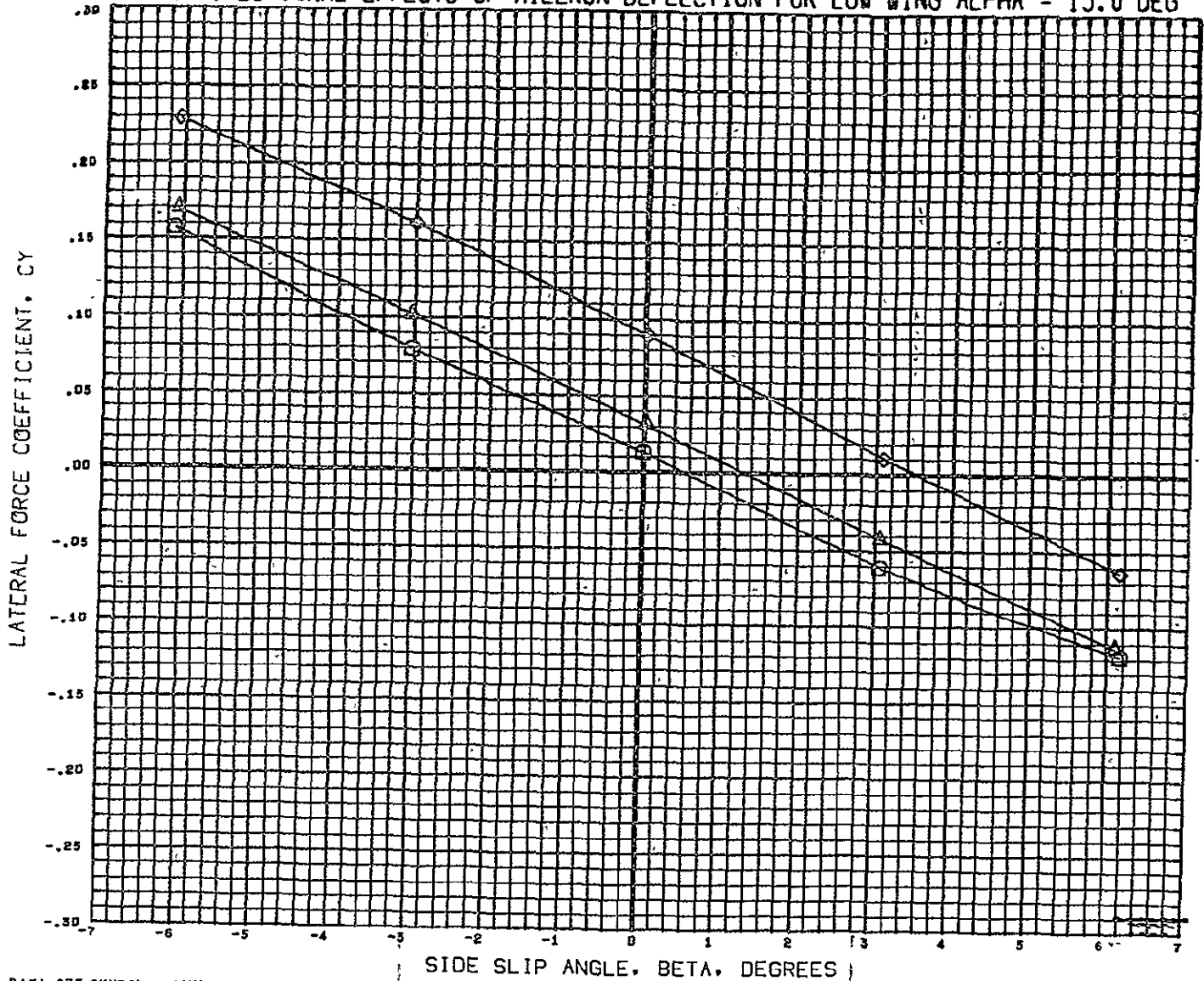
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LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2020)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT.
(RN4080)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4084)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

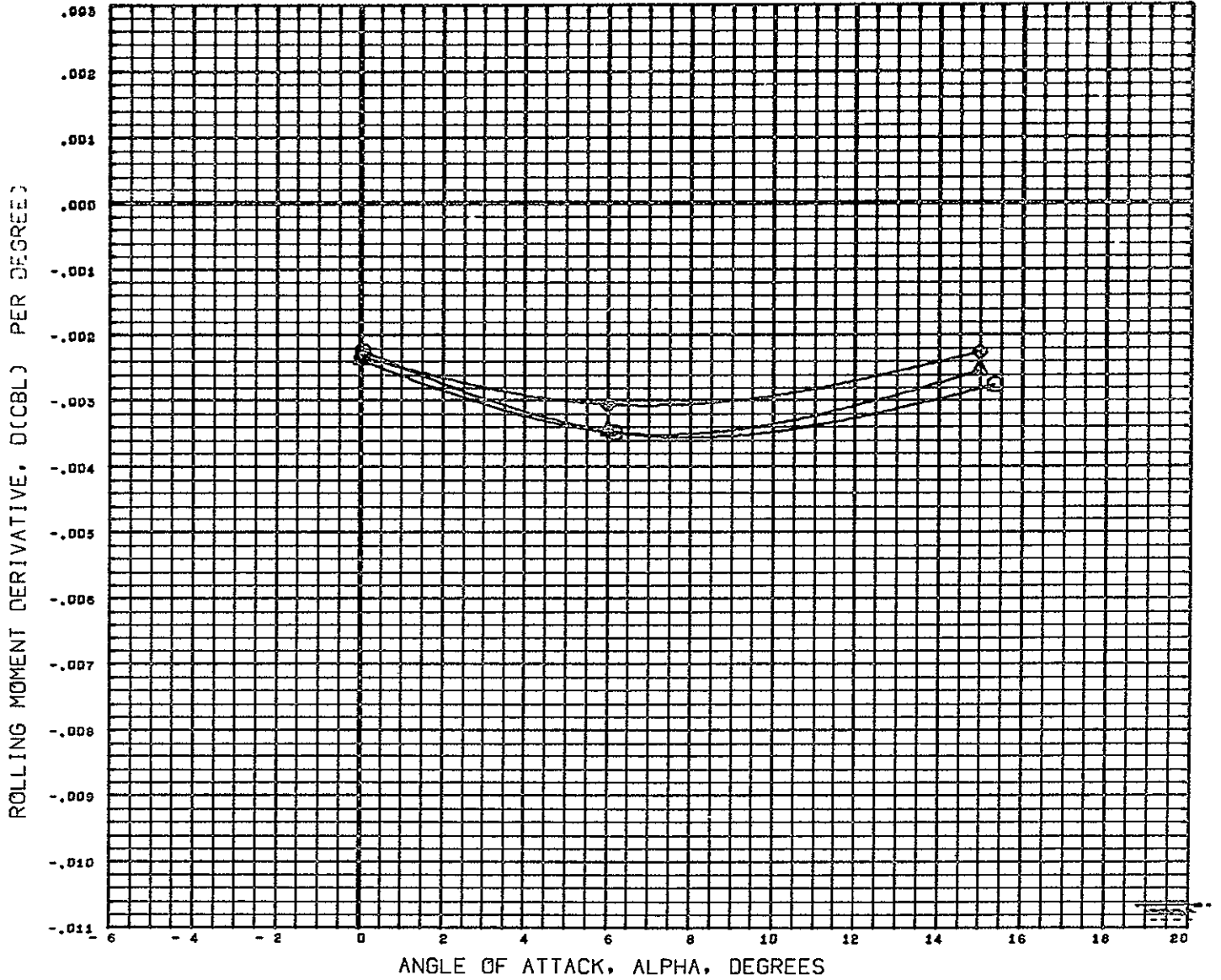
LATERAL DIRECTIONAL EFFECTS OF AILERON DEFLECTION FOR LOW WING ALPHA = 15.0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	AILRON	REFERENCE INFORMATION
(HN2020)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4090)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	10.000	LREF 3.4530 FEET
(RN4084)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	20.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

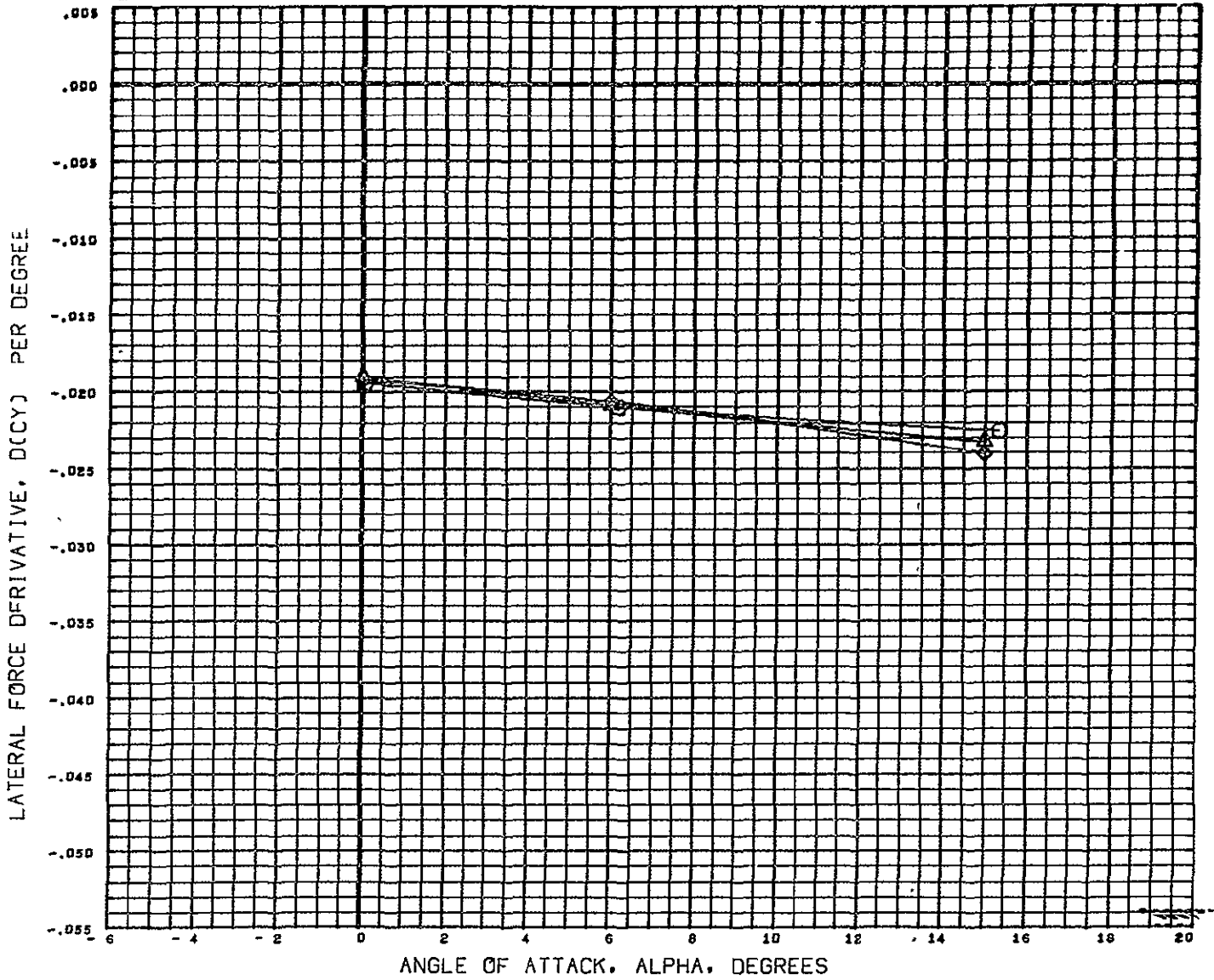
MACH .38

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR LOW WING



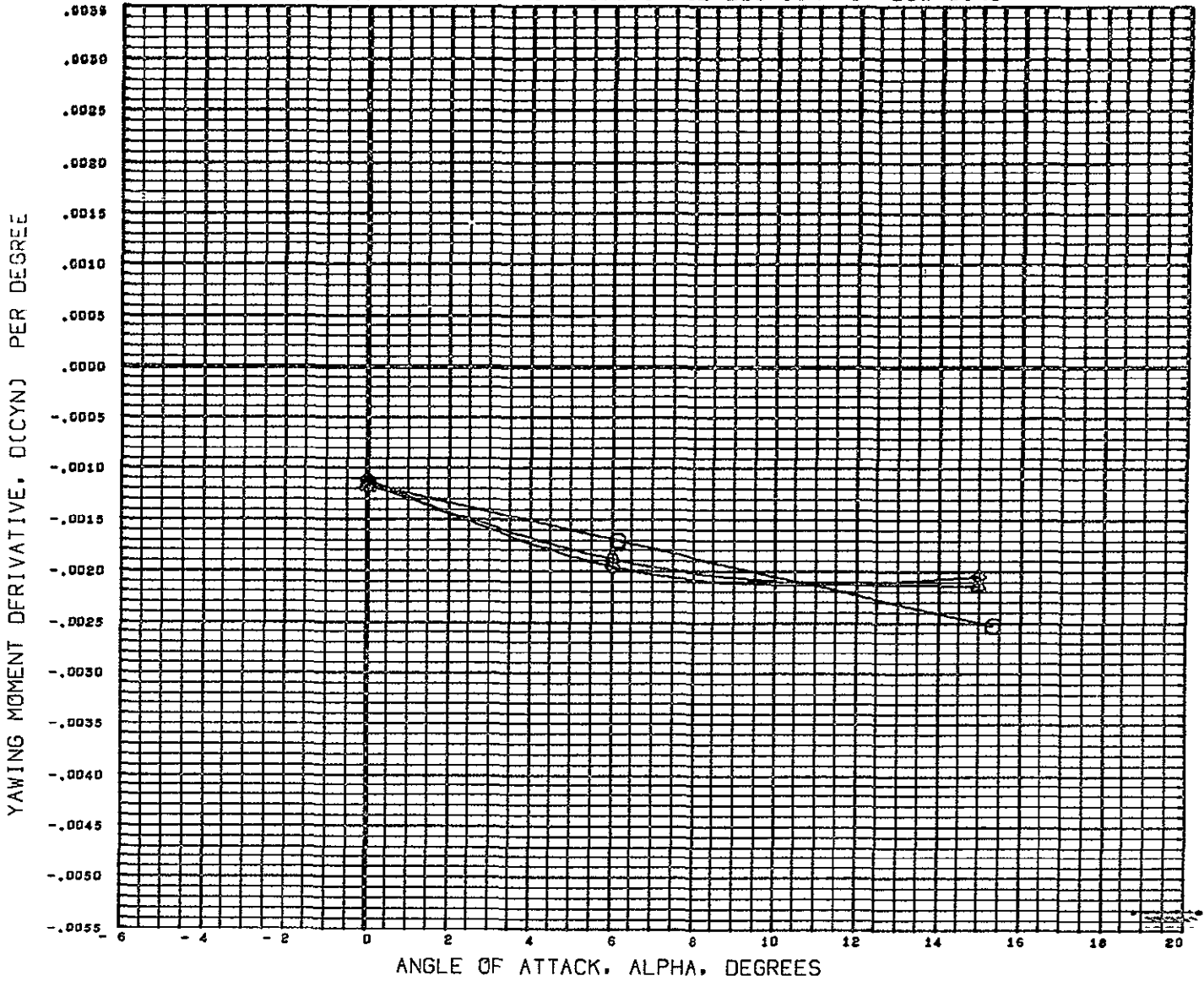
SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	HACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	10.000	INCIDW	0.000	DINDRL	7.660	LREF	3.4530	FEET
◇	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR LOW WING



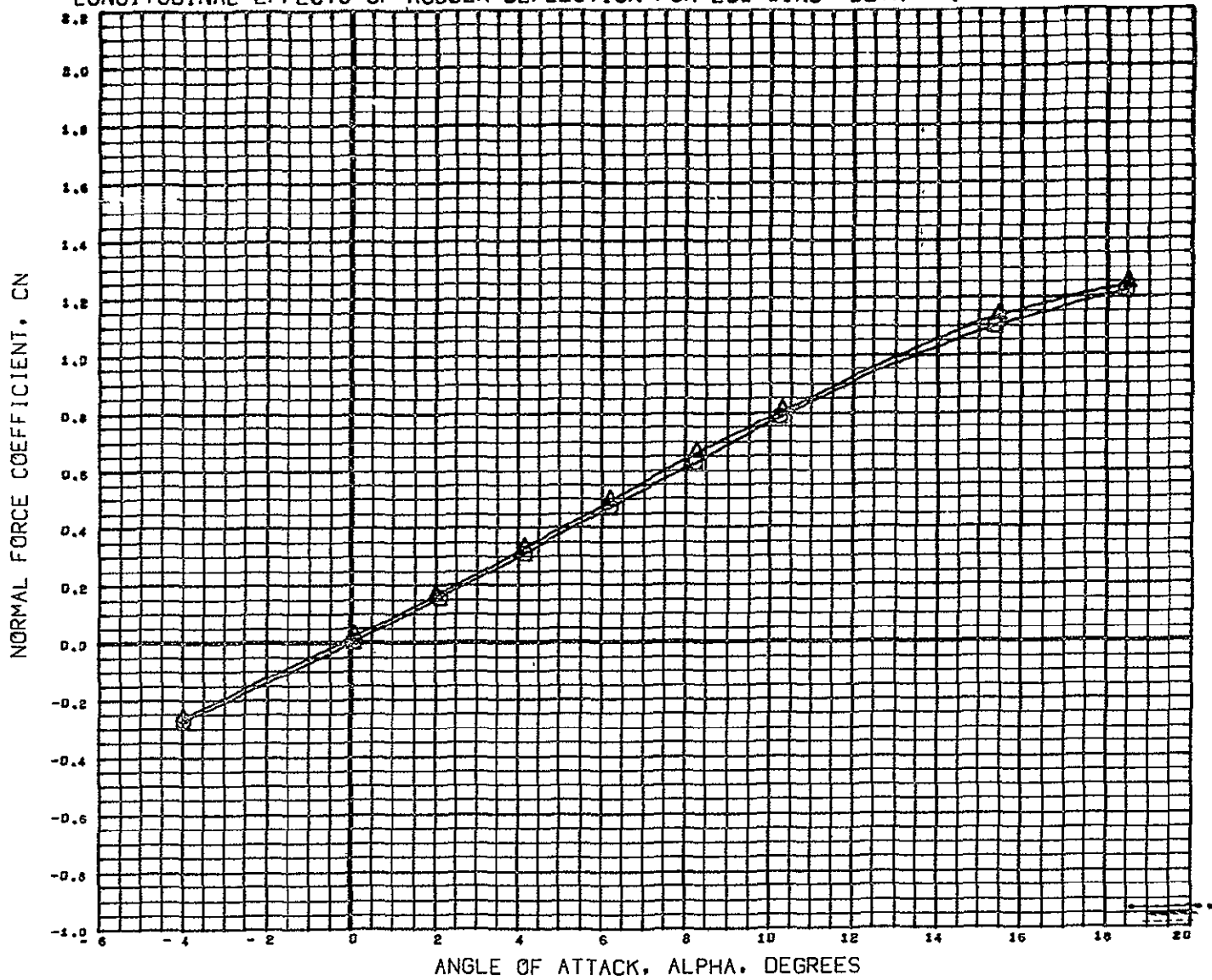
SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
∞	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT
◇	10.000	INCIDW	0.000	DINDRL	7.660	LREF	3.4530	FEET
	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR AILERON DEFLECTION FOR LOW WING



SYMBOL	AILRON	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	10.000	INCIDW	0.000	DIHDRL	7.660	LREF	3.4530	FEET
◇	20.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

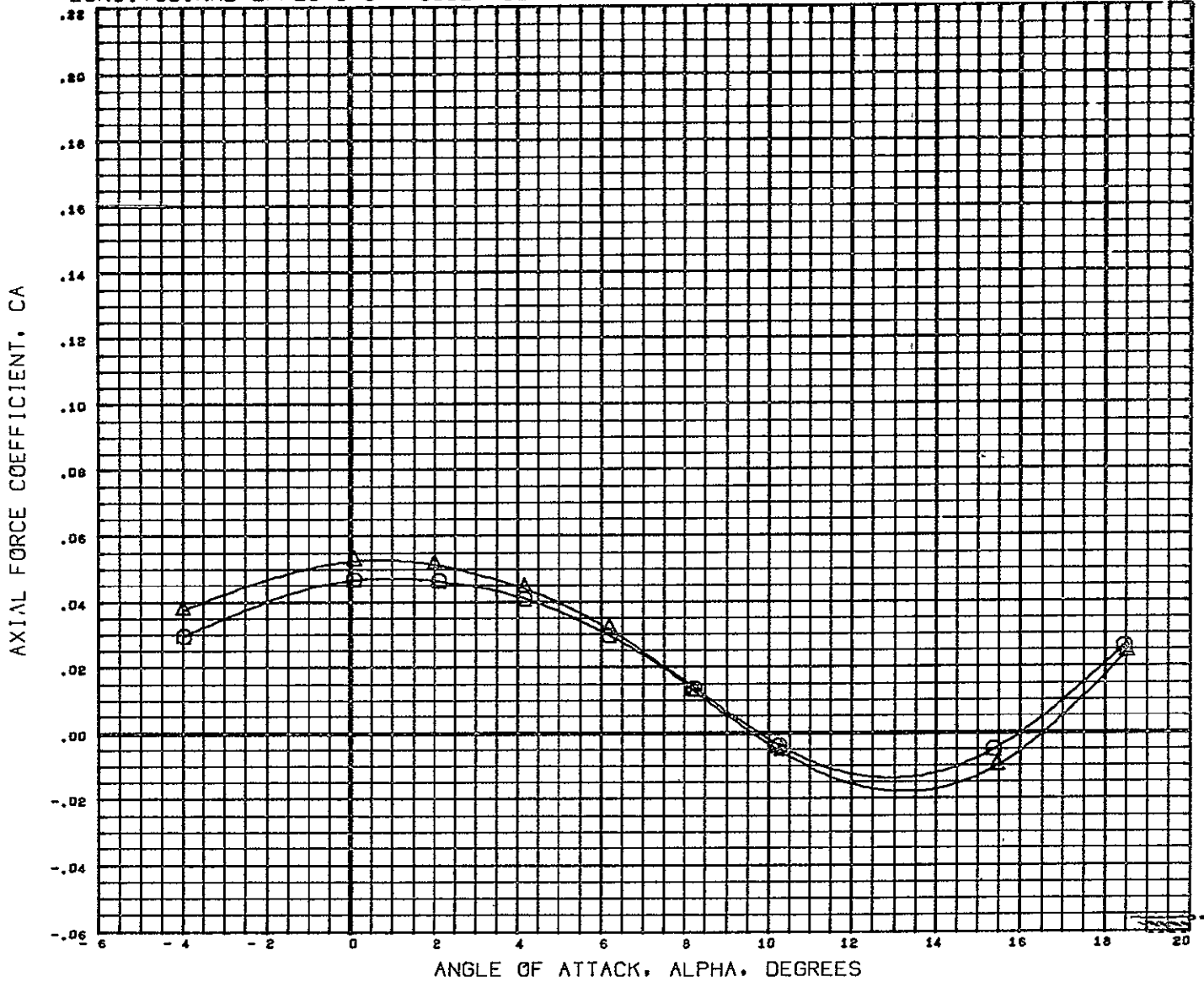
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4085)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

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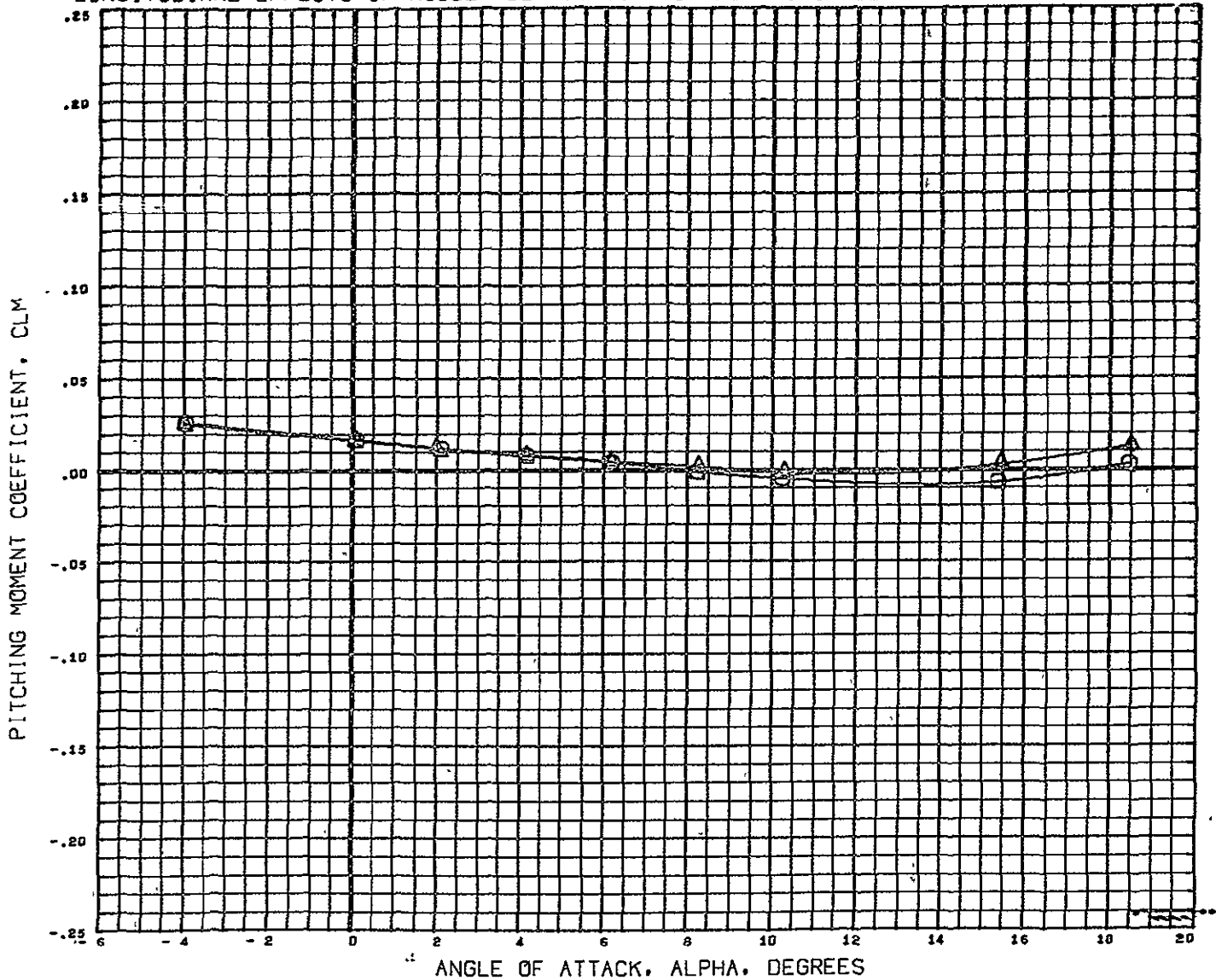
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4085)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

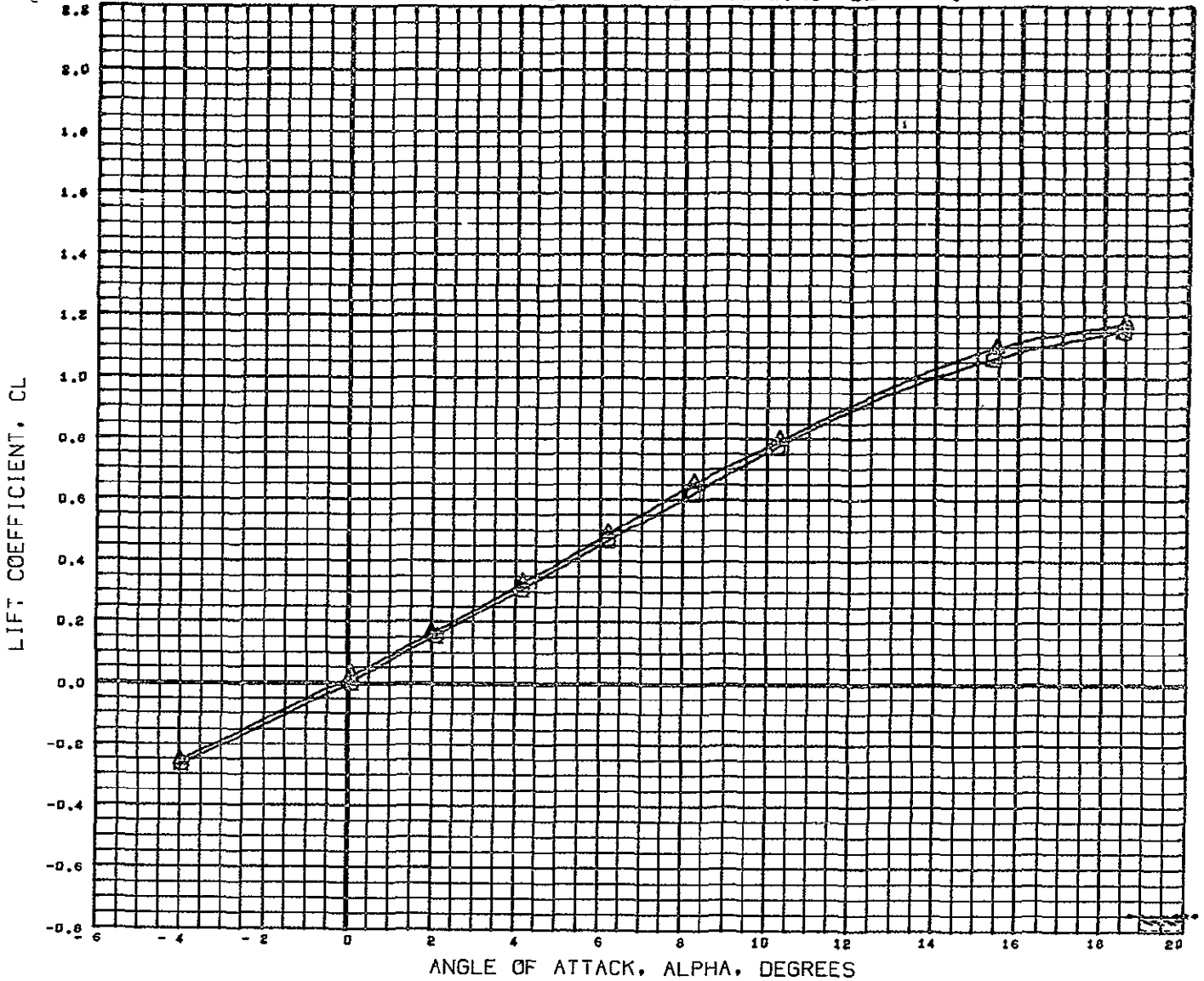
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LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT
(RN4085)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

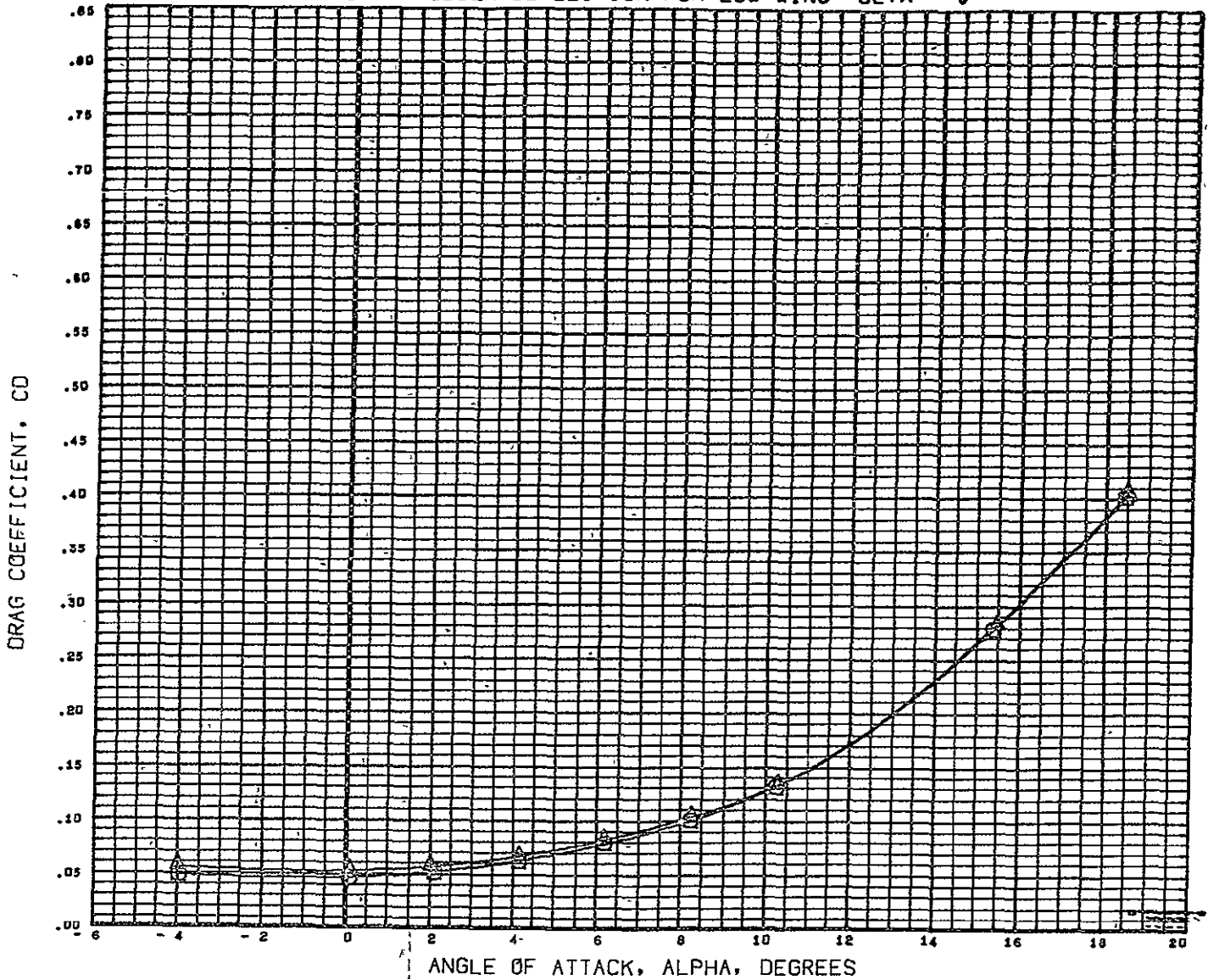
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4085)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0190 SCALE

MACH .38

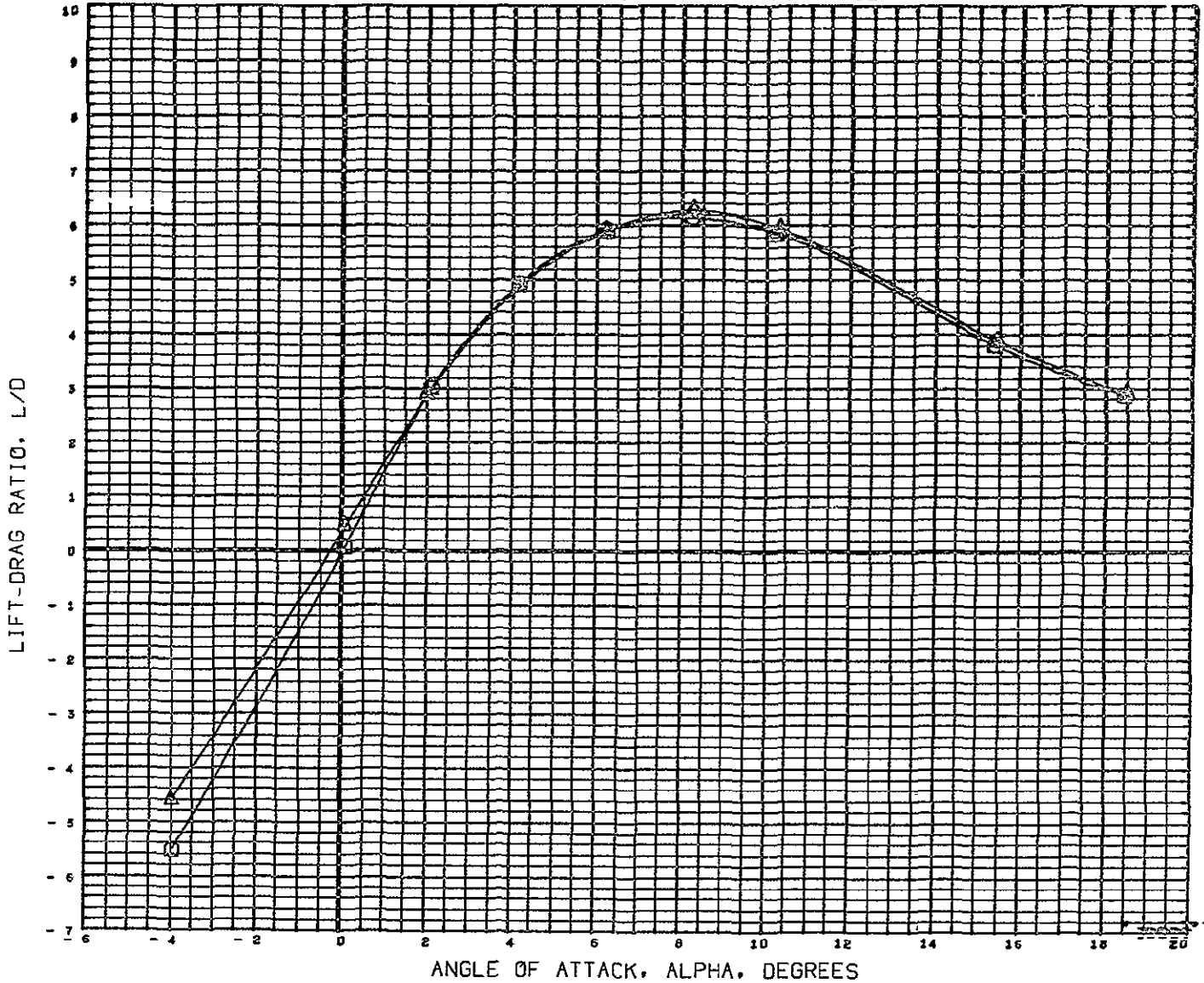
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4085)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

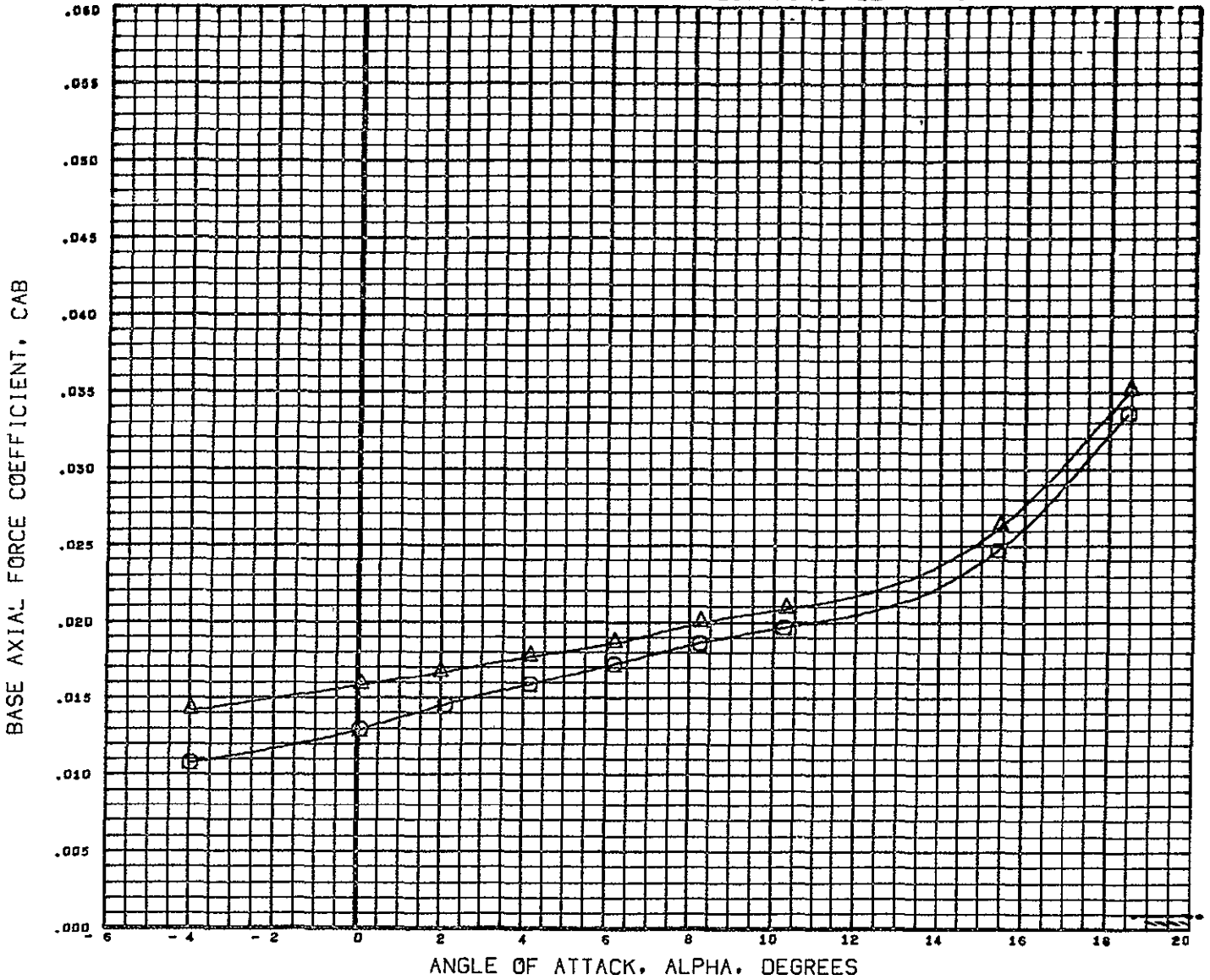
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION	
(HN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF	1.3550 SQ.FT.
(RN4085)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XHRP	2.5950 FEET
						YHRP	0.0000 FEET
						ZHRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .38

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0

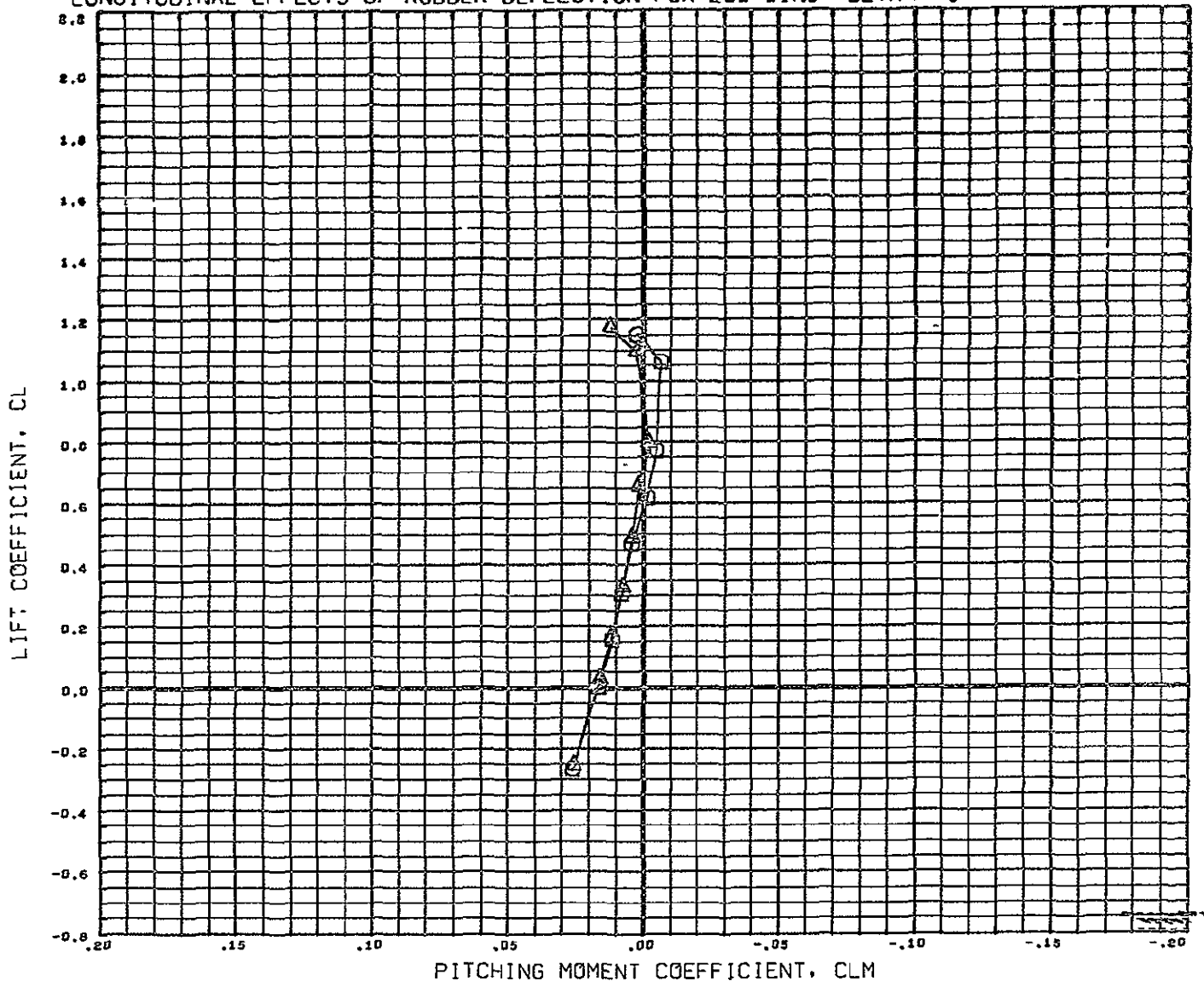


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4085)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

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LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0

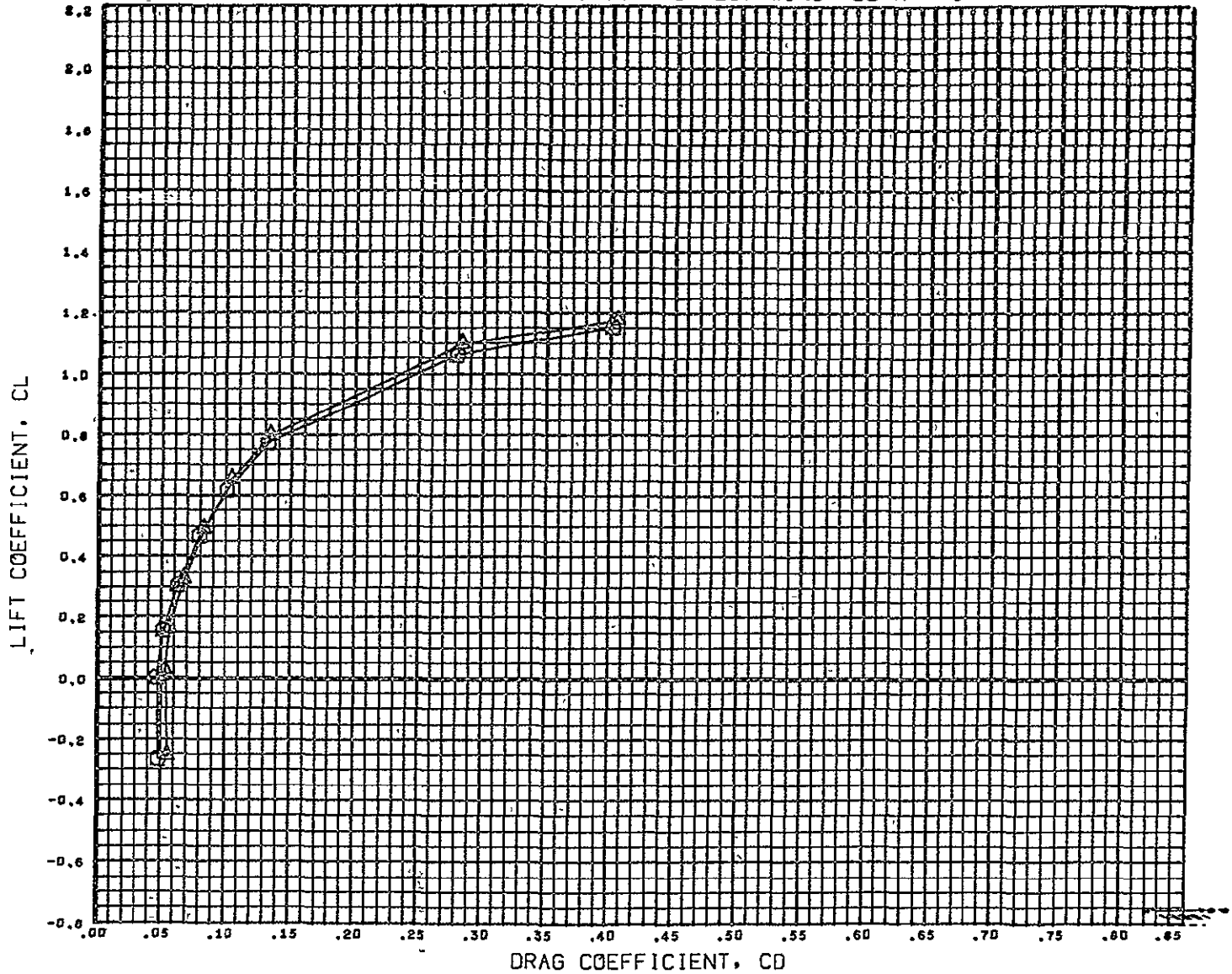


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2D17)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4085)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
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						SCALE 0.0150 SCALE

MACH .38

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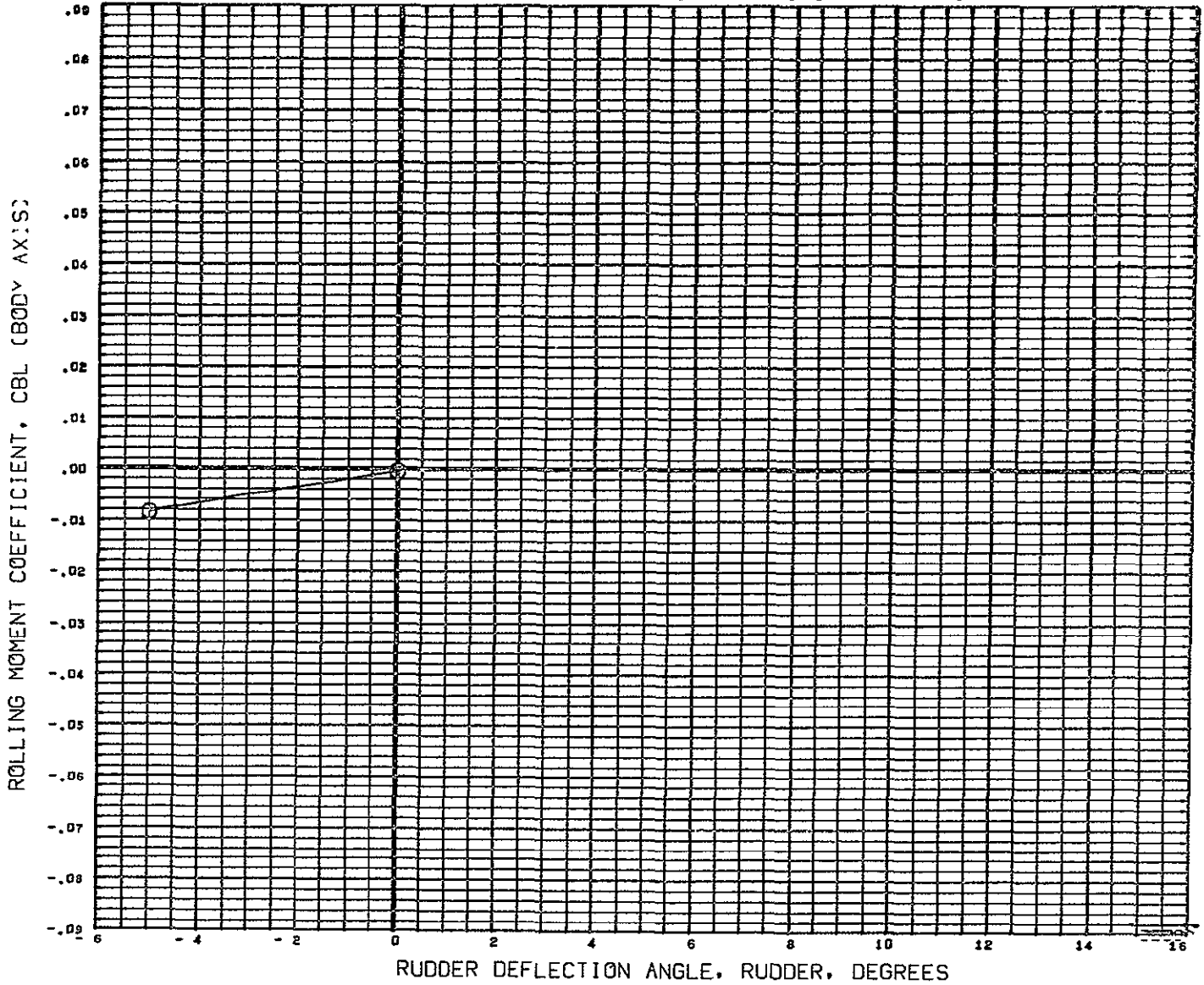
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2017)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE
(RN4085)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	

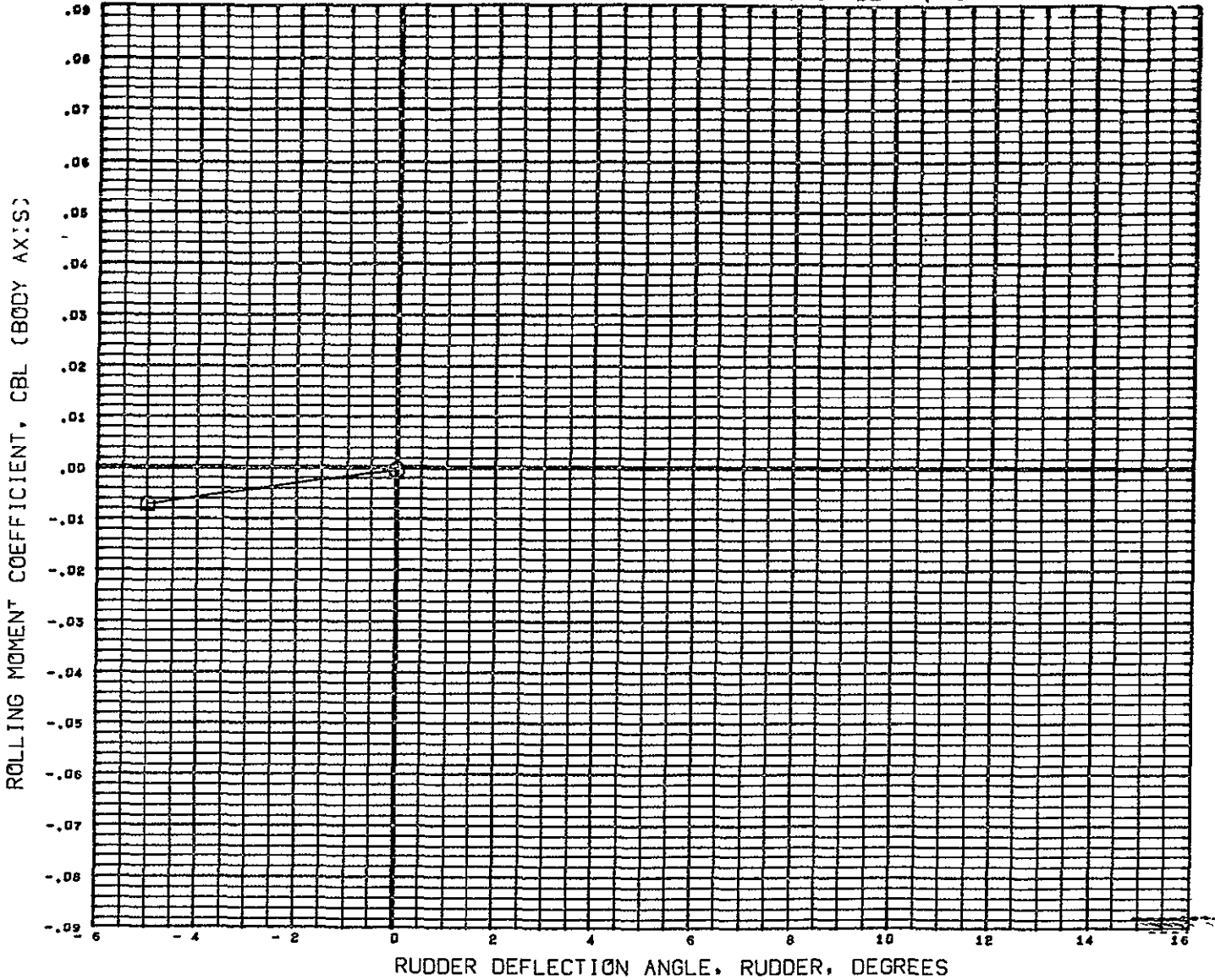
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LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



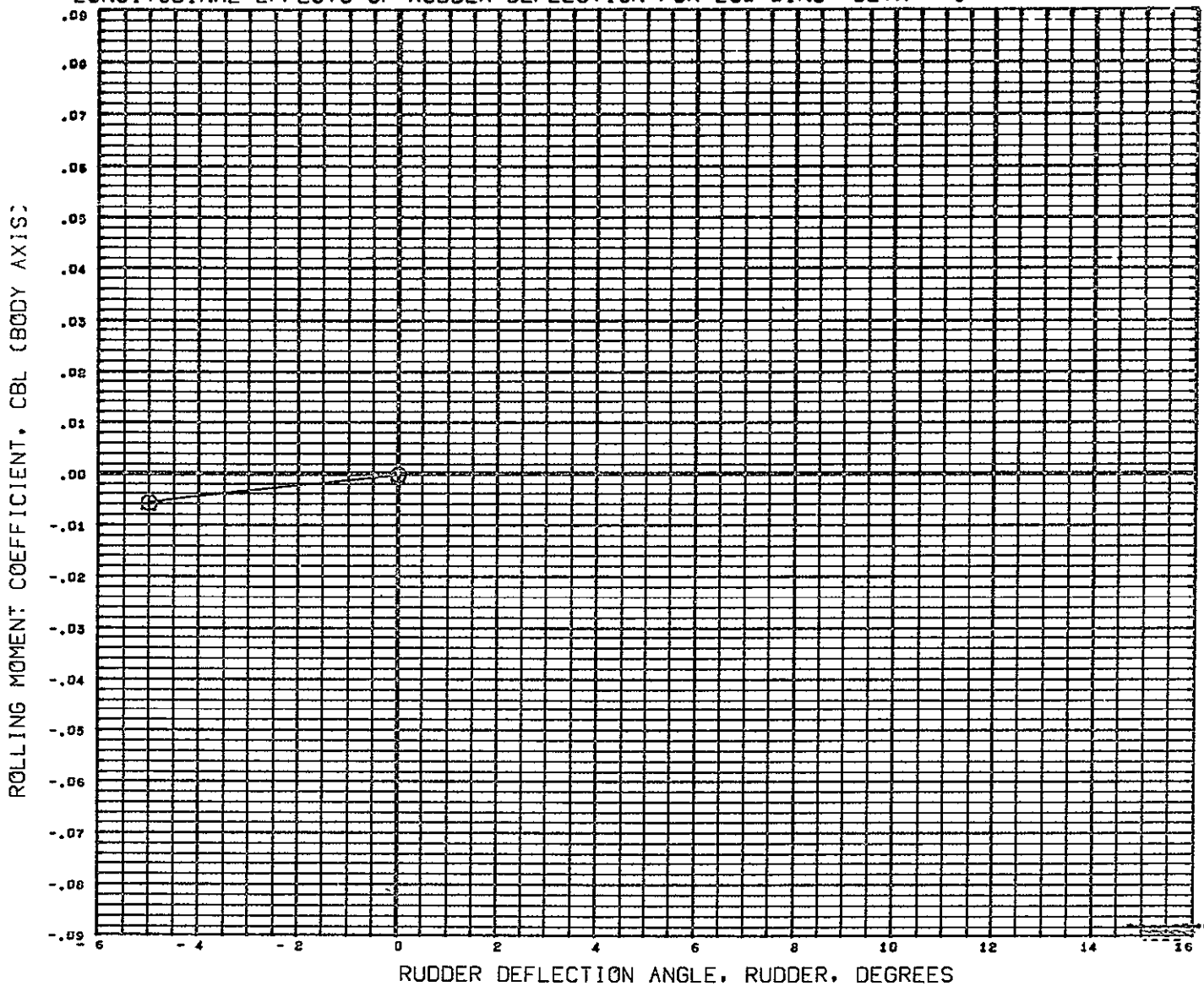
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			INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
			DIHDR	7.660	AILRON	0.000	BREF	3.4530	FEET
			CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
			WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
			DATA HIST. CODE	MI			ZNRP	0.0187	FEET
							SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



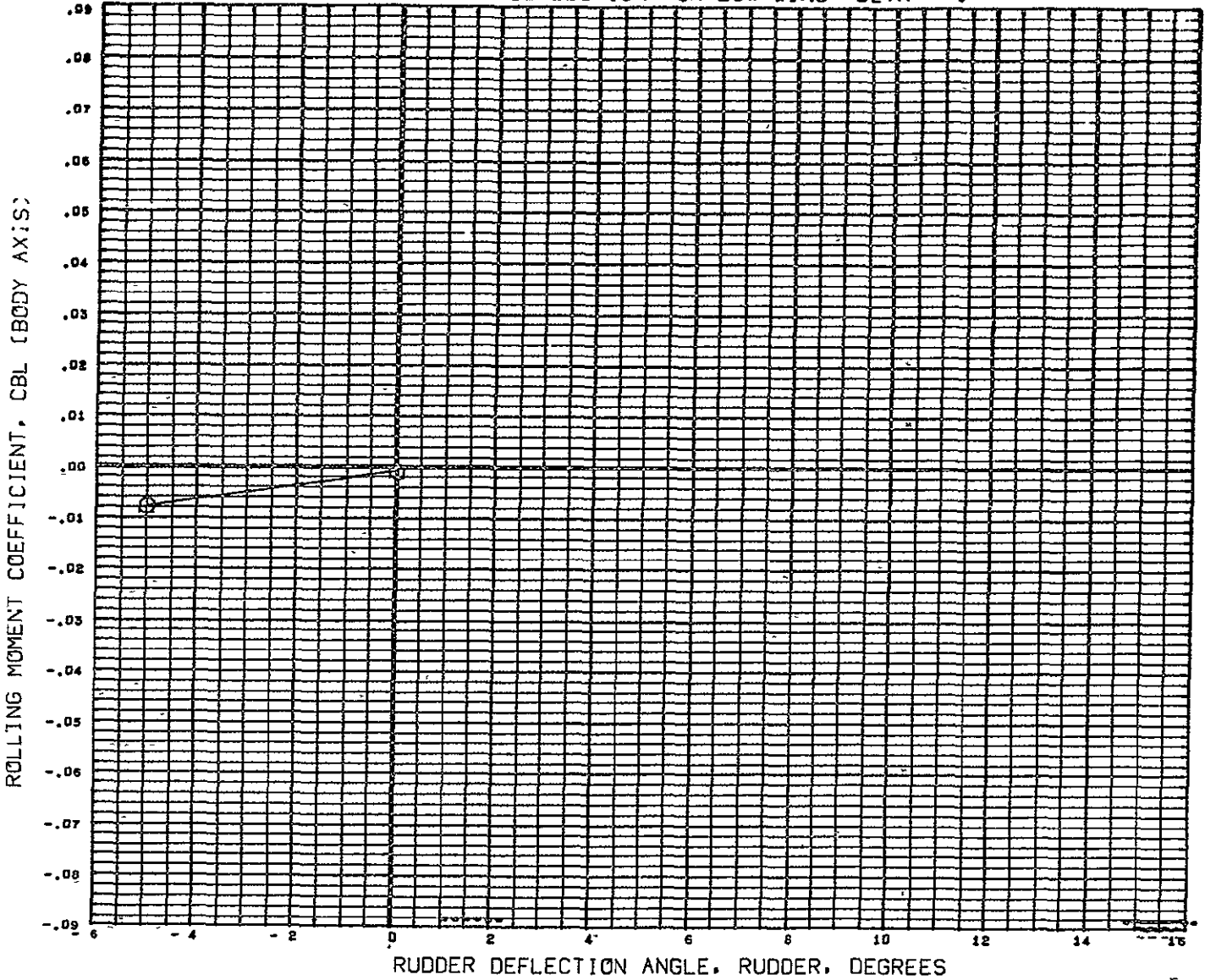
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○	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



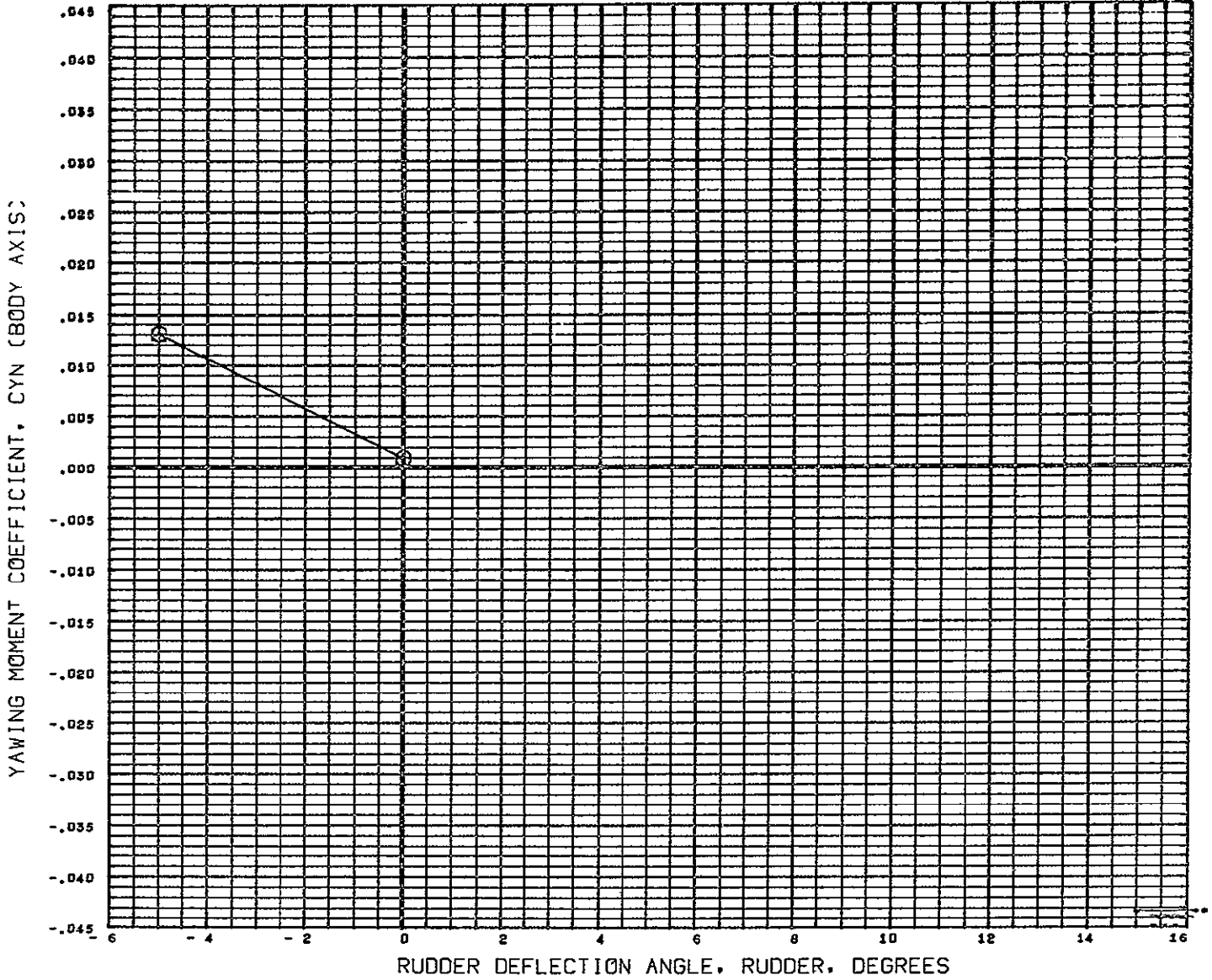
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		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



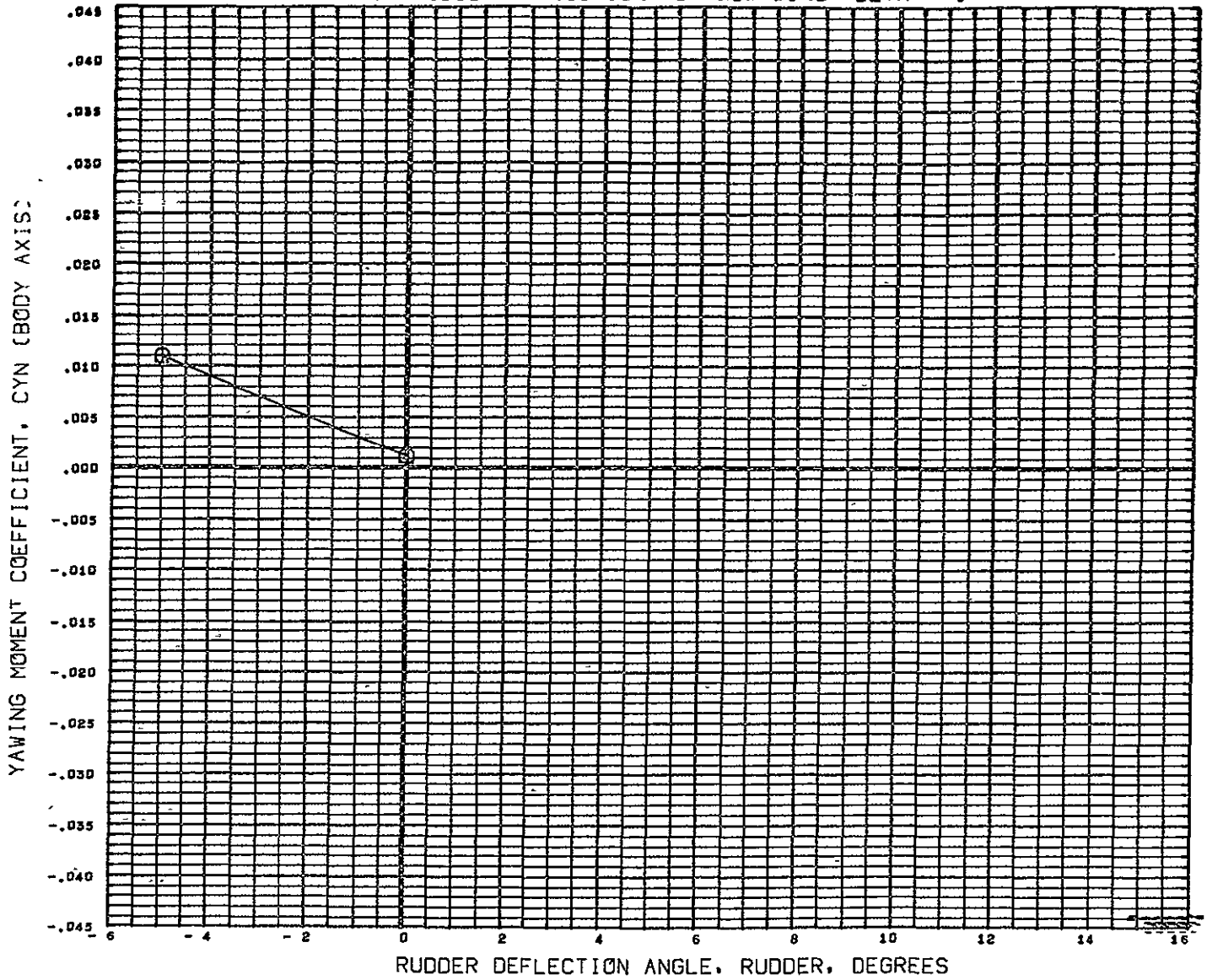
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O	15.000	HACH	0.400	BETA	0.016	SREF	1.3550 SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530 FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530 FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950 FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000 FEET
		DATA HIST. CODE	MI			ZMRP	0.0187 FEET
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LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



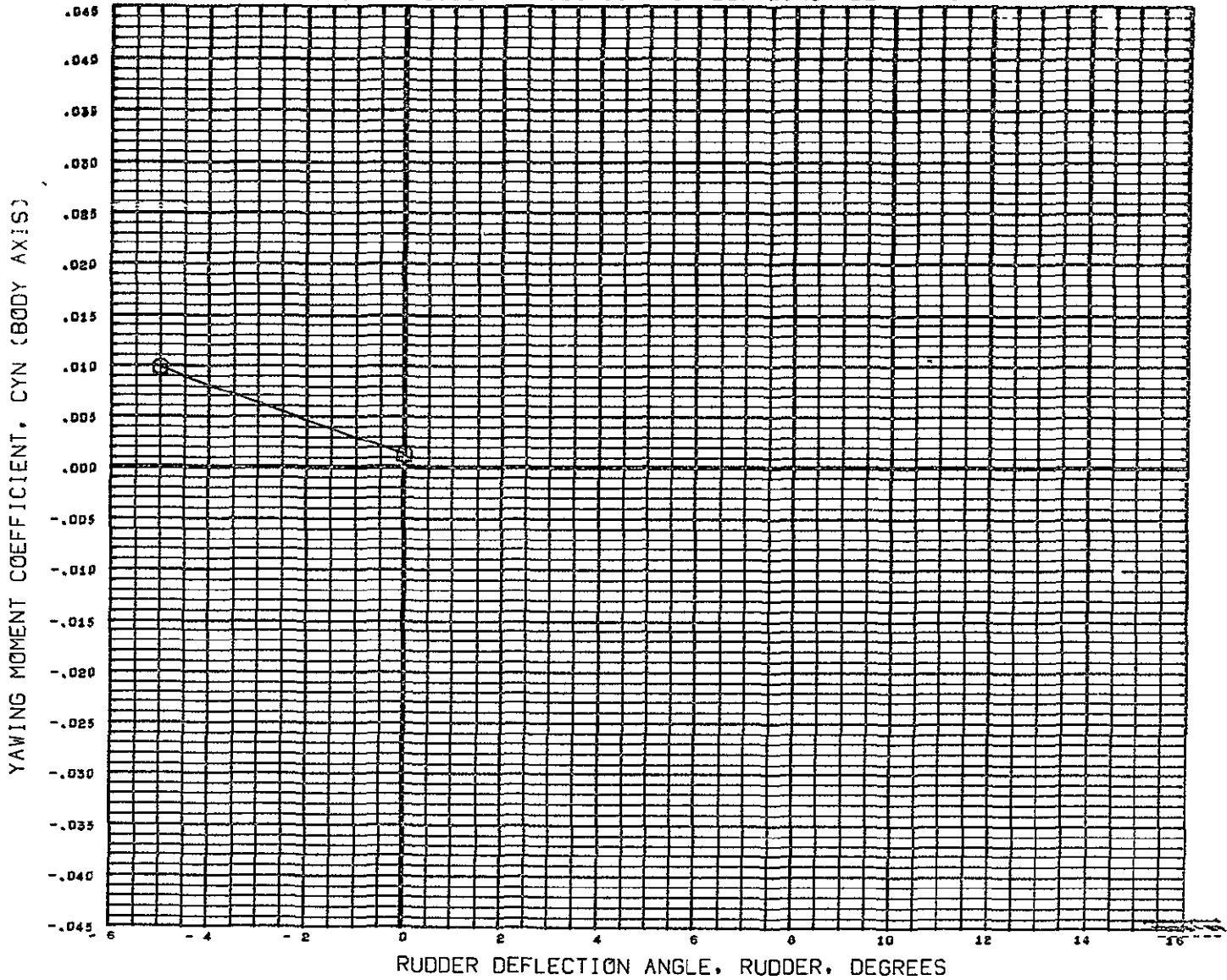
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		DINDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	NI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

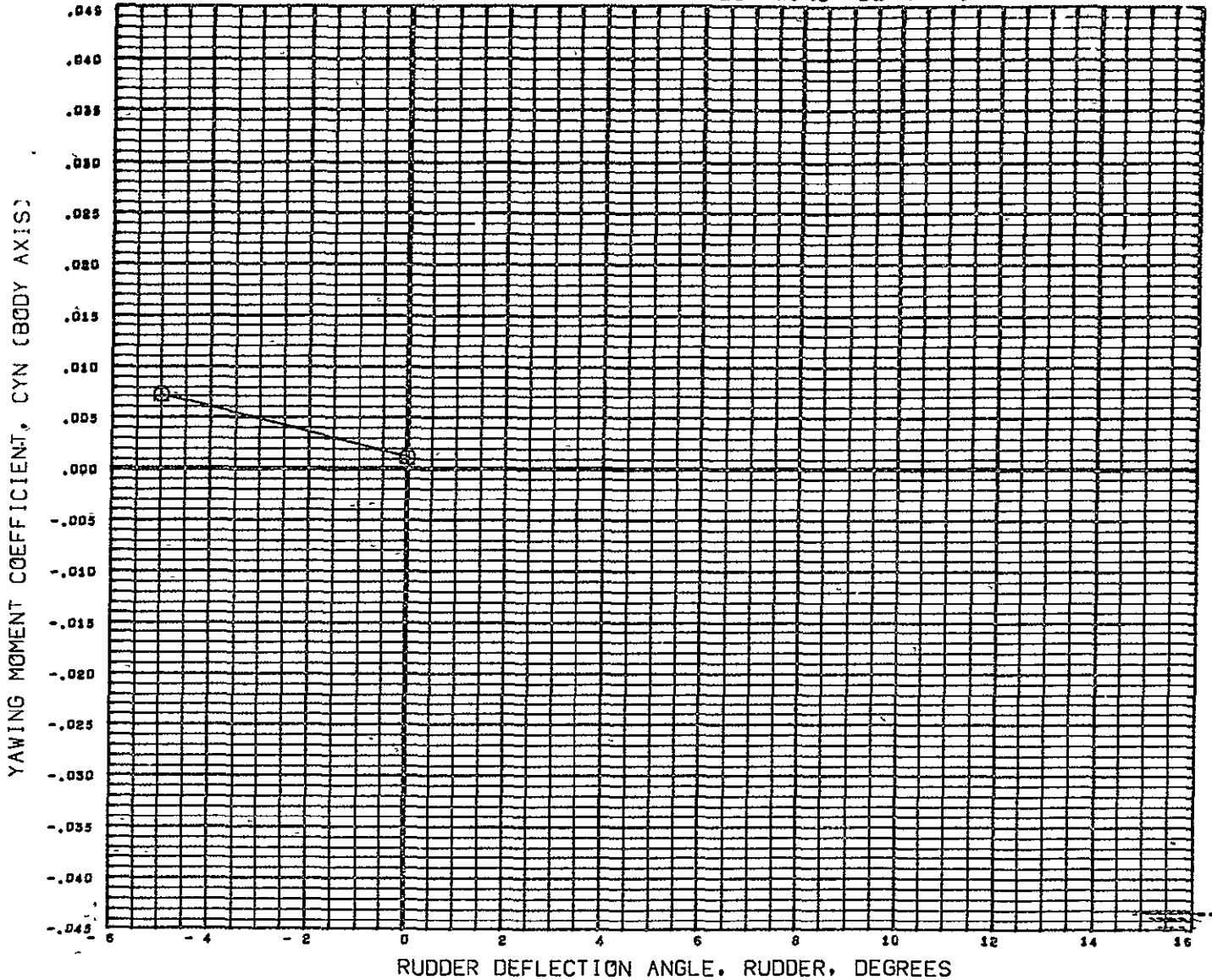
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RUDDER DEFLECTION ANGLE, RUDDER, DEGREES

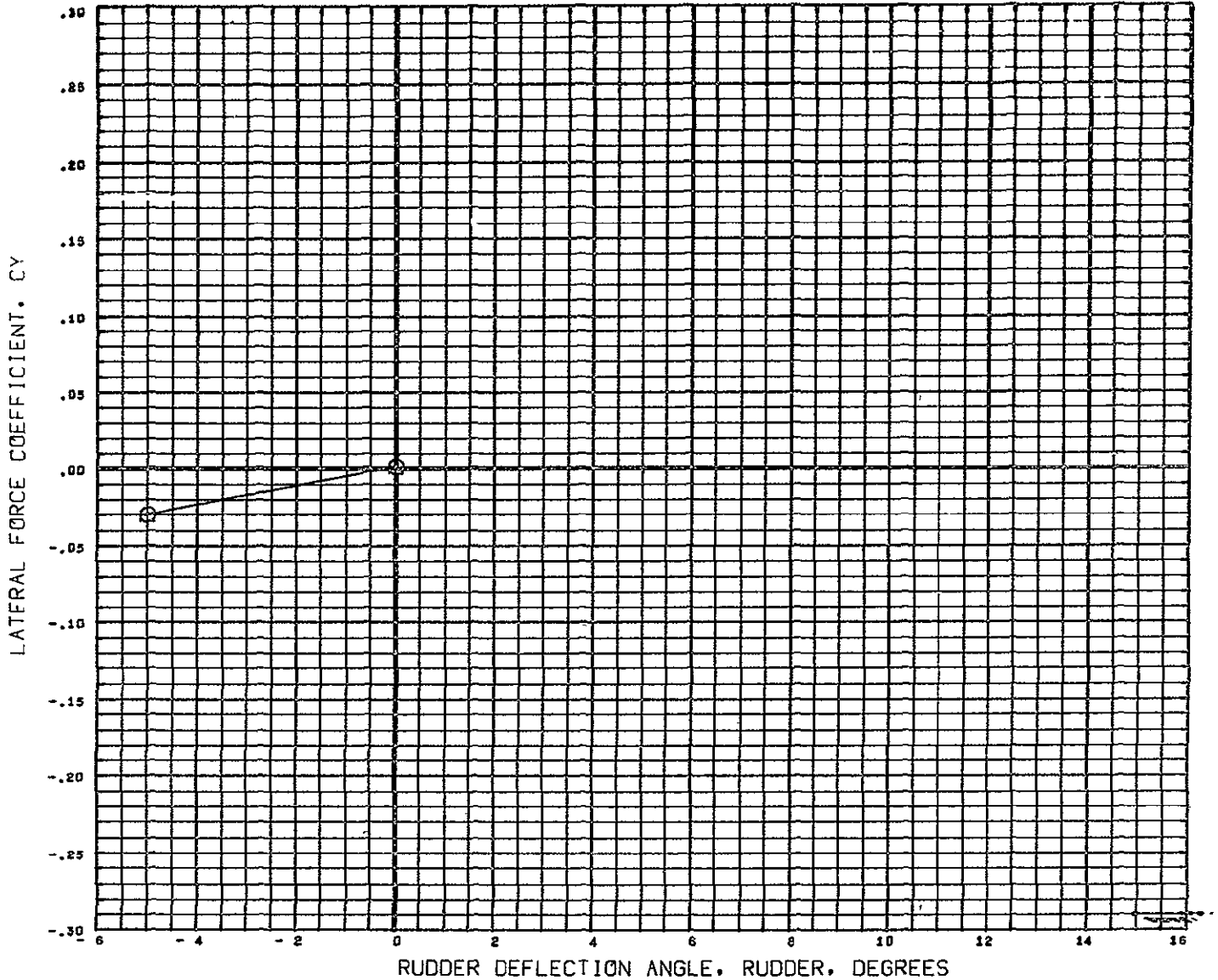
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		DIHDL	7.660	AILRON	0.000	BREF	3.4990	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5990	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST	CODE	MI		ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



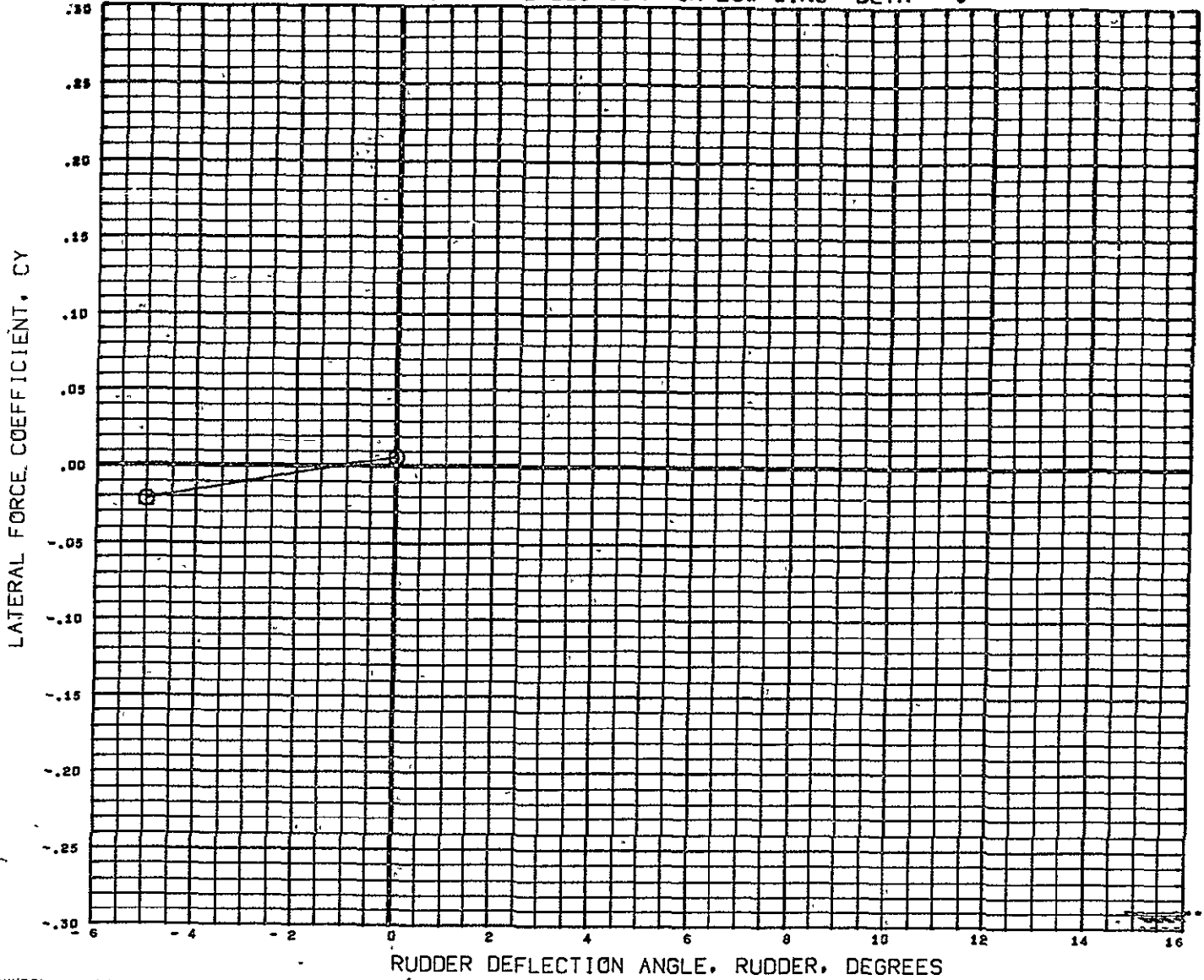
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	H1			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

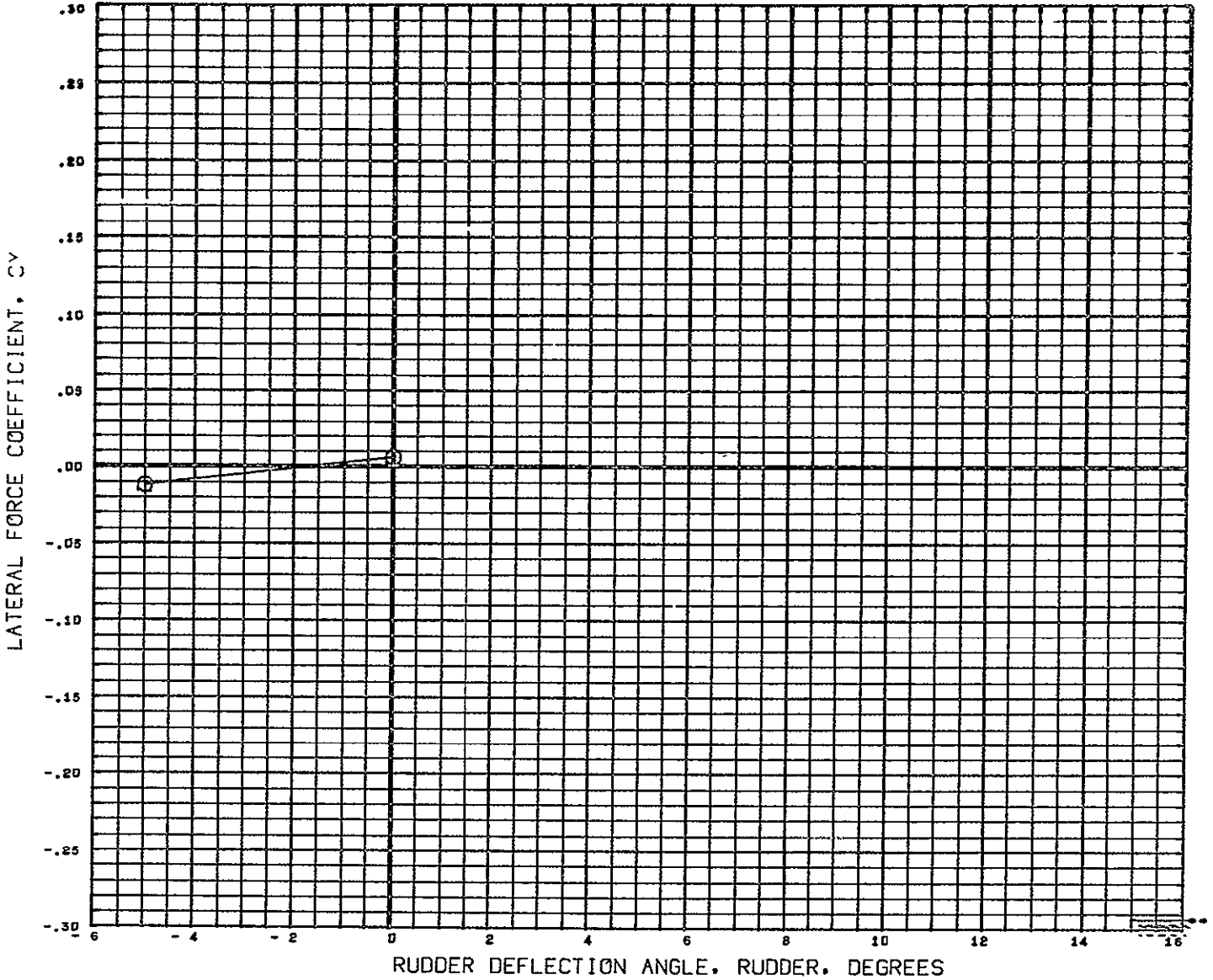
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
○	5.000	MACH	0.400	BETA	0.016
		INCIDC	3.000	INCIDW	0.000
		DIHDL	7.660	AILRON	0.000
		CANARD	0.000	ELEVTR	0.000
		WNGPOS	2.000	CNDPOS	1.000
		DATA HIST. CODE	NI		

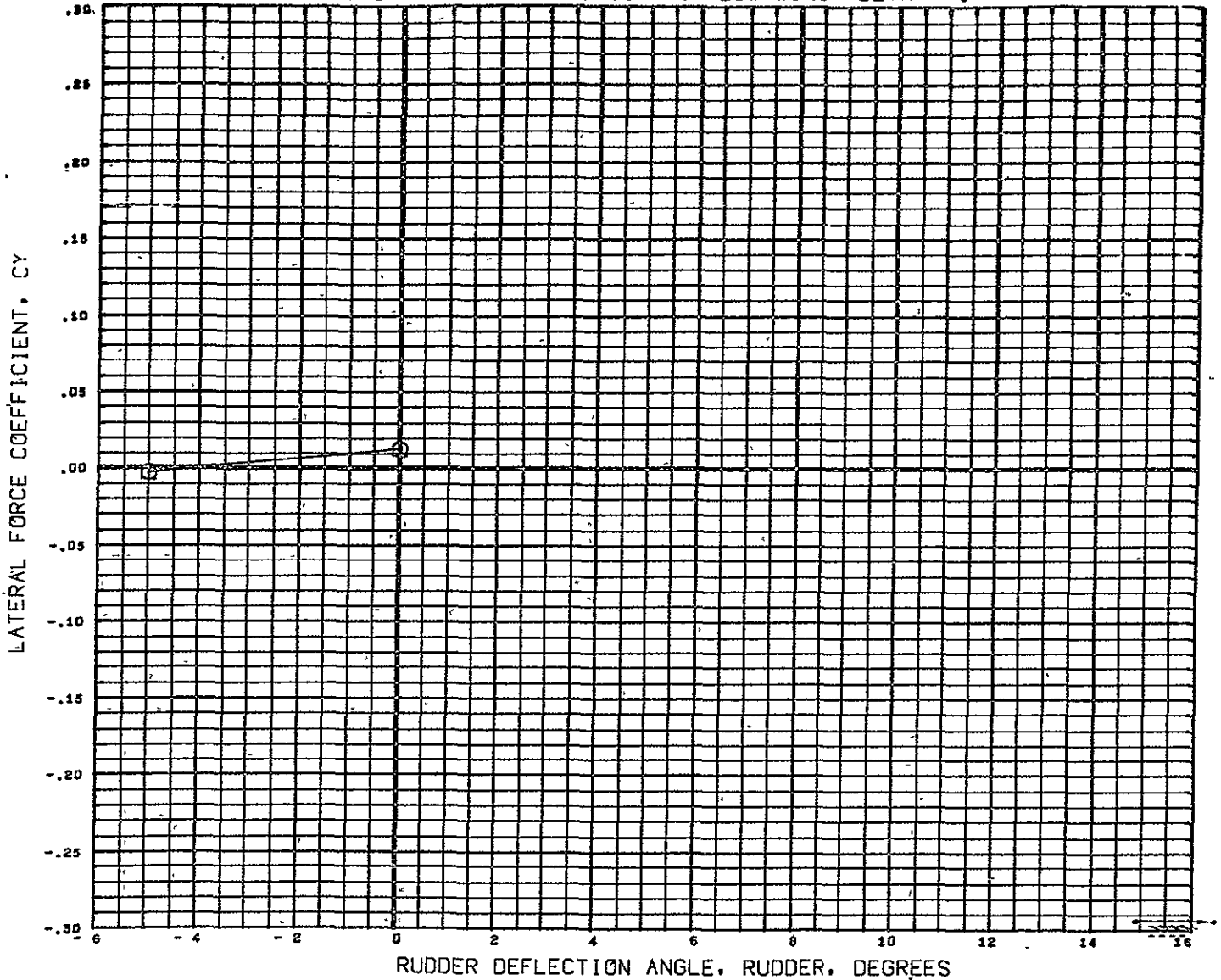
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LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5930	FEET
YMRP	0.0000	FEET
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SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



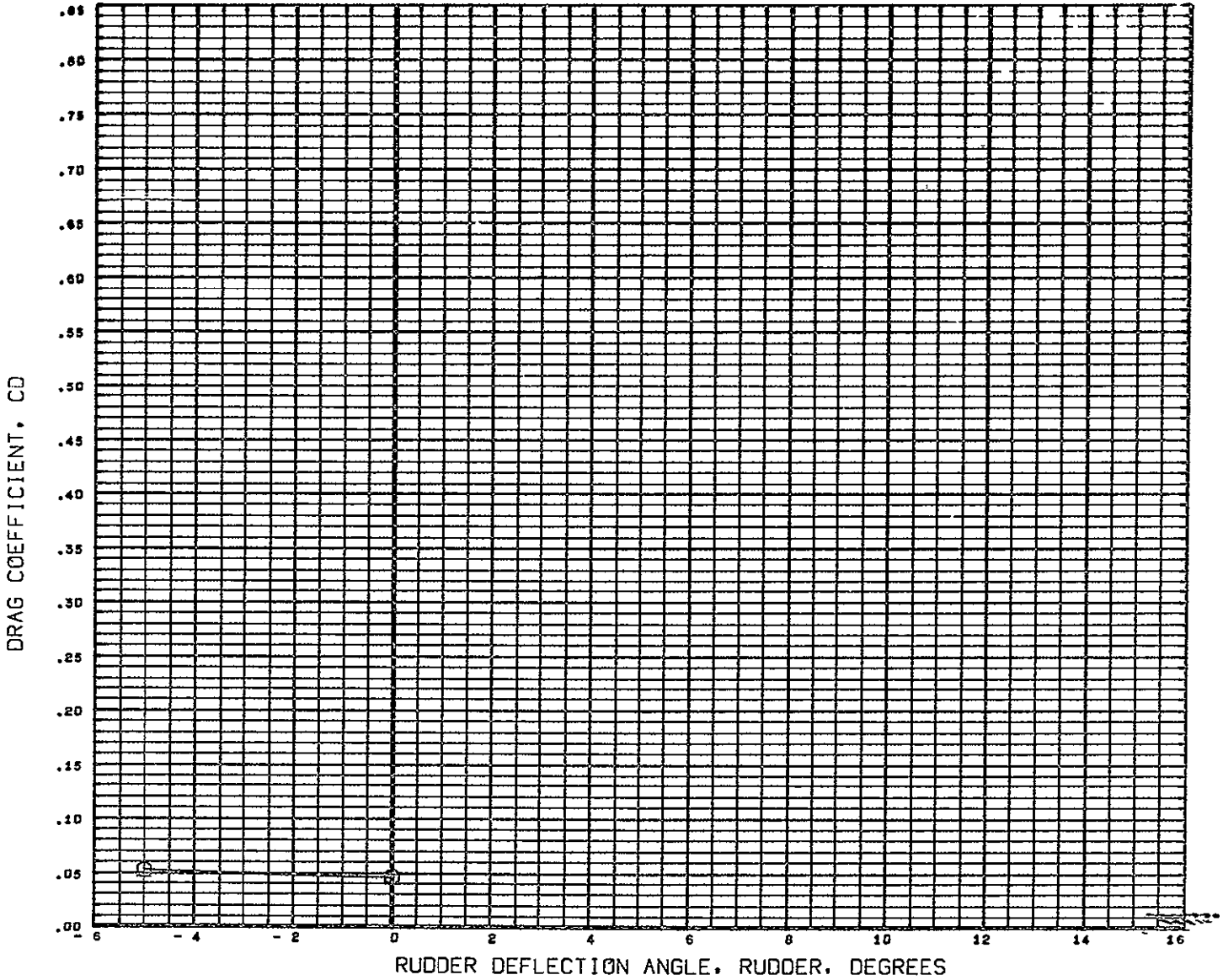
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	YHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	ZHRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



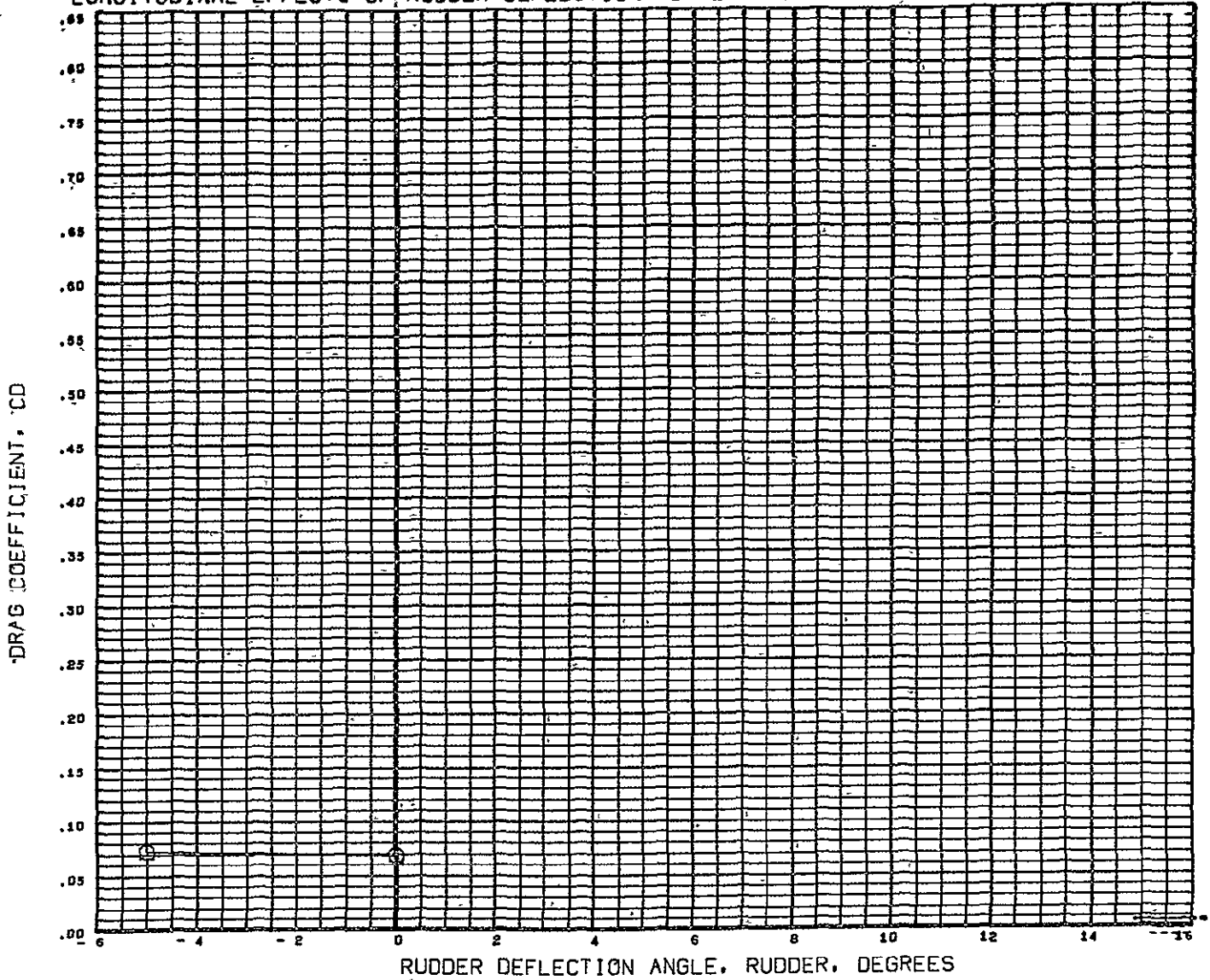
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



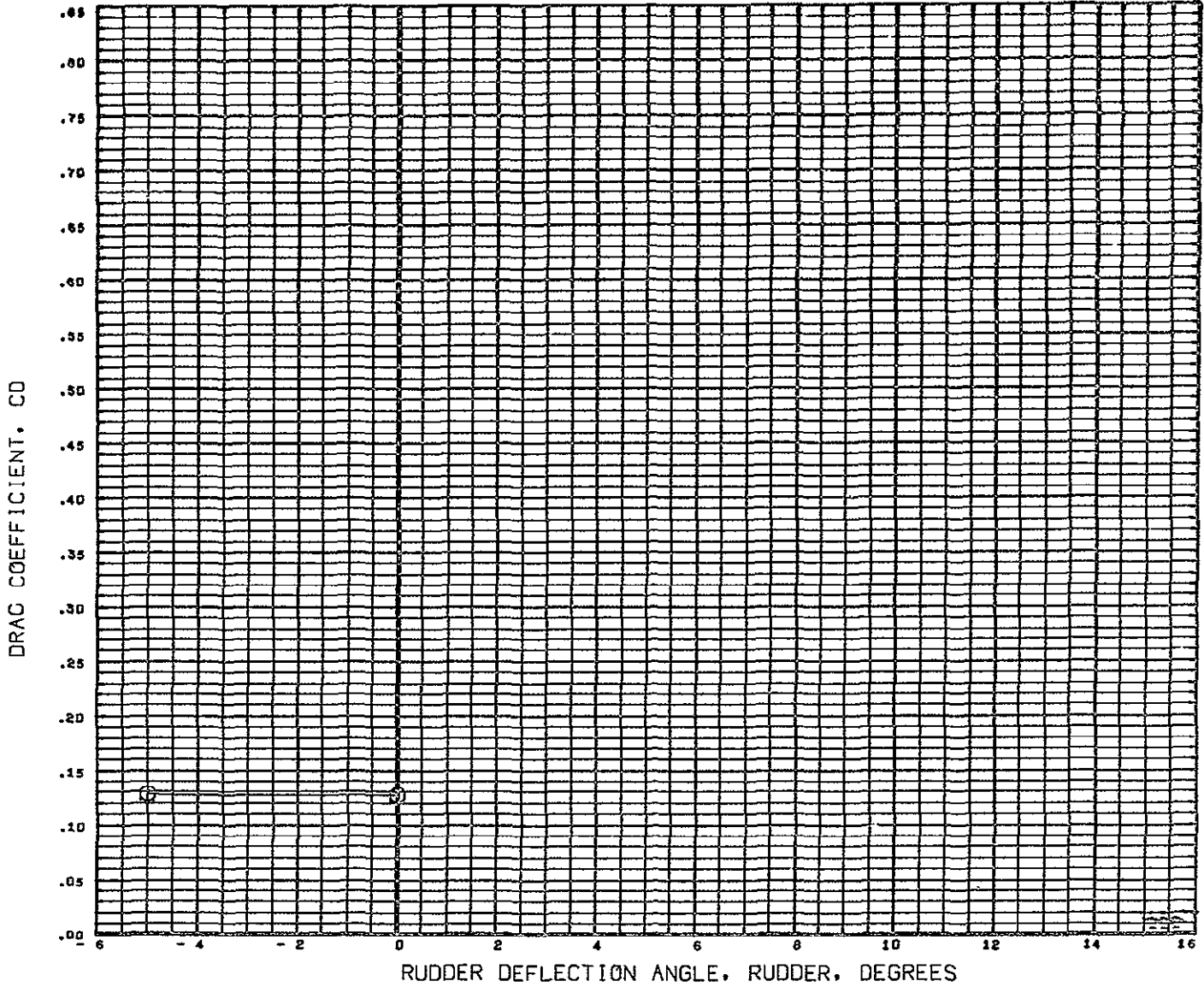
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0107	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



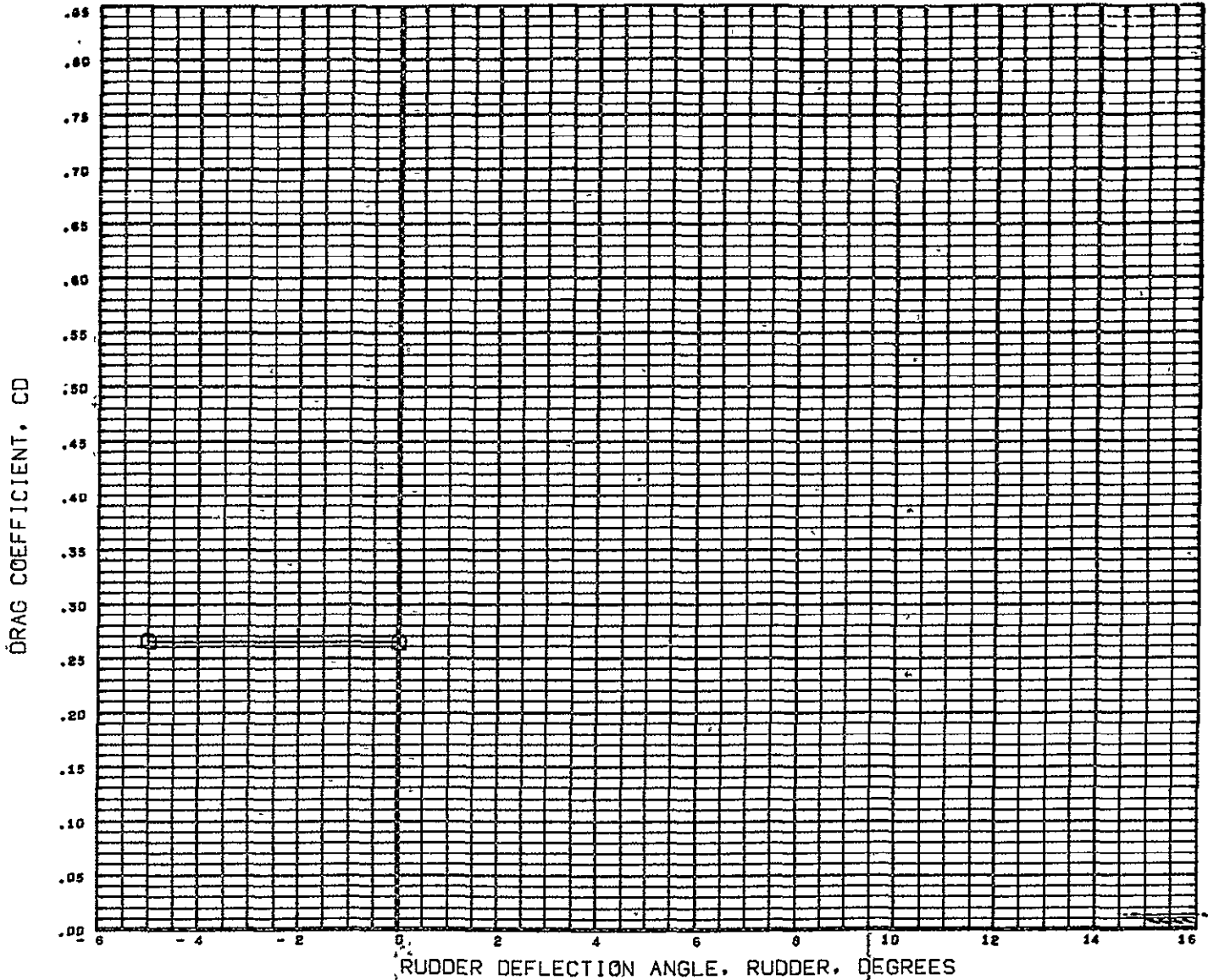
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		MACH	BETA	INCIDW	ELEVTR	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	Sq. FT.
○	5.000	0.400	0.016	0.000	0.000	1.3530	3.4530	3.4530	2.3950	0.0000	0.0187	0.0150	FEET
		7.660	0.000	0.000	0.000								FEET
		0.000	0.000	0.000	0.000								FEET
		2.000	1.000										FEET
		DATA HIST. CODE	MI										SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST	CODE	MI		ZNRP	0.0167	FEET
						SCALE	0.0150	SCALE

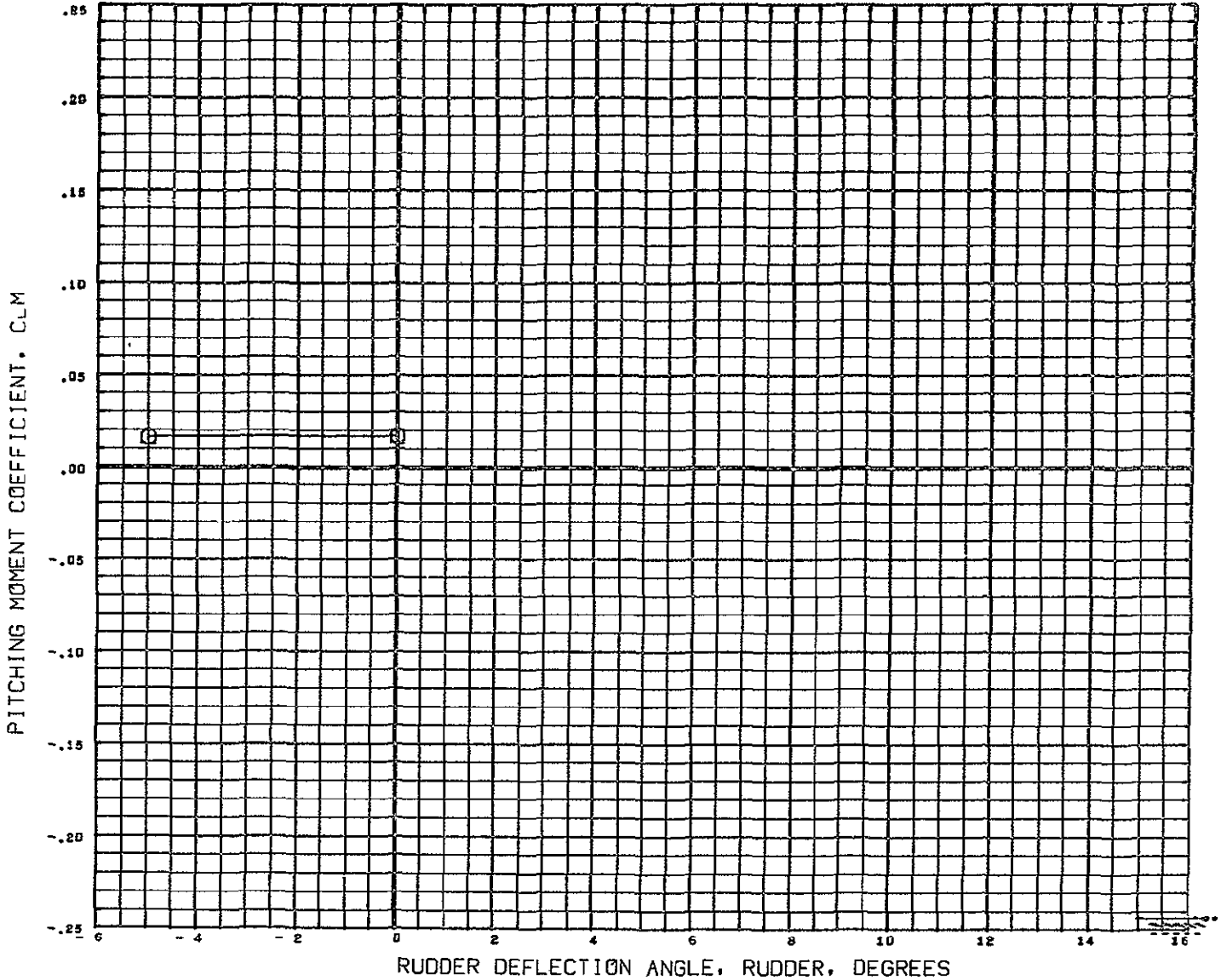
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES			
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		INCIDC	3.000	INCIDW	0.000
		DIHDL	7.660	AILRON	0.000
		CANARD	0.000	ELEVTR	0.000
		WNGPOS	2.000	CNDPOS	1.000
		DATA HIST. CODE	HI		

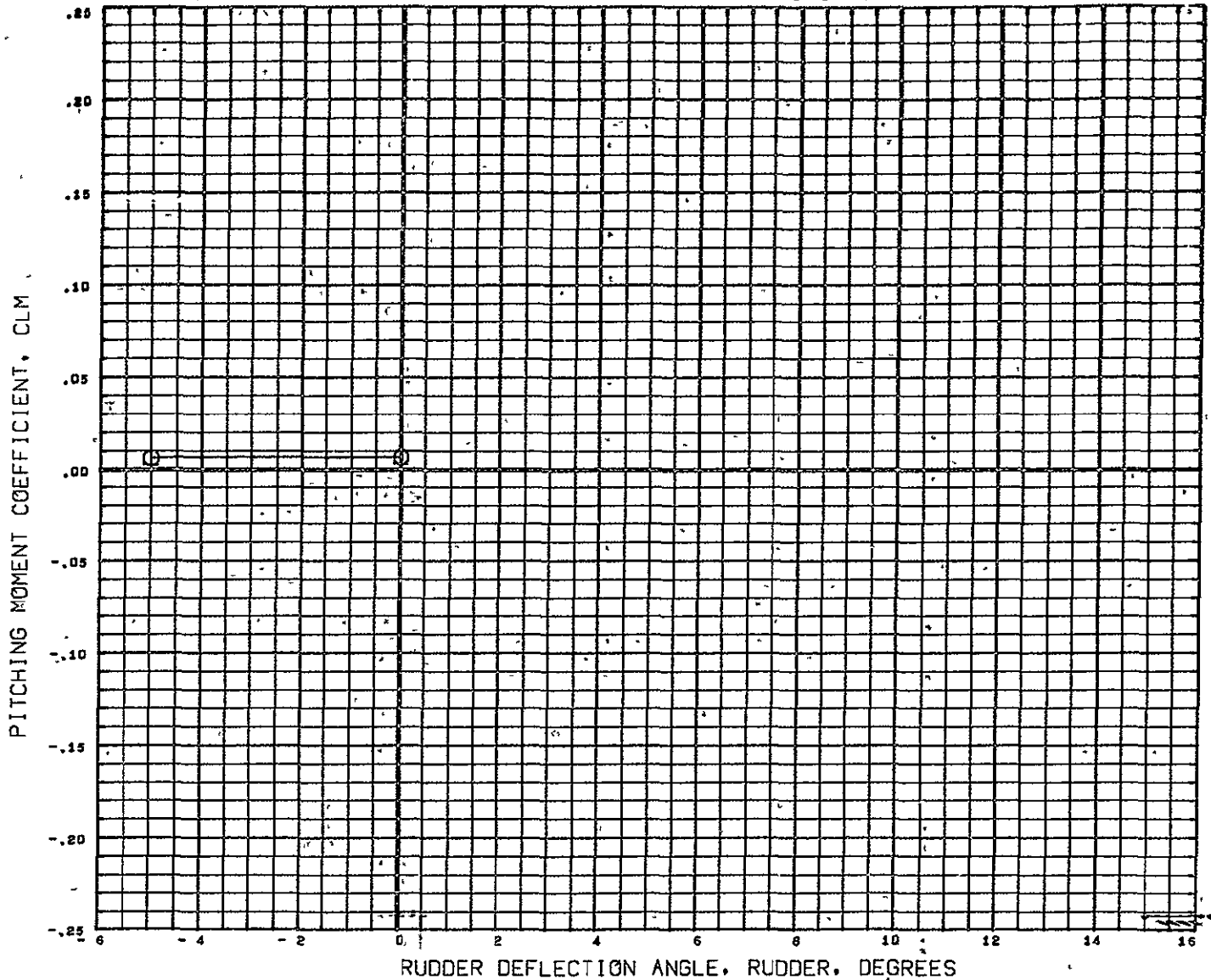
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XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0167	FEET
SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



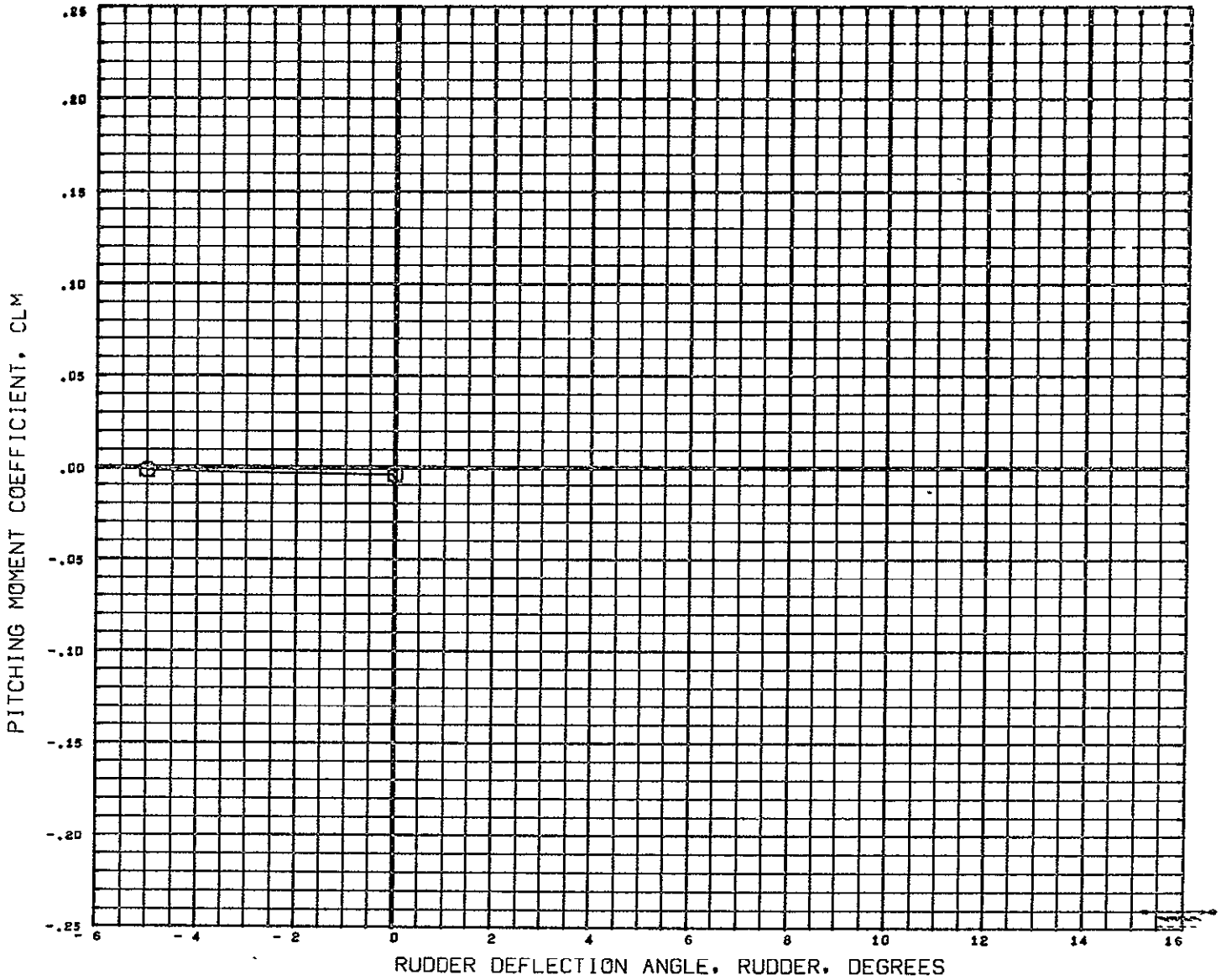
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	BETA	0.016	SREF	1.3550	sq. FT.
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		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.016	SREF	1.3550	sq.ft.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0

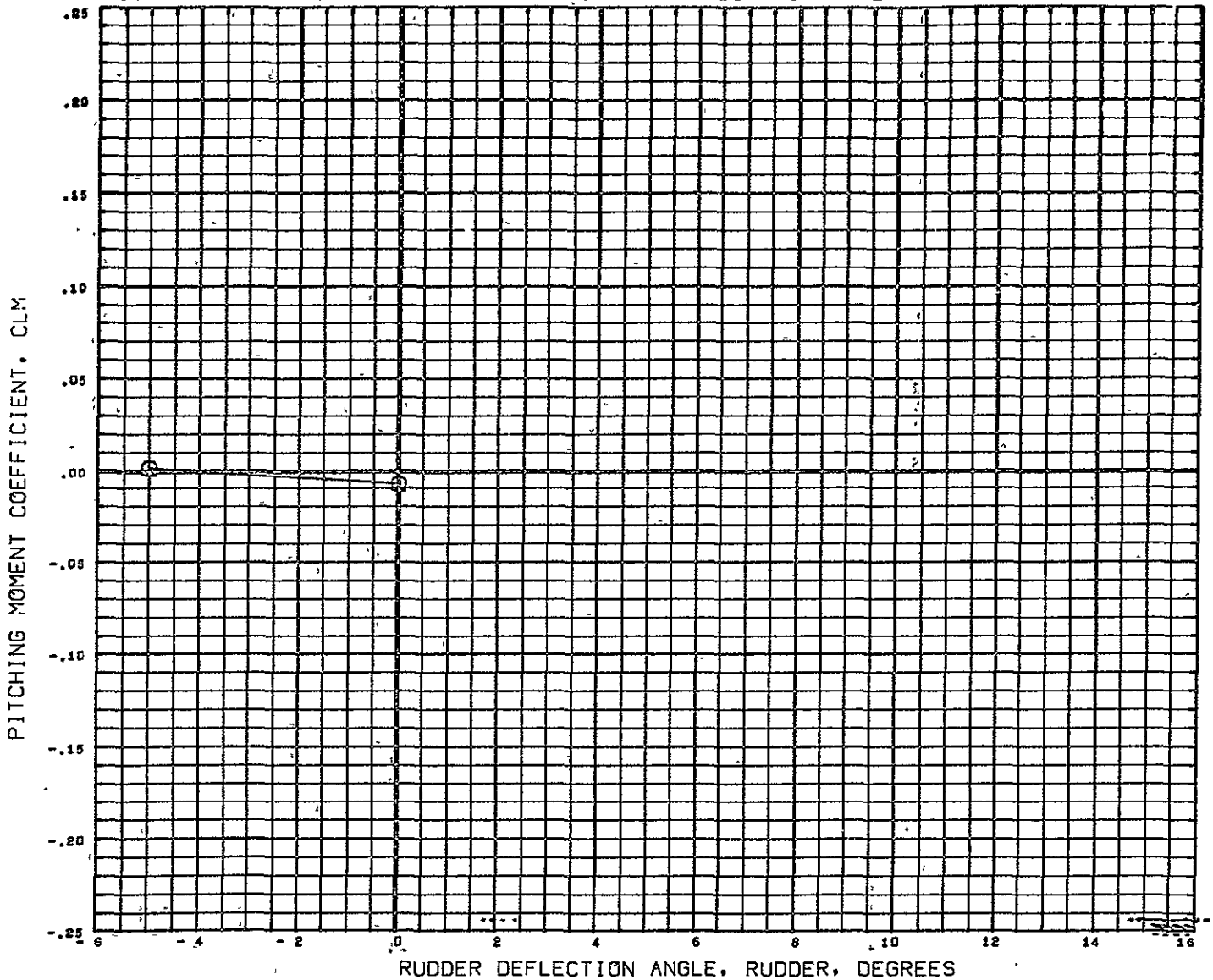


SYMBOL ALPHA
 ○ 10.000

PARAMETRIC VALUES
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 DIHDL 7.660 AILRON 0.000
 CANARD 0.000 ELEVTR 0.000
 WNGPOS 2.000 CNDPOS 1.000
 DATA HIST. CODE HI

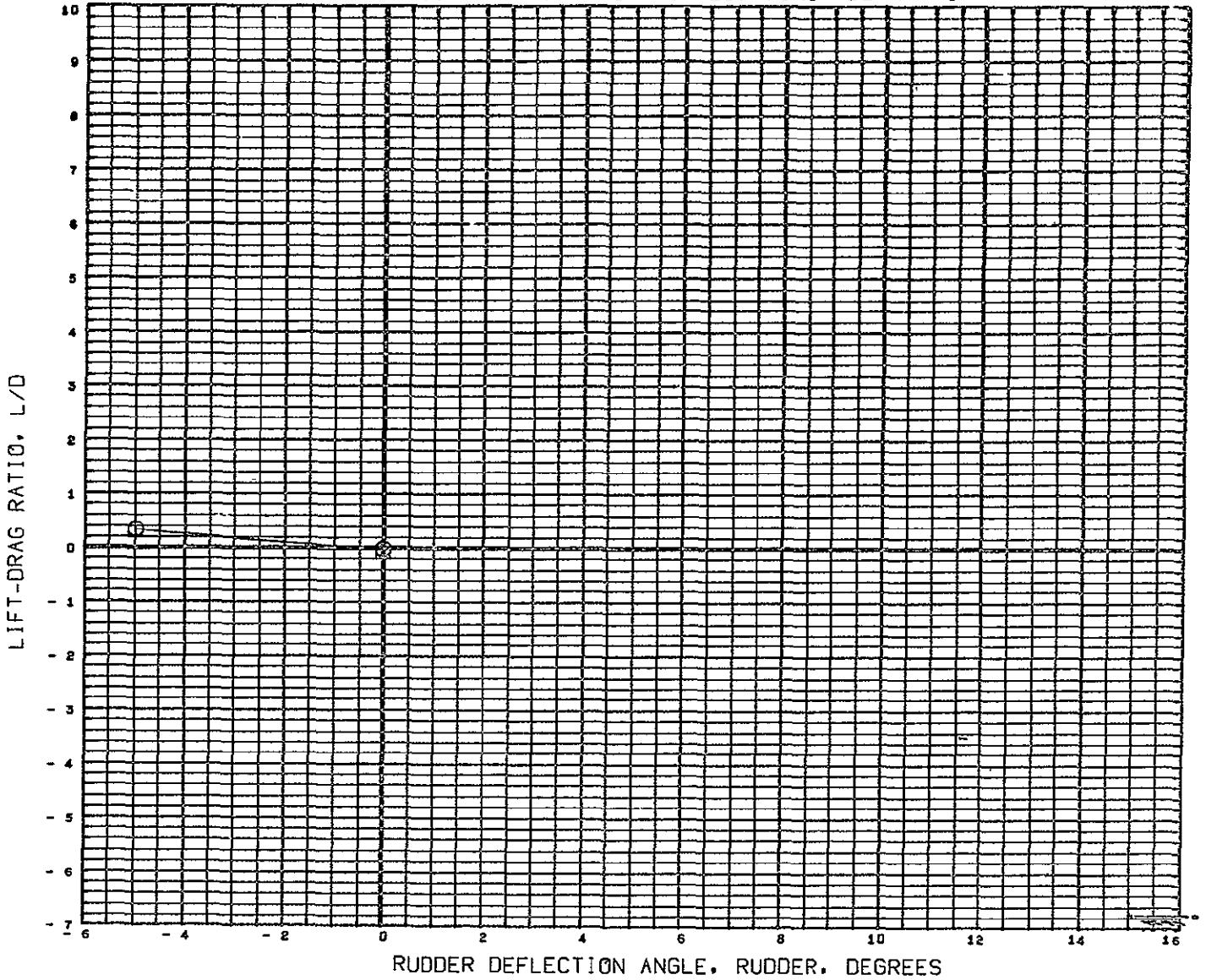
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 XHRP 2.5950 FEET
 YHRP 0.0000 FEET
 ZHRP 0.0187 FEET
 SCALE 0.0150 SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



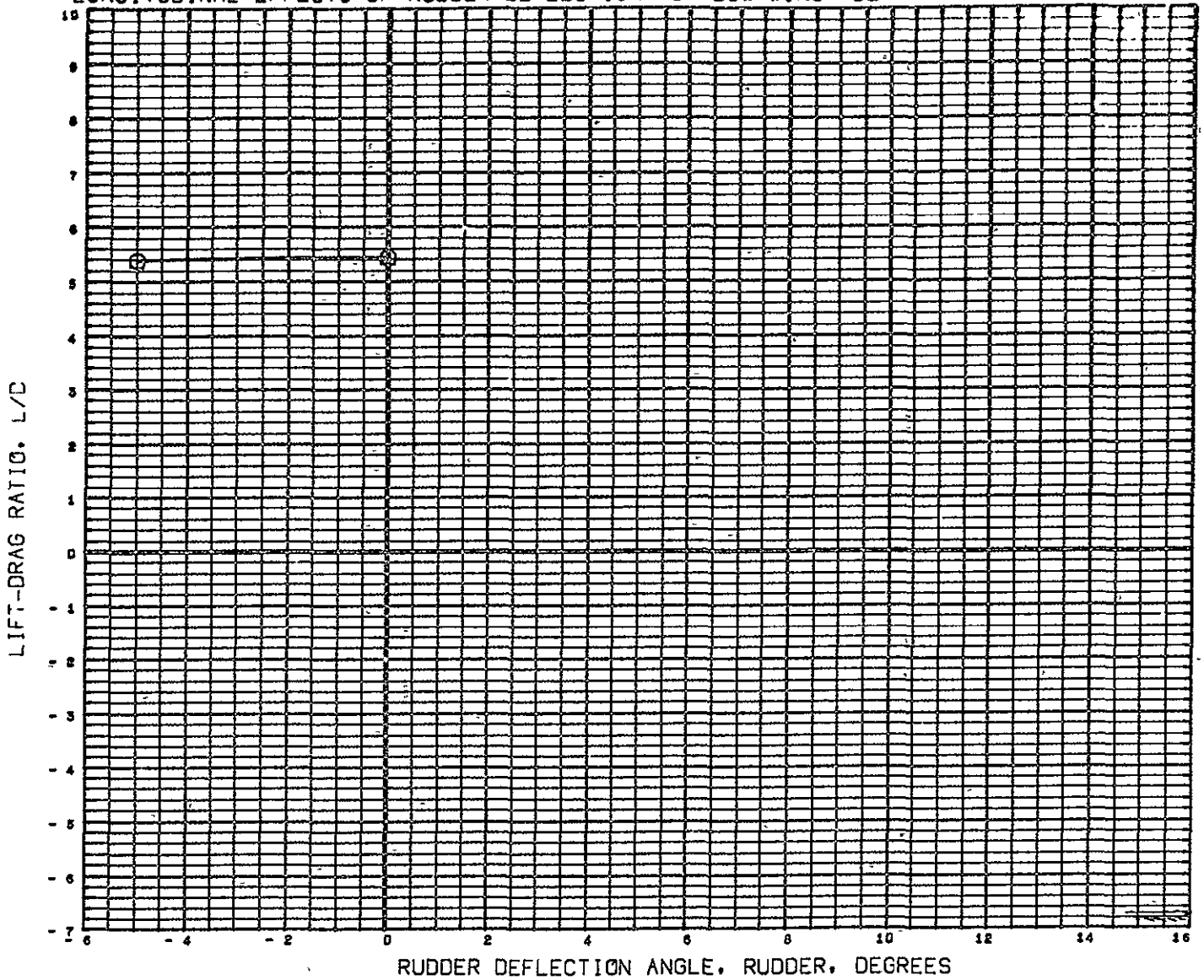
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	15.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



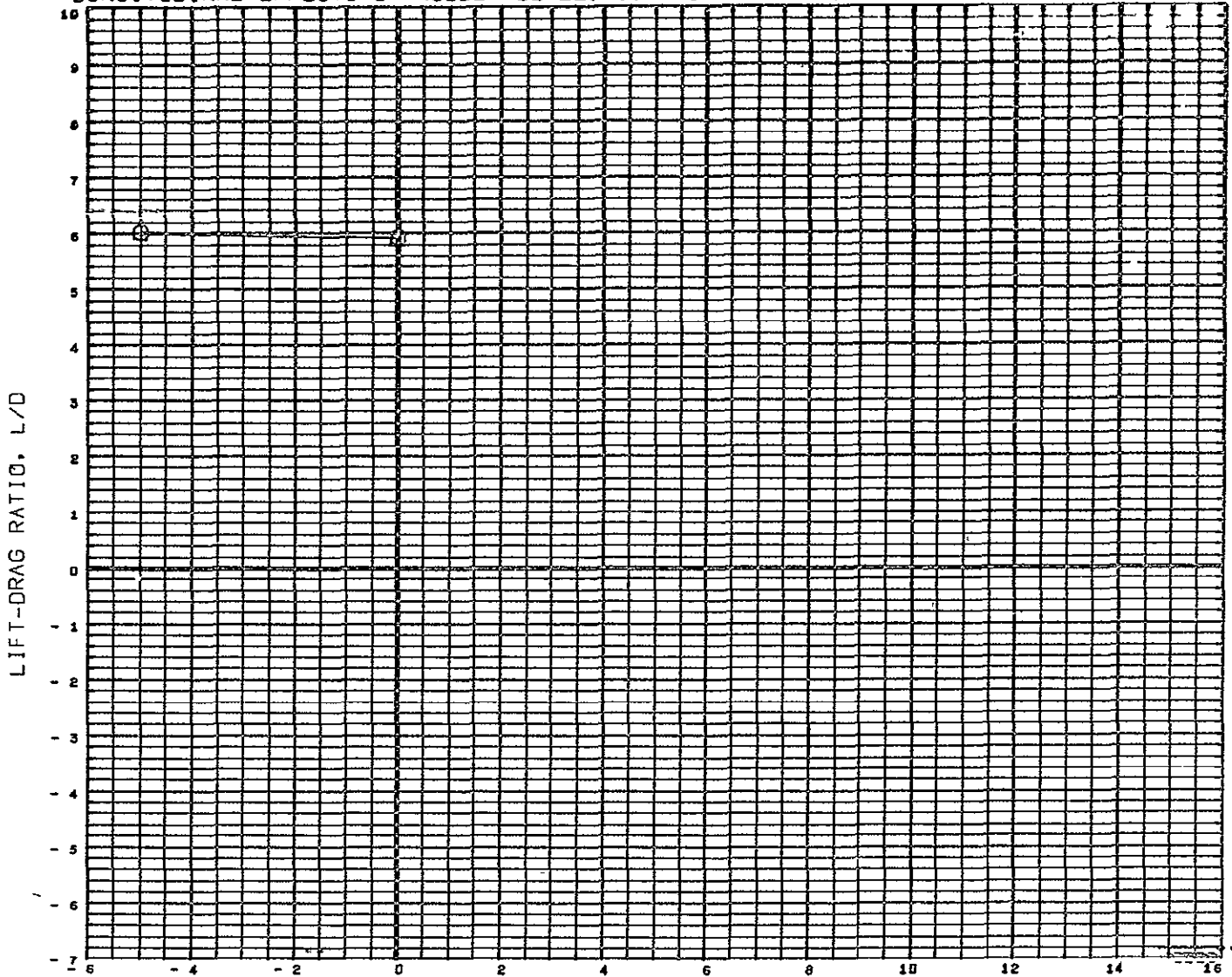
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	0.000	HACH	0.400	BETA	0.016	SREF	1.3550	SQ FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	5.000	MACH	0.400	BETA	0.016	* SREF	1.3850	SQ. FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHRL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XMRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

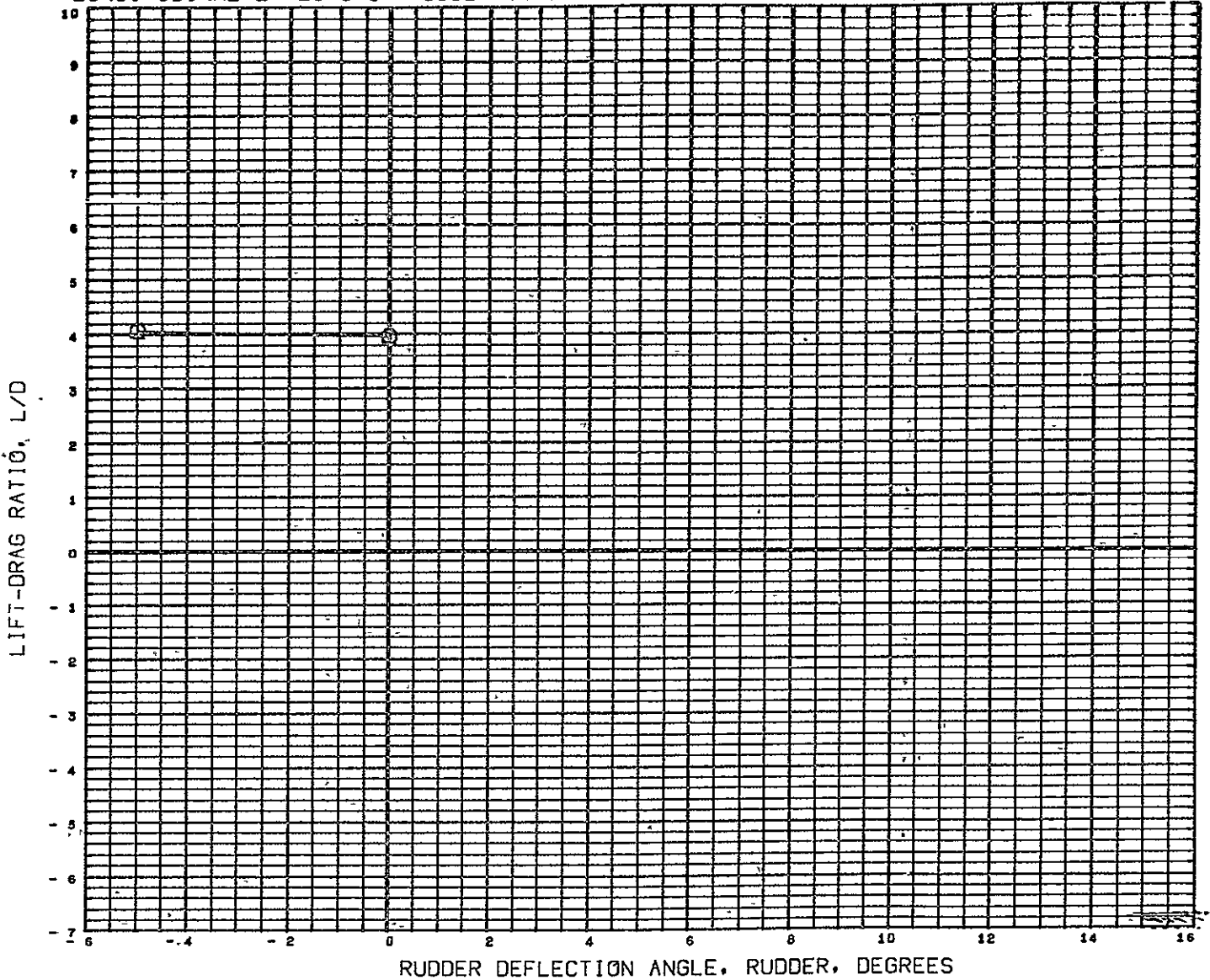
LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



RUDDER DEFLECTION ANGLE, RUDDER, DEGREES

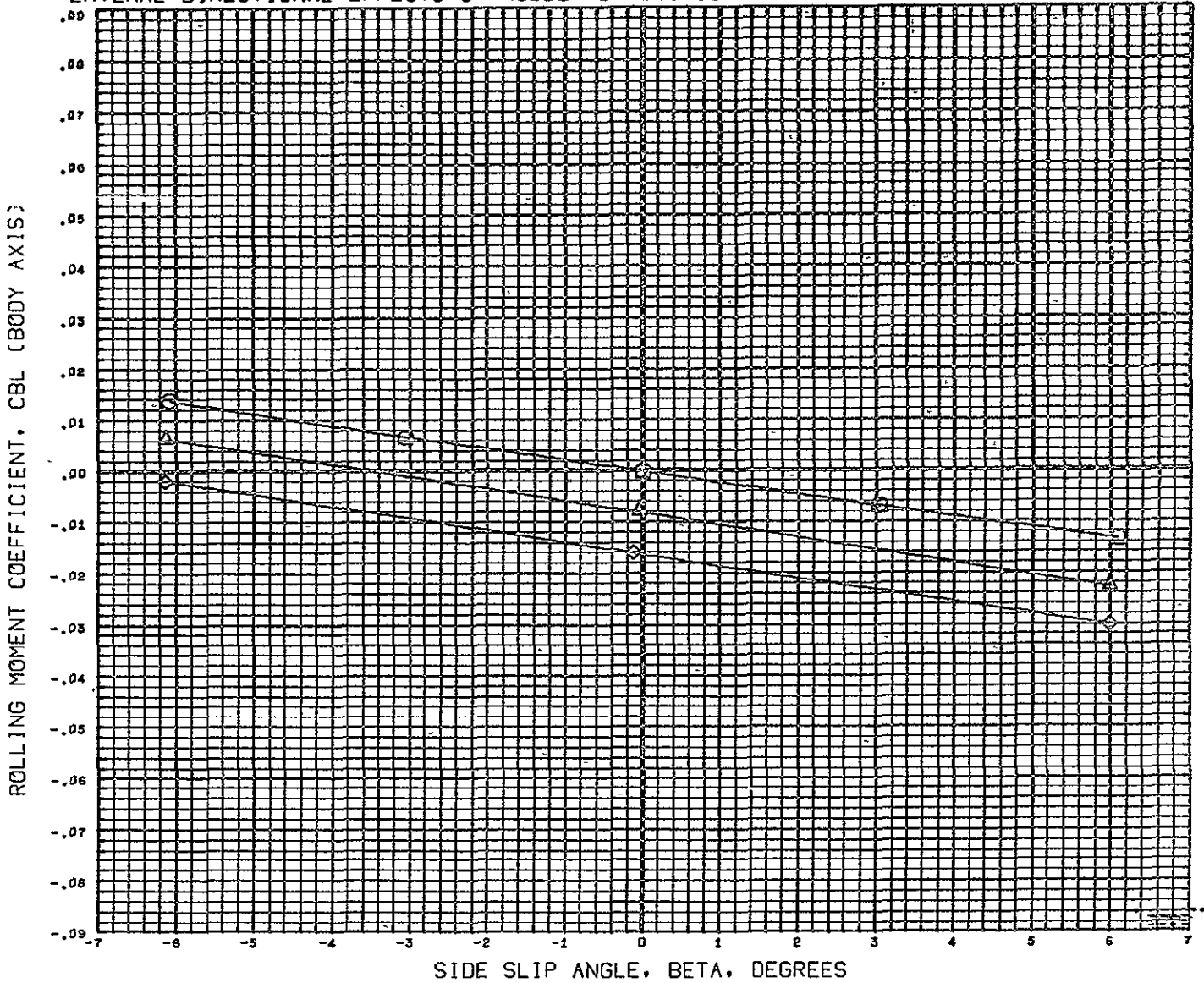
SYMBOL	ALPHA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	10.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEEET
		CANARD	0.000	ELEVTR	0.000	XHRP	2.5950	FEEET
		WNGPOS	2.000	CNDPOS	1.000	YHRP	0.0000	FEEET
		DATA HIST. CODE	MI			ZHRP	0.0187	FEEET
						SCALE	0.0150	SCALE

LONGITUDINAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING BETA = 0



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	ALPHA- 15.000	MACH	0.400	BETA	0.016	SREF	1.3550	SQ.FT.
		INCIDC	3.000	INCIDW	0.000	LREF	3.4530	FEET
		DIHDL	7.660	AILRON	0.000	BREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	XNRP	2.5950	FEET
		WNGPOS	2.000	CNDPOS	1.000	YNRP	0.0000	FEET
		DATA HIST. CODE	HI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



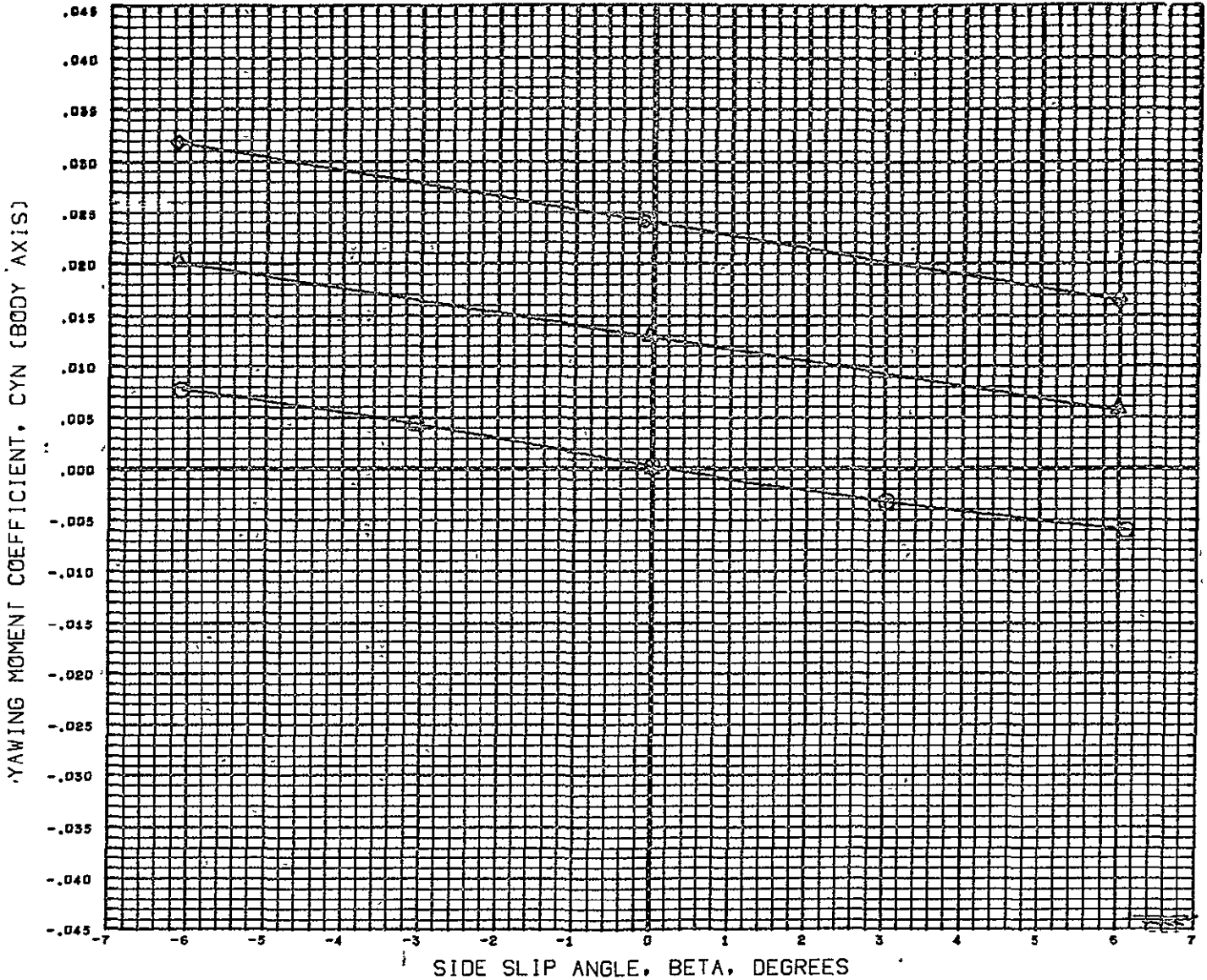
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2018)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4086)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4089)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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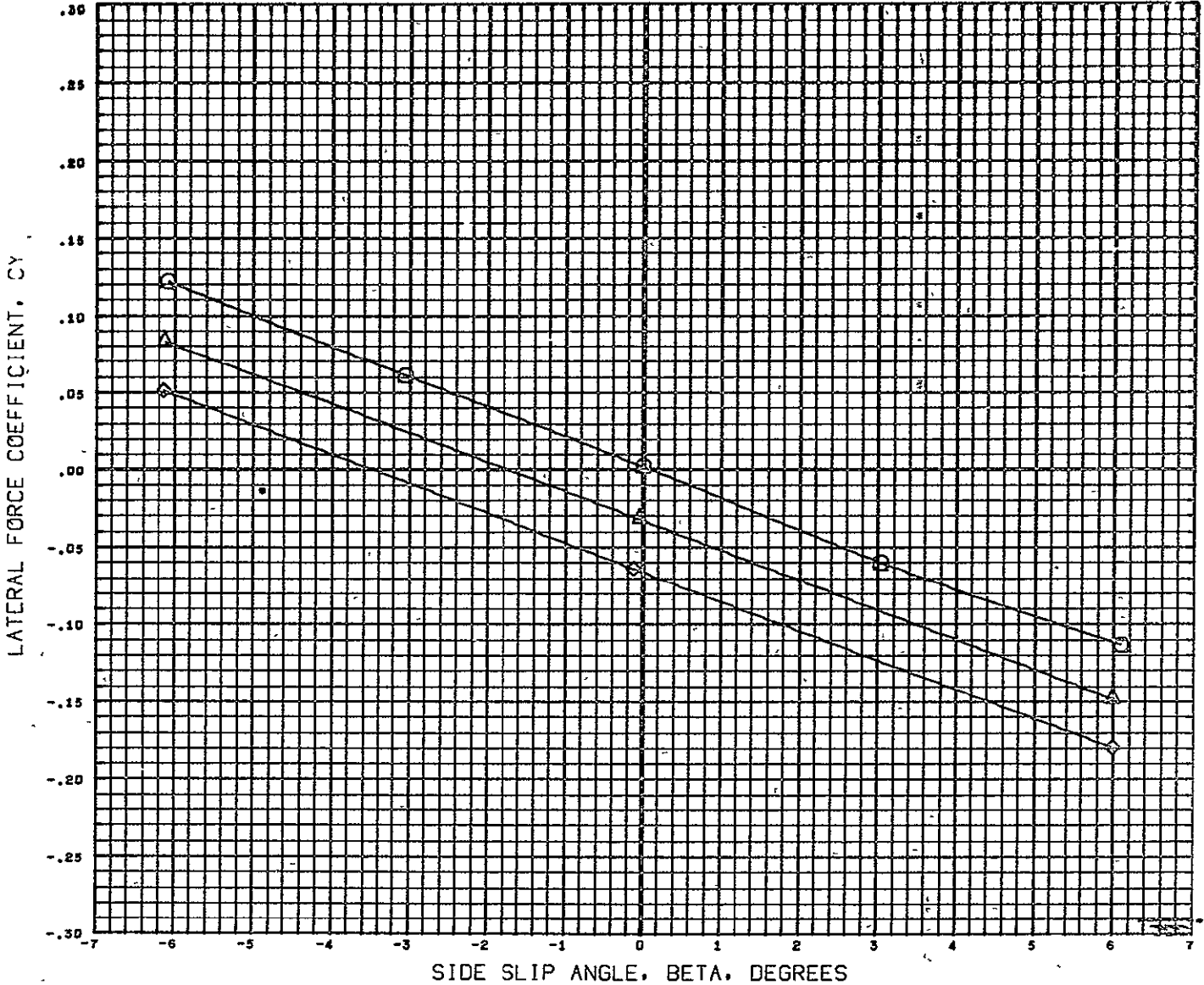
C.11

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2018)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4086)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4089)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

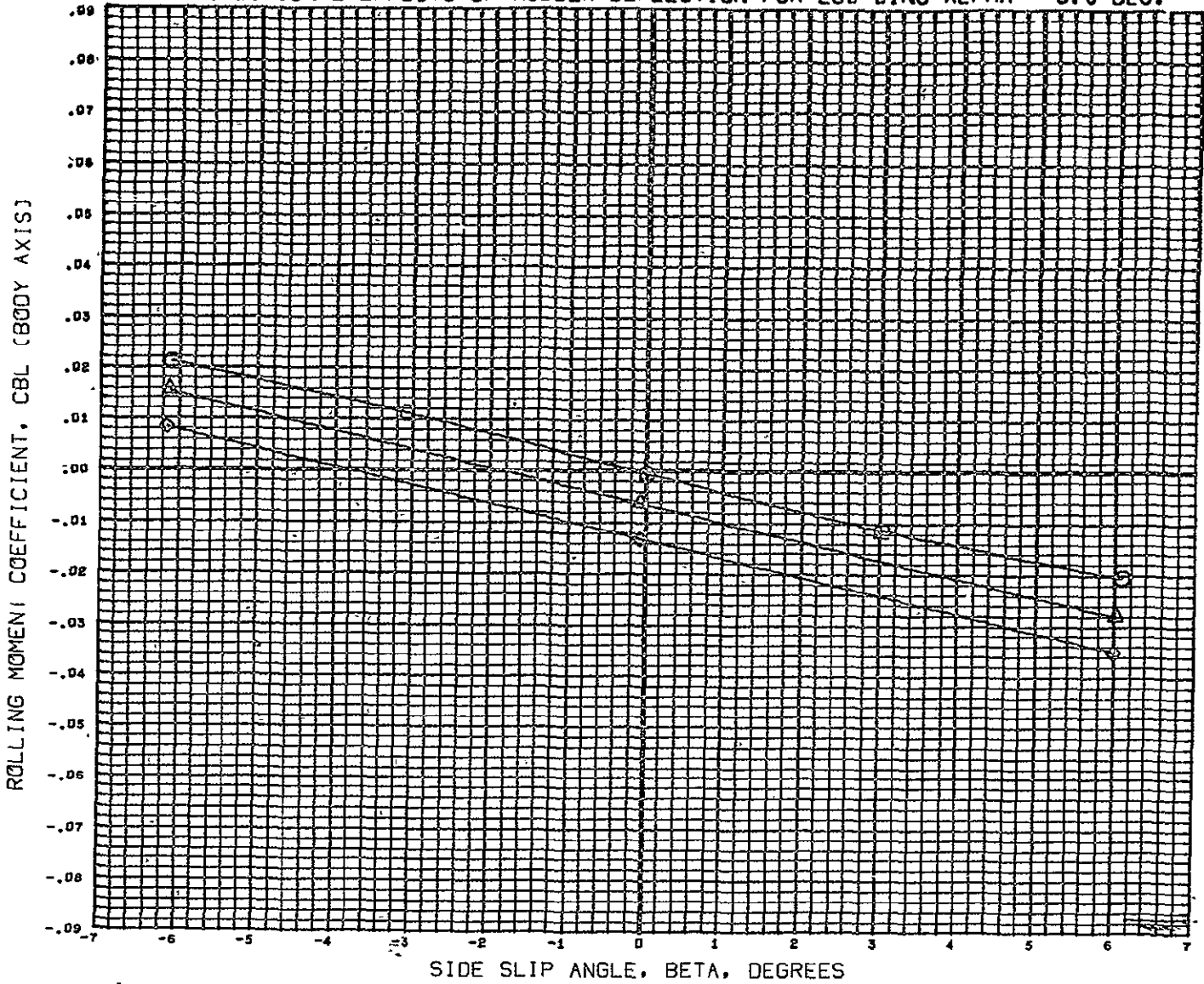
LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 0.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIH/DRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2018) \odot	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4086) \triangle	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4089) \diamond	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.

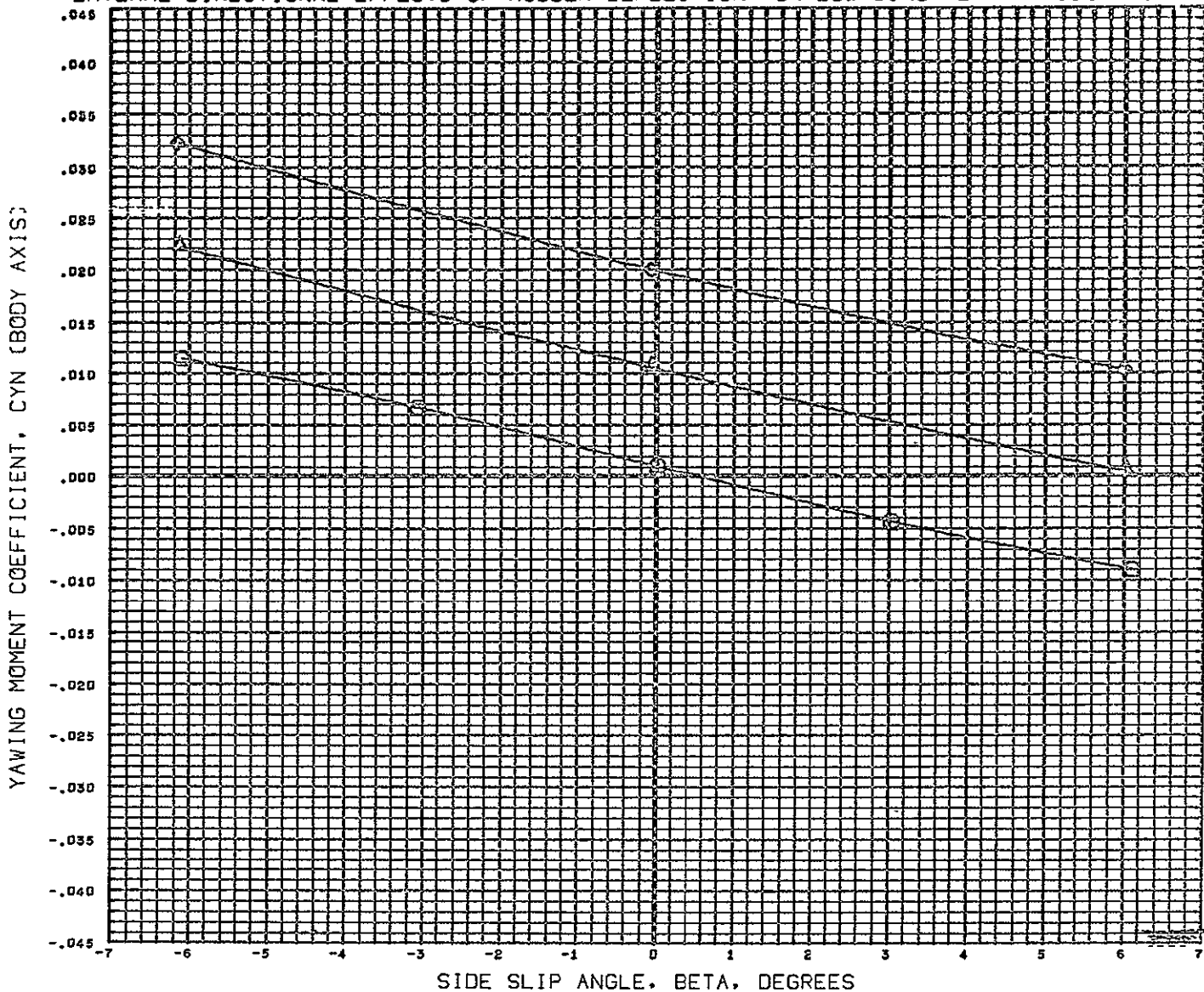


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2019)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4087)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4090)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

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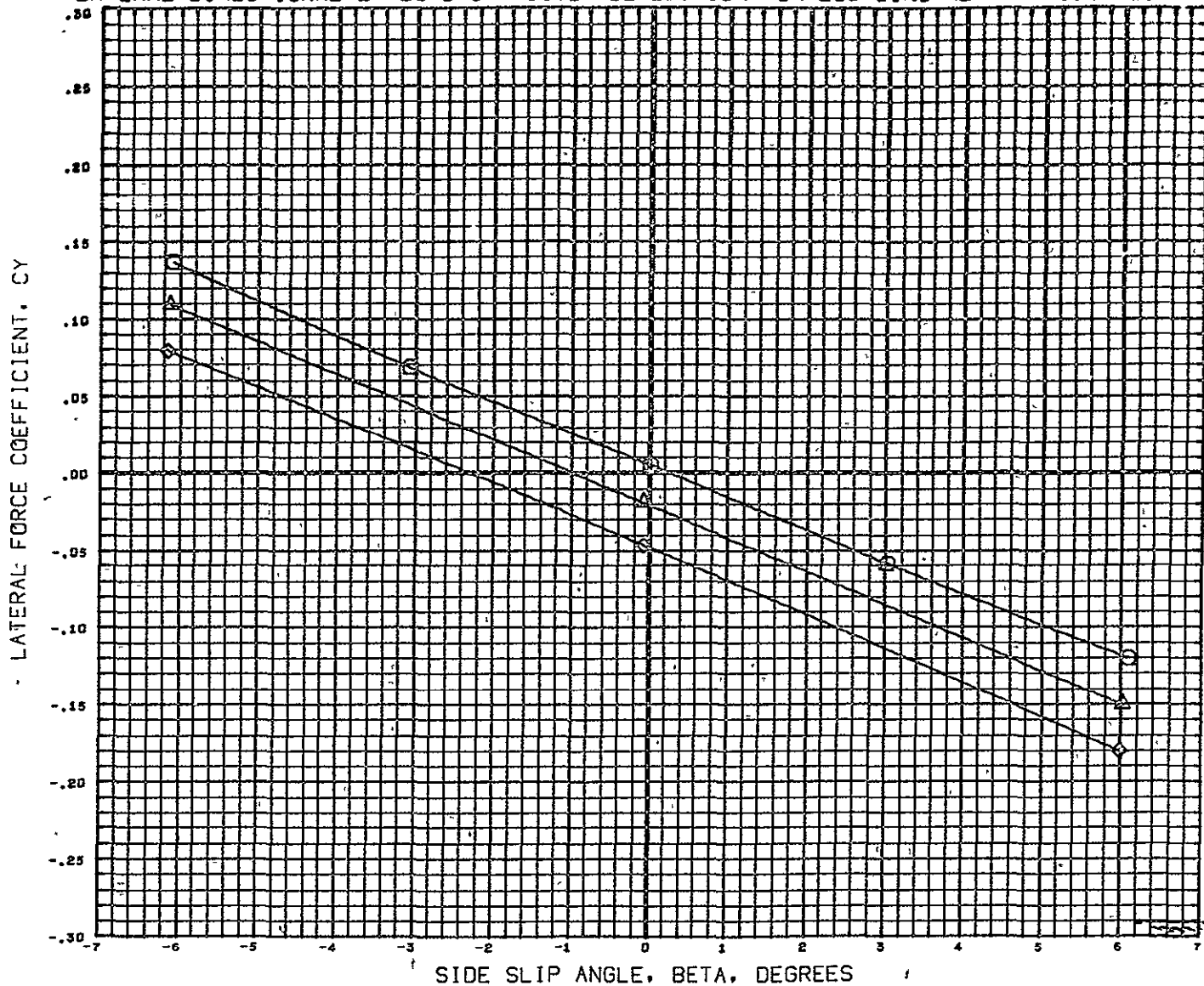
LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDFOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2019)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN3090)	NSRDC-3510,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

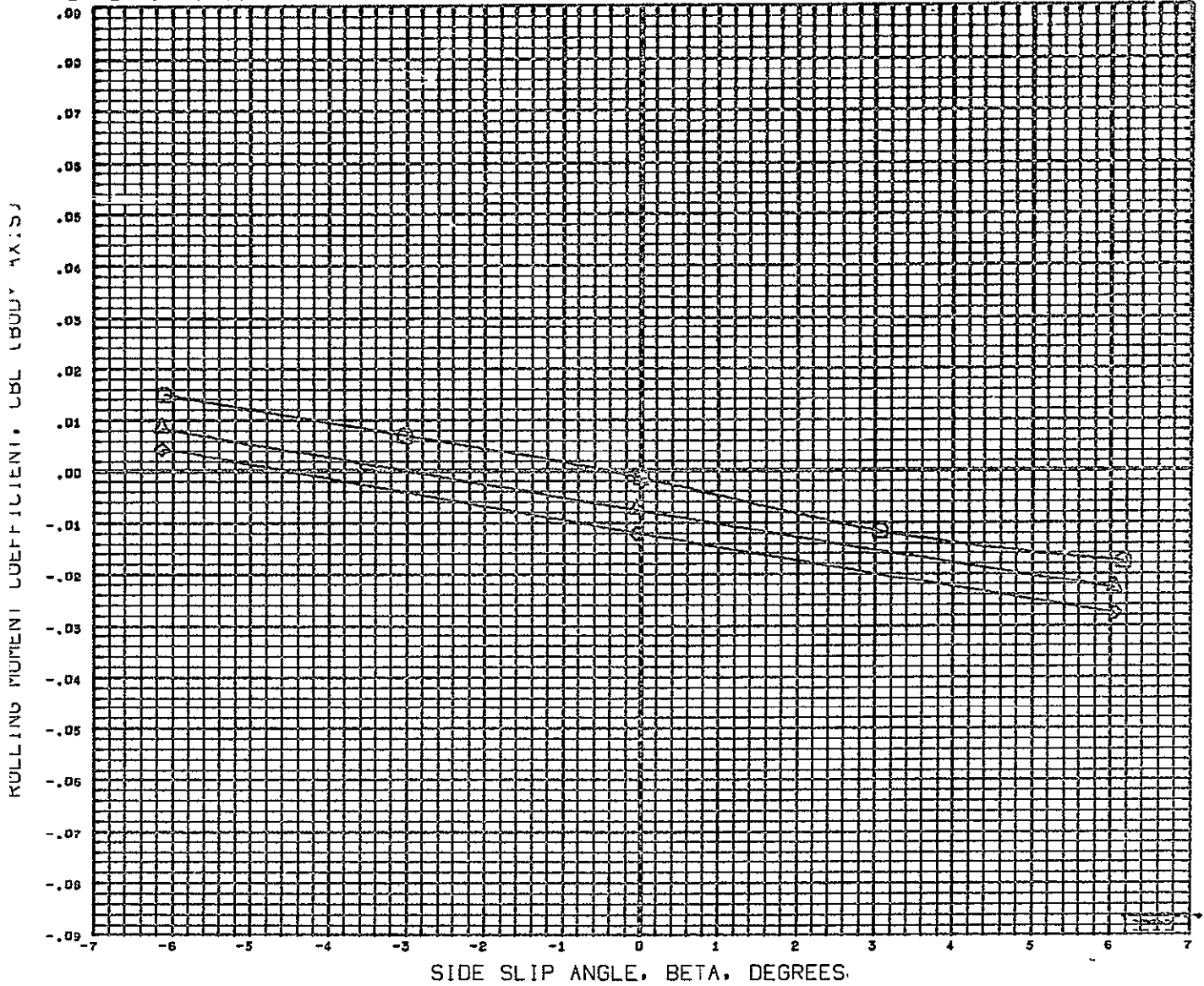
MACH .38

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 6.0 DEG.



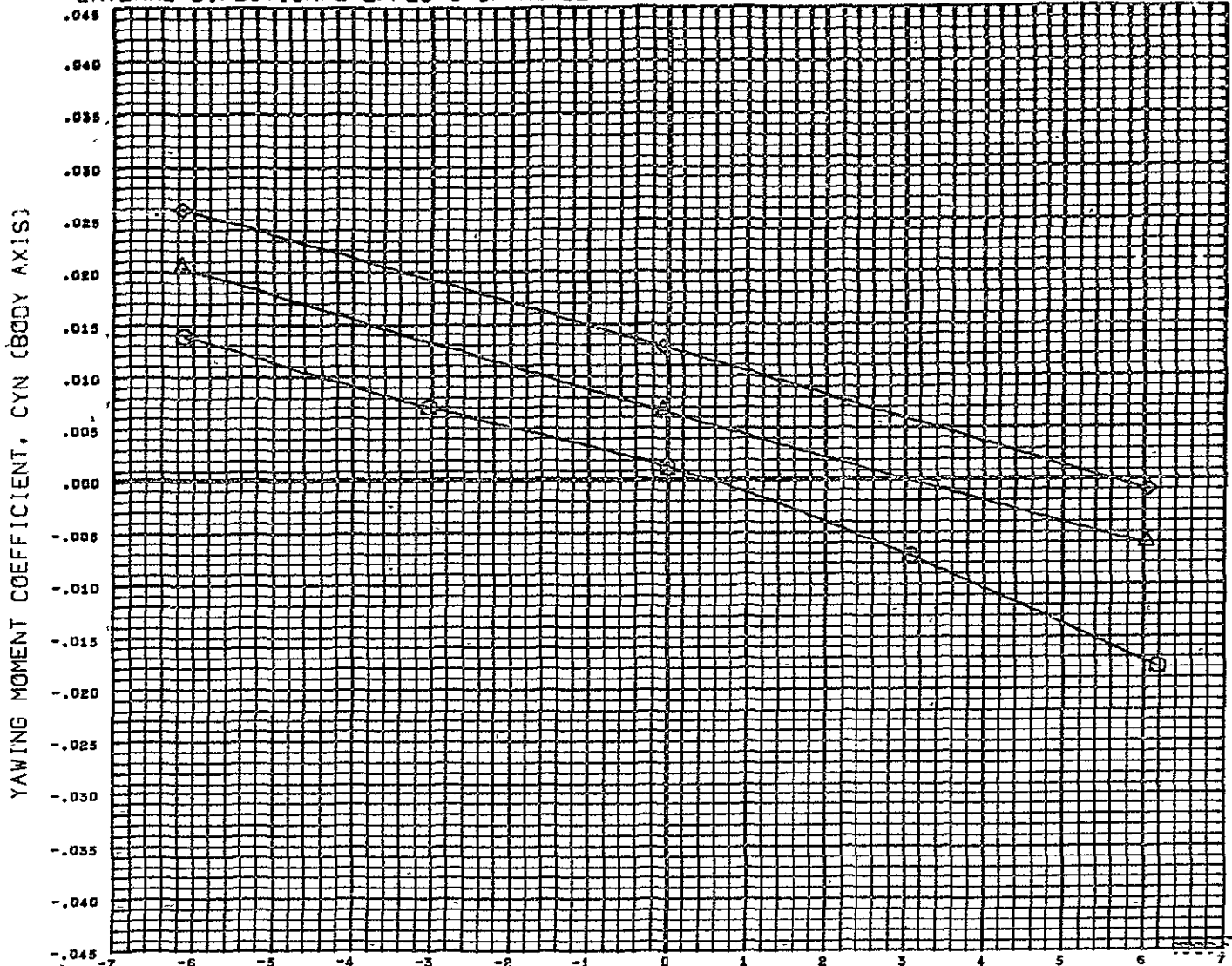
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2019)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4087)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4090)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 15.0 DEG.



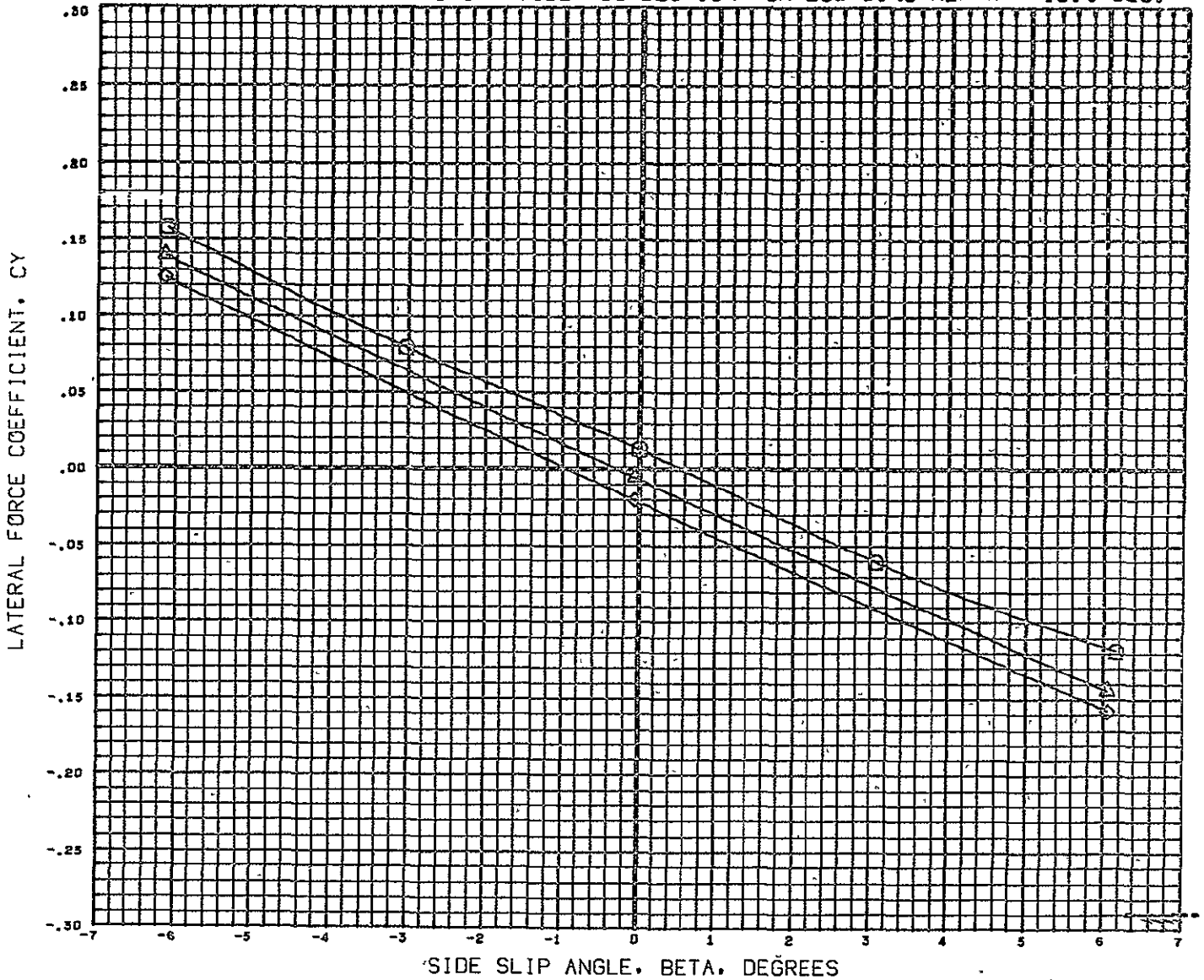
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2020)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4088)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4091)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 15.0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D/DHRL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2020)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4088)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4091)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

LATERAL DIRECTIONAL EFFECTS OF RUDDER DEFLECTION FOR LOW WING ALPHA = 15.0 DEG.

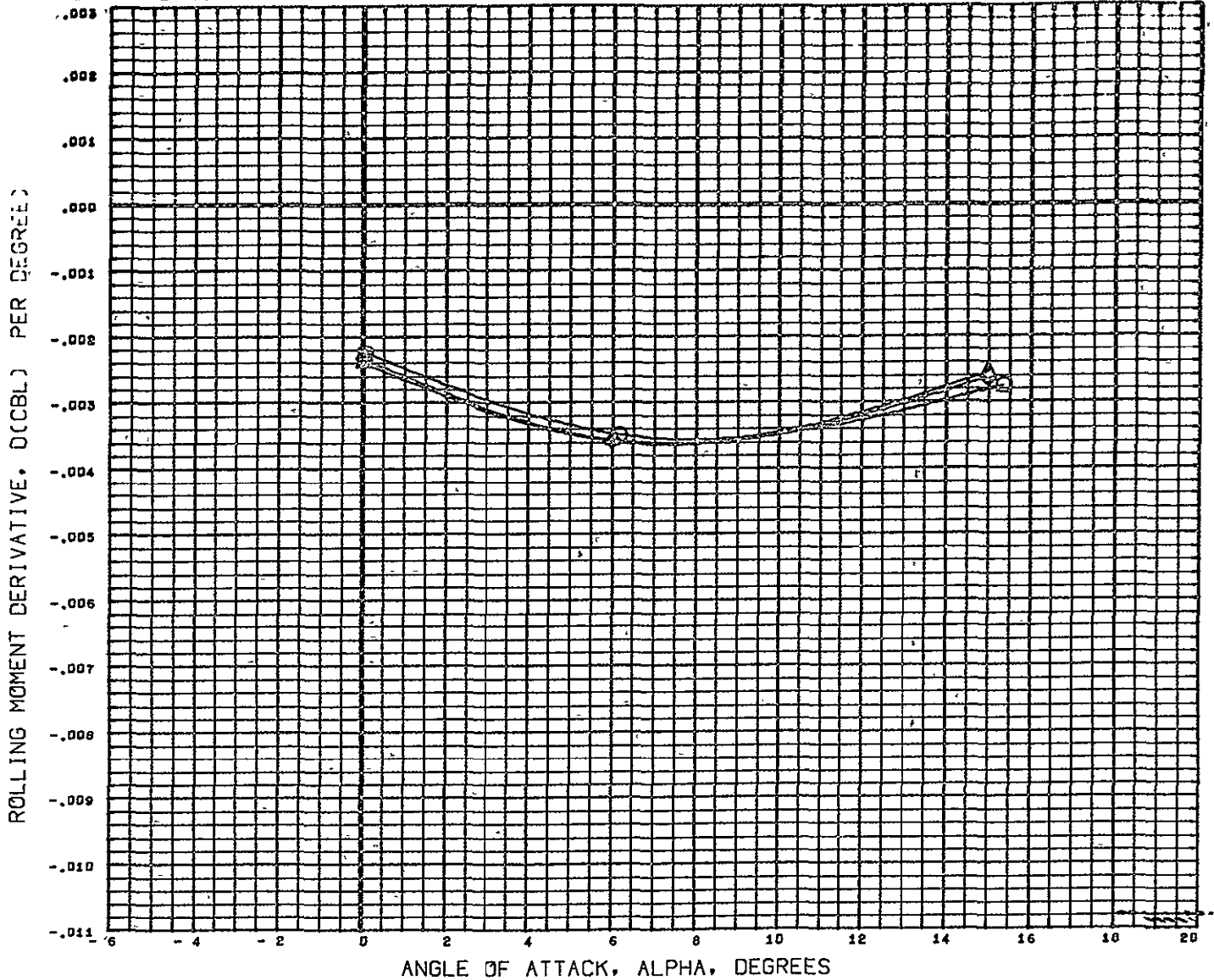


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	RUDDER	REFERENCE INFORMATION
(HN2020)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4088)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-5.000	LREF 3.4530 FEET
(RN4091)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	-10.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

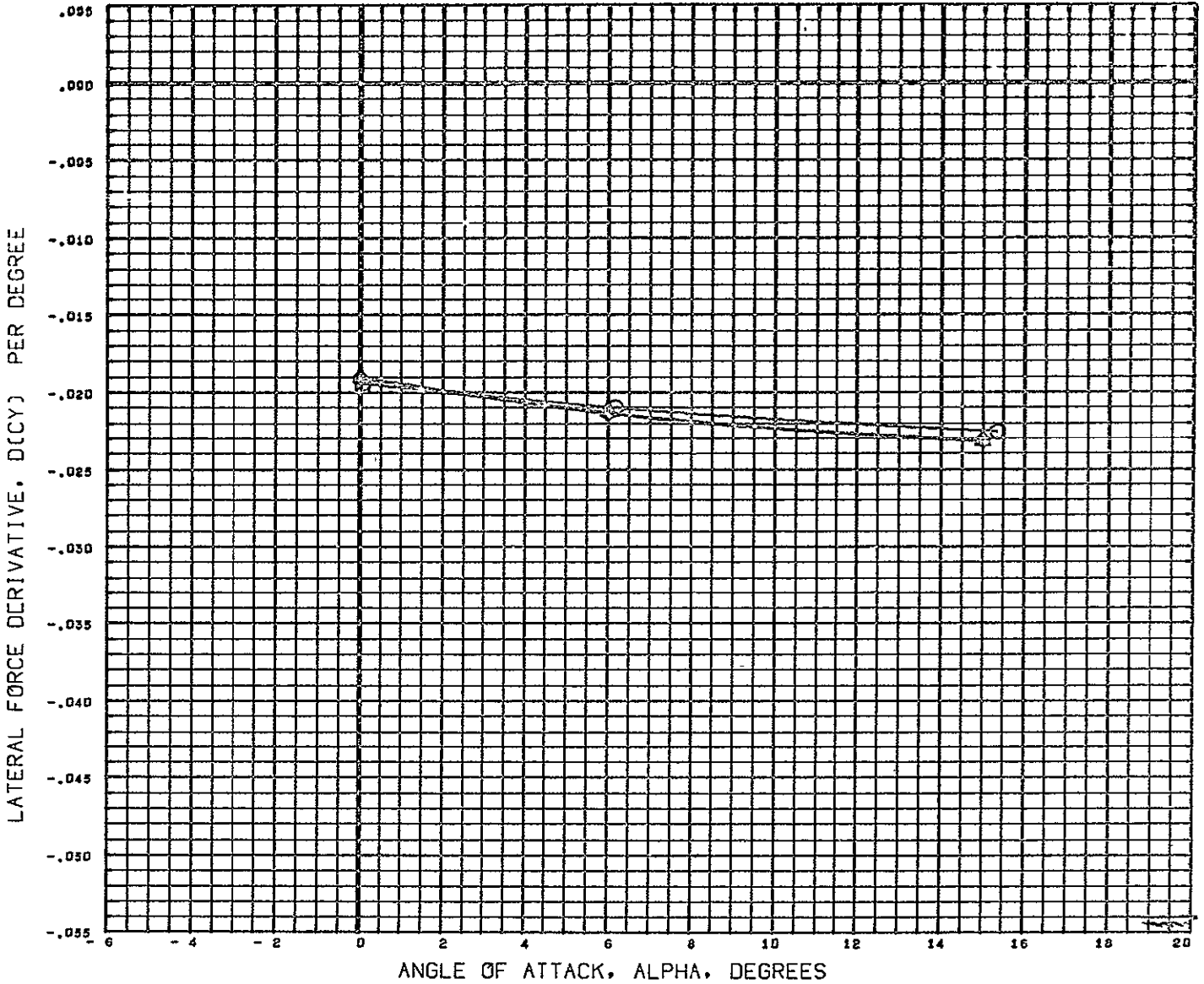
PAGE 545

LATERAL DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR LOW WING



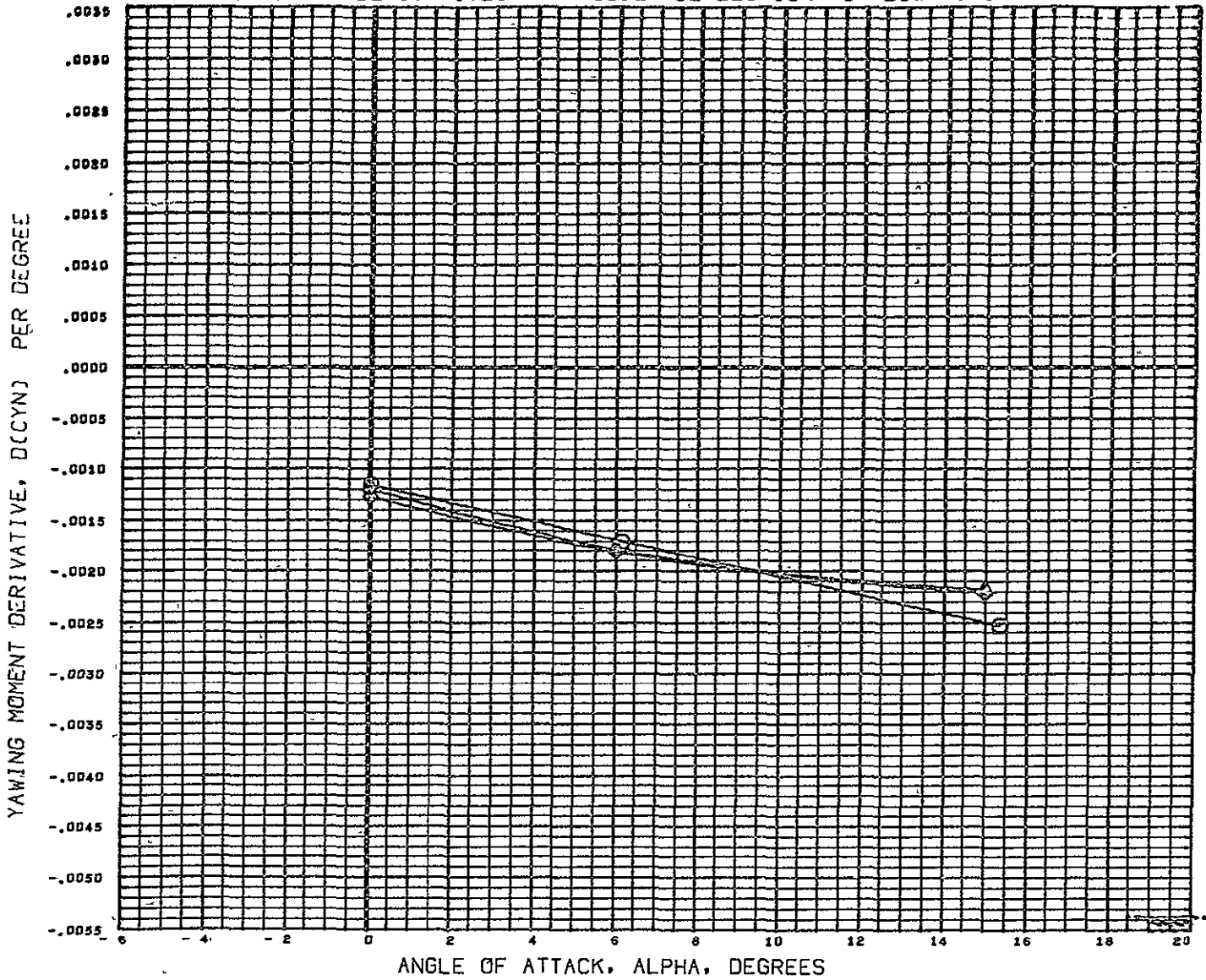
SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.
◇	- 5.000	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◇	- 10.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR LOW WING



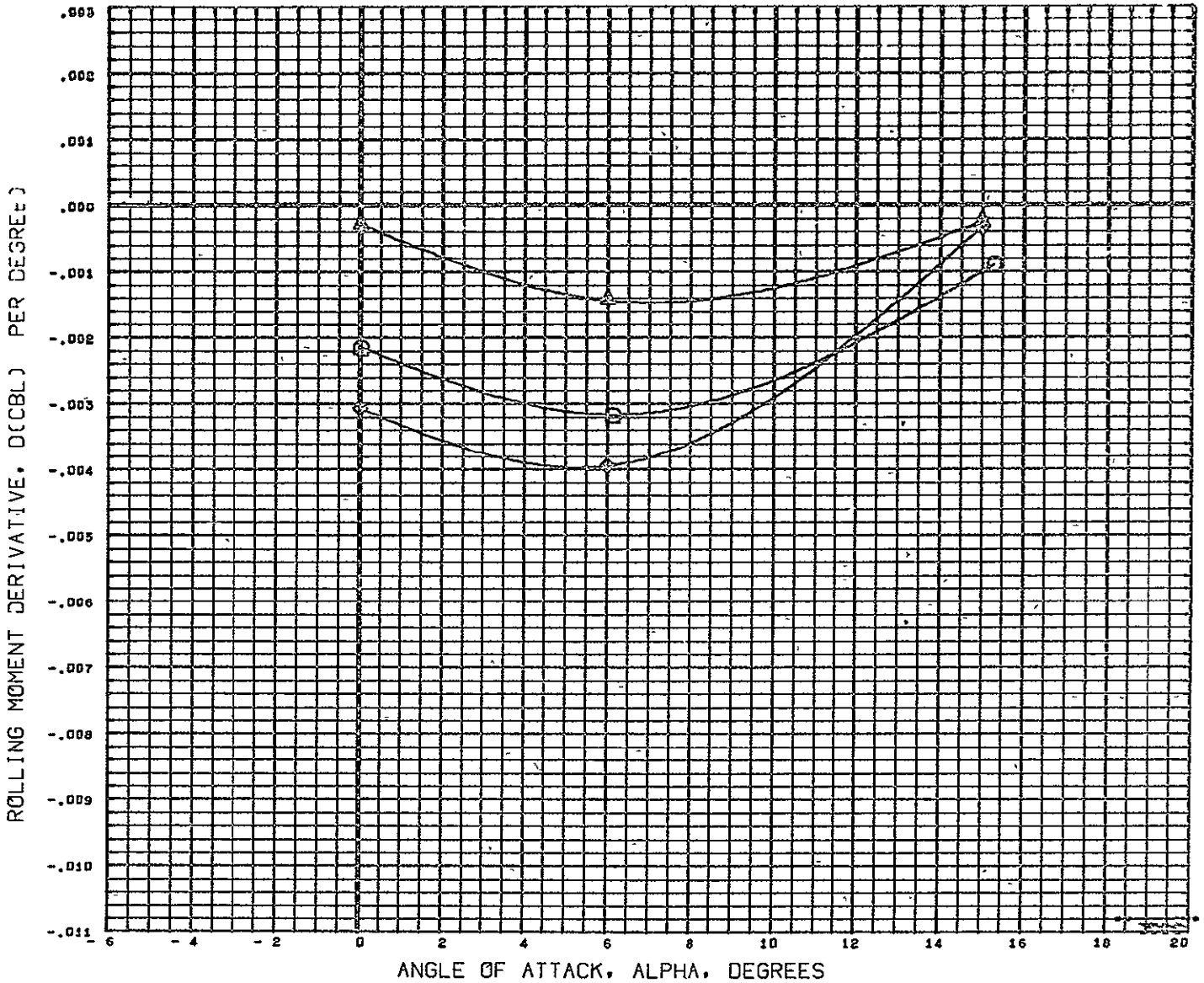
SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	- 5.000	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◇	- 10.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

LATERAL DIRECTIONAL DERIVATIVES FOR RUDDER DEFLECTION FOR LOW WING



SYMBOL	RUDDER	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	0.000	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.
□	- 5.000	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
○	- 10.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	MI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

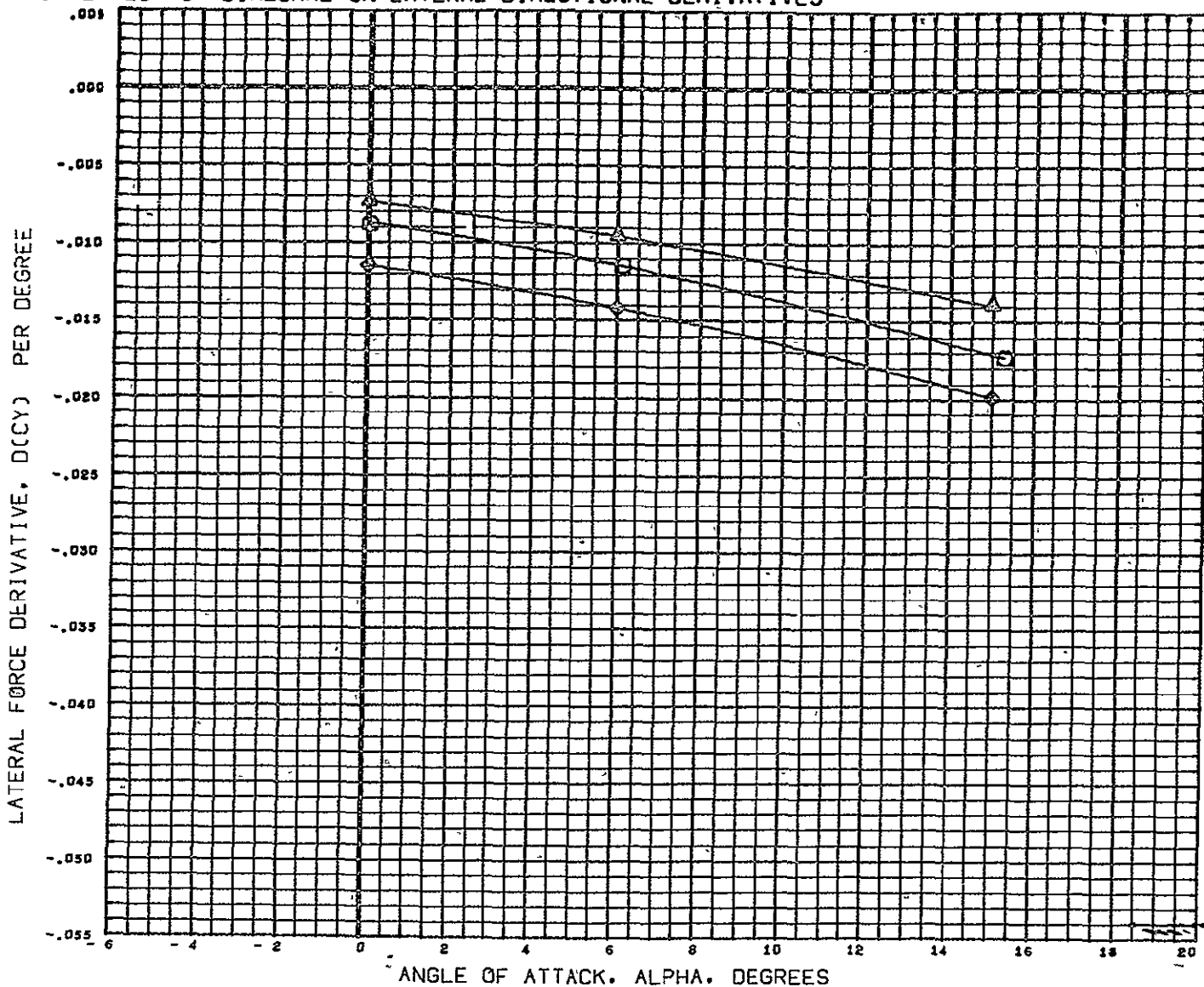
EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHDL	PARAMETRIC VALUES				REFERENCE INFORMATION		
		MACH	INCIDC	AILRON	ELEVTR	SREF	LREF	BREF
△	7.660	0.400	3.000	0.000	0.000	1.3550	3.4530	3.4530
○	7.660	0.000	0.000	0.000	0.000	2.5950	2.5950	2.5950
◇	15.000	0.000	0.000	0.000	0.000	0.0187	0.0187	0.0187
		WNGPOS	1.000	CNDPOS	1.000	SCALE	0.0150	SCALE

DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES

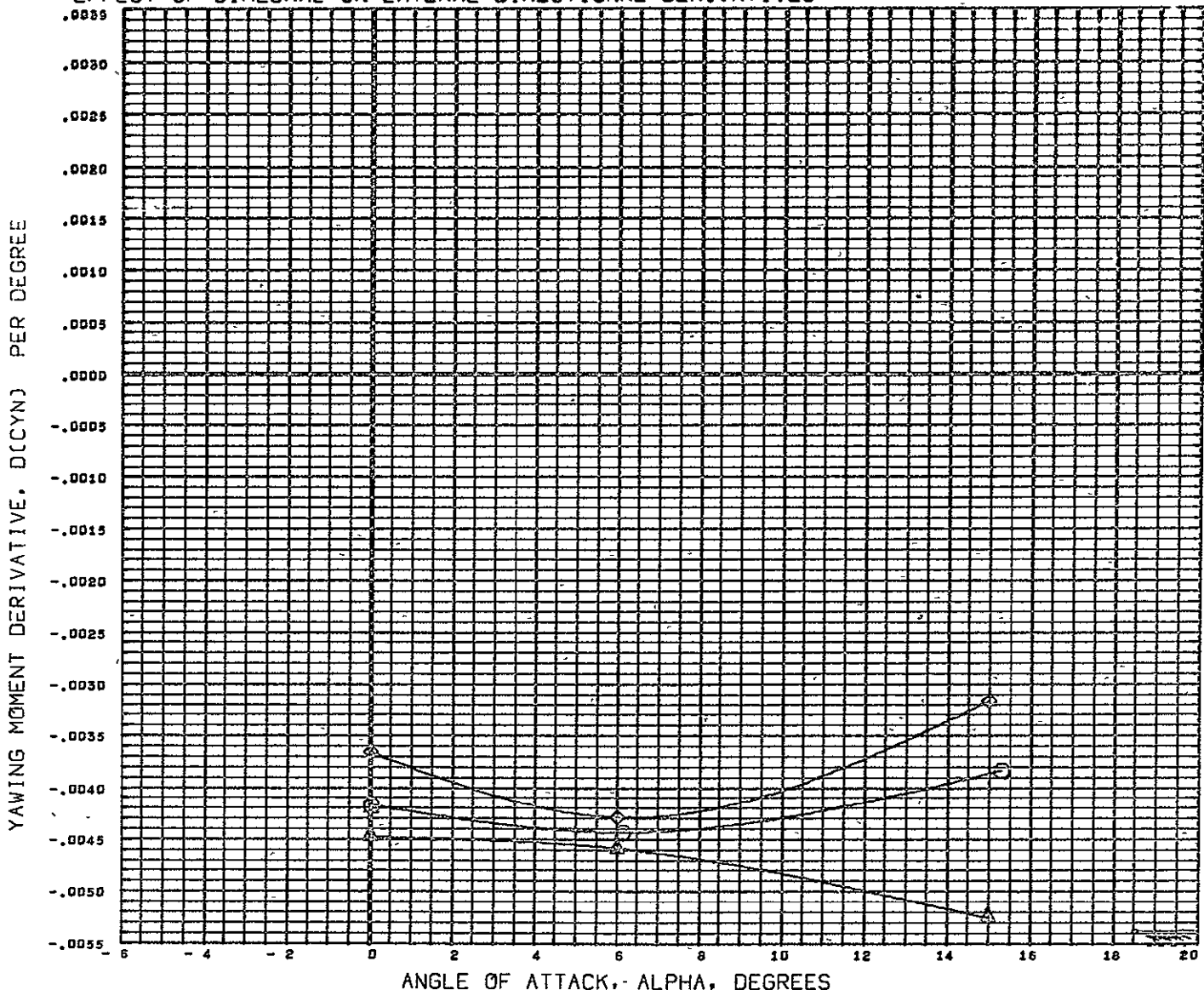


SYMBOL	DIHEDRAL	PARAMETRIC VALUES			
◇	7.660	MACH	0.400	INCIDC	3.000
-	7.660	INCIDW	0.000	AILRON	0.000
◇	15.000	CANARD	0.000	ELEVTR	0.000
		WINGPOS	1.000	CNDPOS	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XHRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0187	FEET
SCALE	0.0150	SCALE

DATA HIST. CODE NI

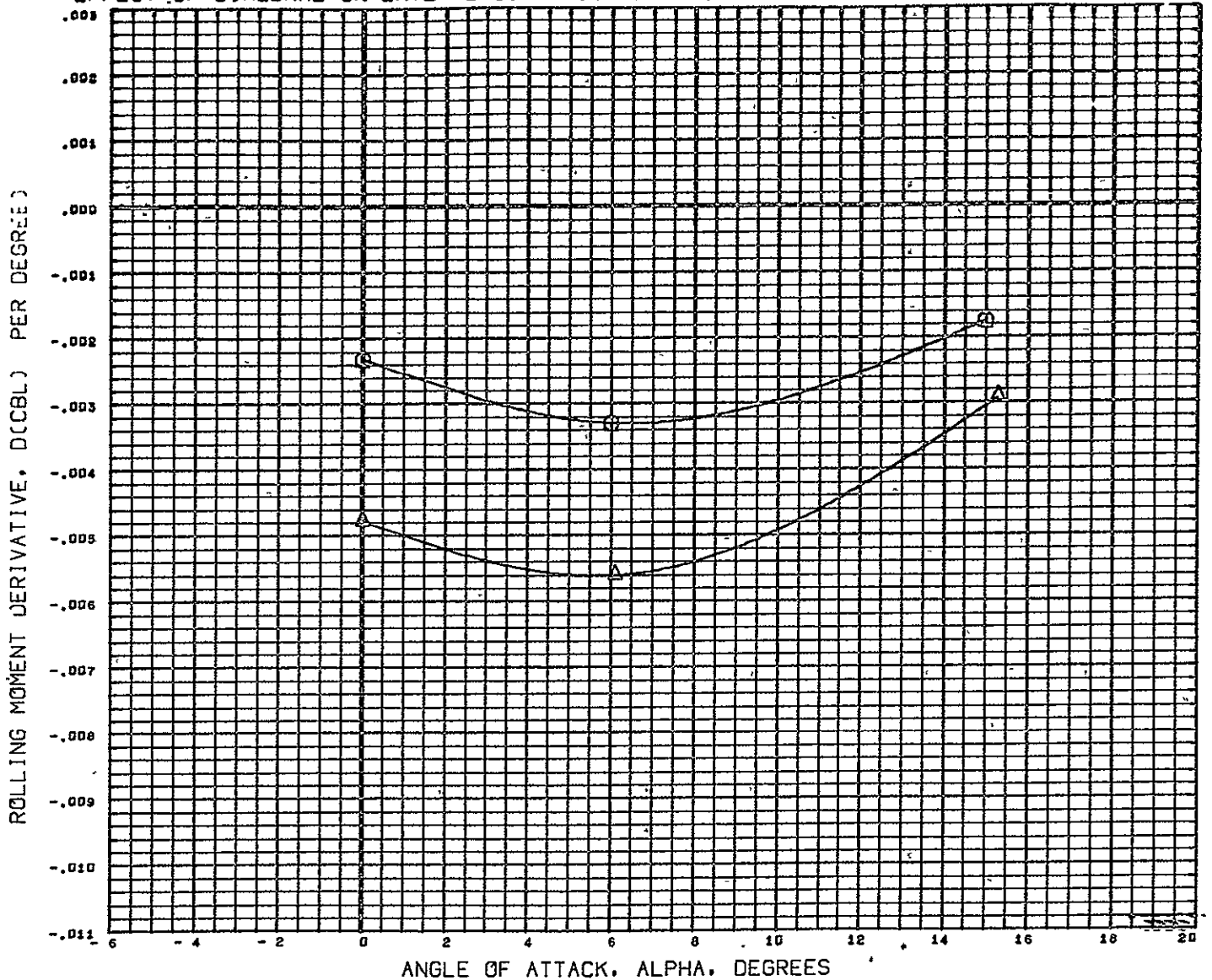
EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ FT.
△	7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
◇	15.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		WNGPOS	1.000	CNDPOS	1.000	XHRP	2.5950	FEET
						YHRP	0.0000	FEET
						ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

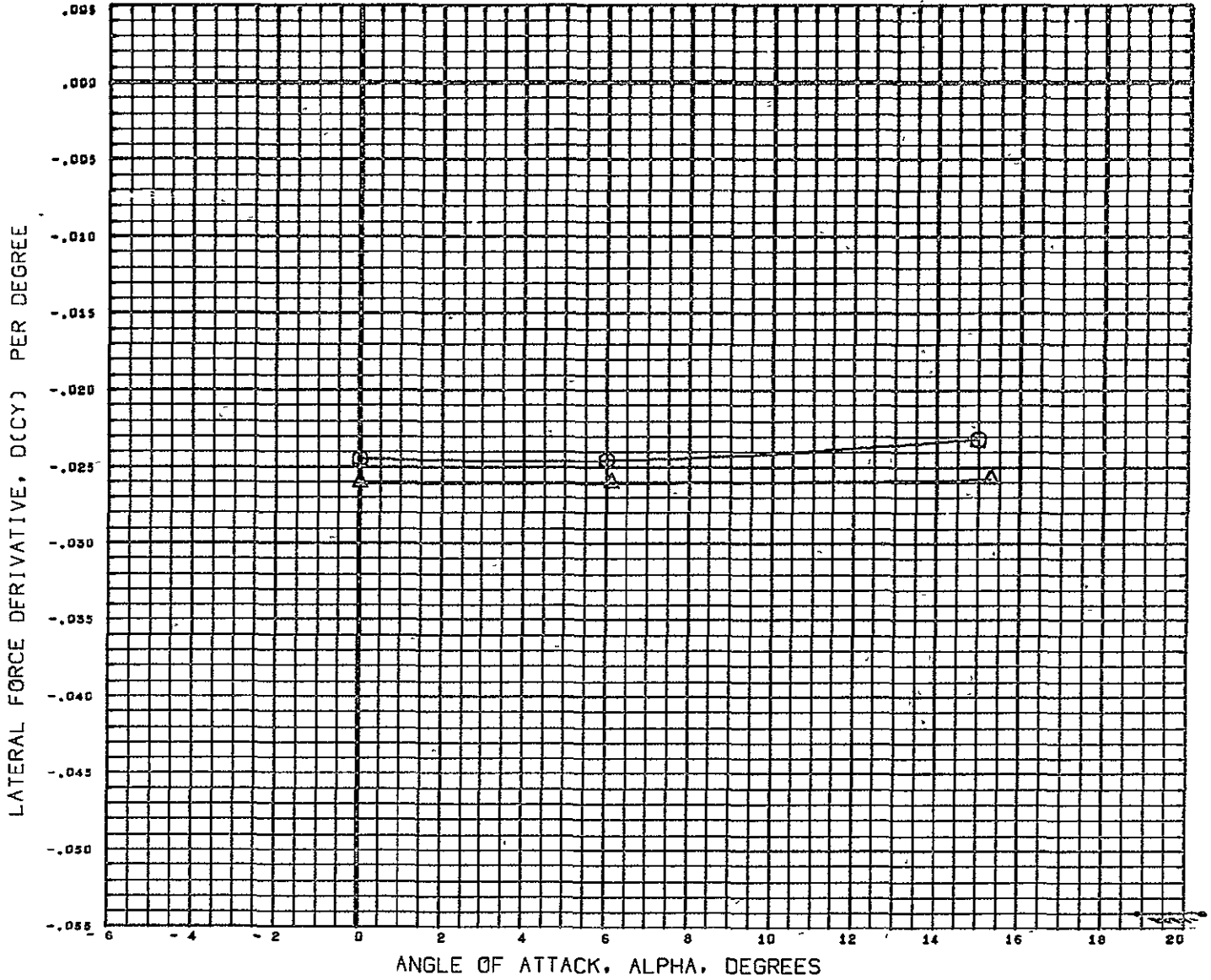
DATA HIST. CODE HI

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHDRL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	○	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550
△	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



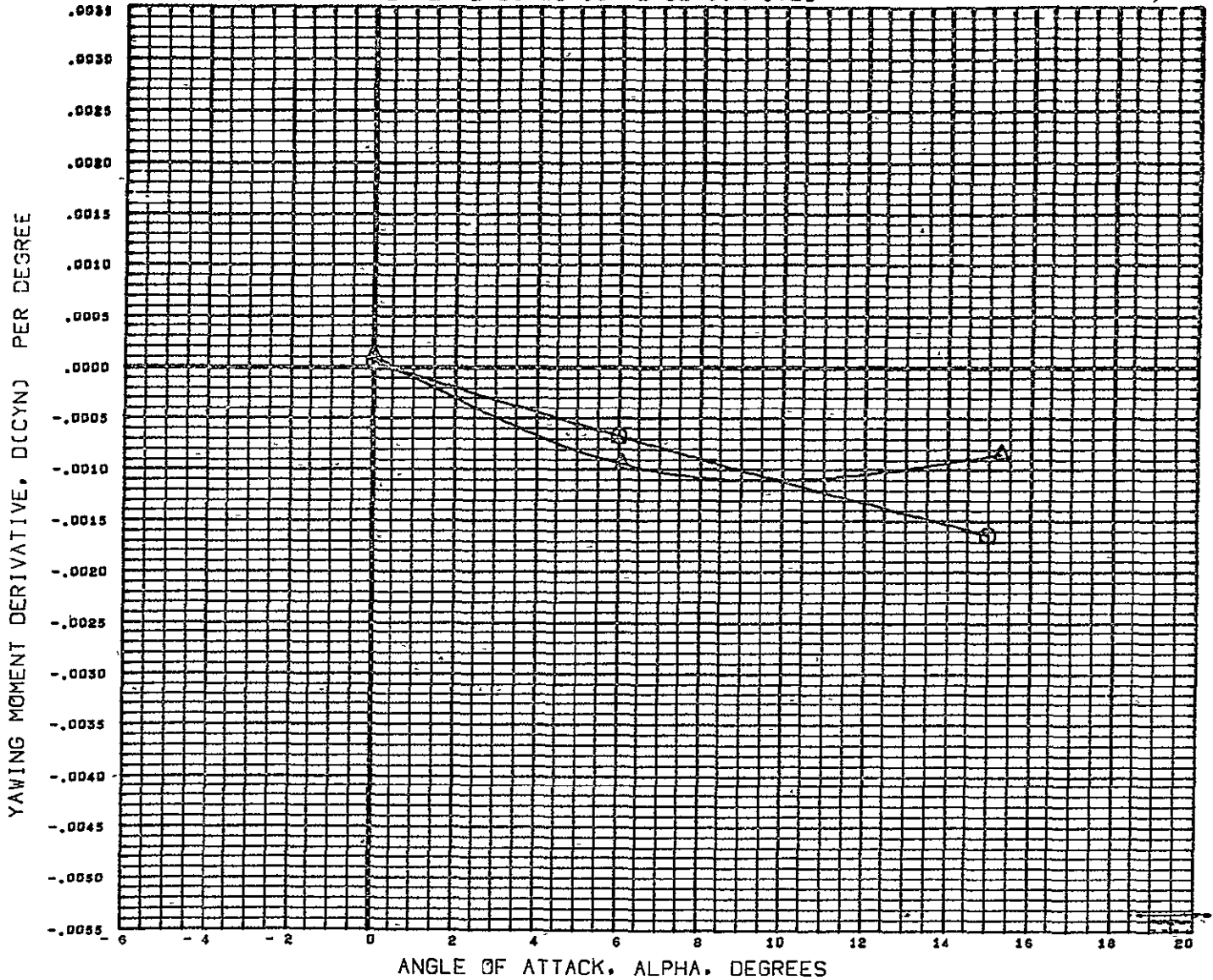
SYMBOL DIHEDRAL
 Δ 7.660
 15.000

PARAMETRIC VALUES
 MACH 0.400 INCIDC 3.000
 INCIDW 0.000 AILRON 0.000
 CANARD 0.000 ELEVTR 0.000
 RUDDER 0.000 WNGPOS 1.000
 CNBPOS 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 3.4330 FEET
 BREF 3.4330 FEET
 XHRP 2.5950 FEET
 YHRP 0.0000 FEET
 ZHRP 0.0187 FEET
 SCALE 0.0150 SCALE

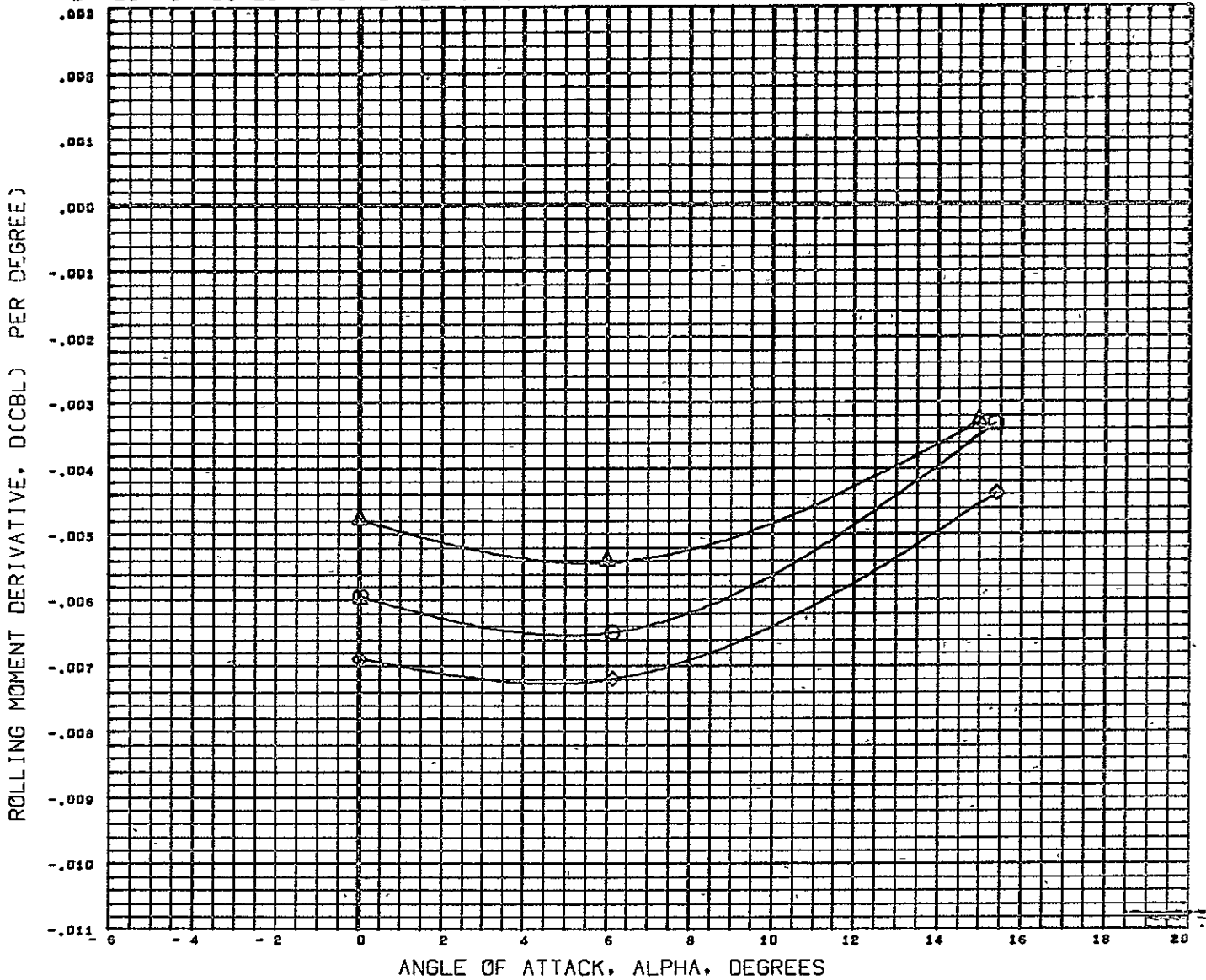
DATA HIST. CODE MI

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



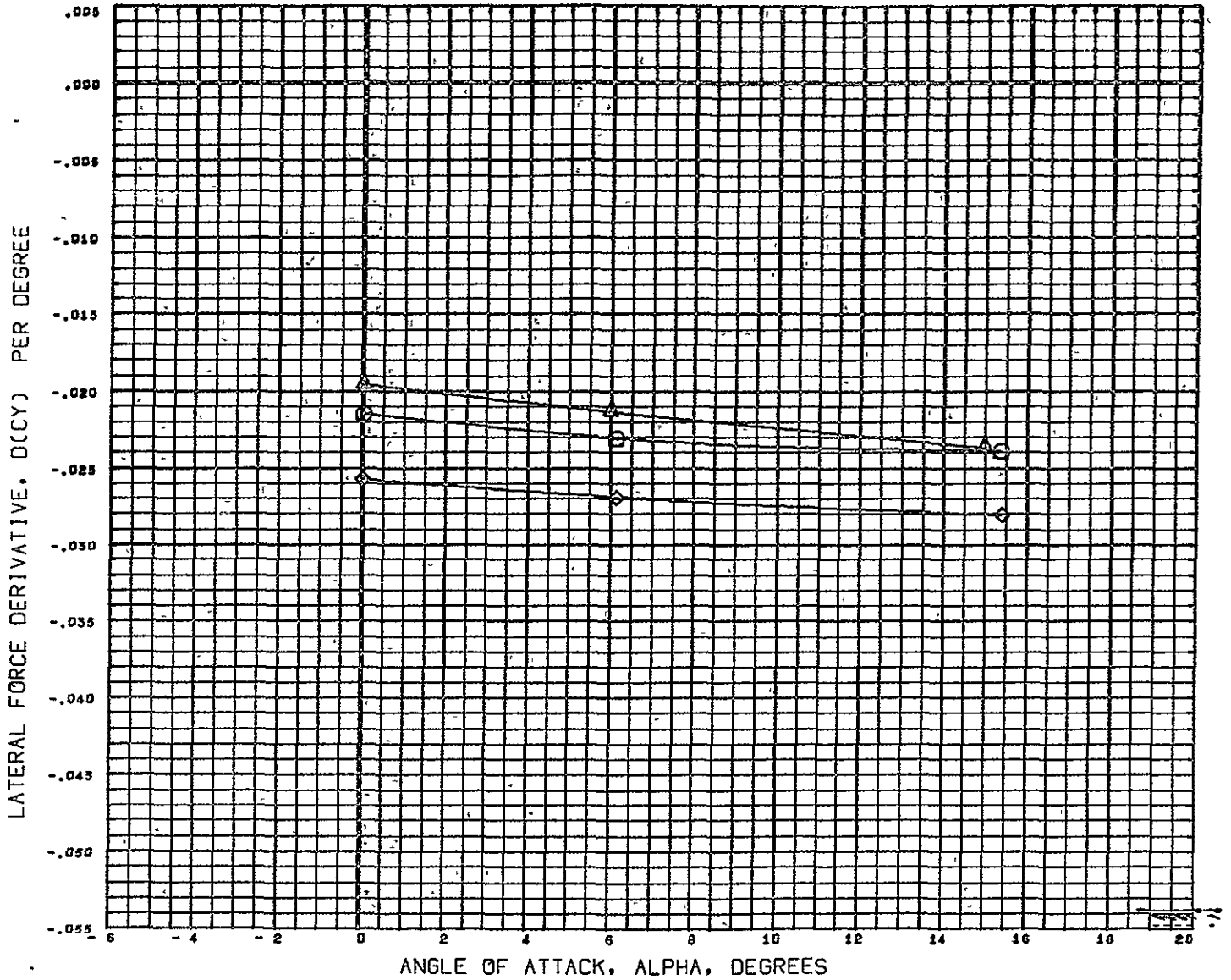
SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION	
∞	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550 SQ.FT.
	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530 FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530 FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	2.5950 FEET
		CNDPOS	1.000			YMRP	0.0000 FEET
		DATA HIST. CODE	MI			ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



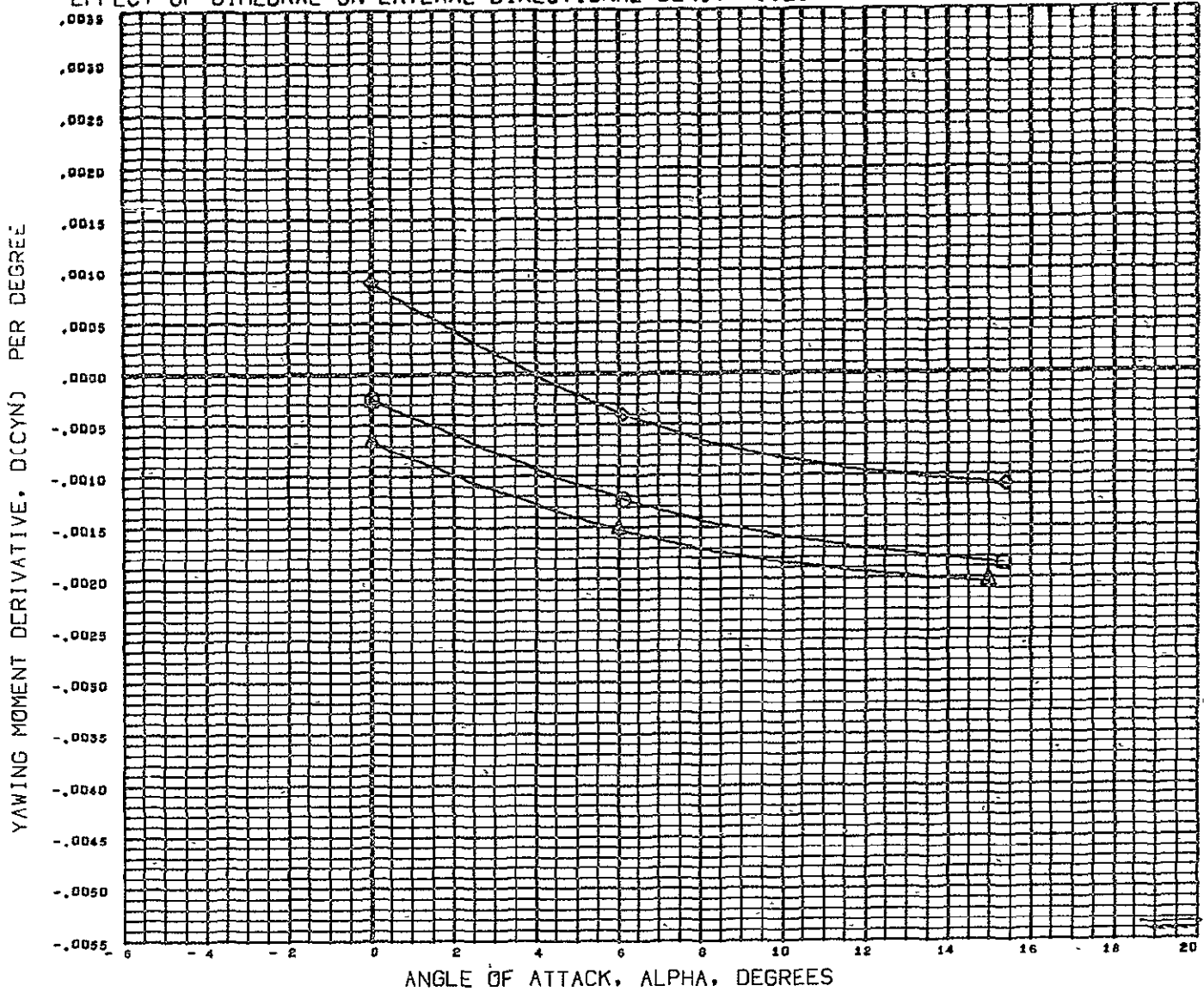
SYMBOL	DIHEDRAL	PARAMETRIC VALUES			REFERENCE INFORMATION			
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△	7.660	INCIDW	0.000	ATLON	0.000	LREF	3.4530	FEET
◇	15.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		ENGLOC	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CHDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MHI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



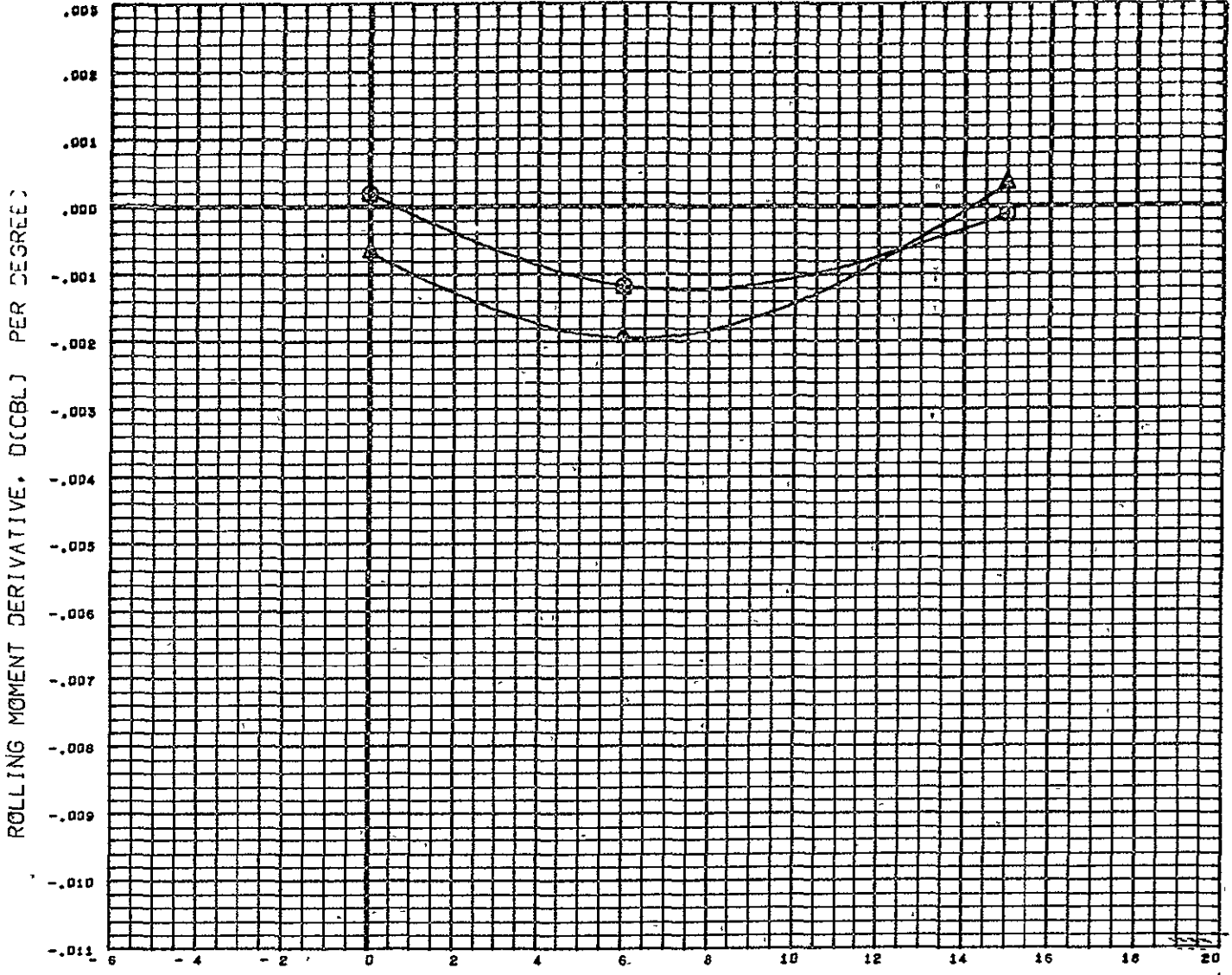
SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION		
△	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
○	7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4330	FEET
◇	15.000	CAHARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		ENGLCC	0.000	WNGPOS	1.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	NHI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	80.FT.
△	7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
◇	15.000	CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		ENGLCC	0.000	WNGPOS	1.000	XMRF	2.5950	FEET
		CNDPOS	1.000			YMRF	0.0000	FEET
		DATA HIST. CODE	NMI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES

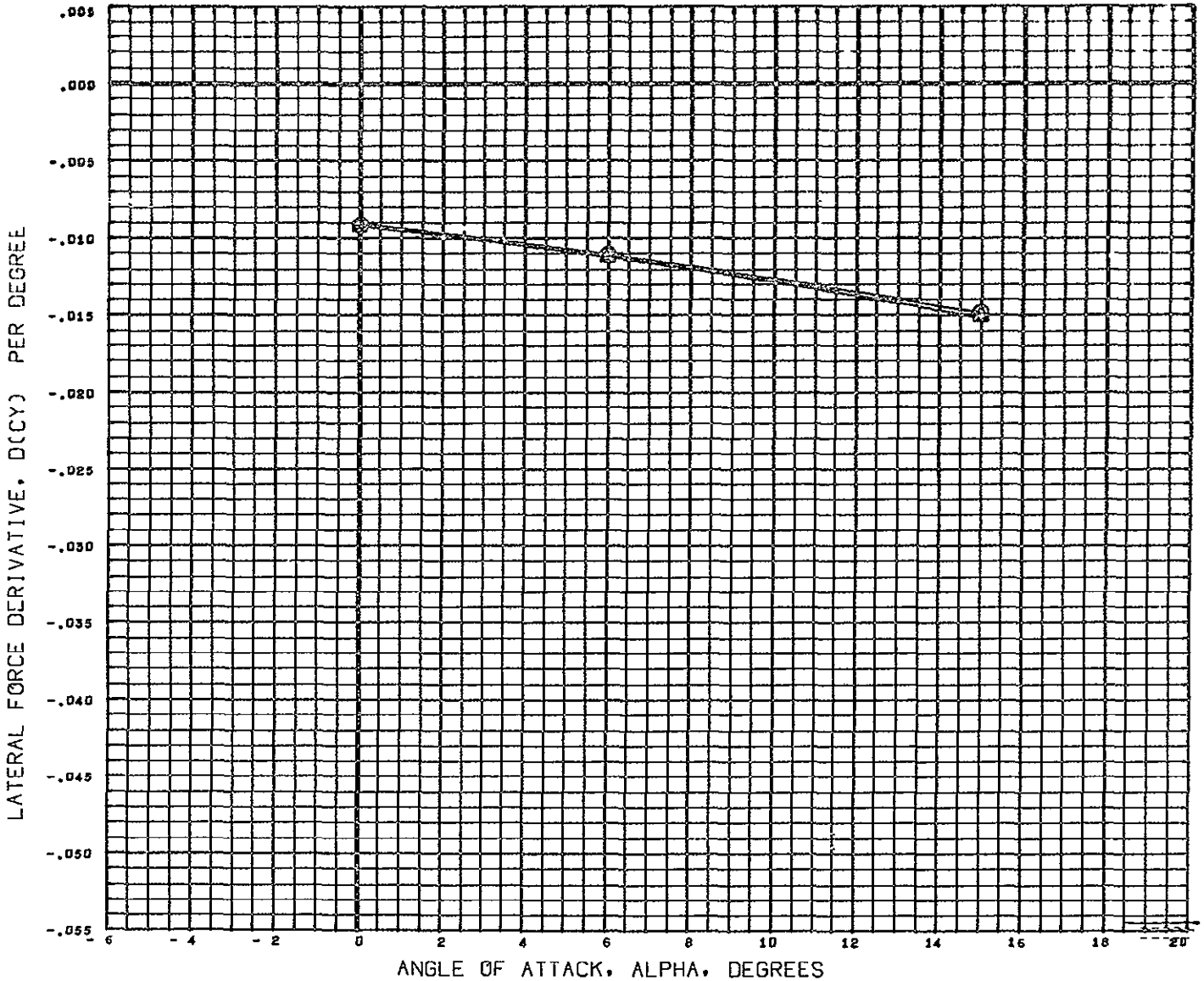


SYMBOL	DIHEDRAL	PARAMETRIC VALUES			
⊙	7.660	MACH	0.400	INCIDC	3.000
⊙	15.000	INCIDW	0.000	AILRON	0.000
		CANARD	0.000	ELEVTR	0.000
		WNGPOS	2.000	CNDPOS	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XMRP	2.5950	FEET
YMRP	0.0000	FEET
ZMRP	0.0187	FEET
SCALE	0.0150	SCALE

DATA HIST. CODE HI

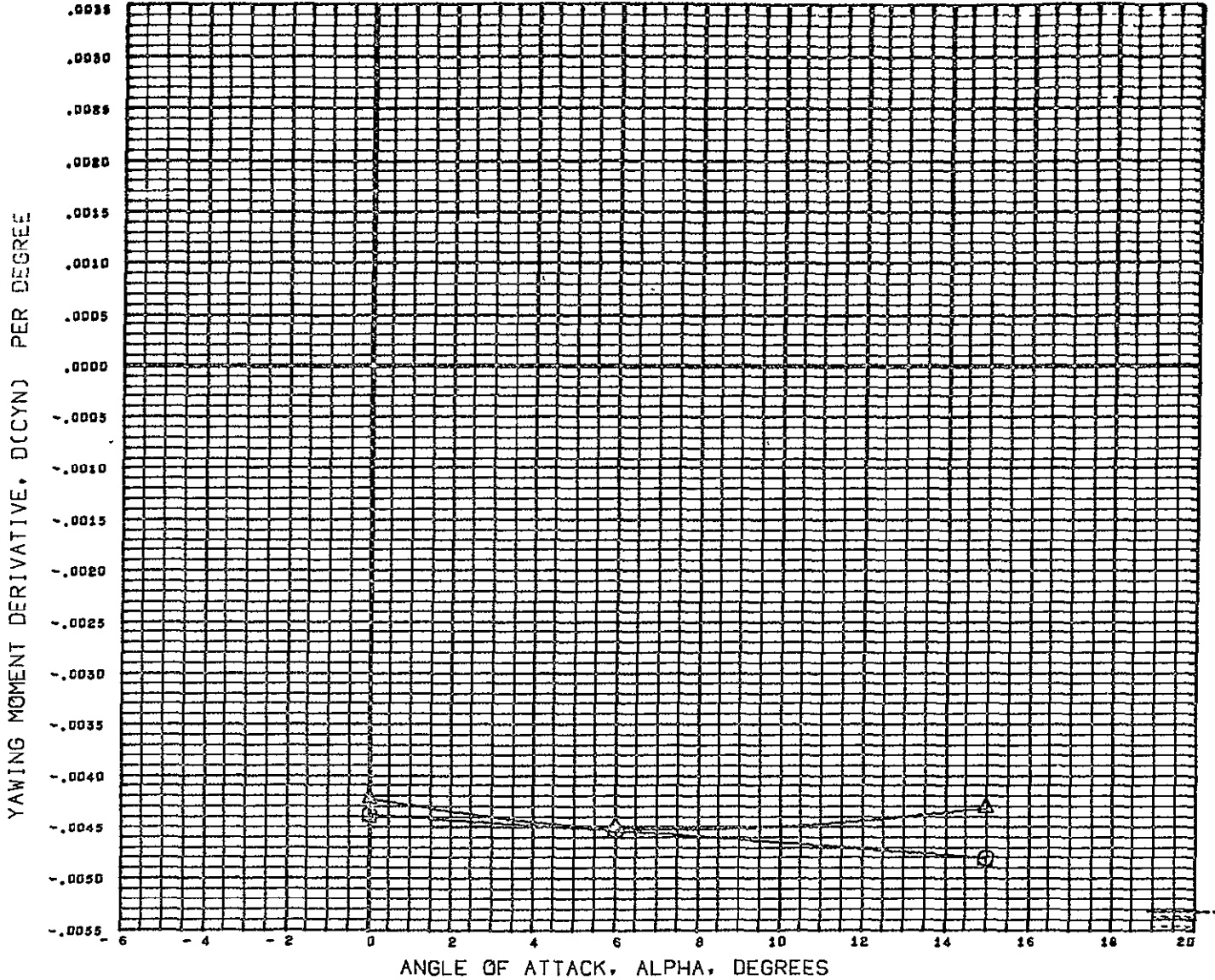
EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHDL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.
∞	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		WNGPOS	2.000	CNDPOS	1.000	XMRP	2.5950	FEET
						YMRP	0.0000	FEET
					ZMRP	0.0187	FEET	
					SCALE	0.0150	SCALE	

DATA HIST. CODE HI

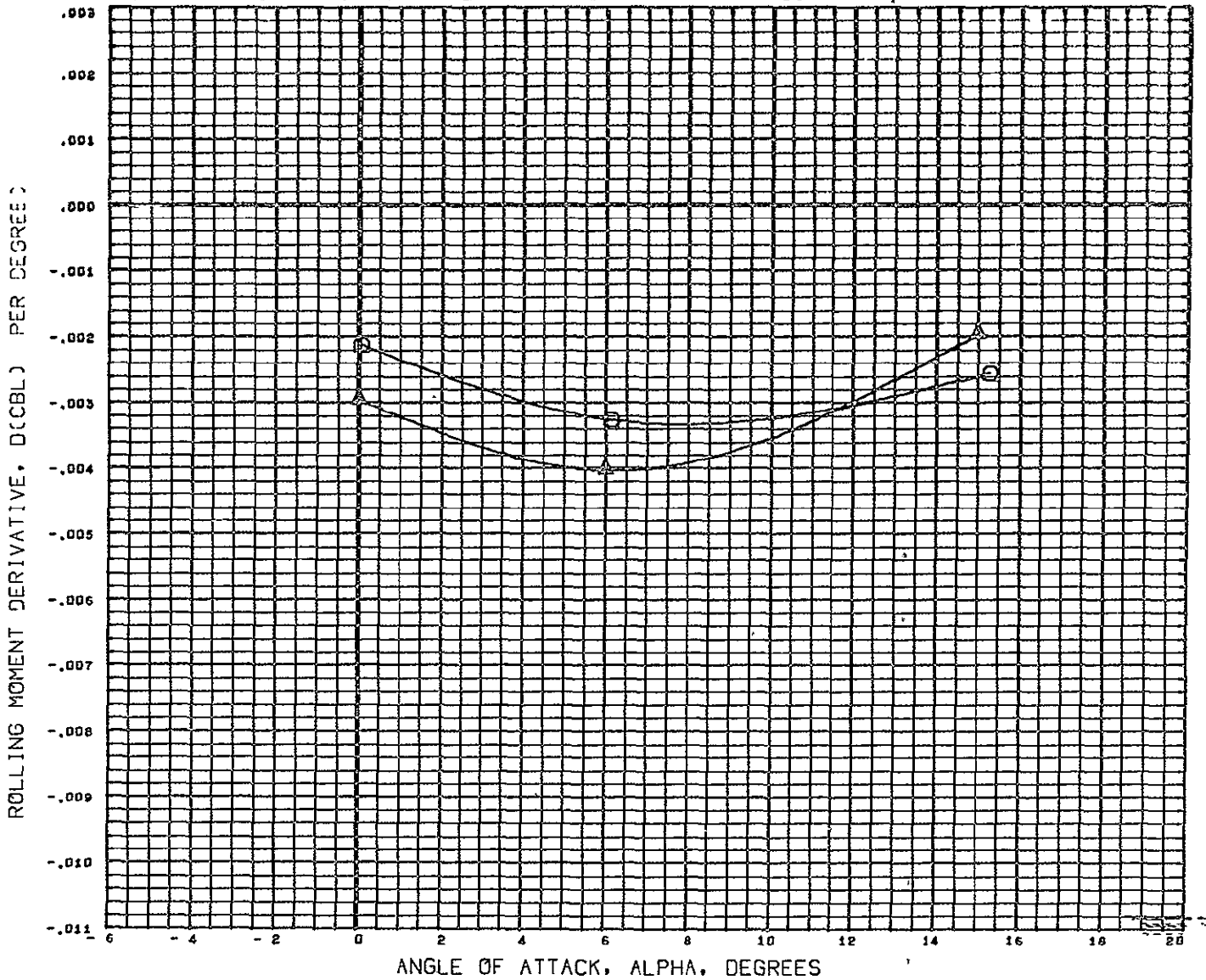
EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	PARAMETRIC VALUES		REFERENCE INFORMATION		
	DIHEDRAL	MACH	INCIDC	SREF	SQ.FT.
△	7.660	0.400	3.000	LREF	3.4530
	15.000	INCIDW	0.000	BREF	3.4530
	CANARD	0.000	ELEVTR	0.0000	FEET
	WNGPOS	2.000	CNDPOS	1.000	FEET
				XHRP	2.5950
				YHRP	0.0000
				ZHRP	0.0187
				SCALE	0 0150
					FEET
					SCALE

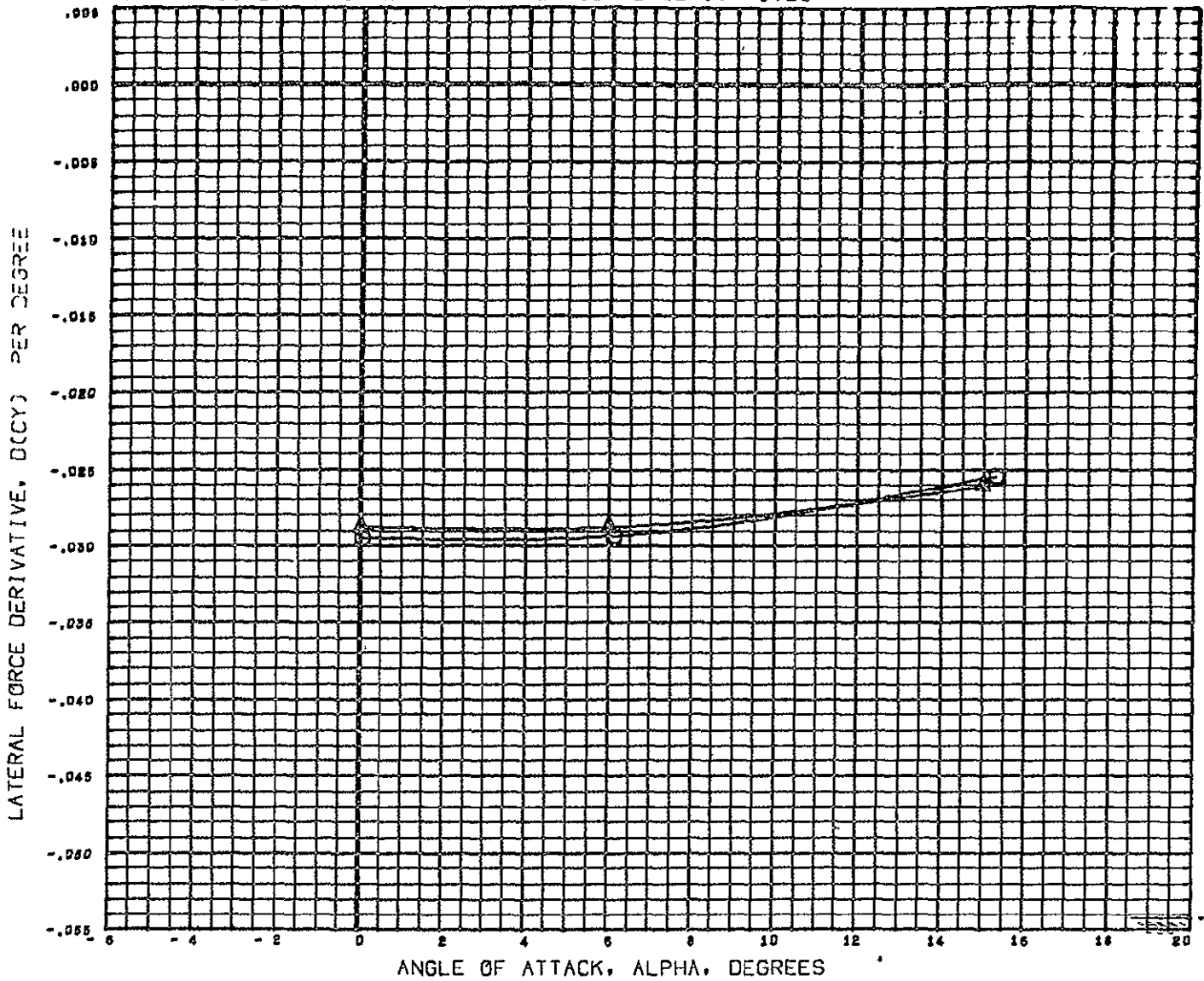
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EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



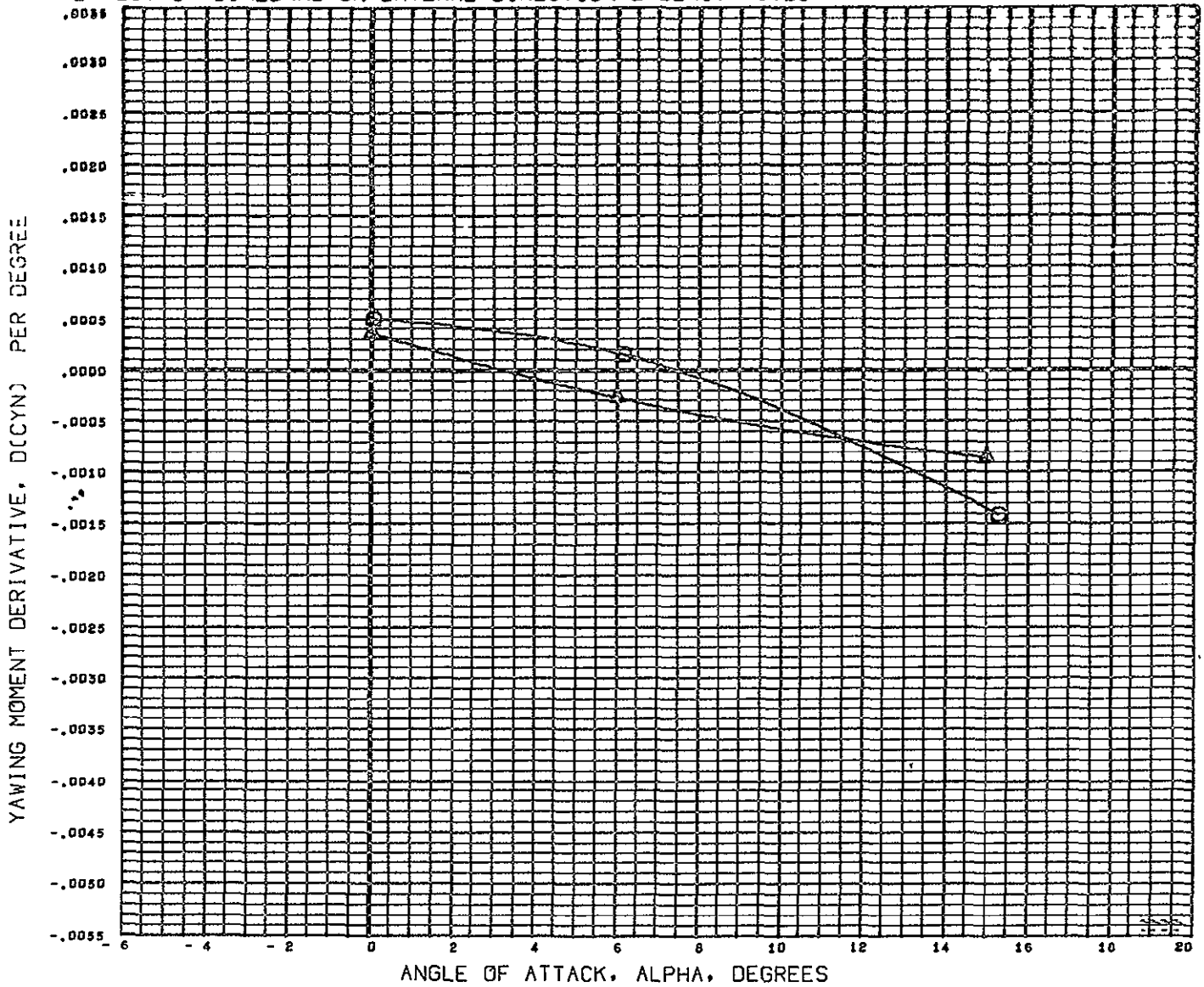
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	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT
Δ	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XHRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



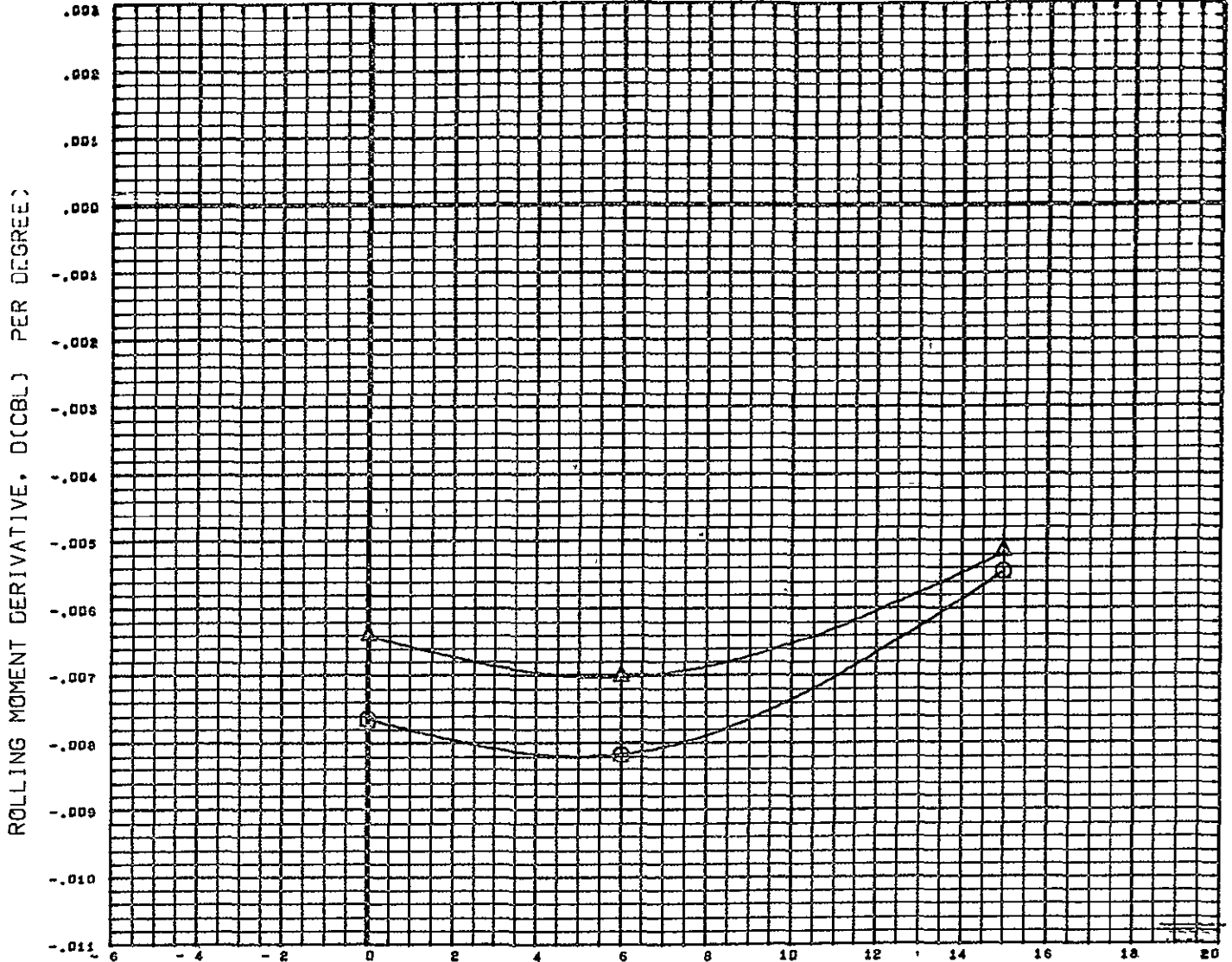
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Δ	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.
	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ FT.
△	15.000	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	2.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	NI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

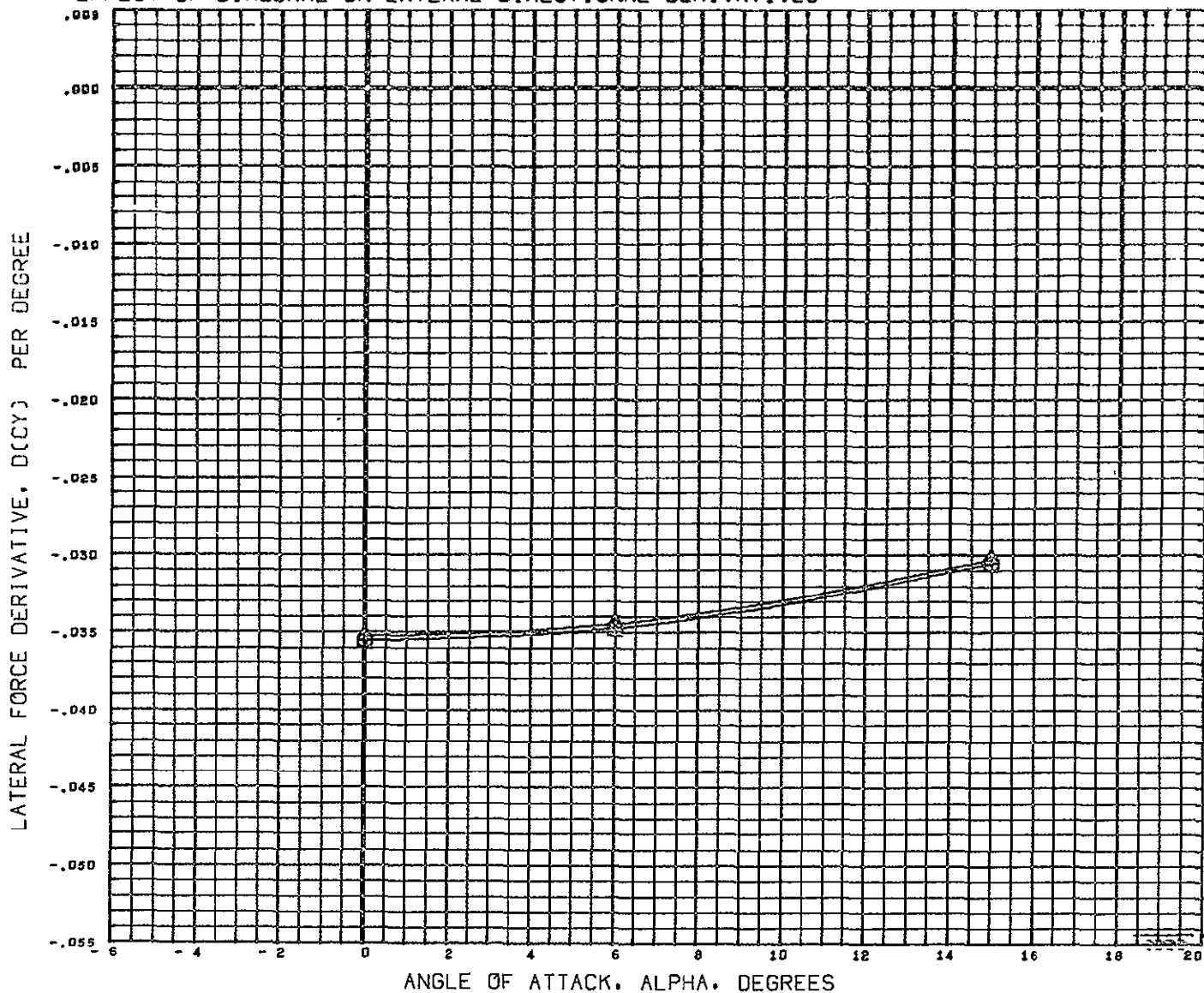
EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



ANGLE OF ATTACK, ALPHA, DEGREES

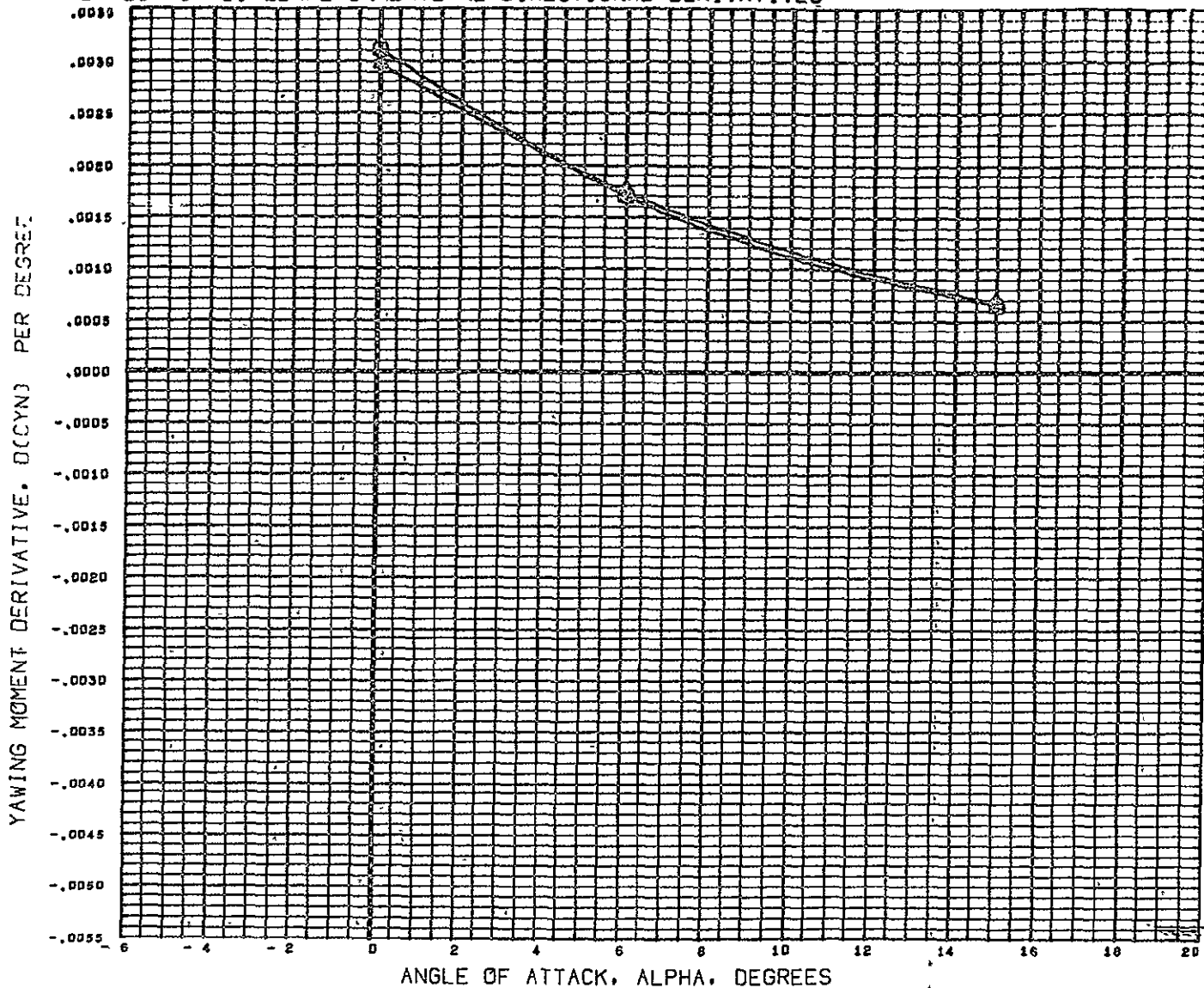
SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION	
△	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550 SQ. FT.
○	7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4530 FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530 FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	0.2162 FEET
		CNDPOS	1.000			YMRP	0.0000 FEET
						ZMRP	0.0016 FEET
						SCALE	0.0150 SCALE
		DATA HIST. CODE	I				

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



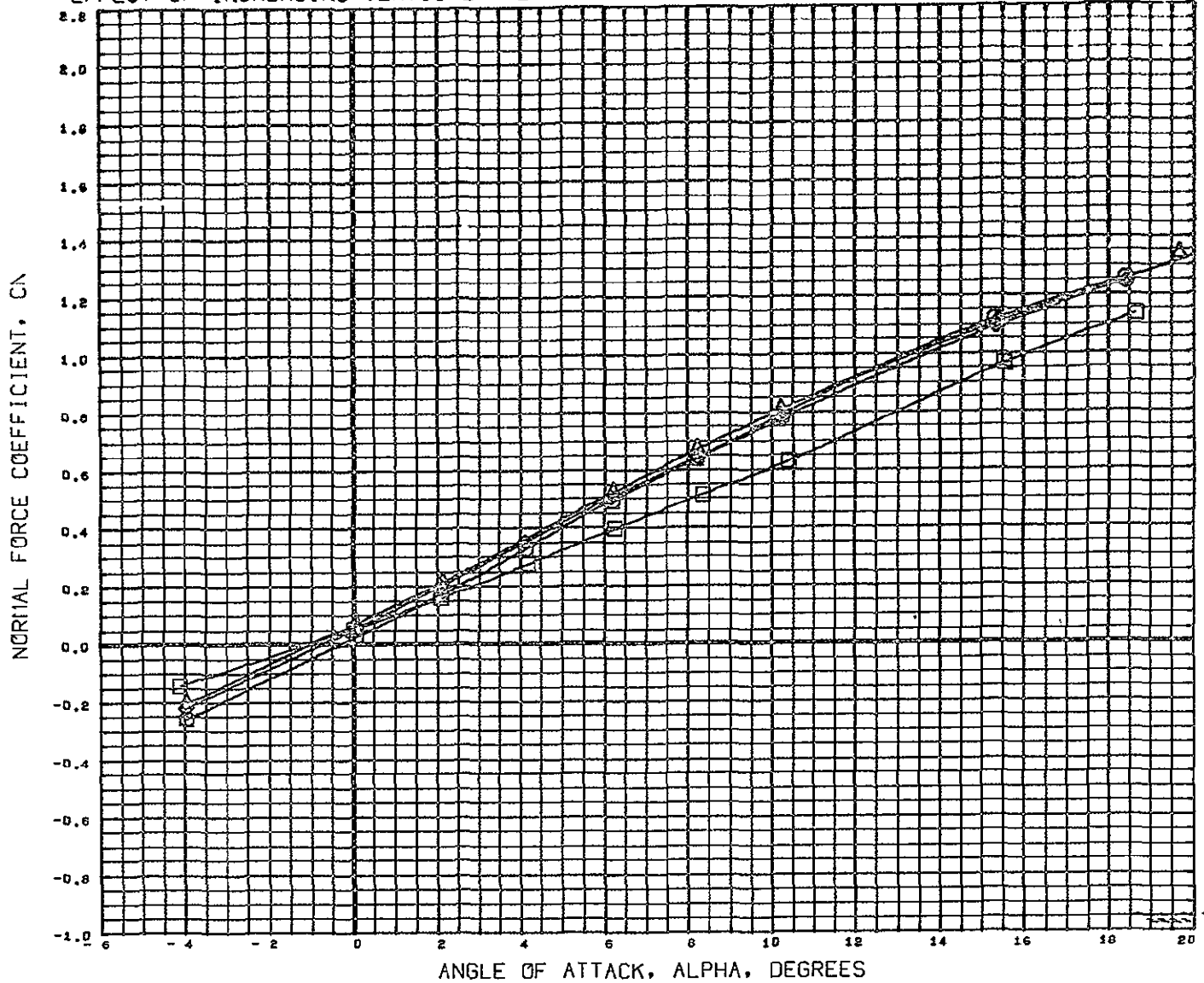
SYMBOL	DIHEDRAL	PARAMETRIC VALUES				REFERENCE INFORMATION		
∞	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT
∞	-7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	0.2162	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	I			ZMRP	0.0016	FEET
						SCALE	0.0150	SCALE

EFFECT OF DIHEDRAL ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	DIHDL	PARAMETRIC VALUES				REFERENCE INFORMATION		
Δ	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	88.FT.
	7.660	INCIDW	0.000	ATLRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		RUDDER	0.000	WNGPOS	1.000	XMRP	0.2162	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
						ZMRP	0.0016	FEET
						SCALE	0.0150	SCALE
		DATA HIST. CODE	I					

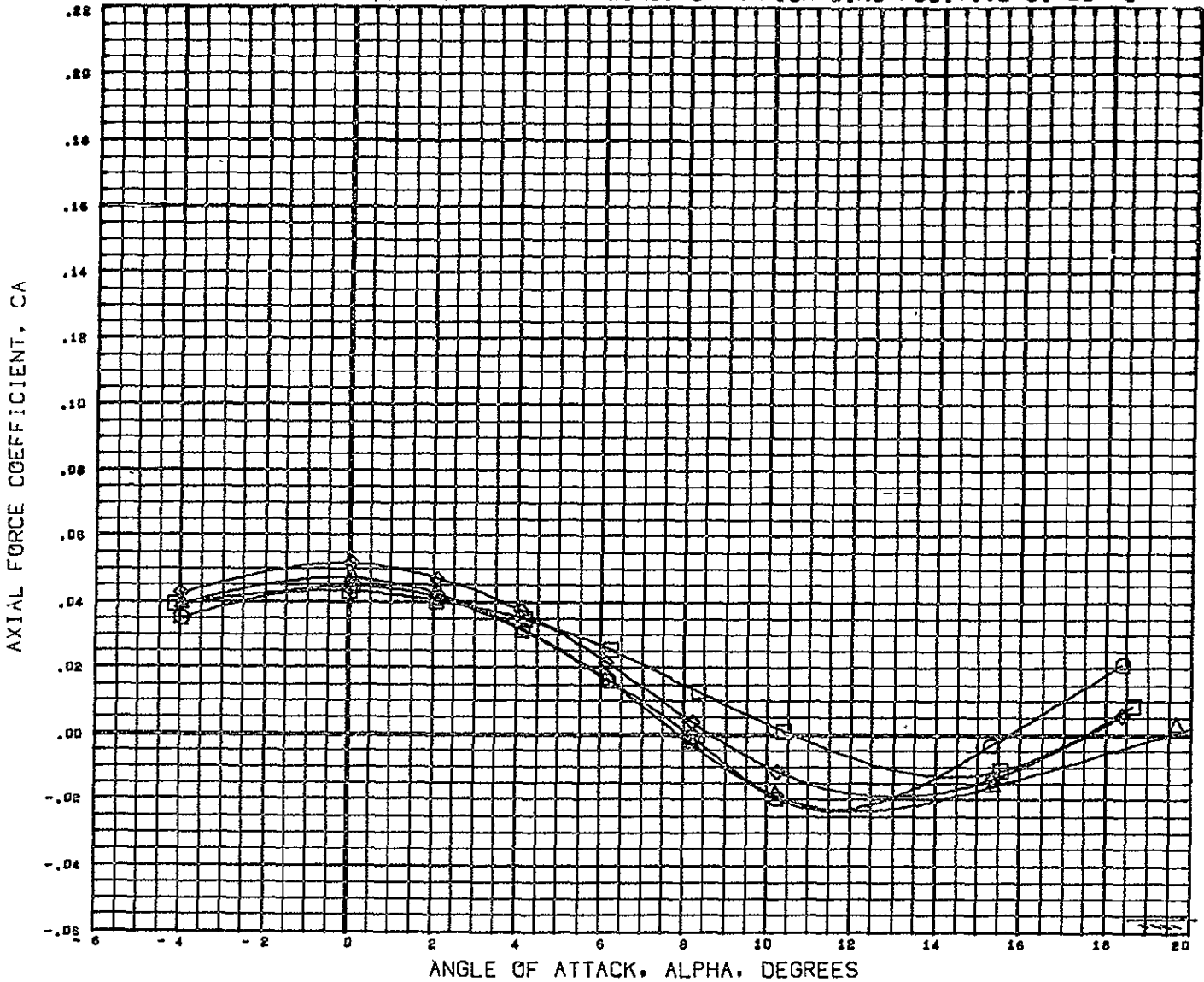
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDFOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

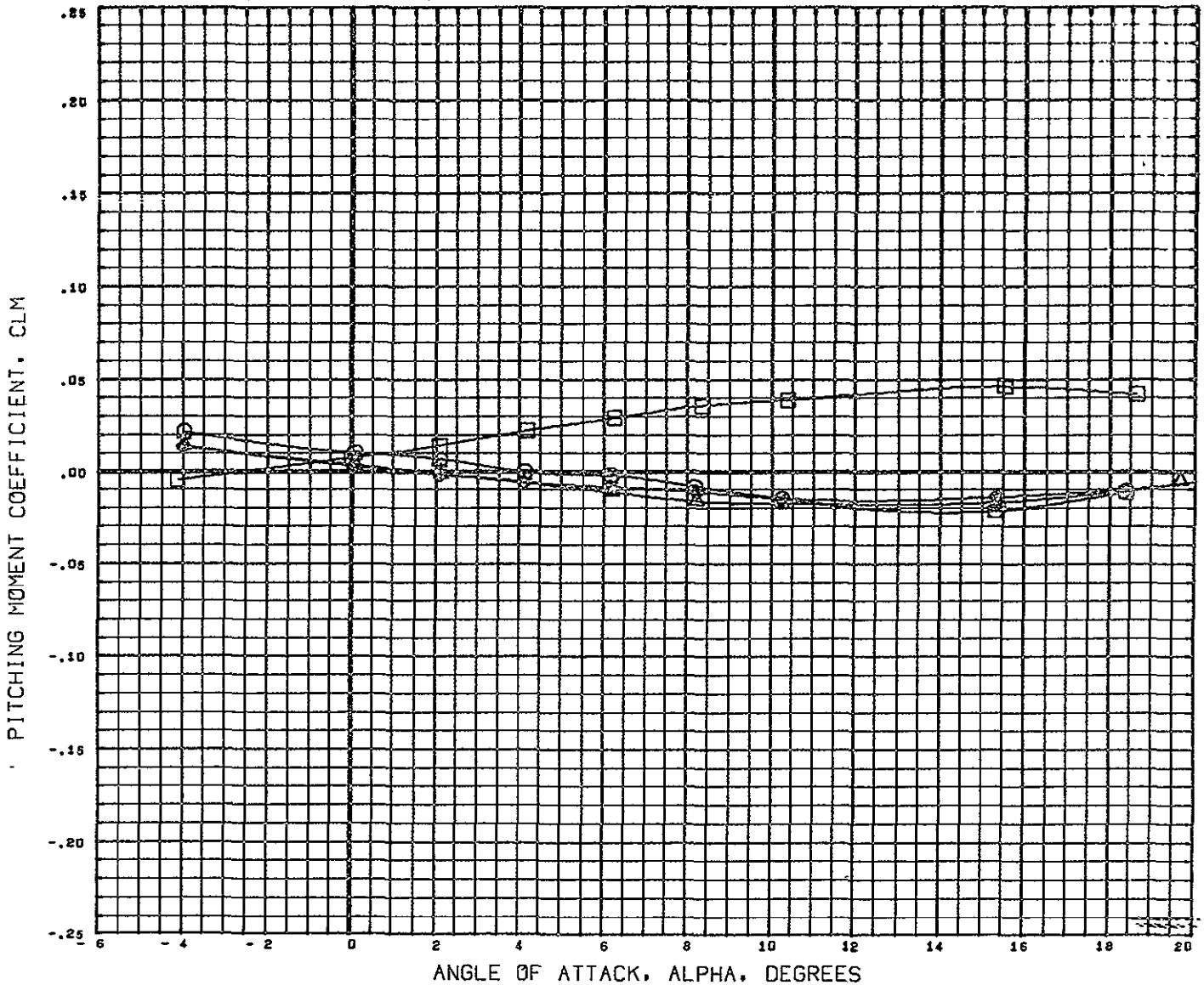
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

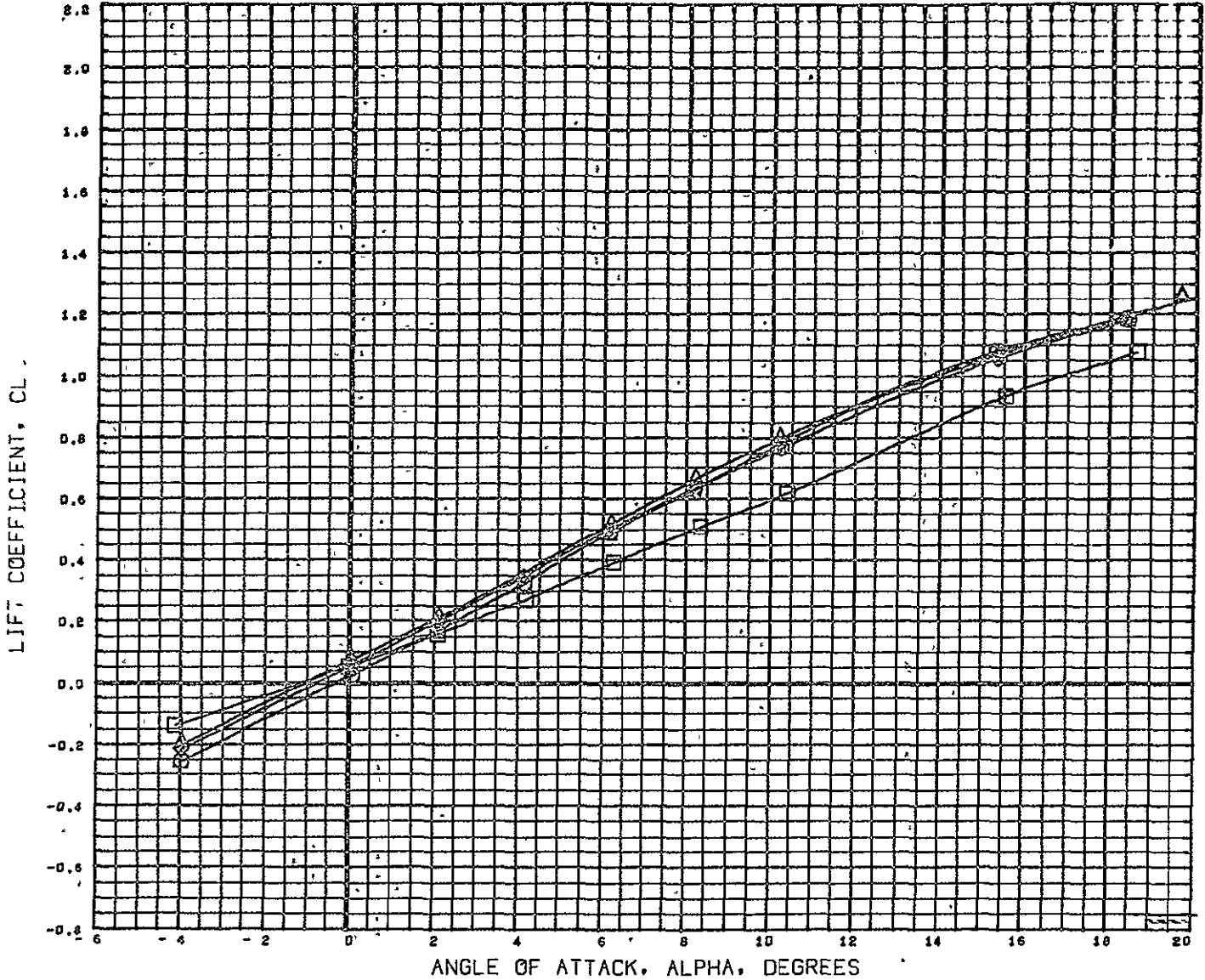
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT
(HN2001)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3 4530 FEET
(HN2561)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3 4530 FEET
(RN4142)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XNRF 2 5950 FEET YNRF 0 0000 FEET ZNRF 0 0187 FEET SCALE 0 0150 SCALE

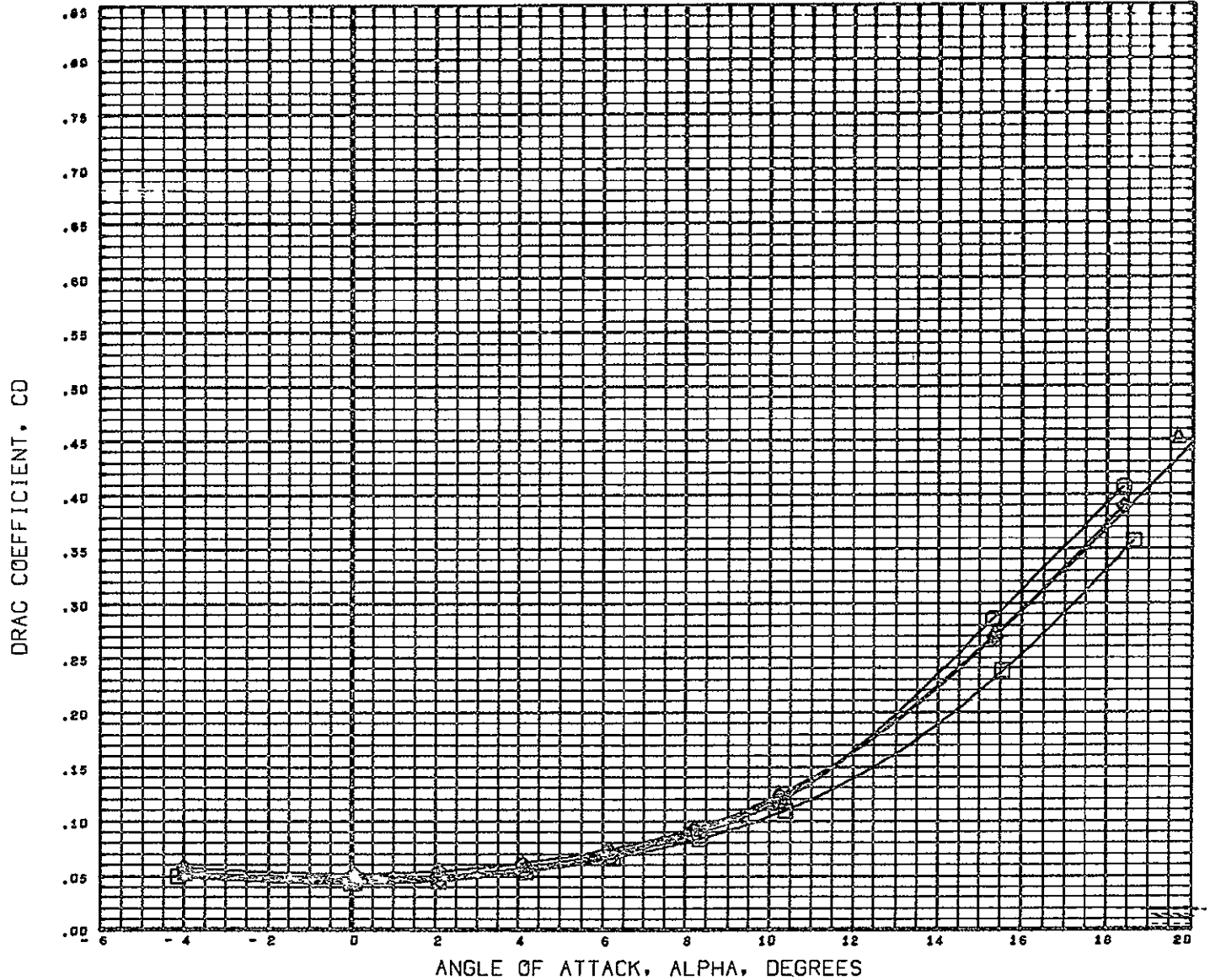
MACH .38

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-9310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

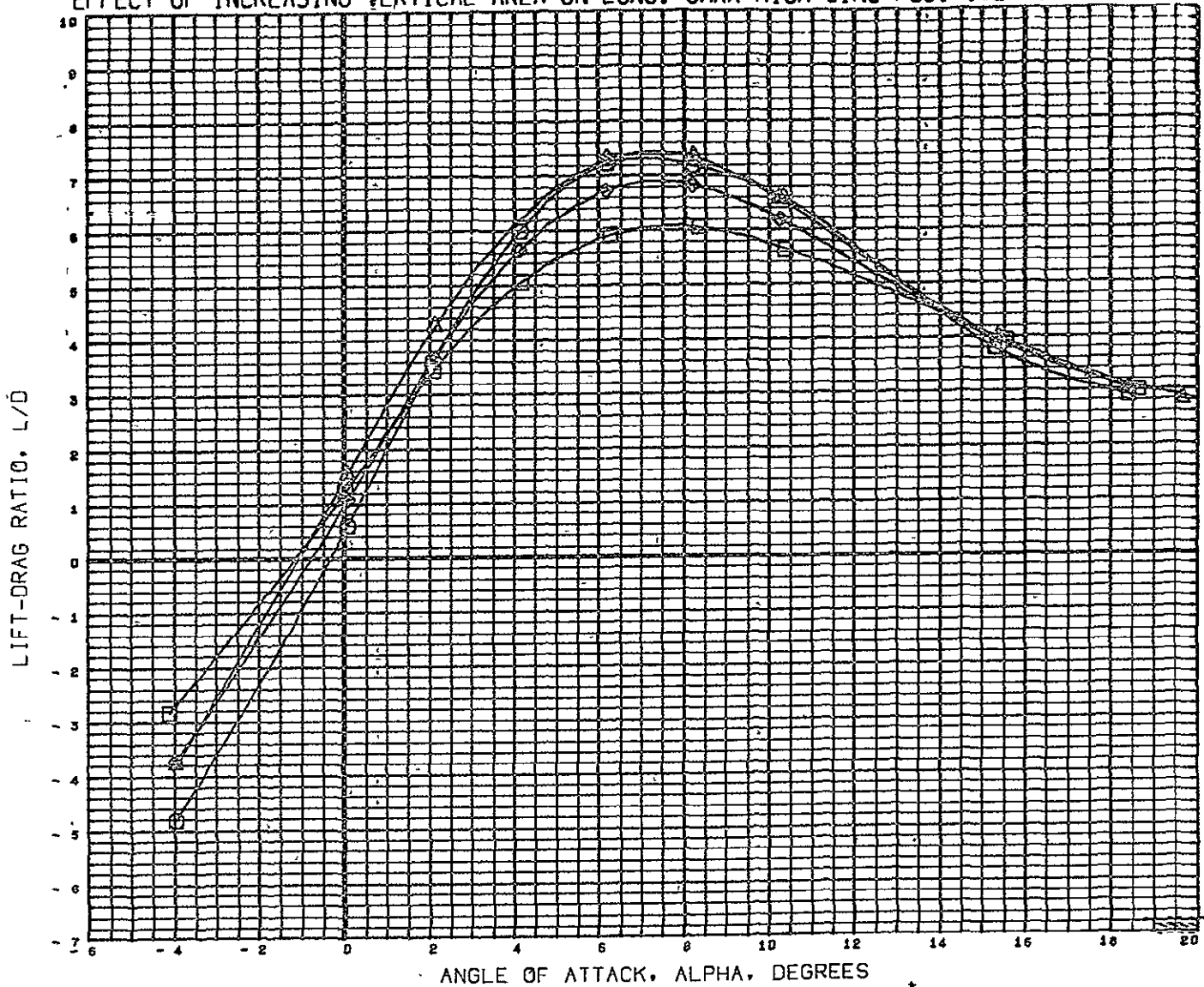
EFFECT OF INCREASING VERTICAL AREA ON LONG, CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

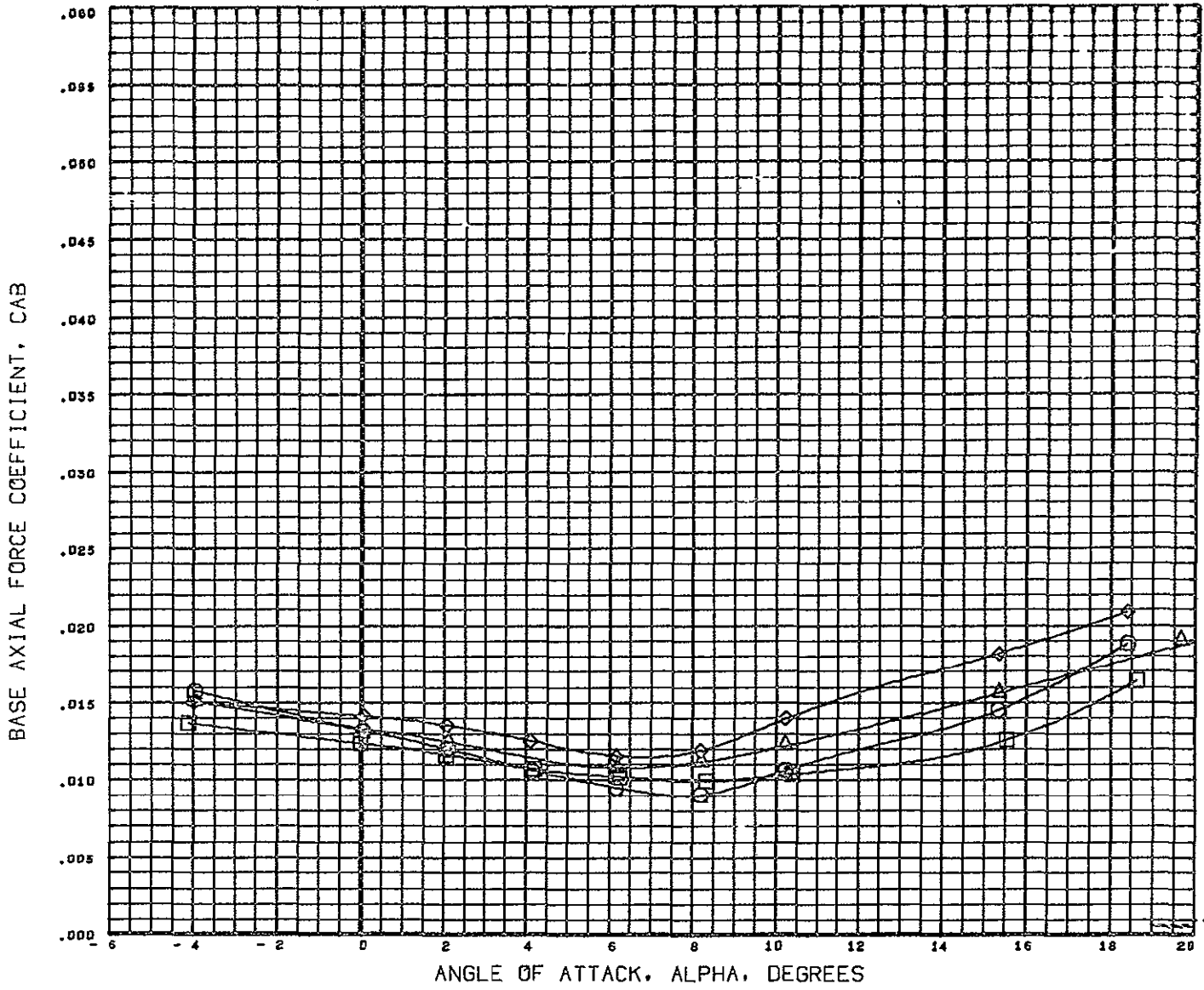
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XWRP 2.5950 FEET
						YHRP 0.0000 FEET
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						SCALE 0.0150 SCALE

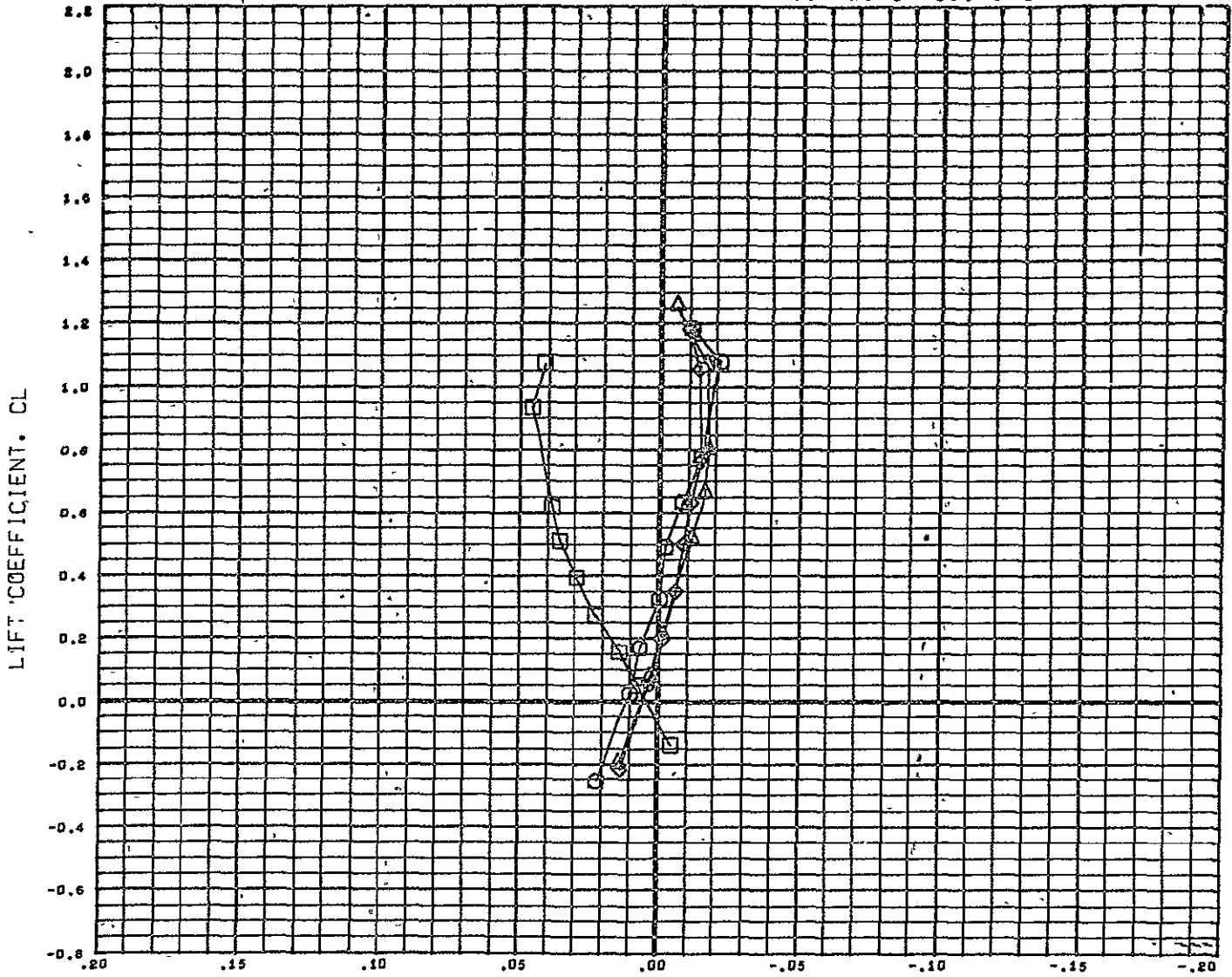
MACH .38

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XMRP 2.5950 FEET YHRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



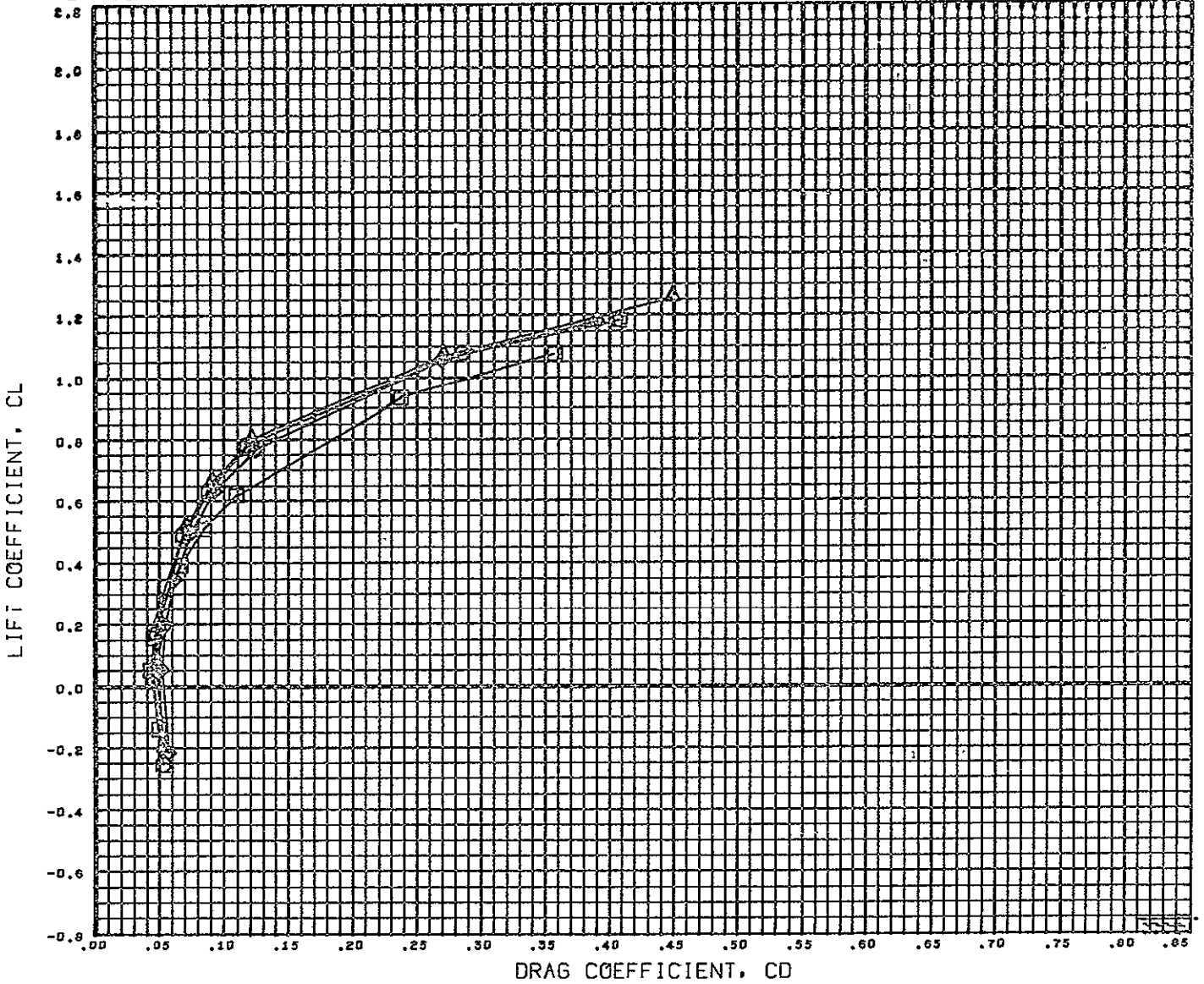
PITCHING MOMENT COEFFICIENT, CLM

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDR	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2553)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2561)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

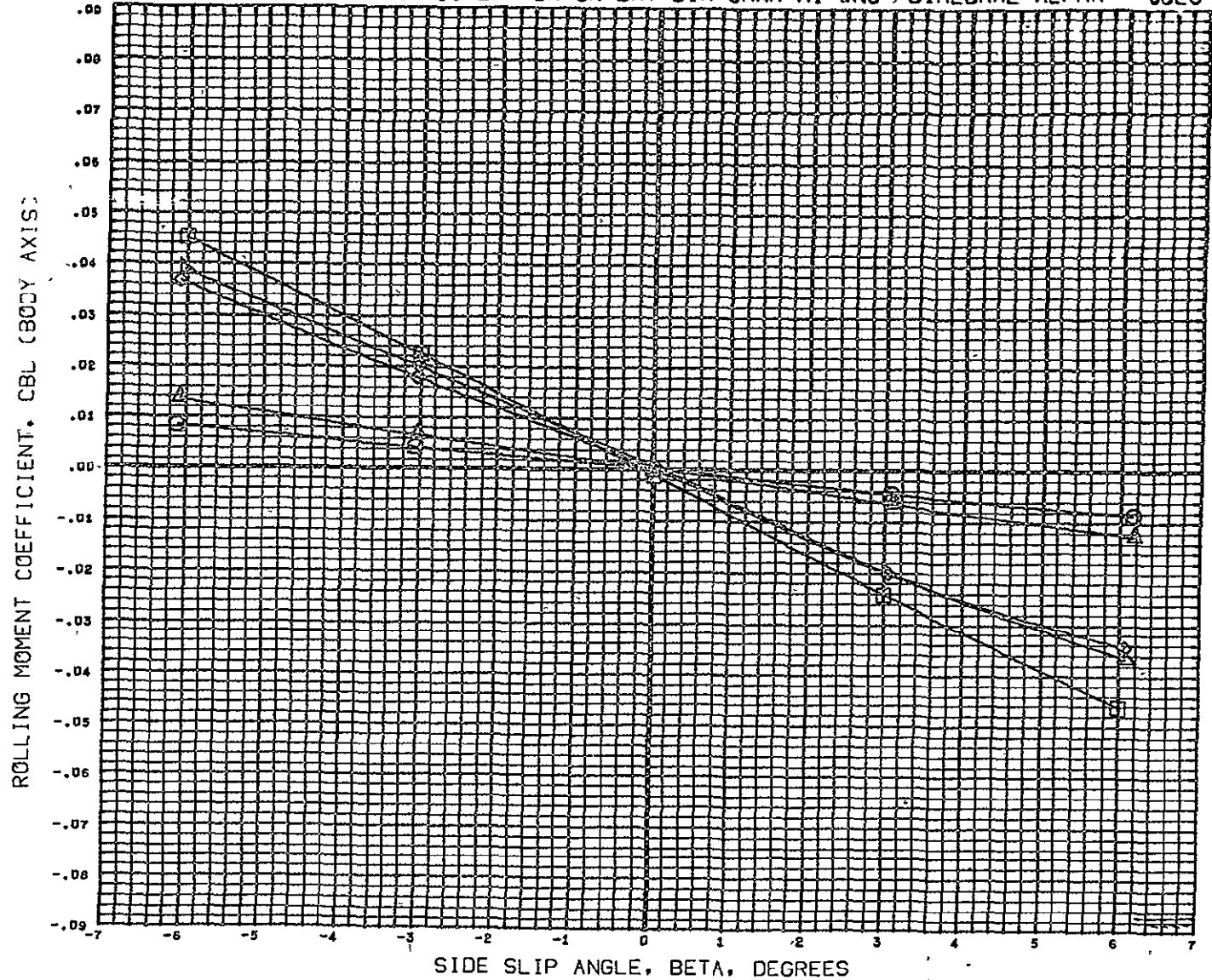
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EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HIGH WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{HN2553}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
{HN2001}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
{HN2561}	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
{RN4142}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

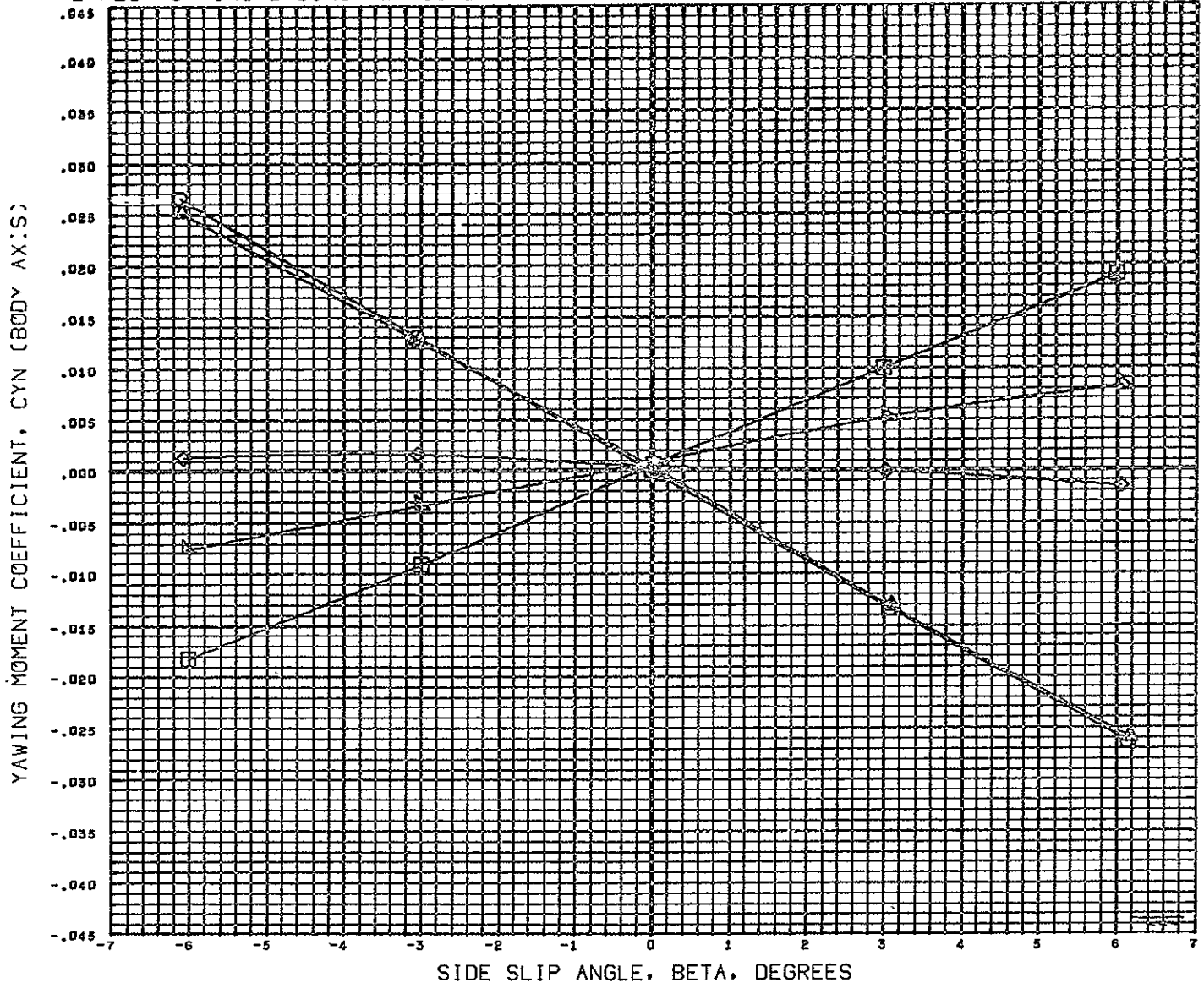
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA = 0DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCLIN	REFERENCE INFORMATION
(RN4143)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(RN2554)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1V2H1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN2002)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4022)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	XMRP 0.2162 FEET
(RN2562)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YMRP 0.0000 FEET ZMRP 0.0016 FEET SCALE 0.0150 SCALE

MACH .40

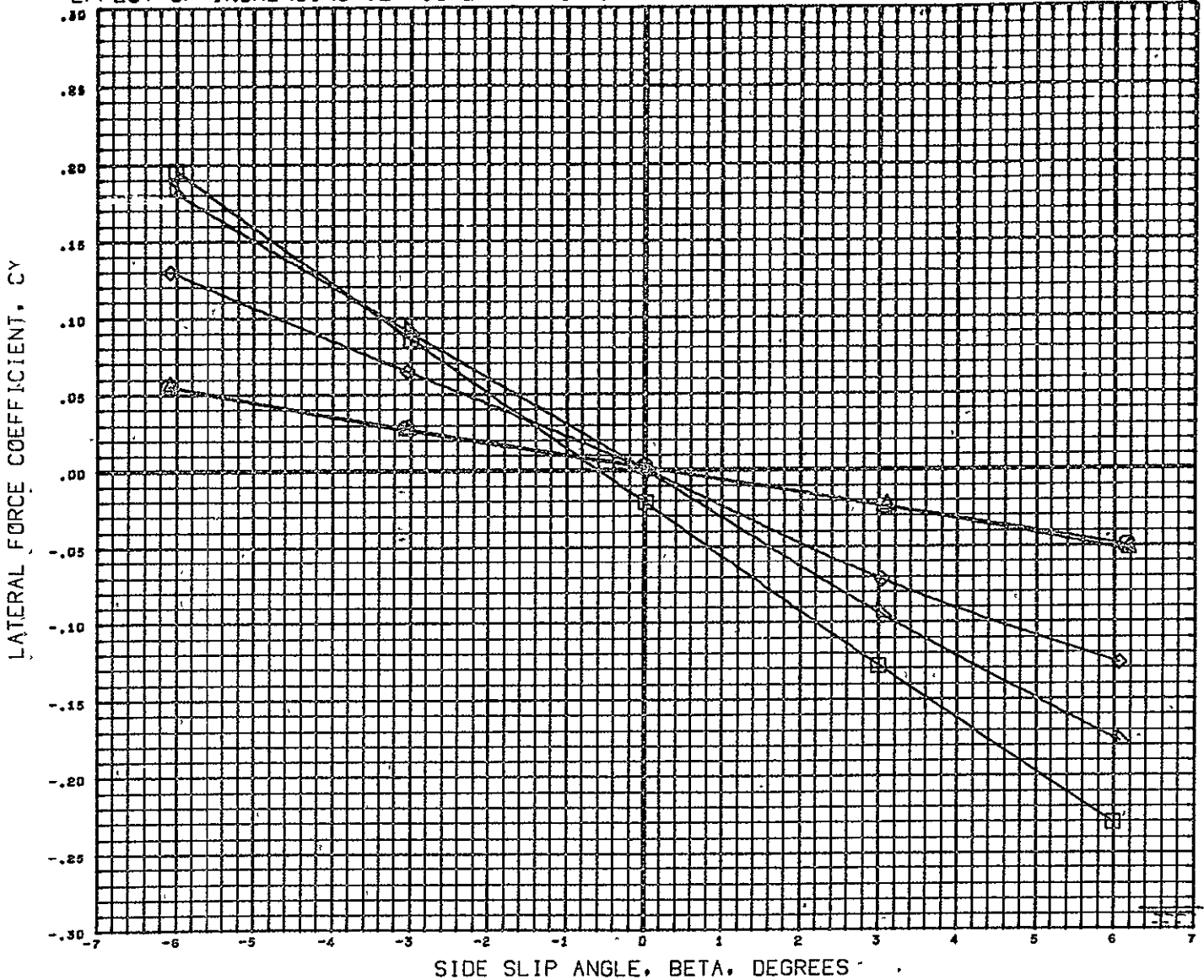
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA = 0DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4143)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2554)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4022)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	XHRF 0.2162 FEET
(HN2562)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YHRF 0.0000 FEET
						ZHRF 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

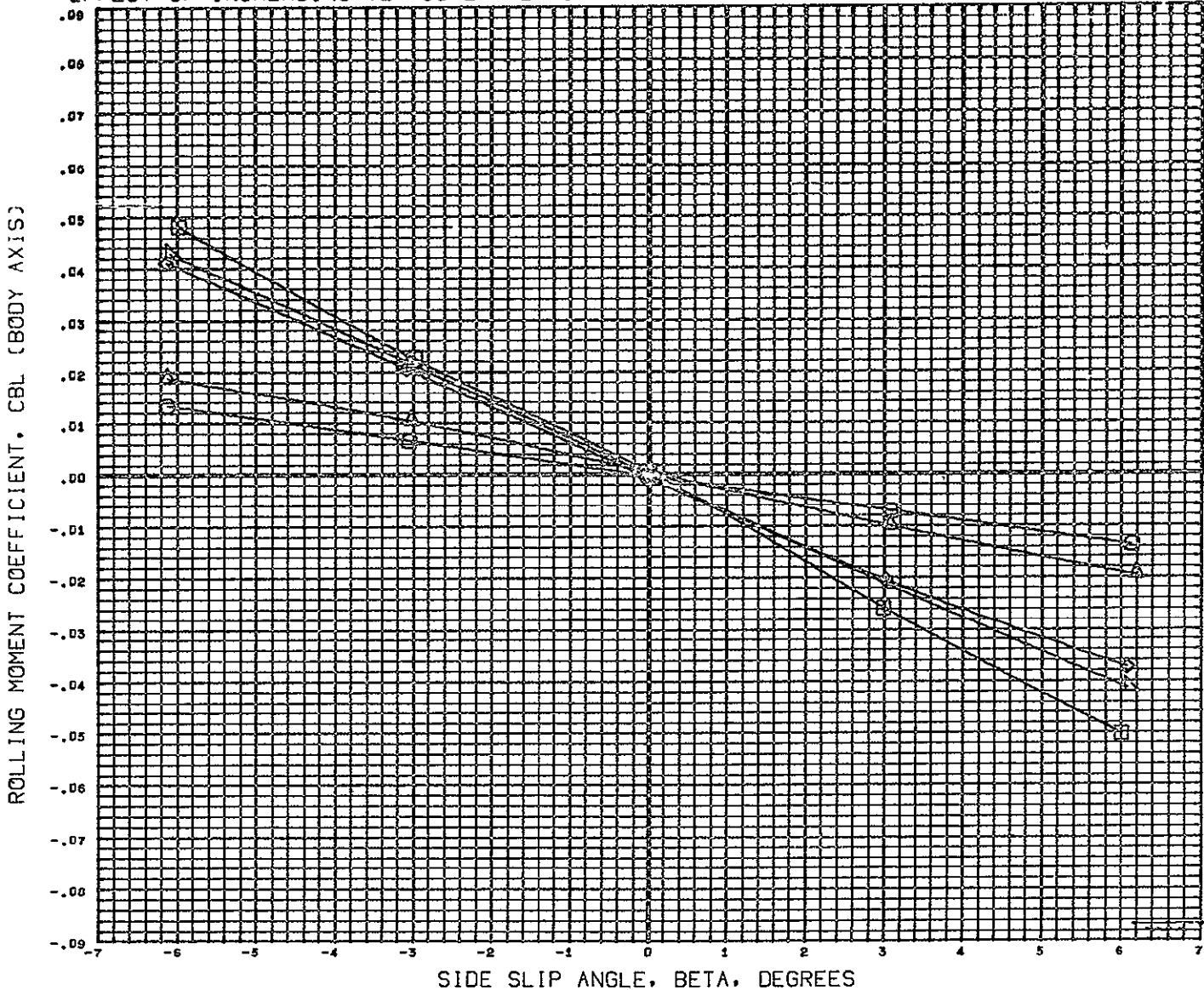
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG + DIHEDRAL ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4143)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(HN2554)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2002)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4022)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	XHRP 0.2162 FEET
(HN2562)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YHRP 0.0000 FEET ZHRP 0.0016 FEET SCALE 0.0150 SCALE

MACH .40

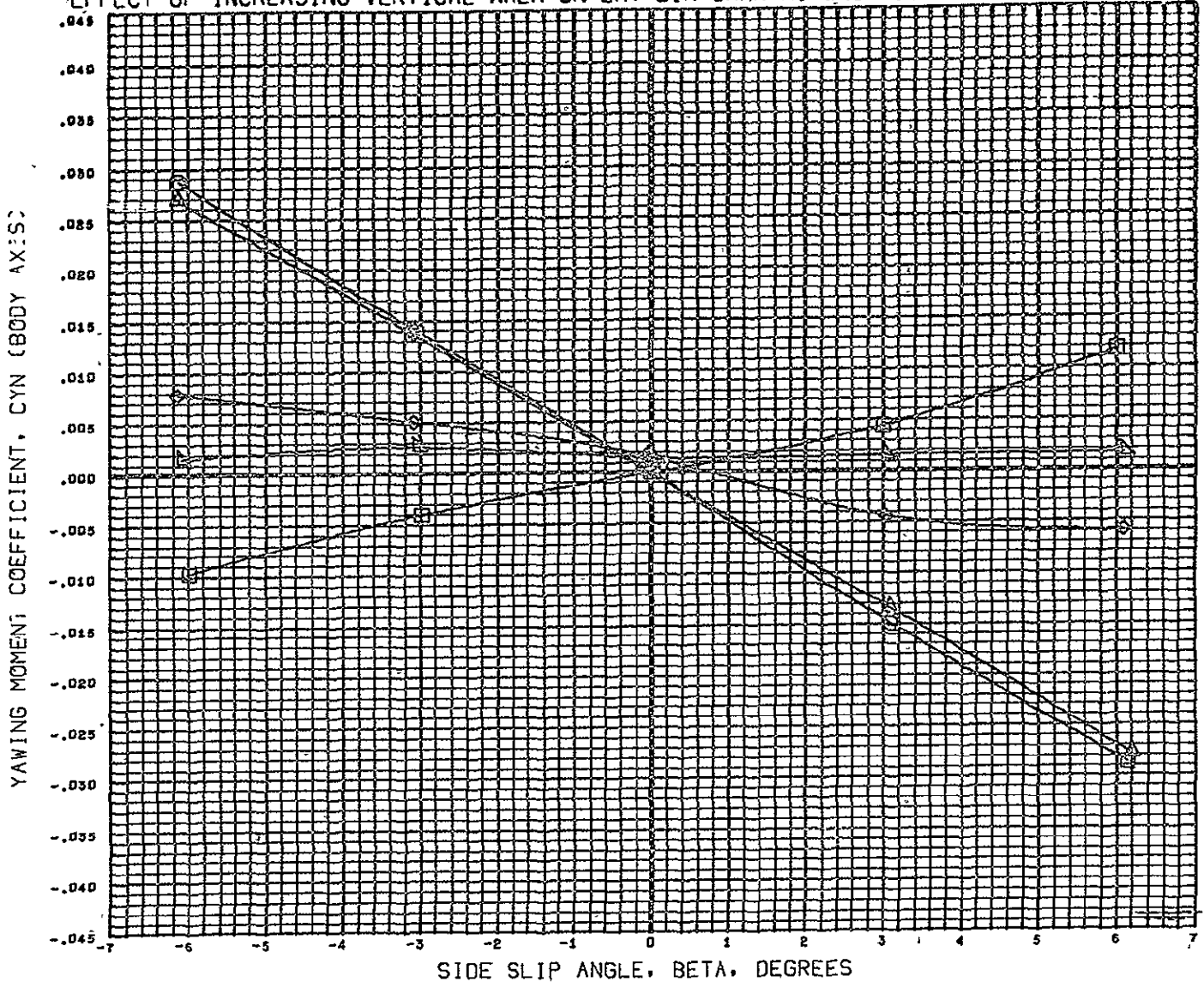
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA = 6DEG



SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4144)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SR.FT.
(HN2555)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2003)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4023)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	YNRP 0.2162 FEET
(HN2563)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YNRP 0.0000 FEET ZNRP 0.0016 FEET SCALE 0.0150 SCALE

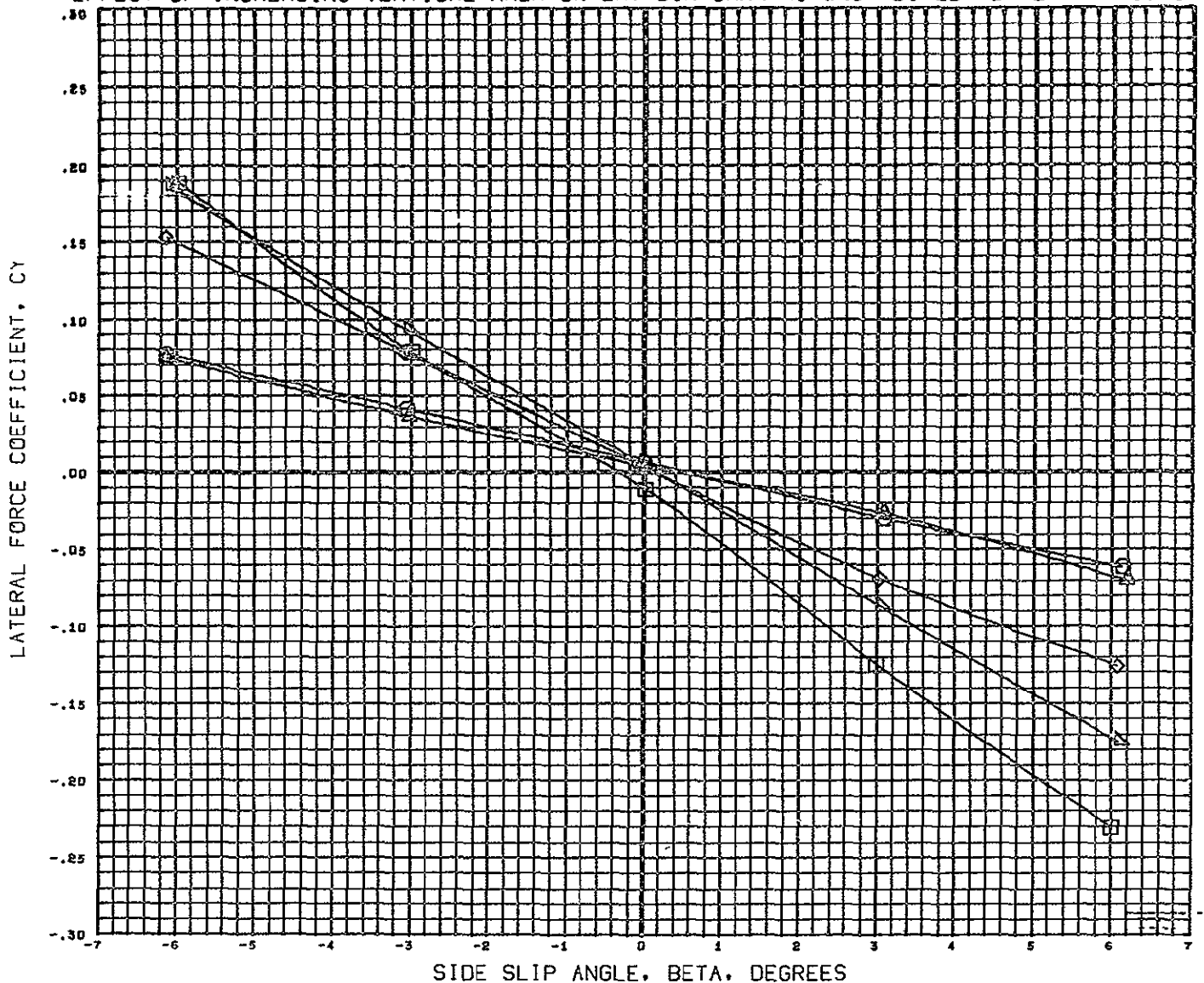
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA = 6DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(RN4144)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3350 SQ.FT.
(HN2555)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2003)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4023)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	XHRP 0.2162 FEET
(HN2563)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

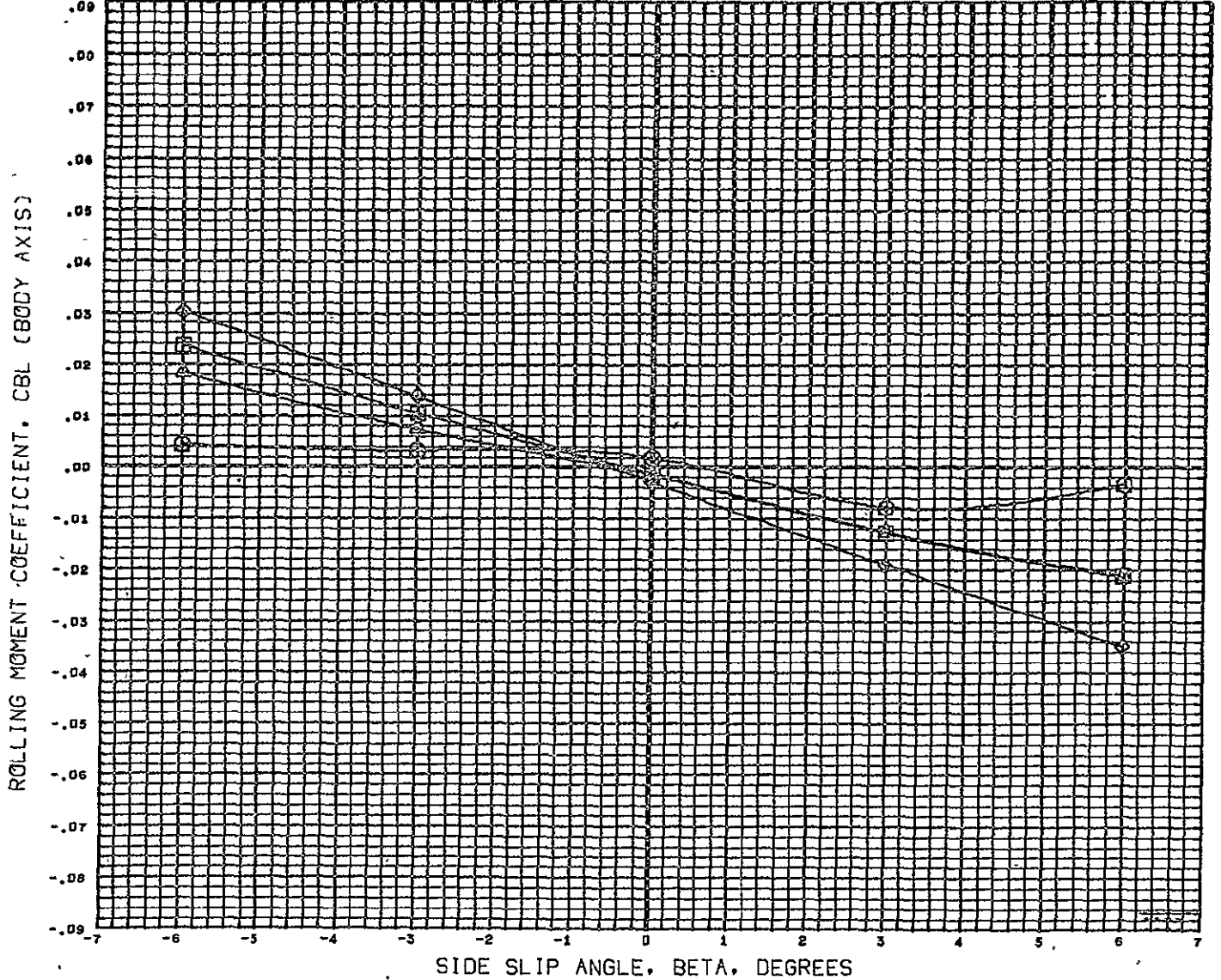
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA = 60 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4144)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(HN2555)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(HN2003)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(RN4023)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	XNRP 0.2162 FEET
(HN2563)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	YNRP 0.0000 FEET
						ZNRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

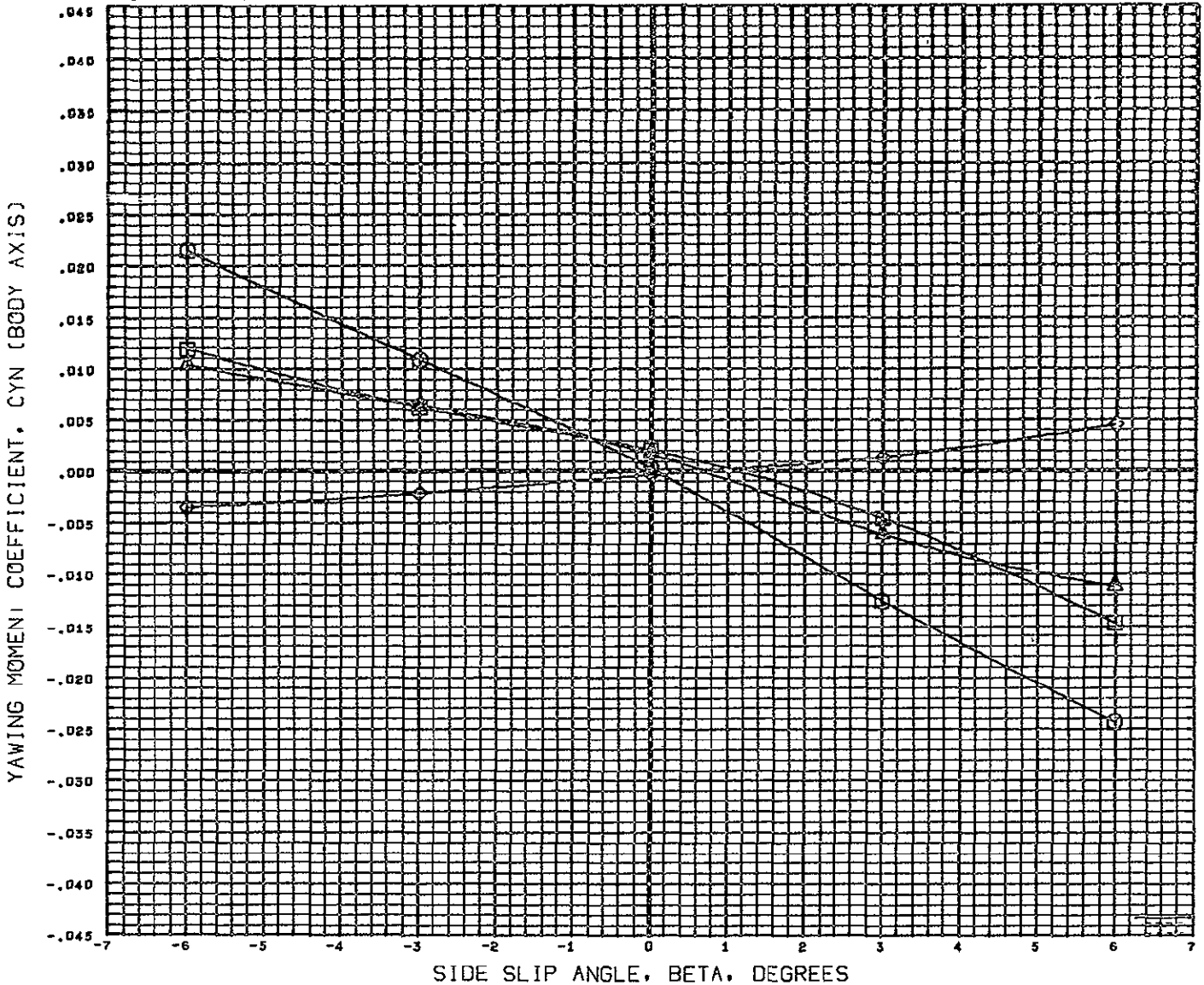
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA =15DFG



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(FN2556)	○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(FN2004)	△	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(FN4024)	◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(FN2564)	□	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA =15DEG

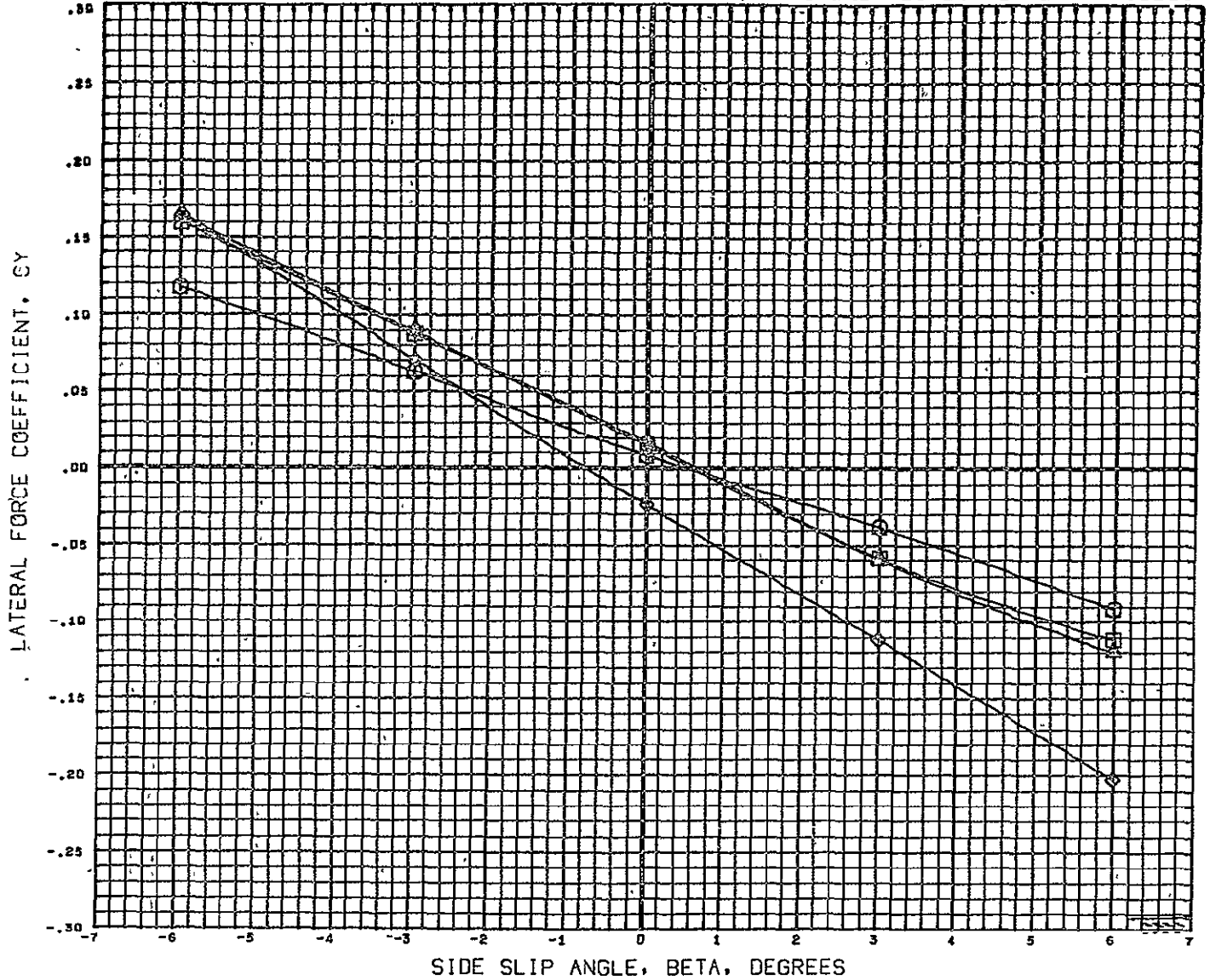


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN2556)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(FN2004)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(FN4024)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(FN2564)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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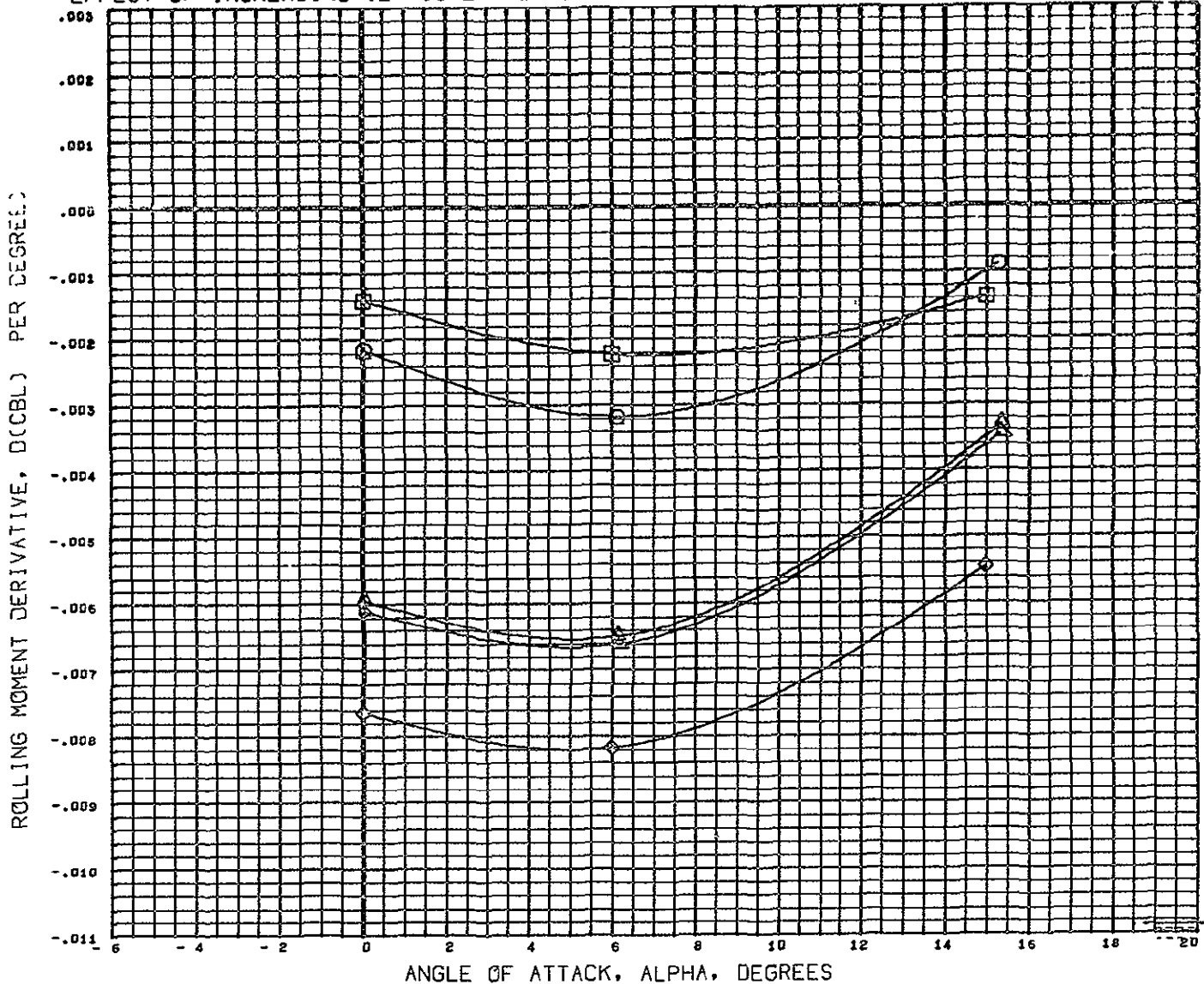
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR HI WNG +DIHEDRAL ALPHA =15DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN2556) ○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1V2W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(FN2004) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(FN4024) ◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	1.000	0.000	SREF 3.4530 FEET
(FN2564) □	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1D2	7.660	1.000	1.000	0.000	XWRP 2.6950 FEET YWRP 0.0000 FEET ZWRP 0.0107 FEET SCALE 0.0150 SCALE

MACH .40

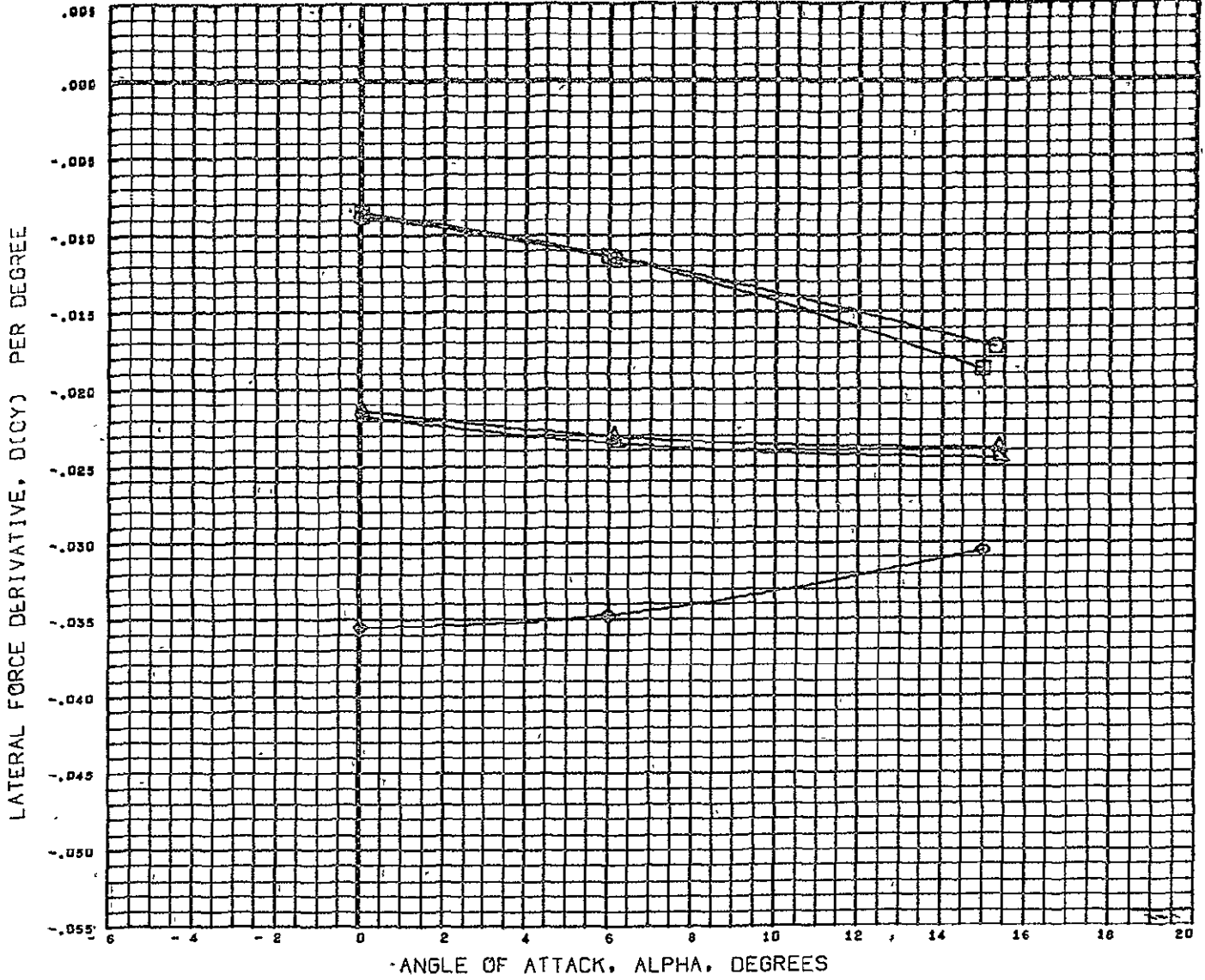
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERIVATIVES HI WING +DIHEDL



SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	1.200	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT
◇	1.100	INCIDW	0.000	DINHRL	7.660	LREF	3.4530	FEET
◇	1.110	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
◇	1.000	ELEVTR	0.000	CNDPOS	1.000	XMRP	2.5950	FEET
◇	1.120					YMRP	0.0000	FEET
						ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

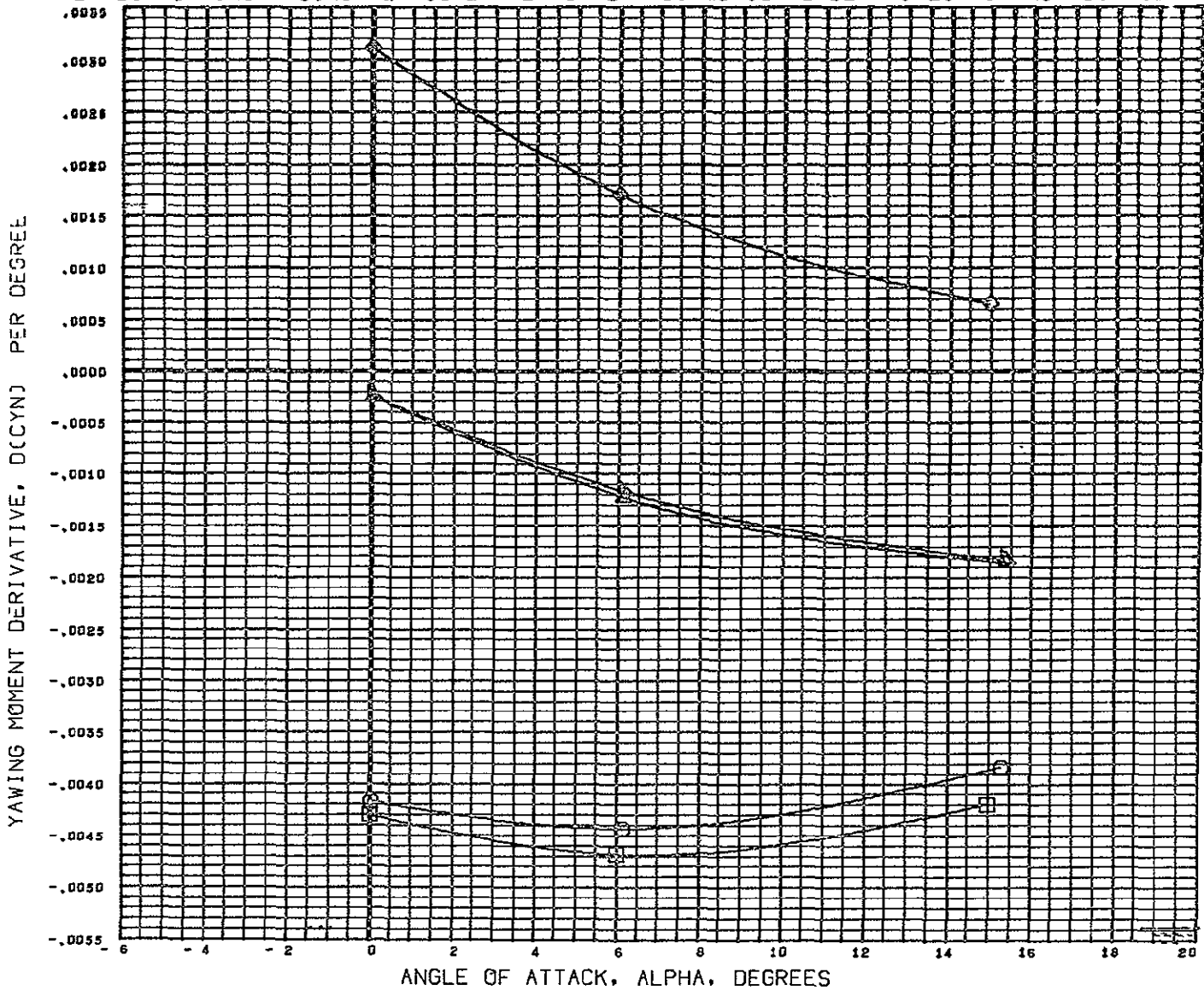
DATA HIST CODE MHJ

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERIVATIVES HI WING +DIHEDL



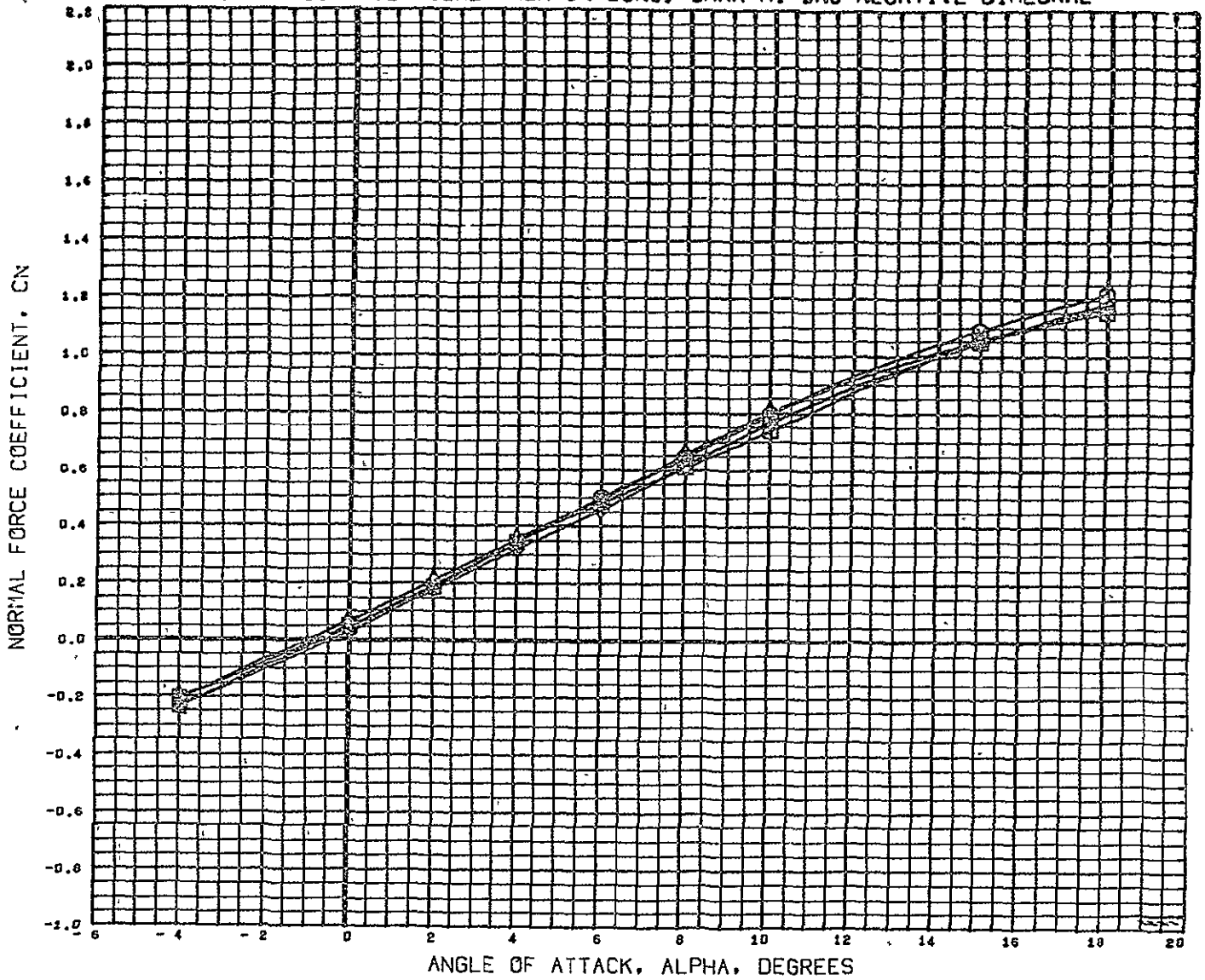
SYMBOL	VCLARA	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	1.200	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.		
△	1.100	0.000	DIHDL	7.660	LREF	3.4530	FEET		
◇	1.110	0.000	CANARD	0.000	BREF	3.4530	FEET		
○	1.000	0.000	CNDPOS	1.000	XNRP	2.5950	FEET		
	1.120				YNRP	0.0000	FEET		
					ZMRP	0.0187	FEET		
					SCALE	0.0150	SCALE		
		DATA HIST. CODE	MNI						

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERATIVES HI WNG +DIHEDL



SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.200	MACH	0.400	INCIDC	3.000	SREF	1 3550	SQ.FT
△	1.100	INCIDW	0 000	DINDRL	7.660	LREF	3 4530	FEET
○	1.110	AILRON	0 000	CANARD	0.000	BREF	3 4530	FEET
□	1.000	ELEVTR	0,000	CNDPOS	1.000	XMRP	2 5950	FEET
	1.120					YMRP	0 0000	FEET
						ZMRP	0 0187	FEET
						SCALE	0 0150	SCALE
		DATA HIST. CODE	MHI					

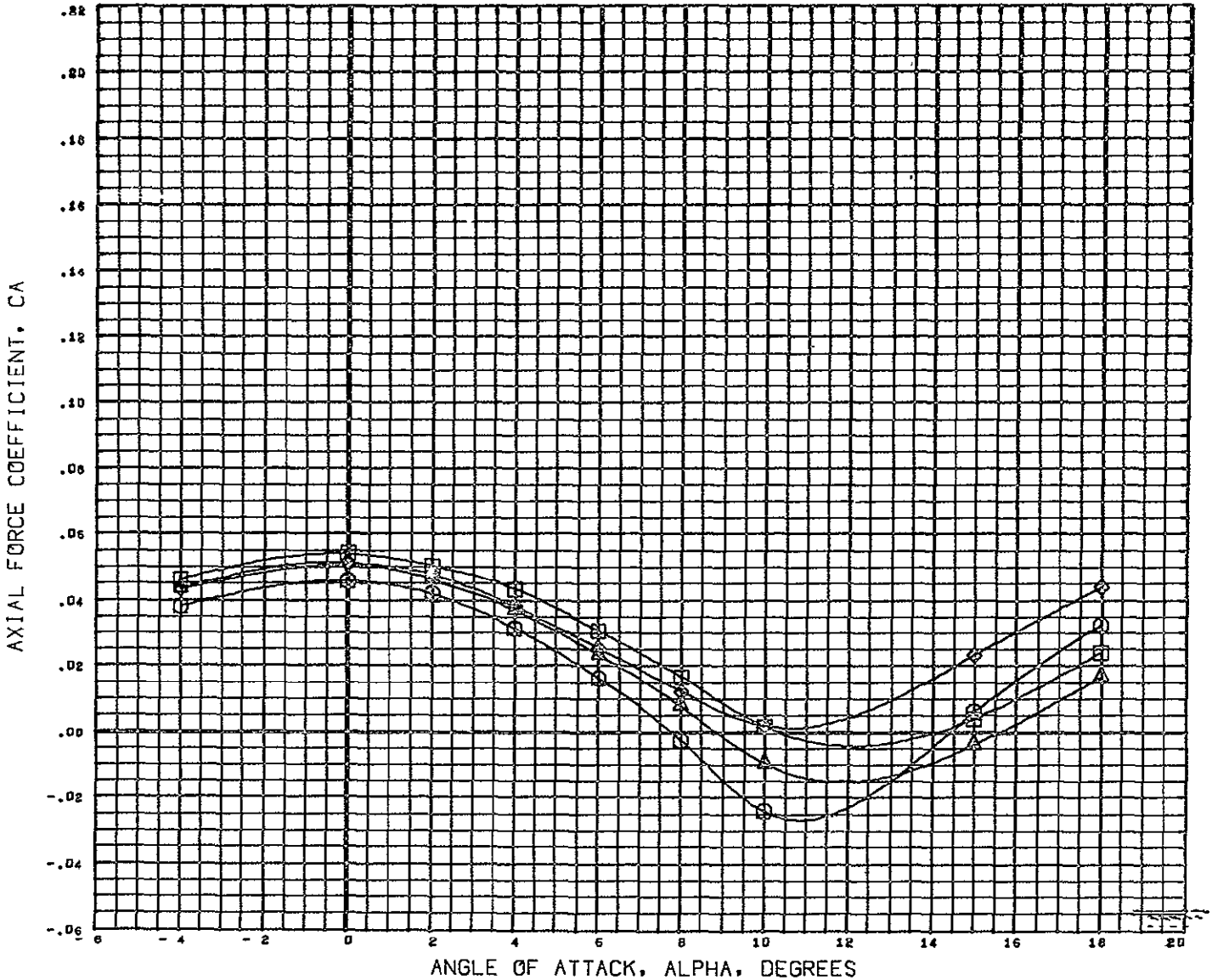
EFFECT OF INCREASING VERTICAL AREA ON LONG, CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

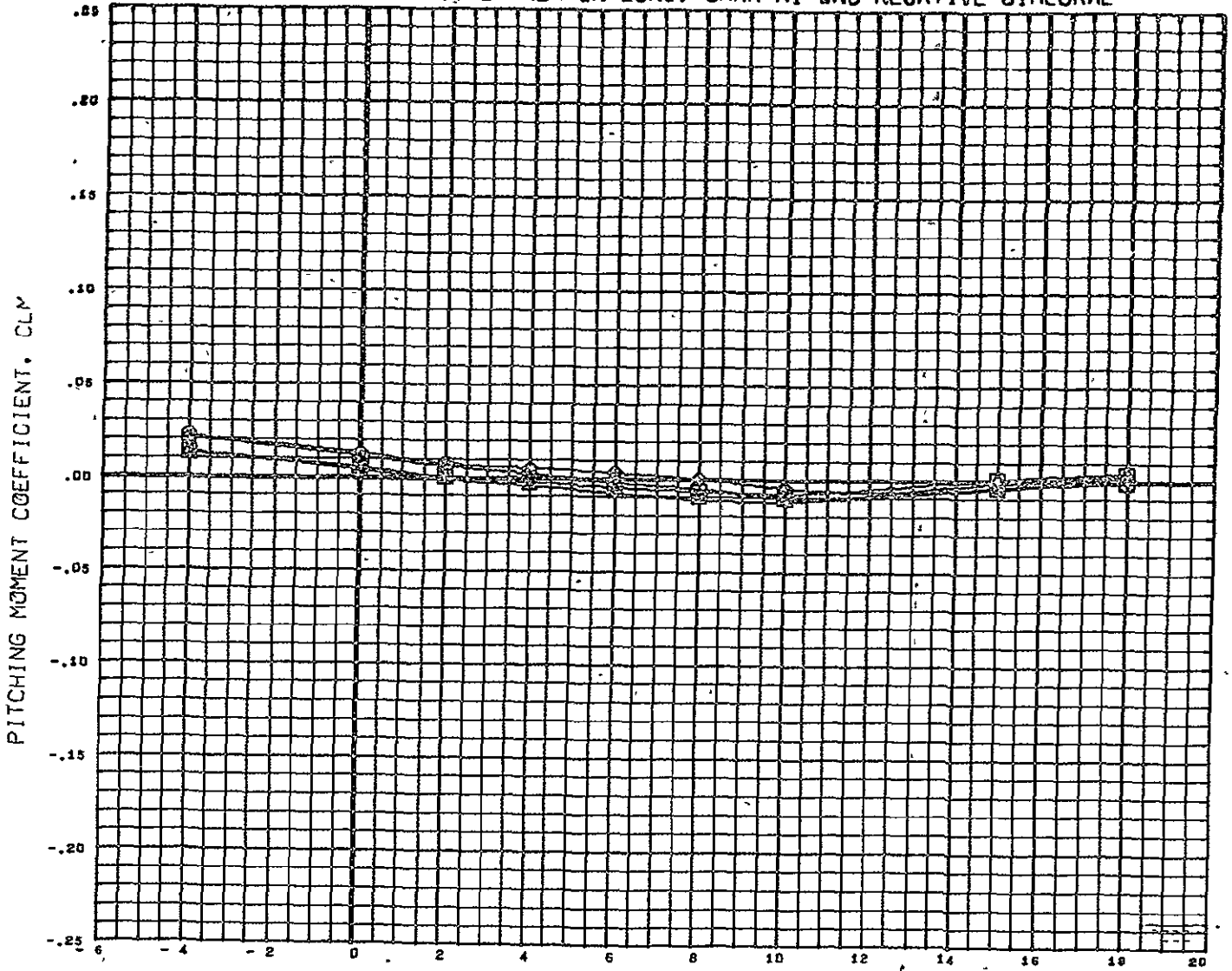
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

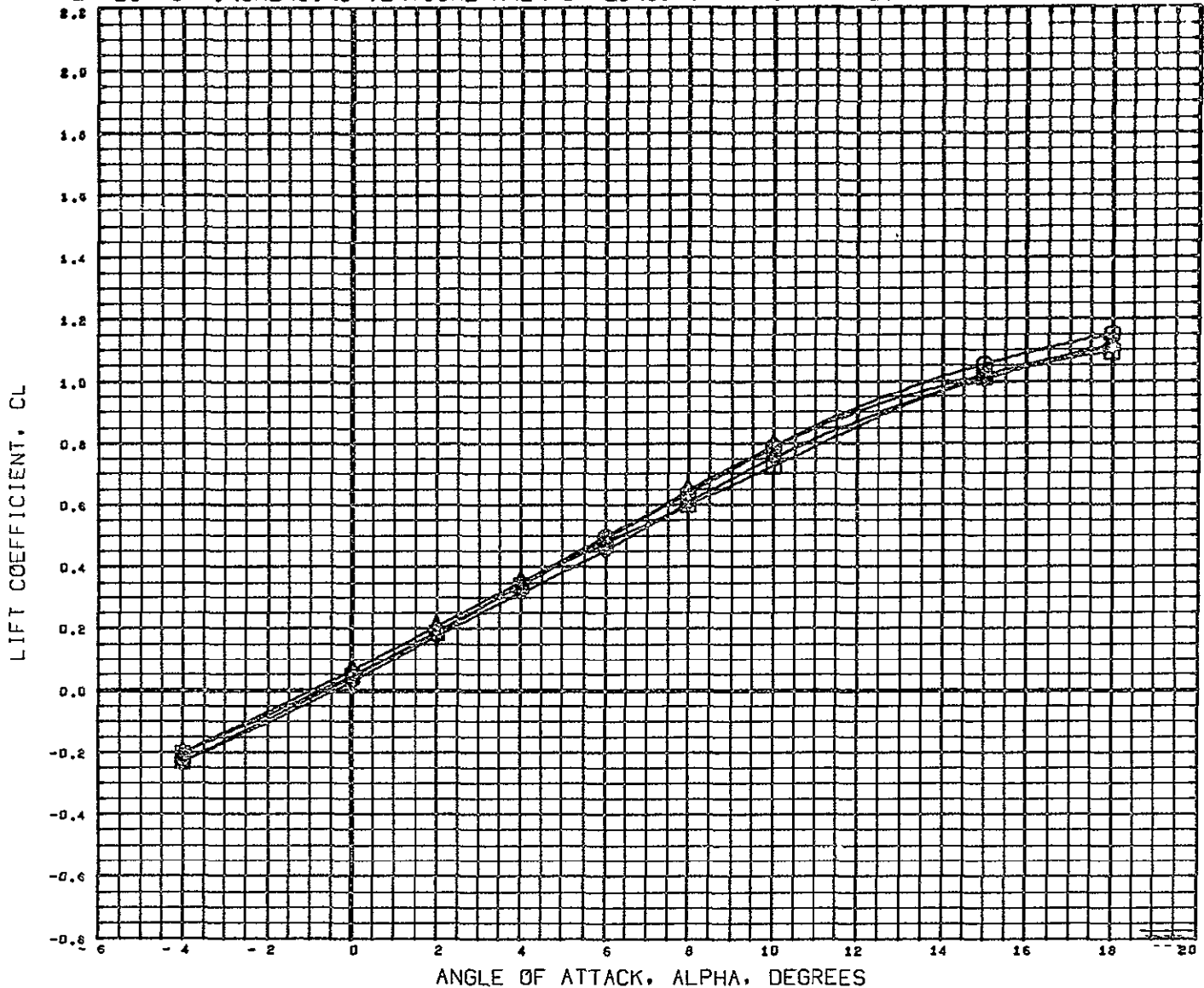
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(CN4001)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(CN4013)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(CN4005)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 3.4530 FEET
(CN4009)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

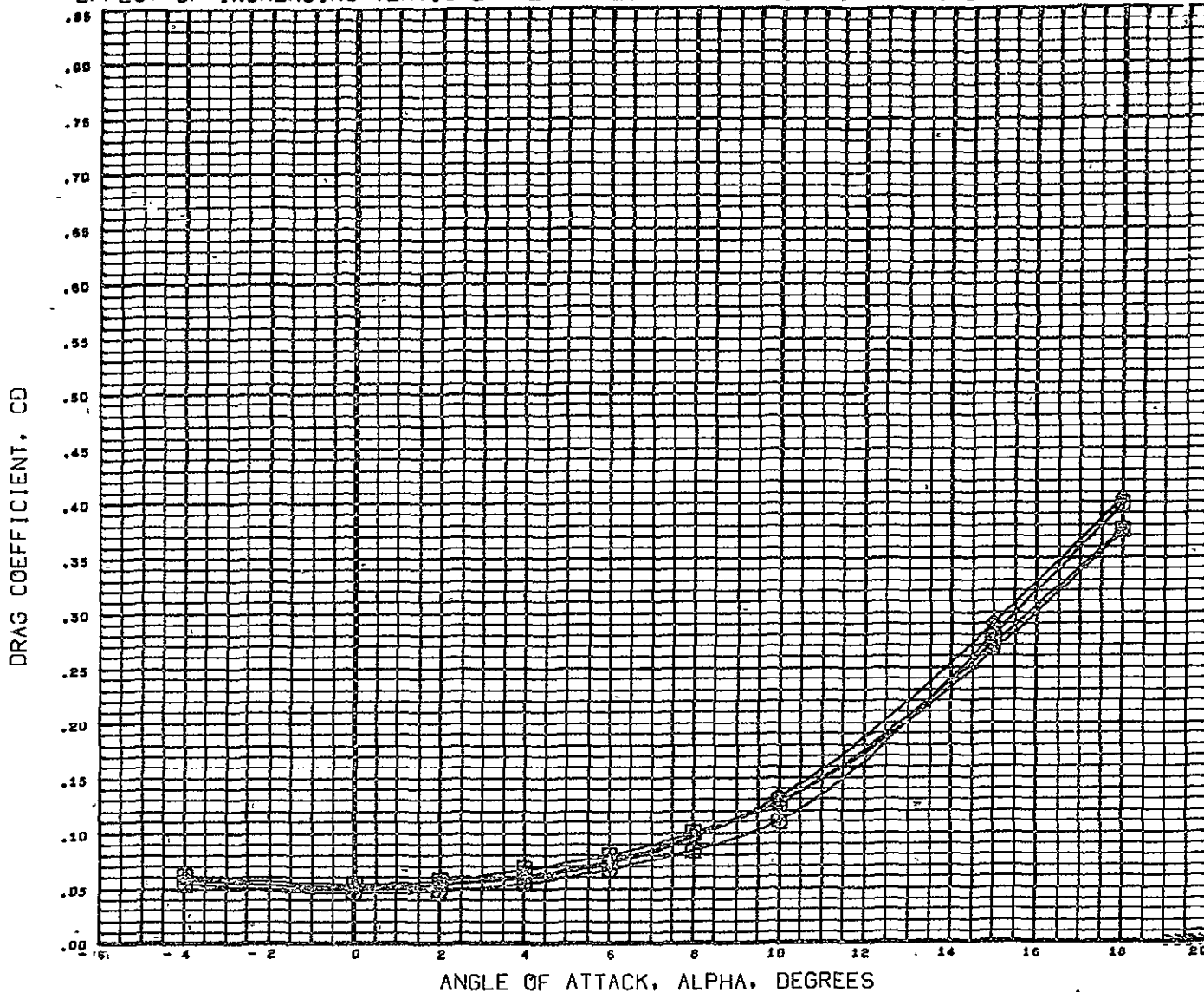
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XWRP 2.5950 FEET YWRP 0.0000 FEET ZWRP 0.0187 FEET SCALE 0.0150 SCALE

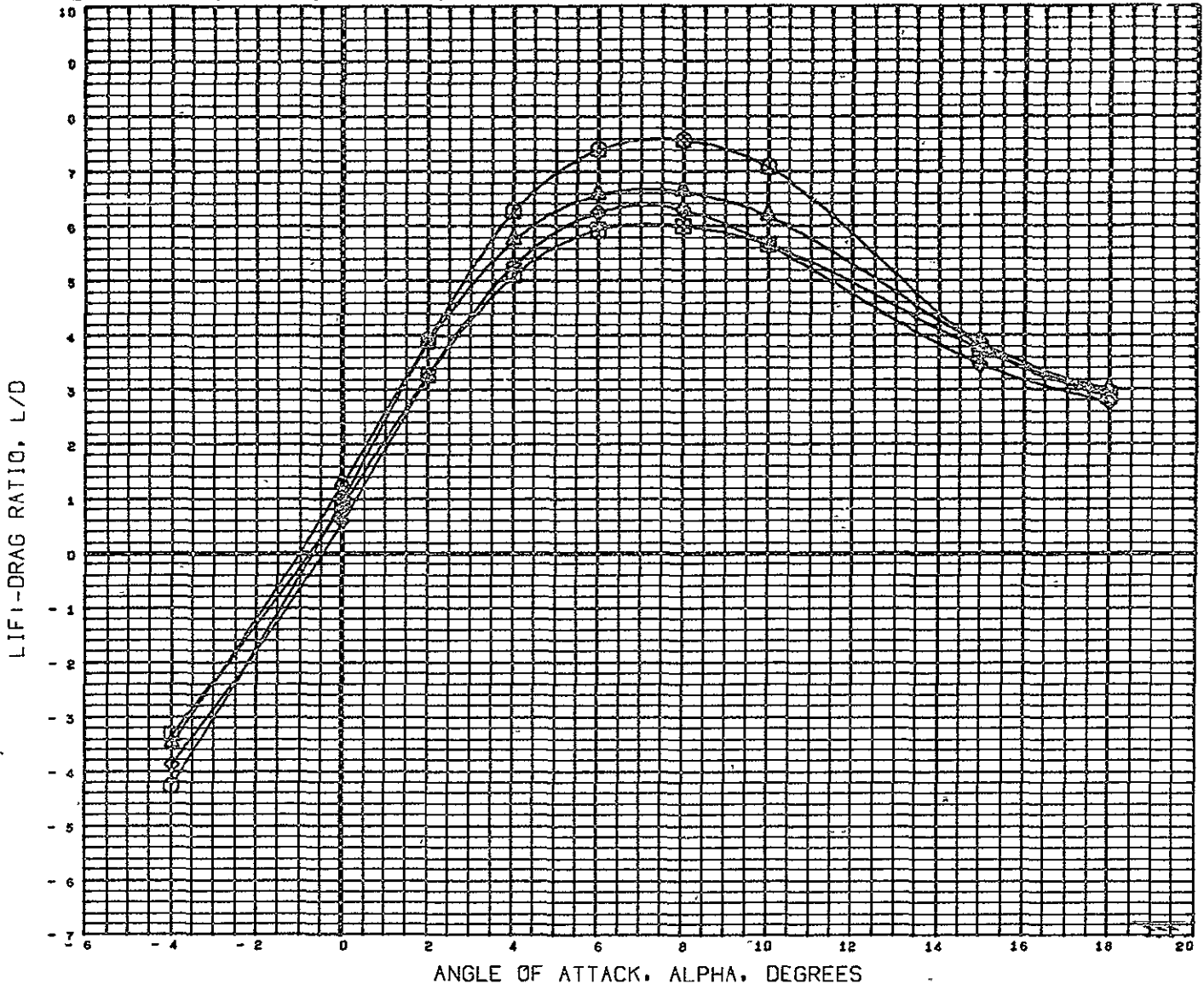
MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0 0150 SCALE

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL

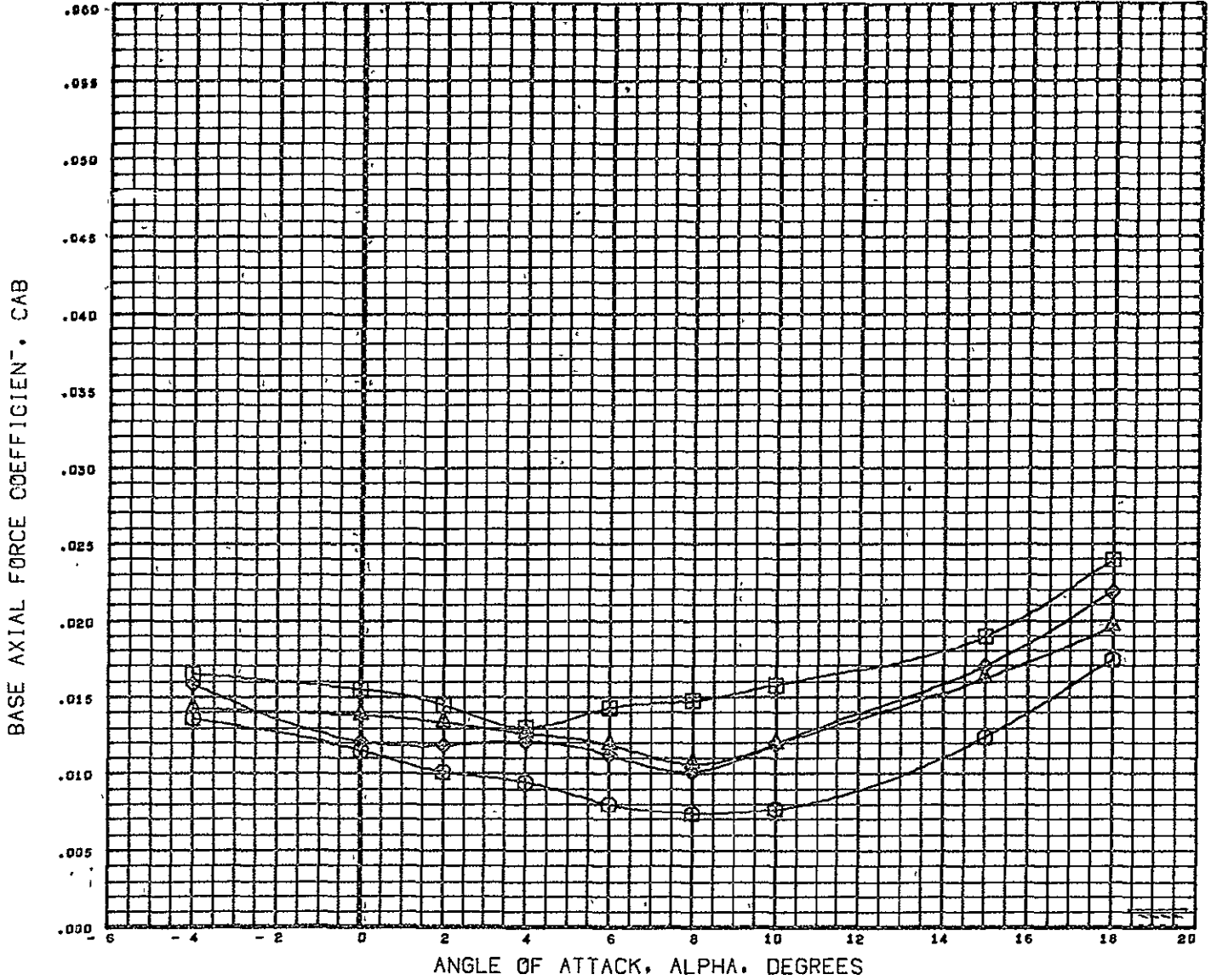


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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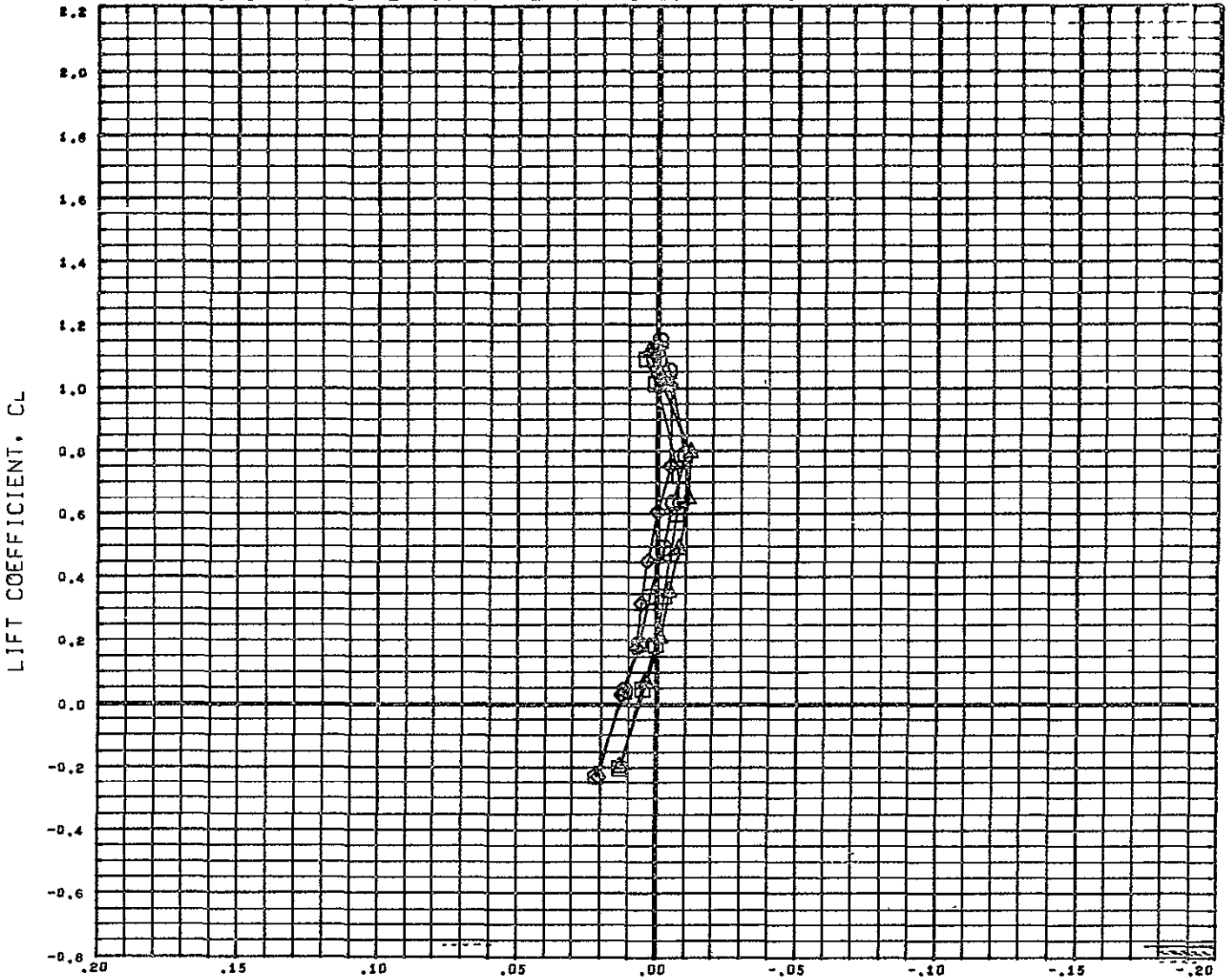
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT.
(GN4013) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005) ◇	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009) □	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

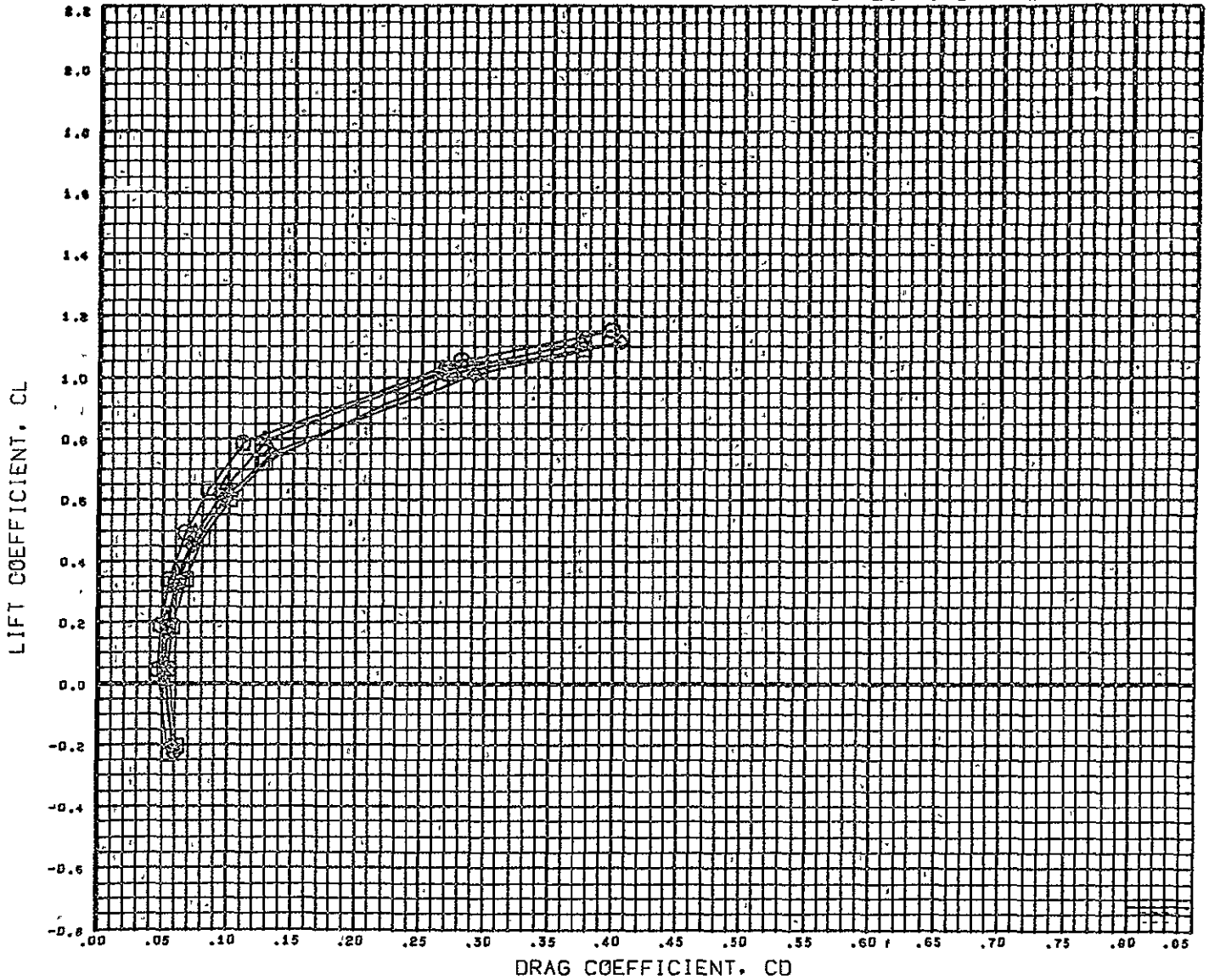
EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LONG. CHAR HI WNG NEGATIVE DIHEDRAL

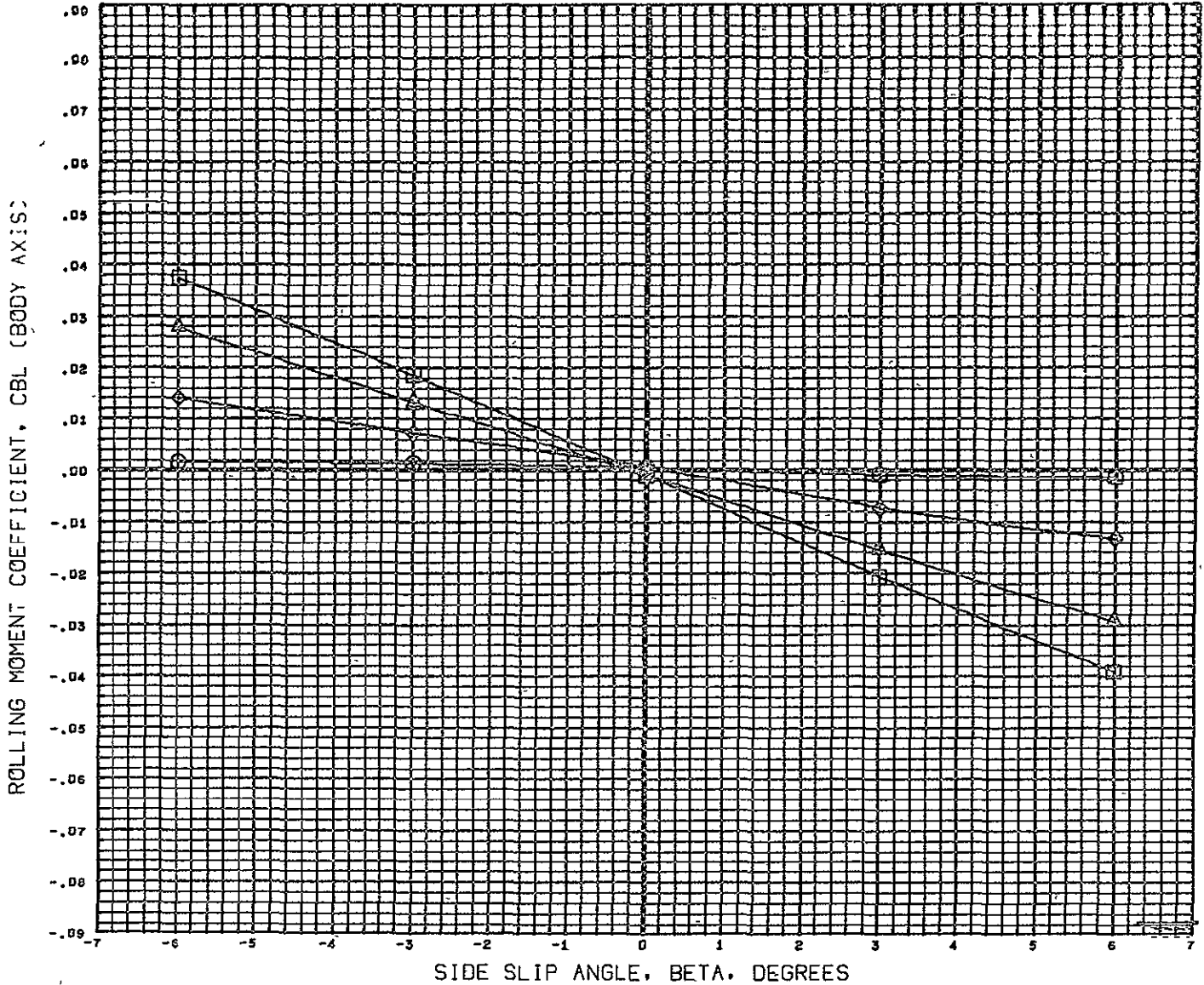


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4013)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4005)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4009)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XMRP 2.9950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

C.12

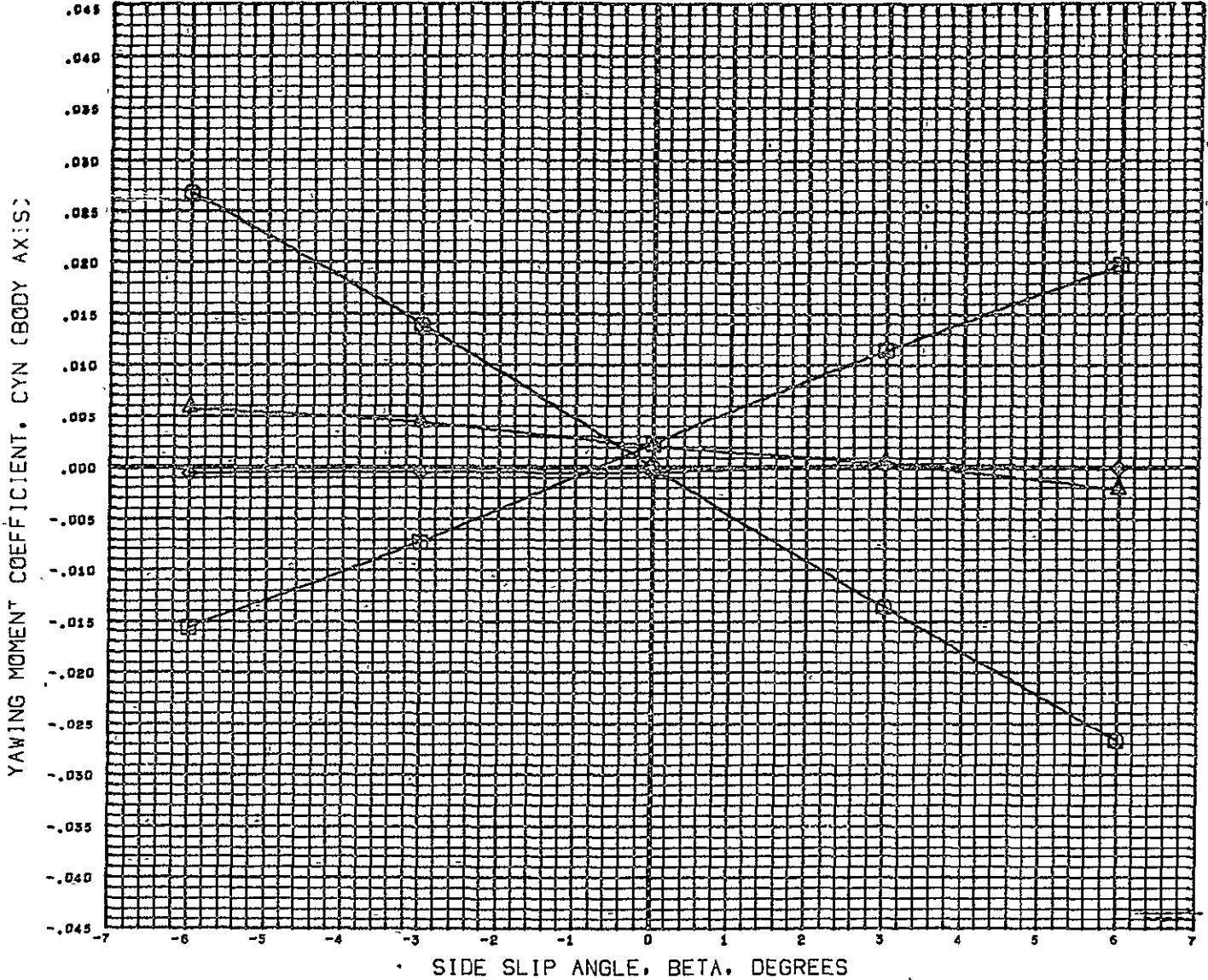
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL'	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4002)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(GN4014)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4006)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4010)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.9950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

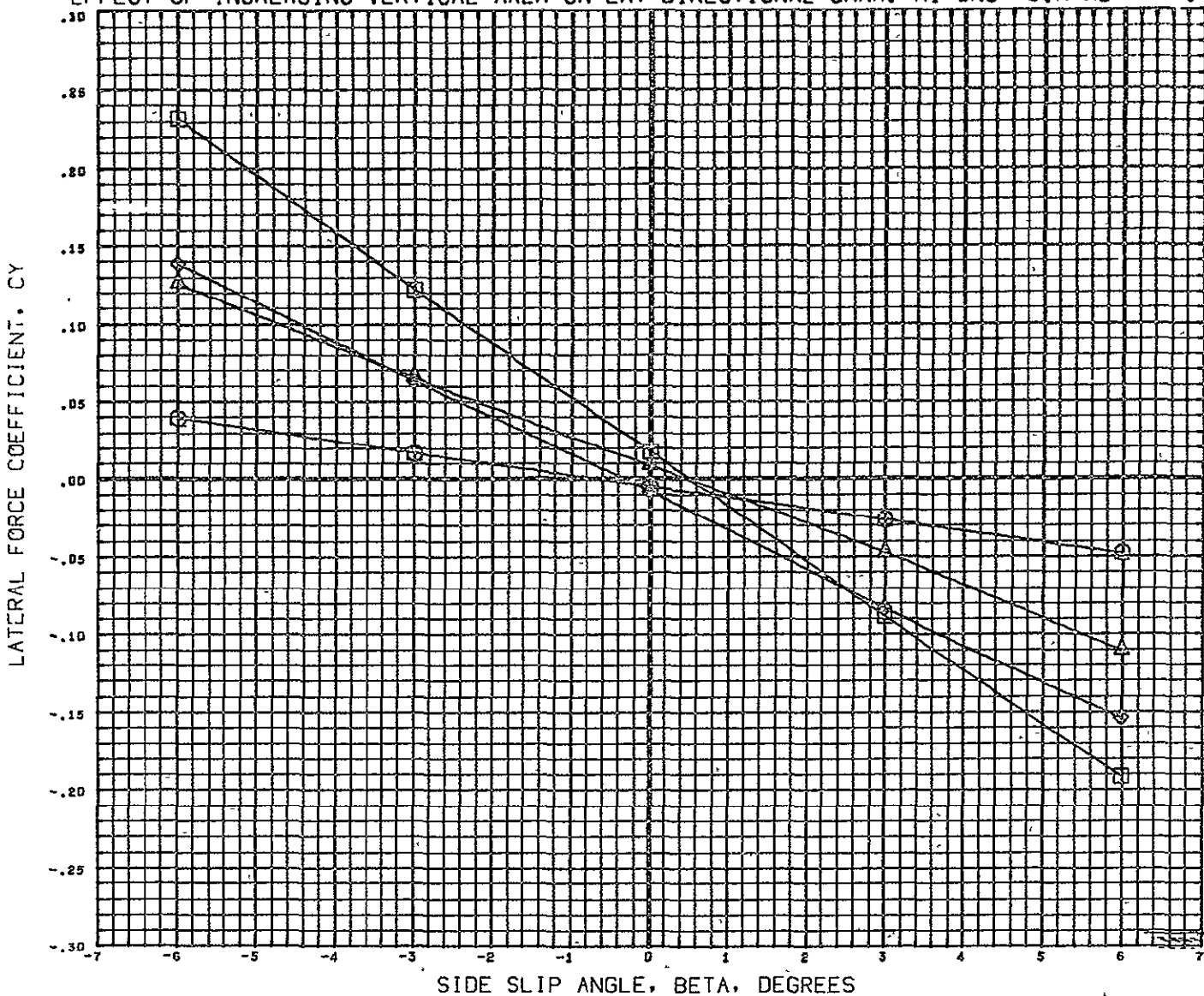
MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4002)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(GN4014)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4006)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	DREF 3.4530 FEET
(DN4010)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

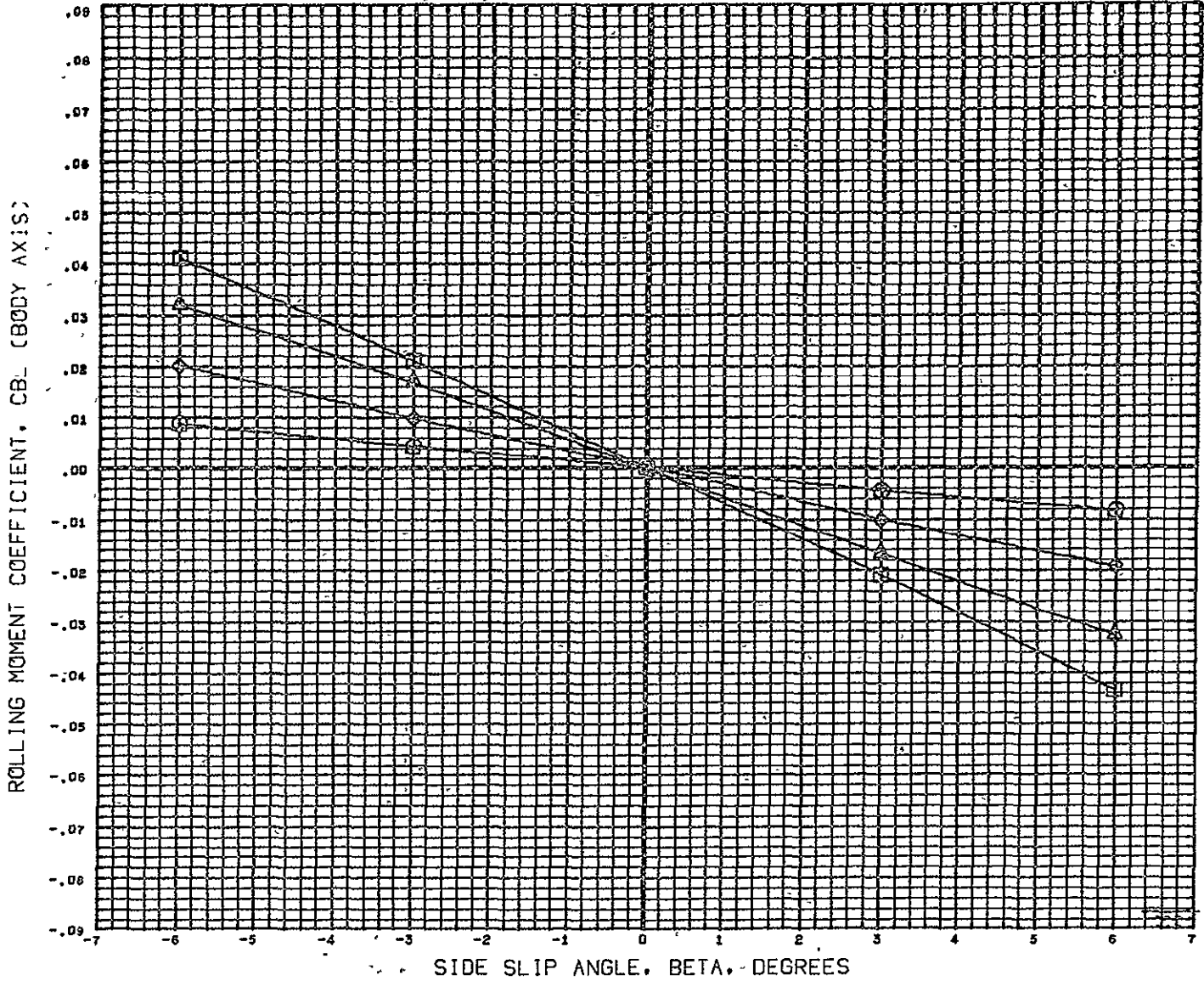
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -UIH ALPHA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4002)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ FT.
(GN4014)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4006)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(GN4010)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA= 6

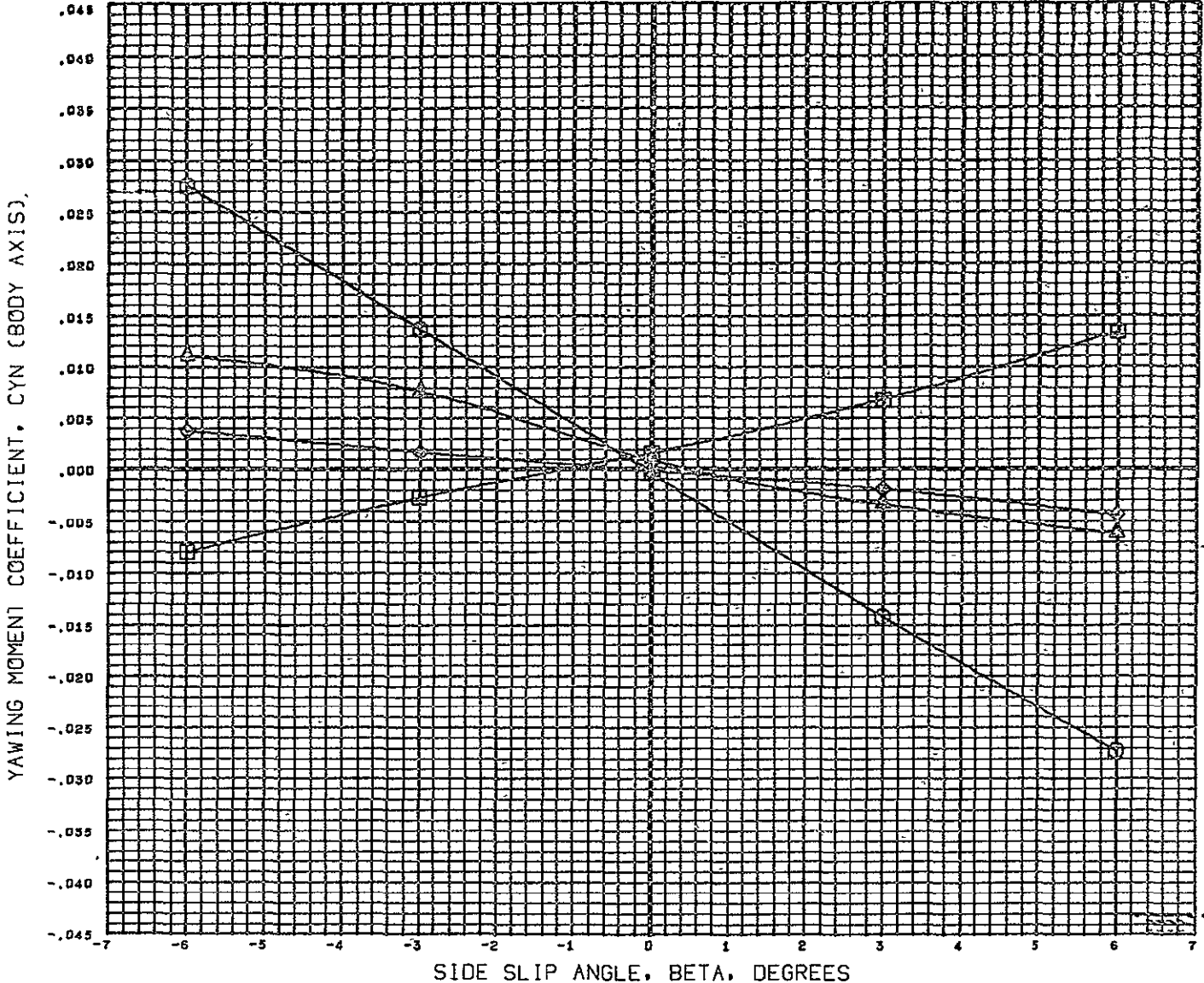


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIH/DRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4003)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ FT.
(GN4015)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4011)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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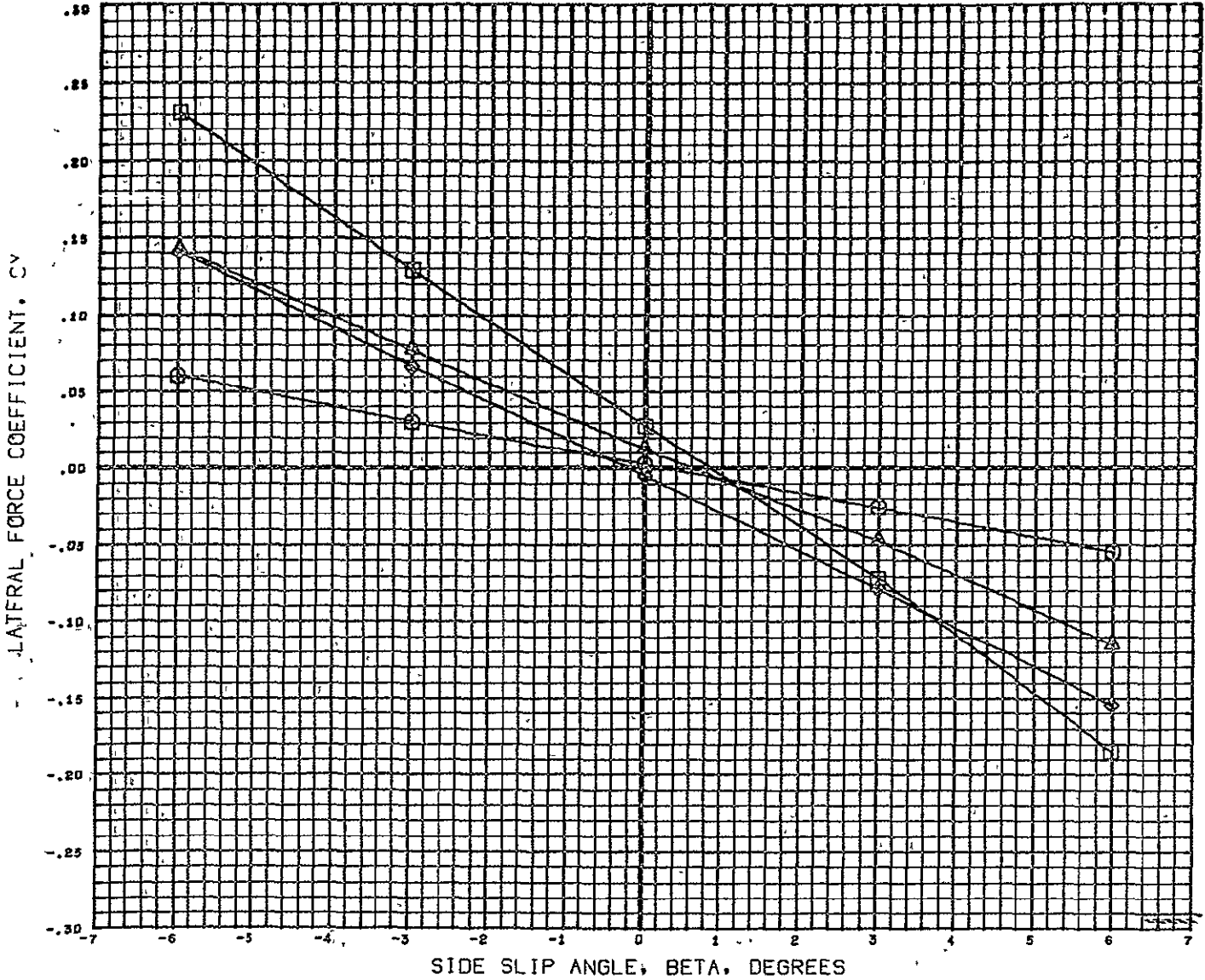
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA= 6



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{FN4003}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
{GN4015}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
{GN4007}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
{DN4011}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRF 2.5950 FEET YHRF 0.0000 FEET ZHRF 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

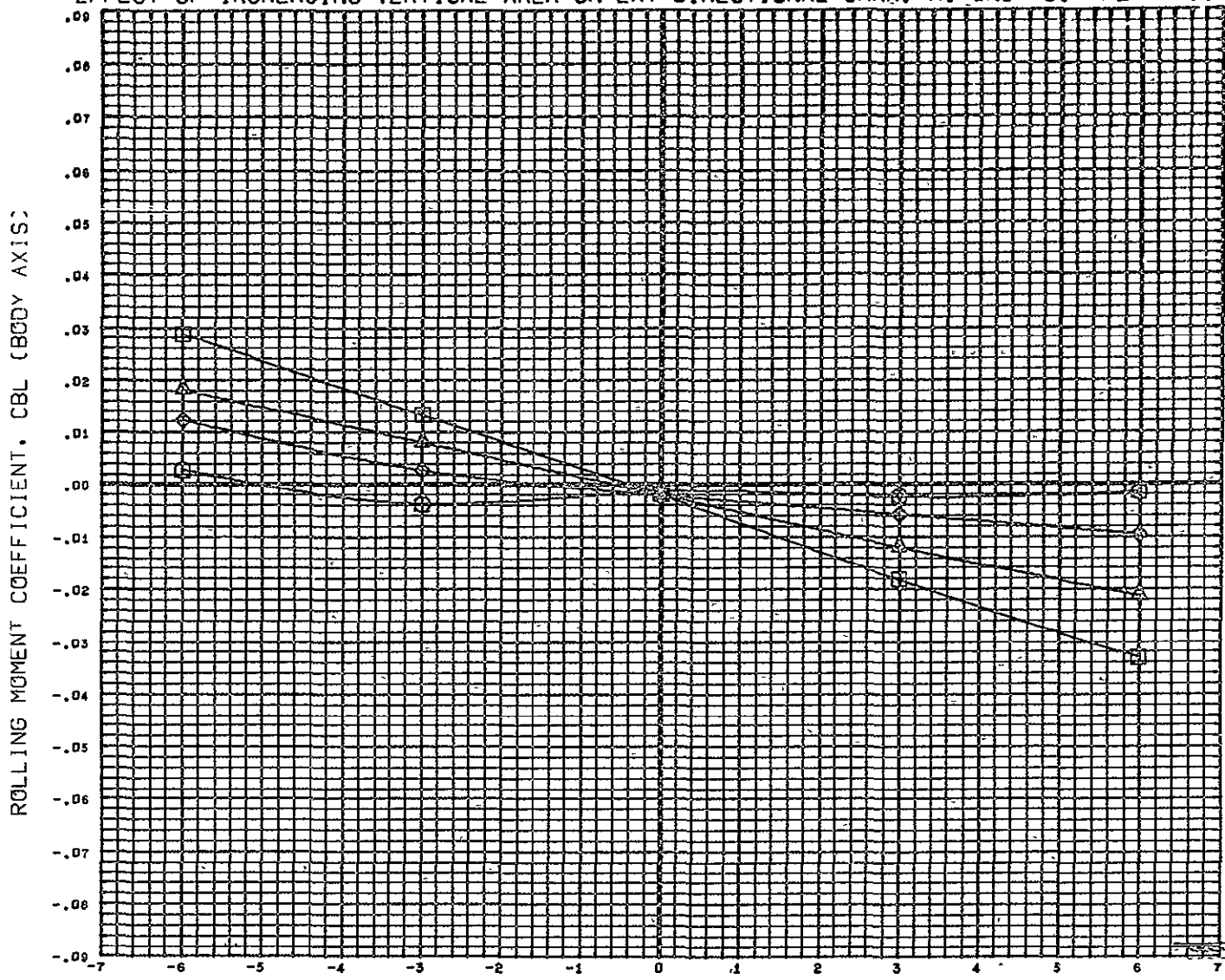
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA= 6



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIH DRL	CND POS	WNG POS	INCIDW	REFERENCE INFORMATION
(FN4003)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SG FT.
(GN4015)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4011)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA=15

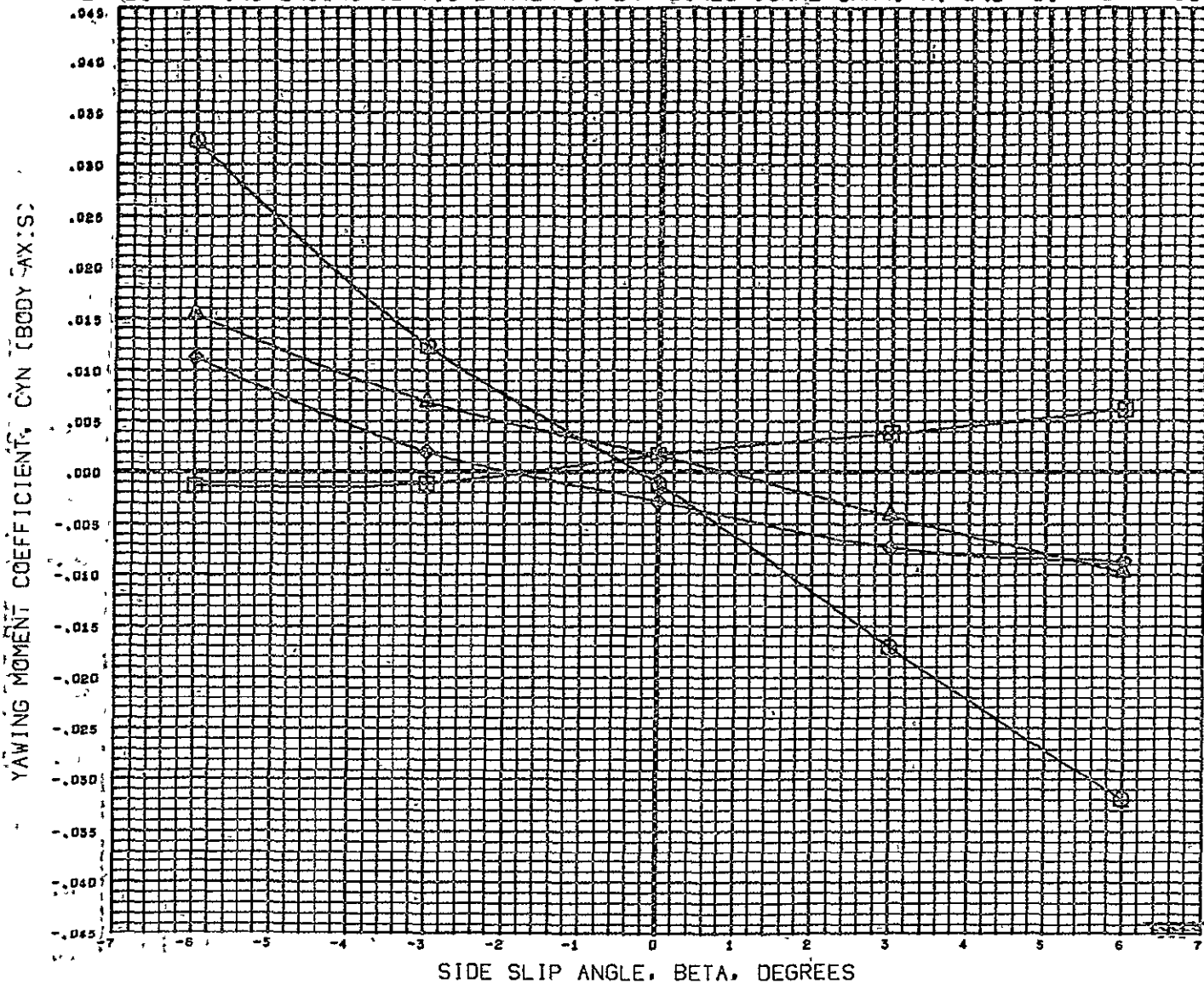


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4004)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(GN4016)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4008)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4012)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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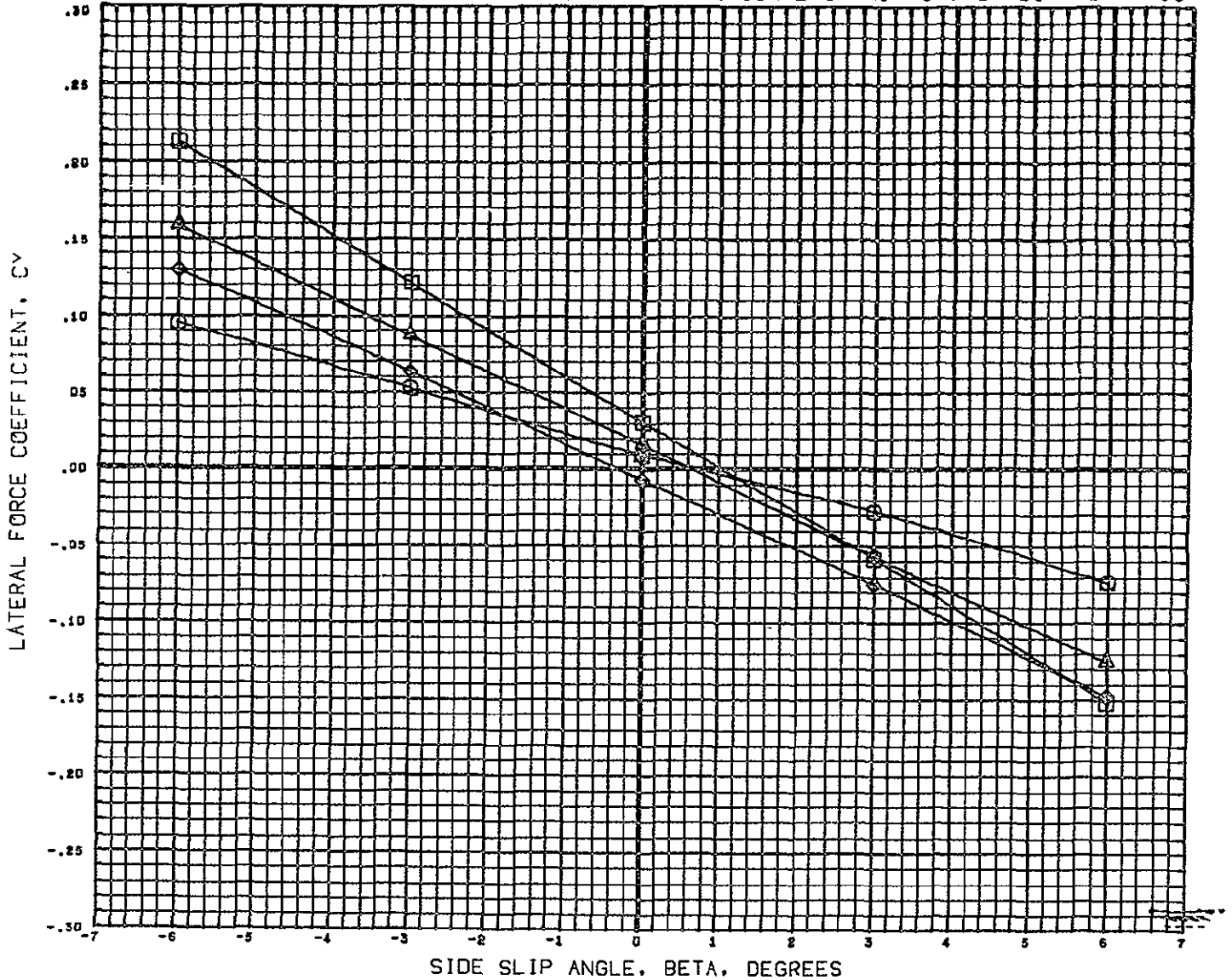
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA=15



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(EN4004)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(GN4016)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4008)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4012)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0197 FEET SCALE 0.0150 SCALE

MACH .40

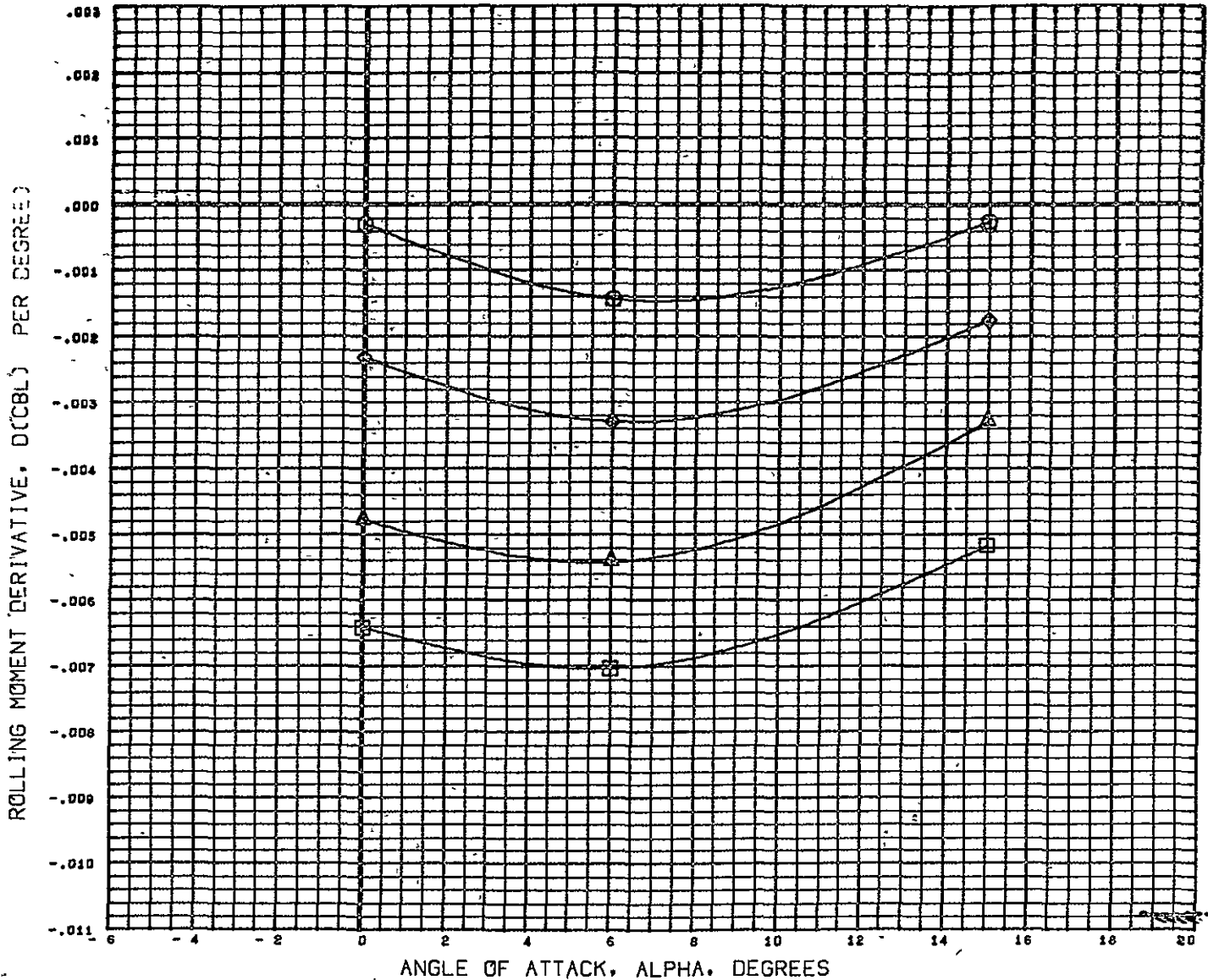
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL CHAR. HI WNG -DIH ALPHA=15



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(FN4004)	○	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4016)	△	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(GN4008)	◇	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET
(DN4012)	□	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	-7.660	1.000	1.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0387 FEET SCALE 0.0150 SCALE

MACH .40

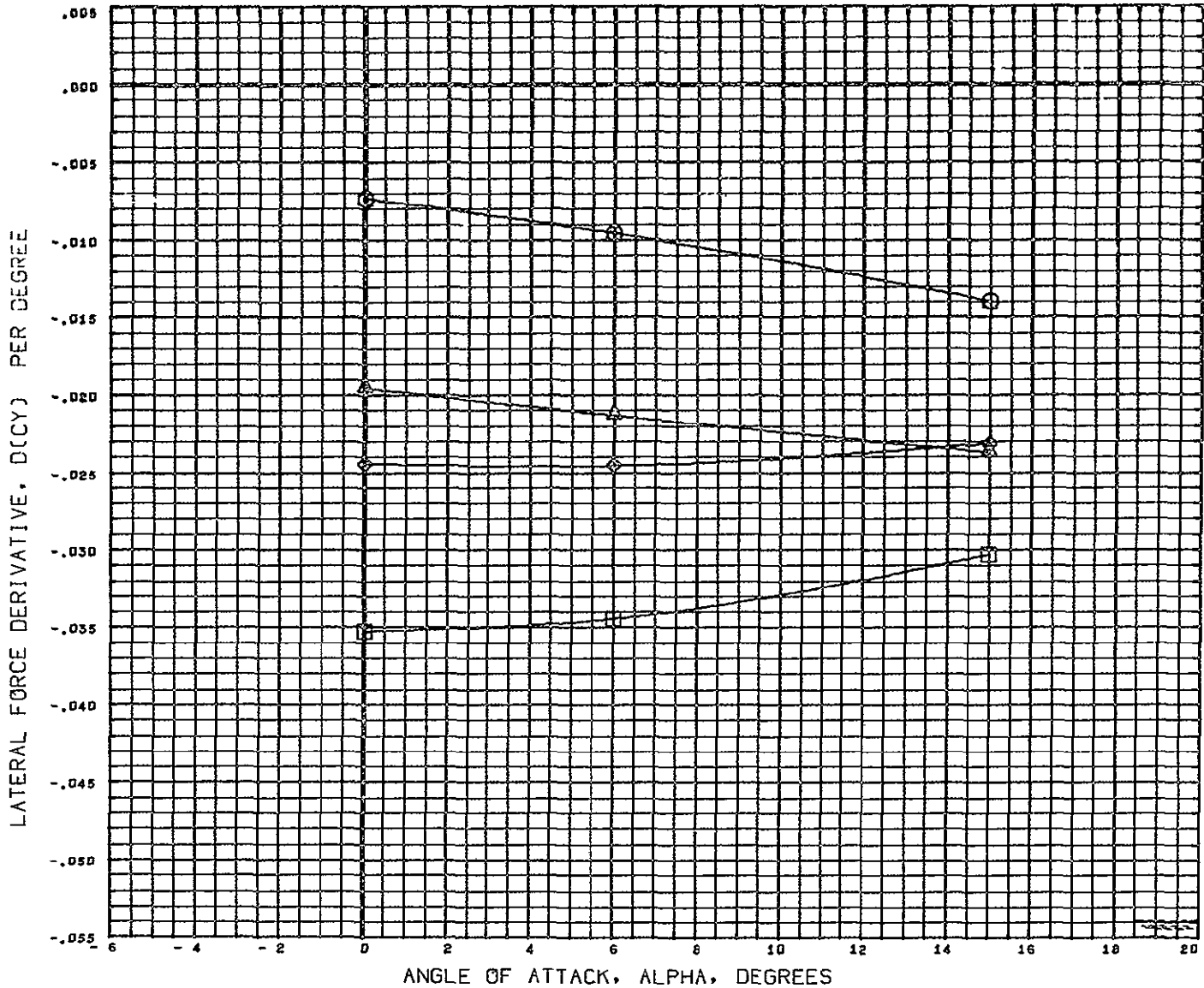
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERIVATIVES HI WNG -DIHEDL



SYMBOL	VCLARA	MACH	PARAMETRIC VALUES		REFERENCE INFORMATION	
○	1.200	0.400	INCIDC	3.000	SREF	1.3550 SQ.FT.
◇	1.100	0.000	DIHDL	7.660	LREF	3.4530 FEET
△	1.210	0.000	CANARD	0.000	BREF	3.4530 FEET
□	1.110	0.000	CNDPOS	1.000	XHRP	2.5950 FEET
					YHRP	0.0000 FEET
					ZHRP	0.0187 FEET
					SCALE	0.0150 SCALE

DATA HIST. CODE MHI

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERIVATIVES HI WNG -DTHEDL

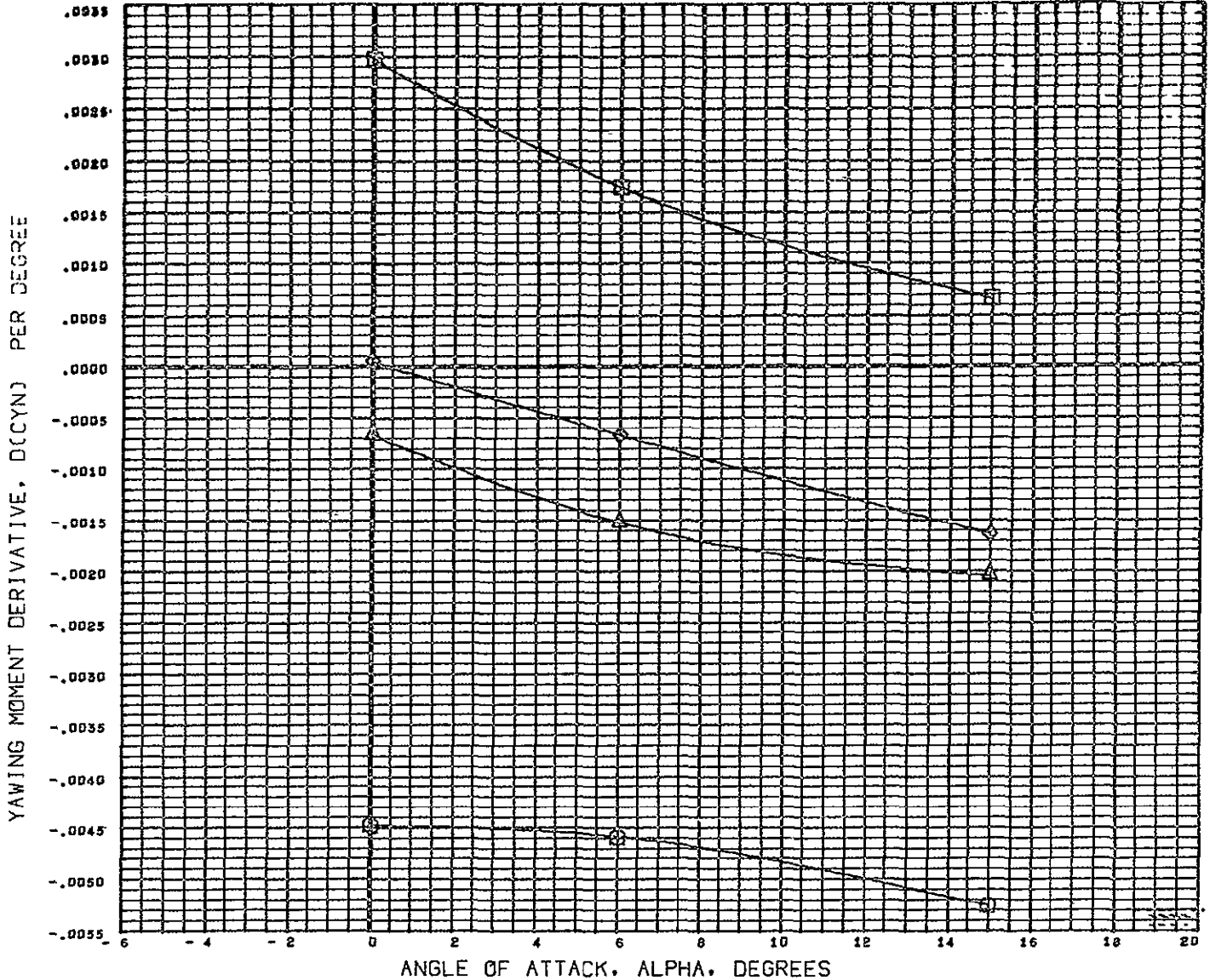


ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.200	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	1.100	INCIDW	0.000	DIHDRL	- 7.660	LREF	3.4530	FEET
◇	1.210	ATLRON	0.000	CANARD	0.000	BREF	3.4530	FEET
□	1.110	ELEVTR	0.000	CNDFOS	1.000	XNRP	2.5950	FEET
						YNRP	0.0000	FEET
						ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

DATA HIST. CODE MMI

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIRECTIONAL DERIVATIVES HI WNG -DIHEDL

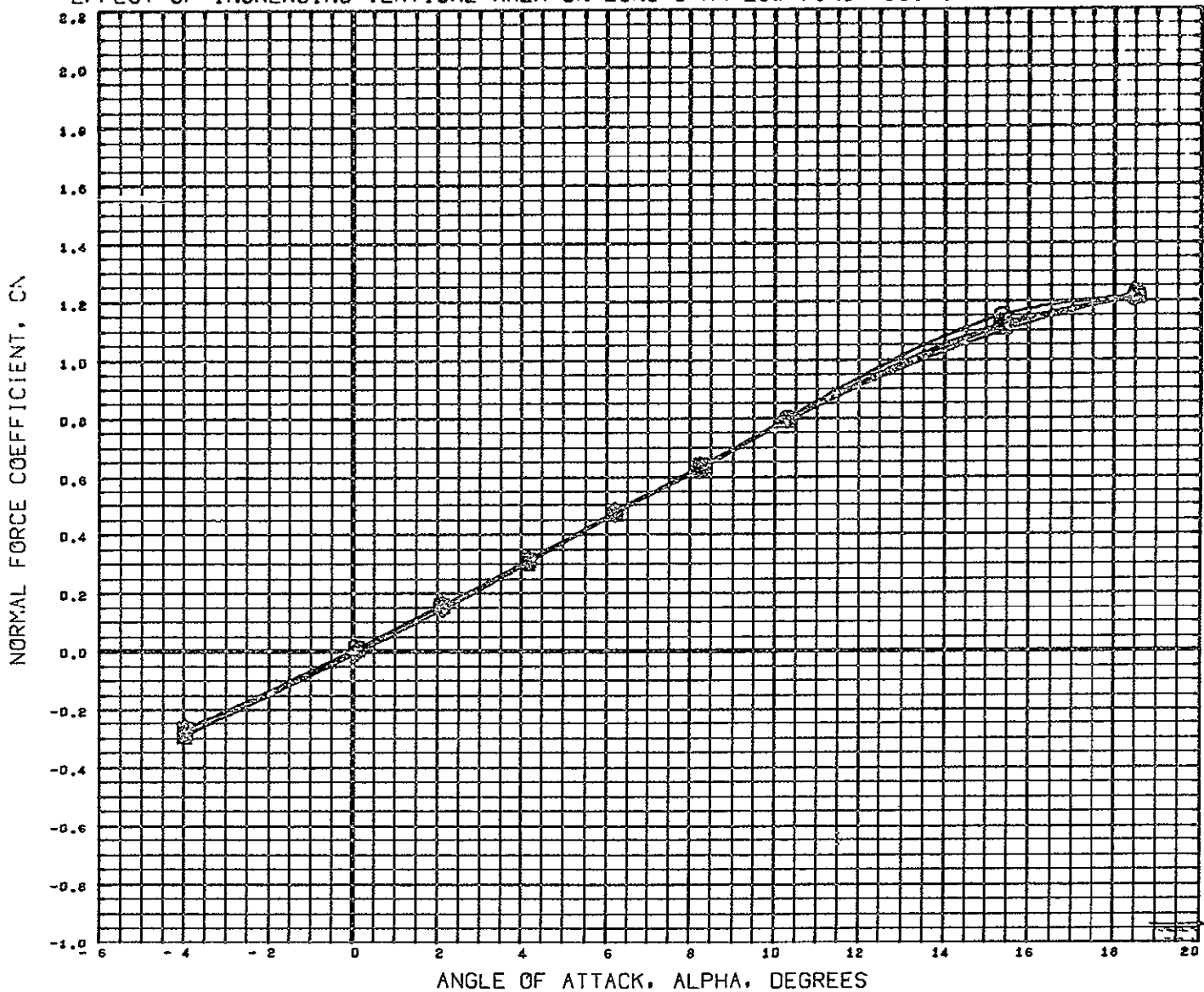


SYMBOL	VCLARA	PARAMETRIC VALUES			
□	1.200	MACH	0.400	INCIDC	3.000
◇	1.100	INCIDW	0.000	DIHDL	- 7.660
△	1.210	AILRON	0.000	CANARD	0.000
○	1.110	ELEVTR	0.000	CNDPOS	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	3.4530	FEET
BREF	3.4530	FEET
XHRP	2.5950	FEET
YHRP	0.0000	FEET
ZHRP	0.0187	FEET
SCALE	0.0150	SCALE

DATA HIST. CODE MHI

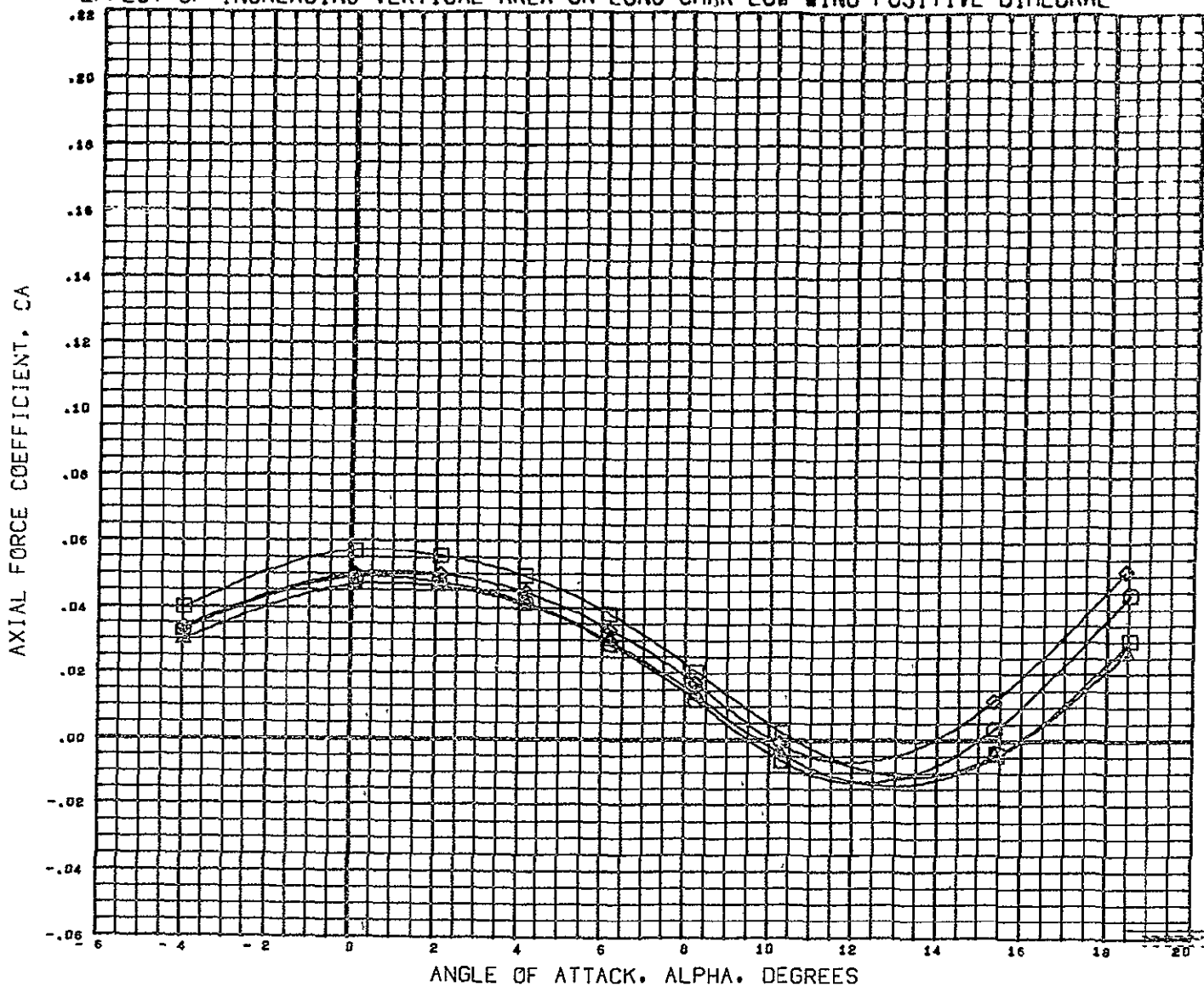
EFFECT OF INCREASING VERTICAL AREA ON LONG CHAM LOW WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

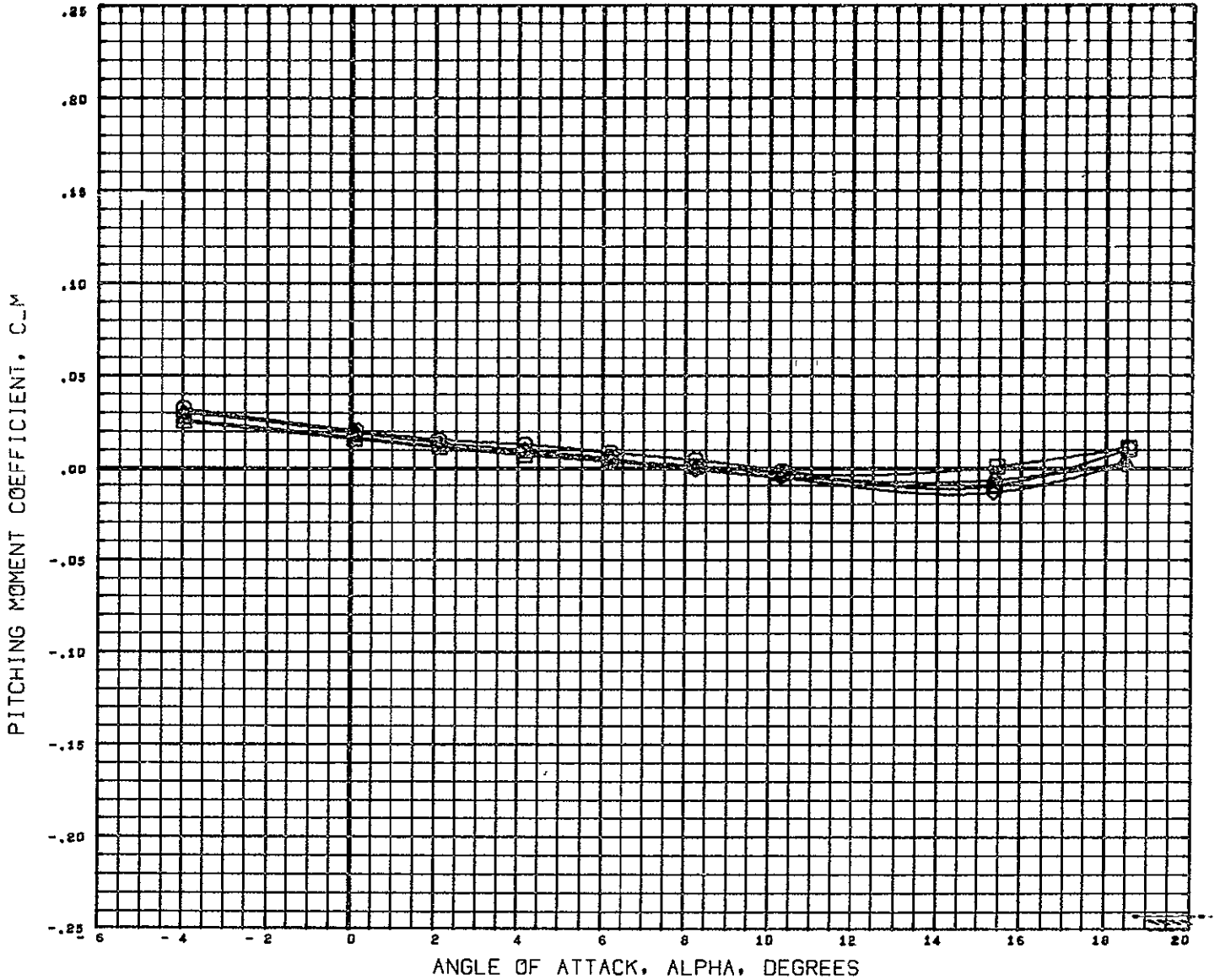
MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LONG CHAM LOW WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(HN2017)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0167 FEET SCALE 0.0150 SCALE

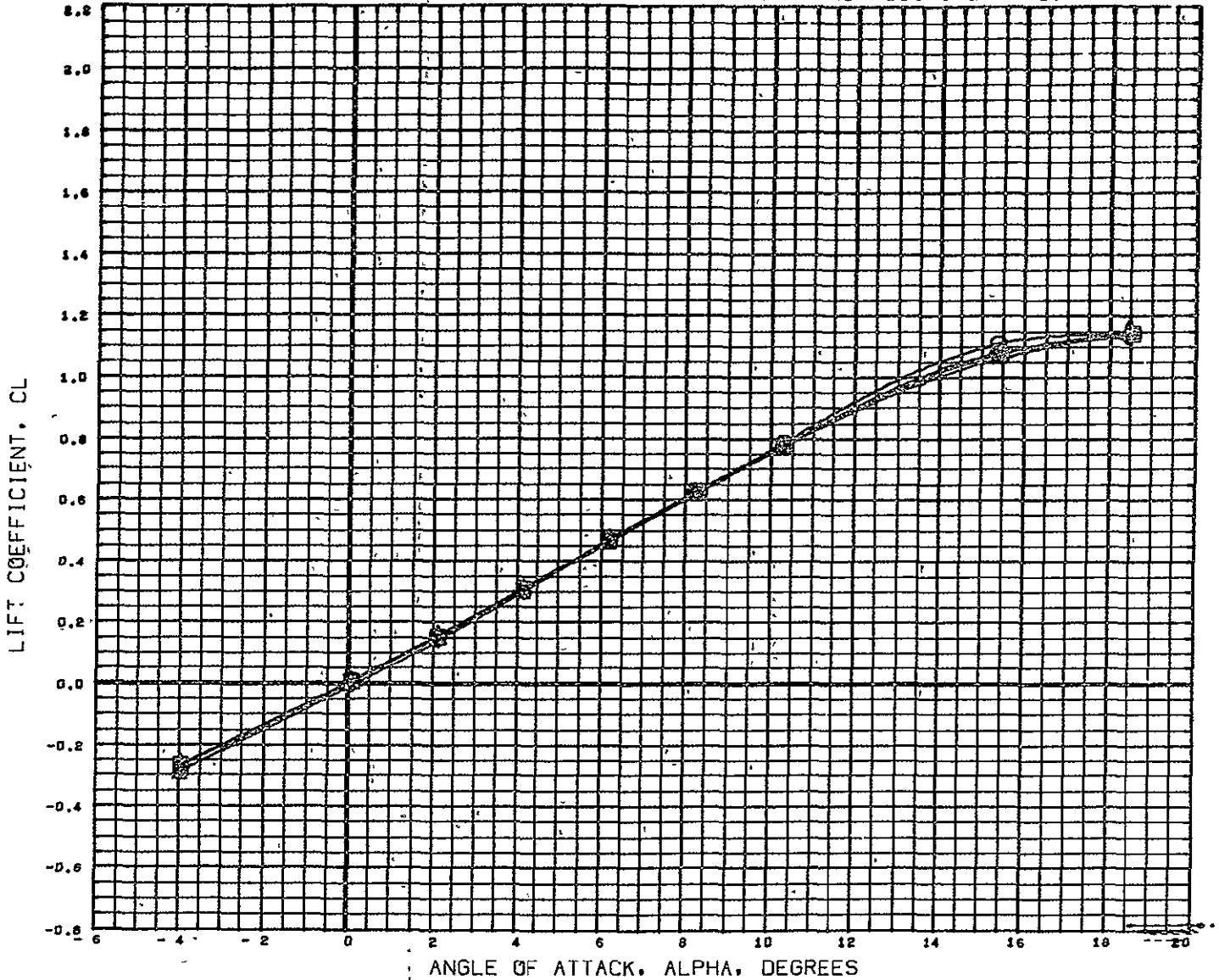
EFFECT OF INCREASING VERTICAL AREA ON LONG CHAM LOW WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2017)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LONG CHAR LOW WING POSITIVE DIHEDRAL

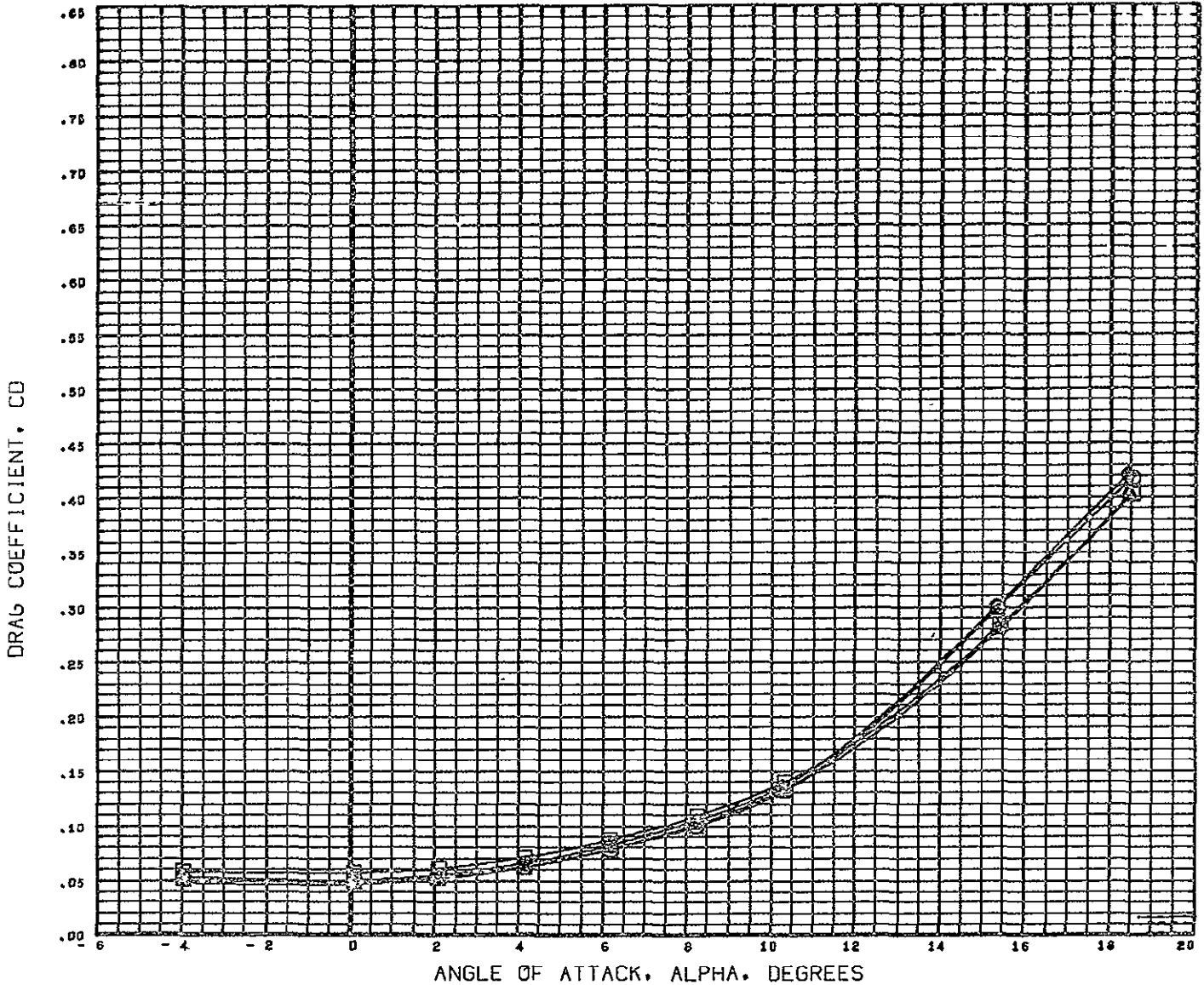


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(NN2017)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(NN2209)	NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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EFFECT OF INCREASING VERTICAL AREA ON LONG CHAR LOW WING POSITIVE DIHEDRAL

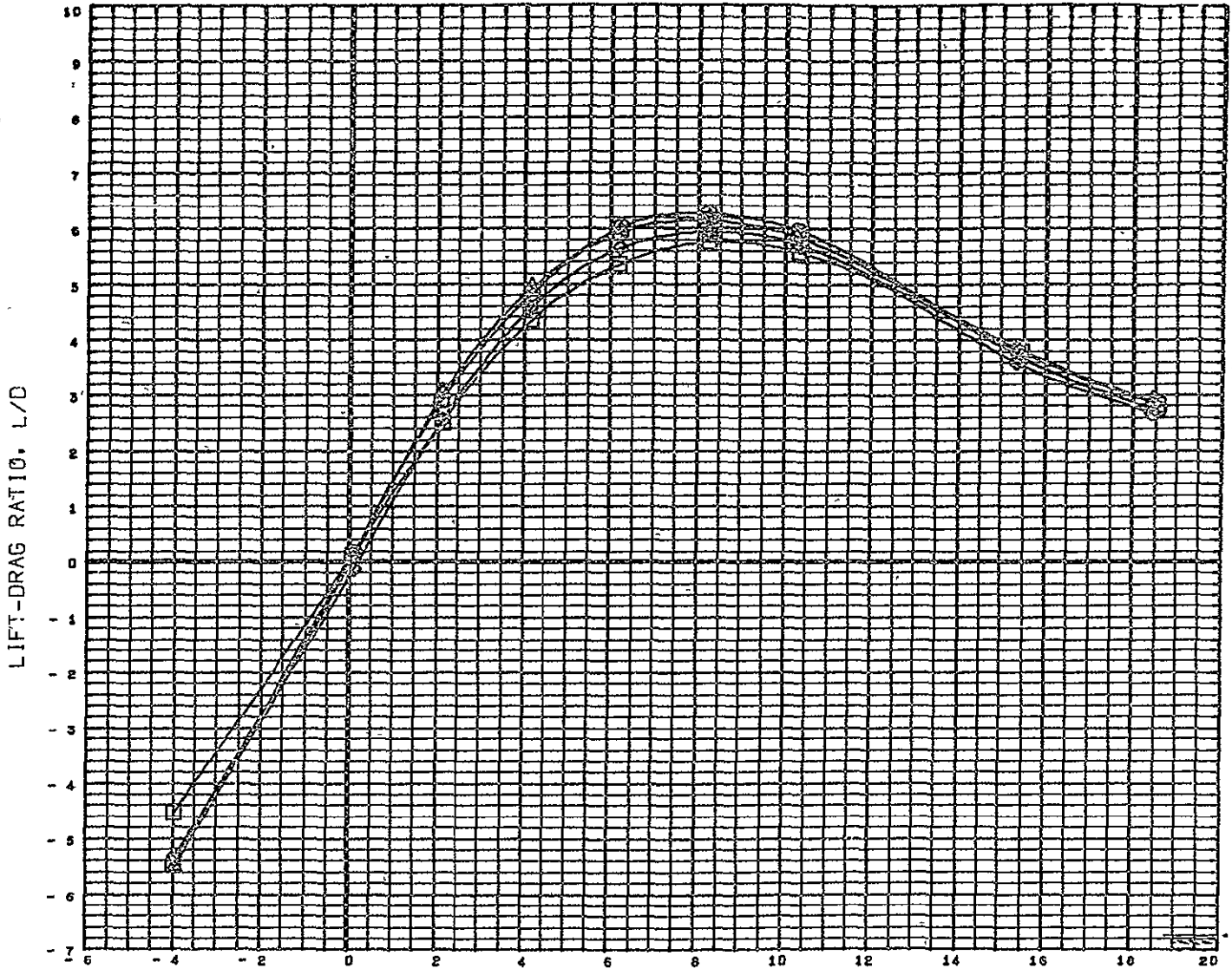


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2017)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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EFFECT OF INCREASING VERTICAL AREA ON LONG CHAM LOW WING POSITIVE DIHEDRAL

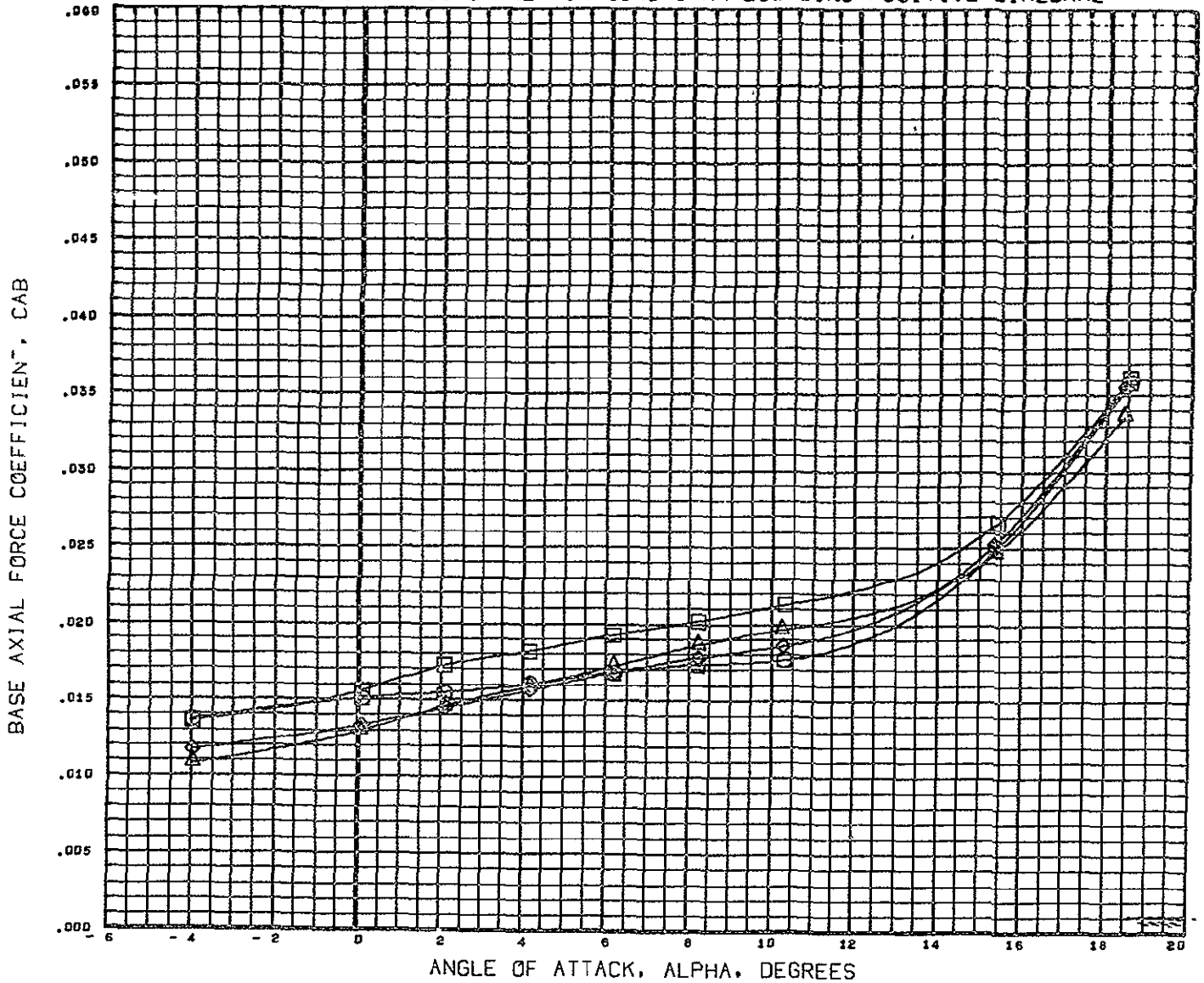


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .40

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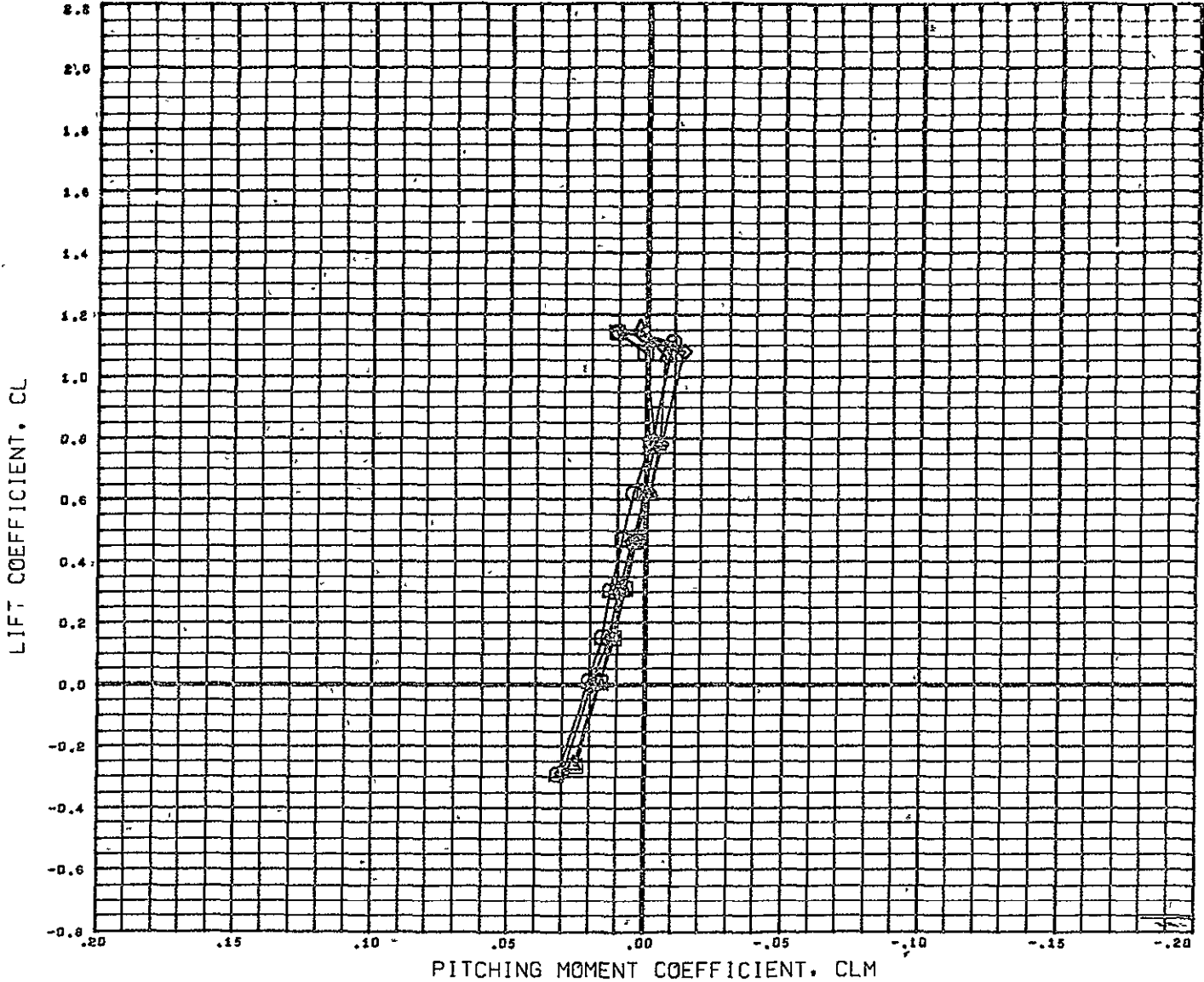
EFFECT OF INCREASING VERTICAL AREA ON LONG CHAR LOW WING POSITIVE DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT.
(HN2017)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LONG CHAN LOW WING POSITIVE DIHEDRAL

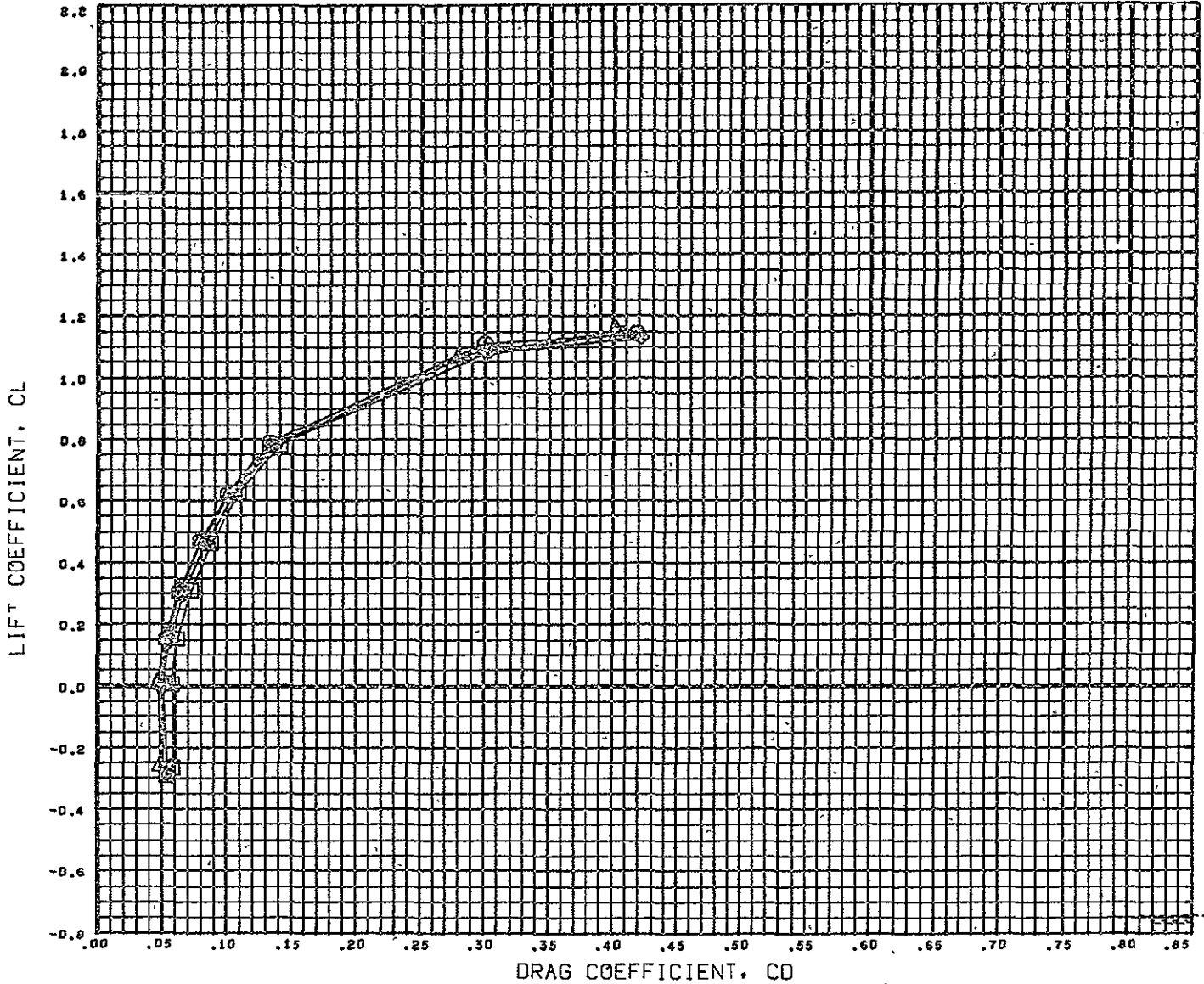


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.860	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.860	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.860	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4057)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.860	1.000	2.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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EFFECT OF INCREASING VERTICAL AREA ON LONG CHAR LOW WING POSITIVE DIHEDRAL

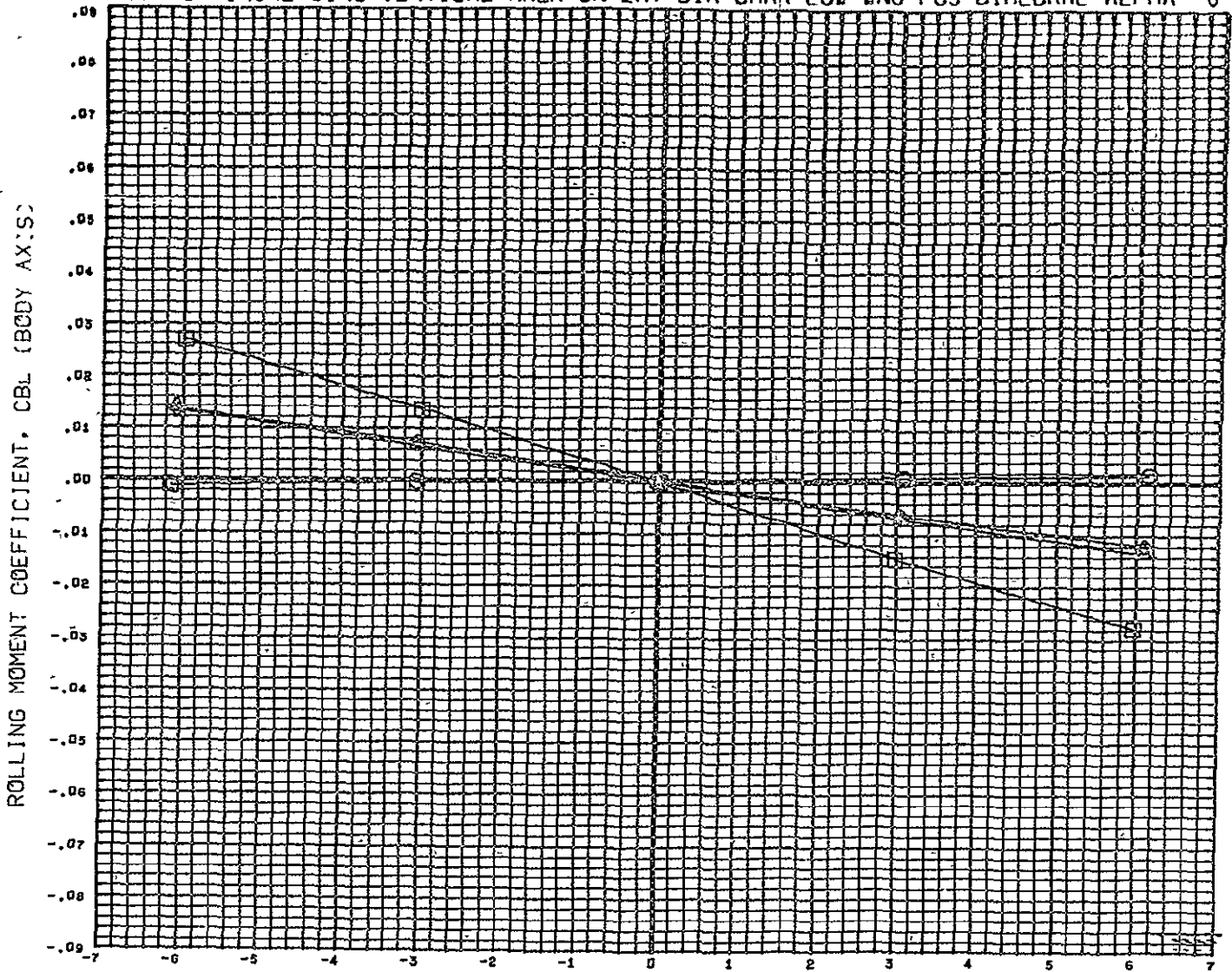


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4049)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1 3550 SQ.FT
(HN2017)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2209)	NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4037)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0 0150 SCALE

MACH .40

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EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 0

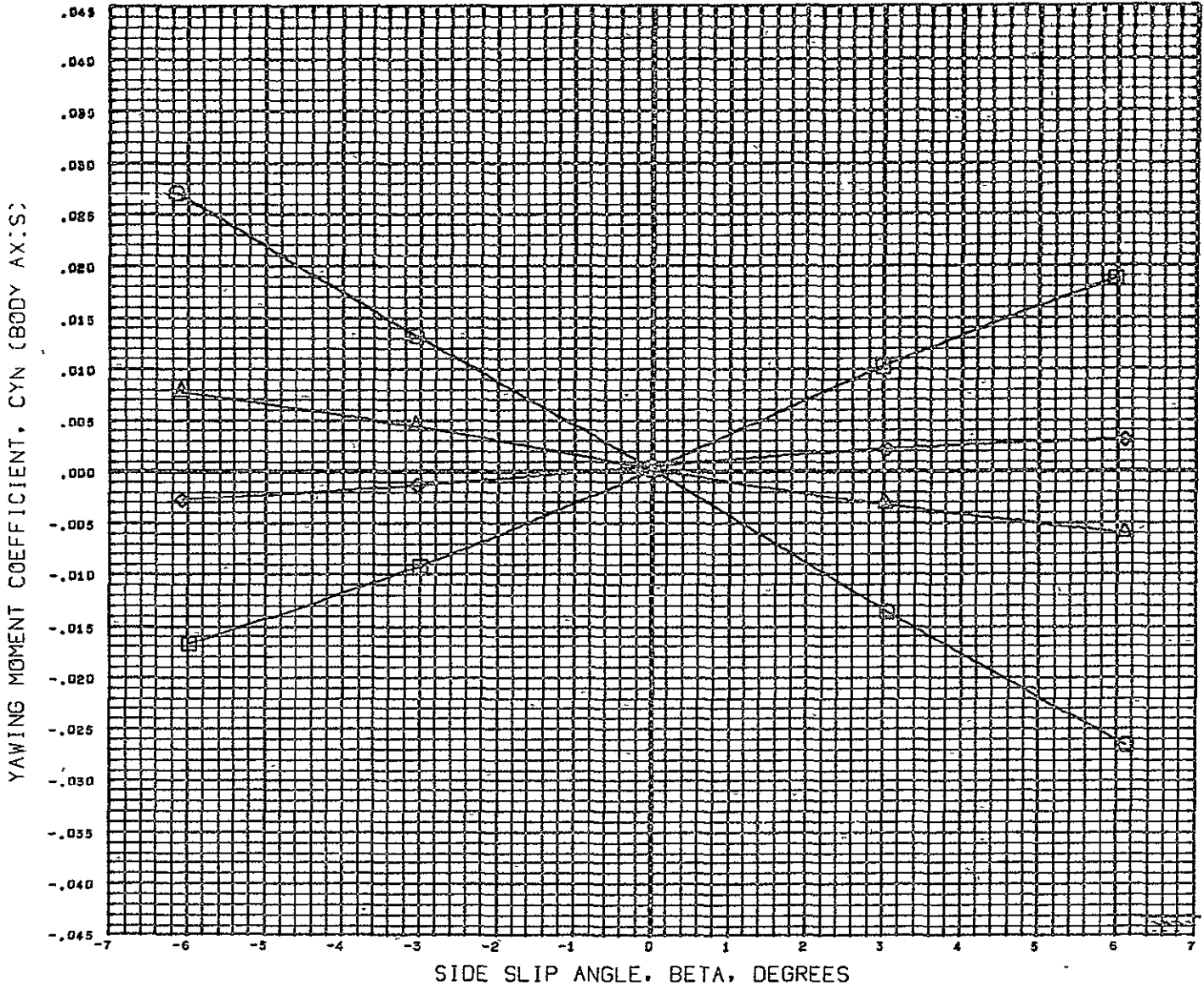


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4050)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2210)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4038)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0 0150 SCALE

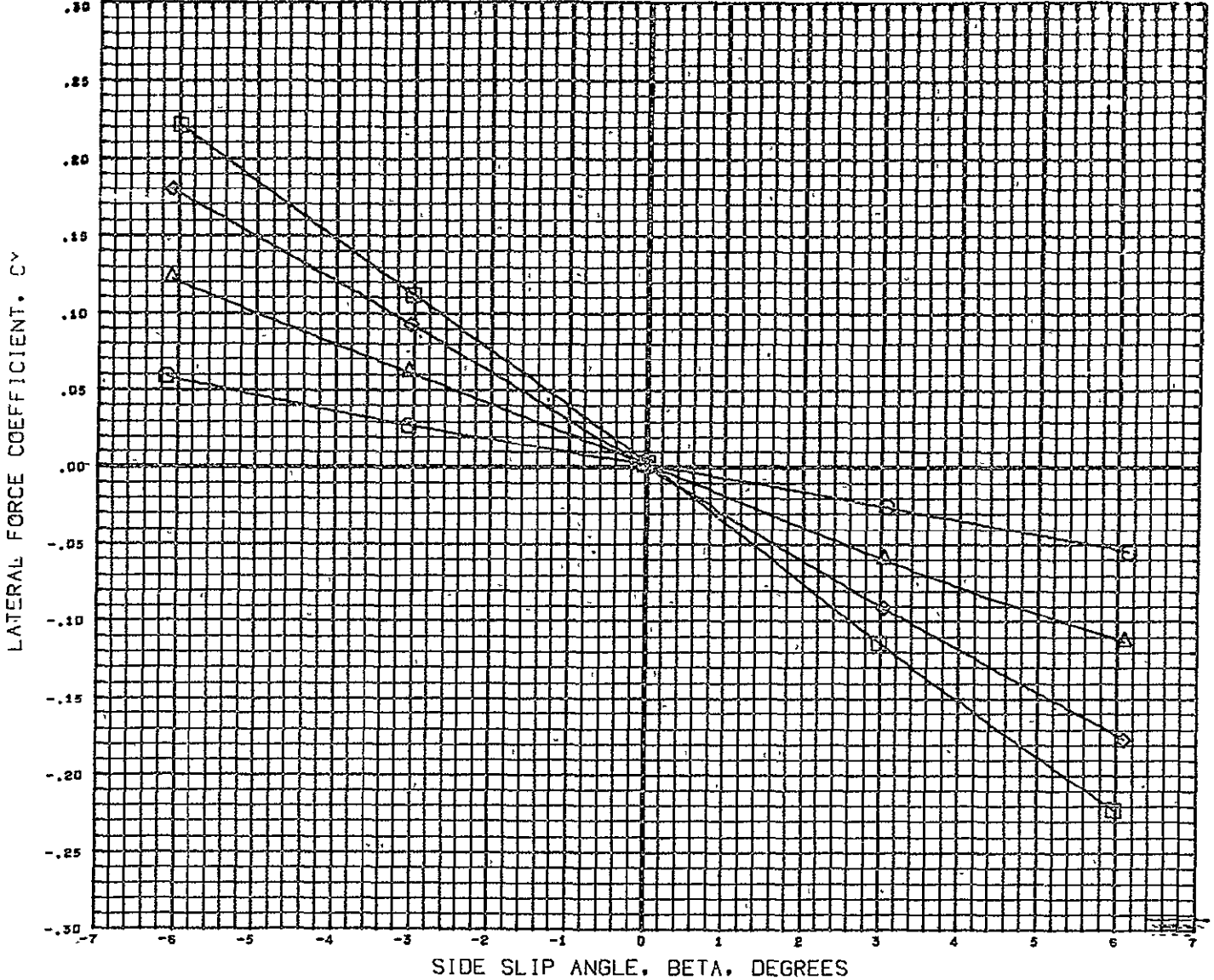
MACH .40

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4050)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2210)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4038)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

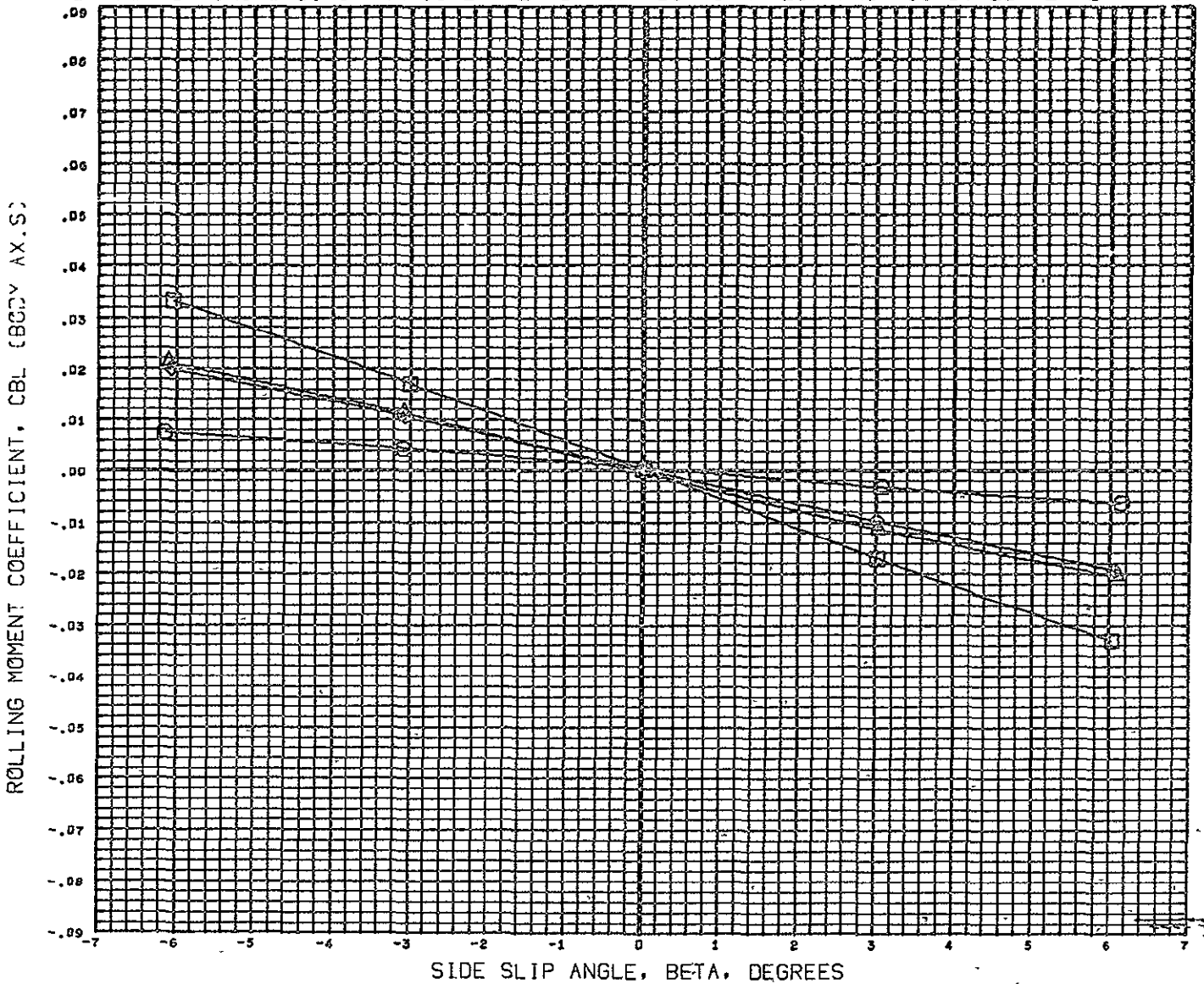
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4050)	NSPDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2210)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4038)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

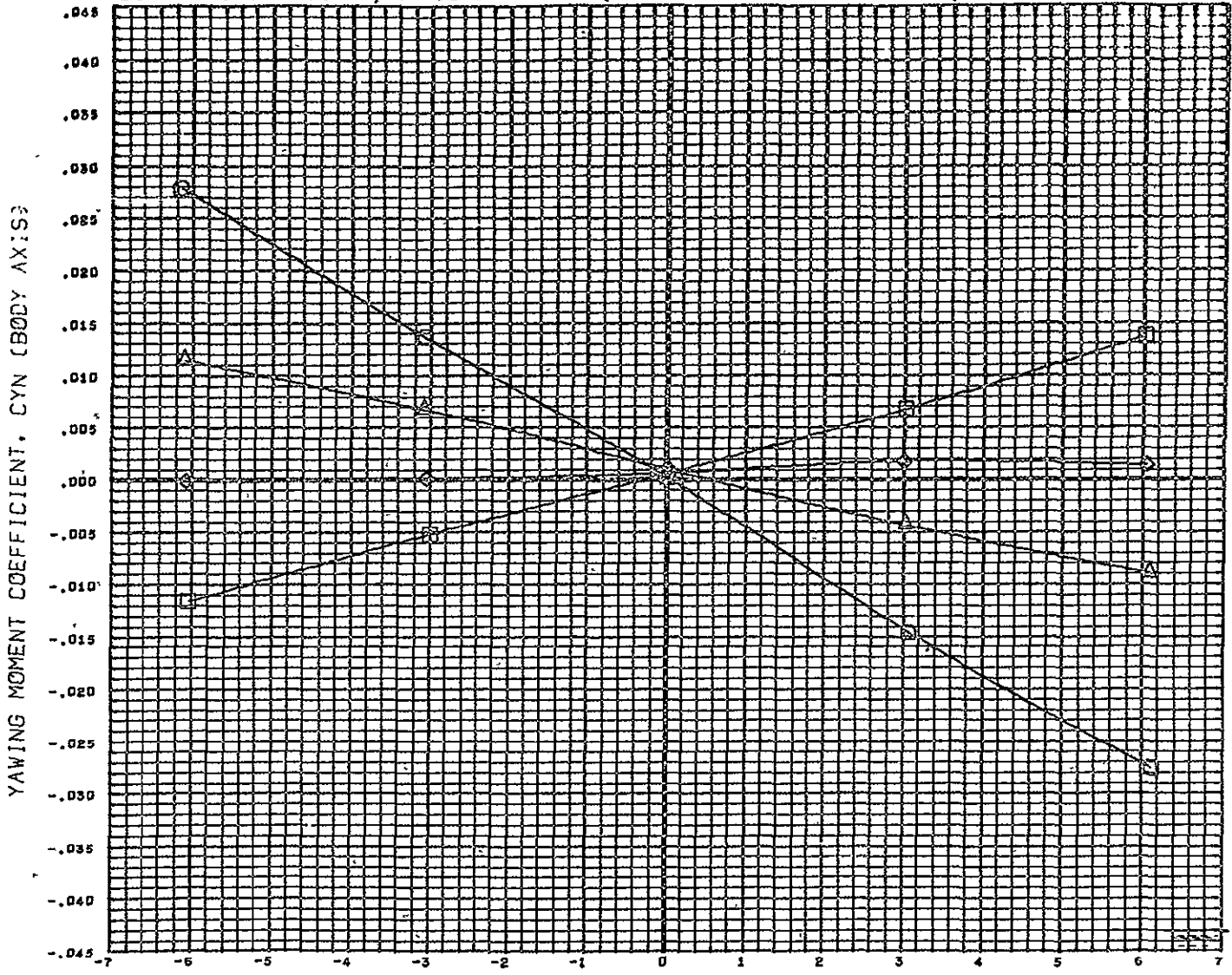
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 6



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4051)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT
(HN2019)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2211)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4039)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

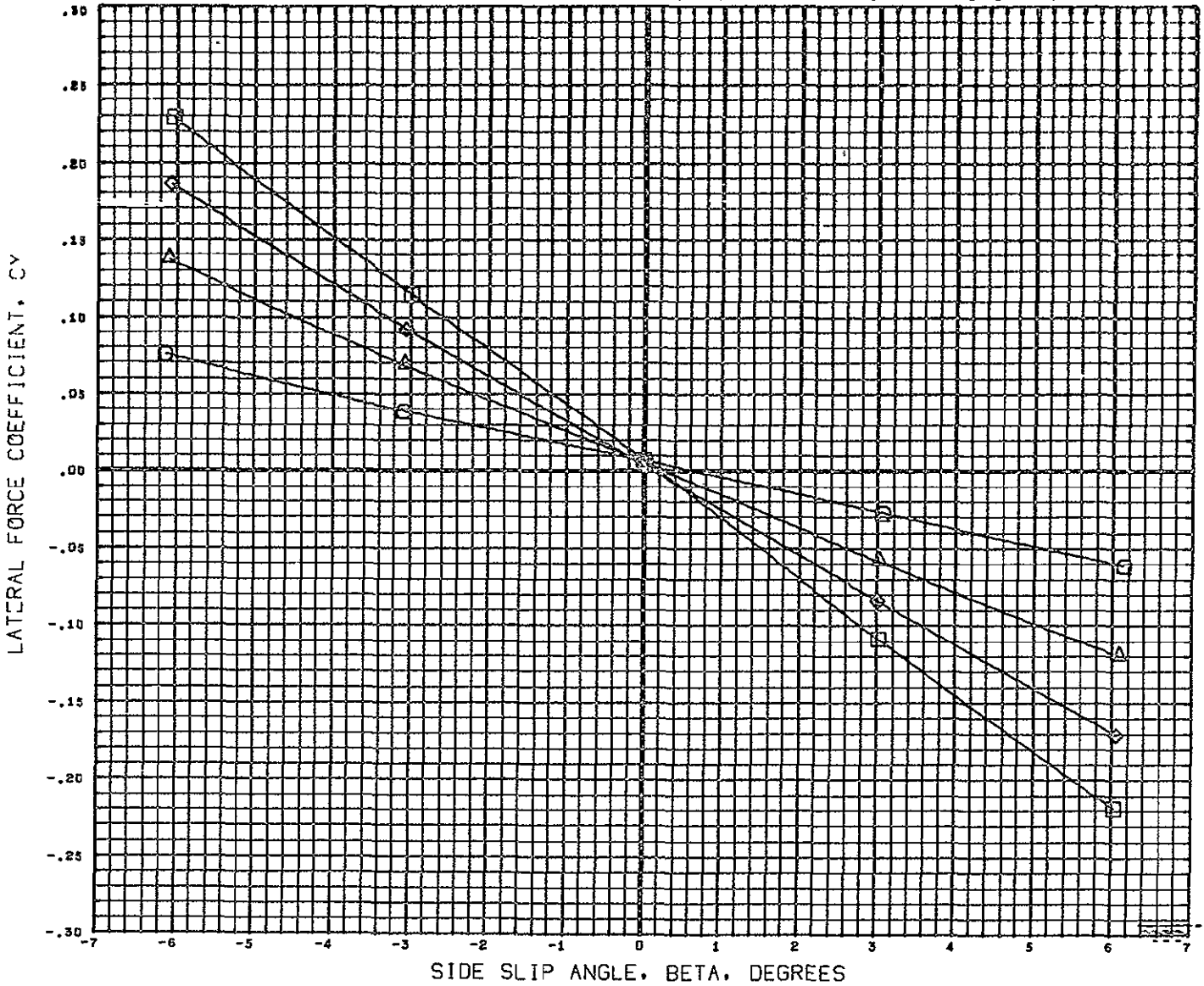
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 6



SIDE SLIP ANGLE, BETA, DEGREES

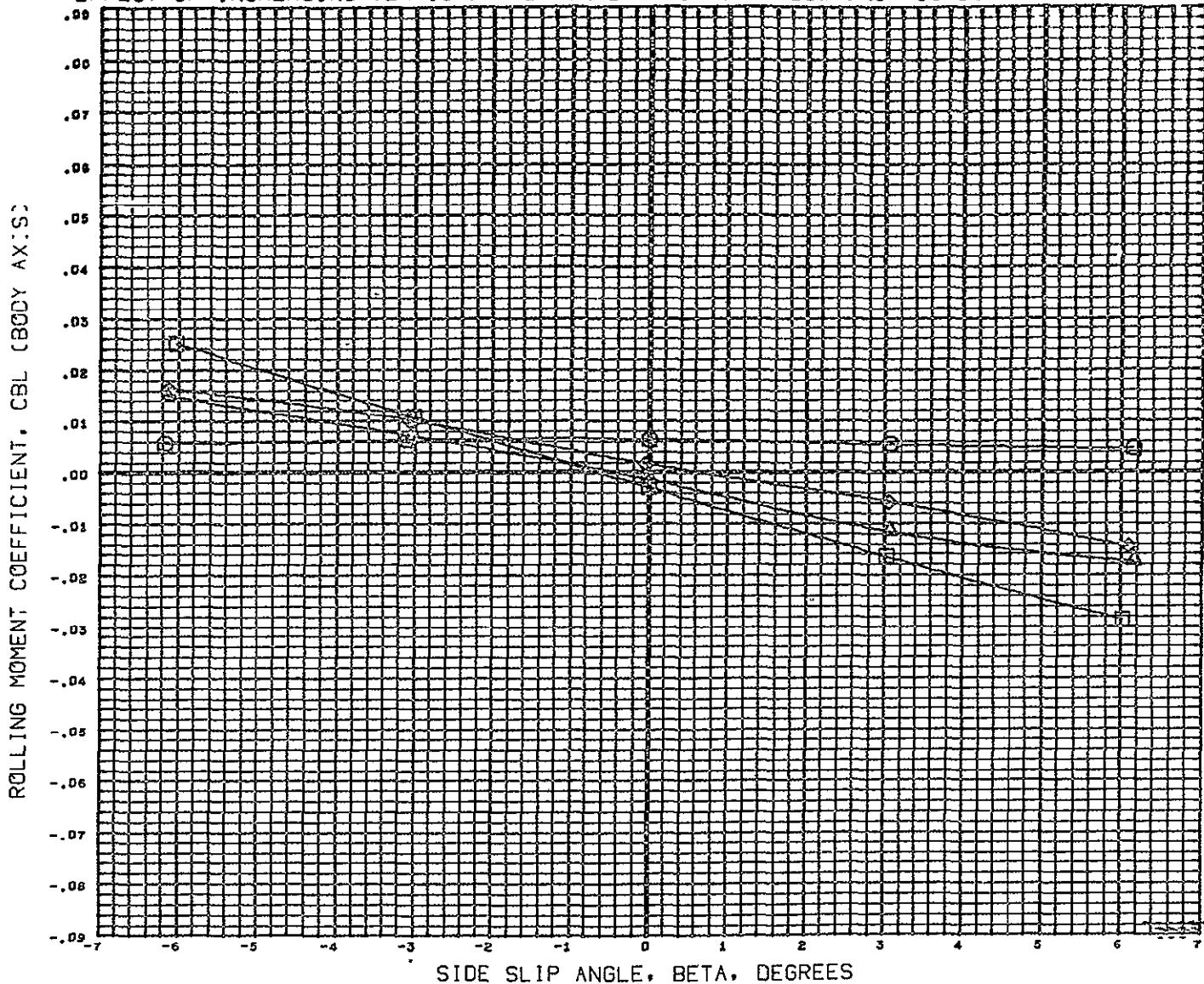
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4051)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN2019)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN2211)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V201	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4039)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0167 FEET SCALE 0.0150 SCALE

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA= 6



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4051)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT
(HN2019)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2211)	NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4039)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA=15

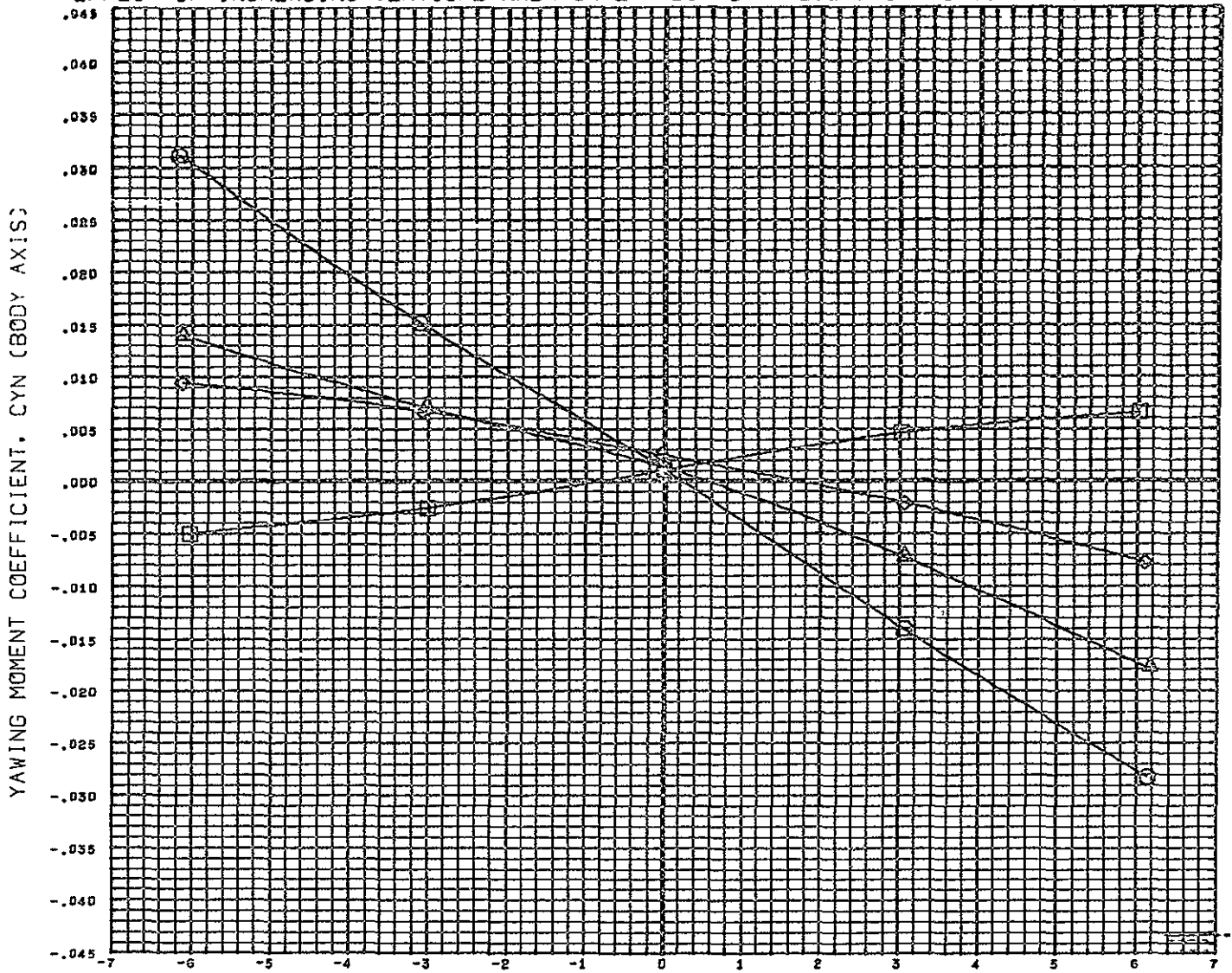


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4052)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT.
(HN2020)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2212)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4040)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA=15

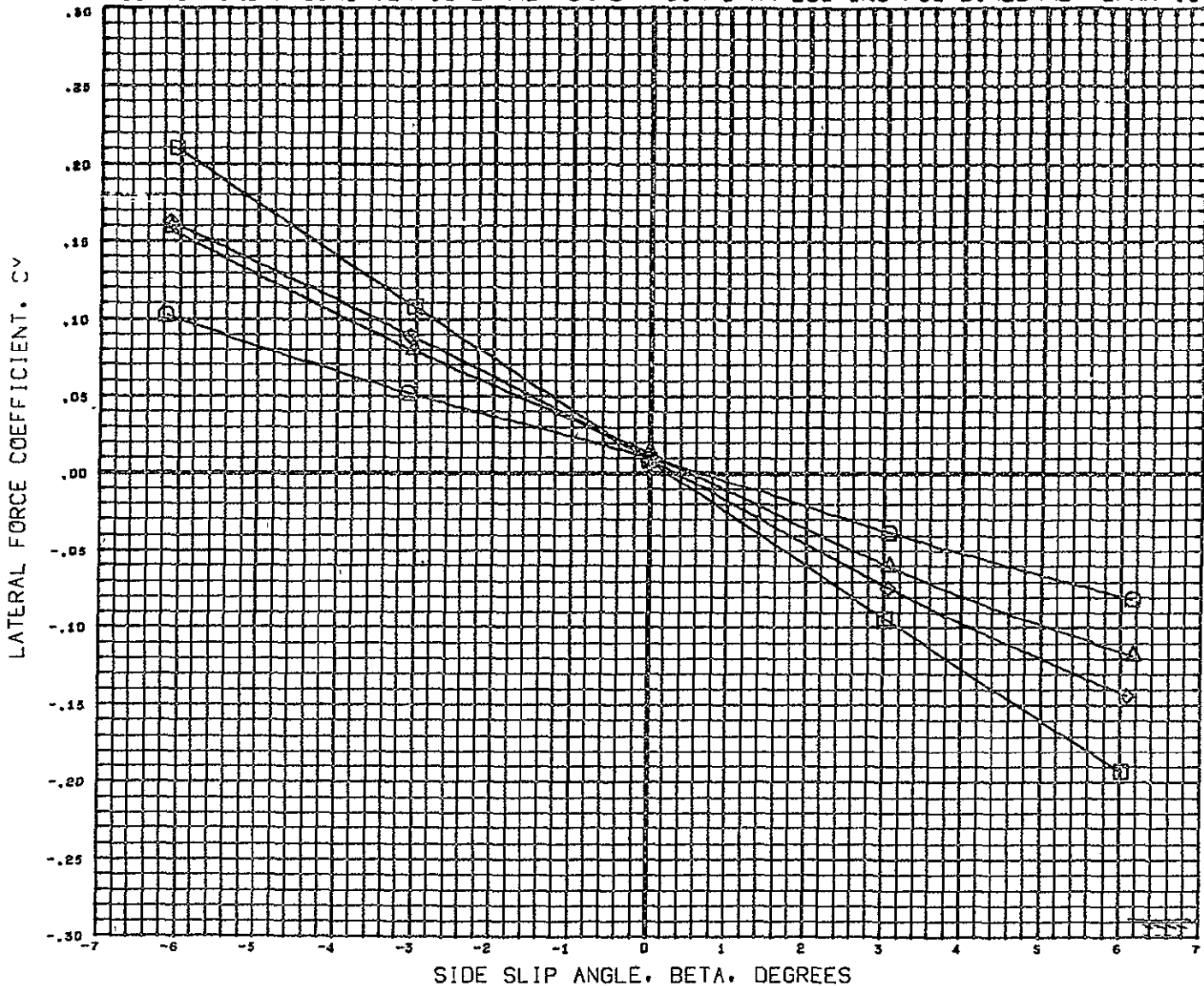


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRAL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4052)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT
(HN2020)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2212)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4040)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XHRF 2.5950 FEET YHRF 0.0000 FEET ZHRF 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

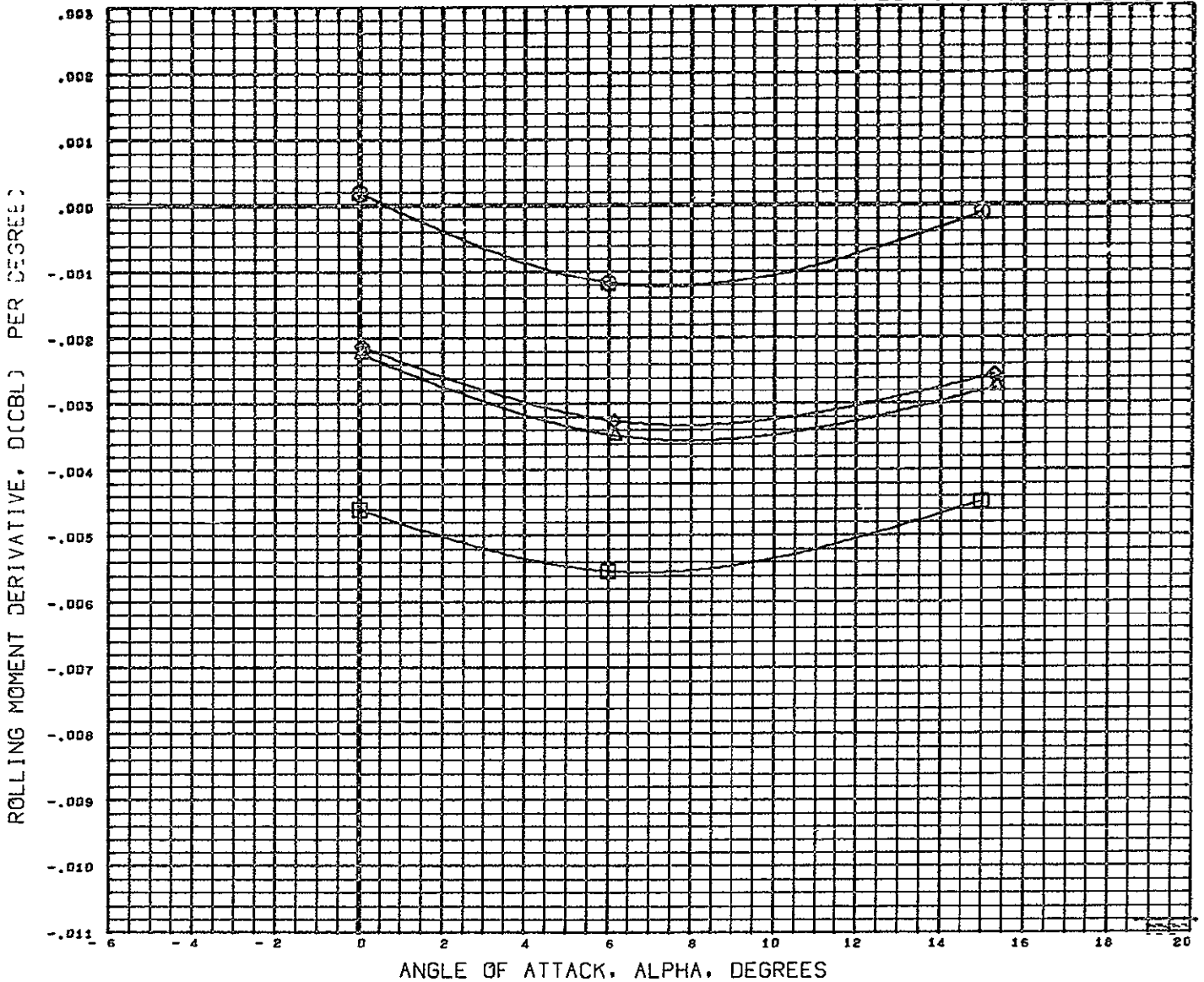
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR CHAR LOW WNG POS DIHEDRAL ALPHA=15



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4952)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(HN2020)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(HN2212)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
(RN4940)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V1D1	7.660	1.000	2.000	0.000	XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

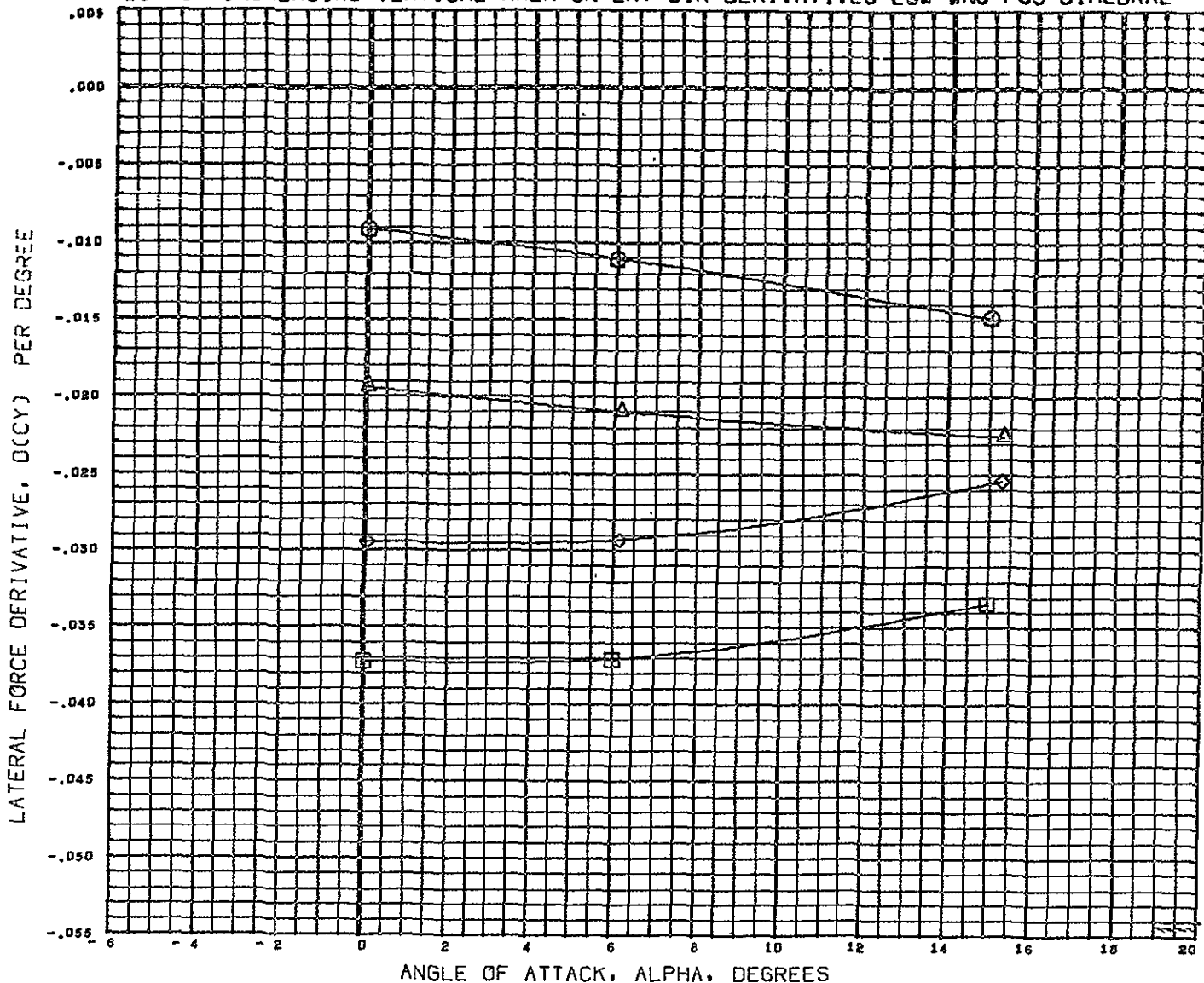
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR DERIVATIVES LOW WING POS DIHEDRAL



SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.200	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT
△	1.100	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◇	1.210	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
□	1.110	ELEVTR	0.000	CNDPOS	1.000	YNRP	2.5950	FEET
						YNRP	0.0000	FEET
						ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

DATA HIST. CODE MHI

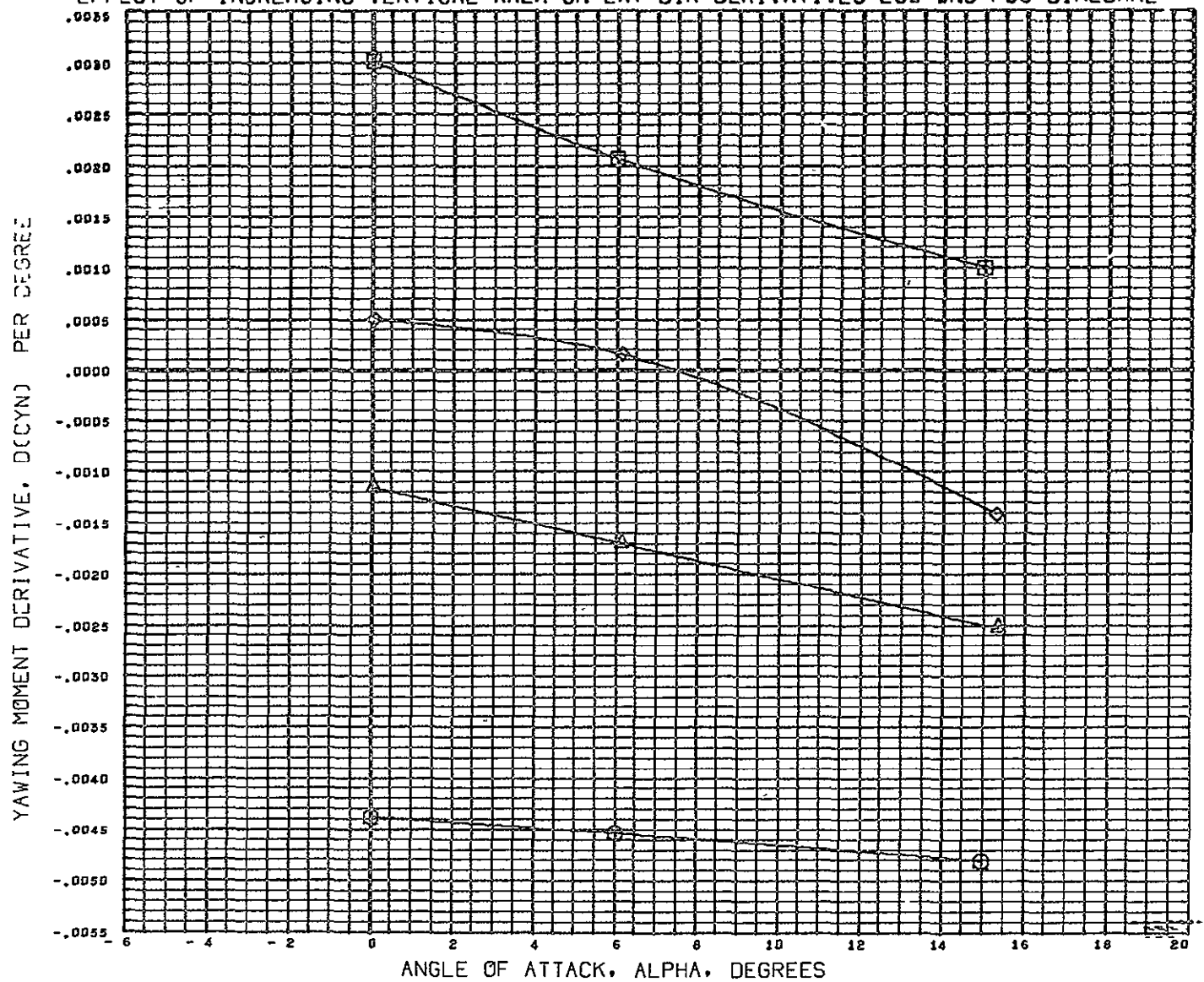
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR DERIVATIVES LOW WNG POS DIHEDRAL



SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION	
		MACH	INCIDC	DINDRL	CANARD	SCALE	SCALE
○	1.200	0.400	3.000		SREF	1.3550	SQ. FT.
△	1.100	0.000	7.660		LREF	3.4530	FEET
◇	1.210	0.000	0.000		BREF	3.4530	FEET
□	1.110	0.000	1.000		XMRP	2.5950	FEET
					YMRP	0.0000	FEET
					ZMRP	0.0187	FEET
					SCALE	0.0150	SCALE

DATA HIST. CODE MHI

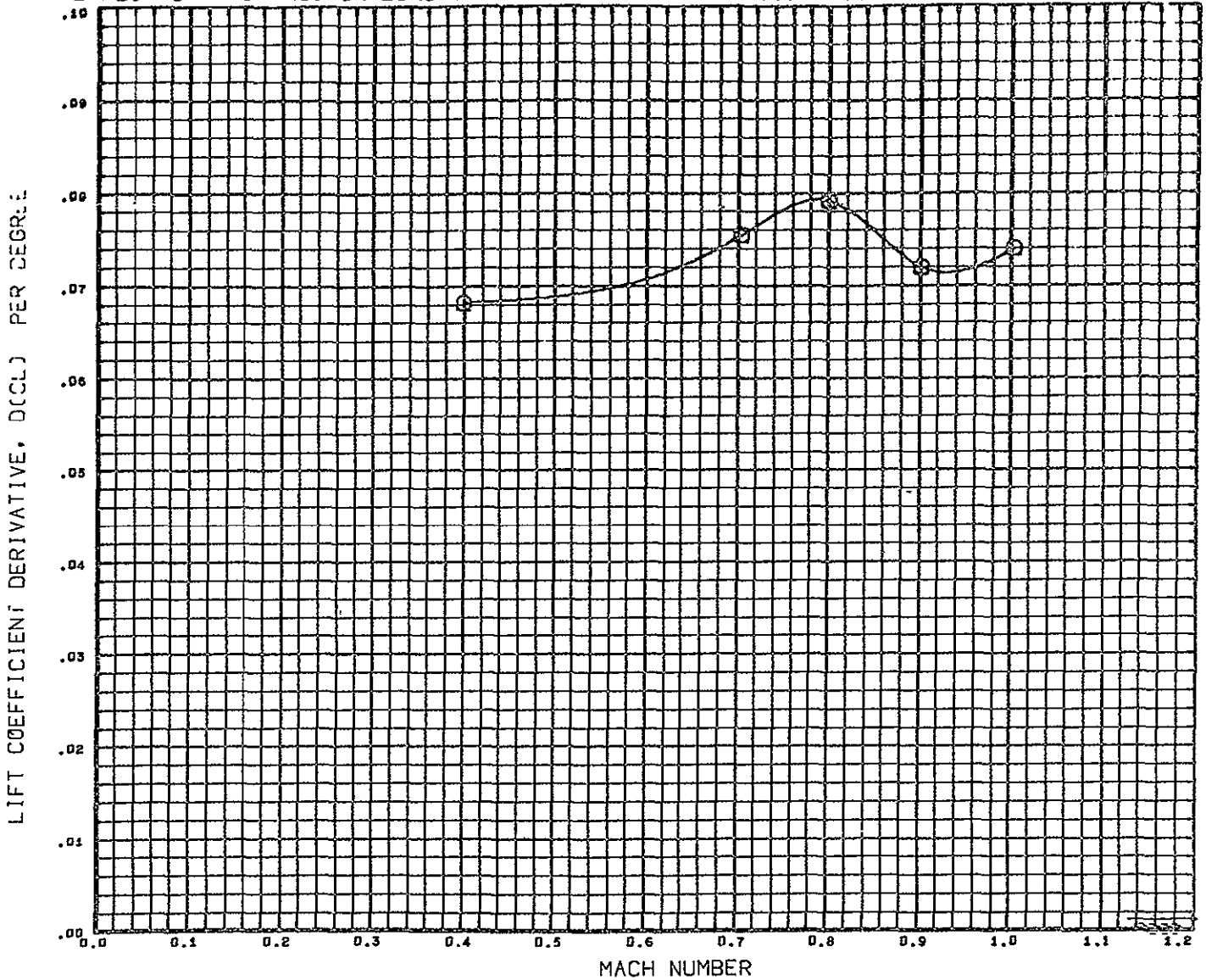
EFFECT OF INCREASING VERTICAL AREA ON LAT-DIR DERIVATIVES LOW WNG POS DIHEDRAL



SYMBOL	VCLARA	PARAMETRIC VALUES				REFERENCE INFORMATION																
		MACH	INCIDW	AILRON	ELEVTR	INCIDC	DIHRL	CANARD	CNDPOS	SREF	LREF	BREF	XNRP	YNRP	ZNRP	SCALE	SCALE					
◇	1.200	0.400	0.000	0.000	3.000	7.660	0.000	1.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	sq. ft.	FEET	FEET	FEET	FEET	FEET	SCALE
△	1.100	0.400	0.000	0.000	3.000	7.660	0.000	1.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	sq. ft.	FEET	FEET	FEET	FEET	FEET	SCALE
□	1.210	0.400	0.000	0.000	3.000	7.660	0.000	1.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	sq. ft.	FEET	FEET	FEET	FEET	FEET	SCALE
○	1.110	0.400	0.000	0.000	3.000	7.660	0.000	1.000	1.3550	3.4530	3.4530	2.5950	0.0000	0.0187	0.0150	sq. ft.	FEET	FEET	FEET	FEET	FEET	SCALE

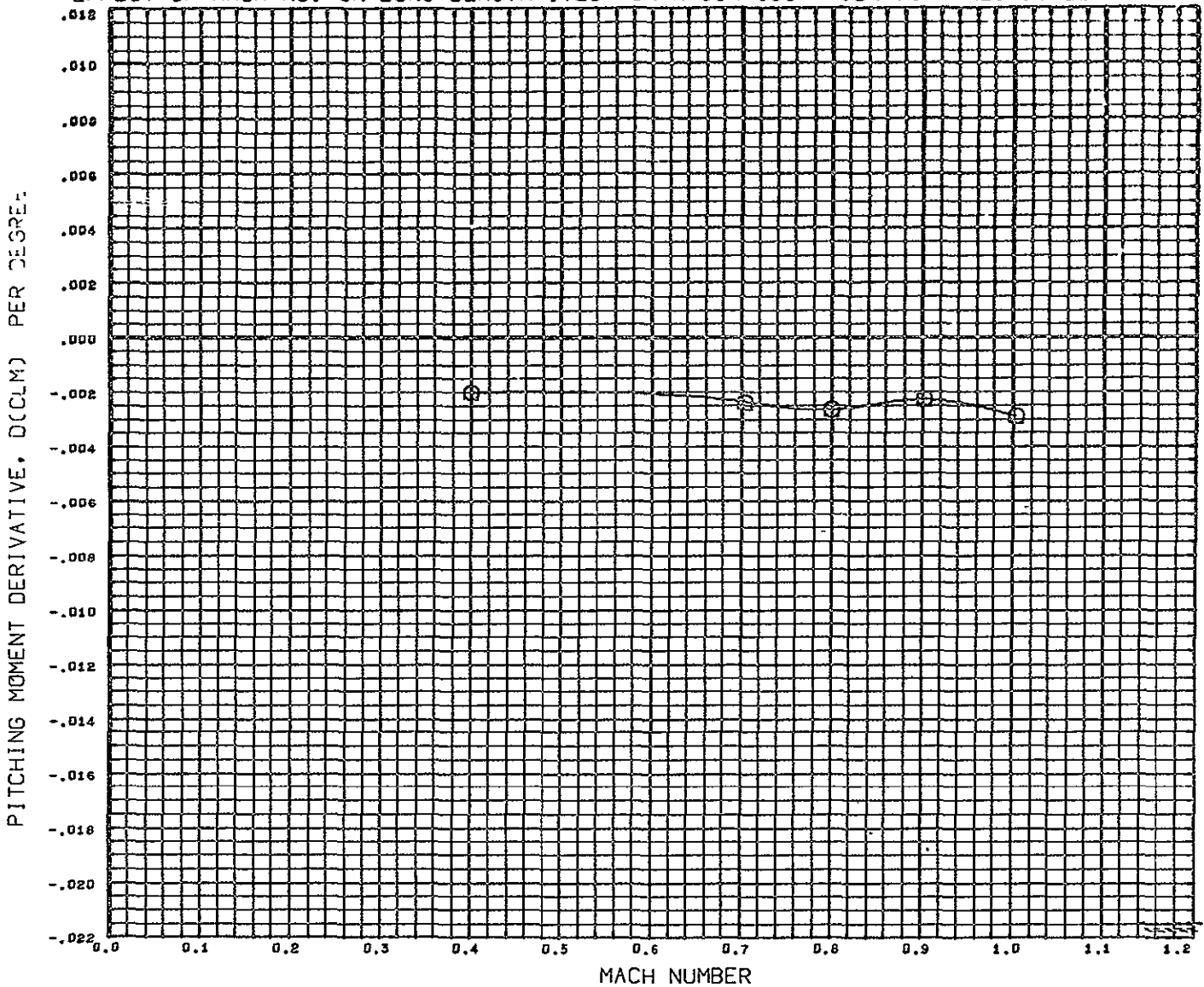
DATA HIST. CODE HHI

EFFECT OF MACH NO. ON LONG-DERIVATIVES FOR A CONFIGURATION WITH NEG DIHEDRAL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4005) □	NSRDC-3310,HSFC/LNSC BOOSTER B1C2F1W1V2D1	-7.650	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XHRF 2.5950 FEET YHRF 0.0000 FEET ZHRF 0.0167 FEET SCALE 0.0150 SCALE

EFFECT OF MACH NO. ON LONG-DERIVATIVES FOR A CONFIGURATION WITH NEG DIHEDRAL



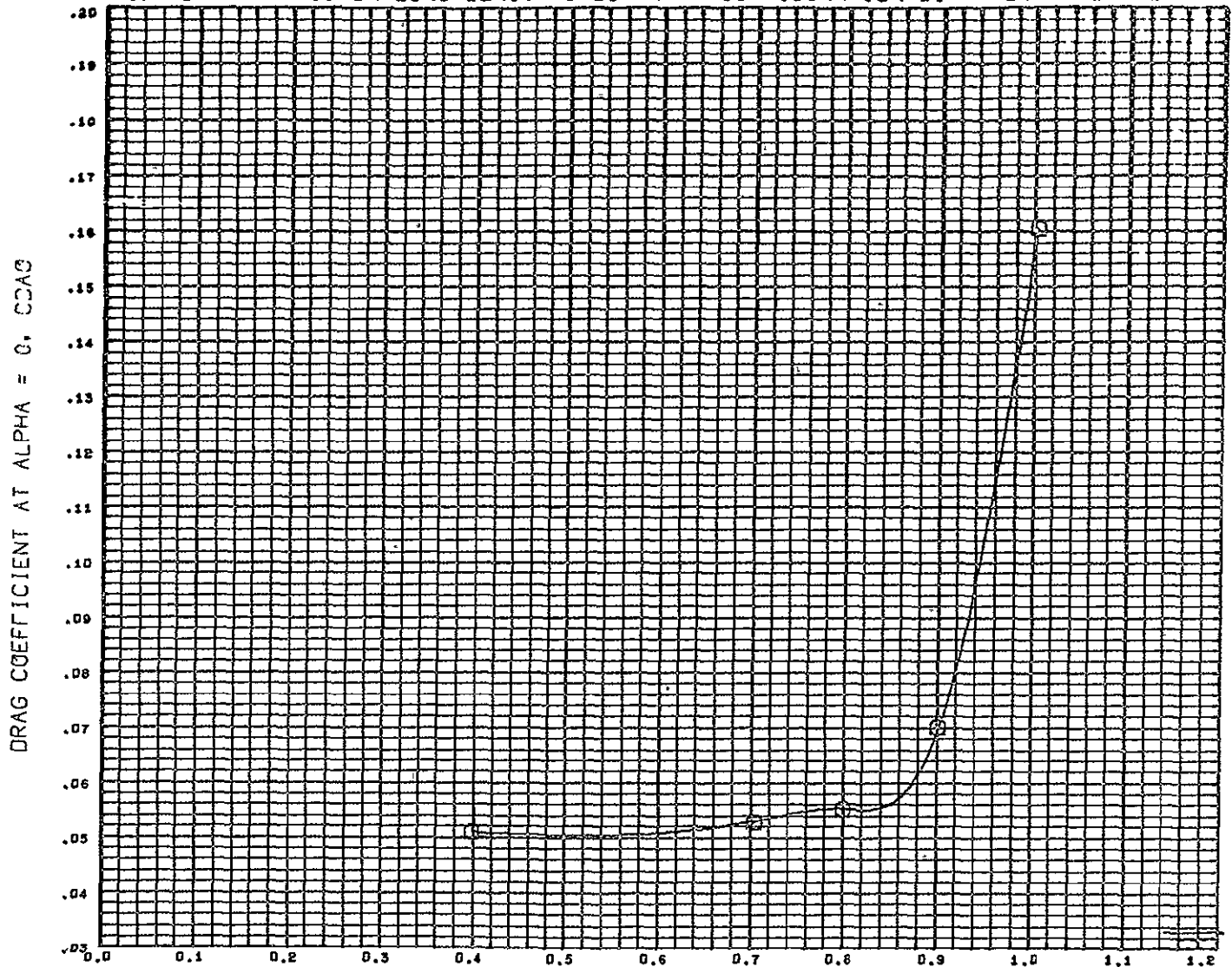
DATA SET SYMBOL (RN4005) □ CONFIGURATION DESCRIPTION NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1

MACH NUMBER

DIHEDL -7.660 CNDPOS 1.000 WNGPOS 1.000 INCIDW 0.000

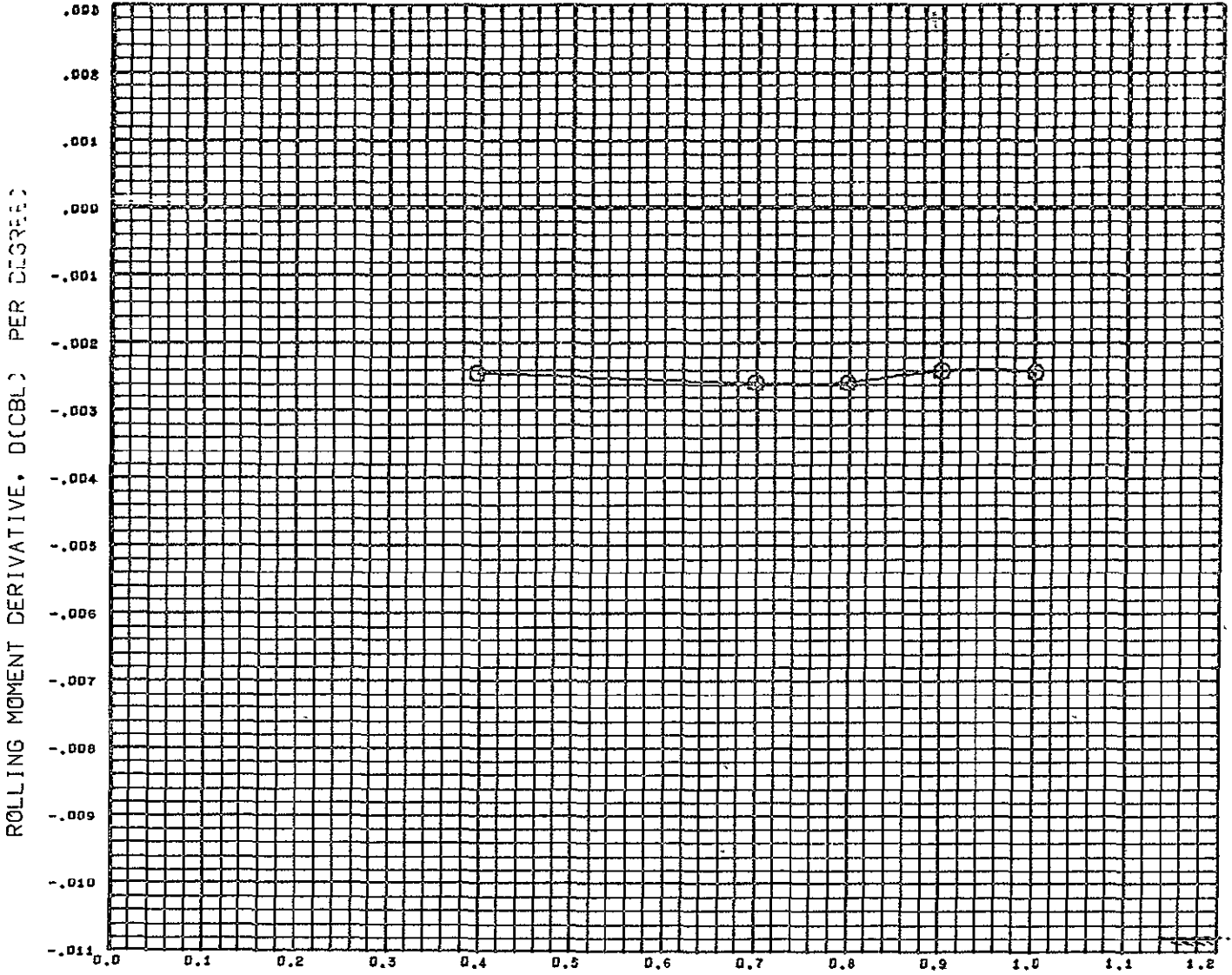
REFERENCE INFORMATION
 SREF 1 3550 SQ.FT
 LREF 3.4530 FEET
 BREF 3.4530 FEET
 XMRP 2 5950 FEET
 YMRP 0.0000 FEET
 ZMRP 0.0187 FEET
 SCALE 0.0150 SCALE

EFFECT OF MACH NO. ON LONG-DERIVATIVES FOR A CONFIGURATION WITH NEG DIHEDRAL



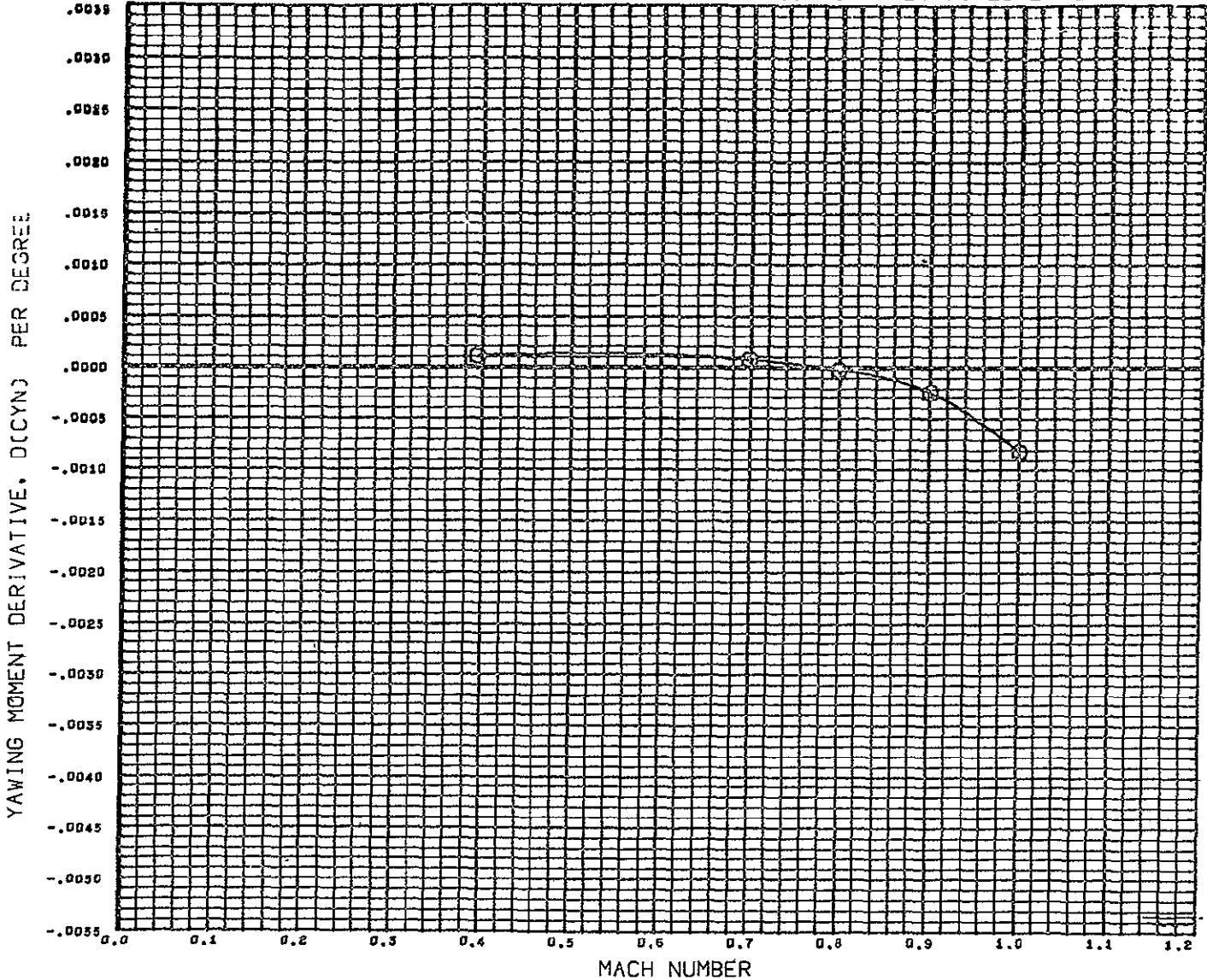
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNGPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(AN4005) ○	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4006) □	NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V2D1	-7 660	1.000	1.000	0.000	SREF	1.3550 SQ. FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XNRP	0.2162 FEET
						YNRP	0.0000 FEET
						ZNRP	0.0016 FEET
						SCALE	0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 0

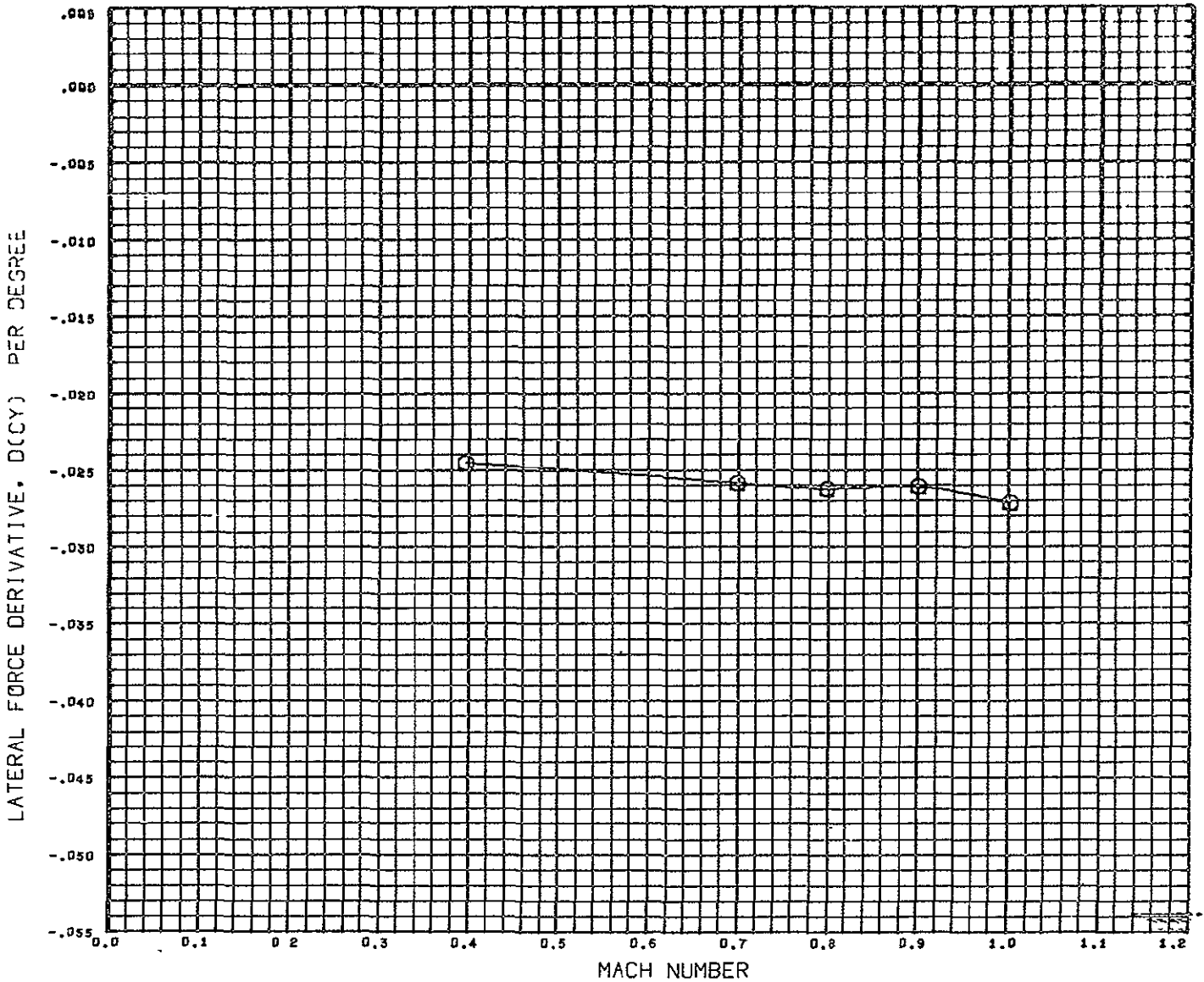


DATA SET SYMBOL (RN4006) ○ CONFIGURATION DESCRIPTION NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1

DIHEDRL -7.668 CNDFOS 1.000 WNGPOS 1.000 INCIDW 0.000

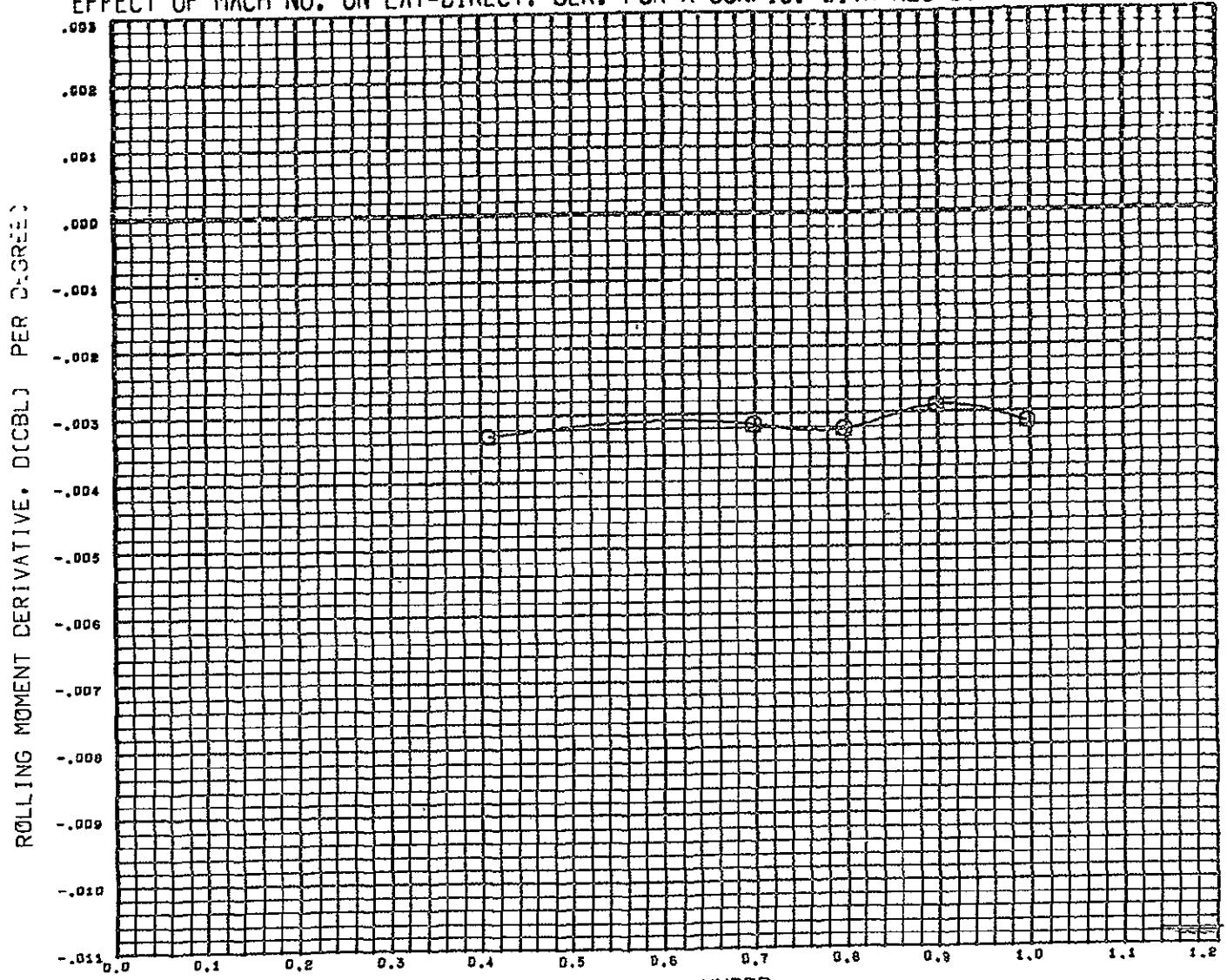
REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 3.4530 FEET
 BREF 3.4530 FEET
 XHRP 0.2162 FEET
 YHRP 0.0000 FEET
 ZHRP 0.0016 FEET
 SCALE 0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4006) ○	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0 000	SREF	1.3550 SQ. FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	0 2162 FEET
						YMRP	0 0000 FEET
						ZMRP	0 0016 FEET
						SCALE	0 0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 6

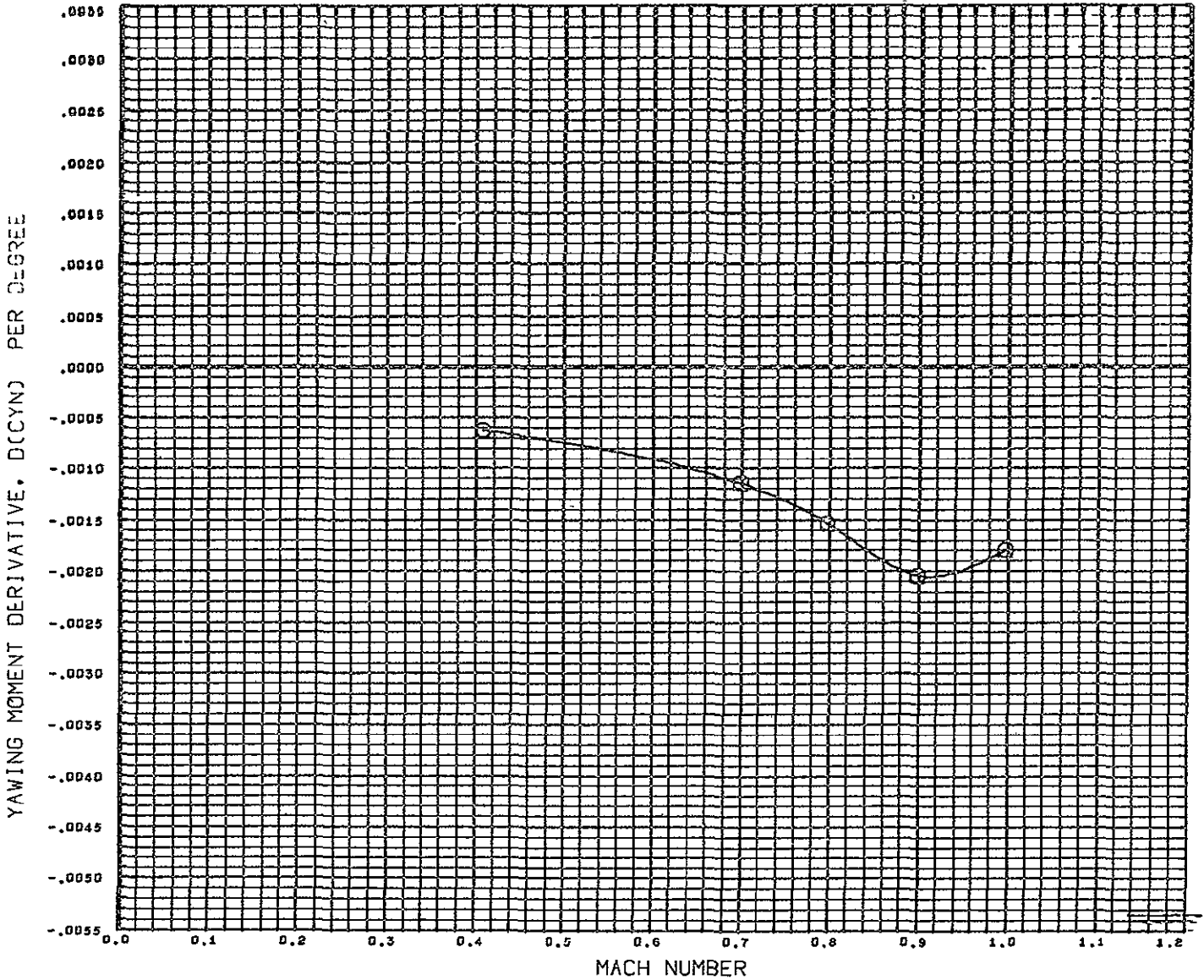


DATA SET SYMBOL (RN4007) ○ CONFIGURATION DESCRIPTION NSRDC-3310,MSFC/LNSC BOOSTER B1C2F1W1V2D1

MACH NUMBER
 DIHEDRL -7.660
 CNDFOS 1.000
 WNGPOS 1.000
 INCIDW 0.000

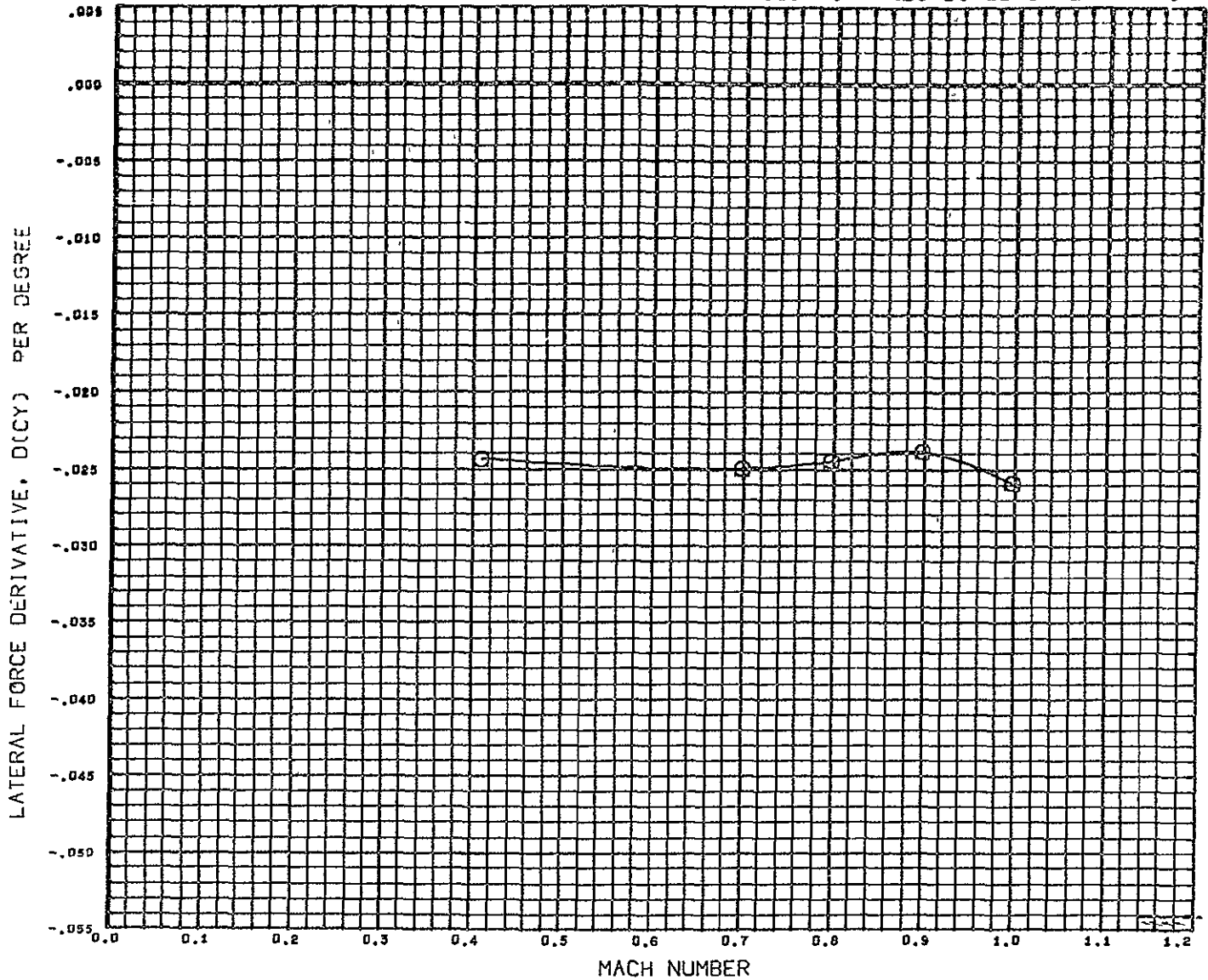
REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 3.4530 FEET
 BREF 3.4530 FEET
 XNRP 0.2162 FEET
 YNRP 0.0000 FEET
 ZNRP 0.0016 FEET
 SCALE 0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 6



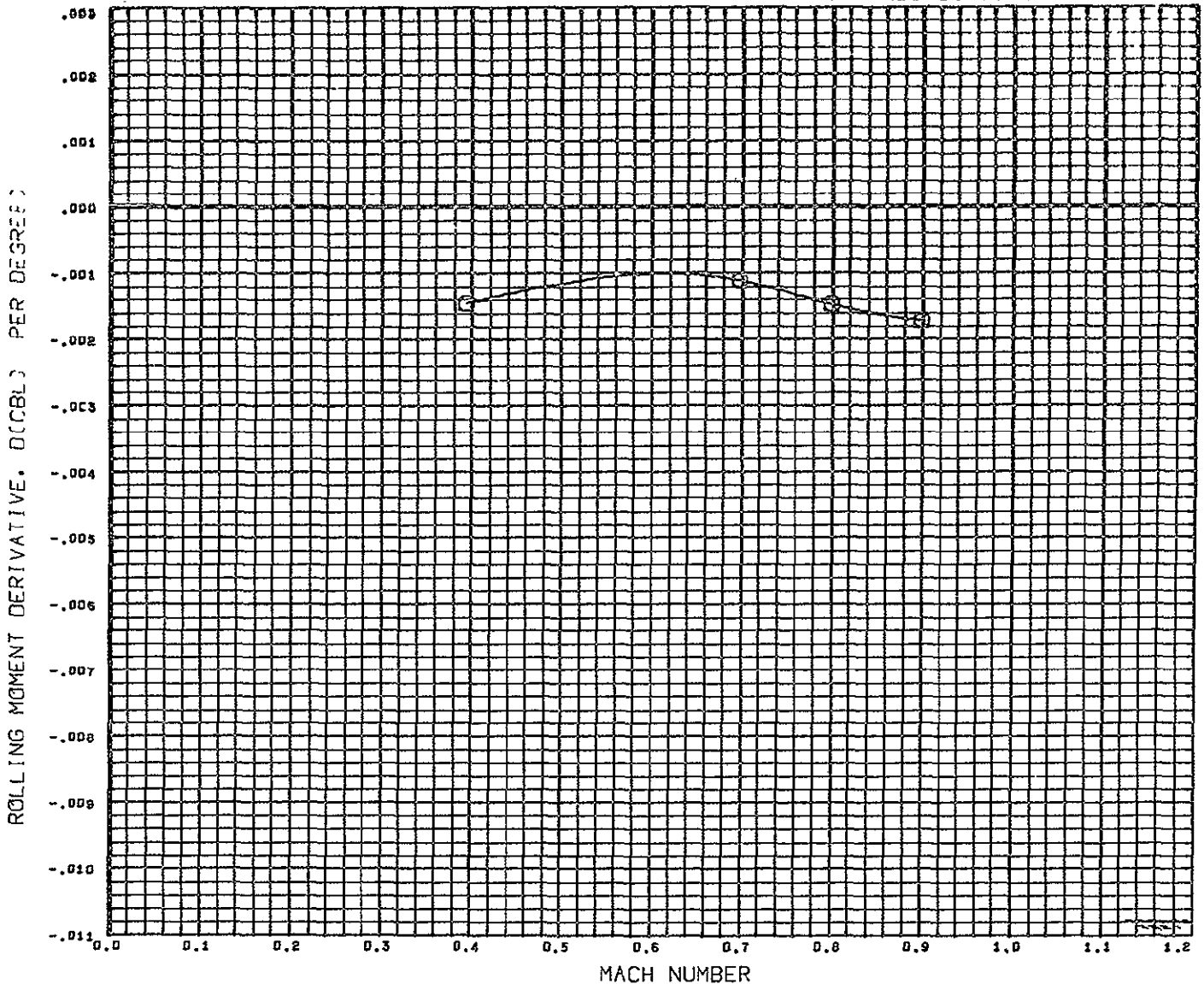
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4007) □	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ. FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XNRP	0.2162 FEET
						YNRP	0.0000 FEET
						ZNRP	0.0016 FEET
						SCALE	0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 6



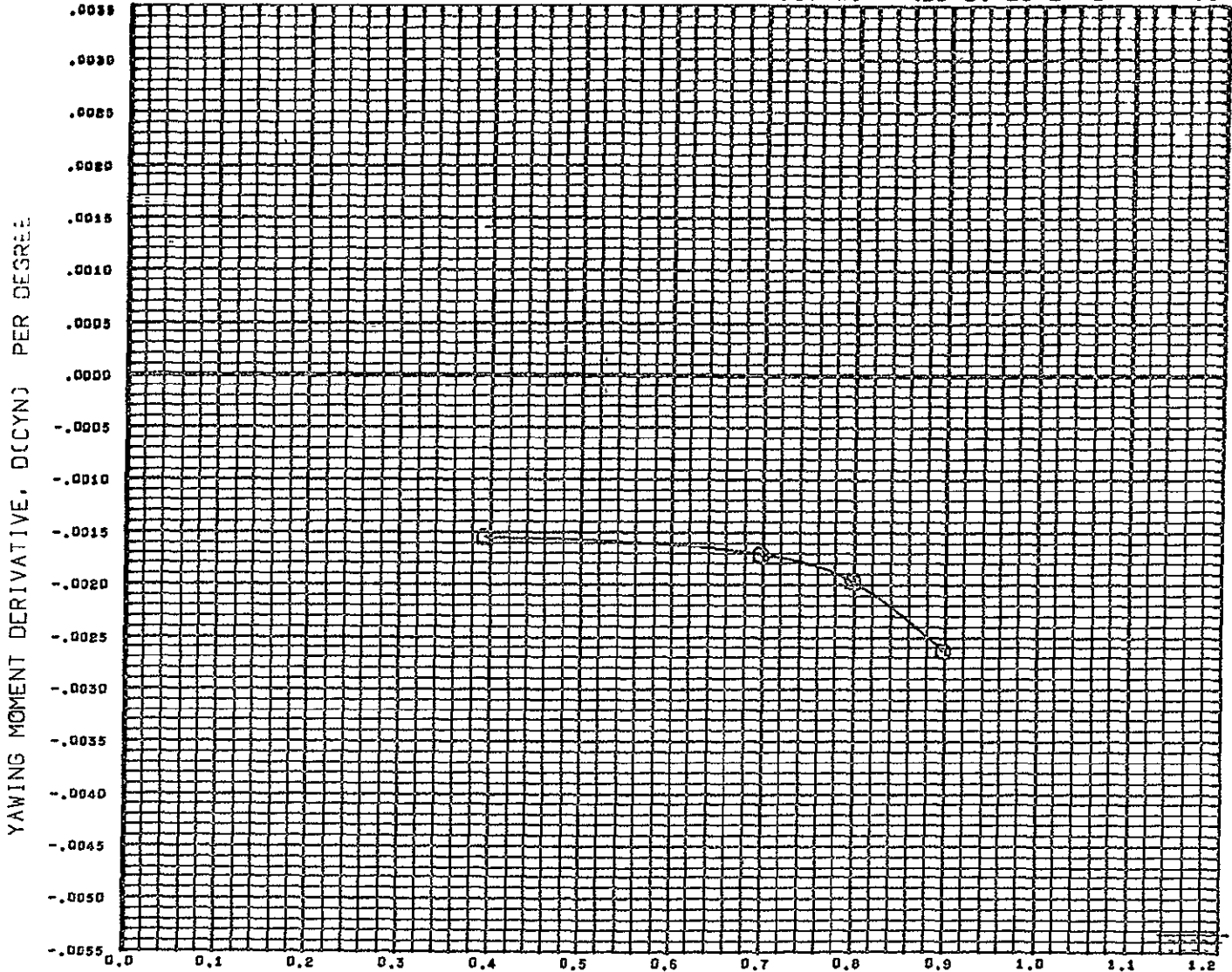
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4007) ○	NSRDC-3310, MSFC/LHSC BOOSTER 81C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	0.2162 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0016 FEET
						SCALE	0.0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 15



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHEDRL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(RN4000) ○	NSRDC-3310, MSFC/LNSC BOOSTER B1C2F1W1V2D1	-7 660	1.000	1.000	0 000	SREF 1.3550 50 FT. LREF 3.4530 FEET BREF 3.4530 FEET YMRP 0.2162 FEET YMRP 0.0000 FEET ZMRP 0.0016 FEET SCALE 0 0150 SCALE

EFFECT OF MACH NO. ON LAT-DIRECT. DER. FOR A CONFIG. WITH NEG DIHEDRL ALPHA = 15



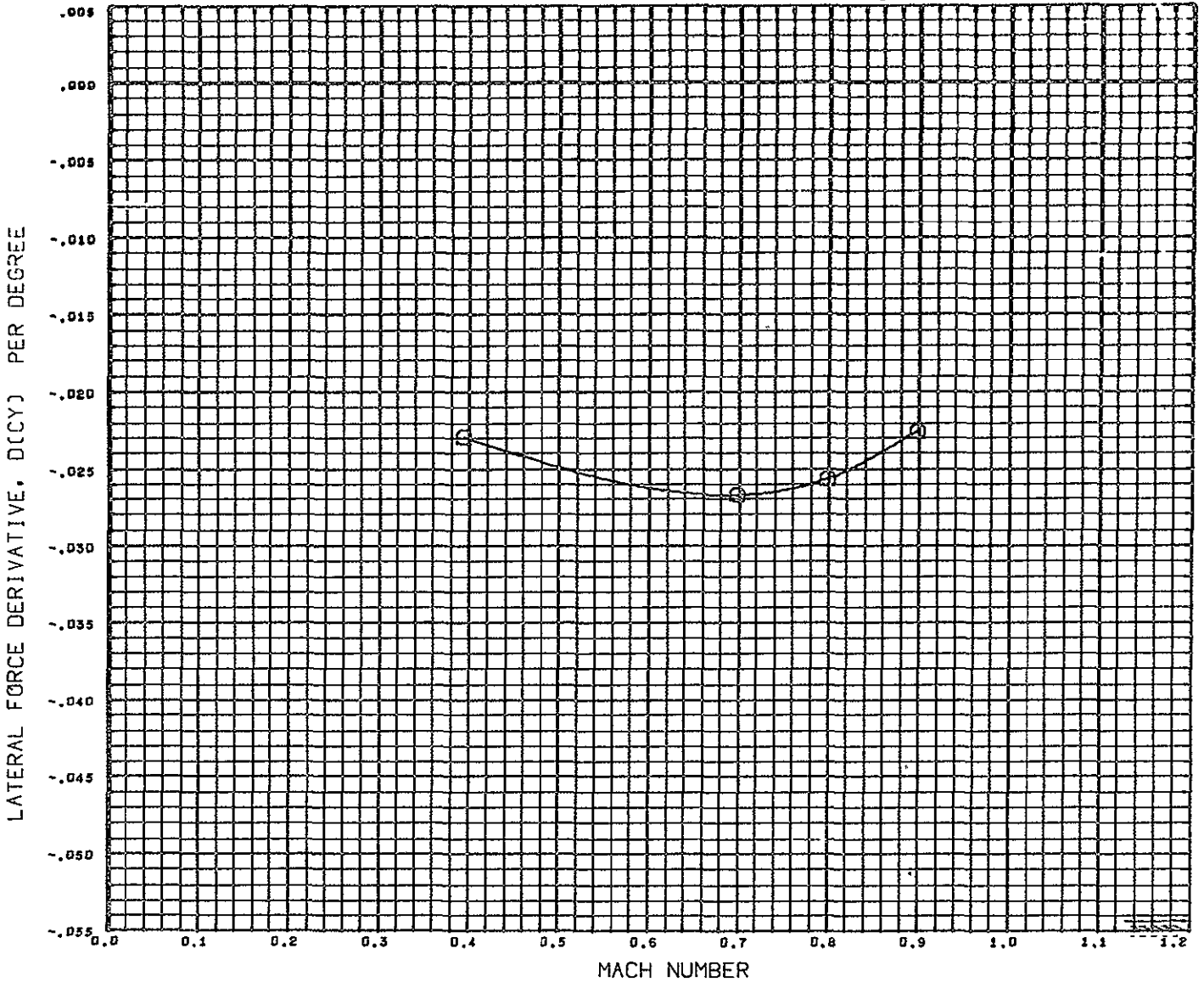
DATA SET SYMBOL: (RN4008) CONFIGURATION DESCRIPTION: NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1

MACH NUMBER

DIHDL: -7.660
 CNBPOS: 1.000
 WNGPOS: 1.000
 INCIDW: 0.000

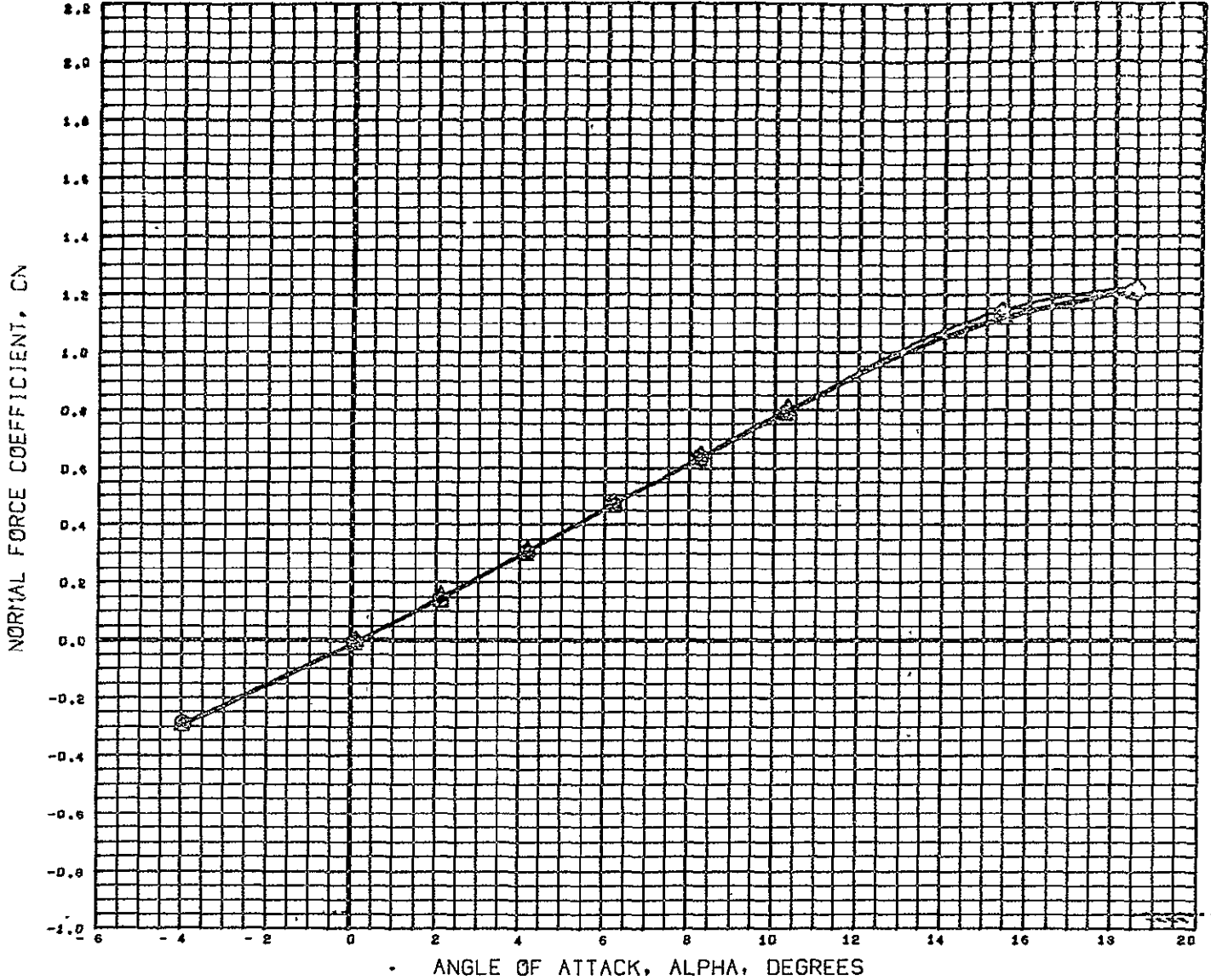
REFERENCE INFORMATION
 SREF: 1 3550 30.FT.
 LREF: 3,4530 FEET
 BREF: 3,4530 FEET
 XMRP: 0 2162 FEET
 YMRP: 0,0000 FEET
 ZMRP: 0,0016 FEET
 SCALE: 0,0150 SCALE

EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(RN4008) ○	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT. LREF 3 4530 FEET BREF 3 4530 FEET XNRP 0.2162 FEET YNRP 0.0000 FEET ZHRP 0.0016 FEET SCALE 0.0150 SCALE

EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0

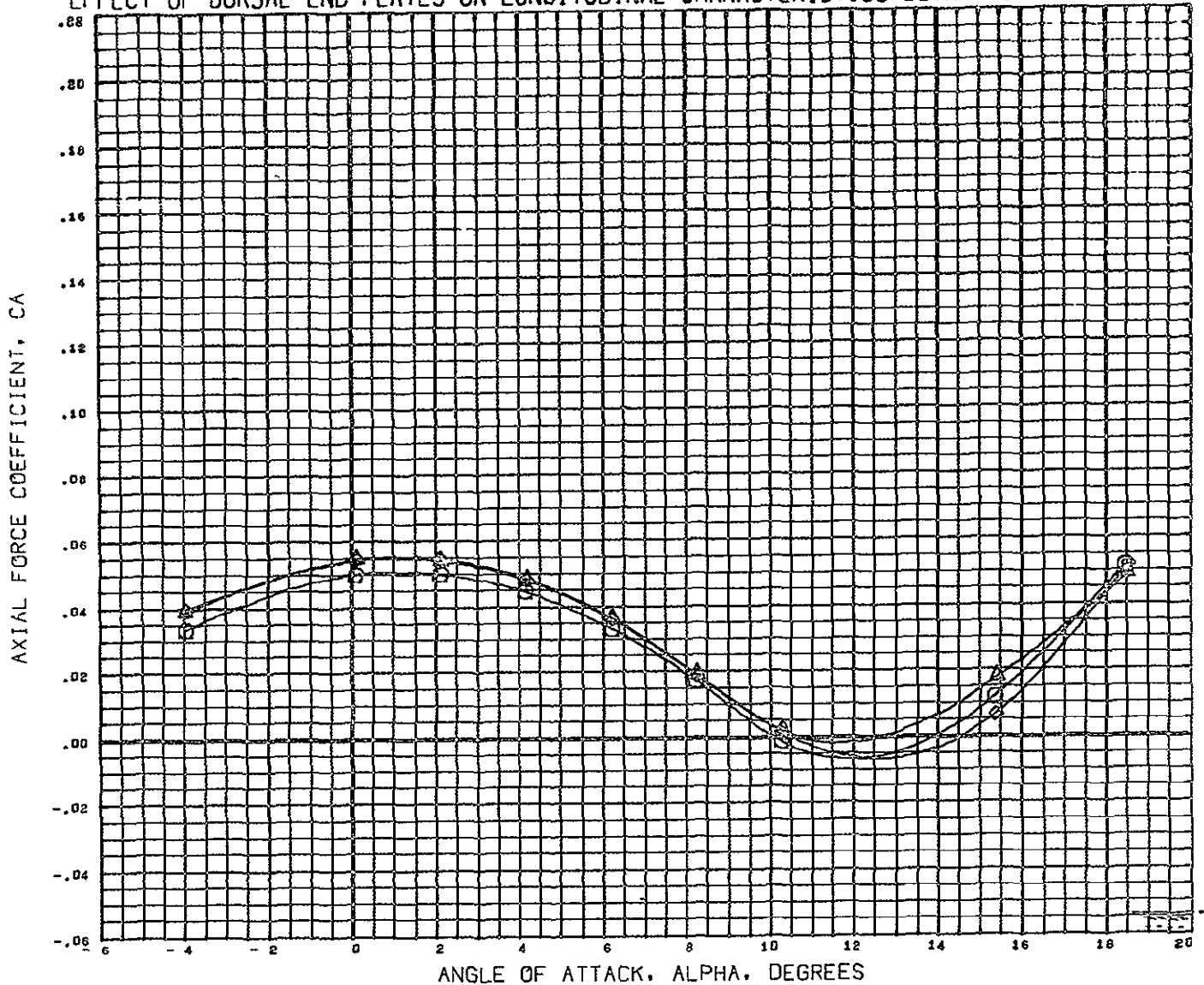


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1,3550 SQ.FT.
(RN4041)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3,4530 FEET
(RN4045)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3,4530 FEET
						XNRP 2,5950 FEET
						YNRP 0,0000 FEET
						ZNRP 0,0187 FEET
						SCALE 0,0150 SCALE

MACH .38

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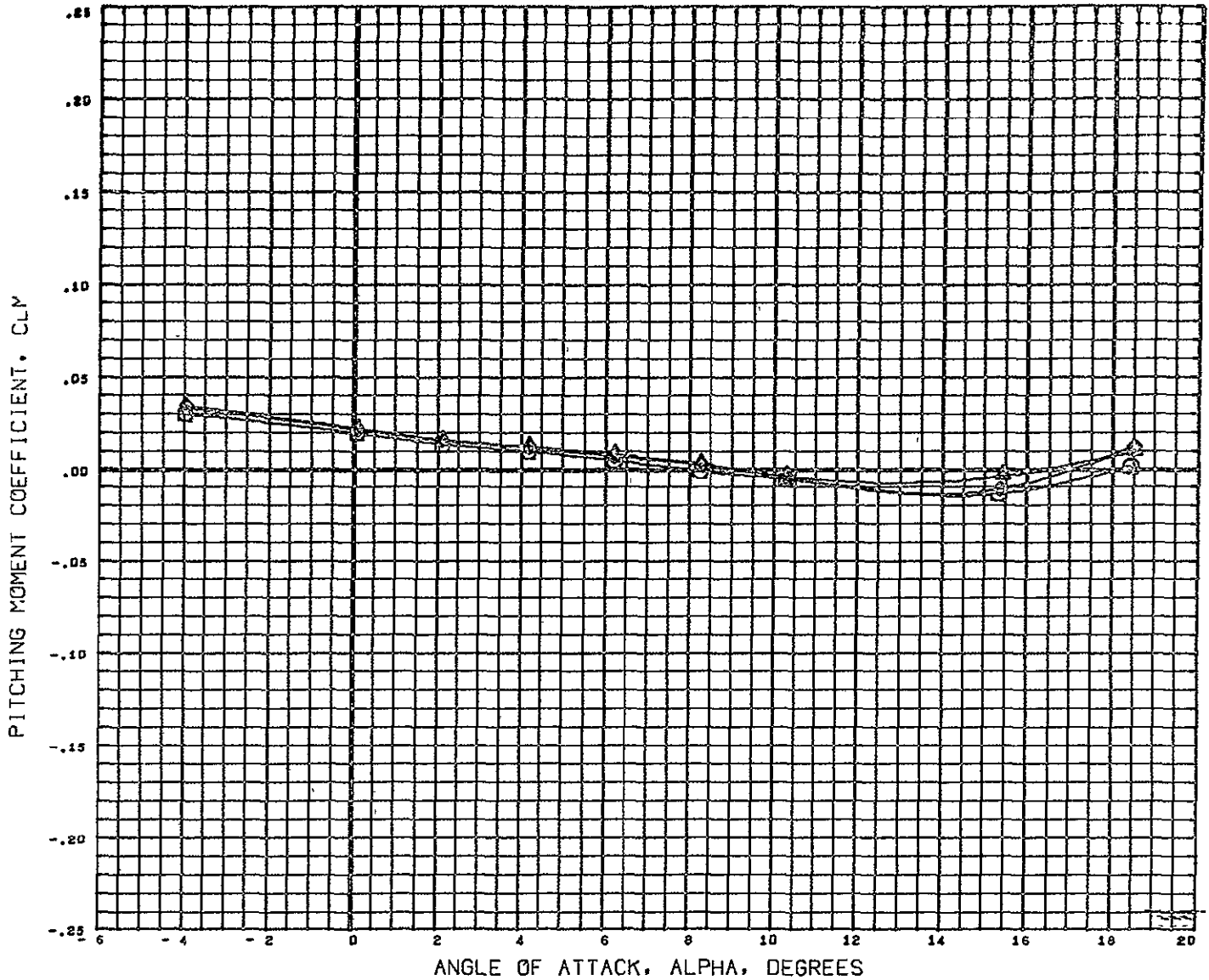
EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1 3550 SQ FT.
(RN4041)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0

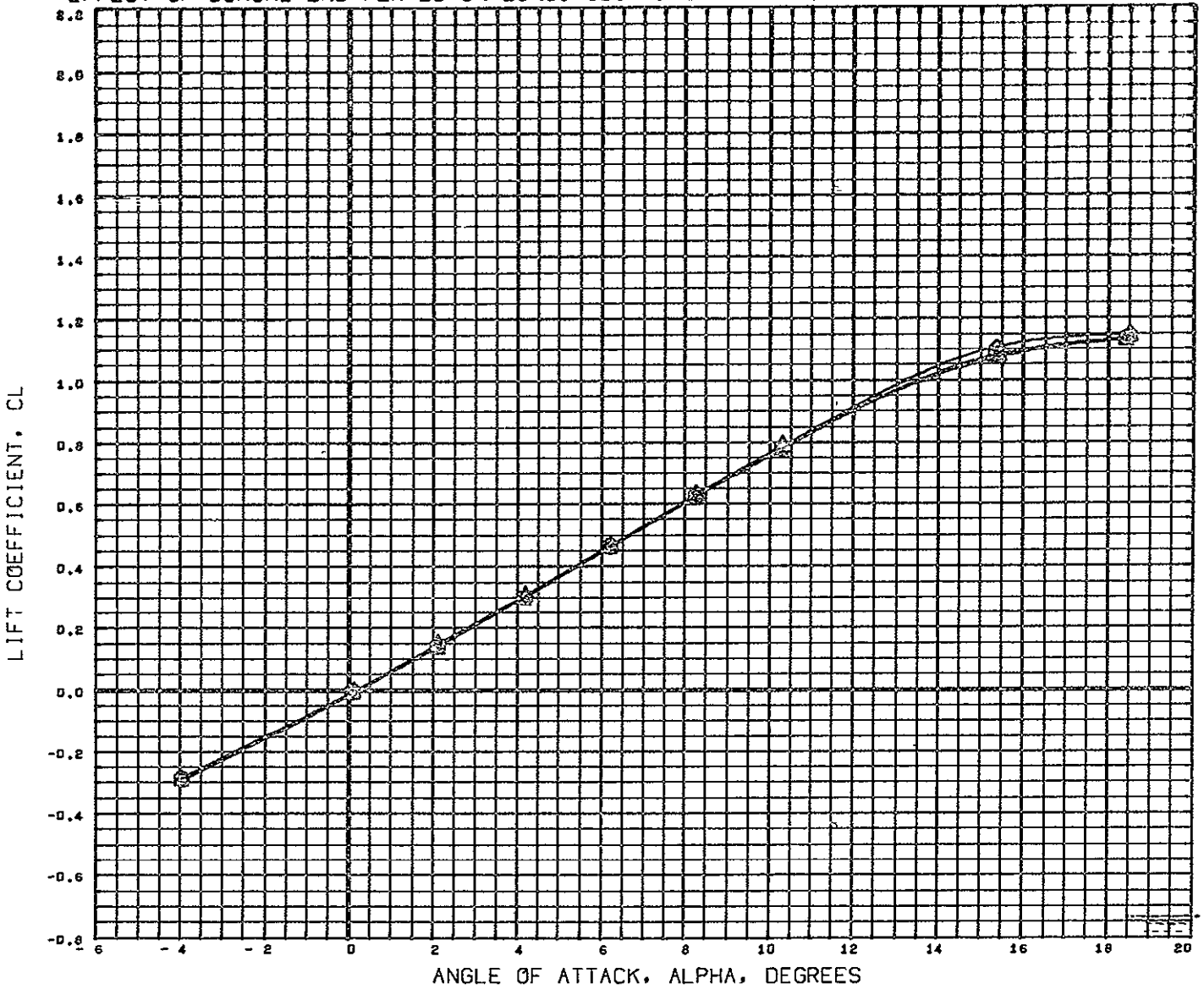


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ. FT.
(RN4041)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0

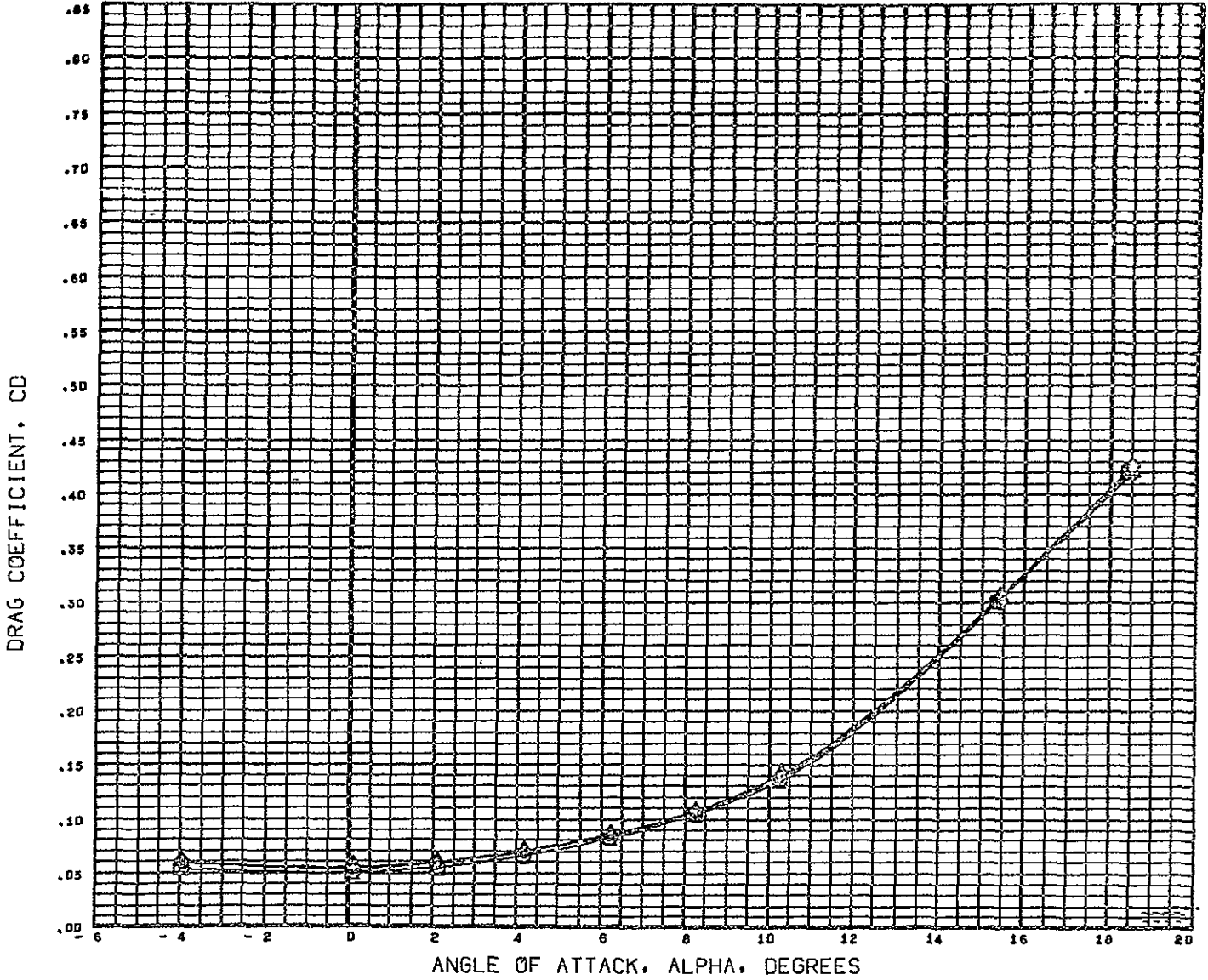


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4041)	NSRDC-3310,NSFC/LHSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310,NSFC/LHSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0

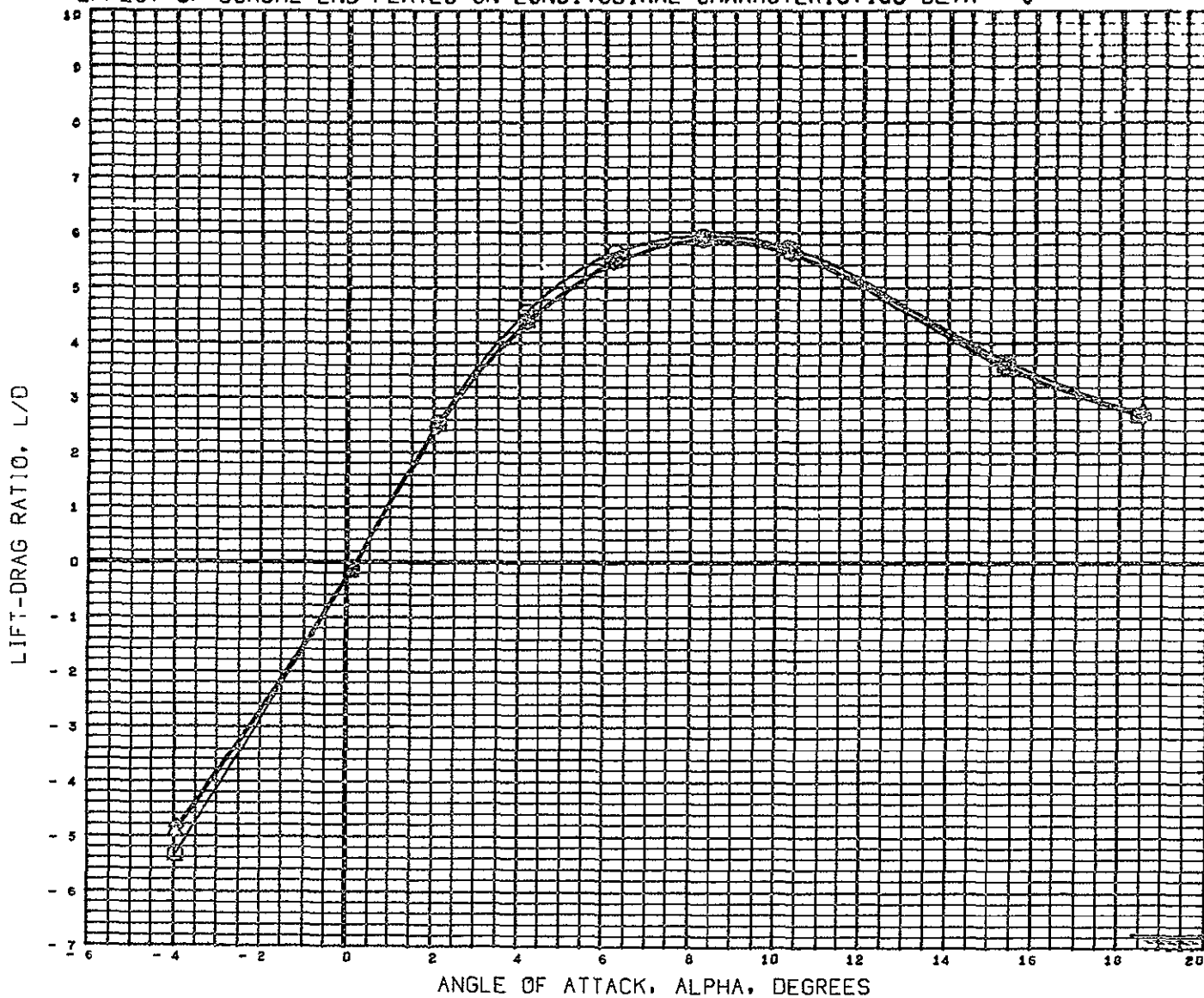


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4041)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

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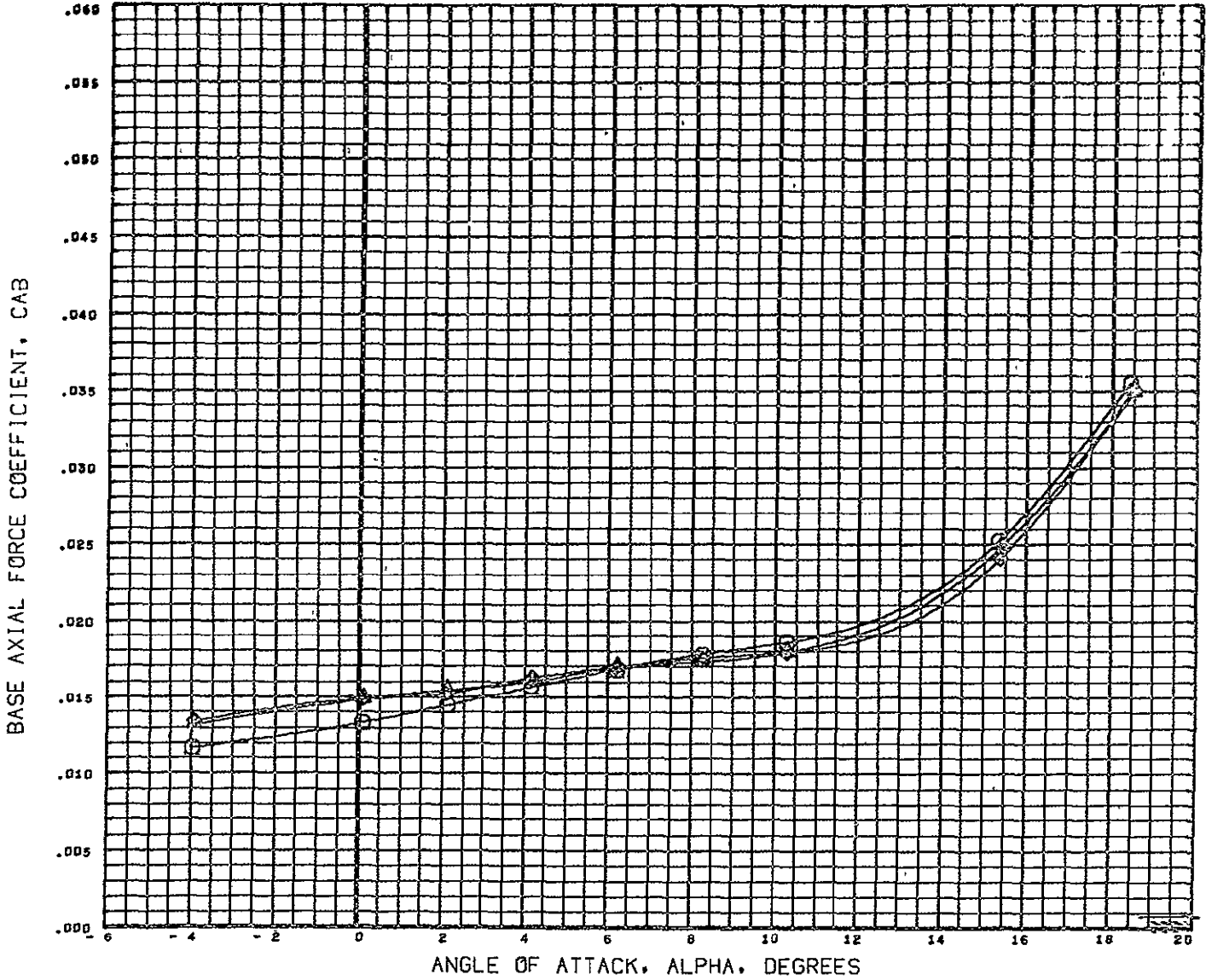
EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1,3550 SQ FT
(RN4041)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3,4530 FEET
(RN4045)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3,4530 FEET XMRP 2,5950 FEET YMRP 0,0000 FEET ZMRP 0,0187 FEET SCALE 0,0150 SCALE

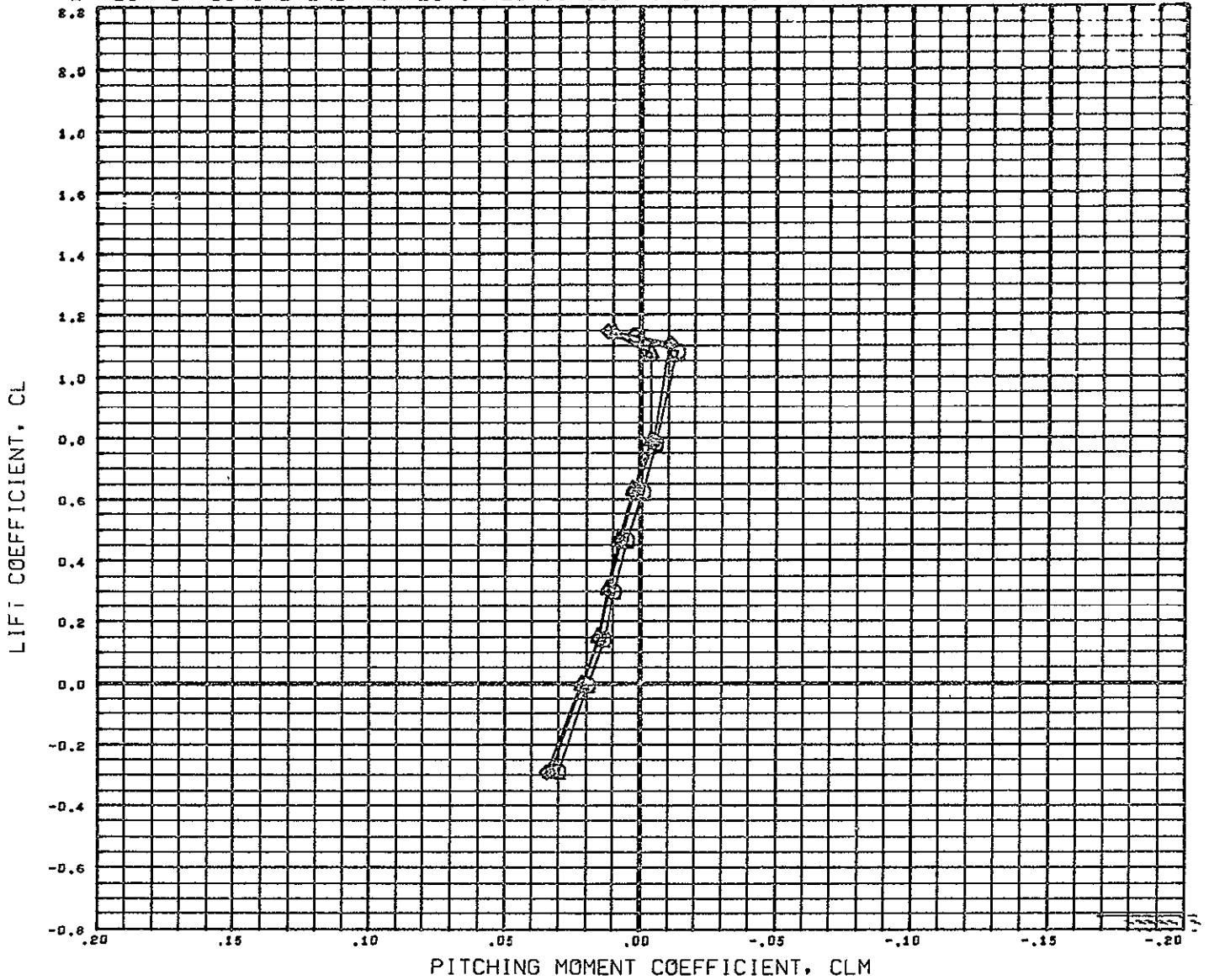
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EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1,000	2,000	0,000	SREF 1.3550 SQ. FT.
(RN4041)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1T1	7.660	1,000	2,000	0,000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1T2	7.660	1,000	2,000	0,000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0

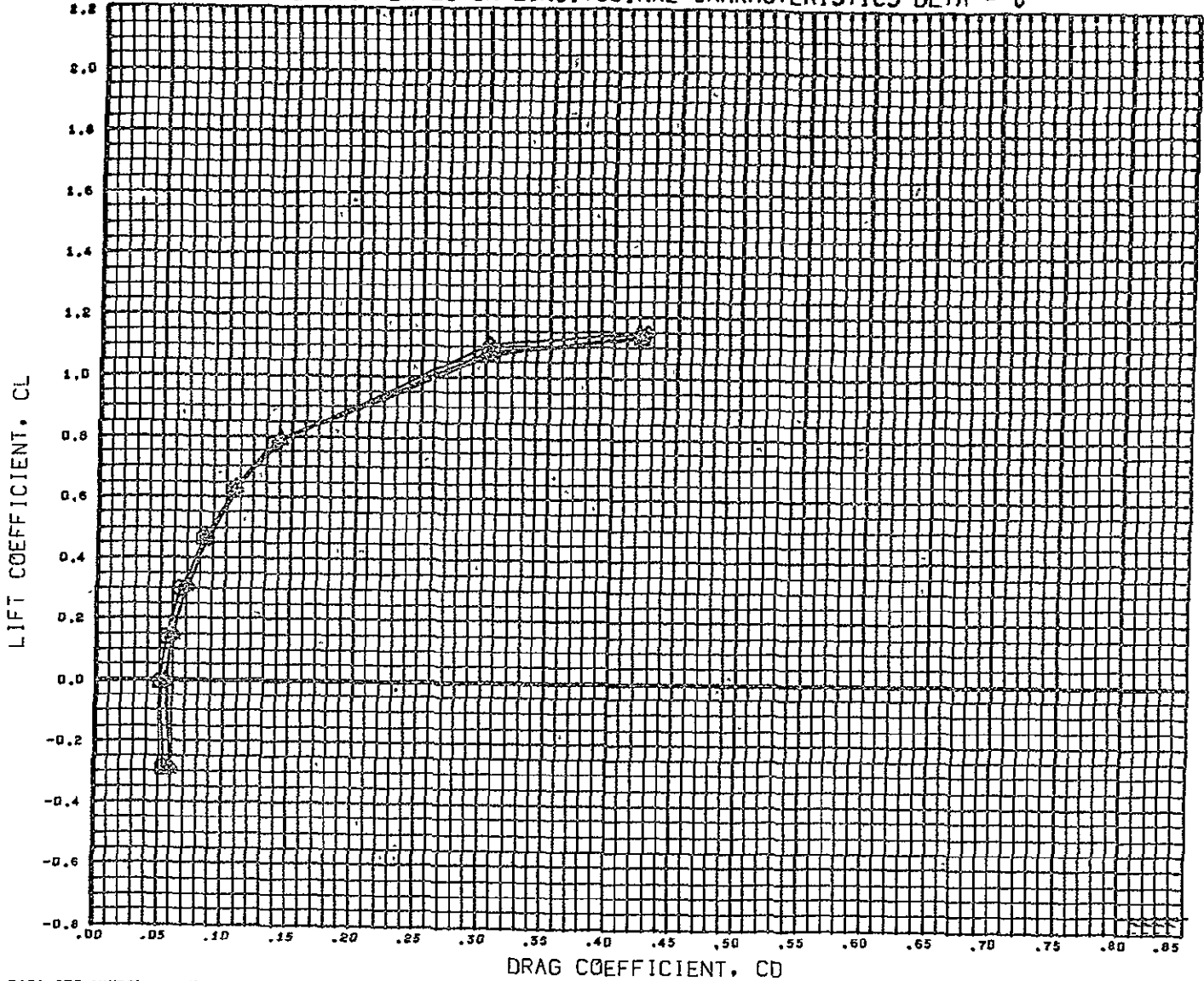


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIH DRL	CND POS	WNG POS	INCID W	REFERENCE INFORMATION	
(HN2209)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF	1.3550 SQ FT
(RN4041)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF	3.4530 FEET
(RN4045)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF	3.4530 FEET
						XMRP	2.5930 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

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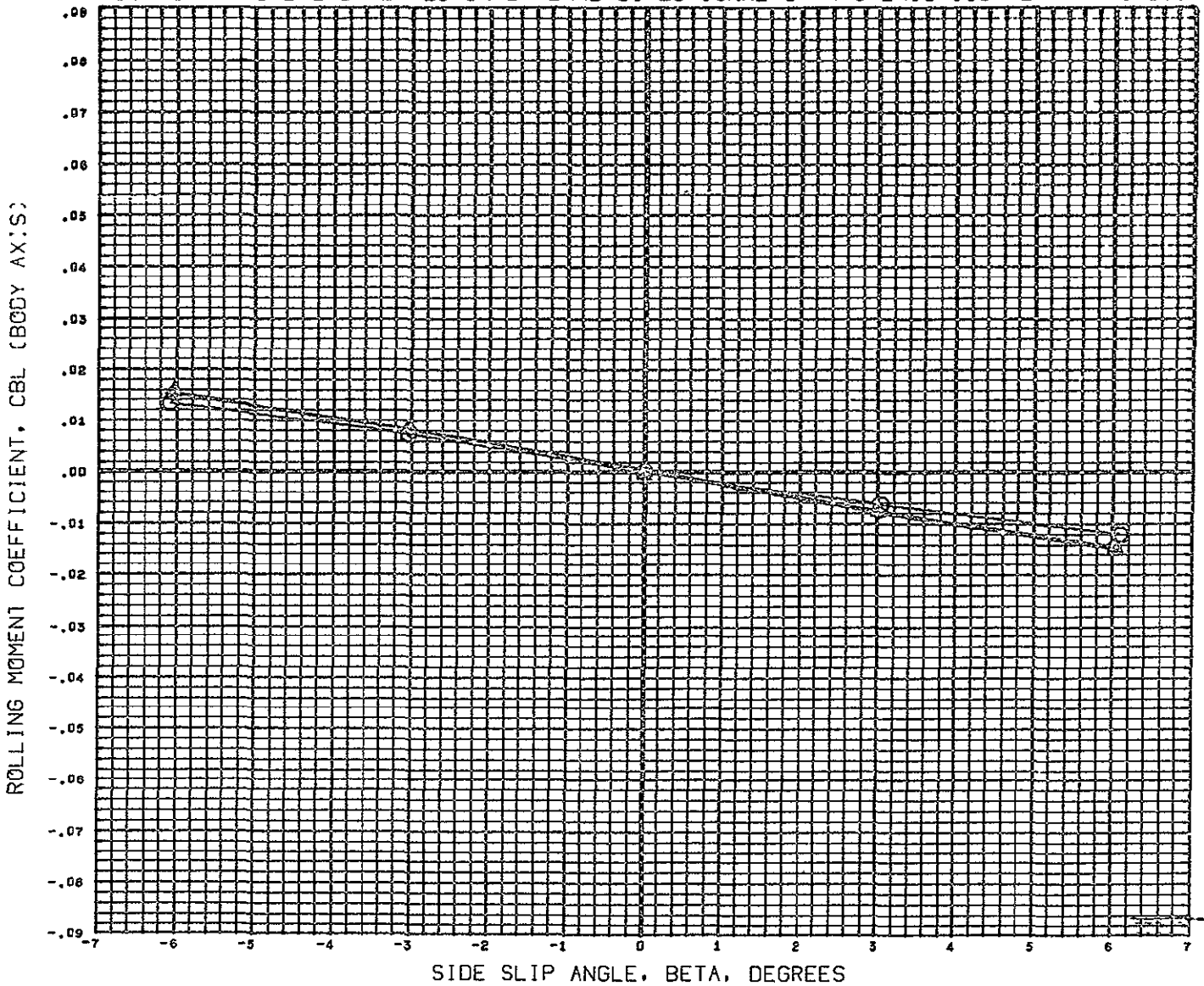
EFFECT OF DORSAL END PLATES ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2209)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V2D1	7.860	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4041)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.860	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4045)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.860	1.000	2.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

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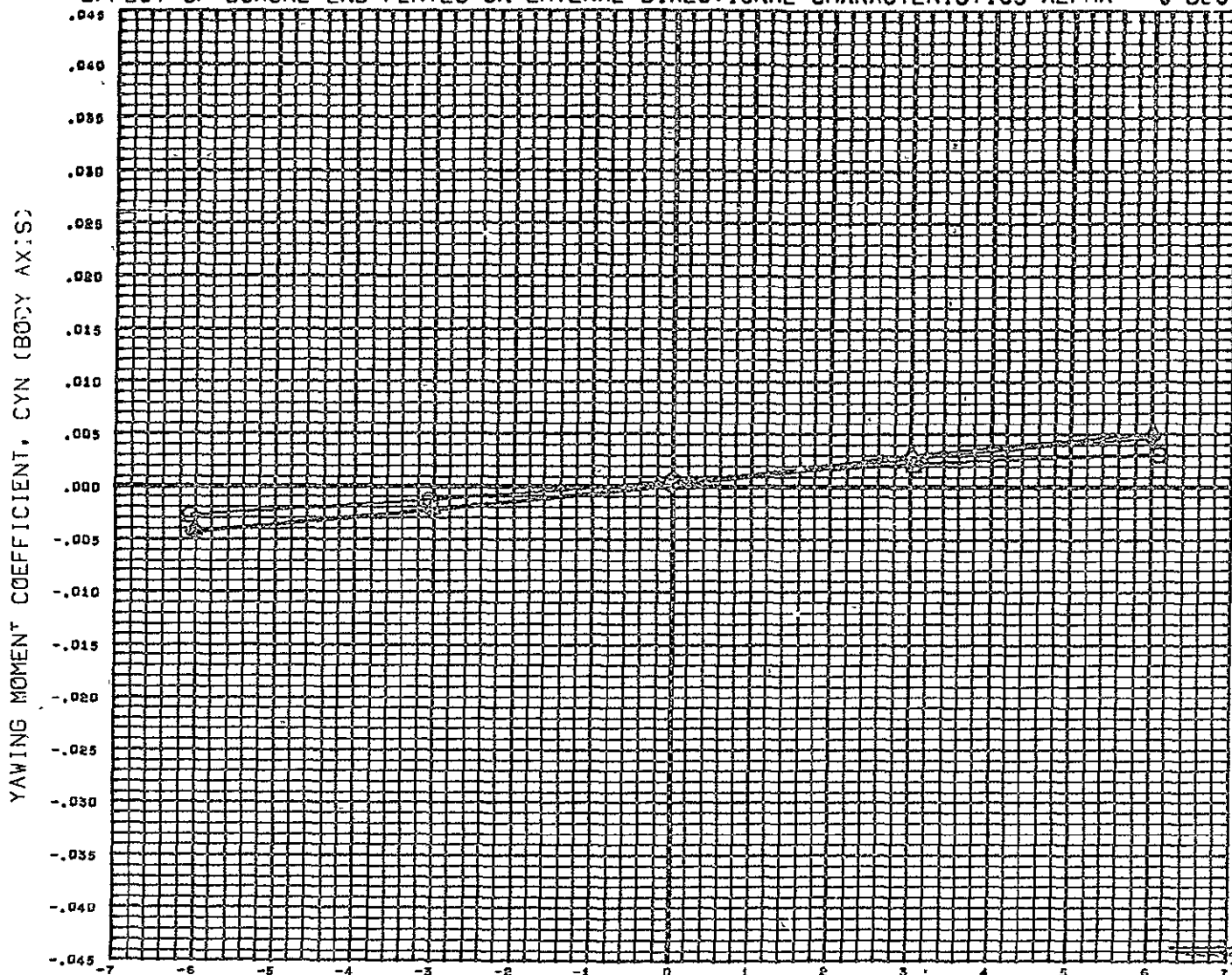
EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2210)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4042)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4046)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET XWRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG



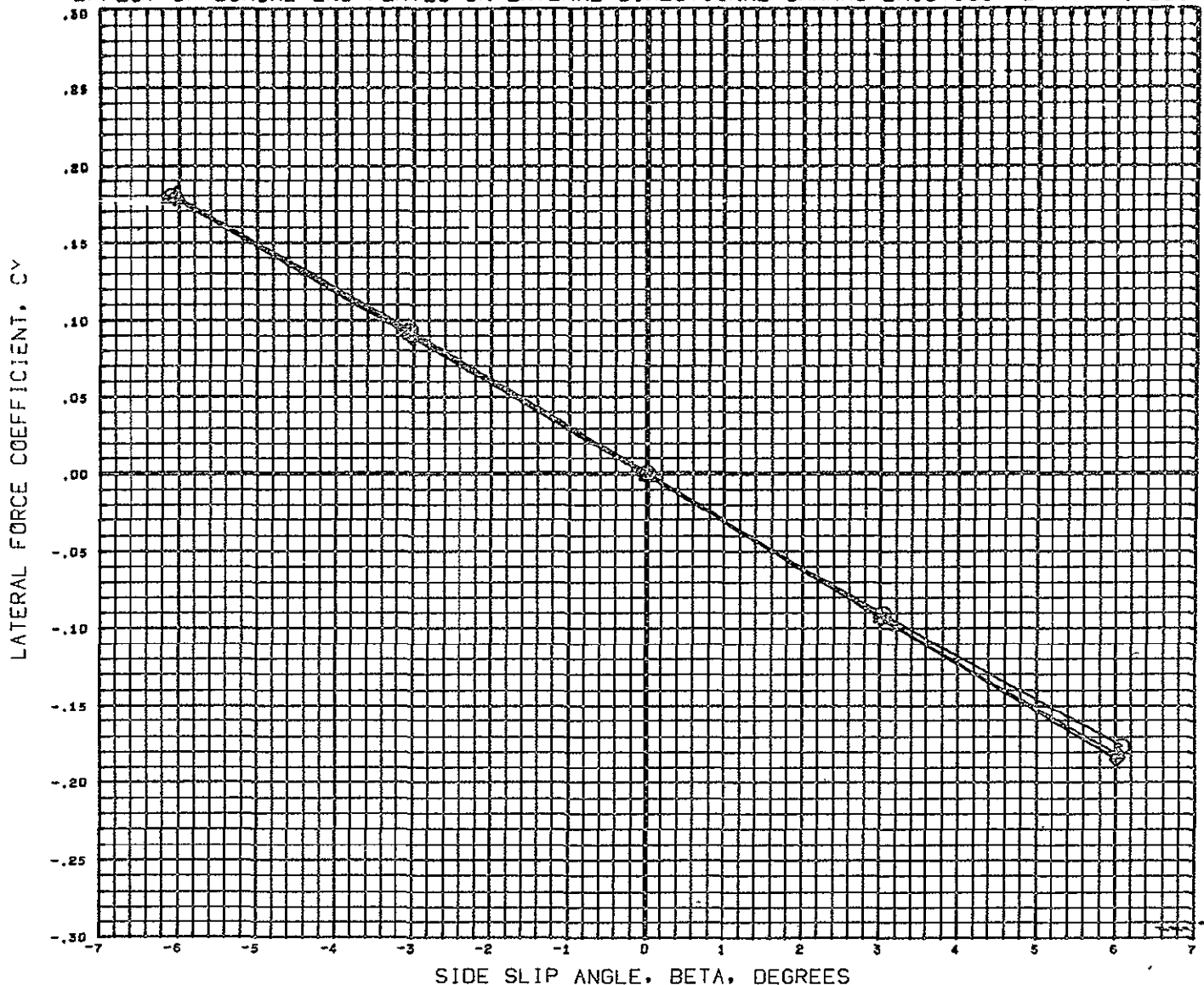
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2210)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4042)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4046)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG

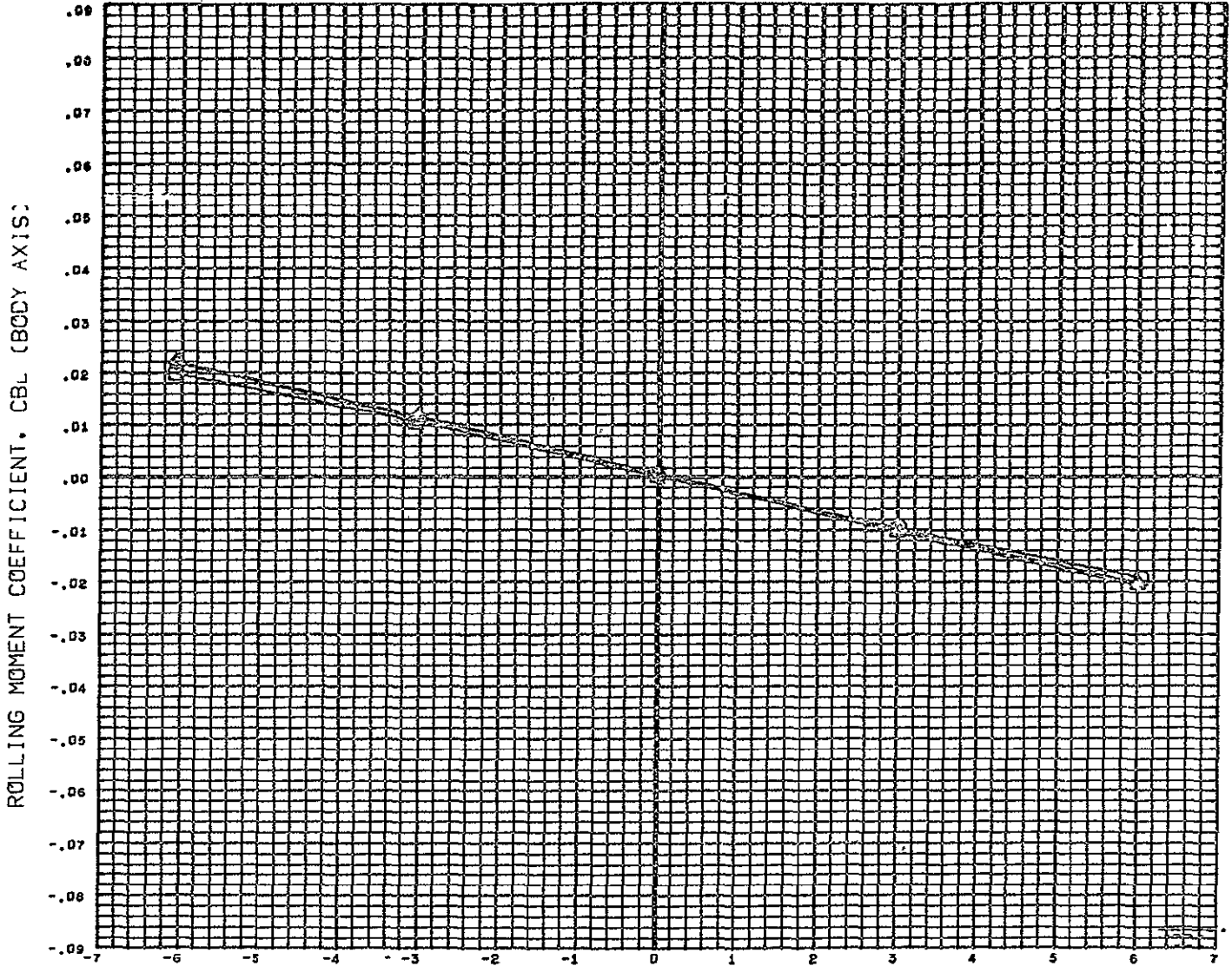


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2210)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1 3550 SQ.FT
(RN4042)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4046)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG



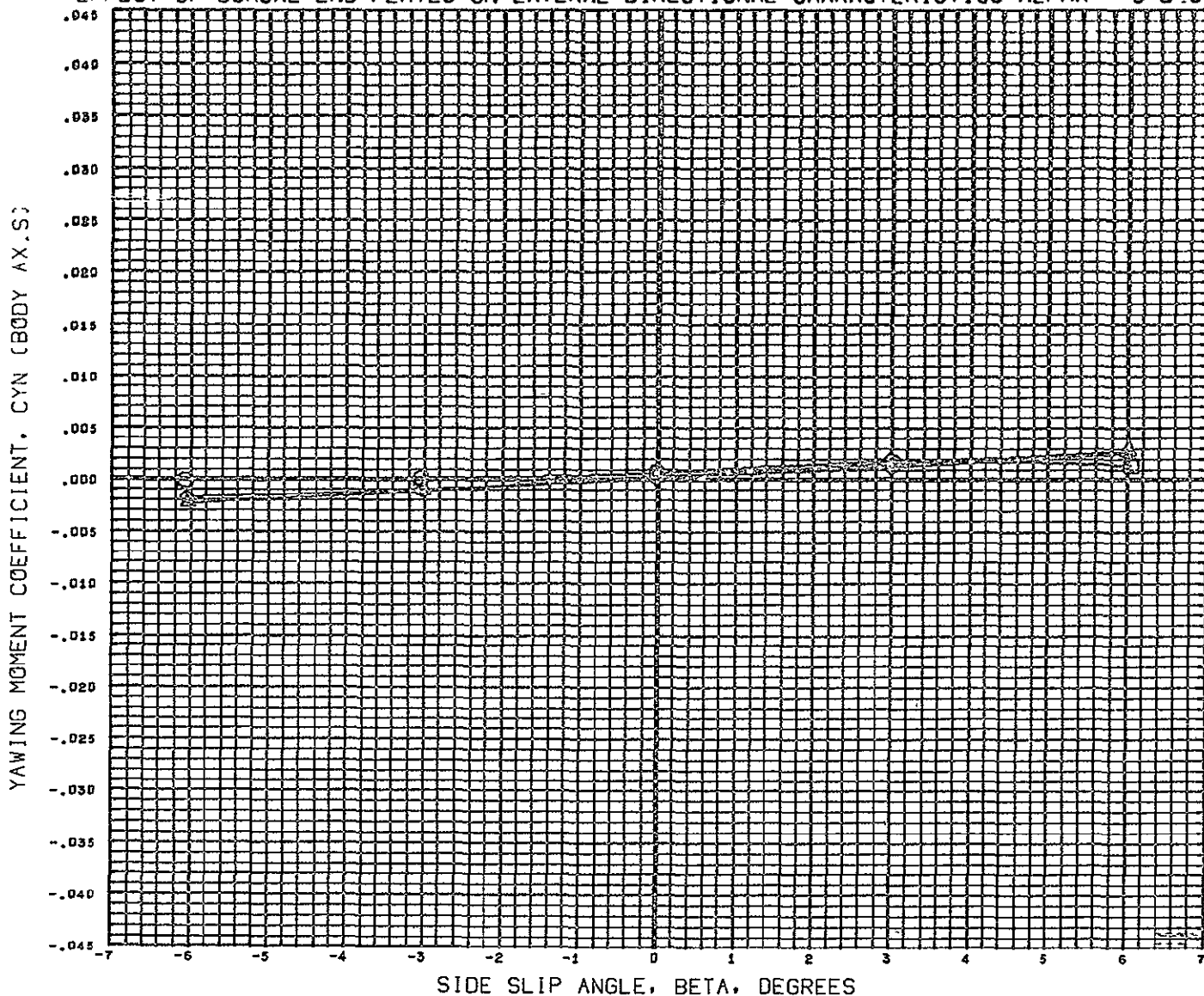
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2211)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4043)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4047)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG



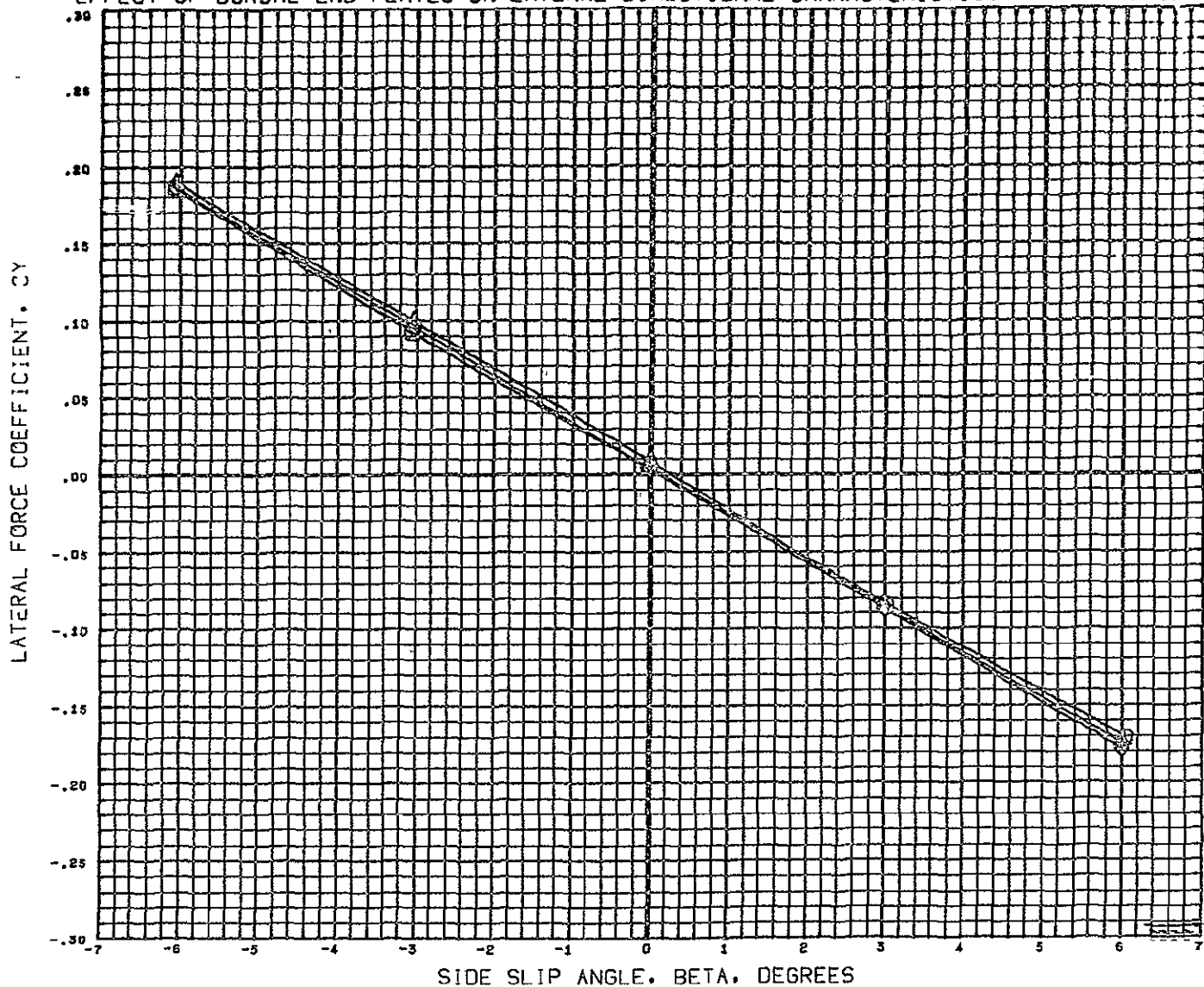
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2211)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1 3550 SE.FT.
(RN4043)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3 4530 FEET
(RN4047)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3 4530 FEET XMRP 2 5950 FEET YMRP 0 0000 FEET ZMRP 0 0187 FEET SCALE 0.0150 SCALE

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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG

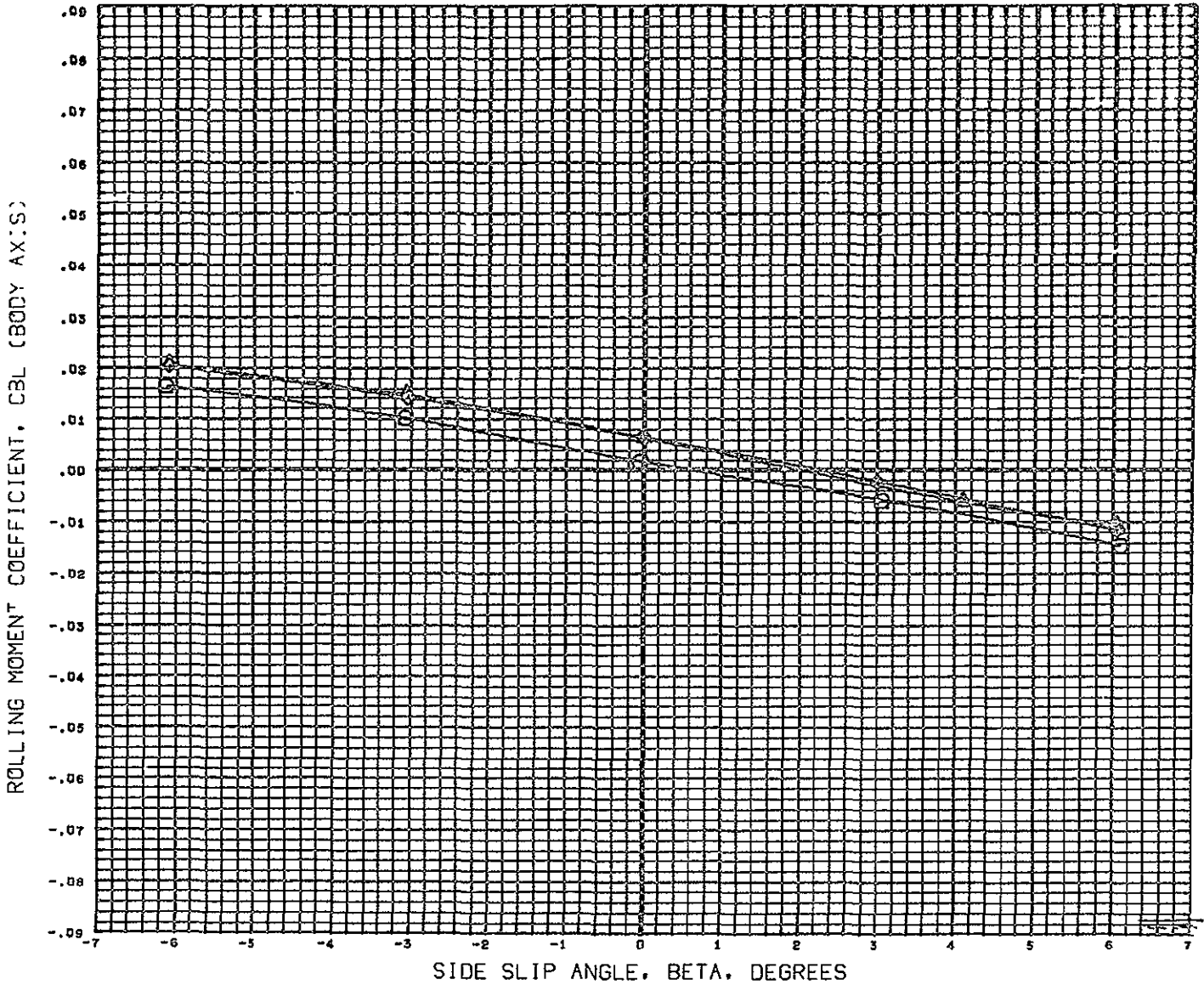


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2211)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4043)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4047)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

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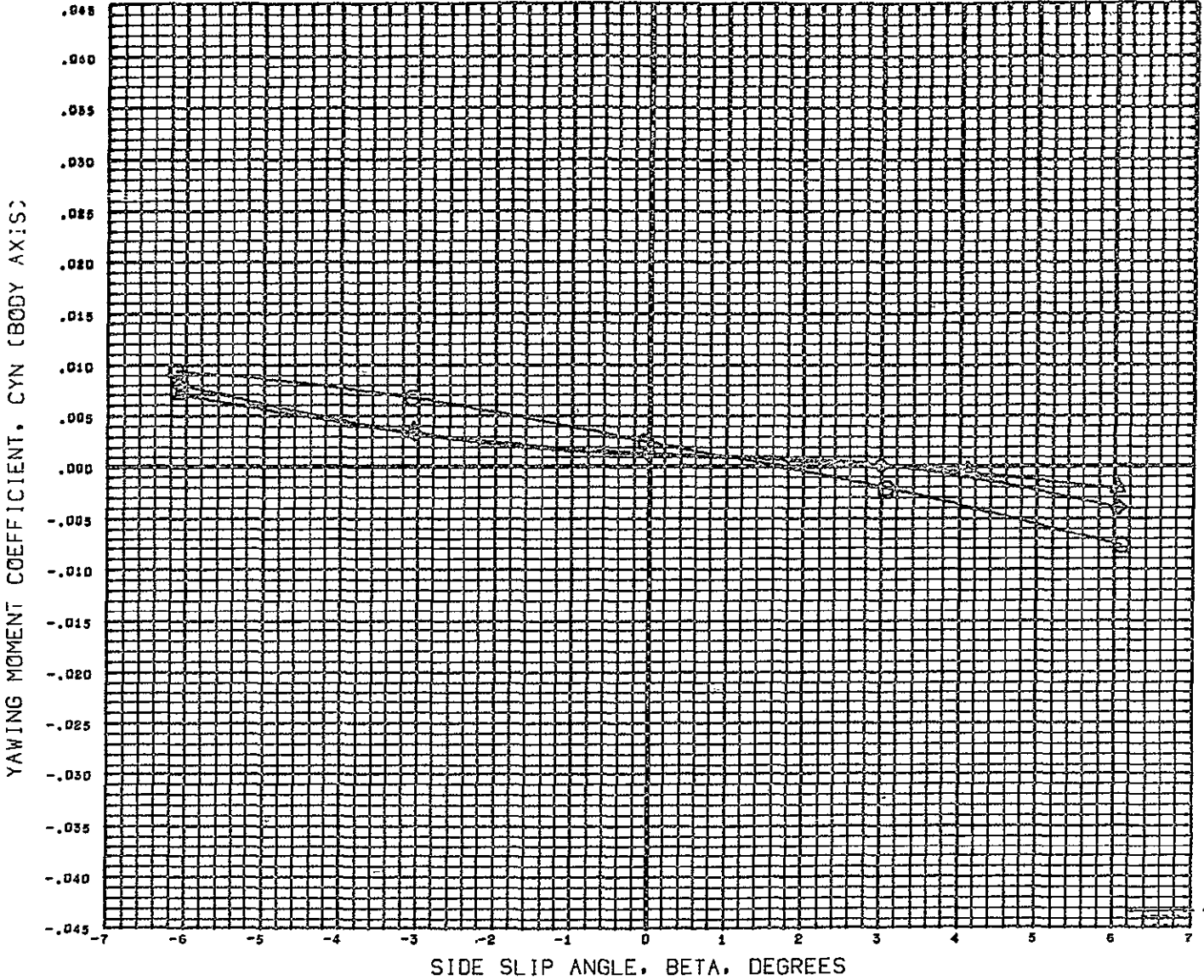
EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA =15 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2212)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4044)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4048)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA =15 DEG

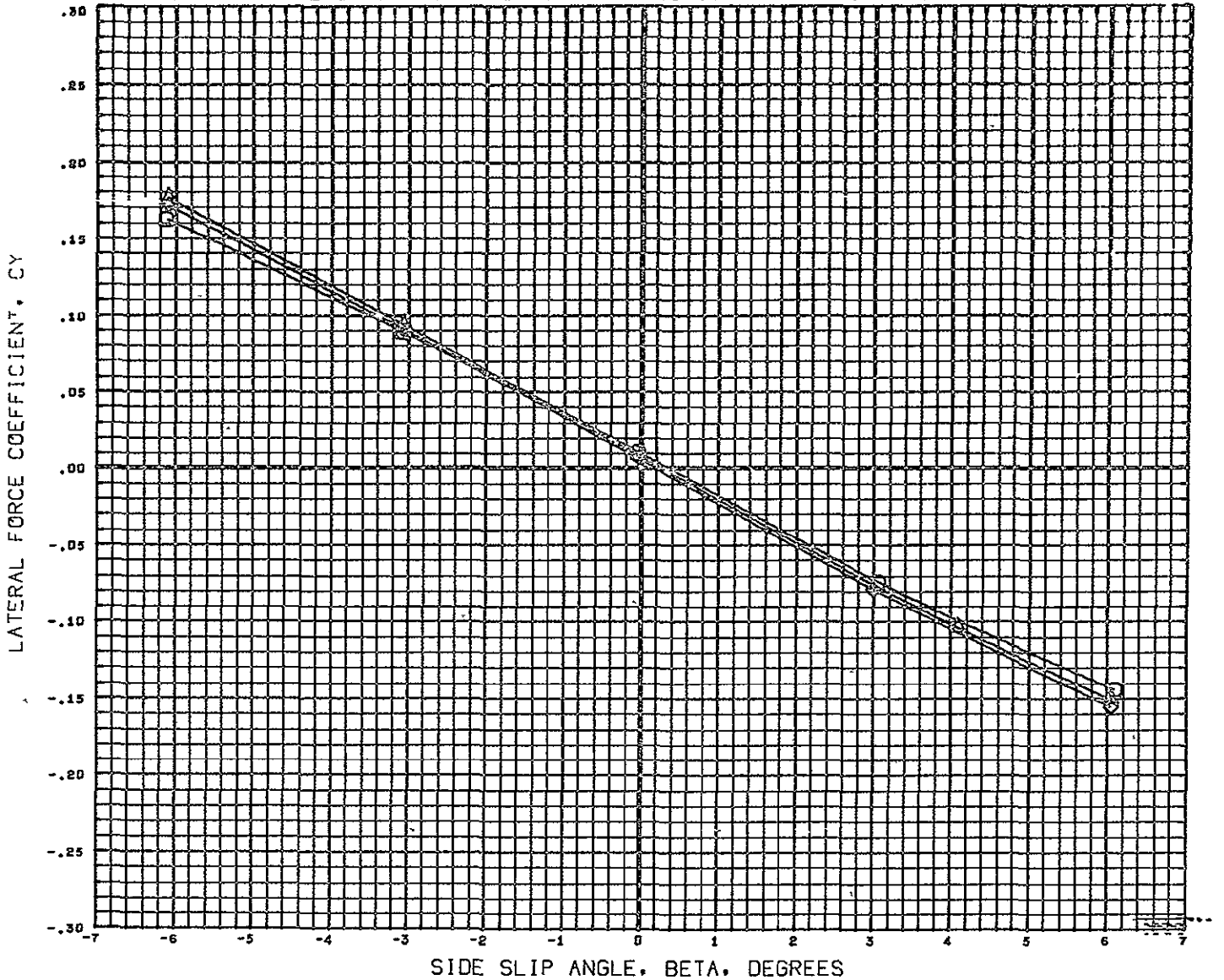


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2212)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ.FT.
(RN4044)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4048)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA =15 DEG

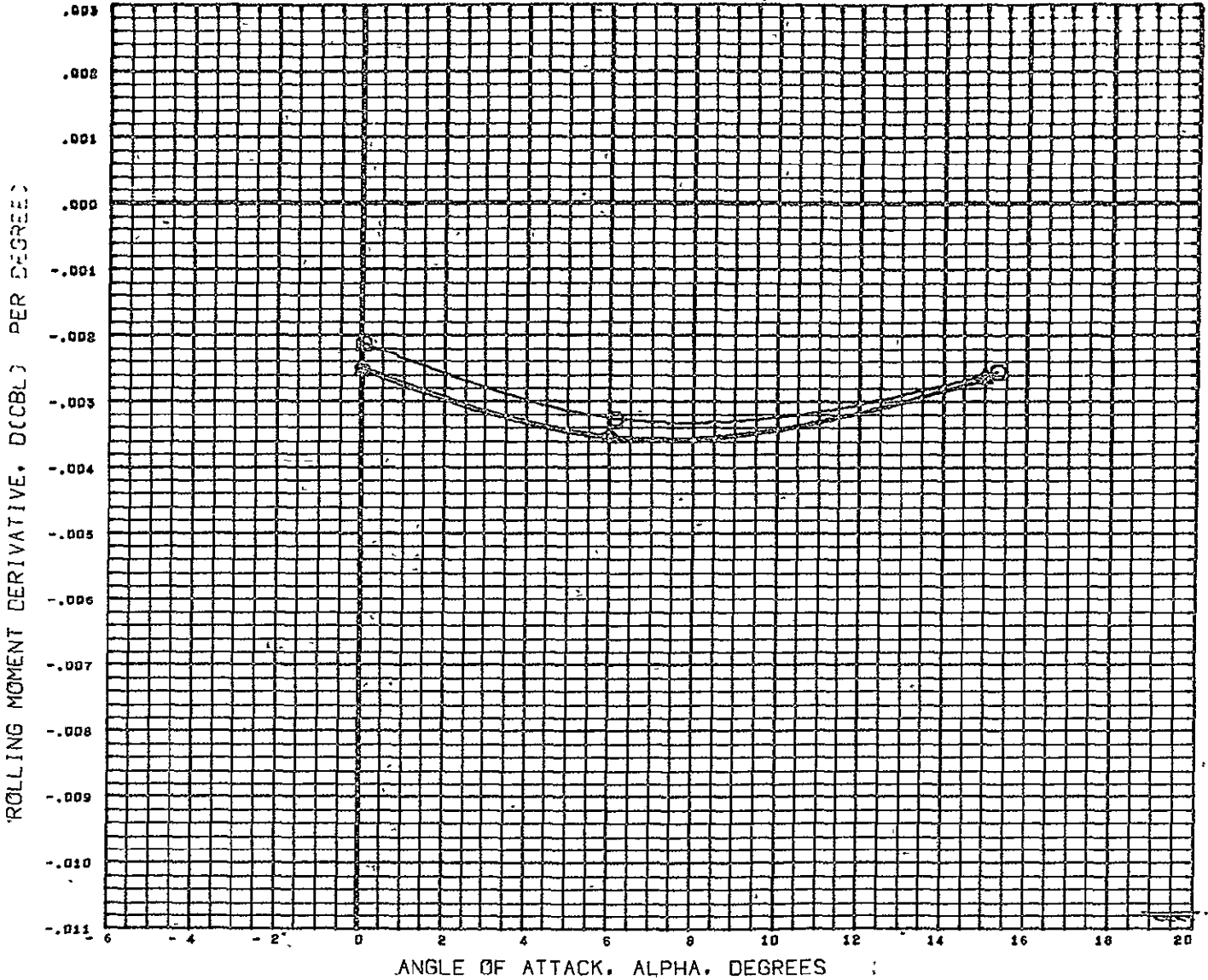


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(HN2212)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V2D1	7.660	1.000	2.000	0.000	SREF 1.3550 SQ FT
(RN4044)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1T1	7.660	1.000	2.000	0.000	LREF 3.4530 FEET
(RN4048)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V2D1T2	7.660	1.000	2.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0167 FEET
						SCALE 0.0150 SCALE

MACH .38

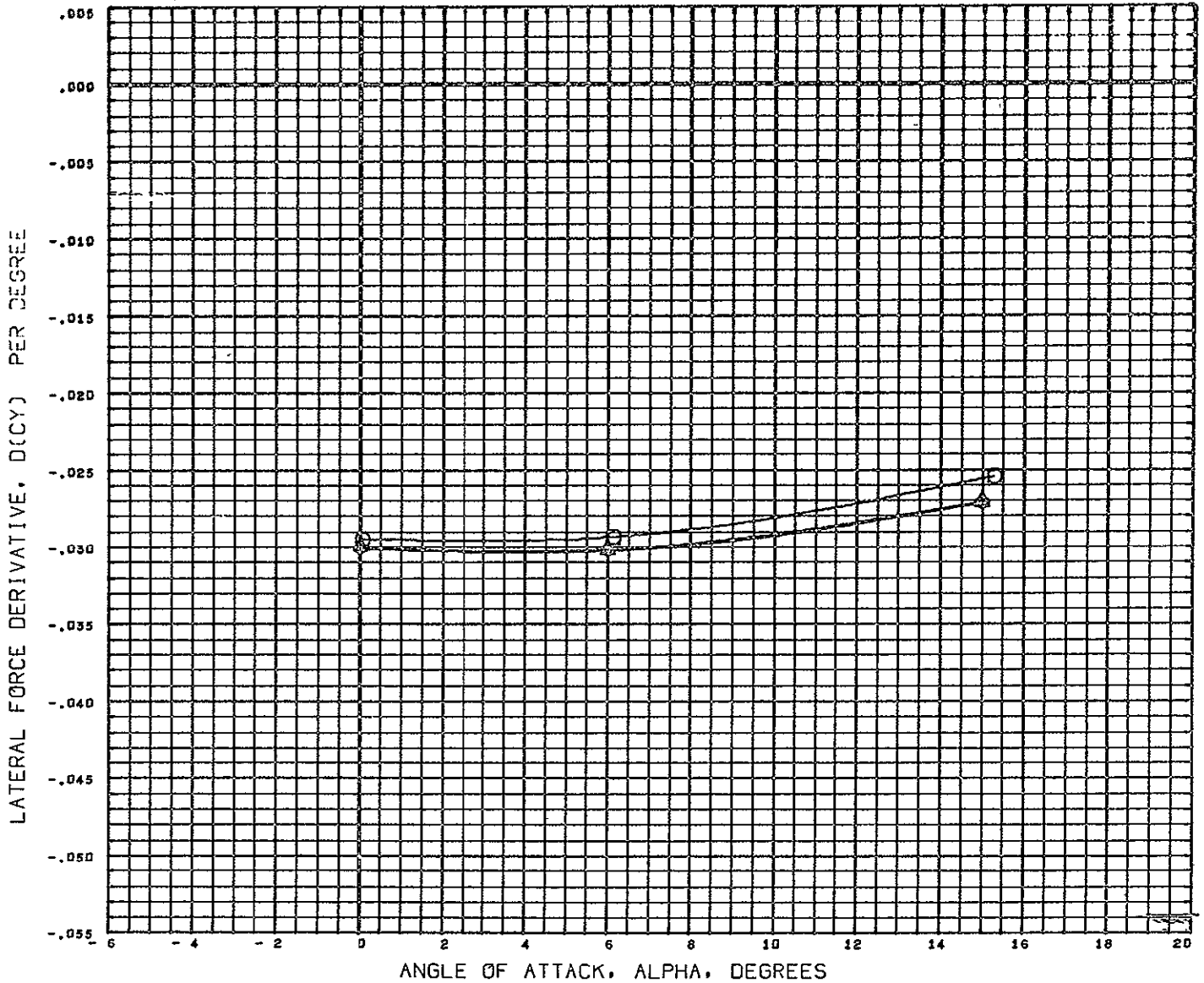
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EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL DERIVATIVES



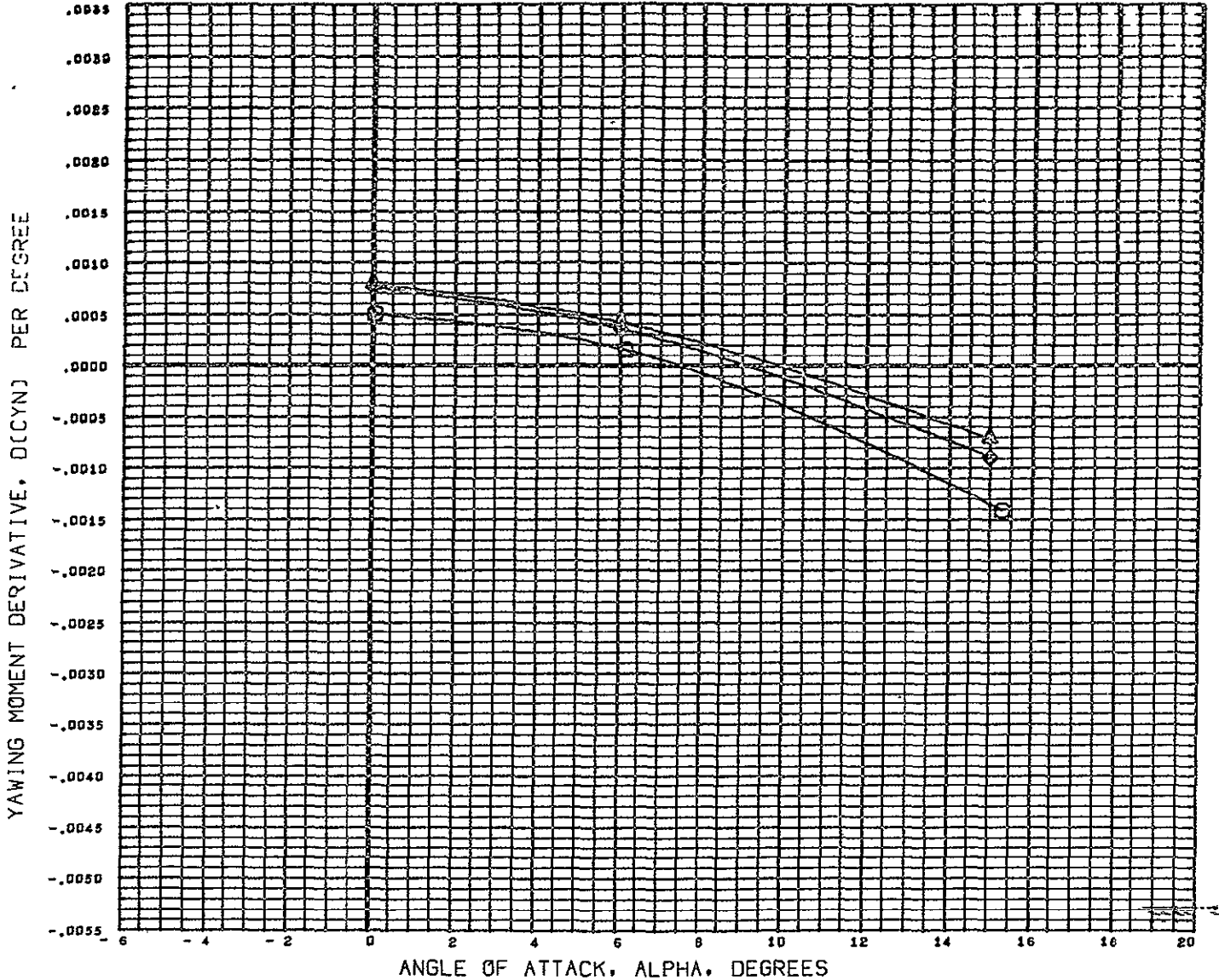
SYMBOL	DOREPL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.210	MACH	0.400	INCIDC	3.000	SREF	1.3550	sq. ft.
◇	1.211	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
◇	1.212	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.5950	FEET
		CNDPOS	1.000			YHRP	0.0000	FEET
		DATA HIST. CODE	HMI			ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL DERIVATIVES



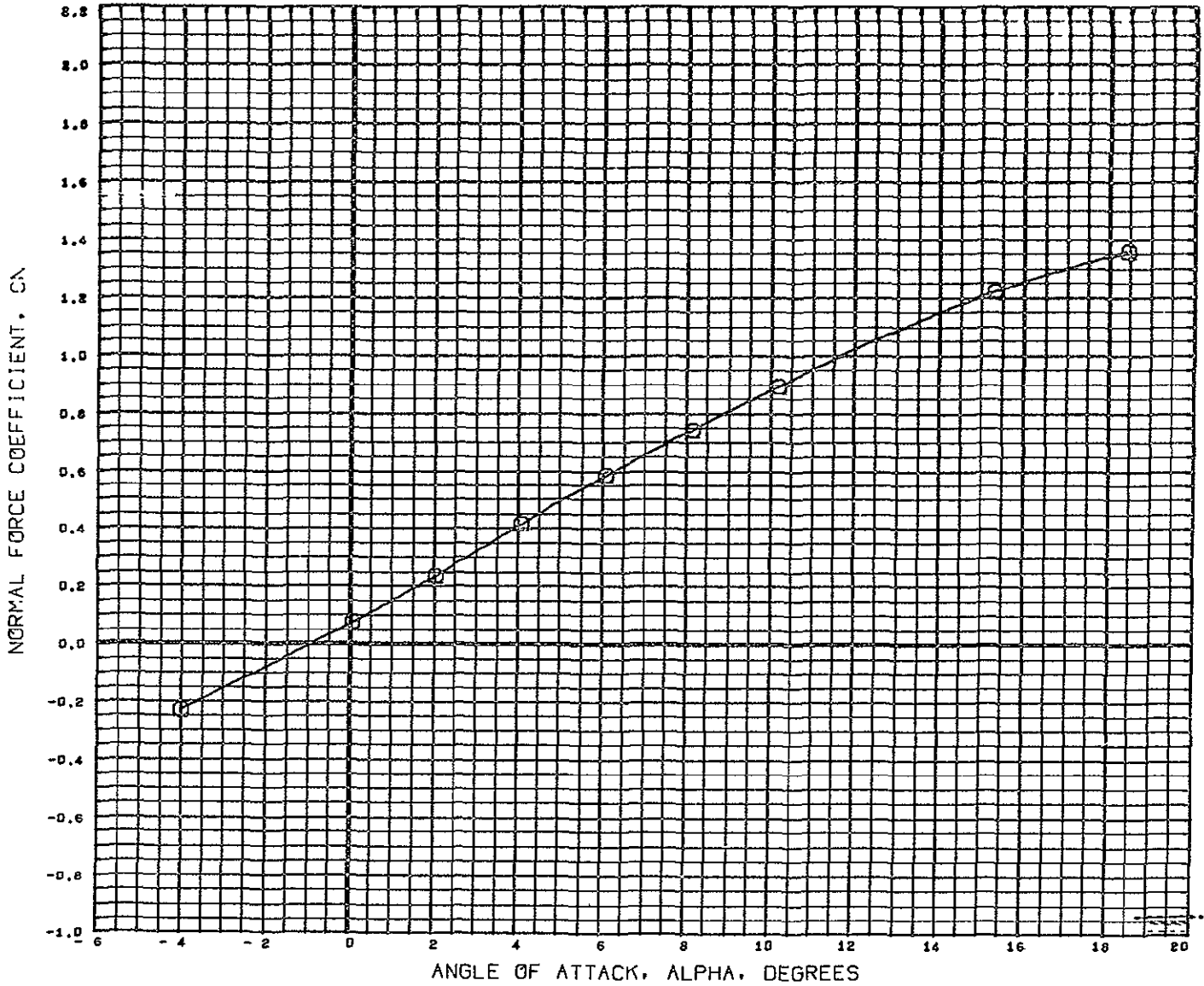
SYMBOL	DOREPL	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.210	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ. FT.
◇	1.211	INCIDW	0.000	DIHDRL	7.660	LREF	3.4530	FEET
◇	1.212	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	2.000	XNRP	2.9950	FEET
		CNDPOS	1.000			YNRP	0.0000	FEET
		DATA HIST. CODE	MHI			ZNRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF DORSAL END PLATES ON LATERAL-DIRECTIONAL DERIVATIVES



SYMBOL	DOREPL	PARAMETRIC VALUES				REFERENCE INFORMATION		
		MACH	INCIDC	DIHDL	CANARD	WNGPOS		
◇	1.210	0.400	3.000			SREF	1.3550	SG.FT
◇	1.211	0.000	7.660			LREF	3.4530	FEET
◇	1.212	0.000	0.000			BREF	3.4530	FEET
		0.000	2.000			XHRP	2.5950	FEET
		1.000				YHRP	0.0000	FEET
						ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE
		DATA HIST. CODE	MHI					

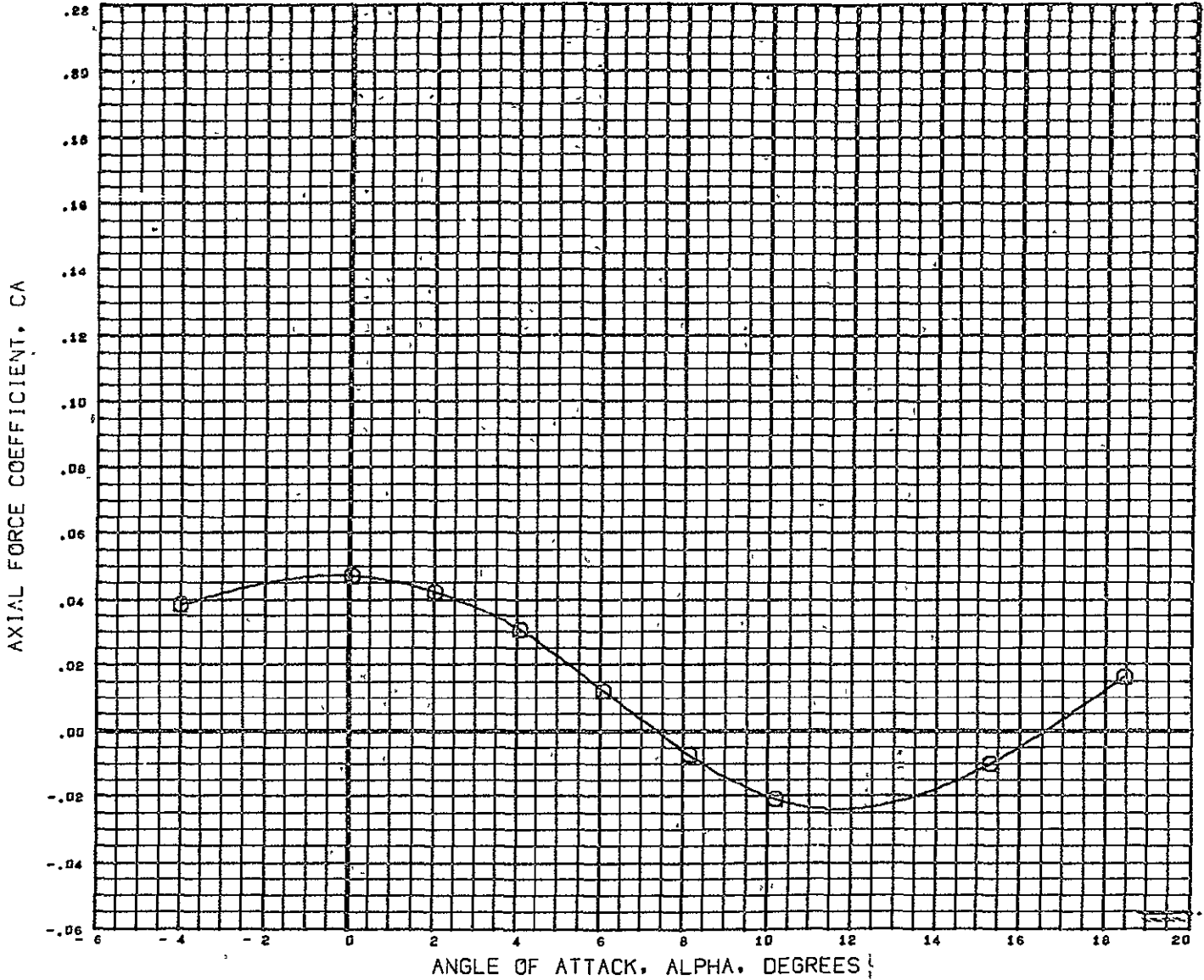
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4134) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

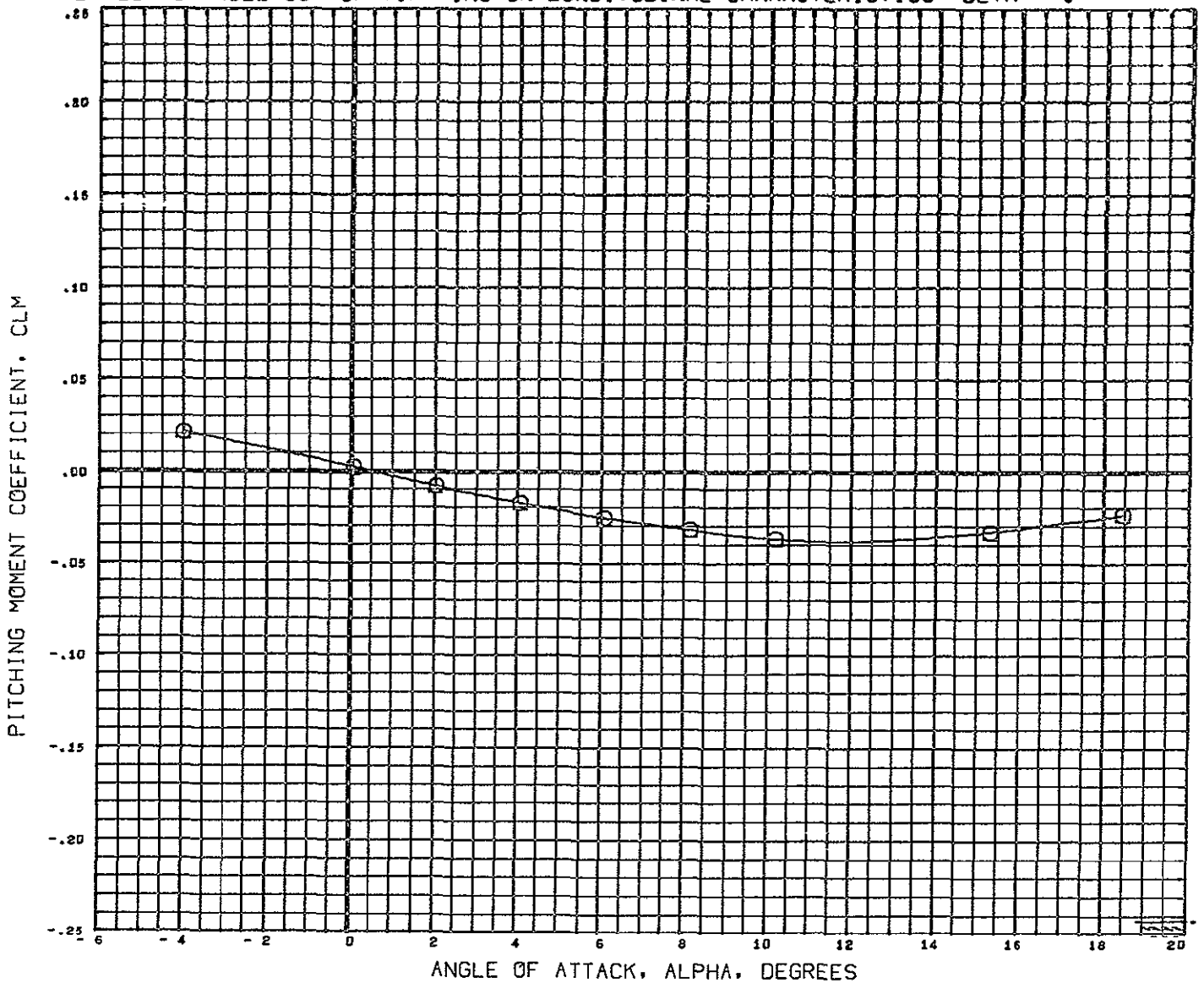


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHREL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4134) □	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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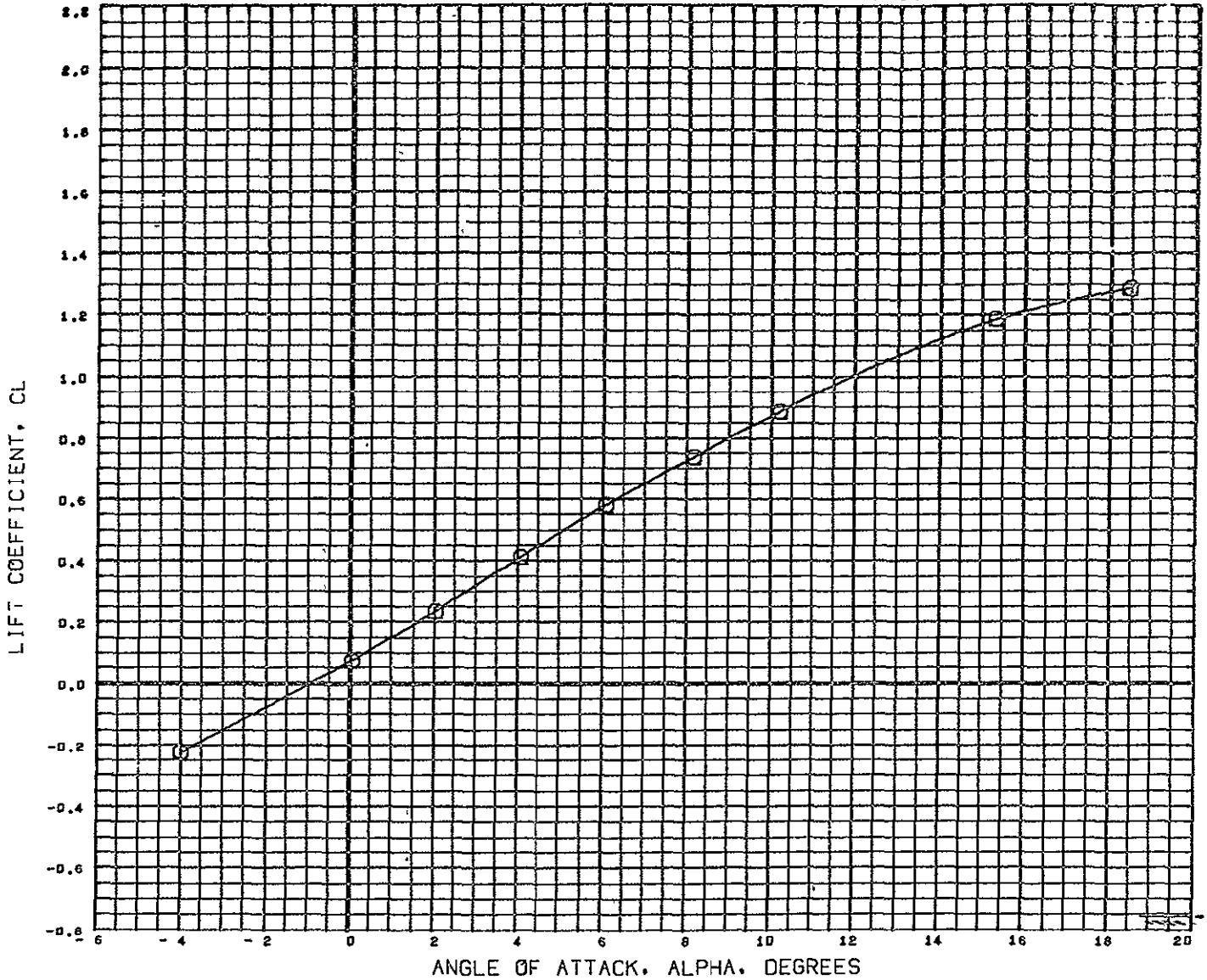
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4134) □	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ. FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						YMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

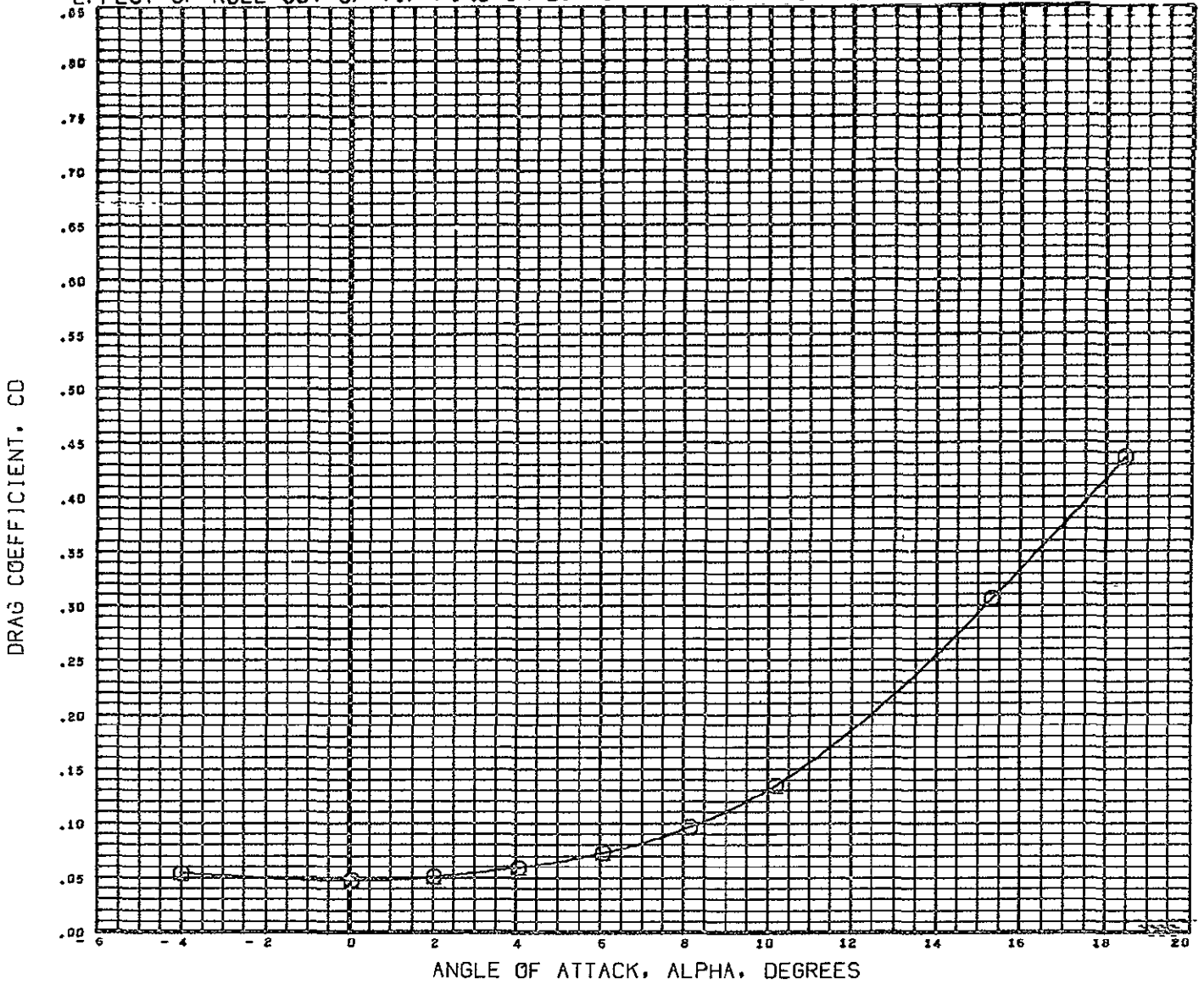


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4134) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF	1 3550 SQ FT.
						LREF	3,4530 FEET
						BREF	3,4530 FEET
						XNRP	2 5950 FEET
						YNRP	0,0000 FEET
						ZNRP	0,0187 FEET
						SCALE	0,0150 SCALE

MACH .40

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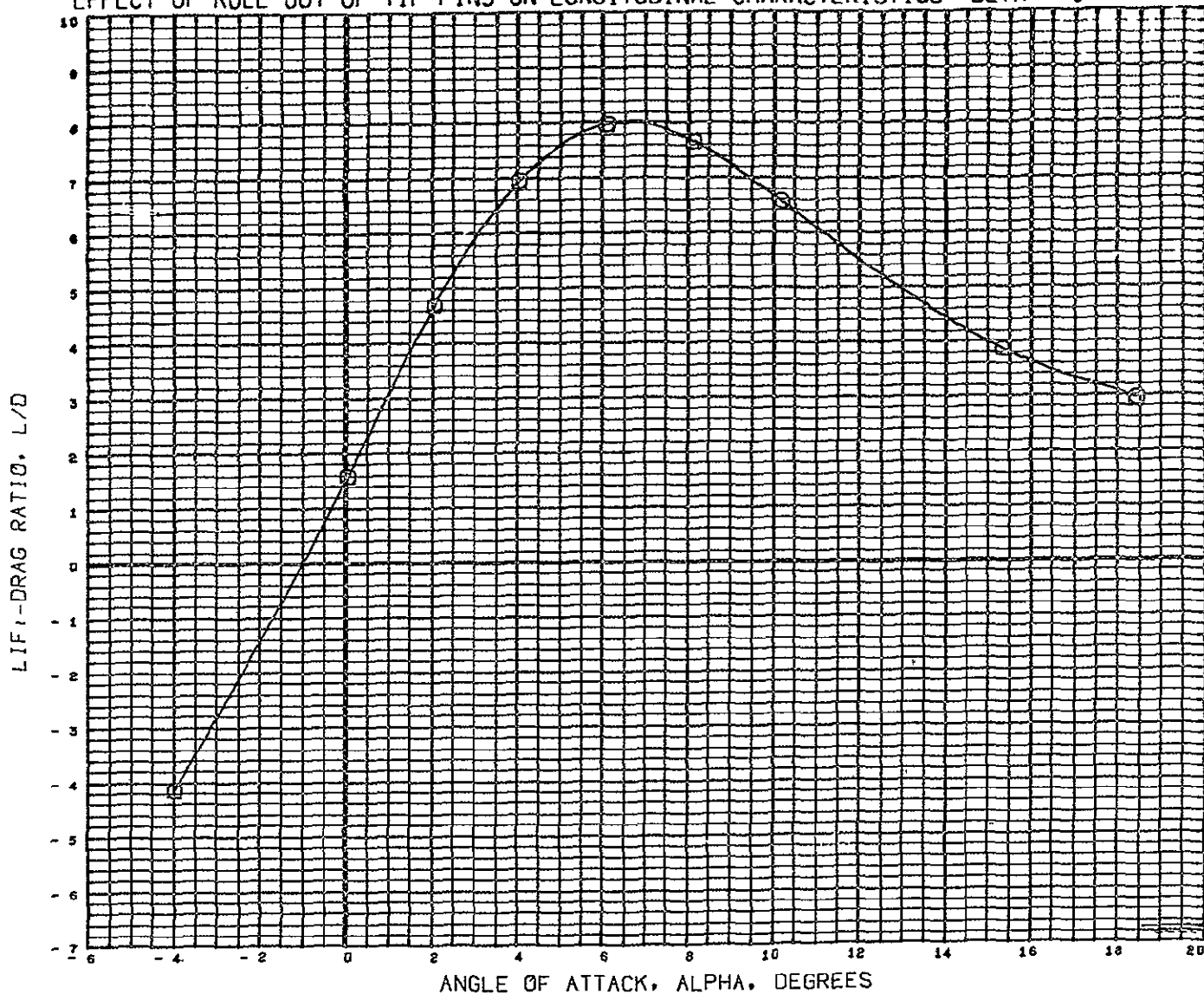
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4134) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

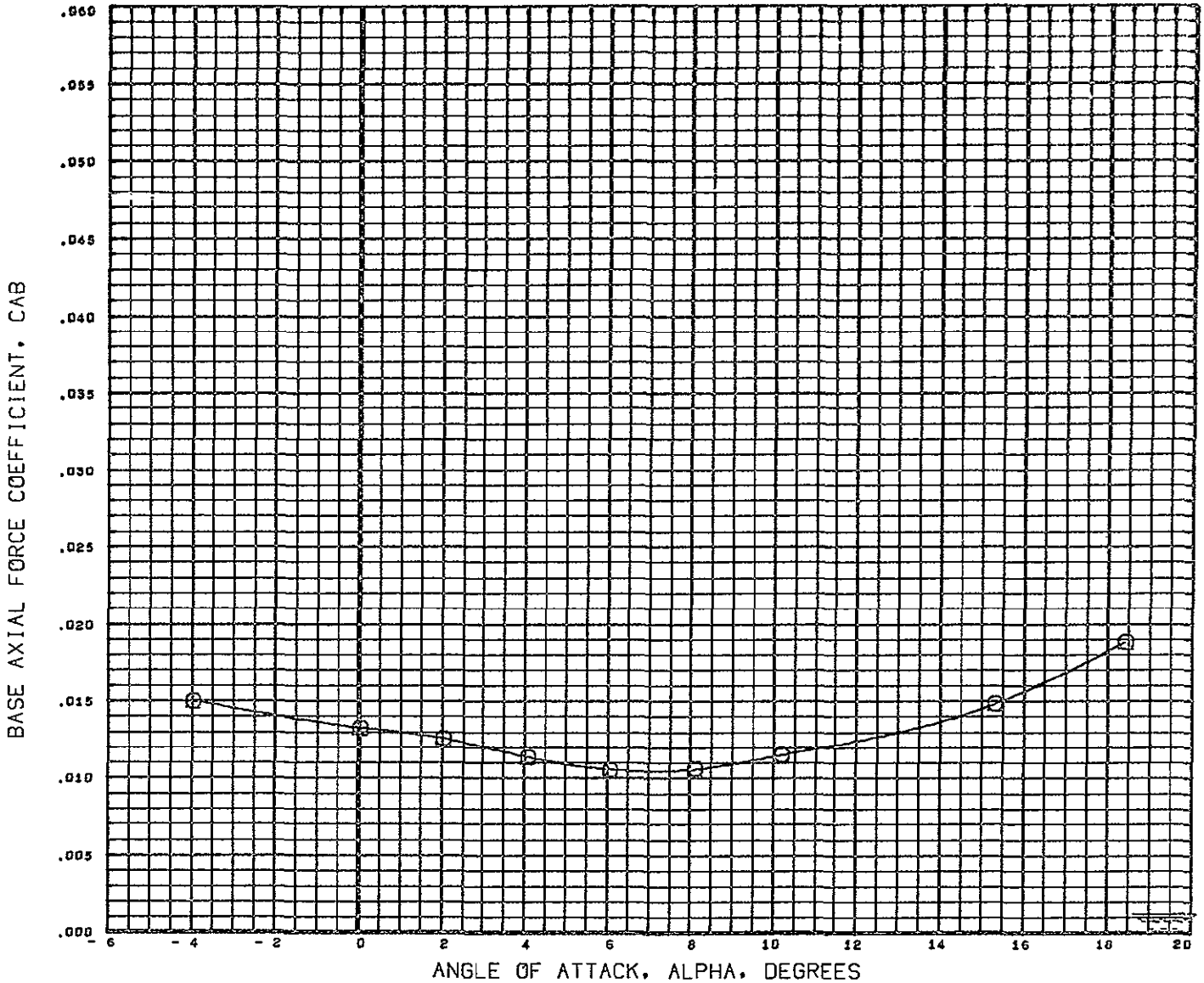
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4134) □	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XNRP	2.5950 FEET
						YNRP	0.0000 FEET
						ZNRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40 -1

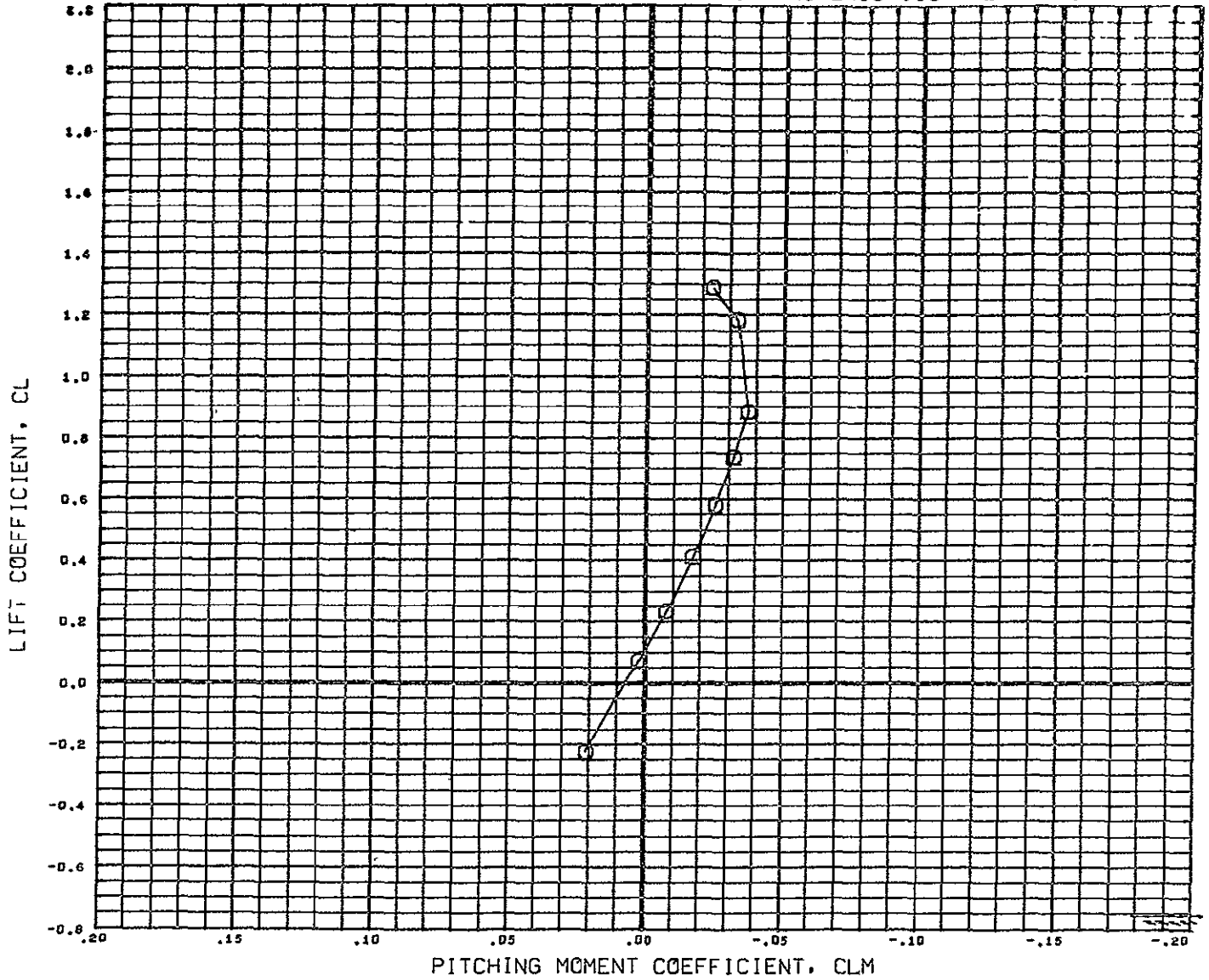
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4134) □	NSRDC-331B, MSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT. LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZHRP 0.0167 FEET SCALE 0.0150 SCALE

MACH .40

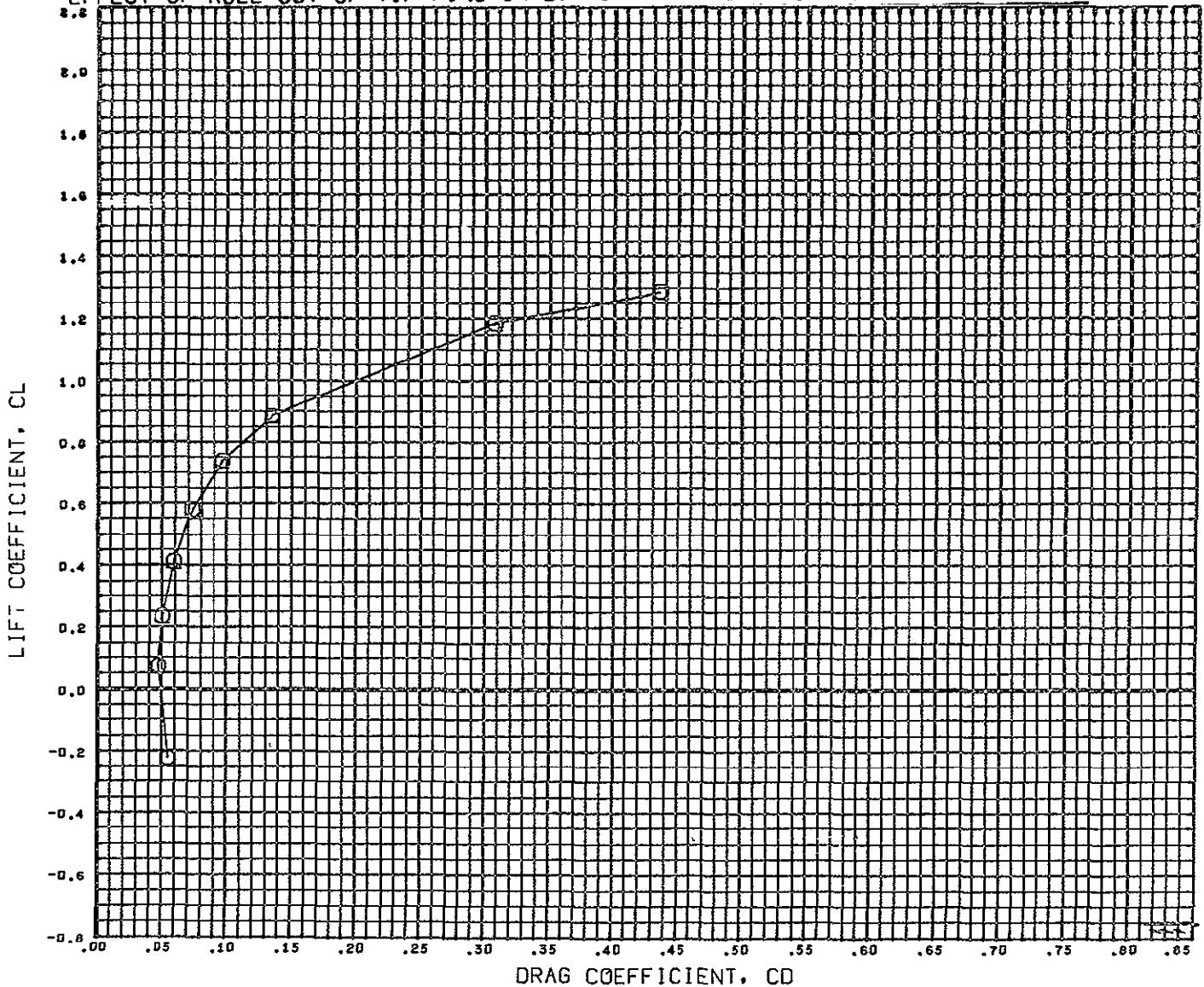
EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIW	REFERENCE INFORMATION
(RN4134) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF ROLL OUT OF TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

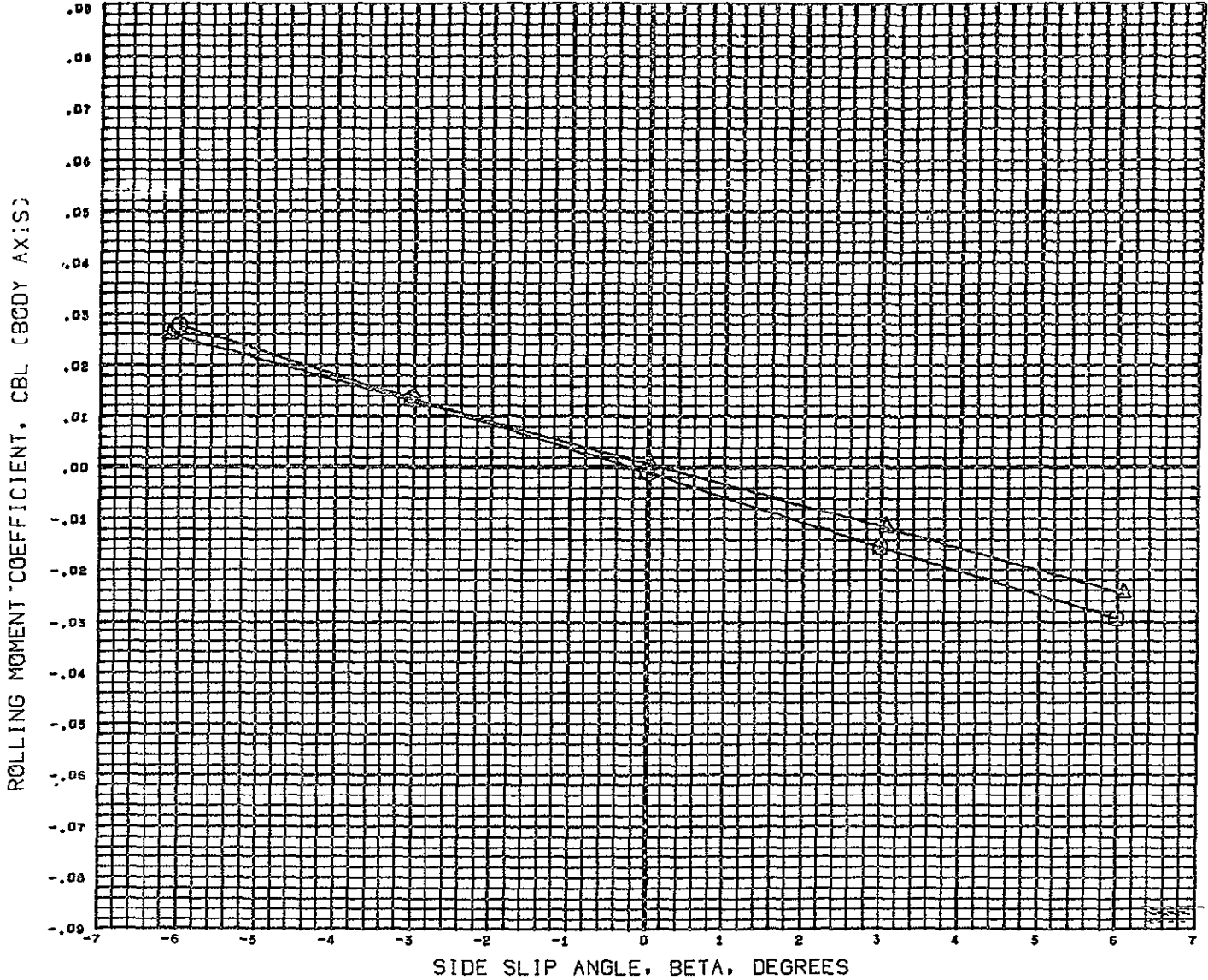


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4134) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 0 DEG

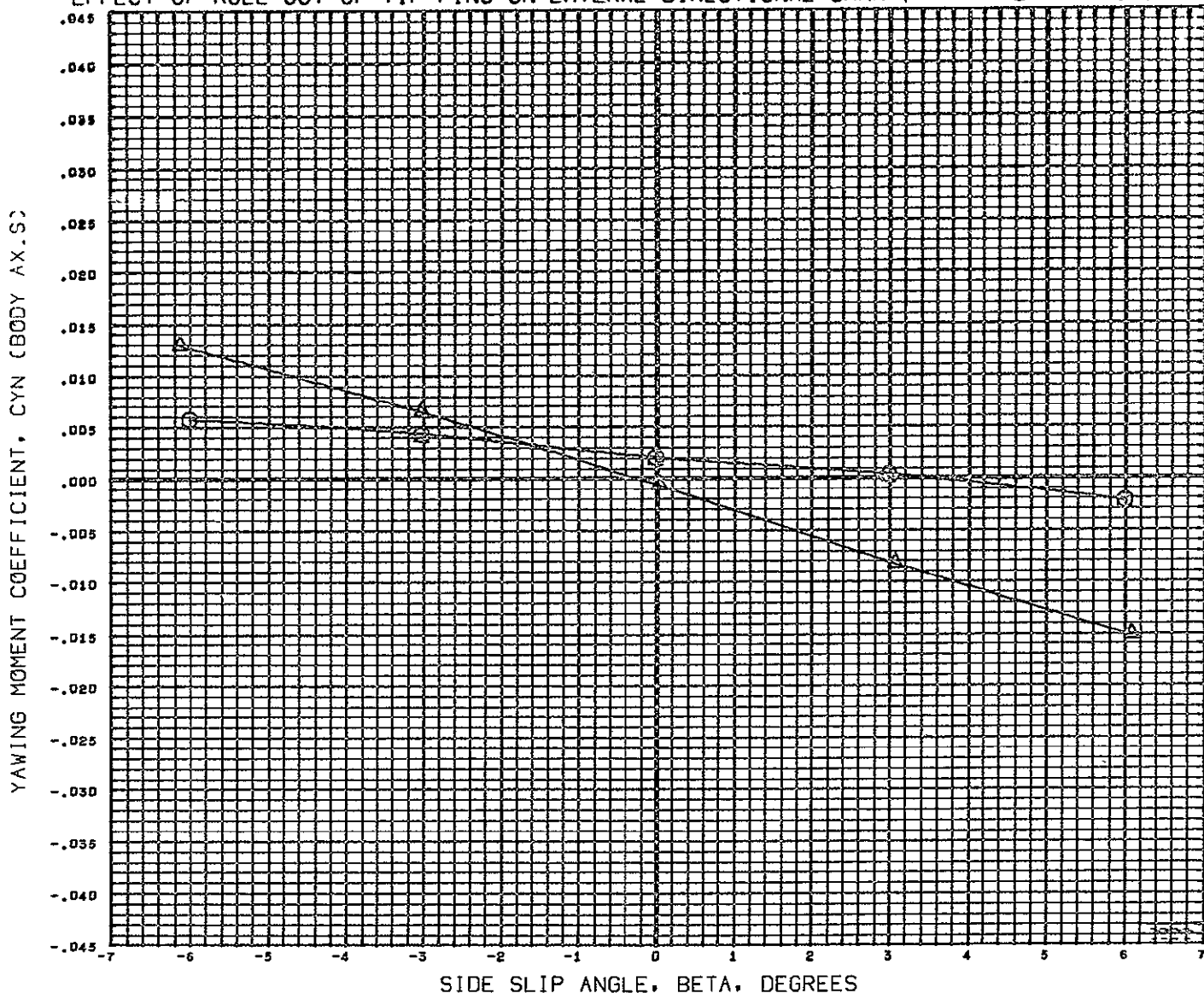




DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4014)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
(RN4135)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	0.2162 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0016 FEET
						SCALE	0.0150 SCALE

MACH .41

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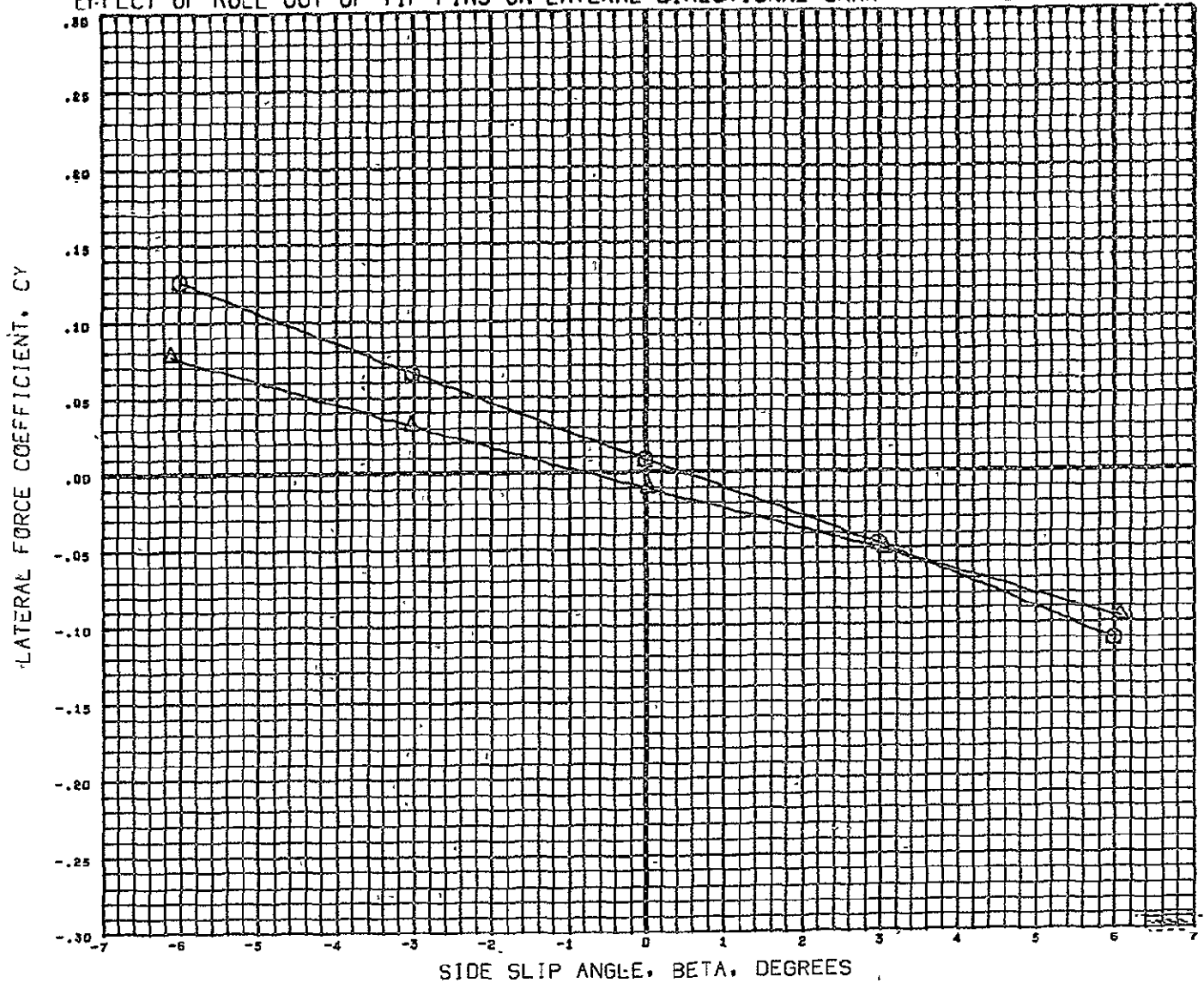
EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR, ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(RN4014) 	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET
(RN4135) 	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	BREF 3.4530 FEET XHRP 0.2162 FEET YHRP 0.0000 FEET ZHRP 0.0016 FEET SCALE 0.0150 SCALE

EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 0 DEG

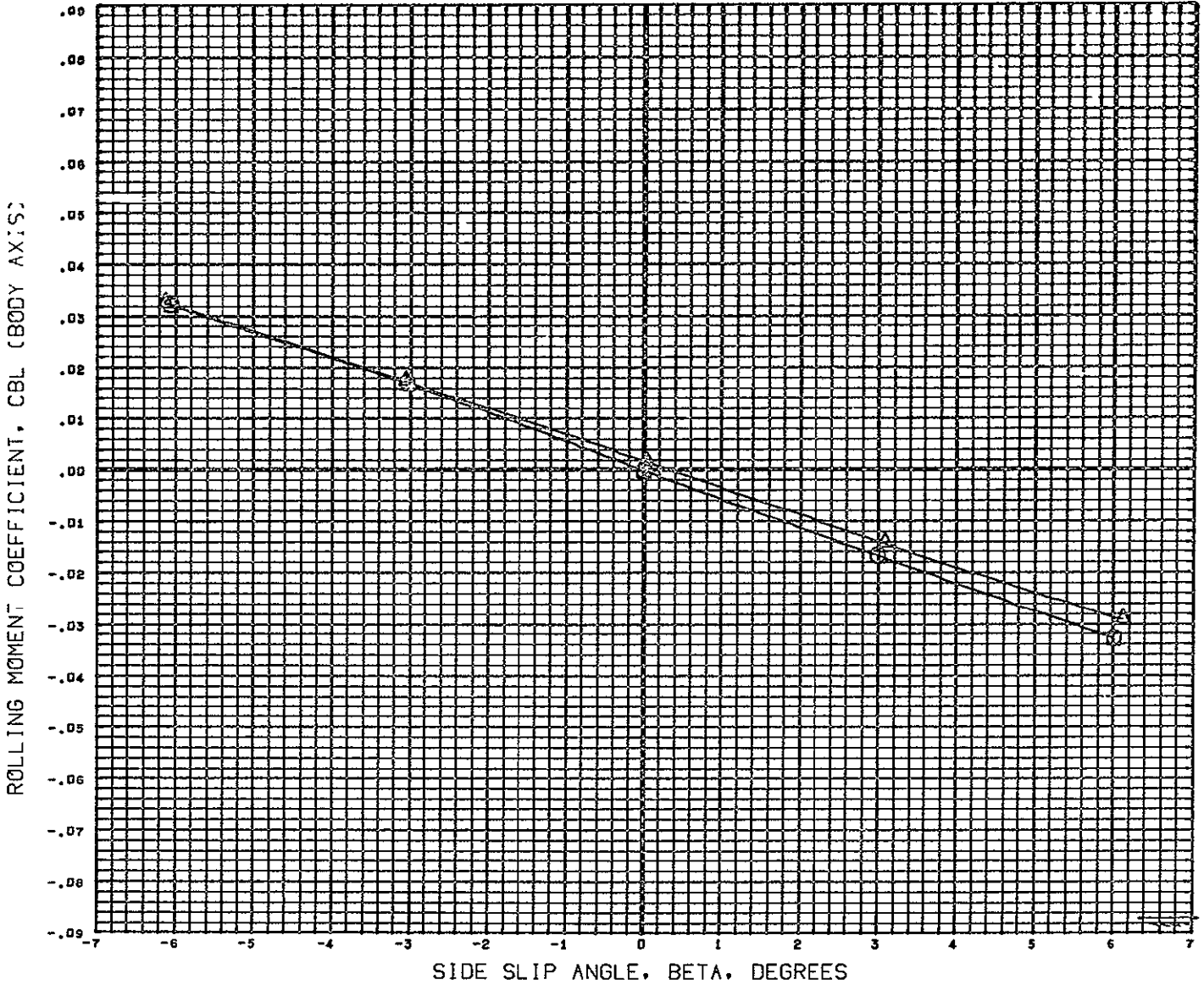


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4034) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
(RN4135) △	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W3	-7.660	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XHRP	0.2162 FEET
						YHRP	0.0000 FEET
						ZHRP	0.0016 FEET
						SCALE	0.0150 SCALE

MACH .41

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EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR , ALPHA = 6 DEG

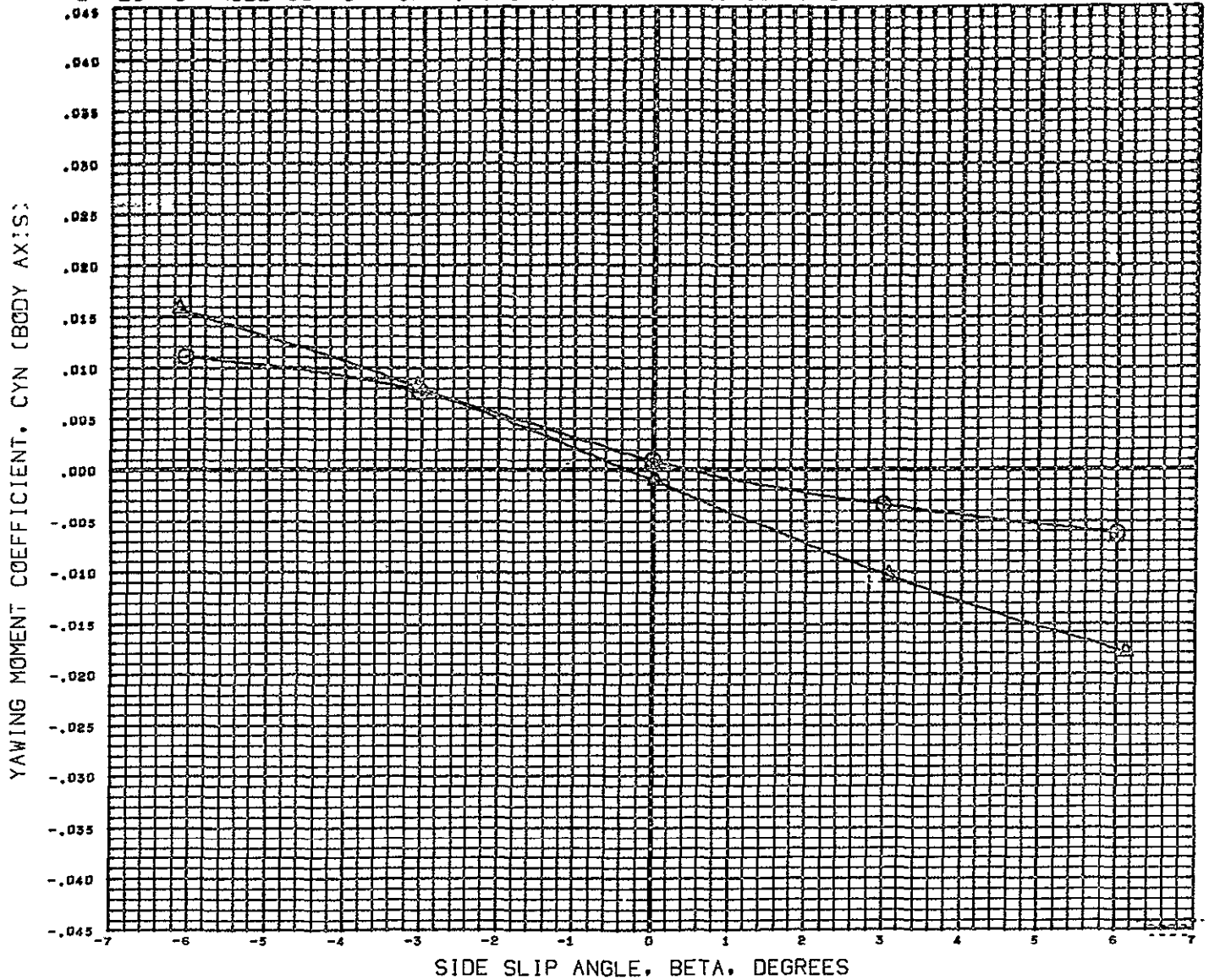


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4015)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1 3550 SB.FT.
(PN4136)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 0.2162 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 6 DEG



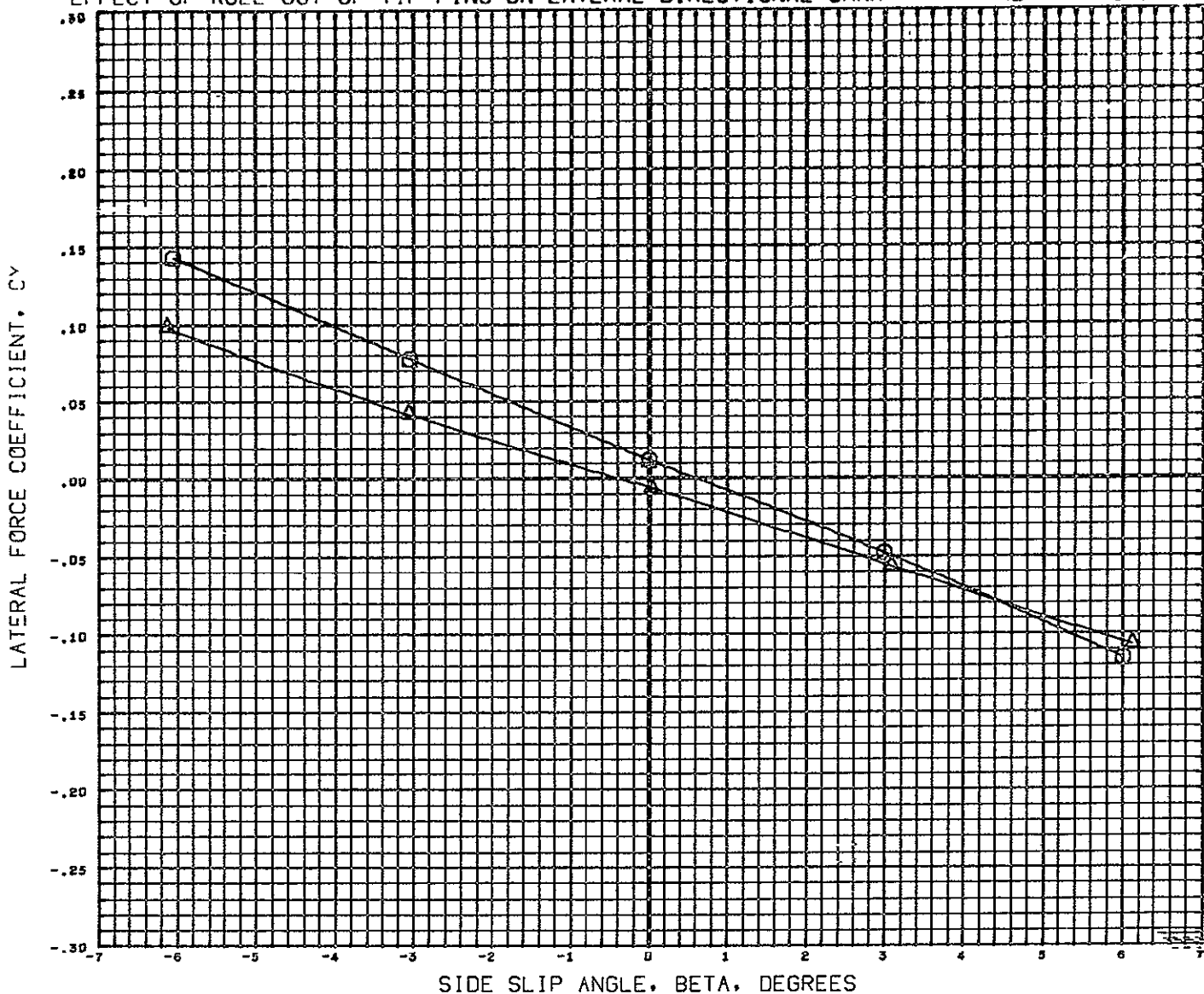
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4015)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4136)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 0.2162 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

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EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 6 DEG



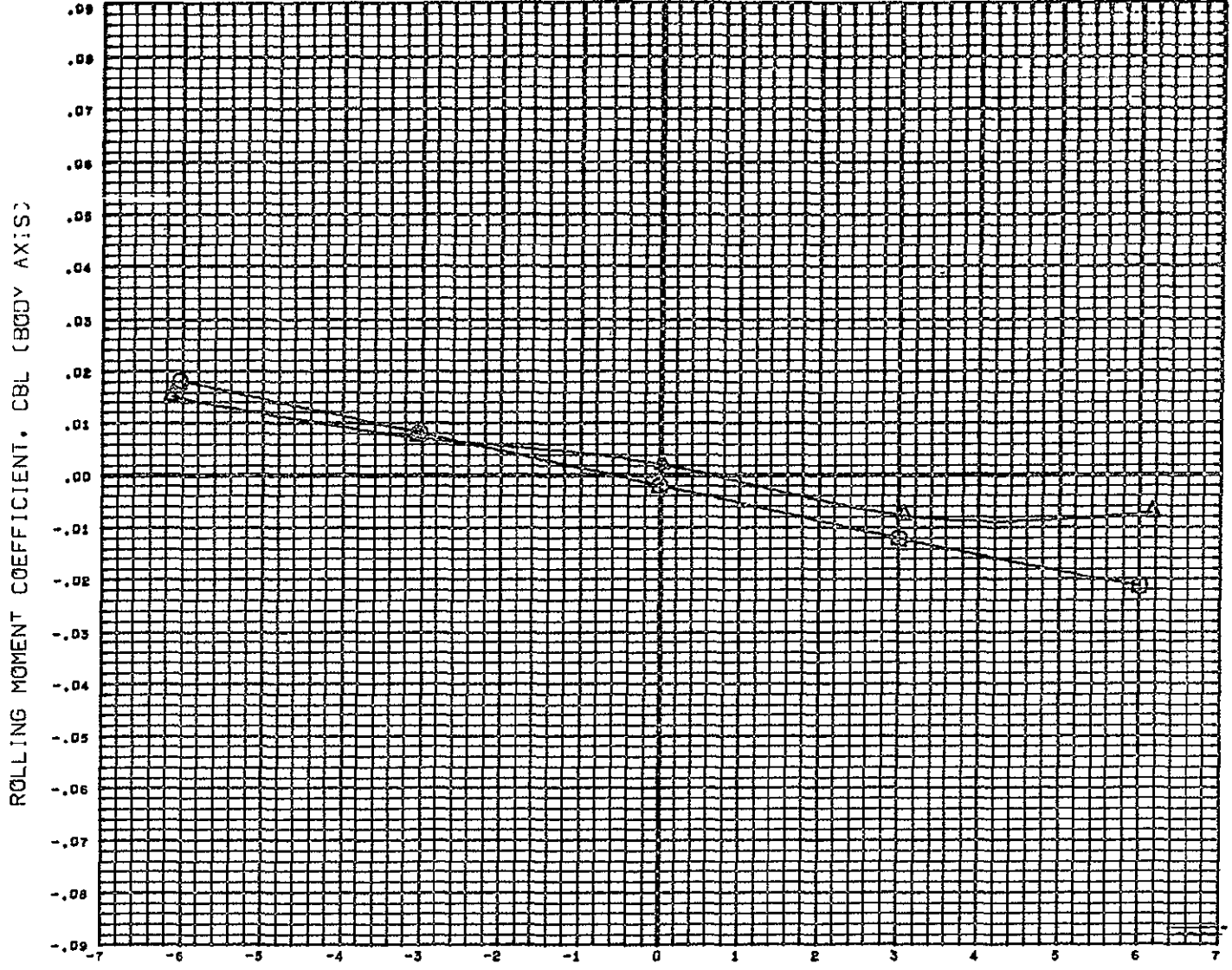
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4015)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4136)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 0.2162 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

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EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 15 DEG



SIDE SLIP ANGLE, BETA, DEGREES

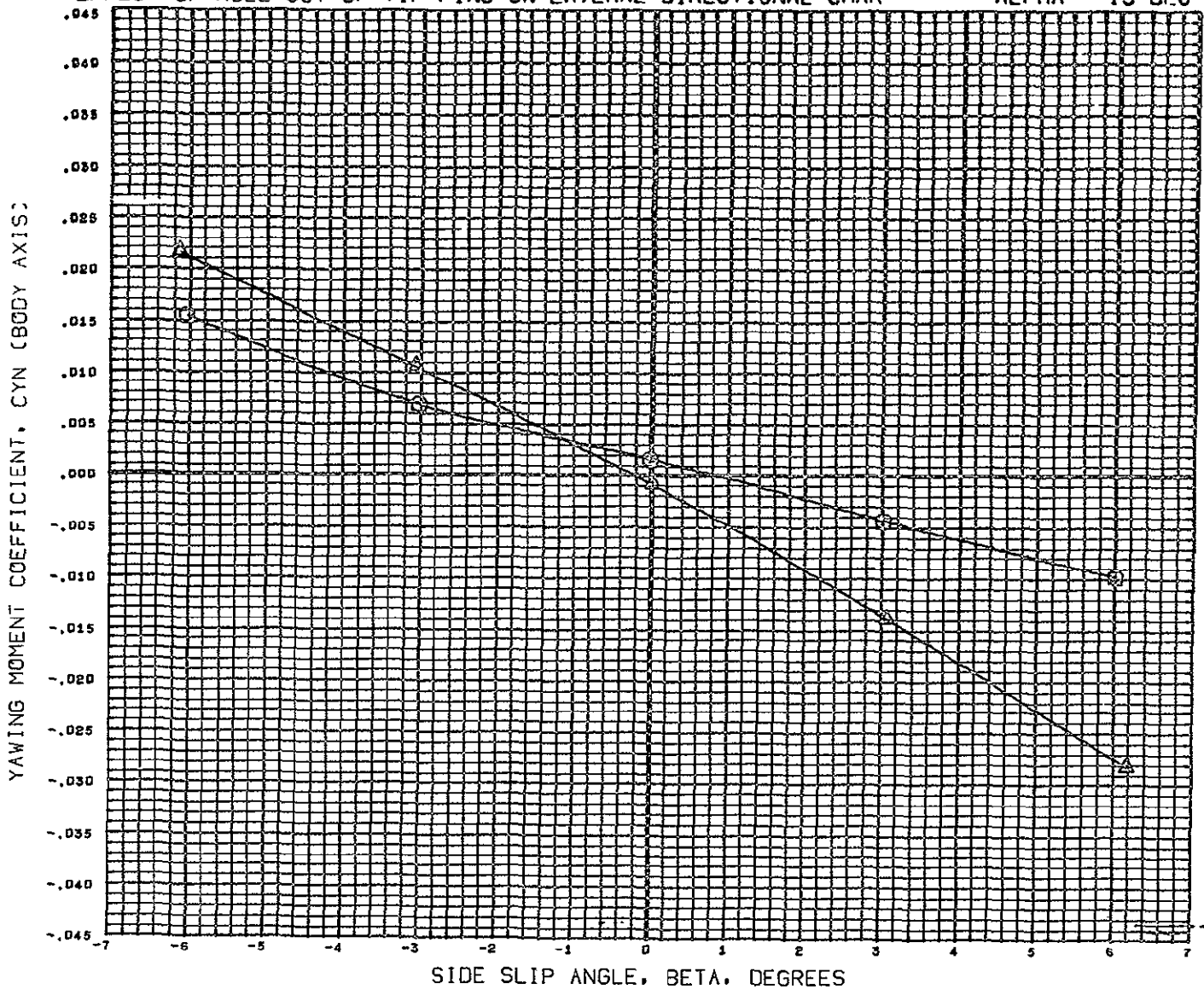
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCDW	REFERENCE INFORMATION
(RN4016) □	NSRDC-3310,HSFC/LNSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 0.2162 FEET YMRP 0.0000 FEET ZMRP 0.0016 FEET SCALE 0.0150 SCALE
(RN4137) △	NSRDC-3310,HSFC/LNSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	

MACH .40

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EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 15 DEG



DATA SET SYMBO
(RN4016) ○
(RN4137) △

CONFIGURATION DESCRIPTION
NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V3

DIHDL CNDPOS WNGPOS INCIDW
-7.660 1.000 1.000 0.000
-7.660 1.000 1.000 0.000

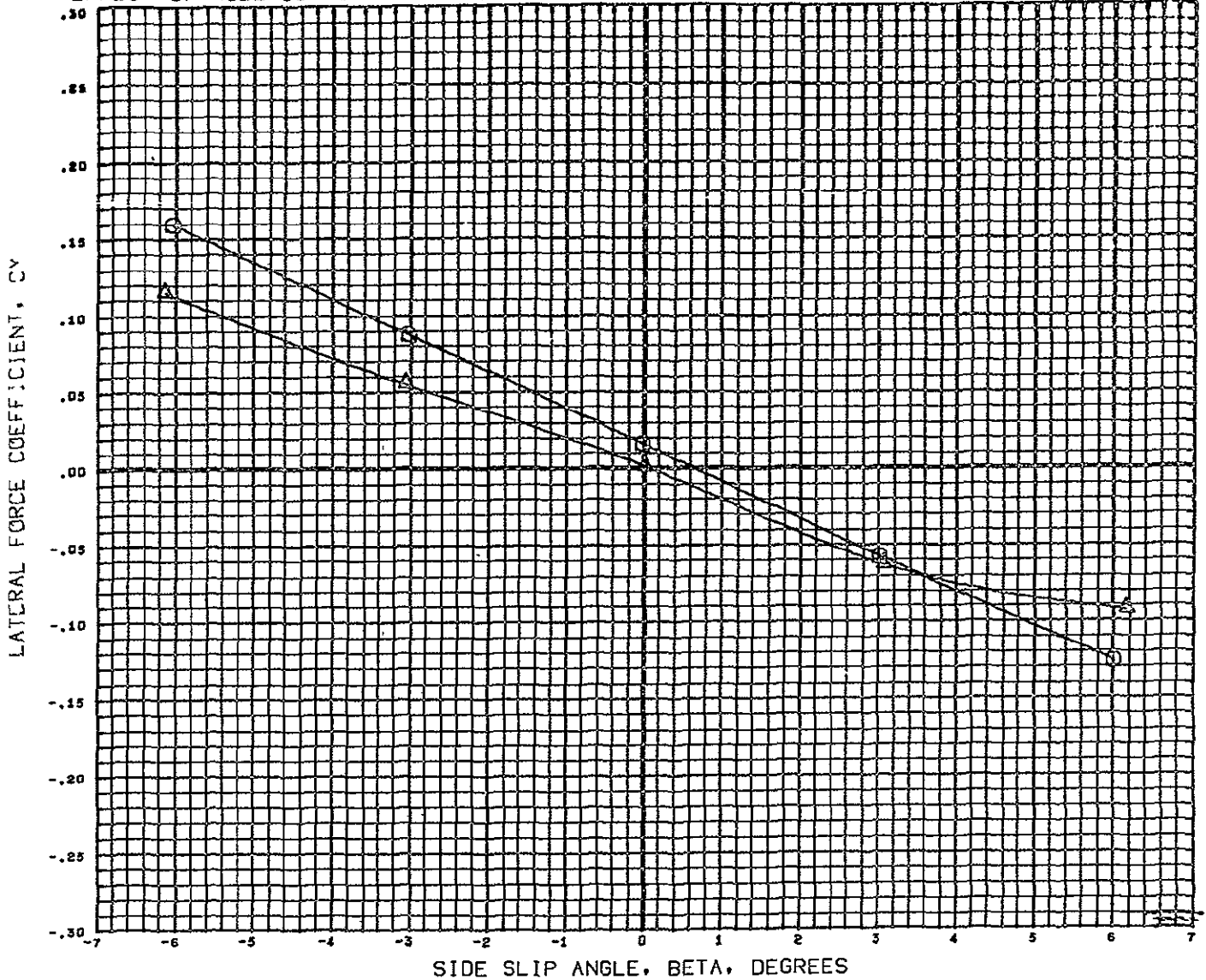
REFERENCE INFORMATION
SREF 1.3550 SQ. FT
LREF 3.4530 FEET
BREF 3.4530 FEET
XMRP 0.2162 FEET
YMRP 0.0000 FEET
ZMRP 0.0016 FEET
SCALE 0.0150 SCALE

MACH .40

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EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL CHAR

ALPHA = 15 DEG

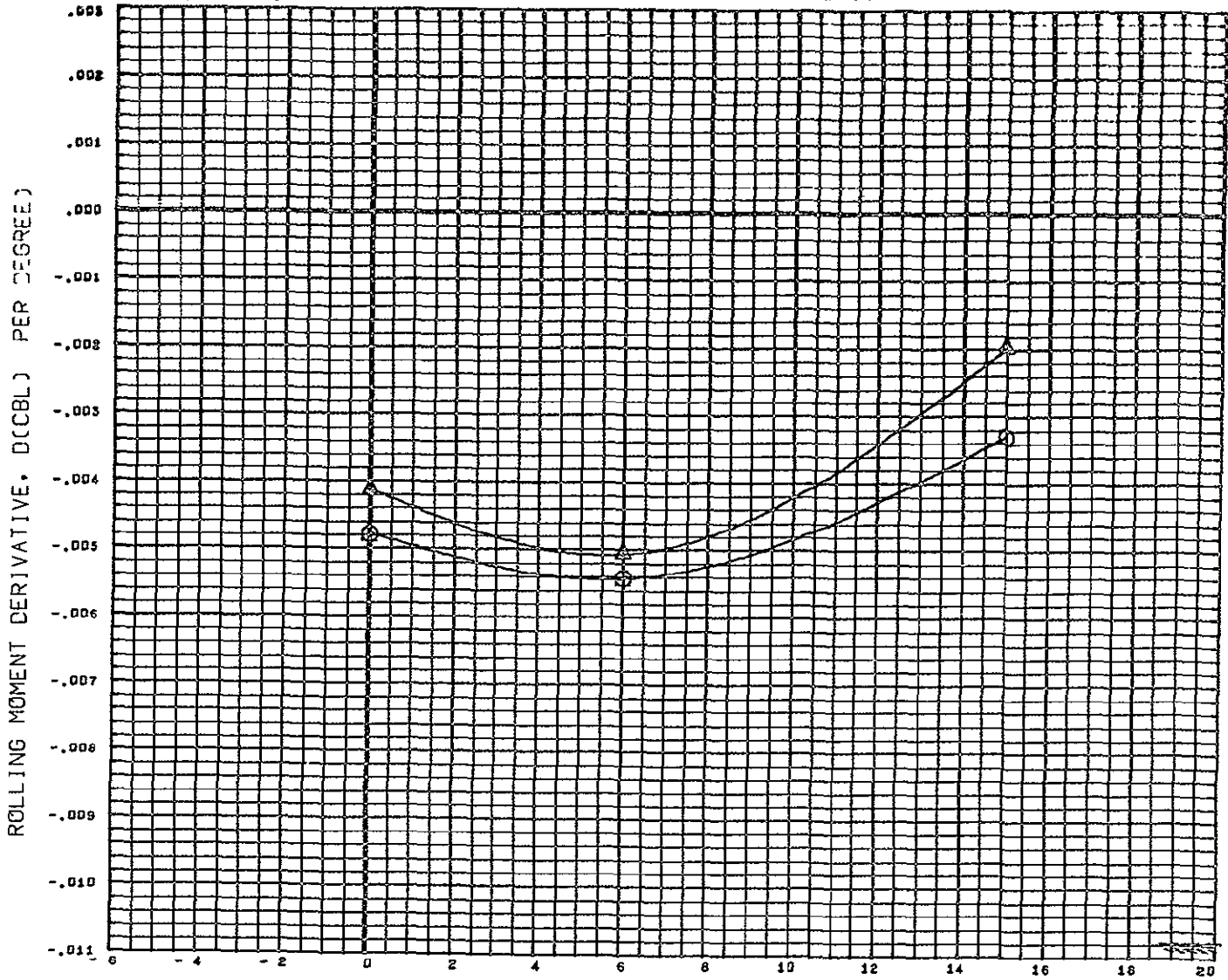


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(RN4016)	NSRDC-3310, HSFC/LHSC BOOSTER B1C2F1W1V1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4137)	NSRDC-3310, HSFC/LHSC BOOSTER B1C2F1W1V3	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 0.2162 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0016 FEET
						SCALE 0.0150 SCALE

MACH .40

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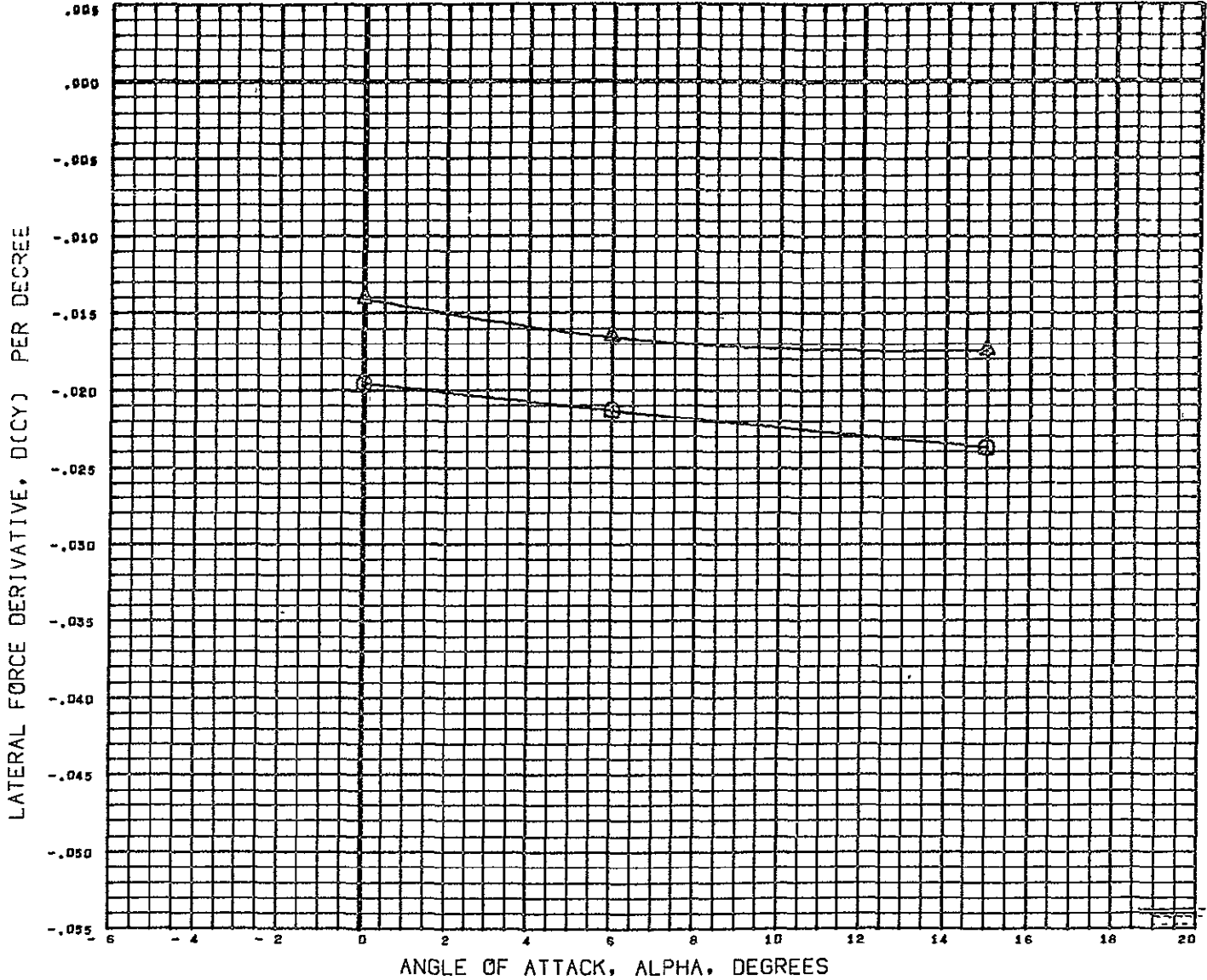
EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL DERIVATIVES



ANGLE OF ATTACK, ALPHA, DEGREES

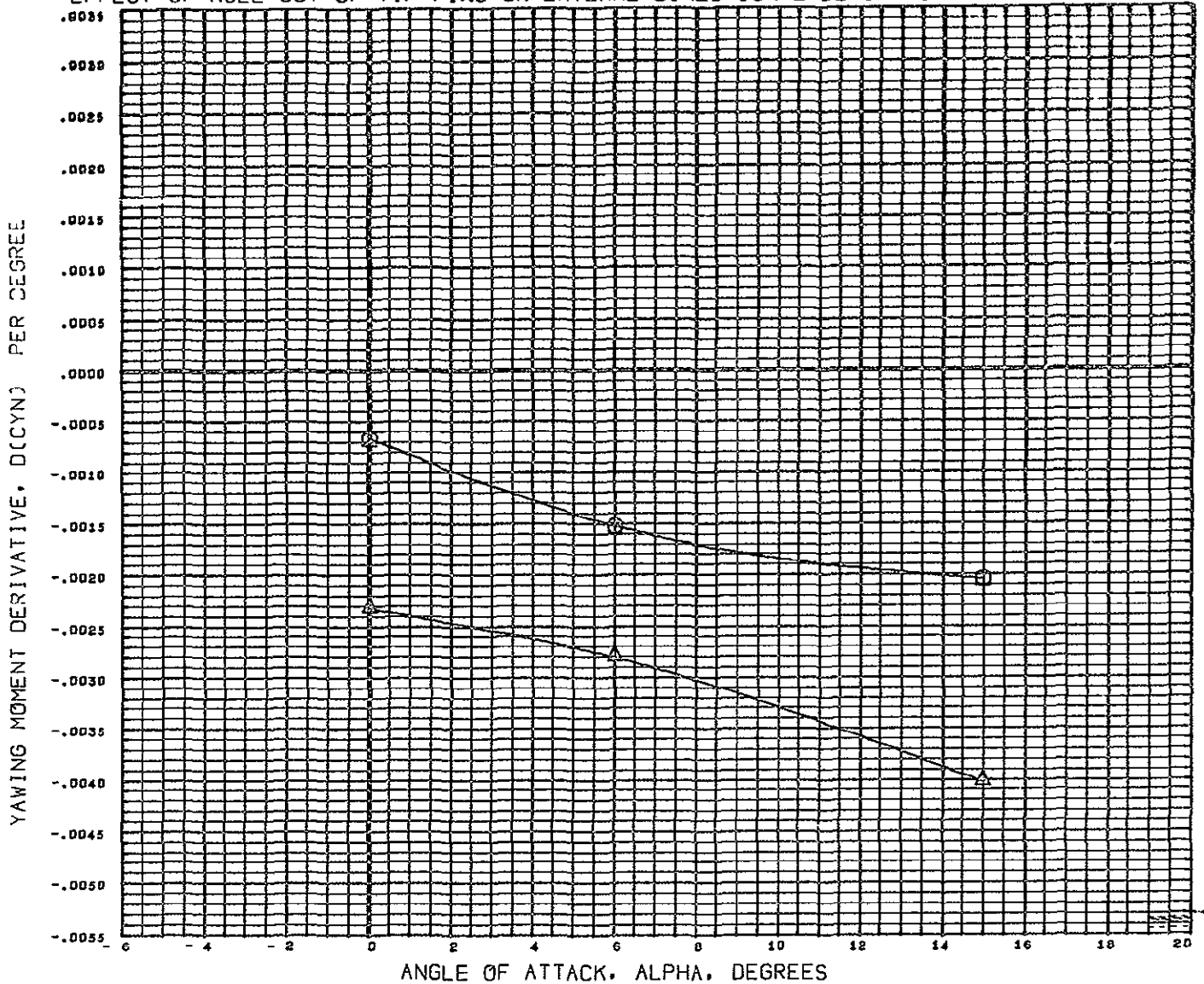
SYMBOL	ROLFIN	PARAMETRIC VALUES		REFERENCE INFORMATION	
△	1.300	MACH	0.400	INCIDC	3.000
○	1.300	INCIDW	0.000	DIHRL	- 7.660
		AILRON	0.000	CANARD	0.000
		ELEVTR	0.000	WNGPOS	1.000
		CNDPOS	1.000		
		DATA HIST. CODE	HI		
				SREF	1.3550
				LREF	3.4530
				BREF	3.4530
				XMRP	2.5950
				YMRP	0.0000
				ZMRP	0.0187
				SCALE	0.0150
					SCALE

EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL DERIVATIVES



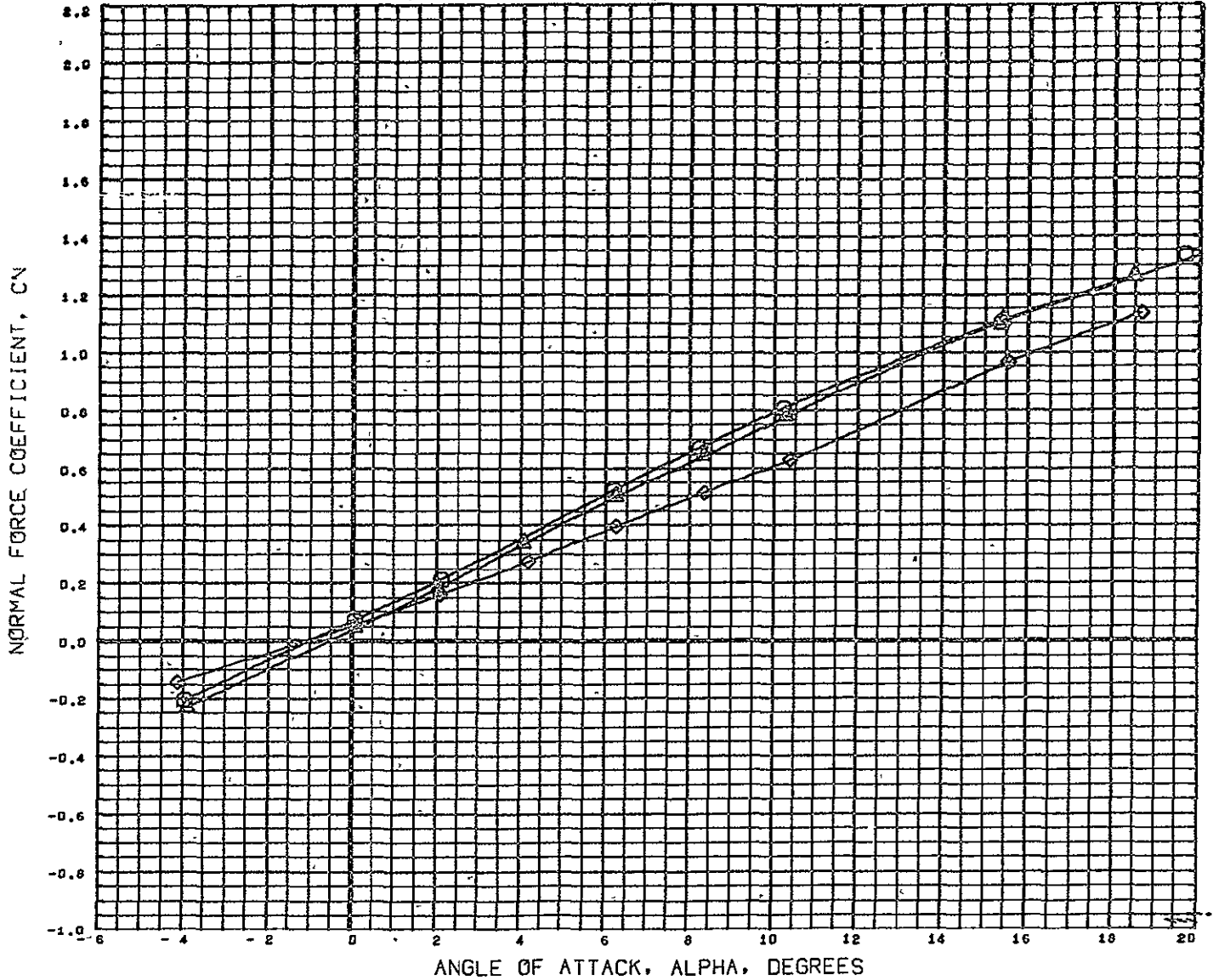
SYMBOL	ROLFIN	PARAMETRIC VALUES				REFERENCE INFORMATION		
△	1.100	<u>NACH</u>	0.400	INCIDC	3.000	SREF	1.3550	Sq. FT
	1.300	INCIDW	0.000	DINDRL	- 7.660	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XHRF	2.5950	FEET
		CNDPOS	1.000			YHRF	0.0000	FEET
		DATA HIST. CODE	MI			ZHRF	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF ROLL OUT OF TIP FINS ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.100	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
	1.300	INCIDW	0.000	DIHRL	-7.660	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0107	FEET
						SCALE	0.0150	SCALE

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

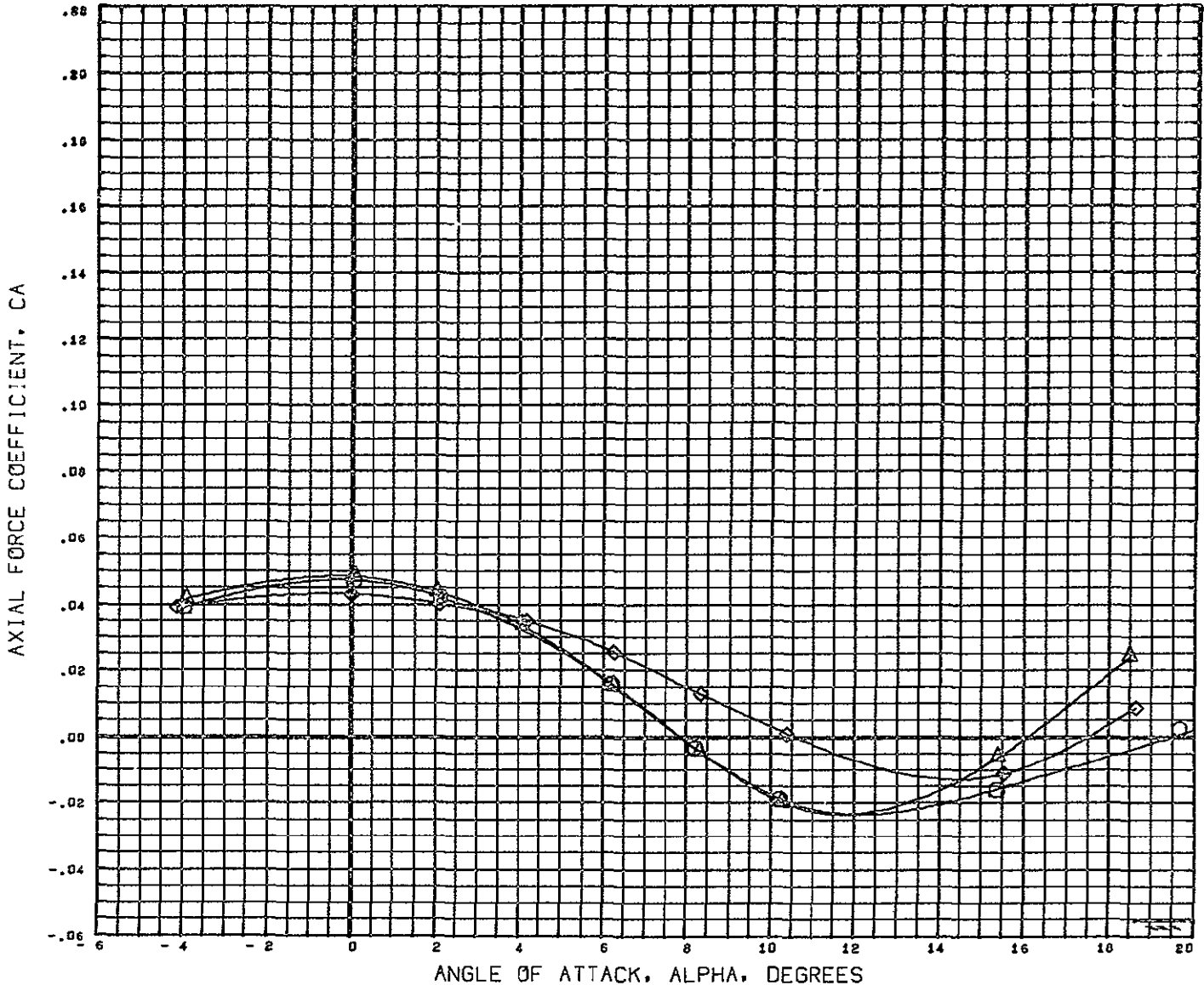


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4150)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

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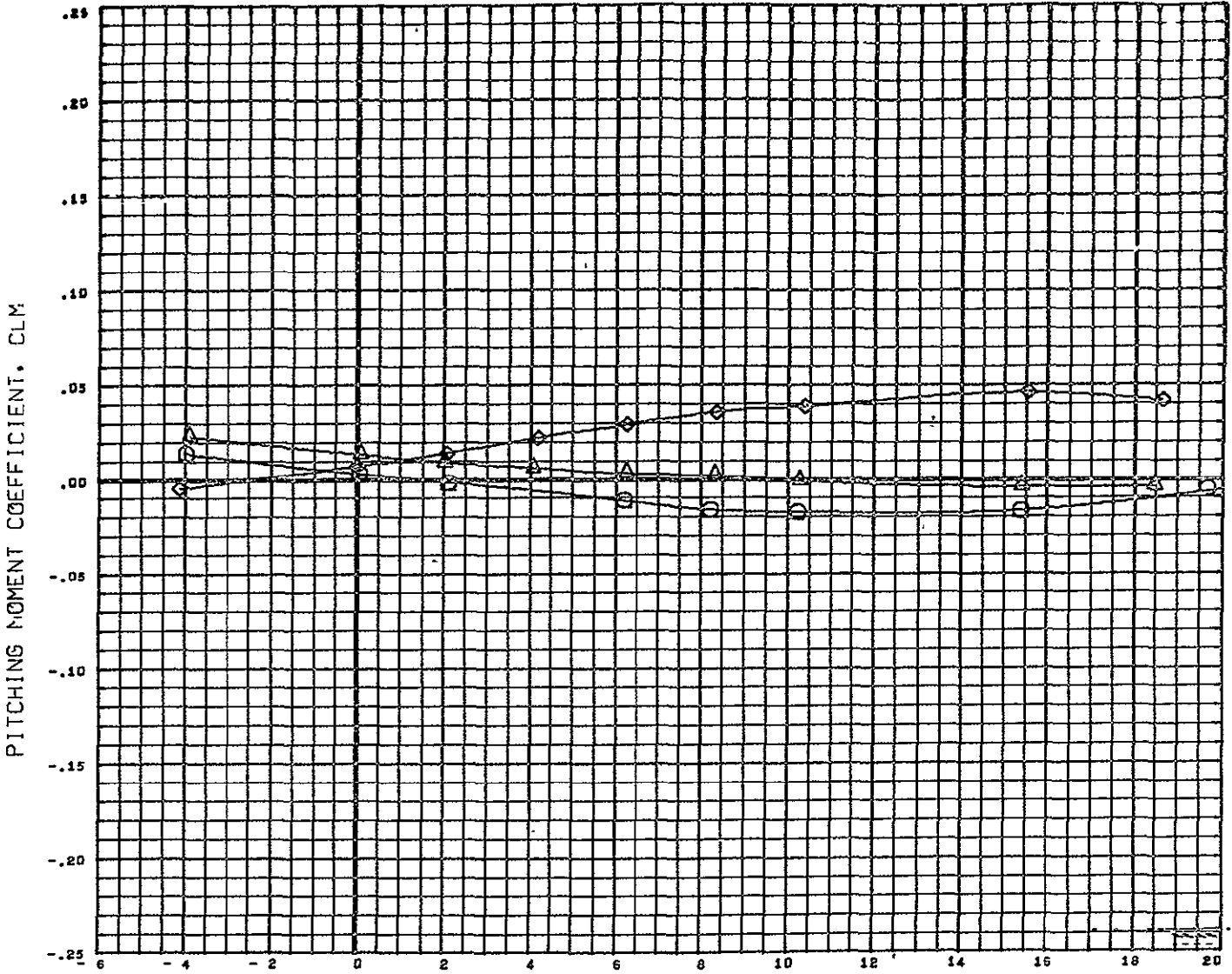
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

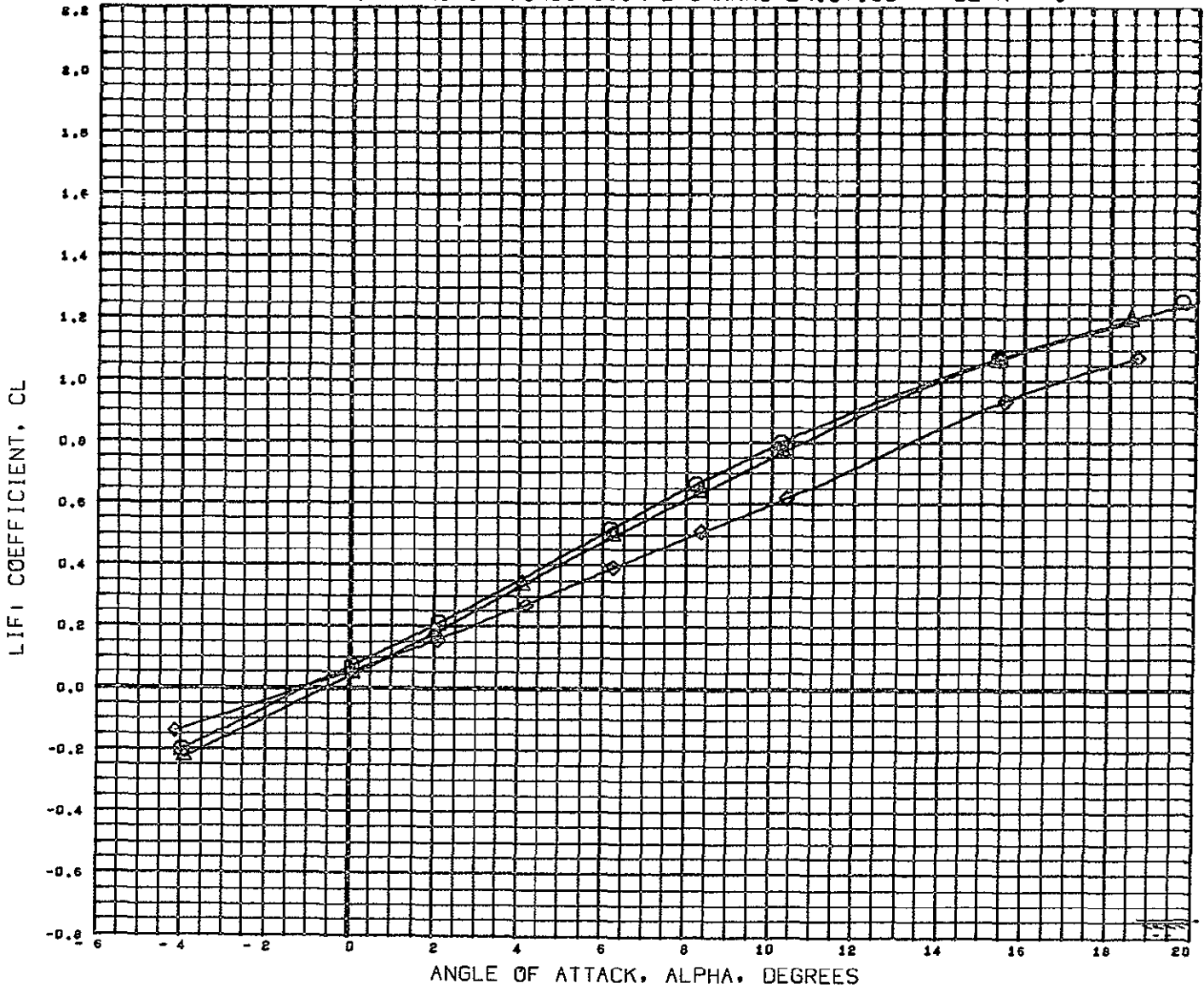


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN2001)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4150)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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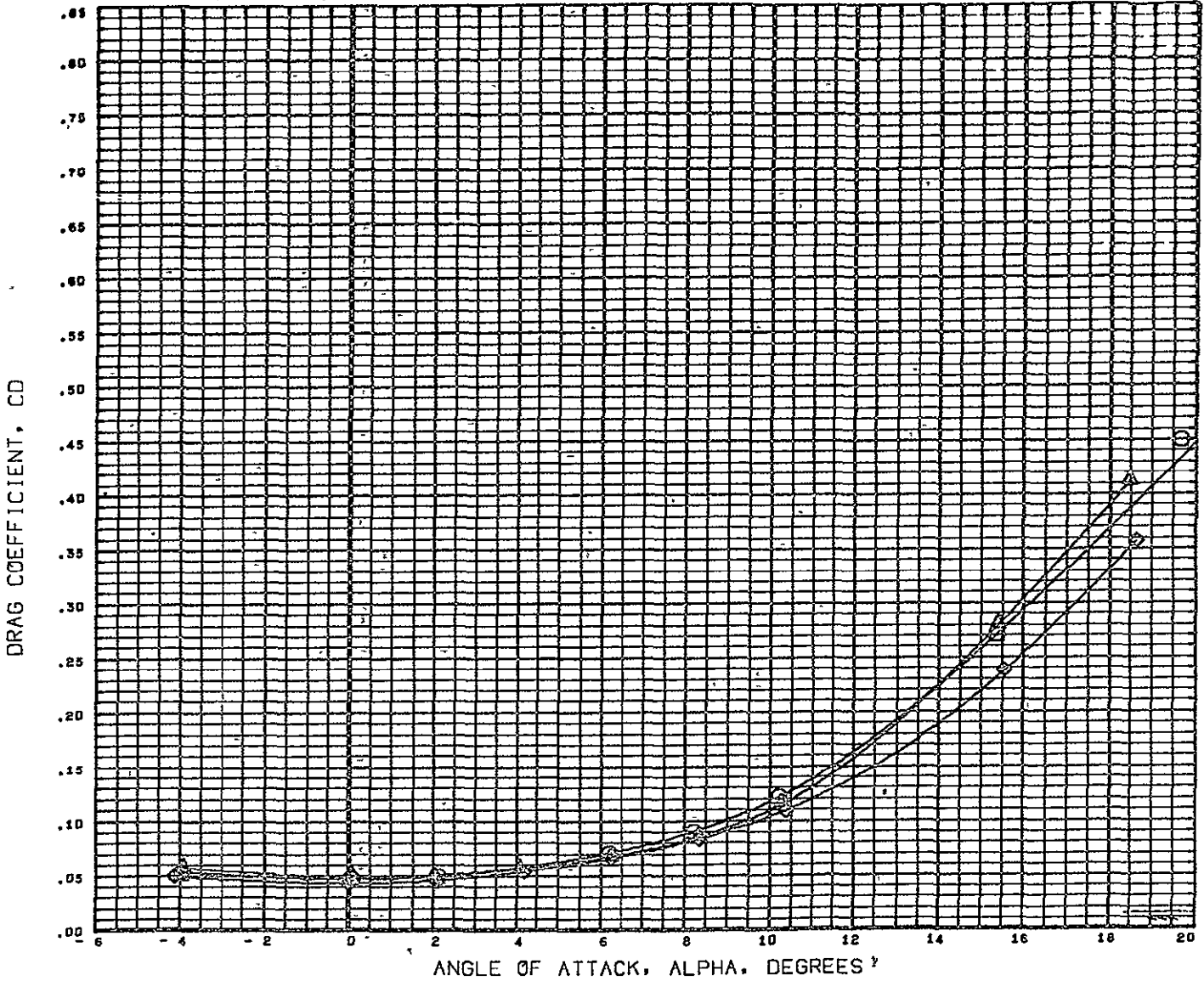
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN2001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

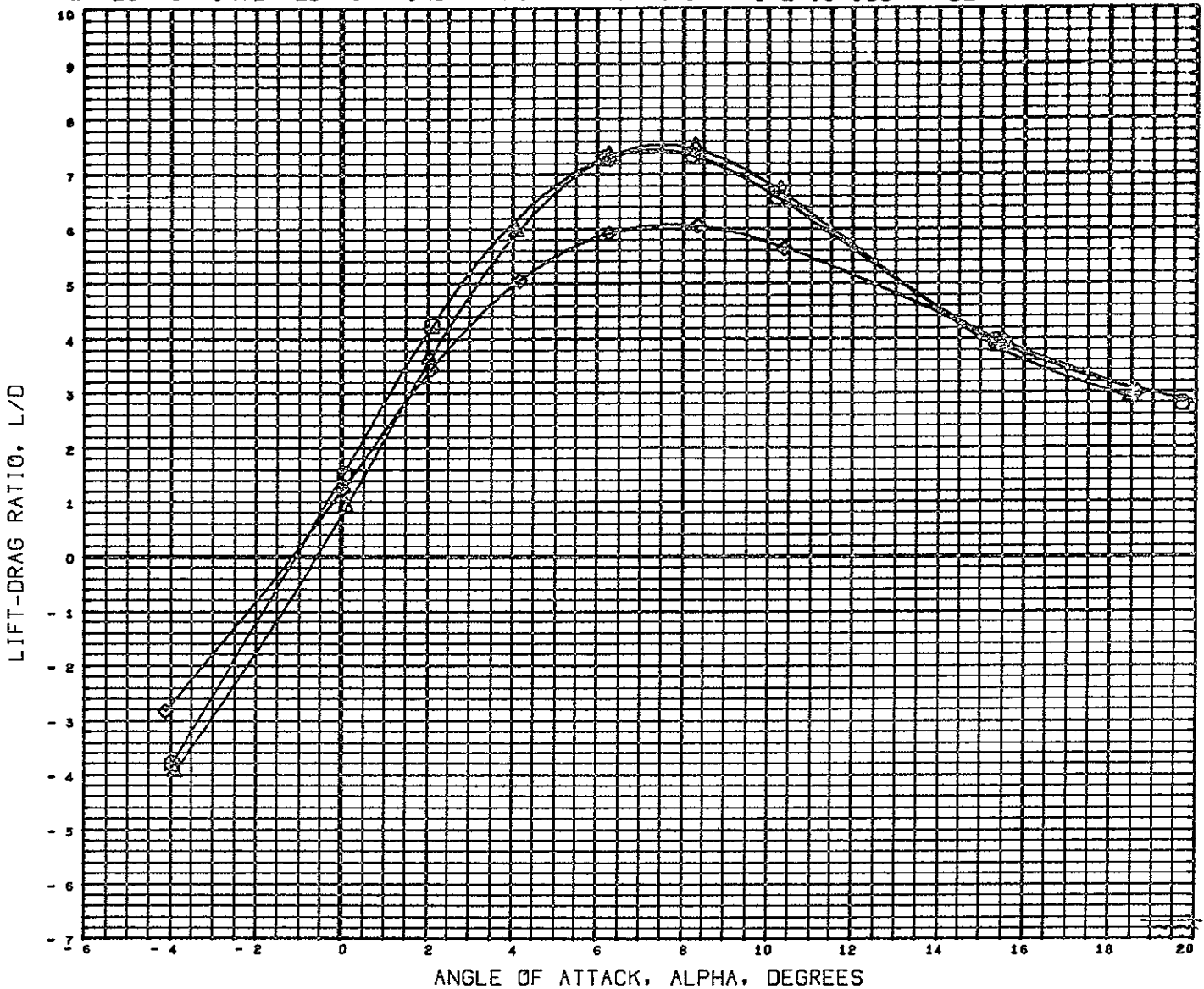


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	-1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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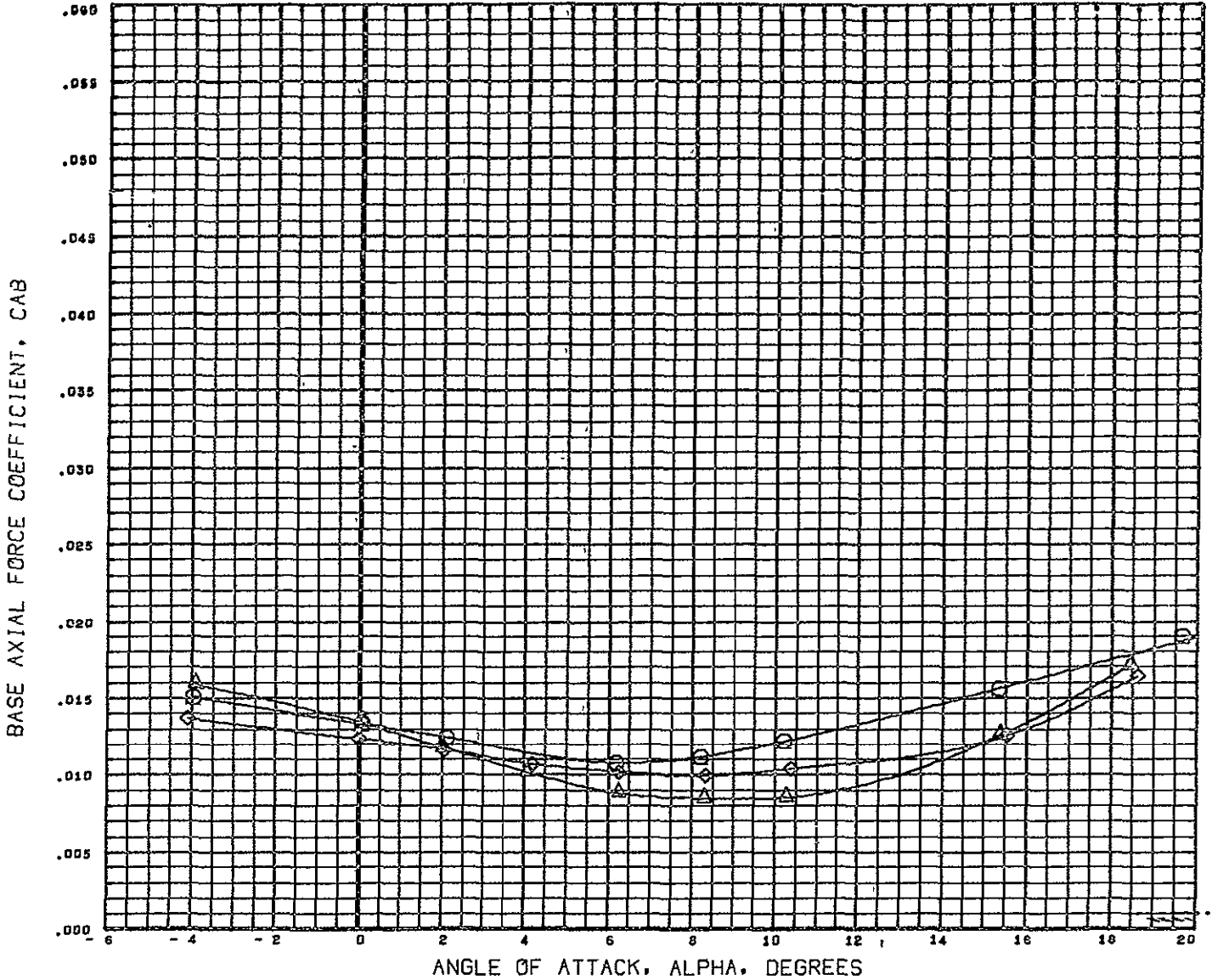
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

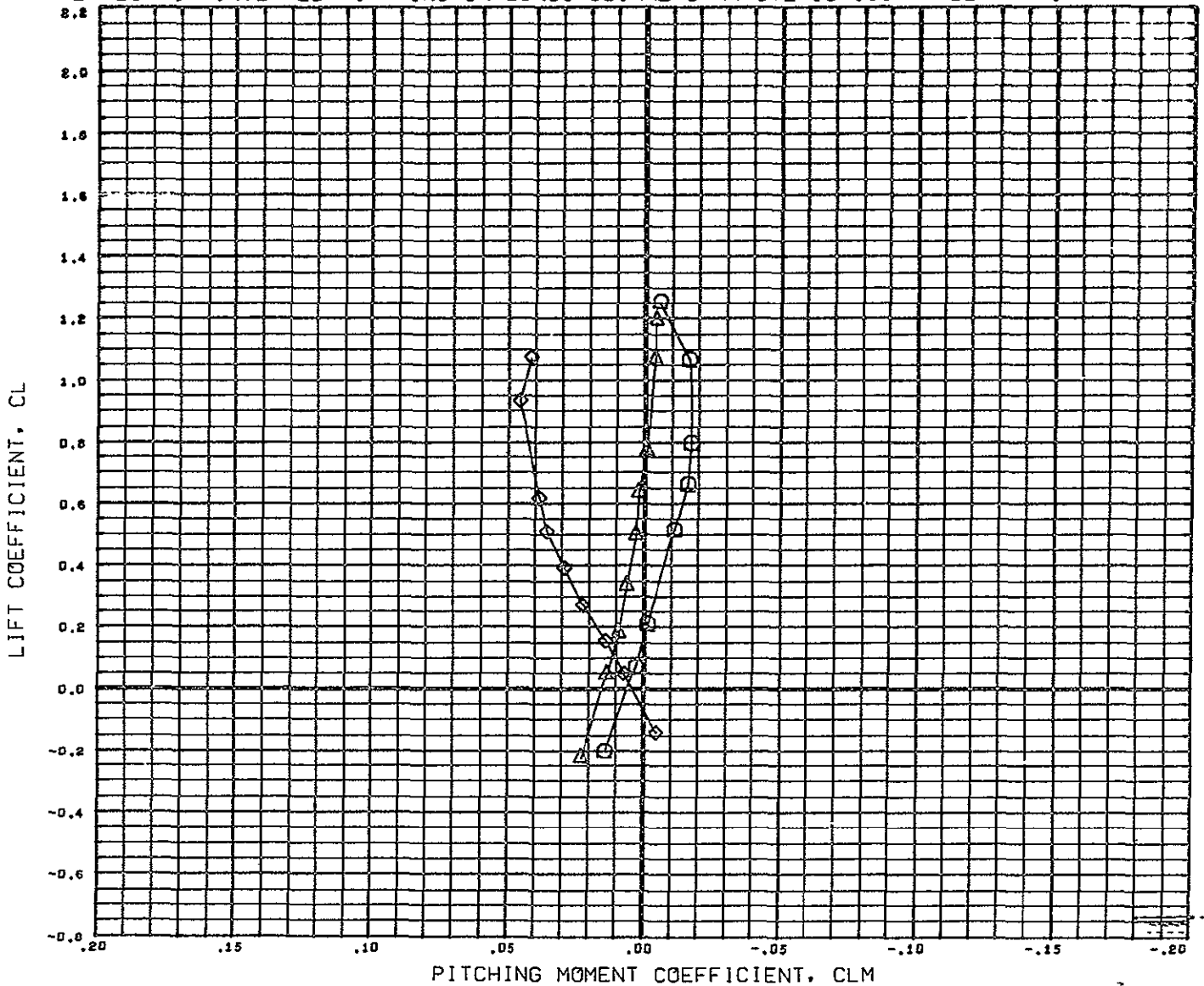


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINHRL	CNDPOS	WNGPOS	INCDW	REFERENCE INFORMATION
(HN2001)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4150)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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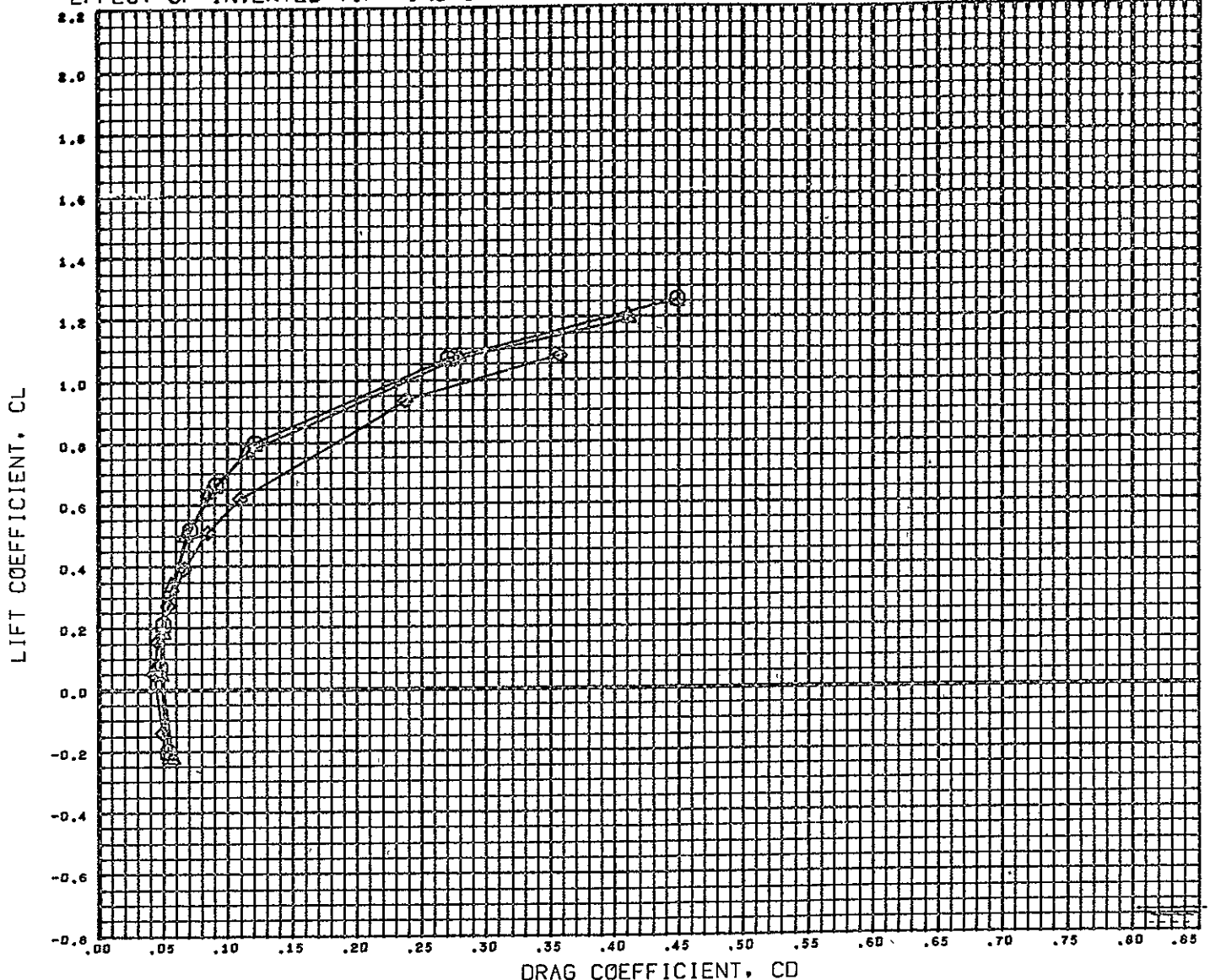
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIBW	REFERENCE INFORMATION	
(HN2DD1)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF	3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .38

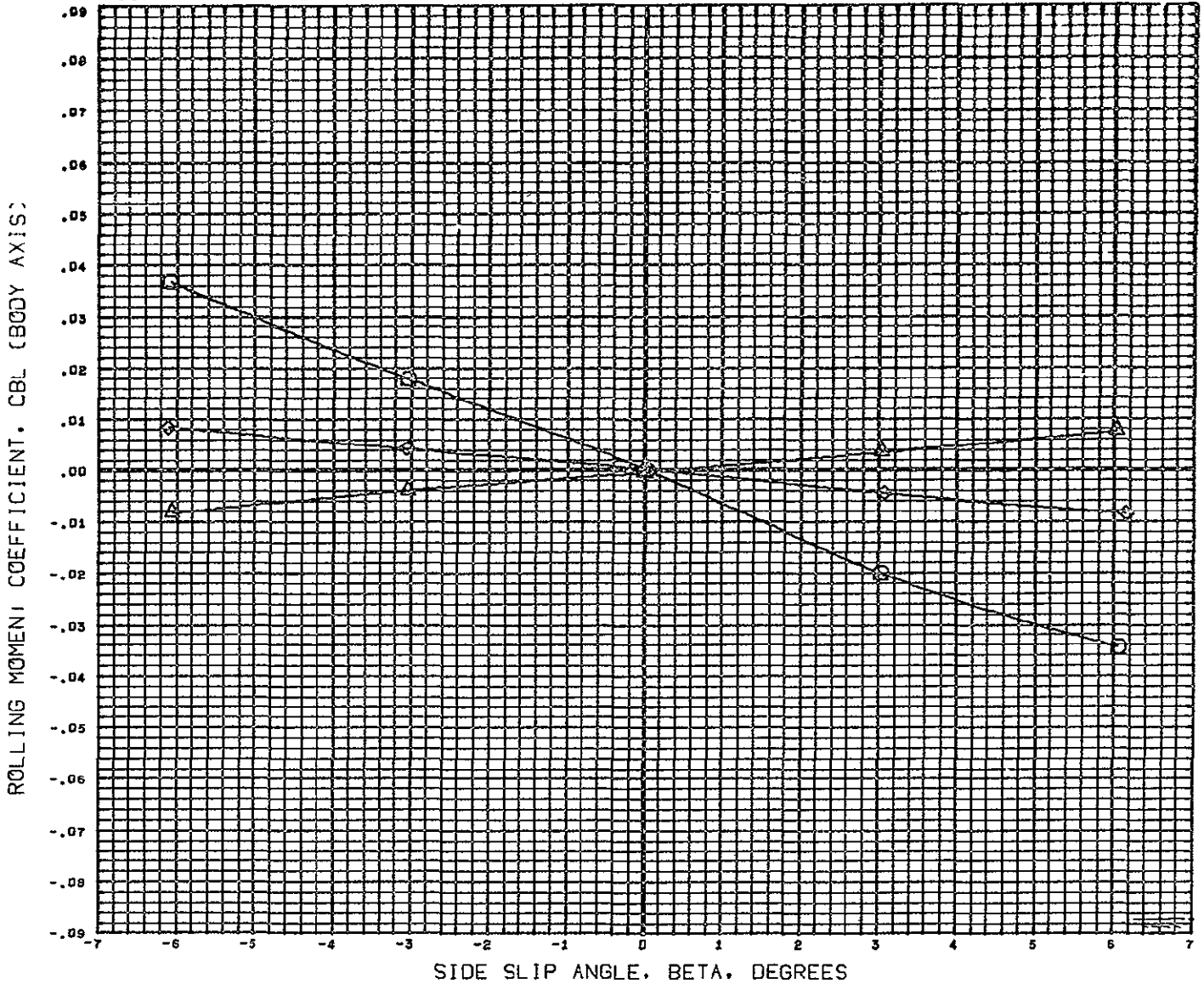
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(HN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(RN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4142)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

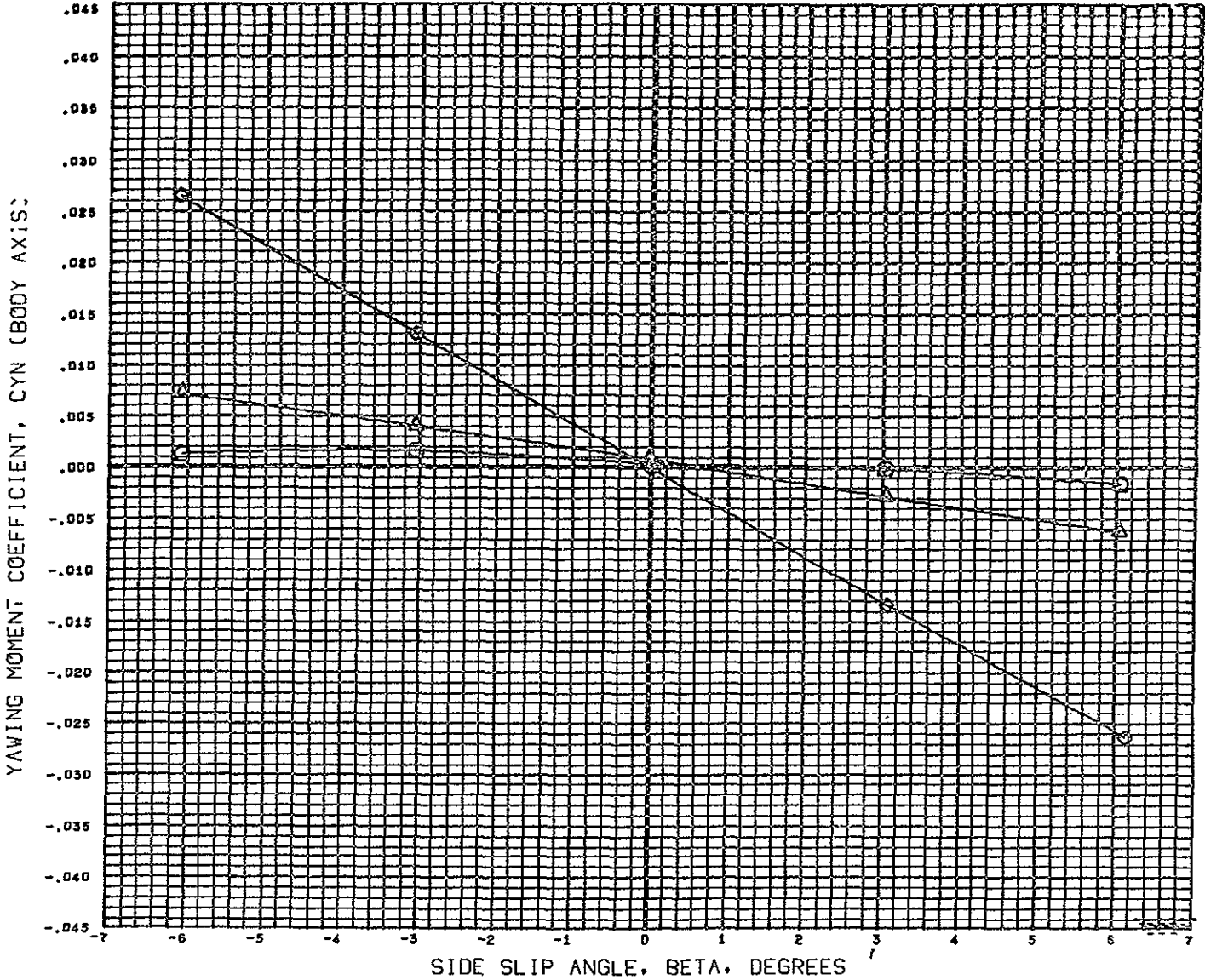
MACH .38

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG



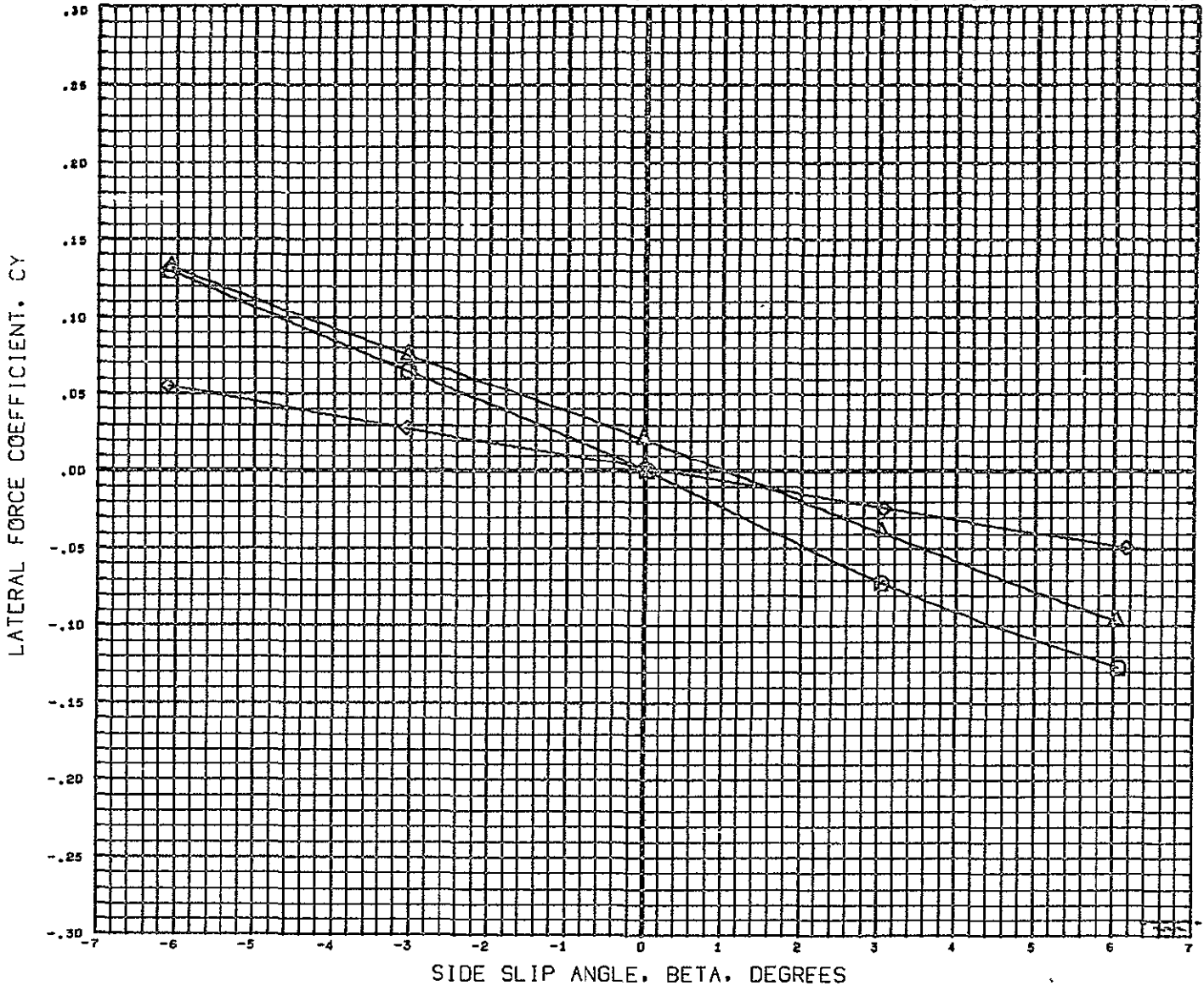
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4151)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4143)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0167 FEET SCALE 0.0150 SCALE

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG



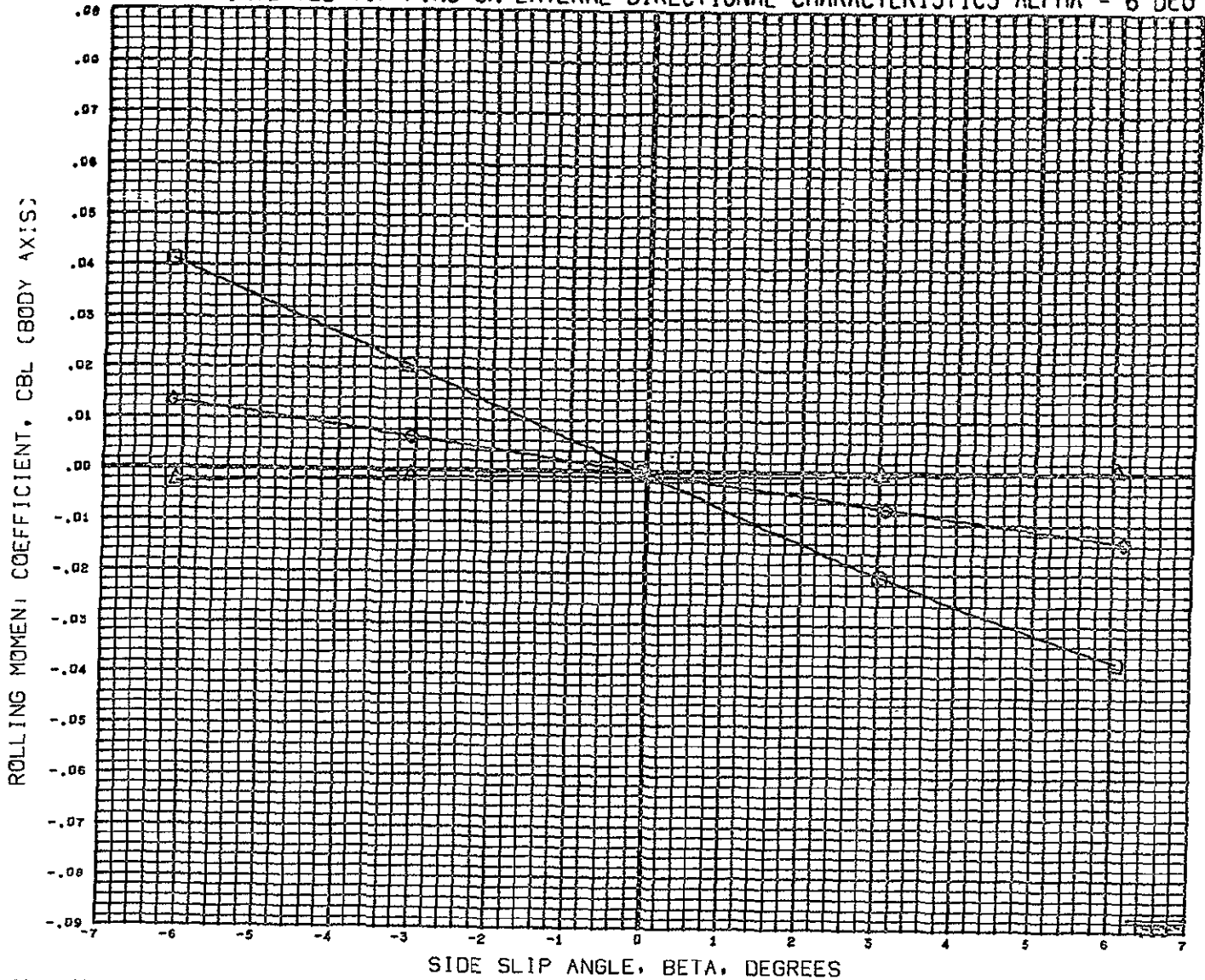
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D/DHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2002)	NSRDC-3110,HSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4151)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4143)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XRRP 2.5950 FEET
						YRRP 0.0000 FEET
						ZRRP 0.0187 FEET
						SCALE 0.0150 SCALE

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2002)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4151)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4143)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

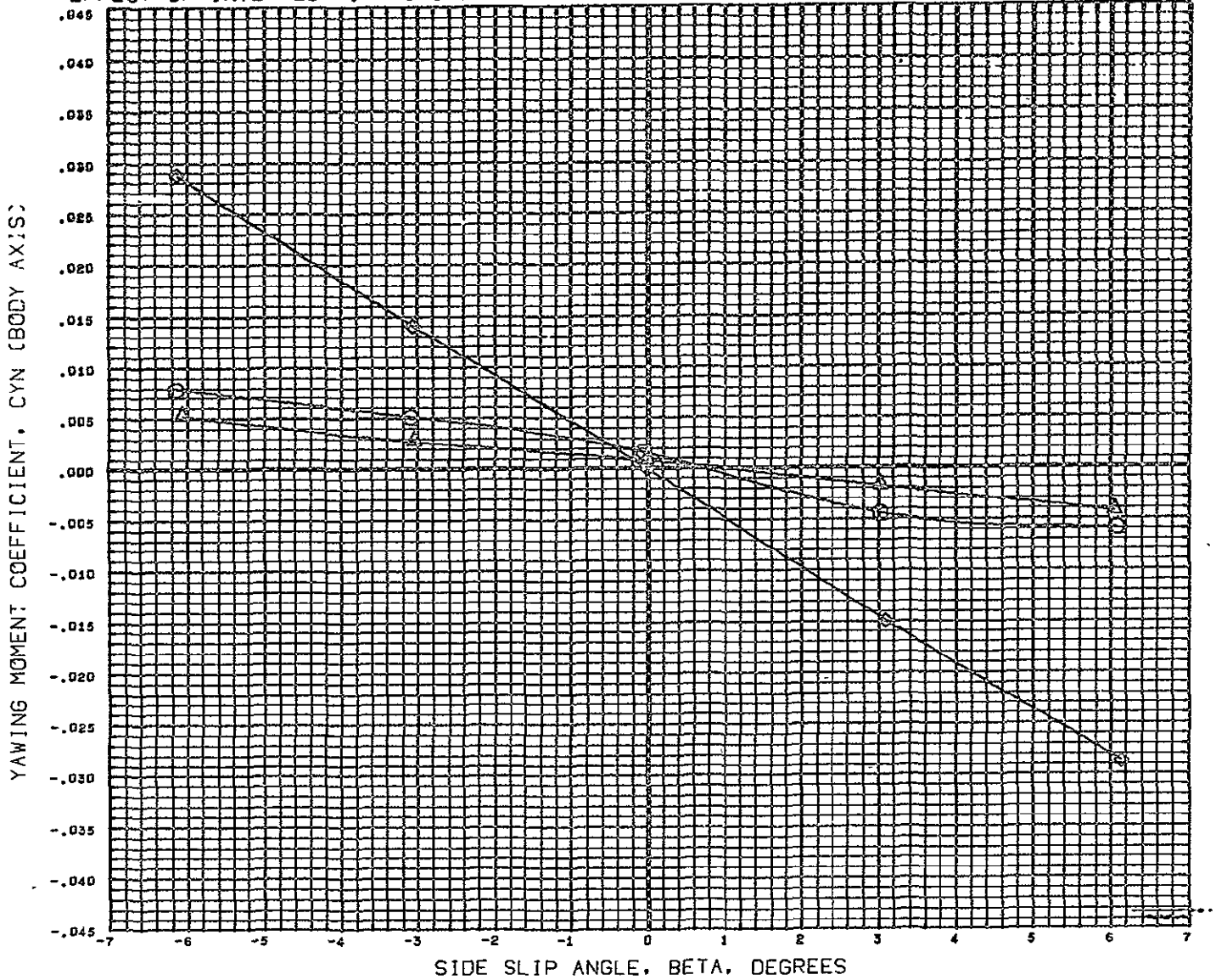
EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(HN2003)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(RN4152)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4144)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

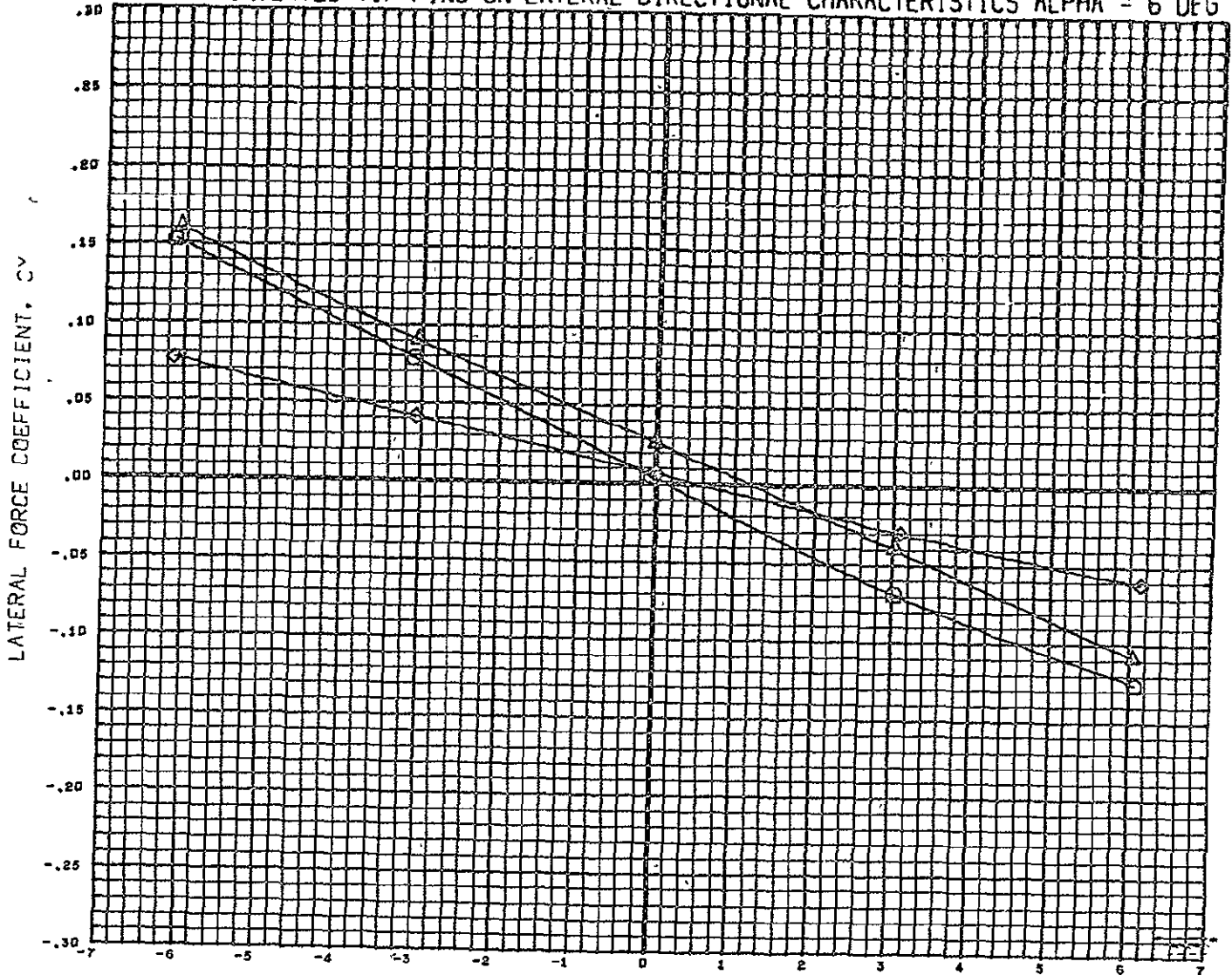
EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2003)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4152)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4144)	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRF 2.5950 FEET
						YHRF 0.0000 FEET
						ZHRF 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

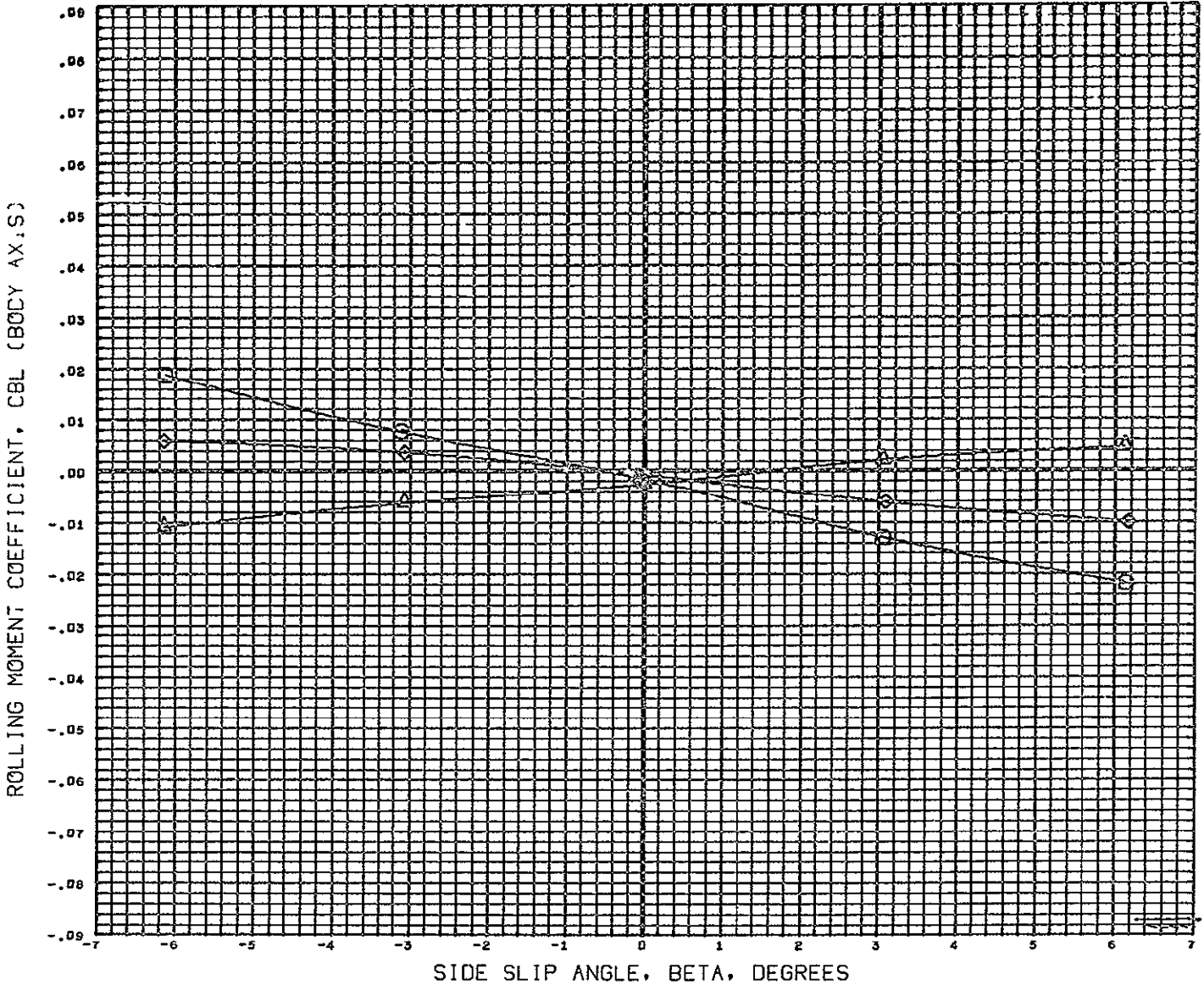
EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2003)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4152)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4144)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 15DEG

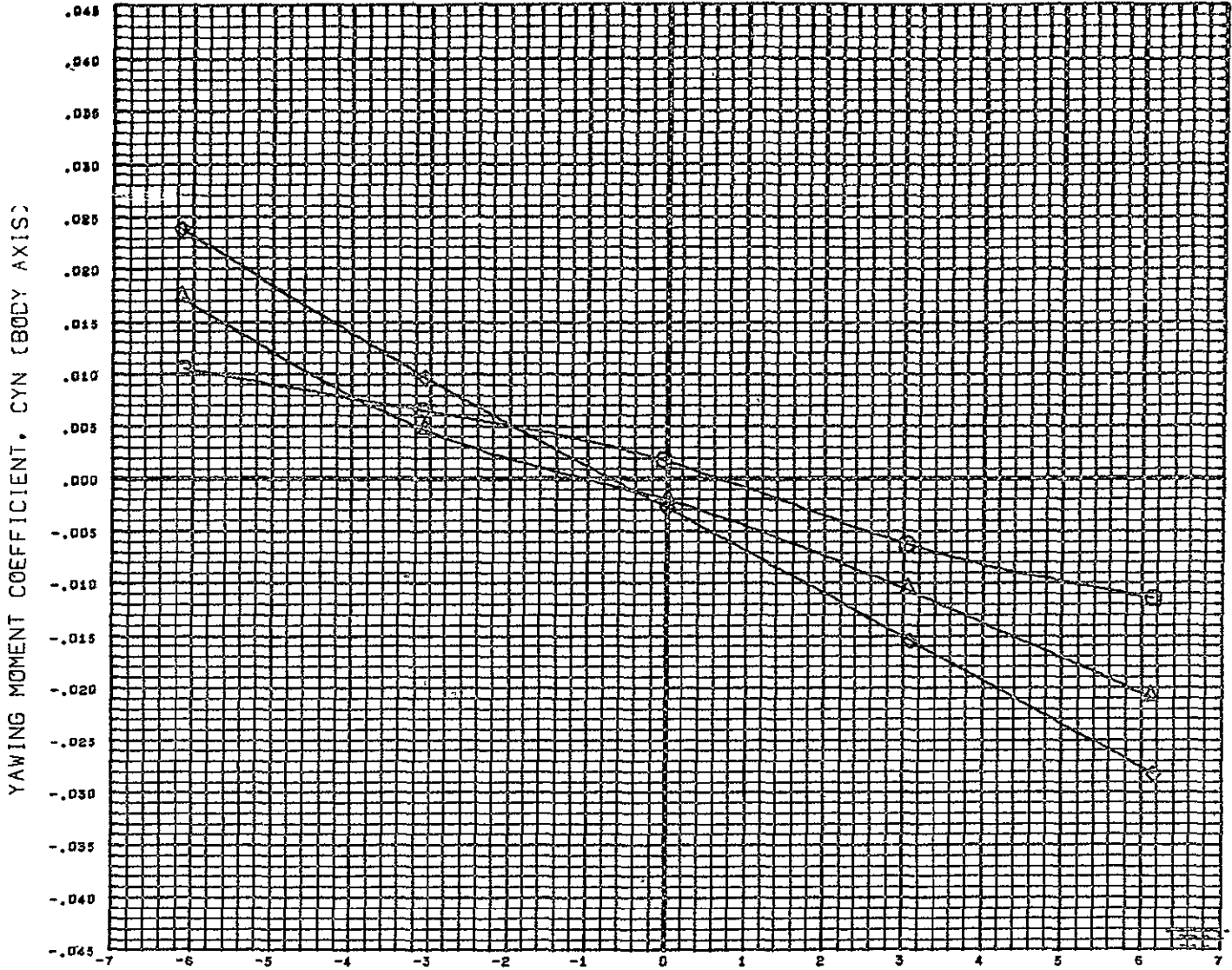


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2004) \circ	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(RN4153) \triangle	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4145) \diamond	NSRDC-3310,HSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET XNRP 2.9950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .38

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EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 15DEG



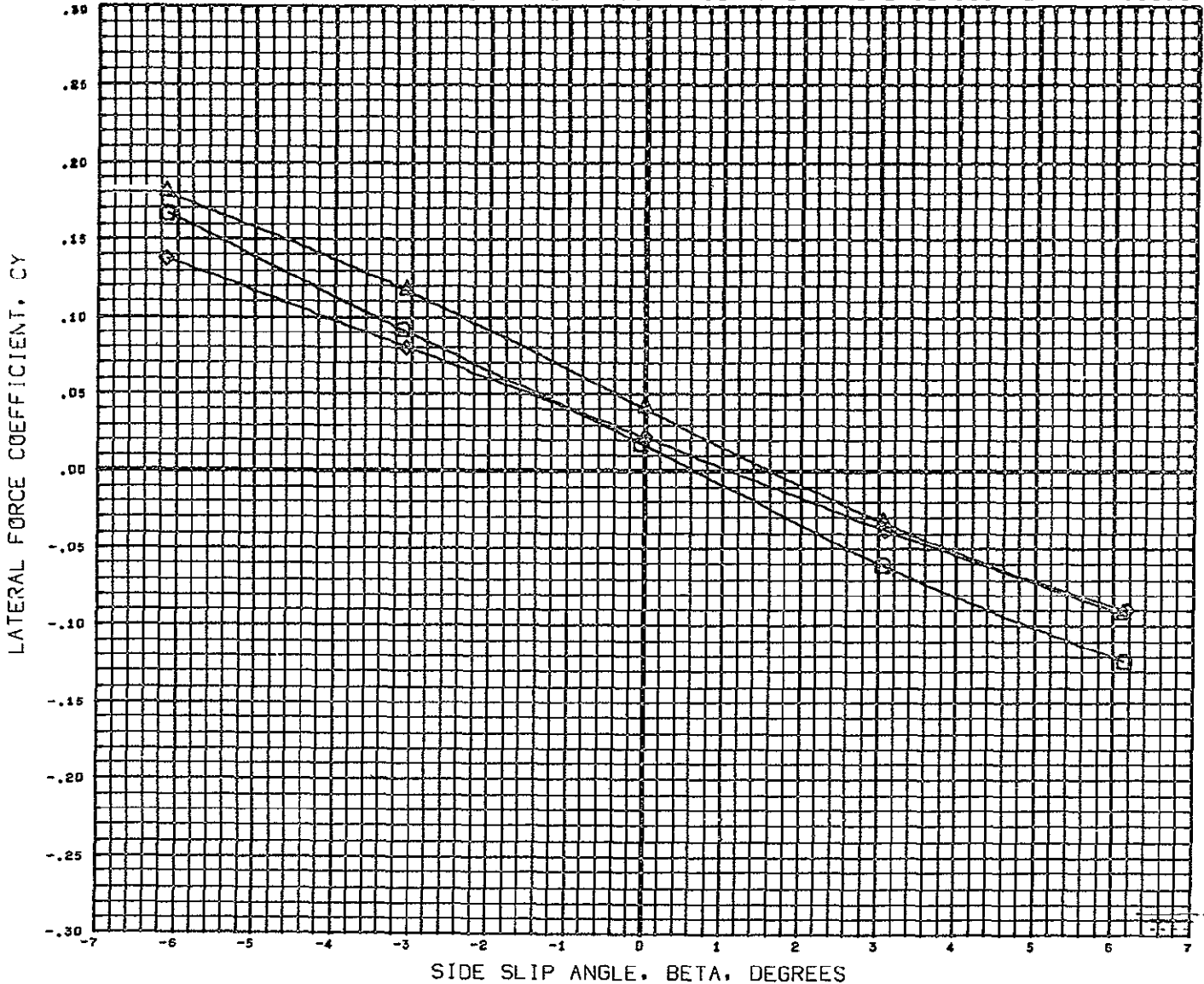
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2004)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(RN4153)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4145)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .38

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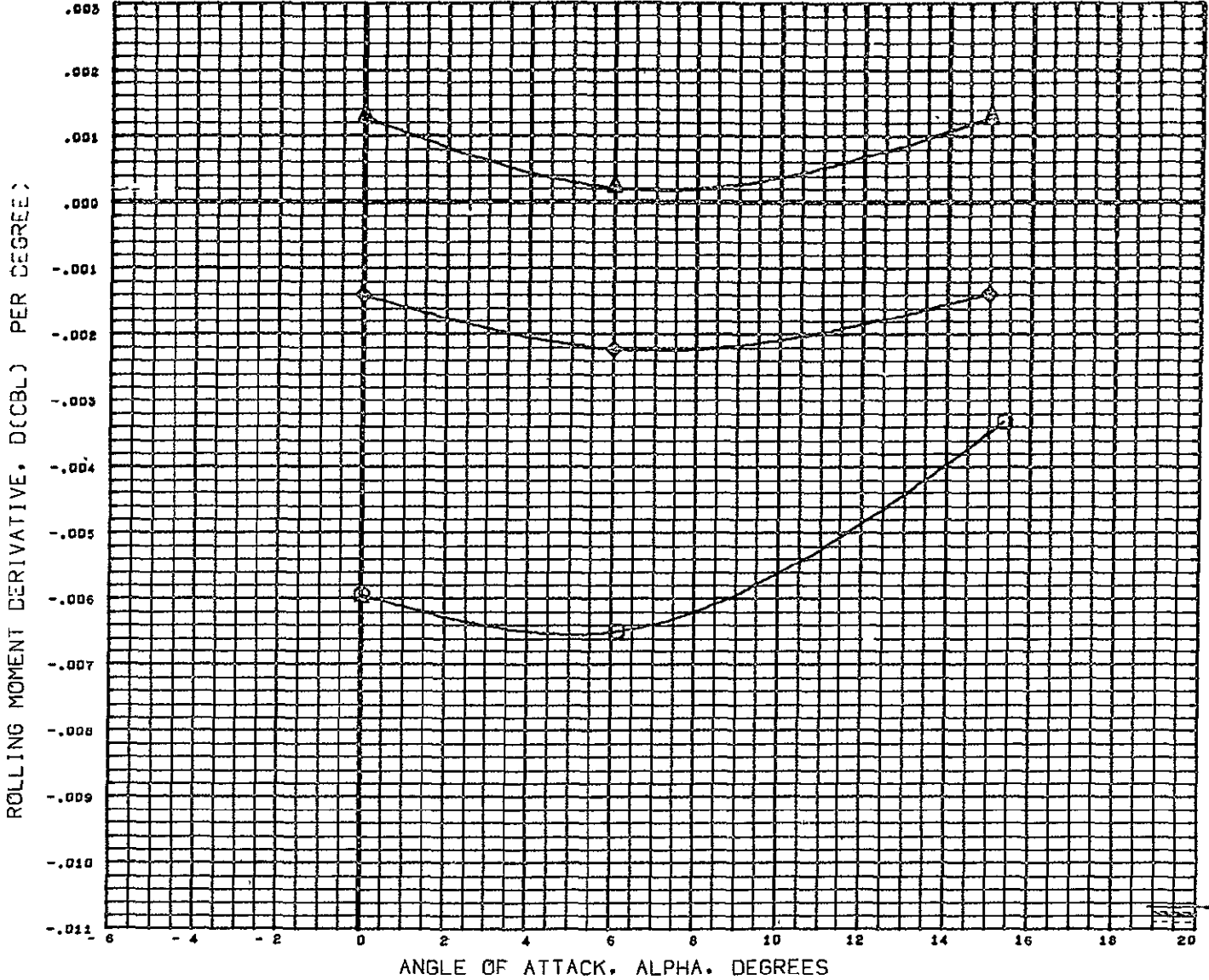
EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL CHARACTERISTICS ALPHA = 15DEG



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(HN2004)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V1	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(RN4153)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	LREF 3.4530 FEET
(RN4145)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1	7.660	1.000	1.000	0.000	BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

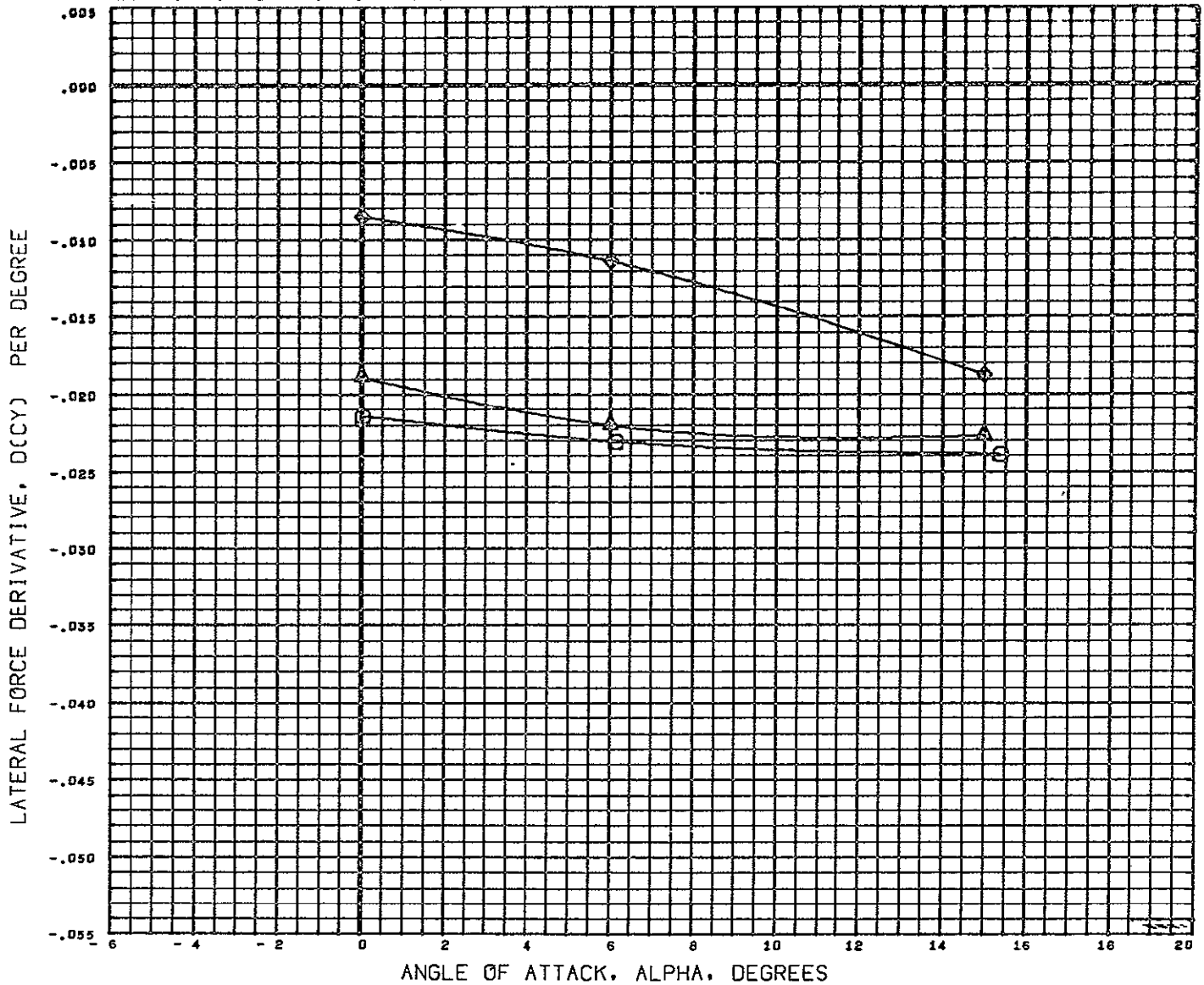
MACH .38

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



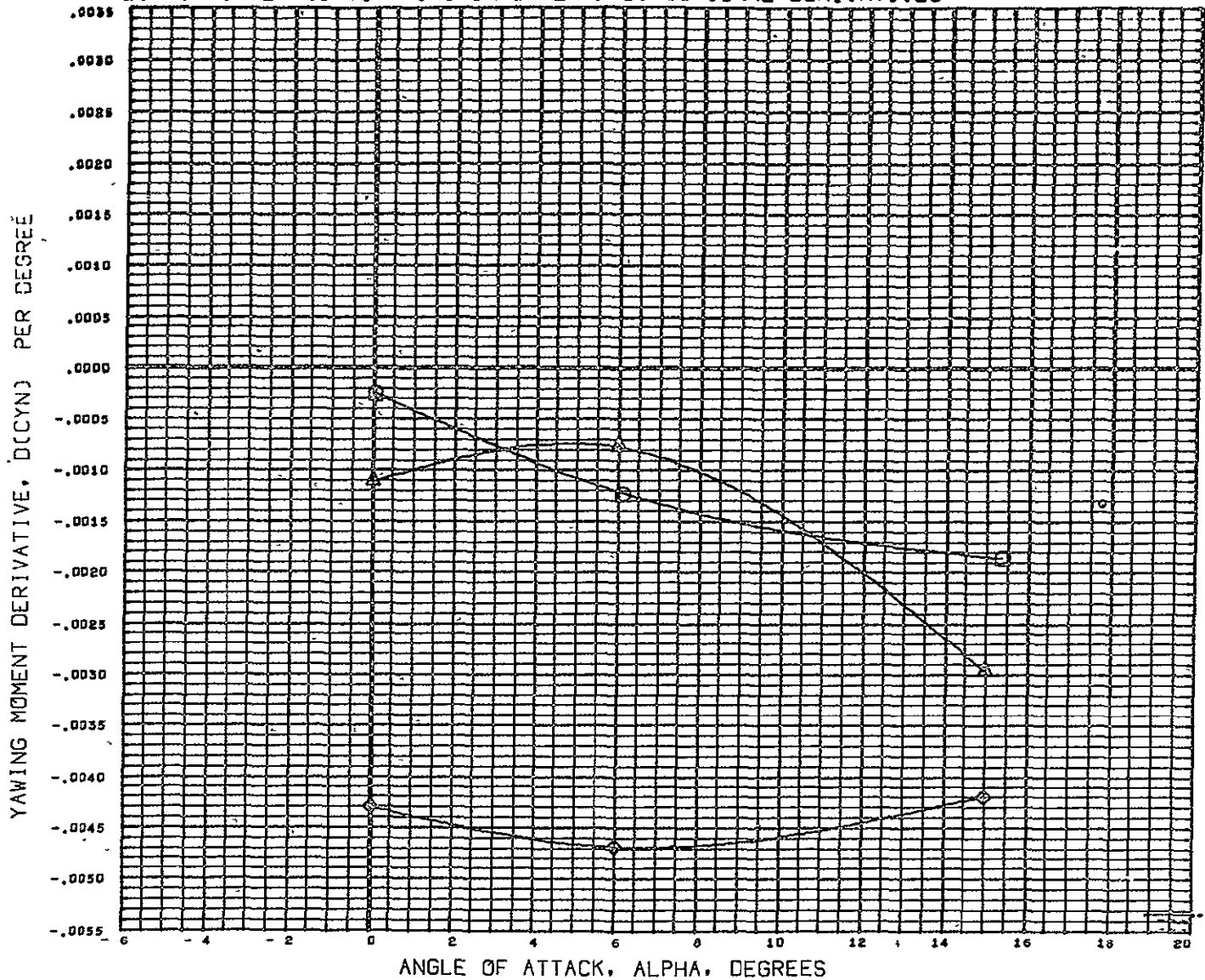
SYMBOL	INVTIP	PARAMETRIC VALUES				REFERENCE INFORMATION		
△	1.100	MACH	0.400	INCIDC	3.000	SPEF	1.3550	SQ.FT.
◇	1.400	INCIDW	0.000	DIHDL	7.660	LREF	3.4530	FEET
○	1.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MHI			ZMRP	0.0167	FEET
						SCALE	0.0150	SCALE

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



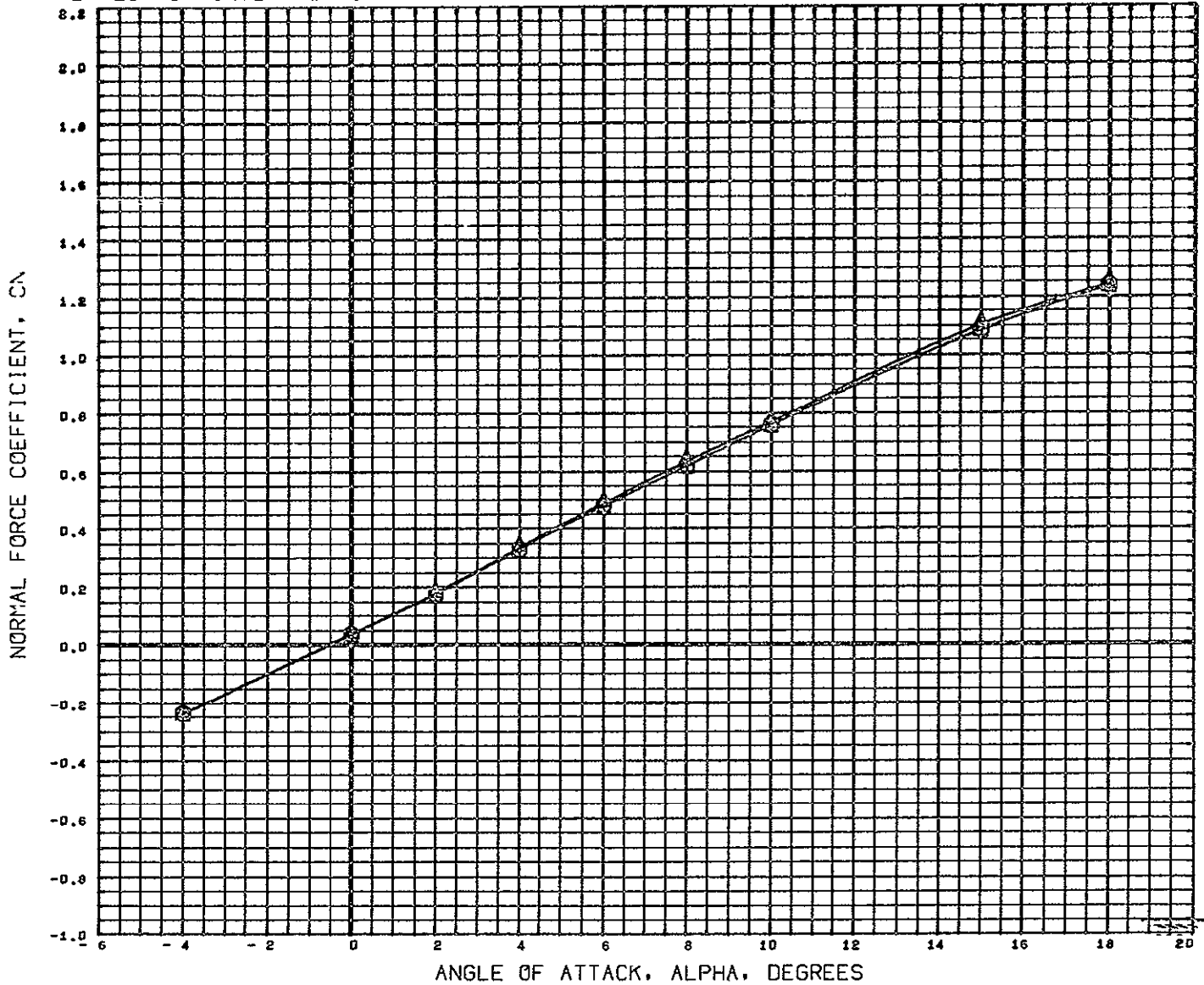
SYMBOL	INVTIP	PARAMETRIC VALUES				REFERENCE INFORMATION		
◇	1.100	MACH	0.400	INCIDC	3.000	SREF	1.3550	50. FT.
△	1.400	INCIDW	0.000	DIHDRL	7.660	LREF	3.4530	FEET
○	1.000	AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HMI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



SYMBOL	INVTIP	PARAMETRIC VALUES				REFERENCE INFORMATION		
		MACH	INCIDC	DIHDL	SREF	SR.FT.		
◇	1.100	0.400	3.000		1.3550	SQ.FT.		
▷	1.400	0.000	7.660		3.4530	FEET		
◇	1.000	0.000	0.000		3.4530	FEET		
		0.000	1.000		2.5950	FEET		
		0.000			0.0000	FEET		
		1.000			0.0187	FEET		
		DATA HIST. CODE	NHI		0.0150	SCALE		

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

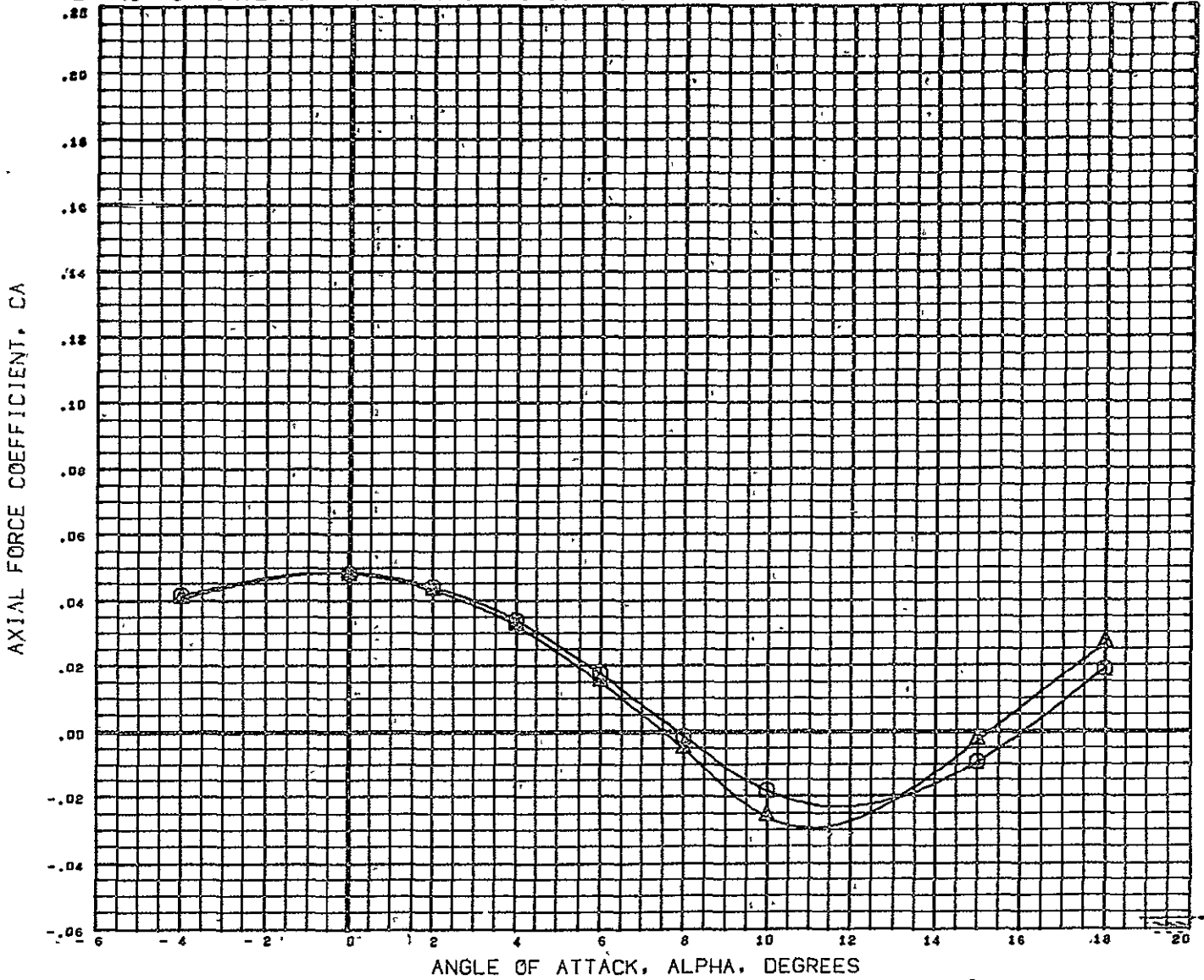


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(DN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1 000	1 000	0.000	SREF 1.3550 SQ FT.
(DN4138)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1 000	1 000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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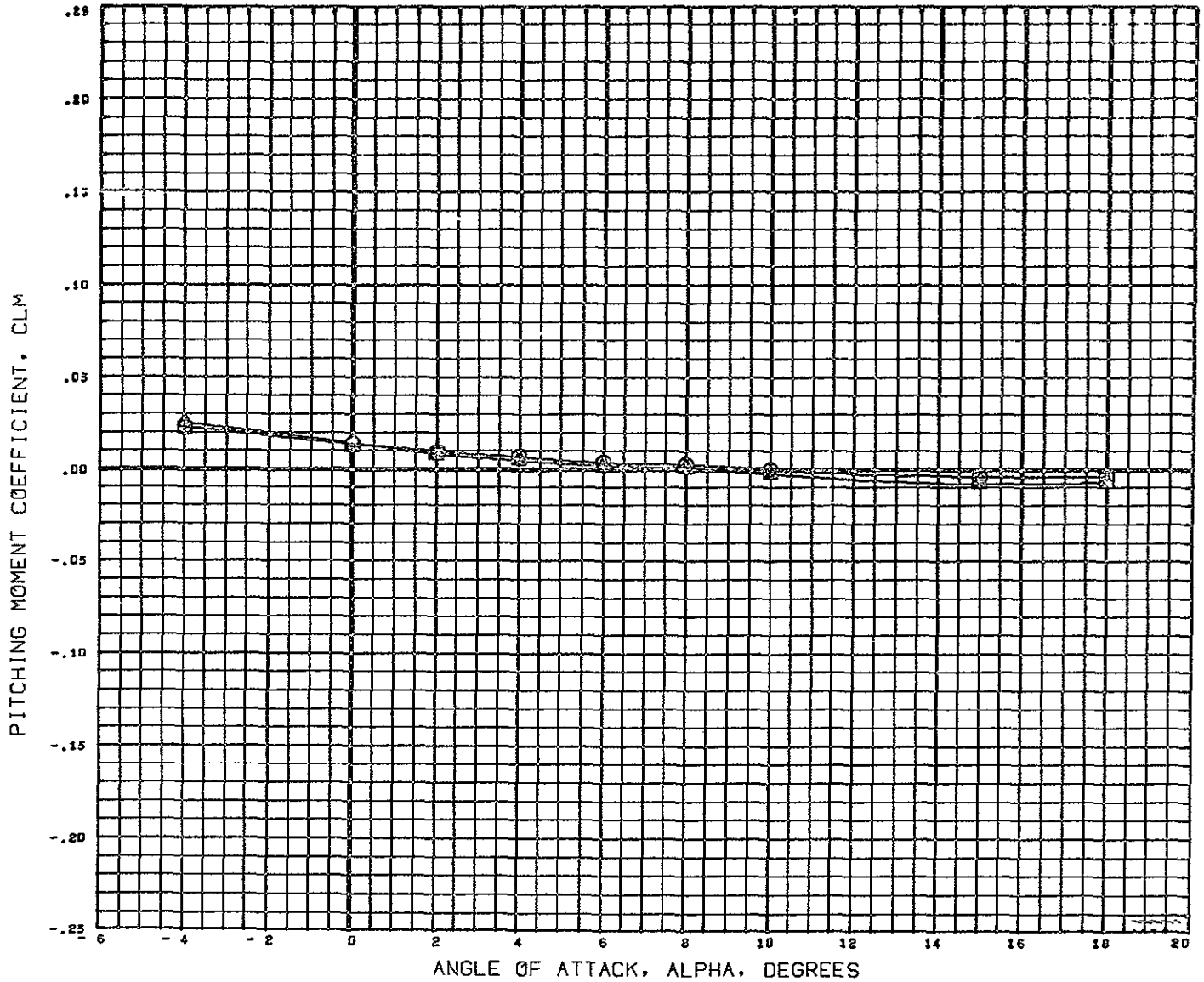
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(DN4150) ○	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF 1 3550 SQ.FT
(DN4138) △	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

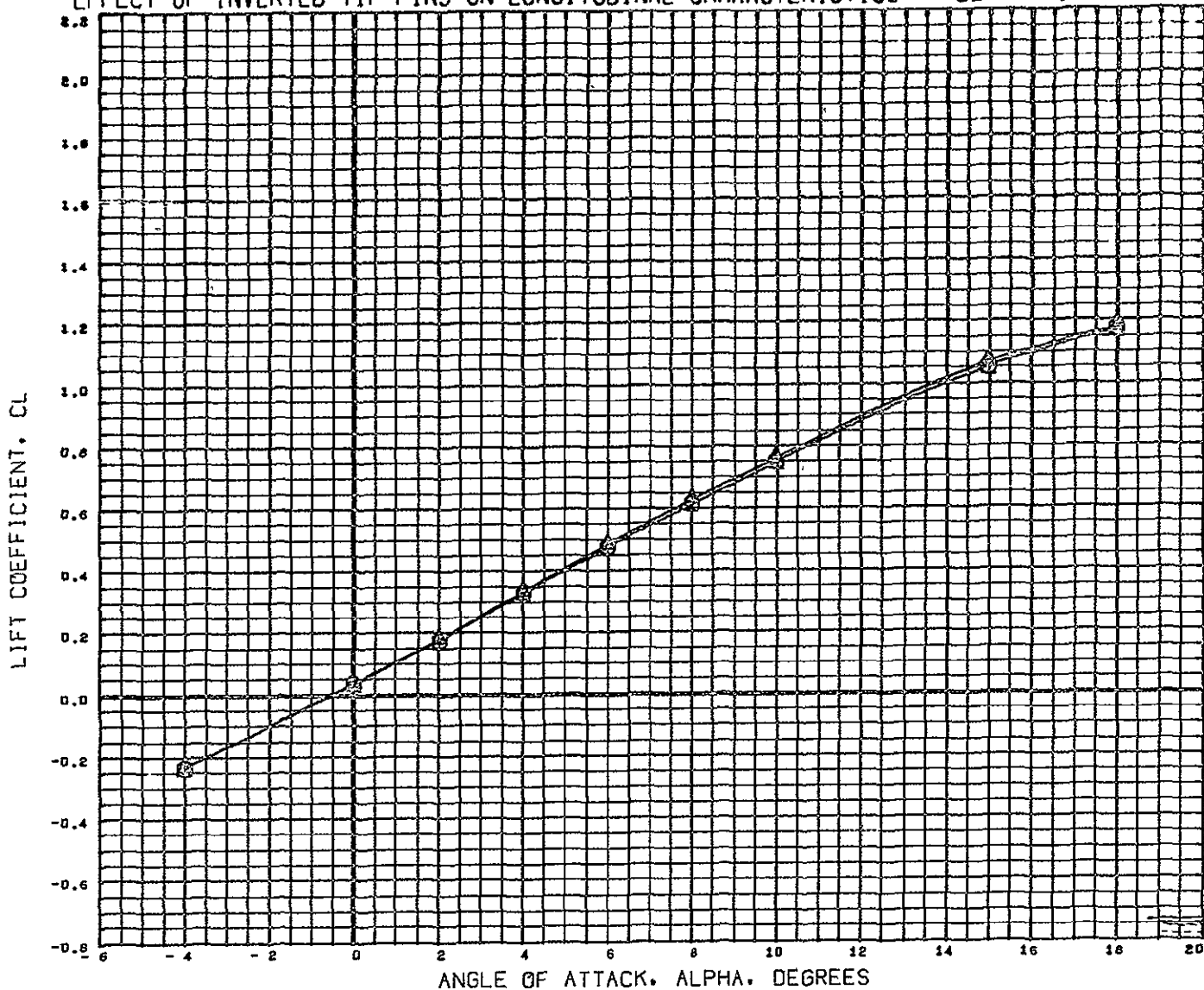
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIMDRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION	
(DN4150)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
(DN4138)	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

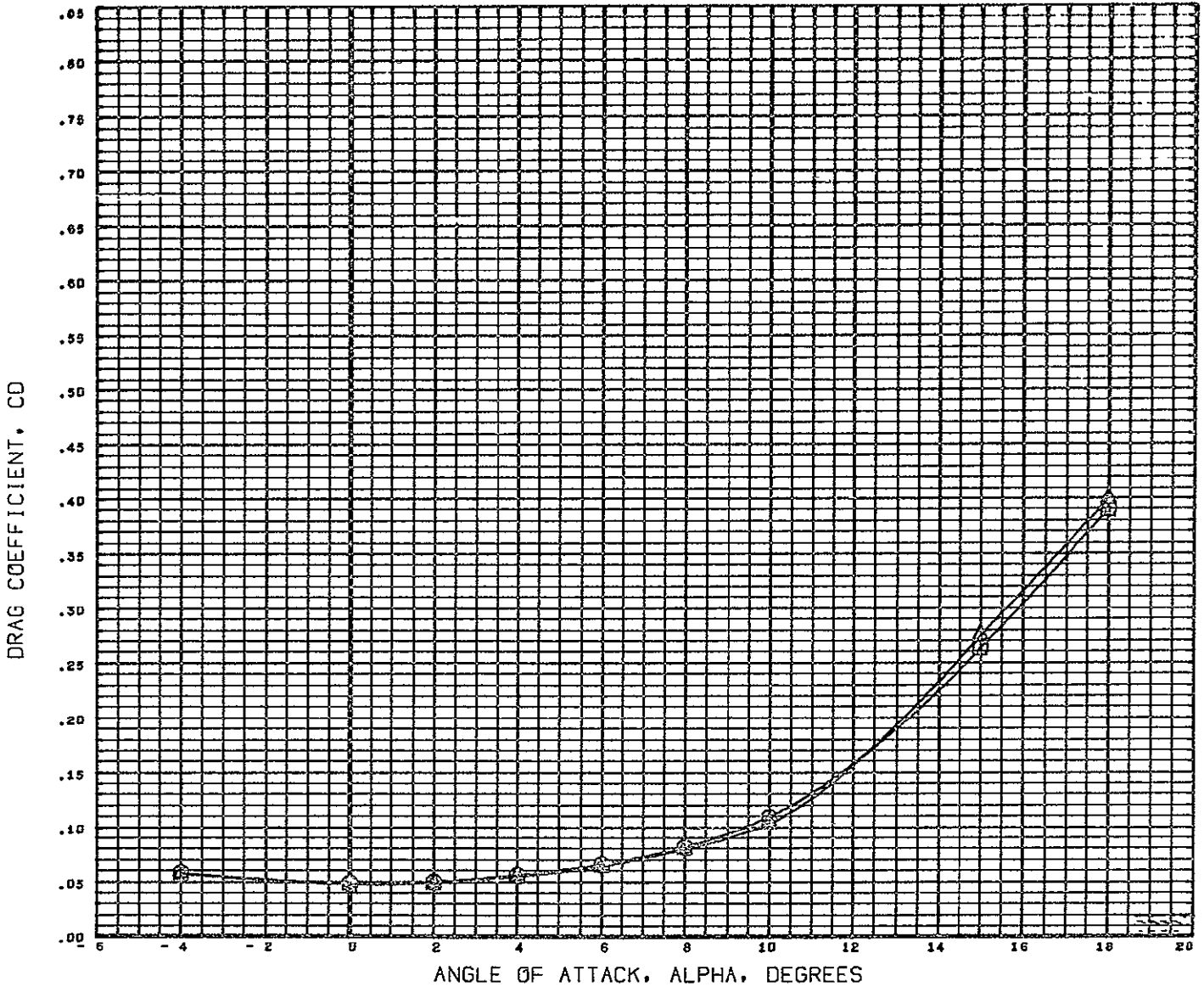
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
{DN4150}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
{DN4138}	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

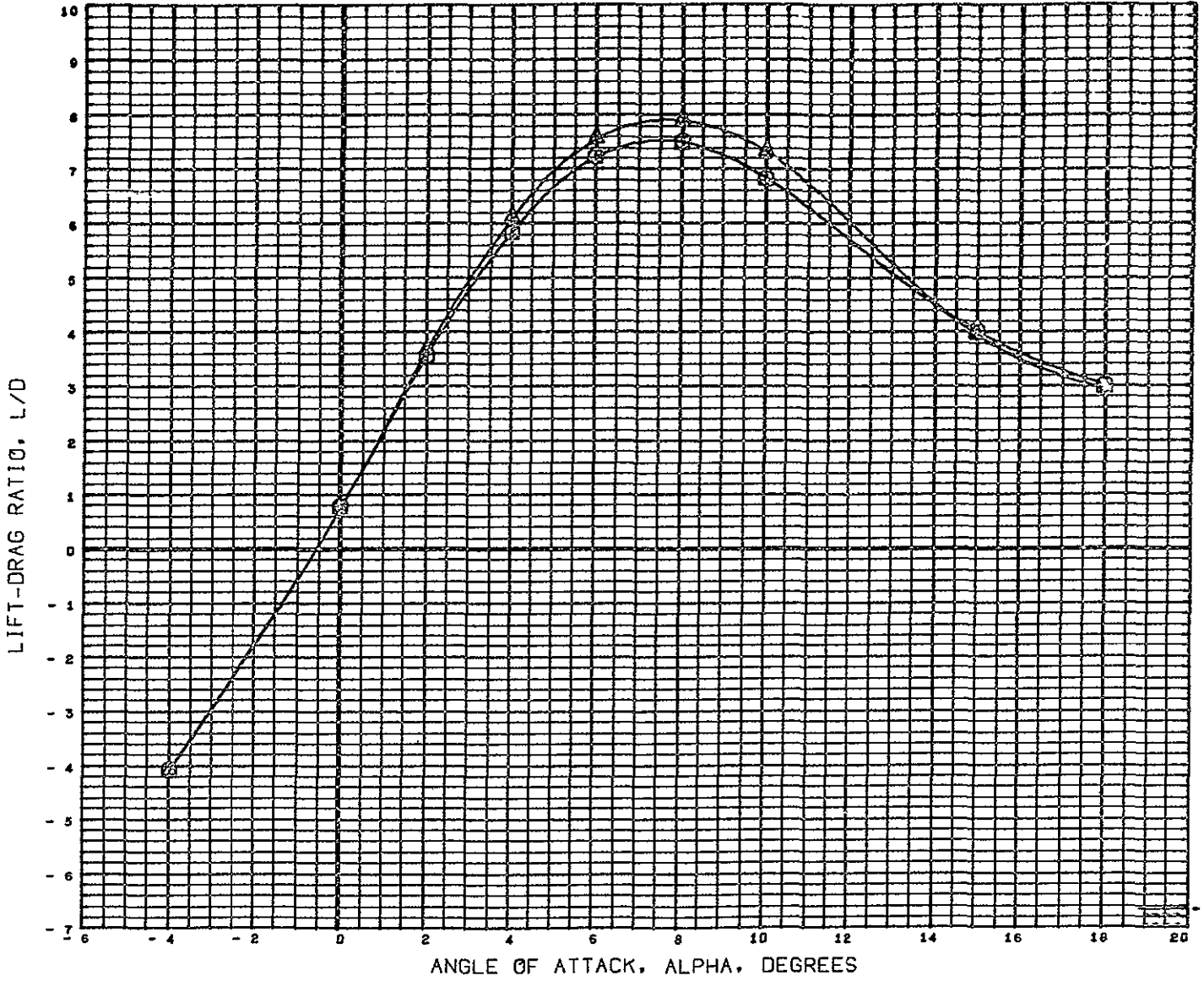




DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CMDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(DN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF	1.3550 SQ FT.
(DN4138)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0.0150 SCALE

MACH .40

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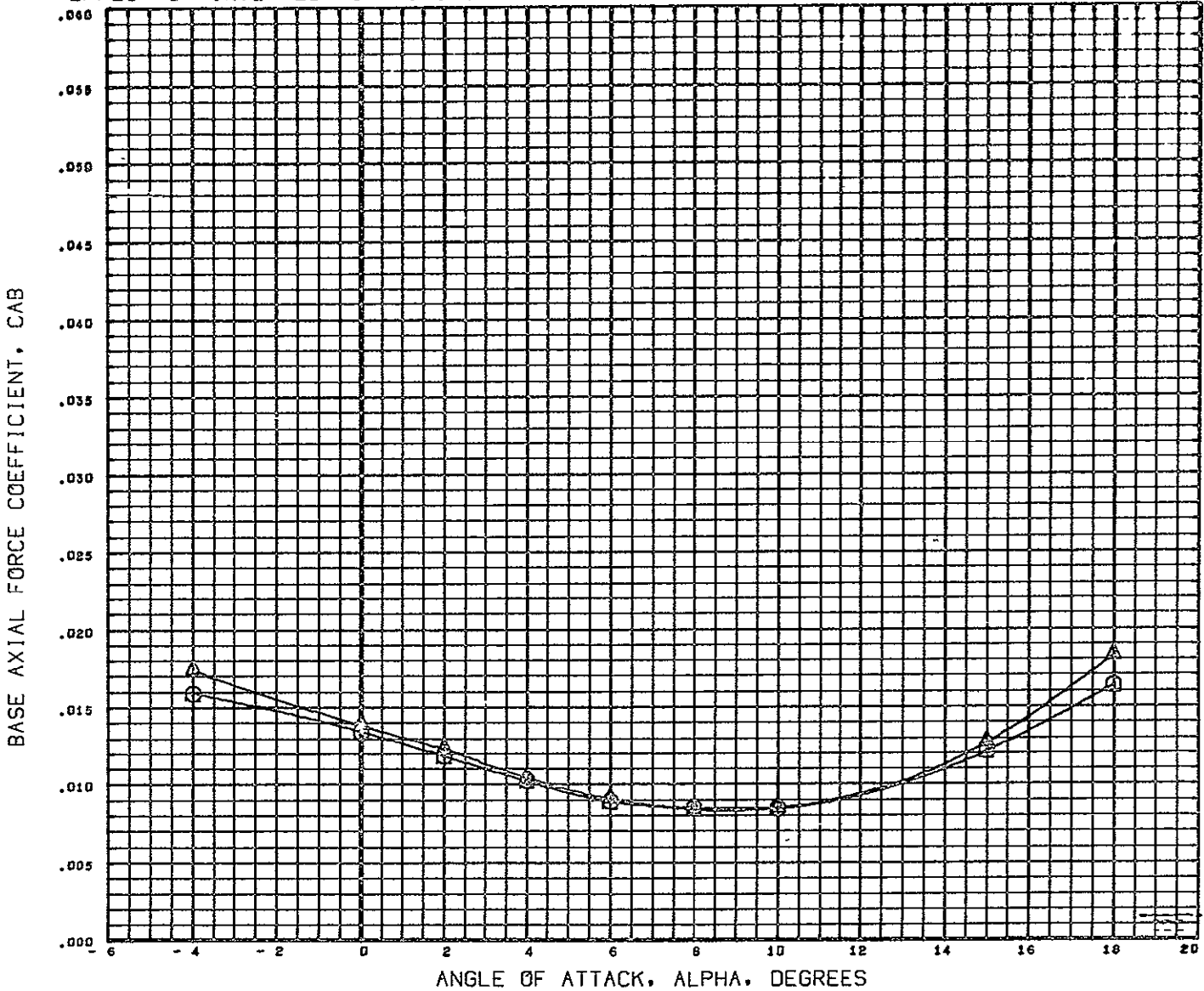
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(DN4150) 	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE
(DN4158) 	NSRDC-3310,HSFC/LHSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	

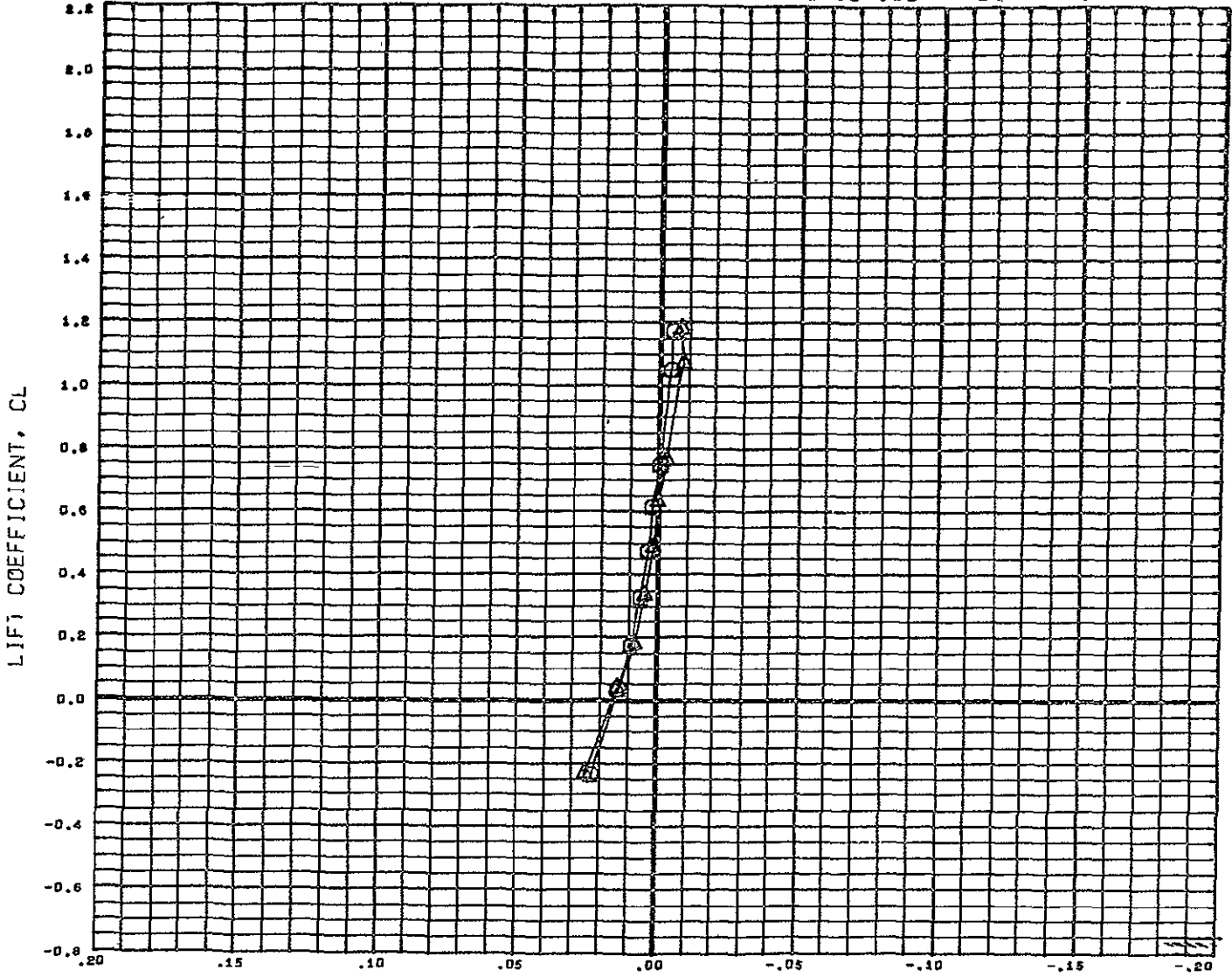
MACH .40

EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(DN4150)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4150)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

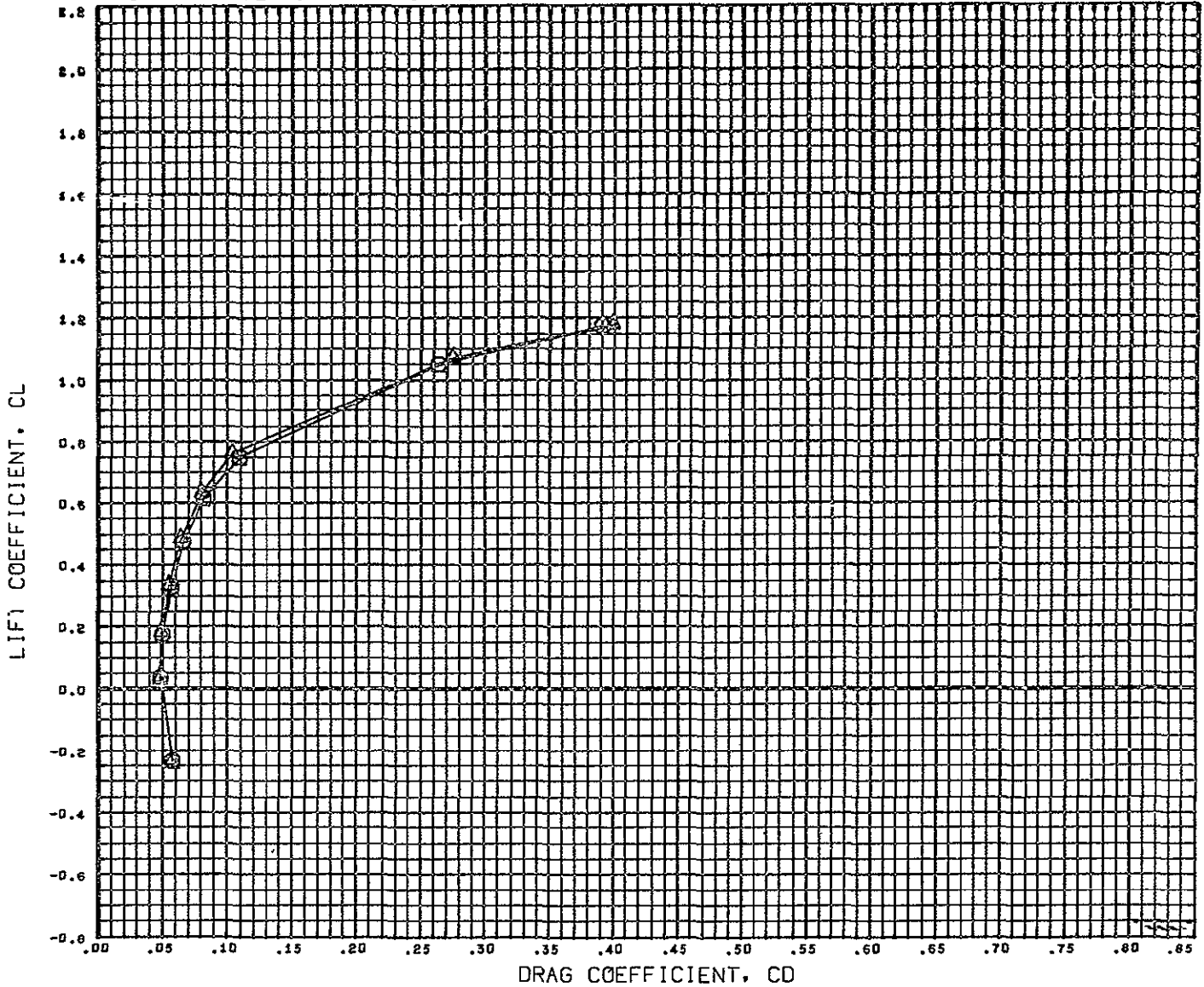
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(DN4150)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1,000	1,000	0.000	SREF 1.3550 SQ.FT.
(DN4138)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1,000	1,000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

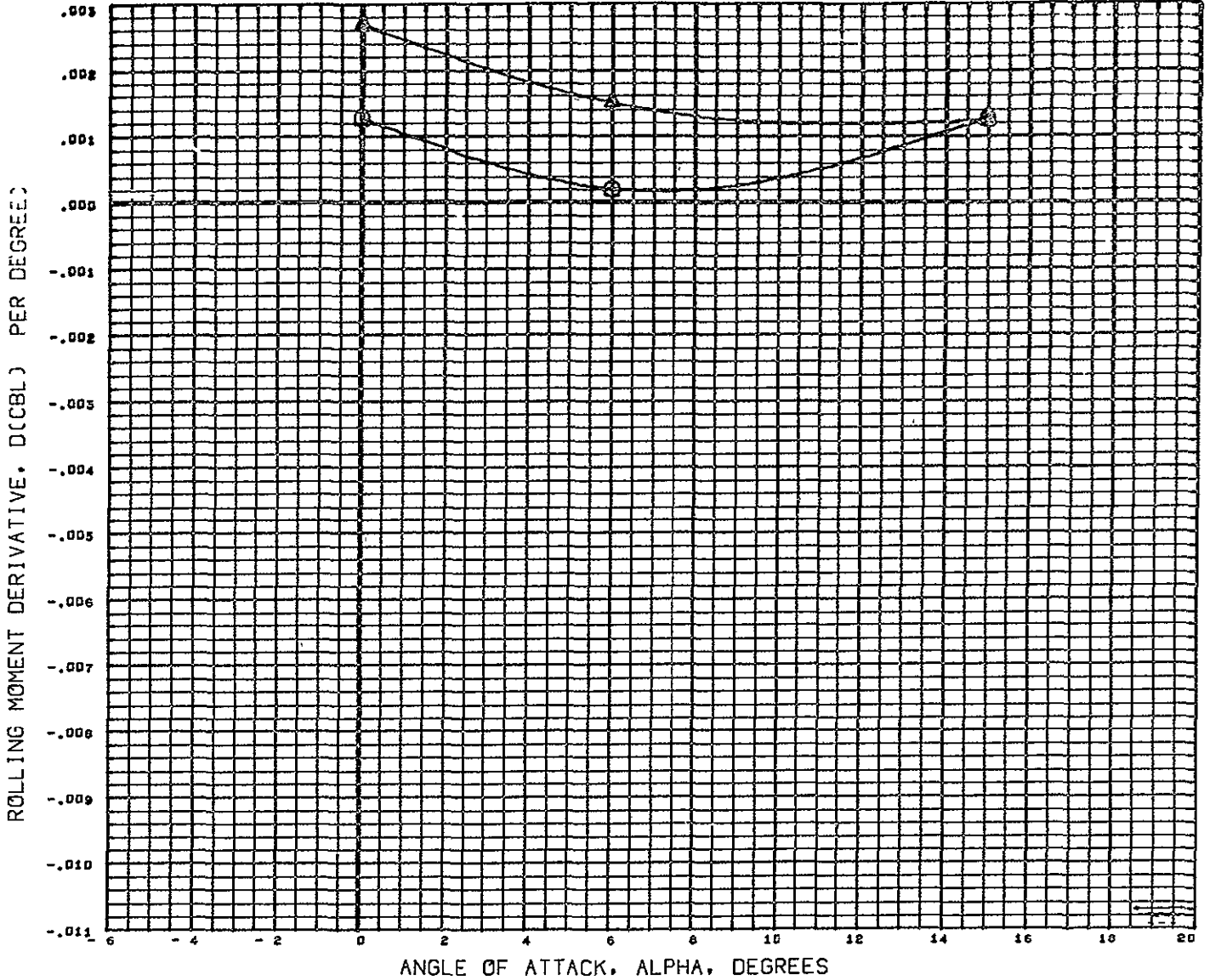
EFFECT OF INVERTED TIP FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(DN4150)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(DN4138)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V4	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

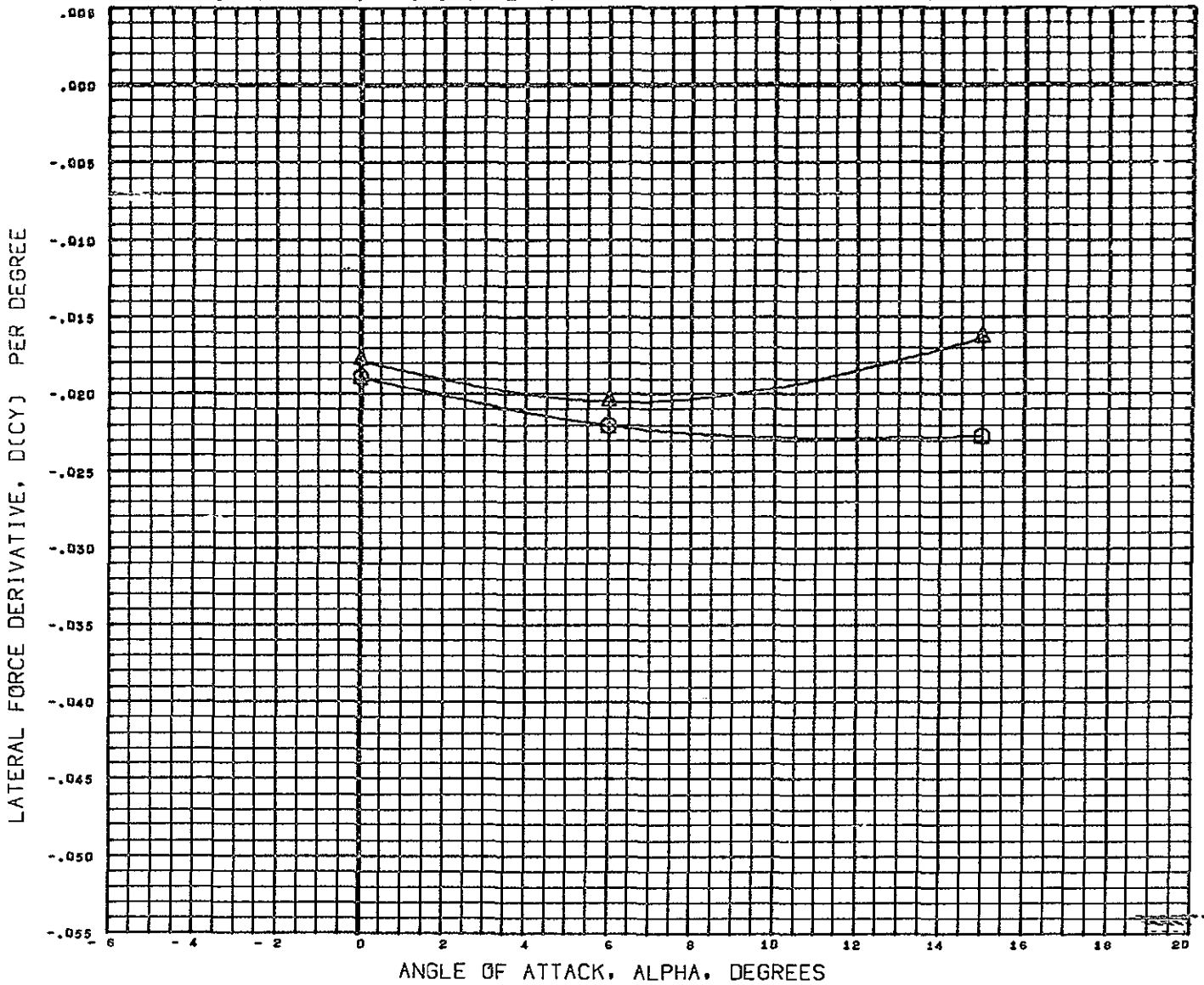
EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



SYMBOL	DIHRL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	7.660	MACH	0.400	INCIDC	3.000	SREF	1.3550	SQ.FT.
△	- 7.660	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		INVTIP	1.400	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	HI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

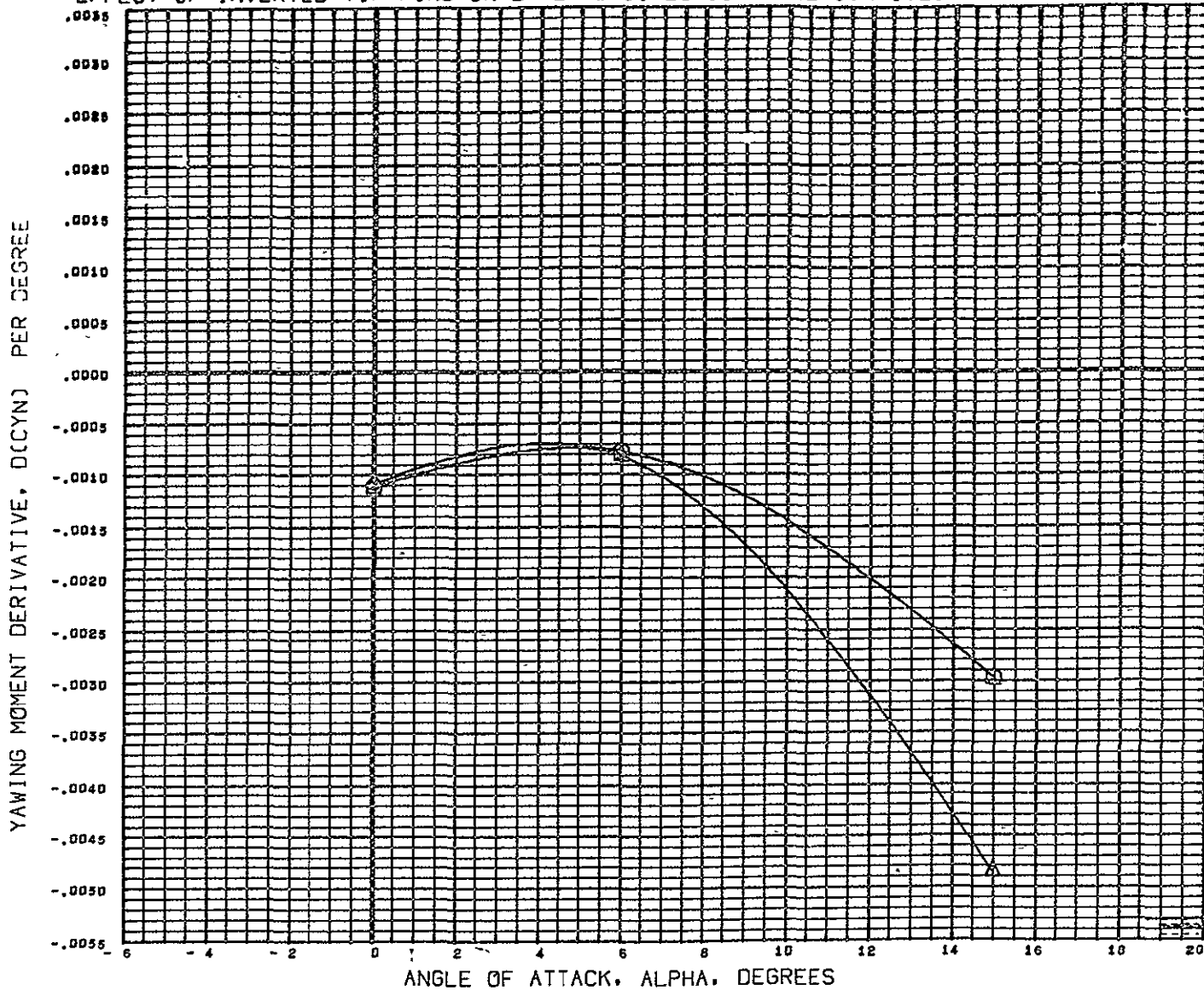
C.14

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



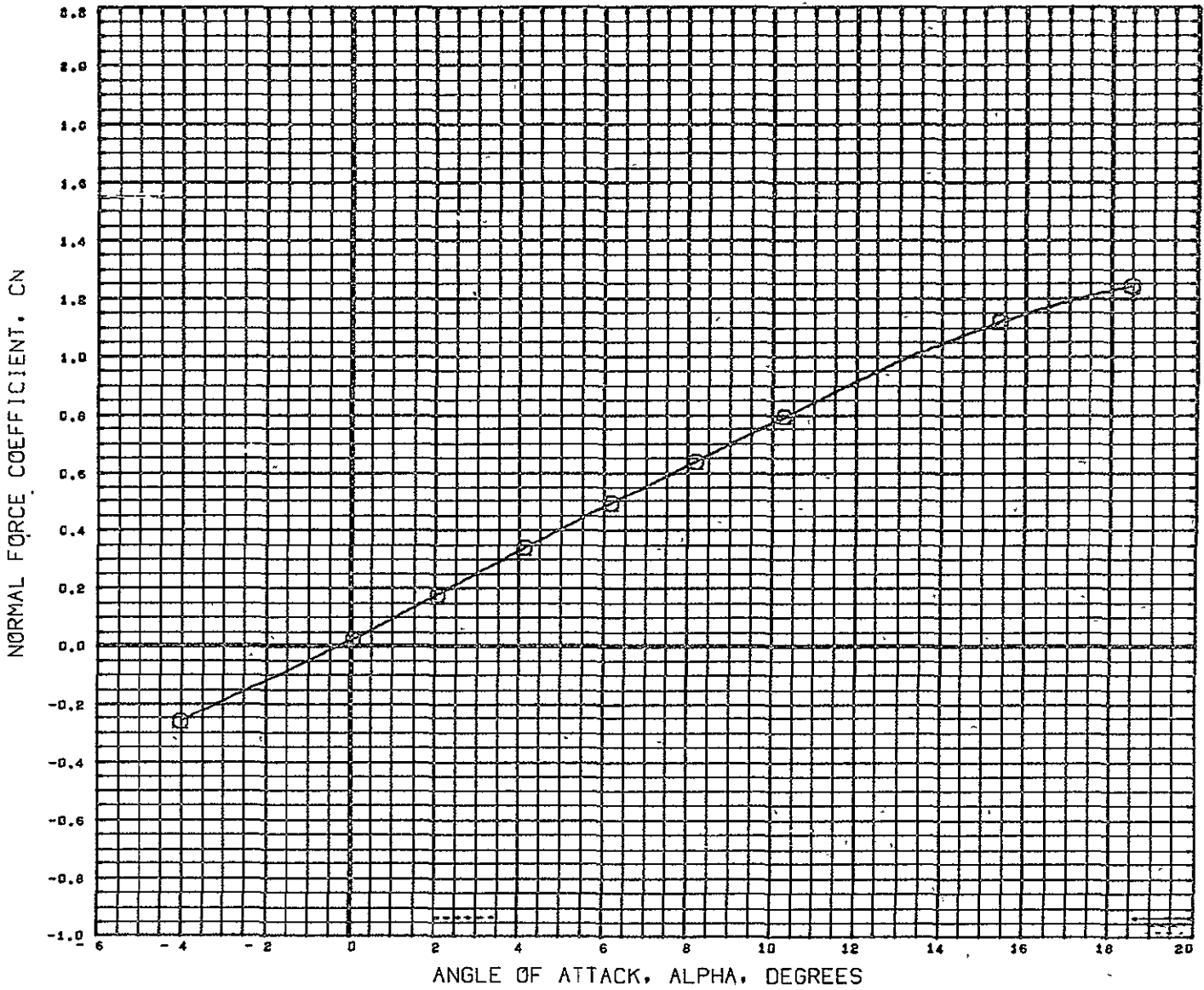
SYMBOL	DIHBRL	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	7 660	HACH	0.400	INCIDC	3.000	SREF	1.3550	sq.ft.
△	7 660	INCIDW	0.000	AILRON	0.000	LREF	3.4530	FEET
		CANARD	0.000	ELEVTR	0.000	BREF	3.4530	FEET
		INVTIP	1.400	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST	CODE	HI		ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF INVERTED TIP FINS ON LATERAL-DIRECTIONAL DERIVATIVES



PARAMETRIC VALUES				REFERENCE INFORMATION	
SYMBOL	DIHDL	MACH	INCIDC	SREF	SQ.FT.
Δ	7.660	0.400	3.000	LREF	3.4530
	- 7.660	INCIDW	AILRON	BREF	3.4530
		0.000	0.000	XMRP	2.5950
		CANARD	ELEVTR	YMRP	0.0000
		0.000	0.000	ZMRP	0.0107
		INVTIP	WNGPOS	SCALE	0.0150
		1.400	1.000		
		CNDPOS			
		1.000			
		DATA HIST. CODE	HI		

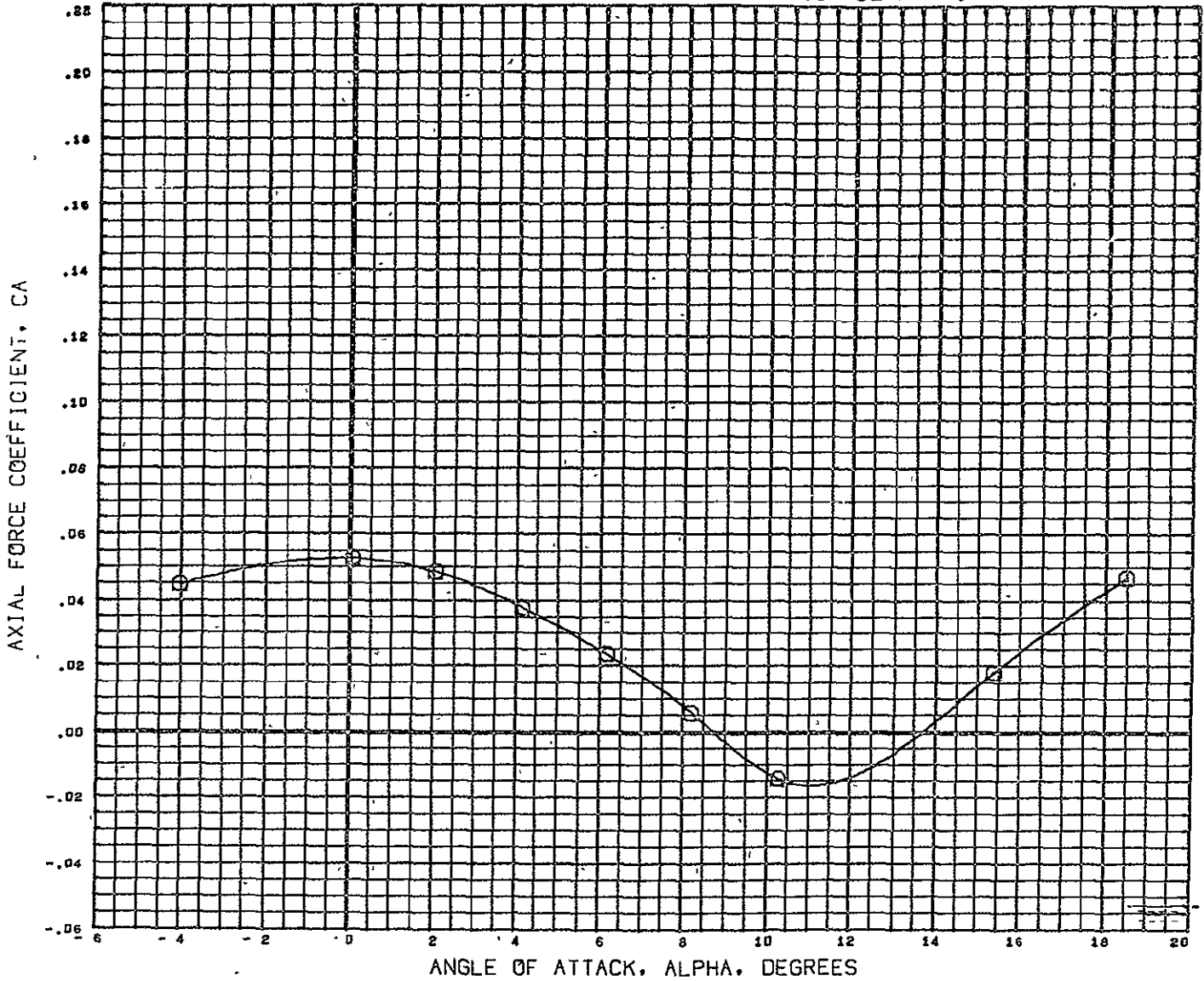
EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	D1HDRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(RN4130) ○	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0167 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4130) □	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT. LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0107 FEET SCALE 0 0150 SCALE

MACH .40

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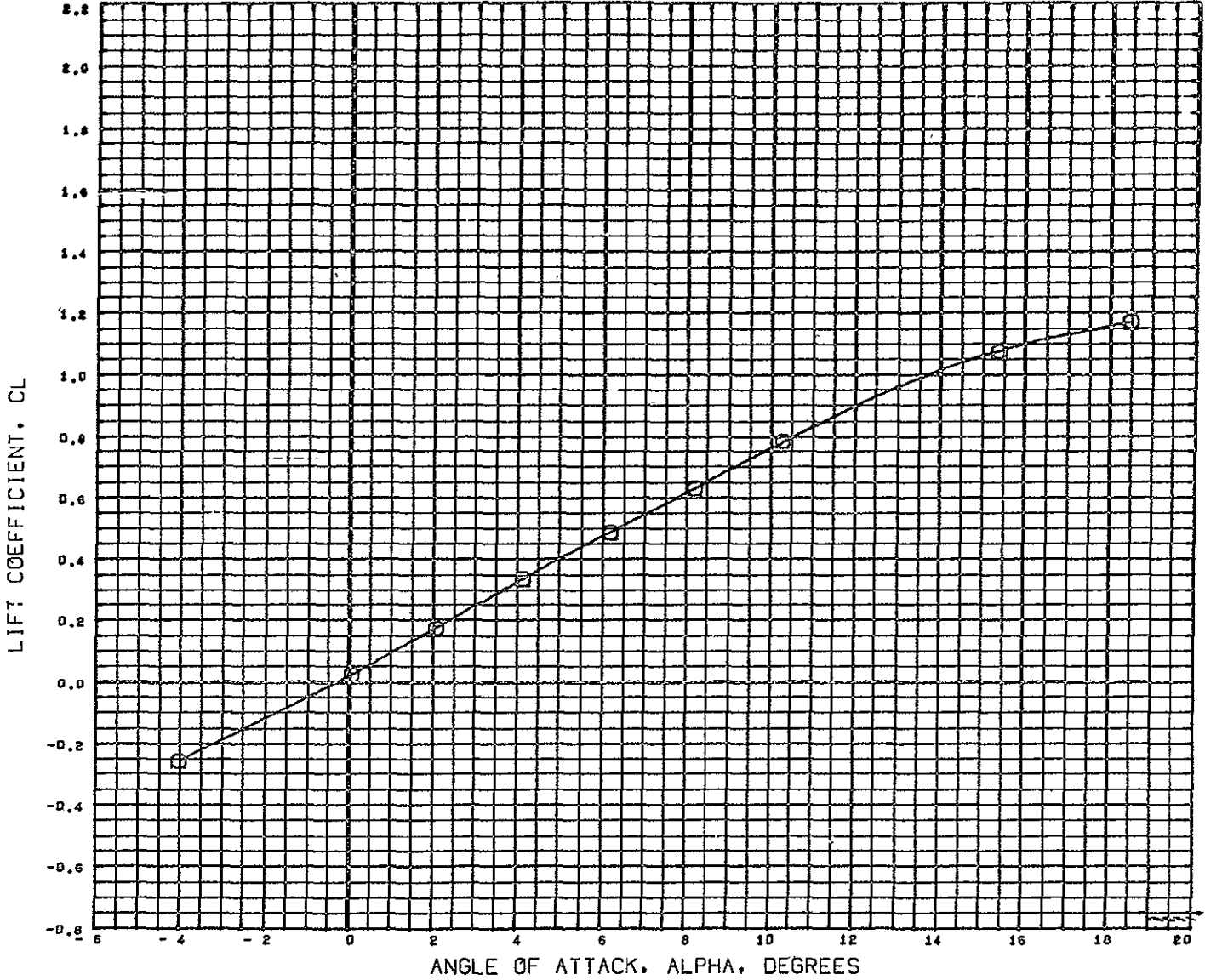
EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN413D) ○	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT. LREF 3.4530 FEET BREF 3.4530 FEET XHRP 2.5950 FEET YHRP 0.0000 FEET ZHRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

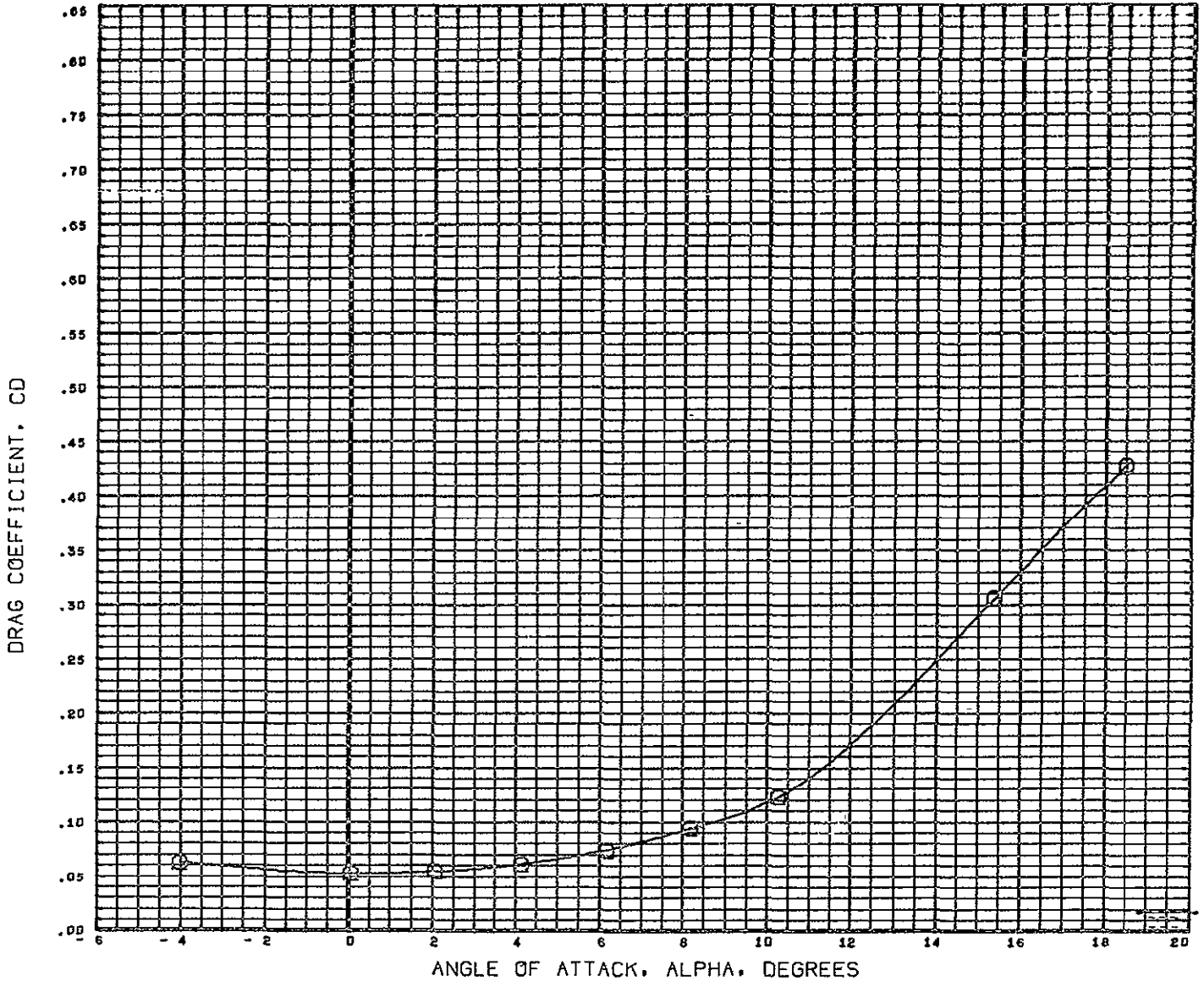


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4130) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

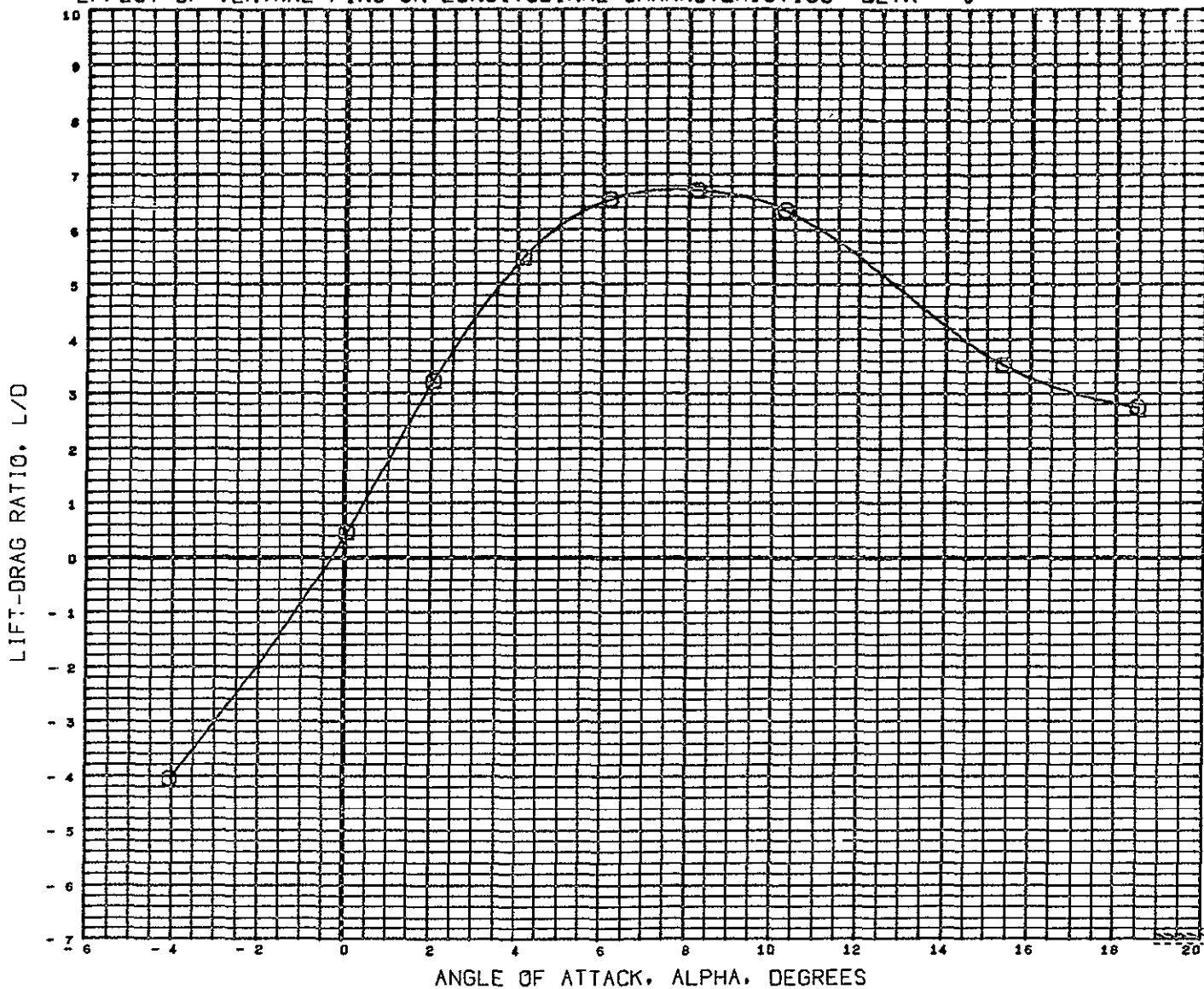


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4130) ○	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ FT. LREF 3 4530 FEET BREF 3 4530 FEET XHRP 2 5050 FEET YHRP 0 0000 FEET ZHRP 0 0187 FEET SCALE 0 0150 SCALE

MACH .40

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EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDR	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION	
(RN4130) ○	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ.FT.
						LREF	3.4530 FEET
						BREF	3.4530 FEET
						XHRP	2.5950 FEET
						YHRP	0.0000 FEET
						ZHRP	0.0167 FEET
						SCALE	0.0150 SCALE

MACH .40

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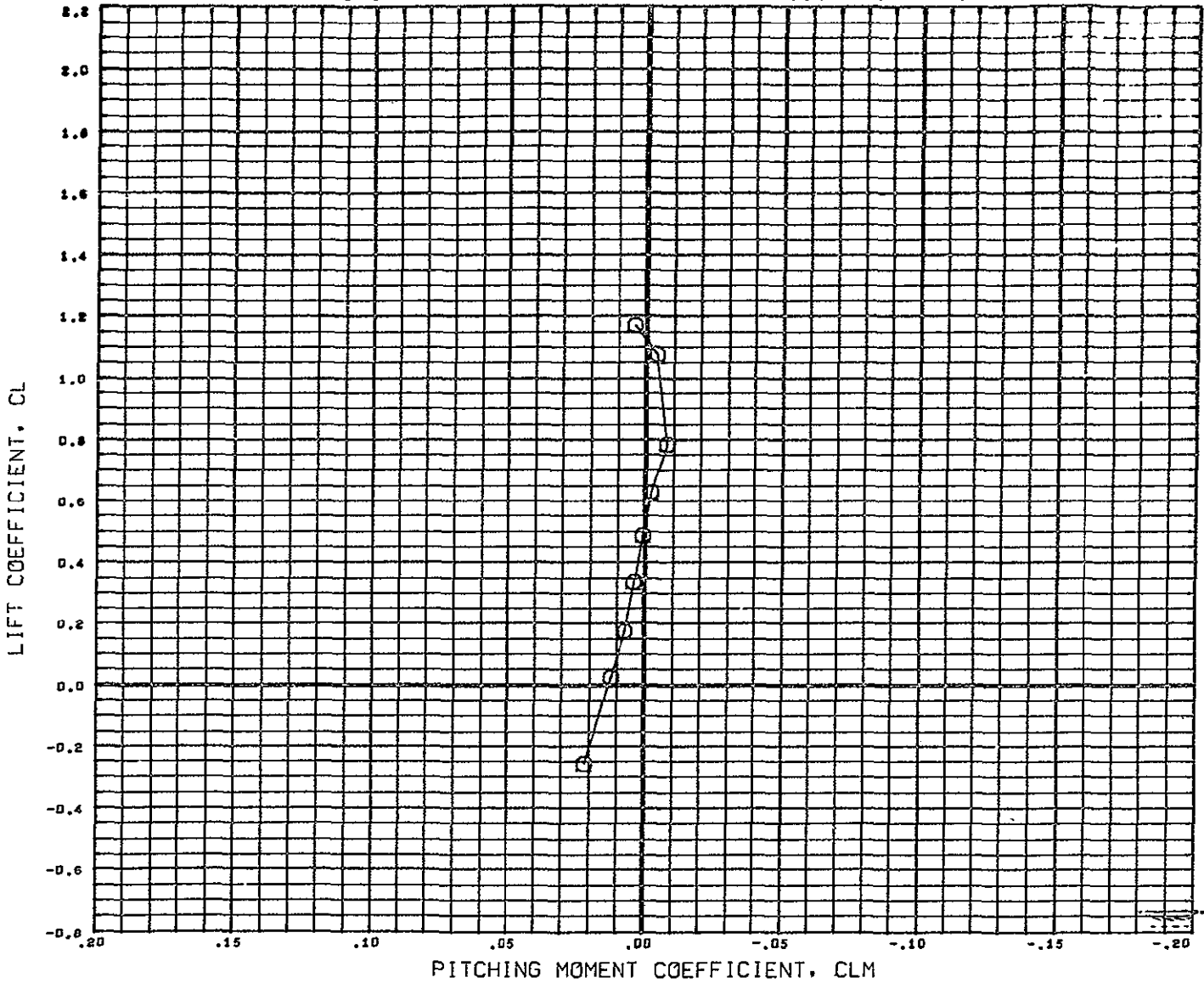
EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4130) ○	NSRDC-3310, NSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0

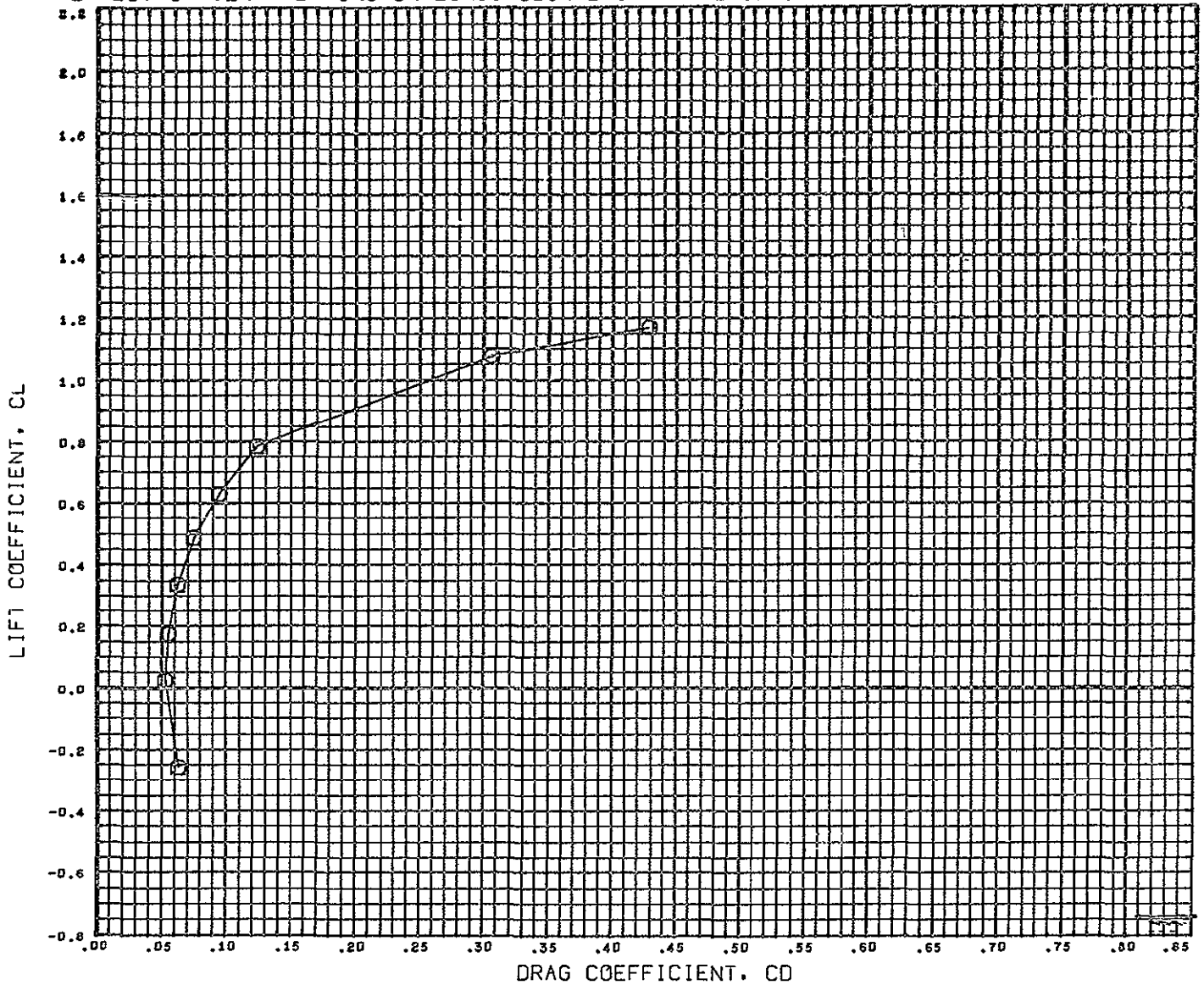


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(RN4130) ○	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0 000	SREF 1.3550 SQ FT. LREF 3.4530 FEET BREF 3.4530 FEET XMRP 2.5950 FEET YMRP 0.0000 FEET ZMRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

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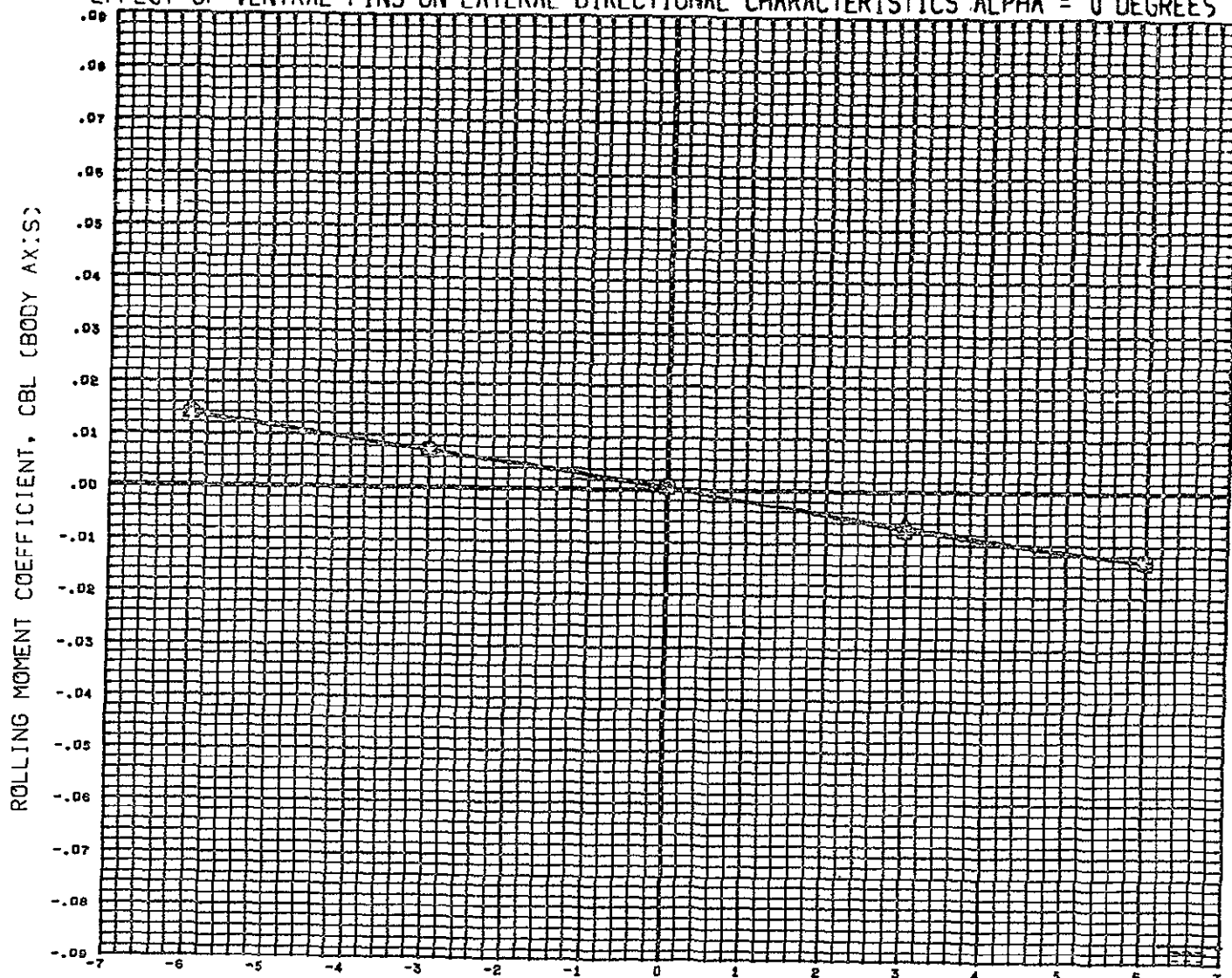
EFFECT OF VENTRAL FINS ON LONGITUDINAL CHARACTERISTICS BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLW	REFERENCE INFORMATION
(RN4130)	○ NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	SREF 1 3550 SQ. FT. LREF 3.4530 FEET BREF 3.4530 FEET XNRP 2.5950 FEET YNRP 0.0000 FEET ZNRP 0.0187 FEET SCALE 0.0150 SCALE

MACH .40

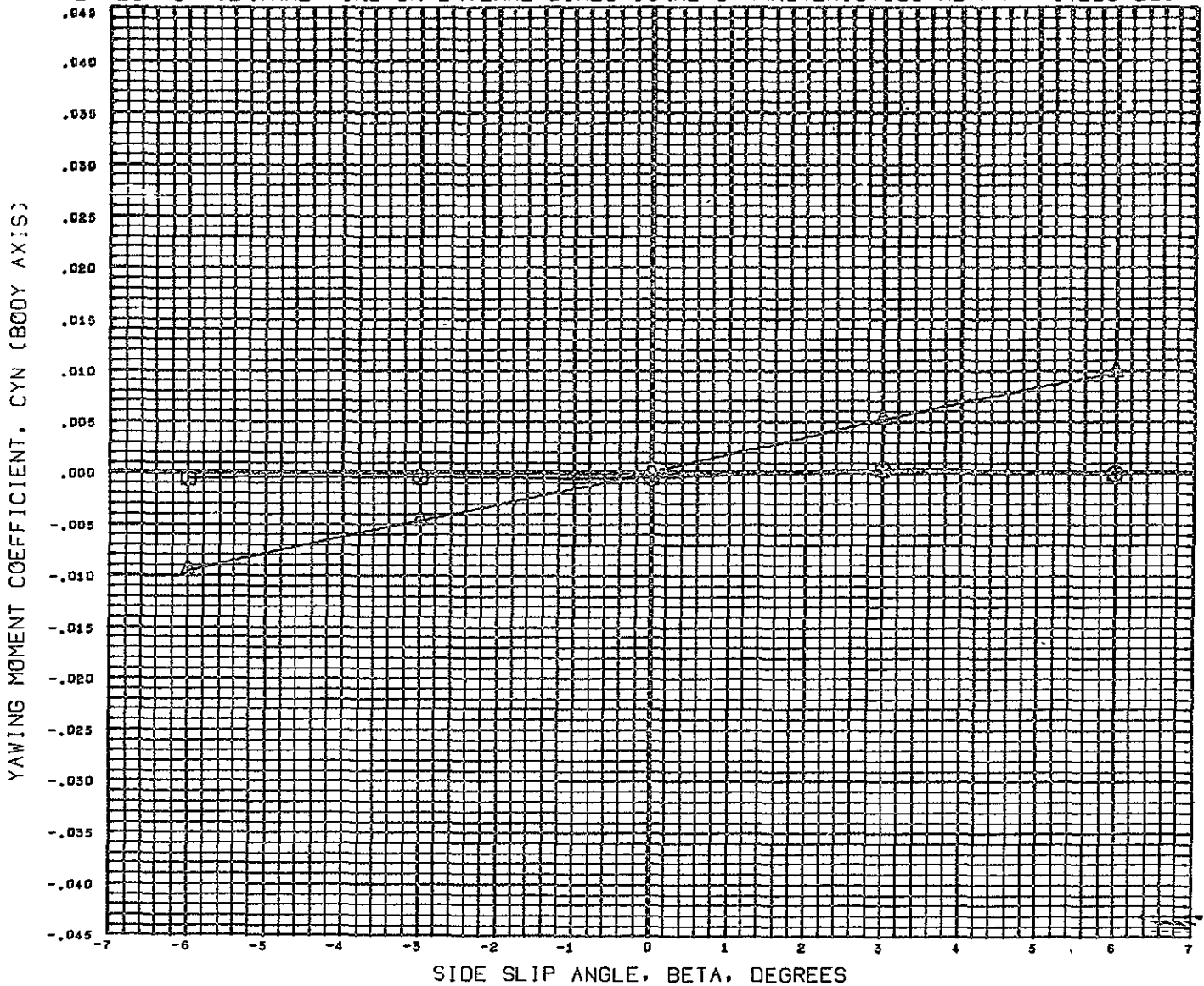
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DINDRL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4006)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(GN4131)	NSRDC-3310, MSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

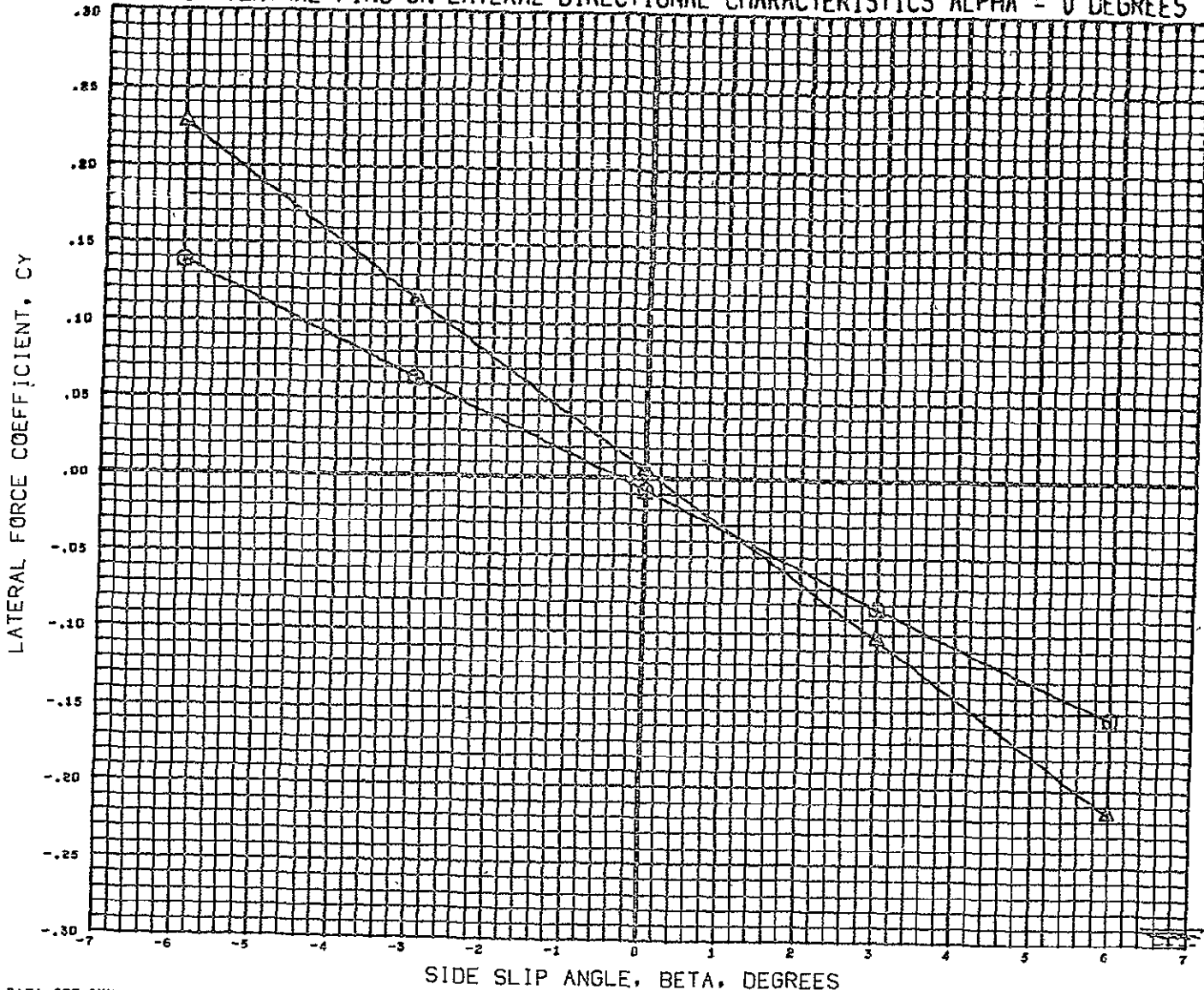
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(GN4006)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT
(GN4131)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.9950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0107 FEET
						SCALE 0.0150 SCALE

MACH .40

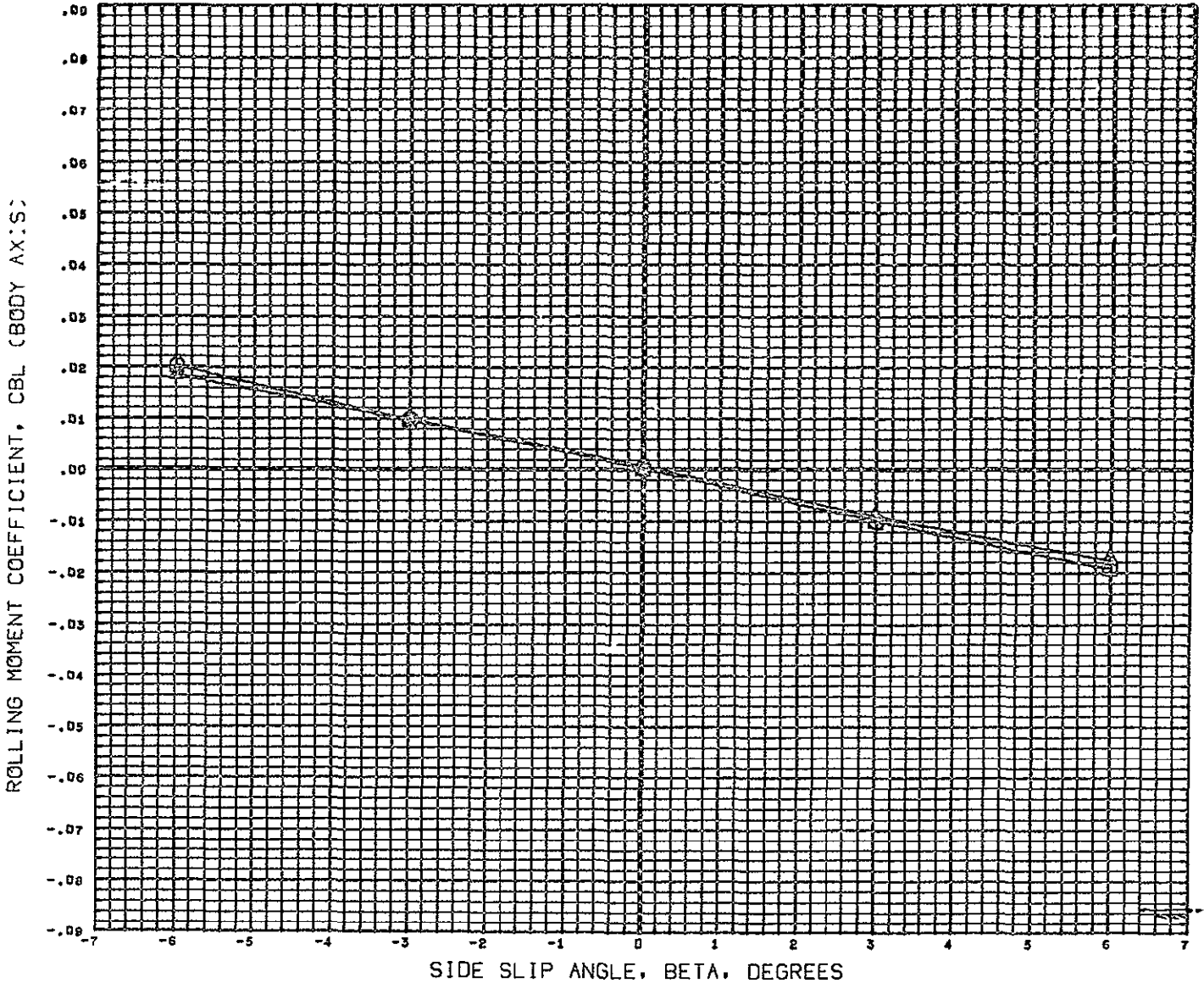
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(6N4006)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(6N4131)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XMRP 2.5950 FEET
						YMRP 0.0000 FEET
						ZMRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

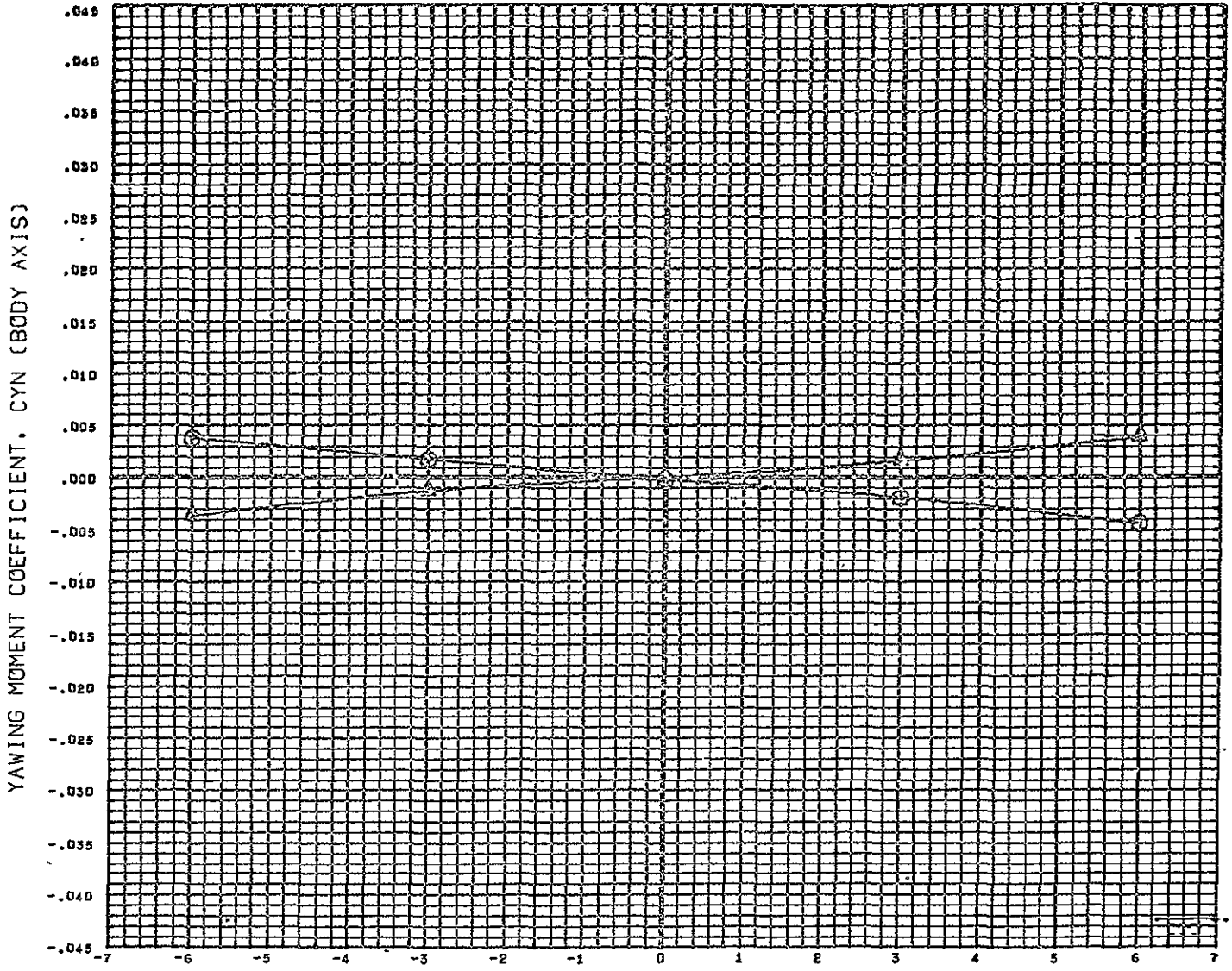
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHBR	CNDFOS	WNGPOS	INCLDW	REFERENCE INFORMATION	
(GN4007)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF	1.3550 SQ. FT.
(GN4132)	NSRDC-3310, MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF	3.4530 FEET
						BREF	3.4530 FEET
						XMRP	2.5950 FEET
						YMRP	0.0000 FEET
						ZMRP	0.0187 FEET
						SCALE	0 0150 SCALE

MACH .40

EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEGREES



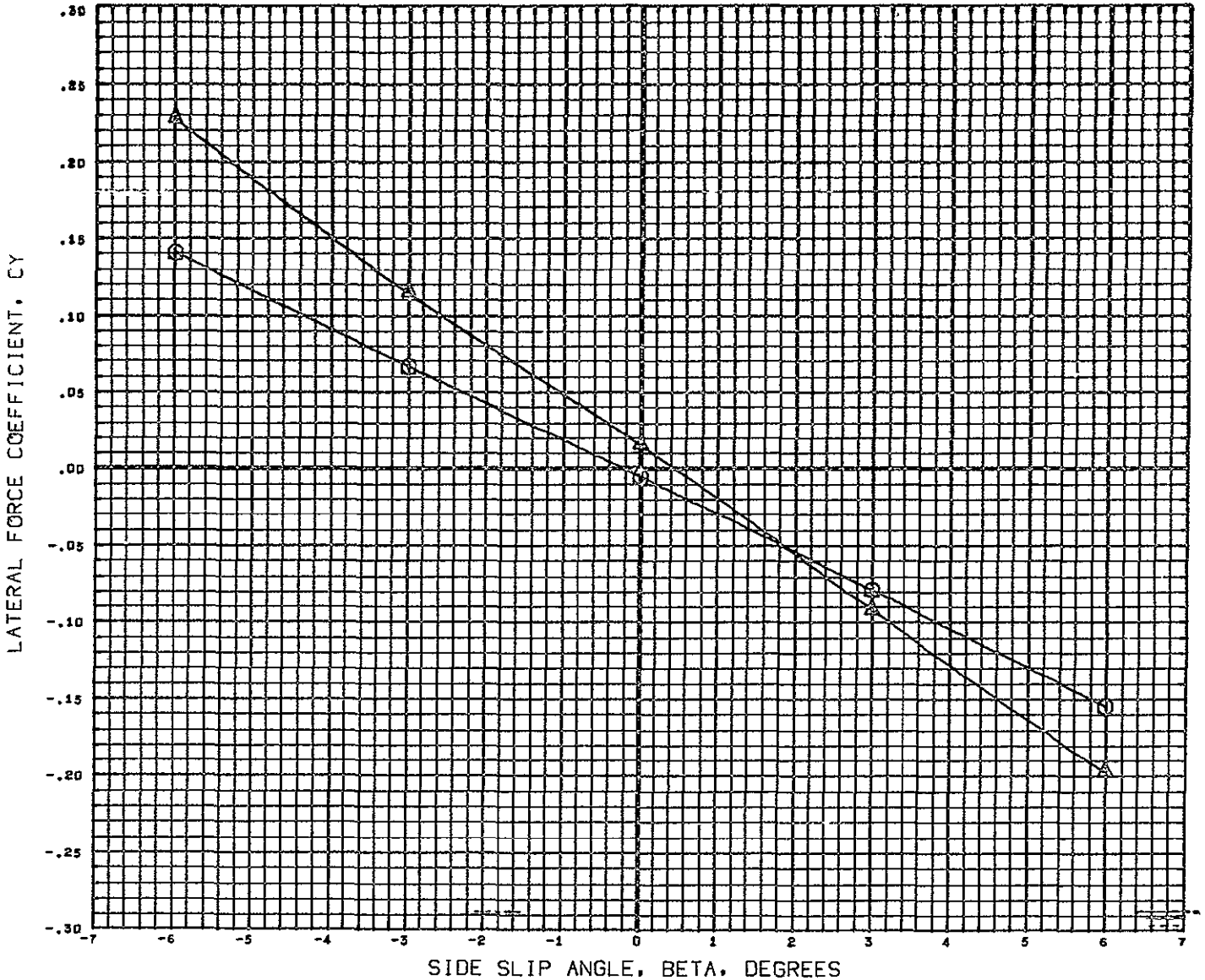
SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(GN4007)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(GN4132)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5850 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

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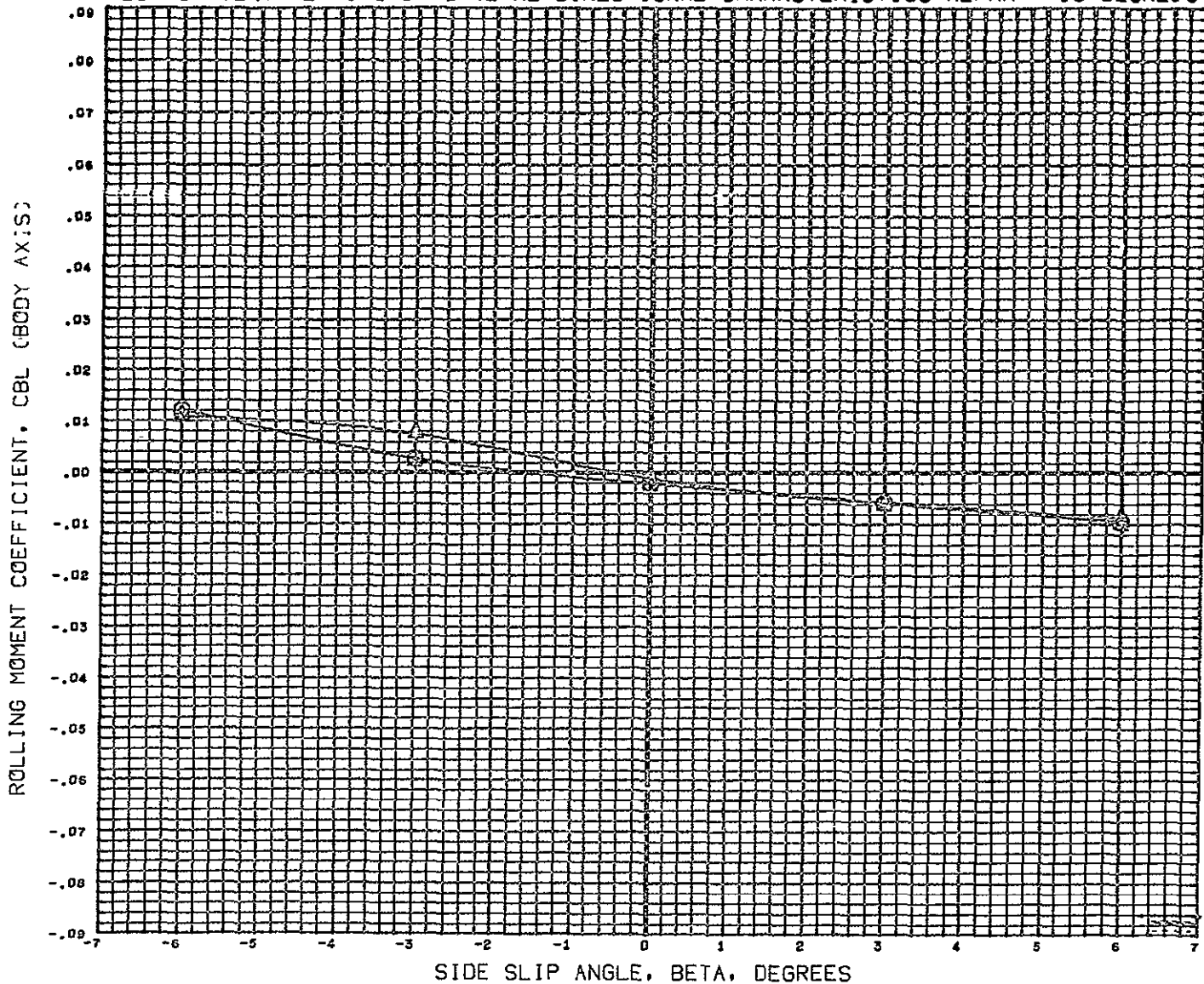
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 6 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGFOS	INCIDW	REFERENCE INFORMATION
(GN4007)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ FT.
(GN4132)	NSRDC-3310,MSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XHRP 2.5950 FEET
						YHRP 0.0000 FEET
						ZHRP 0.0107 FEET
						SCALE 0.0150 SCALE

MACH .40

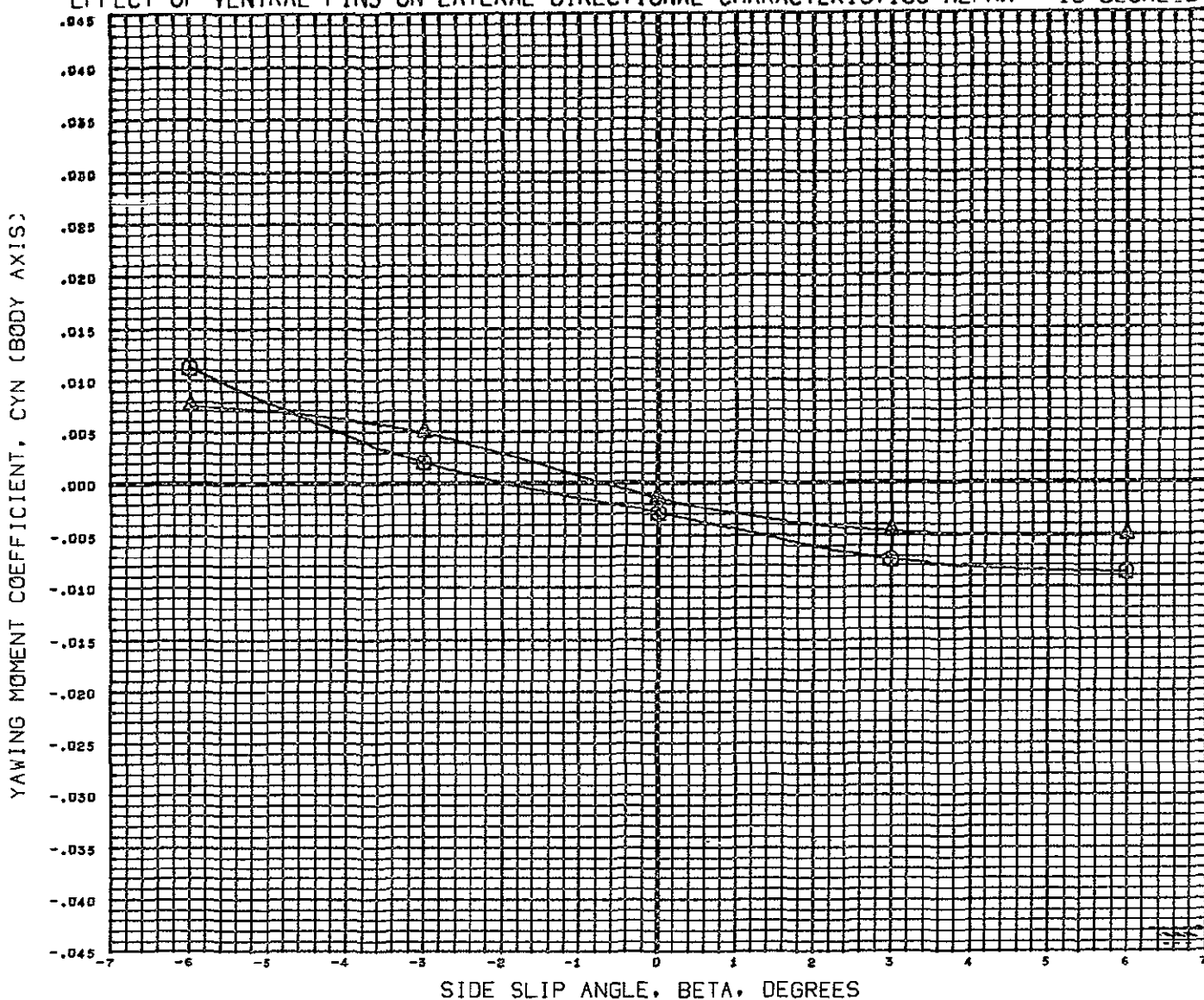
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 15 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDFOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4008)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ. FT.
(GN4133)	NSRDC-3310, NSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

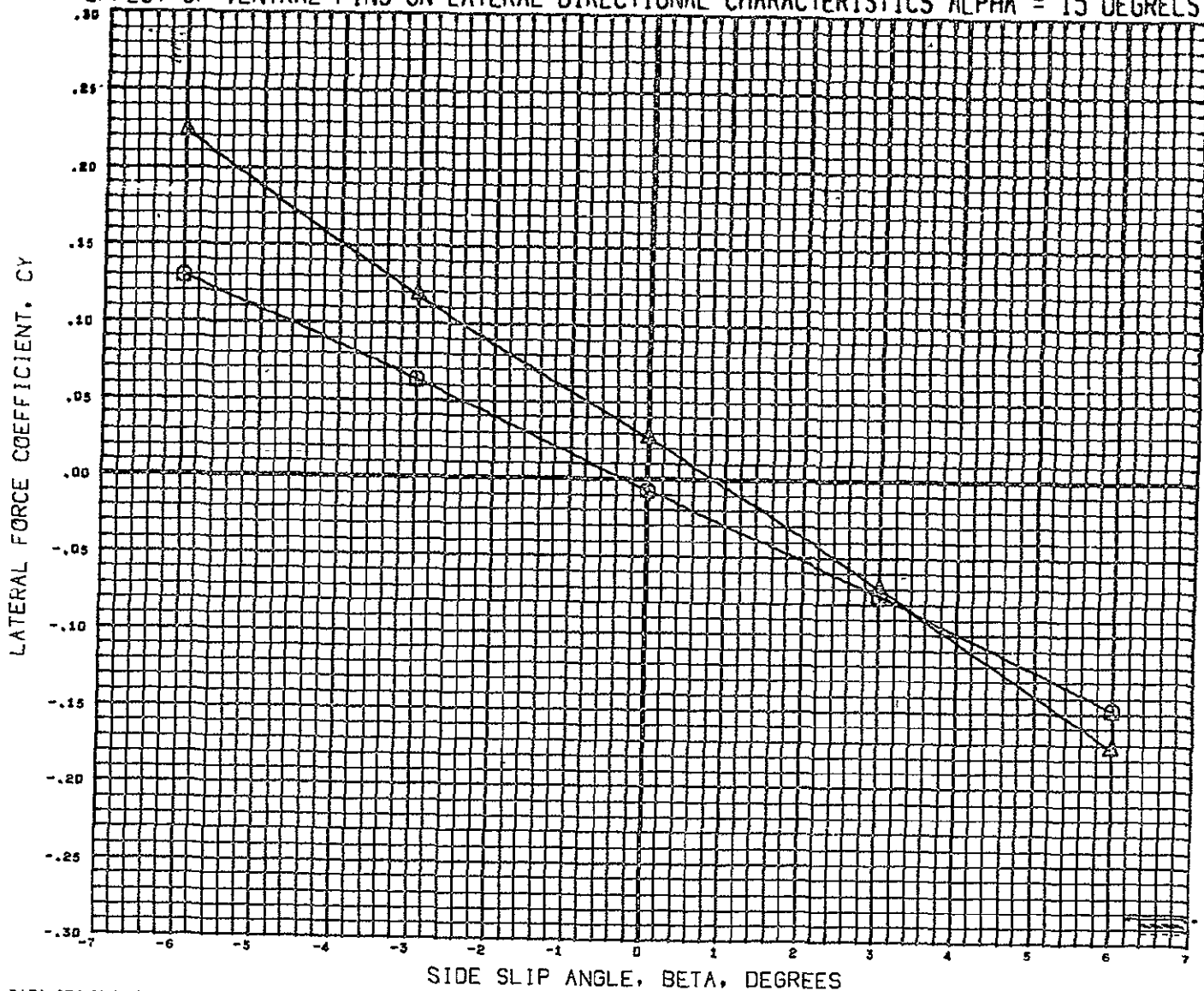
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 15 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDRL	CNDPOS	WNGPOS	INCLDW	REFERENCE INFORMATION
(GN4008)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2D1	-7.660	1.000	1.000	0.000	SREF 1.3550 SQ.FT.
(GN4133)	NSRDC-3310,MSFC/LHSC BOOSTER B1C2F1W1V2V5D1	-7.660	1.000	1.000	0.000	LREF 3.4530 FEET
						BREF 3.4530 FEET
						XNRP 2.5950 FEET
						YNRP 0.0000 FEET
						ZNRP 0.0187 FEET
						SCALE 0.0150 SCALE

MACH .40

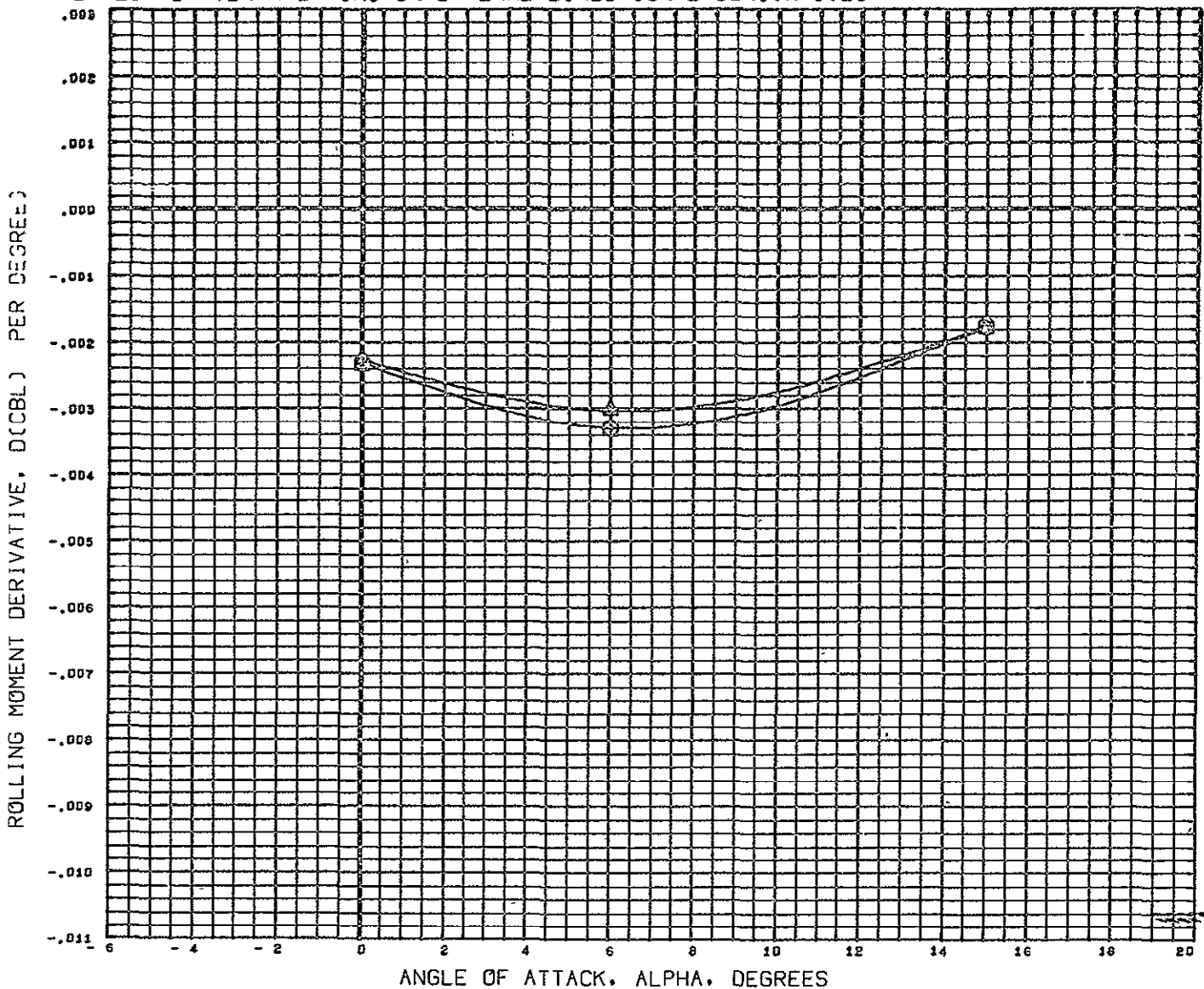
EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL CHARACTERISTICS ALPHA = 15 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DIHDL	CNDPOS	WNGPOS	INCIDW	REFERENCE INFORMATION
(GN4008)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2D1	-7.660	1,000	1,000	0,000	SREF 1,3550 SQ.FT.
(GN4133)	NSRDC-3310, HSFC/LMSC BOOSTER B1C2F1W1V2V5D1	-7.660	1,000	1,000	0,000	LREF 3,4530 FEET
						BREF 3,4530 FEET
						XMRP 2,5950 FEET
						YNRP 0,0000 FEET
						ZNRP 0,0187 FEET
						SCALE 0,0150 SCALE

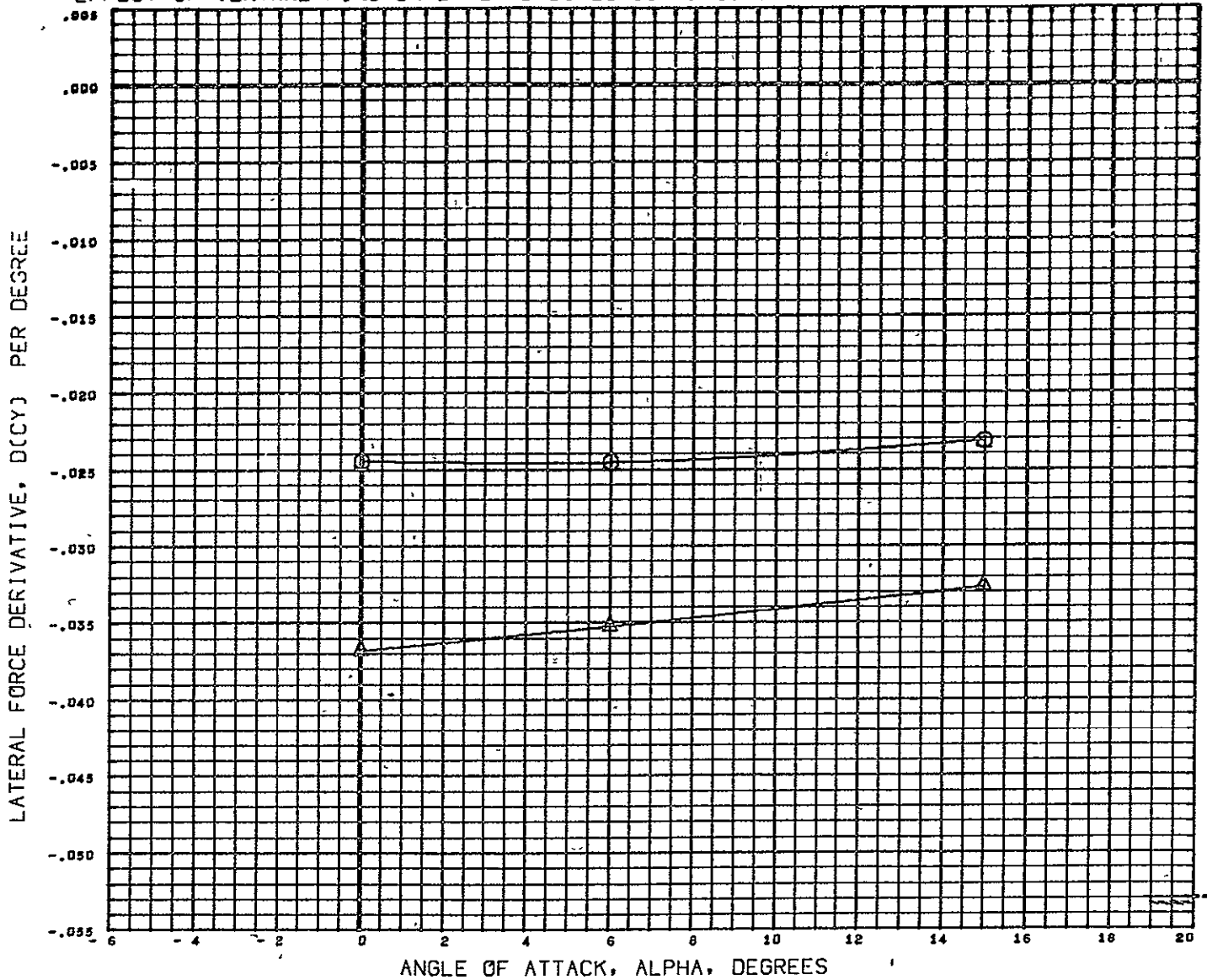
MACH .40

EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL DERIVATIVES



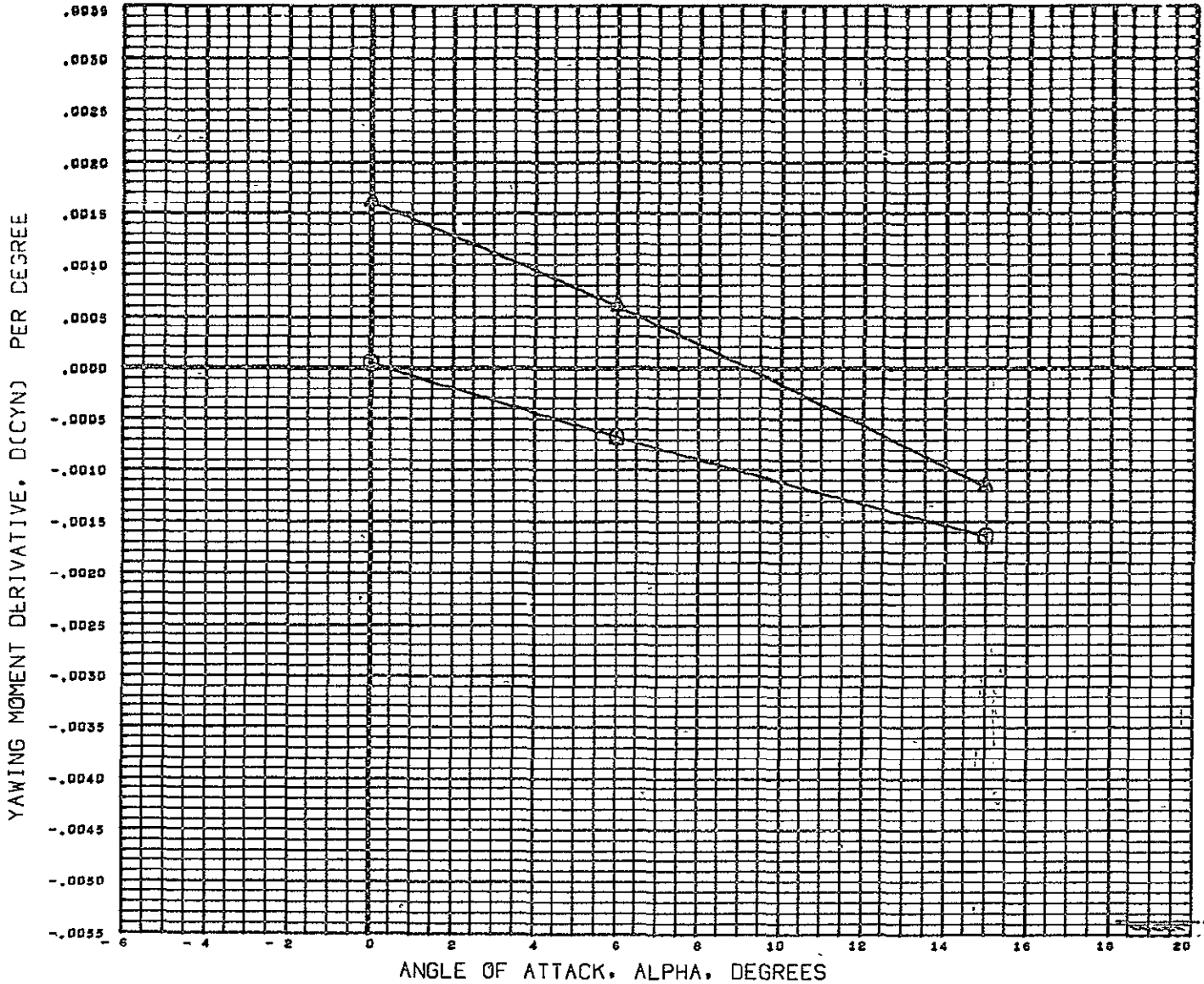
SYMBOL	VENFIN	PARAMETRIC VALUES				REFERENCE INFORMATION		
Δ	1.210	MACH	0.400	INCIDC	3.000	SREF	1 3550	60 FT.
	1.510	INCIDW	0 000	DIHDL	- 7.660	LREF	3.4530	FEET
		AILRON	0 000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XNRP	2.5950	FEET
		CNDPOS	1 000			YNRP	0.0000	FEET
		DATA HIST	CODE	MI		ZHRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	VENFIN	PARAMETRIC VALUES				REFERENCE INFORMATION		
Δ	1.210	MACH	0.400	INCIDC	3.000	SREF	1.3550	50.FT
	1.510	INCIDW	0.000	DINDRL	-7.660	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE

EFFECT OF VENTRAL FINS ON LATERAL DIRECTIONAL DERIVATIVES



SYMBOL	VENFIN	PARAMETRIC VALUES				REFERENCE INFORMATION		
∞	1.210	MACH	0.400	INCIDC	3.000	SREF	1.3550	50. FT.
	1.510	INCIDW	0.000	DIHRL	- 7.660	LREF	3.4530	FEET
		AILRON	0.000	CANARD	0.000	BREF	3.4530	FEET
		ELEVTR	0.000	WNGPOS	1.000	XMRP	2.5950	FEET
		CNDPOS	1.000			YMRP	0.0000	FEET
		DATA HIST. CODE	MI			ZMRP	0.0187	FEET
						SCALE	0.0150	SCALE