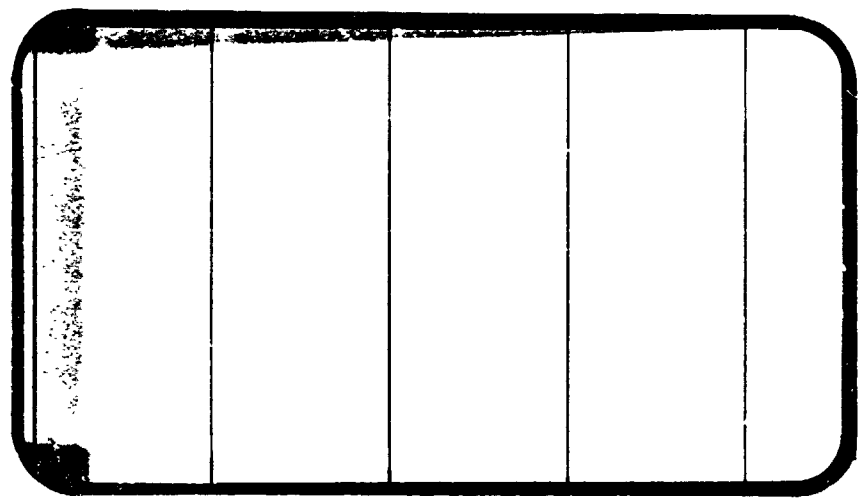


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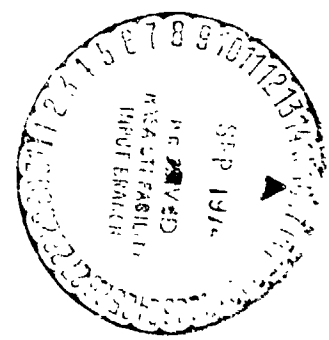
# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



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INVESTIGATION OF SPACE SHUTTLE ORBITER  
SUBSONIC STABILITY AND CONTROL CHARACTERISTICS  
IN THE NAAL LOW SPEED WIND TUNNEL (OA62B)

VOLUME I

by

Robert Mennell and Terrance Hughes  
Rockwell International Space Division

Prepared under NASA Contract Number NAS9-15247

by

Data Management Services  
Chrysler Corporation Space Division  
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for

Engineering Analysis Division  
Johnson Space Center  
National Aeronautics and Space Administration  
Houston, Texas

WIND TUNNEL TEST SPECIFICS

Test Number: NAAL 717  
NASA Series Number: OA62B  
Test Dates: 14 November through 6 December 1973  
Model Number: 43-0

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PROJECT ENGINEERS:

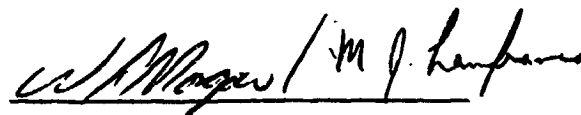
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INVESTIGATION OF SPACE SHUTTLE ORBITER  
SUBSONIC STABILITY AND CONTROL CHARACTERISTICS  
IN THE NAAL LOW SPEED WIND TUNNEL (OA62B)

By Robert Mennell and Terrance Hughes  
Rockwell International Space Division

ABSTRACT

Experimental aerodynamic investigations were conducted on a sting-mounted C.0405-scale representation (model 43-0) of the 140A/B Space Shuttle Orbiter in the Rockwell International 7.75- by 11-Foot Low Speed Wind Tunnel during the time period from 14 November 1973 to 6 December 1973. The NASA designation for this test period was OA62B.

The primary test objectives were to establish basic longitudinal stability characteristics in and out of ground effect as well as lateral-directional stability characteristics in free air.

Two dual podded nacelle configurations (ABPS) were also tested, one with three dual podded nacelles on the lower wing surface at fuselage station 950. This configuration was tested in and out of ground effect. The other ABPS configuration included a single dual nacelle on the lower centerline and another dual nacelle pylon mounted above each wing. The overwing nacelle/pylon was toed in 5 degrees toward the model centerline and the nacelle was rotated 7 degrees nose down. This configuration was tested in ground effect only.

Stability and control characteristics were investigated at nominal

elevon deflections of  $0^\circ$ ,  $5^\circ$ ,  $10^\circ$ ,  $15^\circ$ ,  $-5^\circ$ ,  $-10^\circ$ ,  $-15^\circ$ ,  $-20^\circ$ ,  $-30^\circ$  and  $-40^\circ$ ; rudder deflections of  $0^\circ$ ,  $-7.96^\circ$  and  $-16.22^\circ$ ; aileron deflections of  $0^\circ$ ,  $+5^\circ$ ,  $+10^\circ$ ,  $+15^\circ$  and  $-5^\circ$  used in conjunction with elevon deflections of  $0^\circ$ ,  $+5^\circ$ ,  $+10^\circ$ ,  $-5^\circ$ ,  $-10^\circ$  and  $-15^\circ$ ; rudder flare angles of  $0^\circ$ ,  $25^\circ$ ,  $40^\circ$ ,  $55^\circ$  and  $85^\circ$ ; and body flap deflections of  $0^\circ$ ,  $-11.7^\circ$ ,  $+16.3^\circ$  and  $+22.5^\circ$ .

The effects of various elevon and elevon/fuselage gaps on longitudinal stability and control were also investigated. Additional configurations tested included Reynolds number effect, boundary layer transition grit on and off, elliptical wing leading edge on the  $45^\circ$  swept portion of the wing, cargo bay door gaps and hinges, OMS pod gaps, vertical tail gaps and flow visualization.

Pressure bugs were used to determine pressures on the vertical tail at spanwise stations of  $\eta = 0.1228$ ,  $0.500$  and  $0.878$  and chordwise stations of  $x/c = 0.05$ ,  $0.15$ ,  $0.25$ ,  $0.45$ ,  $0.55$ ,  $0.65$ ,  $0.75$ , and  $0.90$ . These were installed at  $0^\circ$  and  $25^\circ$  rudder flare angles. An additional survey was made at  $0^\circ$  flare angle and OMS pods off. Rudder hingeline radii of 2.09 and 4.94 inches were investigated along with a 6.12-inch radius contour on the rudder. Additional inputs to lateral-directional stability which were tested included a straight leading edge on the vertical tail and recontouring of the vertical tail airfoil section to a biconvex section.

Aerodynamic force and moment data were measured in the stability axis system by an internally mounted, six-component strain gage balance (MK IX, 2.5-inch diameter). The model was sting-mounted with the center of rotation located at the trailing edge of the wing. The nominal angle of attack ( $\alpha$ )

range was from  $-4^{\circ}$  to  $+30^{\circ}$ . Yaw polars were recorded over a sideslip angle ( $\beta$ ) range of  $-10^{\circ}$  to  $+10^{\circ}$  at fixed angles of attack of  $0^{\circ}$ ,  $5^{\circ}$ ,  $10^{\circ}$ ,  $15^{\circ}$  and  $20^{\circ}$ .

This report is published in two volumes. Volume I contains Data Figures 4 through 71. Volume II contains Data Figures 72 through 128 and the Tabulated Source Data.

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Note: See next page for Plotted Coefficients Schedule.

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- (A) CL, CN, CAF, CAB, CDF, CLM, XCP/L, LF/DF versus ALPHA  
CL versus CLM  
CL versus CDF  
DCL, DCDF, DCLM, DCA, DCN versus DELVON
- (B) CL, CN, CAF, CAB, CDF, CLM, XCP/L, LF/DF versus ALPHA  
CL versus CLM  
CL versus CDF
- (C) DCL, DCDF, DCLM versus H/BW
- (D) CY, CYN, CBL versus BETA  
CYNBET, CBLBET, CYBETA versus ALPHA
- (E) CY, CYN, CBL versus ALPHA  
DCY, DCYN, DCBL, DCA, DCN versus AILRON
- (F) CL, CDF, CLM versus ALPHA  
DCL, DCDF, DCLM, DCA, DCN versus BDFLAP
- (G) CL, CDF, CLM versus ALPHA  
DCL, DCDF, DCLM, DCA, DCN versus SPDBRK  
CY, CYN, CBL versus ALPHA  
DCY, DCYN, DCBL versus SPDBRK
- (H) CL, CDF, CLM, CY, CYN, CBL versus ALPHA  
DCY, DCYN, DCBL, DCA, DCN versus RUDDER
- (I) CY, CYN, CBL versus BETA
- (J) DCL, DCDF, DCLM, DCA versus DELVON

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, $C_A - C_{A_b}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
$C_n$	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; $\frac{\text{side force}}{qS}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
$C_n$	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; $C_L/C_D$
$L_f/D_f$	LF/DF	forebody lift-to-drag ratio $C_{L_f}/C_{D_f}$

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
$\alpha$	ALPHA	angle of attack, degrees
$\beta$	BETA	angle of sideslip, degrees
$\psi$	PSI	angle of yaw, degrees
$\phi$	PHI	angle of roll, degrees
$\rho$		mass density; $kg/m^3$ , slugs/ft <sup>3</sup>

Reference & C.G. Definitions

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

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
$\infty$	free stream

NOMENCLATURE (Continued)  
Additions To Standard Nomenclature

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Description</u>
ABPS		air breathing propulsion system
$A_{BC}$		balance cavity area, ft <sup>2</sup>
$C_{A_{BC}}$		balance cavity axial-force coefficient
$C_{A_N}$		nacelle internal duct drag axial-force coefficient correction
$C_{A_T}$		model weight tare axial-force coefficient correction
$C_{m_N}$		nacelle internal duct drag pitching-moment coefficient correction
$C_{m_u}$		balance measured pitching-moment coefficient
Flare	SPDBRK	speed brake deflection angle, degrees
$h/b_w$	H/BW	distance between wing trailing edge and ground plane, fraction of wing span
$P_{BC}$		balance cavity pressure, psia
$\delta_a$	AILRON	aileron deflection angle, degrees
$\delta_e$	ELEVON	elevon deflection angle, degrees
$\delta_{e_L}$	ELEV-L	left elevon deflection angle, degrees
$\delta_{e_R}$	ELEV-R	right elevon deflection angle, degrees
$\delta_f$	BDFLAP	body flap deflection angle, degrees
$\delta_R$	RUDDER	rudder deflection angle, degrees



NOMENCLATURE (Concluded)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Description</u>
XCP/l	XCP/L	longitudinal center of pressure location; fraction of body length.
$\Delta C_A$	DCA	incremental axial force coefficient, algebraic difference of two runs.
$\Delta C_{D_F}$	DCDF	incremental forebody drag coefficient, algebraic difference of two runs
$\Delta C_L$	DCL	incremental lift coefficient, algebraic difference of two runs.
$\Delta C_m$	DCLM	incremental pitching moment coefficient, algebraic difference of two runs.
$\Delta C_N$	DCN	incremental normal force coefficient, algebraic difference of two runs.
$\Delta C_{\ell}$	DCBL	incremental rolling moment coefficient, algebraic difference of two runs.
$\Delta C_Y$	DCY	incremental side force coefficient, algebraic difference of two runs.
$\Delta C_n$	DCYN	incremental yawing moment coefficient, algebraic difference of two runs.
$C_{Y_\beta}$	CYBETA	derivative of side force coefficient with respect to beta (beta = $\pm 5^\circ$ ); per degree, body axis system.
$C_{n_\beta}$	CYNBET	derivative of yawing moment coefficient with respect to beta (beta = $\pm 5^\circ$ ); per degree, body axis system.
$C_{\ell_\beta}$	CBLBET	derivative of rolling moment coefficient with respect to beta (beta = $\pm 5^\circ$ ); per degree, body axis system.

## CONFIGURATIONS INVESTIGATED

The model used for this test period was an 0.0405-scale representation of the Rockwell International 140A/B Space Shuttle Orbiter. The basic model is of the blended wing-body design utilizing a double delta wing ( $75^\circ/45^\circ \Lambda_{L.E.}$ ), full span elevons (unswept hingeline), a centerline vertical tail with rudder and/or speed brake capability, a canopy, and an orbital maneuvering system (OMS). To test the orbiter in the ferry mission configuration, the OMS pods are removed and air breathing engines are located in various number/location combinations on the wing and fuselage.

During the air breathing propulsion system (ABPS) testing, the left hand engine pod was instrumented with an 8 tube static pressure and 17 tube total pressure rake located at each engine face station. This pressure instrumentation was used to determine engine pressure recovery and to check on the repeatability of nacelle inlet assembly.

For this test period the following nomenclature was used to designate the various model components:

<u>Component</u>	<u>Description</u>
B <sub>26</sub>	-140A/B fuselage
B <sub>52</sub>	B <sub>26</sub> with simulated cargo bay door gaps added
B <sub>53</sub>	B <sub>52</sub> with simulated cargo bay door hinges added
C <sub>9</sub>	-140A/B canopy
G <sub>15</sub>	Main and nose landing gear plus doors

M<sub>7</sub> -140A/B orbital maneuvering system (OMS)  
M<sub>50</sub> M<sub>7</sub> with simulated gap  
F<sub>8</sub> -140A/B Orbiter body flap  
W<sub>116</sub> -140A/B Double delta wing (75°/45°<sub>L.E.</sub>)  
W<sub>122</sub> W<sub>116</sub> with elliptical lower surface L.E. on 45° sweep portion of wing  
E<sub>26</sub> -140A/B Solid elevon used on wing W<sub>116</sub>  
E<sub>28</sub> Elevon with midspan and elevon/fuselage baseline "Grumman" gap  
E<sub>29-36</sub> Elevons with various combinations of midspan and elevon/fuselage gaps. See Model Dimensional Data  
J<sub>43</sub> Air Breathing Propulsion System (ABPS) consisting of three underwing pylon mounted dual podded nacelles located at Fuselage Station 950  
J<sub>62</sub> Air Breathing Propulsion System (ABPS) consisting of a single centerline lower wing surface dual nacelle (FS 950) and a pylon-mounted dual nacelle above each wing (FS 1050)  
V<sub>8</sub> -140A/B vertical tail  
V<sub>9</sub> V<sub>8</sub> with vertical tail/rudder thermal expansion gap open  
V<sub>12</sub> Vertical tail used with rudder hingeline modification R<sub>7</sub>  
V<sub>13</sub> Vertical tail used with rudder hingeline modification R<sub>8</sub>  
V<sub>14</sub> Vertical tail used with rudder hingeline modification R<sub>9</sub>  
V<sub>15</sub> Vertical tail used with rudder R<sub>10</sub> modification

V<sub>16</sub> Same as V<sub>8</sub> except L.E. of vertical tail is extended forward at the vertical/fuselage intersection

V<sub>17</sub> Same as V<sub>8</sub> except contour forward of the rudder hingeline is modified to a biconvex section

R<sub>5</sub> -140A/B rudder used on vertical tail V<sub>8</sub>

R<sub>7</sub> Same as R<sub>5</sub> except for 2.09 inch radius at rudder hingeline<sup>5</sup>

R<sub>8</sub> Same as R<sub>5</sub> except for 4.94 inch radius at rudder hingeline<sup>5</sup>

R<sub>9</sub> Same as R<sub>5</sub> except for 6.12 inch radius from rudder hingeline<sup>5</sup> to rudder TE

R<sub>10</sub> Same as R<sub>9</sub> except the 6.12 inch radius is on the entire vertical aft of the rudder hingeline

X<sub>9</sub> Transition grit composed of glass beads located aft of all swept surfaces and model nose

X<sub>10</sub> Same as X<sub>9</sub> except also added to ABPS nacelles

## TEST FACILITY DESCRIPTION

The North American Aerodynamics Laboratory (NAAL) 7.75- by 11-Foot Wind Tunnel is a continuous flow, closed circuit, single return type tunnel capable of speeds up to 200 miles per hour. The test section is vented to atmospheric pressure and is 7.75 x 11 feet wide by 12 feet in length. Power is supplied by a 1250 horsepower nacelle-mounted synchronous motor driving a 19 foot, seven blade, laminated birch propeller. The airspeed is controlled by varying the degree of coupling between the motor and propeller by means of a magnetic clutch. A damping screen and honeycomb section in the settling chamber upstream from the contraction cone (ratio 7.53 to 1) minimizes turbulence in the test section. The NAAL Wind Tunnel has been in operation since June 1943 and calibrations are available over a wide range of test conditions.

Tests may be conducted using a variety of mounting systems; e.g., a single strut, double strut, sting strut, reflection plane, cable suspension, and two dimensional wall. Aerodynamic data may be measured by a planar type external balance system or sting mounted internal balances. An Astro-data Automatic Data Acquisition System is used to collect, multiplex, digitize, and record 50 channels of force and/or pressure data on magnetic tape. This data is then rapidly reduced and plotted using automatic data processing equipment and an automatic digital plotter.

## DATA REDUCTION

The aerodynamic force and moment data presented were measured by the Task Corporation 2.5-inch MK IX strain gage balance. The data have been corrected for model base and balance chamber pressure effects, nacelle internal drag, model blockage influence on tunnel dynamic pressure, wall interference effects, sting and balance deflections, and model weight tare.

The corrections made to axial force were accomplished in the following manner:

$$C_{A_F} = C_A - C_{A_{BC}} - C_{A_B} - C_{A_N} - C_{A_T}$$

where

$$C_{A_{BC}} = - \left( \frac{P_{SC} - P_o}{q} \right) \left( \frac{A_{BC}}{S_w} \right)$$

$$C_{A_B} = - \left( \frac{P_B - P_o}{q} \right) \left( \frac{A_B}{S_w} \right), \quad P_B = 1/5 (P_{B1} + \dots + P_{B5})$$

$C_{A_N}$  = nacelle internal drag correction

$C_{A_T}$  = model axial force weight tare

CONFIG.

	$C_{A_N}$
$J_{43}$	.002468
$J_{62}$	.002449

The correction made to pitching moment to account for the nacelle internal drag was as follows:

$$C_m = C_{m_u} + C_{m_N}$$

where:

$C_{m_u}$  = uncorrected pitching moment

$C_{m_N}$  = nacelle internal drag correction

CONFIG.	$C_{m_N}$
J <sub>43</sub>	0.00069
J <sub>62</sub>	0.00012

The following reference dimensions were used for reducing all aerodynamic data to coefficient form:

<u>Symbol</u>	<u>Definition</u>	<u>Value</u>
$A_B$	Area of base (OMS on), ft <sup>2</sup>	0.594
$A_B$	Area of base (OMS off), ft <sup>2</sup>	0.440
$A_{BC}$	Area of balance cavity, ft <sup>2</sup>	0.0985
$S_w$	Area of wing, ft <sup>2</sup>	4.412
XMRP	Center of gravity, fus. sta., in	43.5974
ZMRP	Center of gravity, waterplane, in	15.1875
$L_B$	Length of orbiter body, in	52.257
$\bar{c}_w$ (LREF)	Wing MAC, in	19.230
$b_w$ (BREF)	Wing span, in	37.936





TABLE II.

TEST: CAGEB 111L111		DATA SET/RUN NUMBER COLLATION SUMMARY													DATE: 27 1 75			
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS			
		$\alpha$	$\beta$	$\delta_a$	$\delta_b$	$\delta_c$	$\delta_L$	$\delta_{c.f.}$	$\delta_c$	FLARE								
P0ZCC1	B2M G65 M7 Fg W16 E2g N6 R3g	A	0	0										0	25	1	0.20	
C02																	1	
C03																	2	
C04																	3	
C05																	4	
C06																	5	
C07																	6	
C08																	7	
C09																	8	
C10																	9	
C11																	10	
C12																	11	
C13																	12	
C14																	13	
C15																	14	
C16																	15	
C17																	16	
C18																	17	
																	18	

TEST RUN NUMBERS

7 13 19 25 31 37 43 49 55 61 67 73 76

C11 CDE I G M CN CAF SYN GBL XCP/L CAB MACH

$\alpha$  OR  $\beta$  SCHEDULES

$\alpha$  (A) - 4 (1) 3 1 2 4 30 30

COEFFICIENTS

TABLE II. - Continued.

TEST: CAG6E NANA 111		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE: 27 NOV 73		
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES								NO. OF RUNS	MACH NUMBERS			
		$\alpha$	$\beta$	$\delta\alpha$	$\delta\beta$	$\delta\gamma$	$\delta\delta$	$\delta\epsilon$	$\delta\zeta$	$\delta\eta$	$\delta\theta$		$\delta\iota$	$\delta\kappa$		
R2019	B2L6G1S M7 F9 M11 E28 V6 R5 X9	A	O											1	19	20
O20		A													21	22
O21		C													23	24
O22	E26														25	26
O23	E28														27	28
O24	E26														29	30
O25	E28														31	32
O26	E26														33	34
O27	E28														35	36
O28	E26															
O29	E28															
O30																
O31																
O32																
O33																
O34																
O35																
O36																

7 13 19 25 31 37 43 49 55 61 67 73 79

CHL CDF CEM CN CAC CYN CBL CBY CCB CCB CAB MACH 10. AR 11. 10. AR 121

$\alpha(A) = -4^\circ, -2^\circ, -1^\circ, 0^\circ, 1^\circ, 2^\circ \rightarrow 30^\circ, \Delta\alpha = 2^\circ$

$\alpha(C) = 3^\circ, 4^\circ \rightarrow 30^\circ, \Delta\alpha = 2^\circ$

$\alpha(D) = 11, 12^\circ \rightarrow 30^\circ, \Delta\alpha = 2^\circ$

SCHEDULES

TABLE II. - Continued.

TEST: OAGCE NAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE: 27 NOV 73		
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES									NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta_a$	$\delta_b$	$\delta_{ER}$	$\delta_{EL}$	$\delta_{ER}$	$\delta_{EL}$	$\delta_{ER}$	$\delta_{EL}$	$\delta_{ER}$		$\delta_{EL}$	TEST RUN NUMBERS	
RZC37	B2498MFM16E24R34g	D	O			11.7						0	25	1	37	
O38															38	
O39															39	
O40															40	
O41															41	
O42															42	
O43															43	
O44															44	
O45						.035									45	
O46	E26														46	
O49	E28														49	
O50															50	
O51															51	
O52															52	
O53	E26														53	
O54	E26														54	
O55	E28														55	
O56	E26														56	
7																
13																
19																
25																
31																
37																
43																
49																
55																
61																
67																
75																
76																
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91																
92																
93																
94																
95																
96																
97																
98																
99																
100																

COEFFICIENTS  
 $\alpha(D) = 11.10 \rightarrow 30, \Delta \alpha = 2.0$   
 $\alpha(E) = 16 \rightarrow 30, \Delta \alpha = 2.0$

TABLE II. - Continued.

TEST: CAG64E		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE: 27 NOV 75	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES							NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta\alpha$	$\delta\epsilon_L$	$\delta\epsilon_R$	$\delta\epsilon$	FLAGE						
RZC57	B <sub>2</sub> C <sub>2</sub> G <sub>2</sub> M <sub>1</sub> F <sub>2</sub> W <sub>1</sub> L <sub>2</sub> G <sub>2</sub> A <sub>2</sub> R <sub>2</sub> S <sub>2</sub> X <sub>2</sub>	E	O	0	-10	-10	0	25	1	57				
058	E <sub>2</sub> B <sub>2</sub>				-15	-15				58				
059					-20	-20				59				
060					-30	-30				60				
061					-40	-40				61				
062	B <sub>2</sub> C <sub>2</sub> G <sub>2</sub> M <sub>1</sub> F <sub>2</sub> W <sub>1</sub> L <sub>2</sub> G <sub>2</sub> A <sub>2</sub> R <sub>2</sub> S <sub>2</sub> X <sub>2</sub>				0	0				62				
063					0	0		0		63				
064					+15	+15				64				
065					-10	-10				65				
066					-20	-20				66				
067		C			-20	-20				67				
068					-10	-10				68				
069					+15	+15				69				
070					0	0				70				
071										71				
072		A								72				
073										73				
074					+15	+15				74				

$\alpha$  OR  $\beta$  SCHEDULES  
 $\alpha(A) = -4, -2, -1, 0, 1, 2 \rightarrow 30, \Delta\alpha = 2$   
 $\alpha(C) = 3, 4 \rightarrow 30, \Delta\alpha = 2$   
 $\beta(E) = 16 \rightarrow 28, \Delta\beta = 2$   
 $\beta(A) = -10 \rightarrow +10, \Delta\beta = 2$

TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73					
DATA SET IDENTIFIER	CONFIGURATION	PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS				
		SCHD. α	β	γ	δ	ε	ζ	η	θ	ι	κ		λ	μ	ν		
075	BzG6MFBjgMwEzVgS Xjg	A	0	.285	-11.7	0	0	0	0	0	0	0	0	0	1	75	76
076	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	77	78
077	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	79	80
078	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	81	82
079	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	83	84
080	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	85	86
081	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	87	88
082	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	89	90
083	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	91	92
084	BzG6MFBjgMwEzVgS Xjg	A	0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
085	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
086	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
087	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
088	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
089	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
090	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
091	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
092	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

TEST RUN NUMBERS

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

CH... GDF... GJM... GN... GAF... GYN... GBL... GY... P/H... CAB... MACH... ALPHA... BETA... GAMMA... DELTA... Epsilon... ZETA... Eta... Theta... Iota... Kappa... Lambda... Mu... Nu... Xi... Omicron... Pi... Rho... Sigma... Tau... Upsilon... Phi... Chi... Psi... Omega

α OR β SCHEDULES

α(A) = -4, 0, 1, 2 → SC, AD 2

β(A) = -10 → +10, AD = 2

TABLE II. - Continued.

TEST: OAGCB NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta F$	$\delta C_a$	$\delta C_L$	$\delta C_E$	$\delta E$	FLARE				
093	B2C5F8M7F8W10E2B1V8S% 10	10	A	-11.7	0	0	C	0	25	1	93		
094		15									94		
095		20									95		
096		A	O			+5	+5				96		
097						+10	+10				97		
098						+15	+15				98		
099						-5	-5				99		
100						-10	-10				100		
101						-15	-15				101		
102						-20	-20				102		
103						-30	-30				103		
104						-40	-40				104		
105	B2C9M7F8W10E2B1V8S% 10					-40	-40				105		
106						-30	-30				106		
107						-20	-20				107		
108						-15	-15				108		
109						-10	-10				109		
110						-10	-10				110		

1 7 13 19 25 31 37 43 49 55 61 67 73 76  
 CDF CEM CN CAF CYN CBL CY XCP Y CAB MACH  
 COEFFICIENTS  
 $\alpha(A) = -4$   
 $\beta(A) = -10$

TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta F$	$\delta G$	$\delta L$	$\delta R$	$\delta E$	FLAGE				
RDZ 111	B <sub>26</sub> G <sub>1</sub> M <sub>1</sub> F <sub>8</sub> W <sub>16</sub> E <sub>28</sub> B <sub>5</sub> X <sub>2</sub>	A	O	-11.7	0	-5	-5	C	25	1	.20		
112	E <sub>26</sub>					+15	+15				111		
113	E <sub>26</sub>					+15	+15				112		
114	E <sub>28</sub>					+10	+10				113		
115	E <sub>26</sub>					+5	+5				114		
116	E <sub>26</sub>					+5	+5				115		
117	E <sub>28</sub>					0	0				116		
118		-5	A								117		
119		0									118		
120		5									119		
121		10									120		
122		15									121		
123		20									122		
124	E <sub>26</sub>	A	O								123		
125		O	A								124		
126		5									125		
127		10									126		
128		15									127		
											128		

$\alpha$  OR  $\beta$  SCHEDULES:  $\alpha(A) = -4, -2, 1, 0, 1, 2 \rightarrow 30$ ,  $\alpha B = 2$   
 $\beta(A) = -10 \rightarrow +10$ ,  $\beta B = 2$   
 CH... CDE... GFM... GNN... GAF... GNN... GBL... GY... IXSP/L... CAB... MAX... ALPHA... BETA...  
 COEFFICIENTS:  $\delta F$ ,  $\delta G$ ,  $\delta L$ ,  $\delta R$ ,  $\delta E$   
 TEST RUN NUMBERS: 7, 19, 25, 31, 37, 43, 49, 55, 61, 67, 75, 71

TABLE II. - Continued.

TEST: CA62B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta F$	$\delta s$	$\delta c_L$	$\delta c_R$	$\delta R$	FLARE				
RDZ 129	B2G M7B M15E2B B C5X9	20	A	-11.7	0	C	C	0	25	1	129		
130	E28	A	0			0	-30				130		
131						+5	-25				131		
132						+5	-5				132		
133						+10	-10				133		
134						+15	-15				134		
135						0	0				135		
136				16.3							136		
137				22.5							137		
138				-11.7					40		138		
139		0	A								139		
140		5									140		
141		10									141		
142		15									142		
143		20									143		
144		A	0						85		144		
145		C	A								145		
146		5	A								146		

7 19 19 25 31 37 43 49 55 61 67 75 76  
 CH... CDF... FLM... CN... CAL... CYN... CBL... XSP/L... CAB... MACH... ALPHA...  
 COEFFICIENTS  
 $\alpha(A) = -4, -5, 1, 0, 1, 2 \rightarrow 40, \Delta \alpha = 2$   
 $\beta(A) = -10 \rightarrow +10, \Delta \beta = 2$   
 SCHEDULES  
 IC VAR (1) IC AH (2) IC



TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE: 27 NOV 75					
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS		TEST RUN NUMBERS	
		$\alpha$	$\beta$	$\delta F$	$\delta a$	$\delta e_L$	$\delta e_R$	Sr	FRAP	.26	.23	.20	.16					
RDZ 147	B <sub>2</sub> C <sub>4</sub> M <sub>7</sub> F <sub>3</sub> W <sub>1</sub> E <sub>28</sub> V <sub>8</sub> R <sub>5</sub> X <sub>0</sub>	10	A	-11.7	0	0	0	0	0	0	0	0	0	0	1			
148		15																
149		20																
150		A	O													150		
151																151		
152																		152
153																		153
154																		154
155																		155
156																		156
157																		157
158																		158
159																		159
160																		160
161																		161
162																		162
163																		163
164																		164

$\alpha$  OR  $\beta$  SCHEDULES  $X(A) = -4, -2, -1, 0, 1, 2 \rightarrow 30, A0 = 2$   
 $A(A) = -10 \rightarrow +10, AB = 2$

TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE: 27 NOV 73		
DATA SET IDENTIFIER	CONFIGURATION	PARAMETERS/VALUES												NO. OF RUNS	MACH NUMBERS	
		SCMD. α	β	δF	δS	δL	δR	δZ	FLARE	δZ	FLARE	δZ	FLARE		NO. OF RUNS	MACH NUMBERS
RDZ165	B. CMfg M <sub>1</sub> E <sub>2</sub> V <sub>8</sub> R <sub>2</sub> X <sub>9</sub>	0	A	-11.7	0	0	0	0	0	0	0	0	0	1	165	
166		5													166	
167		10													167	
168		15													168	
169		20													169	
170		A	0										-16.22		170	
171		0	A												171	
172		5													172	
173		10													173	
174		15													174	
175		20													175	
176		A	0										-7.96	40	176	
177		0	A												177	
178		5													178	
179		10													179	
180		15													180	
181		20													181	
182		A	0										-16.22		182	
1	7	13	19	25	31	37	43	49	55	61	67	73	79			
CH		CDF	GLM	GN	CAF	GIN	CPL	GY	IXP/L	CAR	MACH	ALPHA	BETA			
α OR β		COEFFICIENTS														
SCHEDULES		A(A) = -4.2 - 1.0 1.2 → 30 Ad = 2														
		B(A) = -10 → +10 AB = 2														

TABLE II. - Continued.

TEST: OAG25 NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73				
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS	
		$\alpha$	$\beta$	$\delta F$	$\delta a$	$\delta e_L$	$\delta e_R$	$\delta C$	FLARE	$\delta C$	FLARE	$\delta C$	FLARE		NO.	MACH
RDE183	B <sub>2</sub> G <sub>1</sub> M <sub>7</sub> F <sub>8</sub> W <sub>11</sub> E <sub>20</sub> V <sub>8</sub> P <sub>5</sub> X <sub>5</sub>	0	A	-11.7	0	0	0	-16.22	40				1	183		
184		5												184		
185		10												185		
186		15												186		
187		20												187		
188		A	O					-7.96	25					188		
189		O	A											189		
190		5												190		
191		10												191		
192		15												192		
193		20												193		
194		A	O					-16.22						194		
195		O	A											195		
196		5												196		
197		10												197		
198		15												198		
199		20												199		
200	B <sub>2</sub> G <sub>1</sub> M <sub>7</sub> F <sub>8</sub> W <sub>11</sub> E <sub>20</sub> V <sub>8</sub> P <sub>5</sub>	A	O					0	25					200		

7 13 19 25 31 37 43 49 51 57 67 75 76

CH...CPE...CFM...CN...CAF...CYN...CBL...CY...XEP/L...CAE...MACH...ALPHA

COEFFICIENTS

$\alpha(A) = -4, -2, -1, C, 1, 2 \rightarrow 30, \Delta d = 2$

$\beta(A) = -10 \rightarrow +10, \Delta b = 2$

SCHEDULES

10, APR 11 10, APR 12 10, APR 13



TABLE II. - Continued.

TEST: CA62B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 27 NOV 73				
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		TEST RUN NUMBERS			
		$\alpha$	$\beta$	$\delta F$	$\delta D$	$\delta L$	$\delta R$	$\delta L$	$\delta R$		$\delta R$	FLAGE				
RDZ 219	B26G9F8W116E28X	20	A	-11.7	C	0	0					1			.20	
220	B26G9M7F8W116E28X	A	C												219	
221		C	A												220	
222		S													221	
223		10													222	
226		15													223	
225		20													226	
227	B26G9M7F8W116E28X	A	O												225	
228		A	O												227	
229		O	A												228	
230		S													229	
231		10													230	
232		15													231	
233		20													232	
240		A	O												233	
241															240	
242	E29														241	
244															242	
															244	

$\alpha$  OR  $\beta$  SCHEDULES  
 $\alpha(A) = -4, -2, -1, 0, 1, 2 \rightarrow 30$ , COEFFICIENTS  
 $\beta(A) = -10 \rightarrow +10$ ,  $\Delta A = 2$

TABLE II. - Continued.

TEST: CAC2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY														DATE: 10 DEC 73		
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES											NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta F$	$\delta a$	$\delta L$	$\delta R$	FLAGE	$\delta R$	$\delta R$	$\delta R$	$\delta R$	$\delta R$	$\delta R$		$\delta R$	$\delta R$	$\delta R$
RDZ245	B2GAM7F8M16E29VR5X9	A	O	-11.7	O	+15	+15	O	C	25	1							245
246						O	O											246
248	E30					C	C											248
249						+5	+5											249
250						-10	-10											250
251	E31					-10	-10											251
252						+5	+5											252
253						+15	+15											253
254						O	O											254
256	E32																	256
256	E33																	256
257	E34																	257
258																		258
259						+5	+5											259
260						-10	-10											260
261	E35					+15	+15											261
262	E36					O	O											262
263	B2GAM7F8M16E29VR5X9																	263

1 7 13 19 25 31 37 43 49 55 61 67 75 76  
 CH...CPE...ISM...SN...CAF...CYN...GBL...CY...XSP/L...SAB...MAC...ALPHA  
 SCHEDULES  $\alpha(A) = -4, -2, -1, 0, 1, 2 \rightarrow 30$  COEFFICIENTS  $\Delta A = 2$   
 $\beta(A) = -10 \rightarrow +10$  AB = 2  
 (0, 0, 0, 1) (0, 0, 0, 1) (0, 0, 0, 1)

TABLE II. - Continued.

TEST: OAG28 NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 10 DEC 73	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta F$	$\delta \alpha$	$\delta \beta$	$\delta \gamma$	$\delta \epsilon$	$\delta \zeta$		$\delta \eta$		
264	B22G9M7F8W116E28V6R5X9	0	A	-11.7	0	0	0	0	0	0	1	264	281
265		5										265	
266		10										266	
267	B22G9M7F8W116E28V6R5X9	A	O									267	
268		0	A									268	
269		5										269	
270		10										270	
271		15										271	
272		20										272	
273	B22G9M7F8W116E28V6R5X9	A	O									273	
274		0	A									274	
275		5										275	
276		10										276	
277		15										277	
278		20										278	
279	B22G9M7F8W116E28V6R5X9	A	O									279	
280		0	A									280	
281		5	A									281	

1 7 13 19 25 31 37 43 49 55 61 67 75 76  
 CH...CDF...CLM...CN...CAF...GYN...CBL...XCP...ICAB...MACH...ALPHA...BETA...  
 COEFFICIENTS  
 $\alpha(A) = -4, -2, -1, 0, 1, 2 \rightarrow 20, \Delta \alpha = 2^\circ$   
 $\beta(A) = -10 \rightarrow +10, \Delta \beta = 2^\circ$   
 SCHEDULES







TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 10 DEC 73		
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS			
		$\alpha$	$\beta$	$\delta E$	$\delta L$	$\delta R$	$\delta Z$	$\delta R$	$\delta R$		FLARE			
318	B2G7F8W12E28V8R5X9	15	A	-11.7	0	0	0	0	0	0	25	1	.20	.26
319		20	A										318	
321		A	O										319	
322													321	
323	B2G7F8W12E28V8R5X9												322	
324		O	A										323	
325		5											324	
326		10											325	
327		15											326	
328		20											327	
329		A	O										328	
330		A	O								40		329	
331		C	A										330	
332		5											331	
333		10											332	
334		15											333	
335		20											334	
336		A	O								55		335	

TEST RUN NUMBERS

7 13 19 25 31 37 43 49 55 61 67 73 79

CH...SDF...GLM...CN...CAF...CYN...CBL...XCP/A...CAB...MACH...BETA...

COEFFICIENTS  
 $\alpha(A) = -4, -2, -1, 0, 1, 2 \rightarrow 30, \Delta L = 2^\circ$   
 $\beta(A) = -10 \rightarrow +10, \Delta B = 2^\circ$

SCHEDULES

IC (AR 11) IC (AR 12)



TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE: 10 DEC 73		
DATA SET IDENTIFIER	CONFIGURATION	PARAMETERS/VALUES												NO. RUNS	MACH NUMBERS	
		SCHD. α	SCHD. β	δF	δL	δR	δC	δE	δR	δC	δE	δR	δC		NO. RUNS	MACH NUMBERS
RDZ 356	B20M7F8M1L5V6R5X	0	A	11.7	0	0	0	0	0	0	0	0	0	1	0.20	0.26
357		5														0.40
358		10														0.57
359		15														0.58
360		20														0.59
361		A	0													0.60
362		0	A													0.61
363		5														0.62
364		10														0.63
365		15														0.64
366		20														0.65
384	V12R7X9	A	0													0.66
385		0	A													0.84
386		5														0.85
387		10														0.86
388		15														0.87
389		20														0.88
391	V13R8X9	A	0													0.89
391																0.91

CH...GDF...ICM...CN...CAF...CIN...CBL...XCP/F...GAB...MACH...  
 α OR β SCHEDULES α(A) = -4, -2, -1, 0, 1, 2, → 30, Ad = 2°  
 β(A) = -10 → +10, Aβ = 2°  
 COEFFICIENTS  
 7 13 19 25 31 37 43 49 55 61 67 73 76  
 10VAR (1) 10VAR (2) 10VAR (3)

TABLE II. - Continued.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 10 DEC 73	
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES						NO. OF RUNS	MACH NUMBERS		
		$\alpha$	$\beta$	$\delta_1$	$\delta_2$	$\delta_3$	OR	FLARE					
392	B2C6M7F1M1K2E28M3R2A19	0	A	11.7	0	0	0	0	0	0	1		392
393		5											393
394		10											394
395		15											395
396		20											396
403	V14R19	A	0										403
404		0	A										404
405		5											405
406		10											406
407		15											407
408		20											408
409	V15R019	A	0										409
410		0	A										410
411		5											411
412		10											412
413		15											413
414		20											414
429	V16R519	A	0										429

TEST RUN NUMBERS

7 13 19 25 31 37 43 49 55 61 67 75.71  
 CH... GDE... JCLM... CN... CAF... CN... CBL... CY... XCP/A... CAB... MACH...  
 COEFFICIENTS  
 $\alpha(A) = -4, -2, -1, 0, 1, 2, \dots, 30, \Delta\alpha = 2^\circ$   
 $\beta(A) = -10, \dots, +10, \Delta\beta = 2^\circ$   
 SCHEDULES

TABLE II. - Concluded.

TEST: OAG2B NAAL 717		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 10 DEC 73					
DATA SET IDENTIFIER	CONFIGURATION	PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS				
		SCHD.	$\delta F$	$\delta a$	$\delta L$	$\delta RR$	$\delta e$	FLAGE	TEST RUN NUMBERS								
		$\alpha$	$\beta$														
430	B2G9M/F8W16E28V4R5X9	0	A			C	0	0	0	0	0	0	1				
431		5															431
432		10															432
433		15															433
434		20															434
436	V17R5X9	A	O														436
437		0	A														437
438		5															438
439		10															439
440		15															440
441		20															441
443	B2G9 F8X9	A	O														443
444		0	A														444
445		5															445
446		10															446
447		15															447
448		20															448

1 7 13 19 25 31 37 43 49 55 61 67 73 79  
 C... GDE... ICM... CN... CAF... CYN... CBL... CY... XCP... I... CAB... MACH... ALPHA...  
 COEFFICIENTS  
 $\alpha(A) = -4, -2, -1, 0, 1, 2, \dots, 30, \Delta \alpha = 2^\circ$   
 $\beta(A) = -10, \dots, +10, \Delta \beta = 2^\circ$   
 SCHEDULES  
 (ICVAR (1) (ICVAR (2) (ICVAR (3) (ICVAR (4)

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B<sub>26</sub>

GENERAL DESCRIPTION : Orbiter fuselage configuration 140 A/B

\_\_\_\_\_

\_\_\_\_\_

MODEL SCALE: 0.0405

DRAWING NUMBER : VI.70-000193, VI.70-000140A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Body nose @ $X_0=238.$ )-In.	<u>1290.30</u>	<u>52.257</u>
Max Width ( $X_0 = 1520$ In.) - In.	<u>262.00</u>	<u>10.611</u>
Max Depth ( $X_0 = 1464$ In.) - In.	<u>250.00</u>	<u>10.125</u>
Fineness Ratio	<u>4.925</u>	<u>4.925</u>
Area - Ft. <sup>2</sup>	_____	_____
Max. Cross-Sectional	<u>340.88</u>	<u>0.559</u>
Planform	_____	_____
Wetted	_____	_____
Base	_____	_____

TABLE III. = MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY - B52

GENERAL DESCRIPTION : Orbiter fuselage configuration 140 A/B with simulated cargo bay door gaps and thermal expansion joints. All gaps arc 1.50" deep (full scale); all longitudinal gaps are 0.500" wide (full scale); lateral gaps vary in width from 0.500 to 2.830" (Full scale).

MODEL SCALE: 0.0405

DRAWING NUMBER : VL70-000193, VL70-000140A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Body nose @ $X_0 = 238.0$ ) - In.	<u>1290.30</u>	<u>52.257</u>
Max Width ( $X_0 = 1520$ In.) - In.	<u>262.00</u>	<u>10.611</u>
Max Depth ( $X_0 = 1464$ In.) - In.	<u>250.00</u>	<u>10.125</u>
Fineness Ratio	<u>4.925</u>	<u>4.925</u>
Area - Ft <sup>2</sup>	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>310.88</u>	<u>0.559</u>
Planform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>



TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY - B<sub>53</sub>

GENERAL DESCRIPTION : Orbiter fuselage configuration 140 A/B with simulated cargo bay door hinges along waterplane Z<sub>0</sub> - 420.00( sill longeron).

MODEL SCALE: 0.0405

DRAWING NUMBER : VL70-000193, VL70-000140A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Body nose @ X <sub>0</sub> =238) - In.	<u>1290.30</u>	<u>52.257</u>
Max Width (X <sub>0</sub> = 1520 In.) - In.	<u>262.00</u>	<u>10.611</u>
Max Depth (X <sub>0</sub> = 1464 In.) - In.	<u>250.00</u>	<u>10.125</u>
Fineness Ratio	<u>4.925</u>	<u>4.925</u>
Area - Ft <sup>2</sup>	<u>          </u>	<u>          </u>
Max. Cross-Sectional	<u>340.88</u>	<u>0.559</u>
Planform	<u>          </u>	<u>          </u>
Wetted	<u>          </u>	<u>          </u>
Base	<u>          </u>	<u>          </u>

LONGITUDINAL LOCATION OF HINGES (FUS.STA.):

<u>FULL SCALE</u>	<u>MODEL SCALE</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
X <sub>0</sub> 602.50	24.401	X <sub>0</sub> 1033.40	41.853
669.80	27.127	1100.45	44.568
737.30	29.861	1144.20	46.340
783.55	31.734	1204.20	48.770
850.60	34.449	1264.20	51.200
917.65	37.165	1293.00	52.367
966.35	39.137		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : CANOPY - C<sub>0</sub>

GENERAL DESCRIPTION : Orbiter canopy Configuration used on BODY

B<sub>26</sub>

MODEL SCALE: 0.0405

DRAWING NUMBER : VL70-000140A, VL70-000143A

DIMENSIONS	FULL SCALE	MODEL SCALE
Length ( $X_0 = 434.64 \quad 670.00$ ) - In.	<u>235.36</u>	<u>9.532</u>
Max Width ( $X_0 = 513.13$ ) - In.	<u>152.41</u>	<u>6.173</u>
Max Depth ( $X_0 = 485.00$ ) - In.	<u>25.00</u>	<u>1.013</u>
Fineness Ratio	<u>                    </u>	<u>                    </u>
Area	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>                    </u>	<u>                    </u>
Planform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E26

GENERAL DESCRIPTION: Orbiter elevon configuration used on WING W16.

DOES NOT HAVE ELEVON GAPS.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000400, VL70-000140B

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES)	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line)-Ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E28

GENERAL DESCRIPTION: Elevon configuration used with WING - W116, has a  
midspan gap and an elevon-fuselage gap. These two gaps are referred  
to as baseline Grumman gaps, configuration 1-A.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS: (DATA FOR 1 OF 2 SIDES)</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line) - Ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>29</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING - W<sub>116</sub> has a  
midspan gap and an alternate #1 elevon/fuselage gap, configuration  
1-B.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES):	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line)-Ft. <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>30</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has a  
mid-span gap and an alternate #2 elevon/fuselage gap. These two  
gaps are referred to as baseline Grumman gaps, configuration 1-C.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS: (DATA FOR 1 OF 2 SIDES)</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line) - Ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>31</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has an  
alternate #1 midspan elevon gap, configuration 2A. (Baseline Grumman  
gap, configuration 2A).

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES)	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.0</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line) - ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E22

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub> has  
a midspan gap and an alternate #1 elevon/fuselage gap. These two  
gaps are referred to as baseline Grumman gaps, Configuration 2B.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA for 1 OF 2 SIDES):	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line)-ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>



TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E33

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has an  
alternate #2 midspan elevon gap, configuration 2B. This is baseline  
Grumman gap, configuration 2B.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES)	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft. <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent)- In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>-10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>34</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has an  
alternate #2 midspan elevon gap. This gap is referred to as baseline  
Grumman gap, Configuration 3A.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES)	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord - In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord- In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>-10.056</u>
Hinge line	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line)-ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>35</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has an  
alternate #1 elevon/fuselage gap. These two gaps are referred to  
as baseline Grumman gaps, Configuration 3B.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS: (DATA FOR 1 OF 2 SIDES)</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord In.	<u>119.62</u>	<u>4.845</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E<sub>36</sub>

GENERAL DESCRIPTION: Elevon configuration used with WING, W<sub>116</sub>, has an  
alternate #2 elevon/fuselage gap. These gaps are referred to as  
baseline Grumman gaps, configuration 3C.

MODEL SCALE: 0.0405

DRAWING NUMBER: \_\_\_\_\_

<u>DIMENSIONS:</u> (DATA FOR 1 OF 2 SIDES)	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area ft <sup>2</sup>	<u>223.58</u>	<u>0.367</u>
Span (equivalent) - In.	<u>368.34</u>	<u>14.918</u>
Inb'd equivalent chord In.	<u>119.62</u>	<u>2.235</u>
Outb'd equivalent chord - In.	<u>55.19</u>	<u>2.235</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.210</u>	<u>0.210</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Trailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.0</u>	<u>0.0</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>851.15</u>	<u>0.057</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY FLAP - F<sub>B</sub>

GENERAL DESCRIPTION : Orbiter body flap configuration used on  
BODY - B<sub>26</sub>.

MODEL SCALE: 0.0405

DRAWING NUMBER : VL70-000140B, VL70-000400

DIMENSIONS	FULL SCALE	MODEL SCALE
Length - In.	<u>94.86</u>	<u>3.842</u>
Max Width - In.	<u>262.31</u>	<u>10.623</u>
Max Depth - In.	<u>23.00</u>	<u>0.932</u>
Fineness Ratio	<u>          </u>	<u>          </u>
Area - Ft <sup>2</sup>	<u>          </u>	<u>          </u>
Max. Cross-Sectional	<u>          </u>	<u>          </u>
Planform	<u>158.85</u>	<u>0.261</u>
Wetted	<u>          </u>	<u>          </u>
Base	<u>47.90</u>	<u>0.069</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

COMPONENT MODEL: LANDING GEAR - G15

GENERAL DESCRIPTION: Main and nose landing gear doors and assemblies.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A/SS-A00149

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
<b>NOSE GEAR:</b>		
No. wheels	<u>2</u>	<u>2</u>
Wheel axis:		
Fuselage Station	<u>374.407</u>	<u>15.177</u>
Waterline	<u>22.151</u>	<u>8.971</u>
Pivot axis:		
Fuselage Station	<u>366.458</u>	<u>15.208</u>
Waterline	<u>298.000</u>	<u>12.069</u>
Strut Diameter - In.	<u>7.72</u>	<u>0.3125</u>
Wheel diameter - In.	<u>32.000</u>	<u>1.296</u>
Wheel Width - In.	<u>8.790</u>	<u>0.356</u>
Wheel centerline-to-centerline width-In.	<u>22.000</u>	<u>0.891</u>
Side Door:		
Height (follows body contour) - In.	<u>18.518</u>	<u>0.75</u>
Leading Edge location, F.S.	<u>271.605</u>	<u>11.0</u>
Trailing Edge location, F.S.	<u>381.926</u>	<u>15.468</u>
<b>MAIN GEAR:</b>		
No. of wheels	<u>2</u>	<u>2</u>
Wheel axis:		
Fuselage Station	<u>44.247</u>	<u>1.792</u>
Waterline	<u>175.432</u>	<u>7.105</u>
Pivot Axis		
Fuselage Station	<u>1180.000</u>	<u>47.790</u>
Waterline	<u>283.012</u>	<u>11.462</u>
Main Strut Diameter - In.	<u>9.259</u>	<u>0.375</u>
Wheel Diameter - In.	<u>44.198</u>	<u>1.79</u>
Wheel Width - In.	<u>16.049</u>	<u>0.65</u>
Wheel centerline-to-centerline width-In.	<u>36.000</u>	<u>1.458</u>
Side Door:		
Length - In.	<u>148.148</u>	<u>6.00</u>
Width - In.	<u>61.728</u>	<u>2.50</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: AIR BREATHING PROPULSION SYSTEM - J43

GENERAL DESCRIPTION: Six underwing engines installed in three nacelle pods. Inlet has short cowl, 7° cowl lip angle, short flow diverter, and 7° diverter lip angle. Baseline engine position @ F.S. 950.

MODEL SCALE: 0.0405

DRAWING NO.: SS-A00139, SS-A01159

DIMENSION (EACH NACELLE):	FULL SCALE	MODEL SCALE
Length - In.	<u>209.51</u>	<u>8.485</u>
Max. Width - In.	<u>66.00</u>	<u>2.673</u>
Max. Depth - In.	<u>66.00</u>	<u>2.673</u>
Max. Pylon Width, In.	<u>19.75</u>	<u>0.800</u>
Area - In. <sup>2</sup>		
Max. Cross-Sectional	<u>2737.30</u>	<u>4.490</u>
Capture	<u>1900.92</u>	<u>3.118</u>
Wetted	<u>          </u>	<u>          </u>
Base	<u>          </u>	<u>          </u>

\*Nacelle Sta. 0.0 @

	WING PODS		C PODS	
	Outboard	Inboard	Left	Right
Model Sta. - In.	<u>38.475</u>	<u>38.475</u>	<u>38.475</u>	<u>38.475</u>
Waterplane - In.	<u>9.665</u>	<u>9.655</u>	<u>9.310</u>	<u>9.310</u>
Buttock Plane - In.	<u>+ 11.583</u>	<u>+ 8.910</u>	<u>- 1.337</u>	<u>+ 1.337</u>
Incidence Angle - Deg.	<u>3.933</u>	<u>3.933</u>	<u>3.933</u>	<u>3.933</u>
Nacelle Clearance	<u>0.608</u>	<u>0.608</u>	<u>0.142</u>	<u>0.142</u>
Toe-In Angle	<u>5.000</u>	<u>5.000</u>	<u>0.0</u>	<u>0.0</u>

\*All numbers in model scale

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: AIR BREATHING PROPULSION SYSTEM - J62

GENERAL DESCRIPTION: Six engines installed in three nacelle pods, one centerline underwing, two overwing. Inlet has short cowl, 7° lip angle, short flow diverter, and 7° diverter lip angle. Baseline engine position @ F.S. 950 centerline and 1050 wing pods.

MODEL SCALE: 0.0405

DRAWING NUMBER: SS-00139, SS-A01159

DIMENSIONS (EACH NACELLE)	FULL SCALE	MODEL SCALE
Length - In.	<u>209.51</u>	<u>8.485</u>
Max. Width - In.	<u>66.00</u>	<u>2.673</u>
Max. Depth - In.	<u>66.00</u>	<u>2.673</u>
Max. Pylon Width - In.	<u>19.75</u>	<u>0.800</u>
AREA - ft <sup>2</sup>		
Max. Cross-Sectional	<u>2737.30</u>	<u>4.490</u>
Capture	<u>1900.92</u>	<u>3.118</u>

*NACELLE STA. 0.0 @	WING PODS		CENTERLINE POD	
	Outb'd	Inb'd	Left	Right
Model Sta. - In.	42.525	42.525	38.475	38.475
Waterplane - In.	15.180	15.180	9.310	9.310
Buttock plane - In.	+ 11.583	+ 8.910	- 1.337	+ 1.337
Incidence Angle - Deg.	- 7.000	- 7.000	3.933	3.933
Nacelle Clearance - In.	1.215	1.215	0.142	0.142
Tbe-In Angle - Deg.	5.000	5.000	0.0	0.0

\*All numbers in model scale.



TABLE III. - MODEL DIMENSIONAL DATA \_ Continued.

MODEL COMPONENT : ORBITAL MANEUVERING SYSTEM PODS - M<sub>7</sub>

GENERAL DESCRIPTION : OMS Pods used on BODY - B<sub>26</sub>

MODEL SCALE: 0.0405

DRAWING NUMBER : VL70-000140A, VL70-000145

DIMENSIONS	FULL SCALE	MODEL SCALE
Length (Fwd Sta. @ $X_0 = 1233.00$ ) In.	<u>327.00</u>	<u>13.244</u>
Max Width ( $X_0 = 1450.00$ ) - In.	<u>94.50</u>	<u>3.827</u>
Max Depth ( $X_0 = 1493.00$ ) - In.	<u>109.00</u>	<u>4.415</u>
Fineness Ratio	<u>                    </u>	<u>                    </u>
Area	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>                    </u>	<u>                    </u>
Planform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : ORBITAL MANEUVERING SYSTEM PODS - M<sub>50</sub>

GENERAL DESCRIPTION : Configuration 3A with thermal expansion joint gap, 2.930" wide and 1.50" deep (full scale).

MODEL SCALE: 0.0405

DRAWING NUMBER : VI.70-000140A, VI.70-000145

DIMENSIONS	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta. $X_0=1233.0$ )	In. <u>327.000</u>	<u>13.244</u>
Max Width (@ $X_0 = 1450.0$ ) - In.	<u>94.500</u>	<u>3.827</u>
Max Depth (@ $X = 1493.0$ ) - In.	<u>109.000</u>	<u>4.414</u>
Fineness Ratio	<u>                    </u>	<u>                    </u>
Area	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>                    </u>	<u>                    </u>
Platform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R<sub>5</sub>

GENERAL DESCRIPTION: Orbiter rudder used on Vertical Tail, Vg. See  
Figure 2 (Cont'd).

MODEL SCALE: 0.0405

DRAWING NUMBER: VI70-000095, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>106.38</u>	<u>0.174</u>
Span (equivalent) - in.	<u>201.00</u>	<u>8.141</u>
Inb'd equivalent chord - In.	<u>91.59</u>	<u>3.709</u>
Outb'd equivalent chord - In.	<u>50.83</u>	<u>2.059</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.830</u>	<u>34.830</u>
Trailing Edge	<u>26.250</u>	<u>26.250</u>
Hingeline	<u>34.830</u>	<u>34.830</u>
Area Moment (Normal to hinge line) ft <sup>3</sup>	<u>526.13</u>	<u>0.035</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R<sub>7</sub>

GENERAL DESCRIPTION: Orbiter rudder used on Vertical Tail, V<sub>8</sub>, with a  
2.09 inch leading edge radius (at the rudder hingeline).

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000095, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>106.38</u>	<u>0.174</u>
Span (equivalent) - In.	<u>201.00</u>	<u>8.141</u>
Inb'd equivalent chord - In.	<u>91.59</u>	<u>3.709</u>
Outb'd equivalent chord - In.	<u>50.83</u>	<u>2.059</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.830</u>	<u>34.830</u>
Tailing Edge	<u>26.250</u>	<u>26.250</u>
Hingeline	<u>34.830</u>	<u>34.830</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>526.13</u>	<u>0.035</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R<sub>8</sub>

GENERAL DESCRIPTION: Orbiter rudder used on Vertical Tail, V<sub>8</sub>, with a  
4.94 inch radius at the leading edge radius (at the rudder hingeline).

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000095, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area ft <sup>2</sup>	<u>106.38</u>	<u>0.174</u>
Span (equivalent) - In.	<u>201.00</u>	<u>8.141</u>
Inb'd equivalent chord In.	<u>91.59</u>	<u>3.709</u>
Outb'd equivalent chord - In.	<u>50.83</u>	<u>2.059</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.830</u>	<u>34.830</u>
Trailing Edge	<u>26.250</u>	<u>26.250</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line) ft <sup>3</sup>	<u>526.13</u>	<u>0.035</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R<sub>9</sub>

GENERAL DESCRIPTION: Orbiter rudder used on Vertical Tail, V<sub>8</sub>, with a  
6.12" radius contour aft of rudder hingeline to the trailing edge.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000095, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>106.38</u>	<u>0.175</u>
Span (equivalent) - In.	<u>201.00</u>	<u>8.141</u>
Inb'd equivalent chord - In.	<u>91.59</u>	<u>3.709</u>
Outb'd equivalent chord - In.	<u>50.83</u>	<u>2.059</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.830</u>	<u>34.830</u>
Trailing Edge	<u>26.250</u>	<u>26.250</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>526.13</u>	<u>0.035</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R<sub>10</sub>

GENERAL DESCRIPTION: Orbiter rudder used on Vertical Tail, V<sub>8</sub>, with a  
6.12-inch radius contour extending from the root to the tip chord of  
the vertical tail aft of the rudder hingeline.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000095, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft <sup>2</sup>	<u>106.38</u>	<u>0.175</u>
Span (equivalent) - In.	<u>201.00</u>	<u>8.141</u>
Inb'd equivalent chord - In.	<u>91.59</u>	<u>3.709</u>
Outb'd equivalent chord - In.	<u>50.83</u>	<u>2.059</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.830</u>	<u>34.830</u>
Trailing Edge	<u>26.250</u>	<u>26.250</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line) -ft <sup>3</sup>	<u>526.13</u>	<u>0.035</u>

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>8</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A, VL70-000146A, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords: - In.		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius - % Chord	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		



TABLE III. -- MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>9</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability and with groove along the rudder hingeline.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A, VL70-000146A, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - in	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>12</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability with a 2.09 inch radius at rudder hingeline. Used with  
RUDDER - R<sub>7</sub>.

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A, VL70-000146A, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Ang <sup>es</sup> , degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle    Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>15</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability and 4.94 inch radius at rudder hingeline. Used with

RUDDER - R<sub>C</sub>

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A, VL70-000140A, SS-A000E8

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>4.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>14</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake

capability with 6.12 inch radius contour on rudder aft of hingeline

between W.L. 7.000 and W.L. 15.350. Used with RUDDER - R<sub>9</sub>

MODEL SCALE: 0.0405

DRAWING NUMBER:

VL70-000140A, VL70-000146A, SS-A00088

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.17</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.731</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>15</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability with 6.12 inch radius contour extending from root to tip aft of hingeline. Used with RUDDER - R<sub>10</sub>

MODEL SCALE: 0.0405

DRAWING NUMBER: VL70-000140A, VL70-000146A, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>16</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed  
brake capability with the vertical tail leading edge extended forward  
at the vertical/fuselage intersection.

MODEL SCALE: 0.0405

DRAWING NUMBER: VI70-000140A, VI70-000146A, SS-A00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle - Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V<sub>17</sub>

GENERAL DESCRIPTION: Centerline vertical tail with rudder and/or speed brake capability with the contour forward of the rudder hingeline modified to a biconvex section.

MODEL SCALE: 0.0405

DRAWING NUMBER: VI70-000140A, VI70-000146A, SS-00088

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.25</u>	<u>0.678</u>
Span (Theo) - In	<u>315.72</u>	<u>12.787</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.130</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>10.874</u>
Tip (Theo) WP	<u>108.47</u>	<u>4.393</u>
MAC	<u>199.81</u>	<u>8.092</u>
Fus. Sta. of .25 MAC	<u>1163.50</u>	<u>59.272</u>
W. P. of .25 MAC	<u>635.52</u>	<u>25.738</u>
B. L. of .25 MAC	<u>0.0</u>	<u>0.0</u>
Airfoil Section		
Leading Wedge Angle - Deg	<u>10.000</u>	<u>10.000</u>
Trailing Wedge Angle    Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius	<u>1.466</u>	<u>1.466</u>
Void Area	<u>13.17</u>	<u>0.022</u>
Blanketed Area		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: WING-W<sub>122</sub>  
 GENERAL DESCRIPTION: Orbiter delta wing configuration used on BODY - B<sub>06</sub> with  
the addition of a lower surface elliptical L.E. added to the 45° swept  
portion of the wing. Tangency points are at the L.E. and 30% chord element.  
No change made to the planform area. MODEL SCALE: 0.0405

TEST NO. \_\_\_\_\_ DWG. NO. VI70-00011/2B, VI70-000400

DIMENSIONS: FULL SCALE MODEL SCALE

TOTAL DATA

Area (Theo.) - Ft <sup>2</sup>		
Planform	2690.00	4.412
Span (Theo) - In.	936.68	37.936
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	3.500	3.500
Dihedral Angle, degrees	0.500	0.500
Incidence Angle, degrees	3.000	3.000
Aerodynamic Twist, degrees		
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	10.056	10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.O.O.	689.24	27.914
Tip, (Theo) B.P.	137.85	5.583
MAC	474.81	19.230
Fus. Sta. of .25 MAC	1126.72	45.632
W.P. of .25 MAC	291.00	11.786
B.L. of .25 MAC	187.33	7.587

EXPOSED DATA

Area (Theo) - Ft <sup>2</sup>	1812.22	2.973
Span, (Theo) - In. BP108	736.68	29.836
Aspect Ratio	2.058	2.058
Taper Ratio	0.245	0.245
Chords		
Root BP108	570.62	23.110
Tip 1.00 $\frac{b}{2}$	137.85	5.583
MAC	354.24	14.345
Fus. Sta. of .25 MAC	1164.24	47.152
W.P. of .25 MAC	292.00	11.826
B.L. of .25 MAC	239.68	9.707

Airfoil Section (Rockwell Mod NASA)  
XXX-64

Root $\frac{b}{2}$ = .425 Root %	11.3	11.3
Tip $\frac{b}{2}$ = 1.000 Root %	12.0	12.0

Data for (1) of (2) Sides

Leading Edge Cuff		
Planform Area Ft <sup>2</sup>	118.33	0.104
Leading Edge Intersects Fus M. L. @ Sta	505.00	20.453
Leading Edge Intersects Wing @ Sta	1084.5	43.92



TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: WING-W  
116

GENERAL DESCRIPTION: Orbiter delta wing configuration used on BODY - B26

MODEL SCALE: 0.0405

TEST NO. \_\_\_\_\_ DWG. NO. VL70-000140B  
VL70-000400

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area (Theo.) - Ft <sup>2</sup>		
Planform	<u>2690.00</u>	<u>4.412</u>
Span (Theo) - In.	<u>936.68</u>	<u>37.936</u>
Aspect Ratio	<u>2.265</u>	<u>2.265</u>
Rate of Taper	<u>1.177</u>	<u>1.177</u>
Taper Ratio	<u>0.200</u>	<u>0.200</u>
Dihedral Angle, degrees	<u>3.500</u>	<u>3.500</u>
Incidence Angle, degrees	<u>0.500</u>	<u>0.500</u>
Aerodynamic Twist, degrees	<u>3.000</u>	<u>3.000</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.000</u>	<u>45.000</u>
Trailing Edge	<u>-10.056</u>	<u>-10.056</u>
0.25 Element Line	<u>35.209</u>	<u>35.209</u>
Chords:		
Root (Theo) B.P.0.0.	<u>689.24</u>	<u>27.914</u>
Tip, (Theo) B.P.	<u>137.85</u>	<u>5.583</u>
MAC	<u>474.81</u>	<u>16.230</u>
Fus. Sta. of .25 MAC	<u>1126.72</u>	<u>45.632</u>
W.P. of .25 MAC	<u>291.00</u>	<u>11.786</u>
B.L. of .25 MAC	<u>187.33</u>	<u>7.587</u>

EXPOSED DATA

Area (Theo) - Ft <sup>2</sup>	<u>1812.22</u>	<u>2.973</u>
Span, (Theo) In. BP108	<u>736.68</u>	<u>29.836</u>
Aspect Ratio	<u>2.058</u>	<u>2.058</u>
Taper Ratio	<u>0.245</u>	<u>0.245</u>
Chords		
Root BP108	<u>570.62</u>	<u>23.110</u>
Tip 1.00 $\frac{b}{2}$	<u>137.85</u>	<u>5.583</u>
MAC	<u>354.24</u>	<u>14.345</u>
Fus. Sta. of .25 MAC	<u>1164.24</u>	<u>47.152</u>
W.P. of .25 MAC	<u>292.00</u>	<u>11.826</u>
B.L. of .25 MAC	<u>239.68</u>	<u>9.707</u>

Airfoil Section (Rockwell Mod NASA)  
XXXX-64

Root $\frac{b}{2}$ = .425 Root %	<u>11.3</u>	<u>11.3</u>
Tip $\frac{b}{2}$ = 1.000 Tip %	<u>12.0</u>	<u>12.0</u>

Data for (1) of (2) Sides

Leading Edge Cuff $\frac{2}{2}$	<u>118.33</u>	<u>0.194</u>
Planform Area Ft <sup>2</sup>	<u>505.00</u>	<u>20.453</u>
Leading Edge Intersects Fus M. L. @ Sta	<u>1084.5</u>	<u>43.92</u>
Leading Edge Intersects Wing @ Sta		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: TRANSITION GRIT - X<sub>9</sub>

GENERAL DESCRIPTION: Grit composed of glass beads located aft of model nose and all swept surfaces to provide forced boundary layer transition. All dimensions are measured in the streamwise direction aft of the local leading edge.

Grit Diameter - In.	
Fuselage	0.0054
Swept surfaces	0.0076
Strip Width - In.	0.10
Location aft of L.E., In.	1.00

TABLE III. - MODEL DIMENSIONAL DATA - Concluded.

MODEL COMPONENT: TRANSITION GRIT - X<sub>10</sub>

GENERAL DESCRIPTION: Grit composed of glass beads located aft of model nose, ABPS nacelles and all swept surfaces to provide forced boundary layer transition. All dimensions are measured in the streamwise direction aft of the local leading edge.

Grit diameter - In.

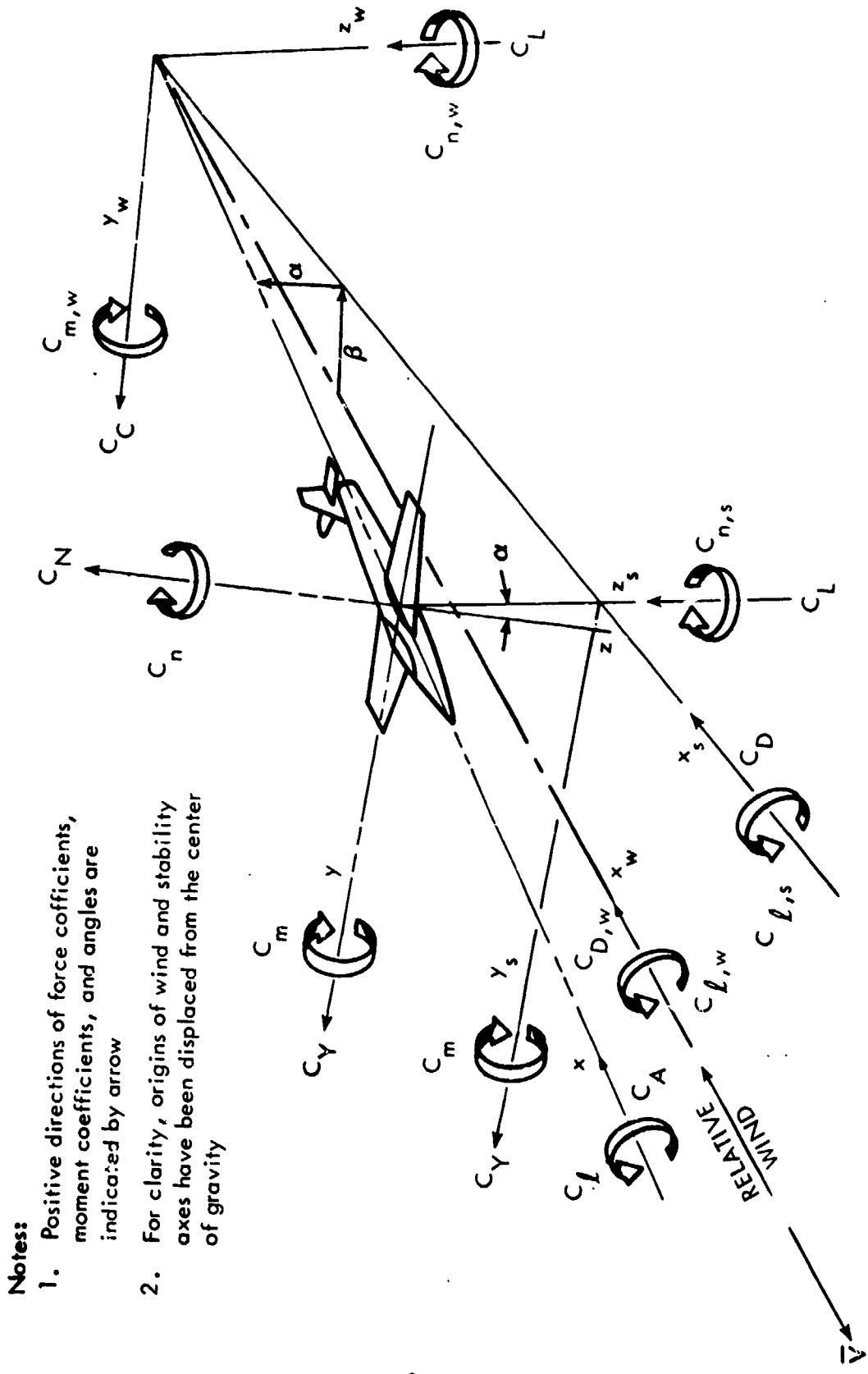
Fuselage 0.0054

Swept surfaces 0.0076

ABPS Nacelles 0.0076

Strip width - In. 0.10

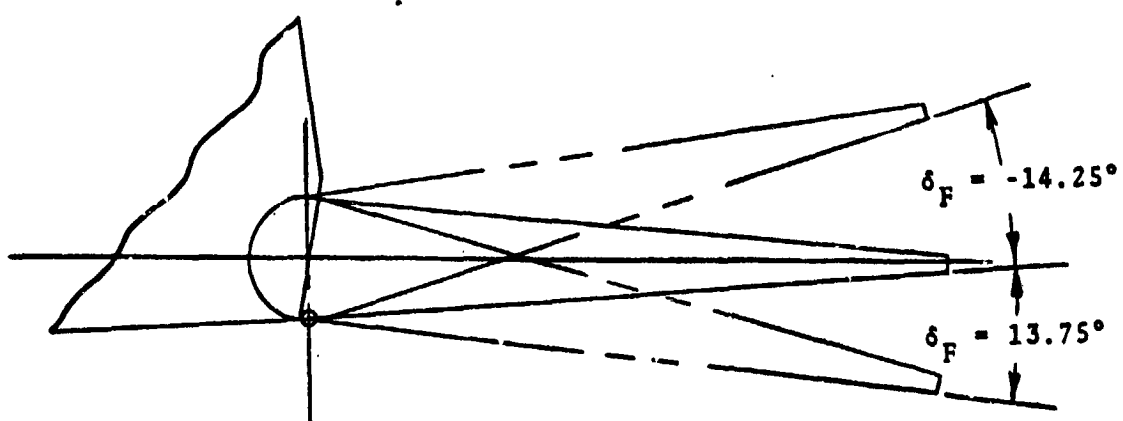
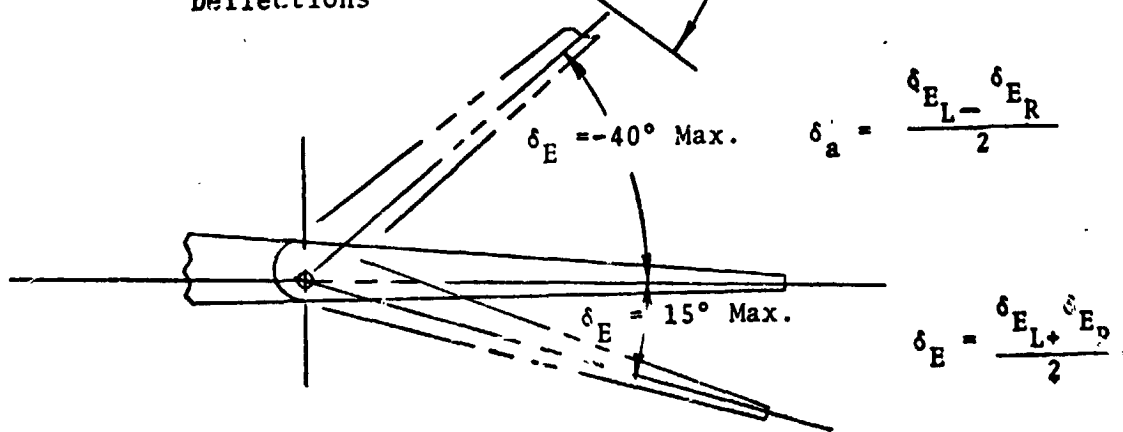
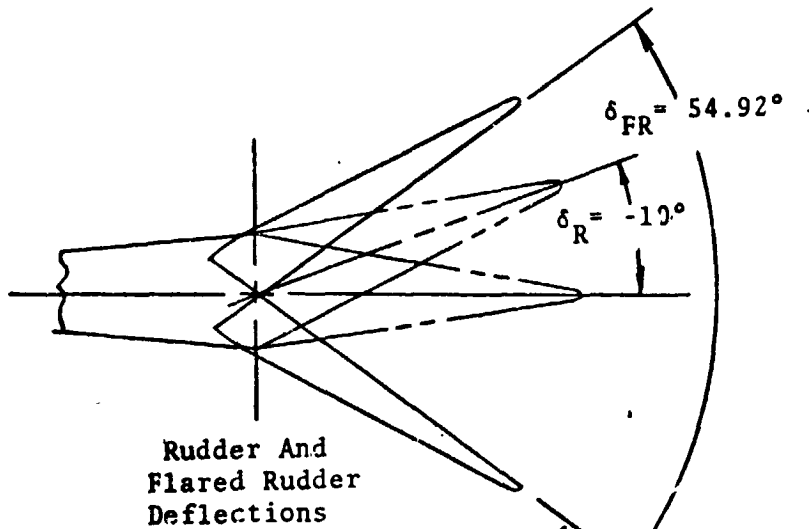
Location aft of cowl L.E. 1.00



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

a. Body and stability axes

Figure 1. - Axis systems.

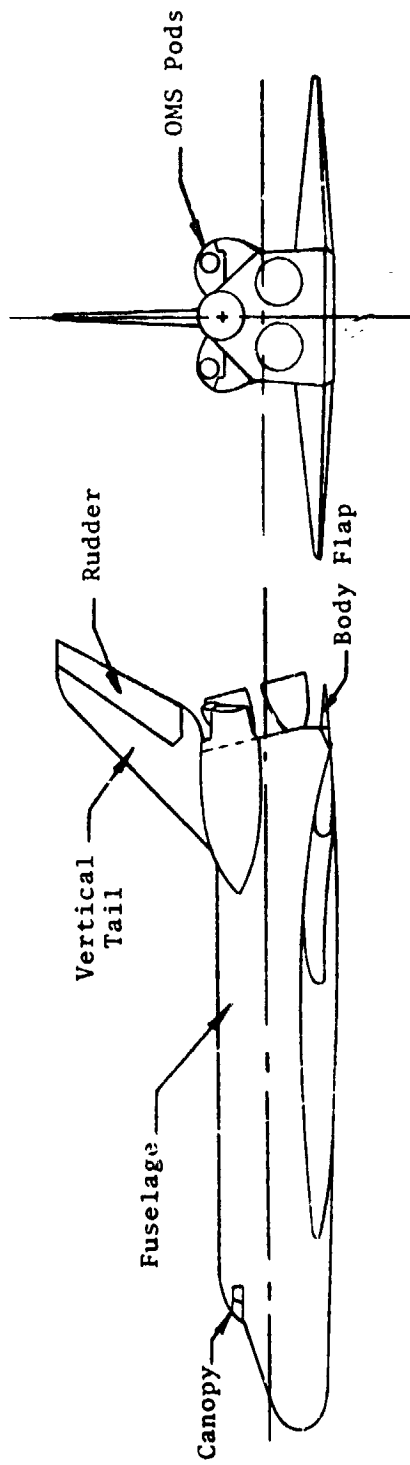
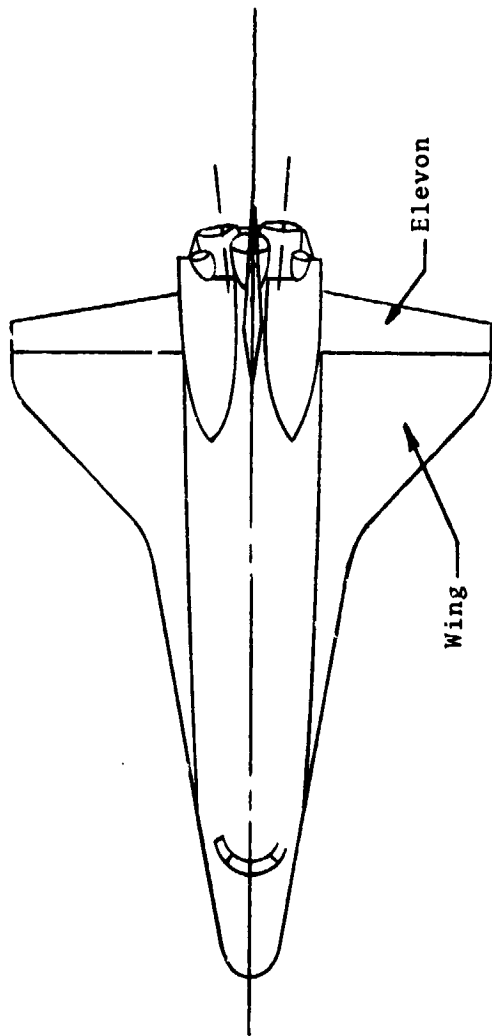


b. Sign convention for control surfaces.

Figure 1. - Concluded.



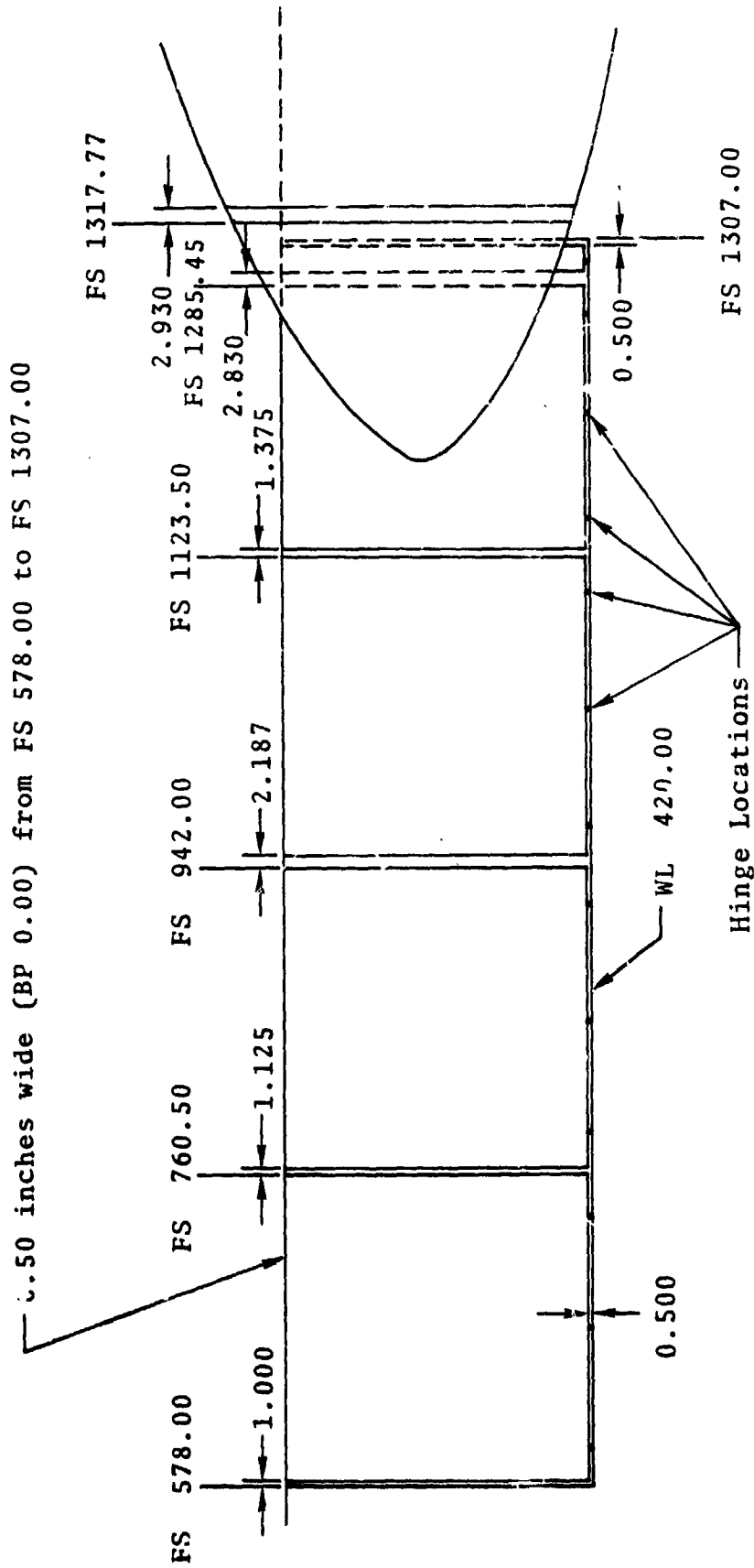
<u>Reference</u>	<u>Dimension</u>
Area	Sw = 2690 ft <sup>2</sup>
MAC	c̄w = 474.8 in
C.G.	X = 1076.48 in
	Z = 375.0 in
Span	bw = 936.68 in
Length	L = 1290.3 in



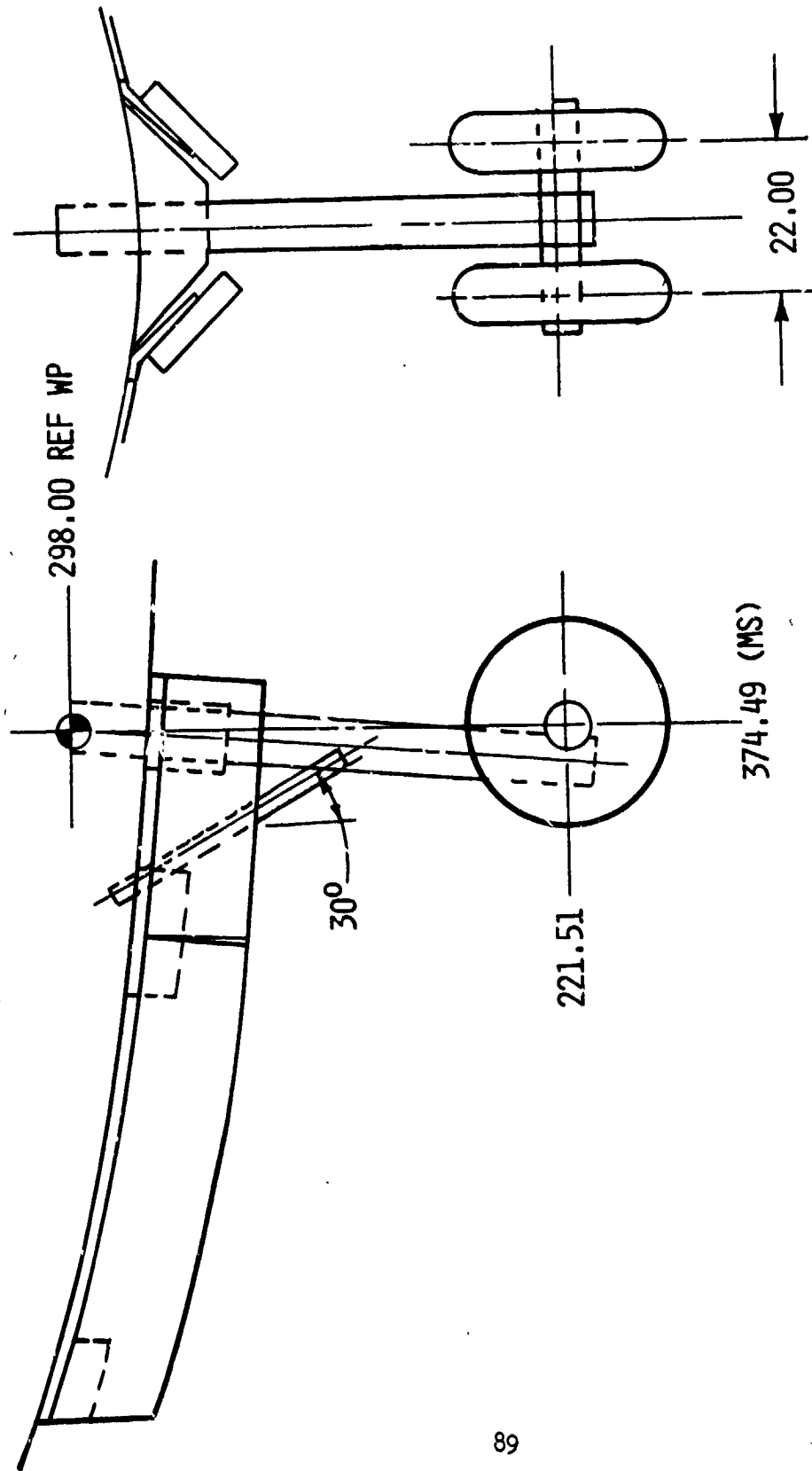
a. GENERAL ARRANGEMENT - 140 ORBITER.

Figure 2. - Model sketches.

All gaps are 1.50 inches deep



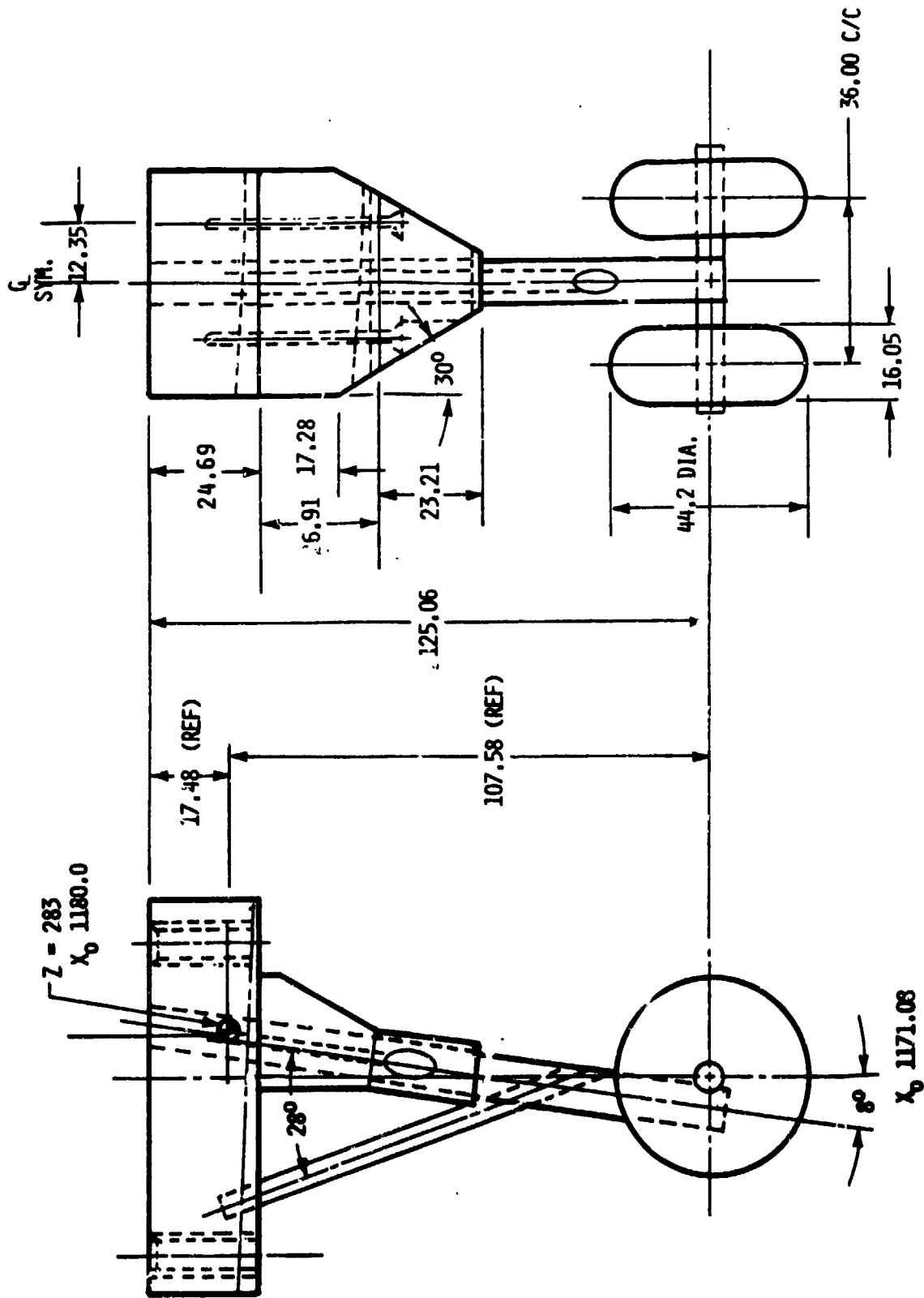
b. Cargo bay door and OMS pod geps.  
 Figure 2. - Continued



c. Nose landing gear, G<sub>15</sub>.

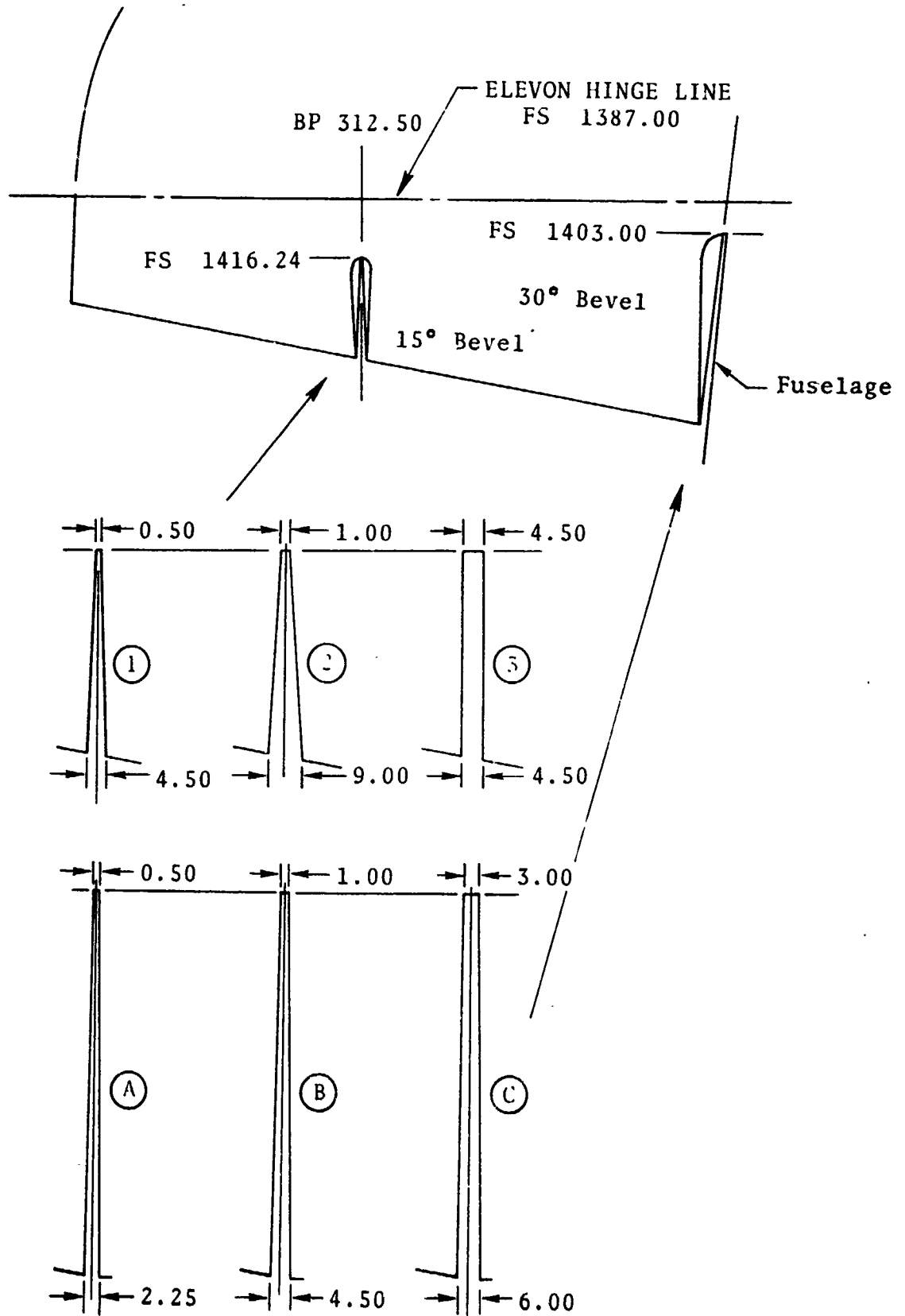
Figure 2. - Continued.





d. Main landing gear, G15.

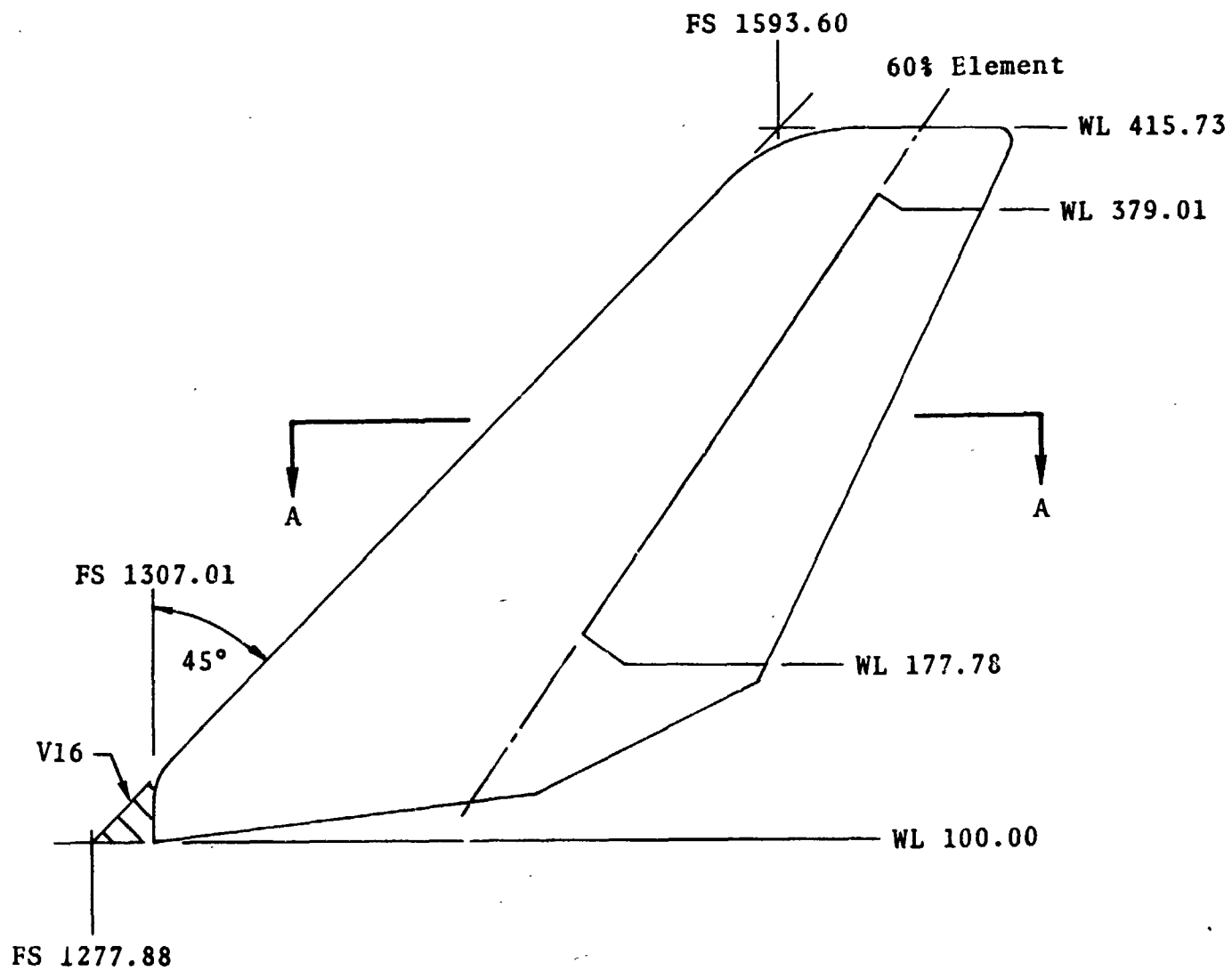
Figure 2. - Continued.



e. Elevon Gap configurations

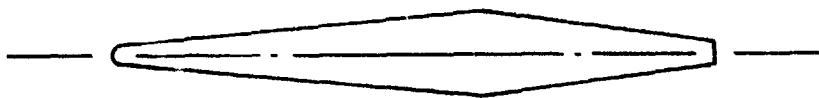
Figure 2. - Continued.

Cid



Dimensions are full scale

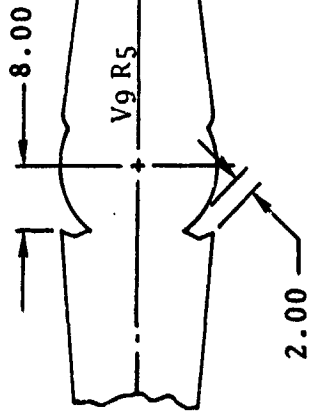
Section A-A



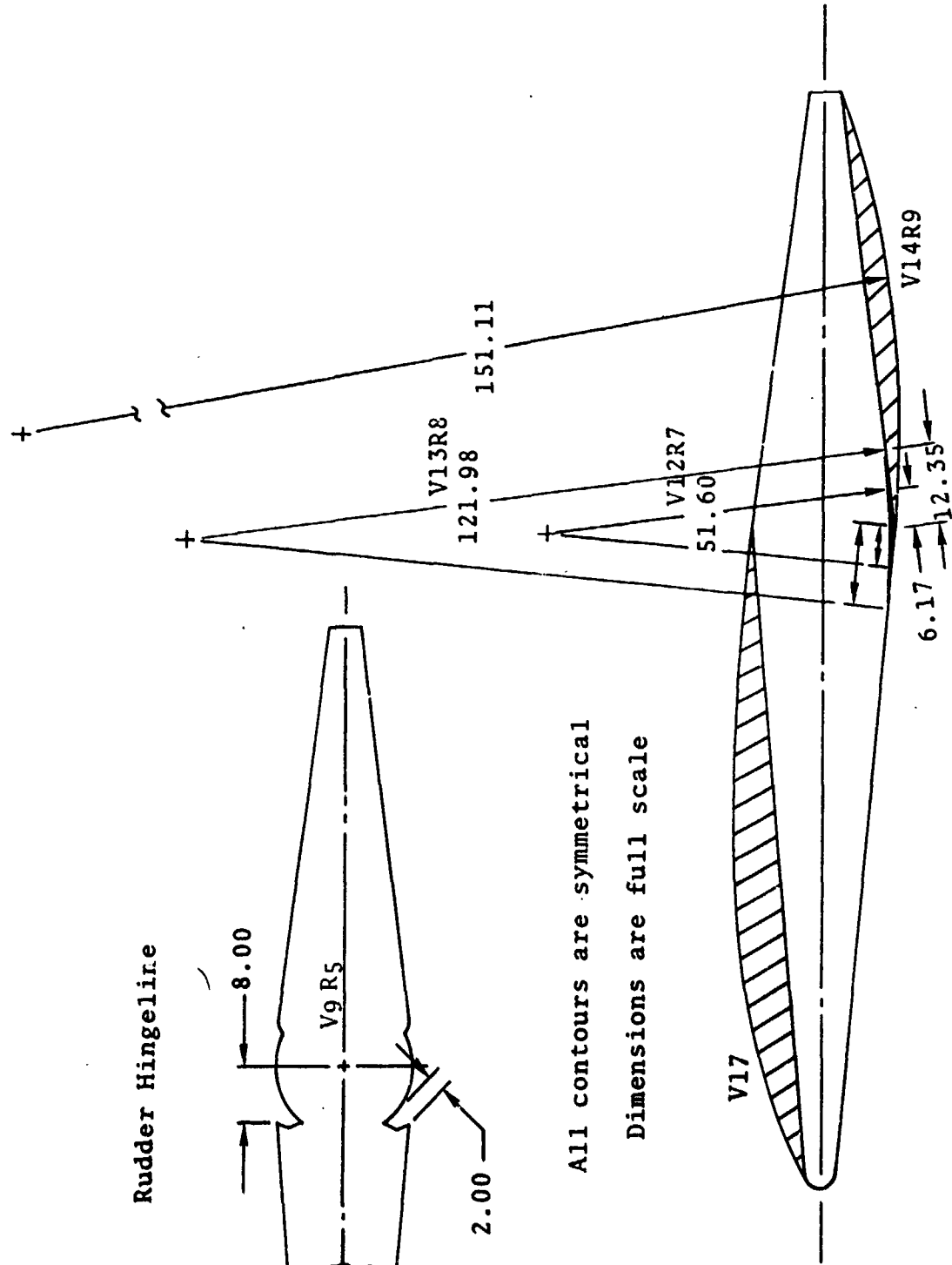
f. Vertical tail - V<sub>8</sub>, V<sub>16</sub>.

Figure 2. - Continued.

Rudder Hingeline

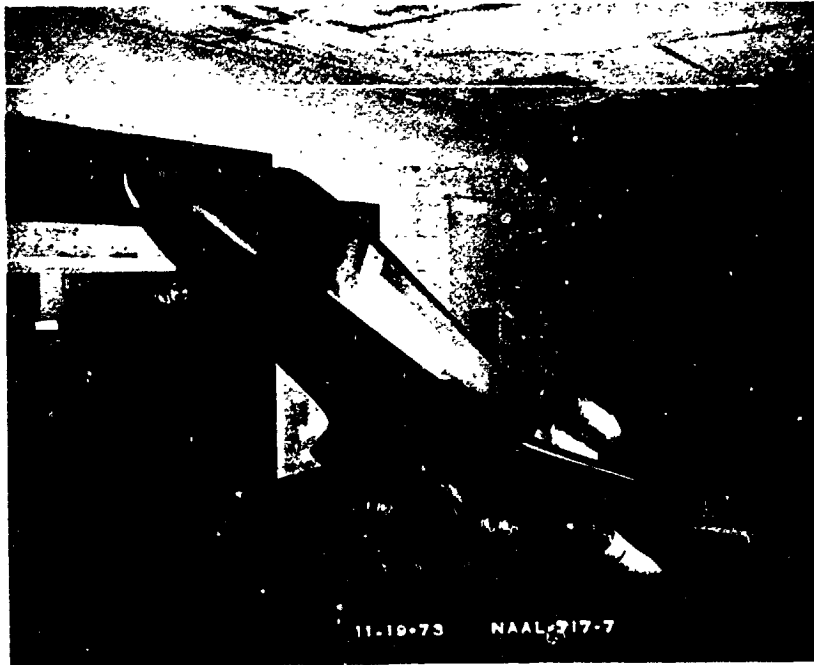


All contours are symmetrical  
Dimensions are full scale

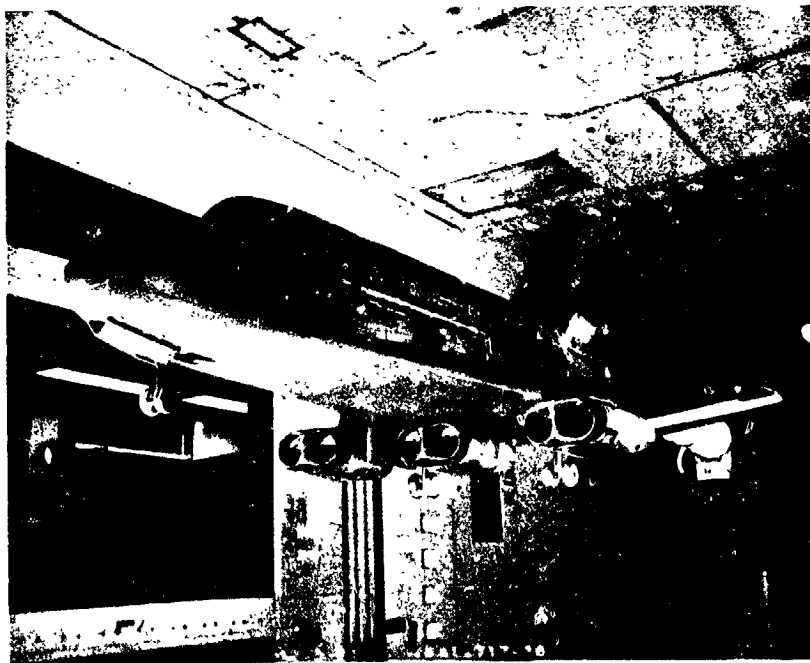


6. Vertical tail and rudder modifications.

Figure 2. - Concluded.



a. Ground plane in, overwing ABPS configuration



b. Free air, underwing ABPS configuration

Figure 3. - Model photographs.

DATA FIGURES

VOLUME I

See Volume II for Figures 72 thru 128  
and Tabulated Source Data listings.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02005)	0A628 B26C961 SMTF8 V118E28VBR5X9	-5.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(B02001)	0A628 B26C961 SMTF8 V118E28VBR5X9	5.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(B02002)	0A628 B26C961 SMTF8 V118E28VBR5X9	10.000	.285	25.000	-12.000	BREF 37.9259 INCHES
(B02003)	0A628 B26C961 SMTF8 V118E28VBR5X9	15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(B02004)	0A628 B26C961 SMTF8 V118E28VBR5X9					YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

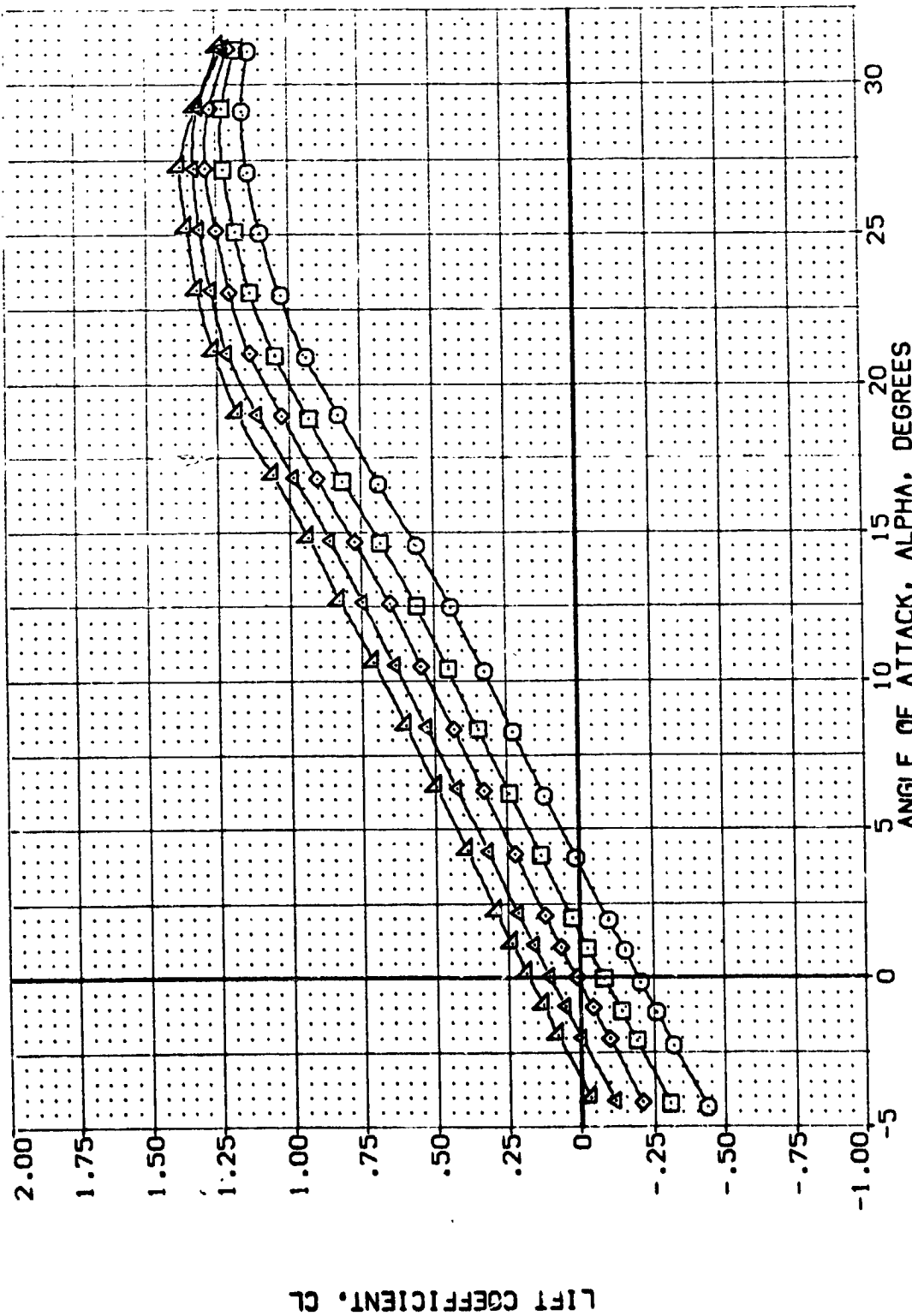
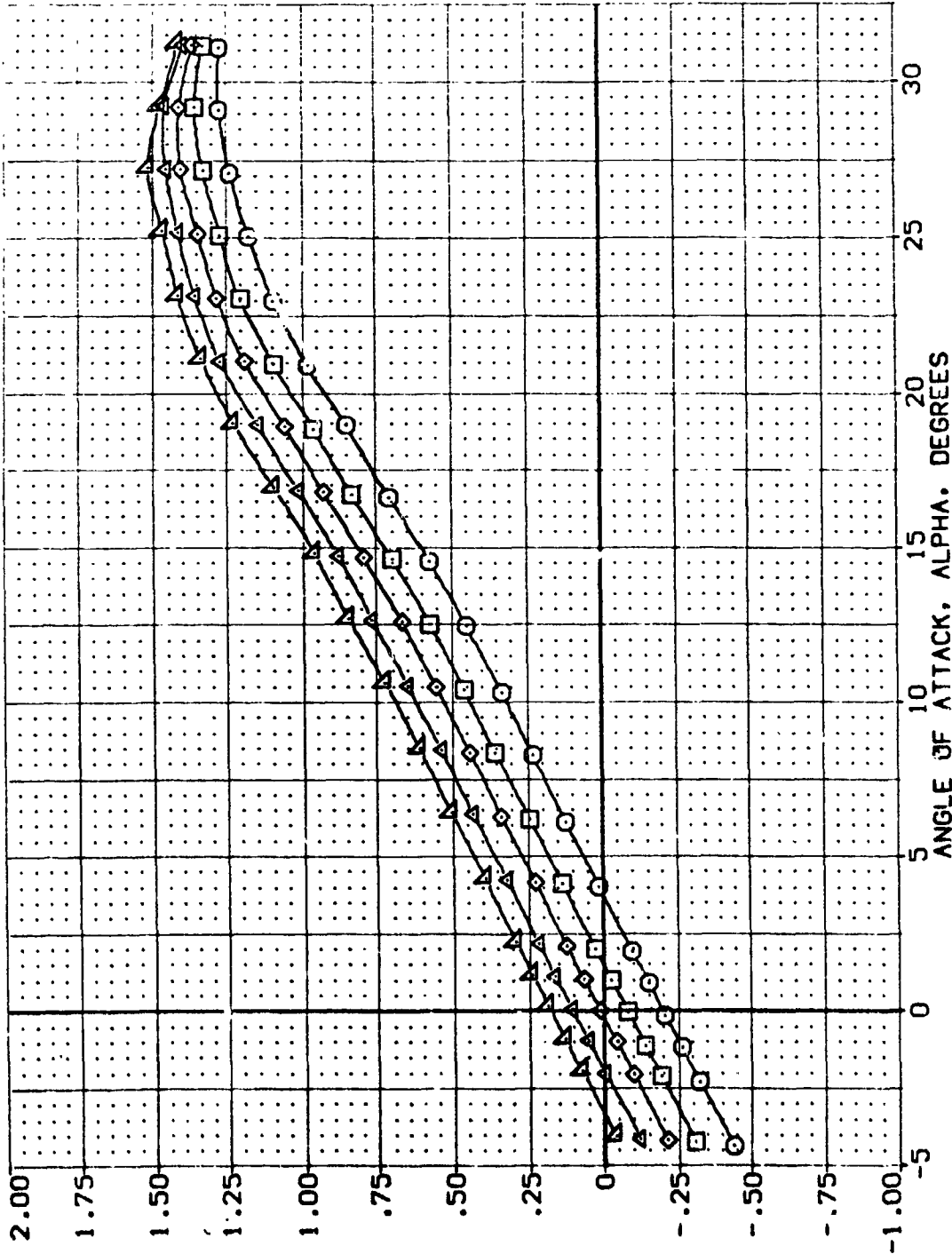


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	S-DBRK	BOFLAP	REFERENCE INFORMATION
(B02005)	0A628 B26C9G1 SMTF8	-5.000	.285	25.000	-12.000	4.4119 SQ.FT.
(B02001)	0A628 B26C9G1 SMTF8	0.000	.285	25.000	-12.000	19.2299 INCHES
(B02002)	0A628 B26C9G1 SMTF8	5.000	.285	25.000	-12.000	37.9359 INCHES
(B02003)	0A628 B26C9G1 SMTF8	10.000	.285	25.000	-12.000	43.5974 INCHES
(B02004)	0A628 B26C9G1 SMTF8	15.000	.285	25.000	-12.000	0000 INCHES
						15.1875 INCHES
						SCALE
						.0405 SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A) MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z005)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-5.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z001)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	5.000	.285	25.000	-12.000	LREF 19.2289 INCHES
(80Z002)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	10.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(80Z003)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(80Z004)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9					ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

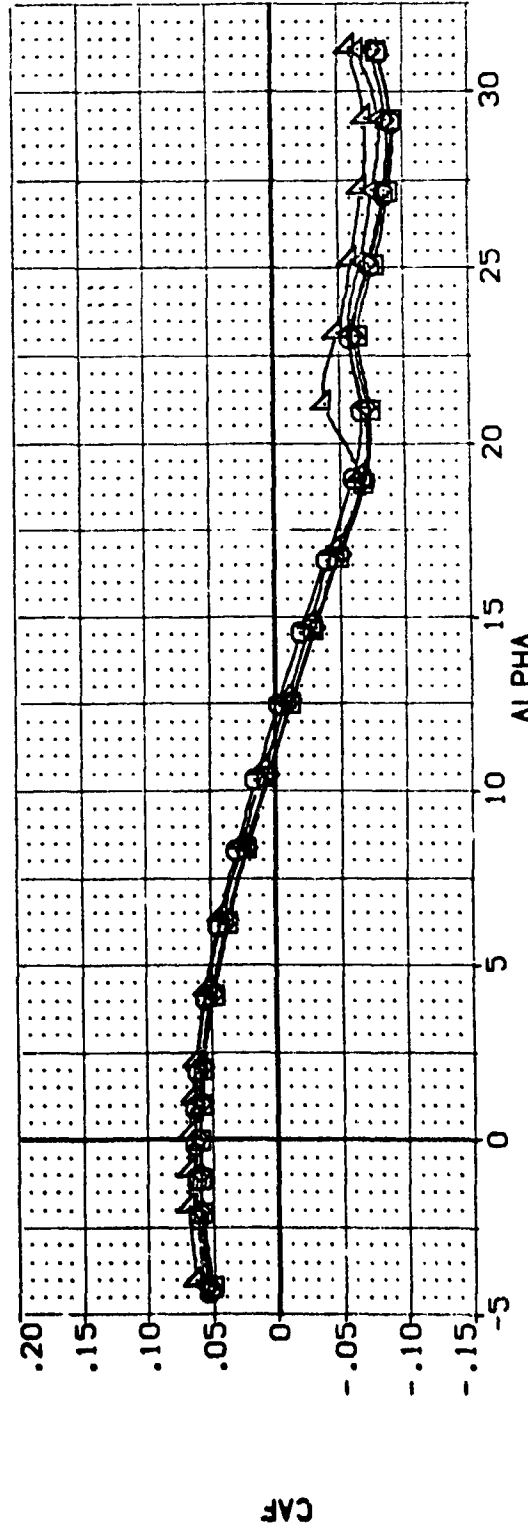
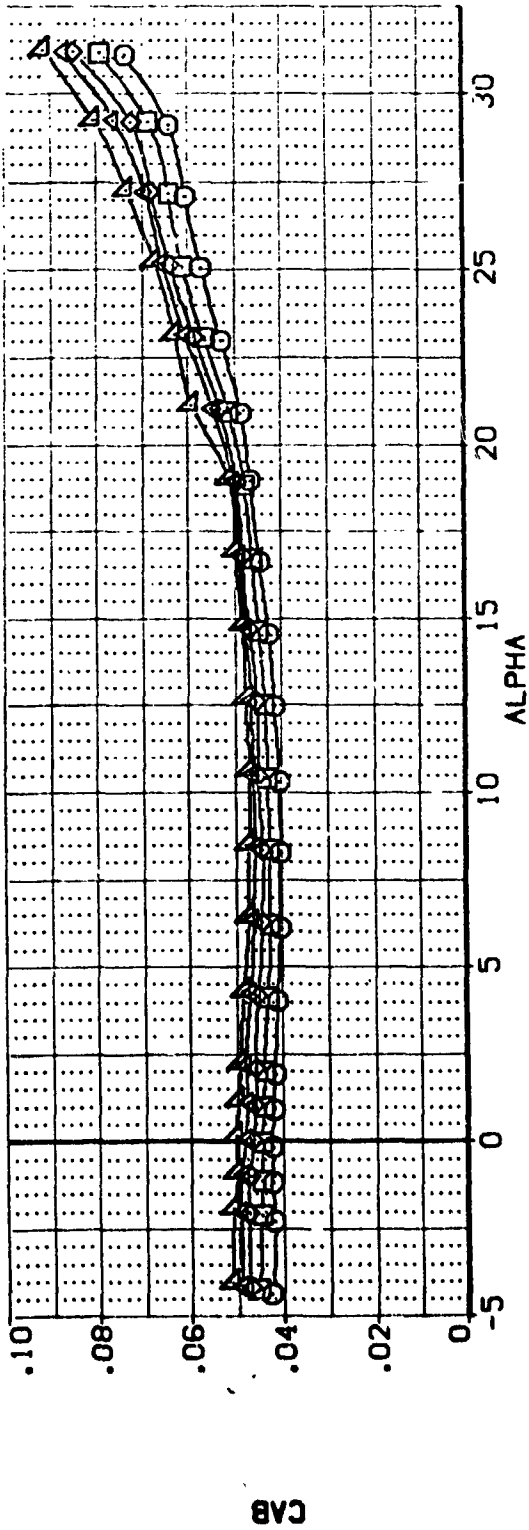
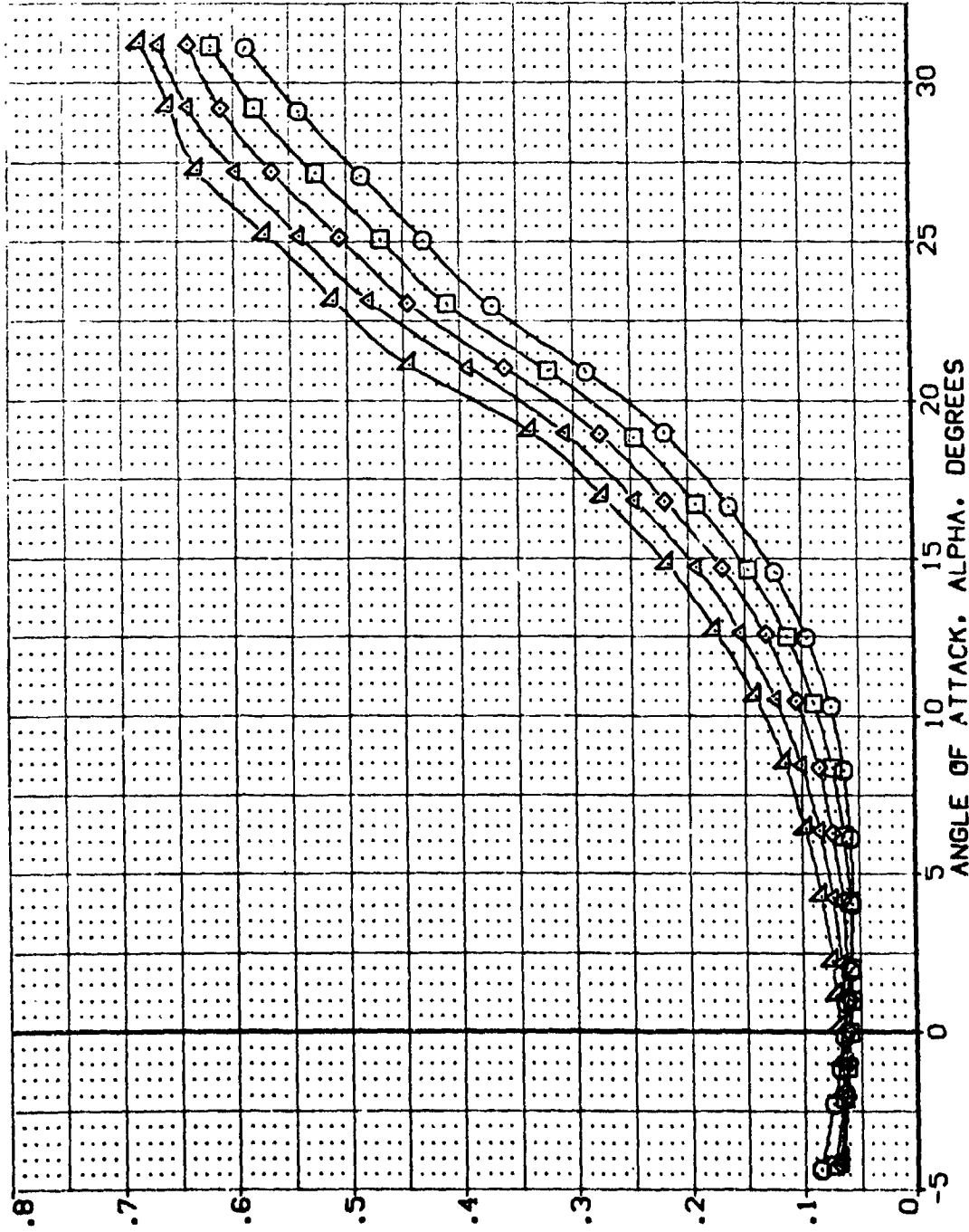


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285  
CAJMACB = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BD/LAP	REFERENCE INFORMATION
(80Z005)	0A6Z8 B26C9615M7F8 V116E28V8R5X9	-5.000	.285	25.000	-12.000	SREF 4.4119 SQ.FT.
(80Z001)	0A6Z8 B26C9615M7F8 V116E28V8R5X9	5.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(80Z002)	0A6Z8 B26C9615M7F8 V116E28V8R5X9	10.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(80Z003)	0A6Z8 B26C9615M7F8 V116E28V8R5X9	15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(80Z004)	0A6Z8 B26C9615M7F8 V116E28V8R5X9			25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



FOREBODY DRAG COEFFICIENT, CP

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(B0Z005)	0A6Z8 B26C9G 5M7F8 V116E28V8R5X9	-5.000	.285	25.000	-12.000	SREF 4.4119 SQ.FT.
(B0Z001)	0A6Z8 B26C9G 5M7F8 V116E28V8R5X9	0.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(B0Z002)	0A6Z8 B26C9G 5M7F8 V116E28V8R5X9	5.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(B0Z003)	0A6Z8 B26C9G 5M7F8 V116E28V8R5X9	10.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(B0Z004)	0A6Z8 B26C9G 5M7F8 V116E28V8R5X9	15.000	.285	25.000	-12.000	YMRP 15.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

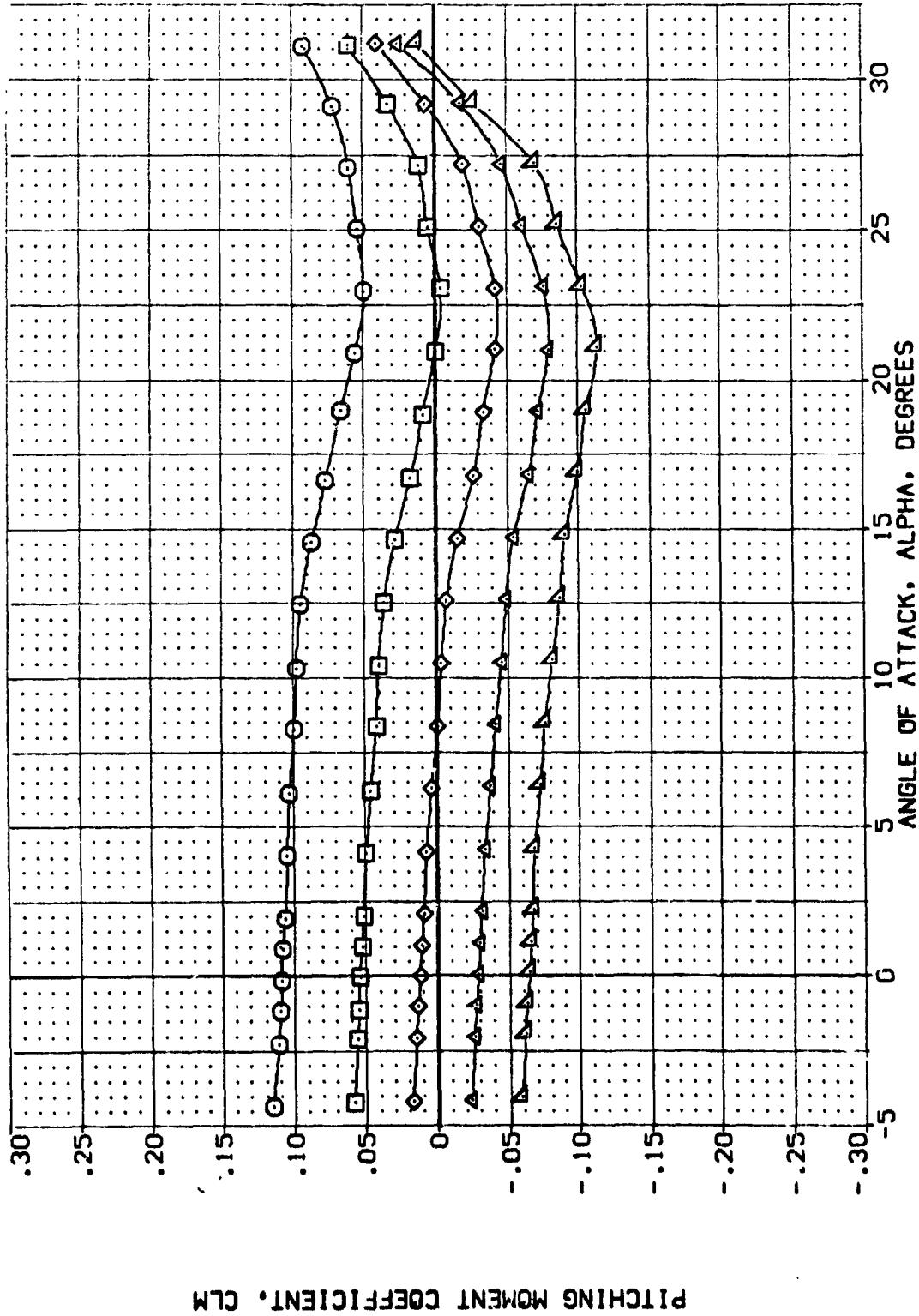


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A) MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B0Z005)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9
(B0Z001)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9
(B0Z002)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9
(B0Z003)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9
(B0Z004)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9

ELEVON	H/BW	SFDBRK	BOFLAP	REFERENCE INFORMATION
-5.000	.285	25.000	-12.000	SREF 4.4119 SO.FT
5.000	.285	25.000	-12.000	LREF 19.2299 INCHES
10.000	.285	25.000	-12.000	XMRP 37.9359 INCHES
15.000	.285	25.000	-12.000	ZMRP 43.5974 INCHES
				SCALE 15.1875 INCHES
				SCALE .0405

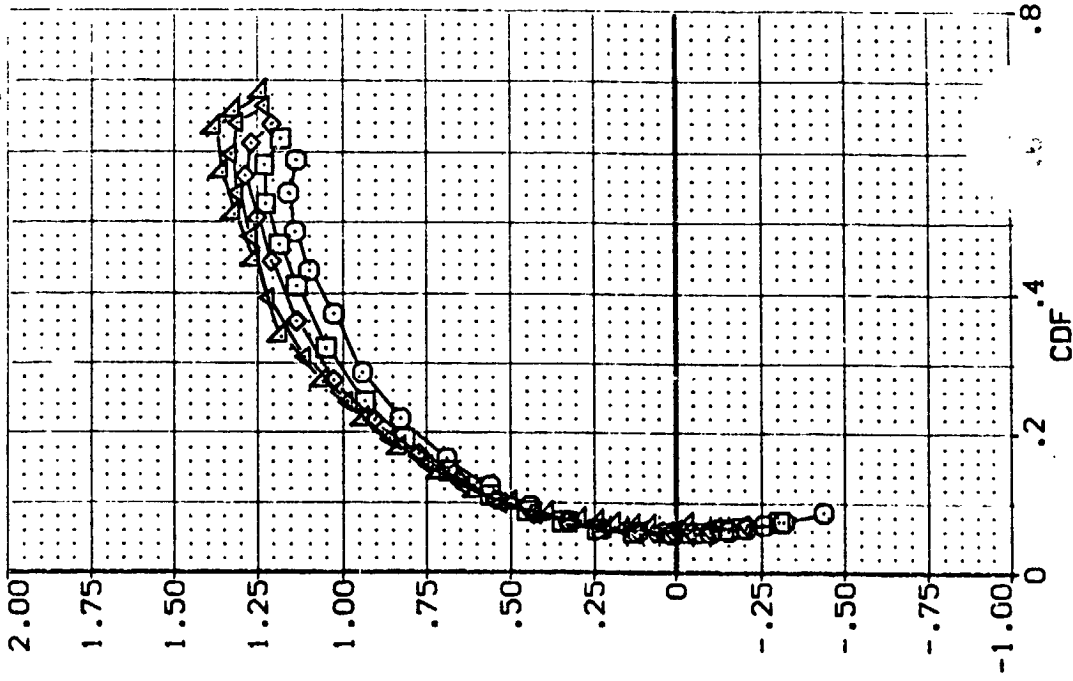
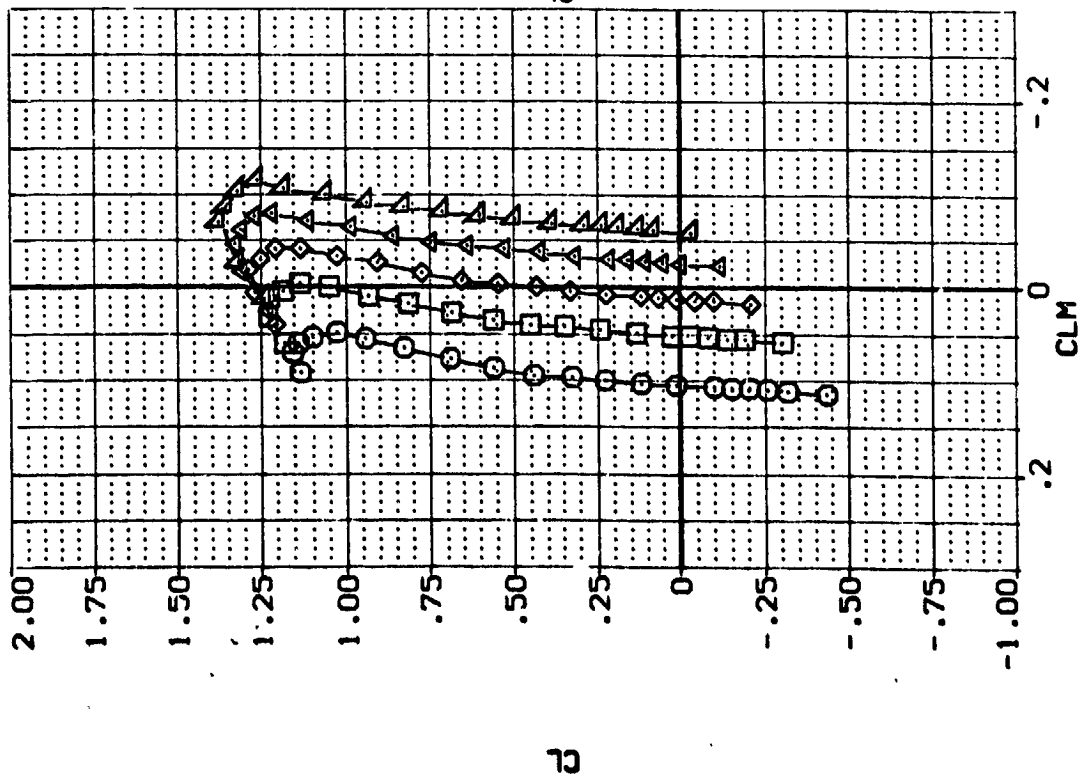


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20



REFERENCE INFORMATION	
SREF	4.4119 INCHES
LREF	19.2299 INCHES
BREF	37.9359 INCHES
YMRP	43.5974 INCHES
ZMRP	15.1875 INCHES
SCALE	.0405 INCHES

ELEV'N	H/BW	SPOBRK	BDFLAP
-5.000	.285	25.000	-12.000
5.000	.285	25.000	-12.000
10.000	.285	25.000	-12.000
15.000	.285	25.000	-12.000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BDZ005)	0A6Z8 B26C9G1S477 8 V116E28V8R5X9
(BDZ001)	0A6Z8 B26C9G1S477 8 V116E28V8R5X9
(BDZ002)	0A6Z8 B26C9G1S477 8 V116E28V8R5X9
(BDZ003)	0A6Z8 B26C9G1S477 8 V116E28V8R5X9
(BDZ004)	0A6Z8 B26C9G1S477 8 V116E28V8R5X9

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

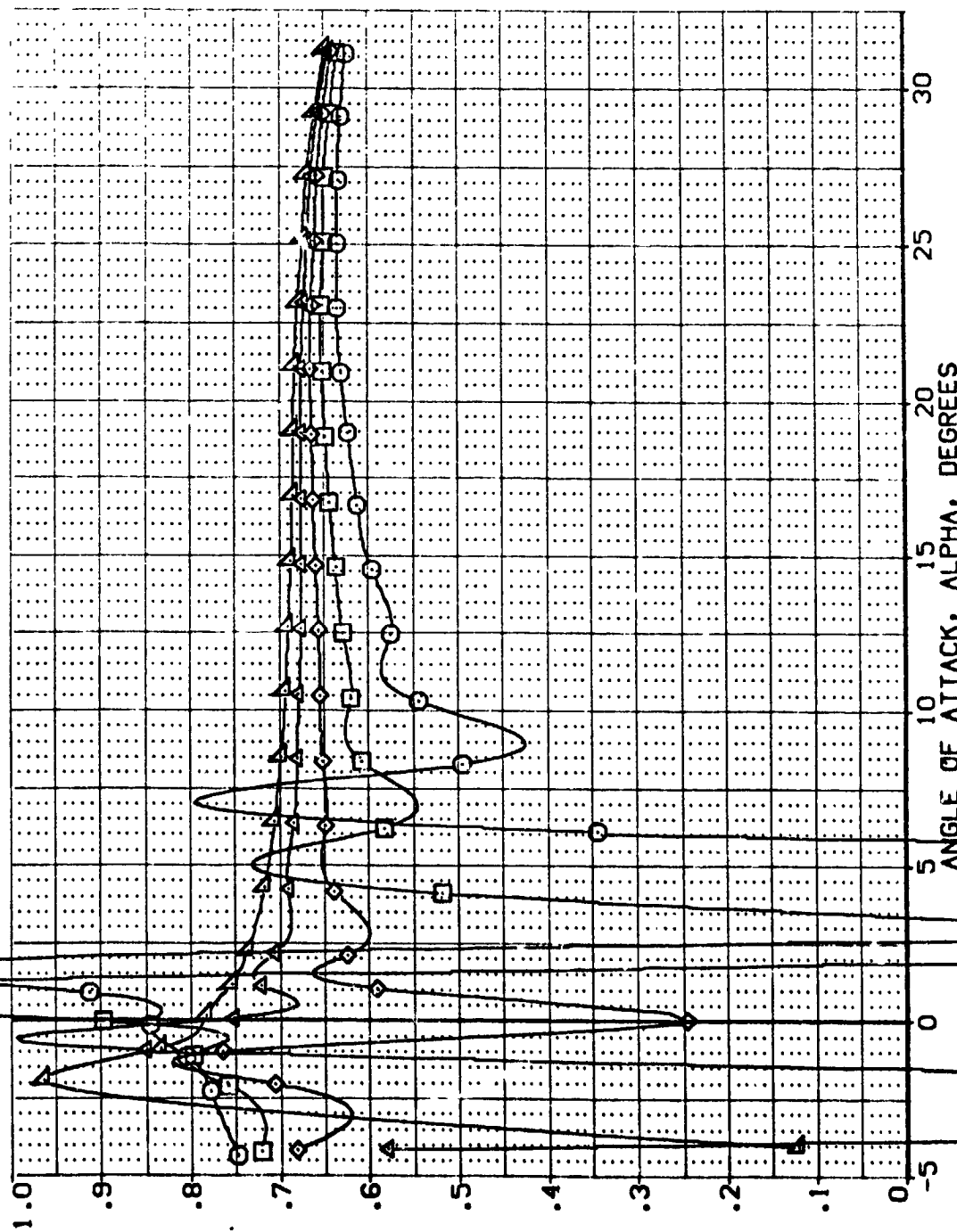


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285  
(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(80Z005)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-5.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z001)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	0.000	.285	25.000	-12.000	LREF 19.7299 INCHES
(80Z002)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	5.000	.285	25.000	-12.000	BREF 37.3359 INCHES
(80Z003)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	10.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(80Z004)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	15.000	.285	25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405 INCHES

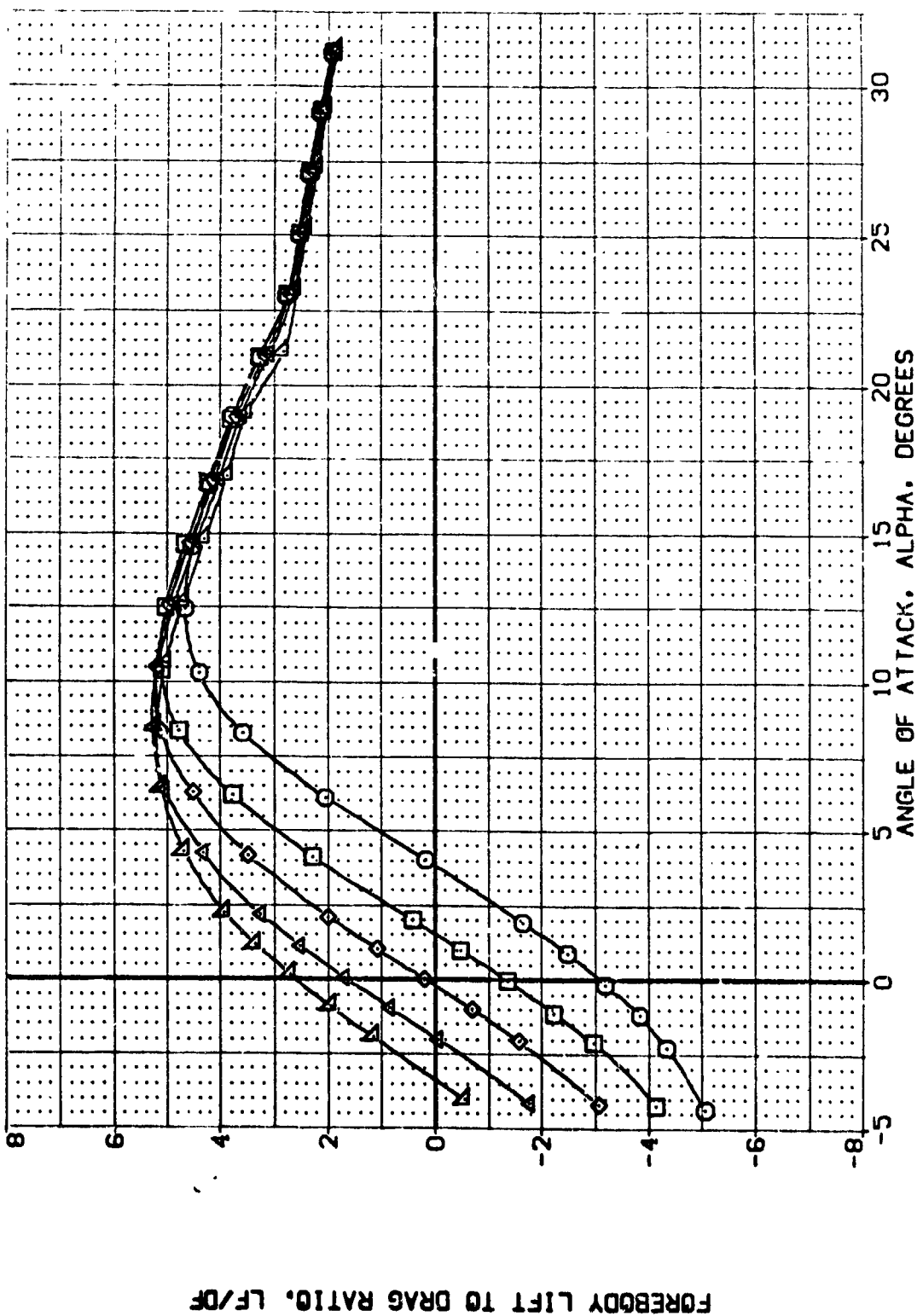


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(M)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SFOBRK	BOFLAP	REFERENCE INFORMATION
(80Z010)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	4.4119 SO.FT.
(80Z009)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	19.2299 INCHES
(80Z008)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	37.9359 INCHES
(80Z007)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	43.5974 INCHES
(80Z006)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	15.0000 INCHES
(80Z001)	OAS28 B26C5G 547F8 V116E28V8R5X9	.285	25.000	-12.000	15.1875 INCHES
					.0405 SCALE

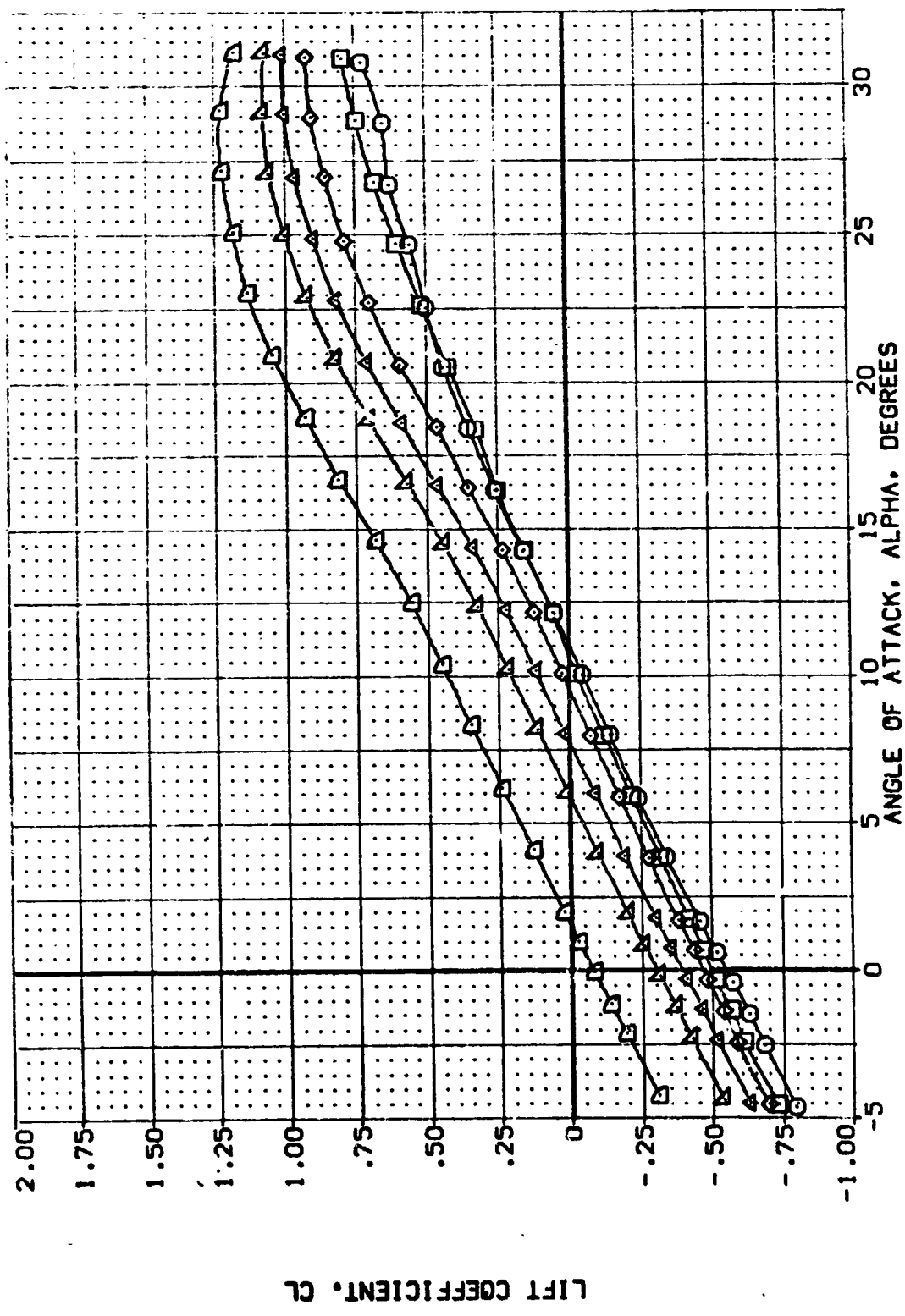


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPORBK	BOFLAP	REFERENCE INFORMATION
(B02010)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(B02009)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-30.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(B02008)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(B02007)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(B02006)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-10.000	.285	25.000	-12.000	ZMRP 15.0000 INCHES
(B02001)	0A5Z8 B26C9G1S47F8 V116E28V8RS4S9	-10.000	.285	25.000	-12.000	SCALE .0405

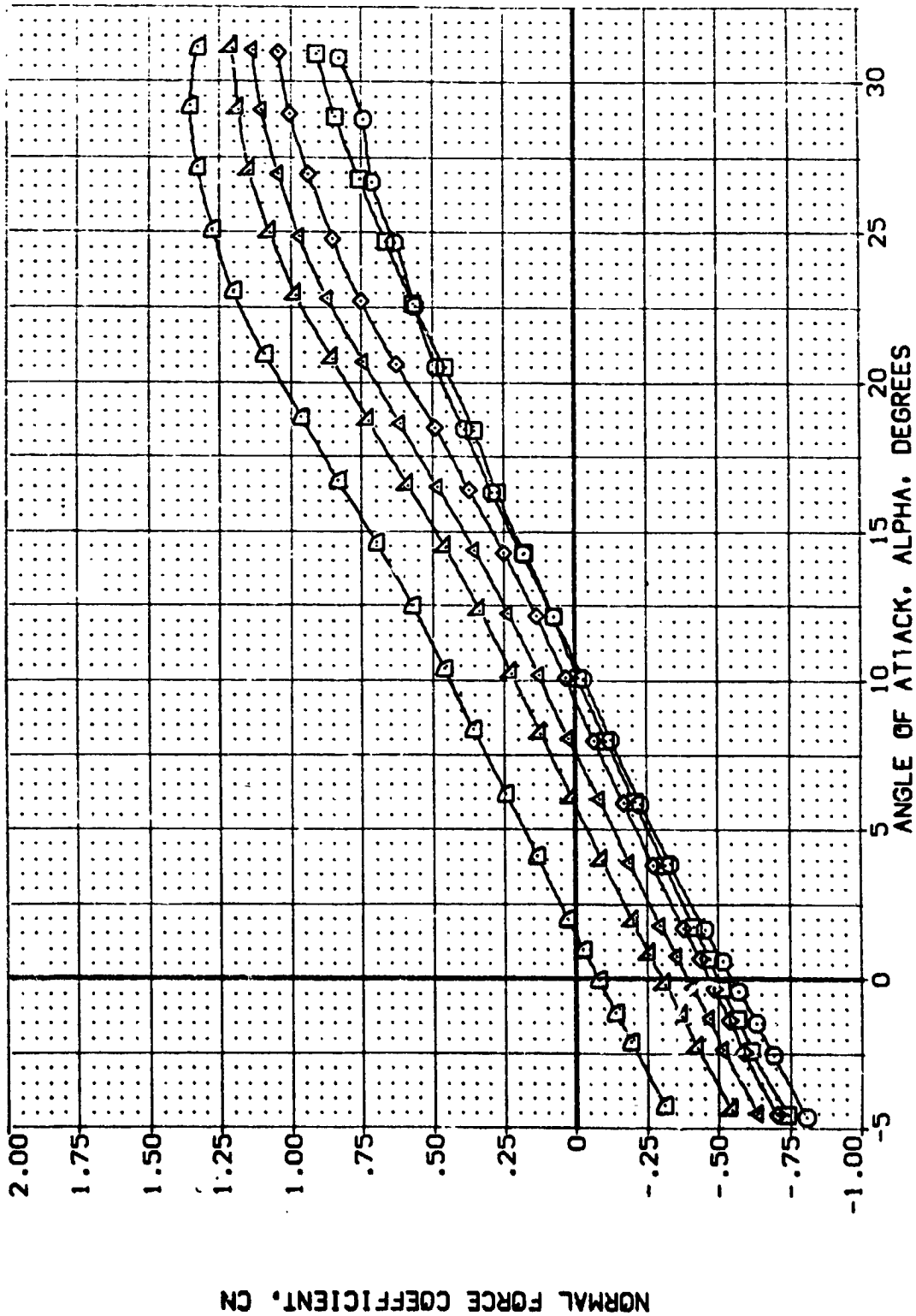


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SFOBRK	BOFLAP	REFERENCE INFORMATION
(BD2010)	0A62B B26C9G1SMTF8 V11E28VBR5X9	-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(BD2009)	0A62B B26C9G1SMTF8 V11E28VBR5X9	-30.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(BD2008)	0A62B B26C9G1SMTF8 V11E28VBR5X9	-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(BD2007)	0A62B B26C9G1SMTF8 V11E28VBR5X9	-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(BD2006)	0A62B B26C9G1SMTF8 V11E28VBR5X9	-10.000	.285	25.000	-12.000	YMRP .0000 INCHES
(BD2001)	0A62B B26C9G1SMTF8 V11E28VBR5X9	.000	.285	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

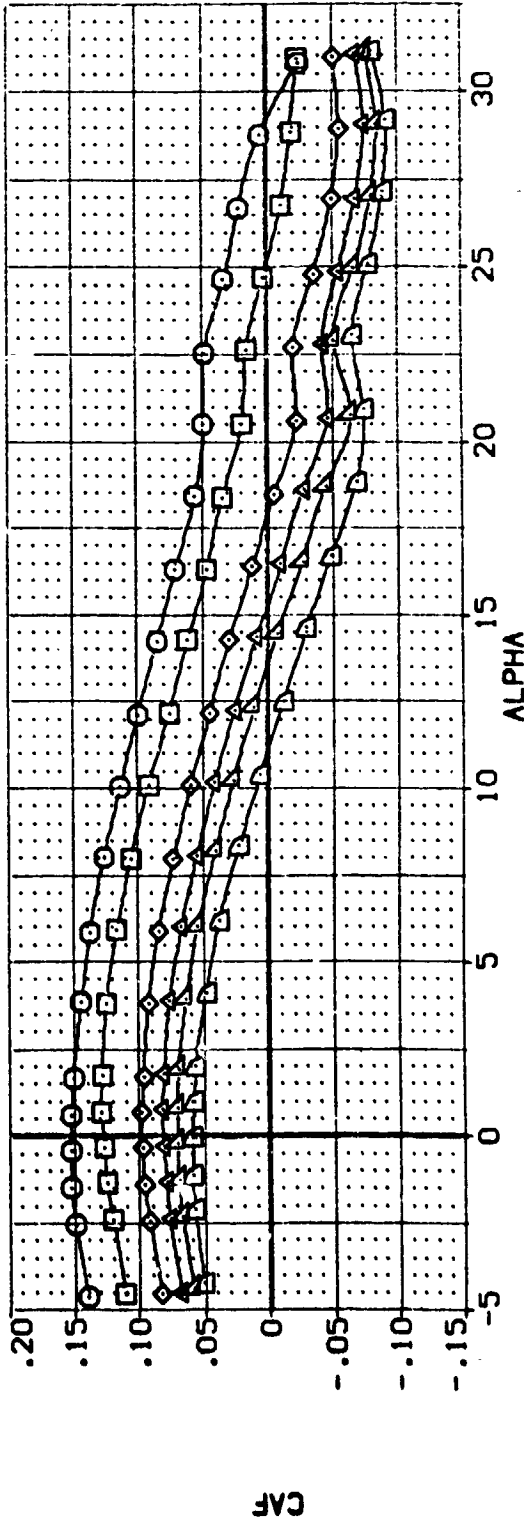
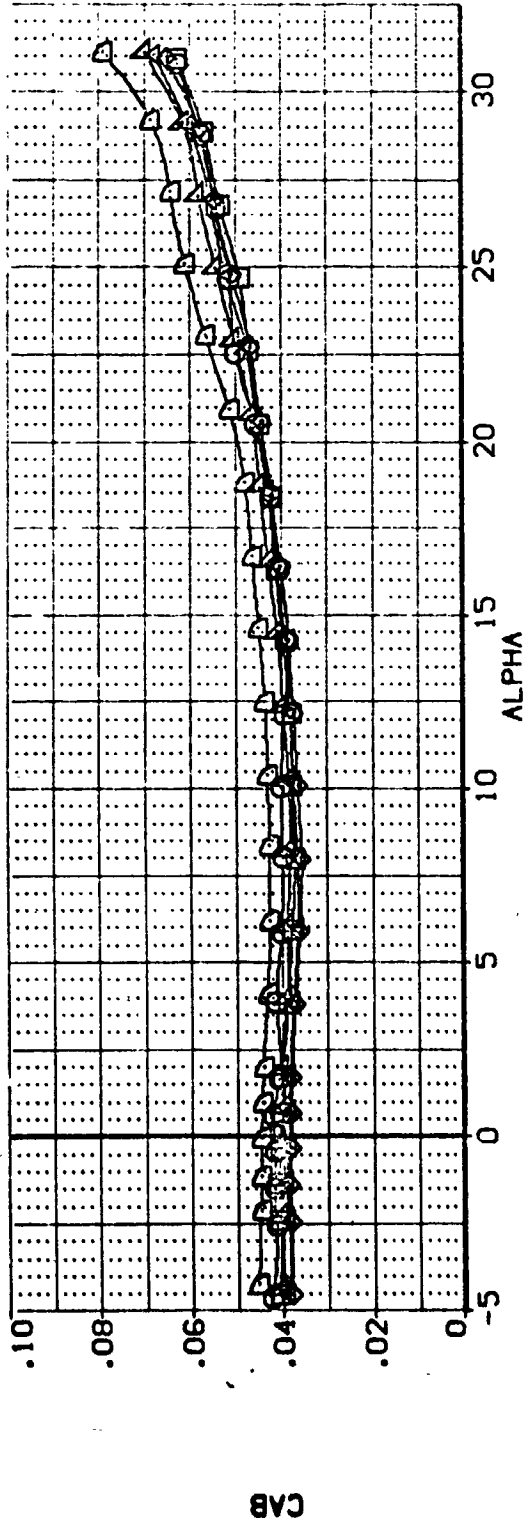


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(802010)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(802009)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	LREF 19.2299 INCHES
(802008)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	BREF 37.9359 INCHES
(802007)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	XMRP 43.5974 INCHES
(802006)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	ZMRP .0000 INCHES
(802001)	0A628 B26C9G1SMTF8 V116E28V8R5X9	.285	25.000	-12.000	SCALE 15.1875 INCHES
					SCALE .0405

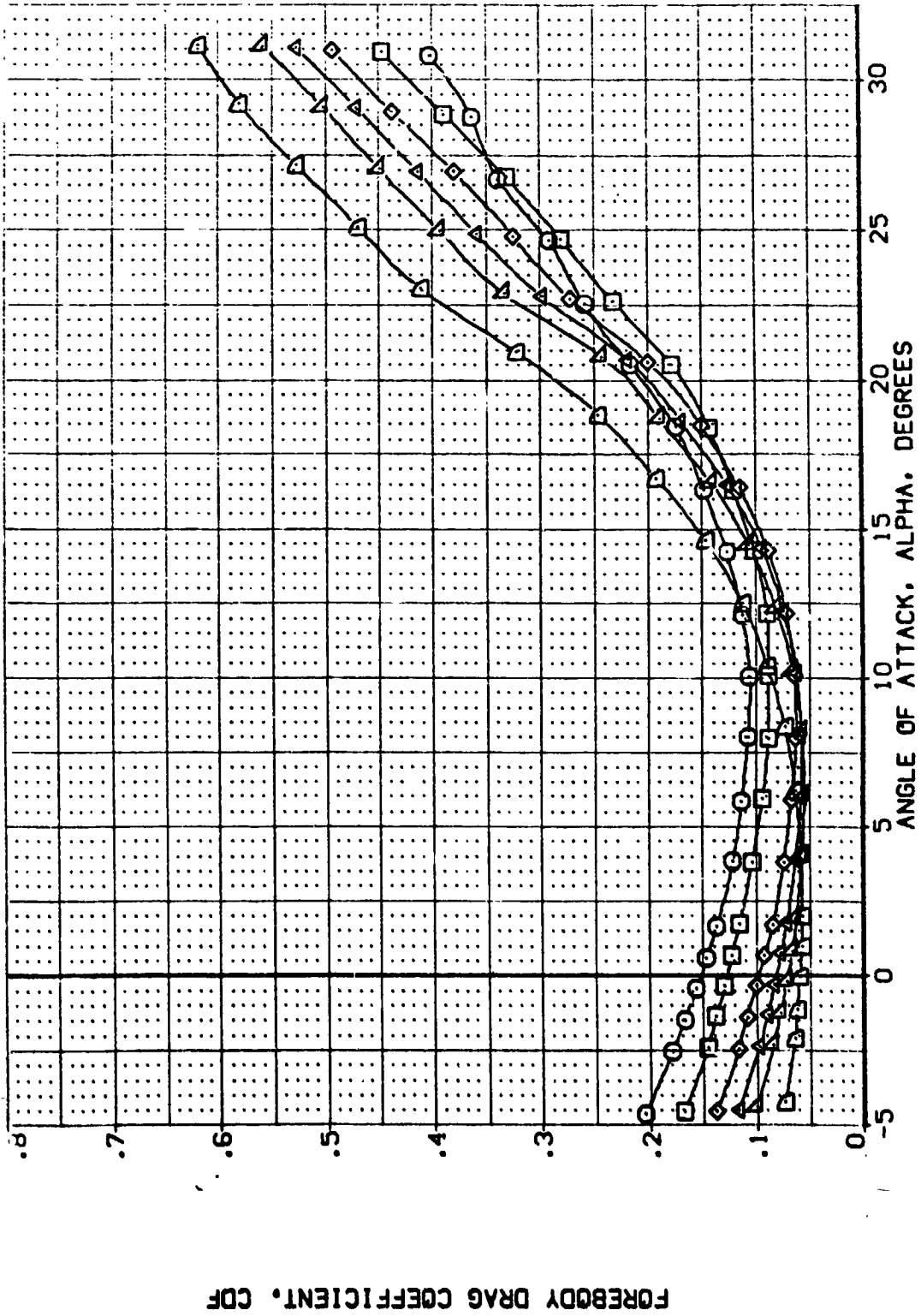


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/WB	SFOBRK	BOFLAP	REFERENCE INFORMATION
(80Z010)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z009)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-30.000	.285	25.000	-12.000	LREF 19.2299 INCHES
(80Z008)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(80Z007)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(80Z006)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-10.000	.285	25.000	-12.000	YMRP 15.0000 INCHES
(80Z001)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	.000	.285	25.000	-12.000	ZMRP 15.1873 INCHES
						SCALE .0405

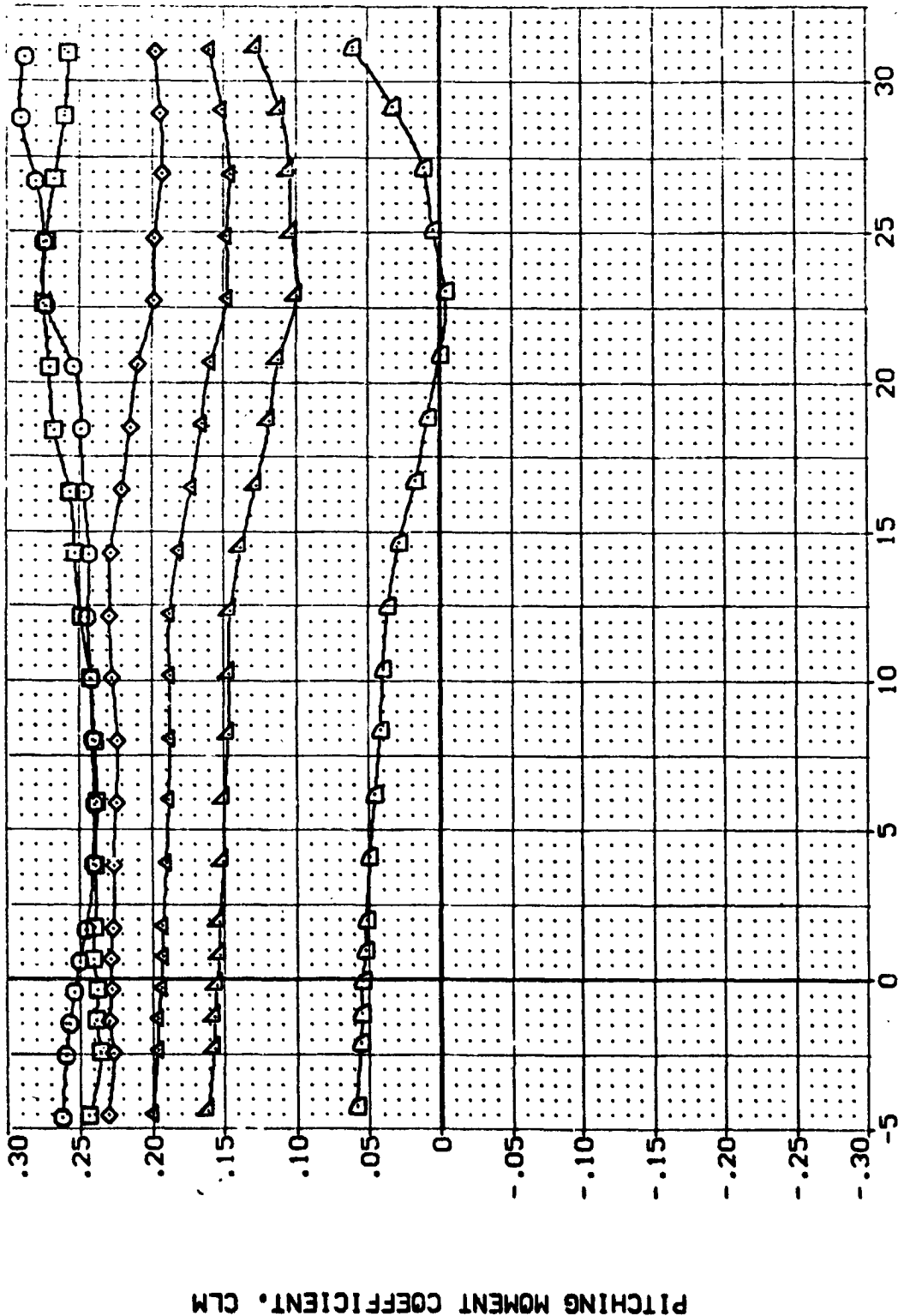


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/WB = 0.285

(A)MACH = .20

ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
-30.000	.285	25.000	-12.000	LREF 19.2299 INCHES
-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
-10.000	.285	25.000	-12.000	YMRP 0.000 INCHES
.000	.285	25.000	-12.000	ZMRP 15.1375 INCHES
				SCALE .0475 SCALE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z010)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9
(80Z008)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9
(80Z009)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9
(80Z007)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9
(80Z006)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9
(80Z001)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9

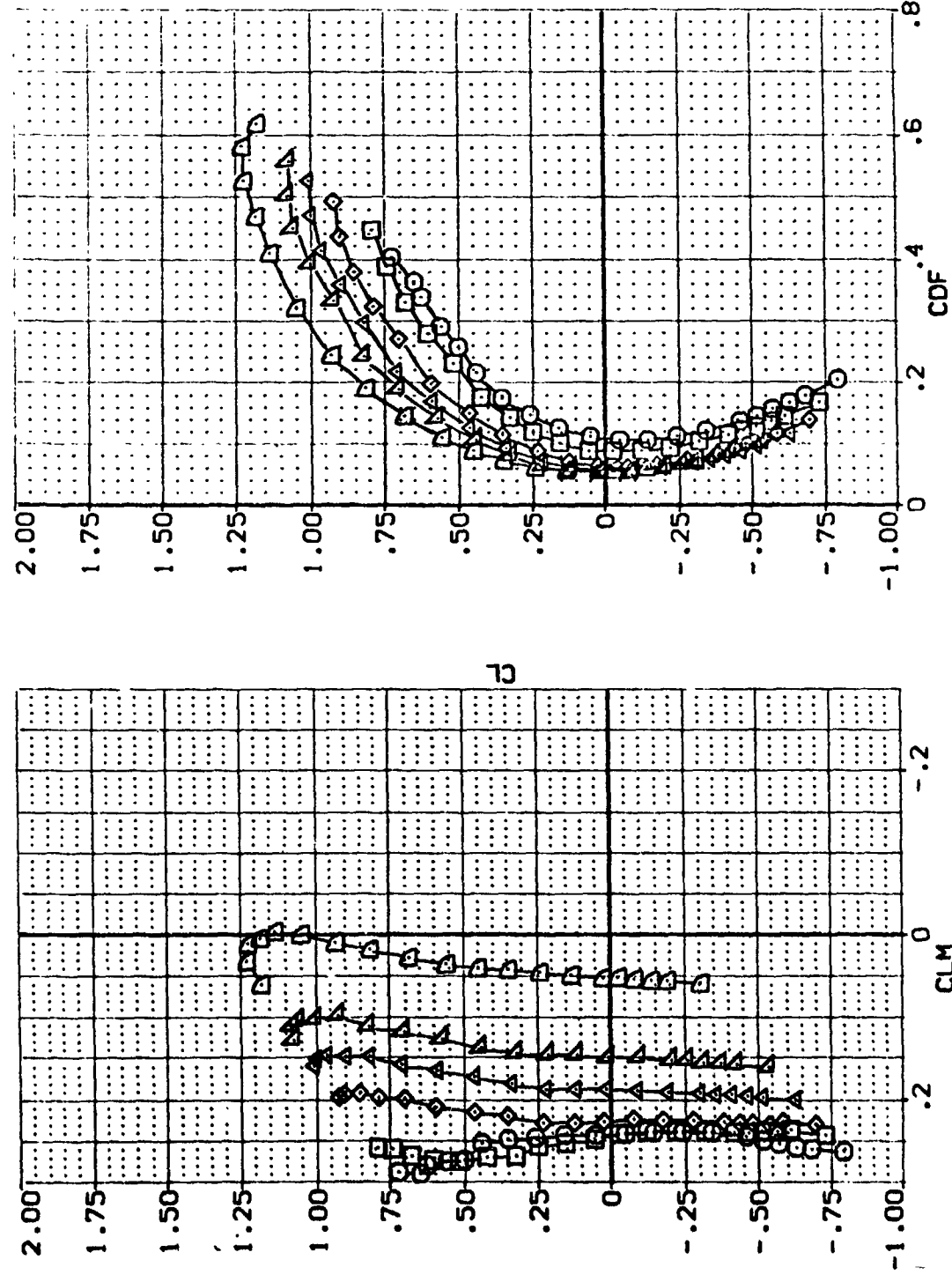


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20



ELEVON	H/BW	SPDBRK	BOFLAP	REFERENCE INFORMATION
-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
-30.000	.285	25.000	-12.000	LREF 19.2299 INCHES
-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
-10.000	.285	25.000	-12.000	YMRP .0000 INCHES
.000	.285	25.000	-12.000	ZMRP 15.1875 INCHES
				SCALE .0405

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z010)	B26C9G1S4778
(80Z009)	V1E28E8C9S19
(80Z008)	V1E28E8C9S19
(80Z007)	V1E28E8C9S19
(80Z006)	V1E28E8C9S19
(80Z005)	V1E28E8C9S19
(80Z004)	V1E28E8C9S19
(80Z003)	V1E28E8C9S19
(80Z002)	V1E28E8C9S19
(80Z001)	V1E28E8C9S19

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

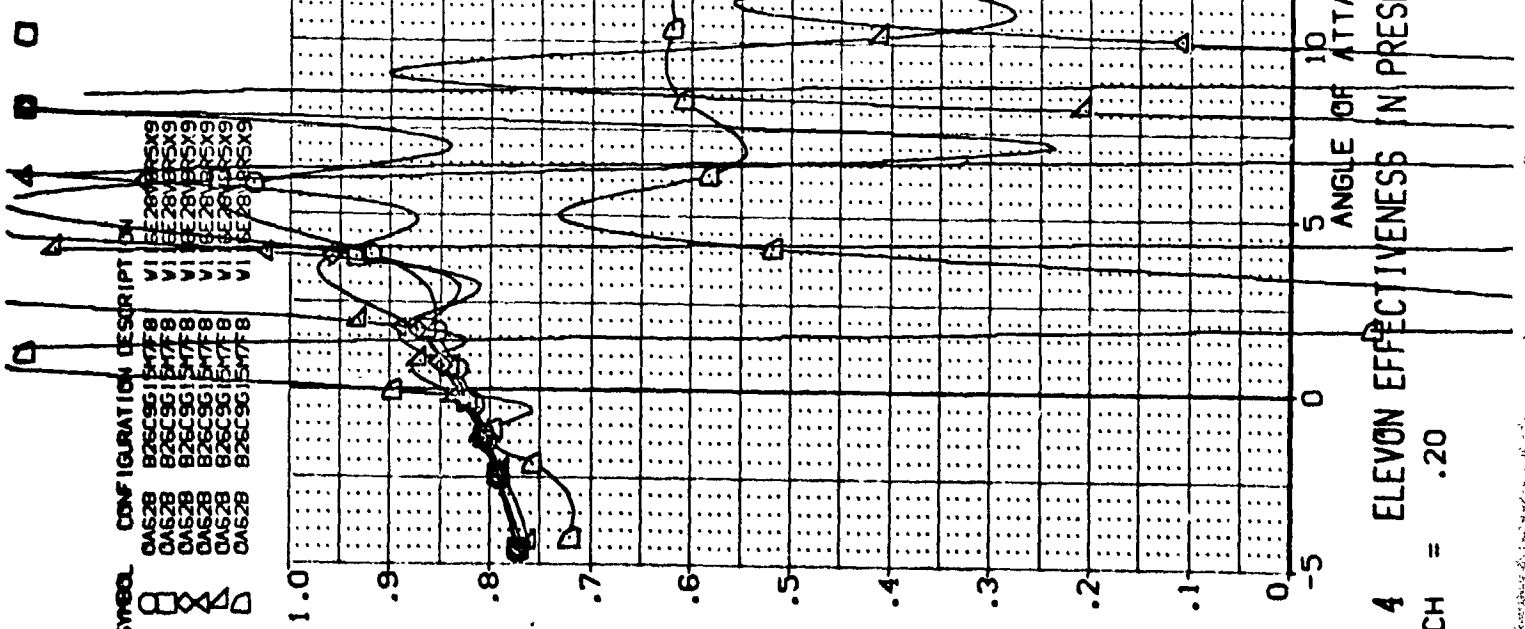


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(B02001)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	-40.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(B02002)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	-30.000	.285	25.000	-12.000	LREF 19.2298 INCHES
(B02003)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	-20.000	.285	25.000	-12.000	BREF 37.9359 INCHES
(B02004)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	-15.000	.285	25.000	-12.000	XMRP 43.5974 INCHES
(B02005)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	-10.000	.285	25.000	-12.000	ZMRP .0000 INCHES
(B02006)	0A628 B26C9G 5M7F8 V1 6E28V8R5X9	.000	.285	25.000	-12.000	SCALE .0405

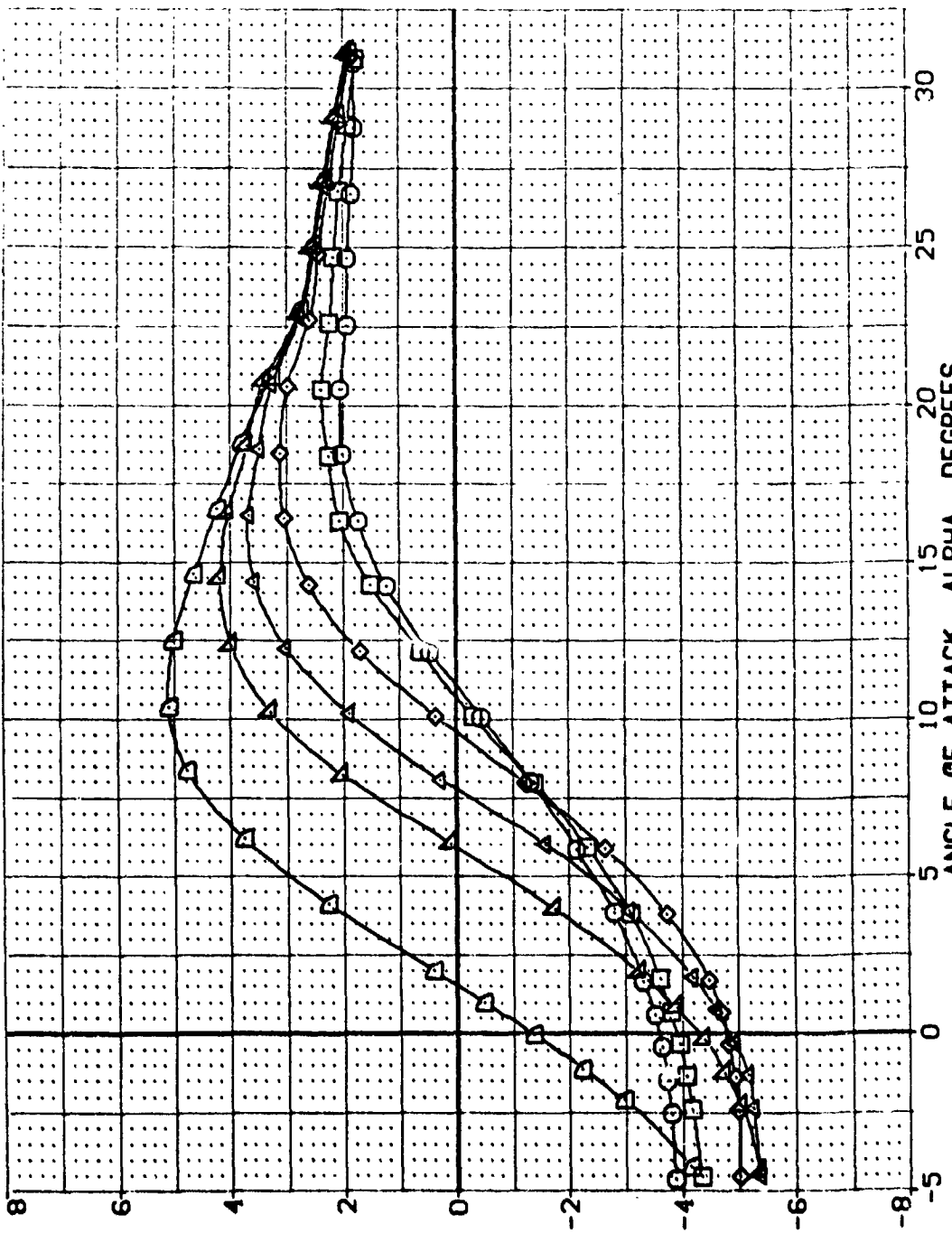


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(A)MACH = .20

0A628 826C9G15M7F8 W116E28V8R5X9 (1DZ010)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.000	DELTVN	DELTVN	SREF	SO.FT.
MACH	.200	BETA	.000	LREF	INCHES
BOFLAP	-12.000	ALLRON	-40.000	BREF	INCHES
RUDDER	.000	SPORBK	-20.000	XMRP	INCHES
H/BW	.285	DELTVN	-10.000	YMRP	INCHES
		DELTVN	10.000	ZMRP	INCHES
		DELTVN	15.000	SCALE	SCALE
		DELTVN	10.000		

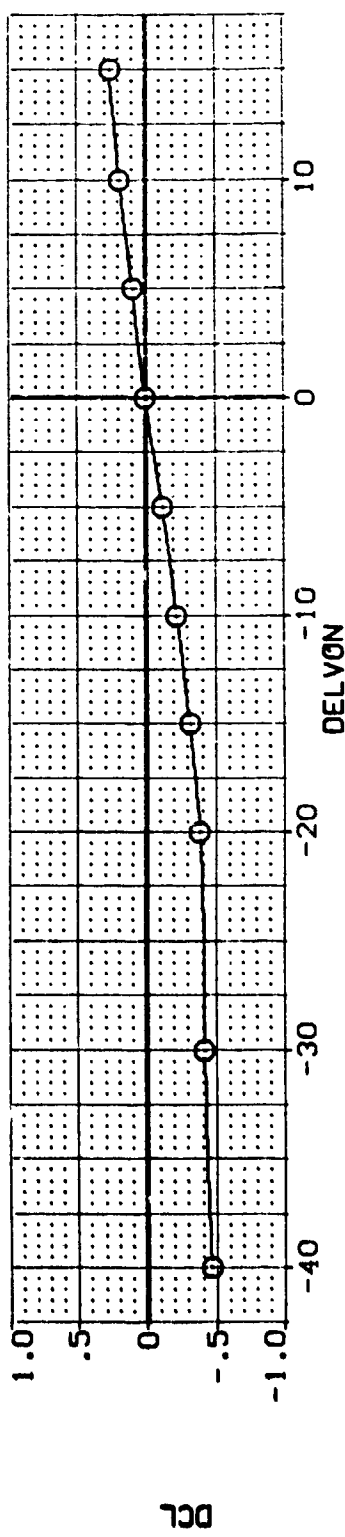
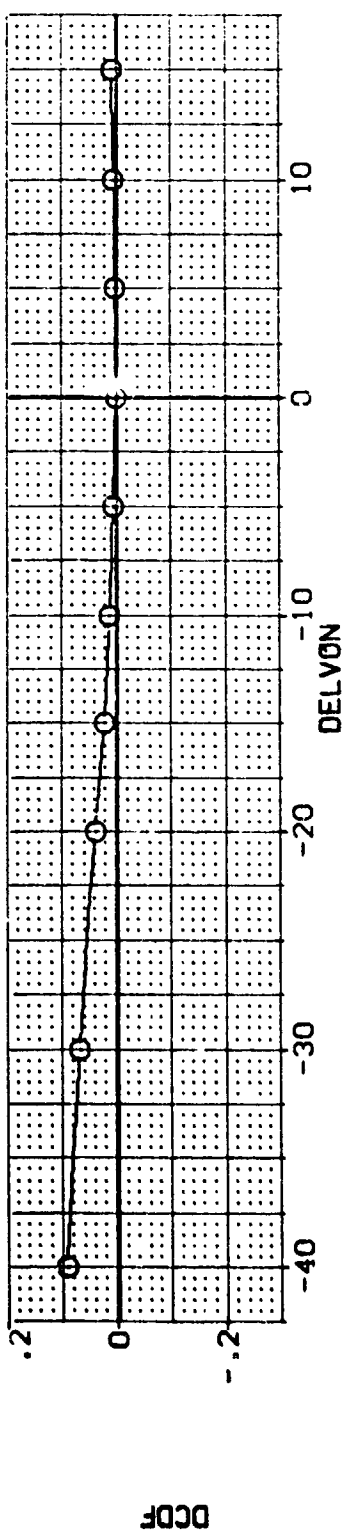
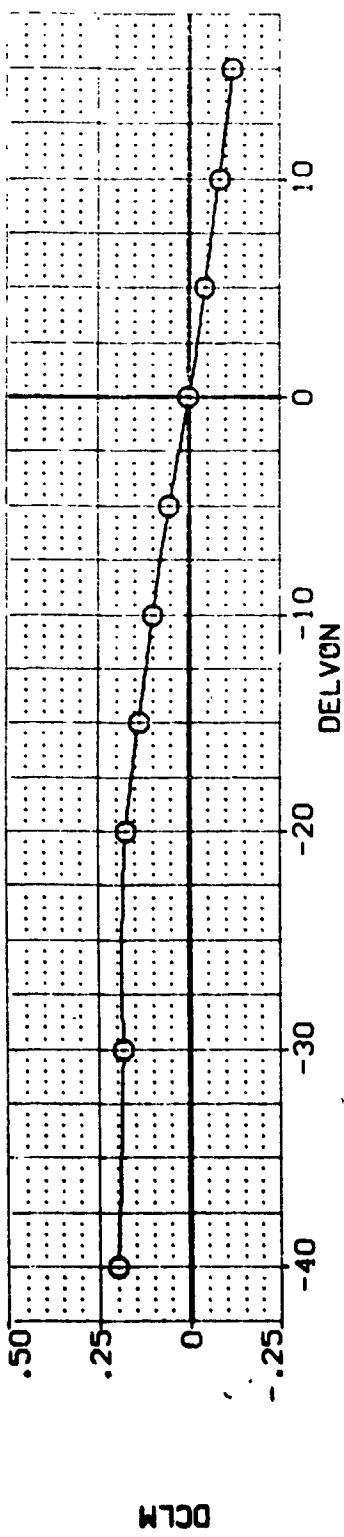


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ010)

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		DELTVN		DATASET		DELTVN		SREF		REFERENCE INFORMATION	
0		5.000				.200	BETA	.000	1DZ010	-40.000		1DZ009	-30.000	LREF	4.4119	SO.FT.	19.2293	INCHES	
				BDFLAP		-12.000	A1LRON	.000	1DZ008	-20.000		1DZ007	-15.000	SREF	37.5359	INCHES			
				RUDDER		.000	SPOBRK	25.000	1DZ006	-10.000		1DZ005	-5.000	XPRP	43.5974	INCHES			
				H/BW		.285			1DZ001	10.000		1DZ002	5.000	ZPRP	.0000	INCHES			
									1DZ003			1DZ004	15.000	SCALE	15.1875	INCHES			
														SCALE	.0405	SCALE			

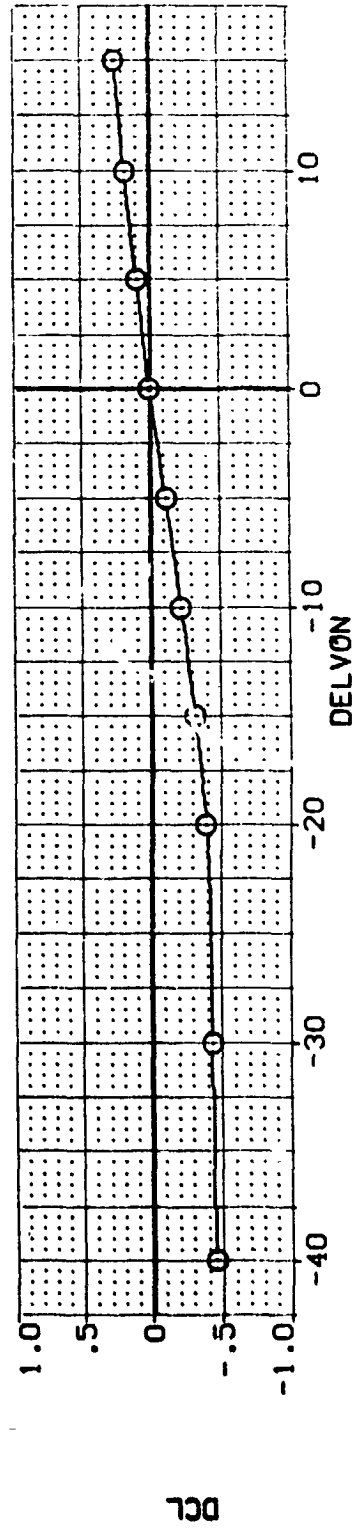
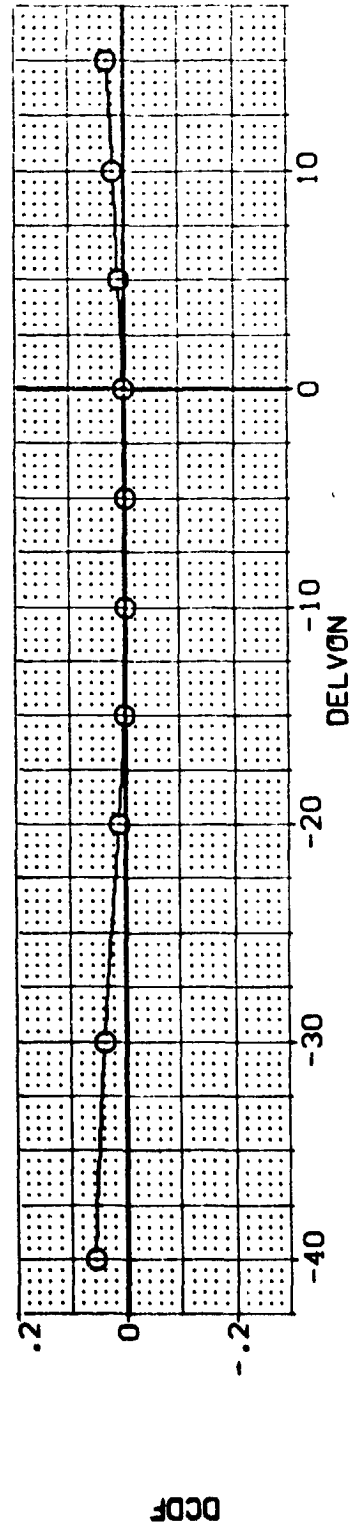
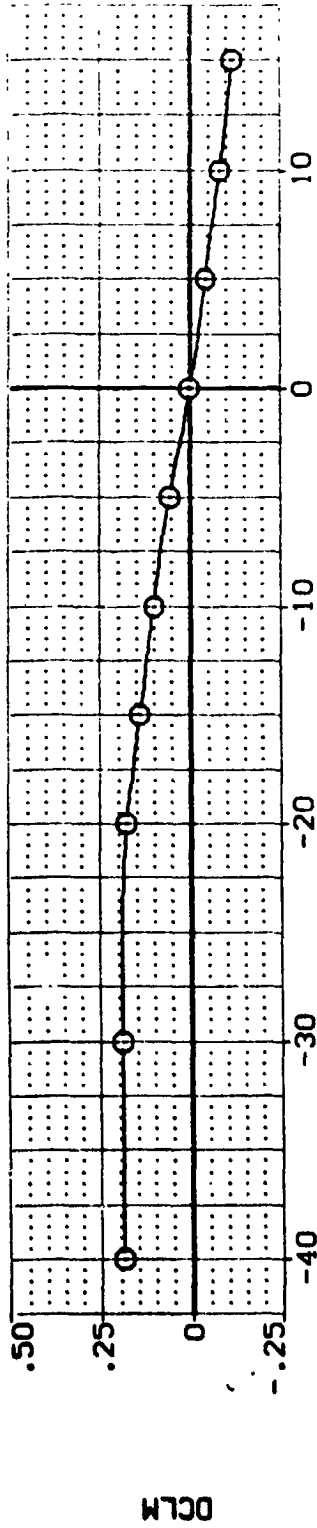


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285



(1DZ010)

GA628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	ALPHA	10.000	MACH	.000	DATASET	DELTVN	SREF
	BETA	.200	AILRON	.000	1DZ009	-30.000	LREF
	AILRON	-12.000	SPOBRK	25.000	1DZ007	-15.000	BREF
	SPOBRK	.000			1DZ005	-5.000	XMRP
	H/BW	.285			1DZ002	5.000	ZMRP
					1DZ004	15.000	SCALE
							SO.FT.
							4.4119
							19.2299
							37.9359
							43.5274
							.0000
							15.1875
							.0405

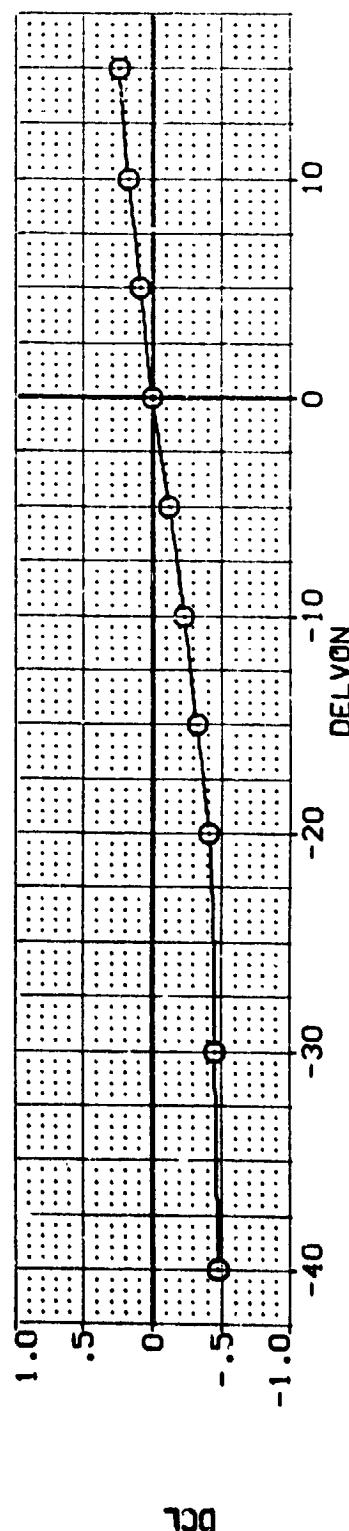
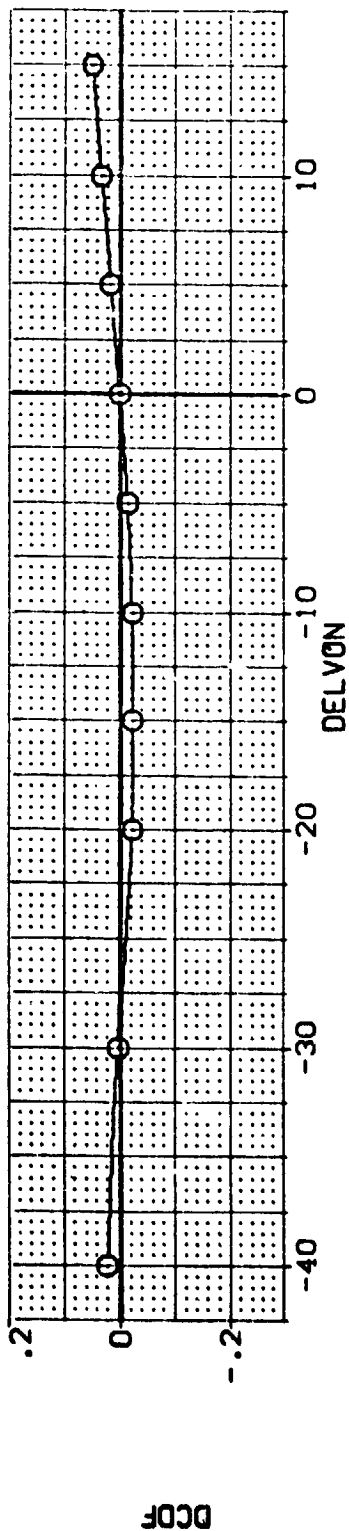
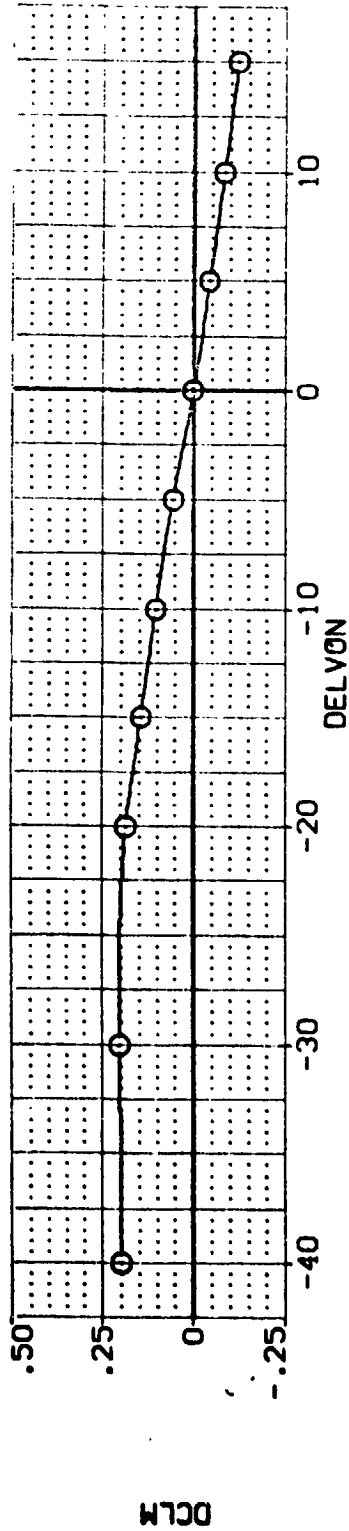


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(1DZ010)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	ALPHA	15.000	BETA	.000	IC2010	DELTVN	SREF
	MACH	.200	A1LRON	-40.000	ID2009	-30.000	LREF
	BOFLAP	-12.000	SPOBRK	-20.000	ID2007	-15.000	BREF
	RUDDER	.000		-10.000	ID2005	-5.000	XTRP
	H/BW	.285		10.000	ID2002	5.000	YTRP
					ID2004	15.000	ZTRP
							SCALE
							4.4119
							19.2299
							37.9359
							43.5974
							.0000
							15.1875
							.0405

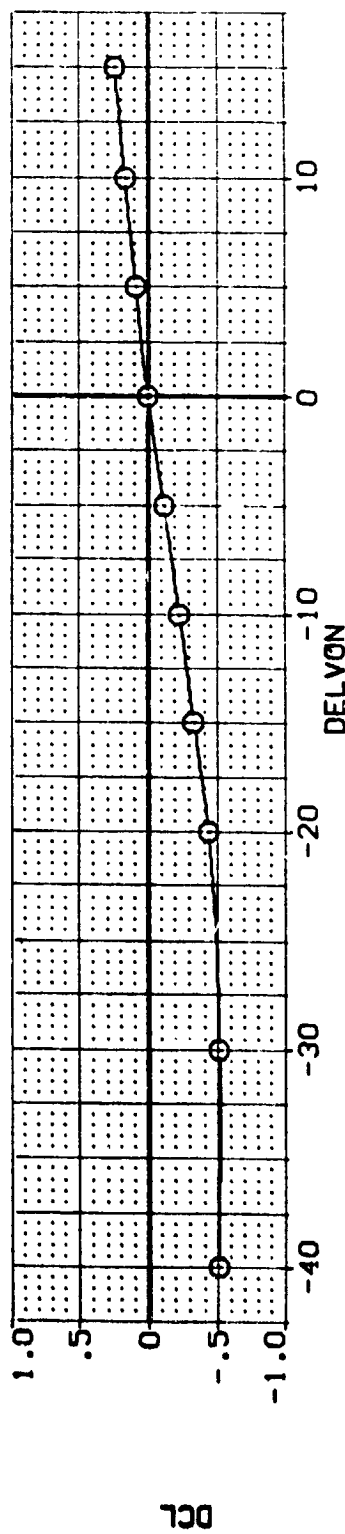
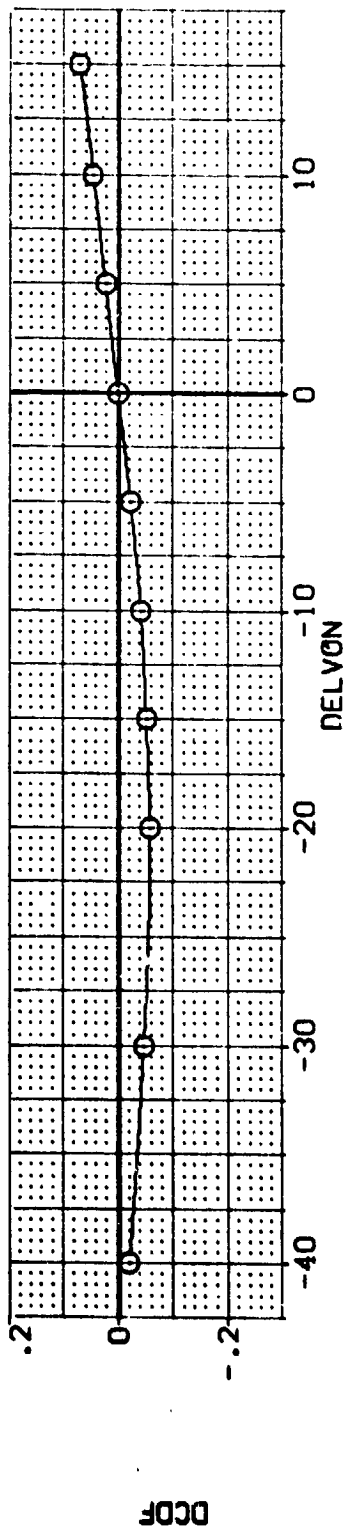
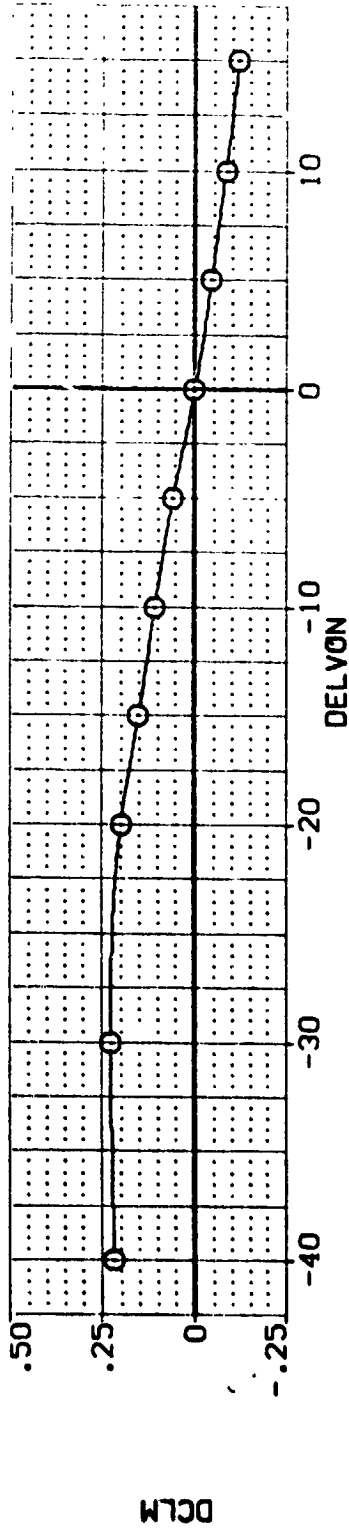


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285



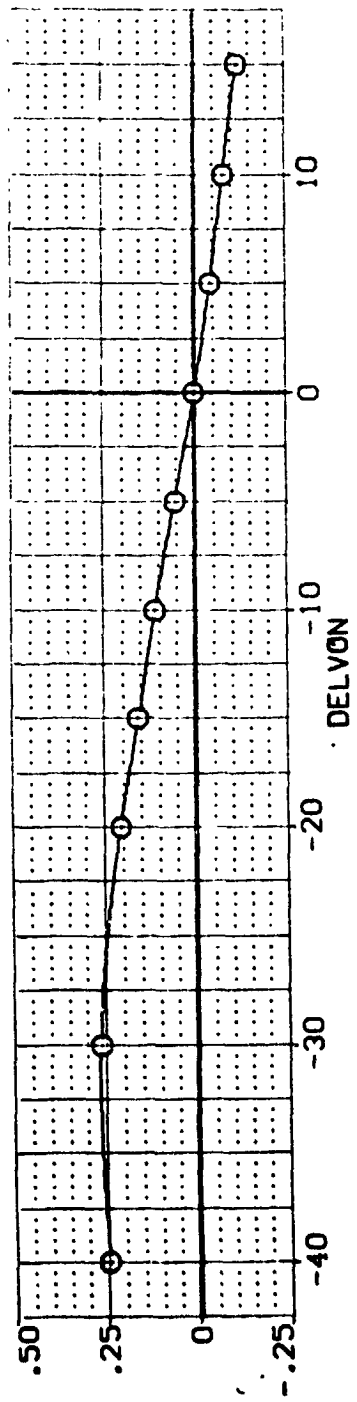
(10Z010)

W116E28V8R5X9

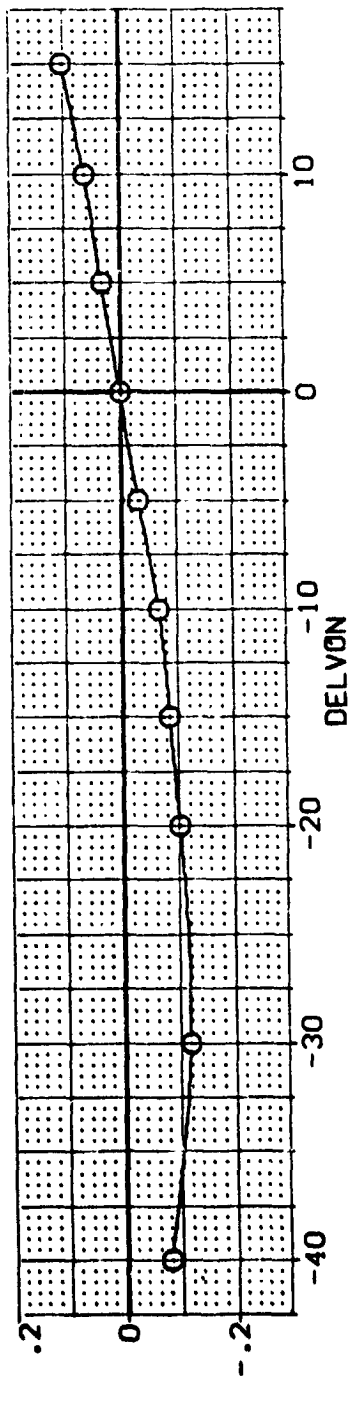
B26C9G15M7F8

0A62B

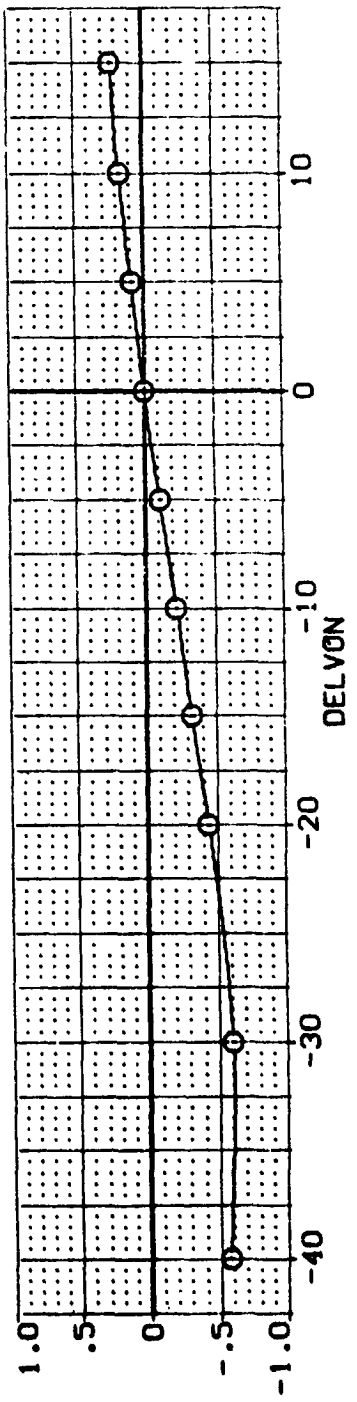
PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
ALPHA	.200	BETA	.000	DELTON	-30.000	SREF	4.4119	50.FT.
MACH	.200	ALLRON	.000	DELTON	-15.000	LREF	19.2299	INCHES
BDFLAP	-12.000	SPDRK	25.000	DELTON	-5.000	BREF	37.9359	INCHES
RUDDER	.000	IDZ001	.000	DELTON	5.000	XPRP	43.5974	INCHES
H/BW	.285	IDZ003	10.000	DELTON	15.000	ZPRP	15.1875	INCHES
		IDZ004		DELTON		SCALE	.0405	SCALE



DCLM



DCDF



DCL

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

0A628 B26C9G15M7F8 W116E28V8R5X9

(1DZ010)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	ALPHA	.200	BETA	.000	DATASET	DELTVN	SREF
	25.000	-12.000	A11LRN	.000	1DZ009	-30.000	LREF
		.000	SPOBRK	25.000	1DZ007	-15.000	BREF
		.285			1DZ005	-5.000	XMRP
					1DZ002	5.000	YMRP
					1DZ004	15.000	ZMRP
							SCALE
							4.4119
							19.2299
							37.9359
							43.5974
							0.0000
							15.1875
							SCALE
							.0405

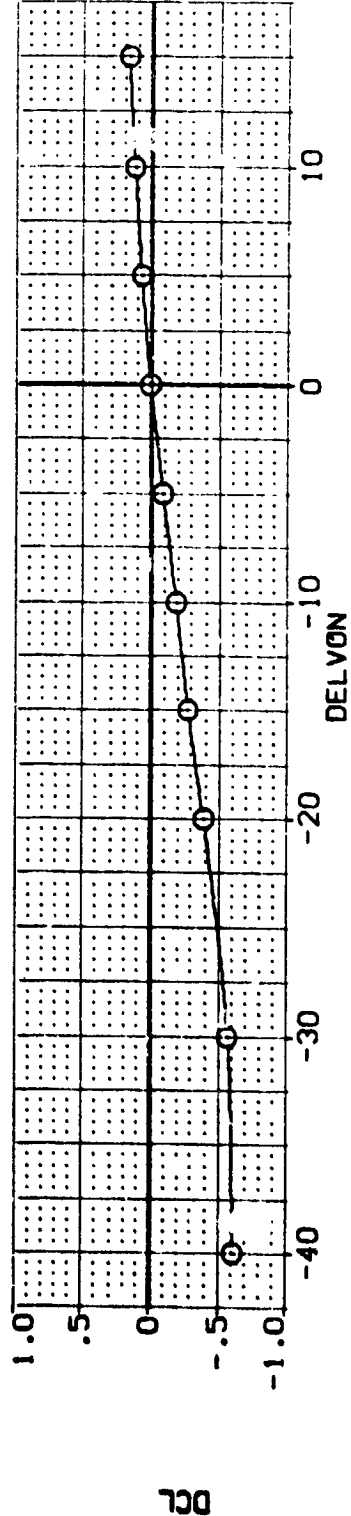
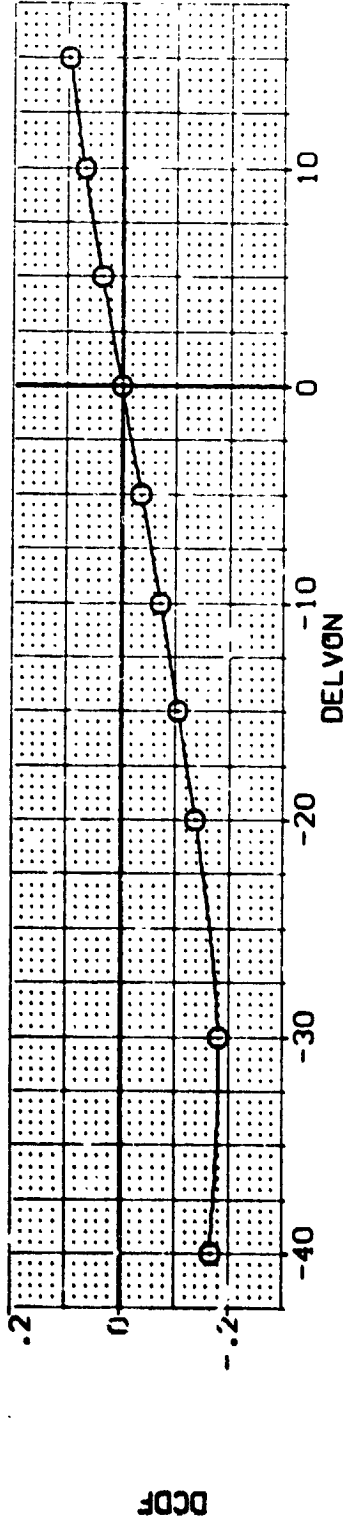
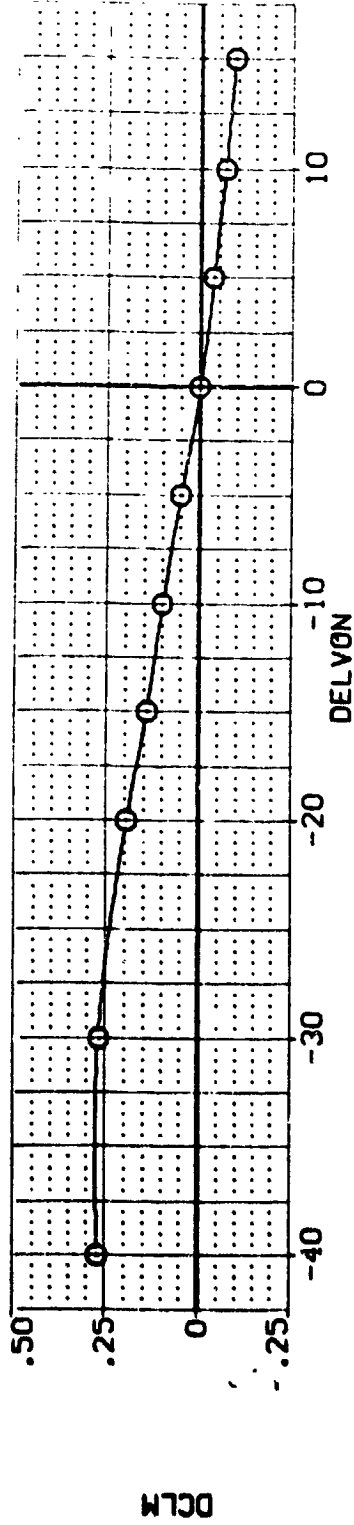


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

0A628 B26C9G15M78 W116E28V8R5X9 (1DZ010)  
 ALPHA 30.000 MACH .200 PARAMETRIC VALUES  
 SYMBL O BOFLAP .000 BETA .000 DATASET .000 DELVON DATA SOURCE  
 RUDDER .000 AILRON .000 IDZ010 -40.000 DELVON SREF  
 H/BW .285 SPOBRK 25.000 IDZ008 -20.000 LREF 19.2299  
 IDZ006 -10.000 IDZ007 -15.000 BREF 37.9149  
 IDZ005 5.000 YHRP 43.5674  
 IDZ004 10.000 ZHRP .0000  
 IDZ003 15.000 SCALE 15.1875  
 IDZ002 15.000 SCALE .0405  
 IDZ001 15.000 SCALE .0405

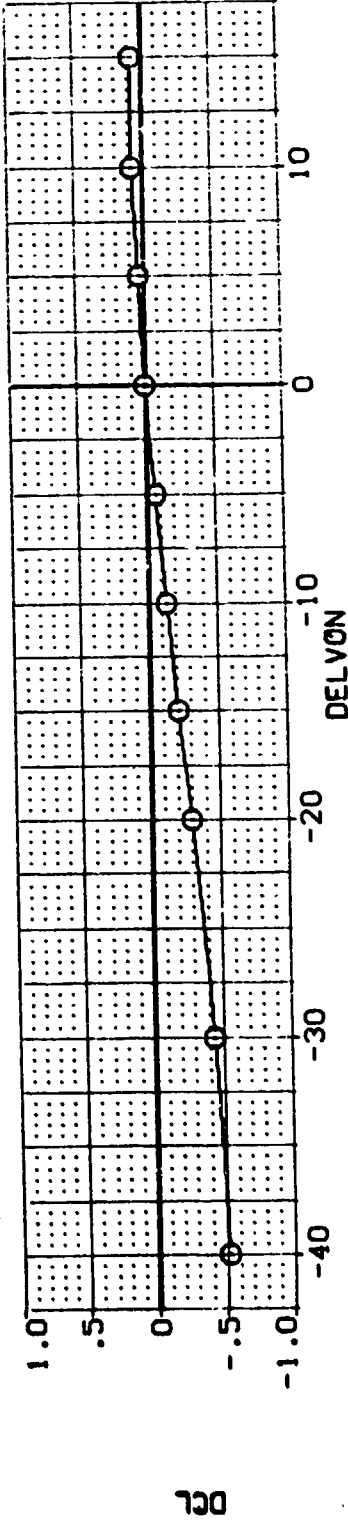
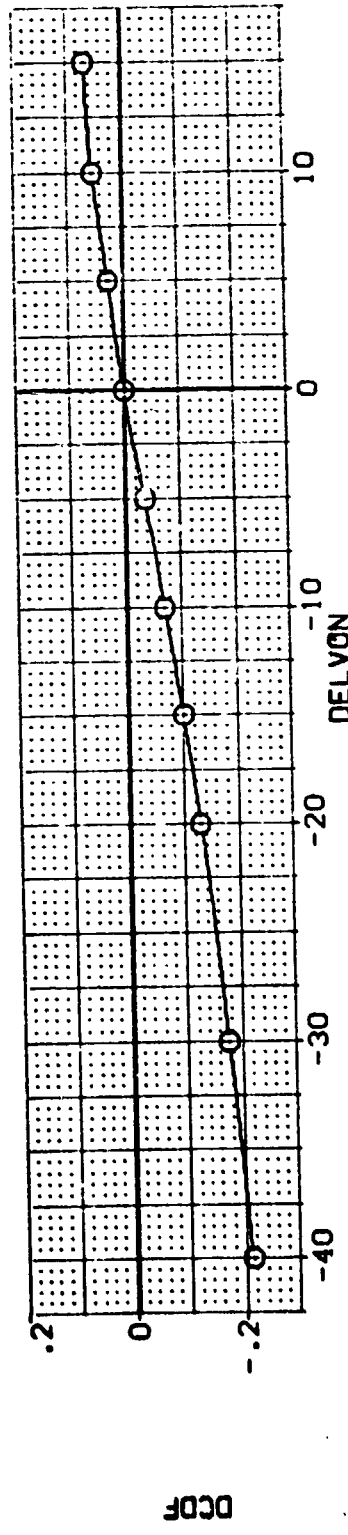
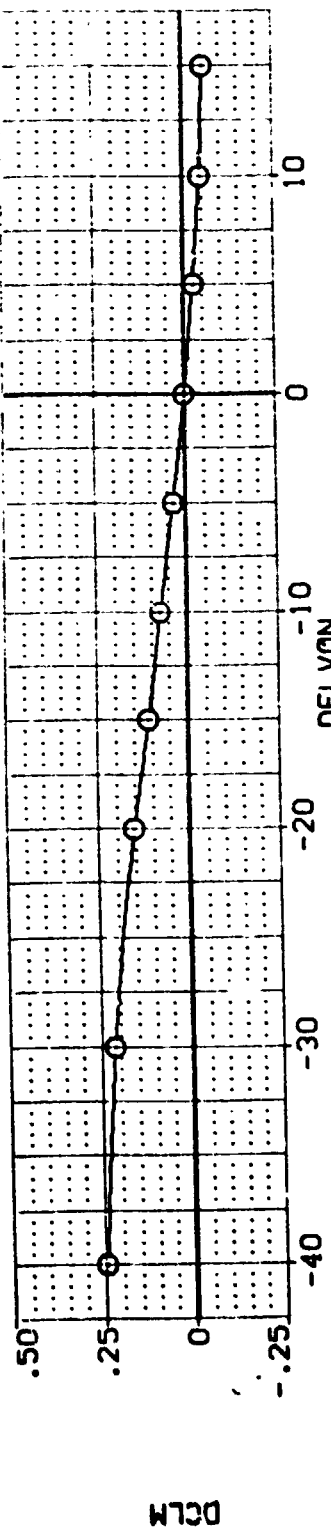


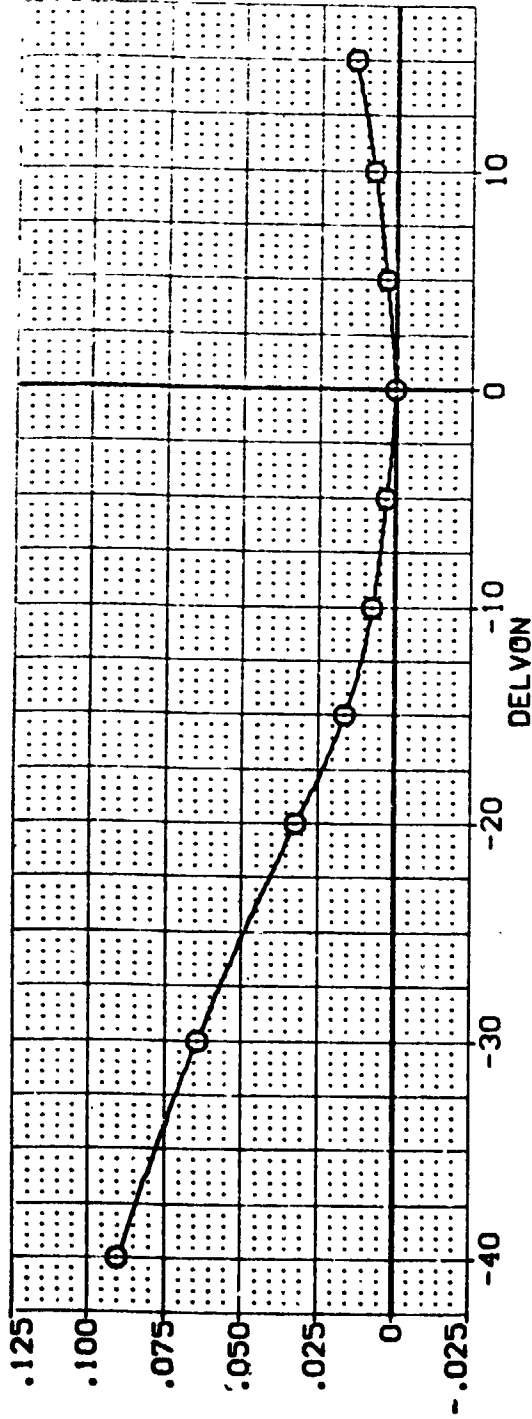
FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285



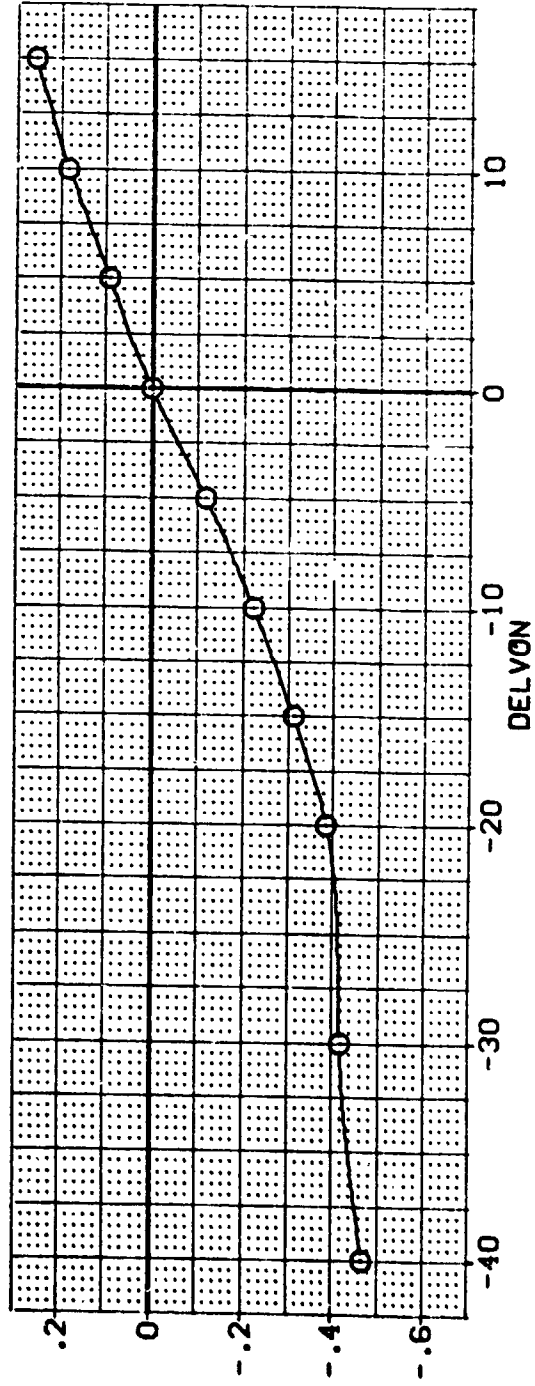
(1DZ010)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	SREF	REFERENCE INFORMATION
O	.000	.200	.000	.000	.285	BETA -12.000 ALTRON .000 SPDRK .285	DELTVN -40.000 -20.000 -10.000 10.000	IDZ010 IDZ008 IDZ006 IDZ001 IDZ003	IDZ009 IDZ007 IDZ005 IDZ002 IDZ004	-30.000 -15.000 5.000 15.000 SCALE	LREF 37.9359 XTRP 43.5974 YTRP .0000 ZTRP 15.1875 SCALE .0405	SO. FT. INCHES INCHES INCHES INCHES SCALE



DCA



DCN

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(10Z010)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	5.000	DELVON	10.000	SREF	4.4119
MACH	.200	DATASET	.000	LREF	19.2298
BOFLAP	-12.000	10Z010	-40.000	BREF	37.9359
RUDDER	.000	10Z008	-20.000	XTRP	43.5974
H/BW	.285	10Z006	-10.000	YTRP	.0000
		10Z001	10.000	ZTRP	15.1875
		10Z003	10.000	SCALE	.0405

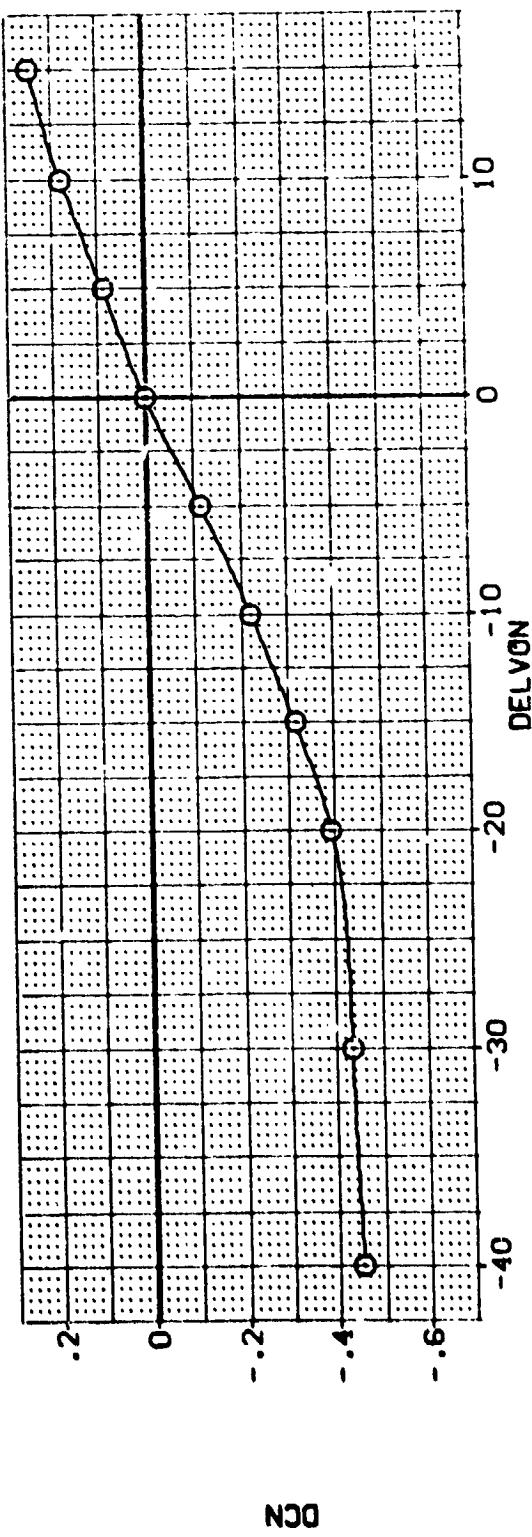
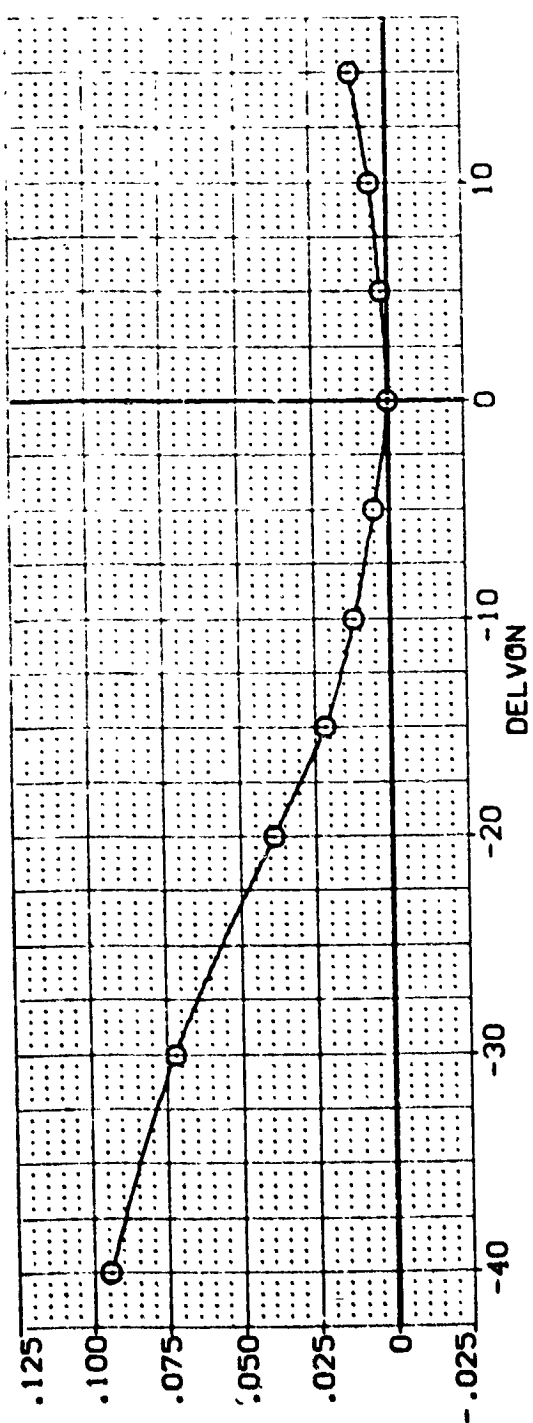


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

0A628 B28C9G15M7F8 W116E28V8R5X9

(10Z010)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE	DATASET	DELTVN	SREF	REFERENCE INFORMATION	
O	10.000	BOFLAP	.200	BETA	.000	10Z009	-30.000	LREF	4.4119	SO. FT.
		RUDER	-12.000	A1LRON	.000	10Z010	-15.000	BREF	19.2299	INCHES
		H/BW	.000	SPDRFX	25.000	10Z007	-5.000	XMRP	37.9359	INCHES
			.285			10Z005	-10.000	YMRP	43.5974	INCHES
						10Z001	.000	ZMRP	0.000	INCHES
						10Z003	10.000	SCALE	15.1875	SCALE
									.0405	

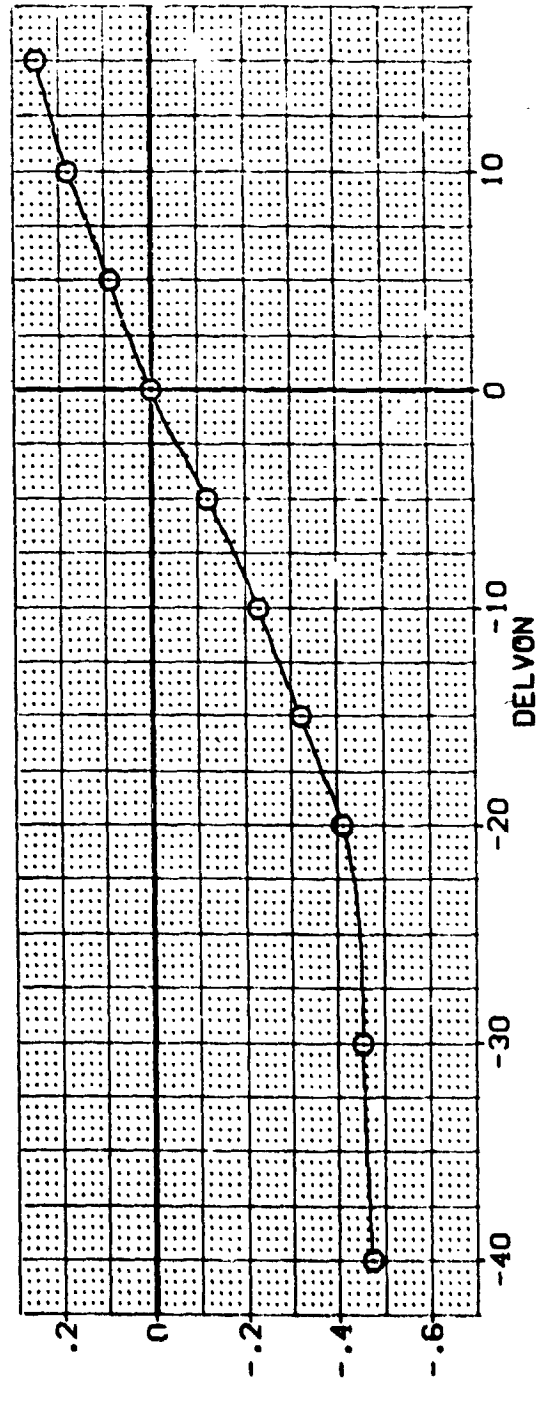
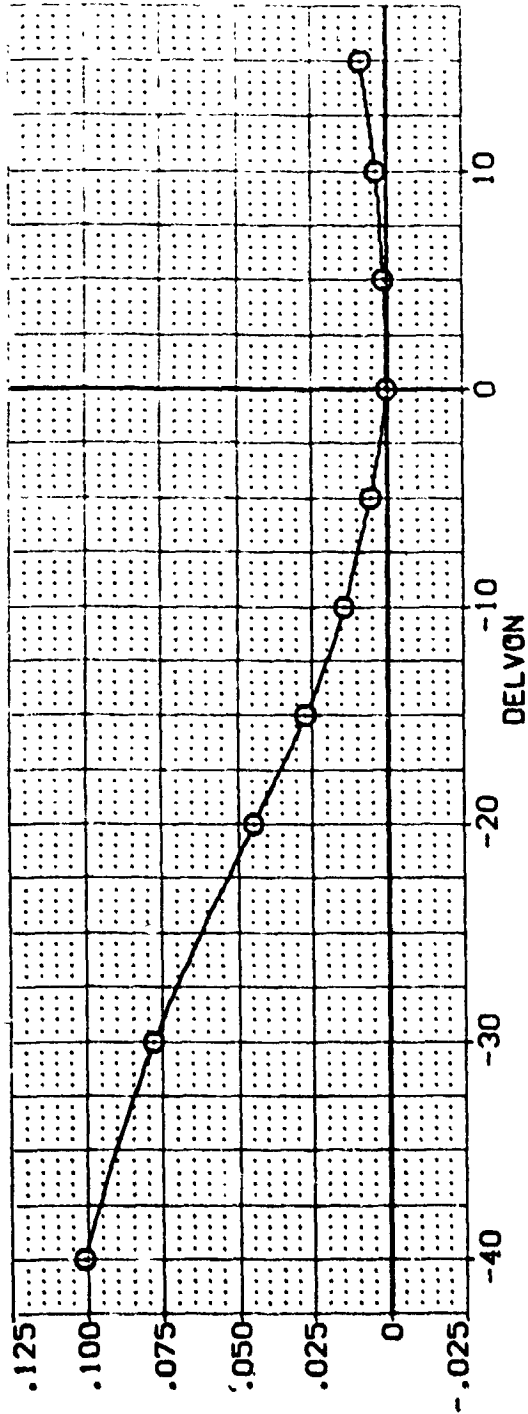


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

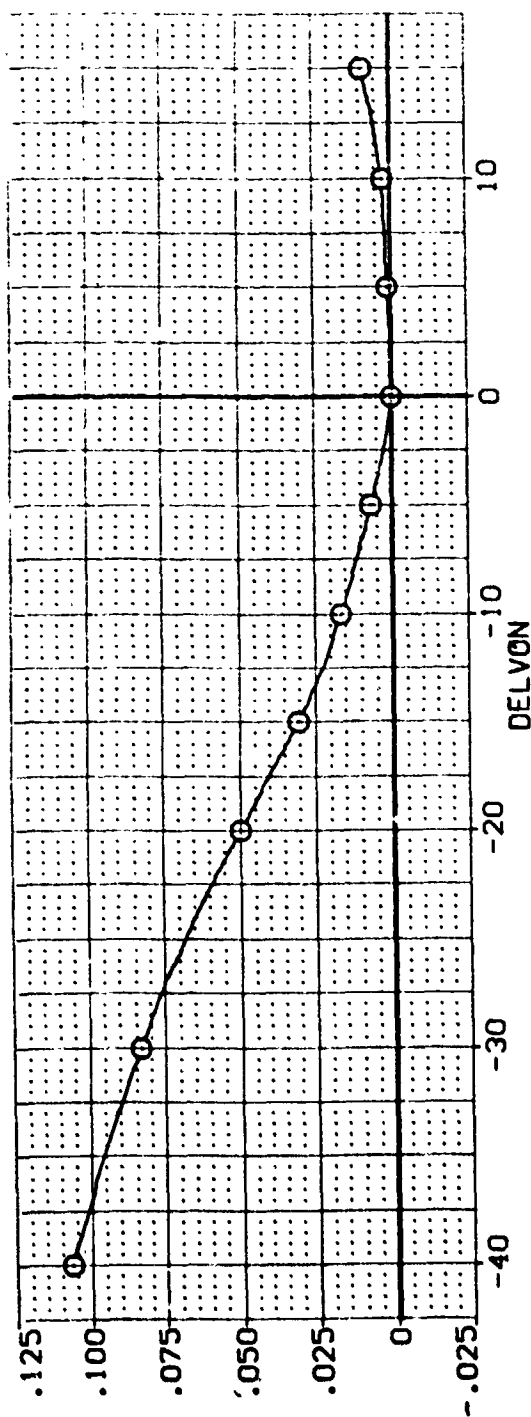




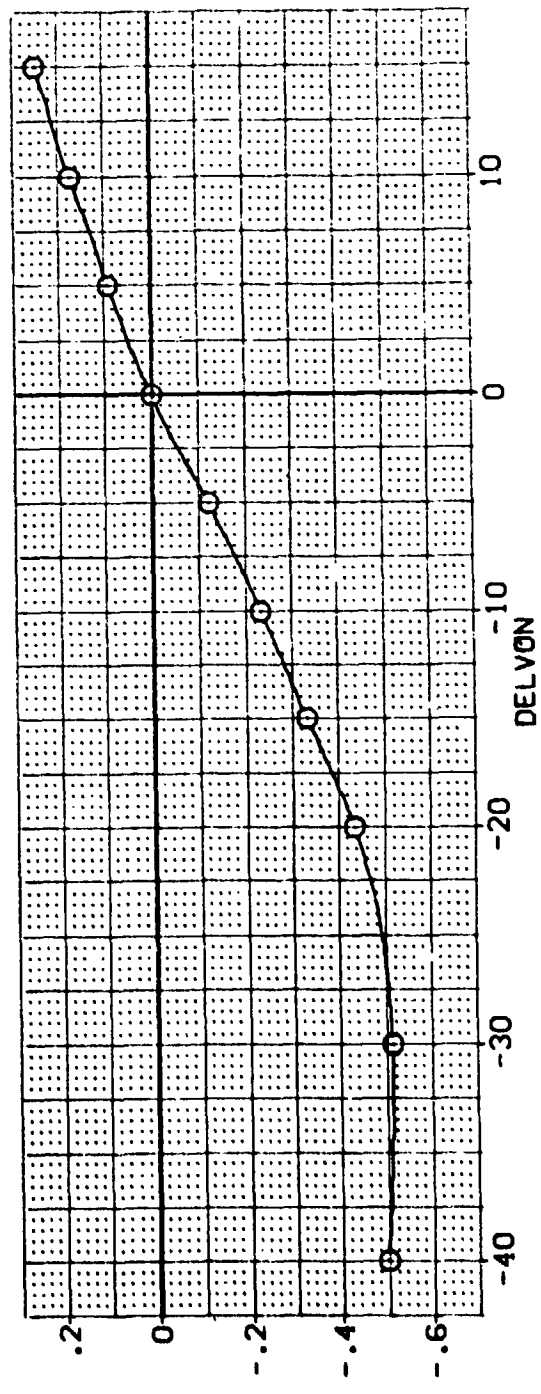
(10Z010)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION								
ALPHA	15.000	MACH	.200	BETA	.000	DELTON	-40.000	SREF	4.4119	SO FT	19.2299	
BOFLAP	-12.000	A1LRON	.000	DELTON	-20.000	LREF	-20.000	BREF	37.935	INCHES	43.5974	
RUDDER	.000	SPDRK	25.000	DELTON	-10.000	XMRP	5.000	XMRP	.0000	INCHES	15.1875	
H/BW	.285	DELTON	10.000	DELTON	10.000	ZMRP	5.000	ZMRP	15.1875	INCHES	SCALE	.0405
		DELTON	10.000	DELTON	10.000	SCALE	15.000	SCALE				



DCA



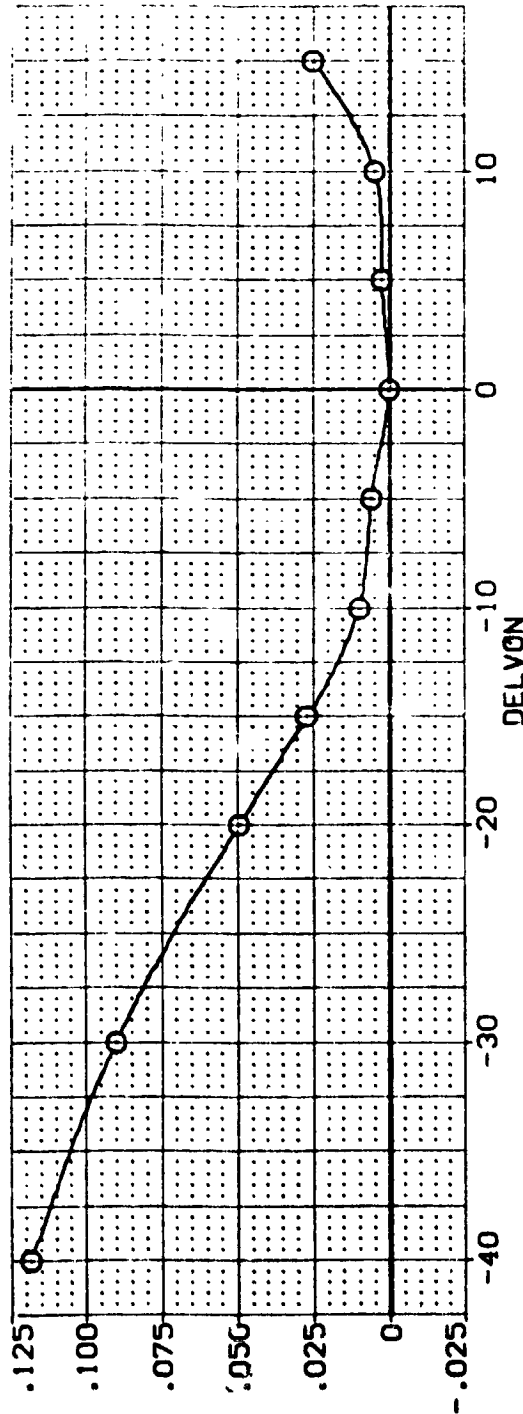
DCN

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

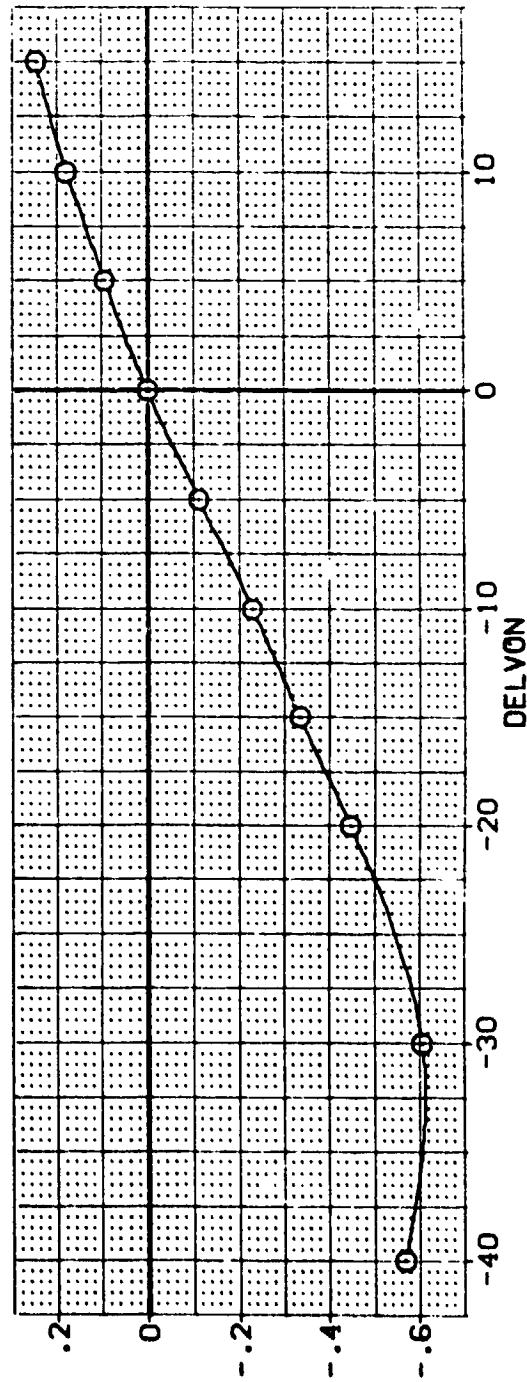
(10Z010)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	20.000	DELTON	DELTON	SREF	4.4119
MACH	.200	BETA	.000	LREF	19.2299
BDFLAP	-12.000	AILLRON	.000	SREF	37.9359
RUDDER	.000	SPDBRK	25.000	XMRP	43.5974
H/BW	.285	IDZ001	-10.000	YMRP	.0000
		IDZ002	10.000	ZMRP	15.1875
		IDZ003	10.000	SCALE	.0405
		IDZ004	10.000	SCALE	.0405



DCA



DCN

FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

(1DZ010)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	ALPHA	MACH	BETA	DEL VGN	SREF	SO. FT.	
	25.000	.200	.000	-40.000	19.2299	INCHES	
		-12.000	.000	-20.000	37.9359	INCHES	
		.000	25.000	-10.000	43.5974	INCHES	
		.000	.000	10.000	15.0000	INCHES	
		.285	.000		15.1875	INCHES	
					15.0405	SCALE	

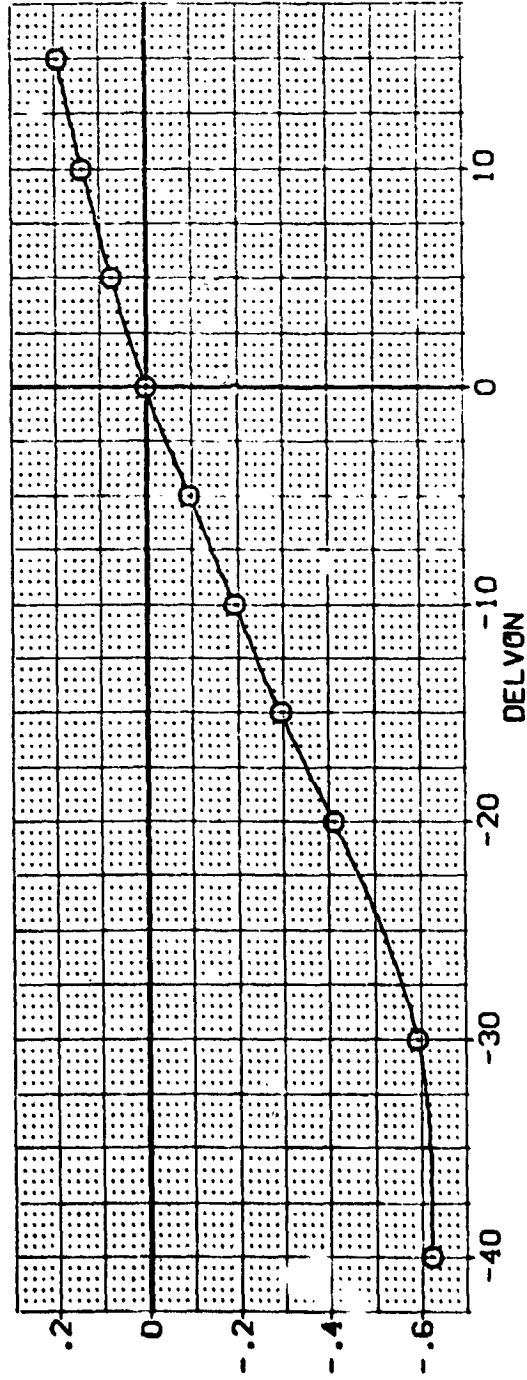
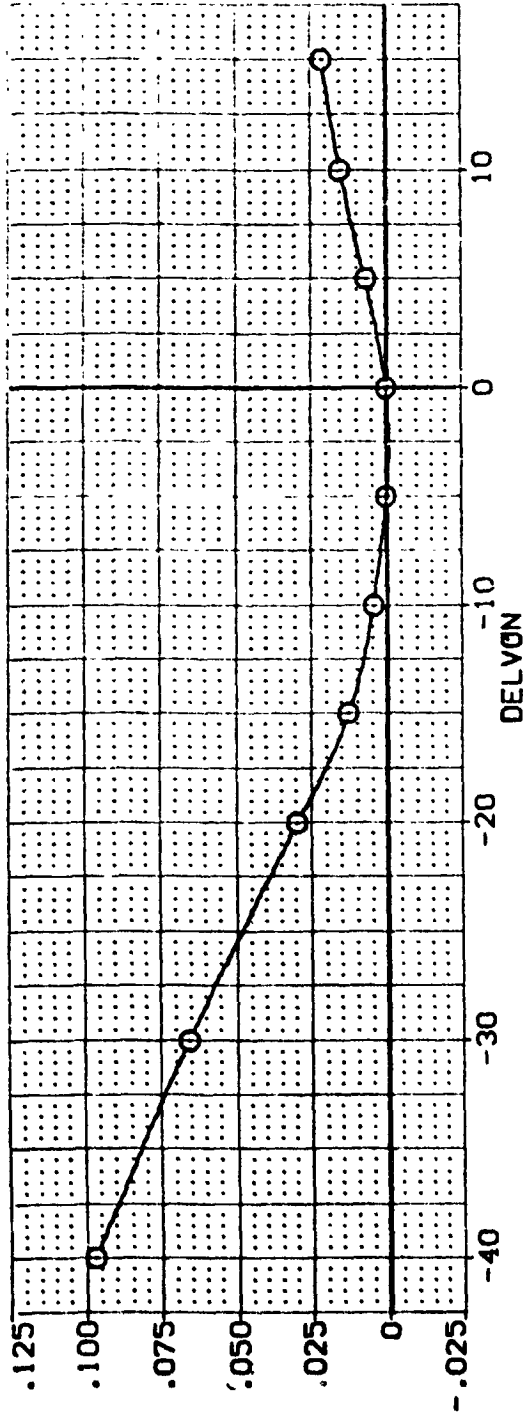


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285

0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ010)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.200	DELTON	DELTON	SREF	SO.FT.
MACH	.285	DELTON	DELTON	LREF	INCHES
BEFLAP	-12.000	DELTON	DELTON	BREF	INCHES
RUDDER	.000	DELTON	DELTON	XMRP	INCHES
H/BW	.285	DELTON	DELTON	YMRP	INCHES
		DELTON	DELTON	ZMRP	INCHES
		DELTON	DELTON	SCALE	SCALE

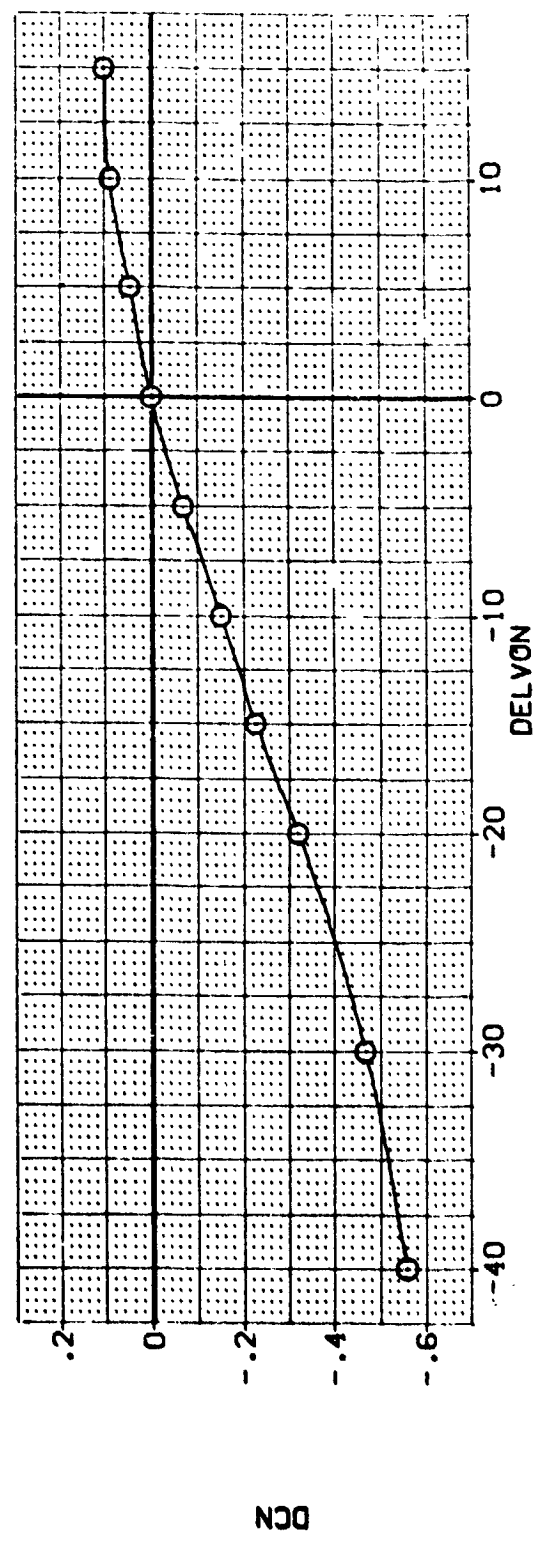
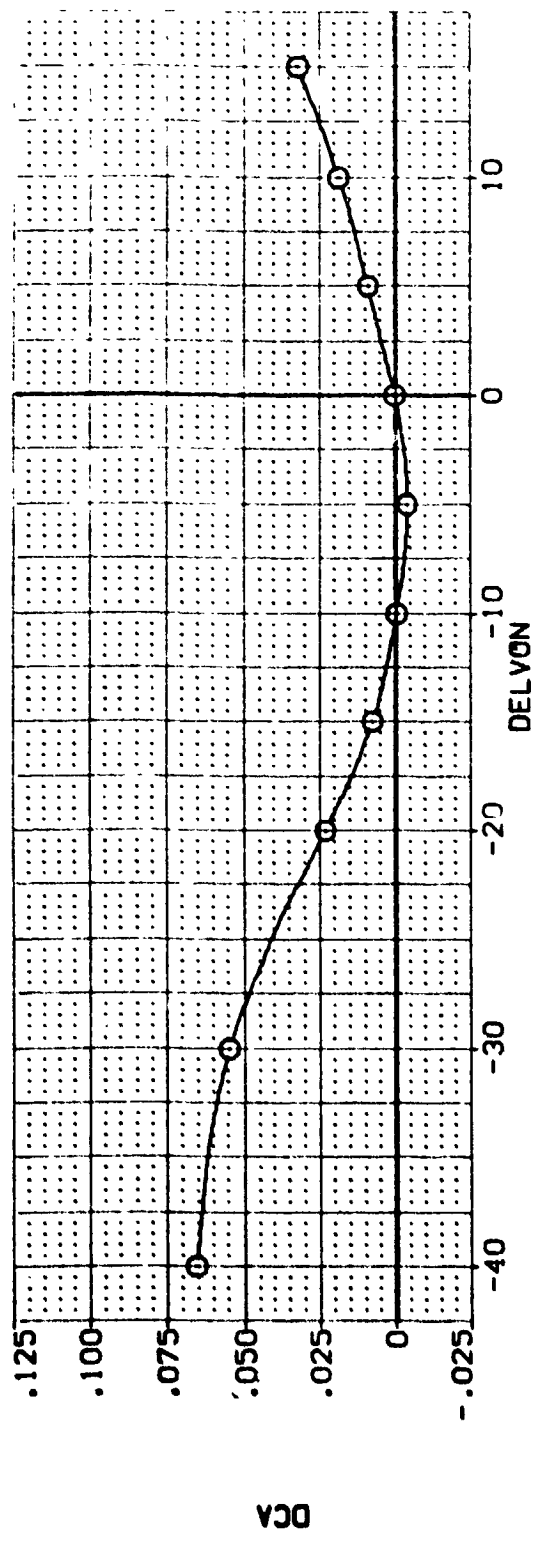


FIG 4 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.285



<b>DATA SET SYMBOL</b>	<b>CONFIGURATION DESCRIPTION</b>	<b>ELEVON H/BW</b>	<b>SFOBRK</b>	<b>BOFLAP</b>	<b>REFERENCE INFORMATION</b>
(80Z016)	0A6Z8 B2C9G1S47F8 V116E28V8R5X9	-5.000	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z020)	0A6Z8 B2C9G1S47F8 V116E28V8R5X9	5.000	25.000	-12.000	LREF 19.2289 INCHES
(80Z019)	0A6Z8 B2C9G1S47F8 V116E28V8R5X9	10.000	25.000	-12.000	BREF 37.9359 INCHES
(80Z018)	0A6Z8 B2C9G1S47F8 V116E28V8R5X9	15.000	25.000	-12.000	XPRP 43.5574 INCHES
(80Z017)	0A6Z8 B2C9G1S47F8 V116E28V8R5X9		25.000	-12.000	ZPRP .0000 INCHES
					SCALE 15.1875 INCHES
					SCALE .0405 INCHES

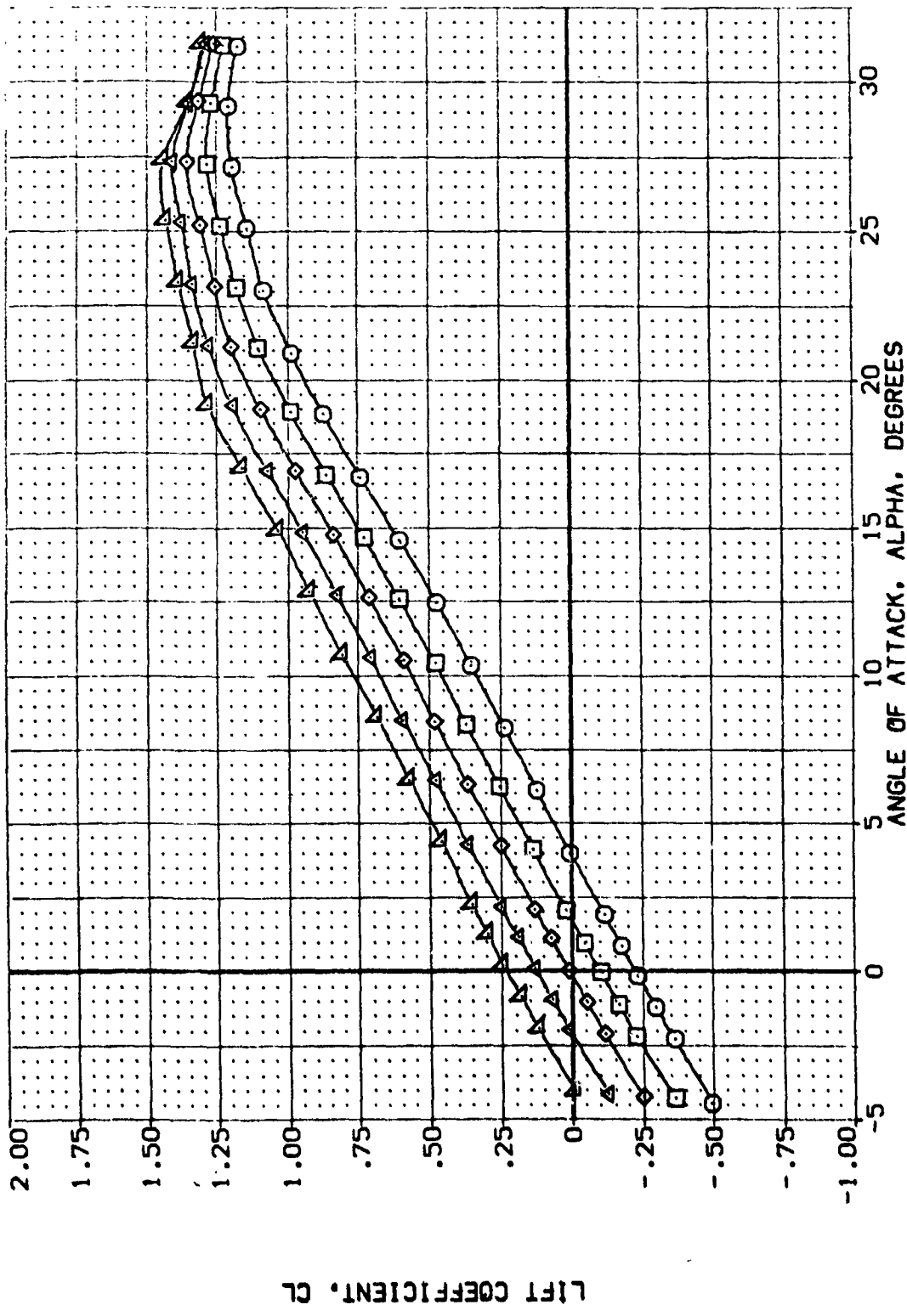


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPORX	BDFLAP	REFERENCE INFORMATION
(BDZ016)	0A62B B26C9G1S7F8 V116E28V8FSX9	.178	25.000	-12.000	SREF 4.4119 SO.FT.
(BDZ020)	0A62B B26C9G1S7F8 V116E28V8FSX9	.178	25.000	-12.000	LREF 19.2299 INCHES
(BDZ019)	0A62B B26C9G1S7F8 V116E28V8FSX9	.178	25.000	-12.000	BREF 37.9359 INCHES
(BDZ018)	0A62B B26C9G1S7F8 V116E28V8FSX9	.178	25.000	-12.000	XMRP 43.5974 INCHES
(BDZ017)	0A62B B26C9G1S7F8 V116E28V8FSX9	.178	25.000	-12.000	ZMRP .0000 INCHES
					SCALE .0405

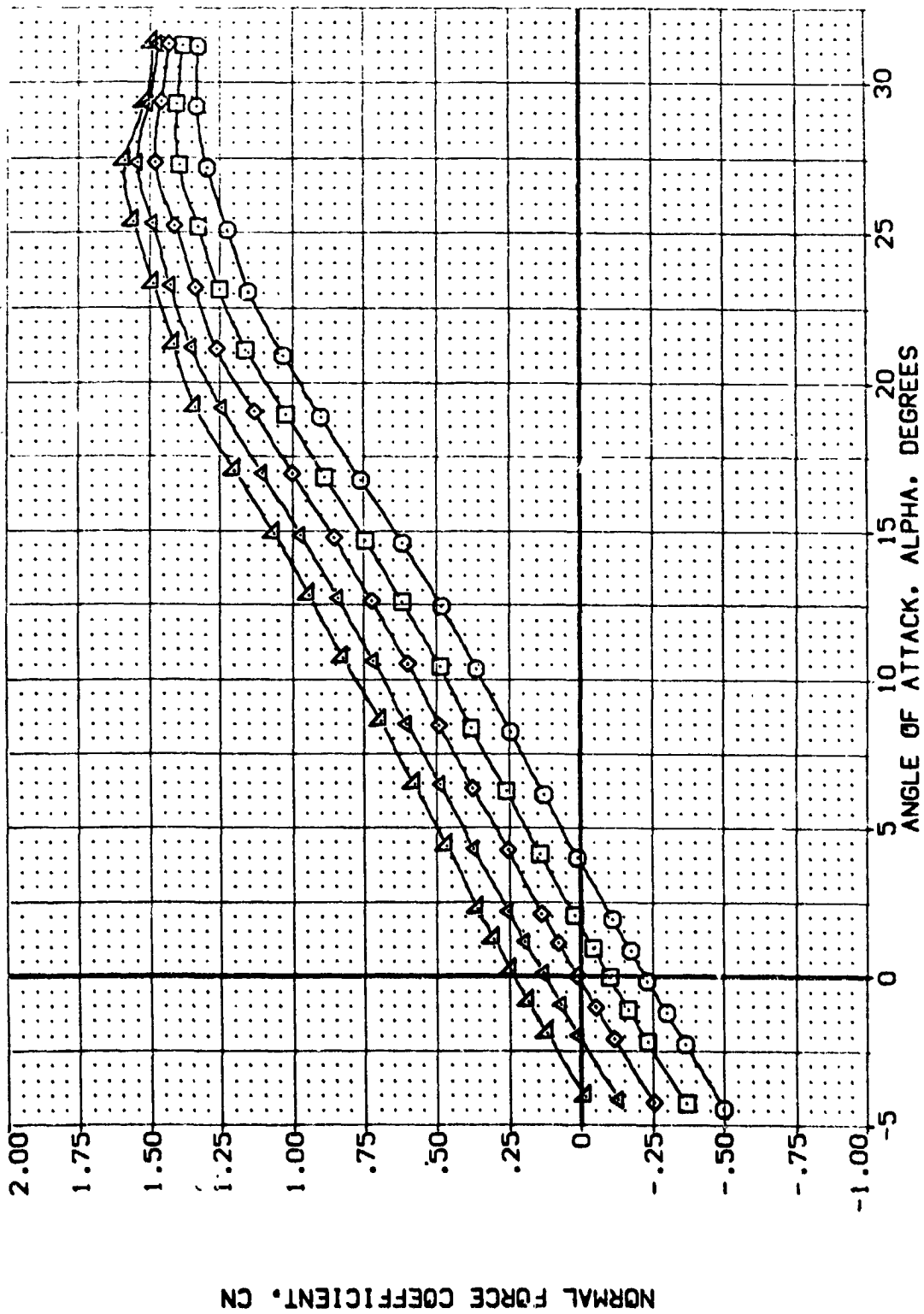


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(M)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02016)	0A628 B26C9615M7F8 V116E28V8R5X9	-5.000	.178	25.000	-12.000	SREF 4.4119 SQ.FT.
(B02020)	0A628 B26C9615M7F8 V116E28V8R5X9	.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(B02019)	0A628 B26C9615M7F8 V116E28V8R5X9	5.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(B02018)	0A628 B26C9615M7F8 V116E28V8R5X9	10.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(B02017)	0A628 B26C9615M7F8 V116E28V8R5X9	15.000	.178	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

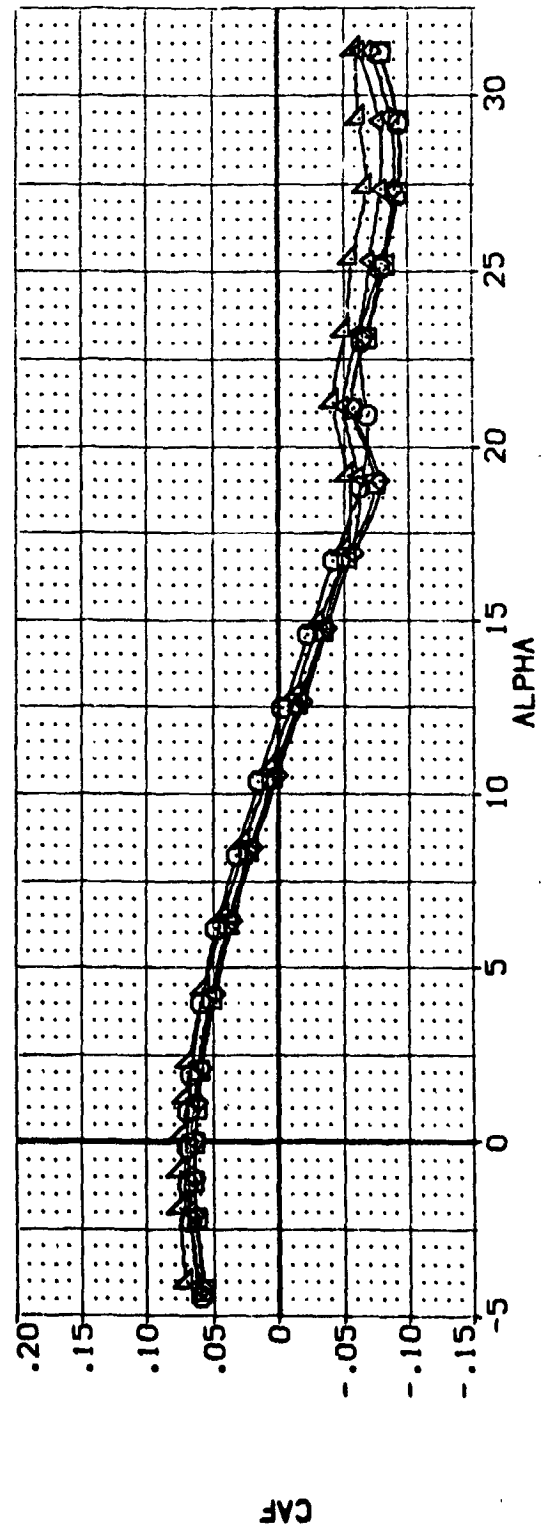
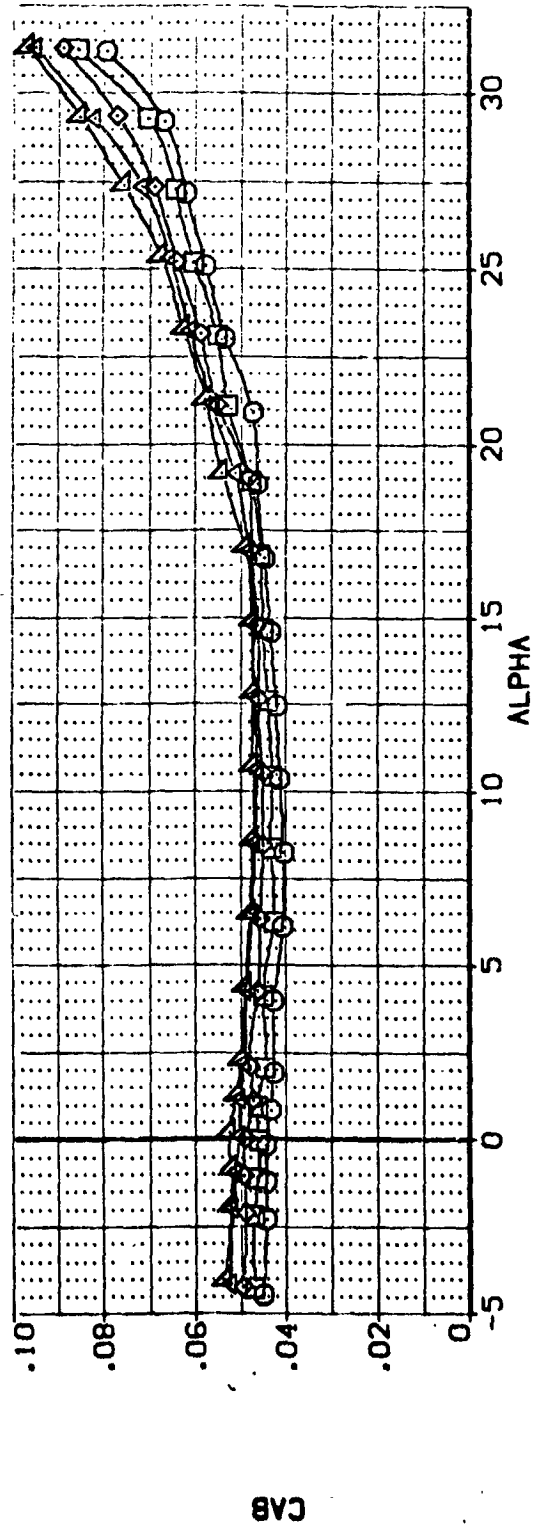


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z016)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-5.000	.178	25.000	-12.000	SREF 4.4119 SO.FT
(80Z020)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	.000	.178	25.000	-12.000	LREF 19.2293 INCHES
(80Z019)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	5.000	.178	25.000	-12.000	BREF 37.5359 INCHES
(80Z018)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	10.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(80Z017)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	15.000	.178	25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405 INCHES

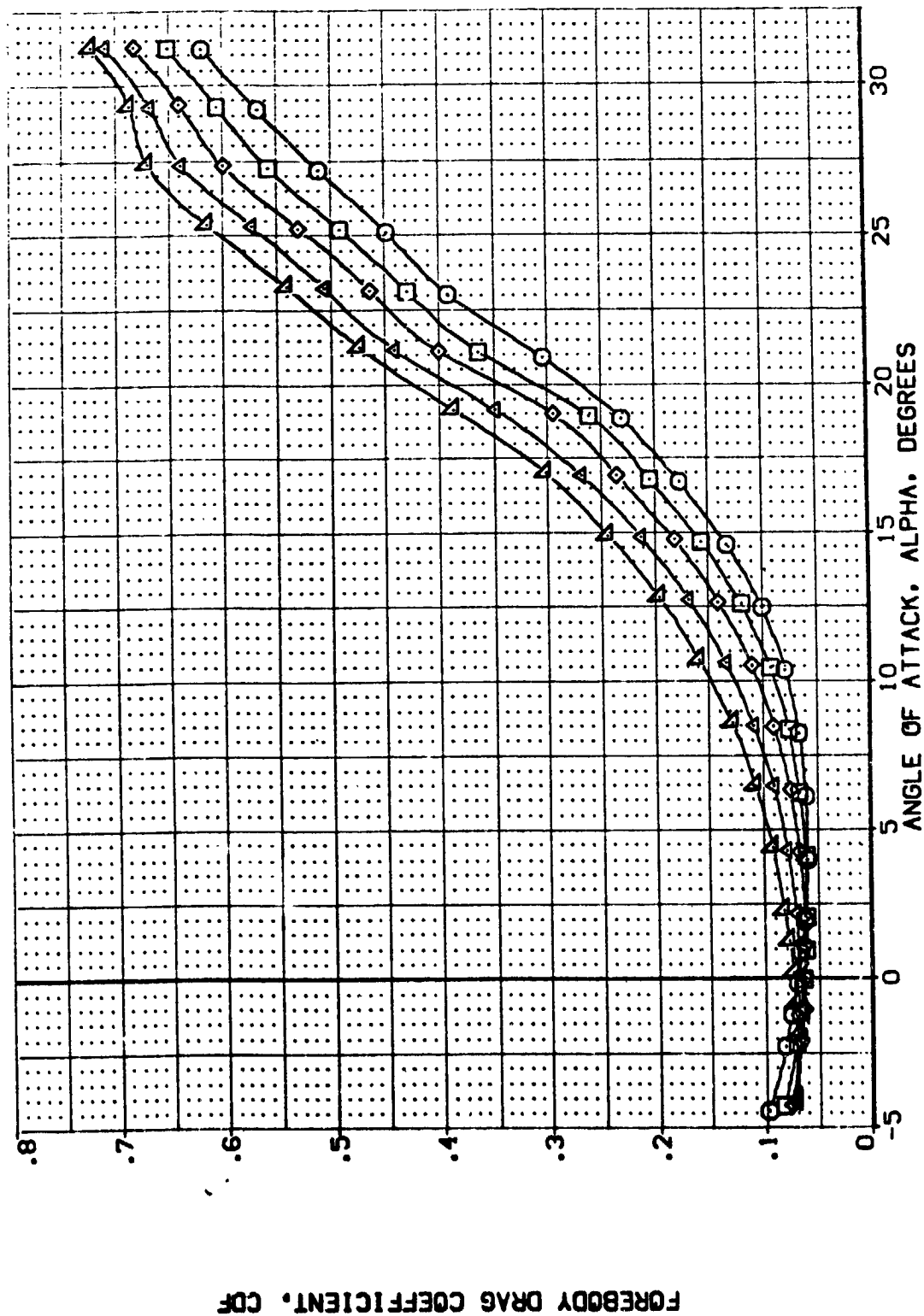


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BD/FLAP	REFERENCE INFORMATION
(802016)	0A628 B26C9G1SMT78 V116E28V8R5X9	-5.000	.178	25.000	-12.000	SREF 4.4119 SQ. FT.
(802020)	0A628 B26C9G1SMT78 V116E28V8R5X9	.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(802019)	0A628 B26C9G1SMT78 V116E28V8R5X9	5.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(802018)	0A628 B26C9G1SMT78 V116E28V8R5X9	10.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(802017)	0A628 B26C9G1SMT78 V116E28V8R5X9	15.000	.178	25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

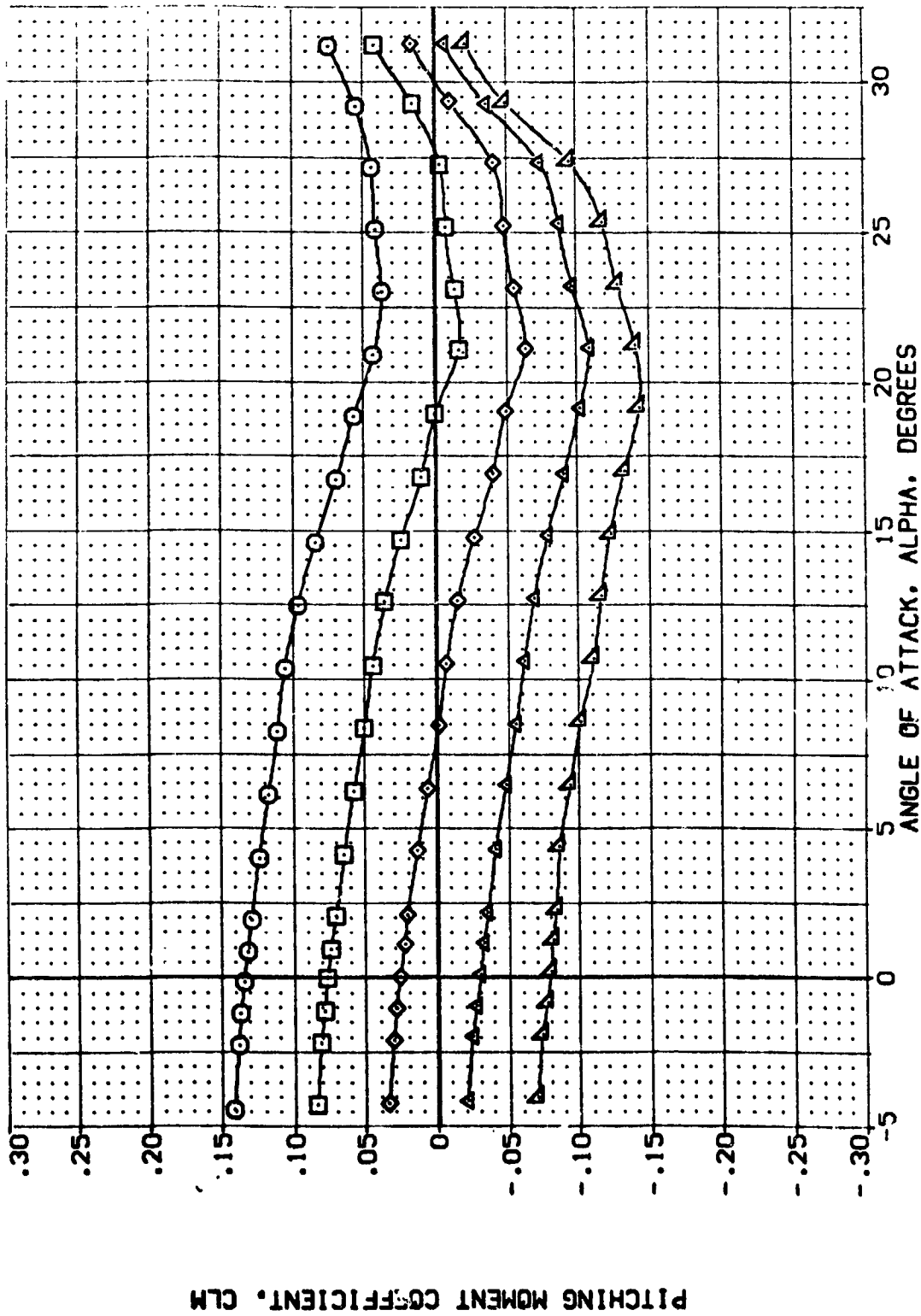


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(802015)	0AG28 826CJ615K778 V116E28V8RSX9
(802020)	0AG28 826CJ615K778 V116E28V8RSX9
(802018)	0AG28 826CJ615K778 V116E28V8RSX9
(802016)	0AG28 826CJ615K778 V116E28V8RSX9
(802017)	0AG28 826CJ615K778 V116E28V8RSX9

ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION	SO, FT
-5.000	.178	25.000	-12.000	SREF	4.4119
5.000	.178	25.000	-12.000	LREF	19.2299
10.000	.178	25.000	-12.000	MREF	37.9359
15.000	.178	25.000	-12.000	YMRP	43.5974
				ZMRP	.0000
				SCALE	15.1875
				SCALE	.0405

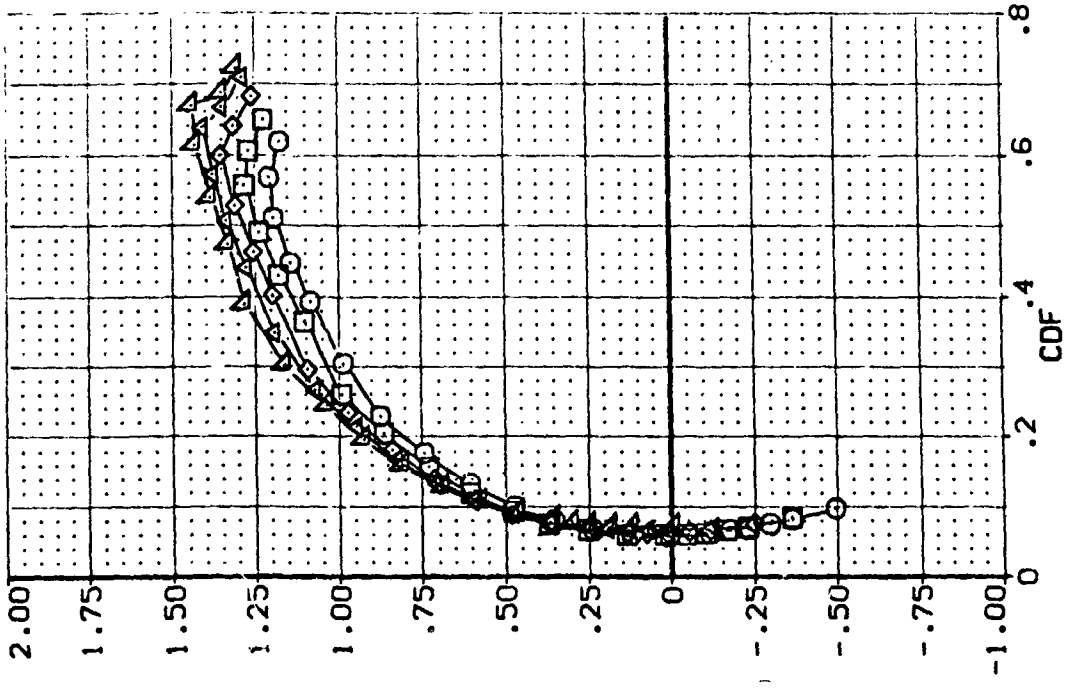
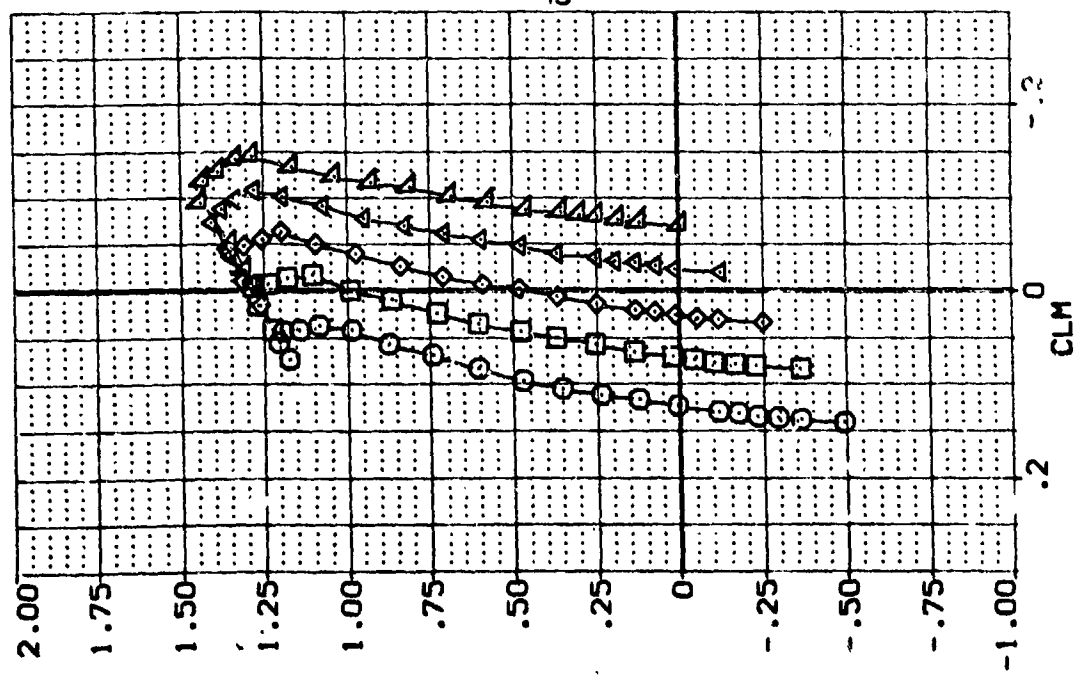


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

CLM/MACH = .20



ELEVON	H/BW	SPDRBK	GOFLAP	REFERENCE INFORMATION
-5.000	.178	25.000	-12.000	SREF 4.4119 SO.FT
.000	.178	25.000	-12.000	LREF 19.2299 INCHES
5.000	.178	25.000	-12.000	BREF 37.9359 INCHES
10.000	.178	25.000	-12.000	YMRP 43.5574 INCHES
15.000	.178	25.000	-12.000	ZMRP 0.0000 INCHES
				SCALE 15.1675 INCHES
				SCALE .0405

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02016)	B28C9015M7F8 V116E28V8RSX9
(B02020)	B28C9015M7F8 V116E28V8RSX9
(B02019)	B28C9015M7F8 V116E28V8RSX9
(B02018)	B28C9015M7F8 V116E28V8RSX9
(B02017)	B28C9015M7F8 V116E28V8RSX9

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

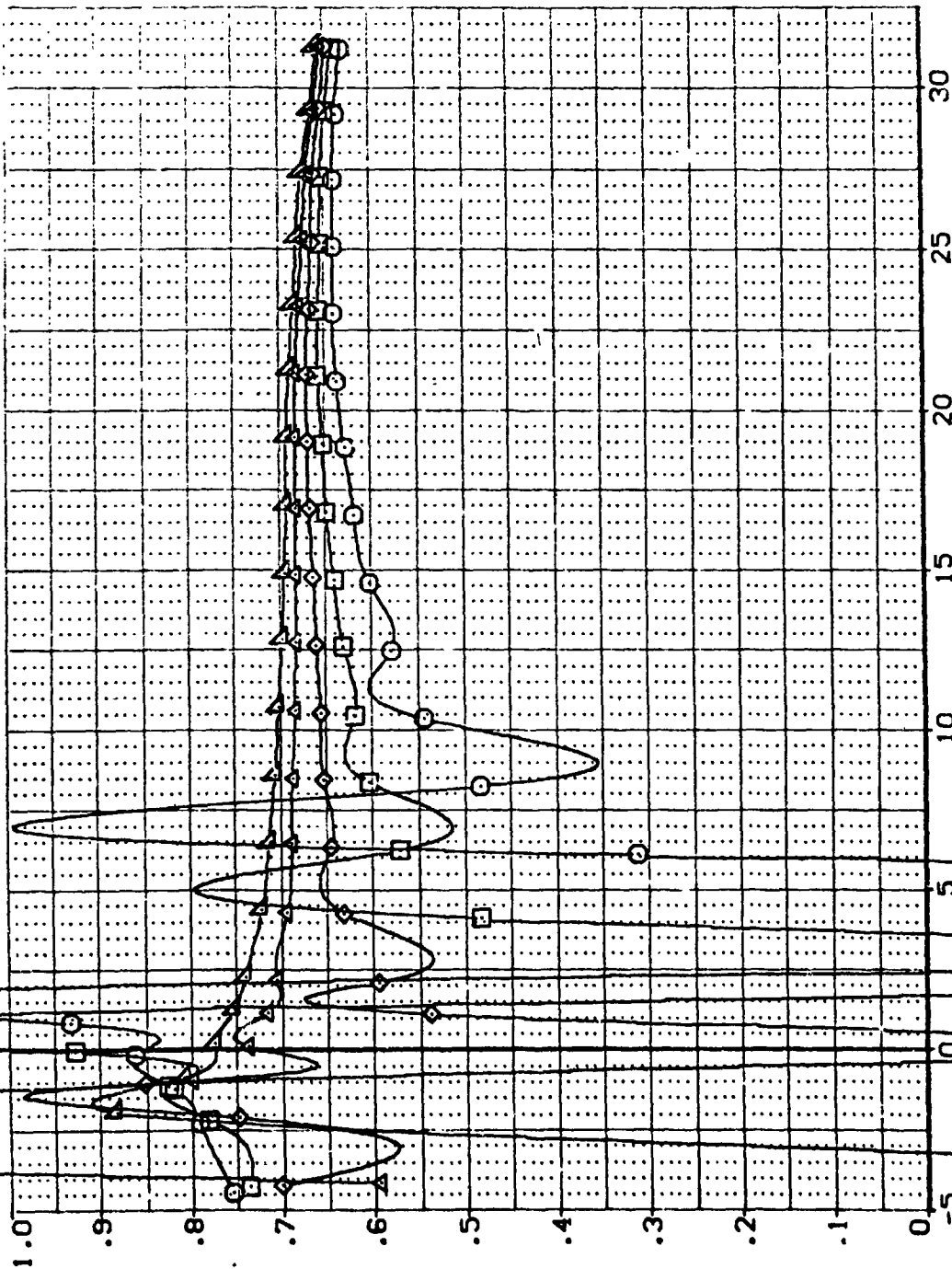


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/W	SFOBRK	EDFLAP	REFERENCE INFORMATION
(BD2016)	0A628 B26C9G15M7F8 V116E28V8R5X9	-5.000	.178	25.000	-12.000	SREF 4.4119 SQ.FT.
(BD2020)	0A628 B26C9G15M7F8 V116E28V8R5X9	.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(BD2019)	0A628 B26C9G15M7F8 V116E28V8R5X9	5.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(BD2018)	0A628 B26C9G15M7F8 V116E28V8R5X9	10.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(BD2017)	0A628 B26C9G15M7F8 V116E28V8R5X9	15.000	.178	25.000	-12.000	ZMRP 15.0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405 INCHES

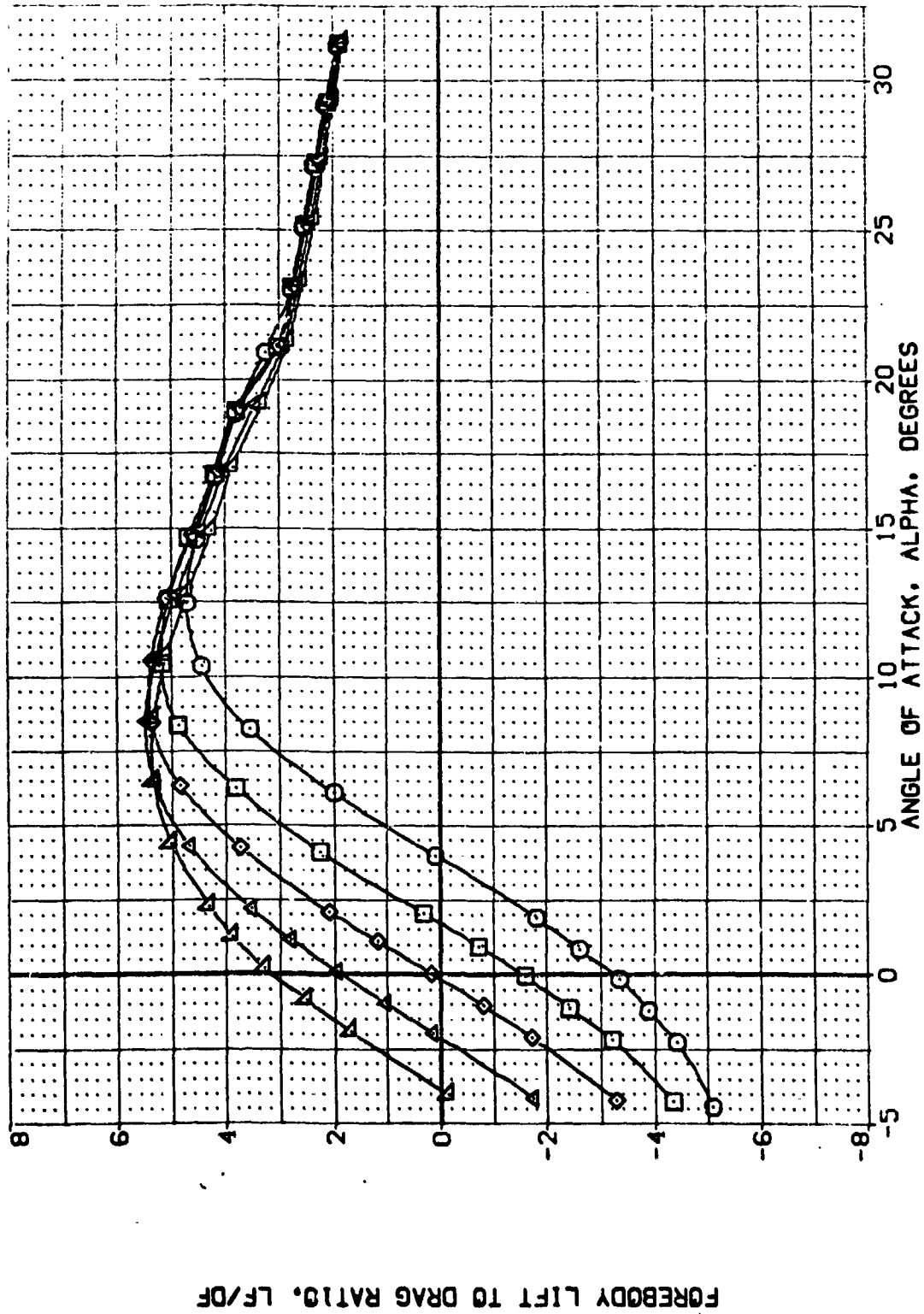


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	SREF	REFERENCE INFORMATION
(B07011)	0A628 B26C9G1S7F78 V116E28V8FSX9	-40.000	.178	25.000	-12.000	4.4119	SO.FT.
(B07012)	0A628 B26C9G1S7F78 V116E28V8FSX9	-30.000	.178	25.000	-12.000	19.2299	INCHES
(B07013)	0A628 B26C9G1S7F78 V116E28V8FSX9	-20.000	.178	25.000	-12.000	37.9359	INCHES
(B07014)	0A628 B26C9G1S7F78 V116E28V8FSX9	-15.000	.178	25.000	-12.000	43.5974	INCHES
(B07015)	0A628 B26C9G1S7F78 V116E28V8FSX9	-10.000	.178	25.000	-12.000	0.000	INCHES
(B07020)	0A628 B26C9G1S7F78 V116E28V8FSX9	.000	.178	25.000	-12.000	15.1875	INCHES
						.0405	SCALE

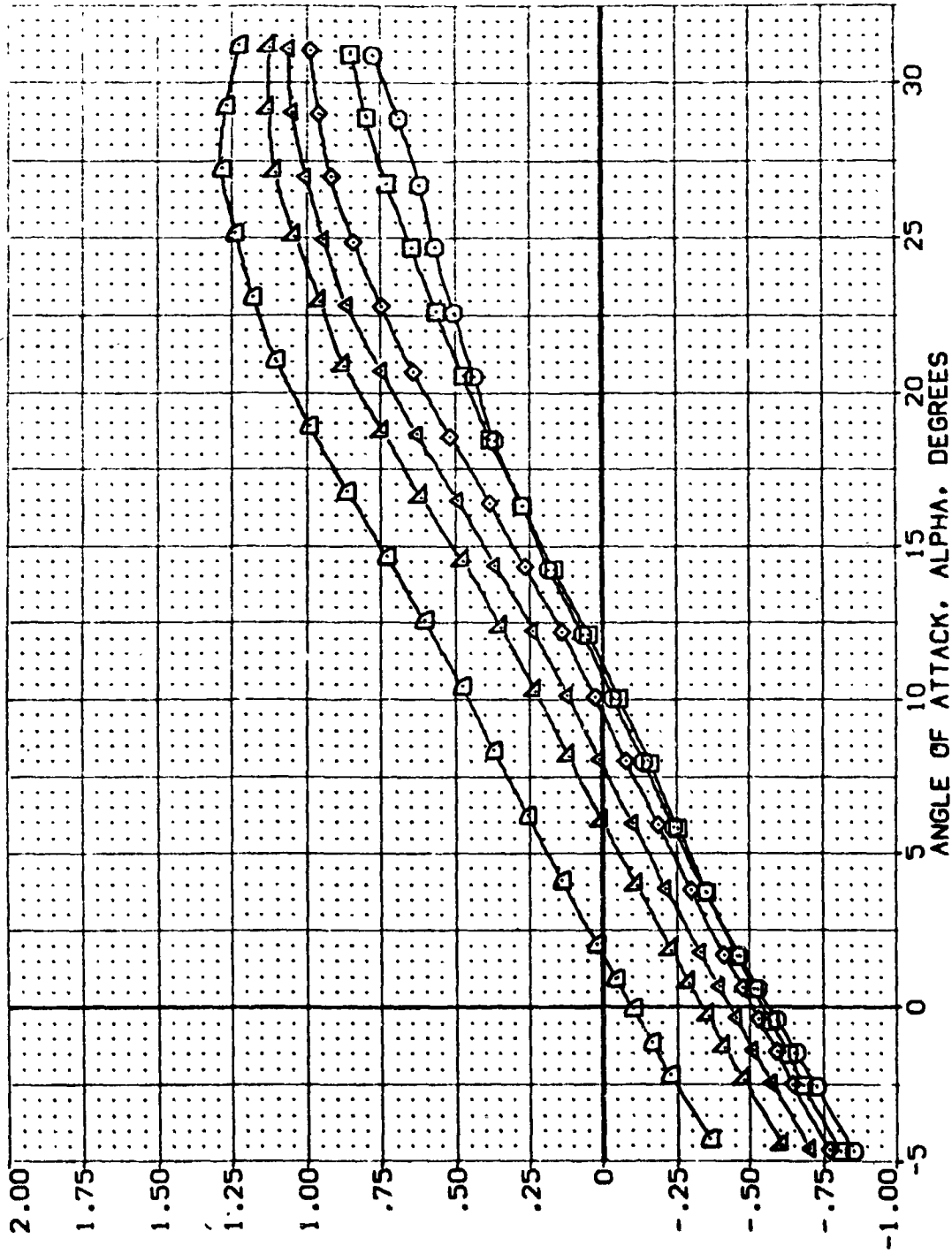


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(80Z011)	0AG28 826C9G1547F8 V116E28V8R5X9	-40.000	.178	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z012)	0AG28 826C9G1547F8 V116E28V8R5X9	-20.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(80Z013)	0AG28 826C9G1547F8 V116E28V8R5X9	-20.000	.178	25.000	-12.000	BREF 37.9399 INCHES
(80Z014)	0AG28 826C9G1547F8 V116E28V8R5X9	-15.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(80Z015)	0AG28 826C9G1547F8 V116E28V8R5X9	-10.000	.178	25.000	-12.000	VMRP .0000 INCHES
(80Z020)	0AG28 826C9G1547F8 V116E28V8R5X9	.000	.178	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

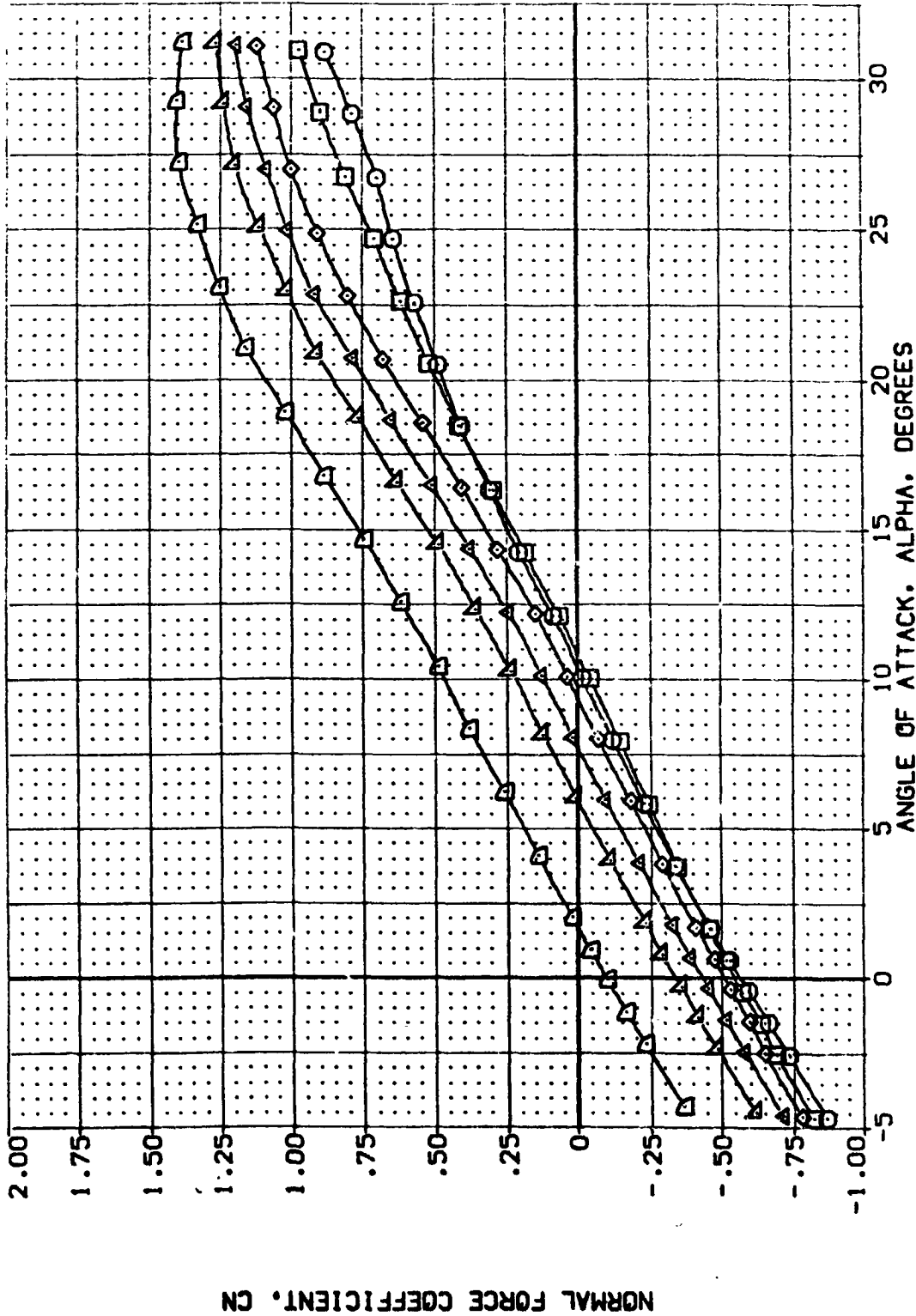


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(M)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRK	BOFLAP	REFERENCE INFORMATION
(BDZ011)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-40.000	.178	25.000	-12.000	SREF 4.4119 SO.FT.
(BDZ012)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-30.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(BDZ013)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-20.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(BDZ014)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-15.000	.178	25.000	-12.000	XMPR 43.5974 INCHES
(BDZ015)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-10.000	.178	25.000	-12.000	YMPR .0000 INCHES
(BDZ020)	0A628 B26C9G1SM7F8 V116E28V8R5X9	.000	.178	25.000	-12.000	ZMPR 15.1875 INCHES
						SCALE .0405 SCALE

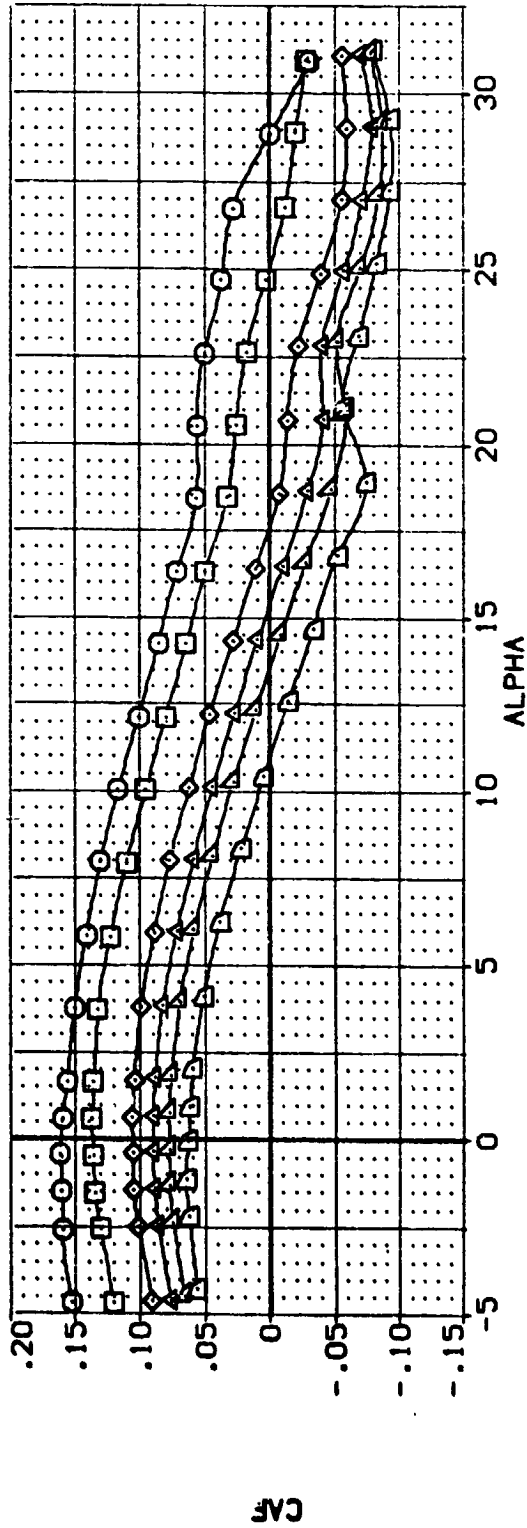
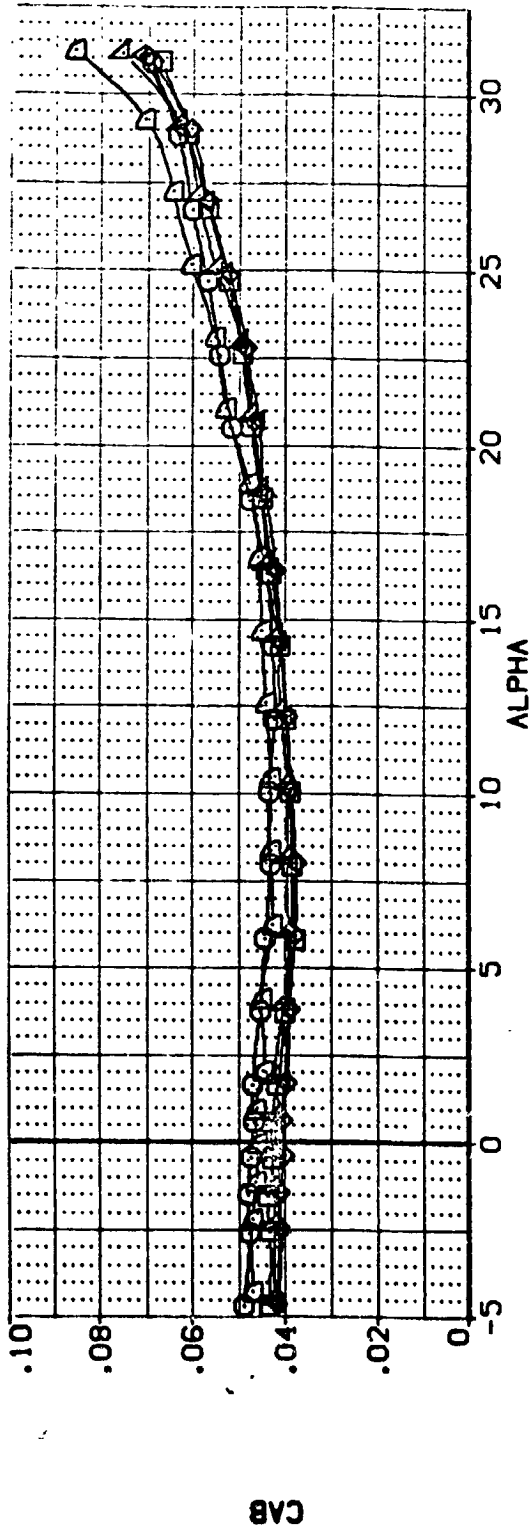


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEV. V	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z011)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-40.000	.178	25.000	-12.000	SREF 4.4119 SQ.FT.
(80Z012)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-30.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(80Z013)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-20.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(80Z014)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-15.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(80Z015)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	-10.000	.178	25.000	-12.000	YMRP 15.0000 INCHES
(80Z020)	0A6Z8 B26C9G 5H7F8 V116E28V8K5X9	.000	.178	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

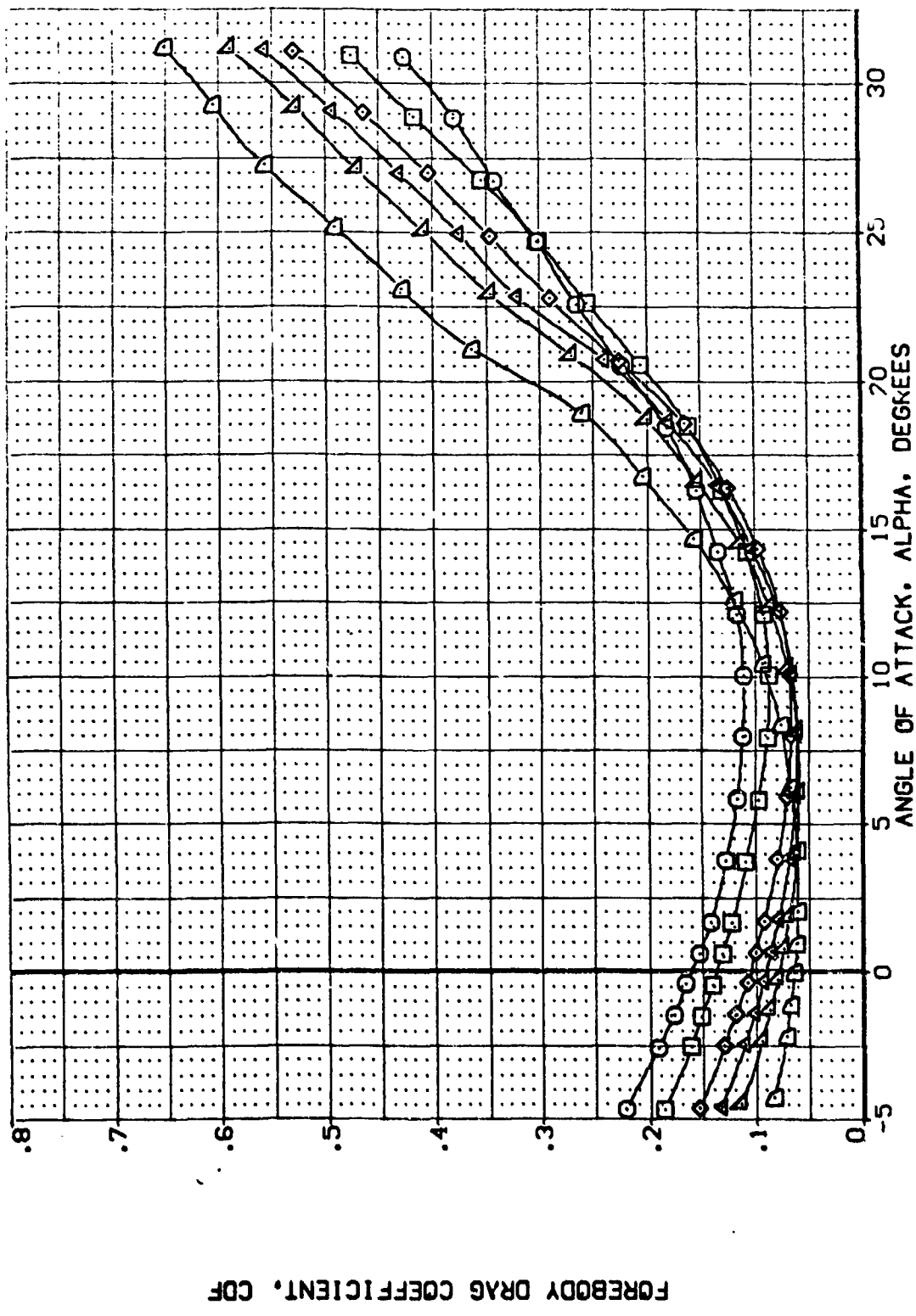


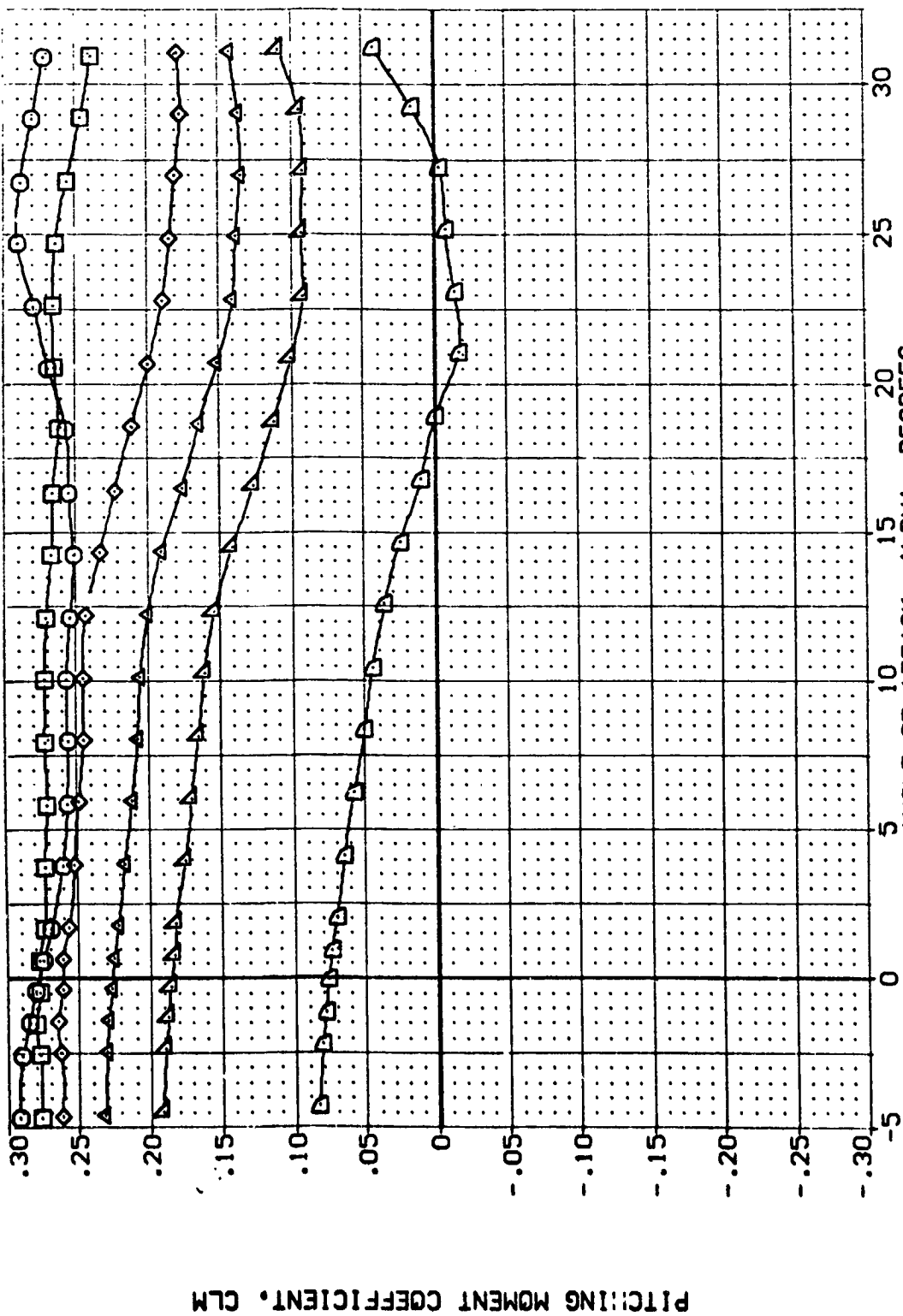
FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SFOBRK	BOFLAP	REFERENCE INFORMATION	SO.FT.
(BDZ011)	0A628 B26C9G15M7F8 V116E28V8RSX9	-40.000	.178	25.000	-12.000	SREF	4.4119
(BDZ012)	0A628 B26C9G15M7F8 V116E28V8RSX9	-30.000	.178	25.000	-12.000	LREF	19.2299
(BDZ013)	0A628 B26C9G15M7F8 V116E28V8RSX9	-20.000	.178	25.000	-12.000	BREF	37.9359
(BDZ014)	0A628 B26C9G15M7F8 V116E28V8RSX9	-15.000	.178	25.000	-12.000	XMRP	43.5974
(BDZ015)	0A628 B26C9G15M7F8 V116E28V8RSX9	-10.000	.178	25.000	-12.000	YMRP	.0000
(BDZ020)	0A628 B26C9G15M7F8 V116E28V8RSX9	.000	.178	25.000	-12.000	ZMRP	15.1875
						SCALE	.0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(M)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02011)	0A628 B26C9G1S47F8 V116E28V8R5X9
(B02012)	0A628 B26C9G1S47F8 V116E28V8R5X9
(B02013)	0A628 B26C9G1S47F8 V116E28V8R5X9
(B02014)	0A628 B26C9G1S47F8 V116E28V8R5X9
(B02015)	0A628 B26C9G1S47F8 V116E28V8R5X9
(B02020)	0A628 B26C9G1S47F8 V116E28V8R5X9

ELEVON	H/BW	SPDRK	BOFLAP	REFERENCE INFORMATION
-40.000	.178	25.000	-12.000	SAREF 4.4119 SQ.FT.
-30.000	.178	25.000	-12.000	LREF 19.2299 INCHES
-20.000	.178	25.000	-12.000	BREF 37.9359 INCHES
-15.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
-10.000	.178	25.000	-12.000	YMRP 15.0000 INCHES
.000	.178	25.000	-12.000	ZMRP 15.1875 INCHES
				SCALE .0405

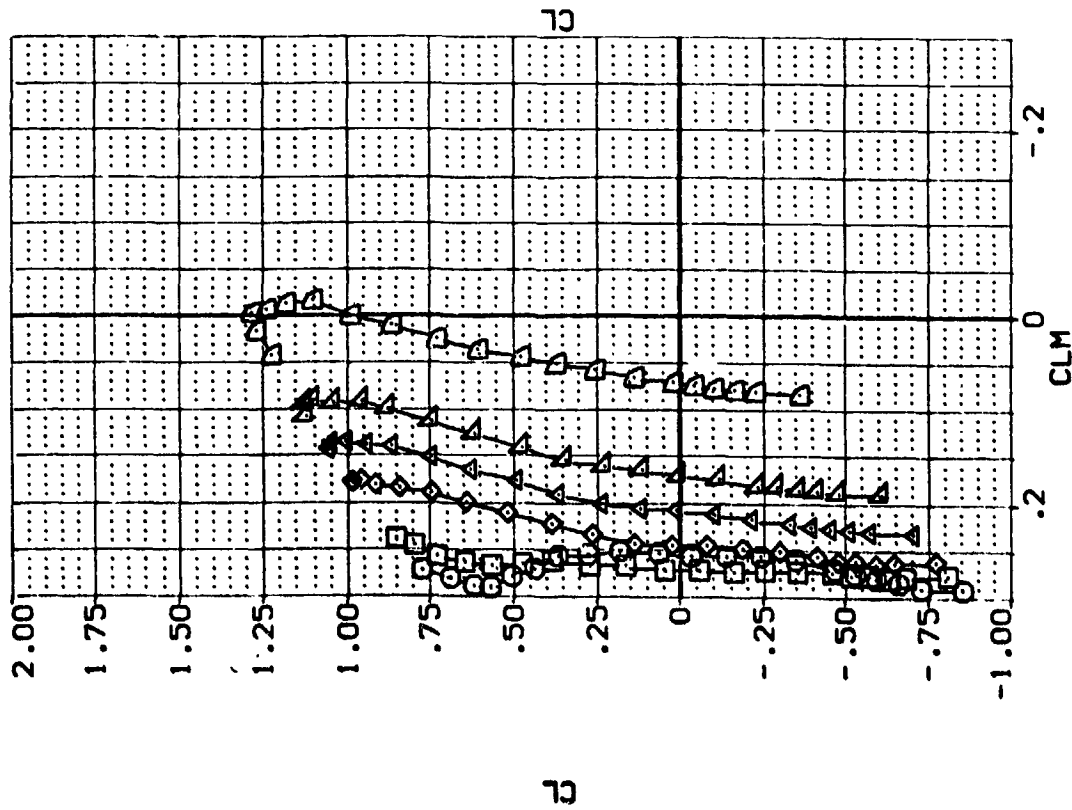
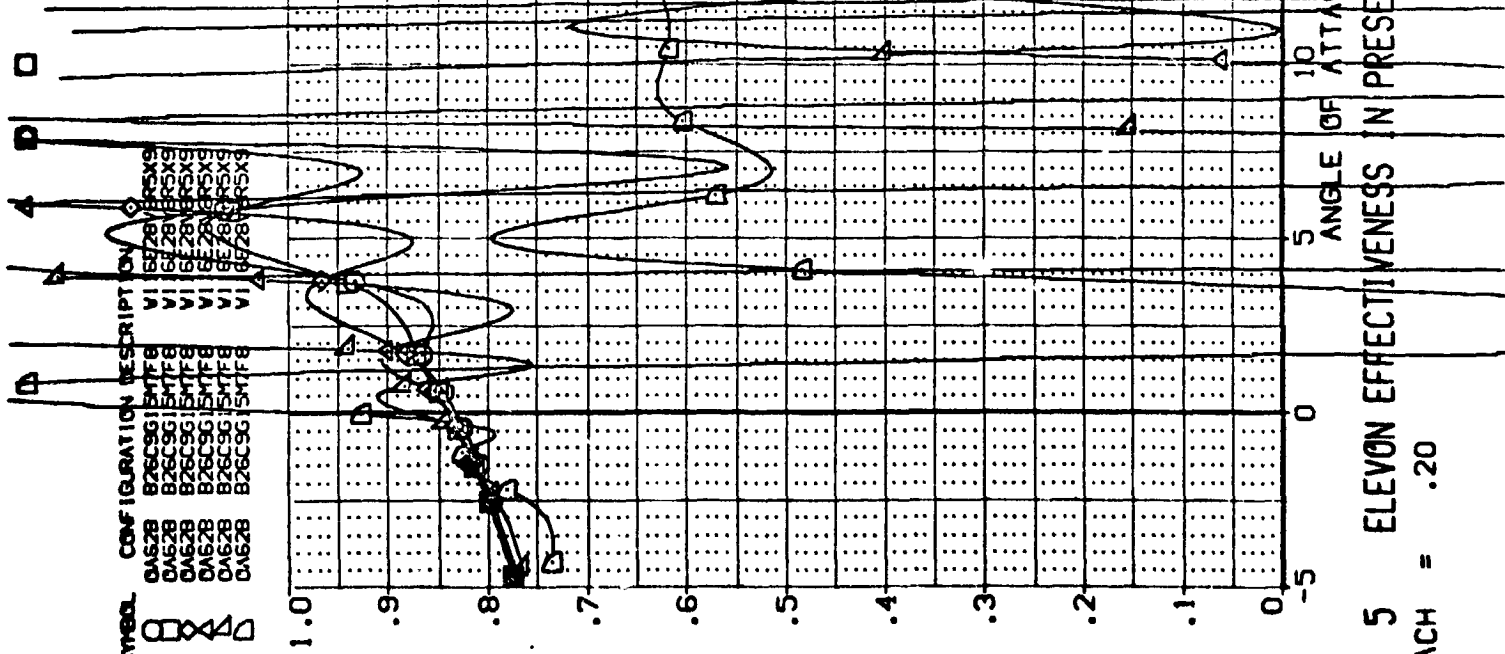


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

ELEVON	H/BW	SPDRBK	BDFLAP	REFERENCE INFORMATION	SCALE
-40.000	.178	25.000	-12.000	SREF	4.4119
-30.000	.178	25.000	-12.000	LREF	19.2299
-20.000	.178	25.000	-12.000	BREF	37.9359
-15.000	.178	25.000	-12.000	XMRP	43.5974
-10.000	.178	25.000	-12.000	VMRP	.0000
.000	.178	25.000	-12.000	ZMRP	15.1875
				SCALE	.0405



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02011)	B26C9G SMTF8
(B02012)	B26C9G SMTF8
(B02013)	B26C9G SMTF8
(B02014)	B26C9G SMTF8
(B02015)	B26C9G SMTF8
(B02020)	B26C9G SMTF8

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(80Z011)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	-40.000	.178	25.000	-12.000	SREF 4.4119 SQ.FT.
(80Z012)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	-20.000	.178	25.000	-12.000	LREF 19.2299 INCHES
(80Z013)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	-20.000	.178	25.000	-12.000	BREF 37.9359 INCHES
(80Z014)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	-15.000	.178	25.000	-12.000	XMRP 43.5974 INCHES
(80Z015)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	-10.000	.178	25.000	-12.000	ZMRP .0000 INCHES
(80Z020)	0A6Z8 B26C9G15M7F8 V116E26V8R5X9	.000	.178	25.000	-12.000	SCALE 15.1875 SCALE

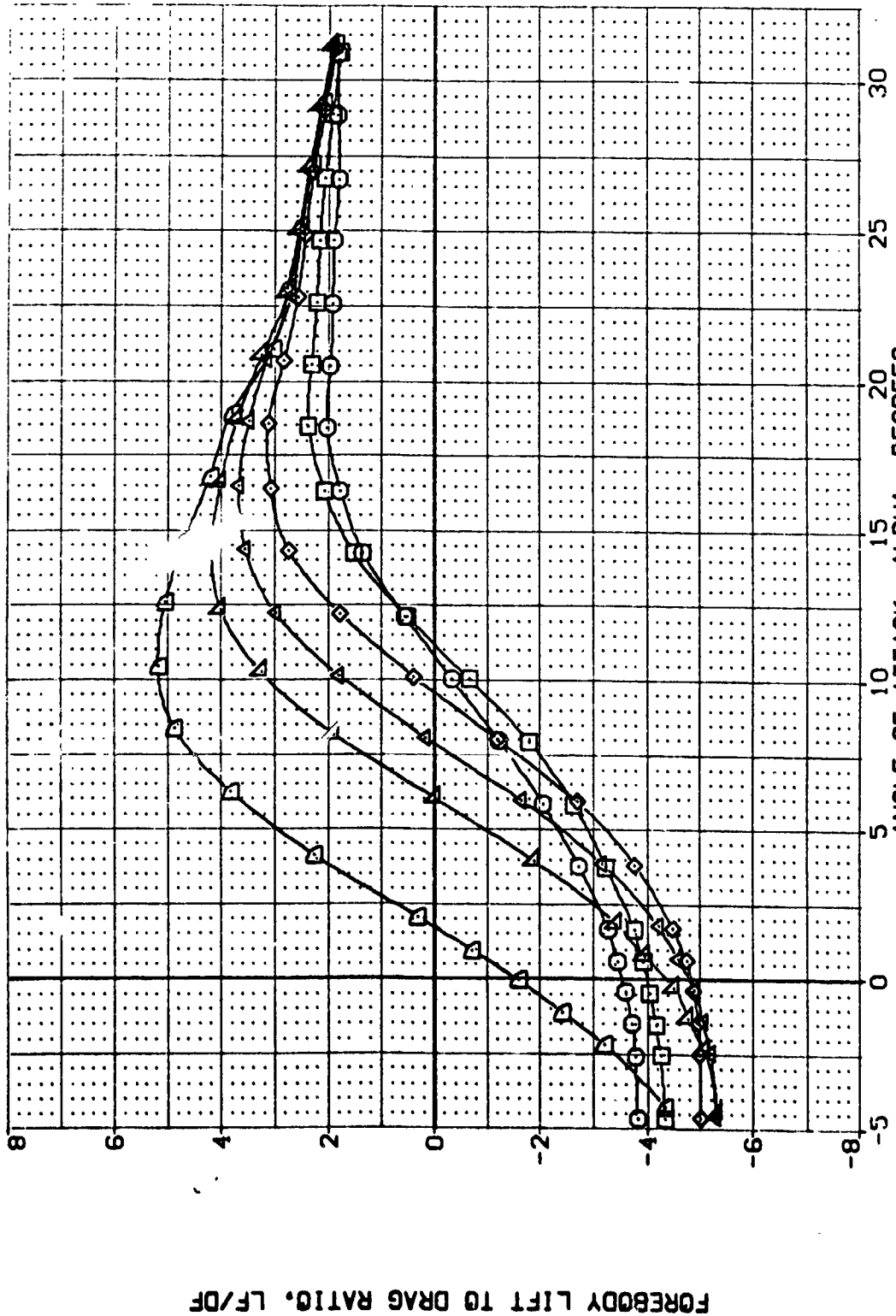


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(A)MACH = .20



(1DZ011)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.000	DELTON	DELTON	SREF	4.4119
MACH	.200	DELTON	DELTON	LREF	19.2299
BEFLAP	-12.000	DELTON	DELTON	BREF	37.9359
RUDDER	.000	DELTON	DELTON	XMRP	43.5974
H/BW	.178	DELTON	DELTON	YMRP	0.000
		DELTON	DELTON	ZMRP	15.1875
		DELTON	DELTON	SCALE	.0405
		DELTON	DELTON	SCALE	

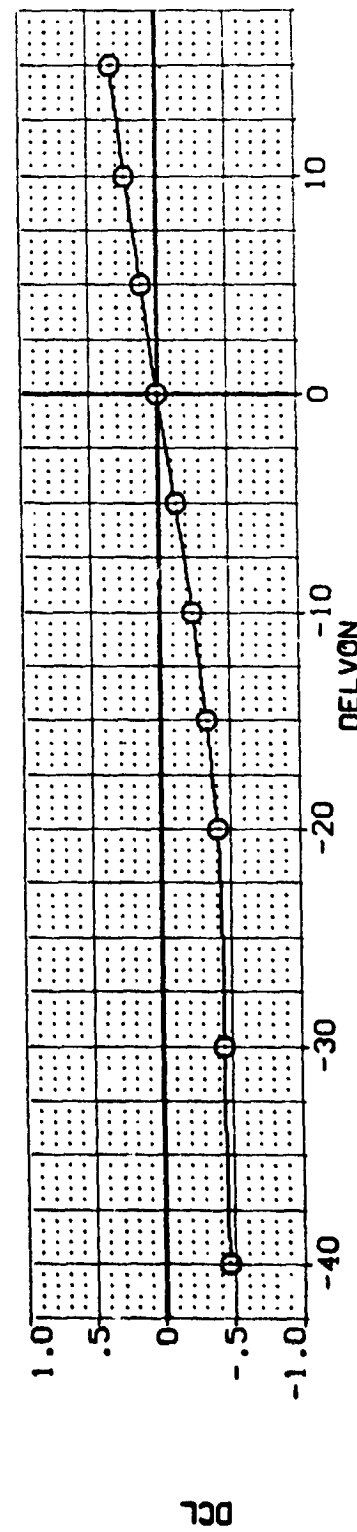
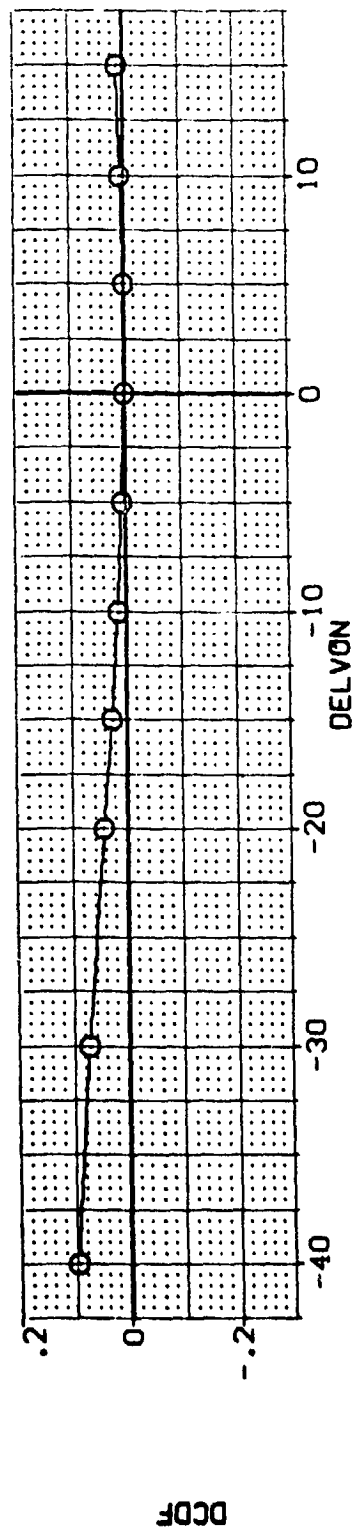
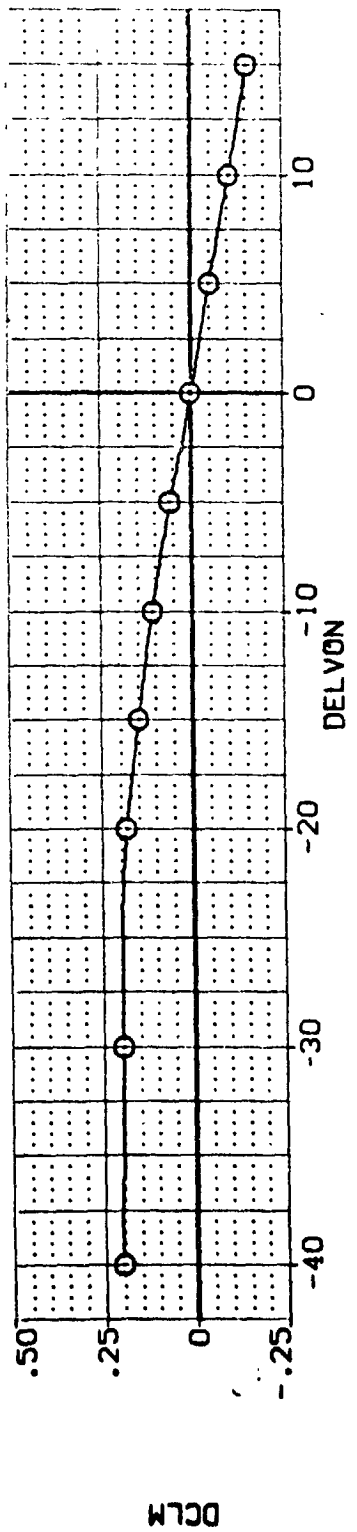


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

0A628 826C9G15M7F8 W116E28V8R5X9 (10Z011)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	5.000	DELTON	DELTON	SREF	4.4119
MACH	.200	BETA	.000	LREF	19.2299
BOFLAP	-12.000	AIRTON	.000	BREF	37.9359
RUDDER	.000	SPOBRK	25.000	XMRP	43.5974
H/BW	.178	IDZ011	-40.000	YMRP	5.0000
		IDZ013	-20.000	ZMRP	15.1875
		IDZ015	-10.000	SCALE	.0405
		IDZ016	10.000		
		IDZ017	15.000		
		IDZ018	20.000		
		IDZ019	25.000		
		IDZ020	30.000		

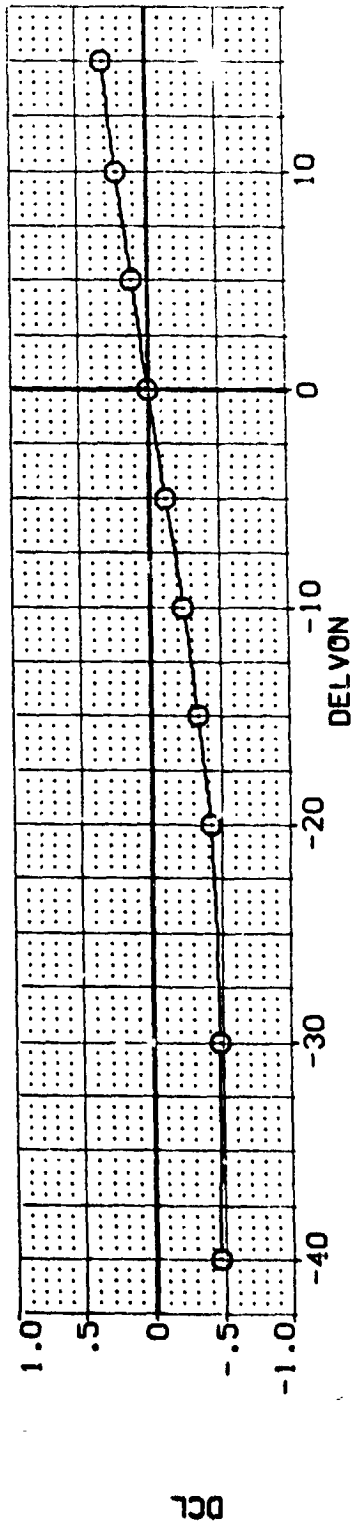
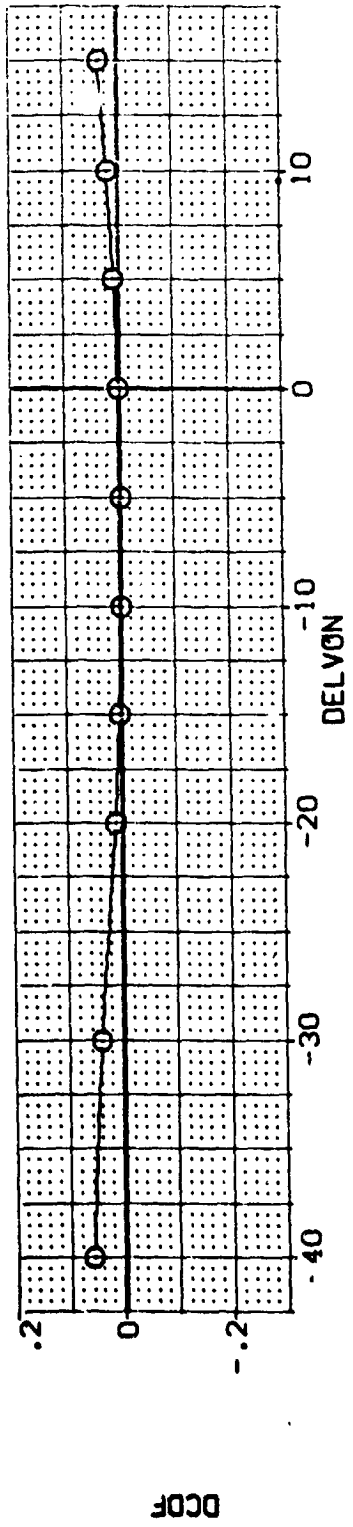
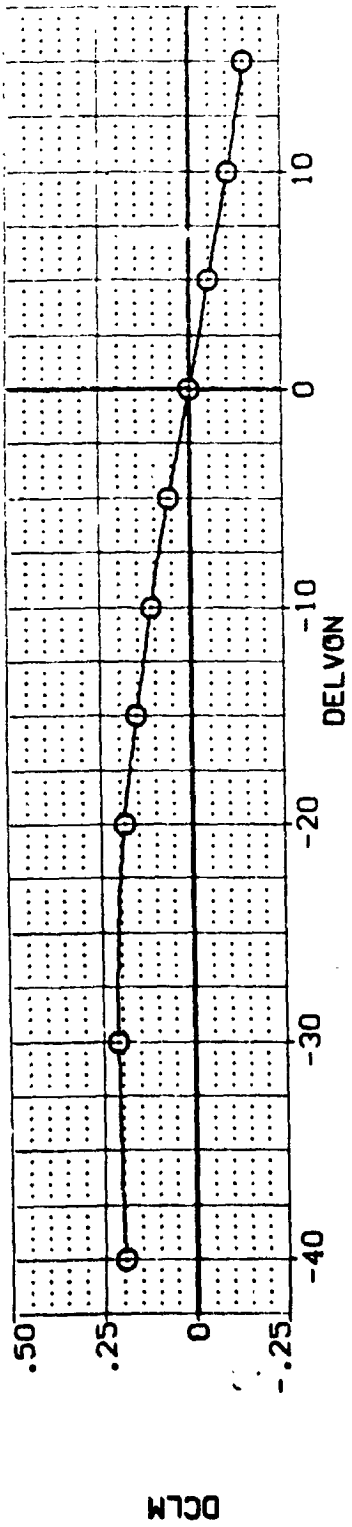


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(1DZ011)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	10.000	DELTON	10.000	SREF	4.419
MACH	.200	BETA	.000	LREF	19.2299
BDFLAP	-12.000	AILRON	.000	BREF	37.9359
RUDDER	.000	SPOBRK	25.000	XPRP	43.5974
H/BW	.178	DELTON	-40.000	YPRP	0.000
		DELTON	-20.000	ZPRP	15.1875
		DELTON	-10.000	SCALE	.0405
		DELTON	10.000		
		DELTON	-30.000		
		DELTON	-15.000		
		DELTON	-5.000		
		DELTON	5.000		
		DELTON	15.000		

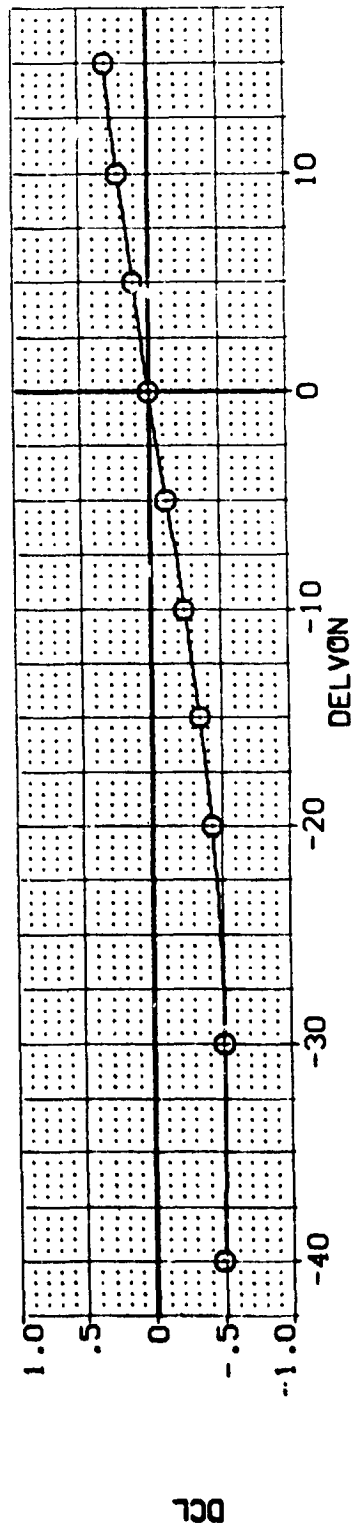
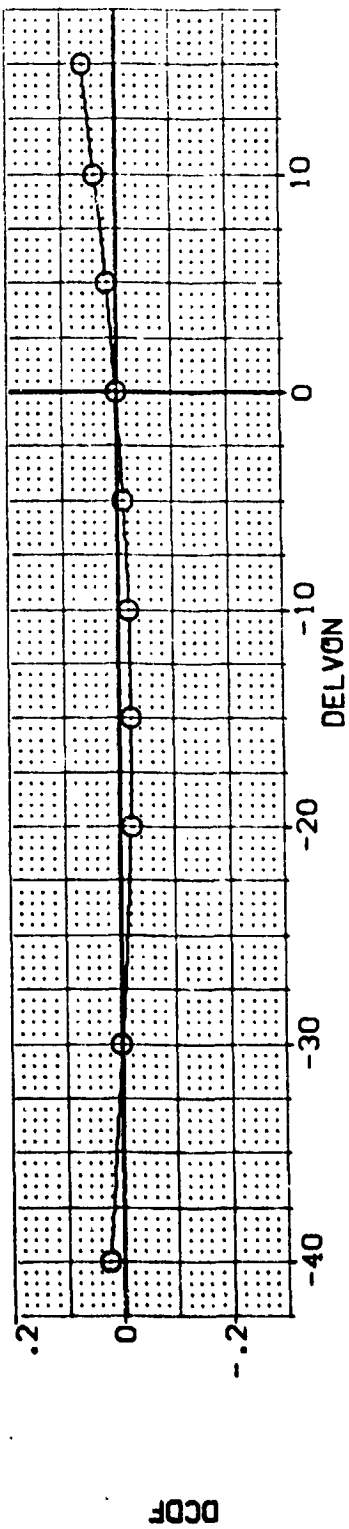
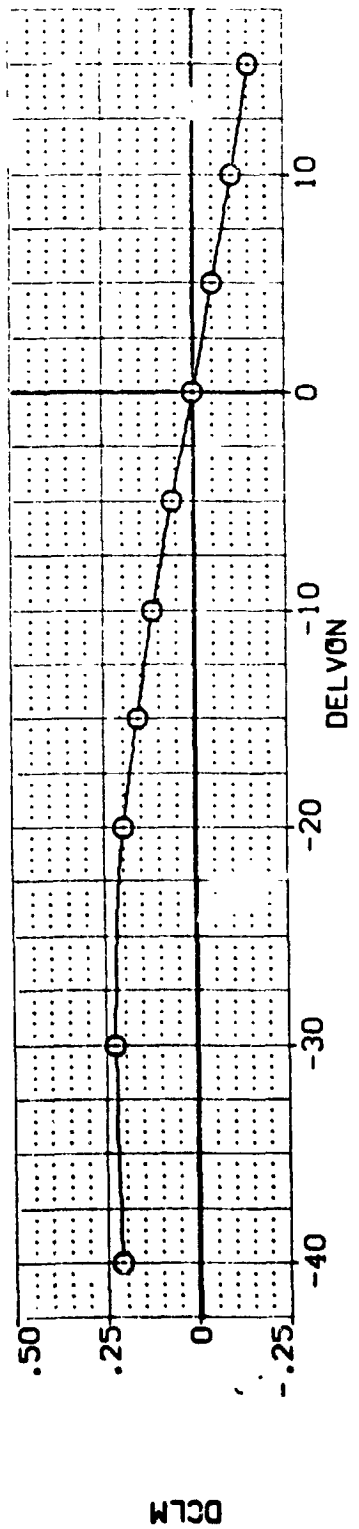


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

0A628 B26C9G15M7F8 W116E28V8R5X9 (10Z011)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION							
ALPHA	15.000	MACH	.200	BETA	.000	DELTON	-30.000	SREF	4.4119	SO.FT.	4.4119
BOFLAP	-12.000	AILRON	.000	DELTON	-40.000	LREF	-30.000	LREF	19.2299	INCHES	19.2299
RUDDER	.000	SPOBRK	25.000	DELTON	-20.000	BREF	-15.000	BREF	37.9359	INCHES	37.9359
H/BW	.178	DELTON	-10.000	DELTON	-10.000	XMRP	5.000	XMRP	43.5974	INCHES	43.5974
		DELTON	10.000	DELTON	10.000	ZMRP	5.000	ZMRP	15.1875	INCHES	15.1875
						SCALE	15.000	SCALE	.0405	SCALE	.0405

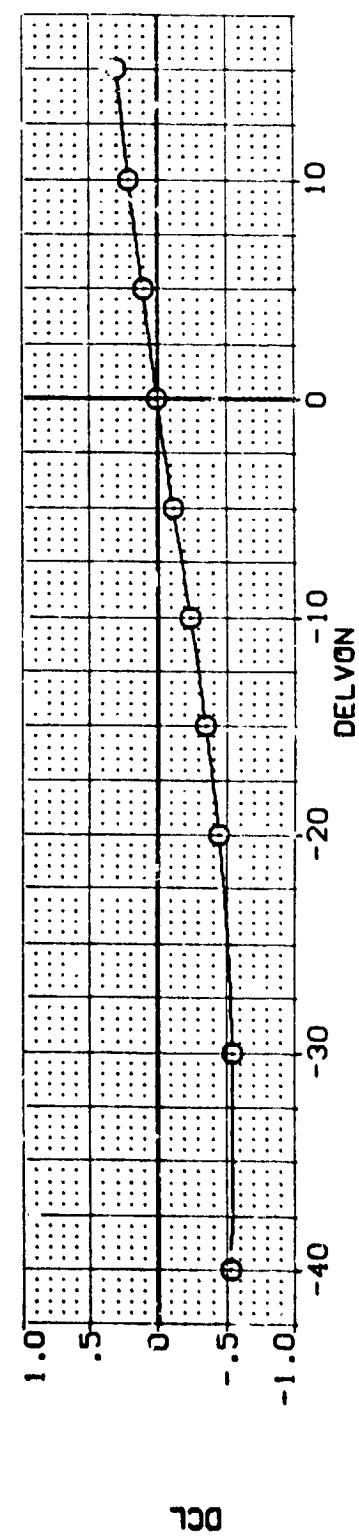
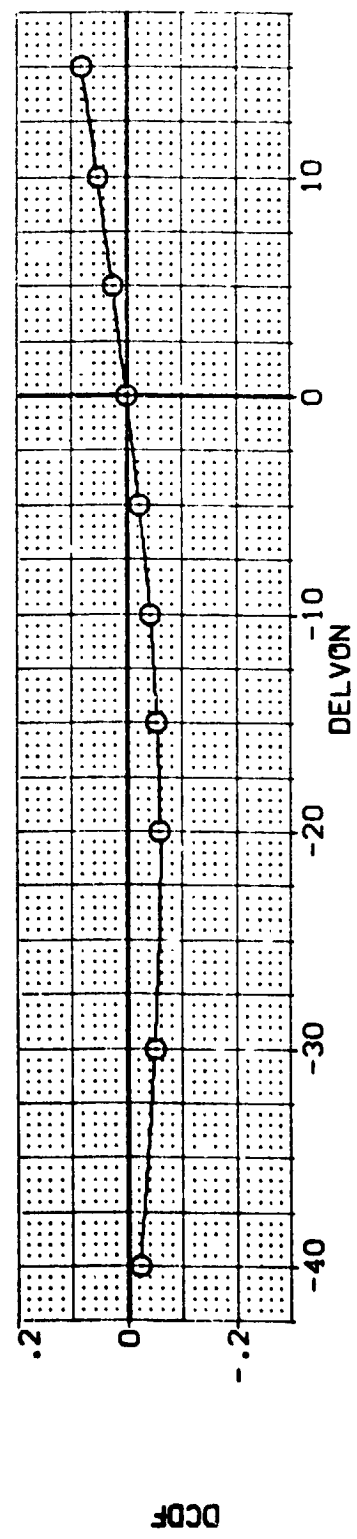
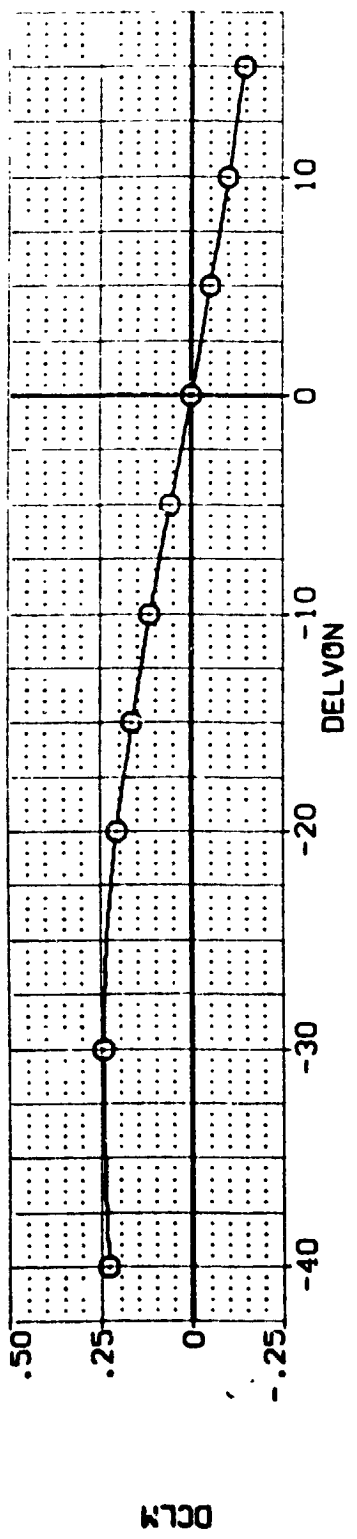


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178





(10Z011)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.200	.000	DELVON	SREF	SO.F.T.
BETA	-12.000	.000	DELVON	LREF	INCHES
MACH	.000	25.000	DELVON	BRCP	INCHES
BOFLAP	.000	.000	DELVON	YMRP	INCHES
RUDDER	.178	.000	DELVON	ZMRP	INCHES
H/BW	.178	10.000	DELVON	SCALE	SCALE
			DATASET		
			IDZ012	4.419	
			IDZ011	19.2299	
			IDZ013	37.9359	
			IDZ015	43.5974	
			IDZ020	.0000	
			IDZ018	15.1875	
			IDZ017	.0405	

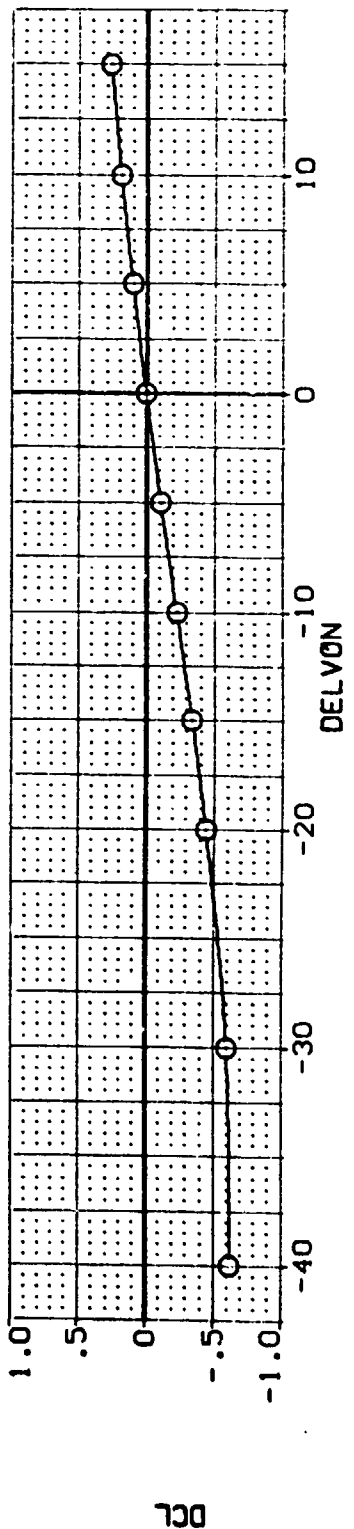
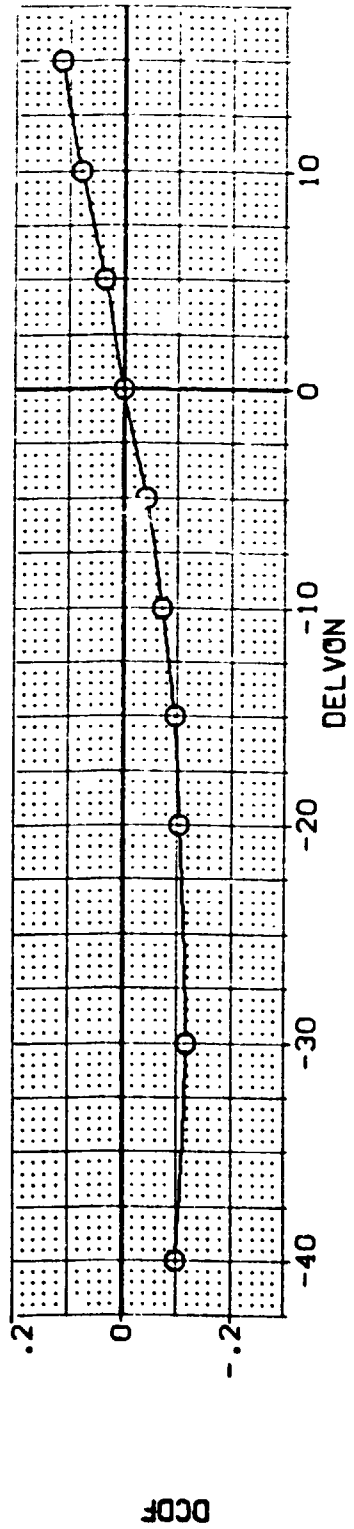
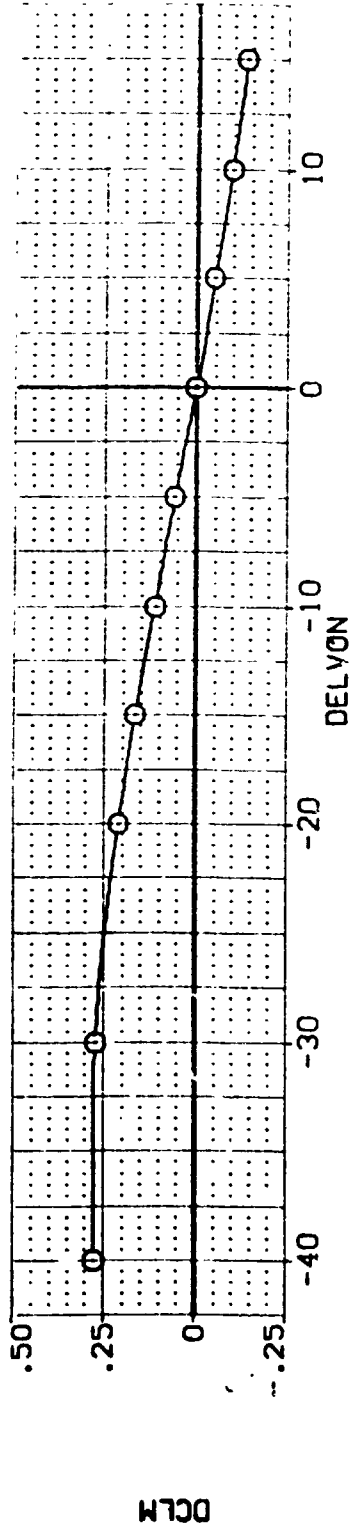


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ011)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	25.000	.000	DELVON	SREF	4.4119
MACH	.200	.000	DELVON	LREF	19.2299
BDFLAP	.12.000	.000	DELVON	BREF	37.9359
RUDDER	.000	25.000	DELVON	XTRP	43.5974
H/BW	.178		DELVON	ZTRP	15.1875
			DELVON	SCALE	.0405

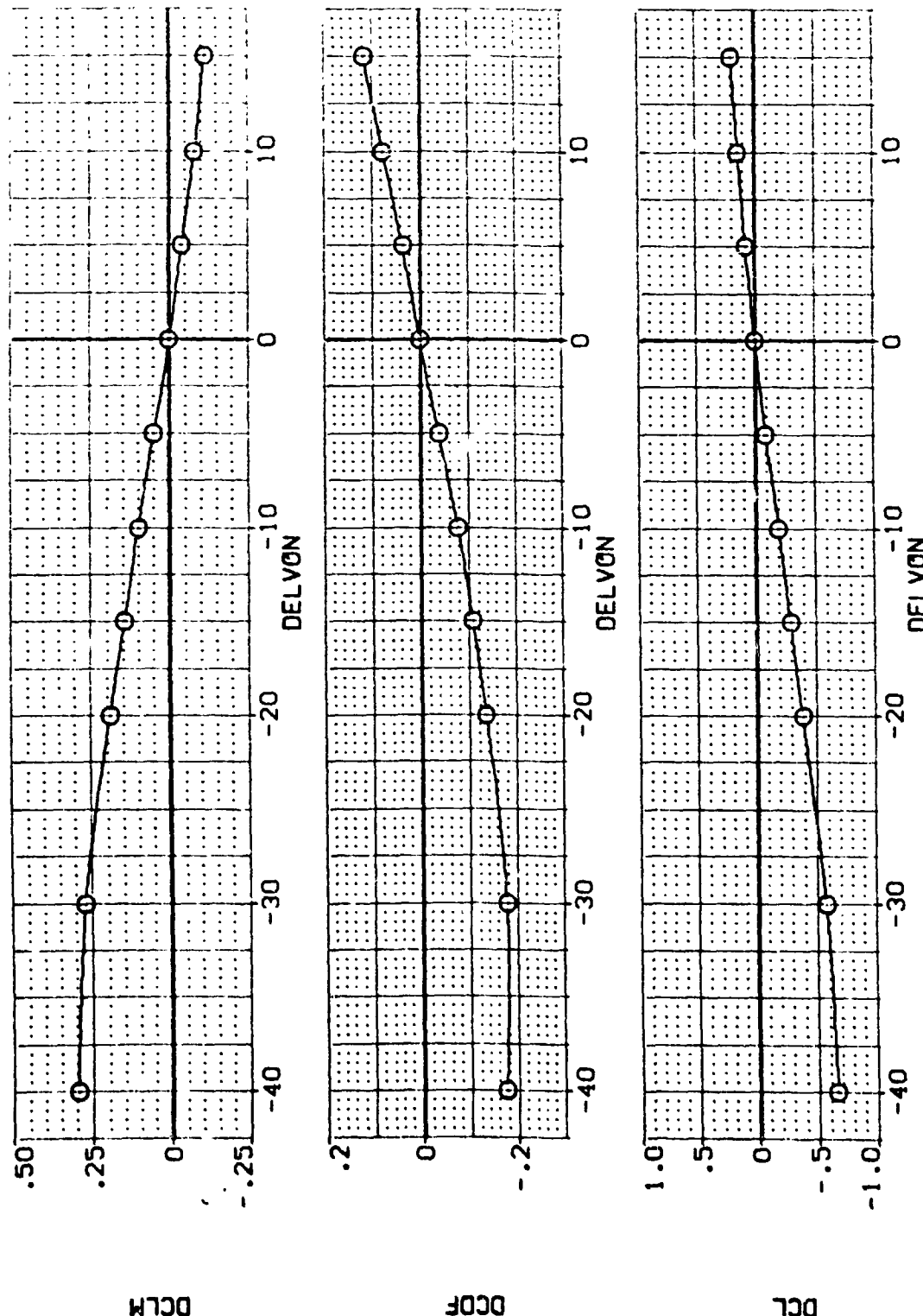


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ011)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.30000	DELTON	DELTON	SREF	SO.FT.
BETA	.200	IDZ011	-30.000	LREF	INCHES
AILERON	-12.000	IDZ012	-40.000	BREF	INCHES
SPORBK	.000	IDZ013	-20.000	XREF	INCHES
H/BW	.178	IDZ015	-10.000	YREF	INCHES
		IDZ016	5.000	ZREF	INCHES
		IDZ017	15.000	SCALE	SCALE
		IDZ018	10.000		
		IDZ019	10.000		
		IDZ020	10.000		
		IDZ021	10.000		
		IDZ022	10.000		
		IDZ023	10.000		
		IDZ024	10.000		
		IDZ025	10.000		
		IDZ026	10.000		
		IDZ027	10.000		
		IDZ028	10.000		
		IDZ029	10.000		
		IDZ030	10.000		
		IDZ031	10.000		
		IDZ032	10.000		
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		IDZ069	10.000		
		IDZ070	10.000		
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		IDZ072	10.000		
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		IDZ075	10.000		
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		IDZ080	10.000		
		IDZ081	10.000		
		IDZ082	10.000		
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		IDZ095	10.000		
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		IDZ100	10.000		

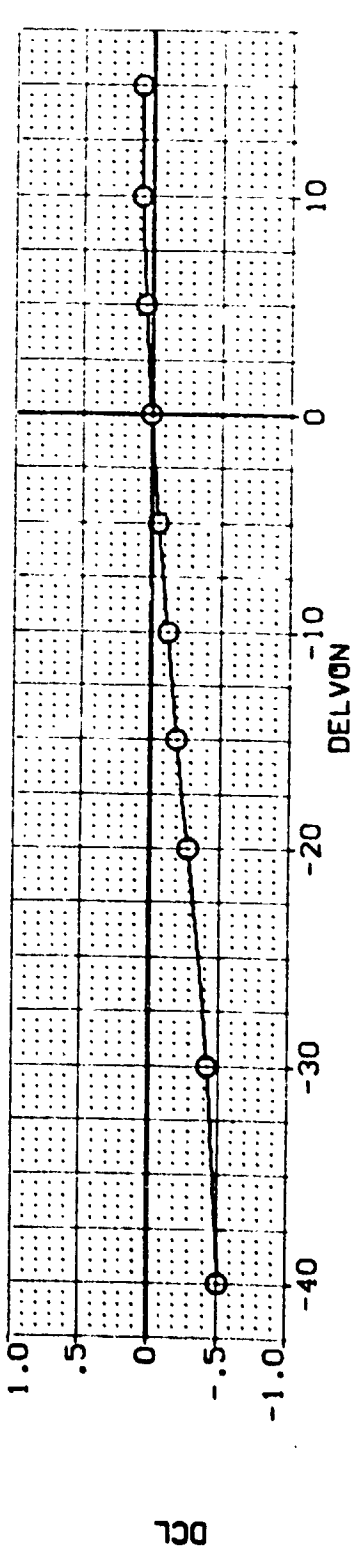
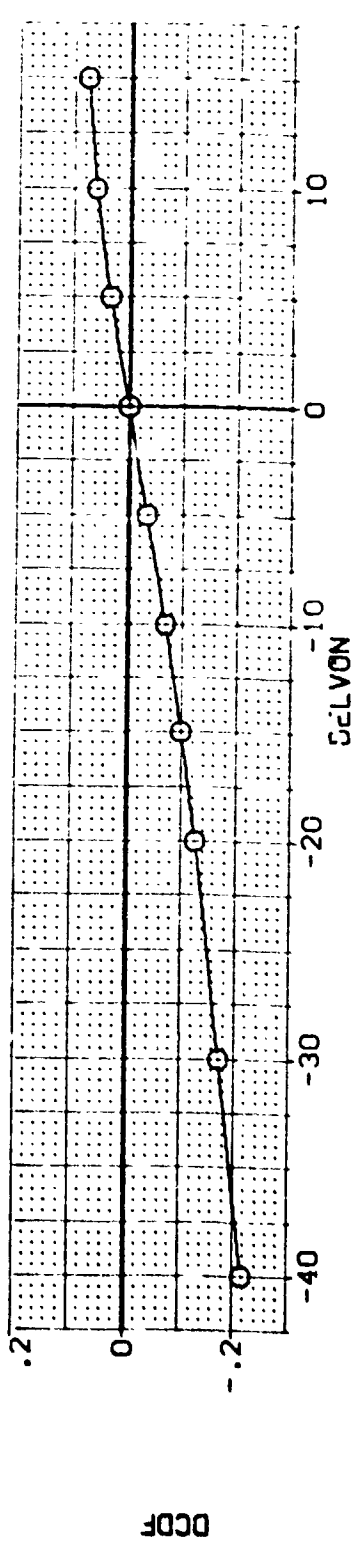
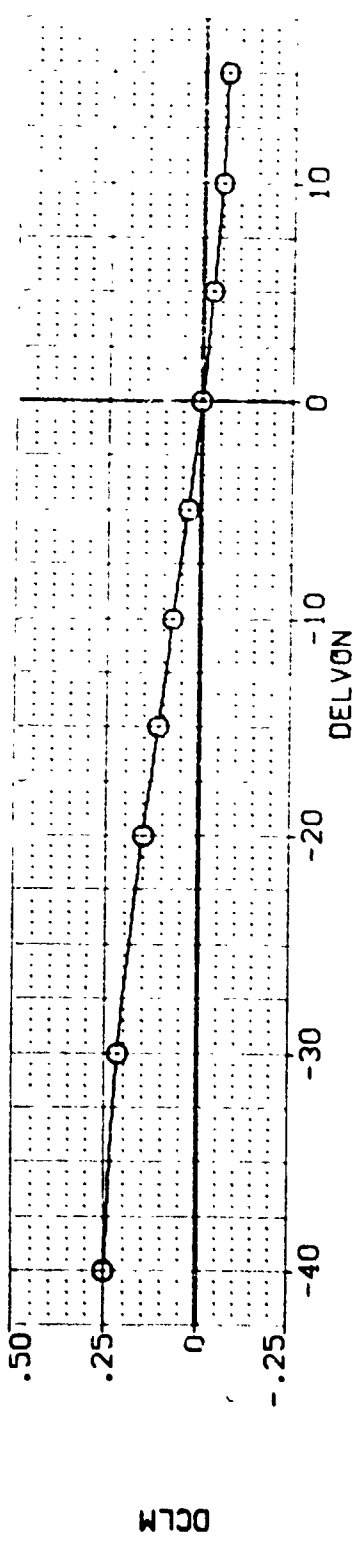


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(1DZ011)

0A628 826C9G15M7F8 W116E28V8R5X9

SYMBOL ○

PARAMETRIC VALUES

MACH	.200
BDFLAP	-12.000
RUDDER	.000
H/BW	.178
BETA	.200
A1LR0N	-12.000
SPOBRK	.000

DATA SOURCE

DELTON	.000
DELTON	-40.000
DELTON	-20.000
DELTON	-10.000
DELTON	10.000

DATASET

IDZ011
IDZ013
IDZ015
IDZ020
IDZ018

DELTON

DELTON	-30.000
DELTON	-15.000
DELTON	5.000
DELTON	15.000

SREF

LREF	4.4119
BREF	19.2299
YREF	37.9359
YREF	43.5974
ZREF	15.1875
SCALE	.0405

REFERENCE INFORMATION

SO.FT.	4.4119
INCHES	19.2299
INCHES	37.9359
INCHES	43.5974
INCHES	15.1875
SCALE	.0405

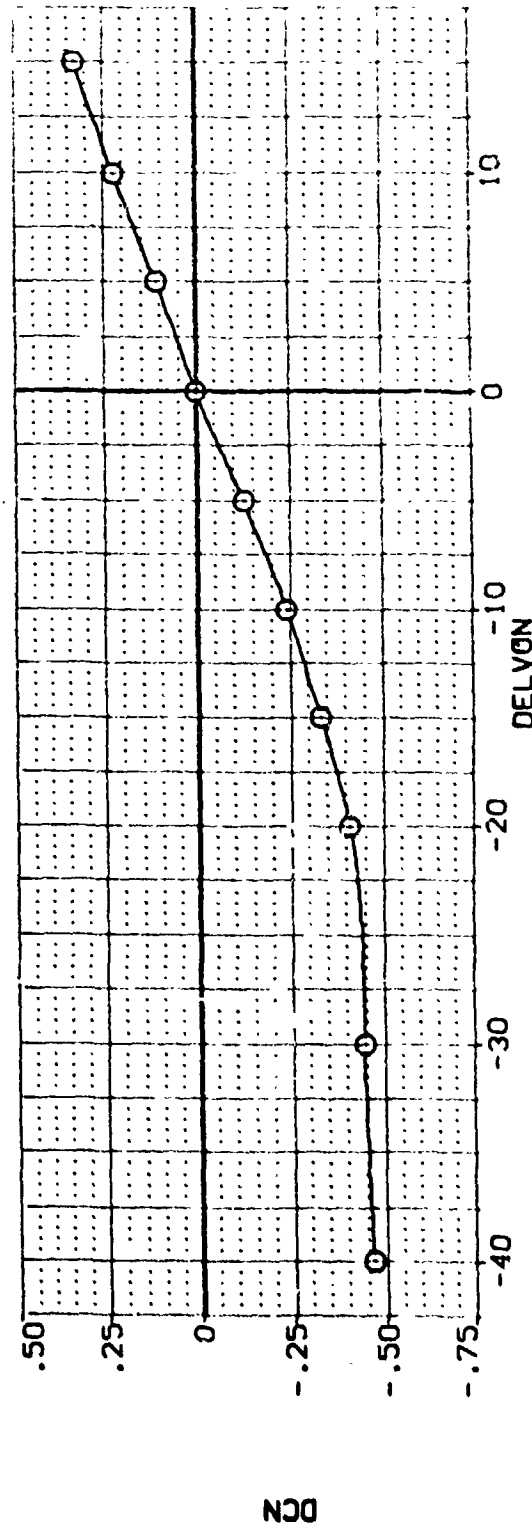
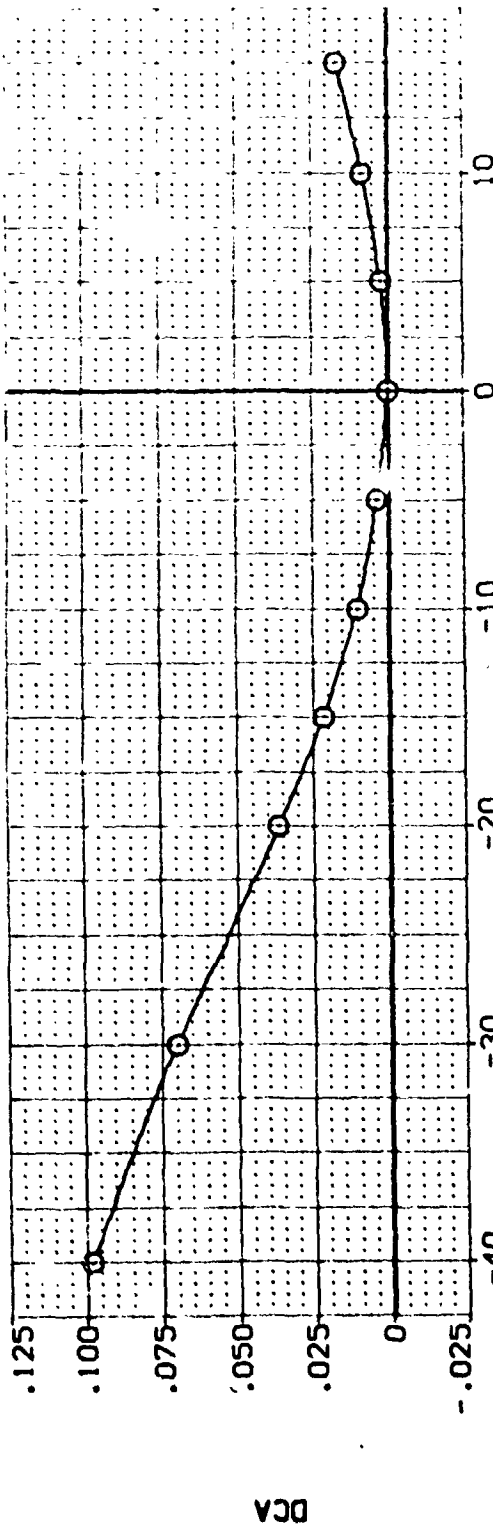


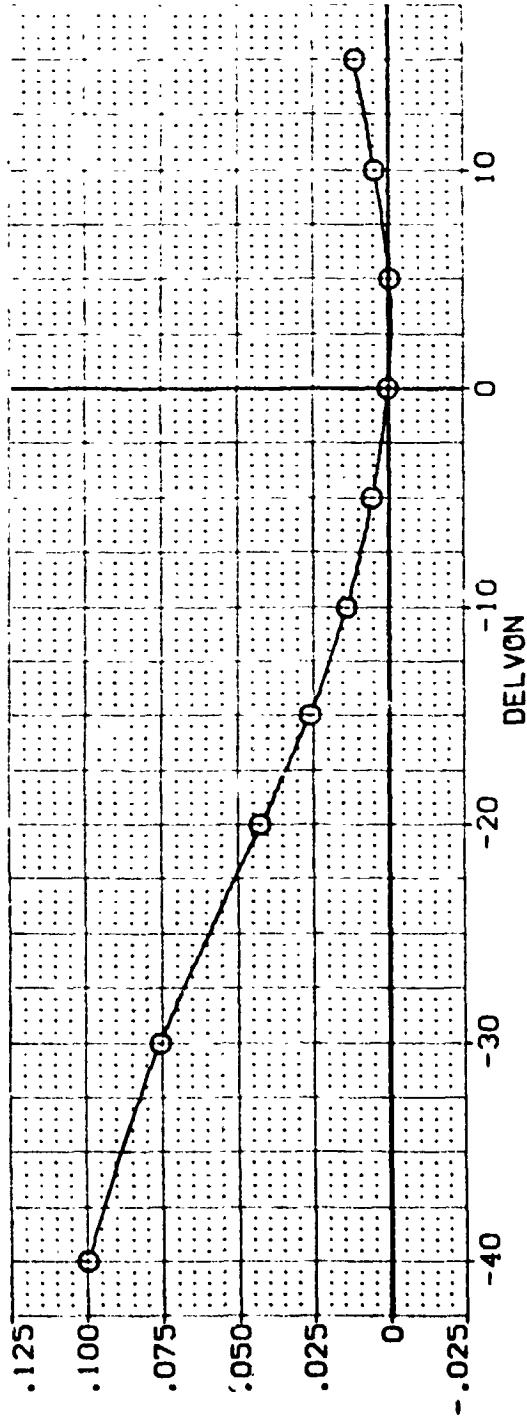
FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178



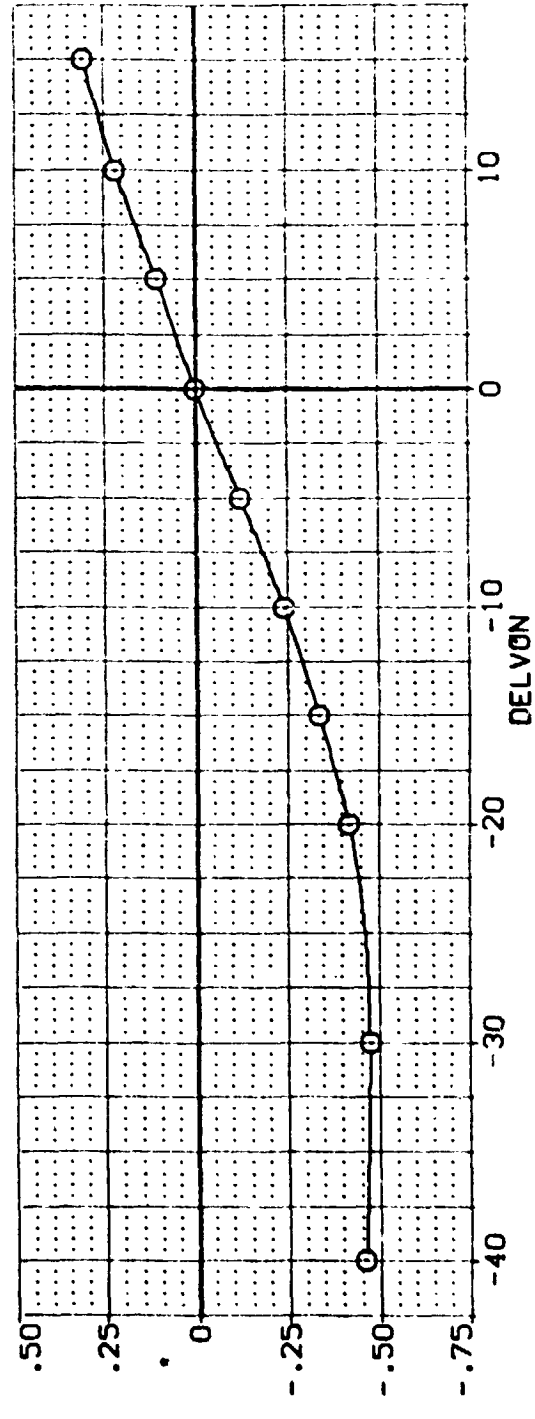
(3)

0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ011)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	5.000	.200	BETA	DELTON	4.4119
		-12.000	AILRON	.000	19.2299
		.000	SPOBRK	25.000	37.9359
		.178			43.5574
					.0000
					15.1875
					.0405
					SCALE



DCA



DCN

FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178



(10Z011)

0A628 B26C9G15M7F8 W116E28V0R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION		
O	10.000	BDFLAP	.200	BETA	.000	DELVON	IDZ012	-30.000	LREF	4.4119	SO.FT.	
		RUDDER	-12.000	A1LRON	.000	DELVON	IDZ014	-15.000	BREF	19.2299	INCHES	
		H/BW	.000	SPOBRK	25.000	DELVON	IDZ016	-5.000	XMRP	37.9359	INCHES	
			.178			DELVON	IDZ019	5.000	YMRP	43.5974	INCHES	
						DELVON	IDZ017	15.000	ZMRP	15.1875	INCHES	
											SCALE	
											.0405	

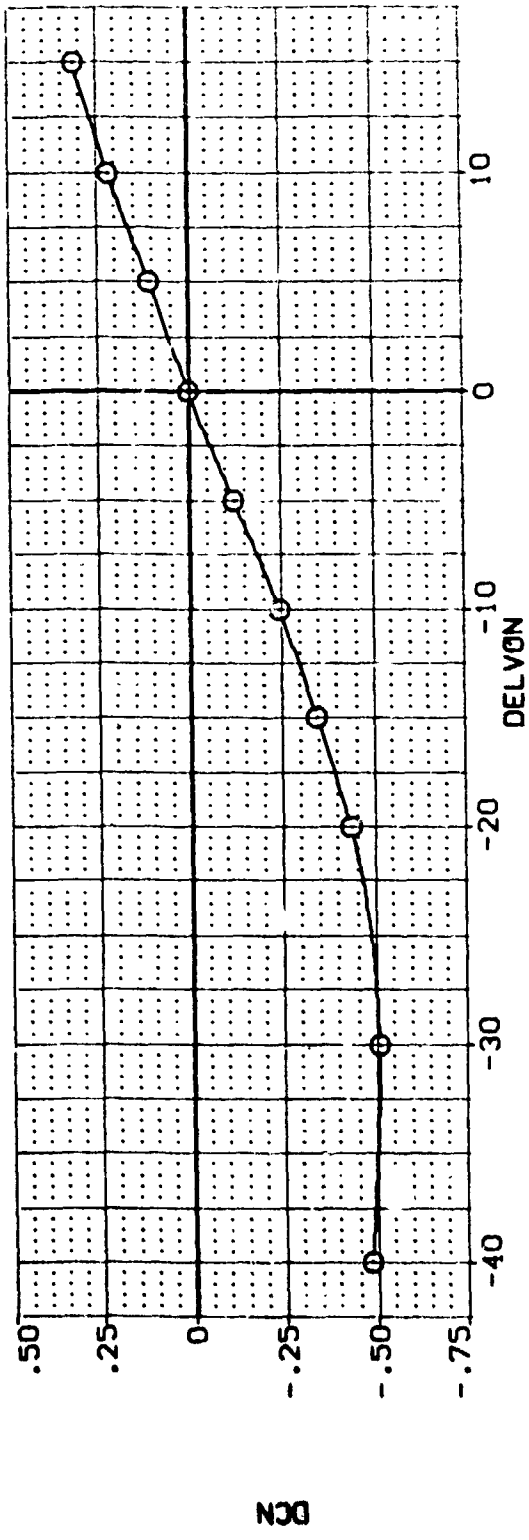
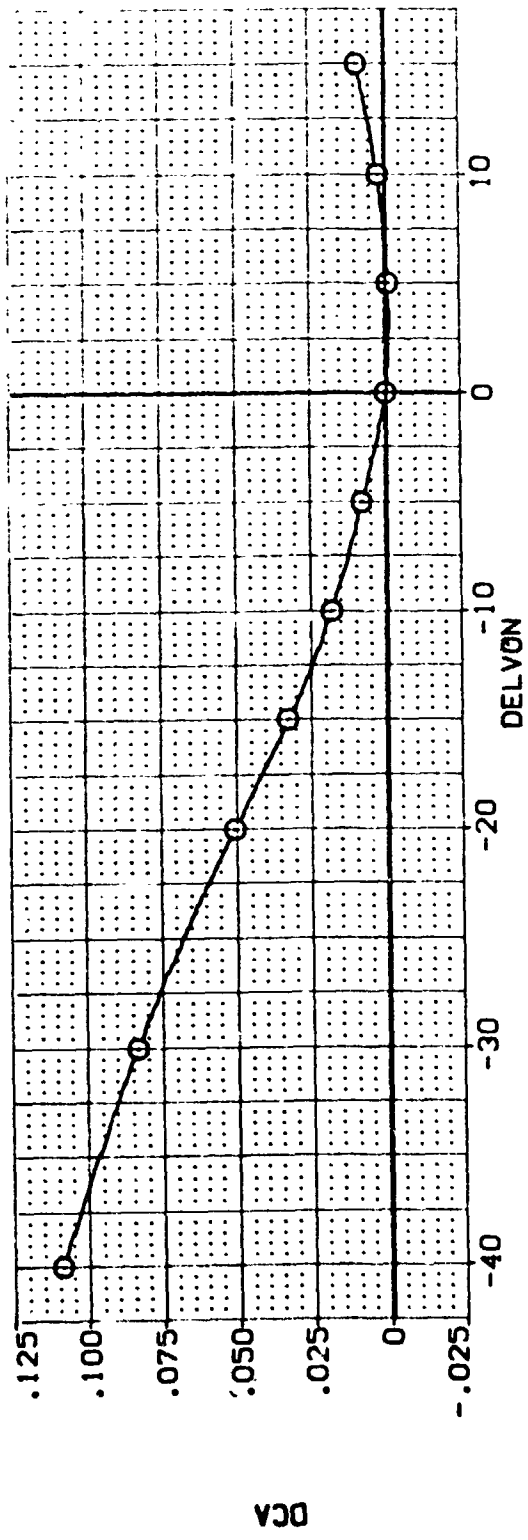


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178



(1DZ011)

0A628 B26C9G15M7F8 W116E28V8R5X9

ALPHA 15.000

SYMBOL  
O

PARAMETRIC VALUES

MACH	.200	BETA	.000
BDFLAP	-12.000	A1LRON	.000
RUDDER	.000	SPOBRK	25.000
H/BW	.178		

DATA SOURCE

DELVON	-40.000	DATASET	IDZ011
	-20.000		IDZ013
	-10.000		IDZ015
	10.000		IDZ018

DELVON

SREF	-30.000	DATASET	IDZ012
LREF	-15.000		IDZ014
BREF	-5.000		IDZ016
XMRP	5.000		IDZ019
YMRP	15.000		IDZ017
ZMRP	15.000		
SCALE			

REFERENCE INFORMATION

SO FT.	4.4119
INCHES	19.2299
INCHES	37.9359
INCHES	43.5974
INCHES	.0000
INCHES	15.1875
SCALE	.0405

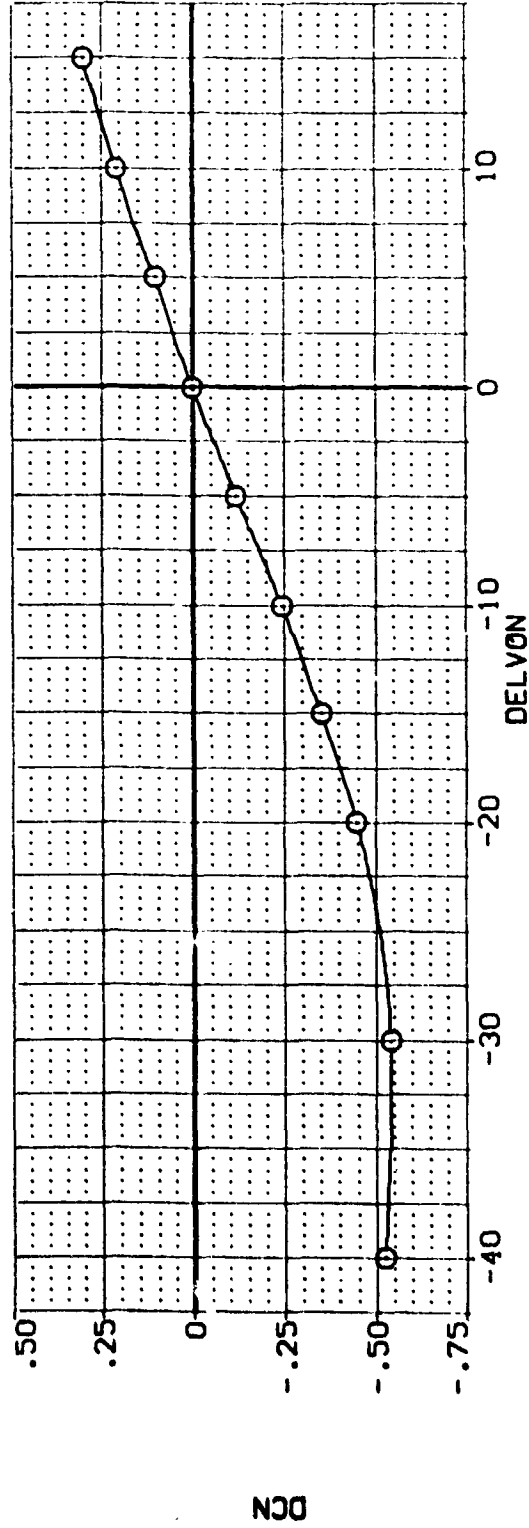
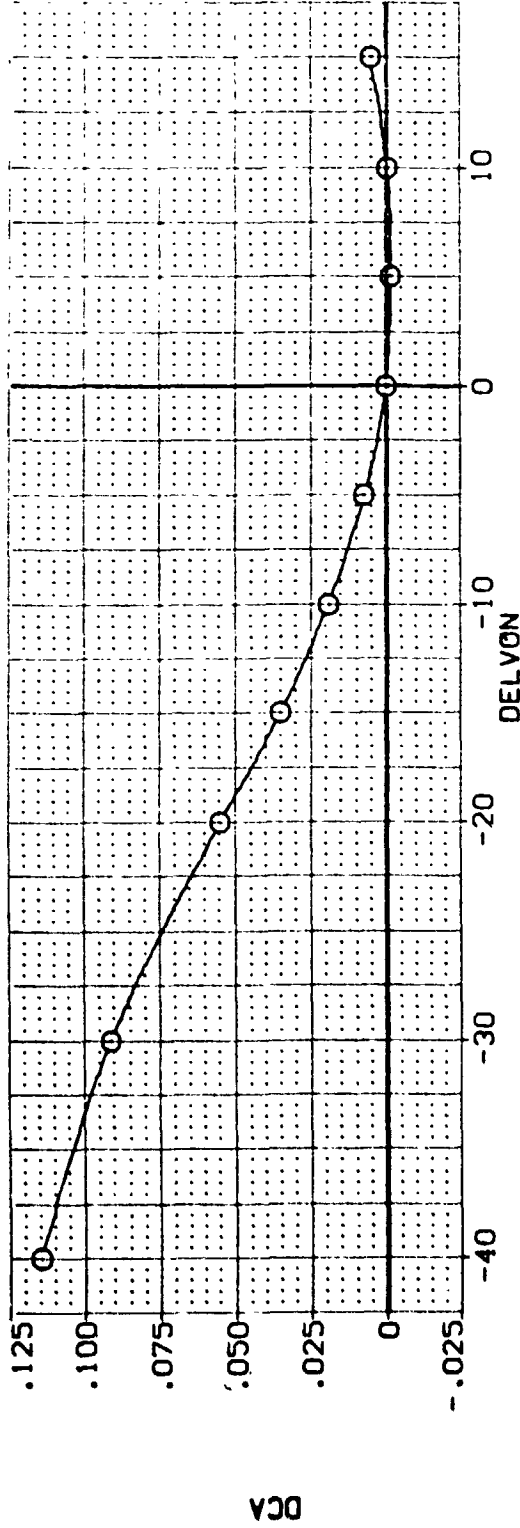


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178



0A62B B26C9G15M7F8 W116E28V8R5X9 (10Z011)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	.200	BETA	.000	DATASET	SREF	SO.FT.
	BOFLAP	-12.000	A11LRON	-40.000	10Z012	LREF	INCHES
	RUDDER	.000	SPDRBK	-20.000	10Z014	XPRP	INCHES
	H/BW	.178		-10.000	10Z016	YPRP	INCHES
				10.000	10Z019	ZPRP	INCHES
					10Z017	SCALE	SCALE

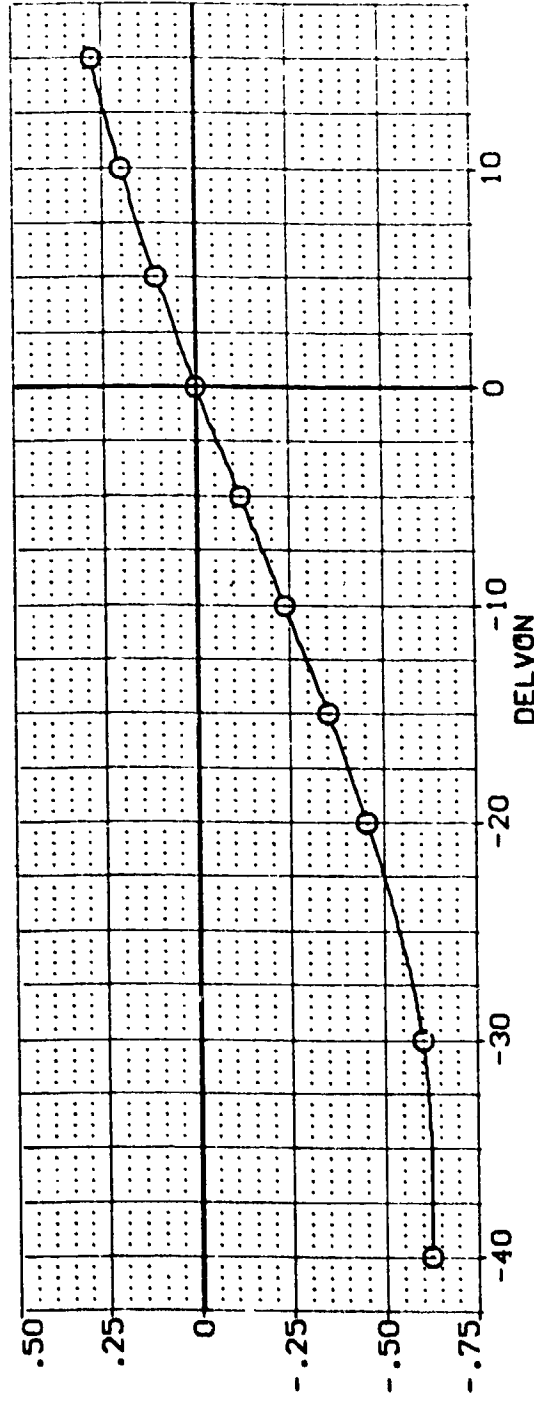
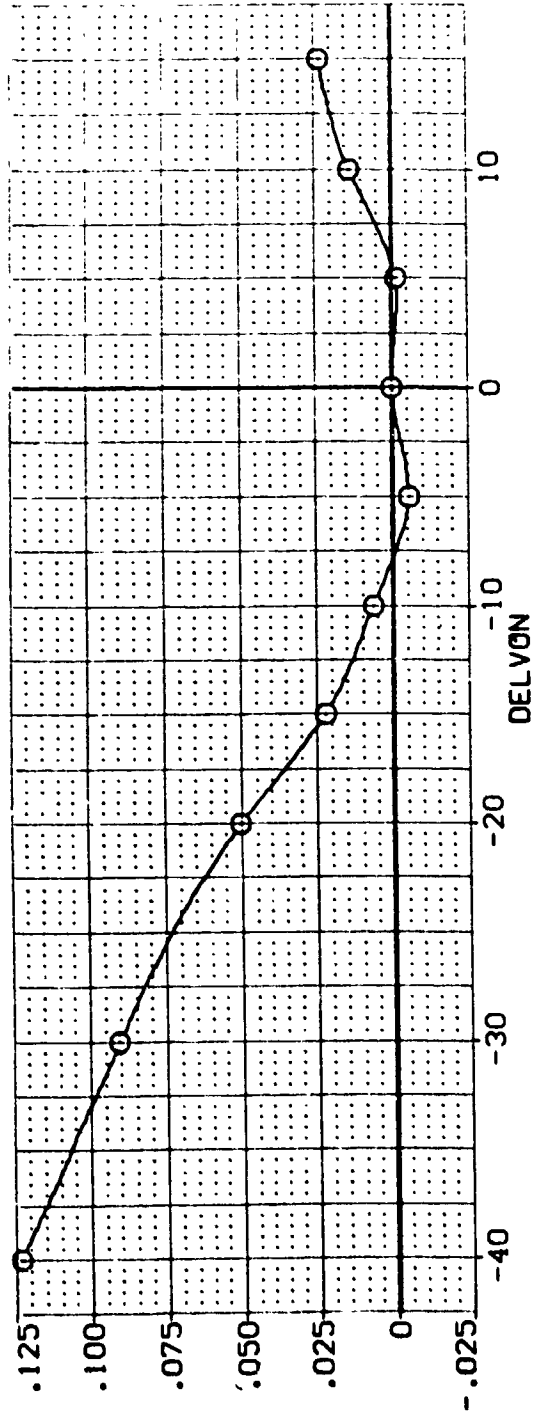


FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

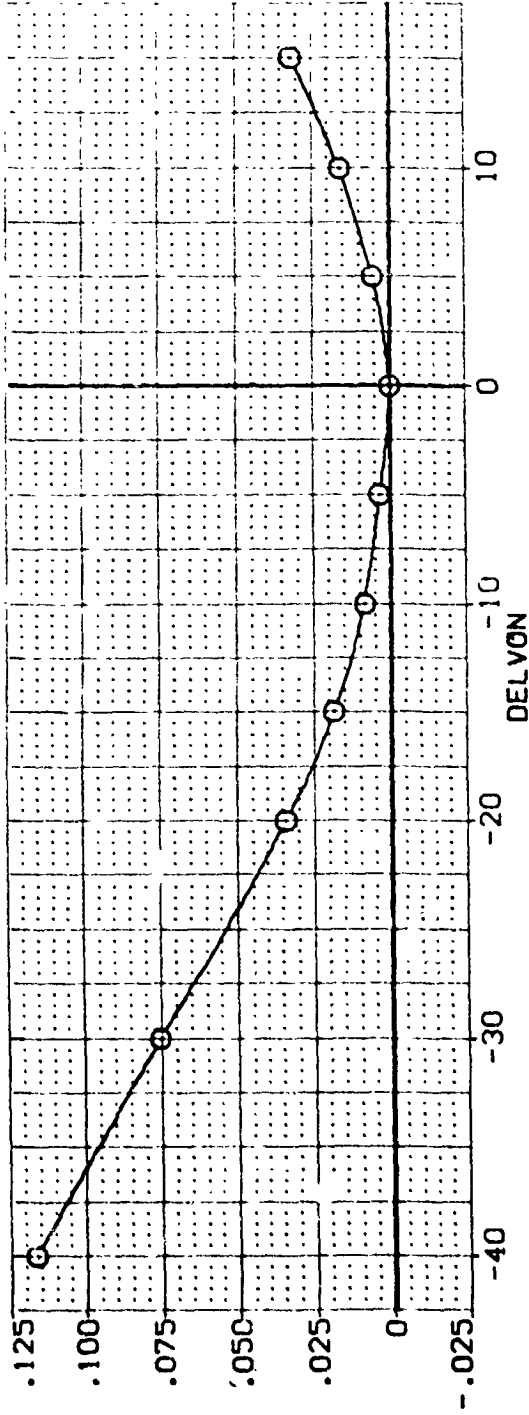




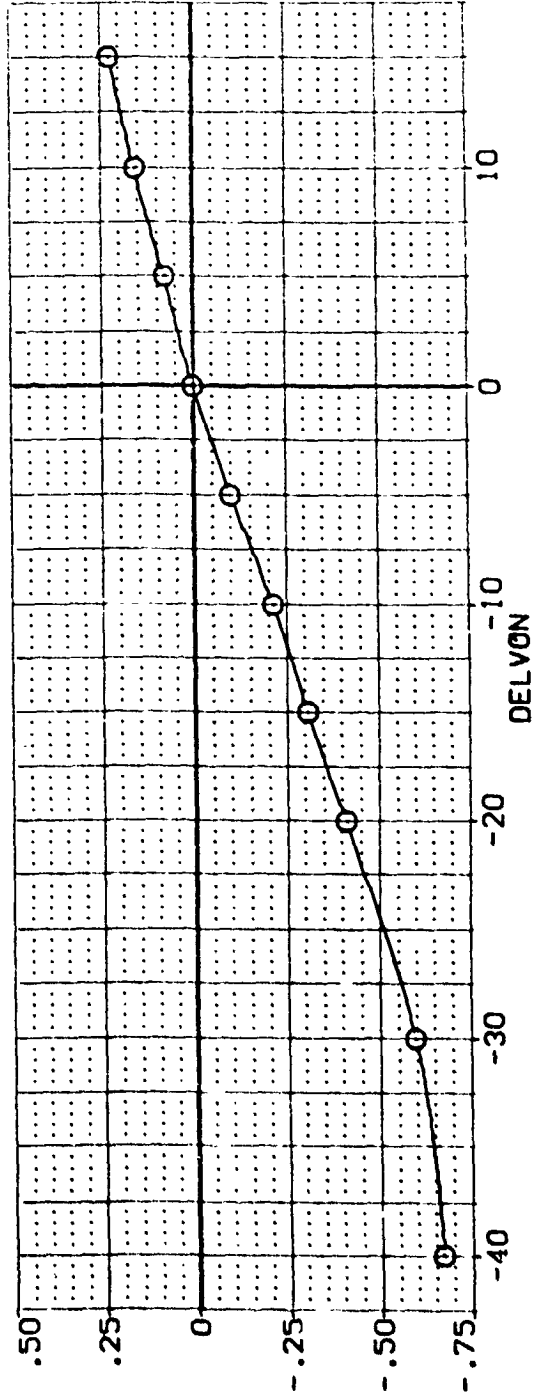
(1DZ011)

0A628 B26C9615M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	25.000	DELTON	DELTON	SREF	SO.FT.
BETA	.200	DELTON	DELTON	LREF	INCHES
MACH	.000	DELTON	DELTON	BREF	INCHES
BDFLAP	-12.000	DELTON	DELTON	XMRP	INCHES
RUDDER	.000	DELTON	DELTON	YMRP	INCHES
H/BW	.178	DELTON	DELTON	ZMRP	INCHES
		DELTON	DELTON	SCALE	SCALE



DCA



DCN

FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178

(1DZ011)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL ALPHA 30.000

MACH .200

BOFLAP -12.000

RUDDER .000

H/BW .178

PARAMETRIC VALUES

BETA .000

AIRTON .000

SPOBRK 25.000

DATA SOURCE

DELVON -40.000

DELVON -20.000

DELVON -10.000

DELVON 10.000

DATASET IDZ011

DATASET IDZ013

DATASET IDZ015

DATASET IDZ020

DATASET IDZ018

REFERENCE INFORMATION

SO. FT. 4.4119

INCHES 19.2299

INCHES 37.9359

INCHES 43.5974

INCHES .0000

INCHES 15.1875

SCALE .0405

DELVON SREF

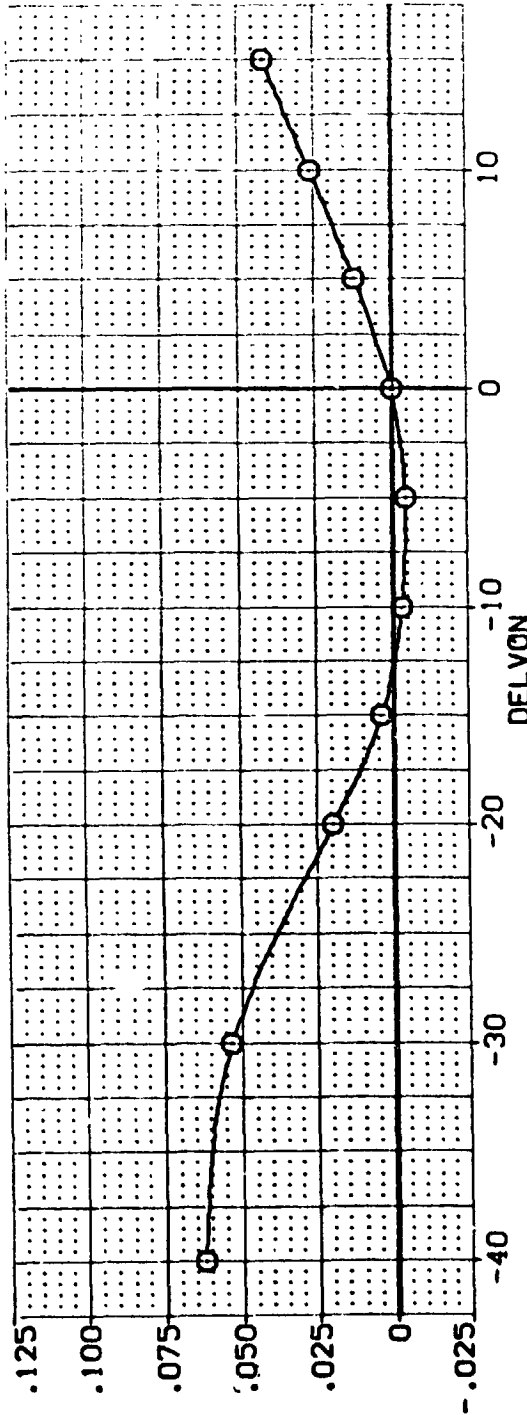
DELVON -30.000

DELVON -15.000

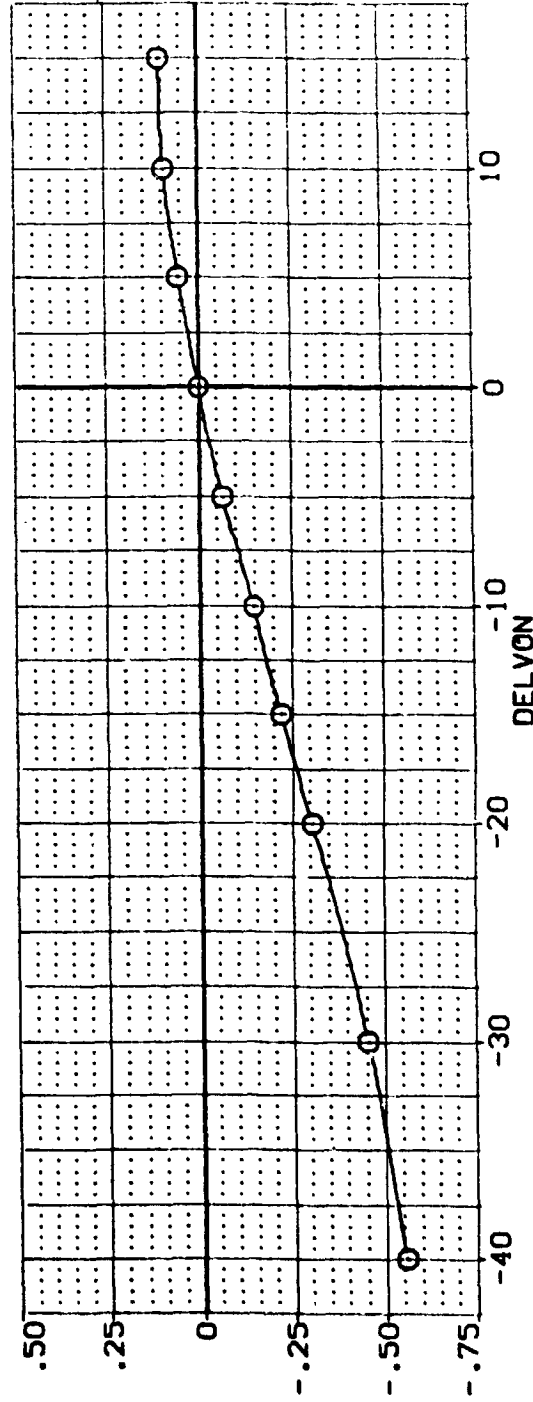
DELVON 5.000

DELVON 15.000

SCALE



DCA



DCN

FIG 5 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.178



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z020)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z021)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	LREF 19.2299 INCHES
(80Z022)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z023)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	XMRP 43.5974 INCHES
(80Z024)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	ZMRP .0000 INCHES
(80Z025)	0A6Z8 B26C961547F8 V116E28V8RSX9	.125	25.000	-12.000	SCALE 15.1875 INCHES
					SCALE .0405

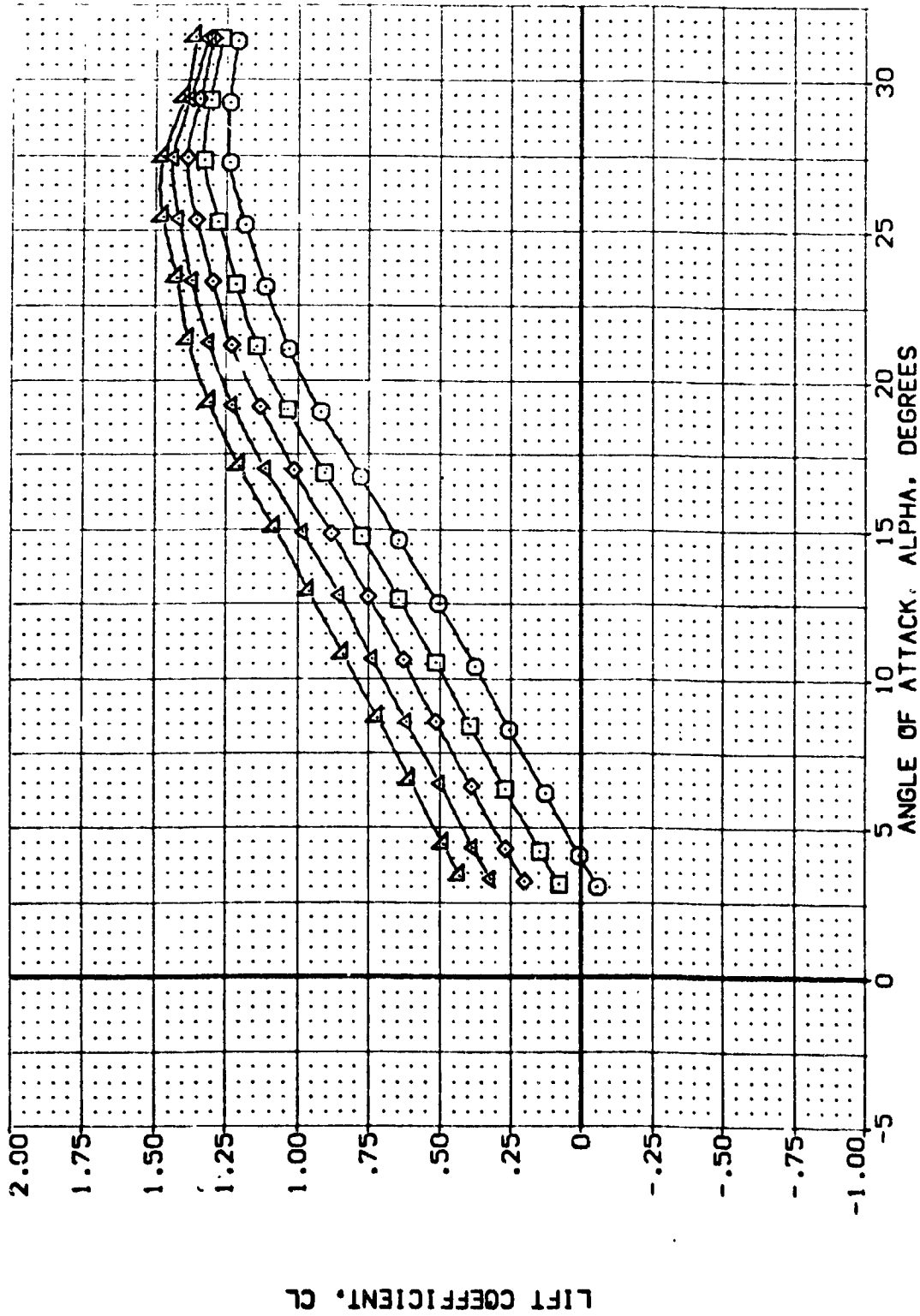


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20

DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z020)	0A6Z8 B26C9G1S47F8 V116E28V8RSX9	-5.000	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z021)	0A6Z8 B26C9G1S47F8 V116E28V8RSX9	0.000	.125	25.000	-12.000	LREF 19.2299 INCHES
(80Z023)	0A6Z8 B26C9G1S47F8 V116E28V8RSX9	5.000	.125	25.000	-12.000	BREF 37.9559 INCHES
(80Z025)	0A6Z8 B26C9G1S47F8 V116E28V8RSX9	10.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
(80Z025)	0A6Z8 B26C9G1S47F8 V116E28V8RSX9	15.000	.125	25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

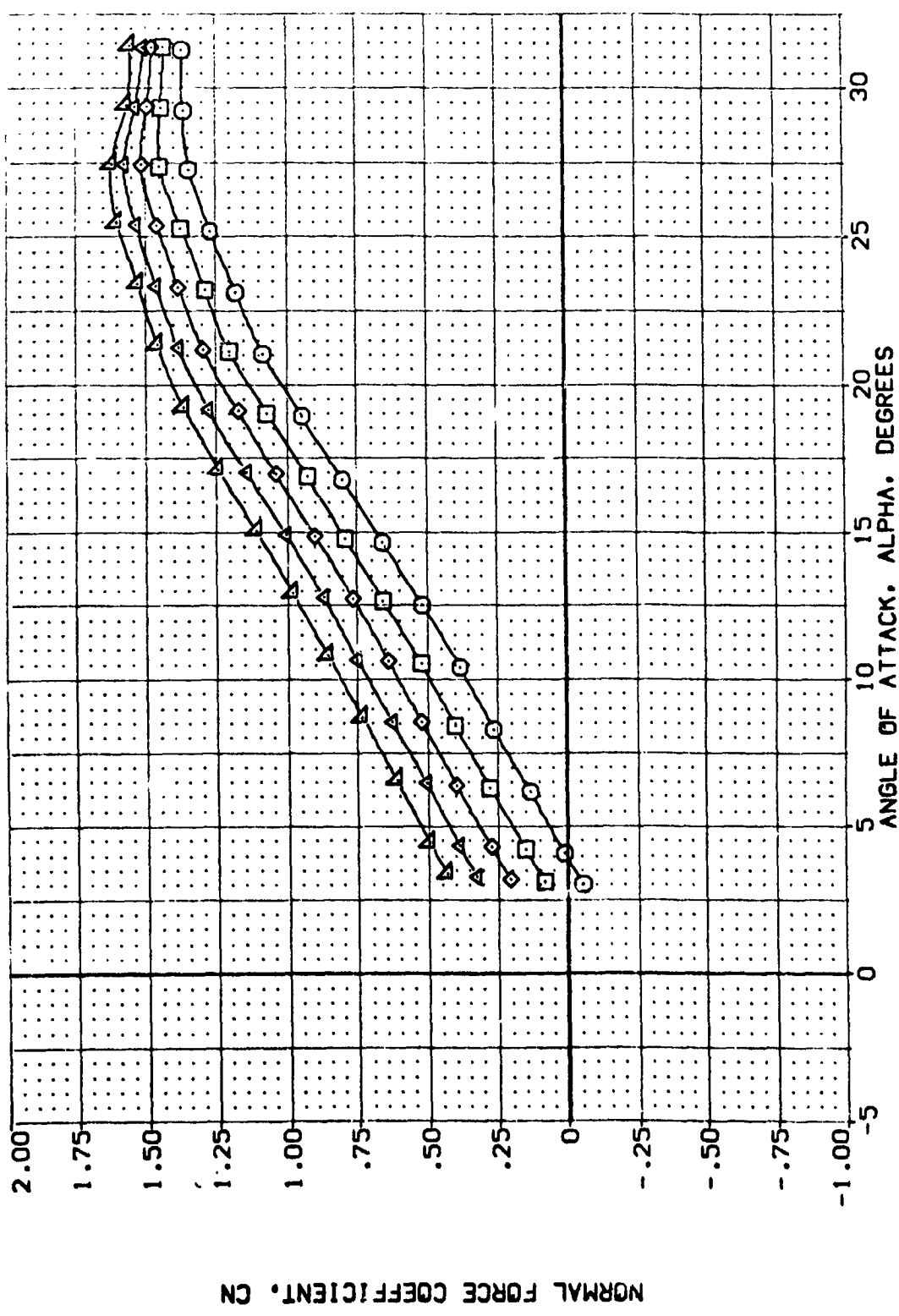


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(M)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z030)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z021)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9	.125	25.000	-12.000	LREF 19.2299 INCHES
(80Z023)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z029)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9	.125	25.000	-12.000	XTRP 43.5974 INCHES
(80Z025)	0A6Z8 B26C9G1S47F8 V116E28V8R5X9	.125	25.000	-12.000	YTRP .0000 INCHES
					ZTRP 15.1875 INCHES
					SCALE .0405

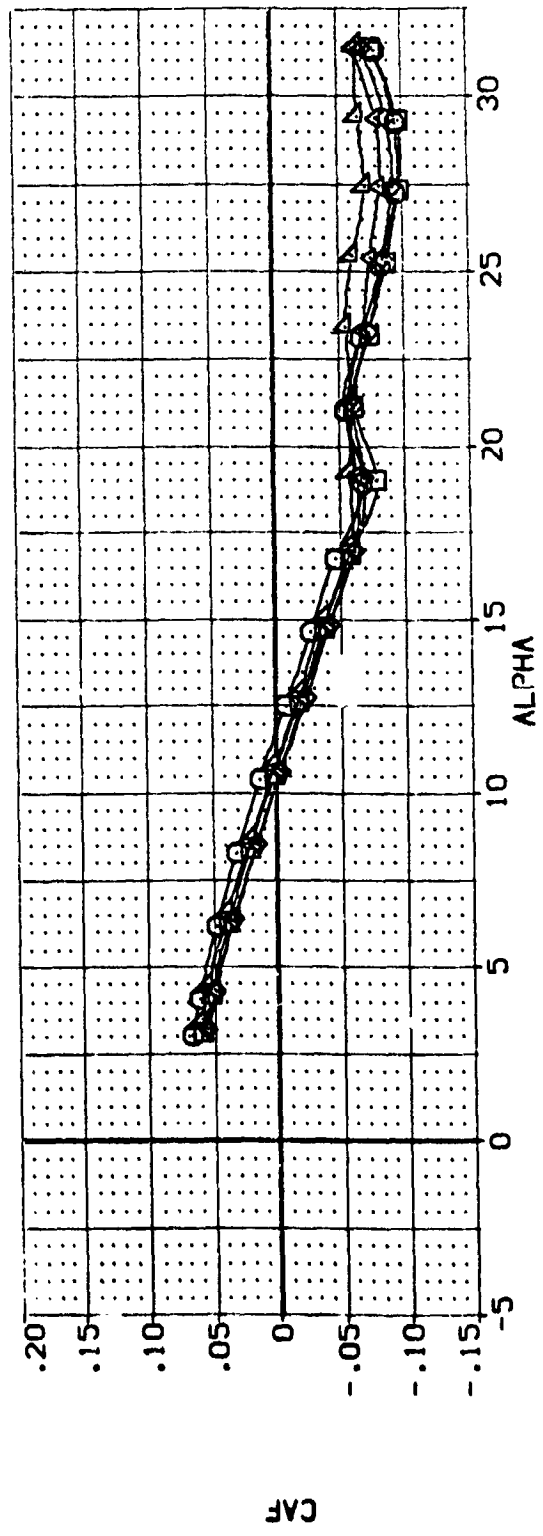
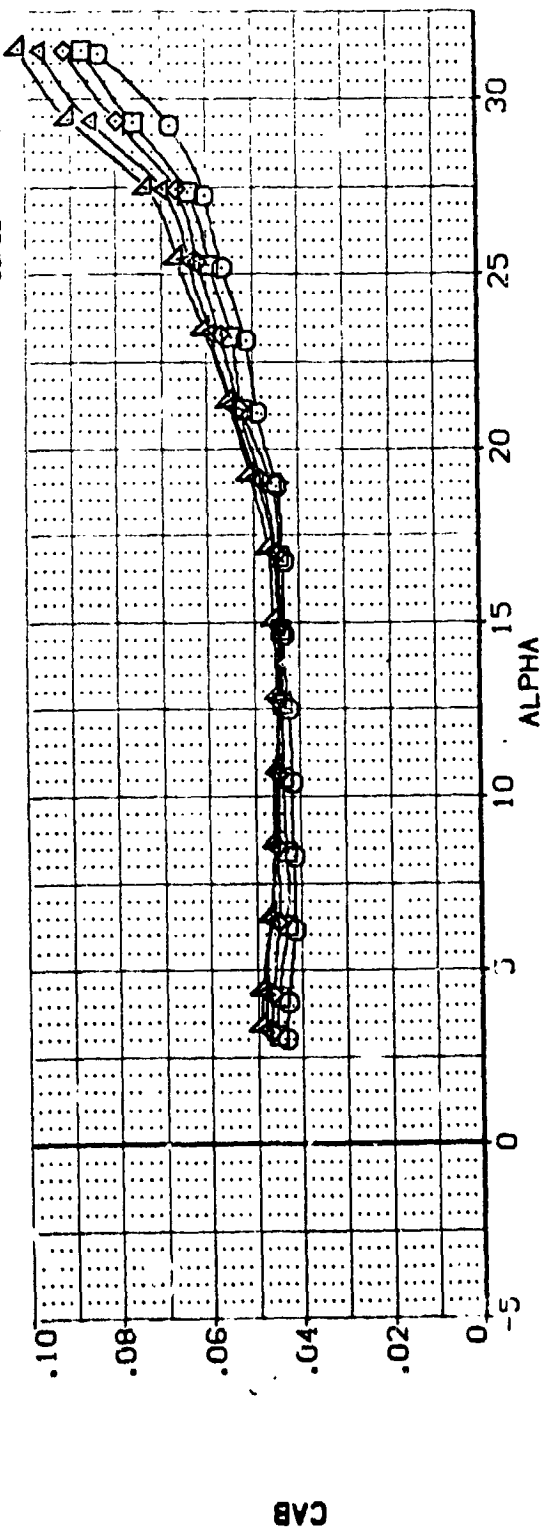


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02020)	0A628 B26C9G1 S77F8 V116E28V8R5X9	-5.000	.125	25.000	-12.000	SREF 4.4119 SQ.FT.
(B02021)	0A628 B26C9G1 S77F8 V116E28V8R5X9	0.000	.125	25.000	-12.000	LREF 19.2299 INCHES
(B02023)	0A628 B26C9G1 S77F8 V116E28V8R5X9	5.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(B02029)	0A628 B26C9G1 S77F8 V116E28V8R5X9	10.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
(B02025)	0A628 B26C9G1 S77F8 V116E28V8R5X9	15.000	.125	25.000	-12.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

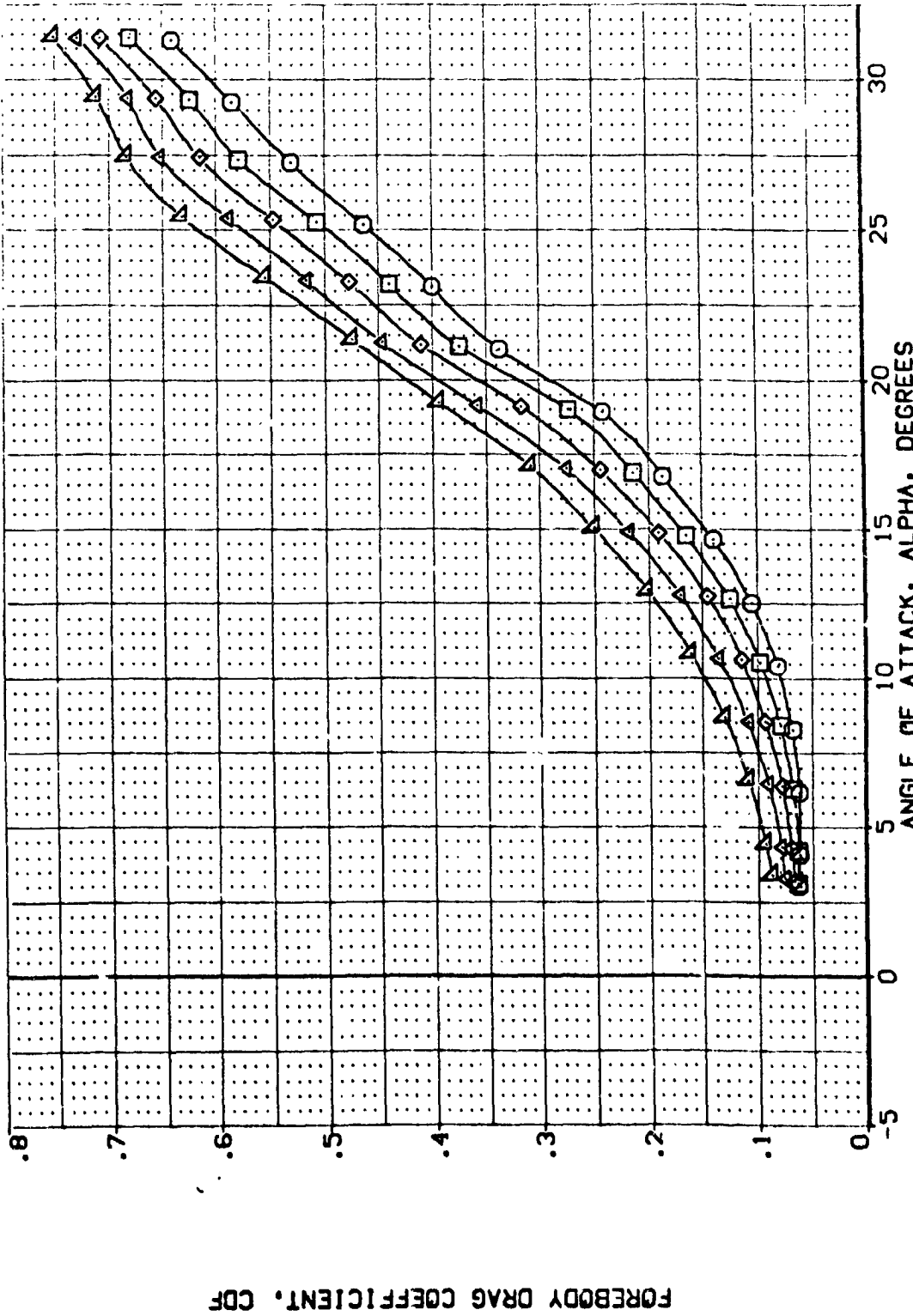
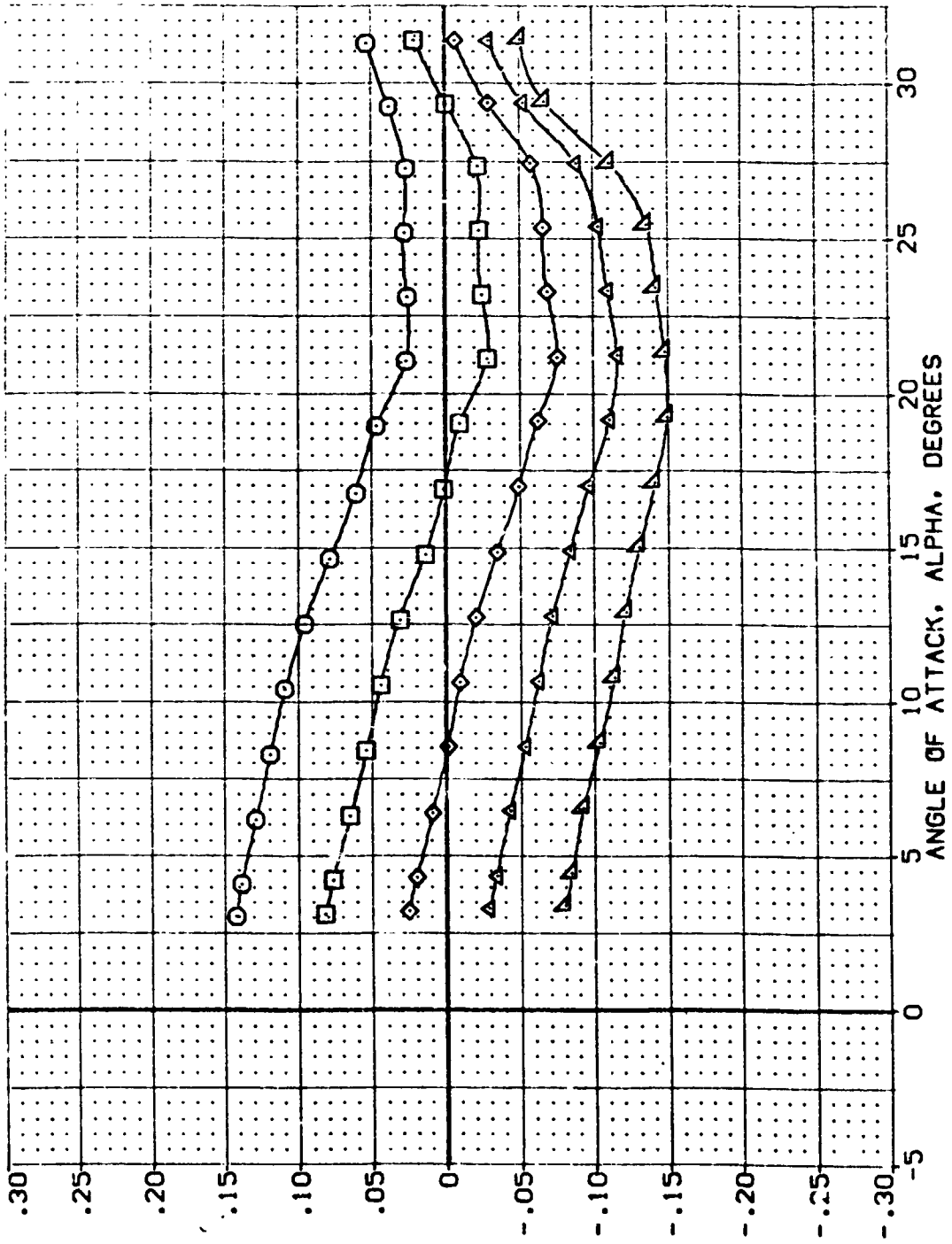


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = C.125

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z00)	0A6Z8 B26C9G 5M7F8 V116E28VBR5X9	-5.000	.125	25.000	-12.000	SREF 4.4119 SO.FT
(80Z021)	0A6Z8 B26C9G 5M7F8 V116E28VBR5X9	5.000	.125	25.000	-12.000	LREF 19.2299 INCHES
(80Z023)	0A6Z8 B26C9G 5M7F8 V116E28VBR5X9	10.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z025)	0A6Z8 B26C9G 5M7F8 V116E28VBR5X9	15.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(AJMACH = .20

ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
-5.000	.125	25.000	-12.000	SREF 4.4119 SO.FT.
.000	.125	25.000	-12.000	LREF 19.2299 INCHES
5.000	.125	25.000	-12.000	BREF 37.9359 INCHES
10.000	.125	25.000	-12.000	YMRP 43.5974 INCHES
15.000	.125	25.000	-12.000	ZMRP 15.0000 INCHES
				SCALE 15.1875 INCHES
				SCALE .0405 INCHES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(8D2020)	0A628 B26C9G SMT7-8 V116E28V8FSX9
(8D2021)	0A628 B26C9G SMT7-8 V116E28V8FSX9
(8D2023)	0A628 B26C9G SMT7-8 V116E28V8FSX9
(8D2029)	0A628 B26C9G SMT7-8 V116E28V8FSX9
(8D2025)	0A628 B26C9G SMT7-8 V116E28V8FSX9

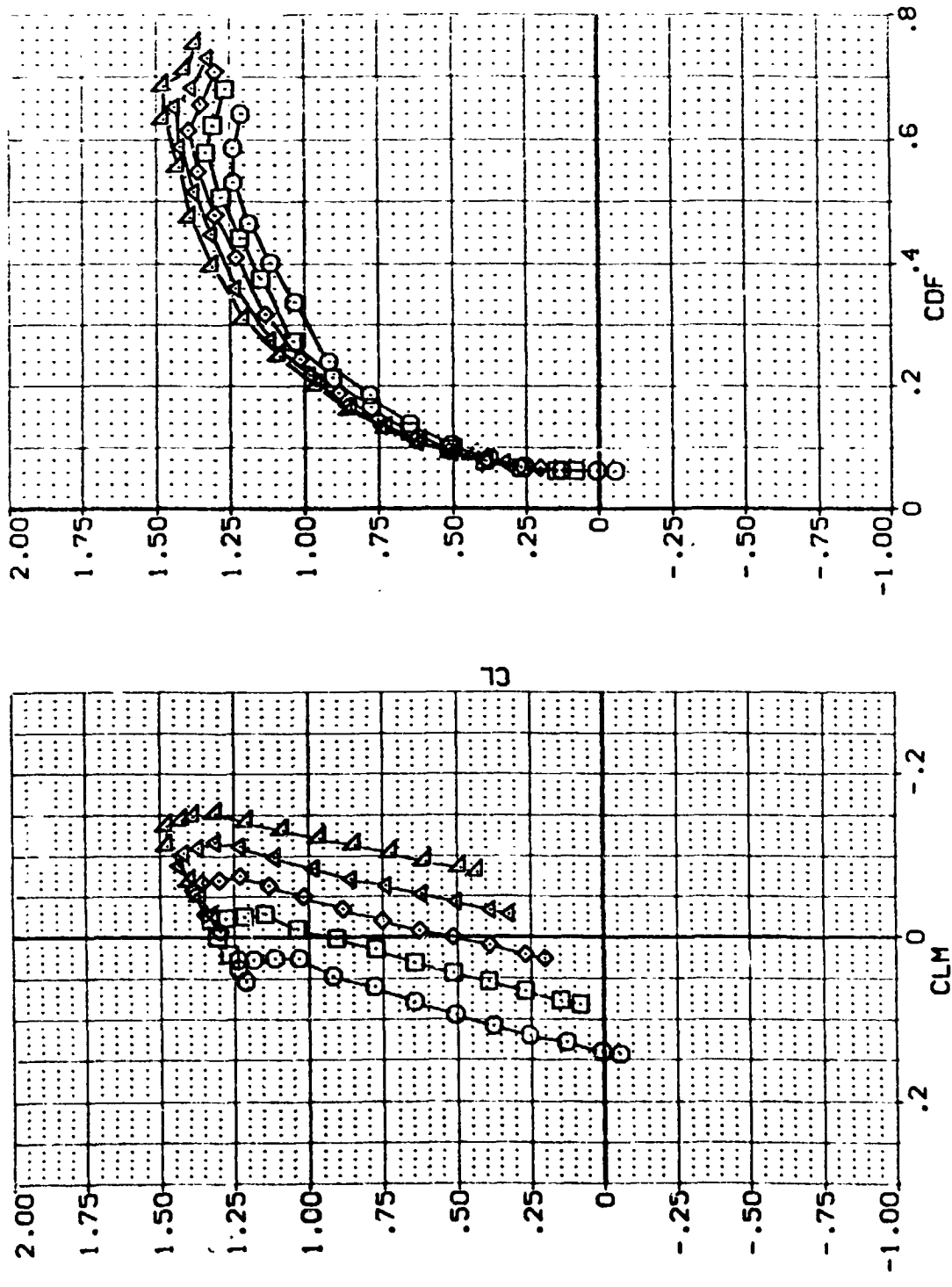


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BV	SFOBRK	BOFLAP	REFERENCE INFORMATION
(B02030)	378 B26C9G 5M7F8 W 1E28V8E5X9	-5.000	.125	25.000	-12.000	4.4119 SO.FT.
(B02021)	378 B26C9G 5M7F8 W 1E28V8E5X9	5.000	.125	25.000	-12.000	19.2299 INCHES
(B07023)	0A6.8 B26C9G 5M7F8 W 1E28V8E5X9	10.000	.125	25.000	-12.000	37.5359 INCHES
(B02029)	0A6.28 B26C9G 5M7F8 W 1E28V8E5X9	15.000	.125	25.000	-12.000	43.1974 INCHES
(B02025)	0A6.28 B26C9G 5M7F8 W 1E28V8E5X9					.0000 INCHES
						15.1875 INCHES
						SCALE

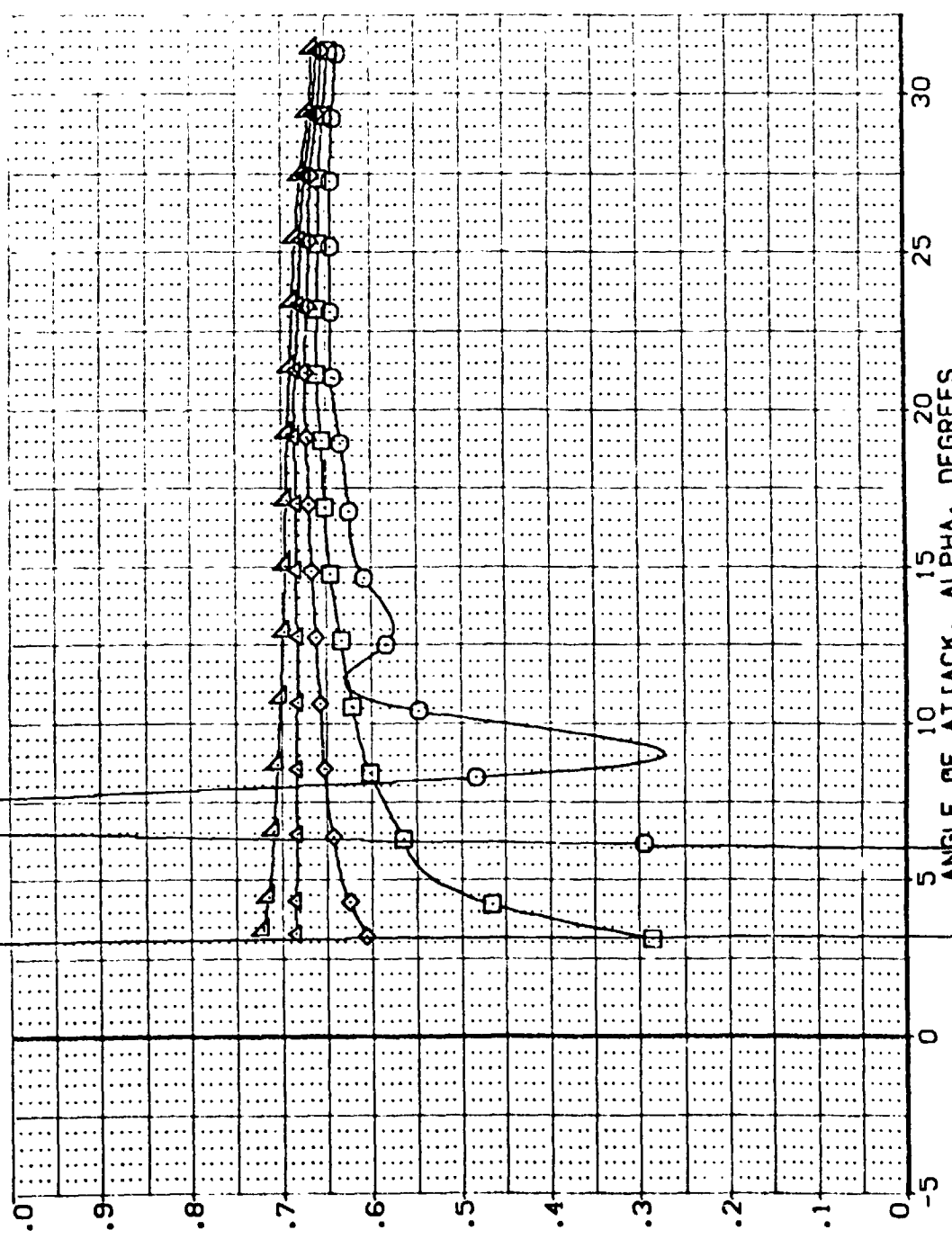
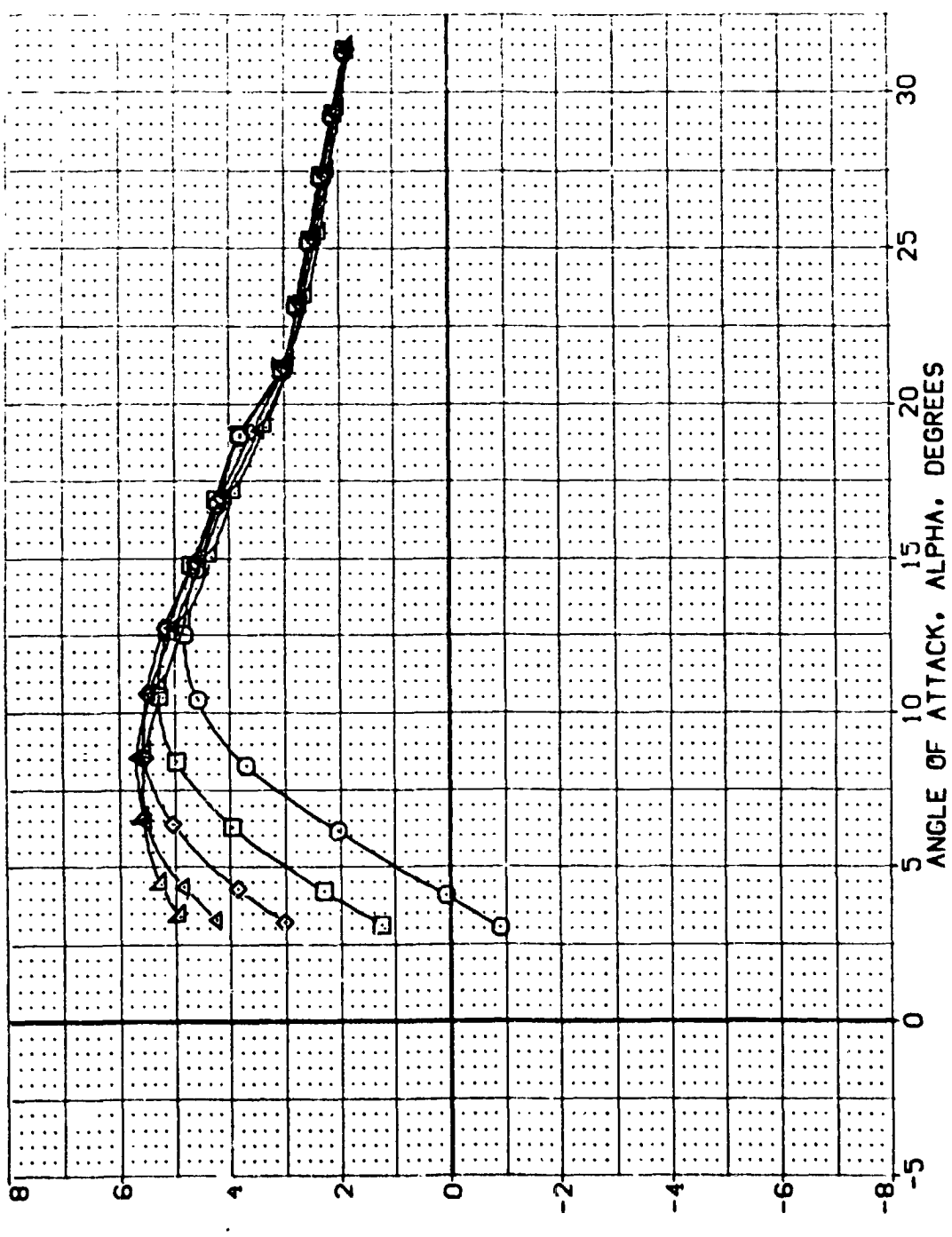


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A) MACH = .20

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z020)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z021)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	LREF 19.2289 INCHES
(80Z022)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	BREF 37.5359 INCHES
(80Z023)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	XTRP 43.5974 INCHES
(80Z024)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	YTRP .0000 INCHES
(80Z025)	0A6Z8 BZ6C5G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	ZTRP 15.1875 INCHES
					SCALE .0405



FOREBODY LIFT TO DRAG RATIO, L/D/F

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z034)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-40.000	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(B0Z033)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-30.000	.125	25.000	-12.000	LREF 19.2299 INCHES
(B0Z032)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-20.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(B0Z031)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-15.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
(B0Z027)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	-10.000	.125	25.000	-12.000	ZMRP .0070 INCHES
(B0Z021)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	.000	.125	25.000	-12.000	SCALE 15.1875 INCHES

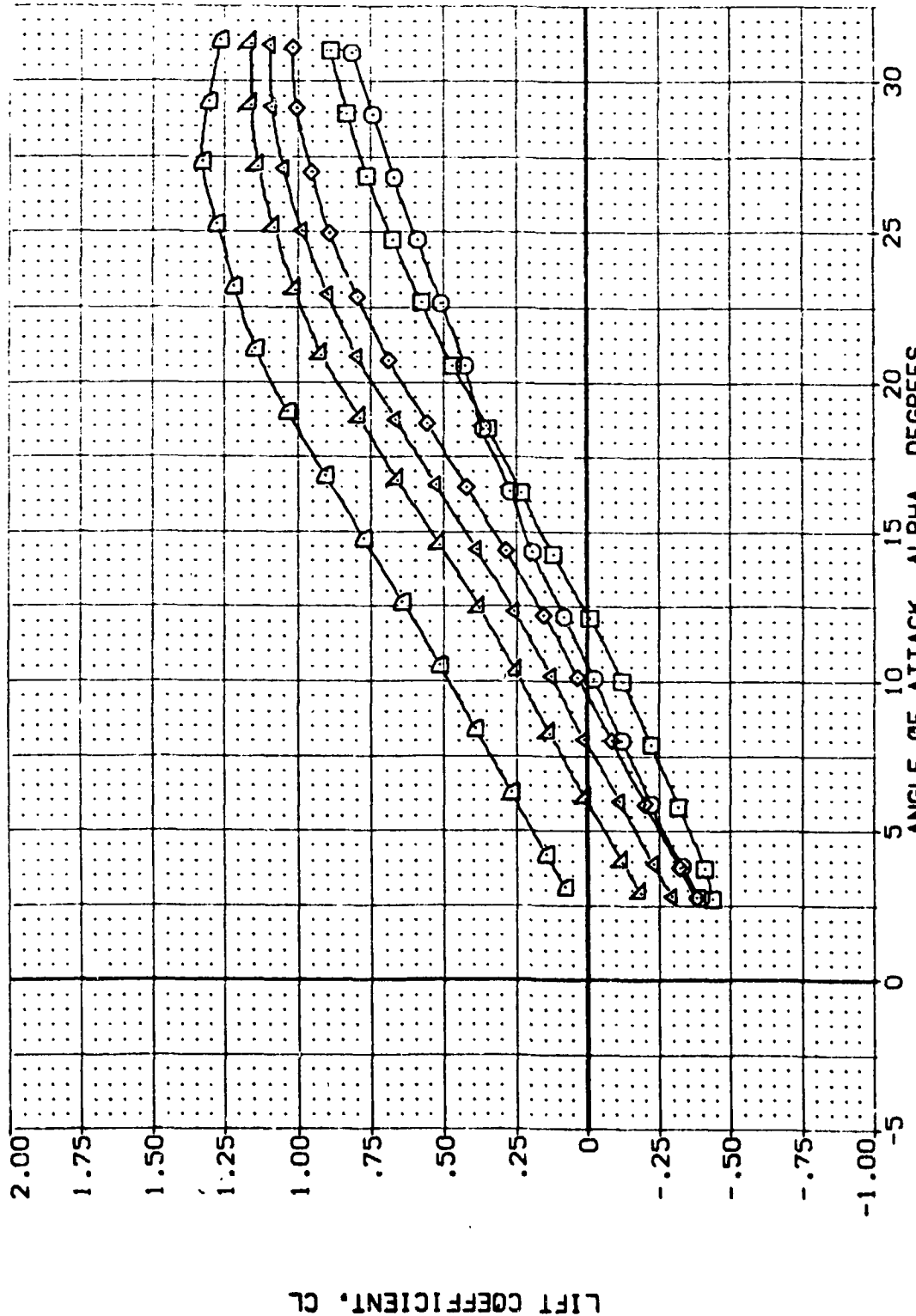


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125  
(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(80Z034)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	SREF 4.4119 SQ.FT.
(80Z033)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	LREF 19.2298 INCHES
(80Z032)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z031)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	XMRP 43.5974 INCHES
(80Z027)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	ZMRP .0000 INCHES
(80Z021)	0A6Z8 8Z6C9G1S47F8 V116E28V8RSX9	.125	25.000	-12.000	ZMRP 15.1875 INCHES
					SCALE .0405

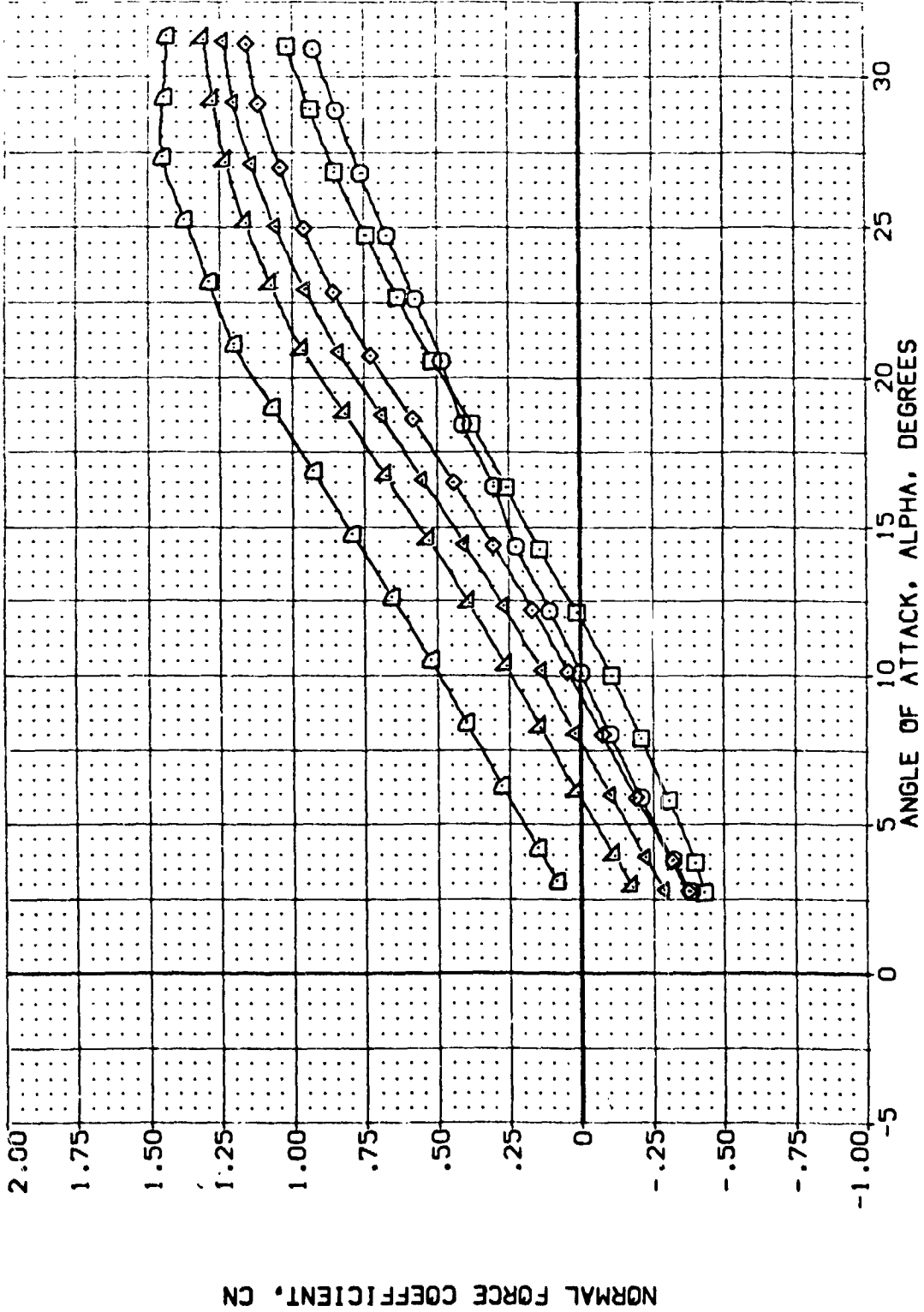


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/Z	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z034)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-40.000	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z033)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-30.000	.125	25.000	-12.000	LREF 19.2289 INCHES
(80Z032)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-20.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z031)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-15.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
(80Z027)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	-10.000	.125	25.000	-12.000	YMRP .0000 INCHES
(80Z021)	0A6Z8 B26C9G15H7F8 V116E28V8RSX9	.000	.125	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

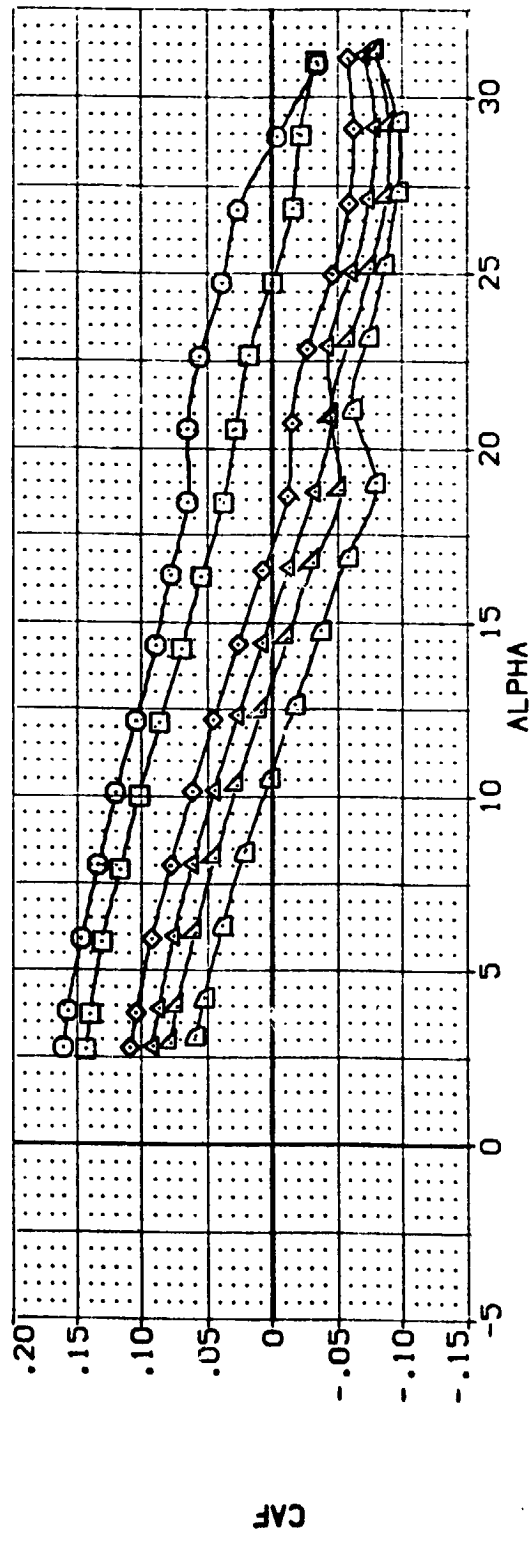
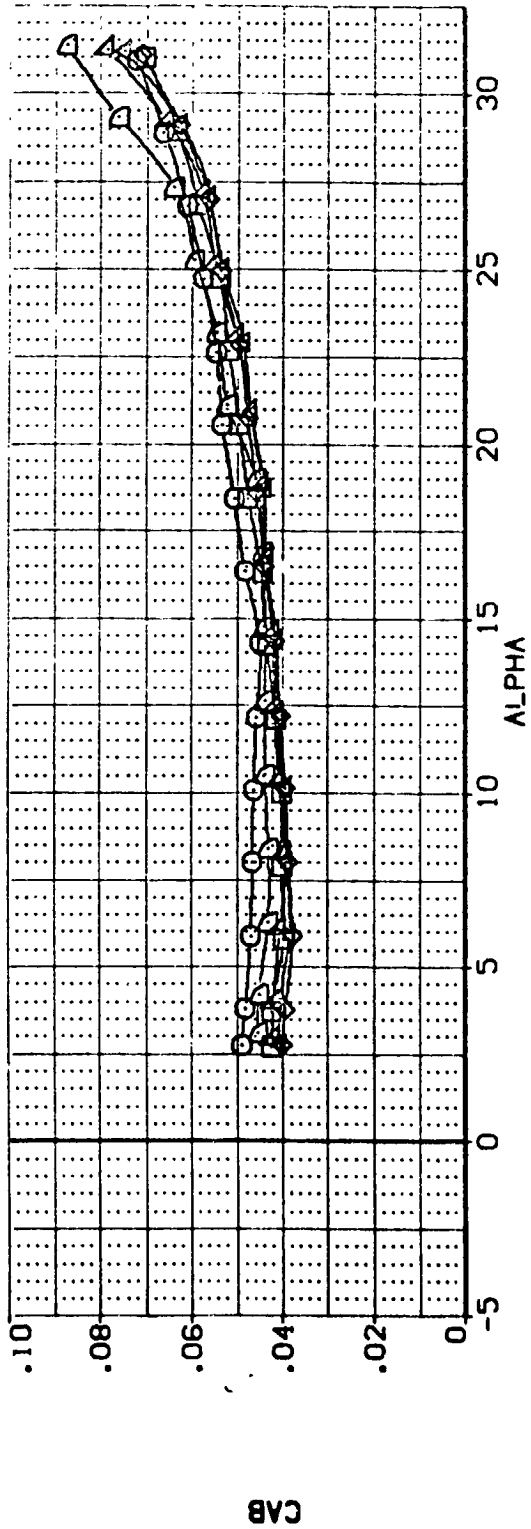
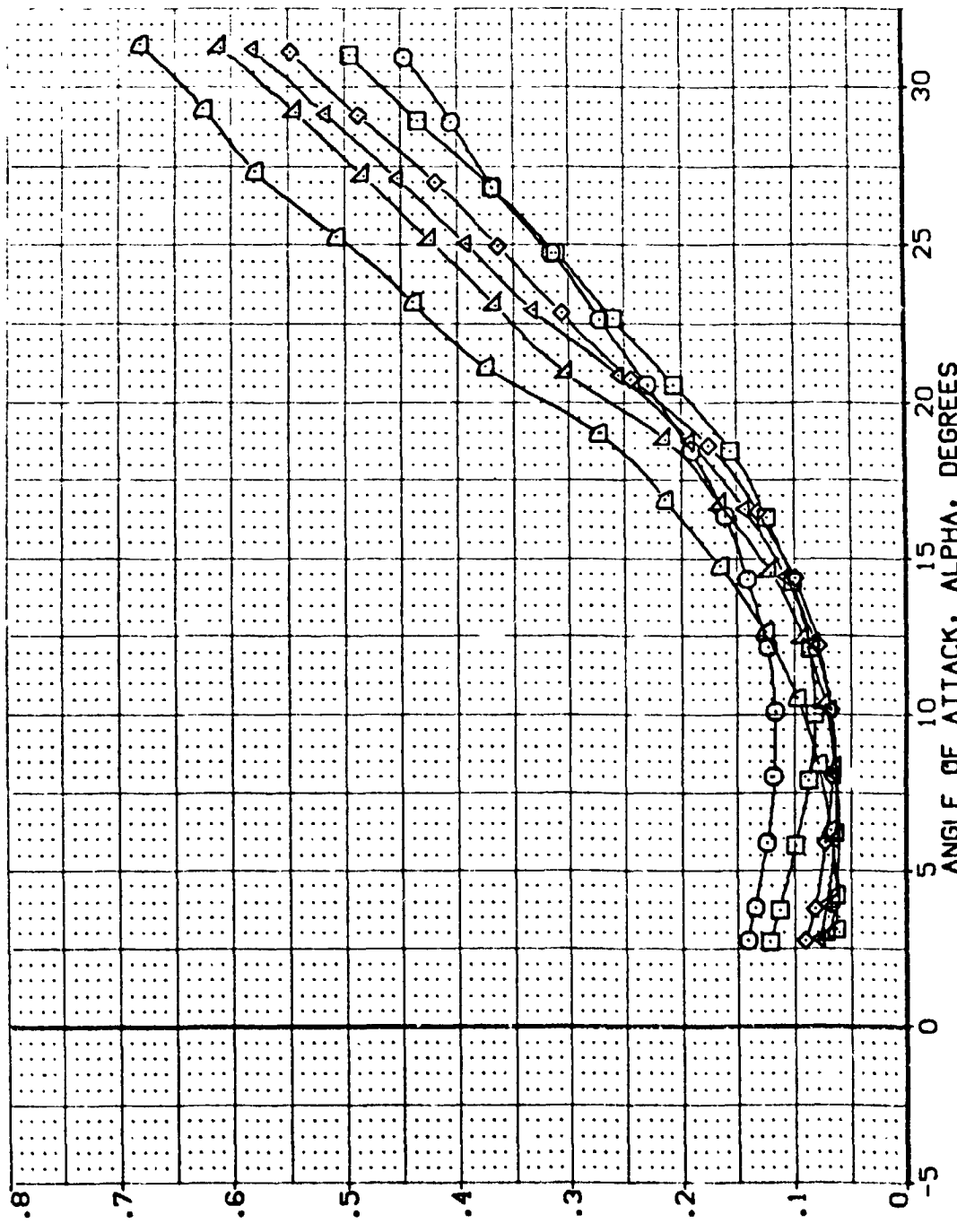


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B07004)	B26C9G1S47F8	-40.000	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(B07033)	B26C9G1S47F8	-30.000	.125	25.000	-12.000	LREF 19.2298 INCHES
(B07032)	B26C9G1S47F8	-20.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(B07031)	B26C9G1S47F8	-15.000	.125	25.000	-12.000	XMRP 43.5374 INCHES
(B07027)	B26C9G1S47F8	-10.000	.125	25.000	-12.000	ZMRP .0000 INCHES
(B07021)	B26C9G1S47F8	.000	.125	25.000	-12.000	SCALE 15.1875 INCHES



FOREBODY DRAG COEFFICIENT, CDF

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

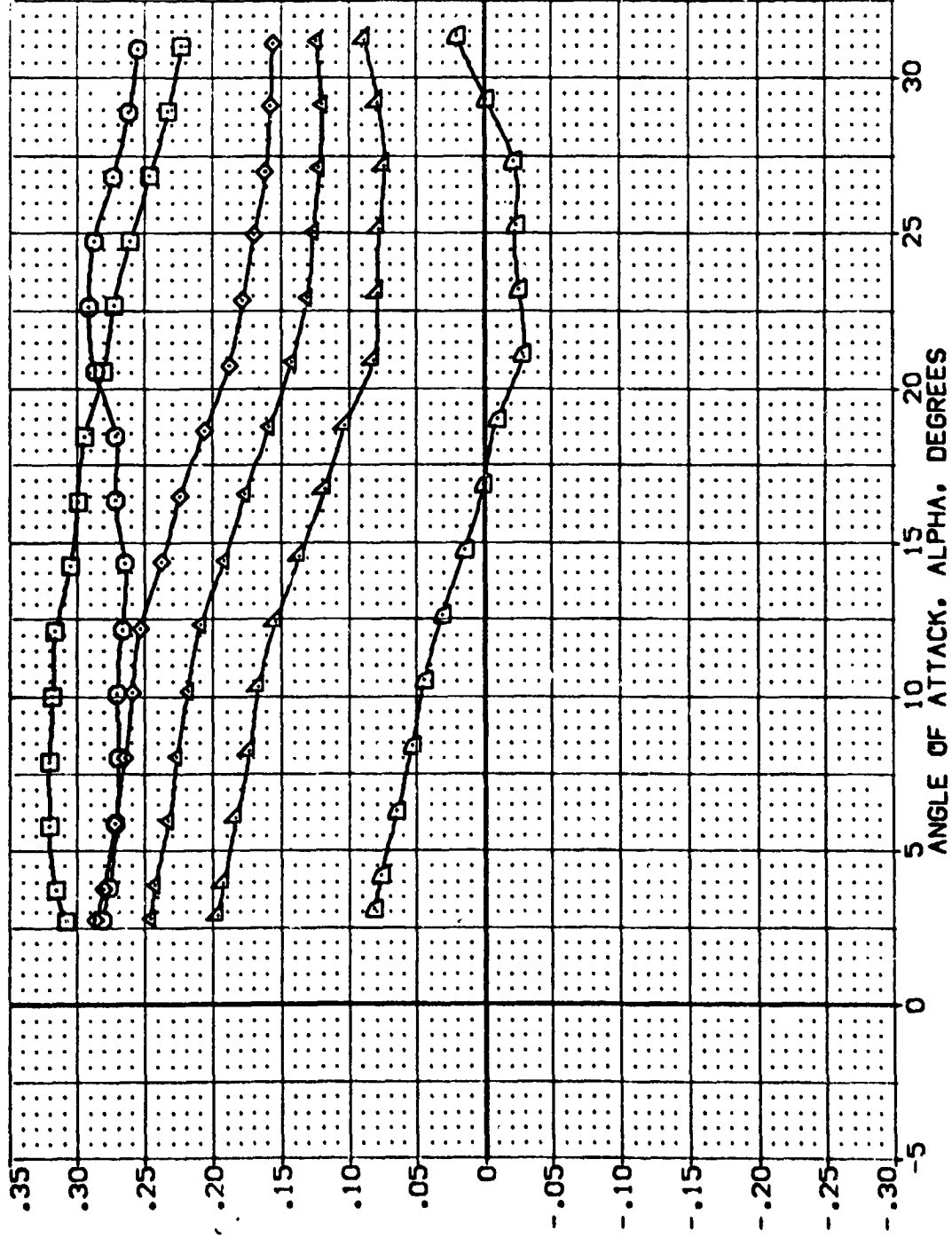
MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

{ B02004 }	DAS28	B26C361547F8	V116E28V8RS49
{ B02009 }	DAS28	B26C361547F8	V116E28V8RS49
{ B02032 }	DAS28	B26C361547F8	V116E28V8RS49
{ B02031 }	DAS28	B26C361547F8	V116E28V8RS49
{ B02027 }	DAS28	B26C361547F8	V116E28V8RS49
{ B02021 }	DAS28	B26C361547F8	V116E28V8RS49

ELEVON H/WB SPOBRK BDFLAP REFERENCE INFORMATION

-40.000	.125	25.000	-12.000	SREF	4.4119	90.FT.
-30.000	.125	25.000	-12.000	LREF	19.2299	INCHES
-20.000	.125	25.000	-12.000	BREF	37.9359	INCHES
-15.000	.125	25.000	-12.000	XMRP	43.5974	INCHES
-10.000	.125	25.000	-12.000	YMRP	0.0000	INCHES
.000	.125	25.000	-12.000	ZMRP	15.1875	INCHES
				SCALE	.0405	SCALE



PITCHING MOMENT COEFFICIENT, CLH

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/WB = 0.125

CAJMACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B0Z001)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z002)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z003)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z004)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z005)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z006)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z007)	045Z8 B26C3G1547F8 V116E28V8F5X9
(B0Z008)	045Z8 B26C3G1547F8 V116E28V8F5X9

ELEVON H/BW	SPORBK	BDFLAP	REFERENCE INFORMATION
-.25	25.000	-12.000	PREF 4.4118 90.FY
-.25	25.000	-12.000	LREF 19.2299 INOES
-.25	25.000	-12.000	BREF 97.9359 INOES
-.25	25.000	-12.000	XMPP 43.5574 INOES
-.25	25.000	-12.000	YMPP .0000 INOES
-.25	25.000	-12.000	ZMPP 15.1875 INOES
-.25	25.000	-12.000	SCALE .0405 SCALE

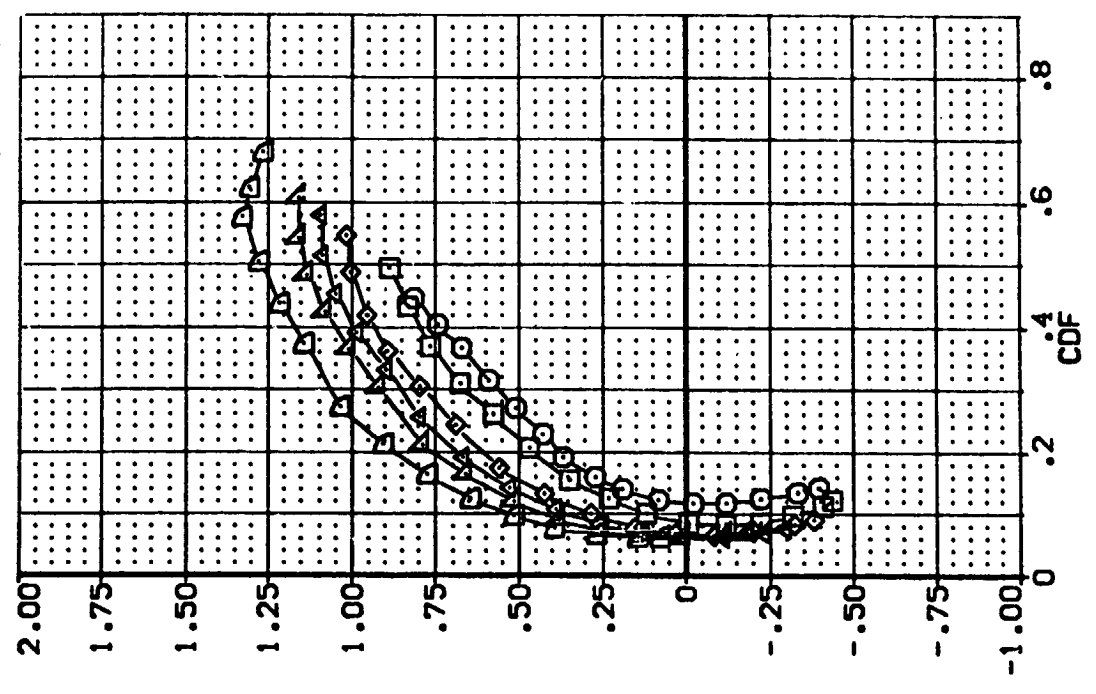
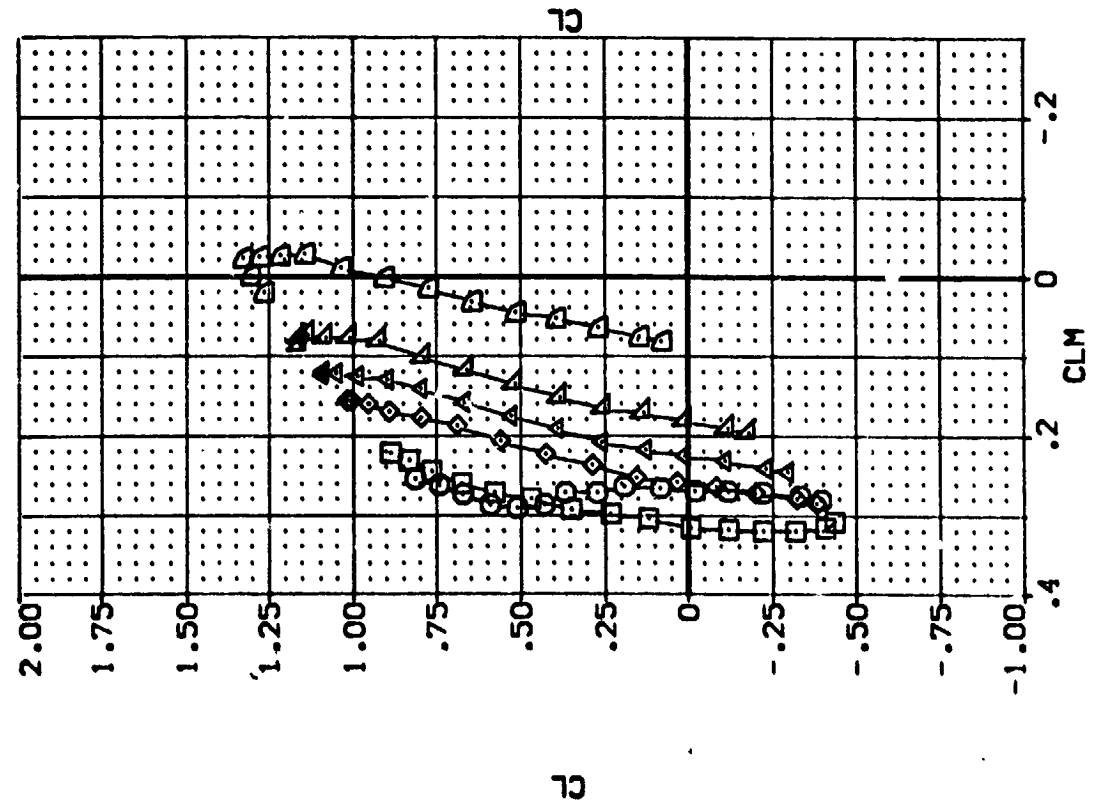


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(B07034)	0A628 B26C9G15M7F8 V116E28 BR5X9	-40.000	.125	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(B07033)	0A628 B26C9G15M7F8 V116E28 BR5X9	-30.000	.125	25.000	-12.000	LREF 19.2299 INCHES
(B07032)	0A628 B26C9G15M7F8 V116E28 BR5X9	-20.000	.125	25.000	-12.000	BREF 37.9359 INCHES
(B07031)	0A628 B26C9G15M7F8 V116E28 BR5X9	-15.000	.125	25.000	-12.000	XMRP 43.5974 INCHES
(B07027)	0A628 B26C9G15M7F8 V116E28 BR5X9	-10.000	.125	25.000	-12.000	ZMRP 0.0000 INCHES
(B07021)	0A628 B26C9G15M7F8 V116E28 BR5X9	0.000	.125	25.000	-12.000	SCALE 15.1875 INCHES .0405 SCALE

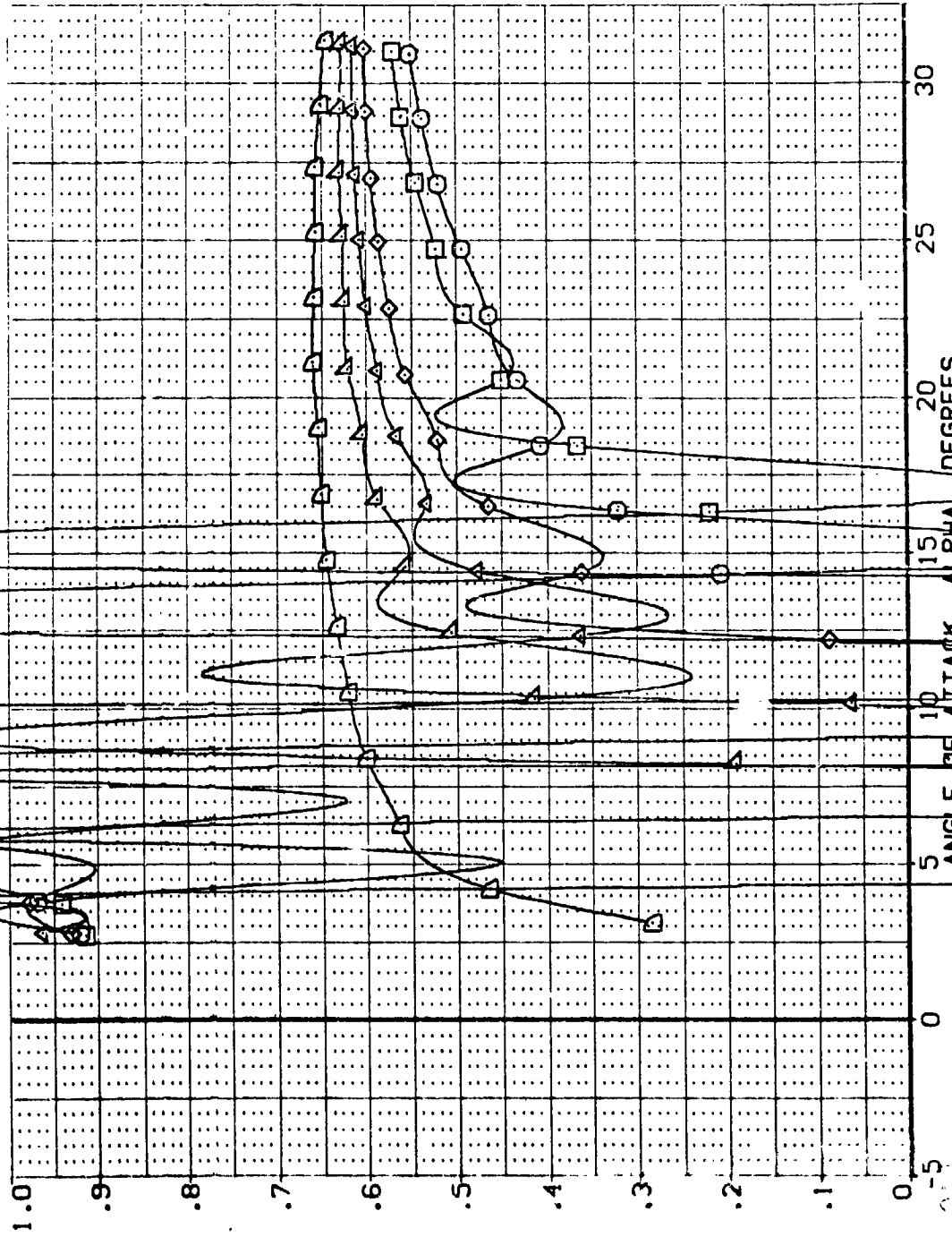


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPDRK	BDFLAP	REFERENCE INFORMATION
(BD2024)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	SREF 4.4119 50.FT. INCHES
(BD2033)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	LREF 19.2298 INCHES
(BD2032)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	BREF 37.9359 INCHES
(BD2031)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	YMRP 43.5974 INCHES
(BD2027)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	ZMRP 15.0000 INCHES
(BD2021)	0A628 B26C9G 5M7F8 V11E28V8SXS9	.125	25.000	-12.000	SCALE .0405 SCALE

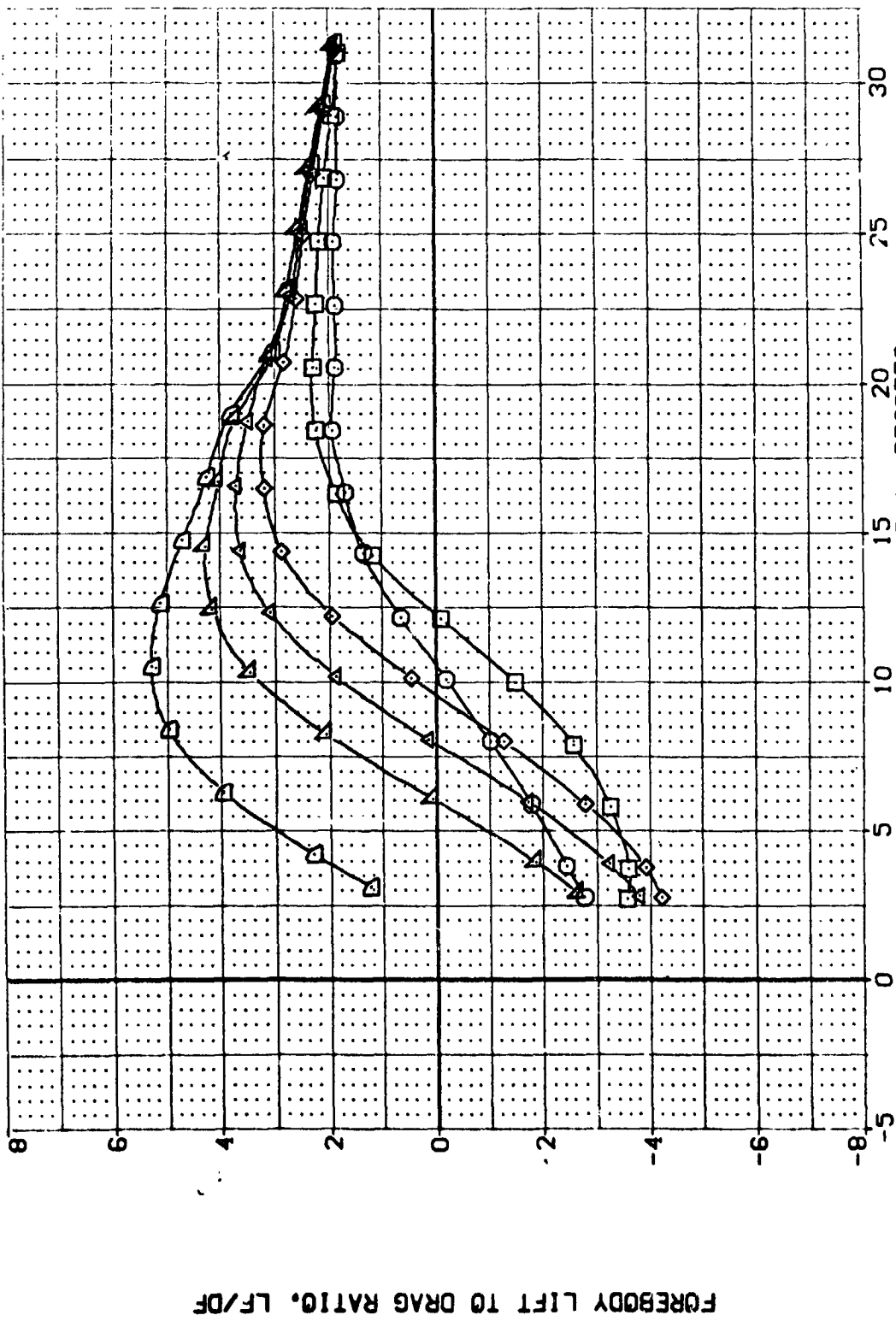


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(A)MACH = .20



(1DZ034)

0A62B B26C9615M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	.000	.200	BETA	.000	DELTON	4.4119	SO.FT.
		-12.000	A/L/RON	.000	DELTON	19.2299	INCHES
		.000	SP/BRK	25.000	DELTON	37.9359	INCHES
		.125			DELTON	43.5974	INCHES
					DELTON	.0000	INCHES
					DELTON	15.1875	INCHES
					DELTON	.0405	SCALE

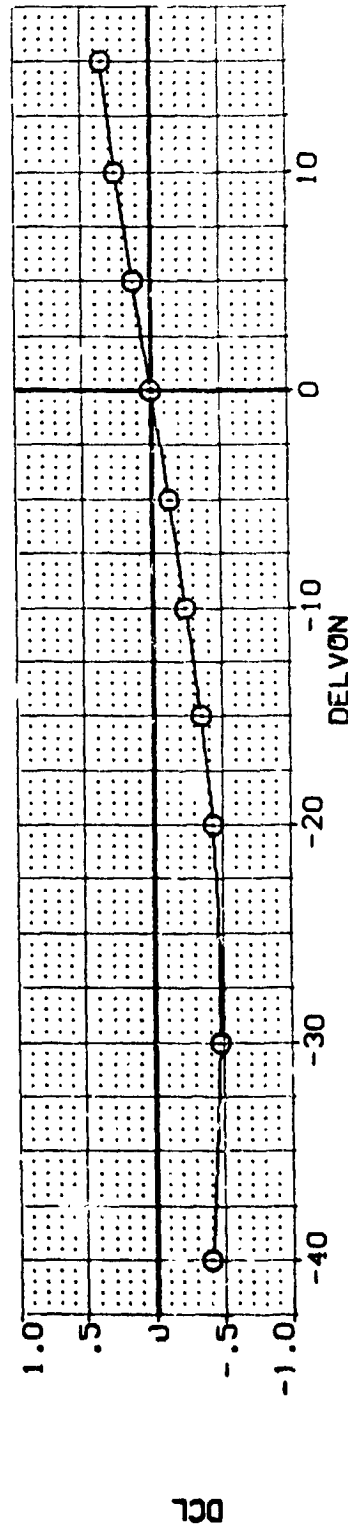
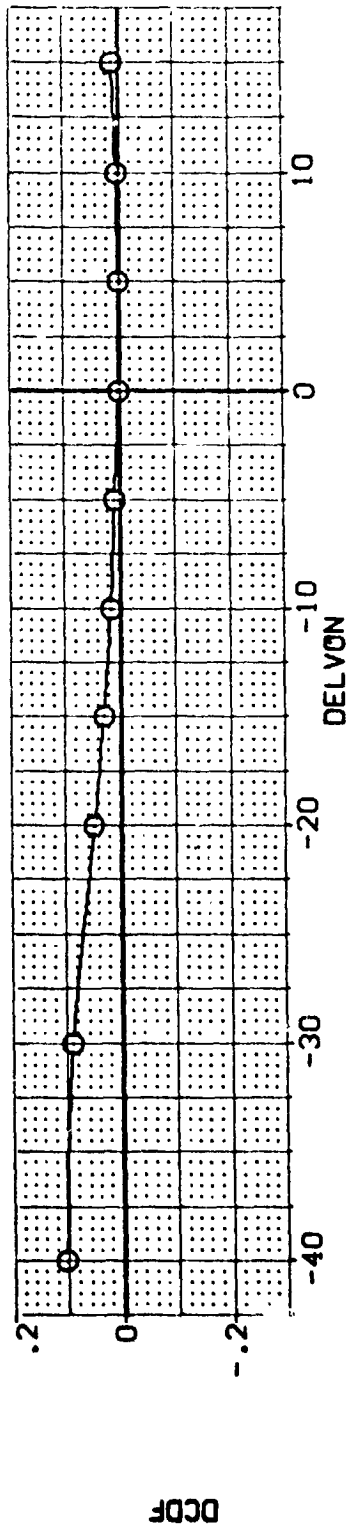
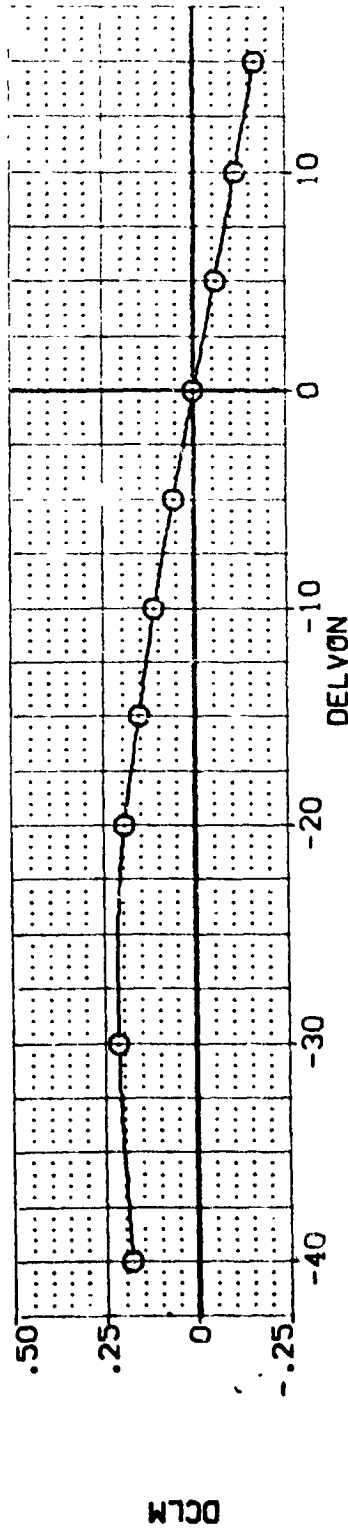


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(1DZ034)

W116E28V8R5X9

B26C9G15M7F8

DA628

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	5.000	.000	DELVON	SREF	4.4119
MACH	.200	.000	DELVON	LREF	19.2799
BDFLAP	-12.000	.000	DELVON	BREF	37.9359
RUDDER	.000	25.000	DELVON	XMRP	43.5974
H/BW	.125	.000	DELVON	YMRP	5.0000
		.000	DELVON	ZMRP	15.1875
		10.000	DELVON	SCALE	.075
			DELVON	SCALE	

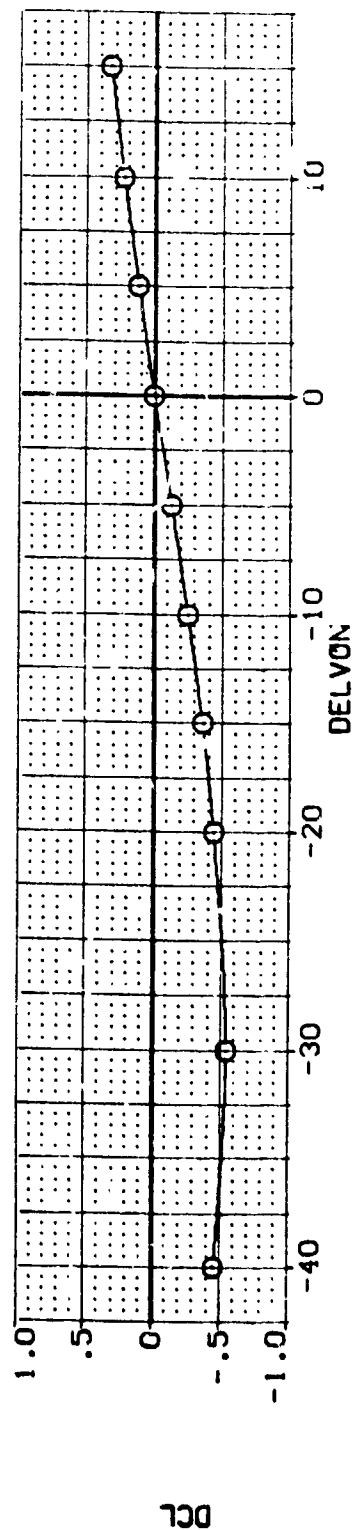
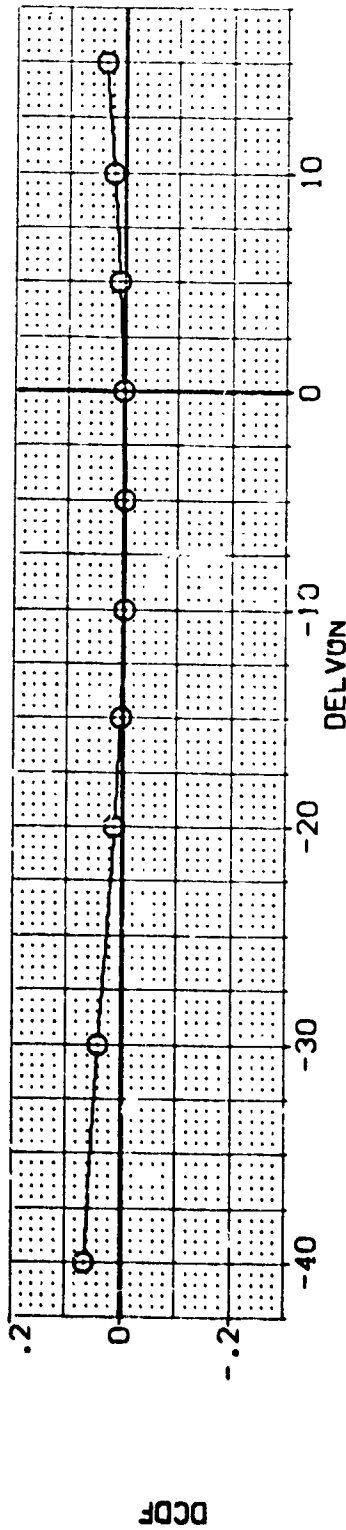
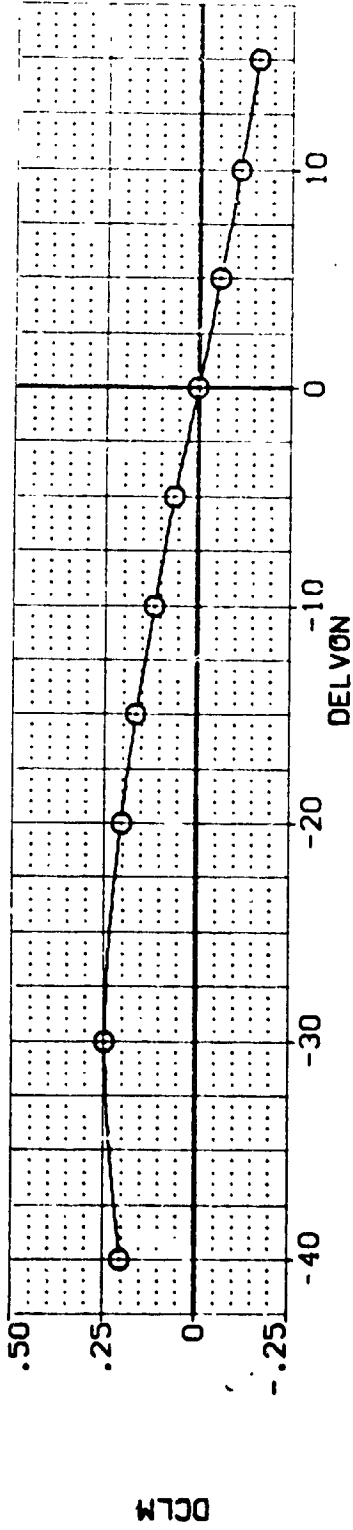


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



0A618 B26C9G15M7F8 W116E28V8R5X9 (10Z034)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	10.000	DELTON	10.000	SREF	4.4119
MACH	.200	DATASET	.000	LREF	19.2299
BOFL/P	-12.000	DELTON	-40.000	BREF	37.9359
R/CORR	.000	DATASET	25.000	XMRP	43.5974
H/BW	.125	DELTON	-10.000	YMRP	.0000
		DATASET	10.000	ZMRP	15.1875
		DELTON	10.000	SCALE	.0405

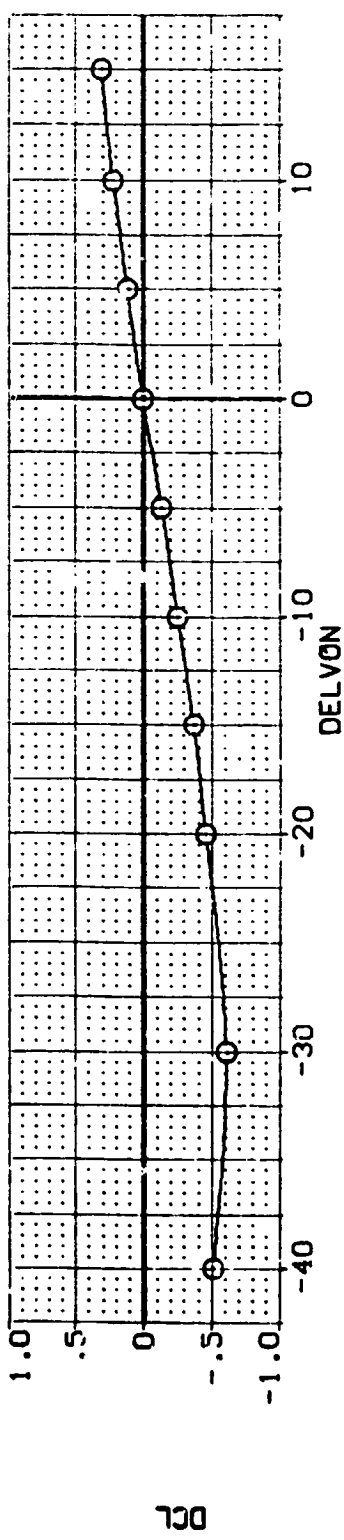
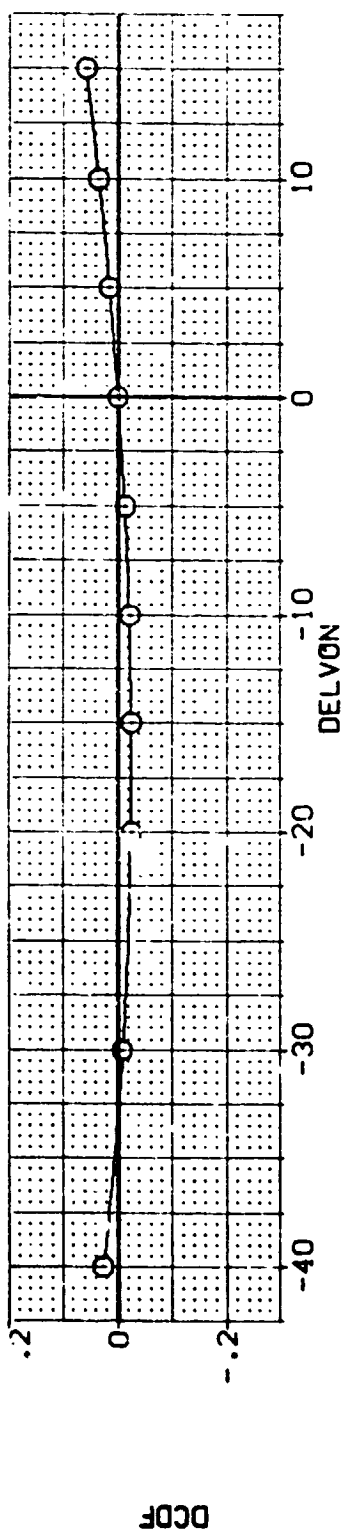
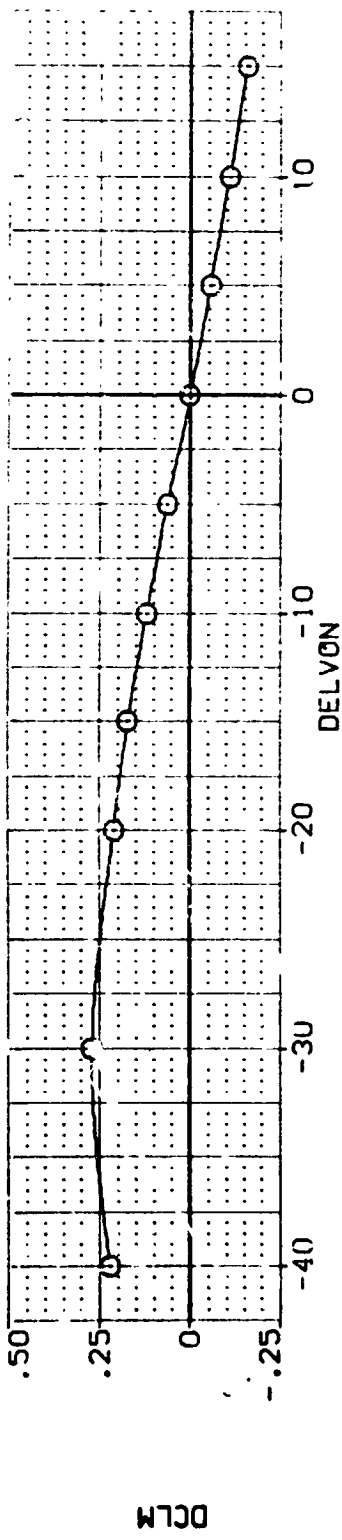


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



0A628 B26C9G15M7F8 W116E28V3R5X9 (1DZ034)

SYMBOL	○
ALPHA	15.000
MACH	.200
BOFLAP	-12.000
RUDDER	.000
H/BW	.125
PARAMETRIC VALUES	
BETA	.000
A1LRON	.000
SPOBRK	25.000
DATA SOURCE	
DELVON	-40.000
DELVON	-20.000
DELVON	-10.000
DELVON	10.000
DATASET	
1DZ034	
1DZ032	
1DZ027	
1DZ021	
1DZ029	
REFERENCE INFORMATION	
SREF	4.4119
LREF	19.2299
BREF	37.9359
XMRP	43.5974
YMRP	5.0000
ZMRP	15.1875
SCALE	.0405

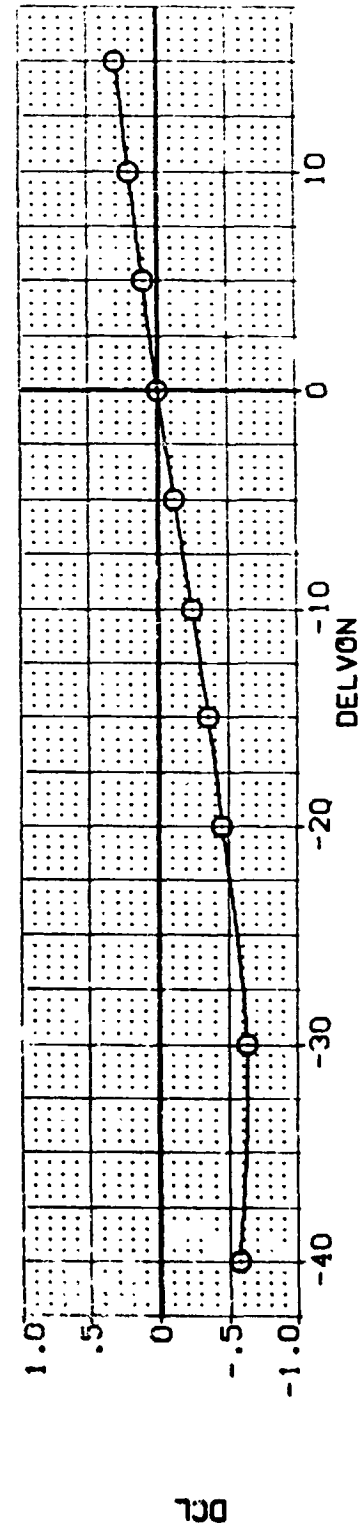
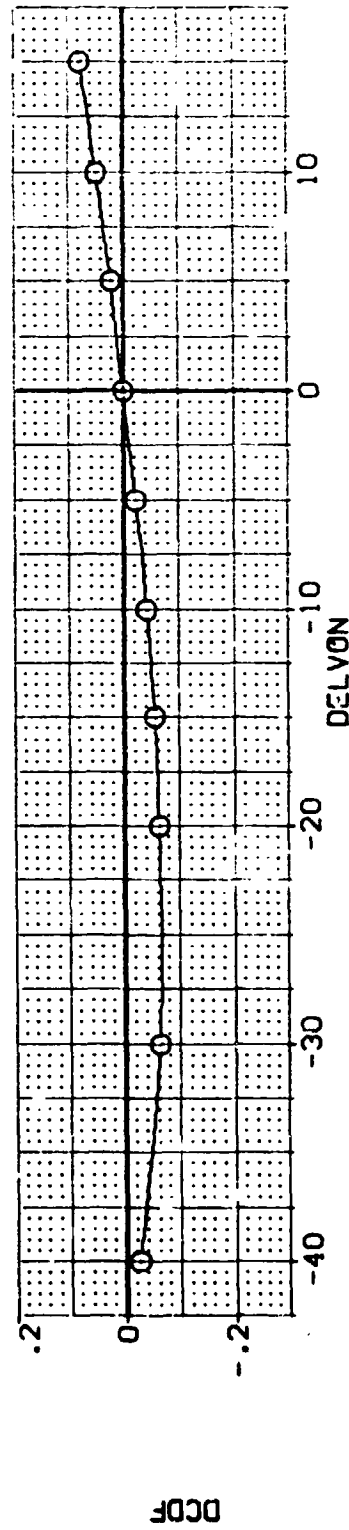
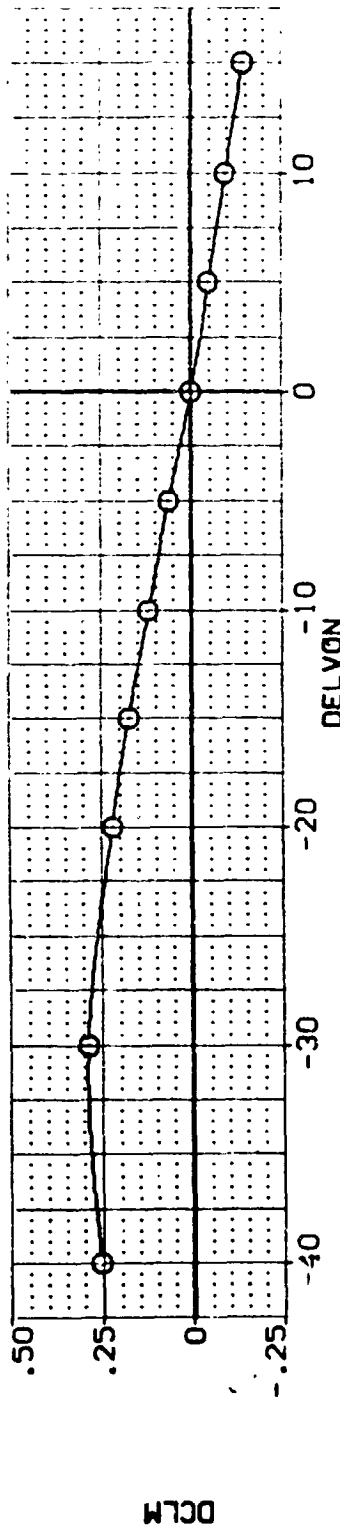


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



(10Z034)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL  
O

ALPHA  
20.000

MACH  
0.200

BETA  
.200

AILRON  
-12.000

SPOBRK  
.000

H/BW  
.125

DATA SOURCE  
DELVON  
-40.000  
-20.000  
-10.000  
10.000

DATASET  
IDZ034  
IDZ032  
IDZ027  
IDZ029

DELVON  
-30.000  
-15.000  
5.000  
15.000

SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

4.4119  
19.2299  
37.9359  
43.5974  
.0000  
15.1875  
.0405

SO.FT  
INCHES  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

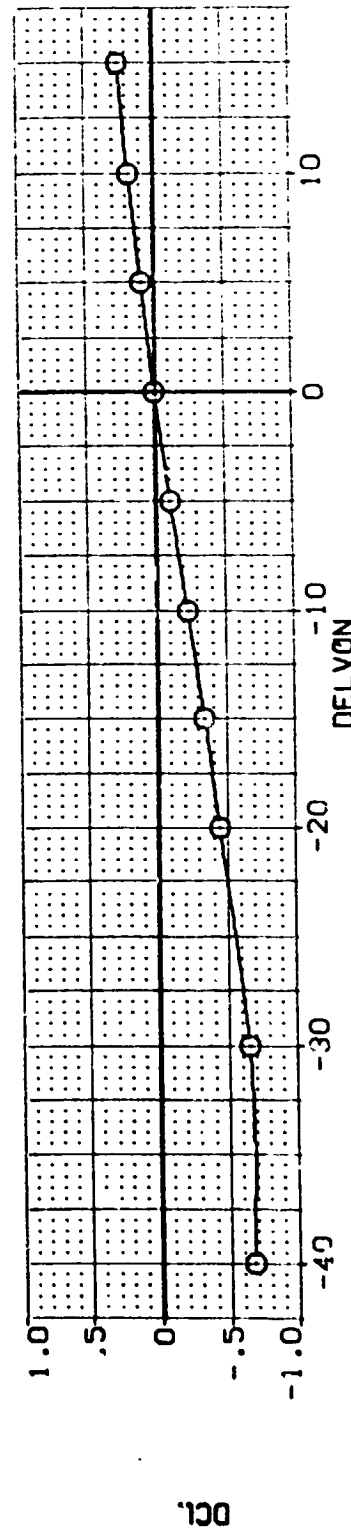
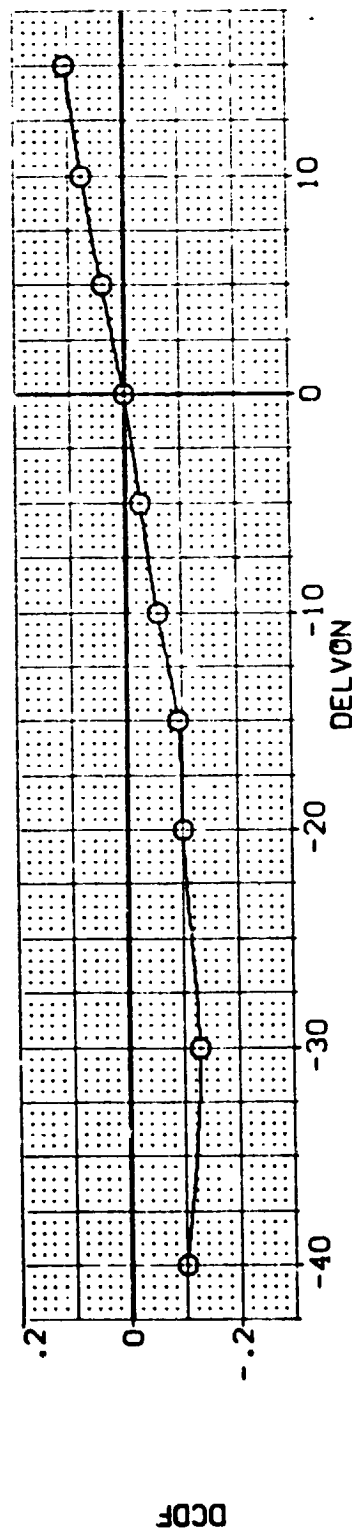
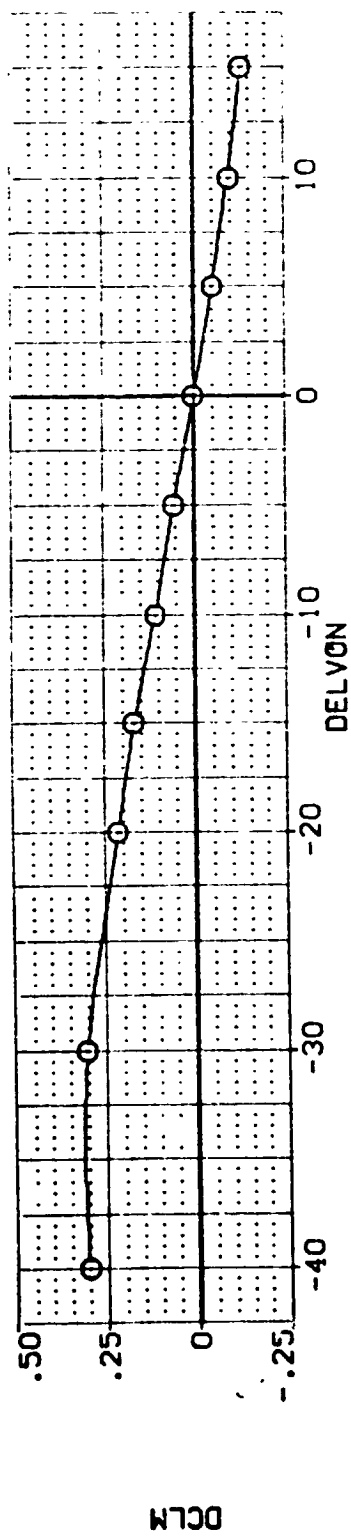


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



0A628 876C9G15M7F8 W116E28V8R5X9 (10Z034)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
SYMBOL	ALPHA	MACH	BETA	DELTON	SREF	SO.FT.
O	28.000	.200	.000	10Z033	LREF	INCHES
		-12.000	.000	10Z031	BREF	INCHES
		.000	25.000	10Z030	XMRP	INCHES
		.000	.000	10Z023	YMRP	INCHES
		.125	.000	10Z025	ZMRP	INCHES
			10.000		SCALE	SCALE

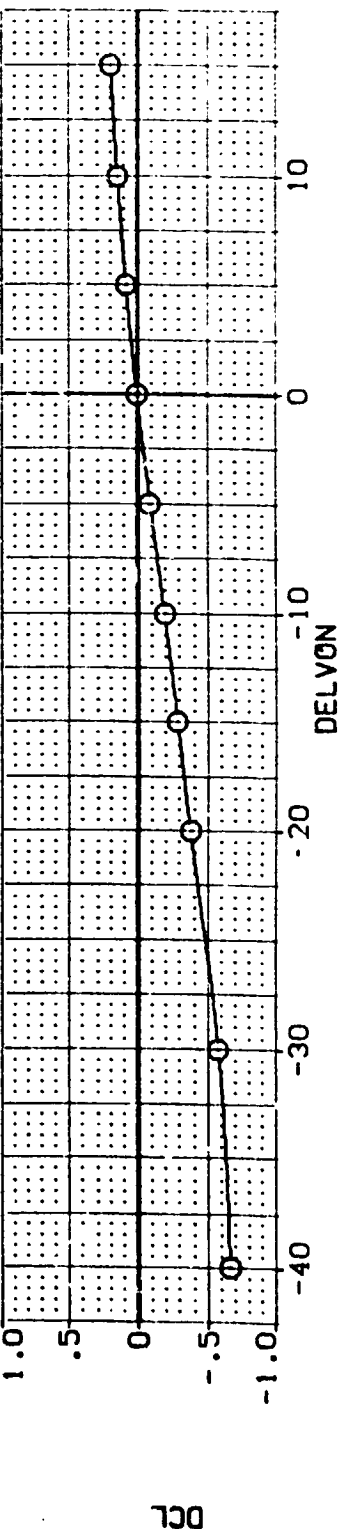
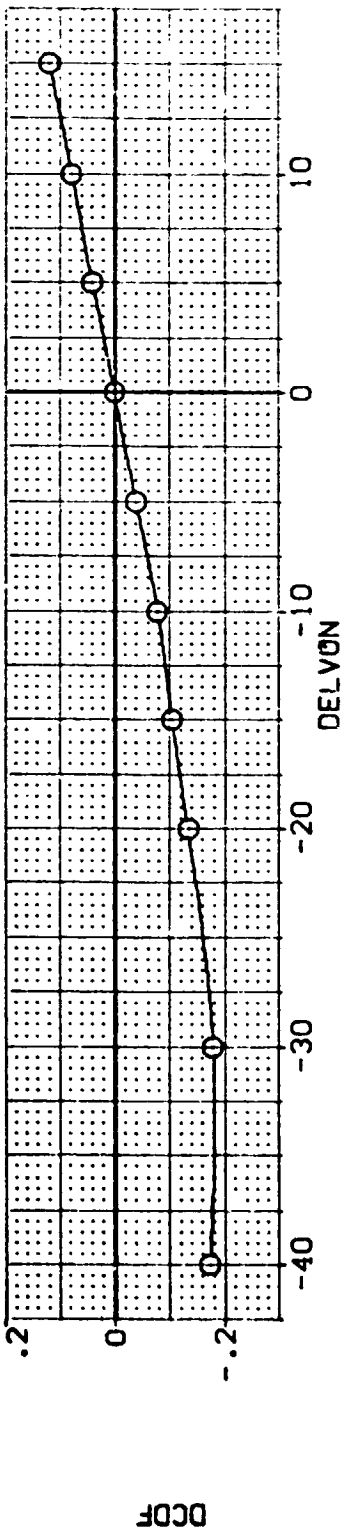
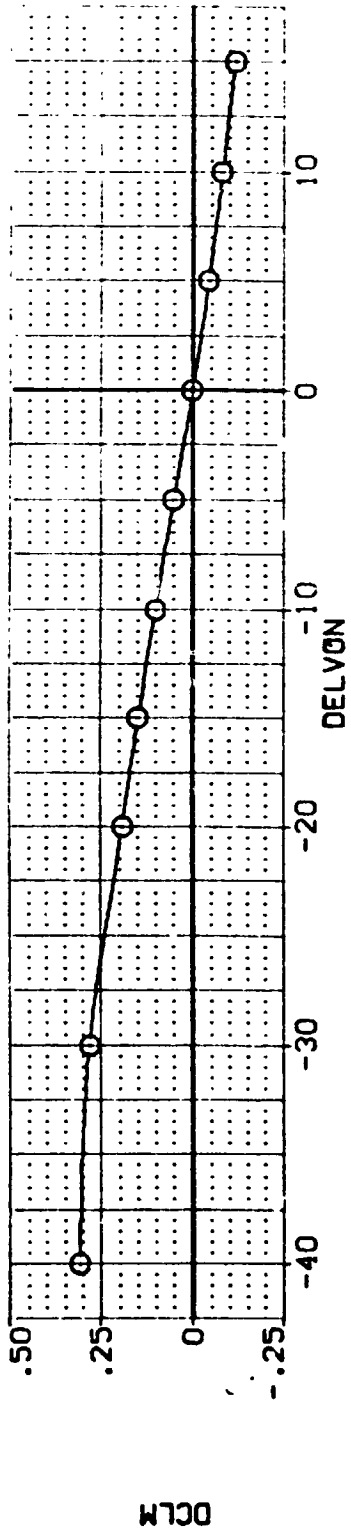


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ034)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	30.000	DELTON	DELTON	SO.FT.	4.4119
BETA	.200	DELTON	DELTON	INCHES	19.2299
MACH	-12.000	DELTON	DELTON	INCHES	37.9359
BOFLAP	.000	DELTON	DELTON	INCHES	43.5974
RUDDER	.000	DELTON	DELTON	INCHES	5.0000
H/BW	.125	DELTON	DELTON	INCHES	15.1875
		DELTON	DELTON	SCALE	.0405

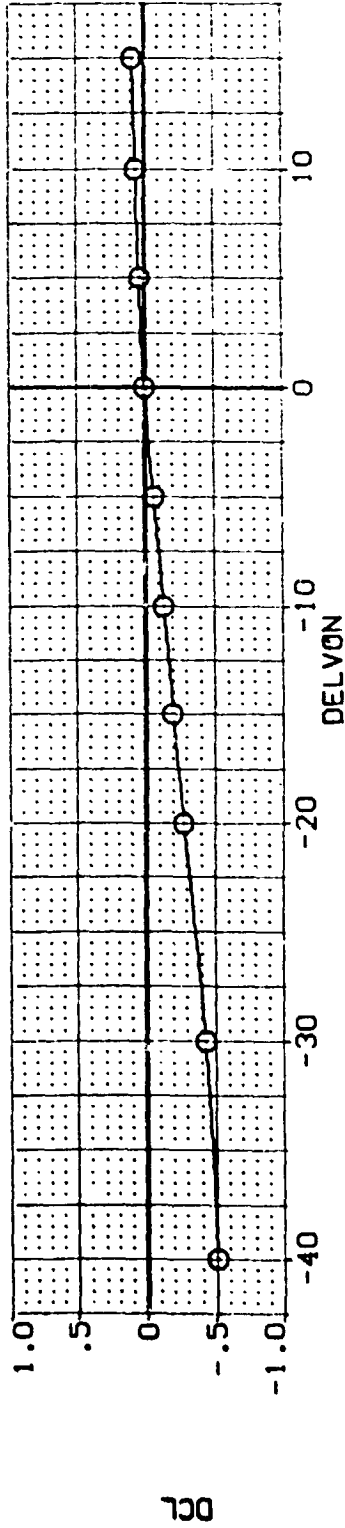
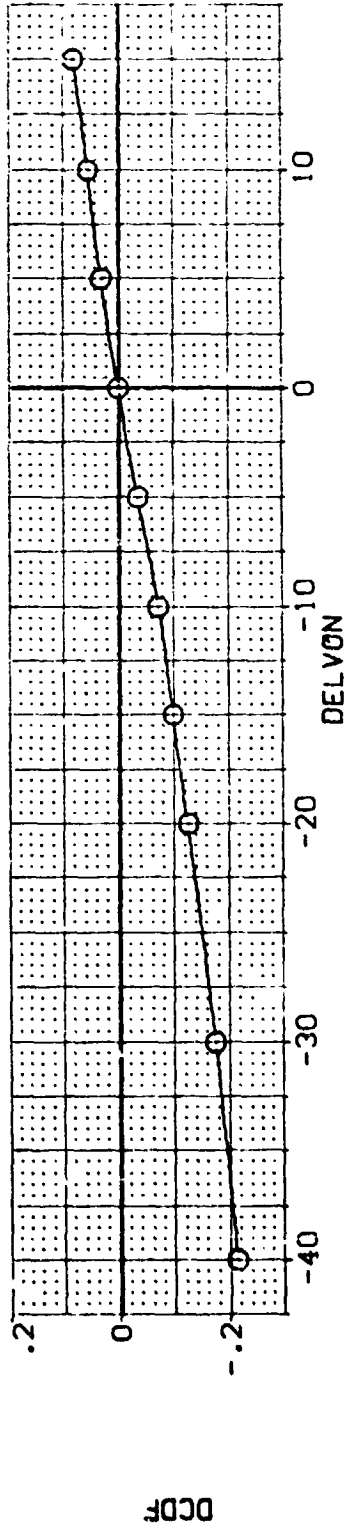
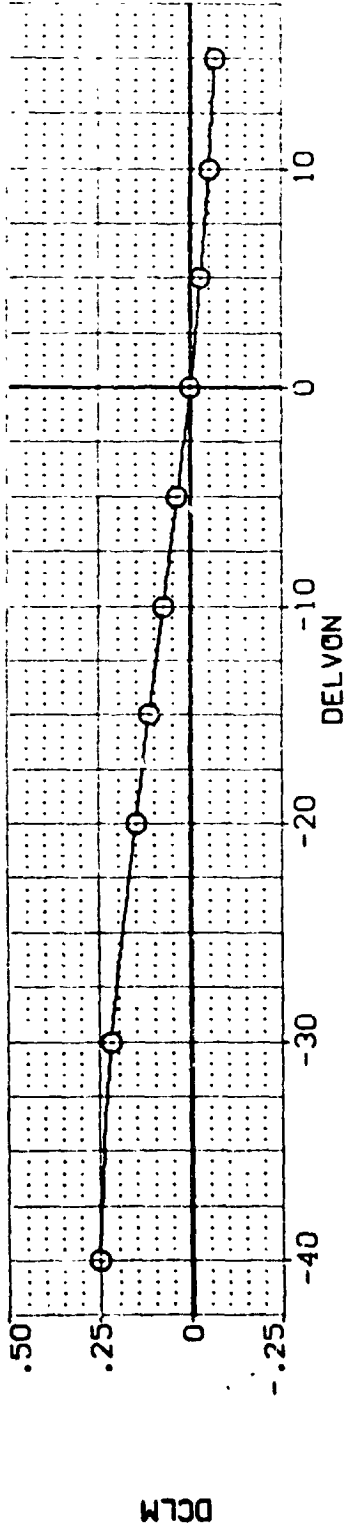


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

0A62B 826C9G15M7F8 W116E28V8R5X9

(1DZ034)

SYMBOL  
O

PARAMETRIC VALUES  
ALPHA .000  
MACH .200  
BDFLAP -12.000  
RUDDER .000  
H/BW .125  
BETA .000  
AILRON .25.000  
SPDRK .000

DATA SOURCE  
DELVN -40.000  
IDZ034 .000  
IDZ032 25.000  
IDZ027 -10.000  
IDZ021 .000  
IDZ029 10.000

DATASET  
IDZ033  
IDZ031  
IDZ030  
IDZ023  
IDZ025

REFERENCE INFORMATION  
SREF 4.4119 SO.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5874 INCHES  
YMRP 0.000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0495 SCALE

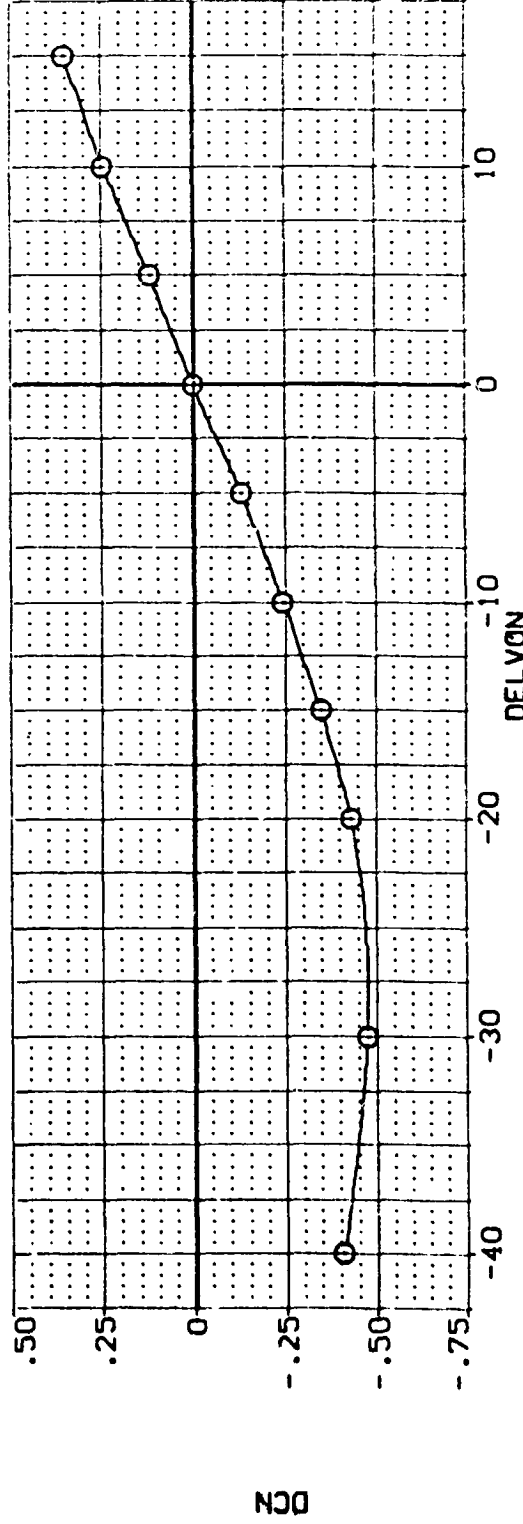
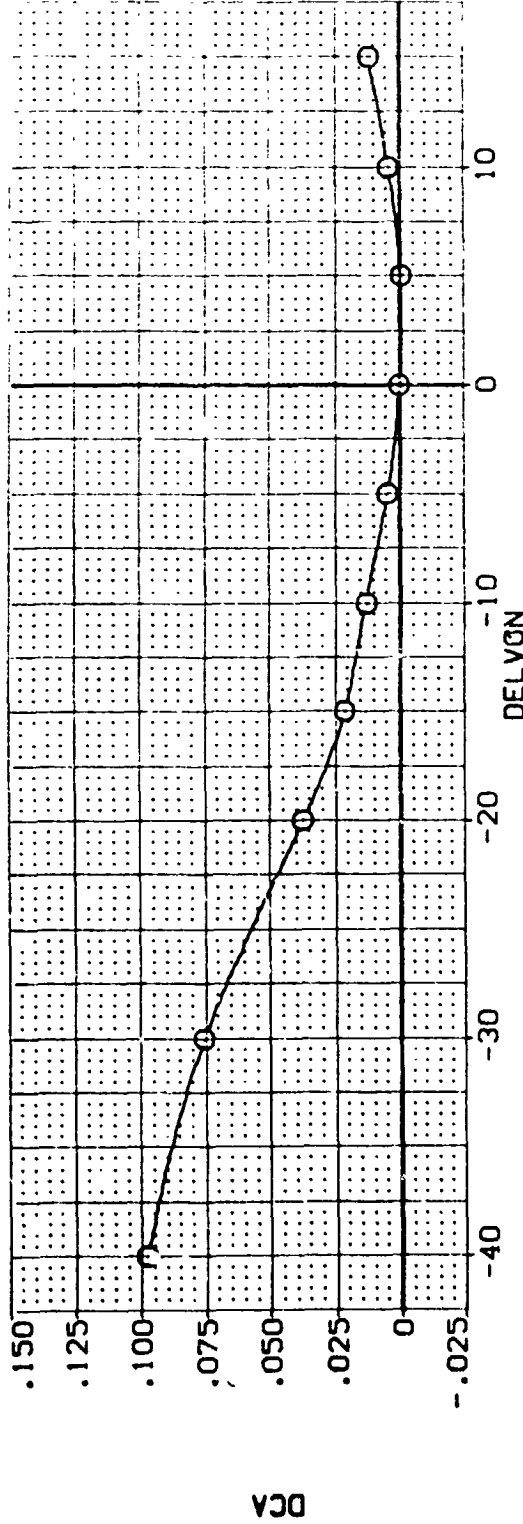
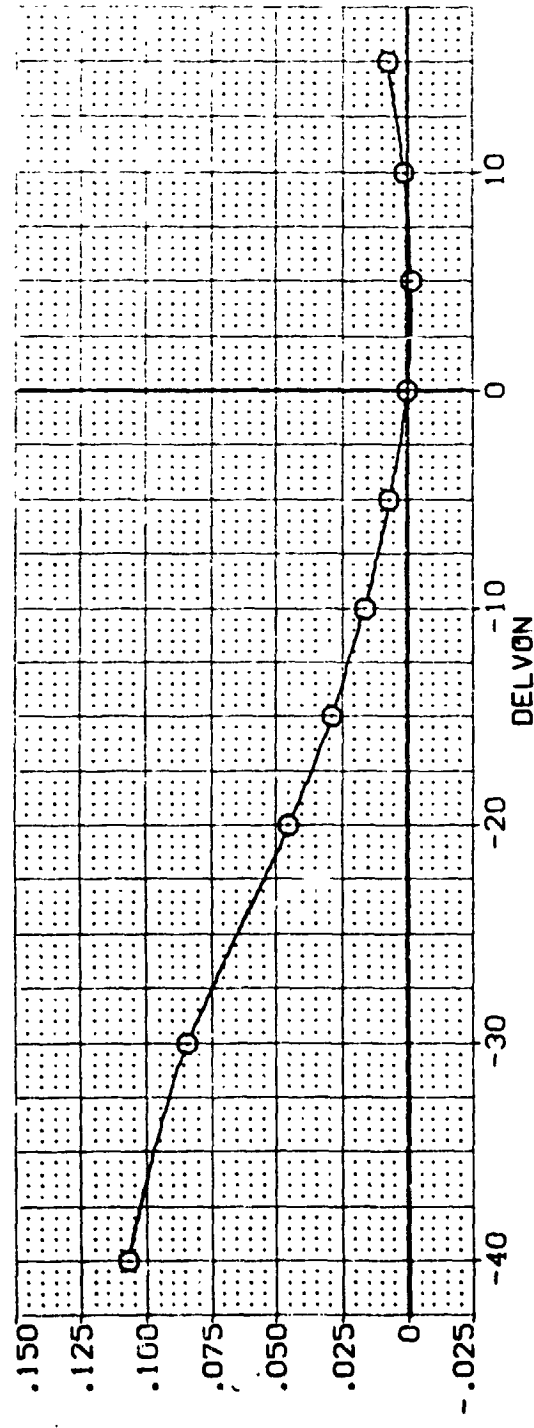


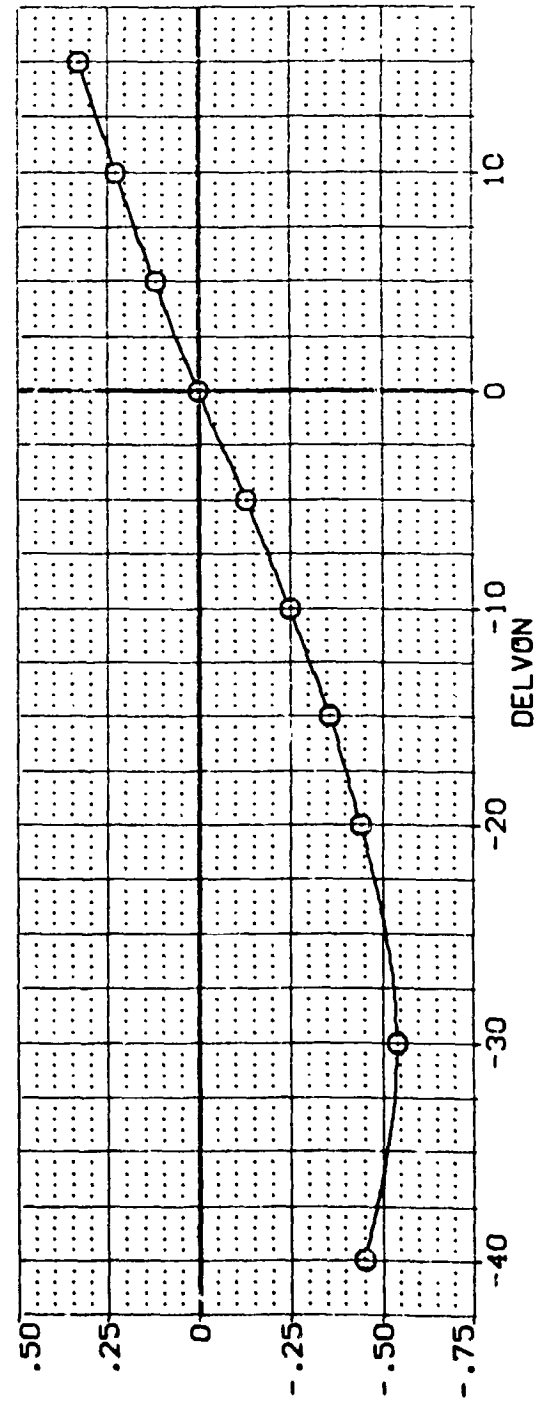
FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

0A628 B26C9G15M7F8 W116E28V8R5X9 (10Z034)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	5.000	DELTON	DELTON	SREF	SO.FT.
MACH	.200	DELTON	DELTON	LREF	INCHES
BDFLAP	-12.000	DELTON	DELTON	BREF	INCHES
RUDDER	.000	DELTON	DELTON	XMRP	INCHES
H/BW	.125	DELTON	DELTON	YMRP	INCHES
		DELTON	DELTON	ZMRP	INCHES
		DELTON	DELTON	SCALE	SCALE



DCA



DCC

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ034)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
○	ALPHA	10.000	BETA	.000	DELTVN	10Z033	SREF	4.4119	50. FT.
	MACH	.200	AILRON	.000	DELTVN	10Z031	LREF	19.2299	INCHES
	EOF LAP	-12.000	SPOBRK	25.000	DELTVN	10Z030	BREF	37.9359	INCHES
	RUDDER	.000			DELTVN	10Z023	XMRP	43.5974	INCHES
	H/BV	.125			DELTVN	10Z025	YMRP	.0000	INCHES
					DELTVN		ZMRP	15.1875	INCHES
							SCALE	.0405	SCALE

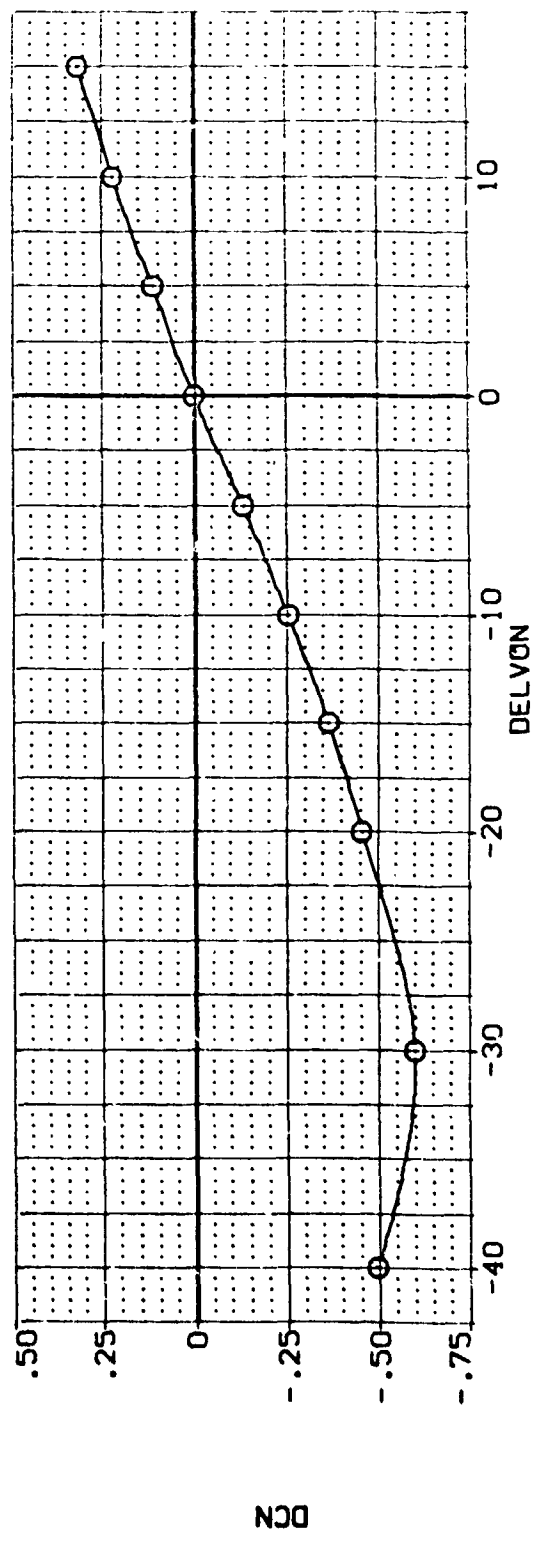
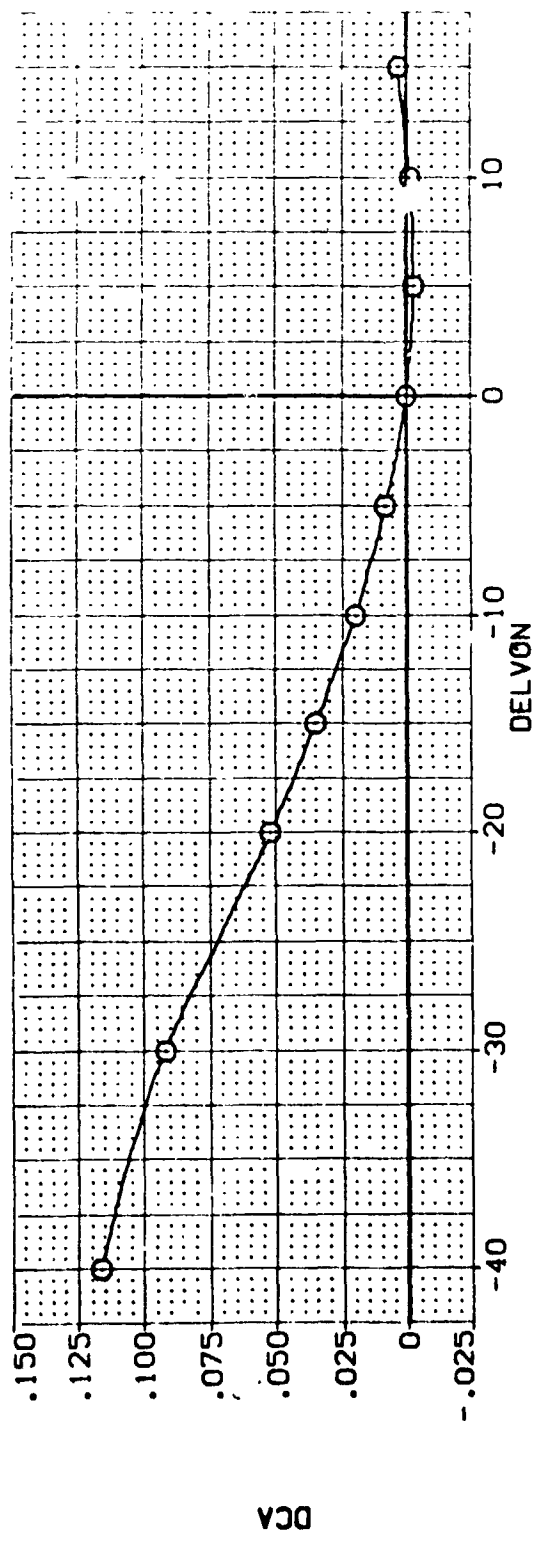


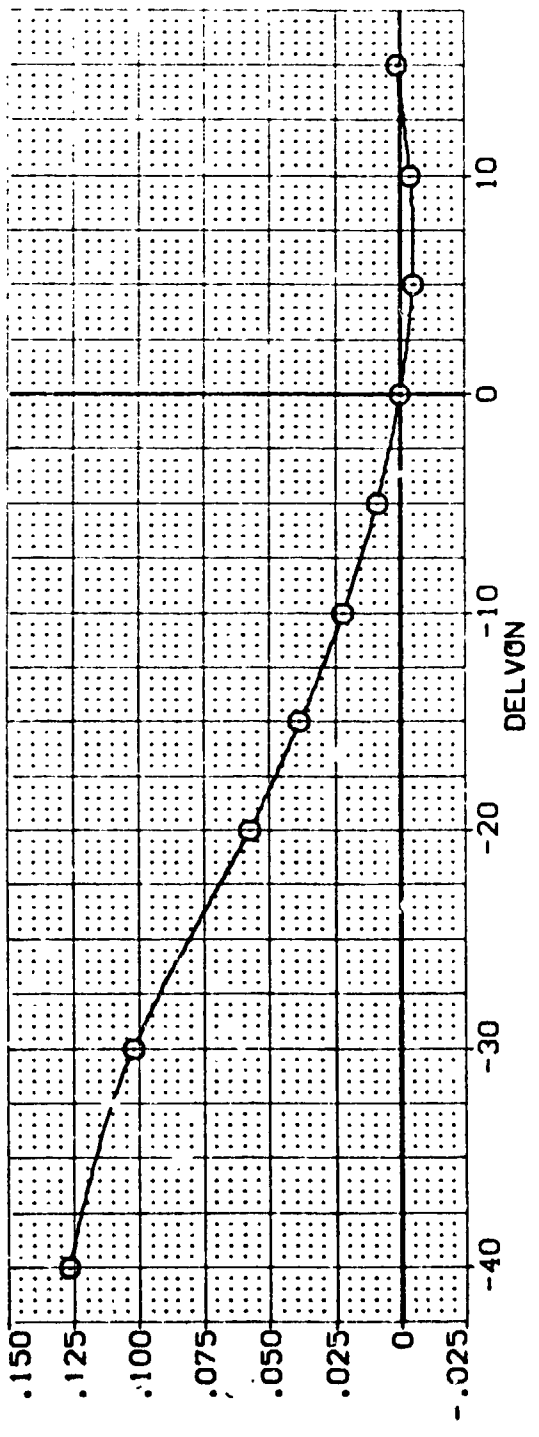
FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BV = 0.125



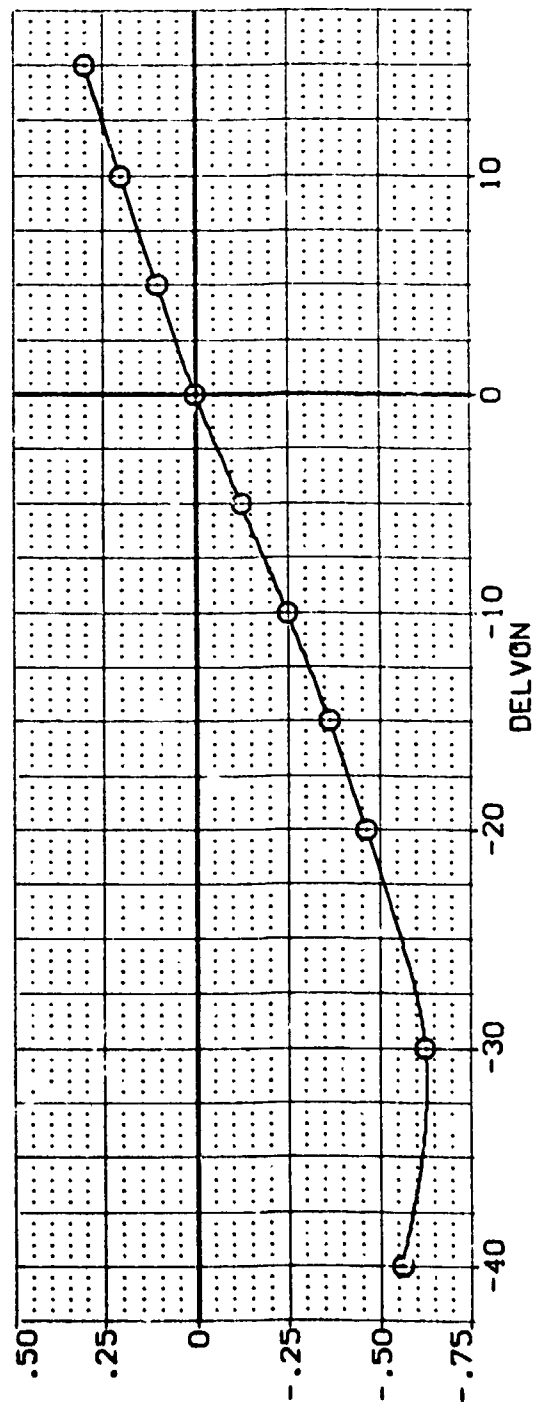
(1DZ034)

0A62B B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
SYMBOL	ALPHA	MACH	BETA	.000	DATASET	DELTON	SREF	4.4119	SQ.FT.
O	15.000	BDFLAP	A1LRON	.000	IDZ034	-40.000	LREF	19.2299	INCHES
		RUDDER	SPOBRK	25.000	IDZ032	-20.000	BREF	37.9359	INCHES
		H/BW		.125	IDZ027	-10.000	XMRP	43.5974	INCHES
					IDZ021	5.000	YMRP	.0000	INCHES
					IDZ029	10.000	ZMRP	15.1875	INCHES
							SCALE	.0405	SCALE



DCA



DCN

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

(1DZ034)

0A62B B26C9G15M7F8 W116E28V8R5X9

SYMBOL  
O

PARAMETRIC VALUES  
ALPHA 20.000  
MACH .200  
BDFLAP .000  
RUDDER .000  
H/BW .125  
BETA .000  
AILRON .000  
SPDRBK .000

DATA SOURCE  
DELTON .000  
IDZ034 .000  
IDZ032 25.000  
IDZ027 .000  
IDZ021 .000  
IDZ029 10.000

DELTON  
-40.000  
-20.000  
10.000  
10.000

DELTON  
-30.000  
-15.000  
5.000  
15.000

REFERENCE INFORMATION  
SO.FT. 4.4119  
INCHES 19.2299  
INCHES 37.9359  
INCHES 43.5974  
INCHES .0000  
INCHES 15.1875  
SCALE .0405

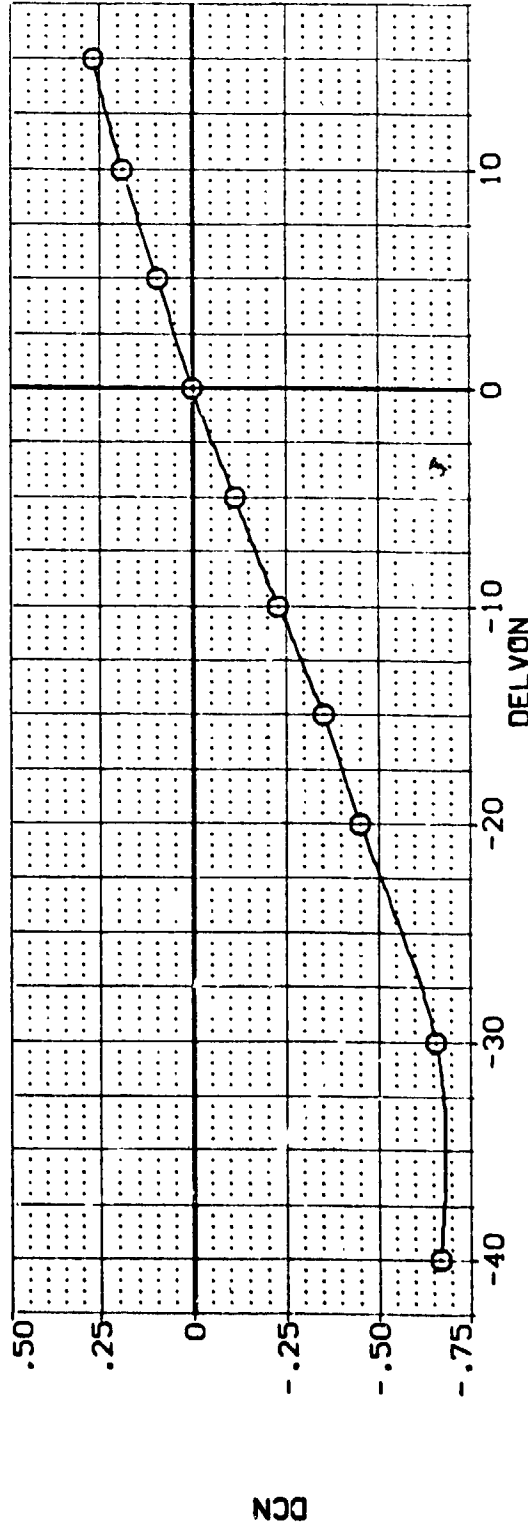
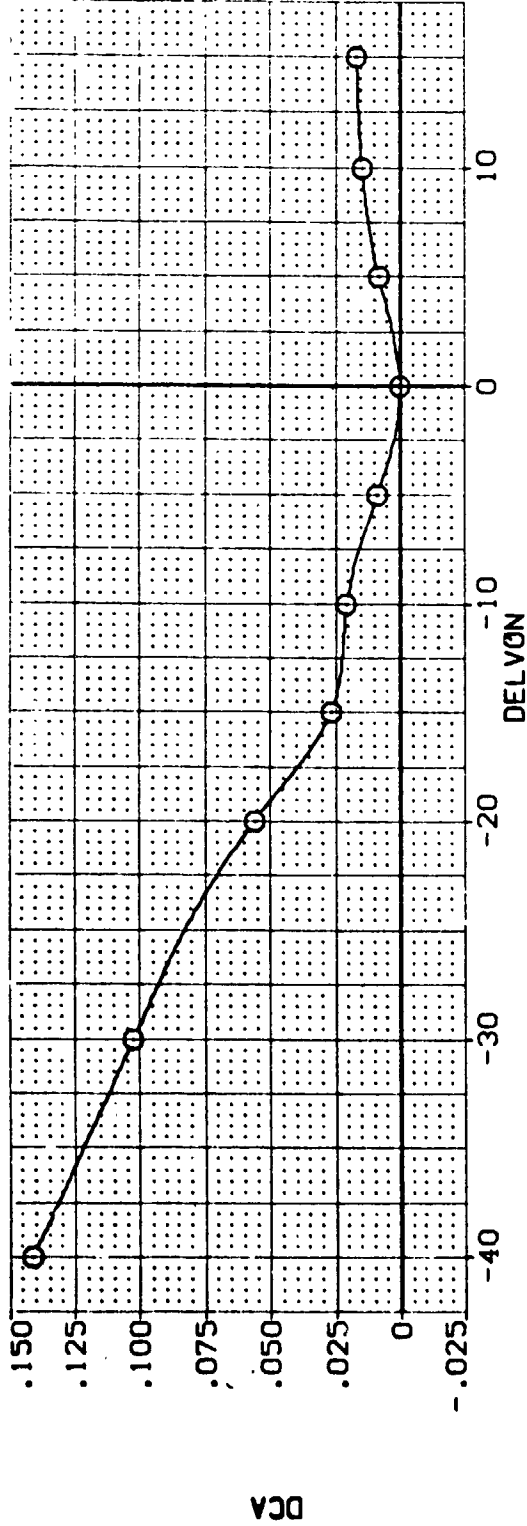
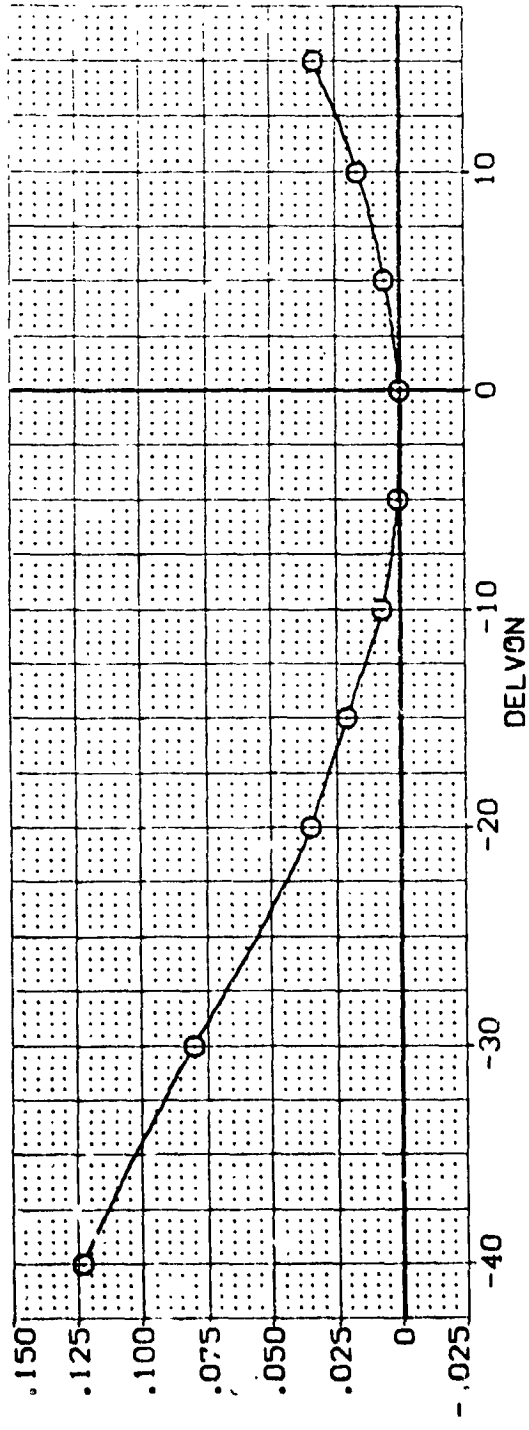


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125

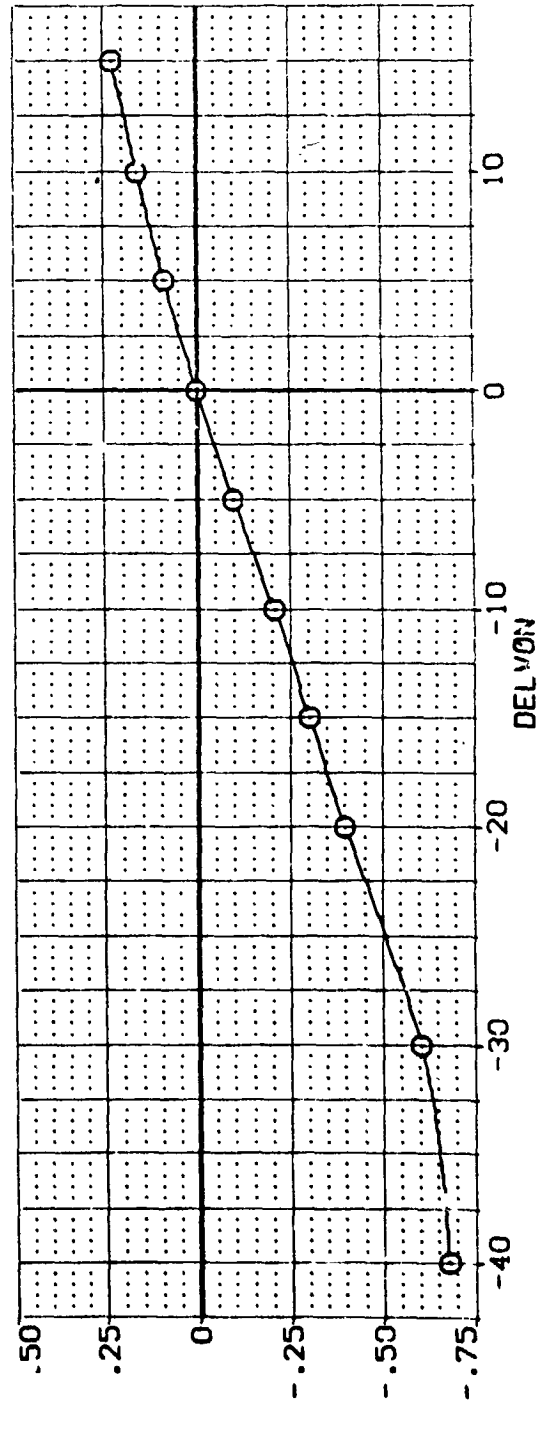
(1DZ034)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	25.000	.000	DEL VON	SREF	4.4119
MAC-1	.200	.000	DEL VON	LREF	19.2299
SOF LAP	-12.000	.000	DEL VON	BREF	37.9359
RUDDER	.000	25.000	DEL VON	XMRP	43.5574
H/BW	.125		DEL VON	ZMRP	0.000
			DEL VON	ZMRP	15.1875
			DEL VON	SCALE	.0405



DCA



DCN

FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



(1DZ034)

0A628 B26C9G15M7F8 W1.6E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	ALPHA	30.000	MACH	.000	DELVON	DELVON	SREF	4.4119	SO.FT.
	BDFLAP	-12.000	BETA	.000	DELVON	LREF	19.2299	19.2299	INCHES
	RUDDER	.000	AILERON	.000	DELVON	BREF	37.9359	37.9359	INCHES
	H/BW	.125	SPDBRK	25.000	DELVON	XMRP	43.5974	43.5974	INCHES
					DELVON	YMRP	1.0000	1.0000	INCHES
					DELVON	ZMRP	15.1875	15.1875	INCHES
					DELVON	SCALE	.0405	.0405	SCALE

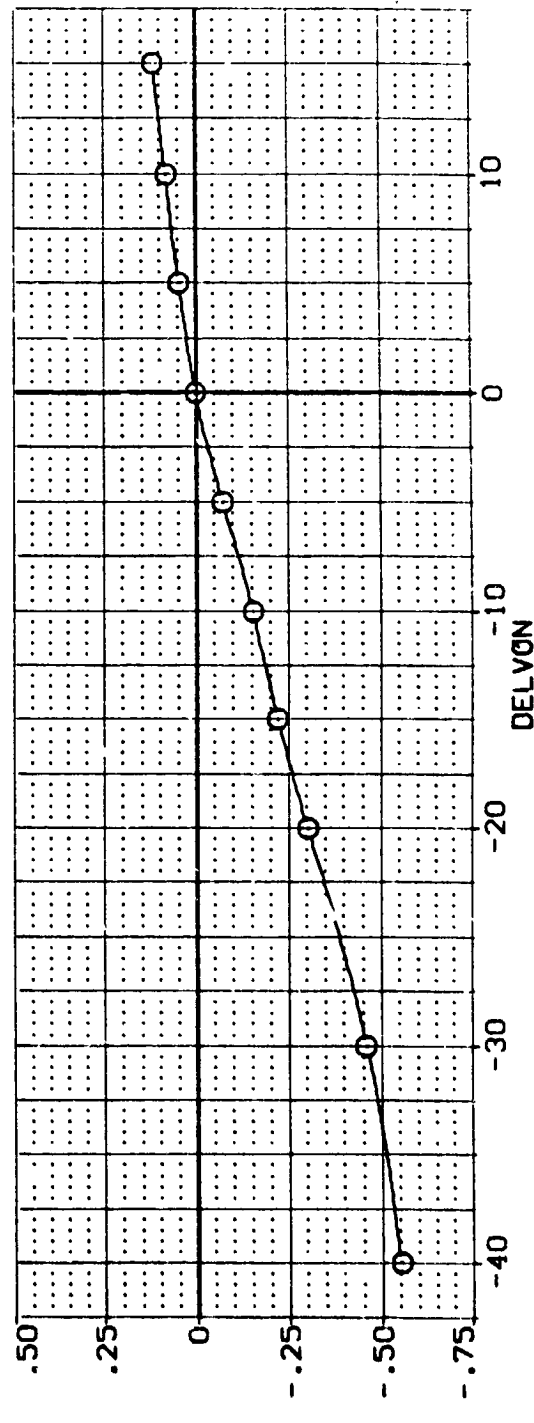
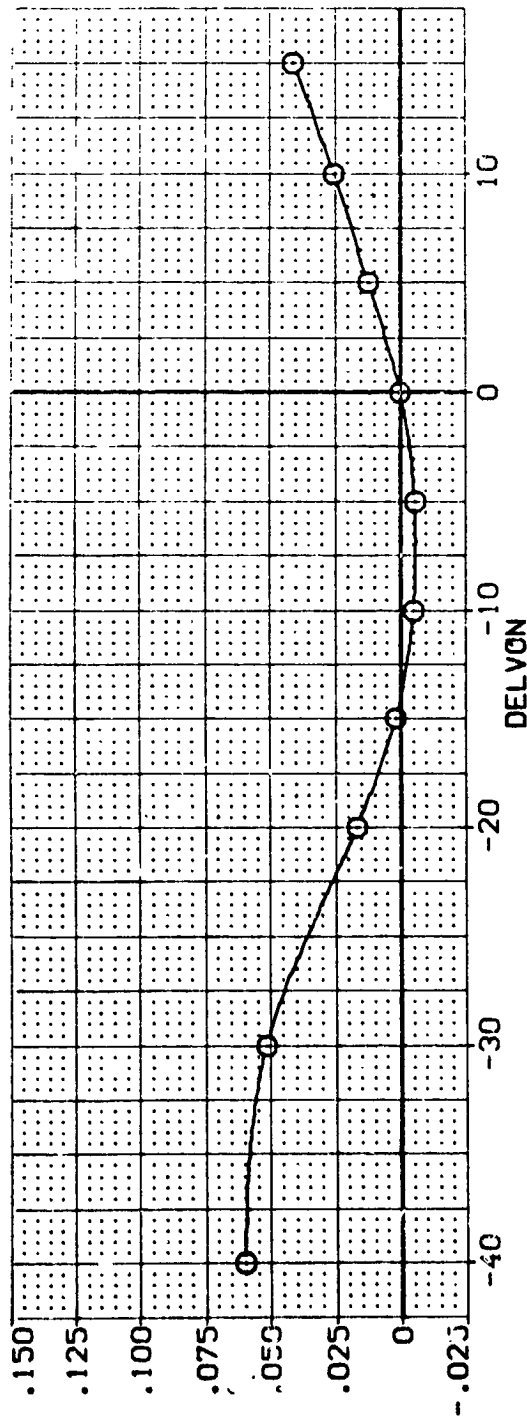


FIG 6 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.125



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z028)	0A6Z8 B26C9G1S47F8 V116E26V8R5X9	.125	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z022)	0A6Z8 B26C9G1S47F8 V116E26V8R5X9	.125	25.000	-12.000	LREF 19.2299 INCHES
(80Z024)	0A6Z8 B26C9G1S47F8 V116E26V8R5X9	.125	25.000	-12.000	BREF 37.9359 INCHES
(80Z026)	0A6Z8 B26C9G1S47F8 V116E26V8R5X9	.125	25.000	-12.000	XPRP 43.5974 INCHES
					YPRP .0000 INCHES
					ZPRP 15.1875 INCHES
					SCALE .0405 SCALE

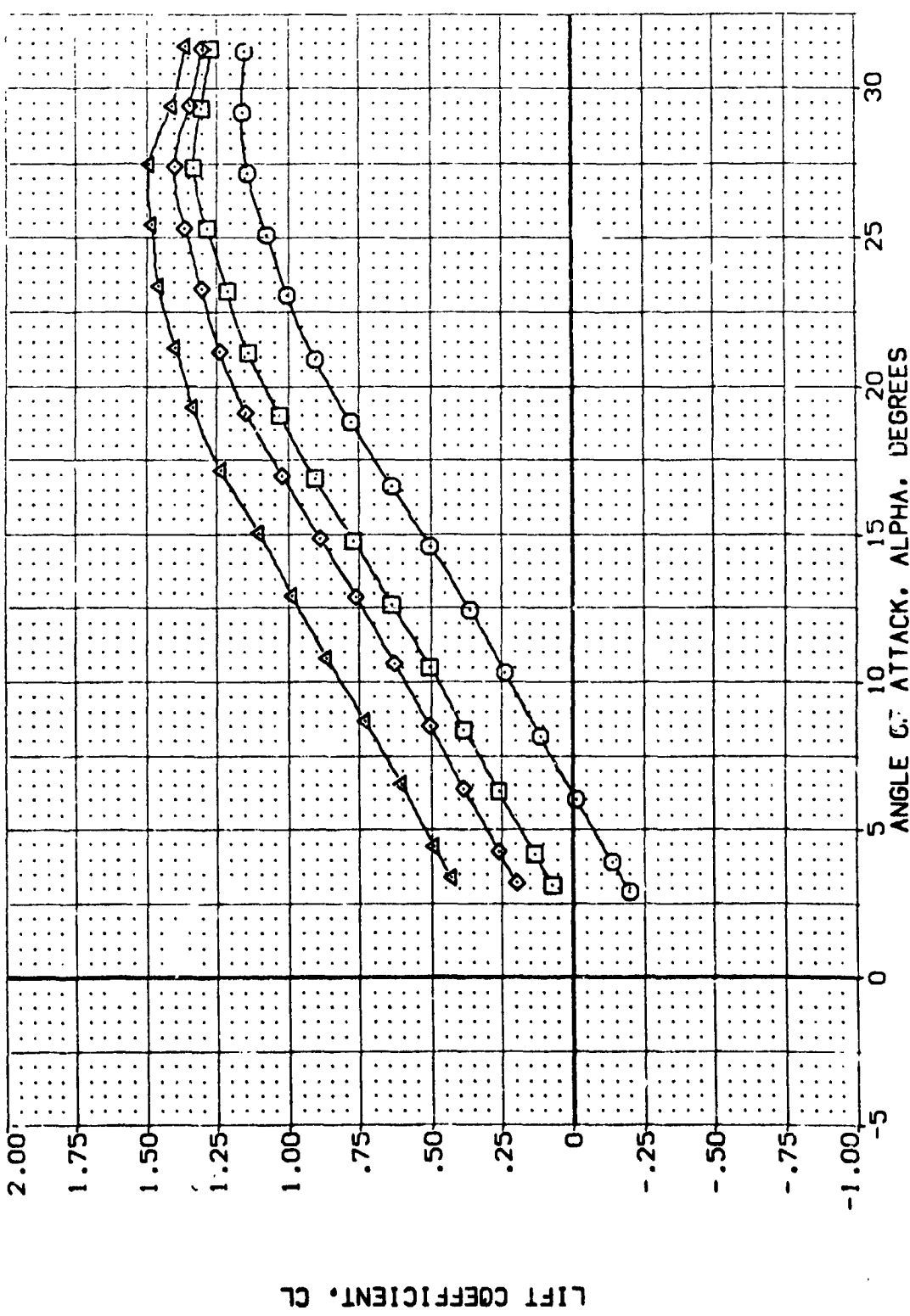


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125  
 (A)MACH = .20



DATA SET S'160L CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(BD2020)	QAG28	B26C9G15M7F8	V11E26V8R5X9	SREF	4.4119	SO.FT.
(BD2022)	QAG28	B26C9G15M7F8	V11E26V8R5X5	LREF	19.2289	INCHES
(BD2024)	QAG28	B26C9G15M7F8	V11E26V8R5X9	BREF	37.9359	INCHES
(BD2026)	QAG28	B26C9G15M7F8	V11E26V8R5X9	XMRP	43.5974	INCHES
				YMRP	0.000	INCHES
				ZMRP	15.1875	INCHES
				SCALE	.0405	SCALE

ELEVON H/BW SPOBRK BOFLAP

-10.000	.125	25.000	-12.000
.000	.125	25.000	-12.000
5.000	.125	25.000	-12.000
15.000	.125	25.000	-12.000

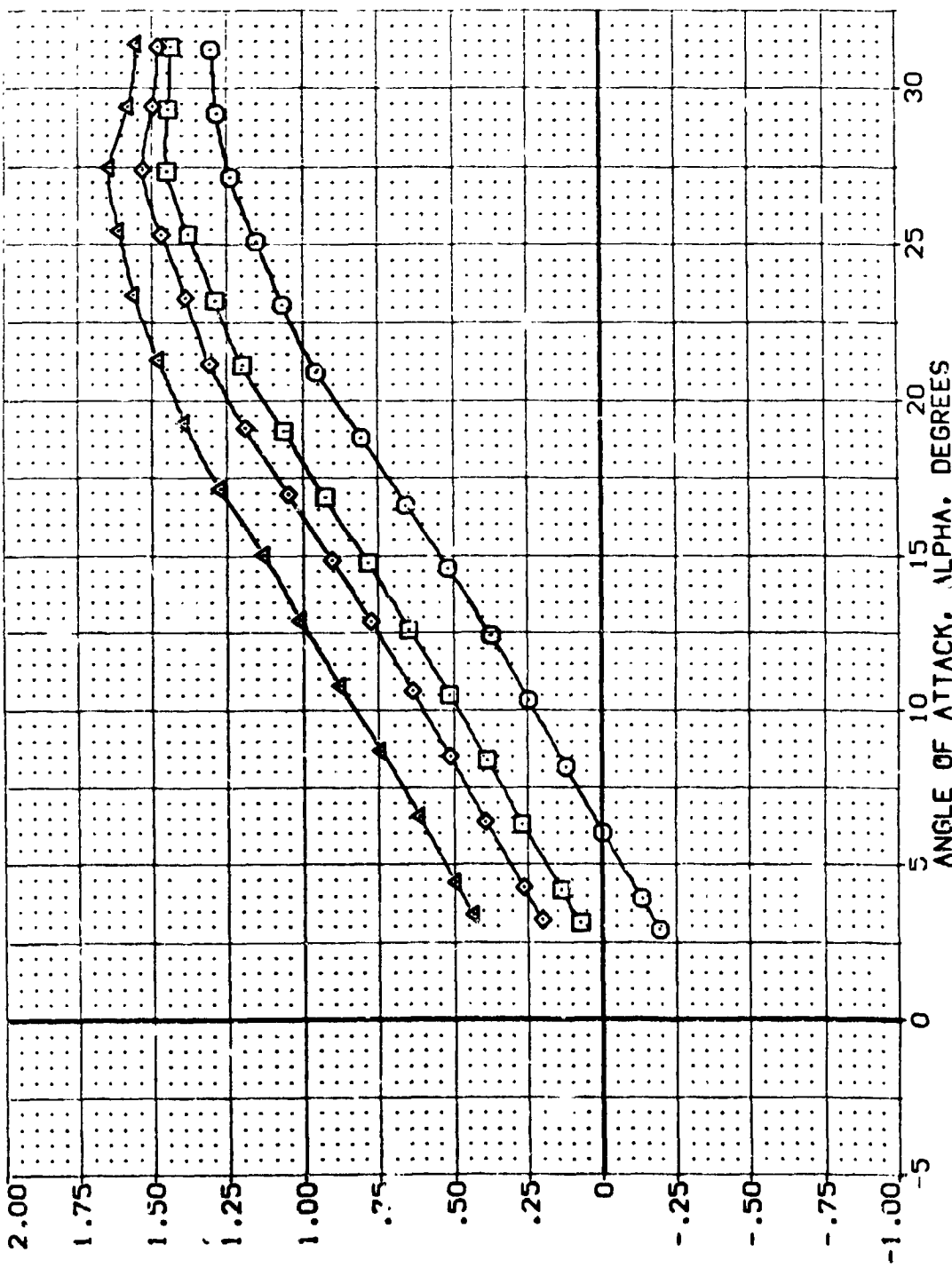


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125  
 (A)MACH = .20 PAGE 32



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ028) OASZB BZ6C9G|SMT7-8 VI|BEZ6VBR5X9  
 (BDZ022) OASZB BZ6C9G|SMT7-8 VI|BEZ6VBR5X9  
 (BDZ024) OASZB BZ6C9G|SMT7-8 VI|BEZ6VBR5X9  
 (BDZ026) OASZB BZ6C9G|SMT7-8 VI|BEZ6VBR5X9

ELEVON H/WB SPOBRK BOFLAP  
 -10.000 25.000 -12.000  
 5.000 25.000 -12.000  
 15.000 25.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 52. FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 0.000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

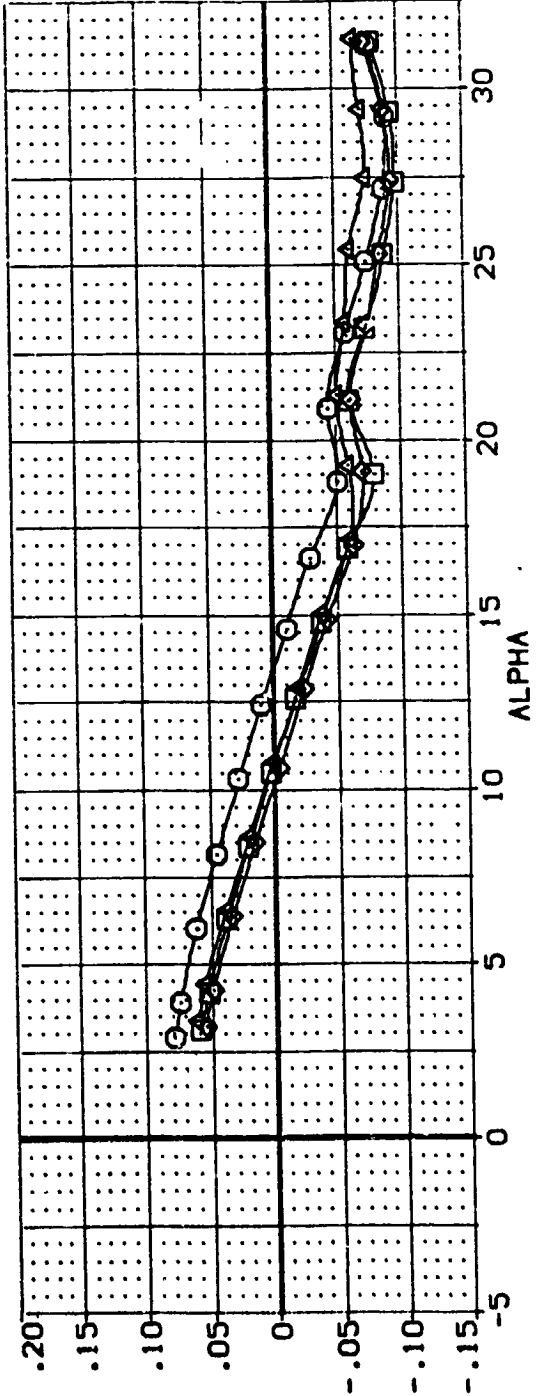
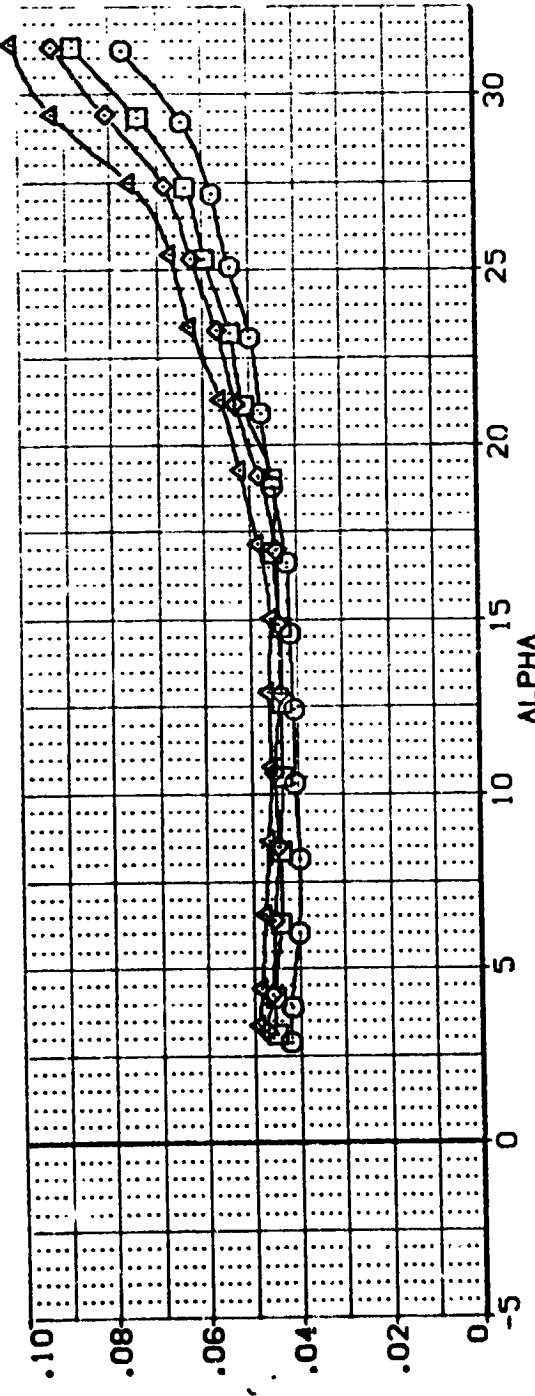


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/WB = .125  
 (A)MACH = .20 PAGE 93



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BD/FLAP	SREF	SO.FT.
(B02026)	0A628 B26C961 SMT78 VI16E26V8RSX9	-10.000	.125	25.000	-12.000	4.4119	INCHES
(B02022)	0A628 B26C961 SMT78 VI16E26V8RSX9	.000	.125	25.000	-12.000	19.2299	INCHES
(B02024)	0A628 B26C961 SMT78 VI16E26V8RSX9	5.000	.125	25.000	-12.000	37.9359	INCHES
(B02026)	0A628 B26C961 SMT78 VI16E26V8RSX9	15.000	.125	25.000	-12.000	43.5974	INCHES
						0.000	INCHES
						15.1875	SCALE
						.0405	SCALE

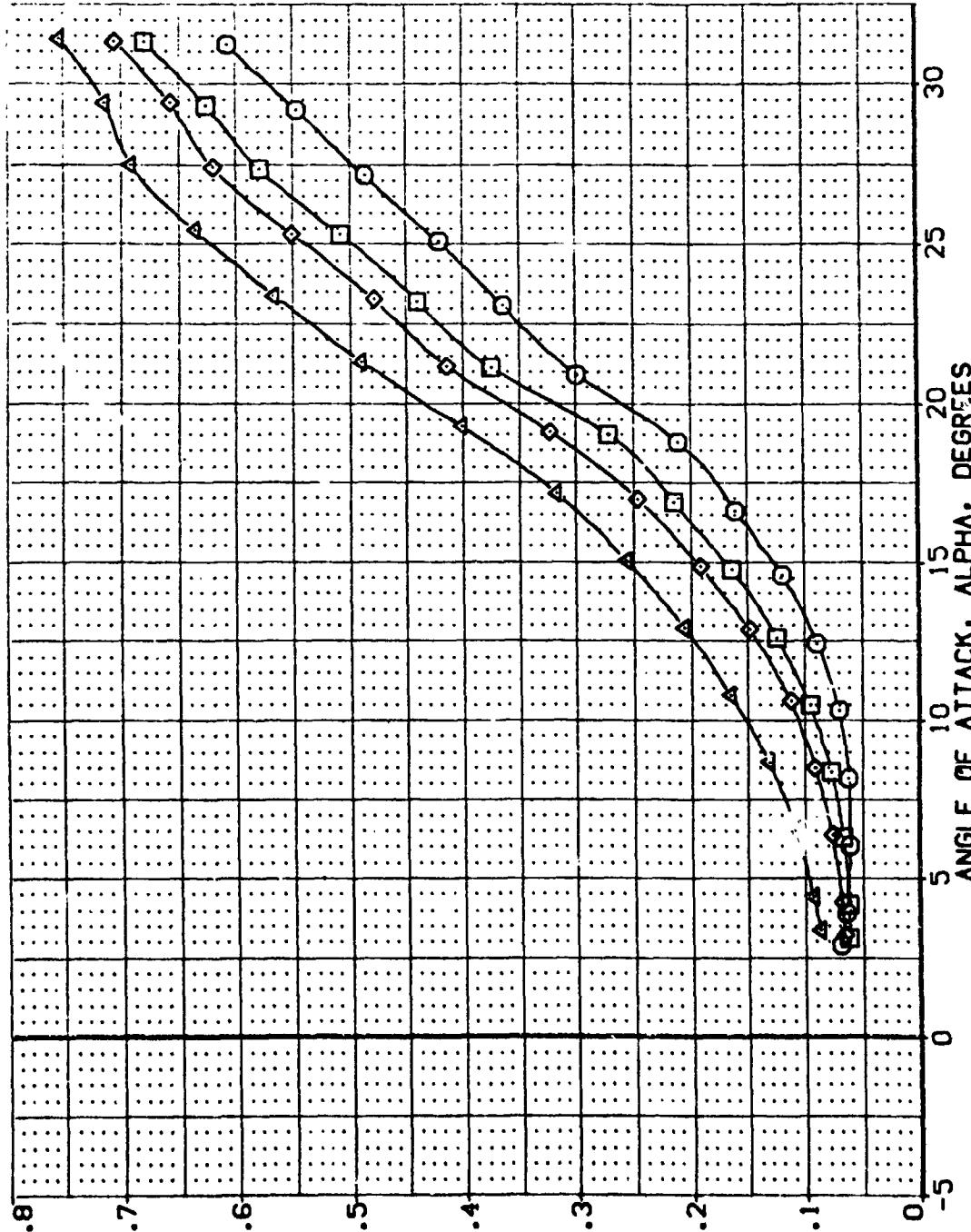


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

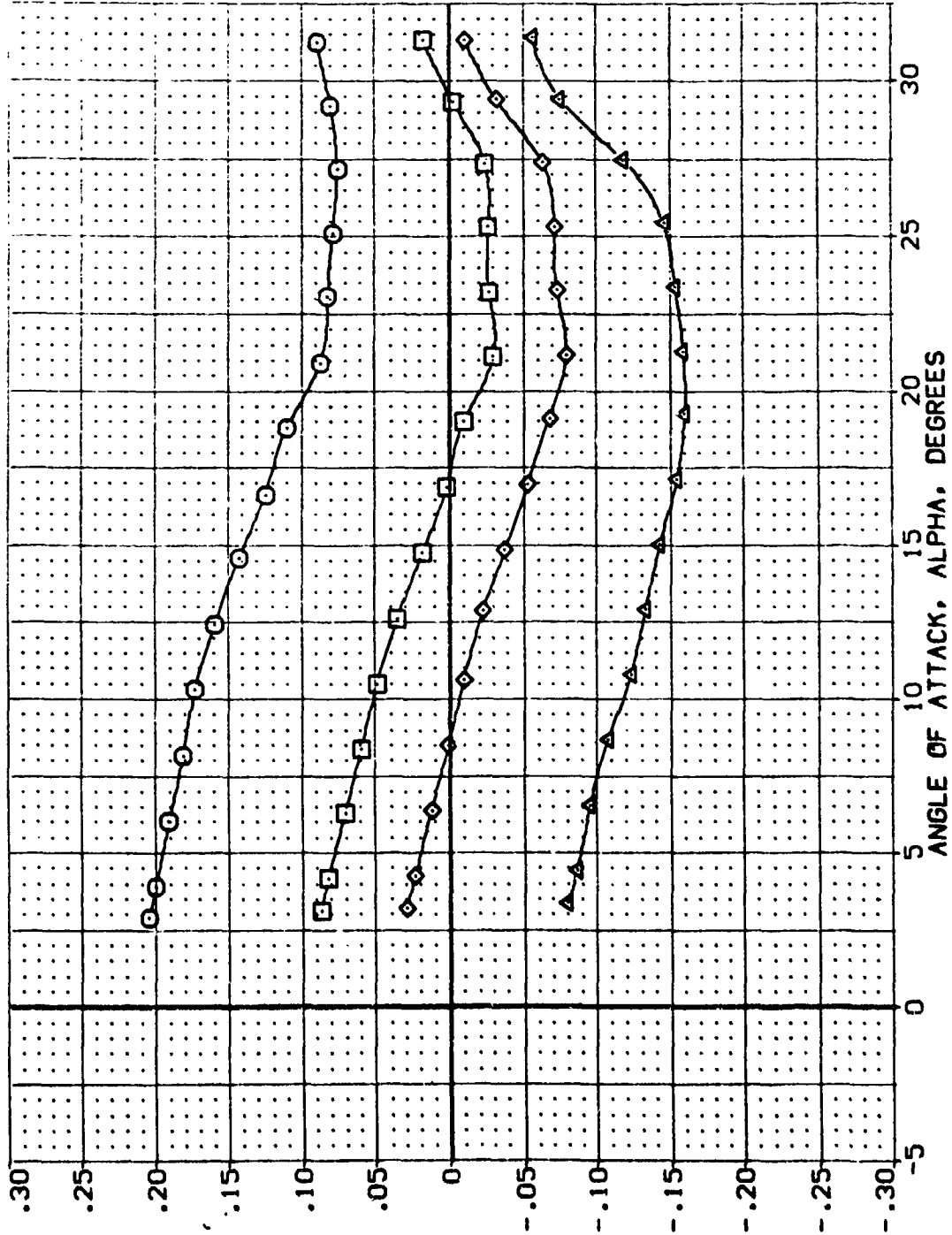
(A)MACH = .20





DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02028) Q B26C9G1S7F8 V11E26V8SXS9  
 (B02022) X B26C9G1S7F8 V11E26V8SXS9  
 (B02024) X B26C9G1S7F8 V11E26V8SXS9  
 (B02026) X B26C9G1S7F8 V11E26V8SXS9

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 -10.000 .125 25.000 -12.000 SREF 4.4119 SO.FT.  
 .000 .125 25.000 -12.000 LREF 19.2799 INCHES  
 5.000 .125 25.000 -12.000 BREF 37.9359 INCHES  
 15.000 .125 25.000 -12.000 XMRP 43.5974 INCHES  
 YMRP 0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BDZ028)	0A628 B26C9G1S7F7-8 VI16E26:8FSX9
(BDZ022)	0A628 B26C9G1S7F7-8 VI16E26:8FSX9
(BDZ024)	0A628 B26C9G1S7F7-8 VI16E26:8FSX9
(BDZ026)	0A628 B26C9G1S7F7-8 VI16E26:8FSX9

ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION	SO.FT.
-10.000	.125	25.000	-12.000	SREF	4.4119
.000	.125	25.000	-12.000	LREF	19.2299
5.000	.125	25.000	-12.000	BREF	37.9359
15.000	.125	25.000	-12.000	XMRP	43.5974
				YMRP	0.0000
				ZMRP	15.1875
				SCALE	.0405
				SCALE	INCHES

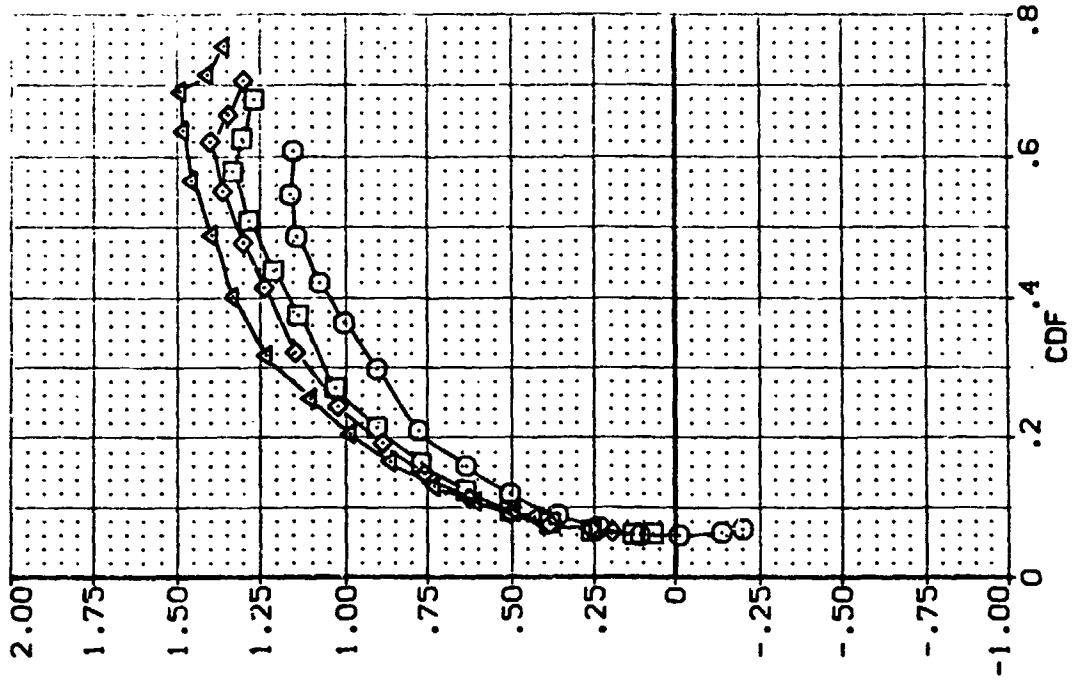
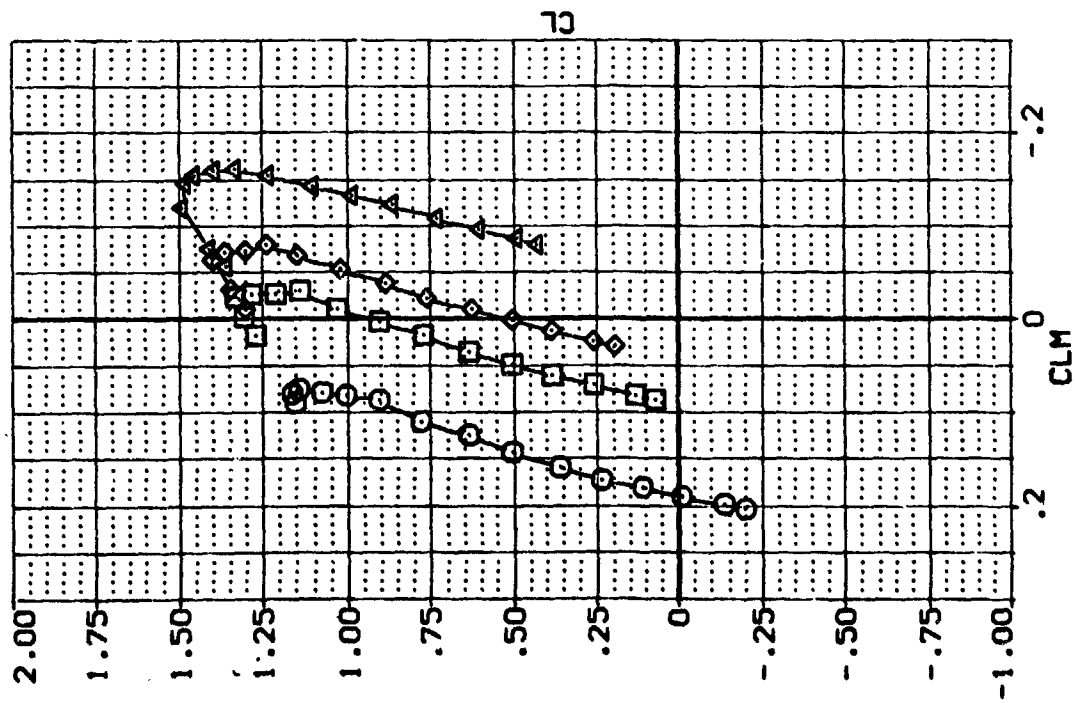


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

(A)MACH = .20





ELEVON		H/BW		SPDRK		BOFLAP		REFERENCE INFORMATION						
-10.000	.125	25.000	-12.000	SAEF	4.4119	SO.FT.	19.2299	LREF	37.9359	INCHES	43.5974	INCHES	15.0000	INCHES
.000	.125	25.000	-12.000	YMRP	.0000	INCHES	15.1875	ZMRP	.0405	SCALE				
5.000	.125	25.000	-12.000											
15.000	.125	25.000	-12.000											

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02028)	0A628 B26C9G15M7F8 V116E26V8R5X9
(B02022)	0A628 B26C9G15M7F8 V116E26V8R5X9
(B02024)	0A628 B26C9G15M7F8 V116E26V8R5X9
(B02026)	0A628 B26C9G15M7F8 V116E26V8R5X9

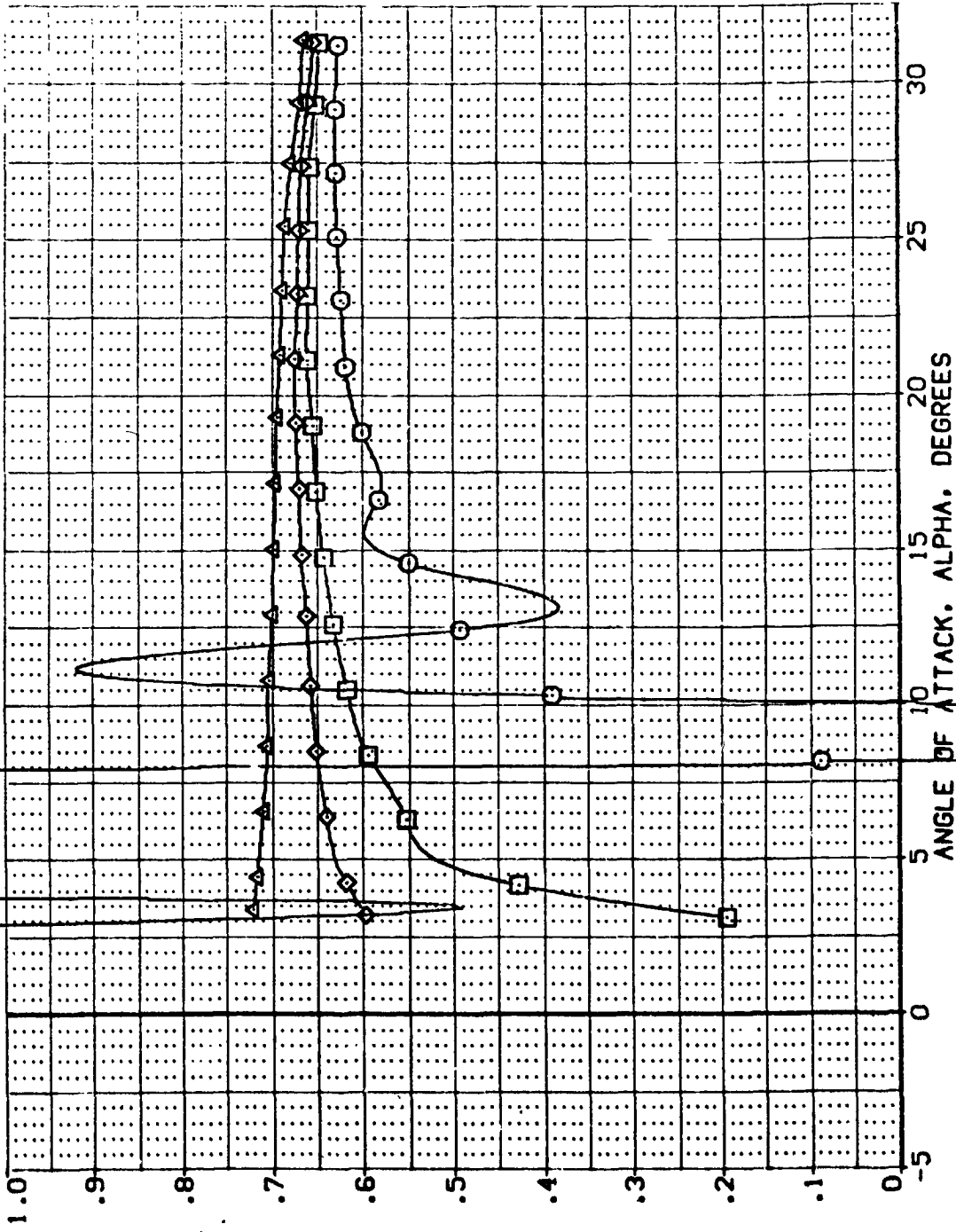


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH



DATA SET SYMBOL CONFIGURATION DESCRIPTION

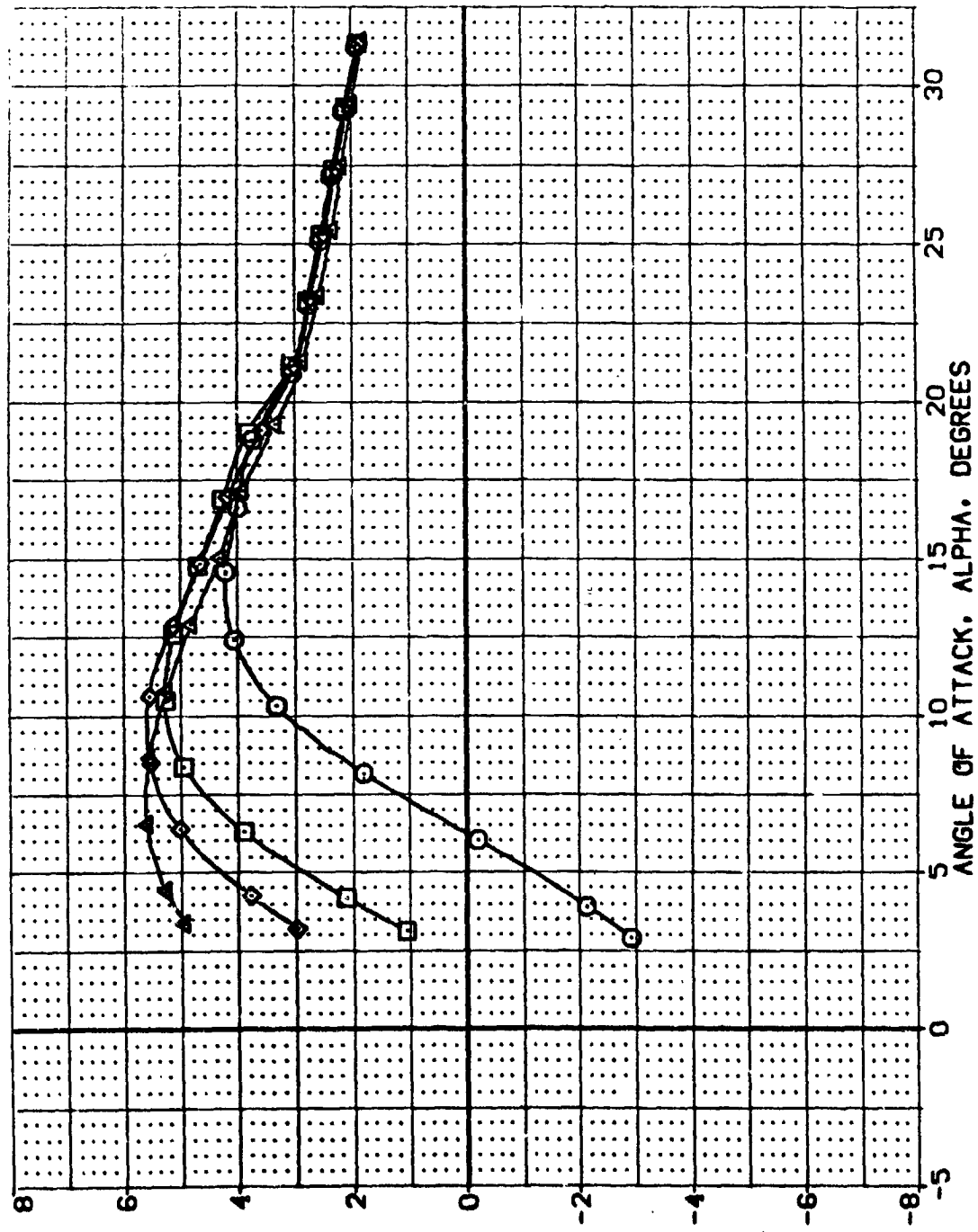
(80Z028)	0A6Z8	B26C5G15W7F8	V116E26V8R5X9
(80Z022)	0A6Z8	B26C5G15W7F8	V116E26V8R5X9
(80Z024)	0A6Z8	B26C5G15W7F8	V116E26V8R5X9
(80Z026)	0A6Z8	B26C5G15W7F8	V116E26V8R5X9

ELEVON H/BW SPOBRK BOFLAP

-10.000	.125	25.000	-12.000
0.000	.125	25.000	-12.000
5.000	.125	25.000	-12.000
15.000	.125	25.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

(A)MACH = .20







(1DZ028)

W116E26V8R5X9

B26C9G15M7F8

0A62B

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.000	DELTON	DELTON	SREF	4.4119
MACH	.200	BETA	.000	LREF	19.2293
BOFLAP	-12.000	AIURRH	1DZ028	BREF	37.9359
RUDDER	.000	SPOBRK	1DZ024	XTRP	43.5974
H/BW	.125			YTRP	.0000
				ZTRP	15.1875
				SCALE	.0405

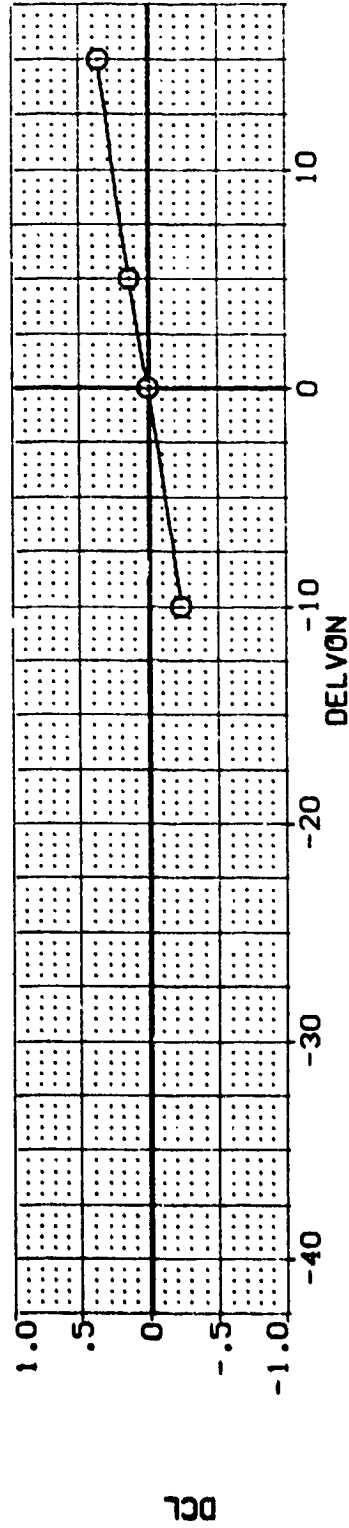
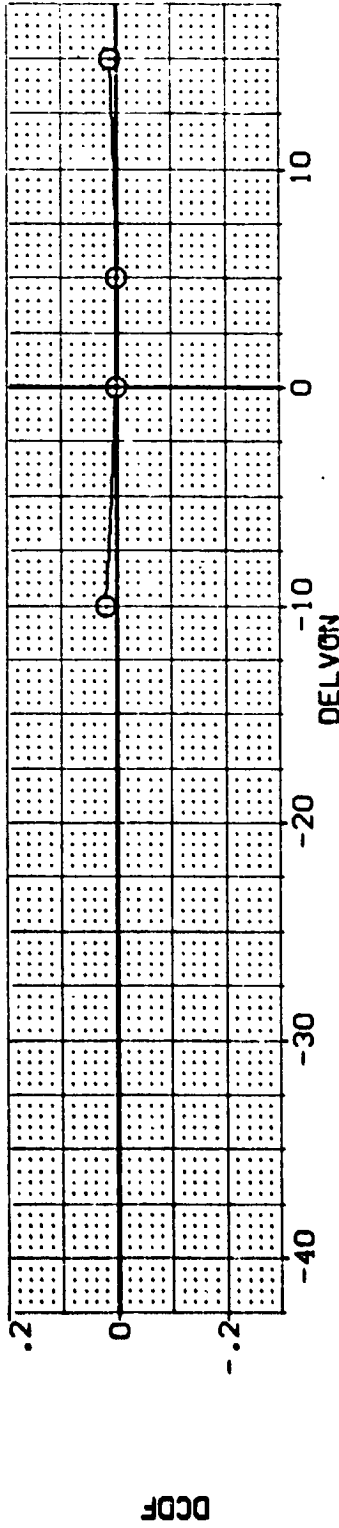
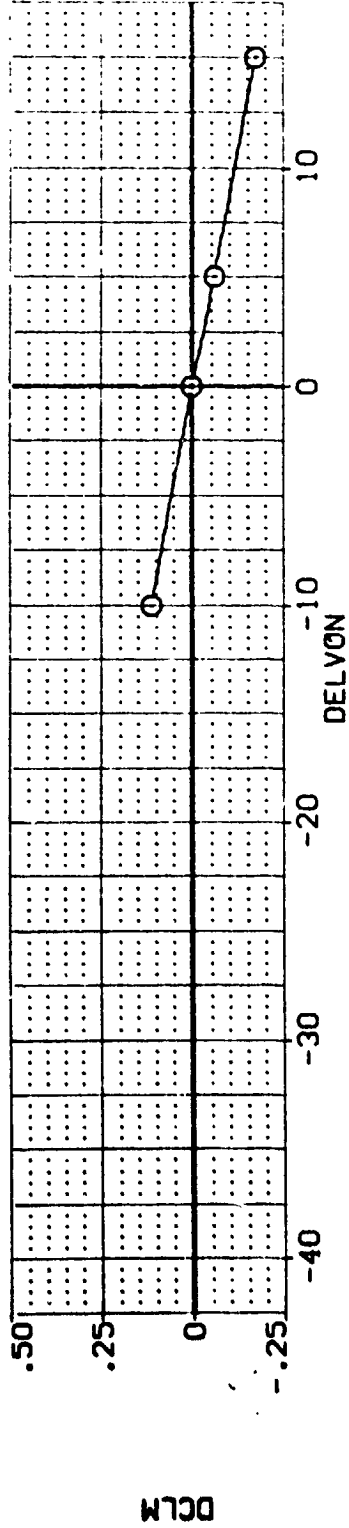


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



0A628 B26C9G15M7F8 W116E26V8R5X9 (10Z028)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE	REFERENCE INFORMATION	
○	5.000	MACH	BETA	DELTON	SREF	SO.FT.
		-12.000	AIRLON	.000	LREF	19.2298
		.000	SPOBRK	25.000	BRF	37.9559
		.125		10Z022	XMRP	43.5574
				10Z026	YMRP	.0000
					ZMRP	15.1875
					SCALE	.0405

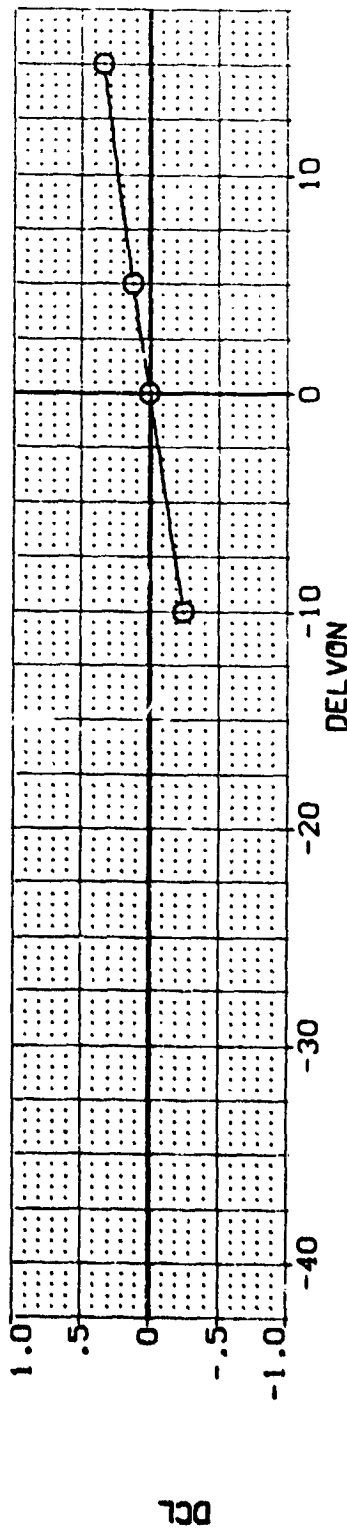
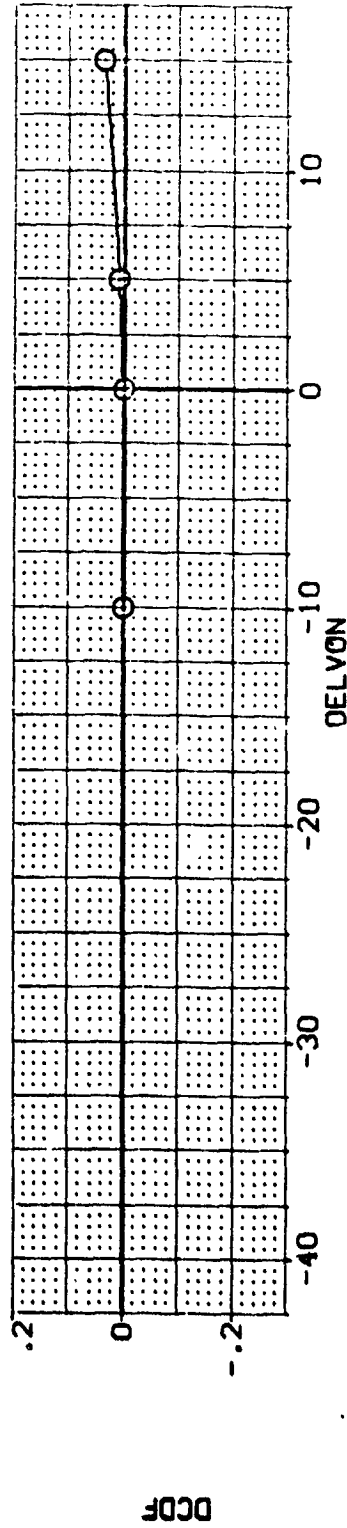
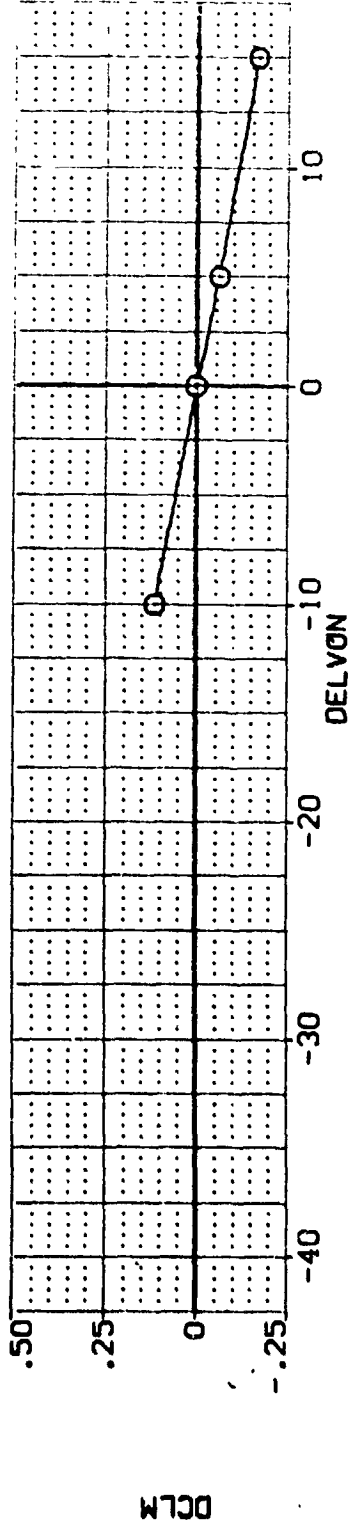


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



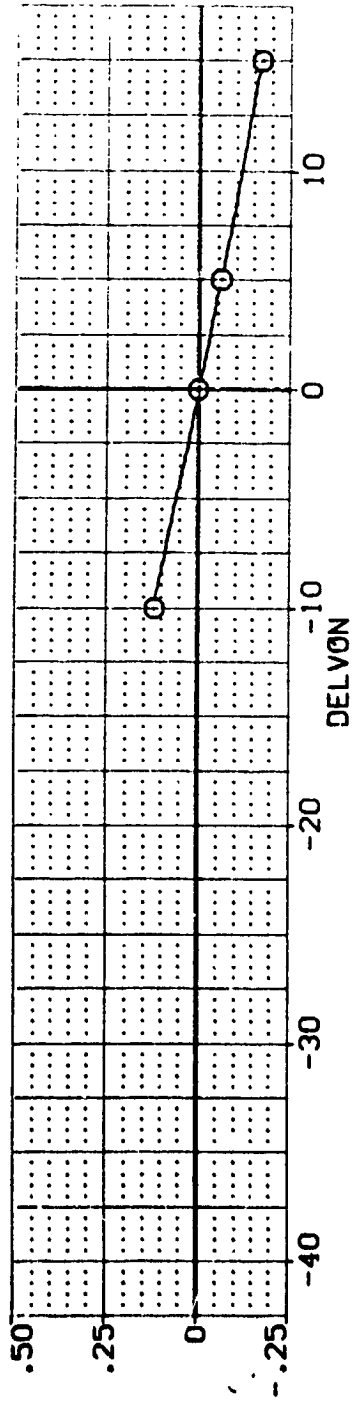


(1DZ028)

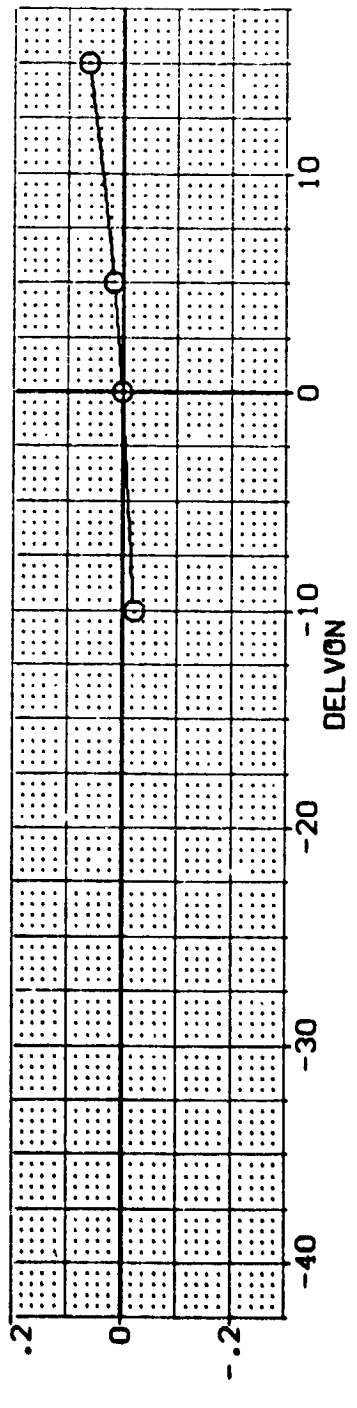
0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL ○

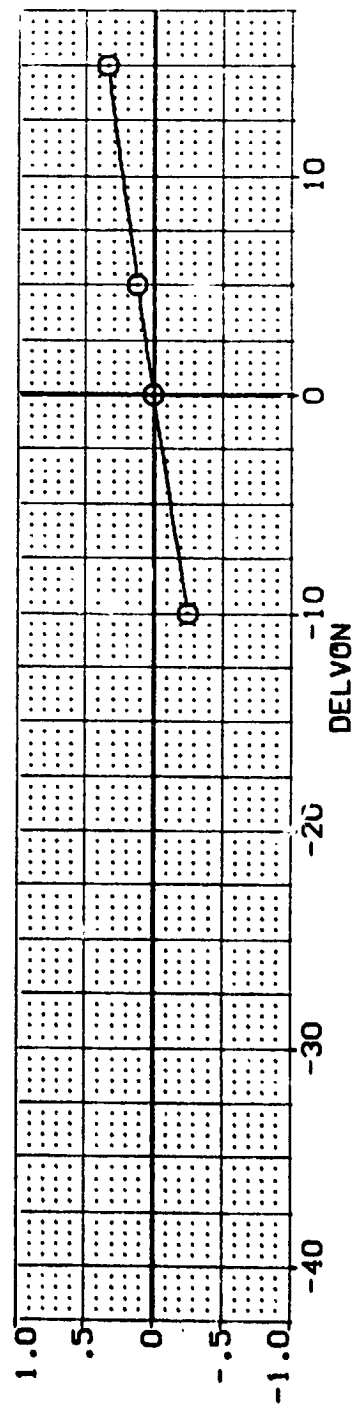
PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	10.000	.000	DELVON	SREF	50. FT.
BETA	-.200	.000	DELVON	LREF	INCHES
AILRON	-12.000	.000	DELVON	BREF	INCHES
SPOBRK	.000	25.000	DELVON	XHRP	INCHES
H/BW	.125	5.000	DELVON	ZHRP	INCHES
			DELVON	SCALE	SCALE
					.0405



DCLM



DCDF



DCL

FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



(10Z028)

0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL		PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION			
0	ALPHA	15.000	HACH	.000	DATASET	DELTON	10Z022	10Z026	SREF	4.4119	SO.FT.
	BOFLAP	.200	BETA	-10.000	DELTON	-10.000	10Z028	10Z024	LREF	19.2299	INCHES
	RUDDER	-12.000	AIRLEN	5.000	DELTON	5.000	10Z024	10Z026	BREF	37.9359	INCHES
	H/BW	.000	SPOBRK	.25	DELTON	.000	10Z024	10Z026	XMRP	43.5974	INCHES
		.125			DELTON	.000	10Z024	10Z026	ZMRP	15.1875	INCHES
					DELTON	.000	10Z024	10Z026	SCALE	.0405	SCALE

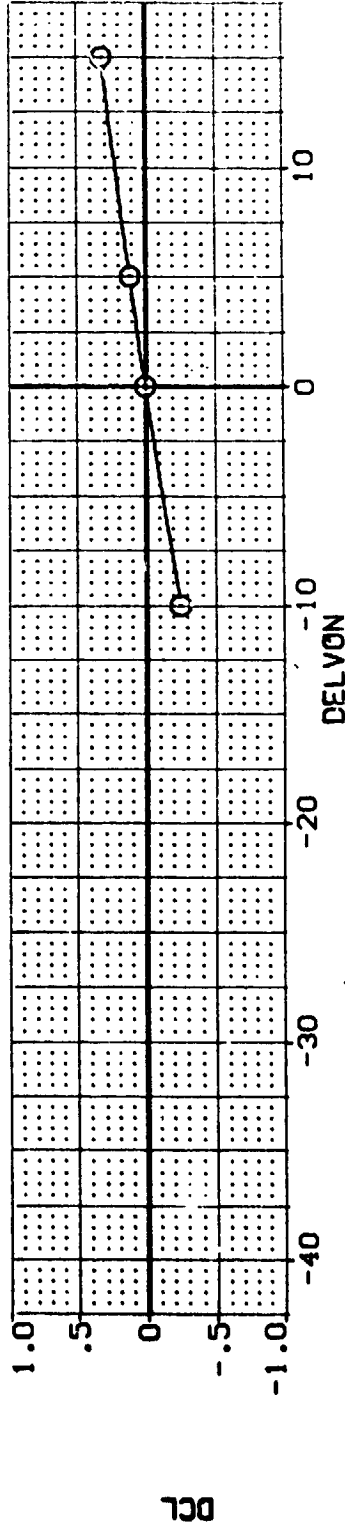
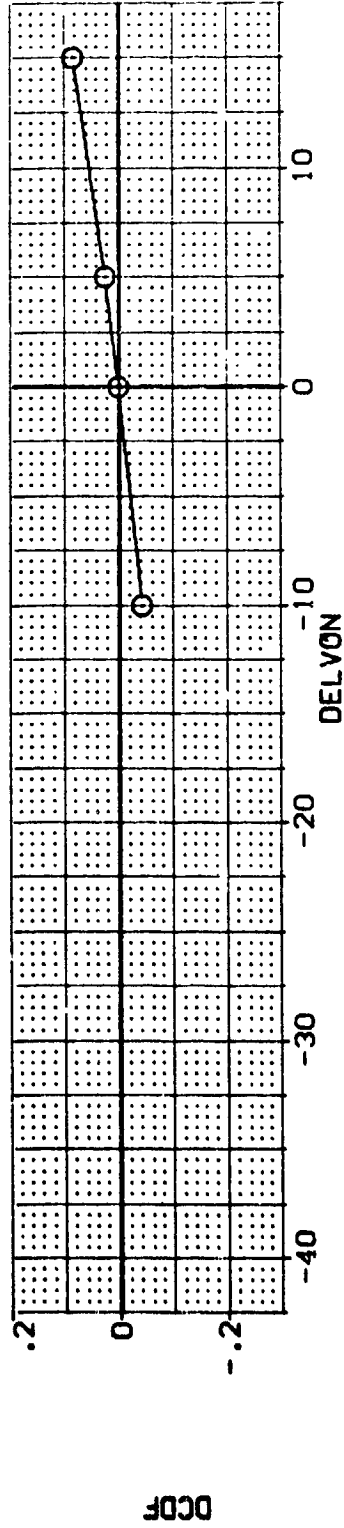
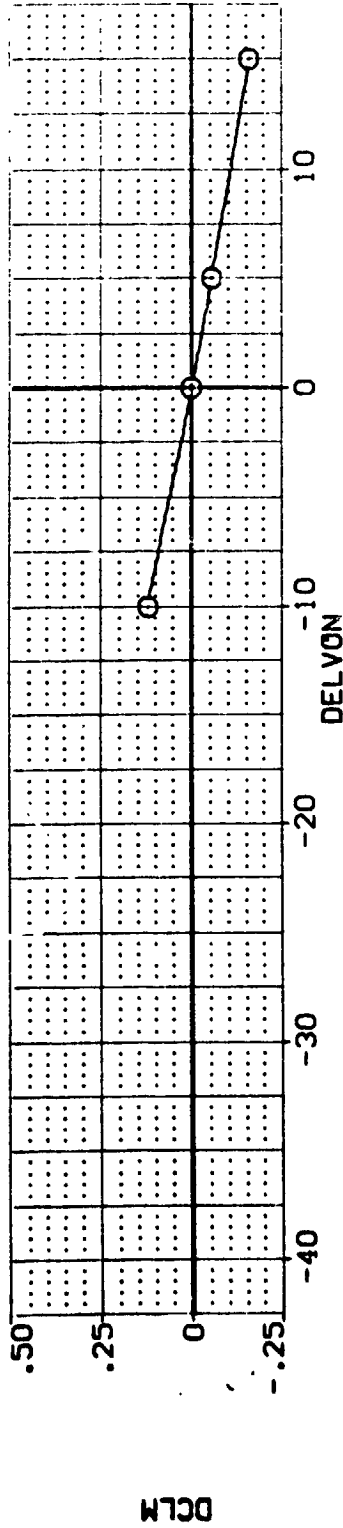


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125





(1DZ028)

0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	ALPHA	.200	BETA	.000	DELTVN	SREF	SQ.FT.
	20.000	-12.000	A1LRON	.000	DELTVN	LREF	INCHES
		.000	SPDRK	-10.000	1DZ022	BREF	INCHES
		.125		5.000	1DZ026	XPRP	INCHES
						YPRP	INCHES
						ZPRP	INCHES
						SCALE	SCALE

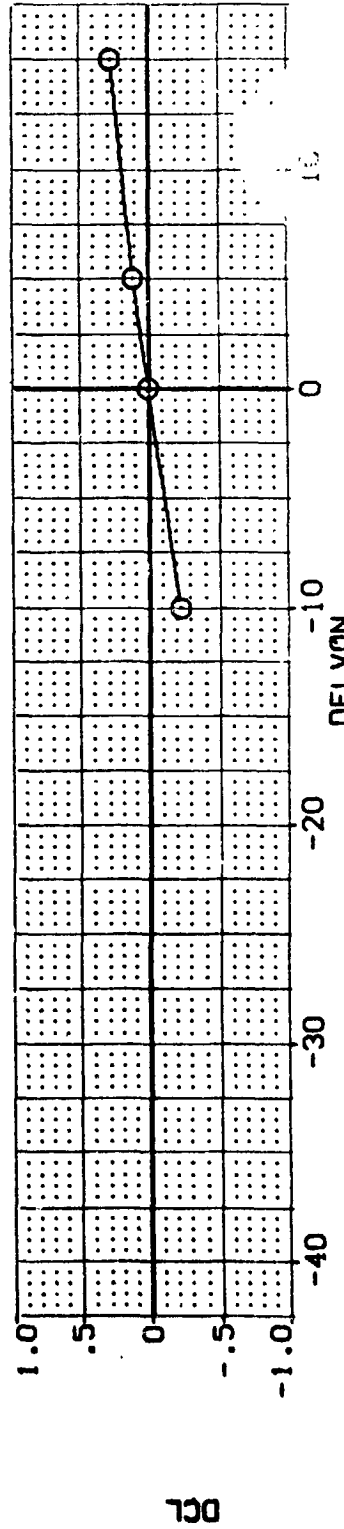
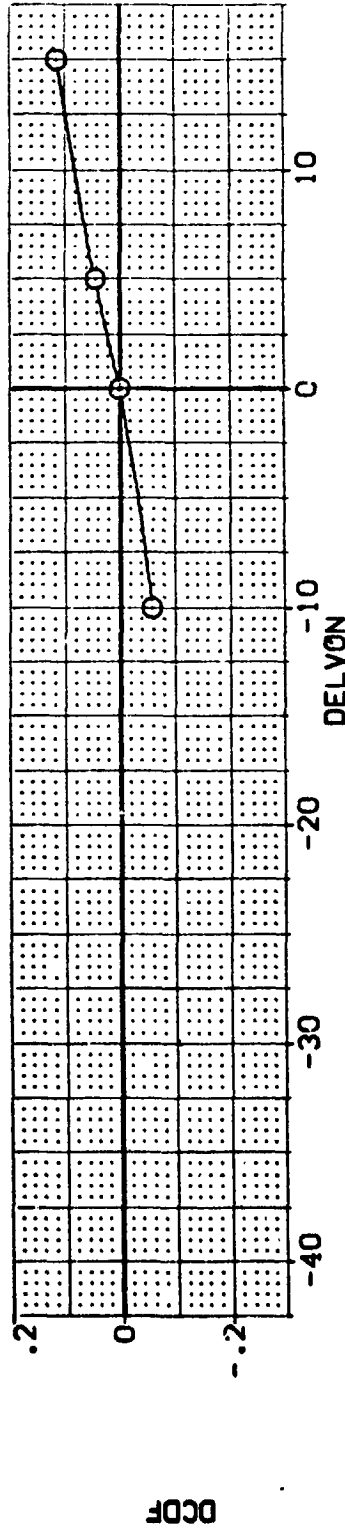
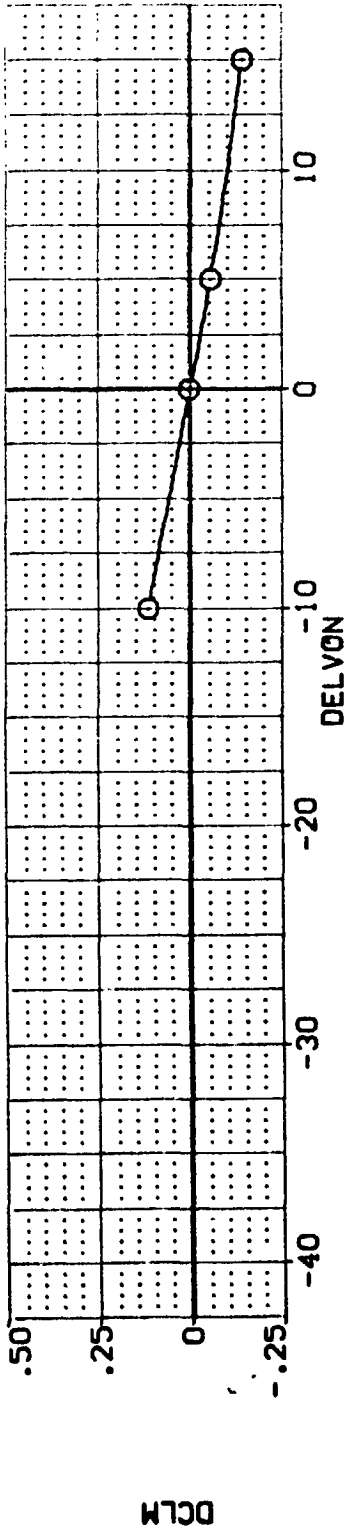


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/L = .25



0A628 B26C9G15M7F8 W116E26V8R5X9 (1DZ028)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
○	25.000		.200	BETA	.000	DELVON	SO. FT.	4.4119	INCHES		
		EDFLAP	-12.000	A1LRON	.000	DELVON	INCHES	19.2289	INCHES		
		RUDDER	.000	SPOBRK	.000	DELVON	INCHES	37.9359	INCHES		
		H/BW	.125		25.000	DELVON	INCHES	43.5974	INCHES		
					5.000	DELVON	INCHES	.0000	INCHES		
						DELVON	INCHES	15.1875	INCHES		
						DELVON	SCALE	.0405	SCALE		

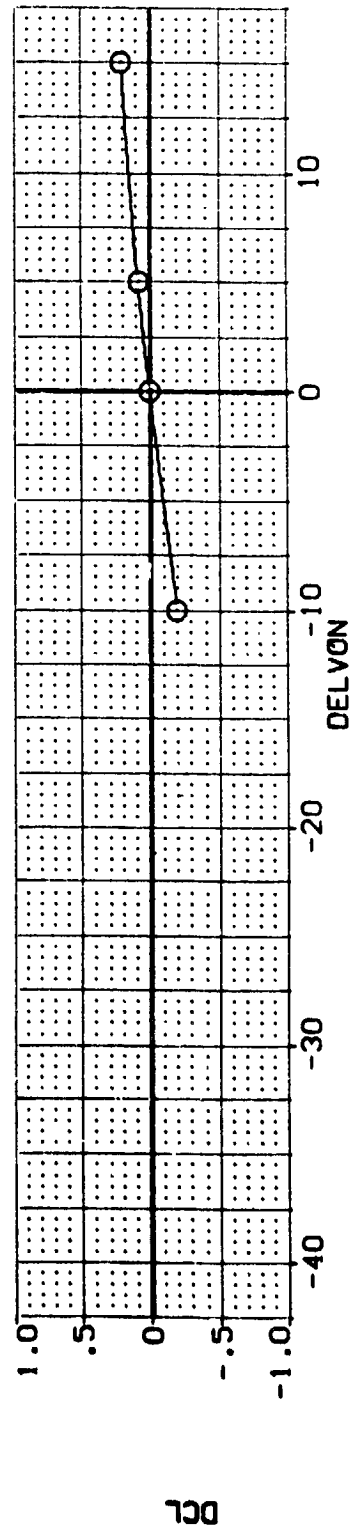
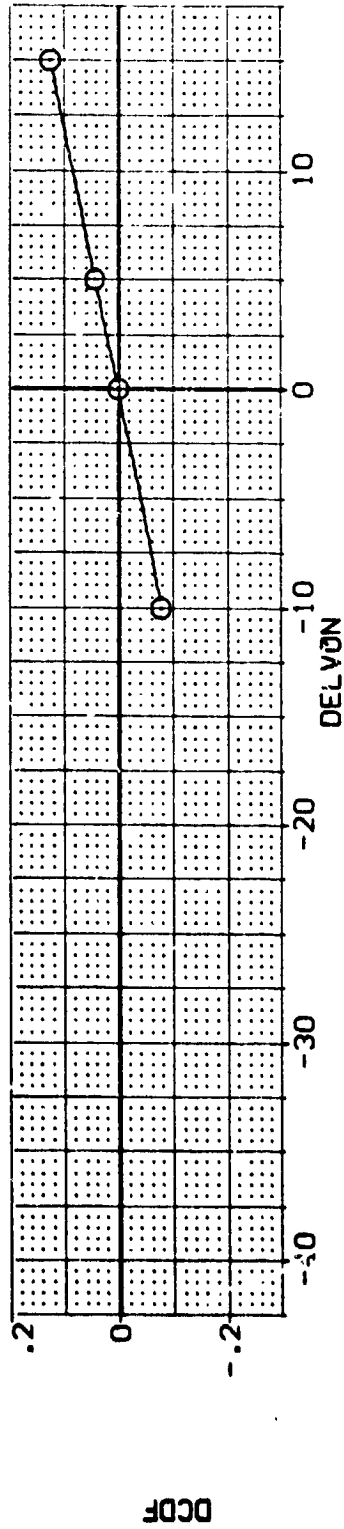
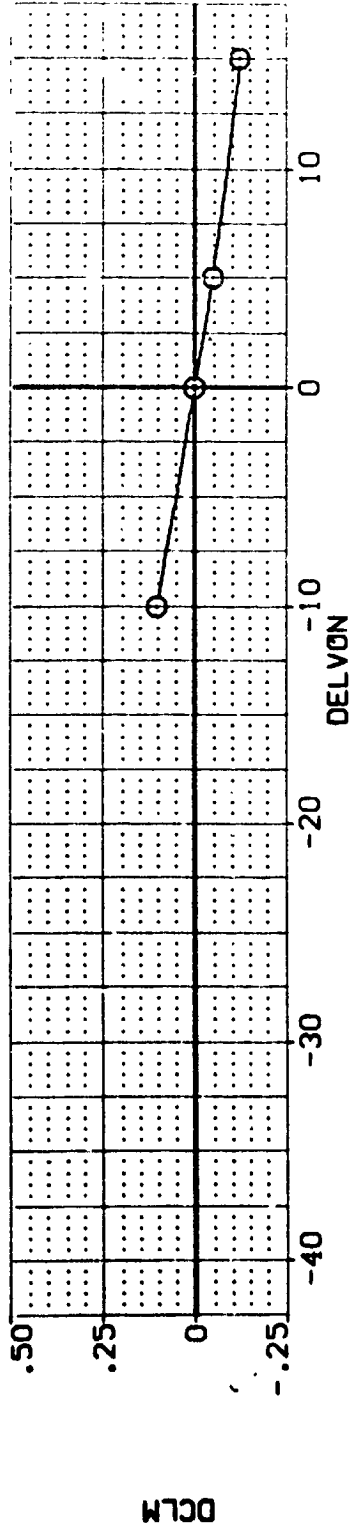


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

0A62B B26C9G15M7F8 W116E26V8R5X9 (1DZ028)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	30.000	MACH	BETA	.000	DATASET	DELTON	SREF
		SWLAP	A/LRDN	.000	1DZ028	.000	LREF
		R/DLCS	S/DBRK	25.000	1DZ024	15.000	BREF
		H/BW	.125				XMRP
							YMRP
							ZMRP
							SCALE
							4.4119
							19.2299
							37.9359
							43.5374
							.0000
							.0000
							15.1875
							.0405
							SCALE
							SC.F.T.
							INCHES
							INCHES
							INCHES
							INCHES
							SCALE

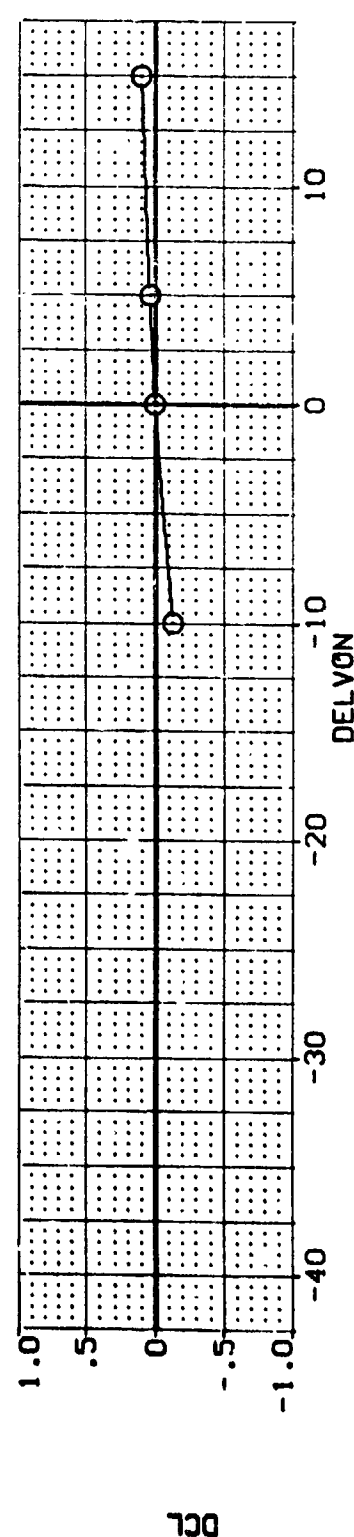
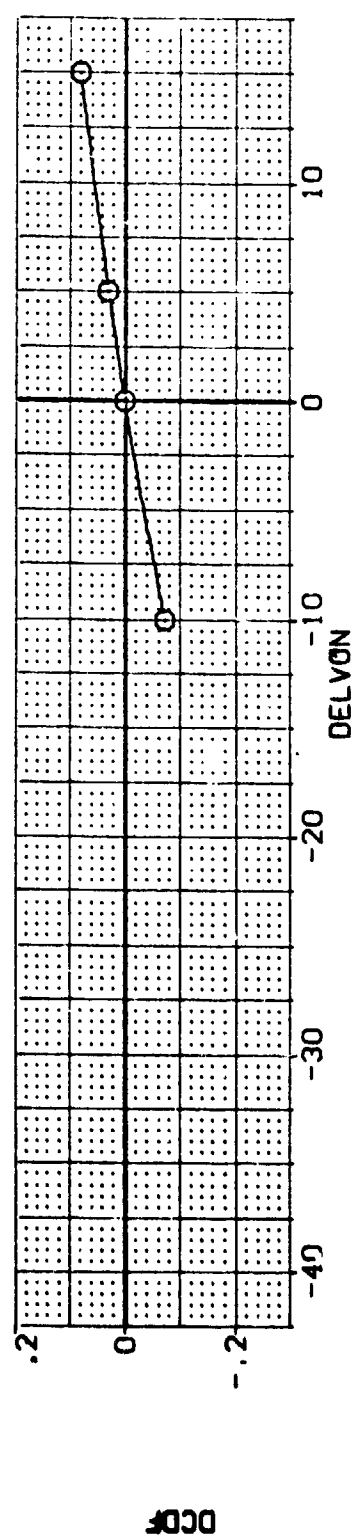
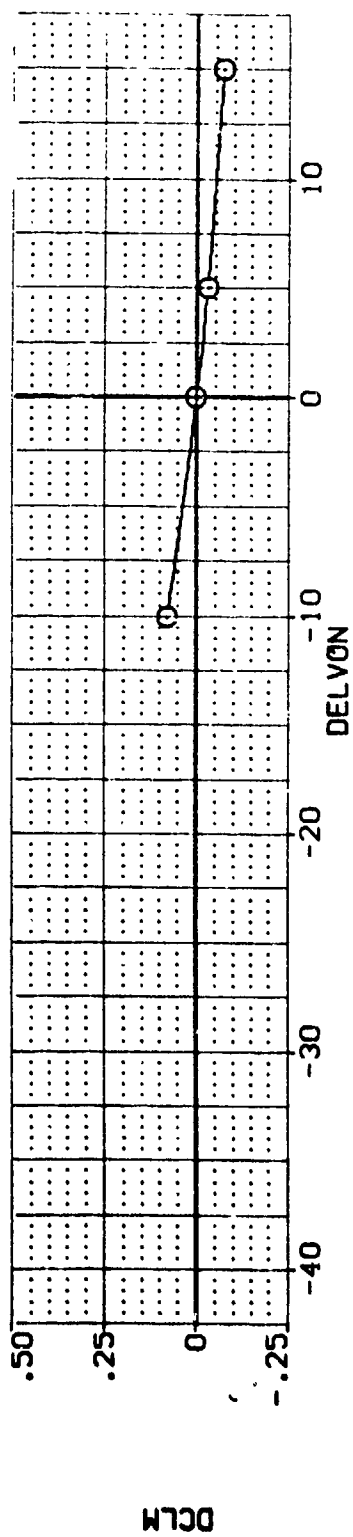


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



(1DZ028)

0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL		ALPHA		MACH		BOFLAP		RUDDER		H/BW		PARAMETRIC VALUES		DATA SOURCE		DATASET		DELVON		SCALE		REFERENCE INFORMATION		
O		.000		.200		-12.000		.000		.125		.000		.000		.000		.000		.000		4.4119		SO.FT.
				.000		.000		.000		.000		.000		.000		.000		.000		.000		19.2299		INCHES
						.000		.000		.000		.000		.000		.000		.000		.000		37.9359		INCHES
																						43.5974		INCHES
																						.0000		INCHES
																						.0000		INCHES
																						.1875		INCHES
																						.0405		SCALE

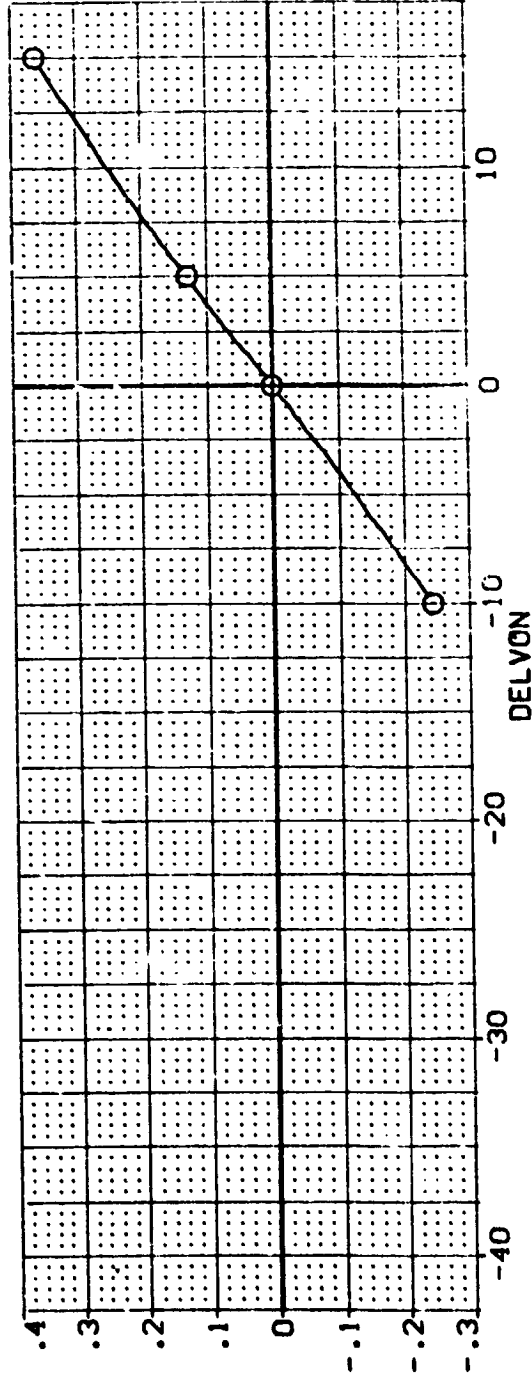
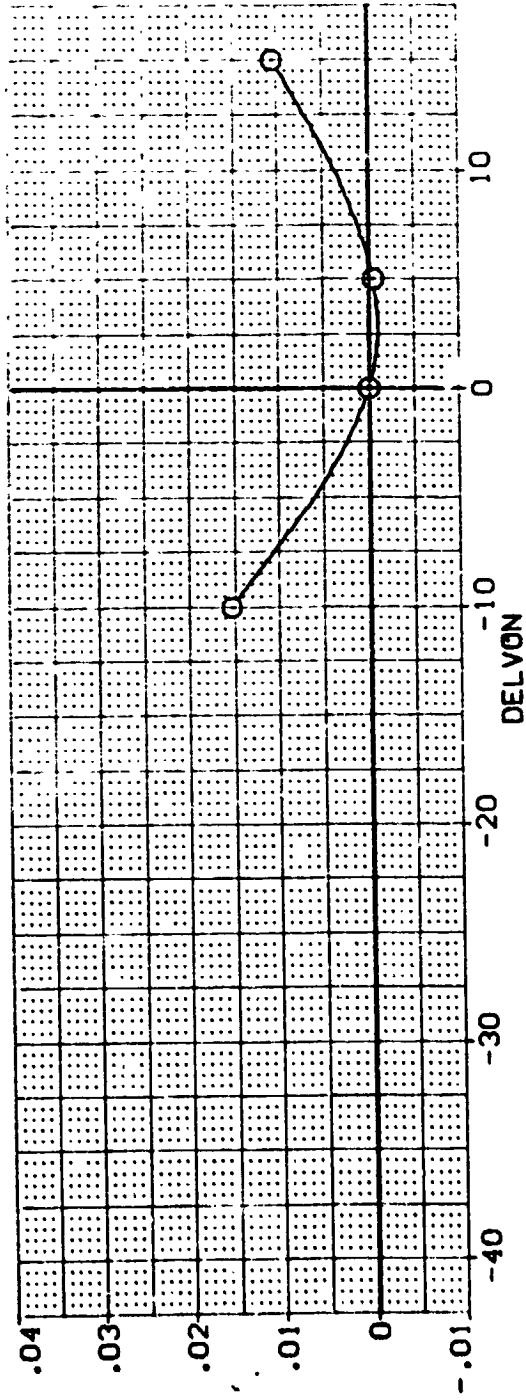


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

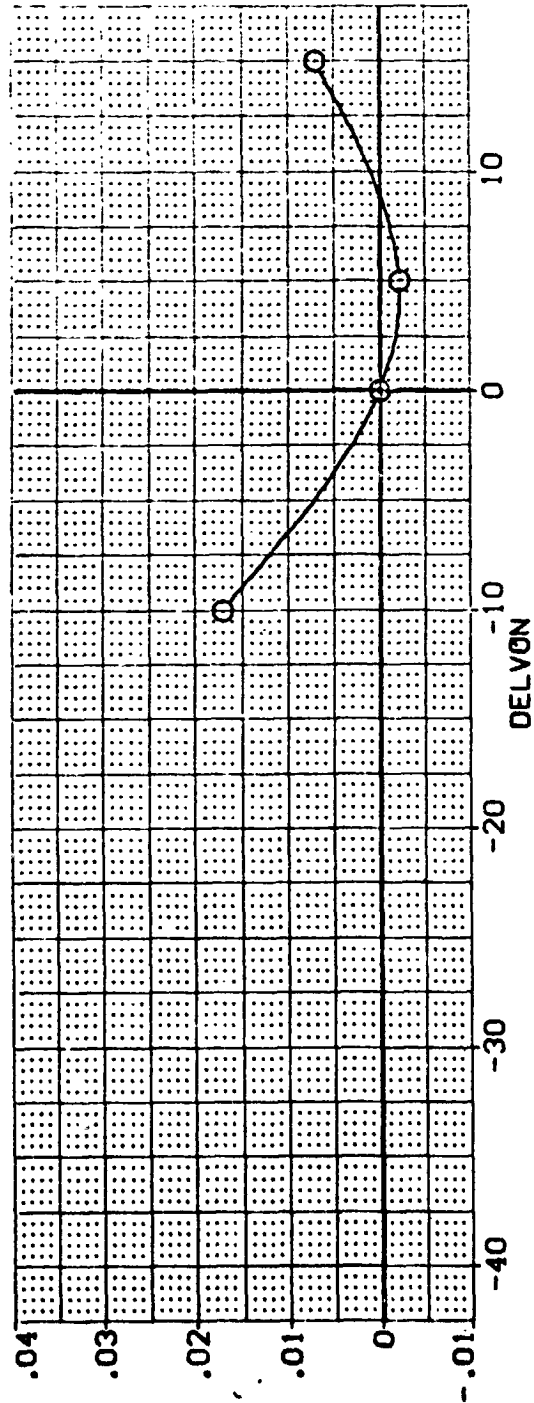




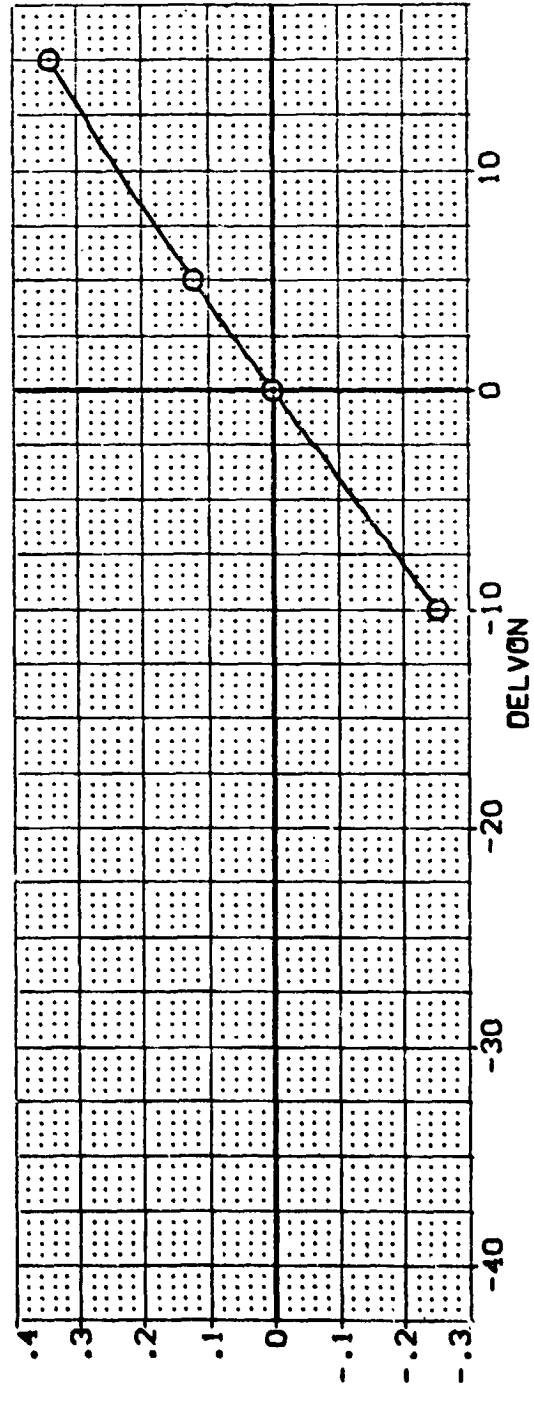
(1DZ028)

0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	5.000		.200	BETA	.000	DATASET	DELVON	SREF	4.4119	SO.FT.	
		BDFLAP	-12.000	A1LRON	.000	1DZ028	-10.000	LREF	19.2299	INCHES	
		RUDDER	.000	SPDRK	25.000	1DZ024	5.000	BREF	37.9359	INCHES	
		H/BW	.125					XMRP	43.5974	INCHES	
								YMRP	.0000	INCHES	
								ZMRP	15.1875	INCHES	
								SCALE	.0405	SCALE	



DCA



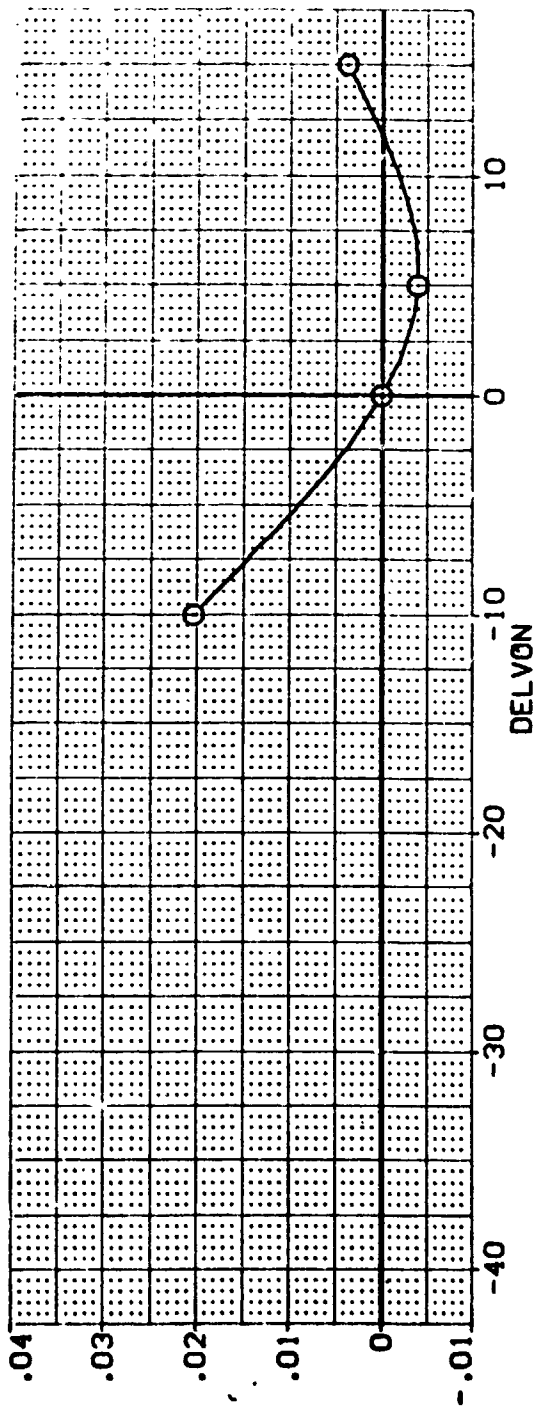
DCN

FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

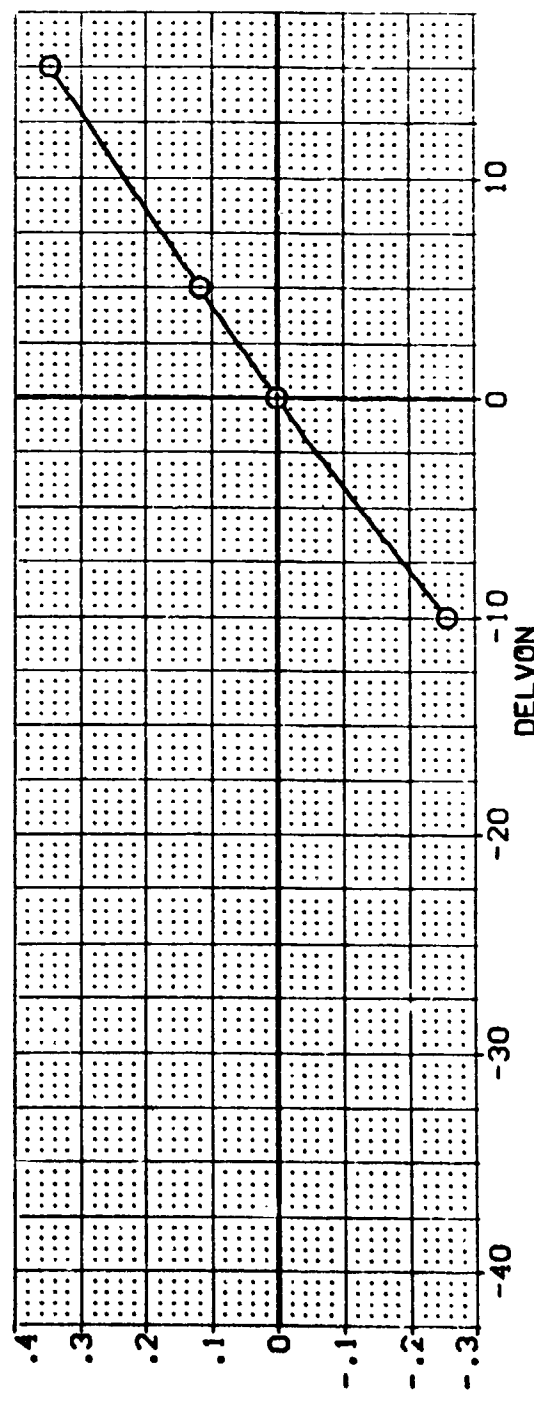


0A628 826C9G15M7F8 W116E26V8R5X9 (1DZ028)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	10.000	.200	BETA	DELTON	SO.FT.
		-12.000	A1LRON	DELTON	INCHES
		.000	SPOBRK	DELTON	INCHES
		.125		DELTON	INCHES
				DELTON	INCHES
				DELTON	INCHES
				DELTON	SCALE
				DELTON	SCALE



DCA



DCN

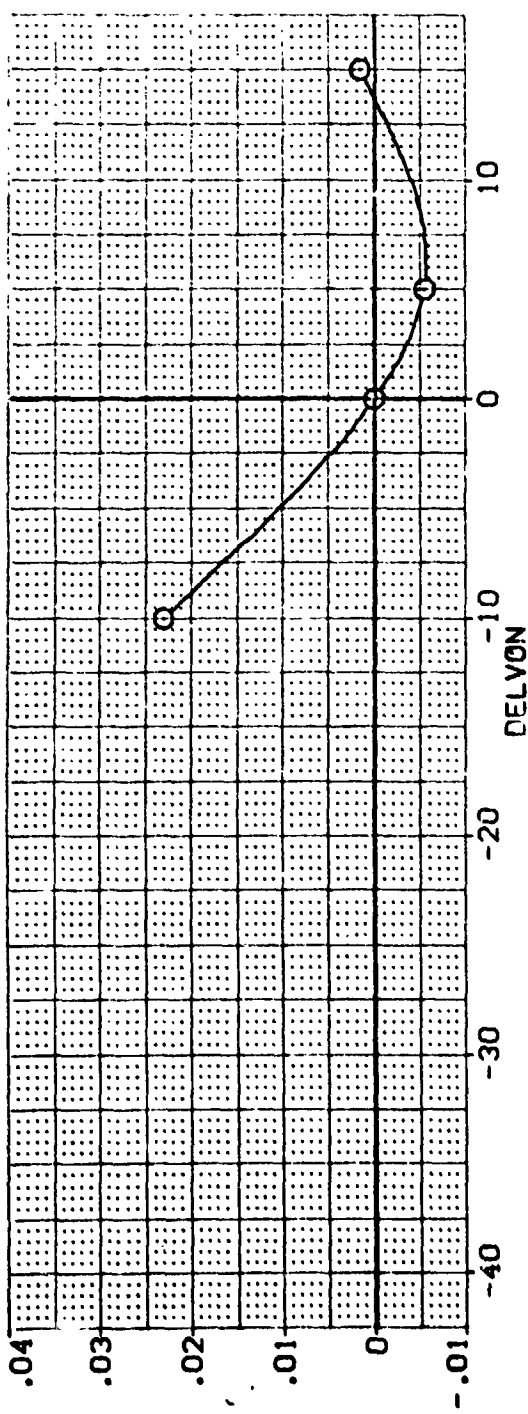
FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



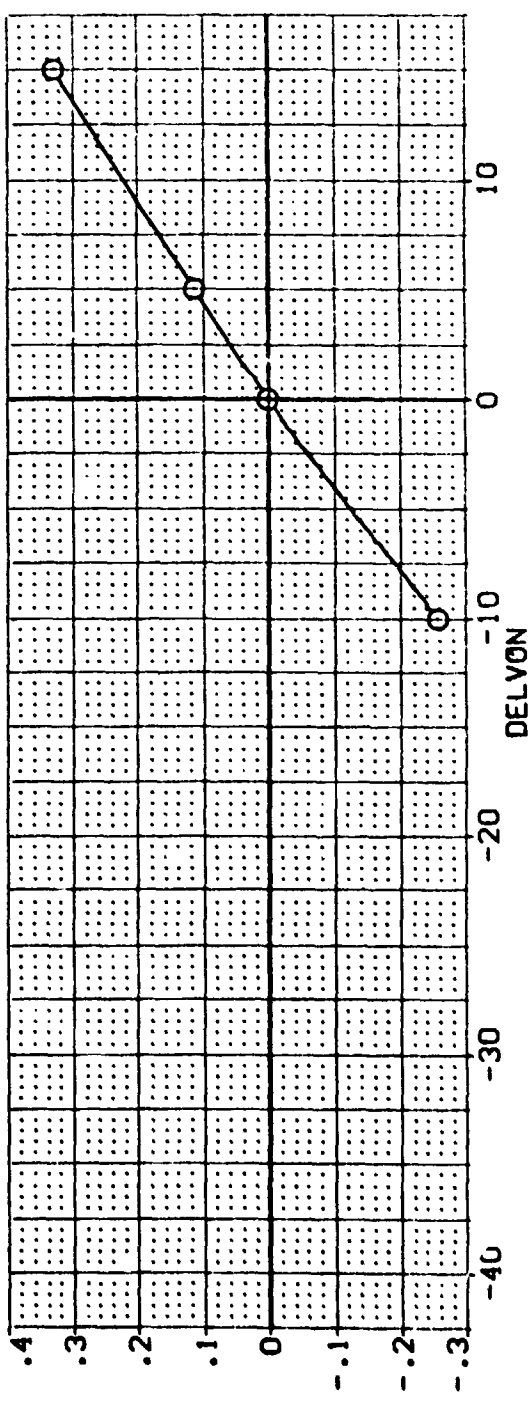
0A628 B26C9G15M7F8 W116E26V8R5X9 (1DZ028)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELTON	DELTON	DELTON	DELTON	SCALE
O	15.000		BETA	.000	10Z028	.000	10Z022	15.000	4.4119
		BDFLAP	-12.000	.000	10Z028	.000	10Z022		19.2299
		RUDDER	.000	25.000	10Z024	5.000			37.9359
		H/BW	.125						43.5974
									.0000
									15.1875
									.0405

REFERENCE INFORMATION  
 SO. FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 SCALE .0405



DCA



DCN

FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

(10Z028)

0A628 B26C9G15M7F8 W116E26V8R5X9

SYMBOL ALPHA 20.000  
 O

PARAMETRIC VALUES  
 MACH .200 BETA  
 BDFLAP -12.000 AILRON  
 RUDDER .000 SPOBRK  
 H/BW .125

DATA SOURCE  
 DELVON .000 DATASET 10Z028  
 -10.000 10Z028  
 5.000 10Z024

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BRFP 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

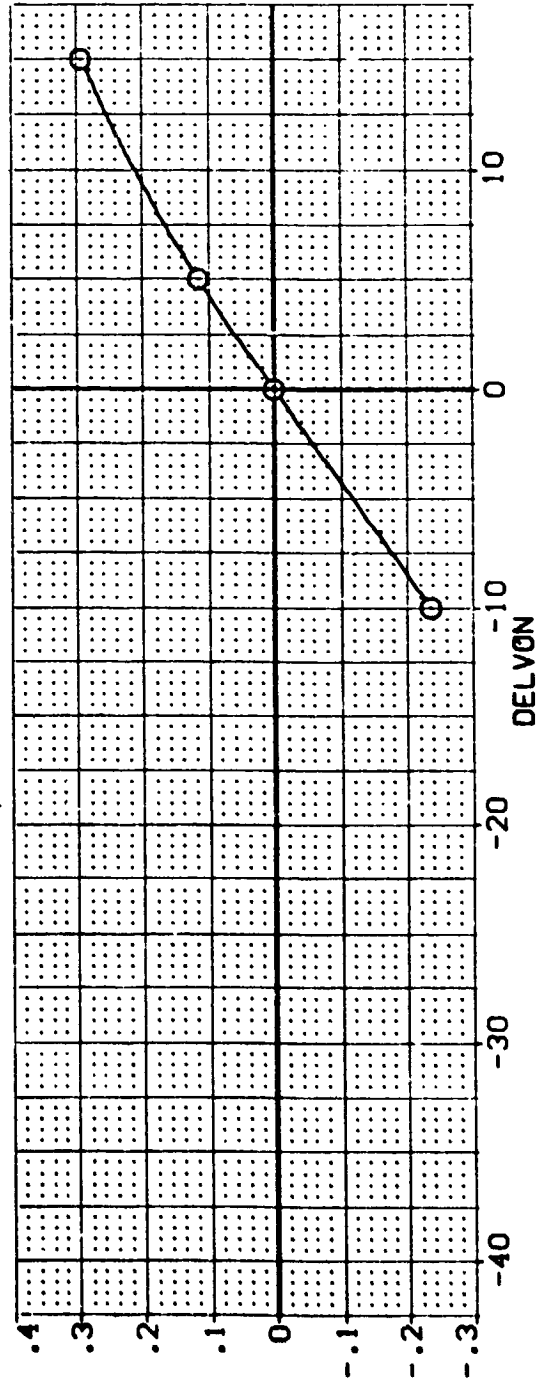
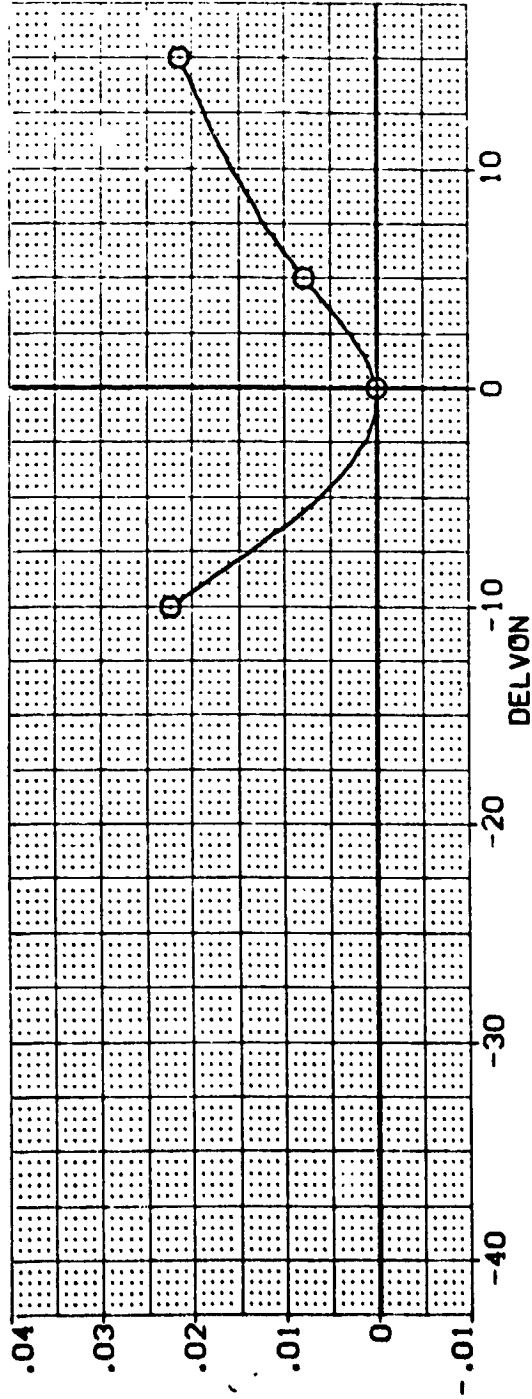


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



0A628 B26C9G15M7F8 W116E26V8R5X9 (1DZ028)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.200	.000	1DZ022	SREF	4.4119
MACH	-12.000	.000	1DZ028	LREF	19.2299
BOFLAP	.000	25.000	1DZ024	BREF	37.9359
RUDDER	.000			XMRP	43.5974
H/BW	.125			YMRP	.0000
				ZMRP	15.1875
				SCALE	.0405

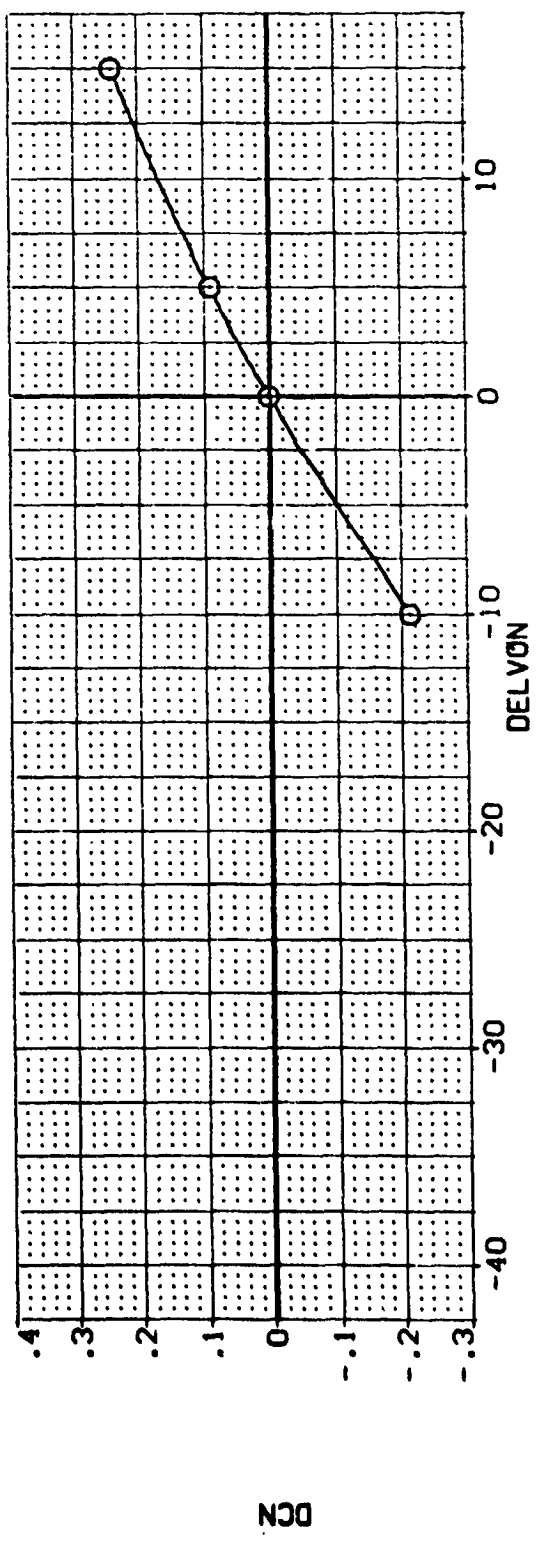
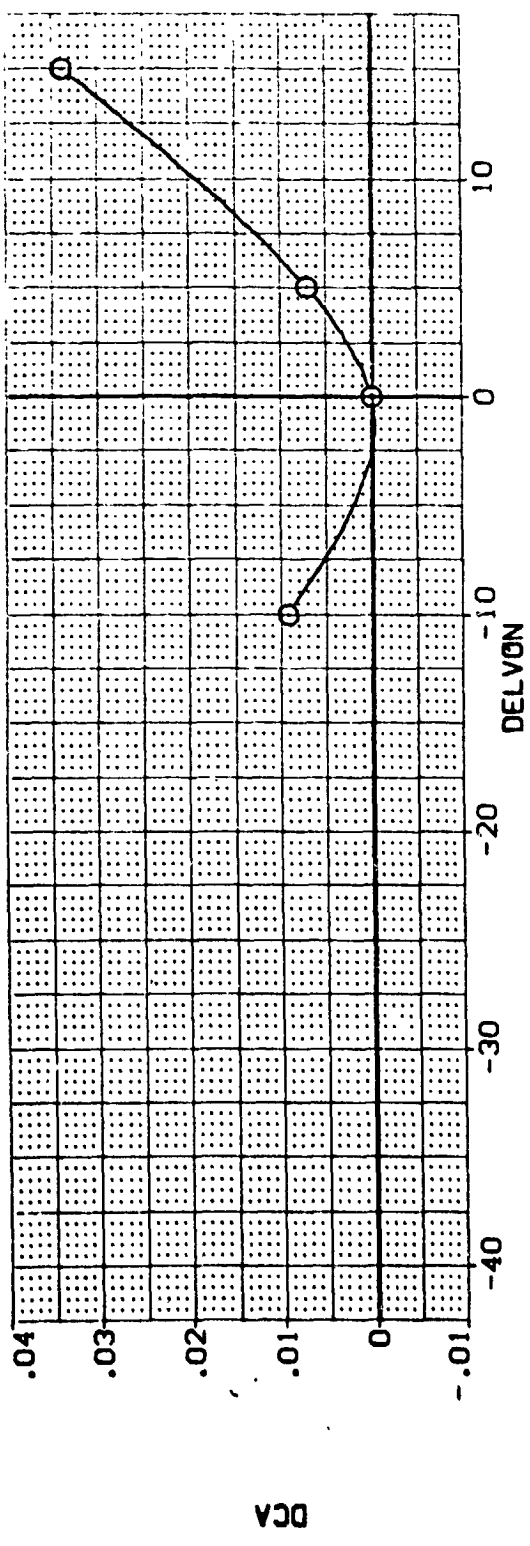


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125

(10Z028)

W116E26V8R5X9

B26C9G15M7F8

0A62B

SYMBOL	ALPHA	MACH	SOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	SREF	REFERENCE INFORMATION
O	30.000					BETA A1LRON SPOBRK	DELTVN		10Z022 10Z026		LREF SREF YMRP ZMRP	SO.FT. INCHES INCHES INCHES INCHES SCALE
						.200 -12.000 .000	-10.000 5.000	.000 .000 25.000	10Z028 10Z024	.000 15.000	4.4119 19.2299 37.9359 43.5974 .0000 15.1875 .0405	

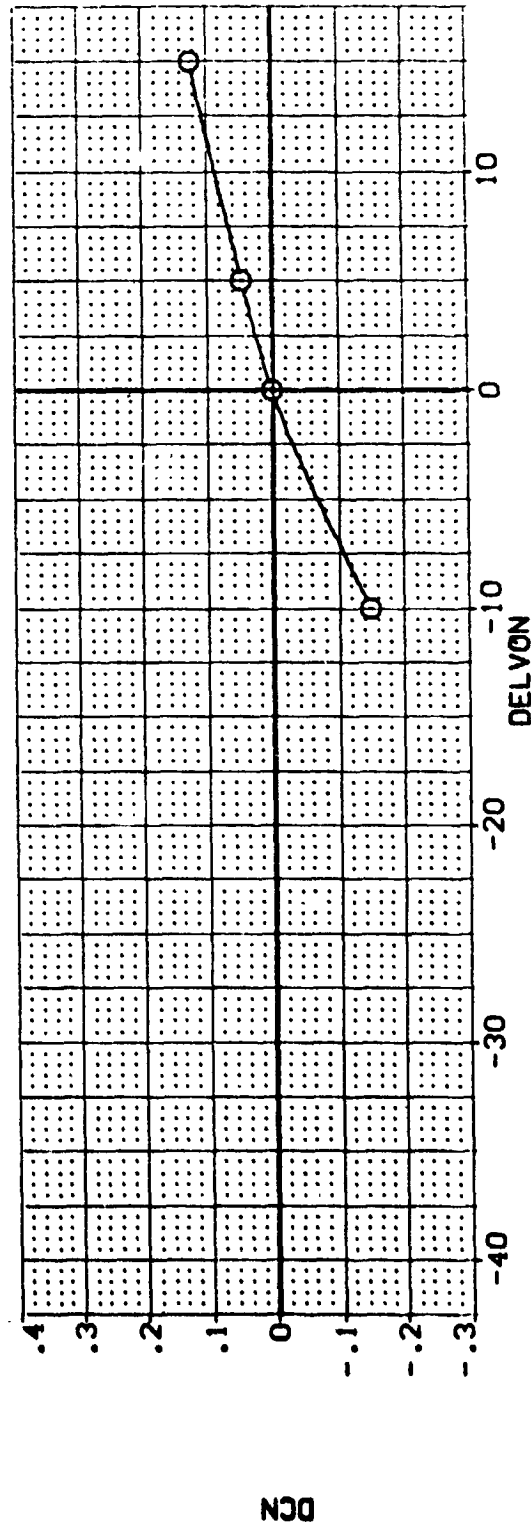
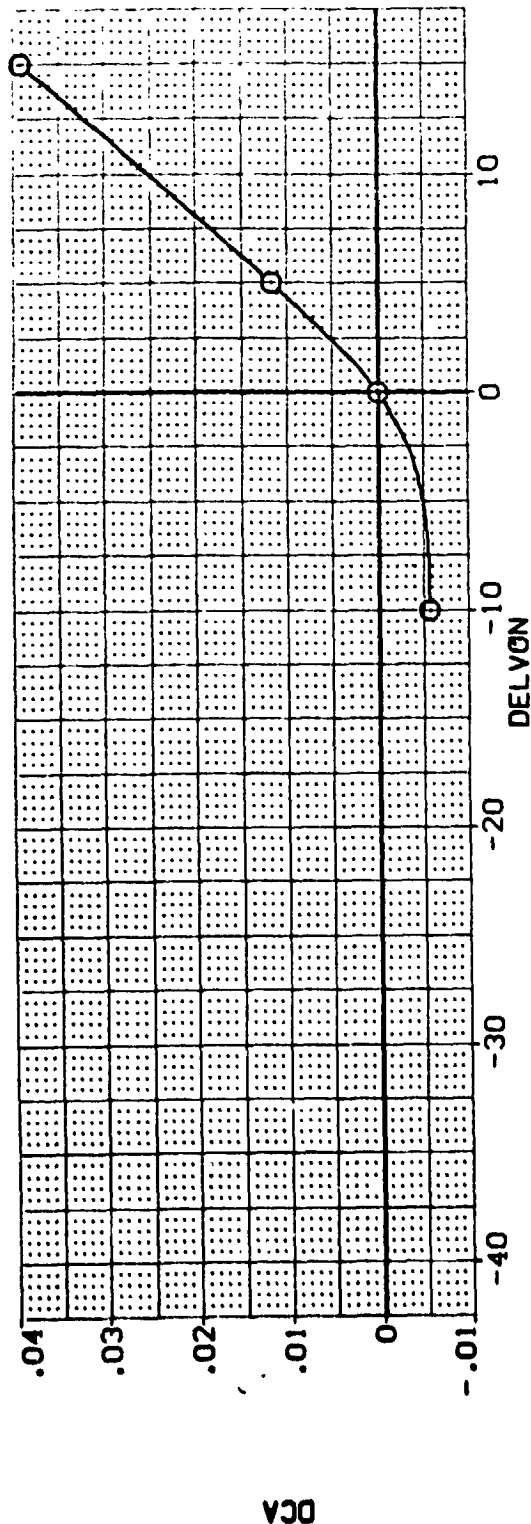


FIG 7 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = .125



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPDRK	BOFLAP	REFERENCE INFORMATION
(802040)	0A6Z8 B26C5G1S47F8 V11E28V8RS49	.068	25.000	-12.000	SREF 4.4119 SO.FT.
(802041)	0A5Z8 B26C5G1S47F8 V11E28V8RS49	.068	25.000	-12.000	LREF 19.2299 INCHES
(802042)	0A5Z8 B26C5G1S47F8 V11E28V8RS49	.068	25.000	-12.000	BREF 37.9359 INCHES
(802043)	0A6Z8 B26C5G1S47F8 V11E28V8RS49	.068	25.000	-12.000	YMRP 43.5374 INCHES
(802044)	0A6Z8 B26C5G1S47F8 V11E28V8RS49	.068	25.000	-12.000	ZMRP 15.0000 INCHES
					SCALE .0405

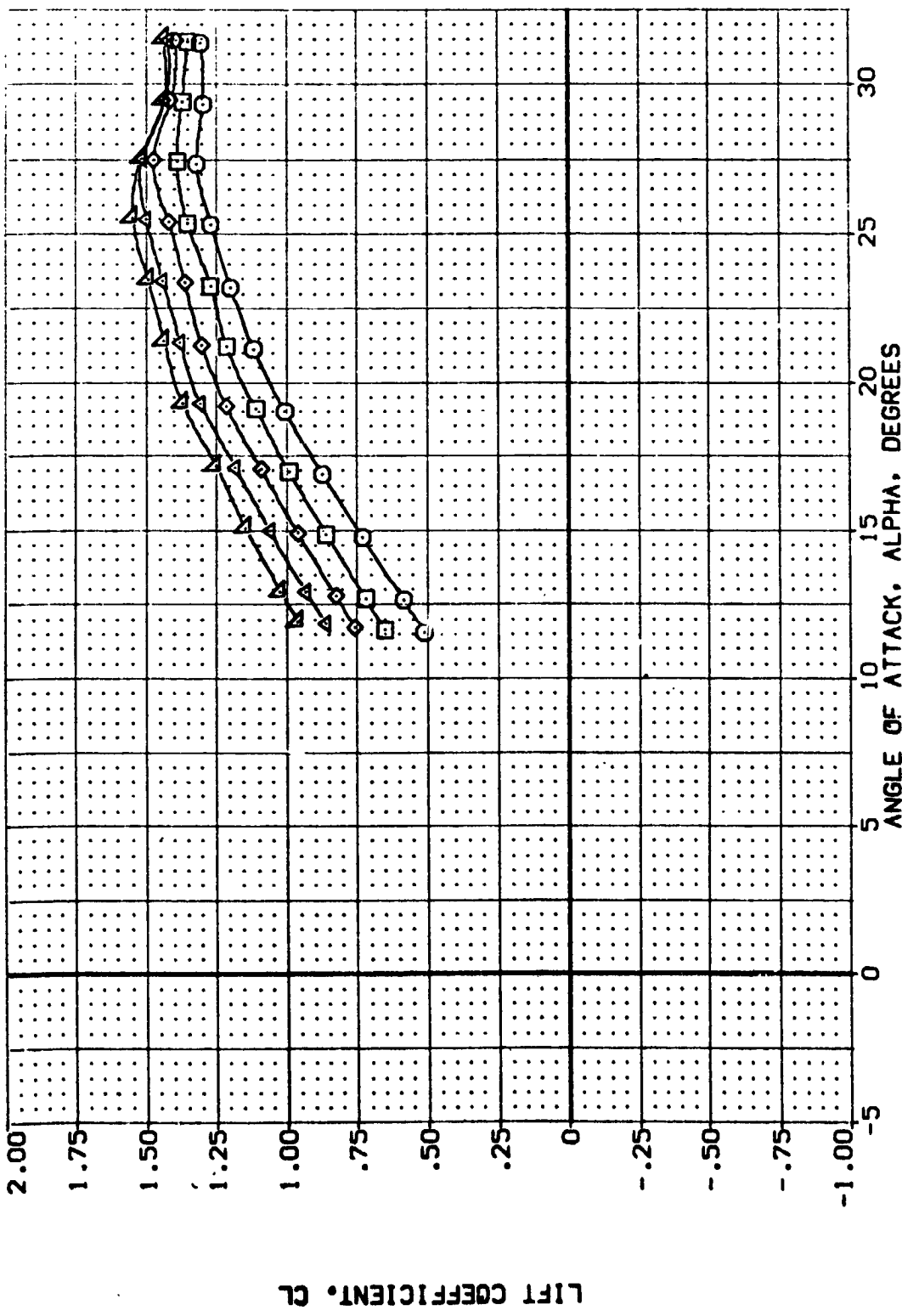


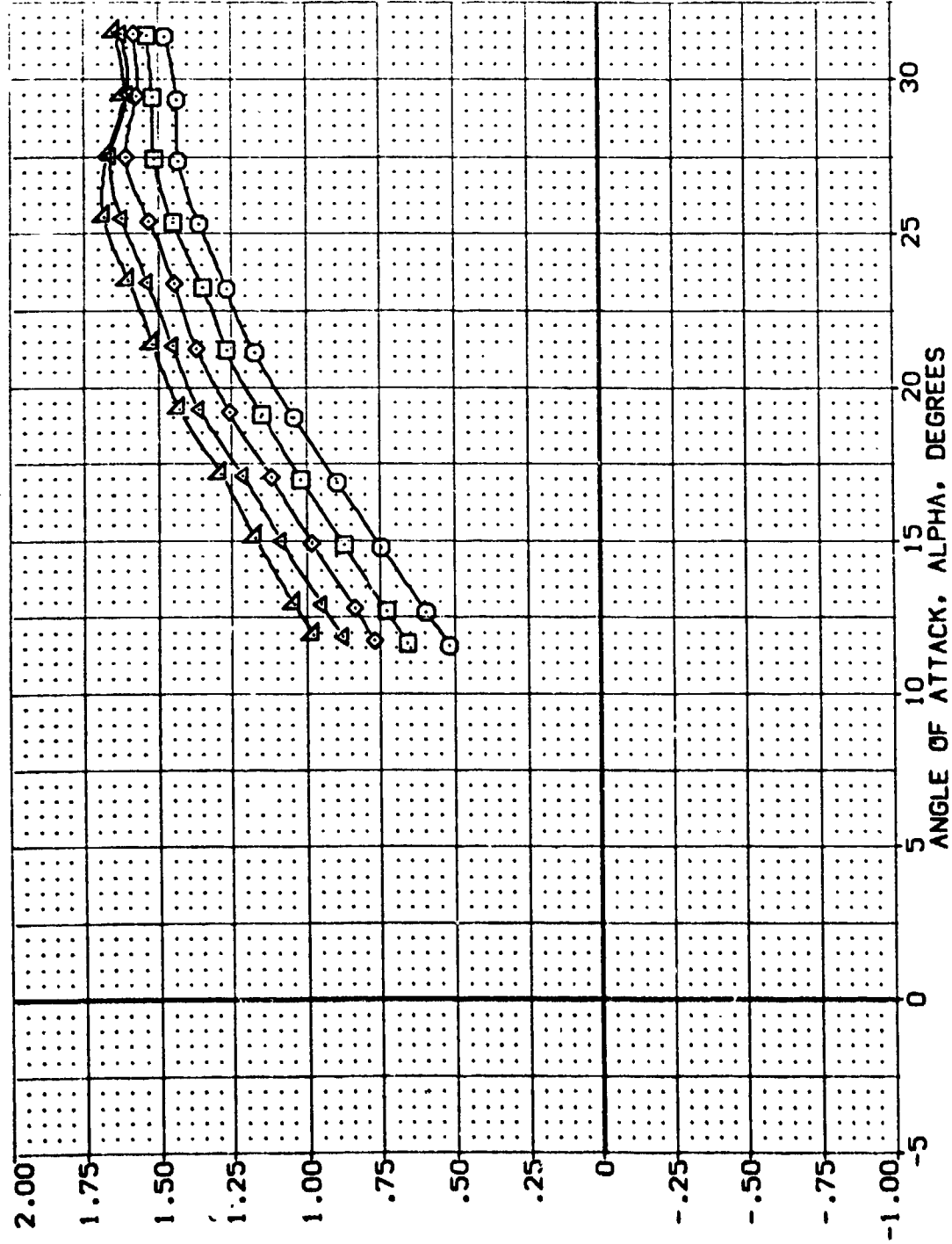
FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
-5.000	.068	25.000	-12.000	SREF 4.4119 SQ.FT.
5.000	.068	25.000	-12.000	LREF 19.2299 INCHES
10.000	.068	25.000	-12.000	BREF 37.9359 INCHES
15.000	.068	25.000	-12.000	XPRP 43.5974 INCHES
				YPRP .0000 INCHES
				ZPRP 15.1875 INCHES
				SCALE .0405 SCALE

DATA SET SYMOL	CONFIGURATION DESCRIPTION
(B02001)	0A628 B26C961547F8 V116E28V8RSX9
(B02004)	0A628 B26C961547F8 V116E28V8RSX9
(B02013)	0A628 B26C961547F8 V116E28V8RSX9
(B02042)	0A628 B26C961547F8 V116E28V8RSX9
(B02041)	0A628 B26C961547F8 V116E28V8RSX9



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FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B02040)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02041)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02042)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02043)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02044)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02045)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02046)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02047)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02048)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02049)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02050)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02051)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02052)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02053)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02054)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02055)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02056)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02057)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02058)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02059)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02060)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02061)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02062)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02063)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02064)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02065)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02066)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02067)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02068)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02069)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02070)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02071)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02072)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02073)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02074)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02075)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02076)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02077)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02078)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02079)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02080)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02081)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02082)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02083)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02084)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02085)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02086)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02087)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02088)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02089)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02090)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02091)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02092)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02093)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02094)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02095)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02096)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02097)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02098)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02099)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9
(B02100)	□	0ASZ8	BZ6C3G15/7F8	V11(6E28V8F5X9

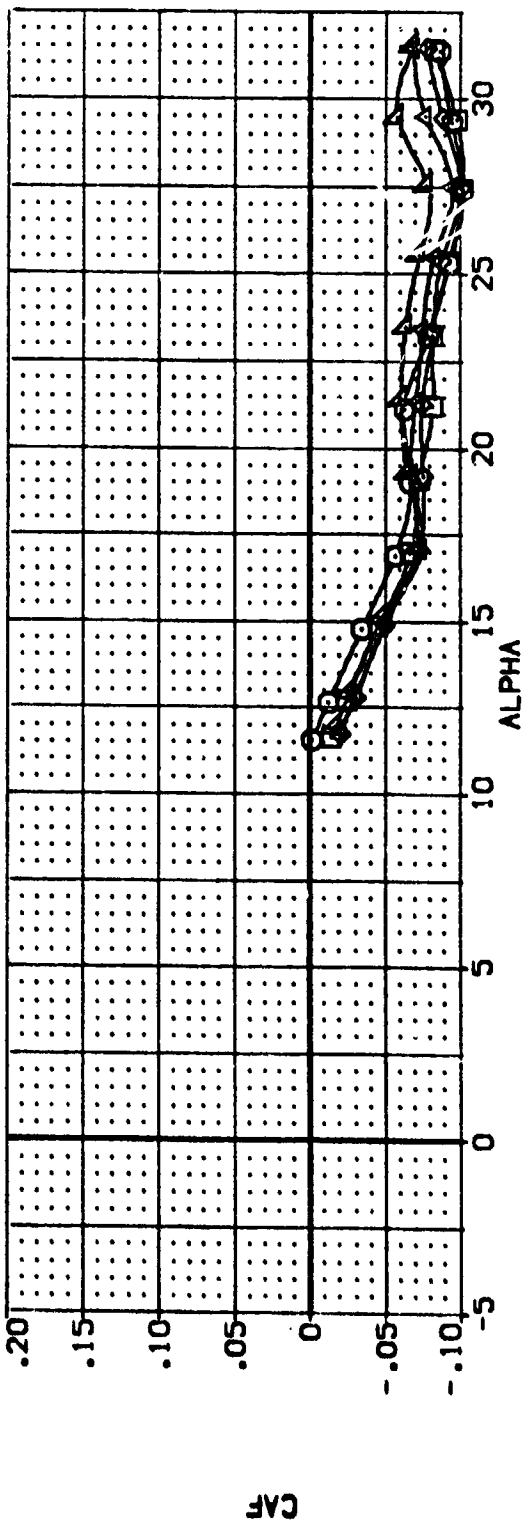
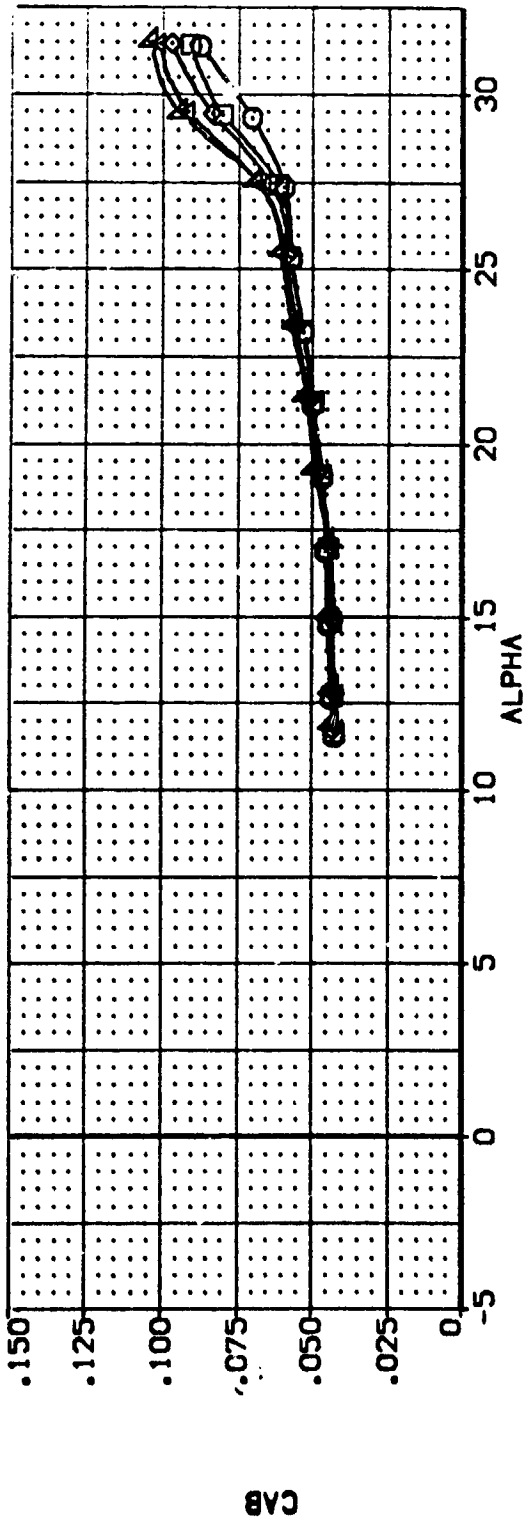


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068  
 (A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BDZ040)	0A6Z8	8Z6C9G1	5M7F8	V116E28V8RSX9
(BDZ041)	0A6Z8	8Z6C9G1	5M7F8	V116E28V8RSX9
(BDZ042)	0A6Z8	8Z6C9G1	5M7F8	V116E28V8RSX9
(BDZ043)	0A6Z8	8Z6C9G1	5M7F8	V116E28V8RSX9
(BDZ044)	0A6Z8	8Z6C9G1	5M7F8	V116E28V8RSX9

ELEVON H/BW SPDBRK BOFLAP

-5.000	.068	25.000	-12.000
5.000	.068	25.000	-12.000
10.000	.068	25.000	-12.000
15.000	.068	25.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	50. FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

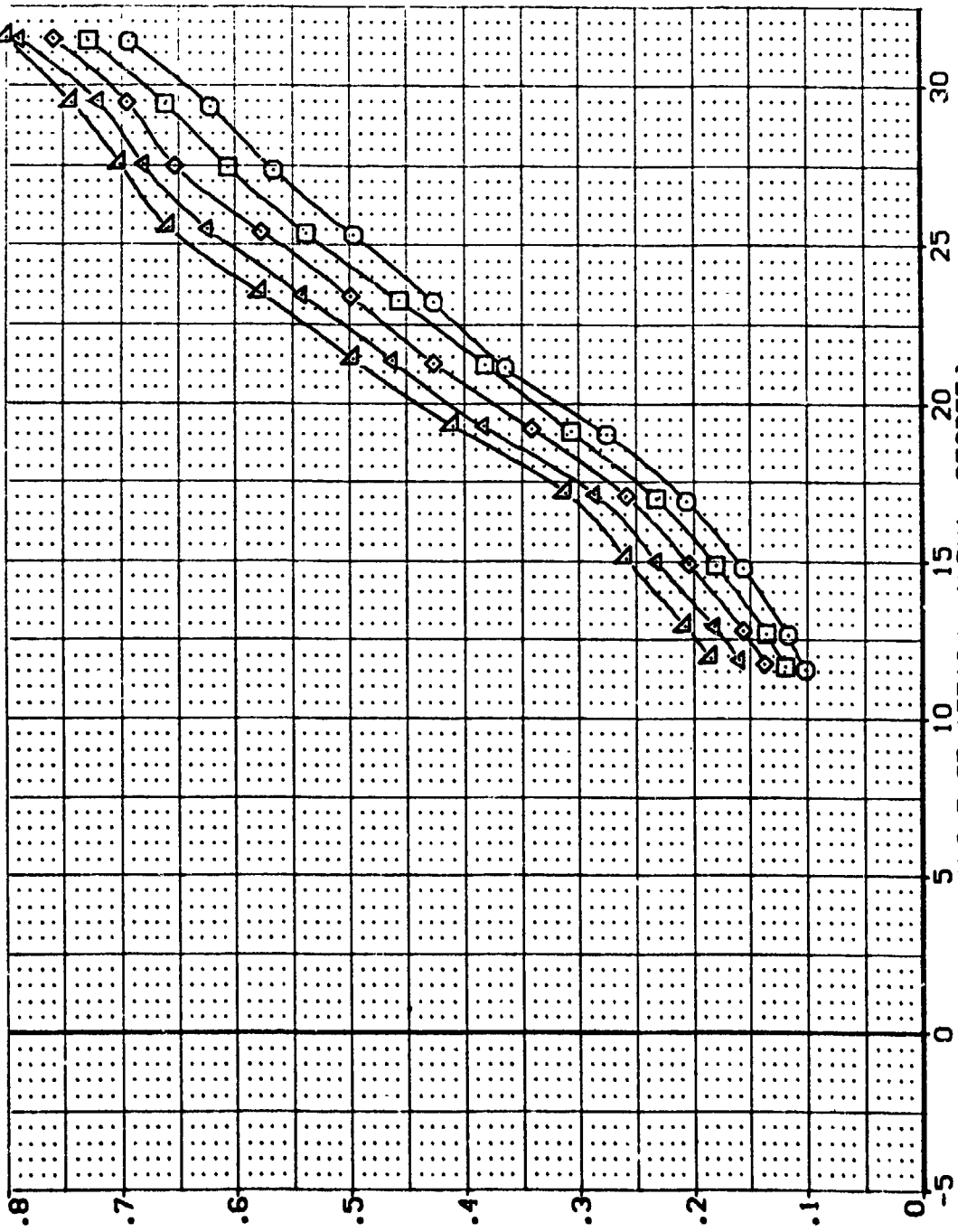
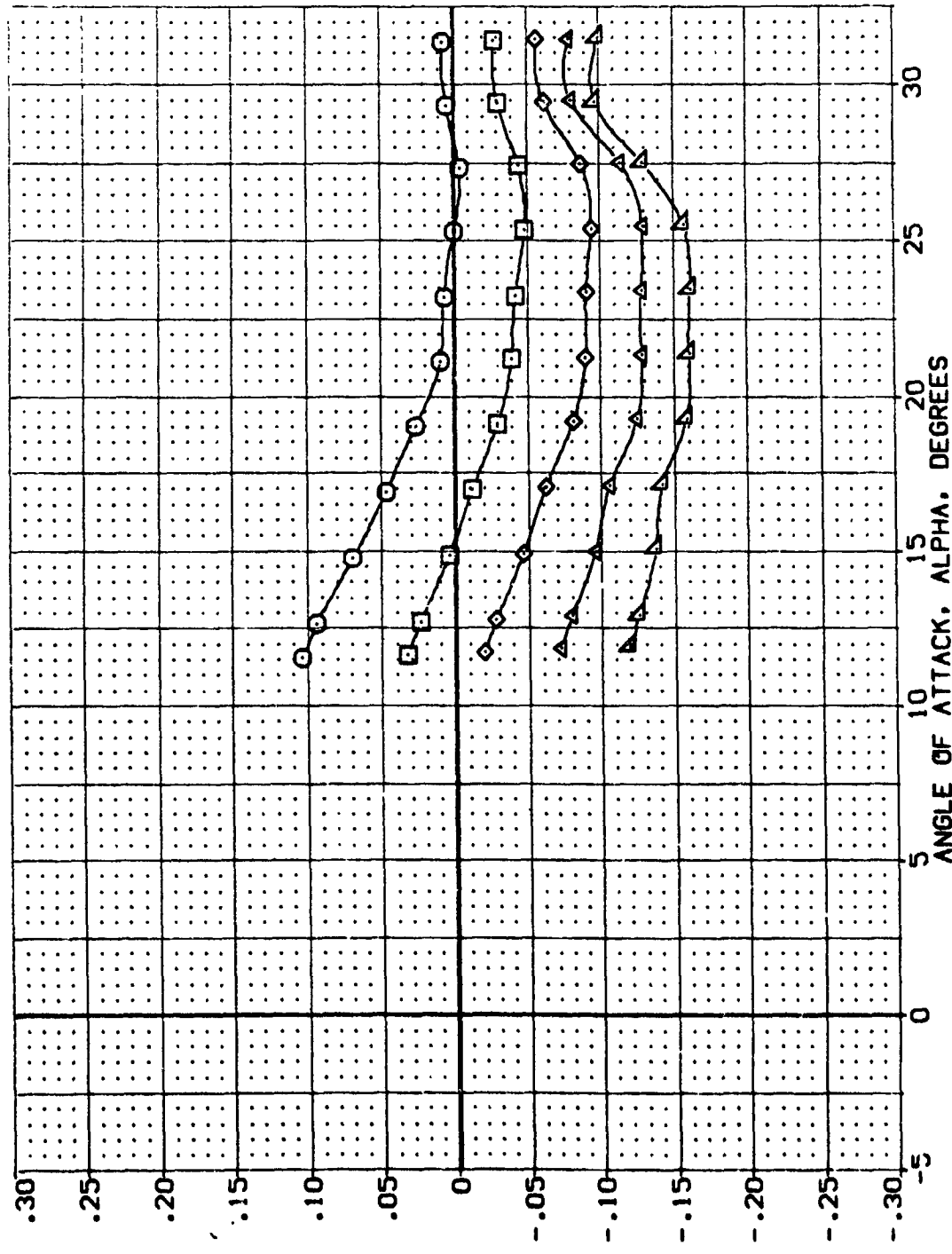


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(BDZ040)	0A628 B26C961 SM7F8 V118E28V8RSX9	-5.000	25.000	-12.000	SREF 4.4119 SO.FT.
(BDZ041)	0A628 B26C961 SM7F8 V118E28V8RSX9	5.000	25.000	-12.000	LREF 19.2289 INCHES
(BDZ042)	0A628 B26C961 SM7F8 V118E28V8RSX9	10.000	25.000	-12.000	BREF 37.9559 INCHES
(BDZ043)	0A628 B26C961 SM7F8 V118E28V8RSX9	15.000	25.000	-12.000	XMRP 43.5974 INCHES
(BDZ044)	0A628 B26C961 SM7F8 V118E28V8RSX9	15.000	25.000	-12.000	YMRP .0000 INCHES
(BDZ045)	0A628 B26C961 SM7F8 V118E28V8RSX9	15.000	25.000	-12.000	ZMRP 15.1875 INCHES
					SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802040) □ B26C9G|SMTF8 V116E28V8SXS  
 (802041) □ B26C9G|SMTF8 V116E28V8SXS  
 (802042) □ B26C9G|SMTF8 V116E28V8SXS  
 (802043) □ B26C9G|SMTF8 V116E28V8SXS  
 (802044) □ B26C9G|SMTF8 V116E28V8SXS  
 (802045) □ B26C9G|SMTF8 V116E28V8SXS

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 -5.000 .068 25.000 -12.000 SREF 4.4119 50.FT.  
 .000 .068 25.000 -12.000 LREF 19.2299 INCHES  
 5.000 .068 25.000 -12.000 BREF 37.9359 INCHES  
 10.000 .068 25.000 -12.000 XMRP 43.5974 INCHES  
 15.000 .068 25.000 -12.000 YMRP 0.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

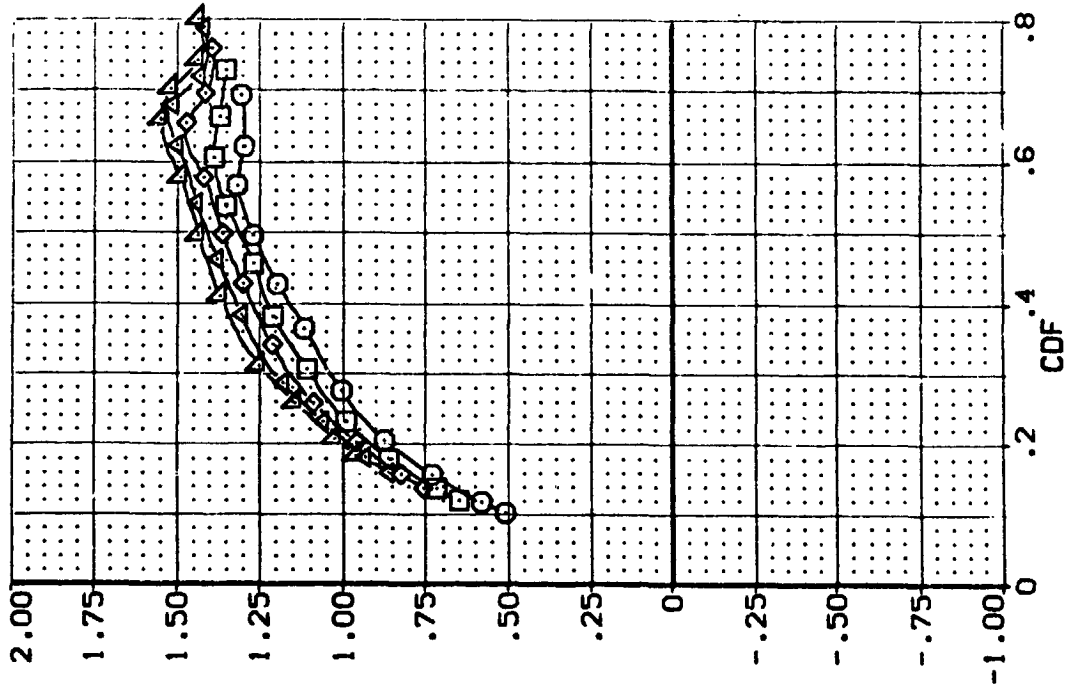
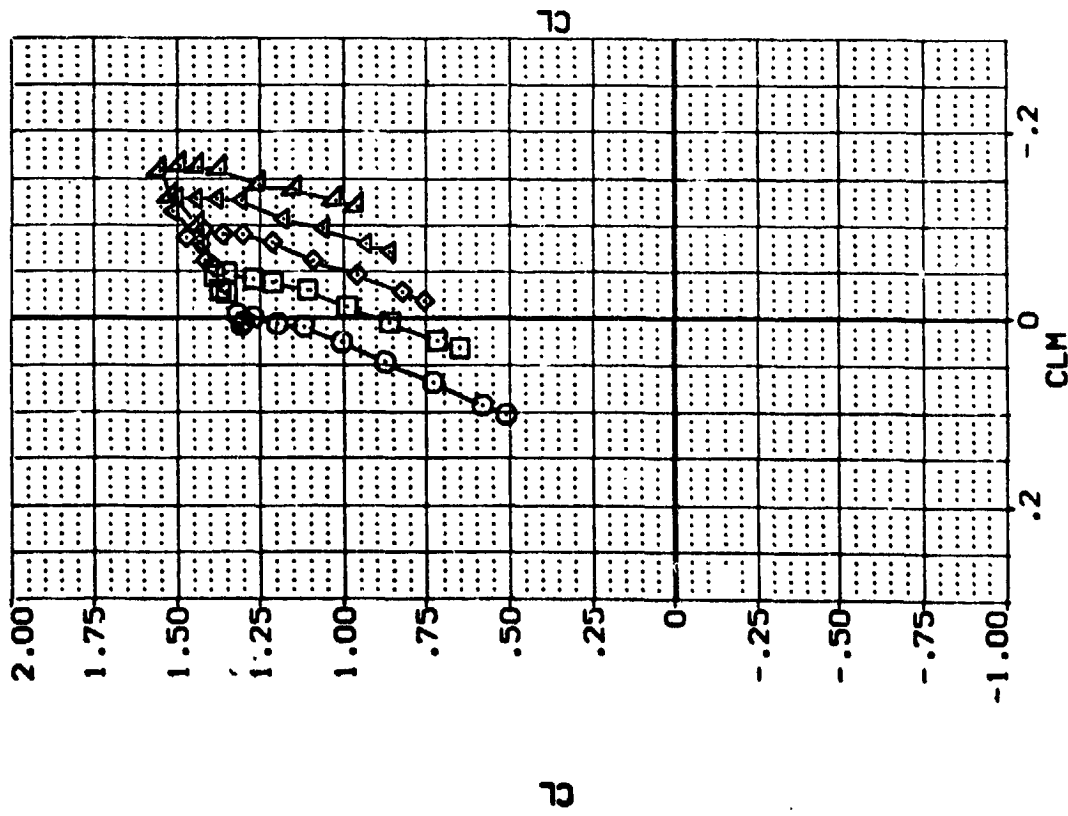


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



ELEVON H/BW .068  
 SPOBRK 25.000  
 BOFLAP -12.000  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1675 INCHES  
 SCALE .0405

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (EDZ040) 0A628 B26C9G1 5H7F8 V116E28V8FSX9  
 (EDZ041) 0A628 B26C9G1 5H7F8 V116E28V8FSX9  
 (EDZ042) 0A628 B26C9G1 5H7F8 V116E28V8FSX9  
 (EDZ043) 0A628 B26C9G1 5H7F8 V116E28V8FSX9  
 (EDZ044) 0A628 B26C9G1 5H7F8 V116E28V8FSX9  
 (EDZ045) 0A628 B26C9G1 5H7F8 V116E28V8FSX9

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

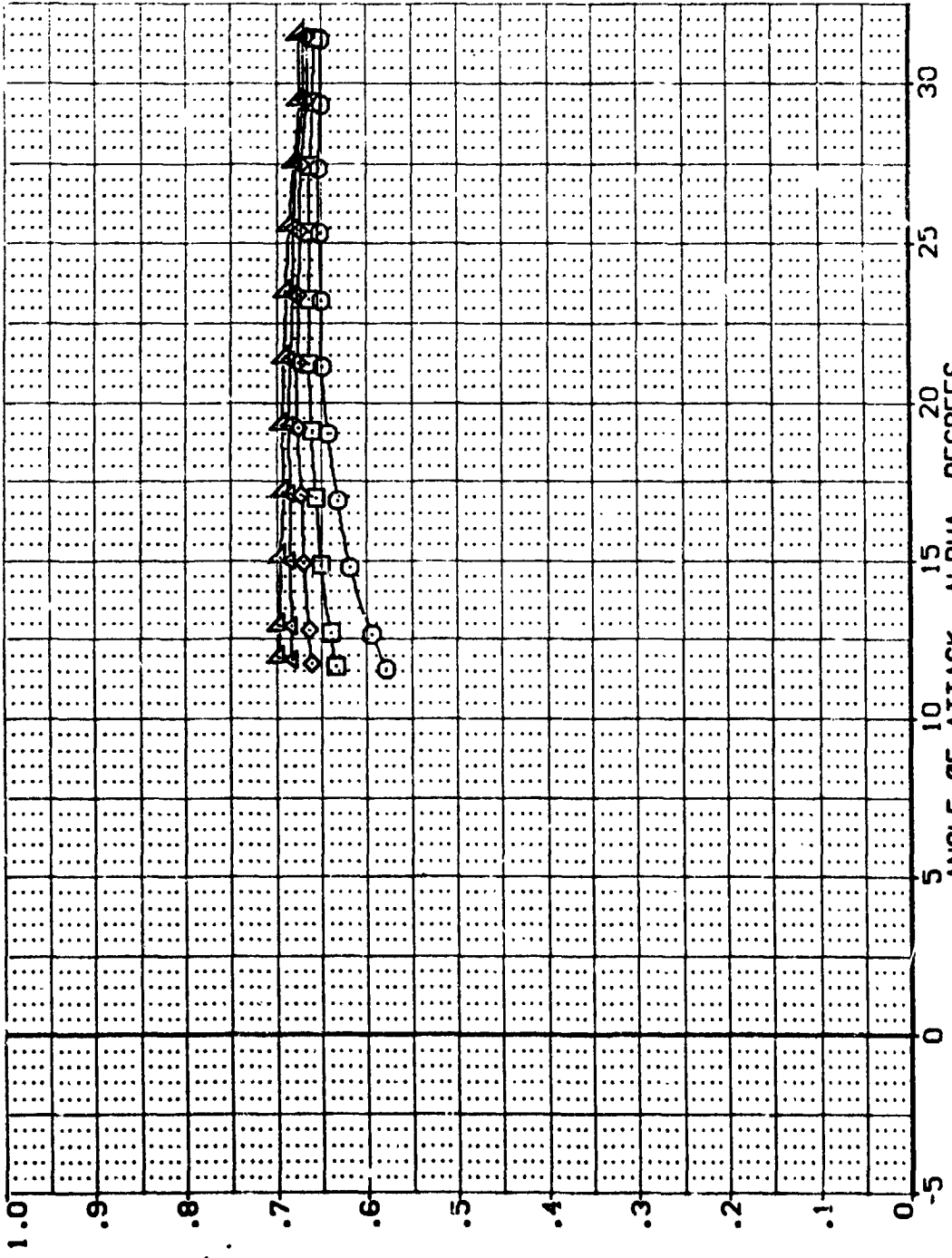
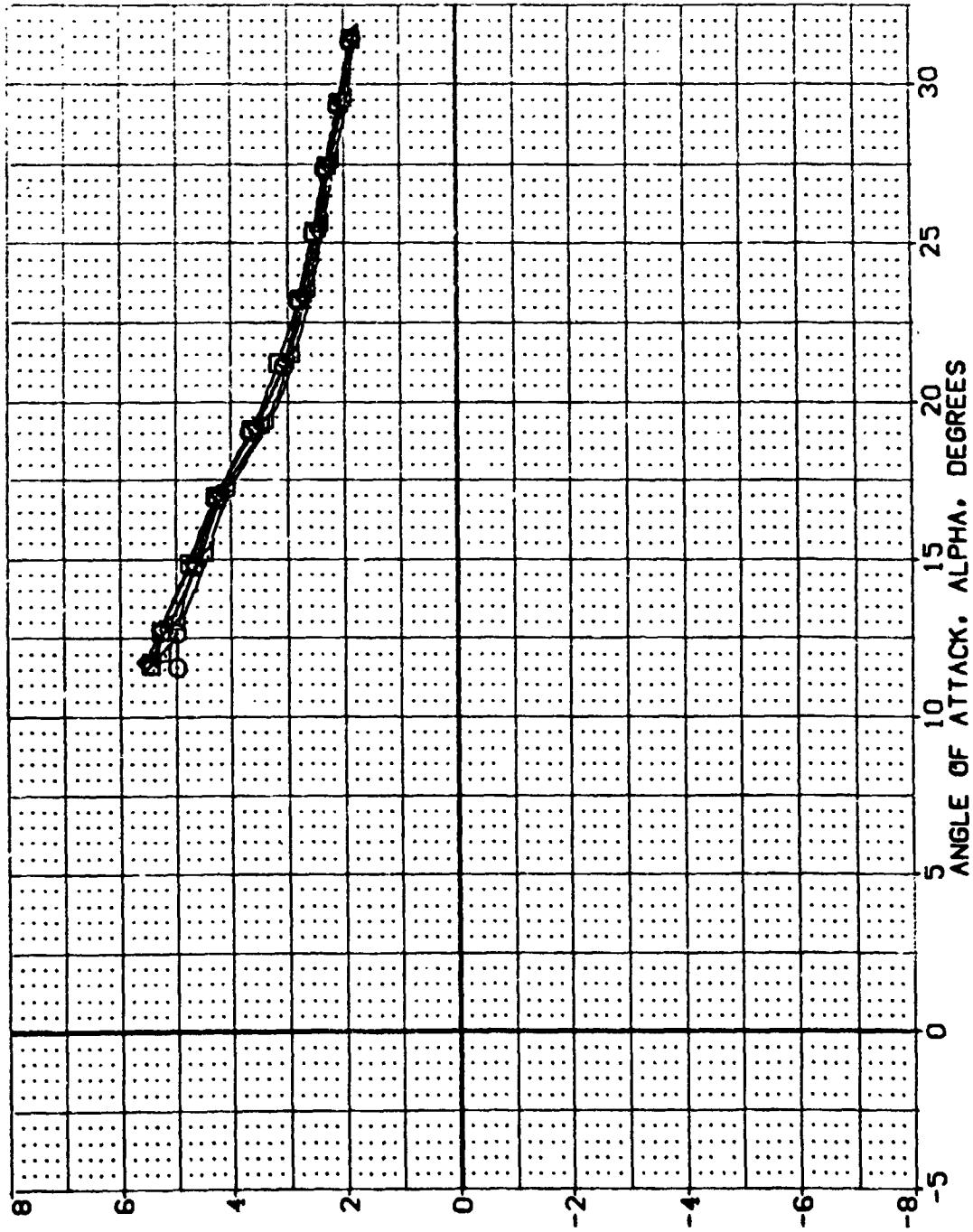


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z040)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	4.4119 SO.FT.
(80Z041)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	19.2298 INCHES
(80Z042)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	37.9359 INCHES
(80Z043)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	43.5974 INCHES
(80Z044)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	.0000 INCHES
(80Z045)	0A628 B26C9G1S47F8 V116E28V8RSX9	.068	25.000	-12.000	15.1675 INCHES
					.0405 SCALE



FOREBODY LIFT TO DRAG RATIO, L/D/F

FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION	SO. FT.
(802025)	0A628 B26C5G15M7F8 V118E28V8R5X9	-40.000	.068	25.000	-12.000	SREF	4.4119
(802026)	0A628 B26C5G15M7F8 V118E28V8R5X9	-30.000	.068	25.000	-12.000	LREF	19.2299
(802037)	0A628 B26C5G15M7F8 V118E28V8R5X9	-20.000	.068	25.000	-12.000	BREF	37.9359
(802038)	0A628 B26C5G15M7F8 V118E28V8R5X9	-15.000	.068	25.000	-12.000	XMRP	43.5974
(802039)	0A628 B26C5G15M7F8 V118E28V8R5X9	-10.000	.068	25.000	-12.000	YMRP	15.0000
(802044)	0A628 B26C5G15M7F8 V118E28V8R5X9	.000	.068	25.000	-12.000	ZMRP	15.1875
						SCALE	.0405

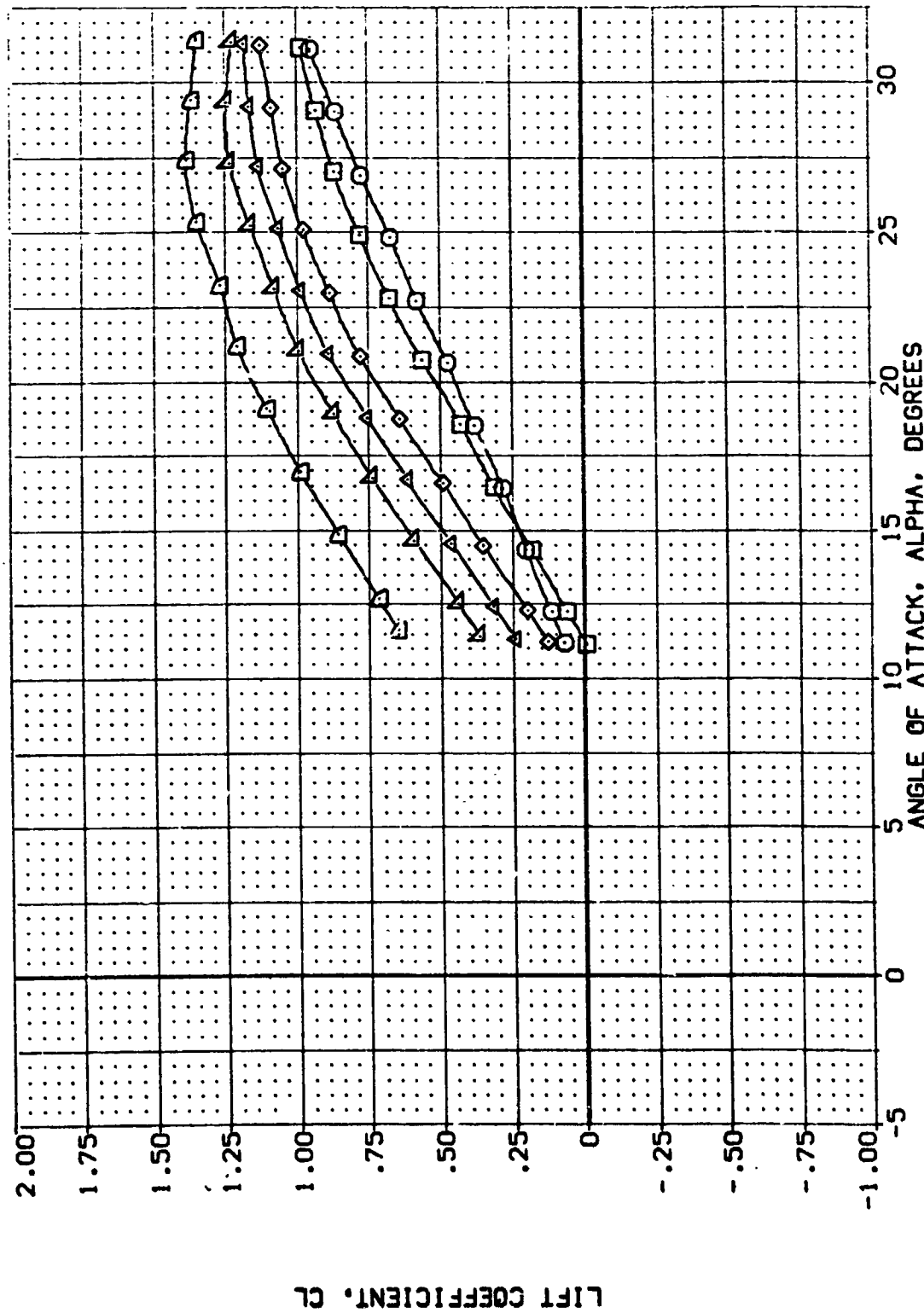


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/WB	SFOBRK	BOFLAP	REFERENCE INFORMATION
(B02035)	0A628 B26C96 547F8 V116E28V8RSX9	-40.000	.068	25.000	-12.000	SREF 4.4119 SO.FT.
(B02036)	0A628 B26C96 547F8 V116E28V8RSX9	-30.000	.068	25.000	-12.000	LREF 19.2298 INCHES
(B02037)	0A628 B26C96 547F8 V116E28V8RSX9	-20.000	.068	25.000	-12.000	SREF 37.9359 INCHES
(B02038)	0A628 B26C96 547F8 V116E28V8RSX9	-15.000	.068	25.000	-12.000	XMRP 43.5974 INCHES
(B02039)	0A628 B26C96 547F8 V116E28V8RSX9	-10.000	.068	25.000	-12.000	YMRP .0000 INCHES
(B02044)	0A628 B26C96 547F8 V116E28V8RSX9	.000	.068	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

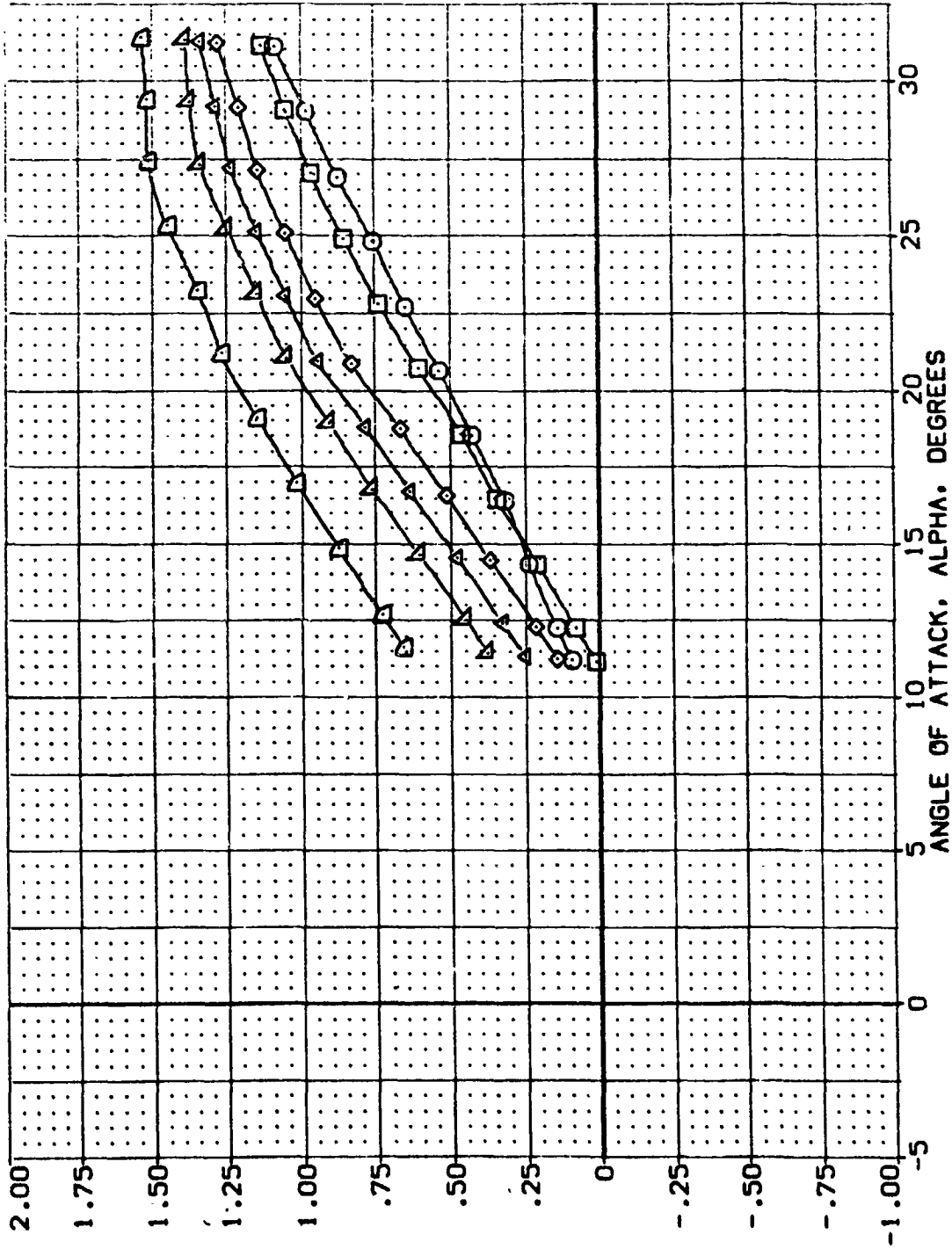


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/WB = 0.068

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(B02035)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-40.000	.068	25.000	-12.000	SREF 4.4119 SO.FT.
(B02036)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-30.000	.068	25.000	-12.000	LREF 19.2289 INCHES
(B02037)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-20.000	.068	25.000	-12.000	BREF 37.9359 INCHES
(B02038)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-15.000	.068	25.000	-12.000	YMRP 43.5374 INCHES
(B02039)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-10.000	.068	25.000	-12.000	ZMRP 15.0000 INCHES
(B02044)	OAS28 826C9G1 5M7F8 V116E28V8RSX9	-10.000	.068	25.000	-12.000	SCALE 15.1875 INCHES .0405 SCALE

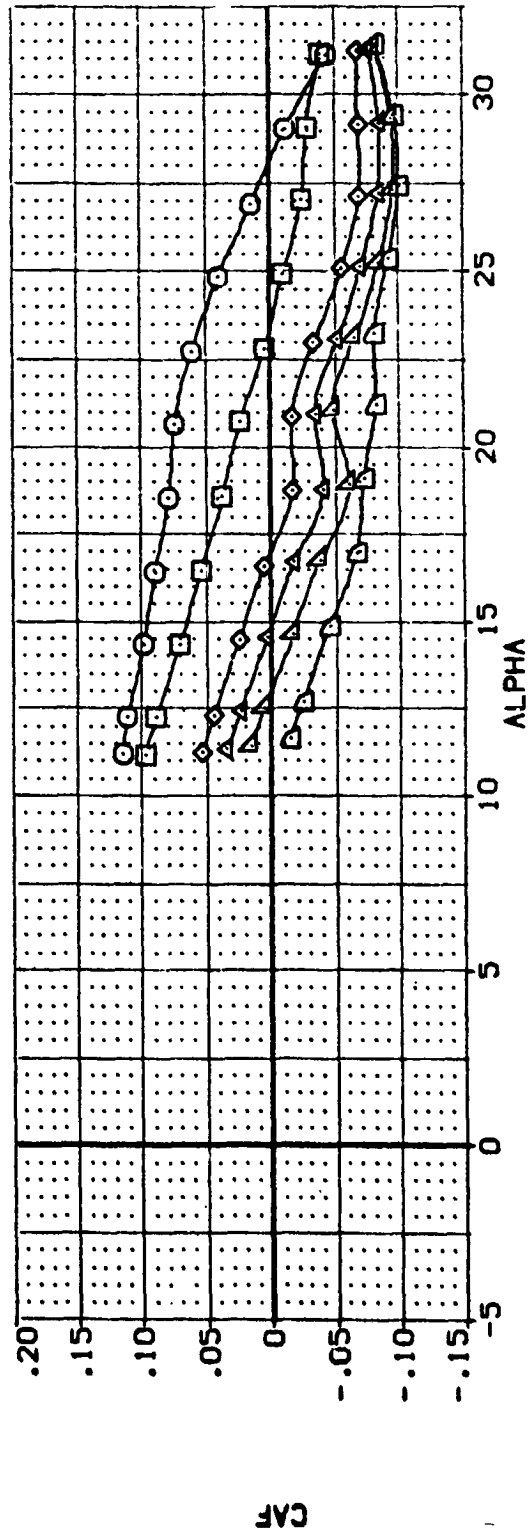
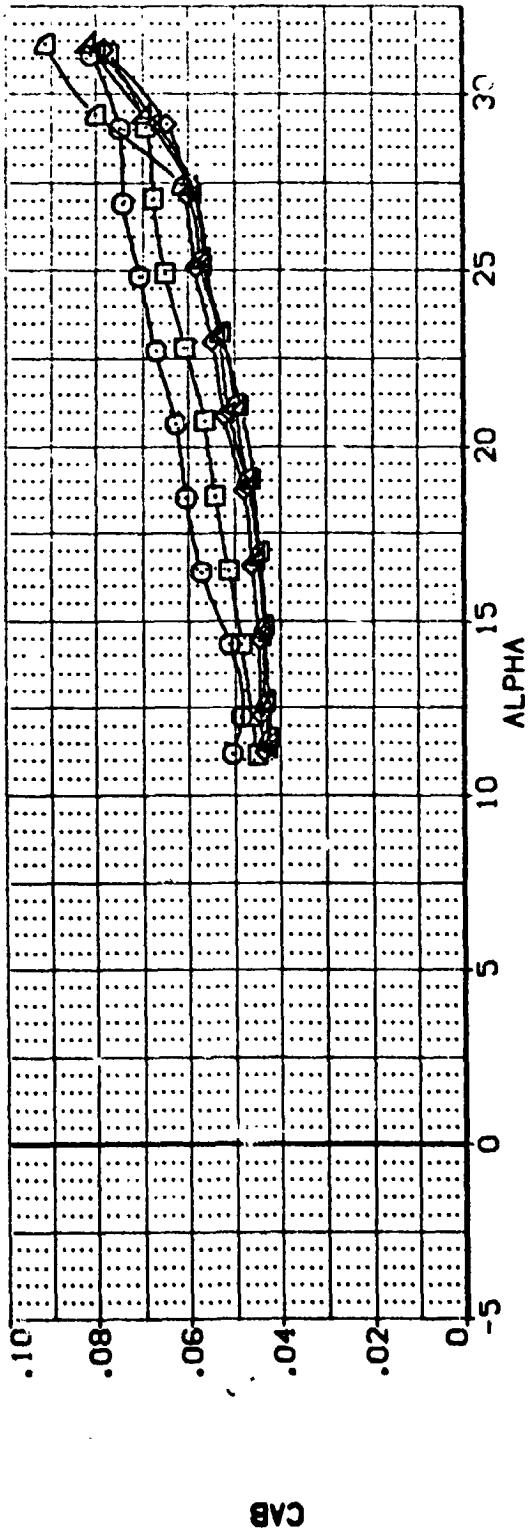
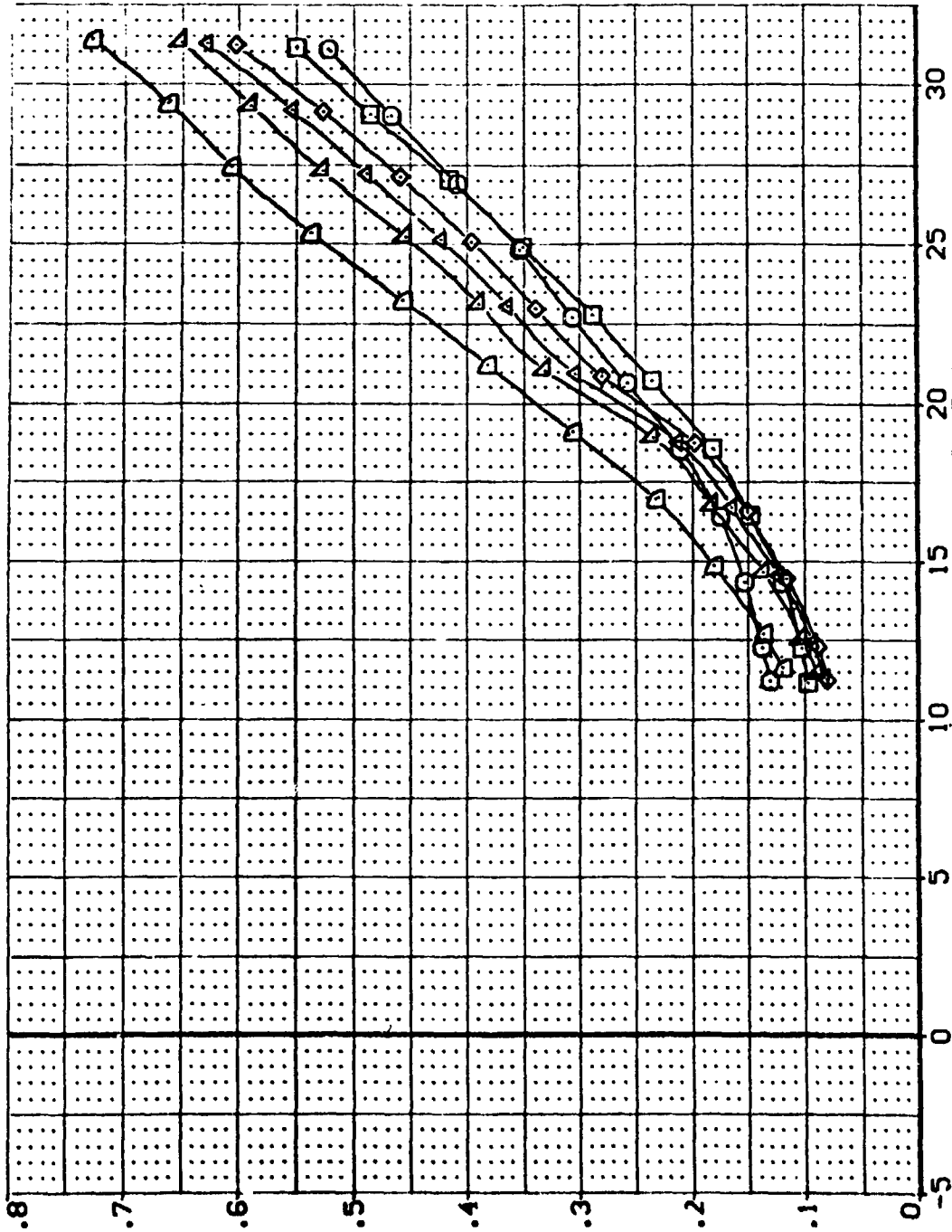


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPORBK	BD/LAP	REFERENCE INFORMATION
(802025)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-40.000	.068	25.000	-12.000	SREF 4.4119 SO.FT
(802035)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-30.000	.068	25.000	-12.000	LREF 19.2299 INCHES
(802037)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-20.000	.068	25.000	-12.000	XMRP 37.9359 INCHES
(802038)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-15.000	.068	25.000	-12.000	ZMRP 43.5974 INCHES
(802039)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-10.000	.068	25.000	-12.000	SCALE .0000 INCHES
(802044)	DA528 B26C9G1 S47F8 V115E28V8FSX9	-10.000	.068	25.000	-12.000	SCALE .0405 INCHES

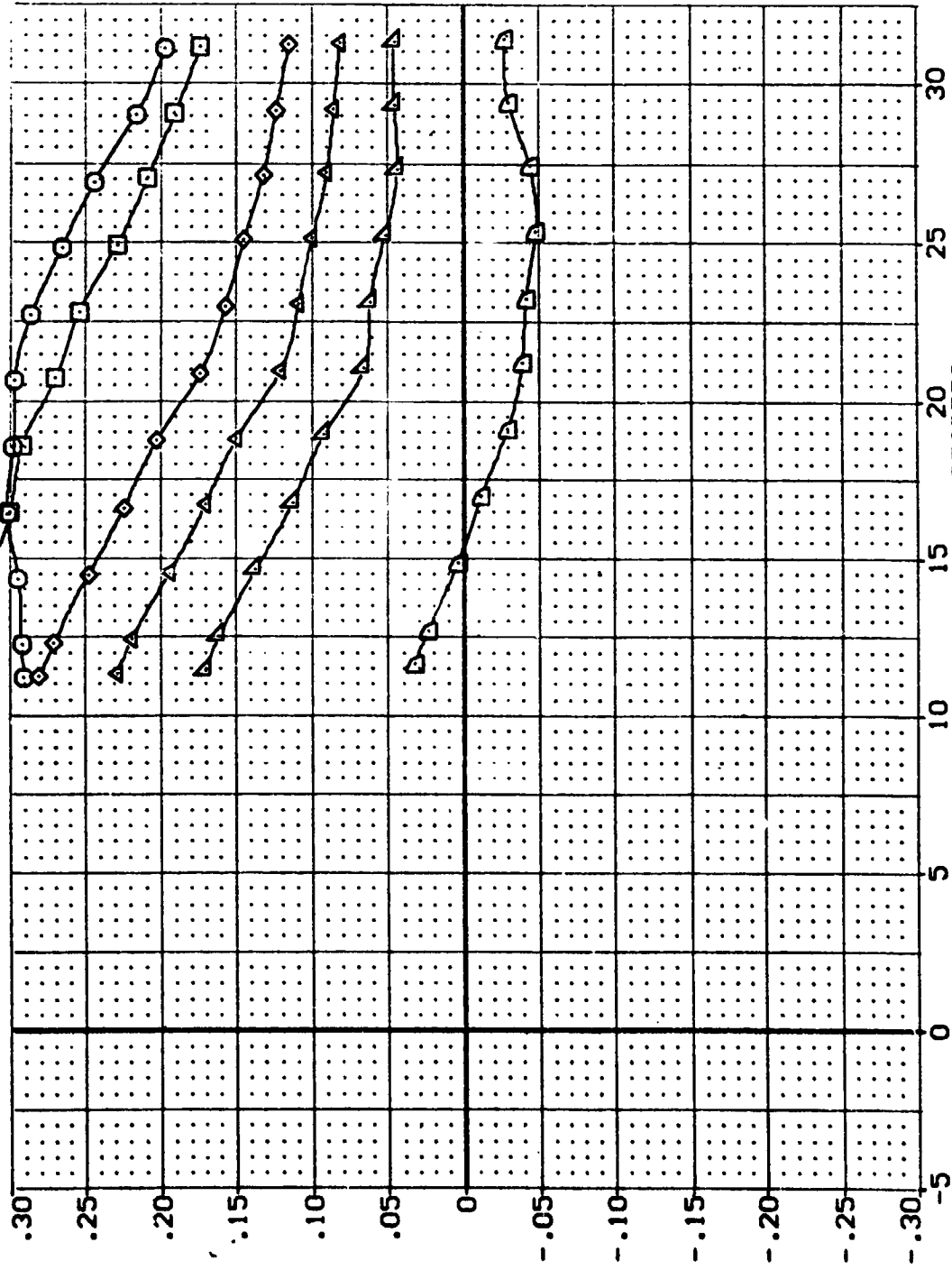


FOREBODY DRAG COEFFICIENT, CDF

FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION	SCALE
(802005)	0A628 B26C9G1S47F8	.068	25.000	-12.000	SREF 4.4119	SO.FT. INCHES
(802006)	0A628 B26C9G1S47F8	.068	25.000	-12.000	LREF 19.2299	INCHES
(802007)	0A628 B26C9G1S47F8	.068	25.000	-12.000	BREF 37.9359	INCHES
(802008)	0A628 B26C9G1S47F8	.068	25.000	-12.000	XMRP 43.5974	INCHES
(802009)	0A628 B26C9G1S47F8	.068	25.000	-12.000	ZMRP .0000	INCHES
(802014)	0A628 B26C9G1S47F8	.068	25.000	-12.000	SCALE 15.1875	SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z025)	0A6Z8 B26C9G1547F8 V116E28V8R5X9
(80Z036)	0A6Z8 B26C9G1547F8 V116E28V8R5X9
(80Z037)	0A6Z8 B26C9G1547F8 V116E28V8R5X9
(80Z038)	0A6Z8 B26C9G1547F8 V116E28V8R5X9
(80Z039)	0A6Z8 B26C9G1547F8 V116E28V8R5X9
(80Z044)	0A6Z8 B26C9G1547F8 V116E28V8R5X9

ELEVON	H/BW	SPOBRK	BOFLAP	SREF	REFERENCE INFORMATION	SO. FT.
-40.000	.068	25.000	-12.000	4.4119		INCHES
-30.000	.068	25.000	-12.000	19.2299		INCHES
-20.000	.068	25.000	-12.000	37.9359		INCHES
-15.000	.068	25.000	-12.000	43.5974		INCHES
-10.000	.068	25.000	-12.000			INCHES
.000	.068	25.000	-12.000	15.1875		INCHES
				.0405		SCALE

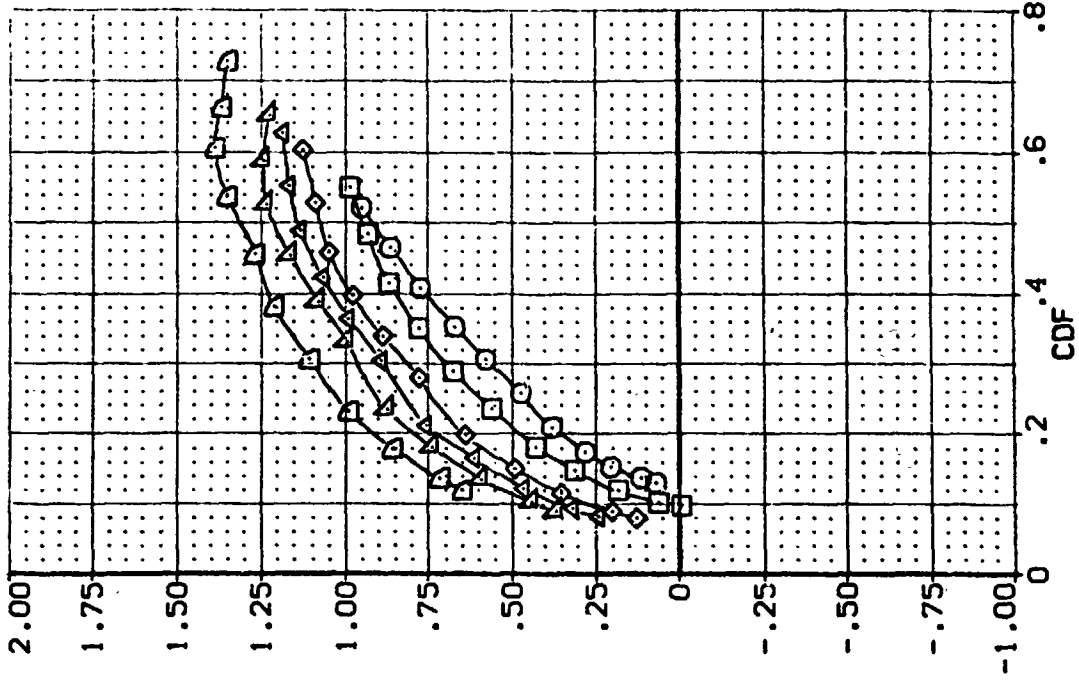
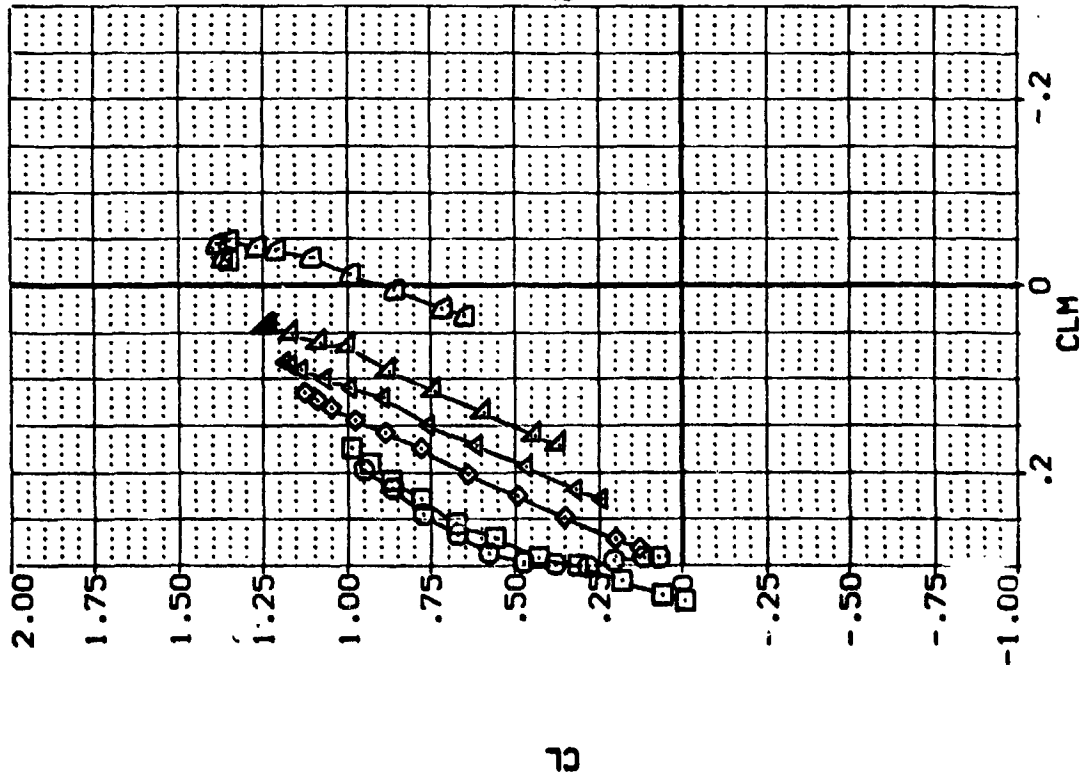


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802035)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	40.000	.068	25.000	-12.000	SREF 4.4119 SQ.FT.
(802036)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	30.000	.068	25.000	-12.000	LREF 19.2299 INCHES
(802037)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	20.000	.068	25.000	-12.000	BREF 37.9359 INCHES
(802038)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	15.000	.068	25.000	-12.000	XTRP 43.5974 INCHES
(802039)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	10.000	.068	25.000	-12.000	YTRP 15.0000 INCHES
(802044)	0A6Z8 B26C9G1S47F8 V116E28VBR5X9	10.000	.068	25.000	-12.000	ZTRP 15.1875 INCHES
						SCALE .0405

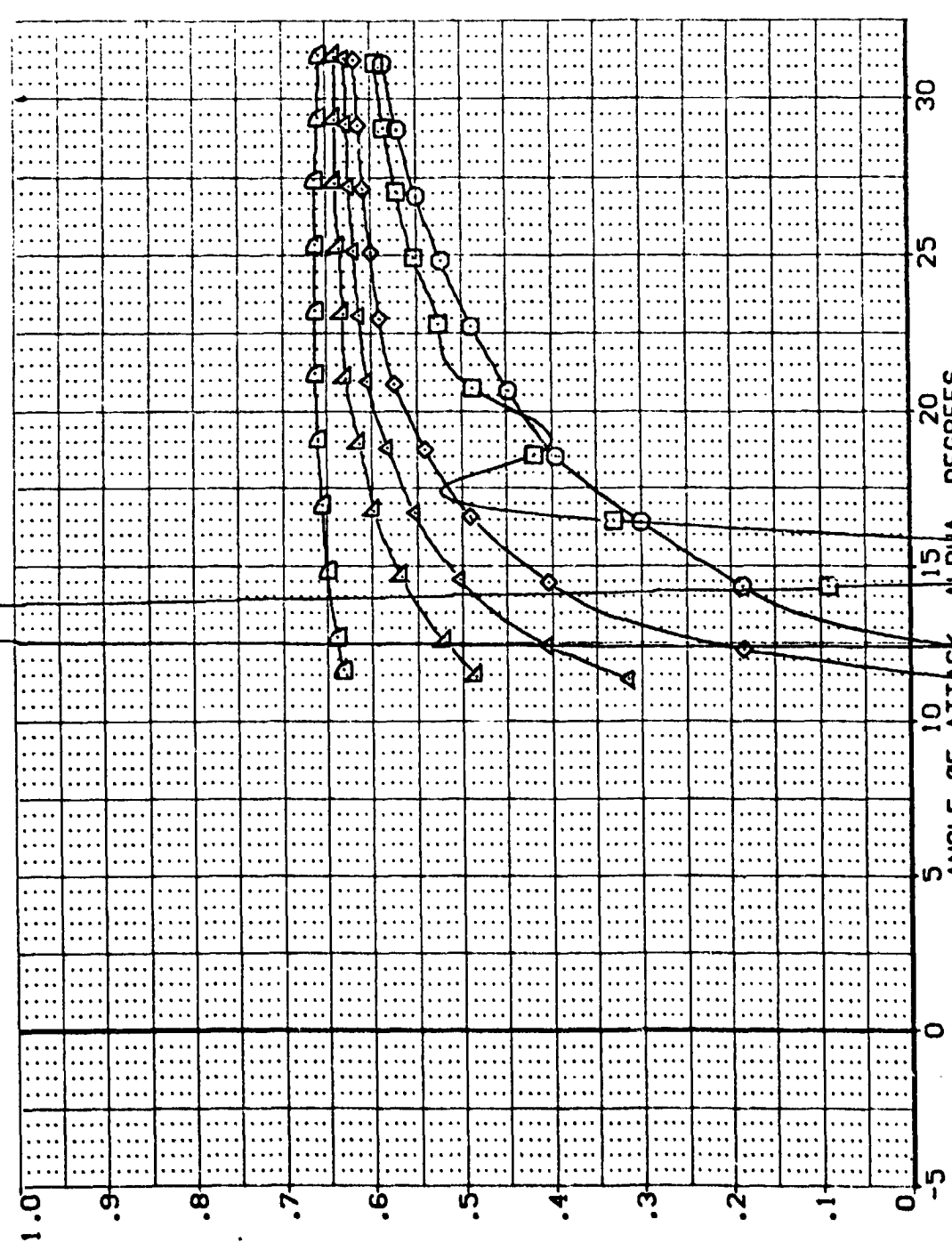


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02005)	0A628 B26C9G1S47F8 V116E28V8RSX9	-40.000	.068	25.000	-12.000	SREF 4.4119 SO.FT.
(B02006)	0A628 B26C9G1S47F8 V116E28V8RSX9	-30.000	.068	25.000	-12.000	LREF 19.2799 INCHES
(B02007)	0A628 B26C9G1S47F8 V116E28V8RSX9	-20.000	.068	25.000	-12.000	BREF 37.9359 INCHES
(B02008)	0A628 B26C9G1S47F8 V116E28V8RSX9	-15.000	.068	25.000	-12.000	XMRP 43.5971 INCHES
(B02009)	0A628 B26C9G1S47F8 V116E28V8RSX9	-10.000	.068	25.000	-12.000	YMRP 00.000 INCHES
(B02011)	0A628 B26C9G1S47F8 V116E28V8RSX9	.000	.068	25.000	-12.000	ZMRP 15.1975 INCHES
						SCALE .0405

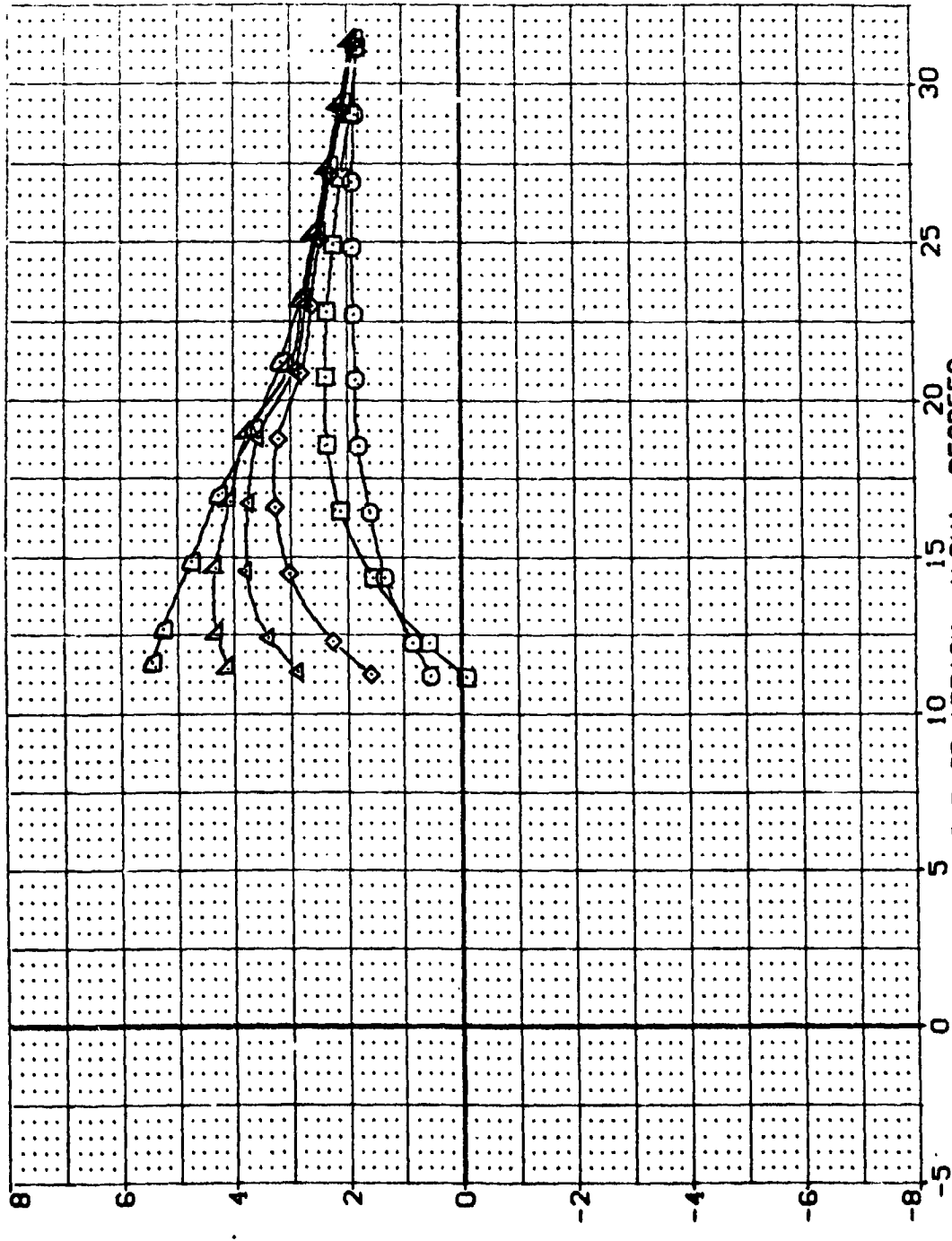


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(A)MACH = .20

(10Z035)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	10.000	DELTVN	10.000	SREF	4.4119
SOBOL	0	DELTVN	-40.000	LREF	19.2299
MACH	.200	DELTVN	-20.000	BREF	37.9359
BOFLAP	-12.000	DELTVN	-10.000	XRRP	43.5974
RUDDER	.000	DELTVN	.000	YRRP	1.0000
H/BW	.068	DELTVN	10.000	ZRRP	15.1873
		DELTVN	10.000	SCALE	.0403

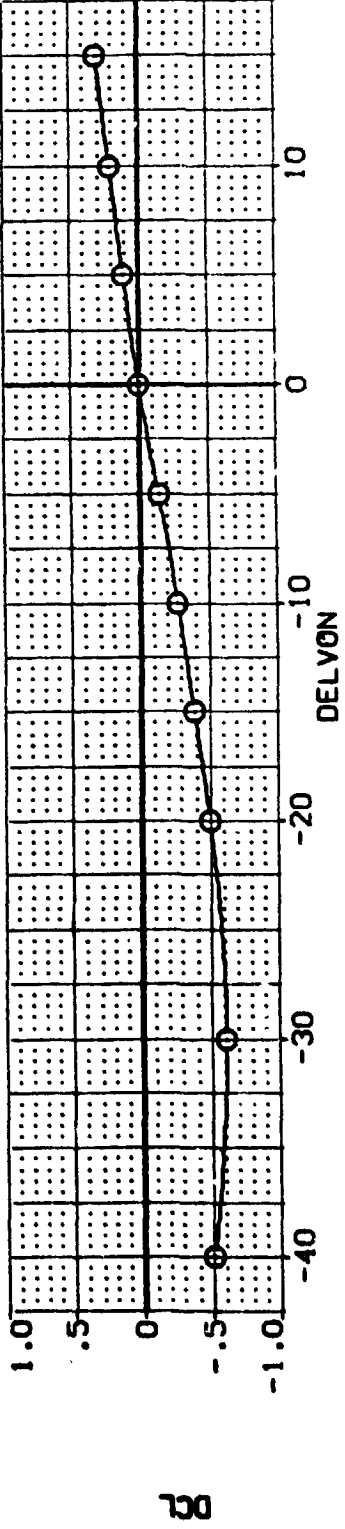
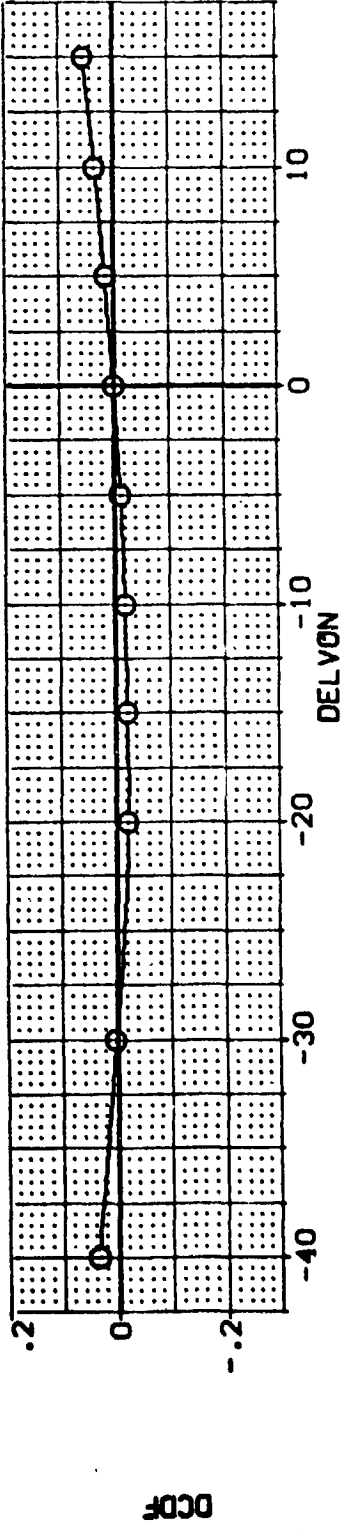
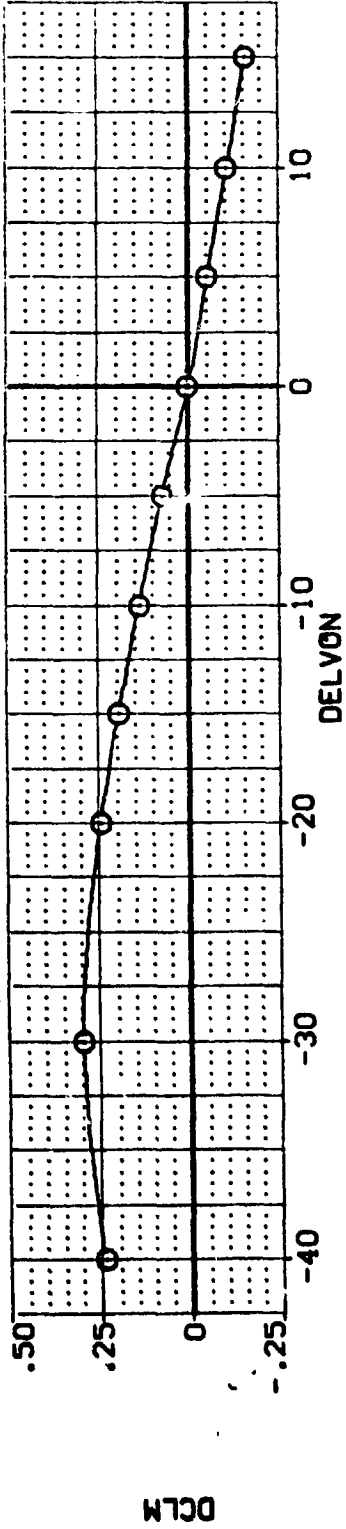


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ035)

SYMBOL	ALPHA	15.000	PARAMETRIC VALUES	.000	DATASET	DELTVN	10.000	DATA SOURCE	IDZ042	IDZ043	IDZ041	DELTVN	SREF	4.4119	SO. FT.
O	MACH	.200	BETA	.000	IDZ035	-40.000	10.000	DELTVN	IDZ036	IDZ038	IDZ040	-30.000	LREF	19.2399	INCHES
	BDFLAP	-12.000	A1LRON	.000	IDZ037	-20.000	10.000	DELTVN	IDZ039	IDZ041	IDZ043	-15.000	EREF	37.5359	INCHES
	RUDDER	.000	SPOBRK	25.000	IDZ035	-10.000	10.000	DELTVN	IDZ040	IDZ042	IDZ044	-5.000	XMRP	43.5974	INCHES
	H/BW	.068			IDZ044	.000	10.000	DELTVN	IDZ043	IDZ041	IDZ043	5.000	YMRP	.0000	INCHES
					IDZ042	10.000	10.000	DELTVN	IDZ041	IDZ041	IDZ041	15.000	ZMRP	15.1875	INCHES
													SCALE	.0405	SCALE

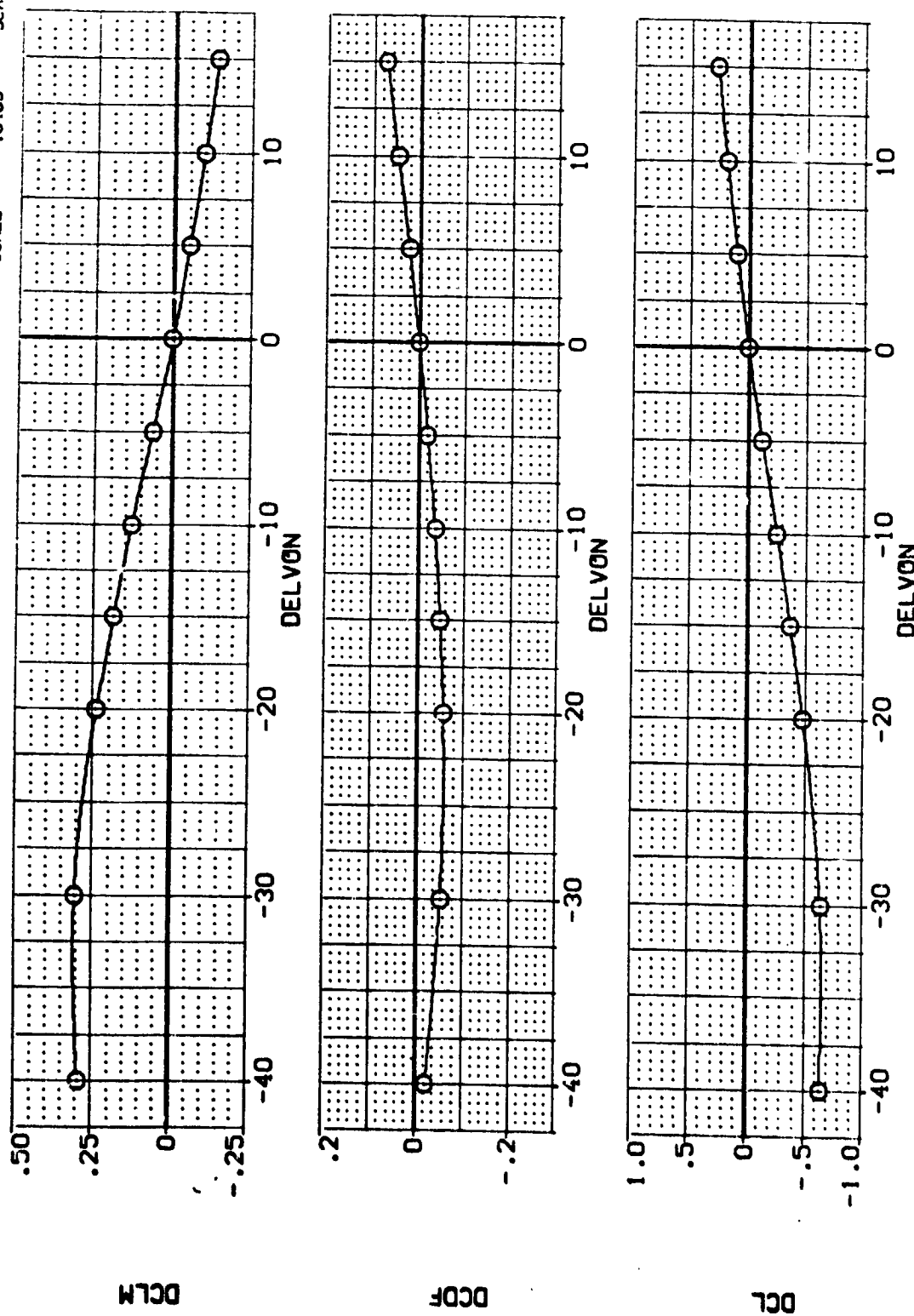


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068





0A628 B26C9G15M7F8 W116E28V8R5X9

(1DZ035)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	20.000	.000	1DZ035	SREF	4.4119
BETA	.200	.000	1DZ036	LREF	19.2259
BDFLAP	-12.000	-40.000	1DZ038	BREF	37.9359
RUDDER	.000	-20.000	1DZ040	XMRP	43.5974
H/BW	.068	-10.000	1DZ043	YMRP	5.0000
		10.000	1DZ041	ZMRP	15.1875
				SCALE	.0405

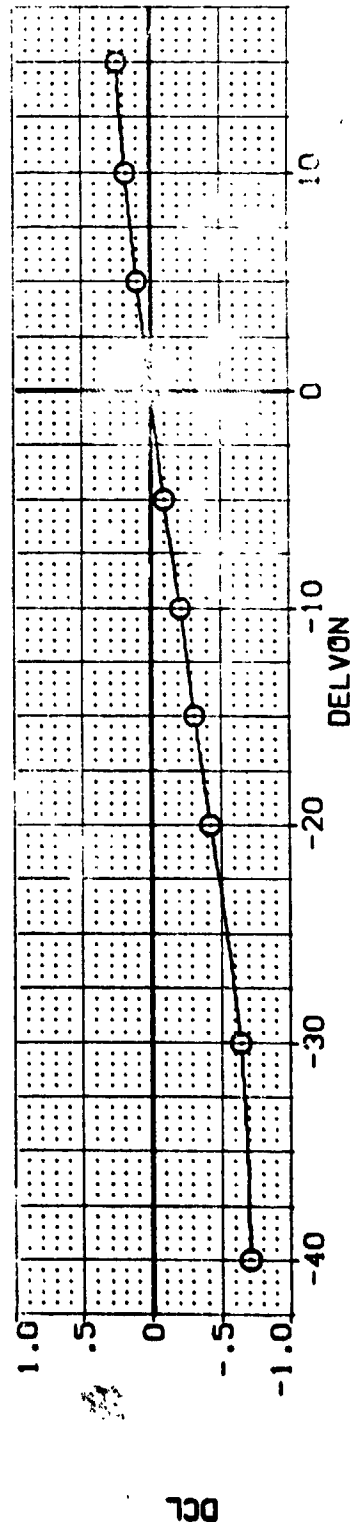
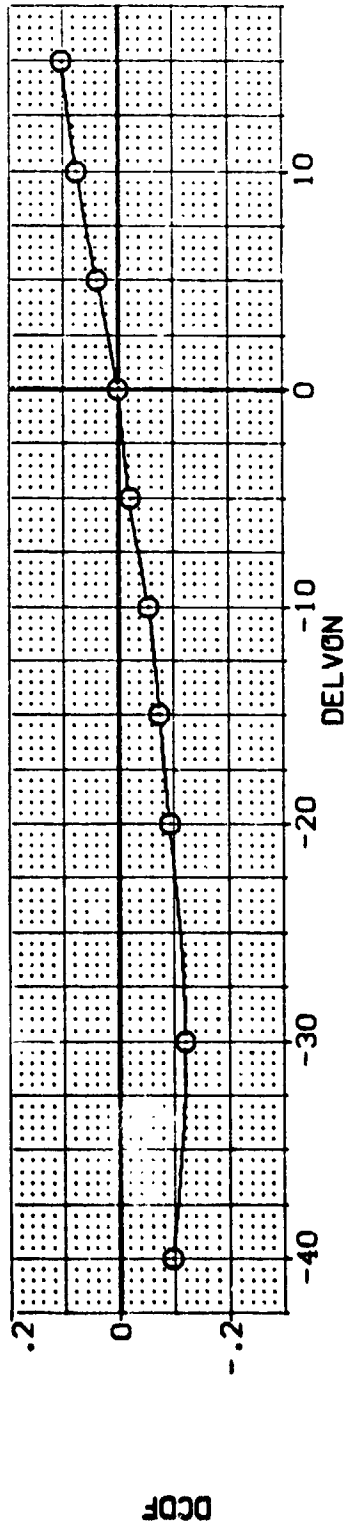
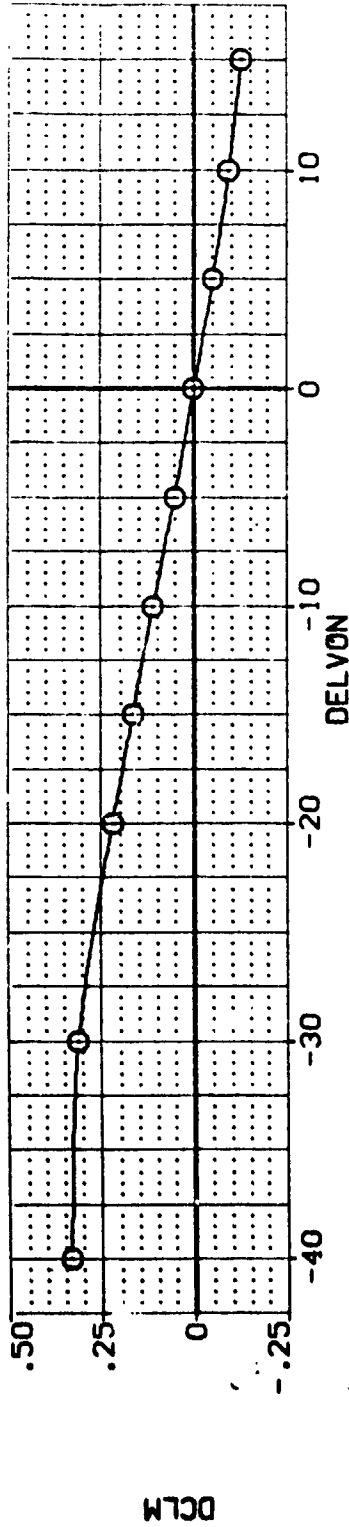


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ035)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	REFERENCE INFORMATION
○	25.000	.200	BETA	.000	10.000	1DZ042	15.000	4.4119
		-12.000	A1LRON	-40.000	10.000	1DZ035	-30.000	19.2299
		.000	SPOBRK	-20.000	10.000	1DZ038	-15.000	37.9359
		.068	H/BW	-10.000	10.000	1DZ040	5.000	43.5974
				10.000	10.000	1DZ043	15.000	.0000
				10.000	10.000	1DZ041	15.000	15.1875
								.0405
								SO FT
								INCHES
								INCHES
								INCHES
								INCHES
								SCALE

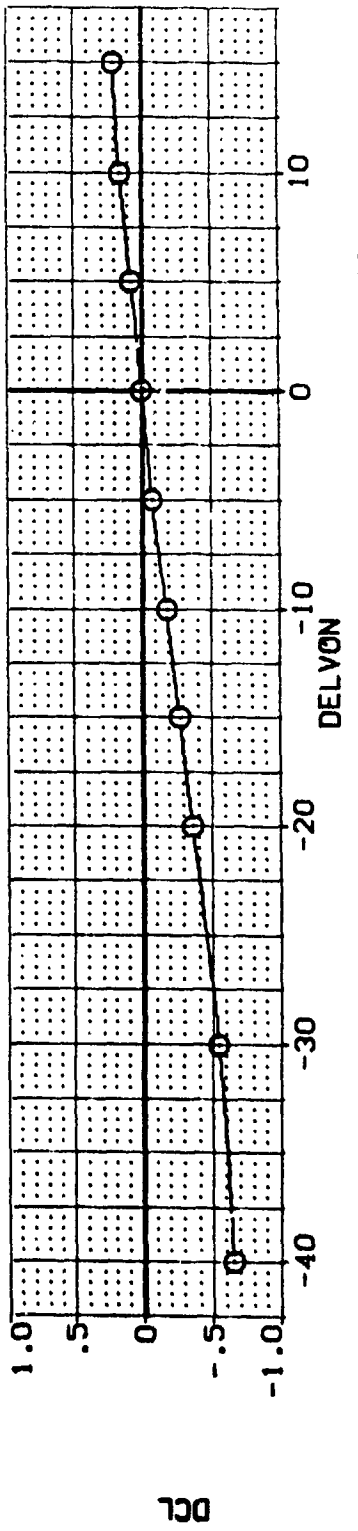
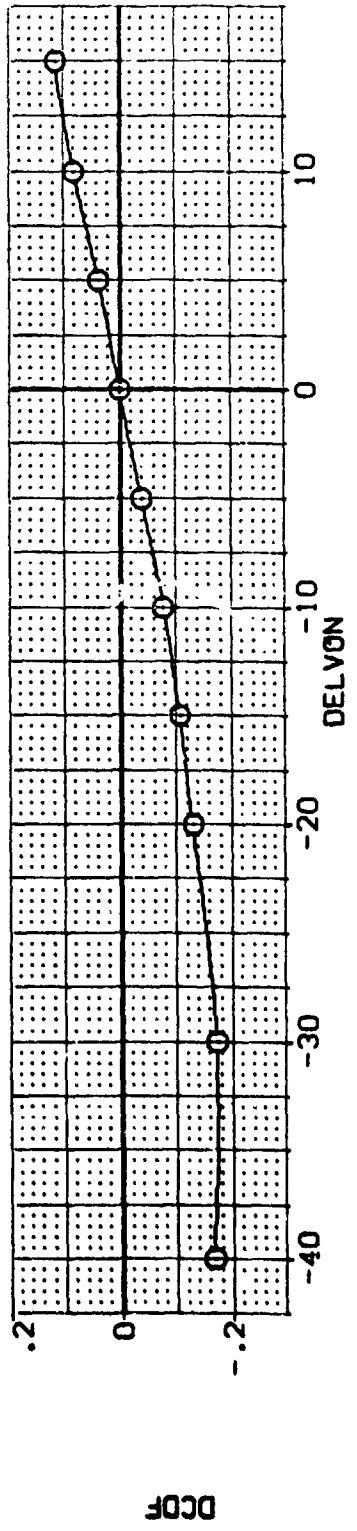
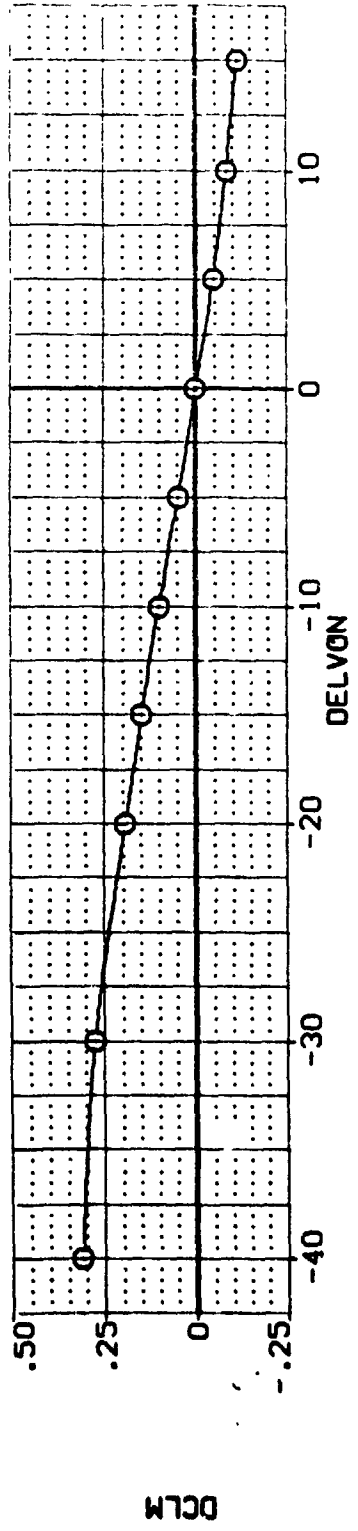


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068





0A628 B26C9G15M7F8 W116E28V8R5X9

(1DZ035)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	30.000	.000	1DZ035	DELTVN	-30.000
MACH	.200	.000	1DZ037	LREF	19.2298
BDFLAP	-12.000	25.000	1DZ039	BREF	37.9359
RUDDER	.000	1DZ041	1DZ040	XTRP	43.5974
H/BW	.068	1DZ042	1DZ043	YTRP	.0000
			1DZ044	ZTRP	15.1875
				SCALE	.0405

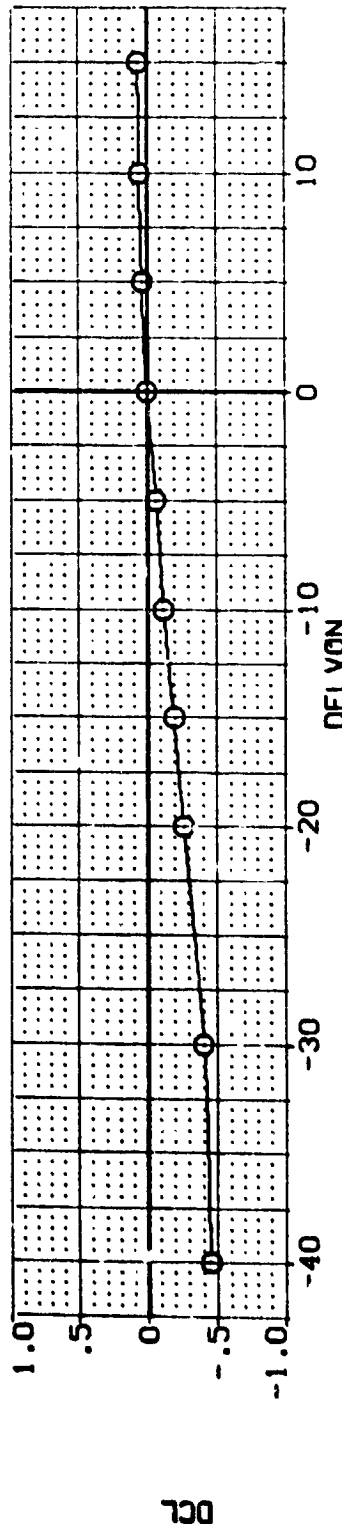
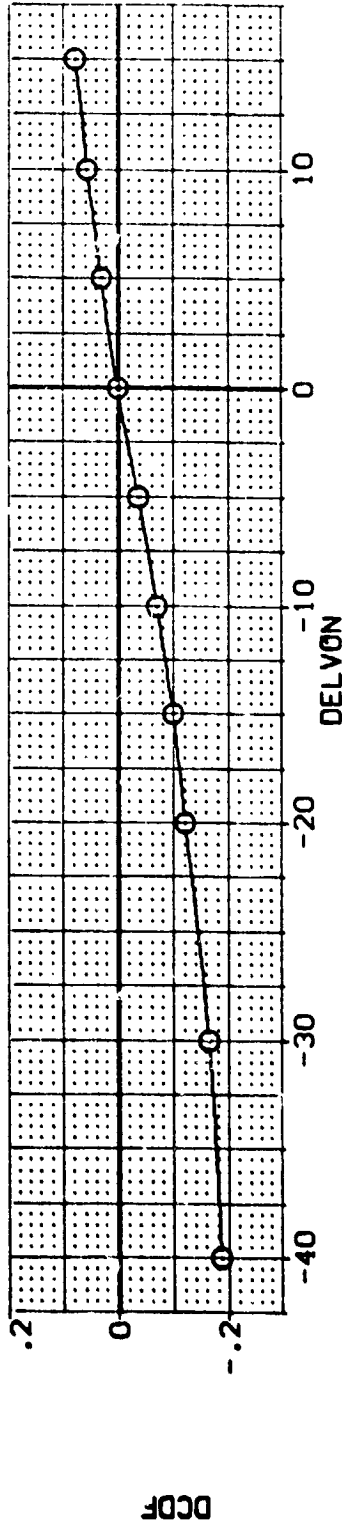
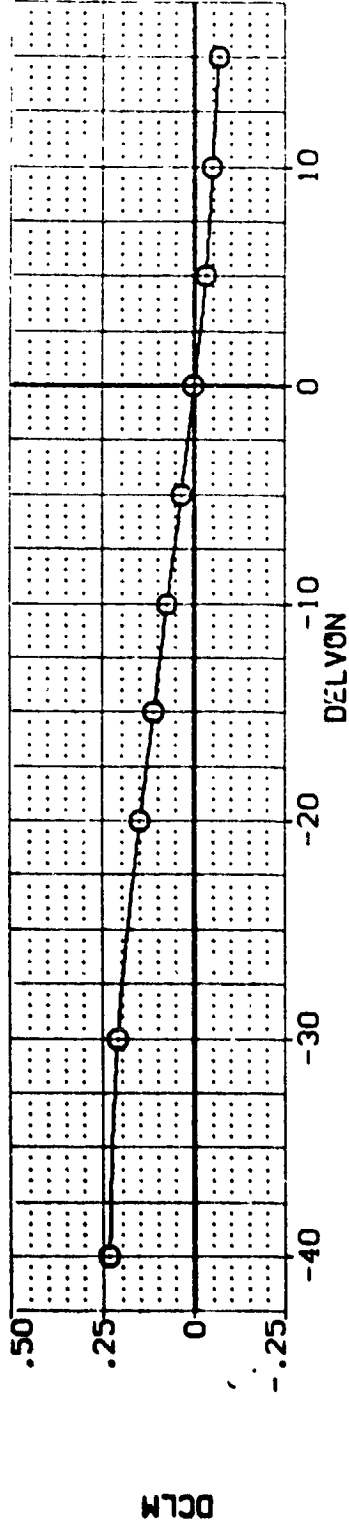


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ035)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELTVN	SREF	REFERENCE INFORMATION
O	10.000	BDFLAP	.200 BETA	.000 DATASET	1DZ036	-30.000	4.4119	50 FT
		RUDDER	-12.000 AILRON	.000 1DZ035	1DZ036	-30.000	19.2299	INCHES
		H/BW	.000 SPOBRK	25.000 1DZ037	1DZ036	-15.000	37.9359	INCHES
			.068	1DZ039	1DZ040	5.000	43.5974	INCHES
				1DZ044	1DZ041	5.000	15.1875	INCHES
				1DZ042	1DZ041	15.000	.0405	SCALE

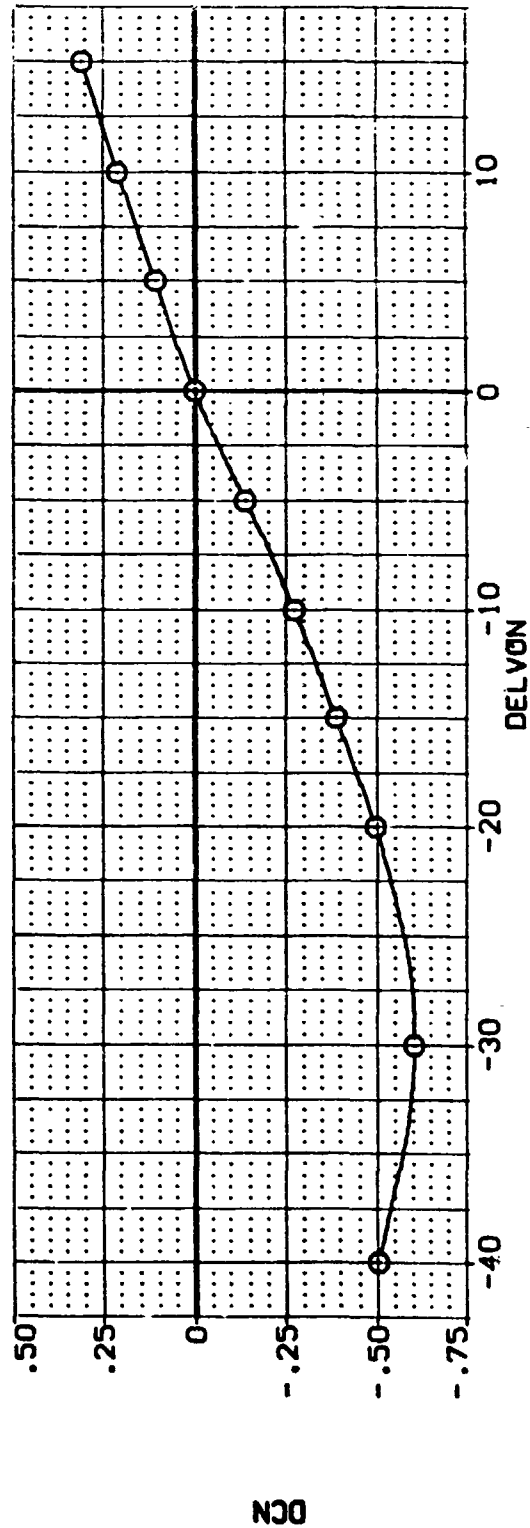
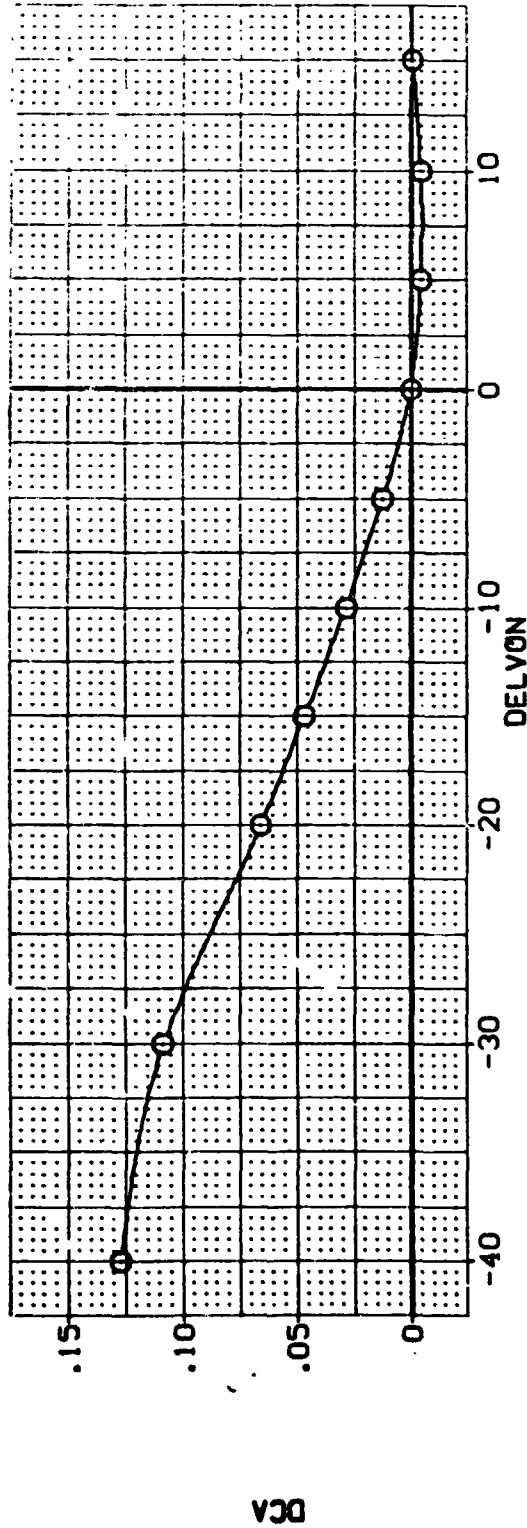


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

(1DZ035)

W116E28V8R5X9

B26C9G15M7F8

0A62B

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	DEL VON	DEL VON	SREF	4.4119
MACH	.200	DEL VON	DEL VON	LREF	19.2299
BDFLAP	-12.000	DEL VON	DEL VON	BREF	37.9359
RUDDER	.000	DEL VON	DEL VON	XWRP	43.5974
H/BW	.068	DEL VON	DEL VON	YWRP	.0000
		DEL VON	DEL VON	ZWRP	15.1875
		DEL VON	DEL VON	SCALE	.0405
		DEL VON	DEL VON		

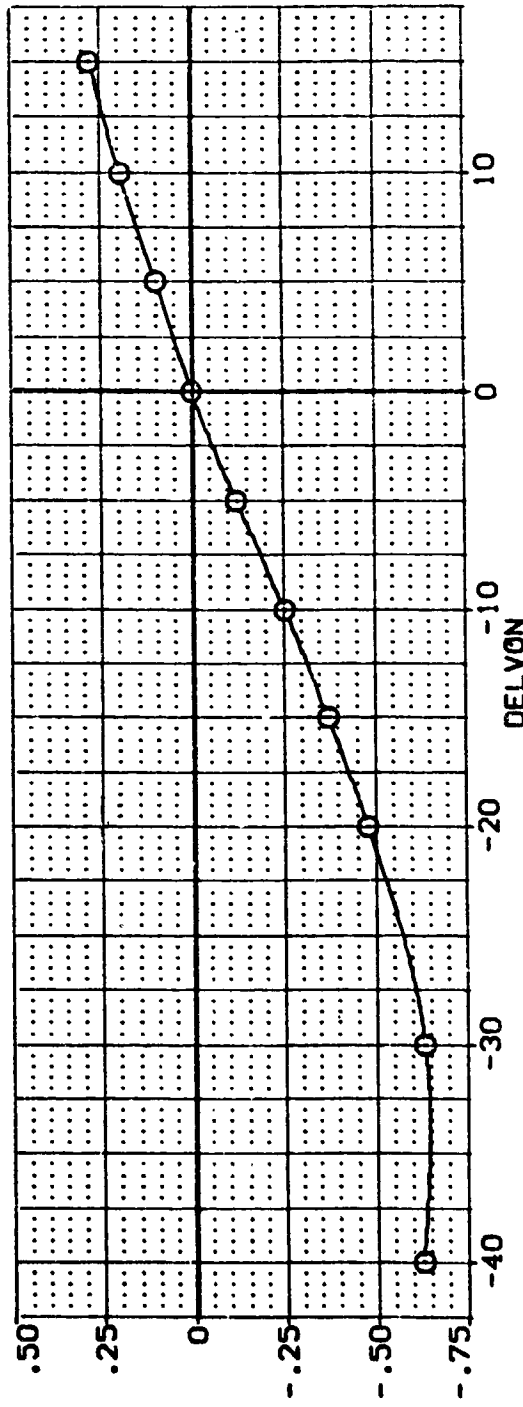
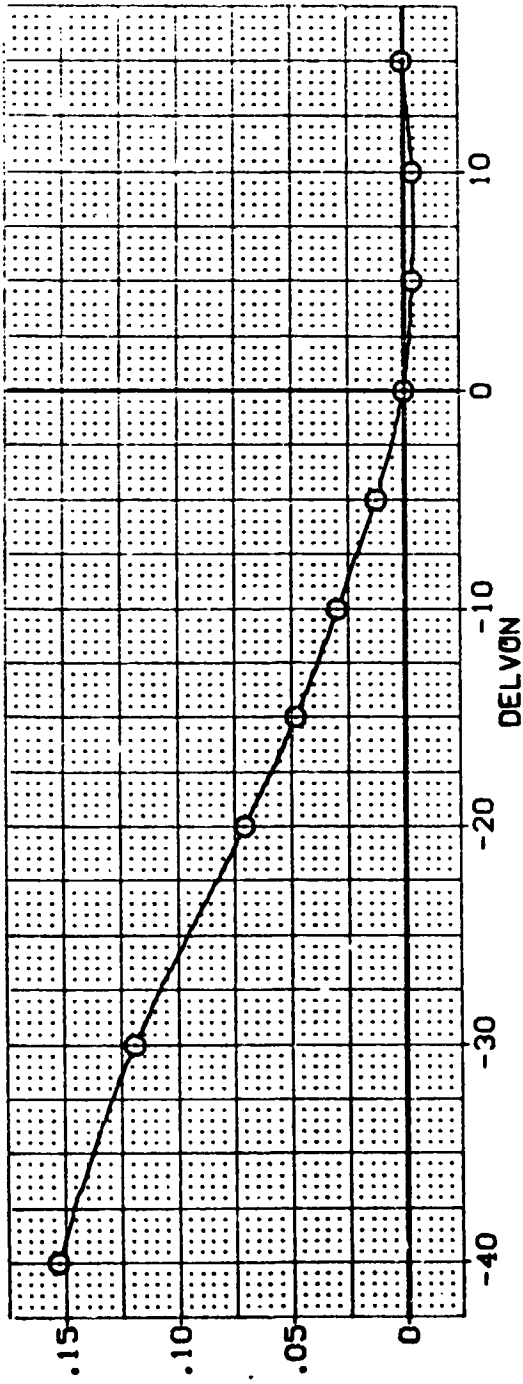


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

0A628 826C9G15M7F8 W116E28V8R5X9 (10Z035)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	20.000	DELTON	10.000	SO. FT.	4.4119
MACH	.200	DELTON	-40.000	INCHES	19.2299
BOFLAP	-12.000	DELTON	-20.000	INCHES	37.9359
RUDDER	.000	DELTON	-10.000	INCHES	43.5974
H/BW	.068	DELTON	10.000	INCHES	.0000
		DELTON	10.000	INCHES	15.1875
		DELTON	10.000	SCALE	.0405
		DELTON	10.000	SCALE	

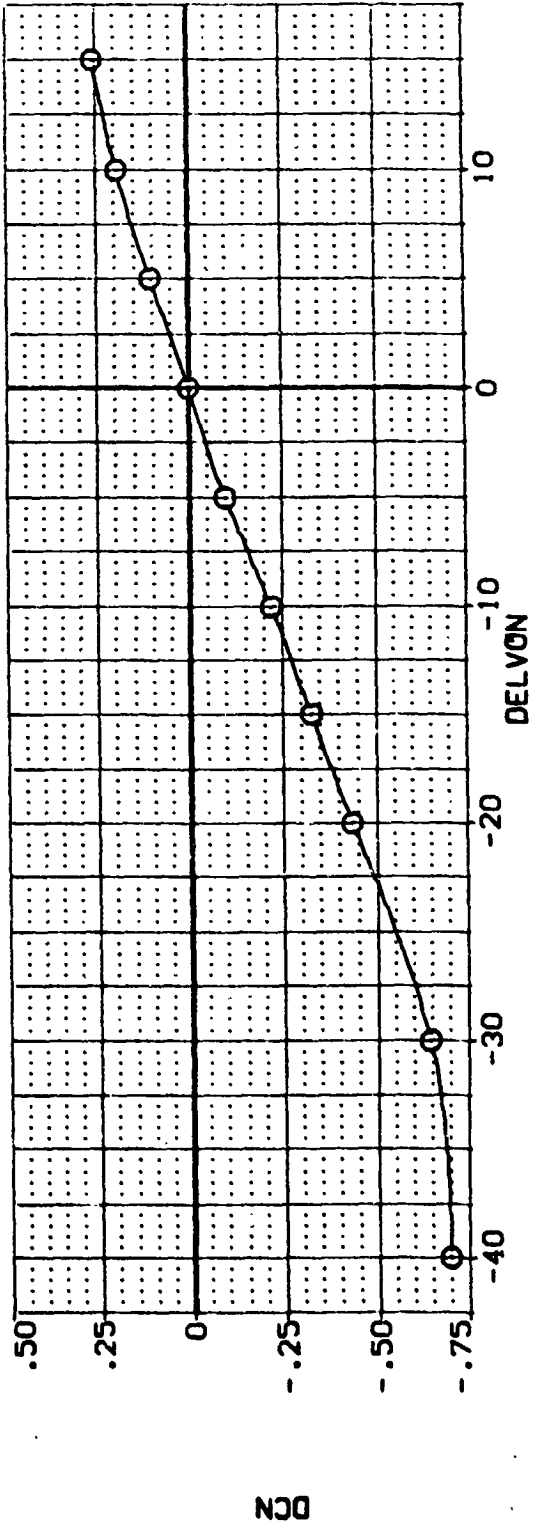
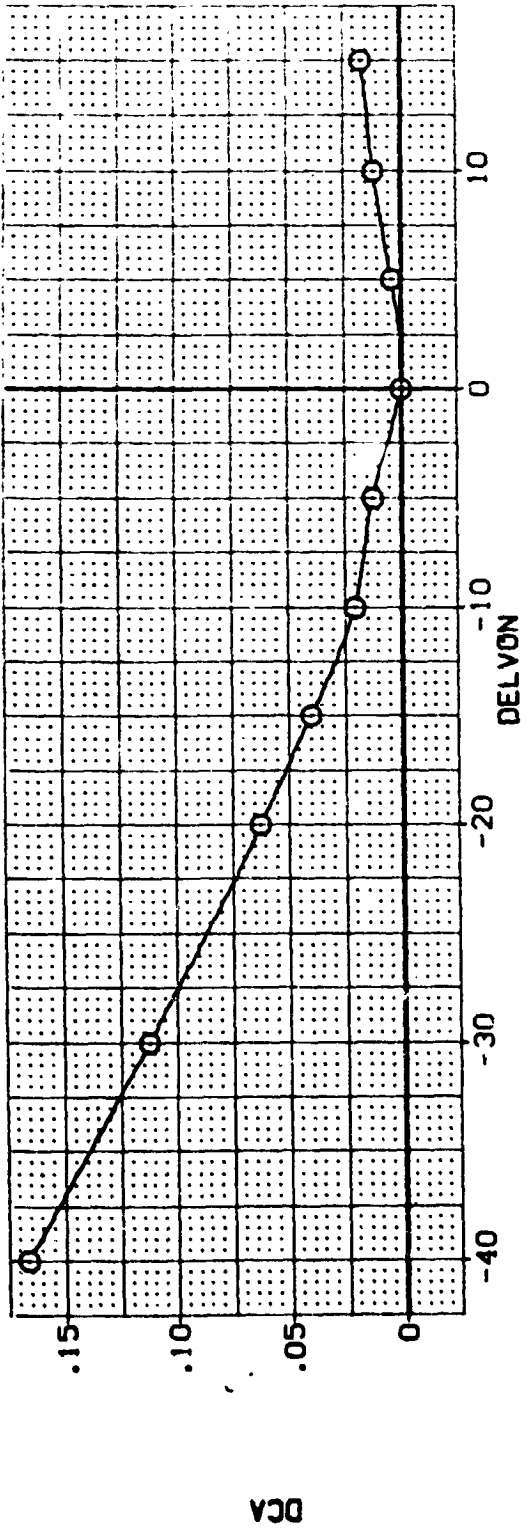


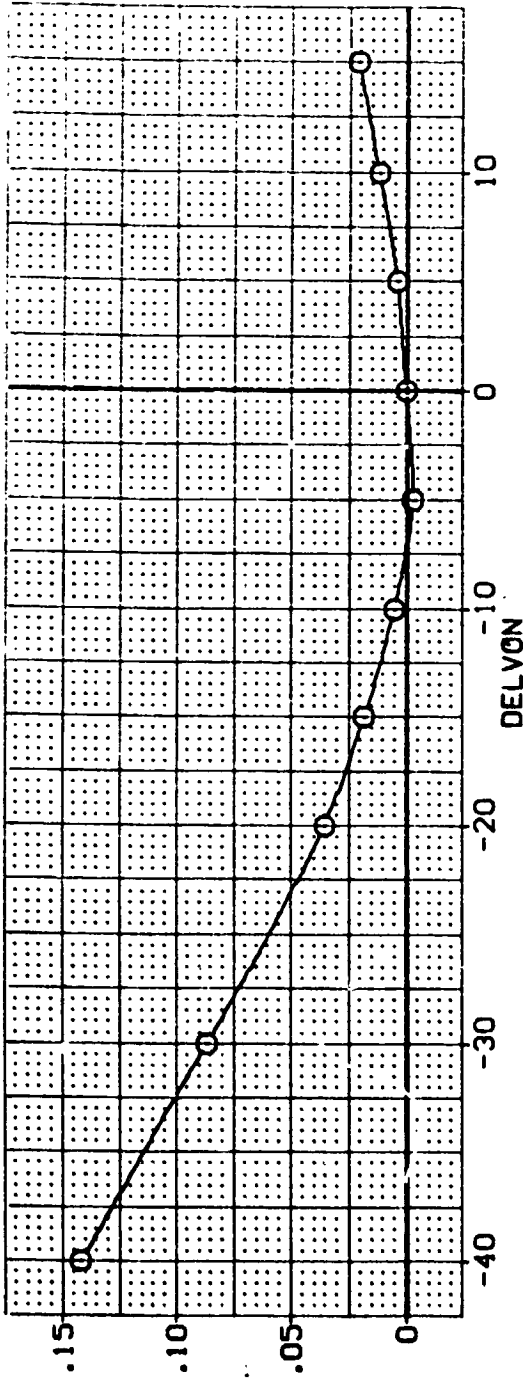
FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068



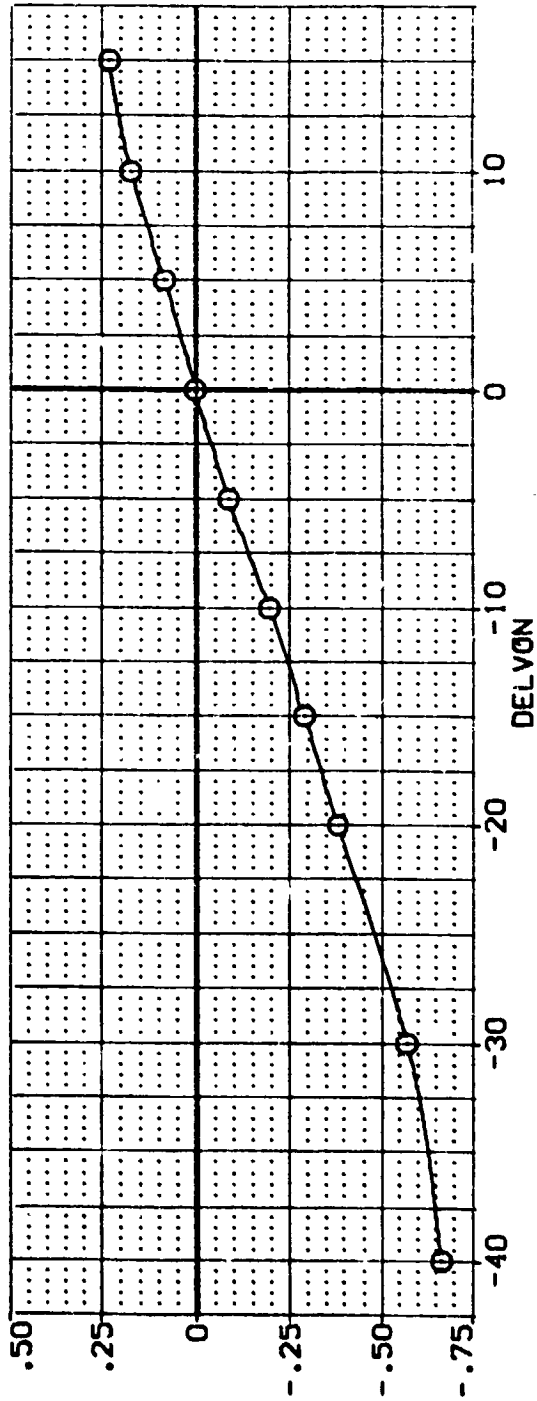


0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ035)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	ALPHA	25.000	MACH	.000	DELTON	-30.000	LREF	4.4119	SO. FT.
	BOFLAP	-12.000	A1LRON	.000	DELTON	-15.000	BREF	19.2298	INCHES
	RLOOR	.000	SPDRK	25.000	DELTON	-5.000	XMRP	37.9359	INCHES
	H/BW	.068			DELTON	5.000	ZMRP	43.5974	INCHES
					DELTON	15.000	SCALE	15.1875	INCHES
					DELTON	10.000	SCALE	.0405	SCALE



DCA



NCO

FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068

0A62B 826C9G15M7F8 W116E28V8R5X9 (1DZ035)

SYMBOL	○
ALPHA	30.000
MACH	.200
BDFLAP	-12.000
FLUDDER	.000
H/BW	.068
PARAMETRIC VALUES	
BETA	.000
ALLRON	.000
SPDRK	25.000
IDZ035	.000
IDZ037	.000
IDZ039	.000
IDZ044	.000
IDZ042	.000
DATA SOURCE	
DELVON	-40.000
DELVON	-20.000
DELVON	-10.000
DELVON	10.000
DATASET	
IDZ035	-30.000
IDZ036	-15.000
IDZ040	5.000
IDZ043	15.000
IDZ041	15.000
REFERENCE INFORMATION	
SREF	4.4119
LREF	19.2299
BREF	37.9359
XMRP	43.5974
YMRP	5.0000
ZMRP	15.1875
SCALE	.0405
SO. FT.	INCHES
INCHES	INCHES
INCHES	INCHES
INCHES	INCHES
INCHES	SCALE

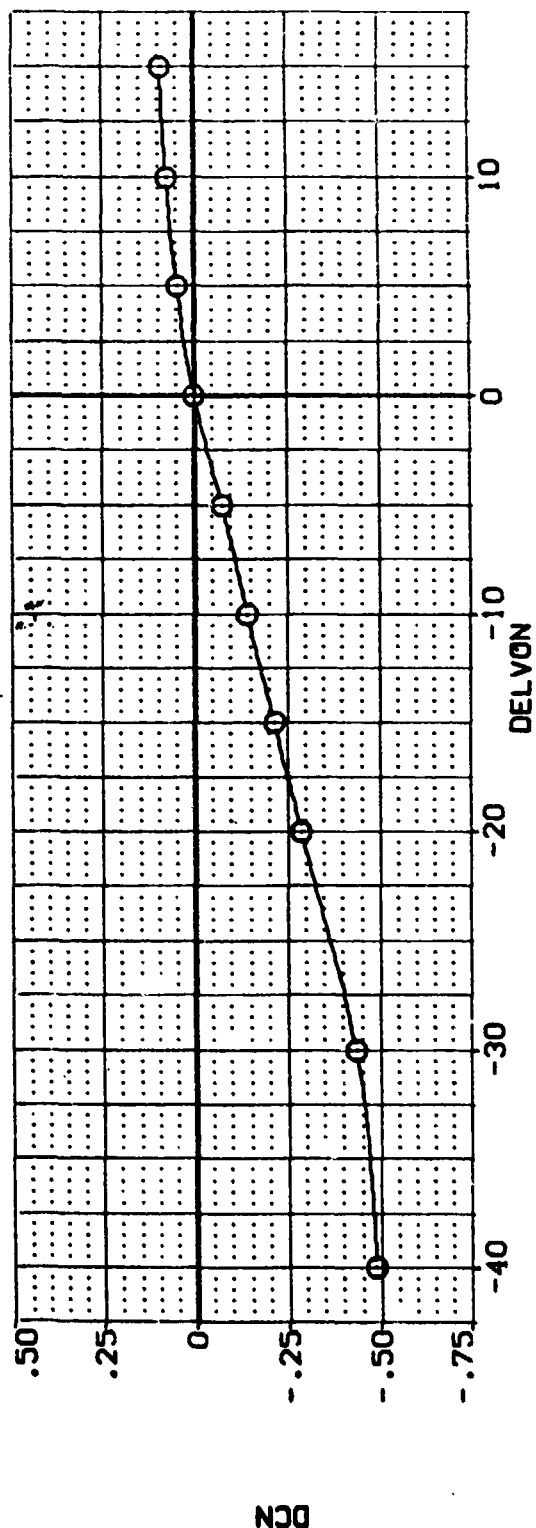
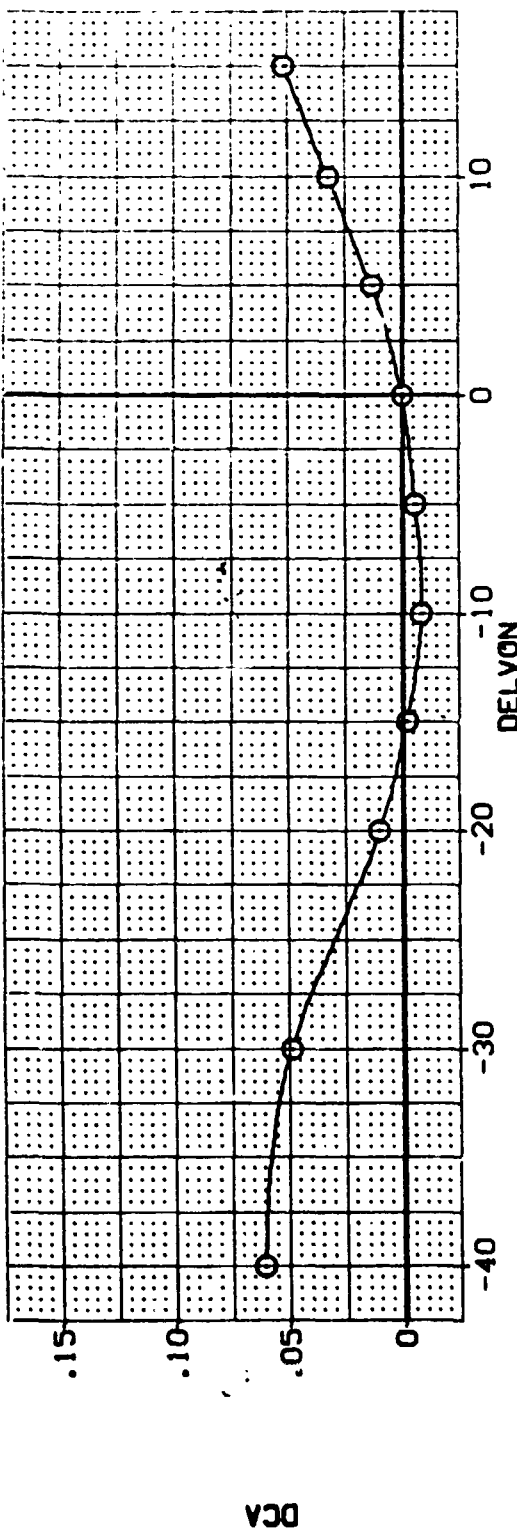


FIG 8 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.068





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02055)	0A628 B26C9G SHT78 V116E28V8R5X9	-5.00	.035	25.000	-12.000	SREF 4.4119 SO.FT
(B02049)	0A628 B26C9G SHT78 V116E28V8R5X9	5.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(B02050)	0A628 B26C9G SHT78 V116E28V8R5X9	10.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(B02051)	0A628 B26C9G SHT78 V116E28V8R5X9	15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
(B02052)	0A628 B26C9G SHT78 V116E28V8R5X9					ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

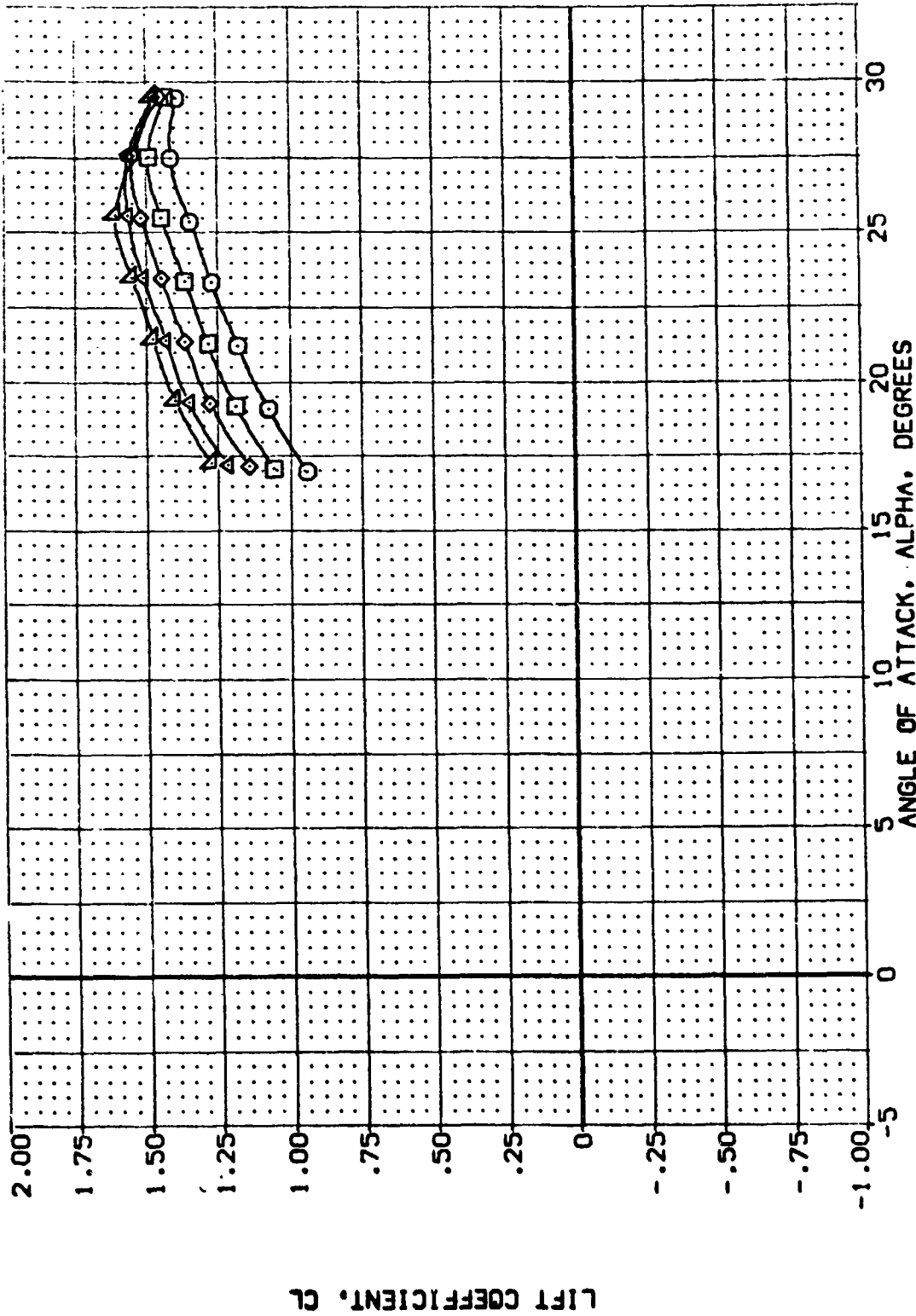


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02055)	0A5Z8 B26C9G1S47F8 V116E28V8RSX9	.035	25.000	-12.000	SREF 4.4119 SO.FT
(B02049)	0A5Z8 B26C9G1S47F8 V116E28V8RSX9	.035	25.000	-12.000	LREF 19.2299 INCHES
(B02050)	0A5Z8 B26C9G1S47F8 V116E28V8RSX9	.035	25.000	-12.000	BREF 37.5359 INCHES
(B02051)	0A5Z8 B26C9G1S47F8 V116E28V8RSX9	.035	25.000	-12.000	XMRP 43.5974 INCHES
(B02052)	0A5Z8 B26C9G1S47F8 V116E28V8RSX9	.035	25.000	-12.000	ZMRP .0000 INCHES
					SCALE 15.1875 INCHES
					SCALE .0405

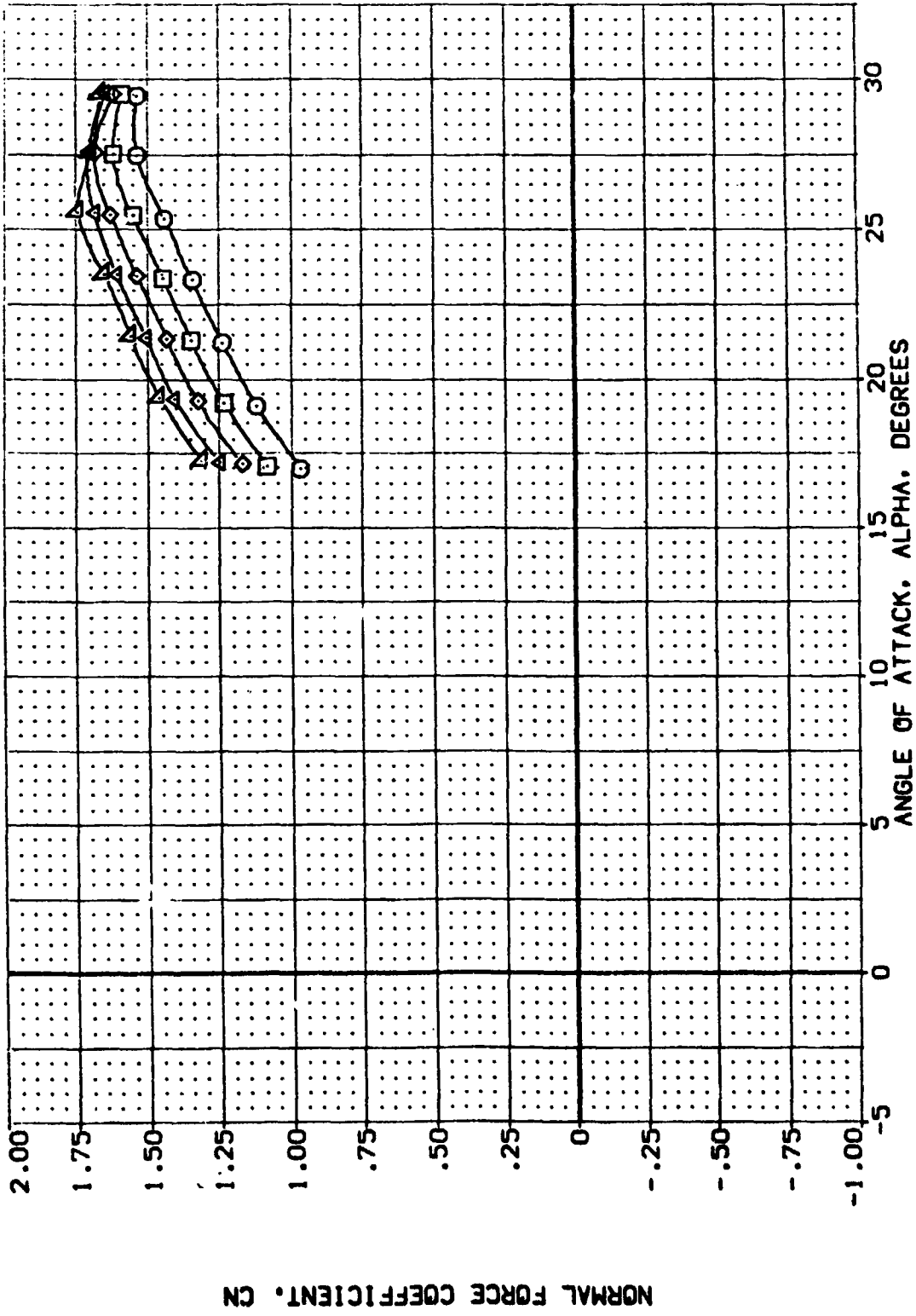


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

(3)

(4)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(BDZ055)	QAS28 B26C9G1SM7F8 V116E28V8R5X9	-5.000	.035	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(BDZ049)	QAS28 B26C9G1SM7F8 V116E28V8R5X9	.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(BDZ050)	QAS28 B26C9G1SM7F8 V116E28V8R5X9	5.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(BDZ051)	QAS28 B26C9G1SM7F8 V116E28V8R5X9	10.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
(BDZ052)	QAS28 B26C9G1SM7F8 V116E28V8R5X9	15.000	.035	25.000	-12.000	YMRP 43.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

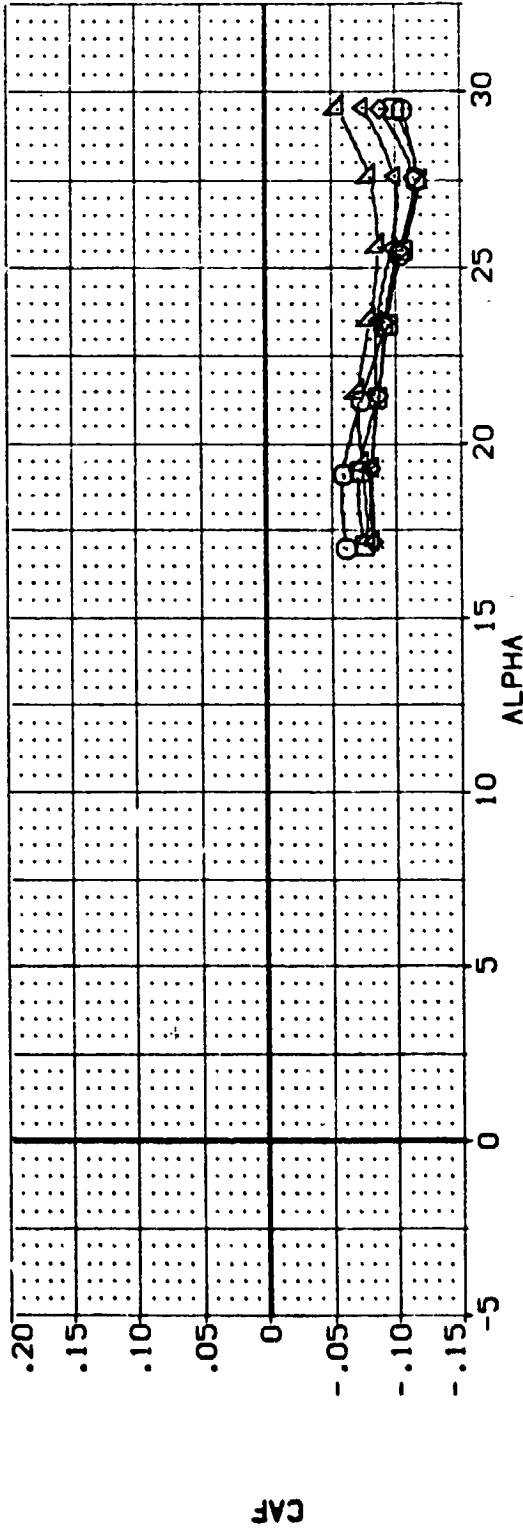
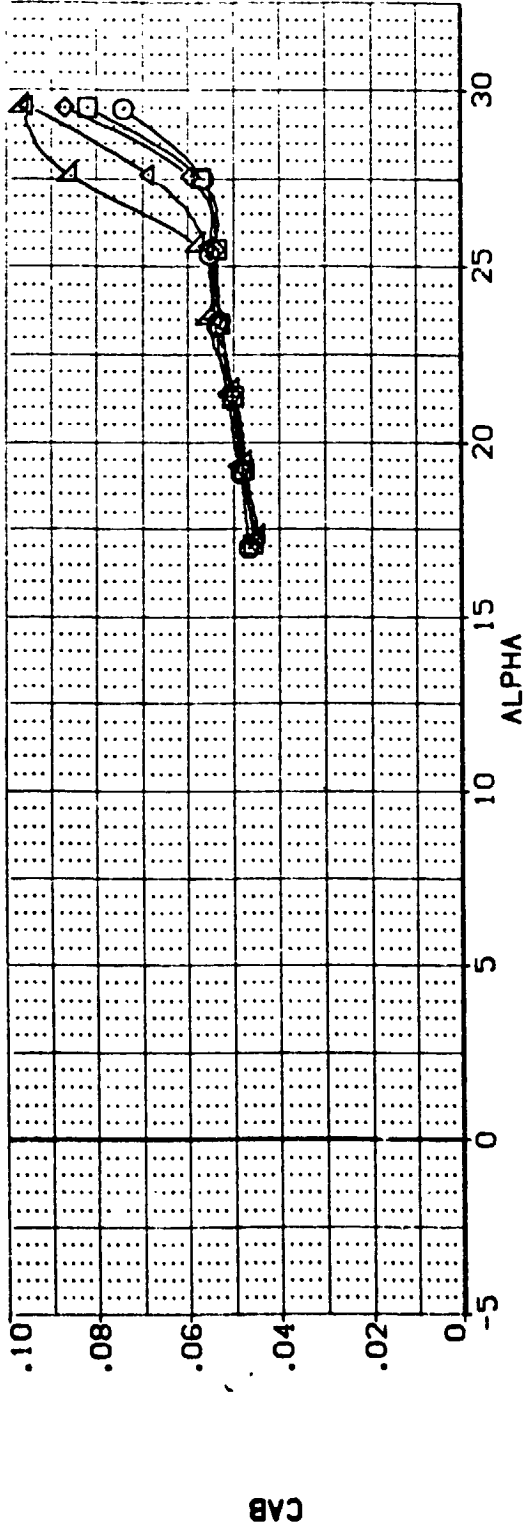
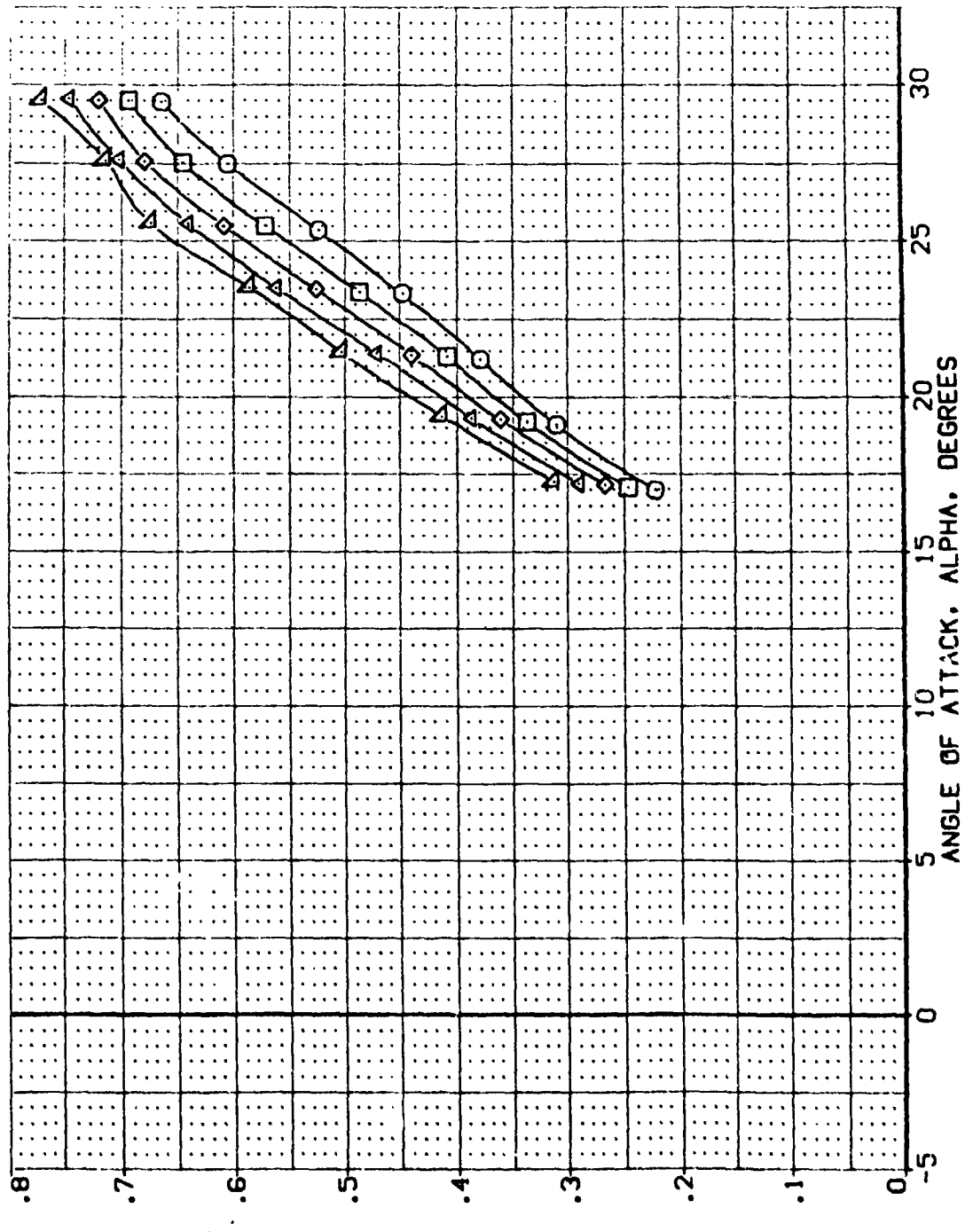


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802051)	0A628 B26C9G15M7F8 V116E28V8R5X9	-5.000	.035	25.000	-12.000	SREF 4.4119 SQ.FT.
(802049)	0A628 B26C9G15M7F8 V116E28V8R5X9	5.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(802050)	0A628 B26C9G15M7F8 V116E28V8R5X9	10.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(802051)	0A628 B26C9G15M7F8 V116E28V8R5X9	15.000	.035	25.000	-12.000	XMRP 43.974 INCHES
(802052)	0A628 B26C9G15M7F8 V116E28V8R5X9					ZMRP 15.1873 INCHES
						SCALE .0405 INCHES

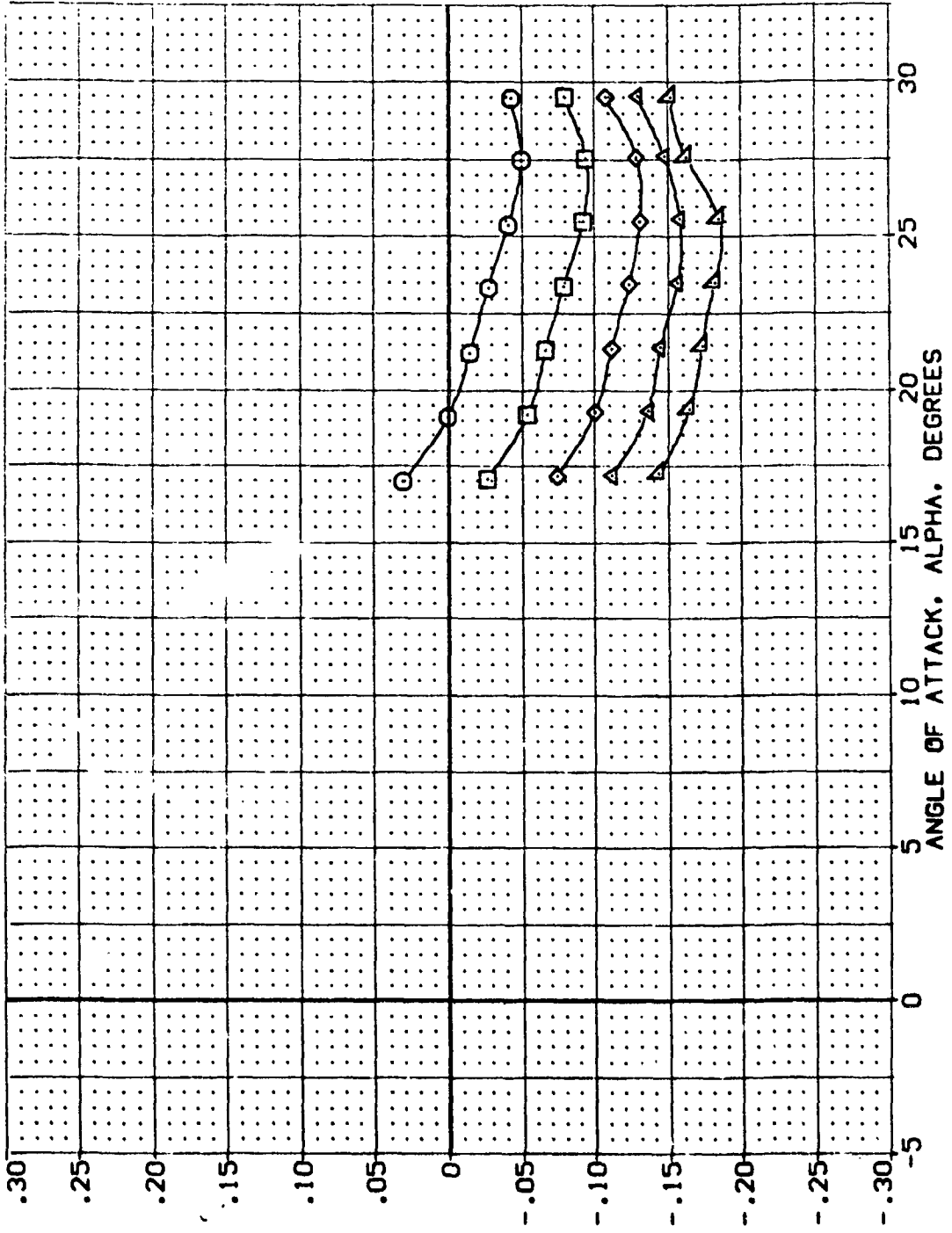


FOREBODY DRAG COEFFICIENT, CDF

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

-(A)M/CH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(802055)	0A528 B26C9G1SMT78 V116E28V8RSX9	-5.000	.035	25.000	-12.000	SREF 4.4119 50.FT.
(802049)	0A528 B26C9G1SMT78 V116E28V8RSX9	.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(802050)	0A528 B26C9G1SMT78 V116E28V8RSX9	5.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(802051)	0A528 B26C9G1SMT78 V116E28V8RSX9	10.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
(802052)	0A528 B26C9G1SMT78 V116E28V8RSX9	15.000	.035	25.000	-12.000	YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CM

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A) MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B0Z055)	0A5Z8 B26C9G154778 V116E28V8RSX9
(B0Z049)	0A5Z8 B26C9G154778 V116E28V8RSX9
(B0Z050)	0A5Z8 B26C9G154778 V116E28V8RSX9
(B0Z051)	0A5Z8 B26C9G154778 V116E28V8RSX9
(B0Z052)	0A5Z8 B26C9G154778 V116E28V8RSX9

ELEVON	H/BW	SPDBRK	BOFLAP	REFERENCE INFORMATION
-5.000	.035	25.000	-12.000	SAEF 4.4119 SO.FT INCHES
0.000	.035	25.000	-12.000	LREF 19.2299 INCHES
5.000	.035	25.000	-12.000	BREF 37.9359 INCHES
10.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
15.000	.035	25.000	-12.000	YMRP .0000 INCHES
				ZMRP 15.1875 INCHES
				SCALE .0405

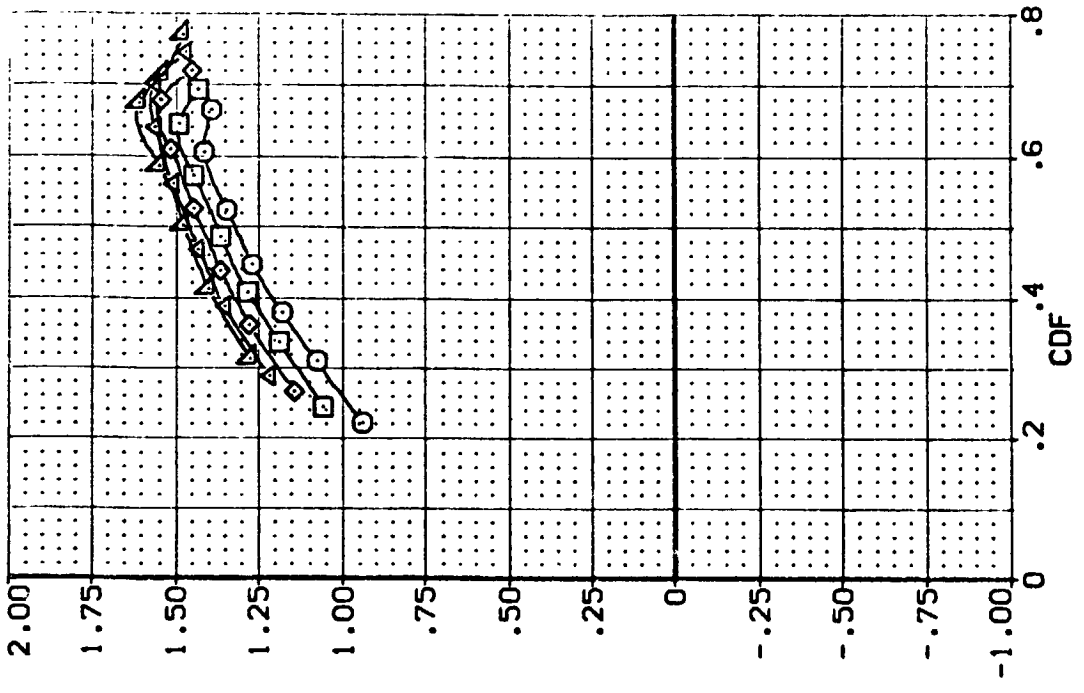
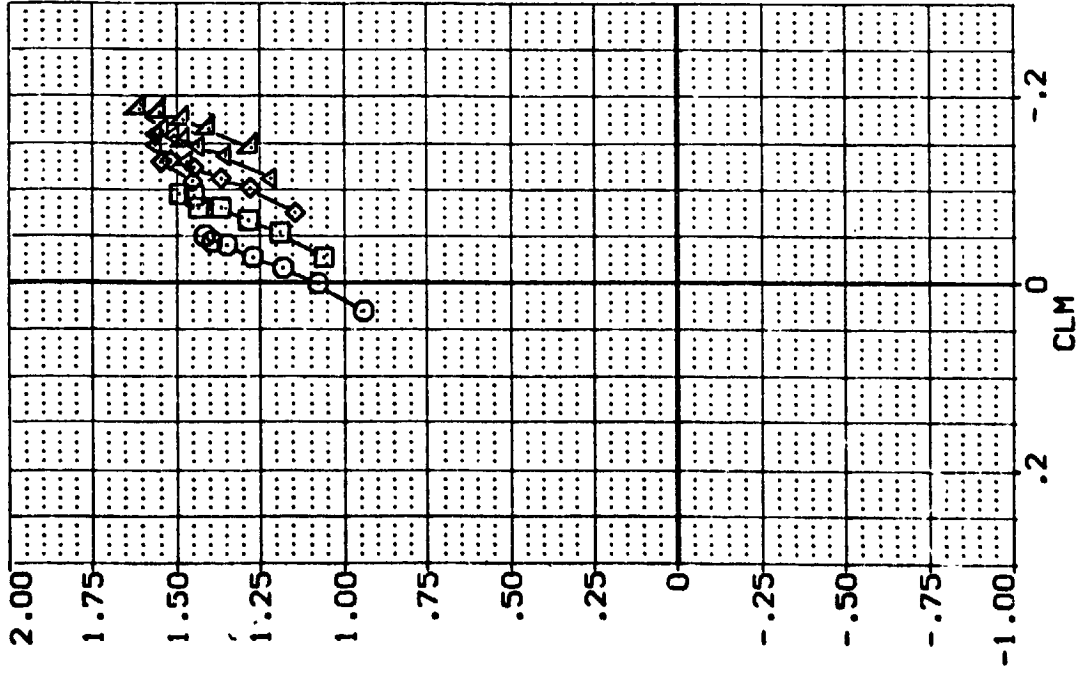


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20



DATA SET SYMBO... CONFIGURATION DESCRIPTION

(BOZ055)	0A5Z8	BZ6C9G1547F8	VII16E28V8RSX9
(BOZ049)	0A5Z8	BZ6C9G1547F8	VII16E28V8RSX9
(BOZ050)	0A5Z8	BZ6C9G1547F8	VII16E28V8RSX9
(BOZ051)	0A5Z8	BZ6C9G1547F8	VII16E28V8RSX9
(BOZ052)	0A5Z8	BZ6C9G1547F8	VII16E28V8RSX9

ELEVON H/BW SPDRK BOFLAP REFERENCE INFORMATION

-5.000	25.000	-12.000	4.4119	SO.FT.
.035	25.000	-12.000	19.2298	INCHES
5.000	25.000	-12.000	37.9359	INCHES
10.000	25.000	-12.000	43.5974	INCHES
15.000	25.000	-12.000	15.0000	INCHES
			15.1875	INCHES
			.0405	SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

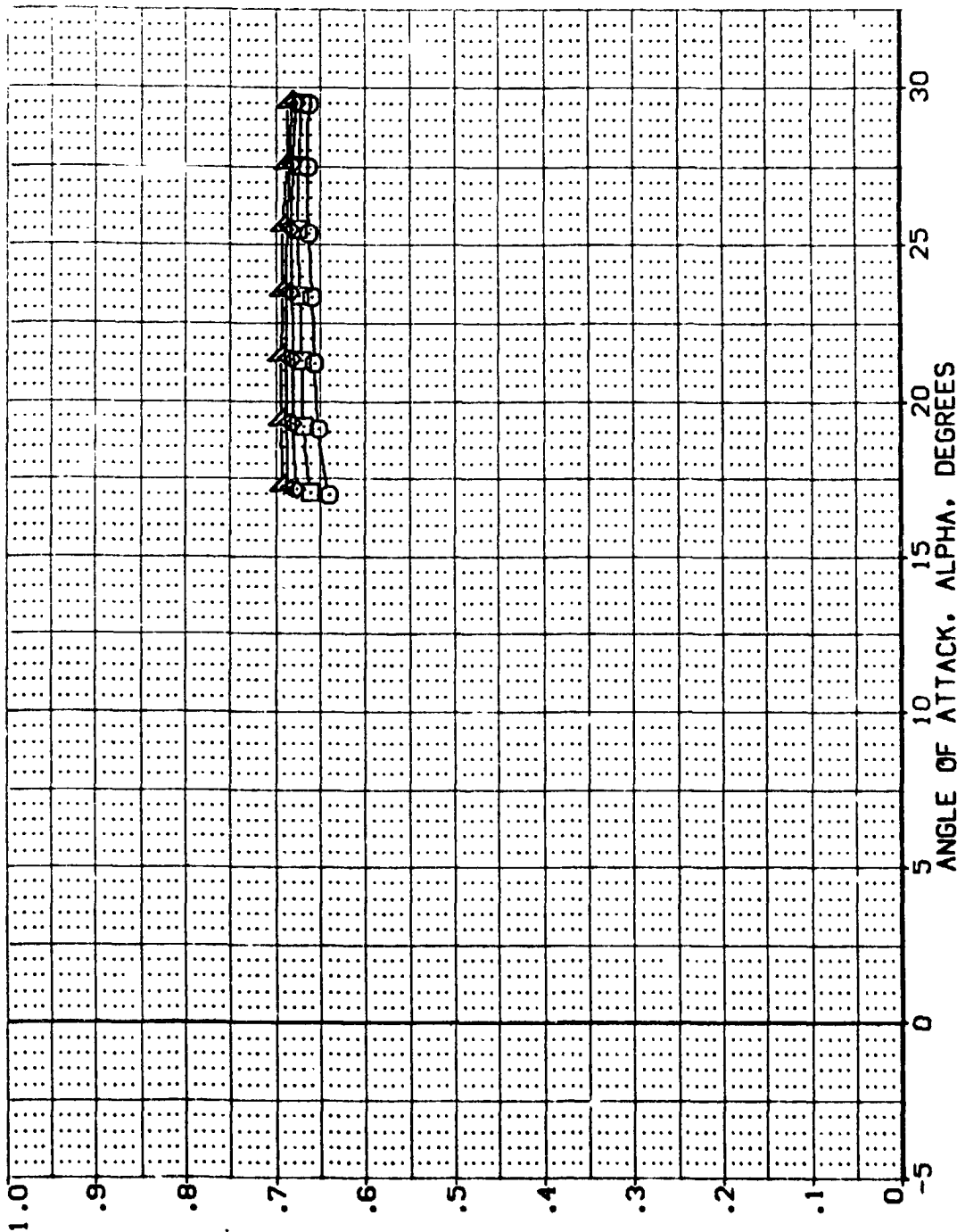
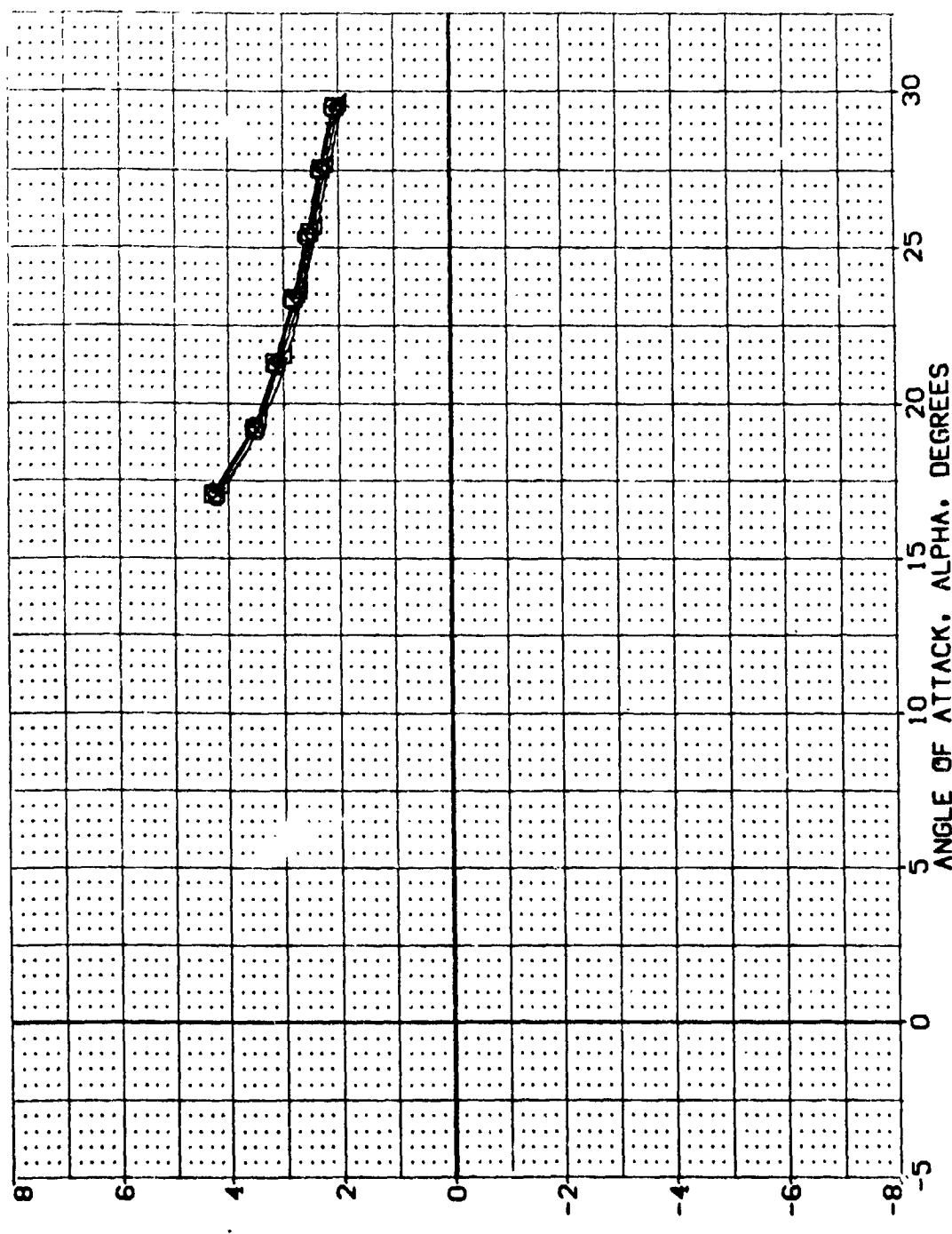


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

CATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BDFLAP	REFERENCE INFORMATION
(80Z055)	0A628 826C9G15M7F8 V116E28V8RSX9	-5.000	.035	25.000	-12.000	SREF 4.4119 SO.FT.
(80Z049)	0A628 826C9G15M7F8 V116E28V8RSX9	5.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(80Z050)	0A628 826C9G15M7F8 V116E28V8RSX9	10.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(80Z051)	0A628 826C9G15M7F8 V116E28V8RSX9	15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
(80Z052)	0A628 826C9G15M7F8 V116E28V8RSX9					ZMRP .0000 INCHES
						ZSCALE 15.1875 INCHES
						SCALE .0405



FOREBODY LIFT TO DRAG RATIO, L/D

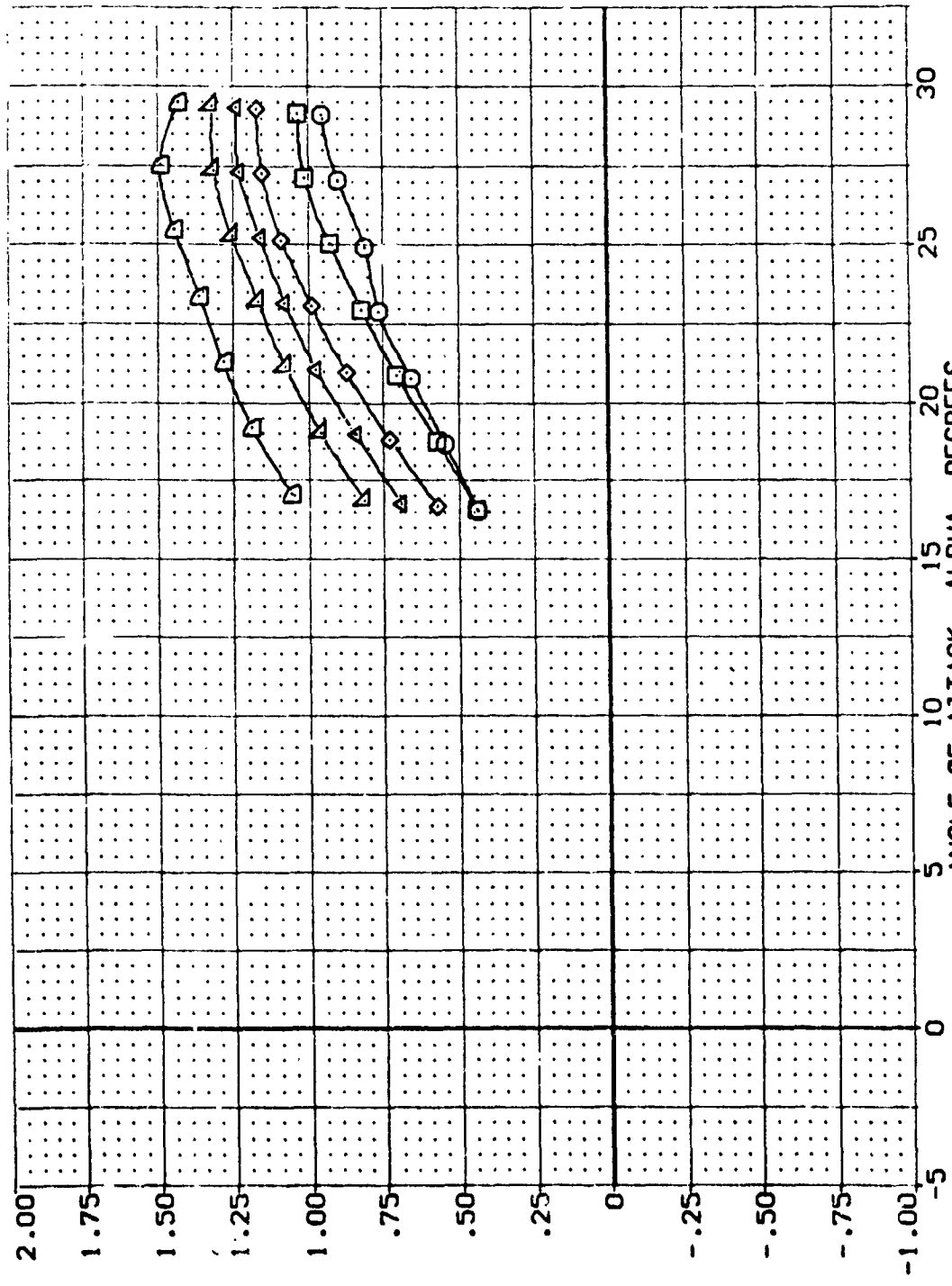
FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

CA/MACH = .20



(5)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDRBK	BOFLAP	REFERENCE INFORMATION
(BD7051)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-40.000	.035	25.000	-12.000	SREF 4.4119 SO.FT.
(BD7050)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-30.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(BD7059)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-20.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(BD7058)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-15.000	.035	25.000	-12.000	XTRP 43.5974 INCHES
(BD7056)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-10.000	.035	25.000	-12.000	YTRP .0000 INCHES
(BD7049)	0A628 B26C9G 5M7F8 V116E28V8R5X9	-10.000	.035	25.000	-12.000	ZTRP 15.1875 INCHES
						SCALE .0405



LIFT COEFFICIENT, CL

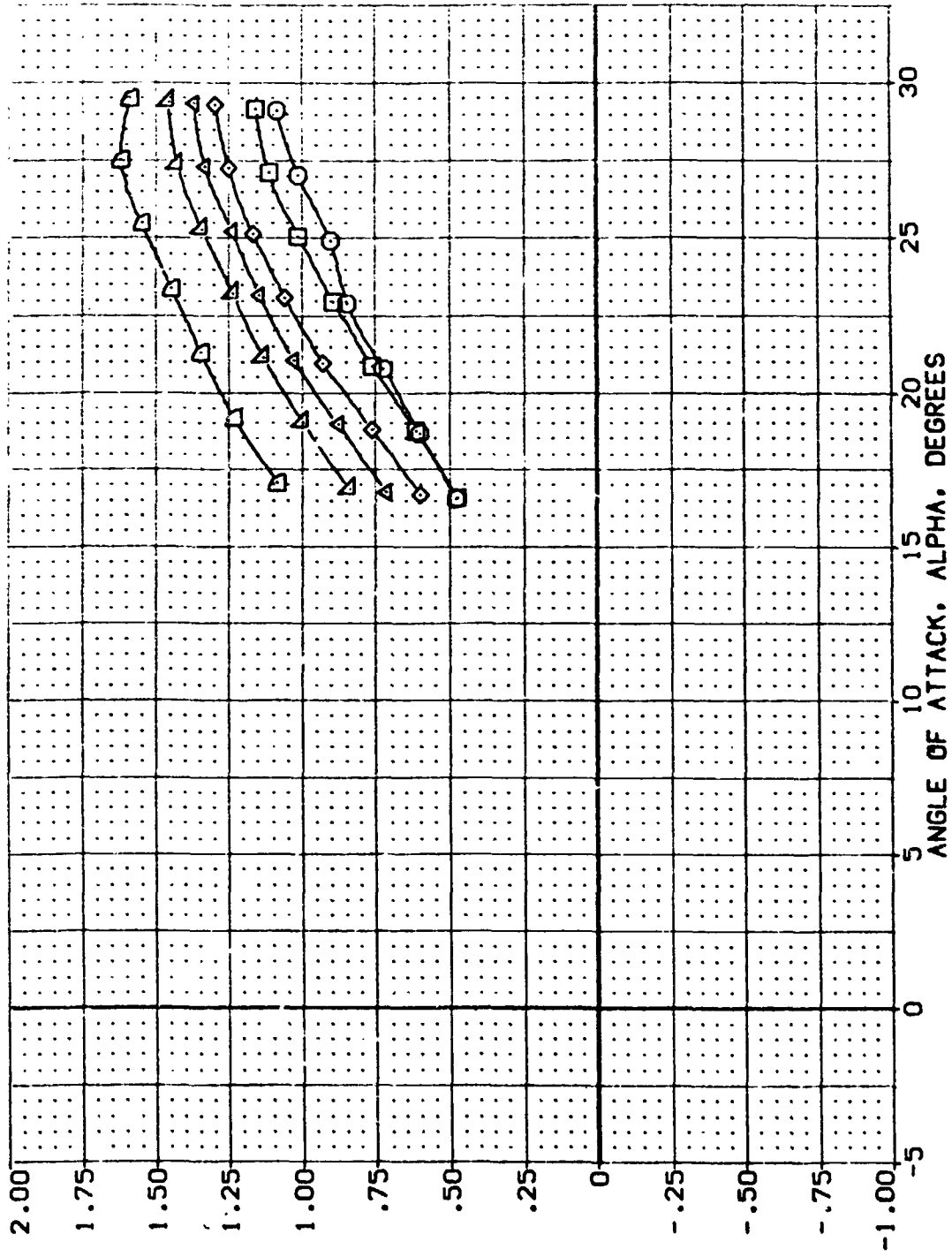
FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (80Z061)    □    0A628 826C961SMT78 V116E28V85X9  
 (80Z060)    ○    0A628 826C961SMT78 V116E28V85X9  
 (80Z059)    △    0A628 826C961SMT78 V116E28V85X9  
 (80Z058)    ◇    0A628 826C961SMT78 V116E28V85X9  
 (80Z056)    □    0A628 826C961SMT78 V116E28V85X9  
 (80Z049)    △    0A628 826C961SMT78 V116E28V85X9

ELEVON H/BW    SPOBRK    BOFLAP  
 -40.000    25.000    -12.000  
 -30.000    25.000    -12.000  
 -20.000    25.000    -12.000  
 -15.000    25.000    -12.000  
 -10.000    25.000    -12.000  
 .000    25.000    -12.000

REFERENCE INFORMATION  
 SAE:    4.4119    50.FT.  
 LREF:    19.2799    INCHES  
 BRFC:    37.9359    INCHES  
 XMRP:    43.5974    INCHES  
 YMRP:    .0000    INCHES  
 ZMRP:    15.1875    INCHES  
 SCALE:    .0405    SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION	SO.FT.	
(BOZ061)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-40.000	.035	25.000	-12.000	SREF	4.4119	
(BOZ060)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-30.000	.035	25.000	-12.000	LREF	19.2259	
(BOZ059)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-20.000	.035	25.000	-12.000	BREF	37.9359	
(BOZ058)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-15.000	.035	25.000	-12.000	XMRP	43.5974	
(BOZ056)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-10.000	.035	25.000	-12.000	ZMRP	0.0000	
(BOZ049)	0A6Z8 B26C9G1 SMT78 VII5E28VBR5X9	-10.000	.035	25.000	-12.000	SCALE	15.1875	
							SCALE	0.0403

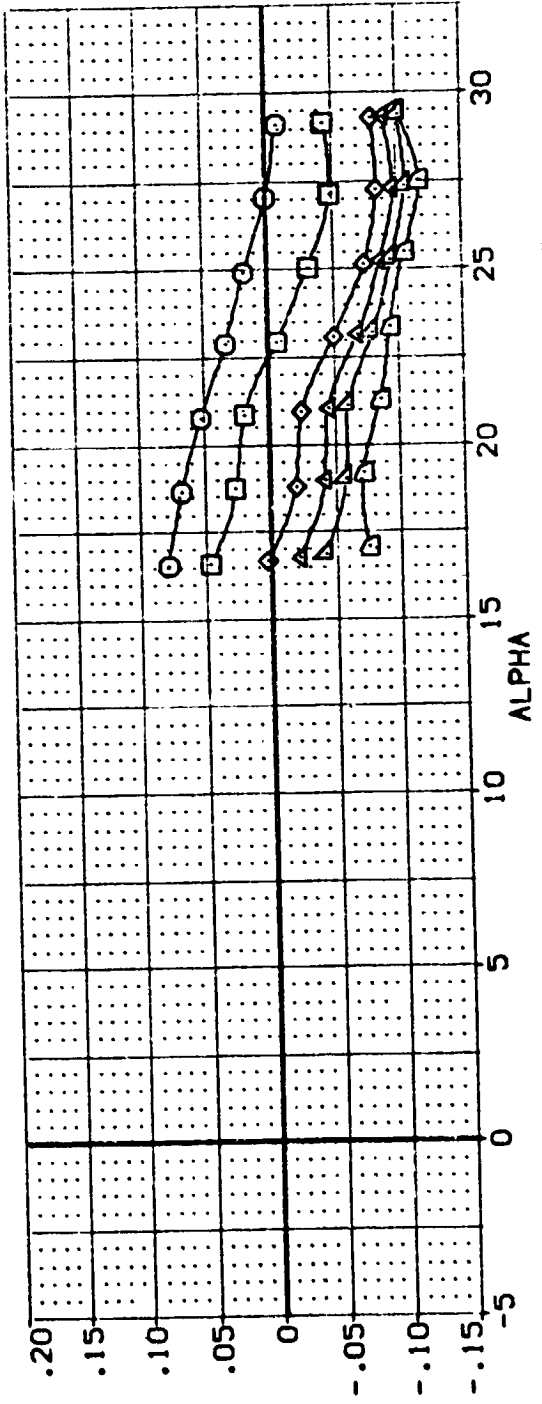
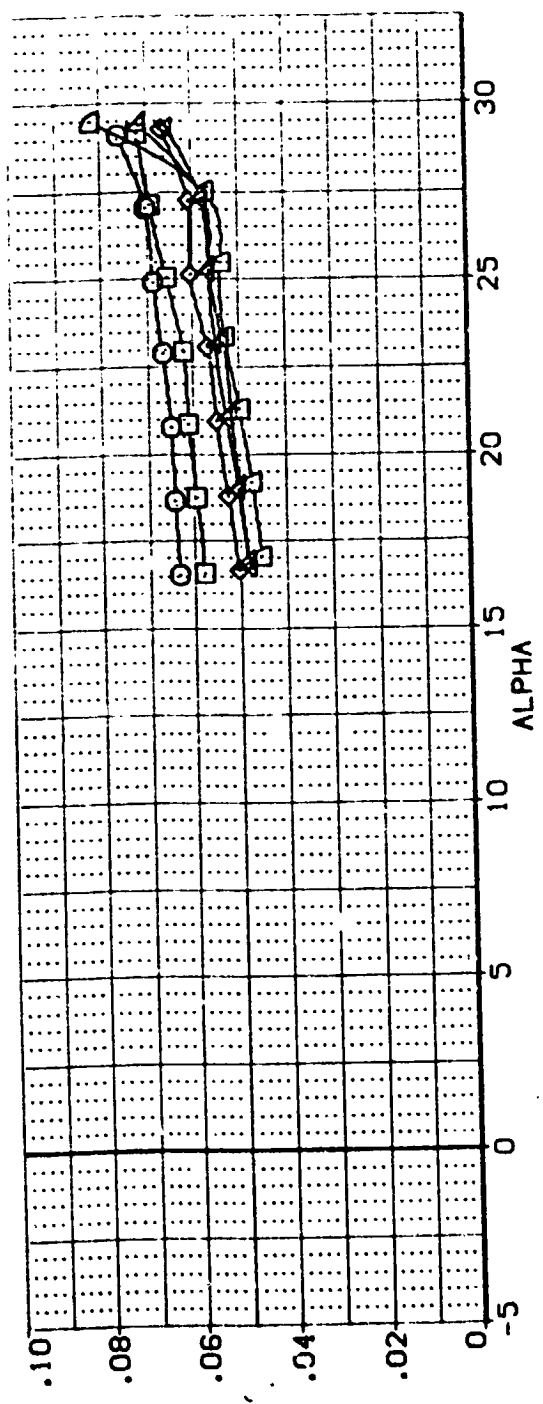


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B07061)	0A628 B26C9G SMT78 V1 E28V85X9	-40.000	.035	25.000	-12.000	4.4119 SO.FT.
(B07060)	0A628 B26C9G SMT78 V1 E28V85X9	-30.000	.035	25.000	-12.000	19.2299 INCHES
(B07059)	0A628 B26C9G SMT78 V1 E28V85X9	-20.000	.035	25.000	-12.000	27.9359 INCHES
(B07058)	0A628 B26C9G SMT78 V1 E28V85X9	-15.000	.035	25.000	-12.000	43.5974 INCHES
(B07056)	0A628 B26C9G SMT78 V1 E28V85X9	-10.000	.035	25.000	-12.000	.0000 INCHES
(B07049)	0A628 B26C9G SMT78 V1 E28V85X9	-10.000	.035	25.000	-12.000	15.1875 INCHES
						.0405 SCALE

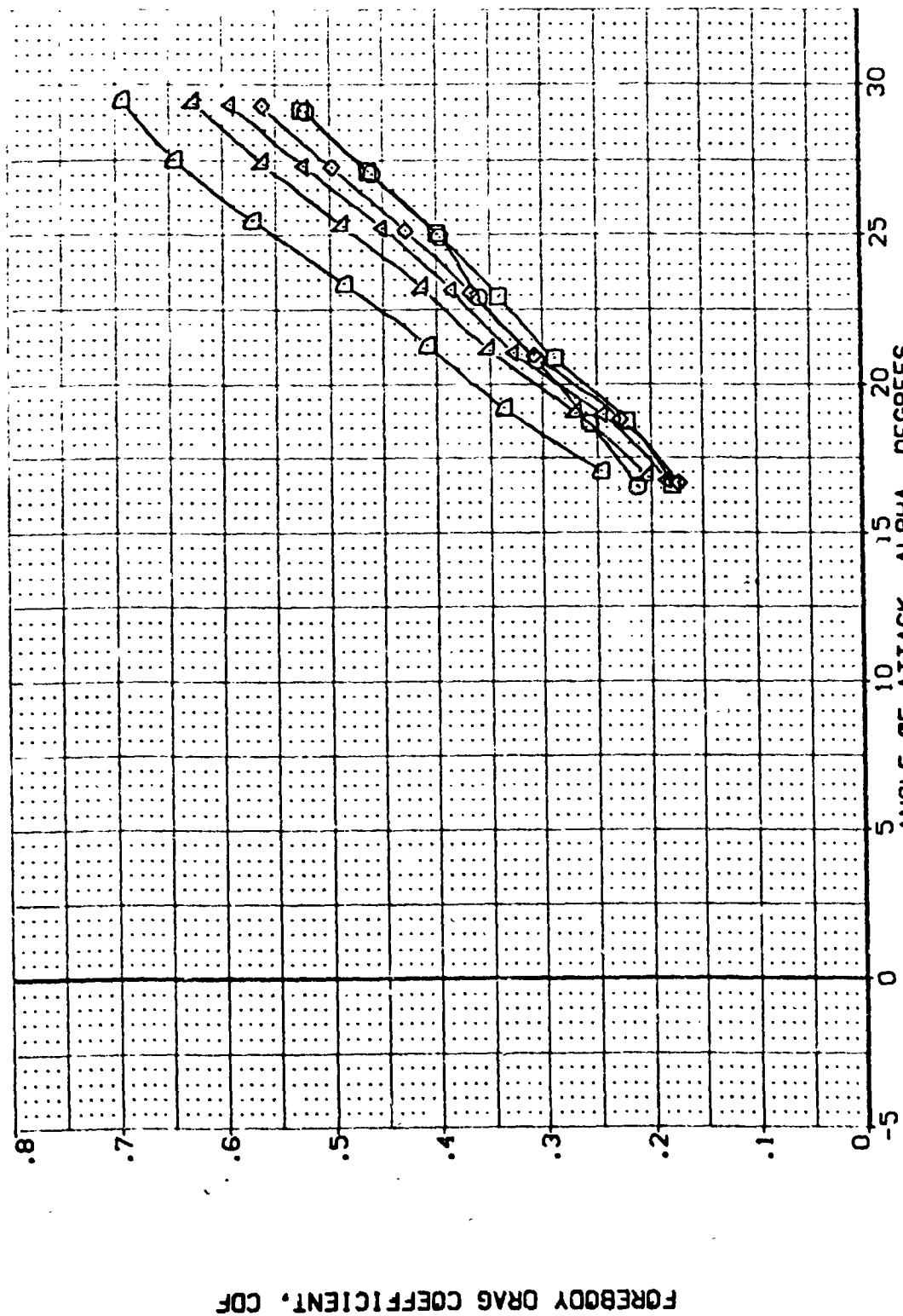
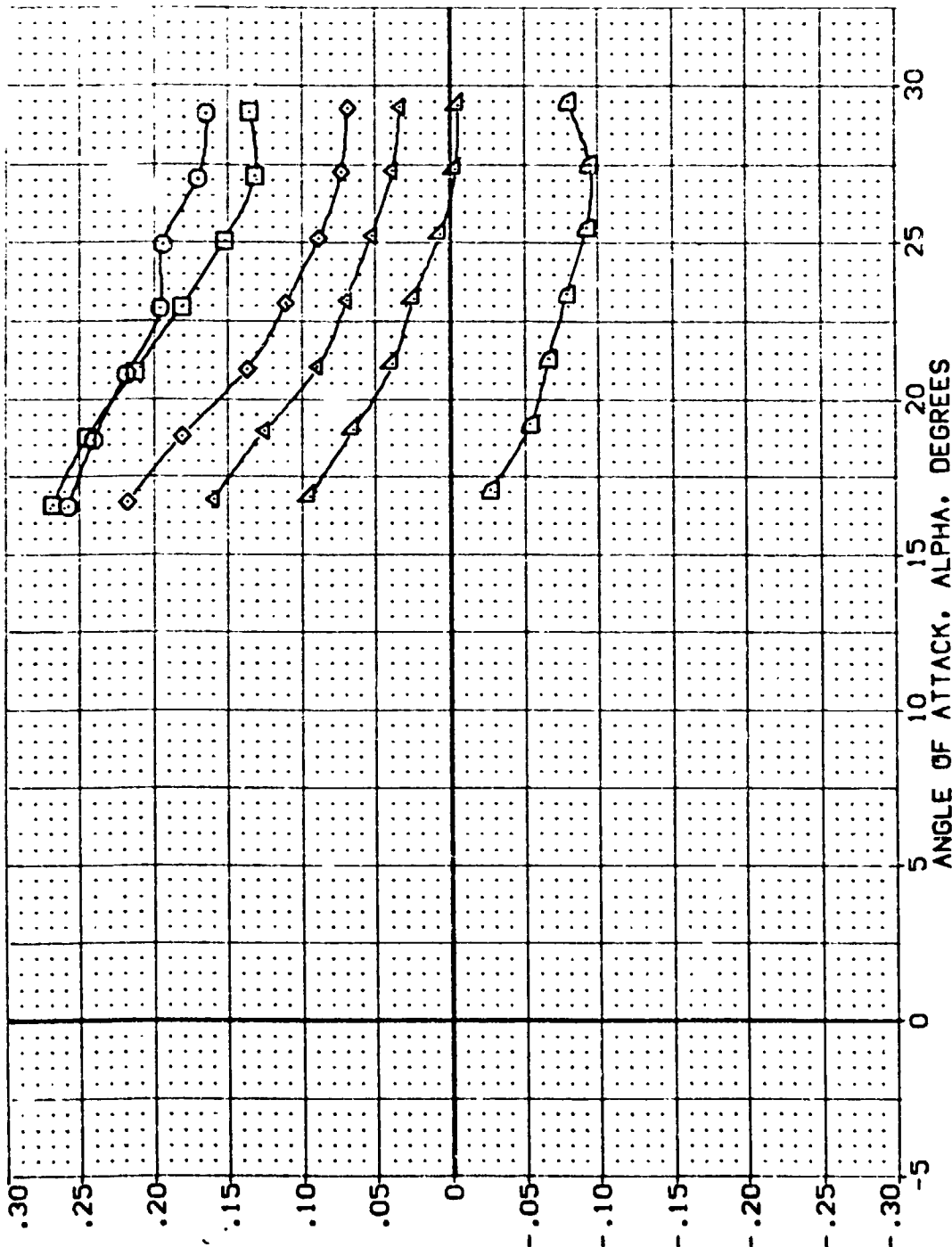


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

9

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802051)	0A628 B26C9G SHTF8 V116E28V8R5X9	-40.000	.035	25.000	-12.000	SREF 4.4119 SQ.FT. INCHES
(802050)	0A628 B26C9G SHTF8 V116E28V8R5X9	-30.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(802059)	0A628 B26C9G SHTF8 V116E28V8R5X9	-20.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(802058)	0A628 B26C9G SHTF8 V116E28V8R5X9	-15.000	.035	25.000	-12.000	XMPR 43.5974 INCHES
(802056)	0A628 B26C9G SHTF8 V116E28V8R5X9	-10.000	.035	25.000	-12.000	ZMPR .0000 INCHES
(802049)	0A628 B26C9G SHTF8 V116E28V8R5X9	.000	.035	25.000	-12.300	SCALE 15.1875 INCHES SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z051)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9
(80Z050)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9
(80Z059)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9
(80Z058)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9
(80Z056)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9
(80Z049)	0A6Z8 B26C9G15M7F8 V116E28VBR5X9

ELEVON	H/BW	SFOBRK	BDFLAP	REFERENCE INFORMATION
-40.000	.035	25.000	-12.000	SREF 4.4119 SO.FT.
-30.000	.035	25.000	-12.000	LREF 19.2299 INCHES
-20.000	.035	25.000	-12.000	BREF 37.9359 INCHES
-15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
-10.000	.035	25.000	-12.000	YMRP .0000 INCHES
.000	.035	25.000	-12.000	ZMRP 15.1875 INCHES
				SCALE .0405 SCALE

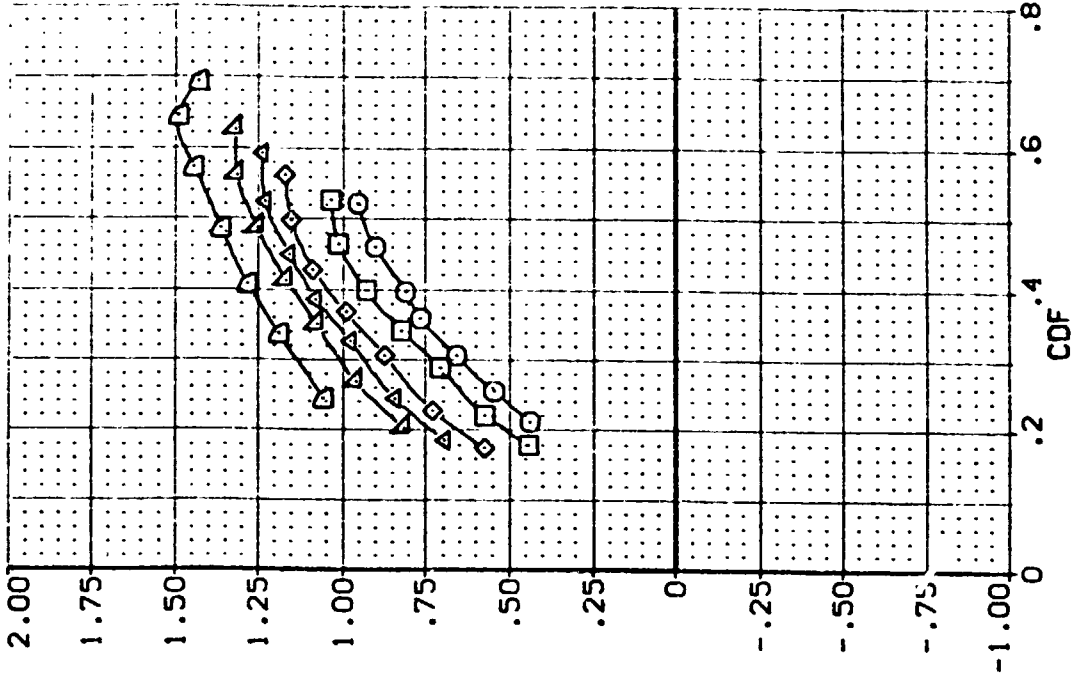
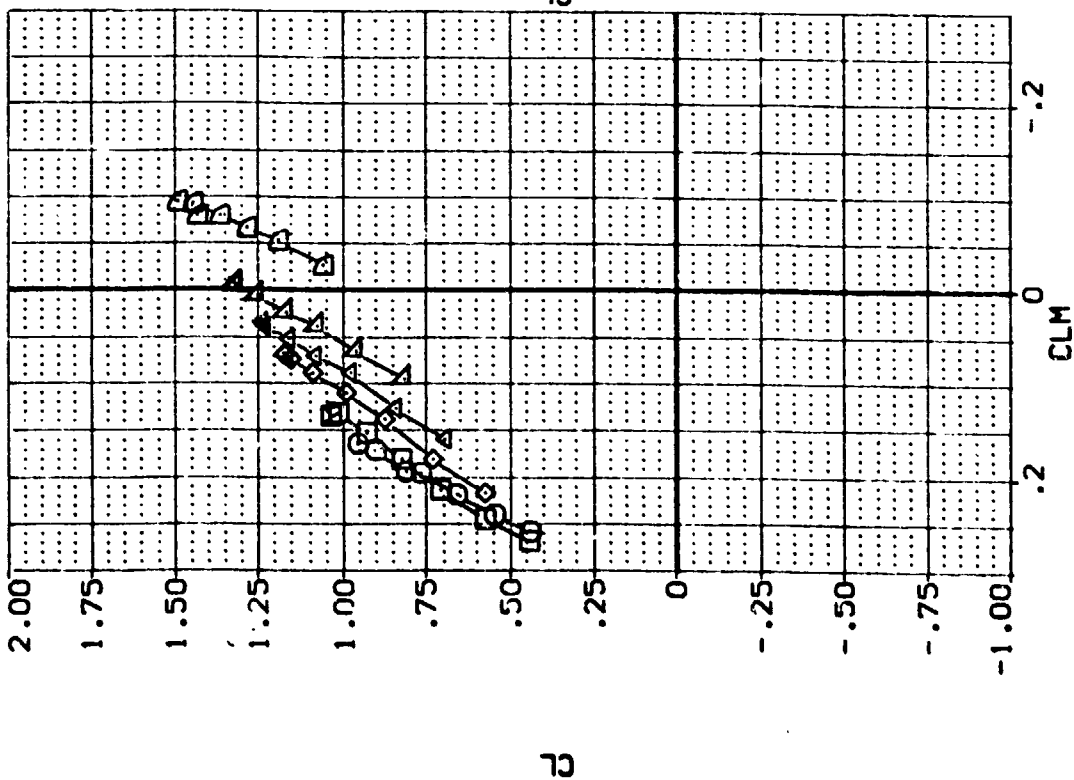


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02061)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	-40.000	.035	25.000	-12.000	SREF 1.4119 50.FT.
(B02060)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	-30.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(B02059)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	-20.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(B02058)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	-15.000	.035	25.000	-12.000	YMRP 43.5574 INCHES
(B02056)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	-10.000	.035	25.000	-12.000	ZMRP 15.0000 INCHES
(B02049)	0A6Z8 B26C9G1S47F8 V116E28V8RS4X9	.000	.035	25.000	-12.000	SCALE 15.1875 INCHES

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

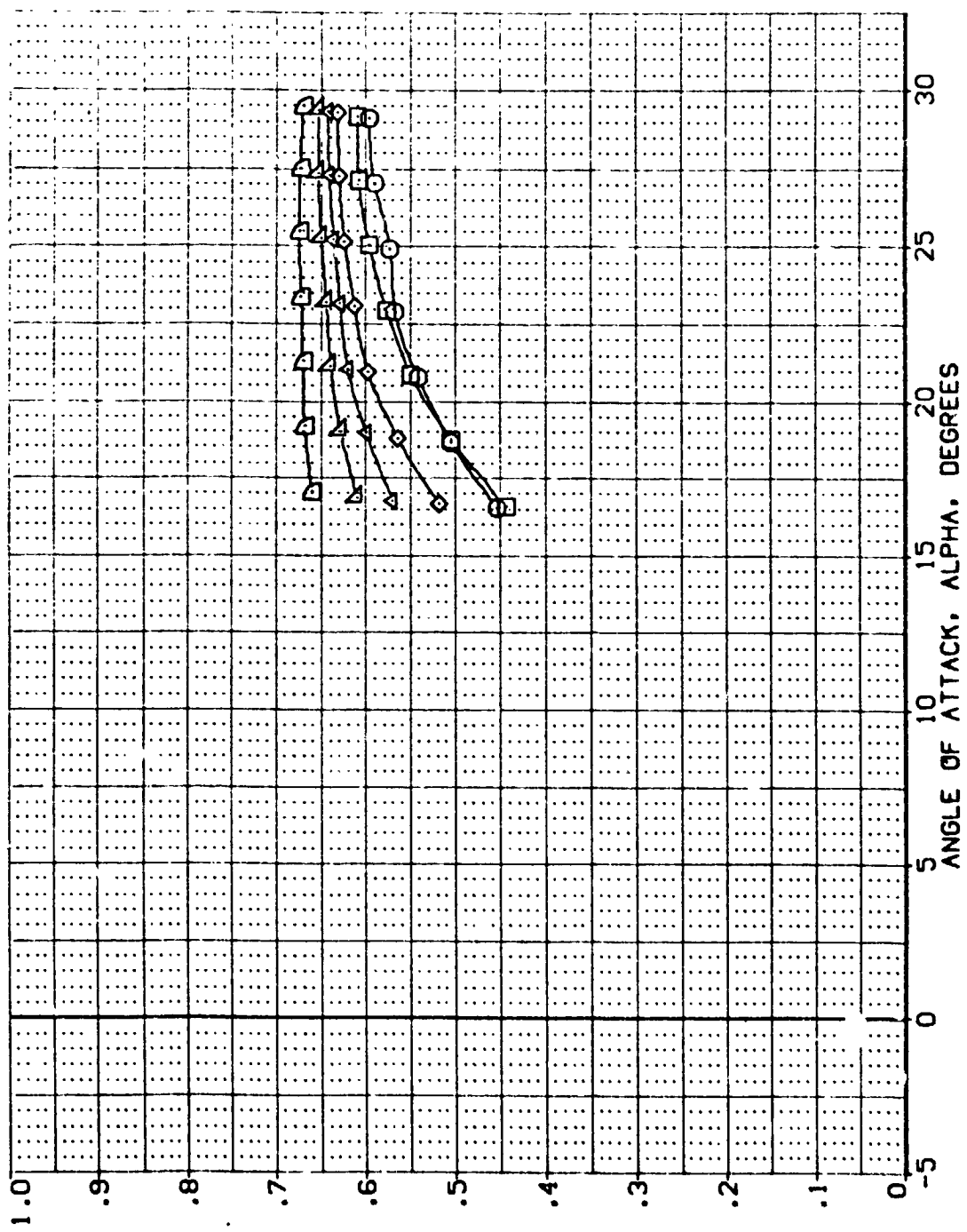


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(M)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z051)	0A6Z8 B26C9G SMT7F8	-40.000	.035	25.000	-12.000	SREF 4.4119 SO.FT.
(B0Z050)	0A6Z8 B26C9G SMT7F8	-30.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(B0Z059)	0A6Z8 B26C9G SMT7F8	-20.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(B0Z058)	0A6Z8 B26C9G SMT7F8	-15.000	.032	25.000	-12.000	XMRP 43.5974 INCHES
(B0Z056)	0A6Z8 B26C9G SMT7F8	-10.000	.035	25.000	-12.000	YMRP .0000 INCHES
(B0Z049)	0A6Z8 B26C9G SMT7F8	-10.000	.035	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

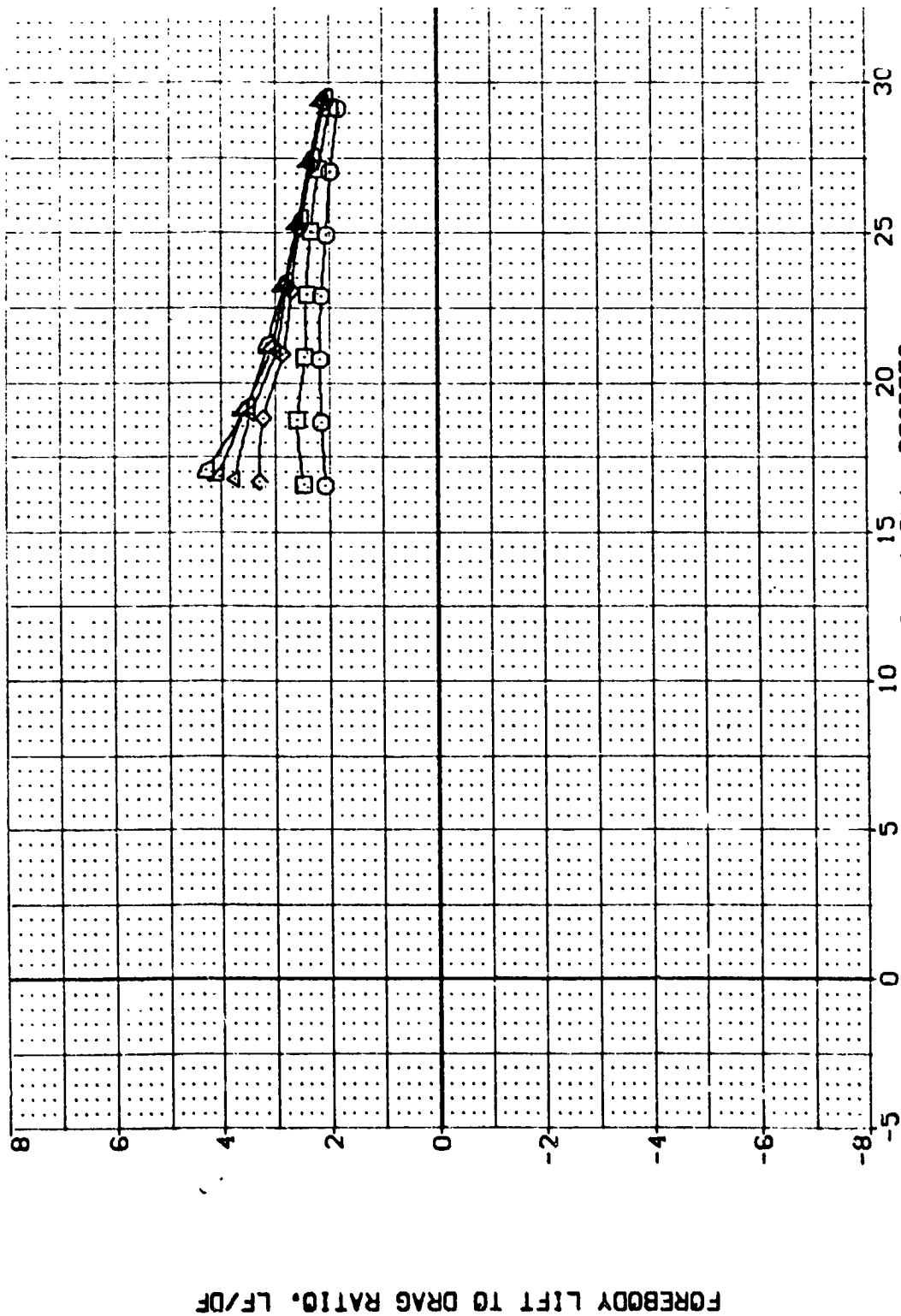


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20





0A628 B26C9G15M7F8 W116E28V8R5X9 (10Z061)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	.000	10Z061	DELTON	4.4119
MACH	.200	.000	10Z061	LREF	19.2299
BOX-LAP	-12.000	.000	10Z059	BREF	37.9359
RUDDER	.000	25.000	10Z055	XMRP	43.5974
H/BW	.035	.000	10Z049	YMRP	5.0000
		10.000	10Z051	ZMRP	15.1875
				SCALE	.0405

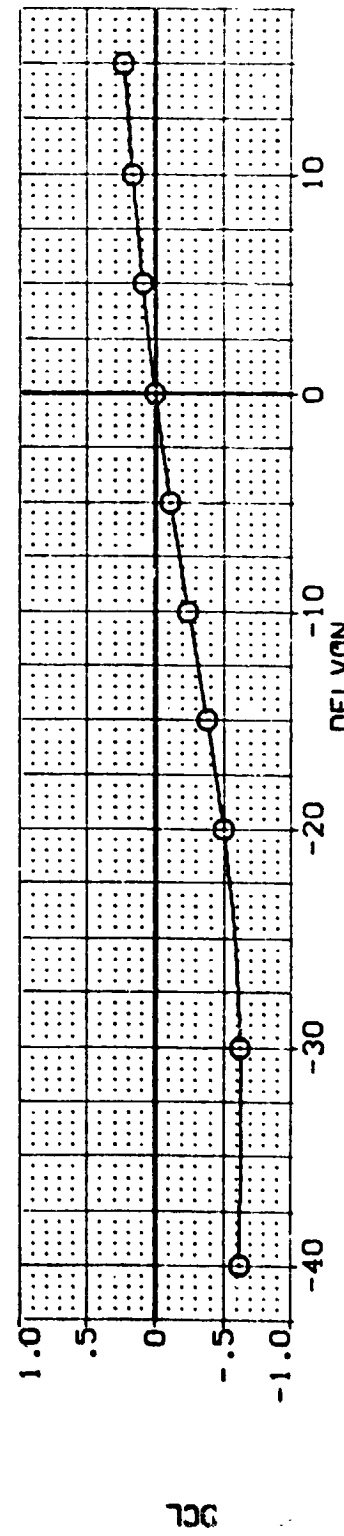
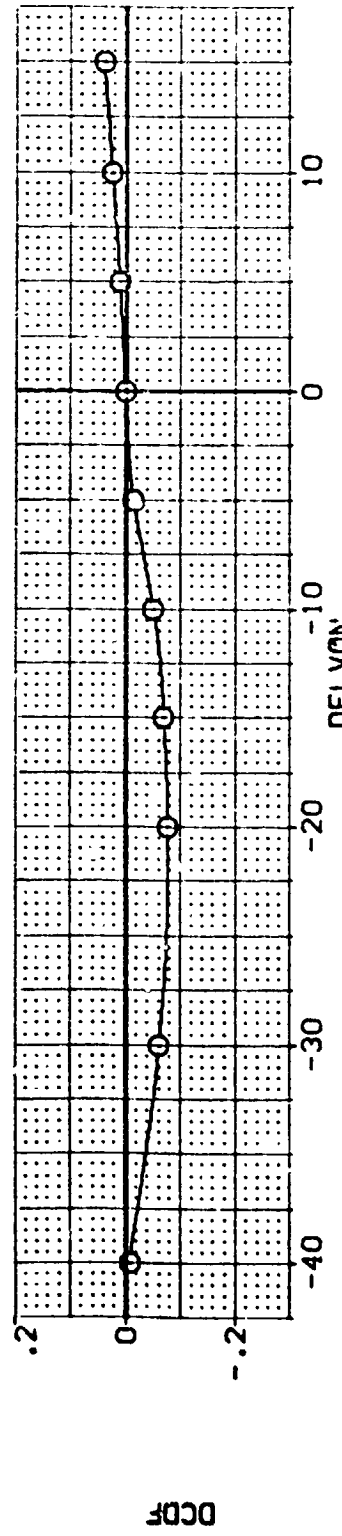
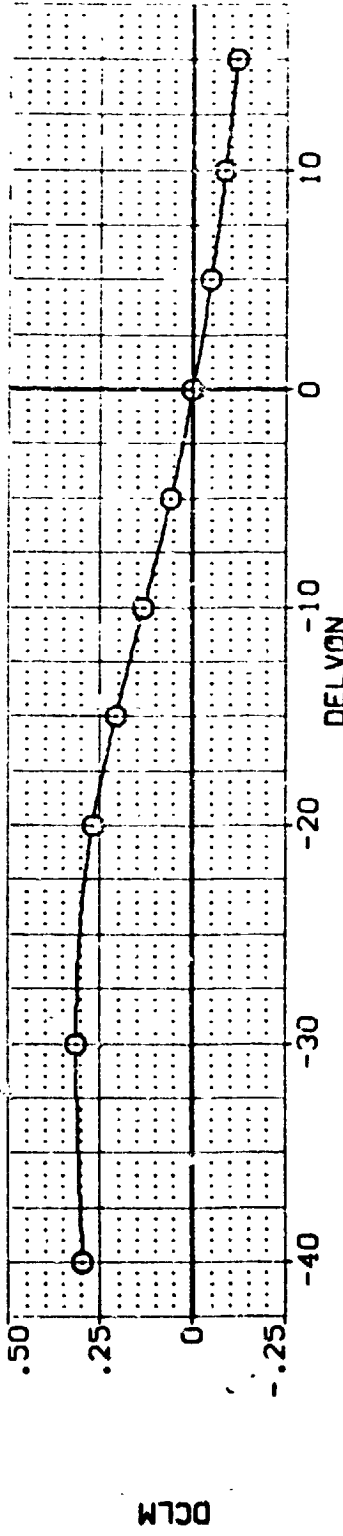


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035



(1DZ061)

0A62B B26C9G15M7F8 W113E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	20.000	MACH	.000	DELTON	SREF
BETA	.200	DELTON	-40.000	LREF	4.4119
BD/FLAP	-12.000	DATASET	.000	BREF	19.2293
RUDDER	.000	IDZ061	.000	YMRP	37.9353
H/BW	.035	IDZ059	25.000	XMRP	43.5974
		IDZ056	-10.000	ZMRP	.0000
		IDZ049	.000	SCALE	15.1875
		IDZ061	10.000		.0405

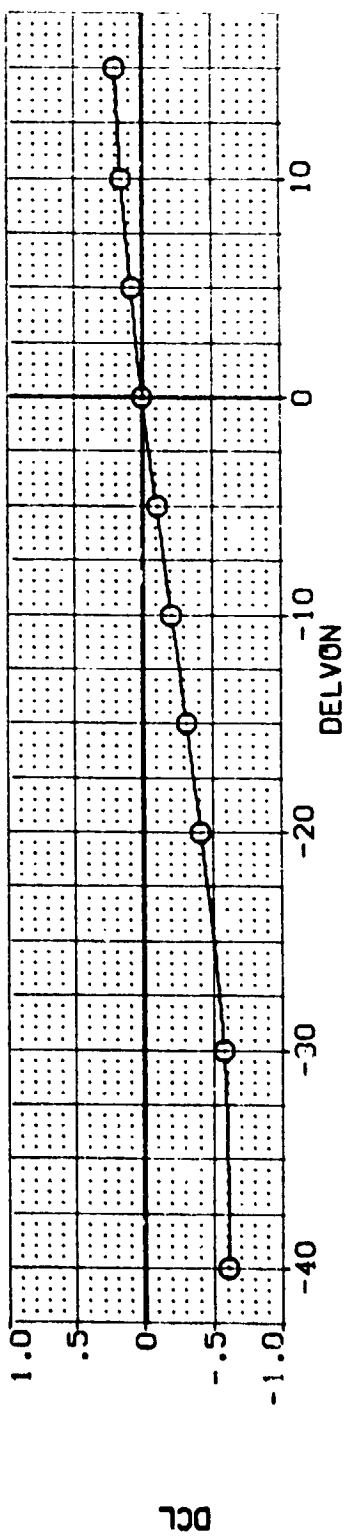
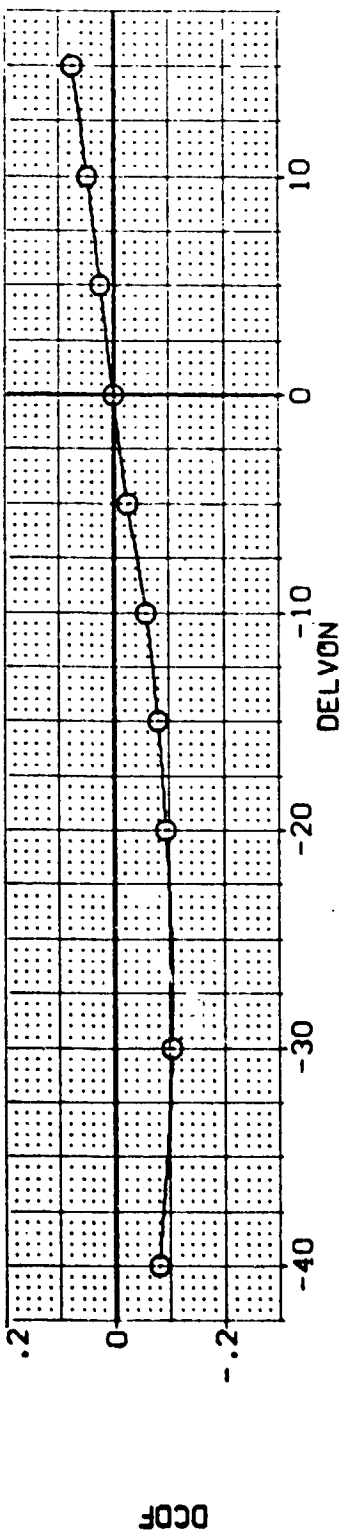
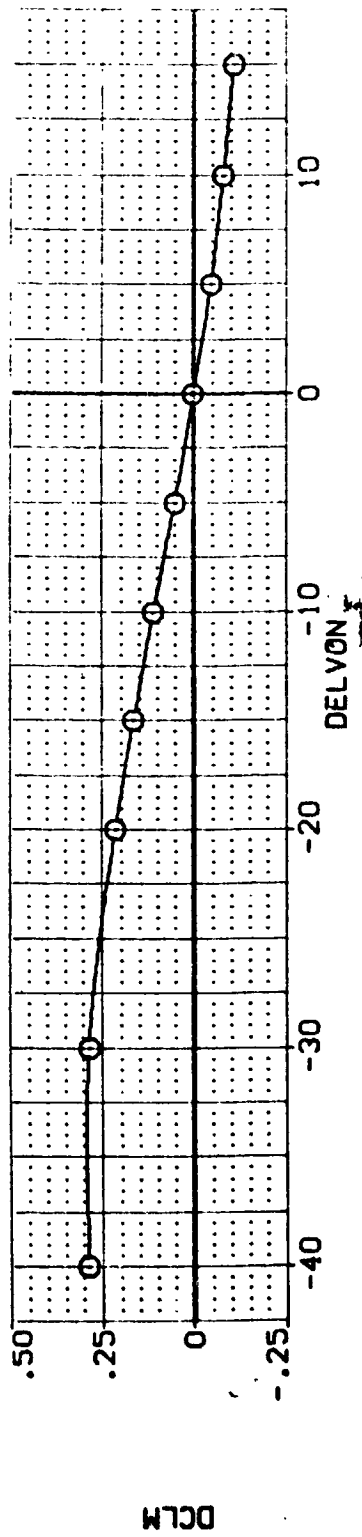


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ061)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	25.000	DELTVN	DELTVN	SREF	4.4119
MACH	.200	DELTVN	DELTVN	LREF	19.2299
BOFLAP	-12.000	DELTVN	DELTVN	BREF	37.9359
RUDDER	.000	DELTVN	DELTVN	XMRP	43.5974
H/BW	.035	DELTVN	DELTVN	YMRP	0.000
		DELTVN	DELTVN	ZMRP	15.1875
		DELTVN	DELTVN	SCALE	.0405

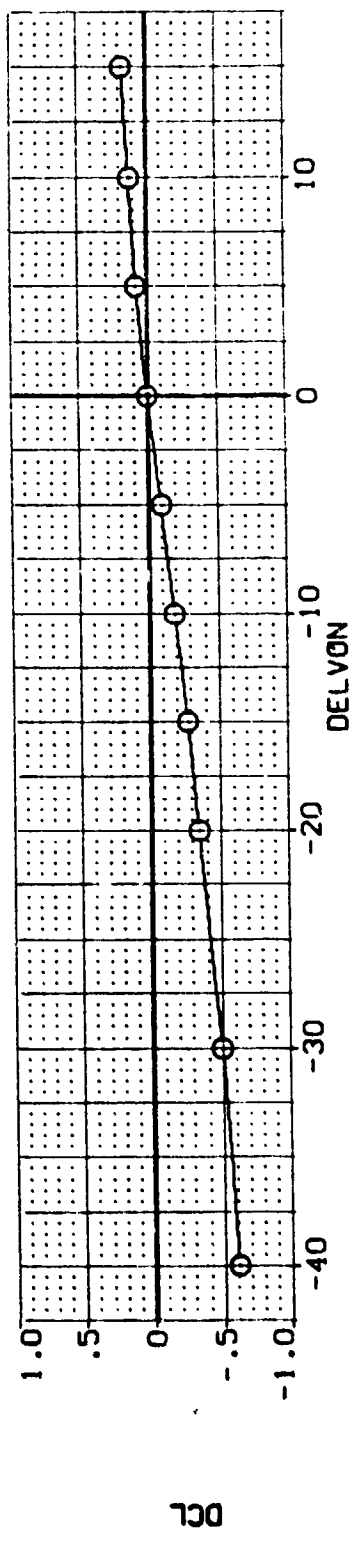
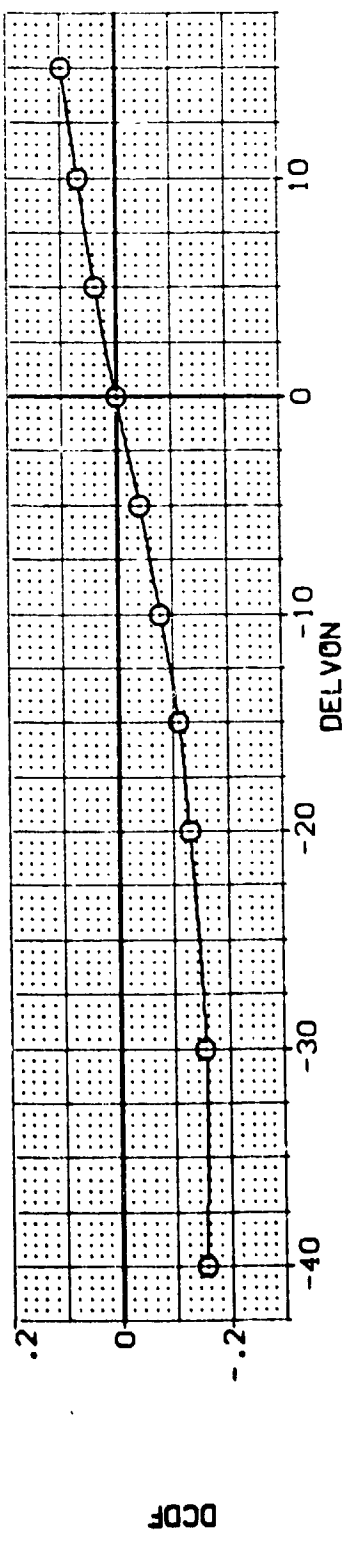
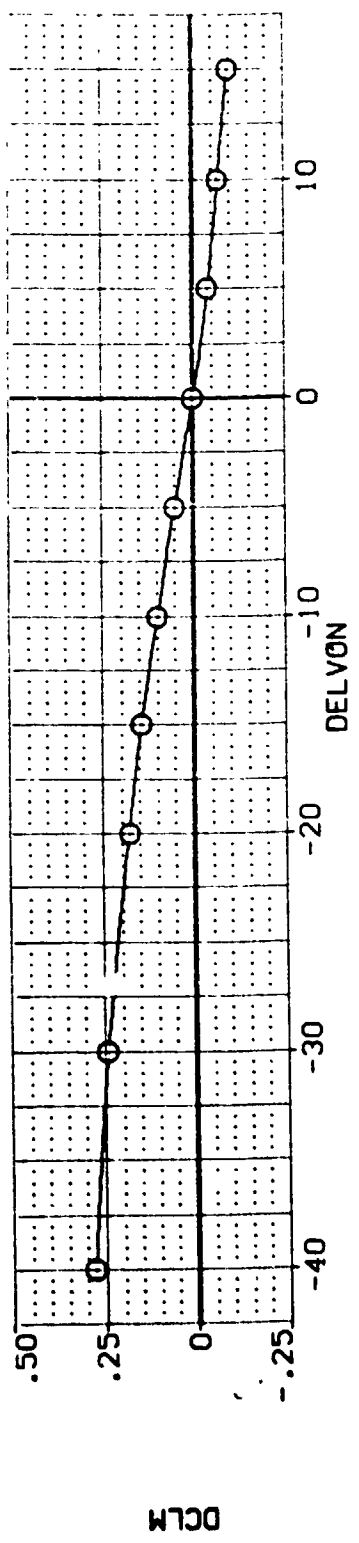


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ061)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	30.000	.200	BETA	.000	DATASET	DELVON	SREF	SO.FT.
		-12.000	A1LRON	.000	IDZ061	-40.000	LREF	19.2299
		.000	SFOBRK	25.000	IDZ059	-20.000	BREF	37.9359
		.035			IDZ056	-10.000	XMRP	43.5974
					IDZ049	.000	YMRP	.0000
					IDZ051	10.000	ZMRP	15.1875
							SCALE	.0405

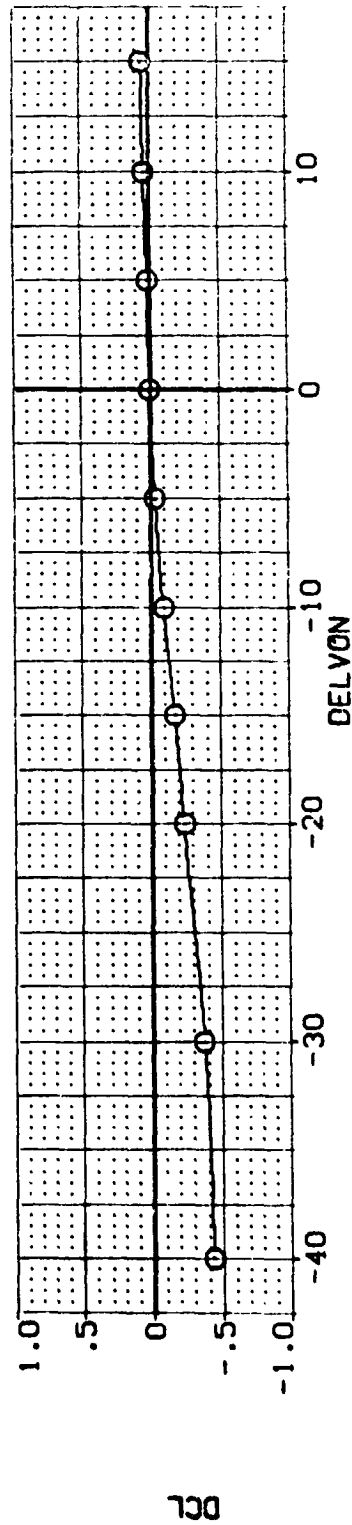
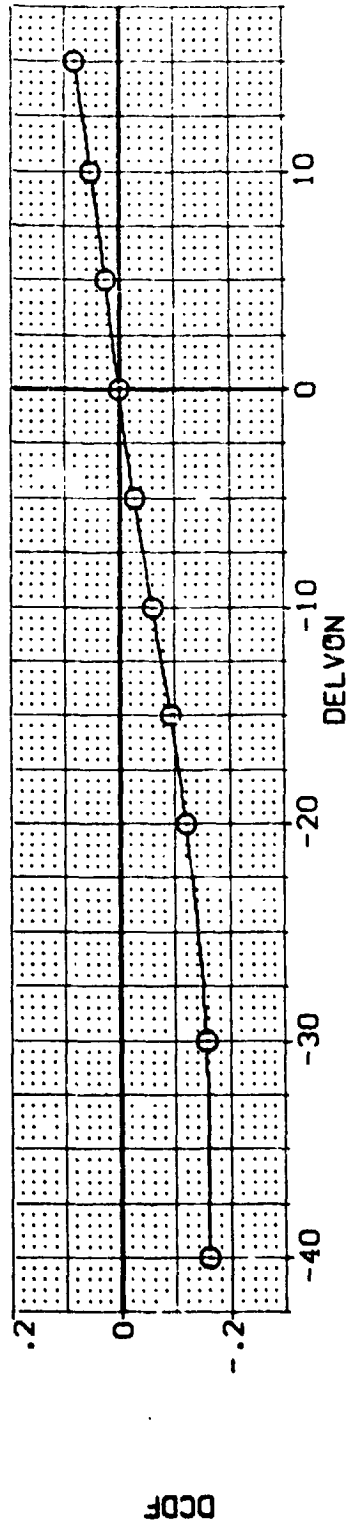
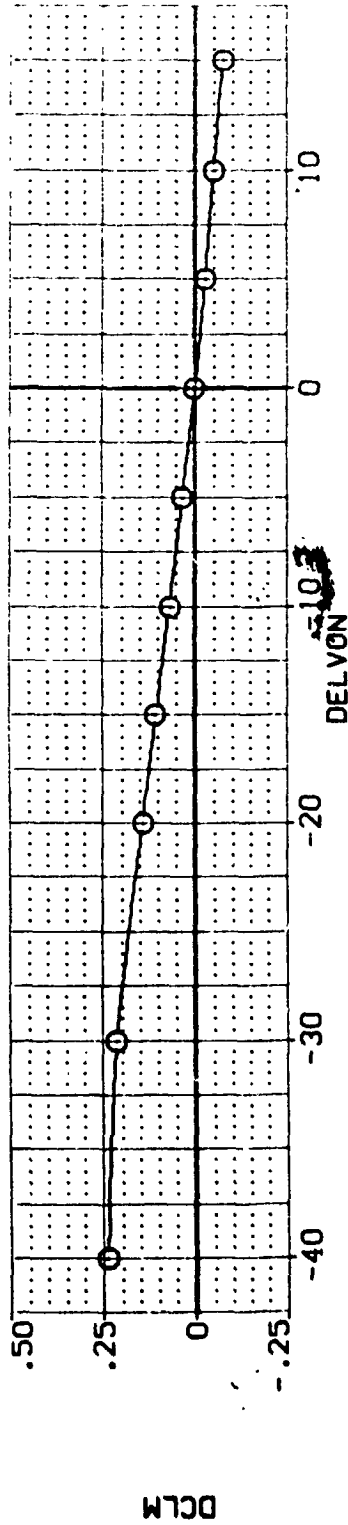
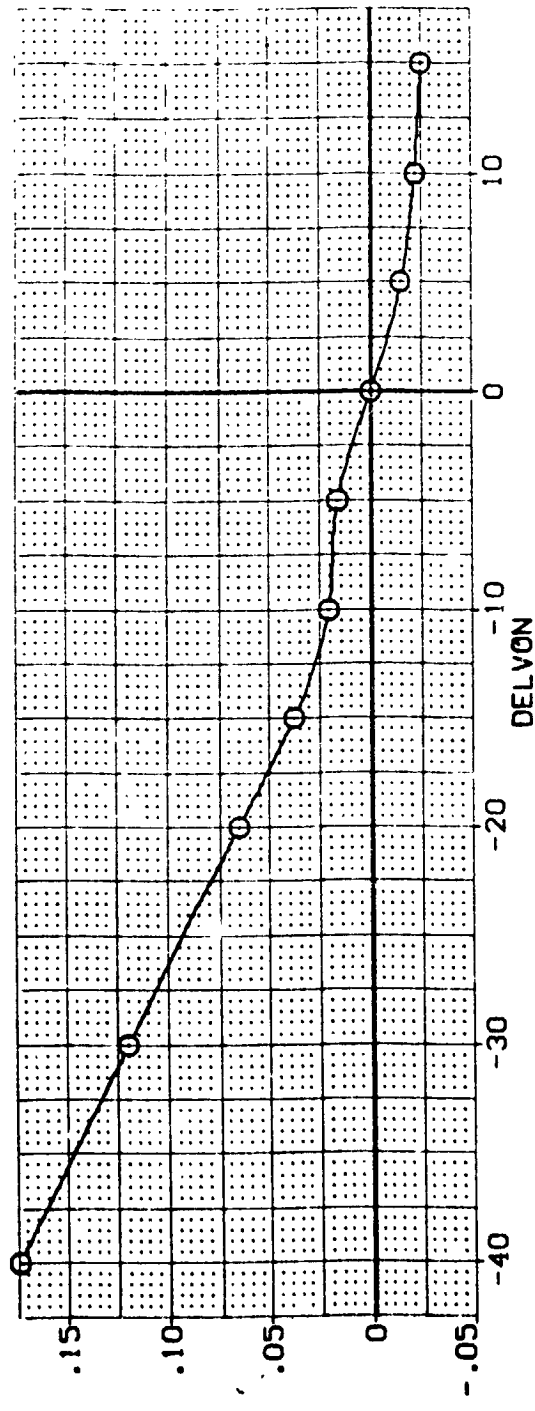


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035

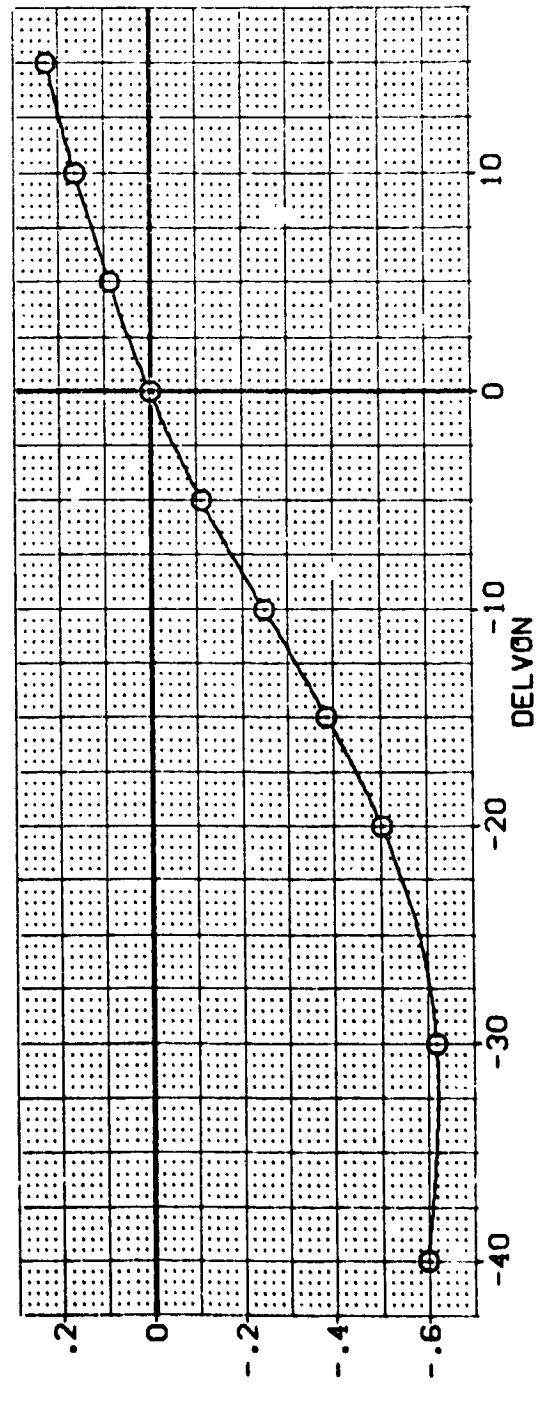


CA628 B26C9G15M7F8 W116E28V8R5X9 (1DZ061)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	DELTVN	-30.000	SREF	4.4119
MACH	.200	BETA	-40.000	LREF	19.2299
BDFLAP	-12.000	AILRON	-20.000	BREF	37.9359
RUDDER	.000	SPOBRK	25.000	YMRP	43.5974
H/BW	.035	IDZ061	-10.000	ZMRP	15.1875
		IDZ059	10.000	SCALE	.0405
		IDZ056			
		IDZ049			
		IDZ052			



DCA



DCN

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035



(1DZ061)

W116E28V8R5X9

B26C9G15M7F8

0A628

SYMBOL ○

ALPHA 20.000

MACH .200

BDFLAP .000

RUDDER .000

H/BW .035

BETA .12.000

ALLRON 25.000

SPOBRK .000

DELVON 10.000

DATA SOURCE

DELVON

REFERENCE INFORMATION

SC.FT. 4.4119

INCHES 19.2293

INCHES 37.9359

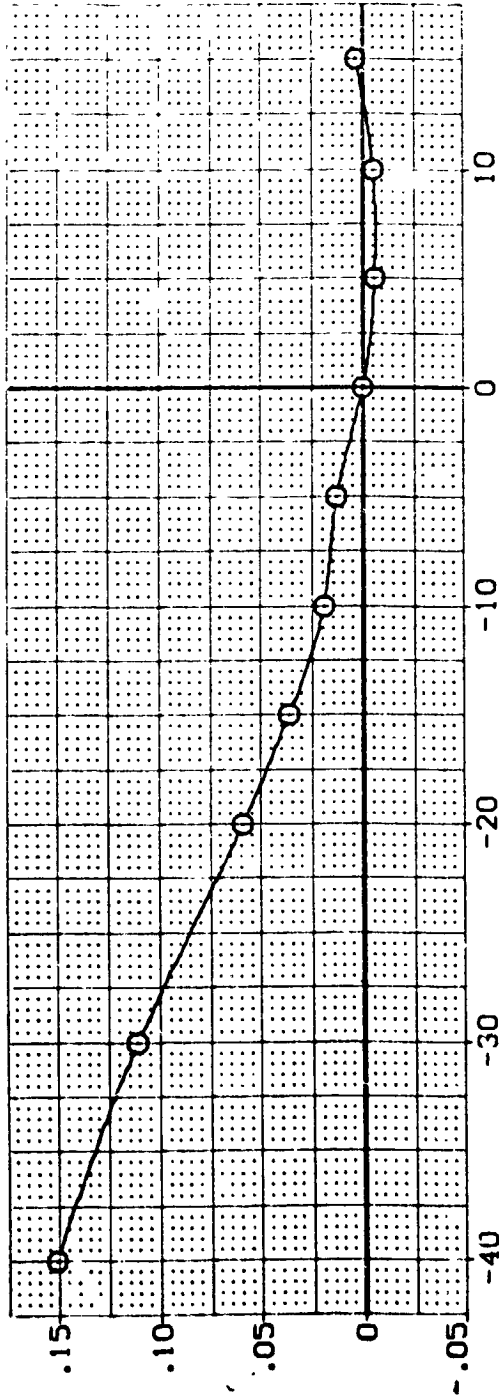
INCHES 43.5974

INCHES .0000

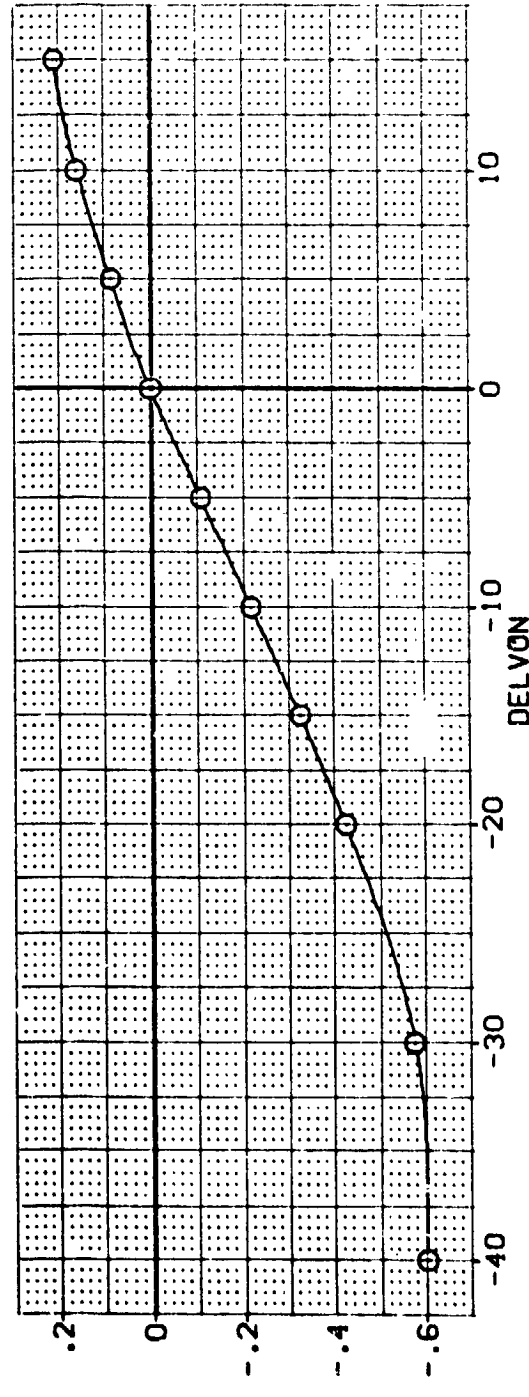
INCHES .0000

SCALE 15.1875

SCALE .0405



DCA



DCN

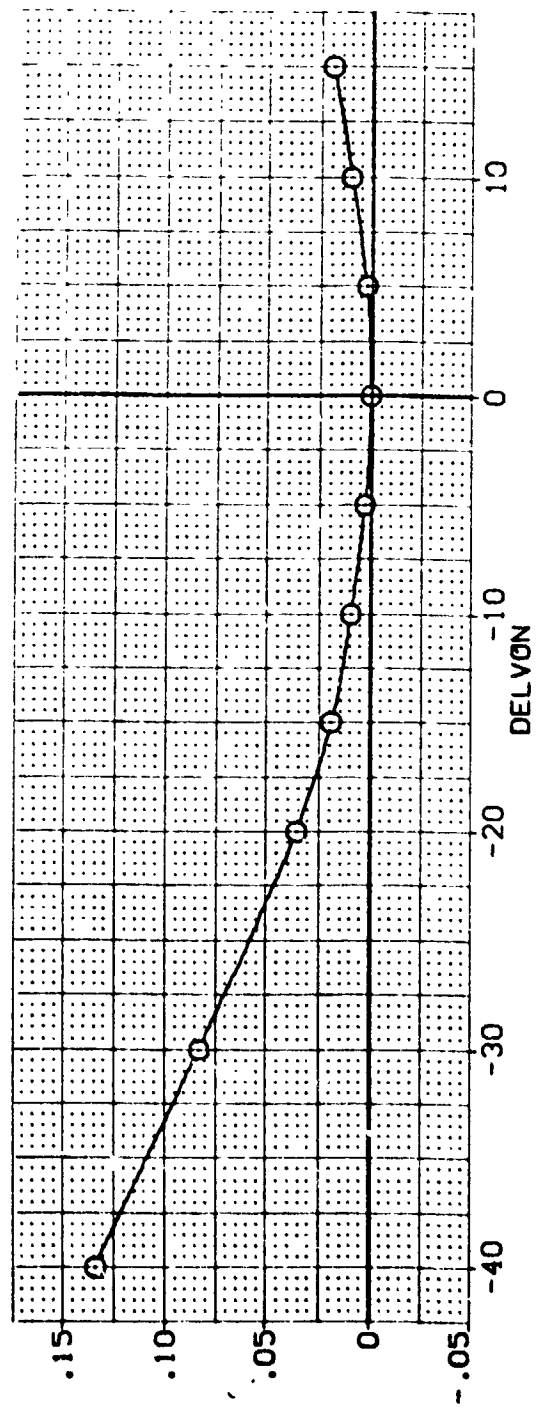
FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035



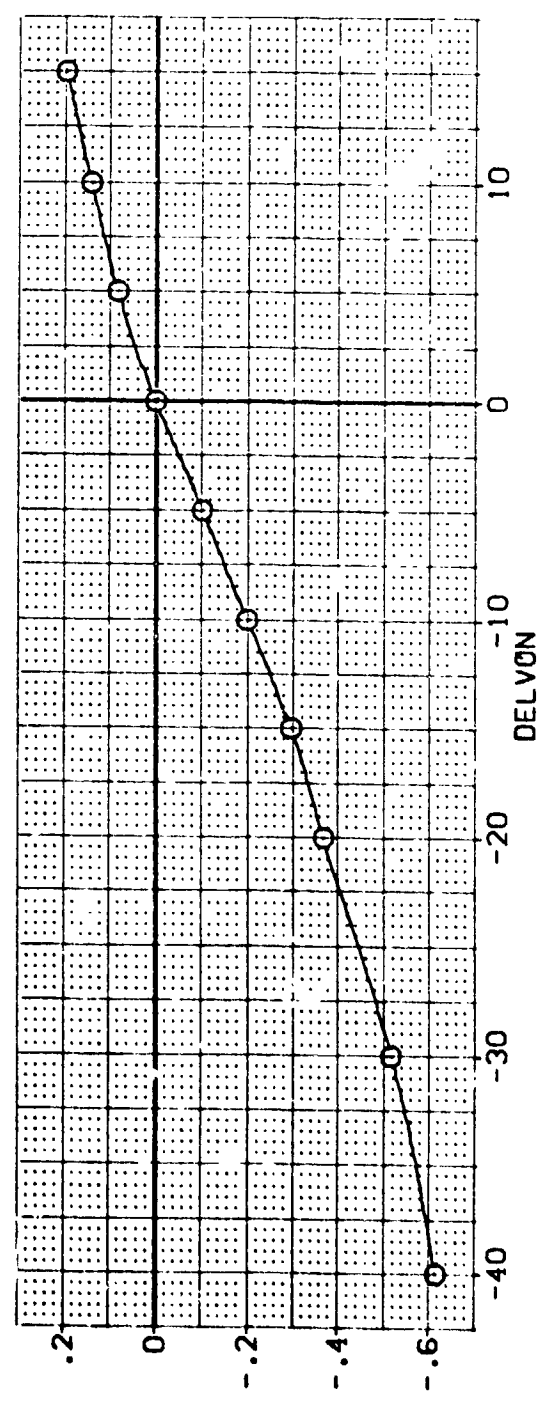


0A628 B26C9G15M7F8 W116E28V8R5X9 (10Z061)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
ALPHA	.200	BETA	.000	DATASET	10Z060	SREF	4.4119	SO. FT.	4.4119
BOFLAP	-12.000	A1LRON	.000	DELTVN	-30.000	LREF	19.2299	INCHES	19.2299
RUDDER	.000	SP08RK	25.000	DELTVN	-15.000	BREF	37.9359	INCHES	37.9359
HVBW	.035	10Z055		DELTVN	5.000	XMRP	43.5974	INCHES	43.5974
		10Z049		DELTVN	5.000	ZMRP	15.1875	INCHES	15.1875
		10Z051		DELTVN	10.000	ZMRP	15.1875	INCHES	15.1875
				DELTVN	15.000	SCALE	.0405	SCALE	.0405



DCA



DCN

FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND HVBW = J.035



(1DZ061)

W116E28V8R5X3

0A62B 826C9G15M7F8

PARAMETRIC VALUES

MACH	.200
BETA	.000
ALLRON	-12.000
SPOBRK	.000
H/BW	.035

DATA SOURCE

DELTON	-40.000
DELTON	-20.000
DELTON	-10.000
DELTON	10.000

DATA SET

1DZ061
1DZ059
1DZ056
1DZ049
1DZ051

DELTON

DELTON	-30.000
DELTON	-15.000
DELTON	-5.000
DELTON	5.000
DELTON	15.000

REFERENCE INFORMATION

SQ.FT.	4.4119
INCHES	19.2293
INCHES	37.9353
INCHES	43.5974
INCHES	.0000
INCHES	15.1875
SCALE	.0405

ALPHA 30.000

SYMBOL ○

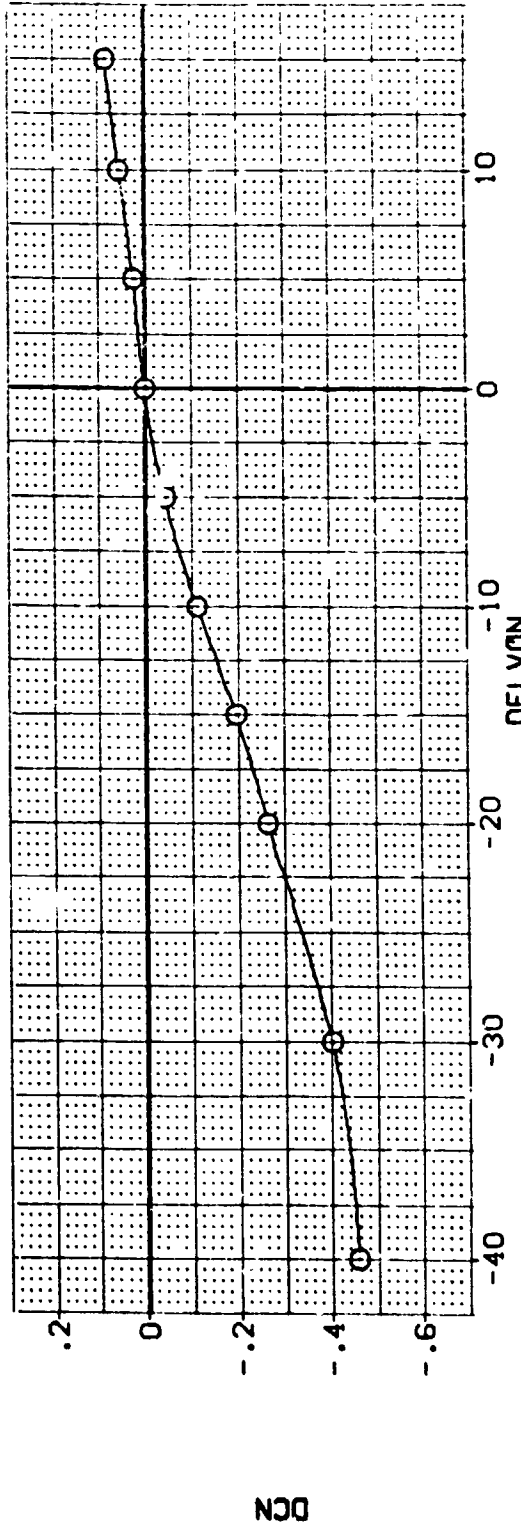
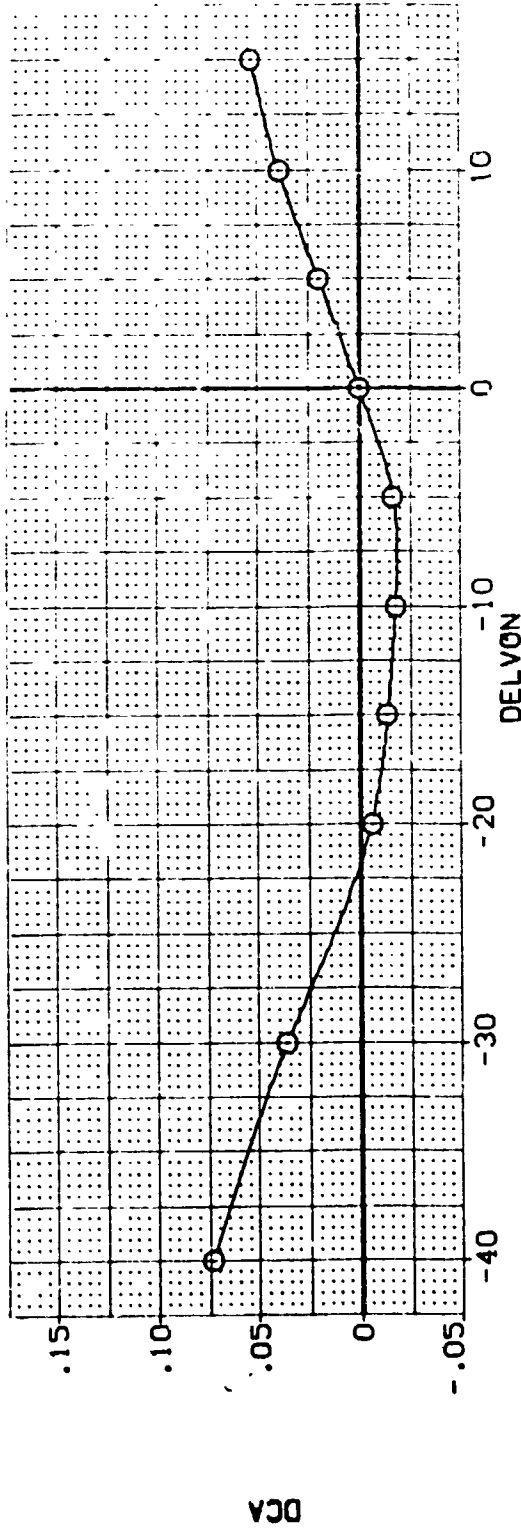


FIG 9 ELEVON EFFECTIVENESS IN PRESENCE OF GROUND H/BW = 0.035





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z057)	0A6Z8 B26C9G1547F8 V116E26V8R5X9	-10.000	.075	25.000	-12.000	SREF 4.4119 50.FT.
(80Z046)	0A6Z8 B26C9G1547F8 V116E26V8R5X9	5.000	.035	25.000	-12.000	LREF 19.2789 INCHES
(80Z054)	0A6Z8 B26C9G1547F8 V116E26V8R5X9	15.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(80Z053)	0A6Z8 B26C9G1547F8 V116E26V8R5X9					YMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

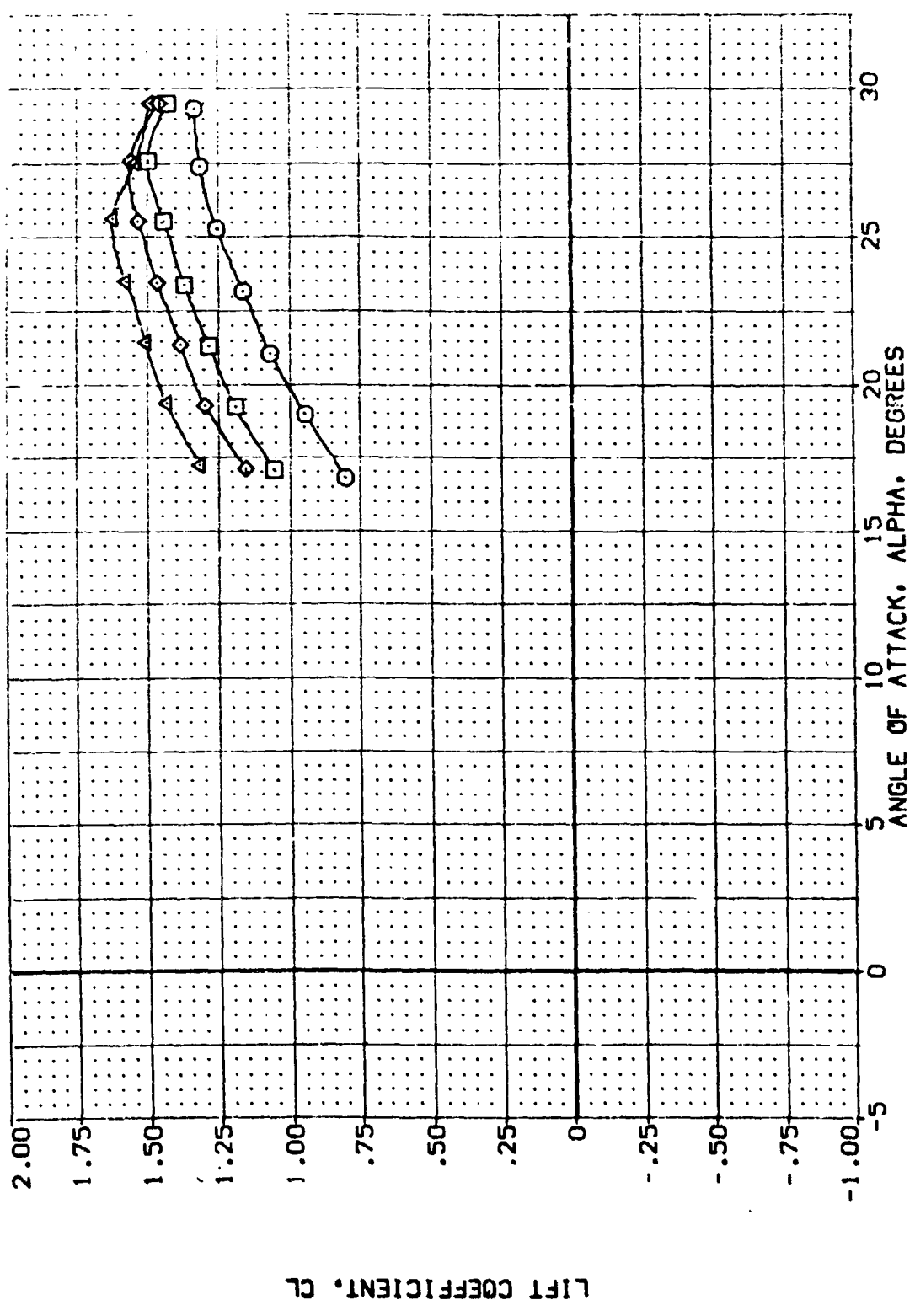


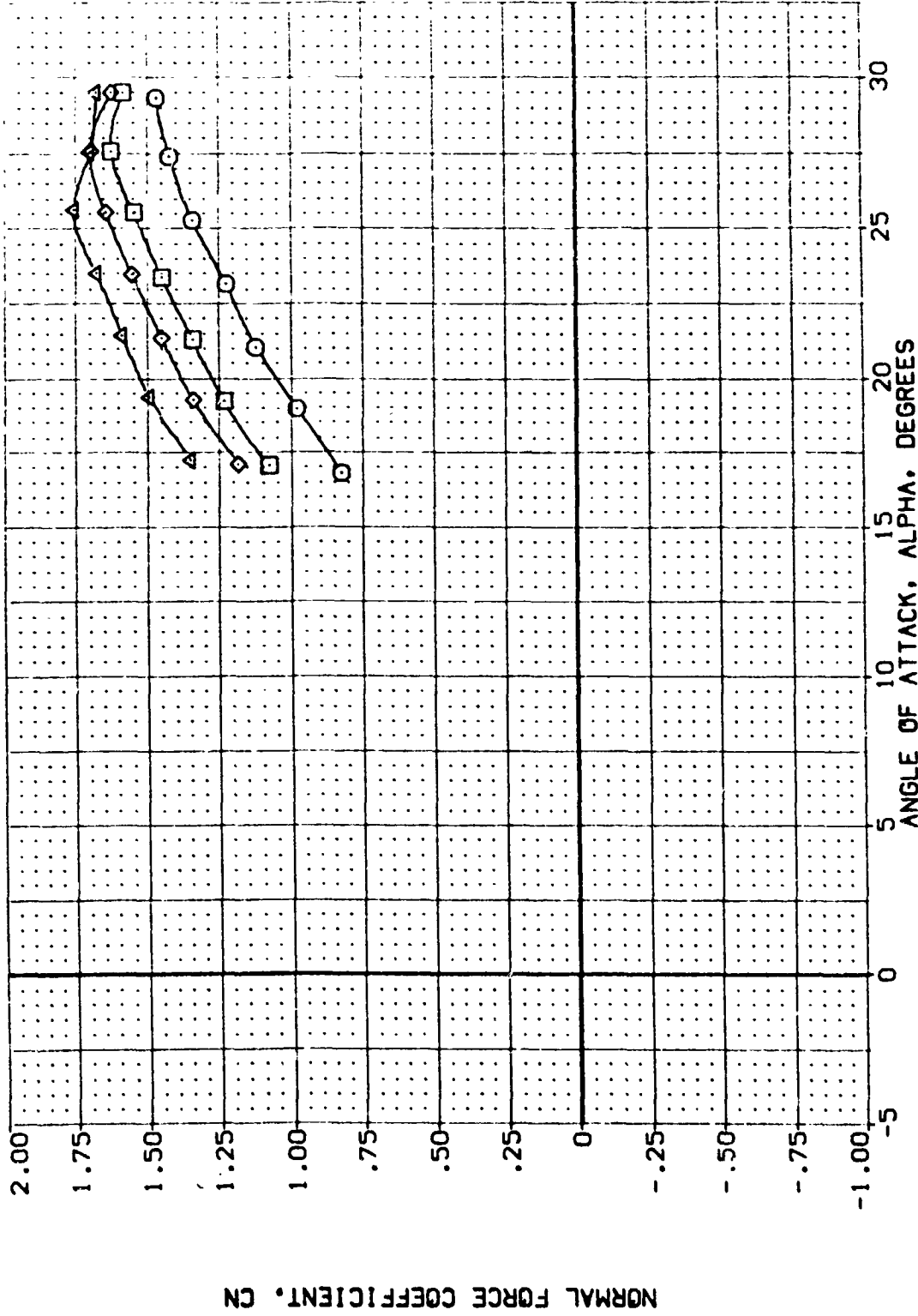
FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z057)	0A628 B26C9G SMT78 V116E26V8RSX9
(80Z046)	0A628 B26C9G SMT78 V116E26V8RSX9
(80Z054)	0A628 B26C9G SMT78 V116E26V8RSX9
(80Z053)	0A628 B26C9G SMT78 V116E26V8RSX9

ELEVON	H/BW	SPOBRK	BOFLAP
-10.000	.035	25.00	-12.000
0.000	.035	25.00	-12.000
5.000	.035	25.00	-12.000
15.000	.035	25.00	-12.000

REFERENCE INFORMATION	SCALE
SREF 4.4119	SO.FT.
LREF 19.2299	INCHES
BREF 37.9359	INCHES
XMRP 43.5974	INCHES
YMRP 15.0000	INCHES
ZMRP 15.1873	INCHES
	SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(BDZ057)	0A6Z8 BZ6C9G15M7F8 V116E26V8R5X9	-10.000	.035	25.000	-12.000	SREF 4.4119 50.FT.
(BDZ046)	0A6Z8 BZ6C9G15M7F8 V116E26V8R5X9	.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(BDZ054)	0A6Z8 BZ6C9G15M7F8 V116E26V8R5X9	5.000	.035	25.000	-12.000	BREF 37.9353 INCHES
(BDZ053)	0A6Z8 BZ6C9G15M7F8 V116E26V8R5X9	15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

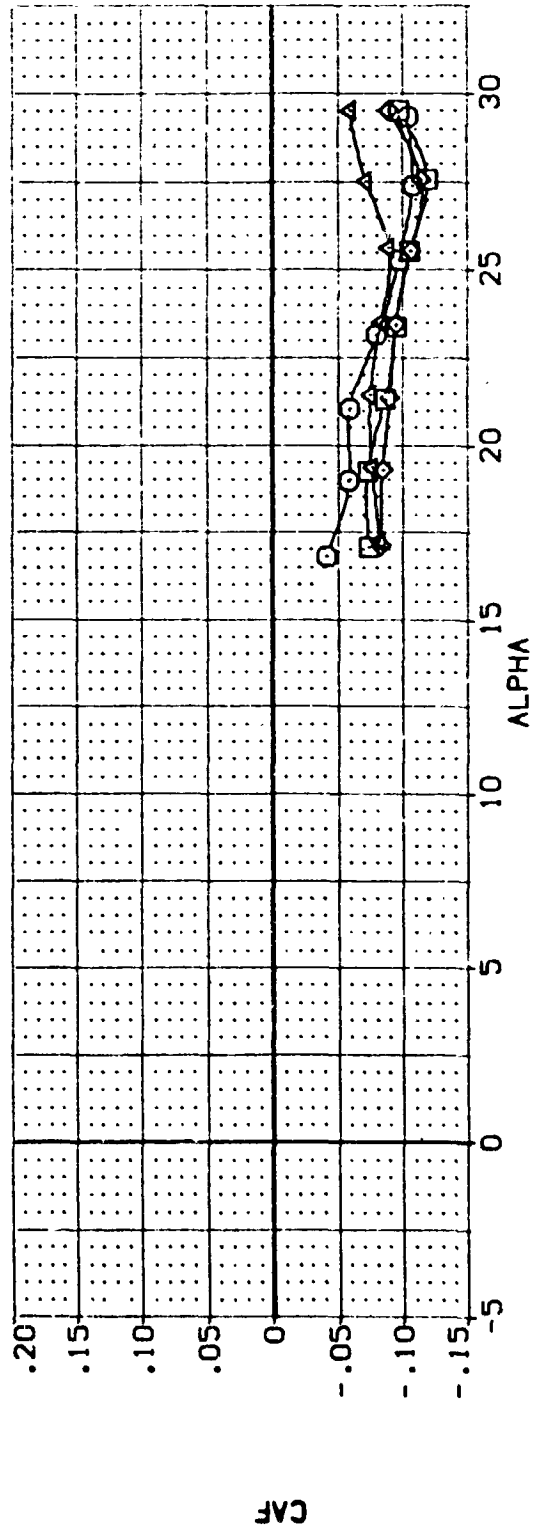
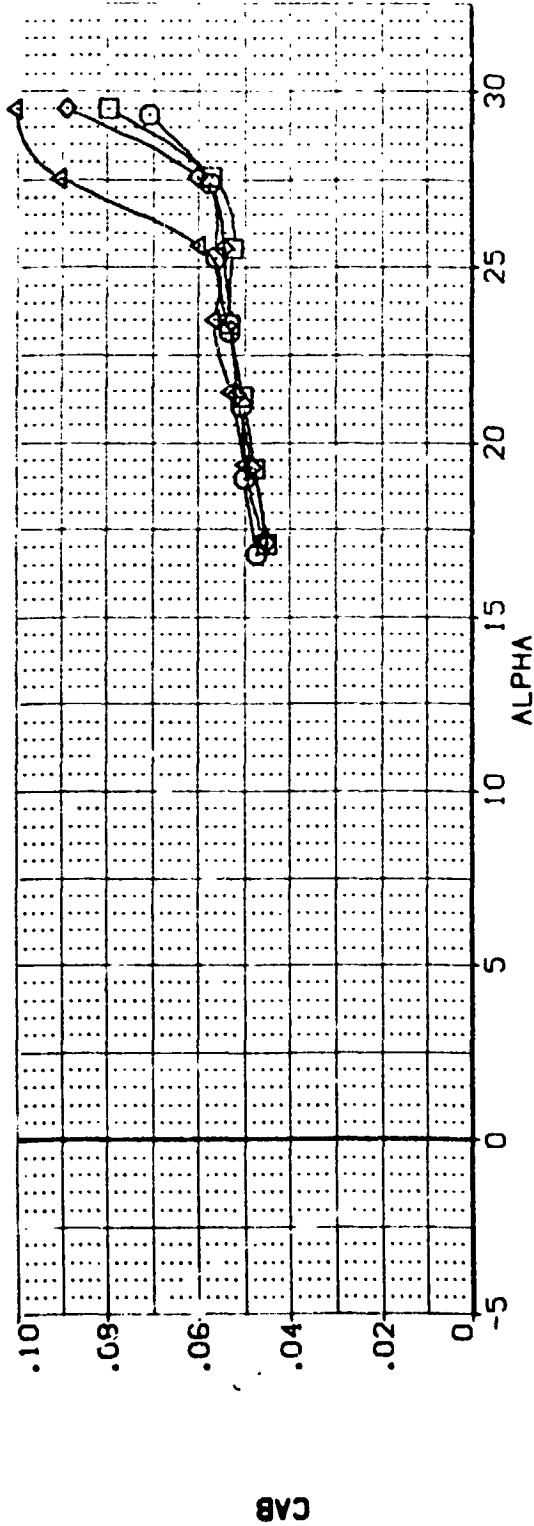


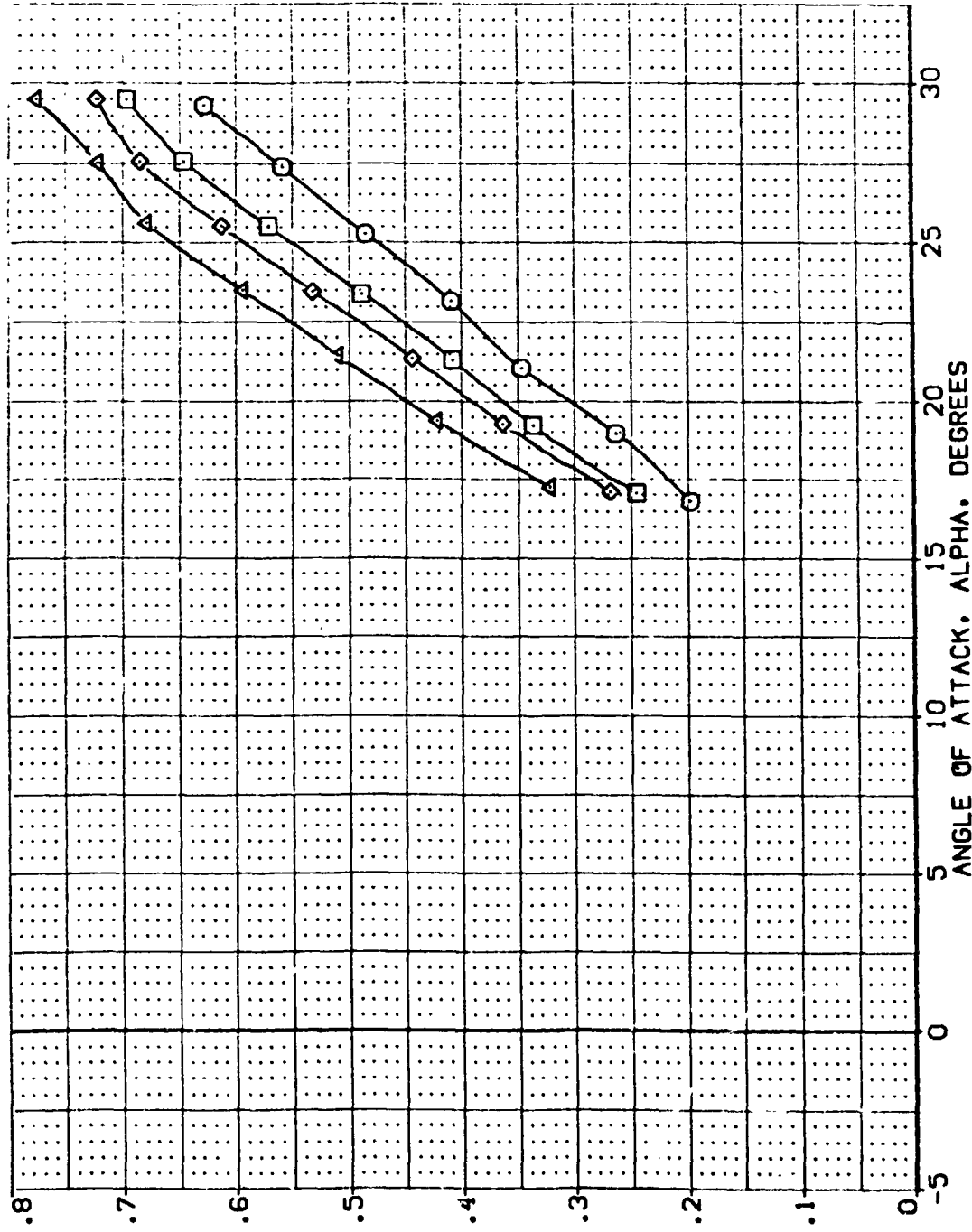
FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(BDZ057)	QAS28 B26C9G1S7F8 V116E26V8RSX9	SREF 4.4119 SO.FT.
(BDZ046)	QAS28 B26C9G1S7F8 V116E26V8RSX9	LREF 19.2299 INCHES
(BDZ054)	QAS28 B26C9G1S7F8 V116E26V8RSX9	BREF 37.9359 INCHES
(BDZ053)	QAS28 B26C9G1S7F8 V116E26V8RSX9	XMRP 43.5974 INCHES
		ZMRP 15.0000 INCHES
		SCALE .0405 INCHES

ELEVON	H/BW	SPOBRK	BOFLAP
-10.000	.035	25.000	-12.000
.000	.035	25.000	-12.000
5.000	.035	25.000	-12.000
15.000	.035	25.000	-12.000

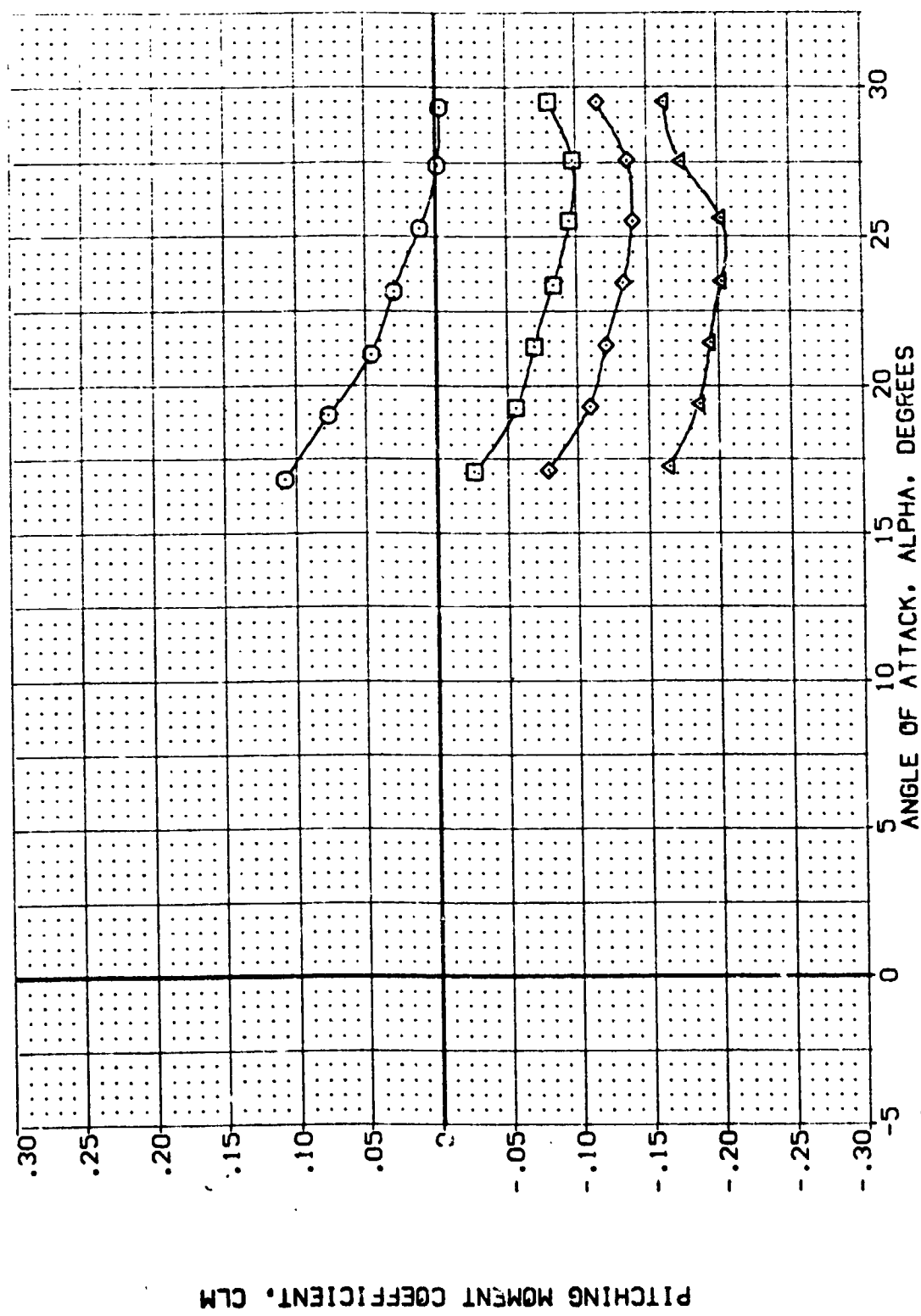


FOREBODY DRAG COEFFICIENT, CDF

FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035  
 (A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z057)	0A628 B2C9G1S47F8 V116E26V8R5X9	-10.000	25.000	-12.000	SREF 4.4119 SQ.FT.
(B0Z046)	0A628 B2C9G1S47F8 V116E26V8R5X9	0.000	25.000	-12.000	LREF 19.2299 INCHES
(B0Z054)	0A628 B2C9G1S47F8 V116E26V8R5X9	5.000	25.000	-12.000	BREF 37.9359 INCHES
(B0Z051)	0A628 B2C9G1S47F8 V116E26V8R5X9	15.000	25.000	-12.000	XMRP 43.5974 INCHES
					YMRP .0000 INCHES
					ZMRP 15.1875 INCHES
					SCALE .0405 SCALE



PITCHING MOMENT COEFFICIENT, CM

FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035  
 (A)MACH = .20 PAGE 167

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z057)	0A6Z8 B26C9G15M7F8 V116E26V8RSX9
(80Z046)	0A6Z8 B26C9G15M7F8 V116E26V8RSX9
(80Z054)	0A6Z8 B26C9G15M7F8 V116E26V8RSX9
(80Z053)	0A6Z8 B26C9G15M7F8 V116E26V8RSX9

E-EVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
-10.000	.035	25.000	-12.000	SREF 4.4119 SO.FT.
0.000	.035	25.000	-12.000	LREF 19.2289 INCHES
5.000	.035	25.000	-12.000	BREF 37.9359 INCHES
15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
				YMRP .0000 INCHES
				ZMRP 15.1875 INCHES
				SCALE .0405 SCALE

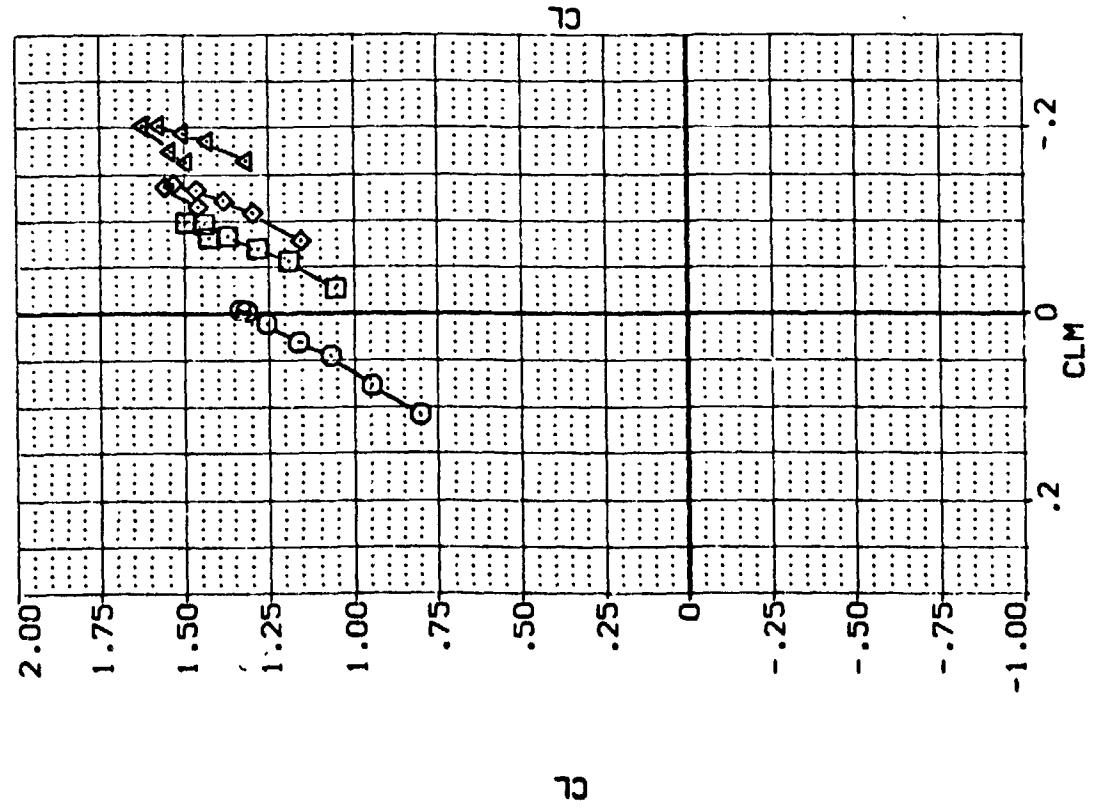


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

(AJMACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z057)	0A628 B26C9G15M7F8	-10.000	.035	25.000	-12.000	SREF 4.4119 SO.FT
(80Z046)	0A628 B26C9G15M7F8	.000	.035	25.000	-12.000	LREF 19.2299 INCHES
(80Z054)	0A628 B26C9G15M7F8	5.000	.035	25.000	-12.000	BREF 37.9359 INCHES
(80Z053)	0A628 B26C9G15M7F8	15.000	.035	25.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1975 INCHES
						SCALE .0405

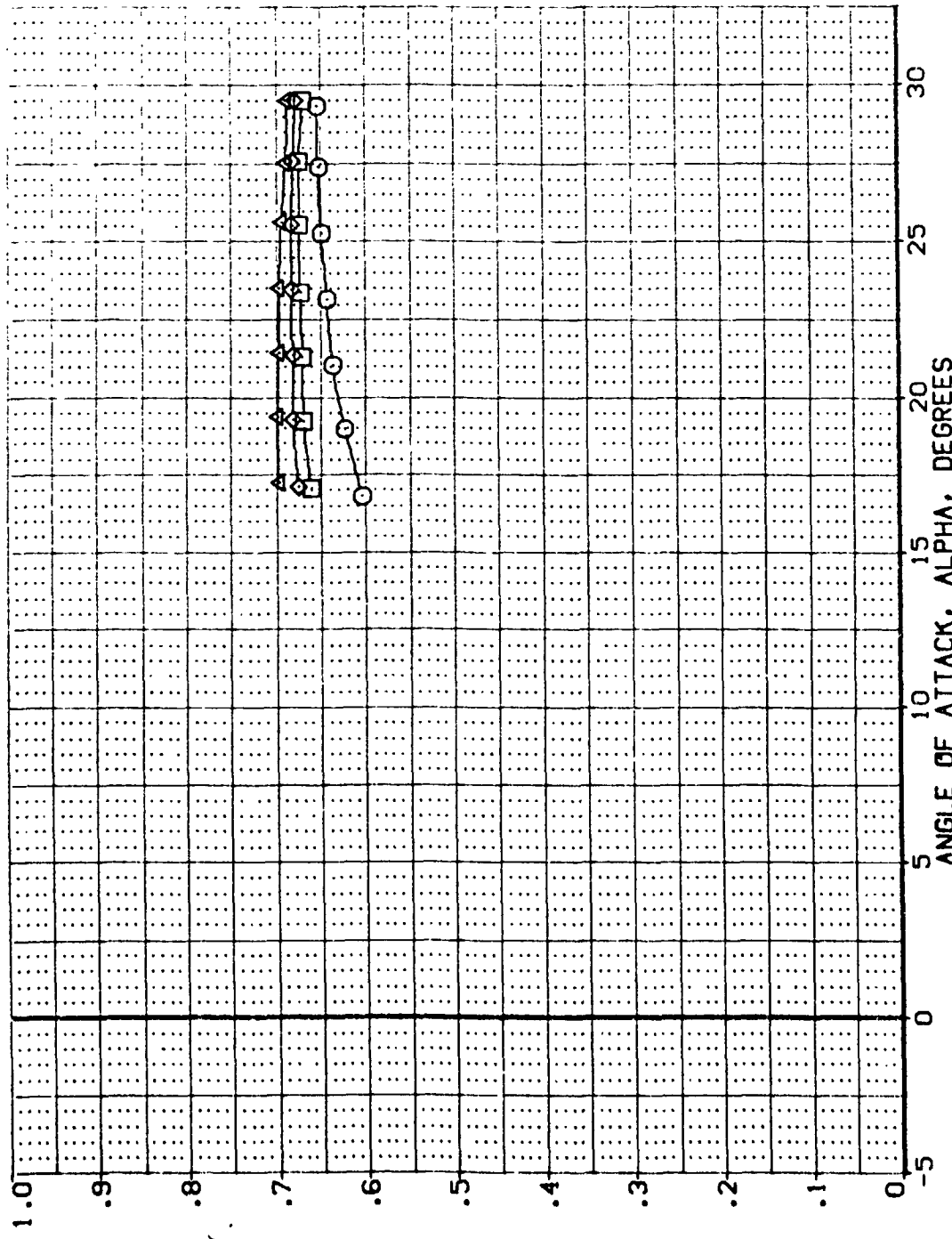


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035  
 (A)MACH = .20

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH



DATA SET SYMBOL  
 (BDZ057)  
 (BDZ046)  
 (BDZ054)  
 (BDZ053)

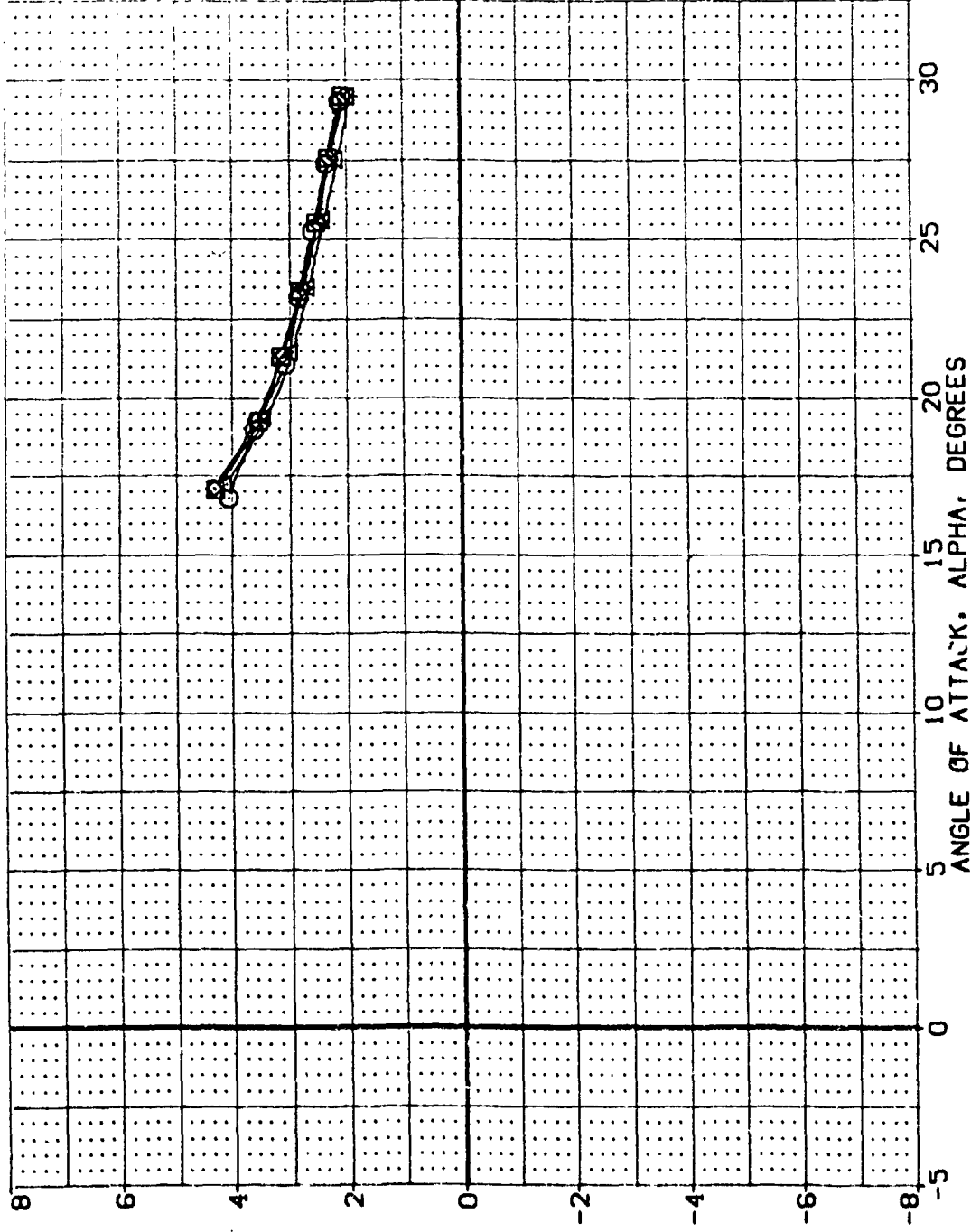
CONFIGURATION DESCRIPTION  
 0A628 B26C5G|5M7F8 V11E26V8R5X9  
 0A628 B26C5G|5M7F8 V11E26V8R5X9  
 0A628 B26C5G|5M7F8 V11E26V8R5X9  
 0A628 B26C5G|5M7F8 V11E26V8R5X9

ELEVON H/WB  
 .035  
 .035  
 .035  
 .035

SPOBRK  
 25.000  
 25.000  
 25.000  
 25.000

BOFLAP  
 -12.000  
 -12.000  
 -12.000  
 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ. FT.  
 LREF 19.2293 INCHES  
 BREF 37.9353 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE



FOREBODY LIFT TO DRAG RATIO, L/D/F

ANGLE OF ATTACK, ALPHA, DEGREES

FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

(A)MACH = .20



4 4

0A628 B26C9G15M7F8 W116E26V8R5X9 (10Z057)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	MACH	.000	SREF	4.4119
BETA	.200	DELTON	-10.000	LREF	19.2299
AIRLON	-12.000	DATASET	10Z046	BREF	37.9359
SPDRK	.000	DELTON	10Z053	XHRP	43.5974
H/BW	.035	DELTON	5.000	YHRP	.0000
				ZHRP	15.1875
				SCALE	.0405

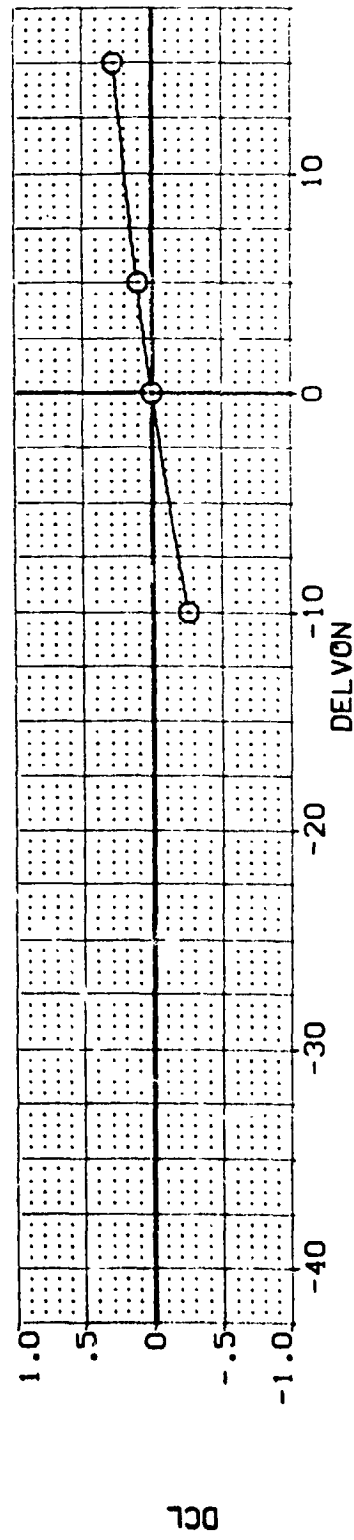
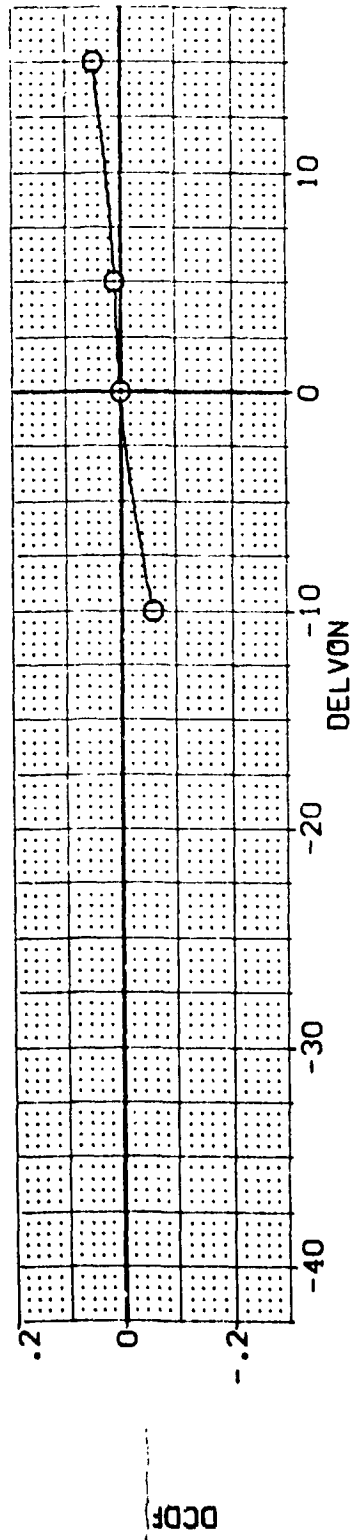
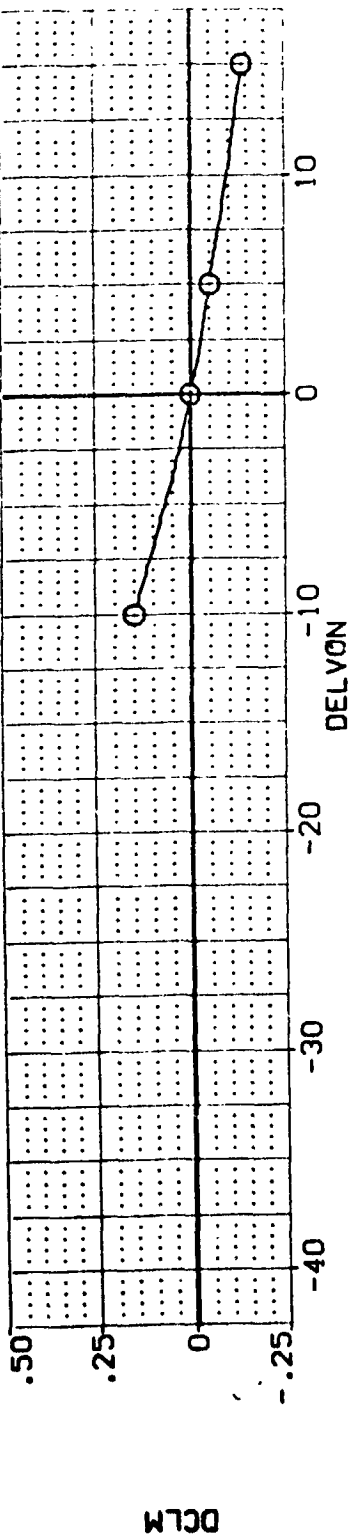


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A628 B26C6G15M7F8 W116E26V8R5X9 (1DZ057)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	20.000	.200	BETA	.000	SO.FT.
		-12.000	A1LRON	1DZ057	19.2289
		.000	SFOBRK	1DZ054	37.9359
		.035			43.9374
					.0000
					15.1875
					.0405
					SCALE
					SREF
					LREF
					BREF
					XMRP
					YMRP
					ZMRP
					SCALE

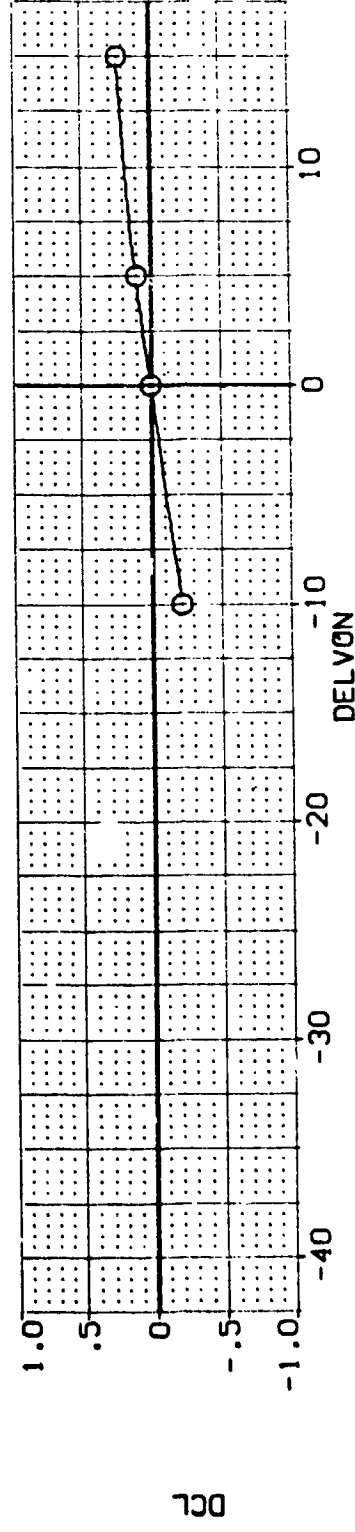
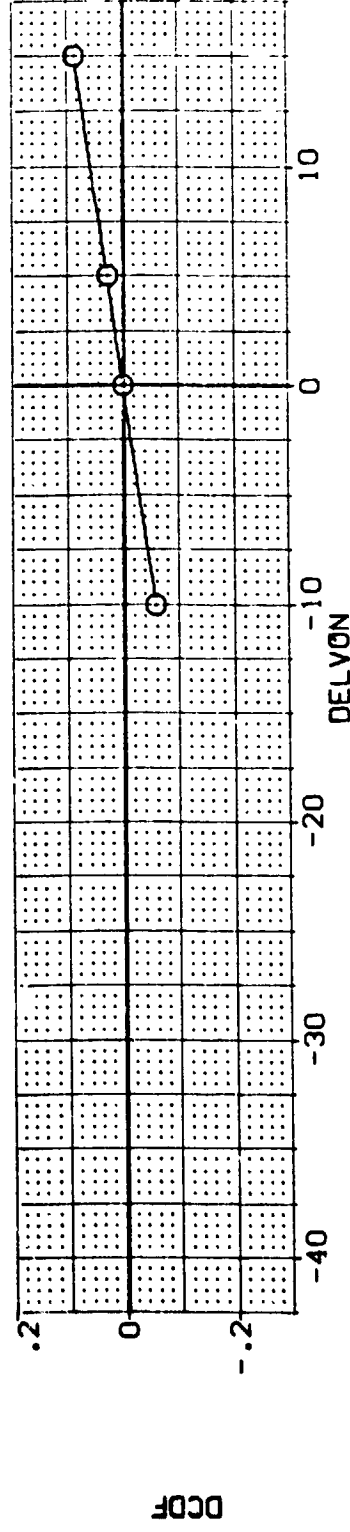
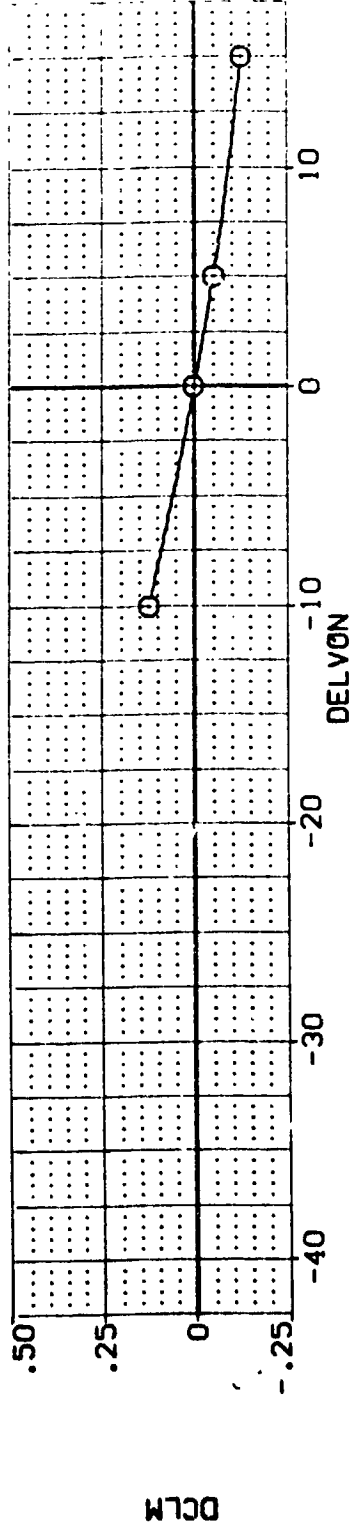


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A628 B26C9G15M7F8 W116E26V8R5X9 (1DZ057)

<b>SYMBOL</b>	<b>ALPHA</b>	<b>PARAMETRIC VALUES</b>	<b>DATA SOURCE</b>	<b>REFERENCE INFORMATION</b>
O	25.000	MACH .200 BETA BOFLAP -12.000 AILIRON RUDDER .000 SPDRBK H/BW .035	.000 DATASET DELVON -10.000 5.000	SO.FT. 4.4119 INCHES 19.2298 INCHES 37.9359 INCHES 43.5974 INCHES .0000 INCHES 15.1875 SCALE .0405
			DELVON .000 15.000	SREF LREF BREF XMRP YMRP ZMRP SCALE

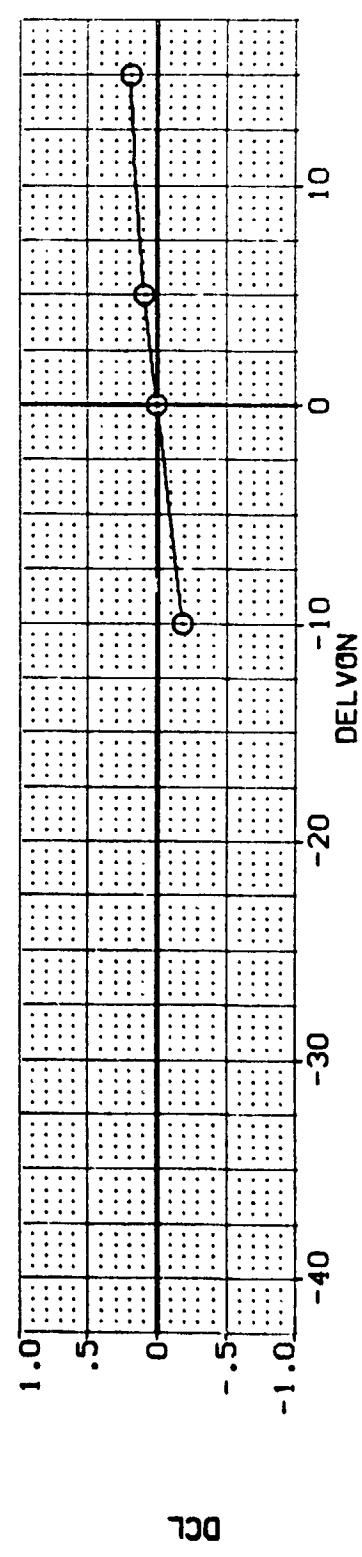
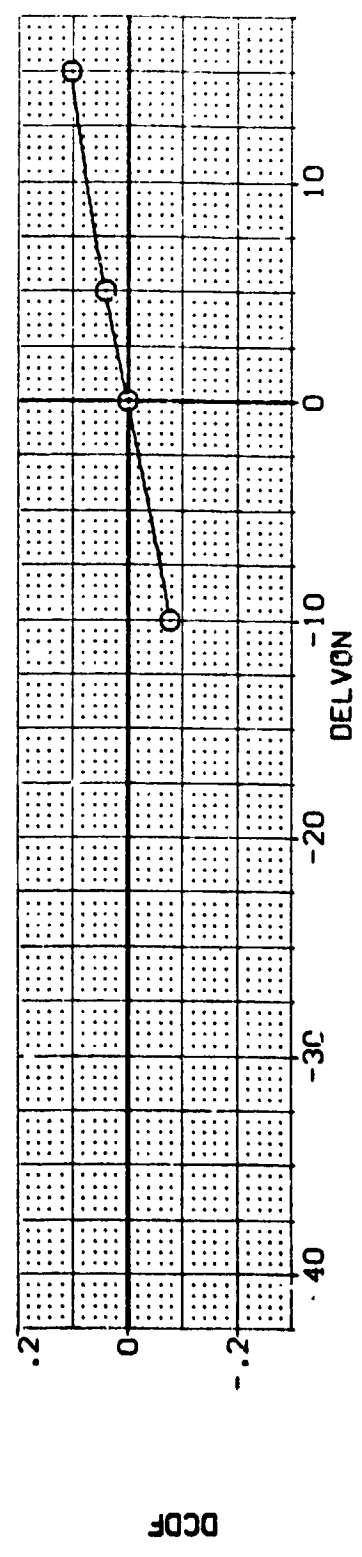
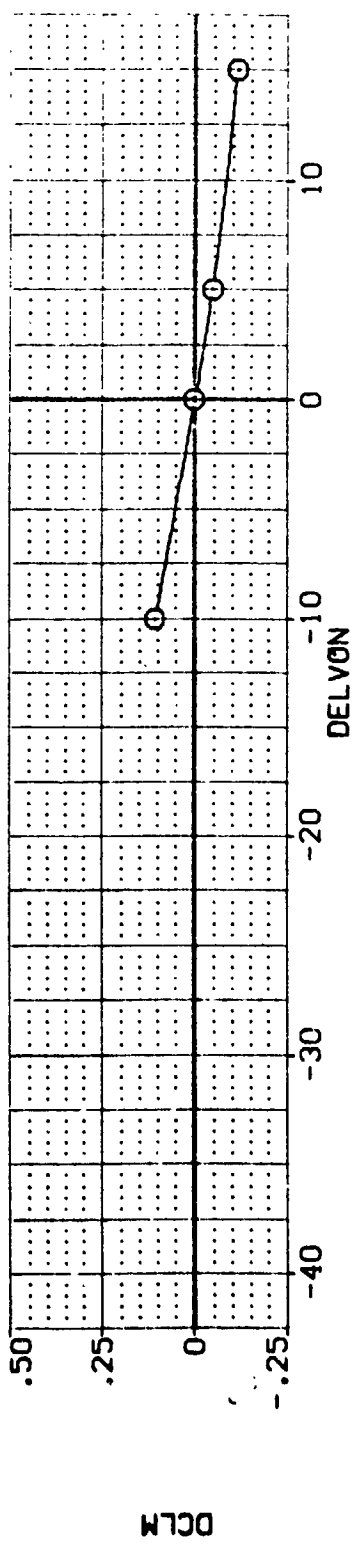


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

(1DZ057)

0A528 B26C9G15M7F8 W116E26V8R5X9

SYMBOL	ALPHA	MACH	BDFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	SREF	REFERENCE INFORMATION
O	30.000					.230 BETA -12.000 AILRON .000 SPDRK .035	.000 DATASET IDZ057 -10.000 DELTVN 5.000	15.000 DELTVN .000 SREF 15.000 DATASET IDZ046 IDZ053	4.4119 SO.FT. 19.2299 INCHES 37.9359 INCHES 43.5974 INCHES 15.0000 INCHES 15.1875 INCHES .0405 SCALE			

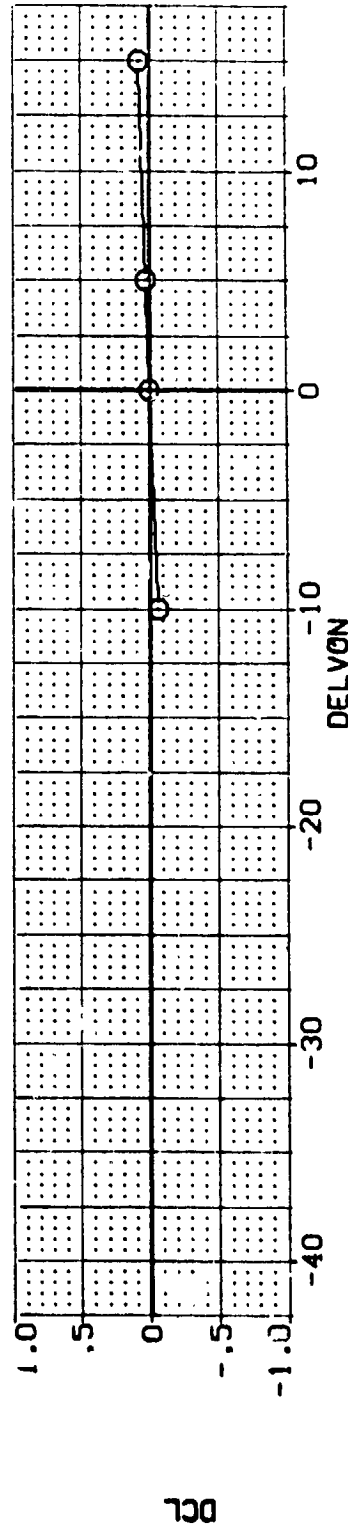
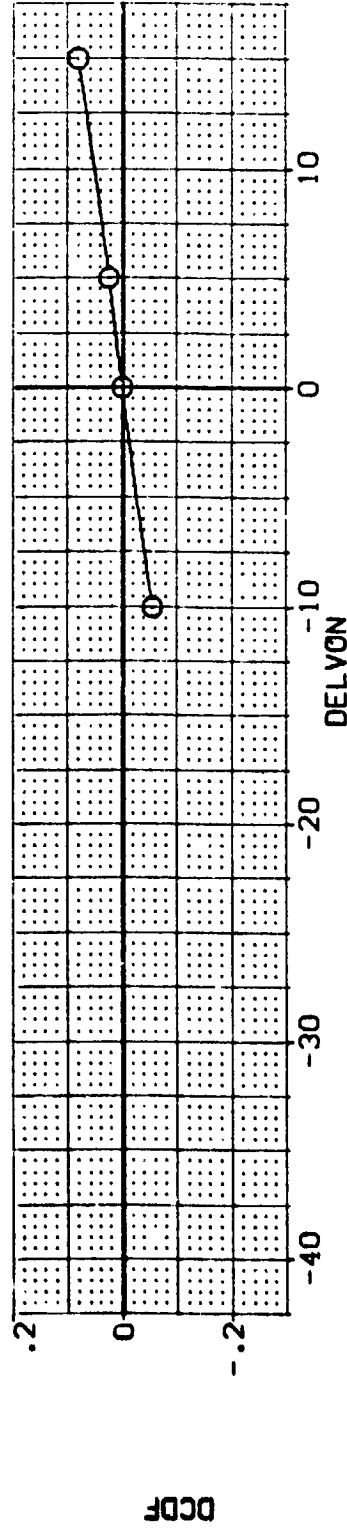
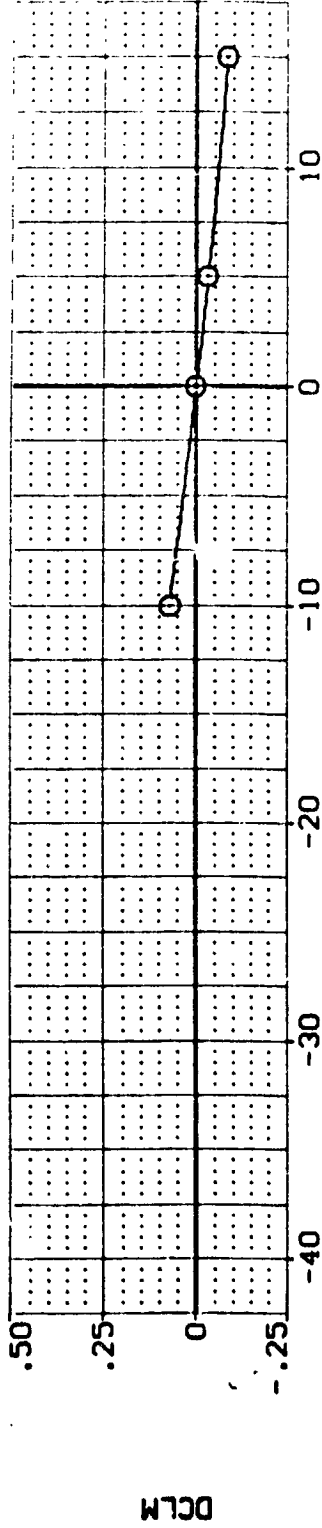


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A628 B26C9G15M7F8 W116E26V8R5X9 (10Z057)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	ALPHA	15.000	BETA	.000	DATASET	DELVON	SREF	4.4119	SO.FT.
	BOFLAP	-12.000	ATLRON	.000	10Z057	.000	LREF	19.2299	INCHES
	RLODER	.000	SPOBRK	25.000	10Z054	15.000	BREF	37.9359	INCHES
	H/BW	.035					XMRP	43.5974	INCHES
							YMRP	.0000	INCHES
							ZMRP	15.1875	INCHES
							SCALE	.0405	SCALE

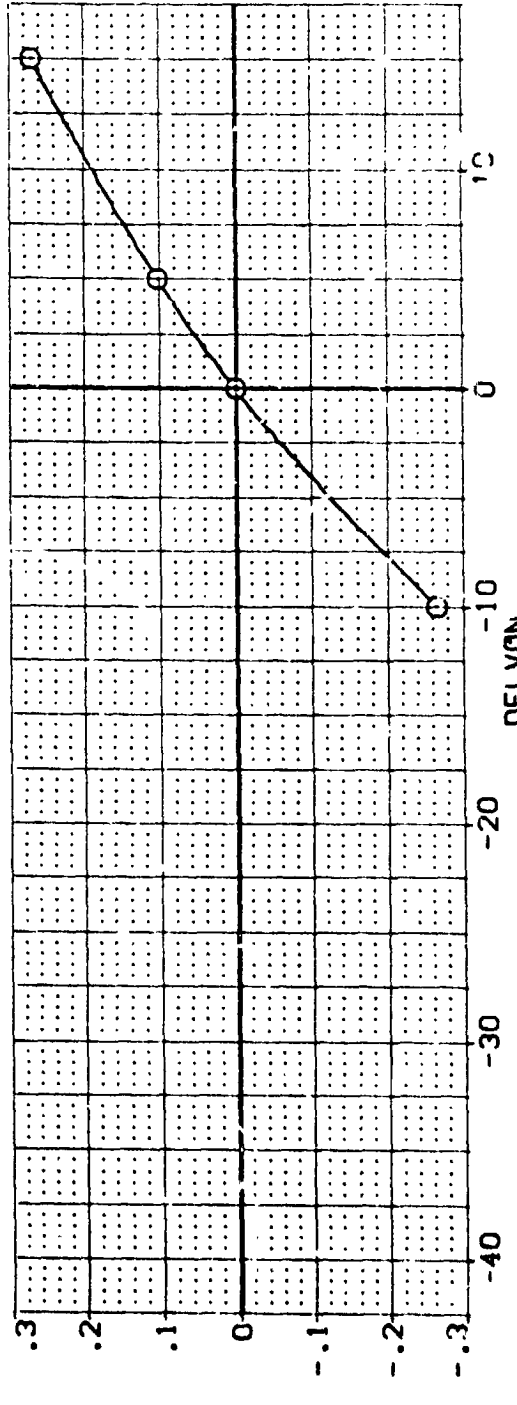
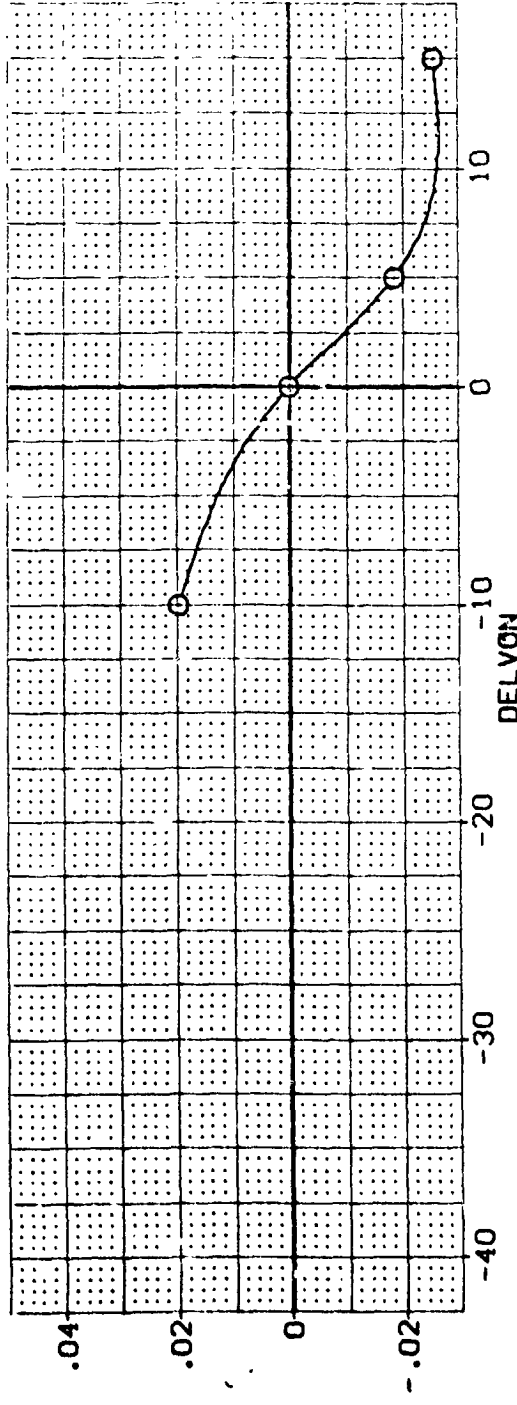


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A62B B26C9G15M7F8 W116E26V8R5X9 (1DZ057)

SYMBOL		ALP		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○		20.000		.200	BETA	.000	DATASET	.000	SREF
				-12.000	AIRLON	-10.000	1DZ046	.000	LREF
				.000	SPDRK	5.000	1DZ053	.000	BREF
				.035				15.000	YMRP
								.0000	ZMRP
								15.1875	SCALE
								.0405	SCALE

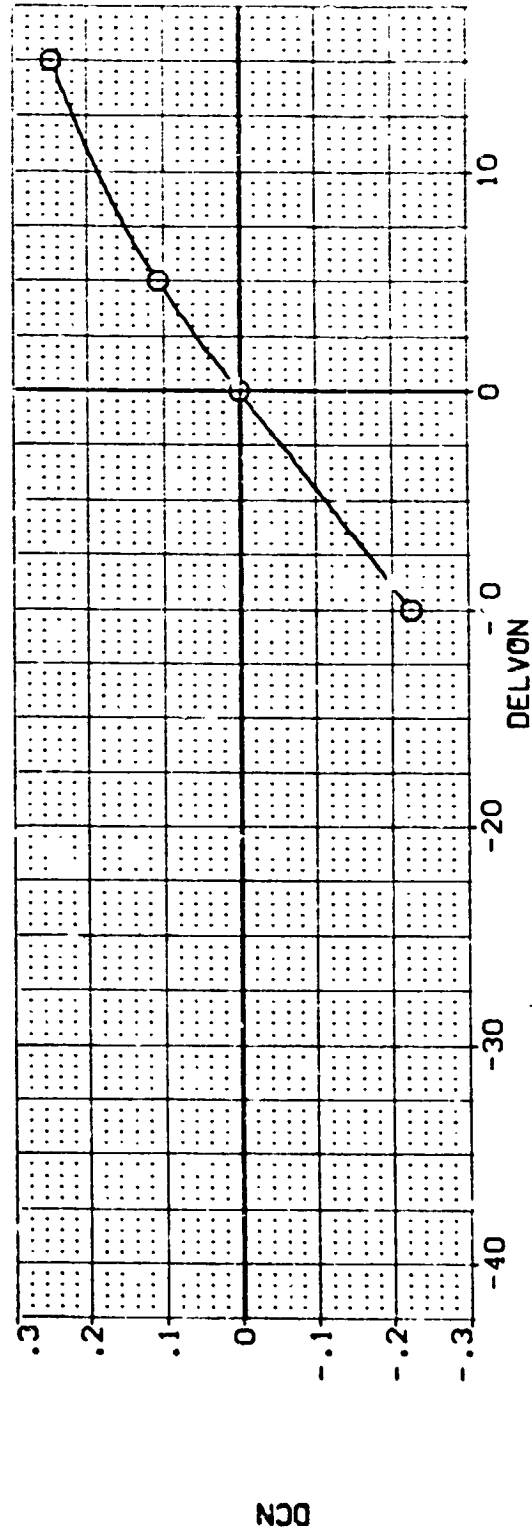
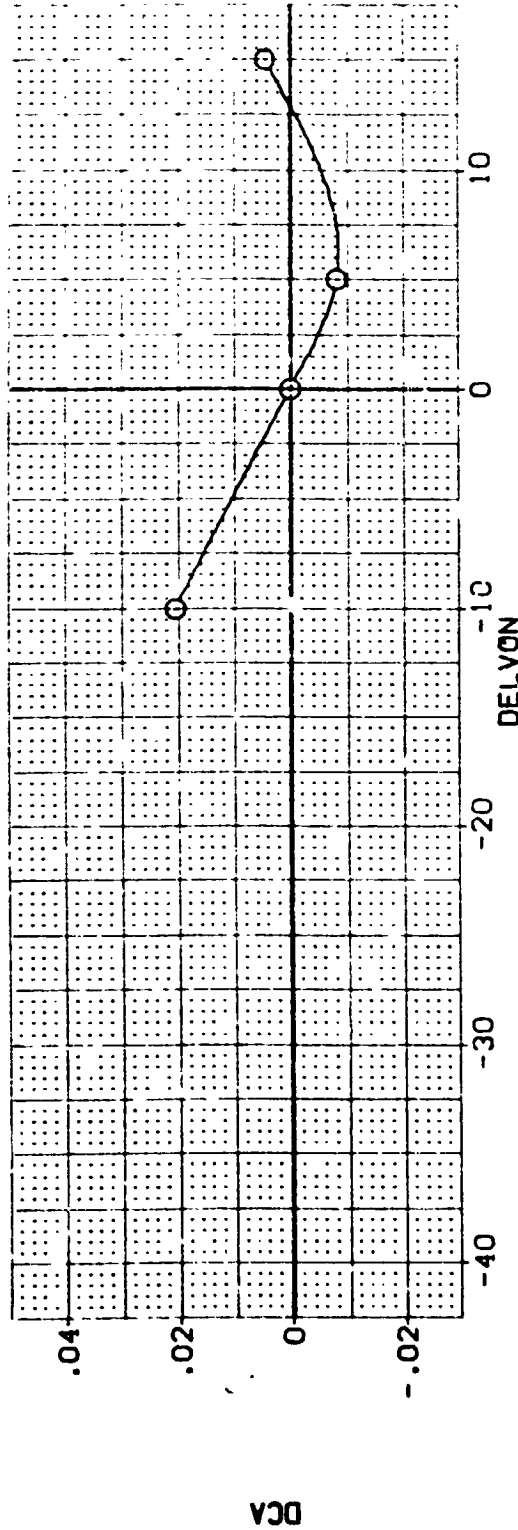


FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A62B B26C9G15M7F8 W116E26V8R5X9 (1DZ057)

SYMBOL  
O

ALPHA: 25.000  
MACH: .200  
EXFLAP: -12.000  
RUDDER: .000  
N/BV: .035

PARAMETRIC VALUES  
BETA  
AILRON  
SPOBRK

DATA SOURCE  
DELVN  
-10.000  
5.000

DATASET  
1DZ016  
1DZ053

DELVN  
0.000  
15.000

REFERENCE INFORMATION  
SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

4.4119  
19.2299  
37.9359  
43.5974  
15.0000  
15.1875  
.0405

SO.FT.  
INCHES  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

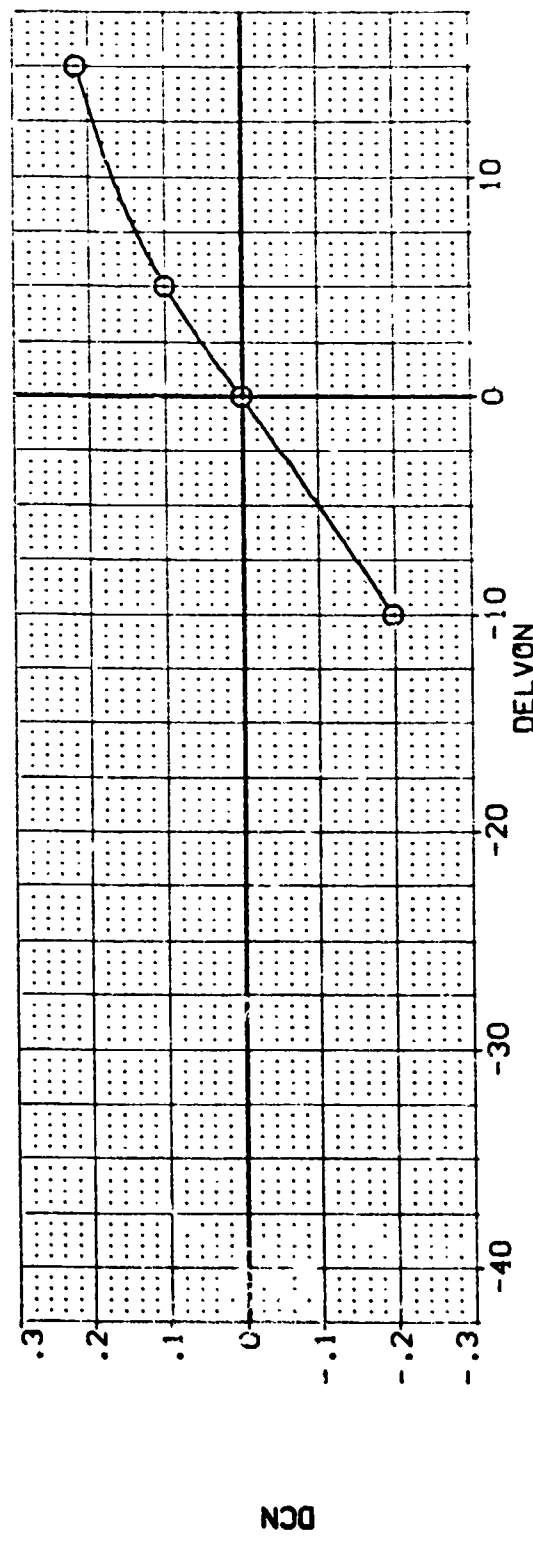
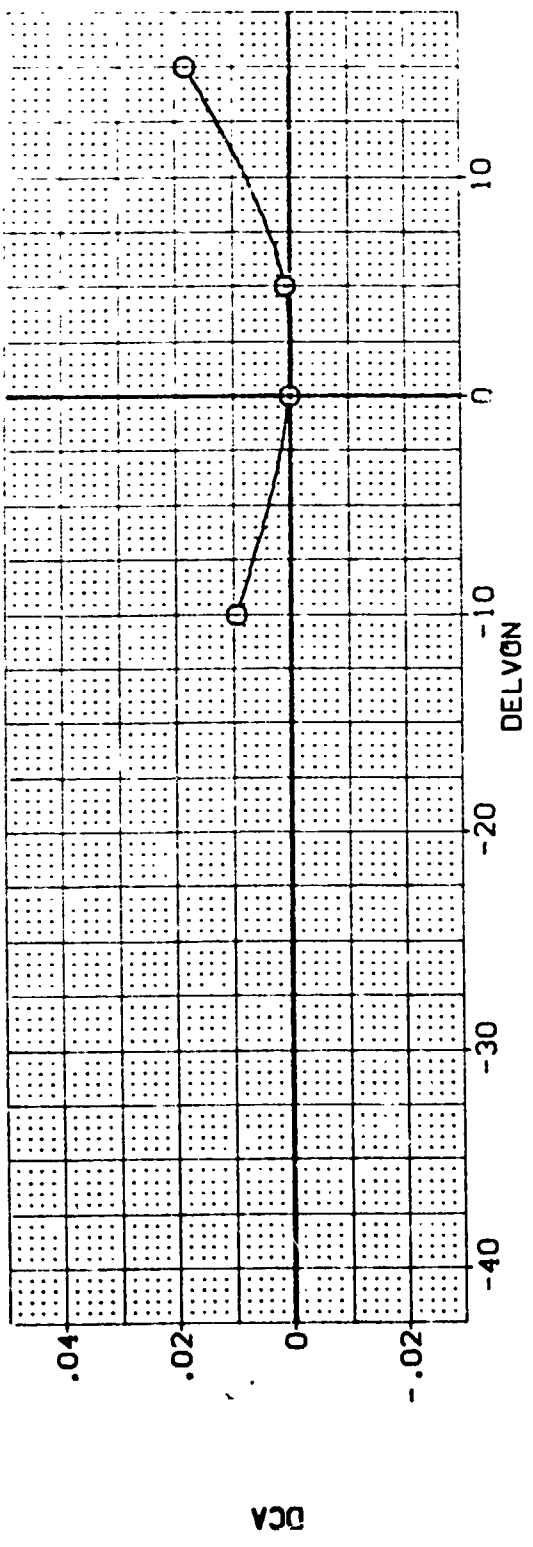
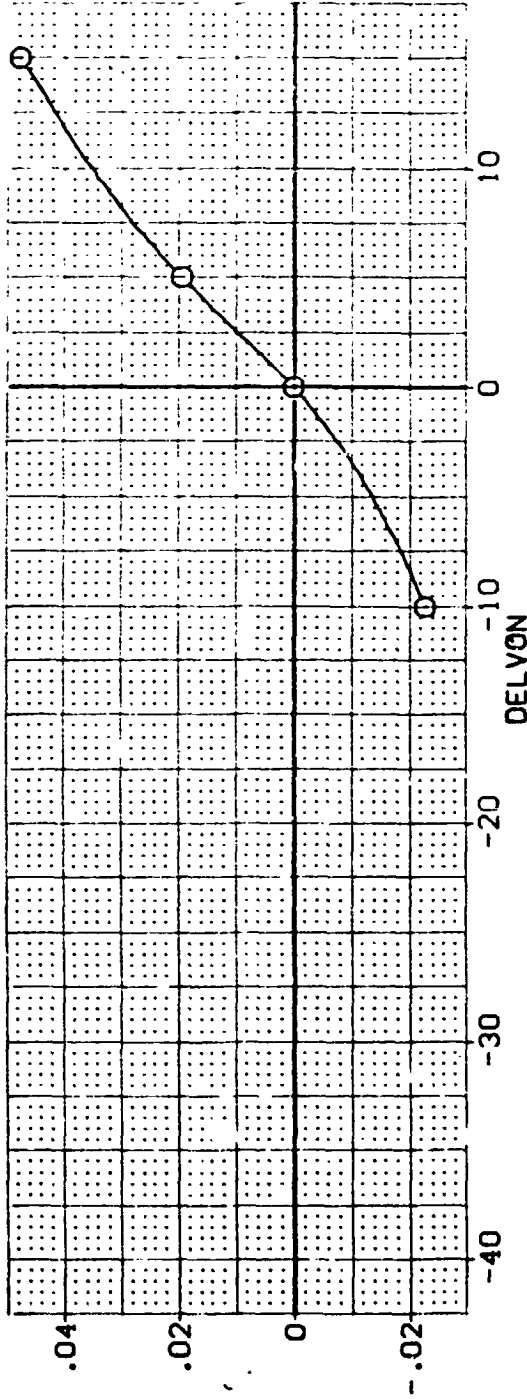


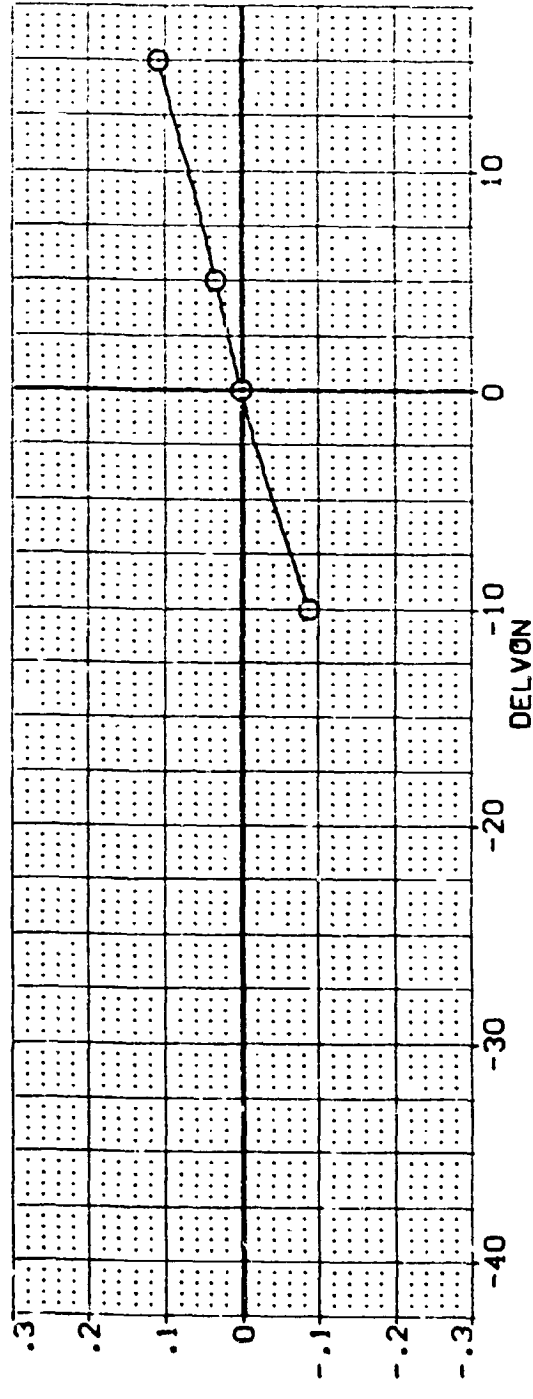
FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035

0A628 826C9G15M7F8 W116E26V8R5X9 (10Z057)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	30.000	MACH	.200	BETA	.000	DATASET	SREF
		BOFLAP	-12.000	A1LRON	.000	10Z046	LREF
		RUDGER	.000	SPOSRK	25.000	10Z057	BREF
		H/BW	.035			10Z054	XMRP
							YMRP
							ZMRP
							SCALE
							SO.FT.
							INCHES
							INCHES
							INCHES
							INCHES
							SCALE



DCA



DCN

FIG 10 ELEVON EFFECTIVENESS (NO GAPS) IN PRESENCE OF GROUND H/BW = 0.035



DATA SET SYMBOL: (BD2063) B (BD2062)  
 CONFIGURATION DESCRIPTION: 0A628 B26C9G|5M7F8J43V1|6E28V8SX10  
 0A628 B26C9G|5M7F8J43V1|6E28V8SX10  
 ELEVON: .000  
 H/BW: .035  
 SPOBRK: .000  
 BOFLAP: -12.000  
 REFERENCE INFORMATION:  
 SREF: 4.4119 SO.FT.  
 LREF: 19.2299 INCHES  
 BREF: 37.9359 INCHES  
 XMRP: 43.5974 INCHES  
 YMRP: .0000 INCHES  
 ZMRP: 15.1875 INCHES  
 SCALE: .0305

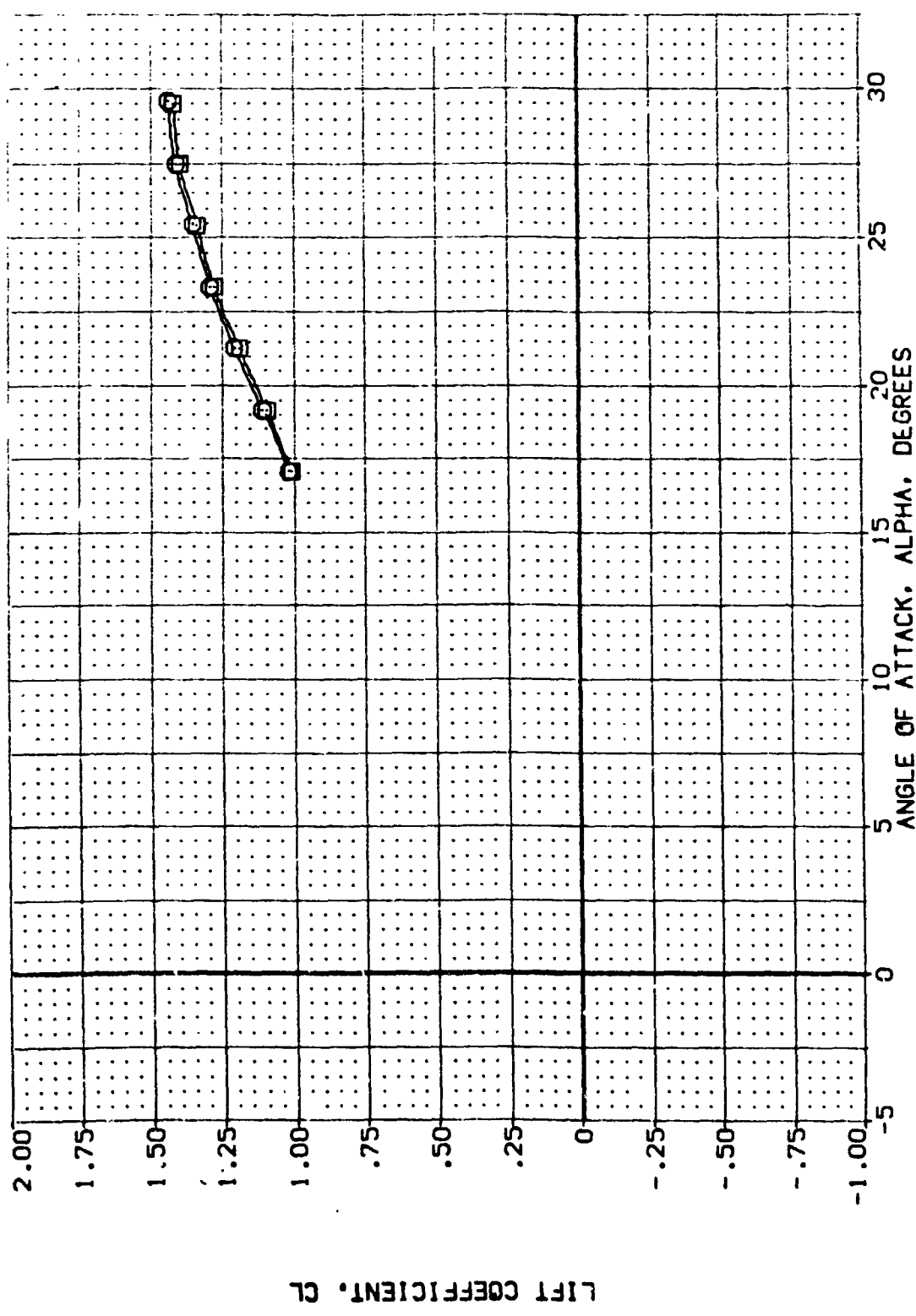


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODED ENGINES, H/BW = 0.035  
 (A)MACH = .20 PAGE 179



DATA SET SYMBOL (BD2063) **B** CONFIGURATION DESCRIPTION  
 (BD2062) CAS28 B26C9G|SMTF8J43W|16E28V85X10  
 CAS28 B26C9G|SMTF8J43W|16E29V85X10

ELEVON H/BW SPOBRK BOFLAP  
 .000 .035 .000 -12.000  
 .000 .035 25.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5374 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1375 INCHES  
 SCALE .0405 SCALE

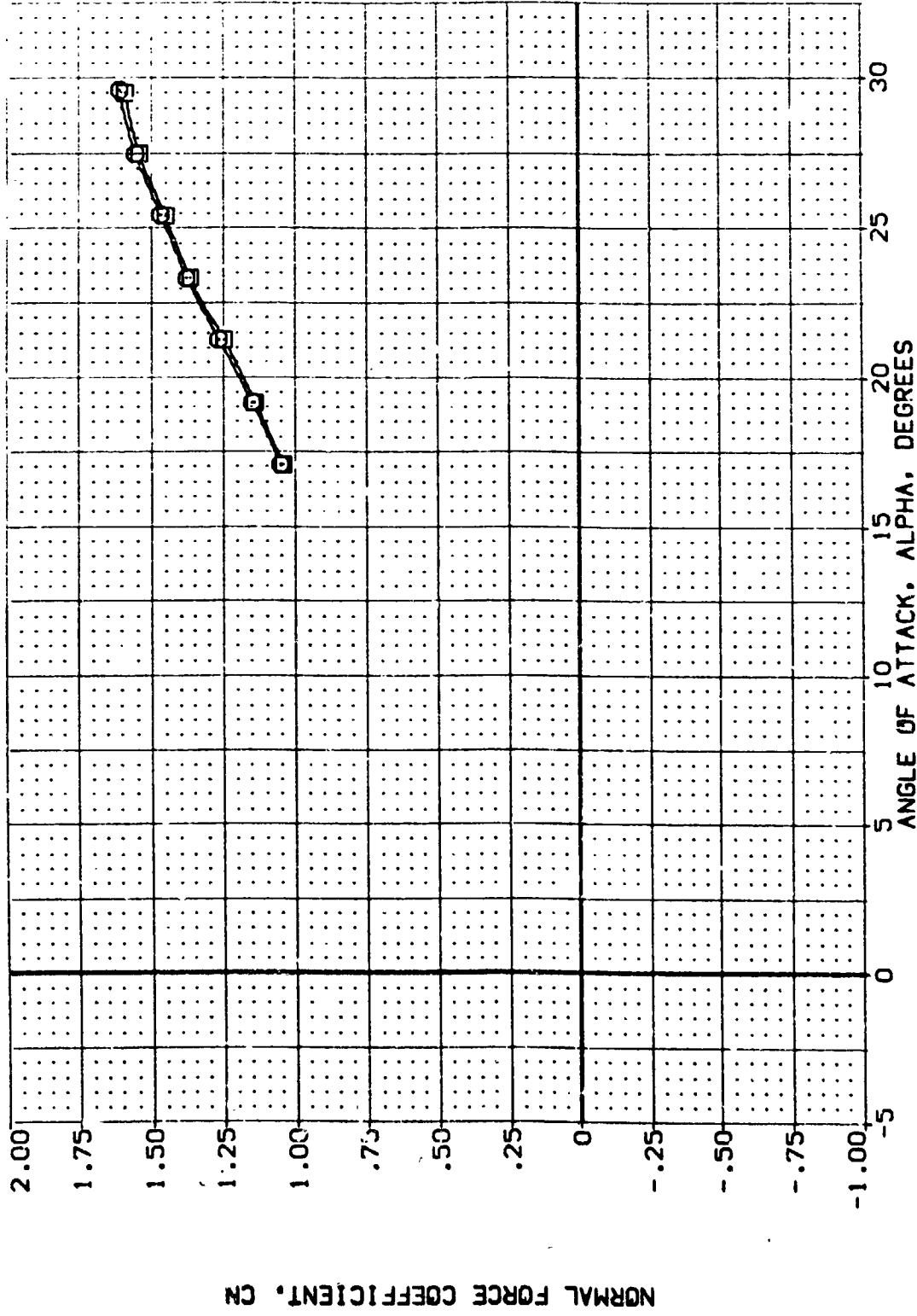


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20

PAGE 180



4  
4

DATA SET SYMBOL (BD2063) **Q** CONFIGURATION DESCRIPTION 0A628 B26C9G1SMTF8J43V116E26V85X10  
 (BD2062) 0A628 B26C9G1SMTF8J43V116E26V85X10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .035 .000 -12.000 4.4119 50.FT.  
 .000 .035 25.000 -12.000 19.2299 INCHES  
 LREF BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

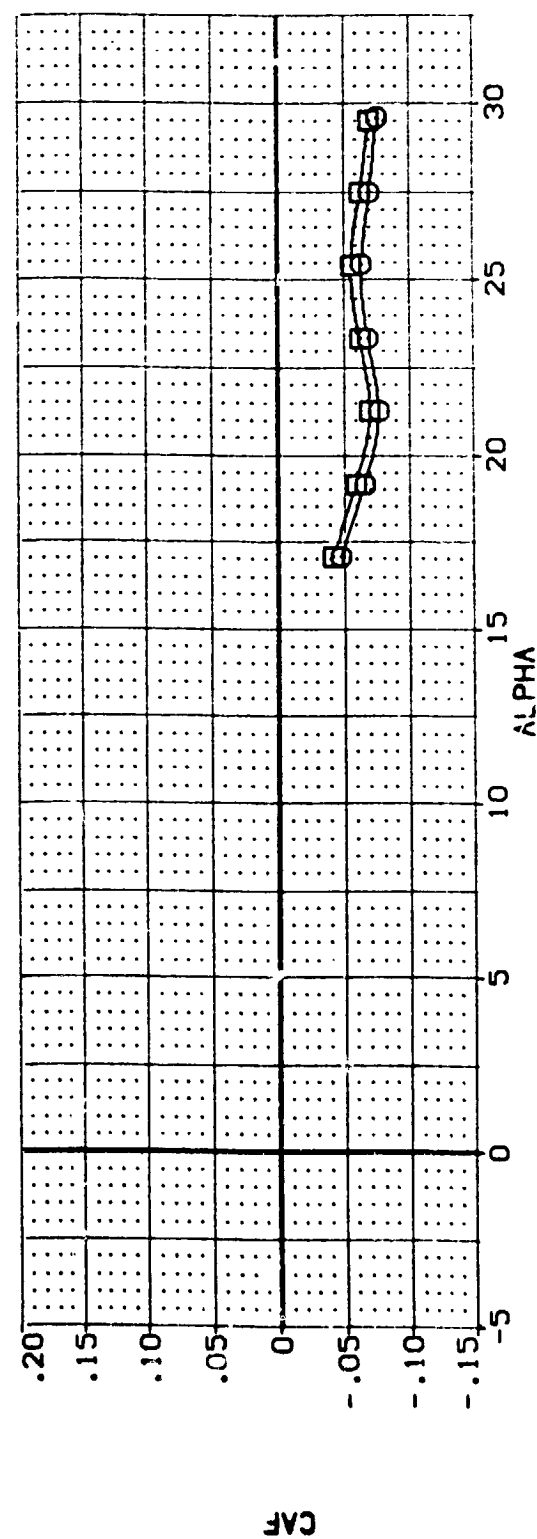
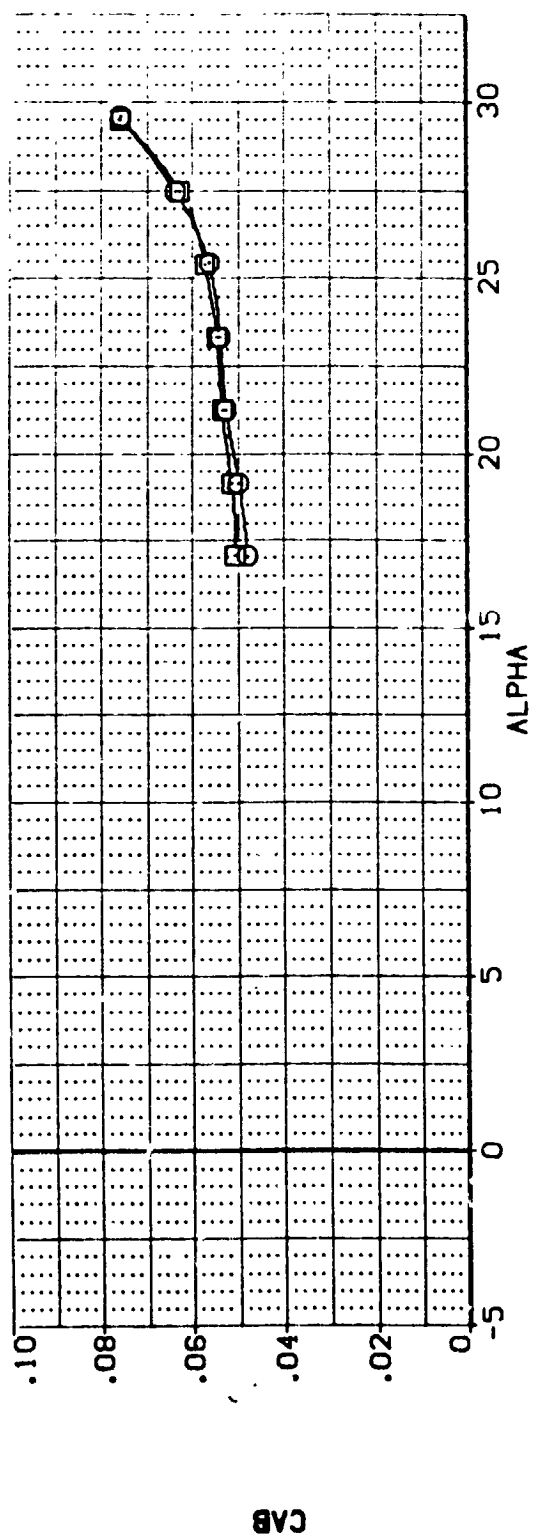


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODED ENGINES, H/BW = 0.035  
 (A)MACH = .20 PAGE 181



DATA SET SYMBOL (80Z053) (80Z062)

CONFIGURATION DESCRIPTION  
 0A6Z8 B26C9G15H7F8J43V116E28V8R5X10  
 0A6Z8 B26C9G15H7F8J43V116E28V8R5X10

ELEVON H/BW SPOBRK BDFLAP  
 .000 .035 .000 -12.000  
 .000 .035 25.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

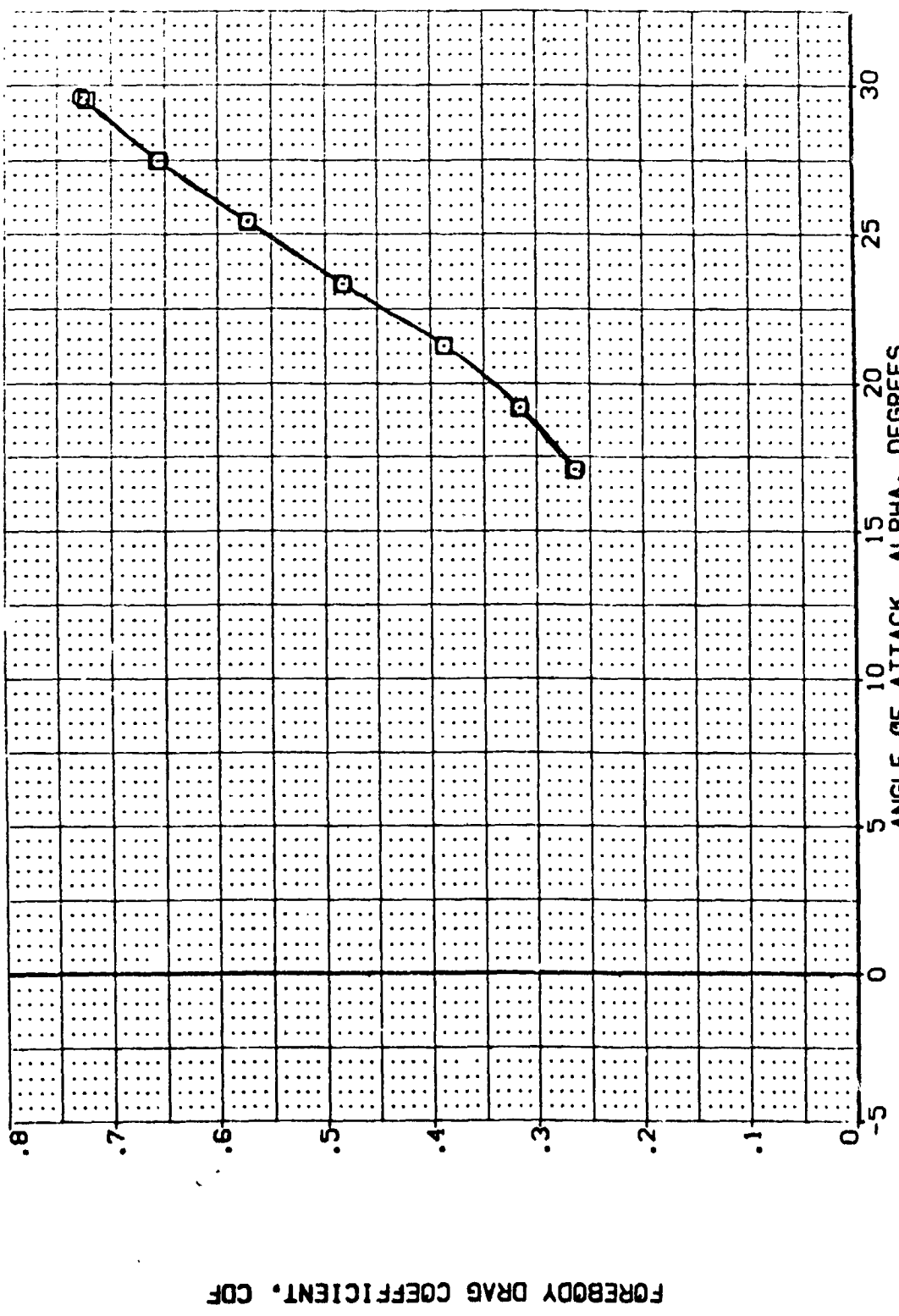
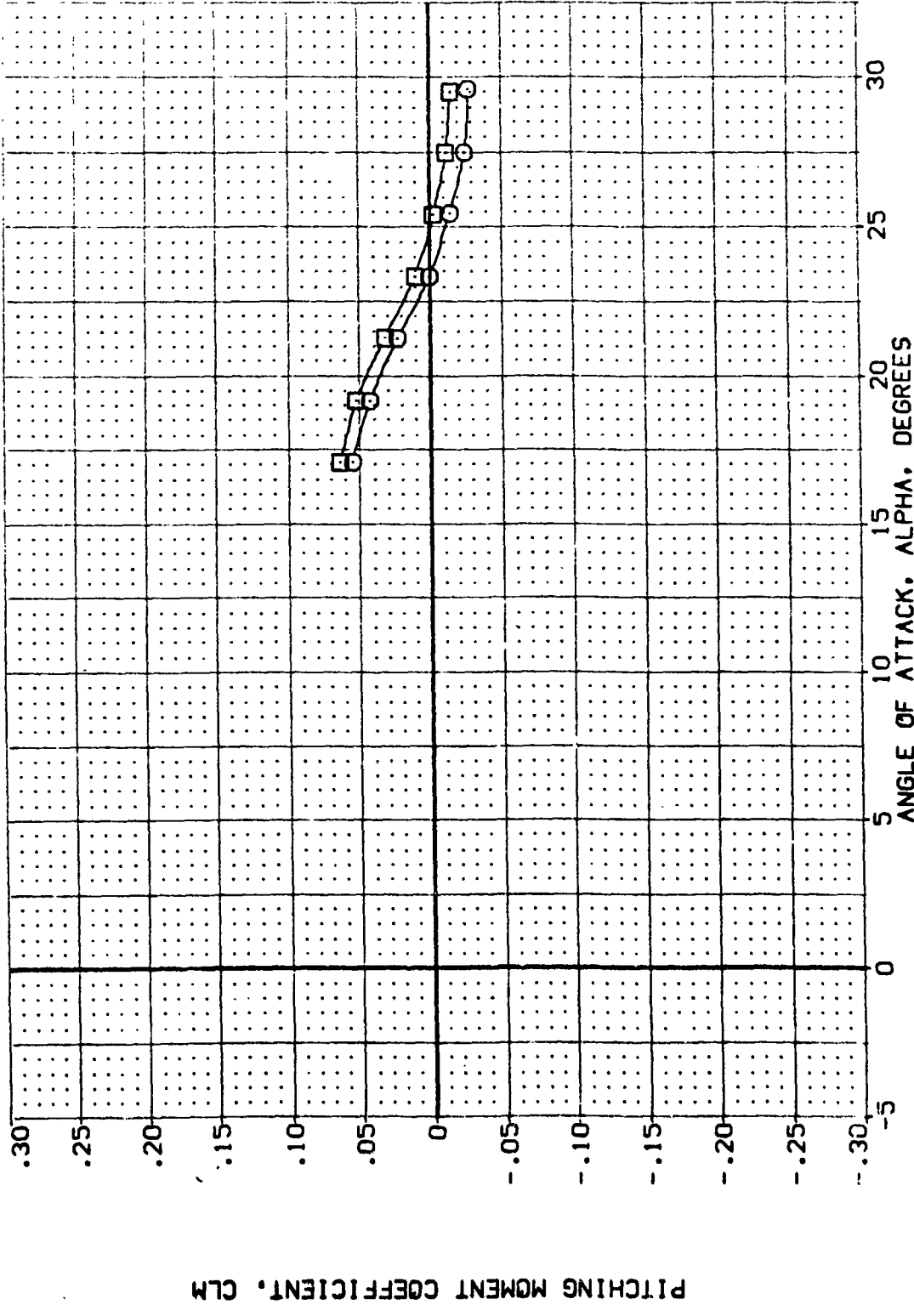


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035  
 (A)MACH = .20

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    ELEVON    H/BW    SPOBRK    BOFLAP    REFERENCE INFORMATION

(B07063)	BAG28 B26C9G SHTF 8J43W 16E28V85X10	.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B07062)	BAG28 B26C9G SHTF 8J43W 16E28V85X10	.000	.035	25.000	-12.000	LREF 19.2299 INCHES
						BREF 37.9359 INCHES
						XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035  
 (A)MACH = .20      PAGE 183

DATA SET SYMBOL (B0Z053) (B0Z052) **B** CONFIGURATION DESCRIPTION 0A6Z8 B26C9G1547F8J43V116E28V85X10 0A6Z8 B26C9G1547F8J43V116E28V85X10

ELEVON H/BW .000 .035 SFOBRK .000 -12.000 BDFLAP .000 -12.000 REFERENCE INFORMATION SREF 4.4119 SO.FT. 19.2299 INCHES LREF 37.9359 INCHES BREF 43.5974 INCHES YMRP .0000 INCHES ZMRP 15.1875 INCHES SCALE .0405 SCALE

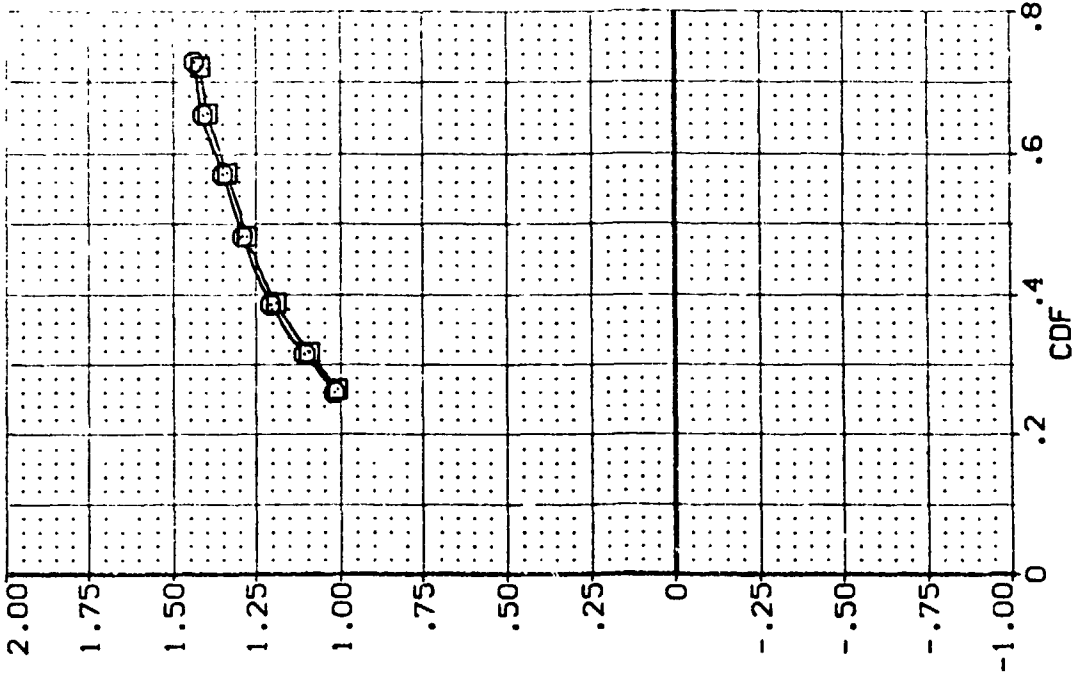
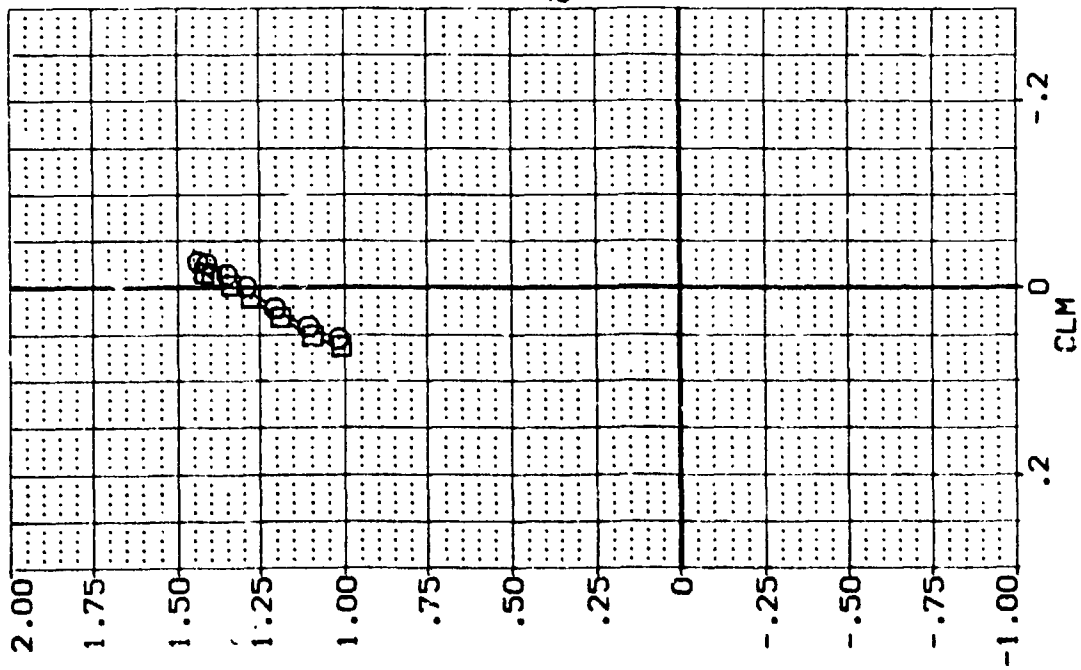


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035

(A) MACH = .20





DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (B0Z063)    B26C9615M7F8J43W116E28V8R5X10  
 (B0Z062)    B26C9615M7F8J43W116E28V8R5X10

ELEV3N    H/BW    SPDBRX    BDFLAP  
 .000    .035    .000    -12.000  
 .000    .035    25.000    -12.000

REFERENCE INFORMATION  
 SREF    4.4119    SQ.FT.  
 LRFF    19.2299    INCHES  
 BRFF    37.9359    INCHES  
 XMRP    43.5974    INCHES  
 YMRP    .0000    INCHES  
 ZMRP    15.1875    INCHES  
 SCALE    .0405    SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

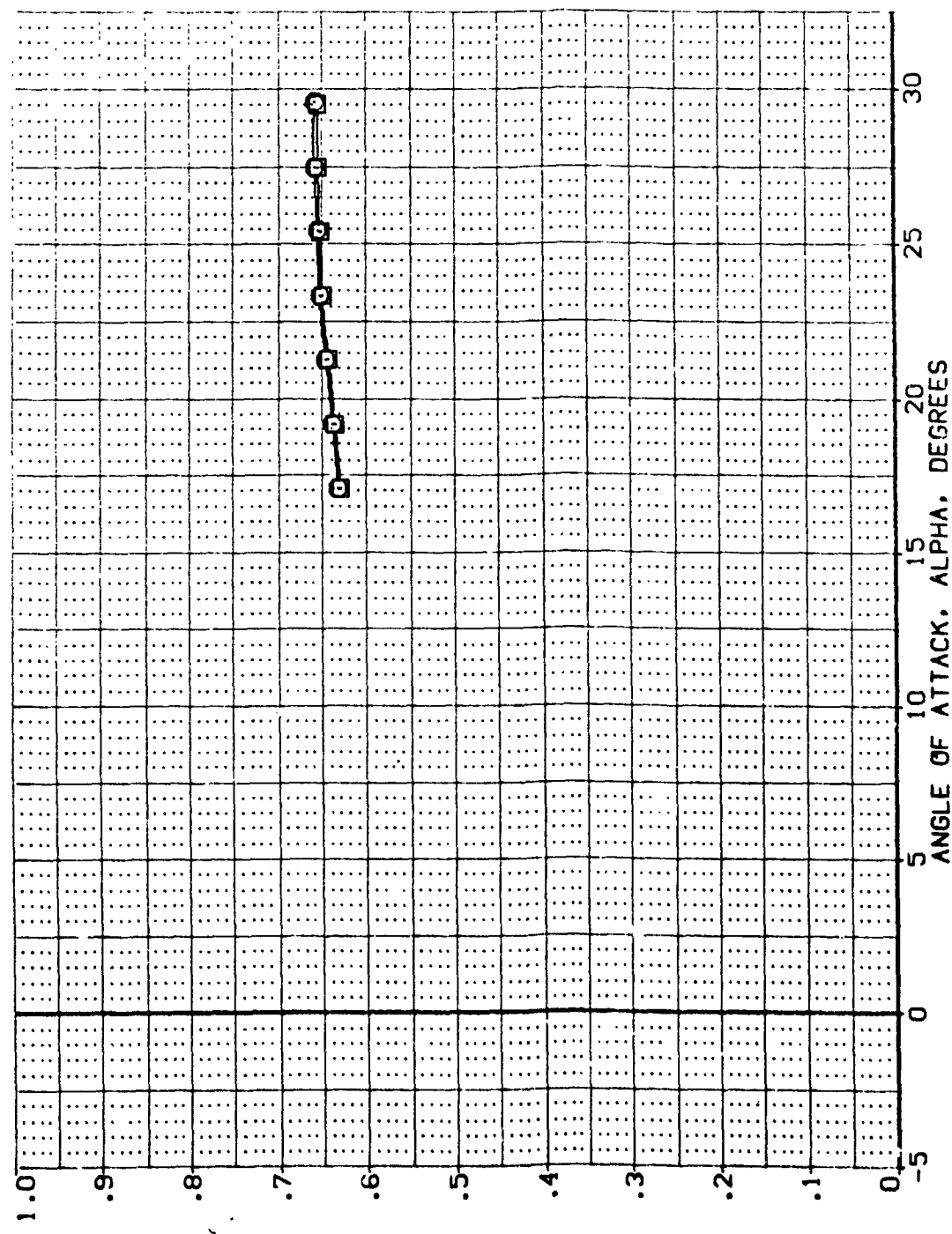


FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035

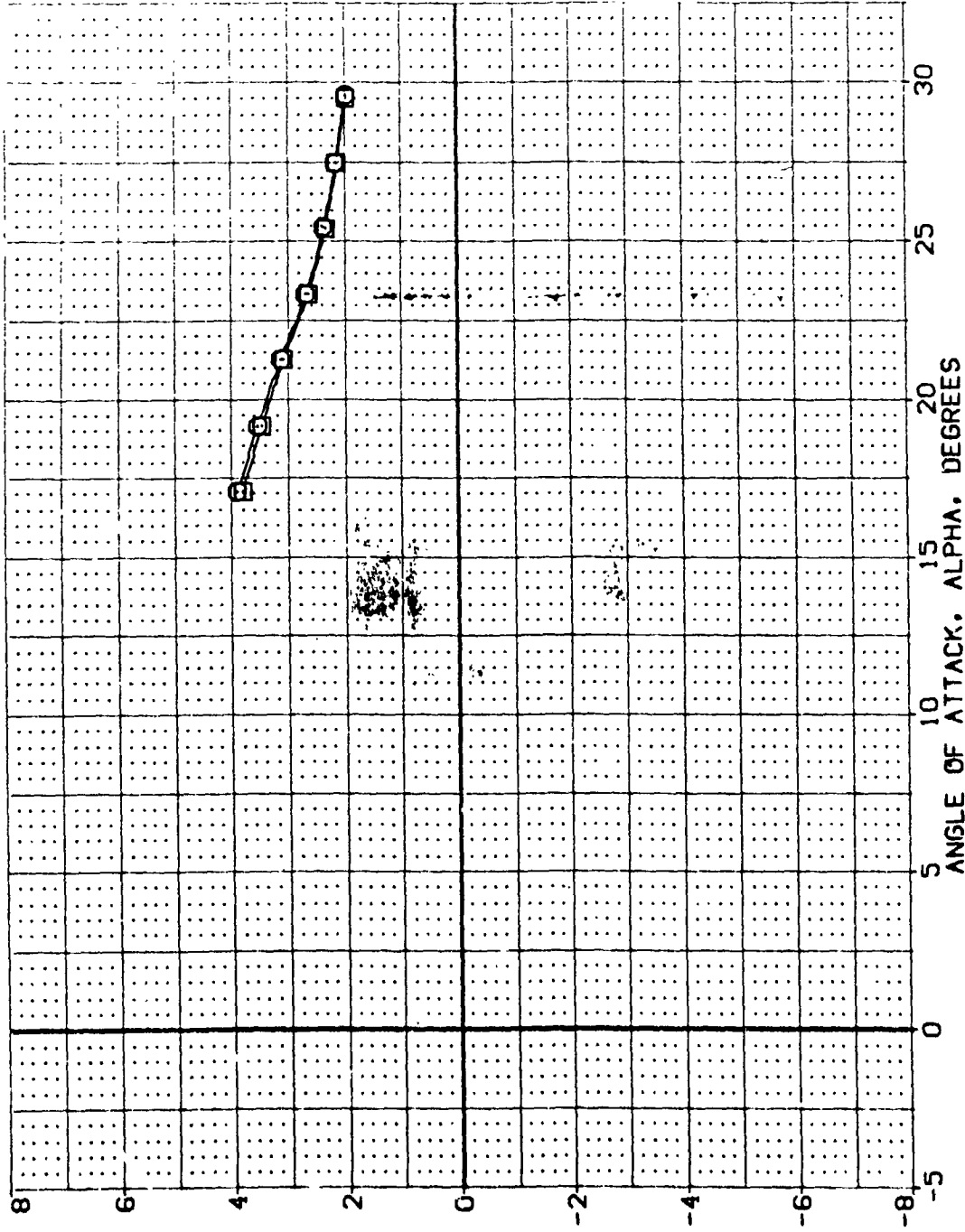
(A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ063) QAS28 B26C9G15M7F8J43V116E28V8FSX10  
 (PZ062) QAS28 B26C9G15M7F8J43V116E28V8FSX10

ELEWIN H/BW SPOBRK BOFLAP  
 .000 .035 .000 -12.000  
 .000 .035 25.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 11 EFFECT OF VERTICAL TAIL FLARE, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02066)	QAG28 B26C9G 5M7F8J43V 16E28V85X10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B02065)	QAG28 B26C9G 5M7F8J43V 16E28V85X10	-10.000	.035	.000	-12.000	LREF 19.2299 INCHES
(B02063)	QAG28 B26C9G 5M7F8J43V 16E28V85X10	.000	.035	.000	-12.000	BREF 37.9359 INCHES
(B02064)	QAG28 B26C9G 5M7F8J43V 16E28V85X10	15.000	.035	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

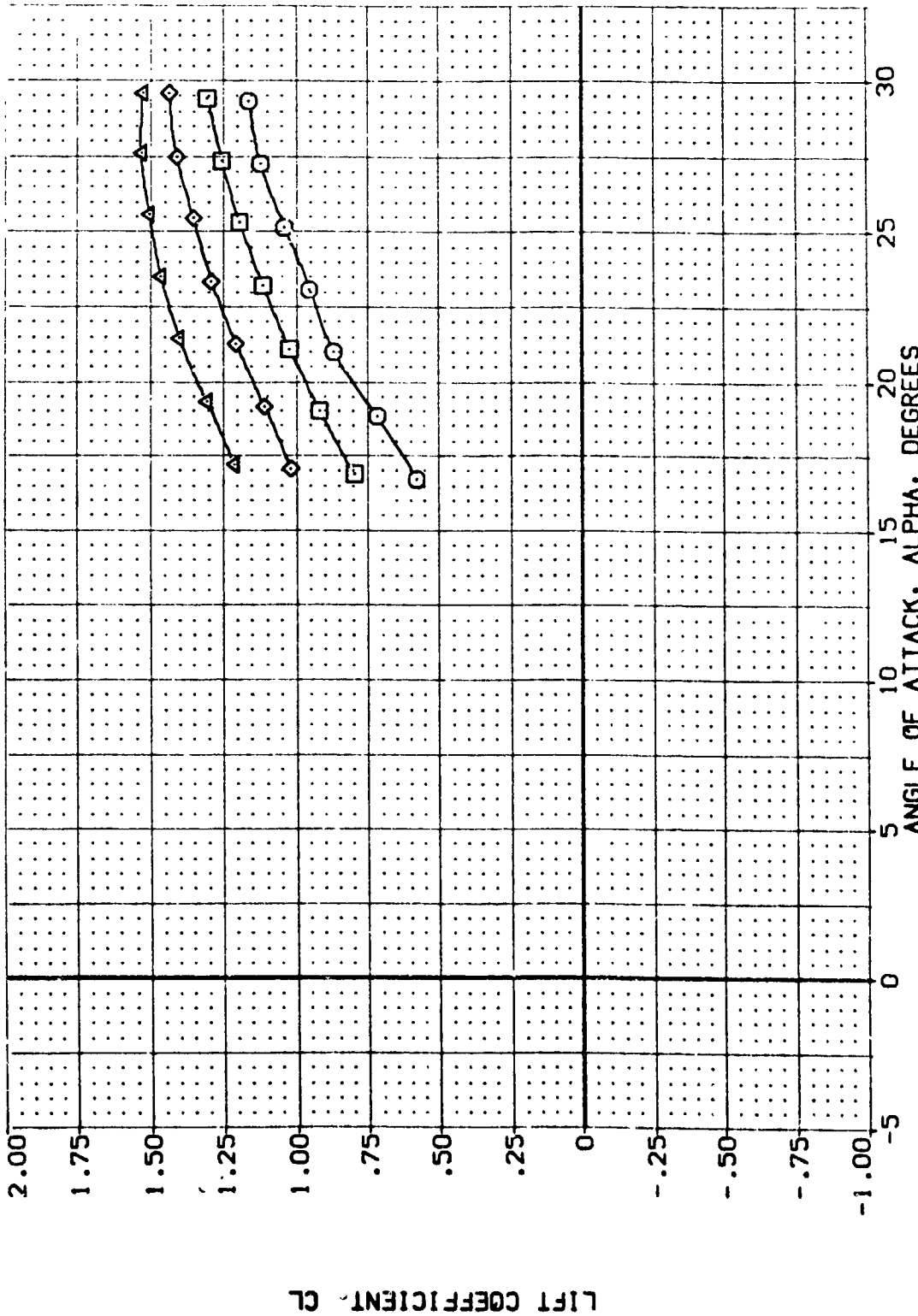


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20 PAGE 187



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDBRK	BOFLAP	REFERENCE INFORMATION
(B0Z066)	0A628 B26C961 5M7F 8J43V116E28V8RSX10	-20.000	.035	.000	-12.000	SREF 4.4119 SQ.FT.
(B0Z065)	0A528 B26C961 5M7F 8J43V116E28V8RSX10	-10.000	.035	.000	-12.000	LREF 19.2289 INCHES
(B0Z063)	0A526 B26C961 5M7F 8J43V116E28V8RSX10	0.000	.035	.000	-12.000	PREF 37.9359 INCHES
(B0Z064)	0A628 B26C961 5M7F 8J43V116E28V8RSX10	15.000	.035	.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 INCHES

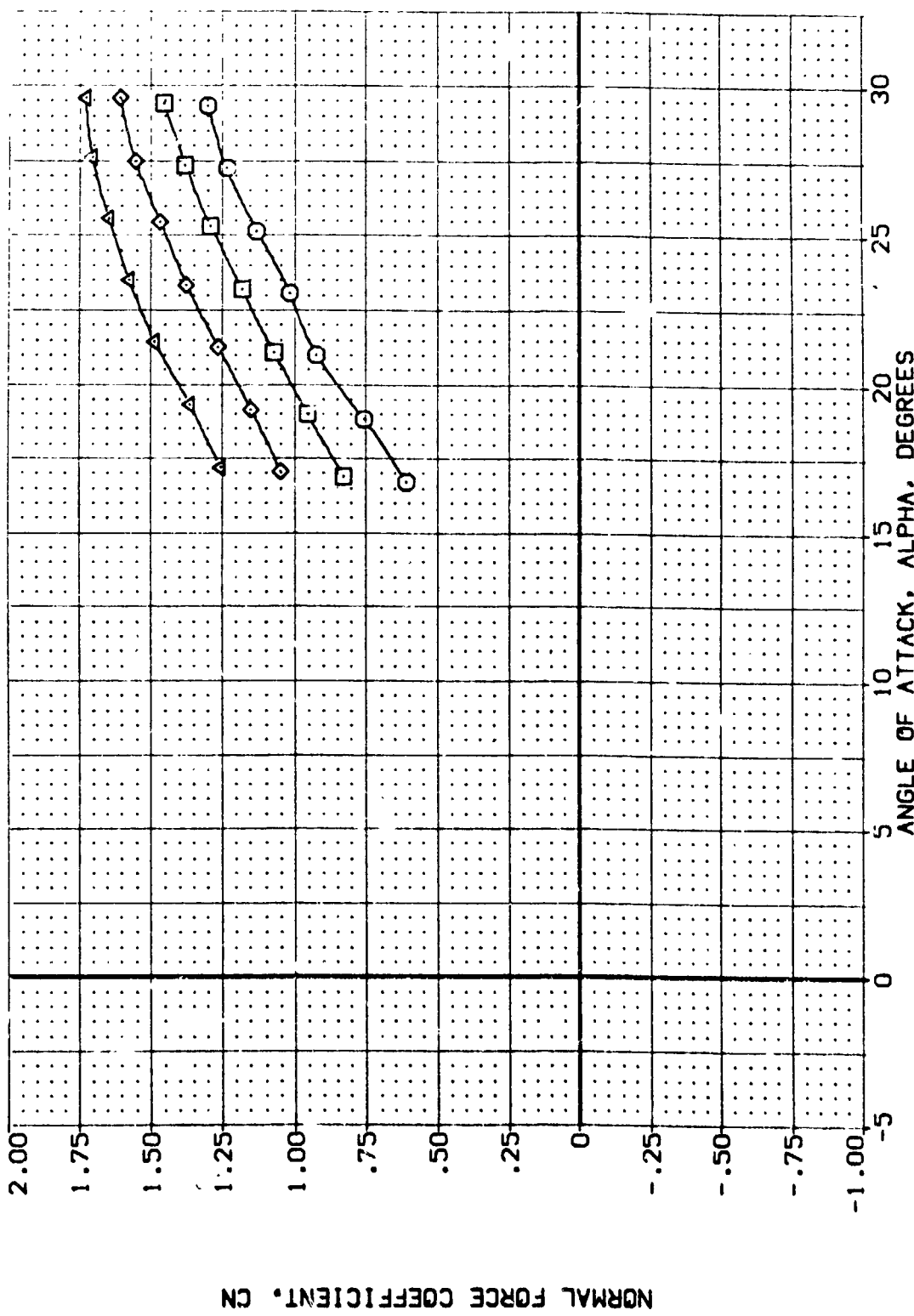


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20 PAGE 188



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z065)	0A5Z8 BZ6C9G1SM7F8J43V116E28V8RSX10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B0Z065)	0A5Z8 BZ6C9G1SM7F8J43V116E28V8RSX10	-10.000	.035	.000	-12.000	LREF 19.2298 INCHES
(B0Z063)	0A5Z8 BZ6C9G1SM7F8J43V116E28V8RSX10	-10.000	.035	.000	-12.000	BREF 37.9359 INCHES
(B0Z054)	0A5Z8 BZ6C9G1SM7F8J43V116E28V8RSX10	15.000	.035	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

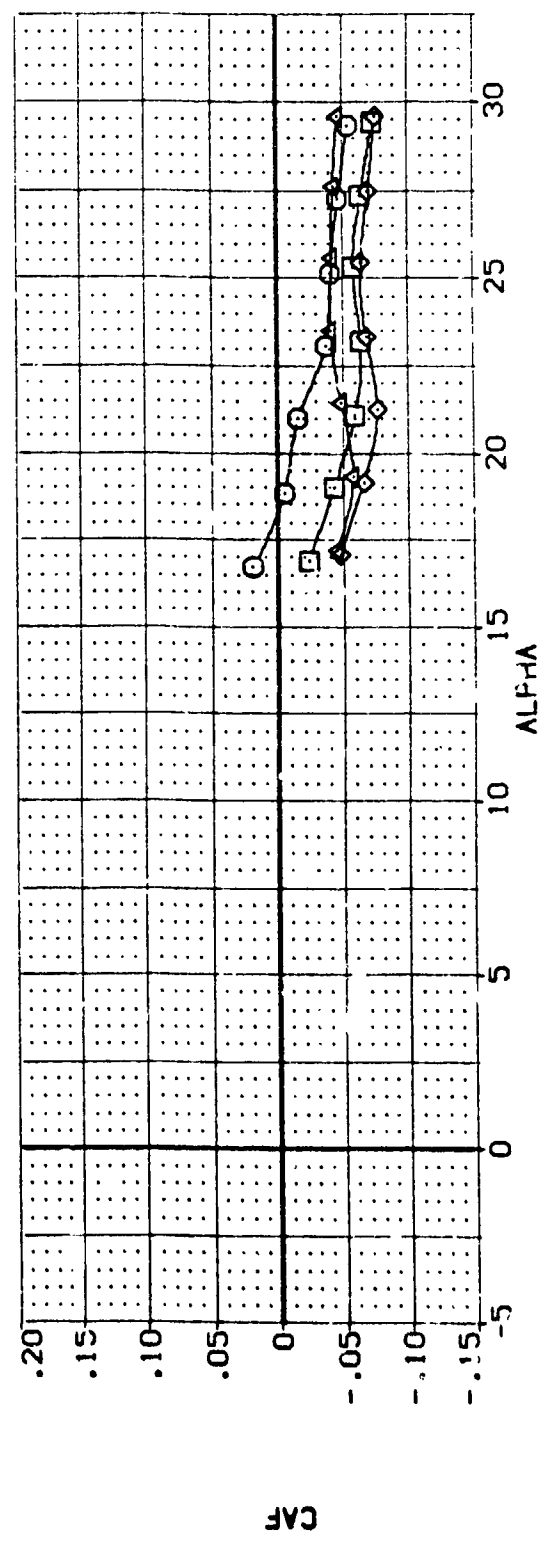
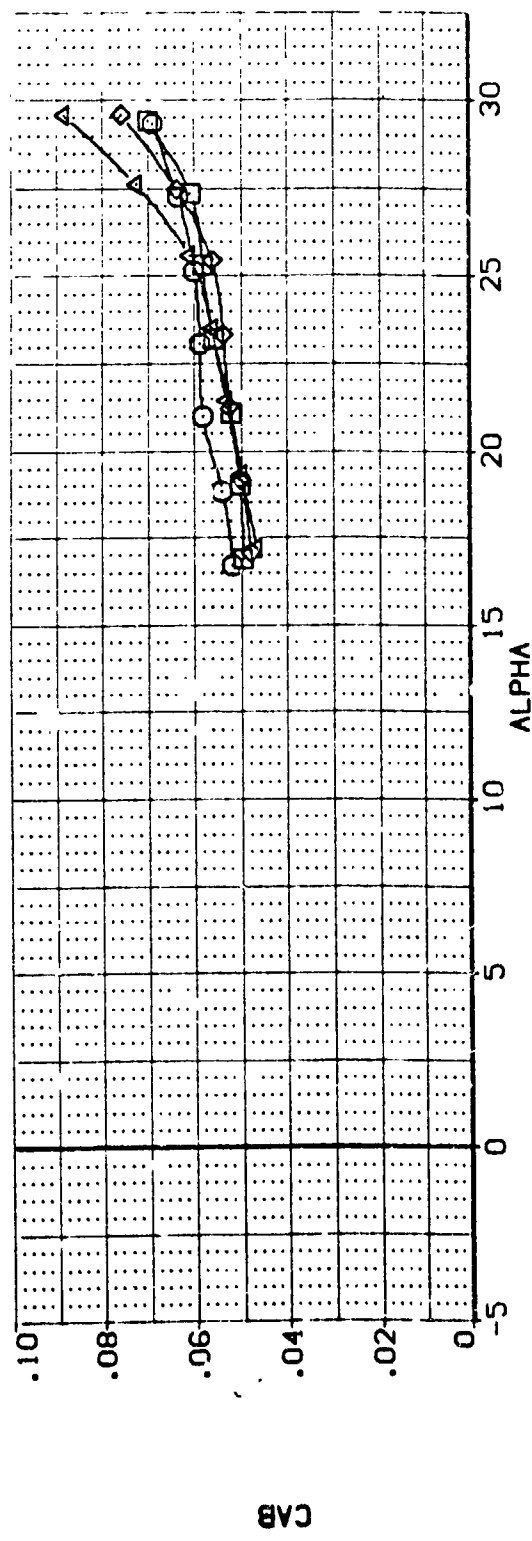


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.035  
 (A) MACH = .20 PAGE 189

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVATION	H/BW	SPDRK	BOFLAP	REFERENCE INFORMATION
(80Z066)	0A6Z8 B26C9G15H7F8J43V116E28V85X10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT
(80Z065)	0A6Z8 B26C9G15H7F8J43V116E28V85X10	-10.000	.035	.000	-12.000	LREF 19.2299 INCHES
(80Z063)	0A6Z8 B26C9G15H7F8J43V116E28V85X10	15.000	.035	.000	-12.000	BREF 37.9359 INCHES
(80Z064)	0A6Z8 B26C9G15H7F8J43V116E28V85X10					XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0105

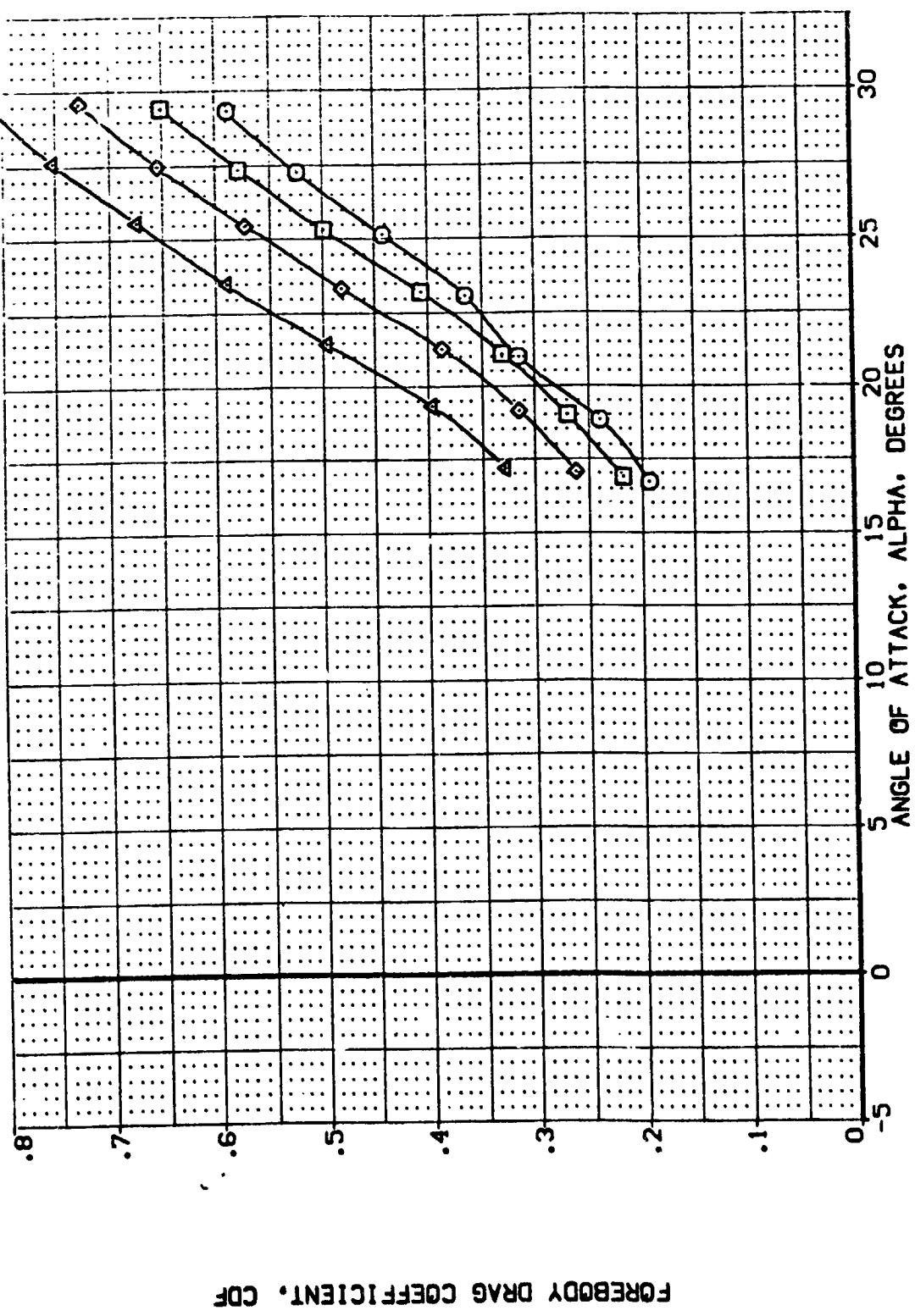


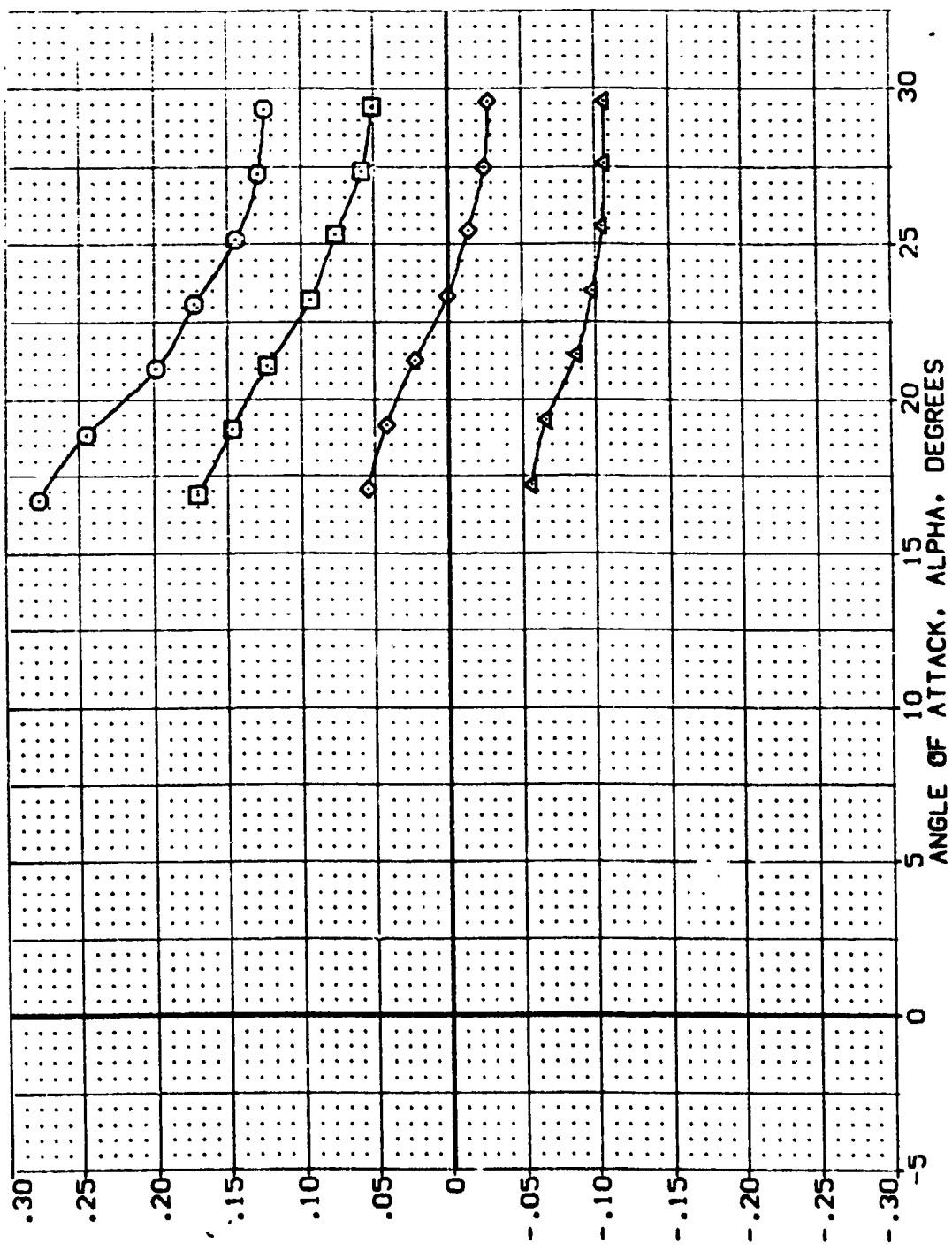
FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL  
 (802065)  
 (802065)  
 (802063)  
 (802064)

CONFIGURATION DESCRIPTION:  
 0A628 B26C9G|S47F8J43W|16E28V8FSX10  
 0A628 B26C9G|S47F8J43W|16E28V8FSX10  
 0A628 B26C9G|S47F8J43W|16E28V8FSX10  
 0A628 B26C9G|S47F8J43W|16E28V8FSX10

ELEVON H/BW .035  
 SPOBRK .000  
 BOFLAP -12.000  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1673 INCHES  
 SCALE .0405



PITCHING MOMENT COEFFICIENT, CM

FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B0Z065) OASZ8 B26C9G1547F 8J43M116E28V8RSX10  
 (B0Z065) OASZ8 B26C9G1547F 8J43M116E28V8RSX10  
 (B0Z063) OASZ8 B26C9G1547F 8J43M116E28V8RSX10  
 (B0Z064) OASZ8 B26C9G1547F 8J43M116E28V8RSX10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 -20.000 .035 .000 -12.000 SREF 4.4119 SO.FT  
 -10.000 .035 .000 -12.000 LREF 19.2299 INCHES  
 15.000 .035 .000 -12.000 XRRP 37.9359 INCHES  
 .0000 .0000 .0000 .0000 YRRP 43.5974 INCHES  
 .0405 .0405 ZRRP 15.1875 INCHES  
 SCALE

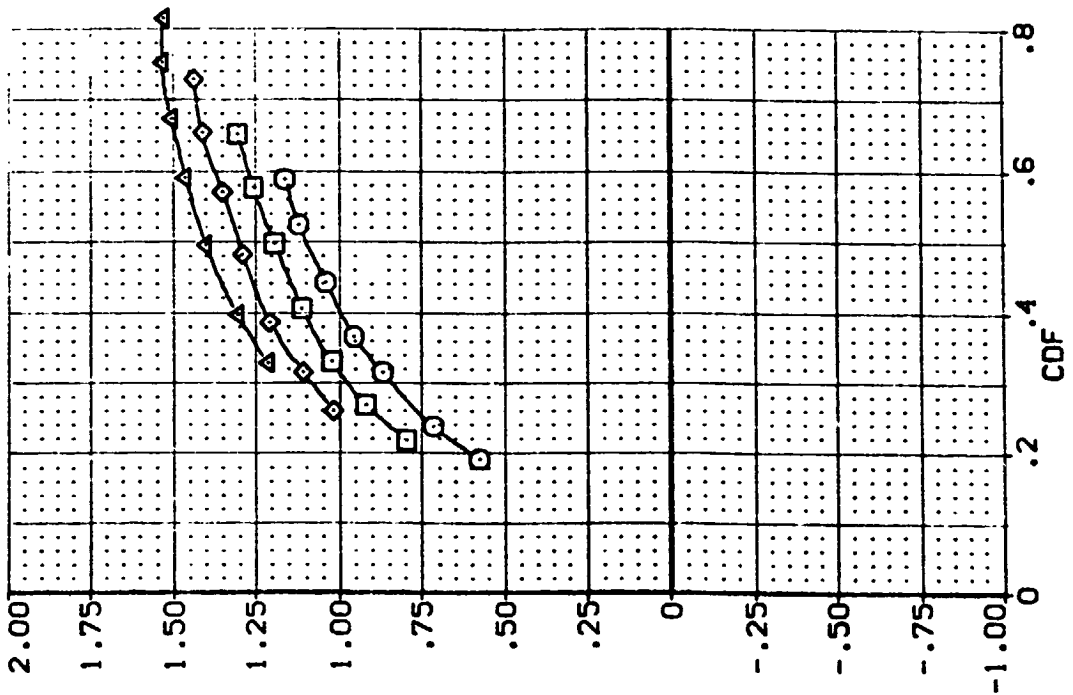
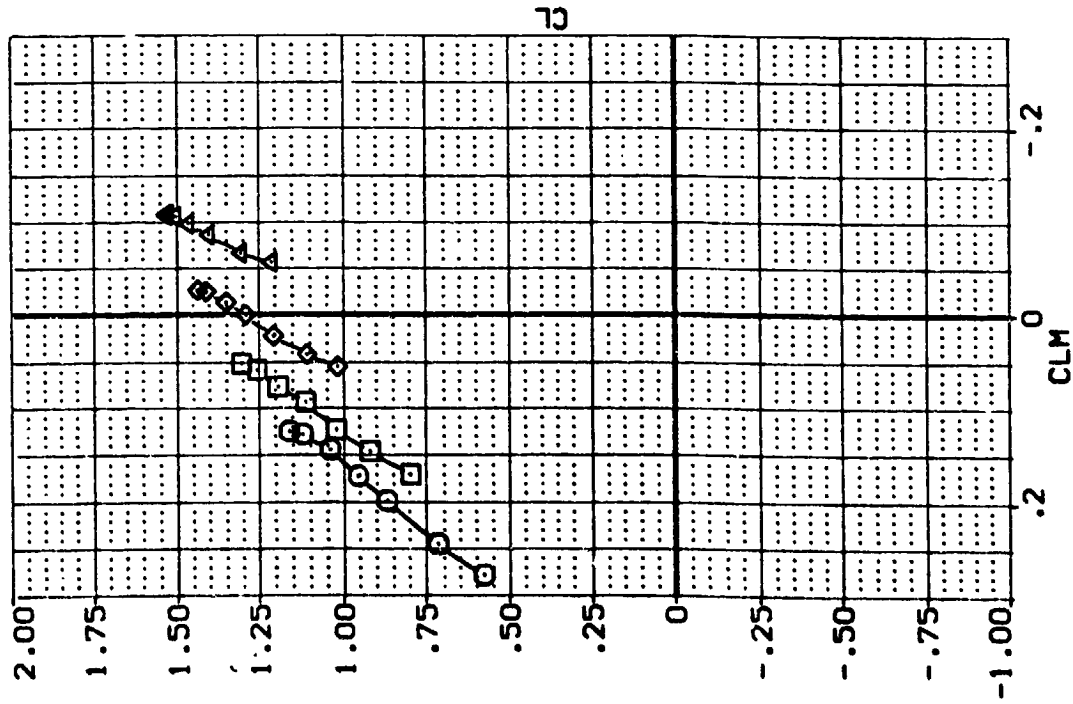


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

(A)MACH = .20

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(80Z066)    B26C96|5W7F8J43V|1E28VBR5X10    SREF    4.4119    50. FT

(80Z065)    B26C96|5W7F8J43V|1E28VBR5X10    LREF    19.2299    INCHES

(80Z063)    B26C96|5W7F8J43V|1E28VBR5X10    BREF    37.9359    INCHES

(80Z064)    B26C96|5W7F8J43V|1E28VBR5X10    XMRP    43.5974    INCHES

YMRP    .0000    INCHES

ZMRP    15.1875    INCHES

SCALE    .0405    SCALE

ELEVON    H/WB    SPOBRK    BOFLAP

-20.000    .035    .000    -12.000

-10.000    .035    .000    -12.000

15.000    .035    .000    -12.000

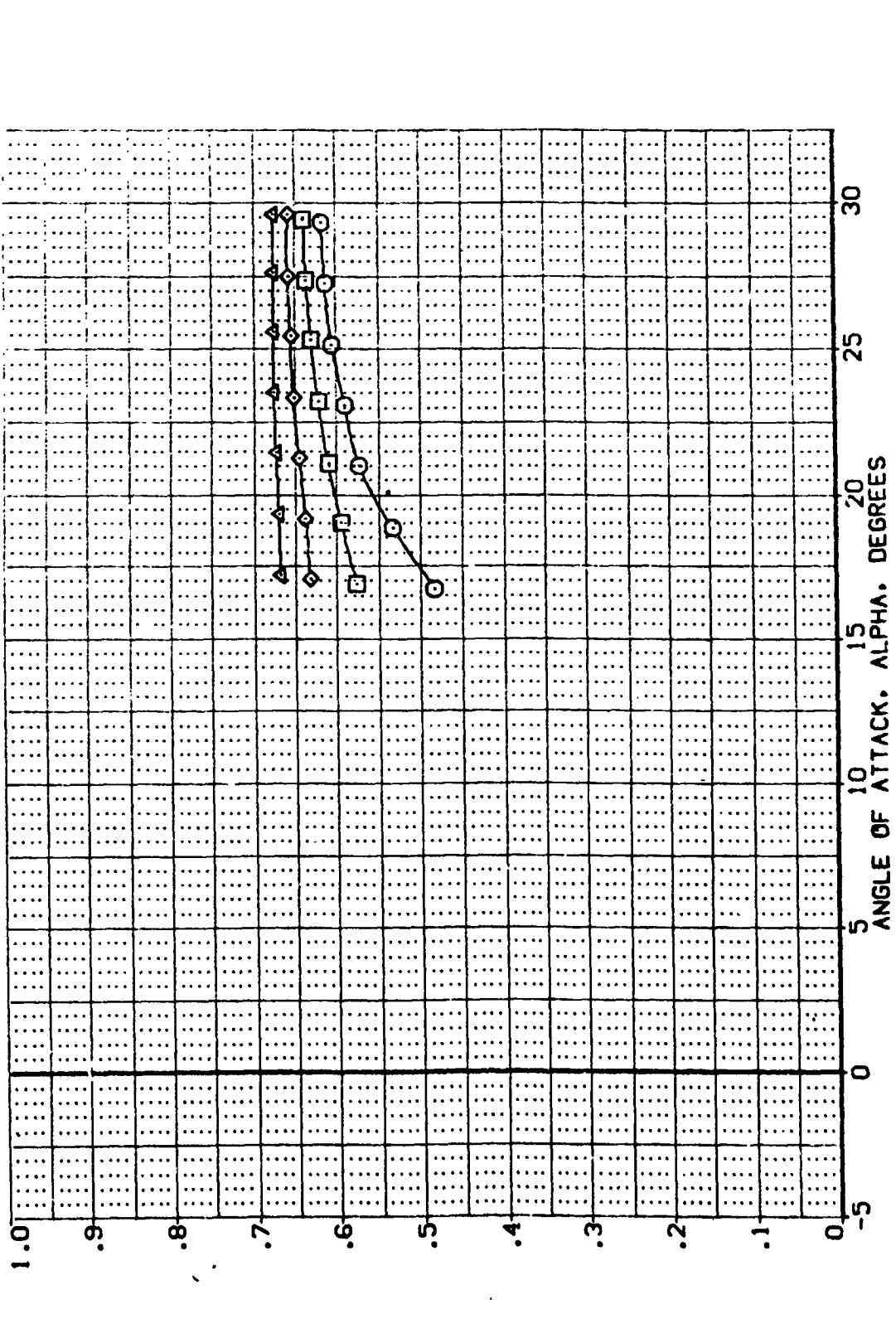
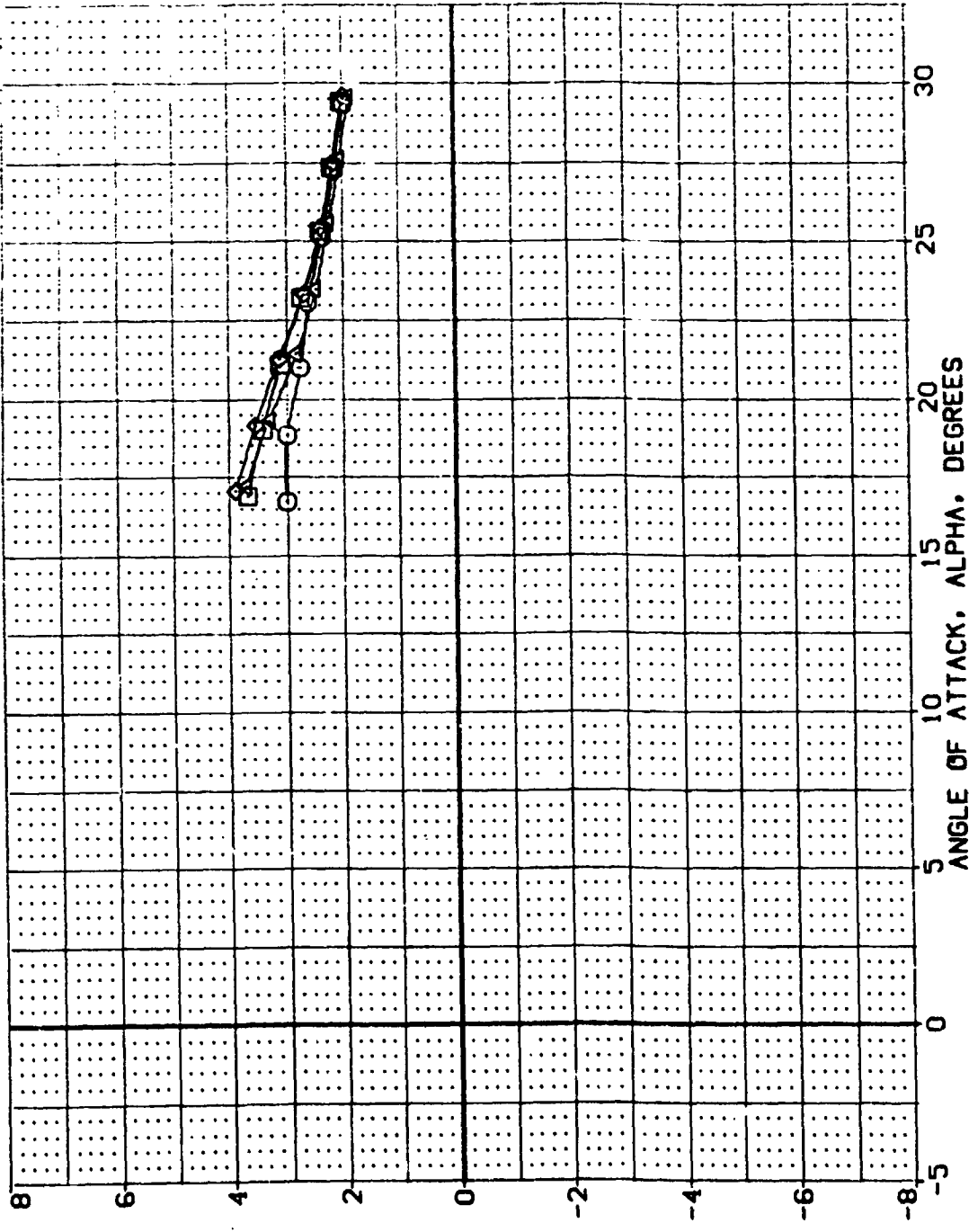


FIG 12 ELEVON EFFECTIVENESS, UNDERWING POADED ENGINES, H/BW = 0.035  
 (A)MACH = .20    PAGE 193

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

DATA SET SYMBL. CONFIGURATION DESCRIPTION

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802066)	0A6Z8 826C9G1547F8443V116E28V8RSX10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(802065)	0A6Z8 826C9G1547F8443V116E28V8RSX10	-10.000	.035	.000	-12.000	LREF 19.2299 INCHES
(802063)	0A6Z8 826C9G1547F8443V116E28V8RSX10	.000	.035	.000	-12.000	BREF 37.9359 INCHES
(802064)	0A6Z8 826C9G1547F8443V116E28V8RSX10	15.000	.035	.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405



FOREBODY LIFT TO DRAG RATIO, LF/DF

ANGLE OF ATTACK, ALPHA, DEGREES

FIG 12 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.035

C/MACH = .20





0A62B 826C9G15M7F8J43W116E28V8R5X10 (1DZ066)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	.000	1DZ066	SREF	4.4119
MACH	.200	.000	1DZ066	LREF	19.2289
BOFLAP	-12.000	.000	1DZ063	BREF	37.9339
RUDDER	.000	.000	1DZ063	XMRP	43.5974
H/BW	.035			YMRP	.0000
				ZMRP	15.1875
				SCALE	.0405

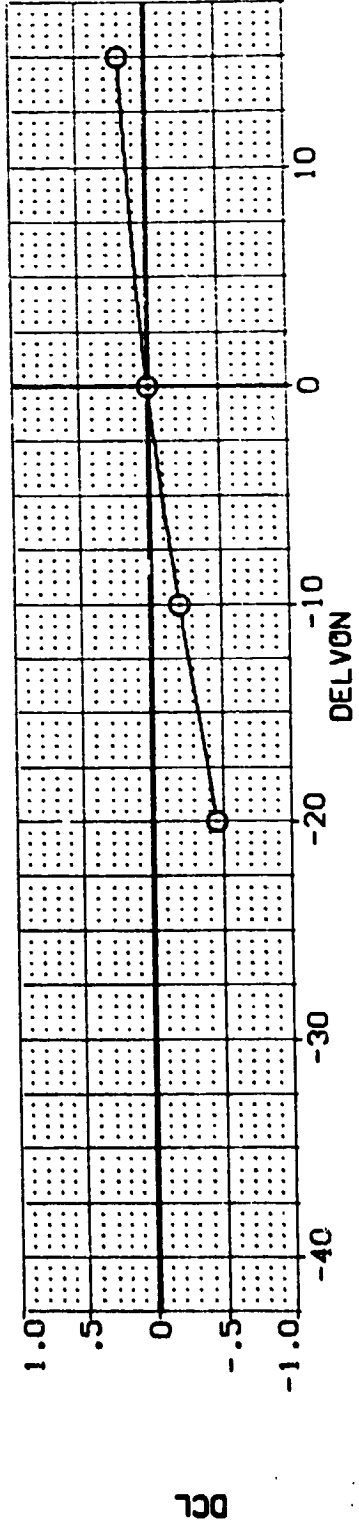
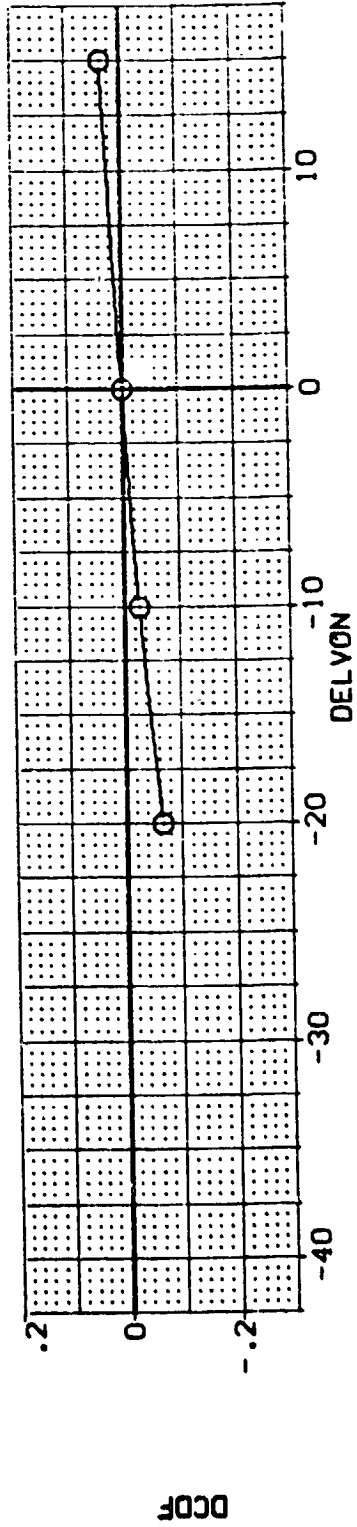
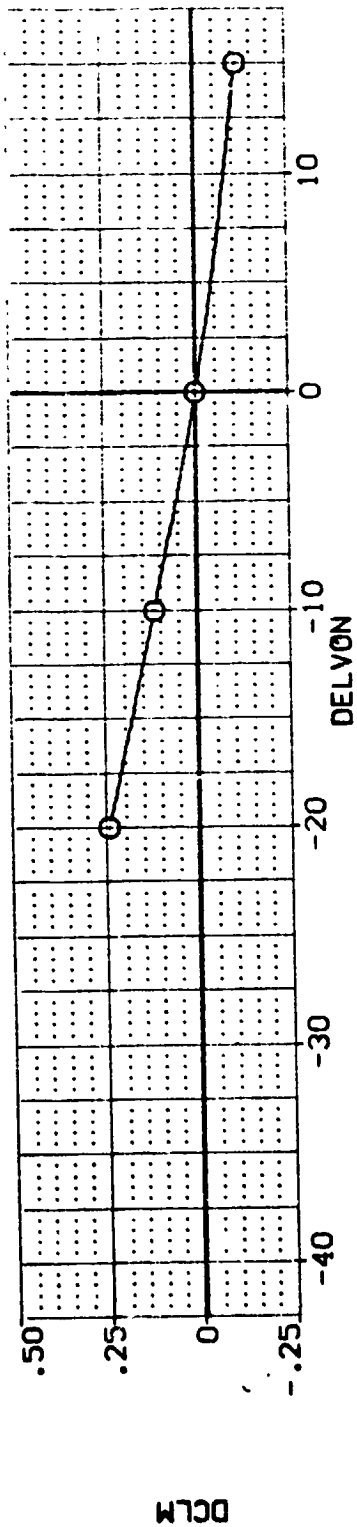


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ066)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	20.000	BETA	.000	10Z065	SREF	4.4119
	MACH	.200	A1LRON	.000	10Z066	LREF	19.2299
	BDFLAP	-12.000	SPOBRK	.000	10Z063	BREF	37.9359
	RUDDER	.000		.000		XMRP	43.5374
	H/BW	.035				YMRP	.0000
						ZMRP	15.1875
						SCALE	.0405

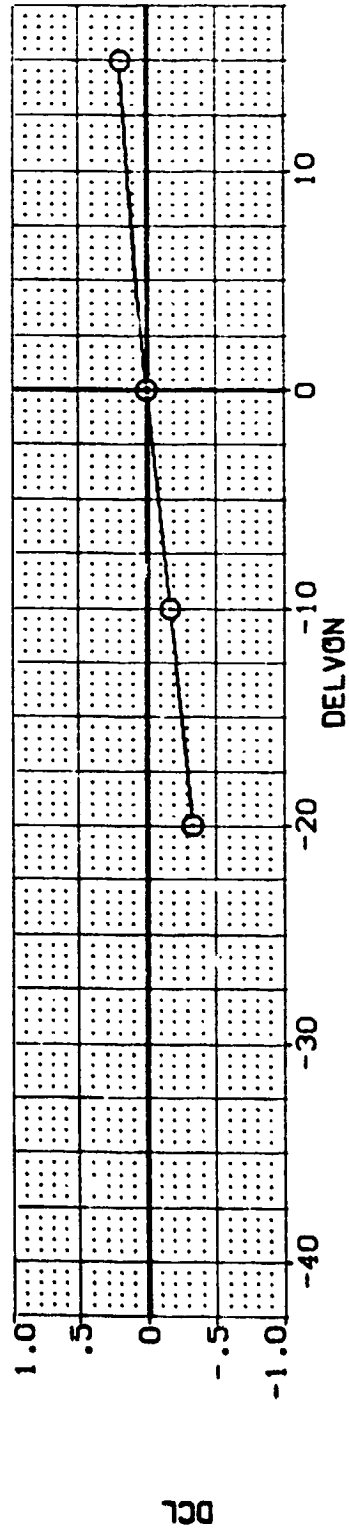
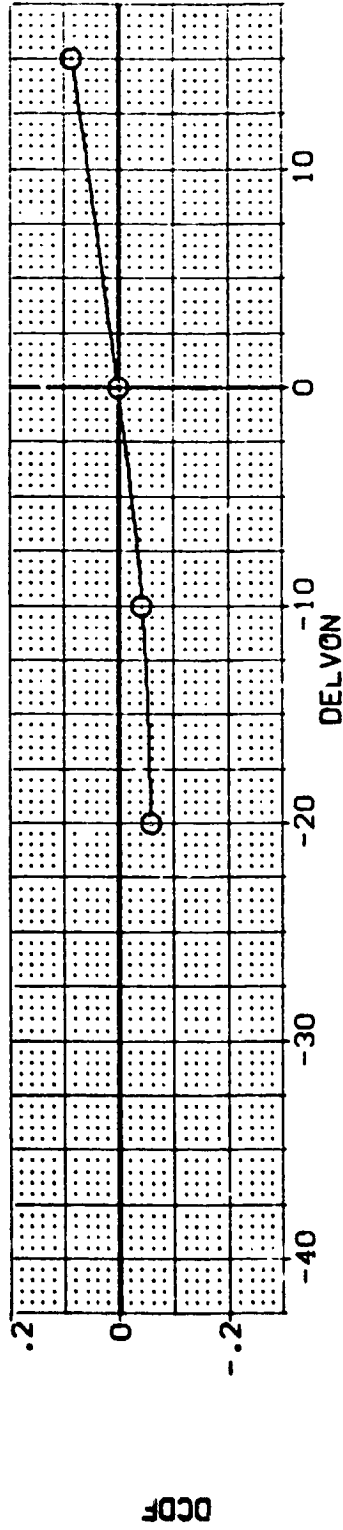
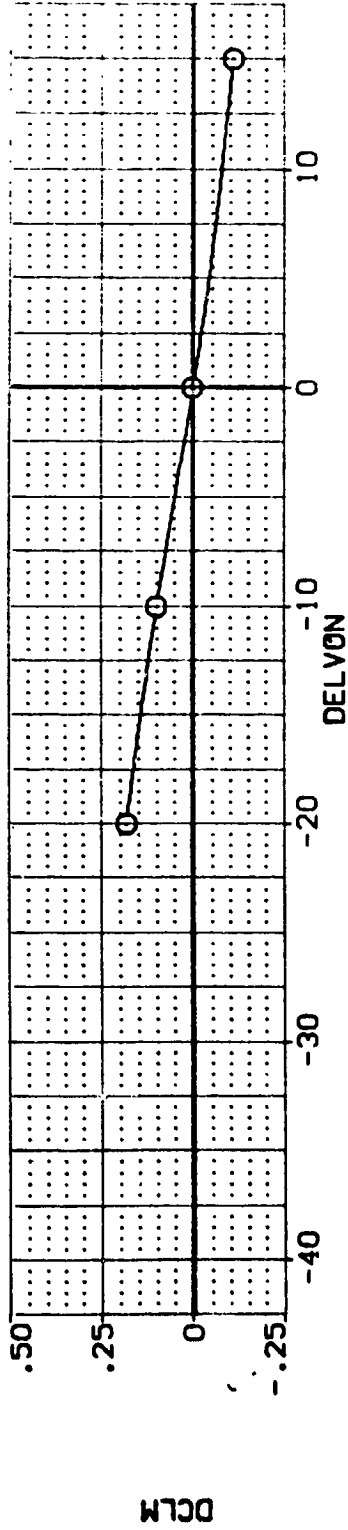


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035



0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ066)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	25.000	.000	DELVON	SREF	SO.FT.
BETA	.200	.000	DELVON	LREF	INCHES
MACH	-12.000	.000	IDZ066	YREF	INCHES
BDFLAP	.000	.000	IDZ064	XTRP	INCHES
RUDDER	.000	.000		YTRP	INCHES
H/BW	.035			ZTRP	INCHES
				SCALE	SCALE
					.0405

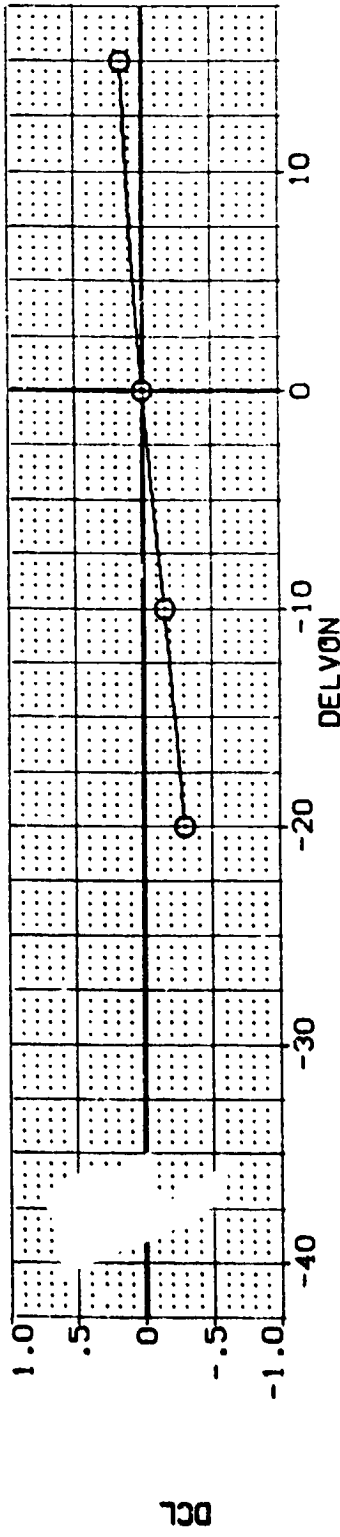
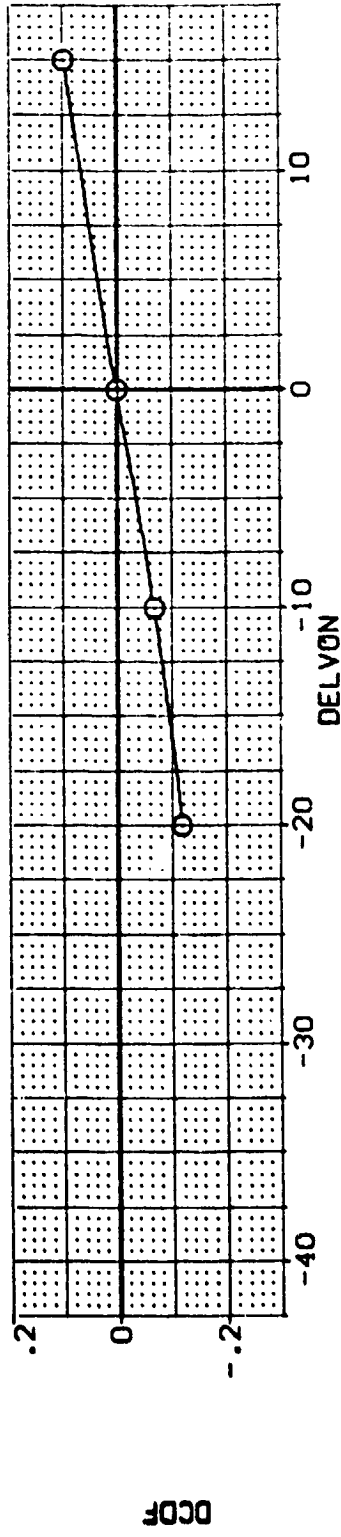
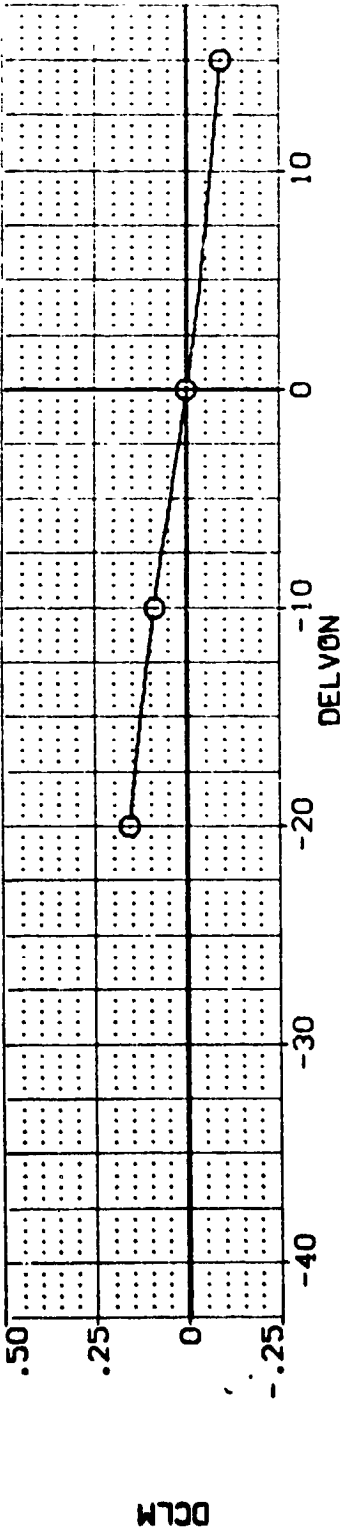


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035



0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ066)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
O	ALPHA	30.000	MACH	.200	BETA	.000	DATASET	DELTON	.000	DELTON	SREF	4.4119	SO.FT.
	BDFLAP			-12.000	AILRON	.000	1DZ066	-20.000	.000	-10.000	LREF	19.2299	INCHES
	RUDDER			.000	SPDRK	.000	1DZ063	.000	.000	15.000	BREF	37.9359	INCHES
	H/BW			.035							YMRP	43.5974	INCHES
											ZMRP	.0000	INCHES
											SCALE	15.1875	INCHES
													SCALE

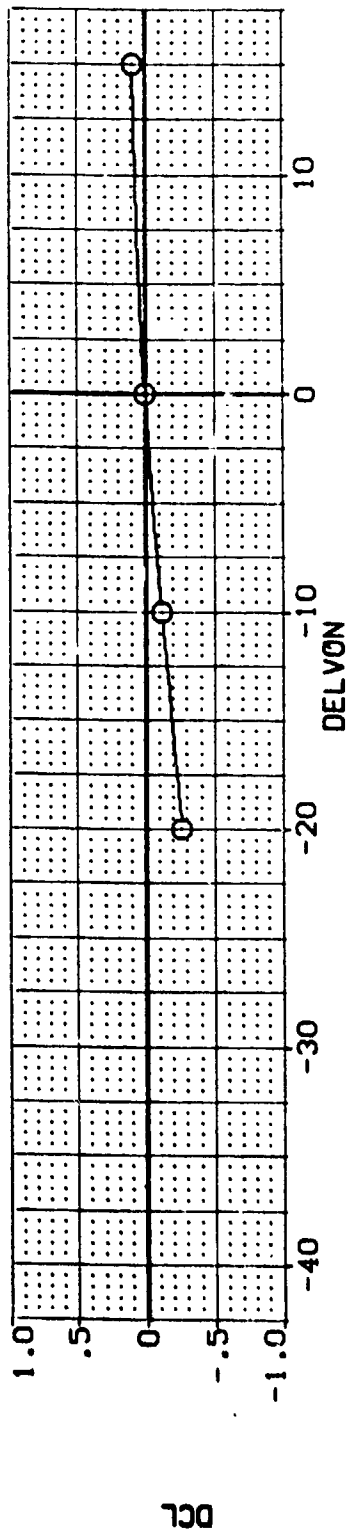
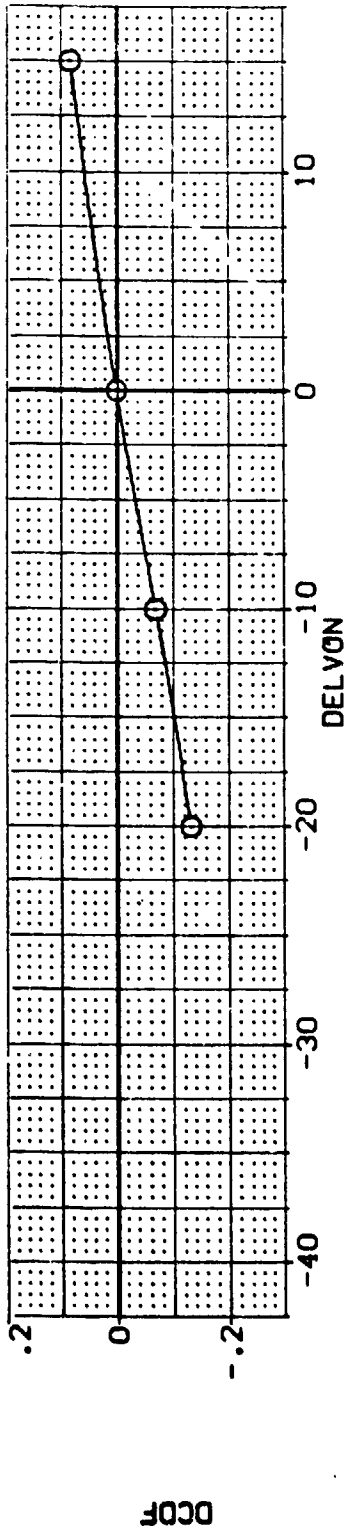
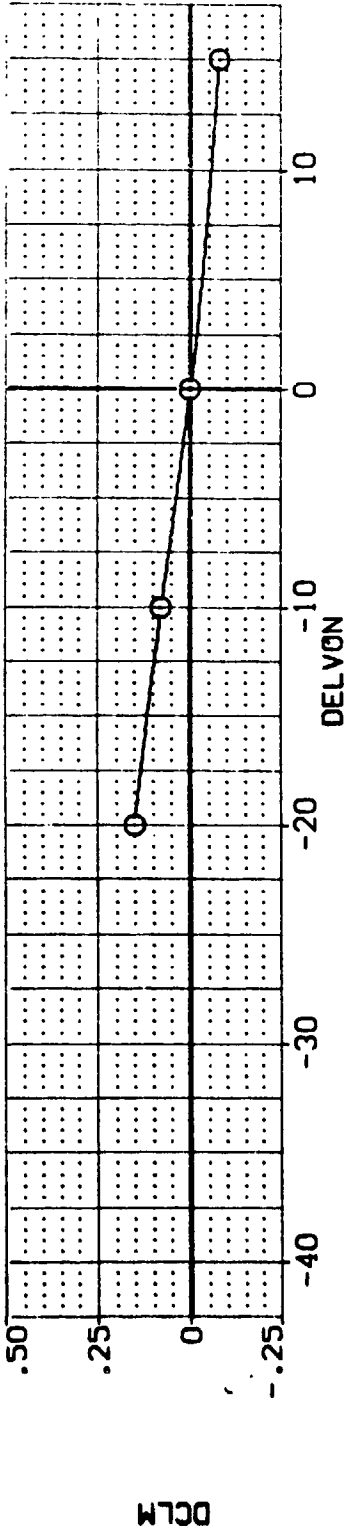
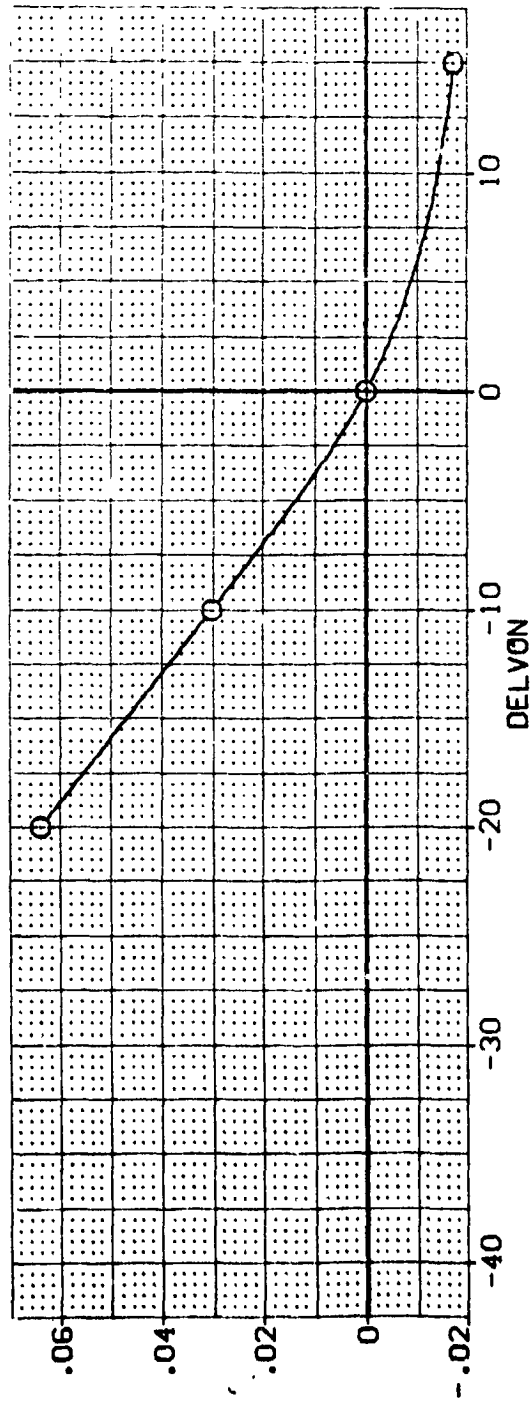


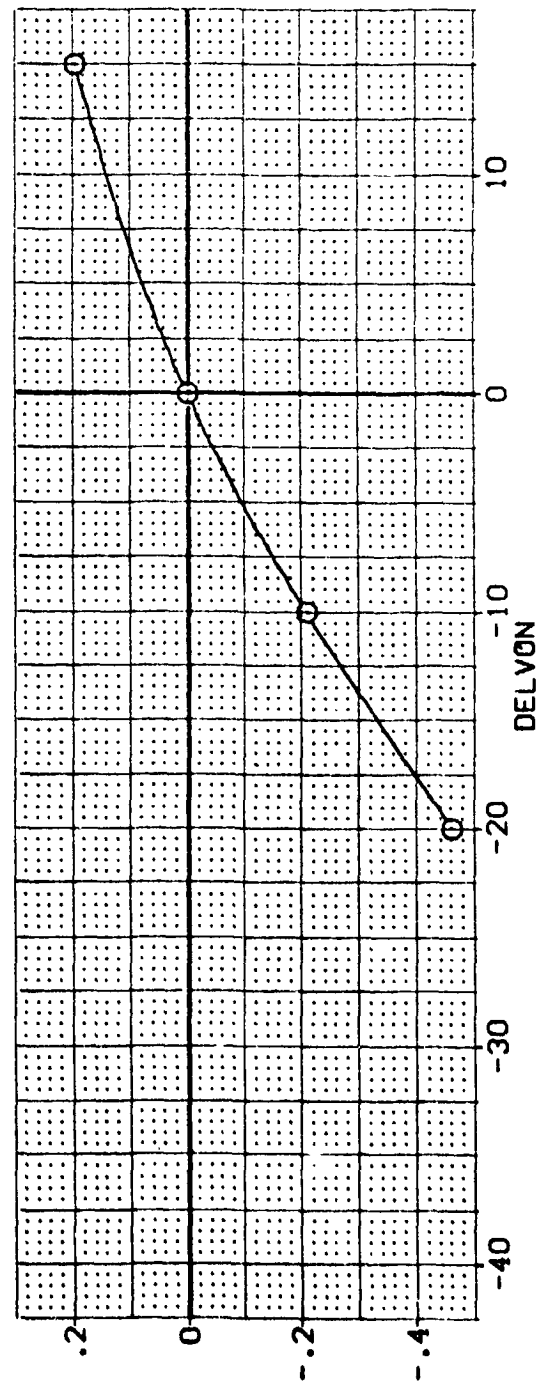
FIG 12 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.035

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ066)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION						
0	ALPHA	15.000	MACH	.200	BETA	.000	DATASET	DELVON	-20.000	.000	IDZ066	DELVON	-10.000	SREF	4.4119	SO.FT.
	BDFLAP	-12.000	AILRON	.000	IDZ066	.000	IDZ066	.000	.000	.000	IDZ064	LREF	19.2799	LREF	19.2799	INCHES
	RUDDER	.000	SPOBRK	.000	IDZ063	.000						BREF	37.9359	BREF	37.9359	INCHES
	H/BW	.035										XMRP	43.5974	XMRP	43.5974	INCHES
												YMRP	.0000	YMRP	.0000	INCHES
												ZMRP	15.1875	ZMRP	15.1875	INCHES
												SCALE	.0405	SCALE	.0405	SCALE



DCA



DCN

FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.035

0A628 826C9G15M7F8J43W116L28V8R5X10 (1DZ066)

<b>SYMBOL</b>	<b>ALPHA</b>	<b>MACH</b>	<b>BOFLAP</b>	<b>RUDDER</b>	<b>H/BW</b>	<b>PARAMETRIC VALUES</b>	<b>.000</b>	<b>DATASET</b>	<b>DELTVN</b>	<b>DATA SOURCE</b>	<b>DATASET</b>	<b>DELTVN</b>	<b>SREF</b>	<b>REFERENCE INFORMATION</b>
O	20.000					BETA	.000	IDZ066	-20.000		IDZ066	-10.000	4.4119	SO.FT.
						AILRON	.000	IDZ063	.000				19.2299	INCHES
						SPOBRK	.000						37.9359	INCHES
						H/BW	.035						43.5974	INCHES
													15.0000	INCHES
													15.1875	INCHES
													.0405	SCALE

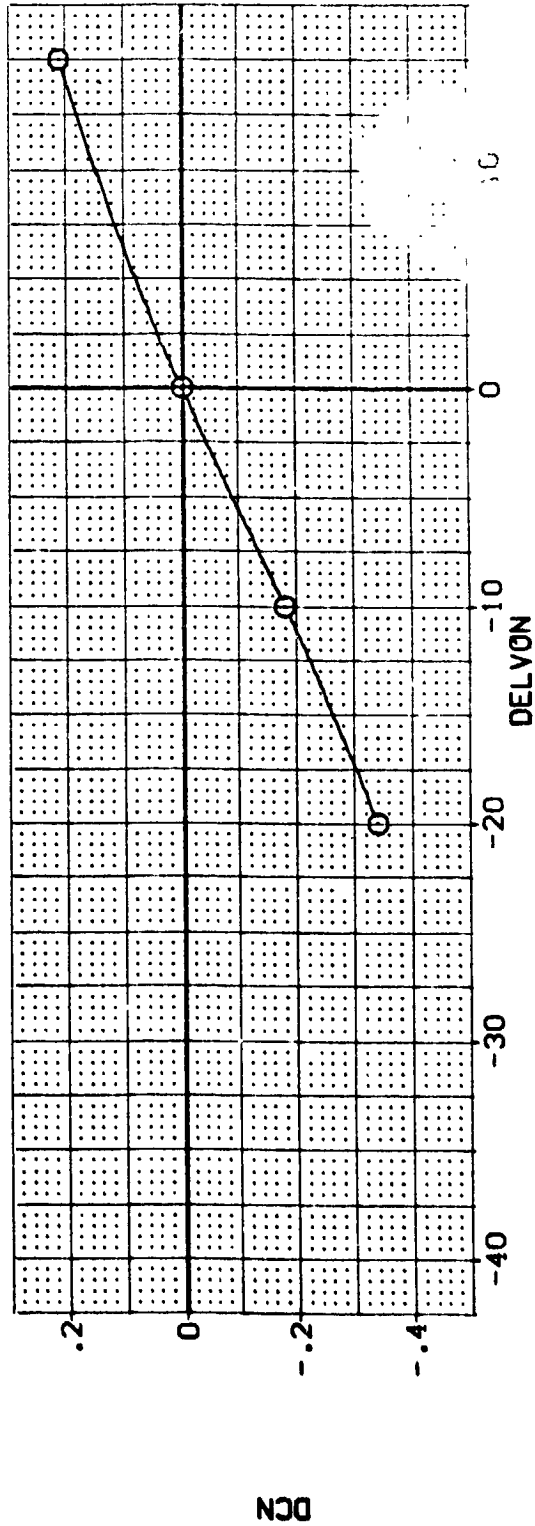
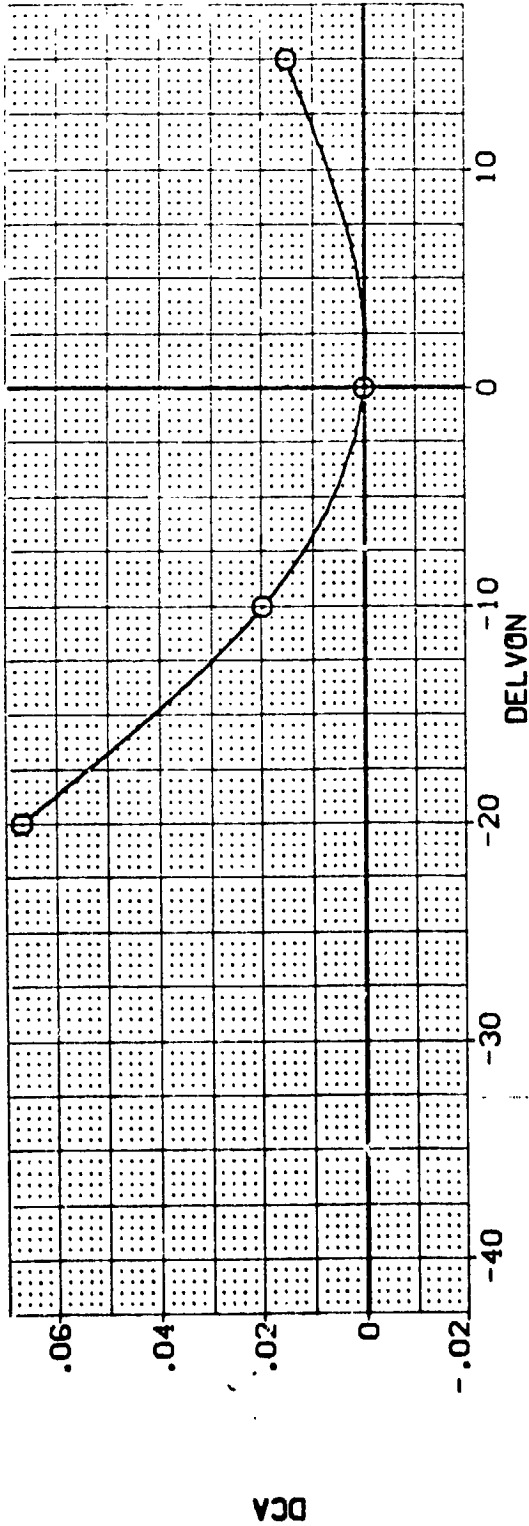


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PADDED ENGINES, H/BW = 0.035

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ066)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	.200	BETA	.000	DELTVN	SREF	SO.FT
	MACH	-12.000	AIRLON	-20.000	DELTVN	LREF	INCHES
	BD/FLAP	.000	SPOBRK	.000	DELTVN	BREF	INCHES
	RUDDER	.000		.000	DELTVN	XMRP	INCHES
	H/BW	.035			DELTVN	ZMRP	INCHES
					DELTVN	SCALE	SCALE

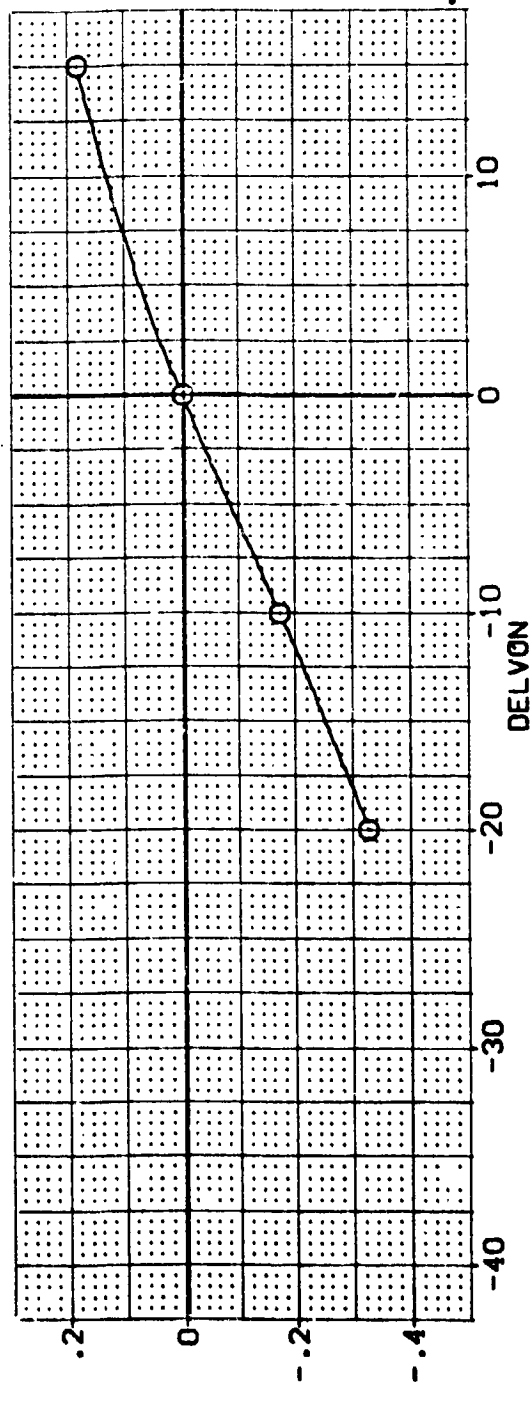
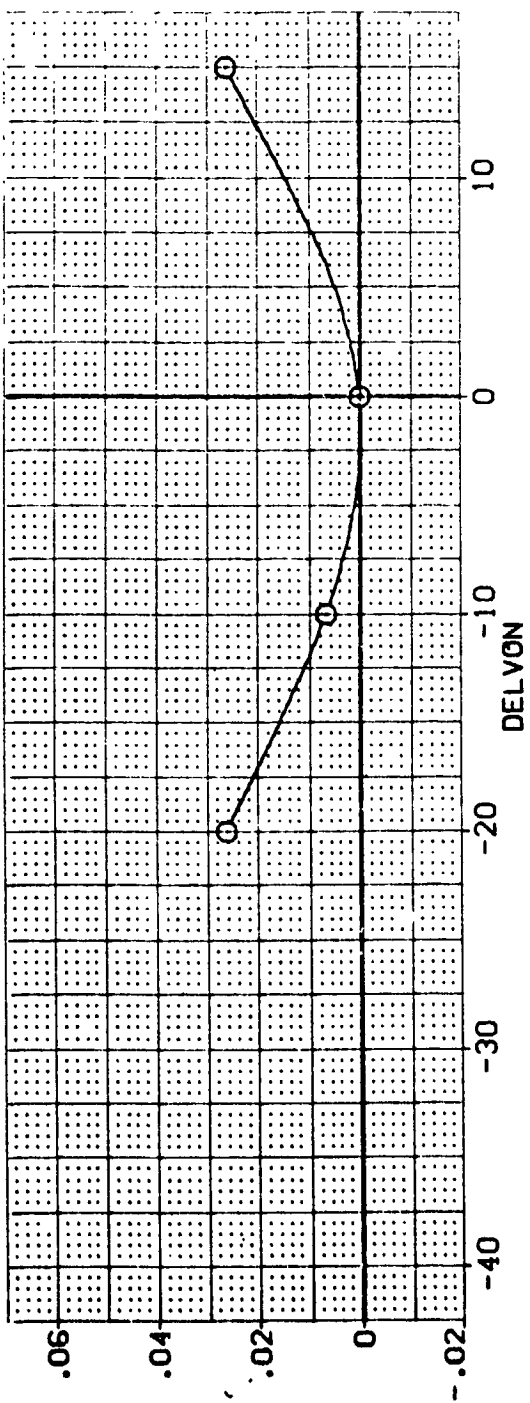


FIG 12 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINE, H/BW = 0.035

0A62B B26C9G15M7F8J43W116E28V8R5X10 (107066)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION				
○	30.000	80FLAP	.200	BETA	.000	DATASET	DELVON	SREF	LREF	INCHES	SO. FT.		
		RUDDER	-12.000	ALLRON	.000	10Z066	10.000	LREF	37.5359	INCHES			
		H/BW	.000	SPOBRK	.000	10Z063	15.000	XMRP	43.5974	INCHES			
			.035					ZMRP	.0000	INCHES			
								SCALE	.5, .1875	INCHES			
									.0405	SCALE			

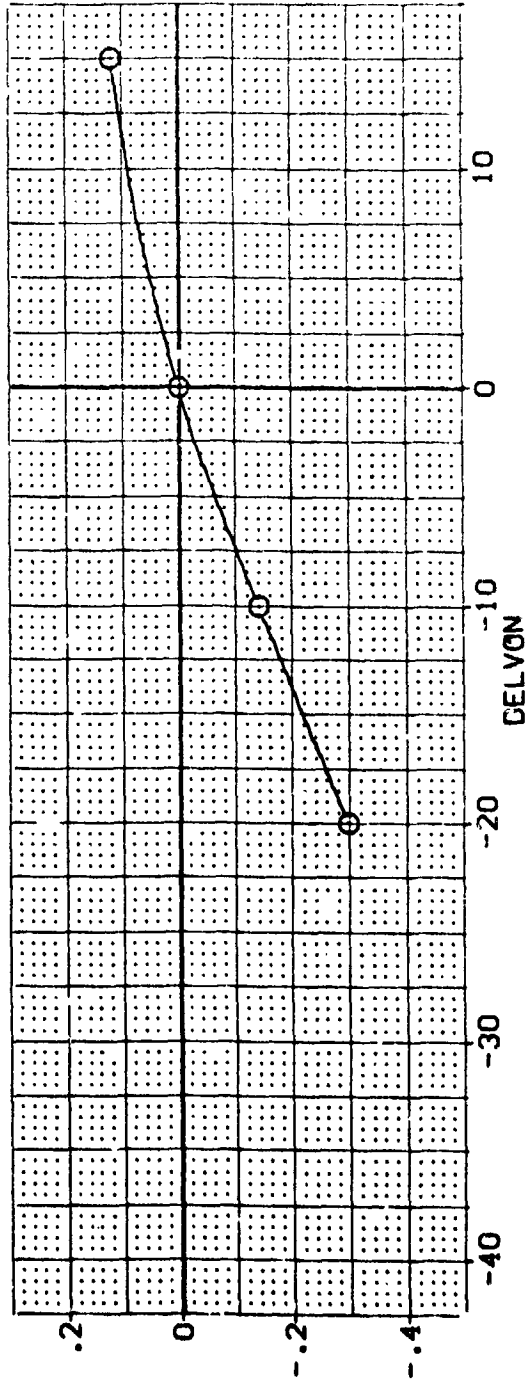
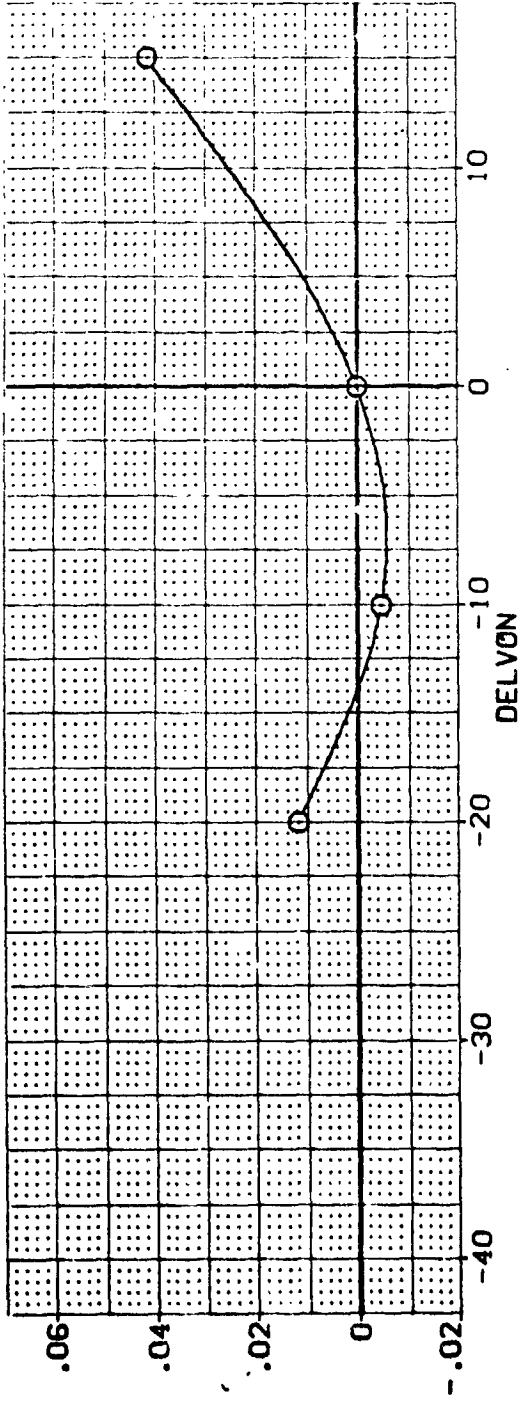


FIG 12 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.035



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z057)	0A6Z8 B2C5G15M7F8J43V116E28V8RSX10	.125	.000	-12.000	4.4119 SO.FT
(80Z058)	0A6Z8 B2C5G15M7F8J43V116E28V8RSX10	.125	.000	-12.000	19.2299 INCHES
(80Z070)	0A6Z8 B2C5G15M7F8J43V116E28V8RSX10	.125	.000	-12.000	37.9359 INCHES
(80Z069)	0A6Z8 B2C5G15M7F8J43V116E28V8RSX10	.125	.000	-12.000	43.5574 INCHES
					.0000 INCHES
					15.1875 INCHES
					.0405 SCALE

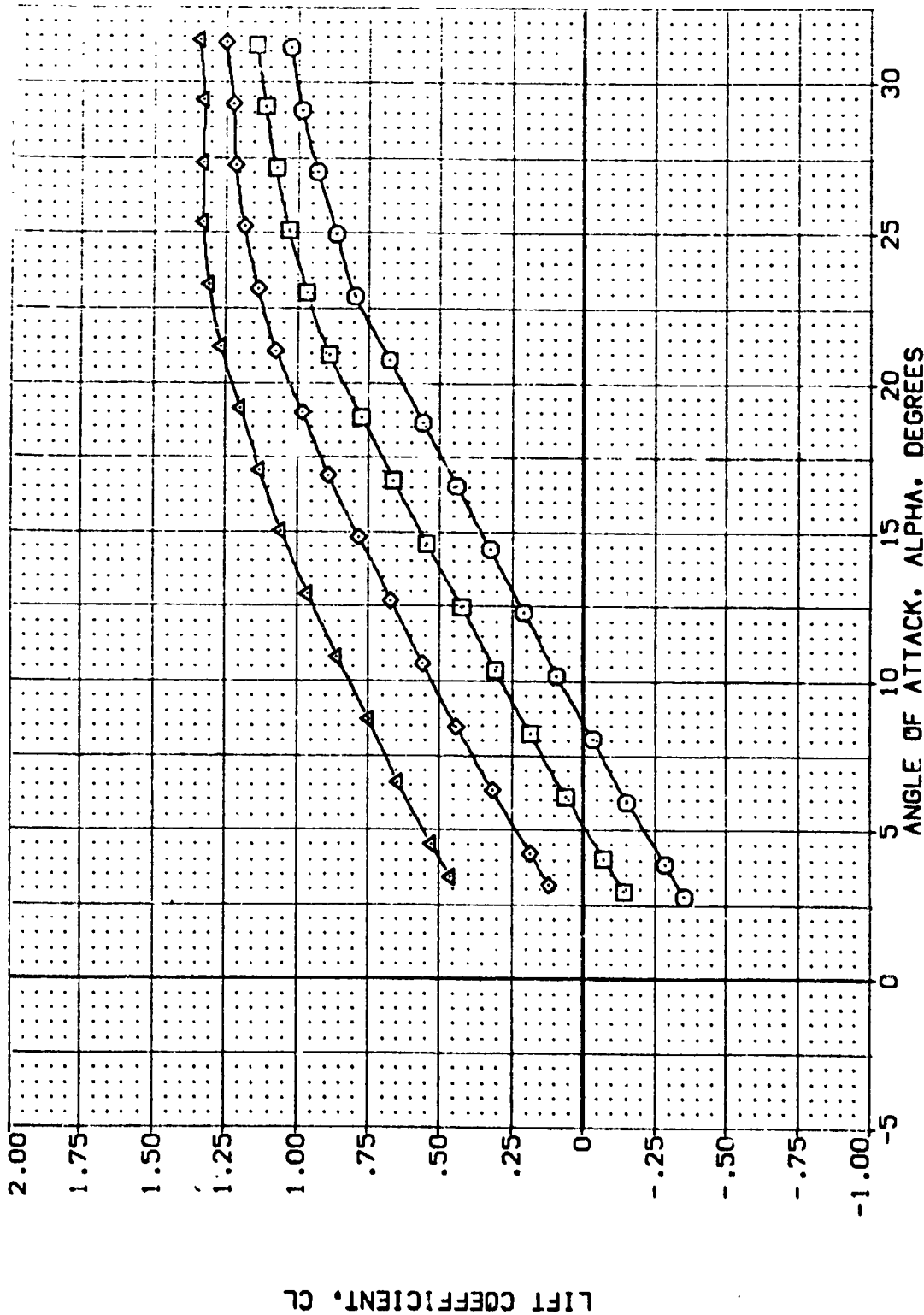


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B02067)	QAE28	B26C9G15M7F8J43V116E28V8RSX10
(B02068)	QAE28	B26C9G15M7F8J43V116E28V8RSX10
(B02070)	YAE28	B26C9G15M7F8J43V116E28V8RSX10
(B02069)	QAE28	B26C9G15M7F8J43V116E28V8RSX10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION

-20.000	.000	-12.000	SREF	4.4119	SO.FT.
-10.000	.000	-12.000	LREF	19.2299	INCHES
.000	.000	-12.000	BREF	37.9359	INCHES
15.000	.000	-12.000	XMRP	43.5574	INCHES
			ZMRP	15.1000	INCHES
			SCALE	15.1875	INCHES
				.0105	SCALE

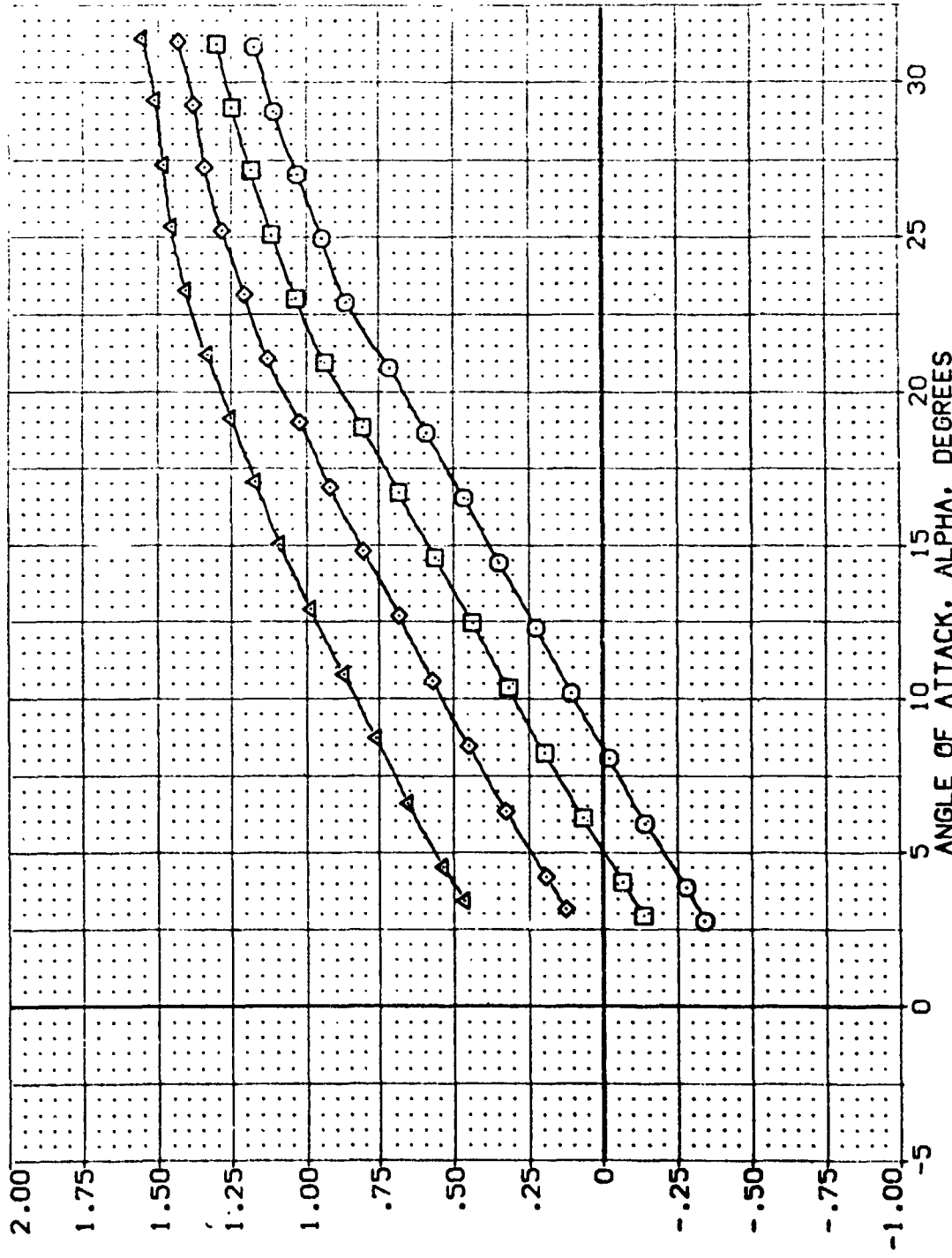


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(802067)	0A628 B26C9G15M7F8J43V11E628V8RSX10	-20.000	.125	.000	-12.000	SREF 4.4119 SO.FT.
(802068)	0A628 B26C9G15M7F8J43V11E628V8RSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
(802070)	0A628 B26C9G15M7F8J43V11E628V8RSX10	15.000	.125	.000	-12.000	BREF 37.9359 INCHES
(802069)	0A628 B26C9G15M7F8J43V11E628V8RSX10			.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

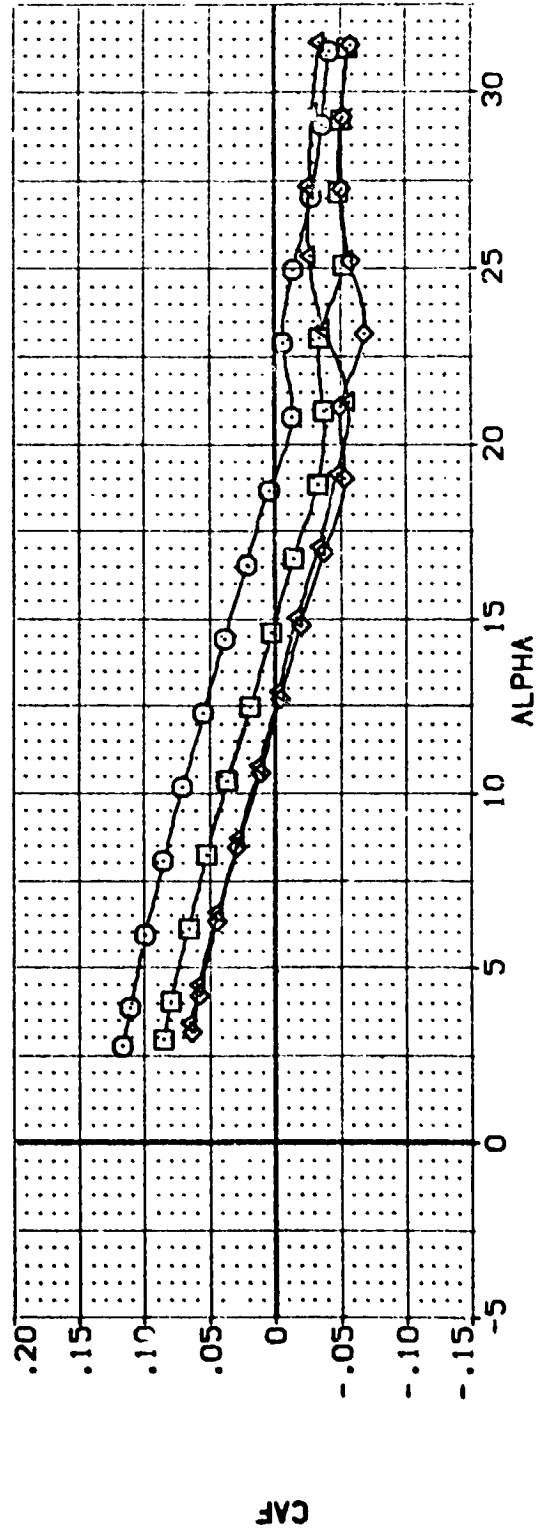
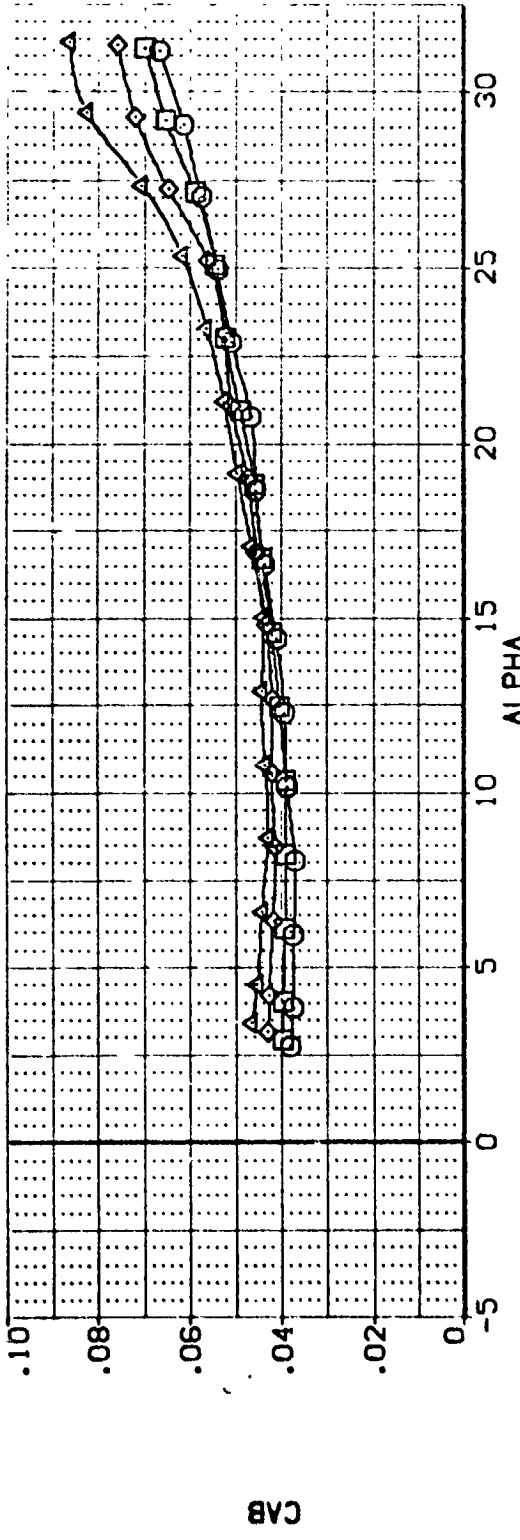


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.125

CA/MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z067)	QAG28 BZ6C9G1S477B/43V116E28V8RSX10	-20.000	.125	.000	-12.000	SREF 4.4119 SO.F.T.
(80Z068)	QAG28 BZ6C9G1S477B/43V116E28V8RSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INC.FS
(80Z070)	QAG28 BZ6C9G1S477B/43V116E28V8RSX10	.000	.125	.000	-12.000	BREF 37.9359 INC.FS
(80Z069)	QAG28 BZ6C9G1S477B/43V116E28V8RSX10	15.000	.125	.000	-12.000	XMRP 43.5974 INC.FS
						YMRP 0.000 INC.FS
						ZMRP 15.1875 INC.FS
						SCALE .0405

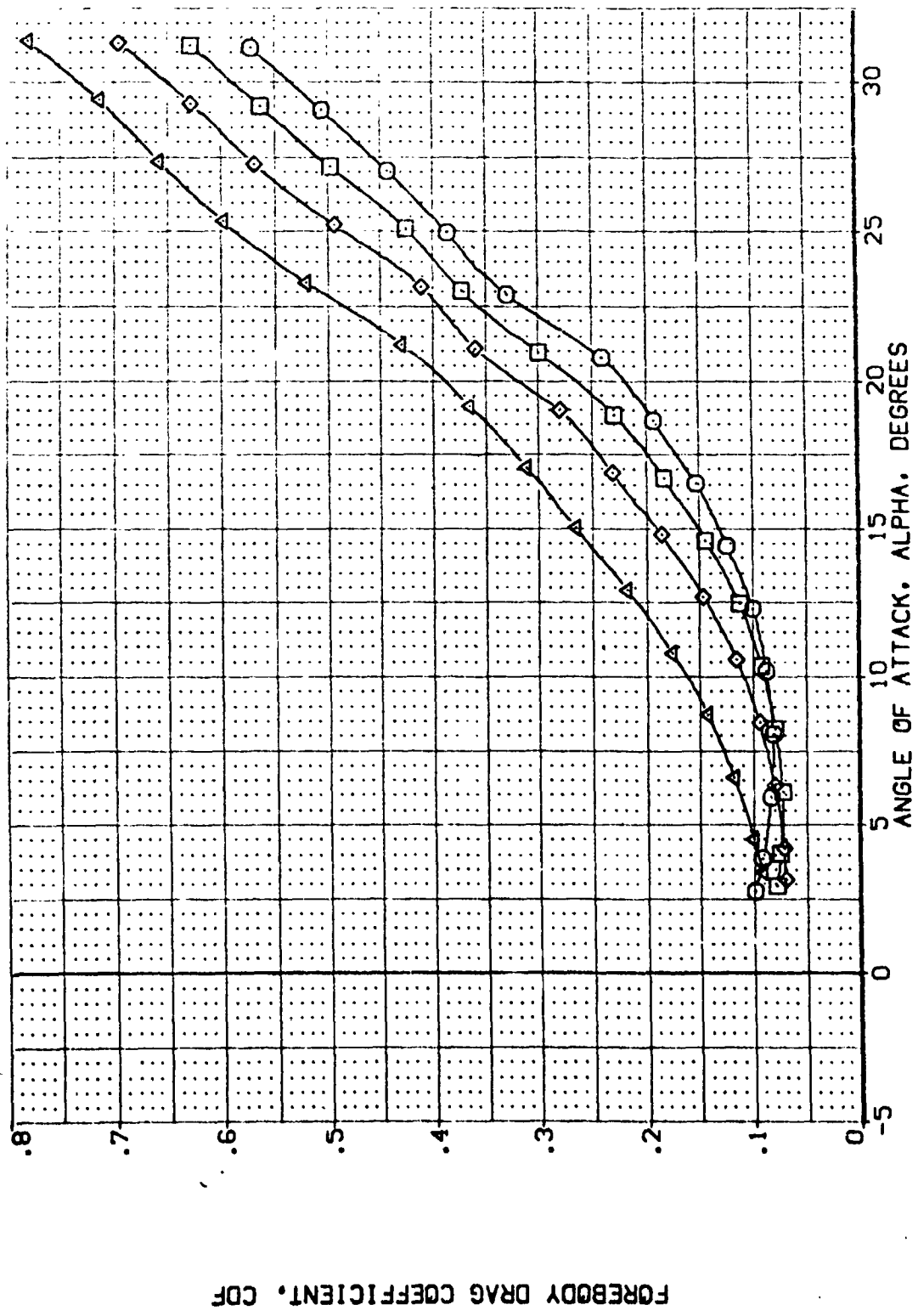


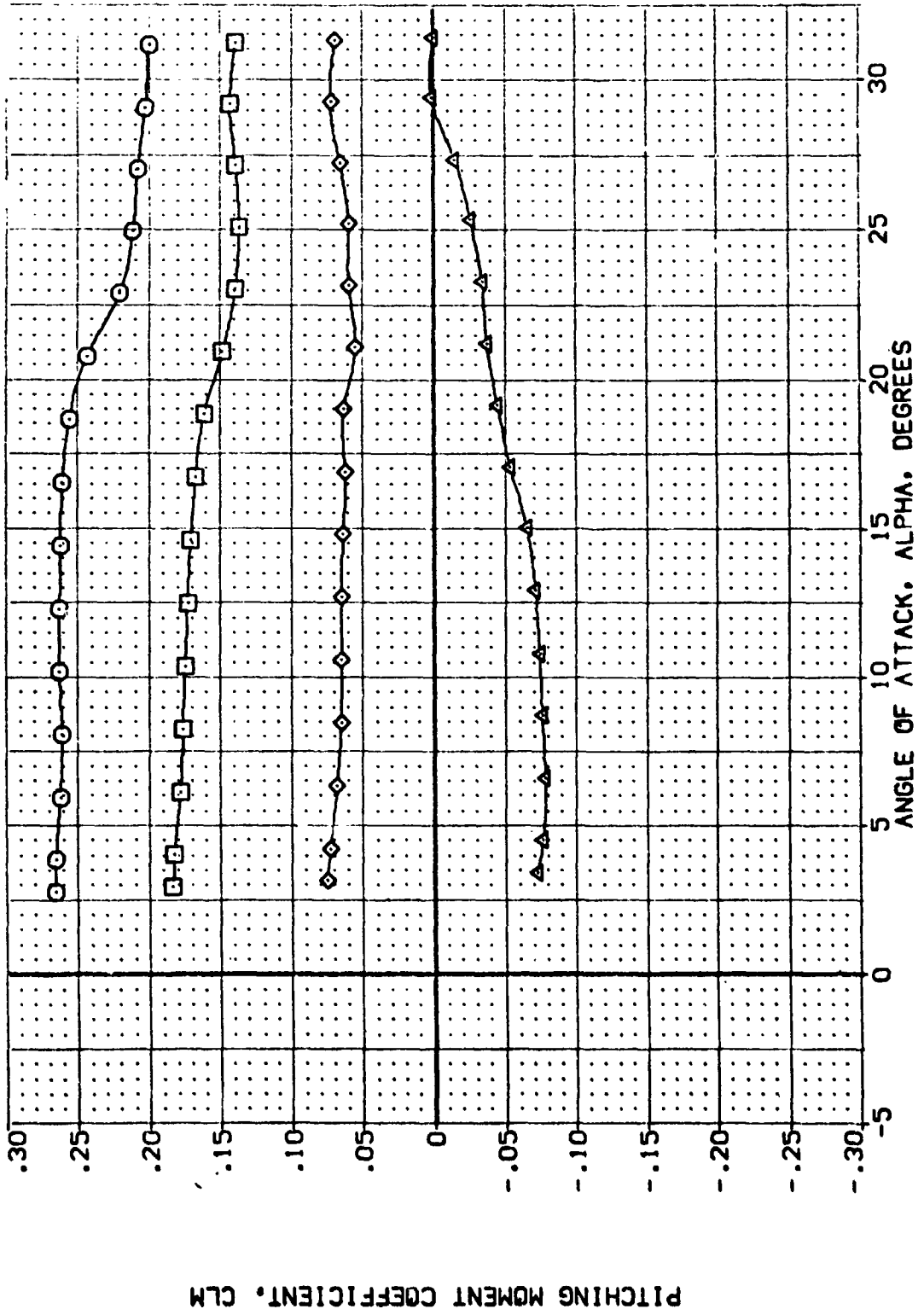
FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125

(M)MACH = .20



( )

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02067)	0A628 B26C9G1 5M7F 6J43V1   16E28V8FSX10	-20.000	.125	.000	-12.000	SREF 4.4119 SQ.FT.
(B02068)	0A628 B26C9G1 5M7F 6J43V1   16E28V8FSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
(B02070)	0A628 B26C9G1 5M7F 6J43V1   16E28V8FSX10	.000	.125	.000	-12.000	BREF 37.9359 INCHES
(B02069)	0A628 B26C9G1 5M7F 6J43V1   16E28V8FSX10	15.000	.125	.000	-12.000	XMRP 43.5974 INCHES
						YMRP 15.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 INCHES



PITCHING MOMENT COEFFICIENT, C<sub>m</sub>

FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B0Z067) (B0Z068) (B0Z069) (B0Z070)

QASZ8 BZ6C9G|5W7F8J43V||6E28V8RSX10  
 QASZ8 BZ6C9G|5W7F8J43V||6E28V8RSX10  
 QASZ8 BZ6C9G|5W7F8J43V||6E28V8RSX10  
 QASZ8 BZ6C9G|5W7F8J43V||6E28V8RSX10

ELEVON H/BW SPOBRK BOFLAP  
 -20.300 .125 .000 -12.000  
 -10.000 .125 .000 -12.000  
 15.000 .125 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

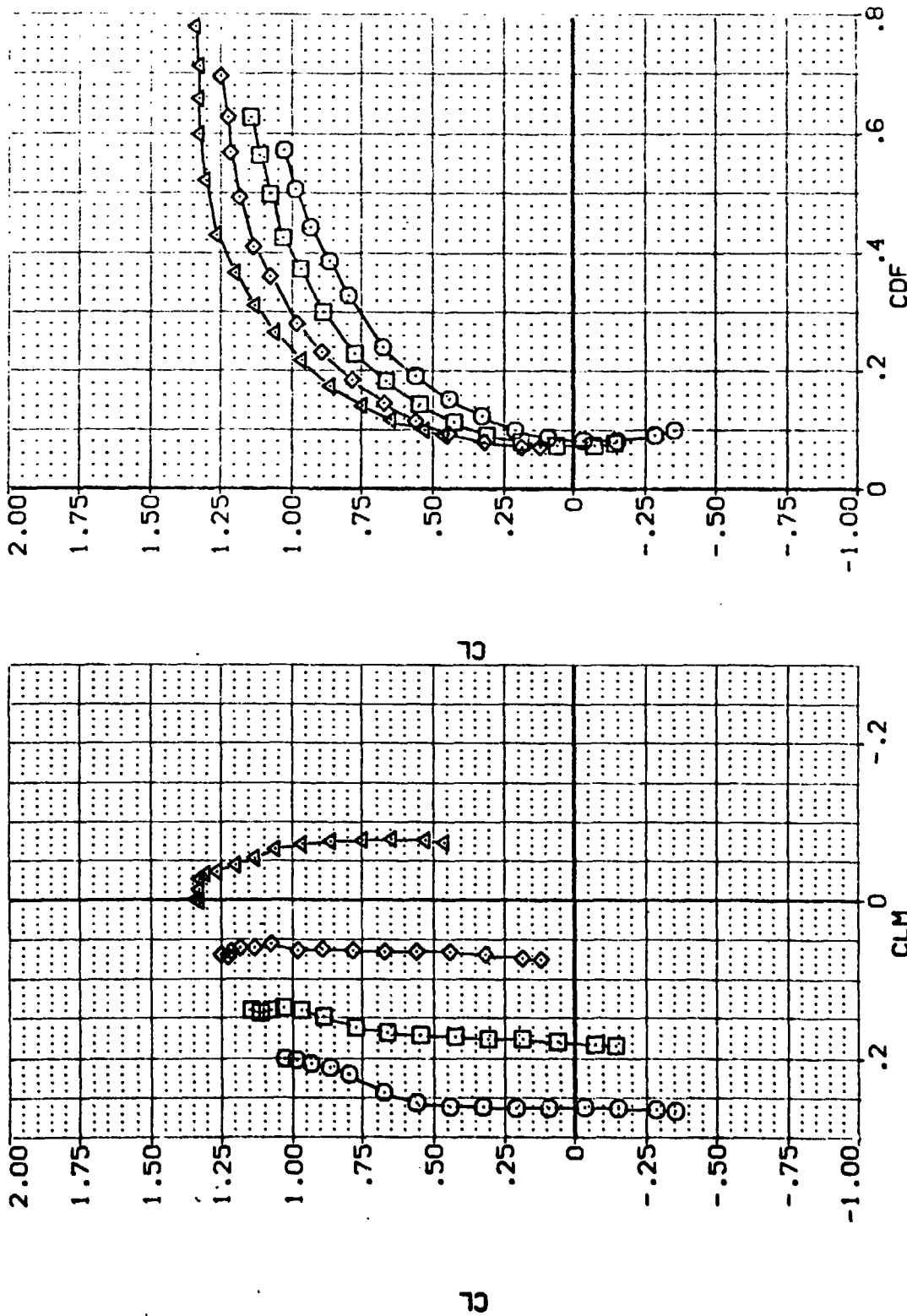


FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPDBRK	BOFLAP	REFERENCE INFORMATION
(B0Z067)	0A6Z8 B26C9G 547F8443V 1E28V 8RSX10	-20.000	.125	.000	-12.000	SREF 4.4119 SO.FT
(B0Z068)	0A6Z8 B26C9G 547F8443V 1E28V 8RSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
(B0Z070)	0A6Z8 B26C9G 547F8443V 1E28V 8RSX10	.000	.125	.000	-12.000	BREF 37.9359 INCHES
(B0Z069)	0A6Z8 B26C9G 547F8443V 1E28V 8RSX10	15.000	.125	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405 INCHES

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

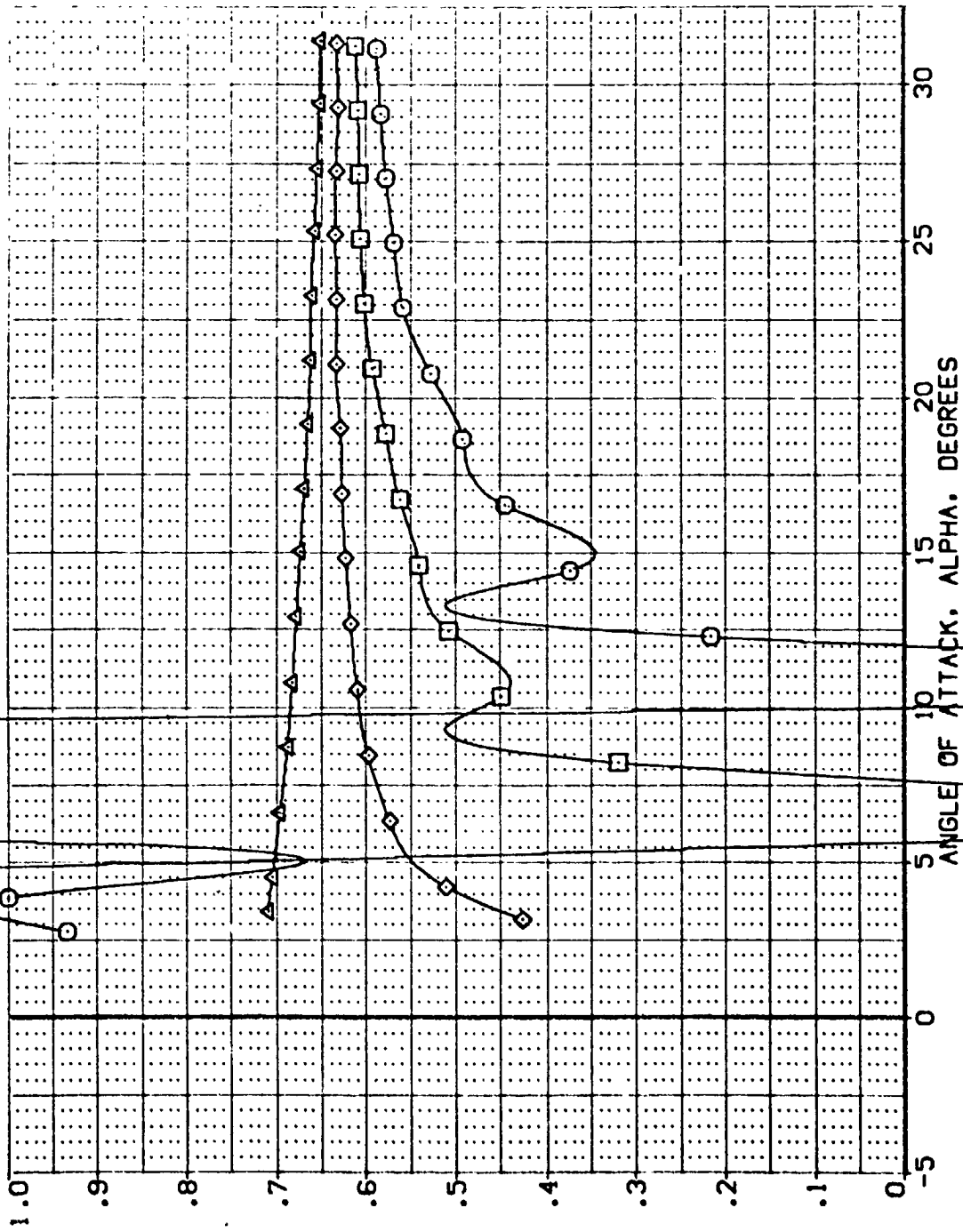


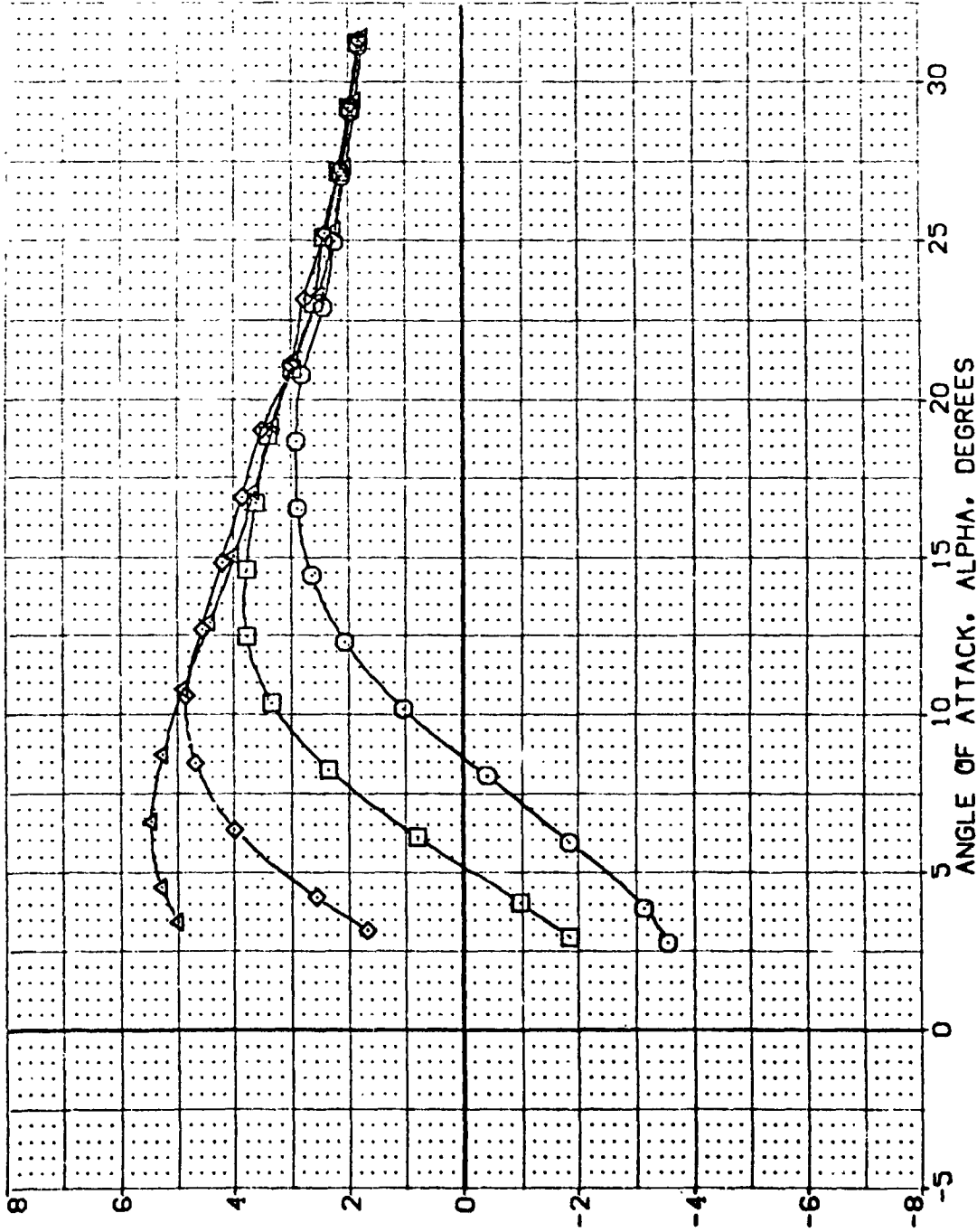
FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (80Z057) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z058) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z070) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z069) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10

ELEVON H/BW SPDBRK BOFLAP  
 -20.000 .125 .000 -12.000  
 -10.000 .125 .000 -12.000  
 15.000 .125 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 YMRP 43.5374 INCHES  
 ZMRP .0500 INCHES  
 SCALE 15.1875 INCHES  
 .0405 INCHES



FOREBODY LIFT TO DRAG RATIO, L/D/F

FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

(A)MACH = .20





0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		ALPHA		MACH		BOFLAP		RUDDER		H/BW		PARAMETRIC VALUES		DATA SOURCE		DATASET		DELVON		SREF		REFERENCE INFORMATION		
	O																							
			.000				.200		BETA		.000		IDZ067		.000		IDZ068		-10.000		4.4119		SC.F.T.	
							-12.000		AILRON		.000		IDZ067		-20.000		IDZ068		-10.000		19.2299		INCHES	
							.000		SPOBRK		.000		IDZ070		.000		IDZ069		15.000		37.9359		INCHES	
							.125												15.000		43.5974		INCHES	
																			.0000		15.1875		INCHES	
																			.0405				SCALE	

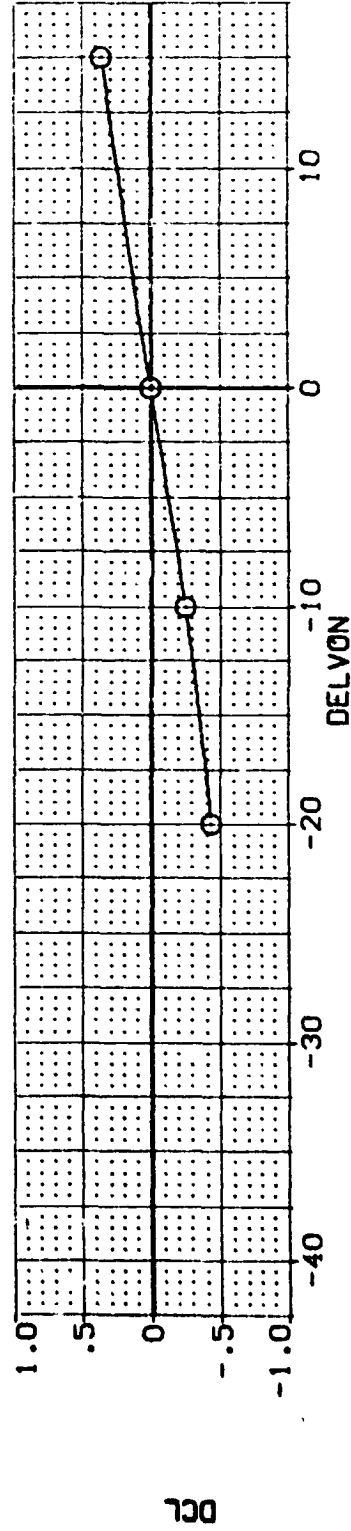
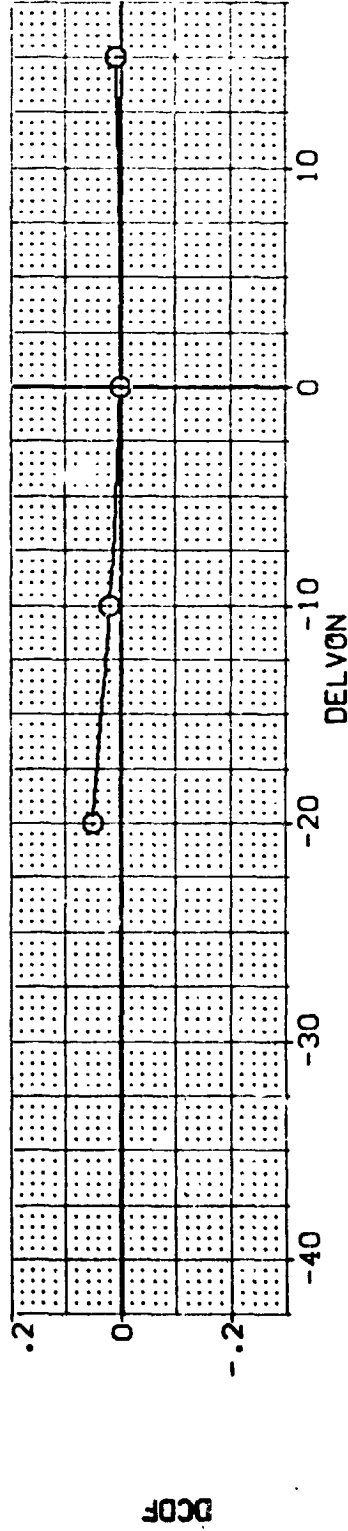
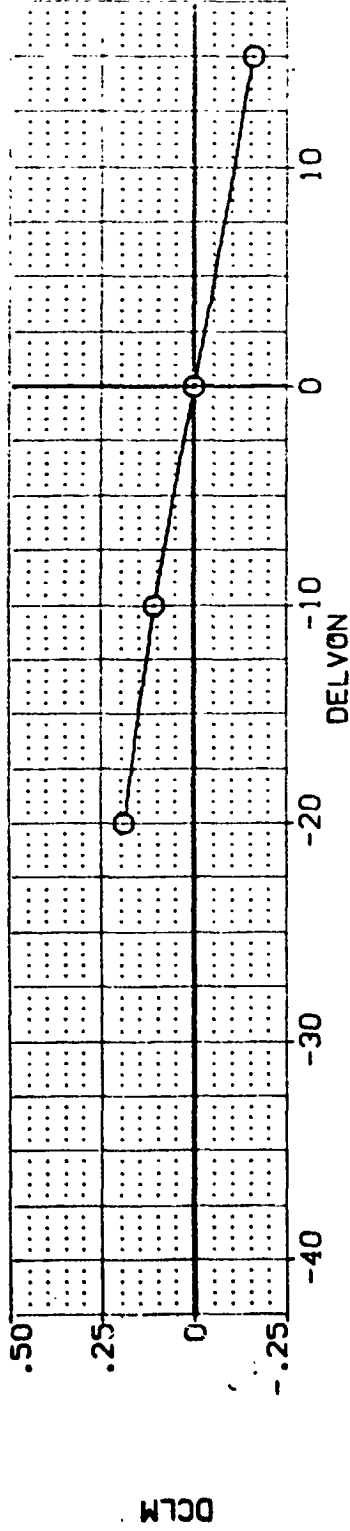


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	5.000	BETA	.000	DELVON	19.2288	SO.F.T.
	MACH	.200	A1LRON	.000	DELVON	37.9359	INCHES
	EDFLAP	-12.000	SPOBRK	.000	DELVON	43.9574	INCHES
	RLODER	.000	H/BW	.000	DELVON	.0000	INCHES
		.125		.000	DELVON	15.1875	INCHES
				.000	DELVON	.0405	SCALE

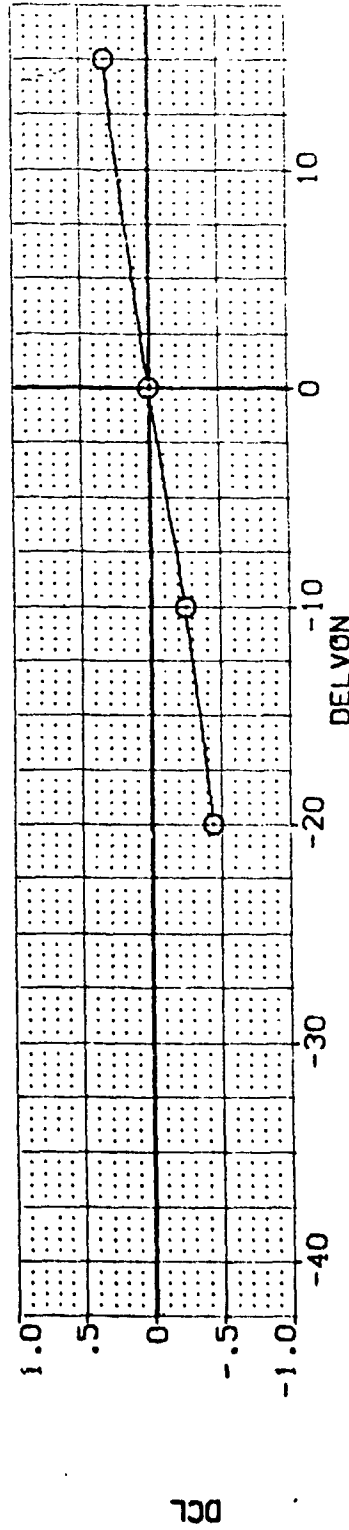
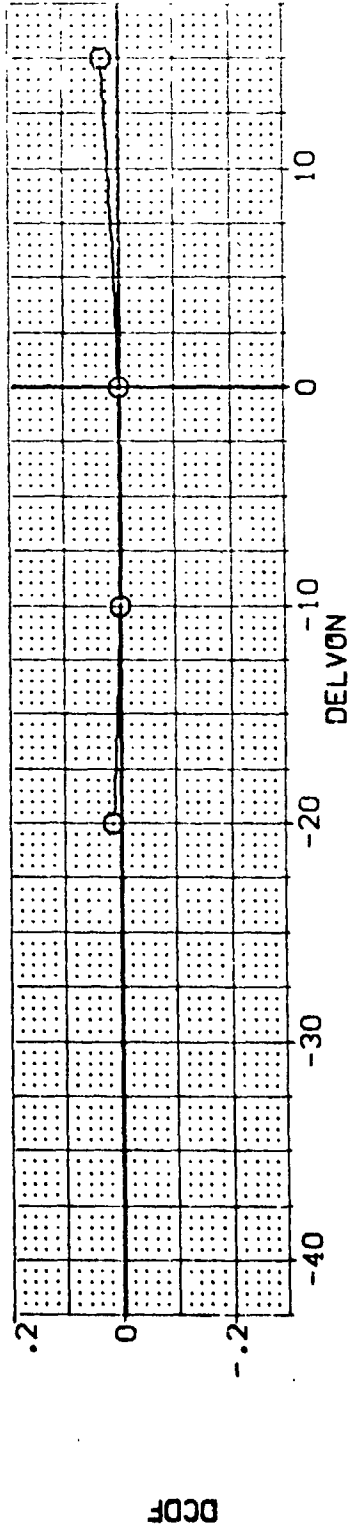
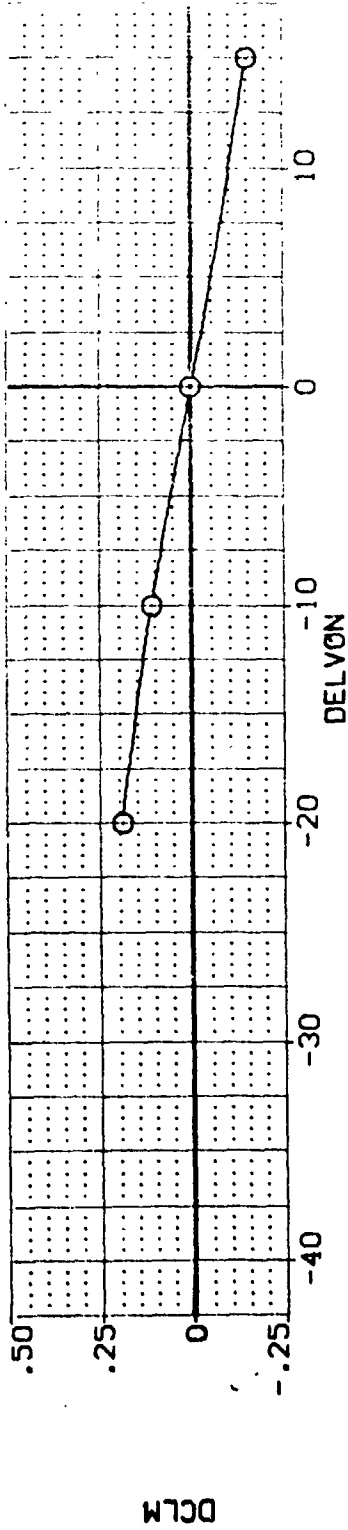


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125



0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O		10.000				.200	BETA	.000	DATASET	DELTON	SREF
						-12.000	AILRON	.000	IDZ067	-10.000	LREF
						.000	SPOBRK	.000	IDZ070	15.000	BREF
						.125					XMRP
											YMRP
											ZMRP
											SCALE
											SCALE

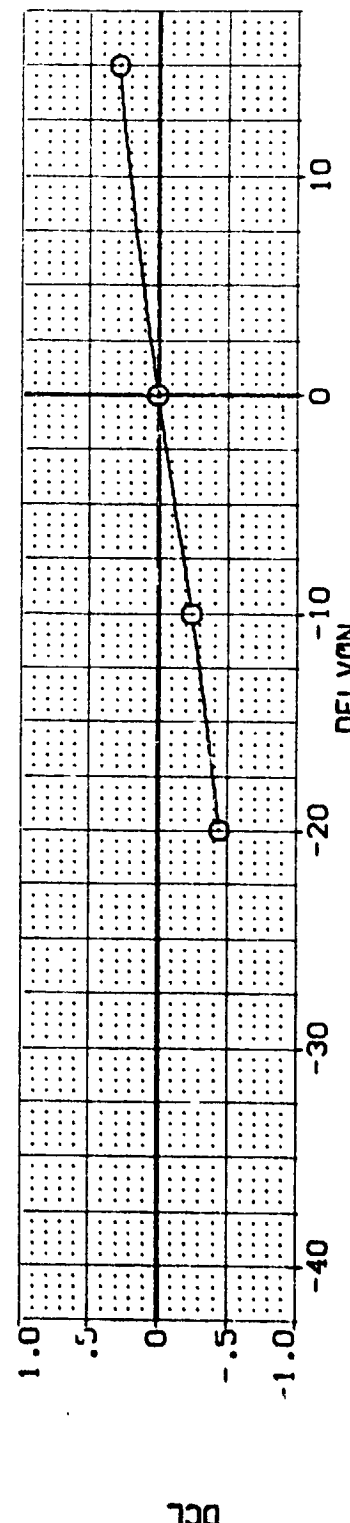
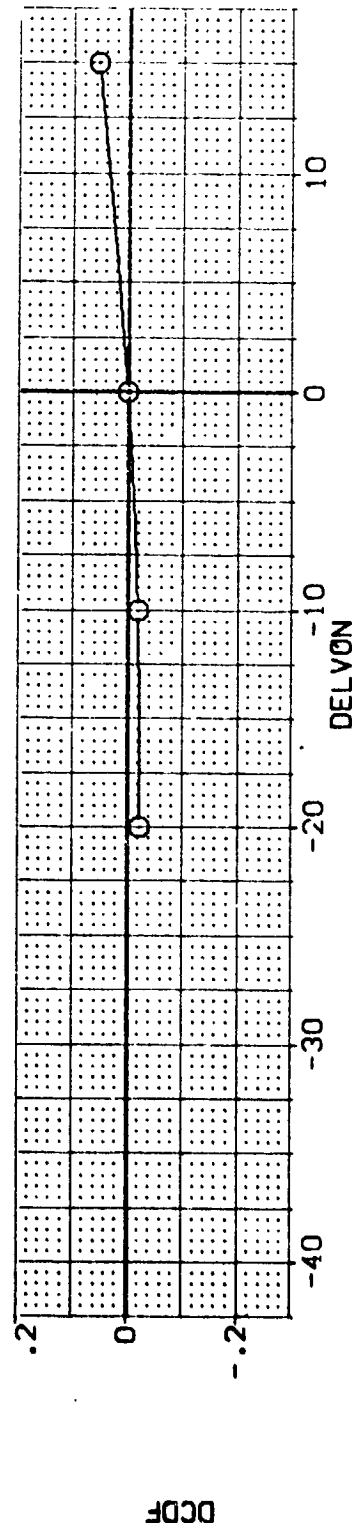
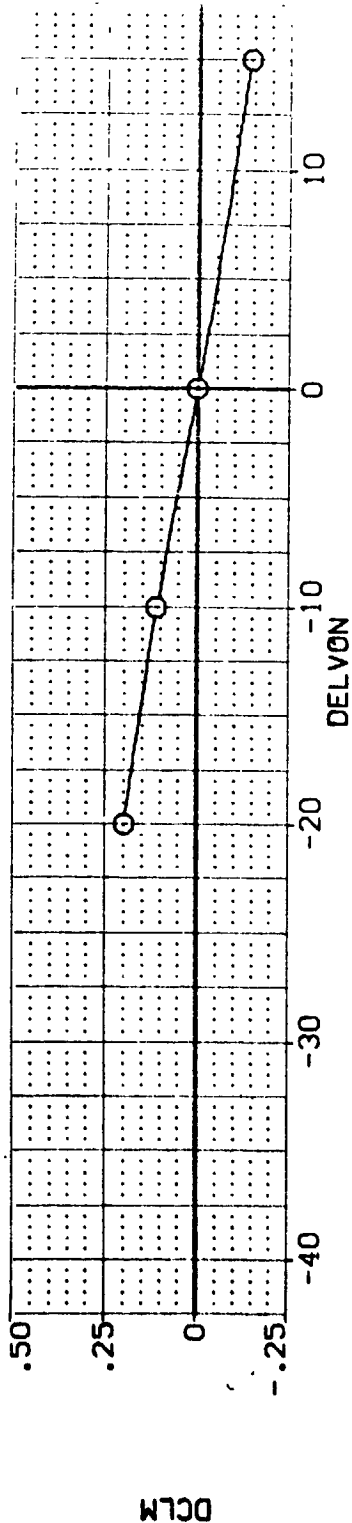


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	.200	BETA	.000	DELVON	SREF	SO.FT.
	MACH	-12.000	A11LRON	-20.000	DELVON	LREF	INCHES
	BOFLAP	.000	SPOBRK	.000	DELVON	BREF	INCHES
	RUDDER	.000			DELVON	XMRP	INCHES
	H/BW	.125			DELVON	ZMRP	INCHES
					DELVON	SCALE	SCALE

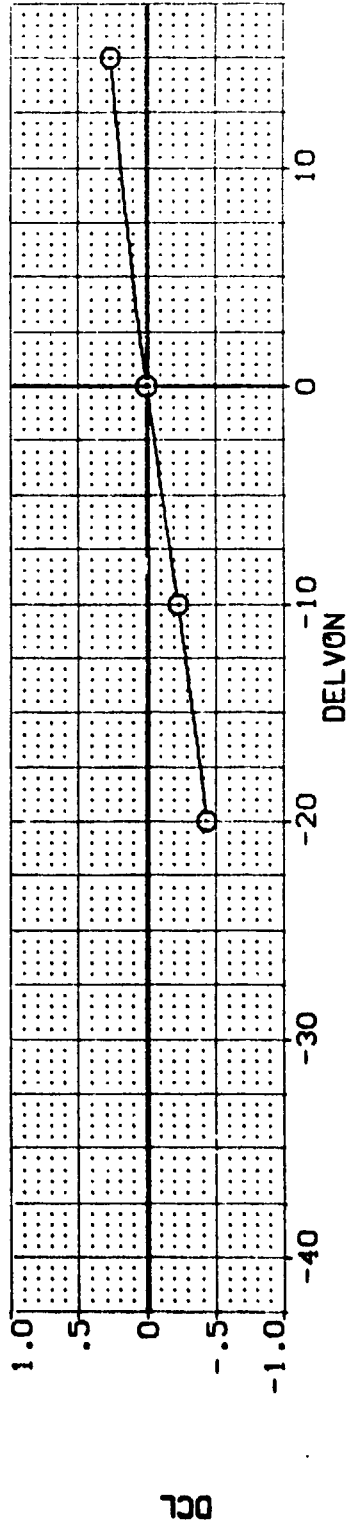
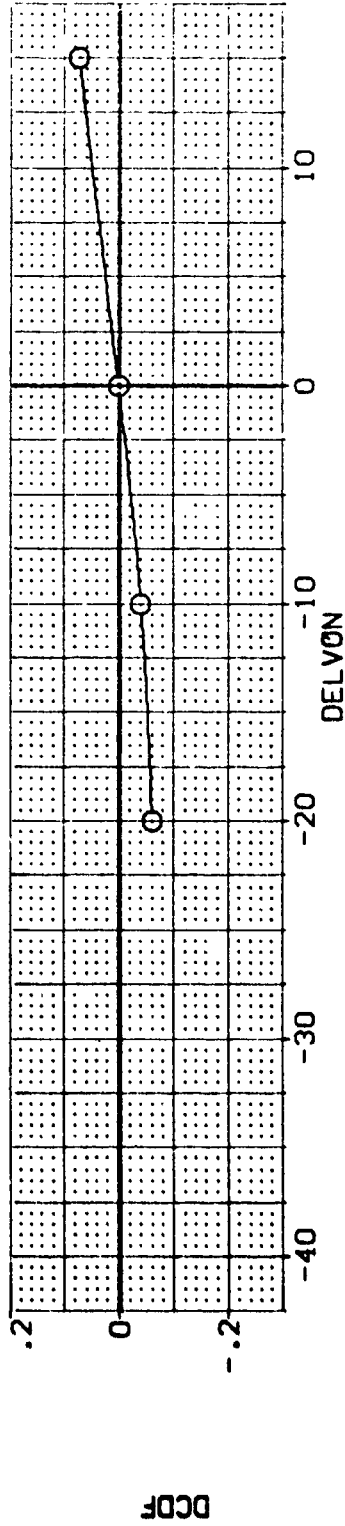
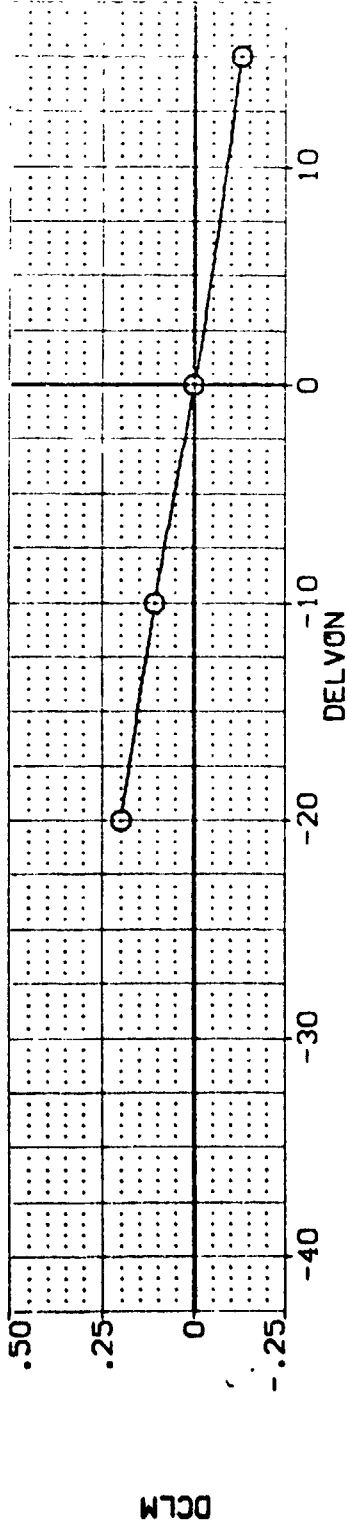


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.125



0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	.000	DATASET	DELVON	.000	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
O	20.000					BETA		10Z067	-10.000		DELVON	10Z068	-10.000	LREF	4.4119
						AILRON		10Z070	-20.000			10Z069	15.000	BREF	19.2299
						SPOBRK			.000					XMRP	37.9359
									.000					YMRP	43.5974
									.000					ZMRP	.0000
									.000					SCALE	15.1875
									.000					SCALE	.0405

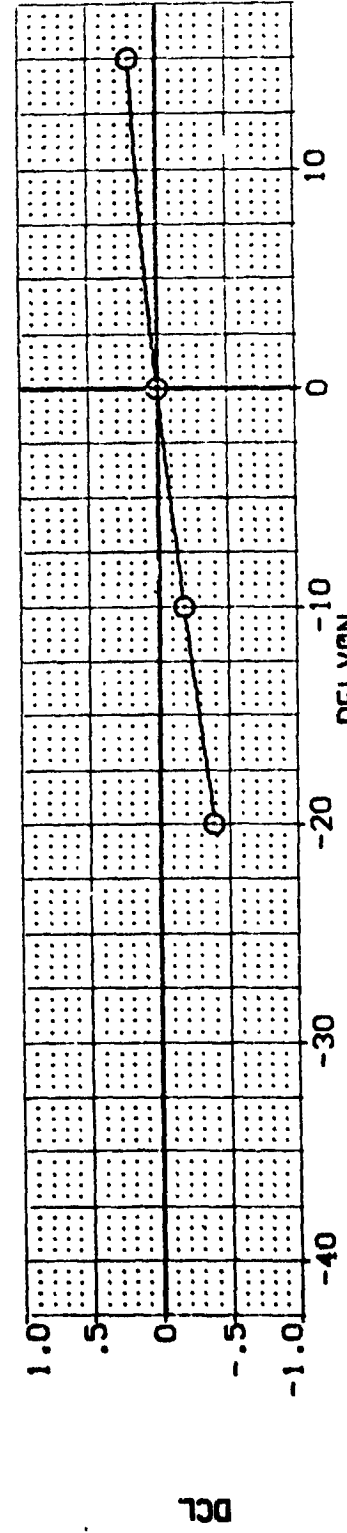
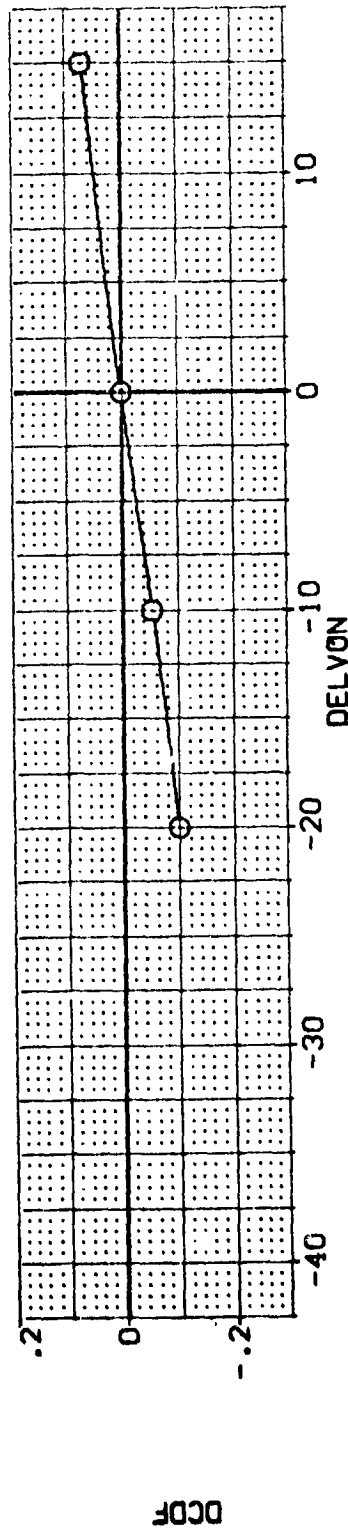
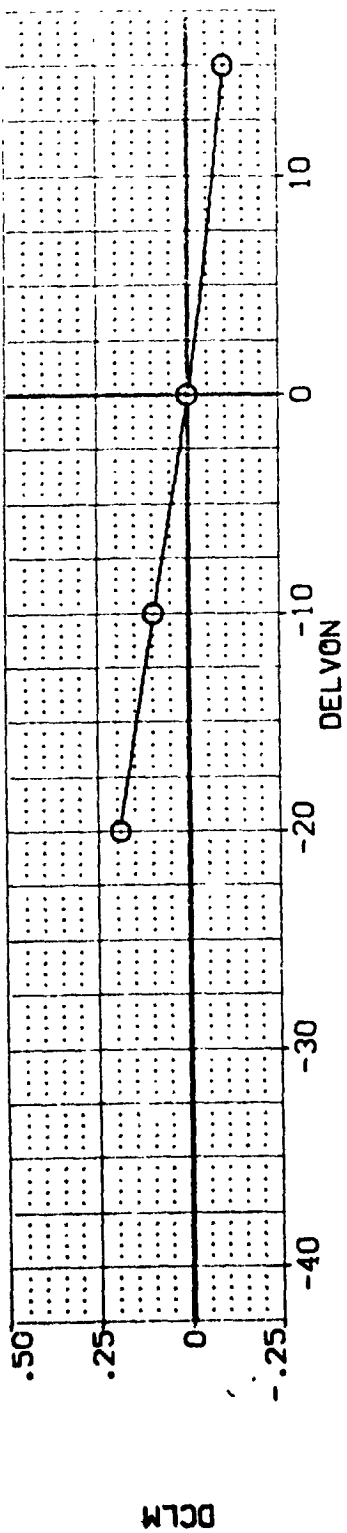


FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O		25.000				.200	BETA	.000	DATASET	DELTVN	SREF
						-12.000	AILRON	.000	1DZ067	-20.000	19.2299
						.000	SPDRBK	.000	1DZ070	.000	37.9359
						.125					13.5914
											.0000
											15.1875
											.0405
											SCALE
											SCALE

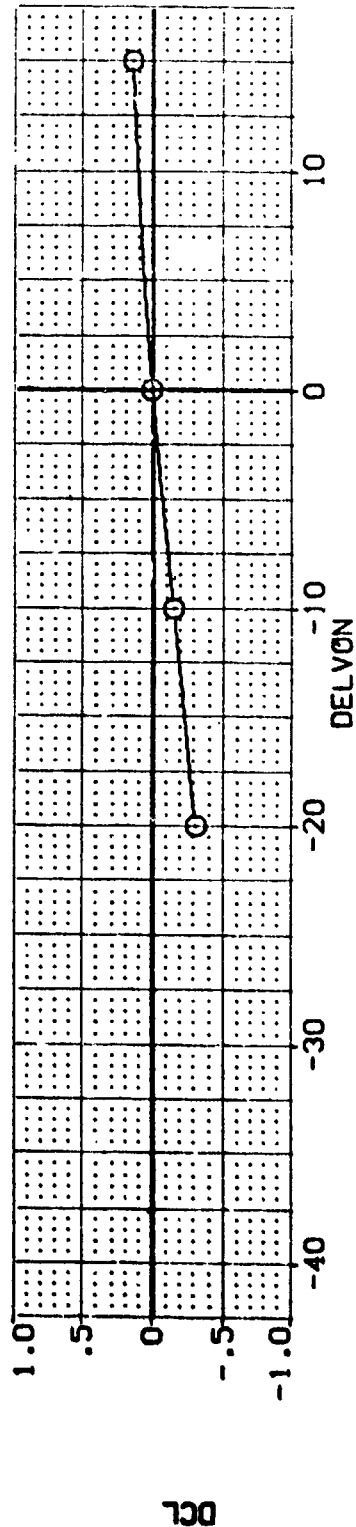
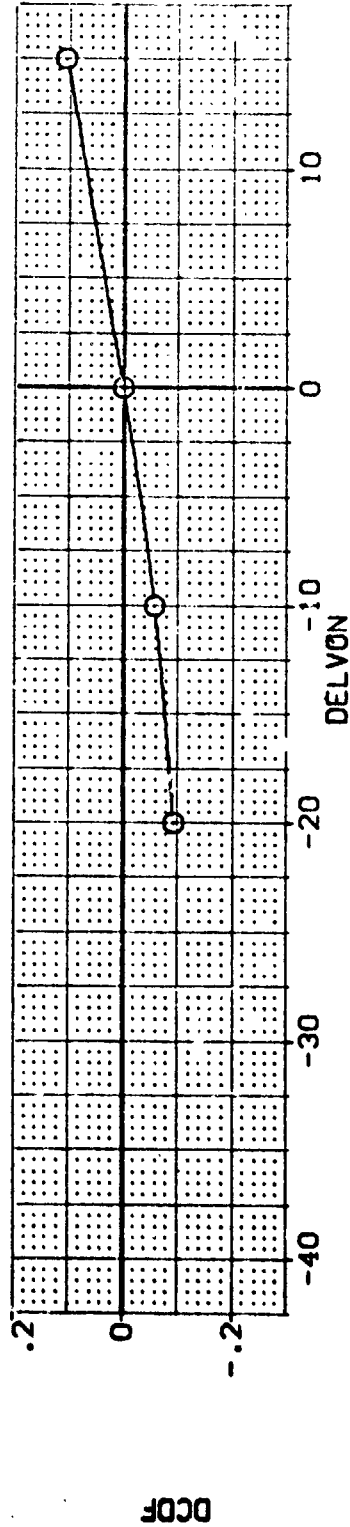
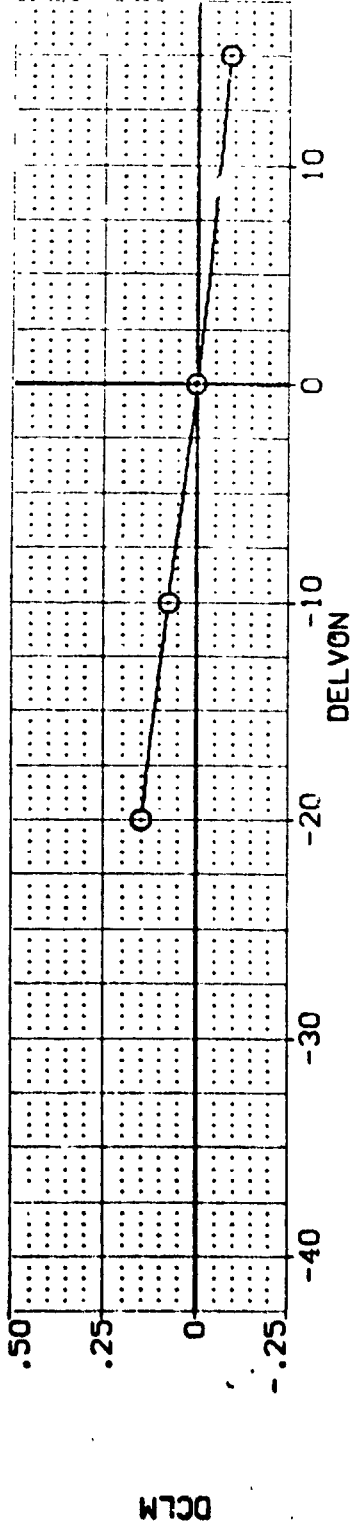


FIG 13 ELEVON EFFECTIVENESS. UNDERWING PODED ENGINES, H/BW = 0.125





0A628 B26C9G15M7F8J43W116E28V8R5X10 (10Z067)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
ALPHA	.200	BETA	.000	DELVON	-10.000	SREF	4.4119	SO.FT.	4.4119
MACH	.200	ALLRON	.000	DELVON	-20.000	LREF	19.2299	INCHES	19.2299
BOFLAP	-12.000	SPDRK	.000	DELVON	.000	BREF	37.9359	INCHES	37.9359
RUDDER	.000	H/BW	.125	DELVON	15.000	XMRP	43.5974	INCHES	43.5974
				DELVON	15.1875	ZMRP	15.1875	INCHES	15.1875
				DELVON	.0405	SCALE	.0405	SCALE	.0405

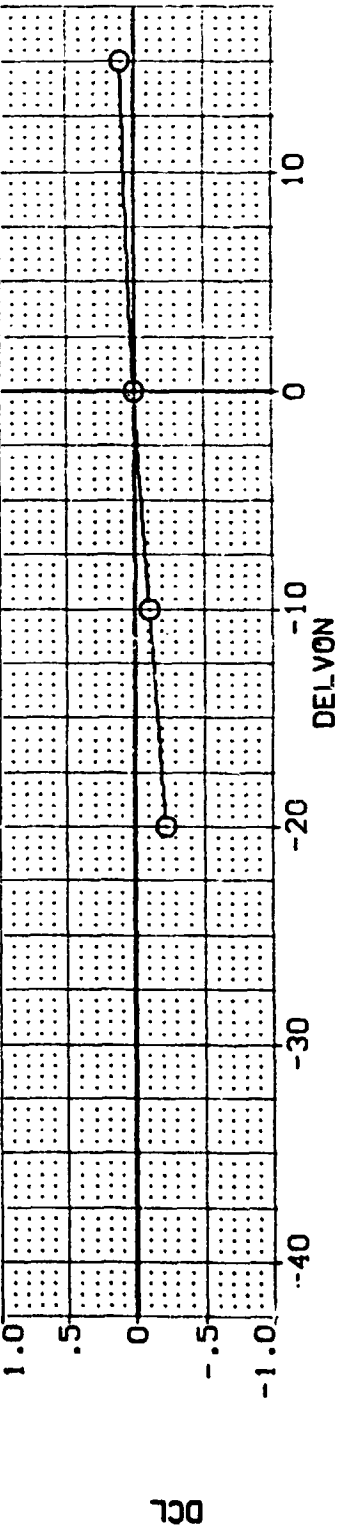
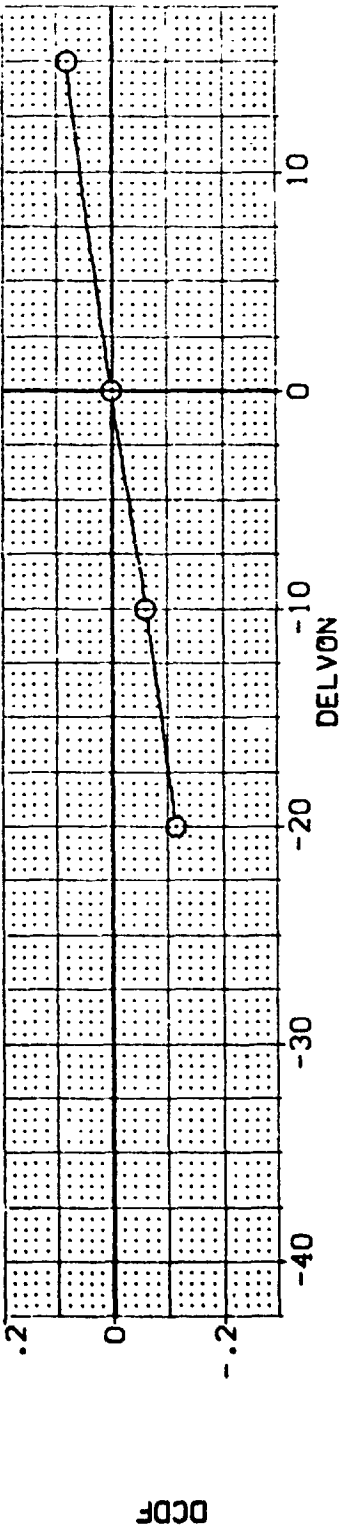
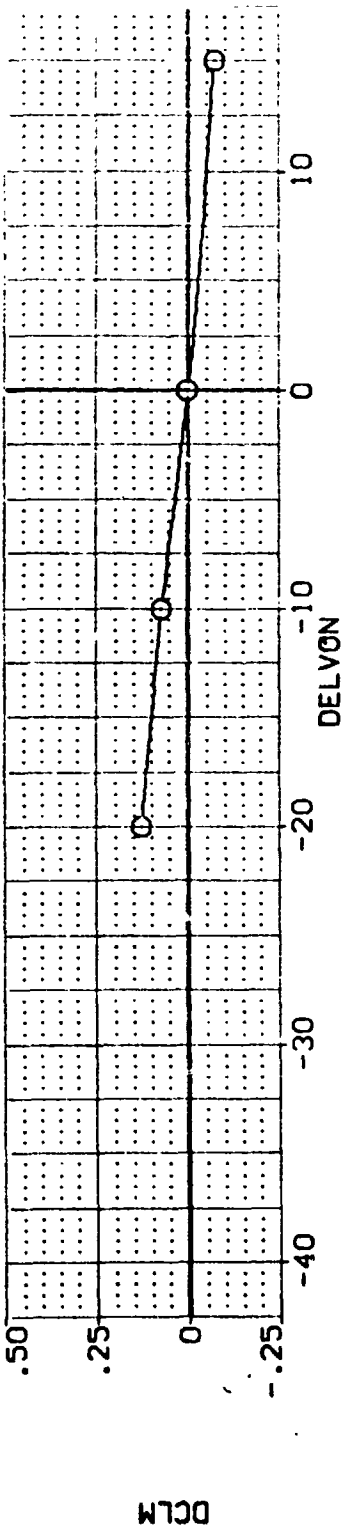


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL		ALPHA		MACH		BOFLAP		RUDDER		H/BW		PARAMETRIC VALUES		DATA SOURCE		DATASET		DELVON		SREF		REFERENCE INFORMATION	
○		.000		.200	BETA	.000		.000		.000		.000		.000		.000		.000		.000		SO. FT.	4.4119
																						INCHES	19.2289
																						INCHES	37.9359
																						INCHES	43.5974
																						INCHES	.0000
																						INCHES	15.1875
																						SCALE	.0405

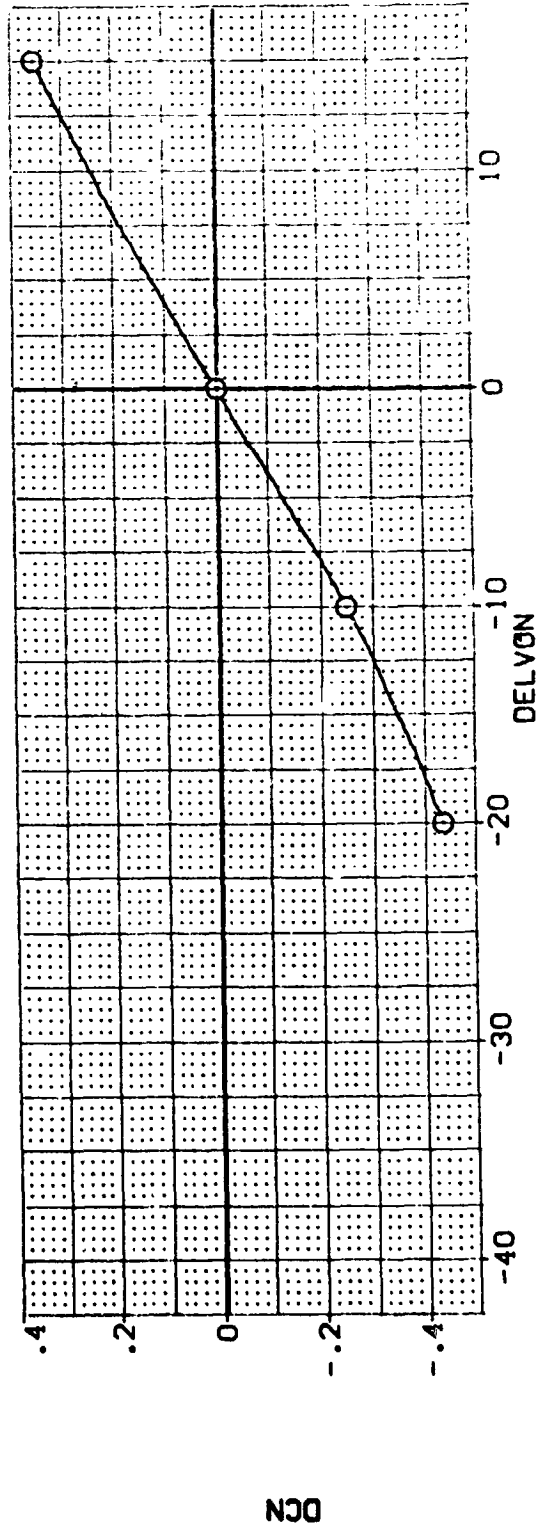
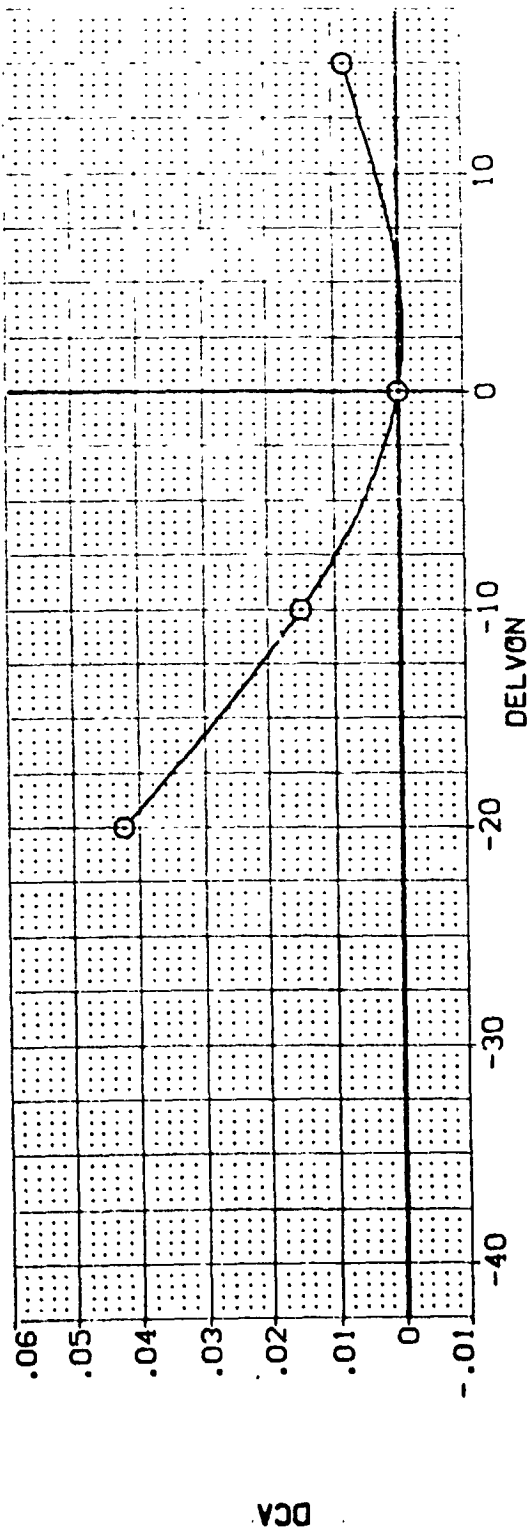


FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125



0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	5.000	.000	DELTON	SREF	4.4119
MACH	.200	.000	DELTON	LRG	19.2299
BDFLAP	-12.000	.000	IDZ067	BREF	37.9759
RUDDER	.000	.000	IDZ070	XREF	43.5574
H/BW	.125	.000	DELTON	YREF	.0000
			DELTON	ZREF	15.1875
			DELTON	SCALE	.0405

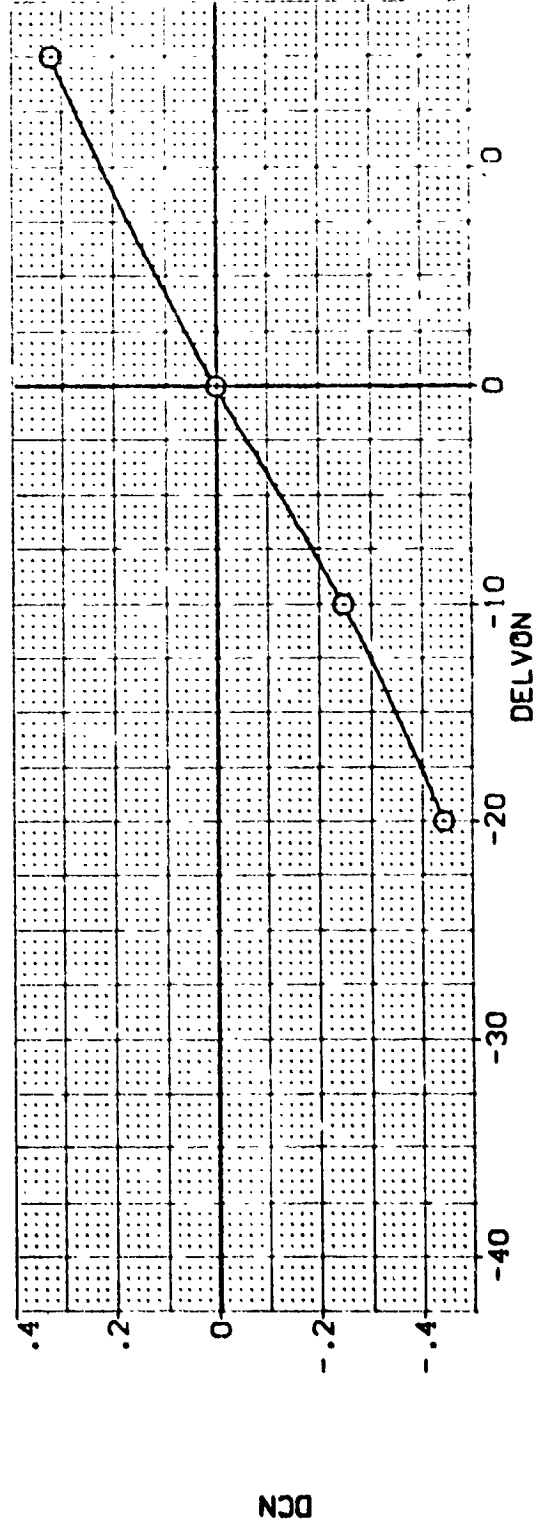
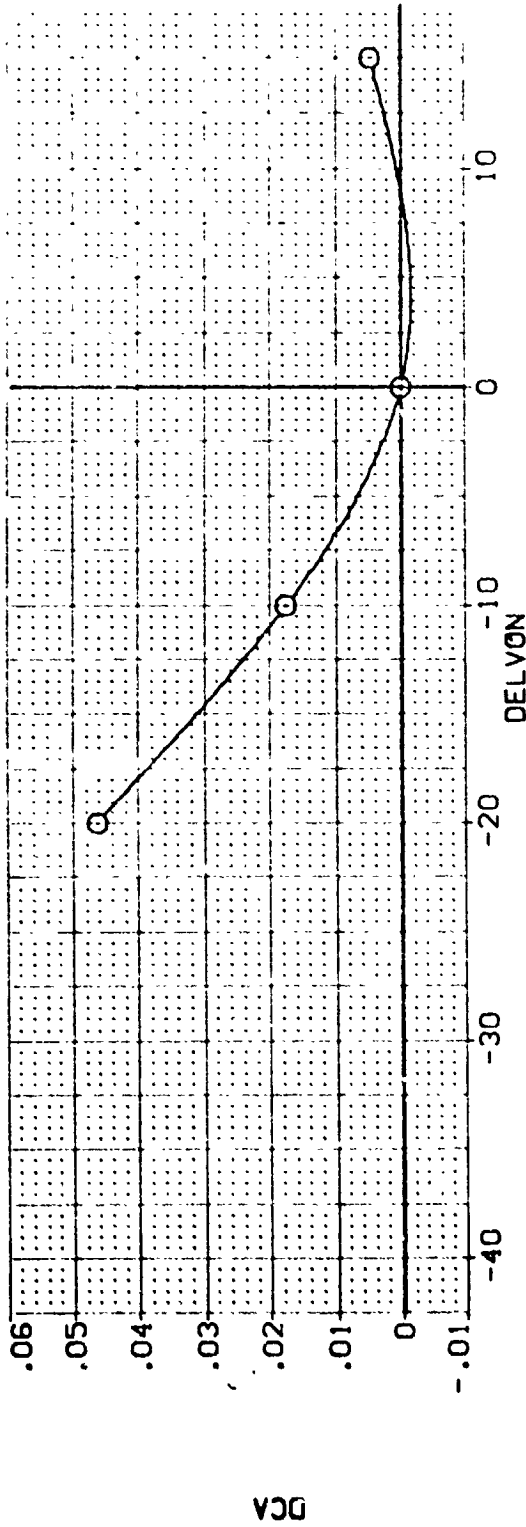


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.125

01528 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
○	10.000	BOFLAP	.200	BETA	.000	DELVON	0.000	SREF	4.4119	SO.FT.	
		RUDDER	-12.000	AILRON	.000	DELVON	-10.000	LREF	19.2299	INCHES	
		H/BW	.000	SPOBRK	.000	DELVON	15.000	BREF	3.9159	INCHES	
			.125					XMRP	43.5974	INCHES	
								ZMRP	15.0000	INCHES	
								SCALE	15.1875	INCHES	
									.0405	SCALE	

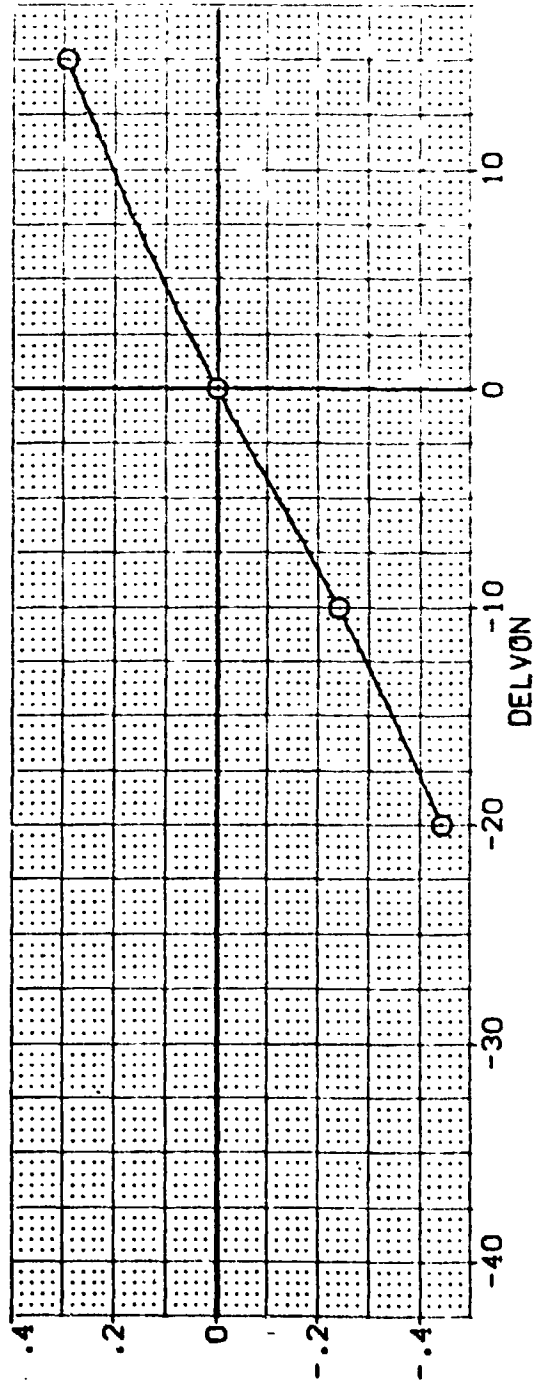
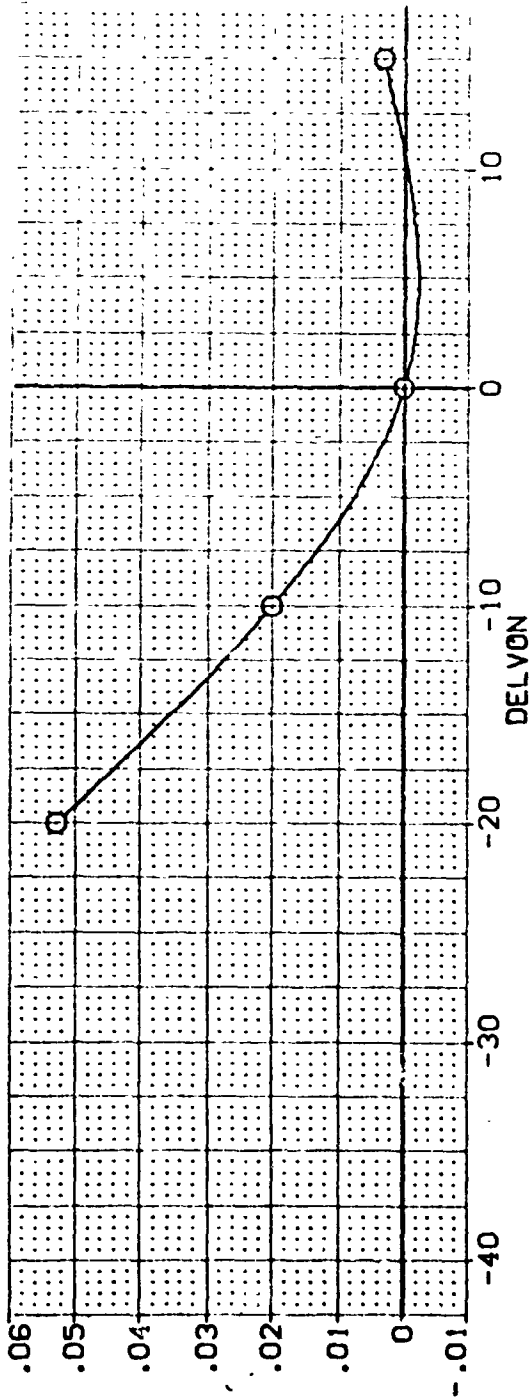


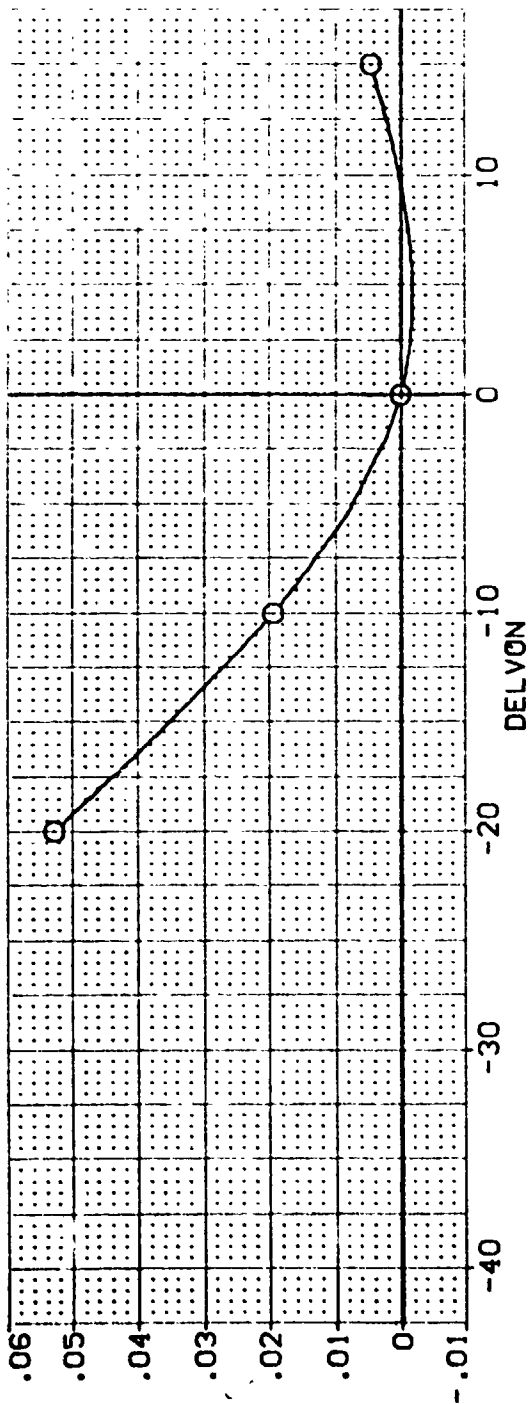
FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125



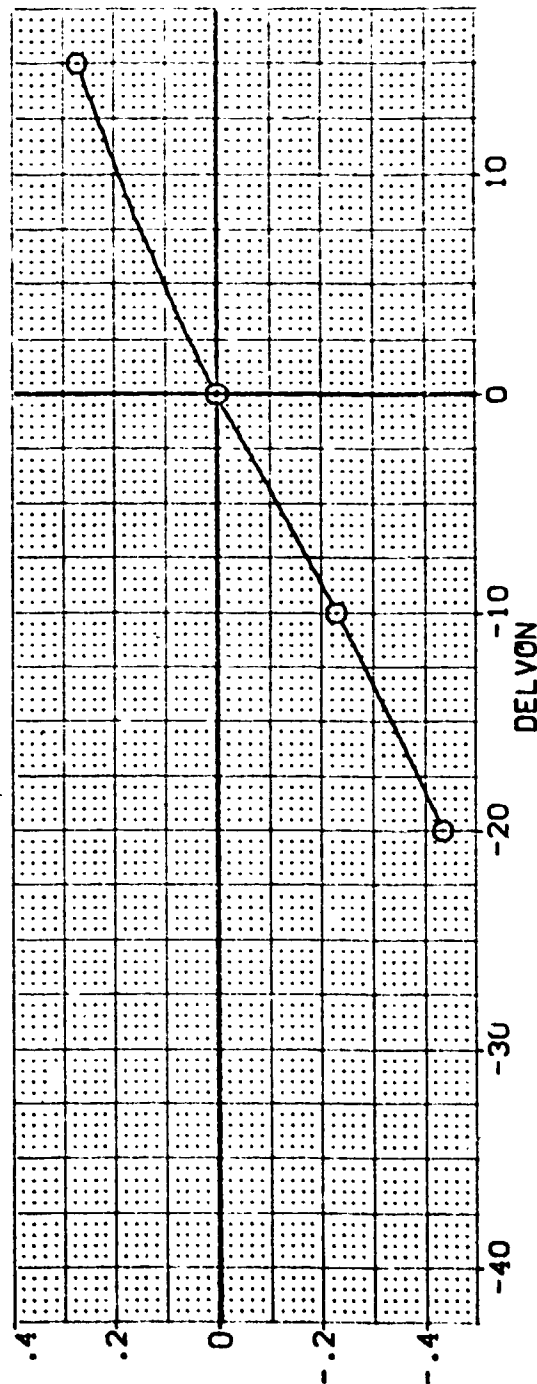


0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	.000	DATA SET	SREF	4.4119
MACH	.200	.000	DELTON	LREF	19.2299
BOFLAP	-12.000	.000	1DZ067	BREF	37.9399
RUDDER	.000	.000	1DZ070	XMRP	43.5974
H/BW	.125	.000		YMRP	.0000
		.000		ZMRP	15.1875
				SCALE	.0405



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FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

0A62B B26C9G15M7F8J43W116E28V8R5X10 (10Z067)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	20.000	BDFLAP	.200 BETA	.000 DATASET	SREF
		RUDDER	-12.000 AILRON	.000 IDZ067	LREF
		H/BW	.000 SPDGRY	.000 IDZ070	BREF
			.125	.000	XMRP
				.000	YMRP
				.000	ZMRP
				.000	SCALE
				.0405	SCALE

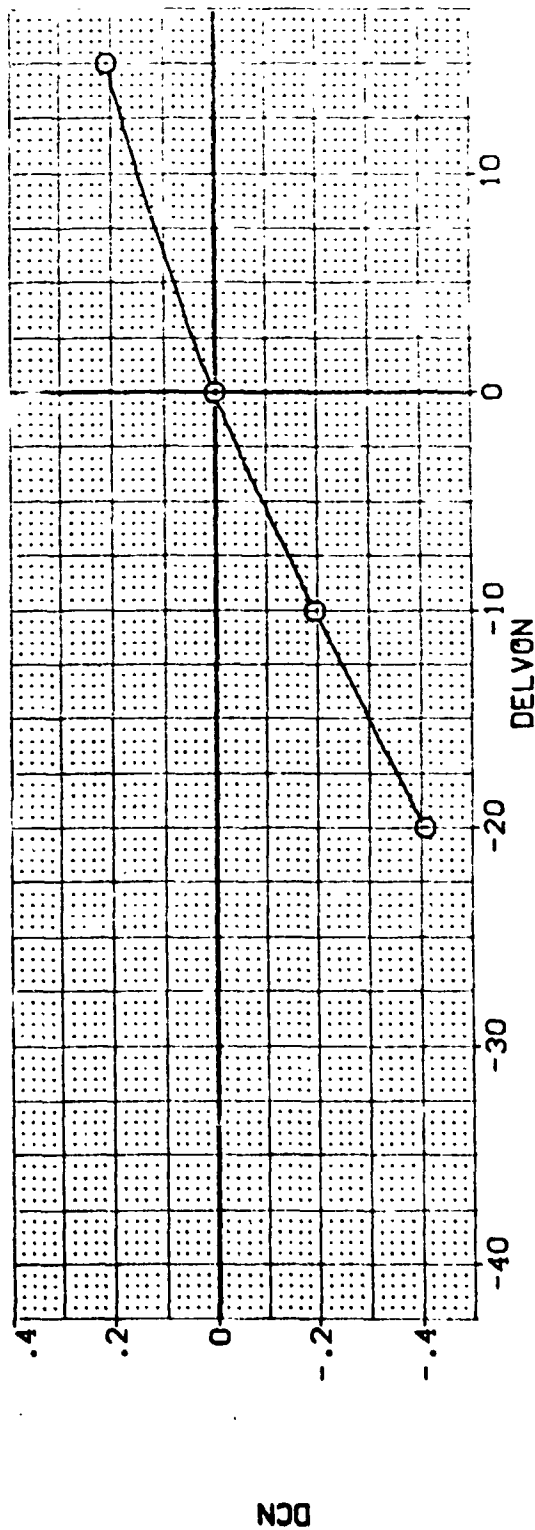
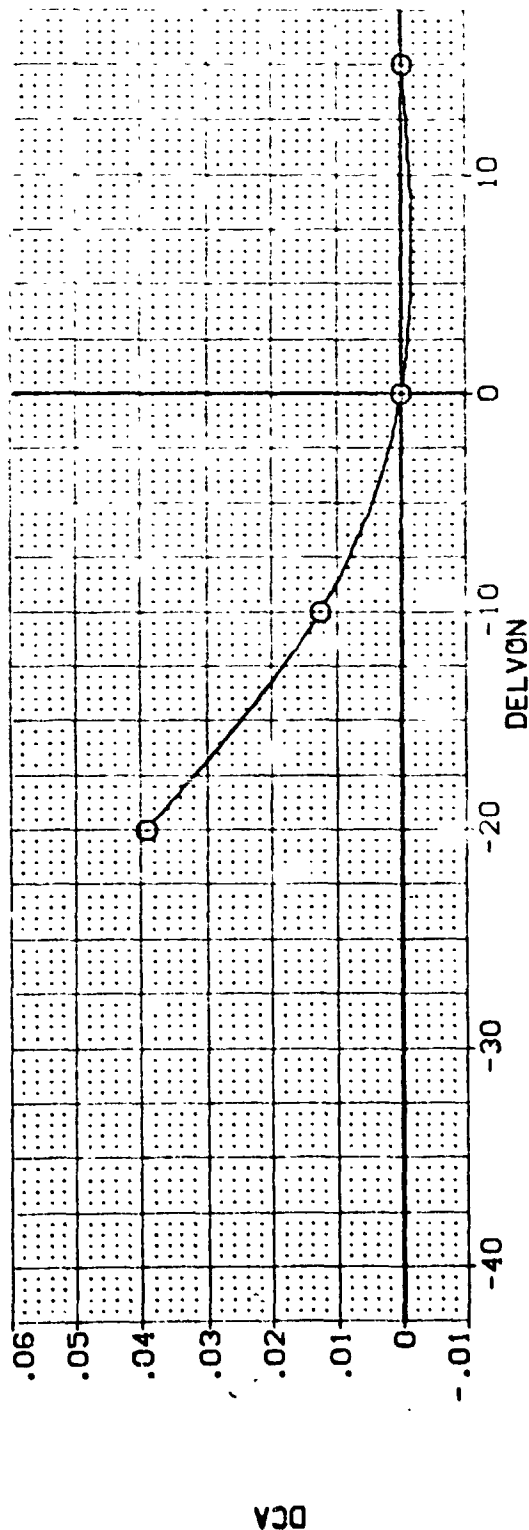
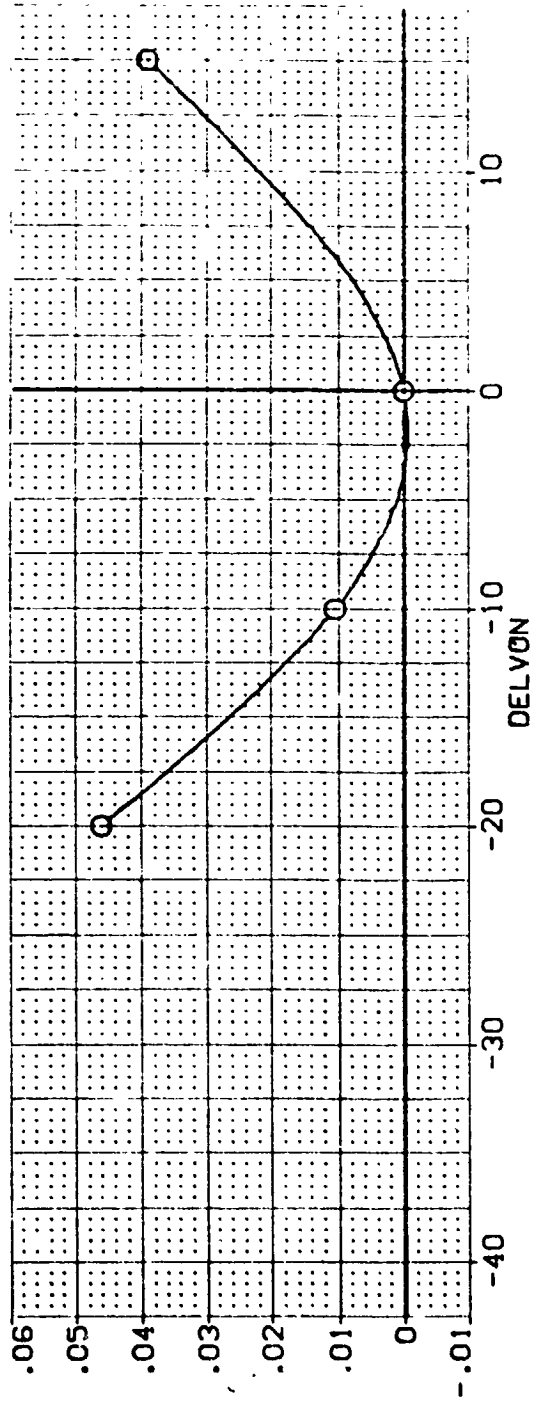


FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.125

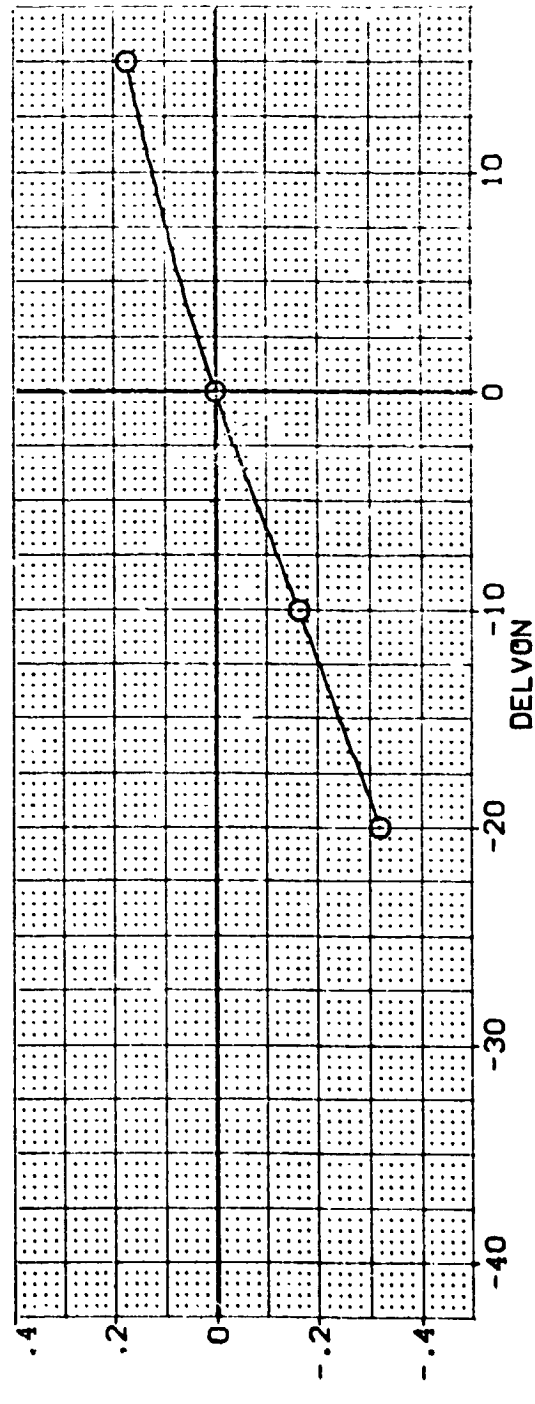


0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL	ALPHA	MACH	BD-LAP	RUDDER	H/BW	PARAMETRIC VALUES	.000	DATASET	DELTVN	.000	DATASET	DELTVN	SREF	REFERENCE INFORMATION
O	25.000	.200	-12.000		.125	BETA	.000	1DZ067	-20.000	.000	1DZ068	-19.000	LREF	SO.FT.
						AILTRN	.000	1DZ070			1DZ069	15.000	BREF	INCHES
						SPOBRK							XMRP	INCHES
													YMRP	INCHES
													ZMRP	INCHES
													SCALE	SCALE



DCA



DCN

FIG 13 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.125

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ067)

SYMBOL	ALPHA	MACH	BDFLAP	RUDER	H/BW	PARAMETRIC VALUES	BETA	ALLRON	SPOBRK	DATA SOURCE	DELVON	DATASET	DELVON	SREF	REFERENCE INFORMATION		
0	30.000					.200				.000	.000	1DZ067	-20.000	LREF	4.4119		
						-12.000				.000	.000	1DZ069	-10.000	SRFF	19.2293		
						.000				.000	.000	1DZ069	15.000	SRFF	37.9359		
						.125								YMRP	43.5574		
														ZMRP	.0000		
														ZMRP	15.1875		
														SCALE	.0405		
																SO.FT.	
																	INCHES
																	INCHES
																	INCHES
																	INCHES
																	INCHES
																	SCALE

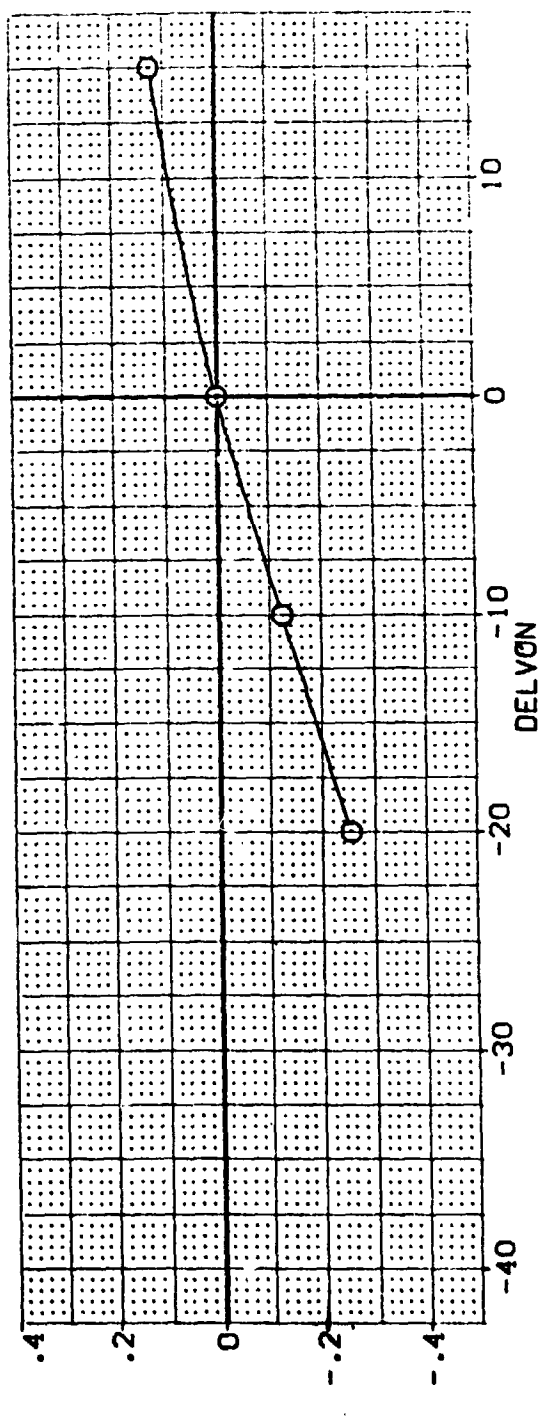
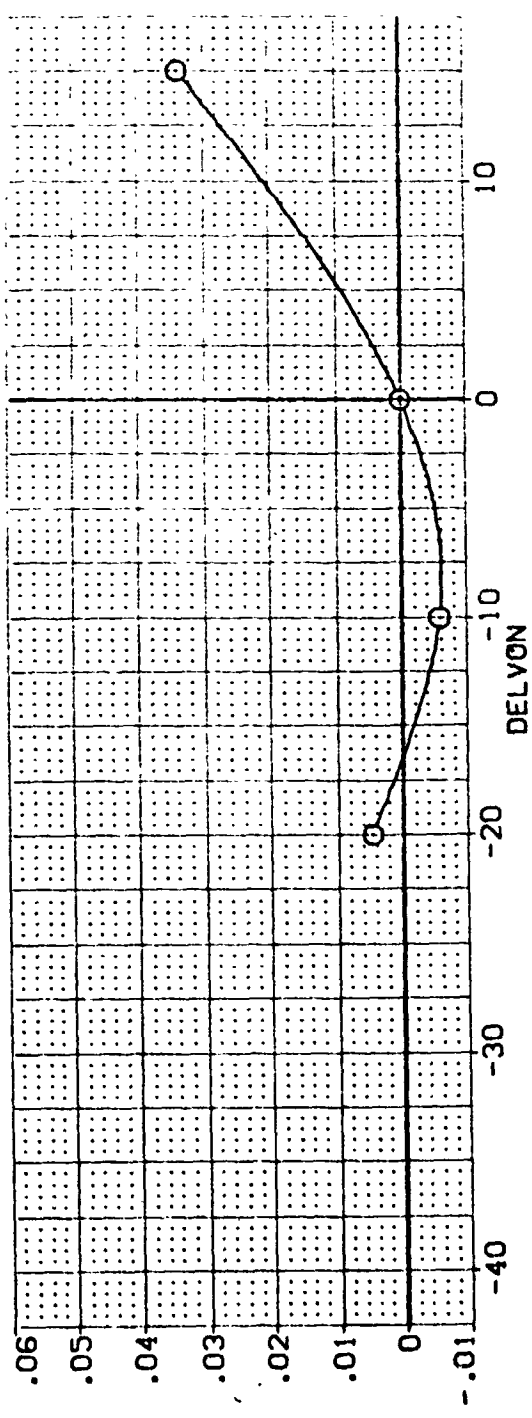


FIG 13 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.125



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SFOBRK	BOFT AP	REFERENCE INFORMATION
(B02076)	0A628 B26C9G 5M7FBJ43V  6E28VBR5X10	-20.000	.285	.000	-12.000	SREF 4.4119 SO.FT.
(B02075)	0A628 B26C9G 5M7FBJ43V  6E28VBR5X10	-10.000	.285	.000	-12.000	LREF 19.2293 INCHES
(B02073)	0A628 B26C9G 5M7FBJ43V  6E28VBR5X10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(B02074)	0A628 B26C9G 5M7FBJ43V  6E28VBR5X10	15.000	.285	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

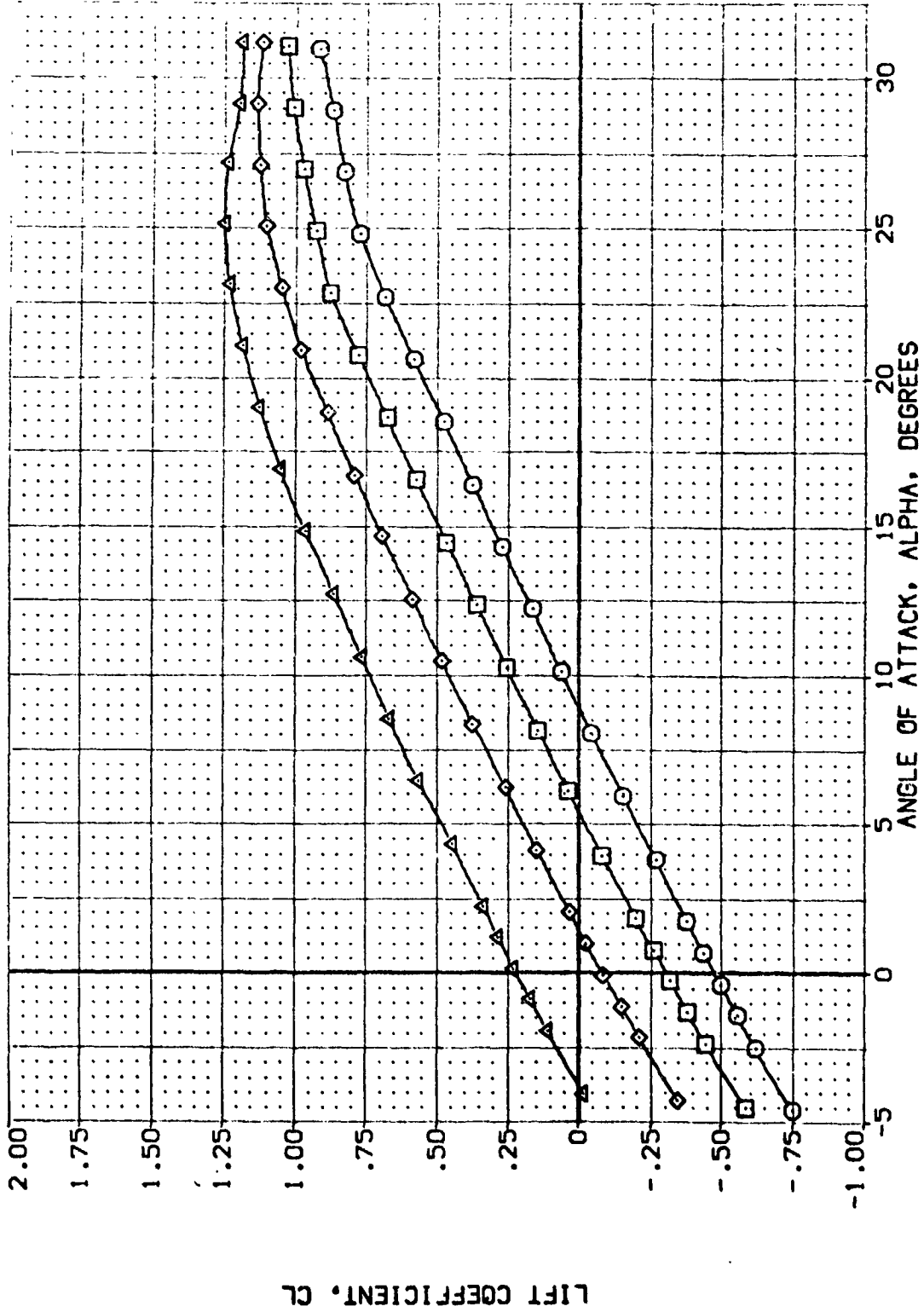


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B02076)	B26C9G SMTF6J43V 16E28V8RSX10
(B02075)	B26C9G SMTF6J43V 16E28V8RSX10
(B02073)	B26C9G SMTF6J43V 16E28V8RSX10
(B02074)	B26C9G SMTF6J43V 16E28V8RSX10

ELEVON H/BW SPOBRK BDFLAP

-20.000	.285	.000	-12.000
-10.000	.285	.000	-12.000
15.000	.285	.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

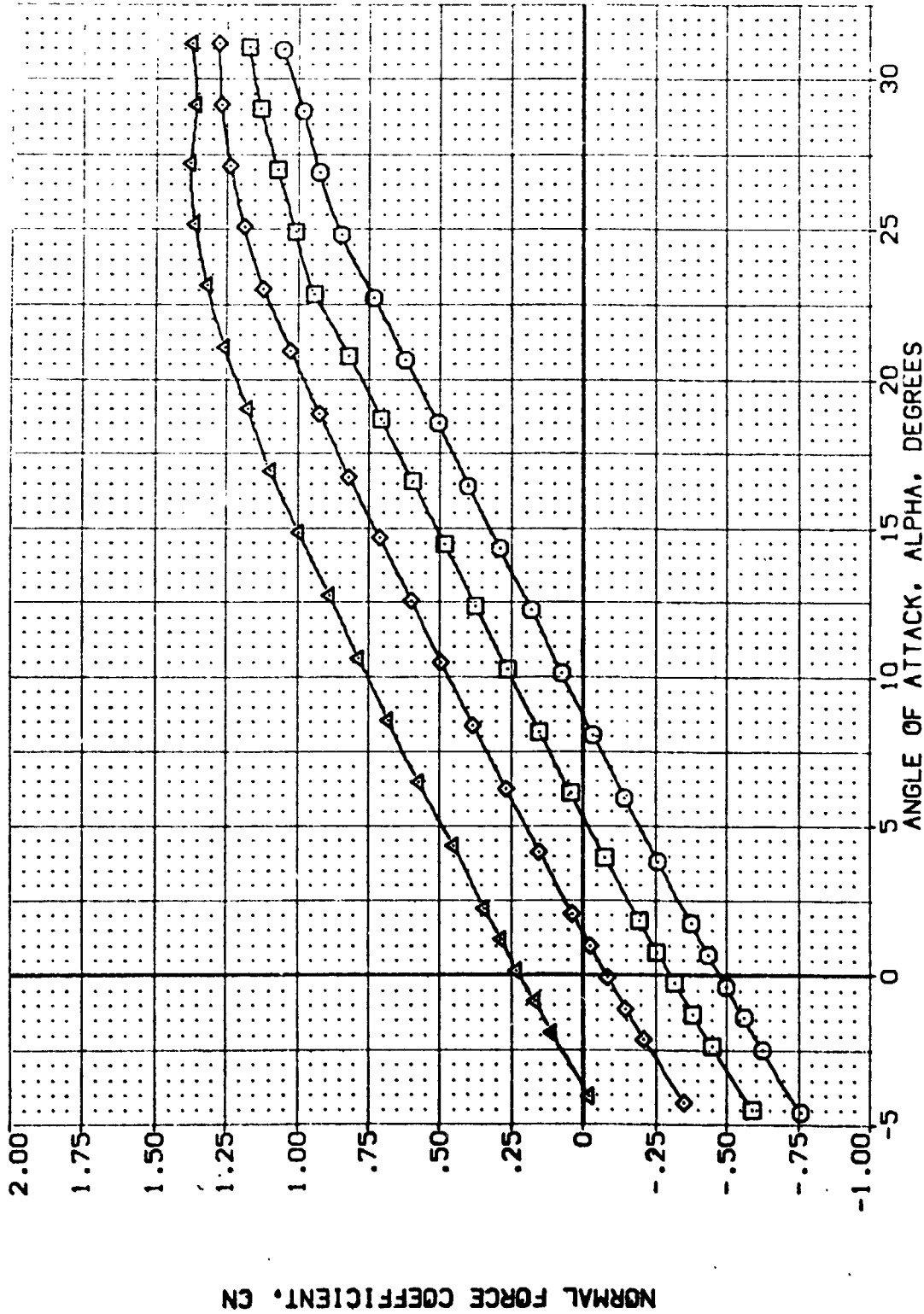


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20



4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SFOBRK	BOFLAP	REFERENCE INFORMATION
(802076)	0A628 B26C9G SM7F 8J43V 1E28V6R5X10	-20.000	.285	.000	-12.000	SREF 4.4119 SO.FT.
(802075)	0A628 B26C9G SM7F 8J43V 1E28V6R5X10	-10.000	.285	.000	-12.000	LREF 19.2289 INCHES
(802073)	0A628 B26C9G SM7F 8J43V 1E28V6R5X10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(802074)	0A628 B26C9G SM7F 8J43V 1E28V6R5X10	15.000	.285	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

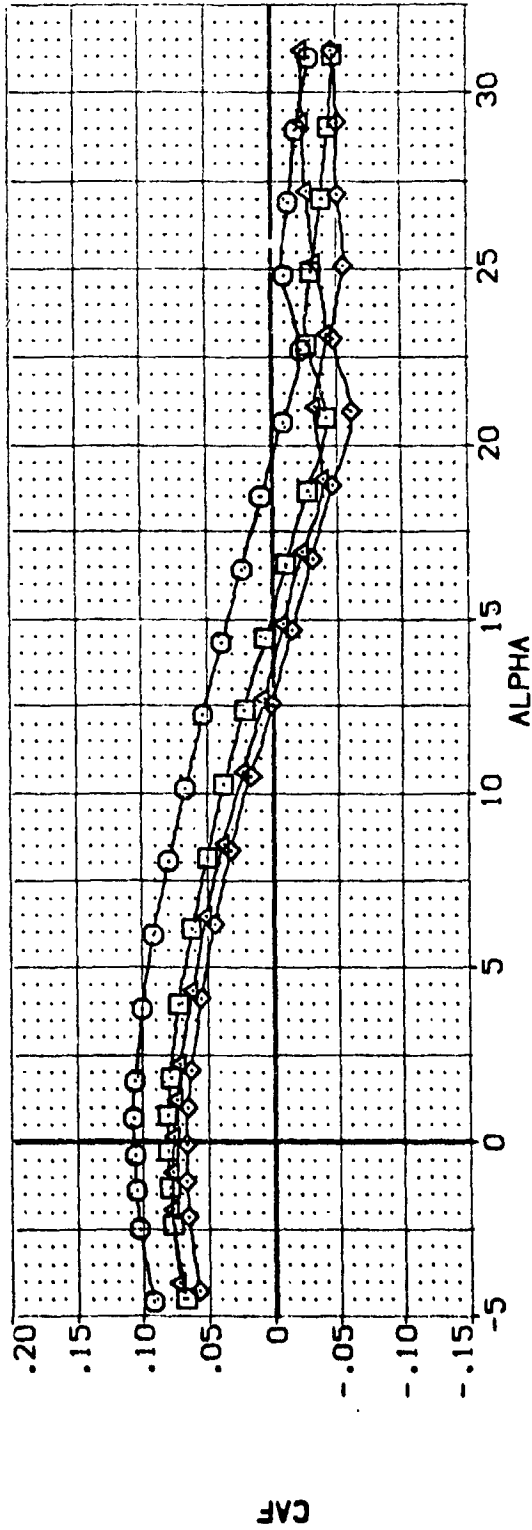
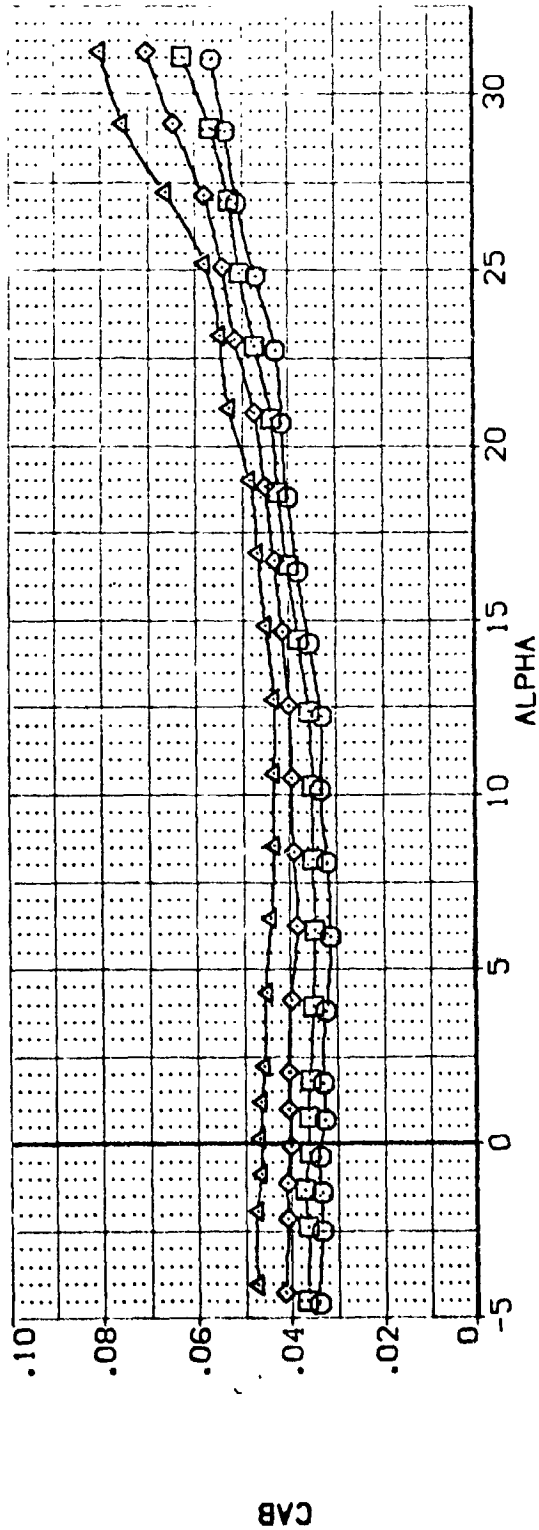


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z076)	0A6Z8 BZ6C9G15M7F8J43V116E28V8RSX10	-20.000	.285	.000	-12.000	SREF 4.4119 SO.FT.
(80Z075)	0A6Z8 BZ6C9G15M7F8J43V116E28V8RSX10	-10.000	.285	.000	-12.000	LREF 19.2299 INCHES
(80Z073)	0A6Z8 BZ6C9G15M7F8J43V116E28V8RSX10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(80Z074)	0A6Z8 BZ6C9G15M7F8J43V116E28V8RSX10	15.000	.285	.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1873 INCHES
						SCALE .0405 SCALE

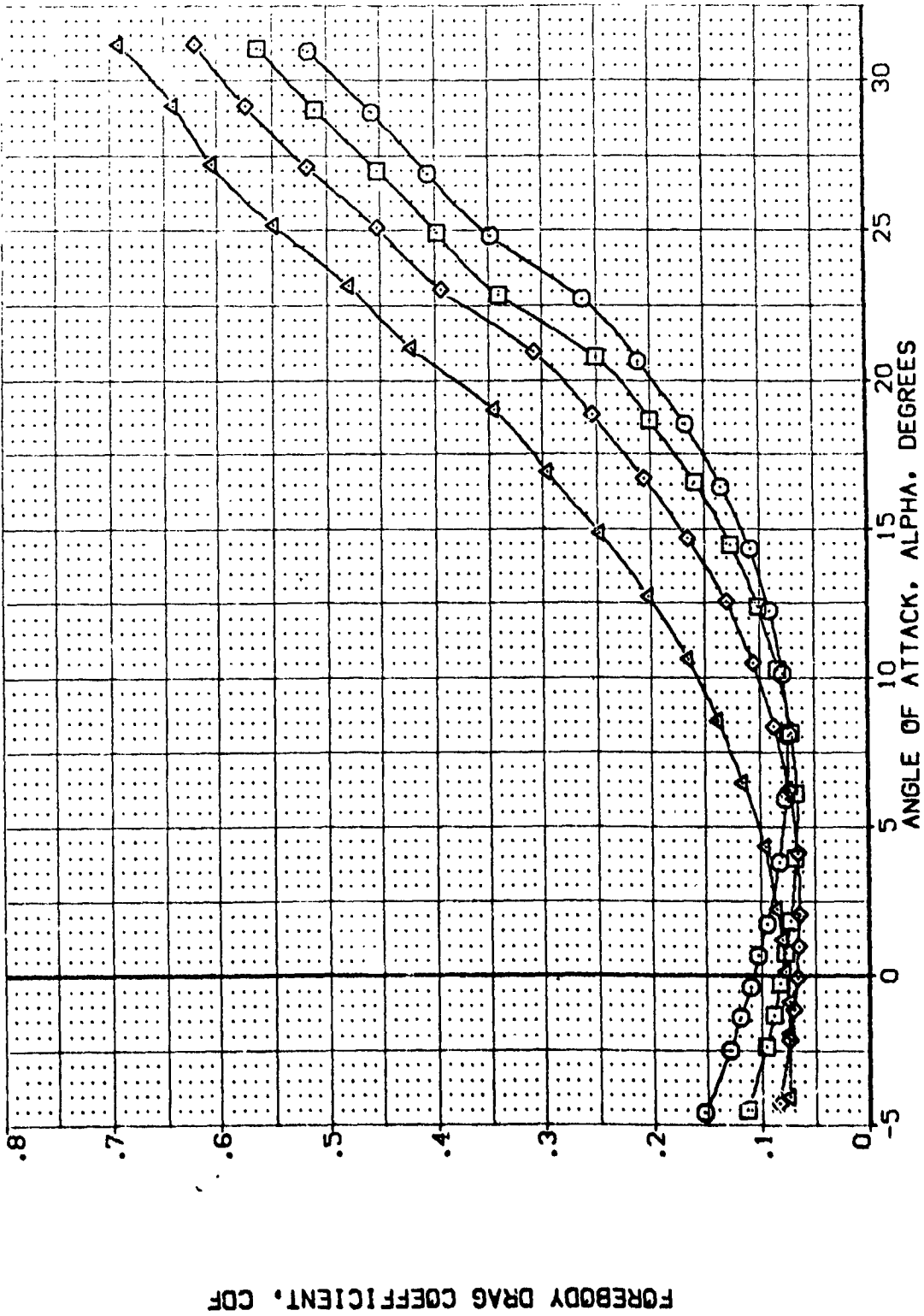
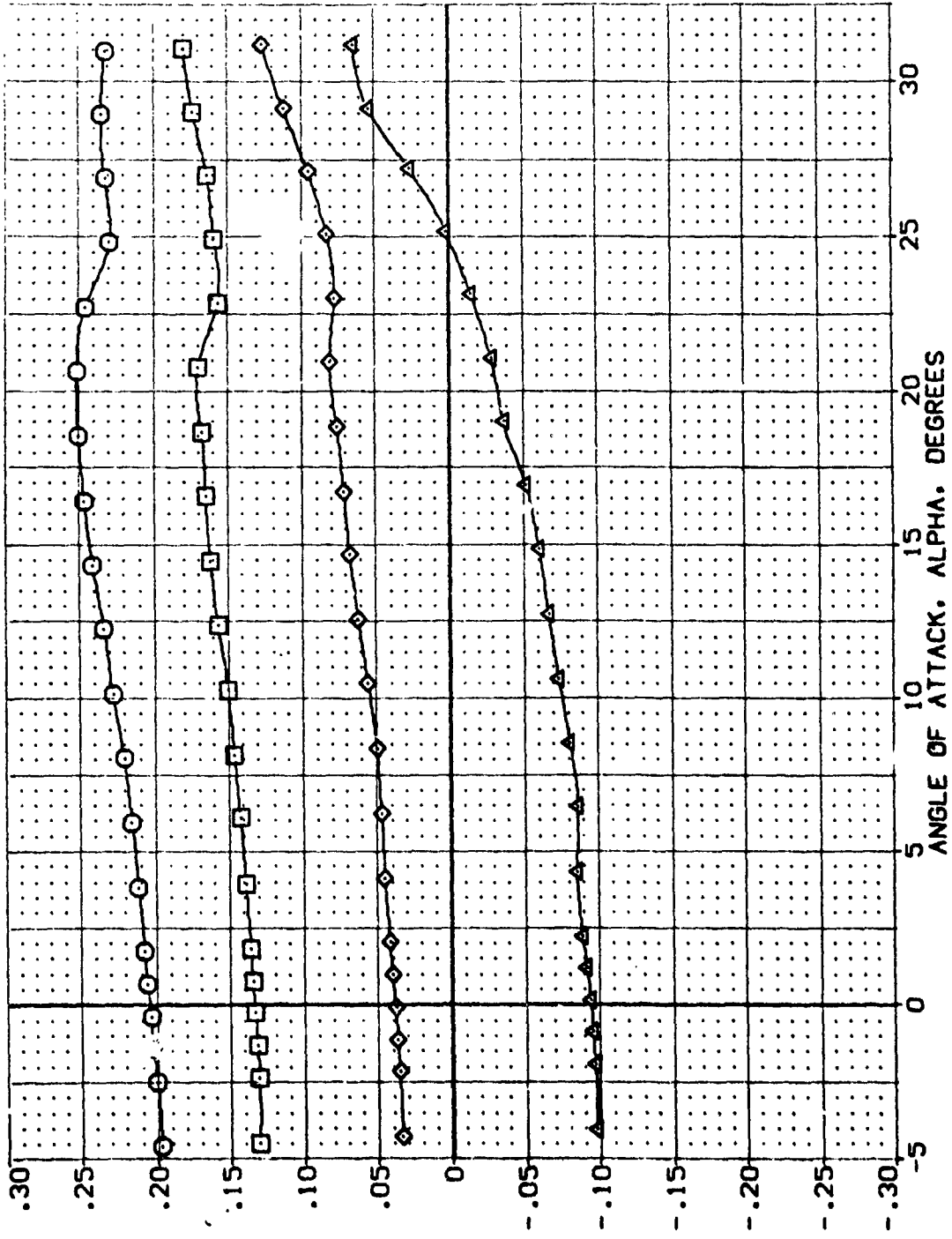


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802075)	0A5Z8 BZ6C9G1S47F8J43V116E28V8RSX10	-20.000	.285	.000	-12.000	SREF 4.4119 SO.FT.
(802075)	0A5Z8 BZ6C9G1S47F8J43V116E28V8RSX10	-10.000	.285	.000	-12.000	LREF 19.2299 INCHES
(802073)	0A5Z8 BZ6C9G1S47F8J43V116E28V8RSX10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(802074)	0A5Z8 BZ6C9G1S47F8J43V116E28V8RSX10	15.000	.285	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1975 INCHES
						SCALE .0405



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FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02076) Q 04628 B26C9G1 SMT7 8J43W1 16E28V8FSX10  
 (B02075) X 04628 B26C9G1 SMT7 8J43W1 16E28V8FSX10  
 (B02073) X 04628 B26C9G1 SMT7 8J43W1 16E28V8FSX10  
 (B02074) X 04628 B26C9G1 SMT7 8J43W1 16E28V8FSX10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 -20.000 .285 .000 -12.000 SREF 4.4119 SQ.FT.  
 -10.000 .285 .000 -12.000 LREF 19.2299 INCHES  
 .000 .285 .000 -12.000 BREF 37.9359 INCHES  
 15.000 .285 .000 -12.000 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

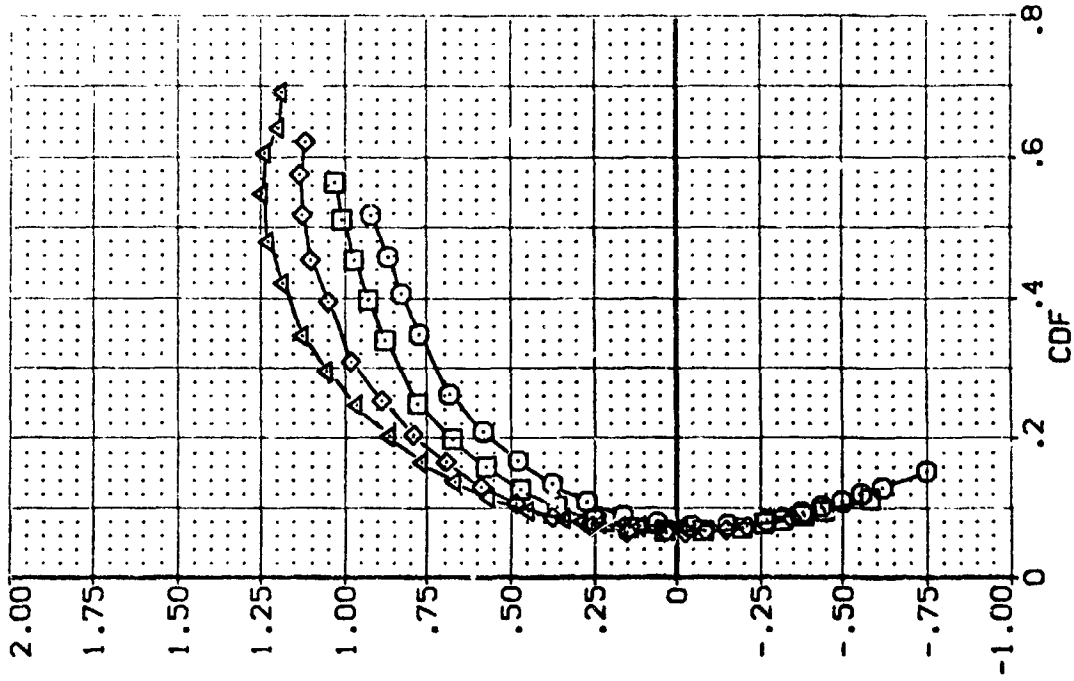
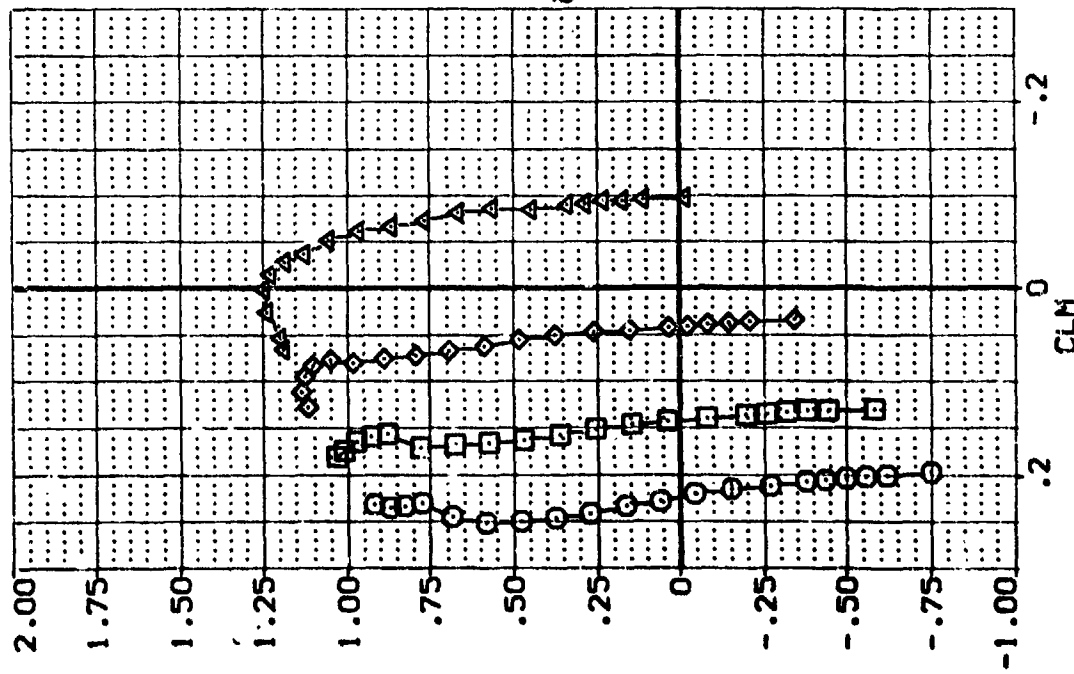


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(BD2076)	0A628 B26C9G SMTF8 A3V1 8E28V8FSX10	-20.000	.285	.000	-12.000	SREF 4.4119 SO.FT
(BD2075)	0A628 B26C9G SMTF8 A3V1 8E28V8FSX10	-10.000	.285	.000	-12.000	LREF 19.2299 INCHES
(BD2073)	0A628 B26C9G SMTF8 A3V1 8E28V8FSX10	15.000	.285	.000	-12.000	BREF 37.9359 INCHES
(BD2074)	0A628 B26C9G SMTF8 A3V1 8E28V8FSX10					XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

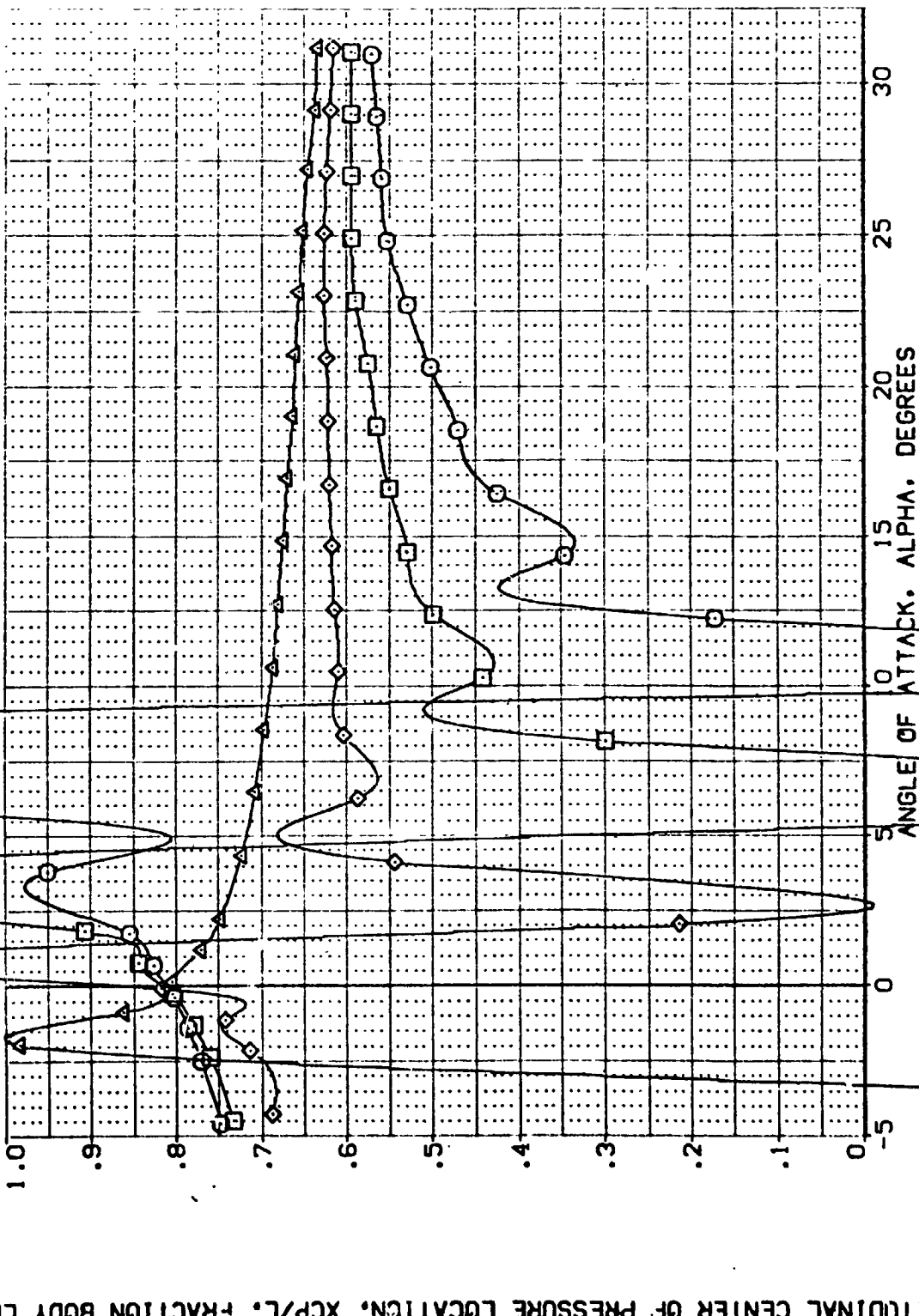


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (80Z076) □ 0A628 B26C9G|5M7F8J43V||6E28V8RSX|0  
 (80Z075) □ 0A628 B26C9G|5M7F8J43V||6E28V8RSX|0  
 (80Z073) □ 0A628 B26C9G|5M7F8J43V||6E28V8RSX|0  
 (80Z074) □ 0A628 B26C9G|5M7F8J43V||6E28V8RSX|0

ELEVON H/BV SPOBRK BOFLAP  
 -20.000 .000 -12.000  
 -10.000 .000 -12.000  
 15.000 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2289 INCHES  
 BREF 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .C405 SCALE

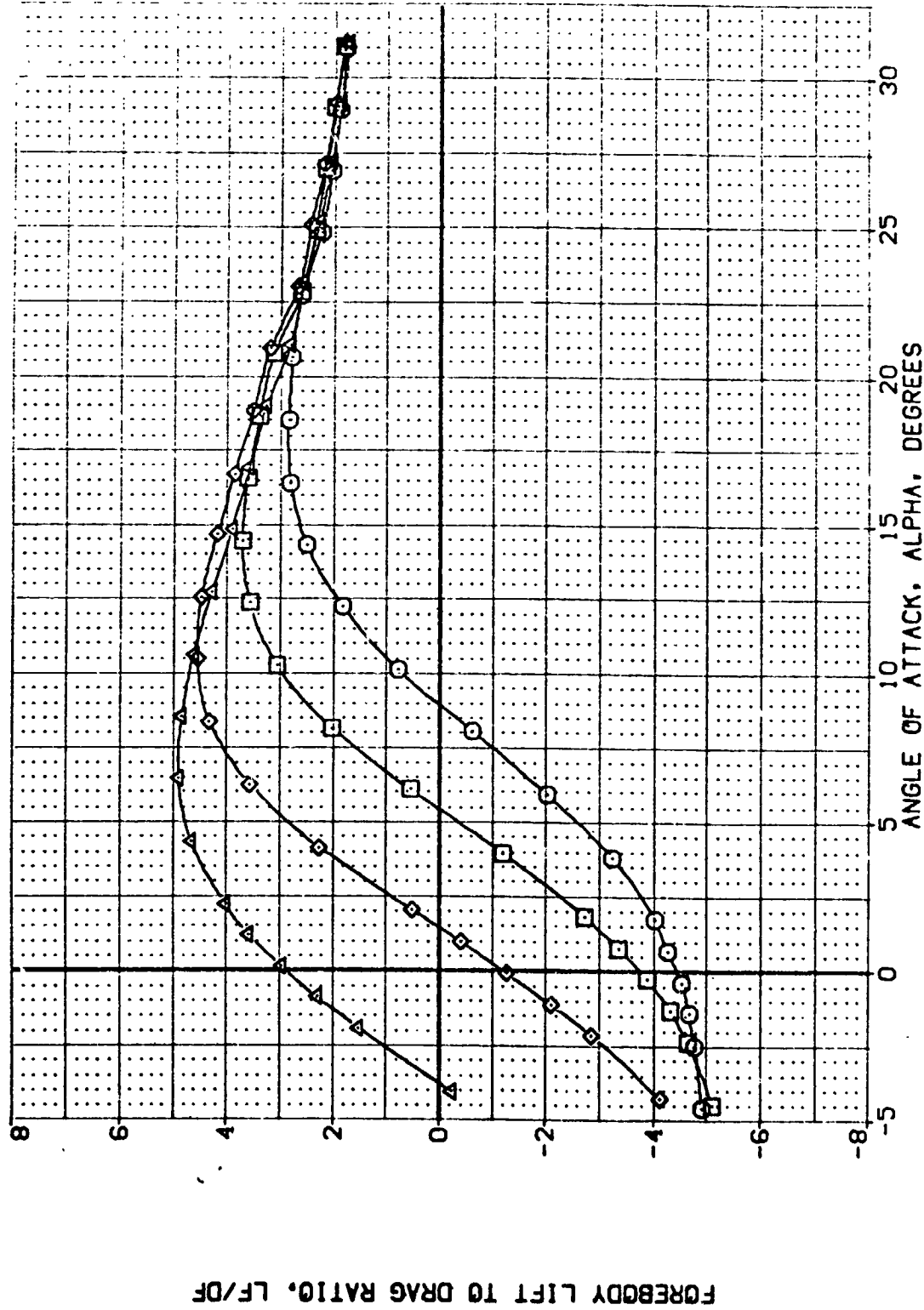


FIG 14 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.285

(A)MACH = .20

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	BOF. AP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	SREF	REFERENCE INFORMATION
○	.000					BETA AILRON SPOBRK	.000 DATASET .000 IDZ076 .000 IDZ073	-20.000 .000	IDZ075 IDZ074	-10.000 15.000	SREF LREF BREF XREF YREF ZREF SCALE	SO. FT. INCHES INCHES INCHES INCHES INCHES INCHES
					.285						4.4119 19.2299 37.9359 43.5974 .0000 15.1875 .0405	

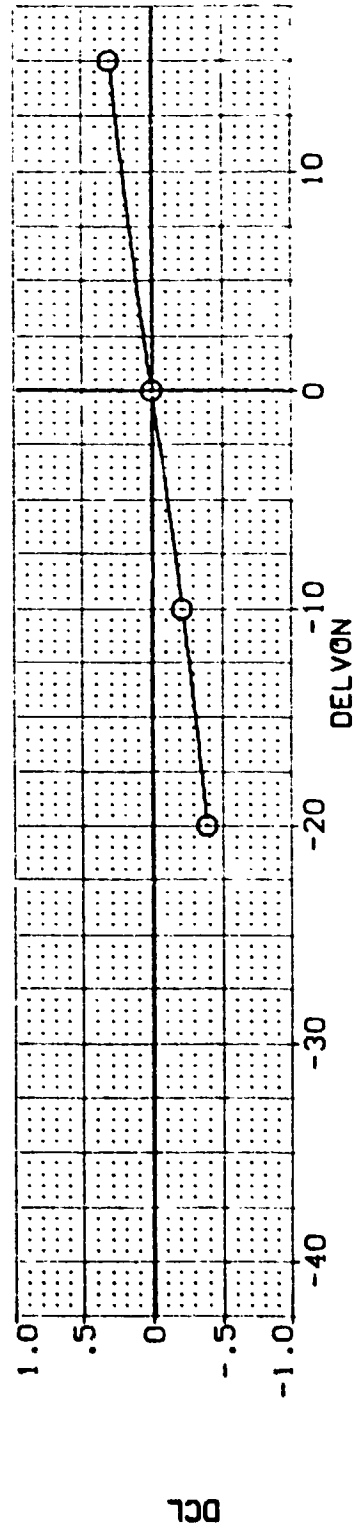
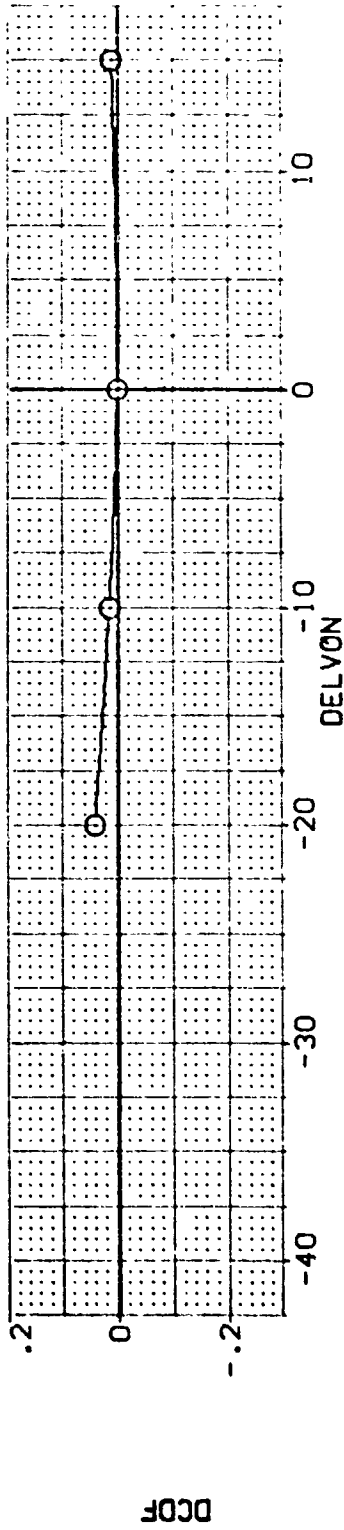
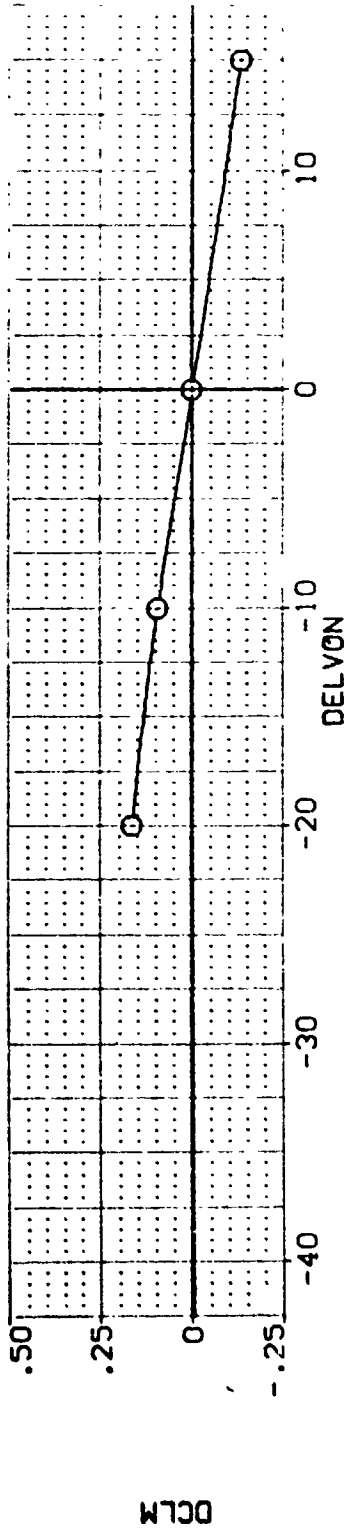


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	BETA	AILRON	SPOBRK	.000	DATASET	DELVON	DATA SOURCE	DATASET	DELVON	SREF	REF	DELVON	REFERENCE INFORMATION	
O	5.000					.200					1DZ076	-20.000	.000	1DZ074	-10.000	4.4119	19.2399	15.000	SO. FT.	
						-12.000					1DZ073	.000	.000	1DZ074	15.000	37.9359	43.5974		INCHES	
						.000										.0000				INCHES
						.285										15.1875				INCHES
																.0405				SCALE

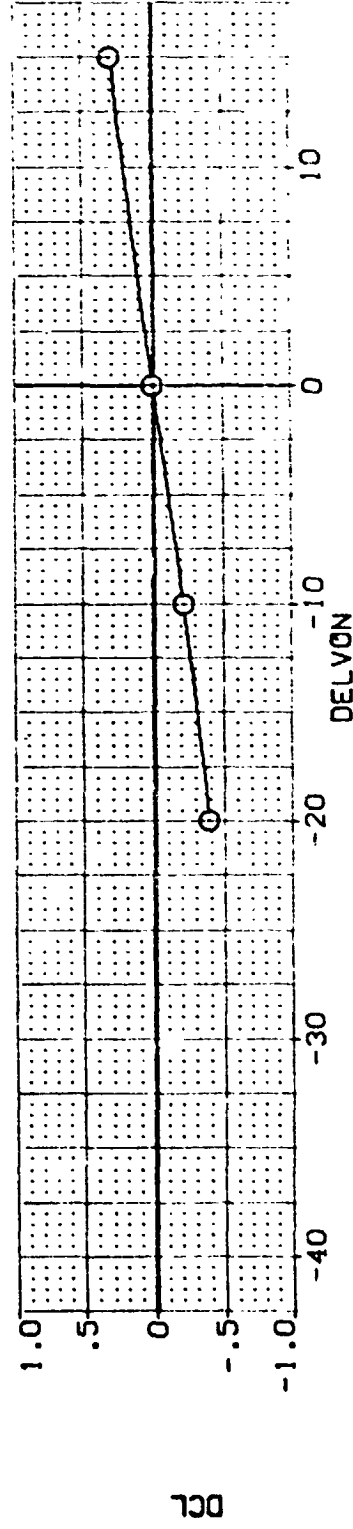
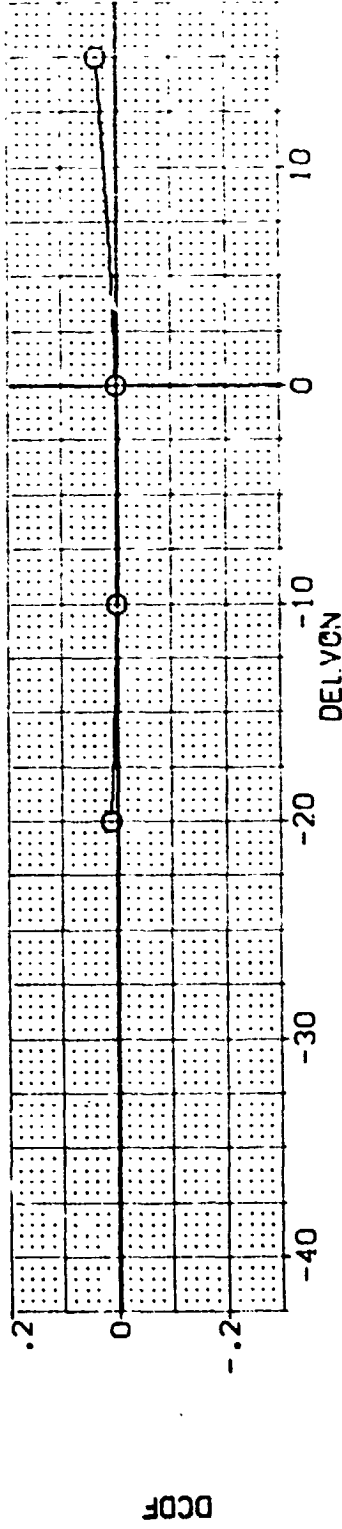
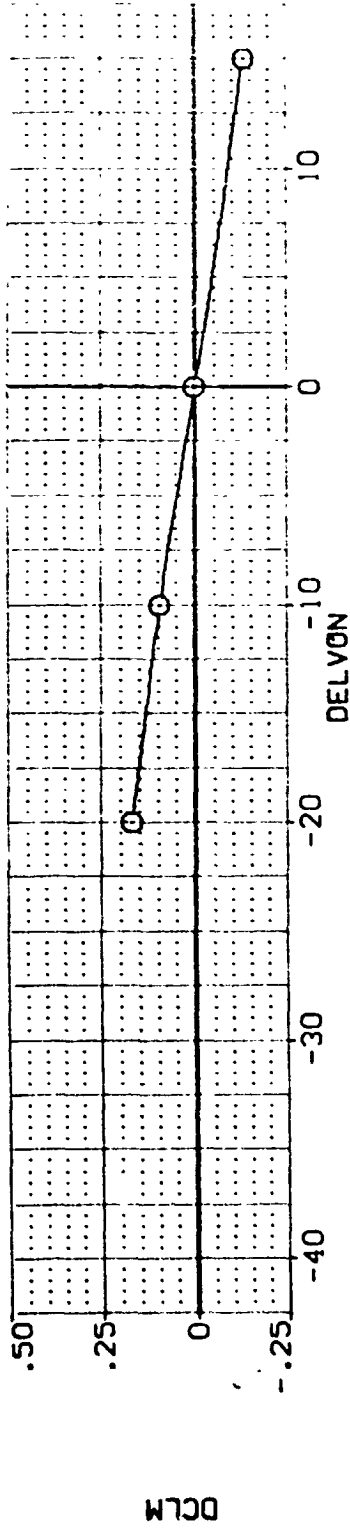


FIG 14 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.285







0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	.200	.000	DELVON	SAFE	4.4119
MACH	-12.000	.000	DELVON	LREF	19.2299
EDFLAP	.000	.000	IDZ076	BREF	37.9359
RUDDER	.000	.000	IDZ073	XTRP	43.5974
H/BV	.285			YTRP	.0000
				ZTRP	15.1875
				SCALE	.0405

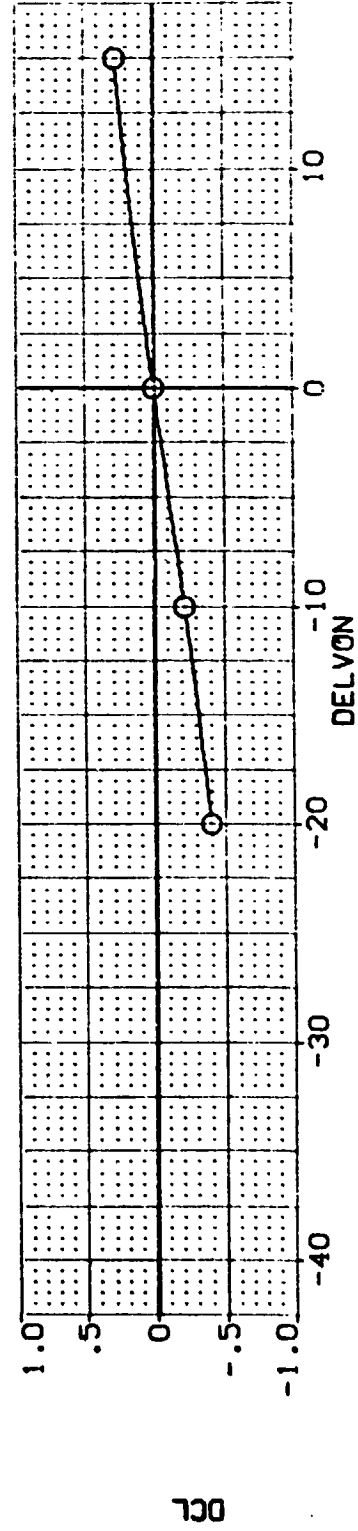
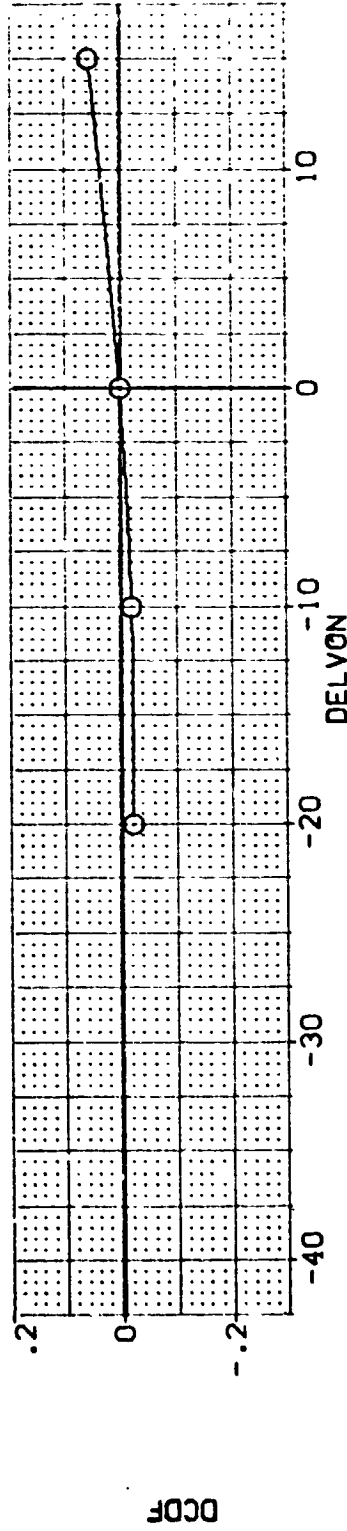
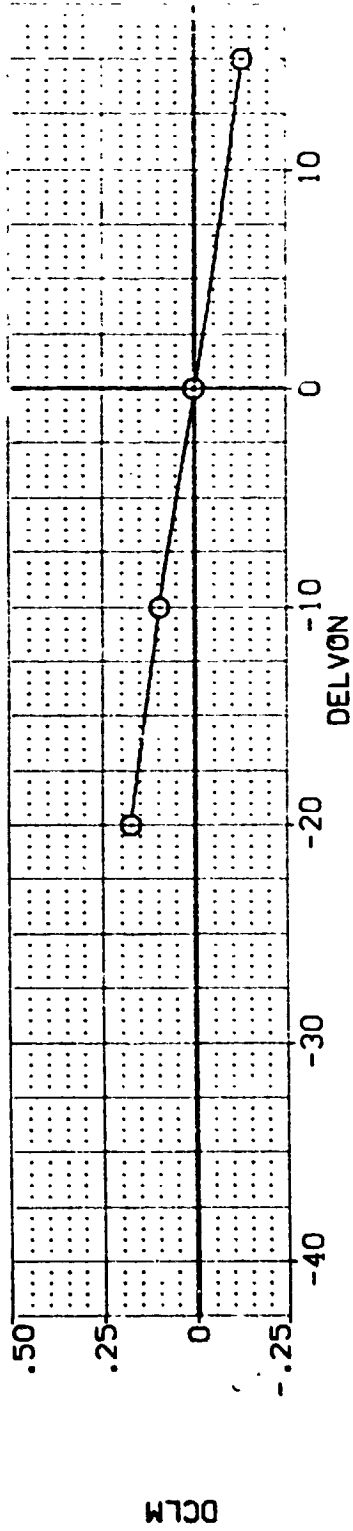


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

0A62B B26C9G15M7F8J43W116E28V8R5X10 (10Z076)

<b>SYMBOL</b>	<b>ALPHA</b>	<b>MACH</b>	<b>PARAMETRIC VALUES</b>		<b>DATA SOURCE</b>		<b>REFERENCE INFORMATION</b>			
O	15.000	BOFLAP	.200	BETA	.000	DATASET	DELVON	SREF	LREF	SO.FT.
		RUDDER	-12.000	A1LRON	.000	10Z076	-20.000	10Z075	19.2299	INCHES
		H/BW	.000	SPDRK	.000	10Z073	.000	10Z074	37.9359	INCHES
			.285						43.5974	INCHES
									.0000	INCHES
									15.1875	INCHES
									.0403	SCALE

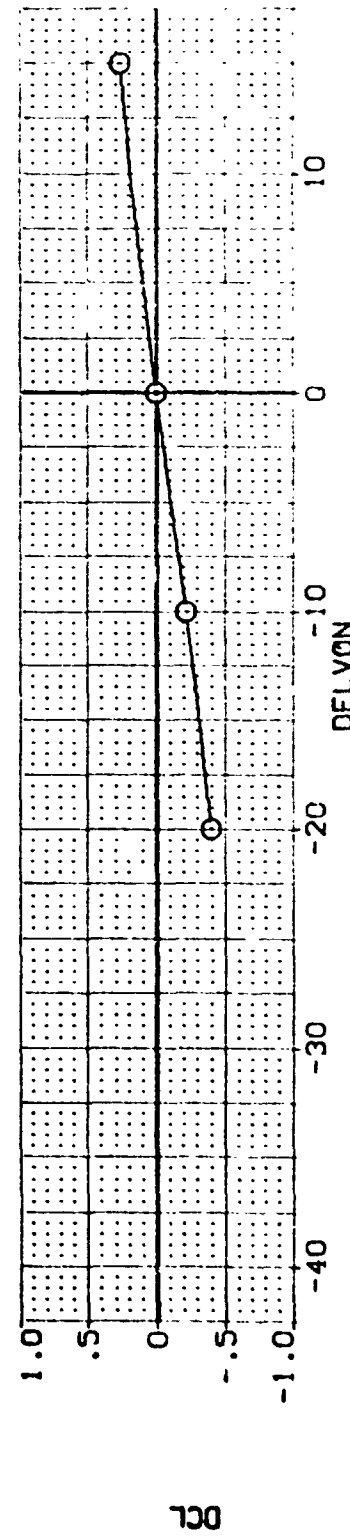
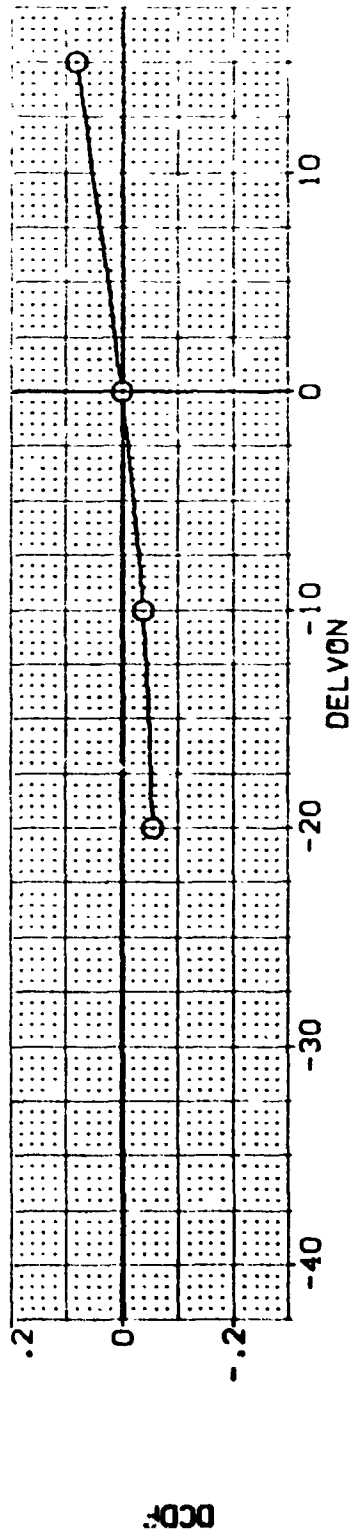
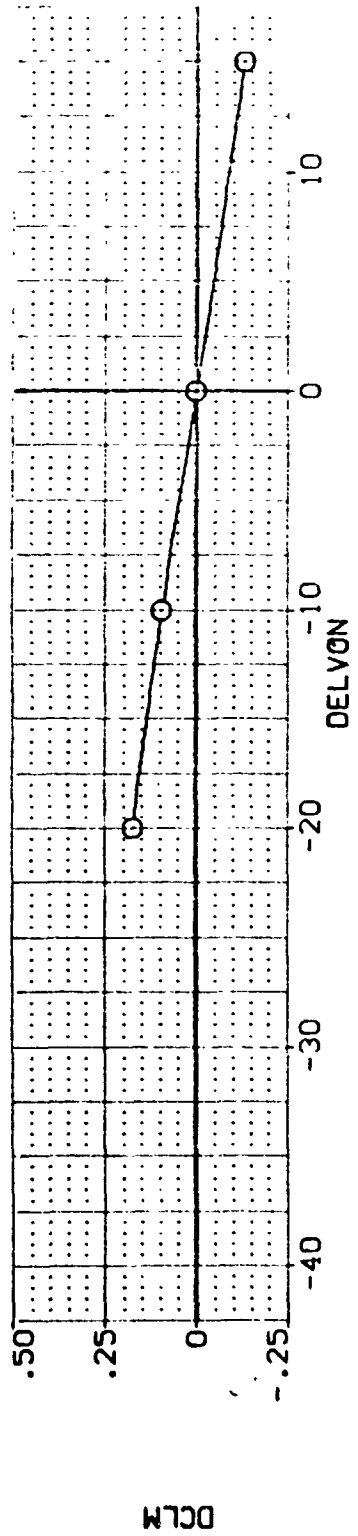


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
○	20.000	.200	BETA	.000	10Z076	.000	DELVON	-20.000	.000	10Z075	10Z074	DELVON	SREF	4.4119	SO.FT.
		-12.000	A1LRON	.000	10Z075	.000	DELVON	-10.000	.000	10Z075	10Z074	DELVON	LREF	19.2298	INCHES
		.000	SPOBRK	.000	10Z073	.000	DELVON	.000	.000	10Z075	10Z074	DELVON	BREF	37.9359	INCHES
				.285			DELVON			10Z075	10Z074	DELVON	XMRP	43.5974	INCHES
							DELVON			10Z075	10Z074	DELVON	YMRP	.0000	INCHES
							DELVON			10Z075	10Z074	DELVON	ZMRP	15.1875	INCHES
							DELVON			10Z075	10Z074	DELVON	SCALE	.0405	SCALE

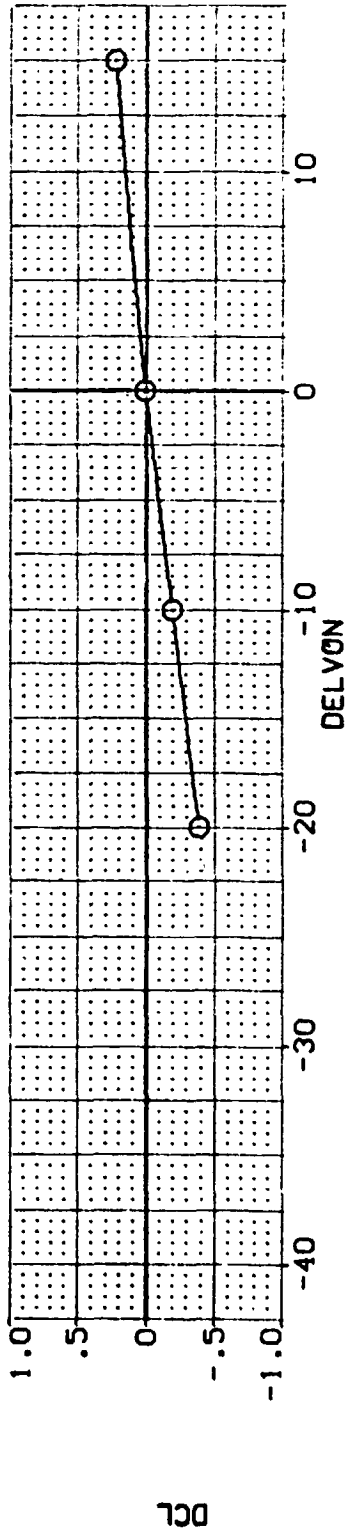
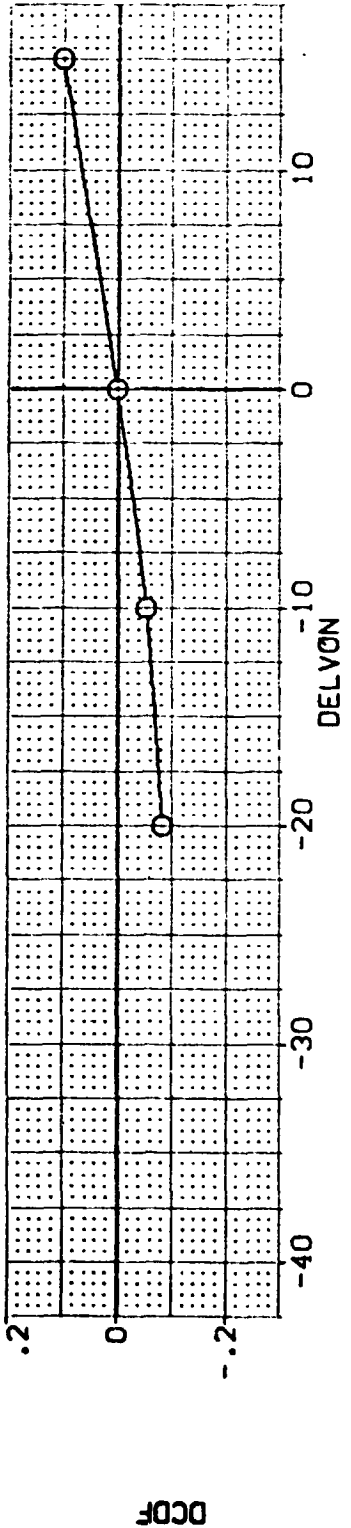
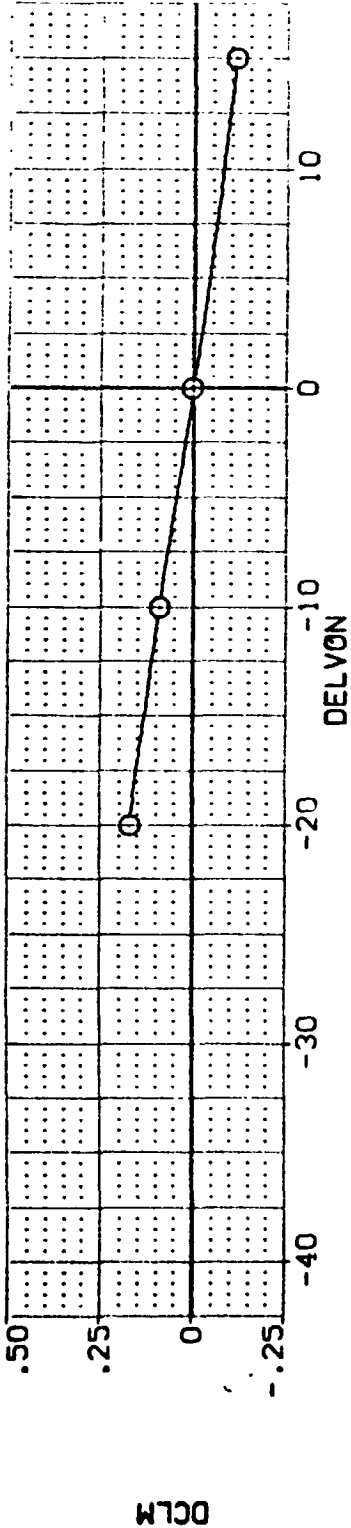


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

0A628 B26C9G15M7F8J43W116E28V8R5X10 (10Z076)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	25.000	BDFLAP	.200	BETA	.000	10Z076	SREF	4.4119
		RUDDER	-12.000	AILRON	.000	10Z074	LREF	19.2299
		H/BW	.000	SPDRK	.000		BREF	37.9359
			.285				XMRP	43.5974
							YMRP	.0000
							ZMRP	15.1873
							SCALE	.0405

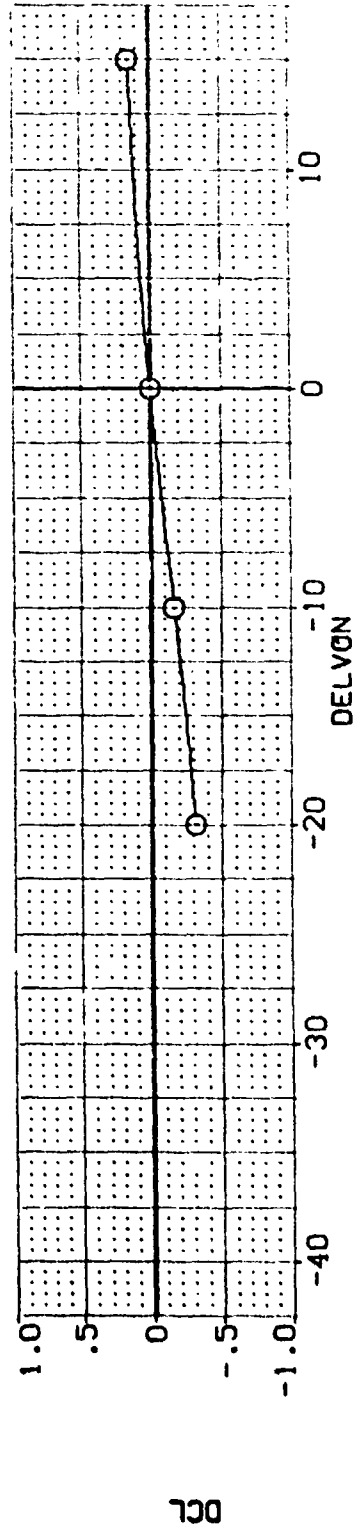
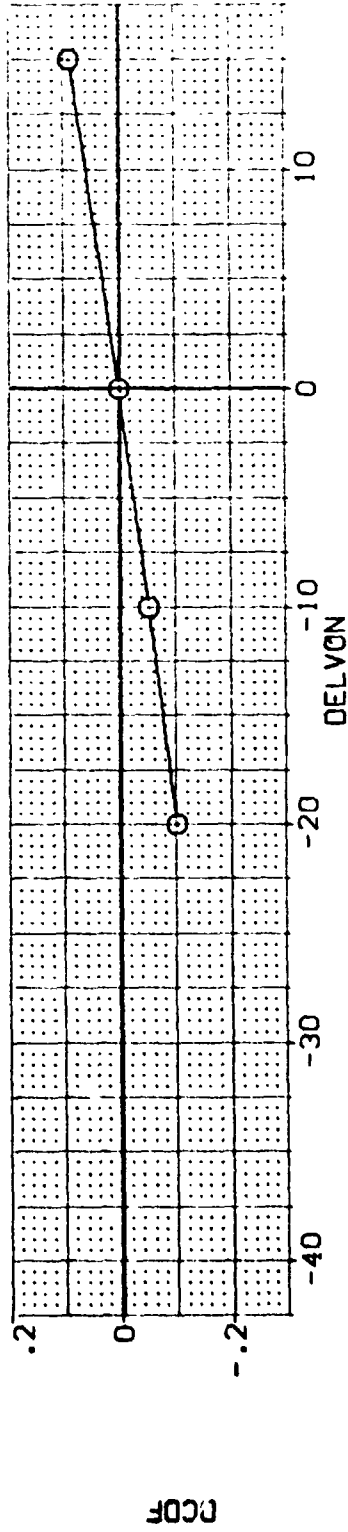
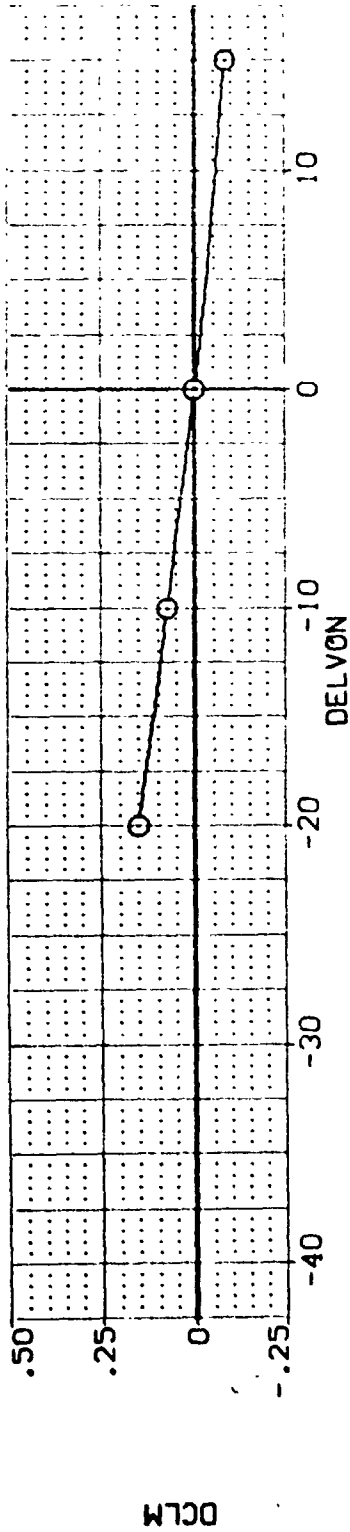


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285



0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DATASET	DEL/VN	SREF	REFERENCE INFORMATION
○	30.000	.200	.000	.000	.000	BETA -12.000 AILRON .000 SPDRK .285	DEL/VN -20.000 .000	1DZ076 1DZ074	-10.000 15.000	LREF 37.9359 XMRP 0.000 ZMRP 15.1875 SCALE .0405	SQ.FT. 4.4119 INCHES 19.2299 INCHES 37.9359 INCHES 43.5974 INCHES 0.000 INCHES 15.1875 SCALE .0405

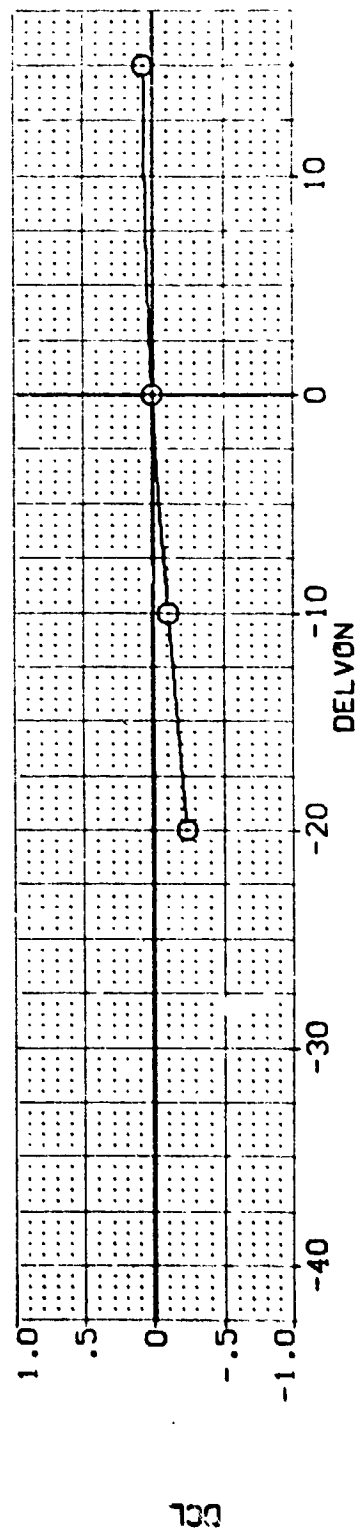
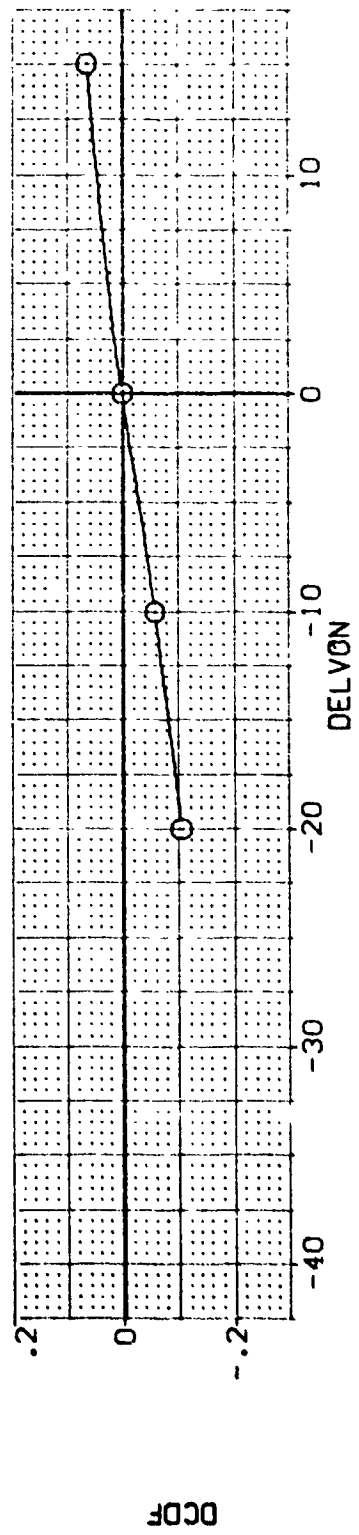
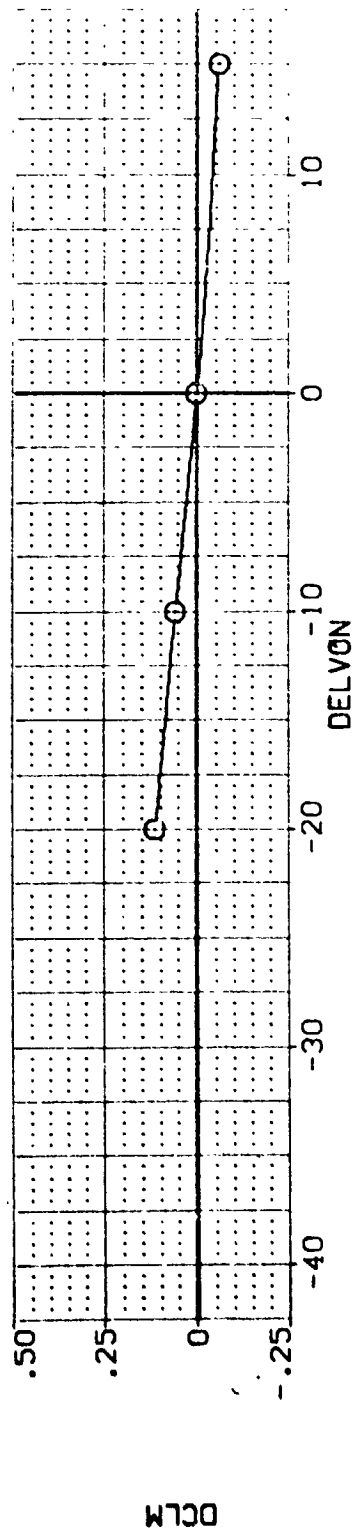


FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
O	.000		.700 BETA	.000	1DZ076	-20.000	4.4119	SQ.FT.
		BOFLAP	-12.000 AILRON	.000	1DZ073	.000	19.2299	INCHES
		RUDDER	.000 SPOBRK	.000			37.9359	INCHES
		H/BW	.285				43.5974	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

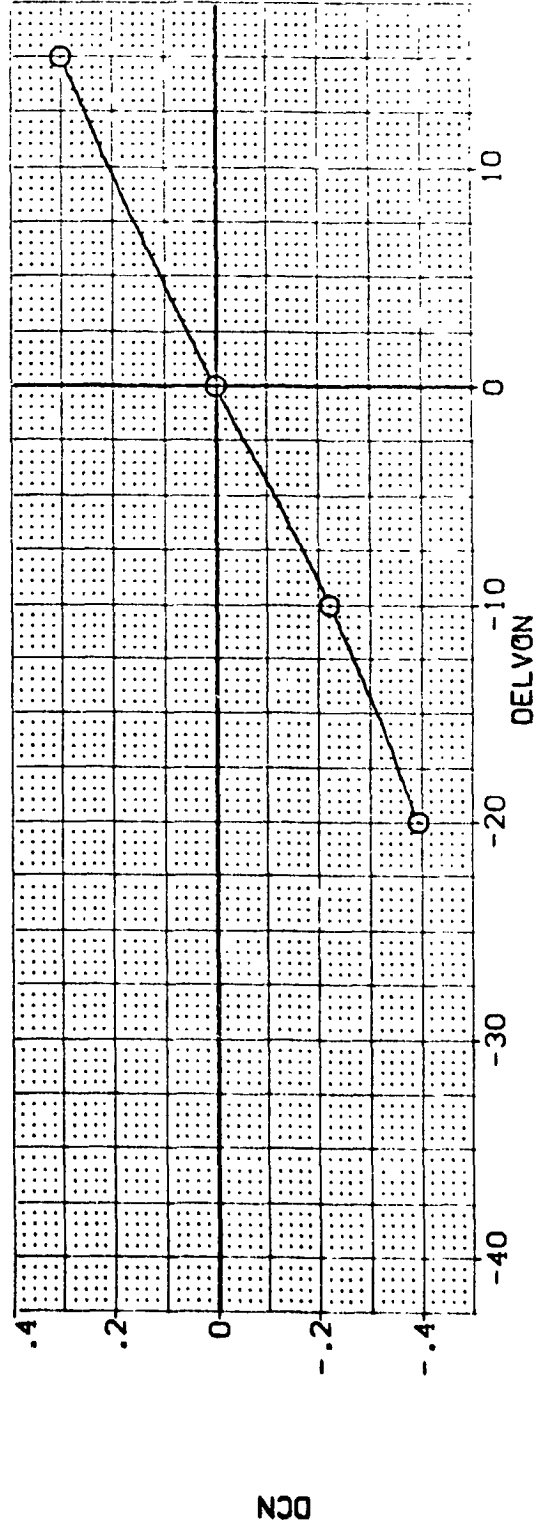
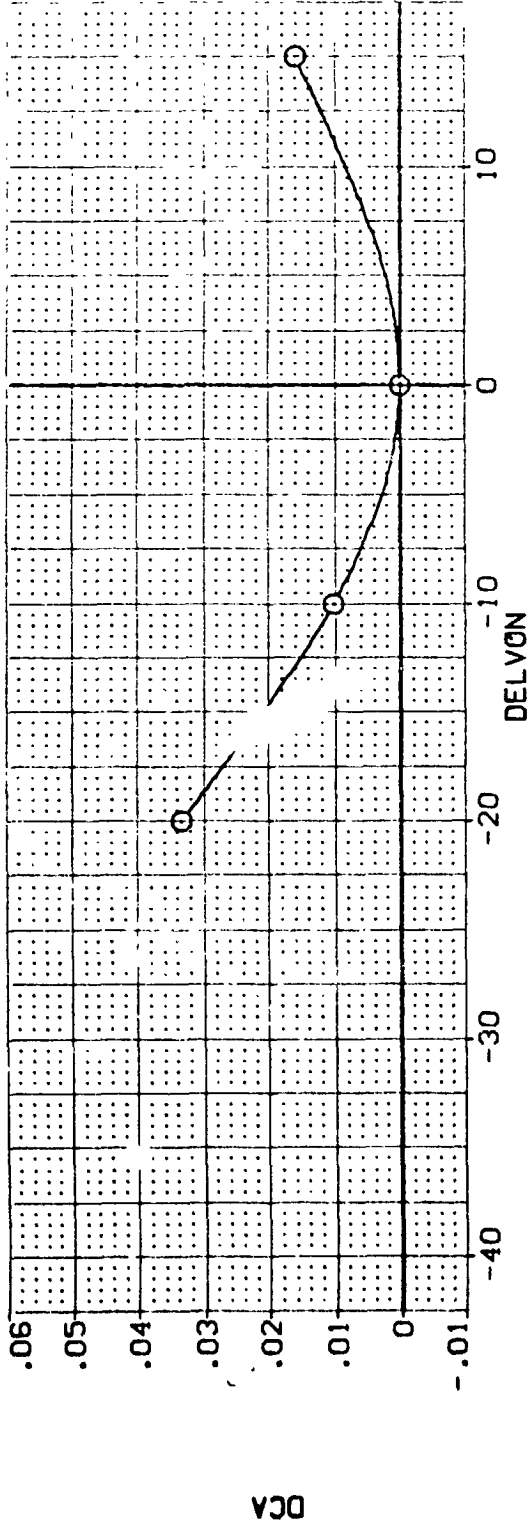
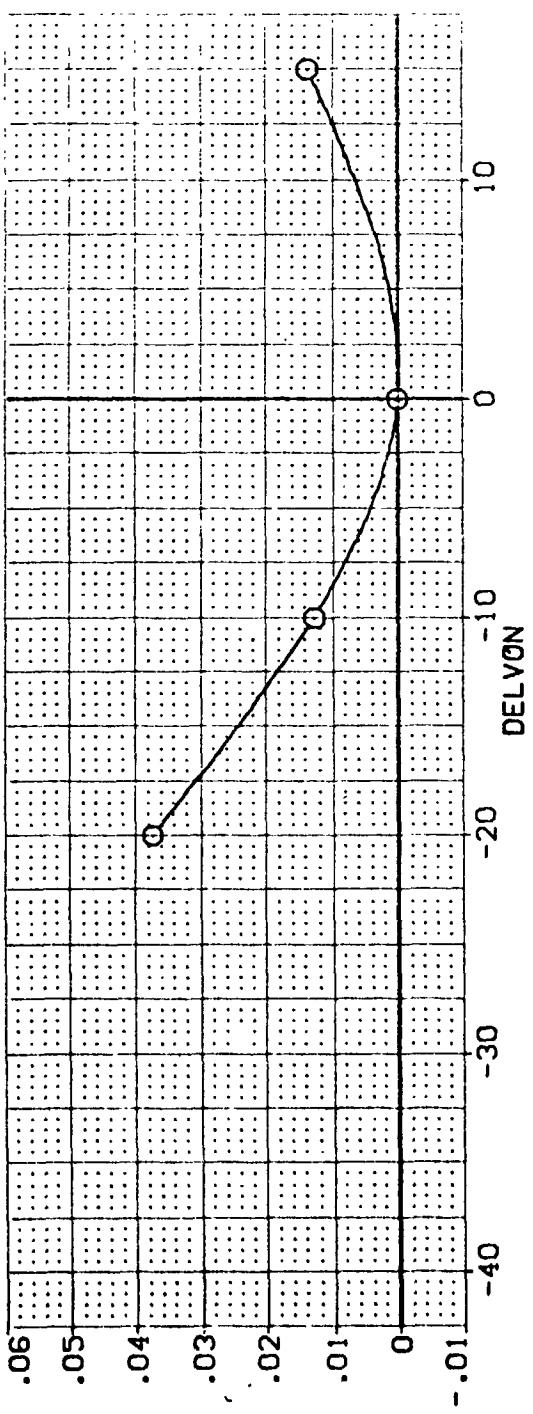


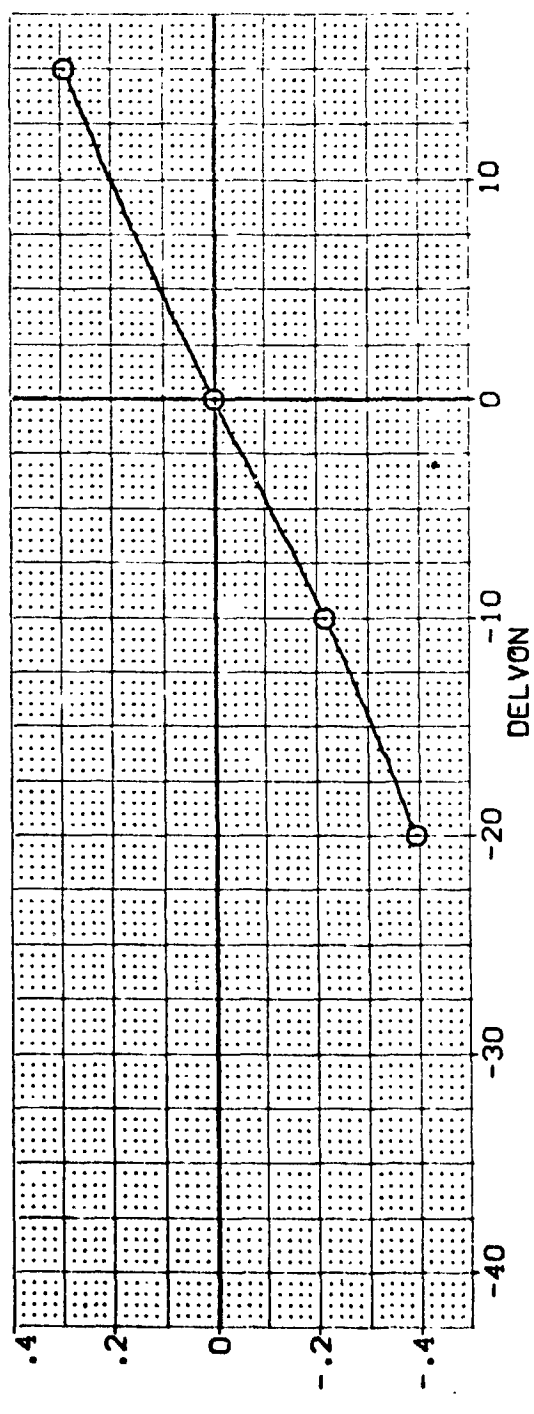
FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	5.000	BOFLAP	.200	BETA	.000	DATASET	SREF	4.4119	SQ.FT.	
		RUDDER	-12.000	AILRON	.000	1DZ076	LREF	19.2289	INCHES	
		H/BW	.000	SPOBRK	.000	1DZ074	BREF	37.9359	INCHES	
			.285				XMRP	43.5974	INCHES	
							YMRP	15.1875	INCHES	
							ZMRP	15.1875	INCHES	
							SCALE	.0405	SCALE	



DCA



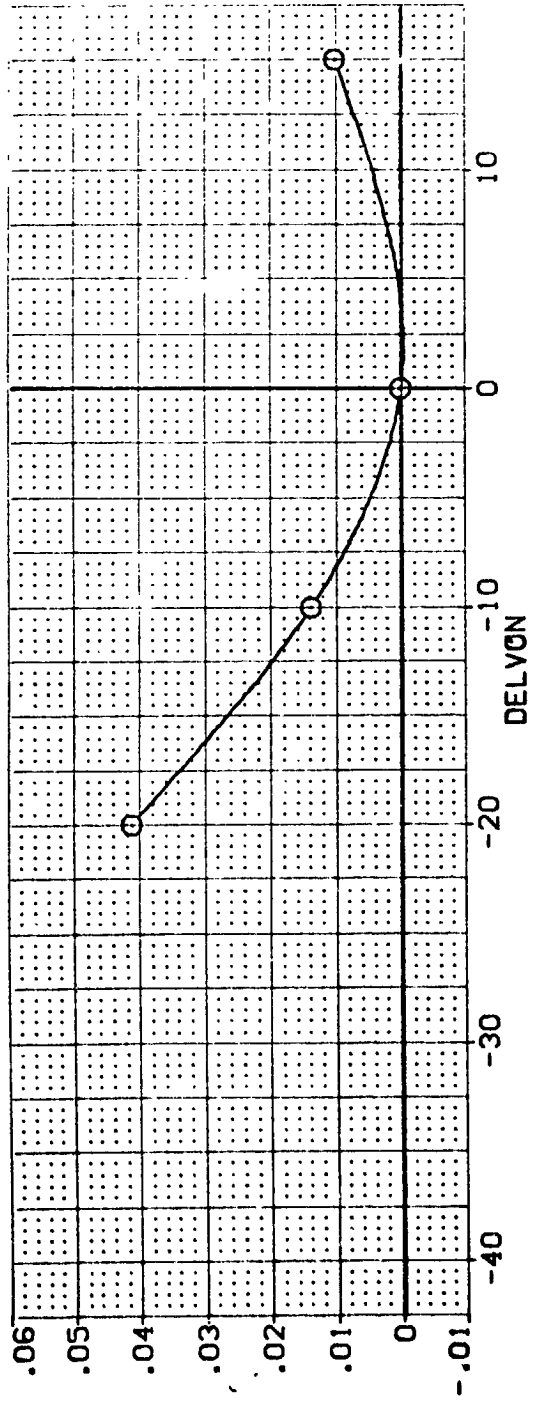
DCN

FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

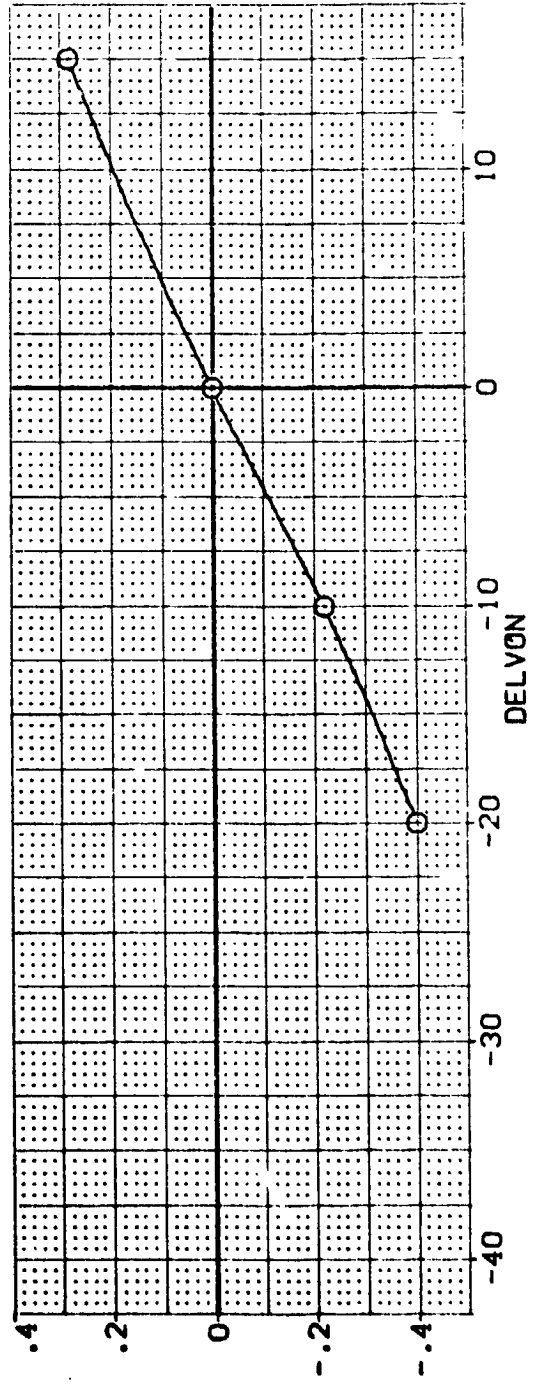
0A62B B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL ○

ALPHA	10.000	MACH	.200	BETA	.000	DATASET	DELVON	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION	
SOFLAP	-12.000	A1LRON	.000	IDZ076	.000	IDZ075	-10.000	DELVON	IDZ074	-10.000	LREF	4.4119	SO.FT.
RUDDER	.000	SPDRYK	.000	IDZ073	.000	IDZ074	-20.000	DELVON	IDZ074	-15.000	BREF	19.2299	INCHES
H/BW	.285						.000	DELVON			XMRP	37.9359	INCHES
							.000	DELVON			YMRP	43.5974	INCHES
							.000	DELVON			ZMRP	15.0000	INCHES
								DELVON			SCALE	15.1875	INCHES
								DELVON			SCALE	.0405	SCALE



DCA



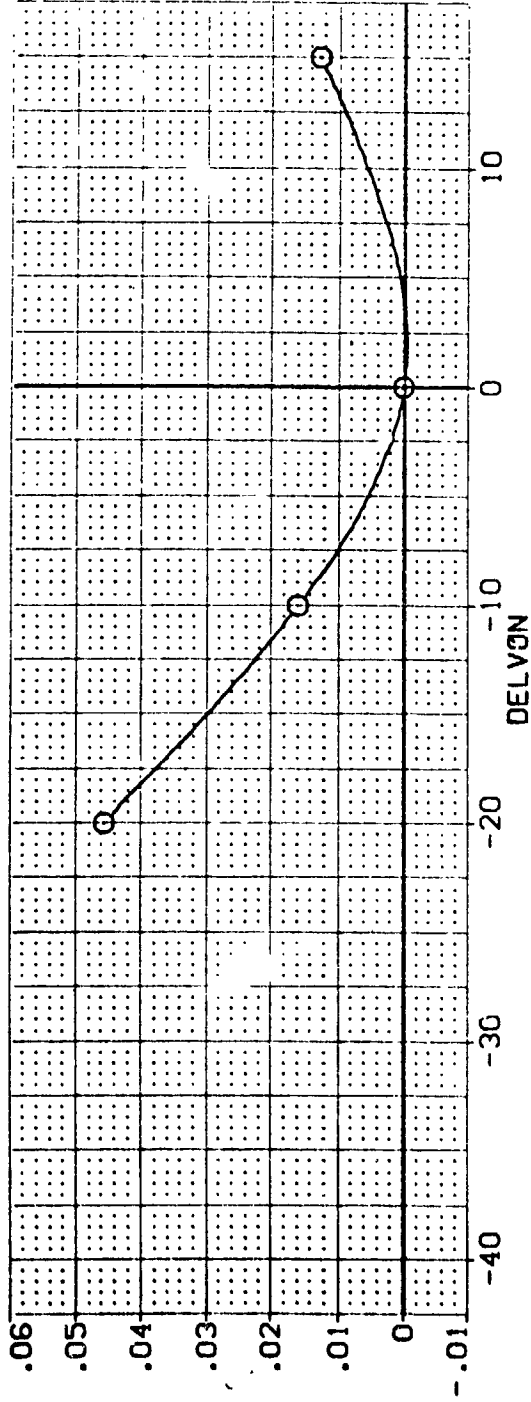
DCN

FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

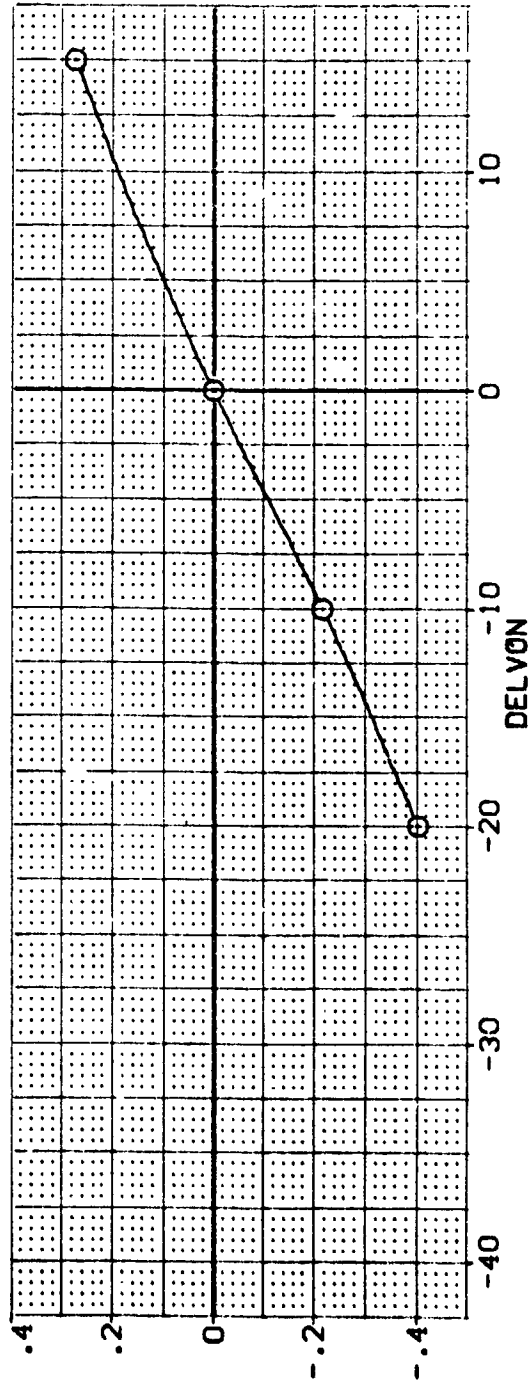


0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELTON	DATASET	DELTON	SREF	REFERENCE INFORMATION
○	15.000	.200	.200	BETA		.000	DELTON	-20.000	IDZ076	-10.000	4.4119	SO.FT.
		-12.000	AIRION			.000	DELTON	.000	IDZ073	15.000	19.2299	INCHES
		.000	SPOBRK			.000					37.9359	INCHES
		.285									43.5974	INCHES
											.0000	INCHES
											15.1875	INCHES
											.0405	SCALE



DCA

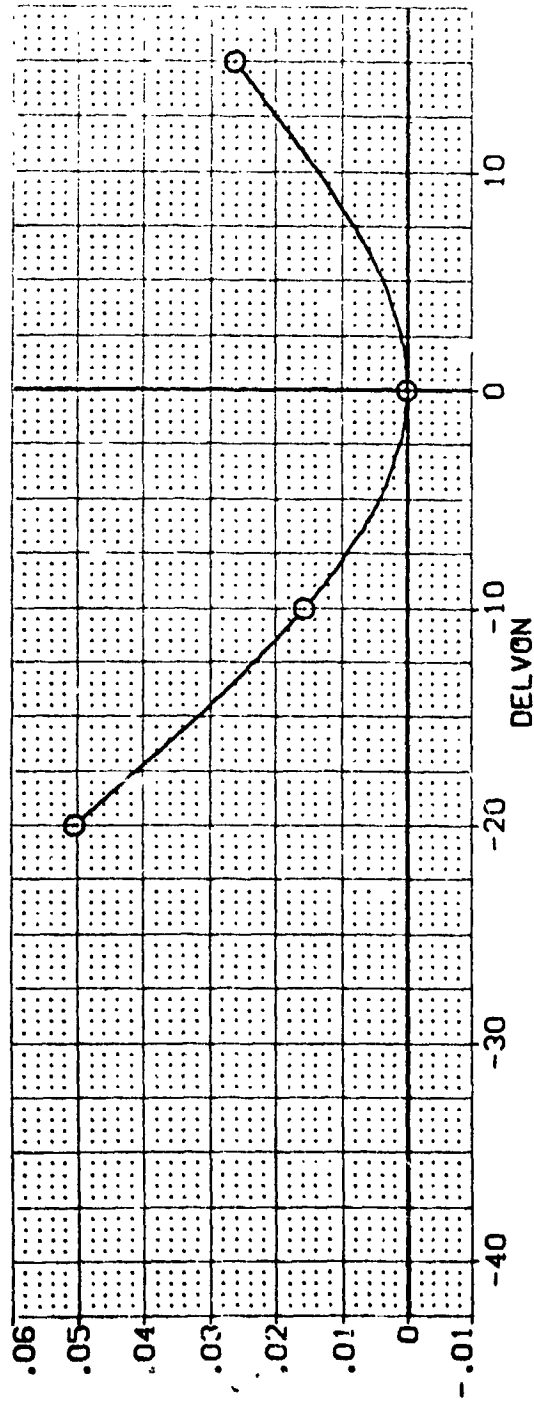


DCN

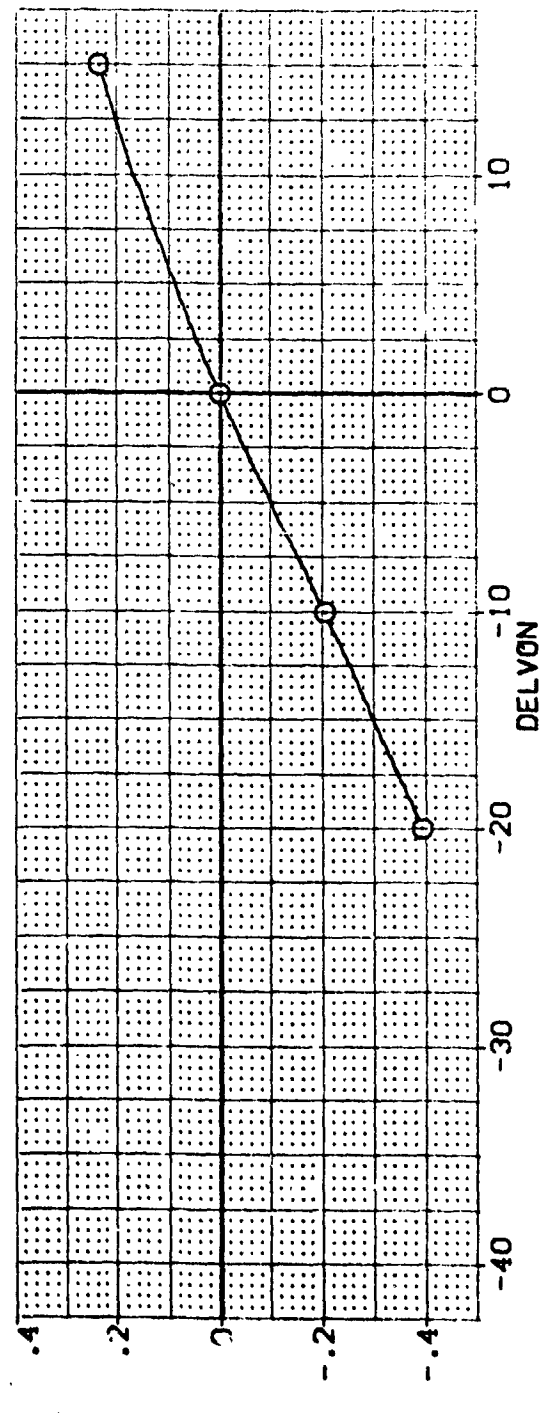
FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODDED ENGINES, H/BW = 0.285

0A628 B26C9G15M7F8J43W116E28V8R5X10 (1DZ076)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	.000	DATASET	.000	DELTVN	-20.000	.000	DATASET	1DZ076	1DZ073	DATASET	1DZ075	1DZ074	DELTVN	-10.000	5.000	SREF	LREF	BREF	XTRP	YTRP	ZTRP	SCALE	REFERENCE INFORMATION						
O	20.000					.200	BETA															4.4119	19.2299	37.9359	43.5974	.0000	15.1875	.0405	SQ.FT.	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE



DCA



DCN

FIG 14 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.285



CA628 B26C9G15M7F8J43W116E28\8R5X10 (1DZ076)

SYMBOL		ALPHA		MACH		BOFLAP		RUDDER		H/BW		PARAMETRIC VALUES		DATA SOURCE		DATASET		DELVN		SREF		REFERENCE INFORMATION	
C		25.000		.700		-12.000		.000		.285		BETA		DELVN		IDZ076		-10.000		4.4119		SQ.FT.	
												A1LRON		-20.000		1DZ075		15.000		19.2288		INCHES	
												SPOBRK		.000		1DZ074		.000		37.9353		INCHES	
																				43.5974		INCHES	
																				.0000		INCHES	
																				15.1875		INCHES	
																				.0005		SCALE	

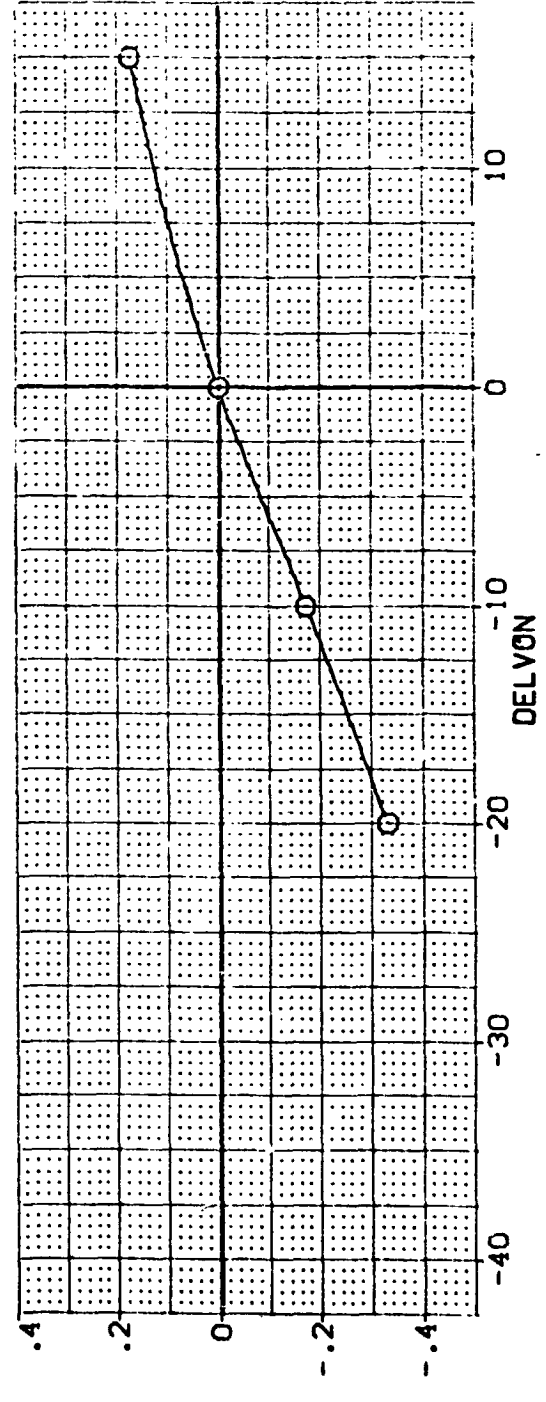
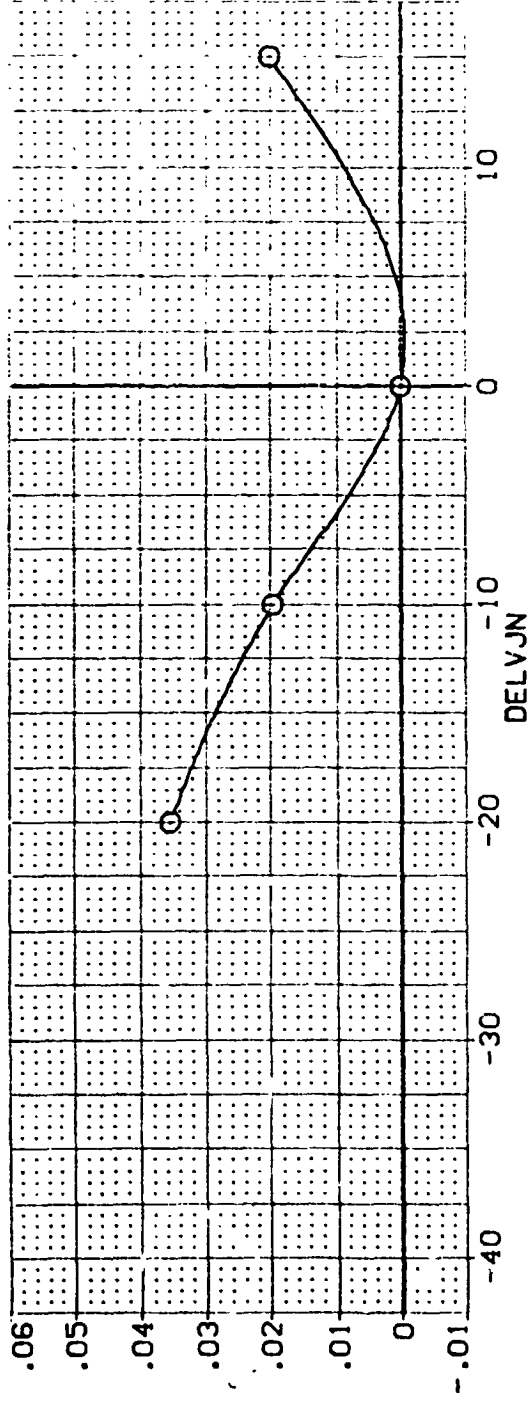
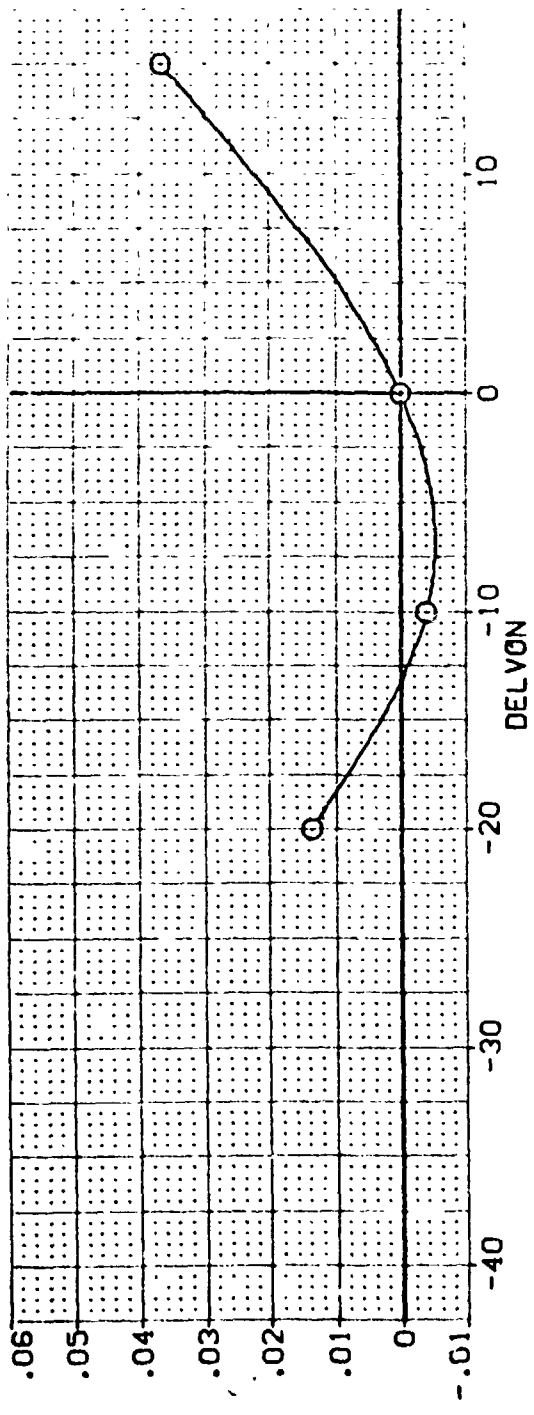


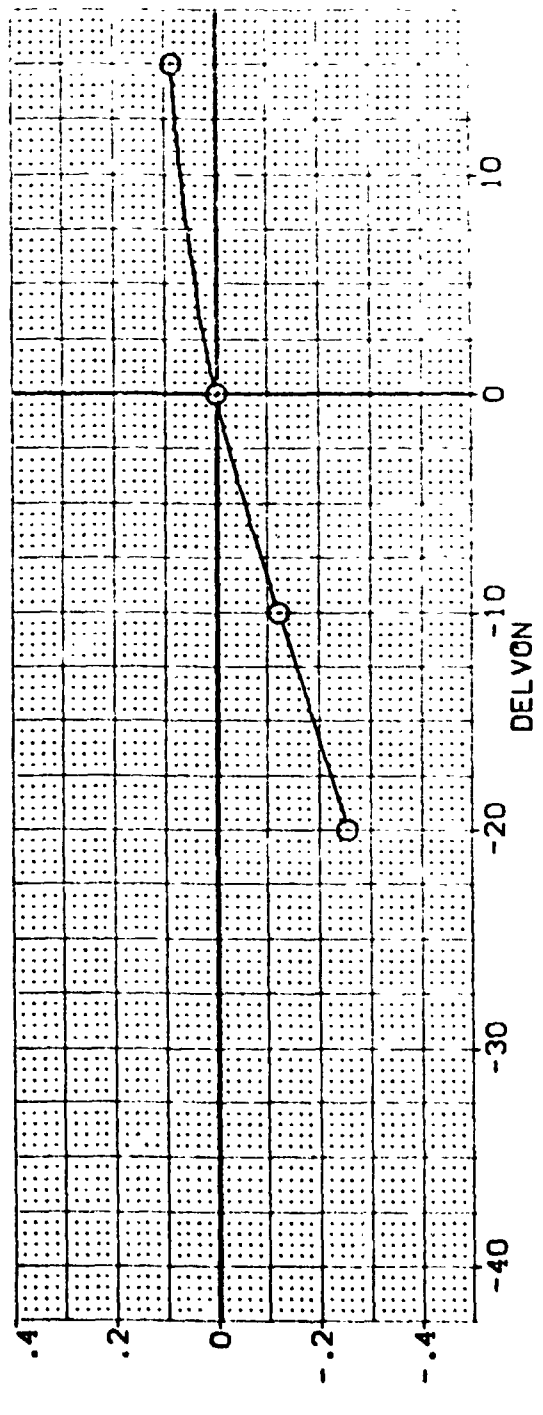
FIG 14 ELEVON EFFECTIVENESS, UNDERWING PODED ENGINES, H/BW = 0.285

0A628 B26C9G15M7F8J43W116E28V8R5X10 (10Z076)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
0	30.000	BOFLAP	.200	BETA	.000	DATASET	DATASET	DELVON	SREF	SO. FT.
		RUDDER	-12.000	A1LRON	-20.000	10Z076	10Z075	-10.000	LREF	INCHES
		H/BW	.000	SPOBRK	.000	10Z073		15.000	BREF	INCHES
			.285						XMRP	INCHES
									YMRP	INCHES
									ZMRP	INCHES
									SCALE	SCALE



DCA



DCN

FIG 14 ELEVON EFFECTIVENESS, UNDERWING POODED ENGINES, H/BW = 0.285



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	W/SV	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z063)	0A6Z8 B26C9G 547F8443V  6E28VBR5X10	.000	.035	.000	-12.000	SREF 4.4119 SQ.FT.
(80Z070)	0A6Z8 B26C9G 547F8443V  6E28VBR5X10	.000	.125	.000	-12.000	LREF 19.2293 INCHES
(80Z073)	0A6Z8 B26C9G 547F8443V  6E28VBR5X10	.000	.265	.000	-12.000	BREF 37.9353 INCHES
(80Z309)	0A6Z8 B26C9G 547F8443V  6E28VBR5X10	.000		.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

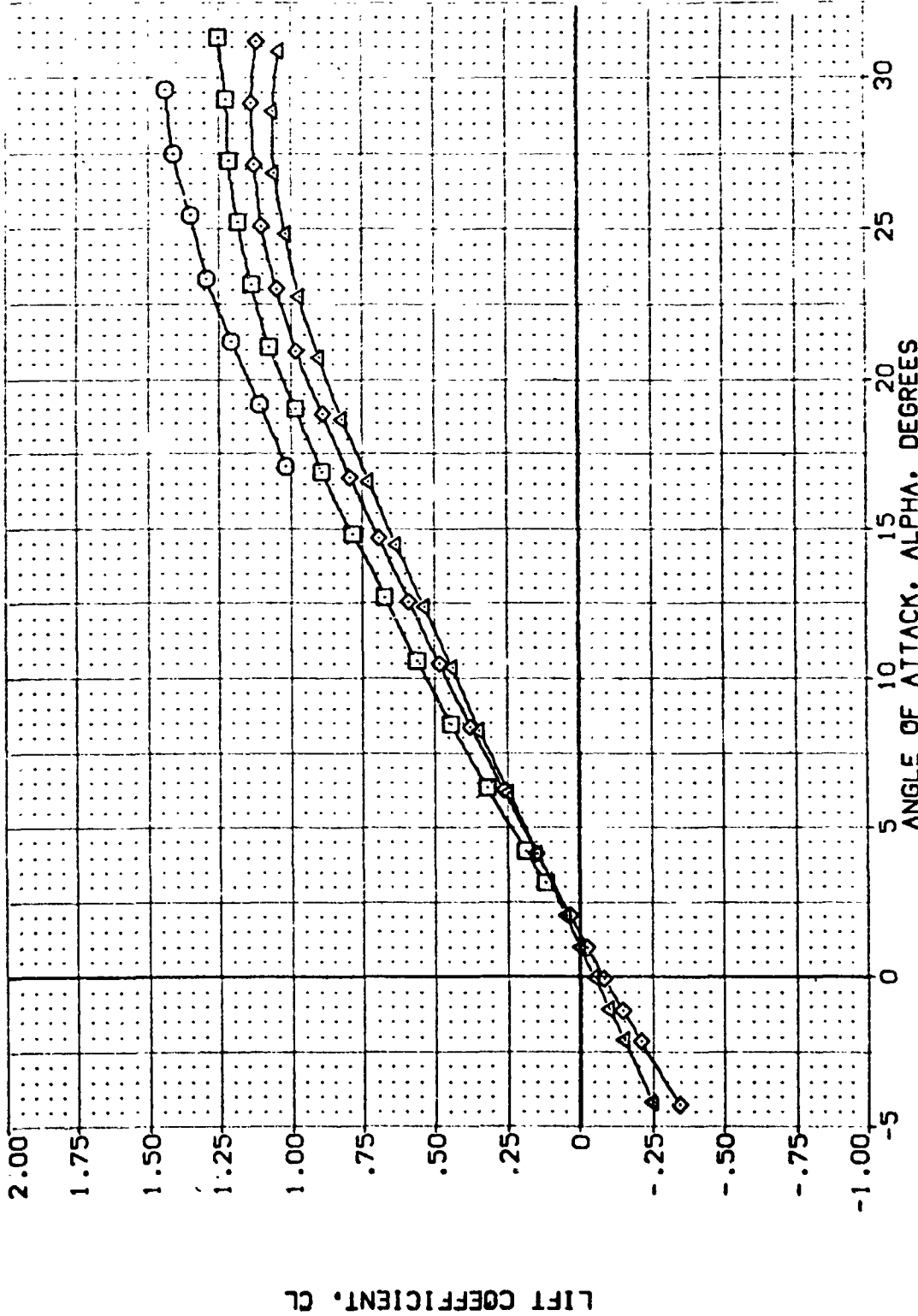


FIG 15 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802063) CAS28 B26C9G|SM7F|BJ43V|1E6Z8V8K5X10  
 (802070) CAS28 B26C9G|SM7F|BJ43V|1E6Z8V8K5X10  
 (802073) CAS28 B26C9G|SM7F|BJ43V|1E6Z8V8K5X10  
 (802309) CAS28 B26C9G|SM7F|BJ43V|1E6Z8V8K5X10

ELEVON H/VBV SPOBRK BOFLAP  
 .000 .035 .000 -12.000  
 .000 .125 .000 -12.000  
 .000 .265 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2292 INCHES  
 BREF 37.5359 INCHES  
 XMRP 43.5374 INCHES  
 YMRP 15.1000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0400 SCALE

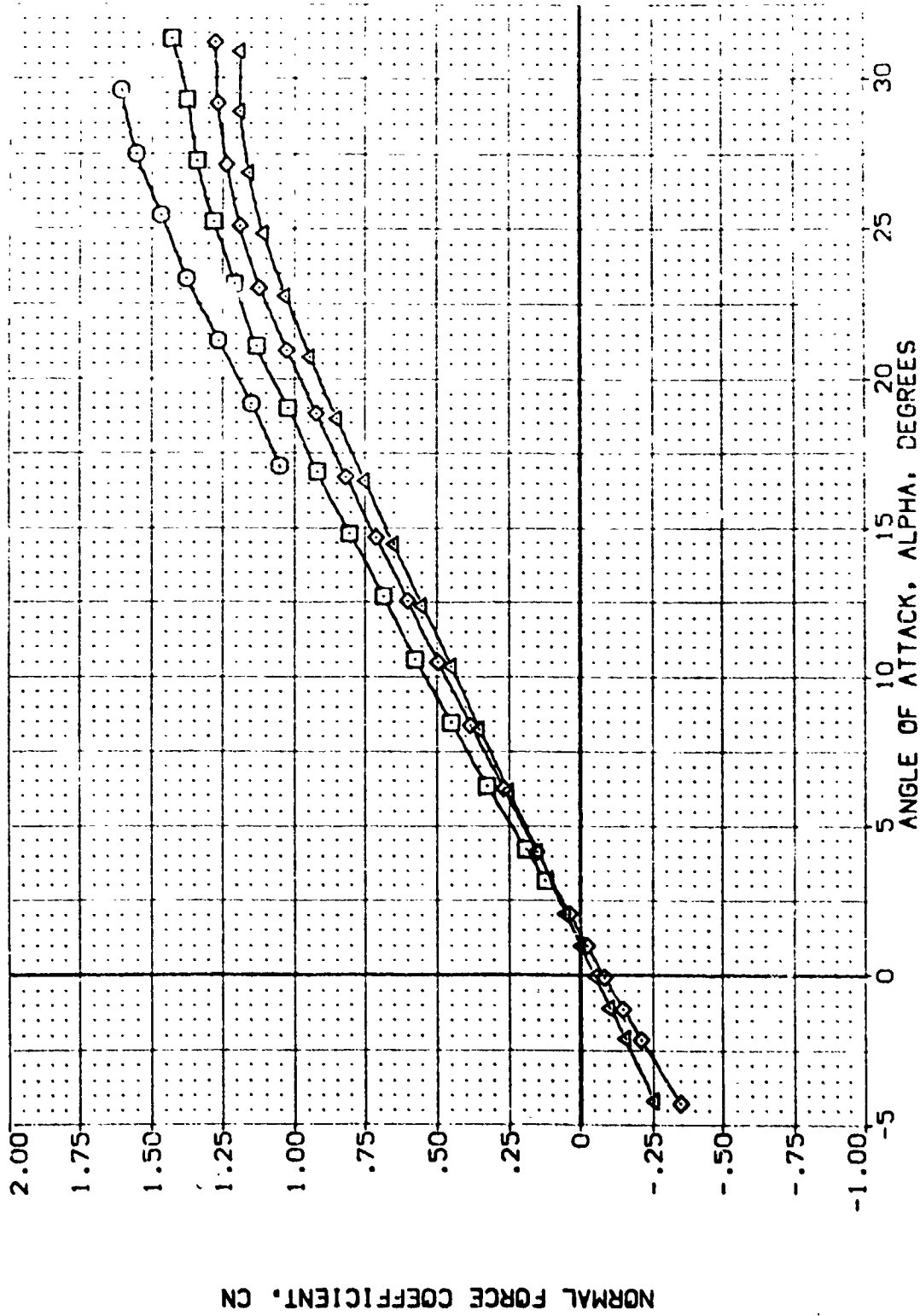


FIG 15 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = 0

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/SV	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802053)	0A628 826C9G 547F 8J43V  6E28V8RSX10	.000	.025	.000	-12.000	SREF 4.4119 SO.FT. INCHES
(802070)	0A628 826C9G 547F 8J43V  6E28V8RSX10	.000	.125	.000	-12.000	LREF 19.2299 INCHES
(802073)	0A628 826C9G 547F 8J43V  6E28V8RSX10	.000	.265	.000	-12.000	BREF 37.9359 INCHES
(802309)	0A628 826C9G 547F 8J43V  6E28V8RSX10	.000		.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

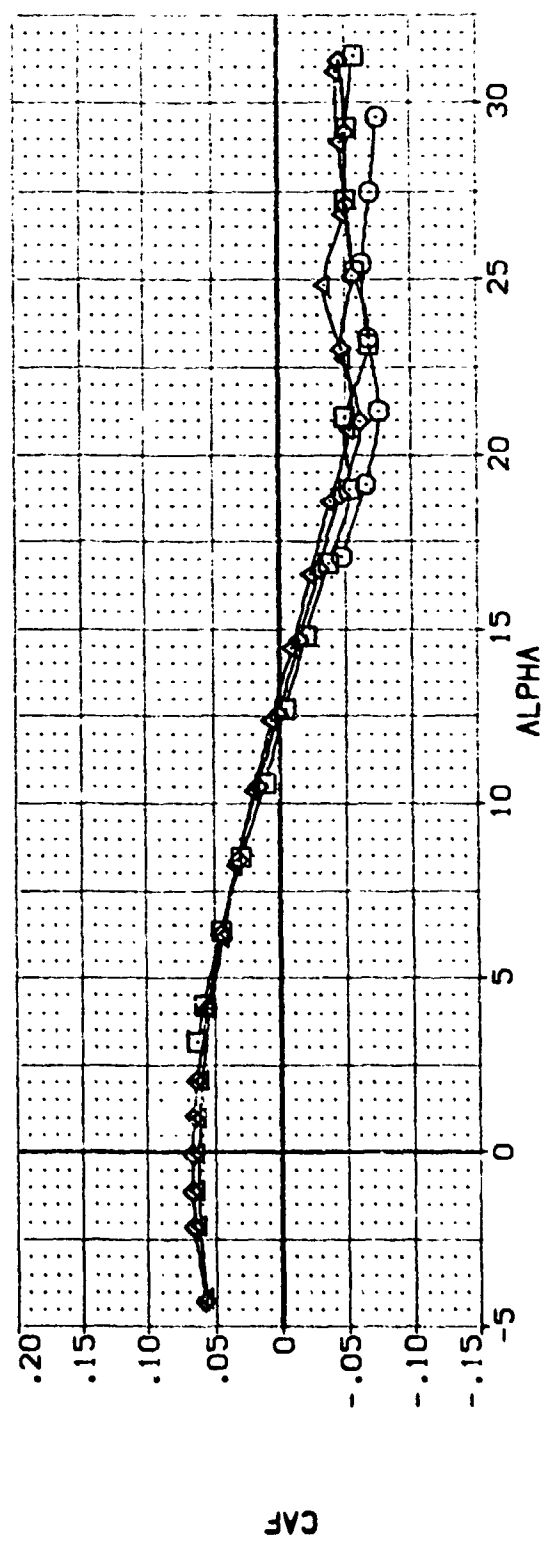
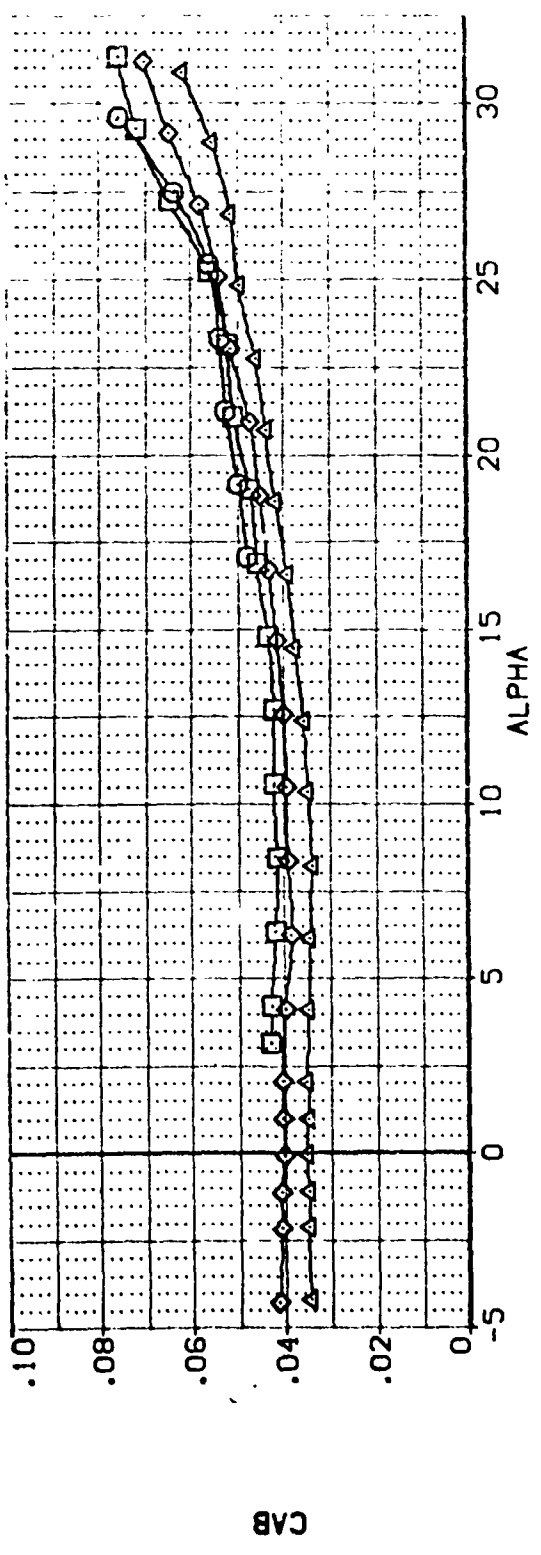
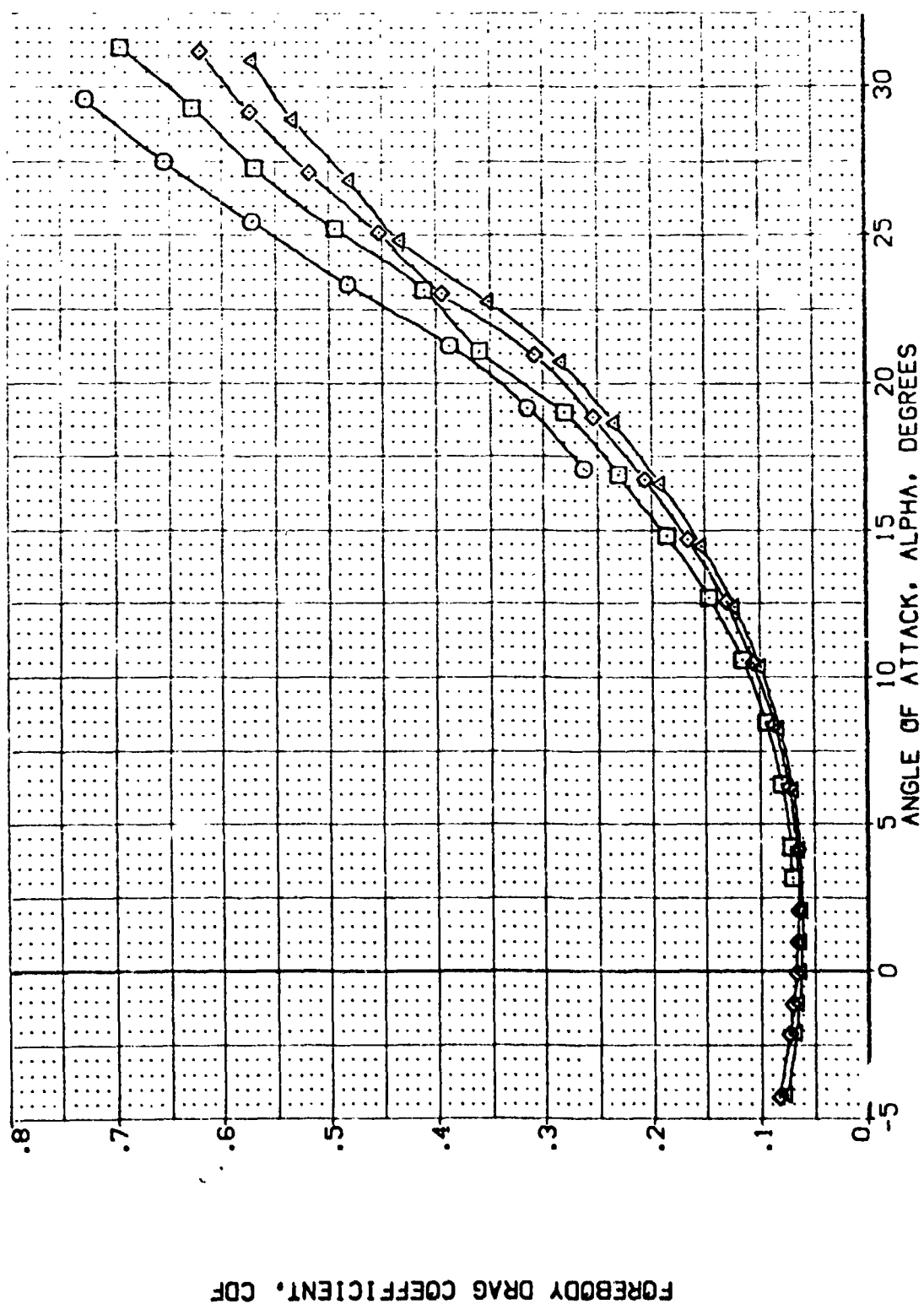


FIG 15 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 0  
 (A)MACH = .20

SREF 4.4119 SO. FT.  
 LREF 19.2293 INCHES  
 PREF 37.9359 INCHES  
 X-REF 43.5974 INCHES  
 Y-REF .0000 INCHES  
 Z-REF 15.1875 INCHES  
 SCALE .0405 SCALE

BOFLAP -12.000  
 SPOBRK .000  
 H/VB .035  
 ELEVON .000  
 BOFLAP -12.000  
 SPOBRK .000  
 H/VB .125  
 ELEVON .000  
 BOFLAP -12.000  
 SPOBRK .000  
 H/VB .285  
 ELEVON .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ082) (BDZ082) B26C9G|547F8J43V||GE28V85X10  
 (BDZ070) (BDZ070) B26C9G|547F8J43V||GE28V85X10  
 (BDZ073) (BDZ073) B26C9G|547F8J43V||GE28V85X10  
 (BDZ309) (BDZ309) B26C9G|547F8J43V||GE28V85X10



FOREBODY DRAG COEFFICIENT, CDF

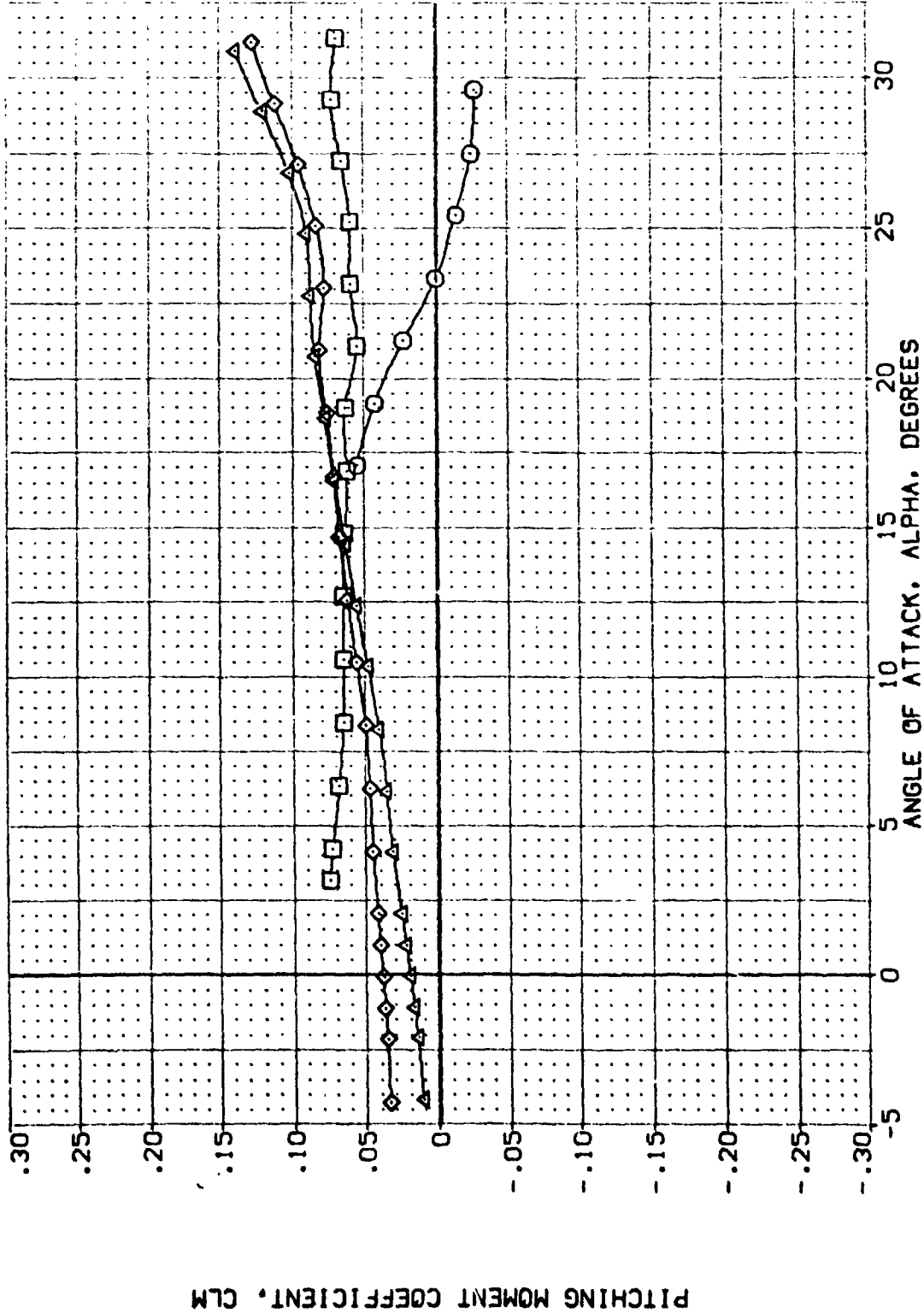
FIG 15 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 0  
 (A)MACH = .20 PAGE 250







DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/VB	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802063)	B26C9G SMTF8J43V  6E28V85X 0	.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(802070)	B26C9G SMTF8J43V  6E28V85X 0	.000	.125	.000	-12.000	LREF 19.2299 INCHES
(802073)	B26C9G SMTF8J43V  6E28V85X 0	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(802309)	B26C9G SMTF8J43V  6E28V85X 0	.000		.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 15 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = 0

(A)MACH = .20 PAGE 251

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(80Z063) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z070) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z073) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10  
 (80Z309) OAG28 B26C9G|5M7F8J43V||6E28V8RSX10

ELEVON H/WB SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .035 .000 -12.000 SREF 4.4119 SO.FT.  
 .000 .125 .000 -12.000 LREF 19.2299 INCHES  
 .000 .285 .000 -12.000 BREF 37.9359 INCHES  
 .000 .000 .000 -12.000 XMRP 43.5974 INCHES  
 .000 .000 .000 -12.000 YMRP 15.0000 INCHES  
 .000 .000 .000 -12.000 ZMRP 15.1375 INCHES  
 .000 .000 .000 -12.000 SCALE .0405 SCALE

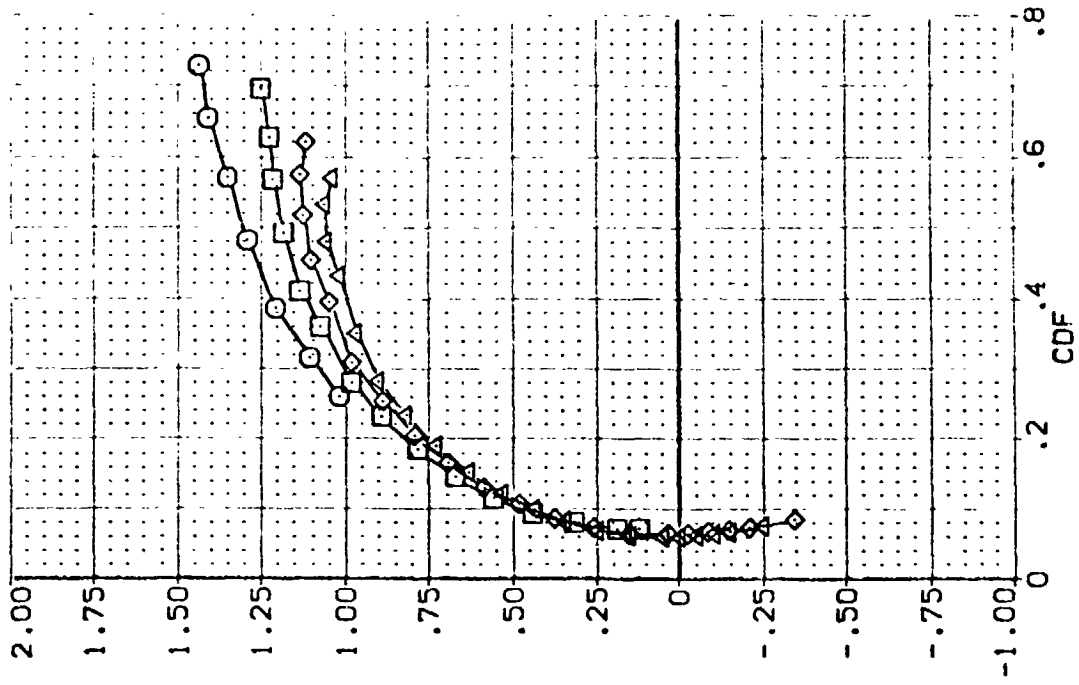
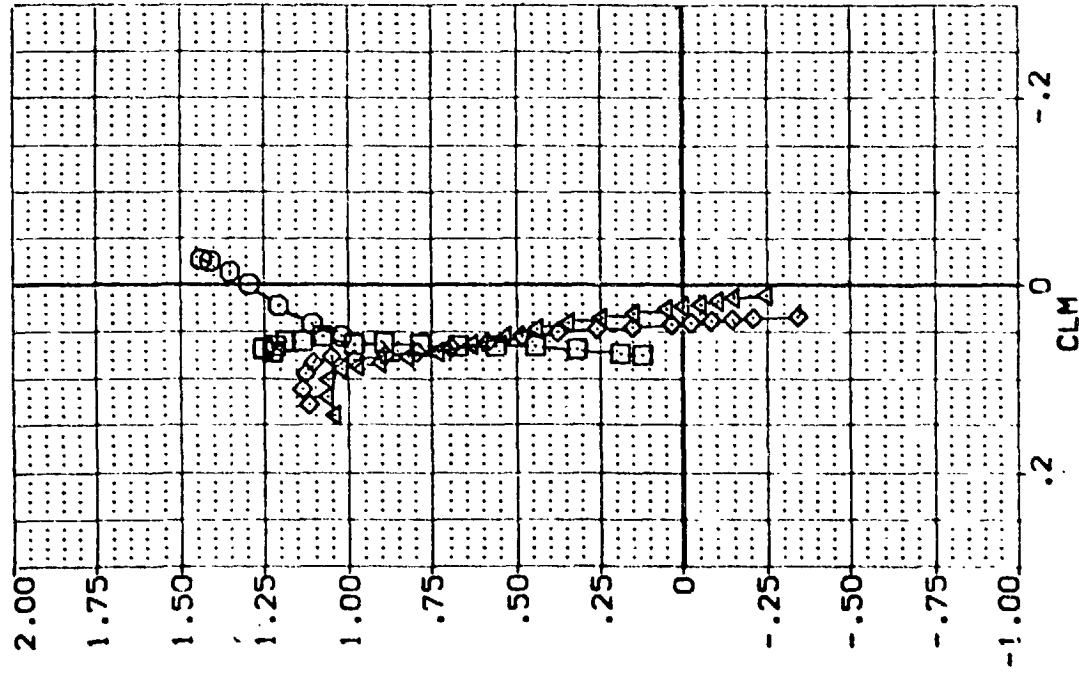


FIG 15 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 0

(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/VBW	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z063)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10	.000	.025	.000	-12.000	SREF 4.4119 50.17
(B0Z070)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10	.000	.125	.000	-12.000	LREF 19.2299 INCHES
(B0Z073)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
(B0Z209)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10	.000	.000	.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0403

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B0Z063)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10
(B0Z070)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10
(B0Z073)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10
(B0Z209)	0A6Z8 B26C9G SMTF 8J43V1   1E28V8K5X10

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

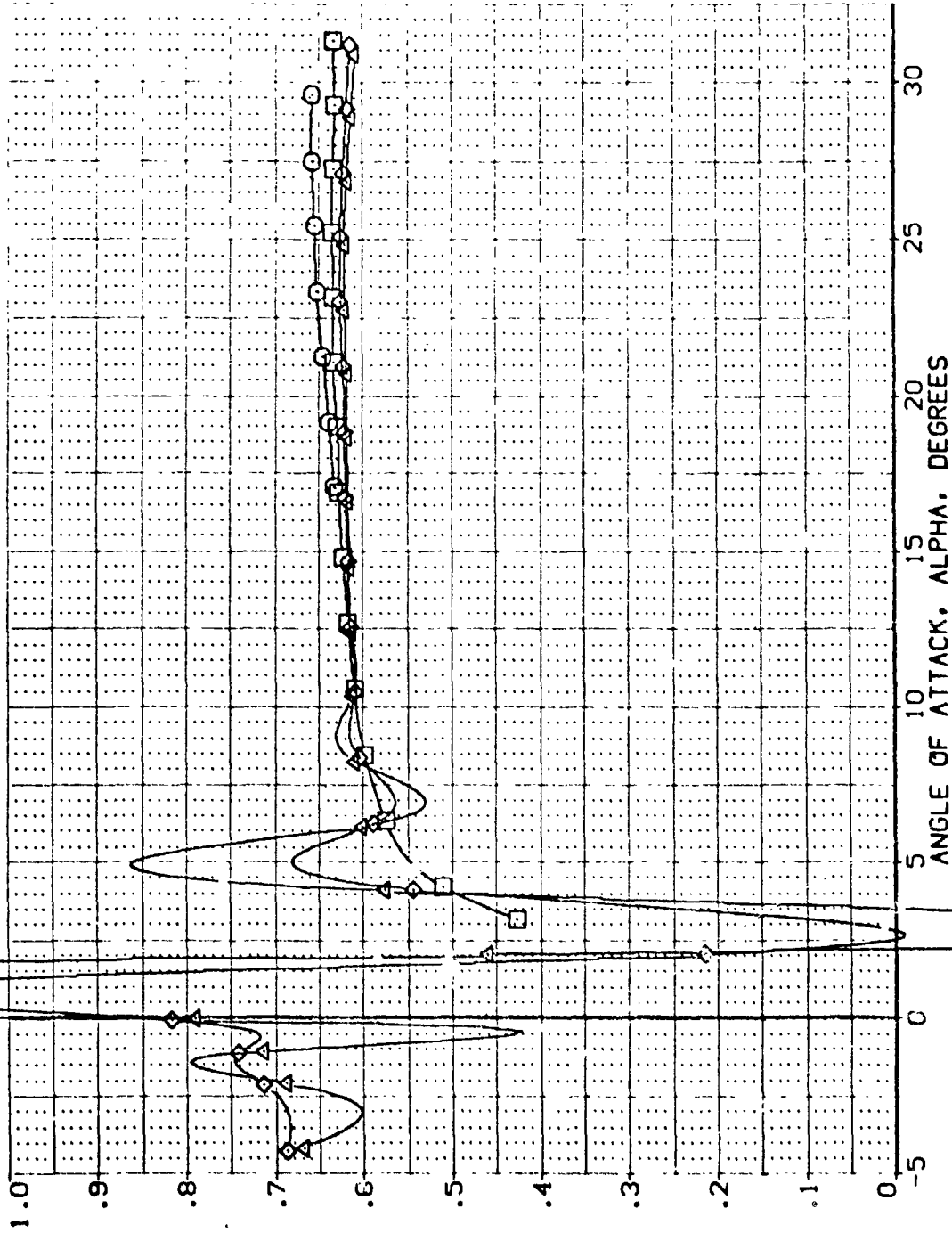


FIG 15 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = 0  
(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

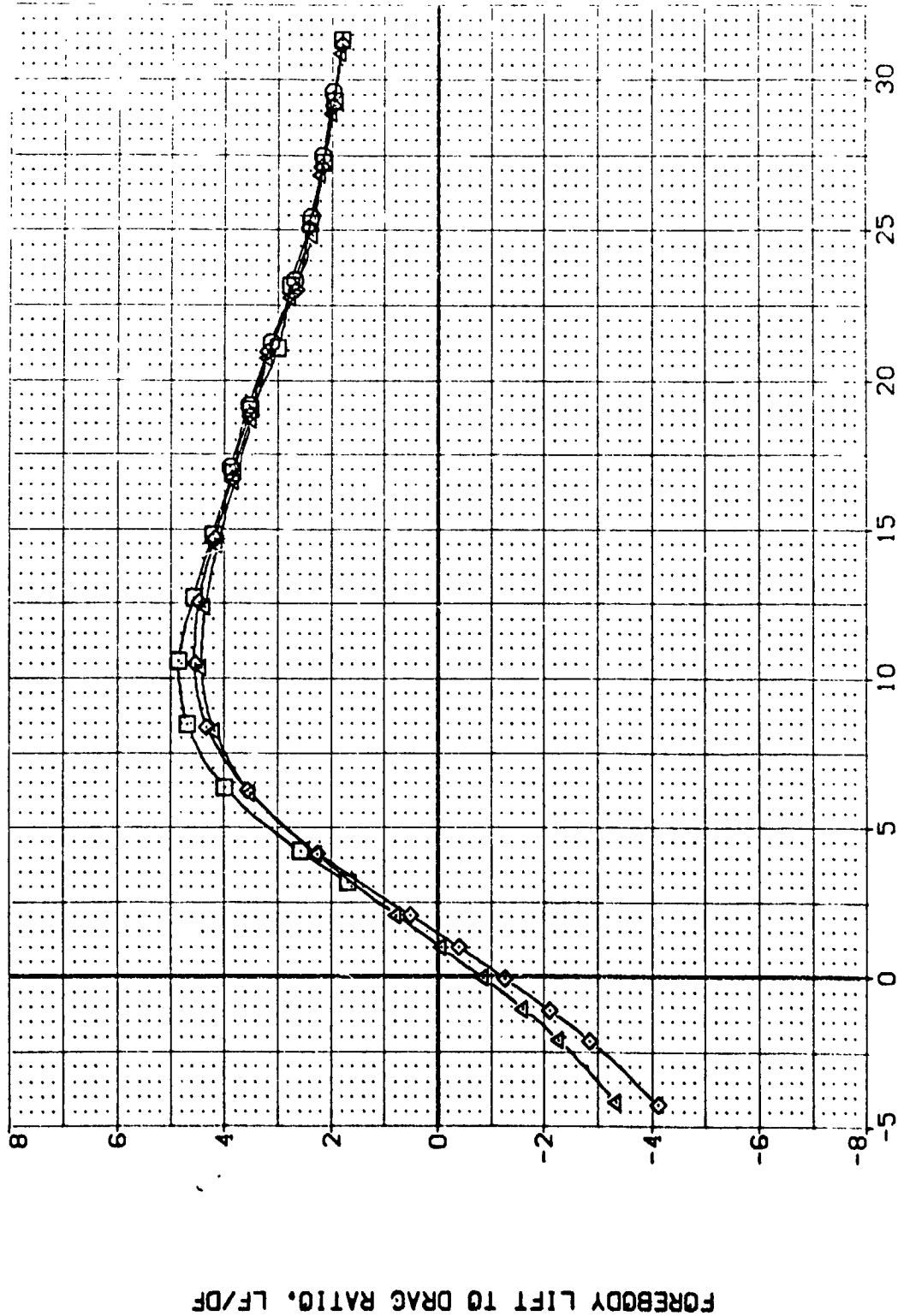
(B0Z063)	B26C53	547F843V	16E28V8R5X10
(B0Z070)	B26C50	547F843V	16E28V8R5X10
(B0Z073)	B26C56	547F843V	16E28V8R5X10
(B0Z309)	B26C56	547F843V	16E28V8R5X10

ELEVON H/BV SPOBRK BOFLAP

.000	.035	.000	-12.000
.000	.125	.000	-12.000
.000	.285	.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT.
LREF	19.2239	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 15 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = 0  
(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/VB	SPOBRK	BOFLAP	REFERENCE INFORMATION
(80Z054)	0A628 B26C36 5M7F8J43V  6E28V8R5X10	15.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(80Z059)	0A628 B26C36 5M7F8J43V  6E28V8R5X10	15.000	.125	.000	-12.000	LREF 19.2298 INCHES
(80Z074)	0A628 B26C36 5M7F8J43V  6E28V8R5X10	15.000	.285	.000	-12.000	BREF 37.9359 INCHES
(80Z311)	0A628 B26C36 5M7F8J43V  6E28V8R5X10	15.000		.000	-12.000	XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES

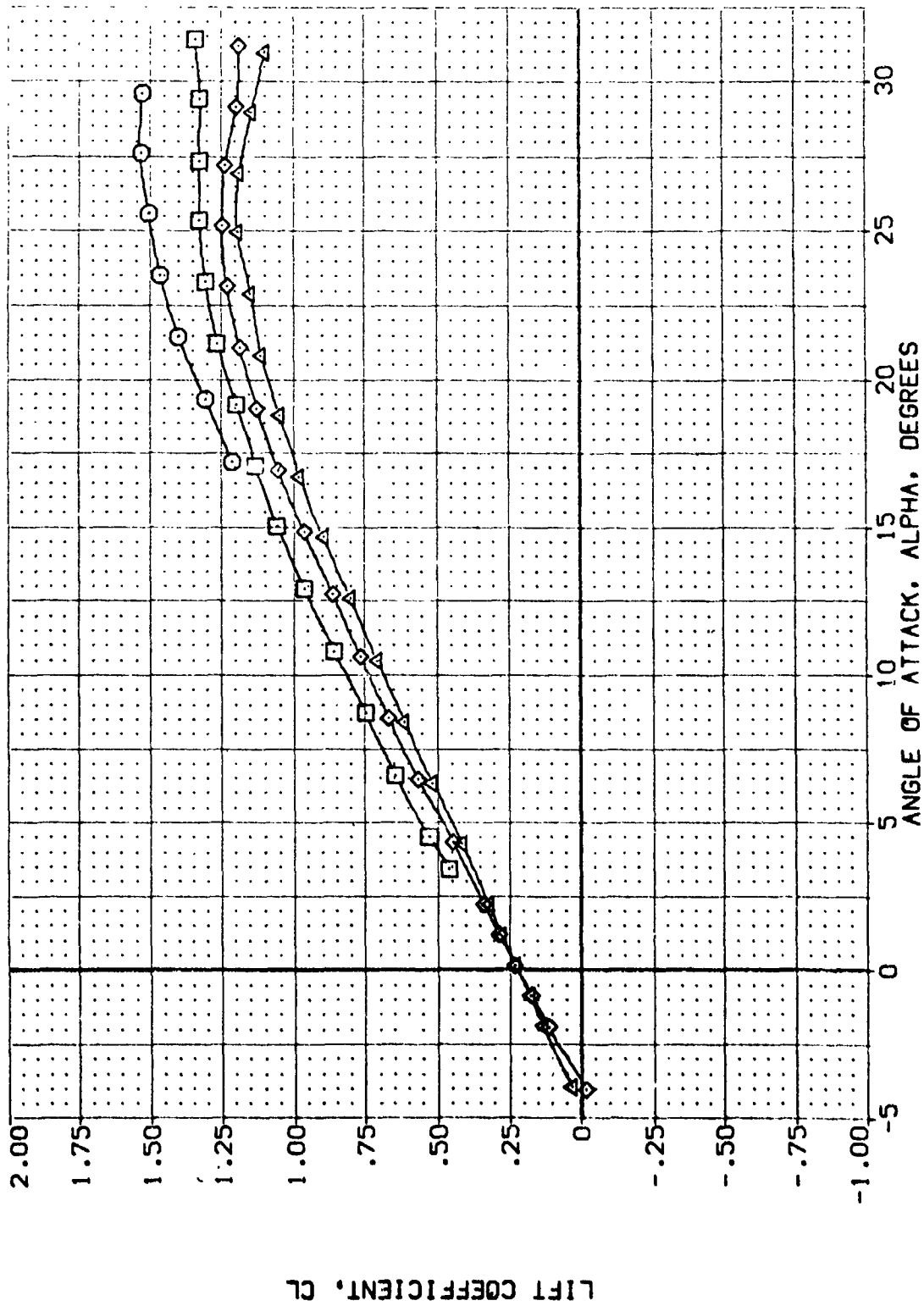


FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BV	SPOBRK	BOFLAP	REFERENCE INFORMATION
(BDZ054)	0A628 B26C9G1 5M7F8J43V116E28V8RSX10	15.000	.075	.000	-12.000	SREF 4.4119 50. FT
(BDZ059)	0A628 B26C9G1 5M7F8J43V116E28V8RSX10	15.000	.125	.000	-12.000	LREF 19.2299 INCHES
(BDZ074)	0A628 B26C9G1 5M7F8J43V116E28V8RSX10	15.000	.285	.000	-12.000	BREF 37.9359 INCHES
(BDZ311)	0A628 B26C9G1 5M7F8J43V116E28V8RSX10	15.000		.000		XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1975 INCHES
						SCALE .0405 SCALE

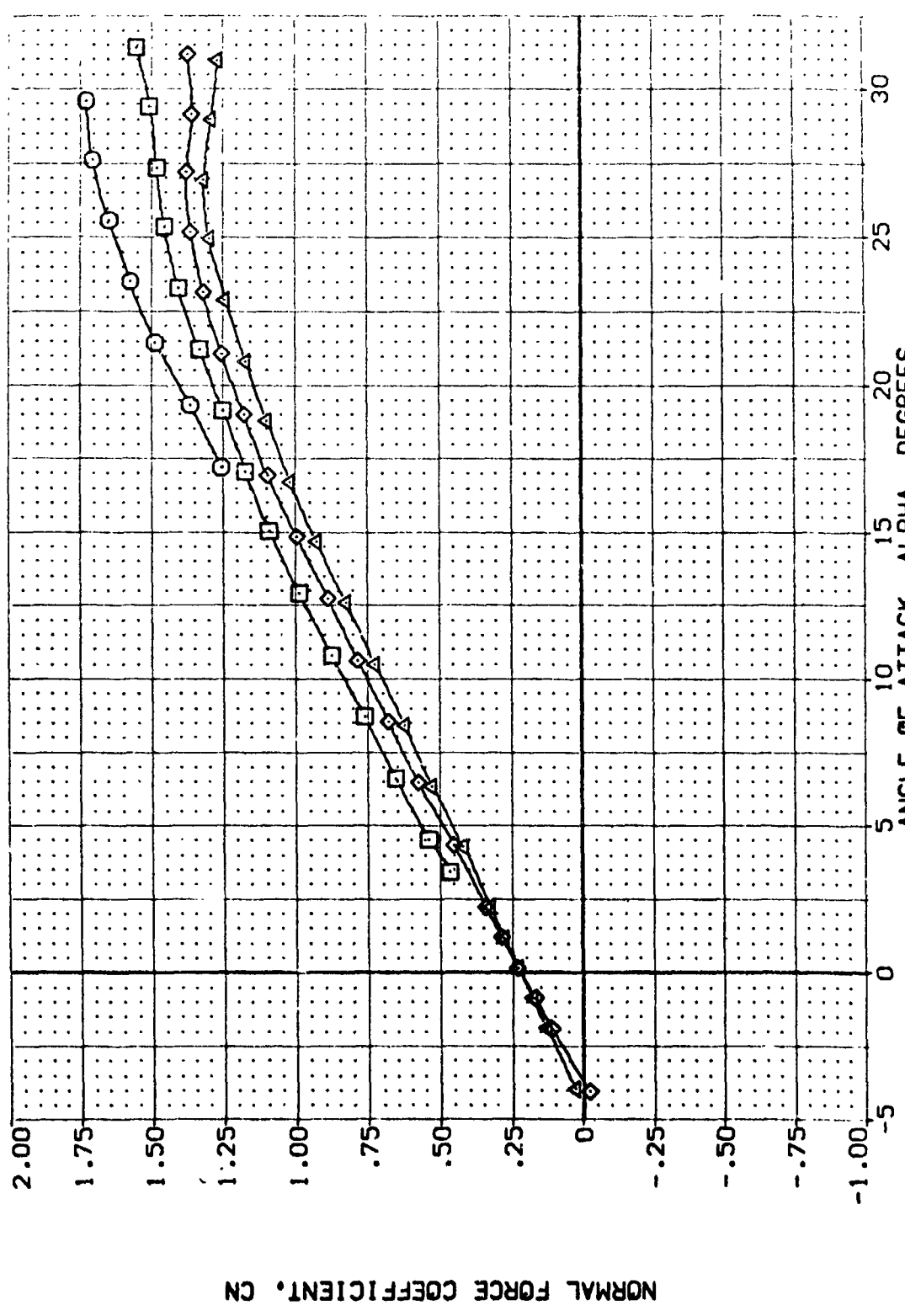


FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15  
 (A)MACH = .20 PAGE 256



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02064)	0A628 826C96 5N7F843V  6E26V8R5X 0
(B02069)	0A628 826C96 5N7F843V  6E26V8R5X 0
(B02074)	0A628 826C96 5N7F843V  6E26V8R5X 0
(B02311)	0A628 826C96 5N7F843V  6E26V8R5X 0

ELEVON	H/VBW	SPOBRK	BDF/LAP	REFERENCE INFORMATION
15.000	.035	.000	-12.000	SREF 4.4119 SO.FT. INCHES
15.000	.125	.000	-12.000	LREF 19.2299 INCHES
15.000	.285	.000	-12.000	BREF 37.9359 INCHES
		.000	-12.000	XMRP 43.5974 INCHES
				ZMRP .0000 INCHES
				SCALE 15.1875 INCHES
				SCALE .0405 INCHES

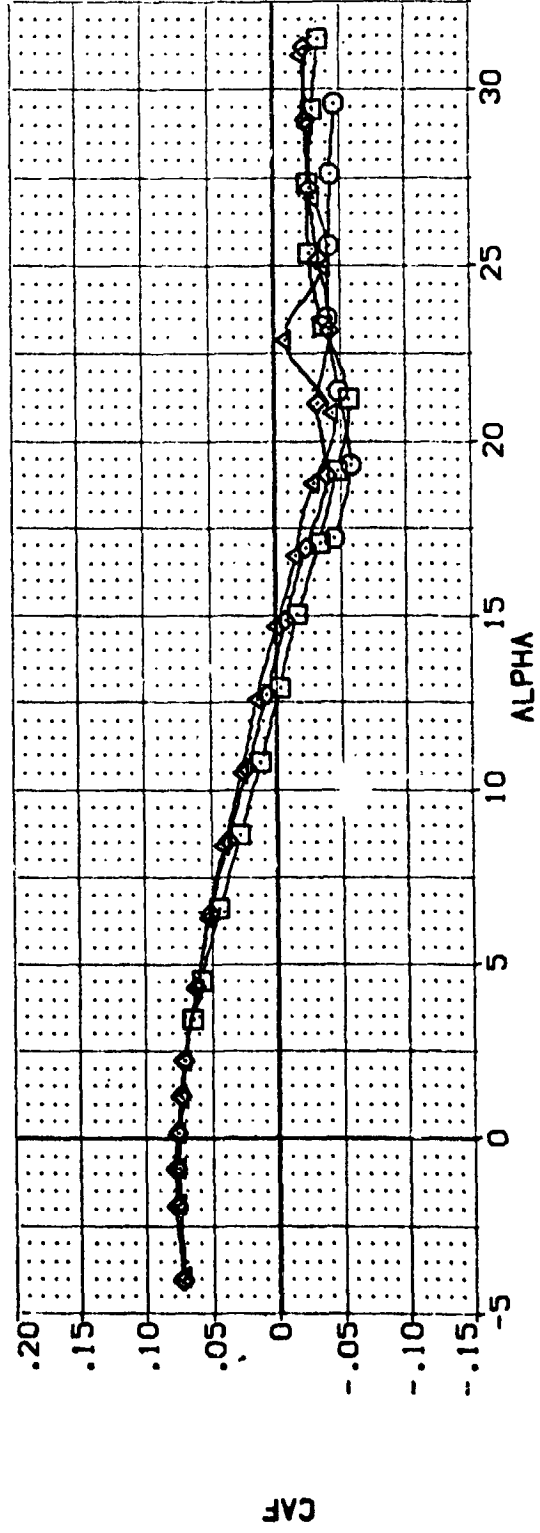
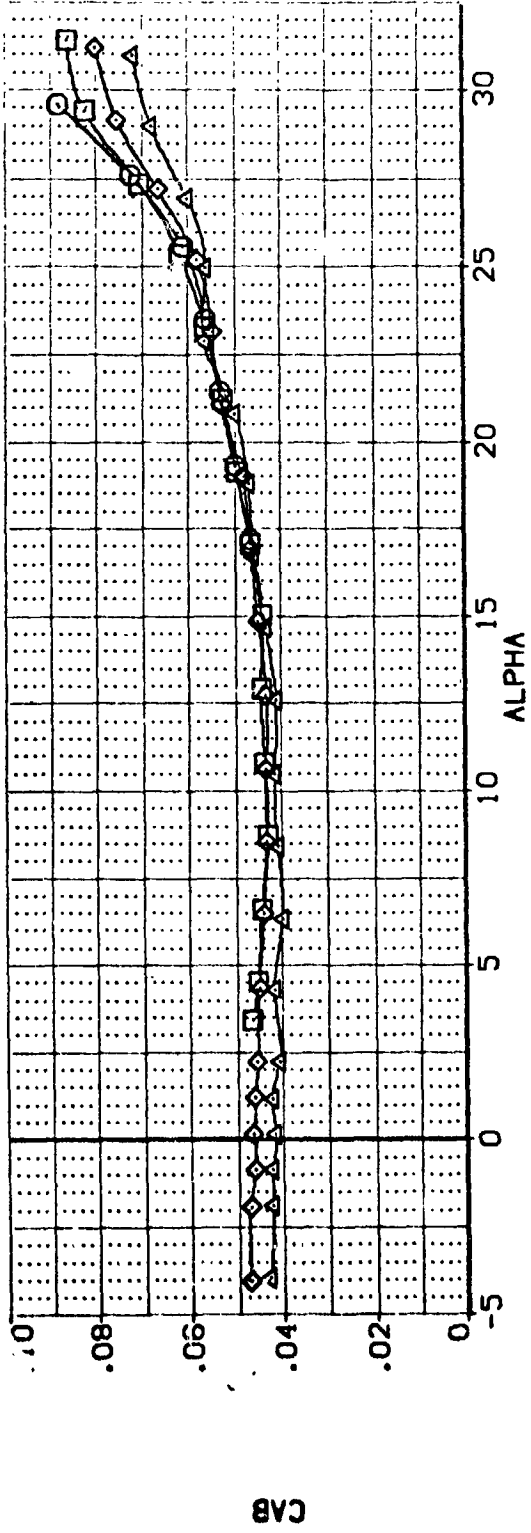


FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15  
 (A)MACH = .20

DATA SET SYMBOL: (B02064) (B02069) (B02074) (B02311)

CONFIGURATION DESCRIPTION: OAG28 B26C9G|SM7F 8J4 3V|1E28V8FSX10  
 OAG28 B26C9G|SM7F 8J4 3V|1E28V8FSX10  
 OAG28 B26C9G|SM7F 8J4 3V|1E28V8FSX10  
 OAG28 B26C9G|SM7F 8J4 3V|1E28V8FSX10

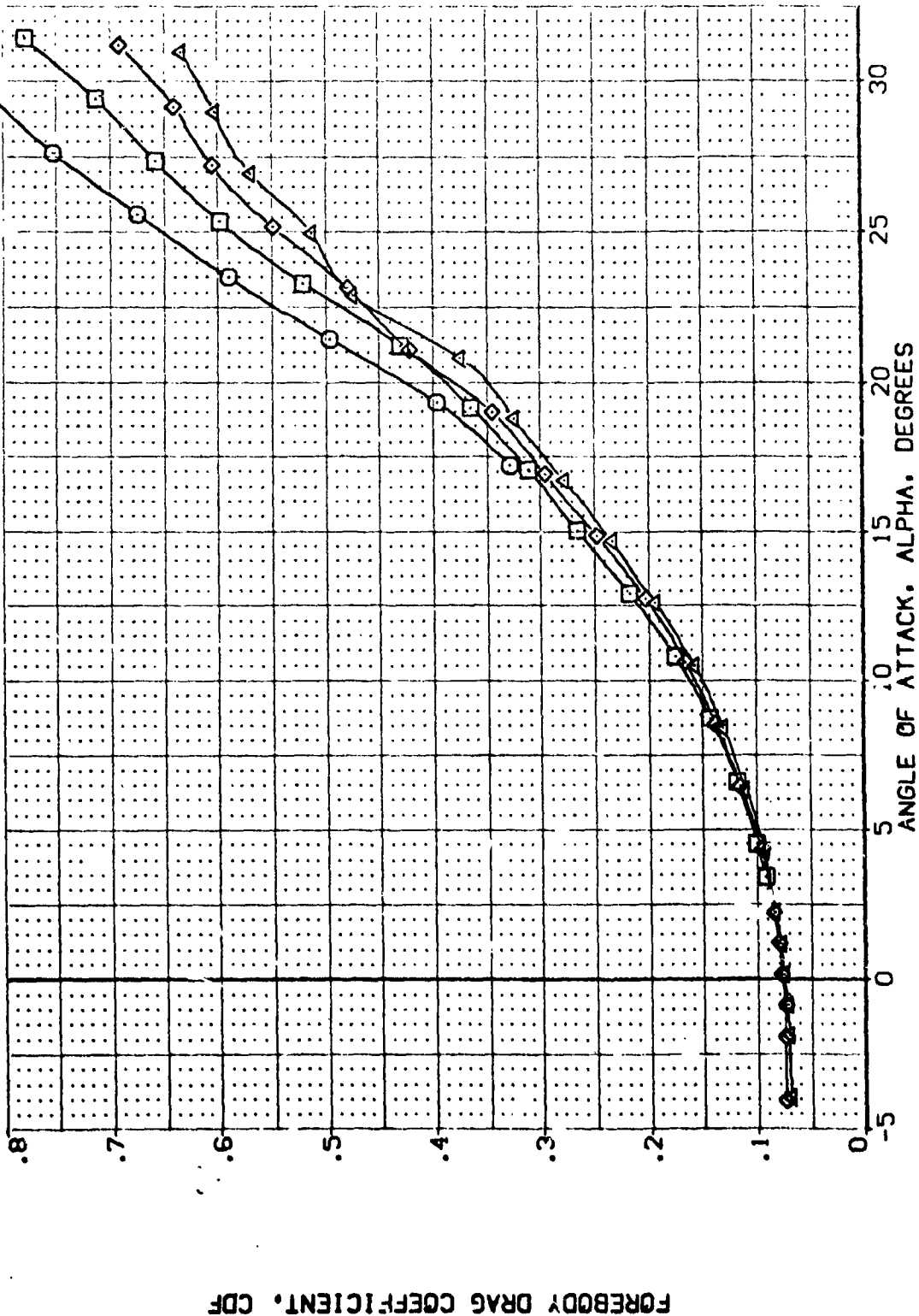
ELEVON: 15.000 15.000 15.000 15.000

H/V: .035 .125 .265

SPOBRK: .000 .000 .000 .000

BOFLAP: -12.000 -12.000 -12.000 -12.000

REFERENCE INFORMATION: SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0105



FOREBODY DRAG COEFFICIENT, CDF

FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15  
 (A)MACH = .20







DATA SET SYMBOL: (B02061) (B02069) (B02074) (B02311)

CONFIGURATION DESCRIPTION: CA628 B26C9G|5M7F8J43V||6E28V8RSX10 CA628 926C9G|5M7F8J43V||6E28V8RSX10 CA628 B26C9G|5M7F8J43V||6E28V8RSX10 CA628 B26C9G|5M7F8J43V||6E28V8RSX10

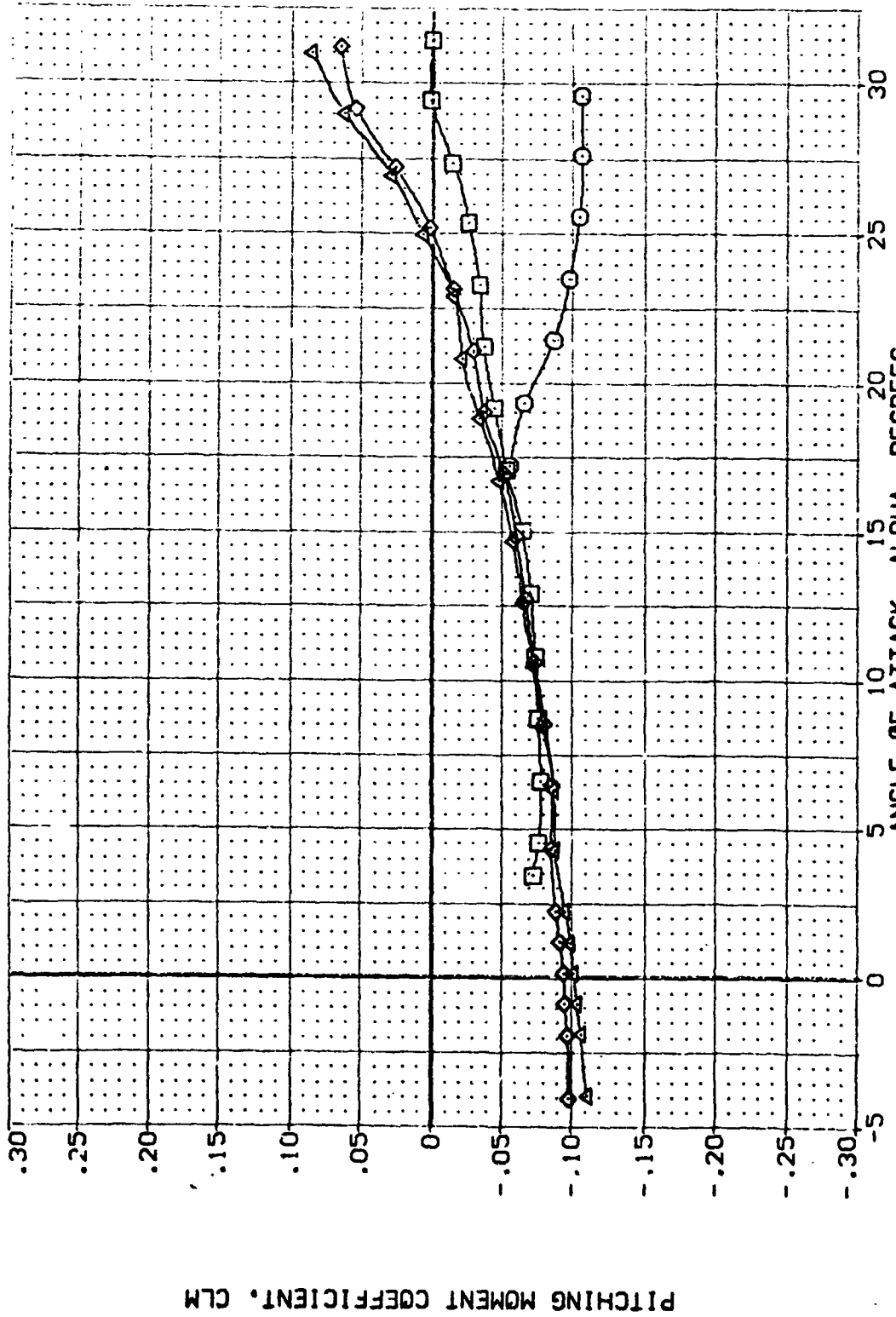
ELEVON: 15.000 15.000 15.000 15.000

H/BSV: .035 .125 .285

SPDRK: .000 .000 .000 .000

BOFLAP: -12.000 -12.000 -12.000 -12.000

REFERENCE INFORMATION: SREF 4.4119 SO.FT. LREF 19.2293 INCHES BREF 37.9523 INCHES YMRP 43.5974 INCHES ZMRP .0000 INCHES SCALE 15.1875 INCHES .0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 16 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS CN, ELEVON = 15

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02064) O B26C9G|547F8J43V||6E28V8R5X10  
 (B02069) O B26C9G|547F8J43V||6E28V8R5X10  
 (B02074) X B26C9G|547F8J43V||6E28V8R5X10  
 (B02311) X B26C9G|547F8J43V||6E28V8R5X10

ELEVON H/WB SPOBRK BOFLAP REFERENCE INFORMATION  
 15.000 .075 .000 -12.000 SREF 4.4119 SO.FT.  
 15.000 .125 .000 -12.000 LREF 19.2299 INCHES  
 15.000 .285 .000 -12.000 BREF 37.9359 INCHES  
 15.000 .000 .000 -12.000 XPRP 43.5974 INCHES  
 15.000 .000 .000 -12.000 YPRP .0000 INCHES  
 15.000 .1875 .0405 ZPRP 15.1875 INCHES  
 15.000 .0405 SCALE

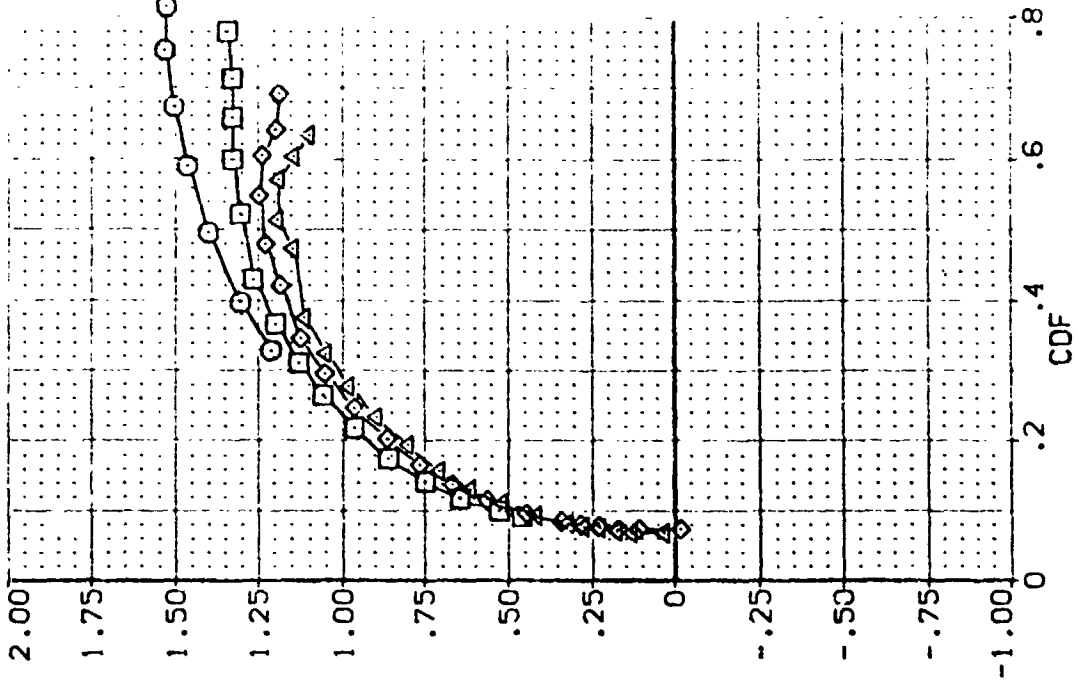
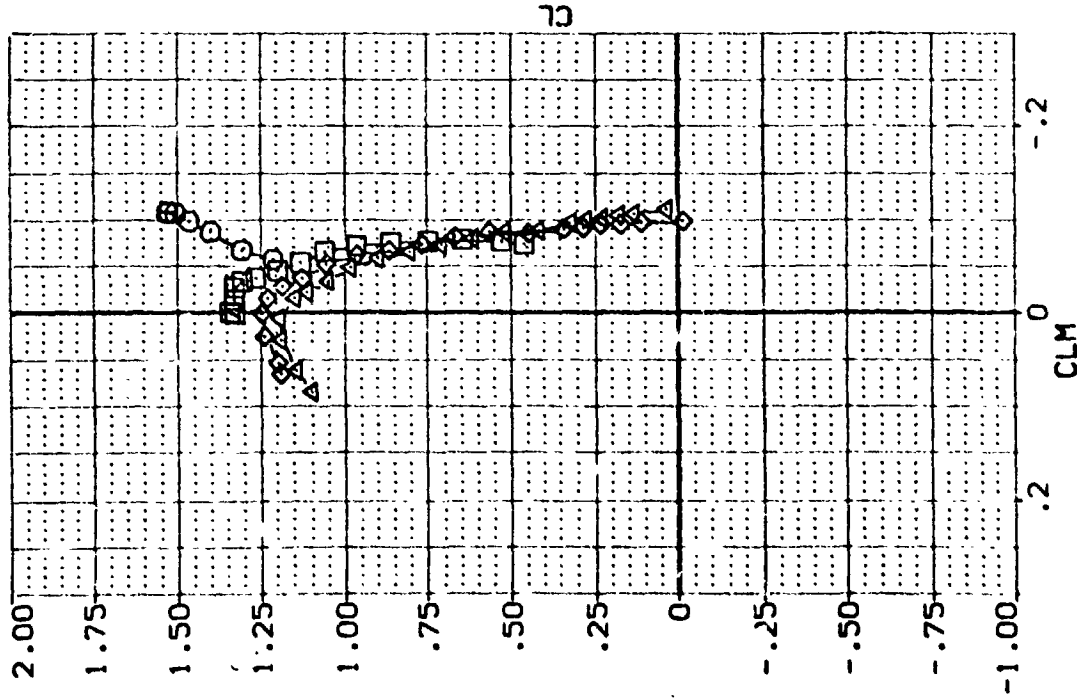


FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15

(A)MACH = .20



△

DATA SET SYMBOL	CONF	DESCRIPTION	ELEVON	M/SB	SPDRK	BOFLAP	REFERENCE INFORMATION
(B02064)	DA628	B26C3G   SMTF 8U43V   1E28V8FSX10	15.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B02069)	DA628	B26C3G   SMTF 8U43V   1E28V8FSX10	15.000	.125	.000	-12.000	LREF 19.2298 INCHES
(B02074)	DA628	B26C3G   SMTF 8U43V   1E28V8FSX10	15.000	.265	.000	-12.000	BREF 37.9559 INCHES
(B02311)	DA628	B26C3G   SMTF 8U43V   1E28V8FSX10	15.000		.000	-12.000	XMRP 43.5974 INCHES
							ZMRP .0000 INCHES
							SCALE 15.1875 INCHES
							SCALE .0405

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

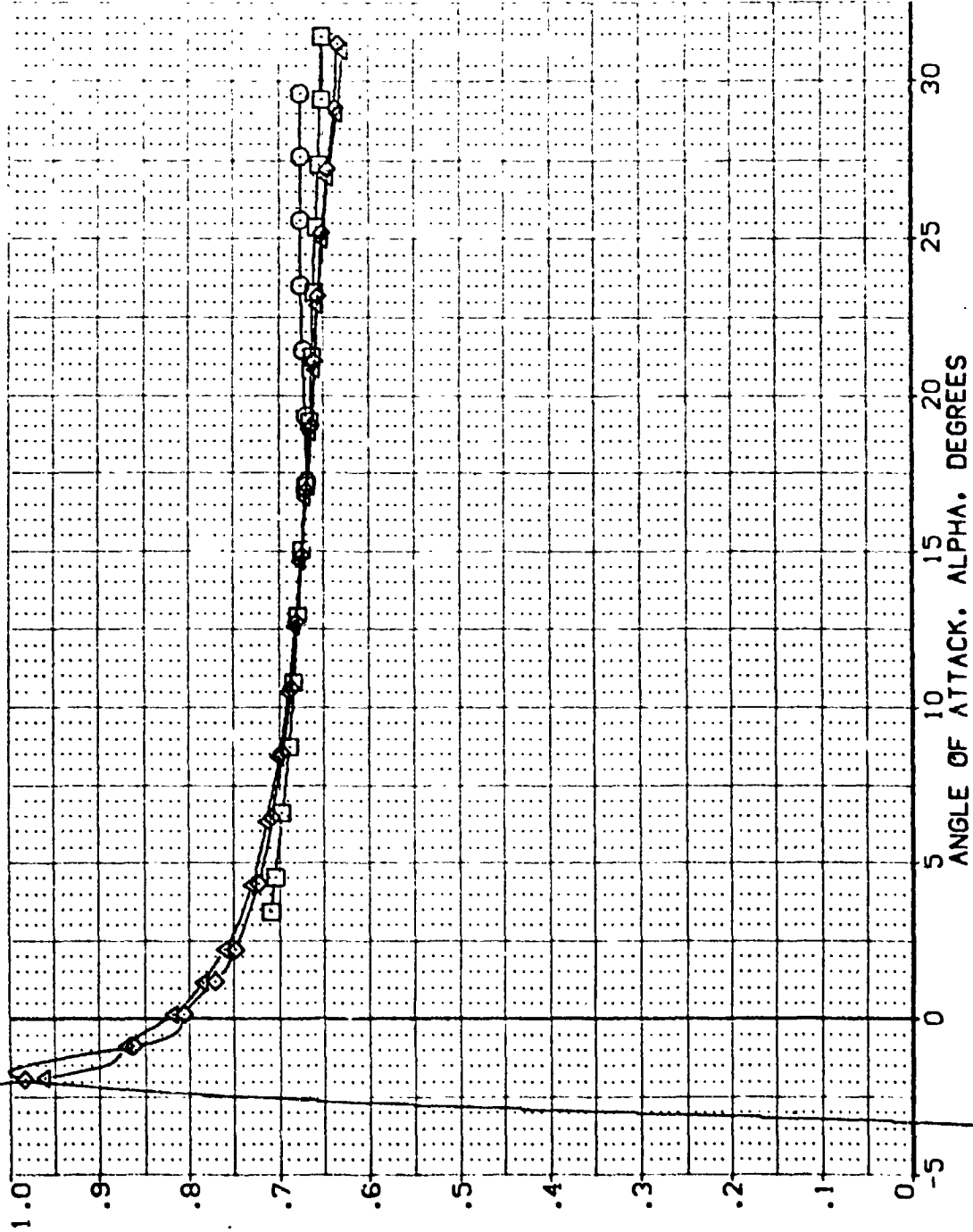


FIG 16 EFFECT OF GROUND HT., UNDERWING PODED ENGINES OMS ON, ELEVON = 15  
(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B0Z064) □ B26C96|547F8J43V||6E28V8RSX10

(B0Z069) □ B26C96|547F8J43V||6E28V8RSX10

(B0Z074) □ B26C96|547F8J43V||6E28V8RSX10

(B0Z311) □ B26C96|547F8J43V||6E28V8RSX10

ELEVON H/WB SPOBRK BOFLAP

15.000 .035 .000 -12.000

15.000 .125 .000 -12.000

15.000 .285 .000 -12.000

REFERENCE INFORMATION

SREF 4.4119 SQ.FT.

LREF 19.2299 INCHES

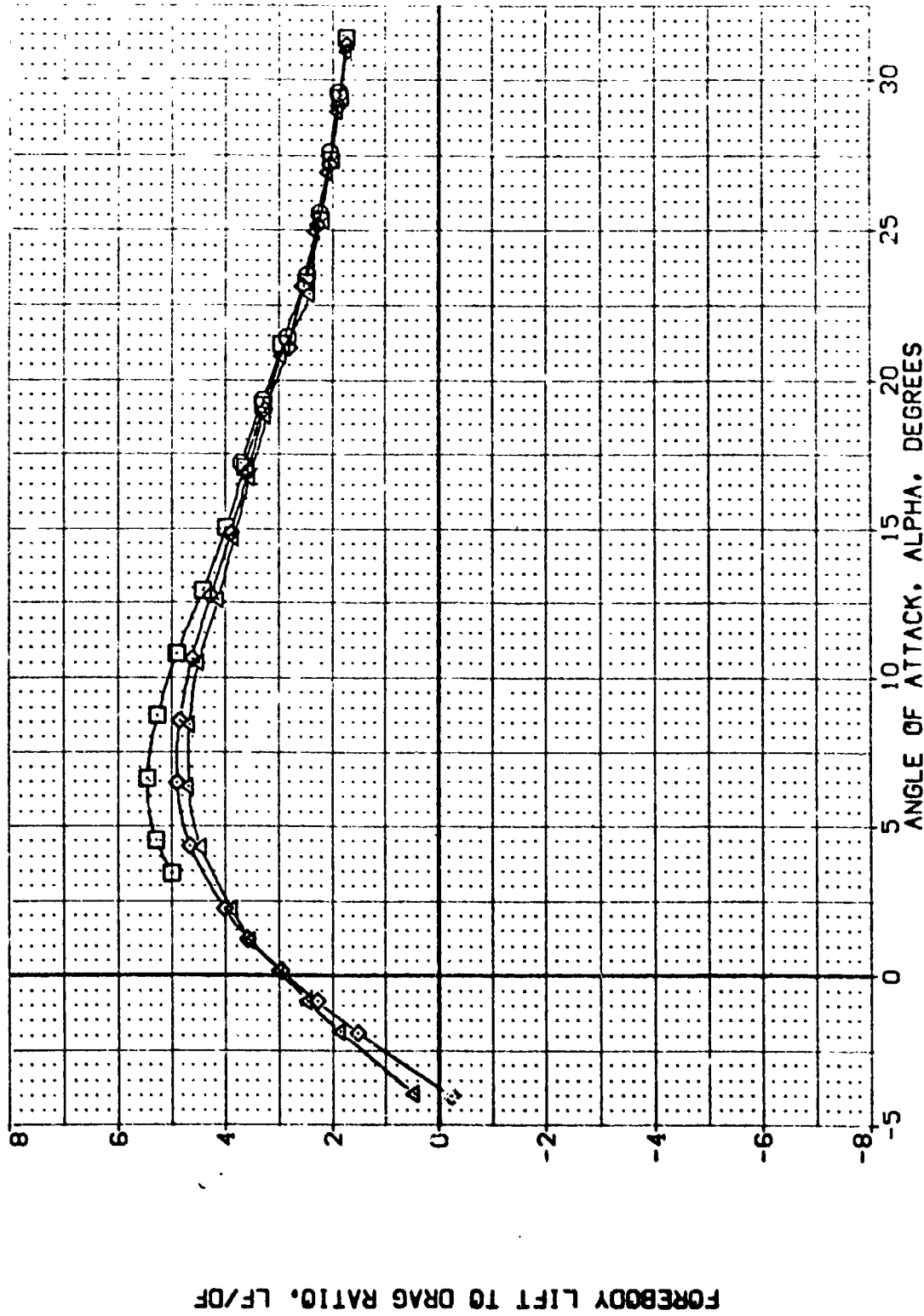
BREF 37.9359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 INCHES



FOREBODY LIFT TO DRAG RATIO, L/D

FIG 16 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = 15

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	M/BV	SPDRK	BOFLAP	REFERENCE INFORMATION
(BD2065)	0A628 B26C9G SMT78J43V 16E28V85X10	-10.00	.035	.000	-12.000	SREF 4.4119 SO.FT.
(BD2068)	0A628 B26C9G SMT78J43V 16E28V85X10	-10.00	.125	.000	-12.000	LREF 19.2299 INCHES
(BD2075)	0A628 B26C9G SMT78J43V 16E28V85X10	-10.00	.285	.000	-12.000	BREF 37.9359 INCHES
(BD2312)	0A628 B26C9G SMT78J43V 16E28V85X10	-10.00				XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

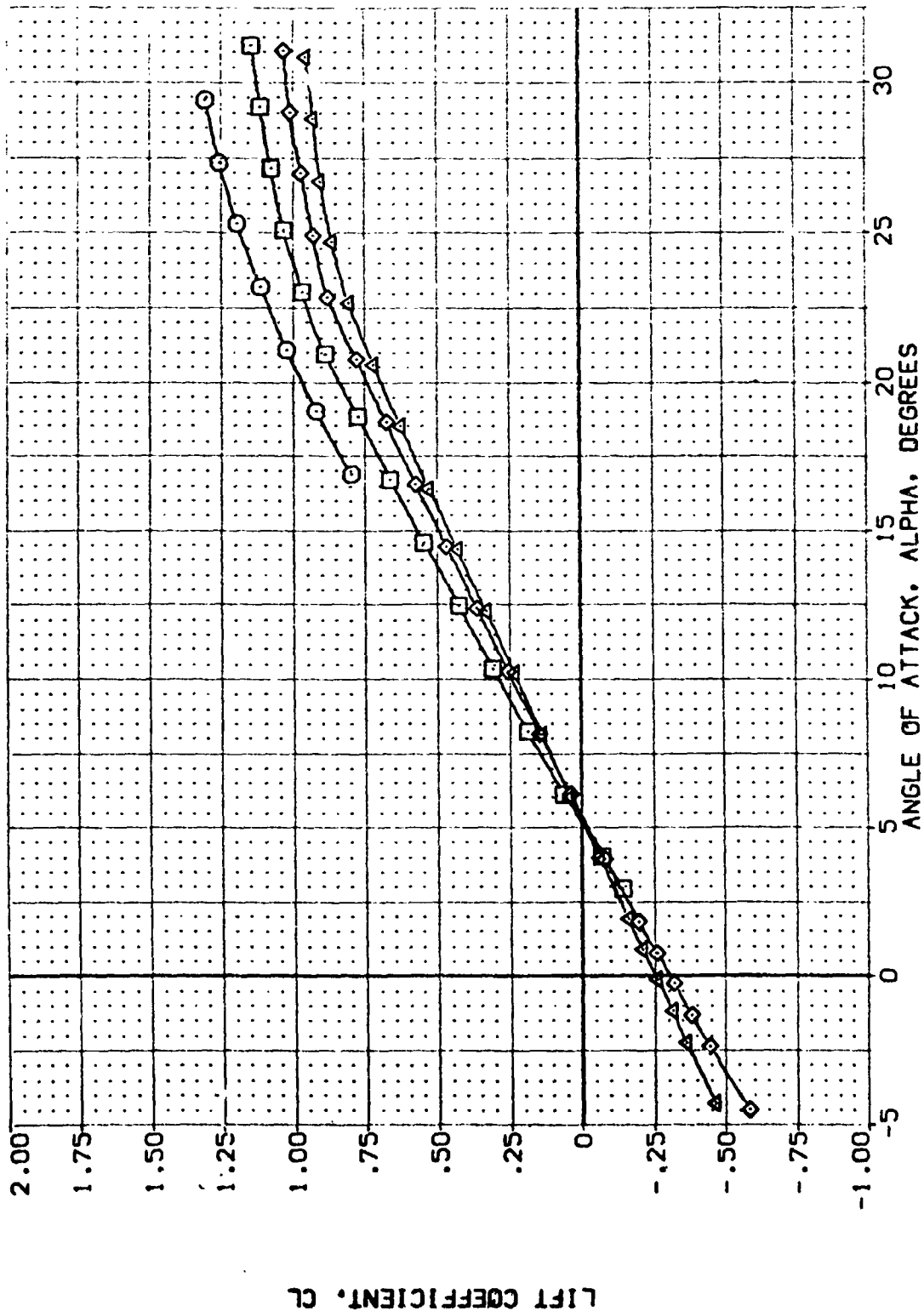


FIG 17 EFFECT OF GROUND HT., UNDERWING PODED ENGINES ON, ELEVON = -10  
 (A)MACH = .20 PAGE 263

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	M/BV	SPDRK	BOFLAP	REFERENCE INFORMATION
(80Z055)	0A6Z8 B26C96 547F8J43M  6E28V8RSX10	-10.000	.025	.000	-12.000	SREF 4.4119 SO.FT.
(80Z058)	0A6Z8 B26C96 547F8J43M  6F28V8RSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
(80Z075)	0A6Z8 B26C96 547F8J43M  6L28V8RSX10	-10.000	.285	.000	-12.000	BREF 37.9359 INCHES
(80Z312)	0A6Z8 B26C96 547F8J43M  6E28V8RSX10	-10.000				XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

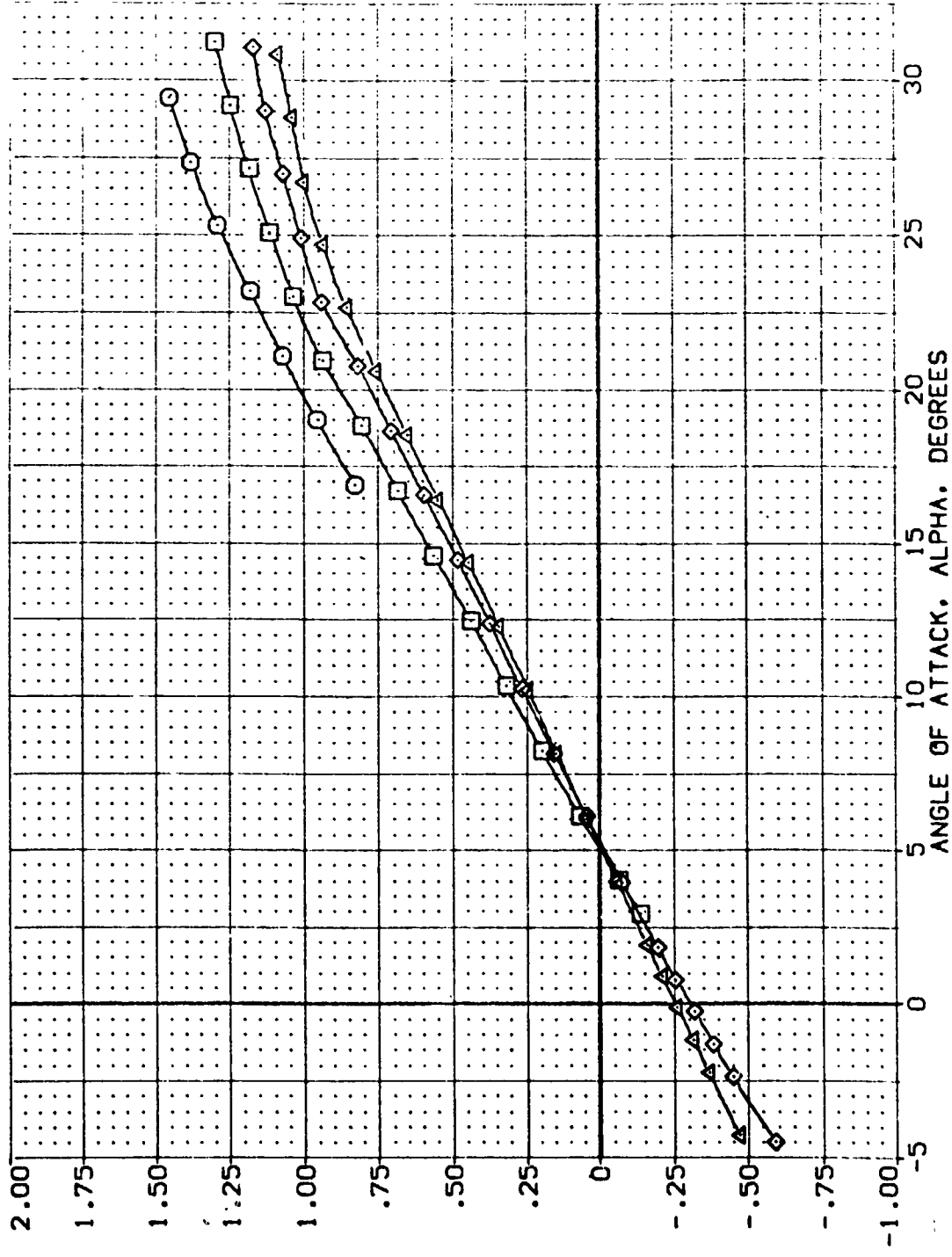


FIG 17 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = -10

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	FLEVON	H/BV	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z055)	B26C9G 5M7F 8J43V  1E 28V8RSX 10	-10.000	.075	.000	-12.000	SREF 4.4119 SQ.FT.
(B0Z068)	B26C9G 5M7F 8J43V  1E 28V8RSX 10	-10.000	.175	.000	-12.000	LREF 19.2259 INCHES
(B0Z075)	B26C9G 5M7F 8J43V  1E 28V8RSX 10	-10.000	.285	.000	-12.000	BREF 37.9359 INCHES
(B0Z312)	B26C9G 5M7F 8J43V  1E 28V8RSX 10	-10.000		.000	-12.000	XWRF 43.5974 INCHES
						YWRP .0000 INCHES
						ZWRP 15.1875 INCHES
						SCALE .0405 SCALE

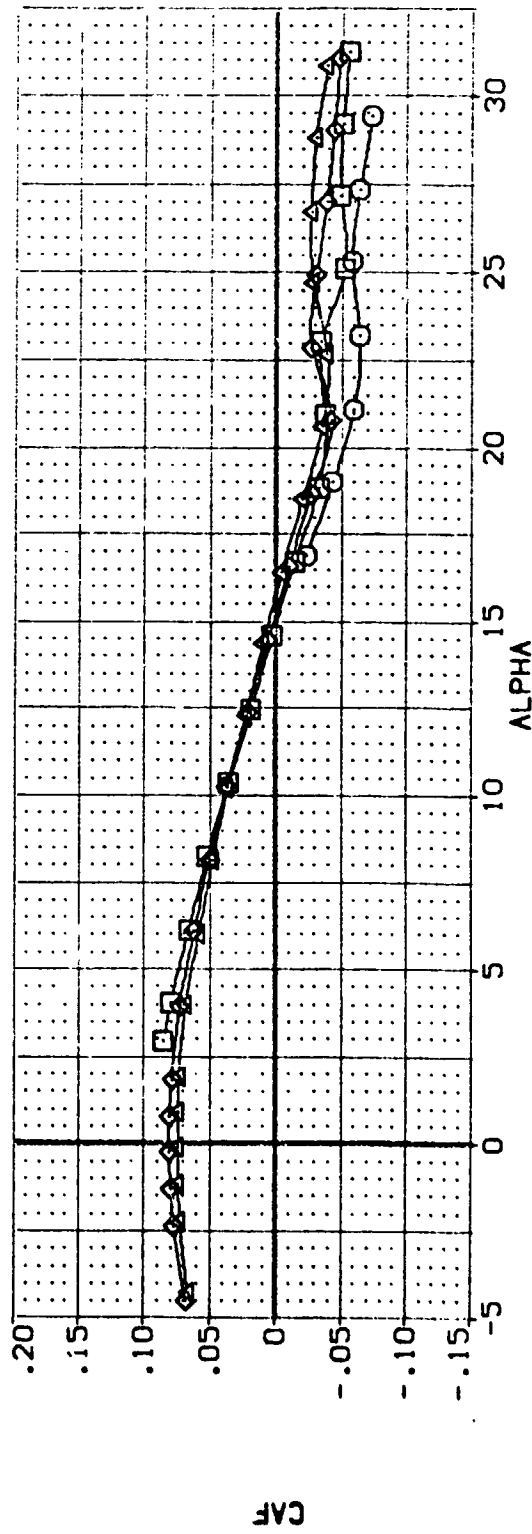
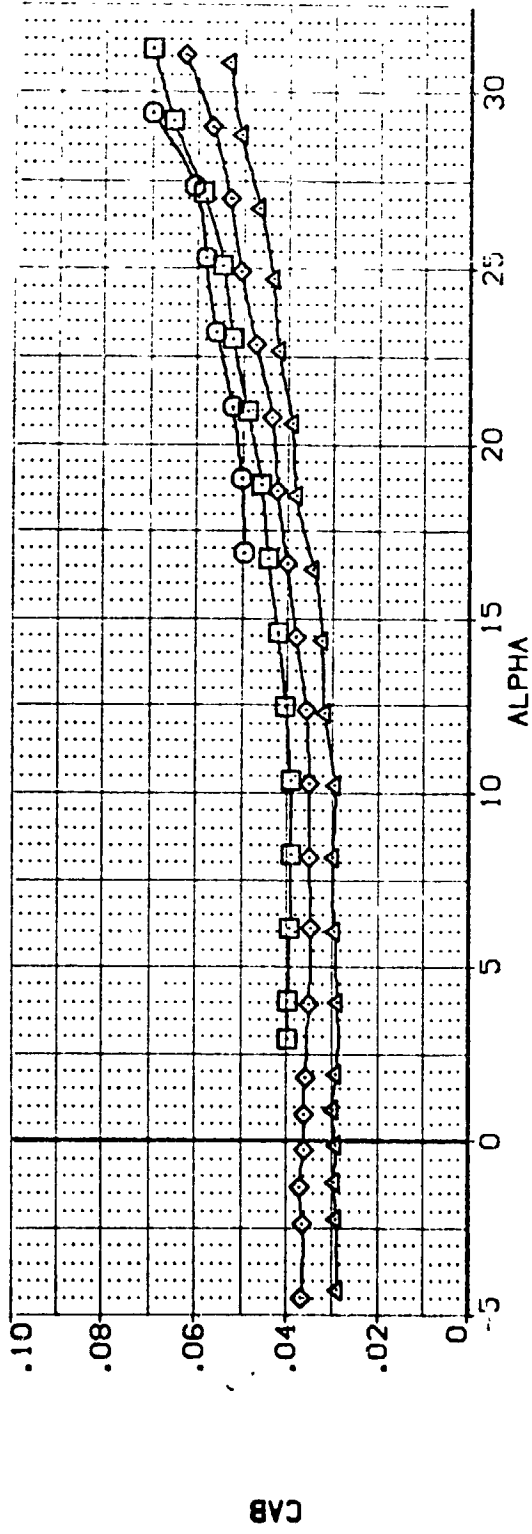
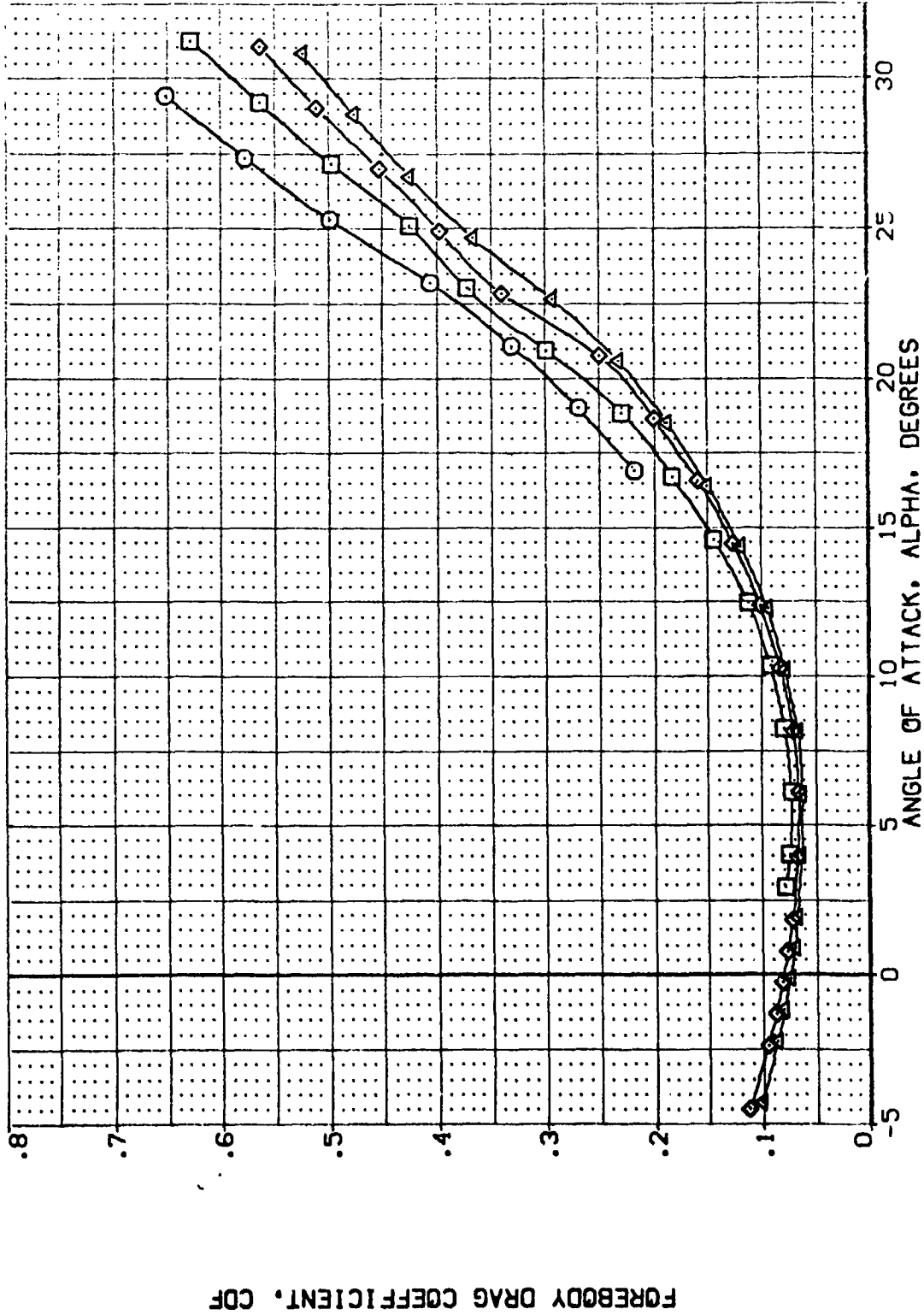


FIG 17 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = -10  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BD2065)	0A628 B26C96 SM7F 8J43V1 6E28V85X10
(BD2068)	0A628 B26C96 SM7F 8J43V1 6E28V85X10
(BD2075)	0A628 B26C96 SM7F 8J43V1 6E28V85X10
(BD2312)	0A628 B26C96 SM7F 8J43V1 6E28V85X10

ELEVON	H/BM	SPOBRK	BOFLAP	REFERENCE INFORMATION
-10.000	.035	.000	-12.000	SREF 4.4119 SO.FT. INCHES
-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
-10.000	.285	.000	-12.000	BREF 37.9359 INCHES
				XMRP 43.5974 INCHES
				YMRP 15.0000 INCHES
				ZMRP 15.1875 INCHES
				SCALE .0405 SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 17 EFFECT OF GROUND HT., UNDERWING PODED ENGINES OMS ON, ELEVON = -10  
 (A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BV	SPDRBK	BOFLAP	REFERENCE INFORMATION
(BOZ065)	0A628 B26C96 5M7F8J43V 16E28V8RSX10	-10.000	.035	.000	-12.000	SREF 4.4119 SQ.FT.
(BOZ068)	0A628 B26C96 5M7F8J43V 16E28V8RSX10	-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
(BOZ075)	0A628 B26C96 5M7F8J43V 16E28V8RSX10	-10.000	.265	.000	-12.000	BREF 37.9359 INCHES
(BOZ312)	0A628 B26C96 5M7F8J43V 16E28V8RSX10	-10.000		.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

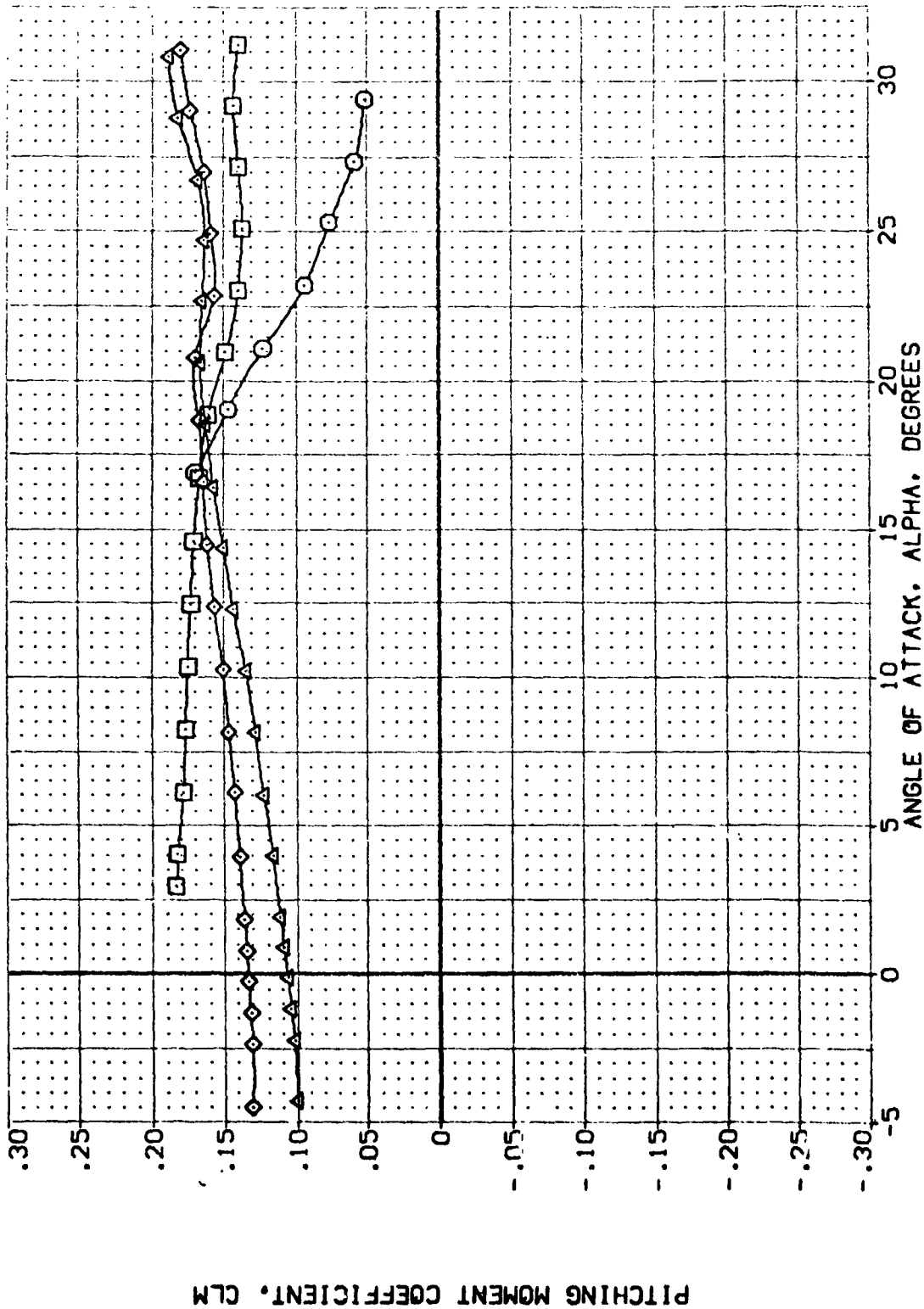


FIG 17 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = -10

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (80Z065) □ 0A628 B26C9G1SM7F8J43V116E28V8RSX10  
 (80Z088) □ 0A628 B26C9G1SM7F8J43V116E28V8RSX10  
 (80Z075) □ 0A628 B26C9G1SM7F8J43V116E28V8RSX10  
 (80Z312) □ 0A628 B26C9G1SM7F8J43V116E28V8RSX10

ELEVON H/BV SPOBRK BOFLAP REFERENCE INFORMATION  
 -10.000 .035 .000 -12.000 SREF 4.4119 SO.FT.  
 -10.000 .125 .000 -12.000 LREF 19.2289 INCHES  
 -10.000 .285 .000 -12.000 BREF 37.9359 INCHES  
 -10.000 .000 .000 -12.000 XMRP 43.5374 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 SCALE .0405

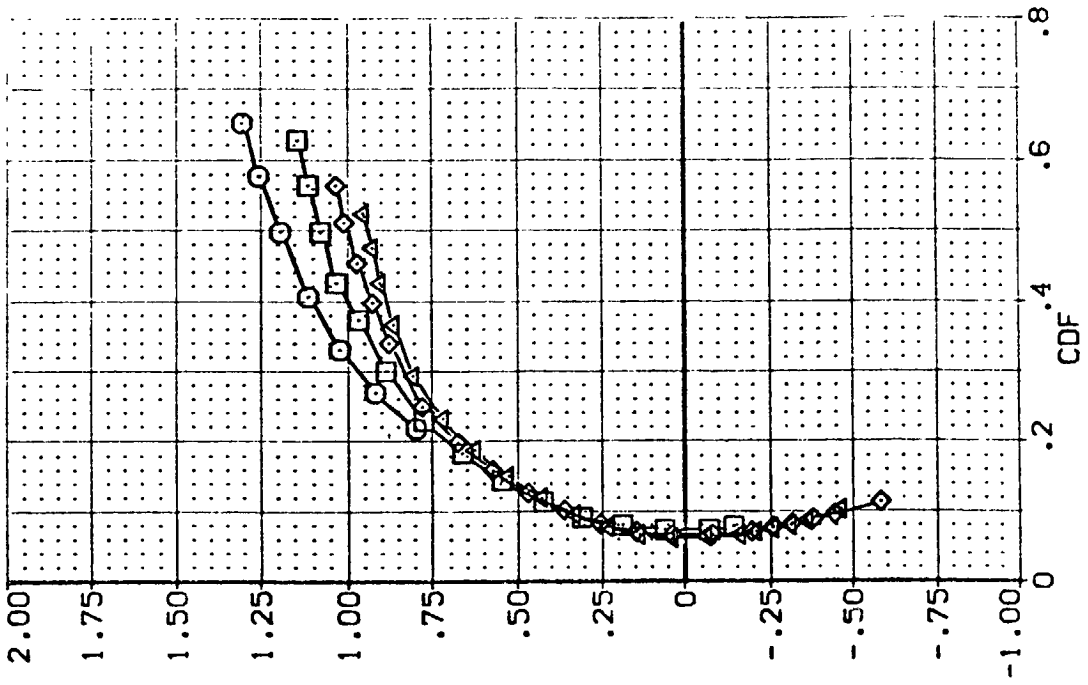
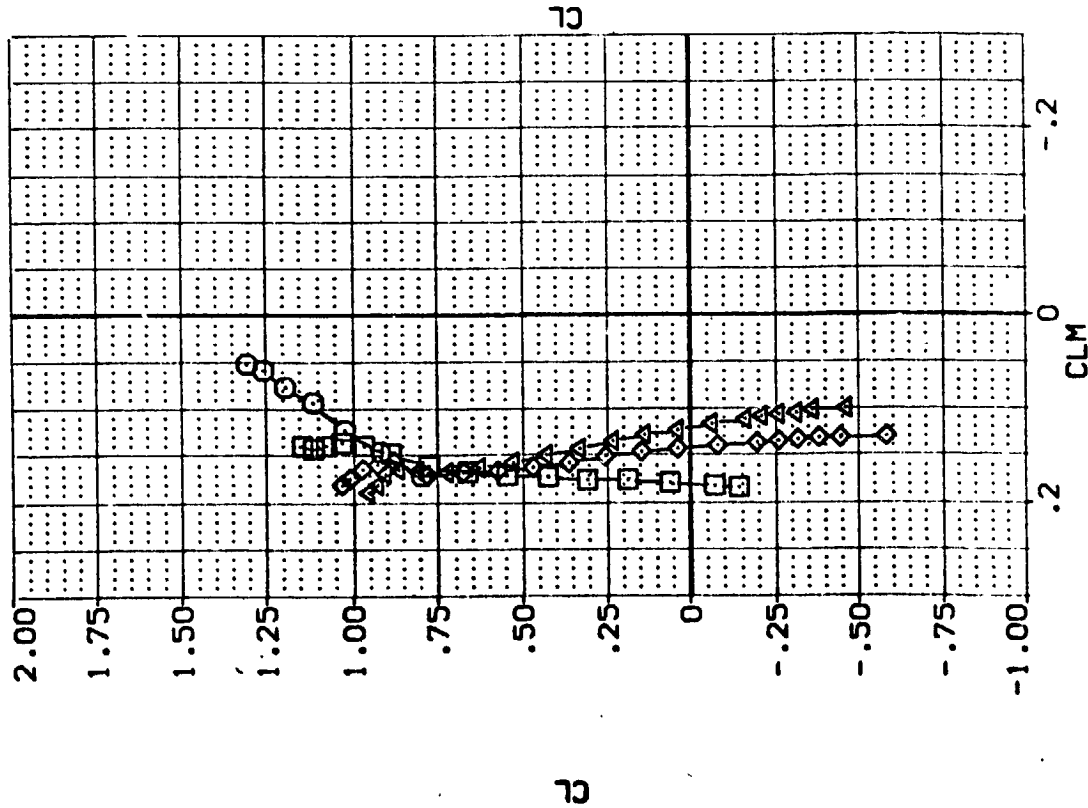


FIG 17 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -10

(A)MACH = .20



ELEVON	H/BV	SFOBRK	BDFLAP	REFERENCE INFORMATION
-10.000	.035	.000	-12.000	SREF 4.4119 SQ.FT. INCHES
-10.000	.125	.000	-12.000	LREF 19.2299 INCHES
-10.000	.285	.000	-12.000	BREF 37.9359 INCHES
		.000	-12.000	XMRP 43.5974 INCHES
				YMRP .0000 INCHES
				ZMRP 15.1873 INCHES
				SCALE .0405

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(80Z055)	0A6Z8 B2C9G15M7F8J16E28V8R5X10
(80Z068)	0A6Z8 B2C9G15M7F8J16E28V8R5X10
(80Z075)	0A6Z8 B2C9G15M7F8J16E28V8R5X10
(80Z312)	0A6Z8 B2C9G15M7F8J16E28V8R5X10

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

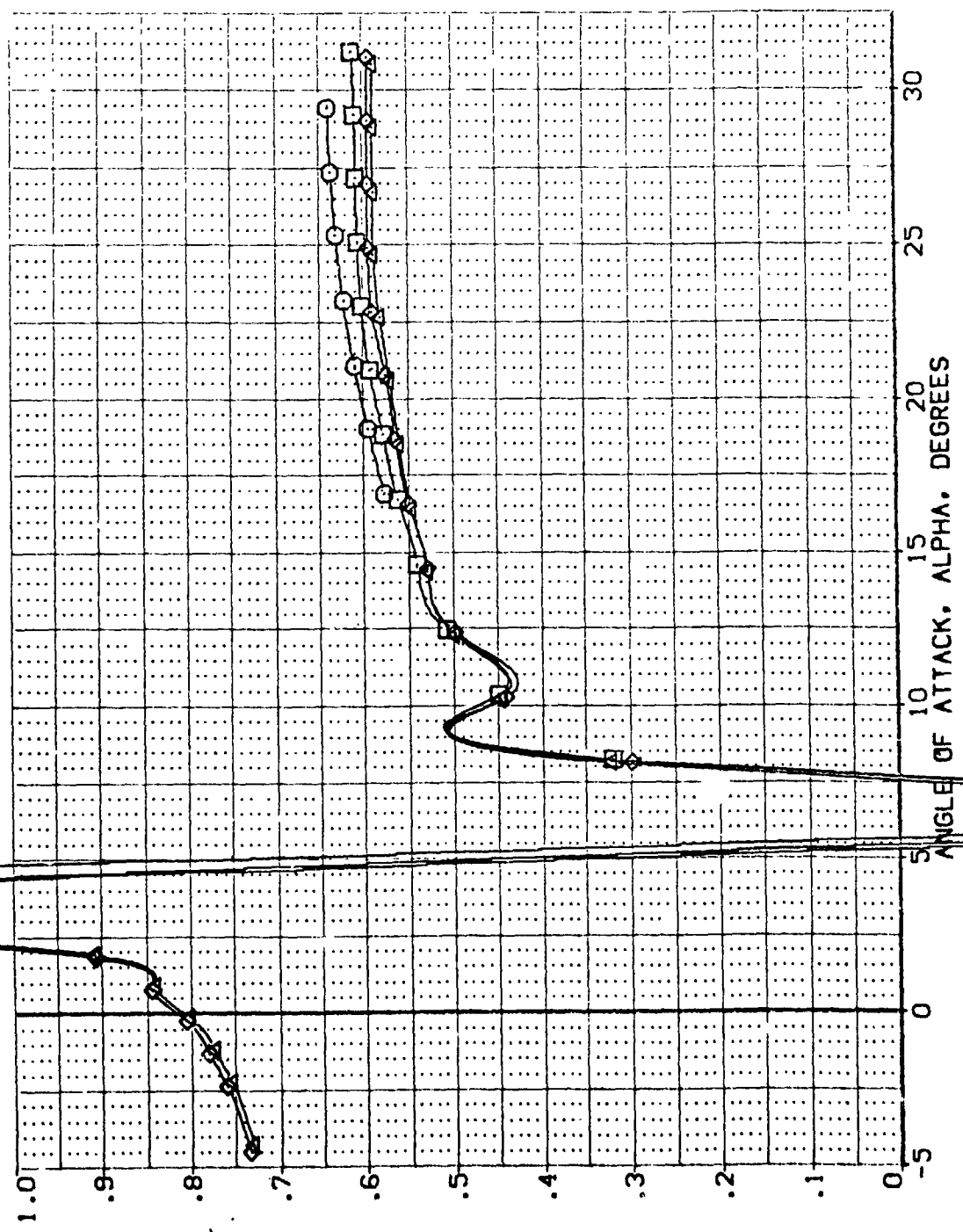
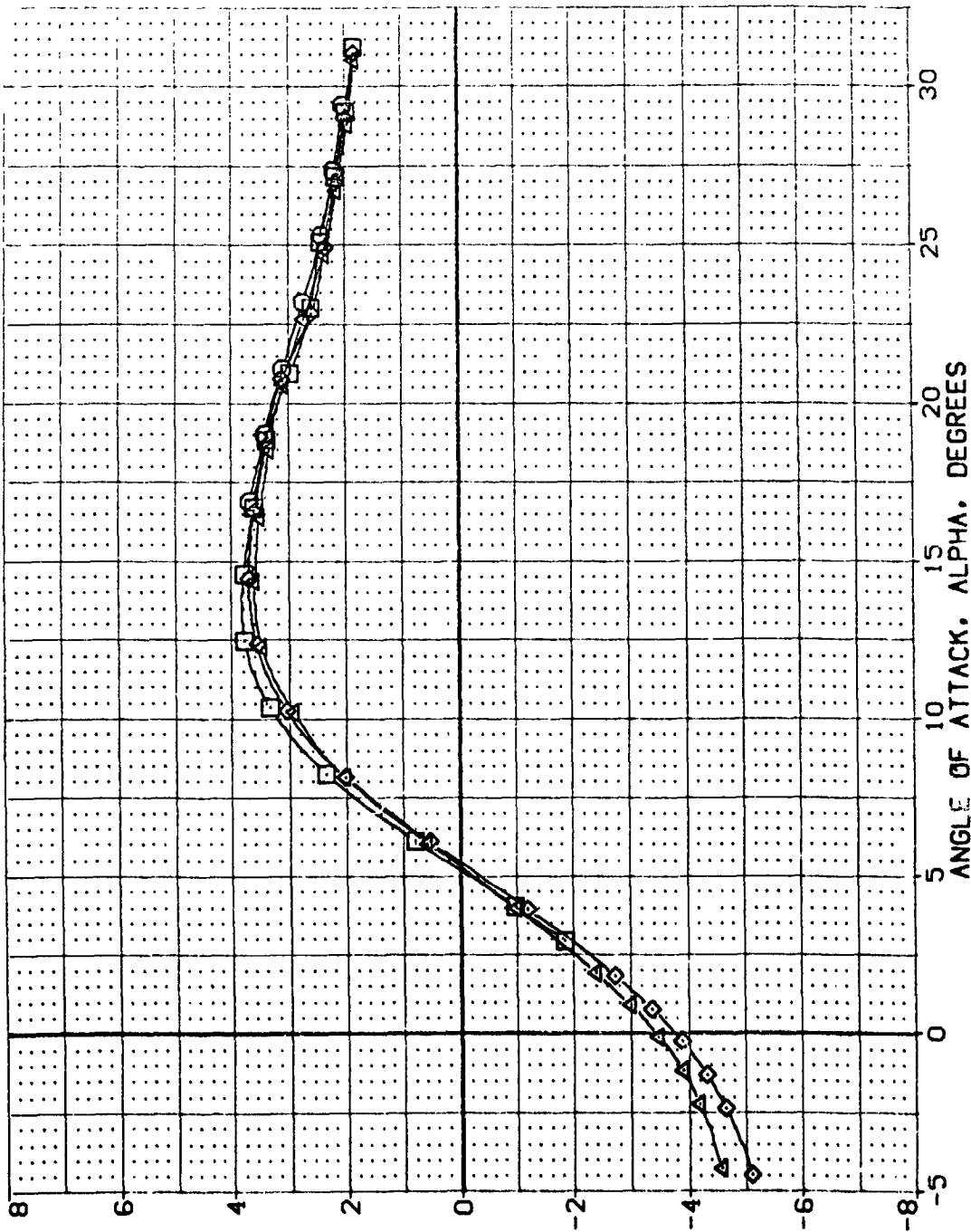


FIG 17 EFFECT OF GROUND HT. UNDERWING PODDED ENGINES ON, ELEVON = -10 (A)MACH = .20 PAGE 269

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802065) □ 0A628 B26C9G1SMT7EJ43V116E28V85X10  
 (802068) □ X 0A628 B26C9G1SMT7EJ43V116E28V85X10  
 (802075) □ X 0A628 B26C9G1SMT7EJ43V116E28V85X10  
 (802312) □ X 0A628 B26C9G1SMT7EJ43V116E28V85X10

ELEVON HVBM SPOBRK BOFLAP REFERENCE INFORMATION  
 -10.000 .035 .000 -12.000 SREF 4.4119 SO.FT  
 -10.000 .125 .000 -12.000 LREF 19.2299 INCHES  
 -10.000 .285 .000 -12.000 BREF 37.9359 INCHES  
 XMRP .000 -12.000 XMRP 43.9974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE



FOREBODY LIFT TO DRAG RATIO, L/D

FIG 17 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -10  
 (A)MACH = .20 PAGE 270





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/SB	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B02065)	0A628 B26C9615M7F8J43V116E28V8RSX10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B02067)	0A628 B26C9615M7F8J43V116E28V8RSX10	-20.000	.125	.000	-12.000	LREF 19.2289 INCHES
(B02076)	0A628 B26C9615M7F8J43V116E28V8RSX10	-20.000	.285	.000	-12.000	BREF 37.9359 INCHES
(B02313)	0A628 B26C9615M7F8J43V116E28V8RSX10	-20.000		.000		XMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						.0405 INCHES

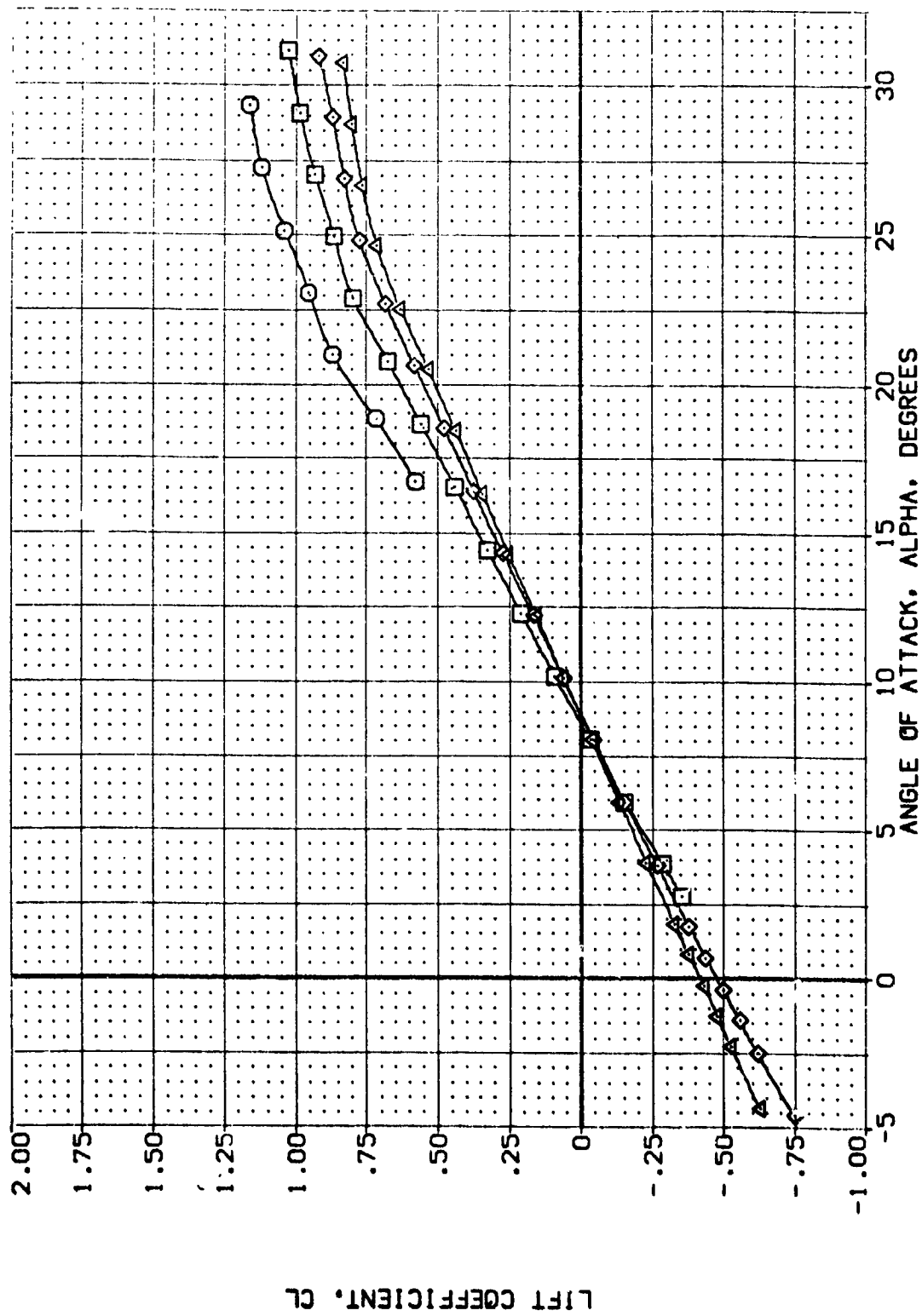


FIG 18 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = -20  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	M/BV	SPDRBK	BOFLAP	REFERENCE INFORMATION
(B02066)	0A628 B26C9G SMT78J43W 16E28V8K5X10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B02067)	0A628 B26C9G SMT78J43W 16E28V8K5X10	-20.000	.125	.000	-12.000	LREF 19.2293 INCHES
(B02076)	0A628 B26C9G SMT78J43W 16E28V8K5X10	-20.000	.25	.000	-12.000	BREF 3.9339 INCHES
(B02313)	0A628 B26C9G SMT78J43W 16E28V8K5X10	-20.000		.000	-12.000	YMRP 43.5974 INCHES
						ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

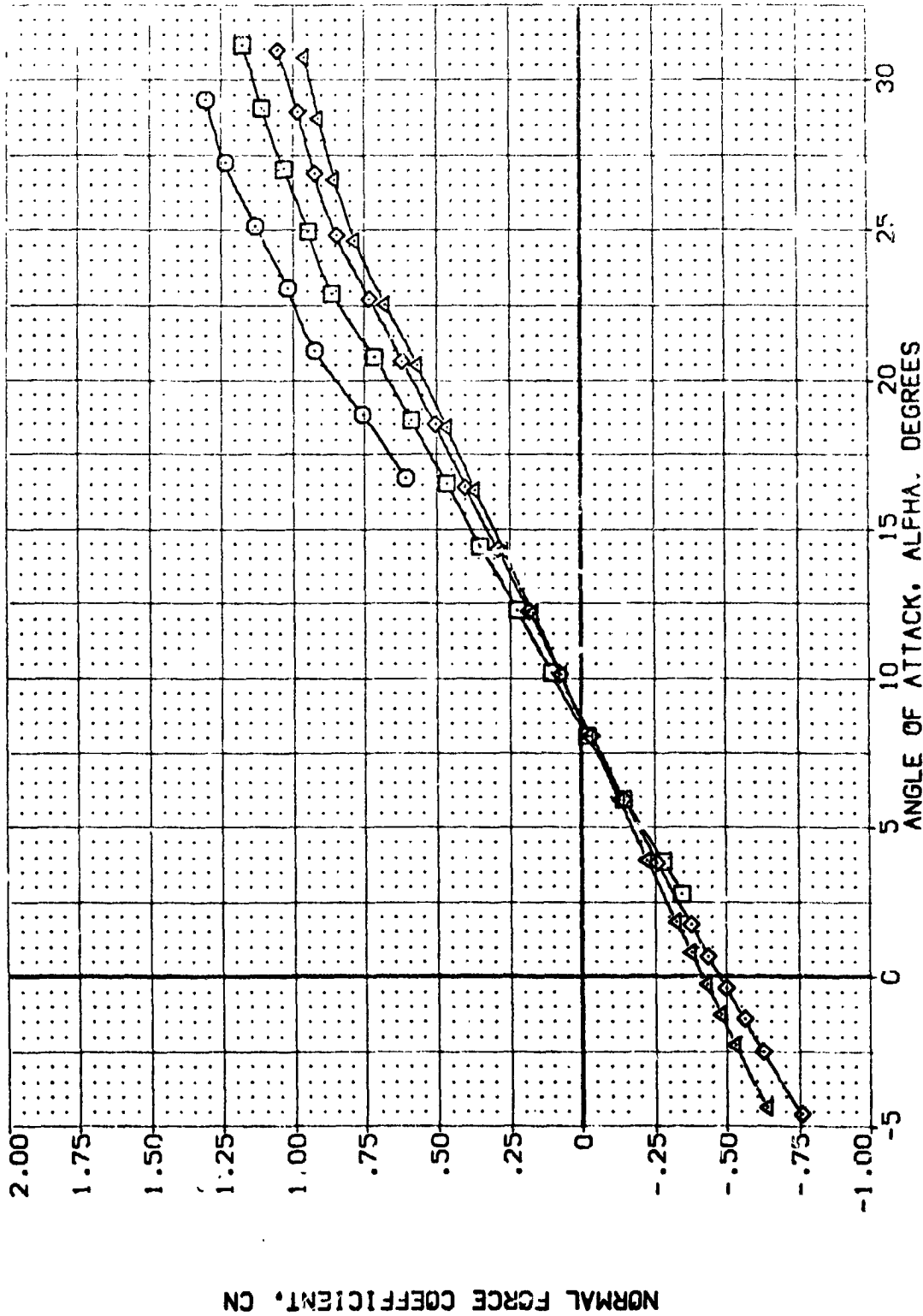


FIG 18 EFFECT OF GROUND HT. UNDERWING PODDED ENGINES OMS ON, ELEVON = -20  
 (A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/VB	S'DBR	BOX LAP	REFERENCE INFORMATION
(802066)	0A628 B26C9G1 S47F8J43V1   6E28V8R5X10	-20.000	.025	.000	0.000	SREF 4.4119 SO.FT.
(802067)	0A628 B26C9G1 S47F8J43V1   6E28V8R5X10	-20.000	.123	.000	-12.000	LREF 19.2799 INCHES
(802076)	0A628 B26C9G1 S47F8J43V1   6E28V8R5X10	-20.000	.285	.000	-12.000	BREF 37.9359 INCHES
(802313)	0A628 B26C9G1 S47F8J43V1   6E28V8R5X10	-20.000			-12.000	XMRP 43.5974 INCHES
						ZMRP 0.0000 INCHES
						ZMFF 15.1875 INCHES
						SCALE .0405 SCALE

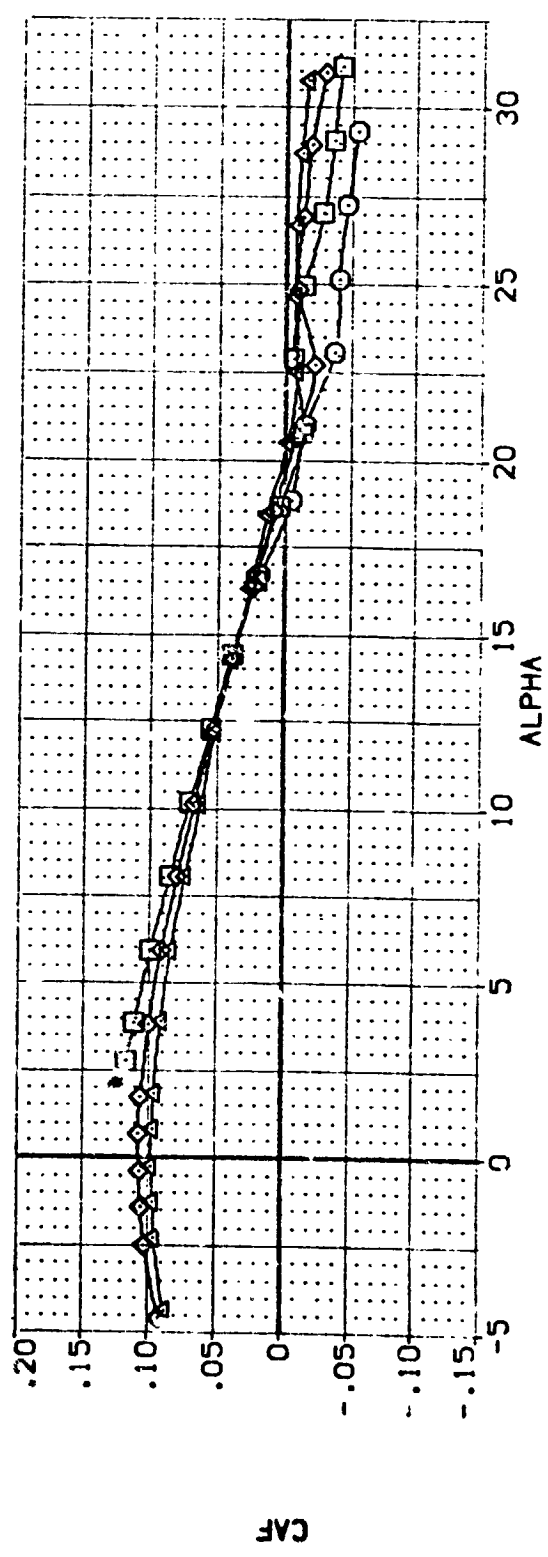
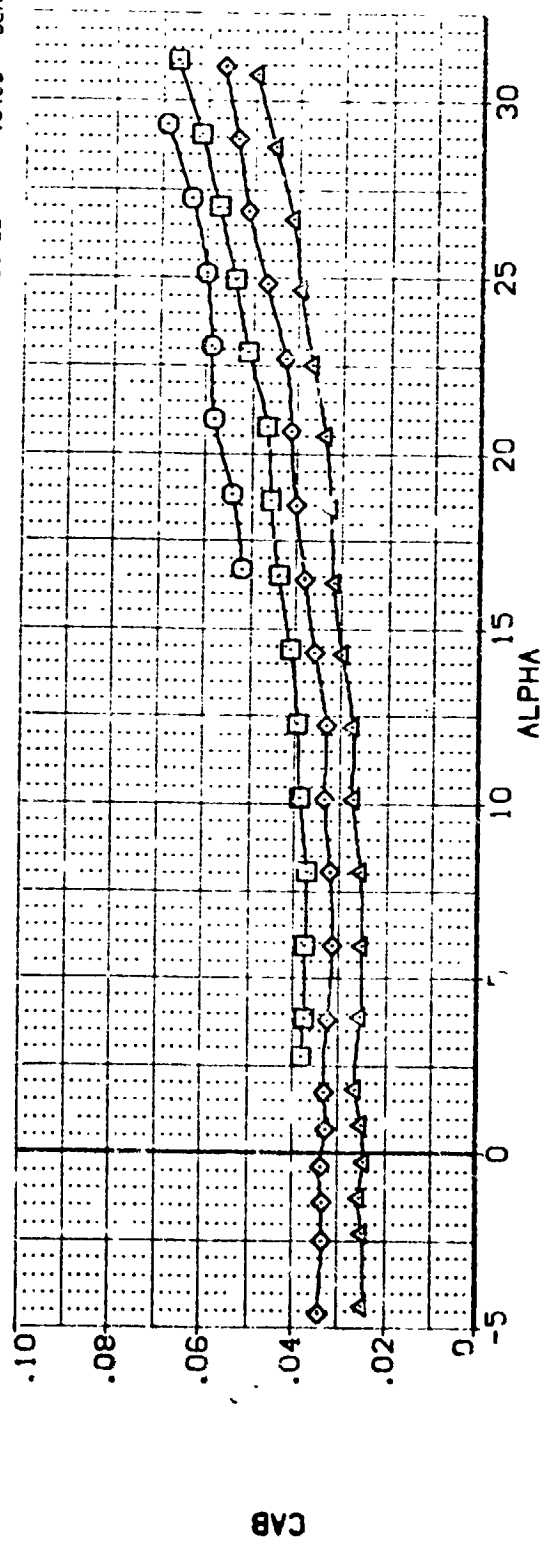


FIG 18 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -20  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B0Z066)	0A6Z8 B26C9G 5M7F8J43V  6E28V8R5X10
(B0Z067)	0A6Z8 B26C9G 5M7F8J43V  6E28V8R5X10
(B0Z076)	0A6Z8 B26C9G 5M7F8J43V  6E28V8R5X10
(B0Z313)	0A6Z8 B26C9G 5M7F8J43V  6E28V8R5X10

ELEVON	H/VB	SPOBRV	BOFLAP	REFERENCE INFORMATION
-20.000	.035	.000	-12.000	SREF 4.4119 SQ.FT.
-20.000	.125	.000	-12.000	LREF 19.2289 INCHES
-20.000	.285	.000	-12.000	BREF 37.9339 INCHES
-20.000		.000	-12.000	XMRP 43.5974 INCHES
				YMRP .0000 INCHES
				ZMRP 15.1875 INCHES
				SCALE .0405 INCHES

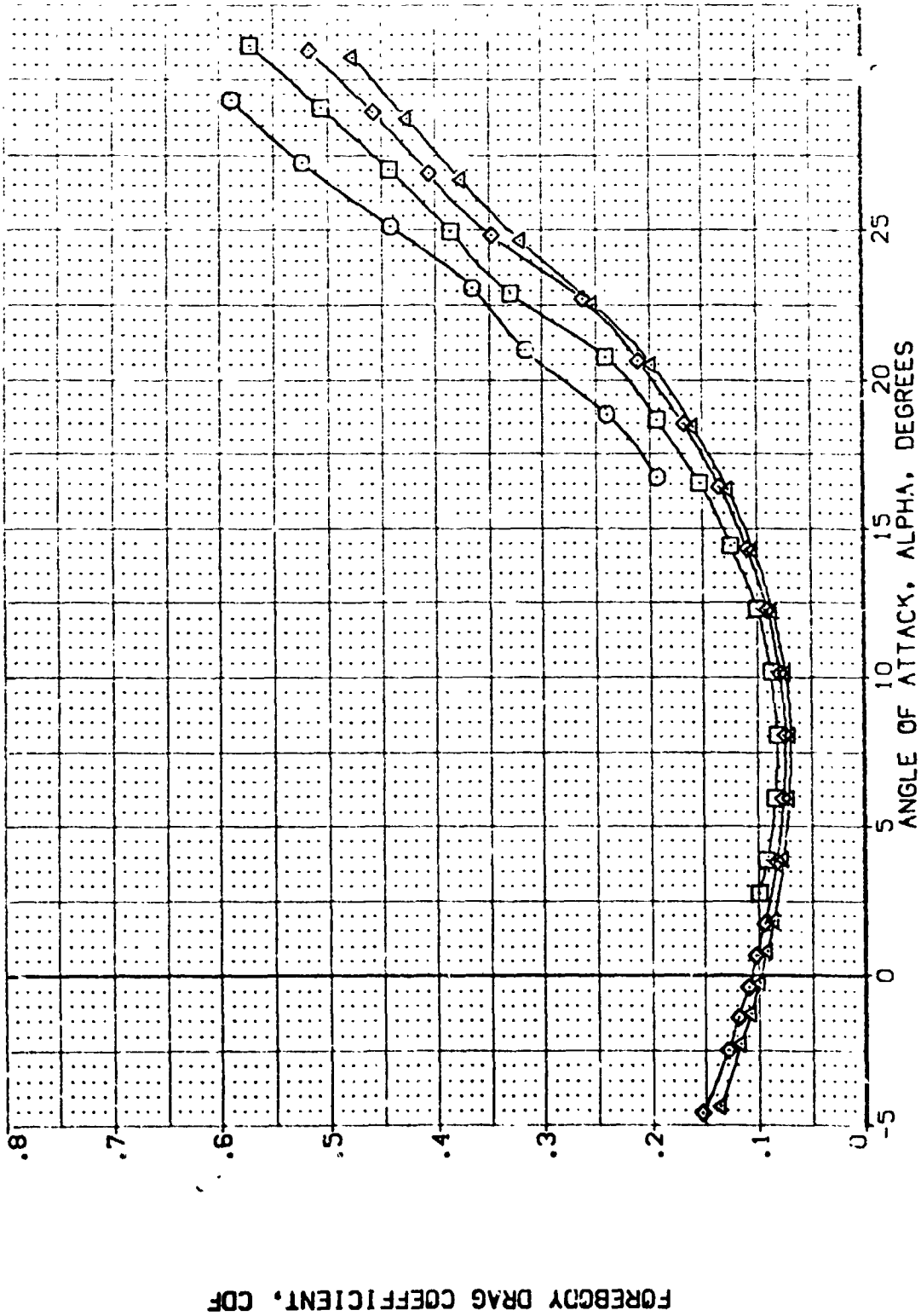


FIG 18 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -20

(A) MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/V/N	SPOBRK	BOFLAP	REFERENCE INFORMATION
(B0Z066)	0A628 B26C9G15M7F8J43V116E28V6RSX10	-20.000	.035	.000	-12.000	SREF 4.4119 SO.FT.
(B0Z067)	0A628 B26C9G15M7F8J43V116E23V8RSX10	-20.000	.125	.000	-12.000	LREF 19.2269 INCHES
(B0Z076)	0A628 B26C9G15M7F8J43V116E28V8RSX10	-20.000	.265	.000	-12.000	BREF 37.9359 INCHES
(B0Z313)	0A628 B26C9G15M7F8J43V116E28V8RSX10	-20.000		.000	-12.000	XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

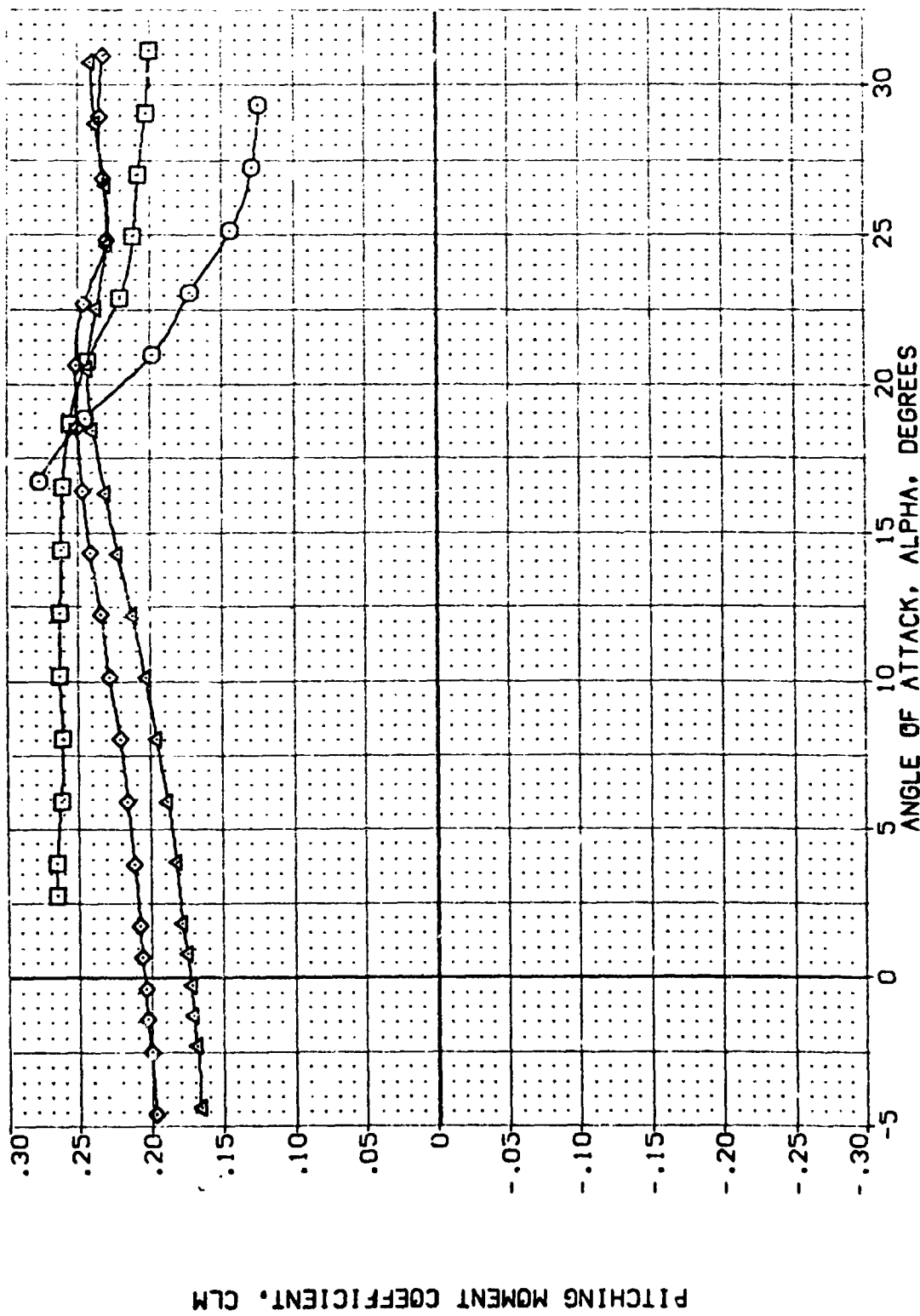


FIG 18 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, ELEVON = -20  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02066) (B02067) (B02076) (B02313)  
 OA628 B26C9G|5M7F8J43V||6E28V8K5X10  
 OA628 B26C9G|5M7F8J43V||6E28V8K5X10  
 OA628 B26C9G|5M7F8J43V||6E28V8K5X10  
 OA628 B26C9G|5M7F8J43V||6E28V8K5X10

ELEVON H/WB SPORRK BDFLAP REFERENCE INFORMATION  
 -20.000 .025 .000 -12.000 SREF 4.4119 50.FT.  
 -20.000 .125 .000 -12.000 LREF 19.2259 INCHES  
 -20.000 .265 .000 -12.000 BREF 37.9359 INCHES  
 -20.000 .000 .000 -12.000 XMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1E75 INCHES  
 SCALE .0405

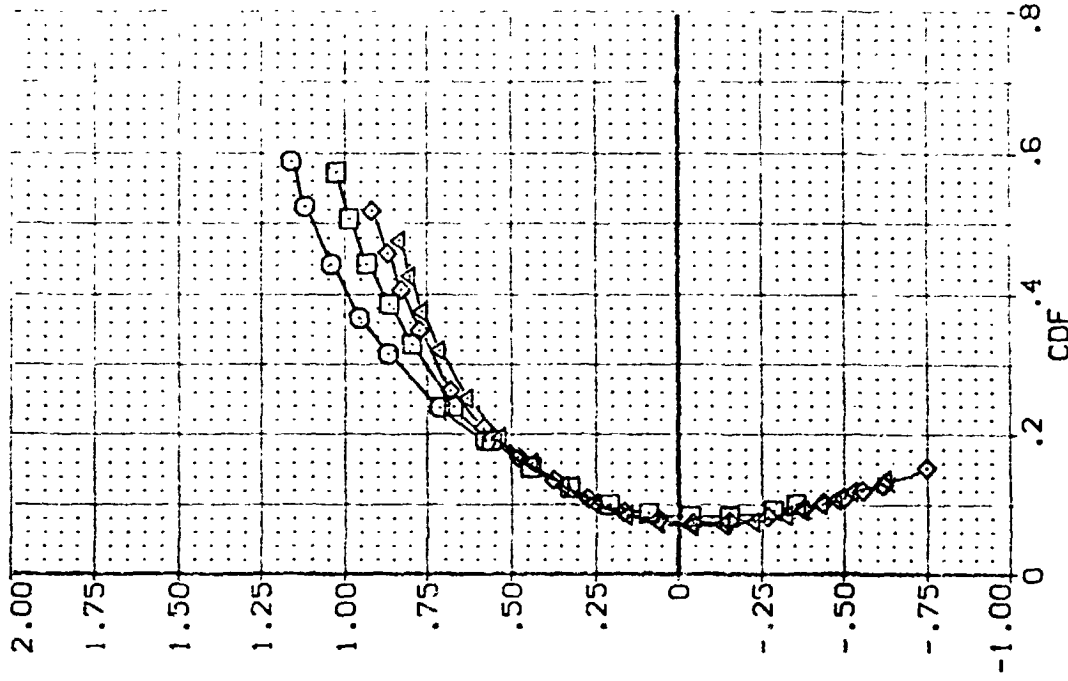
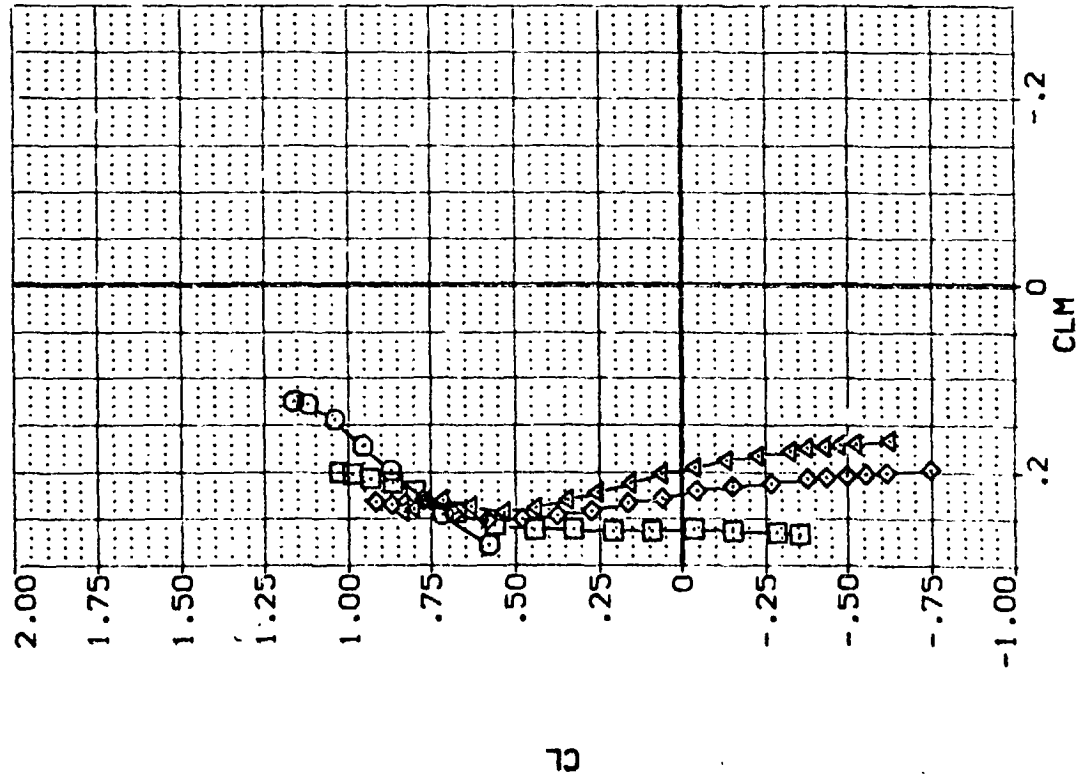


FIG 18 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -20  
 (A)MACH = .20 PAGE 276





DATA SET SYMBOL CONFIGURATION DESCRIPTION

(80Z065)	□	0A528	B26C9G1SM7F8J43V116E28V8RSX10
(80Z067)	○	0A528	B26C9G1SM7F8J43V116E28V8RSX10
(80Z076)	◇	0A528	B26C9G1SM7F8J43V116E28V8RSX10
(80Z313)	△	0A528	B26C9G1SM7F8J43V116E28V8RSX10

ELEVON W/BV SPOBRK EOF/LAP REFERENCE INFORMATION

-20.000	.035	.000	-12.000	SREF	4.4119	SO.FT.
-20.000	.125	.000	-12.000	LREF	19.2298	INCHES
-20.000	.285	.000	-12.000	BREF	37.9359	INCHES
		.000	-12.000	XMRP	43.5974	INCHES
				YMRP	0.0000	INCHES
				ZMRP	15.1873	INCHES
				SCALE	.0405	SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

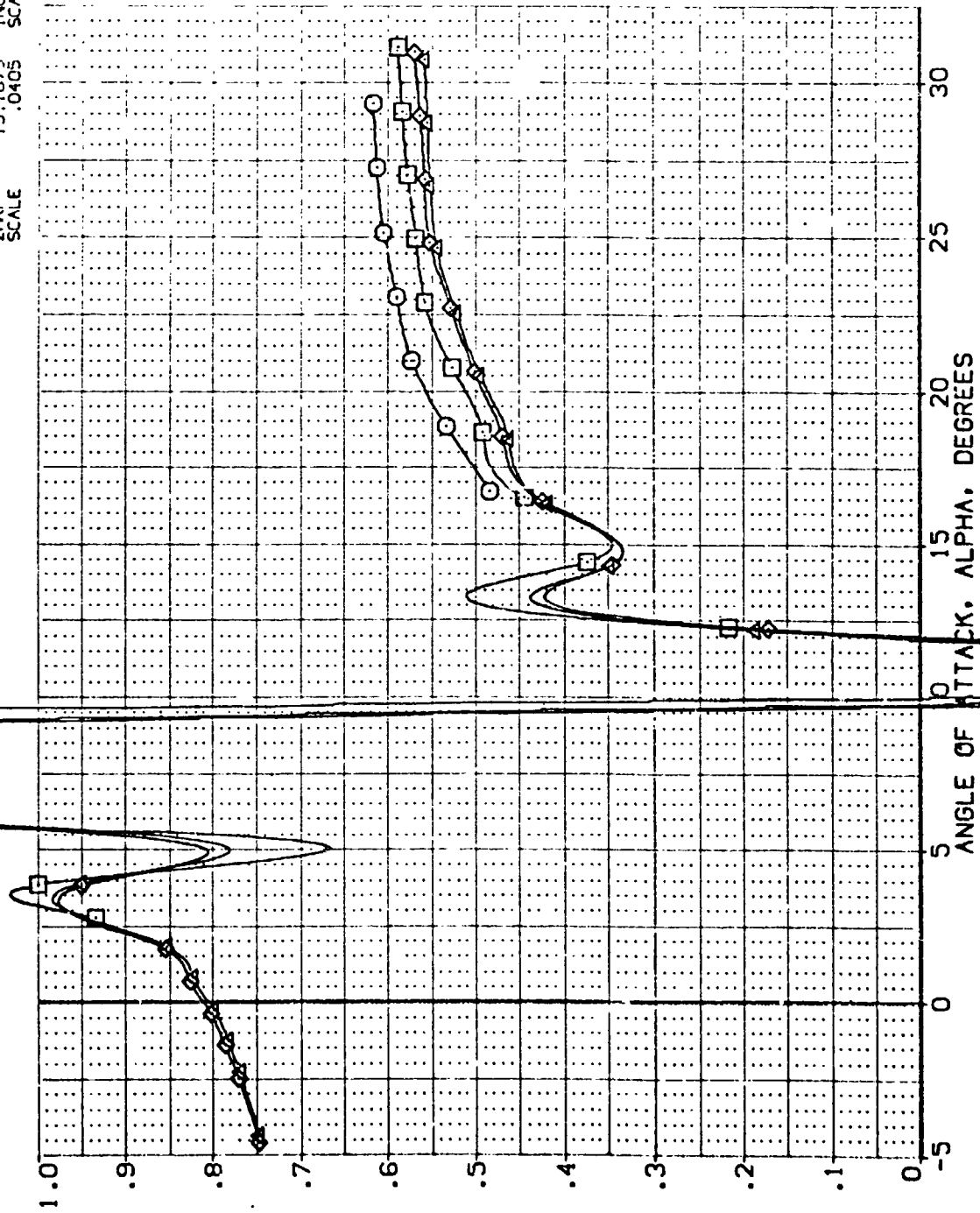


FIG 18 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON. ELEVON = -20  
(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

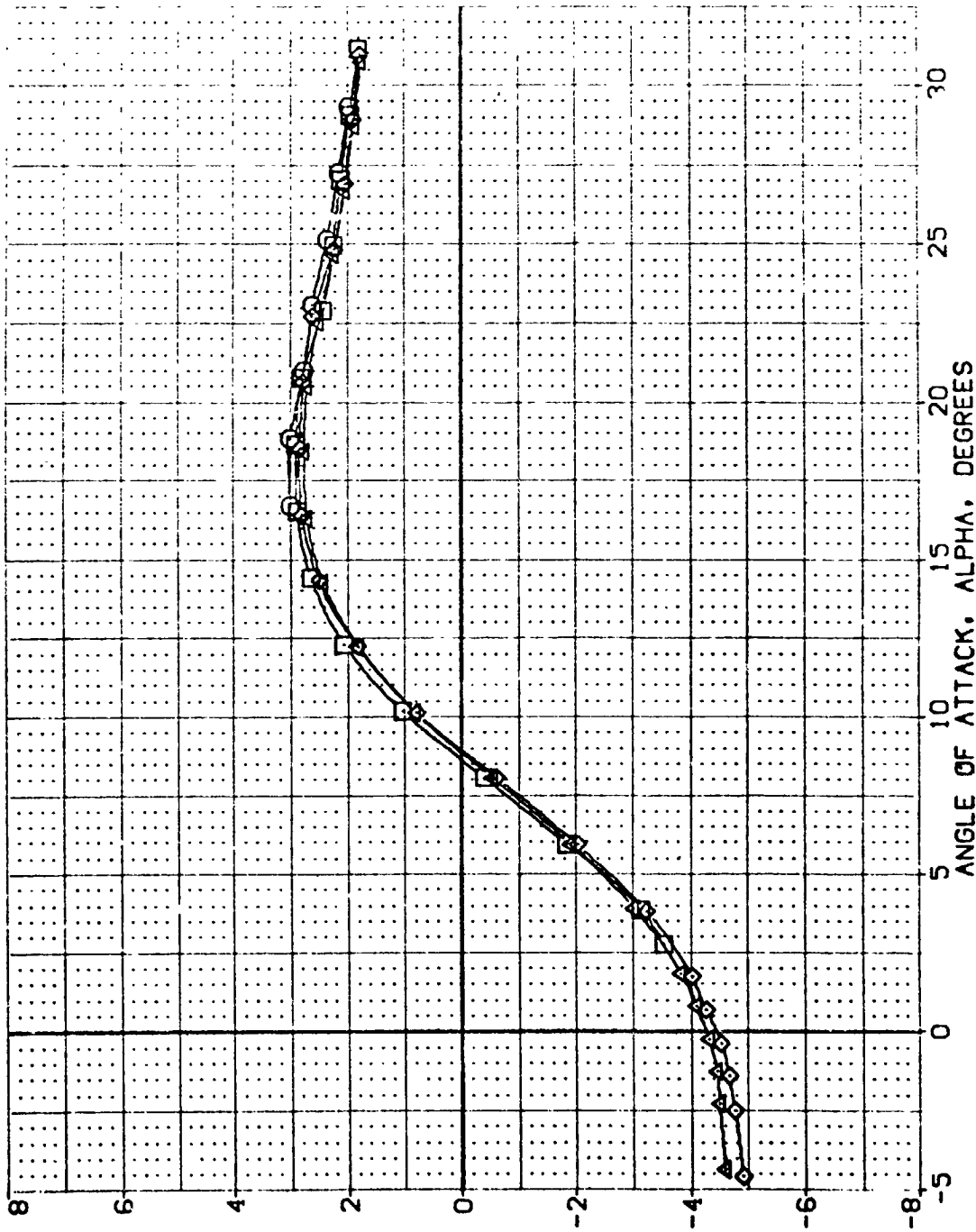
(80Z066)	□	0A628	B26C56 547F8443V  6E28VBR5X10
(80Z067)	○	0A628	B26C56 547F8443V  6E28VBR5X10
(80Z076)	◇	0A628	B26C56 547F8443V  6E28VBR5X10
(80Z313)	△	0A628	B26C56 547F8443V  6E28VBR5X10

ELEVON HUBV SPOBRK BOFLAP

-20.000	.035	.000	-12.000
-20.000	.125	.000	-12.000
-20.000	.265	.000	-12.000

REFERENCE INFORMATION

SREF	4.4113	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1675	INCHES
SCALE	.0105	SCALE



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 18 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES OMS ON, ELEVON = -20

(A)MACH = .20



DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (B02071)    OAS28 B26C9G1 SMT7 8J43V116E28V8RSX10  
 (B02072)    OAS28 B26C9G1 SMT7 8J43V116E28V8RSX10  
 (B02310)    OAS28 B26C9G1 SMT7 8J43V116E28V8RSX10

ELEVON    H/BV    SPOBRK    BOFLAP  
 .000    .125    .000    22.000  
 .000    .285    .000    22.000  
 .000       .000    22.000

REFERENCE INFORMATION  
 SREF    4.4119    SO.FT.  
 LREF    19.2299    INCHES  
 BREF    37.9359    INCHES  
 XMRP    43.5974    INCHES  
 YMRP    .0000    INCHES  
 ZMRP    15.1875    INCHES  
 SCALE    .0405    SCALE

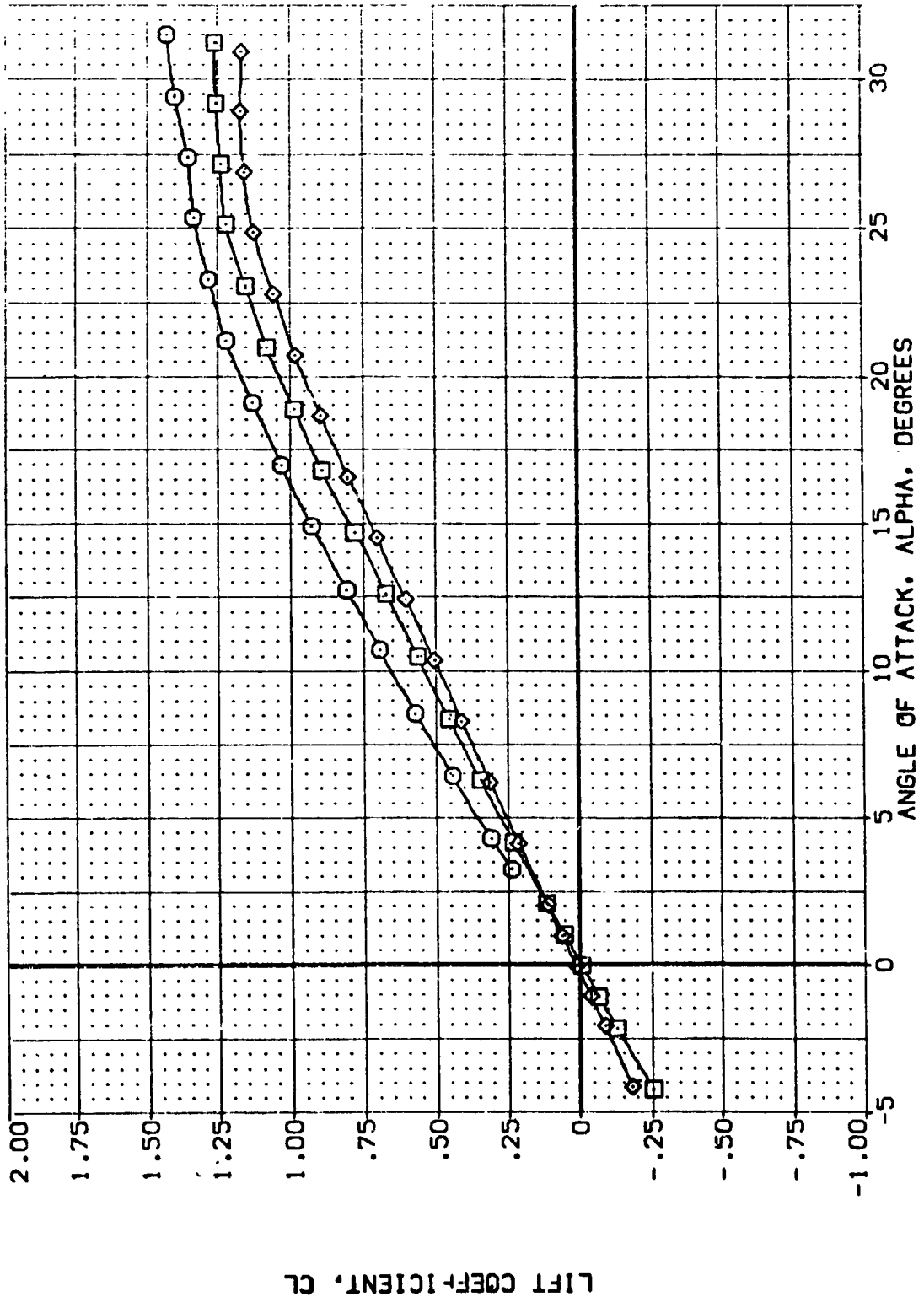
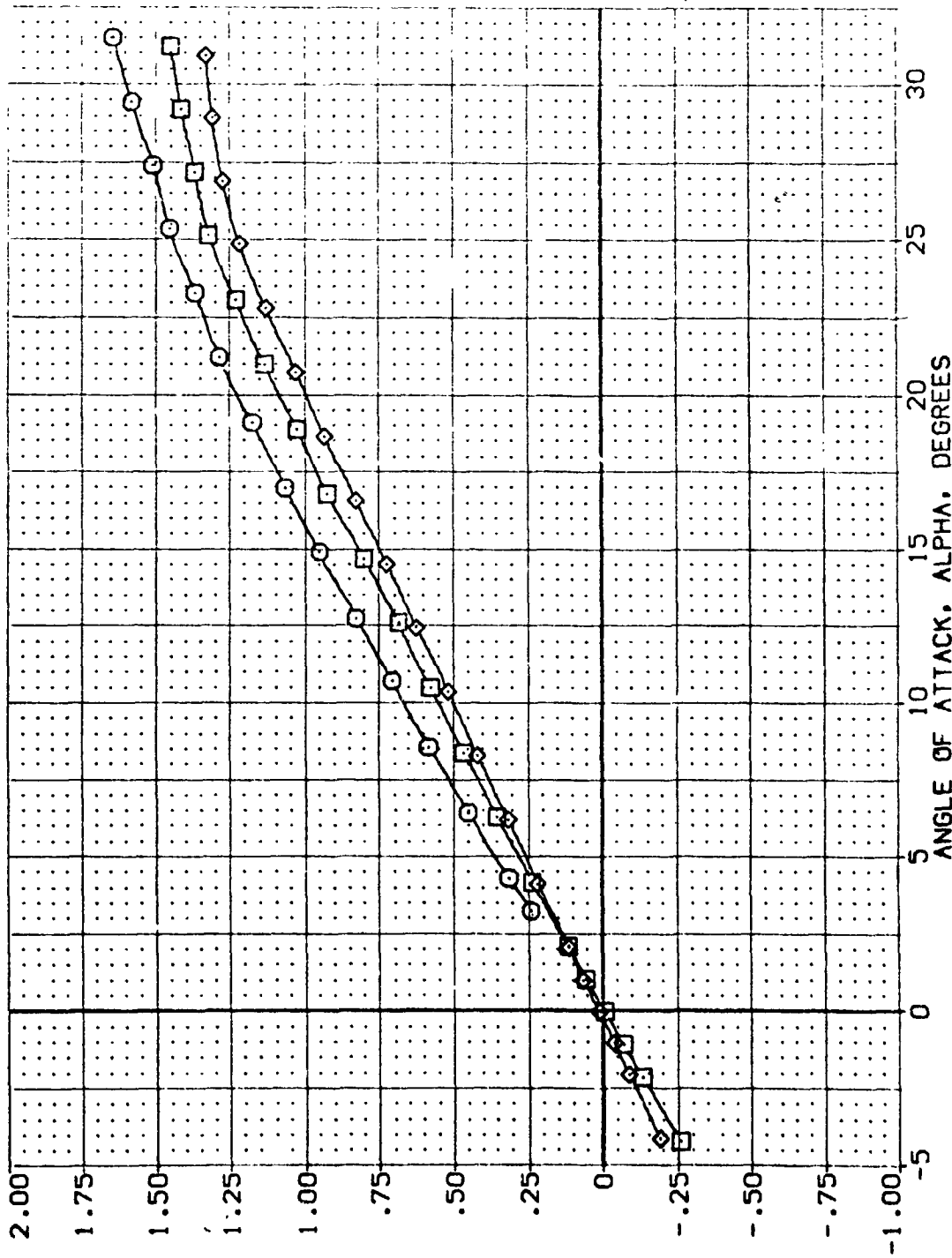


FIG 19 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, BOFLAP = 22.5  
 (A) MACH = .20    PAGE 279

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02071) Q B26C9G|S7F6J43V|16E28V85X10  
 (B02072) Q B26C9G|S7F6J43V|16E28V85X10  
 (B02310) Q B26C9G|S7F6J43V|16E28V85X10

ELEVON H/BV SPOBRK BDFLAP  
 .000 .125 .000 22.000  
 .000 .285 .000 22.000  
 .000 .000 .000 22.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BRKF 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP 15.1000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 19 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, BDFLAP = 22.5  
 MACH = .20 PAGE 280



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEV(I)	H/VB	SFOBRK	BOFLAP	REFERENCE INFORMATION
(B02071)	B26C9G SM7F 6J43V 16E28V8FSX10	.000	.125	.000	22.000	SREF 4.4119 SO.FT.
(B02072)	B26C9G SM7F 6J43V 16E28V8FSX10	.000	.265	.000	22.000	LREF 19.2299 INCHES
(B02310)	B26C9G SM7F 6J43V 16E28V8FSX10	.000		.000	22.000	BRFF 37.9359 INCHES
						XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

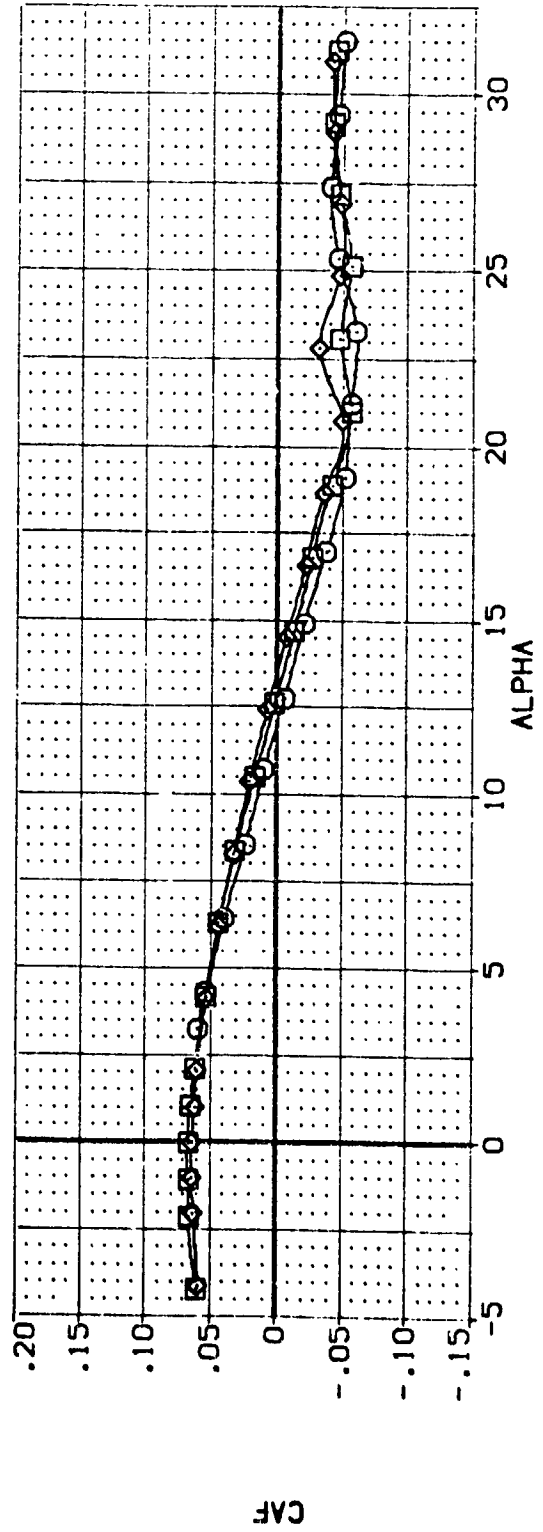
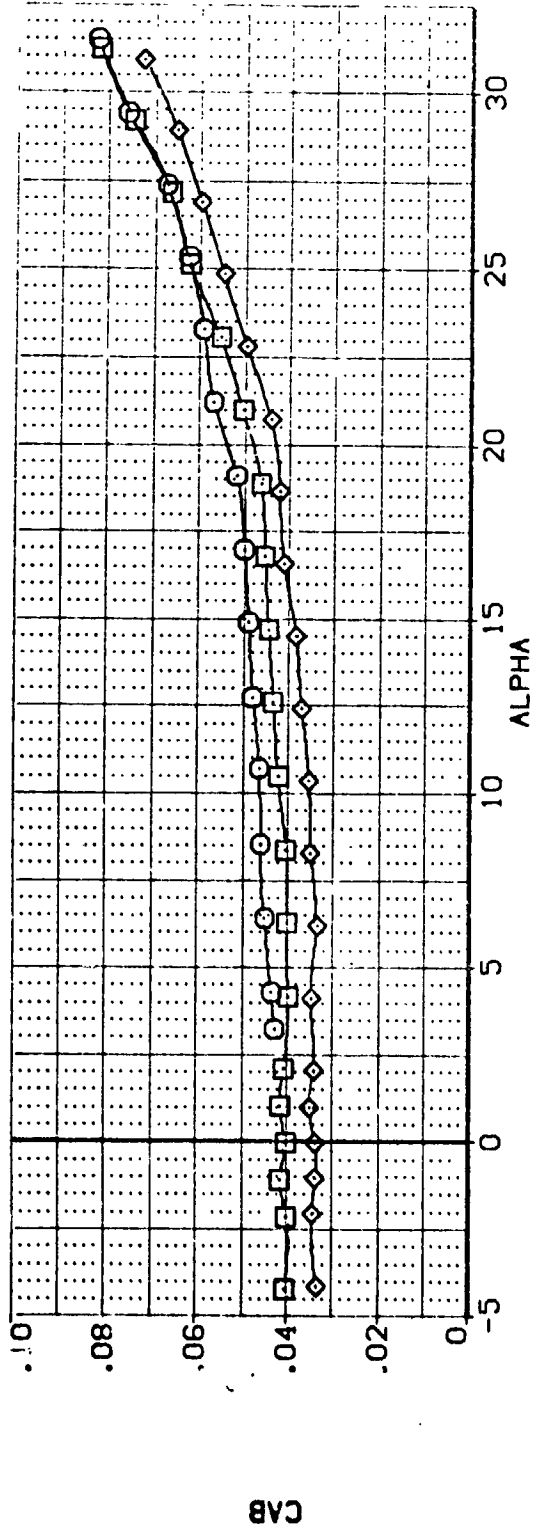


FIG 19 EFFECT OF GROUND HT., UNDERWING PODDED ENGINES ON, BOFLAP = 22.5  
 (A) MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(802071)	Q	0A628	B26C9G 5M7F8J43V 16E28V8RSX10
(802072)	Q	0A628	B26C9G 5M7F8J43V 16E28V8RSX10
(802310)	Q	0A628	B26C9G 5M7F8J43V 16E28V8RSX10

ELEVON H/WB SPOBRK BDFLAP

.000	.000	.000	22.000
.000	.125	.000	22.000
.000	.285	.000	22.000

REFERENCE INFORMATION

SREF	4.4119	SQ.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

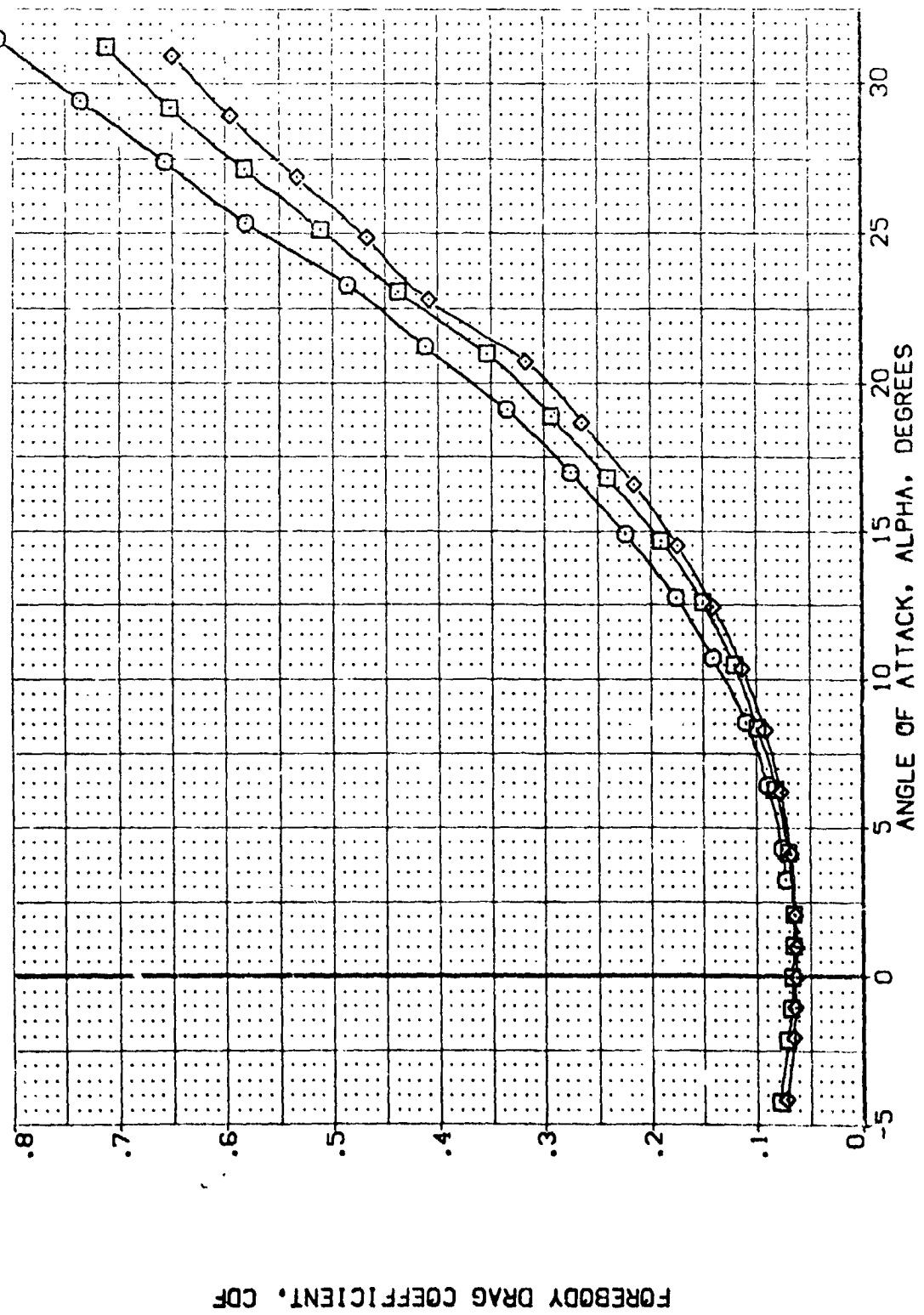


FIG 19 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, BDFLAP = 22.5  
 (A)MACH = .20





DATA SET SYMBOL: (80Z071), (80Z072), (80Z310)  
 CONFIGURATION DESCRIPTION: 0A628 B26C9G|5M7F8J43V||6E28V8RSX10, 0A628 B26C9G|5M7F8J43V||6E28V8RSX10, 0A628 B26C9G|5M7F8J43V||6E28V8RSX10  
 REFERENCE INFORMATION: SREF 4.4119 SO.FT, LREF 19.2299 INCHES, BREF 37.5359 INCHES, XMRP 43.5974 INCHES, YMRP .0000 INCHES, ZMRP 15.1875 INCHES, SCALE .0405
 ELEVON H/VB SPOBRK BDFLAP: .000 .125 .000 22.000, .000 .285 .000 22.000, .000 .000 .000 22.000

PITCHING MOMENT COEFFICIENT, CLM

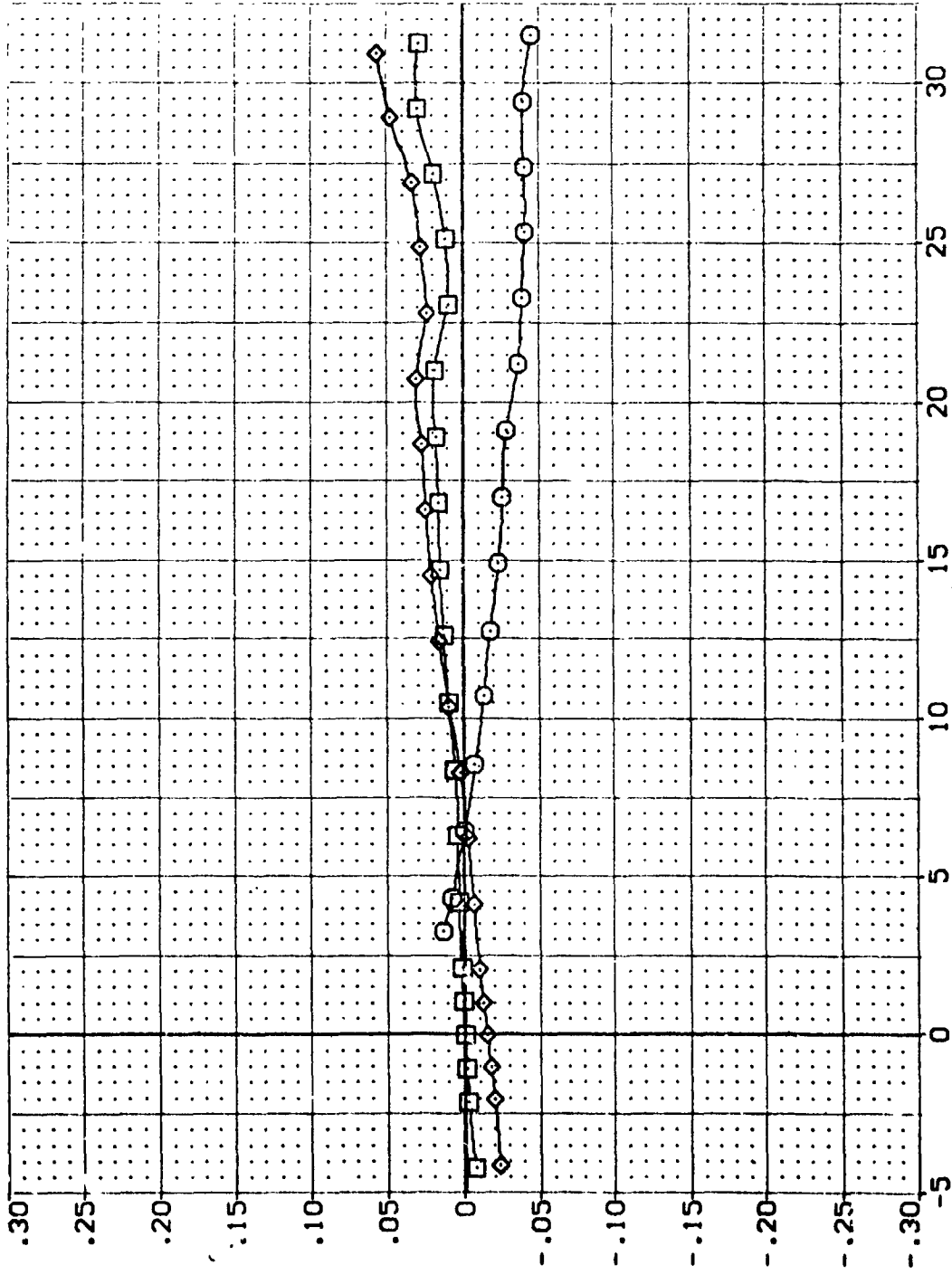


FIG 19 EFFECT OF GROUND HT., UNDERWING POODED ENGINES OMS ON, BDFLAP = 22.5  
 (A)MACH = .20 PAGE 283

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802071) Q 0A62B B26C9G1 SMT7 8J43V1 I6E28V8RSX10  
 (802072) X 0A62B B26C9G1 SMT7 8J43V1 I6E28V8RSX10  
 (802310) X 0A62B B26C9G1 SMT7 8J43V1 I6E28V8RSX10

ELEVON H/VB SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .125 .000 22.000 4.4119 SQ.FT.  
 .000 .285 .000 22.000 15.2299 INCHES  
 .000 .000 .000 22.000 37.9355 INCHES  
 XMRP .0000 43.5974 INCHES  
 ZMRP .0000 15.1875 INCHES  
 SCALE .0405 SCALE

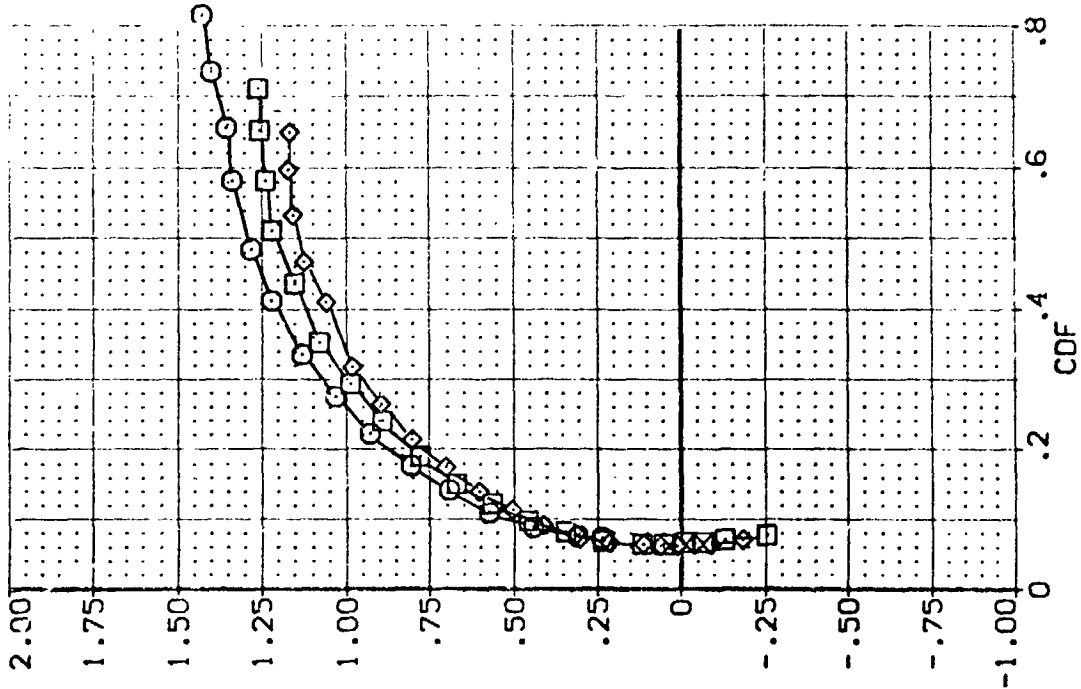
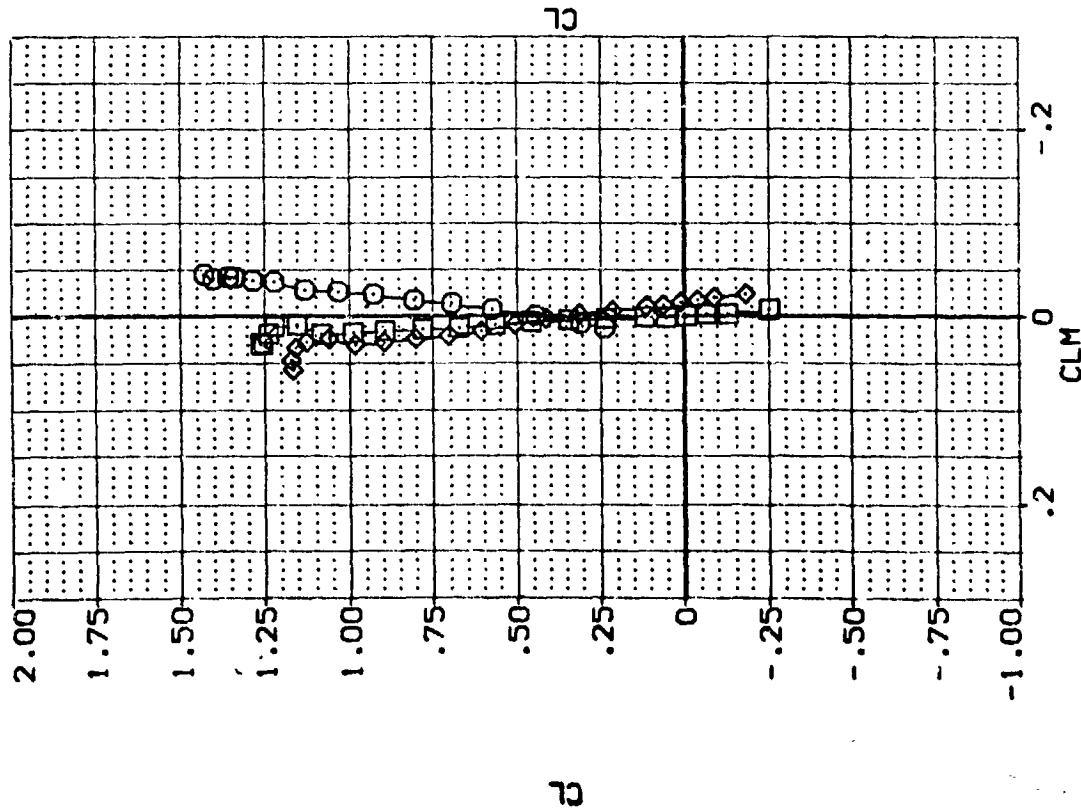


FIG 19 EFFECT OF GROUND HT.. UNDERWING PODDED ENGINES QMS ON, BOFLAP = 22.5  
 (A)MACH = .20 PAGE 284



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BV	SPDRK	BOFLAP	REFERENCE INFORMATION
(B02071)	0A628 B26C9G1S7F8J43V116E28V8RSX10	.000	.125	.000	22.000	4.4119 SQ. FT.
(B02072)	0A628 B26C9G1S7F8J43V116E28V8RSX10	.000	.285	.000	22.000	19.2299 INCHES
(B02310)	0A628 B26C9G1S7F8J43V116E28V8RSX10	.000		.000	22.000	37.9359 INCHES
						43.5374 INCHES
						.0000 INCHES
						15.1875 INCHES
						.0405 SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

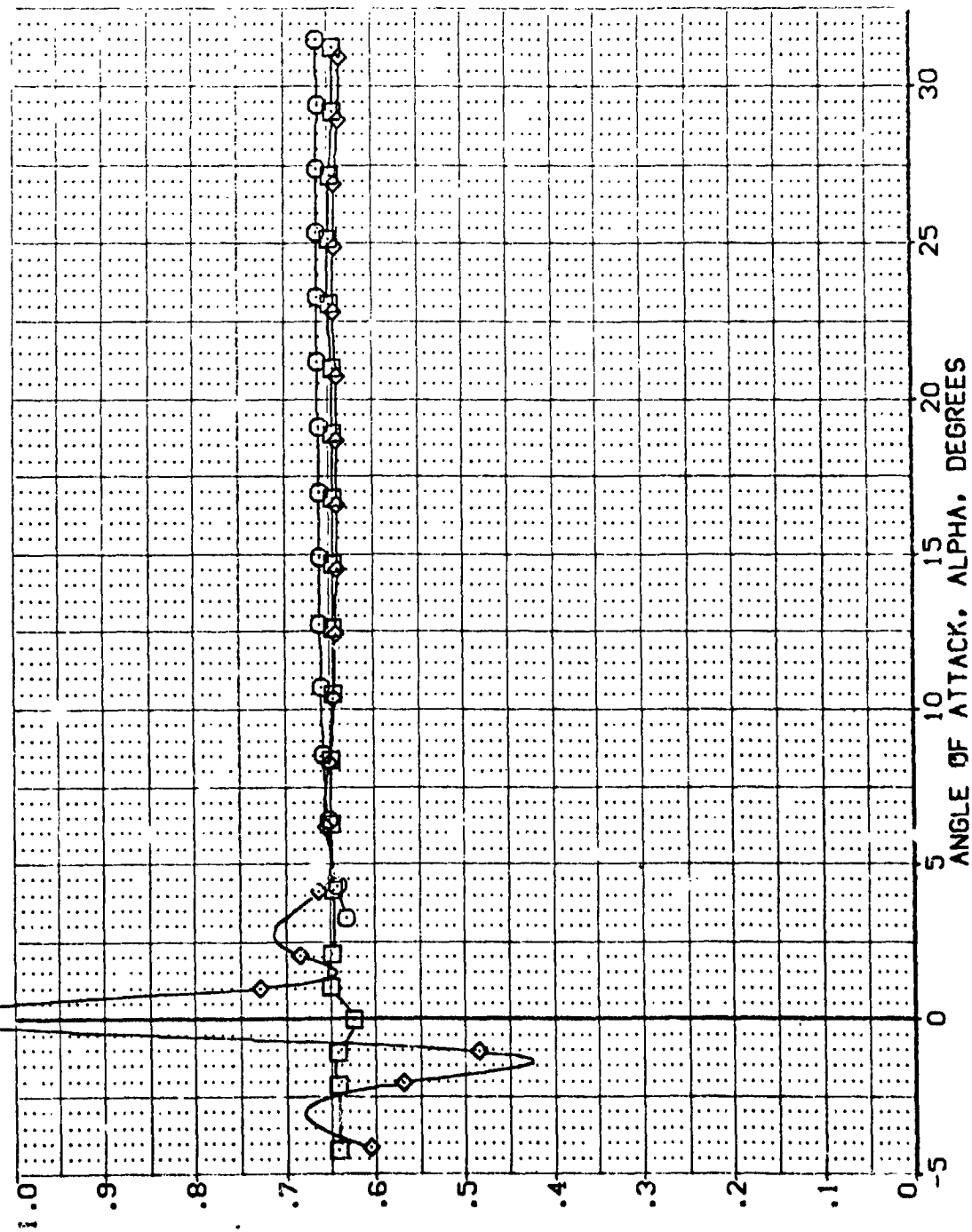


FIG 19 EFFECT OF GROUND HT., UNDERWING PODED ENGINES OMS ON, BOFLAP = 22.5  
 (A)MACH = .20 PAGE 285

**DATA SET SYMBOL**  
 (B02071)  
 (E02072)  
 (B02310)

**CONFIGURATION DESCRIPTION**  
 0A628 B26C9G1SMTF8J43W1ISE28V8RSX10  
 0A628 B26C9G1SMTF8J43W1ISE28V8RSX10  
 0A628 B26C9G1SMTF8J43W1ISE28V8RSX10

**ELEVATION** H/WB  
 .000 .125  
 .000 .265

**SPDRK**  
 .000  
 .000

**BOFLAP**  
 22.000  
 22.000  
 22.000

**REFERENCE INFORMATION**  
 SO.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 INCHES .0405  
 SCALE

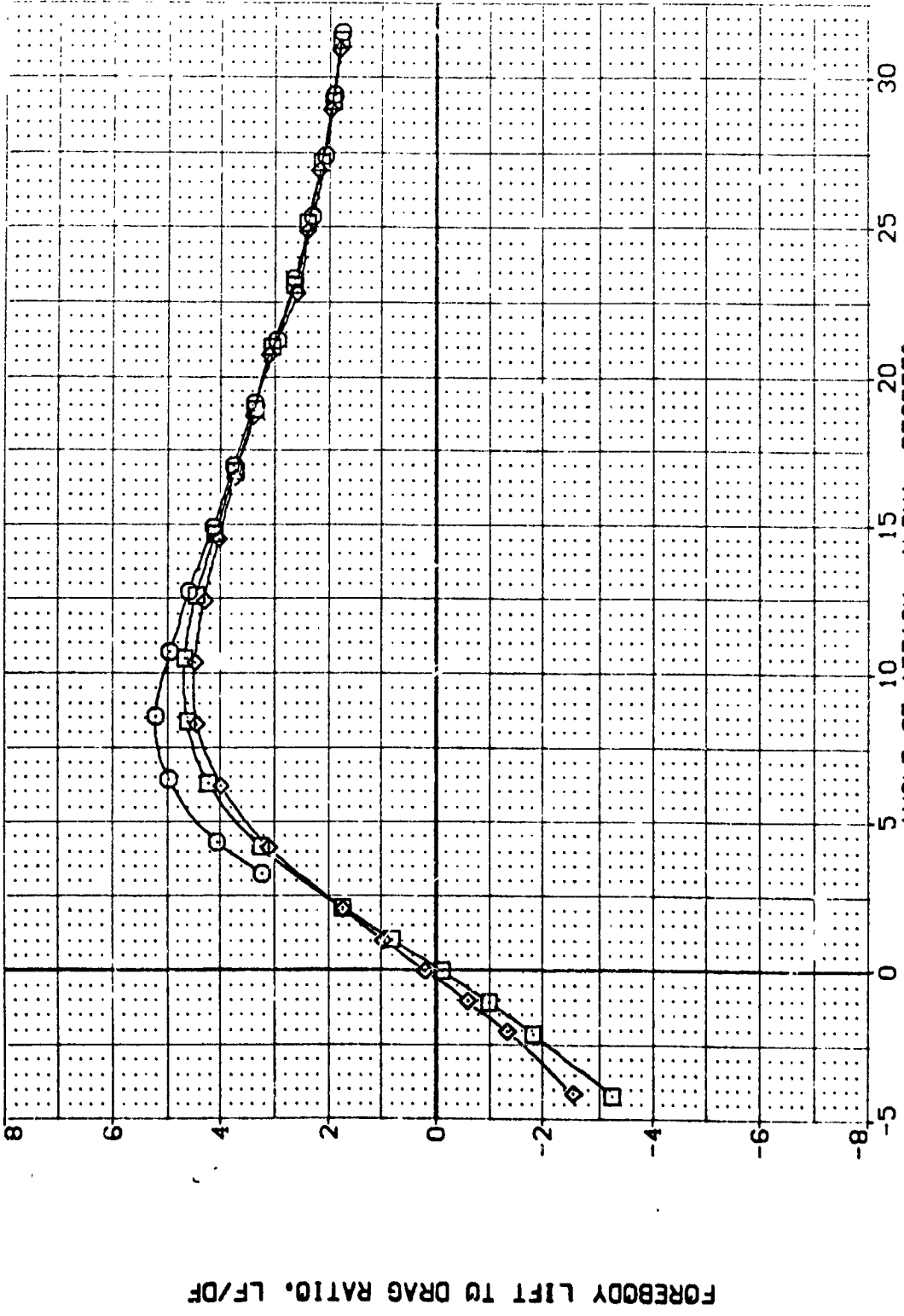


FIG 19 EFFECT OF GROUND HT., UNDERLYING POODED ENGINES RMS ON, BOFLAP = 22.5  
 (A)MACH = .2J

C-5

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(G0Z001)	0A6Z8 B26C5G1547F8 V116E28V8RSX9
(G0Z002)	0A6Z8 B26C5G1547F8 V116E28V8RSX9
(G0Z003)	0A6Z8 B26C5G1547F8 V116E28V8RSX9
(G0Z004)	0A6Z8 B26C5G1547F8 V116E28V8RSX9
(G0Z005)	0A6Z8 B26C5G1547F8 V116E28V8RSX9
(G0Z006)	0A6Z8 B26C5G1547F8 V116E28V8RSX9

ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
-4.000	15.000	25.000	-12.000	SREF 4.4119 SO.FT.
-2.000	15.000	25.000	-12.000	LREF 19.2299 INCHES
.000	15.000	25.000	-12.000	BREF 37.9359 INCHES
2.000	15.000	25.000	-12.000	XMRP 43.5974 INCHES
4.000	15.000	25.000	-12.000	YMRP 15.0000 INCHES
6.000	15.000	25.000	-12.000	ZMRP 15.1873 INCHES
				SCALE .0405

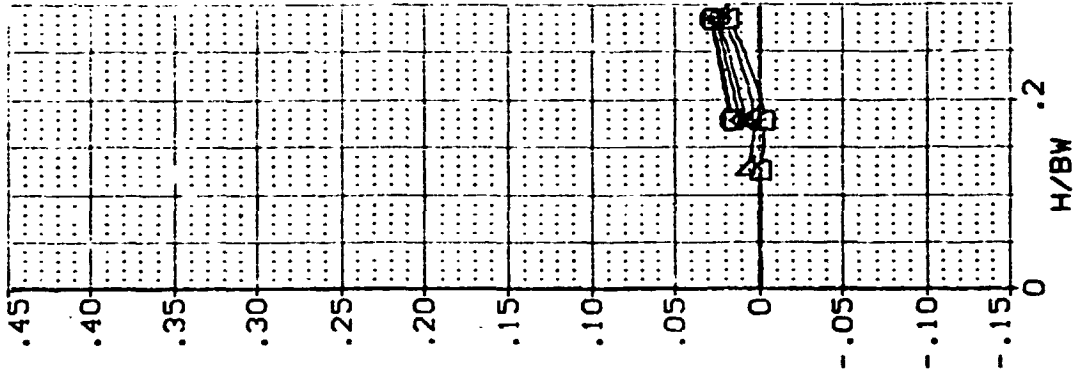
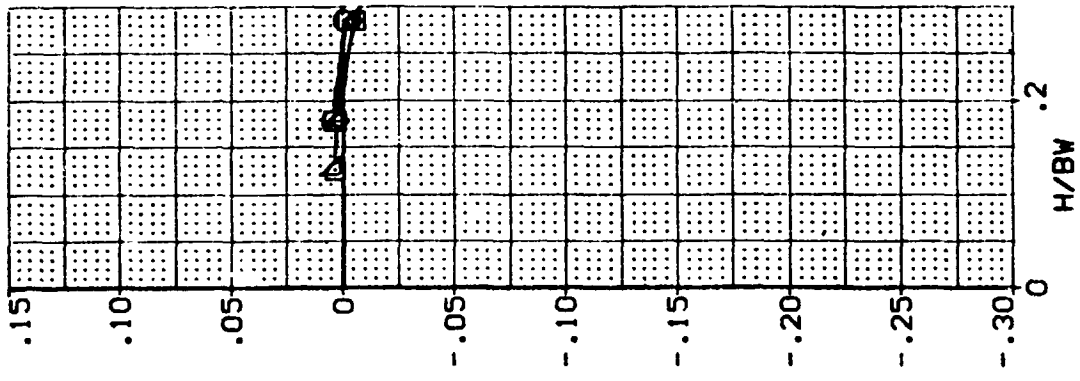
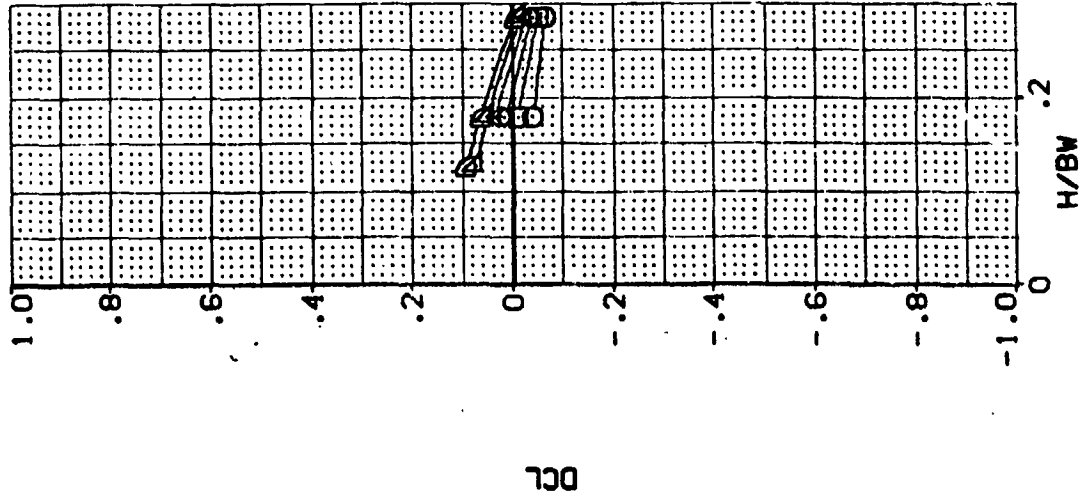


FIG 20 EFFECT OF GROUND HT., ELEVON = 15

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(GDZ007)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	8.000	15.000	25.000	-12.000	4.4119 SO.FT.
(GDZ008)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	10.000	15.000	25.000	-12.000	19.2293 INCHES
(GDZ009)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	12.000	15.000	25.000	-12.000	37.9359 INCHES
(GDZ010)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	14.000	15.000	25.000	-12.000	43.5974 INCHES
(GDZ011)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	16.000	15.000	25.000	-12.000	0.000 INCHES
(GDZ012)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	18.000	15.000	25.000	-12.000	15.1875 INCHES
						SCALE

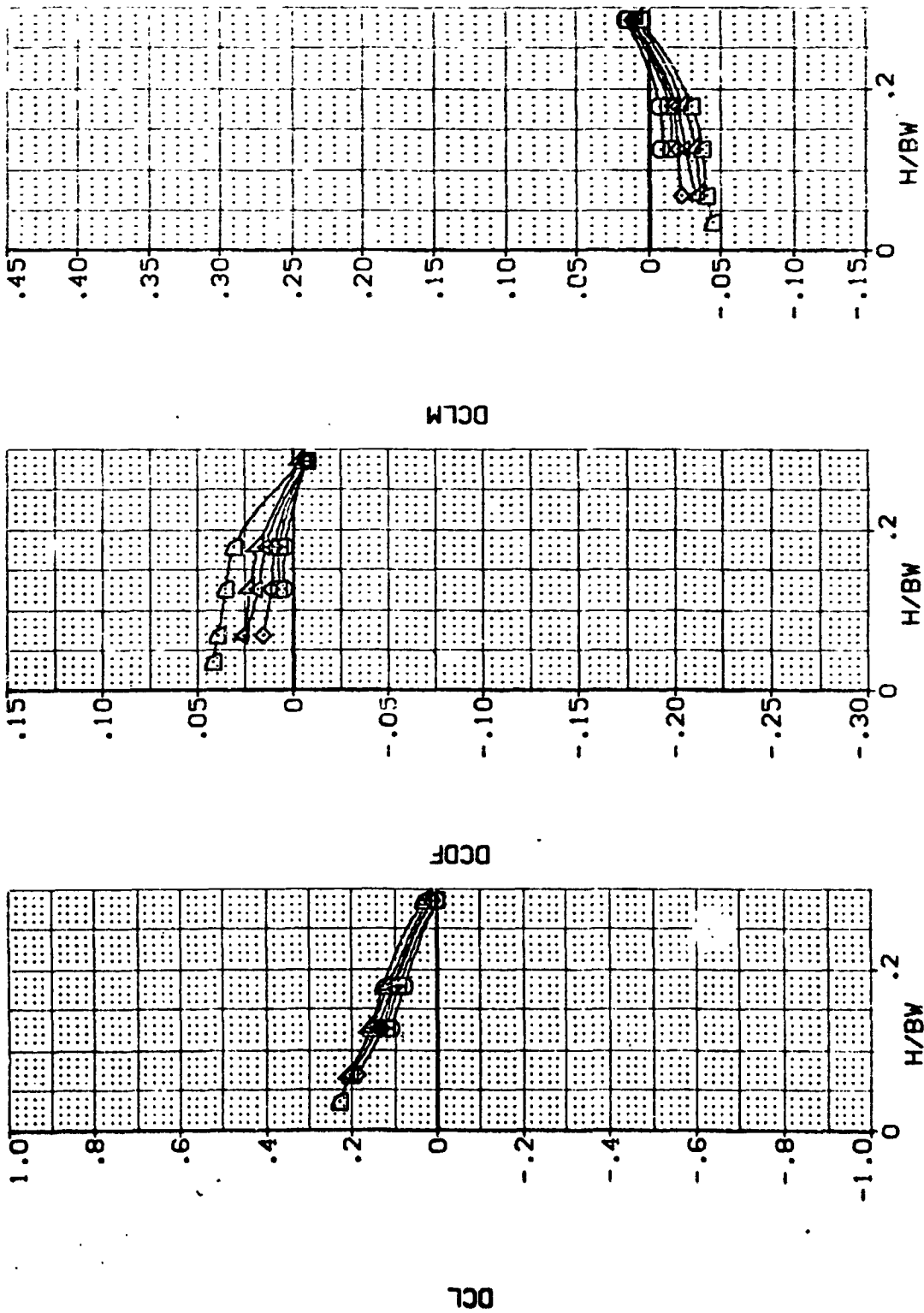


FIG 20 EFFECT OF GROUND HT., ELEVON = 15

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPDBRK	BOFLAP	REFERENCE INFORMATION
(G02013)	0A628 B26C9G1S47F8 V116E28V8R5X9	20.000	15.000	25.000	-12.000	SREF 4.4119 SQ.FT.
(G02014)	0A628 B26C9G1S47F8 V116E28V8R5X9	22.000	15.000	25.000	-12.000	LREF 19.2299 INCHES
(G02015)	0A628 B26C9G1S47F8 V116E28V8R5X9	24.000	15.000	25.000	-12.000	BREF 37.9359 INCHES
(G02016)	0A628 B26C9G1S47F8 V116E28V8R5X9	26.000	15.000	25.000	-12.000	XRRP 43.5974 INCHES
(G02017)	0A628 B26C9G1S47F8 V116E28V8R5X9	28.000	15.000	25.000	-12.000	YRRP .0000 INCHES
(G02018)	0A628 B26C9G1S47F8 V116E28V8R5X9	30.000	15.000	25.000	-12.000	ZRRP 15.1875 INCHES
						SCALE .0405 SCALE

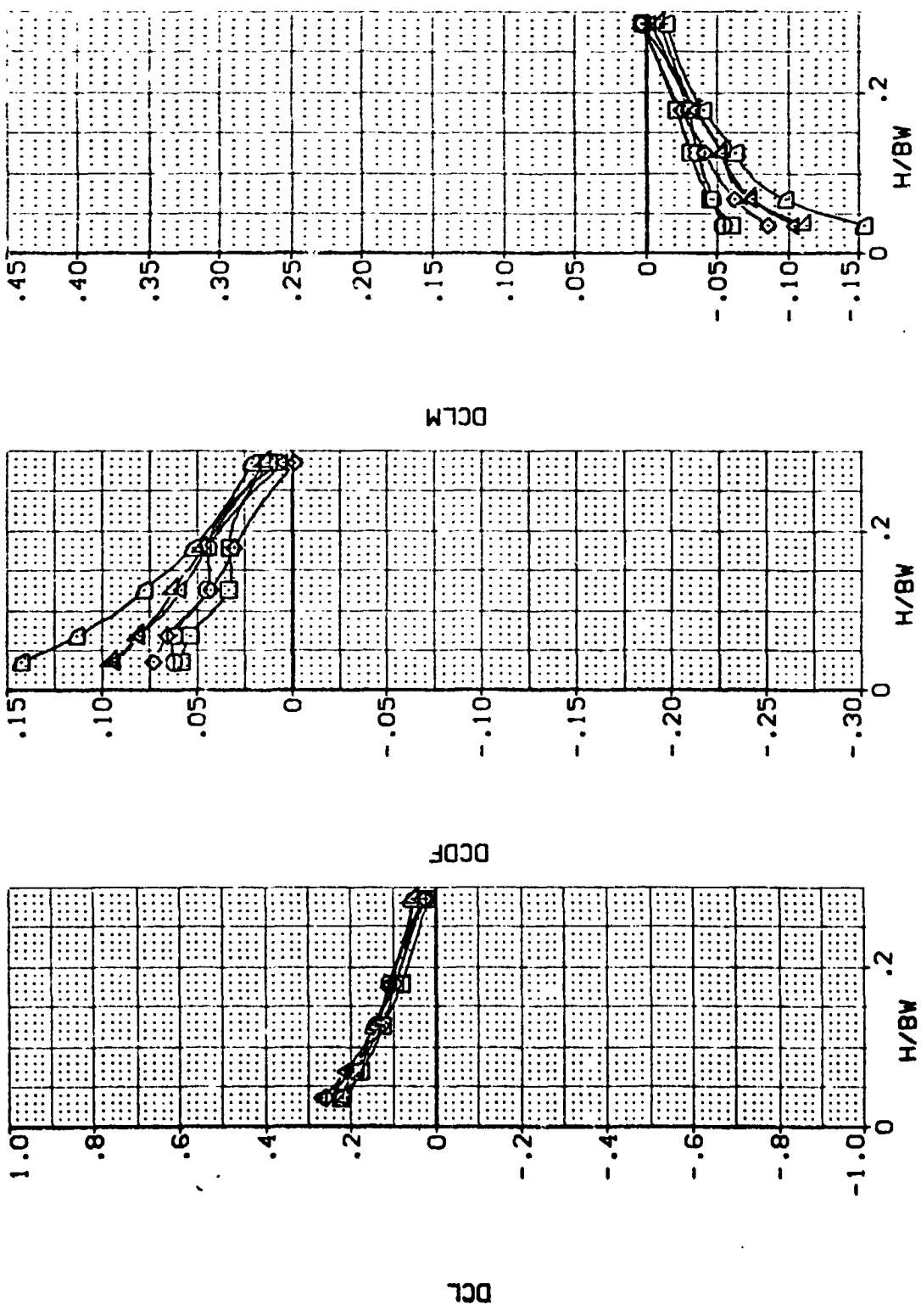


FIG 20 EFFECT OF GROUND HT., ELEVON = 15  
 (A) MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(G02019)	0A5Z8	B26C9G15M7F8	V116E28V8RSX9
(G02020)	0A5Z8	B26C9G15M7F8	V116E28V8RSX9
(G02021)	0A6Z8	B26C9G15M7F8	V116E28V8RSX9
(G02022)	0A6Z8	B26C9G15M7F8	V116E28V8RSX9
(G02023)	0A6Z8	B26C9G15M7F8	V116E28V8RSX9
(G02024)	0A6Z8	B26C9G15M7F8	V116E28V8RSX9

ALPHA ELEVON SPOBRK BOFLAP

-4.000	10.000	25.000	-12.000
-2.000	10.000	25.000	-12.000
2.000	10.000	25.000	-12.000
4.000	10.000	25.000	-12.000
6.000	10.000	25.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	SQ.FT.
LREF	19.2299	INCHES
PREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

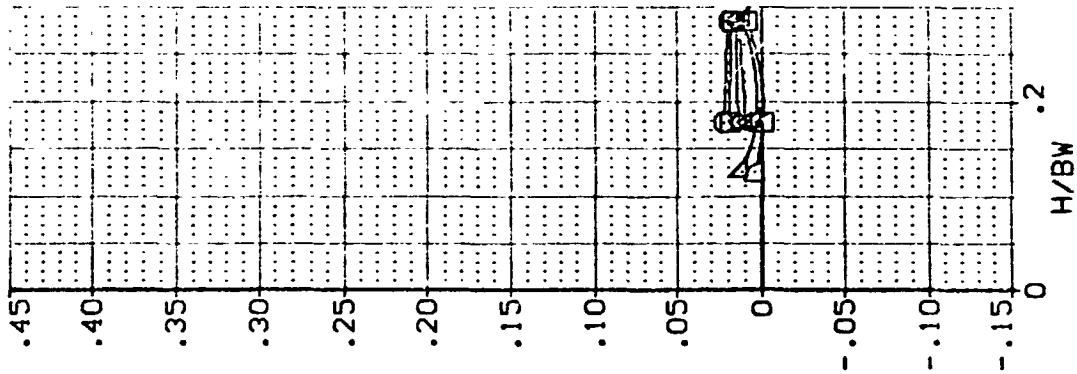
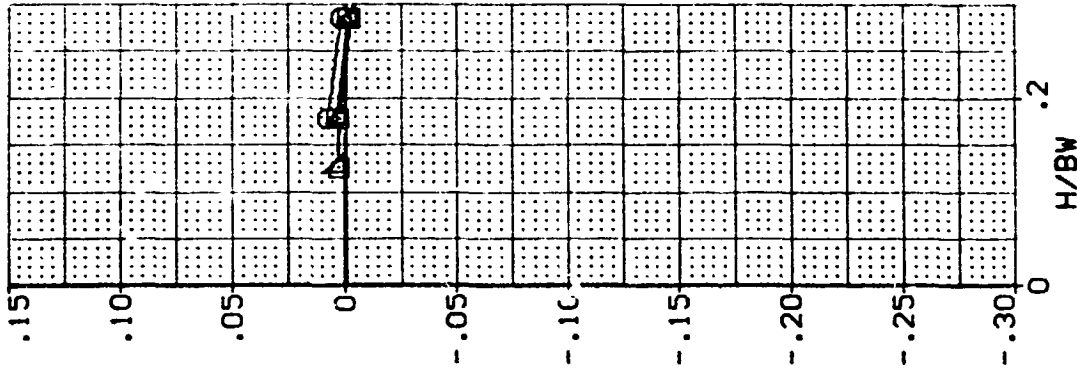
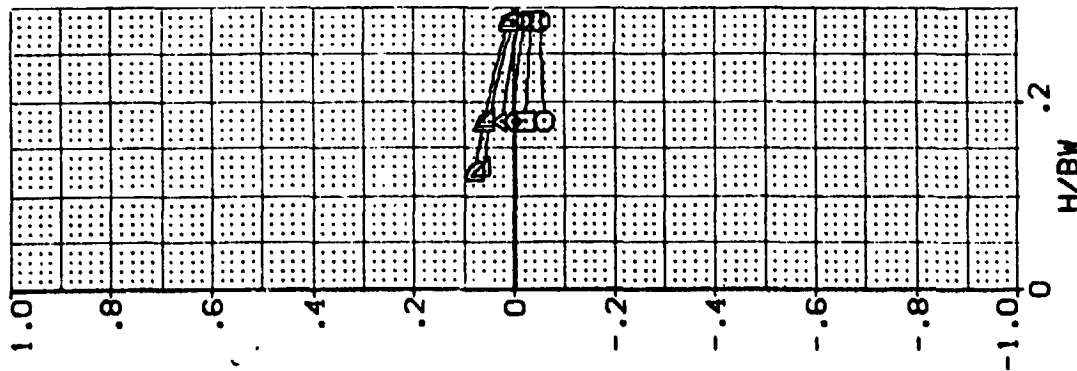


FIG 21 EFFECT OF GROUND HT., ELEVON = 10

(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
(G0Z025)	0A528 B26C9G1SMT7F8	8.000	10.000	25.000	-12.000	SREF 4.4119 50.FT.
(G0Z026)	0A528 B26C9G1SMT7F8	10.000	10.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z027)	0A528 B26C9G1SMT7F8	12.000	10.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z028)	0A528 B26C9G1SMT7F8	14.000	10.000	25.000	-12.000	YMRP 43.5974 INCHES
(G0Z029)	0A528 B26C9G1SMT7F8	16.000	10.000	25.000	-12.000	ZMRP .0000 INCHES
(G0Z030)	0A528 B26C9G1SMT7F8	18.000	10.000	25.000	-12.000	SCALE 15.1875 INCHES .0405 SCALE

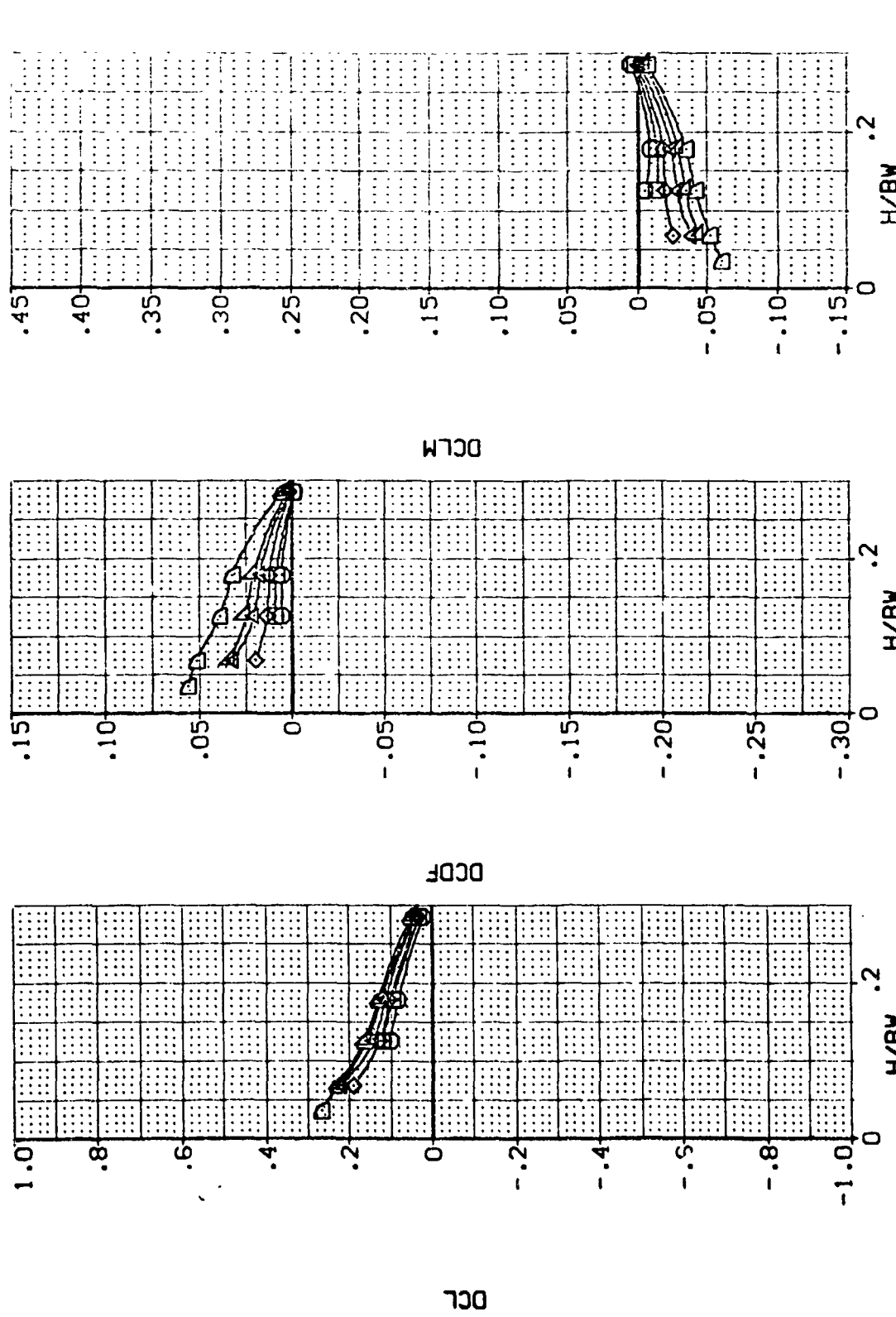


FIG 21 EFFECT OF GROUND HT., ELEVON = 10  
CAJ MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
(G0Z031)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	20.000	10.000	25.000	-12.000	SREF 4.4119 SO.FT.
(G0Z032)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	22.000	10.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z033)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	24.000	10.000	25.000	-12.000	BREF 37.9353 INCHES
(G0Z034)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	26.000	10.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z035)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	28.000	10.000	25.000	-12.000	YMRP .0000 INCHES
(G0Z036)	0A6Z8 B26C9G1547F8 V116E28V8RSX9	30.000	10.000	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

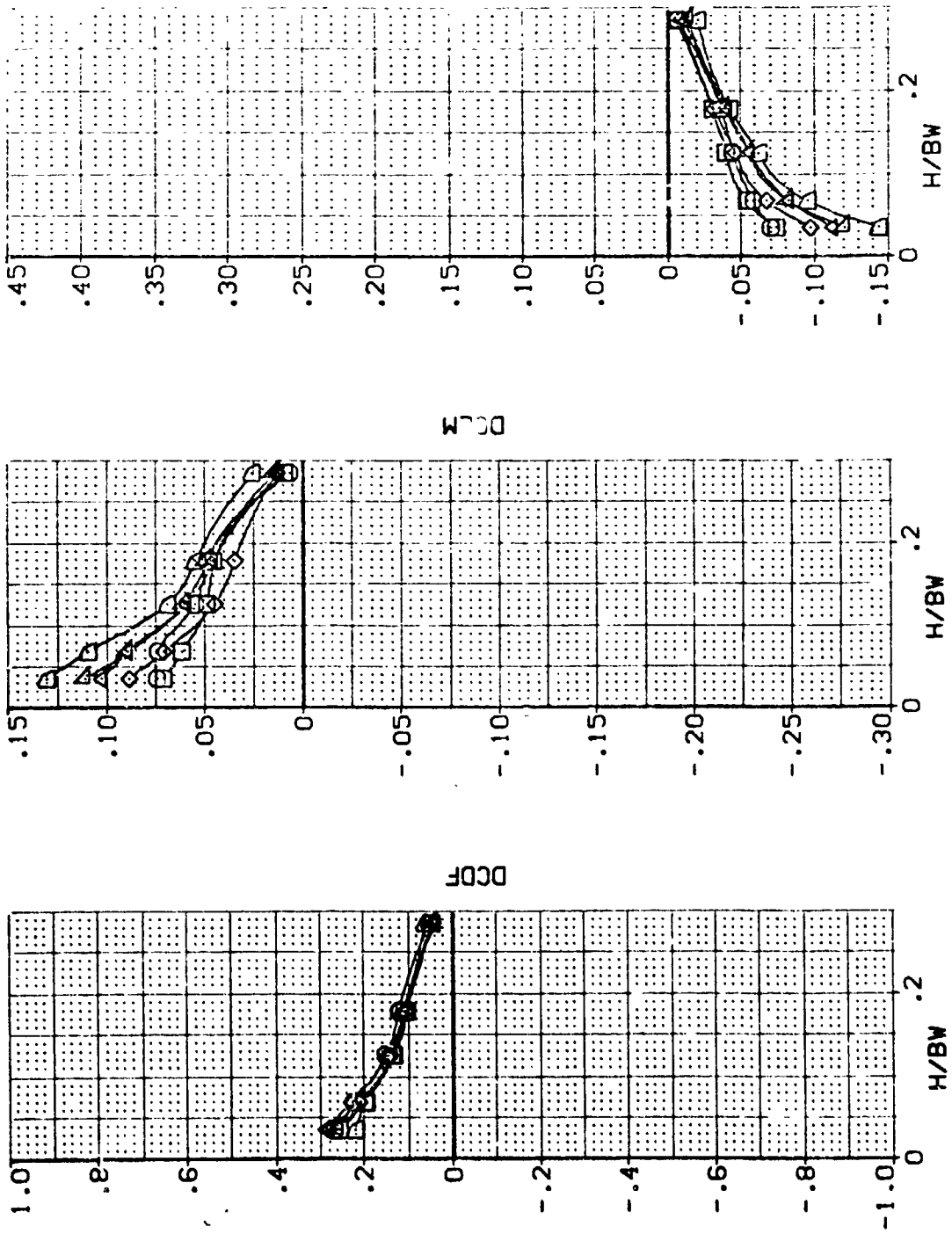


FIG 21 EFFECT OF GROUND HT., ELEVON = 10

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z037)	0A628 B26C9G SMT78 V116E28V8RSX9	-4.000	5.000	25.000	-12.000	SREF 4.4119 SQ. FT.
(G0Z038)	0A628 B26C9G SMT78 V116E28V8RSX9	-2.000	5.000	25.000	-12.000	LREF 15.2299 INCHES
(G0Z039)	0A628 B26C9G SMT78 V116E28V8RSX9	2.000	5.000	25.000	-12.000	BREF 37.9339 INCHES
(G0Z040)	0A628 B26C9G SMT78 V116E28V8RSX9	4.000	5.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z041)	0A628 B26C9G SMT78 V116E28V8RSX9	6.000	5.000	25.000	-12.000	YMRP .0000 INCHES
(G0Z042)	0A628 B26C9G SMT78 V116E28V8RSX9					ZMRP 15.1875 INCHES
						SCALE .0405

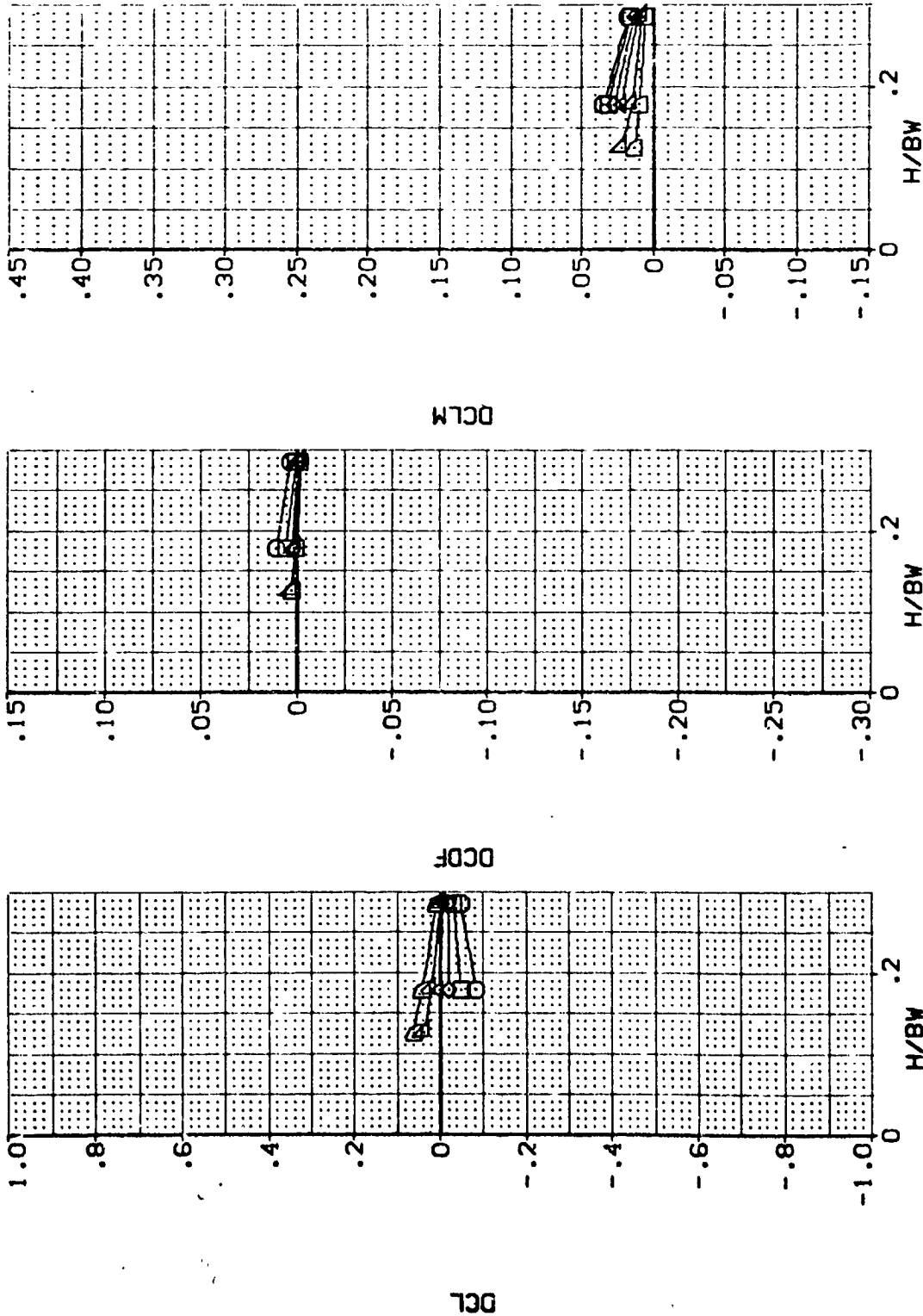


FIG 22 EFFECT OF GROUND HT. ELEVON = 5  
 (AJMACH = .20)

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(GDZ043)	04528 B26C9G1S7F8 V116E28V8RSX9
(GDZ044)	04528 B26C9G1S7F8 V116E28V8RSX9
(GDZ045)	04528 B26C9G1S7F8 V116E28V8RSX9
(GDZ046)	04528 B26C9G1S7F8 V116E28V8RSX9
(GDZ047)	04528 B26C9G1S7F8 V116E28V8RSX9
(GDZ048)	04528 B26C9G1S7F8 V116E28V8RSX9

ALPHA	ELEVON	SPOBR:	BOFLAP	REFERENCE INFORMATION
8.000	5.000	25.000	-12.000	SREF 4.4119 SO.FT.
10.000	5.000	25.000	-12.000	LREF 19.2298 INCHES
12.000	5.000	25.000	-12.000	BREF 37.9559 INCHES
14.000	5.000	25.000	-12.000	XTRP 43.3574 INCHES
16.000	5.000	25.000	-12.000	YTRP .0000 INCHES
18.000	5.000	25.000	-12.000	ZTRP 15.1875 INCHES
				SCALE .0405 SCALE

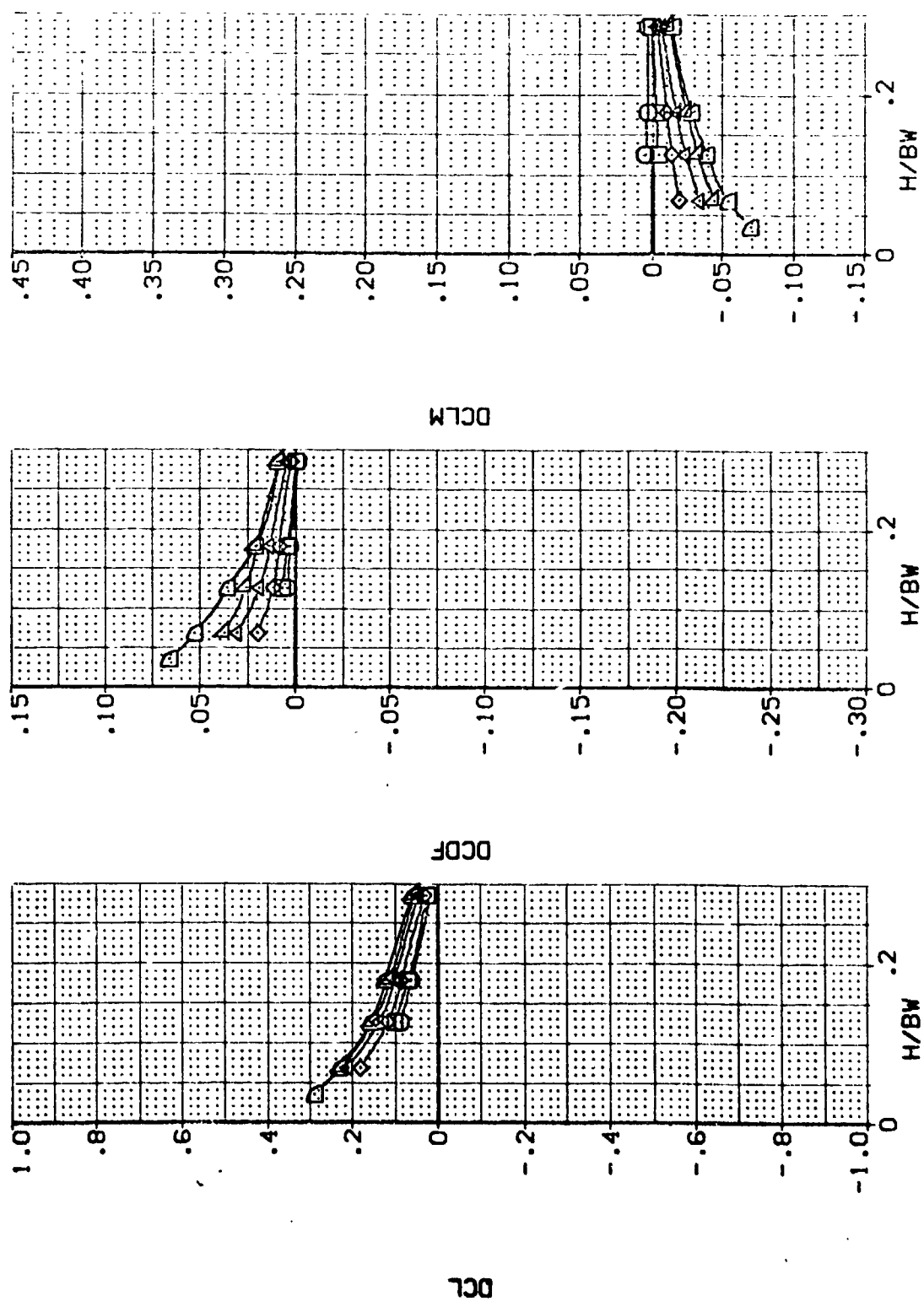


FIG 22 EFFECT OF GROUND HT., ELEVON = 5

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(G0Z049)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(G0Z050)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(G0Z051)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(G0Z052)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(G0Z053)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(G0Z054)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9

REFERENCE INFORMATION

SREF	4.4119	50.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

BOFLAP

SPOBRK	25.000
ELEVON	5.000
ALPHA	20.000
BOFLAP	-12.000
SPOBRK	25.000
ELEVON	5.000
ALPHA	22.000
BOFLAP	-12.000
SPOBRK	25.000
ELEVON	5.000
ALPHA	24.000
BOFLAP	-12.000
SPOBRK	25.000
ELEVON	5.000
ALPHA	26.000
BOFLAP	-12.000
SPOBRK	25.000
ELEVON	5.000
ALPHA	30.000

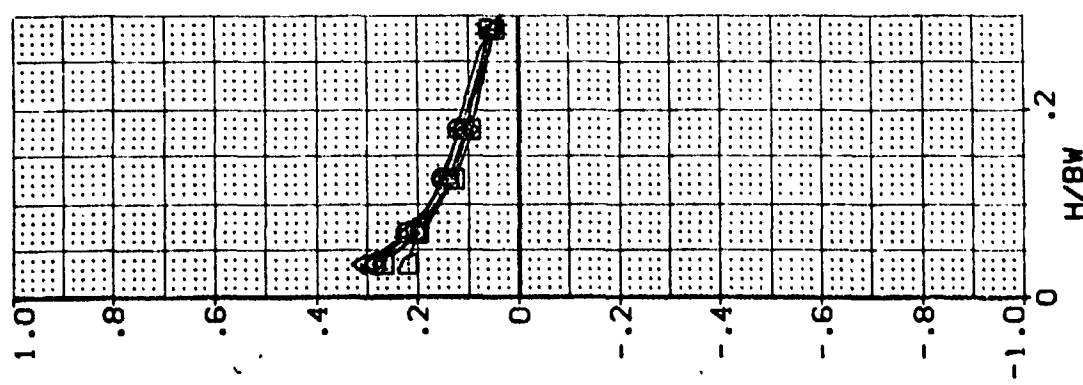
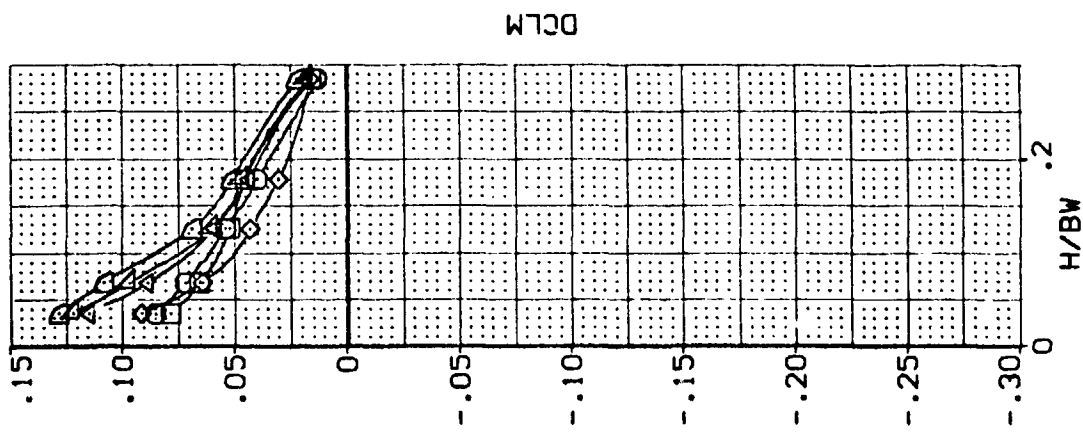
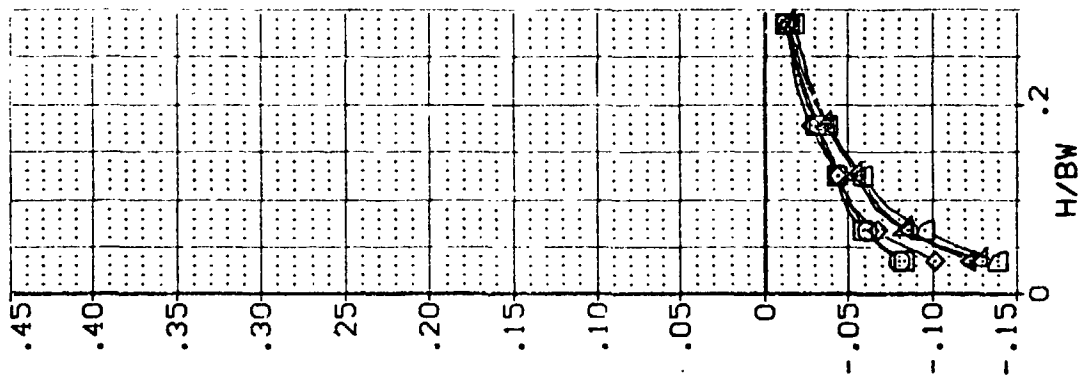


FIG 22 EFFECT OF GROUND HT., ELEVON = 5  
CAJ MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
(GDZ055)	0A628 B26C9G1SM7F8 V116E28V8K5X9	-4.000	.000	25.000	-12.000	SREF 4.4119 SQ. FT.
(GDZ056)	0A628 B26C9G1SM7F8 V116E28V8K5X9	-2.000	.000	25.000	-12.000	LREF 19.2298 INCHES
(GDZ057)	0A628 B26C9G1SM7F8 V116E28V8K5X9	2.000	.000	25.000	-12.000	BREF 37.9359 INCHES
(GDZ058)	0A628 B26C9G1SM7F8 V116E28V8K5X9	4.000	.000	25.000	-12.000	XMRP 43.5974 INCHES
(GDZ059)	0A628 B26C9G1SM7F8 V116E28V8K5X9	6.000	.000	25.000	-12.000	YMRP .0000 INCHES
(GDZ060)	0A628 B26C9G1SM7F8 V116E28V8K5X9			25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

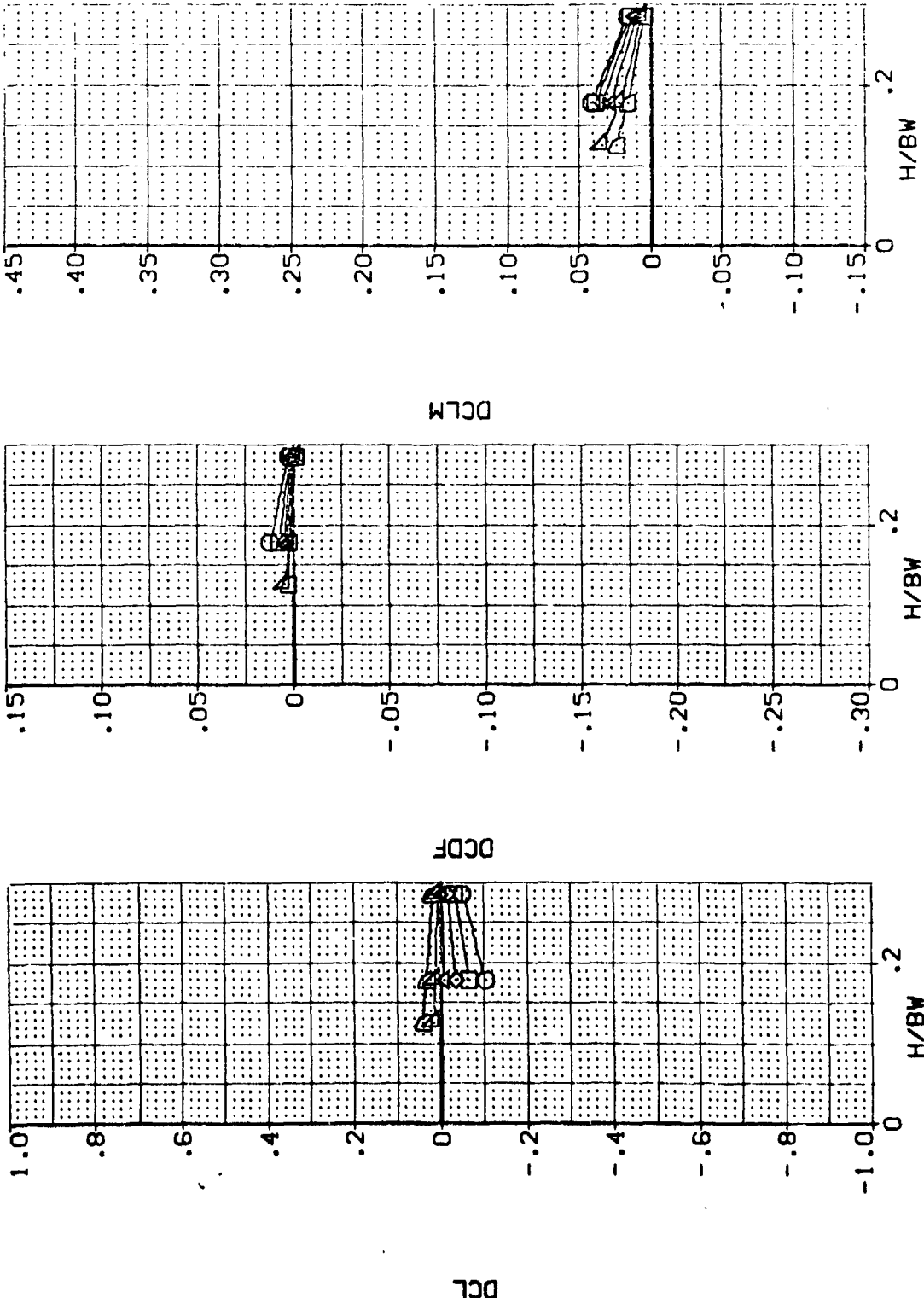


FIG 23 EFFECT OF GROUND HT., ELEVON = 0

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPDBRK	BDFLAP	REFERENCE INFORMATION	SO. FT.
(G0Z061)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	8.000	.000	25.000	-12.000	SREF	4.4119
(G0Z062)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	10.000	.000	25.000	-12.000	LREF	19.2298
(G0Z063)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	12.000	.000	25.000	-12.000	BREF	37.9339
(G0Z064)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	14.000	.000	25.000	-12.000	XMRP	41.5974
(G0Z065)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	16.000	.000	25.000	-12.000	ZMRP	.0000
(G0Z066)	0A6Z8 BZ6C9G1S47F8 V116E28V8R5X9	18.000	.000	25.000	-12.000	ZMRP	15.1875
						SCALE	.0405

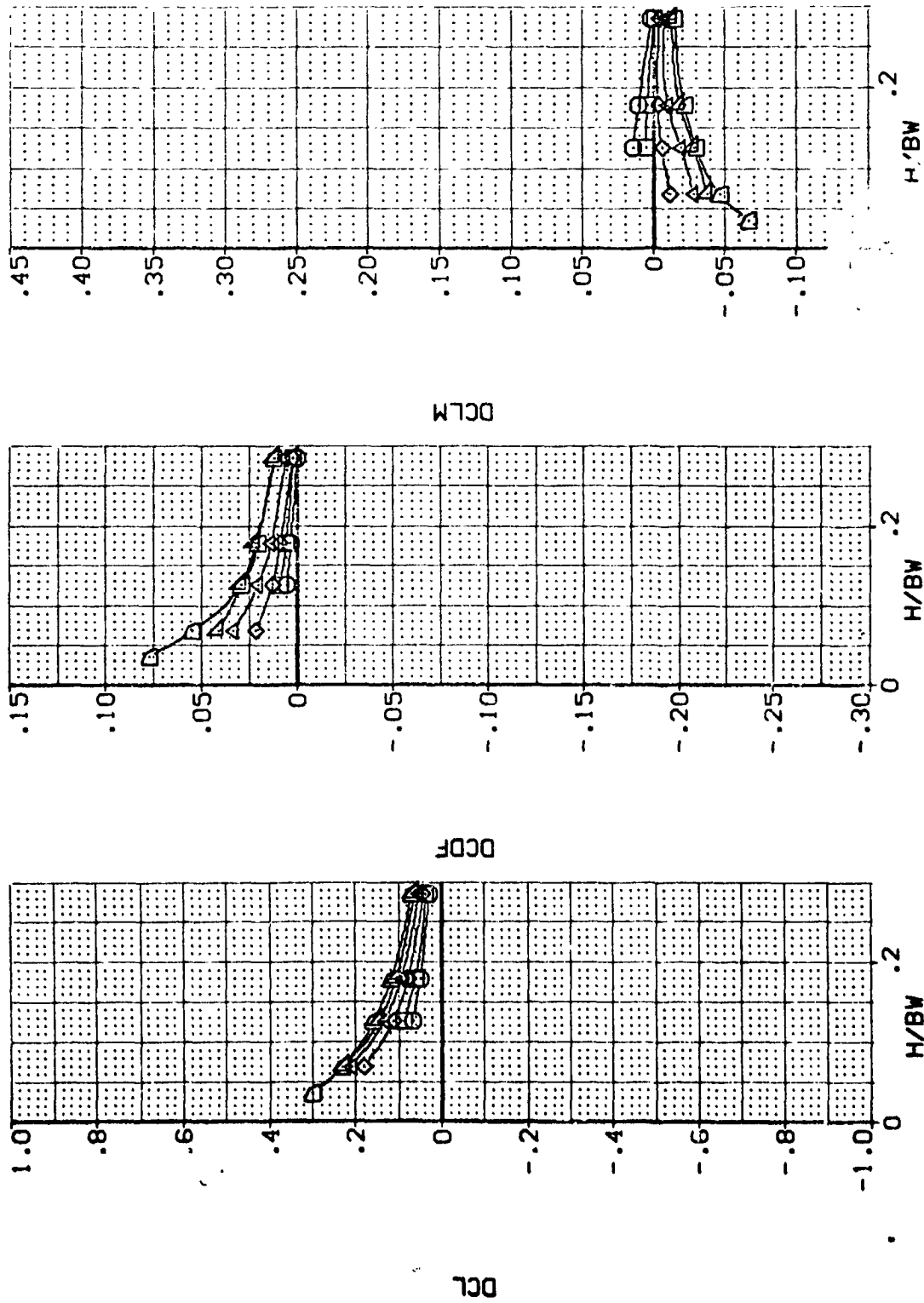


FIG 23 EFFECT OF GROUND HT., ELEVON = 0

(A) MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G02067)	0A528 B26C961 SM7F8 V116E28V8RSX9	20.000	.000	25.000	-12.000	4.4119 SQ.FT.
(G02068)	0A528 B26C961 SM7F8 V116E28V8RSX9	22.000	.000	25.000	-12.000	19.2299 INCHES
(G02069)	0A528 B26C961 SM7F8 V116E28V8RSX9	24.000	.000	25.000	-12.000	37.9359 INCHES
(G02070)	0A528 B26C961 SM7F8 V116E28V8RSX9	26.000	.000	25.000	-12.000	43.5974 INCHES
(G02071)	0A528 B26C961 SM7F8 V116E28V8RSX9	28.000	.000	25.000	-12.000	.0000 INCHES
(G02072)	0A528 B26C961 SM7F8 V116E28V8RSX9	30.000	.000	25.000	-12.000	15.1875 INCHES
						.0405 SCALE

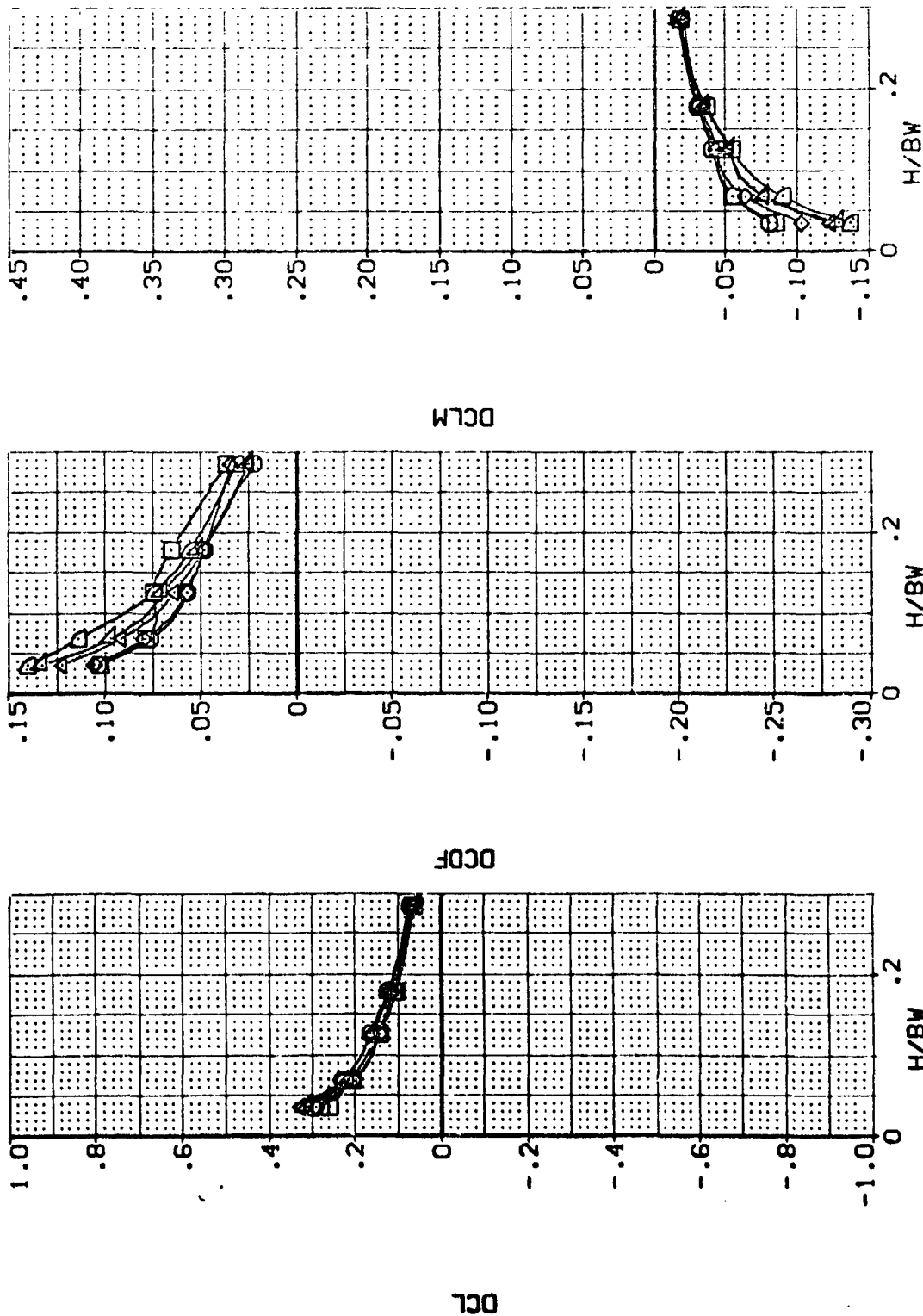


FIG 23 EFFECT OF GROUND HT., ELEVON = 0

(A)MACH = .20





DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(G02073)	QAS2F B26C9G1SMT7F8
(G02074)	QAS2L B26C9G1SMT7F8
(G02075)	QAS2B B26C9G1SMT7F8
(G02076)	QAS2S B26C9G1SMT7F8
(G02077)	QAS2T B26C9G1SMT7F8
(G02078)	QAS2V B26C9G1SMT7F8

ALPHA	ELEVON	SPOBRK	BDFLAP	REFER. LE INFORMATION
-4.000	-5.000	25.000	-12.000	SREF 4.4119 SQ.FT.
-2.000	-5.000	5.000	-12.000	LR.F 19.2299 INCHES
.000	-5.000	25.000	-12.000	BR.F 37.9359 INCHES
2.000	-5.000	25.000	-12.000	YMRP 43.5974 INCHES
4.000	-5.000	25.000	-12.000	ZMRP .0000 INCHES
6.000	-5.000	25.000	-12.000	SCALE 15.1875 INCHES
				.0405 SCALE

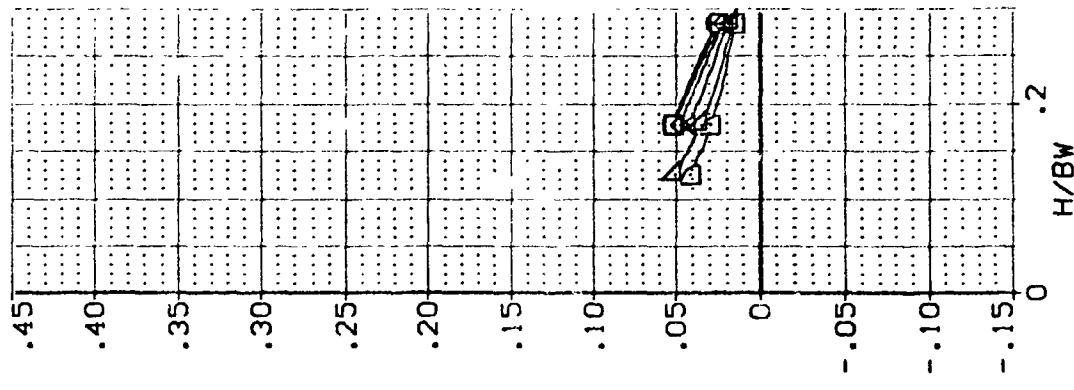
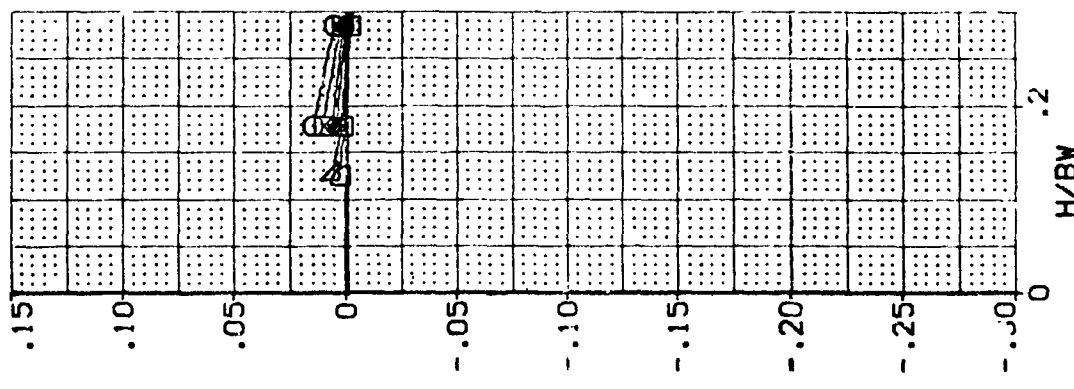
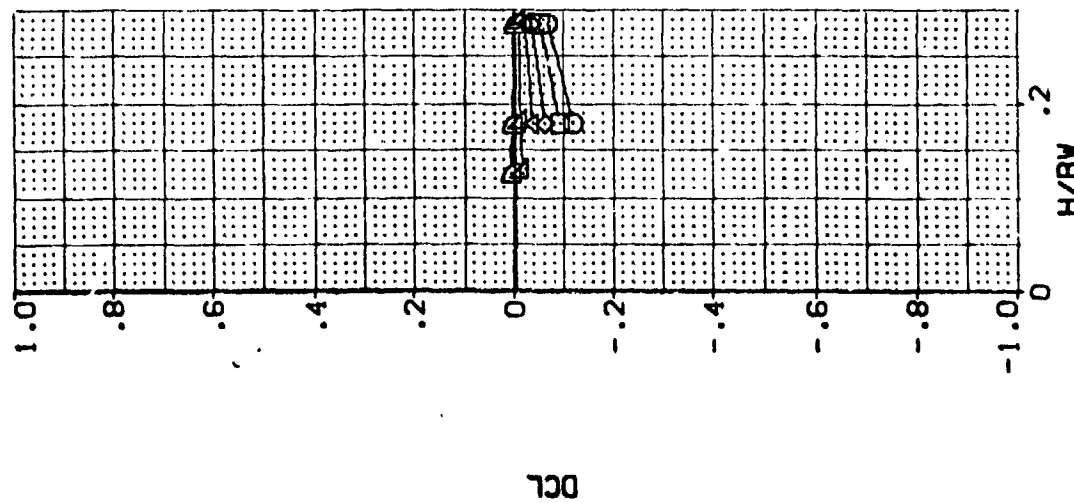


FIG 24 EFFECT OF GROUND HT.: ELEVON = -5  
(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(G0Z079)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9
(G0Z080)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9
(G0Z081)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9
(G0Z082)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9
(G0Z083)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9
(G0Z084)	0A6Z8 B26C9G1SMTF8 V116E28V8R5X9

ALPHA	ELEVON	SPDBRK	BOFLAP	REFERENCE INFORMATION
8.000	-5.000	25.000	-12.000	4.4119 SO.FT
10.000	-5.000	25.000	-12.000	19.2299 INCHES
12.000	-5.000	25.000	-12.000	37.9359 INCHES
14.000	-5.000	25.000	-12.000	43.5574 INCHES
16.000	-5.000	25.000	-12.000	.0000 INCHES
18.000	-5.000	25.000	-12.000	15.1875 INCHES
				.0405 SCALE

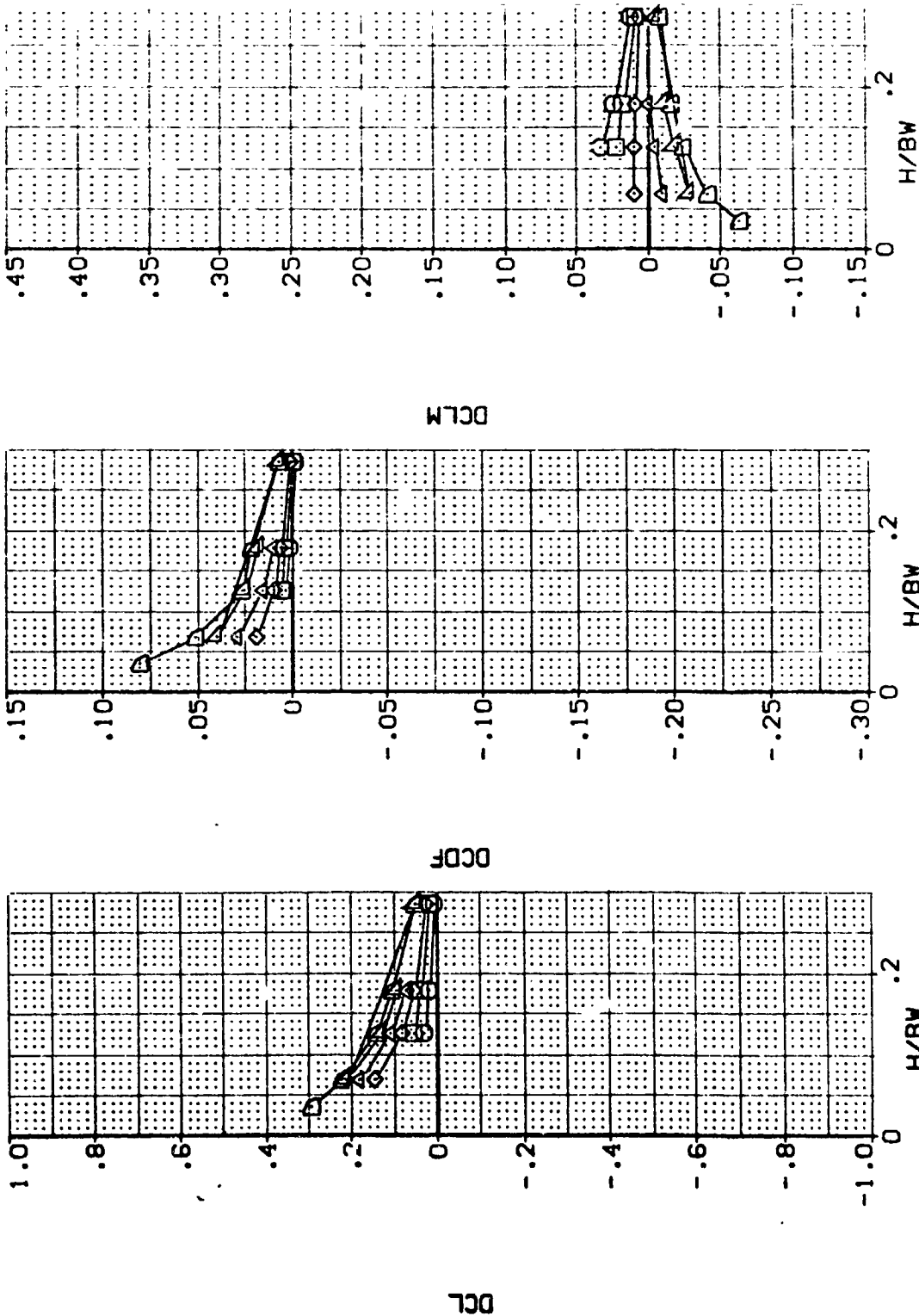


FIG 24 EFFECT OF GROUND HT., ELEVON = -5

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z085)	0A628 B26C9G1S47F8 V118E28V8F5X9	20.000	-5.000	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(G0Z086)	0A628 B26C9G1S47F8 V118E28V8F5X9	22.000	-5.000	25.000	-12.000	LREF 19.2799 INCHES
(G0Z087)	0A628 B26C9G1S47F8 V118E28V8F5X9	24.000	-5.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z088)	0A628 B26C9G1S47F8 V118E28V8F5X9	26.000	-5.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z089)	0A628 B26C9G1S47F8 V118E28V8F5X9	28.000	-5.000	25.000	-12.000	YMRP 10.0000 INCHES
(G0Z090)	0A628 B26C9G1S47F8 V118E28V8F5X9	30.000	-5.000	25.000	-12.000	ZMRP 15.1673 INCHES
						SCALE .0405

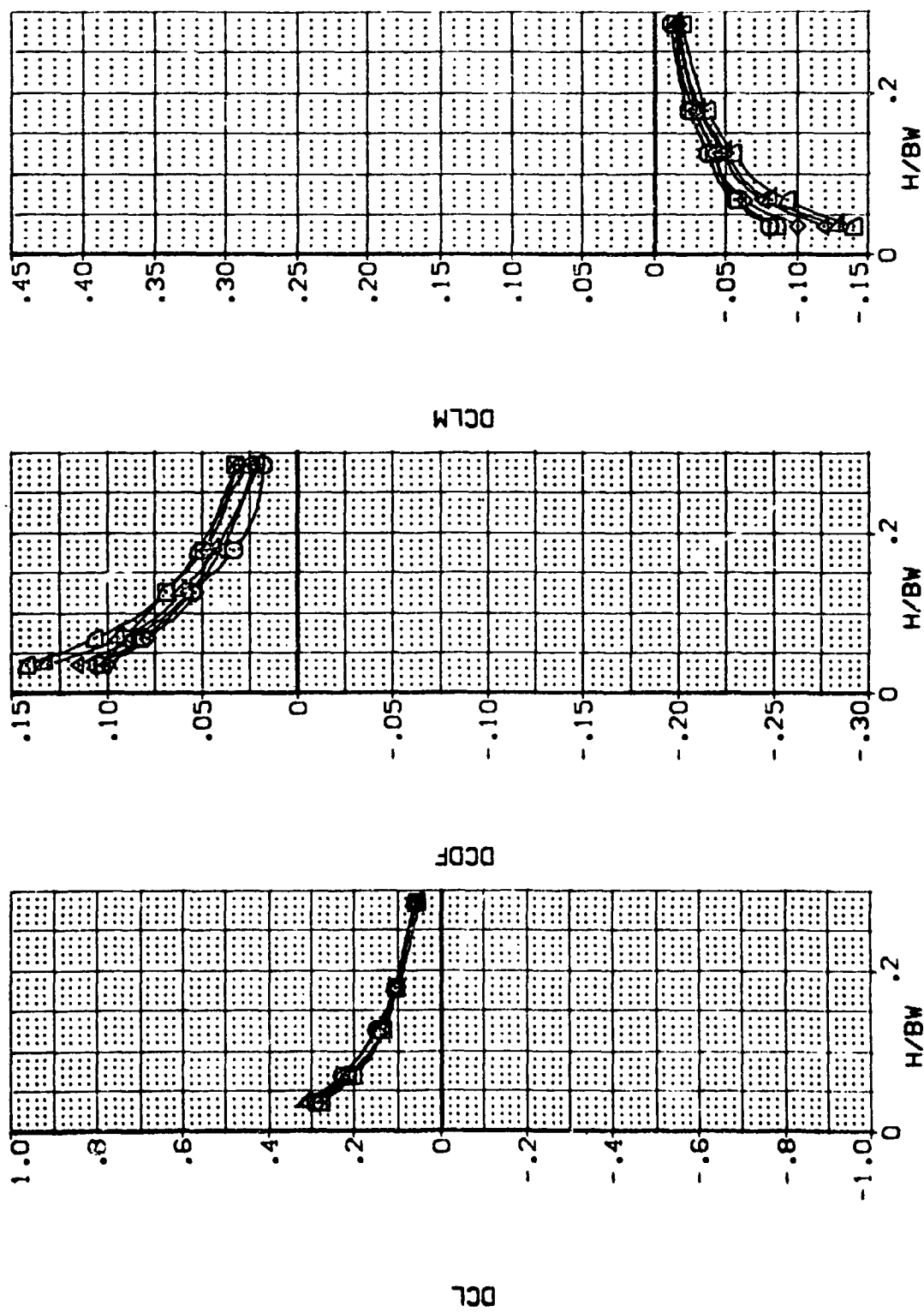
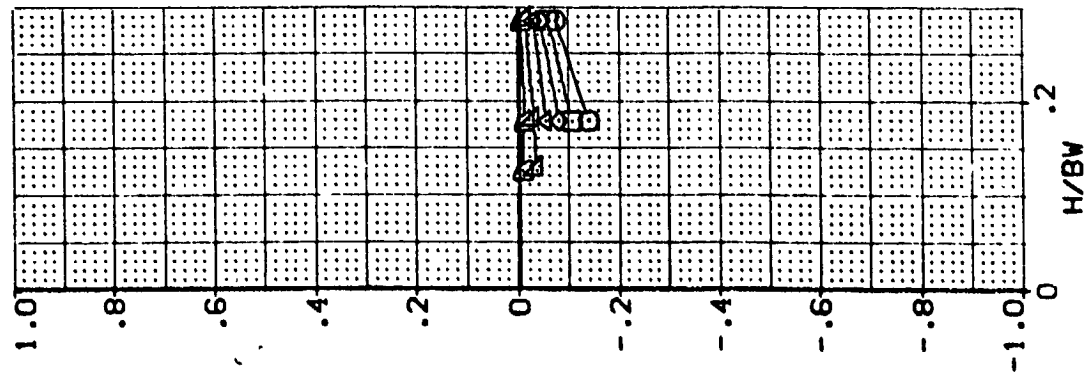


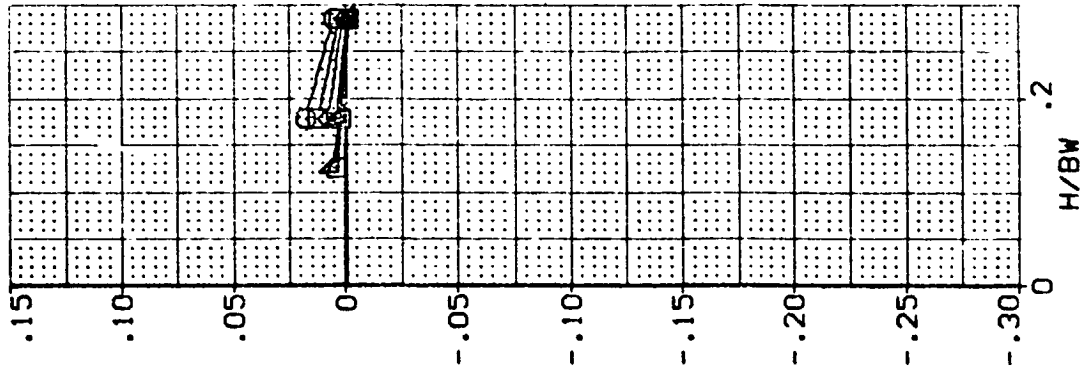
FIG 24 EFFECT OF GROUND HT. ELEVON = -5  
 (A)MACR = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(G0Z091)	0A5Z8 BZ6C9G1S47F8 V116E28V8RSX9
(G0Z092)	0A5Z8 BZ6C9G1S47F8 V115E28V8RSX9
(G0Z093)	0A5Z8 BZ6C9G1S47F8 V116E28V8RSX9
(G0Z094)	0A5Z8 BZ6C9G1S47F8 V116E28V8RSX9
(G0Z095)	0A5Z8 BZ6C9G1S47F8 V116E28V8RSX9
(G0Z096)	0A5Z8 BZ6C9G1S47F8 V116E28V8RSX9

ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
-4.000	-10.000	25.000	-12.000	SREF 4.4119 SO.FT.
-2.000	-10.000	25.000	-12.000	LREF 19.2299 INCHES
.000	-10.000	25.000	-12.000	BREF 37.9359 INCHES
2.000	-10.000	25.000	-12.000	XMRP 43.5974 INCHES
4.000	-10.000	25.000	-12.000	YMRP 0000 INCHES
6.000	-10.000	25.000	-12.000	ZMRP 15.1875 INCHES
				SCALE .0405



DCLF



DCLM

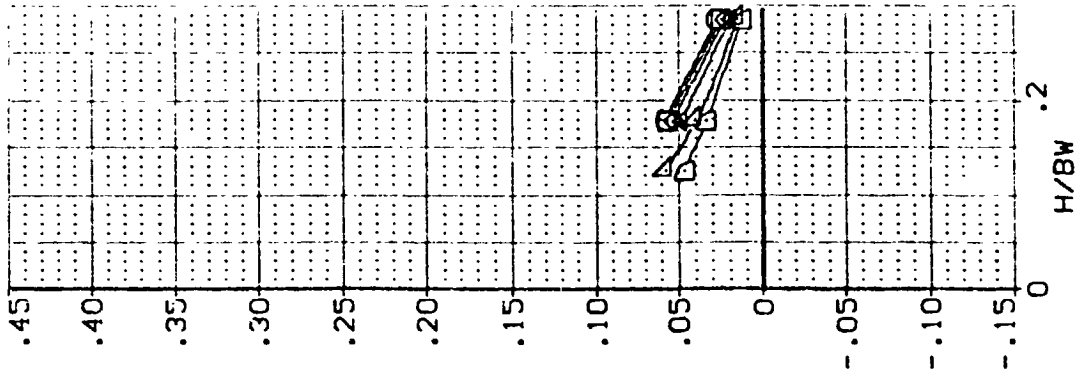


FIG 25 EFFECT OF GROUND HT., ELEVON = -10  
(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z097)	0A628 B26C9G15M7F8 V116E28V8RSX9	8.000	-10.000	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(G0Z098)	0A628 B26C9G15M7F8 V116E28V8RSX9	10.000	-10.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z099)	0A628 B26C9G15M7F8 V116E28V8RSX9	12.000	-10.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z100)	0A628 B26C9G15M7F8 V116E28V8RSX9	14.000	-10.000	25.000	-12.000	YMRP 43.5974 INCHES
(G0Z101)	0A628 B26C9G15M7F8 V116E28V8RSX9	16.000	-10.000	25.000	-12.000	ZMRP .0000 INCHES
(G0Z102)	0A628 B26C9G15M7F8 V116E28V8RSX9	18.000	-10.000	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

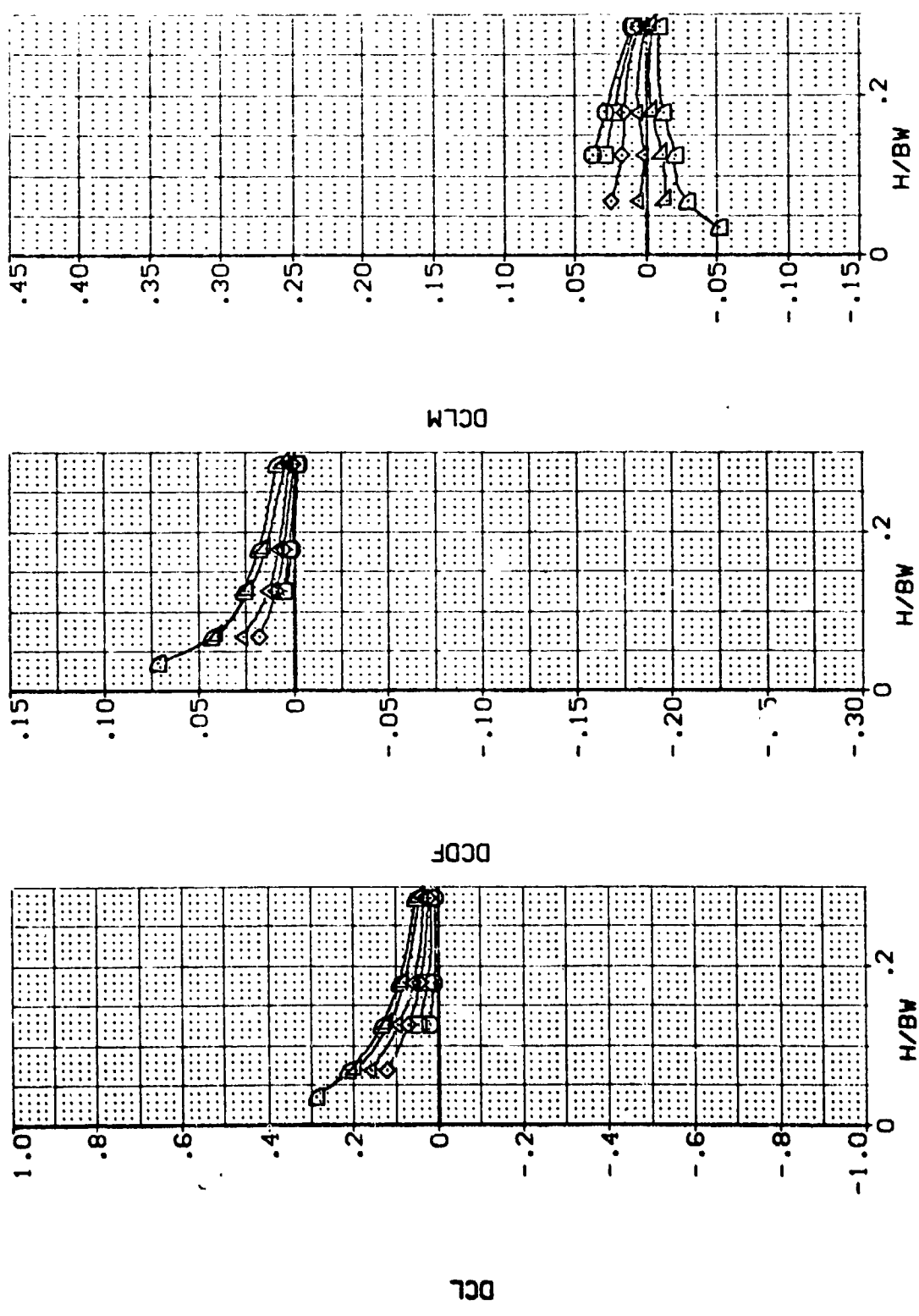


FIG 25 EFFECT OF GROUND HT., ELEVON = -10  
 (A)MACH = .20

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(G02103)	0A628 B26C9G15H7F8 V116E28V8R5X9	SREF 4.4119 SQ.FT.
(G02104)	0A628 B26C9G15H7F8 V116E28V8R5X9	LREF 19.2299 INCHES
(G02105)	0A628 B26C9G15H7F8 V116E28V8R5X9	BREF 37.9359 INCHES
(G02106)	0A628 B26C9G15H7F8 V116E28V8R5X9	XMRP 43.5974 INCHES
(G02107)	0A628 B26C9G15H7F8 V116E28V8R5X9	YMRP .0000 INCHES
(G02108)	0A628 B26C9G15H7F8 V116E28V8R5X9	ZMRP 15.1875 INCHES
		SCALE .0405

ALPHA    ELEVON    SPOBRK    BOFLAP

20.000	-10.000	25.000	-12.000
22.000	-10.000	25.000	-12.000
24.000	-10.000	25.000	-12.000
26.000	-10.000	25.000	-12.000
28.000	-10.000	25.000	-12.000
30.000	-10.000	25.000	-12.000

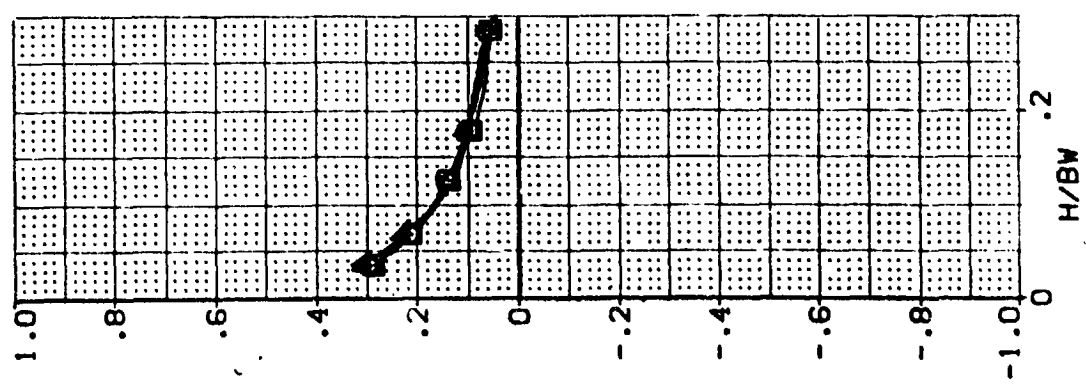
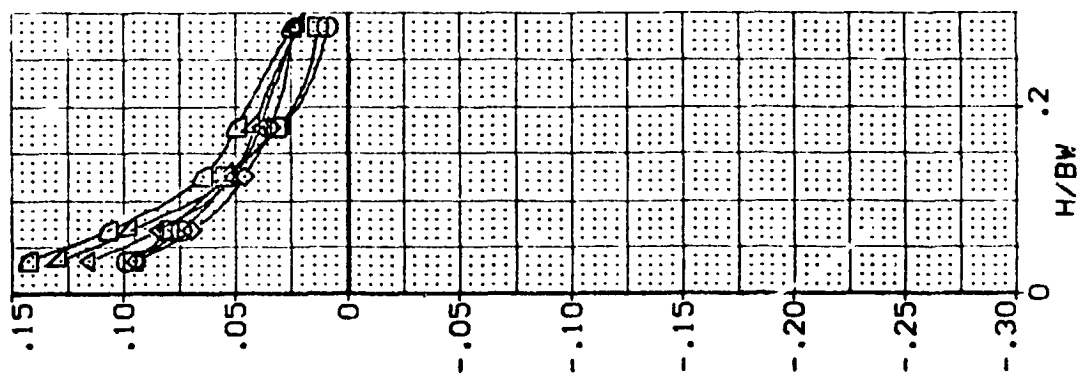
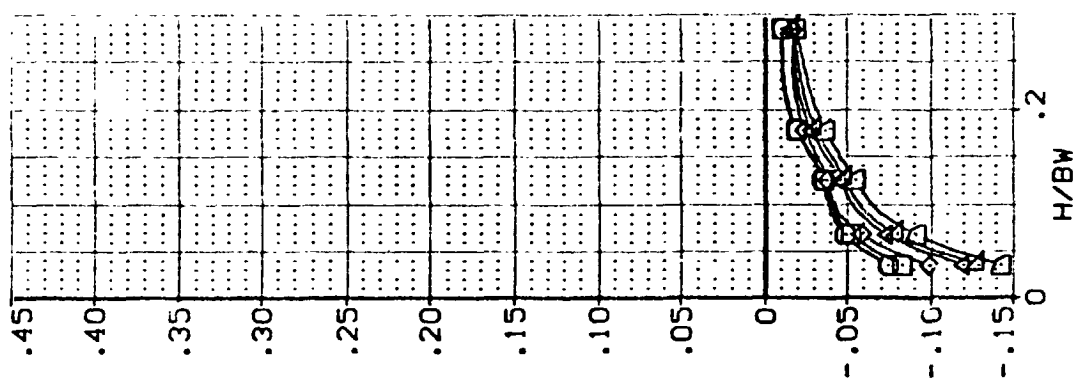


FIG 25 EFFECT OF GROUND HT., ELEVON = -10

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
(GDZ109)	0A628 B26C9G15M7F8 V116E28V8R5X9	4.000	-15.000	25.000	-12.000	SREF 4.4119 SQ.FT.
(GDZ110)	0A628 B26C9G15M7F8 V116E28V8R5X9	-2.000	-15.000	25.000	-12.000	LREF 19.2298 INCHES
(GDZ111)	0A628 B26C9G15M7F8 V116E28V8R5X9	.000	-15.000	25.000	-12.000	BREF 37.9359 INCHES
(GDZ112)	0A628 B26C9G15M7F8 V116E28V8R5X9	2.000	-15.000	25.000	-12.000	XMRP 43.5974 INCHES
(GDZ113)	0A628 B26C9G15M7F8 V116E28V8R5X9	4.000	-15.000	25.000	-12.000	ZMRP .0000 INCHES
(GDZ114)	0A628 B26C9G15M7F8 V116E28V8R5X9	6.000	-15.000	25.000	-12.000	SCALE 15.1875 INCHES .0405 SCALE

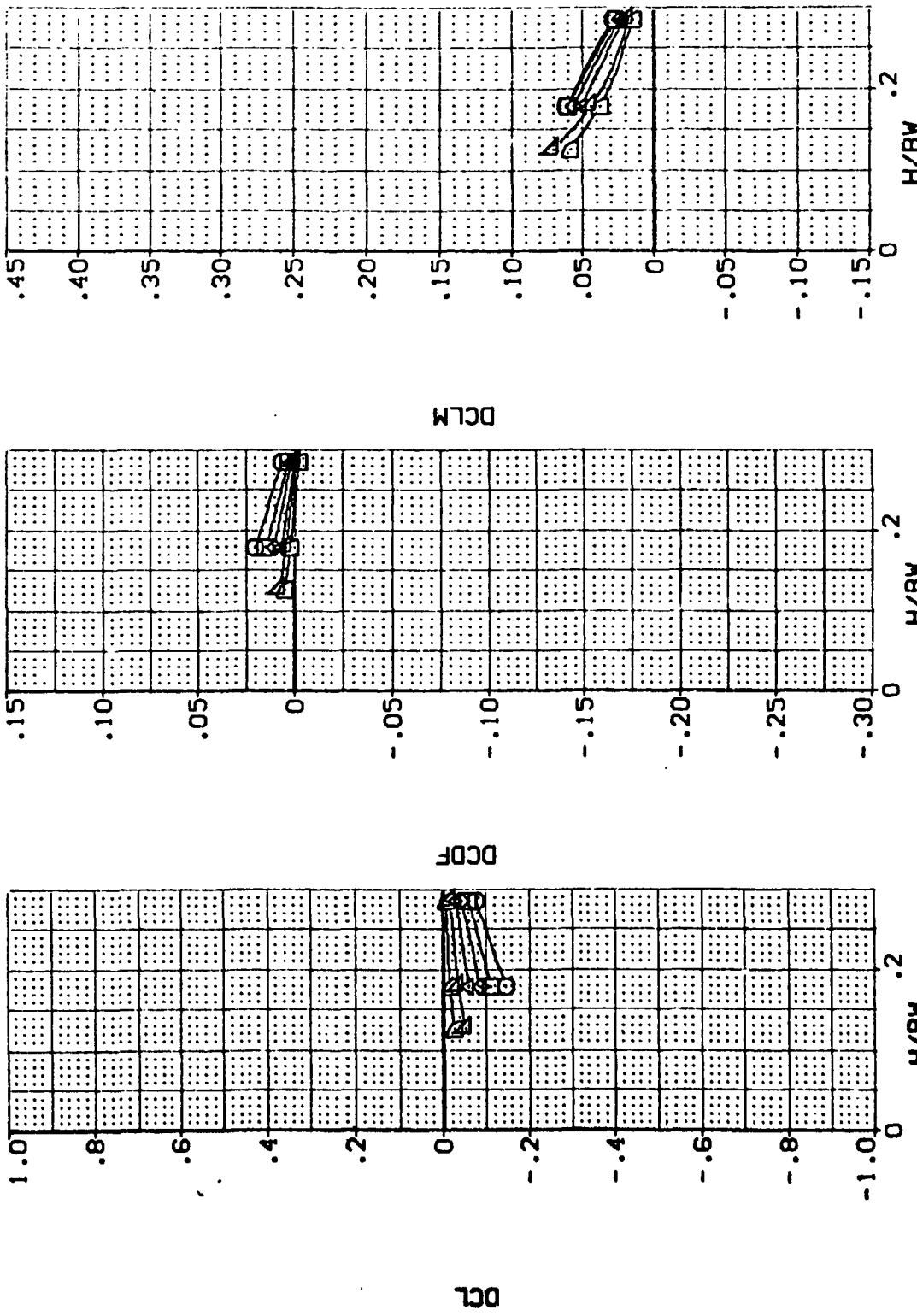


FIG 26 EFFECT OF GROUND HT.. ELEVON = -15  
(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(G0Z115)	0A6Z8	B26C9G1547F8	V116E28V8R5X9
(G0Z116)	0A6Z8	B26C9G1547F8	V116E28V8R5X9
(G0Z117)	0A6Z8	B26C9G1547F8	V116E28V8R5X9
(G0Z118)	0A6Z8	B26C9G1547F8	V116E28V8R5X9
(G0Z119)	0A6Z8	B26C9G1547F8	V116E28V8R5X9
(G0Z120)	0A6Z8	B26C9G1547F8	V116E28V8R5X9

ALPHA ELEVON

8.000	-15.000
10.000	-15.000
12.000	-15.000
14.000	-15.000
16.000	-15.000
18.000	-15.000

SFOBRK BOFLAP

25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	43.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

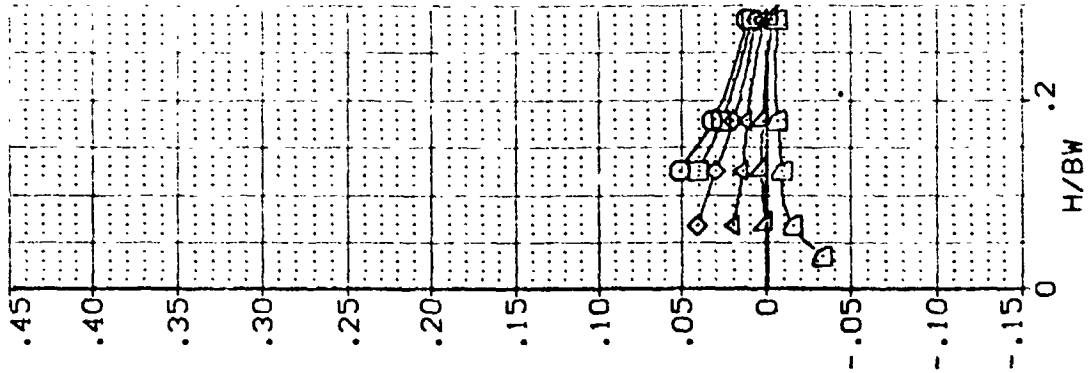
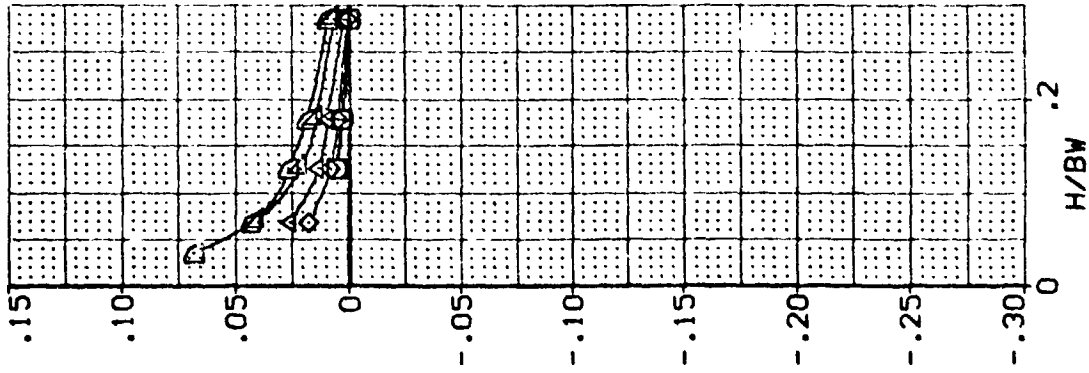
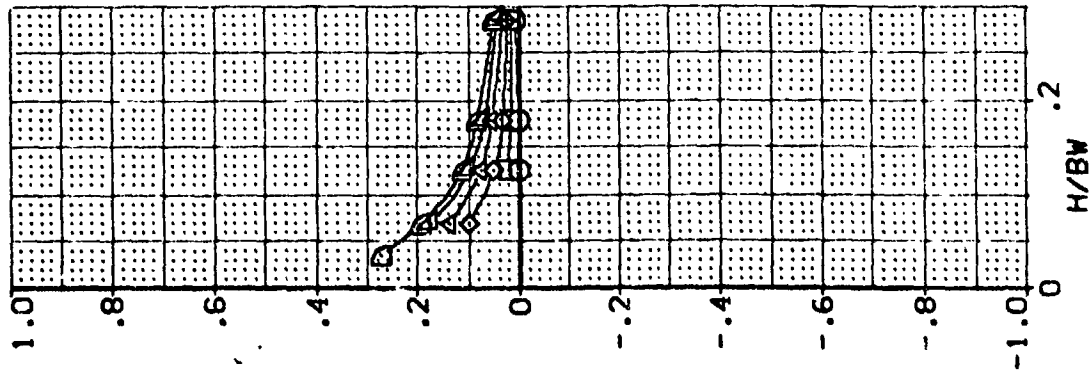


FIG 26 EFFECT OF GROUND HT., ELEVON = -15

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z121)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	20.000	-15.000	25.000	-12.000	SREF 4.4119 SO.FT
(G0Z122)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	22.000	-15.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z123)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	24.000	-15.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z124)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	26.000	-15.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z125)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	28.000	-15.000	25.000	-12.000	YMRP .0000 INCHES
(G0Z126)	0A6Z8 B26C9G15M7F8 V116E28V8RSX9	30.000	-15.000	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

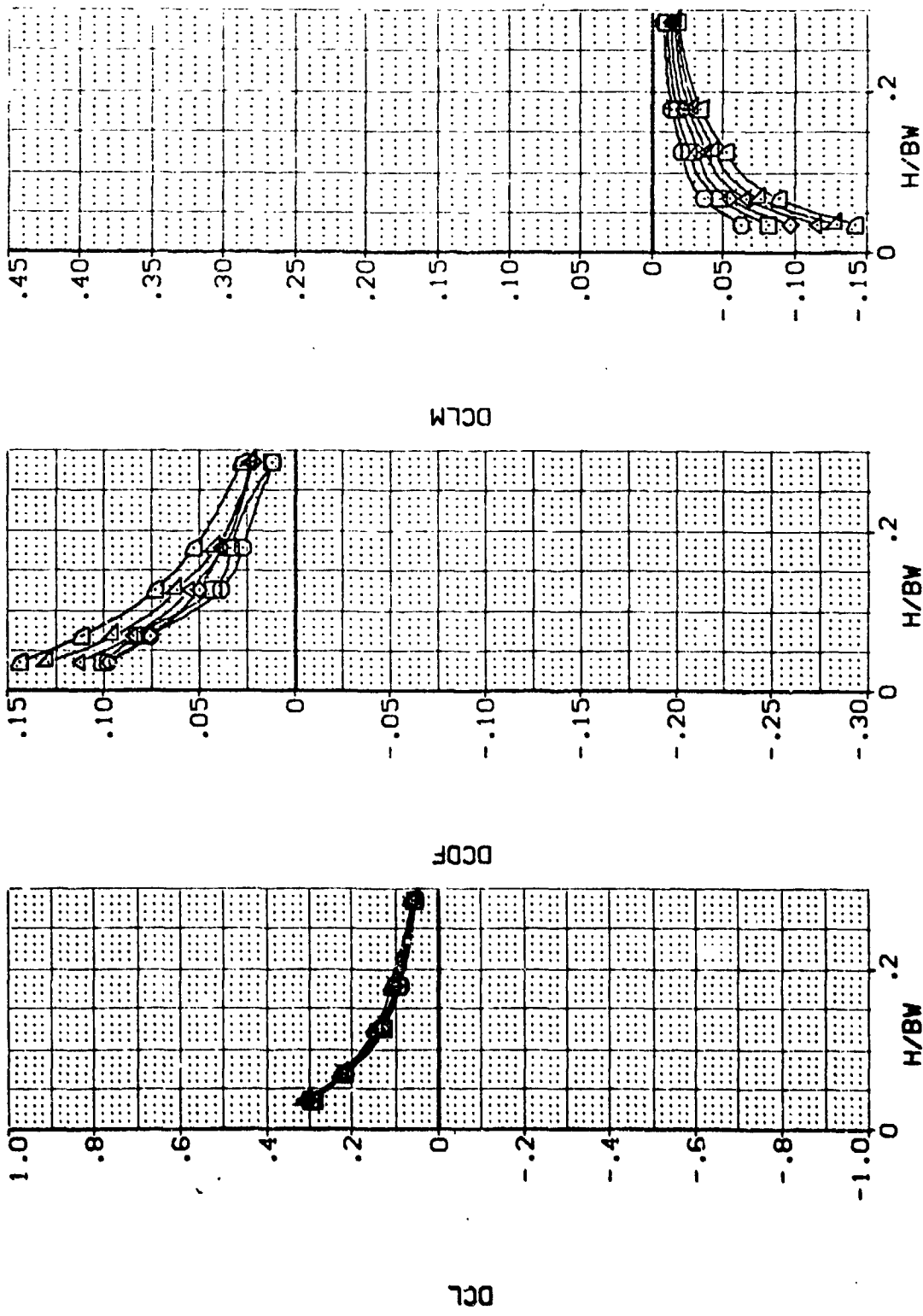


FIG 26 EFFECT OF GROUND HT., ELEVON = -15  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G02127)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-4.000	-20.000	25.000	-12.000	SREF 4.4119 SQ.FT.
(G02128)	0A628 B26C9G1SM7F8 V116E28V8R5X9	-2.000	-20.000	25.000	-12.000	LREF 19.2299 INCHES
(G02129)	0A628 B26C9G1SM7F8 V116E28V8R5X9	.000	-20.000	25.000	-12.000	BREF 37.9359 INCHES
(G02130)	0A628 B26C9G1SM7F8 V116E28V8R5X9	2.000	-20.000	25.000	-12.000	XMRP 43.5974 INCHES
(G02131)	0A628 B26C9G1SM7F8 V116E28V8R5X9	4.000	-20.000	25.000	-12.000	YMRP .0000 INCHES
(G02132)	0A628 B26C9G1SM7F8 V116E28V8R5X9	6.000	-20.000	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

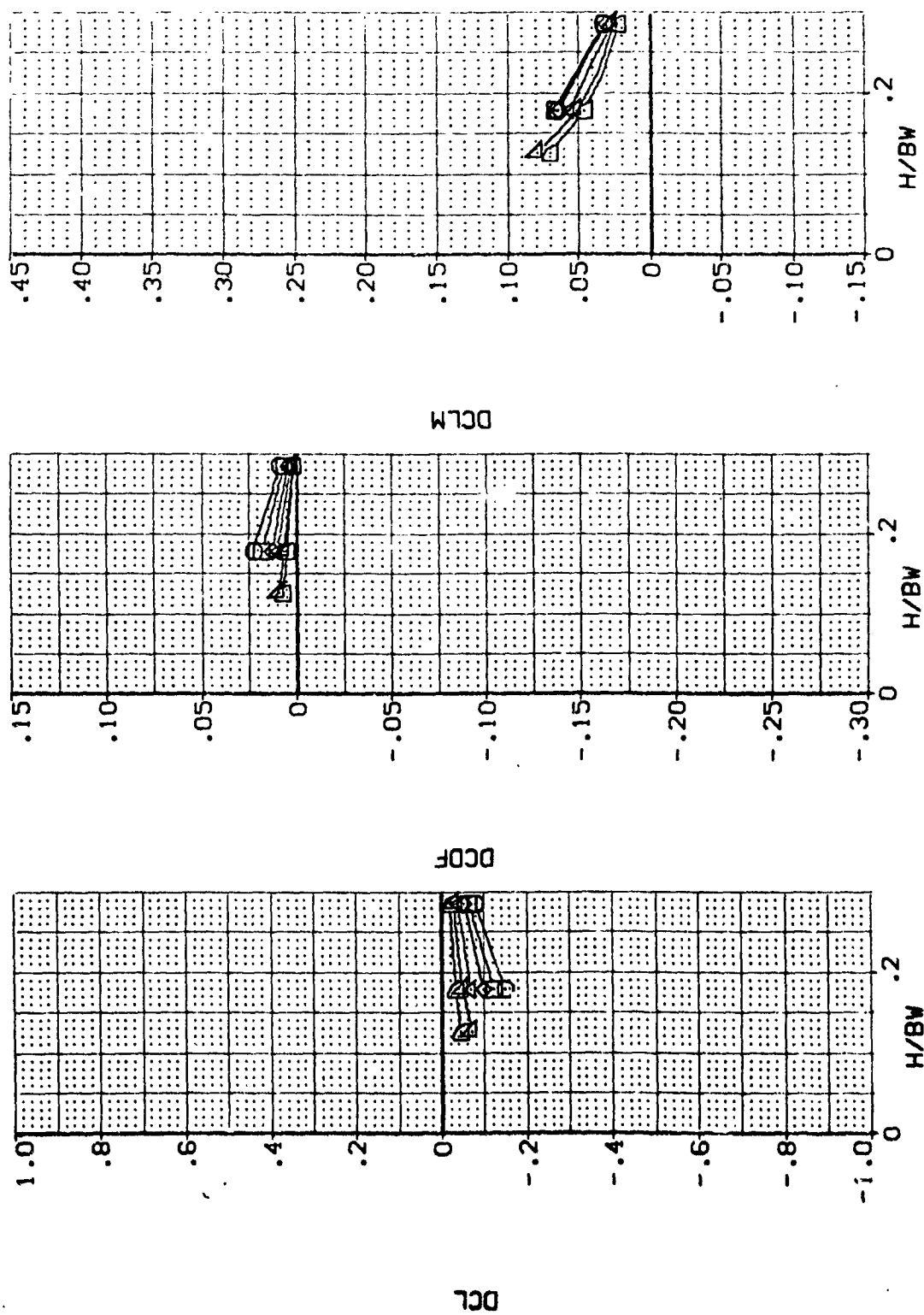


FIG 27 EFFECT OF GROUND HT., ELEVON = -20

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SFOBRK	BOFLAP	REFERENCE INFORMATION
(GOZ131)	0A628 B26C9G1547F8 V116E28V8R5X9	8.000	-20.000	25.000	-12.000	SREF 4.4119 SO.FT. INCHES
(GOZ134)	0A628 B26C9G1547F8 V116E28V8R5X9	10.000	-20.000	25.000	-12.000	LREF 19.2299 INCHES
(GOZ135)	0A628 B26C9G1547F8 V116E28V8R5X9	12.000	-20.000	25.000	-12.000	BREF 37.9359 INCHES
(GOZ136)	0A628 B26C9G1547F8 V116E28V8R5X9	14.000	-20.000	25.000	-12.000	XMRP 43.5974 INCHES
(GOZ137)	0A628 B26C9G1547F8 V116E28V8R5X9	16.000	-20.000	25.000	-12.000	YMRP 15.0000 INCHES
(GOZ138)	0A628 B26C9G1547F8 V116E28V8R5X9	18.000	-20.000	25.000	-12.000	ZMRP 15.1875 INCHES
						SCALE .0405

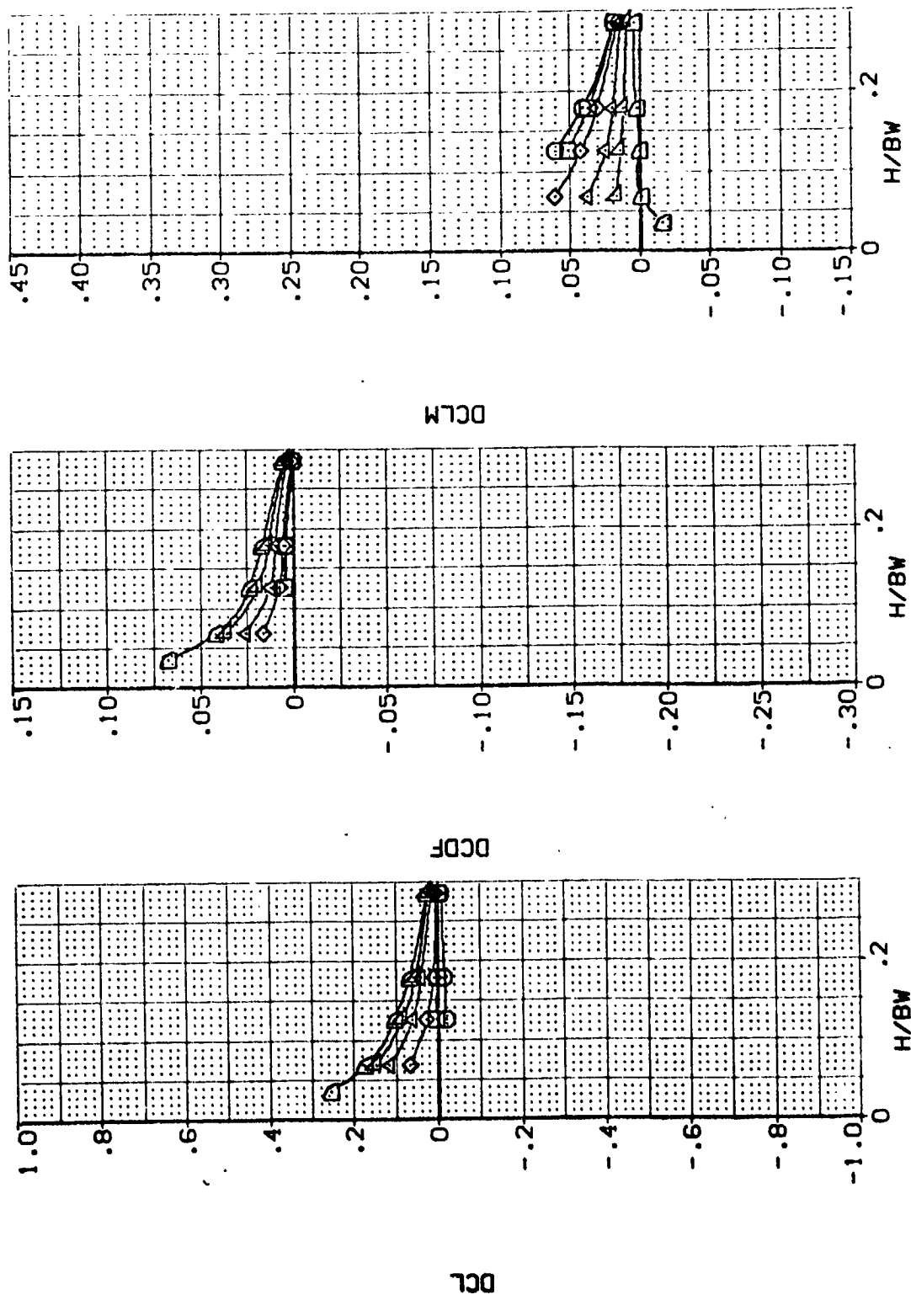


FIG 27 EFFECT OF GROUND HT., ELEVON = -20  
 (A) MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(GOZ139)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(GOZ140)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(GOZ141)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(GOZ142)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(GOZ143)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9
(GOZ144)	0A6Z8	BZ6C9G15M7F8	V116E28V8RSX9

ALPHA ELEVON SPOBRK BOFLAP REFERENCE INFORMATION

20.000	-20.000	25.000	-12.000	SREF	4.4119	SO.FT.
22.000	-20.000	25.000	-12.000	LREF	19.2299	INCHES
24.000	-20.000	25.000	-12.000	XMRP	37.9359	INCHES
26.000	-20.000	25.000	-12.000	YMRP	43.5974	INCHES
28.000	-20.000	25.000	-12.000	ZMRP	.0000	INCHES
30.000	-20.000	25.000	-12.000	SCALE	15.1875	INCHES
					.0405	SCALE

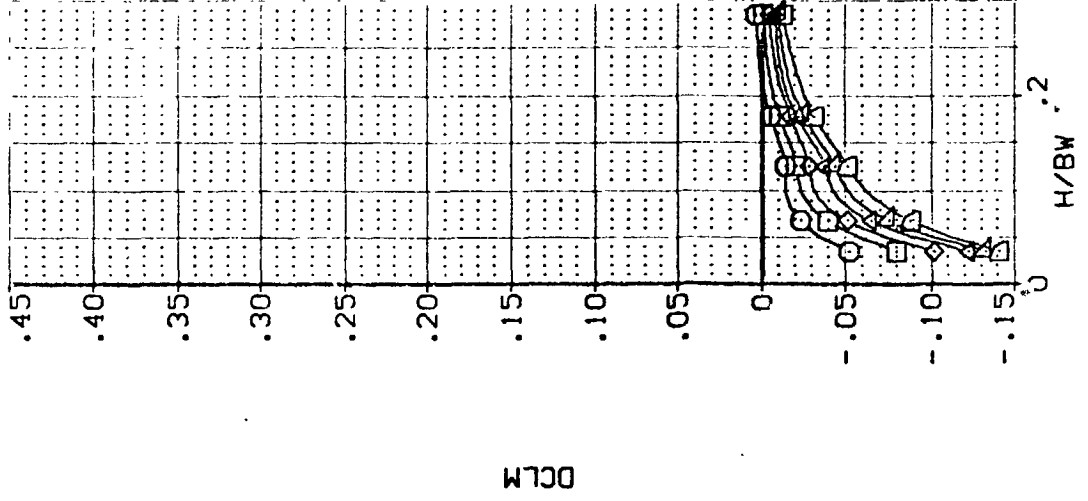
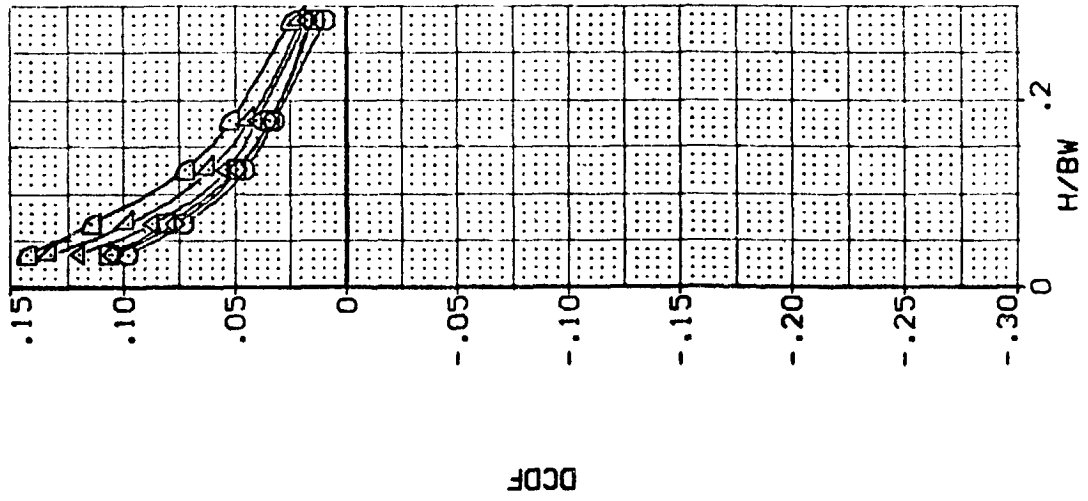
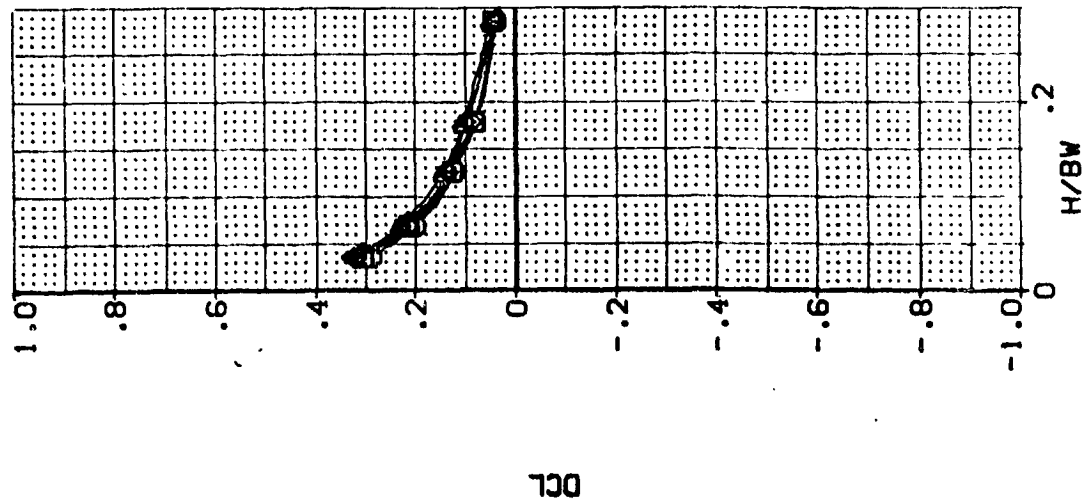


FIG 27 EFFECT OF GROUND HT., ELEVON = -20  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BDFLAP	REFERENCE INFORMATION
(G0Z145)	0A5Z8 BZ6C9G1SM7F8 V116E28V8R5X9	-4.000	-30.000	25.000	-12.000	SREF 4.4119 SO.FT.
(G0Z146)	0A5Z8 BZ6C9G1SM7F8 V116E28V8R5X9	-2.000	-30.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z147)	0A6Z8 BZ6C9G1SM7F8 V116E28V8R5X9	2.000	-30.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z148)	0A5Z8 BZ6C9G1SM7F8 V116E28V8R5X9	4.000	-30.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z149)	0A6Z8 BZ6C9G1SM7F8 V116E28V8R5X9	6.000	-30.000	25.000	-12.000	YMRP .0000 INCHES
(G0Z150)	0A6Z8 BZ6C9G1SM7F8 V116E28V8R5X9					ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

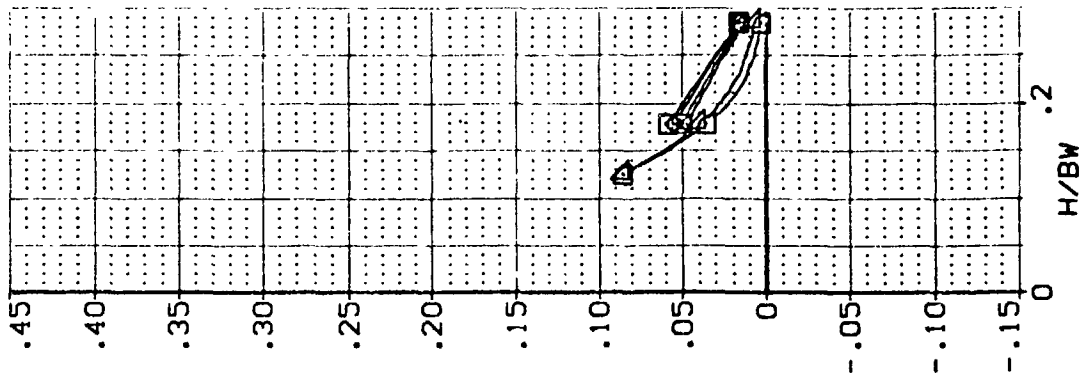
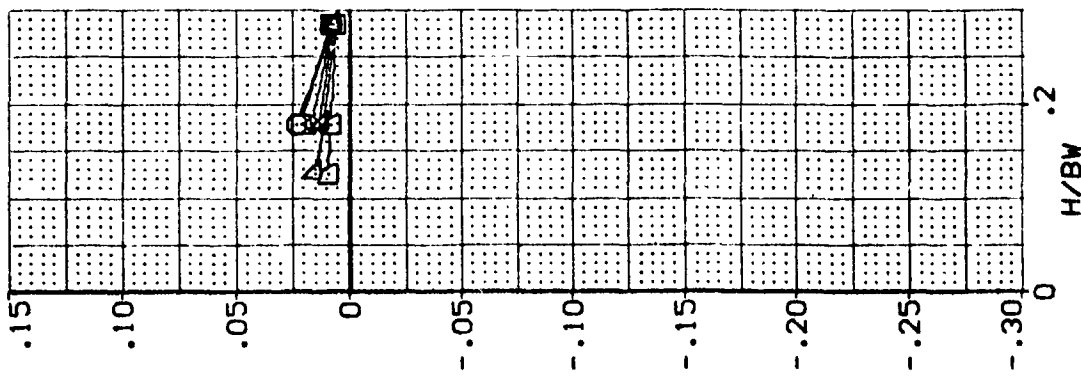
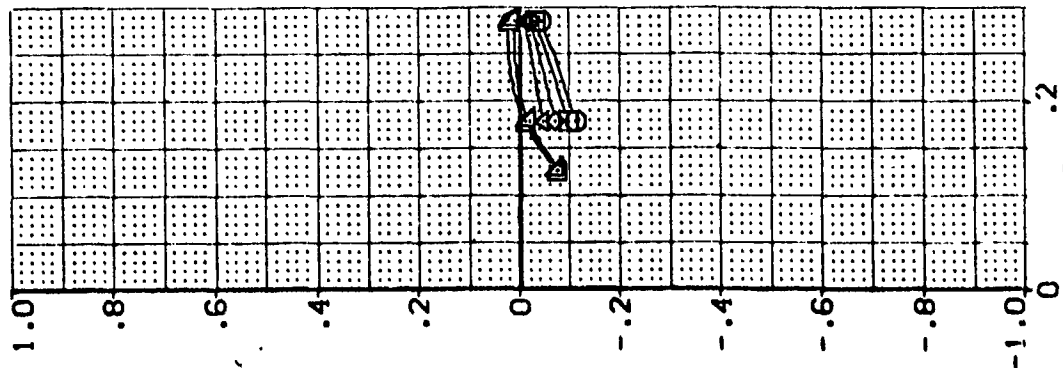


FIG 28 EFFECT OF GROUND HT., ELEVON = -30

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z151)	0A628 B26C9G1SMTF8 V116E28V8R5X9	8.000	-30.000	25.000	-12.000	SREF 4.4119 SO.FT.
(G0Z152)	0A628 B26C9G1SMTF8 V116E28V8R5X9	10.000	-30.000	25.000	-12.000	LREF 19.2299 INCHES
(G0Z153)	0A628 B26C9G1SMTF8 V116E28V8R5X9	12.000	-30.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z154)	0A628 B26C9G1SMTF8 V116E28V8R5X9	14.000	-30.000	25.000	-12.000	XMRP 43.5974 INCHES
(G0Z155)	0A628 B26C9G1SMTF8 V116E28V8R5X9	16.000	-30.000	25.000	-12.000	ZMRP .0000 INCHES
(J0Z156)	0A628 B26C9G1SMTF8 V116E28V8R5X9	18.000	-30.000	25.000	-12.000	ZMRP .0405 INCHES SCALE

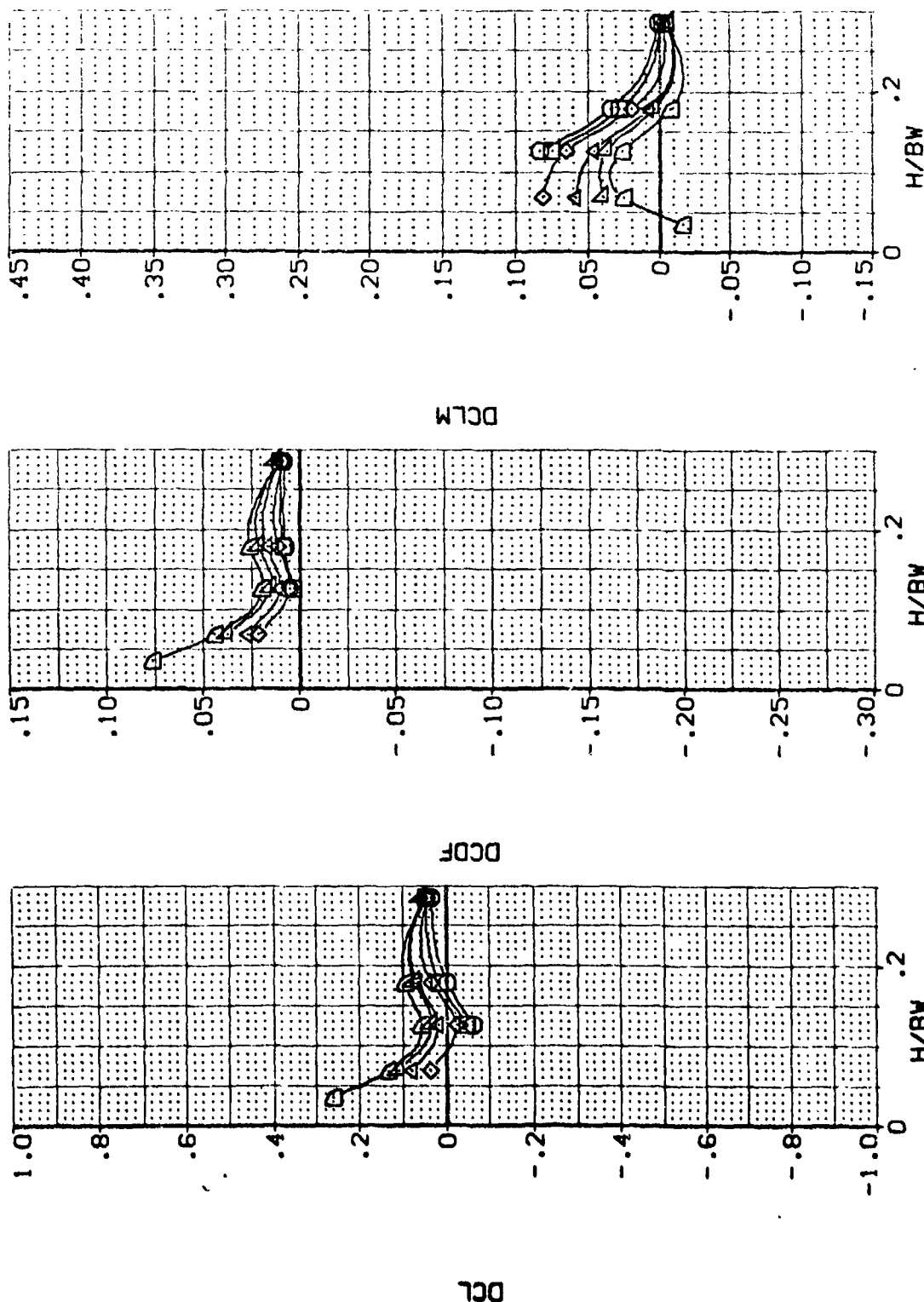


FIG 28 EFFECT OF GROUND HT., ELEVON = -30  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(GOZ157)	0A628 B26C9G15M7F8 VII16E28V8RSX9
(GOZ158)	0A628 B26C9G15M7F8 VII16E28V8RSX9
(GOZ159)	0A628 B26C9G15M7F8 VII16E28V8RSX9
(GOZ160)	0A628 B26C9G15M7F8 VII16E28V8RSX9
(GOZ161)	0A628 B26C9G15M7F8 VII16E28V8RSX9
(GOZ162)	0A628 B26C9G15M7F8 VII16E28V8RSX9

ALPHA	ELEVON
20.000	-30.000
22.000	-30.000
24.000	-30.000
26.000	-30.000
28.000	-30.000
30.000	-30.000

SPOBRK	BOFLAP
25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000
25.000	-12.000

REFERENCE INFORMATION	SO. FT.	INCHES
SREF	4.4119	
LREF	19.2299	
BREF	37.9959	
XMRP	43.5974	
YMRP	.0000	
ZMRP	15.1875	
SCALE	.0405	SCALE

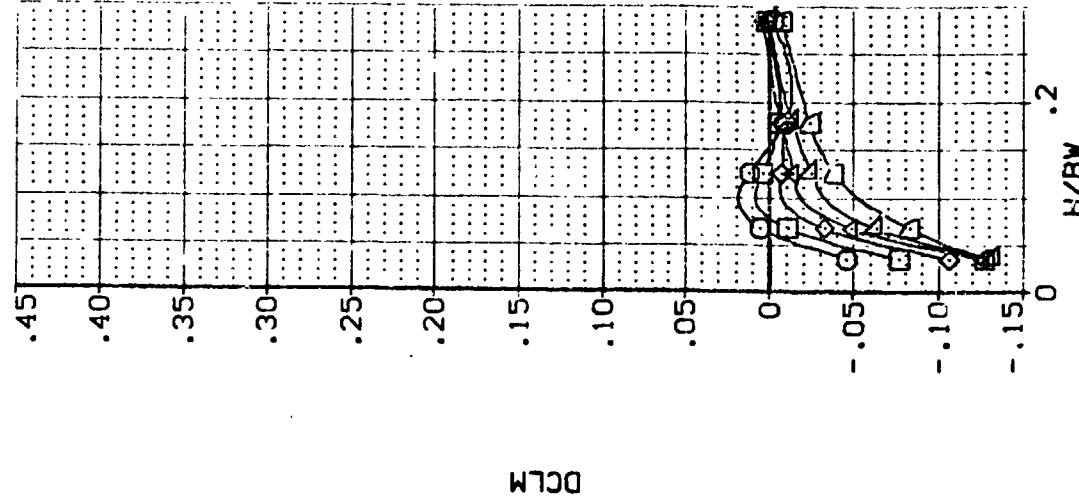
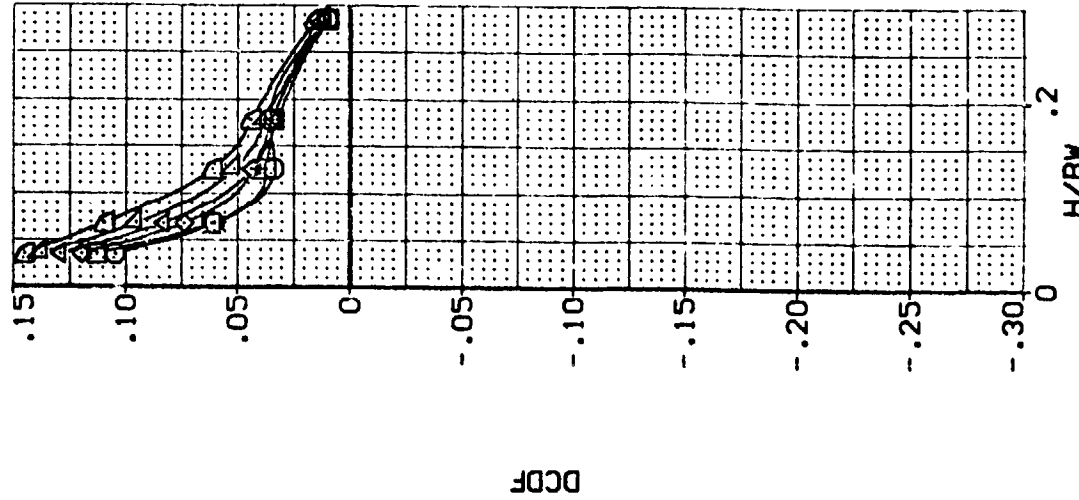
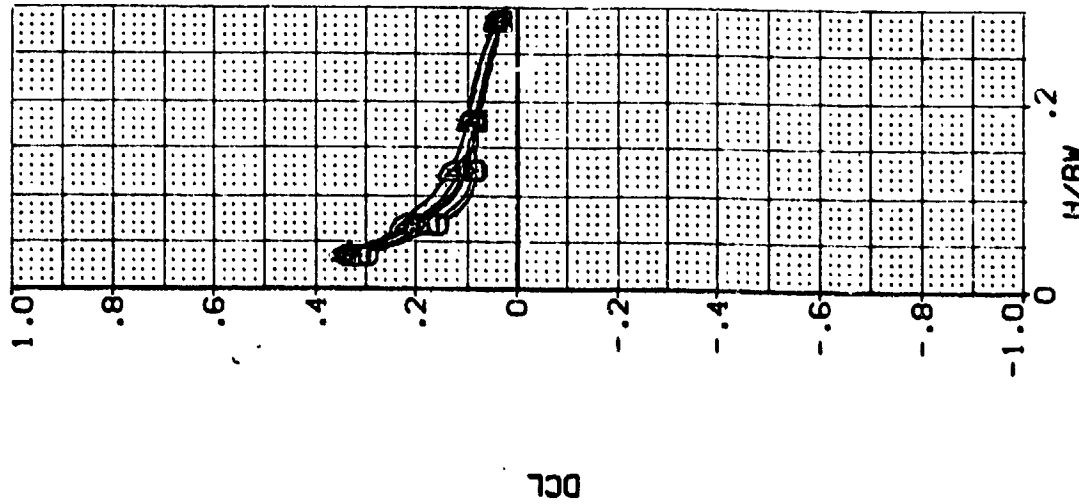


FIG 28 EFFECT OF GROUND HT. ELEVON = -30

(A)MACH = .20

DATA SET SYMBOL. CONFIGURATION DESCRIPTION

(G0Z163)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9
(G0Z164)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9
(G0Z165)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9
(G0Z166)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9
(G0Z167)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9
(G0Z168)	QAS28	BZ6C9G1S47F8	V116E28V8RSX9

REFERENCE INFORMATION

SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

SPDRBK BOFLAP

SPDRBK	25.000	BOFLAP
SPDRBK	-12.000	BOFLAP
SPDRBK	25.000	BOFLAP
SPDRBK	-12.000	BOFLAP
SPDRBK	25.000	BOFLAP
SPDRBK	-12.000	BOFLAP
SPDRBK	25.000	BOFLAP
SPDRBK	-12.000	BOFLAP

ALPHA ELEVON

ALPHA	-4.000	ELEVON
ALPHA	-2.000	ELEVON
ALPHA	.000	ELEVON
ALPHA	2.000	ELEVON
ALPHA	4.000	ELEVON
ALPHA	6.000	ELEVON

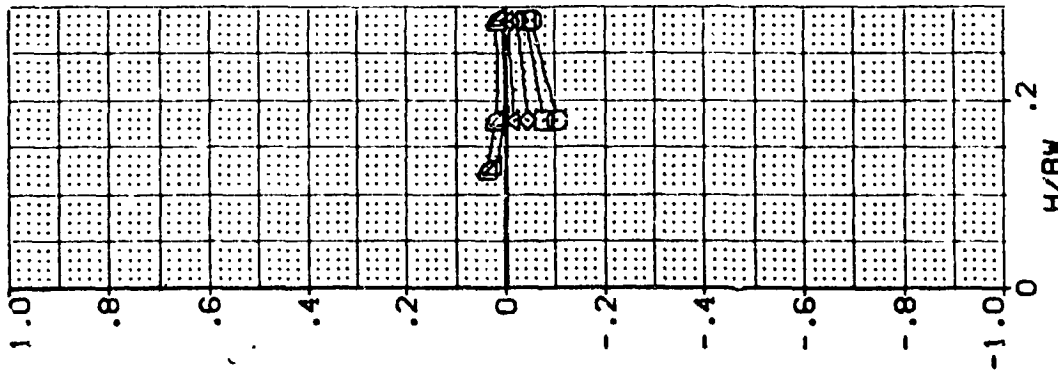
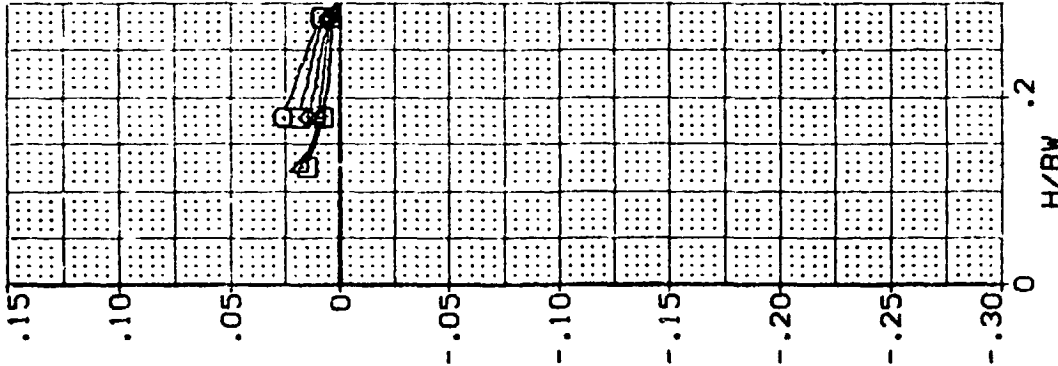
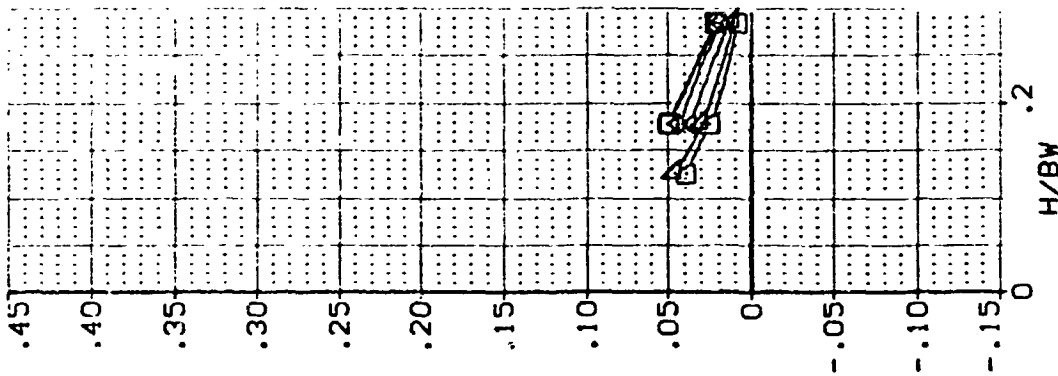


FIG 29 EFFECT OF GROUND HT., ELEVON = -40

(A)MACH = .20

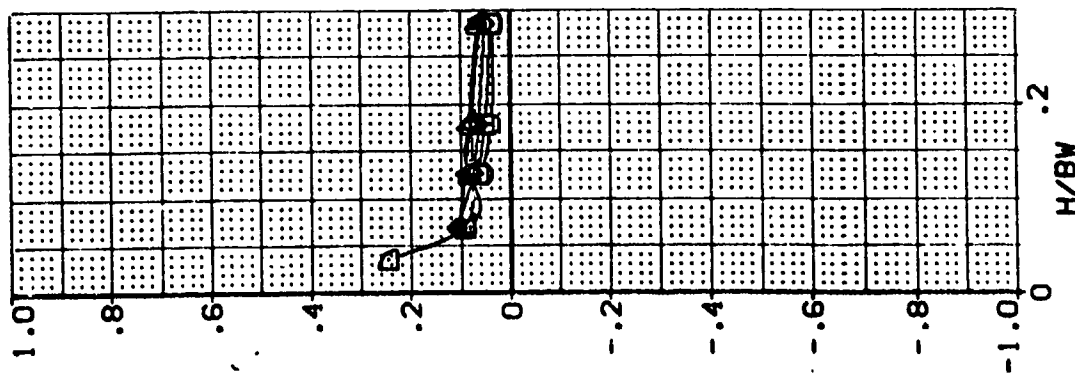




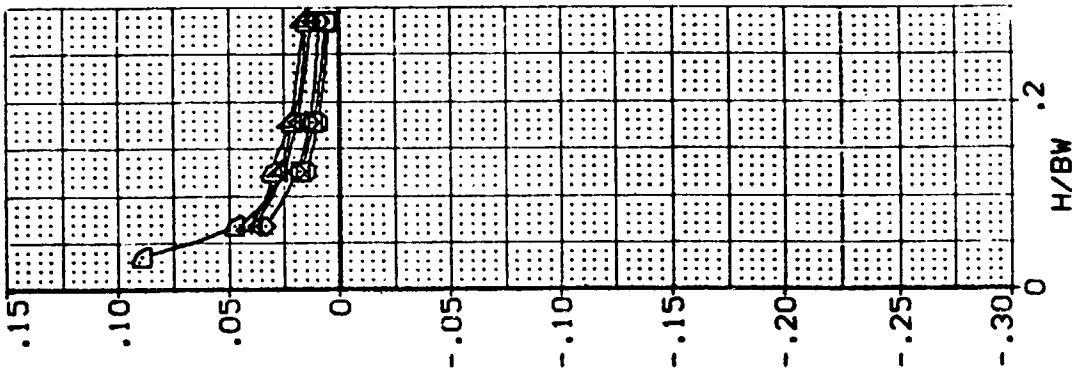


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(G0Z169)	B26C9G1547F8 V116E28V8R5X9
(G0Z170)	B26C9G1547F8 V116E28V8R5X9
(G0Z171)	B26C9G1547F8 V116E28V8R5X9
(G0Z172)	B26C9G1547F8 V116E28V8R5X9
(G0Z173)	B26C9G1547F8 V116E28V8R5X9
(G0Z174)	B26C9G1547F8 V116E28V8R5X9

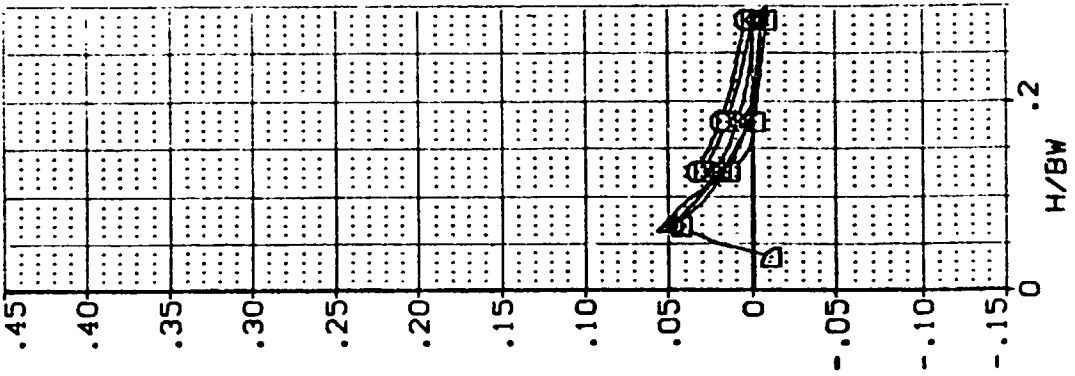
ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
8.000	-40.000	25.000	-12.000	SREF 4.4119 SQ.FT.
10.000	-40.000	25.000	-12.000	LREF 19.2299 INCHES
12.000	-40.000	25.000	-12.000	BREF 37.9359 INCHES
14.000	-40.000	25.000	-12.000	YTRP 43.5974 INCHES
16.000	-40.000	25.000	-12.000	ZTRP 15.0000 INCHES
18.000	-40.000	25.000	-12.000	SCALE .0405 SCALE



DCL



DDF



DCLM

FIG 29 EFFECT OF GROUND HT., ELEVON = -40

(A)MACH = .20



DATA SET SYMB.	CONFIGURATION DESCRIPTION	ALPHA	ELEVON	SPOBRK	BOFLAP	REFERENCE INFORMATION
(G0Z175)	0A628 B26C9G15M7F8 V116E28V8RSX9	20.000	-40.000	25.000	-12.000	SREF 4.4119 SQ.FT.
(G0Z176)	0A628 B26C9G15M7F8 V116E28V8RSX9	22.000	-40.000	25.000	-12.000	LREF 19.2259 INCHES
(G0Z177)	0A628 B26C9G15M7F8 V116E28V8RSX9	24.000	-40.000	25.000	-12.000	BREF 37.9359 INCHES
(G0Z178)	0A628 B26C9G15M7F8 V116E28V8RSX9	26.000	-40.000	25.000	-12.000	XMRP 43.0000 INCHES
(G0Z179)	0A628 B26C9G15M7F8 V116E28V8RSX9	28.000	-40.000	25.000	-12.000	YMRP 15.1875 INCHES
(G0Z180)	0A628 B26C9G15M7F8 V116E28V8RSX9	30.000	-40.000	25.000	-12.000	ZMRP .0405 INCHES

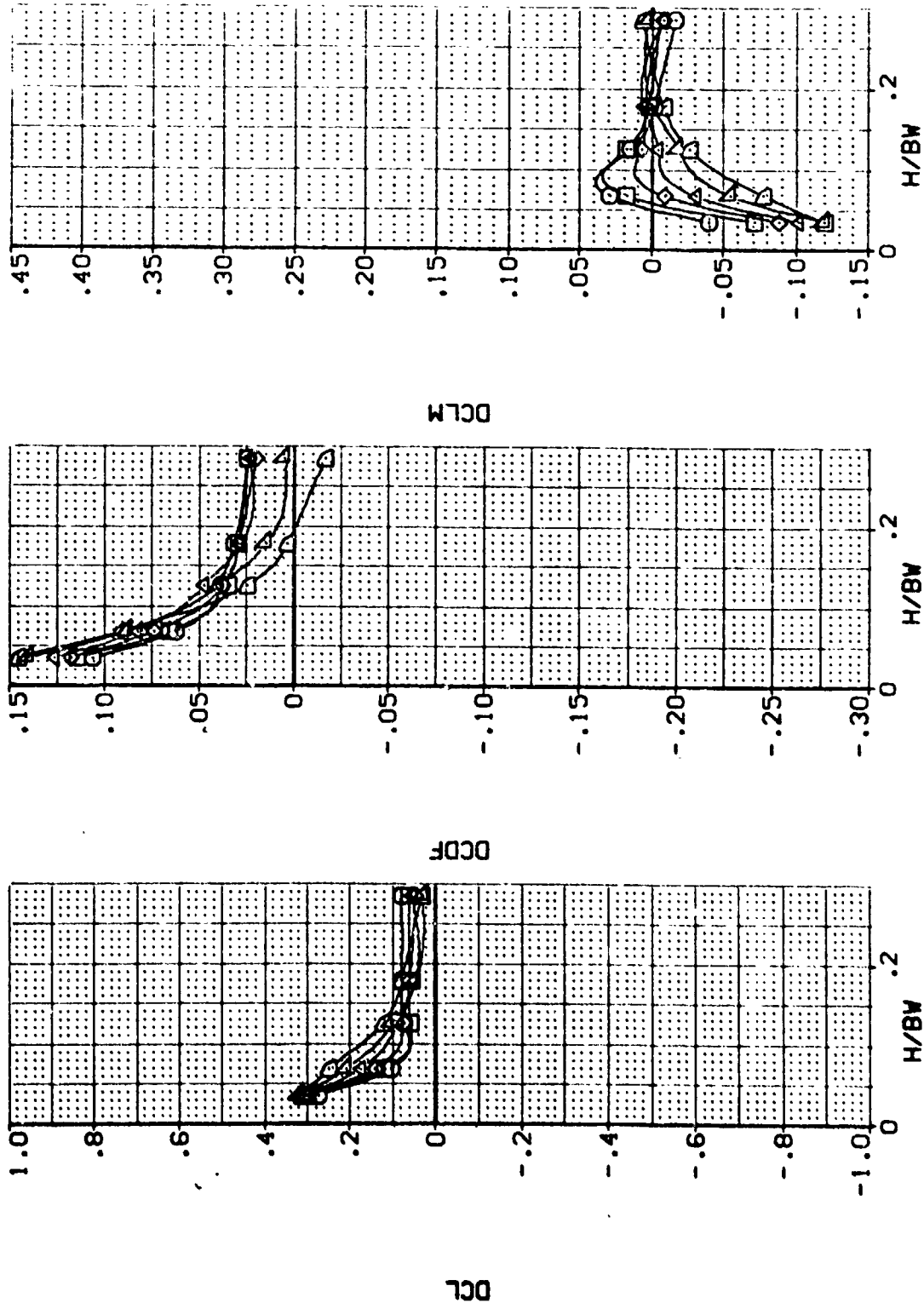


FIG 29 EFFECT OF GROUND HT., ELEVON = -40

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPORBK	BOFLAP	REFERENCE INFORMATION
(D02001)	0A628 B26C9G15M7F8 V111E28V8R5X9	.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
(B02073)	0A628 B26C9G15M7F8J43V111E28V8R5X10	.000	.285	.000	-12.000	LREF 19.2299 INCHES
(B02077)	0A628 B26C9G15M7F8J62V111E28V8R5X10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
						XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

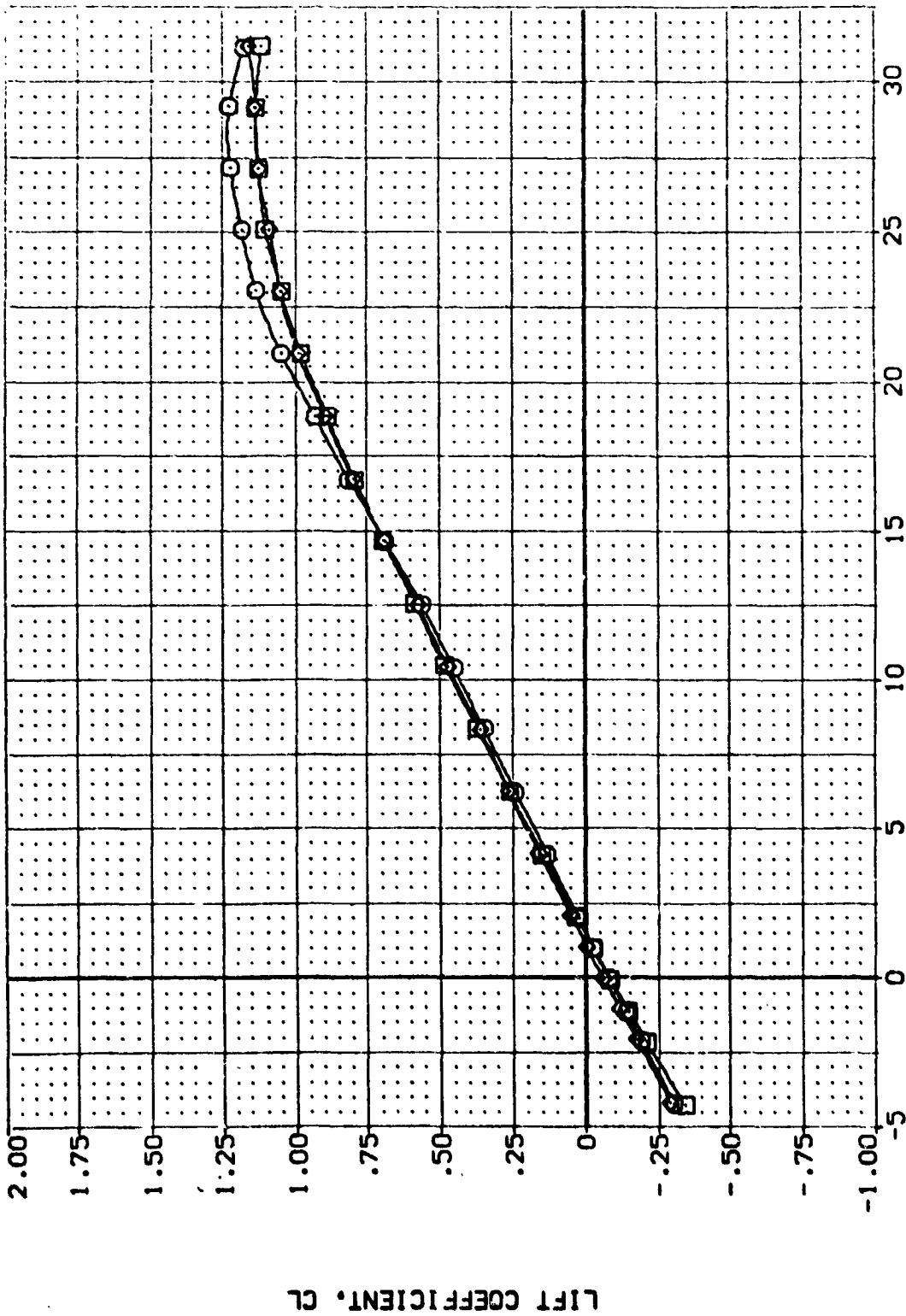


FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BW	SPOBRK	BDFLAP	REFERENCE INFORMATION
(802001)	04628 826C901547F8 V116E28V8RSX9	.000	.265	25.000	-12.000	SREF 4.4119 SO.FT.
(802073)	04628 826C901547F8J43M116E28V8RSX10	.000	.265	.000	-12.000	LREF 19.2299 INCHES
(802077)	04628 826C901547F8J62M116E28V8RSX10	.000	.265	.000	-12.000	BREF 37.9359 INCHES
						XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

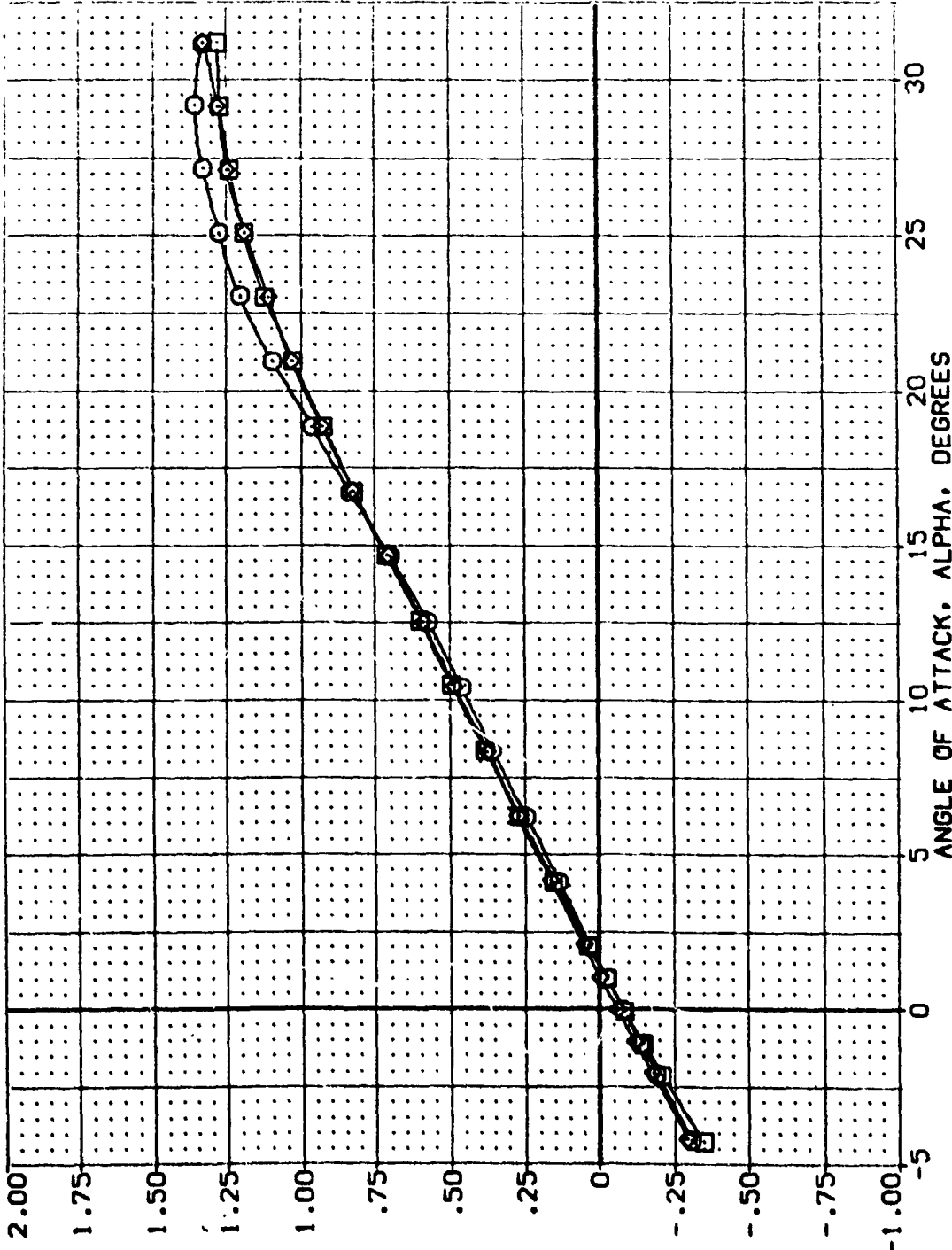


FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (A)MACH = .20



DATA SET SYMBOL: (B02001) (B02073) (B02077)  
 CONFIGURATION DESCRIPTION: 0A6.28 B26C56|547F8 V1|6E28V8RSX9  
 0A6.28 B26C56|547F843V|6E28V8RSX10  
 0A6.28 B26C56|547F8462V|6E28V8RSX10

ELEVON	H/BW	SPOBRK	BOFLAP	REFERENCE INFORMATION
.000	.285	25.000	-12.000	SREF 4.4119 SO.FT.
.000	.285	.000	-12.000	LREF 19.2269 INCHES
.000	.285	.000	-12.000	BREF 37.9359 INCHES
				XMRP 43.5974 INCHES
				YMRP .0000 INCHES
				ZMRP 15.1873 INCHES
				SCALE .0405

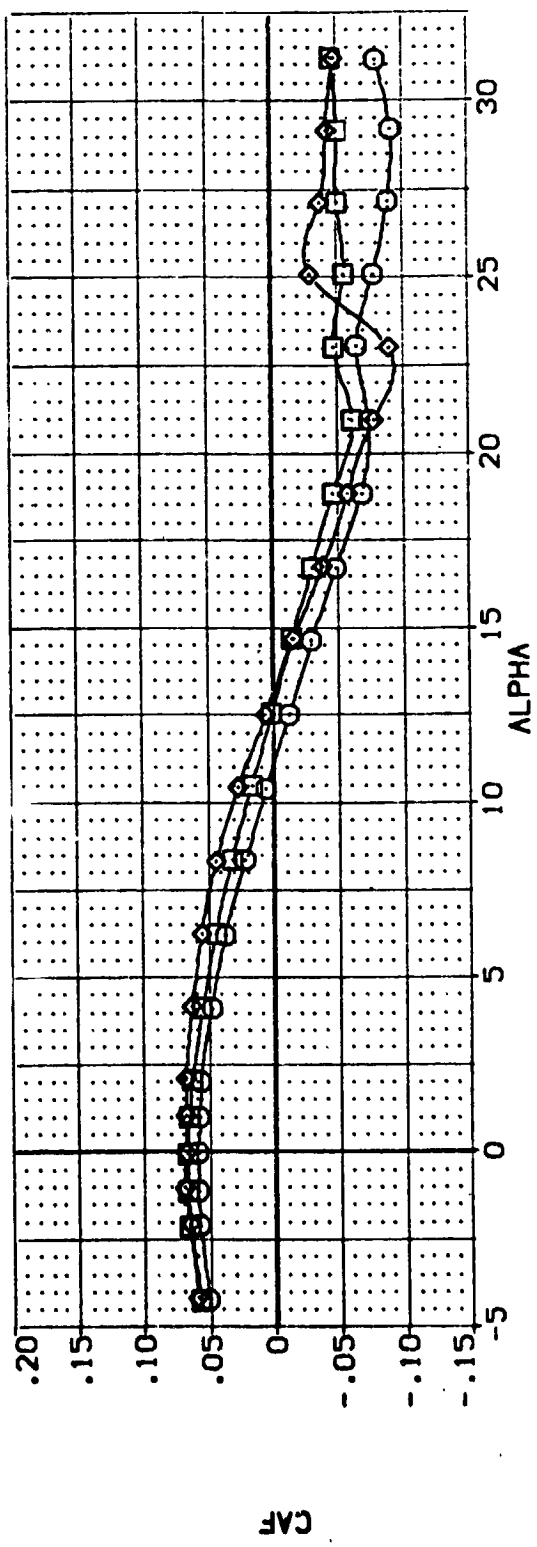
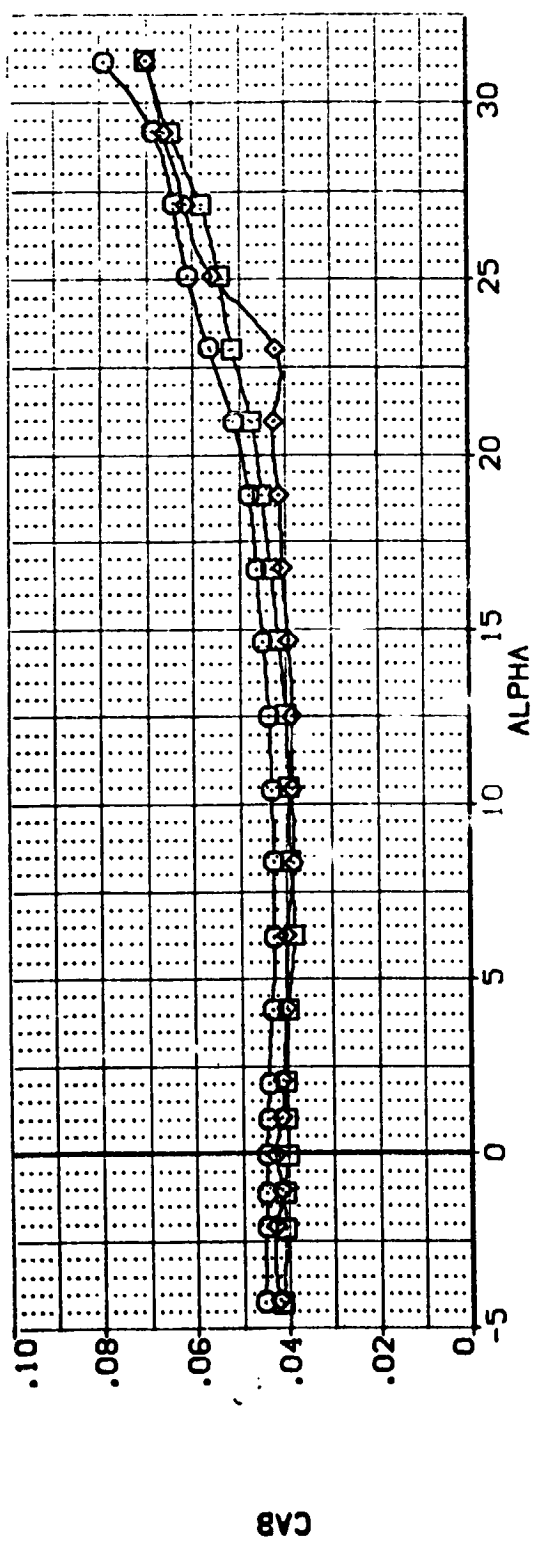
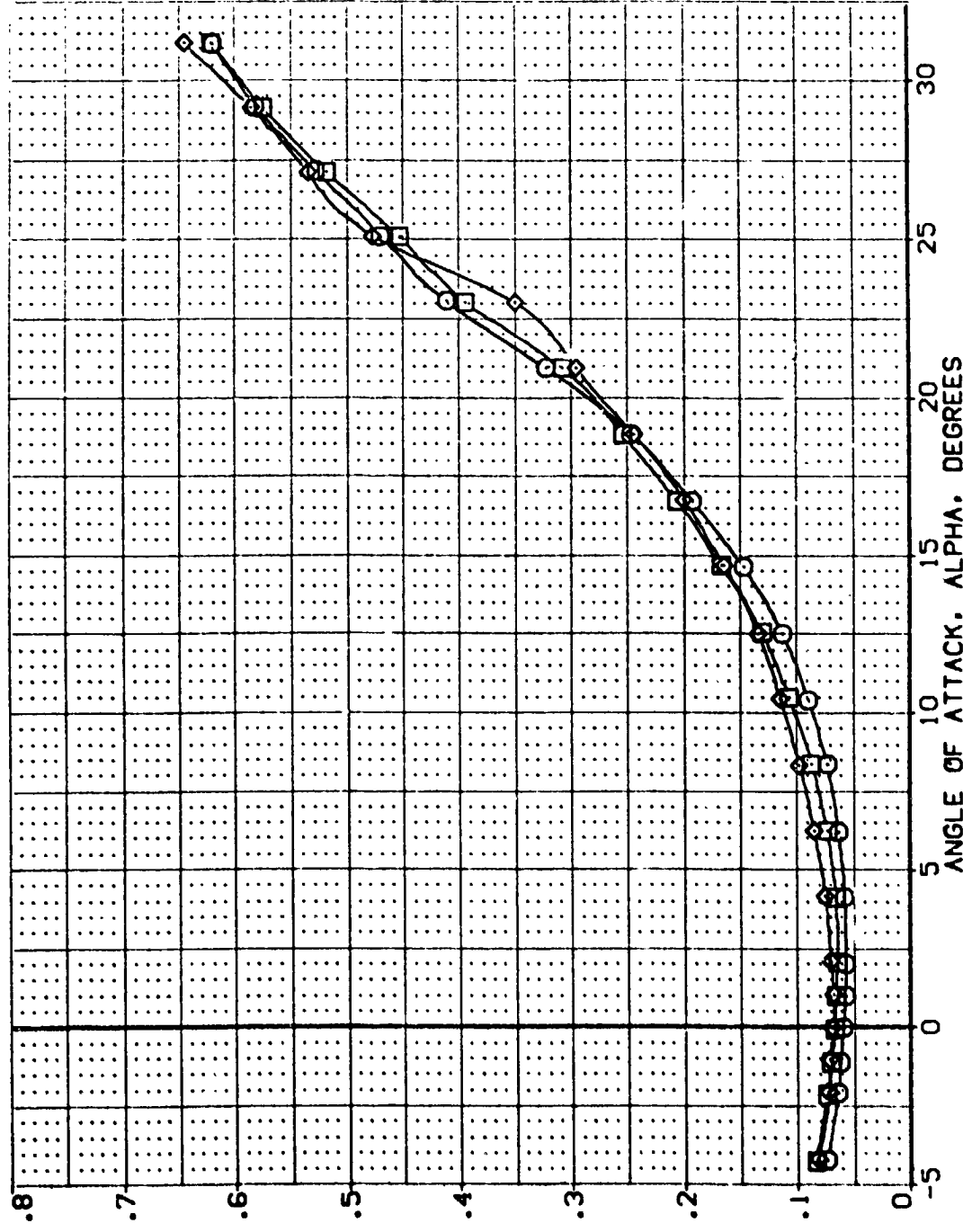


FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802001) OAG28 B26C3G15M7F8 V11E28V8RSX10  
 (802073) OAG28 B26C3G15M7F8J43V11E28V8RSX10  
 (802077) OAG28 B26C3G15M7F8J62V11E28V8RSX10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .285 25.000 -12.000 SREF 4.4119 SO.FT.  
 .000 .285 .000 -12.000 LREF 19.2299 INCHES  
 .000 .285 .000 -12.000 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE



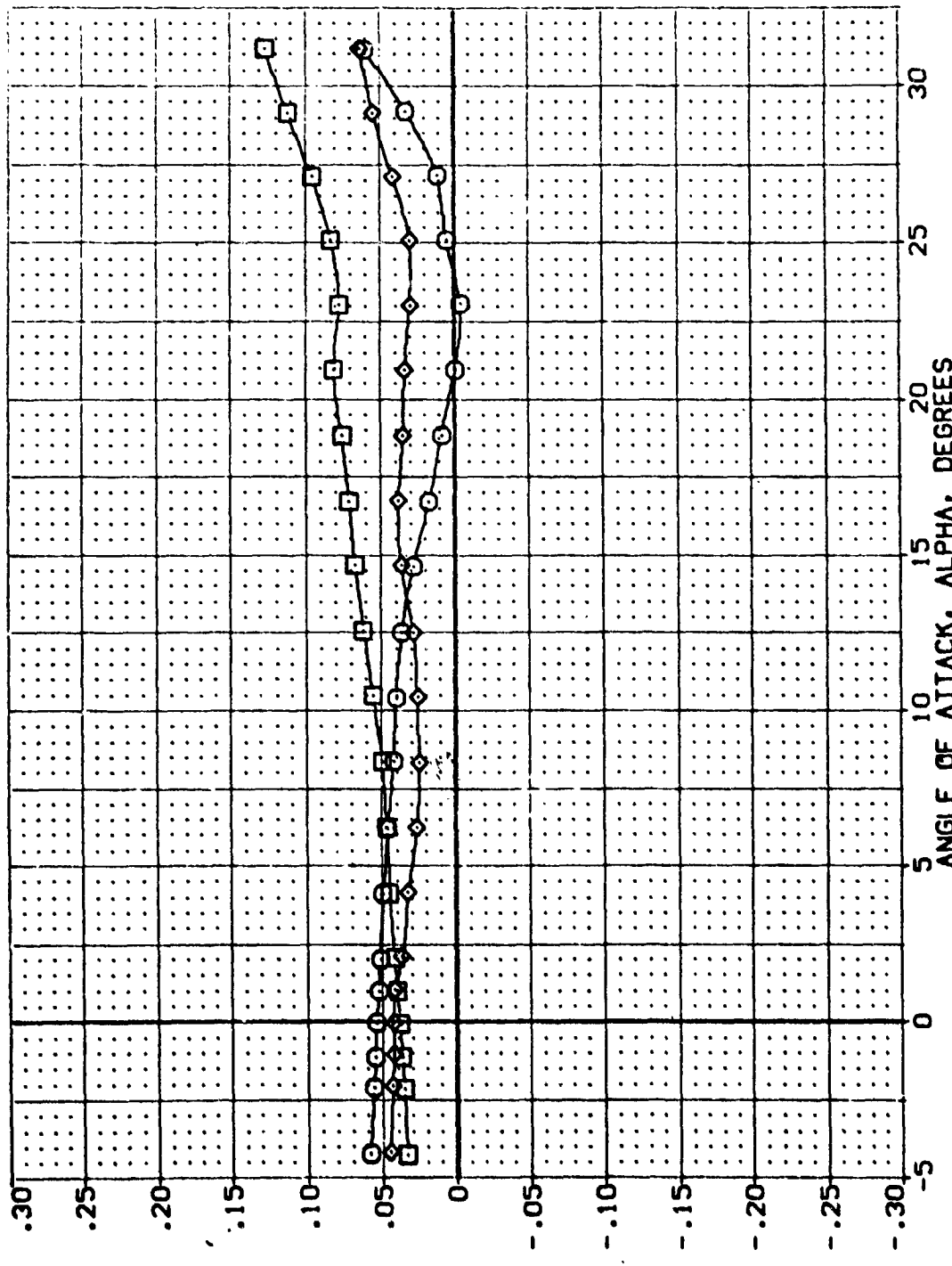
FOREBODY DRAG COEFFICIENT, CDF

FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (A)MACH = .20 PAGE 320



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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	H/BM	SPOBRK	BOFLAP	REFERENCE INFORMATION
(802001)	0A628 B26C9G15M7F6 V116E28V8RSX9	.000	.285	25.000	-12.000	SREF 4.4119 SQ.FT.
(802073)	0A628 B26C9G15M7F8J43V116E28V8RSX10	.000	.285	.000	-12.000	LREF 19.2299 INCHES
(802077)	0A628 B26C9G15M7F8J62V116E28V8RSX10	.000	.285	.000	-12.000	BREF 37.9359 INCHES
						XMRP 43.5974 INCHES
						YMRP 15.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BM = .285 ELEVON = 0  
 (A)MACH = .20 PAGE 321



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802001) 0 0A528 826C9G1577 8 V116E28V85X9  
 (802073) 0 0A528 826C9G1577 8J42V116E28V85X10  
 (802077) 0 0A528 826C9G1577 8J62V116E28V85X10

ELEVON H/BW SPOBRK 80FLAP REFERENCE INFORMATION  
 .000 .265 25.000 -12.000 SREF 4.4119 50.FT.  
 .000 .265 .000 -12.000 LREF 19.2299 INCHES  
 .000 .265 .000 -12.000 BREF 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE

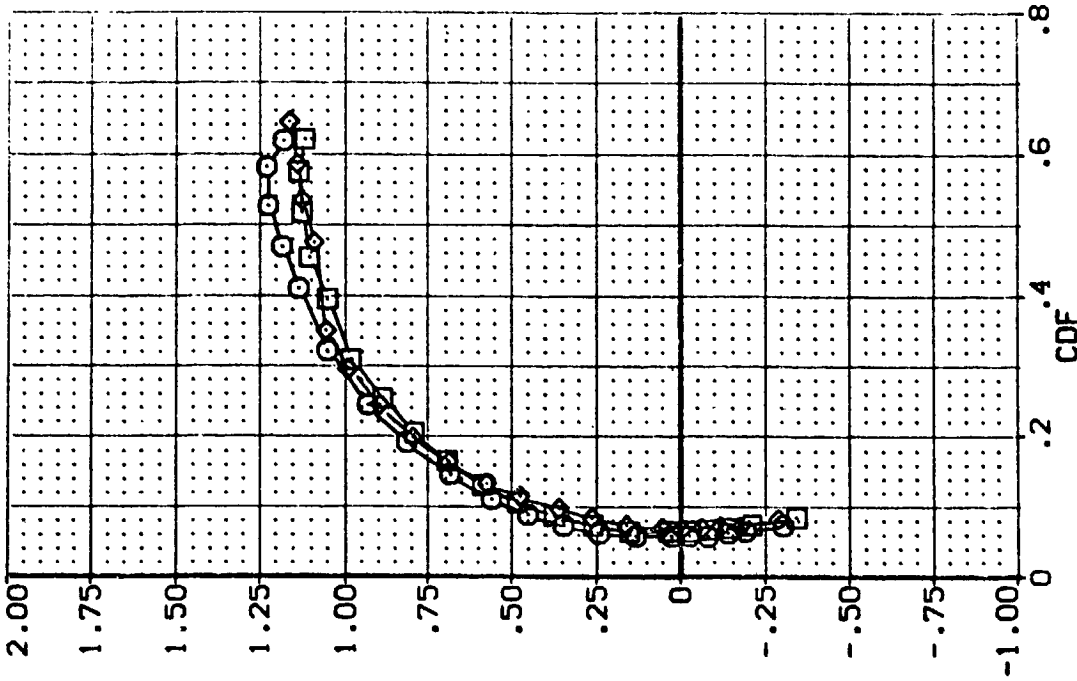
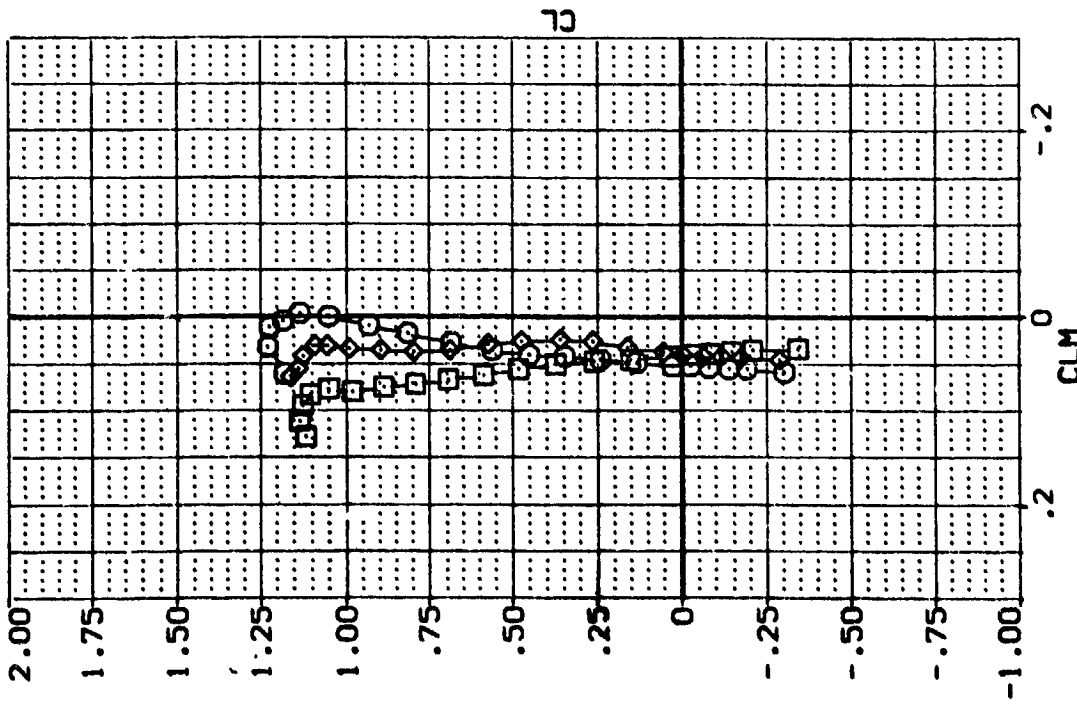


FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (A)MACH = .20





DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (802001)    0A5Z8    B26C56    0A7F8    W115Z    2AVR5KX9  
 (802073)    0A5Z8    B26C56    0A7F8A3W115Z    2AVR5KX10  
 (802077)    0A5Z8    B26C56    0A7F8B162N115Z    2AVR5KX10

ELEVON    H/BW    SPOBRK    BOFLAP  
 .000    .285    25.000    -12.000  
 .000    .285    .000    -12.000  
 .000    .285    .000    -12.000

REFERENCE INFORMATION  
 SREF    4.4119    50. FT.  
 LREF    19.2299    INCHES  
 BREF    37.9359    INCHES  
 XMRP    43.5974    INCHES  
 YMRP    .0000    INCHES  
 ZMRP    15.1875    INCHES  
 SCALE    .0405    SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

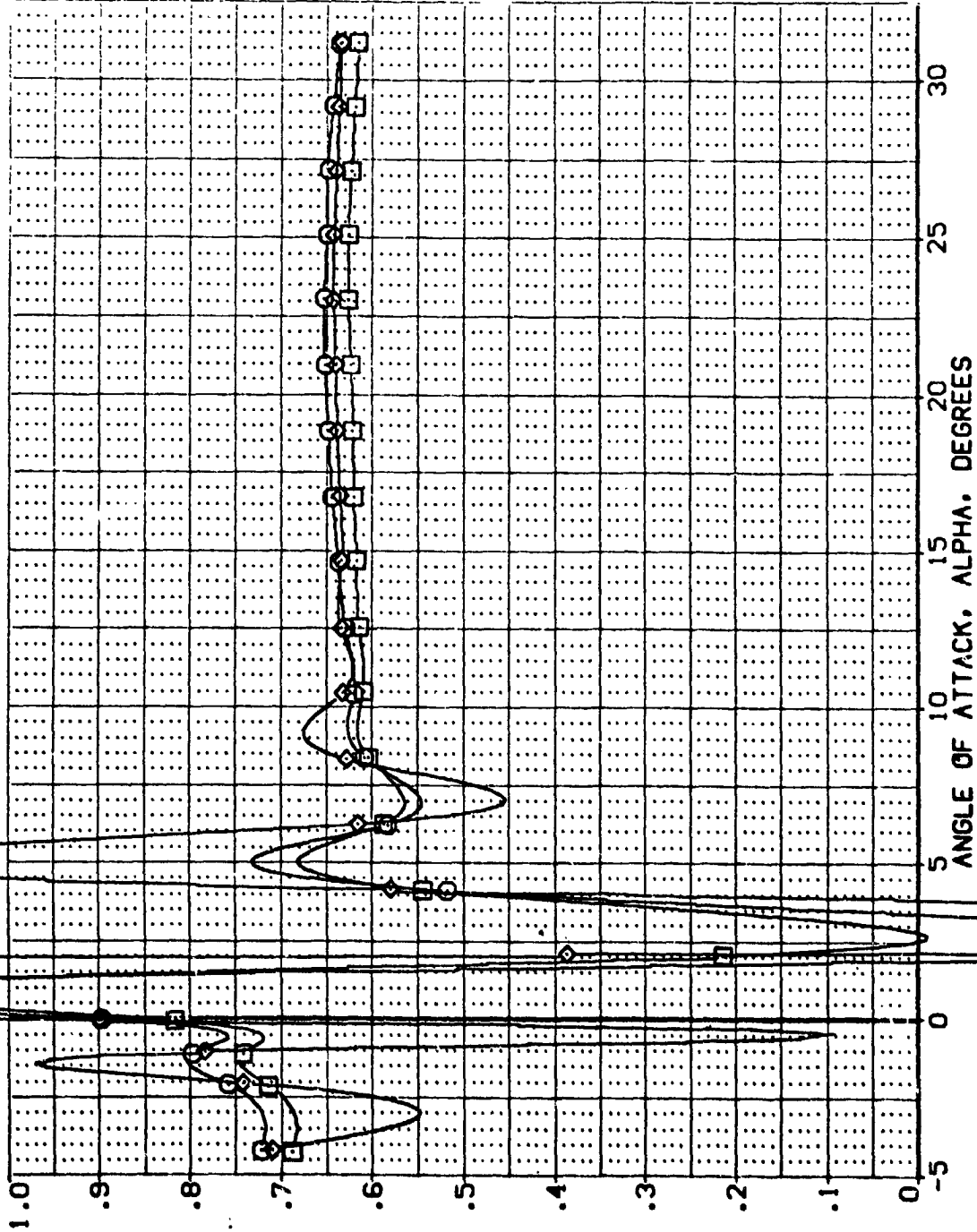


FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (A)MACH = .20      PAGE 323

DATA SET SYMBOL: (B02001), (B02073), (B02077)

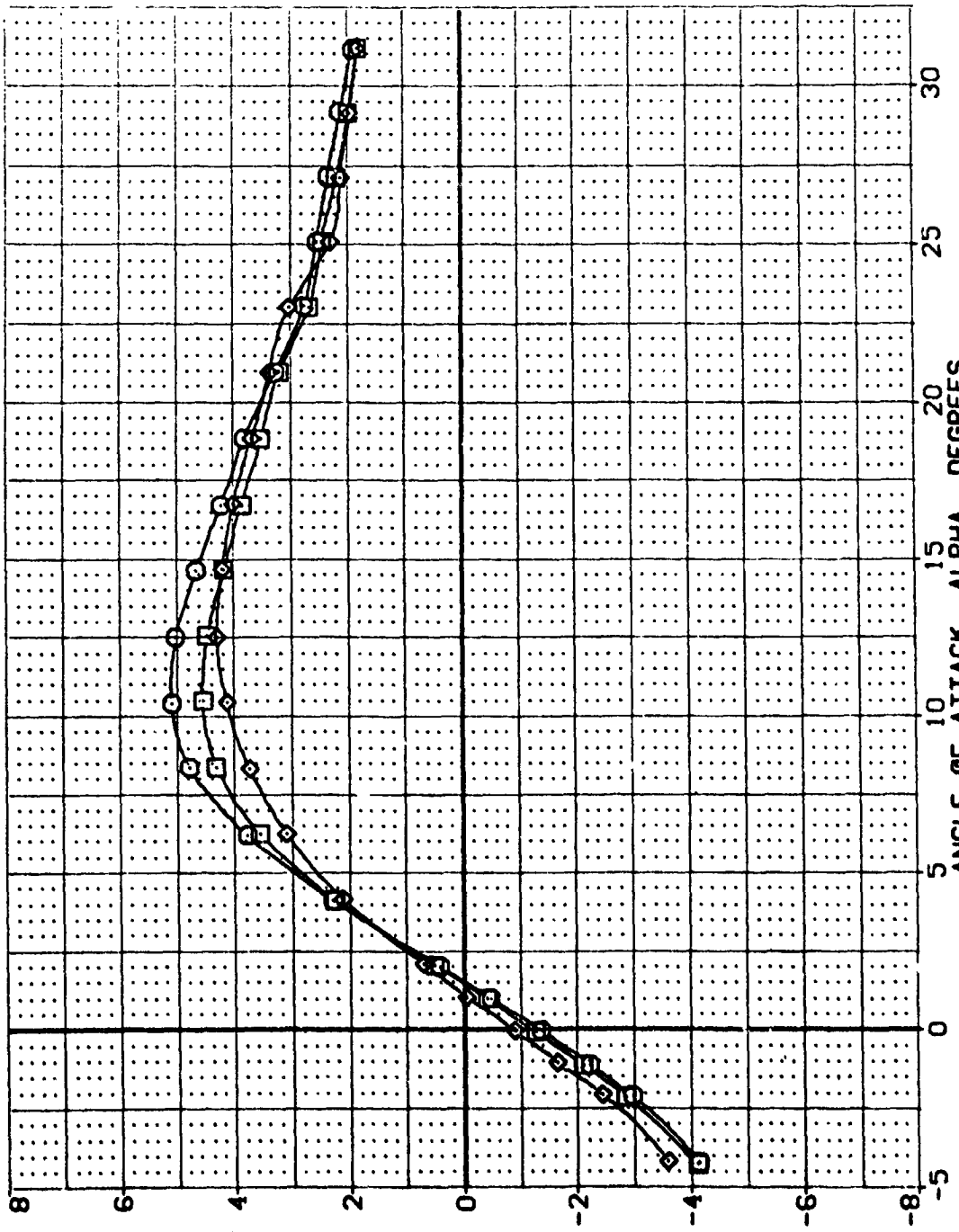
CONFIGURATION DESCRIPTION: 0A528 B26C9615M7F8 V11E28V85X9, 0A628 B26C9615M7F8J43V11E28V85X10, 0A528 B26C9615M7F8J62V11E28V85X10

ELEVON H/BW: .000, .285, .285

SPOBRK: 25.000, .000, .000

BOFLAP: -12.000, -12.000, -12.000

REFERENCE INFORMATION: 4.4119 SO.FT. INCHES, 19.2299 INCHES, 37.9359 INCHES, 43.9374 INCHES, 15.0000 INCHES, 15.1875 INCHES, .0405 SCALE



FOREBODY LIFT TO DRAG RATIO, L/D

FIG 30 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .285 ELEVON = 0  
 (M)MACH = .20





DATA SET SYMB. CONFIGURATION DESCRIPTION  
 (BDZ(21)) 0A528 B26C9G15M7F8 V11E28V8RSX9  
 (BDZ(3)) 0A528 B26C9G15M7F8J43V11E28V8RSX10

ELEVON W/BW SPOBRX BOFLAP  
 .000 .125 25.000 -12.000  
 .000 .125 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2298 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

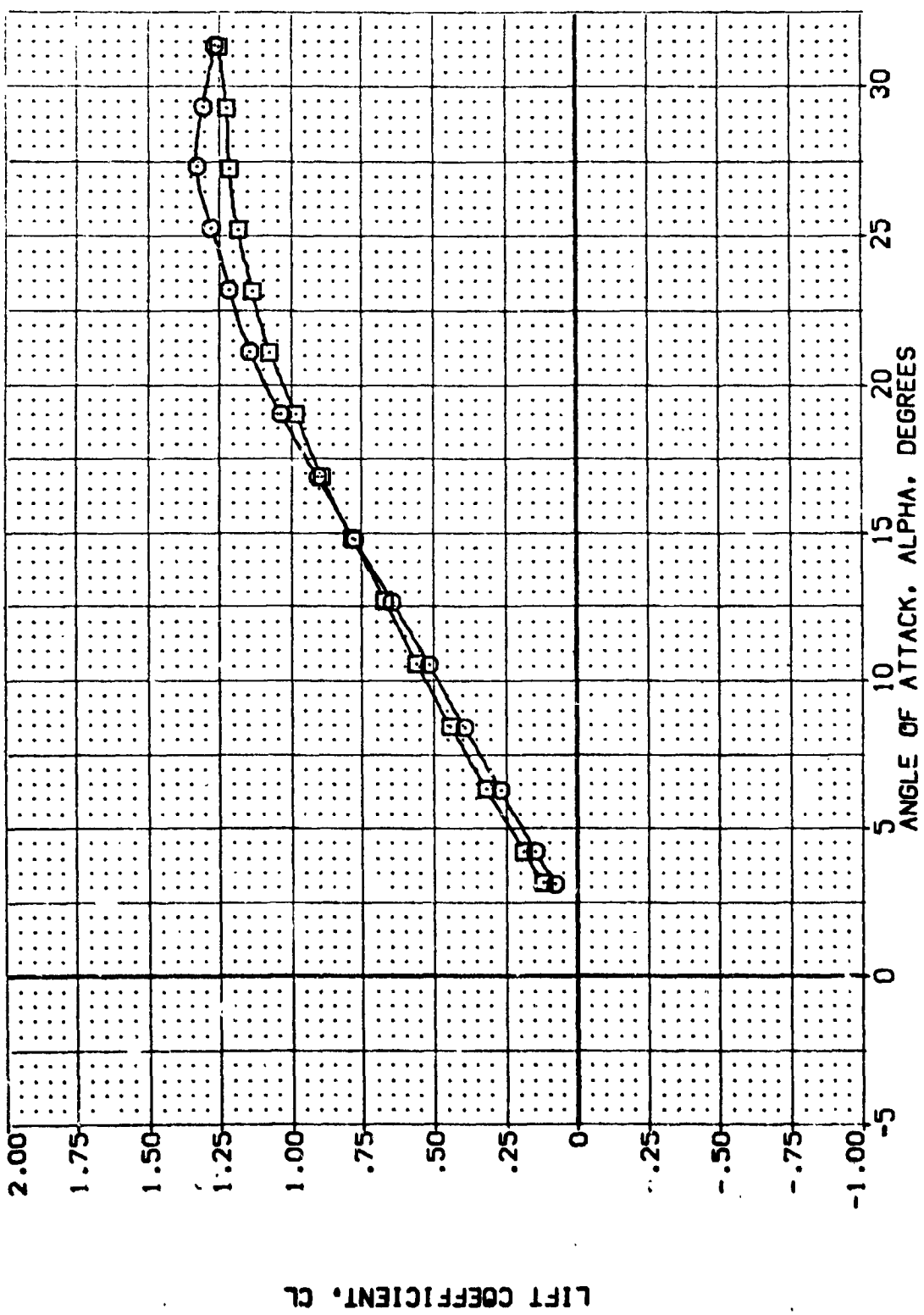


FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802021) 8 64528 826C5G1547F8 V116E28V8RSK9  
 (802070) 8 64628 826C5G1547F843M116E28V8RSK10

ELEVON H/WB SPDRK BOFLAP  
 .000 .125 25.000 -12.000  
 .000 .125 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 YMRP 43.9974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE

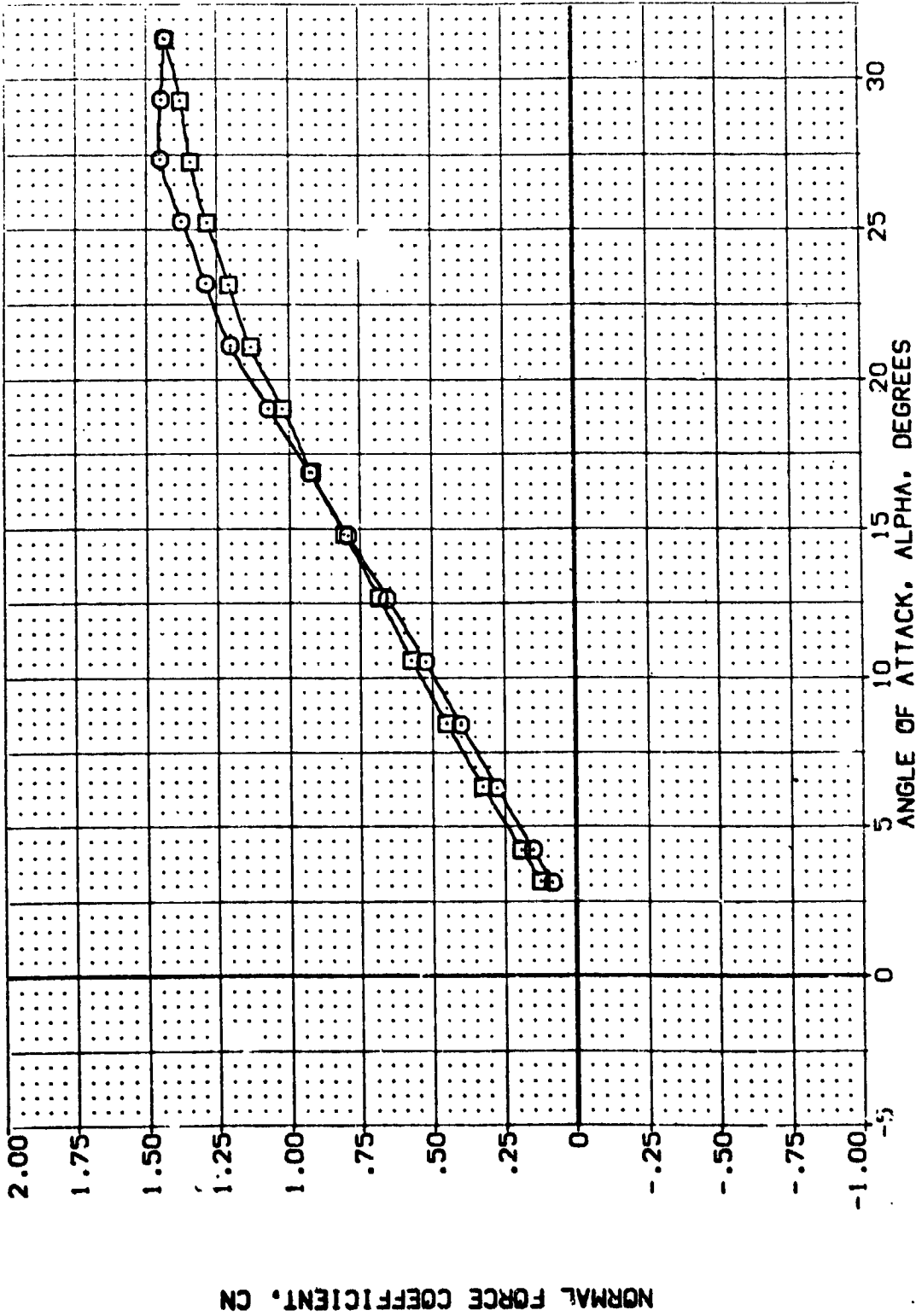


FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/WB = .125 ELEVON = 0  
 (A)MACH = .20





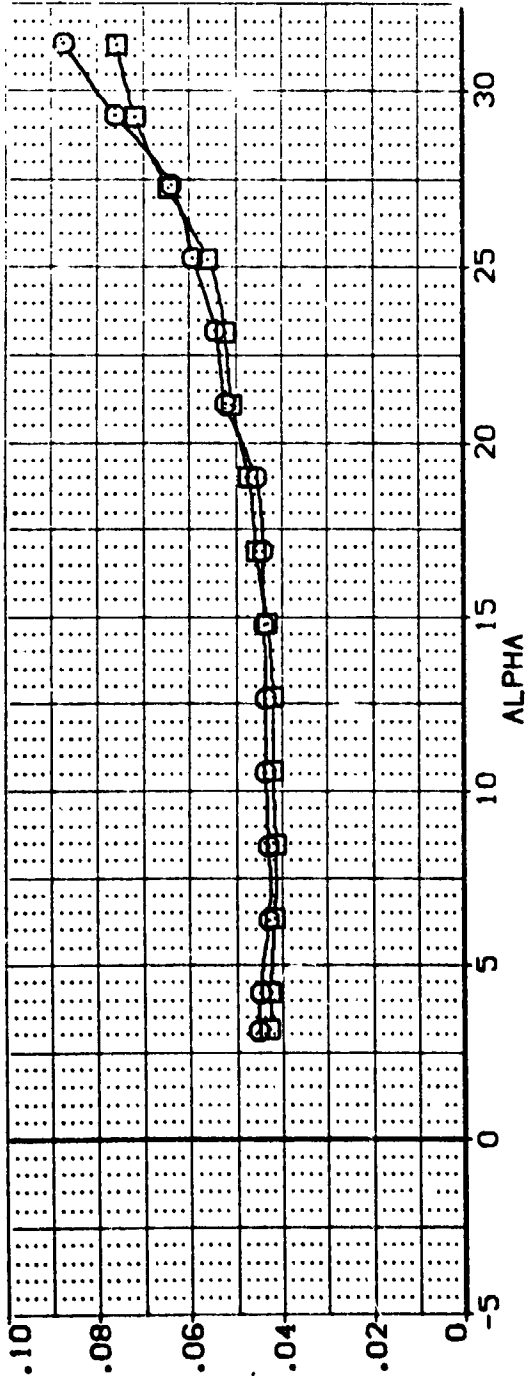
DATA SET SYMBOL (80Z021)  
 (80Z070)

CONFIGURATION DESCRIPTION  
 0A528 B26C36|S478 B V116E28V85X9  
 0A528 B26C36|S478 3A43M116E28V85X10

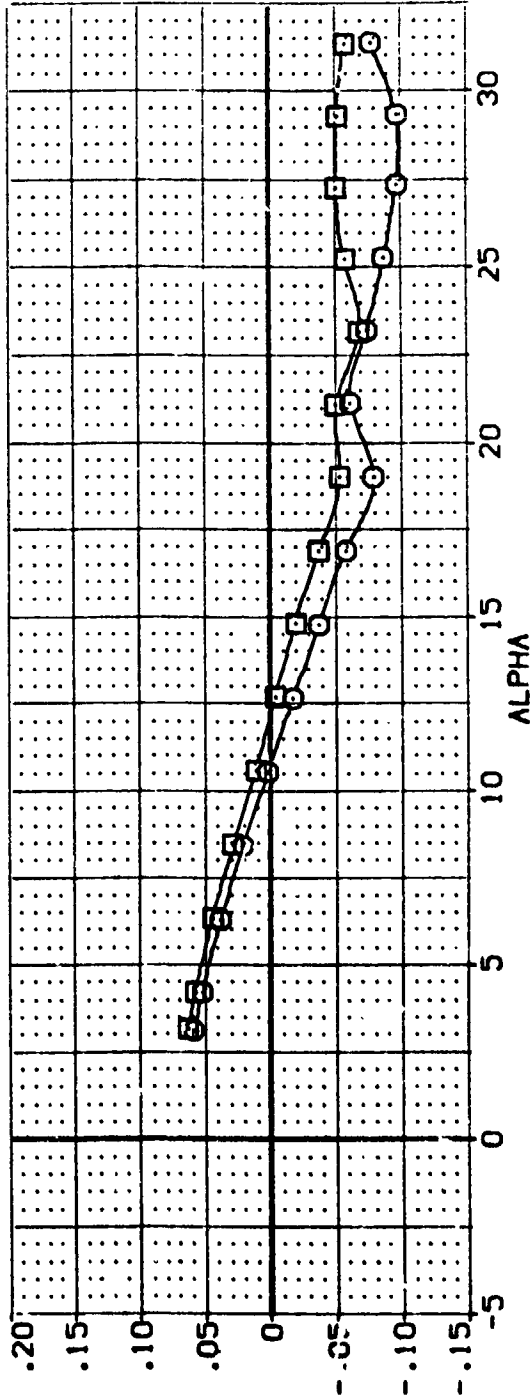
ELEVON H/BW .000 .125  
 .000 .125

SPOBRK 25.000  
 BDFLAP -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2289 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 0.000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405



CAB



CAF

FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0

CAJMACB = .20

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

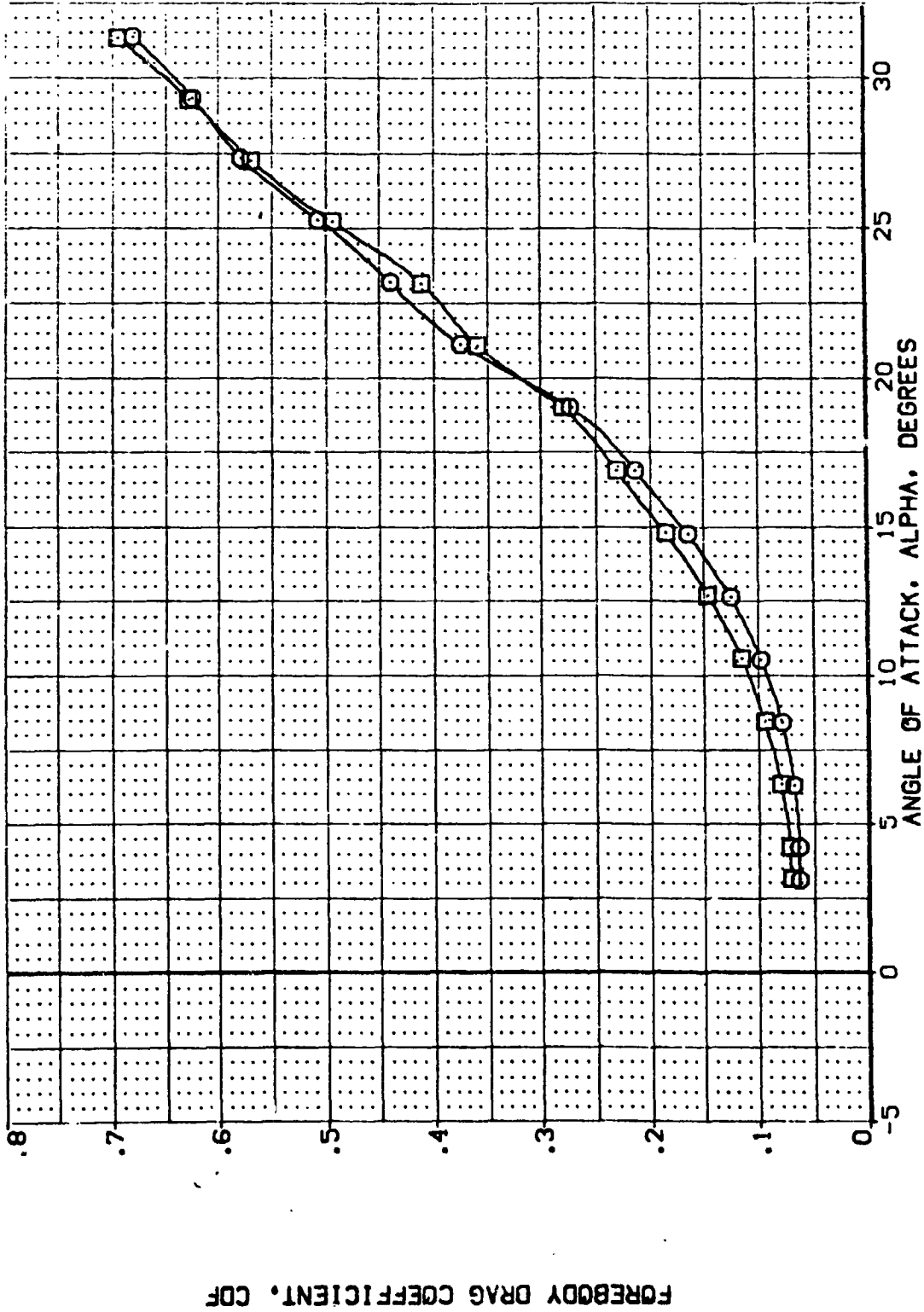
(80Z021)	8	826C9G1S7F78	V116E28V85X9
(80Z070)	□	826C9G1S7F78	8A43V116E28V85X10

ELEVON H/BW SPOBRK BOFLAP

.000	.125	25.000	-12.000
.000	.125	.000	-12.000

REFERENCE INFORMATION

SREF	19.4119	SO.FT
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0  
(A)MACH = .20

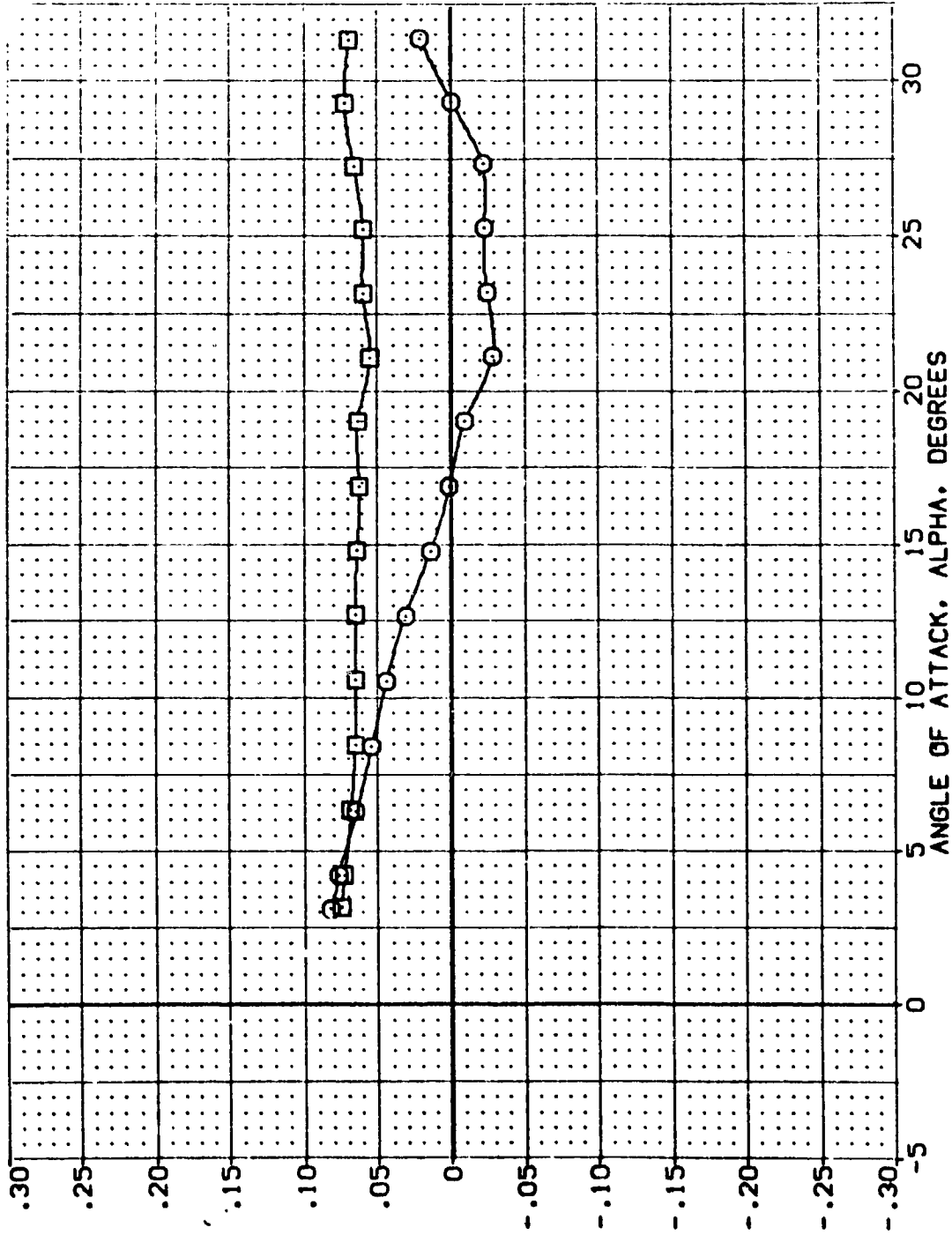


(1)

DATA SET SYMBOL (802070) **□** CONFIGURATION DESCRIPTION  
 0A628 B26C9G1SM7F8 V116E28V85X9  
 0A628 B26C9G1SM7F8J43V116E28V85X10

ELEVON H/BW .000 .125  
 SPOBRK 25.000 .000  
 BOFLAP -12.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 XMRP 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1675 INCHES  
 SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0  
 (A)MACH = .20



DATA SET SYMBOL (B02021) (B02070)  CONFIGURATION DESCRIPTION 04628 826C9G15M7F6 V116E28V8RS49 04628 826C9G15M7F6J43V116E28V8RSX10

ELEVON H/BW .000 .125 .000 .125 SPOBRK 25.000 .000 -12.000 -12.000 BOFLAP 0.000 0.000 0.000 0.000 REFERENCE INFORMATION SREF 4.4119 SO.FT. INCHES LREF 19.2299 INCHES BREF 37.9359 INCHES XMRP 43.5974 INCHES YMRP 0.000 INCHES ZMRP 15.1875 INCHES SCALE .0405

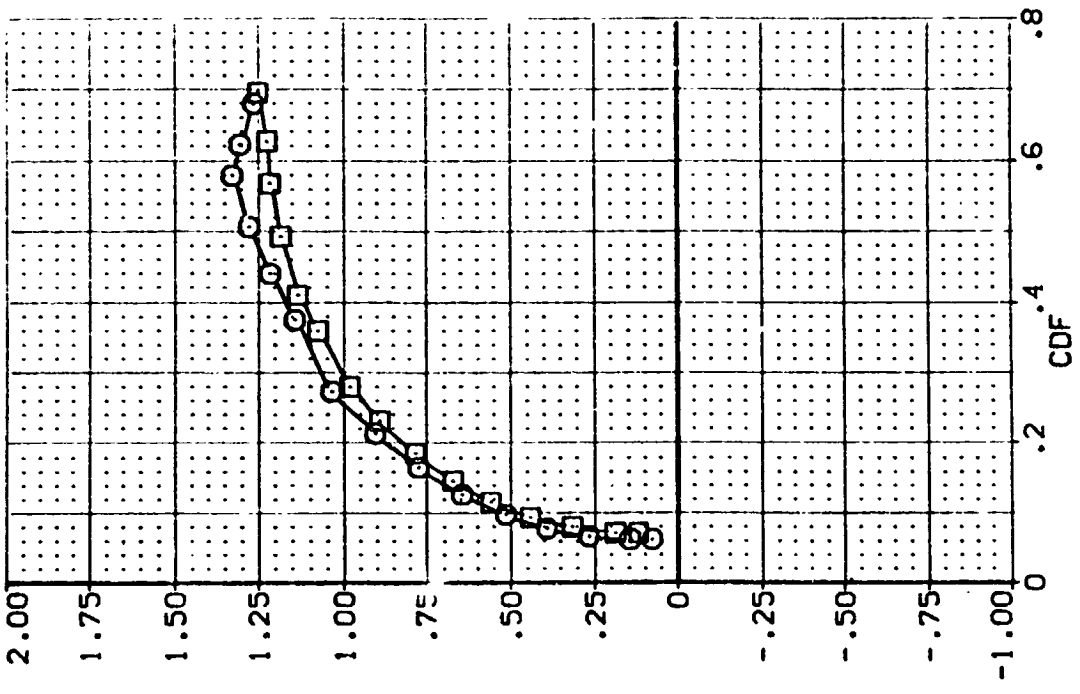
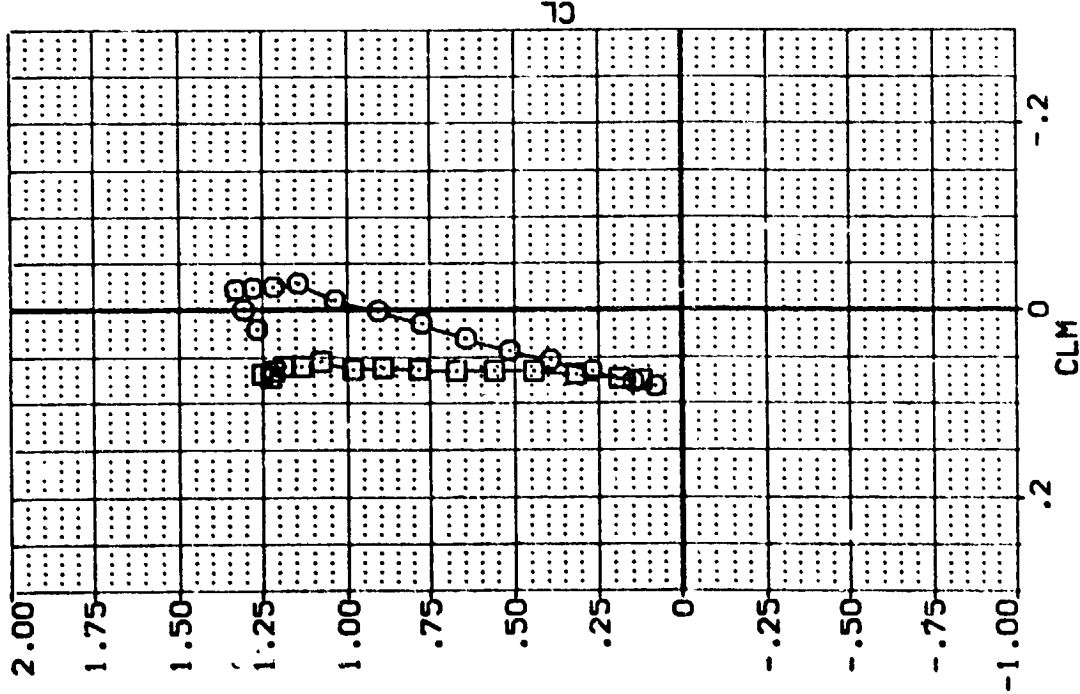


FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0 (A)MACH = .20





DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802021)  $\square$  0A628 B26C9G1547FB V116E28V8RSX9  
 (802070)  $\square$  0A628 B26C9G1547FB43V116E28V8RSX10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .125 25.000 -12.000 SQ.FT.  
 .000 .125 .000 -12.000 INCHES  
 XMRP .0000 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

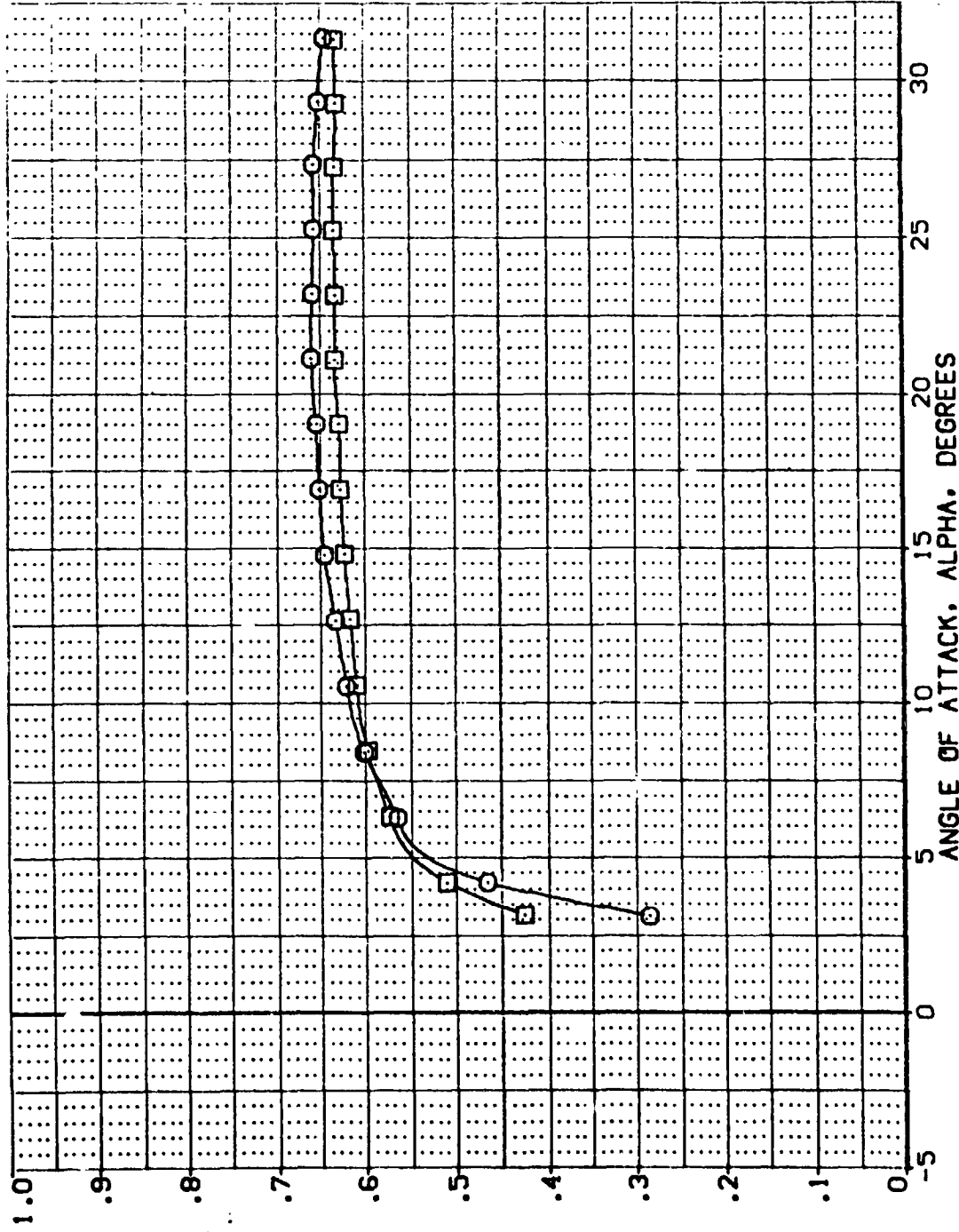


FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0

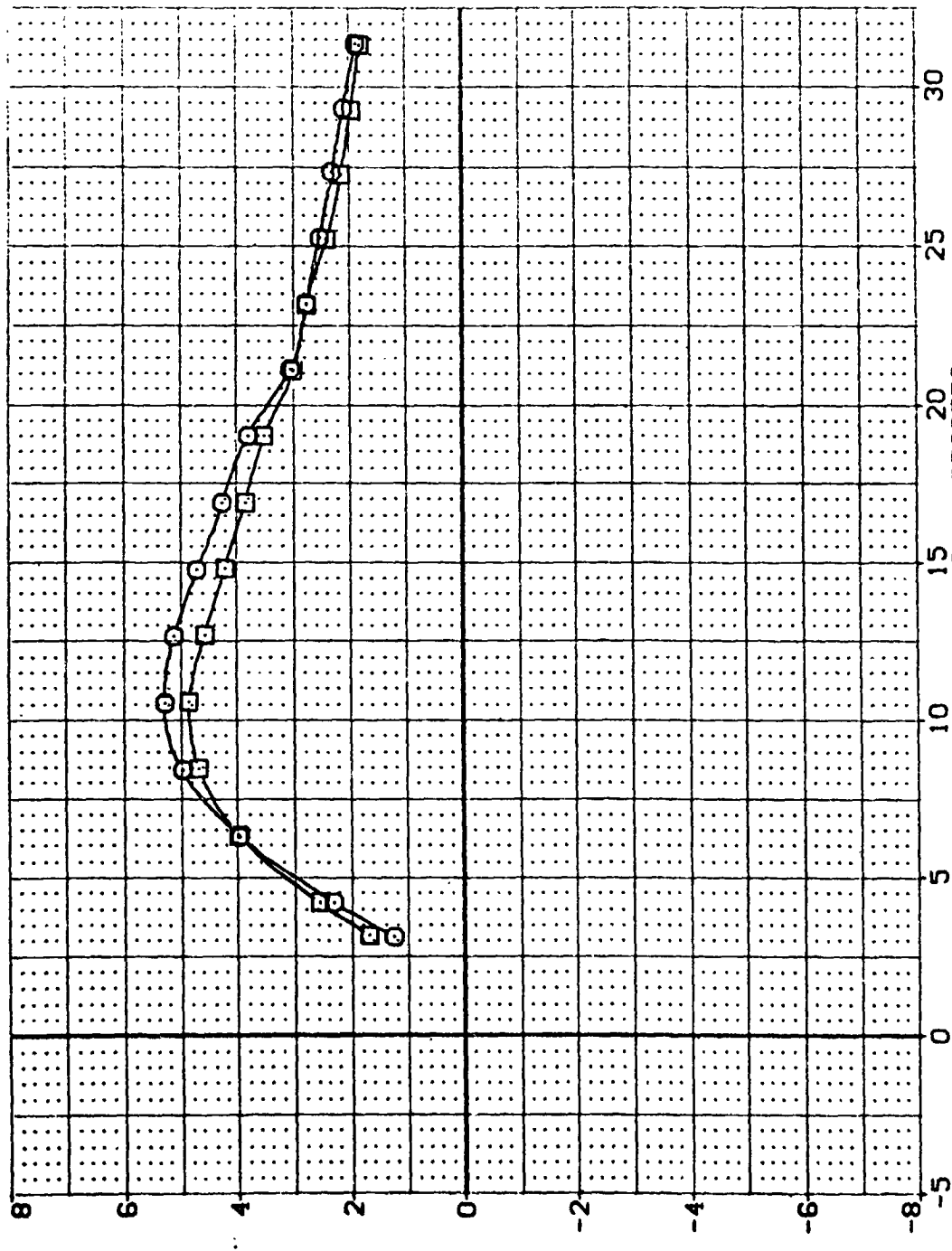
(A)MACH = .20

DATA SET SYMBOL (802021) (802070)

CONFIGURATION DESCRIPTION  
 CASE28 826C9G1S47F8 V116E28V8RSX19  
 CASE28 826C9G1S47F8J43V116E28V8RSX10

ELEVON H/BW .000  
 SPDRK 25.000  
 80FLAP -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405



FOREBODY LIFT TO DRAG RATIO, L/D

ANGLE OF ATTACK, ALPHA, DEGREES

FIG 31 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .125 ELEVON = 0

CAJMACH = .20





DATA SET SYMBOL: (802049) (802063) 
 CONFIGURATION DESCRIPTION: 0A628 B26C5G15K7F8 W115E28V85X9 0A628 B26C5G15K7F8 B443V116E28V85X10  
 ELEVON H/BW: .035 .035  
 SPOBRK BDF/LAP: 25.000 -12.000 .000 -12.000  
 REFERENCE INFORMATION: SREF 4.4119 SO.FT. INCHES LREF 19.2299 INCHES BREF 37.9399 INCHES XMRP 43.5974 INCHES YMRP .0000 INCHES ZMRP 15.1875 INCHES SCALE .0405

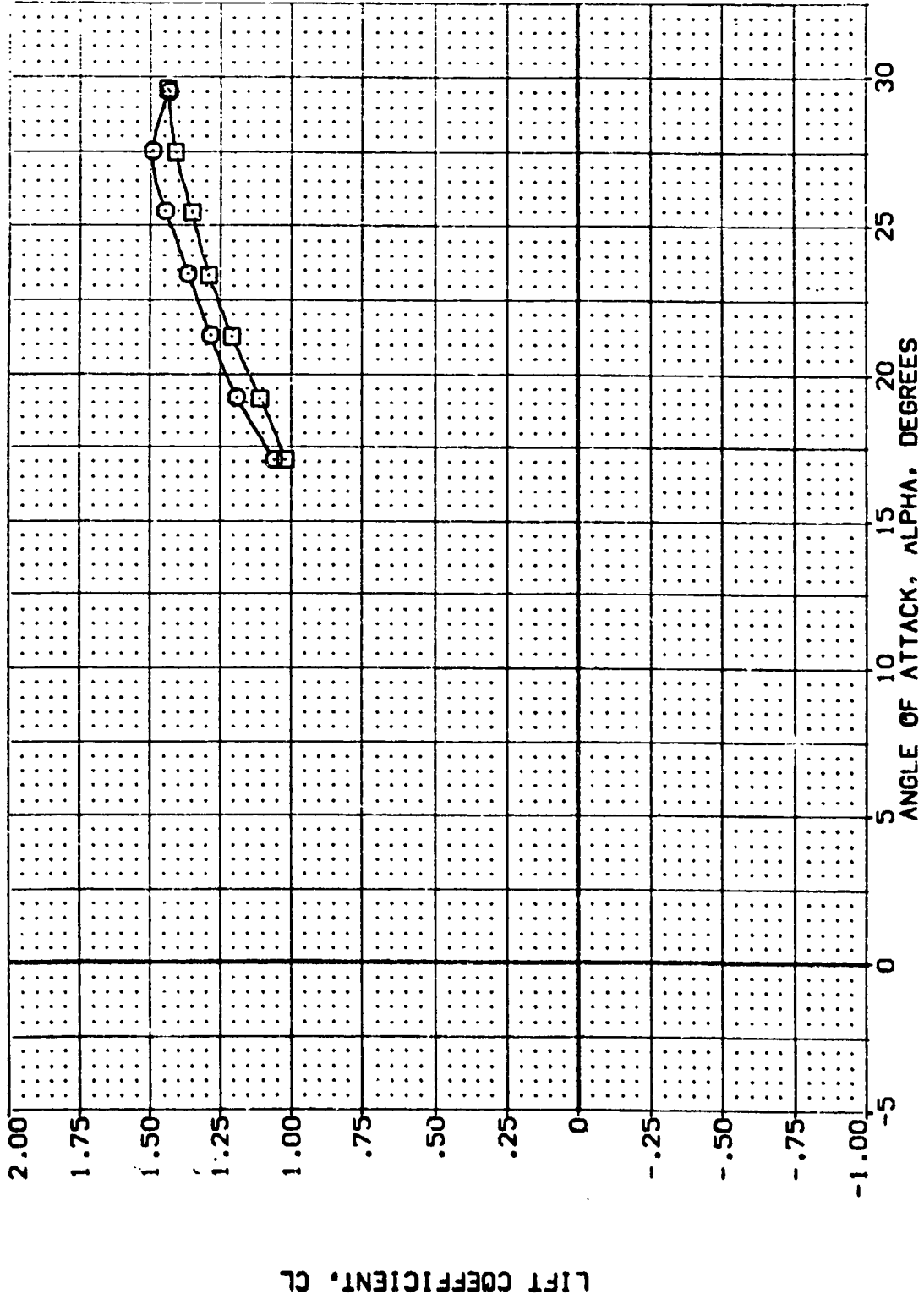


FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 (A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02049) 0A628 B26C9615H7F8 V116E28V8RSX9  
 (B02063) 0A628 B26C9615H7F8J43V116E28V8RSX10

ELEVON H/BW SPOBRK BDFLAP REFERENCE INFORMATION  
 .000 .035 25.000 -12.000 4.4119 SO.FT.  
 .000 .035 .000 -12.000 19.2299 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.1875 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0403 SCALE

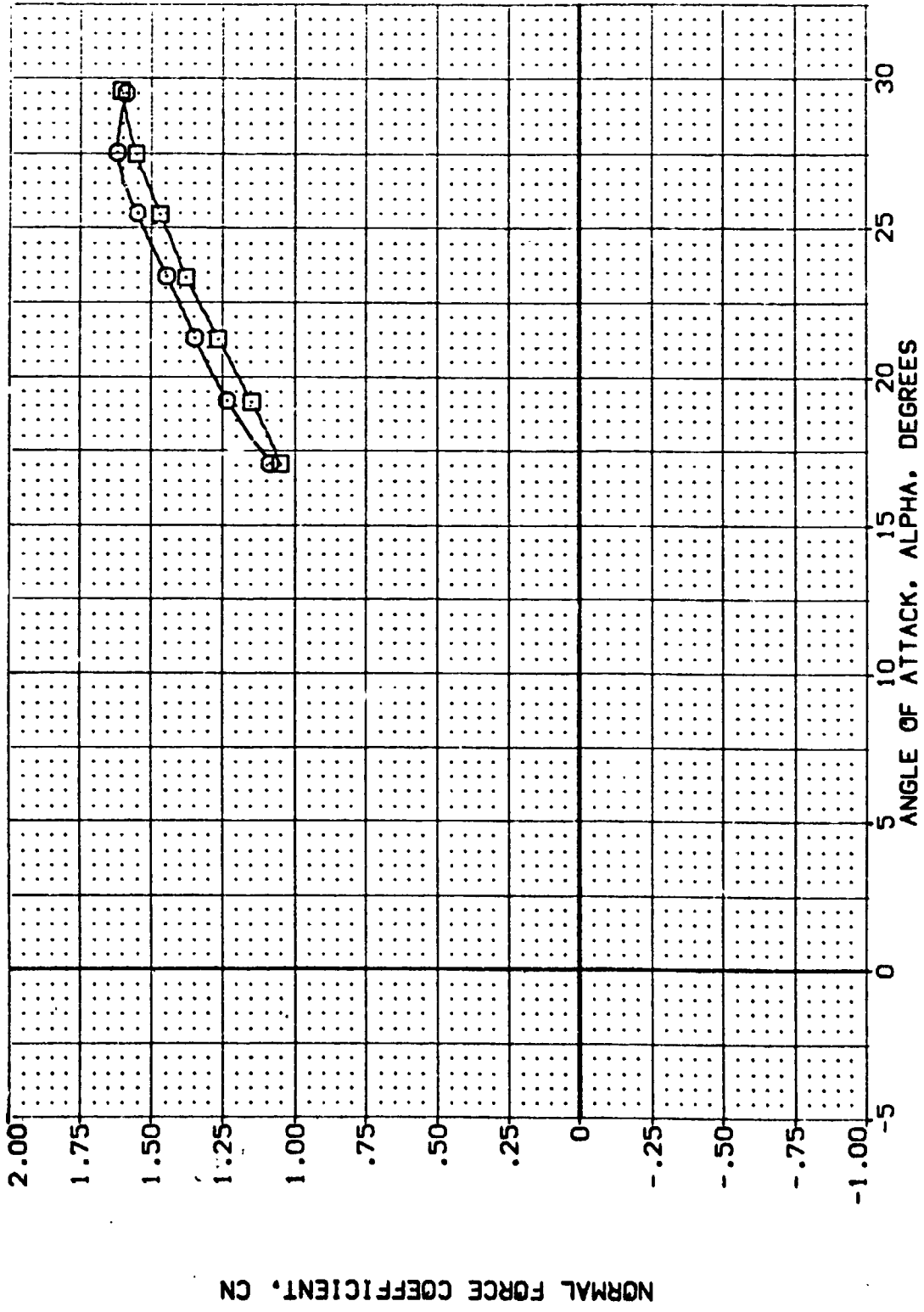


FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 CA3MACH = .20 PAGE 334





DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02049) 04528 826C9G15M7F8 V116E28V8RSX19  
 (B02063) 04528 826C9G15M7F8V116E28V8RSX10

CLEVEN H/BW SPDRK BOFLAP REFERENCE INFORMATION  
 .000 .035 25.000 -12.000  
 .000 .035 .000 -12.000  
 SREF 4.4119 SQ.FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE

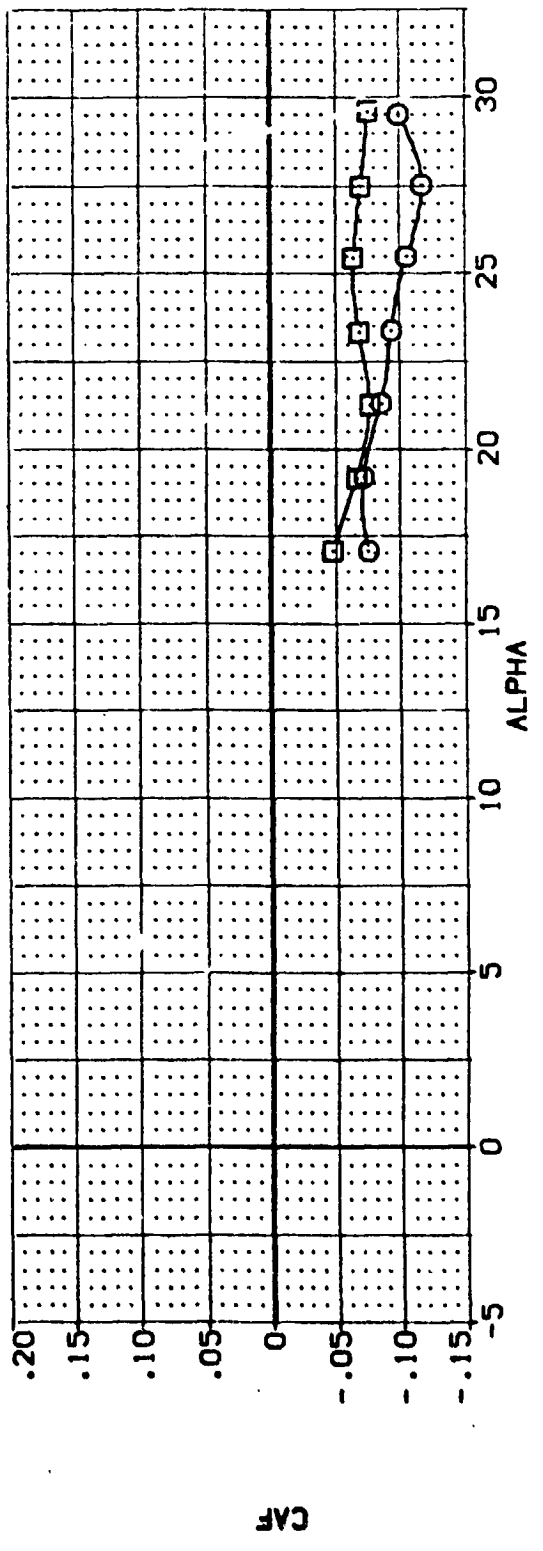
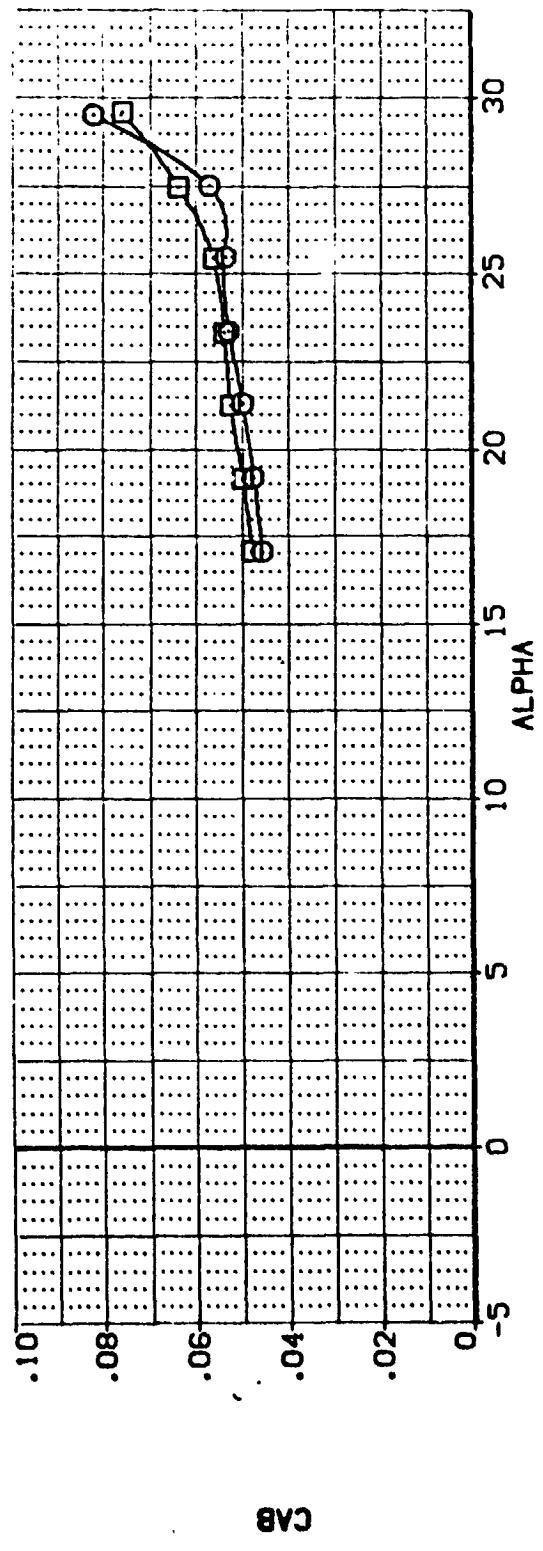
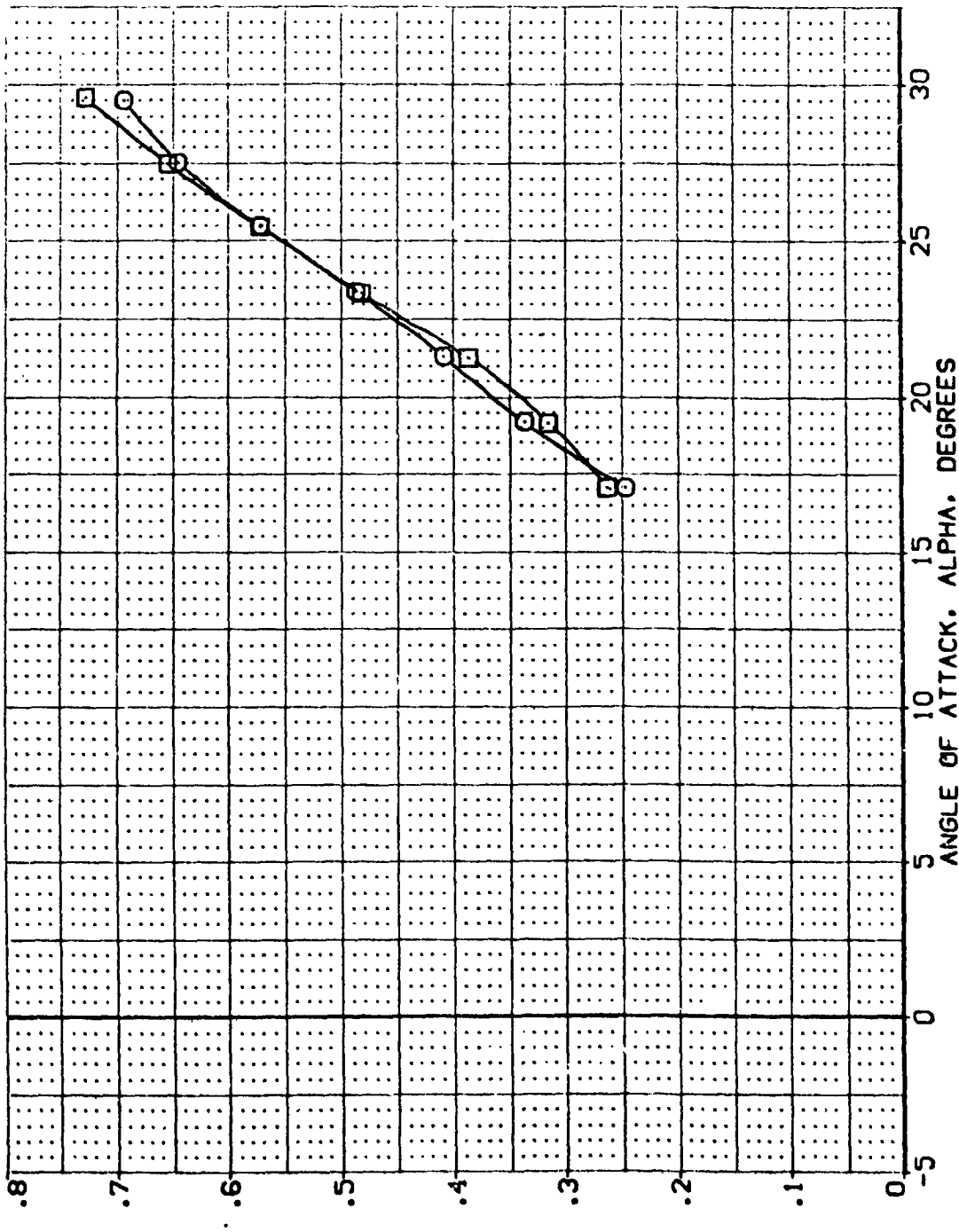


FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 CAJ MACH = .20 PAGE 335

DATA SET SYMBOL (BDZ049) (BDZ063) □  
 CONFIGURATION DESCRIPTION  
 0A628 B26C9G15M7F8 V116E28V8S1X9  
 0A628 B26C9G15M7F8J43V116E28V8S1X10

ELEVON H/BW .000 .035  
 .000 .035  
 SPOBRK BDFLAP 25.000 -12.000  
 .000 .000 -12.000  
 REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1873 INCHES  
 SCALE .0405



FOREBODY DRAG COEFFICIENT, CDF

FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 (A)MACH = .20 PAGE 336



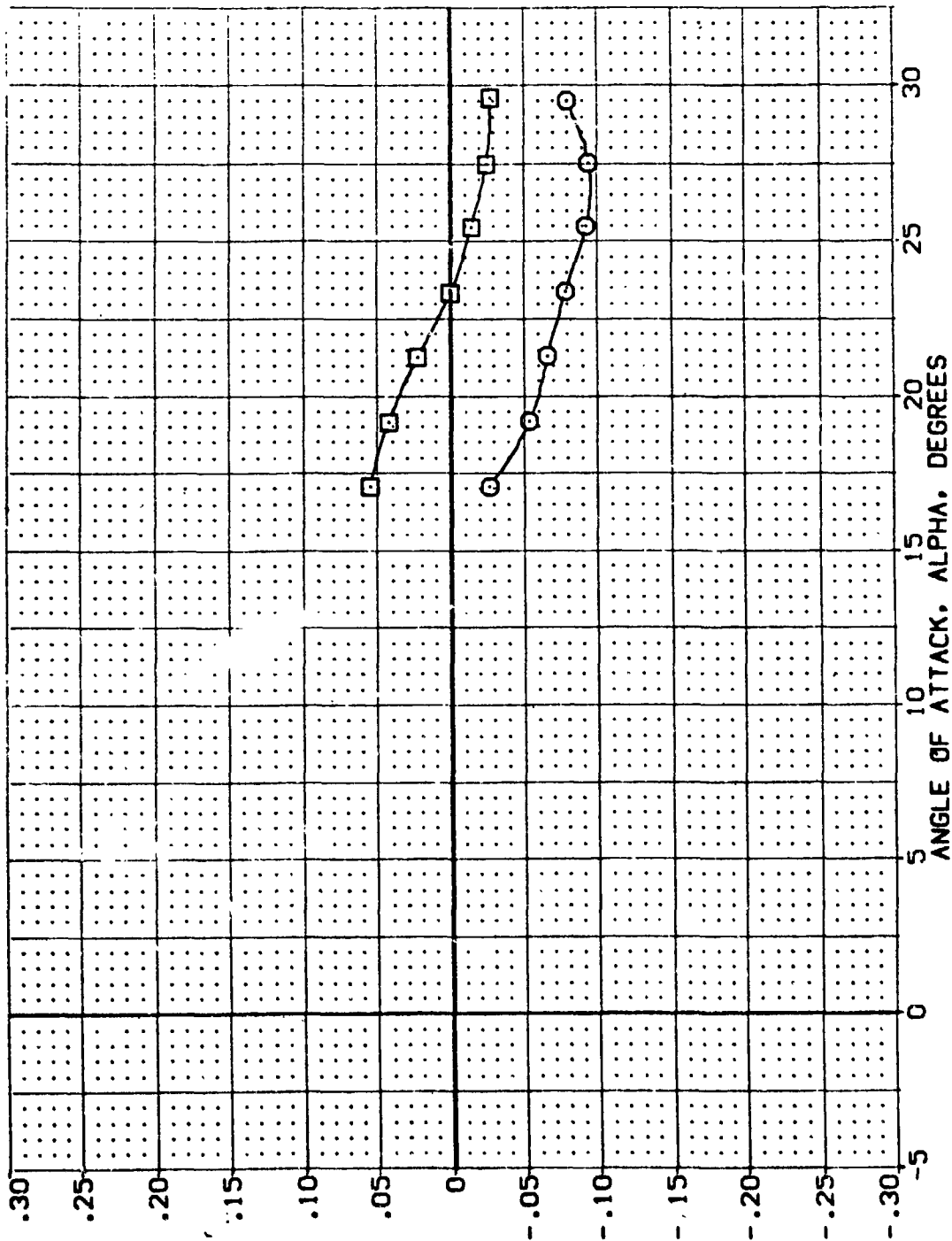


DATA SET SYMBOL (802049) (802063) □  
 CONFIGURATION DESCRIPTION  
 0A628 826C91547F8 V116E28V8RSX9  
 0A628 826C91547F8J43V116E28V8RSX10

ELEVON H/BW .035  
 .000  
 .000

SPOBRK BL .AP  
 25.000 -12.000  
 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2298 INCHES  
 BREF 37.9559 INCHES  
 XMRP 43.9974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0:105



PITCHING MOMENT COEFFICIENT, CLM

FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0

(A)MACH = .20



DATA SET SYMBOL: (B02049) (B02063)  B0628 B26C9G15M7F8J43W116E27V8FSX10

CONFIGURATION DESCRIPTION

0A628 B26C9G15M7F8 J116E27V8FSX9  
 0A628 B26C9G15M7F8J43W116E27V8FSX10

ELEVON H/BW .035 .035  
 .000 .000

SPDRK BDFLAP  
 25.000 -12.000  
 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

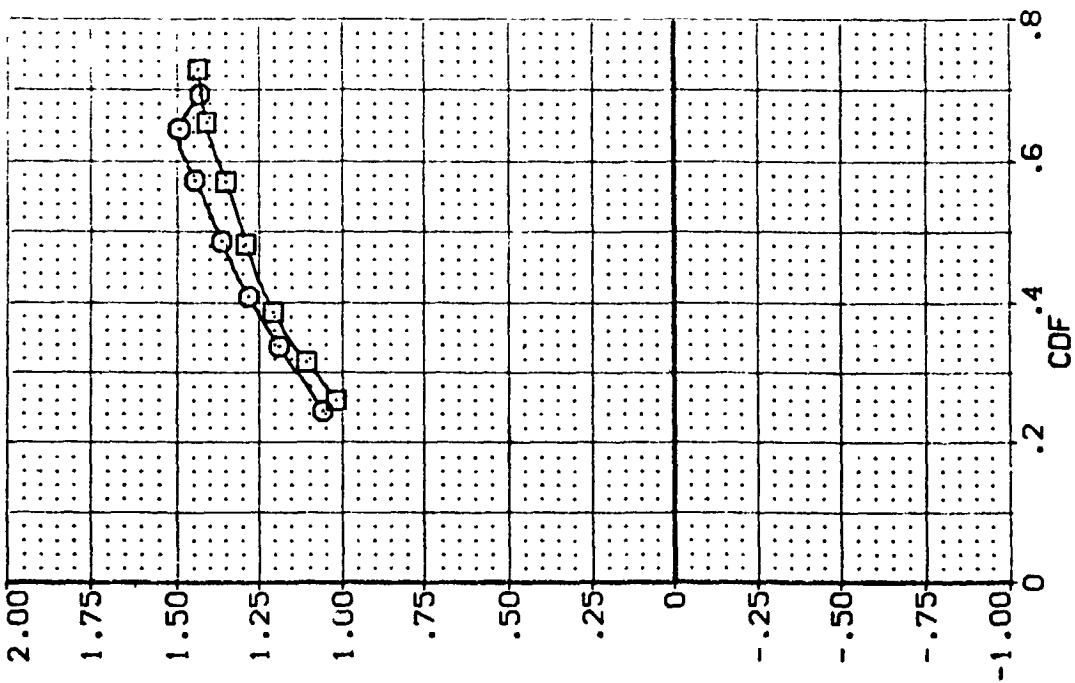
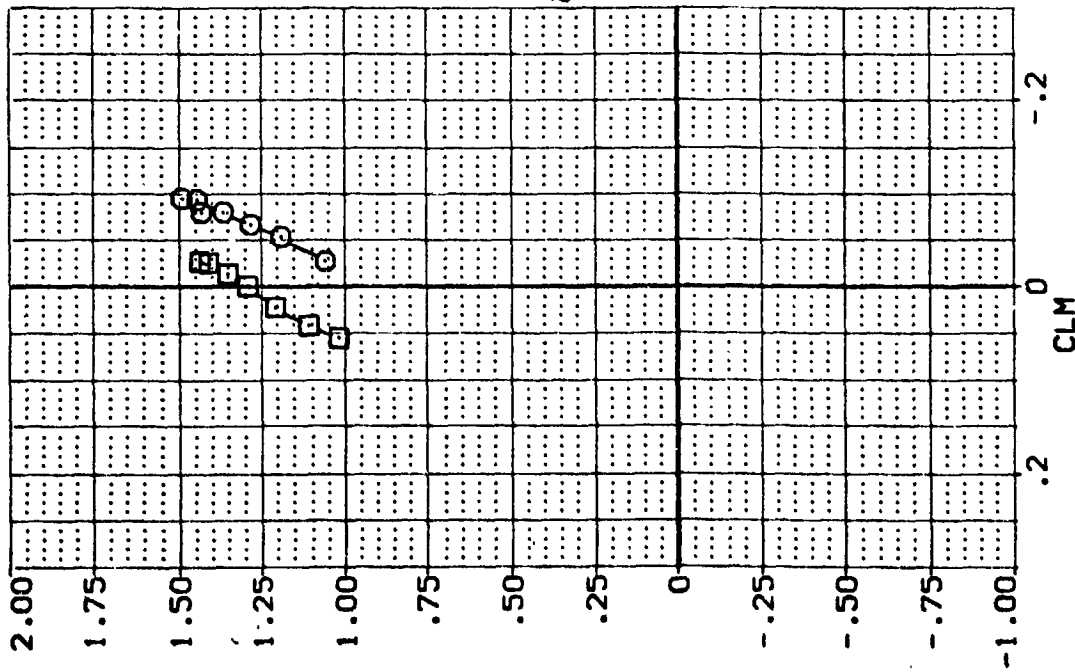


FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0

(A) MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802049) 04628 B26C9G15M7F8 V116E28V8K5X9  
 (802063) 04628 B26C9G15M7F8J43V116E28V8K5X10

ELEVON H/BW SPOBRK BOFLAP REFERENCE INFORMATION  
 .000 .035 25.000 -12.000 4.4119 SQ.FT.  
 .000 .035 .000 -12.000 19.2299 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.1000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

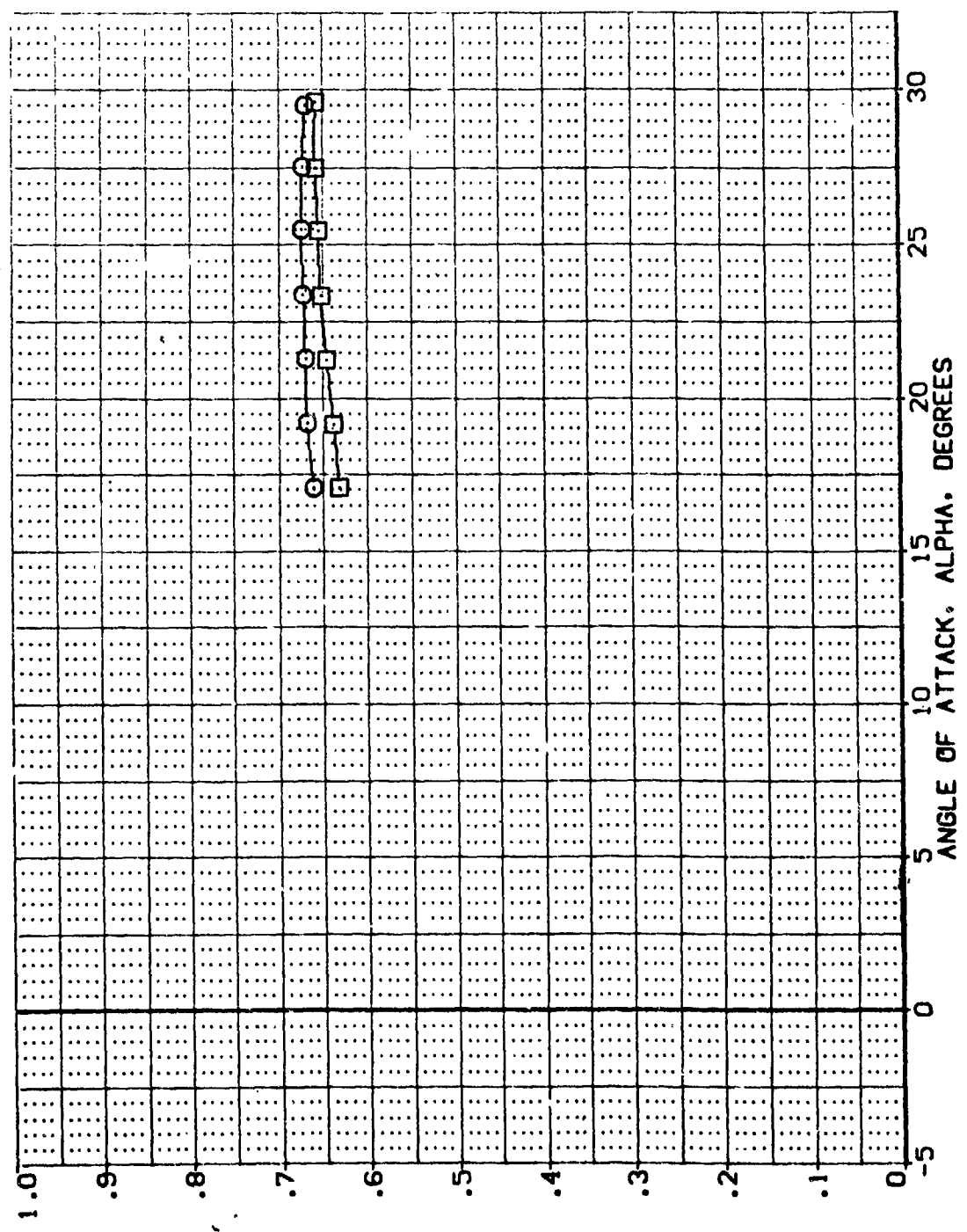
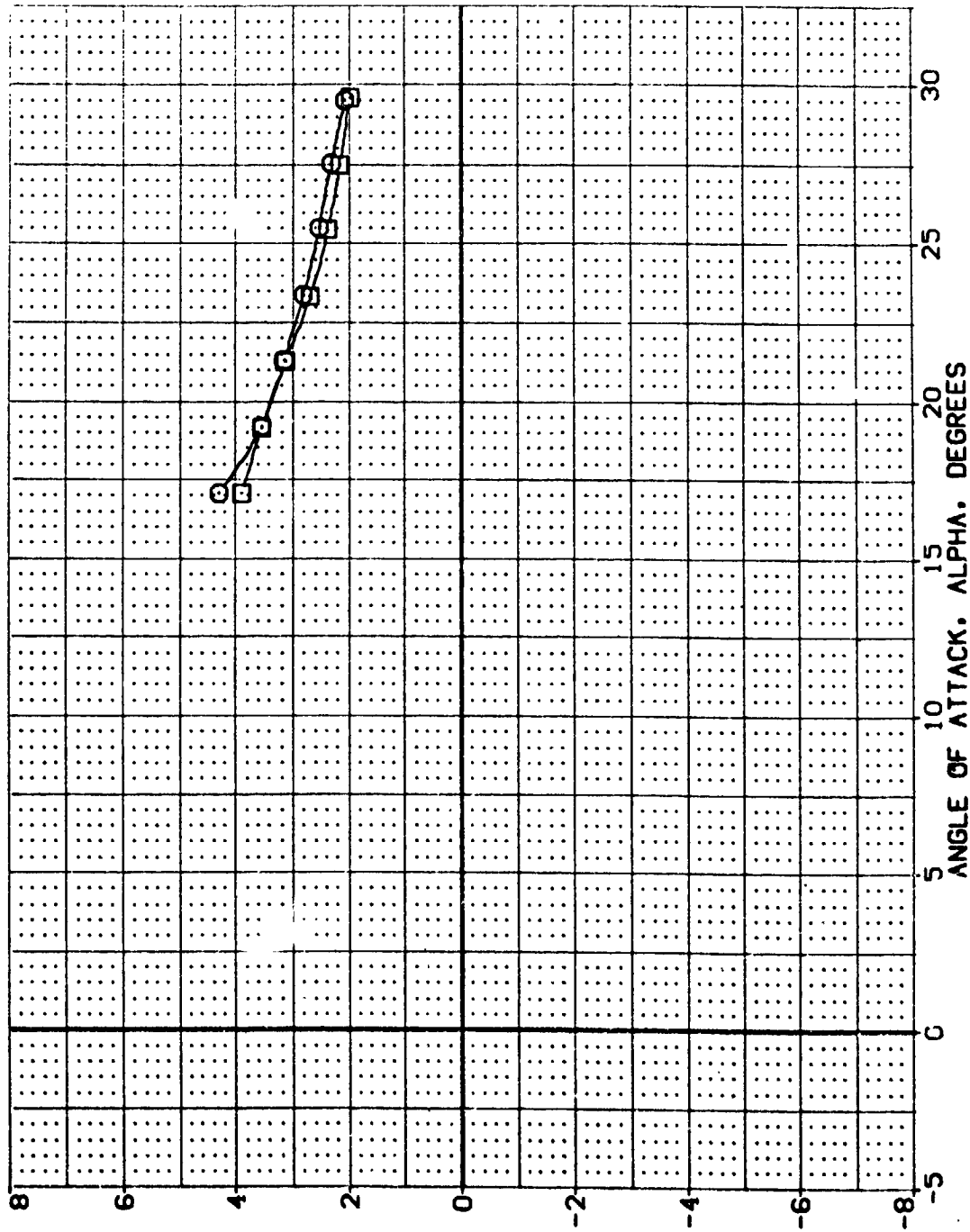


FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 (A)MACH = .20 PAGE 339

DATA SET SYMBOL: (802049) (802053)  CONFIGURATION DESCRIPTION: 0A628 B26C9G15H7F8 V116E28V8R5X9 0A628 B26C9G15H7F8J43V116E28V8R5X10

ELEVON H/BW SPOBRK BOFLAP  
 .000 .035 25.000 -12.000  
 .000 .035 .000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XPRP 43.5974 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1875 INCHES  
 SCALE .0405



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 32 EFFECT OF ENGINE CONFIGURATION IN GROUND EFFECT, H/BW = .035 ELEVON = 0  
 (A)MACH = .20 PAGE 340





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(80Z099)	0A6Z8 BZ6C9G154778 V116E28V8RSX9	-5.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(80Z090)	0A6Z8 BZ6C9G154778 V116E28V8RSX9	.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(80Z095)	0A6Z8 BZ6C9G154778 V116E28V8RSX9	5.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(80Z097)	0A6Z8 BZ6C9G154778 V116E28V8RSX9	10.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(80Z098)	0A6Z8 BZ6C9G154778 V116E28V8RSX9	15.000	25.000	-12.000	.000	YMRP 15.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

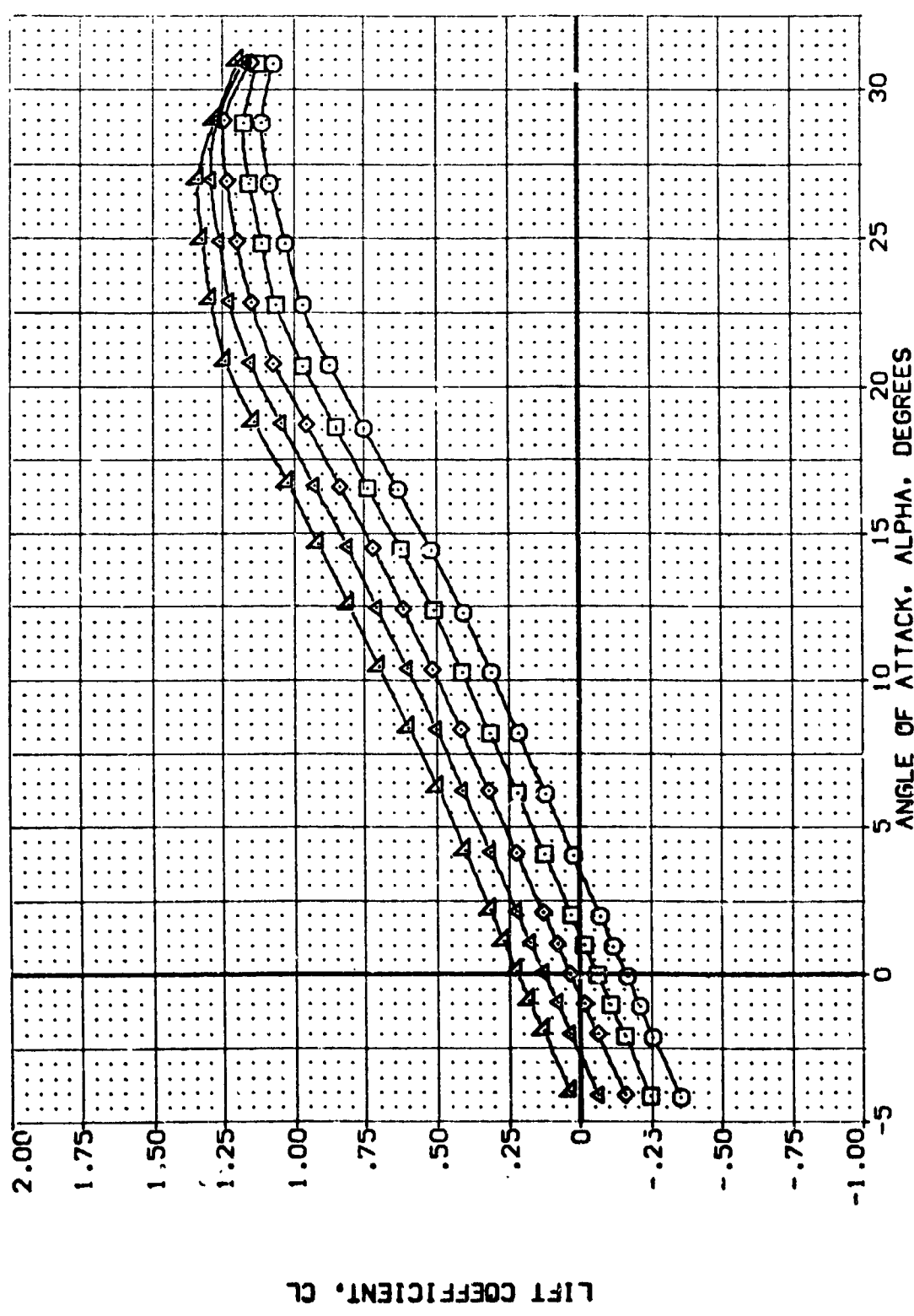


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A)MACH = .20  
 PAGE 341



DATA SET SYMBOL	CONF. ILLUSTRATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(802099)	0A628 B26C9G 5H7F8 V116E28V8K5X9	-5.000	25.000	-12.000	.000	SO. FT. 4.4119
(802090)	0A628 B26C9G 5H7F8 V116E28V8K5X9	5.000	25.000	-12.000	.000	INCHES 19.2399
(802096)	0A628 B26C9G 5H7F8 V116E28V8K5X9	10.000	25.000	-12.000	.000	INCHES 37.9359
(802097)	0A628 B26C9G 5H7F8 V116E28V8K5X9	15.000	25.000	-12.000	.000	INCHES 43.5974
(802098)	0A628 B26C9G 5H7F8 V116E28V8K5X9					INCHES .0000
						INCHES 15.1875
						SCALE .04105

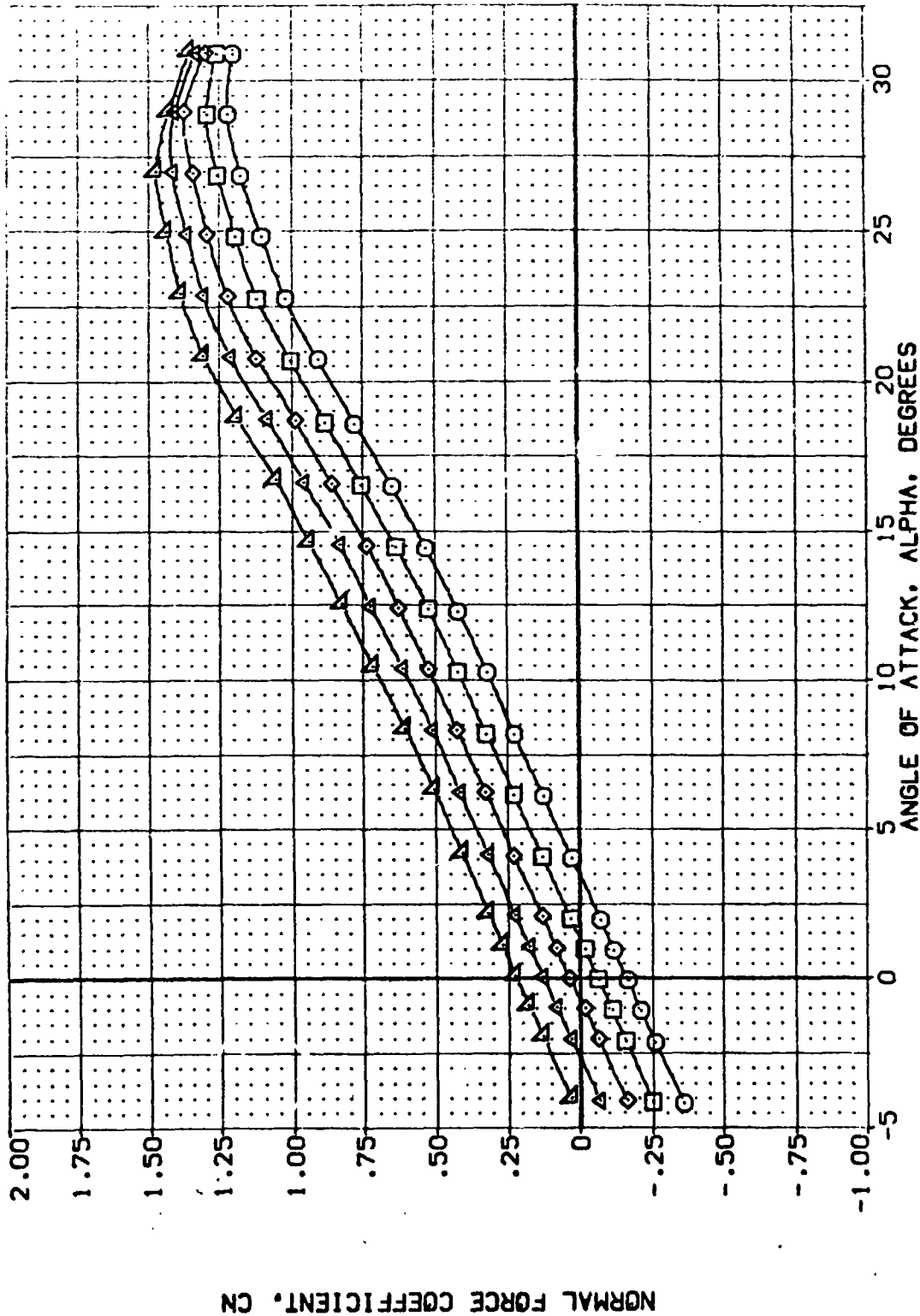


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

(A) MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOILER	BOFLAP	RUDDER	REFERENCE INFORMATION
(BD2099)	0A628 B26C9G SHT78 V116E28V8FSX9	-5.000	25.000	-12.000	.000	SREF 4.4119 SO.FT INCHES
(BD2090)	0A628 B26C9G SHT78 V116E28V8FSX9	5.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(BD2096)	0A628 B26C9G SHT78 V116E28V8FSX9	10.000	25.000	-12.000	.000	BREF 37.9259 INCHES
(BD2097)	0A628 B26C9G SHT78 V116E28V8FSX9	15.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(BD2098)	0A628 B26C9G SHT78 V116E28V8FSX9				.000	YMRP 15.0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

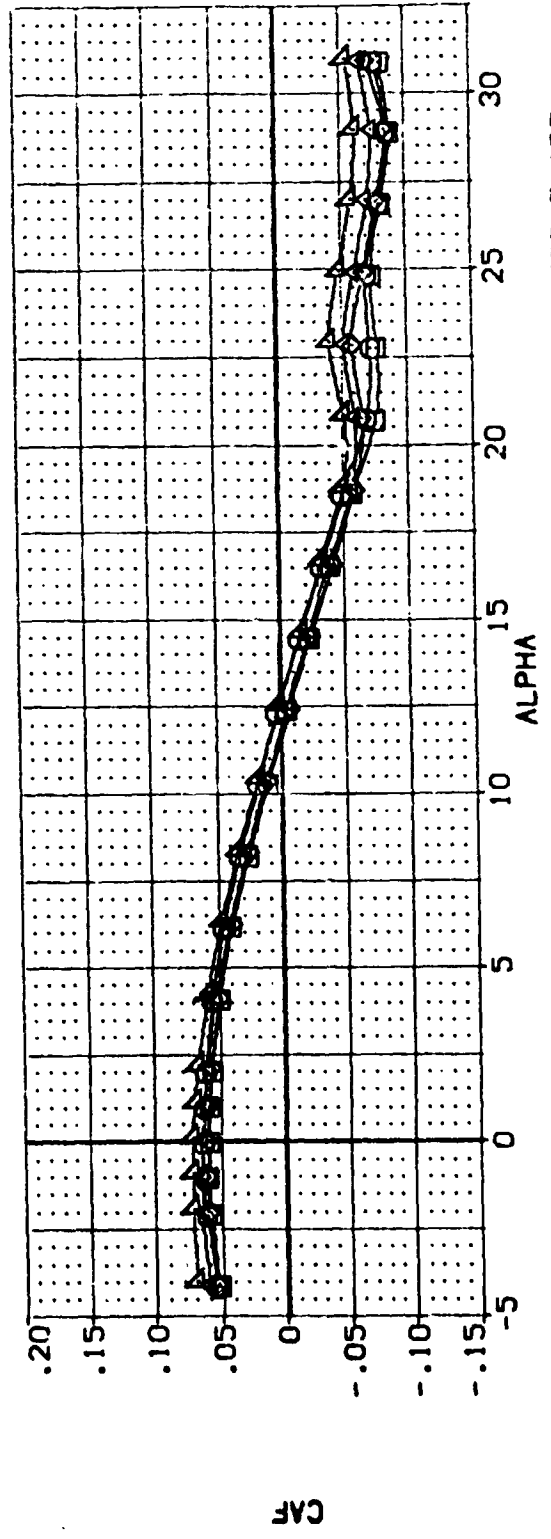
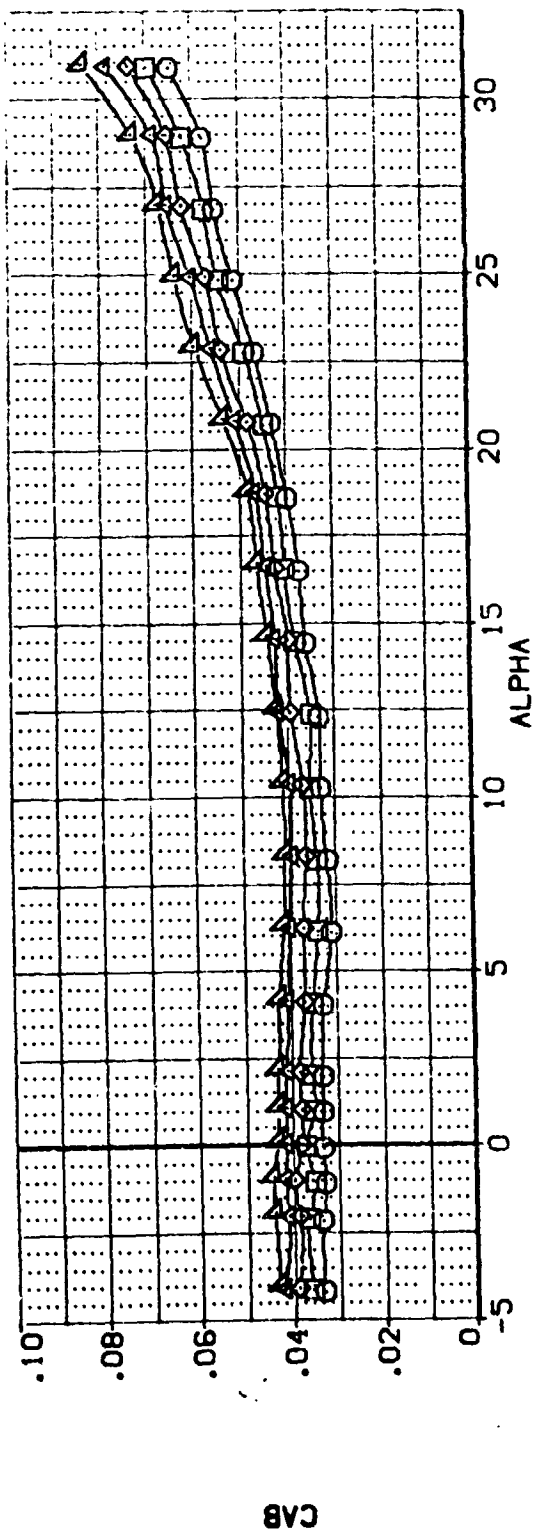


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A)MACH = .20 PAGE 343



DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (80Z099)    0A628    B26C9G|547F8    V1|6E28V8R5X9  
 (80Z050)    0A628    B26C9G|547F8    V1|6E28V8R5X9  
 (80Z076)    0A628    B26C9G|547F8    V1|6E28V8R5X9  
 (80Z097)    0A628    B26C9G|547F8    V1|6E28V8R5X9  
 (80Z098)    0A628    B26C9G|547F8    V1|6E28V8R5X9

ELEVON    SPOBRK    BOFLAP    RUDDER  
 -5.000    25.000    -12.000    .000  
 5.000    25.000    -12.000    .000  
 10.000    25.000    -12.000    .000  
 15.000    25.000    -12.000    .000

REFERENCE INFORMATION  
 SREF    4.4119    SQ.FT.  
 LREF    19.2299    INCHES  
 BREF    37.9359    INCHES  
 XMRP    43.5974    INCHES  
 YMRP    .0000    INCHES  
 ZMRP    15.1875    INCHES  
 SCALE    .0405    SCALE

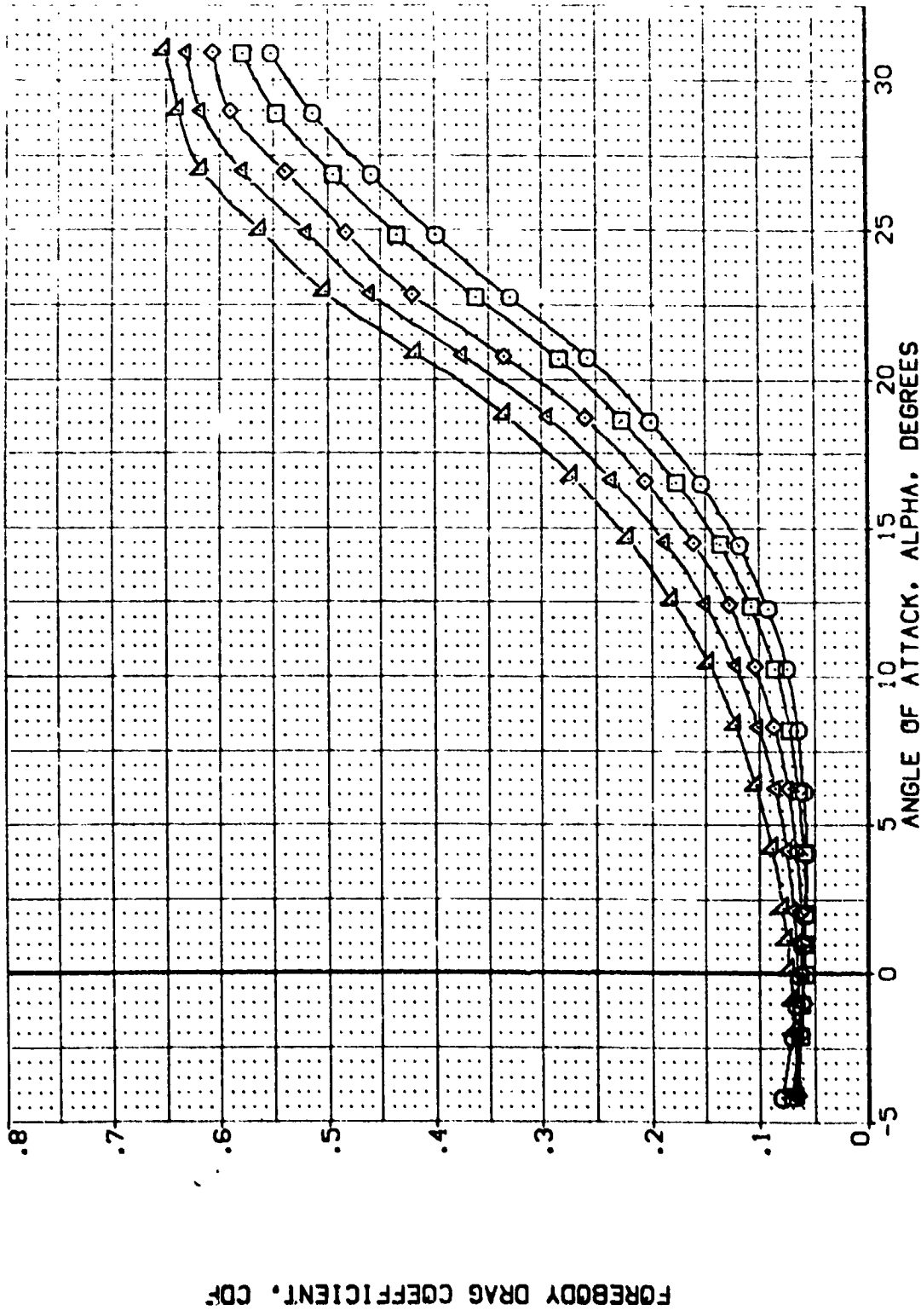
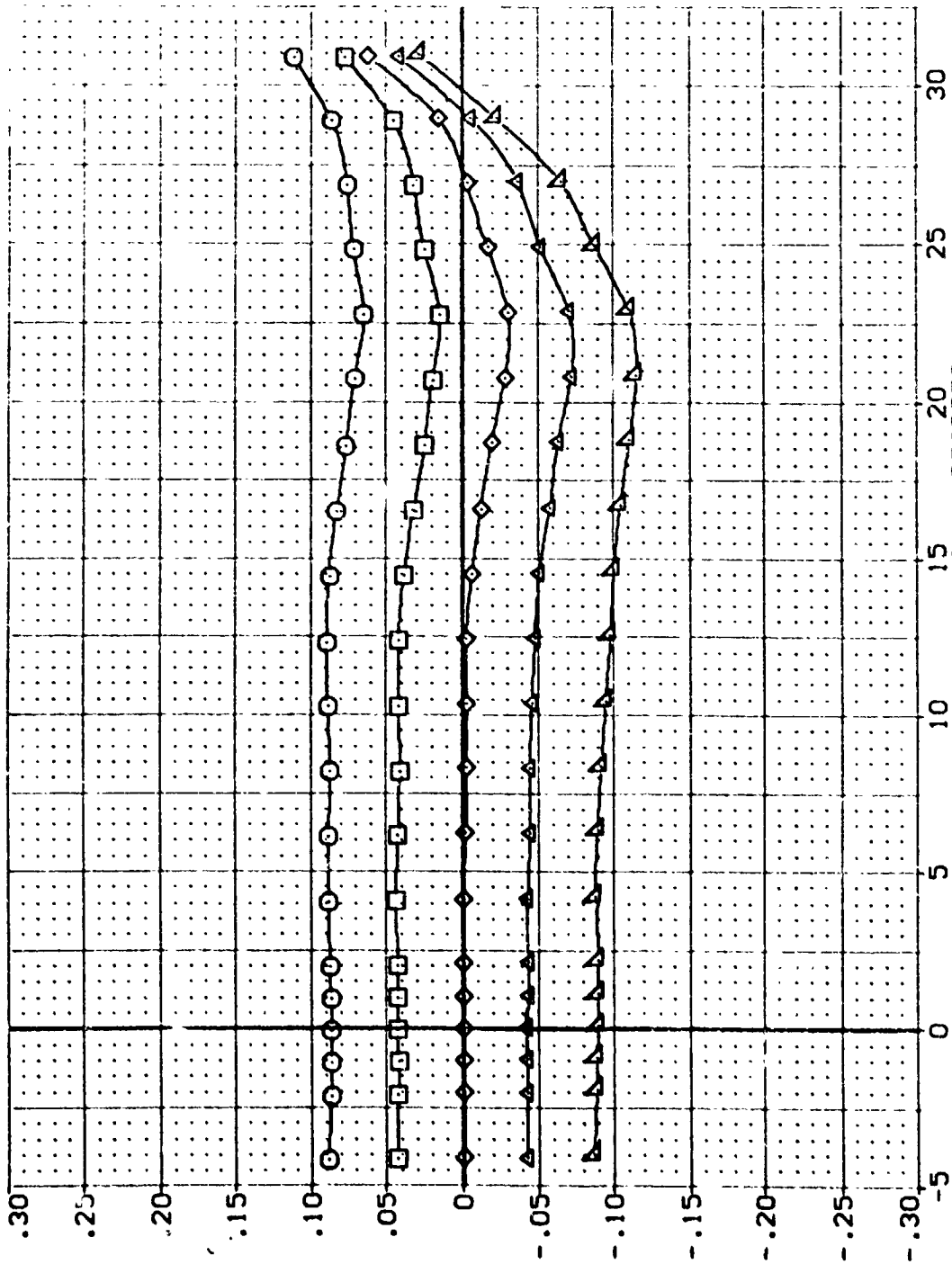


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(802099)	0A628 B26C9G15M7F8 V11E28V8R5K9	-5.000	25.000	-12.000	.000	SREF 4.4119 SO.FT. INCHES
(802090)	0A628 B26C9G15M7F8 V11E28V8R5K9	.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(802096)	0A628 B26C9G15M7F8 V11E28V8R5K9	5.000	25.000	-12.000	.000	BREF 37.5359 INCHES
(802097)	0A628 B26C9G15M7F8 V11E28V8R5K9	10.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(802098)	0A628 B26C9G15M7F8 V11E28V8R5K9	15.000	25.000	-12.000	.000	ZMRP 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

(A)MACH = .20



ELEVON	SPOBRK	EDFLAP	RUDDER	REFERENCE INFORMATION			
-5.000	25.000	-12.000	.000	SREF	4.4119	SO.FT.	
.000	25.000	-12.000	.000	LREF	19.2299	INCHES	
5.000	25.000	-12.000	.000	BREF	37.9359	INCHES	
10.000	25.000	-12.000	.000	XPRP	43.5974	INCHES	
15.000	25.000	-12.000	.000	YPRP	0.0000	INCHES	
				ZPRP	15.1975	INCHES	
				SCALE	.0405	SCALE	

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B02099)	0A628 B26C9G1 5M7F8 V116E28VBR5X9
(B02090)	0A628 B26C9G1 5M7F8 V116E28VBR5X9
(B02096)	0A628 B26C9G1 5M7F8 V116E28VBR5X9
(B02097)	0A628 B26C9G1 5M7F6 V116E28VBR5X9
(B02098)	0A628 B26C9G1 5M7F8 V116E28VBR5X9

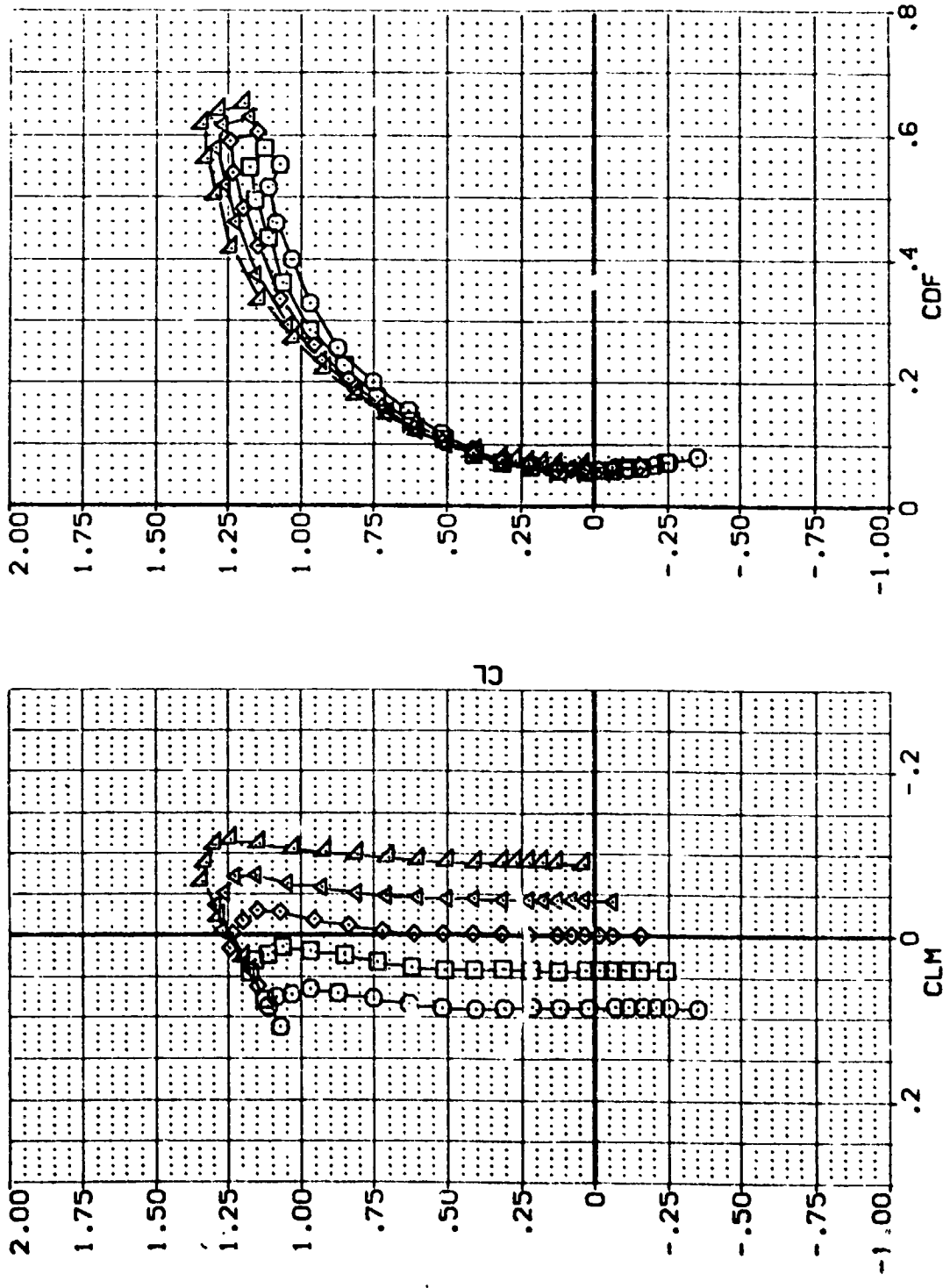


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A) MACH = .20





4-1

REFERENCE INFORMATION  
 SREF 4.4119 50.FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

ELEVON SPOBRK BOFLAP RUDDER  
 -5.000 25.000 -12.000 .000  
 .000 25.000 -12.000 .000  
 5.000 25.000 -12.000 .000  
 10.000 25.000 -12.000 .000  
 15.000 25.000 -12.000 .000

CONFIGURATION DESCRIPTION  
 V11GE28V8RSX9  
 V11GE28V8RSX9  
 V11GE28V8RSX9  
 V11GE28V8RSX9  
 V11GE28V8RSX9

DATA SET SYMBOL  
 (802099)  
 (802050)  
 (802056)  
 (802097)  
 (802096)

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

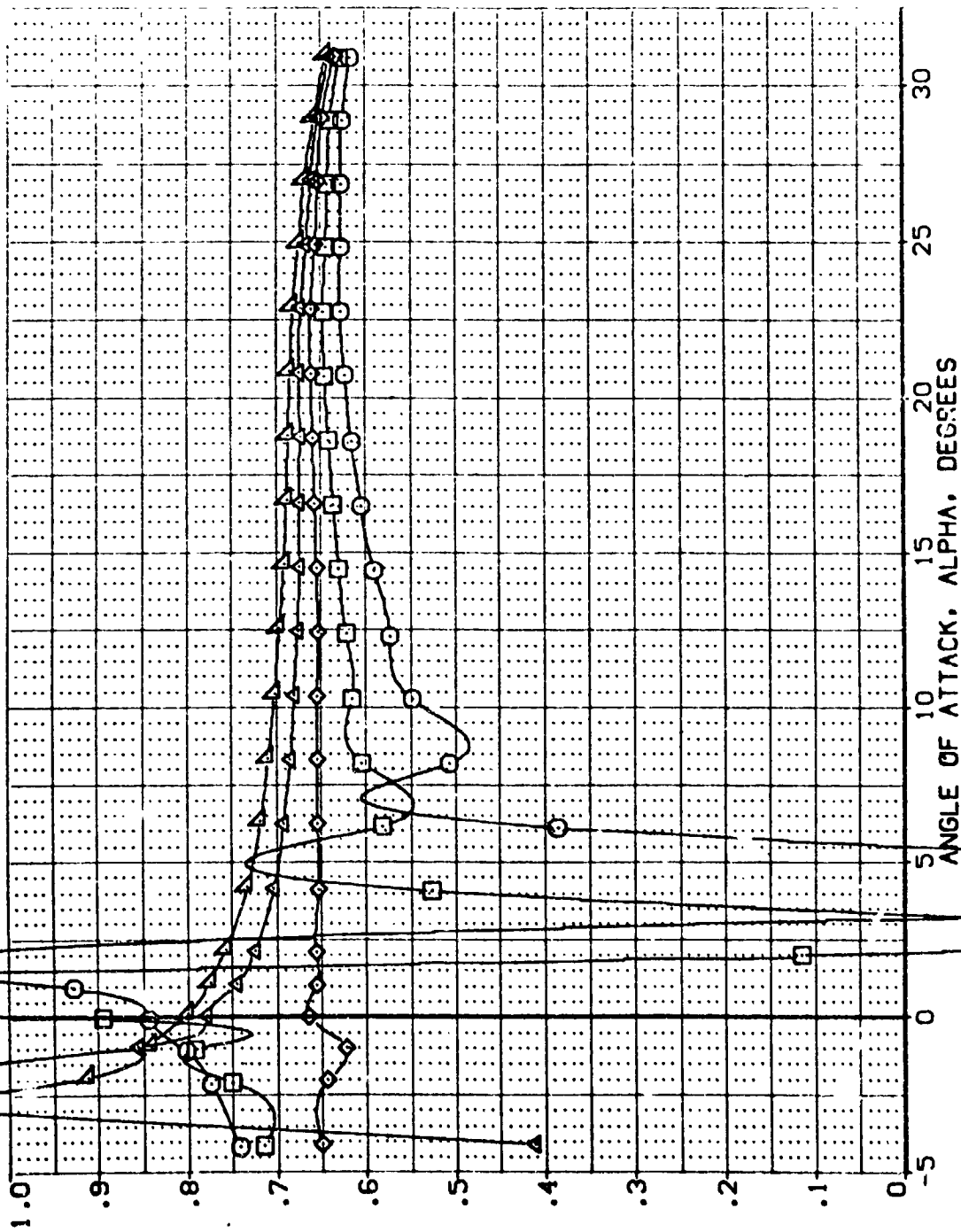


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(802098)	0A628 B26C9G15M7F8 V116E28V8R5X9	-5.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT. INCHES
(802099)	0A628 B26C9G15M7F8 V116E28V8R5X9	.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(802096)	0A628 B26C9G15M7F8 V116E28V8R5X9	5.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(802097)	0A628 B26C9G15M7F8 V116E28V8R5X9	10.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(802098)	0A628 B26C9G15M7F8 V116E28V8R5X9	15.000	25.000	-12.000	.000	YMRP 43.5974 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

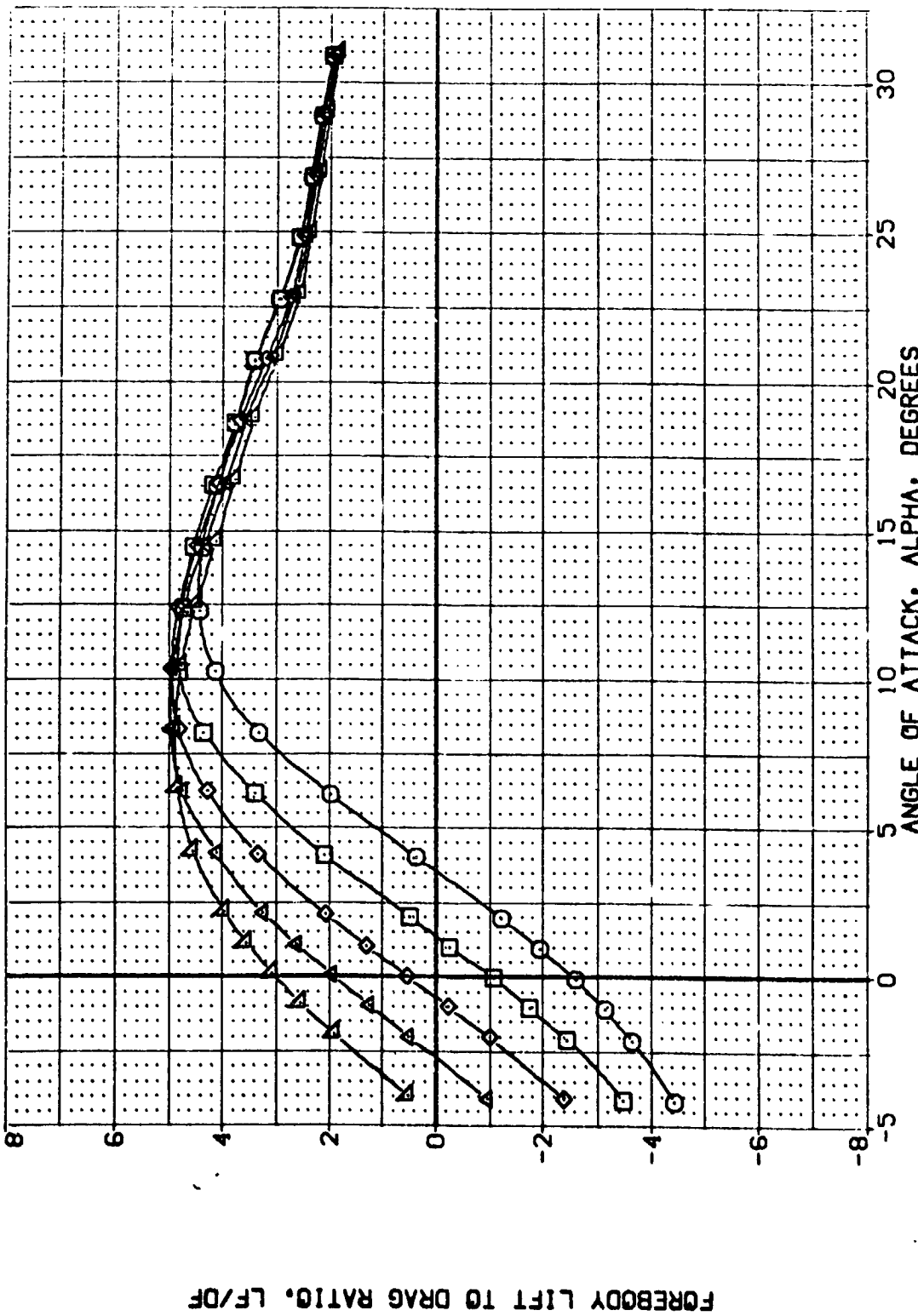


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A)MACH = .20 PAGE 348



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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B0Z104)	0A5Z8 B26C9G1S4778 V116E28V8R5X9	-40.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(B0Z102)	0A5Z8 B26C9G1S4778 V116E28V8R5X9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(B0Z101)	0A5Z8 B26C9G1S4778 V116E28V8R5X9	-20.000	25.000	-12.000	.000	BREF 37.9259 INCHES
(B0Z100)	0A5Z8 B26C9G1S4778 V116E28V8R5X9	-15.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(B0Z090)	0A5Z8 B26C9G1S4778 V116E28V8R5X9	-10.000	25.000	-12.000	.000	YMRP .0000 INCHES
					.000	ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

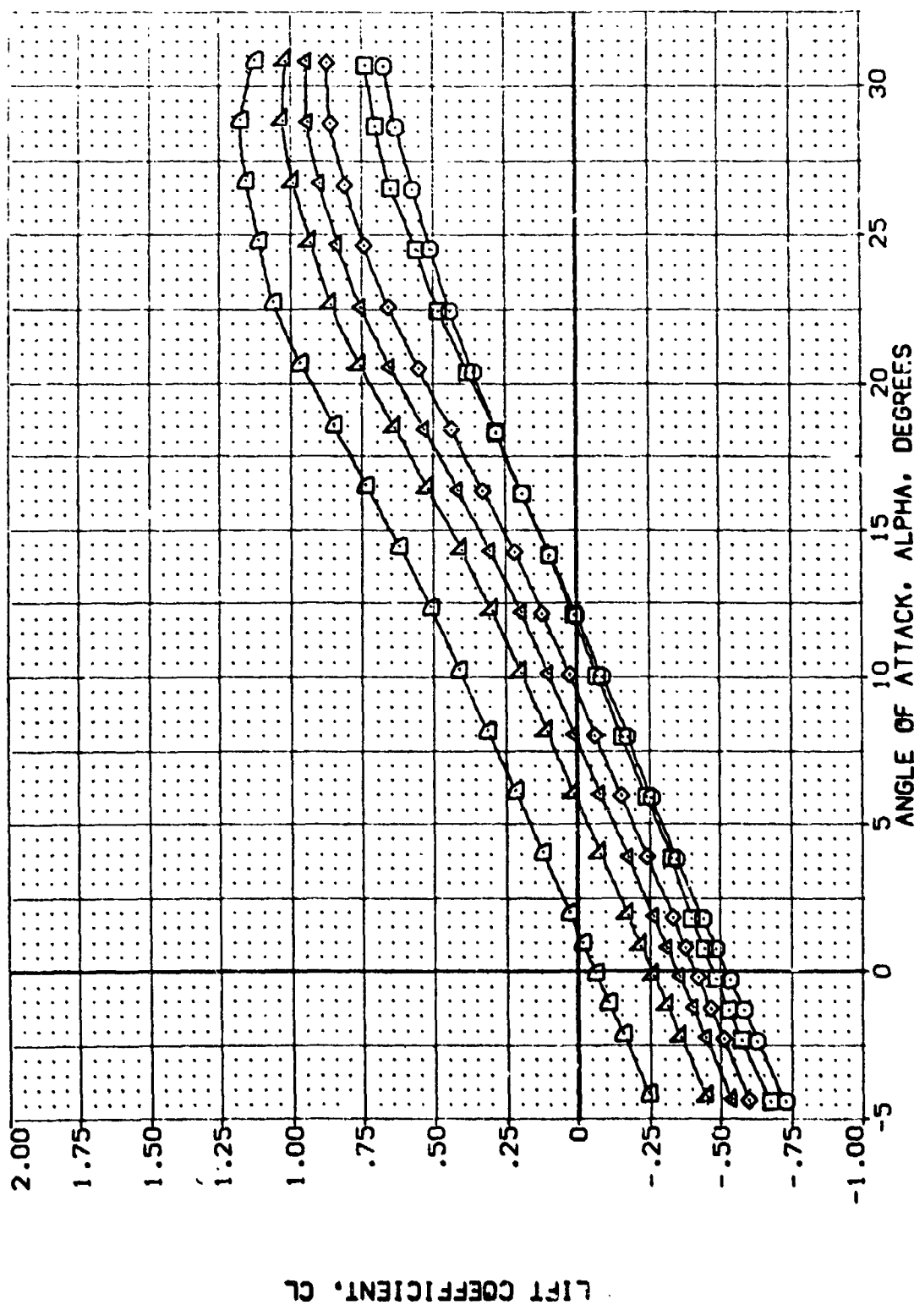


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDRBK	BOFLAP	RUDDER	REFERENCE INFORMATION
(BDZ104)	B26C9G 5M7F8 V11GE28V8R5X9	-40.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(BDZ103)	B26C9G 5M7F8 V11GE28V8R5X9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(BDZ102)	B26C9G 5M7F8 V11GE28V8R5X9	-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(BDZ101)	B26C9G 5M7F8 V11GE28V8R5X9	-15.000	25.000	-12.000	.000	XMRP 43.5574 INCHES
(BDZ100)	B26C9G 5M7F8 V11GE28V8R5X9	-10.000	25.000	-12.000	.000	ZMRP 0.0000 INCHES
(BDZ090)	B26C9G 5M7F8 V11GE28V8R5X9	.000	25.000	-12.000	.000	SCALE 15.1875 INCHES

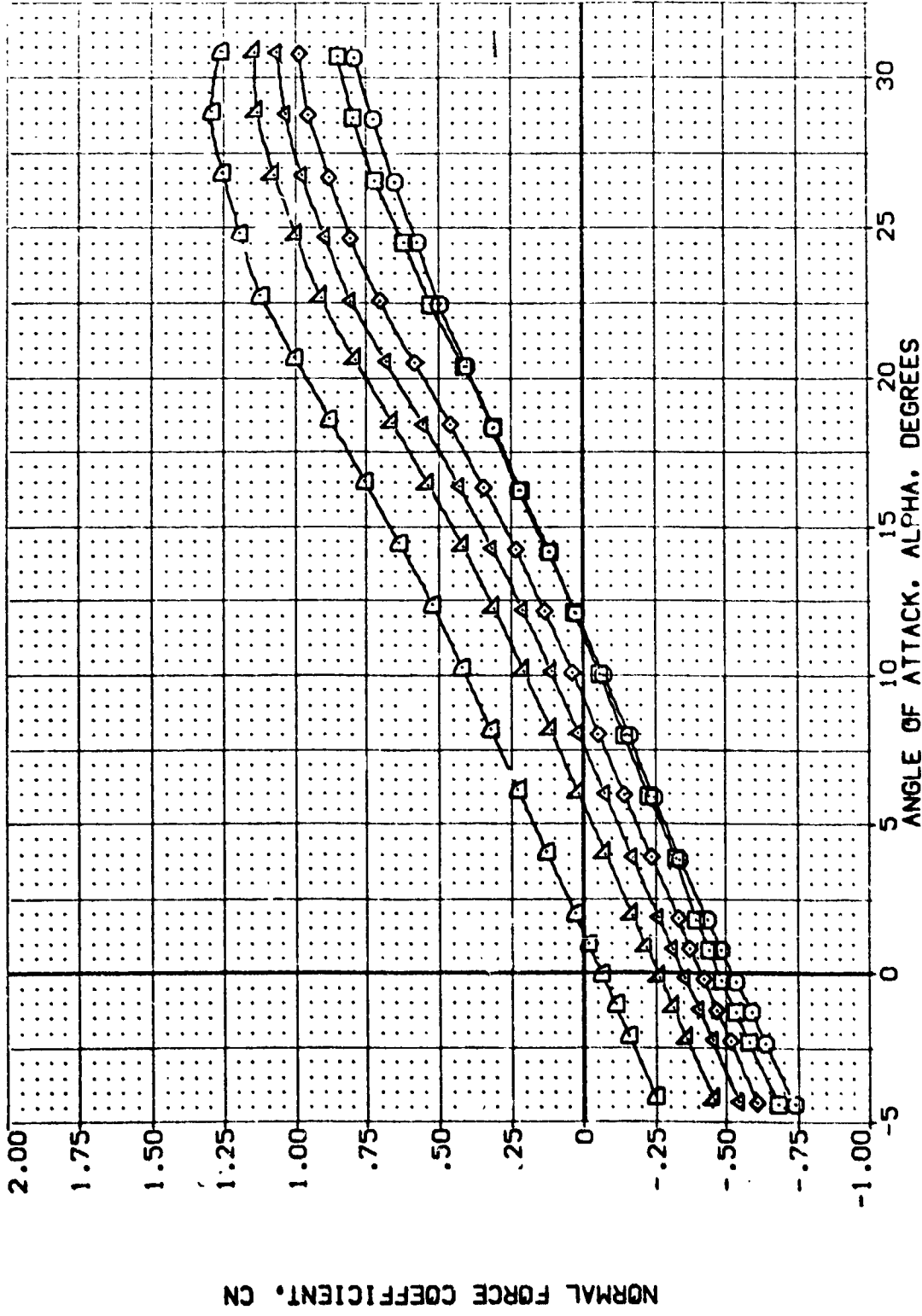


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B02104)	0A628 B26C961S4778 V116E28V8RSX9	-40.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(B02103)	0A628 B26C961S4778 V116E28V8RSX9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(B02102)	0A628 B26C961S4778 V116E28V8RSX9	-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(B02101)	0A628 B26C961S4778 V116E28V8RSX9	-15.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(B02100)	0A628 B26C961S4778 V116E28V8RSX9	-10.000	25.000	-12.000	.000	YMRP .0000 INCHES
(B02099)	0A628 B26C961S4778 V116E28V8RSX9	.000	25.000	-12.000	.000	ZMRP 15.1875 INCHES
						SCALE .0405

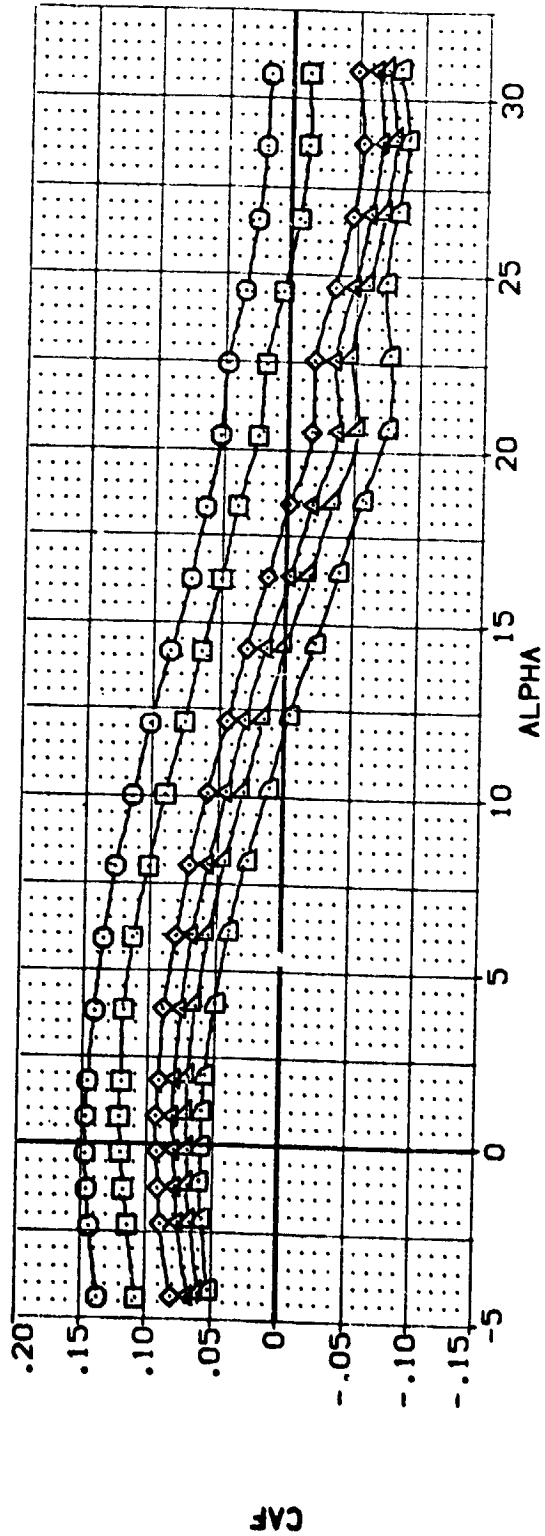
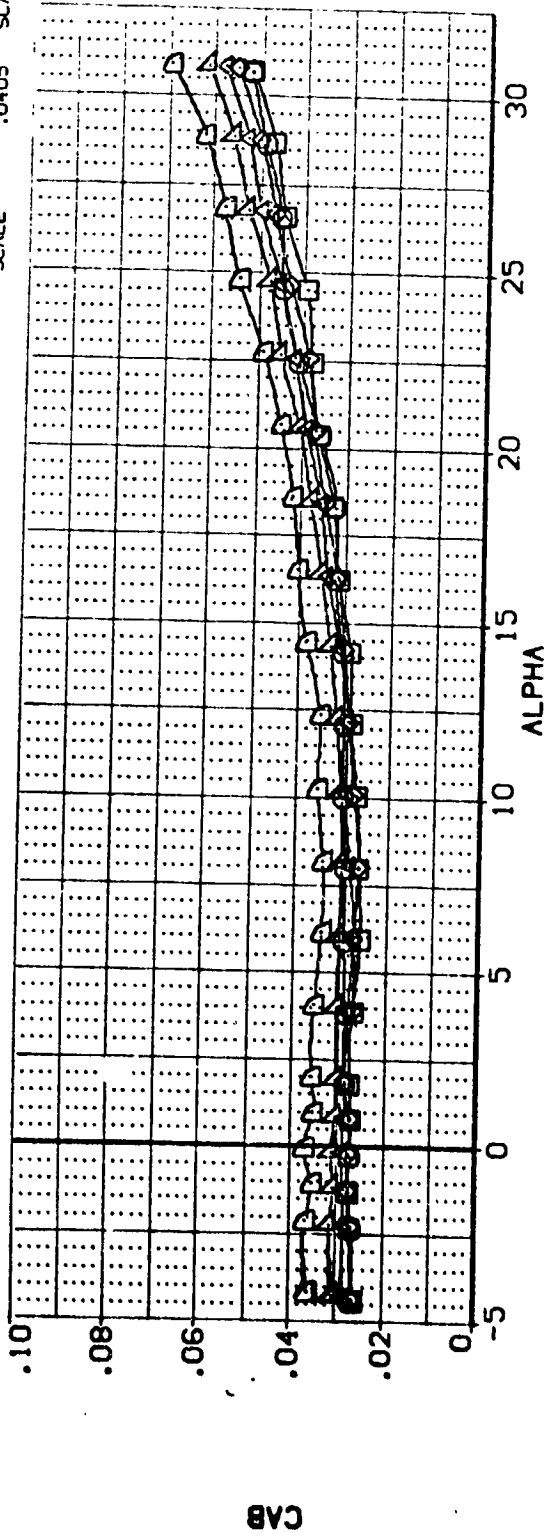


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(BDZ104)	0A628 B26C9G15M7F8 V116E28V8R5X9	-40.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(BDZ103)	0A628 B26C9G15M7F8 V116E28V8R5X9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(BDZ102)	0A628 B26C9G15M7F8 V116E28V8R5X9	-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(BDZ101)	0A628 B26C9G15M7F8 V116E28V8R5X9	-15.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(BDZ100)	0A628 B26C9G15M7F8 V116E28V8R5X9	-10.000	25.000	-12.000	.000	YMRP 15.0000 INCHES
(BDZ050)	0A628 B26C9G15M7F8 V116E28V8R5X9	.000	25.000	-12.000	.000	ZMRP 15.1875 INCHES
						SCALE .0405

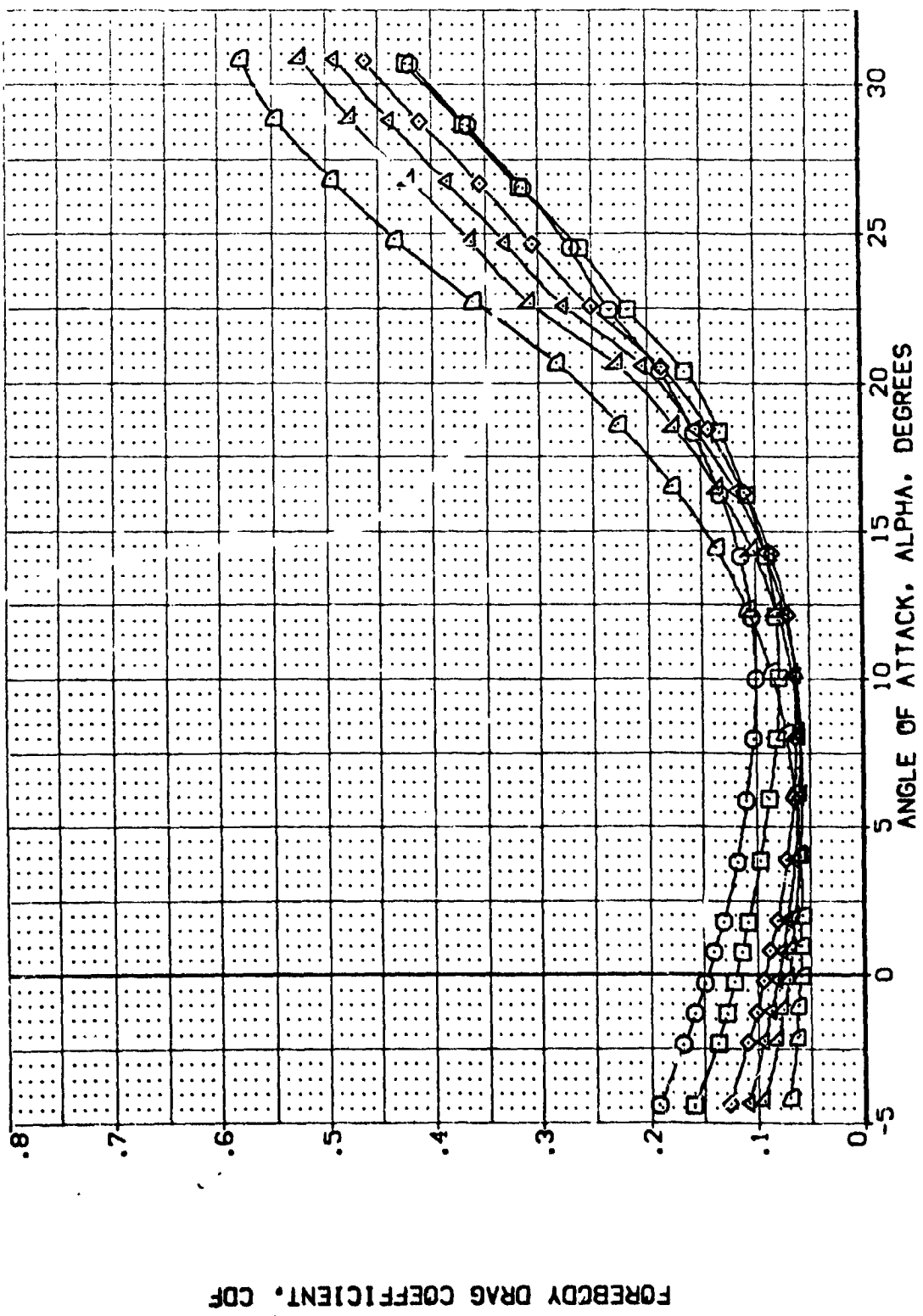
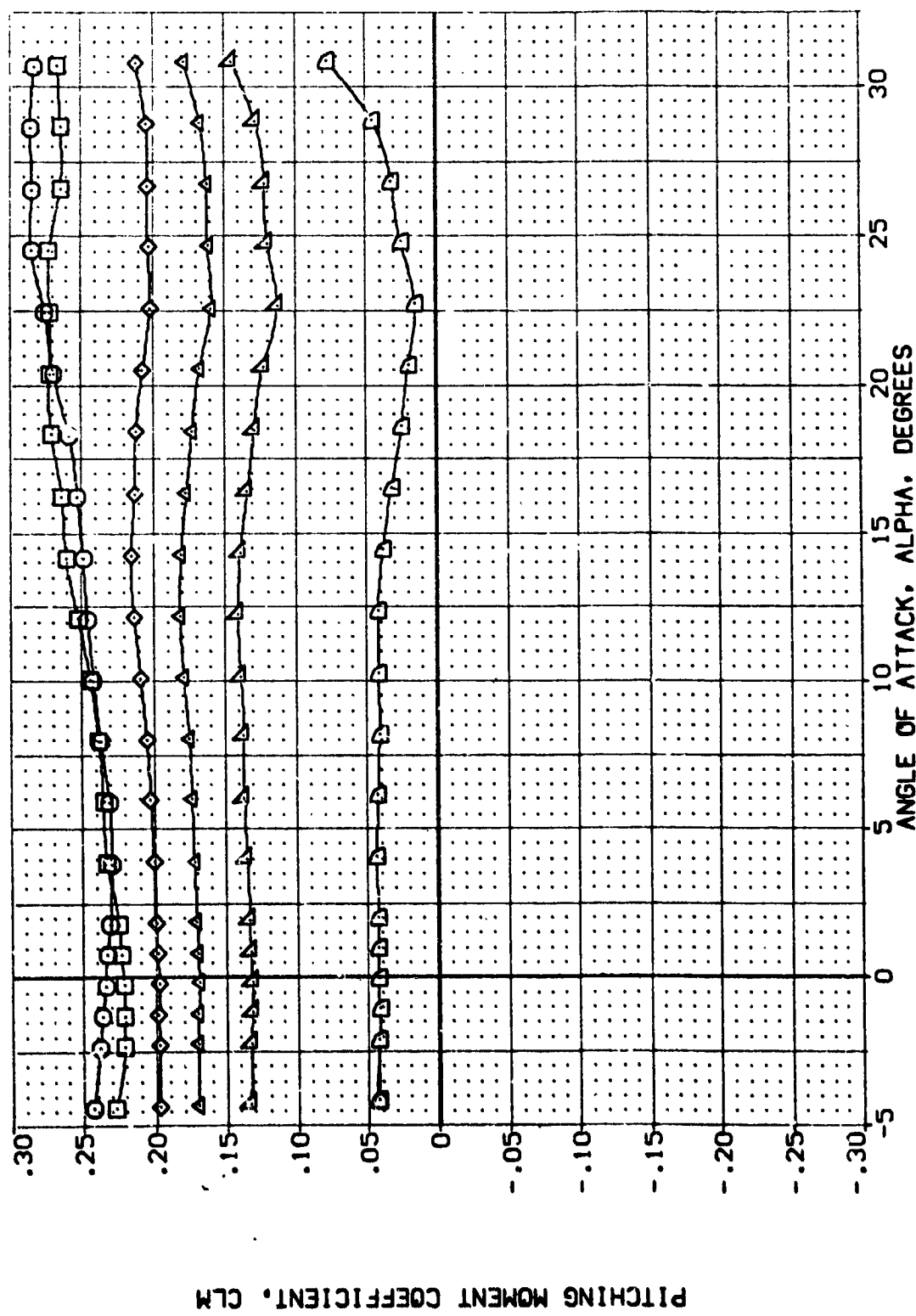


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 MACH = .20  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOF.LAP	RUDDER	REFERENCE INFORMATION
(BDZ104)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	-40.000	25.000	-12.000	.000	SREF 4.4119 50.FT.
(BDZ103)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(BDZ102)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(BDZ101)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	-15.000	25.000	-12.000	.000	YMRP 43.5974 INCHES
(BDZ100)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	-10.000	25.000	-12.000	.000	ZMRP .0000 INCHES
(BDZ090)	0A628 B26C96 5M7F8 VI 1E28V8FSX9	.000	25.000	-12.000	.000	SCALE 15.1875 INCHES



PITCHING MOMENT COEFFICIENT, CLM

FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

(A)MACH = .20

ELEVON	SPOBRK	BDFLAP	RUDDER	REFERENCE INFORMATION
-40.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT.
-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
-15.000	25.000	-12.000	.000	XHRP 43.5974 INCHES
-10.000	25.000	-12.000	.000	YHRP 1.0000 INCHES
.000	25.000	-12.000	.000	ZHRP 15.1675 INCHES
				SCALE .0405

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BDZ104)	0A628 B26C9G 5M7F8 VI SE28V8RSX9
(BLZ103)	0A628 B26C9G 5M7F8 VI SE28V8RSX9
(BDZ102)	0A628 B26C9G 5M7F8 VI SE28V8RSX9
(BDZ101)	0A628 B26C9G 5M7F8 VI SE28V8RSX9
(BDZ100)	0A628 B26C9G 5M7F8 VI SE28V8RSX9
(BDZ099)	0A628 B26C9G 5M7F8 VI SE28V8RSX9

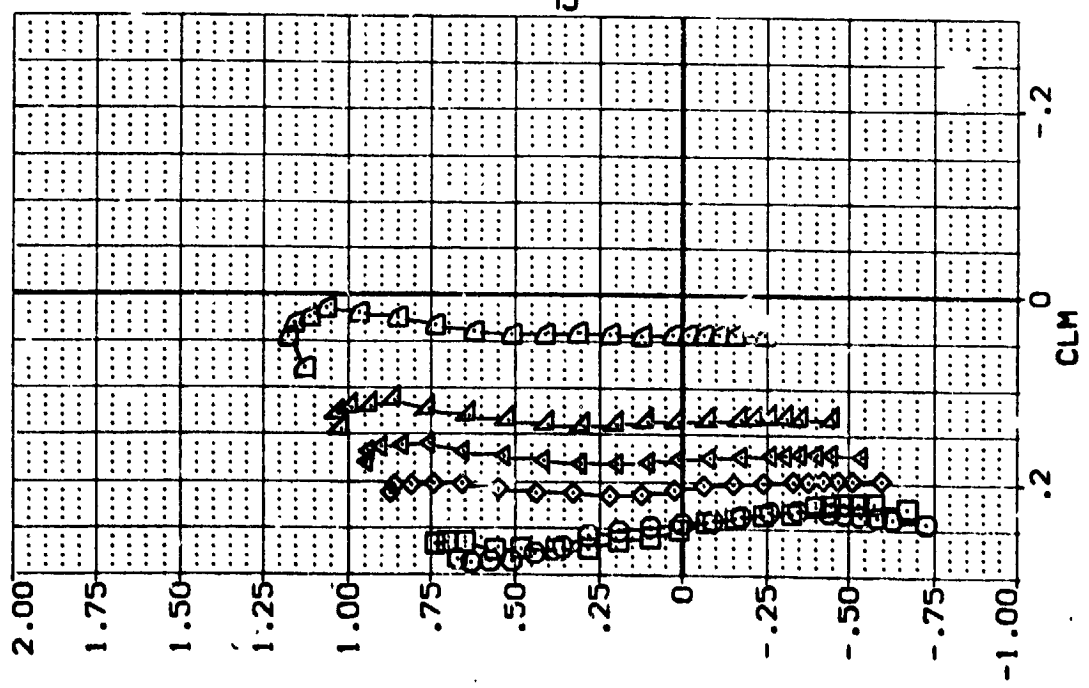
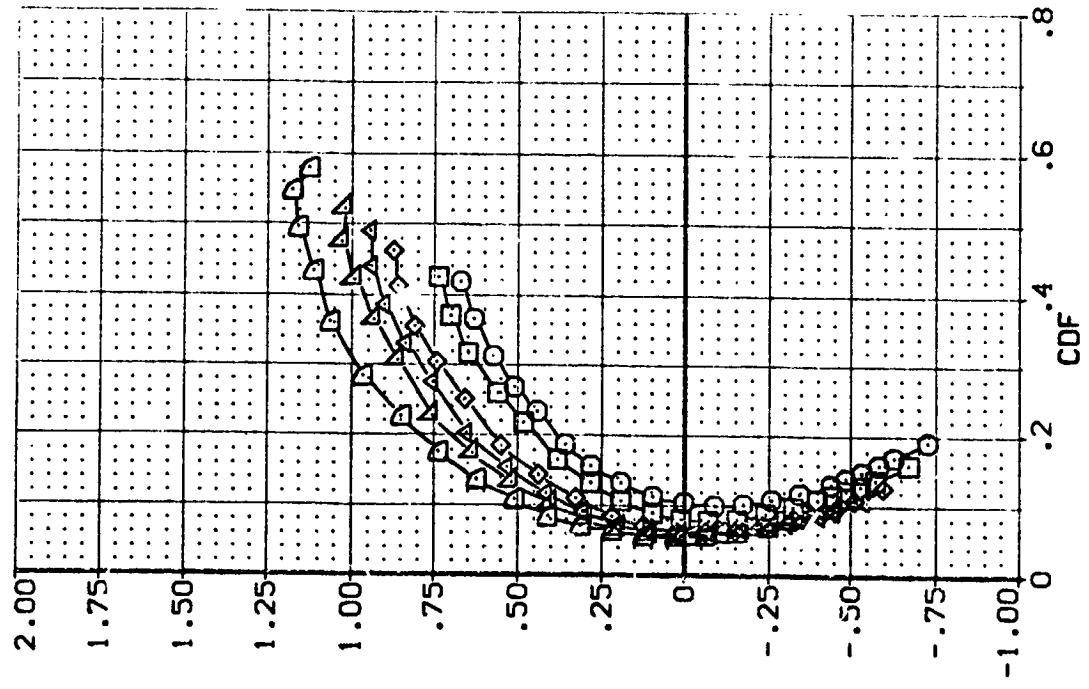


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

(A)MACH = .20







DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(802104)	0A628 B26C9G 15M718 V11E28V8FSX9	-40.000	25.000	-12.000	.000	4.4119 SQ.FT.
(802103)	0A628 B26C9G 15M718 V11E28V8FSX9	-30.000	25.000	-12.000	.000	19.2299 INCHES
(802102)	0A628 B26C9G 15M718 V11E28V8FSX9	-20.000	25.000	-12.000	.000	37.9359 INCHES
(802101)	0A628 B26C9G 15M718 V11E28V8FSX9	-15.000	25.000	-12.000	.000	43.5974 INCHES
(802100)	0A628 B26C9G 15M718 V11E28V8FSX9	-10.000	25.000	-12.000	.000	43.0000 INCHES
(802090)	0A628 B26C9G 15M718 V11E28V8FSX9	-10.000	25.000	-12.000	.000	15.1875 INCHES
						.0405 SCALE

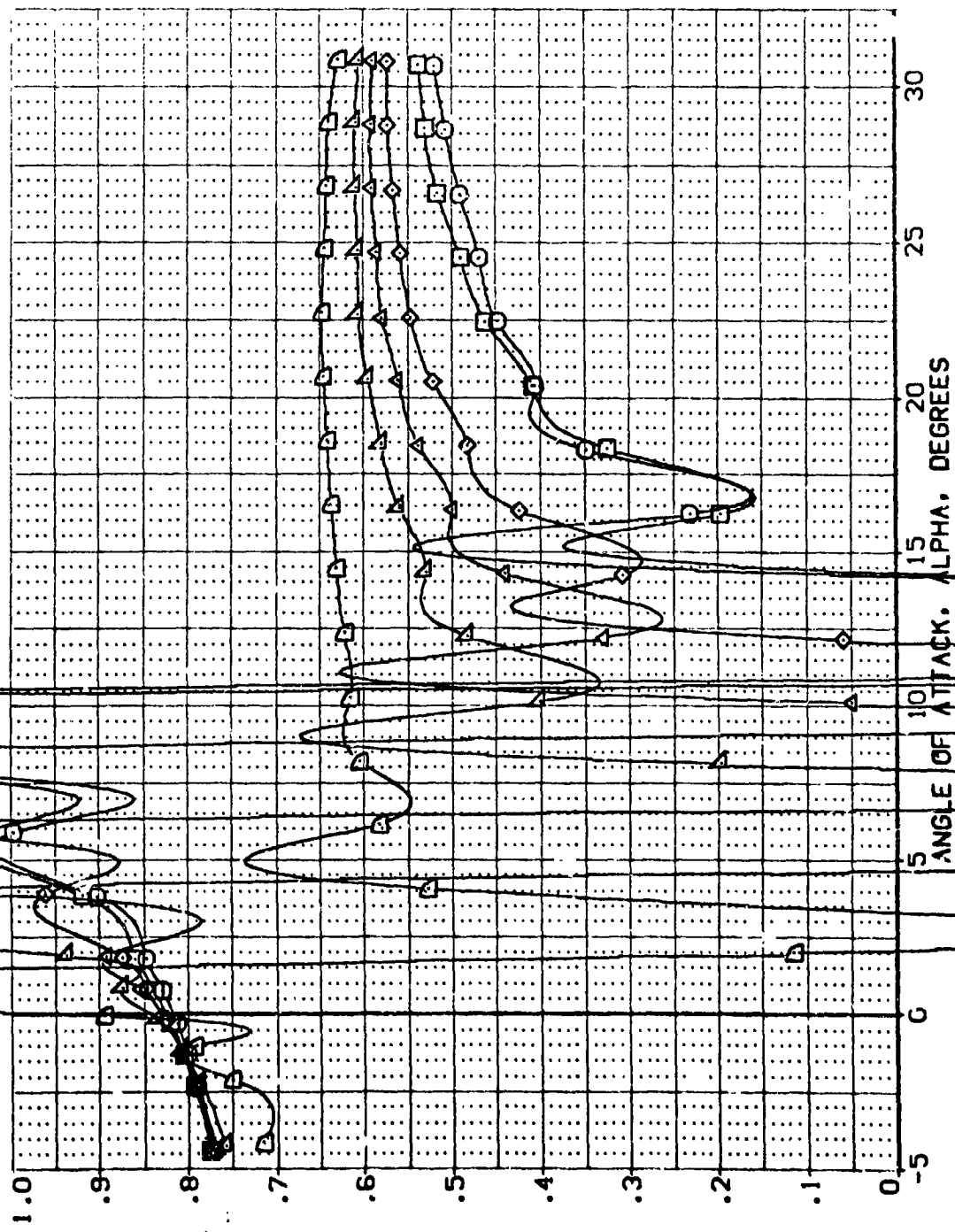


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (A)MACH = .20 PAGE 355

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B02104)	0A628 B26C9G1S47F8 V116E28V8RSX9	-40.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT.
(B02103)	0A628 B26C9G1S47F8 V116E28V8RSX9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(B02102)	0A628 B26C9G1S47F8 V116E28V8RSX9	-20.000	25.000	-12.000	.000	BREF 37.9399 INCHES
(B02101)	0A628 B26C9G1S47F8 V116E28V8RSX9	-15.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(B02100)	0A628 B26C9G1S47F8 V116E28V8RSX9	-10.000	25.000	-12.000	.000	YMRP .0000 INCHES
(B02090)	0A628 B26C9G1S47F8 V116E28V8RSX9	.000	25.000	-12.000	.000	ZMRP 15.1875 INCHES
						SCALE .0405

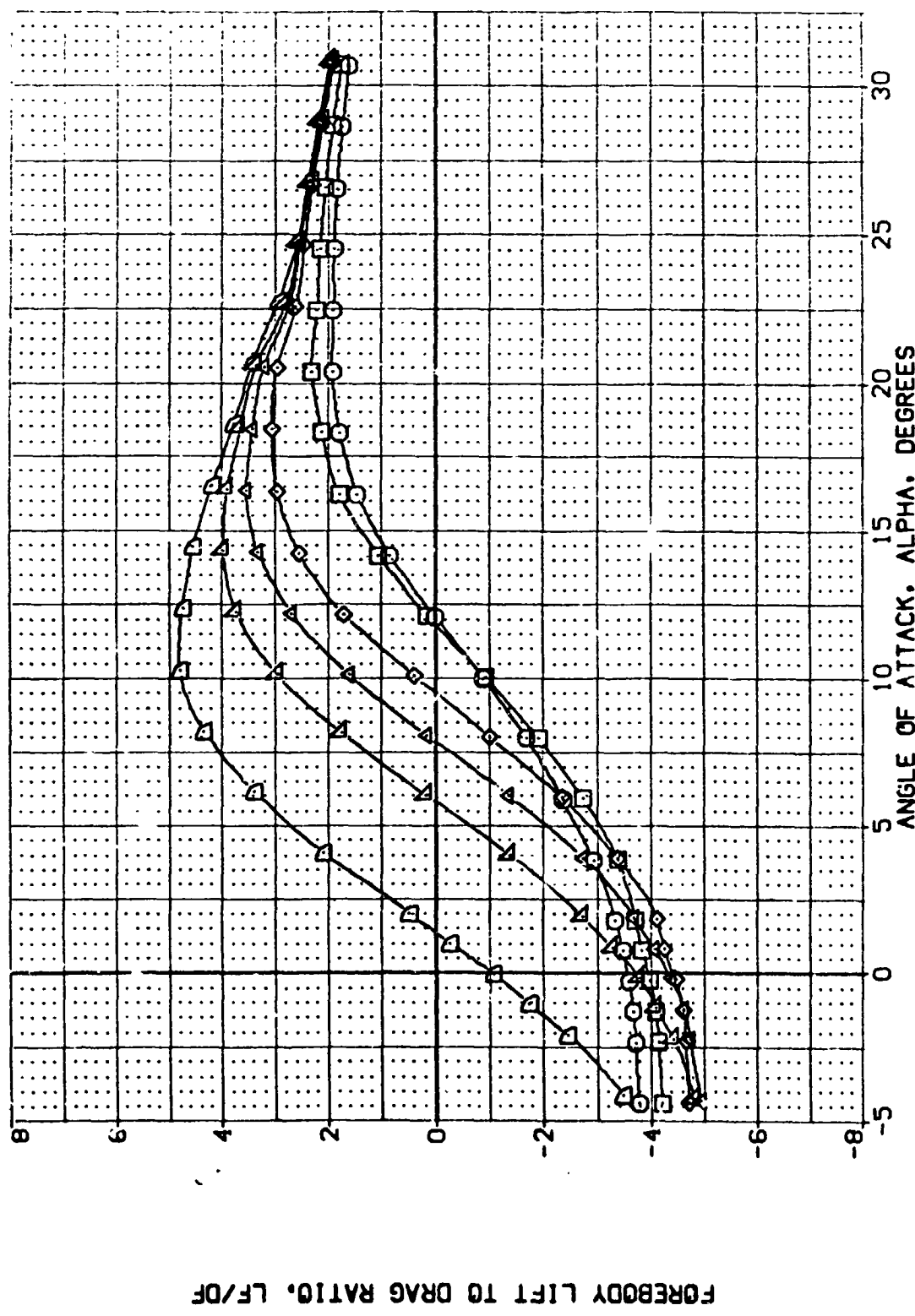


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE  
 (M)MACH = .20

(1DZ103)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	ALPHA	.200	BETA	.000	DATASET	DELTVN	SREF	4.4119	SO. FT.
	MACH	-12.000	AIRLON	.000	IDZ103	-30.000	LREF	19.2299	INCHES
	BOFLAP	.000	SPOBRK	25.000	IDZ101	-15.000	BREF	37.9359	INCHES
	RUDDER	.000			IDZ099	-5.000	XMRP	43.5974	INCHES
					IDZ098	.000	YMRP	.0000	INCHES
					IDZ104	.000	ZMRP	15.1975	INCHES
					IDZ097	10.000	SCALE	.0405	SCALE

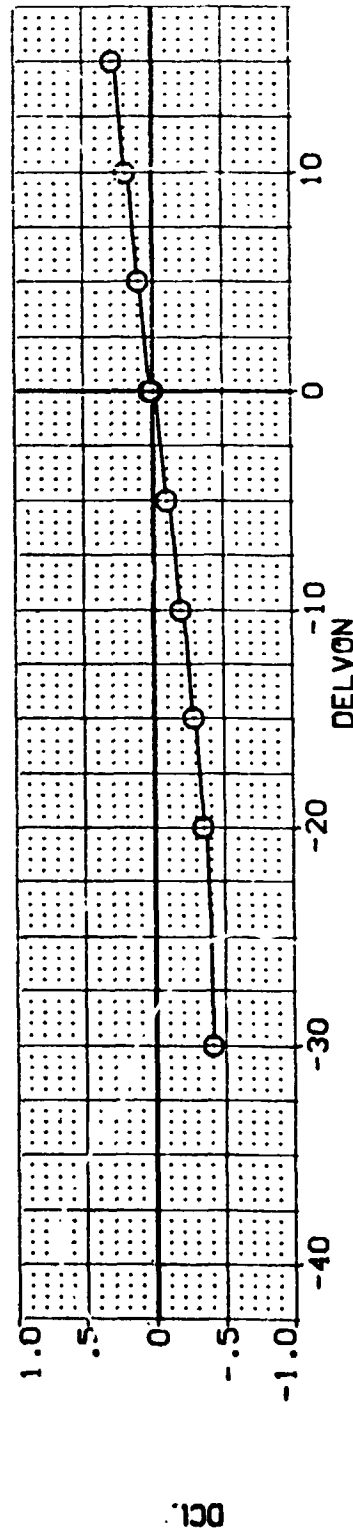
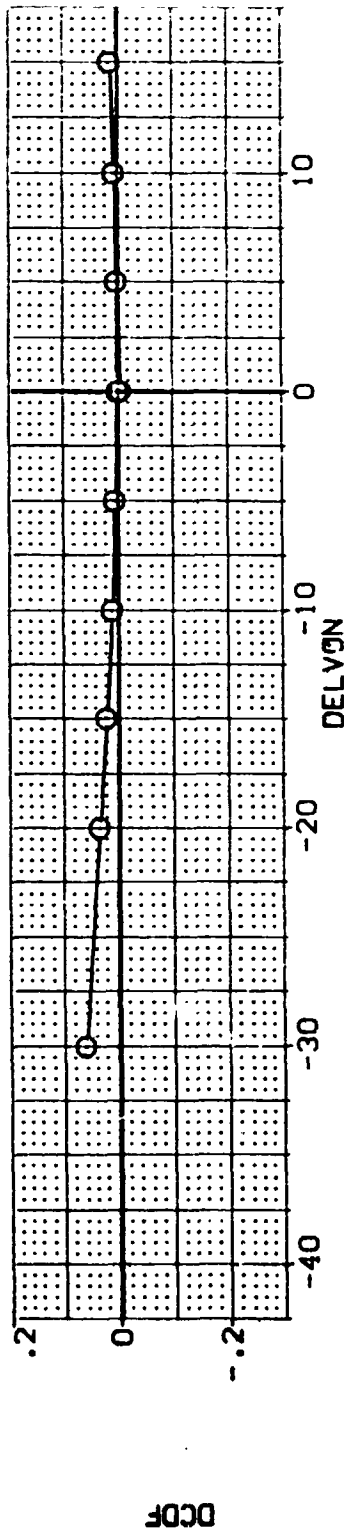
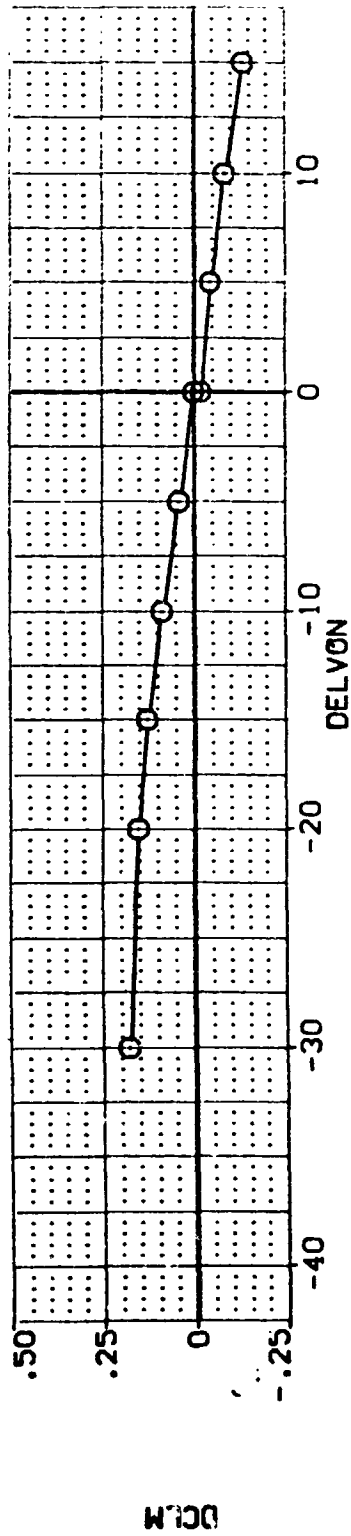


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

0AG28 B26C9G15M7F8 W116E28V8R5X9 (1DZ103)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	5.000	MACH	.000	DATASET	DELTVN	SREF
	BOFLAP	-12.000	AIRLON	.000	IDZ103	-30.000	LREF
	RUDDER	.000	SPOBRK	25.000	IDZ101	-15.000	BREF
					IDZ099	-5.000	XMRP
					IDZ104	.000	YMRP
					IDZ097	10.000	ZMRP
						5.000	SCALE
						15.000	SCALE
							SO.FT.
							INCHES
							INCHES
							INCHES
							INCHES
							SCALE

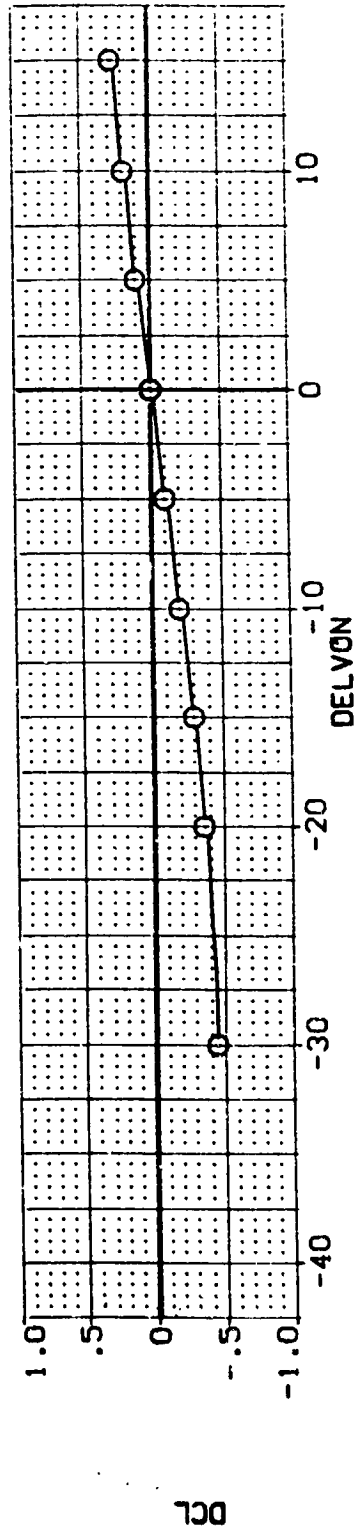
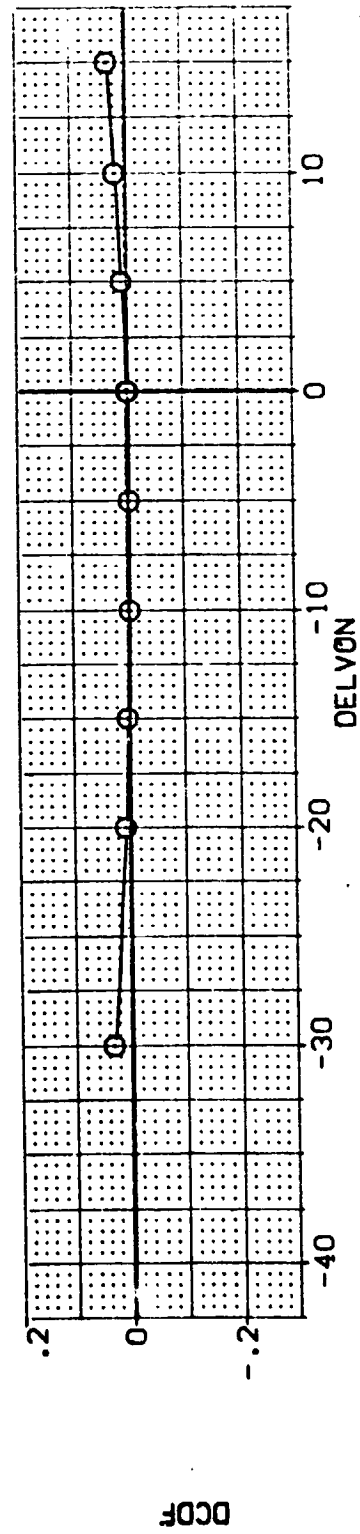
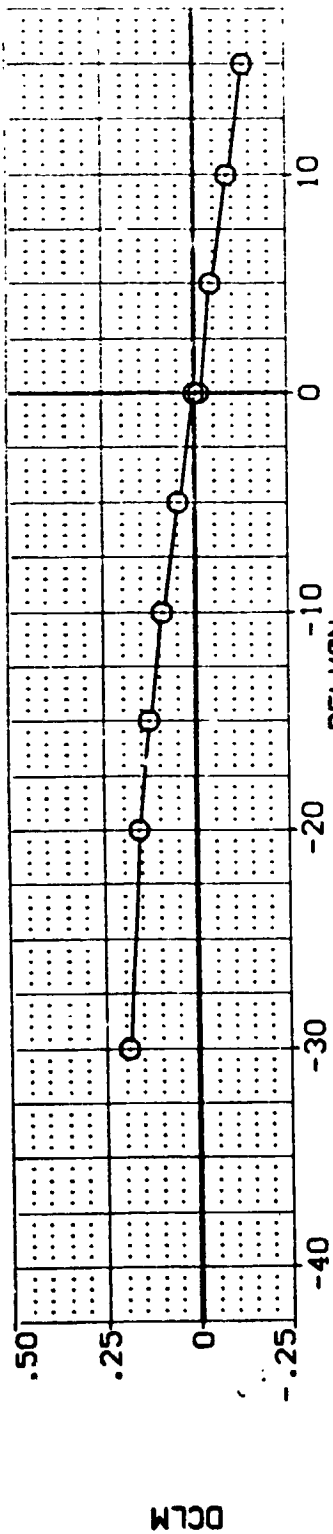


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE PAGE 358



0A62B B26C9G15M7F8 W116E28V8R5X9 (1DZ103)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
ALPHA	10.000	MACH	.200	BETA	.000	DELTON	SREF	4.4119	SO. FT.
BOFLAP	-12.000	AIRTON	.000	DELTON	-30.000	LREF	19.2799	INCHES	
RUDDER	.000	SPOBRK	25.000	DELTON	-15.000	BREF	37.9359	INCHES	
				DELTON	-5.000	XMRP	43.5974	INCHES	
				DELTON	.000	YMRP	5.0000	INCHES	
				DELTON	10.000	ZMRP	15.1875	INCHES	
				DELTON	10.000	SCALE	.0405	SCALE	

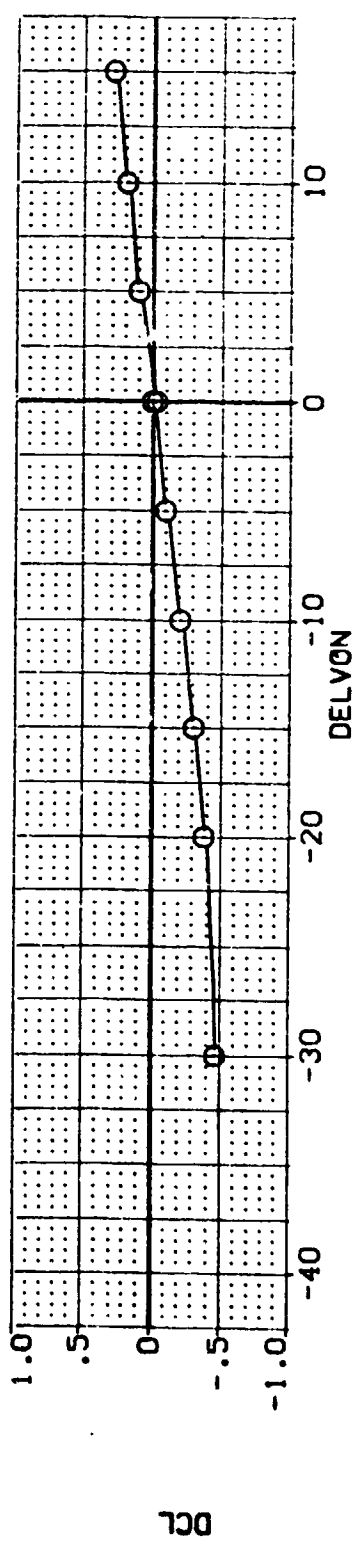
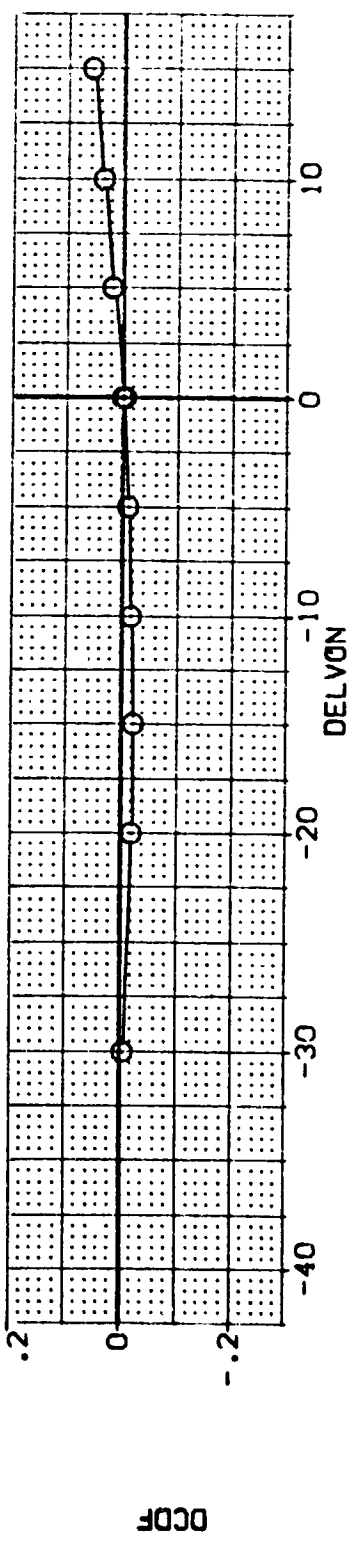
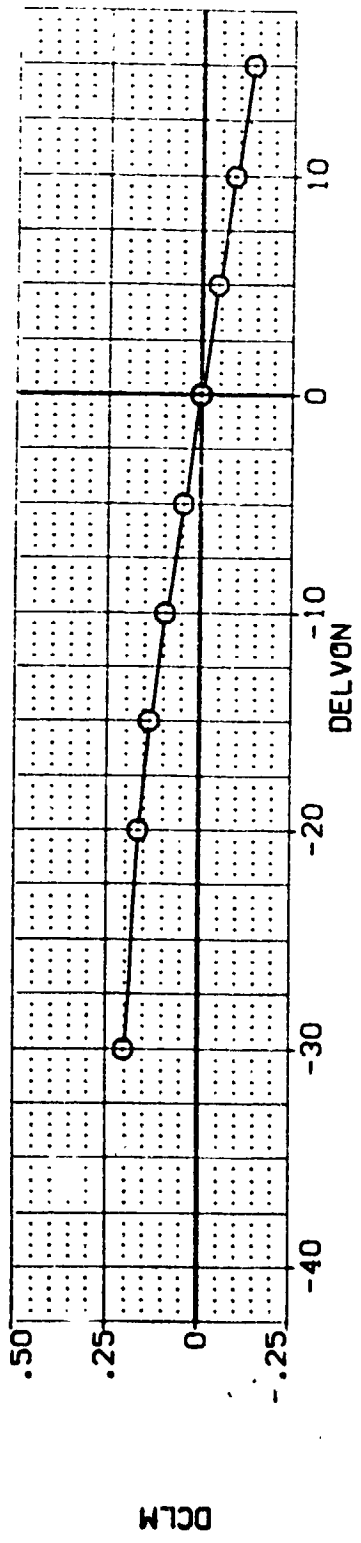


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



(IDZ103)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	15.000	.200	-12.000	.000	BETA A1LR0N SPDRK	DELVON IDZ103 IDZ101 IDZ099 IDZ104 IDZ097	SO. FT. INCHES INCHES INCHES INCHES SCALE
			25.000	.000		DELVON IDZ102 IDZ100 IDZ090 IDZ096 IDZ098	4.4119 19.2299 37.9359 43.5974 .0000 15.1875 .0405
						DELVON IDZ102 IDZ100 IDZ090 IDZ096 IDZ098	SREF LREF BREF XTRP YTRP ZTRP SCALE
						DELVON IDZ102 IDZ100 IDZ090 IDZ096 IDZ098	

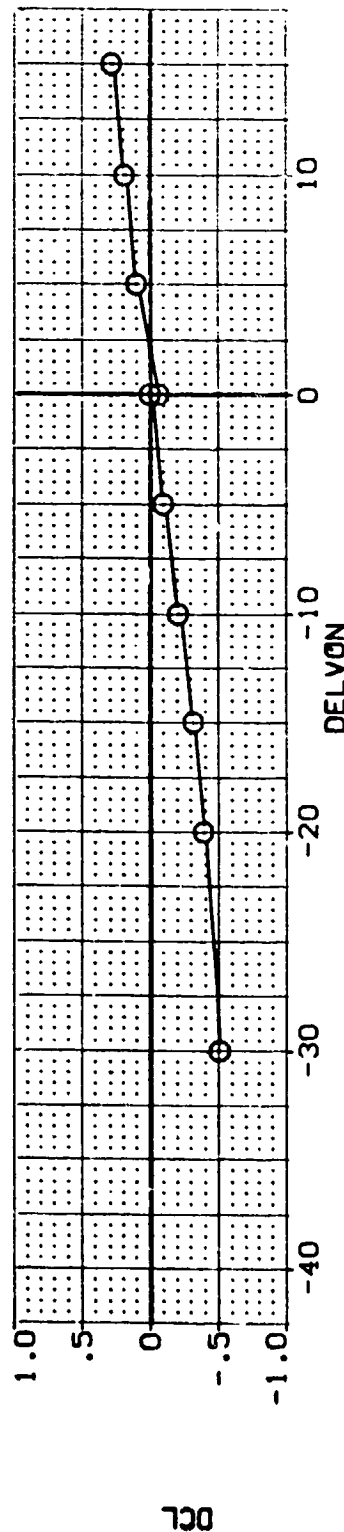
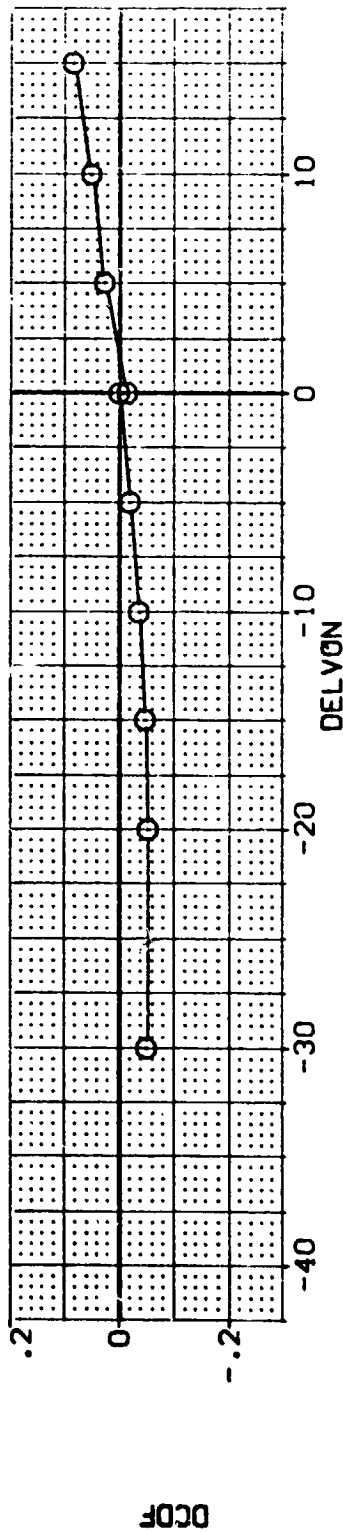
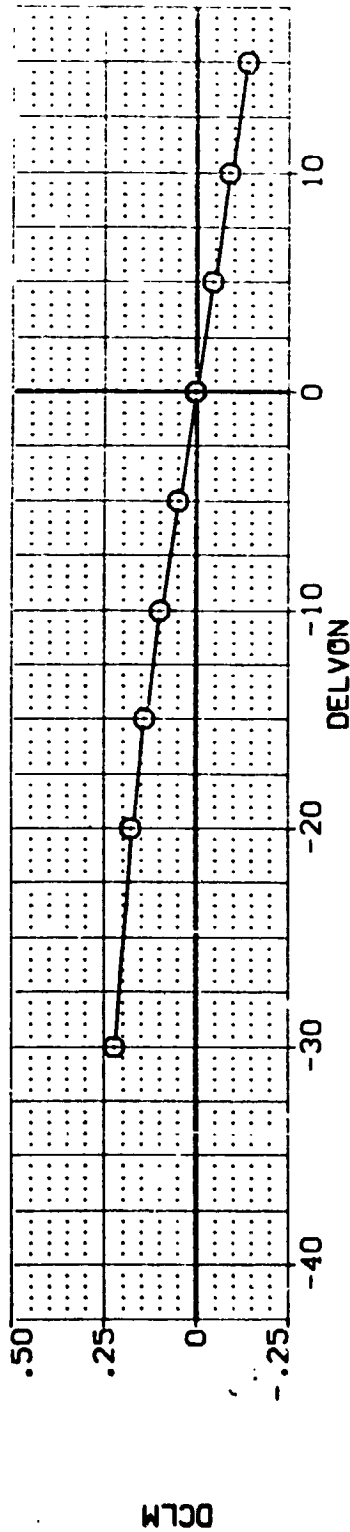


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE





(1DZ103)

0A628 B26C9G15M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	20.000	DELTON	DELTON	SREF	4.4119
BETA	.200	DELTON	DELTON	LREF	19.2299
AILIRON	-12.000	DELTON	DELTON	BREF	37.9359
SPOBRK	.000	DELTON	DELTON	XMRP	43.5974
YMRP	25.000	DELTON	DELTON	YMRP	0.000
ZMRP	.000	DELTON	DELTON	ZMRP	15.1875
SCALE	10.000	DELTON	DELTON	SCALE	.0405

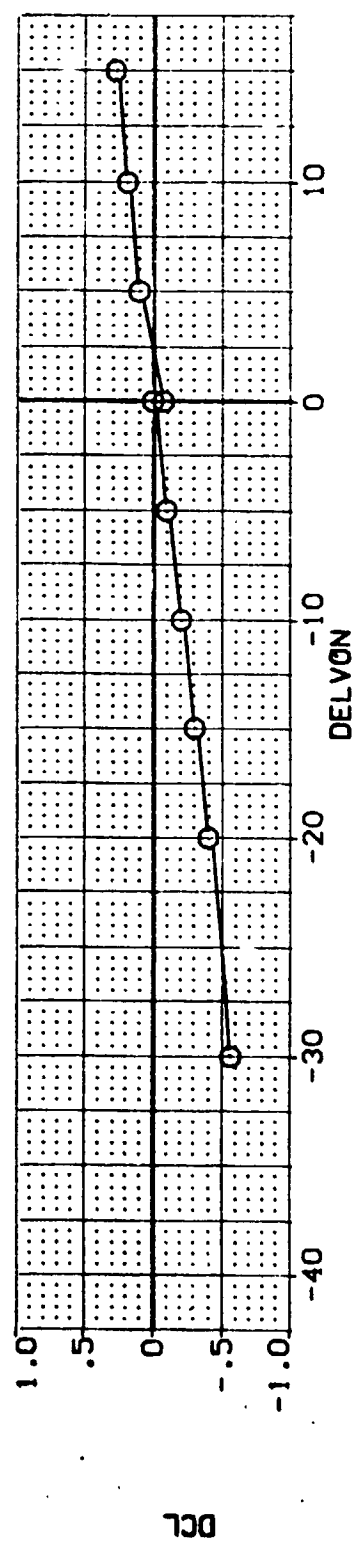
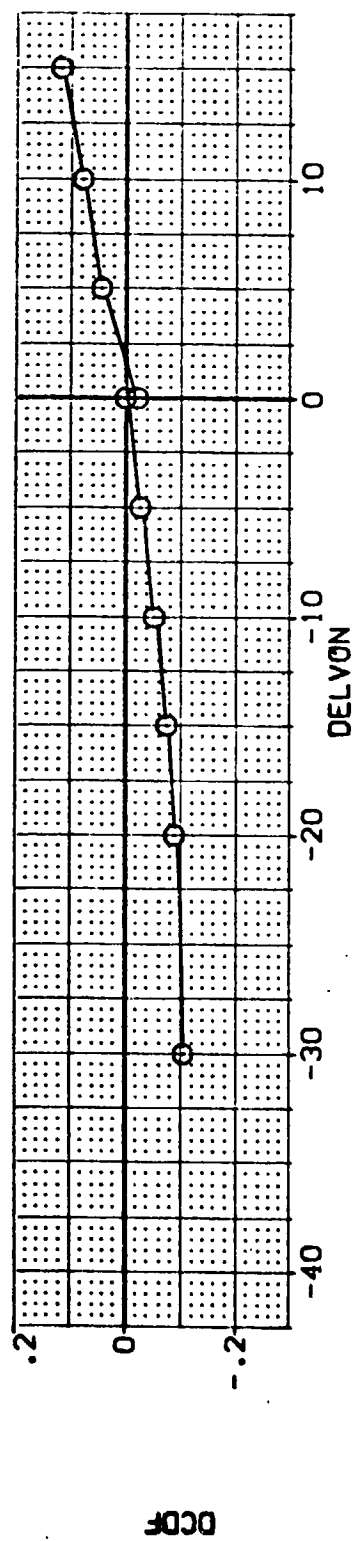
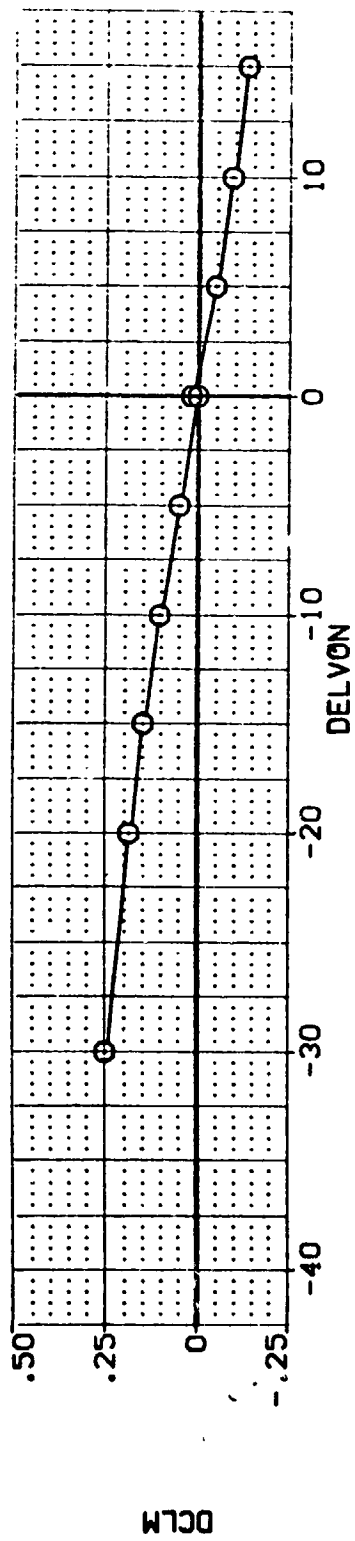


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



(1DZ103)

0A62B B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
0	ALPHA	.200	BETA	.000	DATASET	DELVON	SREF	4.4119	50.FT.
	MACH	12.000	AIRLON	.000	IDZ103	-30.000	LREF	19.2299	INCHES
	BOFLAP	.000	SPDRBK	25.000	IDZ10	-15.000	BREF	37.9359	INCHES
	RUDDER	.000			IDZ099	-5.000	XMRP	43.5974	INCHES
					IDZ104	10.000	YMRP	.0000	INCHES
					IDZ097	10.000	ZMRP	15.1875	INCHES
							SCALE	.0405	SCALE

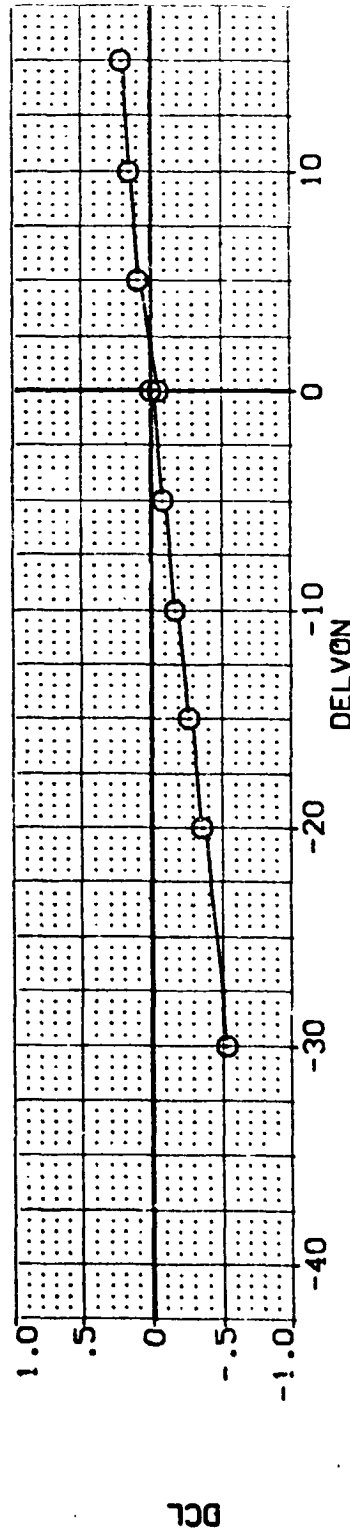
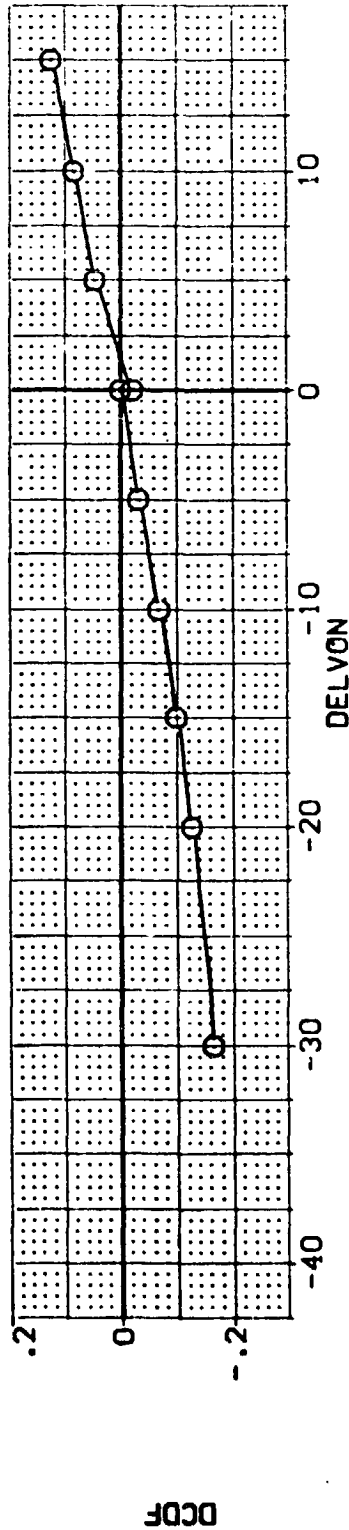
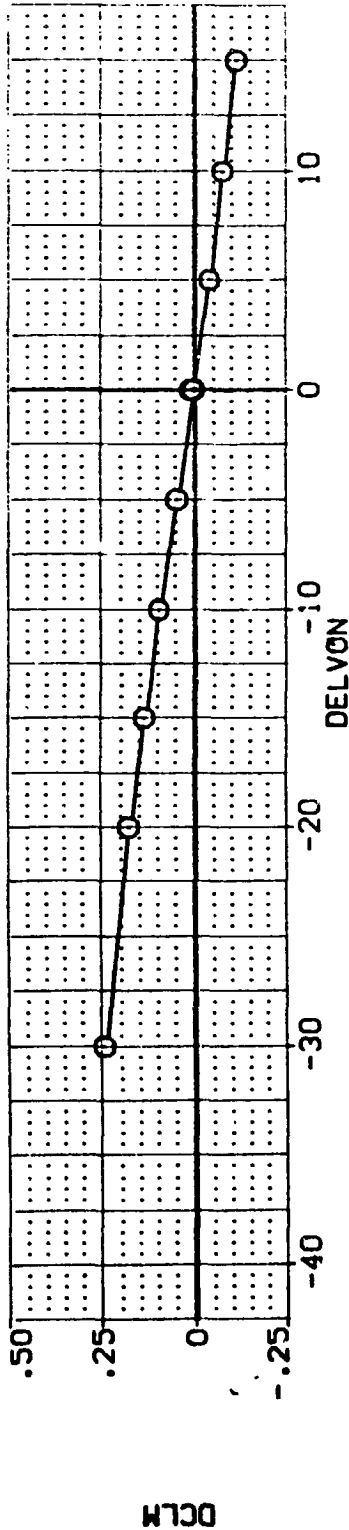


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE





(1DZ103)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	ALPHA	.200	BETA	.000	DATASET	DELVON	SREF
	MACH	-12.000	A1LRON	.000	IDZ103	-20.000	4.4119
	EDFLAP	.000	SPOBRK	25.000	IDZ101	-15.000	19.2299
	RUDDER	.000			IDZ099	-5.000	37.9359
					IDZ098	10.000	43.5974
					IDZ104	.000	.0000
					IDZ096	5.000	15.1875
					ZMRP	15.000	.0405
					SCALE		INCHES
							SCALE

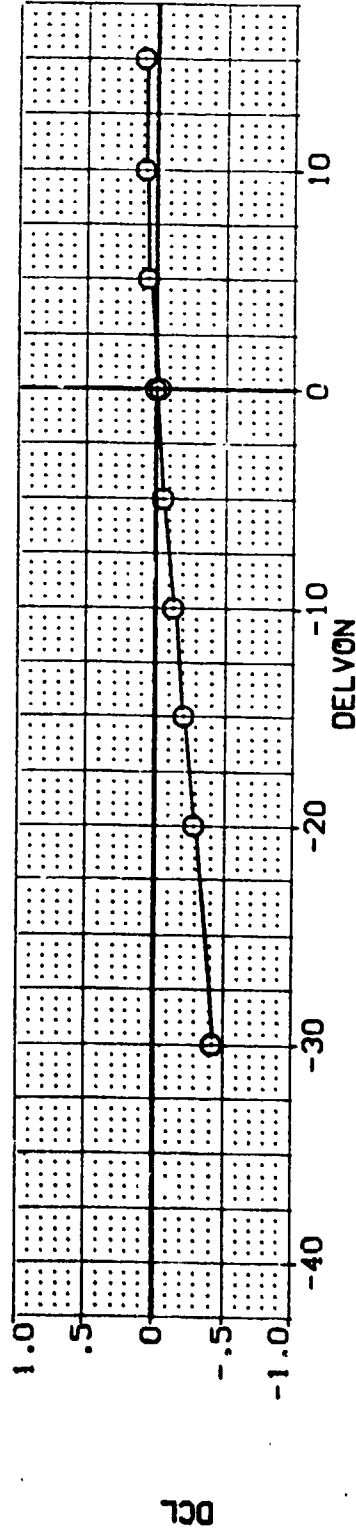
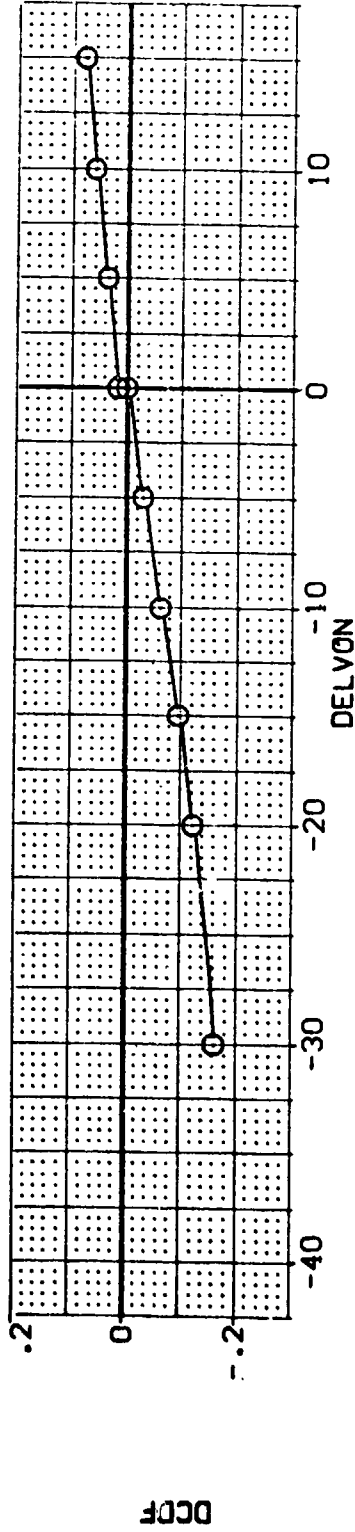
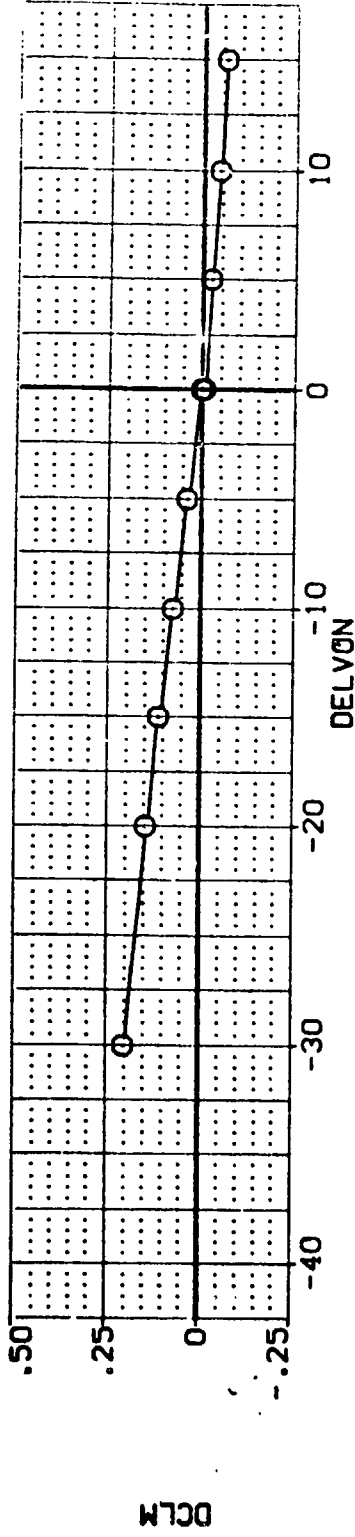


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

(10Z103)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BDFLAP	RUDDER	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
O	.000				BETA .200 AILRON -12.000 SPOBRK .000	DELVON -30.000 -15.000 -5.000 10.000	10Z102 10Z100 10Z090 10Z096 10Z098	-20.000 -10.000 .000 5.000 15.000	LREF 4.4119 BREF 19.2298 XMRP 37.9359 YMRP 43.5974 ZMRP .0000 SCALE 15.1875 .0405	

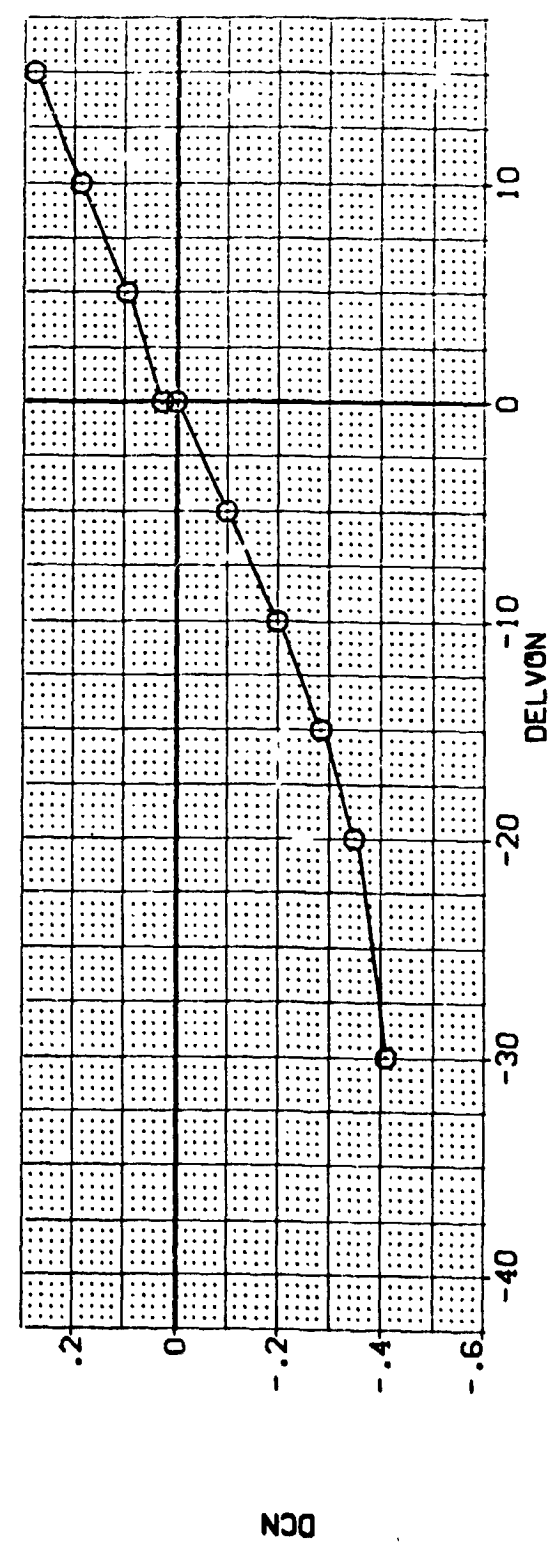
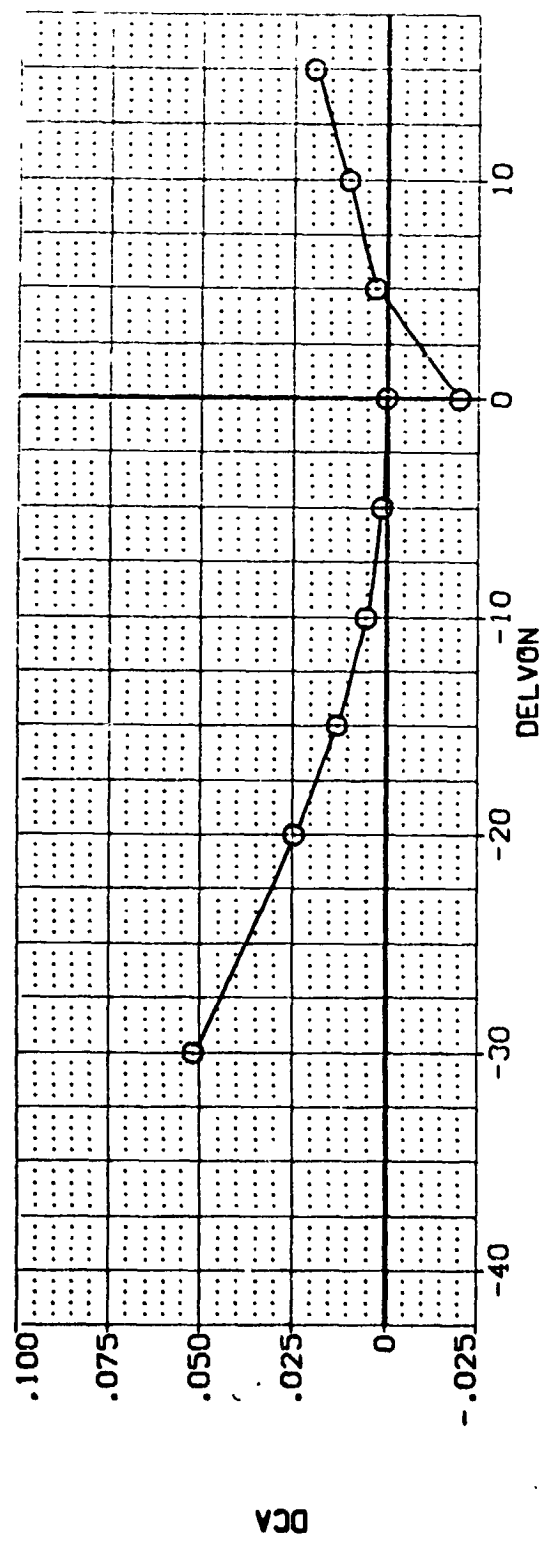


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

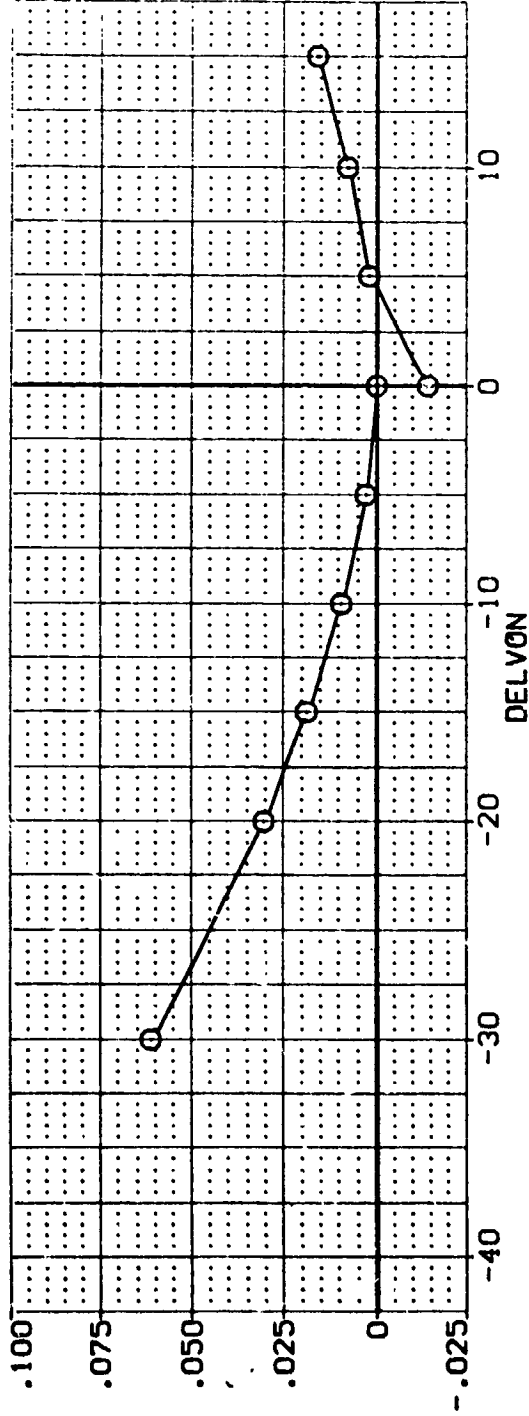




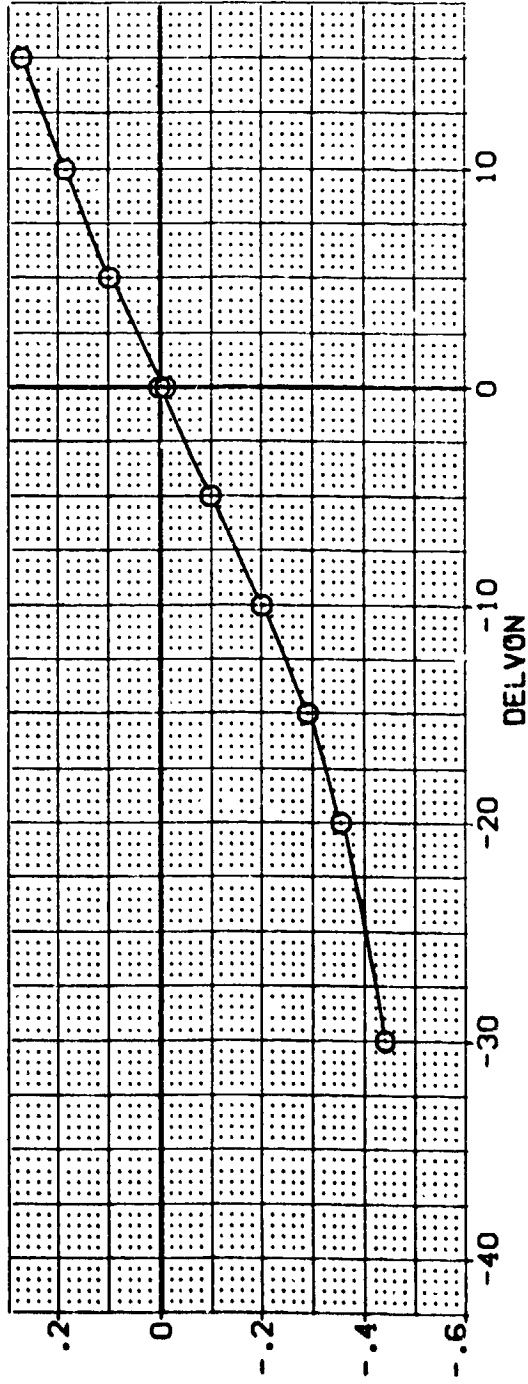
(1DZ103)

0A62B B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
○	ALPHA	5.000	MACH	.200	BETA	.000	DATASET	1DZ103	DELVON	-30.000	SREF	4.4119	SO.FT.
	BOFLAP	-12.000	A1LRON	-12.000	SPOBRK	25.000	1DZ101	DELVON	-15.000	LRFF	19.2299	INCHES	
	RUDDER	.000					1DZ099	DELVON	-5.000	BRFF	37.9359	INCHES	
							1DZ104	DELVON	10.000	XMRP	43.5974	INCHES	
							1DZ097	DELVON	10.000	YMRP	.0000	INCHES	
							1DZ098	DELVON	15.000	ZMRP	15.1875	INCHES	
										SCALE	.0405	SCALE	



DCA



DCN

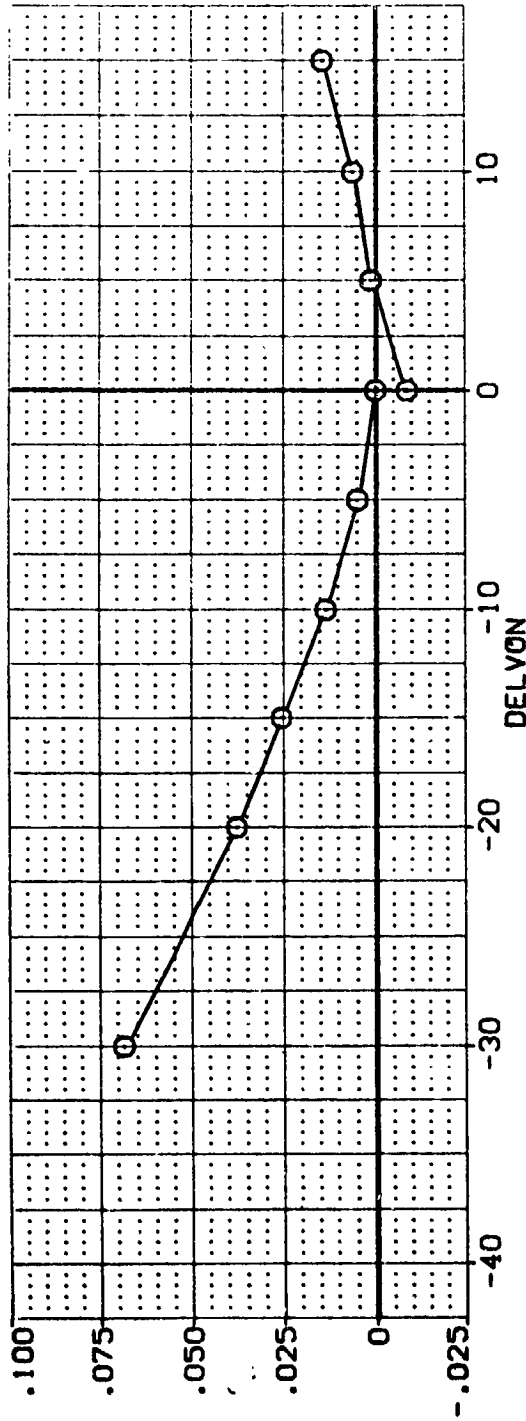
FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



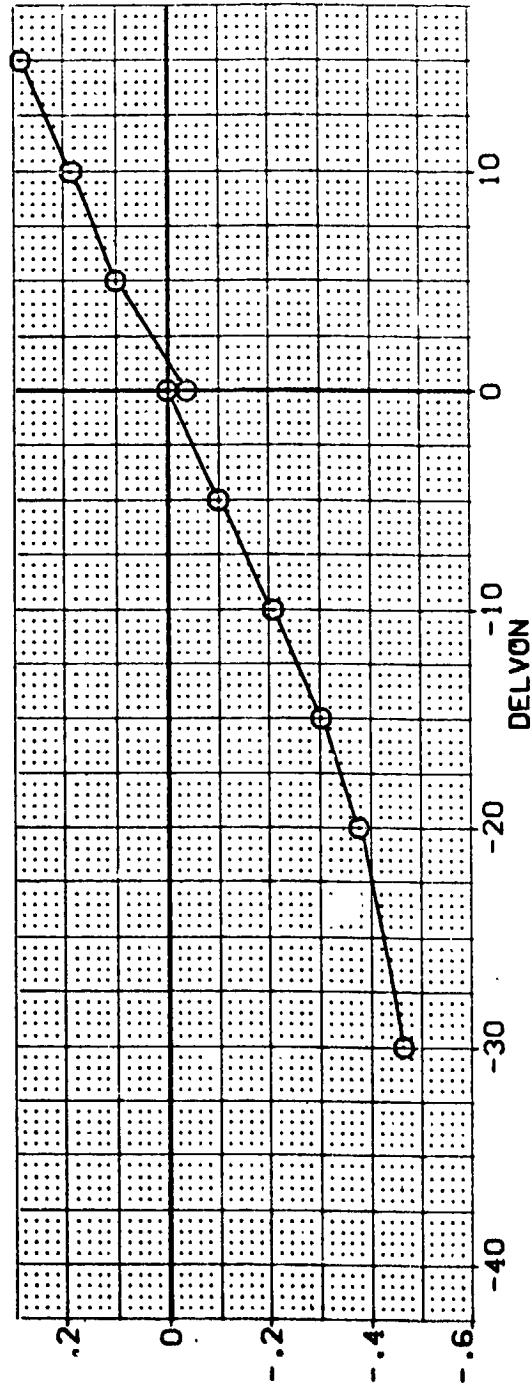
(1DZ103)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
0	ALPHA	10.000	BETA	.000	DATASET	DELTVN	SREF	4.4119	SO.FT.
	MACH	.200	AIRLON	.000	IDZ102	-20.000	LREF	19.2299	INCHES
	BD/FLAP	-12.000	SPOBRK	25.000	IDZ101	-15.000	BREF	37.9359	INCHES
	RUDDER	.000			IDZ090	-5.000	XMRP	43.5974	INCHES
					IDZ096	5.000	YMRP	.0000	INCHES
					IDZ104	10.000	ZMRP	15.1875	INCHES
					IDZ097	10.000	SCALE	.0405	SCALE



DCA



DCN

FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



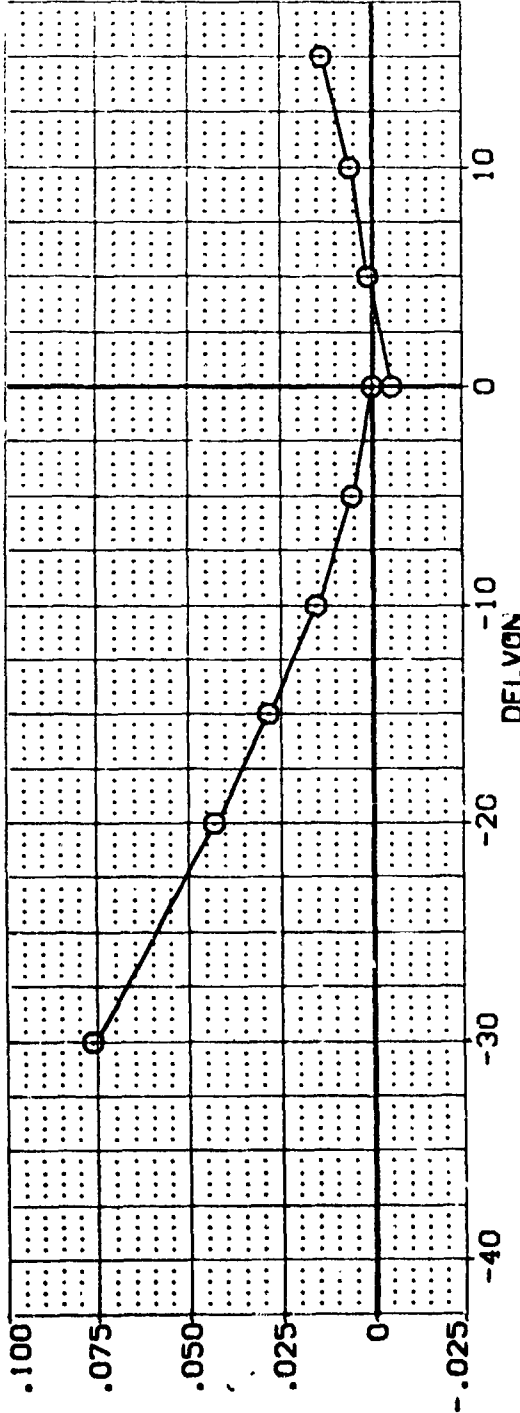
(10Z103)

W116E28V8R5X9

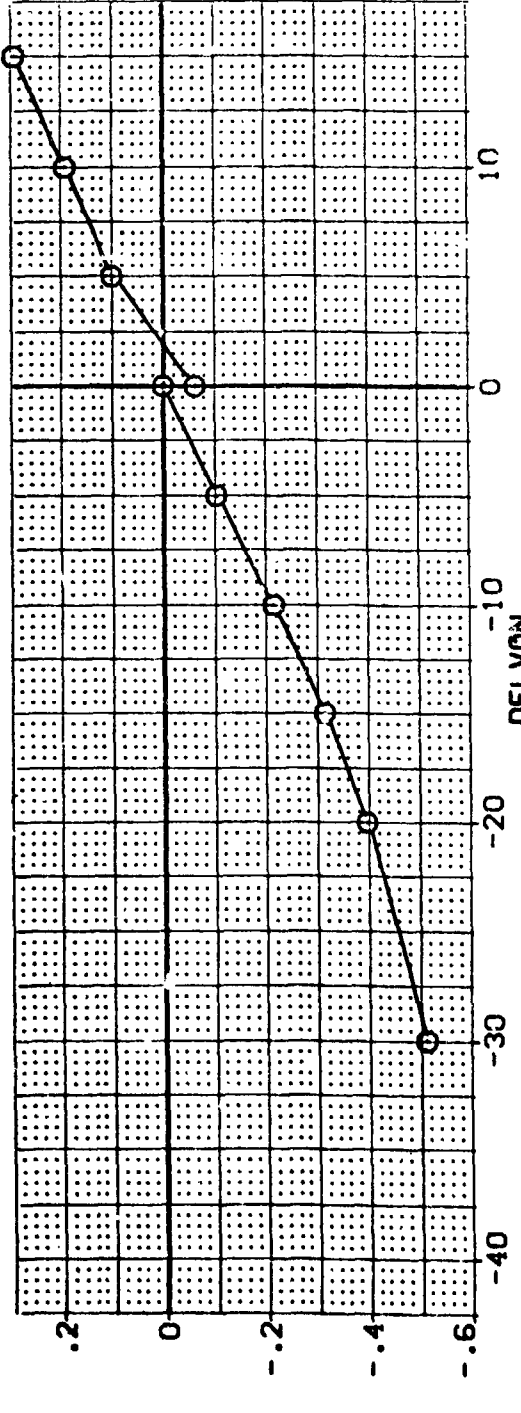
B26C9G15M7F8

0A628

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	15.000	.000	10Z103	SREF	4.3119
MACH	.200	.000	10Z101	LREF	19.2299
BOFLAP	-12.000	25.000	10Z098	BREF	37.9359
RUDDER	.000	.000	10Z096	XMRP	43.5974
			10Z104	YMRP	.0000
			10Z097	ZMRP	15.1875
				SCALE	.0405



DCA



DCN

FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ103)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE	DATASET	DELTVN	SREF	REFERENCE INFORMATION	
0	20.000		.200	BETA	.000	1DZ102	-20.000	L.REF	4.4119	SO.FT.
			-12.000	A1LRON	.000	1DZ103	-15.000	SREF	9.2299	INCHES
			.000	SPOBRK	25.000	1DZ101	-5.000	XMRP	37.9559	INCHES
						1DZ099	10.000	YMRP	43.5974	INCHES
						1DZ104	5.000	ZMRP	.0000	INCHES
						1DZ097	10.000	SCALE	15.1875	SCALE
									.0405	

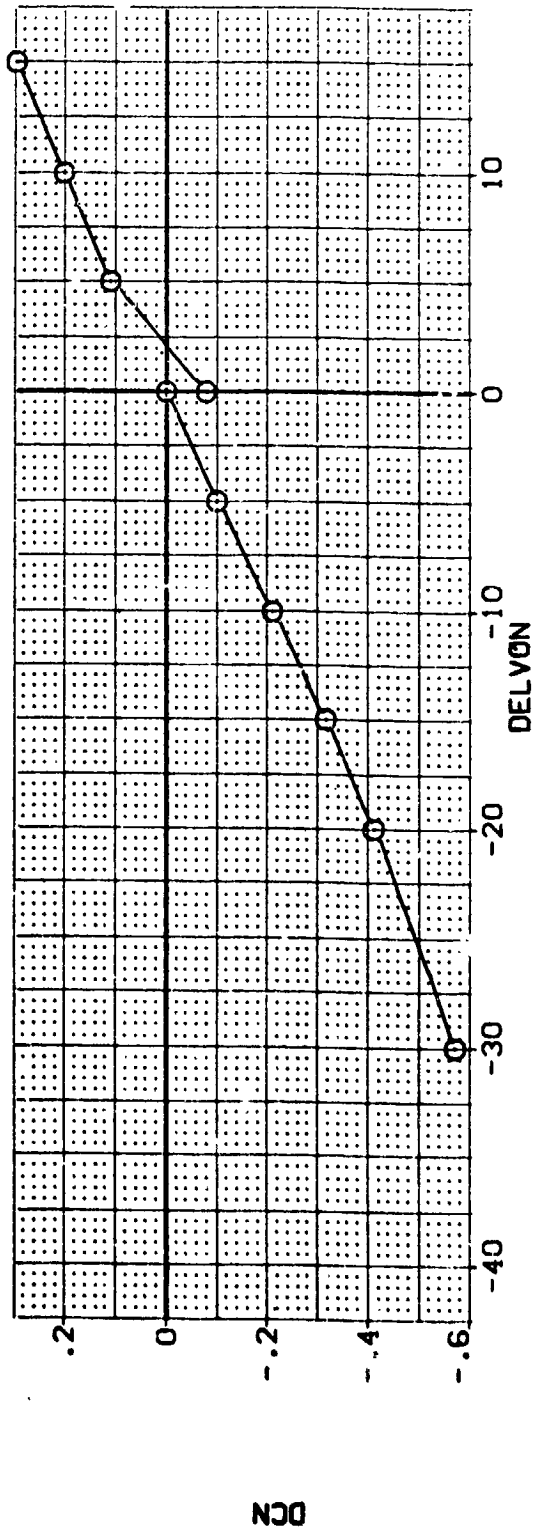
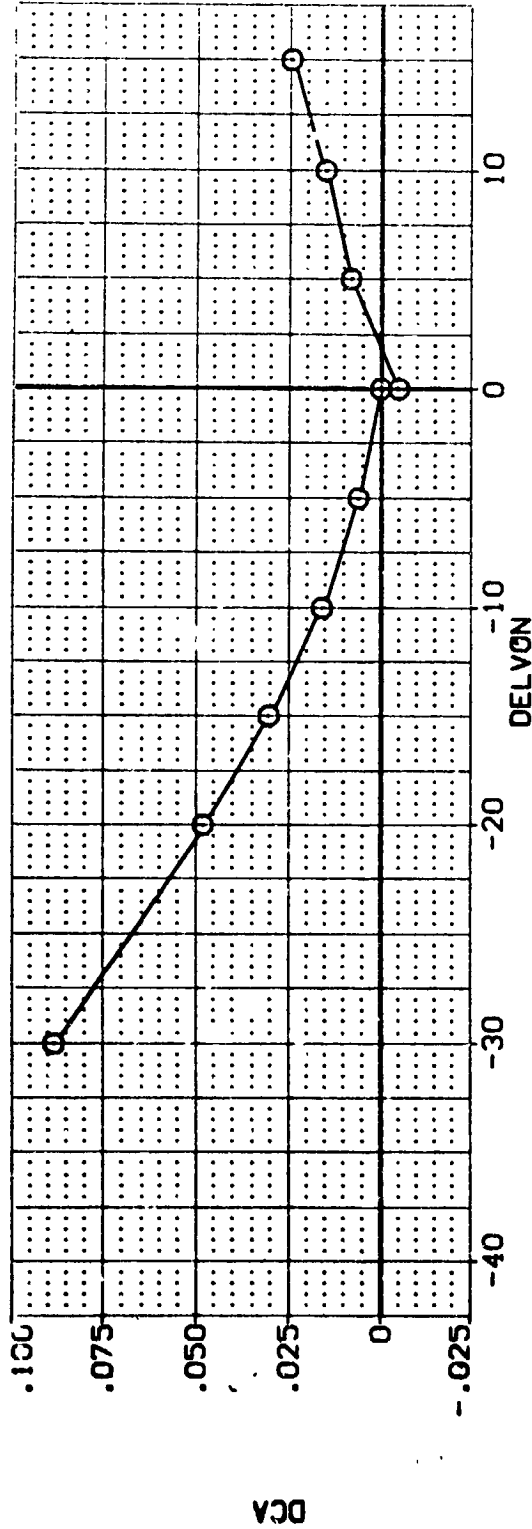


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ103)

SYMBOL	ALPHA	MACH	BOTLAP	RUDDER	PARAMETRIC VALUES	.000	DATASET	DATA SOURCE	DELTA SET	DELTA	SREF	REFERENCE INFORMATION
O	25.000				.200 BETA	.000	1DZ103	DELTA	1DZ102	-20.000	4.41.9	SO.FT.
					-12.000 AILRON	.000	1DZ101	-30.000	1DZ100	-10.000	19.2299	INCHES
					.000 SPOBRK	25.000	1DZ099	-15.C.O	1DZ090	.000	37.9359	INCHES
							1DZ104	-5.000	1DZ096	5.000	43.5974	INCHES
							1DZ097	.000	1DZ098	15.000	15.0000	INCHES
								10.000		15.000	15.1875	SCALE
											.0405	SCALE

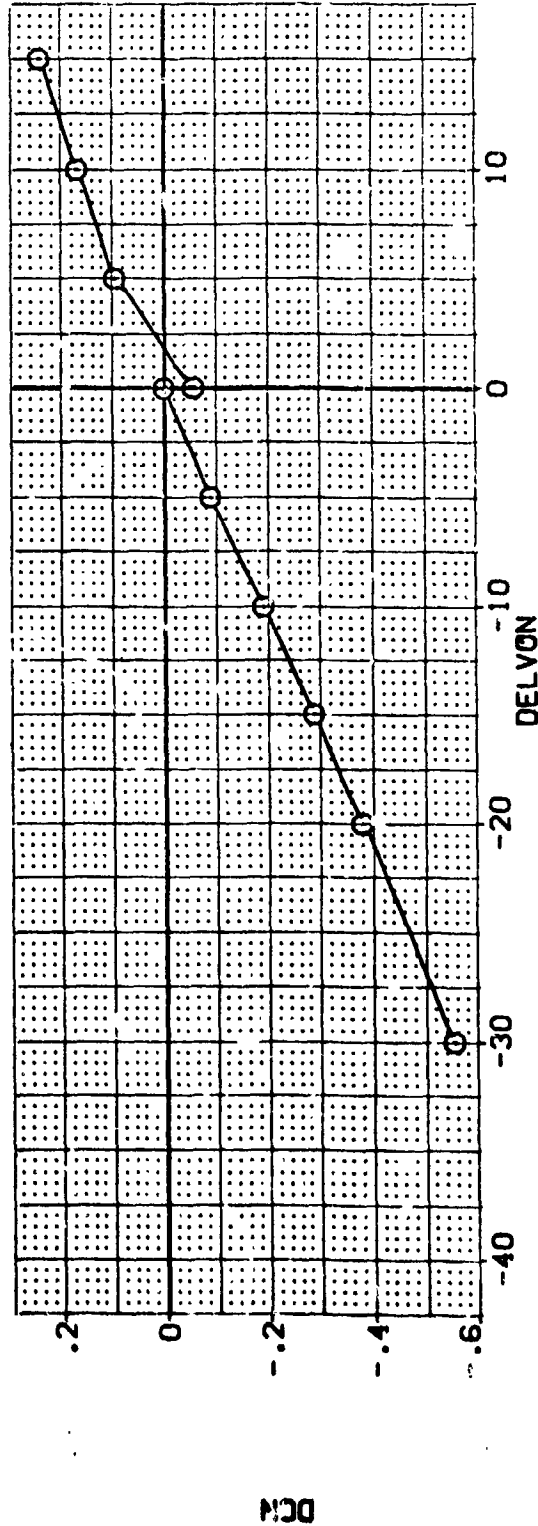
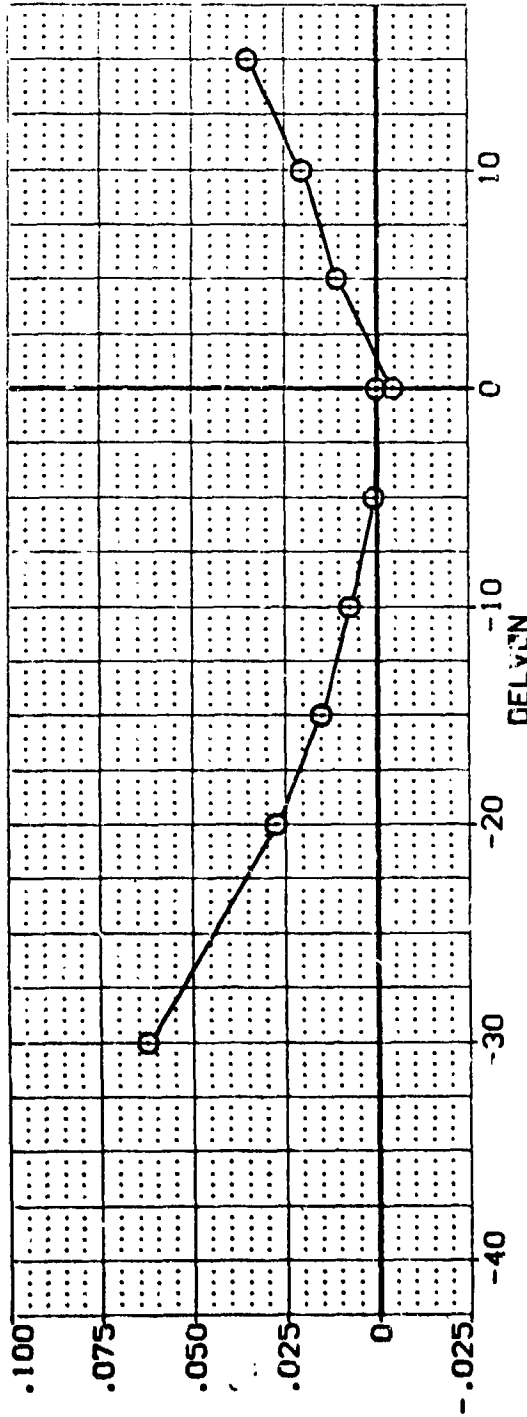


FIG 33 ELEVON EFFECTIVENESS. FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE

0A628 B26C9G15M7F8 W116E28V8R5X9 (1DZ103)

SYMBOL  
O

ALPHA  
10.000

PARAMETRIC V...LES  
MACH .200 BETA .000  
BOFLAP -12.000 AI:RON .000  
RUDDER .000 SPDRBK 25.000

DATA SOURCE  
DELVON  
-30.000  
-15.000  
-5.000  
10.000

DELVON  
-20.000  
-10.000  
5.000  
15.000

REFERENCE INFORMATION  
SREF 4.4119 SO.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
YMRP 43.5974 INCHES  
C000 .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

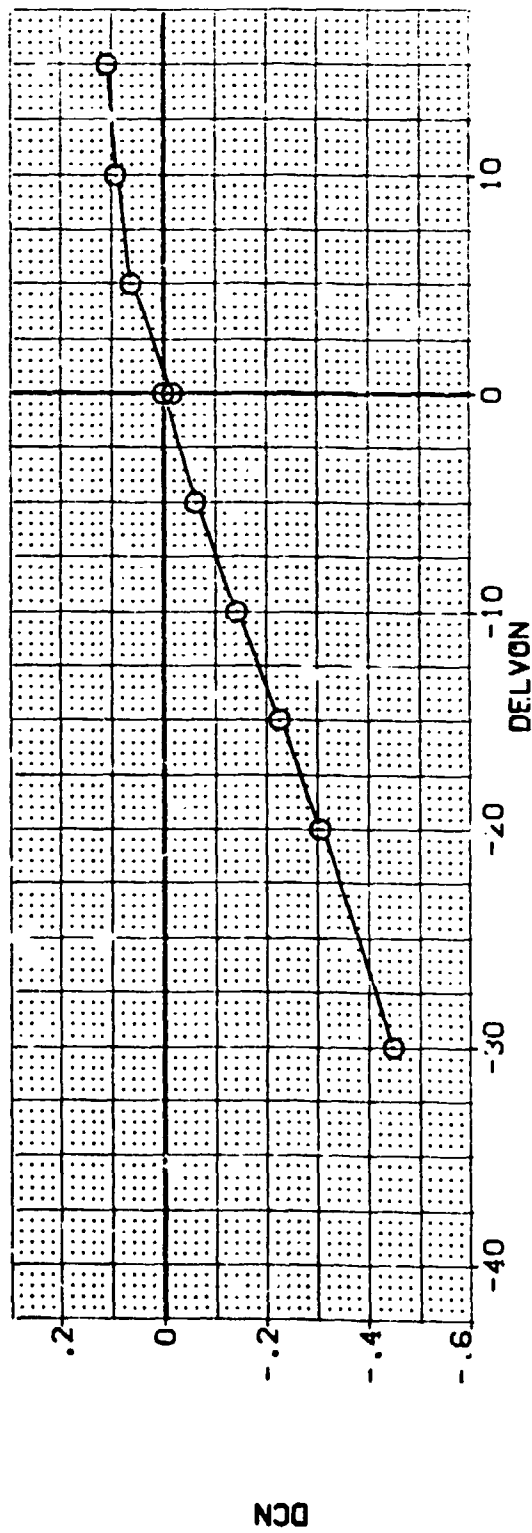
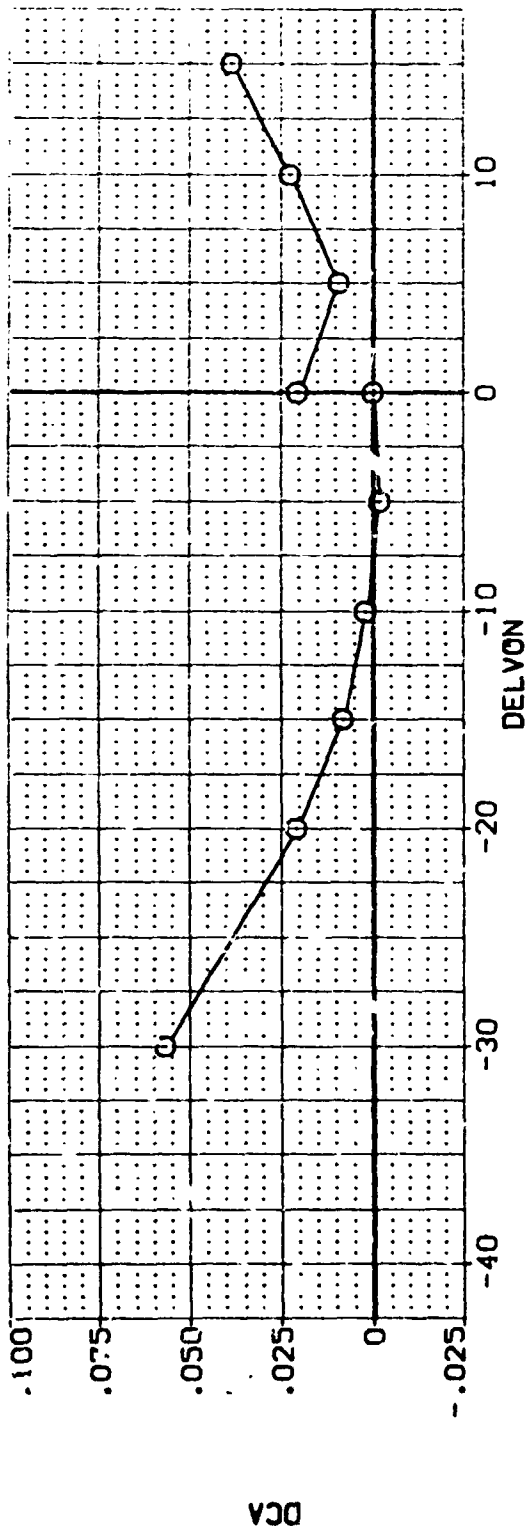


FIG 33 ELEVON EFFECTIVENESS, FREE AIR, GEAR DOWN, 25 DEG RUDDER FLARE



DATA SET SYMBOL: B  
 CONFIGURATION DESCRIPTION: 04528 B26C9G15W7F8 V11GE28M8R5X9  
 : B02090) 04528 B26C9G15W7F8 V11GE28M8R5X9

ELEVON: .000  
 SPDBRK: .000  
 BOFLAP: -12.000  
 RUDDER: .000

REFERENCE INFORMATION:  
 SREF: 4.4119 50 FT.  
 LREF: 19.2299 INCHES  
 BREF: 37.9359 INCHES  
 XMRP: 43.5974 INCHES  
 YMRP: .0000 INCHES  
 ZMRP: 15.1875 INCHES  
 SCALE: .0405

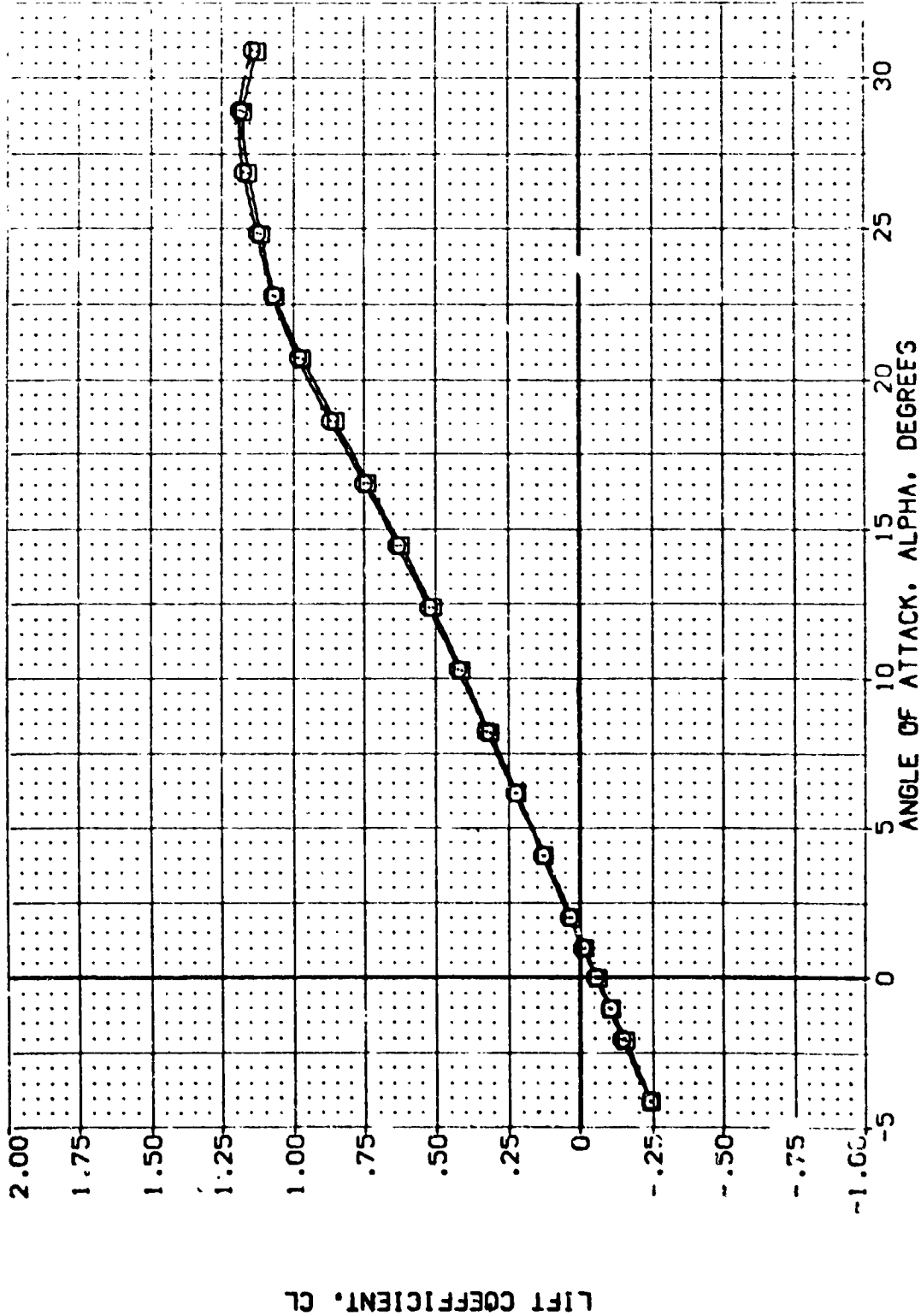


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0  
 (A)MACH = .20

DATA SET SYMBOL (B02094) (B02090)

CONFIGURATION DESCRIPTION

0A628 B26C9G:547F8 W116E20V8R5X9  
 0A628 B26C9G:547F8 V116E20V8R5X9

ELEVON SPOBRK BDFLAP RUDDER

.000 .000 .000  
 .000 25.000 -12.000  
 .000 .000 .000

REFERENCE INFORMATION

SREF 4.4118 SO. FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

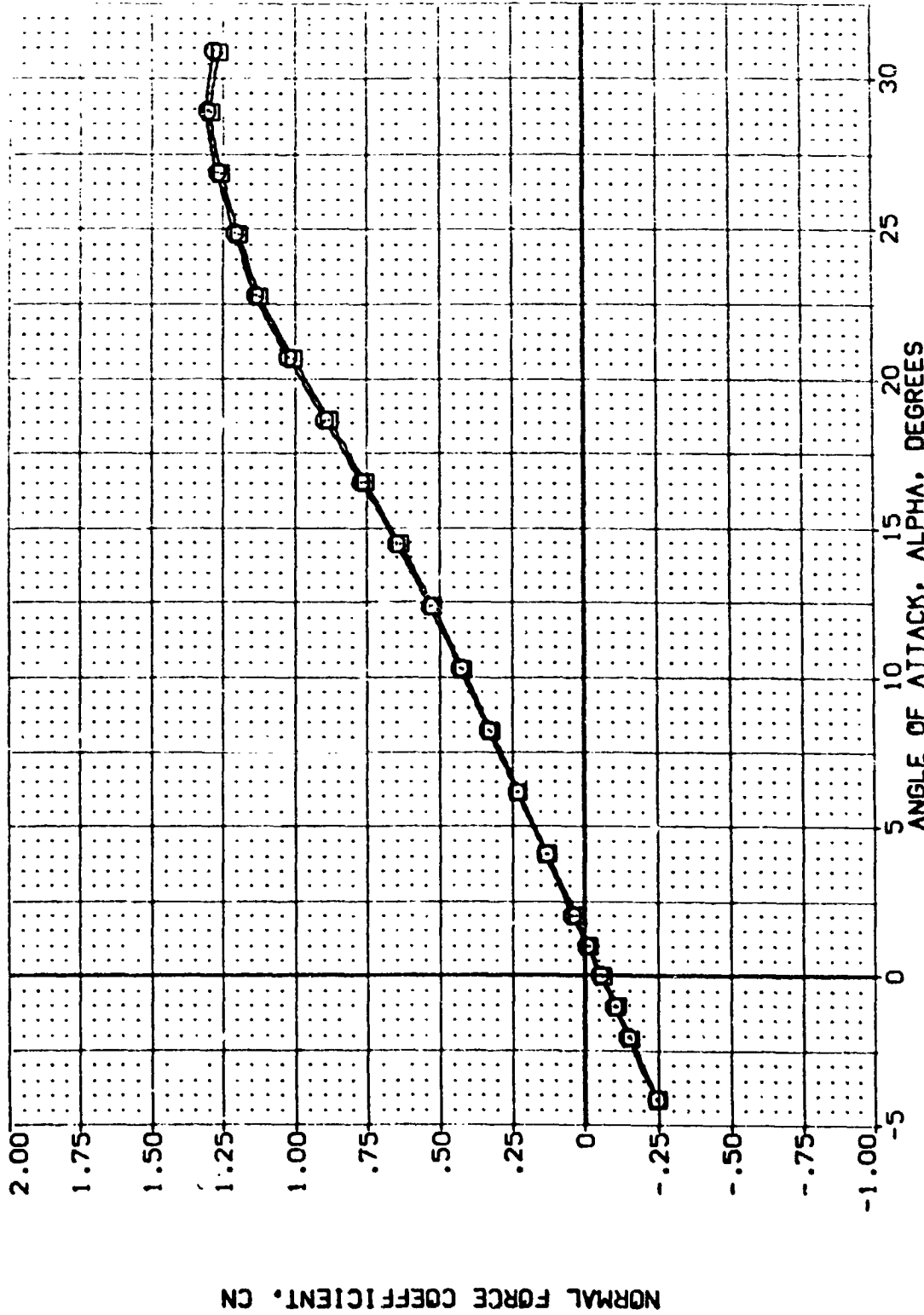


FIG 34 EFFECT OF VERTICAL TAIL FLARE. FREE AIR, GEAR DOWN, ELEVON = 0

( ) MACH = .2

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B01274) 0A528 B26C9G|5M7F8 V116E28V8RSXS  
 (B02090) 0A528 B26C9G|5M7F8 V116E28V8RSXS

ELEVON SPOBRK BOFLAP RUDDER  
 .000 .000 -12.000 .000  
 .000 .000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ. FT.  
 LREF 19.2298 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

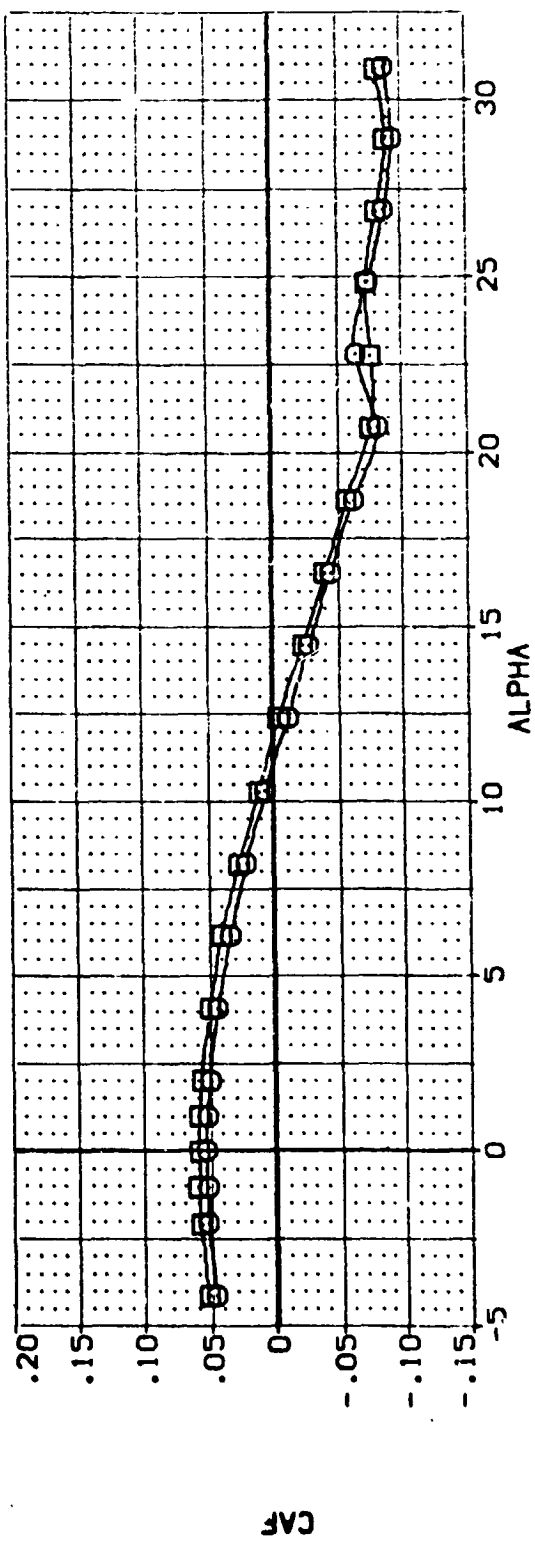
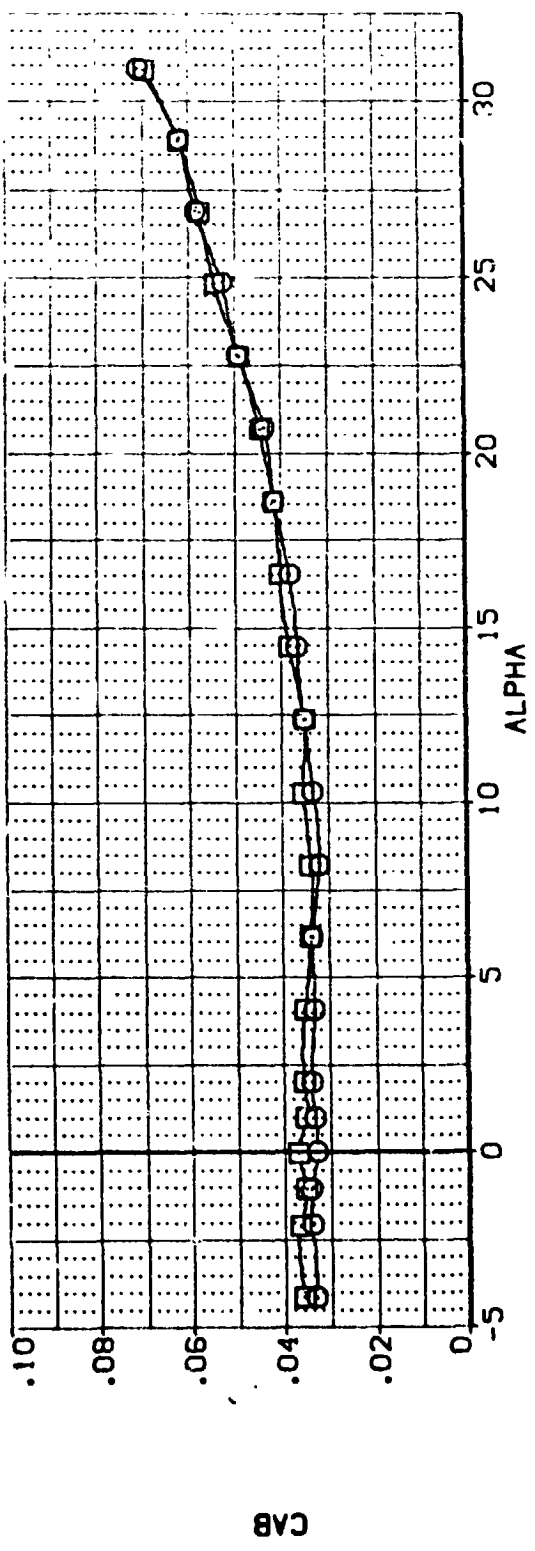


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (80X094) 0A628 B26C9G|S77F8 V116E28VBR5X9  
 (80X050) 0A628 B26C9G|S77F8 V116E28VBR5X9

ELEVON 3POBRK 8DFLAP RUDDER  
 .000 .000 .000  
 .000 .000 .000  
 .000 .000 .000  
 .000 .000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0105 SCALE

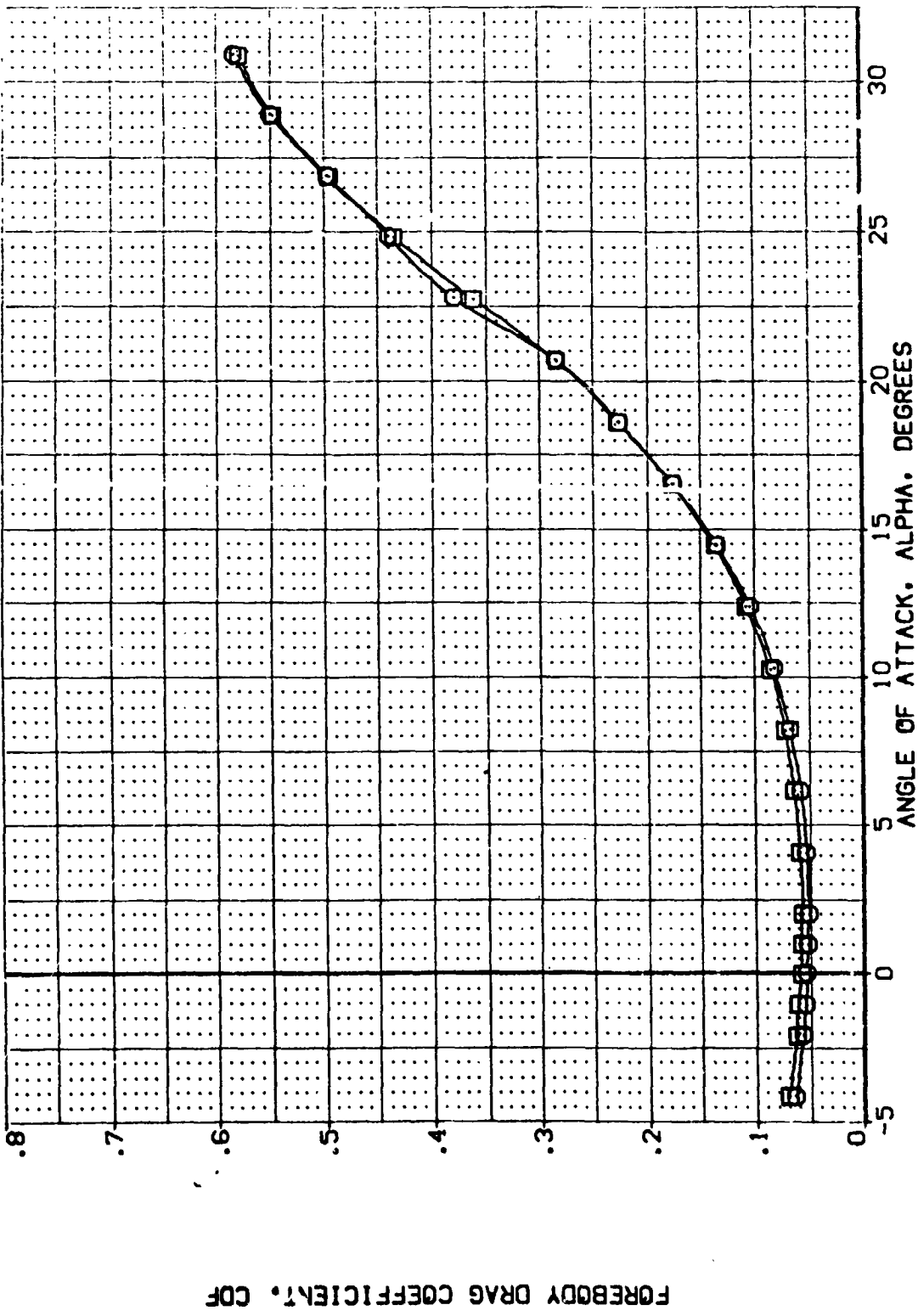
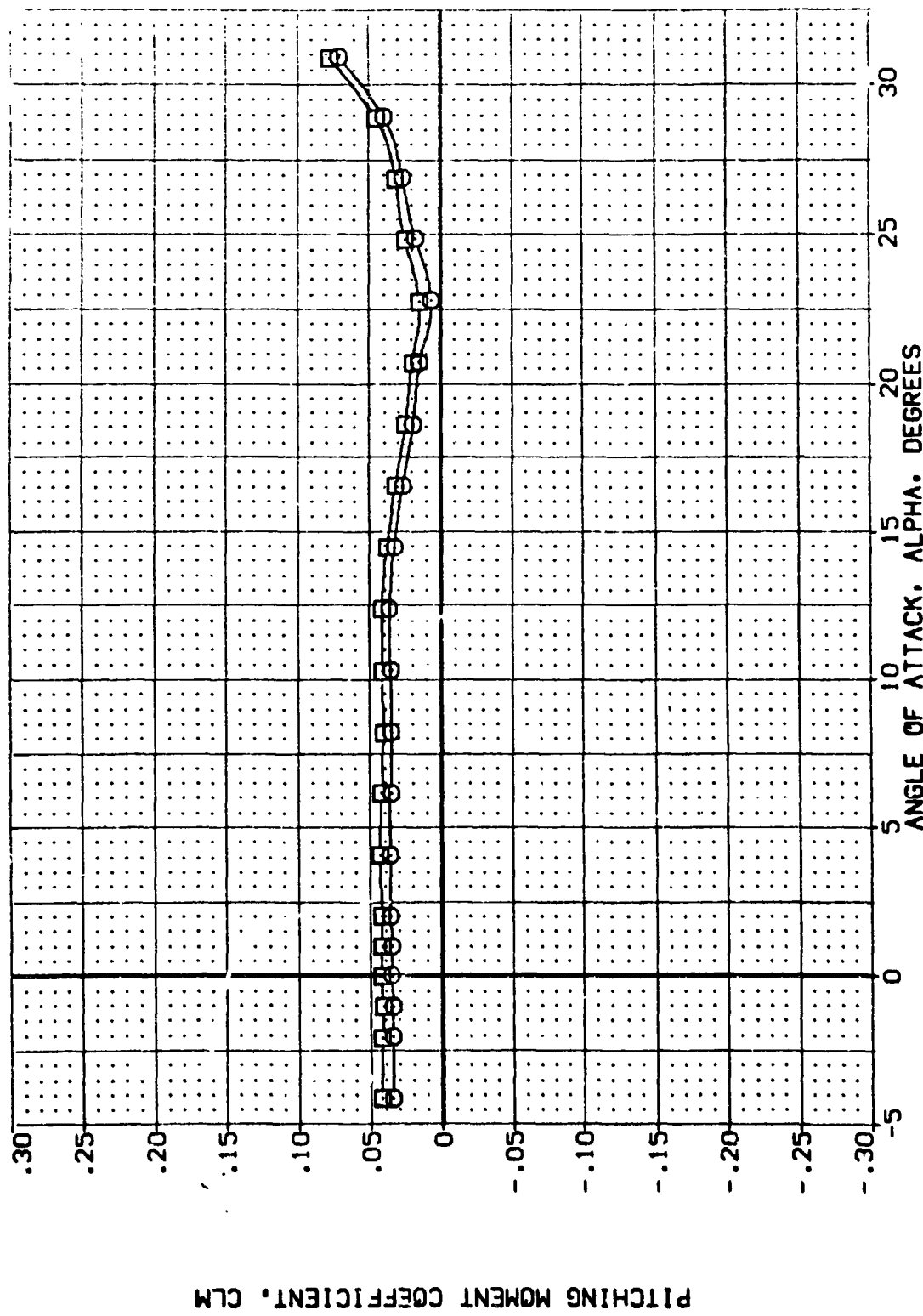


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B07084)	0A628 B26C56154778 V116E28V8RSX9	.000	.000	-12.000	.000	SREF 4.4119 SO.FT.
(B07090)	0A628 B26C56154778 V116E28V8RSX9	.000	25.000	-12.000	.000	LREF 19.2299 INCHES
						BREF 37.9359 INCHES
						XHRP 43.5974 INCHES
						YHRP .0000 INCHES
						ZHRP 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BZ094) 0A628 BZ6C9G15W78 V116E28V8R5X9  
 (RZ090) 0A628 BZ6C9G15W78 V116E28V8R5X9

ELEVON SPOBRK BOFLAP RUDDER REFERENCE INFORMATION  
 .000 .000 -12.000 .000 SREF 4.4119 SO.FT.  
 .000 25.000 -12.000 .000 LREF 19.2299 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.1875 INCHES  
 ZMRP .0405 INCHES  
 SCALE

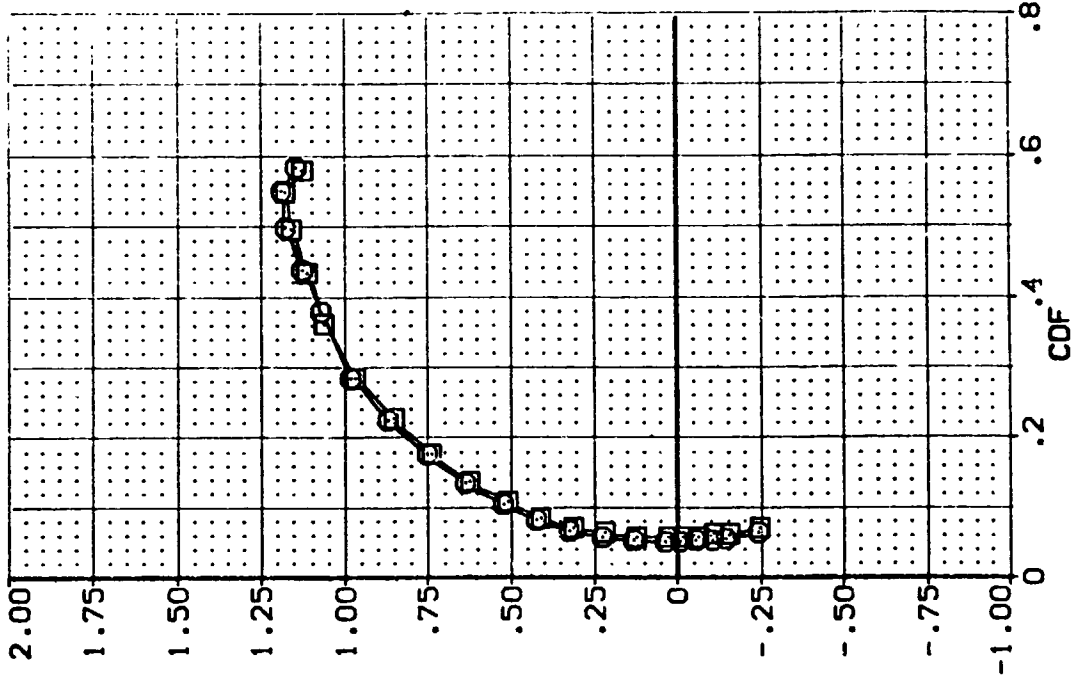
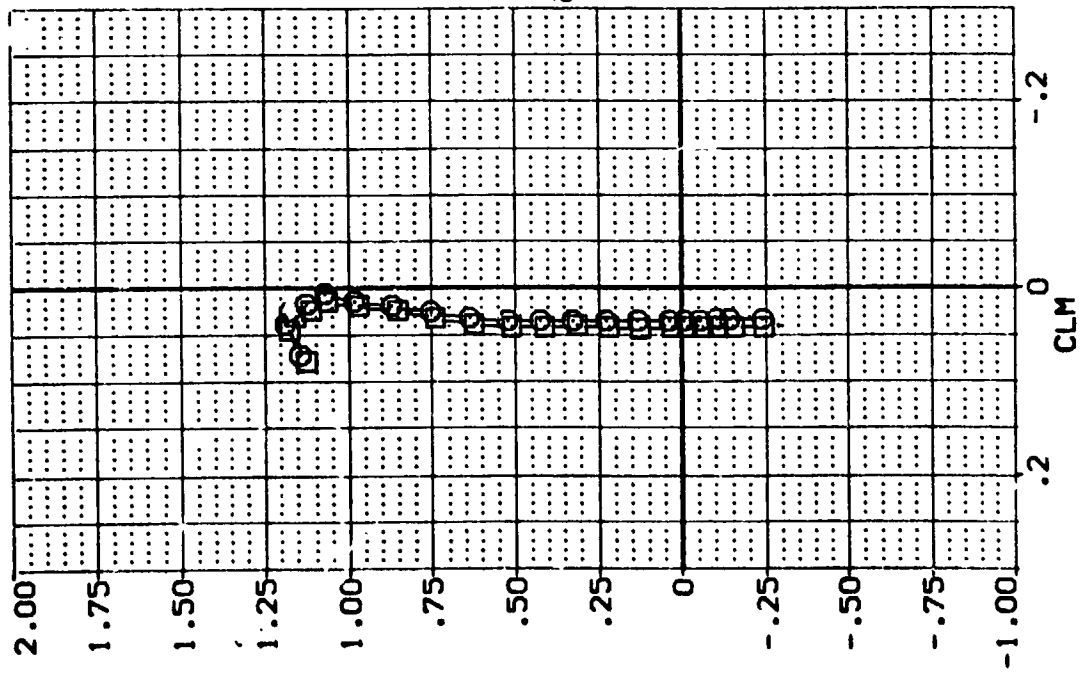


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0

MAJ MACH = .20



DATA SET SYMBOL (80Z094) (80Z090)   
 CONFIGURATION DESCRIPTION (0A5Z8 B26C90) (0A5Z8 B26C90)   
 DESCRIPTION (V116E28V8RSXS) (V116E28V8RSXS)

ELEVON .000 .000 .000 .000   
 SPODBK .000 .000 .000 .000   
 BDFLAP -12.000 -12.000   
 RUDDER .000 .000

REFERENCE INFORMATION   
 SREF 4.4119 SO.FT.   
 LREF 19.2299 INCHES   
 BREF 37.9359 INCHES   
 XMRP 43.5974 INCHES   
 YMRP .0001 INCHES   
 ZMRP 15.1875 INCHES   
 SCALE .0405 SCALE

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCPL, FRACTION BODY LENGTH

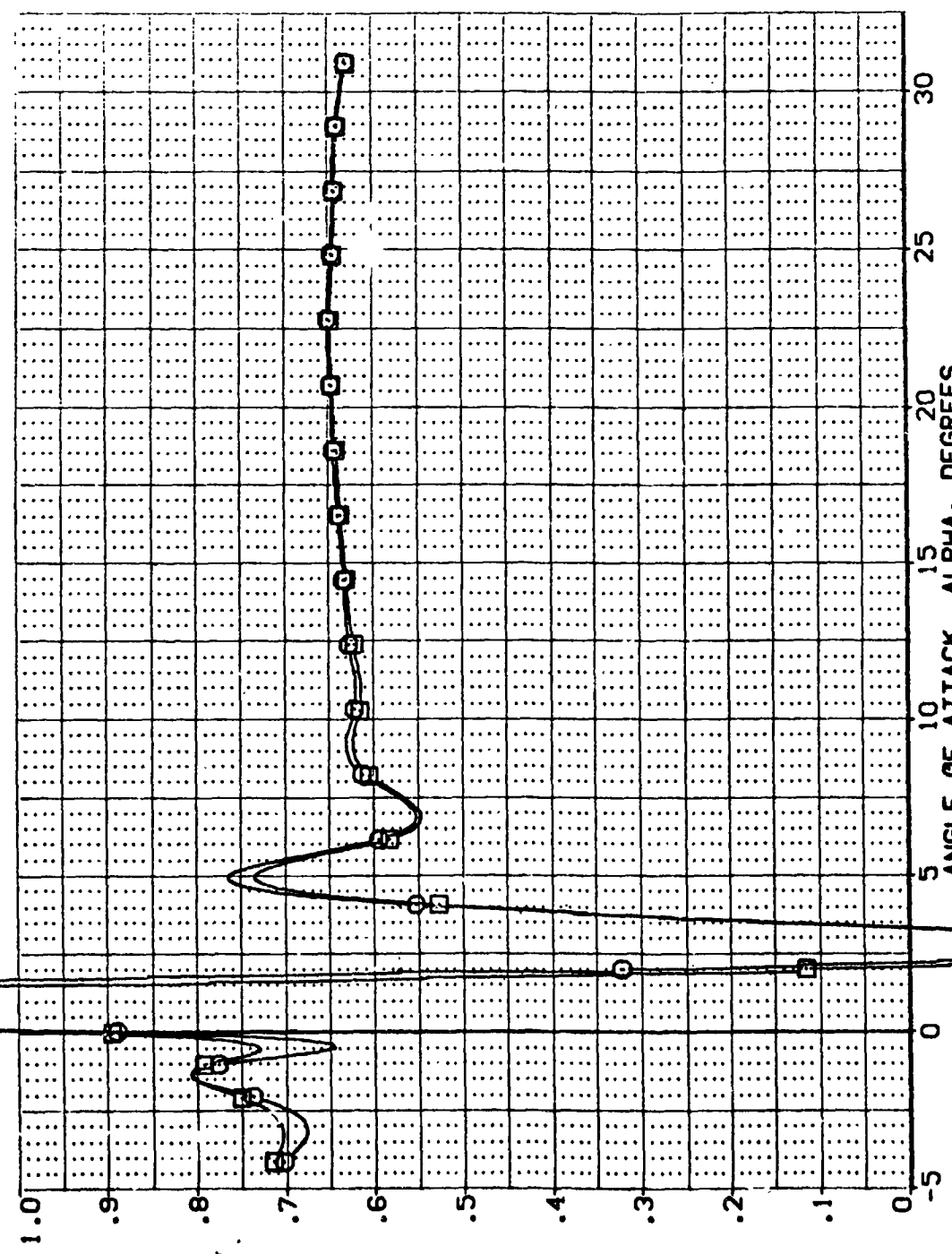


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0   
 (A)MACH = .20

DATA SET SYMBOL (80Z084) (80Z090)  CONFIGURATION DESCRIPTION 0A628 B26C9G15M7F8 V116E28V8K5X9 0A628 B26C9G15M7F8 V116E28V8K5X9

ELEVON SPOBRK 80FLAP RUDDER  
 .000 .000 .000  
 .000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

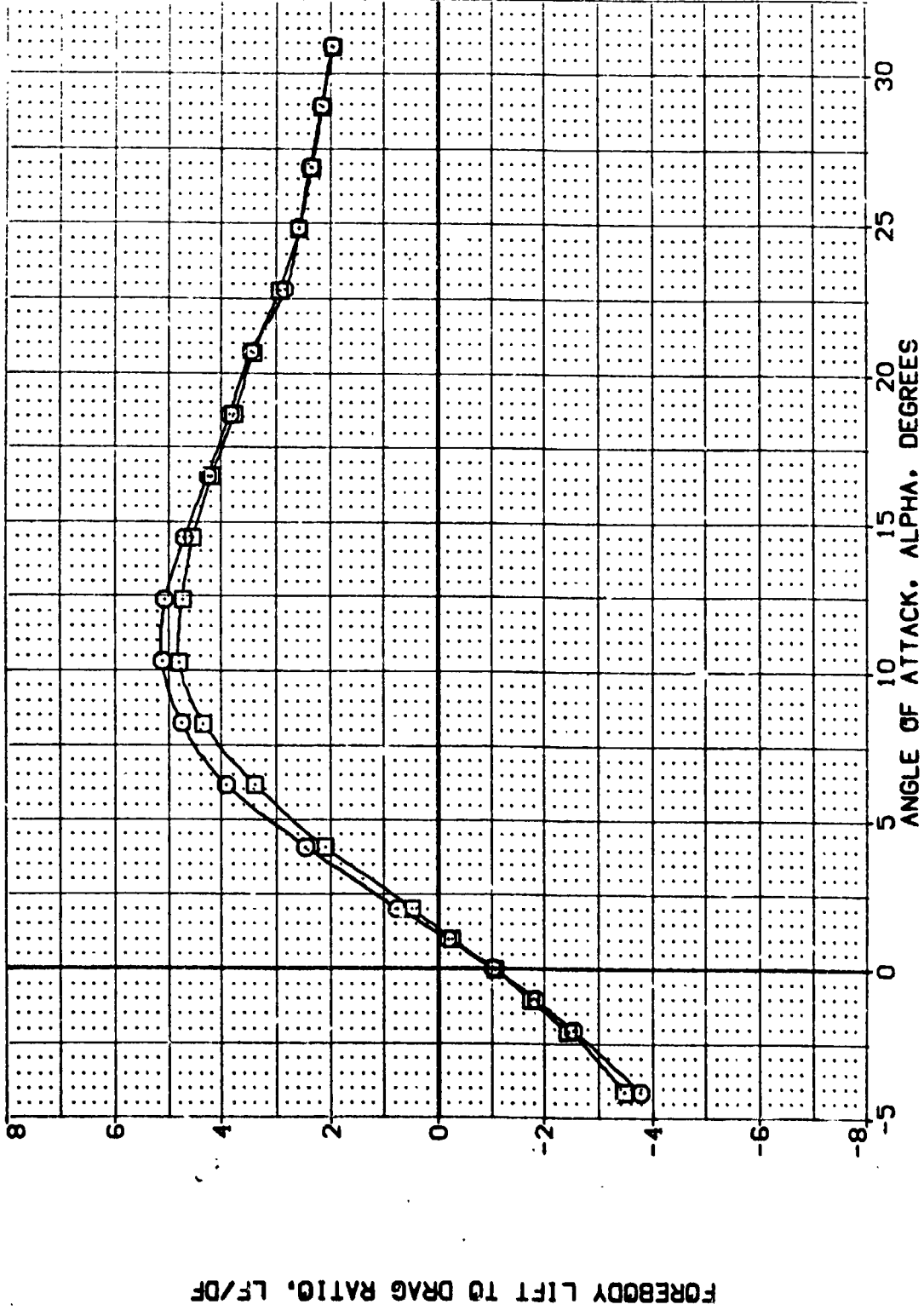


FIG 34 EFFECT OF VERTICAL TAIL FLARE, FREE AIR, GEAR DOWN, ELEVON = 0

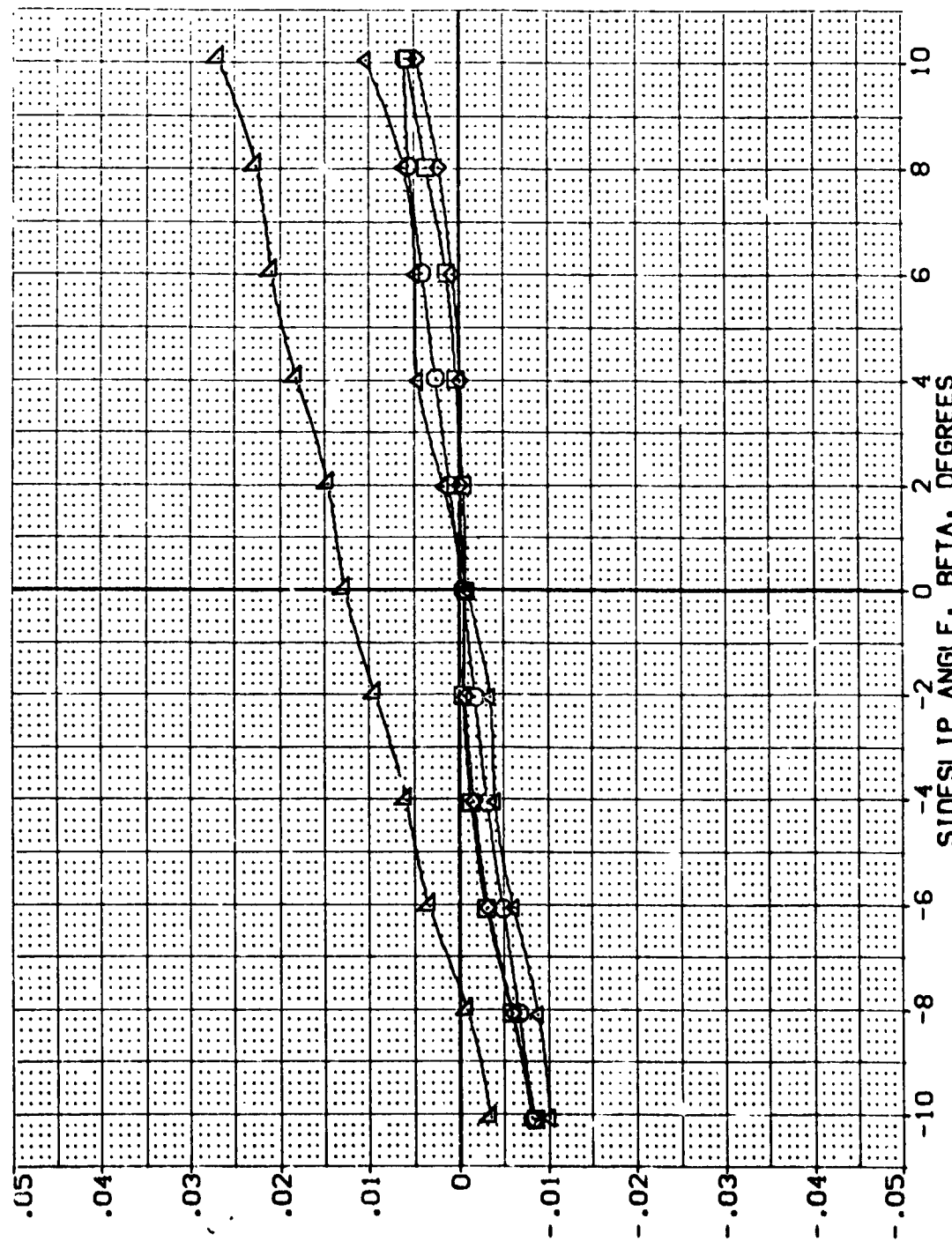
(M)MACH = .20







DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOILER	H/BW	REFERENCE INFORMATION
(ADZ078)	0A528 8Z6C9G1 5M7F 8J62V   1E28VBR5X10	.000	.000	.000	.285	SREF 4.4119 SO.FT. INCHES
(ADZ079)	0A528 8Z6C9G1 5M7F 8J62V   1E28VBR5X10	5.000	.000	.000	.285	LREF 19.2299 INCHES
(ADZ080)	0A528 8Z6C9G1 5M7F 8J62V   1E28VBR5X10	10.000	.000	.000	.285	BREF 37.9359 INCHES
(ADZ081)	0A528 8Z6C9G1 5M7F 8J62V   1E28VBR5X10	15.000	.000	.000	.285	XMRP 43.5974 INCHES
(ADZ082)	0A528 8Z6C9G1 5M7F 8J62V   1E28VBR5X10	20.000	.000	.000	.285	YMRP 15.1875 INCHES
						ZMRP .0405 SCALE

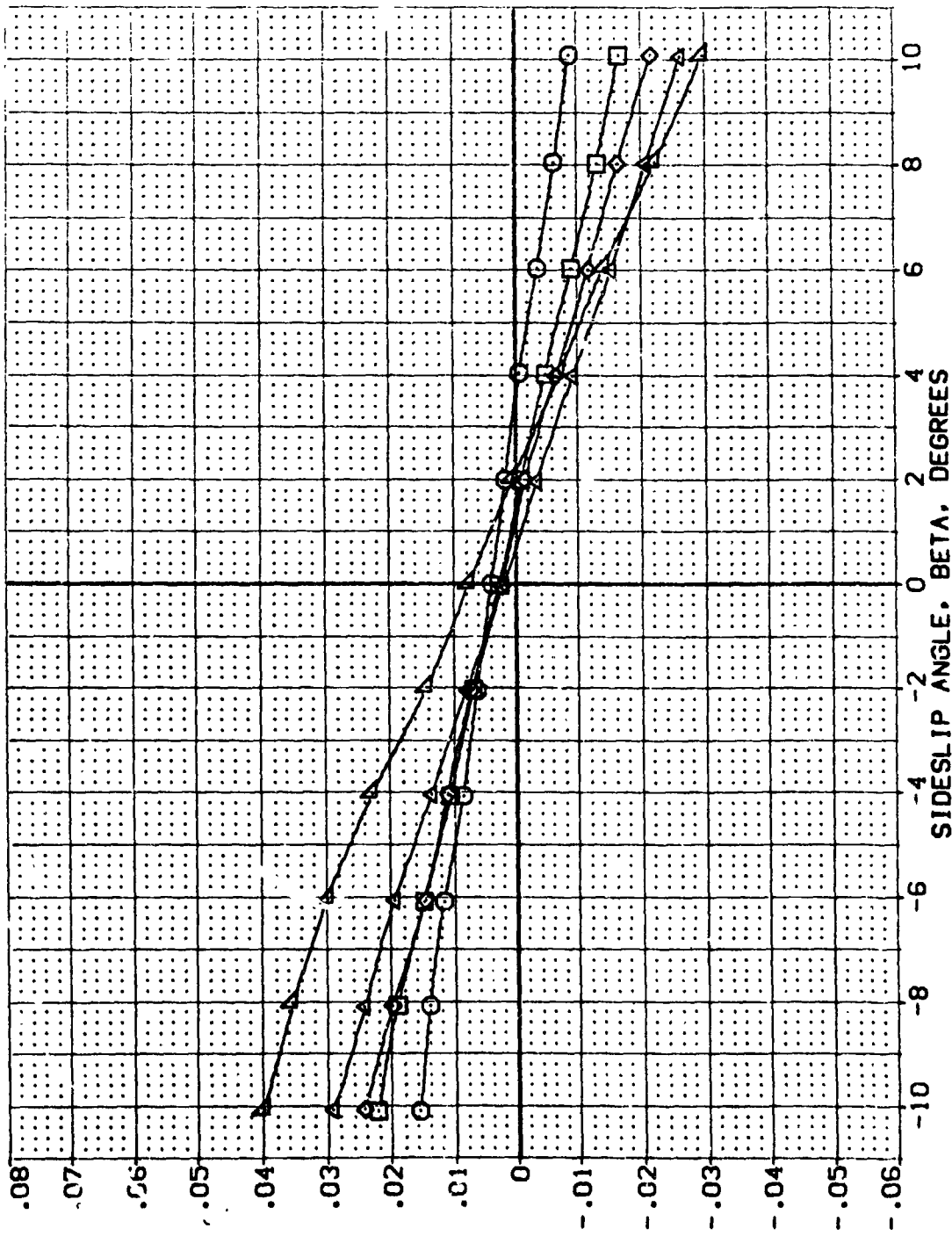


YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 35 LAT/DIR STABILITY, OVERWING POODED ENGINES, H/BW = 0.285, ELEVON = 0  
 (A)MACH = .20 PAGE 379



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPDRK	H/BW	REFERENCE INFORMATION
(A0Z078)	0A6Z8 B26C9G 5M7F B4J6ZV  6E28V8RSX10	.000	.000	.000	.285	SREF 4.4119 SO.FT.
(A0Z079)	0A6Z8 B26C9G 5M7F B4J6ZV  6E28V8RSX10	5.000	.000	.000	.285	LREF 19.2299 INCHES
(A0Z080)	0A6Z8 B26C9G 5M7F B4J6ZV  6E28V8RSX10	10.000	.000	.000	.285	BREF 37.9359 INCHES
(A0Z081)	0A6Z8 B26C9G 5M7F B4J6ZV  6E28V8RSX10	15.000	.000	.000	.285	YMRP 43.5974 INCHES
(A0Z082)	0A6Z8 B26C9G 5M7F B4J6ZV  6E28V8RSX10	20.000	.000	.000	.285	ZMRP 15.0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 35 LAT/DIR STABILITY, OVERWING POODED ENGINES, H/BW = 0.285, ELEVON = 0  
(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPDRK	H/BW	REFERENCE INFORMATION
(A0Z078)	0A628 B26C9615477 8J62V116E28V8RSX10	0.00	.000	.000	.285	SREF 4.4119 SO.FT.
(A0Z079)	0A628 B26C9615477 8J62V116E28V8RSX10	5.000	.000	.000	.285	LREF 19.2299 INCHES
(A0Z080)	0A628 B26C9615477 8J62V116E28V8RSX10	10.000	.000	.000	.285	BREF 37.9359 INCHES
(A0Z081)	0A628 B26C9615477 8J62V116E28V8RSX10	15.000	.000	.000	.285	XMRP 43.5974 INCHES
(A0Z082)	0A628 B26C9615477 8J62V116E28V8RSX10	20.000	.000	.000	.285	YMRP 15.0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

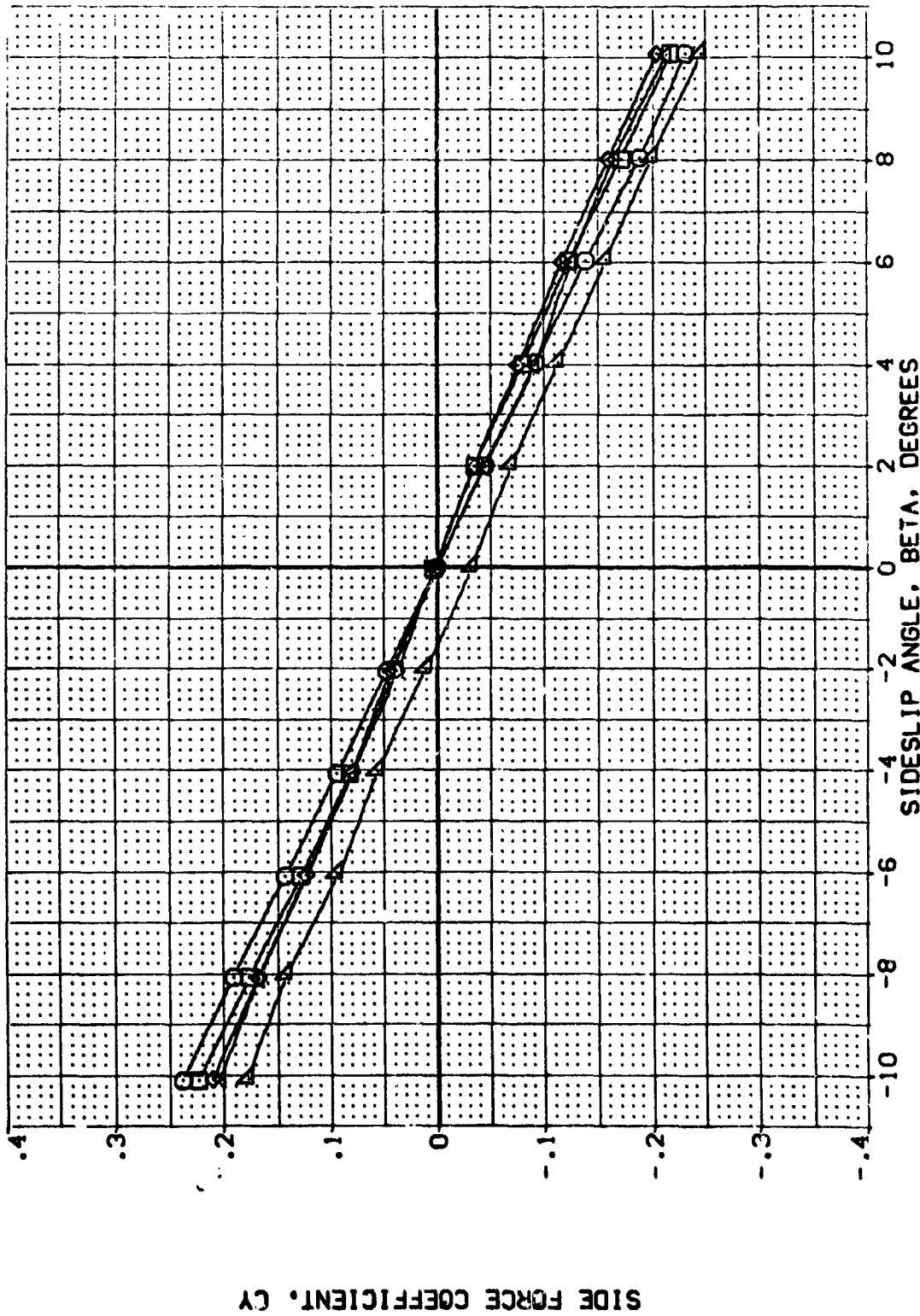


FIG 35 LAT/DIR STABILITY, OVERWING PODDED ENGINES, H/BW = 0.285, ELEVON = 0  
 (A)MACH = .20 PAGE 381

(CDZ078)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL  $\circ$  ELEVON .000

MACH AILIRON SPOBRK

PARAMETRIC VALUES

.200 BDFLAP -12.000

.000 RUDDER .000

.000 H/BW .285

REFERENCE INFORMATION

SREF 4.4119 SQ.FT.

LREF 19.2299 INCHES

BREF 37.9359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

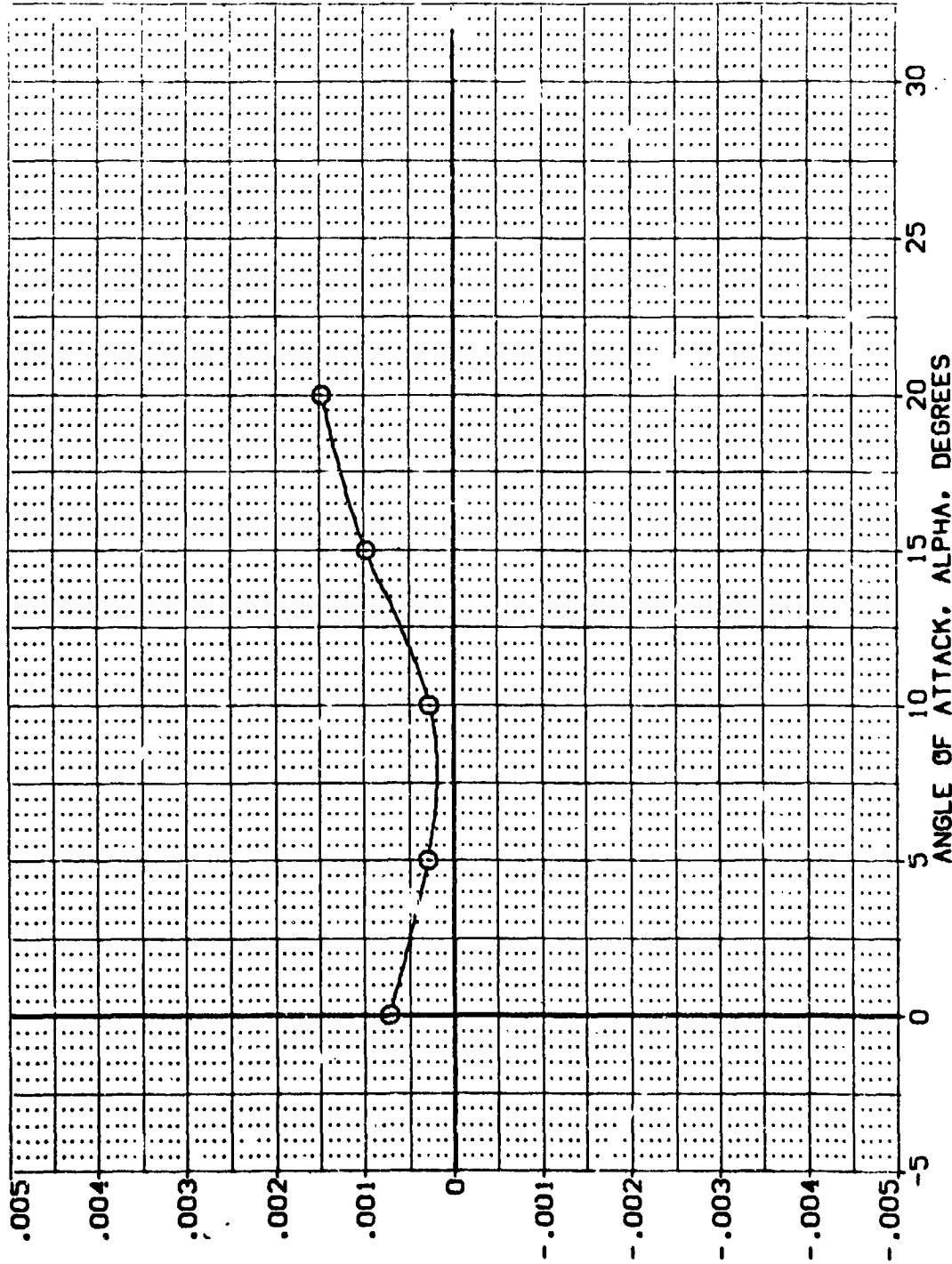


FIG 35 LAT/DIR STABILITY, OVERWING PODDED ENGINES, H/BW = 0.285, ELEVON = 0

(CDZ078)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL ○

REFERENCE INFORMATION

SREF 4.4119 SO.FT

LREF 19.2299 INCHES

BREF 37.5359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 SCALE

ELEVON .000

MACH

ATLIRON

SPOBRK

PARAMETRIC VALUES

BOFLAP -12.000

RUDDER .000

H/BW .785

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

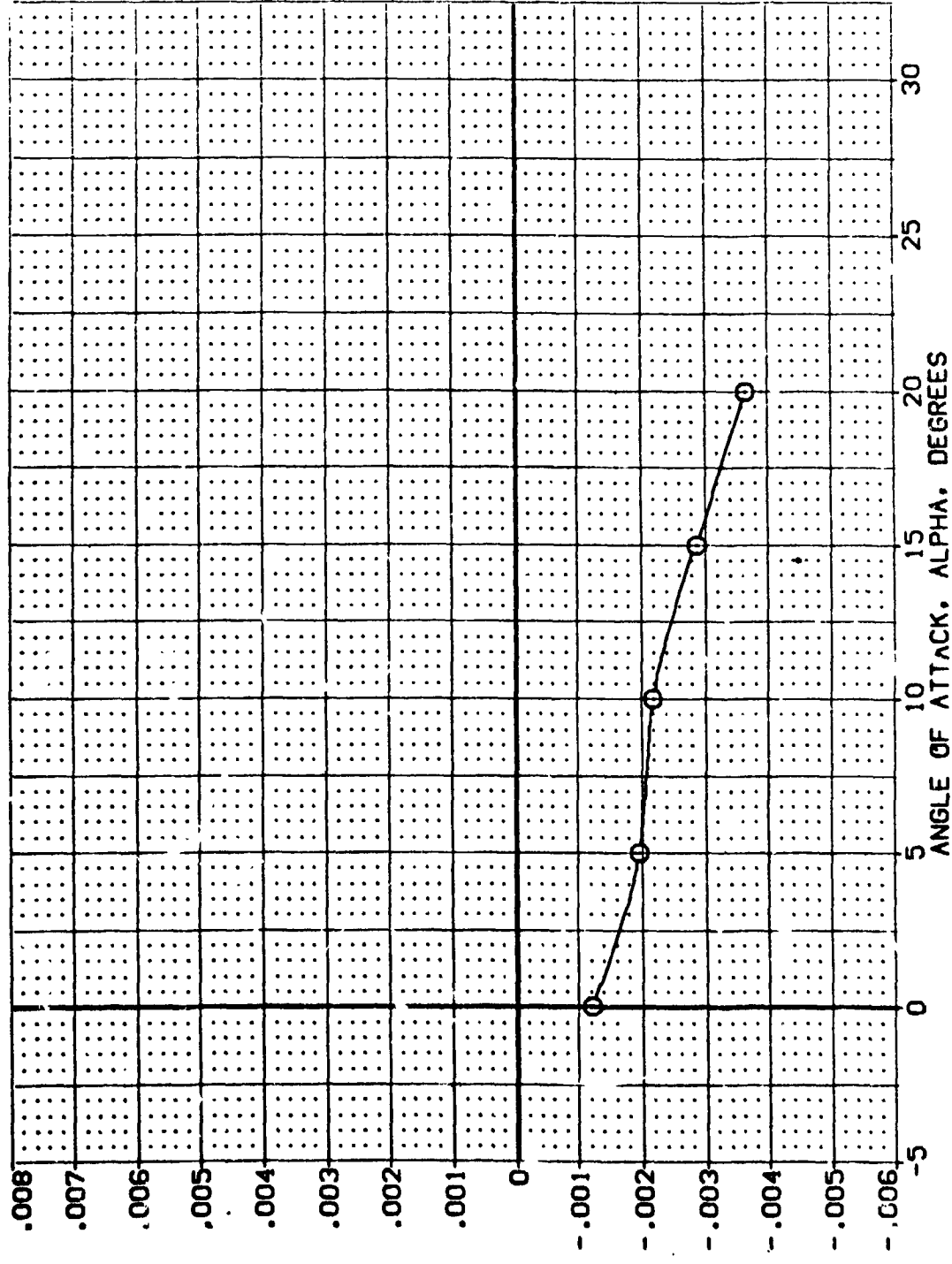


FIG 35 LAT/DIR STABILITY, OVERWING PODDED ENGINES, H/BW = 0.285, ELEVON = 0

PAGE 383

(CDZ078)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL:  $\bigcirc$  REFERENCE INFORMATION

SO. FT.	4.4119
INCHES	19.2799
INCHES	37.9359
INCHES	43.5974
INCHES	.0000
INCHES	15.1875
SCALE	.0405

PARAMETRIC VALUES

WACH	.200	BOFLAP	-12.000
AILTRON	.000	RUDDER	.000
SPOBRK	.000	H/BW	.285

ELEVON: .000

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

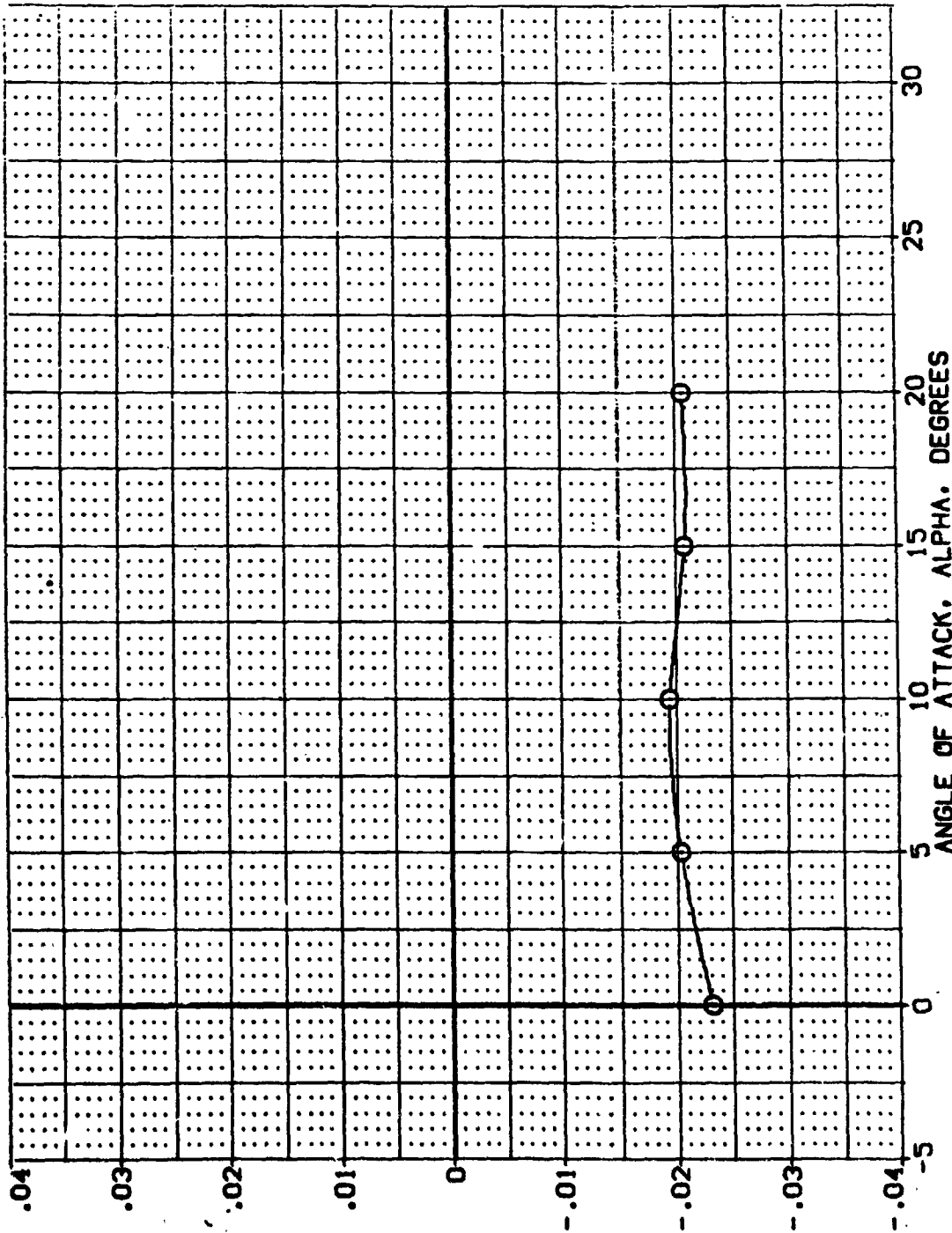


FIG 35 LAT/DIR STABILITY, OVERWING PODDED ENGINES, H/BW = 0.285, ELEVON = 0

DATA SET SYMBOL: (B00077) (B00083)  
 CONFIGURATION DESCRIPTION: 04C38 020C815777 04C2V118E20V8SK10  
 04C38 020C815777 04C2V118E20V8SK10

ELEVON SPOILER BOFLAP RUDDER  
 .000 .000 .000  
 5.000 .000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 60. FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

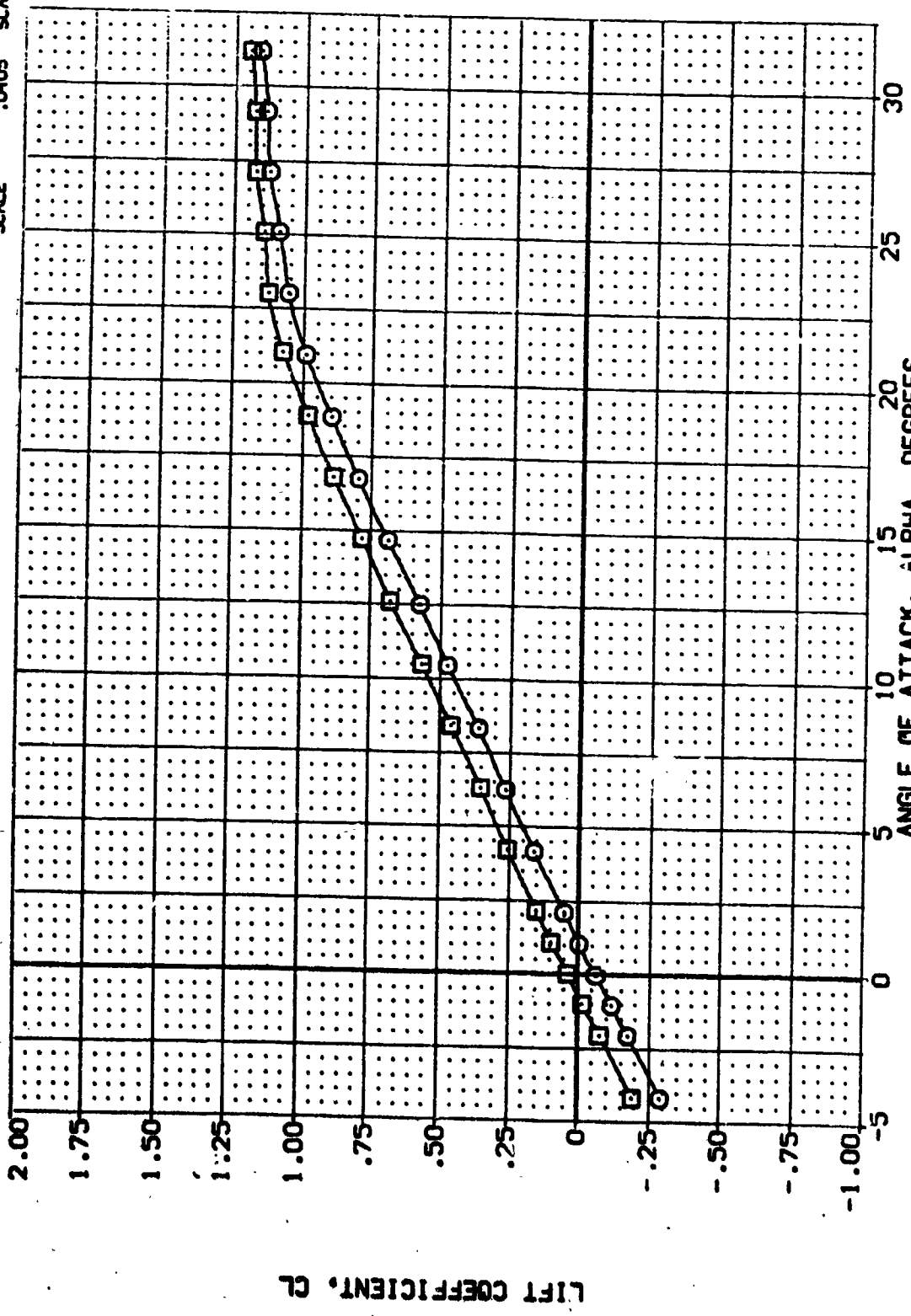
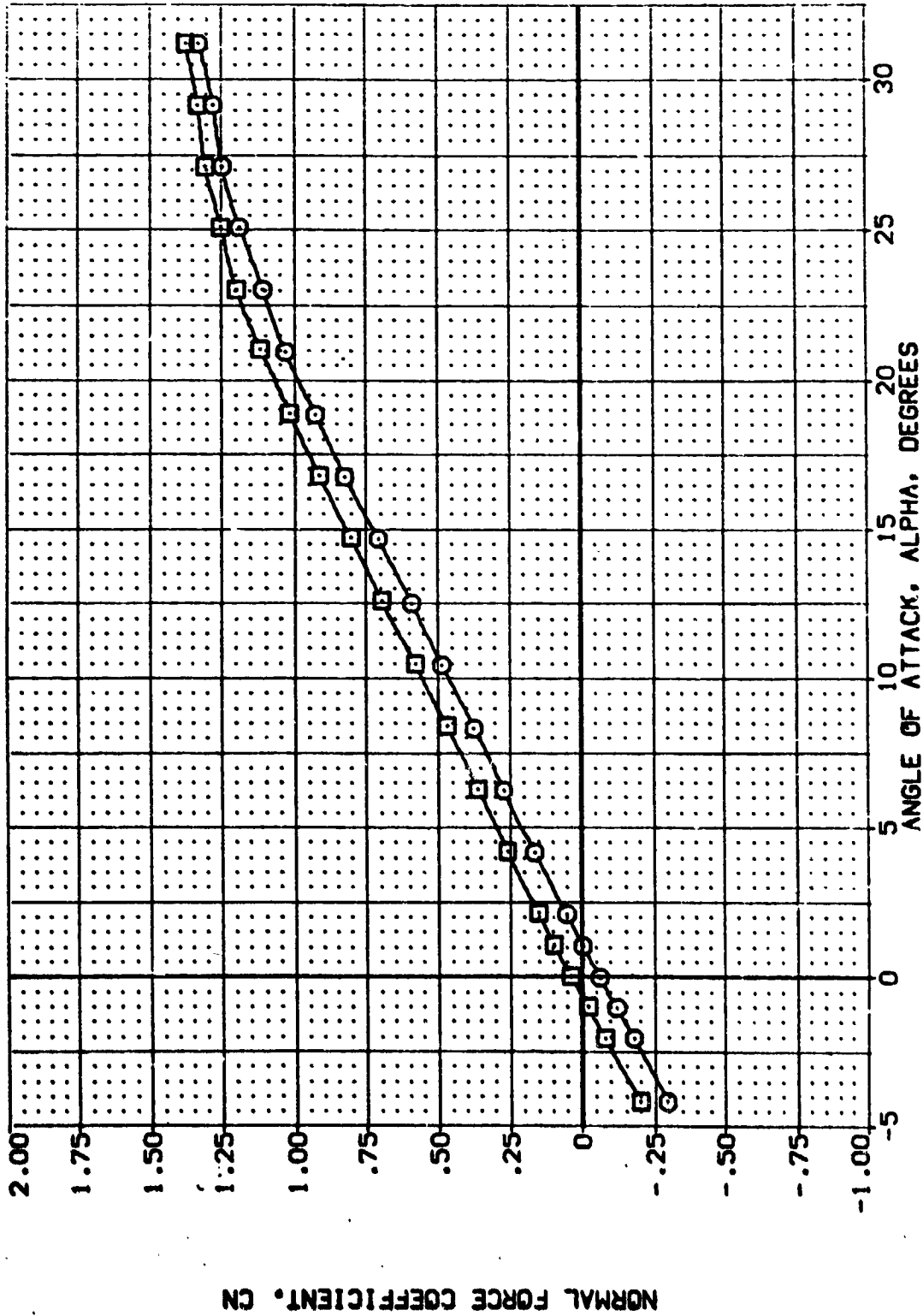


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES  
 (A)MACH = .20

DATA SET SYMBOL: (802077) (802080)  CONFIGURATION DESCRIPTION: 04528 0203615070462V116E200R05X10 04628 0203615070462V116E200R05X10

ELEVON SPOBRK BOFLAP RUDDER  
 .000 .000 .000  
 5.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9559 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES

(A)MACH = .20



DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 (1000077) 8 0AC28 E2AC36|S77|S77|S77|16E2ZWBRS|10  
 (1000066) 8 0AC28 E2AC36|S77|S77|S77|16E2ZWBRS|10

ELEVON SPOONK BDFLAP RUDDER  
 .000 .000 .000  
 5.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 XREF 37.9559 INCHES  
 YREF 43.5974 INCHES  
 ZREF 0.0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE

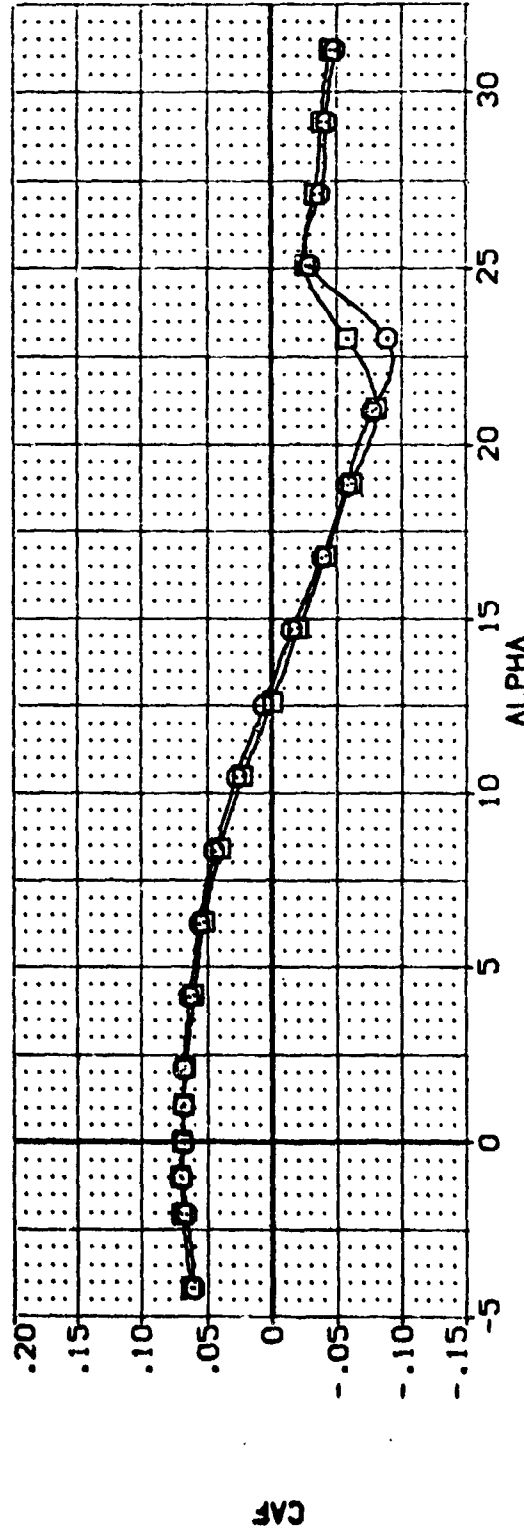
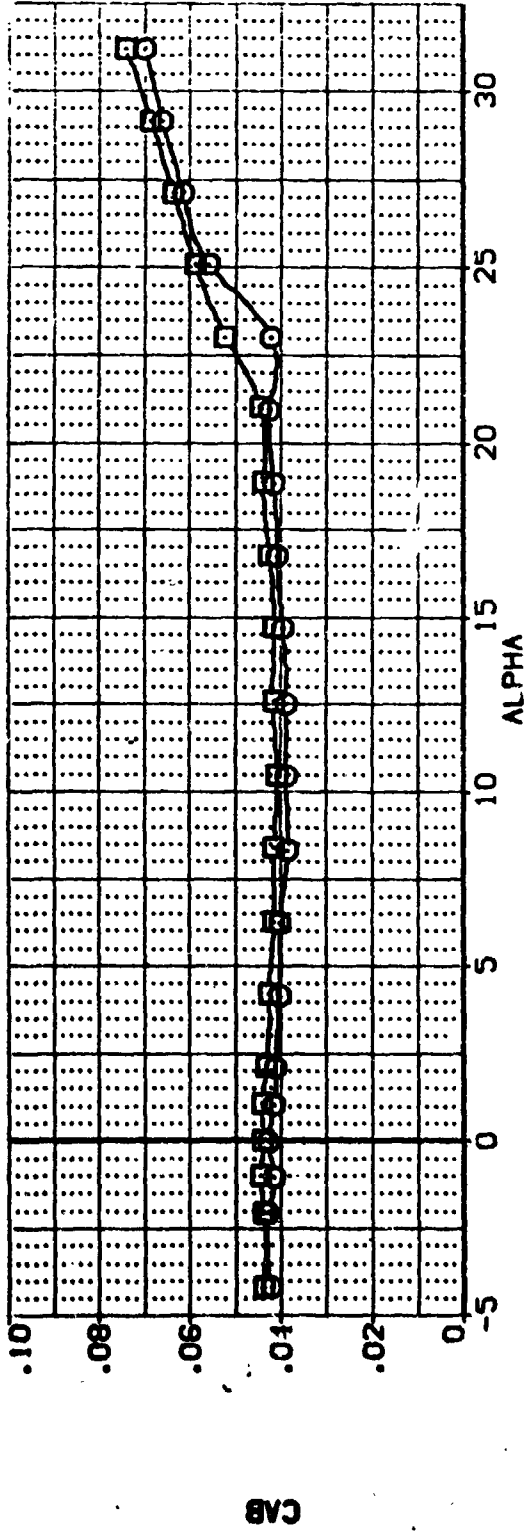


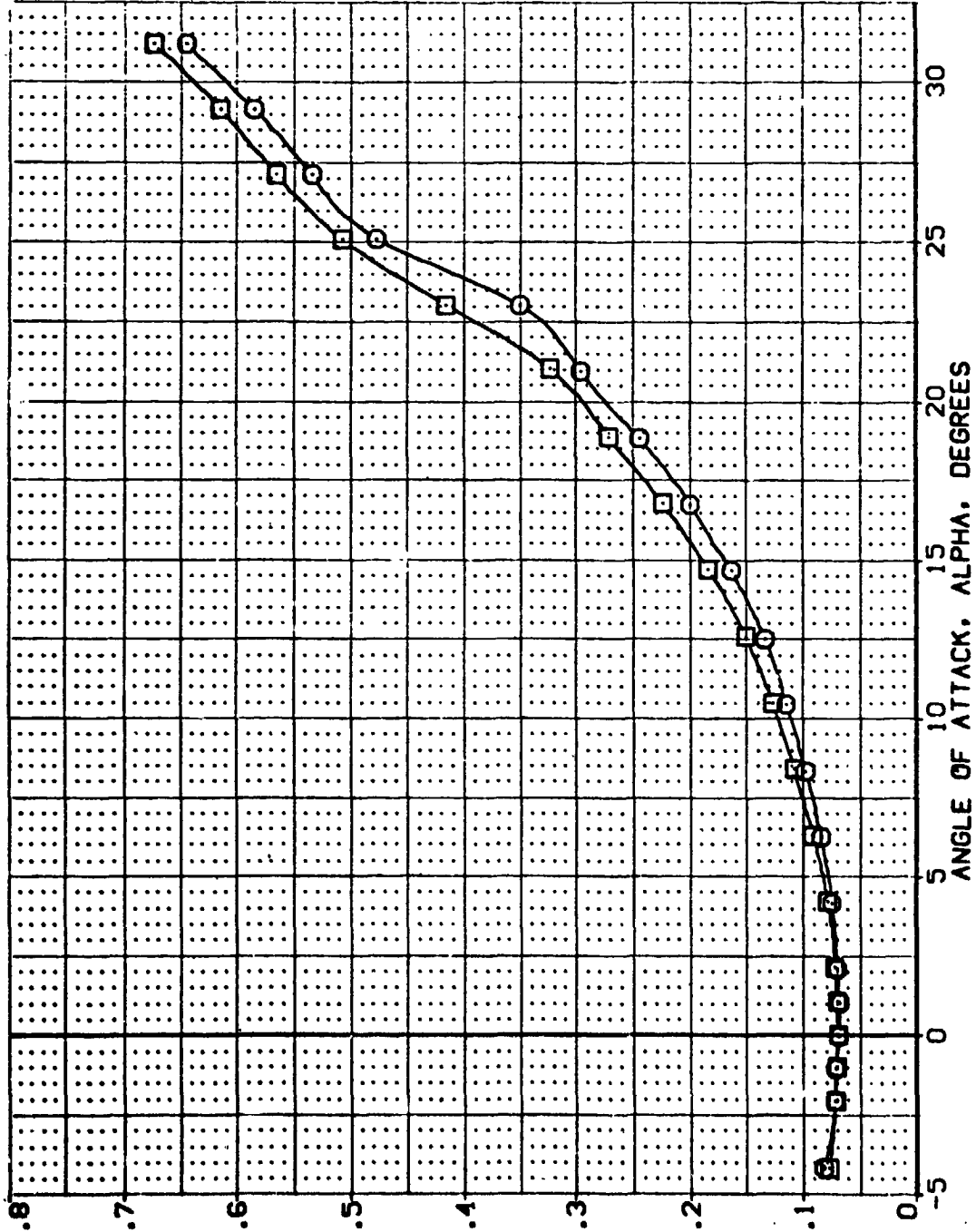
FIG 36 ELEVON EFFECTIVENESS. H/BW = 0.285. OVERWING POODED ENGINES

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802077) □ 0M528 828C3615W7 6J62V116Z26V85X10  
 (802083) □ 0M528 828C3615W7 6J62V116Z26V85X10

ELEVON SPOILER BOFLAP RUDDER  
 .000 .000 .000  
 5.000 .000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 50.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405



FOREBODY DRAG COEFFICIENT, CDF

FIG 36 ELEVON EFFECTIVENESS. H/BW = 0.285, OVERWING POODED ENGINES

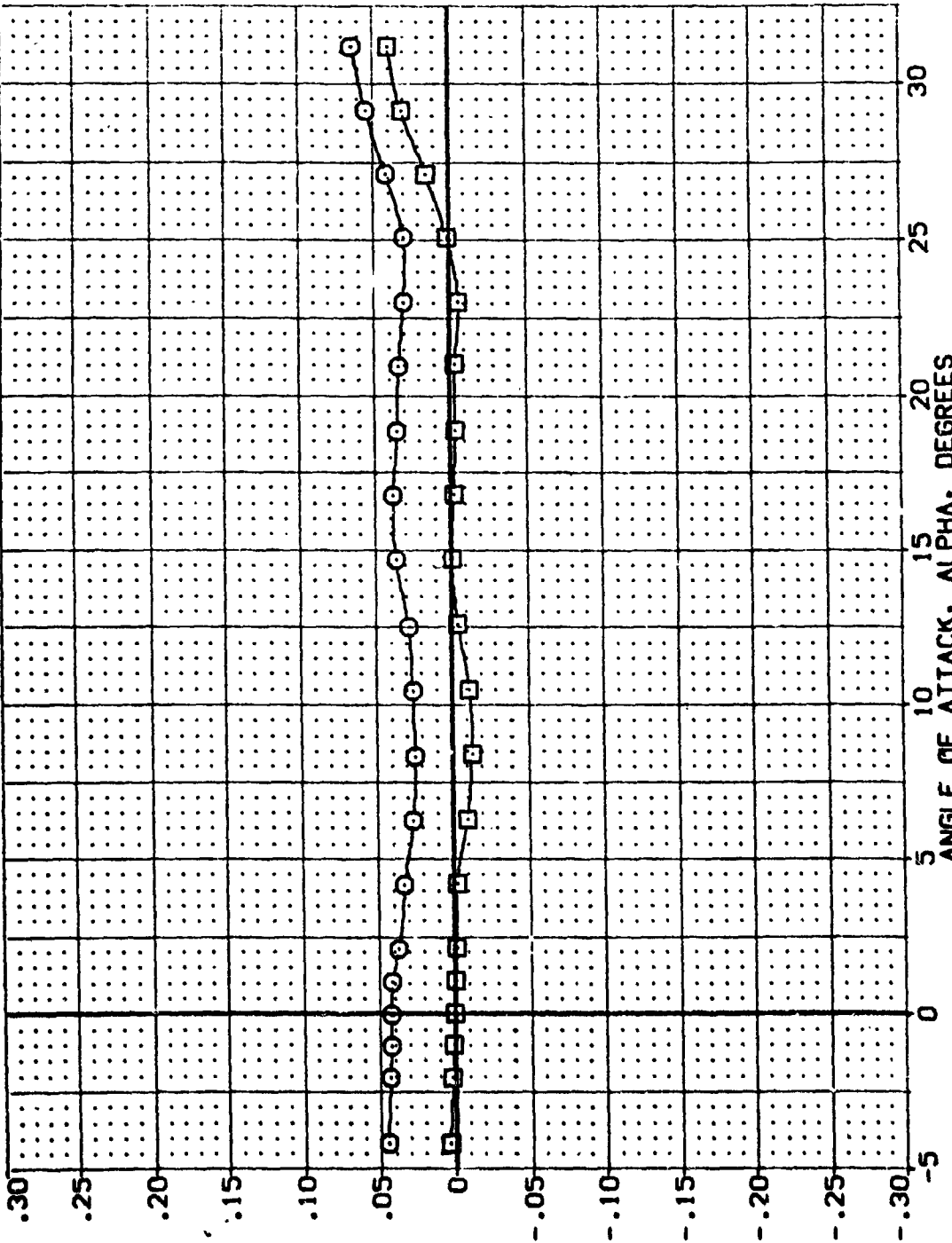
(A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (802077) □ 0A628 B26C3G15W7F8A62V11E23W8S10  
 (802063) □ 0A628 B26C3G15W7F8A62V11E23W8S10

ELEVON SPOBRK BDFLAP RUDDER  
 .000 .000 .000  
 5.000 .000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2259 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

(A)MACH = .20

DATA SET SYMBOL: (802077) (802083)

CONFIGURATION DESCRIPTION: 04628 826C361547F9462V116E28V85X10  
 04628 826C361547F9462V116E28V85X10

ELEVON SPDRK 8DFLAP RUDDER  
 .000 .000 .000  
 5.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 50.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XPRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

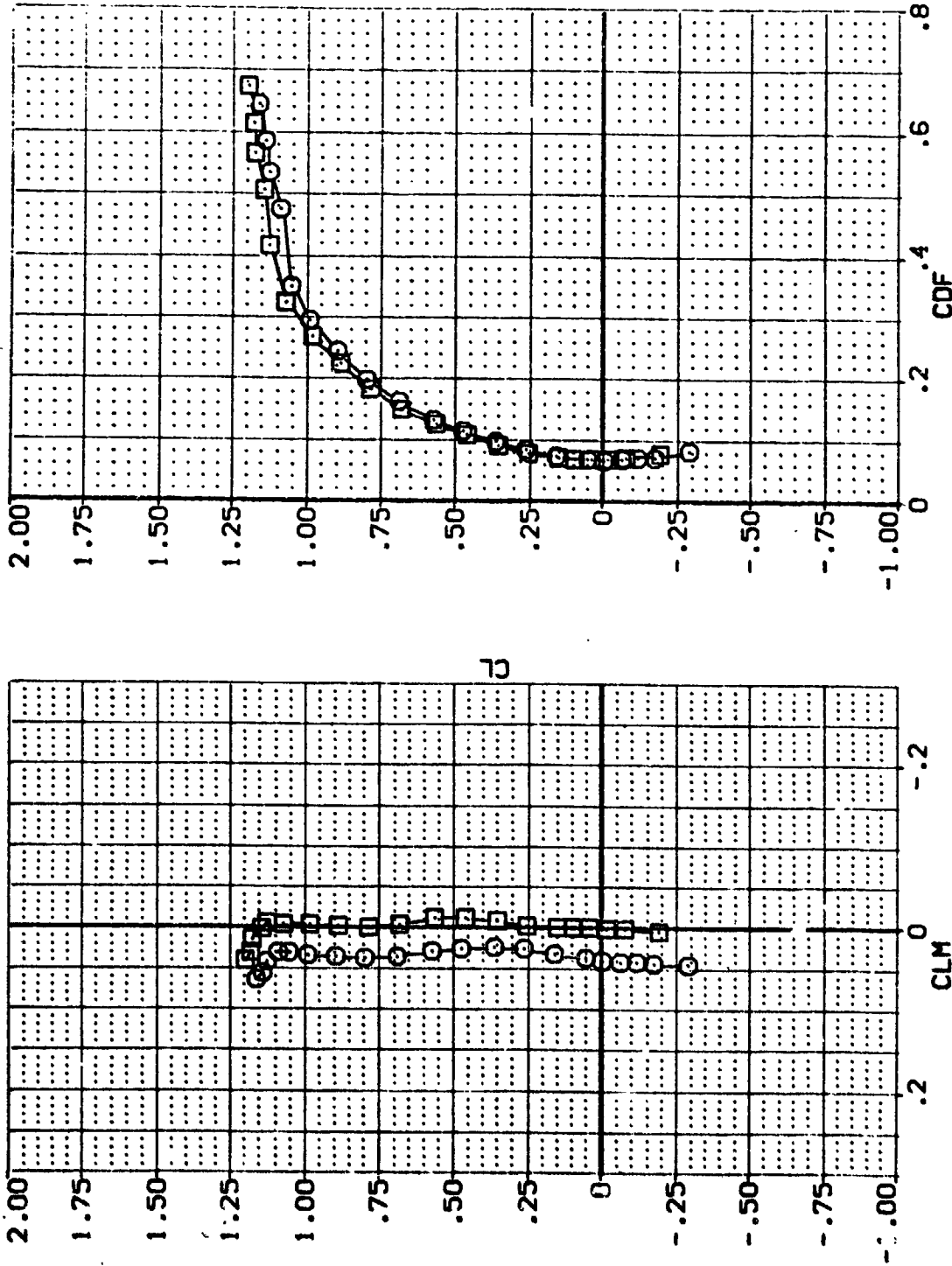


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES

(A)MACH = .20

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L, FRACTION BODY LENGTH

DATA SET SYMBOL (802077) (802083) **B** CONFIGURATION DESCRIPTION 04628 B26C95 5778/62V1 16228V85X10 04628 B26C95 5778/62V1 16228V85X10

ELEVON SPOBRK BOVLAP RUDDER .000 .000 .000 5.000 -12.000 .000 REFERENCE INFORMATION SREF 4.4119 SQ.FT. LREF 19.2299 INCHES BREF 37.9359 INCHES YMRP 43.5974 INCHES ZMRP .0000 INCHES SCALE 15.1875 INCHES .0405 SCALE

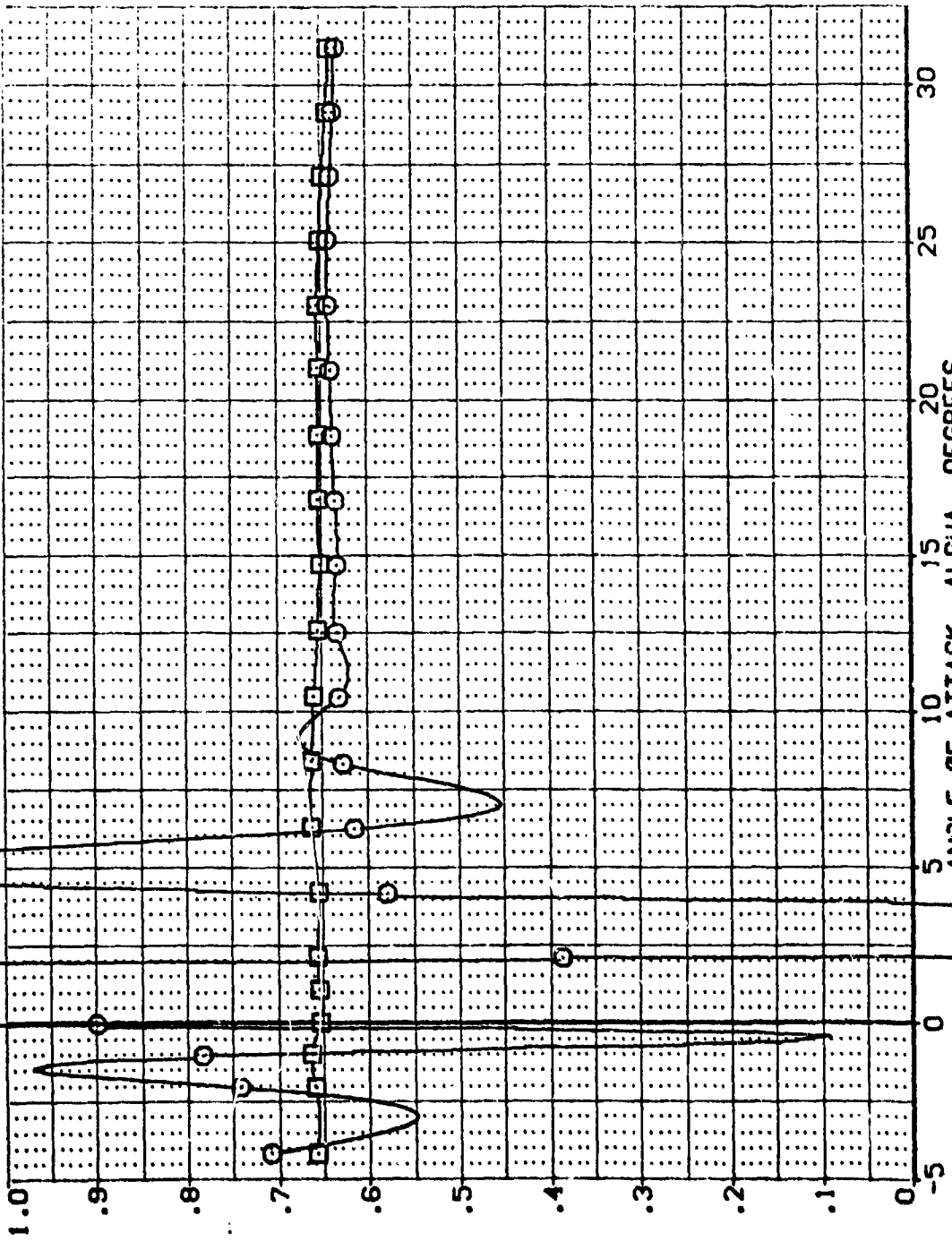


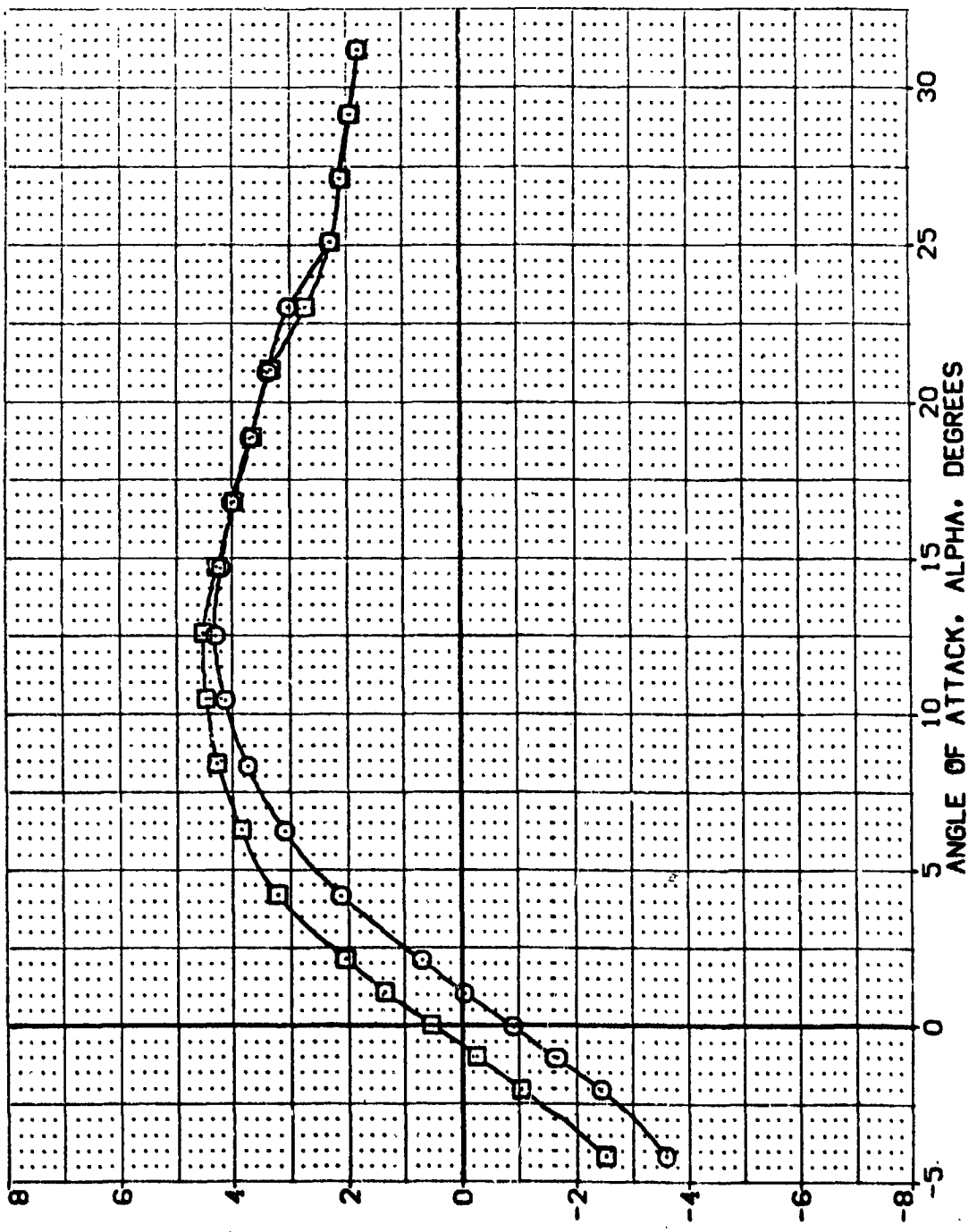
FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

(A)MACH = .20

DATA SET SYMBOL (BD2077) (BD2083) CONFIGURATION DESCRIPTION 0A628 B26C9G1SHTF 8J/62V116E28V8SX10 0A628 B26C9G1SHTF 8J/62V116E28V8SX10

ELEVON SPOBRK BDFLAP RUDDER  
 .000 .000 .000 .000  
 5.000 -12.000 .000

REFERENCE INFORMATION  
 SO.FT. 4.4119  
 INCHES 19.2299  
 LREF BREF 37.9359  
 XMRP 43.5974  
 YMRP .0000  
 ZMRP 15.1875  
 SCALE .0405



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 36 ELEVON EFFECTIVENESS, H/8W = 0.285, OVERWING POODED ENGINES

(A)MACH = .20

0A62B B26C9G15M7F8J62W116E28V8R5X10 (1DZ077)

SYMBOL		ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
○	.000	.200	BETA	.000	DELVON	.000	10Z093	SREF	4.4119	SO.FT.
		-12.000	A1LRON	.000	1DZ077	.000		LREF	19.2299	INCHES
		.000	SPOBRK	.000		.000		BREF	37.9335	INCHES
		.285						XMRP	43.5974	INCHES
								YMRP	.0000	INCHES
								ZMRP	15.1875	INCHES
								SCALE	.0405	SCALE

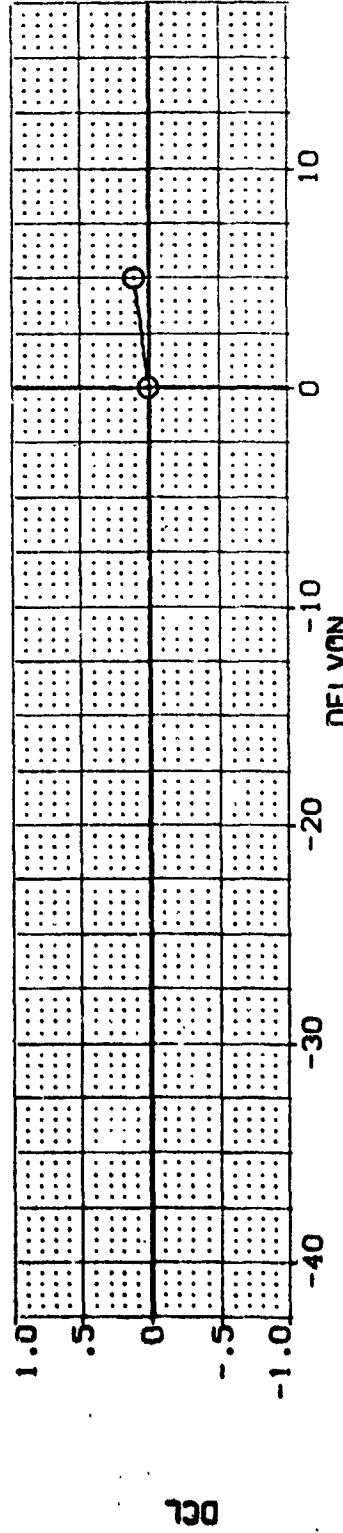
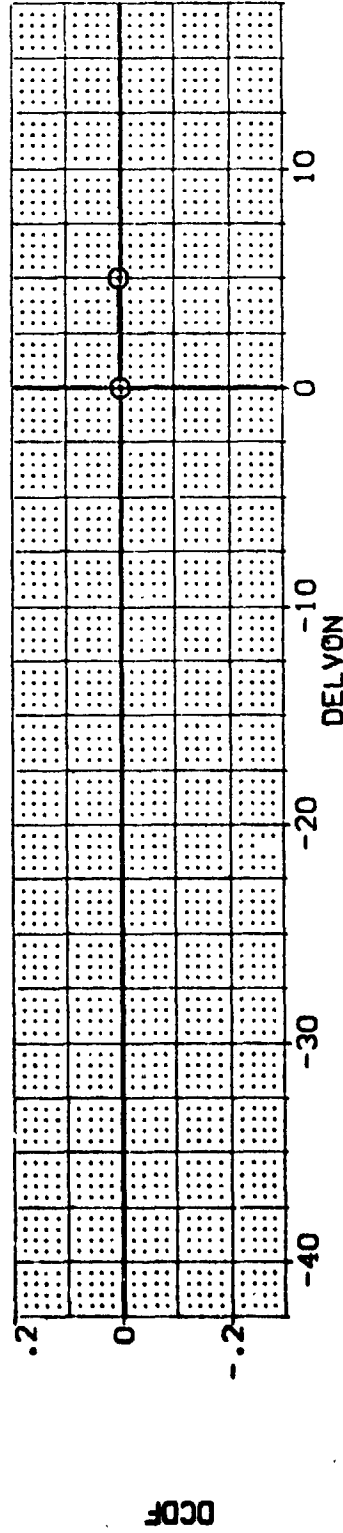
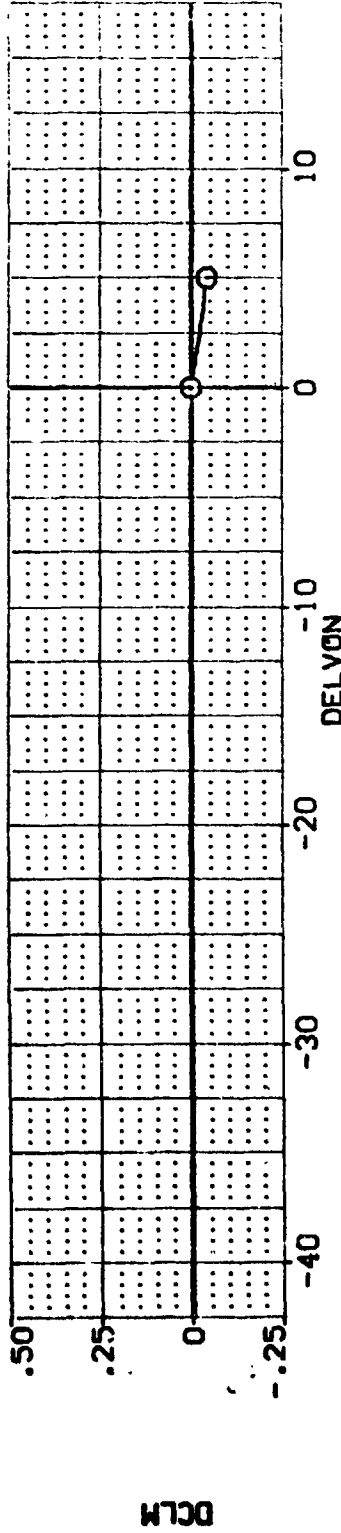


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

0A628 B26C9G15M7F8J62W116E28V8R5X10 (10Z077)

SYMBOL	ALPHA	MACH	BOFLAP	RUDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELTON	SREF	REFERENCE INFORMATION
O	5.000					BETA AILRON SPDRK	.000 .000 .000	10Z083	5.000	4.4119 19.2298 37.9359 43.5974 .0000 15.1875 .0405	SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE

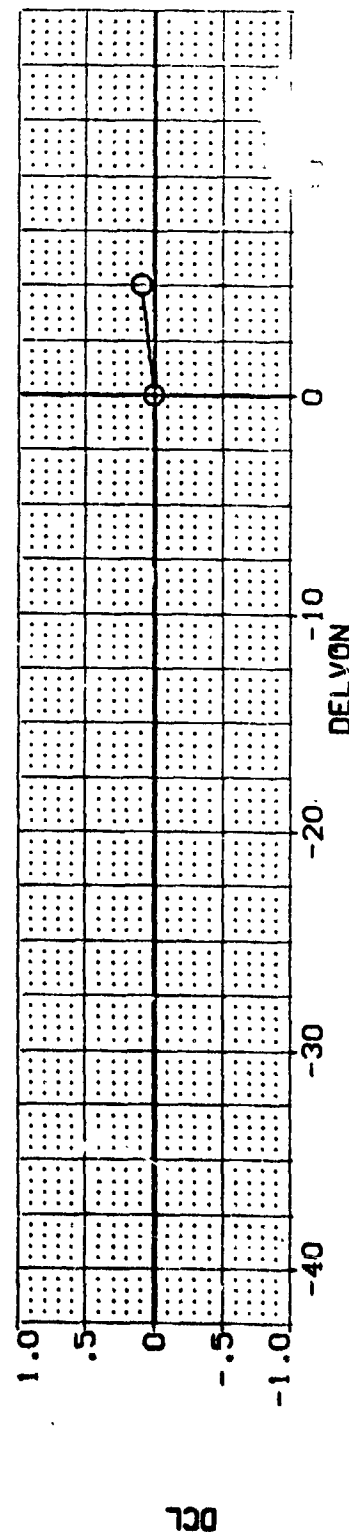
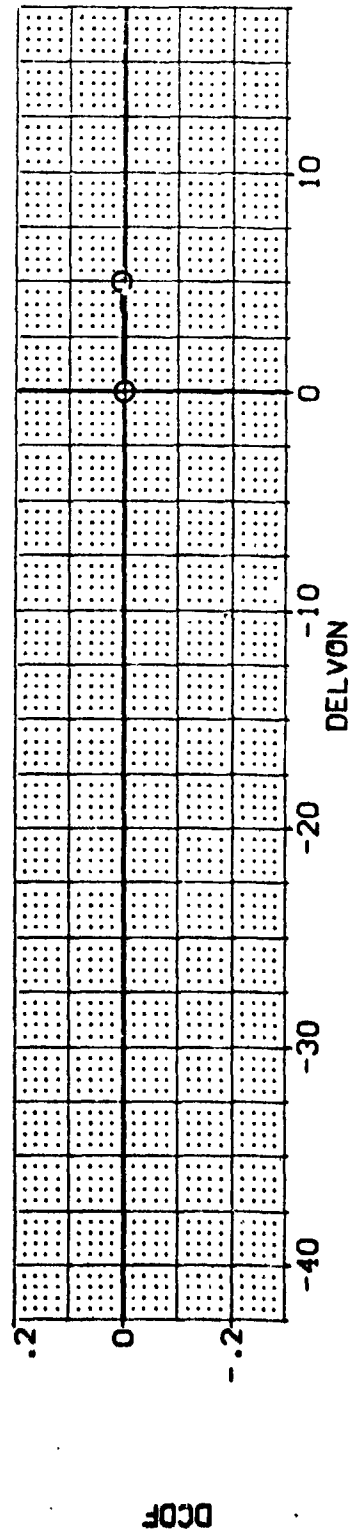
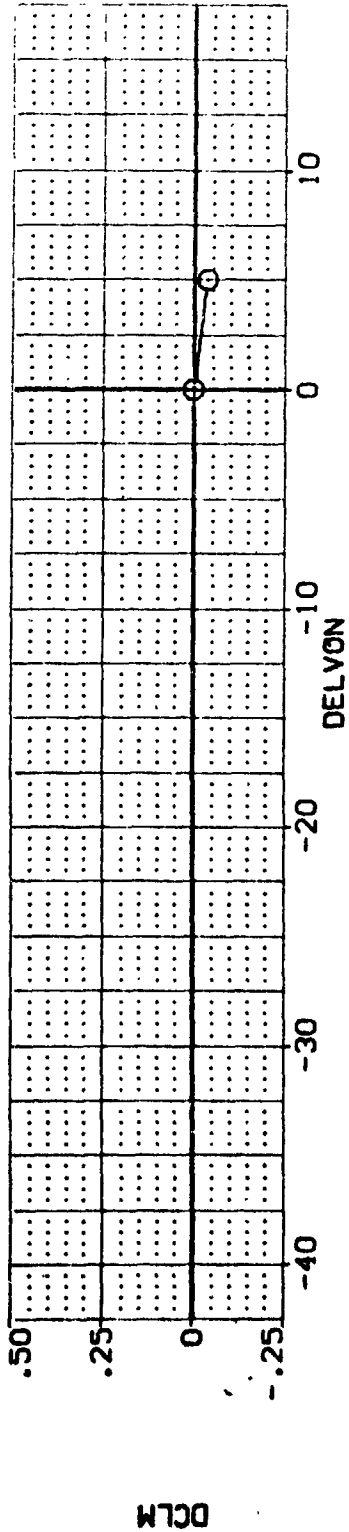


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES





(10Z077)

0A628 B26C9G15N7F8J62W116E28V8R5X10

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
O	15.000	BDFLAP	.200	BETA	.000	DATASET	DELVO	SREF	50.FT.
		RUDDER	-12.000	A11-RON	.000	10Z083	5.000	LREF	19.2298
		H/BW	.000	SPOBRK	.000			BREF	37.9359
			.285					XMRP	43.5974
								ZMRP	.0000
								SCALE	15.1875
									.0405

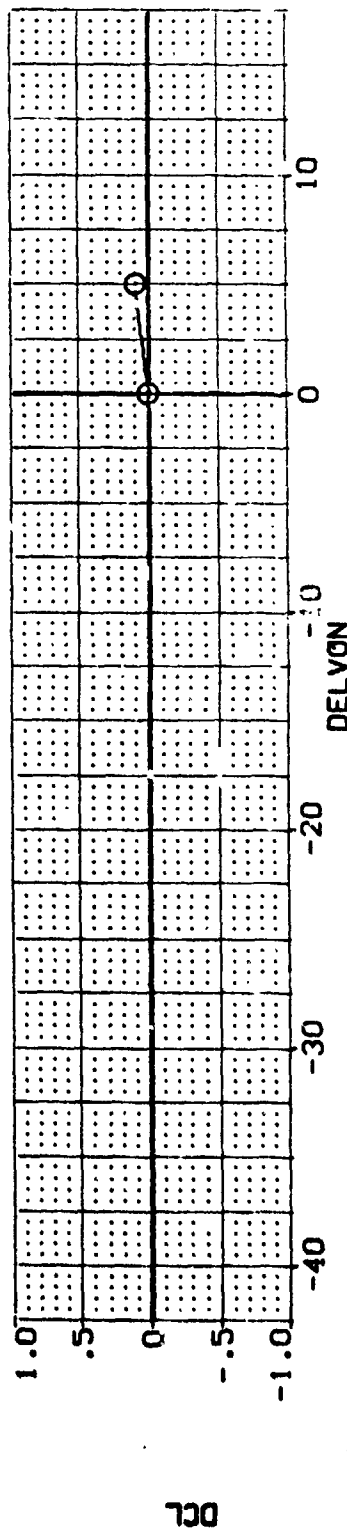
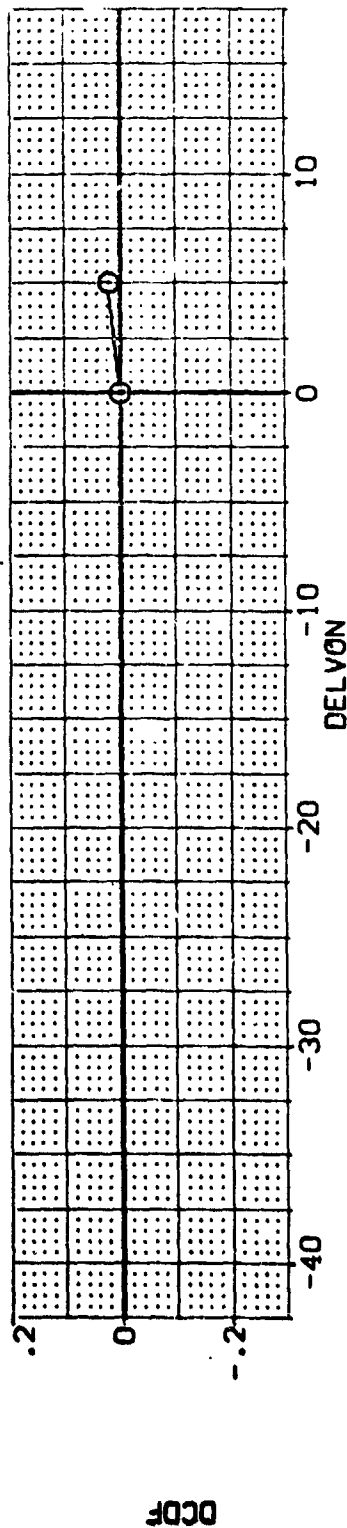
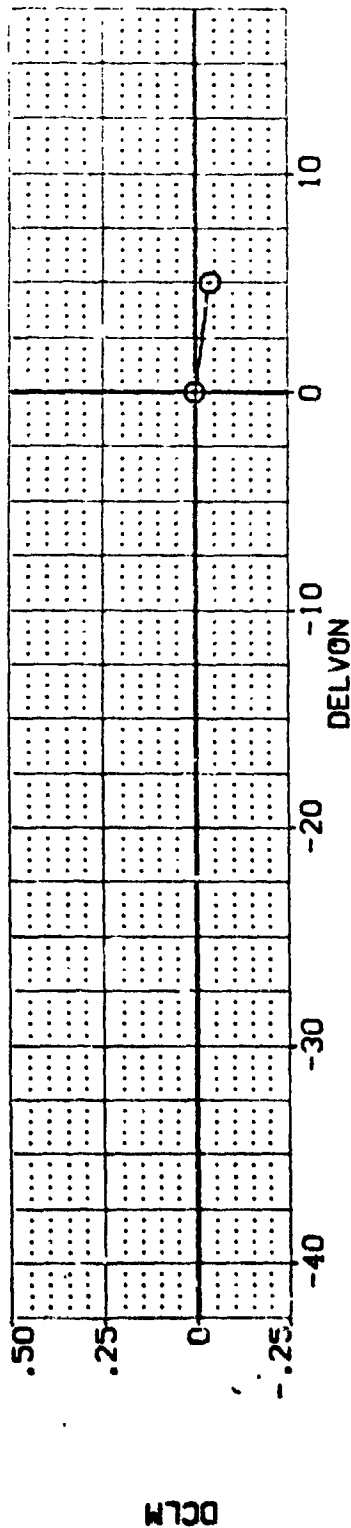


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

0A628 826C9G15M7F8J62W116E28V8R5X10 (1DZ077)

SYMBOL		O	
ALPHA	20.000		
PARAMETRIC VALUES			
MACH	.200	BETA	.000
BOFLAP	-12.000	AIRBRN	.000
RUDDER	.000	SPOBRK	.000
H/BW	.285		
DATA SOURCE		DELVON	
.000 1DZ077		.000 1DZ083	
DELVON		DELVON	
5.000		5.000	
REFERENCE INFORMATION			
SREF	4.4119	SO.FT.	
LREF	19.2299	INCHES	
BREF	37.9359	INCHES	
XTRP	43.5974	INCHES	
YTRP	.0000	INCHES	
ZTRP	15.1875	INCHES	
SCALE	.0405	SCALE	

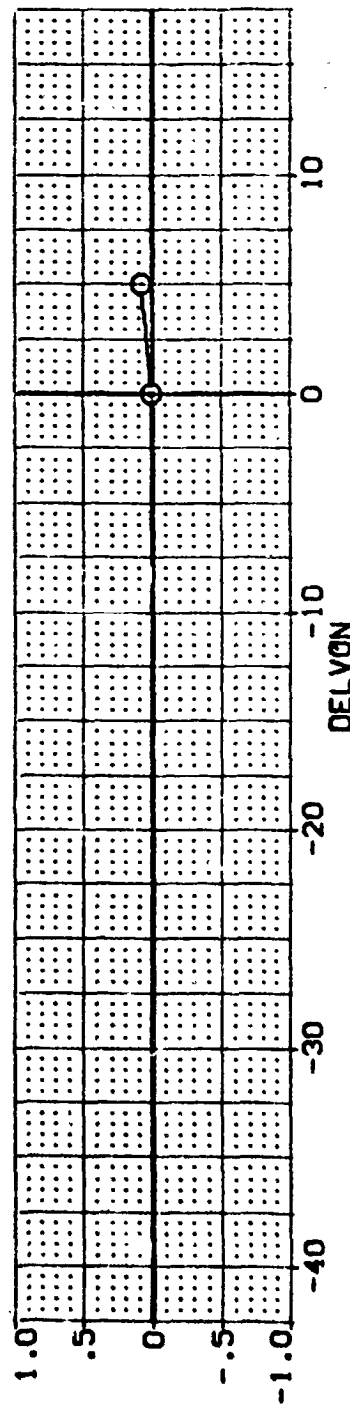
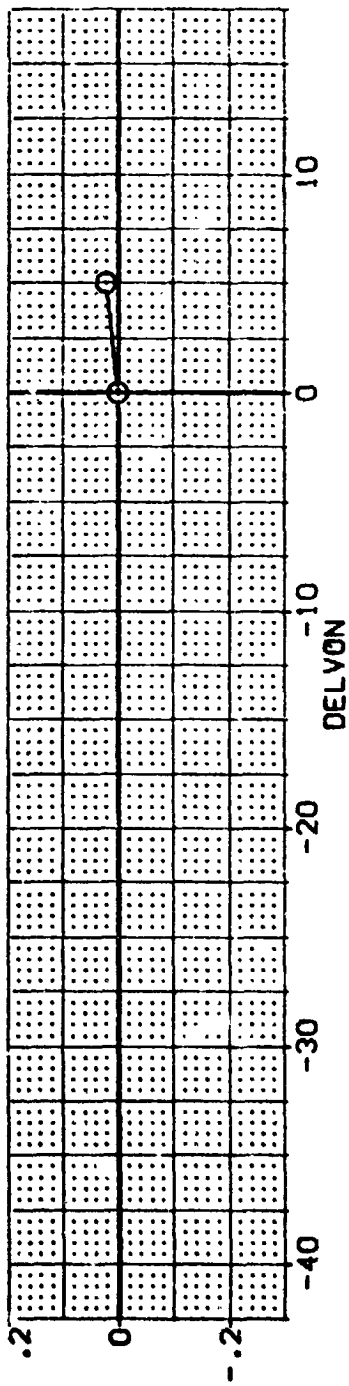
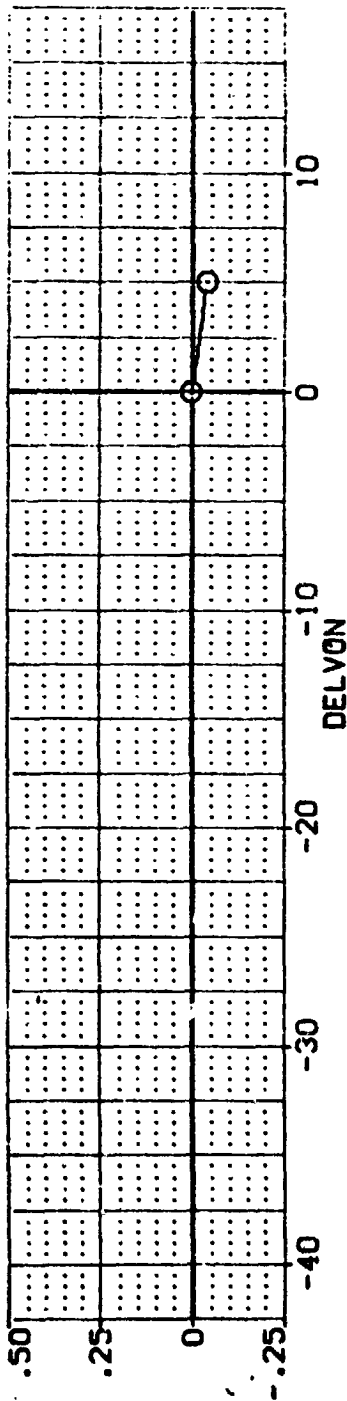


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES

0A628 B26C9G15M7F8J62W116E28V8R5X10 (10Z077)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	25.000	EDFLAP	.200 BETA	.000 DATASET	SREF
		RUDDER	-12.000 AILTRON	.000 10Z077	LREF
		H/BW	.000 SPOBRK	.000 DELVON	BREF
			.285	5.000	XTRP
					YTRP
					ZTRP
					SCALE
					SO.FT.
					INCHES
					INCHES
					INCHES
					INCHES
					SCALE
					.4119
					19.2298
					37.9359
					43.5974
					.0000
					.0000
					15.1875
					.0405

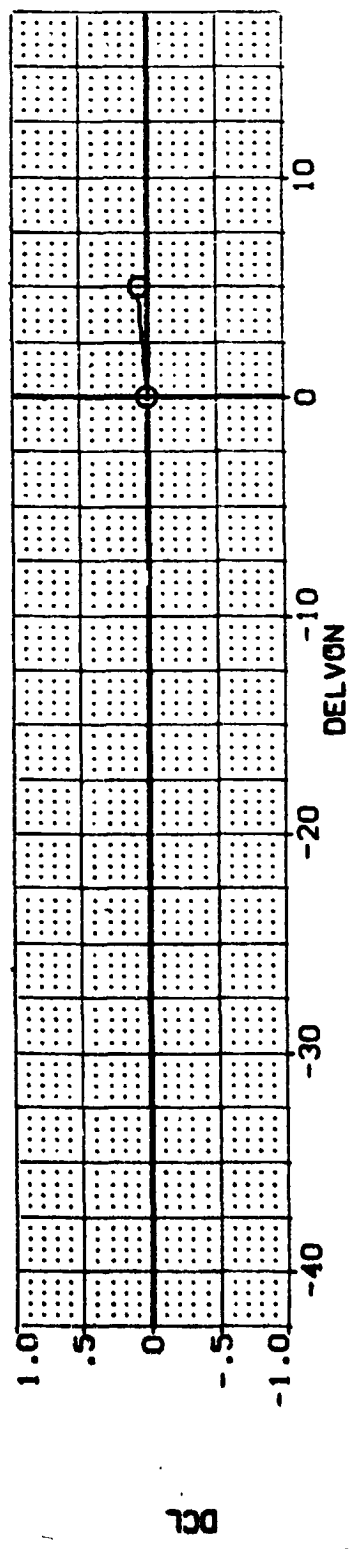
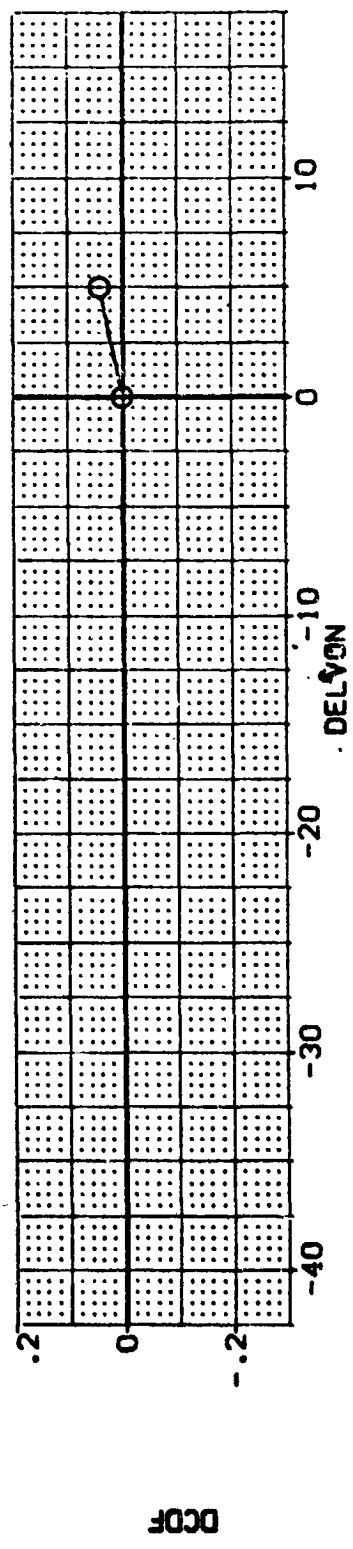
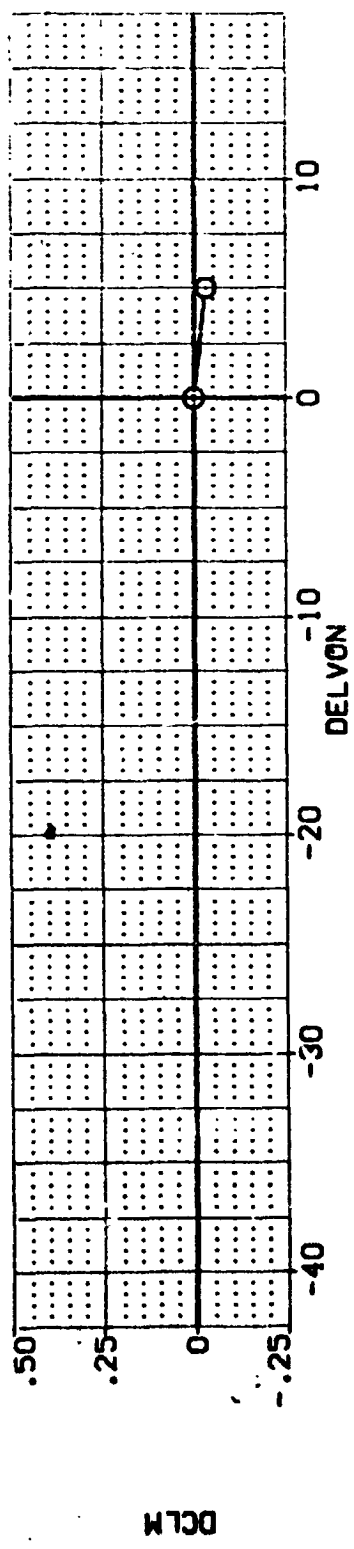


FIG 36 ELEVON EFFECTIVENESS. H/BW = 0.285, OVERWING PODDED ENGINES

0A628 B26C9G15M7F8J62W11GE28V8R5X10 (1DZ077)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
○	ALPHA	.200	BETA	.000	DATASET	DELVON	SREF	SO.FT.
	30.000	-12.000	A1LRON	.000	1DZ077	5.000	REF	INCHES
		.000	SPOBRK	.000			REF	INCHES
		.285					XMRP	INCHES
							ZMRP	INCHES
							SCALE	SCALE

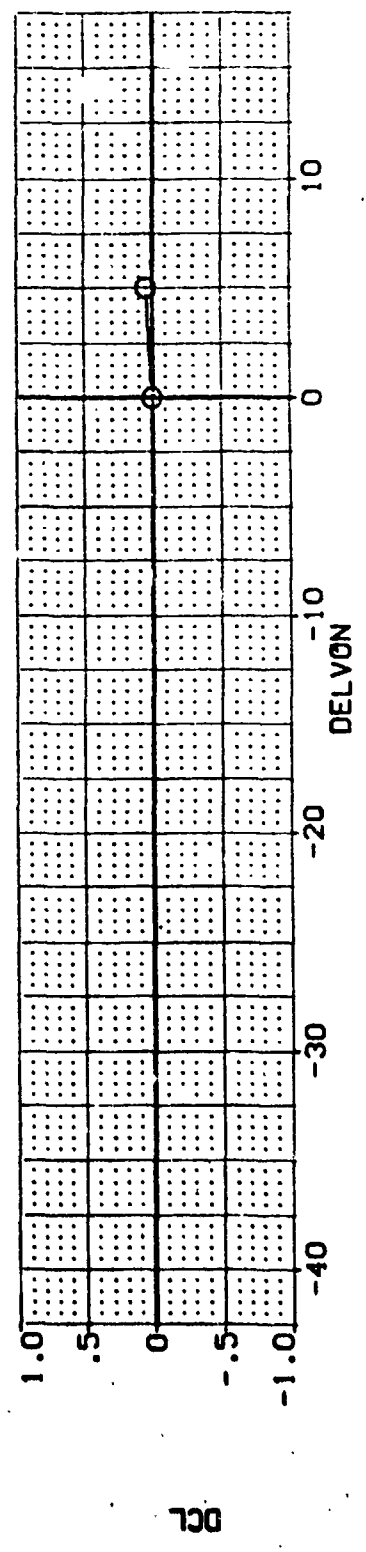
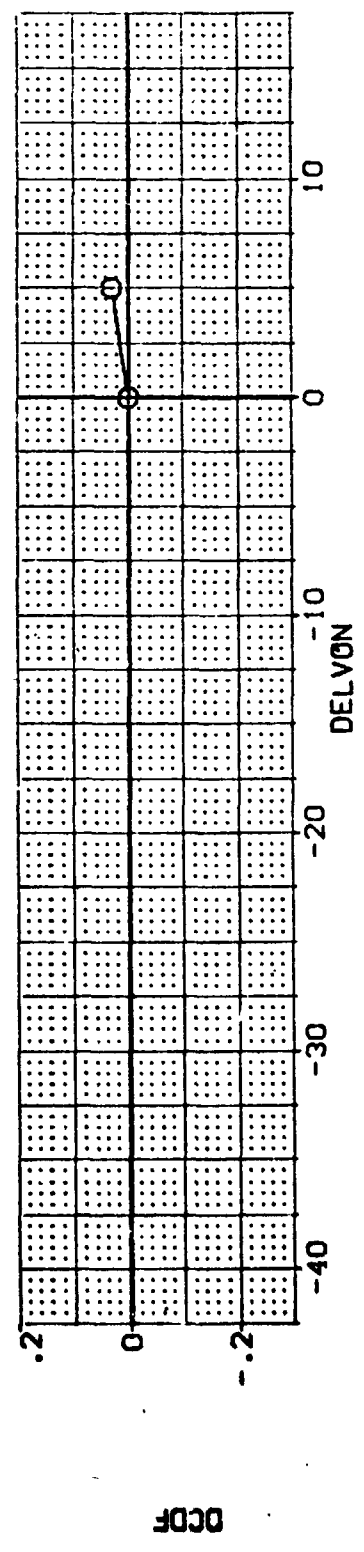
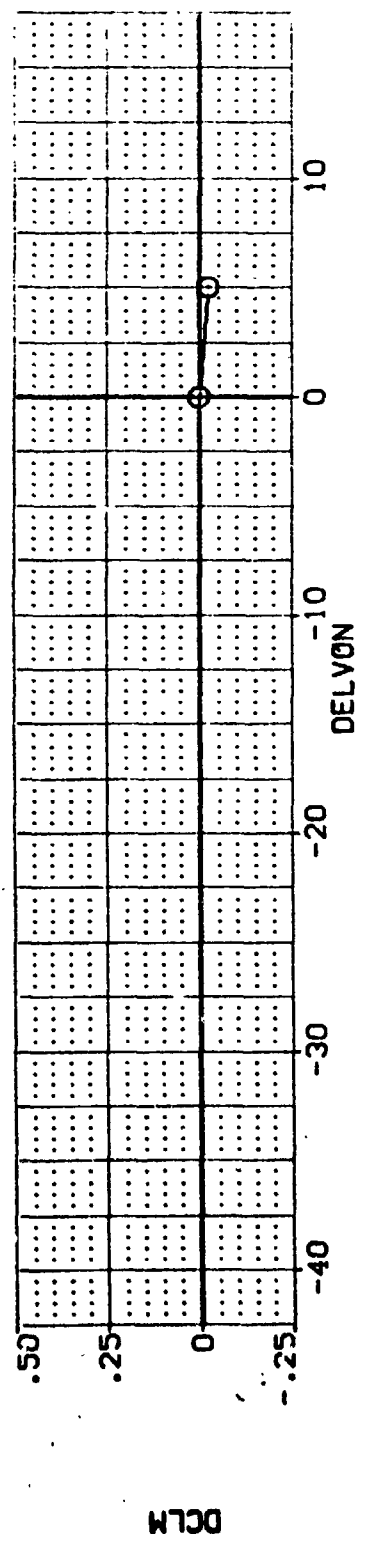


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

0A628 B26C9G15M7F8J62W116E28V8R5X10 (10Z077)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
O	.000		BETA	.000	DATASET	DELVON	.000	DATASET	DELVON	SREF	4.4119	SO. FT.
		BDFLAP	-12.000	AILRON	.000	10Z077	.000	10Z093	5.000	LREF	19.2299	INCHES
		RUDDER	.000	SPOBRK	.000					BREF	37.9359	INCHES
		H/BW	.285							XMRP	43.5974	INCHES
										YMRP	.0000	INCHES
										ZMRP	15.1875	INCHES
										SCALE	.0405	SCALE

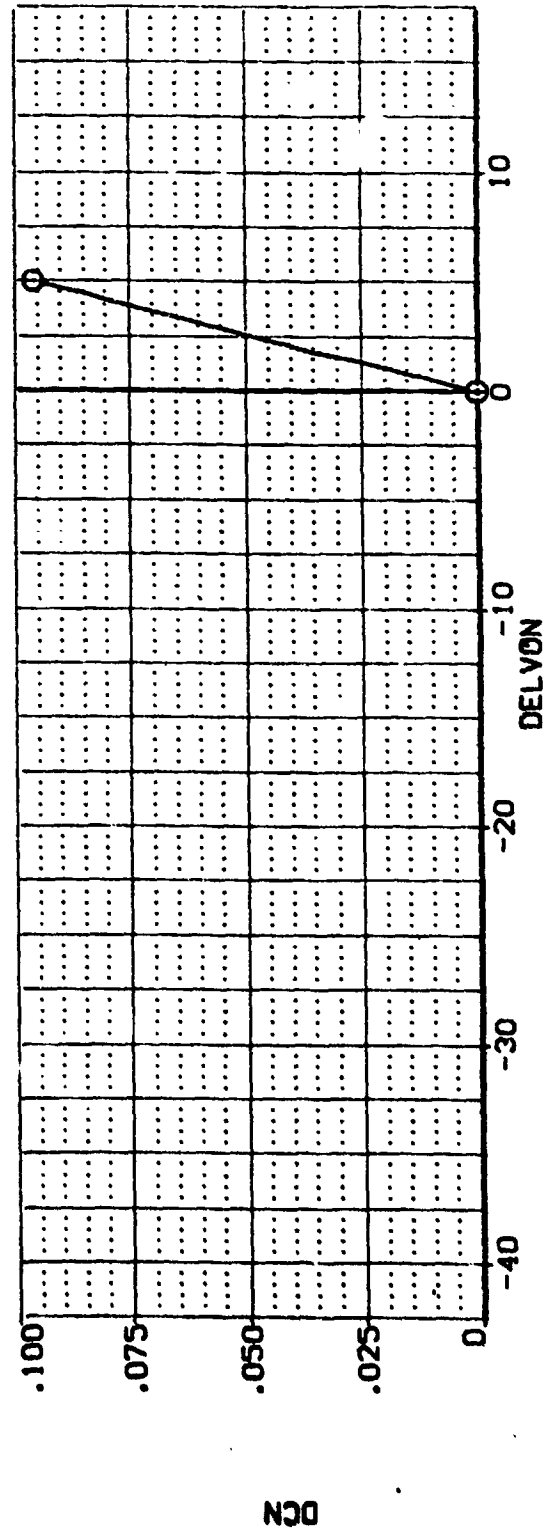
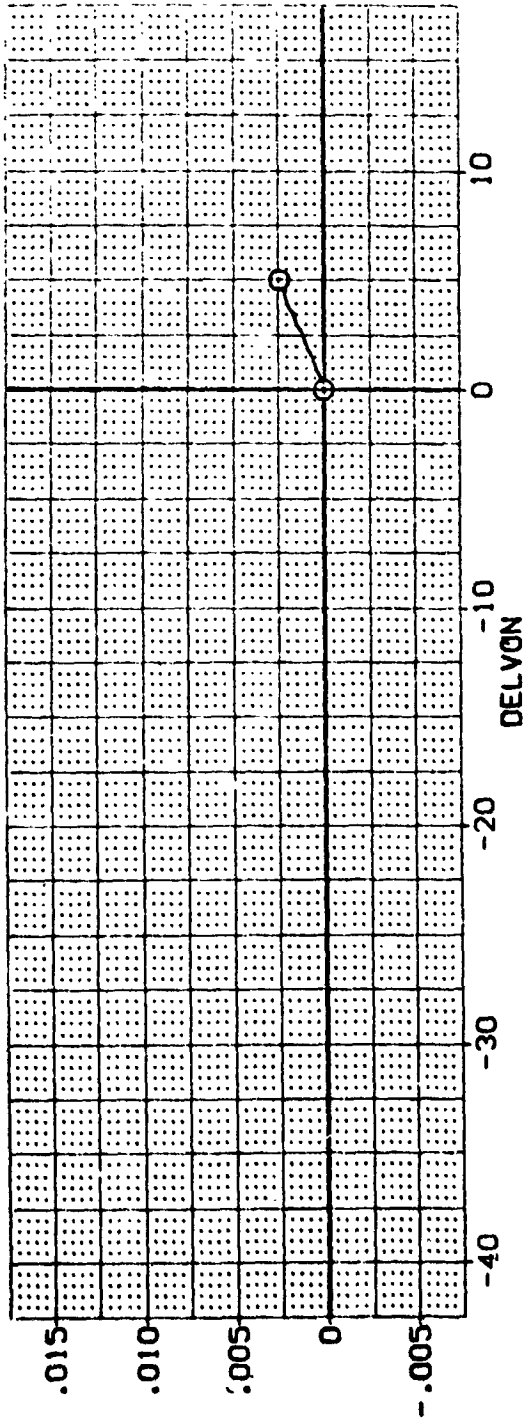
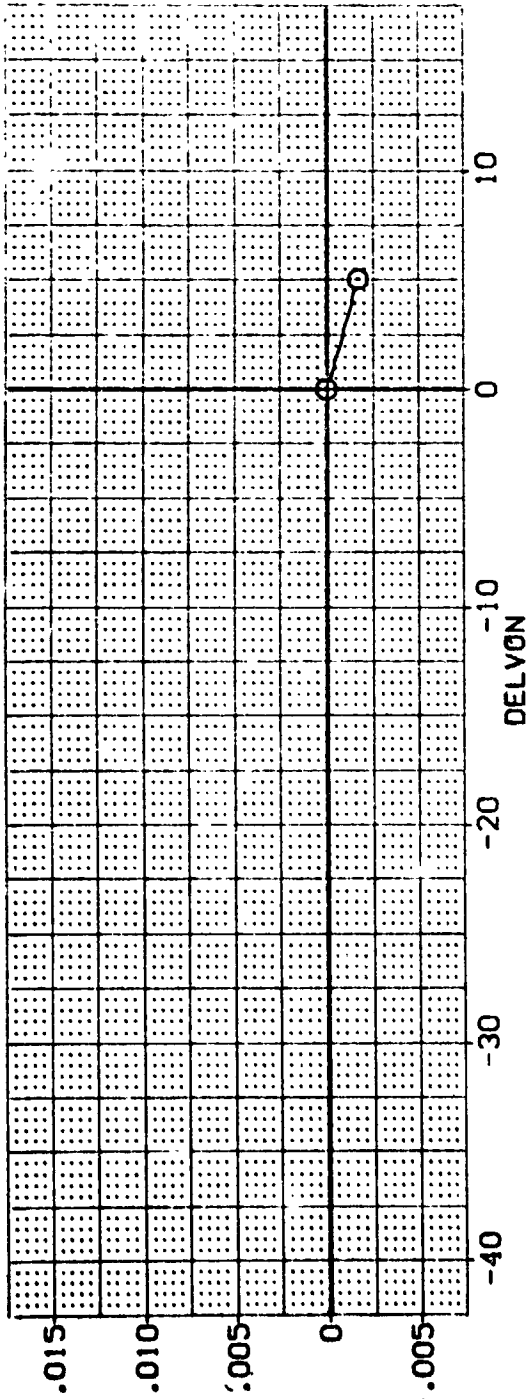


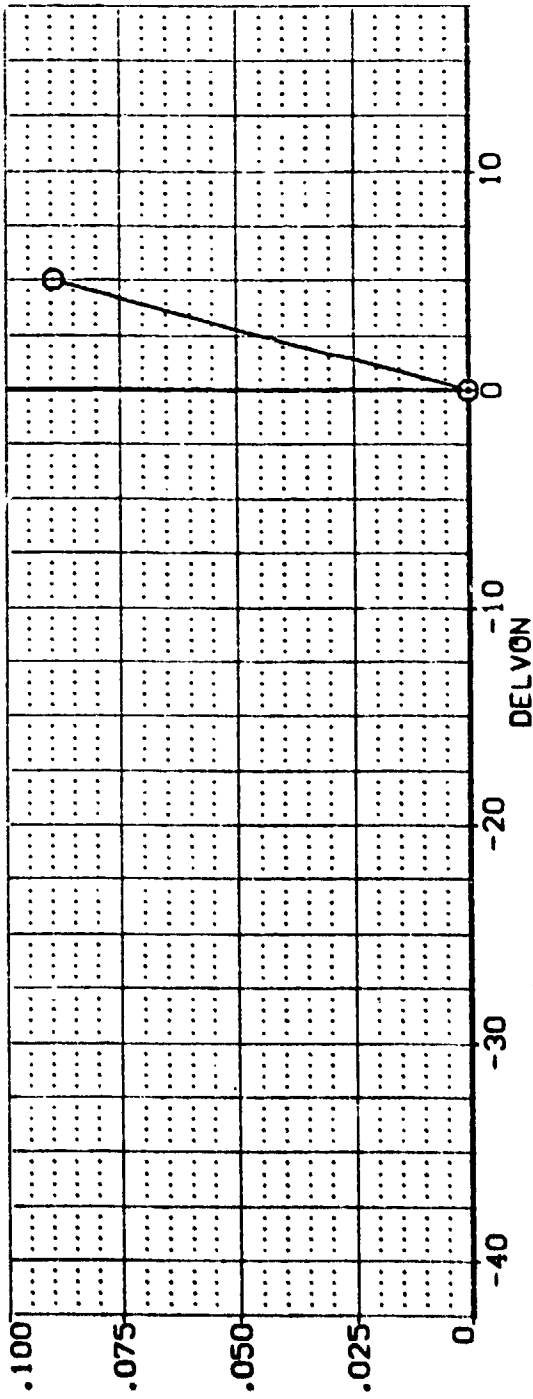
FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES

0A628 B26C9G15M7F8J62W116E28V8R5X10 (1DZ077)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION					
○	ALPHA	5.000	MACH	.200	BETA	.000	DATASET	1DZ077	DELVON	.000	SREF	4.4119	SQ.FT.
	BOFLAP	-12.000	AILRON	.000	SPOBRK	.000	DATASET	1DZ063	DELVON	5.000	LREF	19.2299	INCHES
	RUDDER	.000	SPOBRK	.000	SPOBRK	.000	DATASET	1DZ063	DELVON	5.000	BREF	37.9359	INCHES
	H/BW	.285	SPOBRK	.000	SPOBRK	.000	DATASET	1DZ063	DELVON	5.000	XREF	43.5974	INCHES
							DATASET	1DZ063	DELVON	5.000	YREF	.0000	INCHES
							DATASET	1DZ063	DELVON	5.000	ZREF	15.1875	INCHES
							DATASET	1DZ063	DELVON	5.000	SCALE	.0405	SCALE



VCO



NCO

FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

0A628 B26C9G15M7F8J62W116E28V8R5X10 (1DZ077)

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	10.000					BETA A1LRON SPOBRK	DELVON DELVON DELVON	SO.FT. INCHES INCHES INCHES INCHES SCALE
						.200 -12.000 .000 .285	.000 .000 .000	4.4119 19.2299 7.9359 43.5974 .0000 15.1875 .0405
							SREF LREF BREF XMRP YMRP ZMRP SCALE	
							5.000 5.000 5.000	

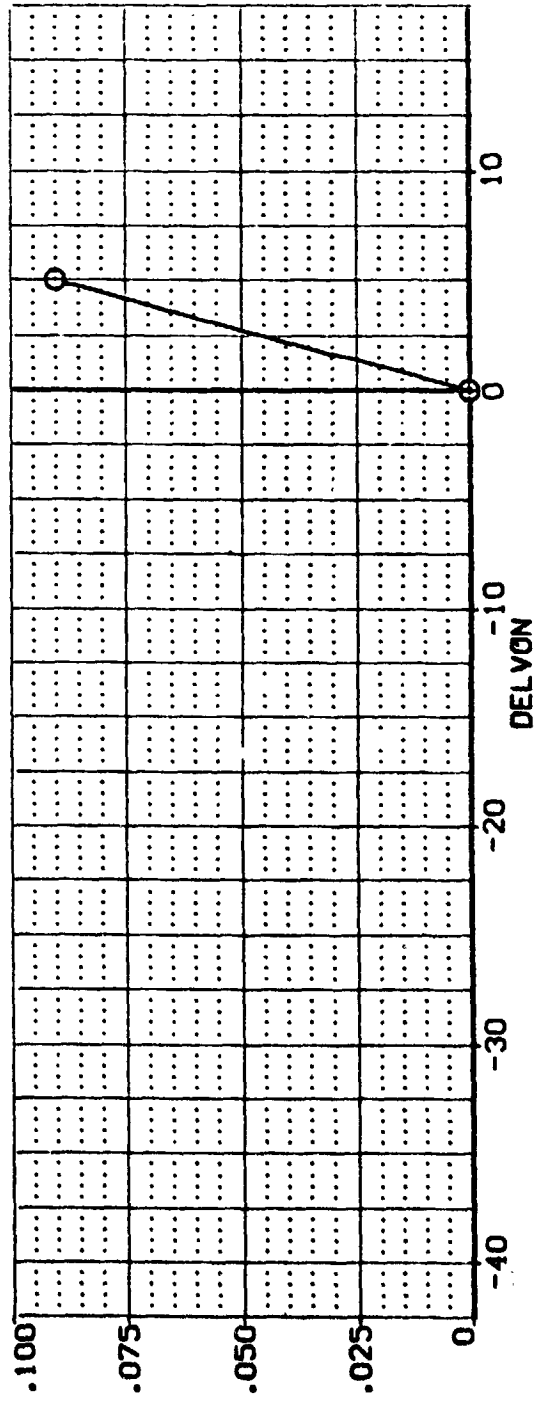
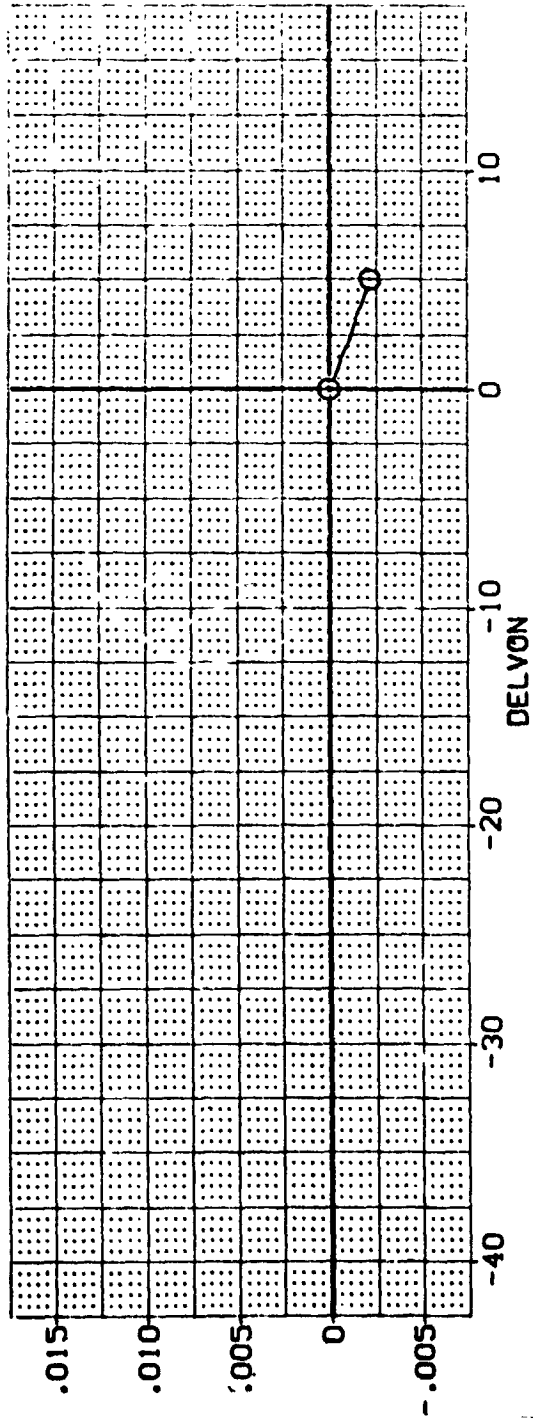


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES



(10Z077)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DELVON	DATASET	DELVON	SREF	REFERENCE INFORMATION
O	15.000					BETA -12.000 AILRON .000 SPDRK .285	.000 10Z077 .000	.000 5.000	10Z083		4.419 19.2299 37.9359 43.5974 .0000 15.1875 .0405	SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE

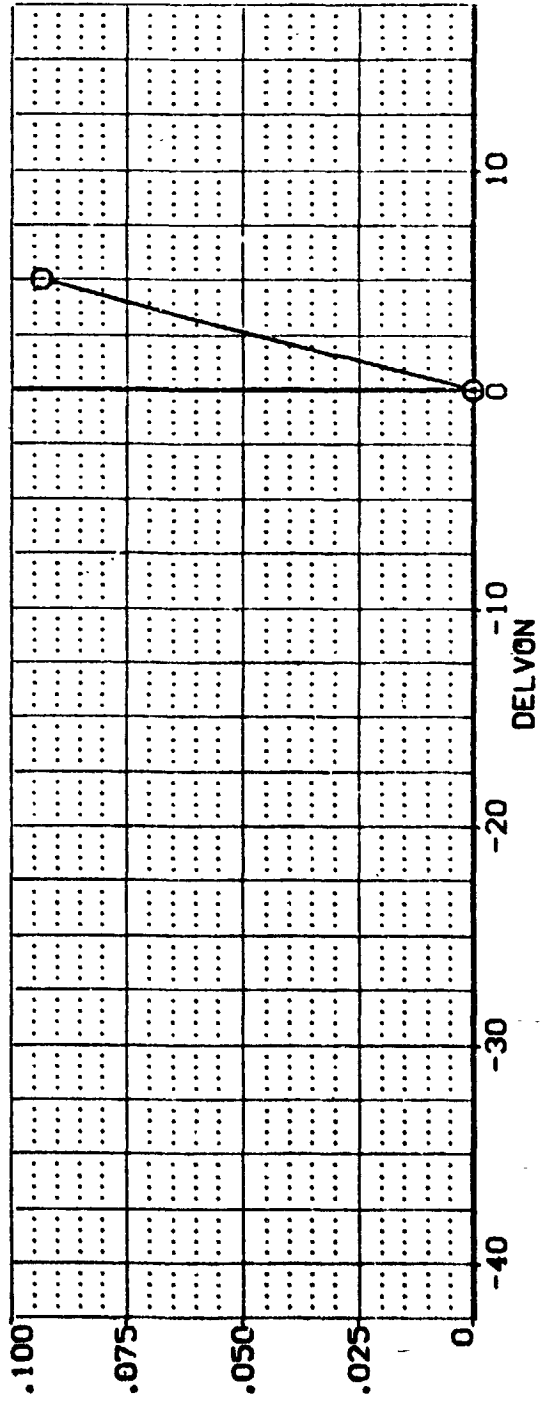
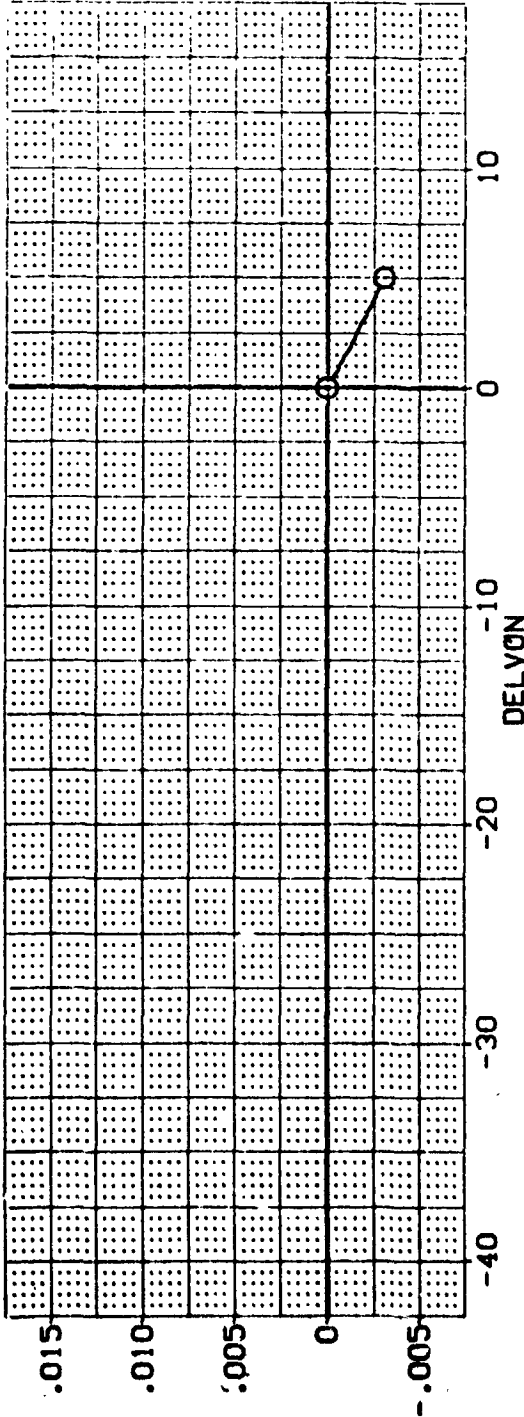


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

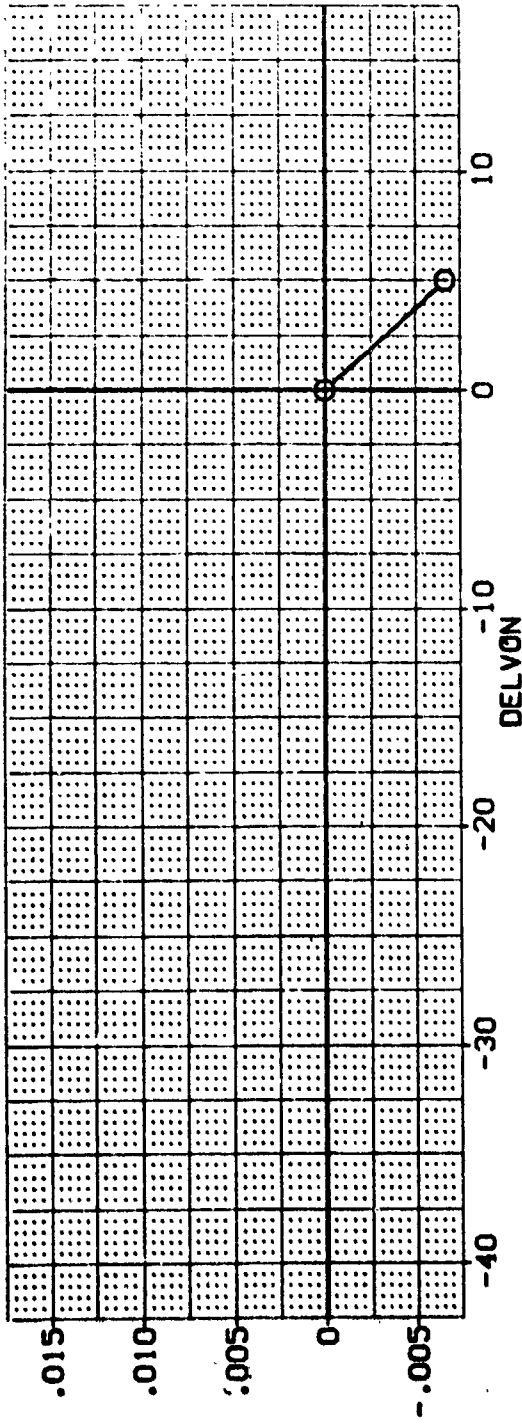
DCA

DCN

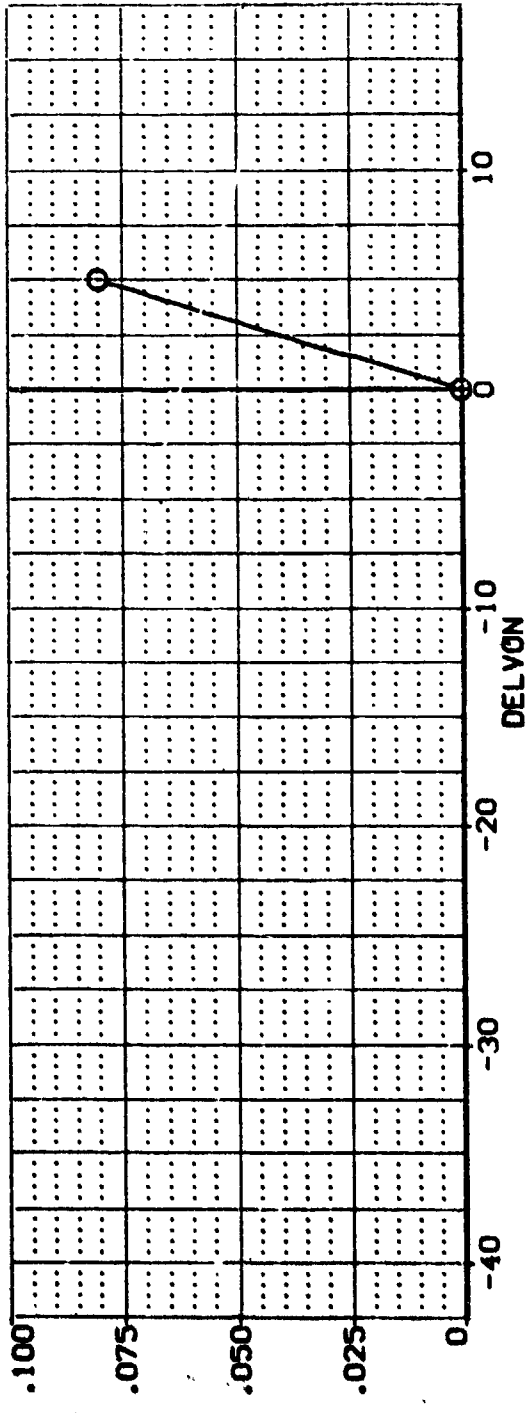
(10Z077)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	H/BW	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
O	20.000					BETA .200 AILRON -12.000 SPDRK .000 SPOBK .285	DELVON .000 IDZ077 .000	IDZ083	5.000	LREF 4.4119 BREF 19.2299 XPRP 37.9359 YPRP 43.5974 ZPRP .0000 SCALE 15.1875 .0405	SO.FT. INCHES INCHES INCHES INCHES SCALE



DCN



DCN

FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODED ENGINES



0A628 B26C9G15M7F8J62W116E28V8R5X10 (1DZ077)

SYMBOL	ALPHA	MACH	EDFLAP	RUDDER	TV37	PARAMETRIC VALUES	BETA	AILIRON	SPOBRK	SCALE
O	25.000	.200	-.000	-.000	.285					

DATA SOURCE	DELTVN	DATASET	DELTVN	DATASET	DELTVN	SCALE
	.000	1DZ077	.000	1DZ083	5.000	.0405

REFERENCE INFORMATION	SO.FT.
SREF	4.4119
LREF	19.2269
BREF	37.9359
XTRP	43.9974
YTRP	.0000
ZTRP	15.1875
SCALE	.0405

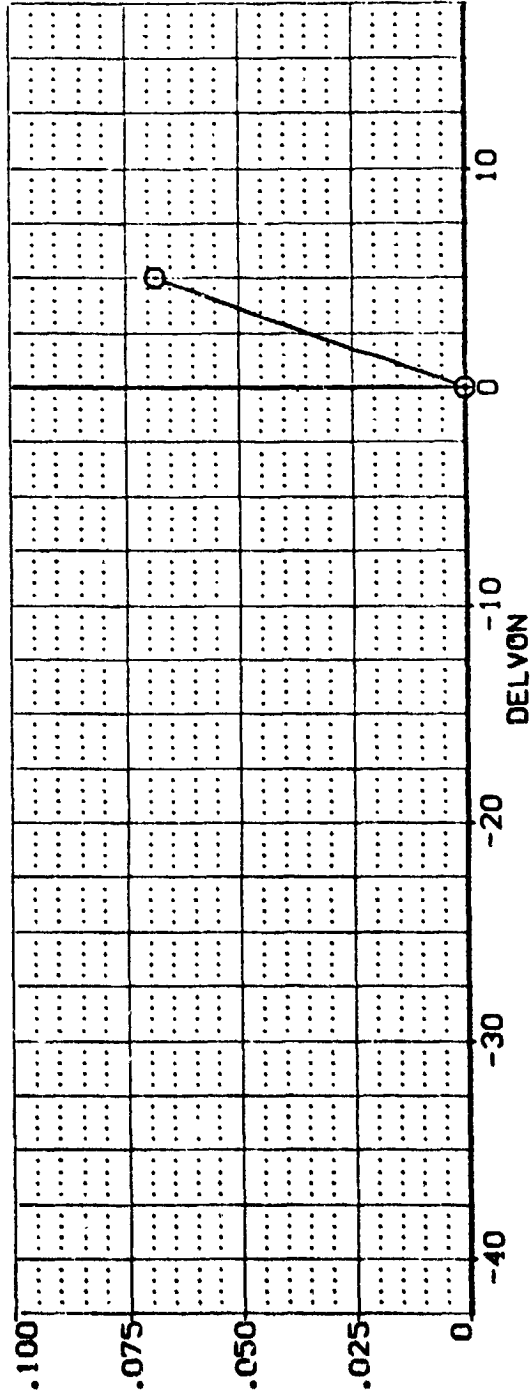
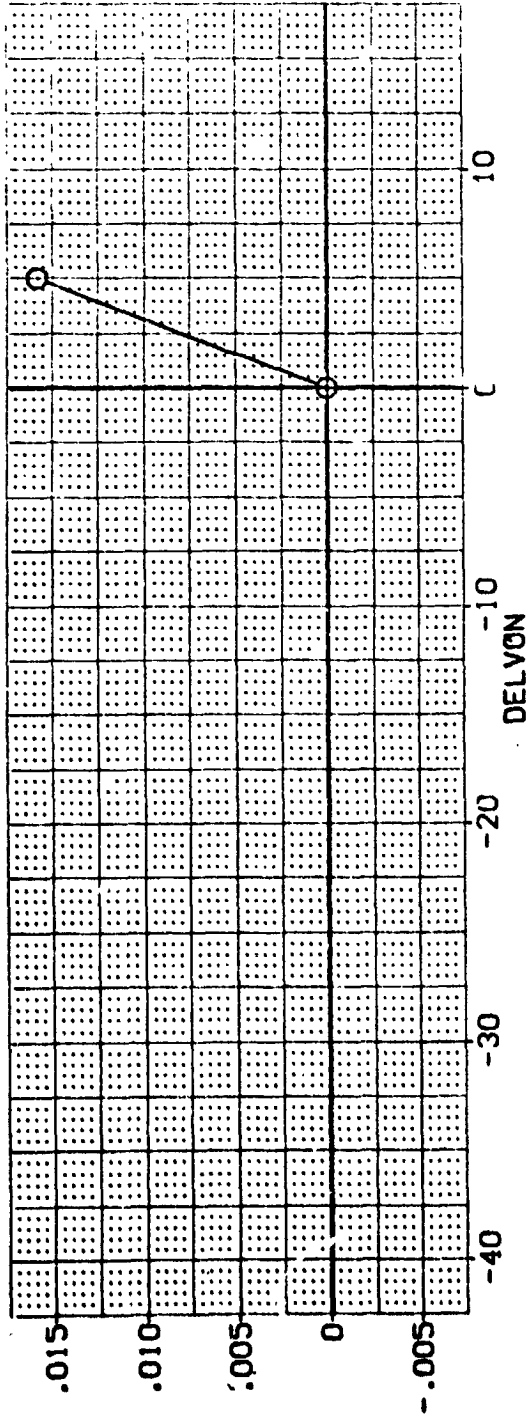


FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING PODDED ENGINES

DCA

DCN

(1DZ077)

0A628 B26C9G15M7F8J62W116E28V8R5X10

SYMBOL  
O

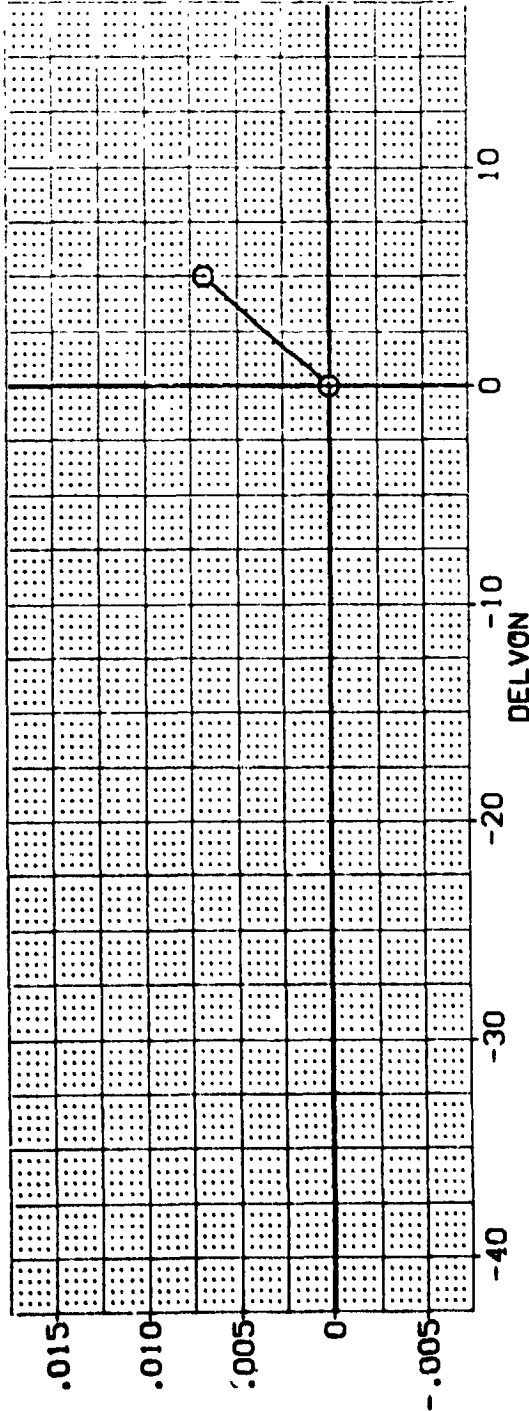
ALPHA 30.000  
MACH .200  
BOFLAP -12.000  
RUDDER .000  
H/BW .265

PARAMETRIC VALUES  
BETA  
AILRON  
SPOBRK

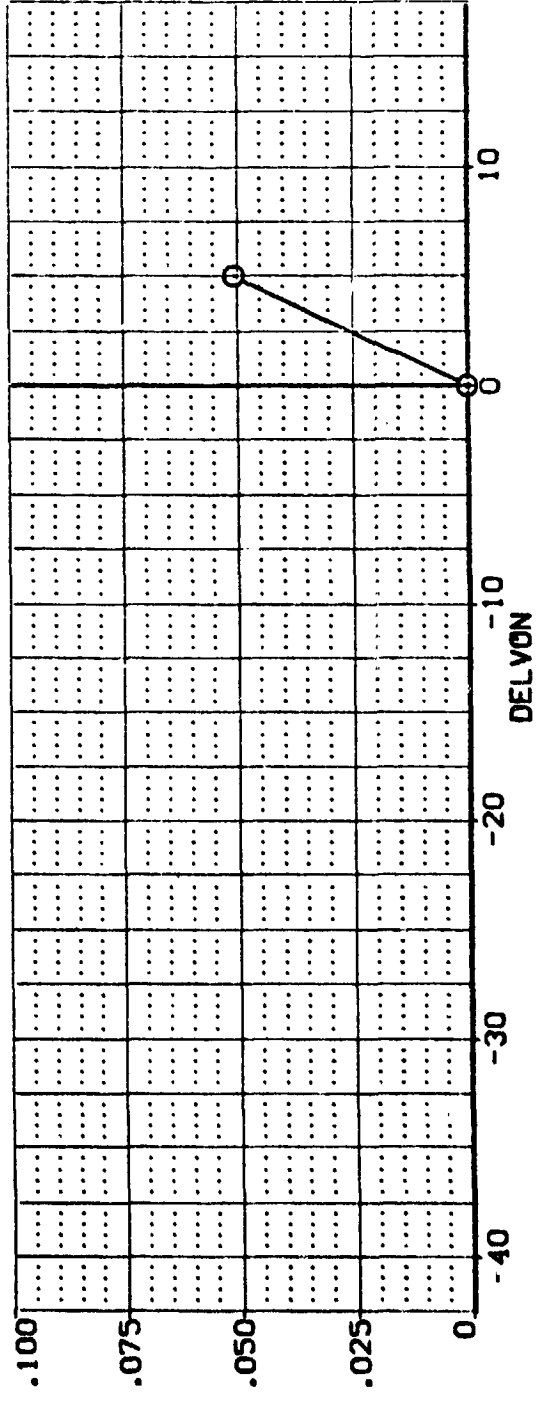
DATA SOURCE  
DELVON .000  
DATASET 1DZ077  
SCALE .000

DATASET 1DZ083  
DELVON 5.000  
SCALE .0405

REFERENCE INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2298  
INCHES 37.9359  
INCHES 43.5974  
INCHES .0000  
INCHES 15.1875  
SCALE .0405



DCA

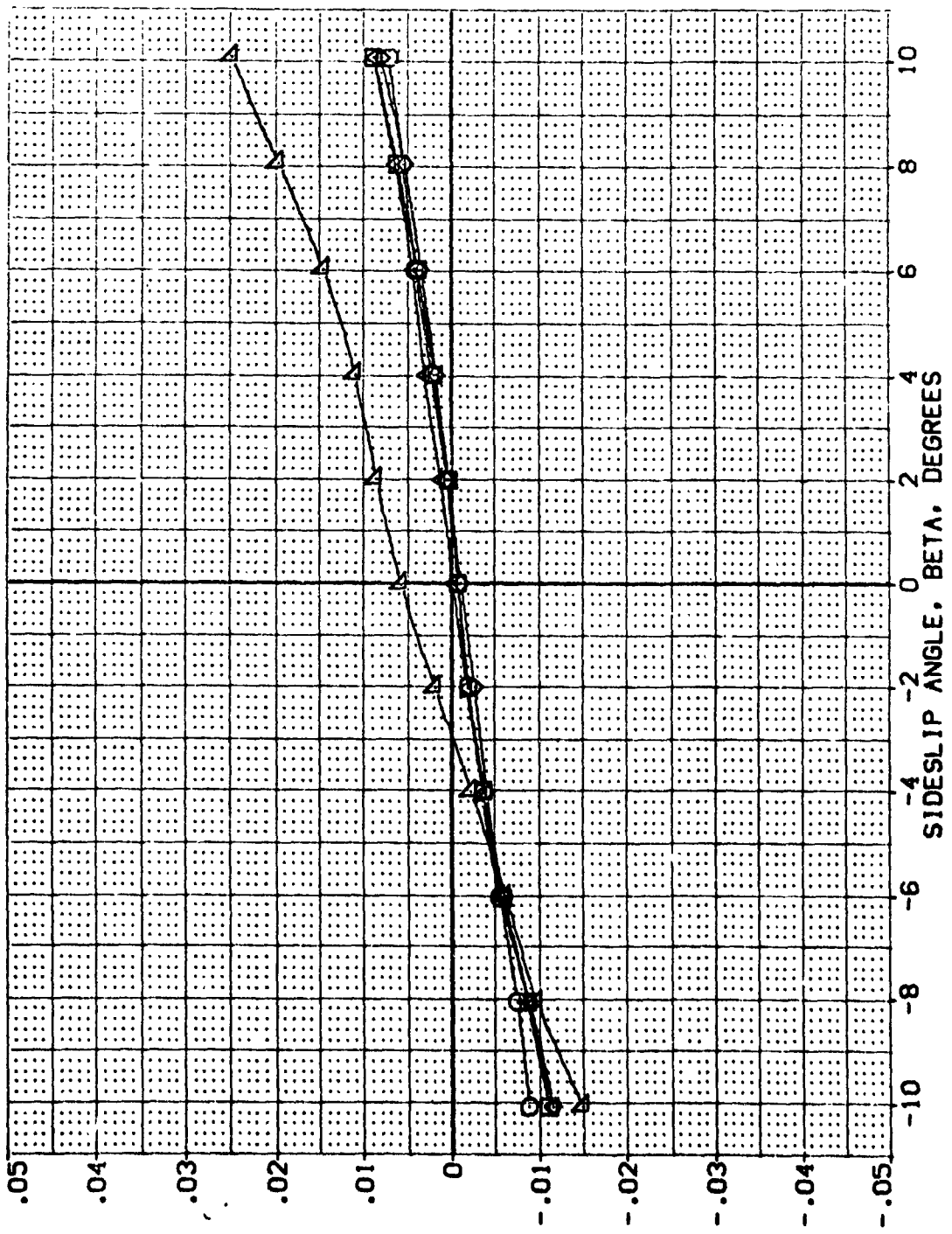


DCN

FIG 36 ELEVON EFFECTIVENESS, H/BW = 0.285, OVERWING POODED ENGINES

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILTRON	SREF	LREF	MREF	YMRP	ZMRP	SCALE
(ADZ085)	0A6Z8 BZ6C9G1547F8 V116E28V8RSX9	.000	.000	.000	.000	4.4119	19.2299	37.9359	.0000	15.1875	SO.FT. INCHES
(ADZ086)	0A6Z8 BZ6C9G1547F8 V116E28V8RSX9	5.000	.000	.000	.000	4.4119	19.2299	37.9359	.0000	15.1875	INCHES
(ADZ087)	0A6Z8 BZ6C9G1547F8 V116E28V8RSX9	10.000	.000	.000	.000	4.4119	19.2299	37.9359	.0000	15.1875	INCHES
(ADZ088)	0A6Z8 BZ6C9G1547F8 V116E28V8RSX9	15.000	.000	.000	.000	4.4119	19.2299	37.9359	.0000	15.1875	INCHES
(ADZ089)	0A6Z8 BZ6C9G1547F8 V116E28V8RSX9	20.000	.000	.000	.000	4.4119	19.2299	37.9359	.0000	15.1875	INCHES



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0  
 (A)MACH = .20 PAGE 407

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AIRLON	REFERENCE INFORMATION
(A07085)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	.000	.000	.000	.000	SREF 4.4119 SQ.FT.
(A07086)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	5.000	.000	.000	.000	LREF 15.2299 INCHES
(A07087)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	10.000	.000	.000	.000	BREF 37.9359 INCHES
(A07088)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	15.000	.000	.000	.000	XHRP 43.5974 INCHES
(A07089)	0A6Z8 B26C9G15M7F8 V116E28V8R5X9	20.000	.000	.000	.000	ZHRP 15.1875 INCHES
						SCALE .0405

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

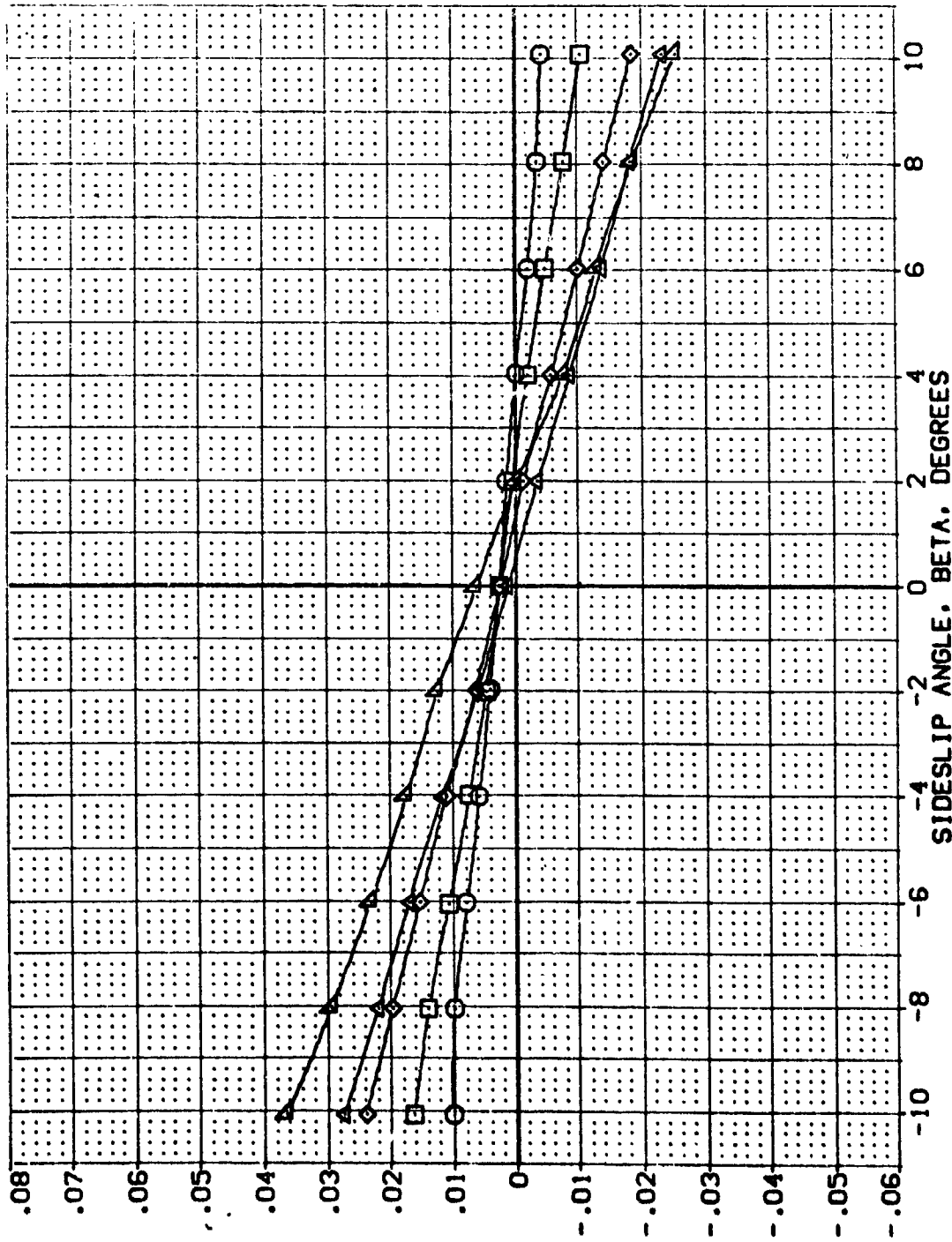


FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPODBRK	AILLRON	REFERENCE INFORMATION
(ADZ085)	0A528 B26C56154778	.000	.000	.000	.000	SREF 4.4119 SQ.FT.
(ADZ086)	0A528 B26C56154778	5.000	.000	.000	.000	LREF 19.2288 INCHES
(ADZ087)	0A528 B26C56154778	10.000	.000	.000	.000	BREF 37.5359 INCHES
(ADZ088)	0A528 B26C56154778	15.000	.000	.000	.000	XMRP 43.5974 INCHES
(ADZ089)	0A528 B26C56154778	20.000	.000	.000	.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES

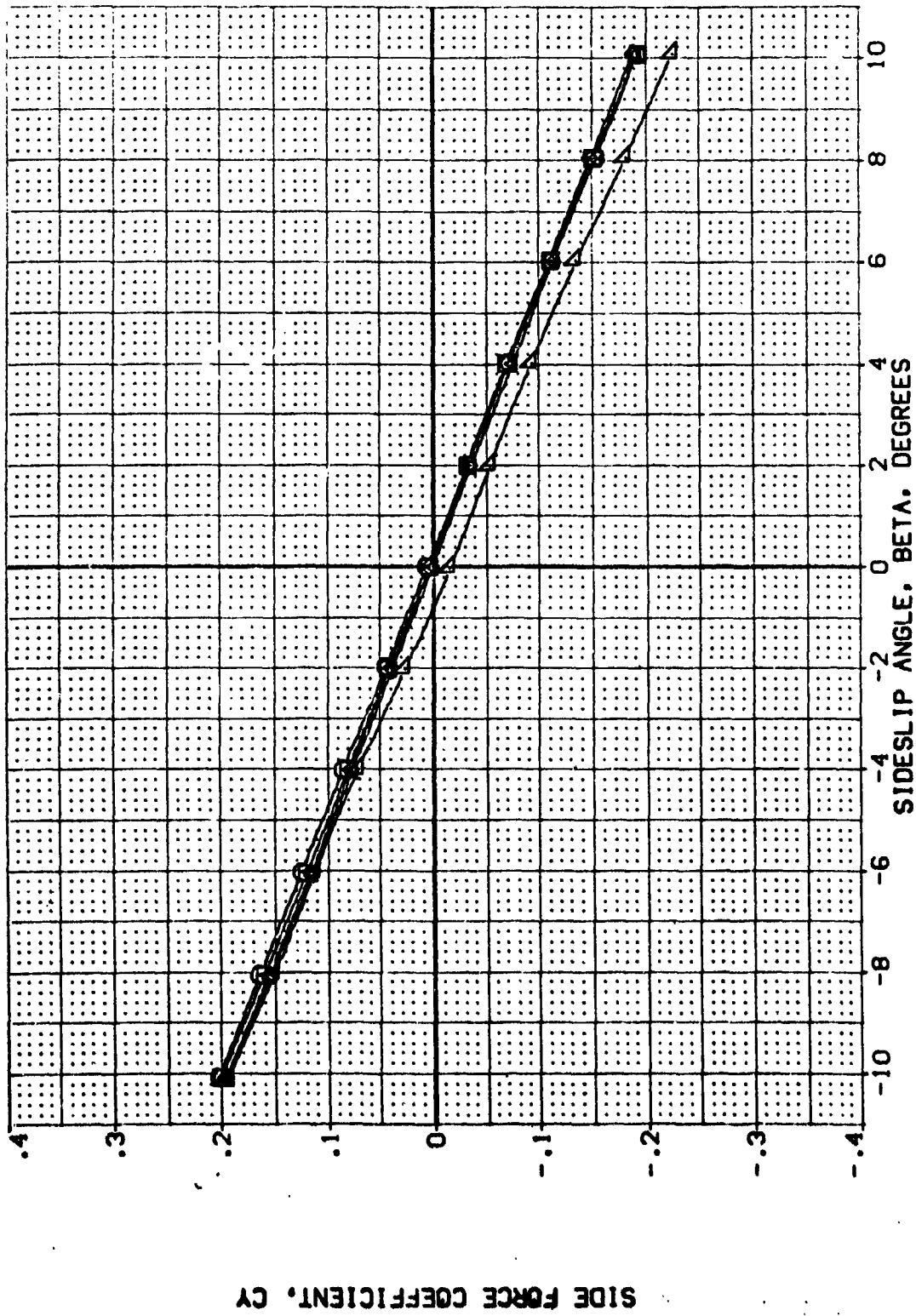


FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0  
 (A)MACH = .20 PAGE 409

0A628 B26C9G15M7F8 W116E28V8R5X9 (CDZ085)

SYMBOL 0  
 ELEVON 1.321  
 MACH .200  
 AILRON .000  
 SPOBRK .000

PARAMETRIC VALUES  
 BOFLAP -12.000  
 RUDDER .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9259 INCHES  
 XMRP 43.5374 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 INCHES

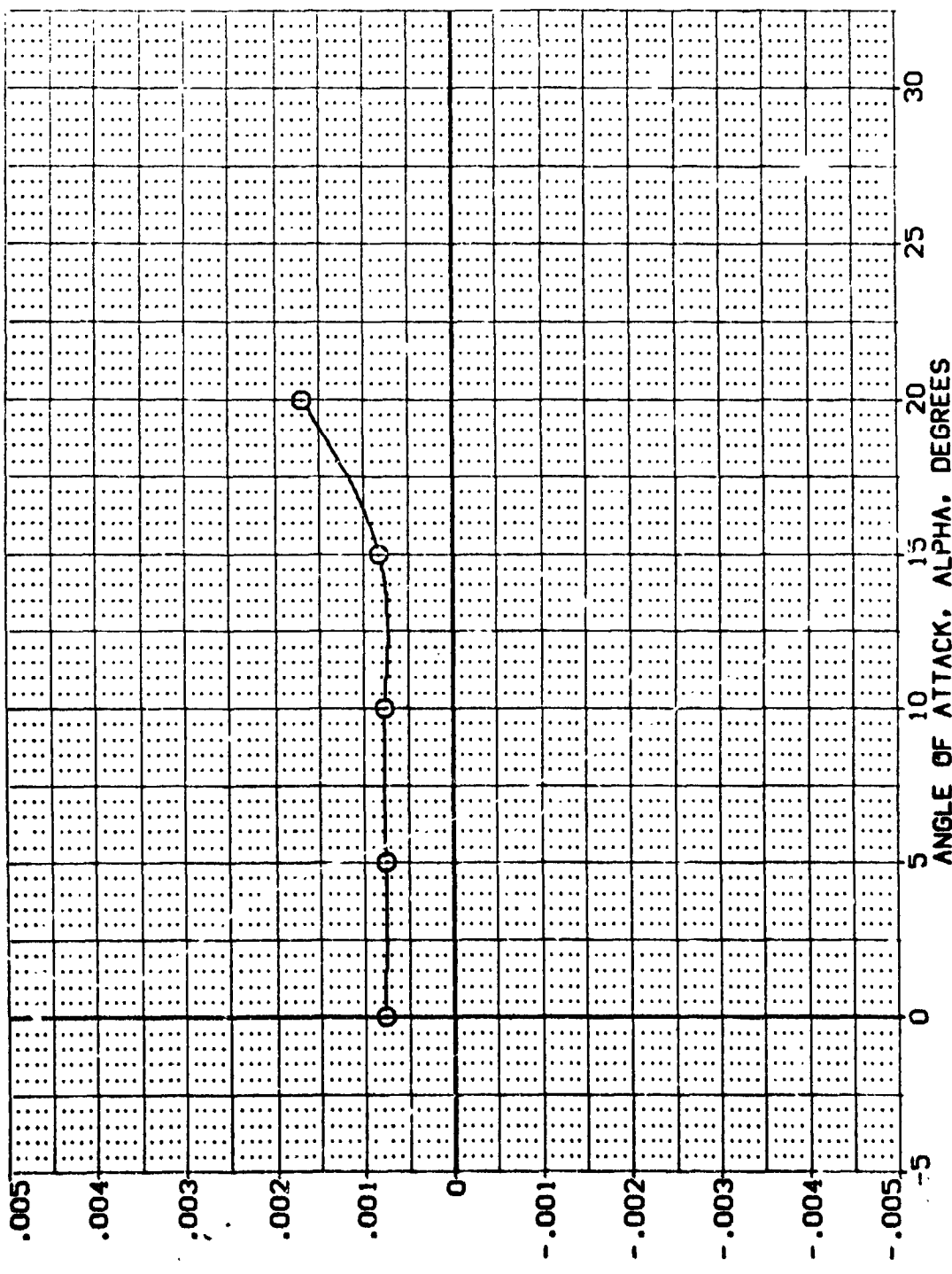


FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, cYnBET, PER DEGREE







0A628 B26C9G15M7F8 W116E28V8R5X9  
 (CDZ085)

SYMBOL 0  
 ELEVON .000  
 MACH .200  
 AILRON .000  
 SPWRK .000  
 BOFLAP -12.000  
 RUDDER .000

PARAMETRIC VALUES  
 SREF 4.4119 SO.FT.  
 LREF 9.2259 INCHES  
 XMRP 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

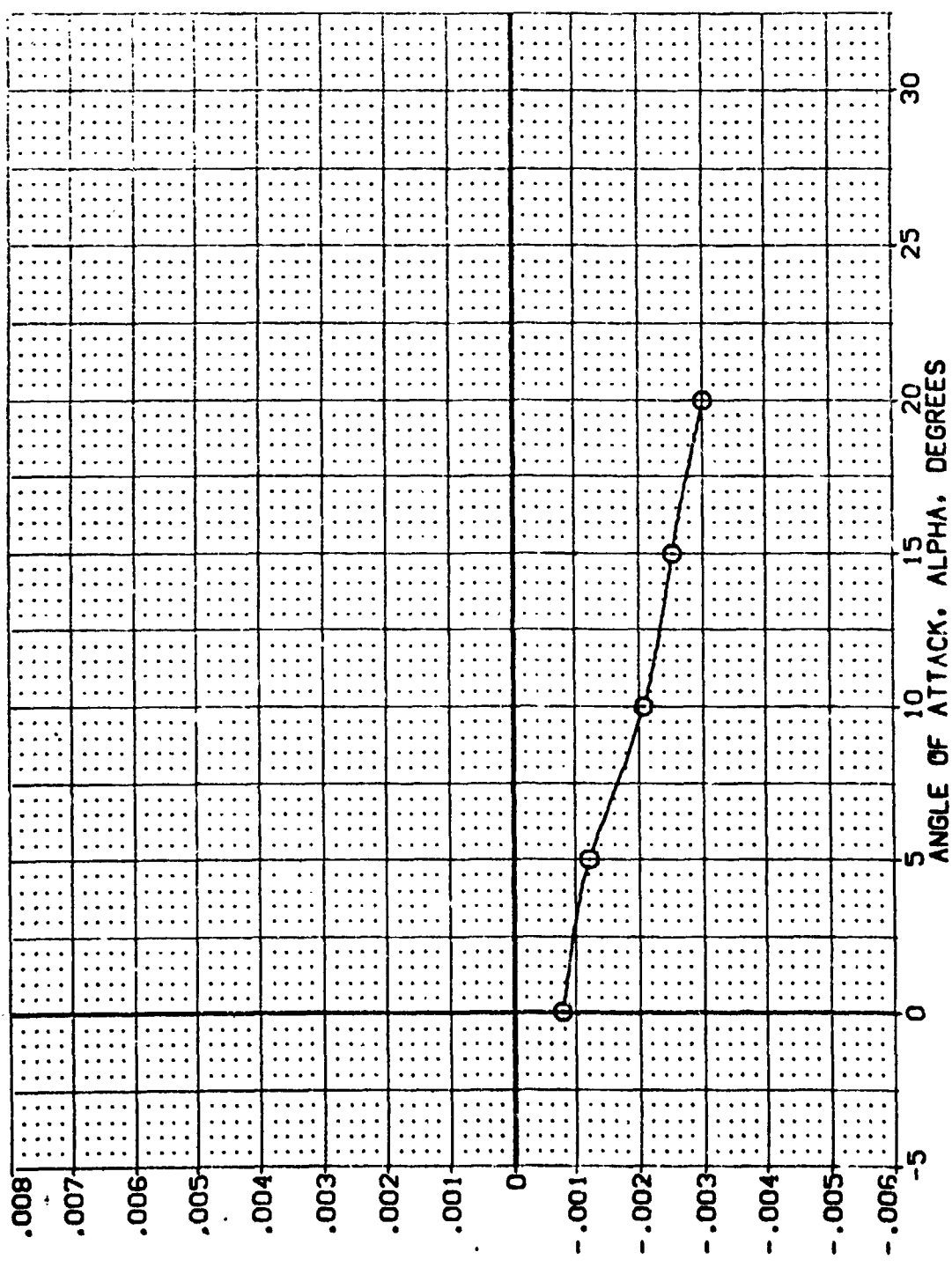


FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0

CA62B E26C9G15M7F8 W116E28V8R5X9 (CDZ085)

SYMBOL	ELEVON	MACH	PARAMETRIC VALUES
O	.000	.200	8DFLAP -12.000
		.000	RUDDER .000
		.000	SPDRB .000

REFERENCE INFORMATION	SO.FT.
SREF	4.4119
LREF	19.2299
EAREF	37.9359
XMRP	43.5974
YMRP	.0000
ZMRP	15.1875
SCALE	.0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

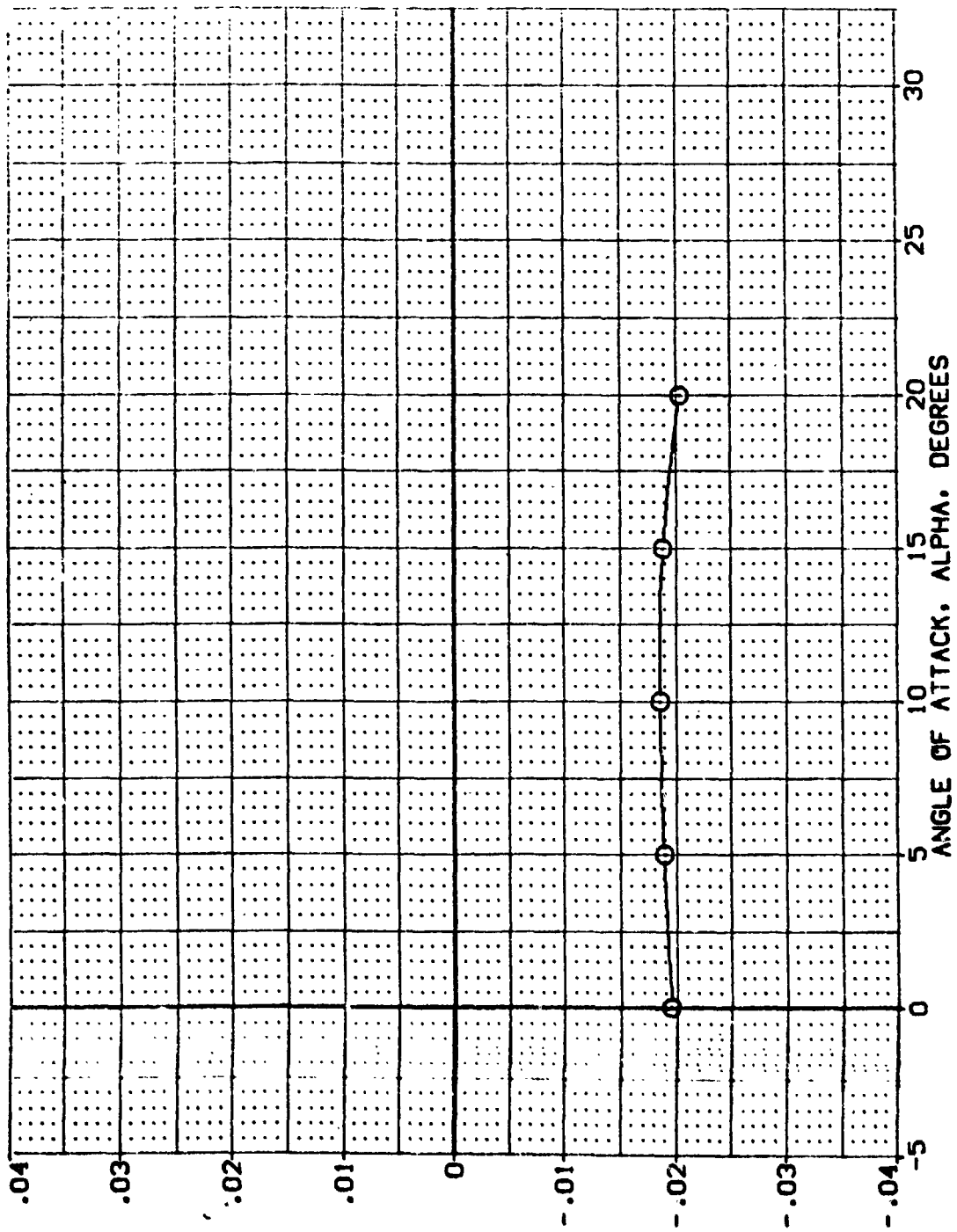
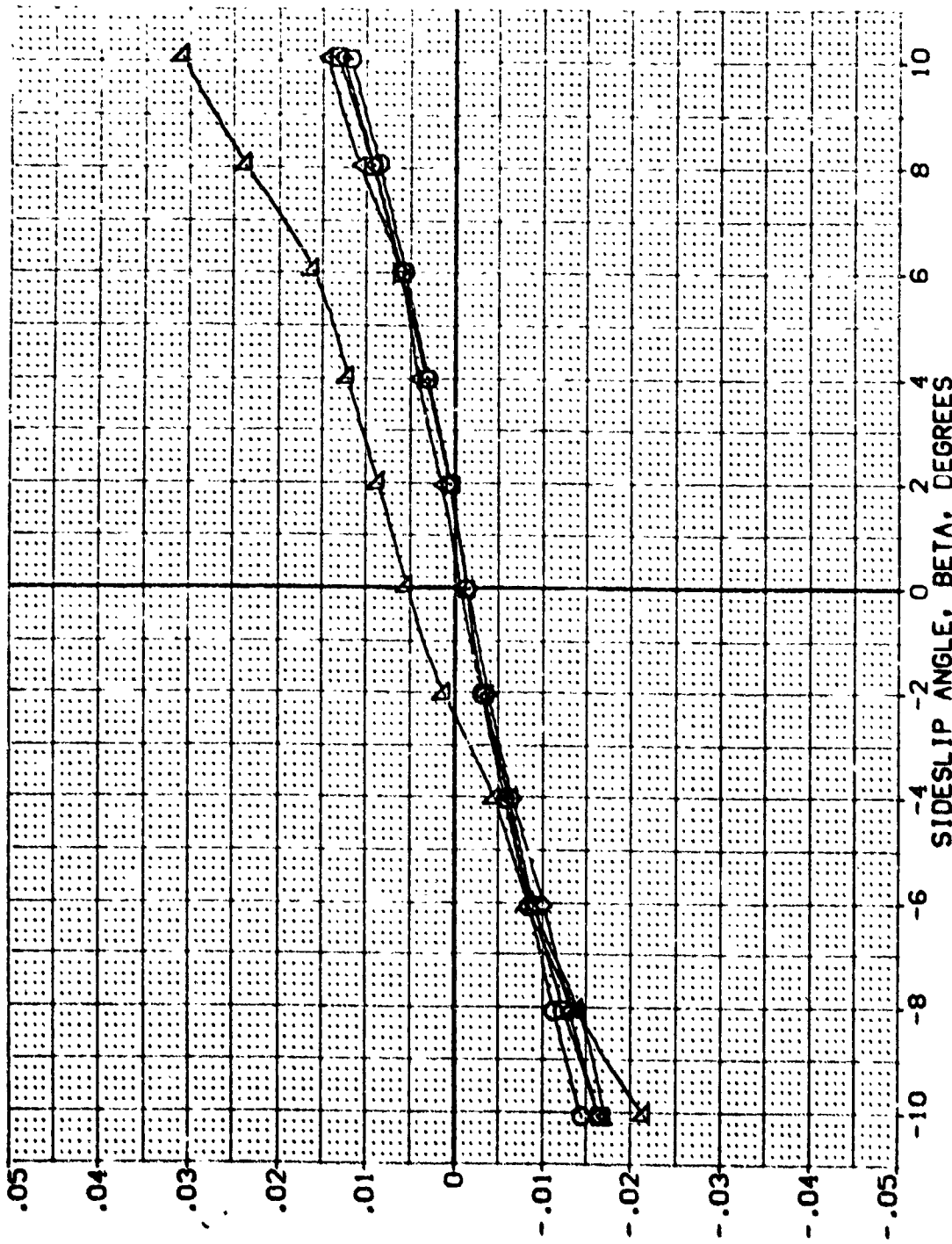


FIG 37 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 0

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILTRON	REFERENCE INFORMATION
(R02091)	04628 526C9G154778 V116E28V85X9	.000	.000	25.000	.000	SREF 4.4119 SO.FT
(R02092)	04628 526C9G154778 V116E28V85X9	5.000	.000	25.000	.000	LREF 19.2299 INCHES
(R02093)	04628 526C9G154778 V116E28V85X9	10.000	.000	25.000	.000	BREF 37.5359 INCHES
(R02094)	04628 526C9G154778 V116E28V85X9	15.000	.000	25.000	.000	XMRP 43.5574 INCHES
(R02095)	04628 526C9G154778 V116E28V85X9	20.000	.000	25.000	.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 25  
 (A)MACH = .20 PAGE 413

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
(RDZ091)	0A62B B26C9G SMT7-8 V11E28V8FSX9	.000	.000	25.000	.000	SREF 4.4119 SO.FT
(RDZ092)	0A62B B26C9G SMT7-8 V11E28V8FSX9	5.000	.000	25.000	.000	LREF 19.2299 INCHES
(RDZ093)	0A62B B26C9G SMT7-8 V11E28V8FSX9	10.000	.000	25.000	.000	BREF 37.9359 INCHES
(RDZ094)	0A62B B26C9G SMT7-8 V11E28V8FSX9	15.000	.000	25.000	.000	YMRP 43.5974 INCHES
(RDZ095)	0A62B B26C9G SMT7-8 V11E28V8FSX9	20.000	.000	25.000	.000	ZMRP 15.1875 INCHES
						SCALE .0405

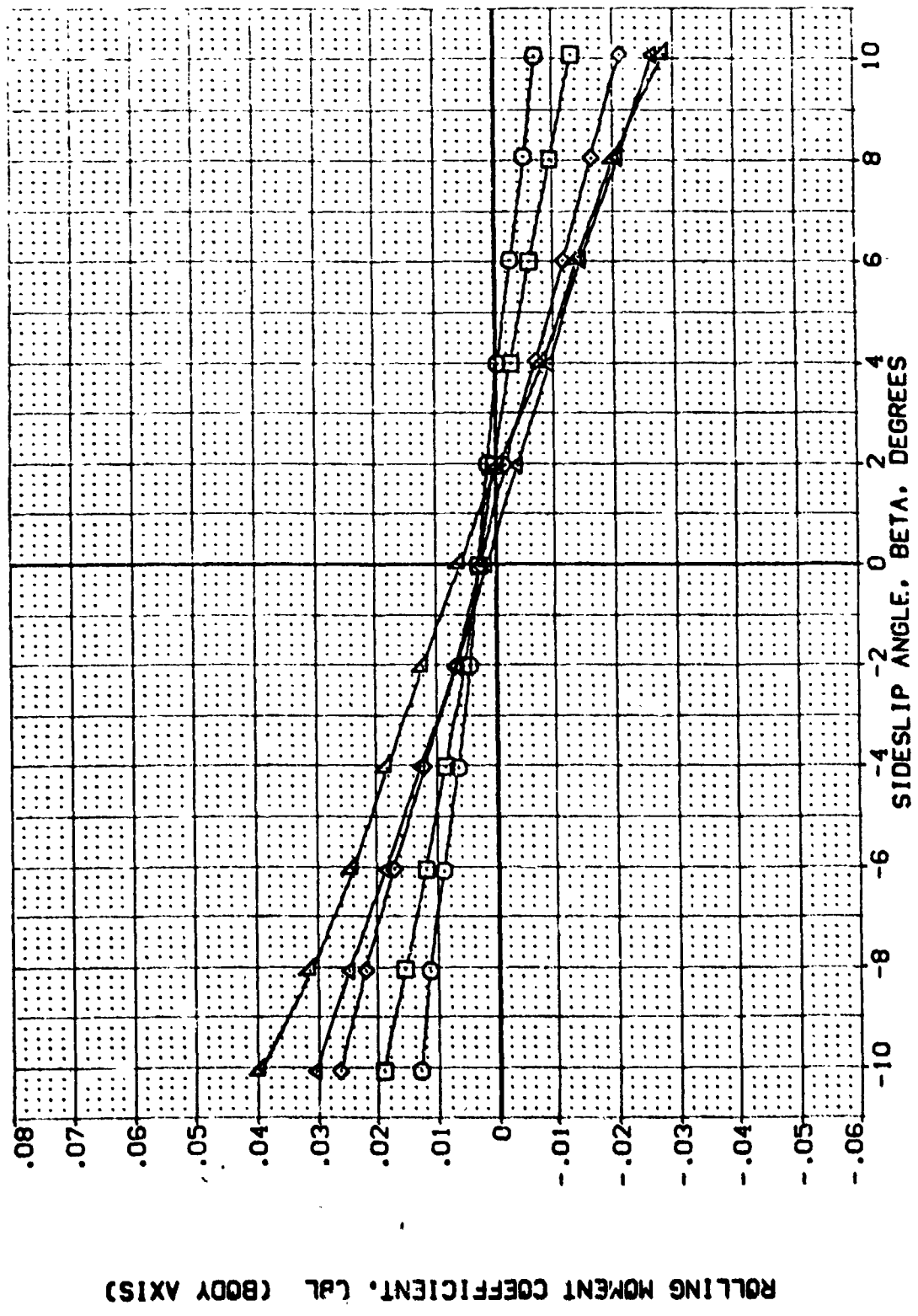
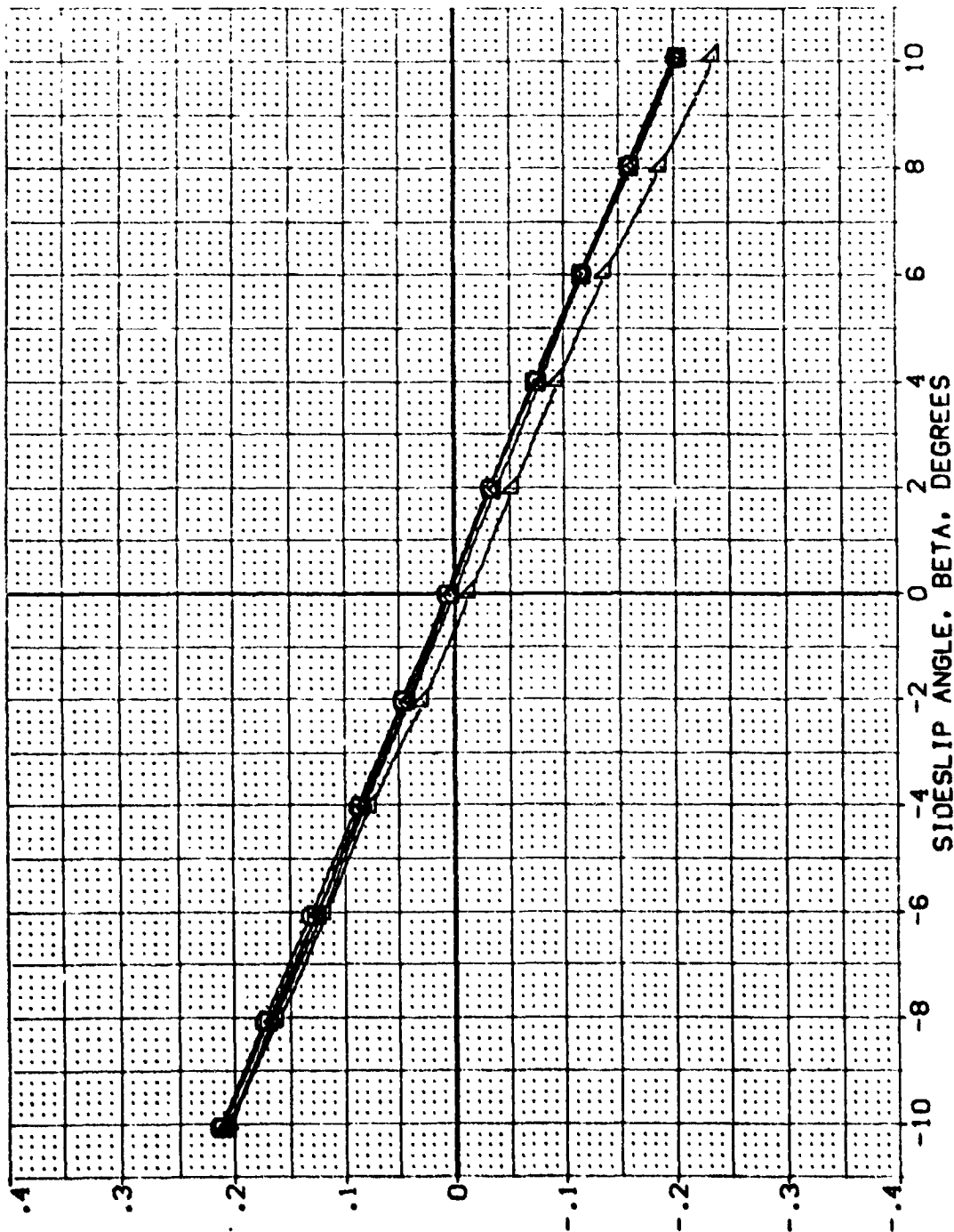


FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELECON = 0, RUDDER FLARE = 25  
MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
(R02091)	0A62B B26C9G1SMT7-8 V11E28V85X9	.000	.000	25.000	.000	SREF 4.4119 SQ.FT.
(R02092)	0A62B B26C9G1SMT7-8 V11E28V85X9	5.000	.000	25.000	.000	LREF 19.2293 INCHES
(R02093)	0A62B B26C9G1SMT7-8 V11E28V85X9	10.000	.000	25.000	.000	BREF 37.9359 INCHES
(R02094)	0A62B B26C9G1SMT7-8 V11E28V85X9	15.000	.000	25.000	.000	XMRP 43.5974 INCHES
(R02095)	0A62B B26C9G1SMT7-8 V11E28V85X9	20.000	.000	25.000	.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405 INCHES



SIDE FORCE COEFFICIENT, CY

FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 25  
 (A)MACH = .20  
 PAGE 415

(CDZ093)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL  
O

PARAMETRIC VALUES  
MACH .200 BOFLAP -12.000  
AILRON .000 RUDDER .000  
SPDBRK 25.000

REFERENCE INFORMATION  
SREF 4.4119 SO.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5974 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

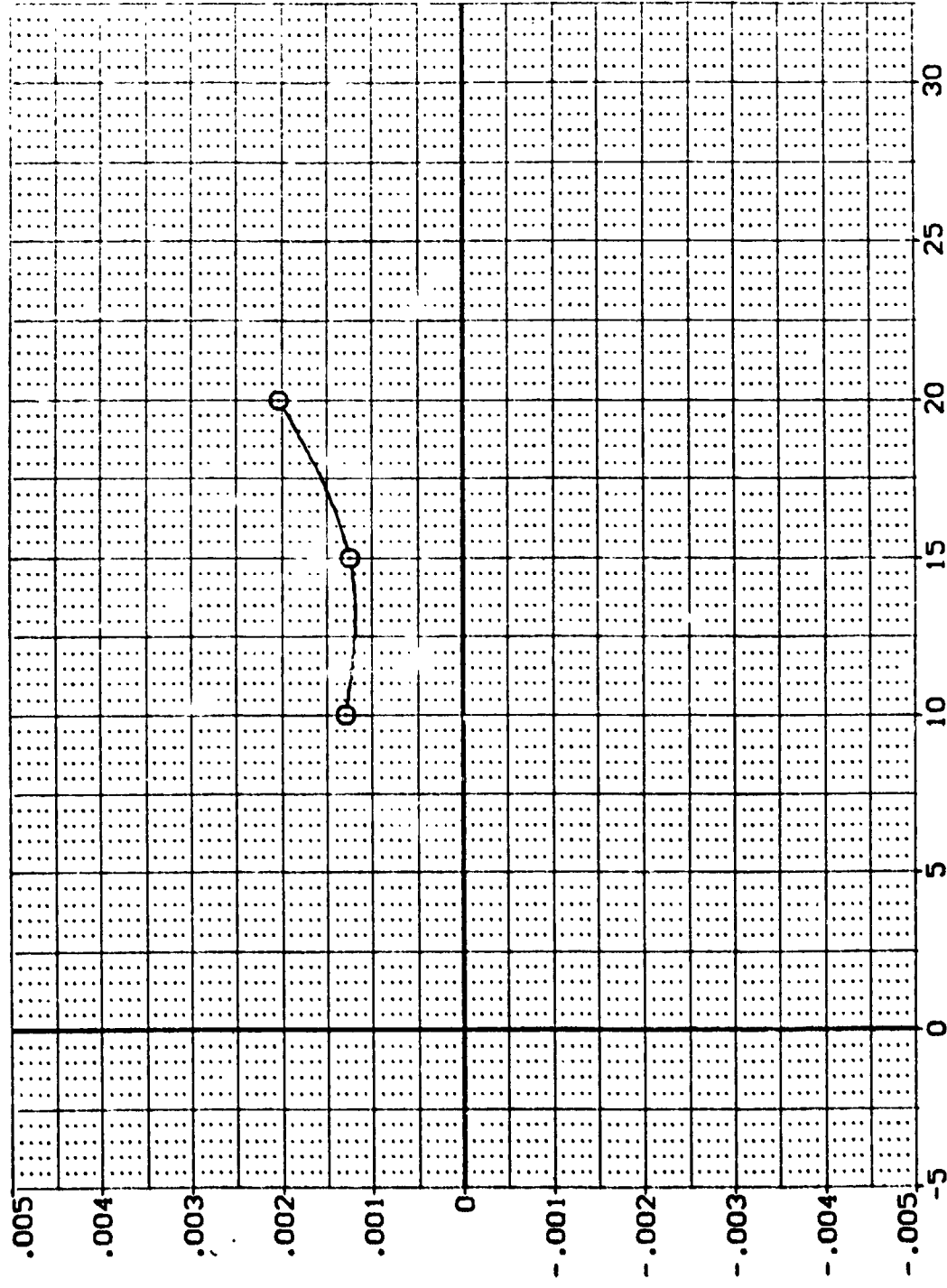


FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 25

(CDZ093)

W116E28V8R5X9

826C9G15M7F8

0A628

SYMBOL  
O

REFERENCE INFORMATION

SREF	4.4119	SQ.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	15.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

PARAMETRIC VALUES

MACH	.200	BOFLAP	-12.000
AILTRON	.000	RUDDER	.000
SPOBRK	25.000		

ELEVON  
.000

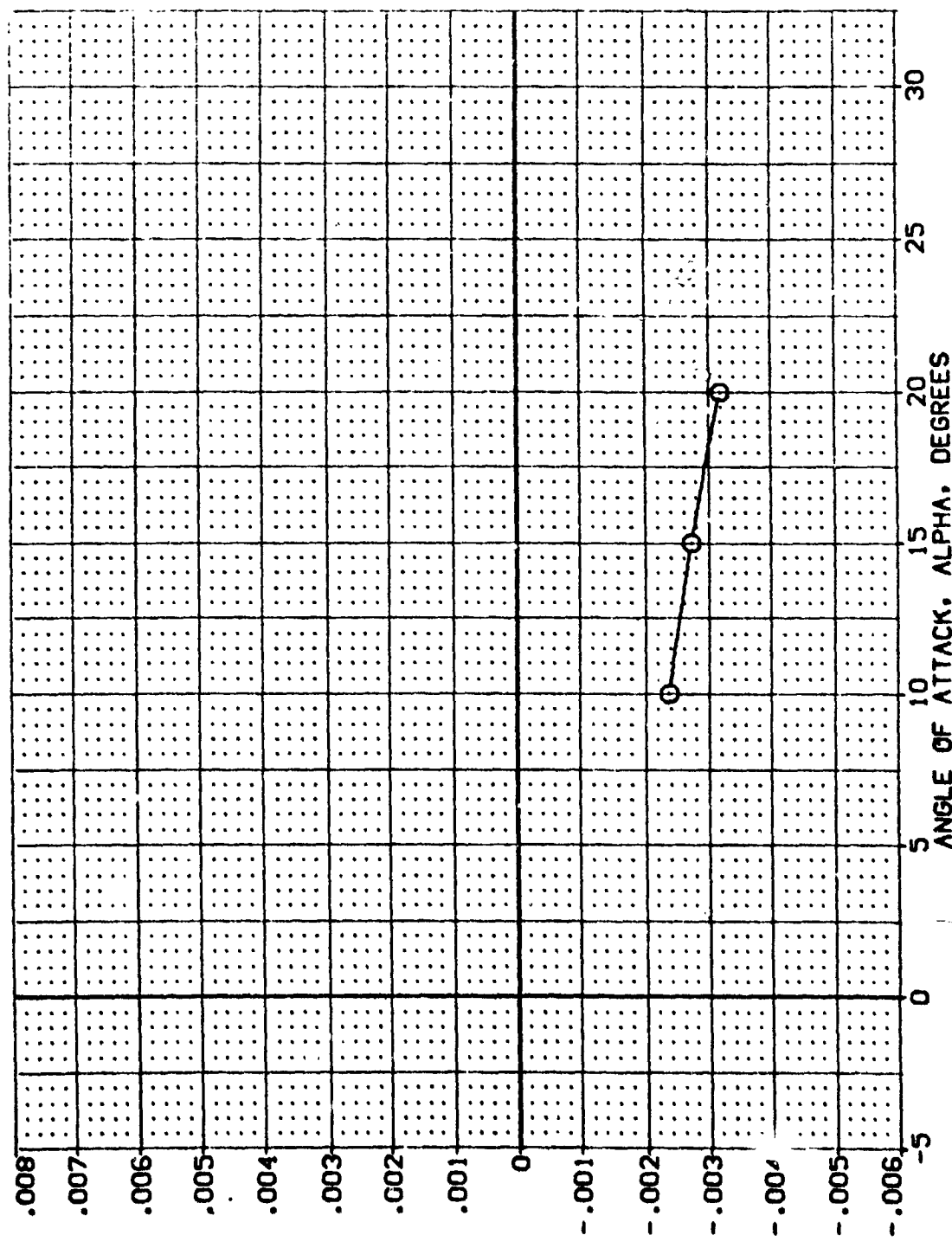


FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 25

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBT. PER DEGREE

(CDZ093)

0A628 B26C9G15M7F8 W116E28V8R5X9

SYMBOL O

ELEVON .000

MACH .200

AILTRON .000

SPOBRK 25.000

SOFLAP -12.000

RUDDER .000

PARAMETRIC VALUES

SREF 4.4119

LREF 19.2299

BREF 37.9359

XTRP 43.5974

YTRP .0000

ZTRP 15.1875

SCALE .0405

REFERENCE INFORMATION

SO.FT. INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

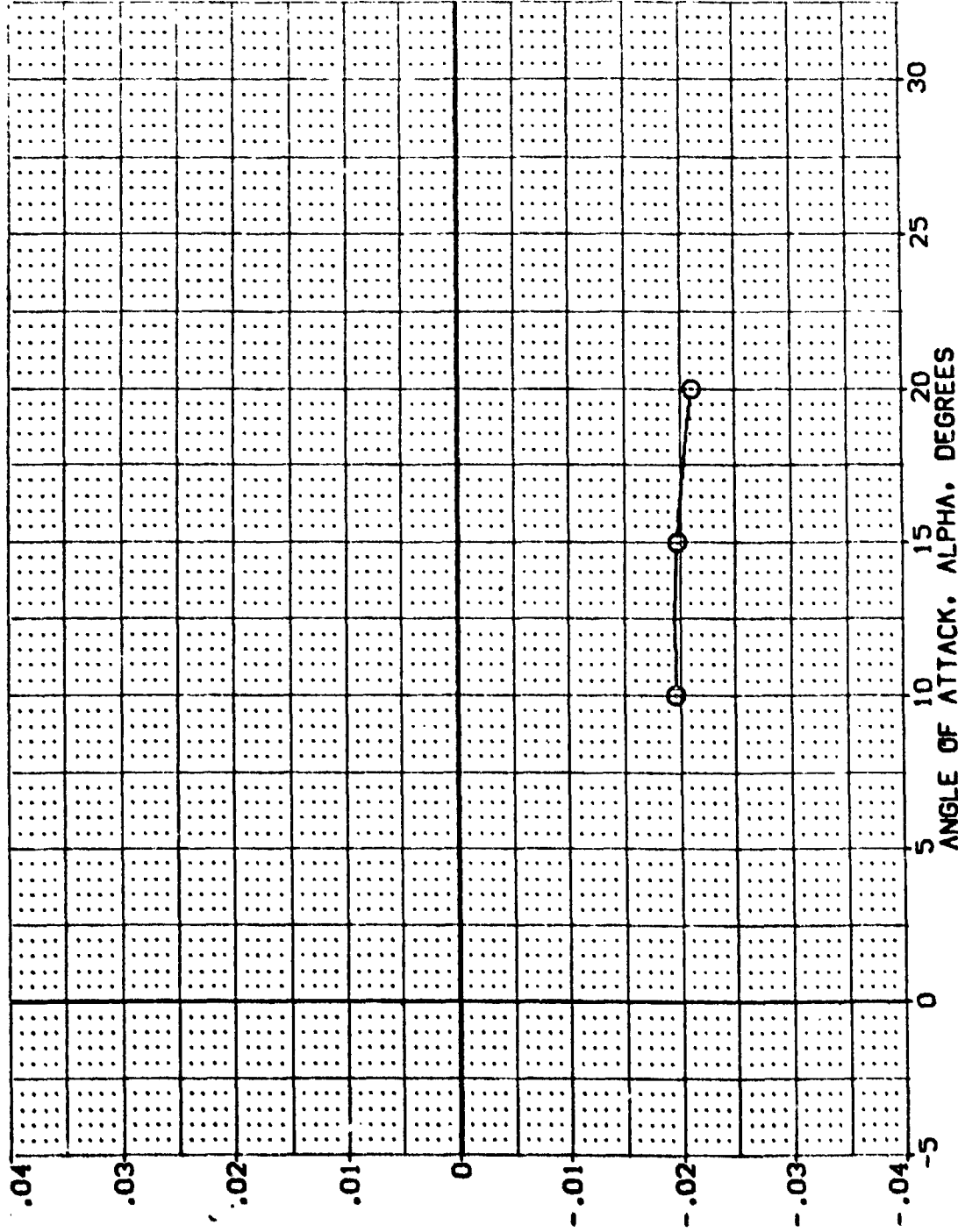


FIG 38 LATERAL/DIRECTIONAL STABILITY, GEAR DOWN, ELEVON = 0, RUDDER FLARE = 25



DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	SPORBK	BDFLAP	RUDDER	REFERENCE INFORMATION
{80Z111}	0A5Z8 B06C9 M7F8 V115E28V8FSK9	-5.000	25.000	-12.000	.000	BREF 4.4119 SO.FT.
{80Z117}	0A5Z8 B06C9 M7F8 V115E28V8FSK9	5.000	25.000	-12.000	.000	LREF 19.2759 INO-ES
{80Z115}	0A5Z8 B06C9 M7F8 V115E28V8FSK9	10.000	25.000	-12.000	.000	BREF 37.9359 INO-ES
{80Z114}	0A5Z8 B06C9 M7F8 V115E28V8FSK9	15.000	25.000	-12.000	.000	XPRP 43.5974 INO-ES
{80Z112}	0A5Z8 B06C9 M7F8 V115E28V8FSK9					ZPRP .0003 INO-ES
						SCALE 15.1675 INO-ES
						SCALE .0405

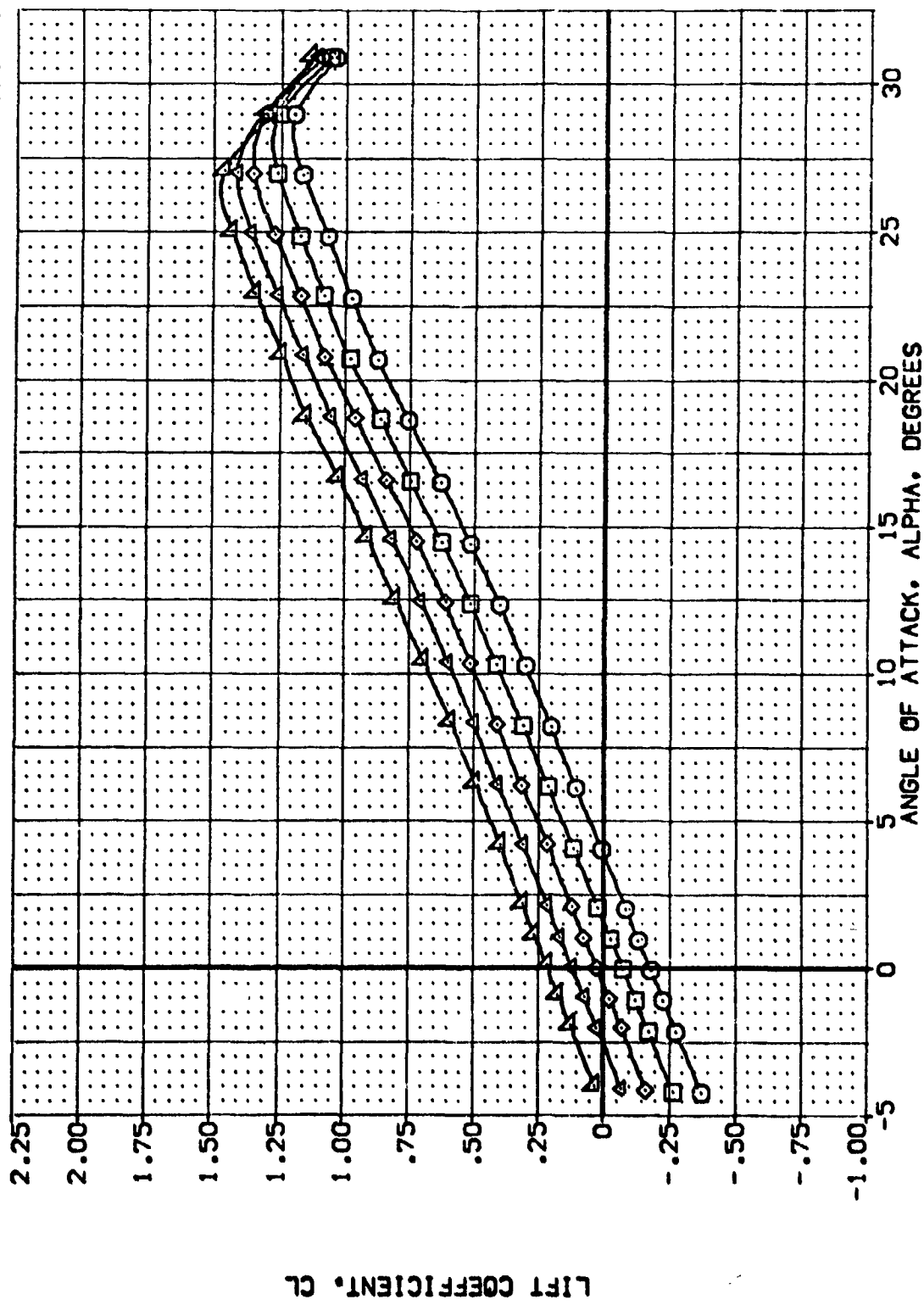


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
CAJMACH = .20

DATA SET SYMBL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BDFLAP	RLODER	REFERENCE INFORMATION
(BDZ111)	0A628 M7F8 V116E28V8FSX9	-5.000	25.000	-12.000	.000	4.4119 SO.FT.
(BDZ117)	0A628 M7F8 V116E28V8FSX9	.000	25.000	-12.000	.000	19.2298 INCHES
(BDZ115)	0A628 M7F8 V116E28V8FSX9	5.000	25.000	-12.000	.000	37.9259 INCHES
(BDZ114)	0A628 M7F8 V116E28V8FSX9	10.000	25.000	-12.000	.000	43.5974 INCHES
(BDZ112)	0A628 M7F8 V116E28V8FSX9	15.000	25.000	-12.000	.000	15.1875 INCHES
						.0405 SCALE

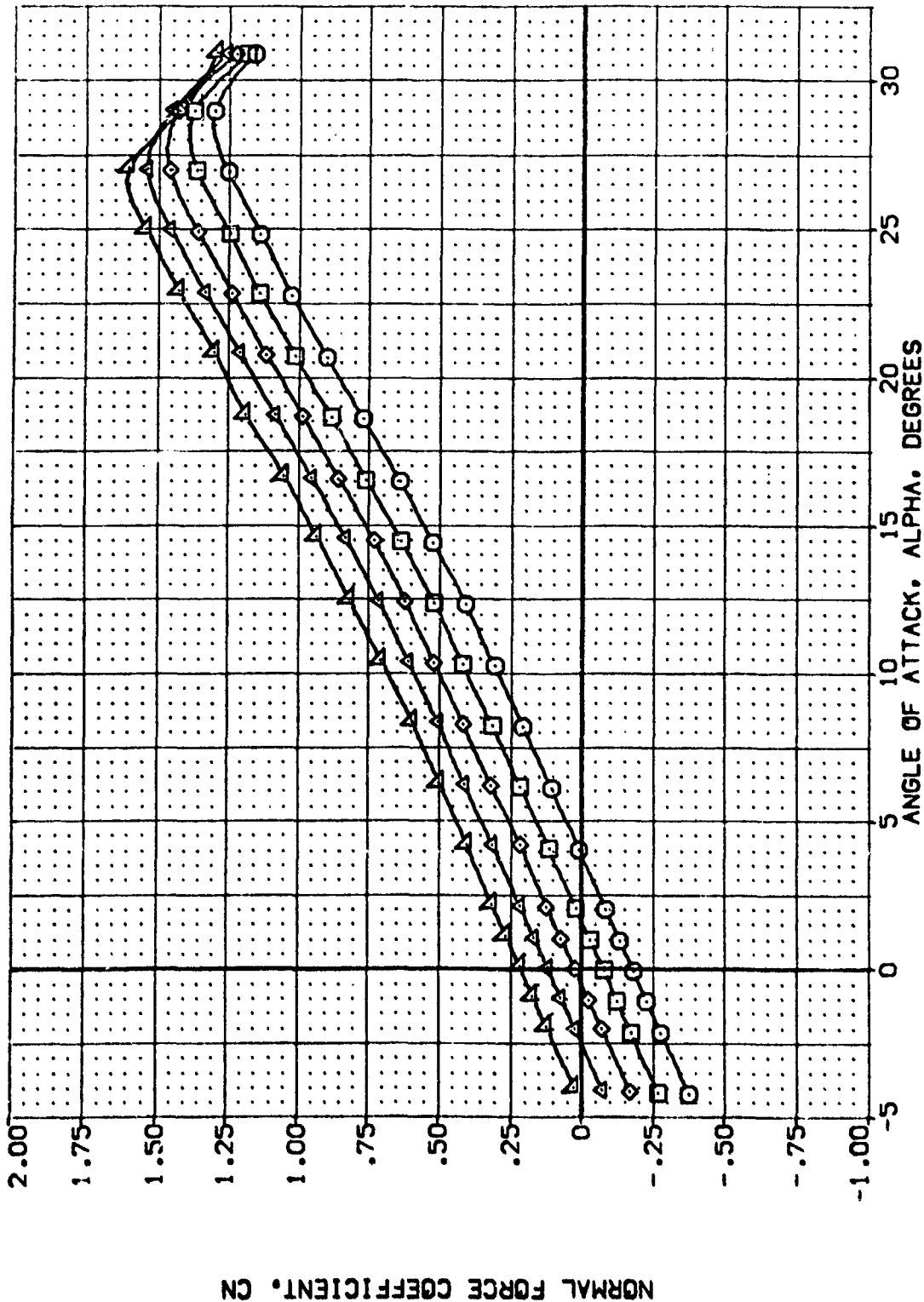


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

MAJ MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BDFLAP	RUDDER	REFERENCE INFORMATION
(BDZ111)	VI16E28V8FSX9	-5.000	25.000	-12.000	.000	4.4119 SO.FT.
(BDZ117)	VI16E28V8FSX9	.000	25.000	-12.000	.000	19.7299 INCH-ES
(BDZ115)	VI16E28V8FSX9	5.000	25.000	-12.000	.000	37.9359 INCH-ES
(BDZ114)	VI16E28V8FSX9	10.000	25.000	-12.000	.000	43.5974 INCH-ES
(BDZ112)	VI16E28V8FSX9	15.000	25.000	-12.000	.000	15.1675 INCH-ES
						.0405 SCALE

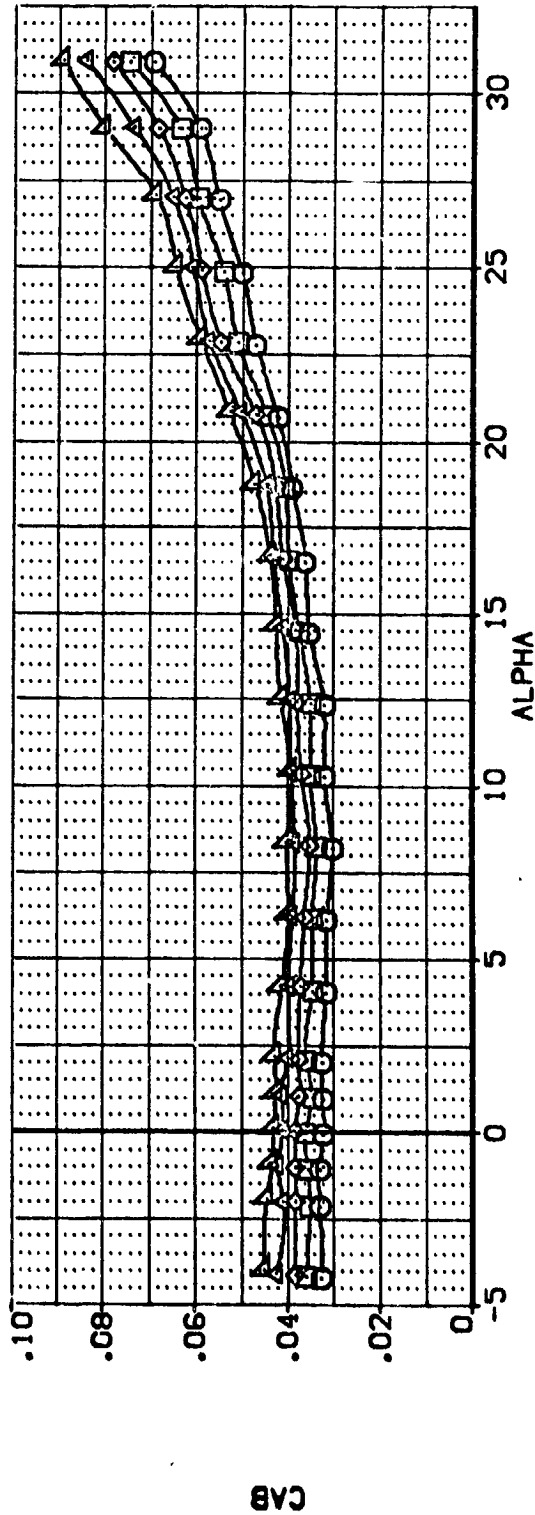
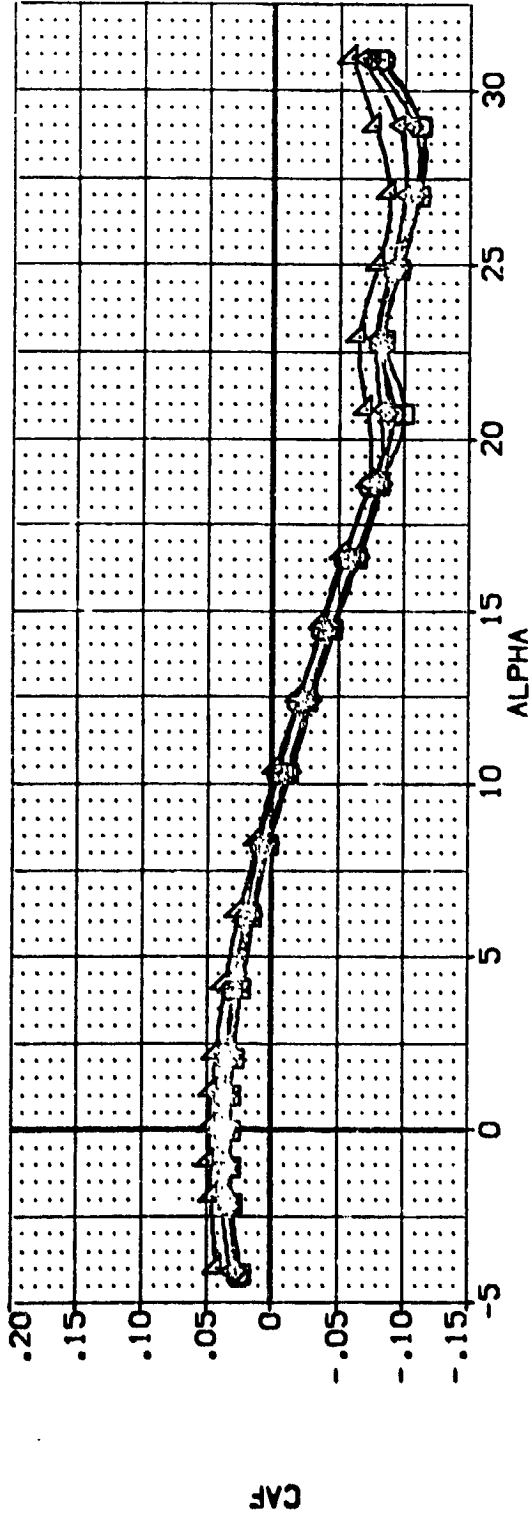


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B0Z111)	0A5Z8 B26C9 M7F8 V116E28V85X9	-5.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(B0Z117)	0A5Z8 B26C9 M7F8 V116E28V85X9	5.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(B0Z115)	0A5Z8 B26C9 M7F8 V116E28V85X9	5.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(B0Z114)	0A5Z8 B26C9 M7F8 V116E28V85X9	10.000	25.000	-12.000	.000	XMRP 43.5974 INCHES
(B0Z112)	0A5Z8 B26C9 M7F8 V116E28V85X9	15.000	25.000	-12.000	.000	YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405

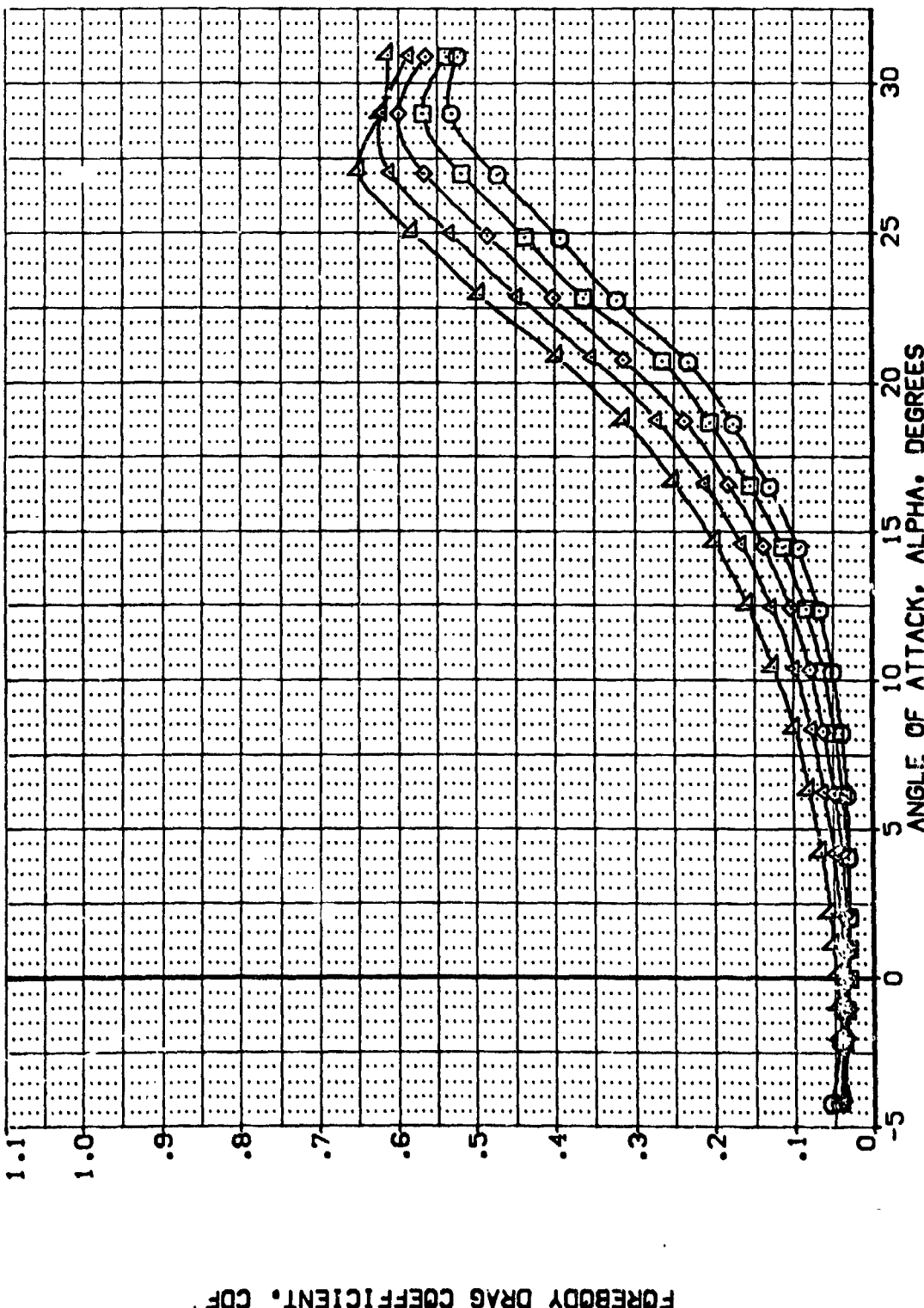


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
 - CAJMACH = .20

DATA SET SYMBO. CONFIGURATION DESCRIPTION

(80Z111)	0A628	B26C3	M7F8	V11E28V8F5X9
(80Z117)	0A628	B26C3	M7F8	V11E28V8F5X9
(80Z115)	0A628	B26C3	M7F8	V11E28V8F5X9
(80Z114)	0A628	B26C3	M7F8	V11E28V8F5X9
(80Z112)	0A628	B26C3	M7F8	V11E28V8F5X9

ELEVON SPOBRK BOFLAP RUDDER

-5.000	25.000	-12.000	.000
5.000	25.000	-12.000	.000
10.000	25.000	-12.000	.000
15.000	25.000	-12.000	.000

REFERENCE INFORMATION

REF	4.4119	SO.FT.
REF	19.2288	INCHES
REF	37.9539	INCHES
XMRP	43.9874	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

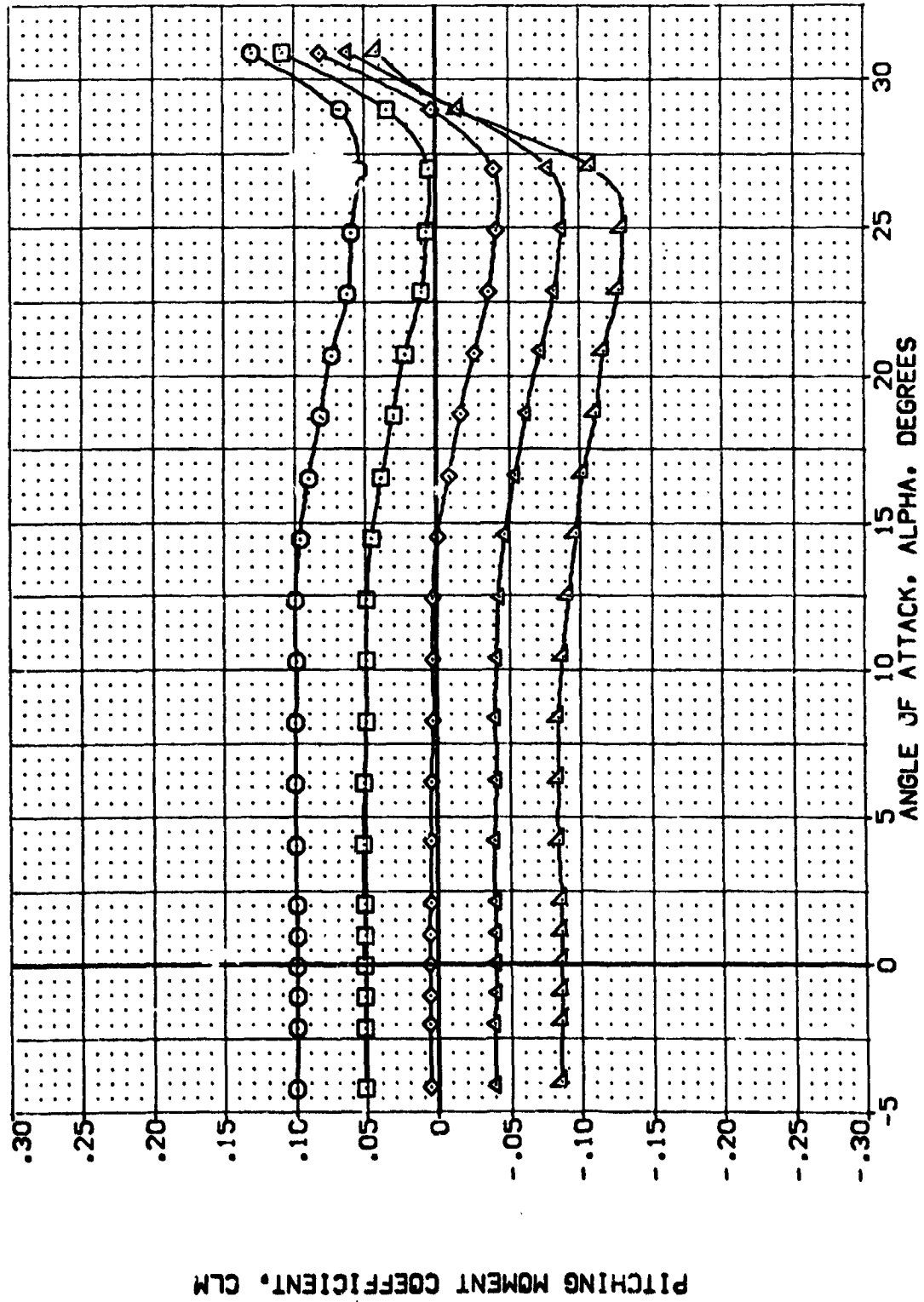


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(M)MACH = .20

DATA SET SYMBL. CONFIGURATION DESCRIPTION

(B02111)	0A628	026C9	M7F8	V11E228V8F5K9
(B02117)	0A628	026C9	M7F8	V11E228V8F5K9
(B02119)	0A628	026C9	M7F8	V11E228V8F5K9
(B02114)	0A628	026C9	M7F8	V11E228V8F5K9
(B02112)	0A628	026C9	M7F8	V11E228V8F5K9

ELEVON SPOTING BOFLAP RUDDER REFERENCE INFORMATION

-5.000	25.000	.000	REF	4.4119	50.FT.
5.000	25.000	.000	USEF	19.2789	INCHES
10.000	25.000	.000	REF	37.5574	INCHES
15.000	25.000	.000	YPRP	.0000	INCHES
			ZPRP	15.1875	INCHES
			SCALE	.0405	SCALE

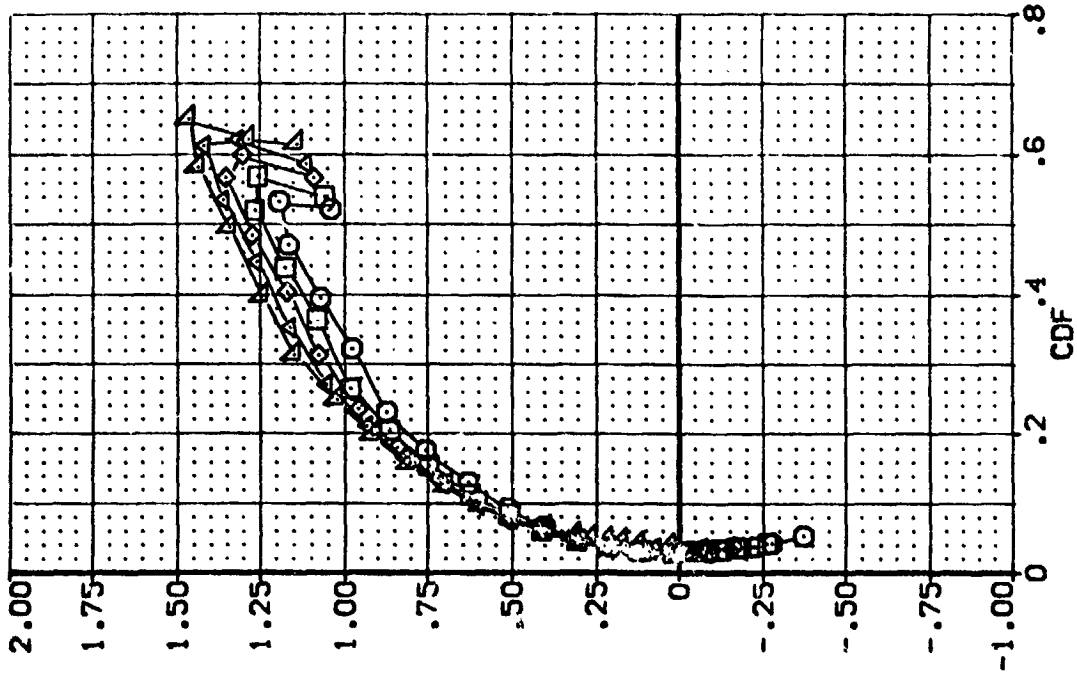
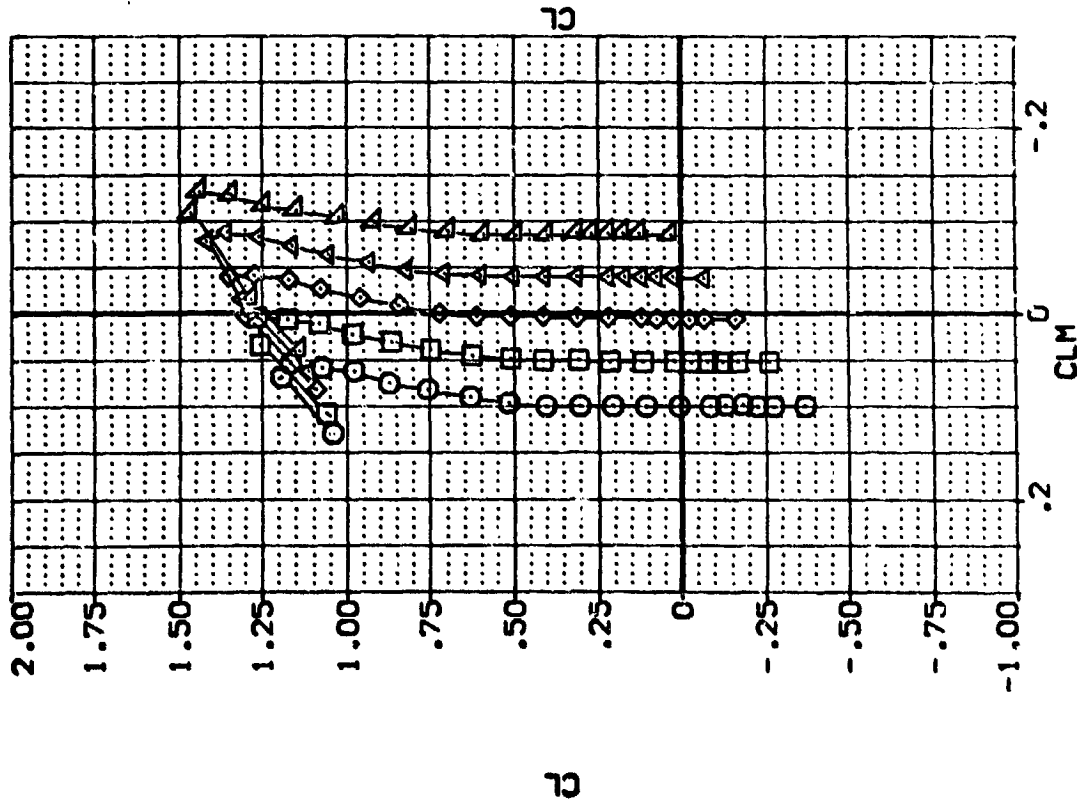


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(A)MACH = .20

LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	EDFLAP	RUCZER	REFERENCE INFORMATION
(80Z111)	0A62B V116E21M8FSX8	-5.000	25.000	-12.000	.000	SREF 4.4113 SO.FT.
(80Z117)	0A62B V116E21M8FSX9	5.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(80Z115)	0A62B V116E21M8FSX9	5.000	22.000	-12.000	.000	BREF 37.5359 INCHES
(80Z114)	0A62B V116E21M8FSX9	10.000	25.000	-12.000	.000	XMRP 43.5574 INCHES
(80Z112)	0A62B V116E21M8FSX9	15.000	25.000	-12.000	.000	ZMRP 15.1875 INCHES
						SCALE .0475

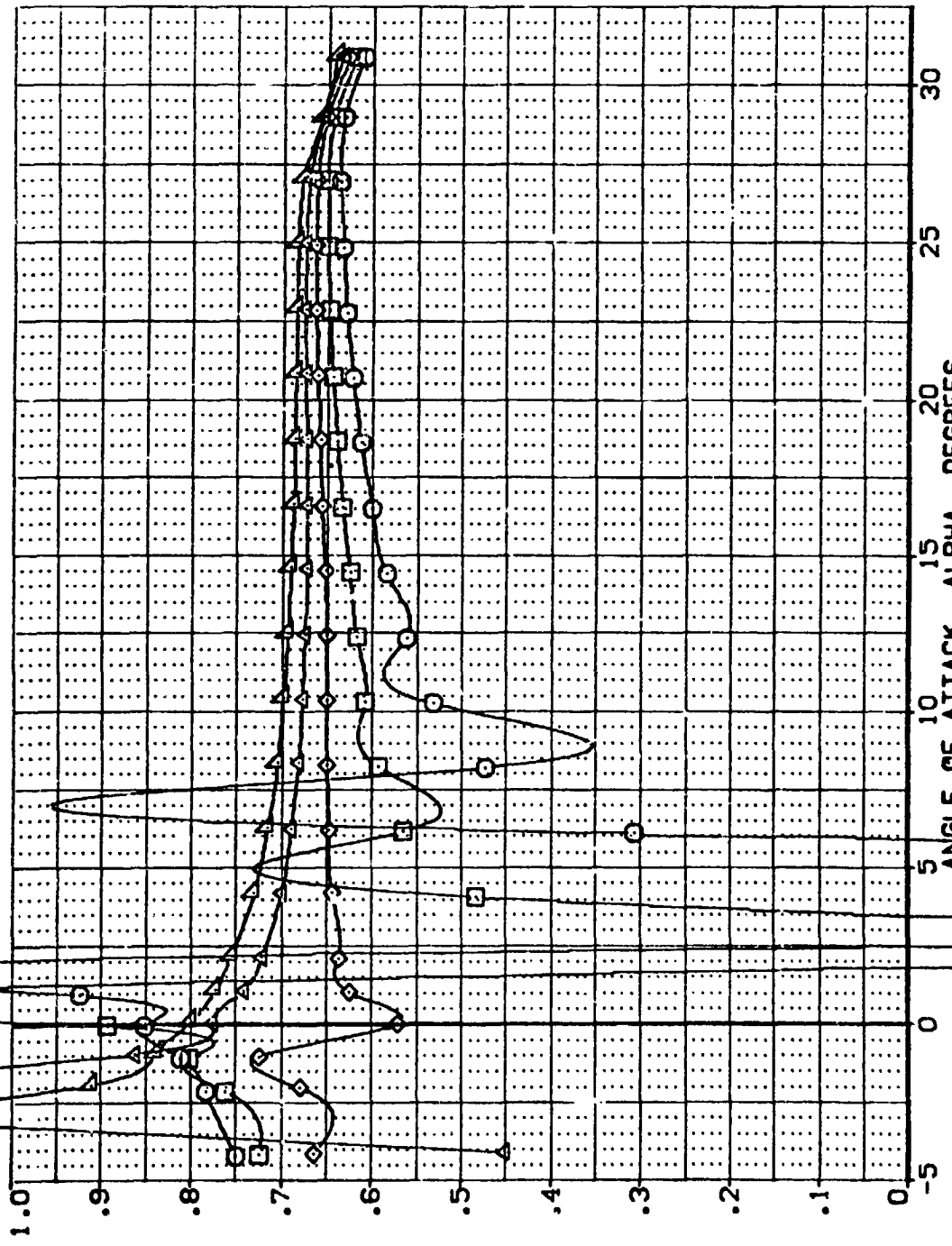


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
 (A)MACH = .20  
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DATA SET SYMB. CONFIGURATION DESCRIPTION

(BDZ111)	8A628	B26C9	M7F8	V118E28V8R5K9
(BDZ117)	8A628	B26C9	M7F8	V118E28V8R5K9
(BDZ115)	8A628	B26C9	M7F8	V118E28V8R5K9
(BDZ114)	8A628	B26C9	M7F8	V118E28V8R5K9
(BDZ112)	8A628	B26C9	M7F8	V118E28V8R5K9

ELEVON SPOONK BOFLAP MUDDER

-5.000	25.000	.000	.000
5.000	25.000	-12.000	.000
10.000	25.000	-12.000	.000
15.000	25.000	-12.000	.000

REFERENCE INFORMATION

SREF	4.4118	90. FT
LREF	19.2298	INCHES
BREF	37.9059	INCHES
XPRP	43.5874	INCHES
YPRP	.0000	INCHES
ZPRP	15.1875	INCHES
SCALE	.0405	SCALE

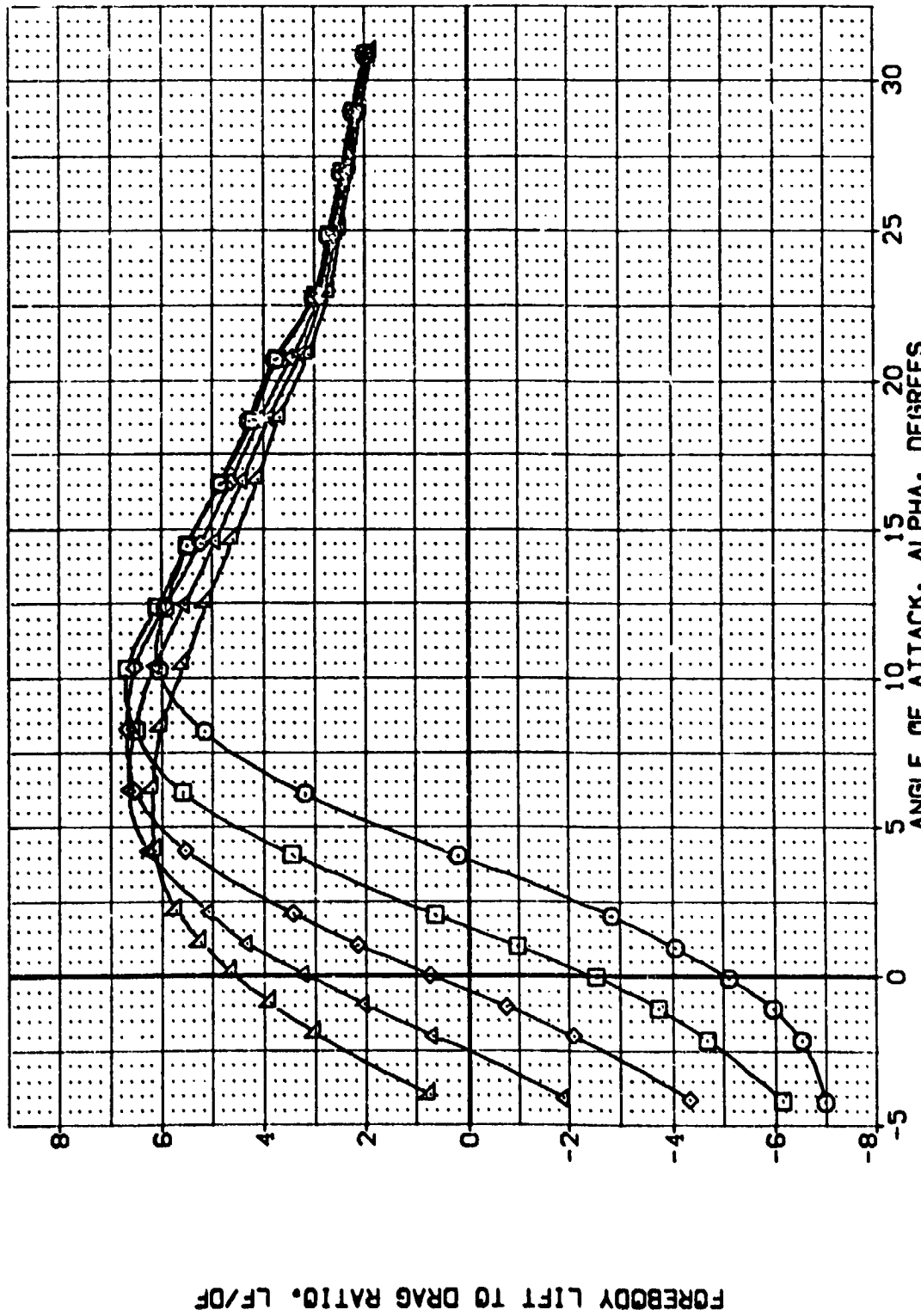


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(A)MACH = .20







DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOON	EOFAP	RUDDER	REFERENCE INFORMATION
(BDZ105)	0A528 B06C3 M7F8 V11E28V8F5A3	-40.000	25.000	-12.000	.000	REF 4.4119 SQ.FT.
(BDZ106)	0A528 B06C3 M7F8 V11E28V8F5A3	-30.000	25.000	-12.000	.000	LREF 19.2259 INCHES
(BDZ107)	0A528 B06C3 M7F8 V11E28V8F5A3	-20.000	25.000	-12.000	.000	BREF 37.5359 INCHES
(BDZ108)	0A528 B06C3 M7F8 V11E28V8F5A3	-15.000	25.000	-12.000	.000	XREF 43.5974 INCHES
(BDZ109)	0A528 B06C3 M7F8 V11E28V8F5A3	-10.000	25.000	-12.000	.000	YREF 15.0000 INCHES
(BDZ117)	0A528 B06C3 M7F8 V11E28V8F5A3	-10.000	25.000	-12.000	.000	ZREF 15.1873 INCHES
						SCALE .0405

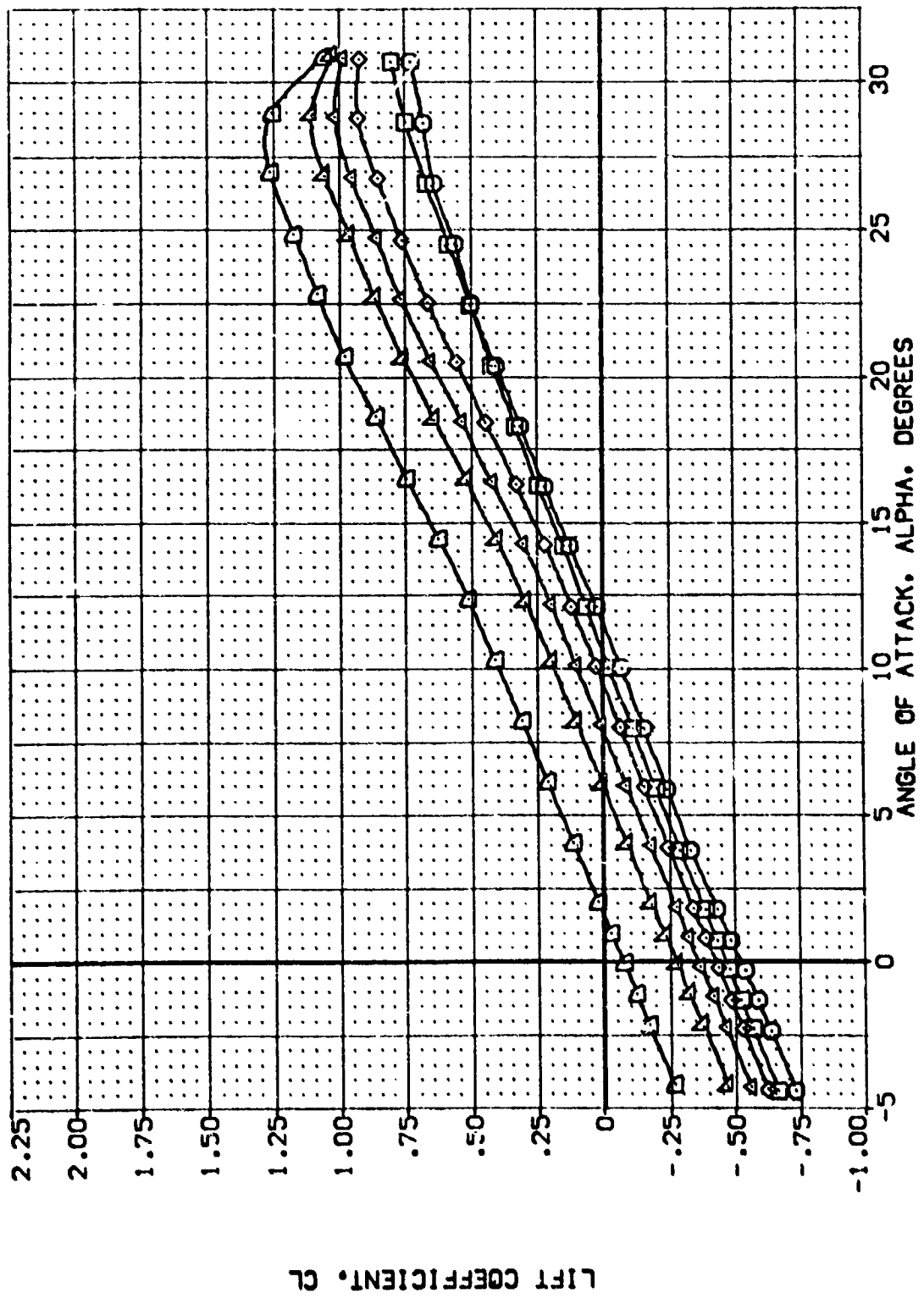


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
 (A)MACHI = .20 PAGE 427

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDRK	BDPLAP	RUDDER	REFERENCE INFORMATION
(B0Z105)	0A628 B26C3 MTF-8 V116E28V85X3	-40.000	25.000	-12.000	.000	4.4119 50.FY
(B0Z106)	0A628 B26C3 MTF-8 V116E28V85X3	-30.000	25.000	-12.000	.000	19.2298 INCHES
(B0Z107)	0A628 B26C3 MTF-8 V116E28V85X3	-20.000	25.000	-12.000	.000	37.9359 INCHES
(B0Z108)	0A628 B26C3 MTF-8 V116E28V85X3	-15.000	25.000	-12.000	.000	43.2574 INCHES
(B0Z109)	0A628 B26C3 MTF-8 V116E28V85X3	-10.000	25.000	-12.000	.000	15.0000 INCHES
(B0Z117)	0A628 B26C3 MTF-8 V116E28V85X3	.000	25.000	-12.000	.000	15.1875 INCHES
						SCALE
						.0405

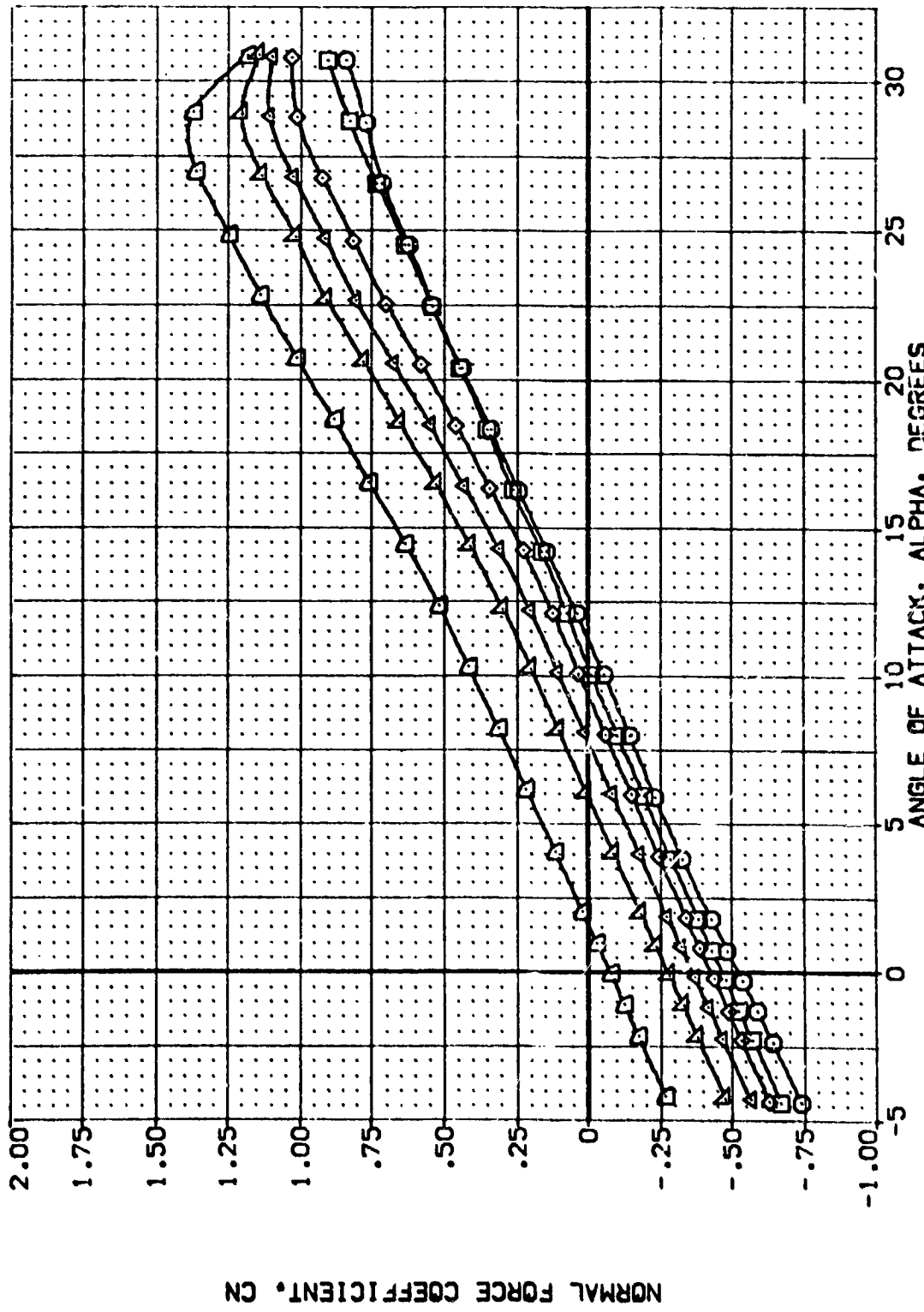


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDRBK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B0Z105)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	-40.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(B0Z106)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	-30.000	25.000	-12.000	.000	LREF 19.2299 INCHES
(B0Z107)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	-20.000	25.000	-12.000	.000	BREF 37.5359 INCHES
(B0Z108)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	-15.000	25.000	-12.000	.000	XTRP 43.5974 INCHES
(B0Z109)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	-10.000	25.000	-12.000	.000	YTRP .0000 INCHES
(B0Z117)	0A5Z8 E26C3 M7F8 V11E2Z8/8P5V9	.000	25.000	-12.000	.000	ZTRP 15.1873 INCHES
						SCALE .0405

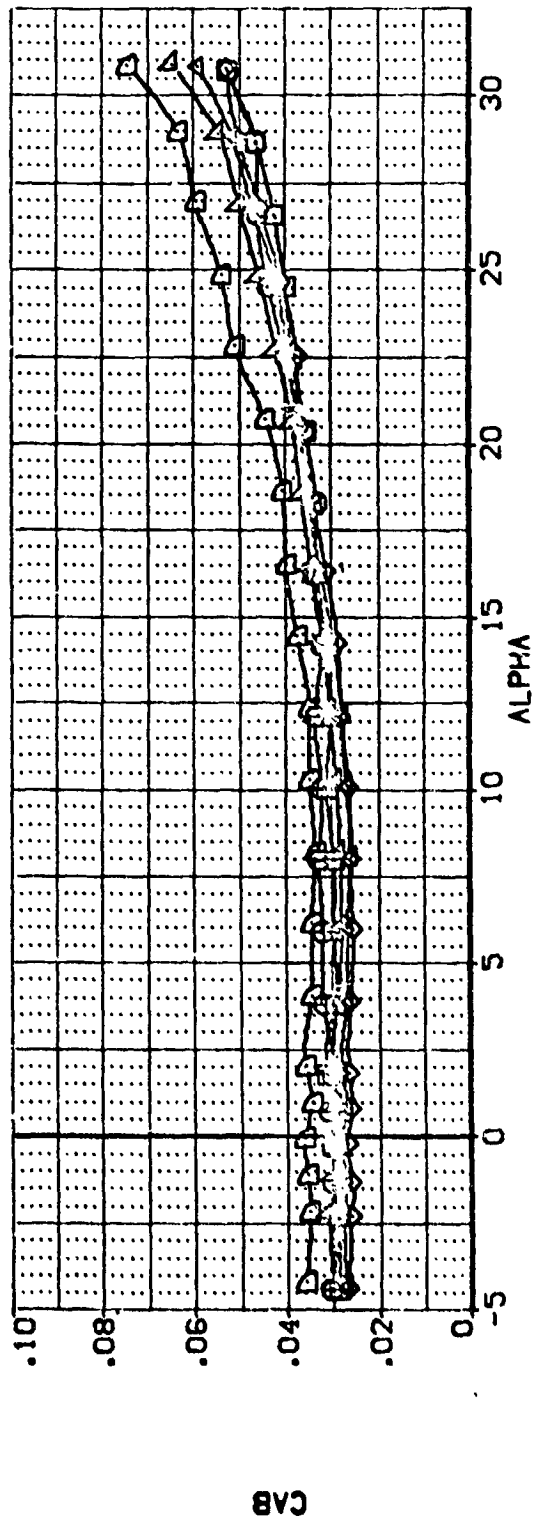
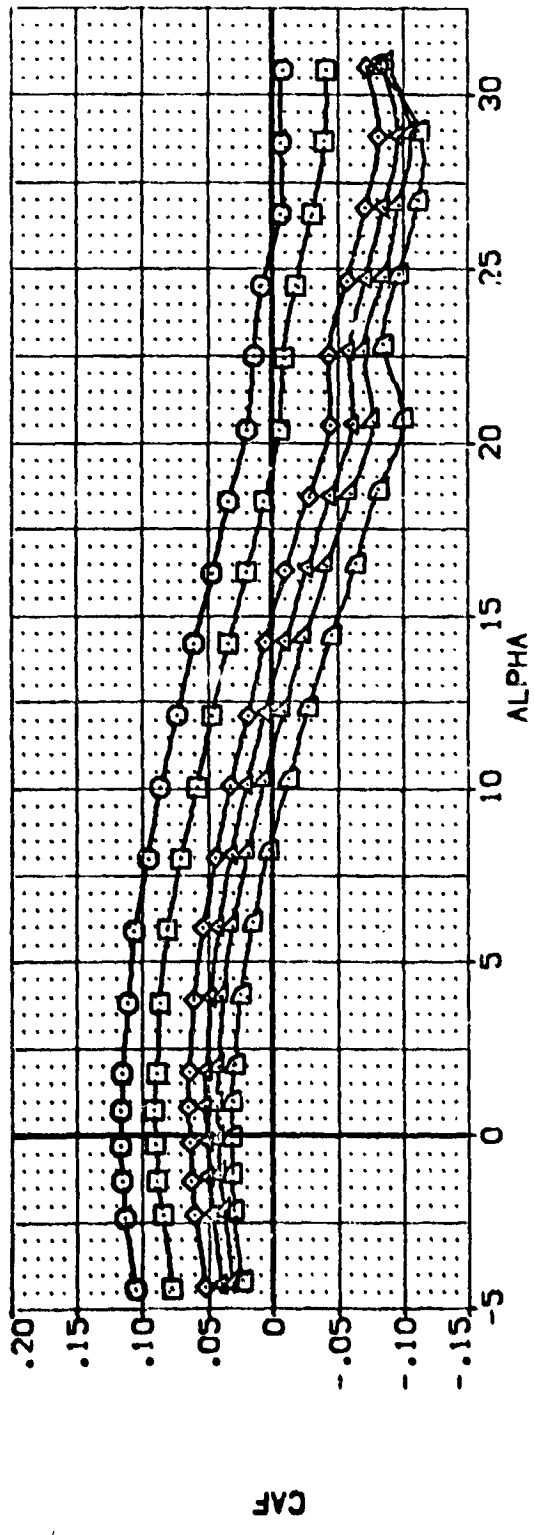
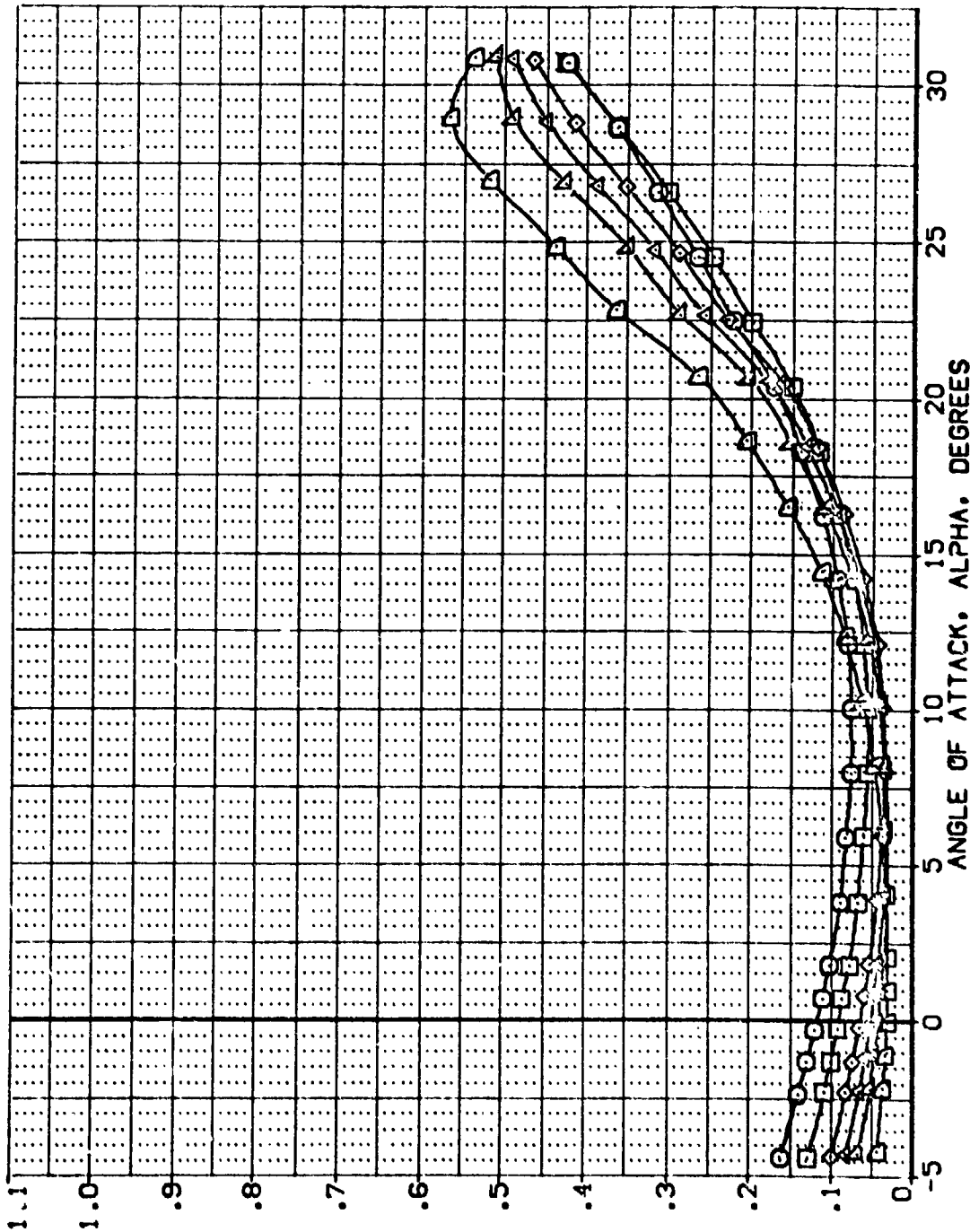


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
 CAJMACH = .20 PAGE 429

DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RLODER	REFERENCE INFORMATION
(80Z105)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	-1.000	25.000	-12.000	.000	SREF 4.1119 50.FT
(80Z106)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	-2.000	22.000	-12.000	.000	LREF 19.2299 INOES
(80Z107)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	-20.000	22.000	-12.000	.000	BREF 37.5359 INOES
(80Z108)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	-15.000	22.000	-12.000	.000	XMRP 43.5974 INOES
(80Z109)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	-10.000	25.000	-12.000	.000	ZMRP .0000 INOES
(80Z117)	0A6Z8 B2B03 M7F8 V11(6Z28V8F5X9	.000	25.000	-12.000	.000	SCALE 15.1875 INOES
						SCALE .0405

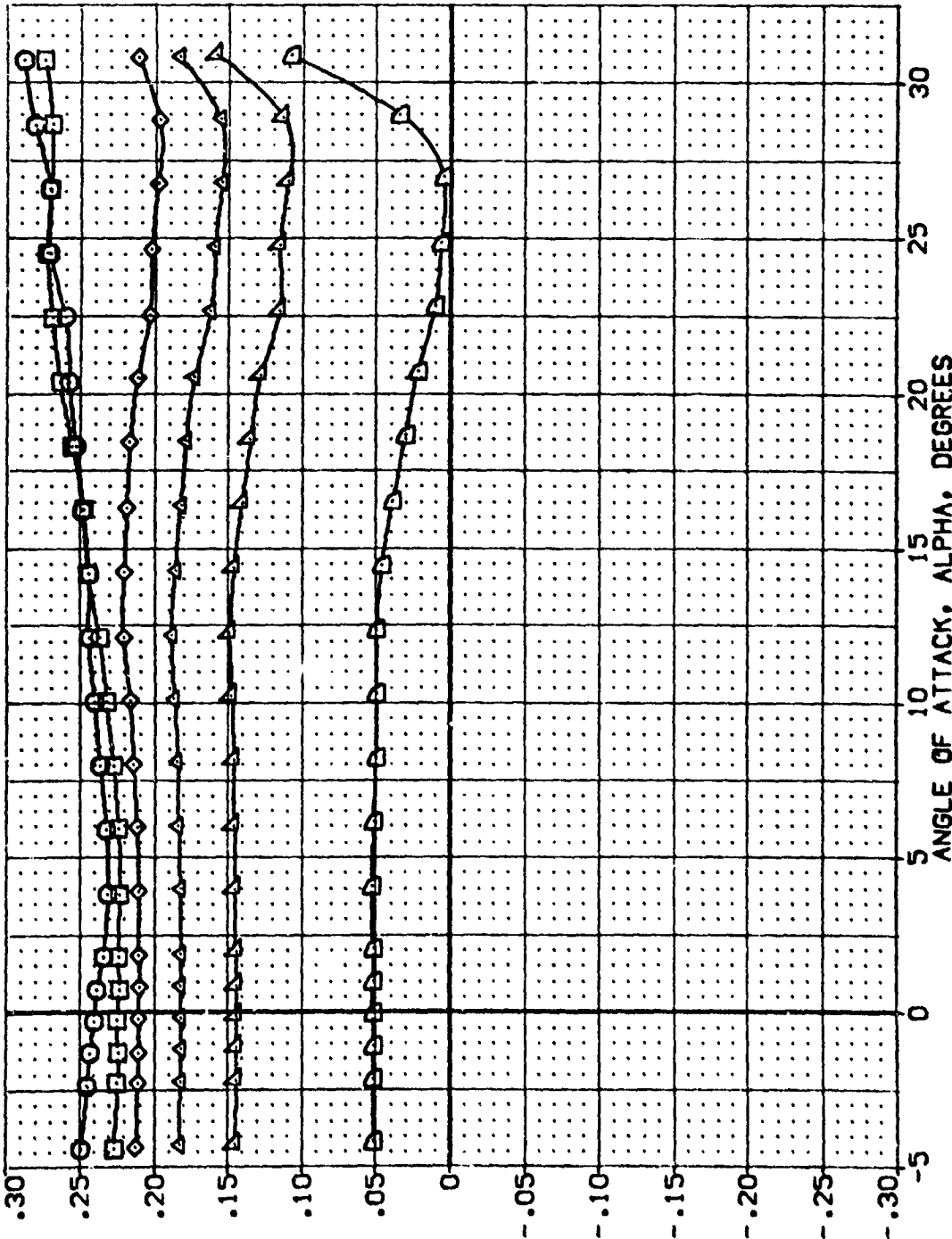


FOREBODY DRAG COEFFICIENT, CDF

FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

CLMACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPORBR	ROFLAP	RUDDER	REFERENCE INFORMATION
(802105)	DAS28 E26C9 M7F8 V116E28V8R5V9	-10.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT.
(802106)	DAS28 E26C9 M7F8 V116E28V8R5V9	-20.000	25.000	-12.000	.000	LRREF 19.2789 INCHES
(802107)	DAS28 E26C9 M7F8 V116E28V8R5V9	-20.000	25.000	-12.000	.000	BRREF 37.5359 INCHES
(802108)	DAS28 E26C9 M7F8 V116E28V8R5V9	-15.000	25.000	-12.000	.000	YPRP 43.5974 INCHES
(802109)	DAS28 E26C9 M7F8 V116E28V8R5V9	-10.000	25.000	-12.000	.000	ZPRP .0000 INCHES
(802117)	DAS28 E26C9 M7F8 V116E28V8R5V9	-10.000	25.000	-12.000	.000	SCALE 15.1875 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(AJMACH = .20

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ELEVON	SPDBK	BDFLAP	RUDDER	REFERENCE INFORMATION	SCALE
-40.000	25.000	-12.000	.000	SREF	4.4119
-30.000	25.000	-12.000	.000	LRFP	19.2299
-20.000	25.000	-12.000	.000	BRFP	37.5359
-15.000	25.000	-12.000	.000	YPRP	43.5974
-10.000	25.000	-12.000	.000	ZPRP	.0000
.000	25.000	-12.000	.000	SCALE	15.1875
					.0405

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	REFERENCE INFORMATION	SCALE
{B0Z105}	B0Z105	V116E28V8F5X9	
{B0Z106}	B0Z106	M7F8	
{B0Z107}	B0Z107	M7F8	
{B0Z108}	B0Z108	M7F8	
{B0Z109}	B0Z109	M7F8	
{B0Z117}	B0Z117	M7F8	

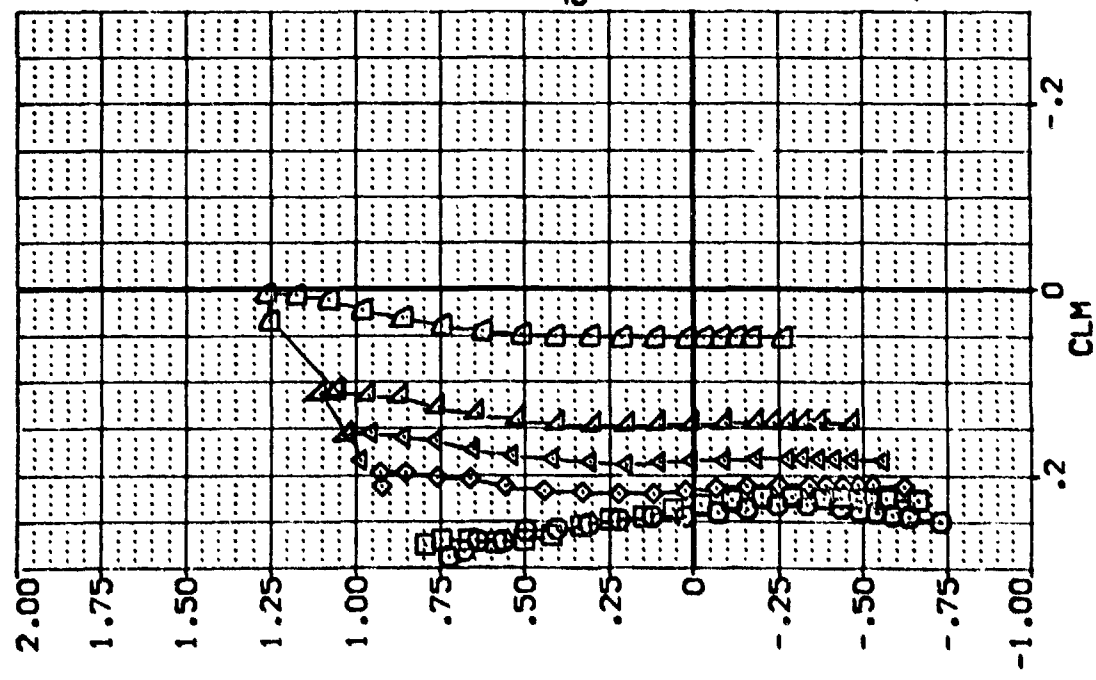
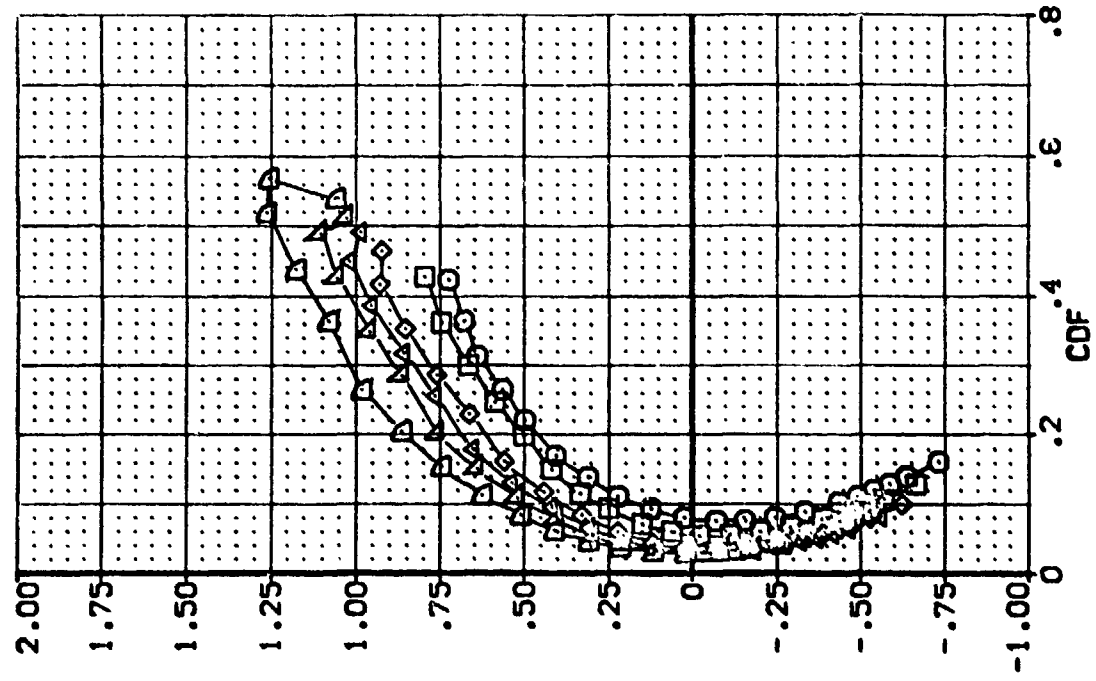


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP  
 (A)MACH = .20  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOTWKB	BDFLAP	RUDDER	REFERENCE INFORMATION
(80Z105)	0A5Z8 B26C3	-40.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT. INCHES
(80Z106)	0A5Z8 B26C3	-30.000	23.000	-12.000	.000	LREF 19.2799 INCHES
(80Z107)	0A5Z8 B26C3	-20.000	23.000	-12.000	.000	BREF 37.9359 INCHES
(80Z108)	0A5Z8 B26C3	-15.000	23.000	-12.000	.000	XTRP 43.5974 INCHES
(80Z109)	0A5Z8 B26C3	-10.000	25.000	-12.000	.000	YTRP .0000 INCHES
(80Z117)	0A5Z8 B26C3	-10.000	25.000	-12.000	.000	ZTRP 15.1875 INCHES
						SCALE .0405

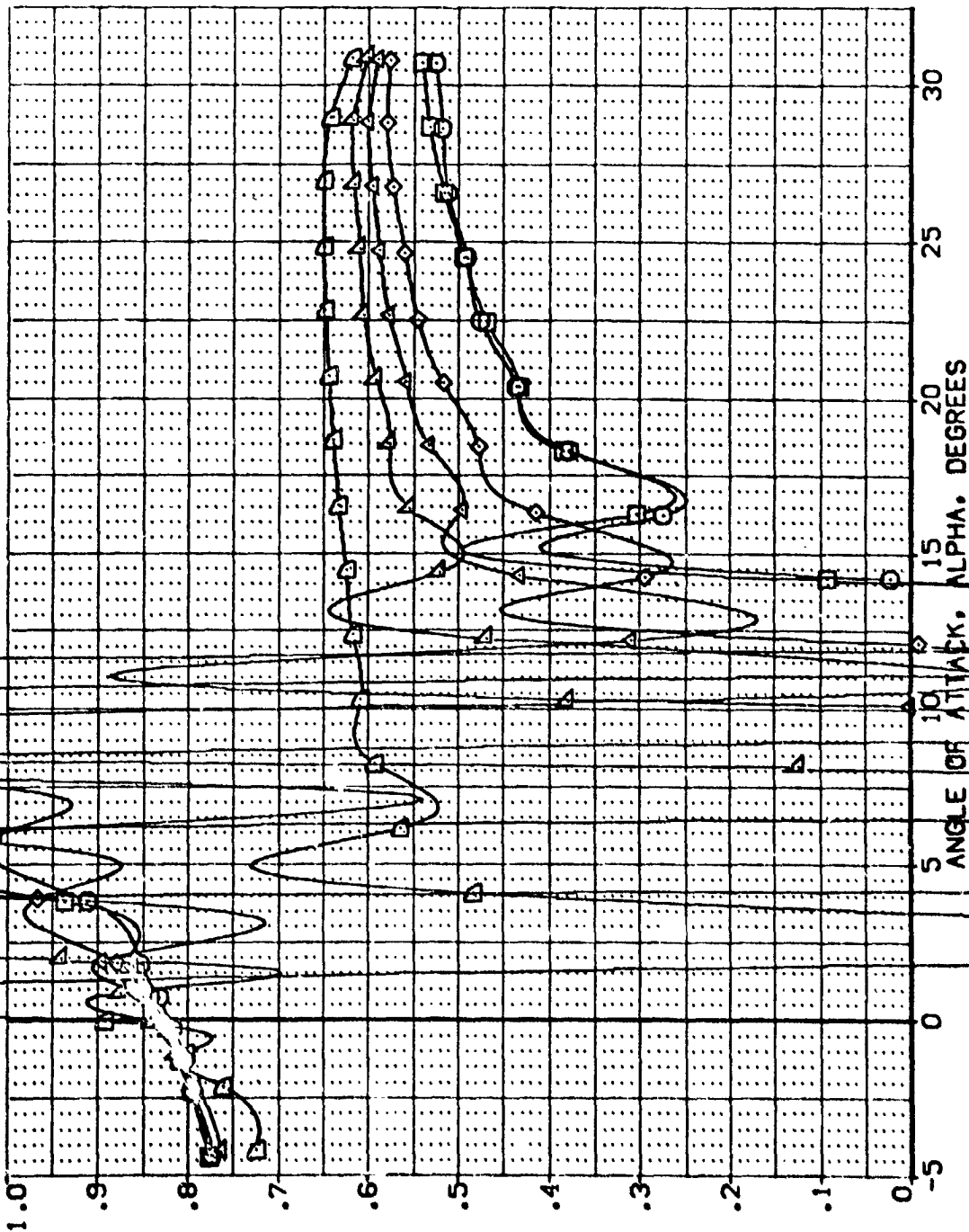


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(CA)MACH = .20

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDRBK	BD/LAP	RUDDER	REFERENCE INFORMATION
(B02105)	0A528 B0263 M7F8 V118E28/8F5X9	-40.000	25.000	-12.000	.000	GREF 4.4119 SQ.FT.
(B02106)	0A528 B0263 M7F8 V118E28/8F5X9	-30.000	25.000	-12.000	.000	LREF 19.2239 INCHES
(B02107)	0A528 B0263 M7F8 V118E28/8F5X9	-20.000	25.000	-12.000	.000	BREF 37.9359 INCHES
(B02108)	0A528 B0263 M7F8 V118E28/8F5X9	-15.000	25.000	-12.000	.000	XMRP 43.9574 INCHES
(B02109)	0A528 B0263 M7F8 V118E28/8F5X9	-10.000	25.000	-12.000	.000	ZMRP .0000 INCHES
(B02117)	0A528 B0263 M7F8 V118E28/8F5X9	.000	25.000	-12.000	.000	SCALE 15.1875 INCHES

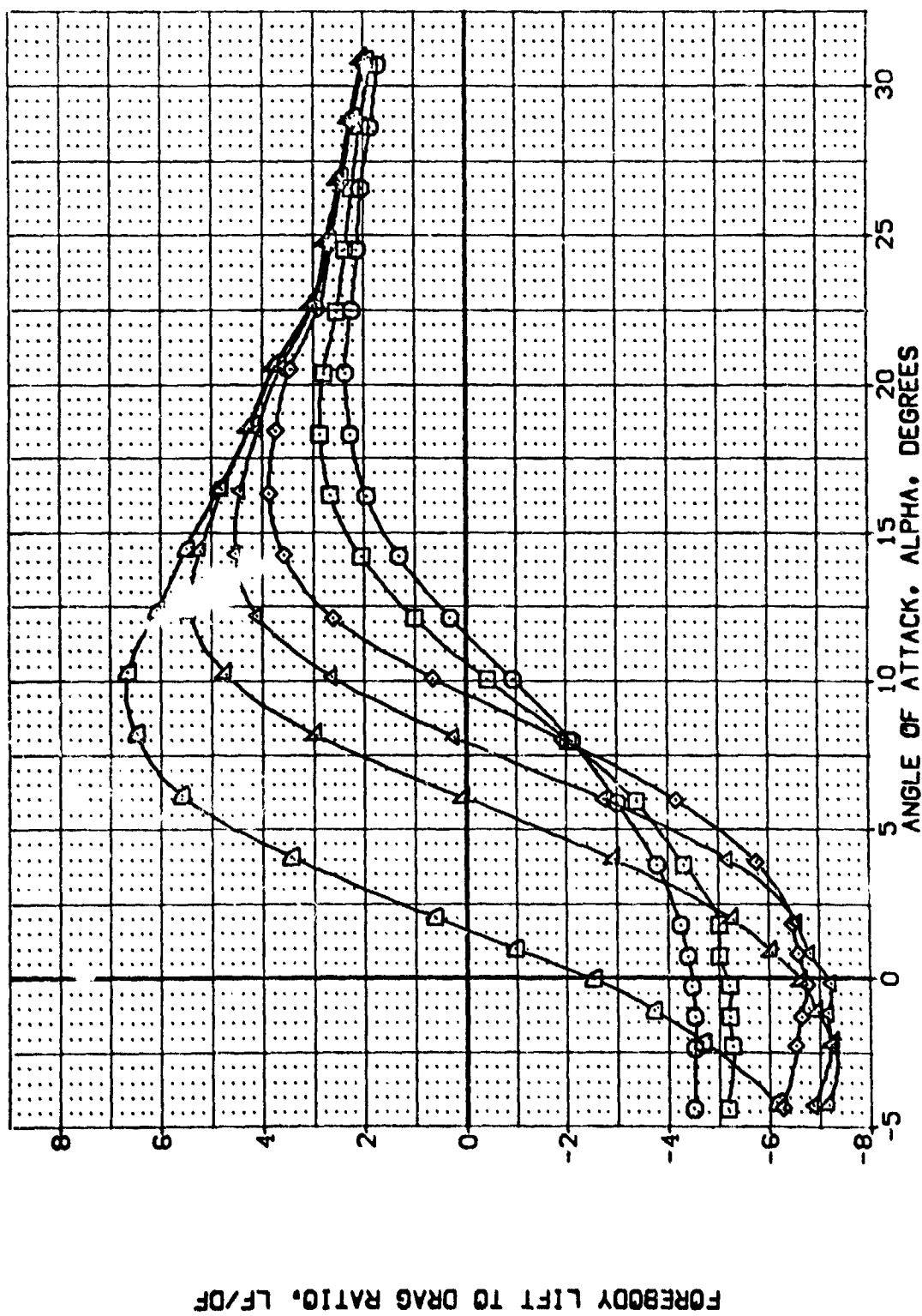


FIG 39 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

CAJMACB = .20 PAGE 434



(20Z105)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	WACH	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DELTVN	DELTVN	SCALE
○	.000	.200	BDFLAP	-12.000	.000	20Z105	20Z106	4.4119
		.000	RLODER	.000	-40.000	20Z107	20Z108	19.2299
		25.000	BETA	.000	-20.000	20Z109	20Z110	37.9359
					-10.000	20Z111	20Z112	43.9974
					10.000	20Z113	20Z114	.00004
						20Z115	20Z116	15.1875
						20Z117	20Z118	.0405
						20Z119	20Z120	

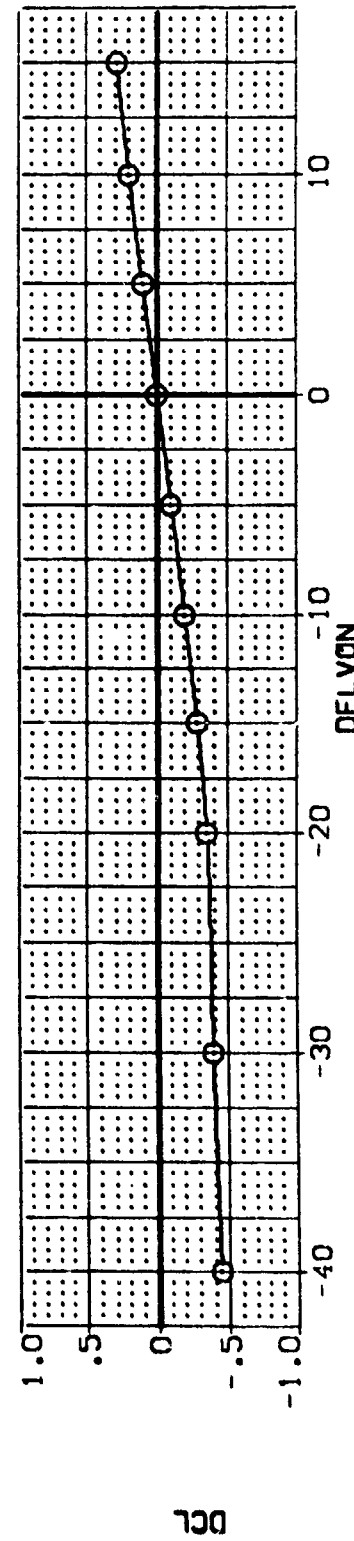
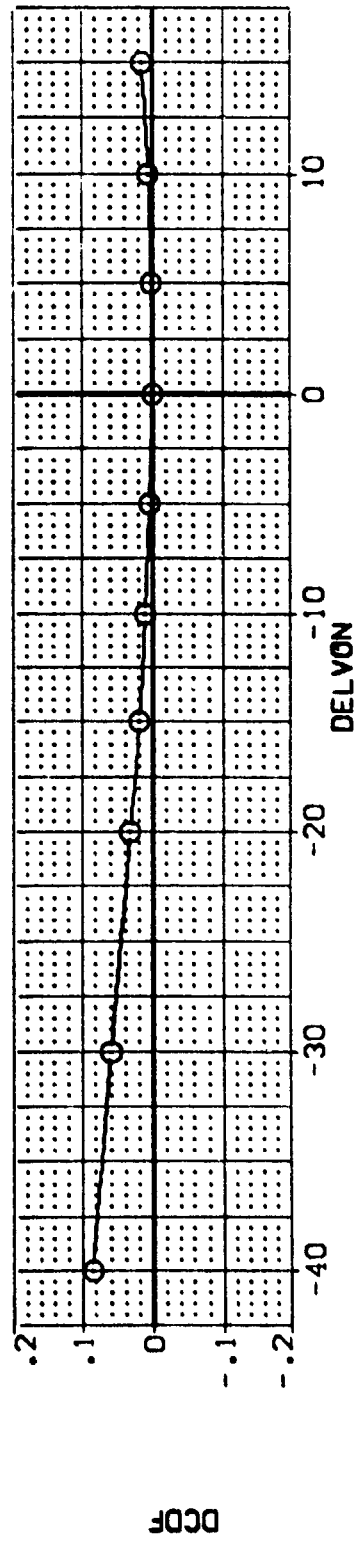
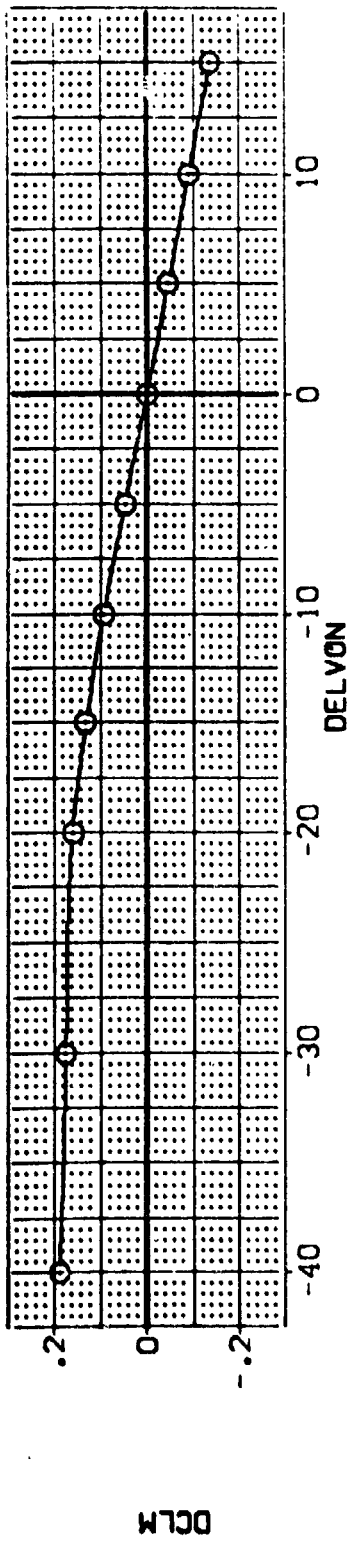


FIG 40 ELEVON EFFECTIVENESS. FREE AIR. GEAR OFF. BASELINE ELEVON GAP

(20Z105)

W116E28V8R5X9

M7F8

B26C9

0A628

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○		5.000				.200	BDFLAP	-12.000	DATASET	DELTVN	SREF
				A1LRON	.000	.000	RJDDER	.000	20Z105	-40.000	LREF
				SPOBRK	25.000	.000	BETA	.000	20Z107	-20.000	BREF
									20Z108	-15.000	XMRP
									20Z111	5.000	ZMRP
									20Z115	5.000	ZMRP
									20Z117	10.000	ZMRP
									20Z114	10.000	ZMRP
											SCALE
											4.4119
											19.2799
											37.9359
											43.5974
											0000
											15.1875
											SCALE
											.0405

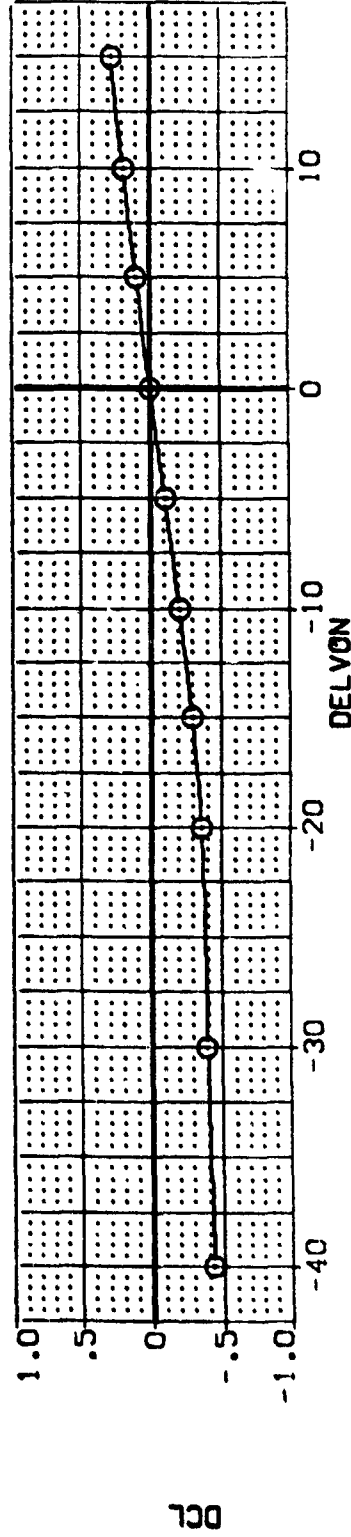
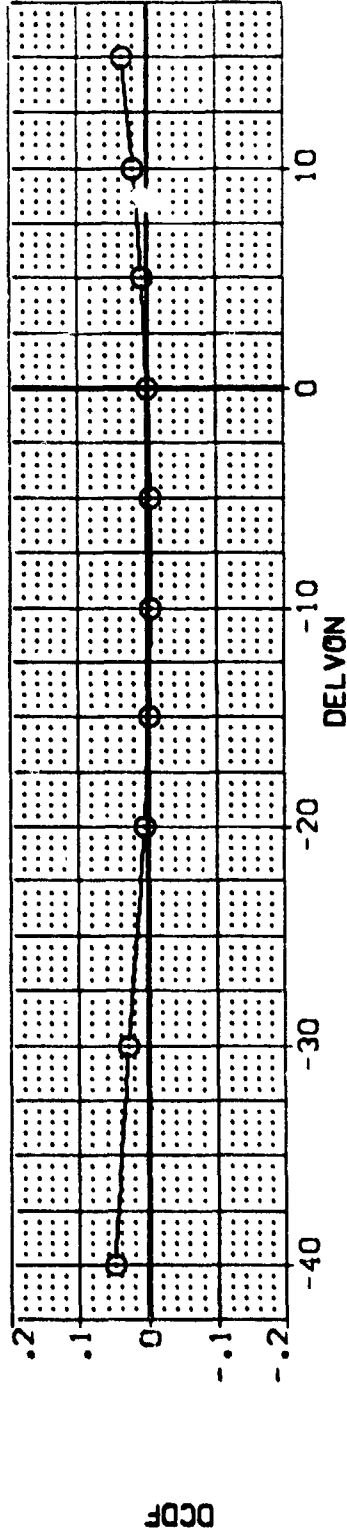
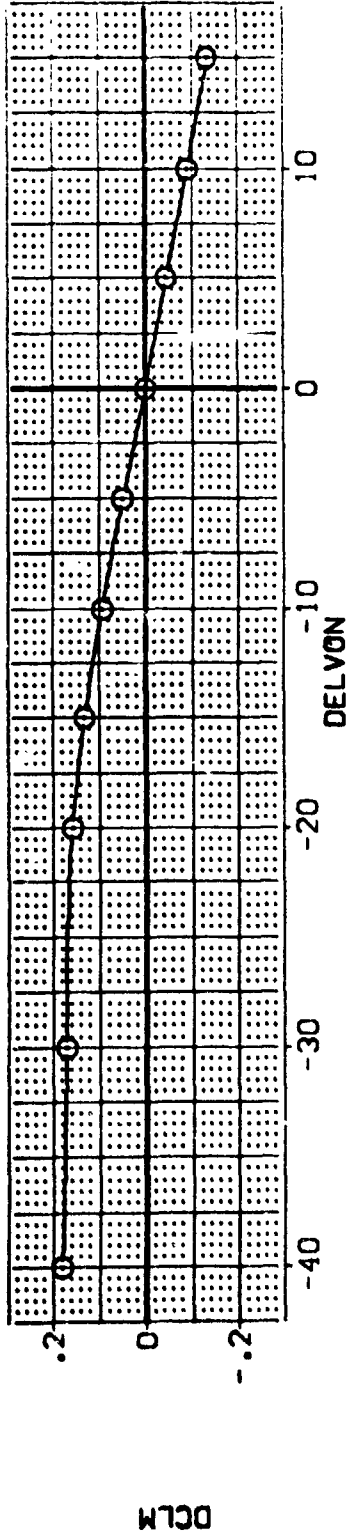


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(20Z105)

W116E28V8R5X9

M7F8

B26C9

0A62B

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	.200	BOFLAP	DELTON	DELTON	SREF	SO.FT.
	10.000	.000	R-LODER	20Z105	-20.000	LREF	19.2299
		.000	BETA	20Z107	-15.000	BREF	37.9359
		25.000		20Z109	-5.000	XMRP	43.5874
				20Z111	5.000	YMRP	0.000
				20Z117	10.000	ZMRP	15.1875
				20Z114	10.000	SCALE	.0405

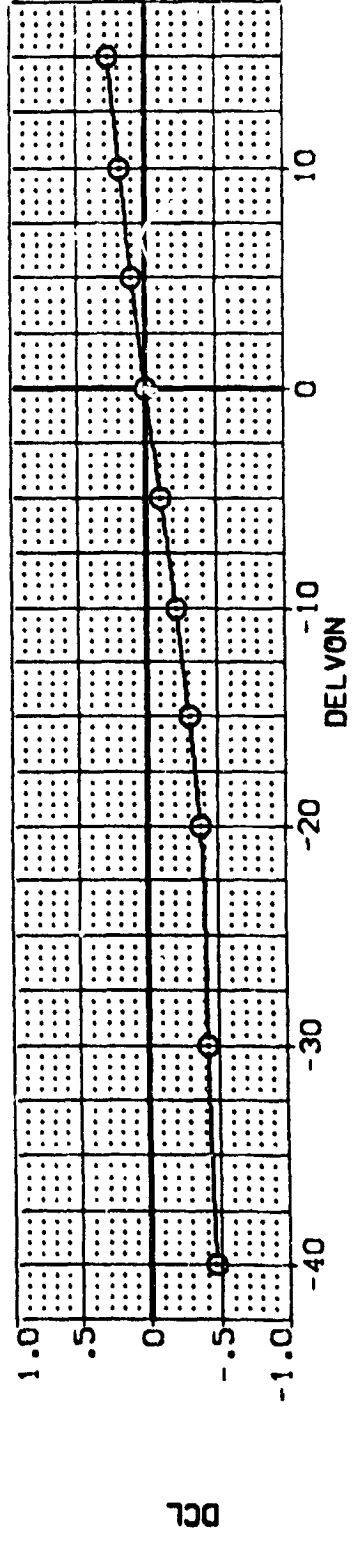
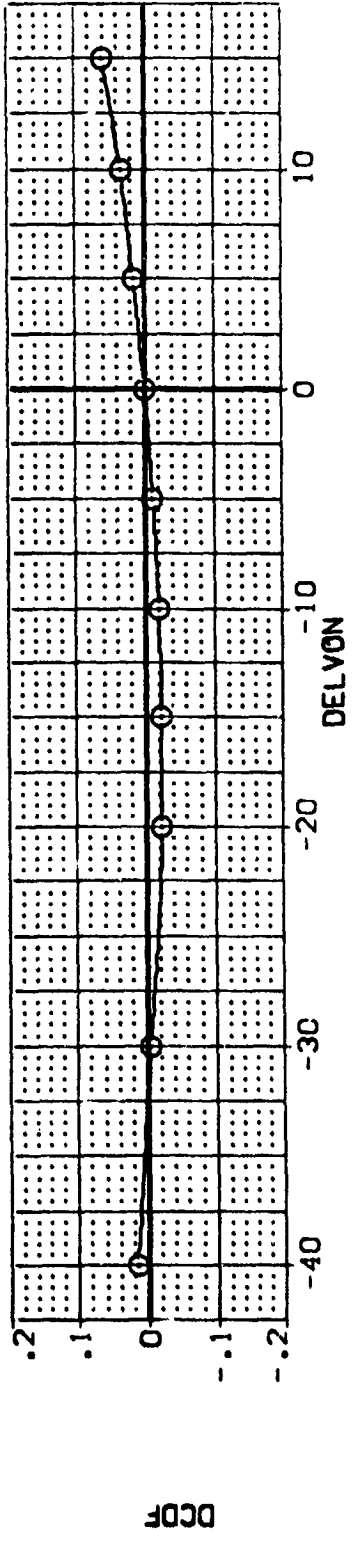
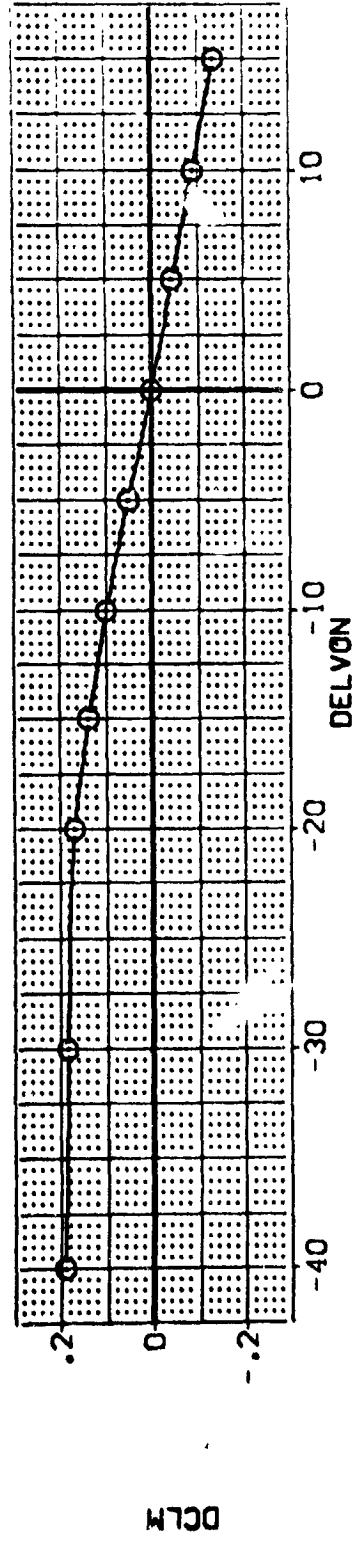


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(20Z105)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
○	15.000		.200 BD/FLAP	-12.000	20Z105	-40.000	LREF	4.4119 SC.FT.
			.000 RUDDER	.000	20Z107	-70.000	BREF	19.2799 INCHES
			25.000 BETA	.000	20Z108	-15.000	XMRP	37.9359 INCHES
					20Z109	-10.000	YMRP	43.5874 INCHES
					20Z117	.000	ZMRP	15.0000 INCHES
					20Z114	10.000	SCALE	15.1675 INCHES
					20Z112	15.000	SCALE	.0405 SCALE

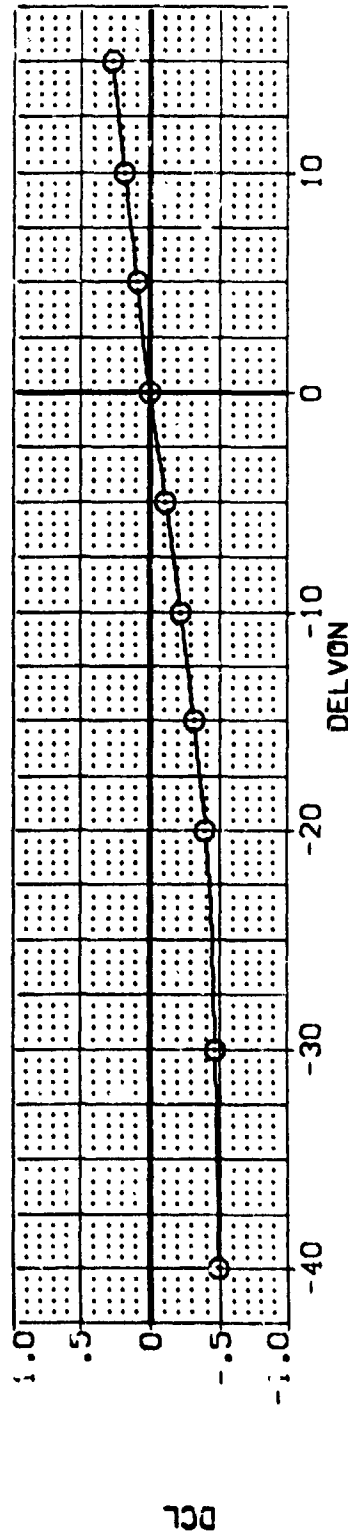
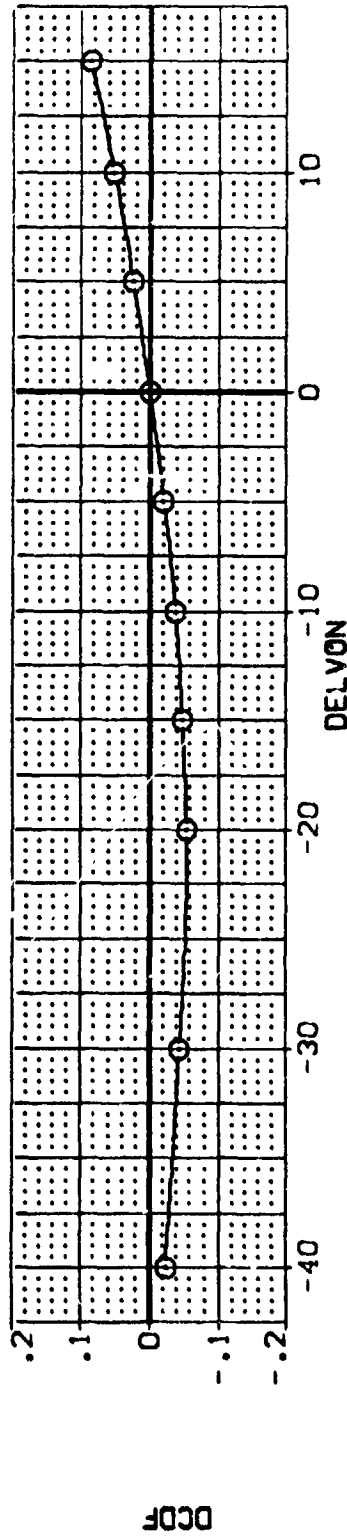
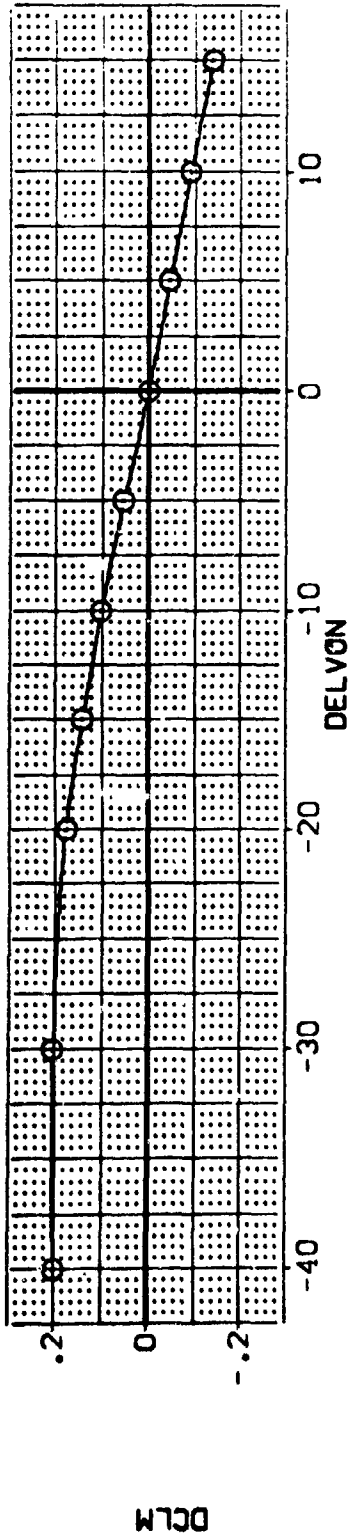


FIG 40 ELEVON EFFECTIVENESS: FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(20Z:05)

0A628 B26C9 M7F8 W116E28VER5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION									
ALPHA	20.000	MACH	.200	BOFLAP	-12.000	DATASET	20Z106	DELV01	30.000	SREF	4.4119	SO.FT.	5
A1LRON	.000	R.ODER	.000	BETA	.000	DATASET	20Z107	DELV02	-15.000	BREF	12.2799	INCHES	5
SPOBRK	25.000					DATASET	20Z108	DELV03	-5.000	X-PRP	37.9359	INCHES	5
						DATASET	20Z111	DELV04	5.000	Y-PRP	43.5974	INCHES	5
						DATASET	20Z115	DELV05	15.000	Z-PRP	.0000	INCHES	5
						DATASET	20Z117	DELV06	15.000	SCALE	15.1875	SCALE	.0405
						DATASET	20Z114	DELV07	10.000				

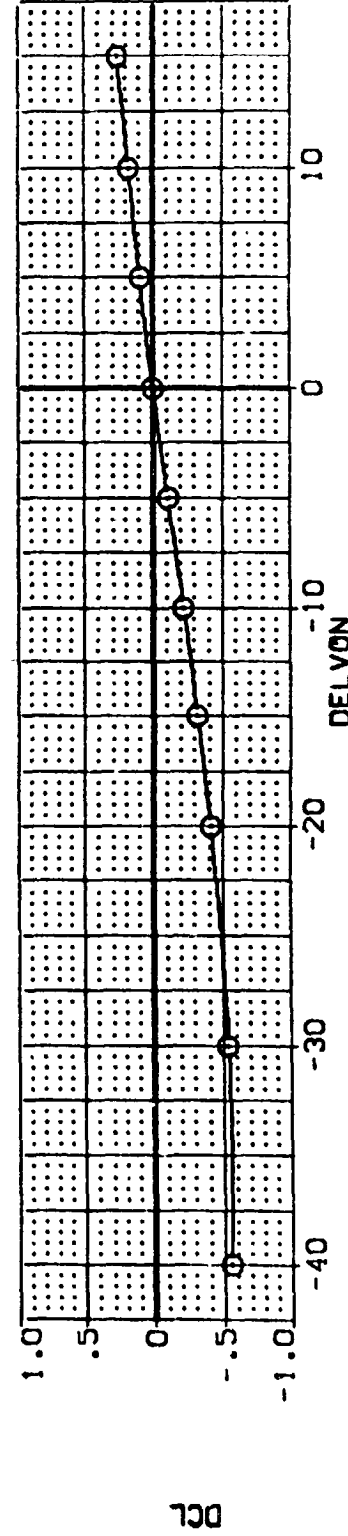
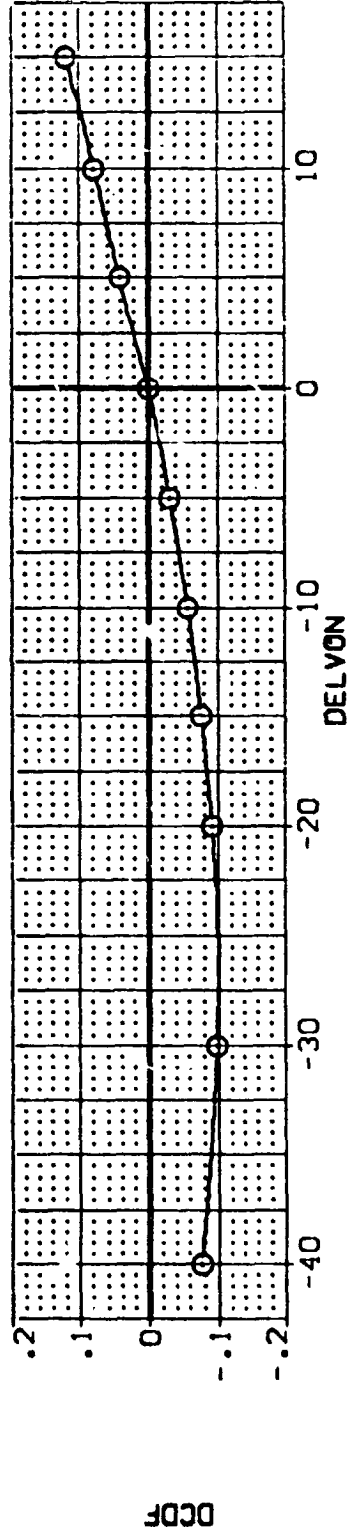
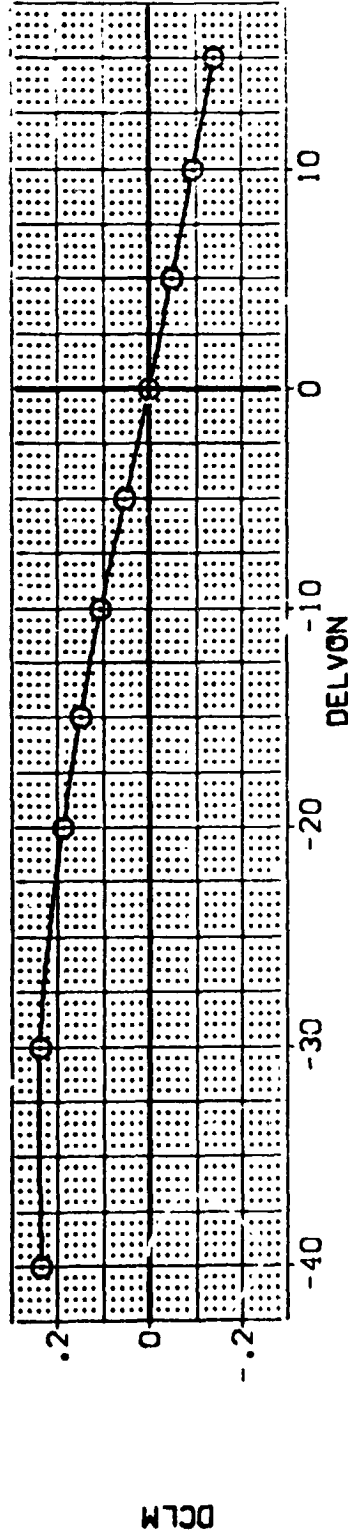


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(20Z105)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		DATASET		DELTON		SRF		REFERENCE INFORMATION	
O		25.000		.700		.200		-12.000		20Z105		-30.000		4.4119		SCPT.	
		AILRON		RUDER		BFLAP		.000		20Z106		-15.000		19.2759		INCL.	
		SPDRK		BETA		.000		-10.000		20Z107		-5.000		37.9359		INCL.	
								.000		20Z109		5.000		43.5674		INCL.	
								10.000		20Z111		15.000		.0000		INCL.	
										20Z112		.0400		15.1873		SCALE	

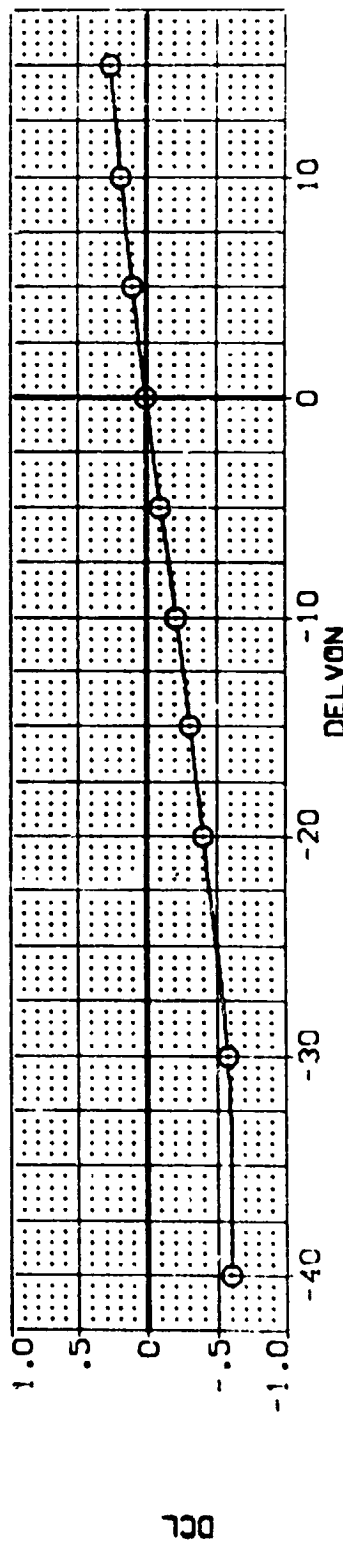
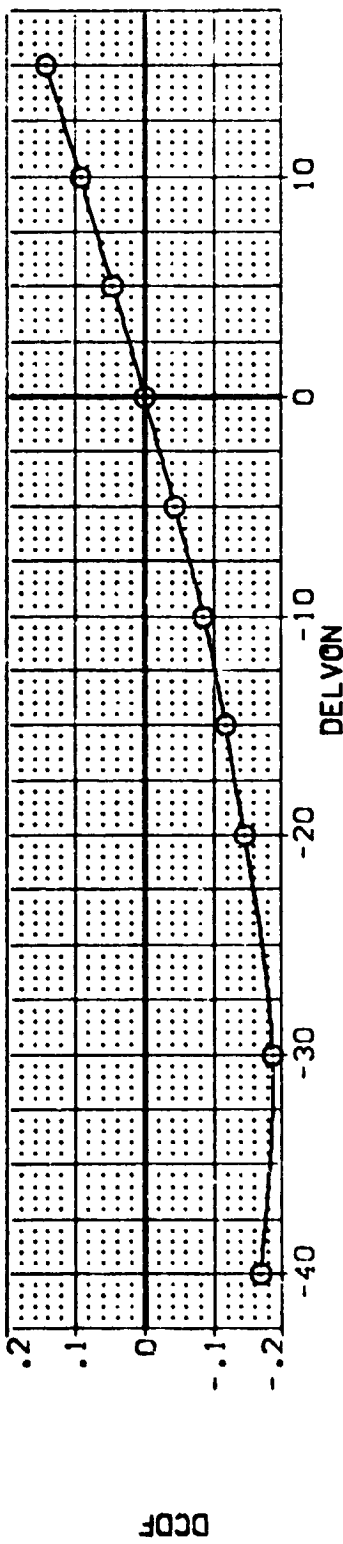
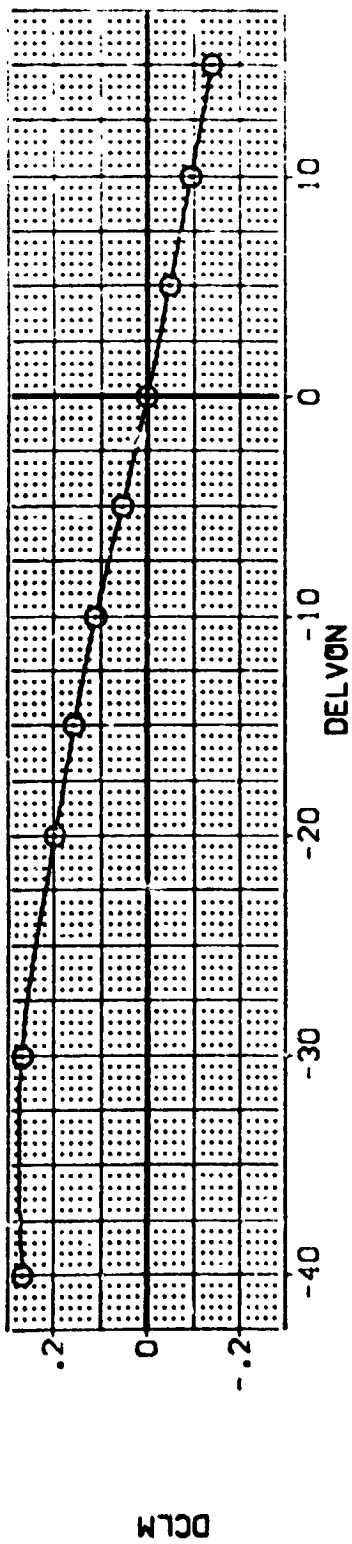


FIG 40 ELEVON EFFECTIVENESS. FREE AIR, GEAR OFF. BASELINE ELEVON GAP

CA62B B26C9 M7F8 W116E28V8RSX9 (20Z105)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	SREF	REFERENCE INFORMATION
○	20.000	AILRON	.200 BOFLAP	DELVON	20Z106	-30.000	LREF	4.4118
		SPOBRK	.000 R-ODER	DELVON	20Z108	-15.000	KREF	19.7299
			75.000 BETA	DELVON	20Z111	-5.000	YREF	43.5874
				DELVON	20Z115	5.000	ZREF	15.1875
				DELVON	20Z112	15.000	SCALE	.0405

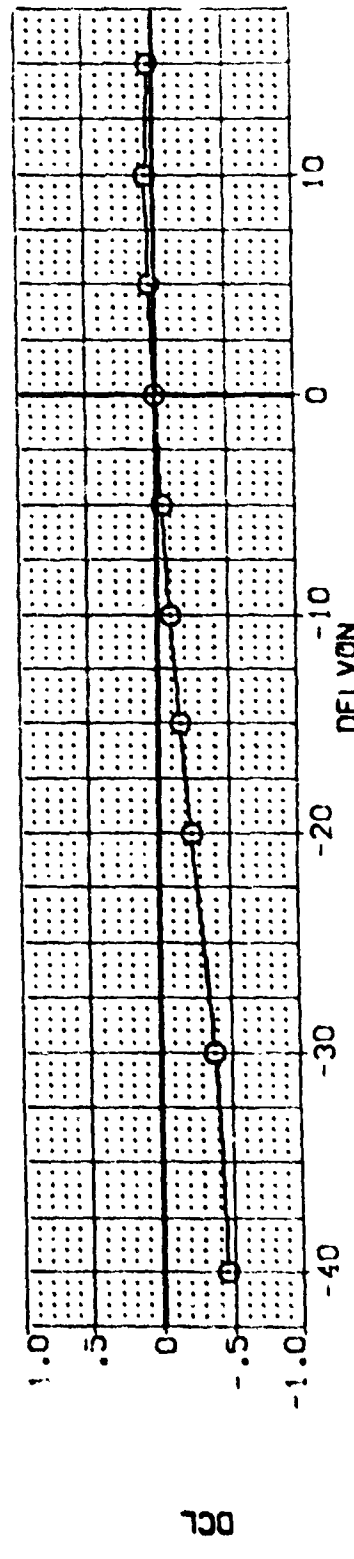
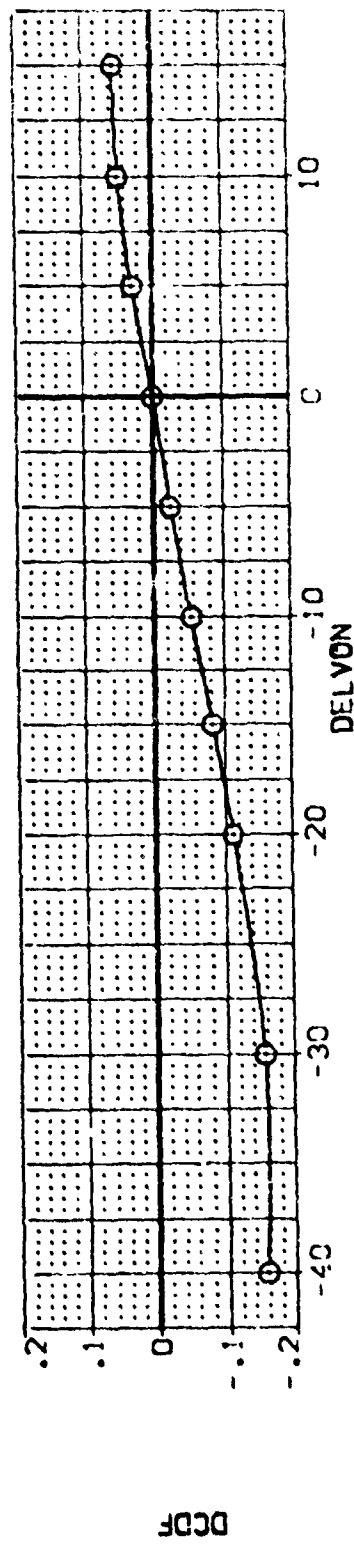
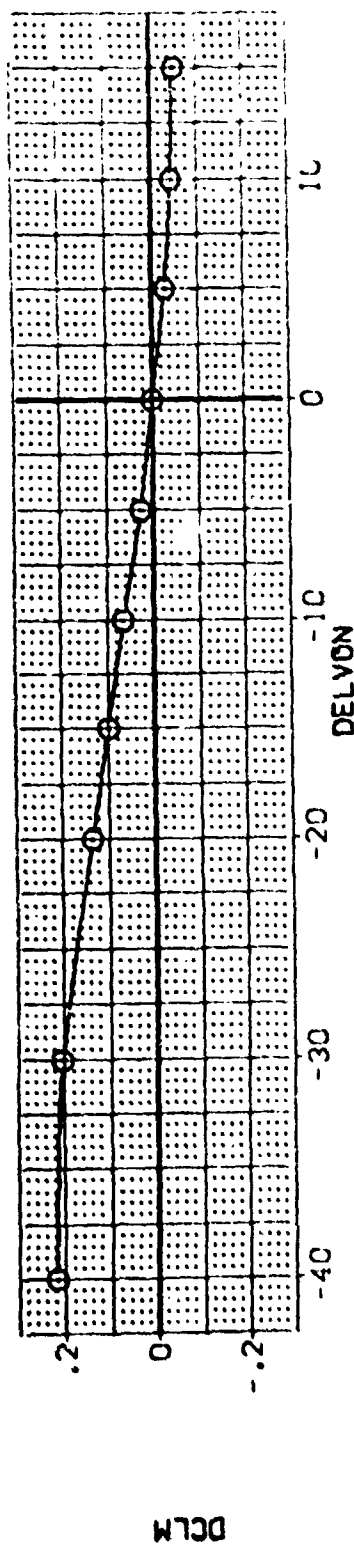
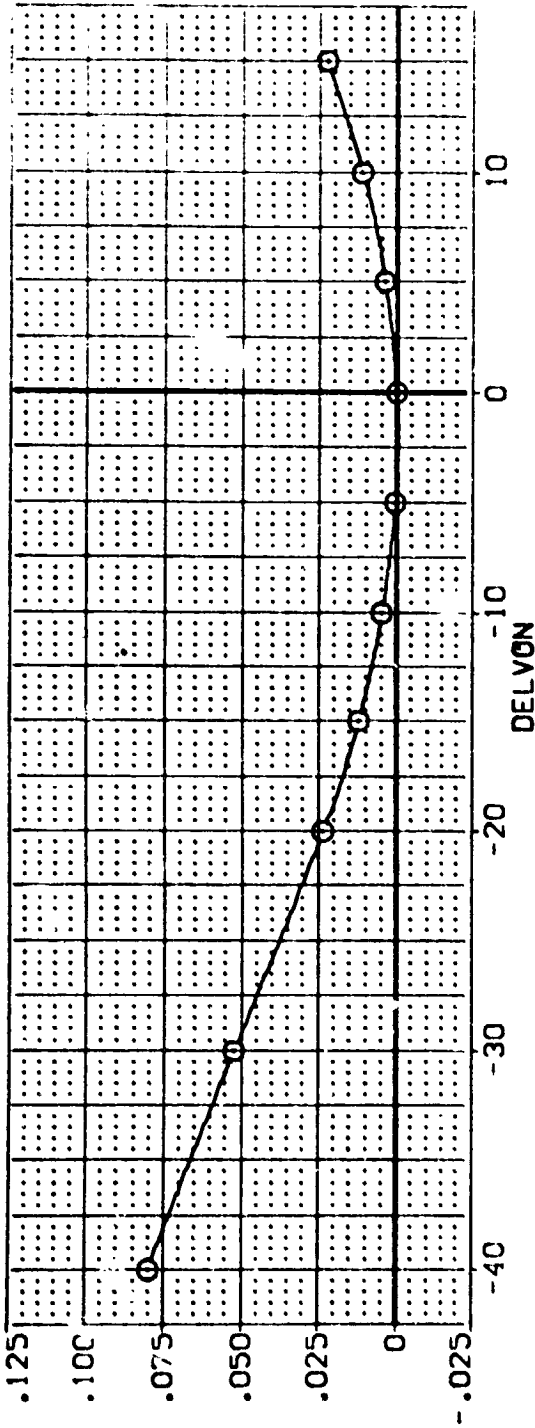


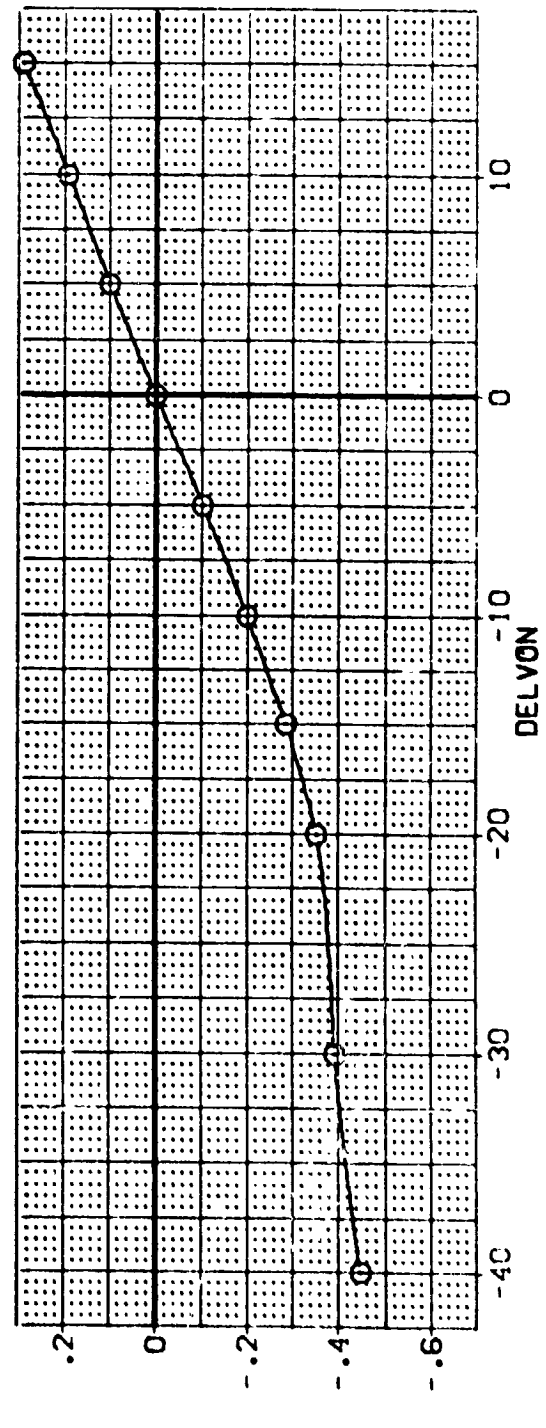
FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z105)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE		REFERENCE INFORMATION		
O	.000	.200	BDLAP	RFLDR	BETA	DELTON	DATASET	DELTON	SREF	SQ.FT.
		.000				-12.000	20Z105	-30.000	LREF	4.4119
		.25.000				.000	20Z107	-15.000	BREF	19.2799
						.000	20Z109	-10.000	XREF	37.9359
						10.000	20Z111	5.000	YREF	43.5974
						10.000	20Z113	5.000	ZREF	15.1875
						10.000	20Z114	15.000	SCALE	.0405



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FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP



(20Z105)

W116E28V8R5X9

M7F8

B26C9

0A628

SYMBOL ○

ALPHA 5.000

MACH ALLRON SPOBRK

PARAMETRIC VALUES

BOFLAP .200

RJODER .000

BETA 25.000

DATA SOURCE

DELVON -40.000

DELVON -20.000

DELVON -10.000

DELVON 10.000

DATASET 20Z105

DATASET 20Z107

DATASET 20Z109

DATASET 20Z111

DATASET 20Z112

DATASET 20Z106

DATASET 20Z108

DATASET 20Z110

DATASET 20Z115

DATASET 20Z112

DELVON SREF -20.000

LREF 19.2299

BREF 37.9358

XMRP 43.5974

YMRP .0000

ZMRP 15.1875

SCALE .0405

REFERENCE INFORMATION

SCALE 4.4119

SCALE 19.2299

SCALE 37.9358

SCALE 43.5974

SCALE .0000

SCALE 15.1875

SCALE .0405

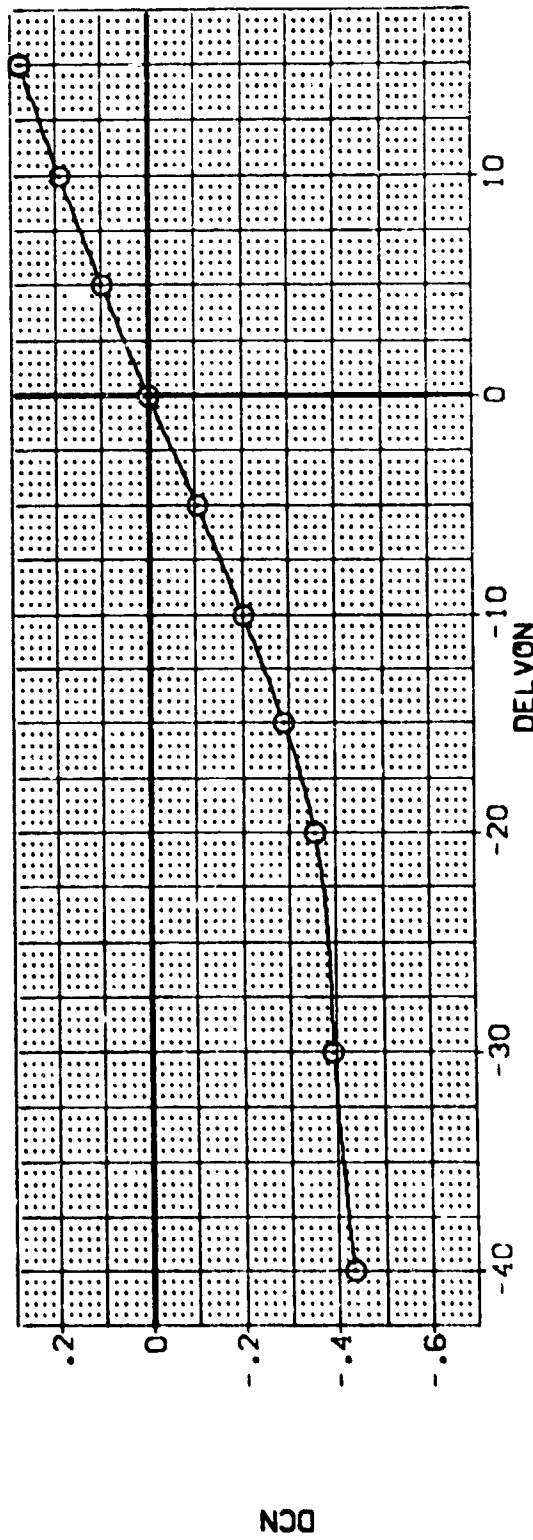
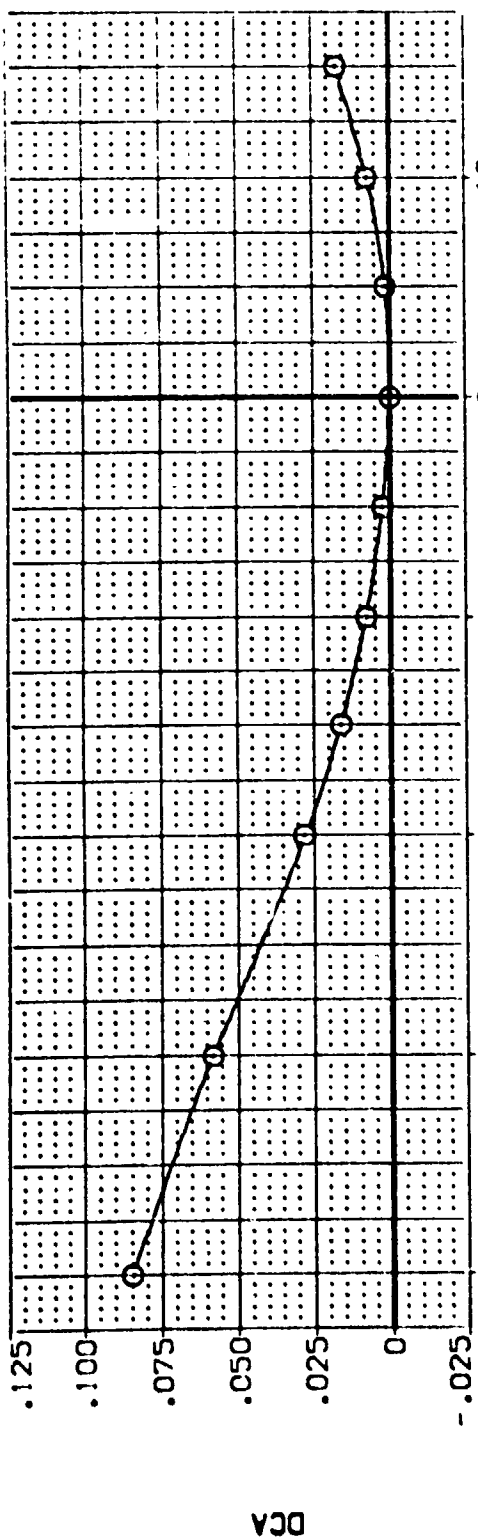
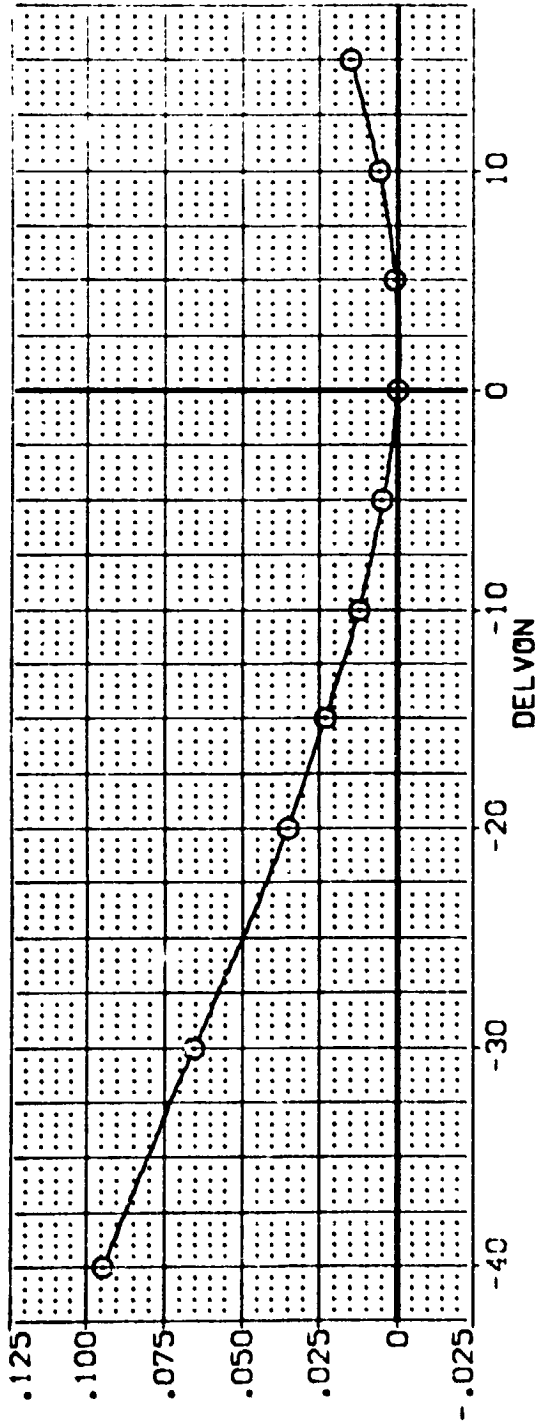


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

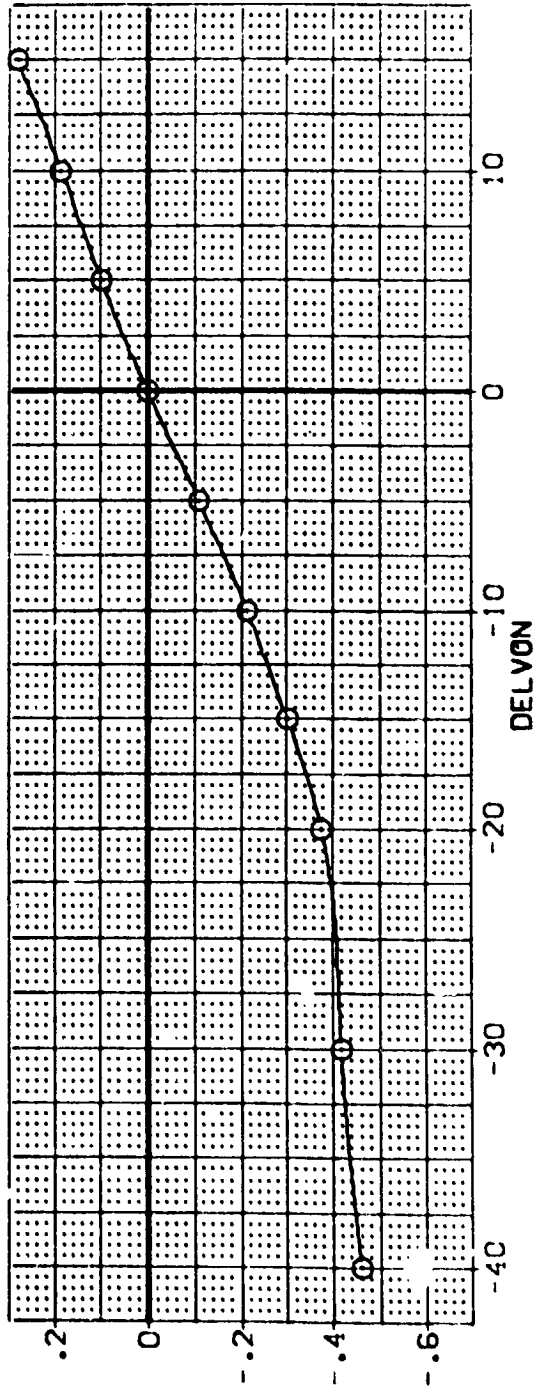
(20Z105)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	10.000	MACH	.200	BOFLAP	-12.000	DATASET	20Z105	DELTVN	-40.000	DATA SOURCE	20Z106	DELTVN	-30.000	SREF	4.4119	REFERENCE INFORMATION	SC.F.T.
			AIRRON	.000	RJODER	.000	20Z107		-20.000		20Z108		-15.000	LREF	19.2299		SCALE	
			SPOBRK	25.000	BE'A	.000	20Z109		-10.000		20Z111		-5.000	BRPF	37.9359		SCALE	
							20Z117		.000		20Z115		5.000	XMRP	43.5974		SCALE	
							20Z114		10.000		20Z112		15.000	ZMRP	15.1875		SCALE	
														ZMRP	15.1875		SCALE	
														ZMRP	15.1875		SCALE	



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FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP



(20Z105)

W116E28V8R5X9

M7F8

B26C9

01628

SYMBOL

○

ALPHA

15.000

MACH

ALLRON

PARAMETRIC VALUES

.200

BOFLAP

.000

R-ODDER

.000

BETA

25.000

DATA SOURCE

DELTON

DATASET

20Z105

DELTON

-30.000

SREF

4.4119

LREF

19.2799

BREF

37.9359

XMRP

43.5874

YMRP

5.000

ZMRP

15.1875

SCALE

.04CS

REFERENCE INFORMATION

SC.FT.

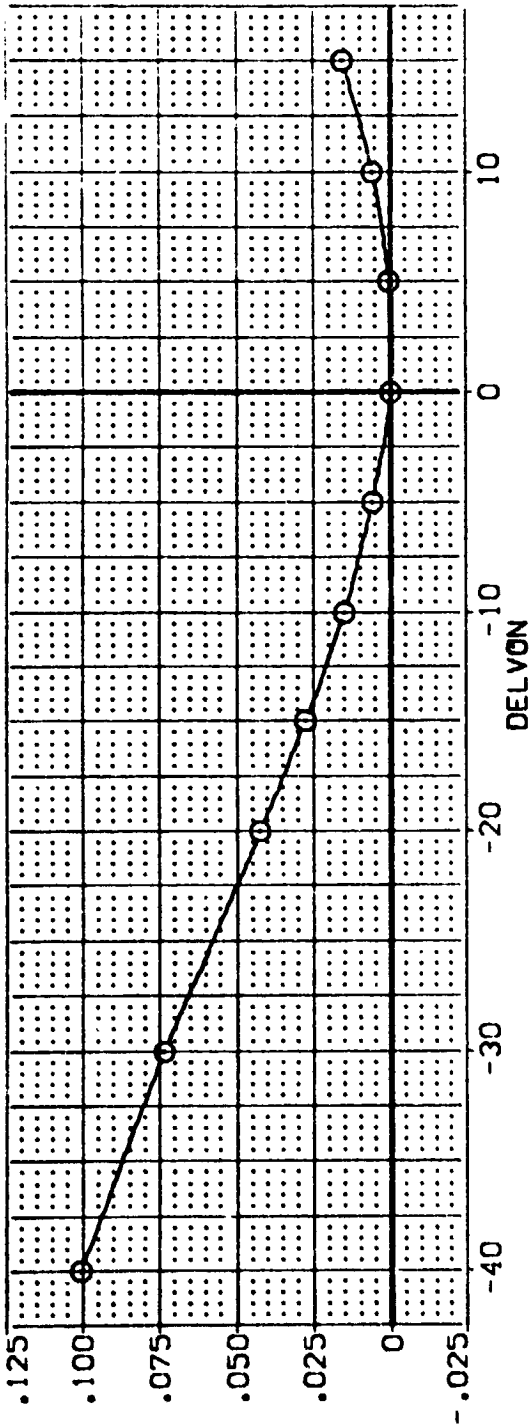
INCHES

INCHES

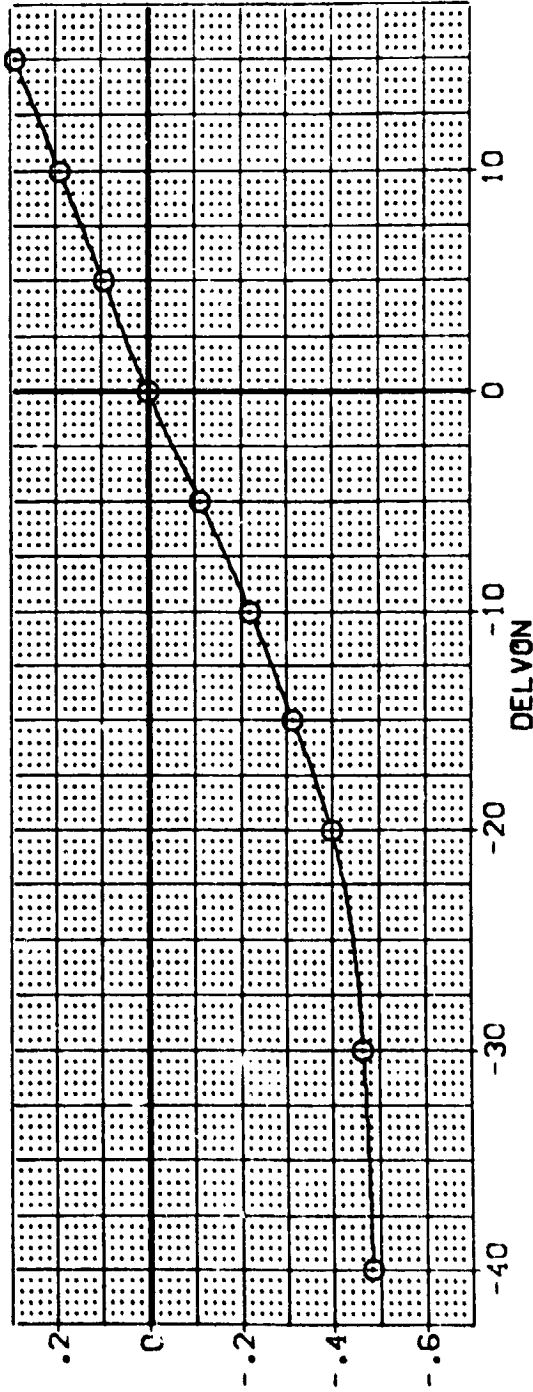
INCHES

INCHES

SCALE



DCA



DCN

FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ105)

SYMBL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		DELTON		REFERENCE INFORMATION	
	O	20.000		.200	BFLAP	-12.000	DATASET	DELTON	SREF	4.4119	SCALF	19.2799	INCHES
				.000	RLOOR	.000	20Z105	-40.000	LREF	37.9359	INCHES	43.5974	INCHES
				75.000	BETA	.000	20Z107	-20.000	BREF	15.0000	INCHES	15.0000	INCHES
							20Z109	-10.000	XPRP	2.0000	INCHES	2.0000	INCHES
							20Z117	10.000	YPRP	15.1875	INCHES	15.1875	INCHES
							20Z114	10.000	SCALE	.0425	SCALE		

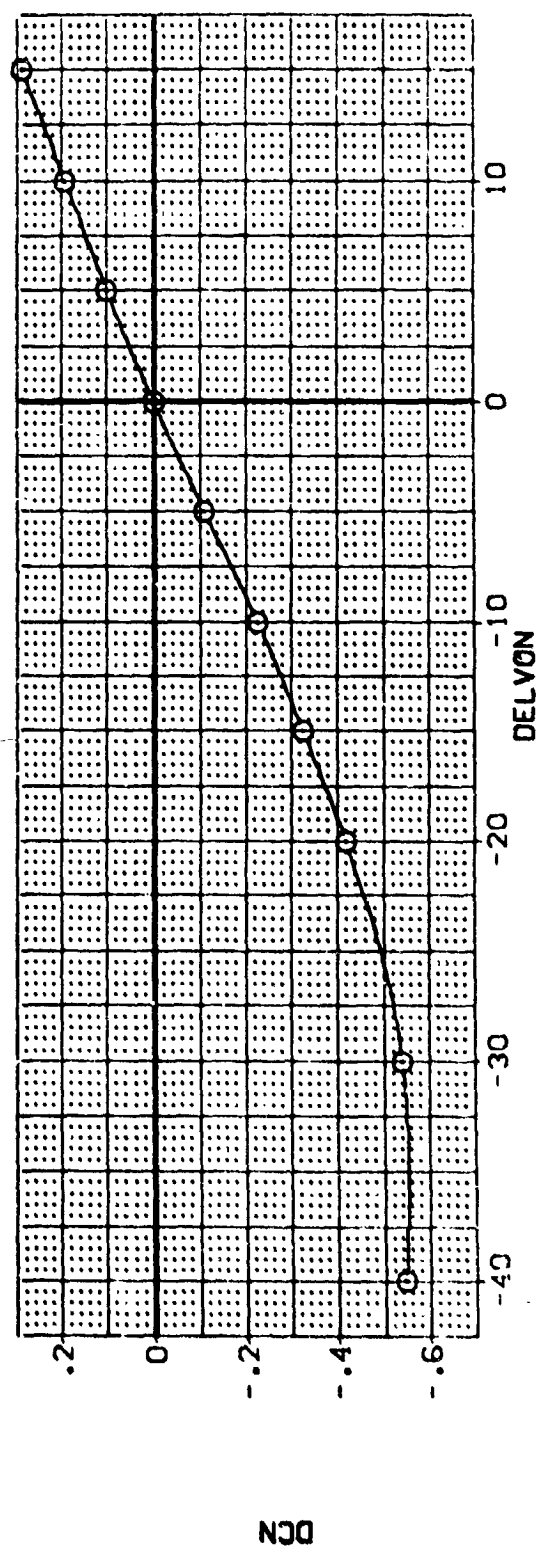
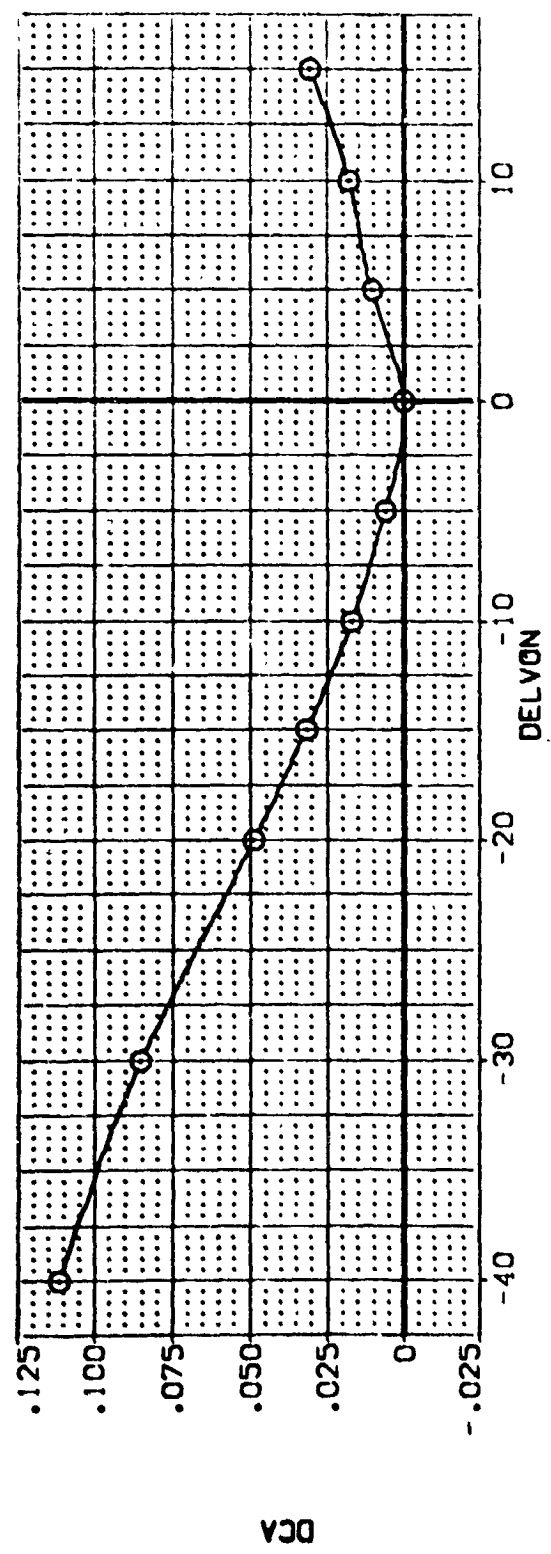


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

(20Z105)

0A628 B26C9 M7F8 W116E28V8RSX9

SYMBOL ○

ALPHA 25.000

MACH 75.000

AILRON 75.000

SPDRK 75.000

PARAMETRIC VALUES

.200 BDFLAP

.000 RUDDER

75.000 BETA

DATA SOURCE

DELVON -40.000

DELVON -20.000

DELVON -10.000

DELVON 10.000

DATASET 20Z105

DATASET 20Z106

DATASET 20Z111

DATASET 20Z112

DELVON -30.000

DELVON -15.000

DELVON 5.000

DELVON 15.000

SREF 4.4119

LREF 19.7299

BREF 37.9359

XMRP 43.5874

YMRP 15.0000

ZMRP 15.1675

SCALE .0405

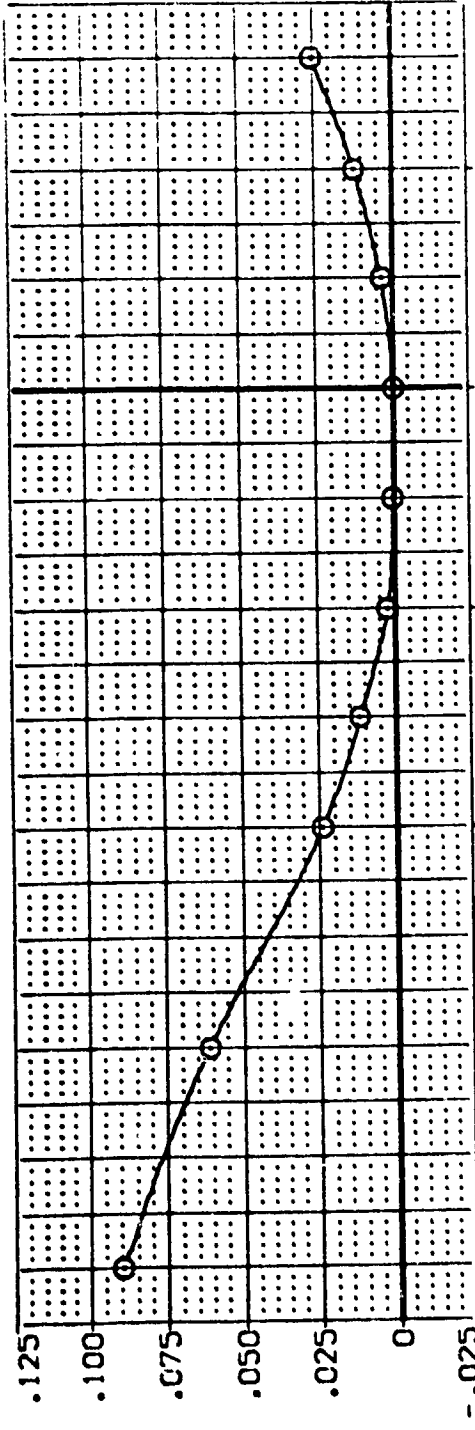
SC.FT. INCHES

INCHES INCHES

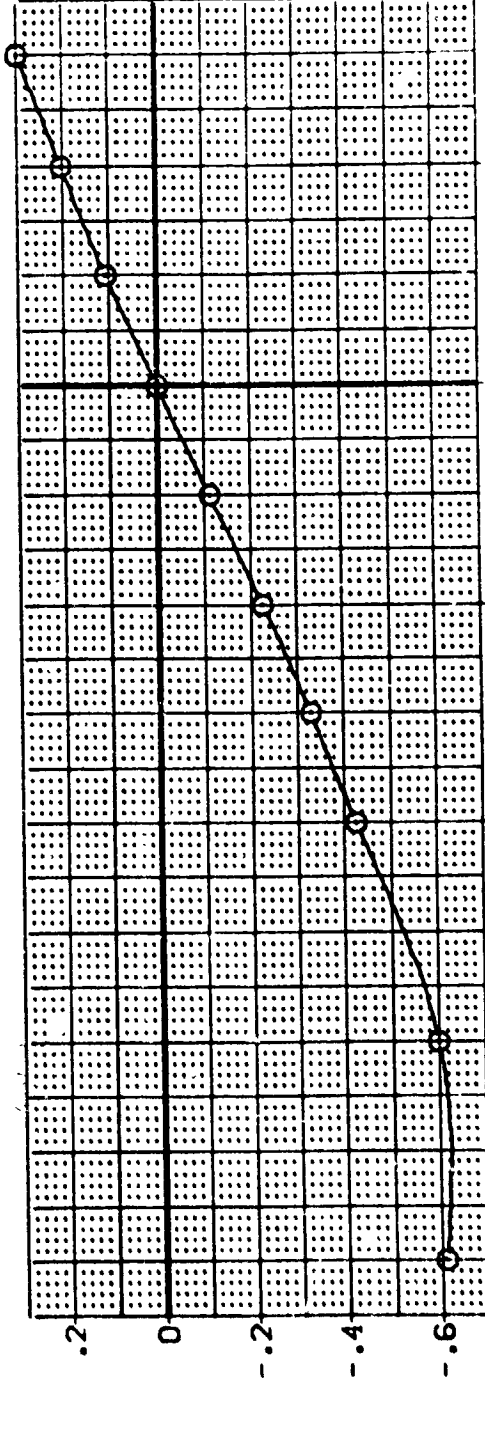
INCHES INCHES

INCHES INCHES

SCALE



DCA



DCN

FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z105)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DELTVN	SREF	SCALE
0	30.000		.200 BDFLAP	-12.000	20Z105	-30.000	4.4119	SC.F.T.
			.000 R-ODER	.000	20Z106	-15.000	19.2799	INCR.F.S
			25.000 BETA	.000	20Z107	-10.000	37.9759	INCR.F.S
					20Z108	-5.000	43.5974	INCR.F.S
					20Z109	5.000	.0000	INCR.F.S
					20Z110	10.000	15.1875	INCR.F.S
					20Z111	15.000	.0405	SCALE
					20Z112			

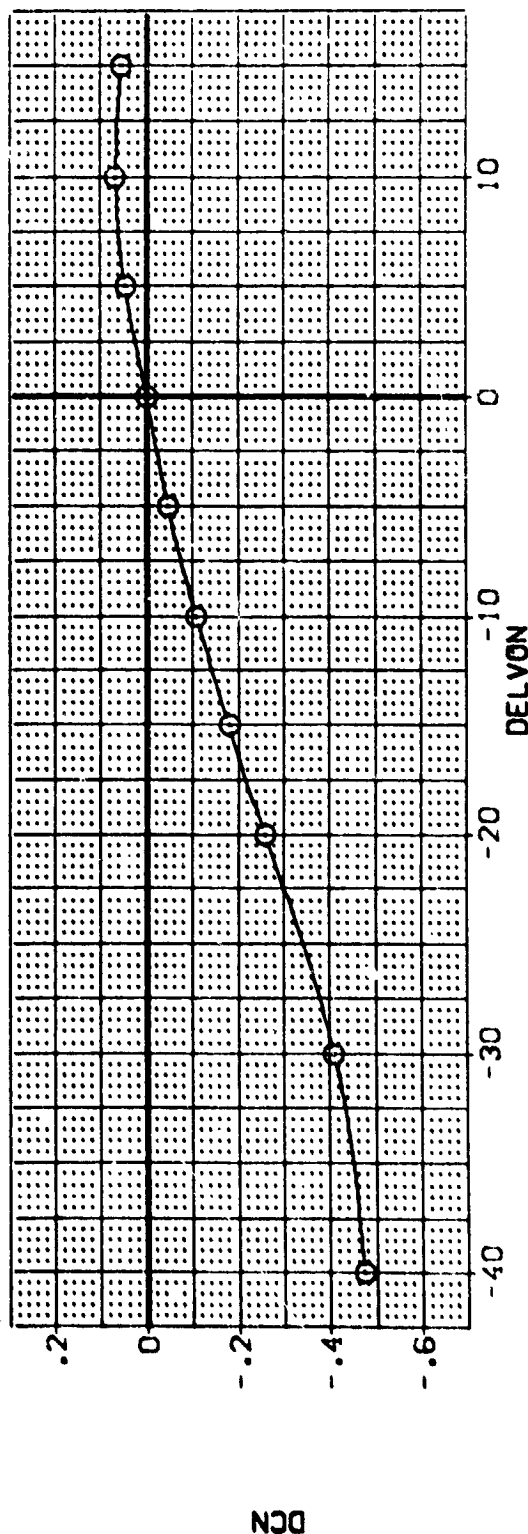
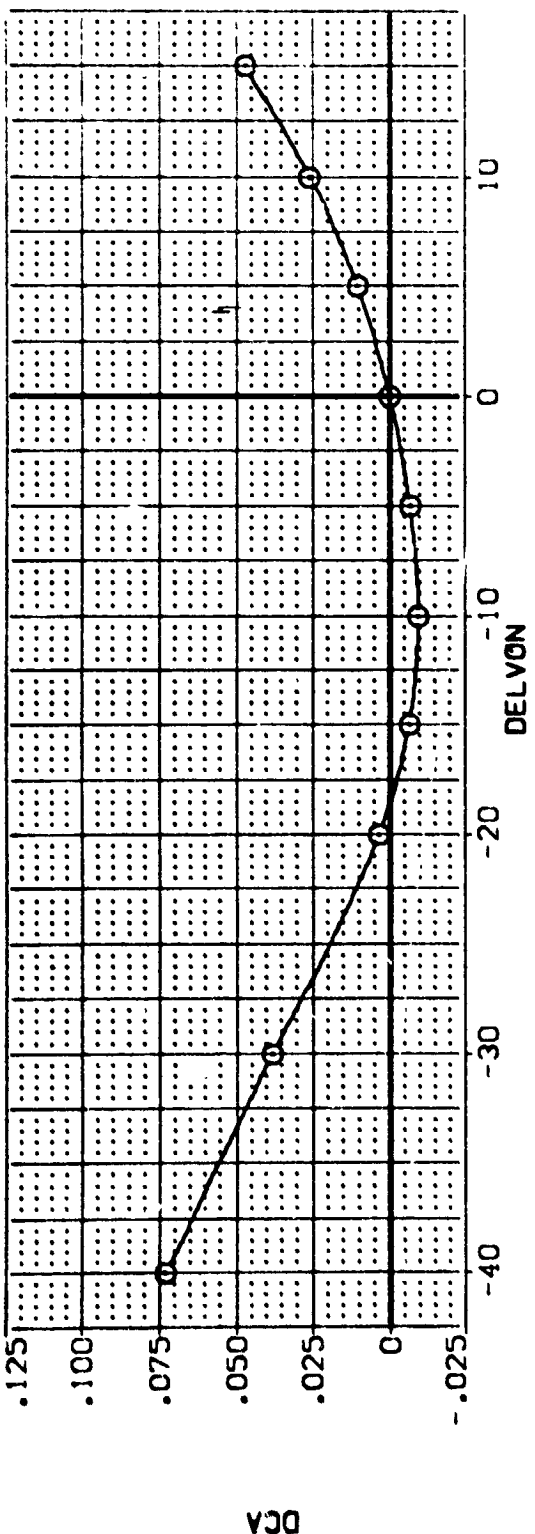


FIG 40 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, BASELINE ELEVON GAP

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ELEVON	SPOONK	BOFLAP	RUDDER	REFERENCE INFORMATION
{80Z110}	0A628 B28C9 M7F8 V116E26V85X9	-10.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
{80Z124}	0A628 B28C9 M7F8 V116E26V85X9	0.000	25.000	-12.000	.000	LREF 19.2299 INCH-ES
{80Z116}	0A628 B28C9 M7F8 V116E26V85X9	5.000	25.000	-12.000	.000	BREF 37.9359 INCH-ES
{80Z113}	0A628 B28C9 M7F8 V116E26V85X9	15.000	25.000	-12.000	.000	XREF 43.5974 INCH-ES
						YREF .0000 INCH-ES
						ZREF 15.1875 INCH-ES
						SCALE .0405

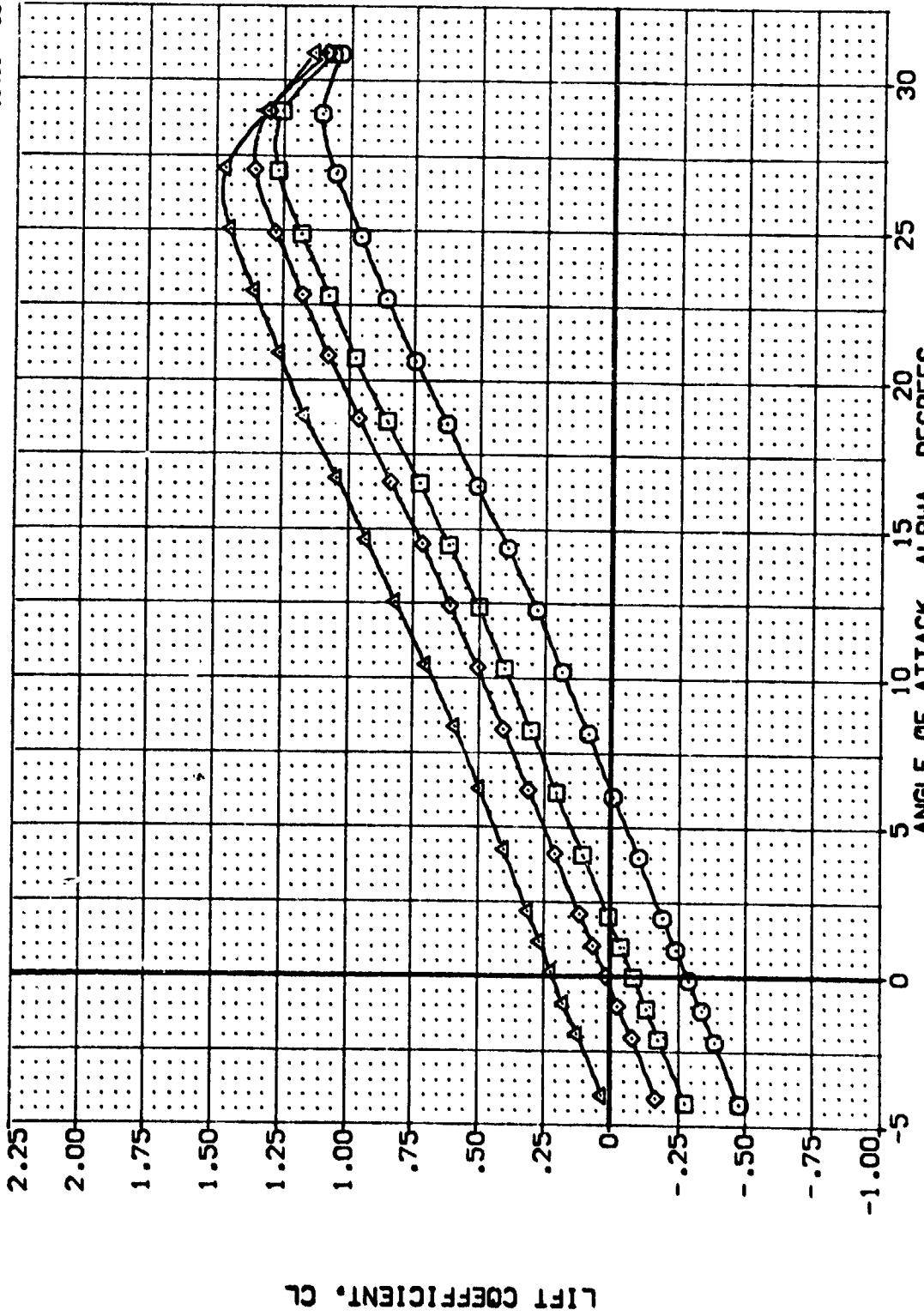


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

(MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(BDZ110)	0A628 M7F8 V116E26/8P5X9	-10.000	25.000	-12.000	.000	SREF 4.4119 SO.FT
(BDZ124)	0A628 M7F8 V116E26/8P5X9	5.000	23.000	-12.000	.000	LREF 19.2299 INO-ES
(BDZ116)	0A628 M7F8 V116E26/8P5X9	15.000	25.000	-12.000	.000	BREF 37.9359 INO-ES
(BDZ113)	0A628 M7F8 V116E26/8P5X9					YMRP 43.5874 INO-ES
						ZMRP 15.1875 INO-ES
						SCALE .0405

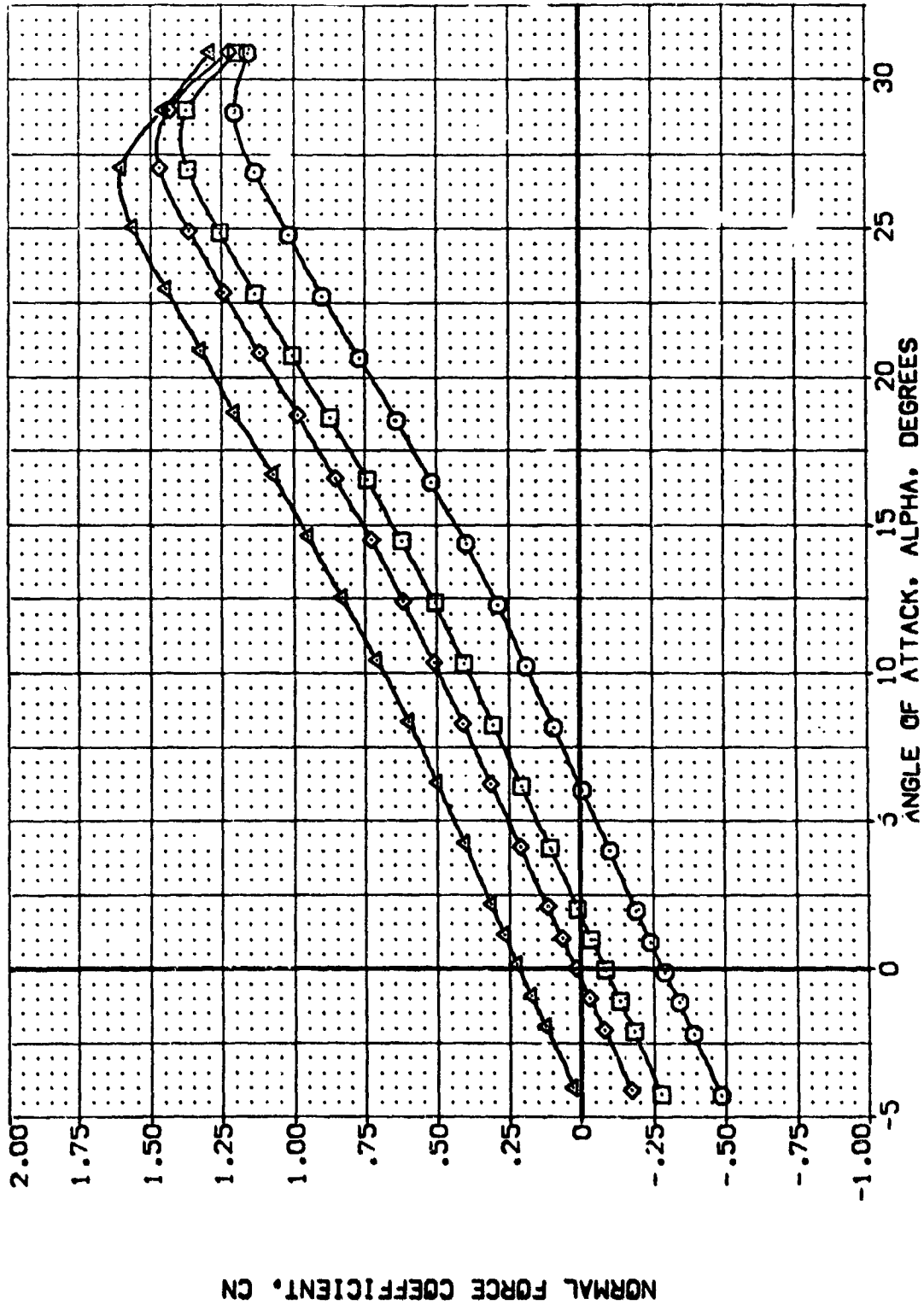


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

MACH = .20





DATA SET SYMBL. CONFIGURATION DESCRIPTION

(80Z110)	0A5Z8	B26C3	M7F8	V11E26V8F539
(80Z111)	0A5Z8	B26C3	M7F8	V11E26V8F539
(80Z112)	0A5Z8	B26C3	M7F8	V11E26V8F539
(80Z113)	0A5Z8	B26C3	M7F8	V11E26V8F539

ELEVON SPOONK BOFLAP RUDDER

-10.000	25.000	-12.000	.000
5.000	25.000	-12.000	.000
15.000	25.000	-12.000	.000

REFERENCE INFORMATION

SREF	4.4119	50.FT.
LREF	19.2289	INCHES
BREF	37.5059	INCHES
XTRP	43.5974	INCHES
YTRP	.0000	INCHES
ZTRP	15.1875	INCHES
SCALE	.0405	SCALE

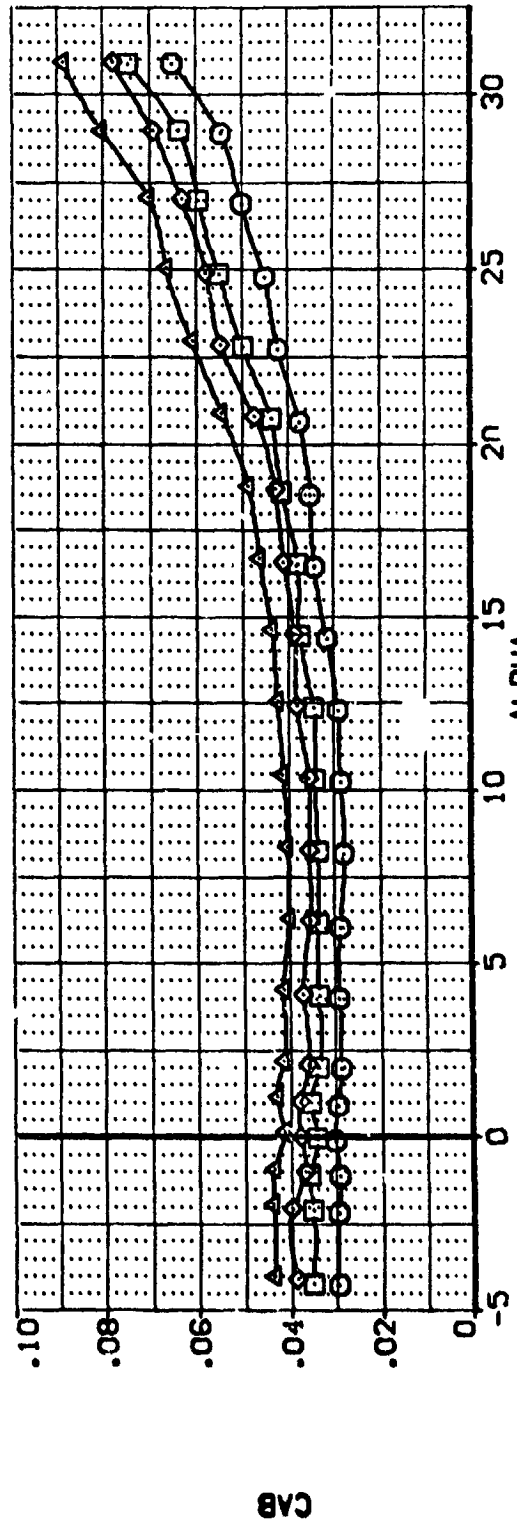
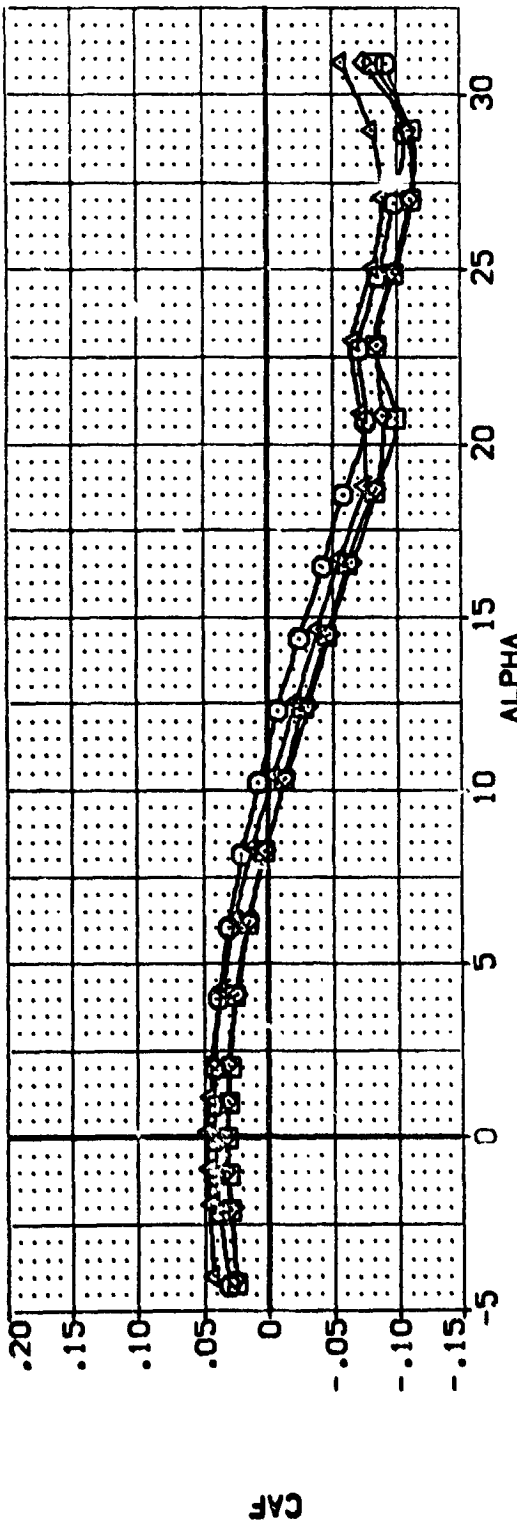


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDWRK	BDFLAP	FLUDDR	REFERENCE INFORMATION
{B0Z110}	04528 B26C9 M7F8 V116E26V8F5X9	-10.000	25.000	-12.000	.000	SREF 4.4119 SO.FT. INCHES
{B0Z112}	04528 B26C9 M7F8 V116E26V8F5X9	.000	25.000	-12.000	.000	LREF 19.2259 INCHES
{B0Z116}	04528 B26C9 M7F8 V116E26V8F5X9	5.000	25.000	-12.000	.000	BREF 37.9559 INCHES
{B0Z113}	04528 B26C9 M7F8 V116E26V8F5X9	15.000	25.000	-12.000	.000	XREF 43.5574 INCHES
						YREF .0000 INCHES
						ZREF 15.1875 INCHES
						SCALE .0405 SCALE

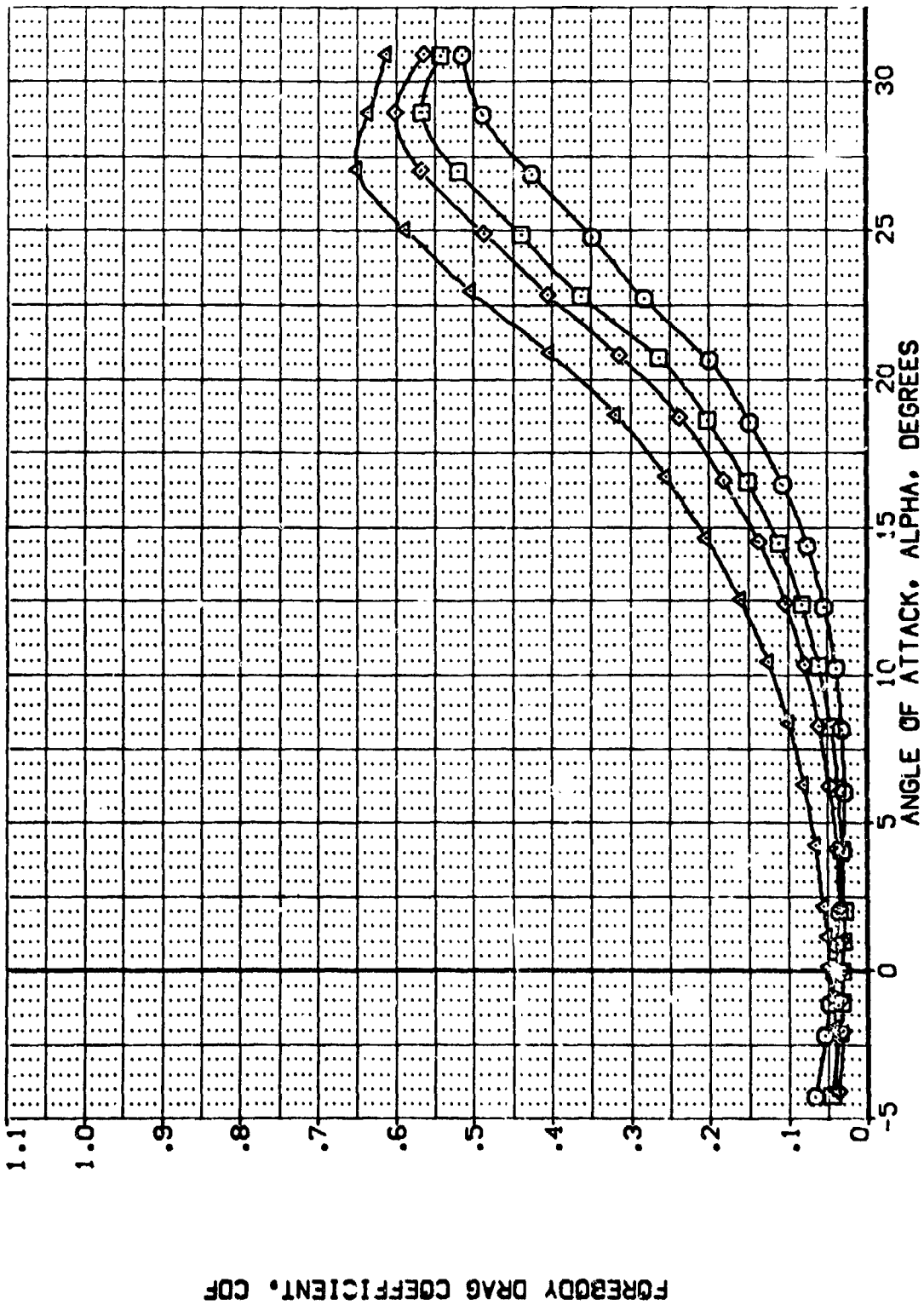
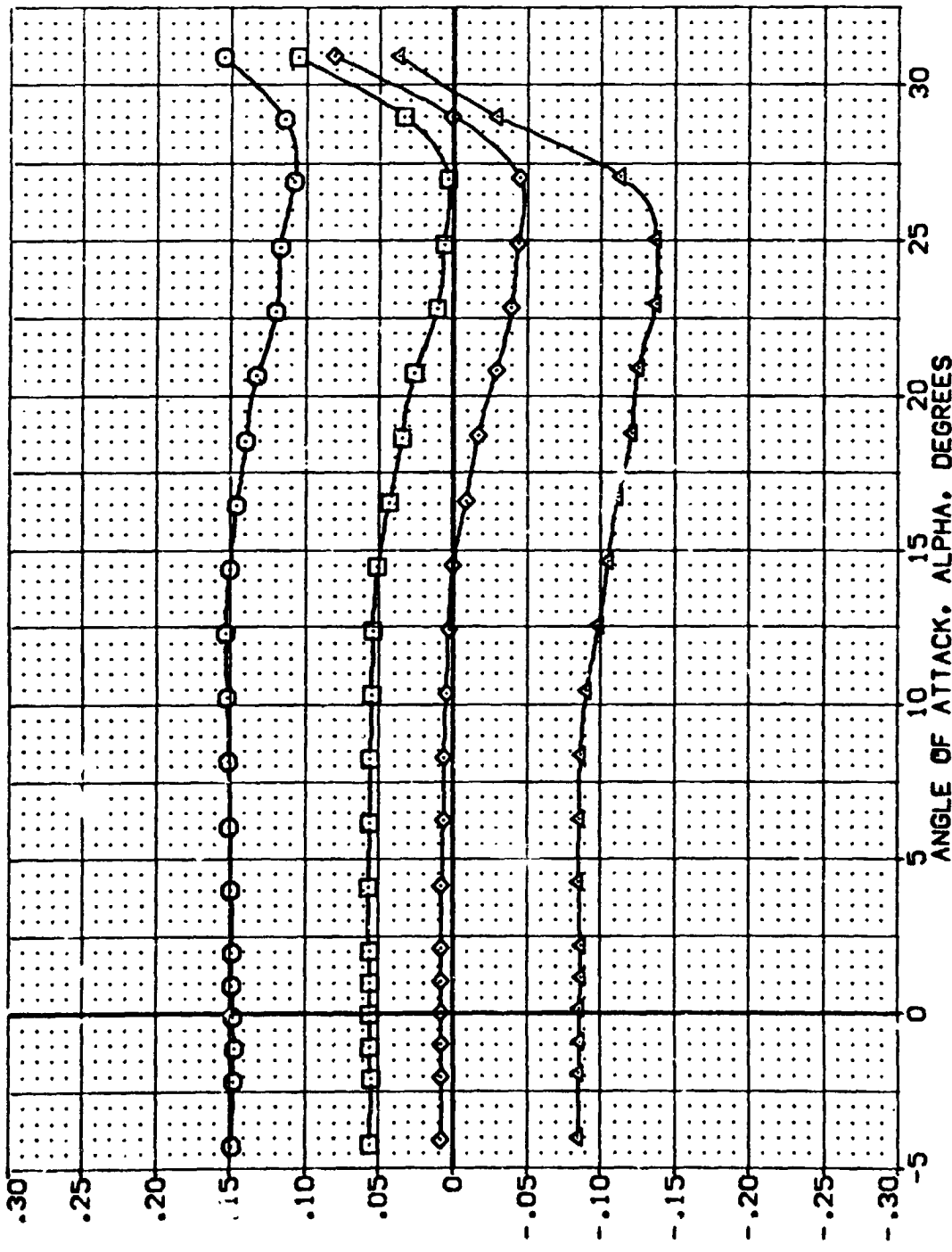


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID FLEVON





DATA SET SYMBL	CONFIGURATION DESCRIPTION	ELEVON	SPOONK	EDFLAP	RUDDER	REFERENCE INFORMATION
(BDZ110)	BAZ28 BZ6C9 M77-B V116E26V875X9	-10.000	29.000	-12.000	.000	4.4119 SQ.FT.
(BDZ124)	BAZ28 BZ6C9 M77-B V116E26V875X9	.000	29.000	-12.000	.000	19.2299 INCHES
(BDZ116)	BAZ28 BZ6C9 M77-B V116E26V875X9	5.000	29.000	-12.000	.000	37.9359 INCHES
(BDZ113)	BAZ28 BZ6C9 M77-B V116E26V875X9	15.000	29.000	-12.000	.000	43.5674 INCHES
						15.1675 INCHES
						.0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON  
CAJMACH = .20

DATA SET SYMB.	CONFIGURATION DESCRIPTION
{BDZ110}	SAC28 BZ6C3 M778 V116E26/8P519
{BDZ124}	SAC28 BZ6C3 M778 V116E26/8P519
{BDZ116}	SAC28 BZ6C3 M778 V116E26/8P519
{BDZ113}	SAC28 BZ6C3 M778 V116E26/8P519

ELEVON	SPDRK	BOFLAP	RUDDER	REFERENCE INFORMATION
-10.000	25.000	-12.000	.000	BREF 4.4119 50.FT. INCHES
.000	25.000	-12.000	.000	LREF 19.2299 INCHES
5.000	25.000	-12.000	.000	XMRP 37.9359 INCHES
15.000	25.000	-12.000	.000	YMRP 43.5974 INCHES
				ZMRP 0.000 INCHES
				ZMRP SCALE 15.1875 INCHES
				SCALE .0405

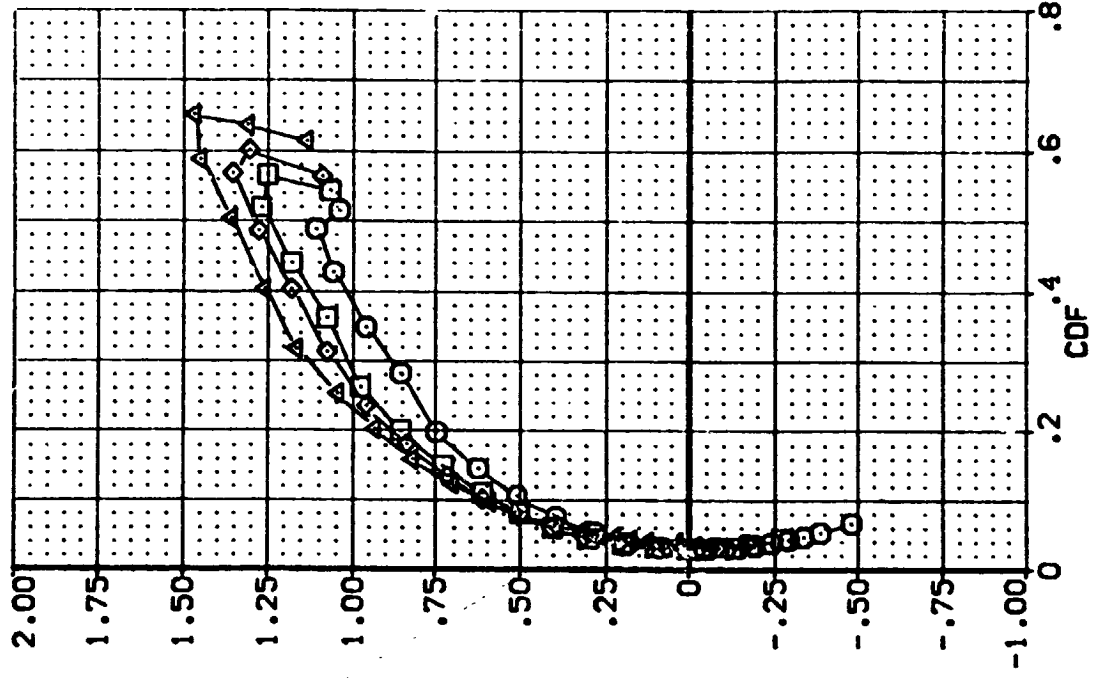
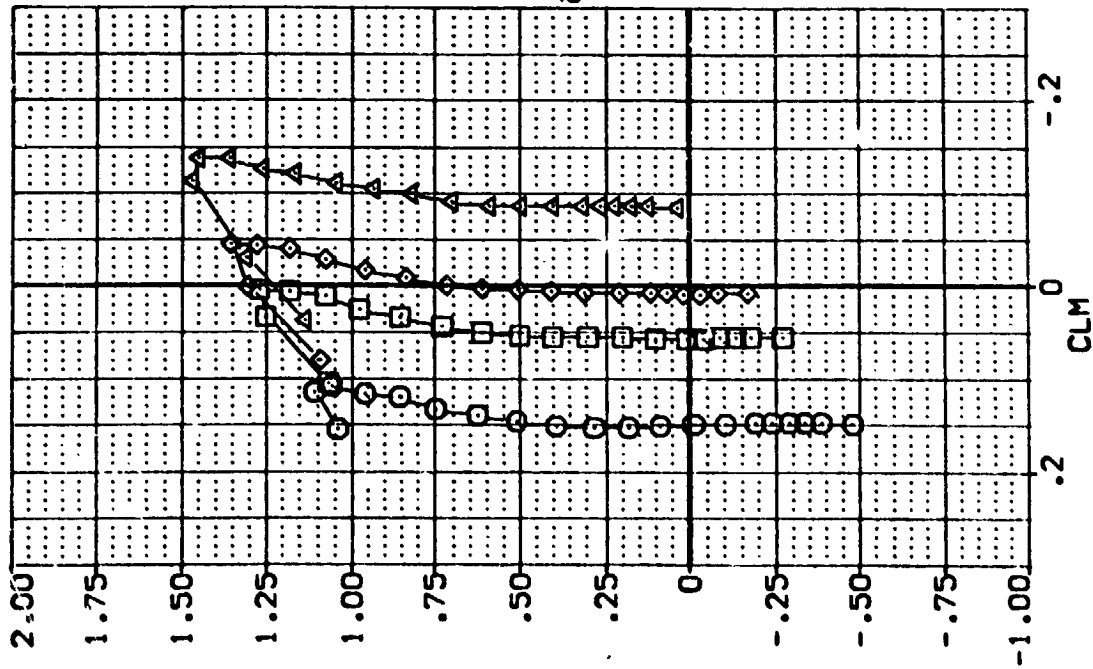


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

CLM = .20





0

A

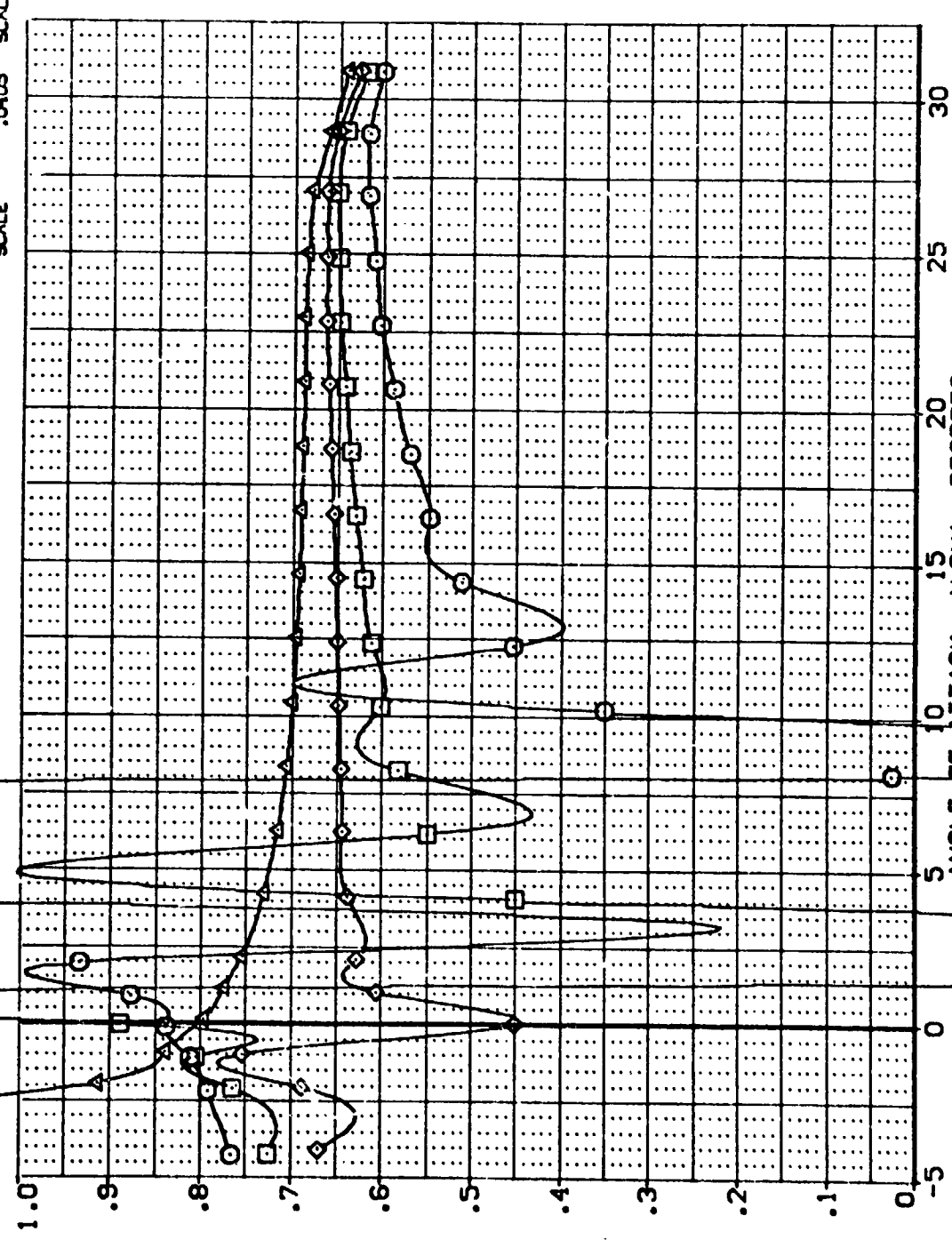
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(B0Z110)	0A6Z8	BZ8C3	M7F8	V1	6E26V8F5X9
(B0Z124)	0A6Z8	BZ8C3	M7F8	V1	6E26V8F5X9
(B0Z116)	0A6Z8	BZ8C3	M7F8	V1	6E26V8F5X9
(B0Z113)	0A6Z8	BZ8C3	M7F8	V1	6E26V8F5X9

REFERENCE INFORMATION

SREF	4.4119	SQ.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XTRP	43.5974	INCHES
YTRP	.0000	INCHES
ZTRP	15.1875	INCHES
SCALE	.0405	SCALE

ELEVON	25.000	SPDBRK	25.000	BOFLAP	-12.000	FLODDR	.000
	5.000		25.000		-12.000		.000
	15.000		25.000		-12.000		.000



LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

ANGLE OF ATTACK, ALPHA, DEGREES

FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

CAJMACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
{B0Z110}	DAS2B B0GCS M7F8 V11E26/8CS/3	-10.000	25.000	-12.000	.000	SPREF 4.4119 50.FT. INCHES
{B0Z124}	DAS2B B0GCS M7F8 V11E26/8CS/3	.000	25.000	-12.000	.000	LRREF 19.2299 INCHES
{B0Z115}	DAS2B B0GCS M7F8 V11E26/8CS/3	5.000	25.000	-12.000	.000	BRREF 37.5059 INCHES
{B0Z113}	DAS2B B0GCS M7F8 V11E26/8CS/3	15.000	25.000	-12.000	.000	XTRP 43.5974 INCHES
						YTRP 15.0000 INCHES
						ZTRP 15.1875 INCHES
						SCALE .0405

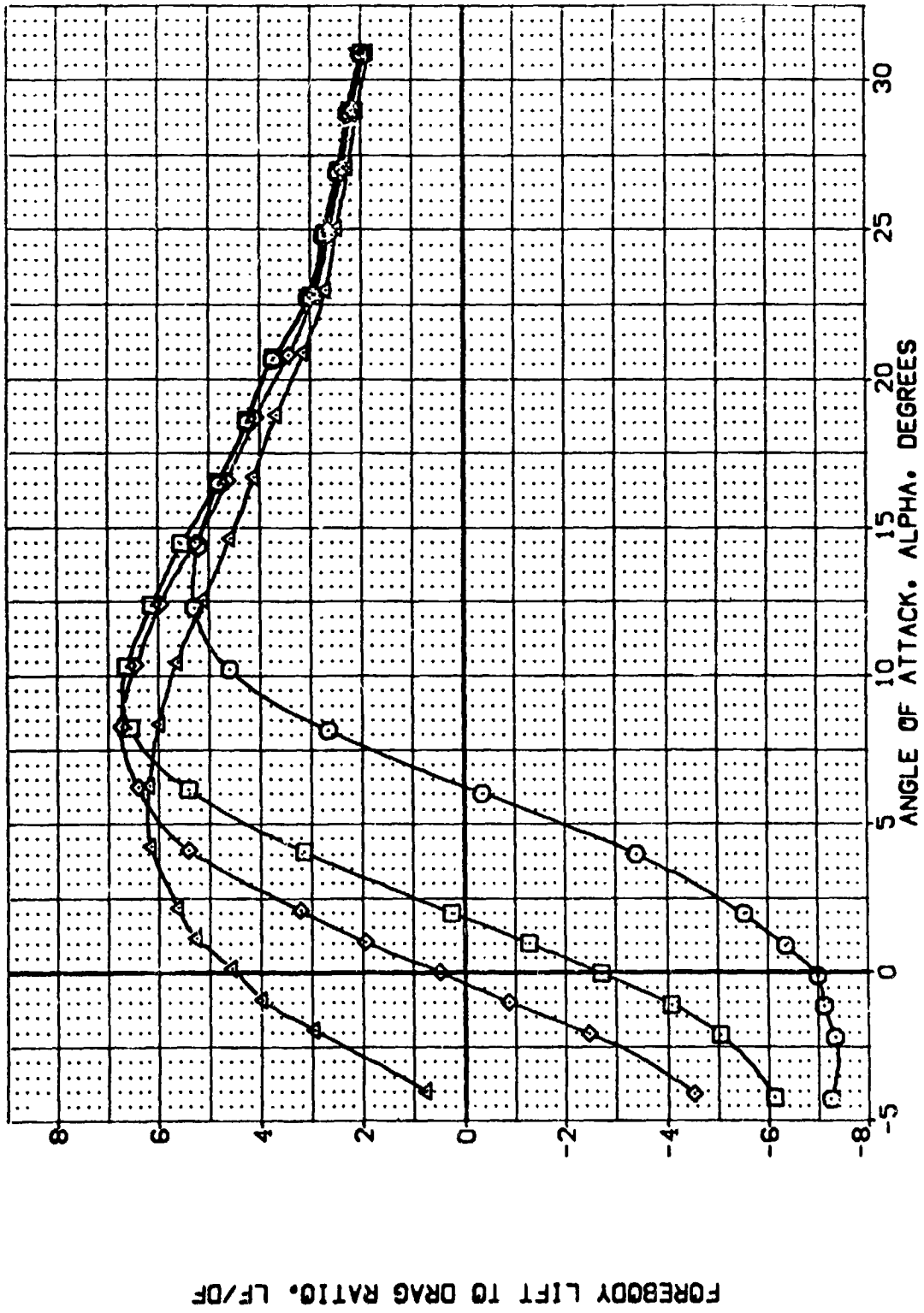


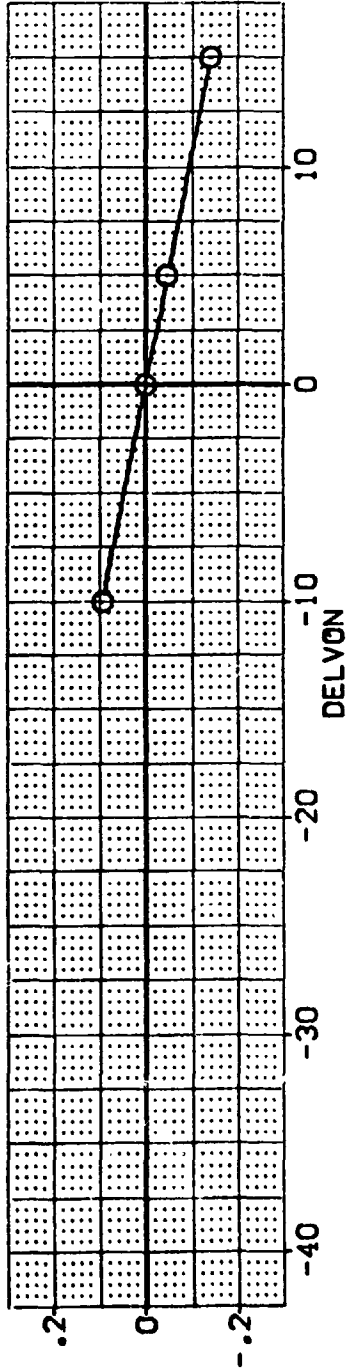
FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

MACH = .20

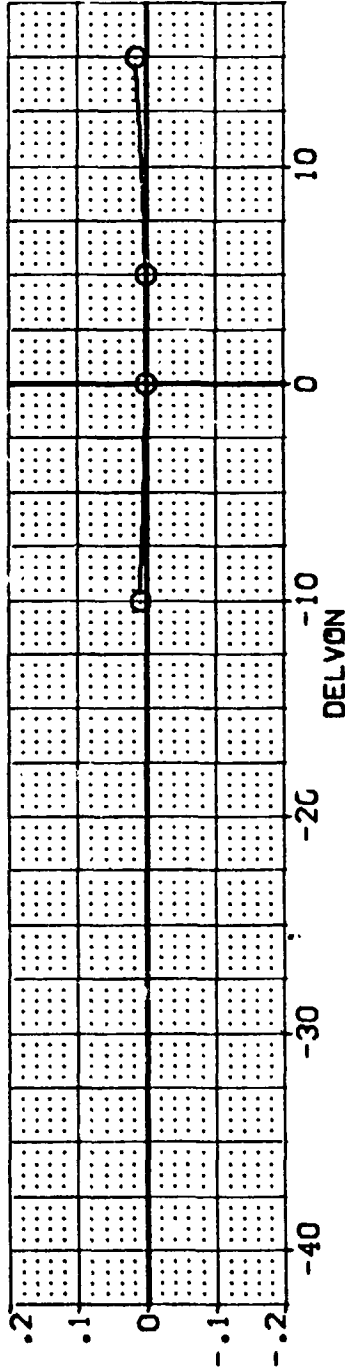


0A628 B26C9 M7F8 W116E26V8R5X9 (2DZ110)

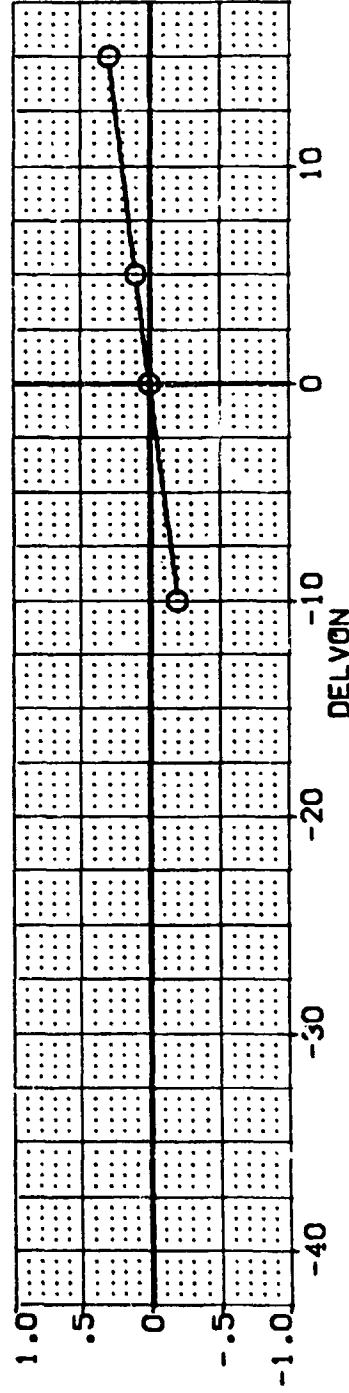
SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELTVN	DATASET	DELTVN	REF	REFERENCE INFORMATION
0	.000	A1LRON	.200	EDFLAP	-12.000	20Z110	.000	REF	4.4119
		SPOBRK	.000	RUDDR	.000	20Z116	15.000	REF	19.2289
			25.000	BETA	.000	20Z113		REF	37.9359
								XPRP	43.5974
								YPRP	15.0000
								ZPRP	15.1875
								SCALE	.0405



DCLM



DCCF



DCL

FIG 4! ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON



0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	5.000	.200	BOCJAP	-12.000	DATASET	DELVON	BREF
		.000	FLUDDER	.000	20Z110	.000	LREF
		25.000	BETA	.000	20Z113	15.000	BREF
							YTRP
							ZTRP
							SCALE
							SQ.FT.
							INCHES
							INCHES
							INCHES
							INCHES
							SCALE

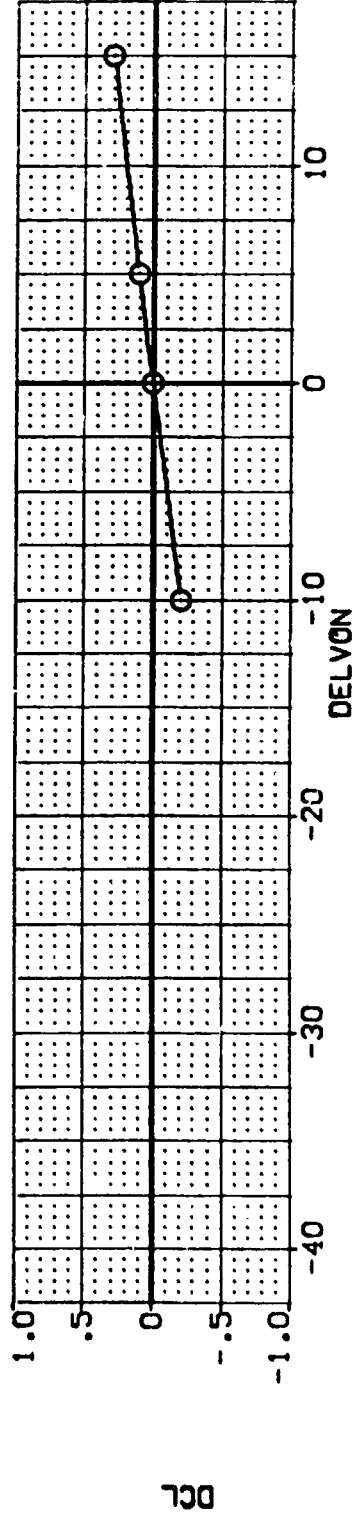
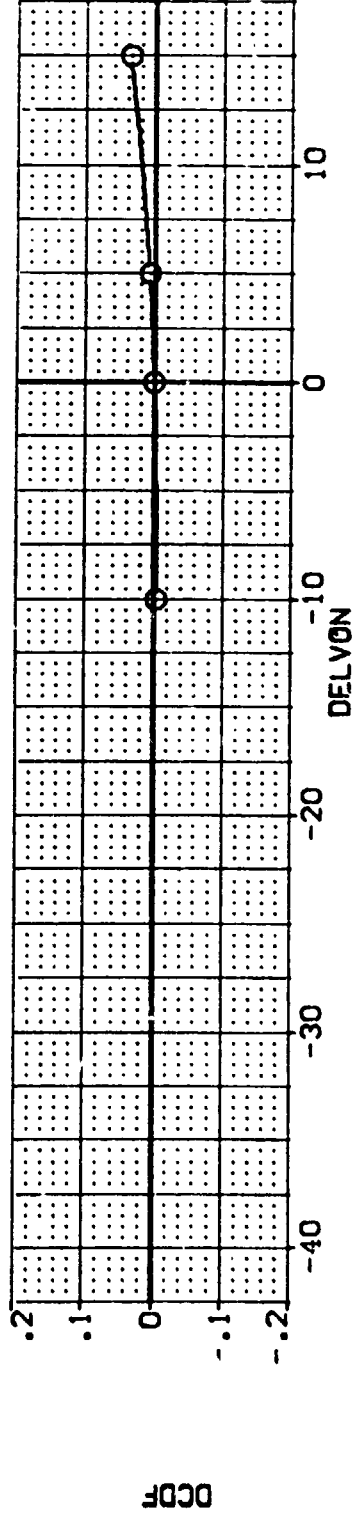
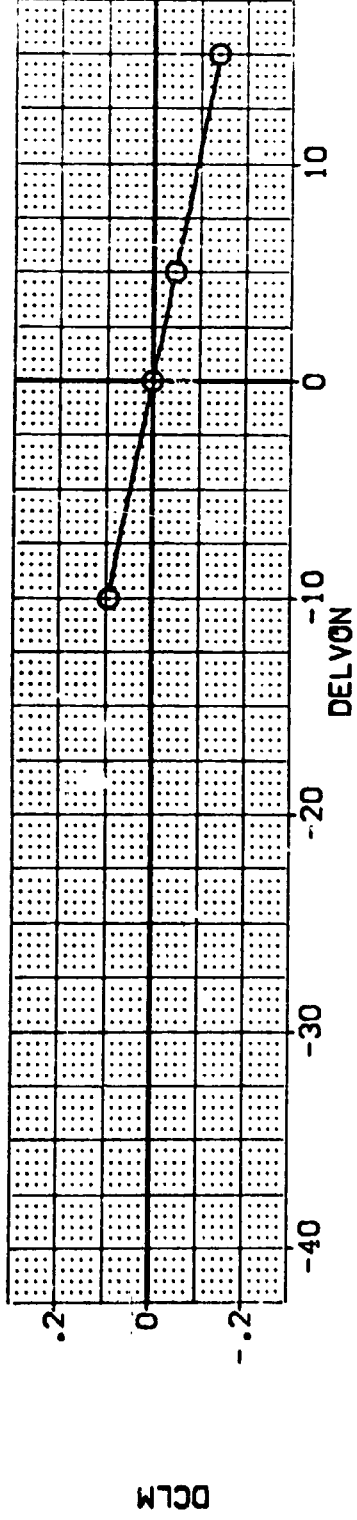


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON





0A628 B26C9 M7F8 W116E26V8R5X9 (2DZ110)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION									
ALPHA	10.000	MACH	.200	BOFLAP	-12.000	DATASET	20Z110	DELVON	0.000	SREF	4.4119	SQ.FT.	19.2299
AILRON	.000	RUDDR	.000	BETA	.000	20Z116	20Z124	15.000	LREF	37.9359	INCHES	43.5974	INCHES
SPDRK	25.000								XPRP	.0000	INCHES	15.1875	INCHES
									YPRP	.0405	SCALE		SCALE

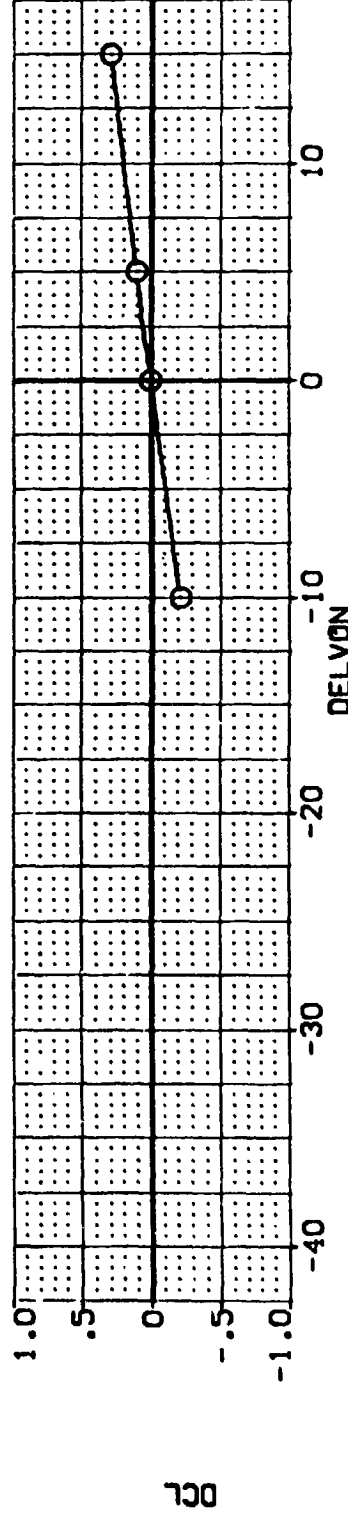
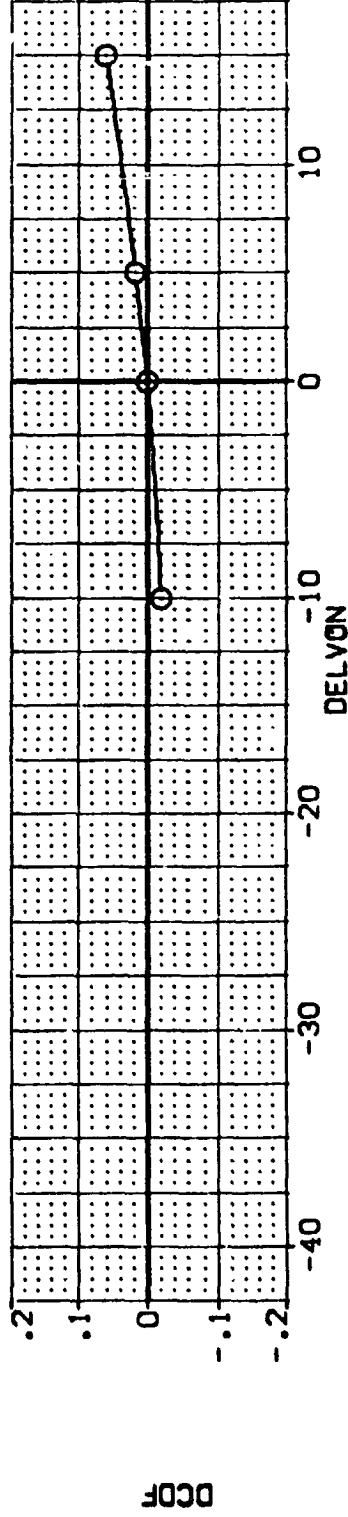
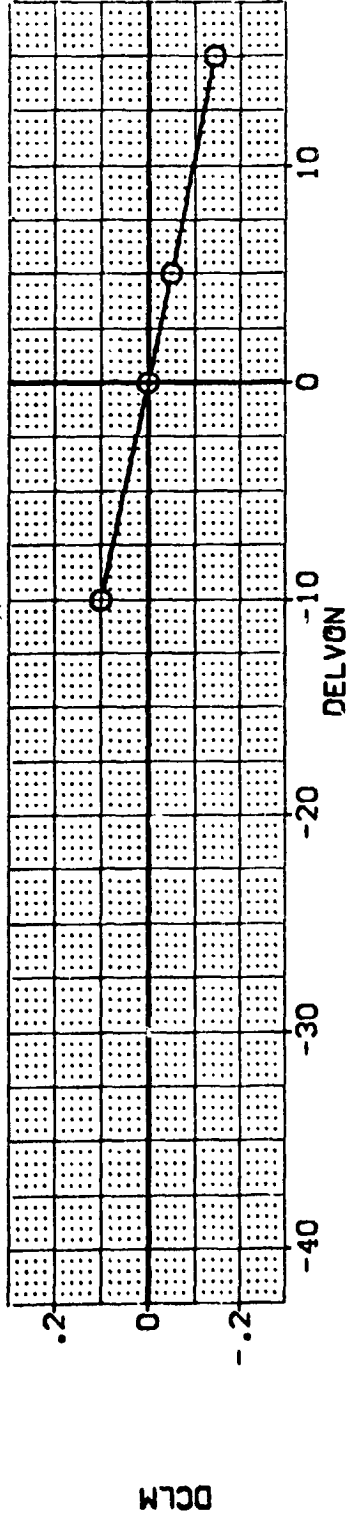


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0A628 B26C9 M7F8 W116E26V8R5X9 (2DZ110)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION			
0	ALPHA	MACH	BDFLAP	-12.000	DATASET	DELTON	DELTON	SREF	4.4119	SO.FT.	
		A1LRON	RUDDER	.000	20Z110	-10.000	.000	LREF	19.2299	INCHES	
		SPTBRK	BETA	.000	20Z116	5.000	15.000	BREF	37.9359	INCHES	
					20Z113			XPRP	43.5974	INCHES	
								YPRP	.0000	INCHES	
								ZPRP	15.1873	INCHES	
								SCALE	.0405	SCALE	

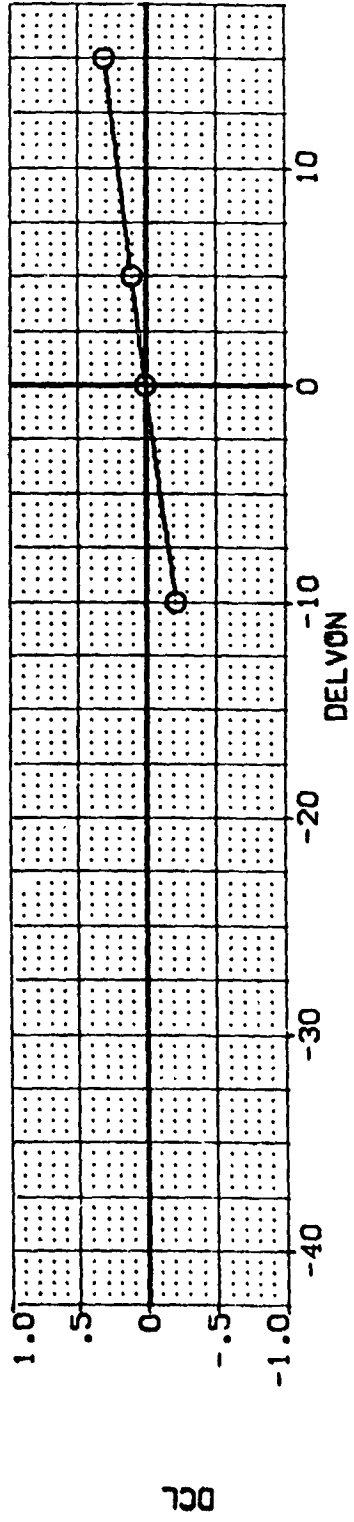
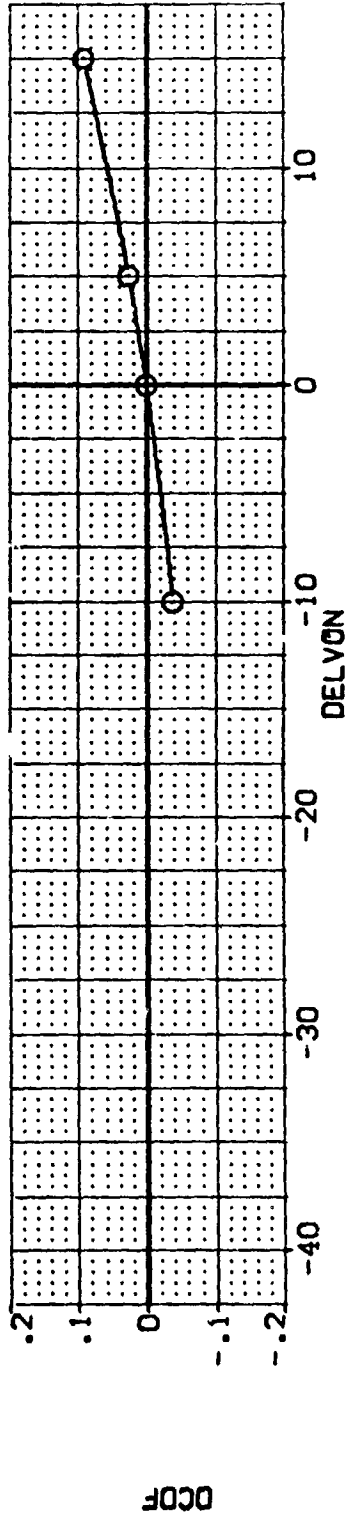
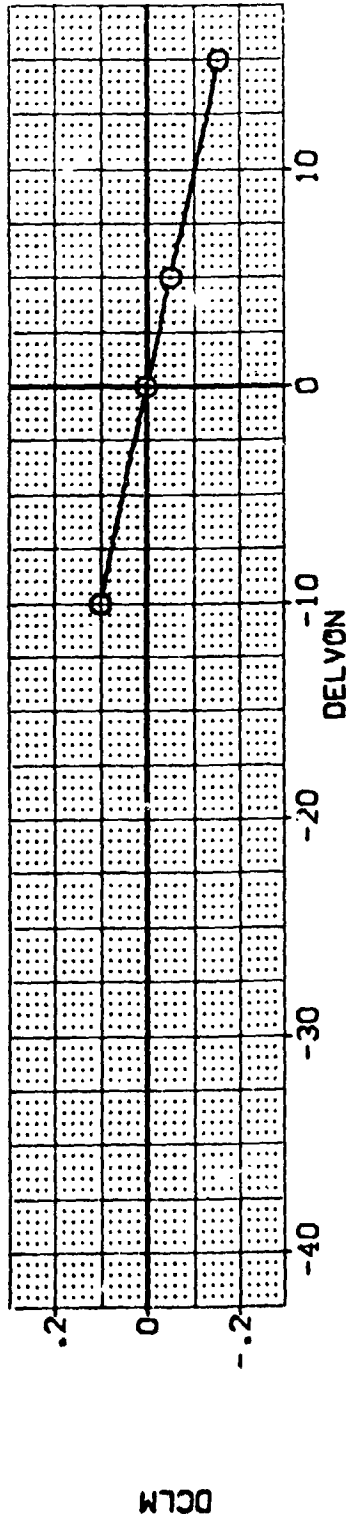


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

(20Z110)

W116E26V8R5X9

M7F8

B26C9

0A628

REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1873  
 SCALE .0405

DATA SOURCE  
 DELVON -10.000  
 DELVON 5.000  
 DATASET 20Z124  
 DATASET 20Z113

PARAMETRIC VALUES  
 MACH .200  
 AILTRON .000  
 SPOBRK 25.000  
 RUDDER .000  
 BETA 20Z110  
 BETA 20Z116

DATA SOURCE  
 DELVON -12.000  
 DELVON 5.000  
 DATASET 20Z110  
 DATASET 20Z116

REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1873  
 SCALE .0405

DATA SOURCE  
 DELVON -10.000  
 DELVON 5.000  
 DATASET 20Z124  
 DATASET 20Z113

PARAMETRIC VALUES  
 MACH .200  
 AILTRON .000  
 SPOBRK 25.000  
 RUDDER .000  
 BETA 20Z110  
 BETA 20Z116

REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1873  
 SCALE .0405

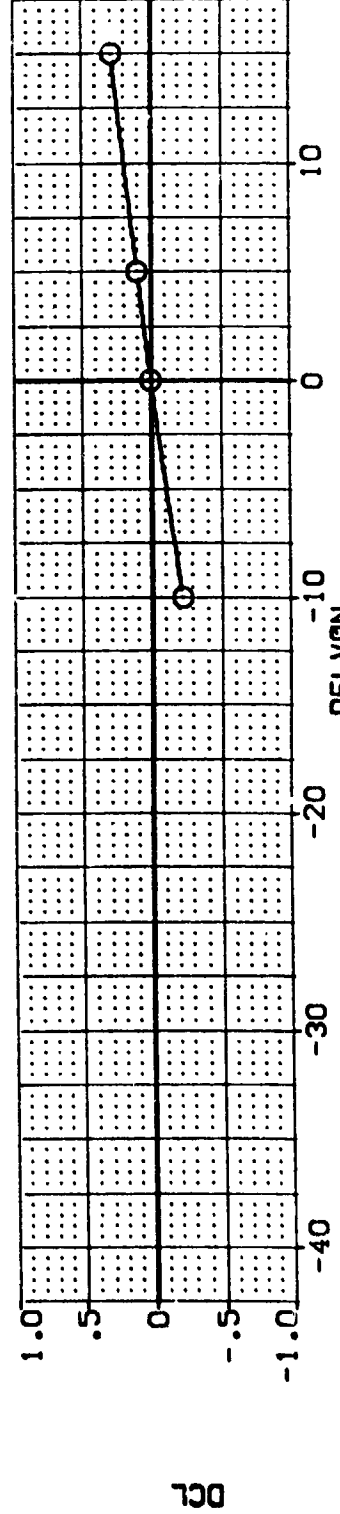
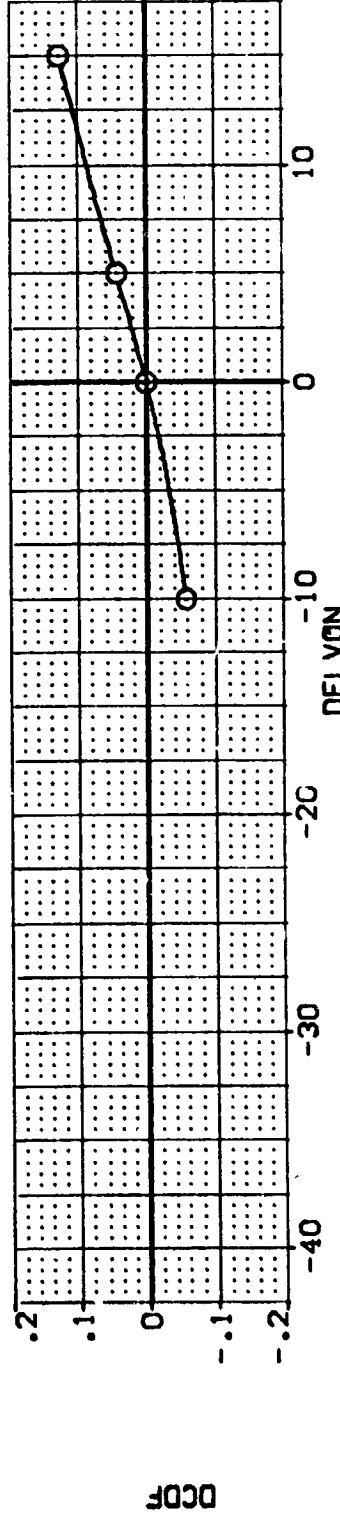
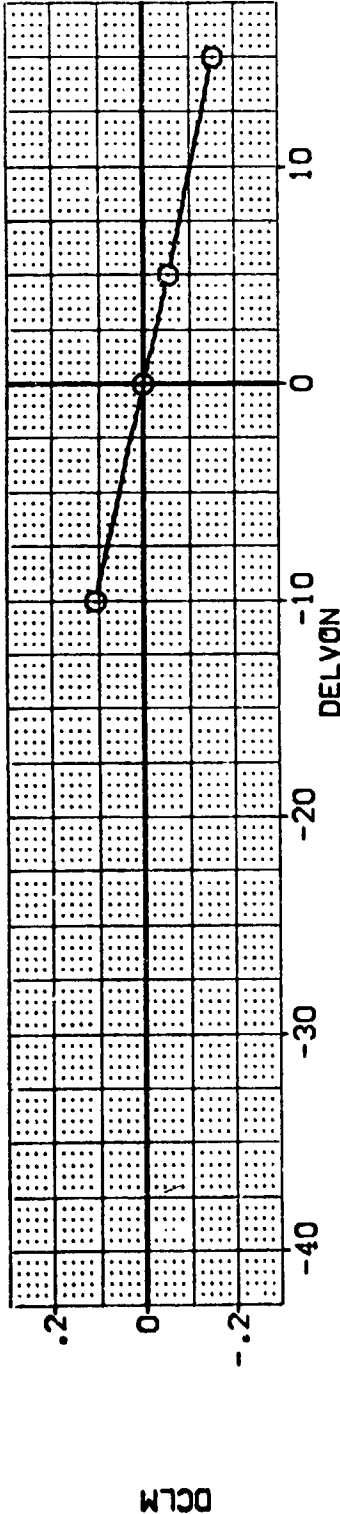


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	25.000	A1URON	.200	BDFLAP	-12.000	DATASET	DELVON	SREF	50.FT.	4.4119	INCHES
		SPOBRK	.000	RUDDER	.000	20Z110	.000	LREF	19.2299	37.9359	INCHES
			25.000	BETA	.000	20Z116	15.000	XMRP	43.5974	.0000	INCHES
								ZMRP	15.1875	15.0405	INCHES
								SCALE			SCALE

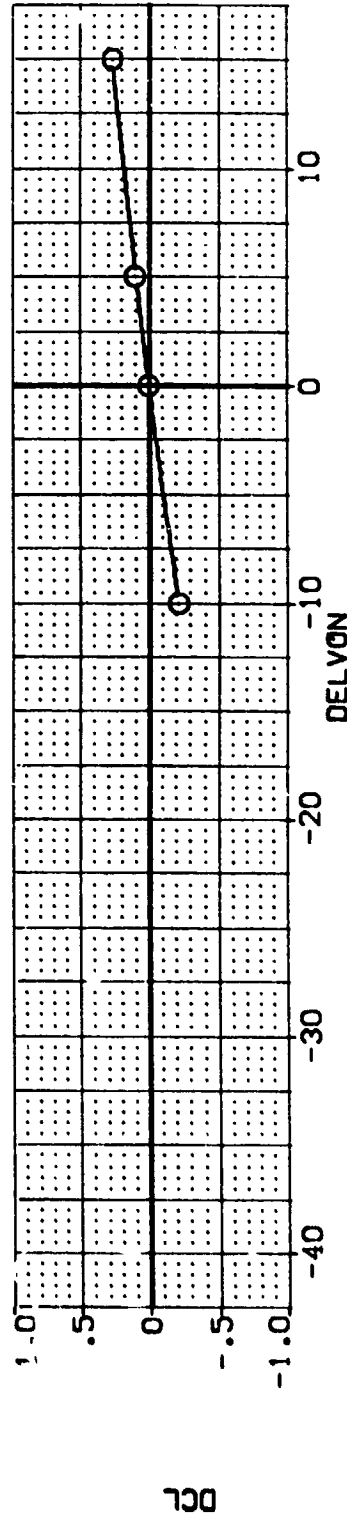
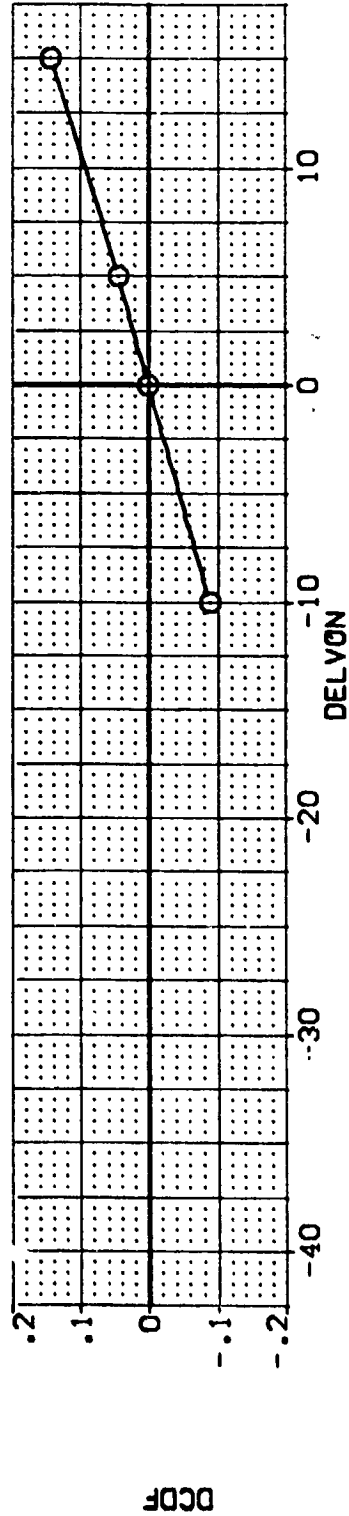
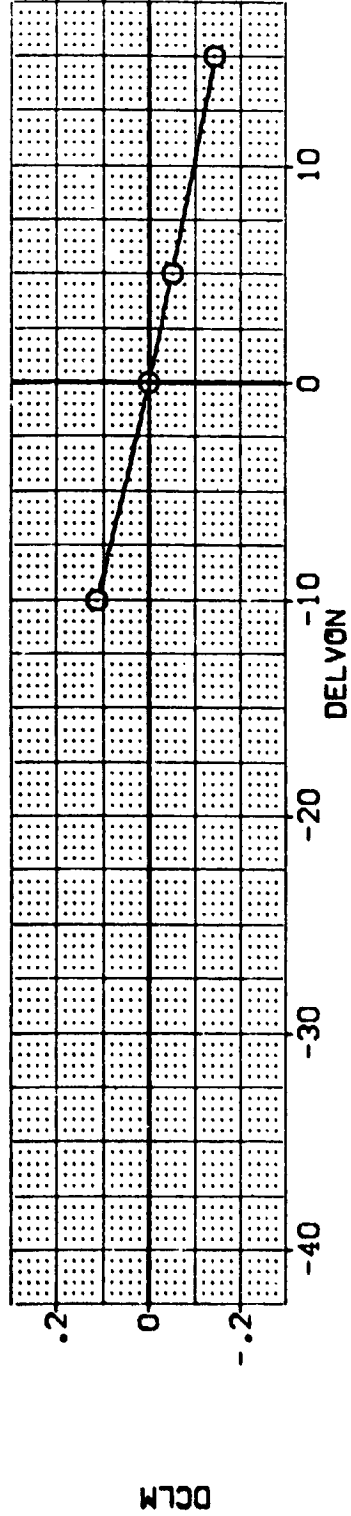


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON



0A62B B26C9 M7F8 W116E26V8R5X9 (2DZ110)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
○	30.000	A1URON	.200	BDFLAP	-12.000	DATASET	DELTON	SRIF	SO.FT.
		SFOBRK	.000	RUDDER	.000	20Z110	.000	LRIF	INCHES
			25.000	BETA	5.000	20Z113	15.000	BRIF	INCHES
								XMRP	INCHES
								ZMRP	INCHES
								SCALE	SCALE

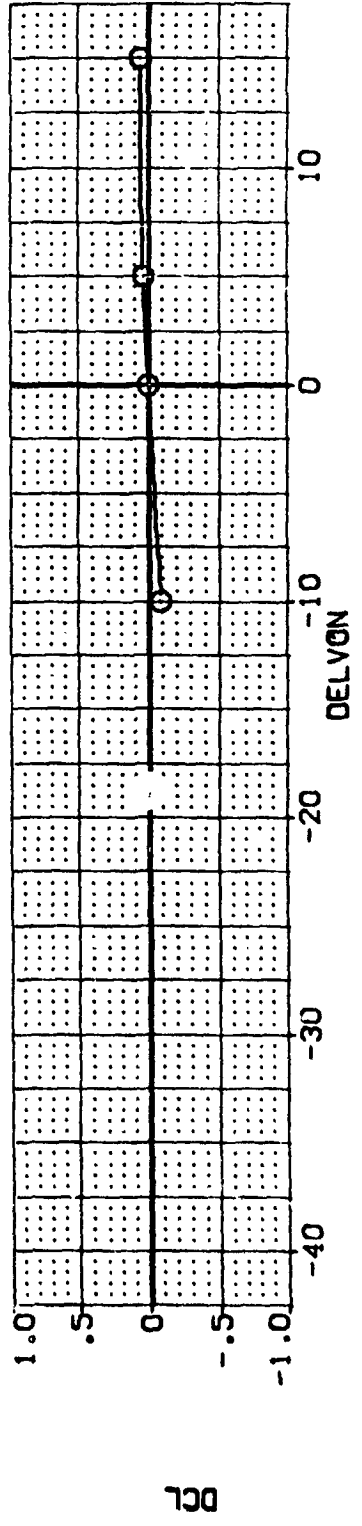
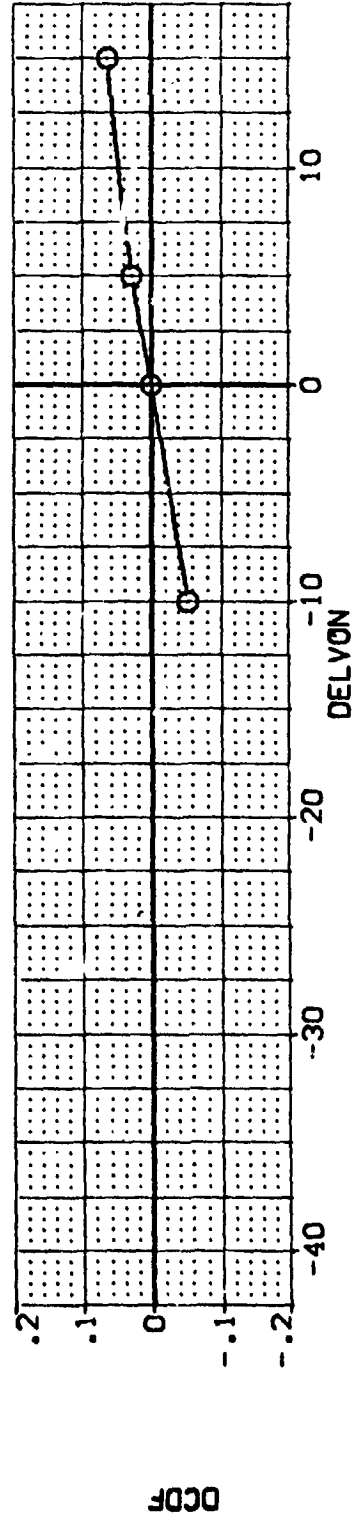
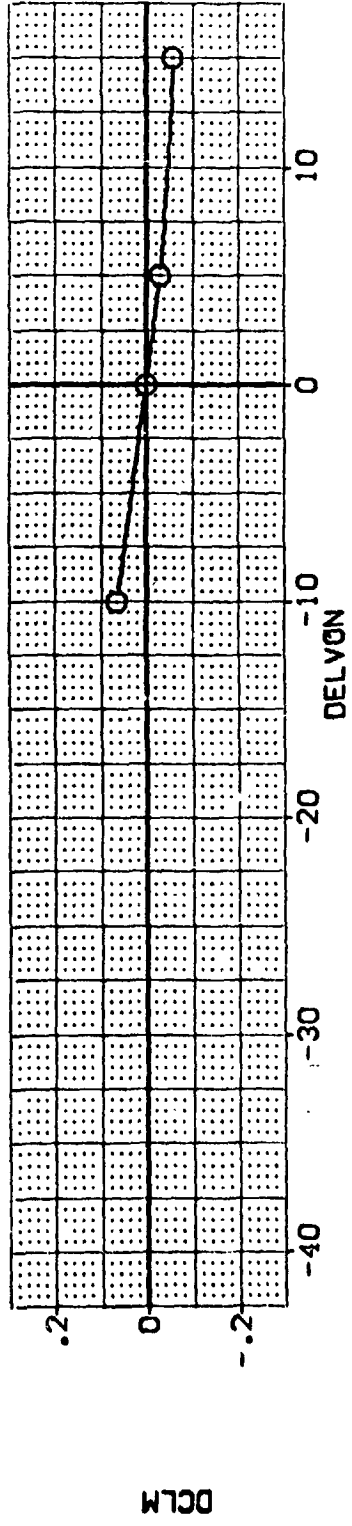


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0A628 B26C9 M7F8 W116E26V8R5X9 (2DZ110)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	.000	.200	BOFLAP	-.12.000	DATASET	DELTVN	SREF	4.4119	SO.FT.		
		.000	RUDDER	.000	2DZ110	.000	LREF	19.2299	INCHES		
		25.000	BETA	.000	2DZ116	15.000	XMRP	37.9359	INCHES		
							YMRP	43.5974	INCHES		
							ZMRP	15.0000	INCHES		
							SCALE	.0405	SCALE		

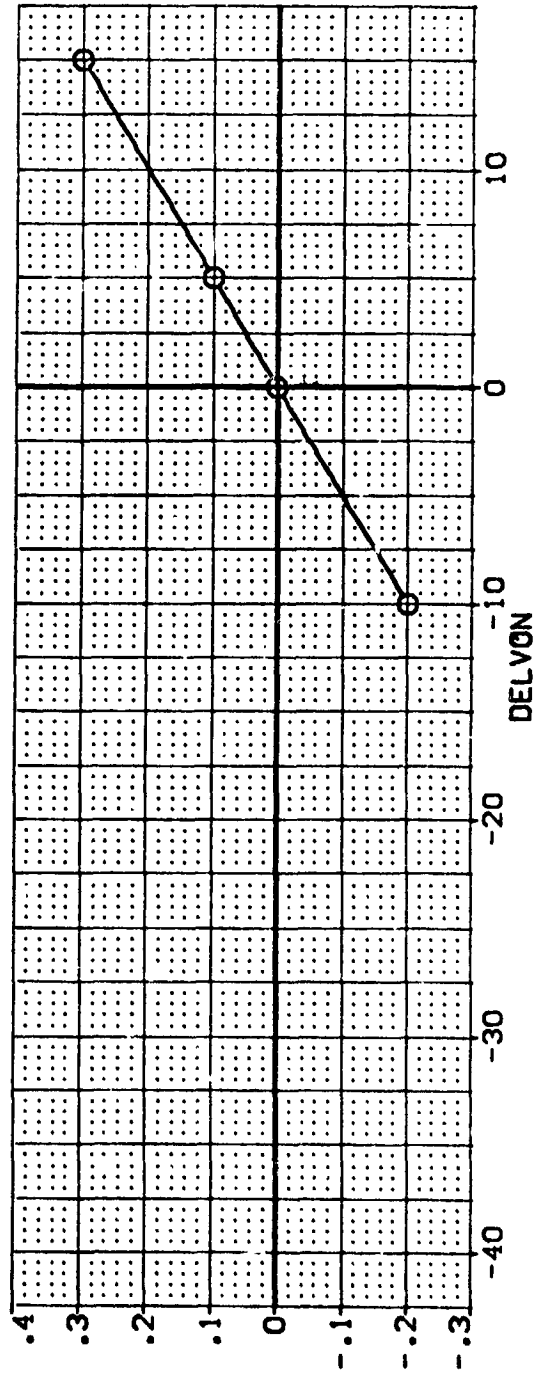
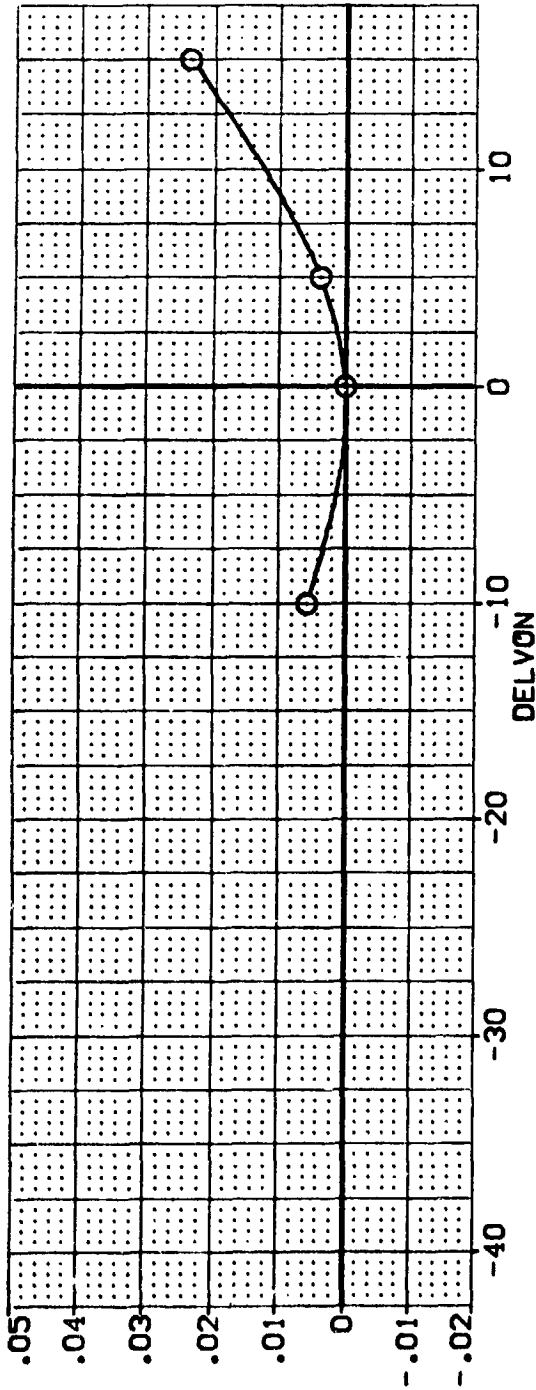
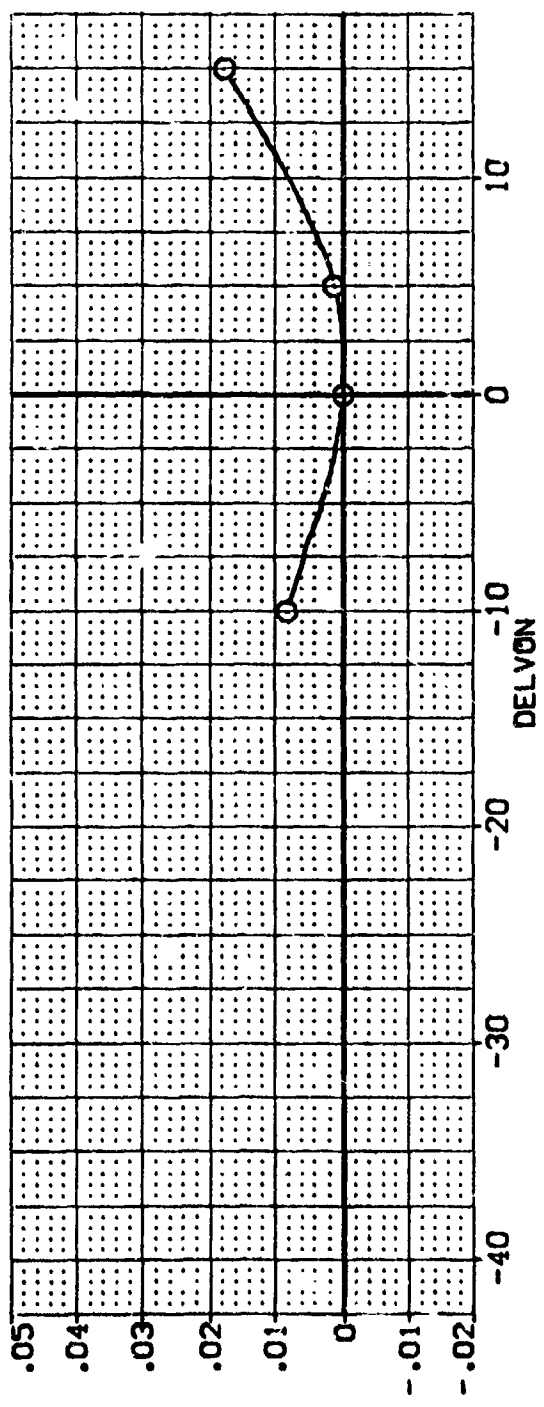


FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

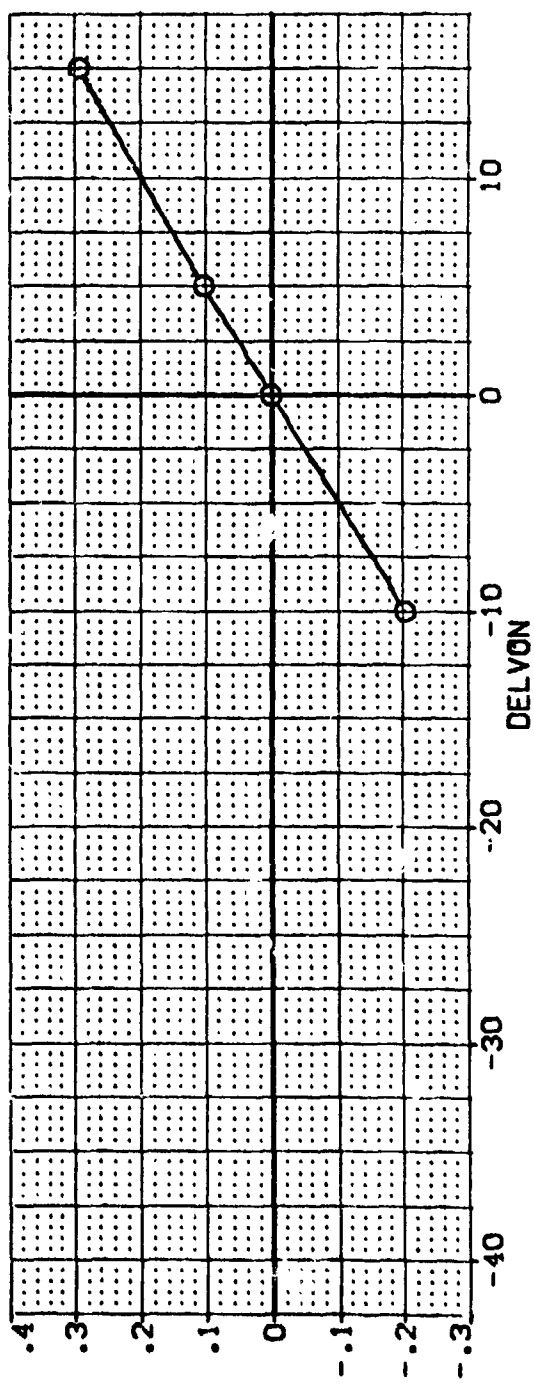


0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBL	ALPHA	MACH	PARA	DATA	REF	SO.FT.
0	5.000	AILRON	BDLAP	DELVON	SREF	INCHES
		SPOBRK	RLOOR	DELVON	LREF	INCHES
			BETA	DELVON	BREF	INCHES
				DELVON	XPRP	INCHES
				DELVON	ZPRP	INCHES
				DELVON	SCALE	SCALE
				DELVON		



DCA



DCN

FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	DEL VON	SREF	REFERENCE INFORMATION
O	10.000	A11URON	.200 BOFLAP	DEL VON	20Z110	.000	4.4119	SO. FT.
		SPURK	.000 RUDDER	-10.000	20Z113	15.000	19.2299	INCHES
			25.000 BETA	5.000			37.9399	INCHES
							43.5974	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

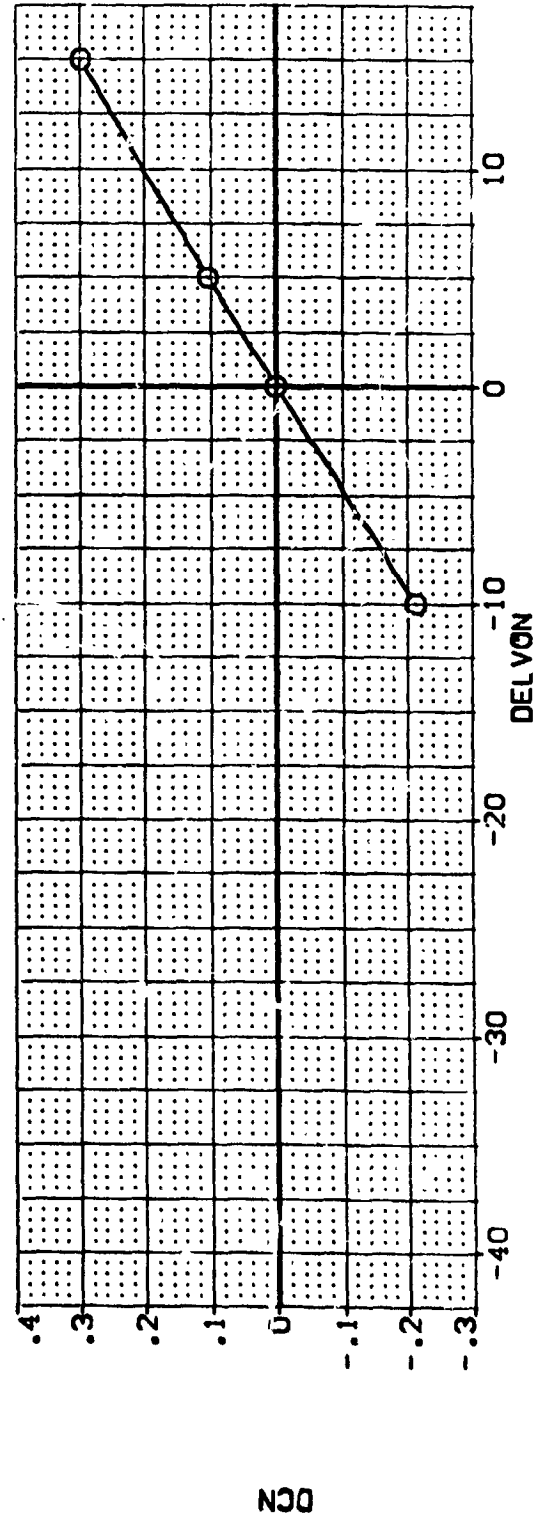
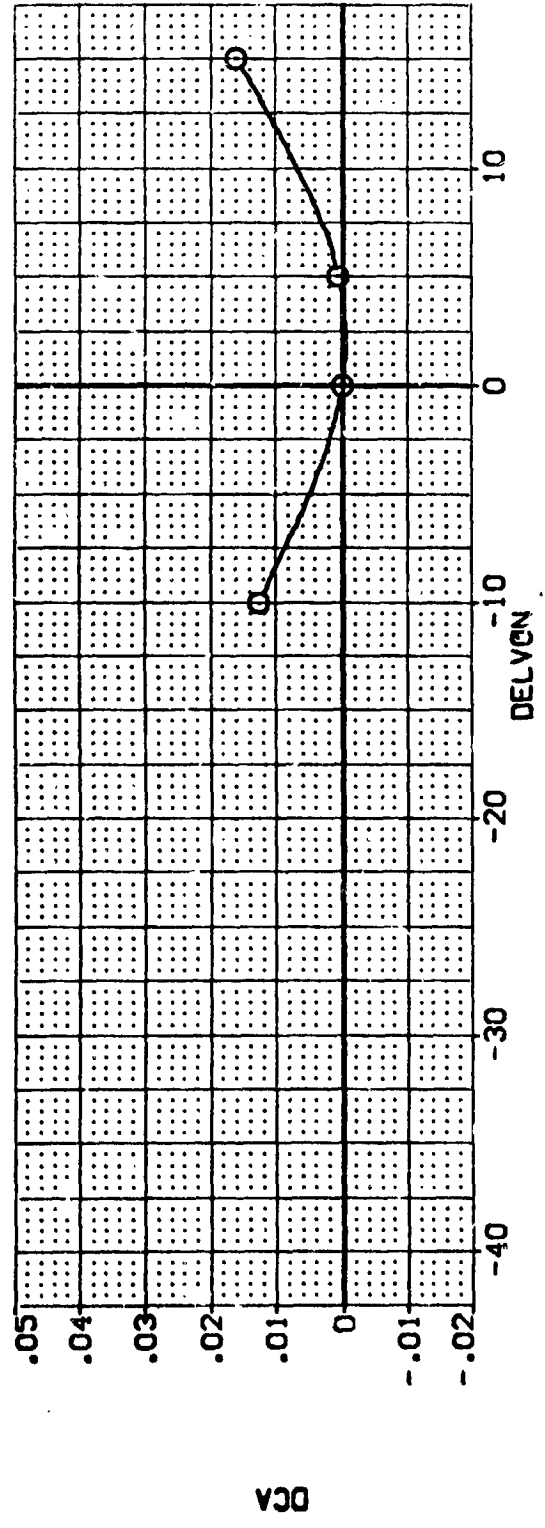


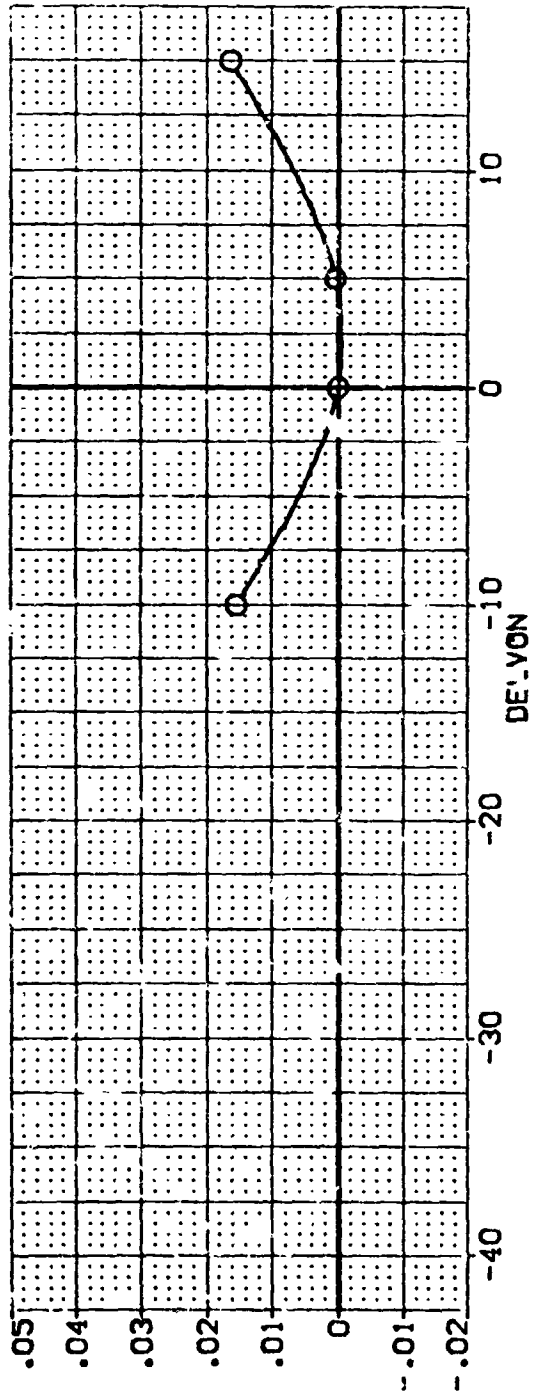
FIG 41 ELEVON EFFECTIVENESS. FREE AIR, GEAR OFF, SOLID ELEVON



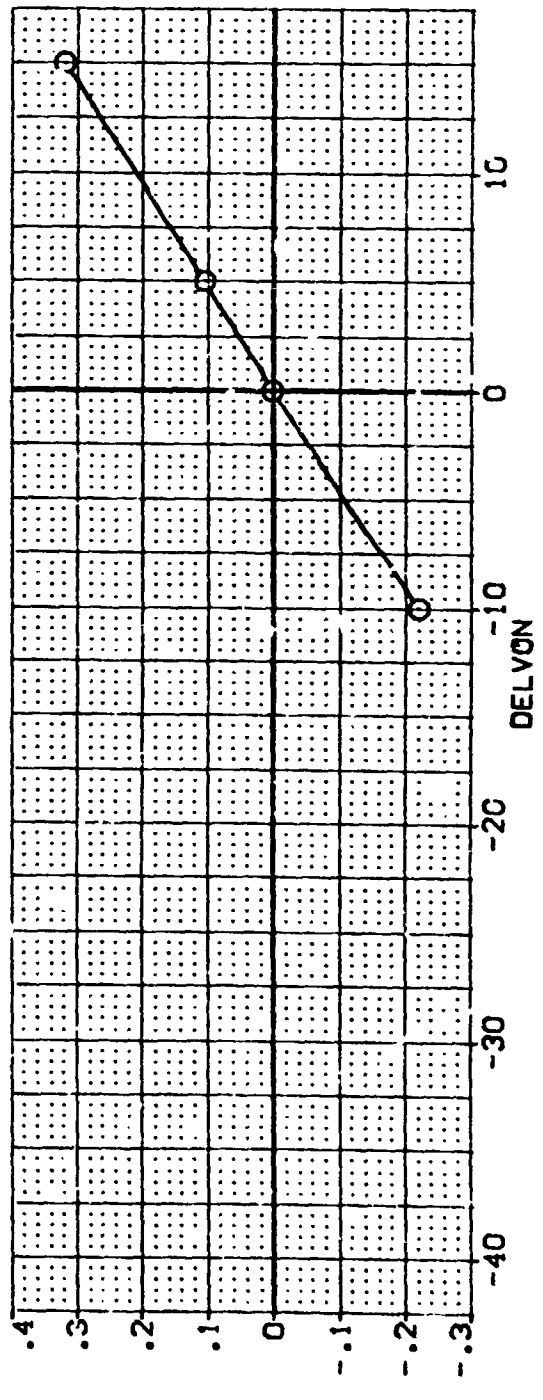


0A628 B26C3 M7F8 W116E26V8R5X9 (20Z110)

ALPHA	15.000	MACH	.200	BOFLAP	.000	DATASET	20Z110	DATA SOURCE	DEL VON	5.000	REF	4.4119	SO. FT.	19.2258
SYMBOL	O	AILRON	.000	RUDDER	.000	20Z110	20Z113	DEL VON	15.000	REF	37.9358	INCHES	43.5274	INCHES
		SPOBRK	25.000	BETA	.000	20Z116		DEL VON	15.000	TRIP	.0000	INCHES	15.1875	INCHES
								ZTRIP	.0405	SCALE				



DCA



DCN

FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	DELVON	REF	REFERENCE INFORMATION
O	20.000	AILRON	.200 BOFLAP	DELVON	20Z124	.000	4.4119	50.FT.
		SPOBRK	.000 RUDDER	-12.000	20Z110	.000	19.2299	INCHES
			25.000 BETA	.000 20Z116	20Z113	15.000	37.9559	INCHES
							43.5974	INCHES
							15.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

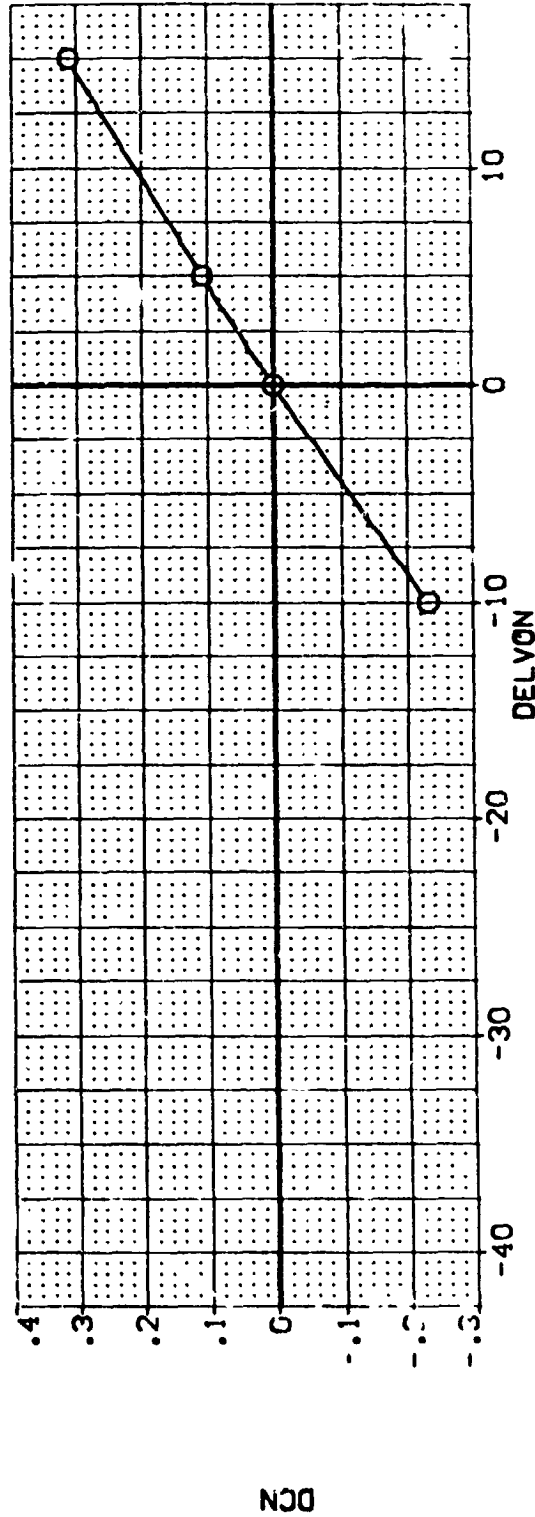
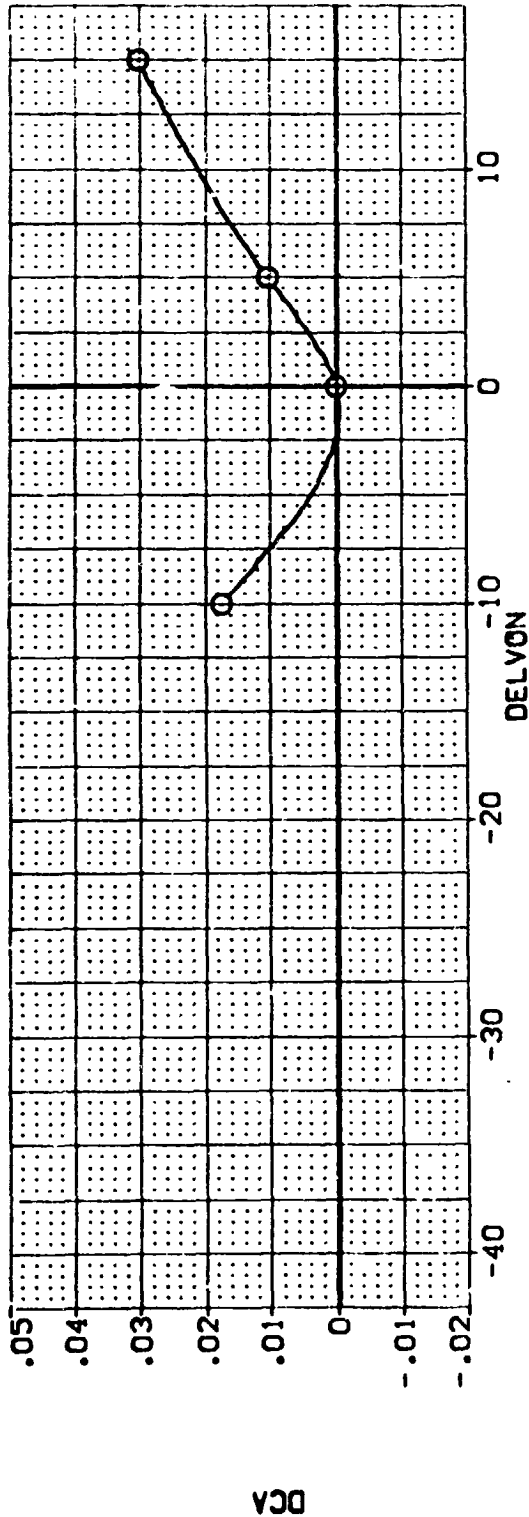


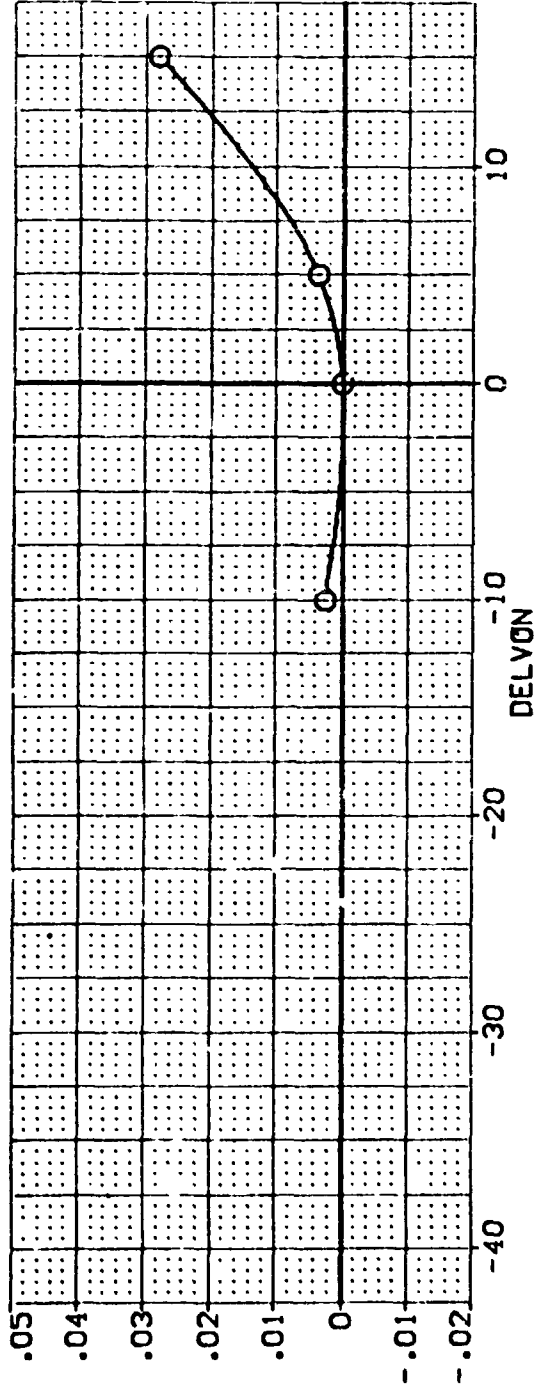
FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON



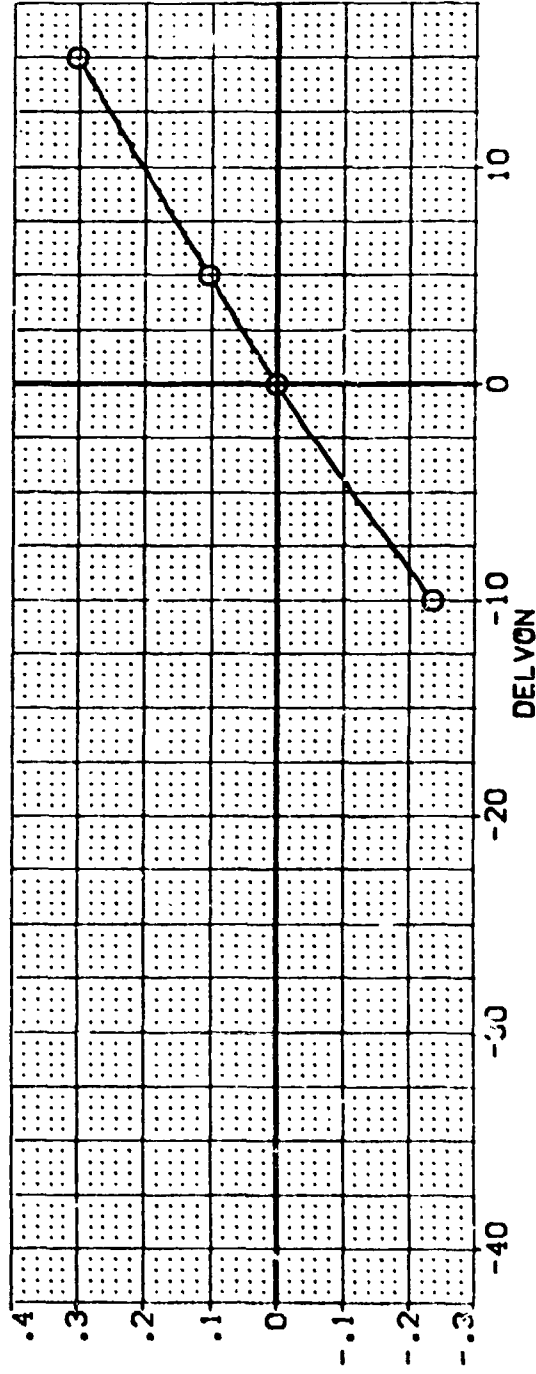
4 1

0A628 B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	25.000		.200	BOFLAP	-12.000	DATASET	DELVON	SREF
			.000	RUDDER	.000	20Z110	.000	LREF
			25.000	BETA	.000	20Z116	15.000	LRREF
								TRREF
								ZTRP
								SCALE
								50.FT.
								INCHES
								INCHES
								INCHES
								INCHES
								SCALE
								.0405



DCA

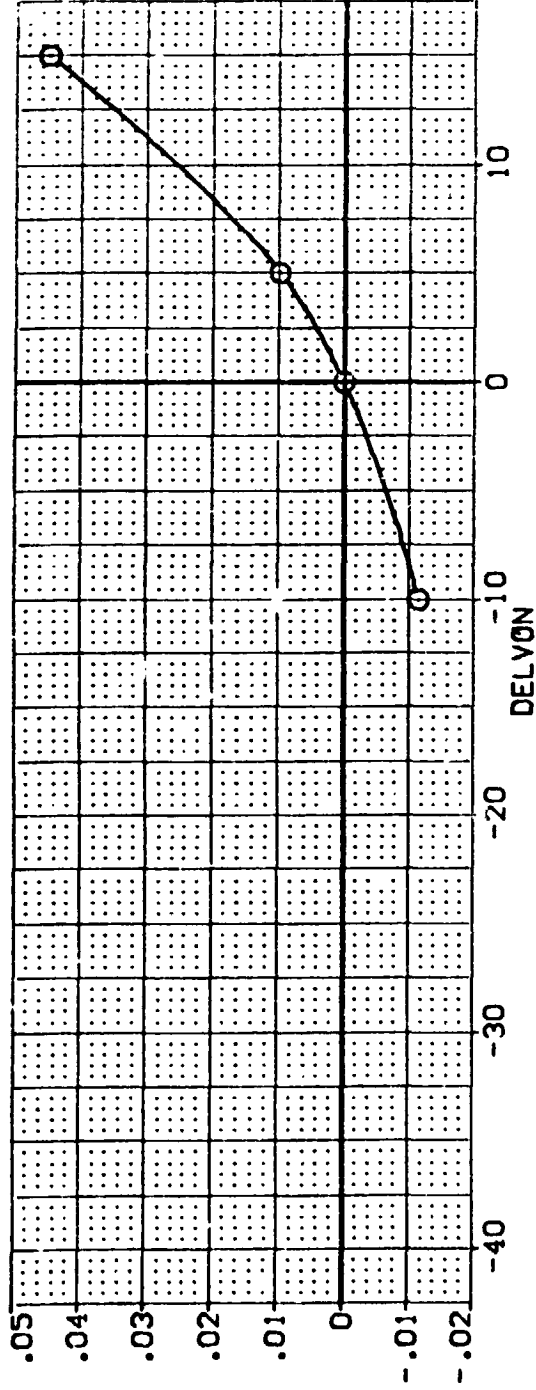


DCN

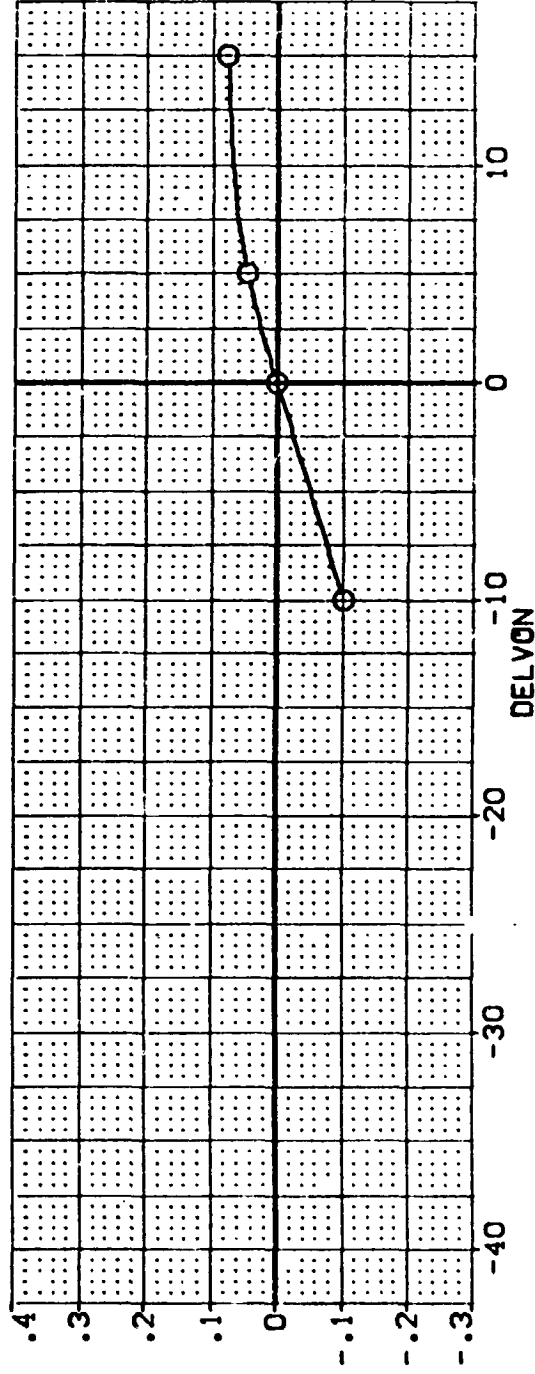
FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON

0AS2B B26C9 M7F8 W116E26V8R5X9 (20Z110)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
0	30.000	A1LRON	.200	BDFLAP	-12.000	DATASET	DELVON	SREF	SO.FT.	4.4119	SO.FT.
		SPOBRK	.000	RUDDER	.000	20Z110	000	LRREF	INCHES	19.2288	INCHES
			25.000	BETA	.000	20Z116	15.000	XRREF	INCHES	37.8259	INCHES
								YMRP	INCHES	43.2374	INCHES
								ZMRP	INCHES	.0000	INCHES
								SCALE	SCALE	15.1875	SCALE
										.0405	



DCA

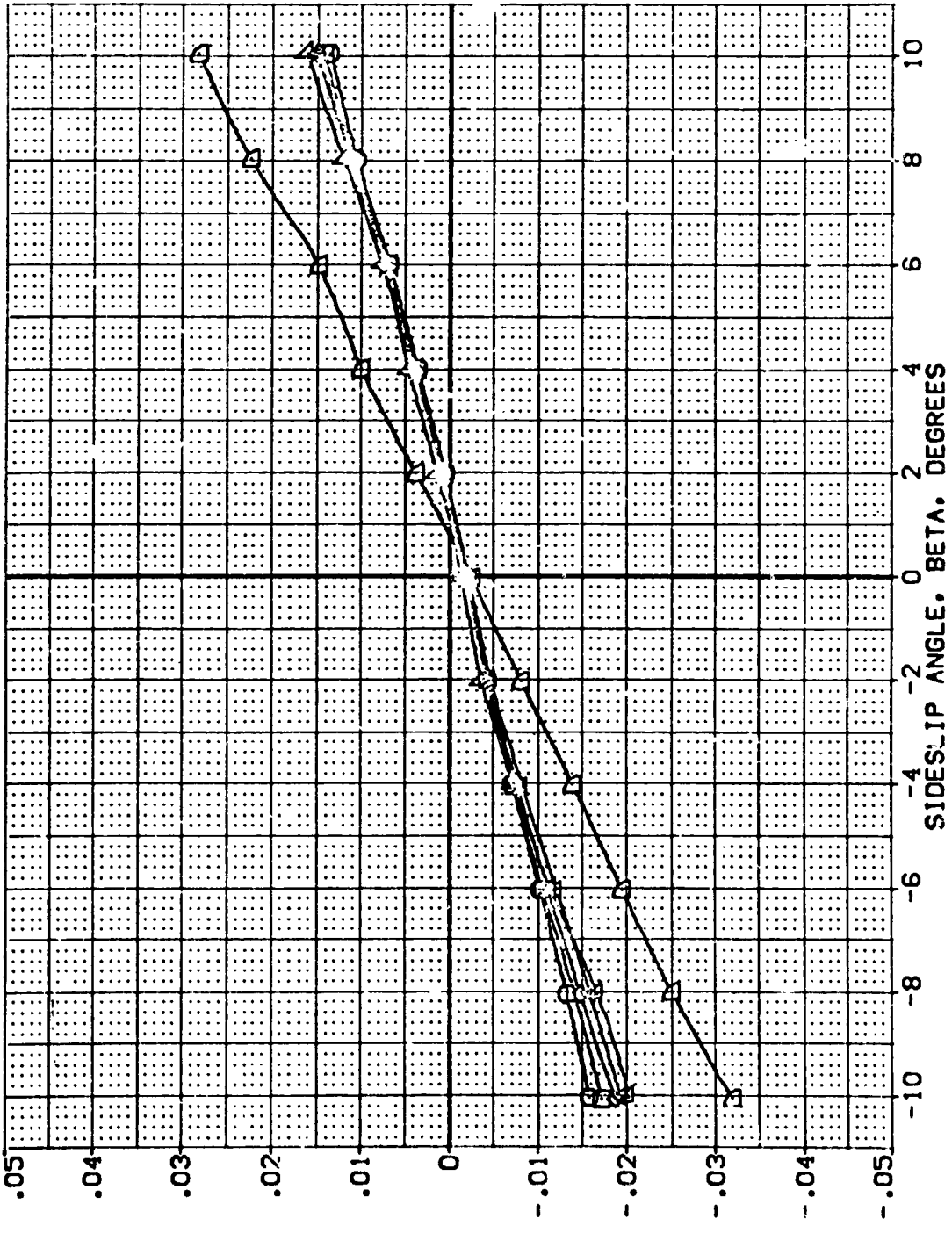


DCN

FIG 41 ELEVON EFFECTIVENESS, FREE AIR, GEAR OFF, SOLID ELEVON



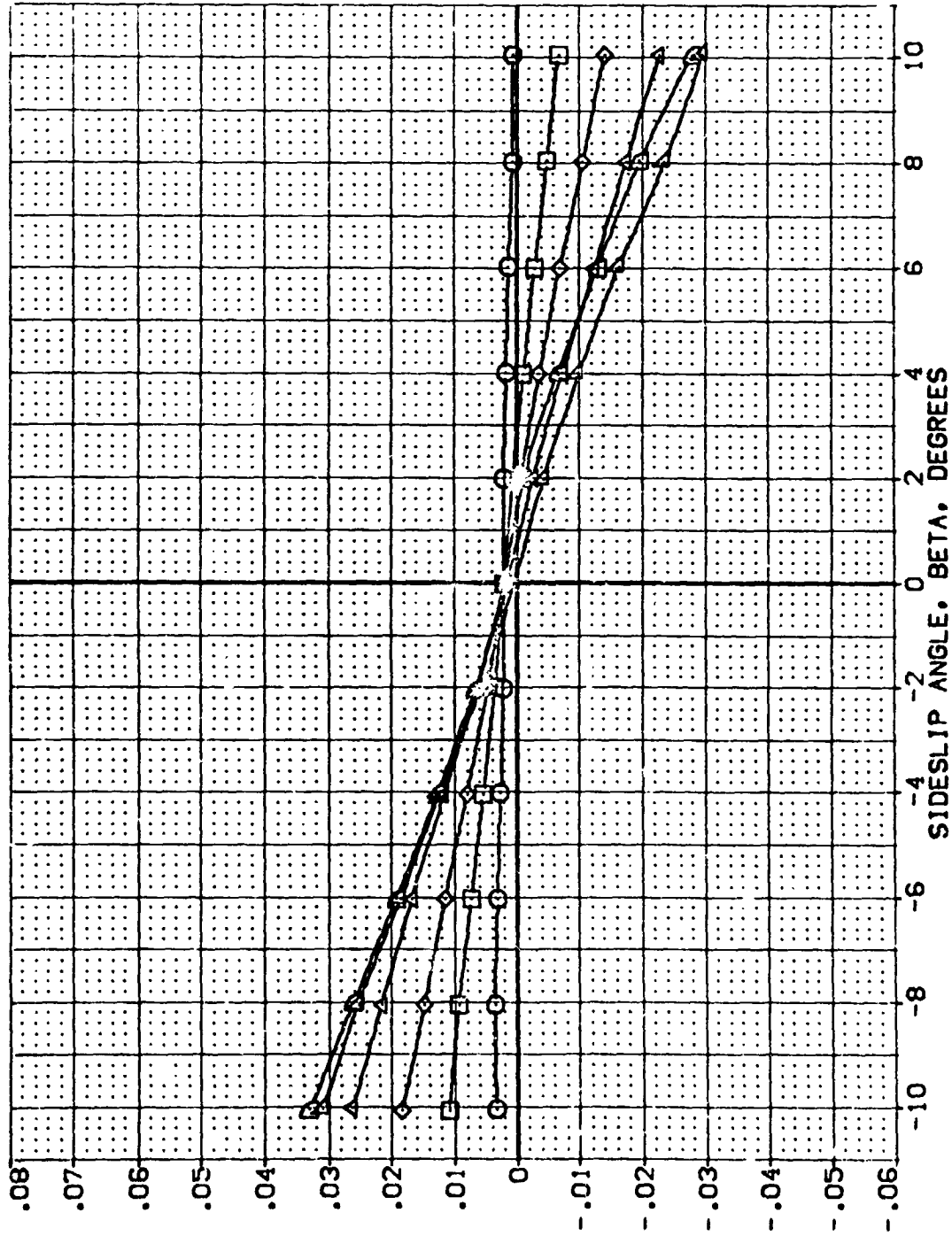
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILDRN	REFERENCE INFORMATION
(RDZ118)	DA628 B26C9 M7F8 V116E28V875X9	-5.000	.000	25.000	.000	SREF 4.4119 SO.FT.
(RDZ119)	DA628 B26C9 M7F8 V116E28V875X9	5.000	.000	25.000	.000	LREF 19.2299 INCHES
(RDZ120)	DA628 B26C9 M7F8 V116E28V875X9	10.000	.000	25.000	.000	BREF 37.9369 INCHES
(RDZ121)	DA628 B26C9 M7F8 V116E28V875X9	15.000	.000	25.000	.000	XMRP 43.5974 INCHES
(RDZ122)	DA628 B26C9 M7F8 V116E28V875X9	20.000	.000	25.000	.000	ZMRP .0000 INCHES
(RDZ123)	DA628 B26C9 M7F8 V116E28V875X9					SCALE 15.1875 INCHES
						SCALE .0405



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE  
CAJ MACH = .20 PAGE 471

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILERON	REFERENCE INFORMATION
(R0Z119)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	-5.000	.000	25.000	.000	SREF 4.4119 SO.FT.
(R0Z119)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	.000	.000	25.000	.000	LREF 19.2299 INCHES
(R0Z120)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	5.000	.000	25.000	.000	BREF 37.9359 INCHES
(R0Z121)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	10.000	.000	25.000	.000	YREF 43.5871 INCHES
(R0Z122)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	15.000	.000	25.000	.000	ZREF .0000 INCHES
(R0Z123)	0A5Z8 8Z6C9 M7F8 V118E28V8FSX9	20.000	.000	25.000	.000	SCALE 15.1873 INCHES SCALE



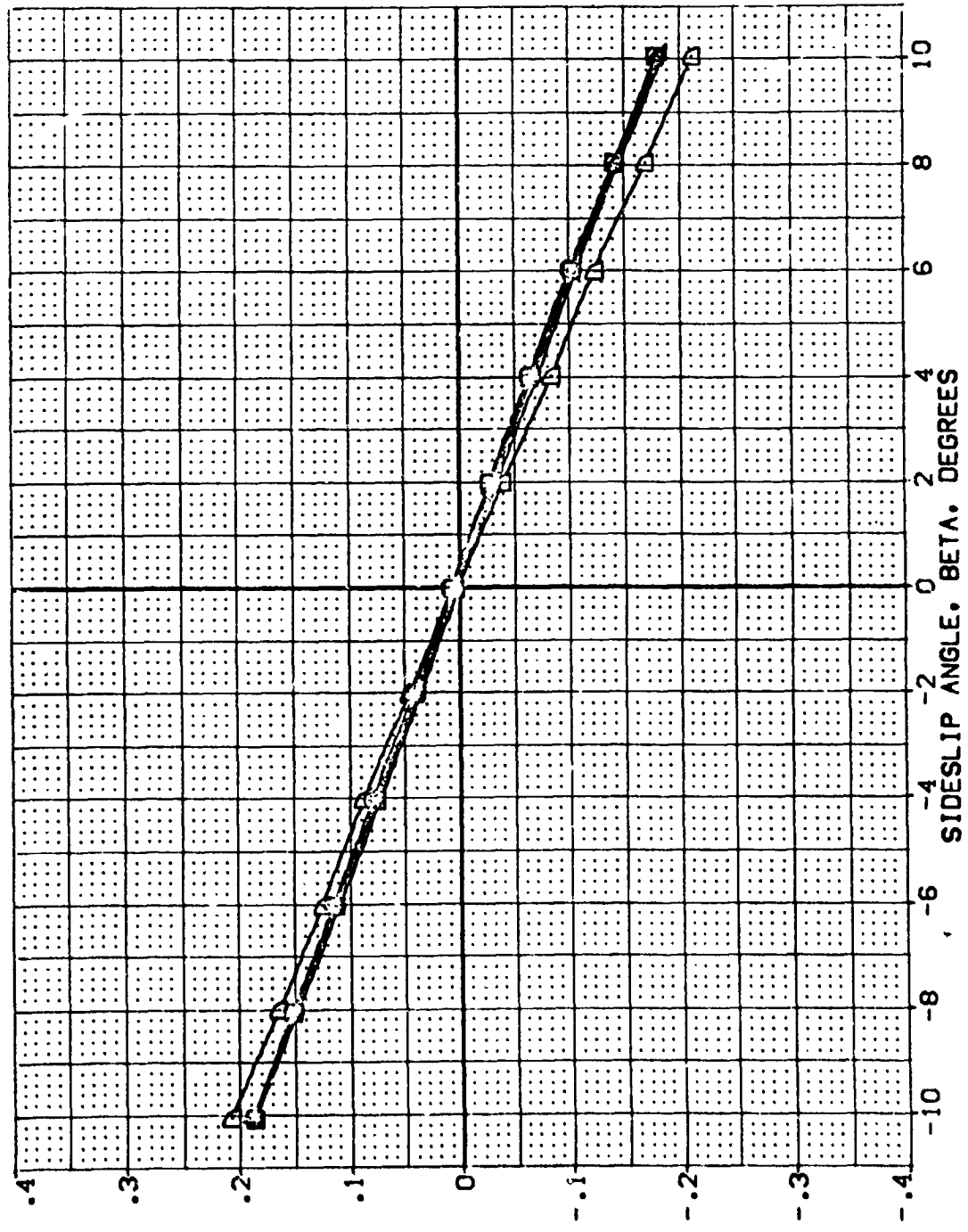
ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
[RZ118]	DAS28 B26C9 M7F8 V116E28V8PSV9	-5.000	.000	25.000	.000	SREF 4.4119 SQ.FT. INCHES
[RZ119]	DAS28 B26C9 M7F8 V116E28V8PSV9	5.000	.000	25.000	.000	LREF 19.2258 INCHES
[RZ120]	DAS28 B26C9 M7F8 V116E28V8PSV9	10.000	.000	25.000	.000	BREF 37.9359 INCHES
[RZ121]	DAS28 B26C9 M7F8 V116E28V8PSV9	15.000	.000	25.000	.000	YTRP 43.5974 INCHES
[RZ122]	DAS28 B26C9 M7F8 V116E28V8PSV9	20.000	.000	25.000	.000	ZTRP 15.0000 INCHES
[RZ123]	DAS28 B26C9 M7F8 V116E28V8PSV9		.000	25.000	.000	SCALE 15.1875 INCHES
						SCALE .0405



SIDE FORCE COEFFICIENT, CY

FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE  
 (A)MACH = .20 PAGE 473

(CDZ118)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

RUDDER	MACH	PARAMETRIC VALUES	
.000	.200	BDFLAP	-12.000
	.000	A1LRON	.000
ELEVON			
SPOBRK	25.000		

REFERENCE INFORMATION		
SREF	4.4119	SO.FT.
LREF	19.2259	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

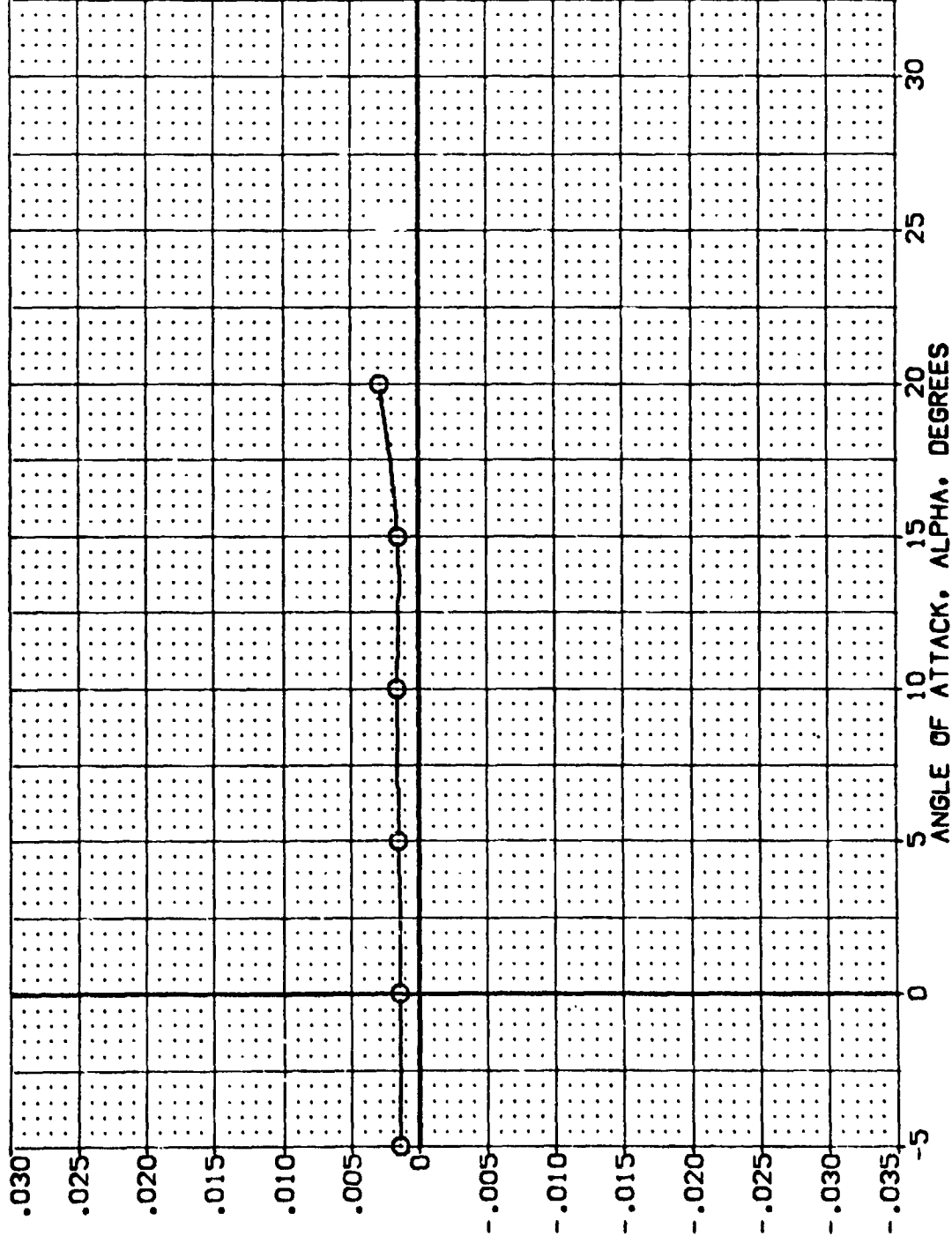


FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE





0A628 B26C9 M7F8 W116E28V8R5X9 (CDZ118)

SYMBOL  
O

RUDDER: .000  
MACH: .200  
ELEVON: .000  
SPOBRK: 25.000

PARAMETRIC VALUES  
EDFLAP: -12.000  
AILTRON: .000

REFERENCE INFORMATION  
SREF: 4.4118 SQ.FT.  
LREF: 19.2298 INCHES  
BREF: 37.9359 INCHES  
XMRP: 43.5974 INCHES  
YMRP: .0000 INCHES  
ZMRP: 15.1875 INCHES  
SCALE: .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

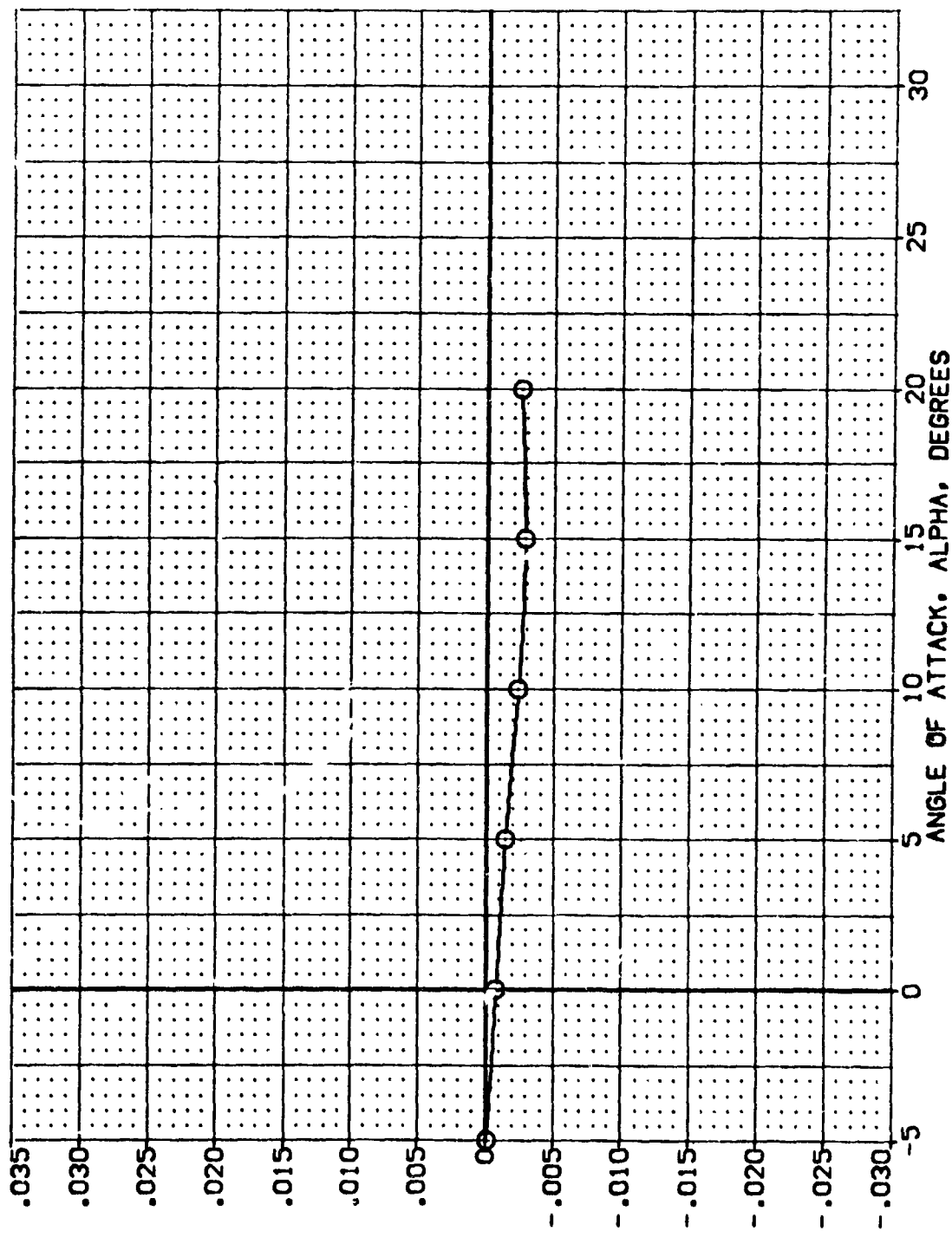


FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE

(COZ118)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER .000

MACH .200

ELEVON .000

SPOORX 25.000

BOFLAP -12.000

A1LRON .000

PARAMETRIC VALUES

SREF 4.4119 SO.FT.

LREF 19.7288 INCHES

BREF 37.9359 INCHES

XMRP 43.5874 INCHES

YMRP .0000 INCHES

ZMRP 15.1075 INCHES

SCALE .0405 SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

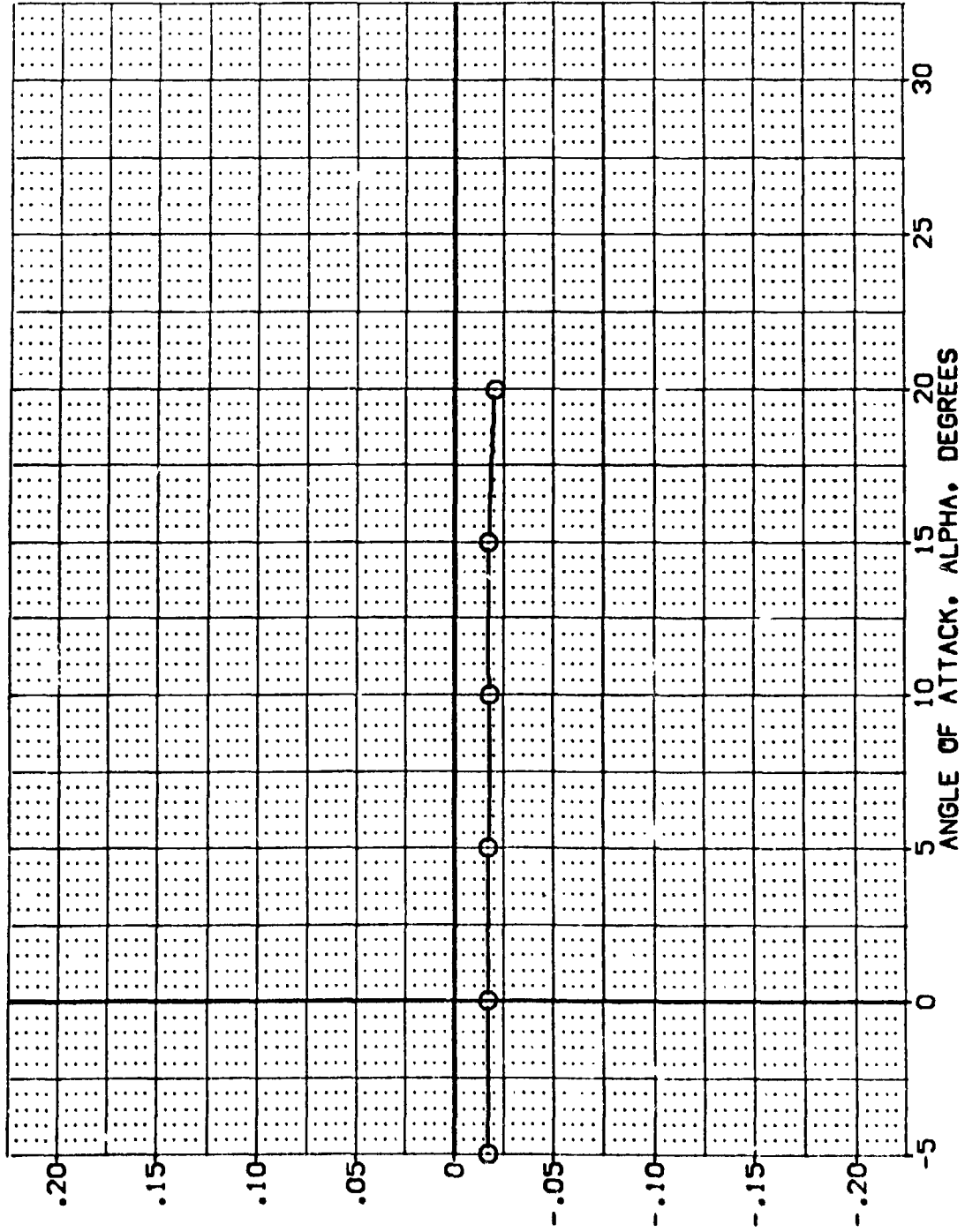


FIG 42 LAT-DIR STAB. FREE AIR GEAR OFF, 0 RUDDER BASELINE ELEVON GAP 25 FLARE

DATA SET SYMBOL. CONFIGURATION DESCRIPTION  
 (CZ124) 8 04628 B26CS M77-B V116E28V85X3  
 (B0Z117) 8 04628 B26CS M77-B V116E28V85X3

ELEVON SPOBRK BDFLAP RUDDER  
 .000 25.000 -12.000 .000  
 .000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2259 INCHES  
 BREF 37.9359 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405

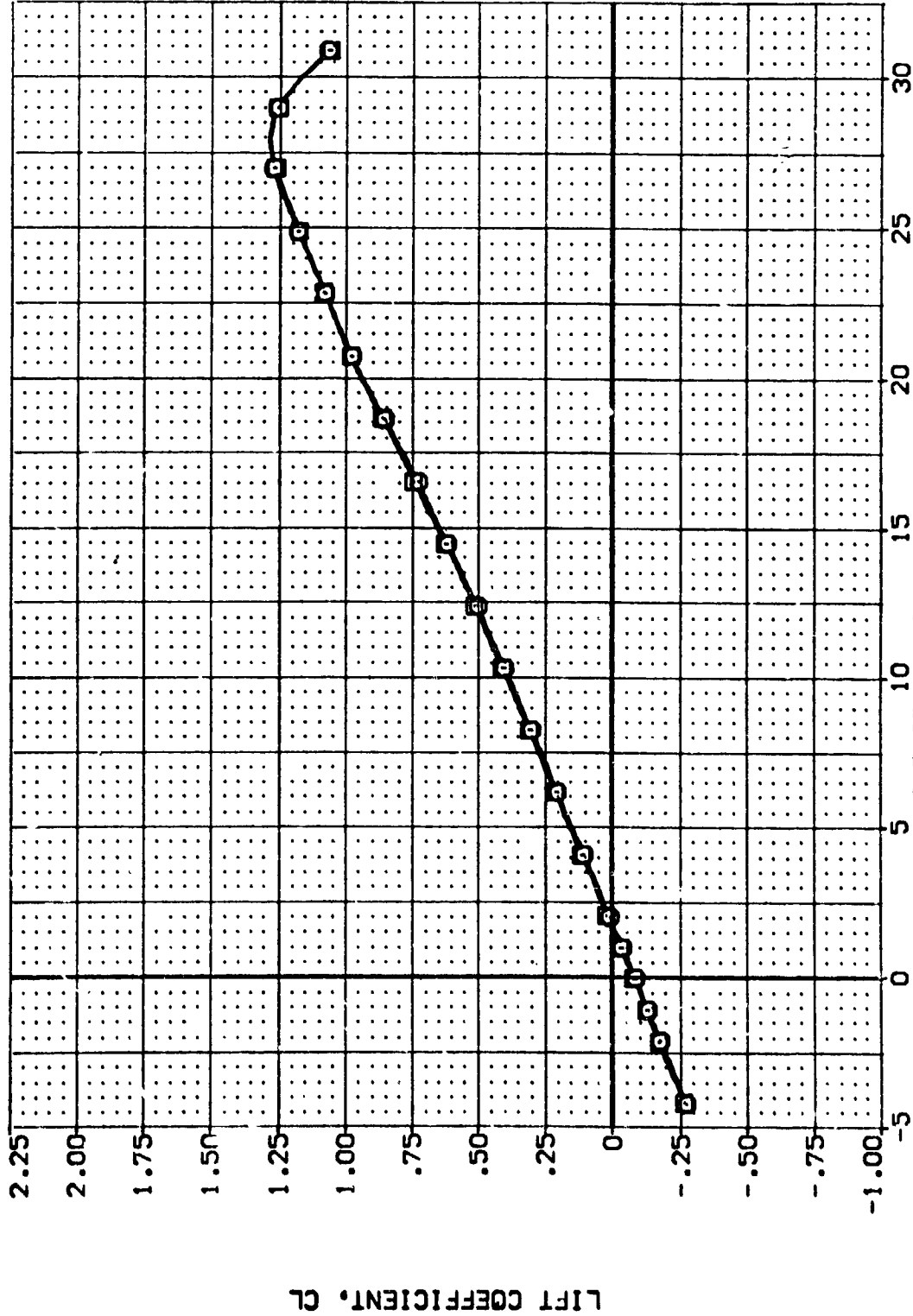


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ124) □ 0A628 B26C9 M7F8 V116E28V8S3  
 (BDZ117) □ 0A628 B26C9 M7F8 V116E28V8S3

ELEVON SPOBRK BOFLAP RUDDER REFERENCE INFORMATION  
 .000 25.000 -12.000 .000 4.4119 50. FT.  
 .000 25.000 -12.000 .000 19.2299 INCHES  
 XMRP 0.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

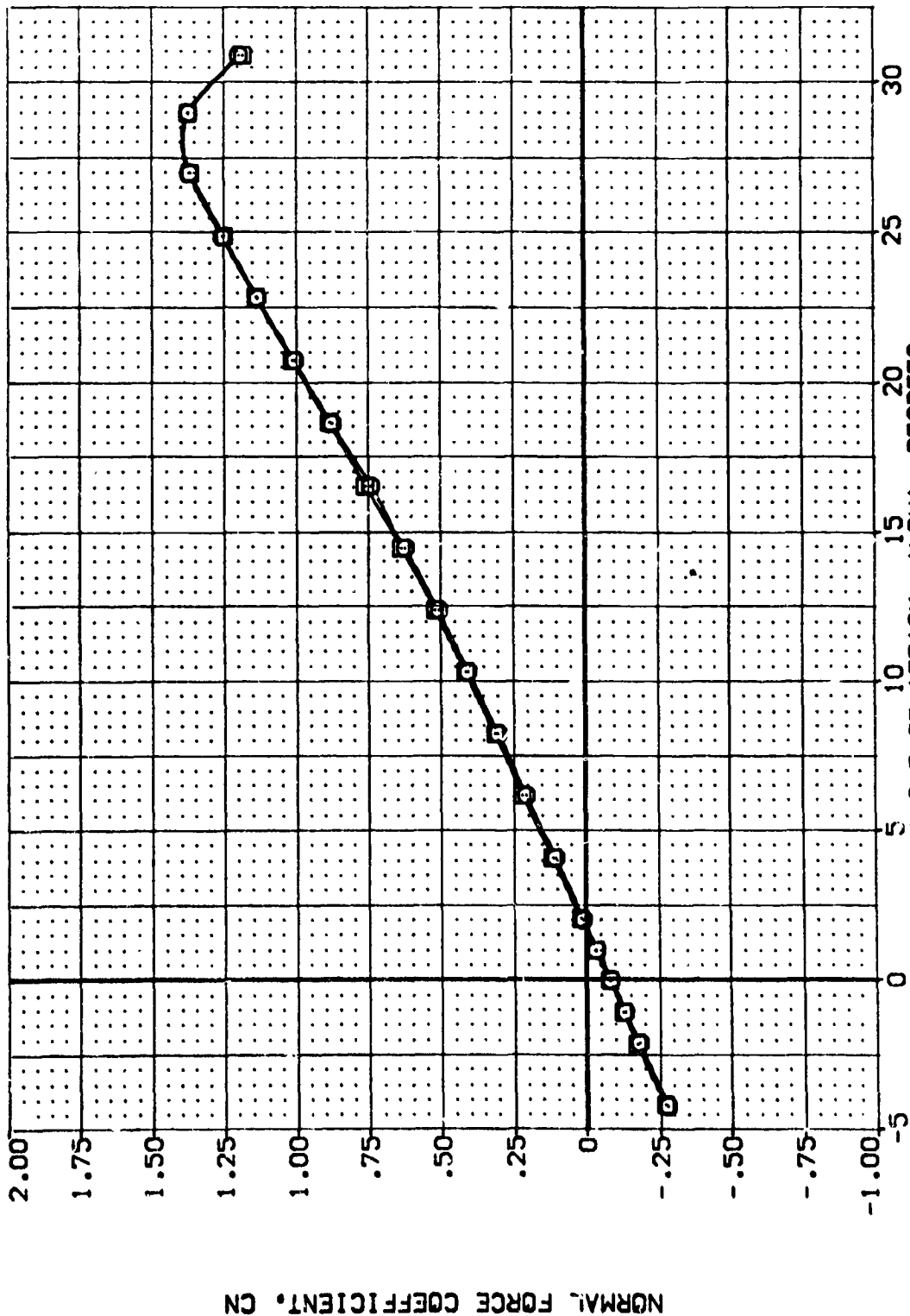


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

MAJ MACH = .20

DATA SET SYMBOL (807124) (802117) □

CONFIGURATION DESCRIPTION

84628 826C8 H7F8 V116E26V85X8  
 84628 826C3 H7F8 V116E26V85X9

ELEVON .000 .000  
 SPOONK 25.000 25.000  
 BDFLAP -12.000 -12.000  
 RUDDER .000 .000

REFERENCE INFORMATION  
 SHEET 4.4118 SO.FT. INCHES  
 LINEF 19.2259 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

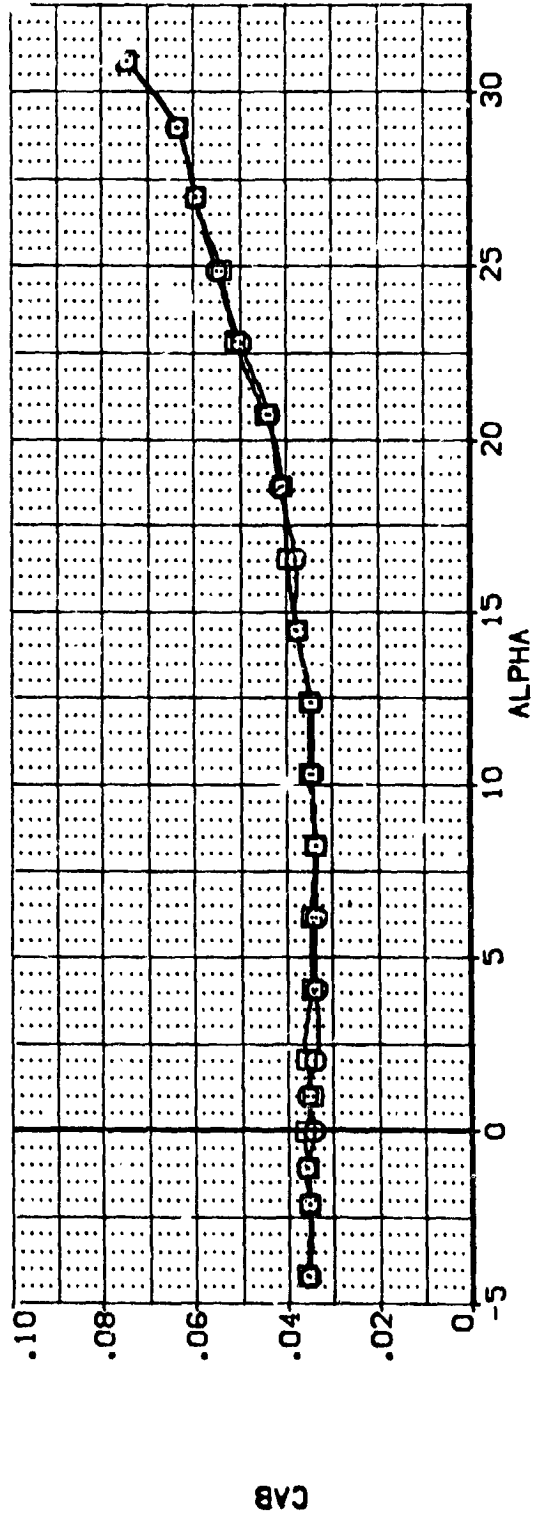
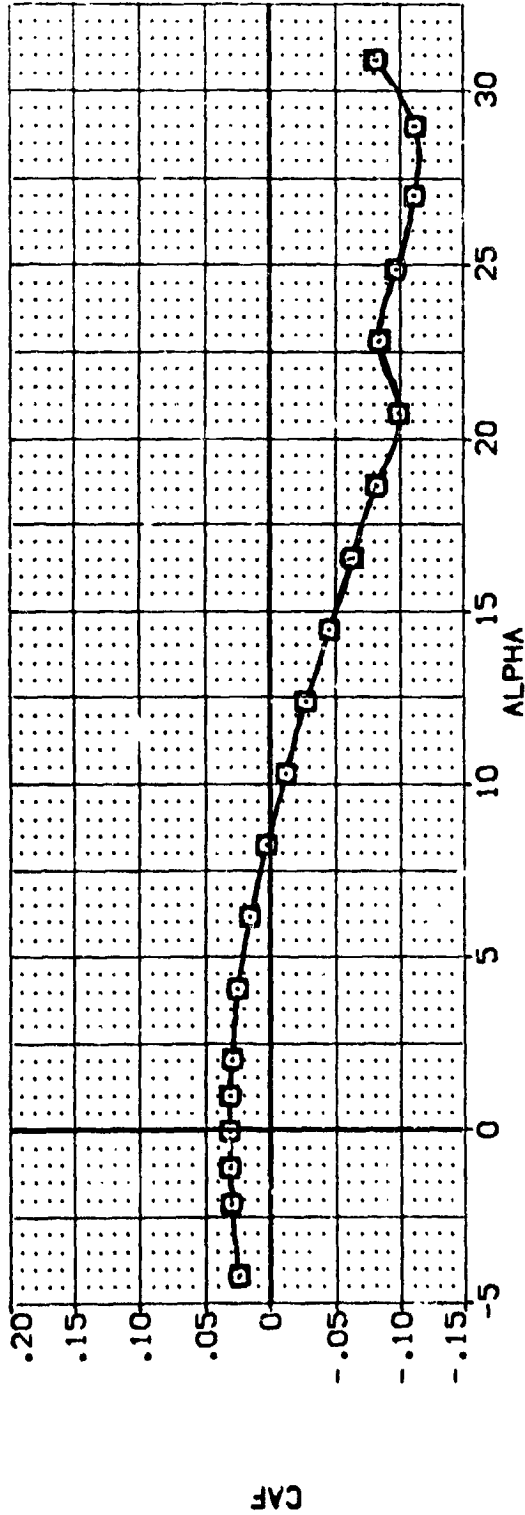


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

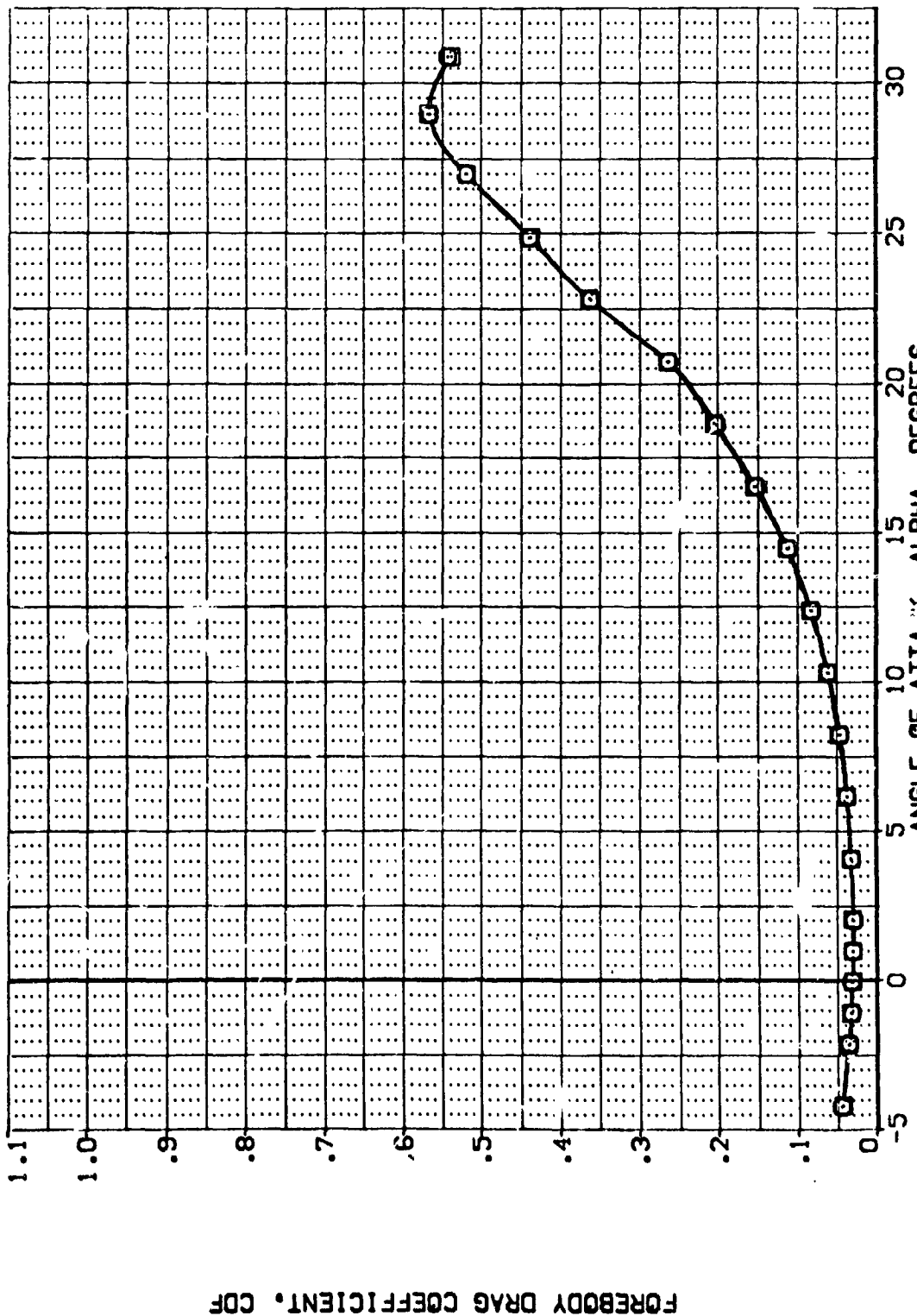
(AJMACH = .20

DATA SET SYMBOL: (BDZ124) (BDZ117)

CONFIGURATION DESCRIPTION:  
 0A628 826CS M7F8 V118E28V8RSX8  
 0A628 826CS M7F8 V118E28V8RSX8

ELEVON: .000 .000  
 SPDRBK: 25.000 25.000  
 BOFLAP: -12.000 -12.000  
 RUDDER: .000 .000

REFEREN. INFORMATION:  
 SREF: 4.4119 50.FT.  
 LREF: 19.2299 INCHES  
 BREF: 37.9359 INCHES  
 YMRP: 43.5974 INCHES  
 ZMRP: .0000 INCHES  
 SCALE: 15.1875 INCHES  
 .0405 SCALE



FOREBODY DRAG COEFFICIENT, CDF

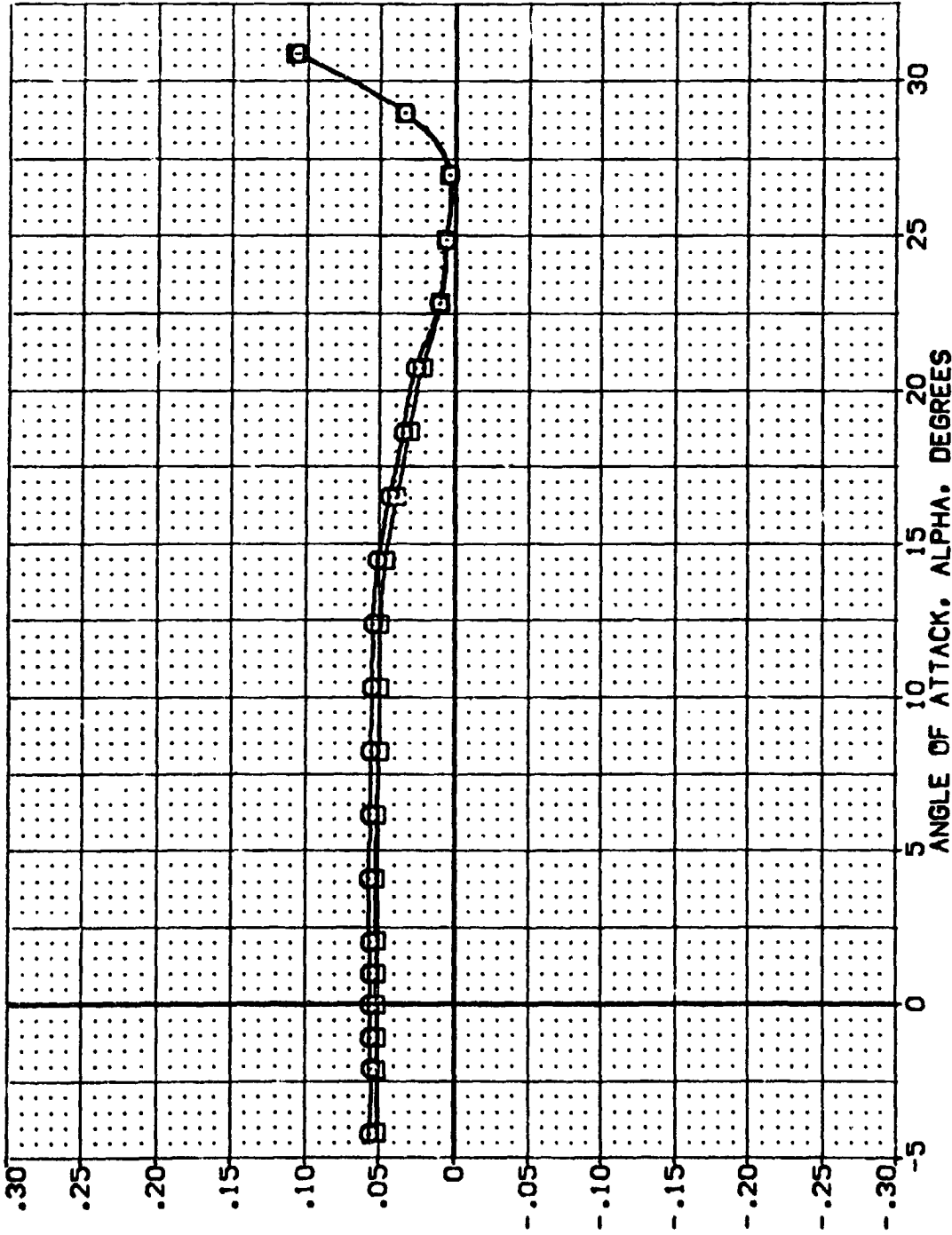
FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

MAJACH = 20



C-7

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SP08BK	BDFLAP	RUDDER	REFERENCE INFORMATION
{80Z124}	0A5Z8 8Z6C9 M7F8 V116Z26V8F5X9	.000	25.000	-12.000	.000	50 FT
{80Z117}	0A5Z8 8Z6C9 M7F8 V116Z26V8F5X9	.000	25.000	-12.000	.000	INCHES
						INCHES
						INCHES
						INCHES
						SCALE
						SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

CA/MACH = .20

DATA SET SYMBOL: CONFIGURATION DESCRIPTION  
 (802124) □ CAS2B B26CS M7B V11E28V8V8X3  
 (802117) □ CAS2B B26CS M7B V11E28V8V8X3

ELEVON SPDRBK BDFLAP RUDDER REFERENCE INFORMATION  
 .000 25.000 -12.000 .000 4.4119 SQ.FT. INCHES  
 .000 25.000 -12.000 .000 19.2239 INCHES  
 .000 25.000 -12.000 .000 37.9359 INCHES  
 .000 25.000 -12.000 .000 43.5674 INCHES  
 .000 25.000 -12.000 .000 15.1673 INCHES  
 .000 25.000 -12.000 .000 .0403 SCALE

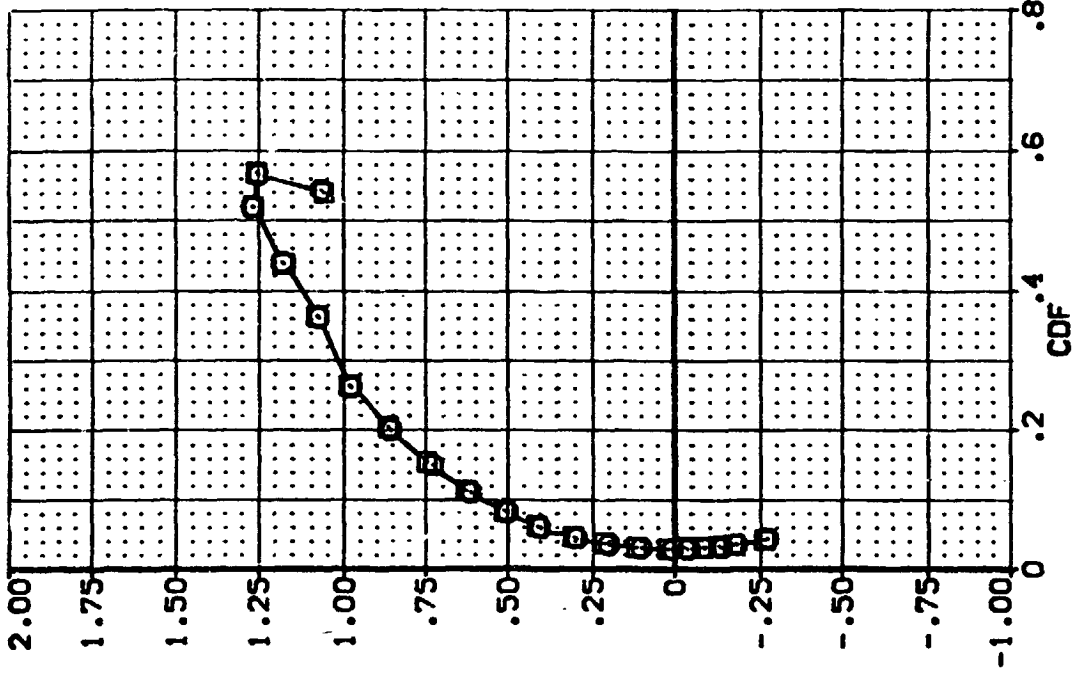
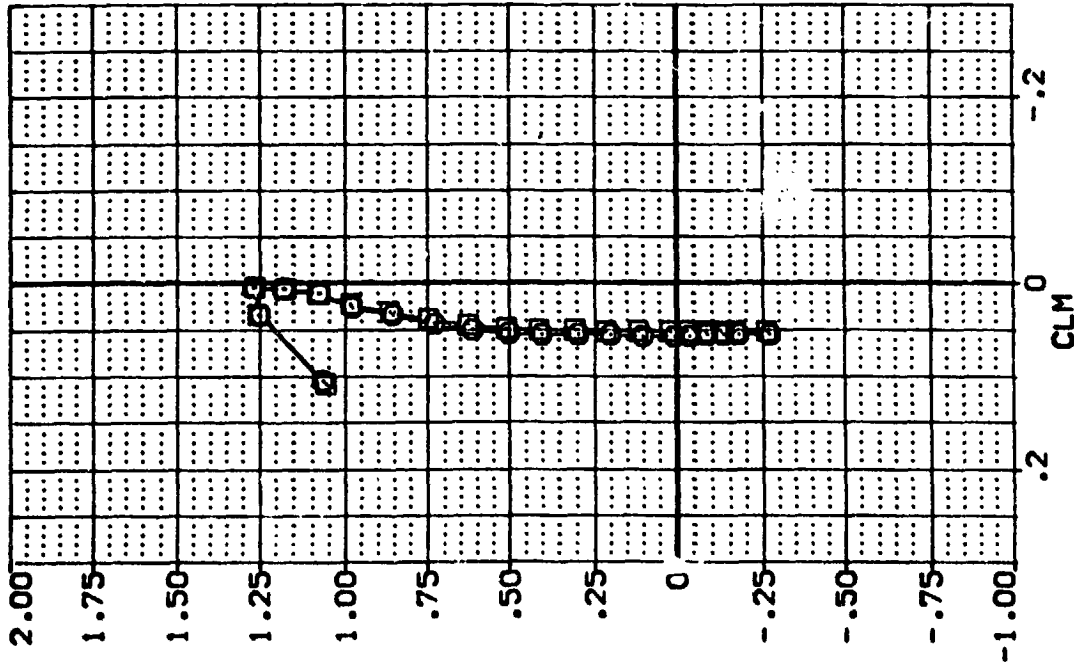


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

CAJMACH = .20





DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 (BDZ124) 0A528 B06C3 M1F8 V116Z28V6R5X3  
 (BDZ117) 0A528 B06C3 M1F8 V116Z28V6R5X3

ELEVON WPOSK BDFLAP RUDDER  
 .000 25.000 -12.000 .000  
 .000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 60.FT.  
 LREF 19.2259 INCHES  
 BREF 37.5359 INCHES  
 XPRP 43.5974 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1673 INCHES  
 SCALE .0405 SCALE

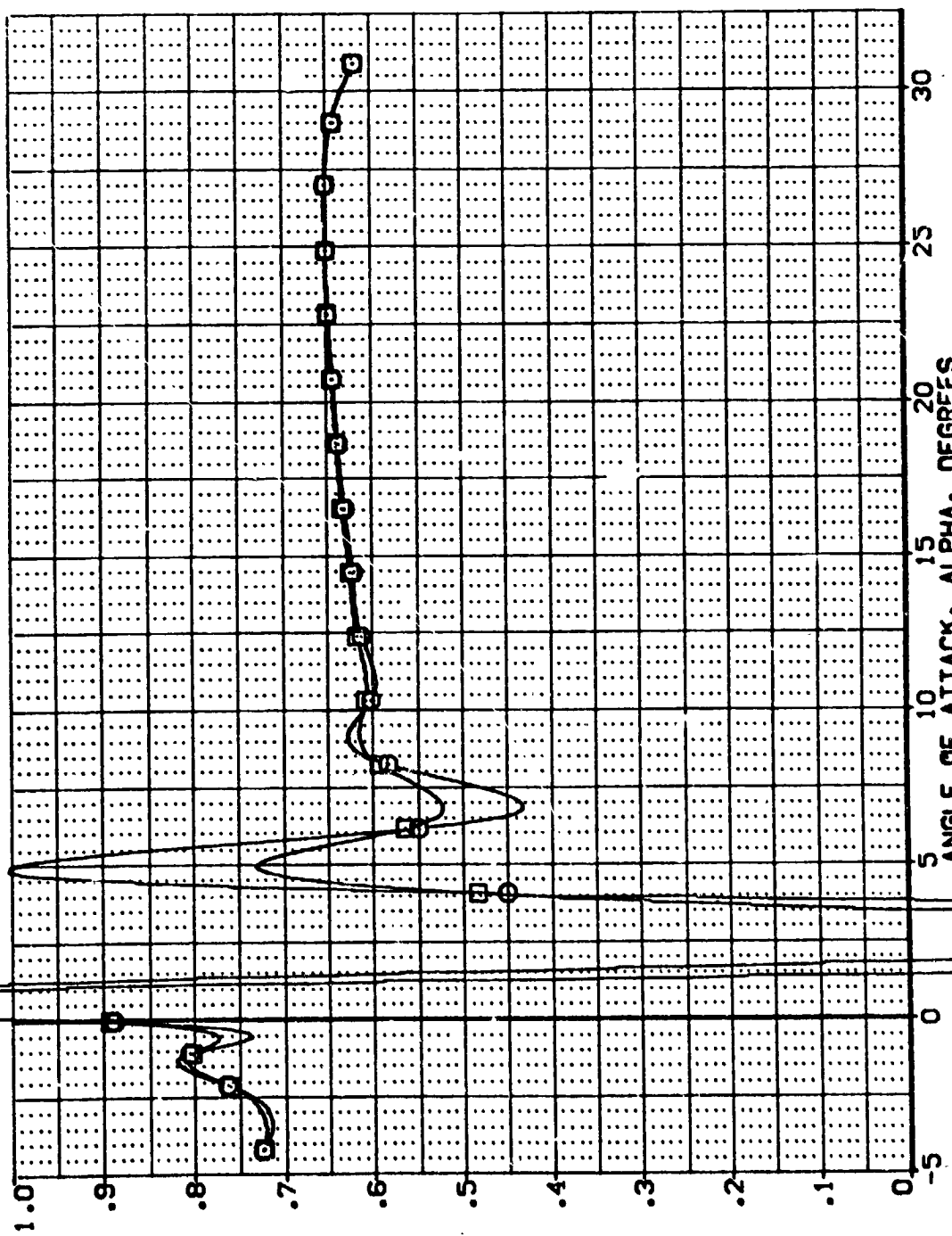


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

(A)MACH = .20

DATA SET SYMBOL: (BDZ124) (BDZ117) □  
 CONFIGURATION DESCRIPTION:  
 OASZ1 OASZ2 OASZ3 M7F8 V11E2Z8V8D3  
 OASZ8 OASZ9 M7F8 V11E2Z8V8D3

ELEVON SPDRK BOFLAP RUDDER  
 .000 25.000 -12.000 .000  
 .000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2289 IN.-CS  
 BREF 37.9359 IN.-CS  
 XMRP 43.5974 IN.-CS  
 YMRP .0000 IN.-CS  
 ZMRP 19.1875 IN.-CS  
 SCALE .0405

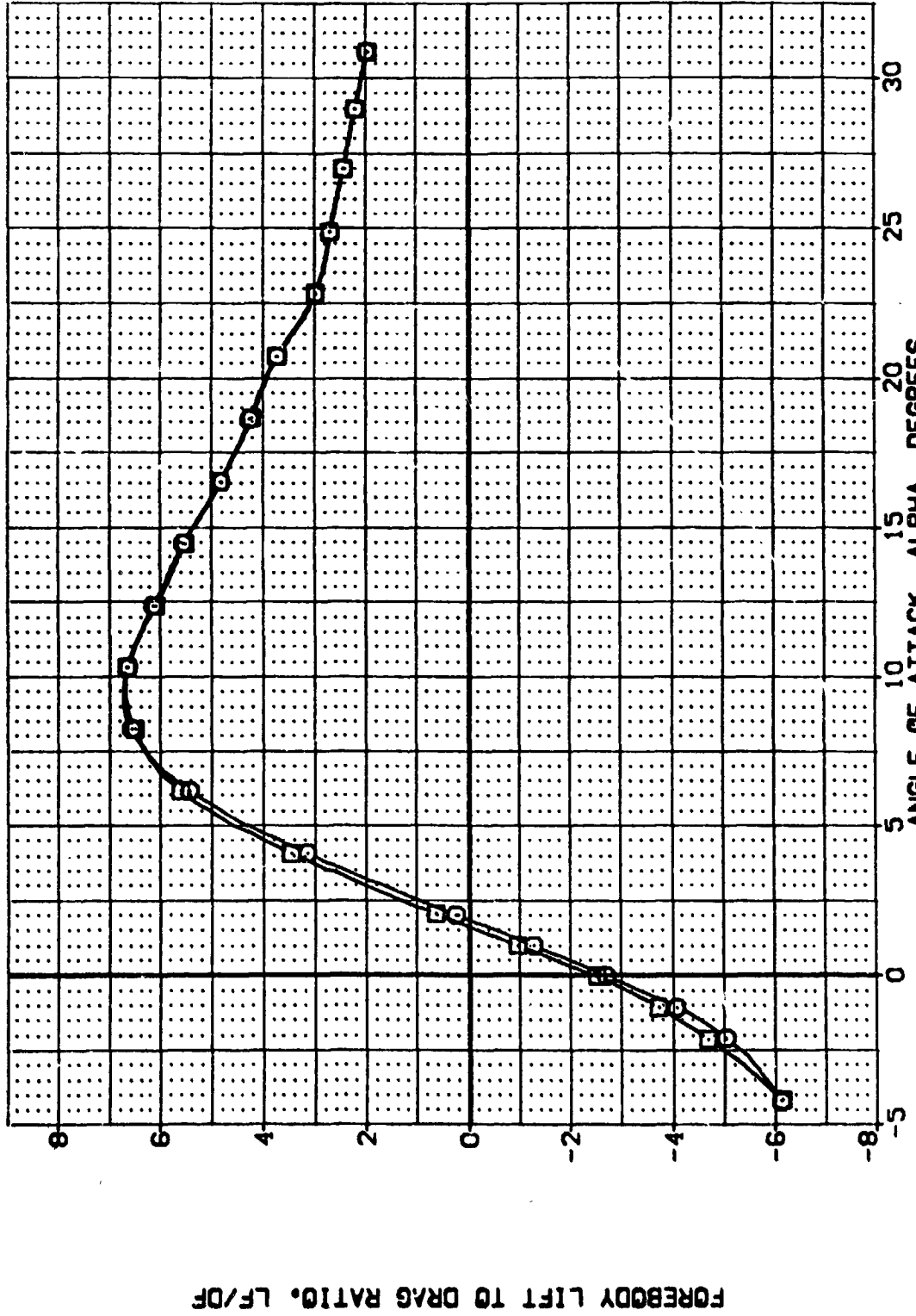


FIG 43 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = 0

MACH = .20

DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 (80Z115) 04528 826C3 M7F8 V115E26V85X8  
 (80Z115) 04628 826C3 M7F8 V115E26V85X3

ELEVON SPOBRK BDFLAP RUDDER  
 5.000 25.000 -12.000 .000  
 5.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2799 INCHES  
 BREF 37.5358 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

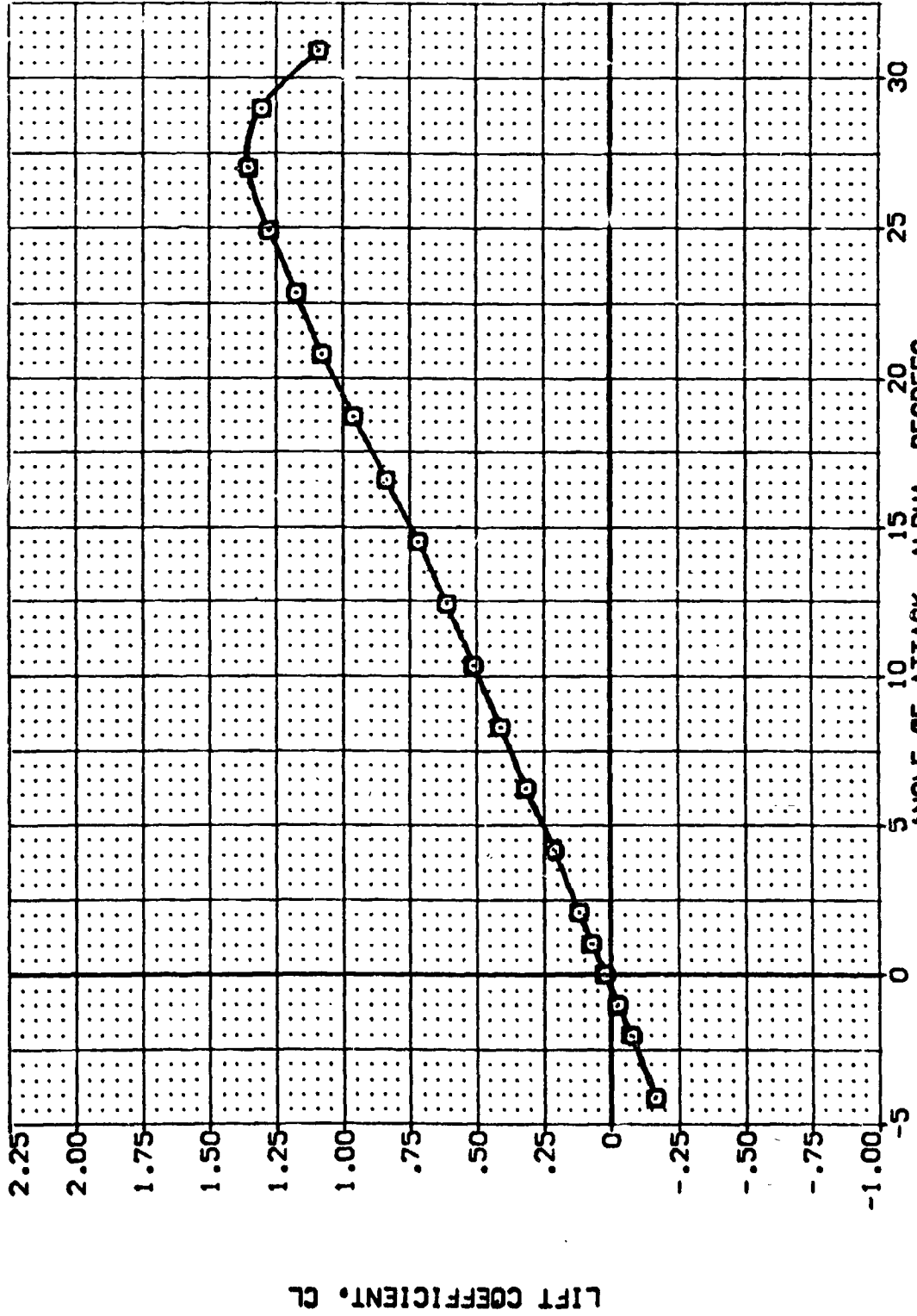


FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

(A)MACH = .20

DATA SET SYMOL. CONFIGURATION DESCRIPTION  
 (EDZ116) □ 04628 B26C9 M7F8 V116263785X9  
 (EDZ115) □ 04628 B26C9 M7F8 V116263785X9

ELEVON SPOBRK BOFLAP RUDDER  
 5.000 25.000 -12.000 .000  
 5.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 90.FT.  
 LREF 19.2259 INCHES  
 BREF 37.9359 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE

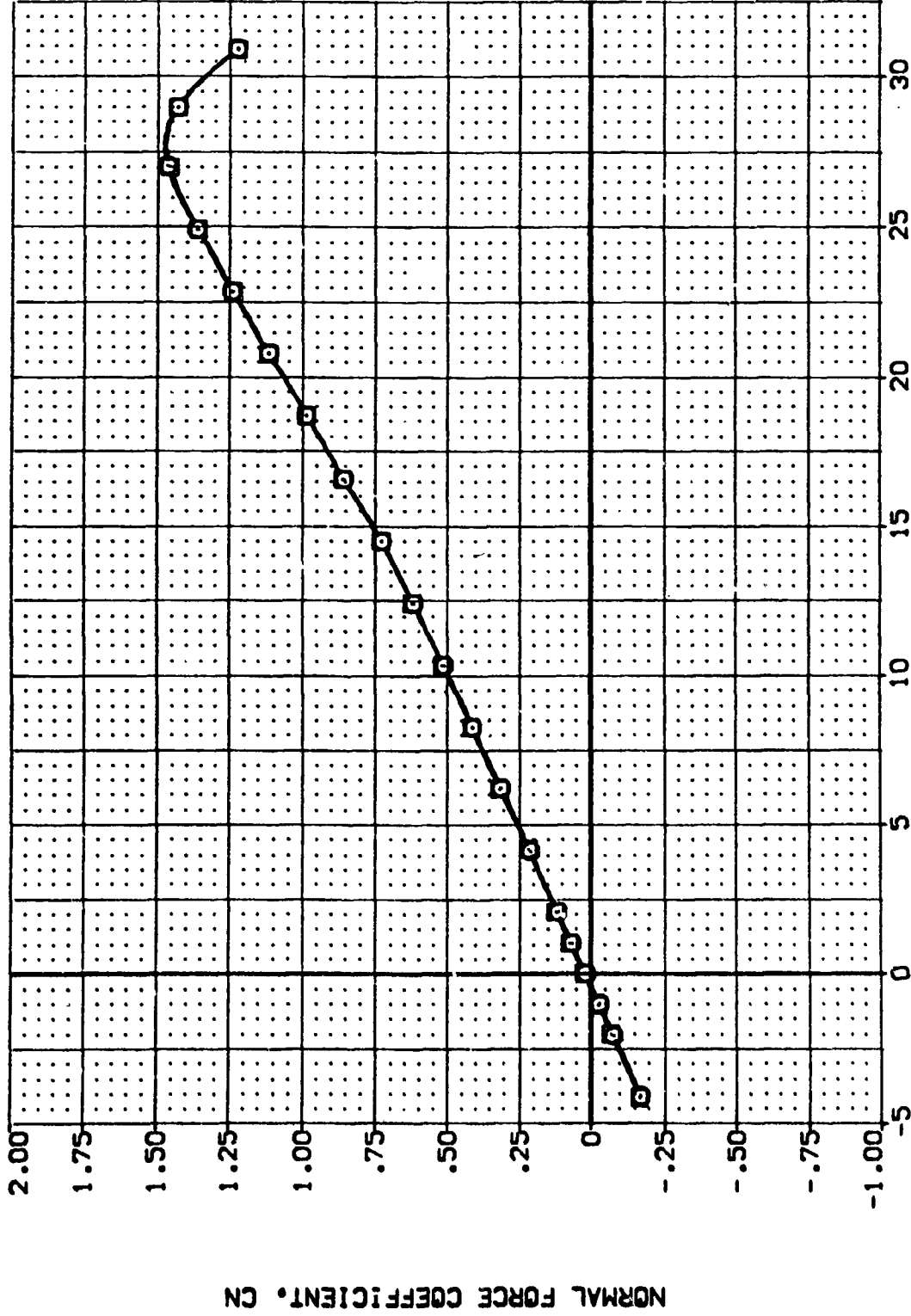


FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

MAJ MACH = .20

DATA SET SYMBO. CONFIGURATION DESCRIPTION  
 (B0Z115) 01A52B 826C3 M7F8 V116E28/85C13  
 (B0Z115) 01A52B 826C3 M7F8 V116E28/85C13

ELEVON 5.000 5.000  
 SPOONK 25.000 25.000  
 BOFLAP -12.000 -12.000  
 RUDDER .000 .000

REFERENCE INFORMATION  
 SREF 4.4119 90.FT.  
 LREF 19.2259 INCHES  
 XREF 37.9359 INCHES  
 YREF 43.5974 INCHES  
 ZREF 15.0000 INCHES  
 SCALE 15.1673 INCHES  
 .0405 SCALE

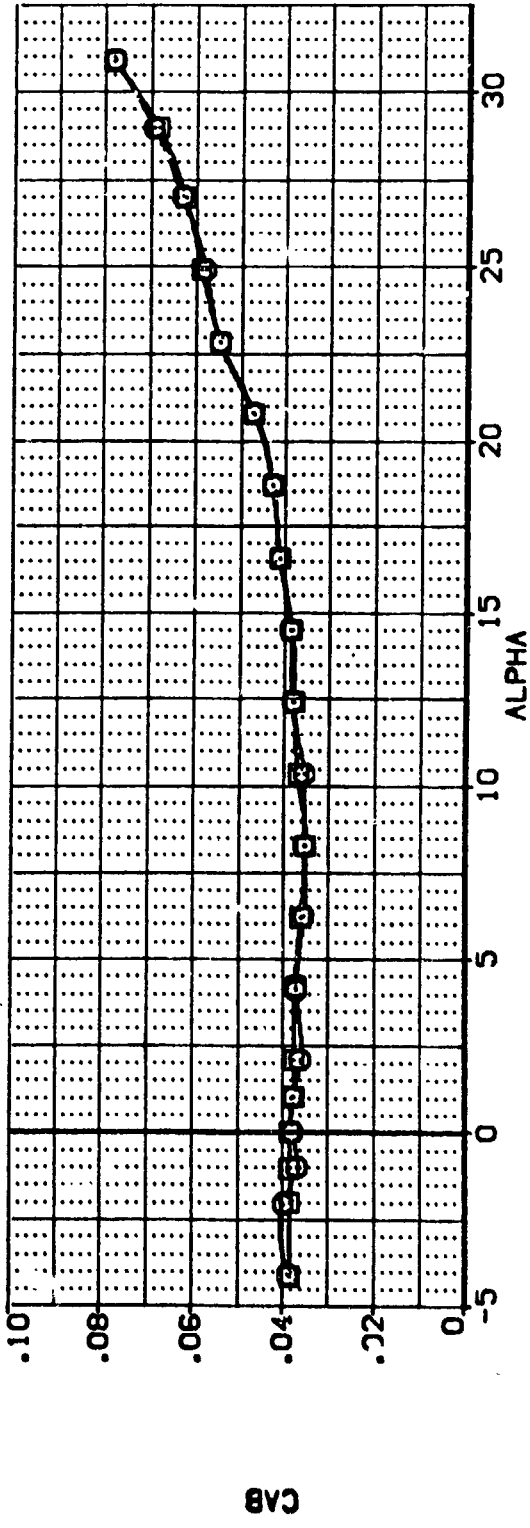
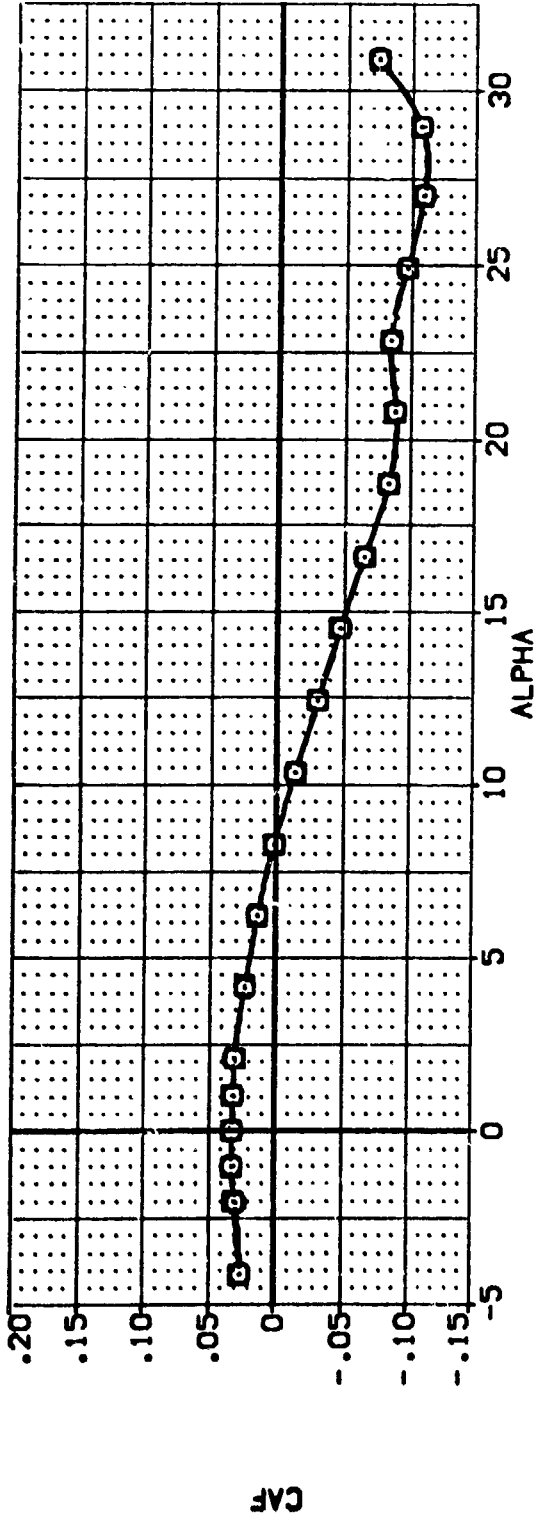
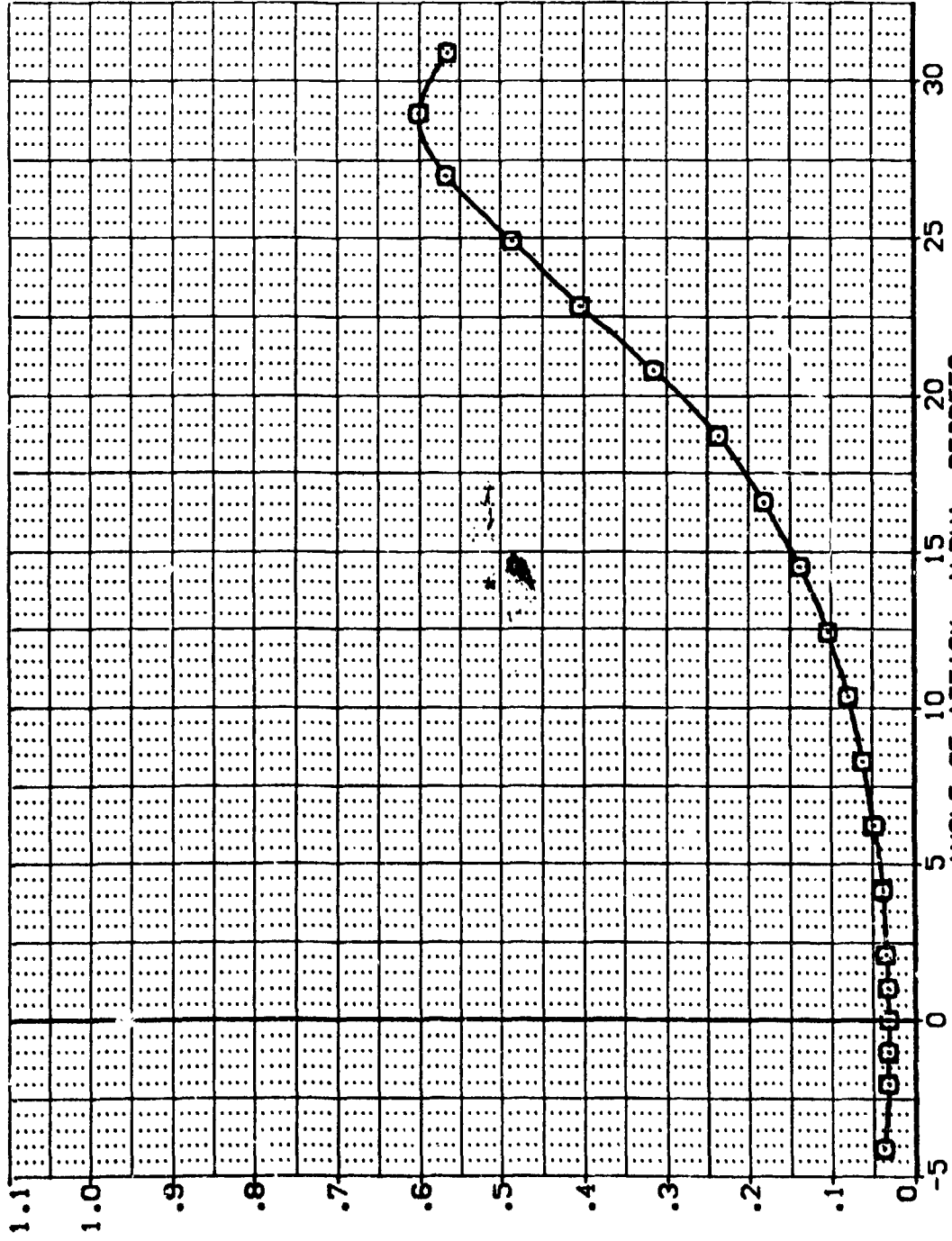


FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5  
 (M)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B0Z1115) □ 0A628 B0629 M7F8 V116E28M85X9  
 (B0Z1115) □ 0A628 B0629 M7F8 V116E28M85X9

ELEVON 5.000 SPOBRK 25.000 SDFLAP -12.000 RUDDER .000  
 REFERENCE INFORMATION  
 SREF 4.4119 90.FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.5359 INCHES  
 XPRP 43.5974 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1875 INCHES  
 SCALE .0403 SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

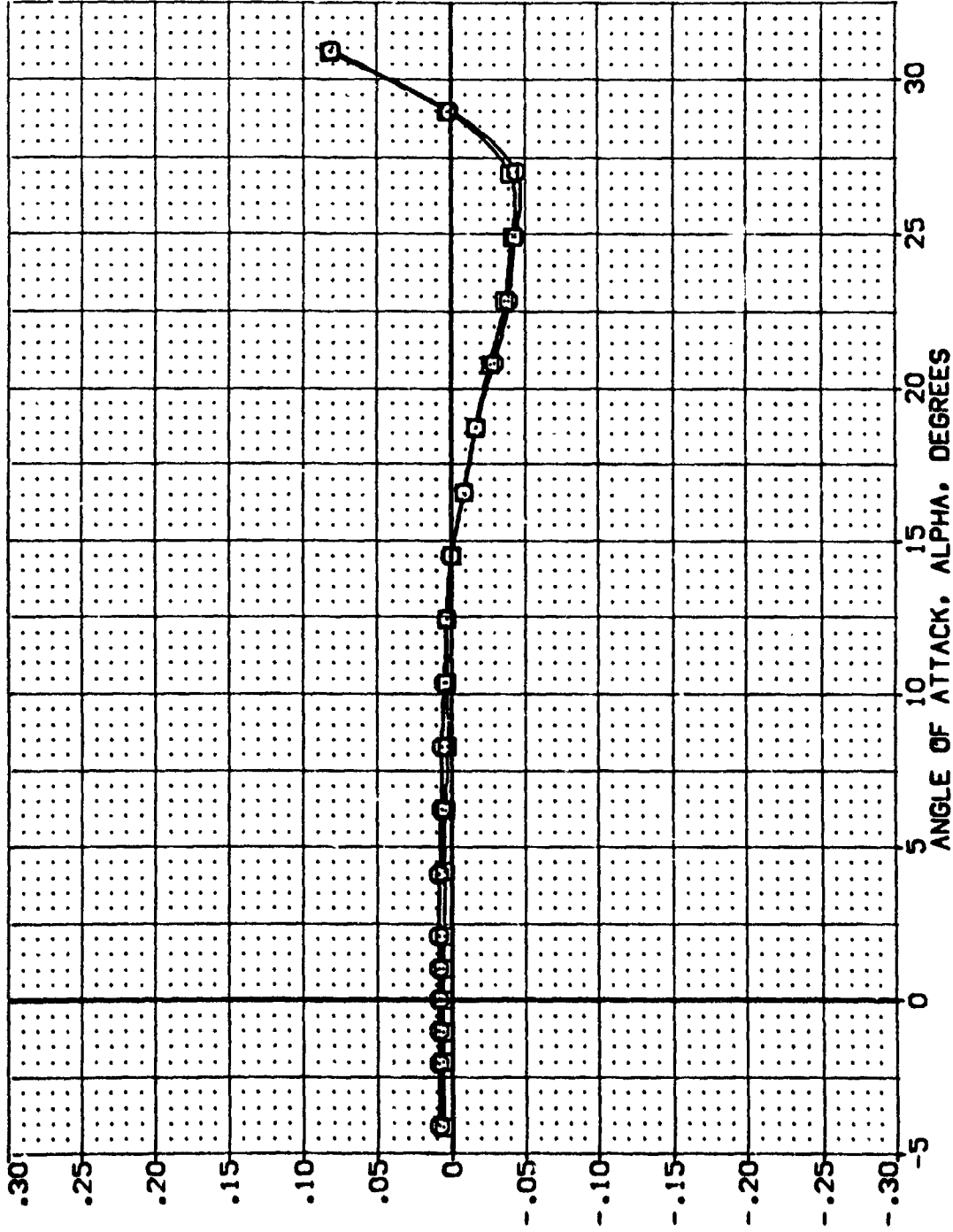
(A)MACH = .20



DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 {80Z1115} 0A5Z28 B26C3 M7F8 V116E26V85C3S  
 {80Z1115} 0A5Z28 B26C3 M7F8 V116E26V85C3S

ELEVON SPOBRX BDFLAP FLUDER  
 5.000 25.000 -12.000 .000  
 5.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2259 INCHES  
 PREF 37.9353 INCHES  
 XTRP 43.5574 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (B02116) (B02116) 01628 B06C9 M778 V118E26V8S13  
 (B02115) (B02115) 01628 B06C9 M778 V118E26V8S13

ELEVON SPDRWA BDFLAP RUDDER REFERENCE INFORMATION  
 5.000 25.000 -12.000 .000 SREF 4.4119 50.FT.  
 5.000 25.000 -12.000 .000 LBREF 19.2299 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0403 SCALE

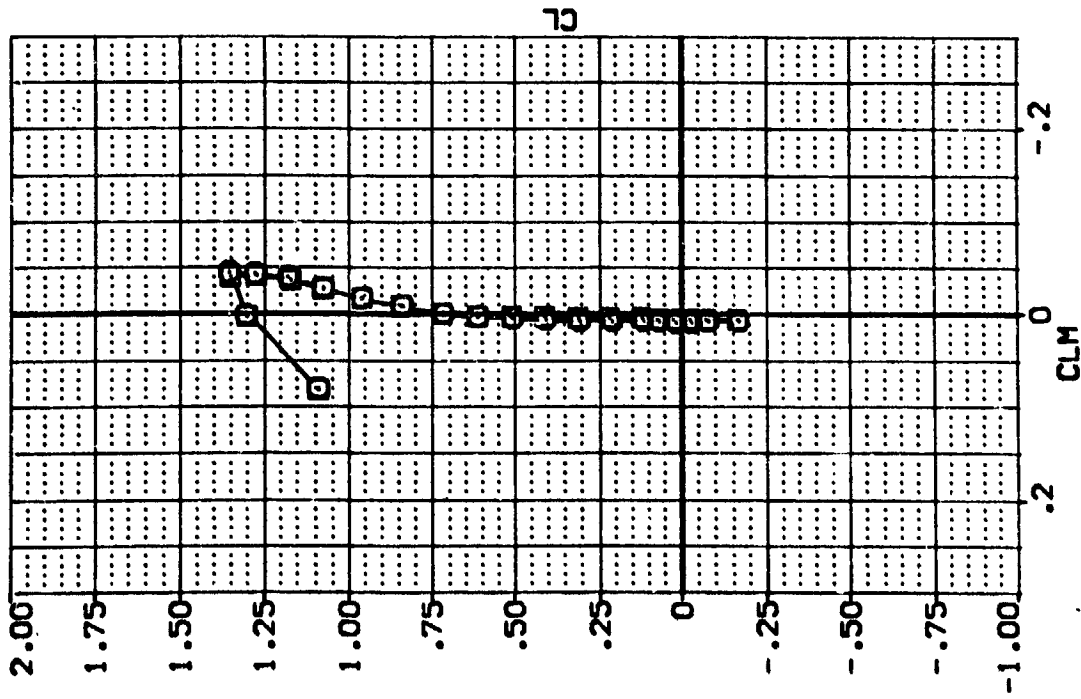


FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

(A)MACH = .20



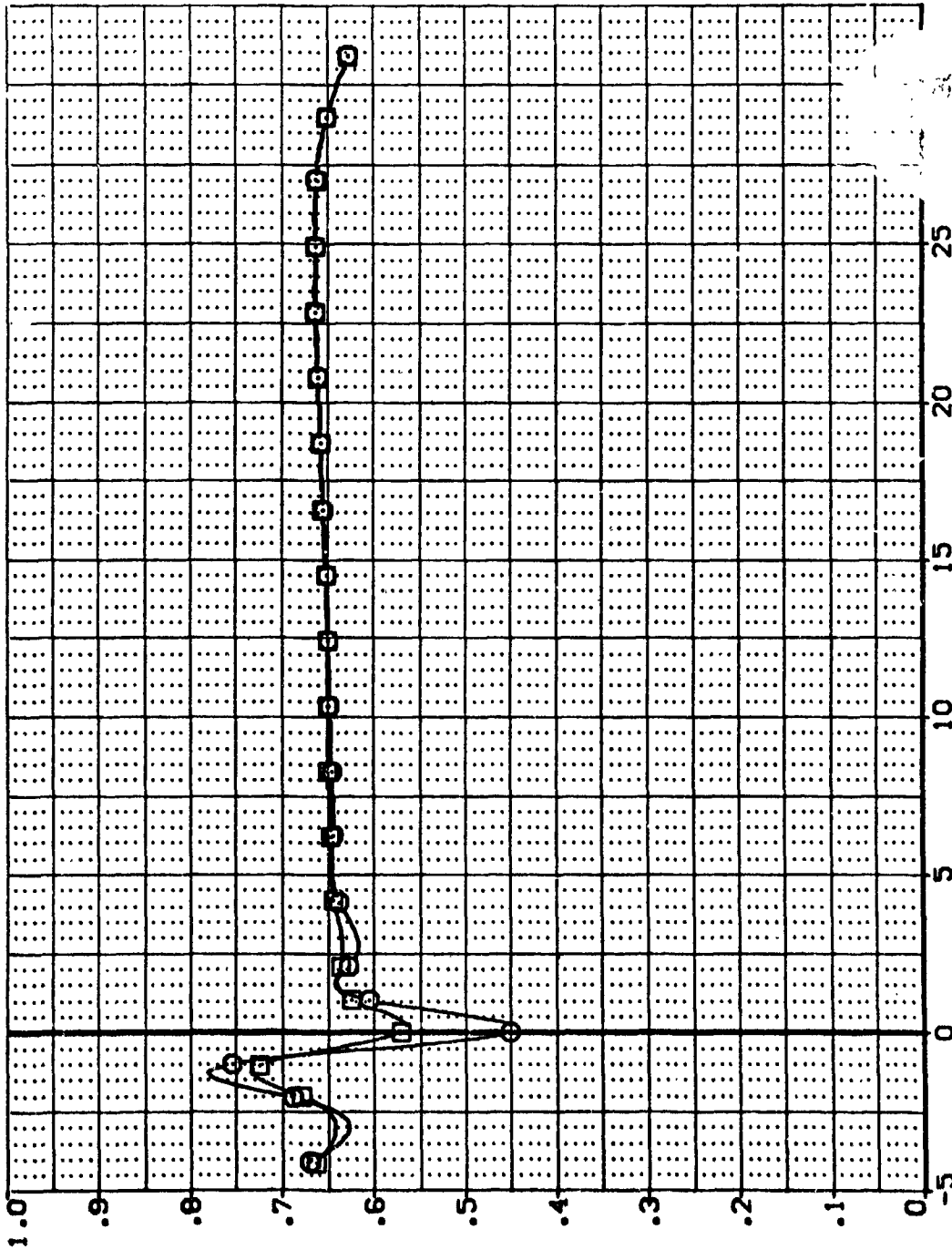
61

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

SYMBOL	DESCRIPTION	REF	SO.FT.
(BDZ116)	QACZB B26C3 M7F8 V11E28V85X8	4.4119	INCHES
(BDZ115)	QACZB B26C3 M7F8 V11E28V85X9	19.2299	INCHES
		37.9359	INCHES
		43.5974	INCHES
		.0000	INCHES
		15.1873	SCALE

ELEVON SPOBRK BDFLAP RUDDER

ELEVON	SPOBRK	BDFLAP	RUDDER
5.000	25.000	-12.000	.000
5.000	25.000	-12.000	.000



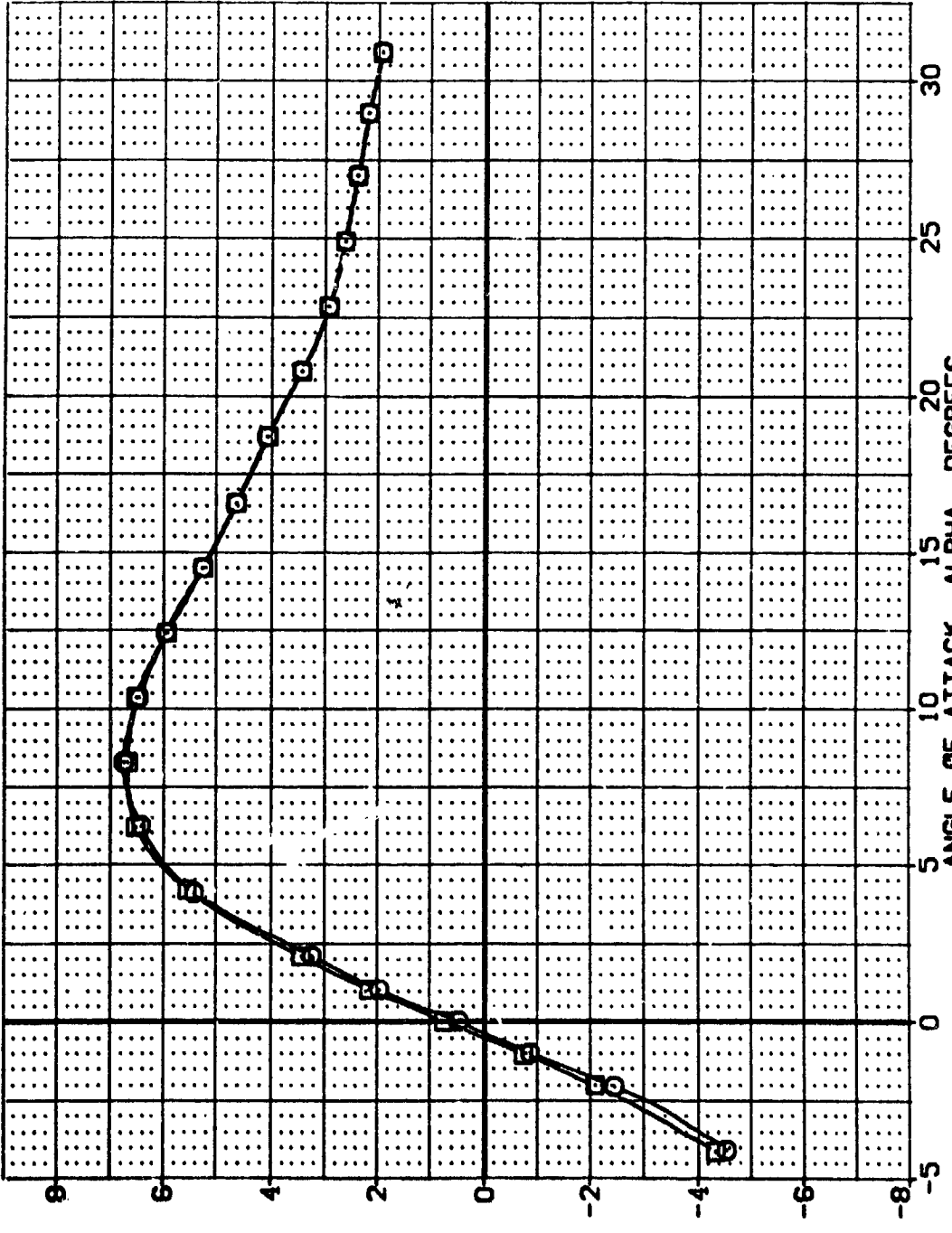
LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5  
 (A)MACH = .20

DATA SET SYMBOL: CONFIGURATION DESCRIPTION  
 (802115) (802115) B 04528 B28C3 M76 V116228M85X3  
 (802115) (802115) B 04628 B28C3 M76 V116228M85X3

ELEVON SPOBRK BDFLAP FLUDDR  
 5.000 25.000 25.000 .000  
 5.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 50.FT.  
 LREF 19.2799 INCHES  
 BREF 37.9359 INCHES  
 XPRP 43.5974 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1875 INCHES  
 SCALE .0405 SCALE



FOREBODY LIFT TO DRAG RATIO, L/D

FIG 44 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +5

MAJ MACH = .20

DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 (80Z1113) 8 0A528 828C3 M7.8 V116Z28V8538  
 (80Z1112) 8 0A528 828C3 M7.8 V116Z28V8538

ELEVON STOSBK BDFLAP RUDDER  
 15.000 25.000 -12.000 .000  
 15.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 REF 4.4118 90.FT.  
 LREF 19.2278 INCHES  
 BREF 37.5759 INCHES  
 XTRP 43.5774 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE

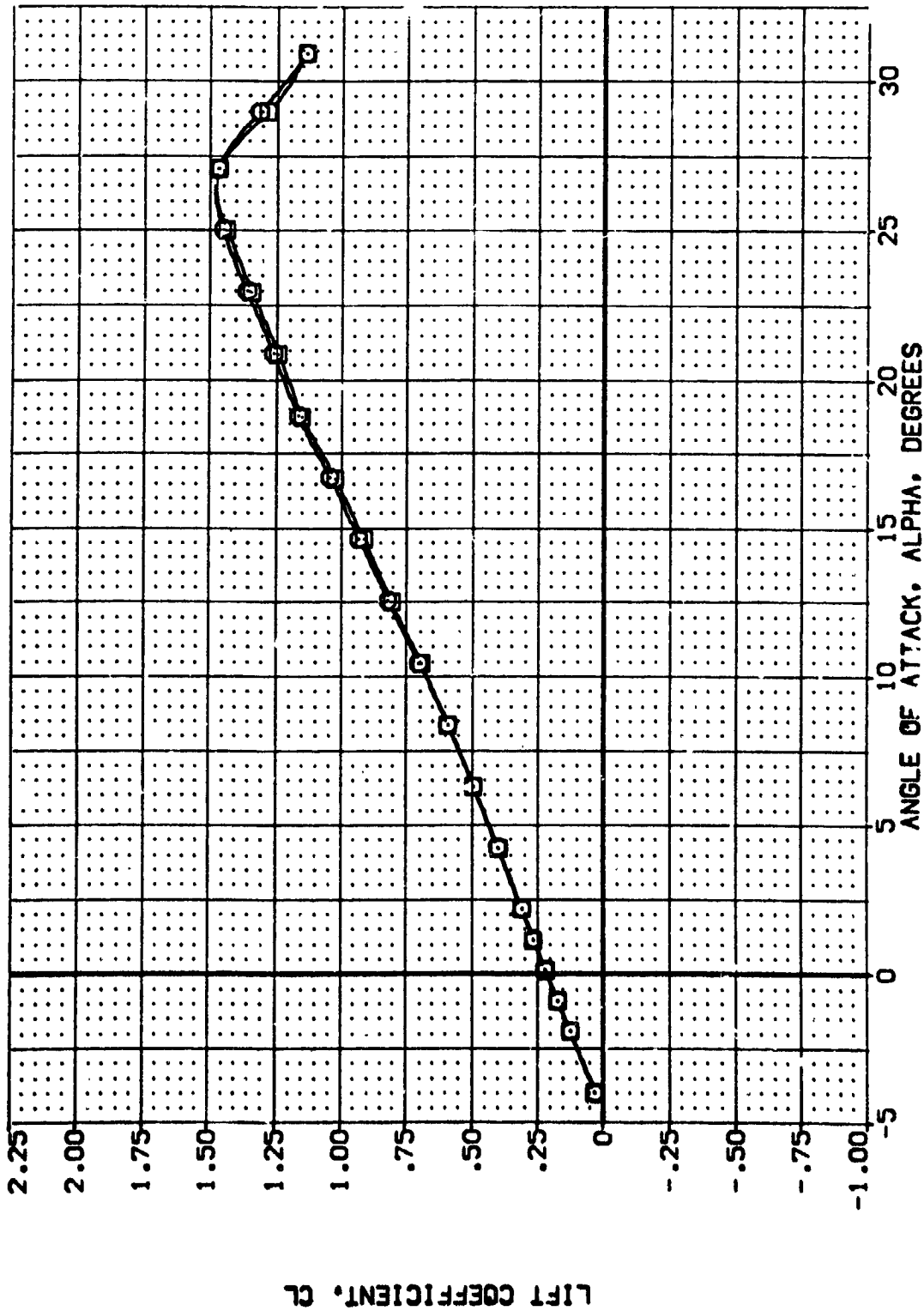


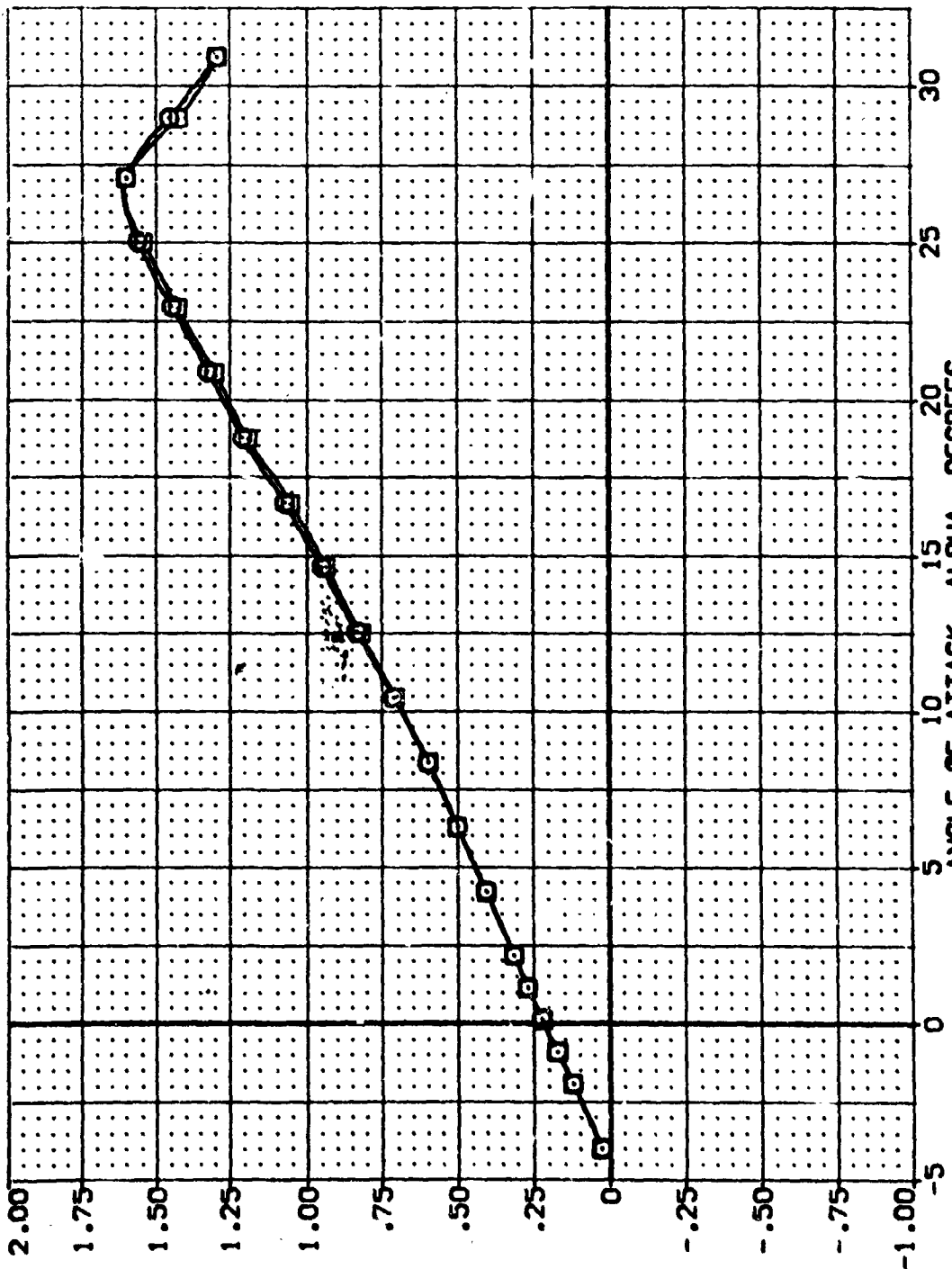
FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

(A)MACH = .20

DATA SET SYMBO. CONFIGURATION DESCRIPTION  
 (802112) B 8A22B 826C3 H778 V118E23V8S3  
 (802112) B 8A22B 826C3 H778 V118E23V8S3

ELEVON SHOWN: 80FLAP RUDDER  
 15.000 25.000 -12.000 .000  
 15.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 INCH 4.4118 50 FT  
 LREF 19.2238 INCHES  
 XREF 37.9258 INCHES  
 YREF 43.9574 INCHES  
 ZREF .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0402 SCALE



NORMAL FORCE COEFFICIENT, CN

FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

CAJ MACH = .20

DATA SET SYMBL. CONFIGURATION DESCRIPTION  
 (BDZ113) 04628 B06C9 M7F0 V11E28V8P5K9  
 (BDZ112) 04628 B06C9 M7F0 V11E28V8P5K9

ELEVON 15.000 25.000 25.000 25.000  
 SPDRK 25.000 25.000 -12.000  
 BFLAP -12.000  
 RUDDR .000 .000  
 REFERENCE INFORMATION  
 SREF 4.4119 SO.FT. INO-ES  
 LREF 19.2259 INO-ES  
 BREF 37.9359 INO-ES  
 XTRP 43.5574 INO-ES  
 YTRP .0000 INO-ES  
 ZTRP 15.1875 INO-ES  
 SCALE .0405 SCALE

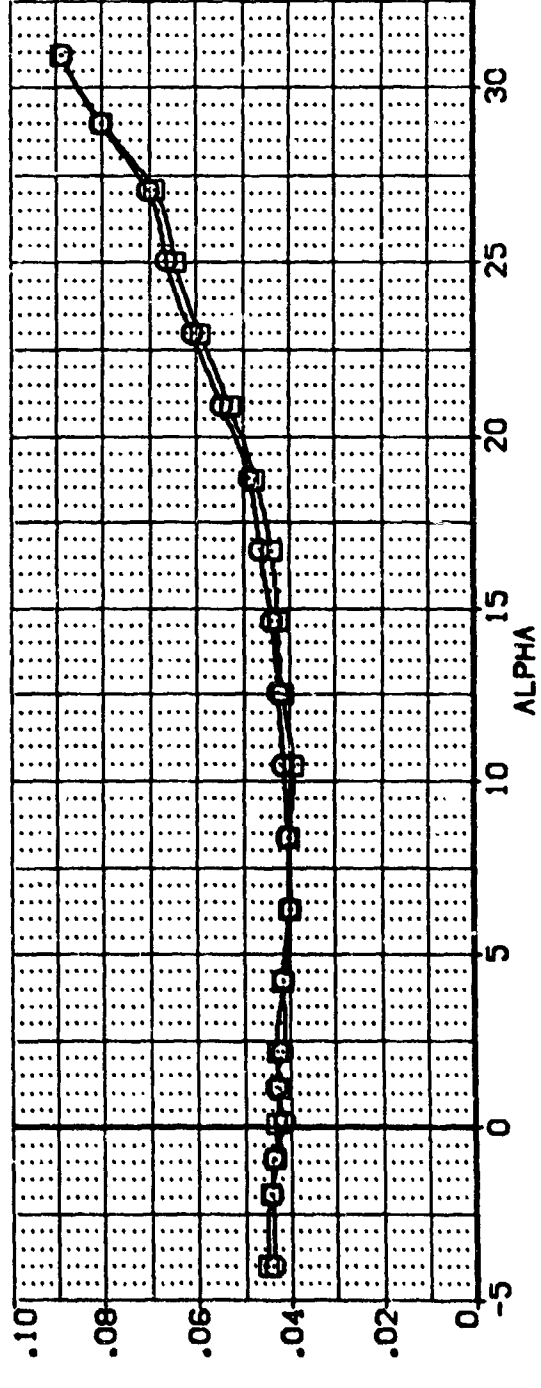
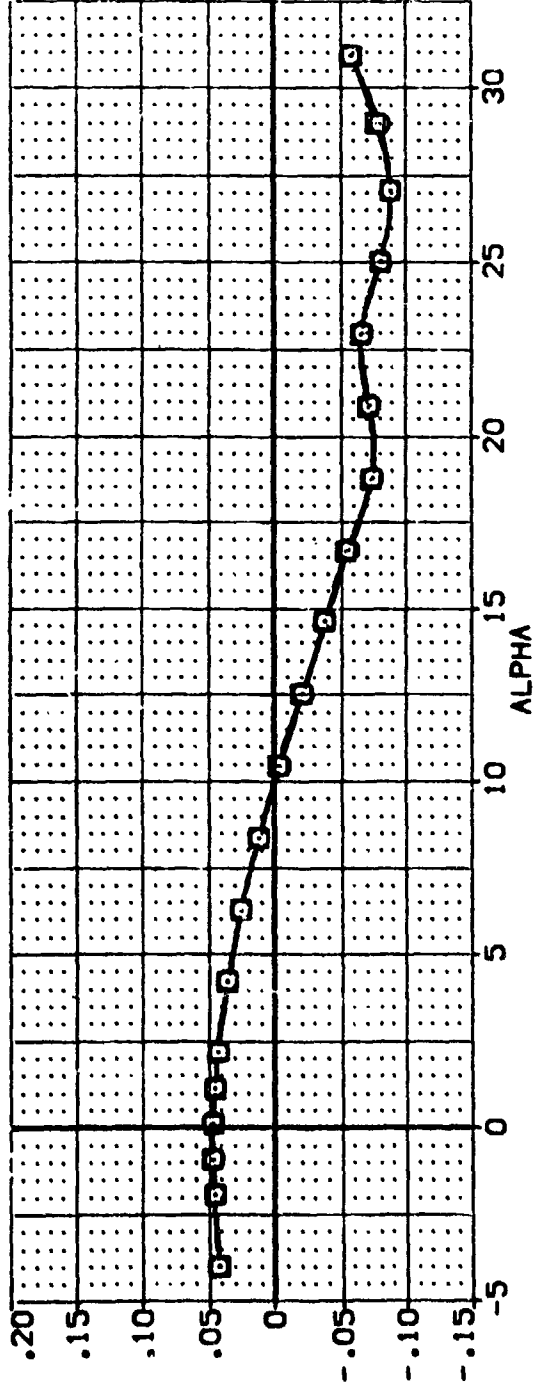


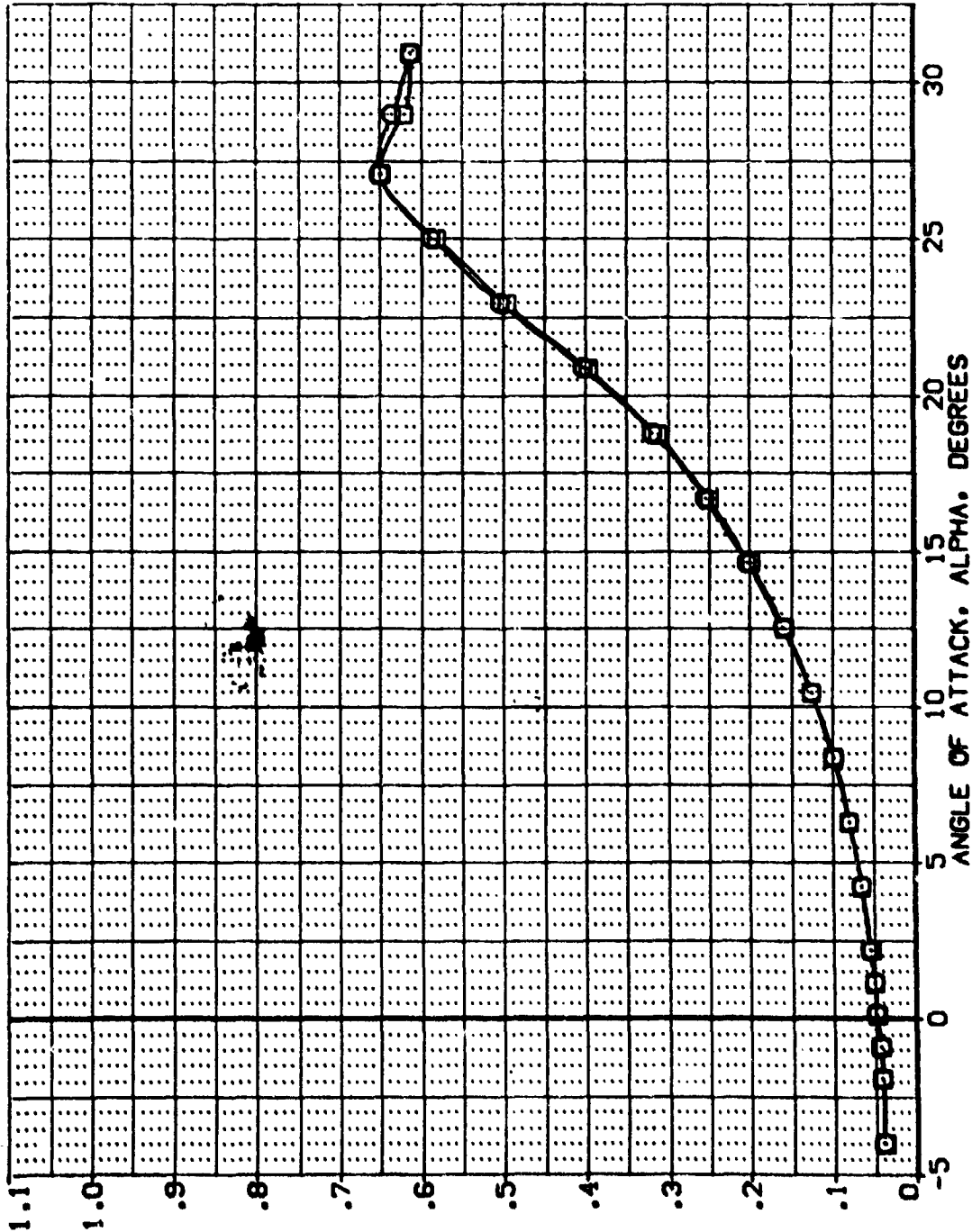
FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

(A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (8DZ112) □ 8A628 826C3 M7F8 V116E2M0R0D3  
 (8DZ112) □ 8A628 826C3 M7F8 V116E2M0R0D3

ELEVON SPORK BDLAP RUDDER  
 15.000 25.000 -12.000 .000  
 15.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2259 INCHES  
 BREF 37.5359 INCHES  
 XPRP 43.5874 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1873 INCHES  
 SCALE .0405



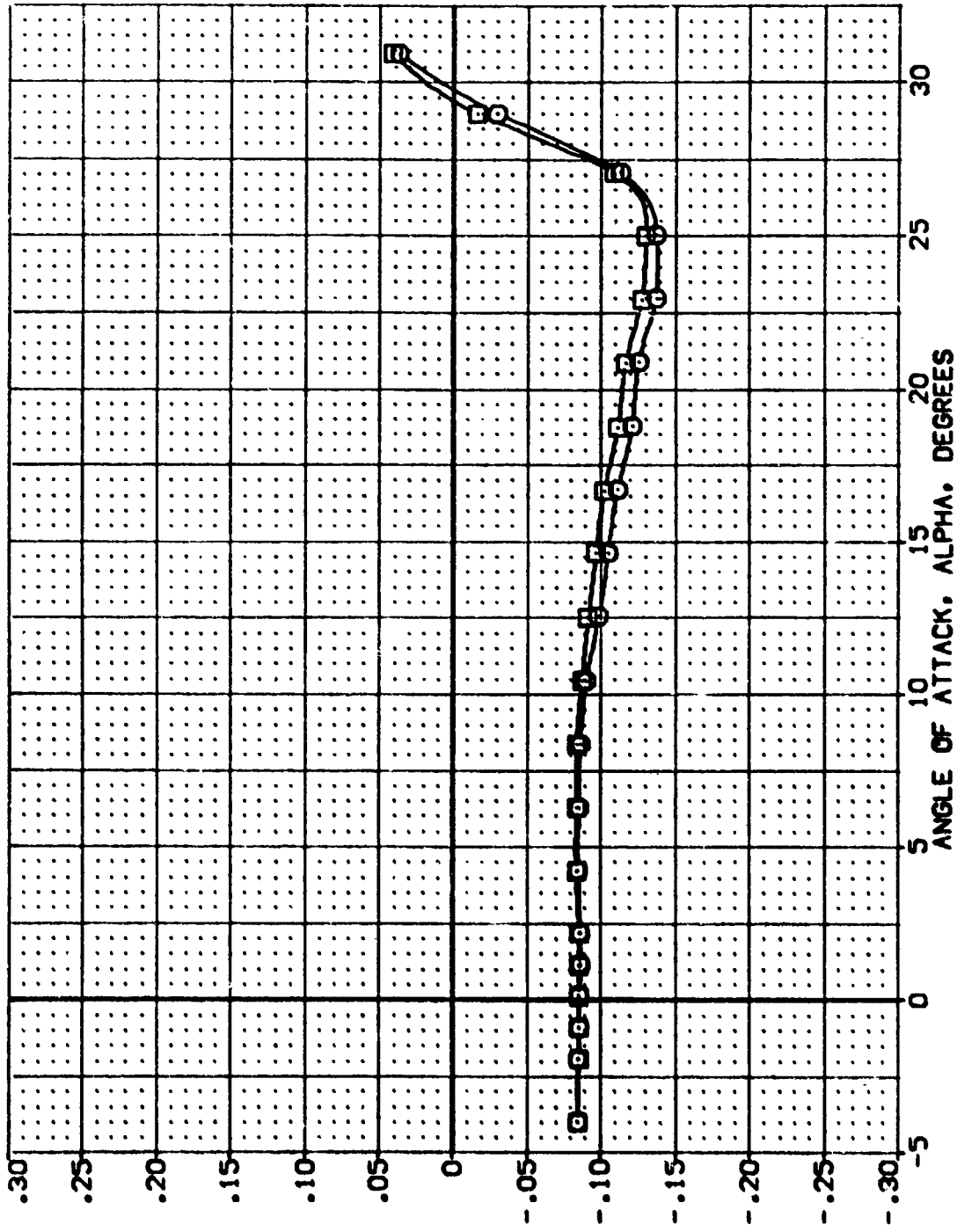
FOREBODY DRAG COEFFICIENT, CDF

FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

MACH = .20



DATA SET SYMBL	CONFIGURATION DESCRIPTION	ELEVON	SPOONK	EDFLAP	RUDDER	REFERENCE INFORMATION
{BDZ112}	BAE28 B0603 M78 V11E28V8F03	15.000	25.000	-12.000	.000	GREF 4.4119 SO.FT.
{BDZ112}	BAE28 B0603 M78 V11E28V8F03	15.000	25.000	-12.000	.000	LREF 19.2268 IN.OES
						BREF 37.9359 IN.OES
						XPRP 43.9574 IN.OES
						YPRP .0000 IN.OES
						ZPRP 15.1875 IN.OES
						SCALE .0405 SCALE



PITCHING MOMENT COEFFICIENT, CLM

FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

(A)MACH = .20

DATA SET SYMB. (80Z113) (80Z112)

CONFIGURATION DESCRIPTION  
 CASZ8 BZ8C3 M78 V11E28V8S3  
 CASZ8 BZ8C3 M78 V11E28V8S3

ELEVON SPOBK BDFLAP RUDDER REFERENCE INFORMATION

19.000	25.000	.000	4.4118	80.FT
15.000	25.000	.000	19.2289	INDEES
	-12.000		37.9339	INDEES
			43.9974	INDEES
			.0000	INDEES
			15.1875	INDEES
			.0405	SCALE

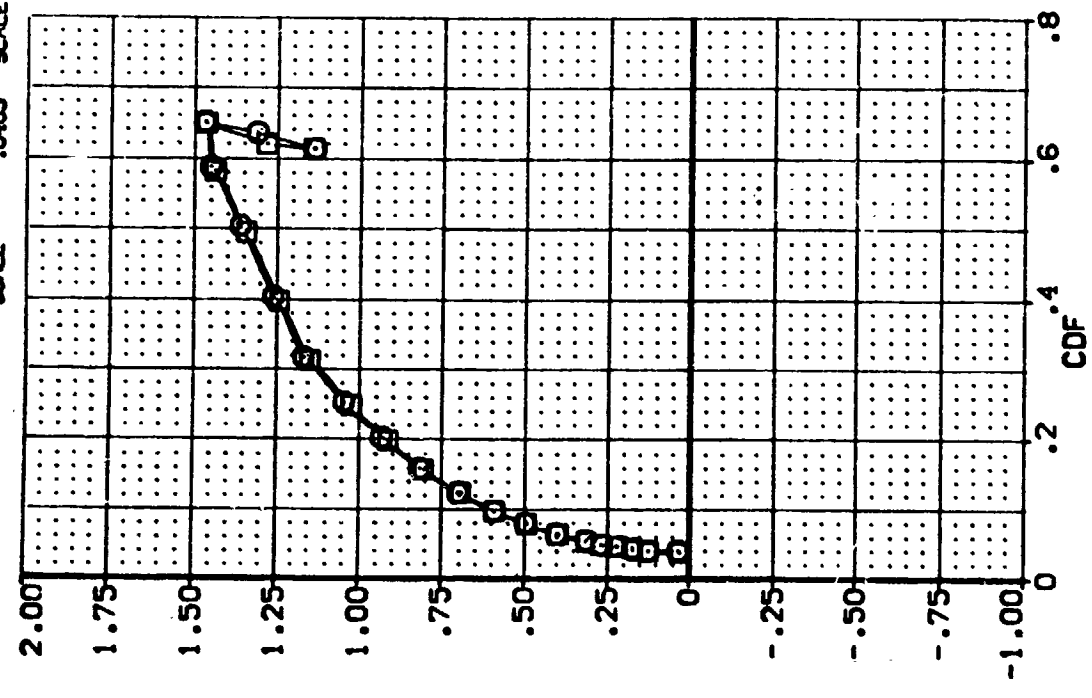
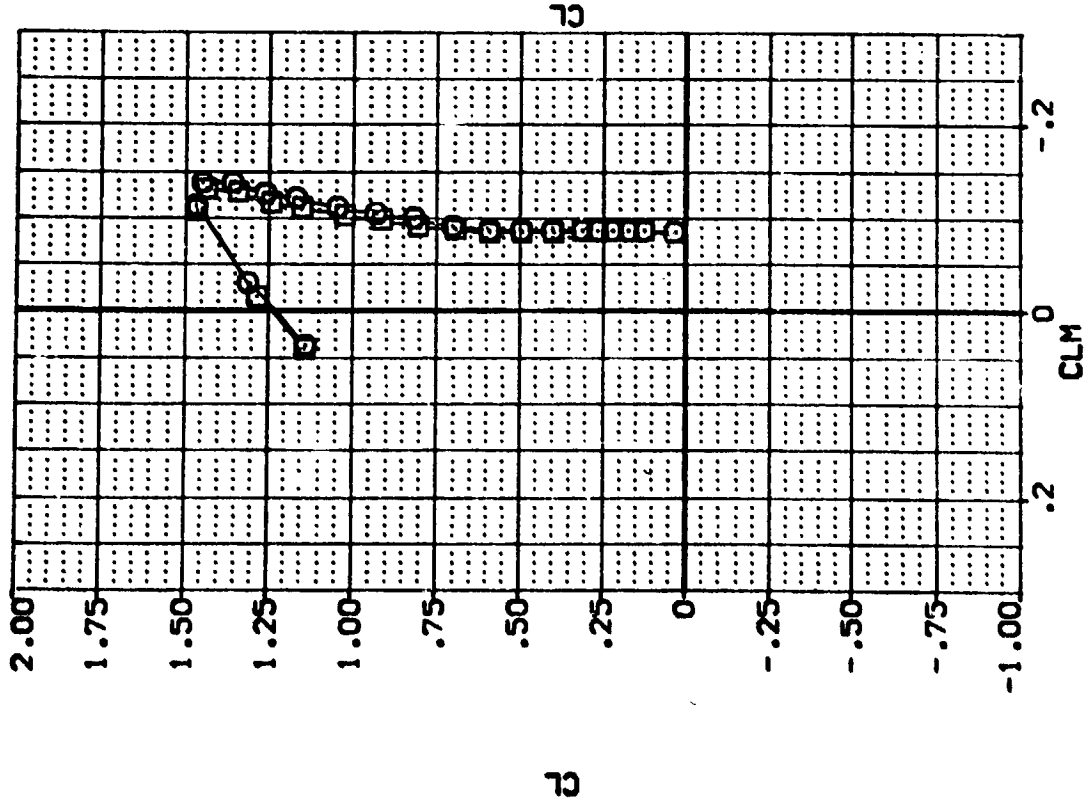


FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

(AJMACH = .20



LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ113) 0A628 BD6CS M7F8 V116E28M8S4S  
 (BDZ112) 0A628 BD6CS M7F8 V116E28M8S4S

ELEVON SPOBRK EDOFLAP RUDDER  
 15.000 25.000 -12.000  
 15.000 25.000 -12.000

REFERENCE INFORMATION  
 SREF 4.4119 50.FT.  
 LREF 19.2299 INCHES  
 BREF 37.5359 INCHES  
 XTRP 43.5974 INCHES  
 YTRP 15.0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405

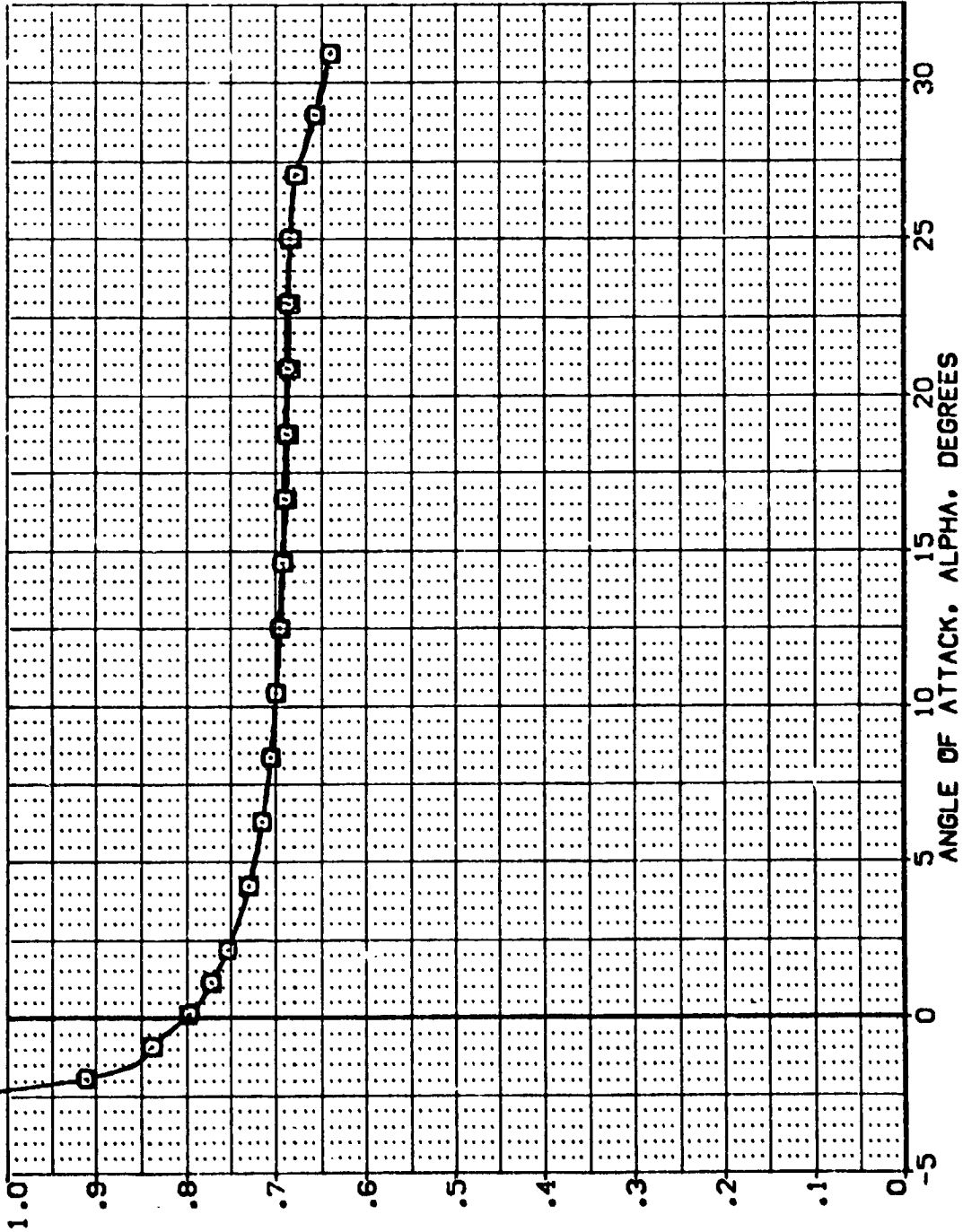


FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15

(A)MACH = .20

DATA SET SYMB.	CONFIGURATION DESCRIPTION	ELEVON	SPDRBK	EDFLAP	RUDDER	REFERENCE INFORMATION
{80Z113}	0ASZ8 B06C9 M7F8 V116Z28V65X9	15.000	25.000	-12.000	.000	4.4119 SQ.FT.
{80Z112}	0ASZ8 B06C9 M7F8 V116Z28V65X9	15.000	25.000	-12.000	.000	19.2299 INCHES
						37.9399 INCHES
						43.5974 INCHES
						.0000 INCHES
						15.1875 INCHES
						.0405 SCALE

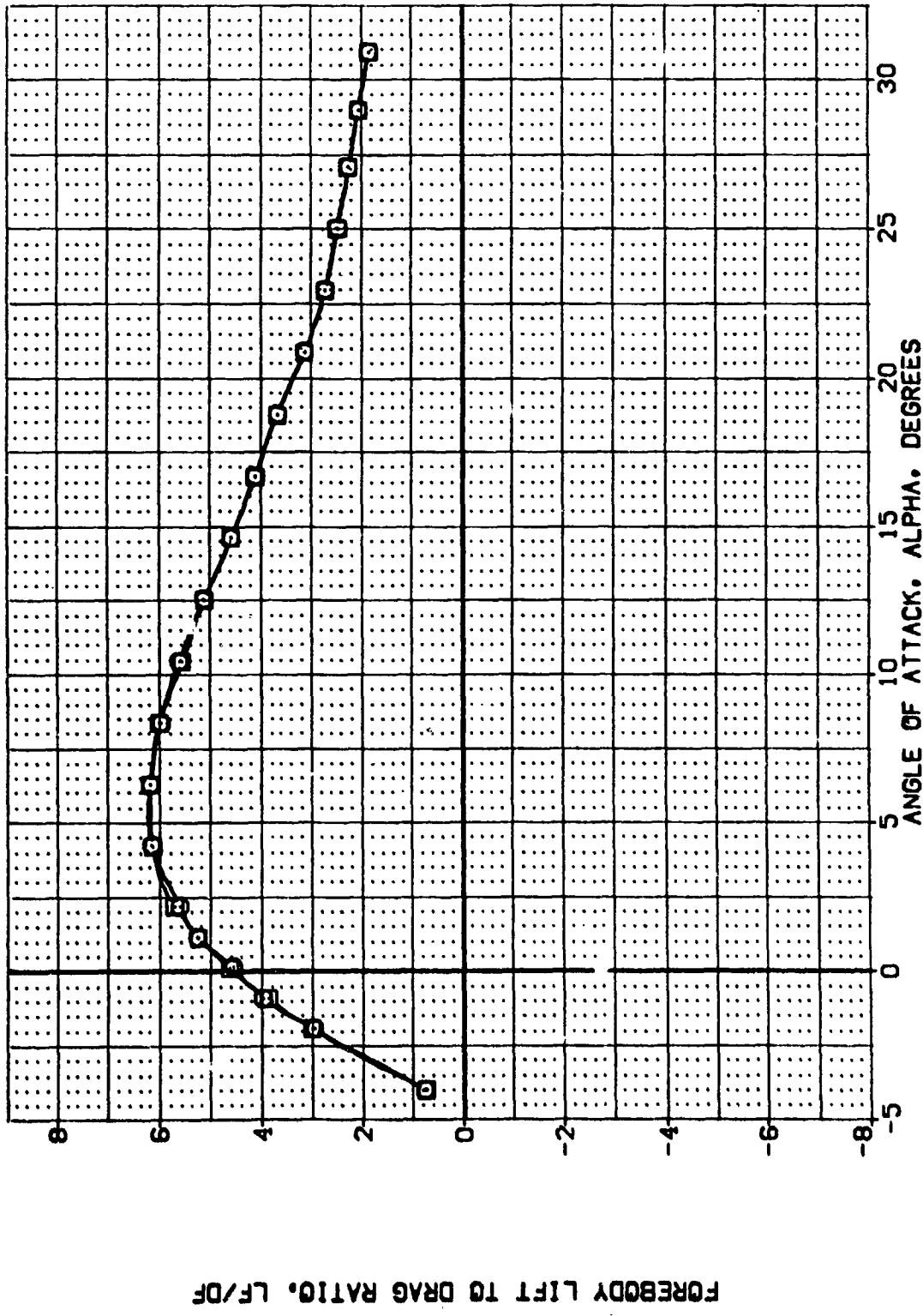
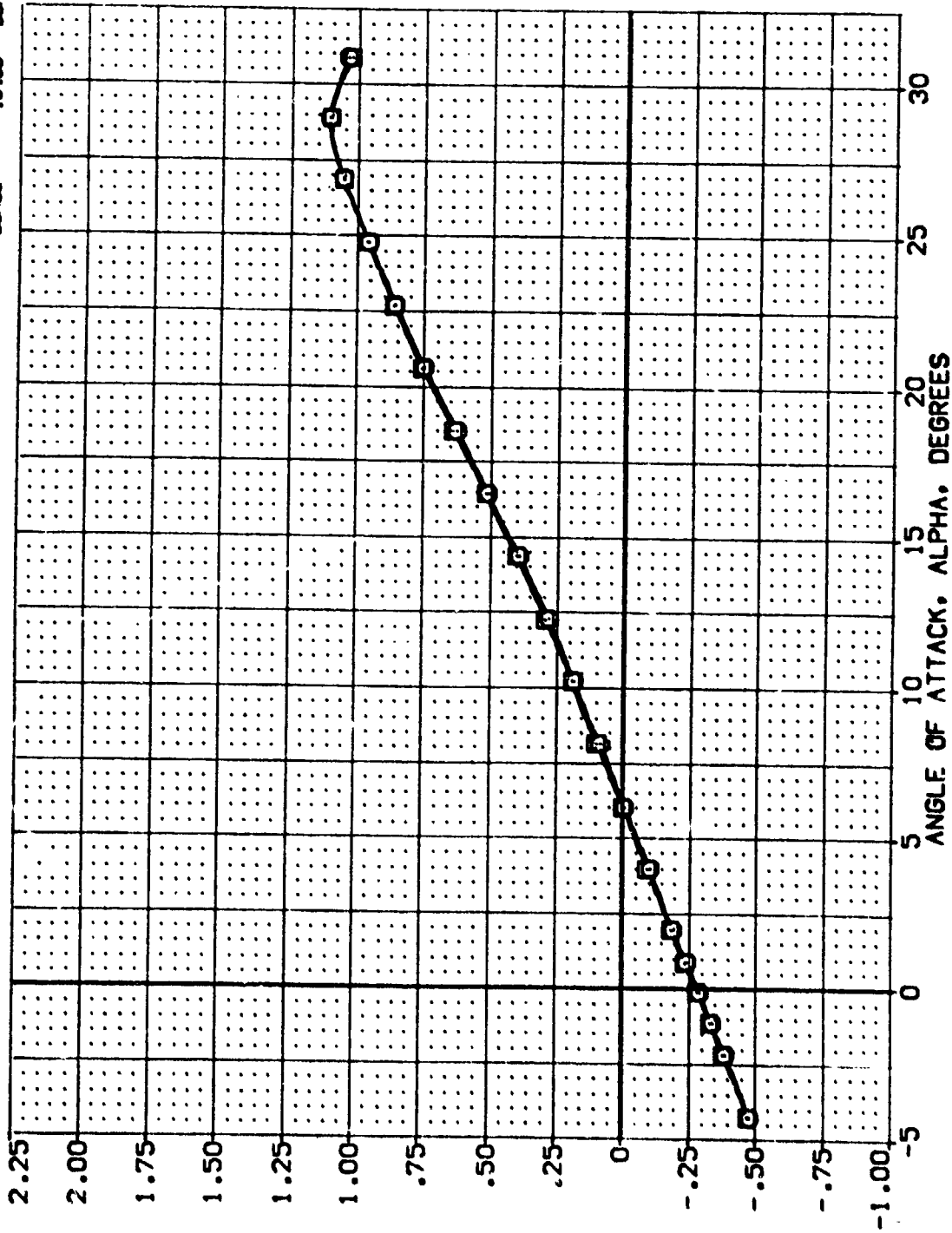


FIG 45 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = +15  
 MAJ MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ10) 8 8AC28 828C9 M7F8 V11E28V85X9  
 (BDZ109) 8 8AC28 828C9 M7F8 V11E28V85X9

ELEVON SPOONK BOFLAP RUDDER  
 -10.000 25.000 -12.000 .000  
 -10.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 BREF 4.4119 60.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 INCHES



LIFT COEFFICIENT, CL

FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

(A)MACH = .20

DATA SET SYMBOL: (BDZ110) (BDZ108) **8**

CONFIGURATION DESCRIPTION:  
 GAS28 BOSCS M7F8 V116E28/8RSX3  
 GAS28 BOSCS M7F8 V116E28/8RSX3

ELEVON: -10.000  
 SPDRK: 25.000  
 BOFLAP: -12.000  
 RUDDER: .000

REFERENCE INFORMATION:  
 GREF: 4.4119 SO.FT.  
 LREF: 19.7269 INCHES  
 BREF: 37.6569 INCHES  
 XMRP: 43.5574 INCHES  
 YMRP: .0000 INCHES  
 ZMRP: 15.1875 INCHES  
 SCALE: .0405

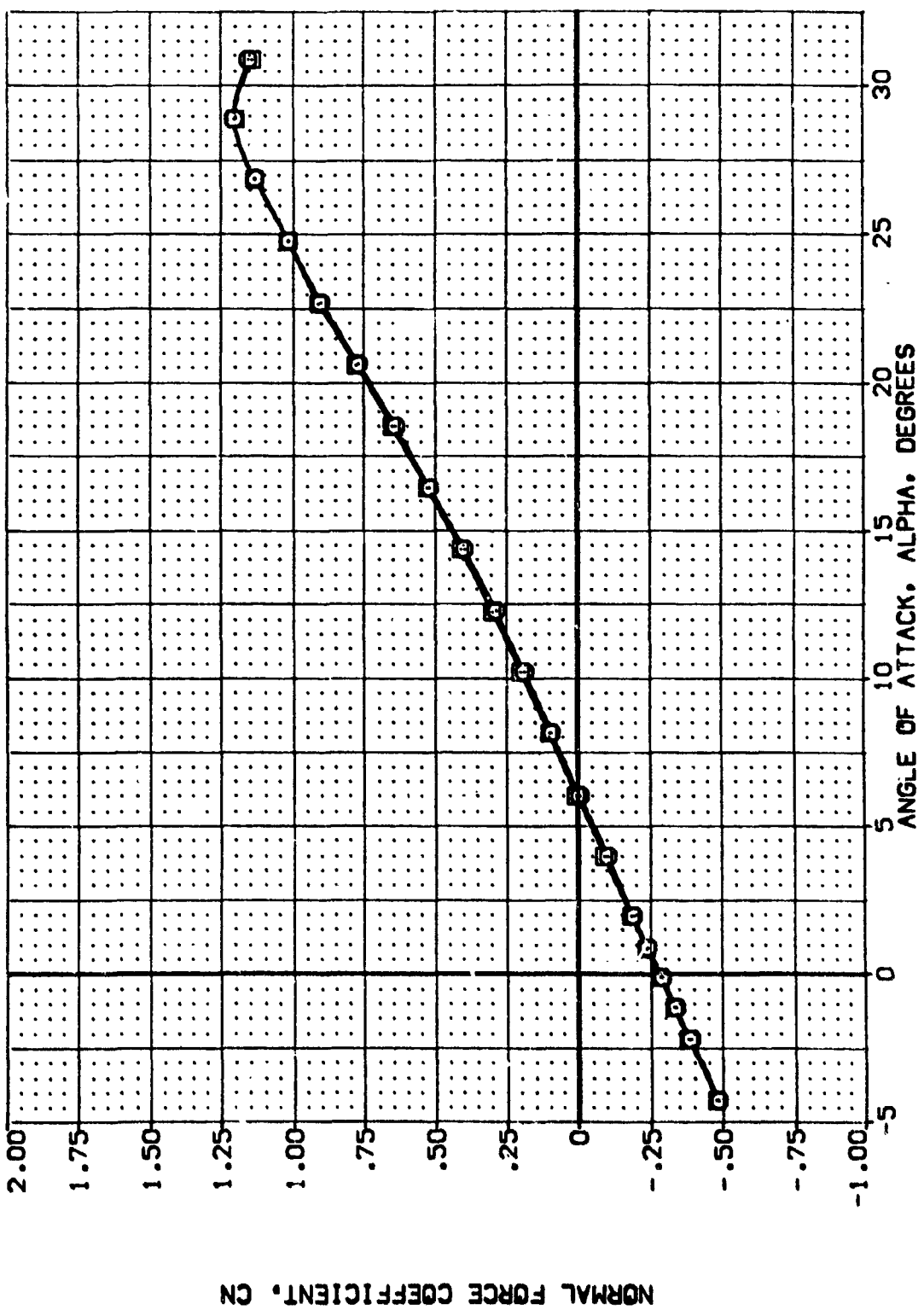


FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

MAJ MACH = .20

DATA SET SYMBO. CONFIGURATION DESCRIPTION  
 (802110) 0 0A52B 826C9 M7F8 V116E28V85X9  
 (802109) 0 0A52B 826C9 M7F8 V116E28V85X9

ELEVON SPOBRK 8DFLAP RUDDER  
 -10.000 25.000 -12.000 .000  
 -10.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2799 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5574 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

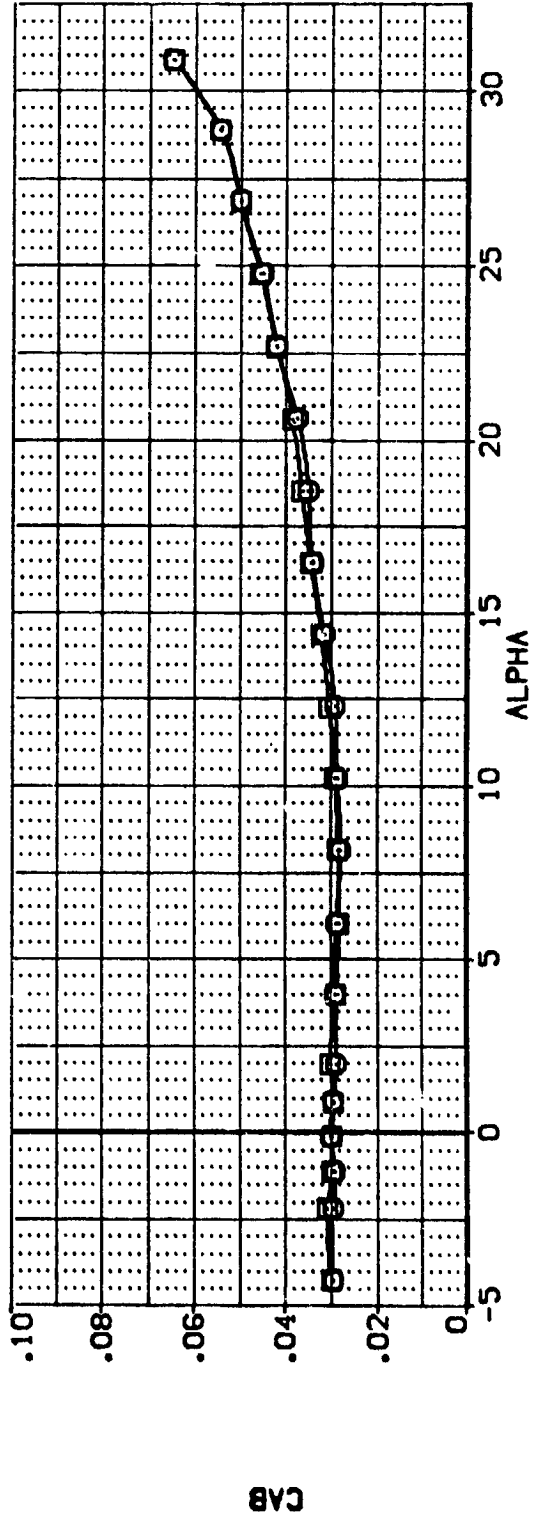
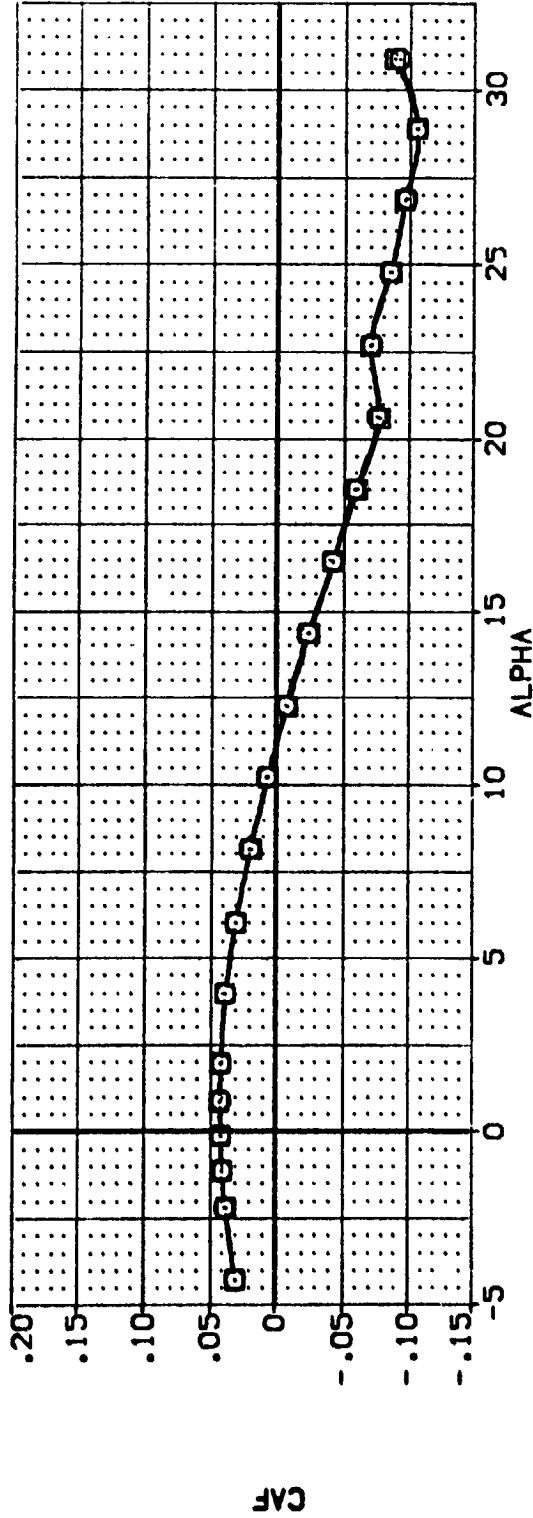


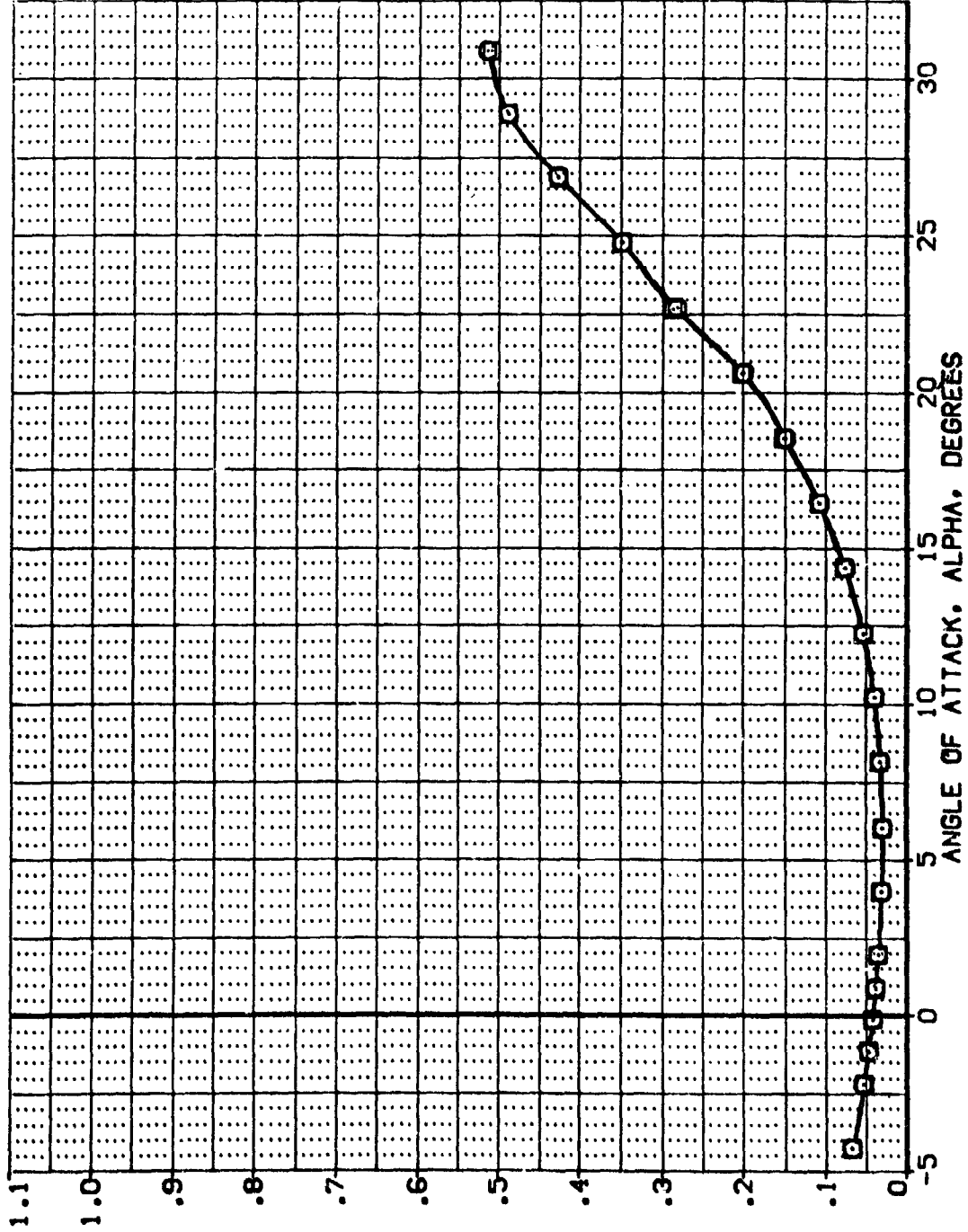
FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

(A)MACH = .20

DATA SET SYMBOL: 0A628 026C9 M7F8 V116E28V80A9  
 (B0Z110) 0A628 026C9 M7F8 V116E28V80A9  
 (B0Z109) 0A628 026C9 M7F8 V116E28V80A9

ELEVON SPOBRK BDFLAP RUDDER  
 -10.000 25.000 -12.000 .000  
 -10.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT  
 LREF 19.2298 INCHES  
 BREF 37.5358 INCHES  
 XPRP 43.5874 INCHES  
 YPRP .0000 INCHES  
 ZPRP 15.1875 INCHES  
 SCALE .0405 SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

(A)MACH = .20

DATA SET SYMBOL: (80Z110) (80Z109)

CONFIGURATION DESCRIPTION: 0A6Z8 026C8 M7F8 V116E28V8S4S 0A6Z8 026C8 M7F8 V116E28V8S4S

ELEVON: -10.000 -13.000

SPOILER: 25.000 25.000

BOFLAP: -12.000 -12.000

RUDDER: .000 .000

REFERENCE INFORMATION:

SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	0.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

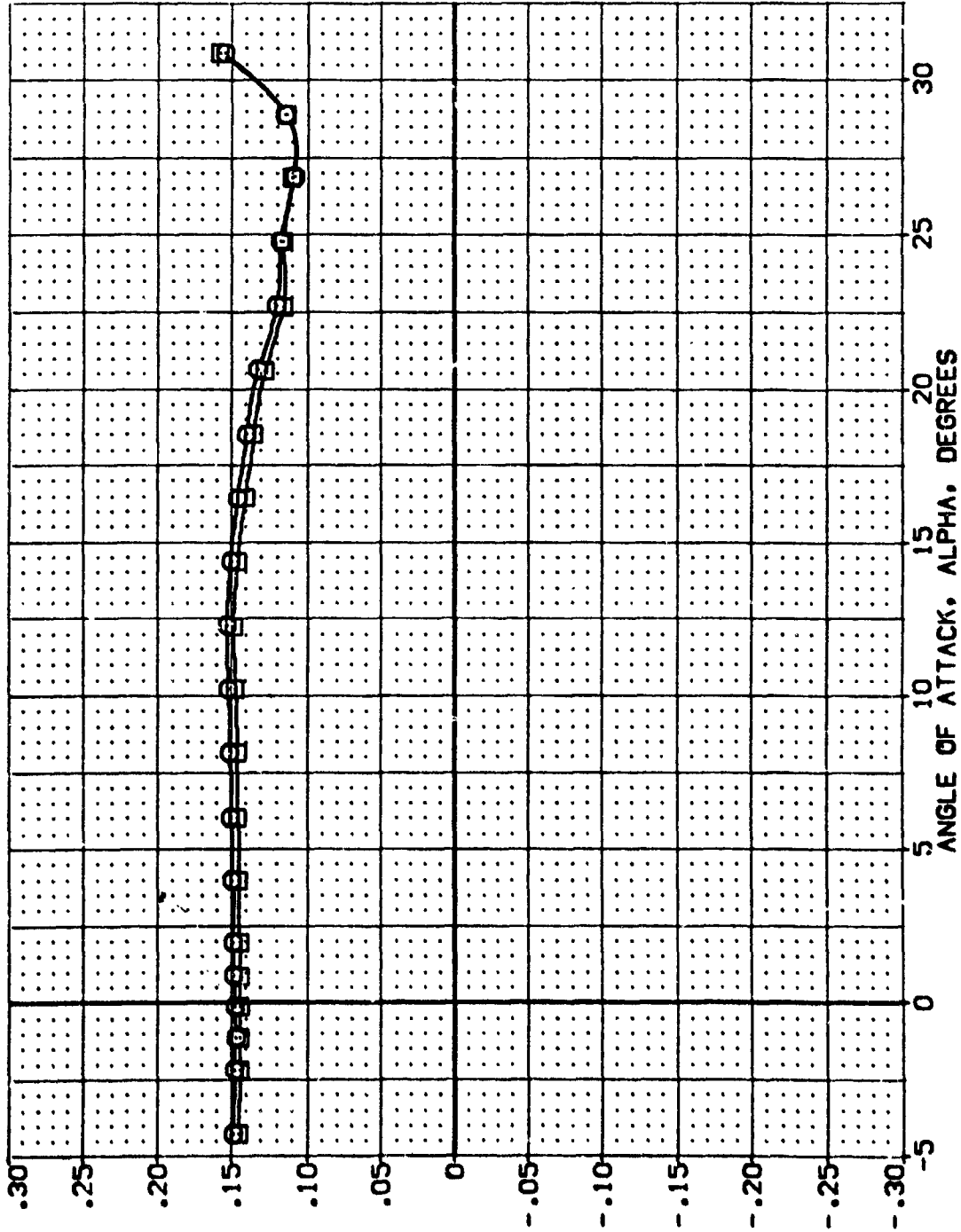


FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

(A)MACH = .20

DATA SET SYMBOL: CONFIGURATION DESCRIPTION  
 (B02110) (M78 V116Z8V8M5X8)  
 (B02109) (M78 V116Z8V8M5X8)

ELEVON SPOONK BOFLAP RUDDER REFERENCE INFORMATION  
 -10.000 25.000 -12.000 .000 4.4119 50.FT. INCHES  
 -10.000 25.000 -12.000 .000 19.2259 100.FT. INCHES  
 .000 .000 .000 .000 37.9359 150.FT. INCHES  
 .000 .000 .000 .000 43.5974 175.FT. INCHES  
 .000 .000 .000 .000 15.1875 100.FT. INCHES  
 .000 .000 .000 .000 .0405 SCALE

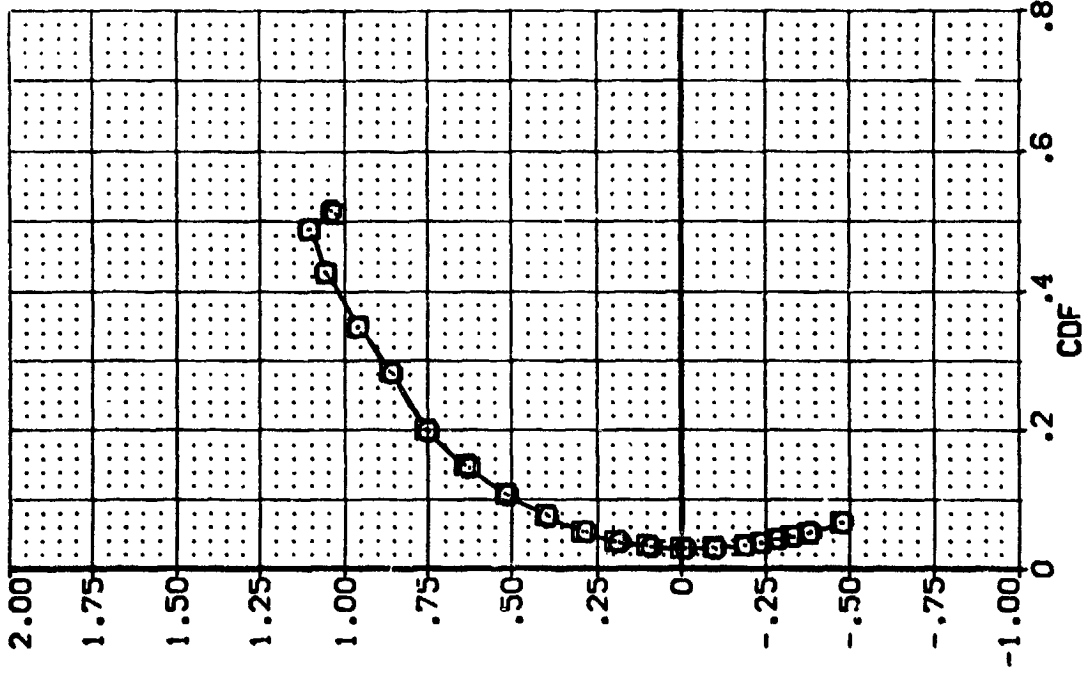
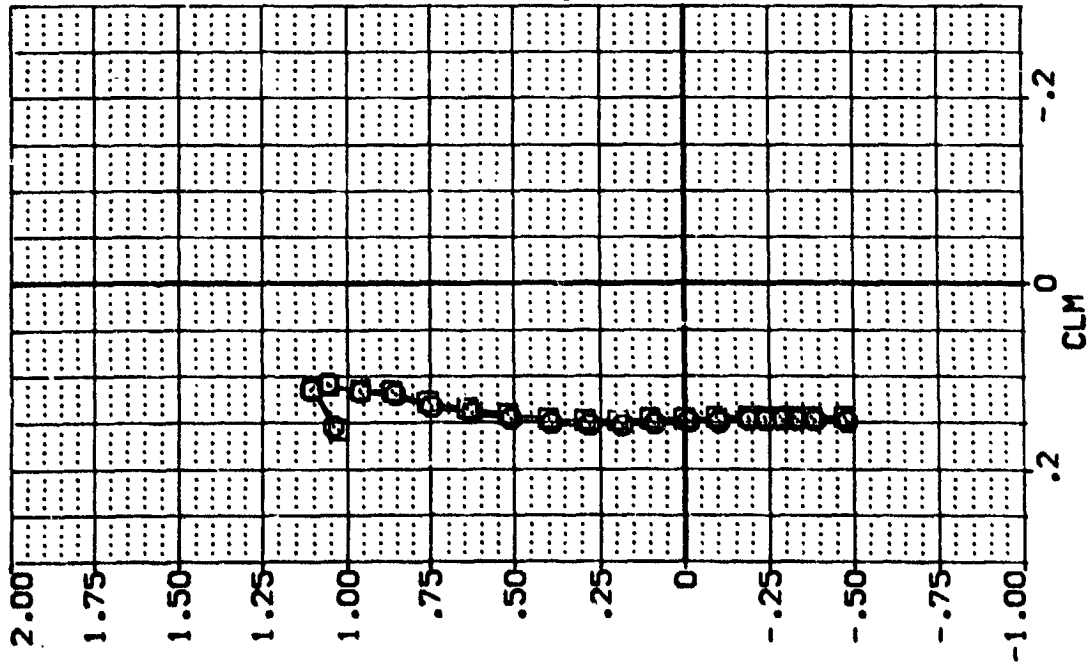


FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

CLM/MACH = .20



LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

DATA SET SYMBOL [B02110] [B02109] □ ○

CONFIGURATION DESCRIPTION  
 BAE28 B28C3 M7F8 V1 (E226/8RS/3)  
 BAE28 B28C3 M7F8 V1 (E226/8RS/3)

ELEVON SPOBK BDFLAP RUDDER  
 -10.000 25.000 -12.000 .000  
 -10.000 25.000 -12.000 .000

REFERENCE I-FORMATION  
 SREF 4.4119 50.FT. INCHES  
 LREF 19.2299 INCHES  
 BREF 37.9358 INCHES  
 XTRP 43.5974 INCHES  
 YTRP .0000 INCHES  
 ZTRP 15.1875 INCHES  
 SCALE .0405 SCALE

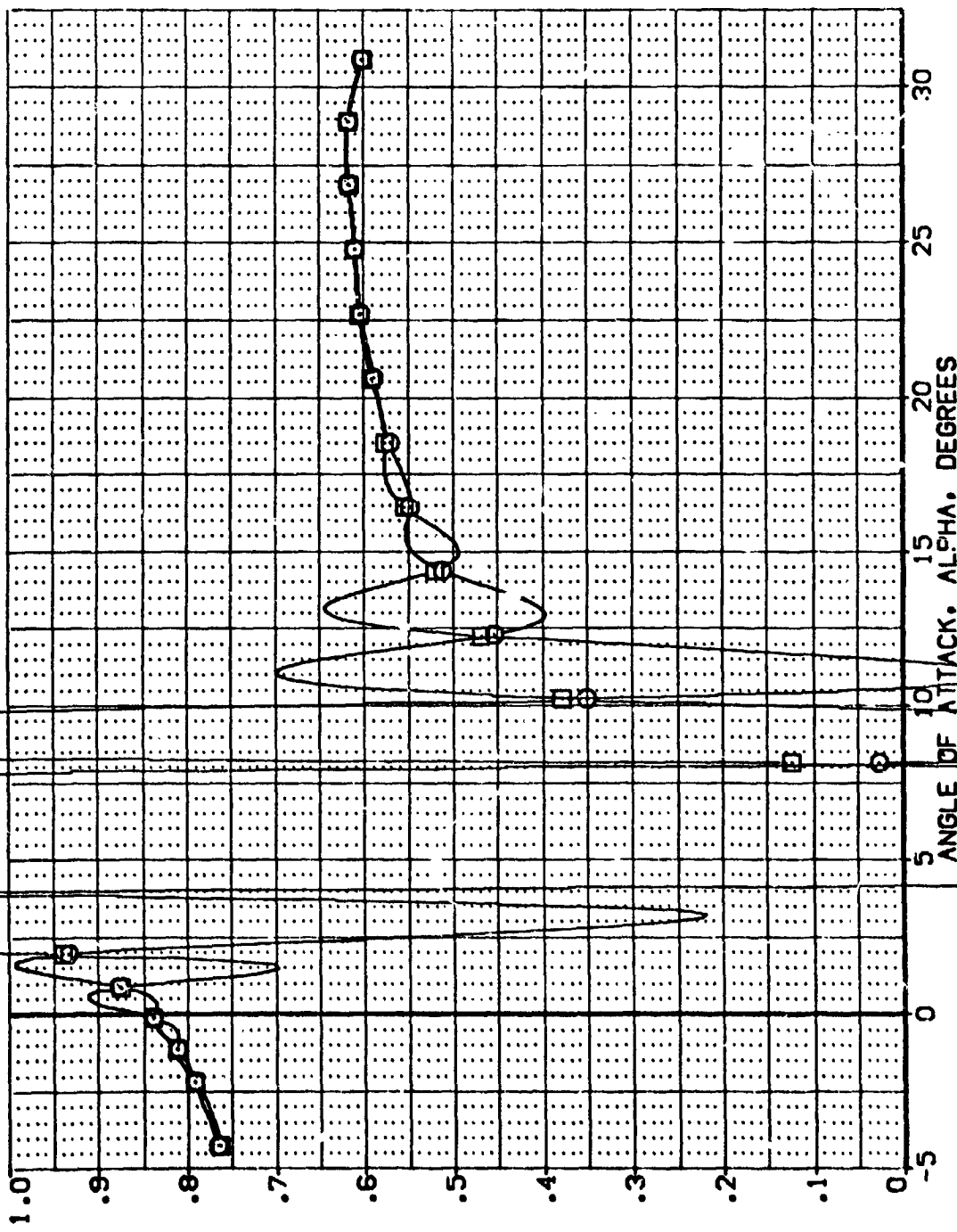


FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10  
 CAJMACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ110) □ 0A628 B26C3 M7F8 Y11E28V8S4S  
 (BDZ109) □ 0A628 B26C3 M7F8 Y11E28V8S4S

ELEVON SPOONK BOFLAP RUDDER  
 -10.000 25.000 -12.000 .000  
 -10.000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4118 80.41  
 LREF 19.2289 10.61  
 BREF 37.8258 10.61  
 VREF 43.5574 10.61  
 YMP 0.0000 10.61  
 ZMP 15.1875 10.61  
 SCALE .0405 10.61

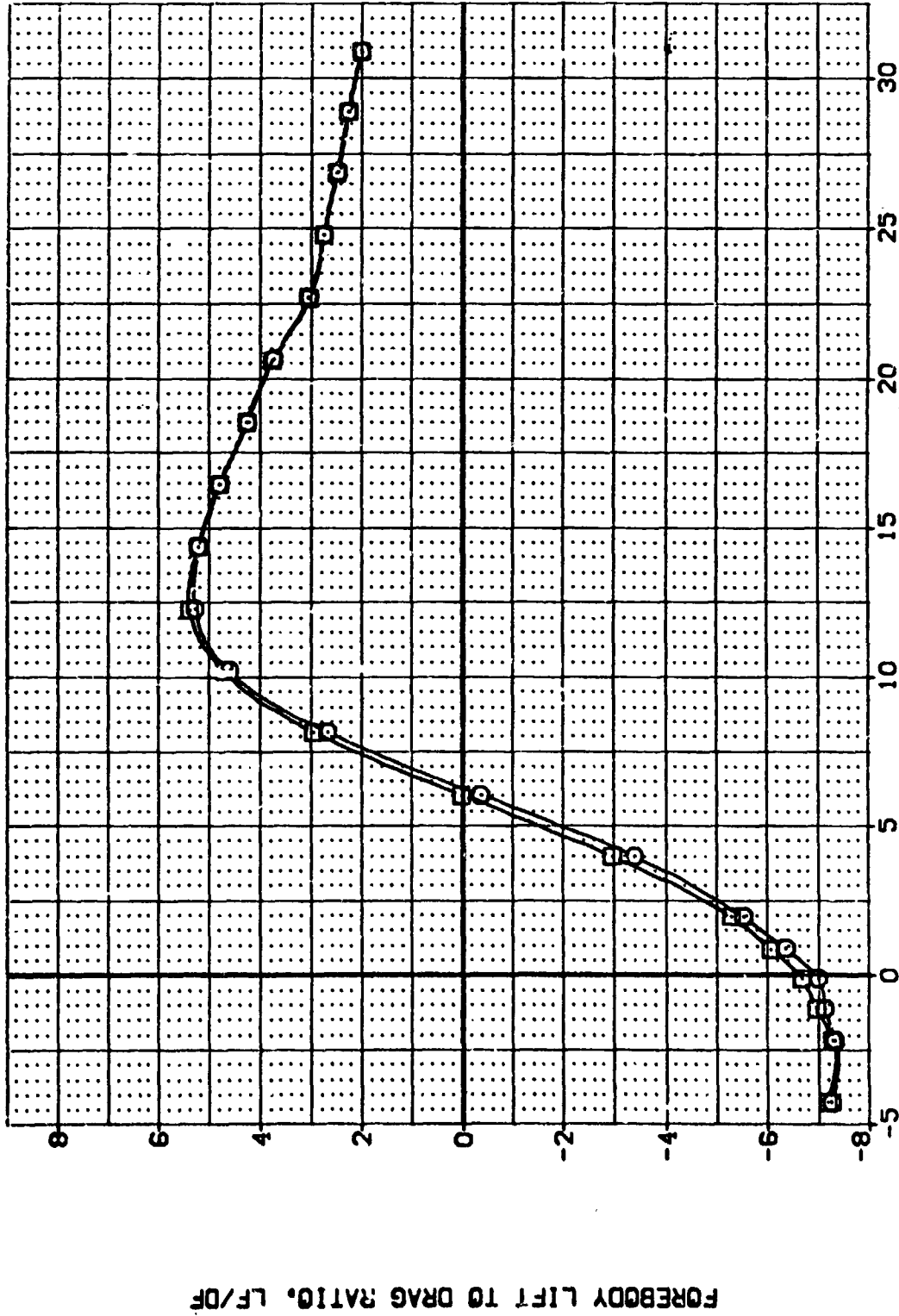
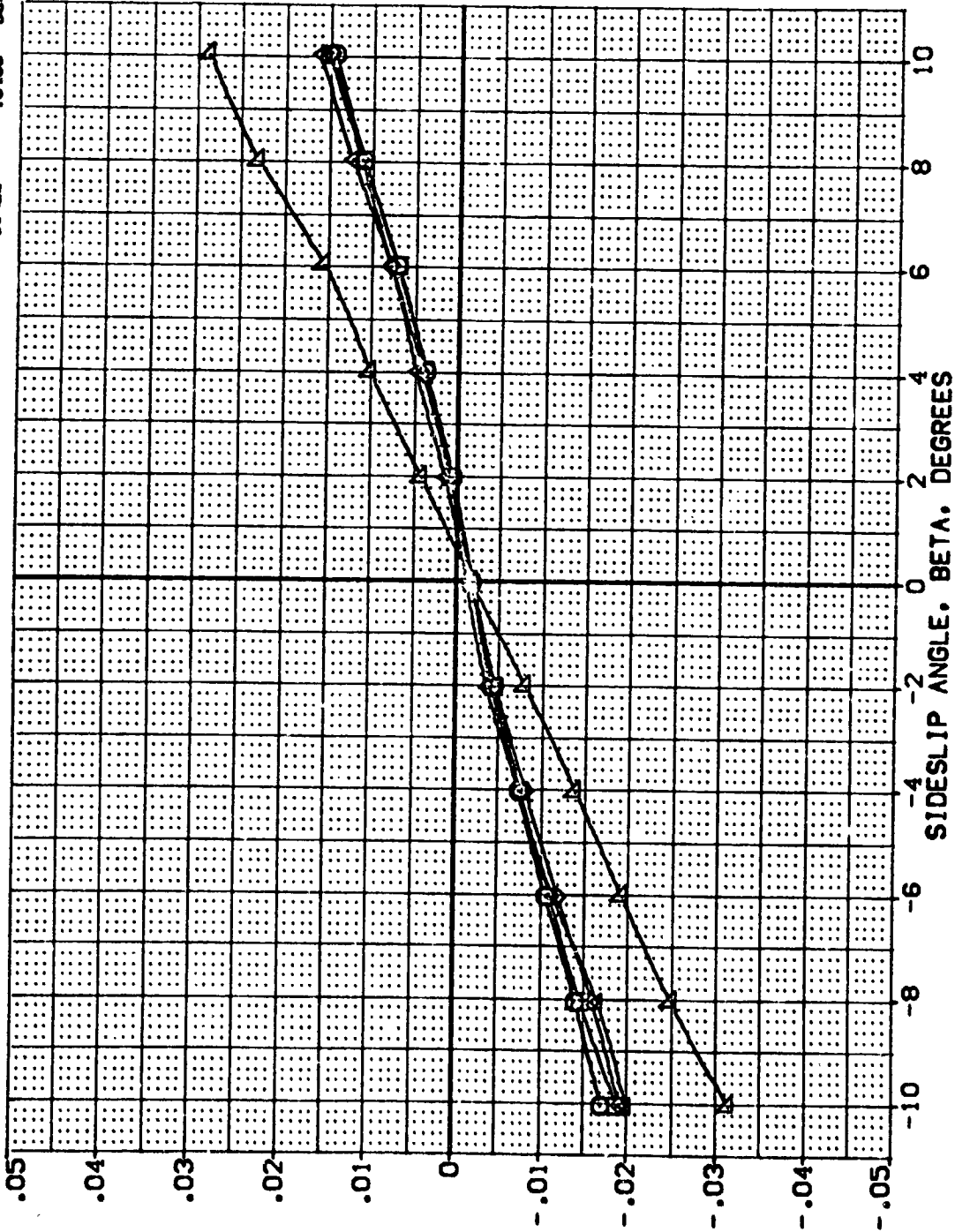


FIG 46 EFFECT OF BASELINE ELEVON GAP, GEAR OFF, ELEVON = -10

MACH = .20



DATA SET SYMB.	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOONK	AIRLORN	REFERENCE INFORMATION
(RZ) 25	GA628 B26C9 M7F8 V11B226V8F5X9	.000	.000	25.000	.000	REF 1.4118 SO.FT.
(RZ) 26	GA628 B26C9 M7F8 V11B226V8F5X9	5.000	.000	25.000	.000	LREF 19.2259 INCHES
(RZ) 27	GA628 B26C9 M7F8 V11B226V8F5X9	10.000	.000	25.000	.000	BREF 37.9259 INCHES
(RZ) 28	GA628 B26C9 M7F8 V11B226V8F5X9	15.000	.000	25.000	.000	XTRP 43.5874 INCHES
(RZ) 29	GA620 B26C9 M7F8 V11B226V8F5X9	20.000	.000	25.000	.000	ZTRP .0000 INCHES
						SCALE 15.1675 INCHES



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON  
CAJ MACH = .20

DATA SET SYMBO	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBK	AILRON	REFERENCE INFORMATION
(RZ125)	0AG28 B06C3 M778 V11E26/8P5V3	.000	.000	25.000	.000	SREF 4.4119 80. FT.
(RZ126)	0AG28 B06C3 M778 V11E26/8P5V3	5.000	.000	25.000	.000	LREF 19.2259 INCHES
(RZ127)	0AG28 B06C3 M778 V11E26/8P5V3	10.000	.000	25.000	.000	MREF 37.9359 INCHES
(RZ128)	0AG28 B06C3 M778 V11E26/8P5V3	15.000	.000	25.000	.000	XREF 43.5974 INCHES
(RZ129)	0AG28 B06C3 M778 V11E26/8P5V3	20.000	.000	25.000	.000	YREF 15.0000 INCHES
						ZREF 15.1875 INCHES
						SCALE .0405

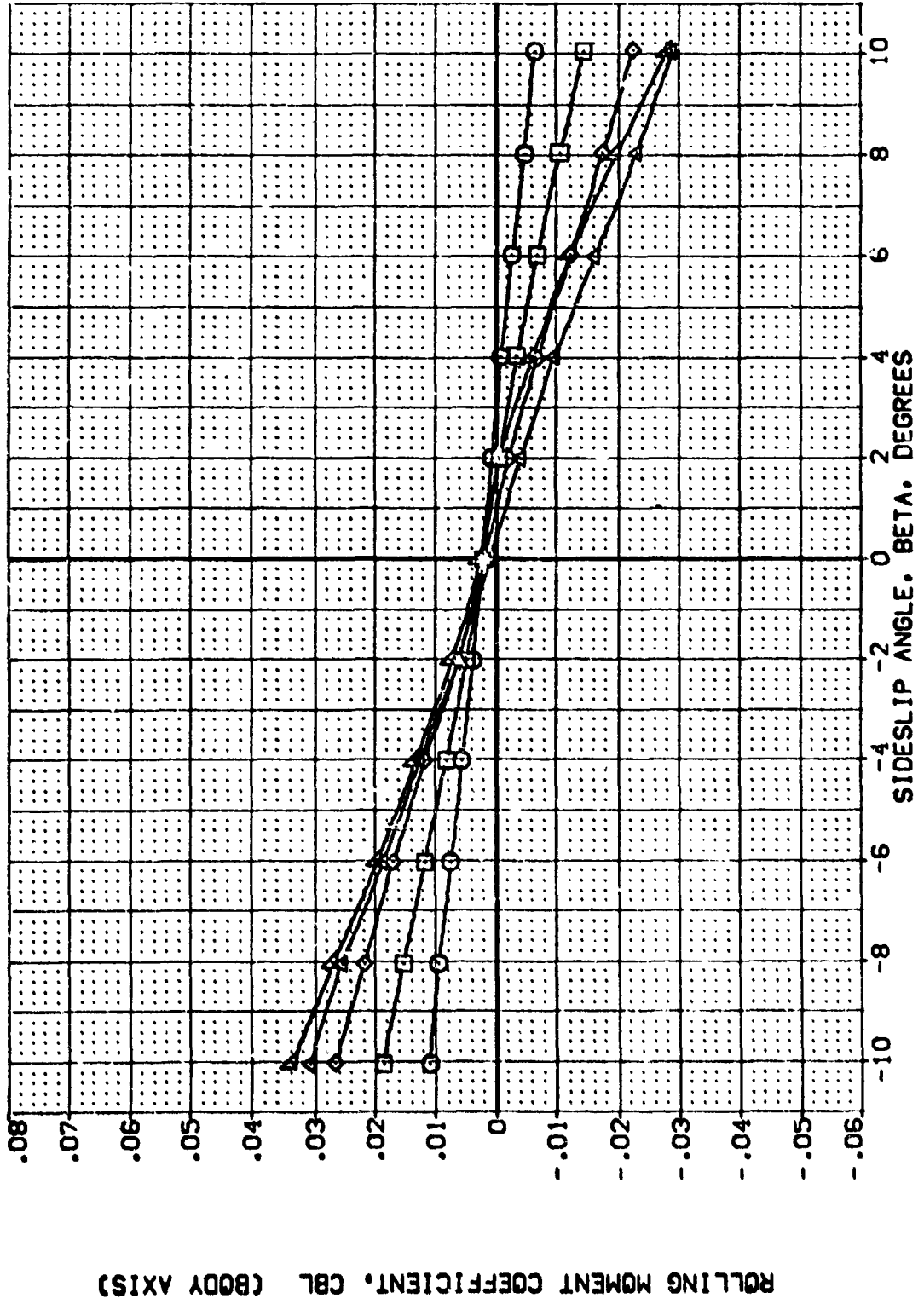
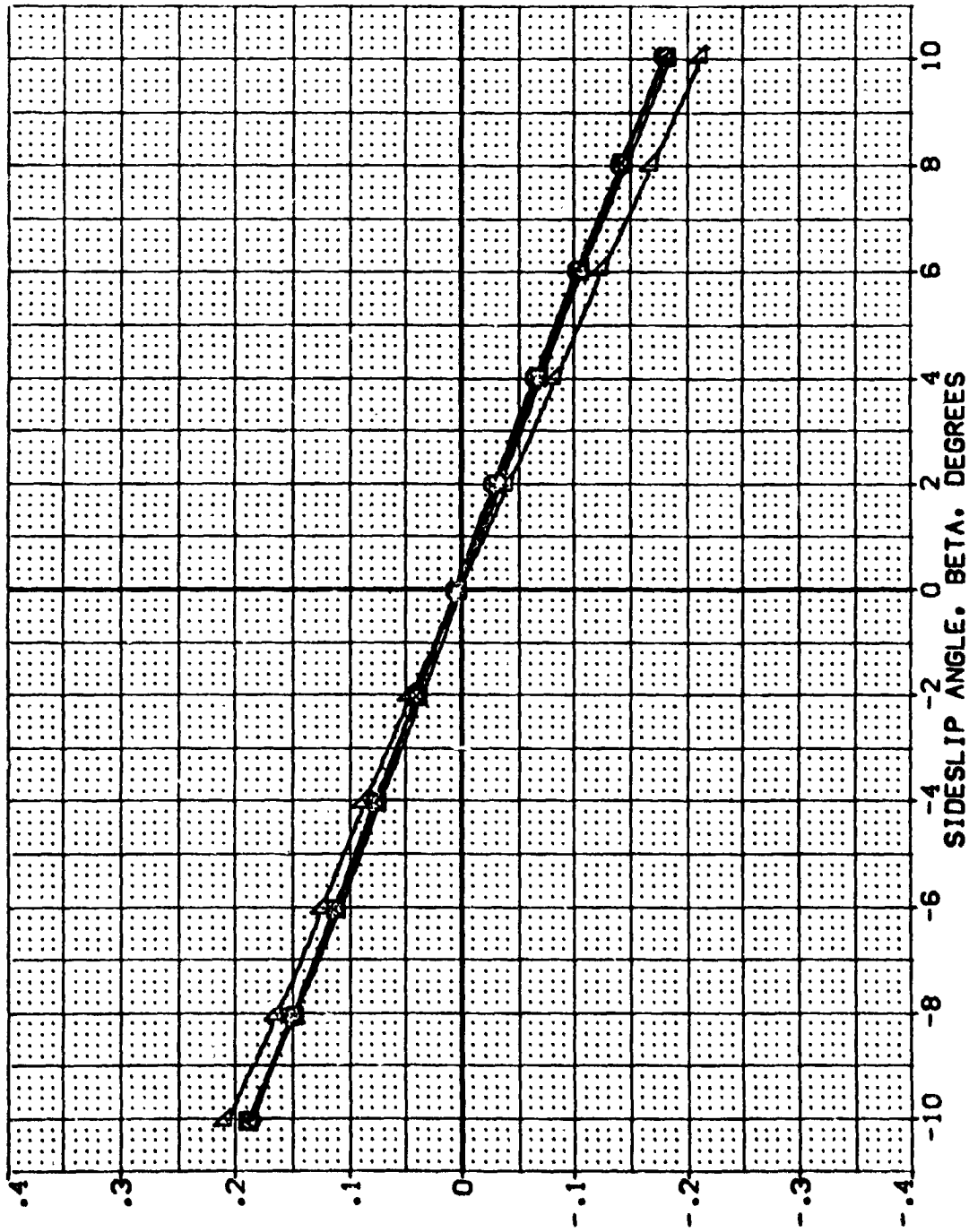


FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON  
 (CA)MACH = .20

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPORK	A1URON	REFERENCE INFORMATION
(RZ125)	0A628 B26C9 M78 V11E26V85C9	.000	.000	25.000	.000	4.4119 SO.FT.
(RZ126)	0A628 B26C9 M78 V11E26V85C9	5.000	.000	25.000	.000	19.2299 INCHES
(RZ127)	0A628 B26C9 M78 V11E26V85C9	10.000	.000	25.000	.000	37.9359 INCHES
(RZ128)	0A628 B26C9 M78 V11E26V85C9	15.000	.000	25.000	.000	43.5974 INCHES
(RZ129)	0A628 B26C9 M78 V11E26V85C9	20.000	.000	25.000	.000	15.1675 INCHES
						.C105 SCALE



SIDE FORCE COEFFICIENT, CY

FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON

(A)MACH = .20

(C0Z125)

0A628 B26C9 M7F8 W116E26V8R5X9

SYMBL O

RUDDER .000

MACH ELEVON SPOBRK

PARAMETRIC VALUES

.200 BOFLAP -12.000

.000 AILRON .000

25.000

REFERENCE INFORMATION

BREF 4.4118 90.FT.

LREF 19.2736 INCHES

BREF 37.9059 INCHES

XTRP 43.5974 INCHES

YTRP .0000 INCHES

ZTRP 15.1875 INCHES

SCALE .0405 SCALE

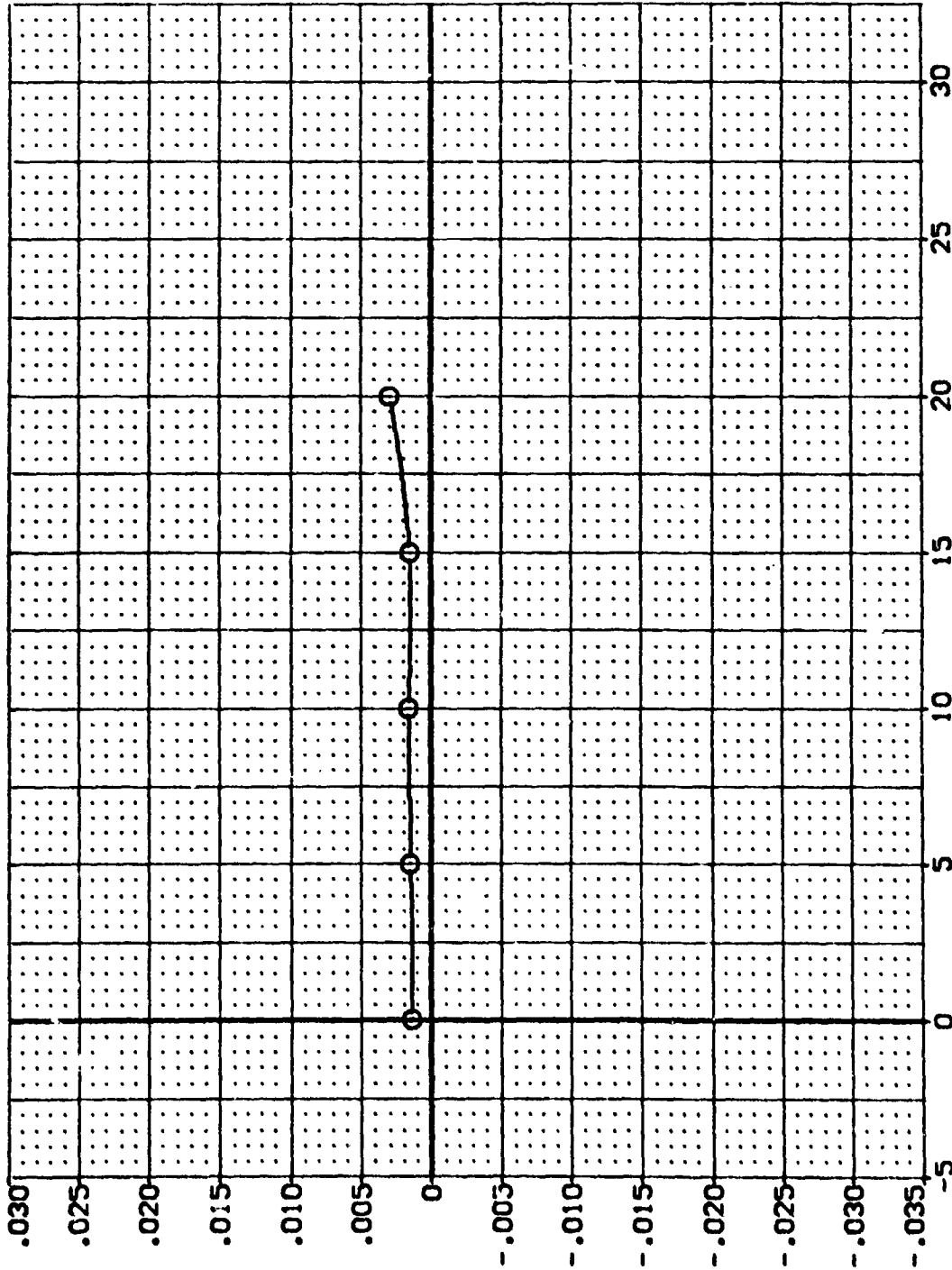


FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

(COZ125)

0A628 B26C9 M7F8 W116526V8R5X9

SYMB. 0

RUDDER .000

MACH .200

ELEVON .000

SPDRK 25.000

BOFLAP -12.000

AIRLN .000

PARAMETRIC VALUES

REF 4.4119

LREF 19.2259

BREF 37.9259

XMRP 43.5974

YMRP .0000

ZMRP 15.1873

SCALE .0405

50.FT. INO-ES

NO-ES INO-ES

NO-ES INO-ES

NO-ES INO-ES

SCALE

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

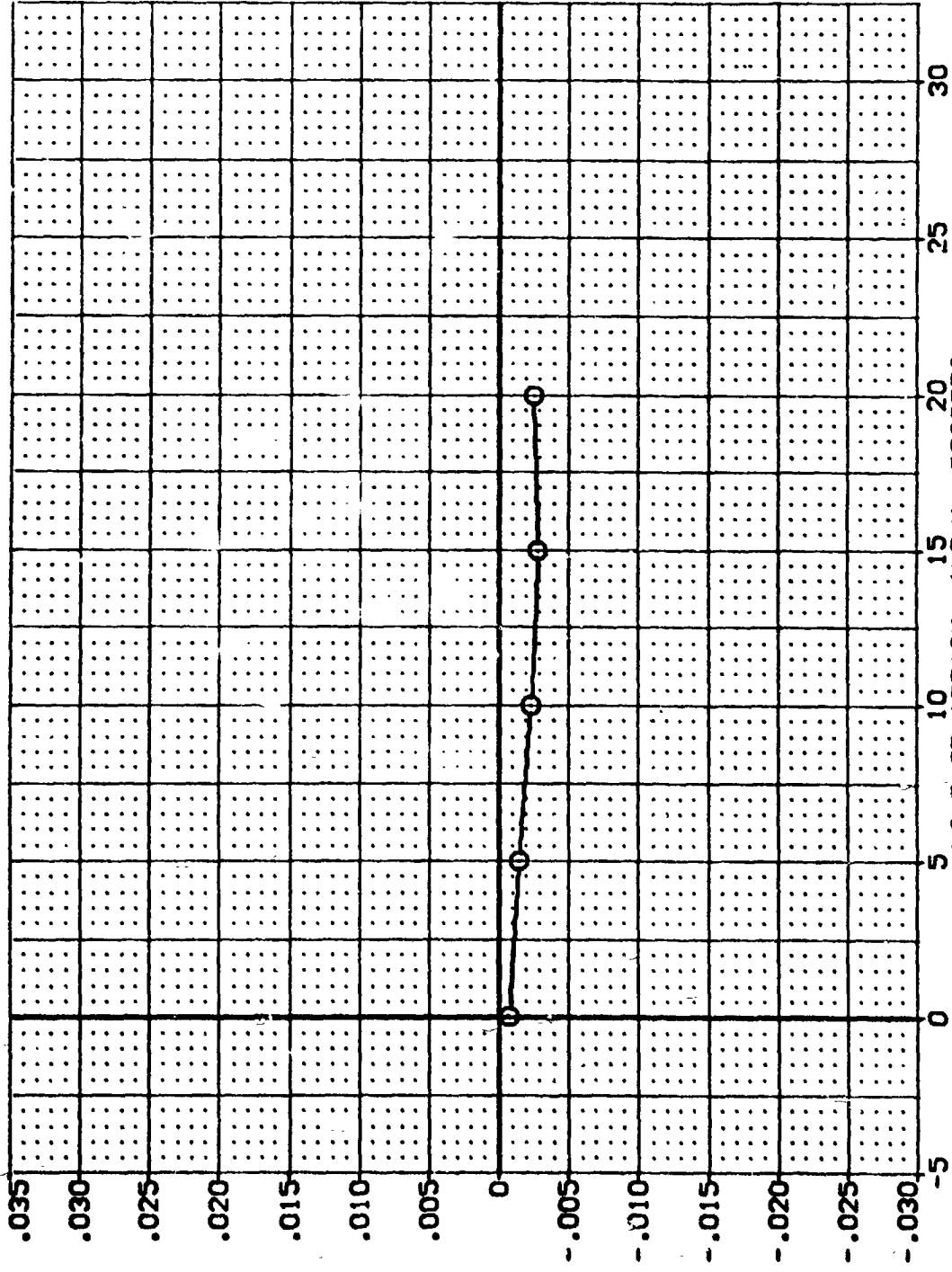


FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON

(CDZ125)

0A628 B26C9 M7F8 W116E26V8R5X9

SWGL 0  
 RUDDER .000  
 MACH  
 ELEVON  
 SPDRN 25.000  
 PARAMETRIC VALUES  
 BOFLAP .200  
 AILRON .000  
 -12.000  
 .000

REFERENCE INFORMATION  
 LREF 4.4118 SO.FT.  
 BREF 19.2298 INCHES  
 YWRP 37.9359 INCHES  
 ZWRP 43.5874 INCHES  
 TRPP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE

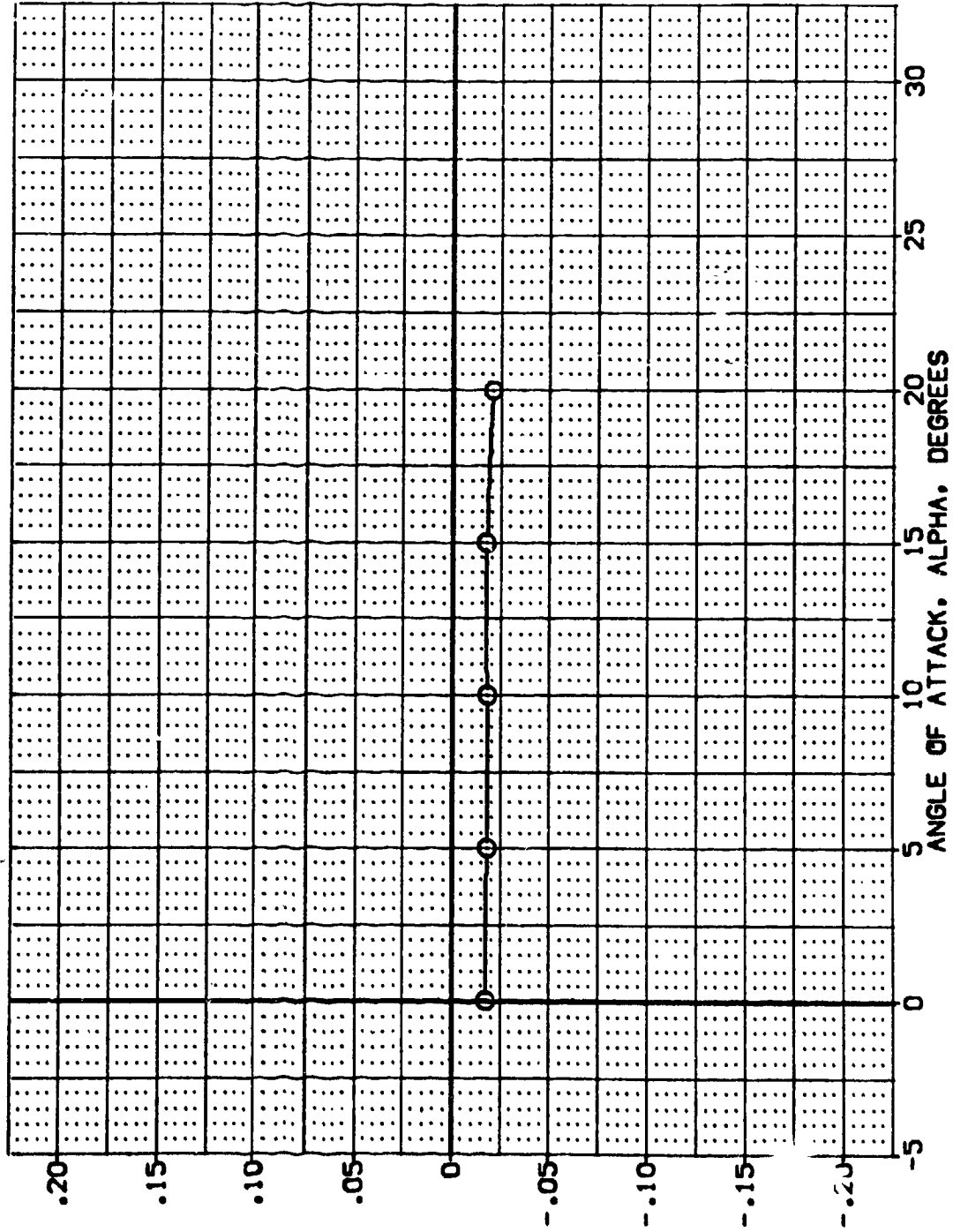


FIG 47 LAT-DIR STAB., GEAR OFF, RUDDER = 0, 25 DEG.FLARE, SOLID ELEVON

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE





DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BDFLAP	AILTRON	REFERENCE INFORMATION
(R0Z117)	0A628 B26C9 MTF8 V11E28V85X9	.000	25.000	-12.000	.000	BREF 4.4119 50.FT
(R0Z120)	0A628 B26C9 MTF8 V11E28V85X9	.000	25.000	-12.000	5.000	LREF 19.2759 INCHES
(R0Z123)	0A628 B26C9 MTF8 V11E28V85X9	.000	25.000	-12.000	10.000	BREF 37.5359 INCHES
(R0Z124)	0A628 B26C9 MTF8 V11E28V85X9	.000	25.000	-12.000	15.000	XTRP 43.5974 INCHES
(R0Z131)	0A628 B26C9 MTF8 V11E28V85X9	-10.000	25.000	-12.000	15.000	Z-TRP .0000 INCHES
(R0Z130)	0A628 B26C9 MTF8 V11E28V85X9	-15.000	25.000	-12.000	15.000	Z-TRP 15.1875 INCHES
						SCALE .0405

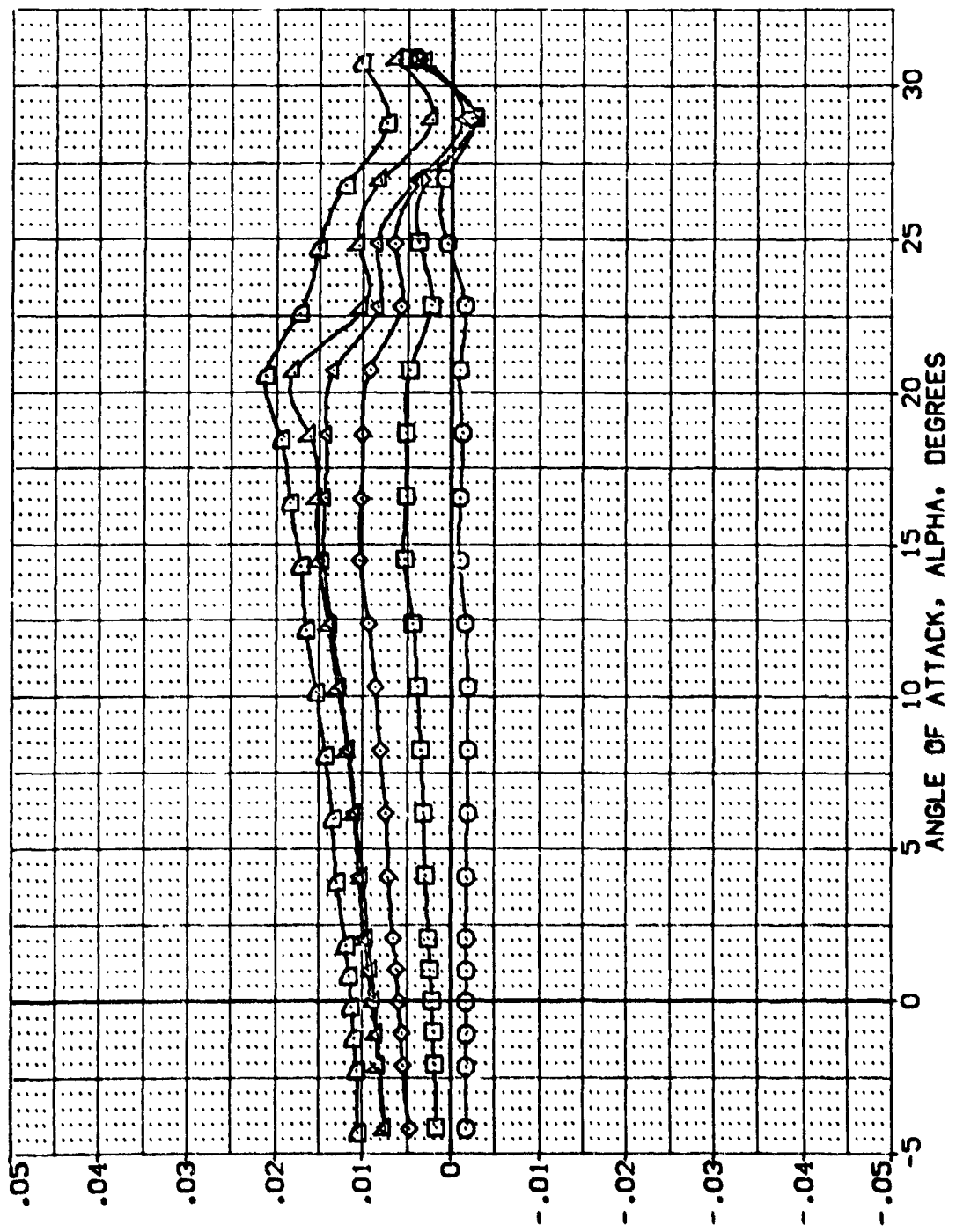


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	AILTRON	REFERENCE INFORMATION
(R0Z117)	0A628 B2623 M7F8 V116E28V85X9	.000	25.000	-12.000	.000	SREF 4.4119 50.FT
(R0Z132)	0A628 B2623 M7F8 V116E28V85X9	.000	25.000	-12.000	5.000	LREF 19.2299 INCHES
(R0Z133)	0A628 B2623 M7F8 V116E28V85X9	.000	25.000	-12.000	10.000	XREF 37.9369 INCHES
(R0Z134)	0A628 B2623 M7F8 V116E28V85X9	.000	25.000	-12.000	15.000	YREF 43.5974 INCHES
(R0Z131)	0A628 B2623 M7F8 V116E28V85X9	-10.000	25.000	-12.000	15.000	ZREF .0000 INCHES
(R0Z130)	0A628 B2623 M7F8 V116E28V85X9	-15.000	25.000	-12.000	15.000	ZMRP 15.1875 INCHES
						SCALE .0405

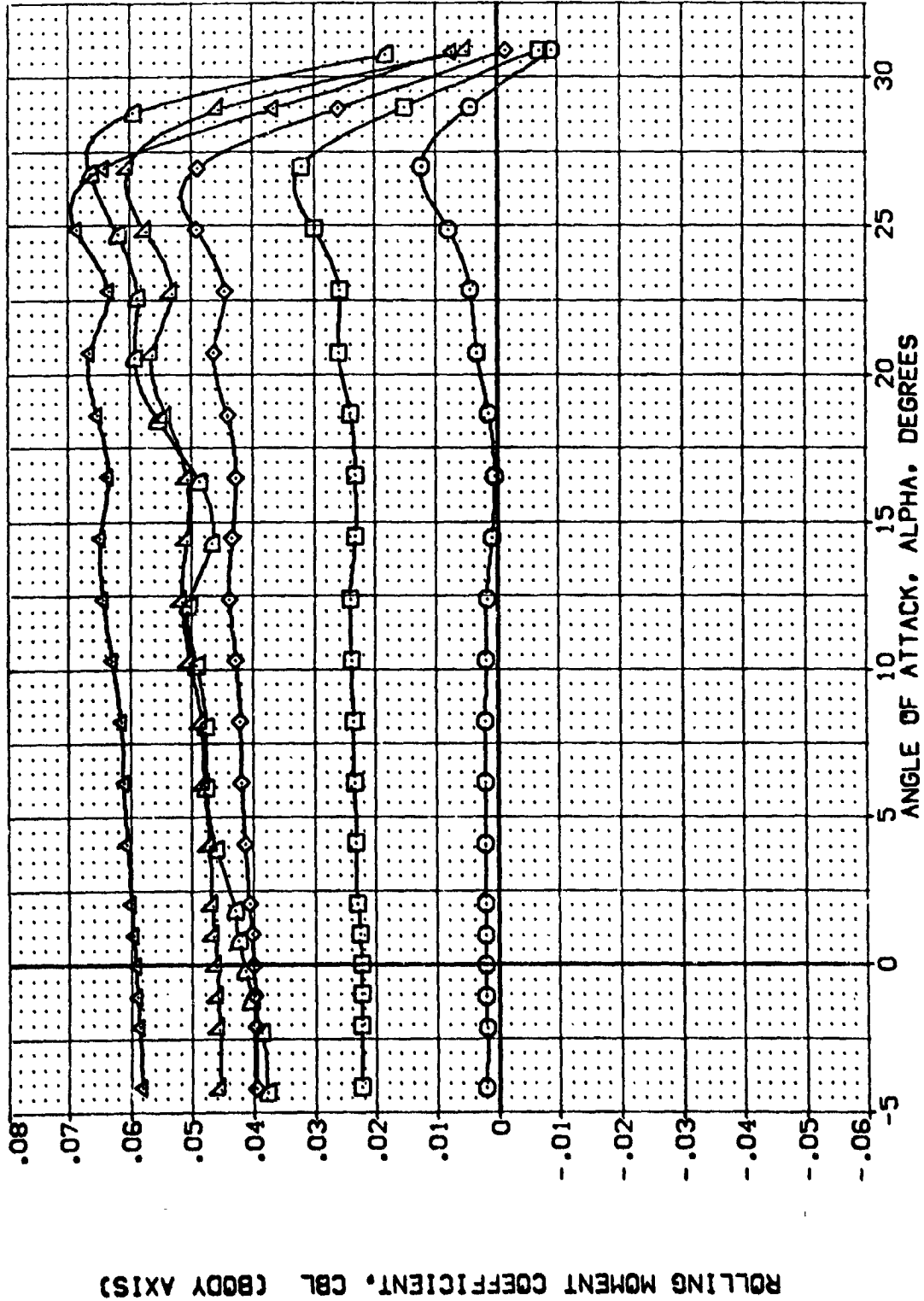
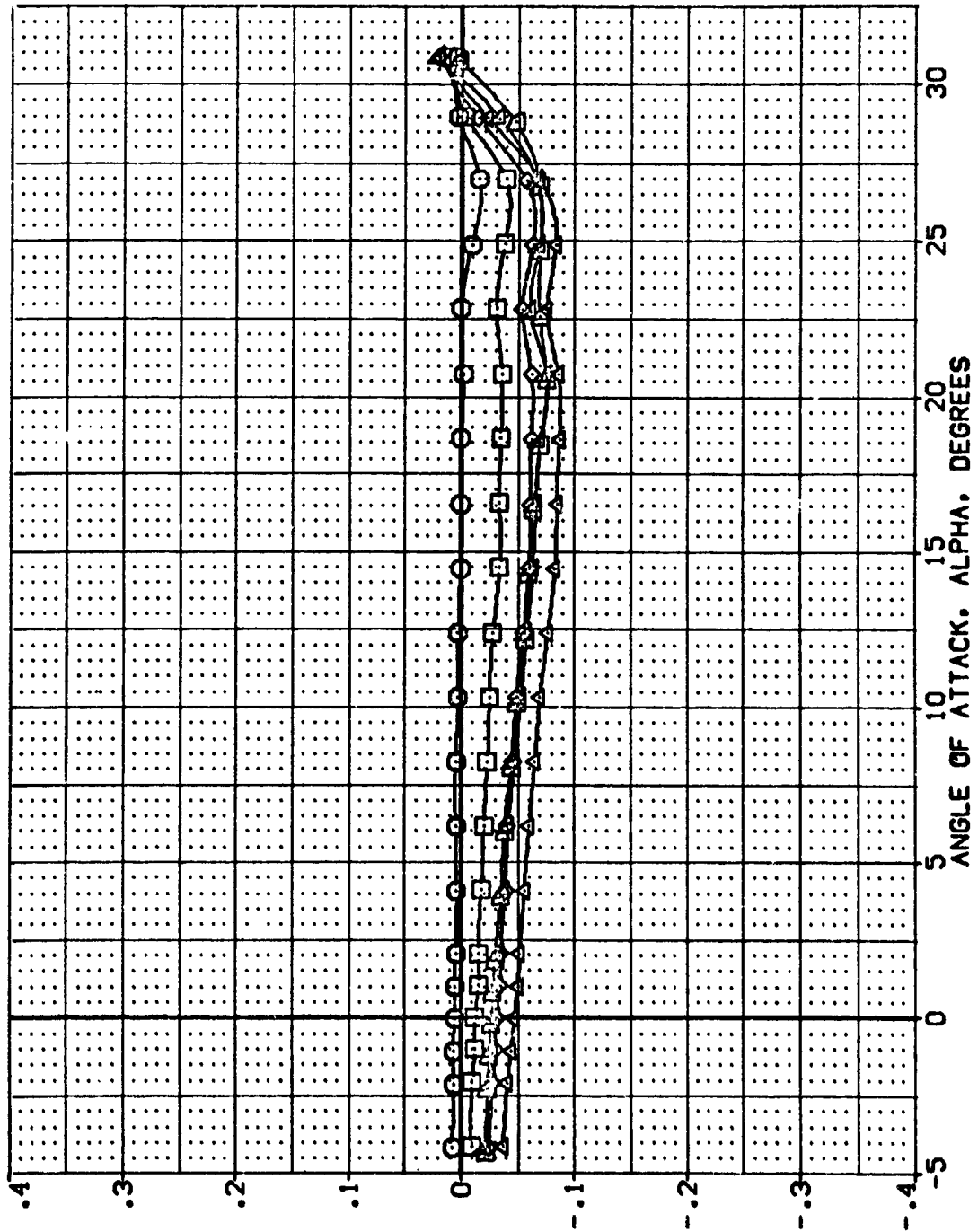


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BDFLAP	AILRON	REFERENCE INFORMATION
(R0Z117)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	.000	25.000	-12.000	.000	SREF 4.4119 50.FT.
(R0Z122)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	.000	25.000	-12.000	5.000	LREF 19.2299 INCHES
(R0Z123)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	.000	25.000	-12.000	10.000	BREF 37.5359 INCHES
(R0Z134)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	-10.000	25.000	-12.000	15.000	XTRP 43.5974 INCHES
(R0Z131)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	-10.000	25.000	-12.000	15.000	YTRP .0000 INCHES
(R0Z130)	0A5Z8 BZ6C9 M7F8 V116E28V8S49	-15.000	25.000	-12.000	15.000	ZTRP 15.1875 INCHES
						SCALE .0405



SIDE FORCE COEFFICIENT, CY

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

(A)MACH = .20

(20Z117)

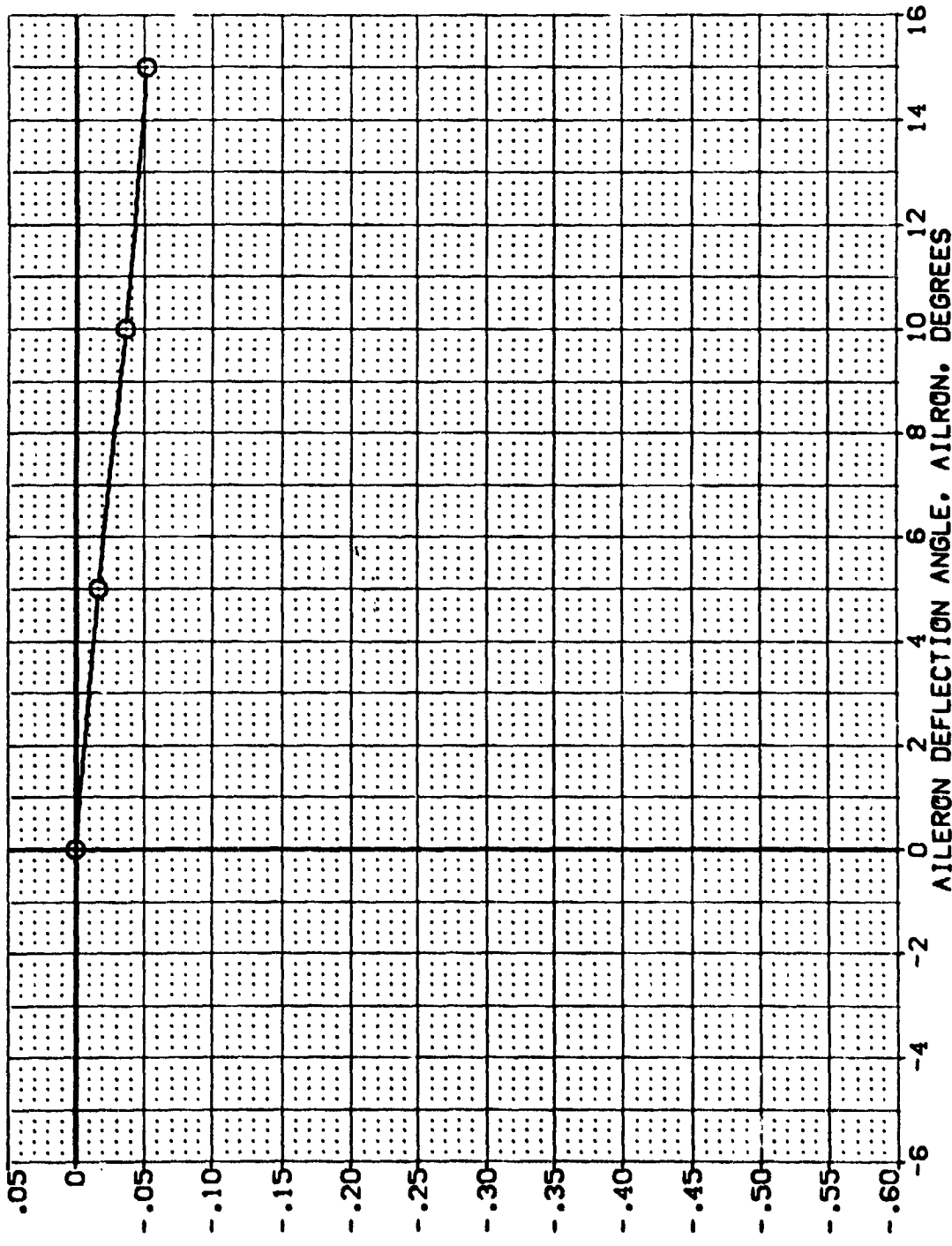
W116E28V8R5X9

M7F8

B26C9

0A628

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	.000	.200	DELTON	AILRON	SO.FT.
		-12.000	RUDDER	.000	INCHES
		25.000	BETA	20Z117	INCHES
				20Z133	INCHES
				.000	INCHES
				10.000	INCHES
				5.000	INCHES
				15.000	INCHES
				YMRP	INCHES
				ZMRF	INCHES
				SCALE	SCALE
					4.4119
					19.2289
					37.9259
					43.5574
					.0000
					15.1875
					.0405



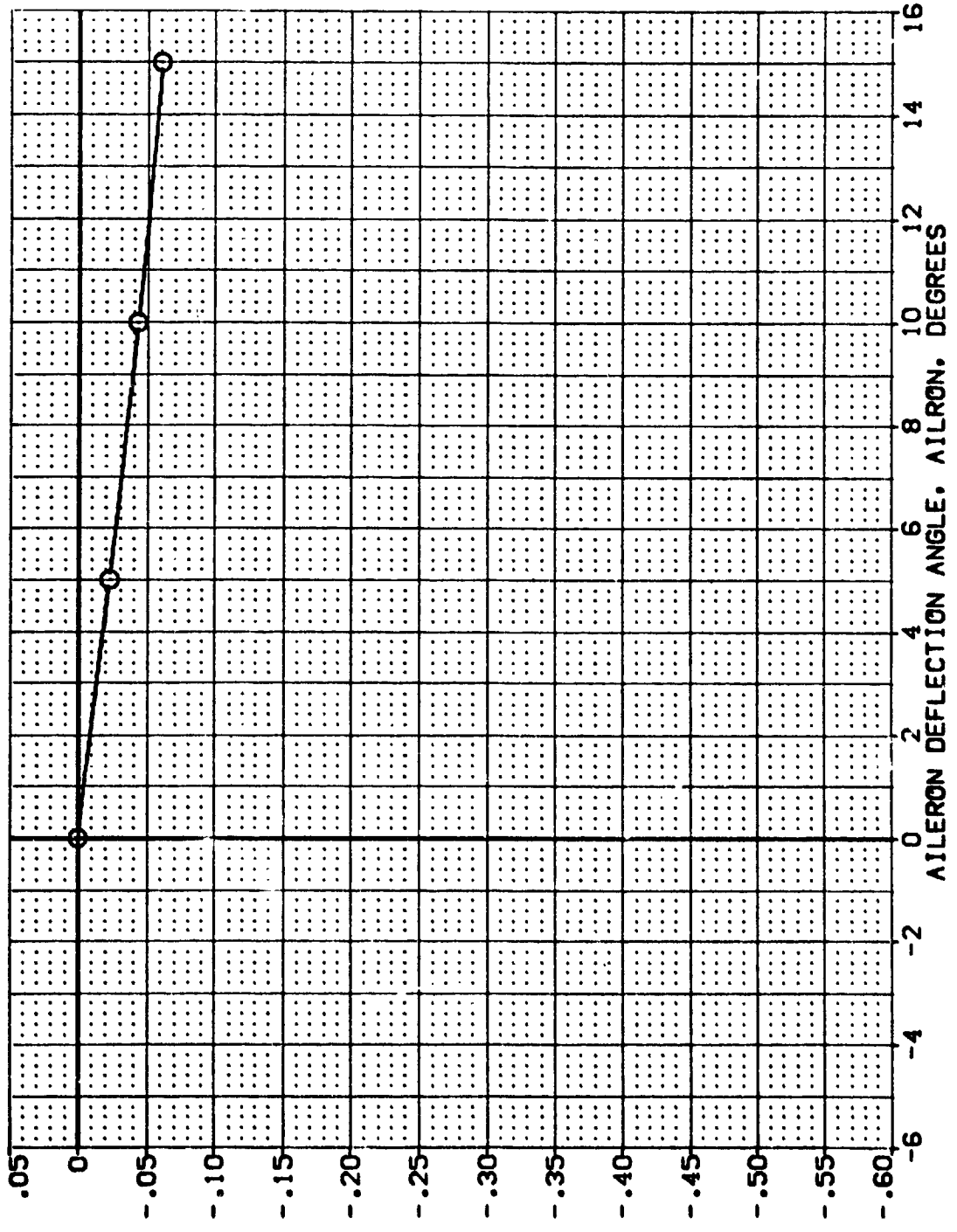
INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B25C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	REFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILRON	REF	REFERENCE INFORMATION
○	5.000				.200 DELVON -12.000 RUDDER 25.000 BETA	AILRON .000 10.000	20Z132 20Z134	5.000 15.000	SREF LREF BREF XMRP YMRP ZMRP SCALE	4.4118 SQ.FT. 19.2299 INCHES 37.9369 INCHES 43.5974 INCHES .0000 INCHES 15.1675 INCHES .0405 SCALE



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

01628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	EDFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	10.000	.200	-12.000	25.000	DELTON RUDDER BETA	AILRON AILRON AILRON	SO.FT. INCHES INCHES INCHES INCHES SCALE
						DATASET DATASET DATASET	
						AILRON AILRON AILRON	
						SCALE	

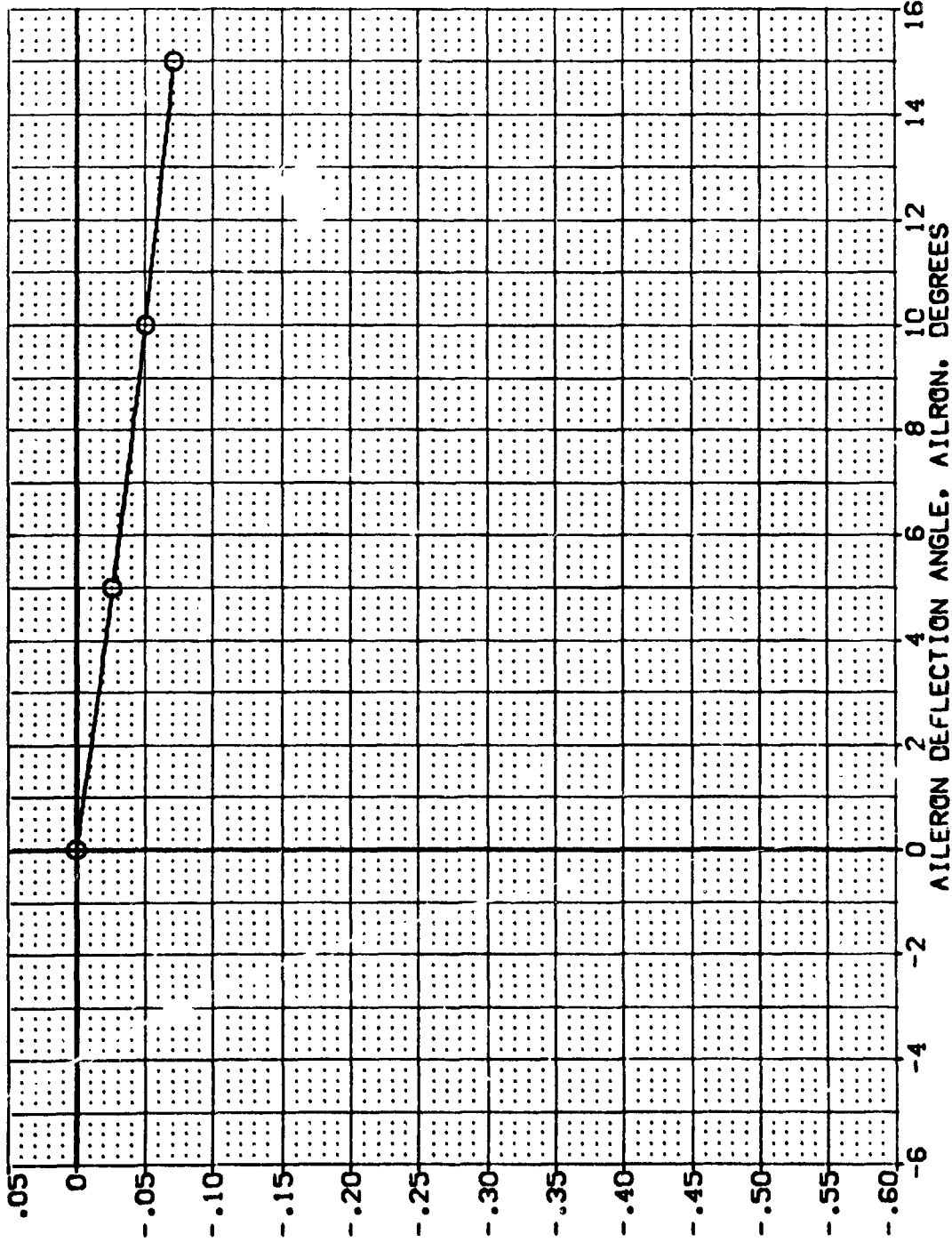


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILERON	REF	REFERENCE INFORMATION
O	15.000	BDFLAP	.200 DELVON	.000 AILRON	.000 DATASET	5.000 AILRON	4.4119 SQ.FT.	
		SPOBRK	-12.000 RUDDER	.000 20Z117	.000 20Z132	15.000	19.2288 INCHES	
			25.000 BETA	.000 20Z133	10.000 20Z134		37.5336 INCHES	
							43.5974 INCHES	
							.0000 INCHES	
							15.1875 INCHES	
							.0405 SCALE	

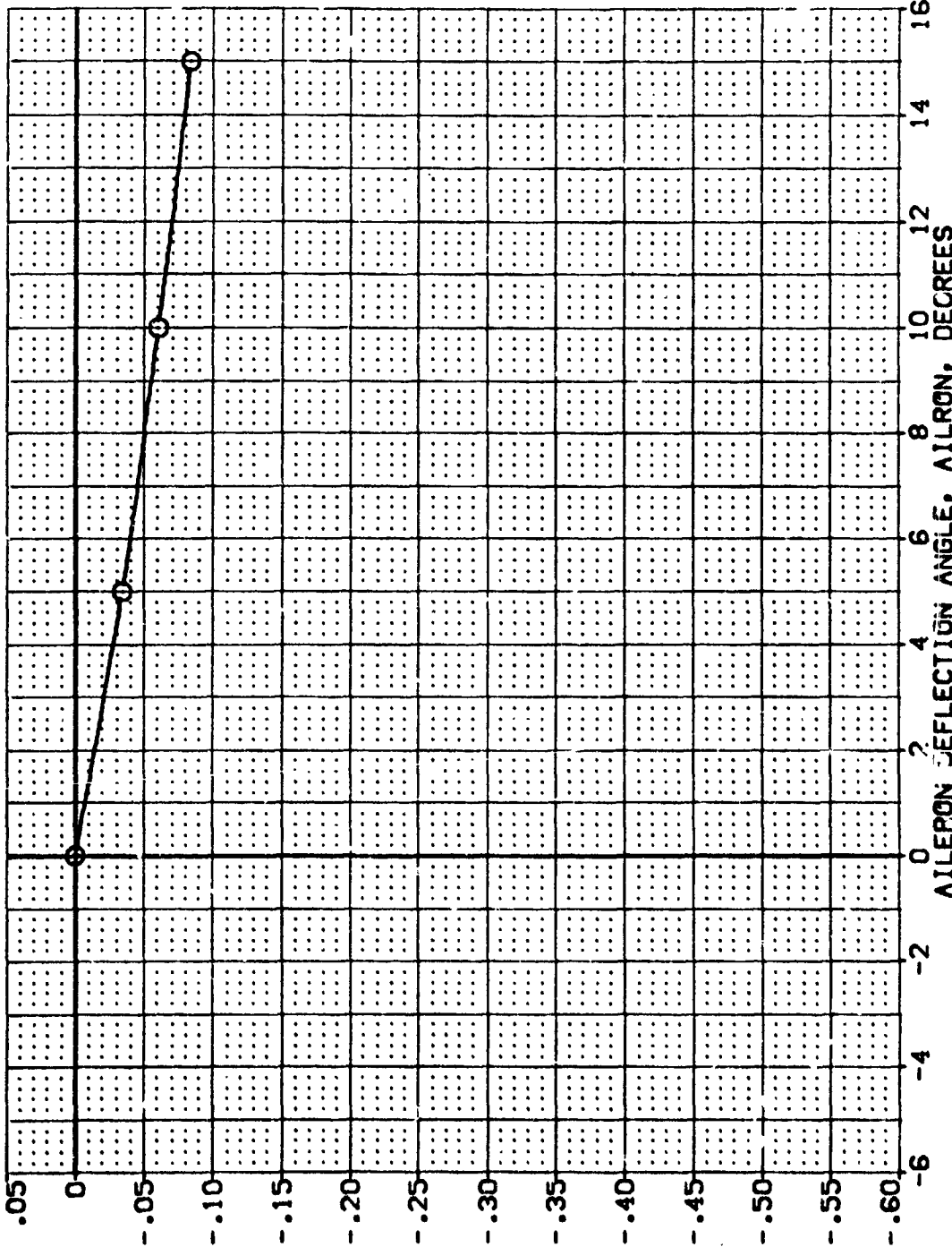
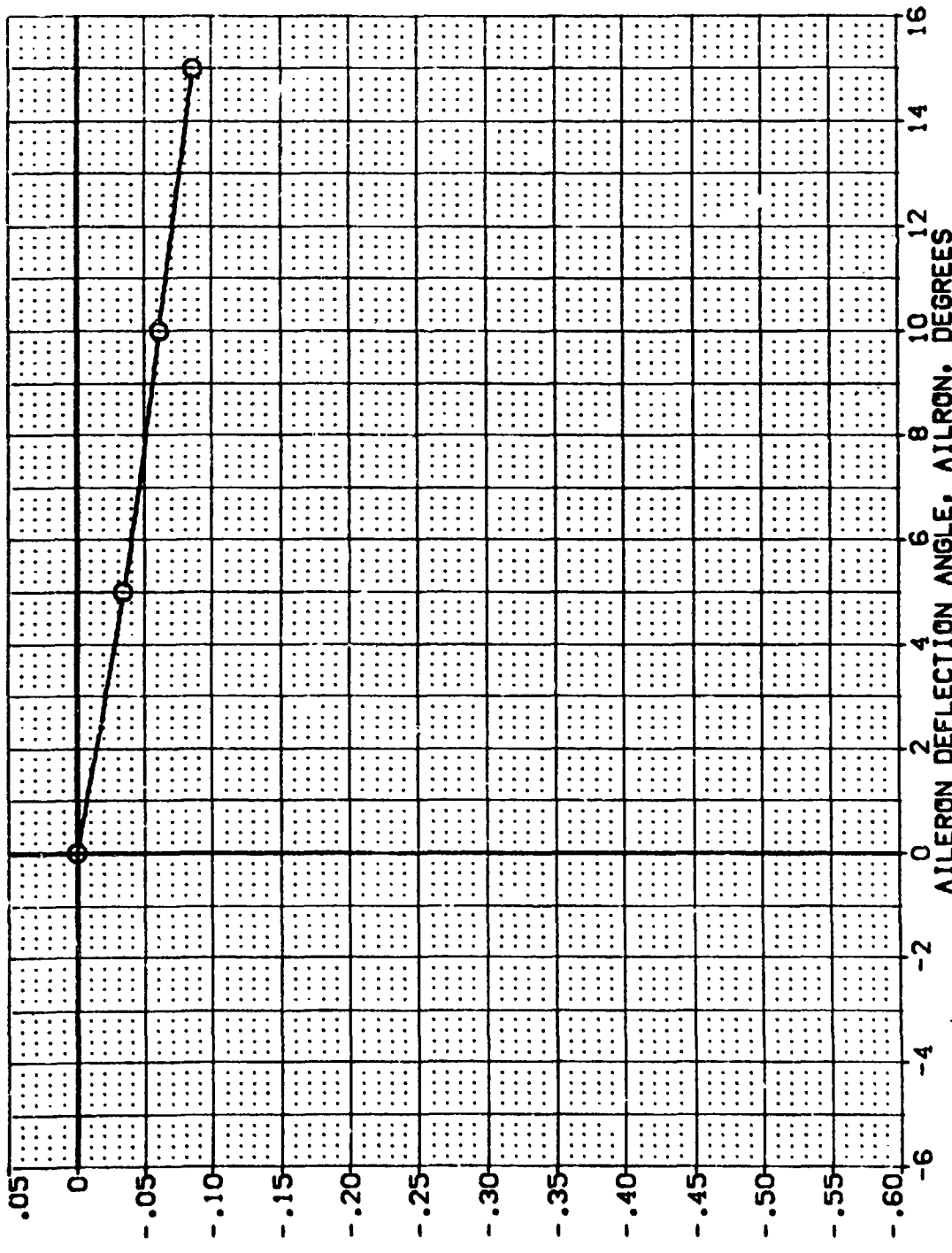


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	DATA SET	AILRON	AILRON	SREF	REFERENCE INFORMATION
0	20.000				.200 DELVON	.000	.000	.000	WLRON	20Z117	5.000	15.000	4.4119	50.FT.
					-12.000 RUDDER	.000	.000	10.000		20Z133			19.2399	INC-ES
					25.000 BETA								37.9359	INC-ES
													43.5974	INC-ES
													.0000	INC-ES
													15.1875	INC-ES
													.0405	SCALE



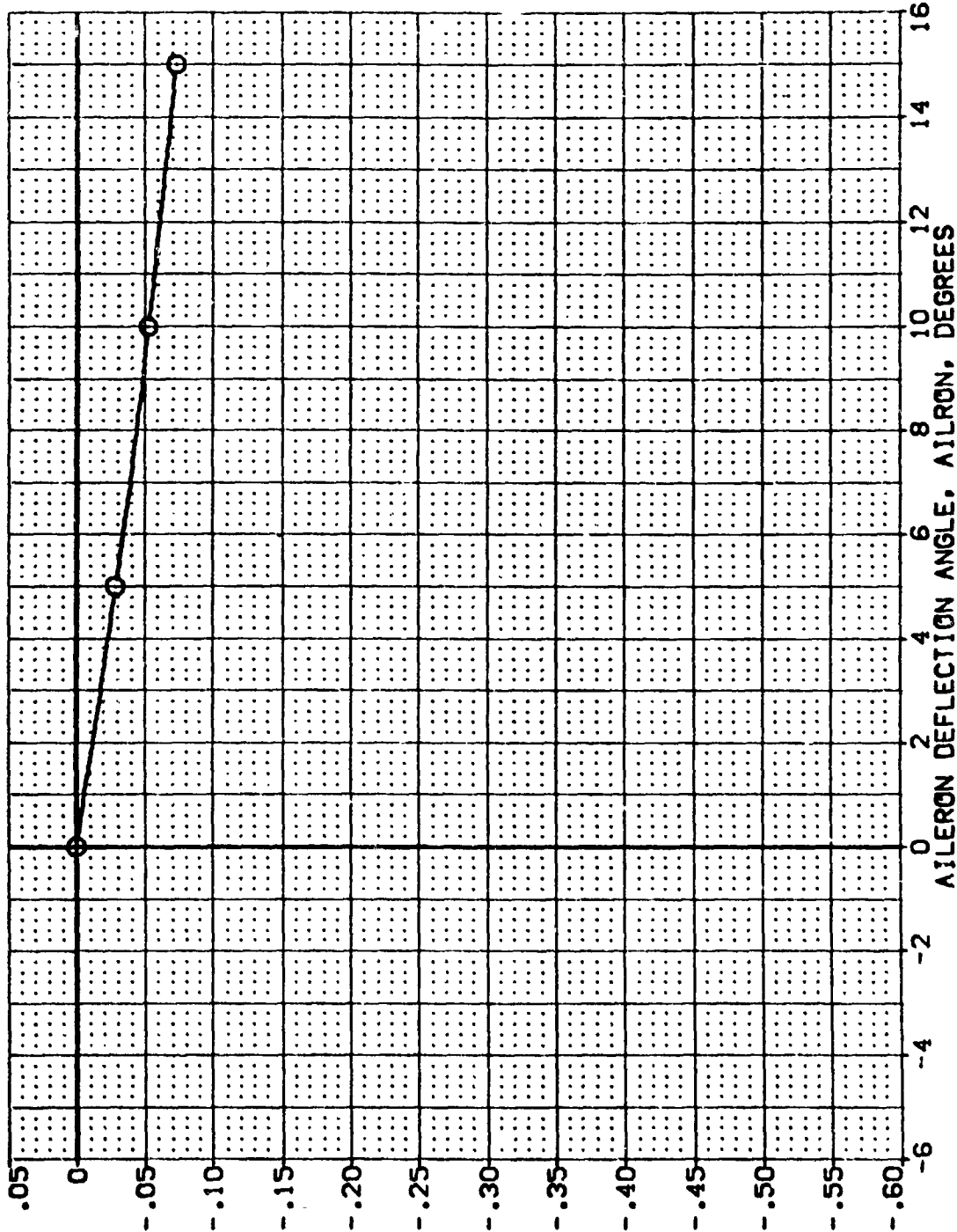
INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	25.000	BDFLAP	.200 DELVON	AILRON	SO.FT.
		SPOBRK	-12.000 RUDDER	AILRON	INCHES
			25.000 BETA	REF	INCHES
				REF	INCHES
				REF	INCHES
				YPRP	INCHES
				ZPRP	INCHES
				SCALE	SCALE



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	ATLRON	REF	REFERENCE INFORMATION
○	20.000		.200 DELVON	.000 ATLRON	20Z132	5.000	4.4118	90.FT
			-12.000 RUDDER	10.000	20Z134	15.000	19.2289	INCHES
			25.000 BETA				37.5359	INCHES
							43.5974	INCHES
							.0000	INCHES
							15.1875	SCALE
							.0405	

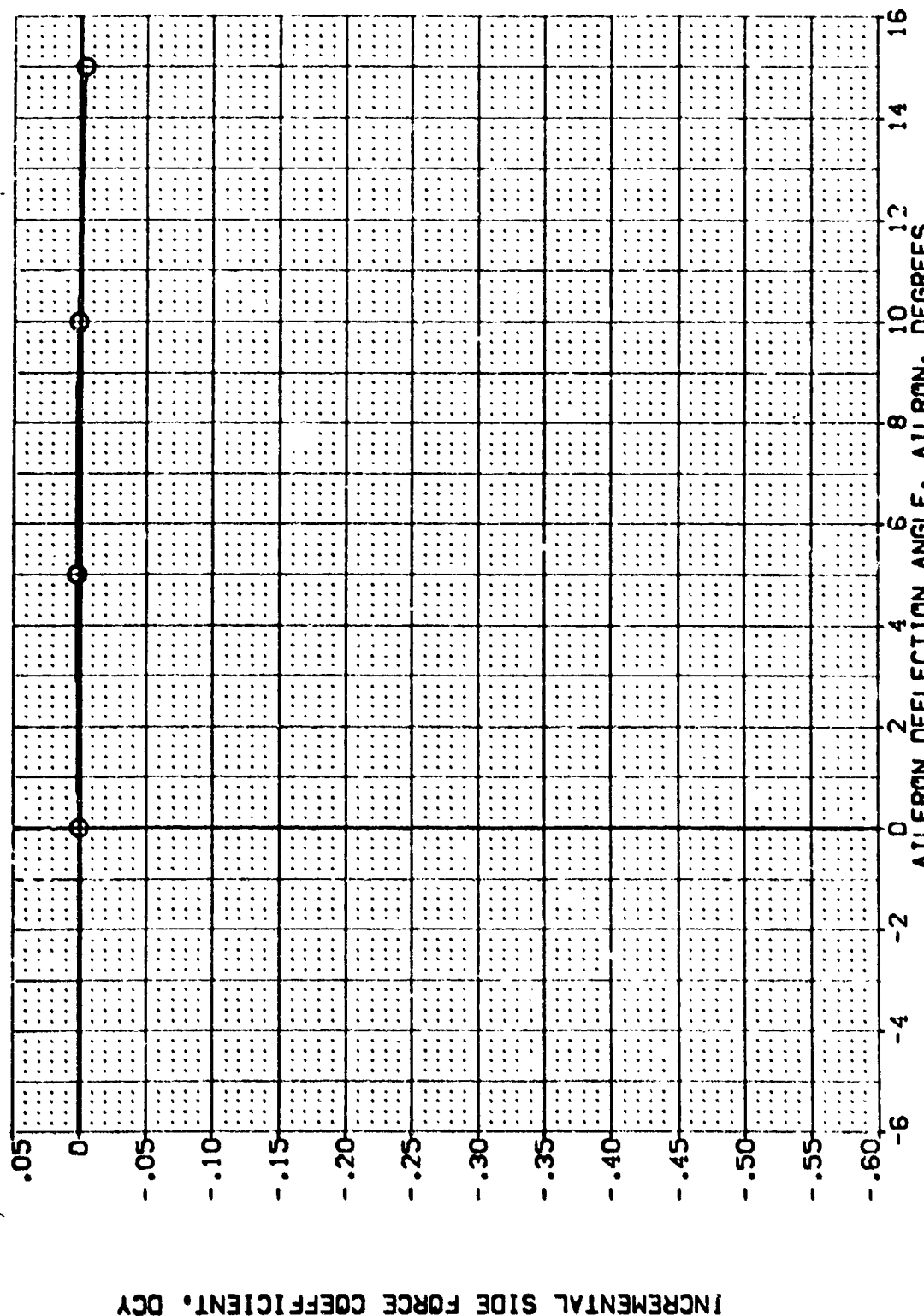
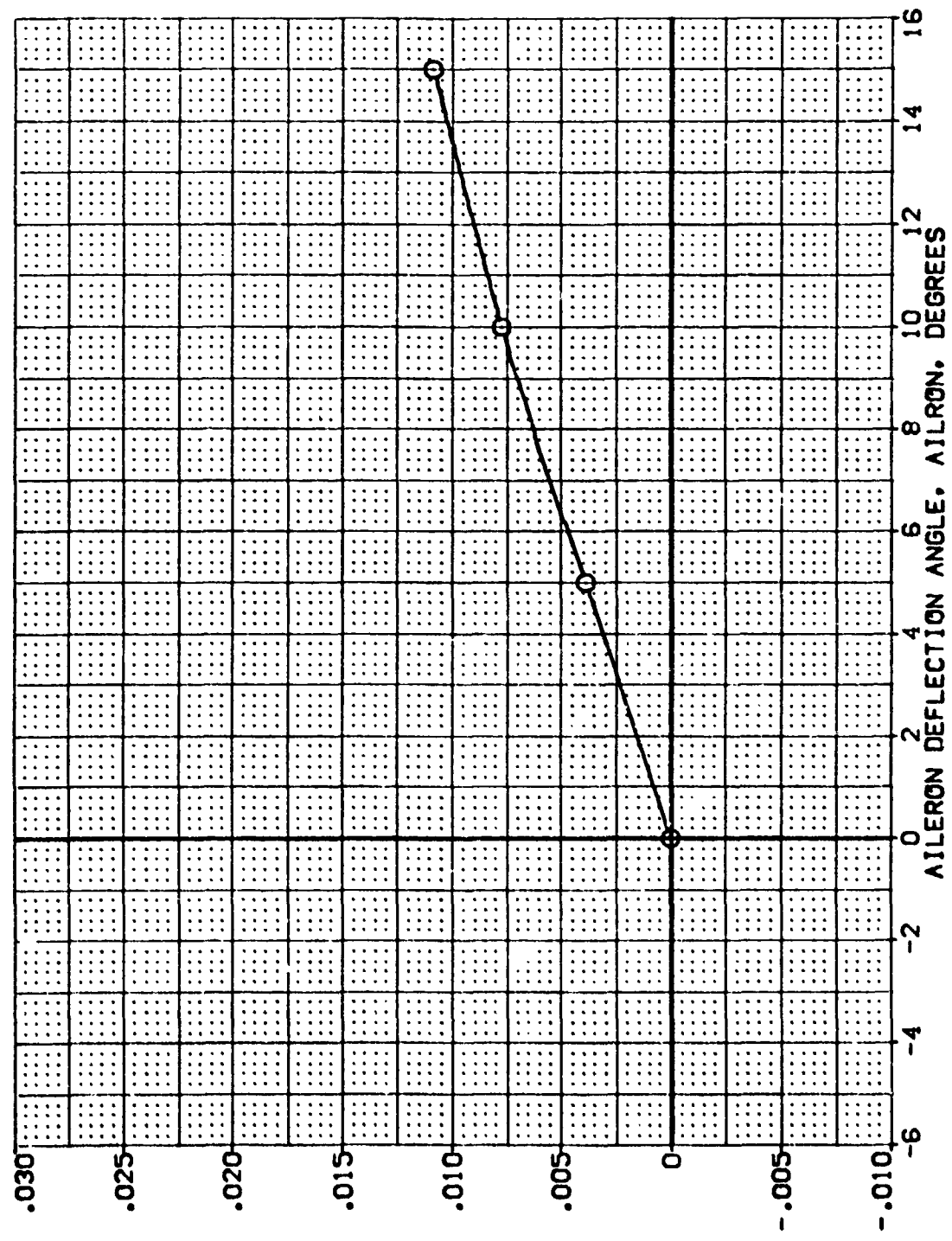


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	.000	BDFLAP	.200	DELTON	.000	DATASET	AILRON	SREF	LREF	50.FT.
		SPOBRK	-12.000	RUDDER	.000	20Z117	5.000	19.2299	37.9359	INCHES
			25.000	BETA	.000	20Z133	15.000	43.5974	10.000	INCHES
								ZTRP	15.1675	INCHES
								SCALE	.0405	SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	SPDRBK	EDFLAP	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	AILRON	AILRON	SREF	SC.LFT.
O	5.000				.200 DELVON -12.000 RUDDER 25.000 BETA	.000 AILRON .000 AILRON 10.000 AILRON	20Z117 20Z133 20Z134	5.000 15.000	5.000 15.000	4.4119 19.2299 37.9359 43.5974 15.0000 15.1873 .0405	IN-O-ES IN-O-ES IN-O-ES IN-O-ES IN-O-ES IN-O-ES SCALE	

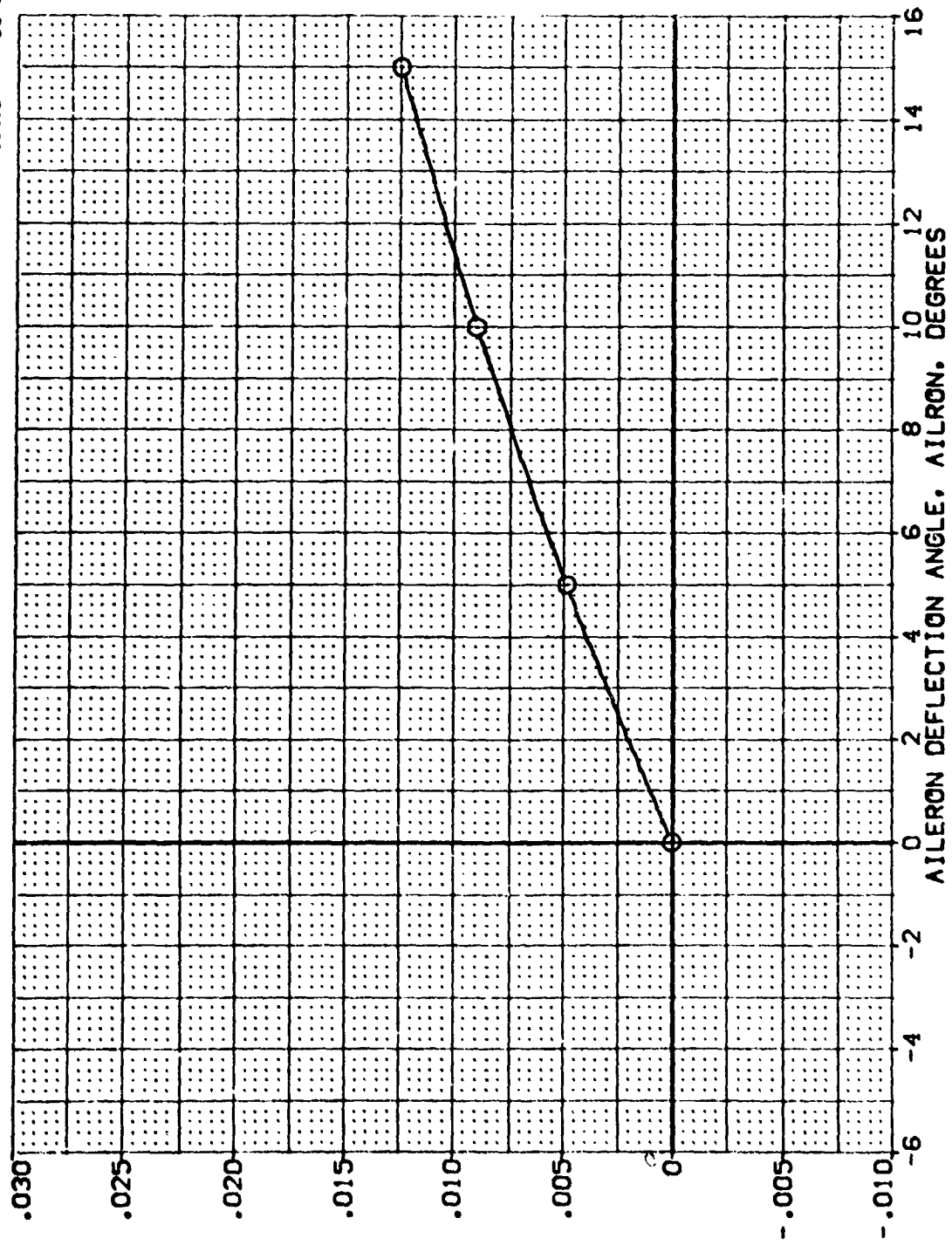


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



(20Z117)

0A628 B26C9 M7F8 W116E28V8PSX9

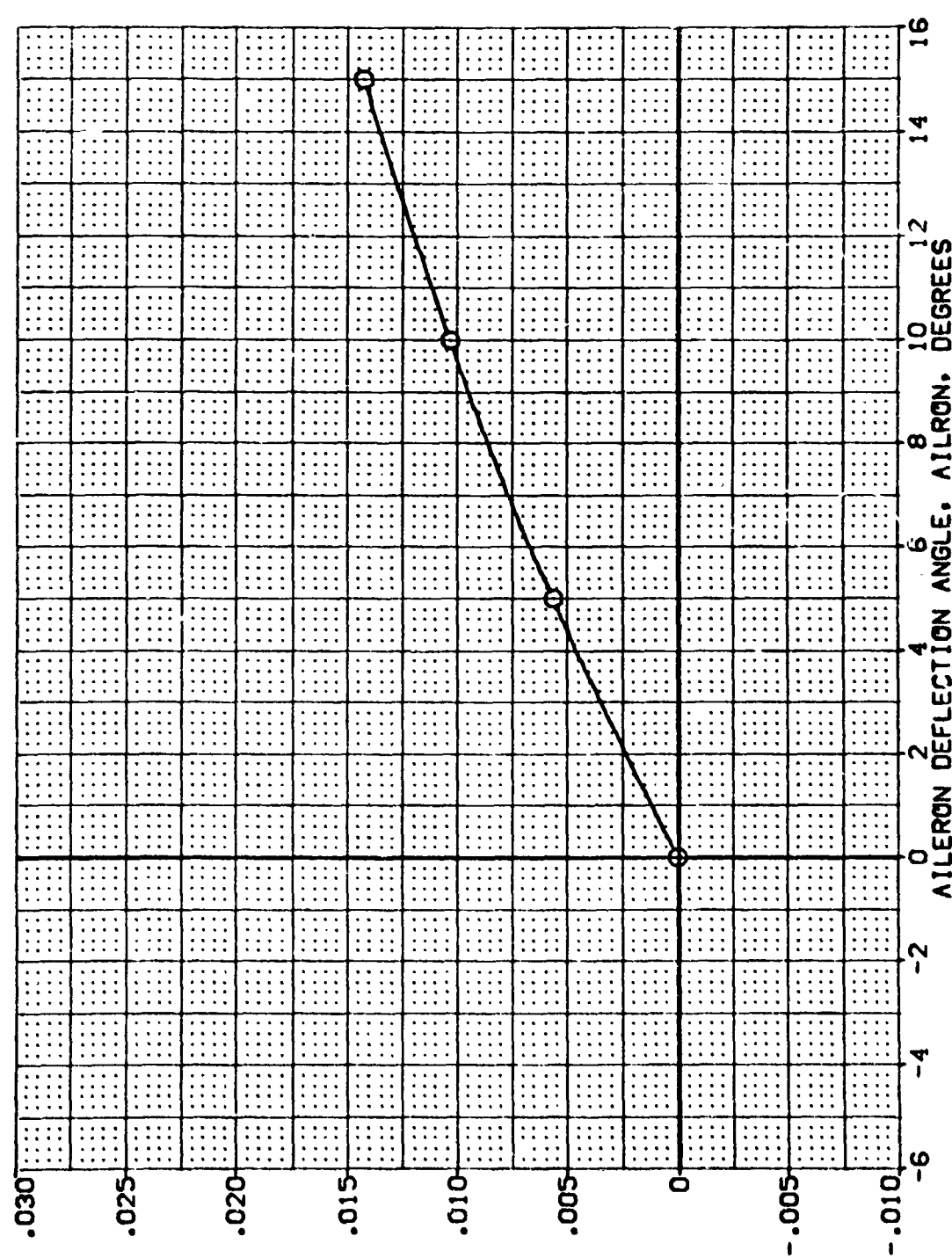
PARAMETRIC VALUES

ALPHA	10.000
MACH	.200
DELTA	.200
RUDDER	-12.000
BETA	25.000

DATA SET	AILRON
SCALE	10.000

DATA SET	20Z133
SCALE	.000

REF	4.4119	SO. FT.
LREF	19.2299	INCHES
XREF	37.9359	INCHES
YREF	43.5874	INCHES
ZREF	.0000	INCHES
SCALE	15.1873	SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

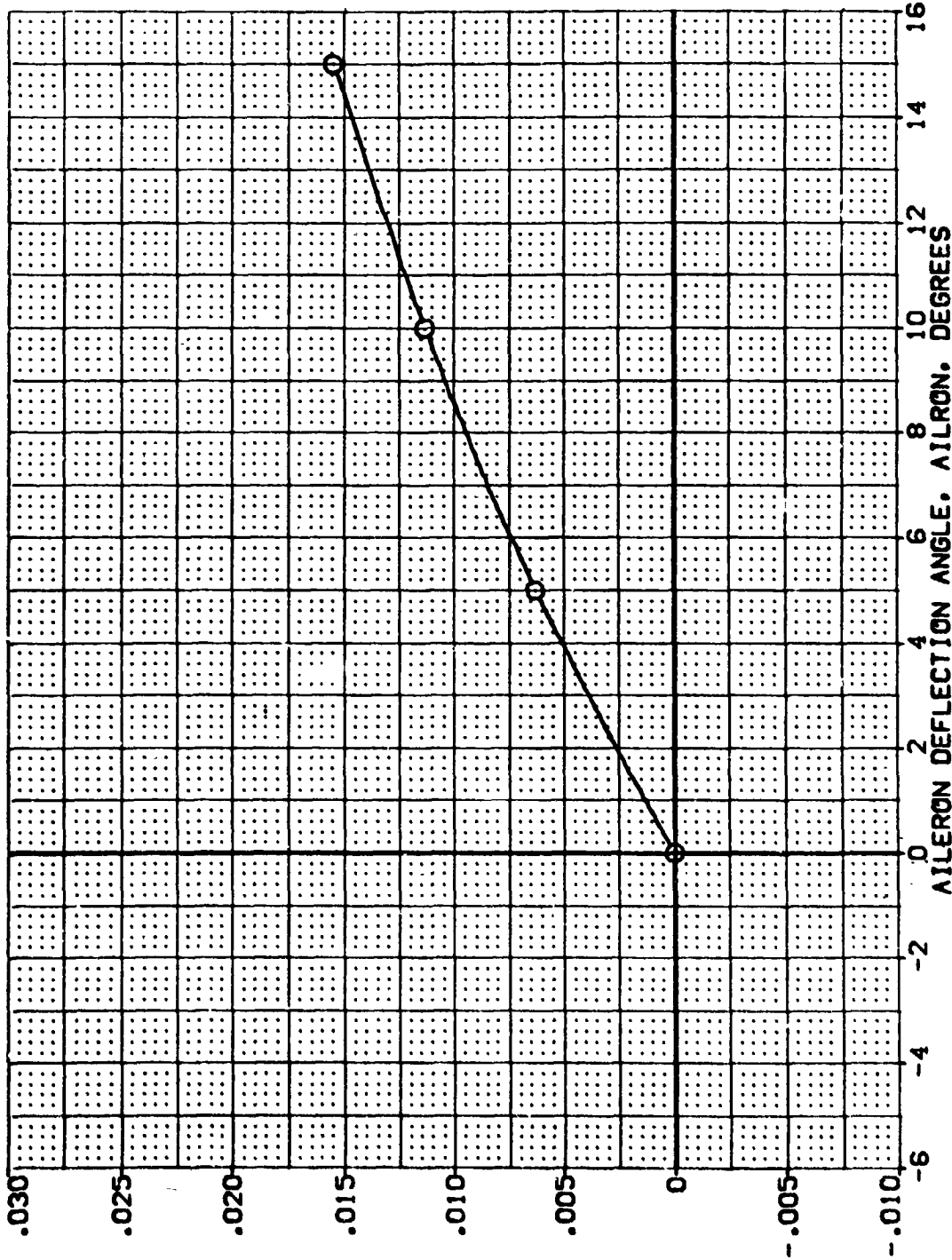


(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	80FLAP	SPUBK	PARAMETRIC VALUES	.000	DAYASET	AILRON	DATA SOURCE	DATASET	AILRON	SREF	REFERENCE INFORMATION
○	15.000				.200 DELVEN	.000	20Z117	5.000	AILRON	20Z132	15.000	19.2299	90.FT.
					-12.000 RUDDER	.000	20Z133	10.000		20Z134		37.9359	INCHES
					25.000 BETA							43.5974	INCHES
												15.1875	INCHES
												.0405	SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE





0A628 B26C9 M7F8 W116E28V8RSX9 (20Z117)

SYMBOL O

ALPHA 20.000

MACH 80FLAP SPOBRK

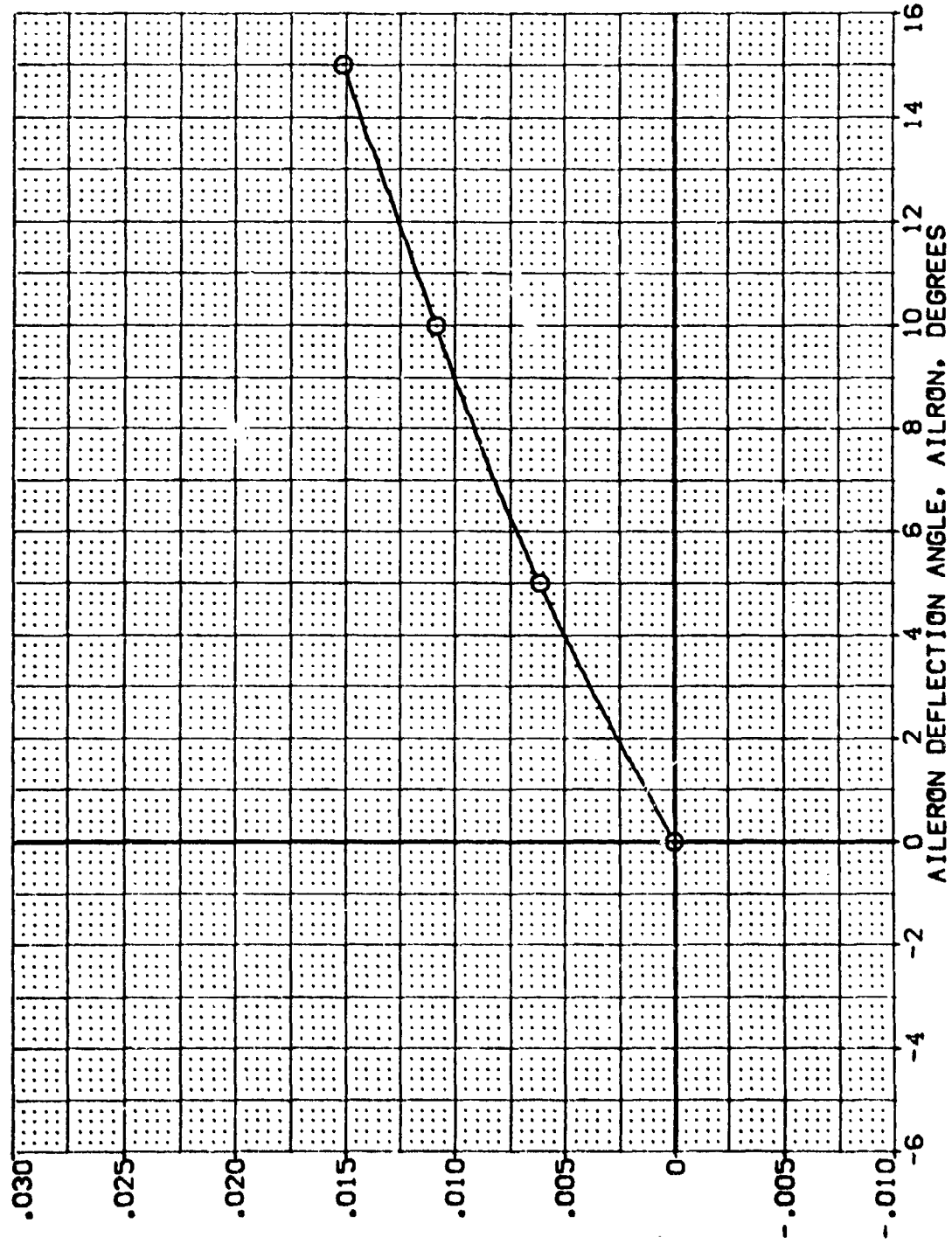
PARAMETRIC VALUES  
 .200 DELVON  
 -12.000 RUDDER  
 25.000 BETA

DATA SOURCE  
 AILRON .000 DATASET 20Z117  
 AILRON 10.000 DATASET 20Z139

AILRON 5.000 DATASET 20Z132  
 15.000 DATASET 20Z134

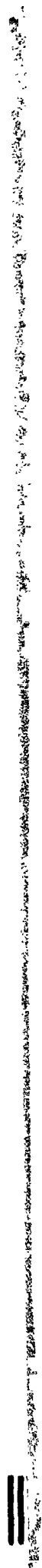
SREF LREF XMRP YMRP ZMRP SCALE  
 4.4119 19.2289 37.9329 43.9974 .0000 .0000 15.1875 .0405

REFERENCE INFORMATION  
 SQ.FT. INCHES INCHES INCHES INCHES SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA:	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	25.000	80FLAP	.200	DELVON	.000	DATASET	AILRON	SREF
		SPOBRK	-12.000	RUDDER	.000	20Z117	5.000	4.4119
		BETA	25.000	BETA	10.000	20Z134	15.000	19.2299
								37.9359
								43.5874
								.0000
								15.1875
								.0405
								SCALE

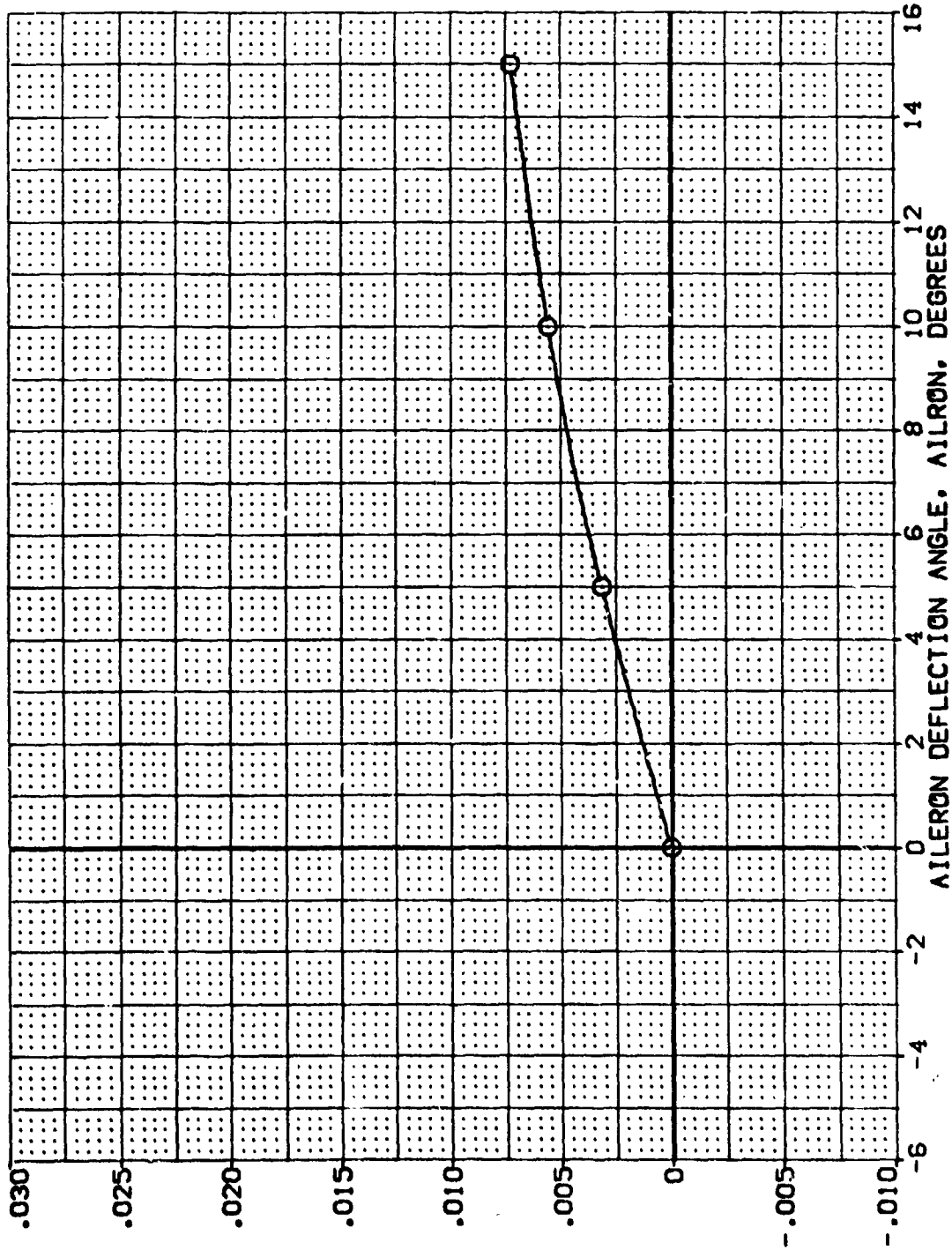


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE







0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION				
O	20.000	BDFLAP	.200	DELTON	.000	DATASET	AILRON	SREF	4.4119	SO.FT.			
		SPOBRK	-12.000	RUDCOR	.000	20Z117	.000	LREF	19.2299	INCHES			
			25.000	BETA	.000	20Z133	10.000	BREF	37.9359	INCHES			
						20Z134	15.000	XPRP	43.5974	INCHES			
								YPRP	.0000	INCHES			
								ZPRP	15.1875	INCHES			
								SCALE	.0405	SCALE			

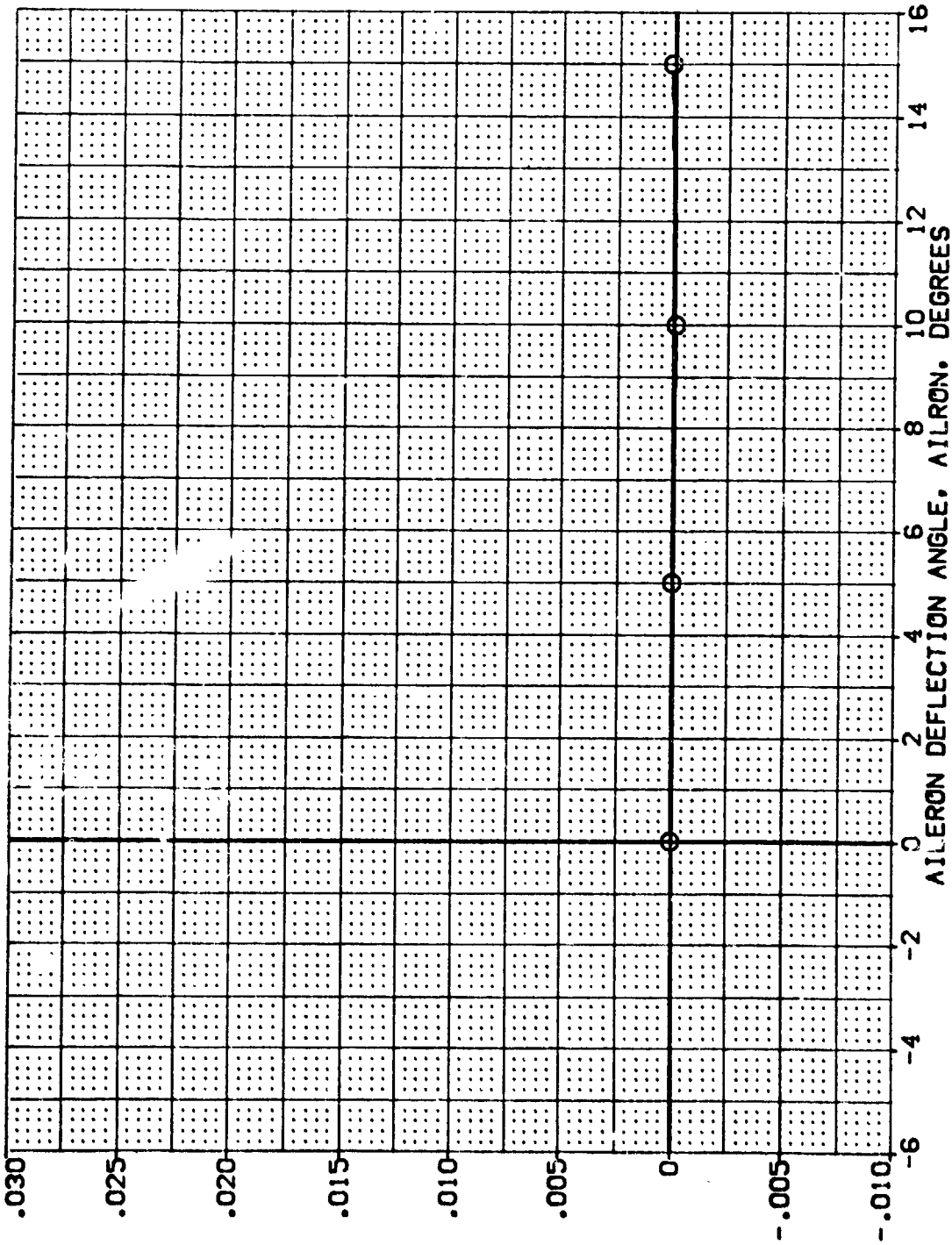
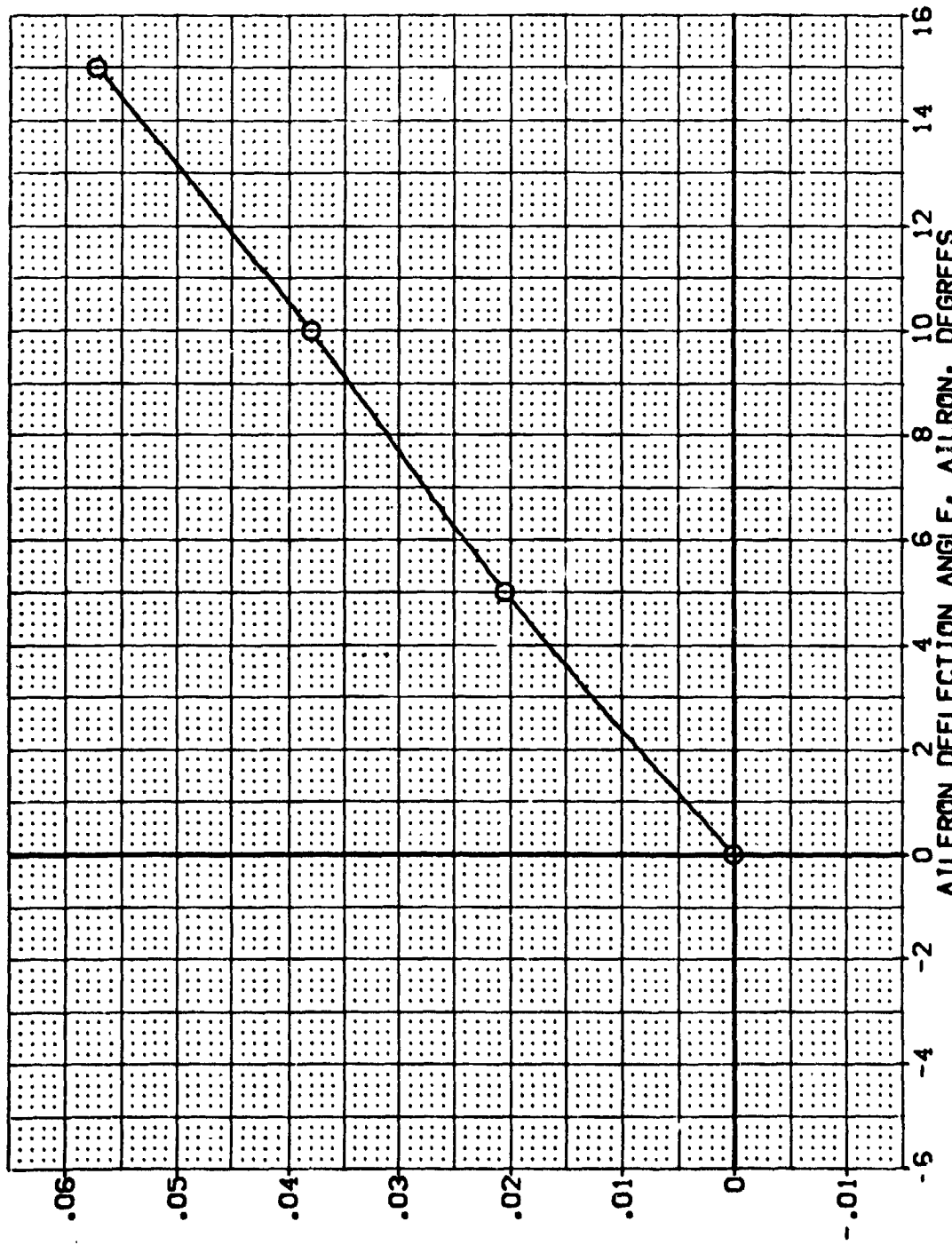


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

0A628 B26C9 M7F8 W116:28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.200	DELTON	RUDDER	BETA	DATA SOURCE	AILRON	SCALE	DATASET	AILRON	SCALE	REF	SCALE	REFERENCE INFORMATION	SO.FT.	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE
O	.000					.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE		20Z132	5.000		4.4118		4.4118	50.FT.	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE
						.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE		20Z134	15.000		19.2259		19.2259	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE	
						.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE					37.9359		37.9359	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE	
						.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE					43.5974		43.5974	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE	
						.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE					.0000		.0000	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE	
						.000	.200	DELTON	RUDDER	BETA	AILRON	SCALE					15.1979		15.1979	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE	



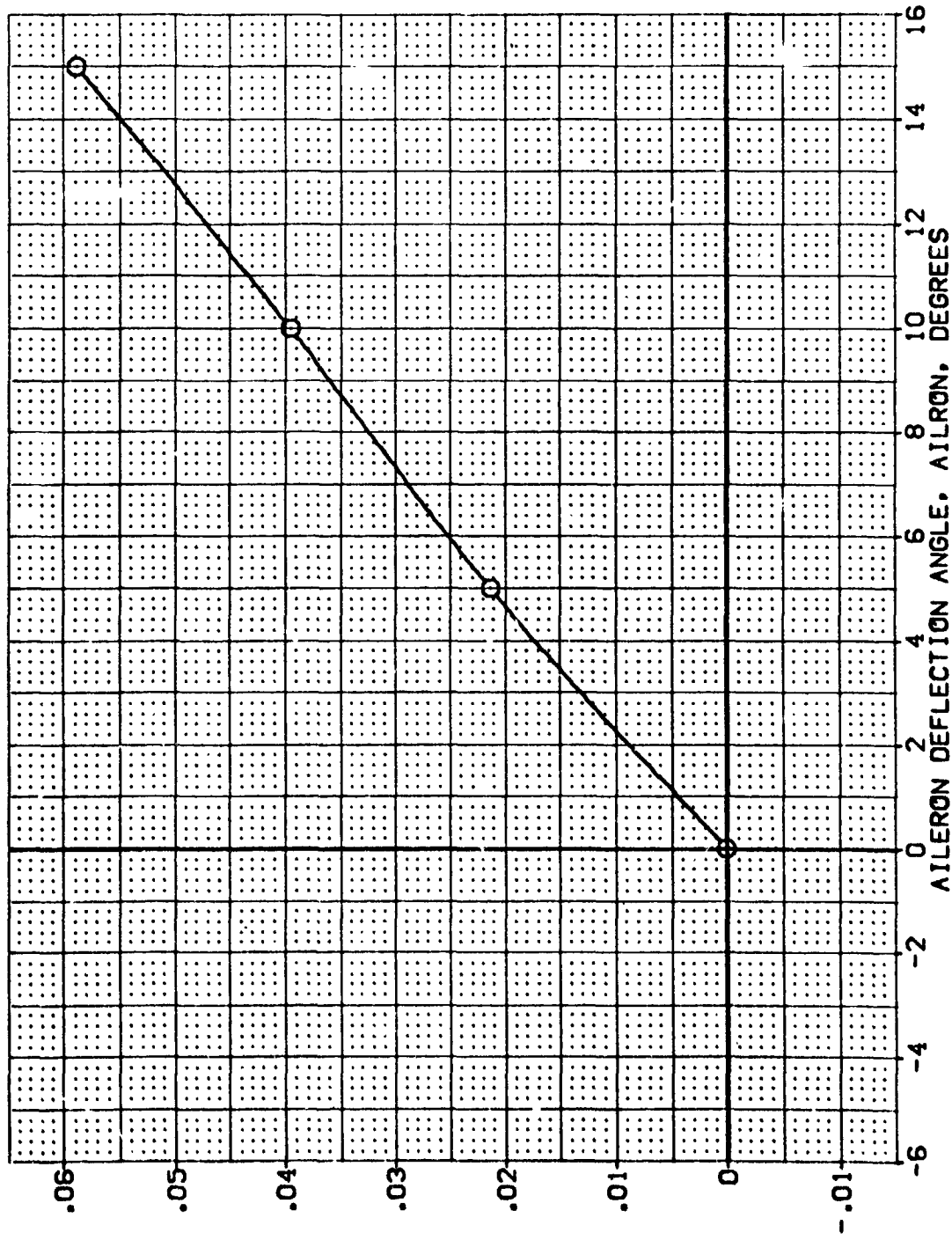
INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	5.000	BDFLAP	.200 DELVON	AILRON	20Z132	5.000	LREF	4.4119 SQ.FT.
		SPOBRK	-12.000 RUDDER	.000 20Z117	20Z134	15.000	BREF	19.2268 INCHES
			25.000 BETA	.000 20Z133			XMRP	37.9569 INCHES
							YMRP	43.5574 INCHES
							ZMRP	.0000 INCHES
							SCALE	15.1875 INCHES
								.0405 SCALE



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
O	10.000		.200	DELTA	.000	DATASET	AILRON	SREF	4.4119	SO.FT.		
		BDFLAP	-12.000	RUDDER	.000	20Z117	3.000	LBREF	19.2268	INCHES		
		SPOBRK	25.000	BETA	.000	20Z139	15.000	XRPP	37.5574	INCHES		
								YRPP	.0000	INCHES		
								ZRPP	15.1875	INCHES		
								SCALE	.0405	SCALE		

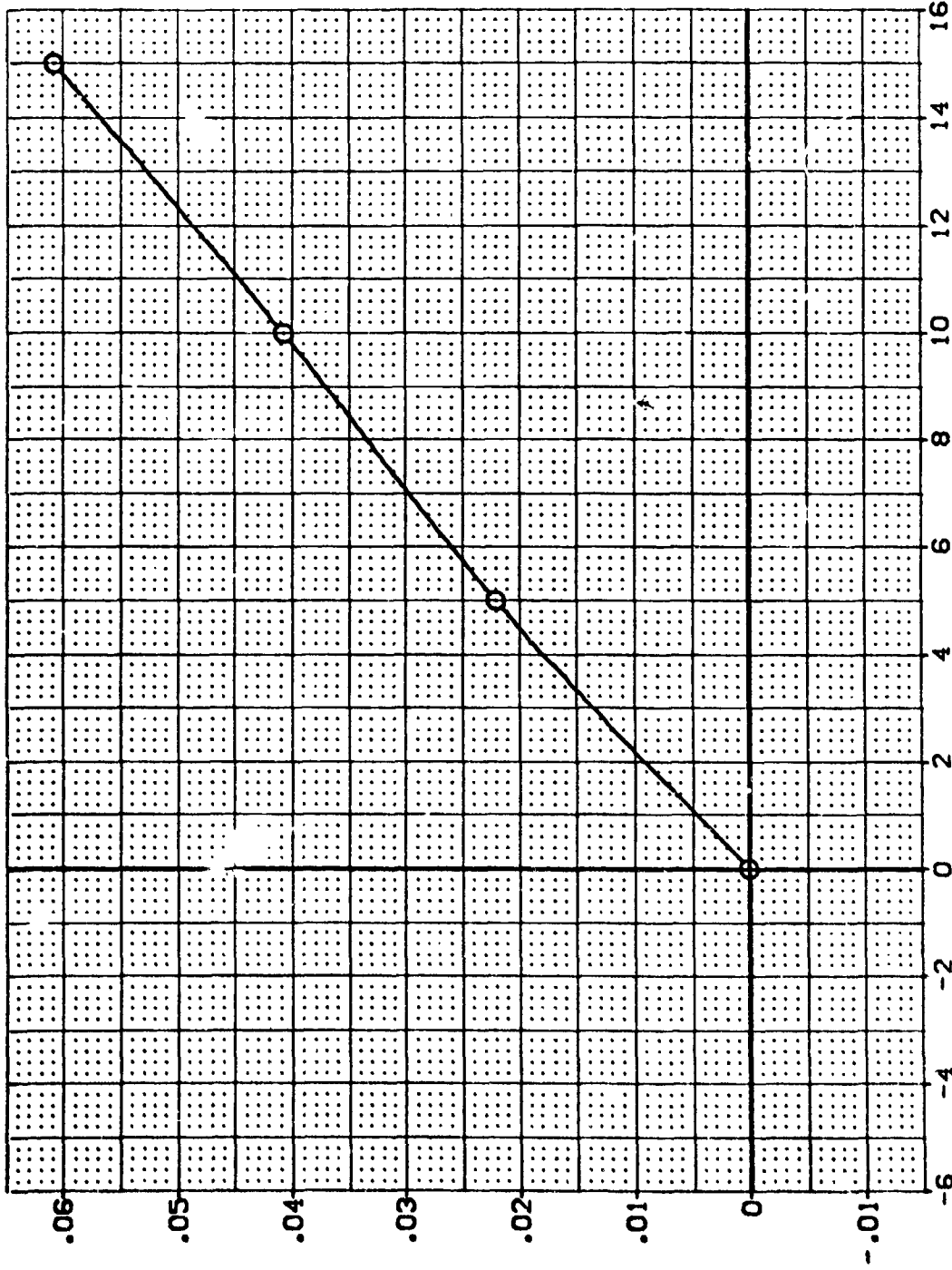


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILERON	REF	REFERENCE INFORMATION
O	15.000	80FLAP	.200 DELVON	AILRON	20Z132	5.000	LREF	4.4119 SQ.FT.
		SPDRK	-12.000 RUDDER	.000 20Z117	20Z134	15.000	BREF	19.2269 IN.-ES
			25.000 BETA	.000 20Z133			XTRP	37.9359 IN.-ES
							YTRP	43.5874 IN.-ES
							ZTRP	.0000 IN.-ES
							SCALE	15.1875 IN.-ES
								.0405 SCALE

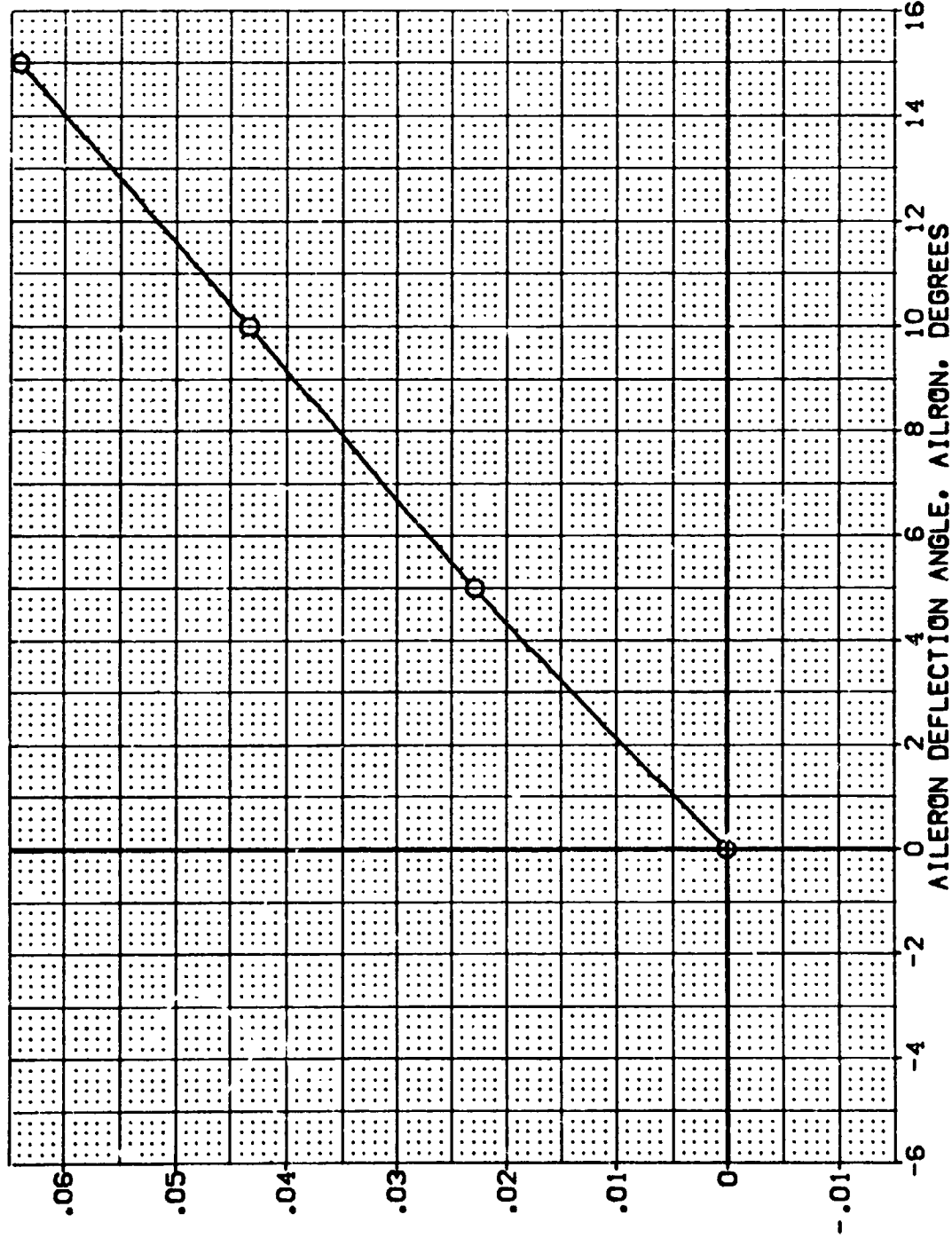


INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	DATASET	ATLORN	DATA SOURCE	DATASET	ATLORN	SREF	REFERENCE INFORMATION
O	20.000				.200 DELVON	.000	20Z117	.000	ATLORN	20Z13C	5.000	LINEF	50.FT.
					-12.000 R7DER	.000	20Z13G	10.000	ATLORN	20Z13A	15.000	BREF	INCHES
					25.000 S.1A							XTRP	INCHES
												YTRP	INCHES
												ZTRP	INCHES
												SCALE	SCALE
													15.1875
													.0405



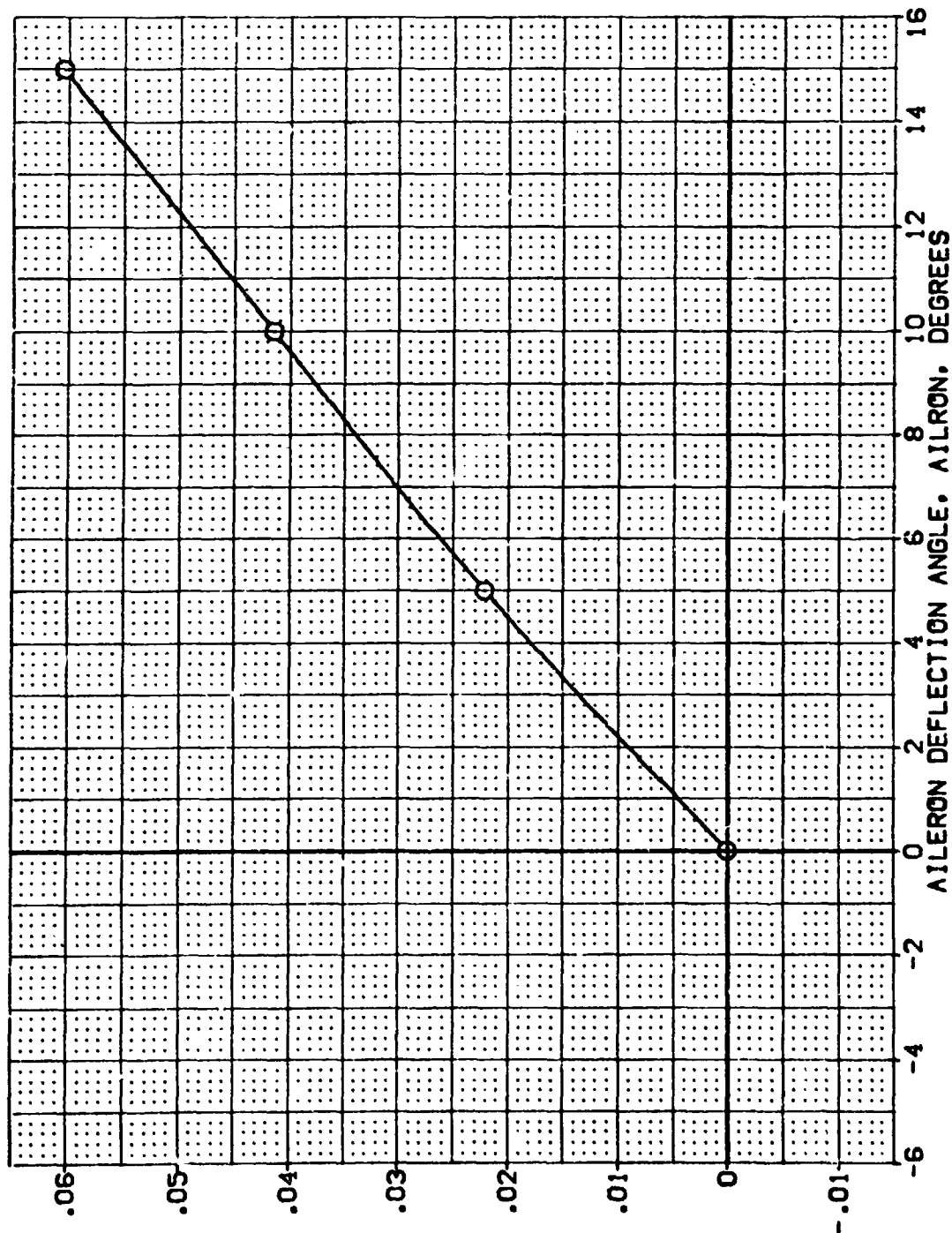
INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
O	25.000	BDFLAP	.000	.200	AILRON	AILRON	SREF	4.4118	SO.FT		
		SPOBRK	-12.000	RUDDER	.000	5.000	LREF	19.2259	INCHES		
		BETA	25.000		10.000	15.000	XREF	37.5059	INCHES		
							YREF	43.5974	INCHES		
							ZTRP	.0000	INCHES		
							SCALE	15.1875	INCHES		
									SCALE		

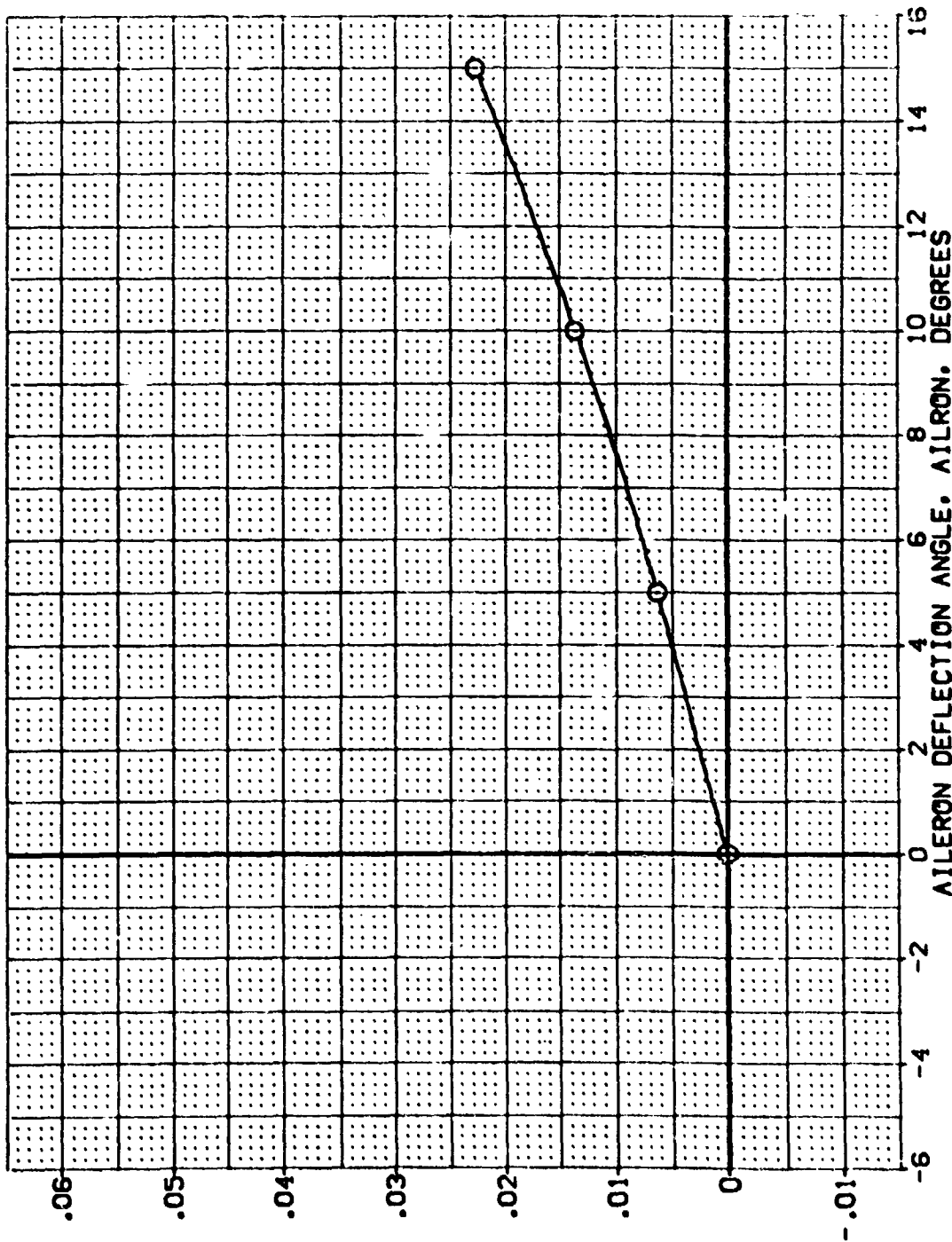


INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	REF	REFERENCE INFORMATION
○	20.000		.200 DELVON	AILRON	.000 20Z117	5.000	4.4113	80.FT
			-12.000 RUDDER	10.000	.000 20Z132	15.000	19.2288	IN-OES
			25.000 BETA		.000 20Z134		37.5528	IN-OES
							43.9574	IN-OES
							.0000	IN-OES
							15.1875	IN-OES
							.0405	SCALE



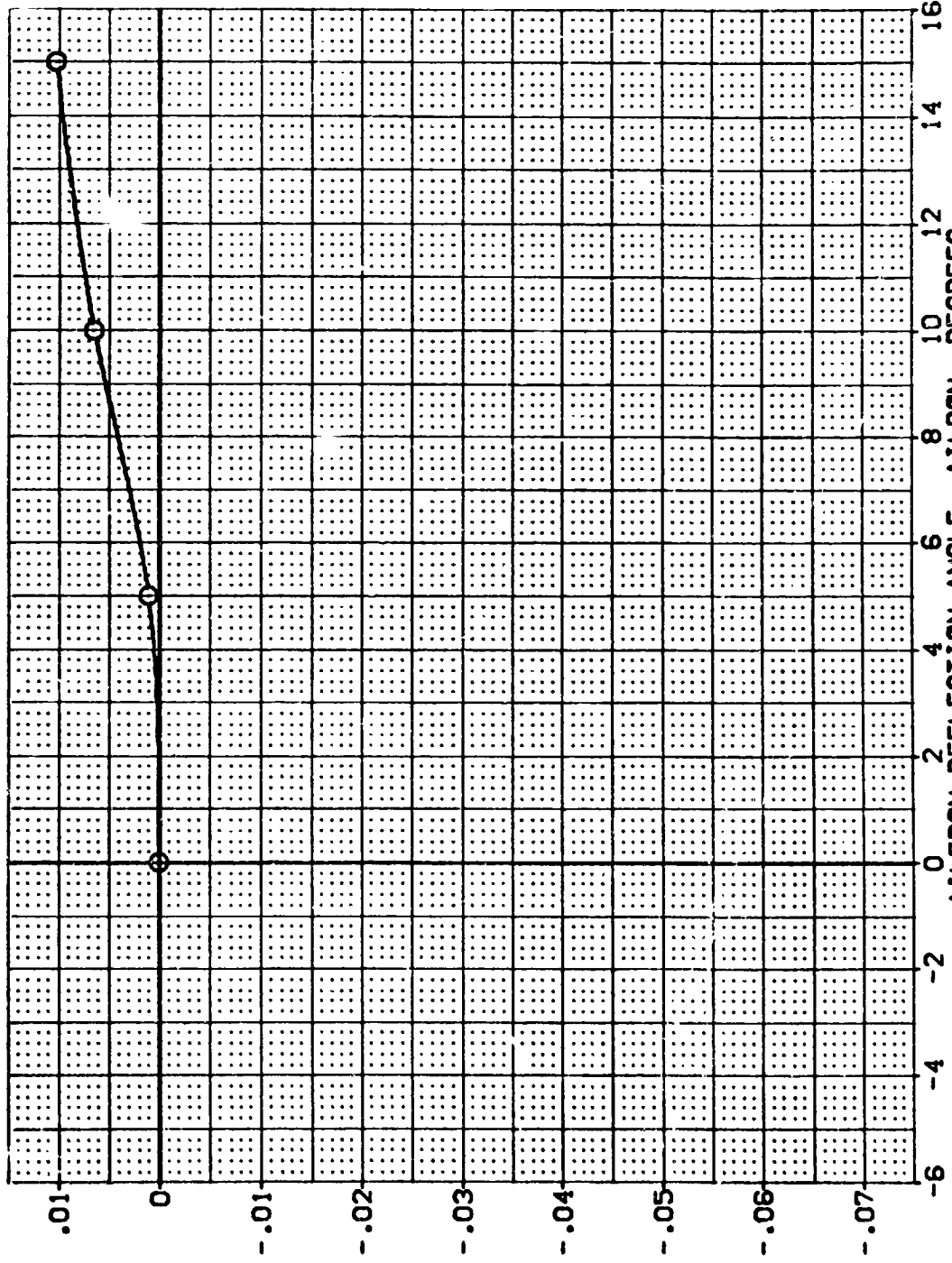
INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	.000		.200	DELVON	.000	DATASET	AILRON	SREF	4.4119	50.FT.	
		BOFLAP	-12.000	RUDDER	.000	20Z117	5.000	LREF	19.2259	INCHES	
		SPOBRK	25.000	BETA	.000	20Z133	10.000	BREF	37.9359	INCHES	
							15.000	XMRP	43.5974	INCHES	
								YMRP	.0000	INCHES	
								ZMRP	15.1875	INCHES	
								SCALE	.0405	SCALE	



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	8DFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	DATASET	AILERON	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	5.000				.200 DELVON	.000	.000	.000	AILERON	20Z132	5.000	20Z134	15.000	19.2299	4.4119
					-12.000 RUDDER	.000	.000	10.000		20Z133				37.9359	INCHES
					25.000 BETA	.000								43.5974	INCHES
														.0000	INCHES
														15.1873	INCHES
														.0405	SCALE

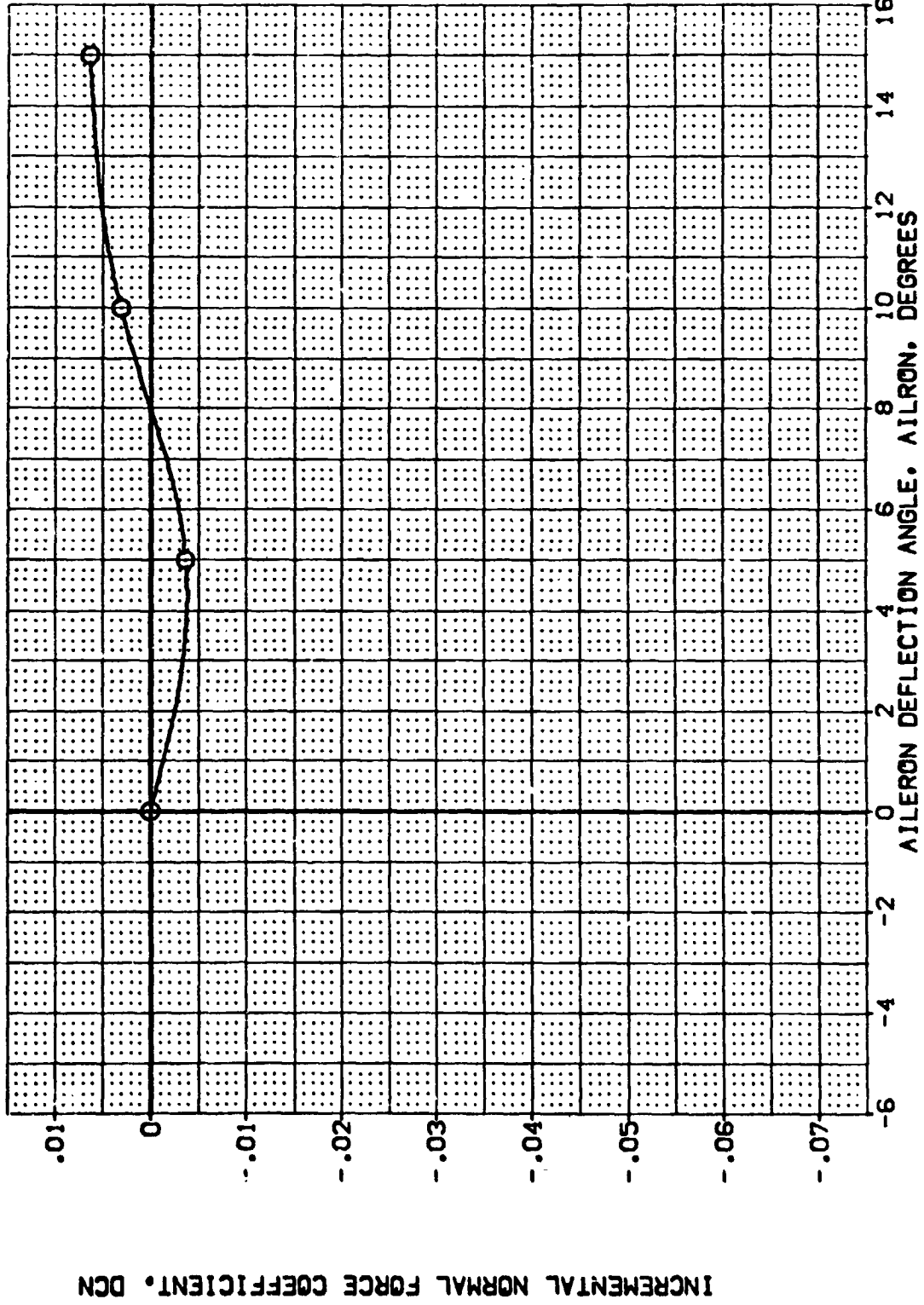


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL  
O

ALPHA 10.000  
MACH 0.200  
DELTA 12.000  
RUDDER 25.000  
BETA

DATA SOURCE  
AILRON 10.000

DATASET 20Z117  
20Z139

AILRON 5.000  
15.000

REFERENCE INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2289  
INCHES 37.9359  
INCHES 43.5974  
INCHES .0000  
INCHES 15.1875  
SCALE .0405

INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

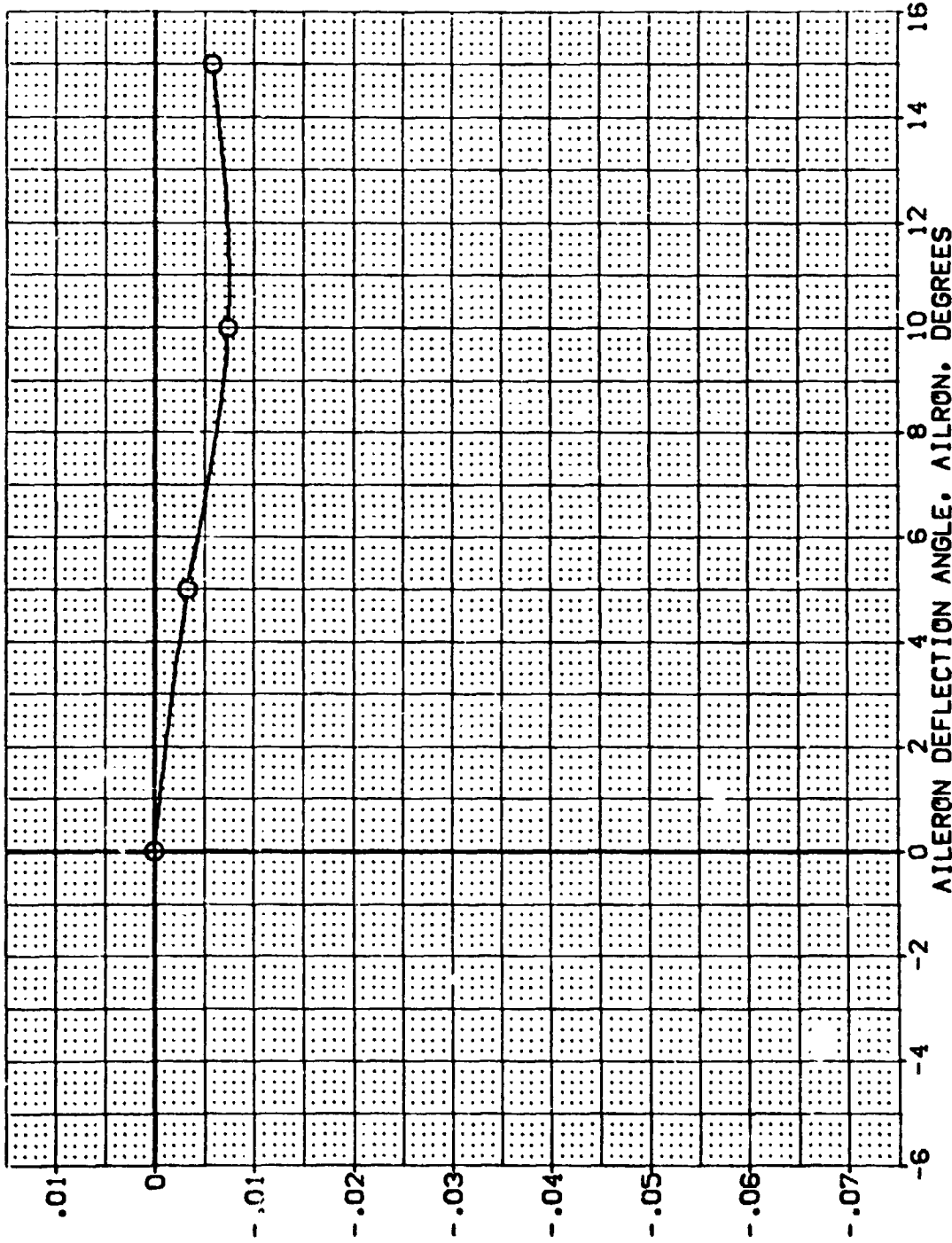
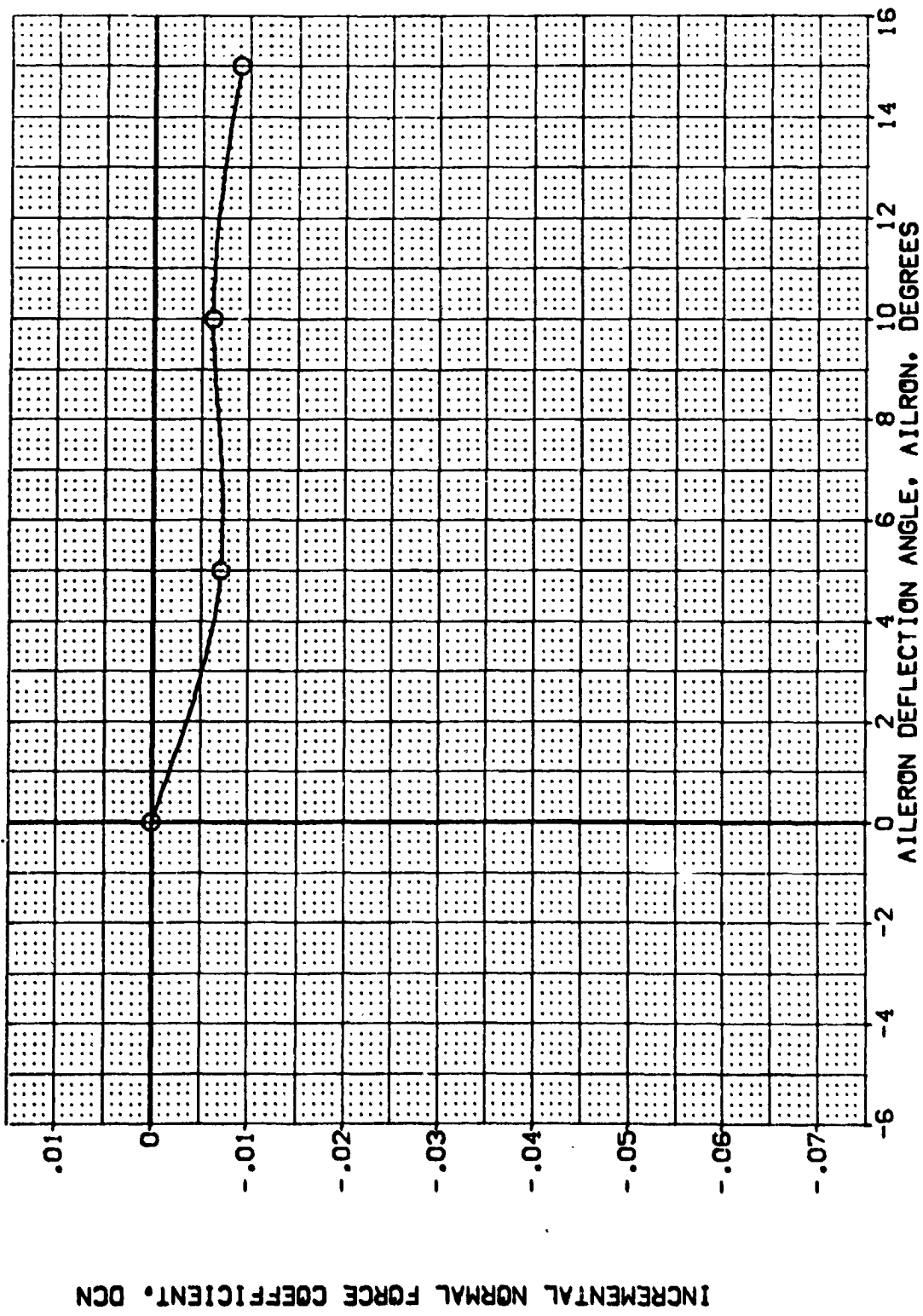


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BDFLAP	SFOBRK	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	AILRON	SREF	REFERENCE INFORMATION
O	15.000				.200 DELVON -12.000 RUDDER 25.000 BETA	AILRON .000 10.000	20Z117 20Z133	5.000 15.000	SREF LREF XREF YREF ZREF SCALE	4.4118 19.2299 37.9359 43.5974 0.000 15.1875 .0405	SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



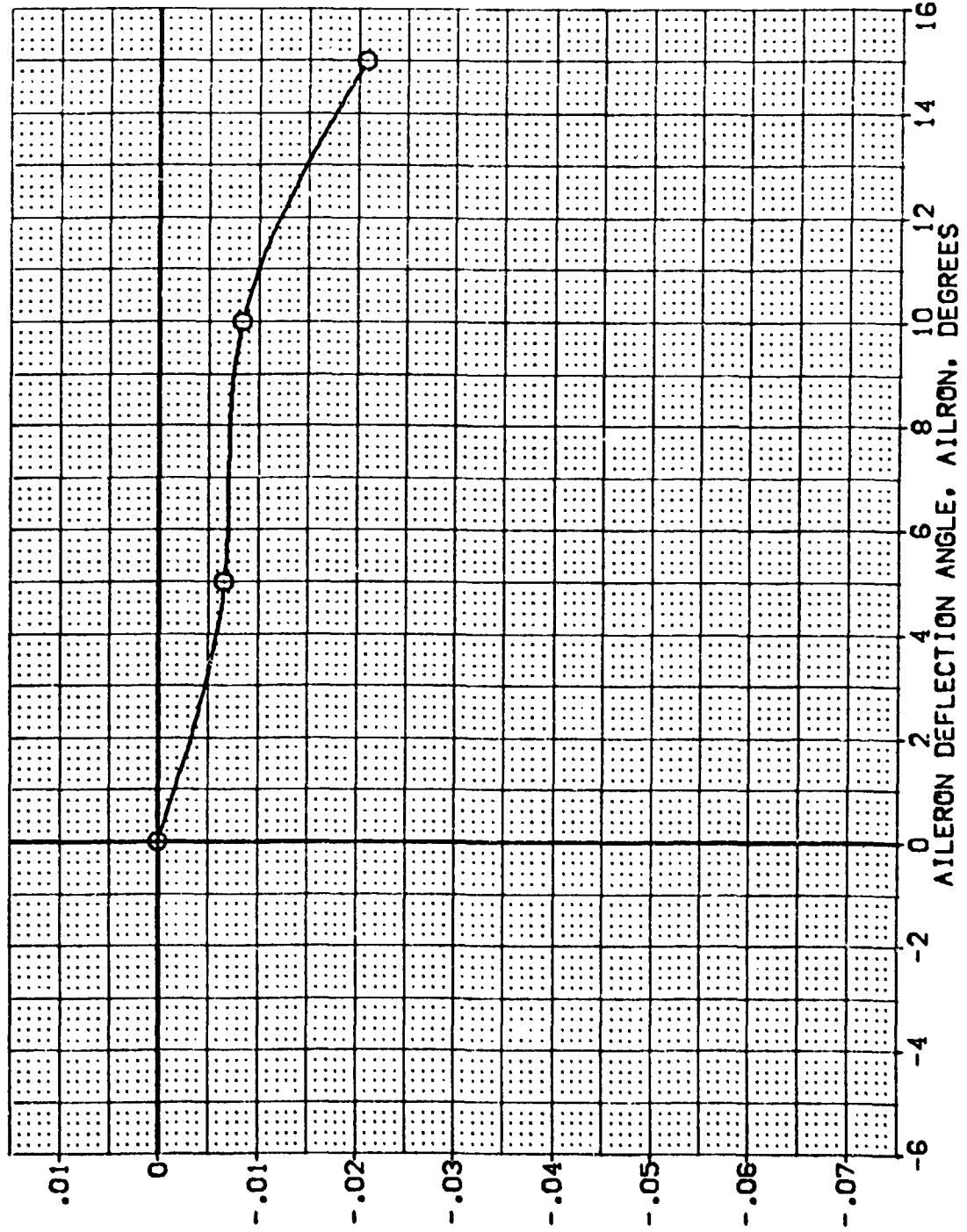
DA628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

ALPHA 20.000  
SYMBOL O

PARAMETRIC VALUES  
MACH .200 DELVON  
BDFLAP -12.000 RUDDER  
SPDRK 25.000 BETA

DATA SOURCE  
.000 DATASET AILRON  
.000 20Z117 .000  
.000 20Z133 10.000

REFERENCE INFORMATION  
SREF 4.4119 SO.FT.  
LREF 19.2259 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5974 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

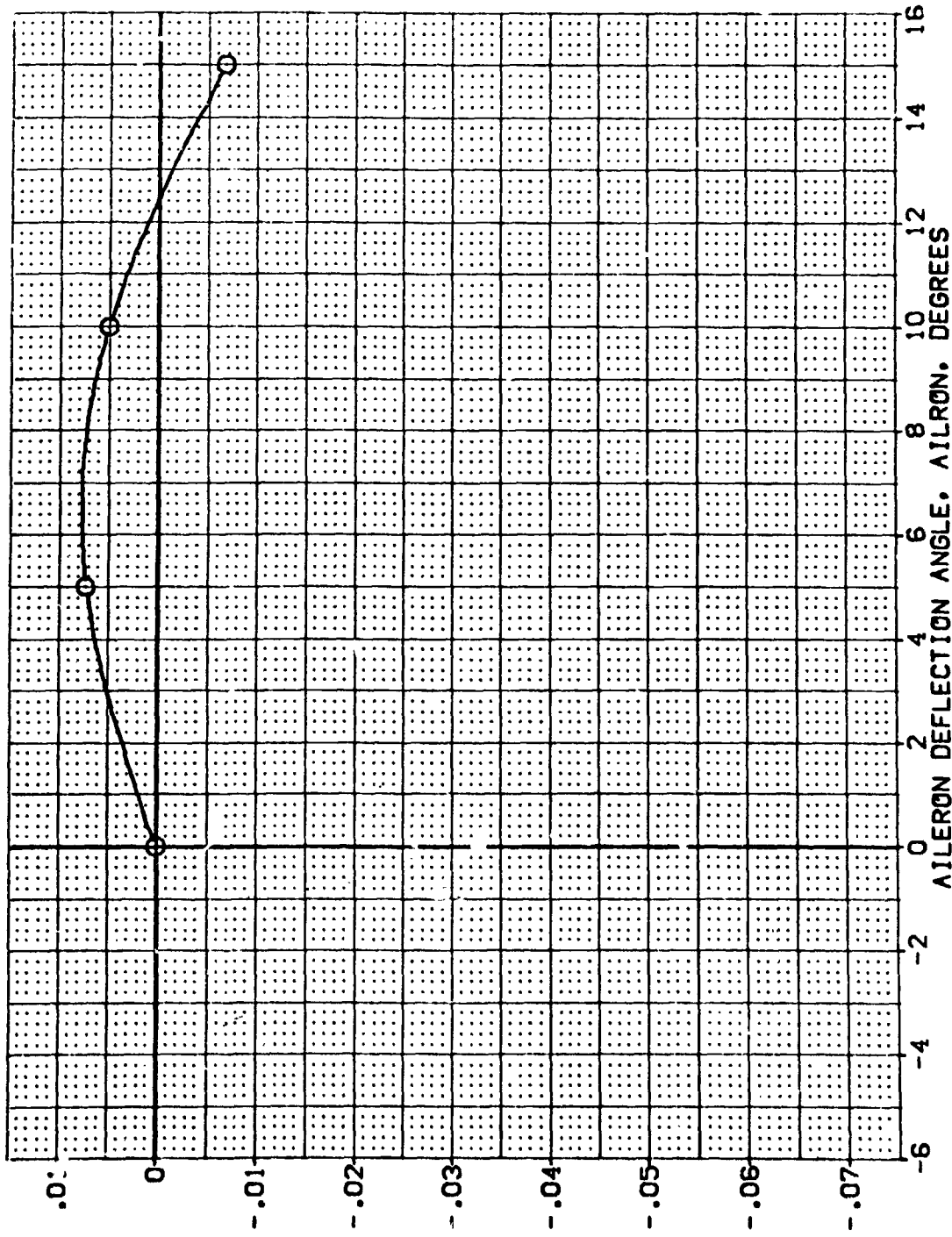


INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 :2DZ117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	DATA SET	AILRON	REF	REFERENCE INFORMATION
O	25.000	.200	-12.000	25.000	DELVON RUDDER BETA	AILRON	20Z132	20Z134	5.000 15.000	REF REF XPRP YPRP ZPRP SCALE	SD, FT. INCHES INCHES INCHES INCHES SCALE
						.000 .000 .000	20Z117 20Z133			4.4119 19.2289 37.6359 43.5974 .0000 15.1875 .0405	



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	30.000		.200	DELIVN	.000	DTASET	AILRON	SREF	4.4119	SO.FT.	
		BDFLAP	-12.000	RUDDER	.000	20Z132	5.000	LREF	19.2259	INC-ES	
		SPOBRK	25.000	BETA	.000	20Z134	15.000	BREF	37.5359	INC-ES	
								XMRP	43.5874	INC-ES	
								YMRP	.0000	INC-ES	
								ZMRP	15.1875	INC-ES	
								SCALE	.0405	SCALE	

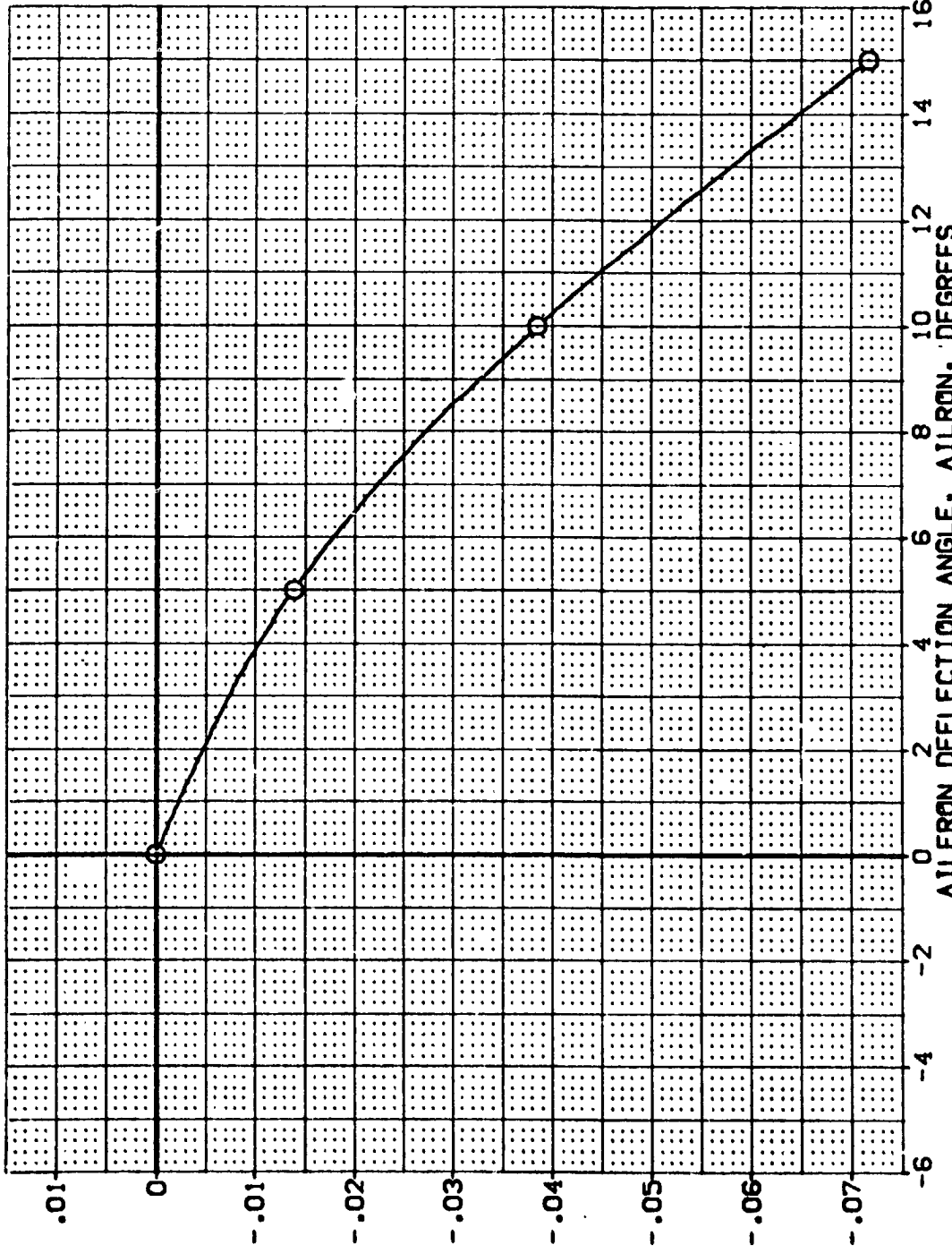


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	.000	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O			MACH	.200	AILRON	AILRON	SREF	4.4119
			BDFLAP	-12.000	.000	20Z117	LREF	19.2299
			SPOBRK	25.000	.000	20Z130	BREF	37.9359
					10.000	20Z131	XMRP	43.5974
							YMRP	.0000
							ZMRP	15.1675
							SCALE	.0405

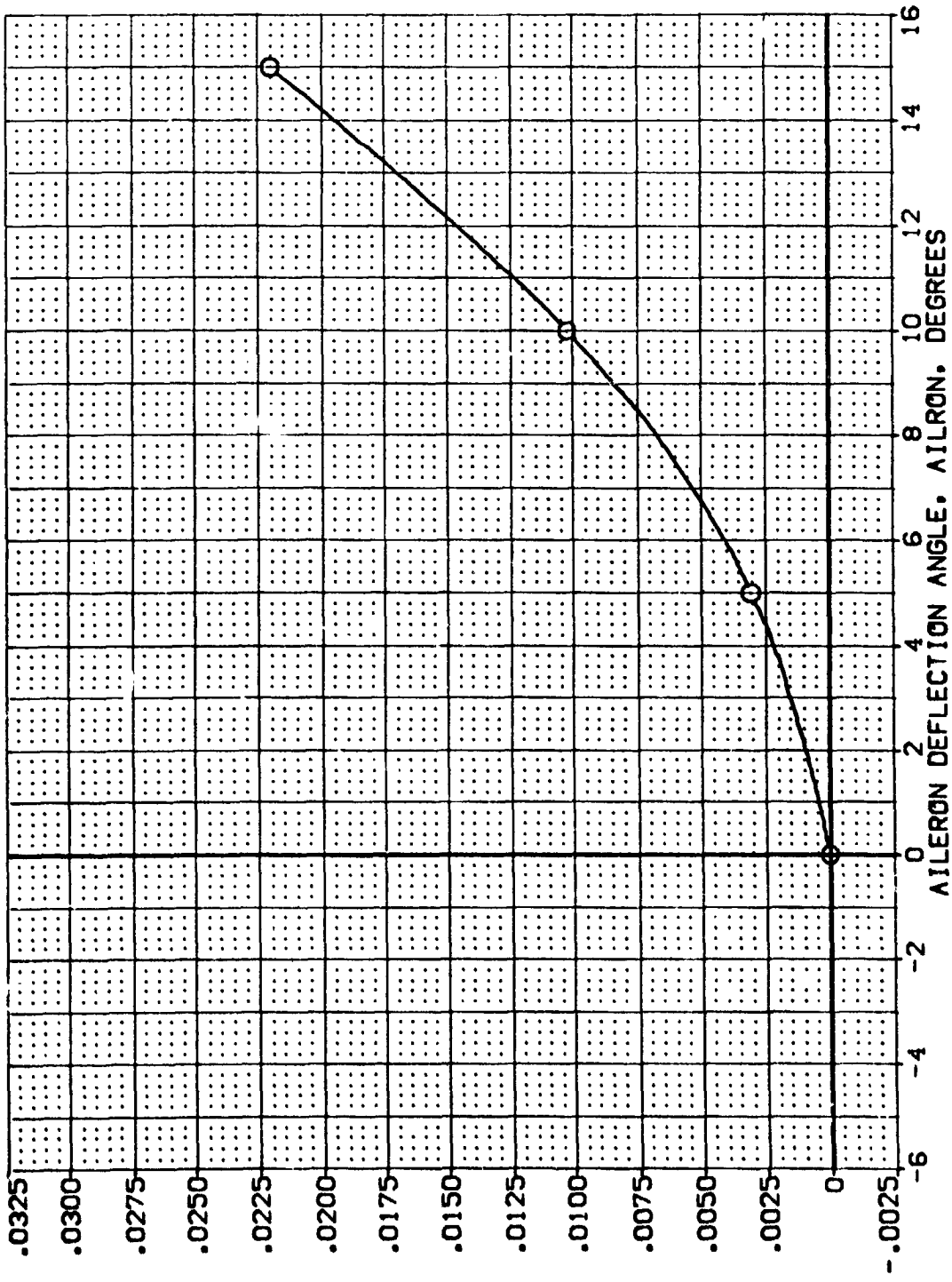
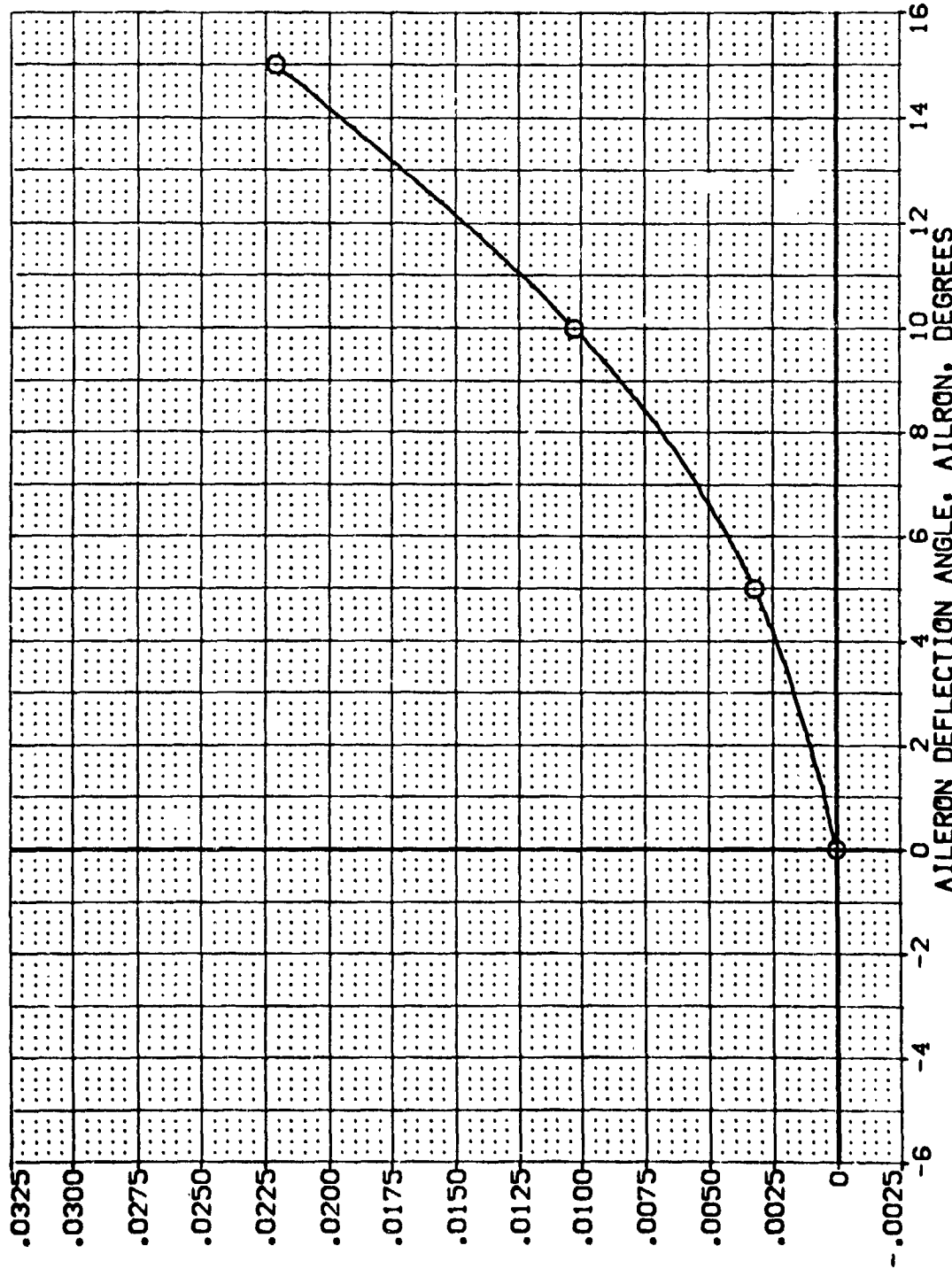


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	AILRON	AILRON	AILRON	SHEET	REFERENCE INFORMATION
O	5.000	.200	-12.000	25.000	DELIVON	20Z117	20Z133	10.000	AILRON	10.000	5.000	15.000	REF	SO.FT.
					RUDDER	20Z117	20Z134						ERRF	INCHES
					BETA								XFRP	INCHES
													YFRP	INCHES
													ZFRP	INCHES
													SCALE	SCALE
														4.4119
														19.2299
														37.9359
														43.5974
														.0000
														15.1875
														.0405

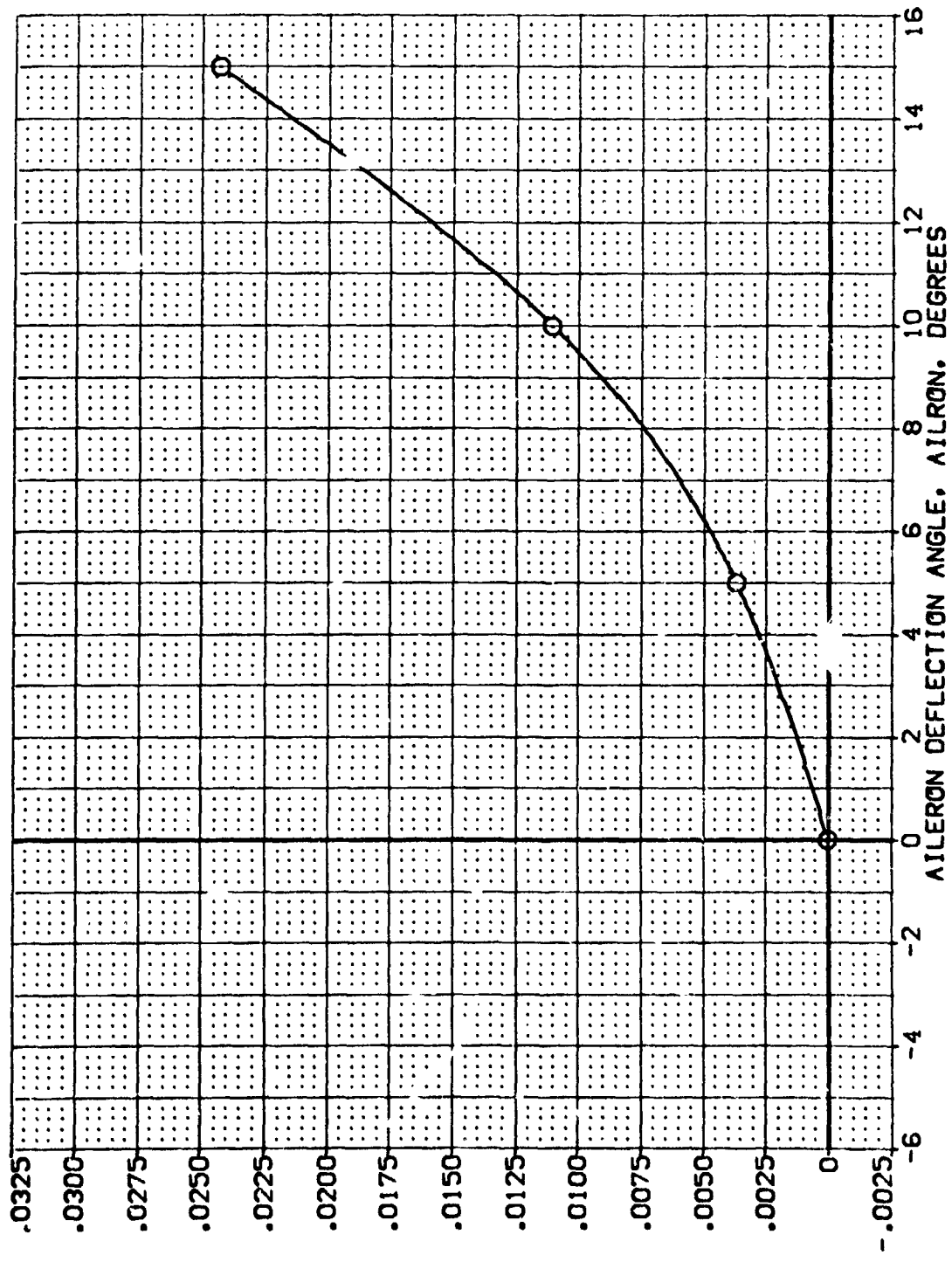


INCREMENTAL AXIAL FORCE COEFFICIENT, OCA

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	10.000		.200	DEL'ON	.000	DATASET	AILERON	SREF
			-12.000	RUDDER	.000	20Z117	5.000	LREF
			25.000	BETA	10.000	20Z134	15.000	BREF
								XTRP
								YTRP
								ZTRP
								SCALE
								50.FT.
								19.2299
								37.5359
								43.5974
								0.0000
								15.1873
								.0405
								SCALE



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	15.000	BOFLAP	.200 DELVON	AILERON	SREF
		SPOBRK	-12.000 RUDDER	AILERON	LREF
			25.000 BETA	20Z132	19.2299
				20Z134	37.9359
					43.5974
					15.0000
					15.1875
					SCALE
					.0405

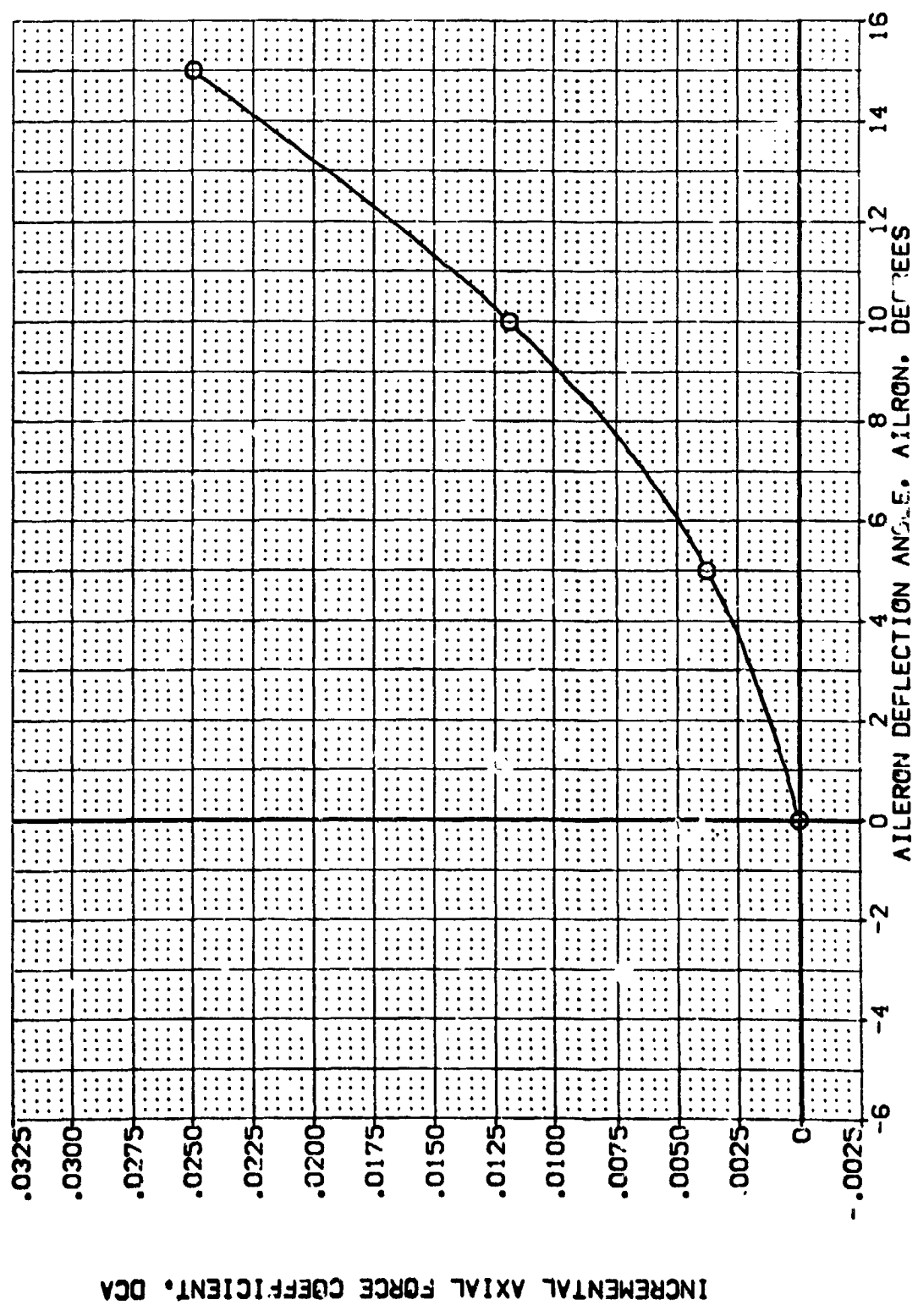
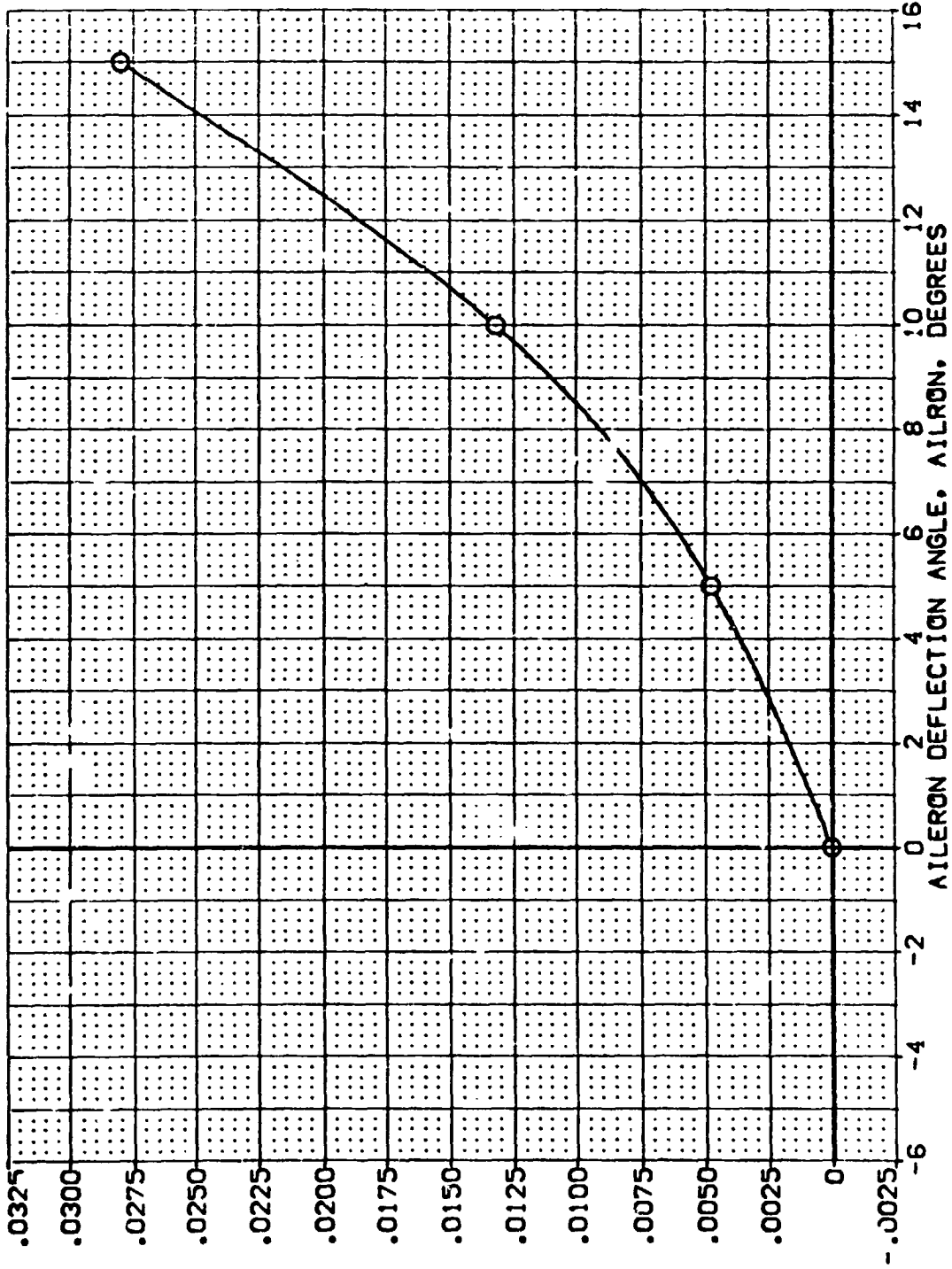


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	DATASET	AILRON	DATA SOURCE	DATASET	AILRON	REF	REFERENCE INFORMATION
○	20.000				.200 DELVON	.000	20Z117	5.000	AILRON	20Z132	15.000	LREF	4.4118
					-12.000 RLODER	.000	20Z117	10.000	AILRON	20Z134	15.000	BREF	19.2.79
					25.000 BETA	.000	20Z133	10.000	AILRON			XREF	37.9359
												YREF	43.5874
												ZREF	.0000
												YREF	15.1875
												SCALE	.0405
												SCALE	



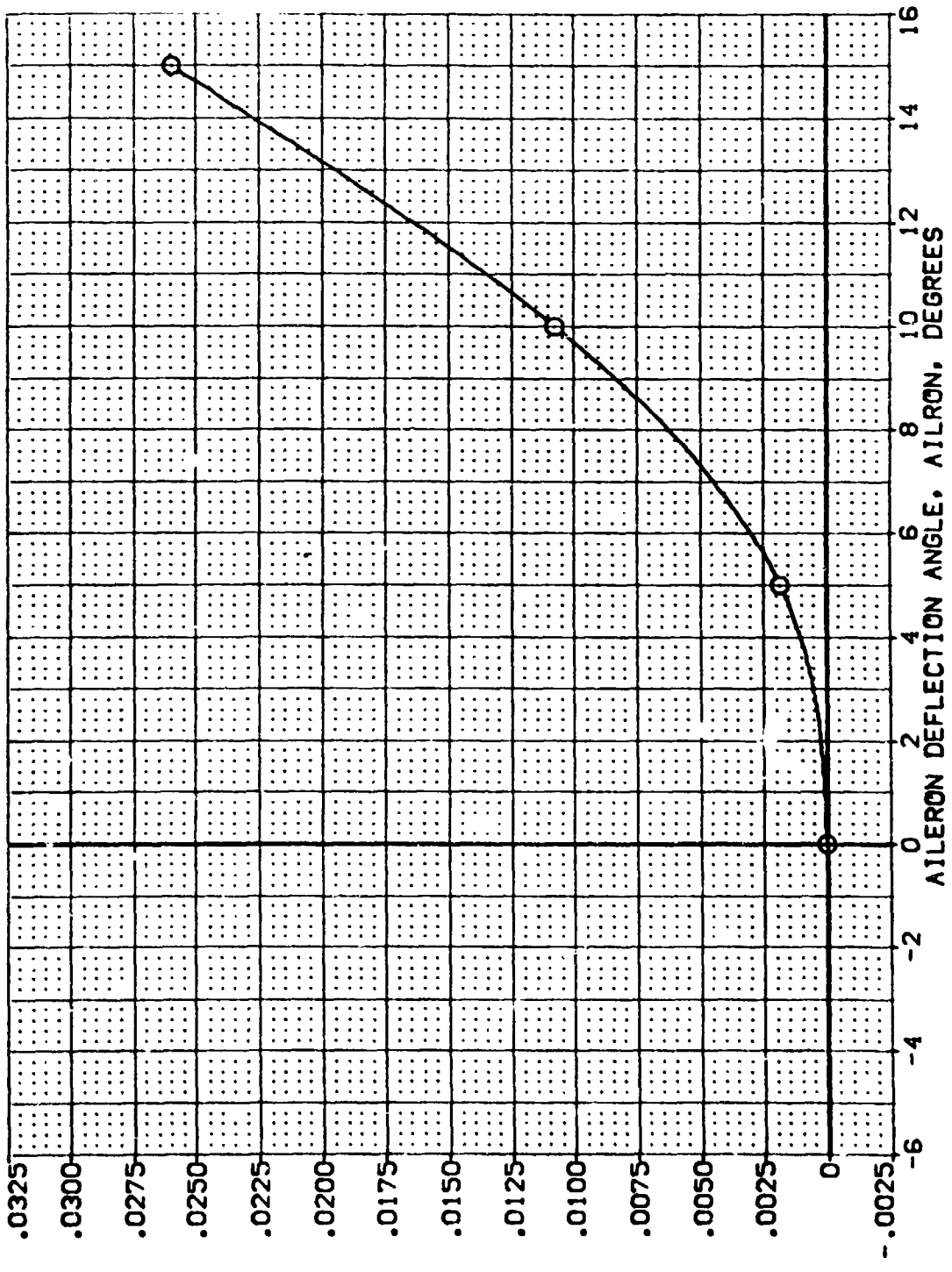
INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
0	25.000		.700	DELTA	.000	DATASET	AILERON	SREF	4.4118	SO.FT.	
		80FLAP	-12.000	RUDDER	.000	20Z117	5.000	LREF	19.2738	INCHES	
		SPDRK	25.000	BETA	.000	20Z133	15.000	BREF	37.9359	INCHES	
								XPRP	43.5874	INCHES	
								YPRP	15.0000	INCHES	
								ZPRP	15.1873	INCHES	
								SCALE	.0405	SCALE	



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	30.000	80FLAP	.200	DELVON	A1LRON	SREF	4.4119	50.FT.
		SPOBRK	-12.000	RUDDER	.000	20Z117	19.2259	INO-ES
			25.000	BETA	10.000	20Z134	37.9359	INO-ES
							43.5974	INO-ES
							15.0000	INO-ES
							15.1875	SCALE

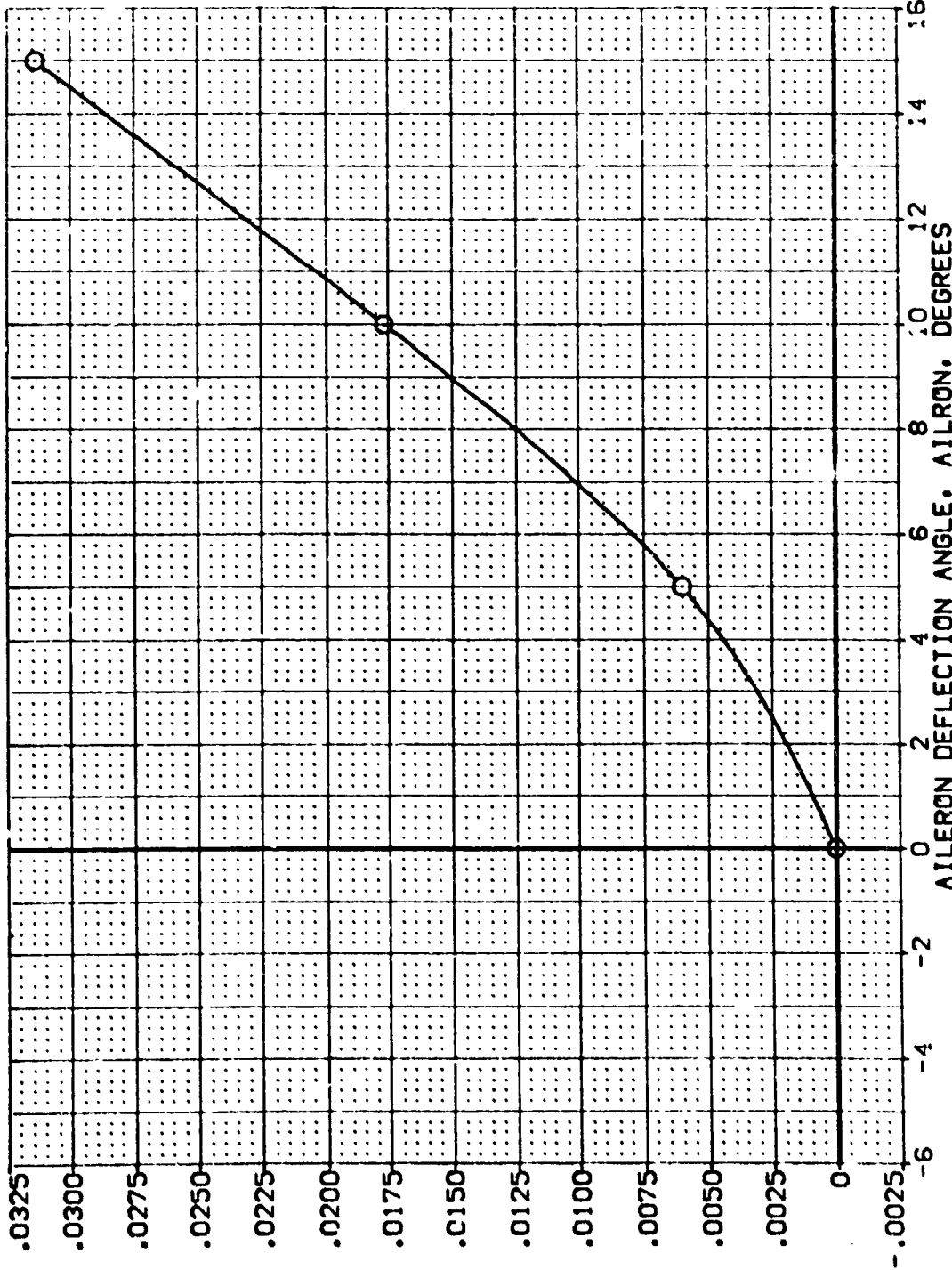


FIG 48 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG. FLARE



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BDZ117) O CAS28 B26C3 M7F8 V11E28/8P5X3  
 (BDZ135) X CAS28 B26C3 M7F8 V11E28/8P5X3  
 (BDZ136) X CAS28 B26C3 M7F8 V11E28/8P5X3  
 (BDZ137) X CAS28 B26C3 M7F8 V11E28/8P5X3

ELEVON SPOBRK BOFLAP RUDDER REFERENCE INFORMATION  
 .000 25.000 -12.000 .000 BRZF 4.4118 90.FT.  
 .000 25.000 .000 .000 LRZF 19.2299 INO-ES  
 .000 25.000 15.000 .000 XMRP 37.9354 INO-ES  
 .000 25.000 22.000 .000 YMRP 43.5874 INO-ES  
 ZMRP 15.0000 INO-ES  
 SCALE .0405 SCALE

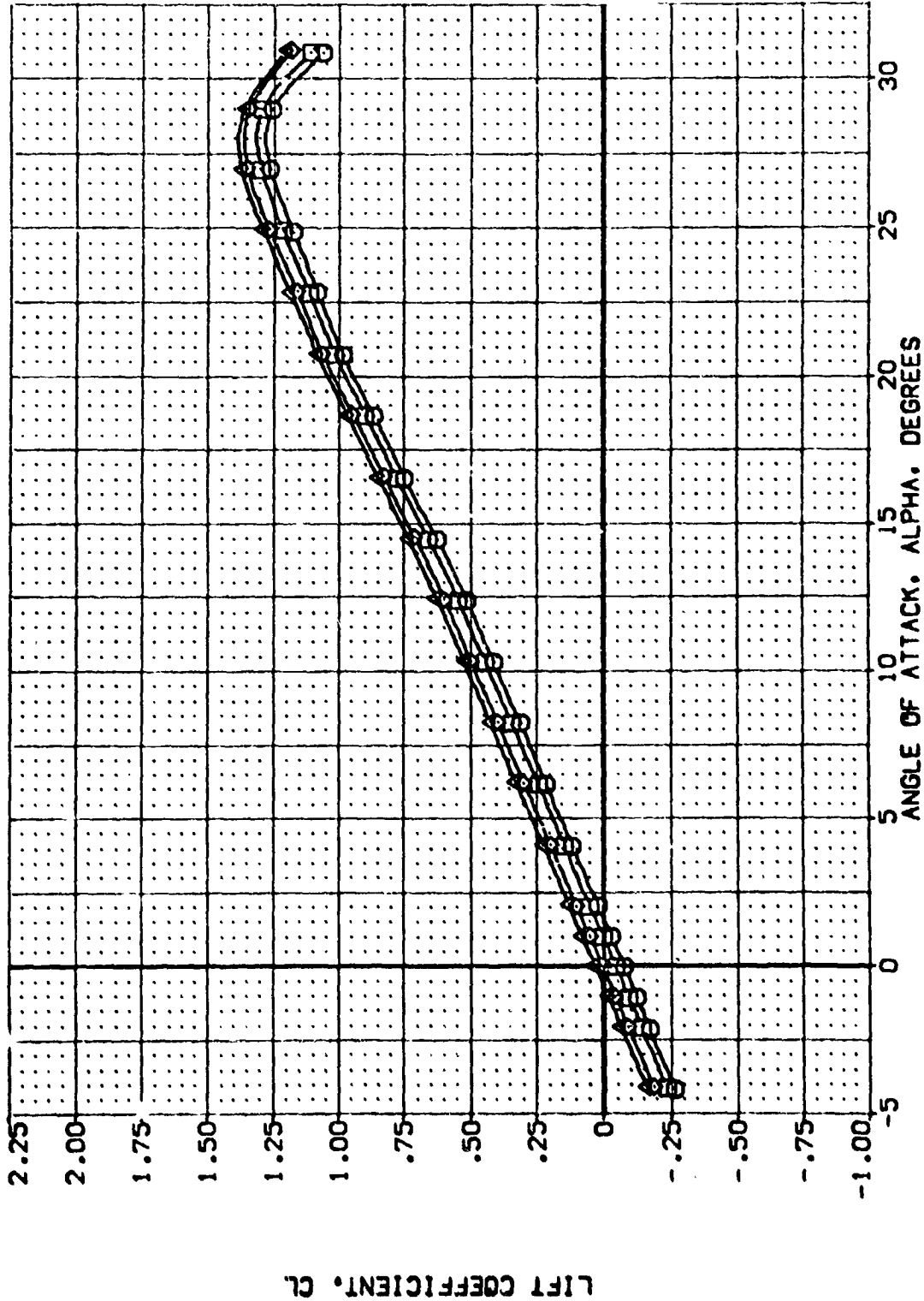


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE  
 (A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOILER	BOFLAP	RUDDER	REFERENCE INFORMATION
(B0Z117)	0A628 B06C9 M7F8 V11E228V8FSX9	.000	25.000	-12.000	.000	4.4119 SO.FT.
(B0Z135)	0A628 B06C9 M7F8 V11E228V8FSX9	.000	25.000	0.000	.000	19.2299 INO-ES
(B0Z136)	0A628 B06C9 M7F8 V11E228V8FSX9	.000	25.000	16.000	.000	37.9359 INO-ES
(B0Z137)	0A628 B06C9 M7F8 V11E228V8FSX9	.000	25.000	22.000	.000	43.5974 INO-ES
						0.000 INO-ES
						15.1873 INO-ES
						.0405 SCALE

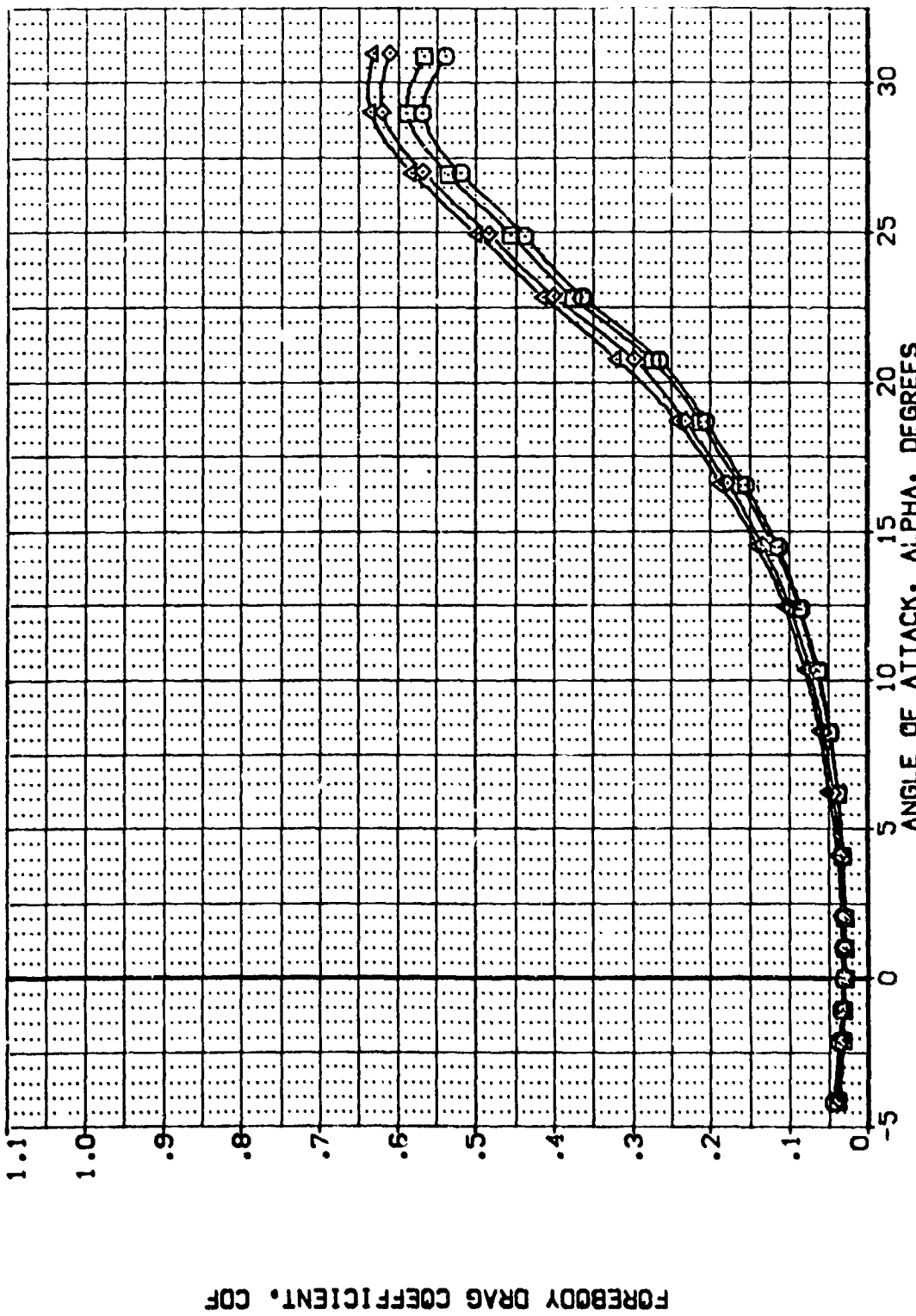


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(AJMACH = .20







DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(B0Z17)	9A6Z8 B0Z19 MTF8 V11E28V85X9	.000	23.000	-12.000	.000	4.4119 50.FT.
(B0Z135)	9A6Z8 B0Z19 MTF8 V11E28V85X9	.000	23.000	0.000	.000	19.2299 INO-ES
(B0Z136)	9A6Z8 B0Z19 MTF8 V11E28V85X9	.000	23.000	16.000	.000	37.9359 INO-ES
(B0Z137)	9A6Z8 B0Z19 MTF8 V11E28V85X9	.000	23.000	22.000	.000	43.5974 INO-ES
						15.0000 INO-ES
						15.1875 INO-ES
						.0105 SCALE

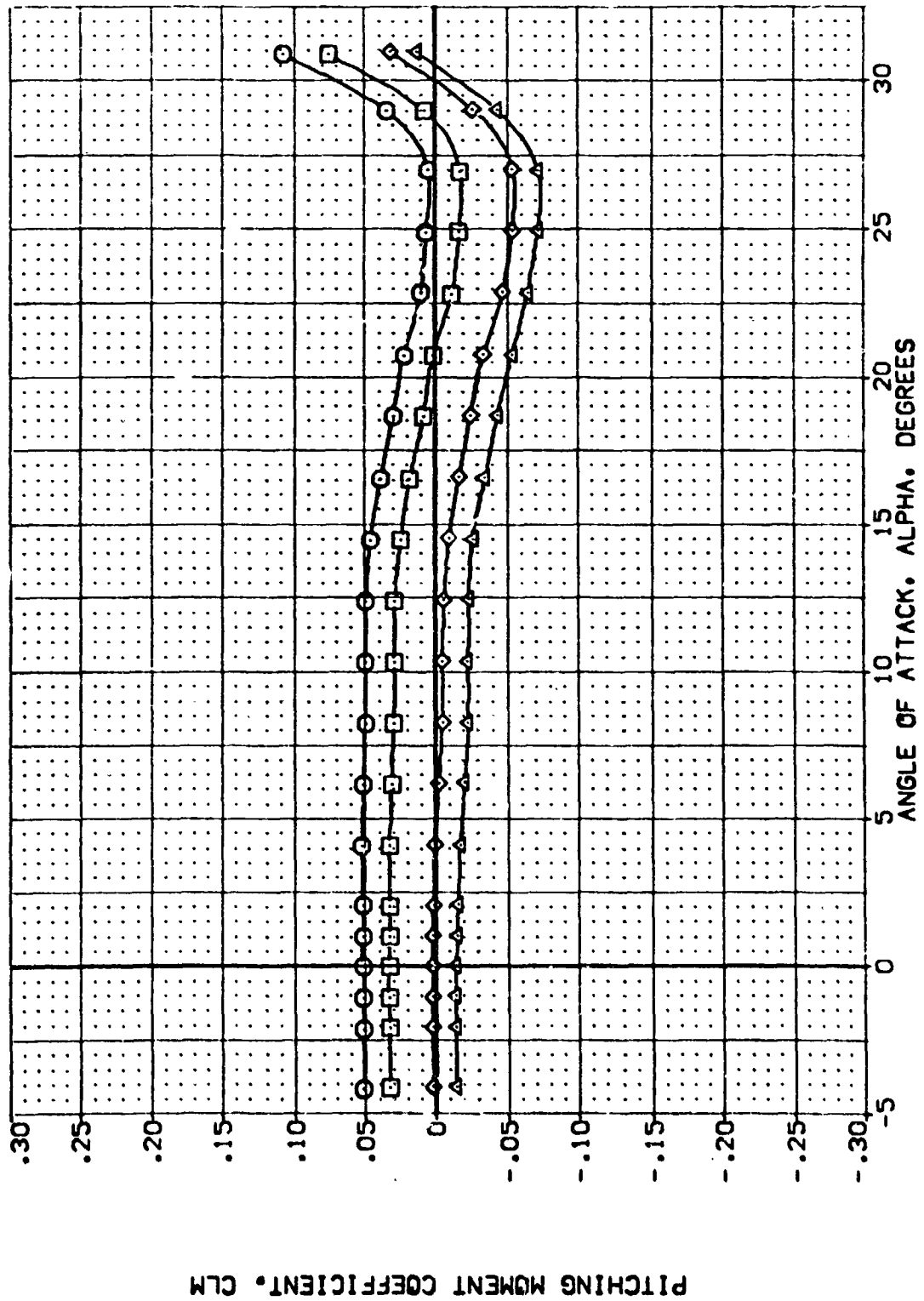


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(A)MACH = .20

0A628 B26C9 M7F8 W116E28V8RSX9 (J0Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	BDFLAP	BDFLAP	REF	SO.FT.
○	-4.000	AILRON	.200 DELVON	BDFLAP	J0Z117	.000	.000	LREF	INCHES
		SPOBRK	.000 RUDDER	-12.000	J0Z136	22.000	22.000	BREF	INCHES
			.000 BETA	16.000	J0Z137			XTRP	INCHES
								YTRP	INCHES
								ZTRP	INCHES
								SCALE	SCALE

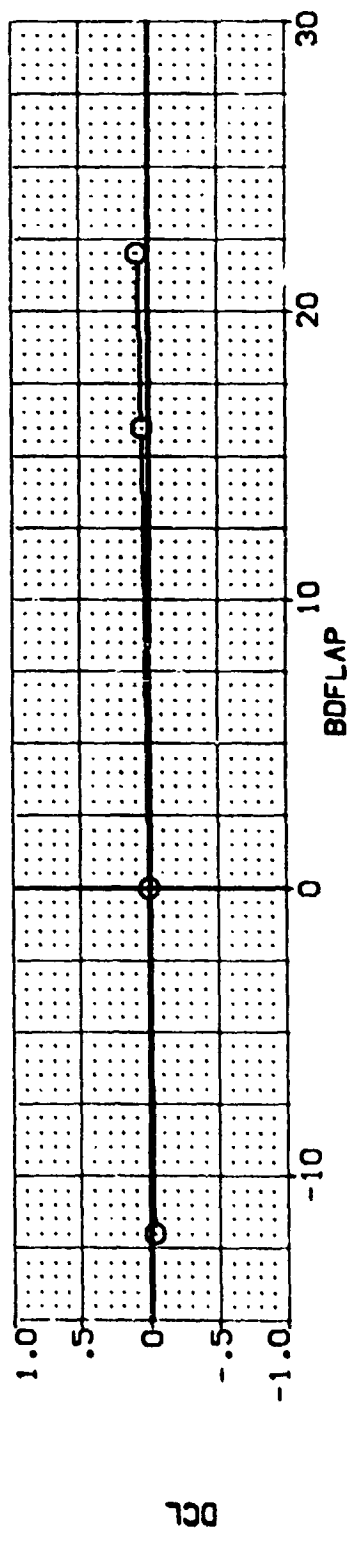
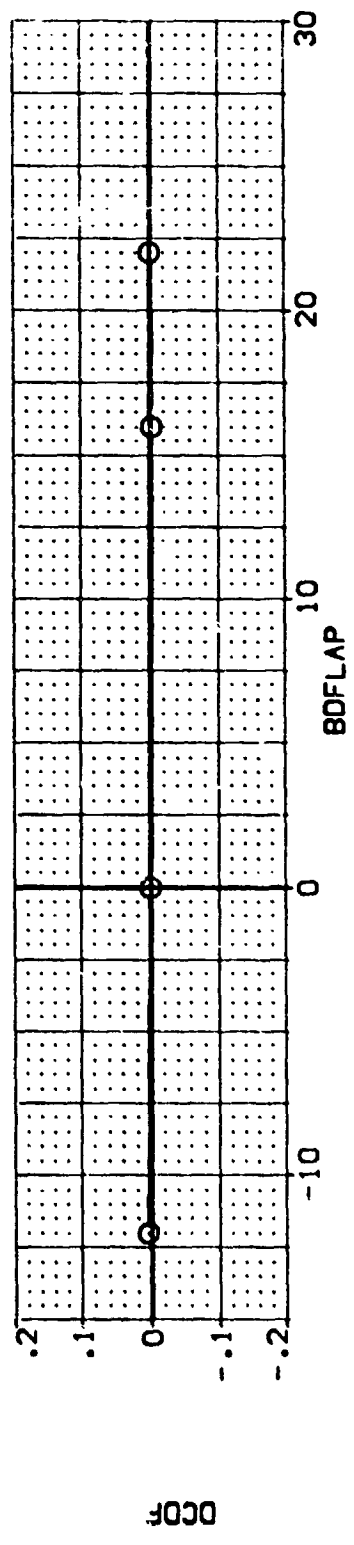
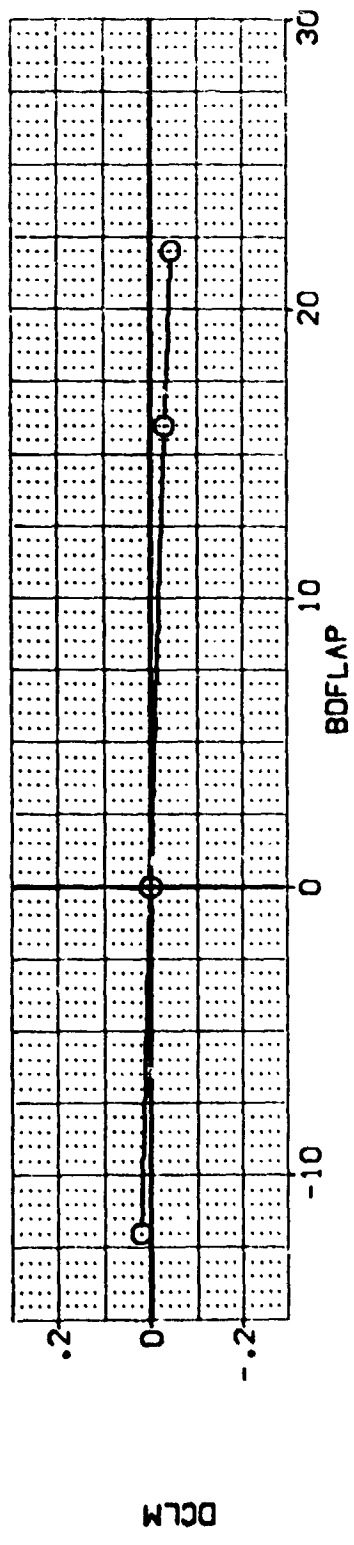


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(J0Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

PARAMETRIC VALUES

ALPHA	-2.000	WACH	.000	DELTA	.000	DELTA	.000
		ALIGN	.000	RUDDER	.000	J0Z117	.000
		SPDRX	25.000	BETA	.000	J0Z136	.000

DATA SOURCE

BDFLAP	-12.000	DATASET	J0Z135	REF	4.4119
	16.000		J0Z137	LINE	19.2288
				REF	37.9259
				REF	43.5574
				REF	.0000
				REF	15.1875
				SCALE	.0405

REFERENCE INFORMATION

SO.FT.	4.4119
INCHES	19.2288
INCHES	37.9259
INCHES	43.5574
INCHES	.0000
INCHES	15.1875
SCALE	.0405

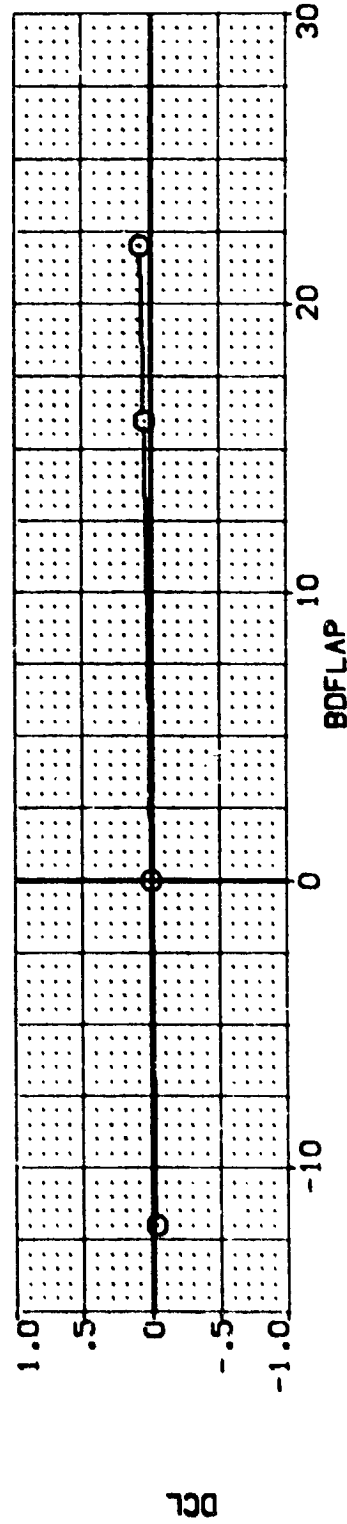
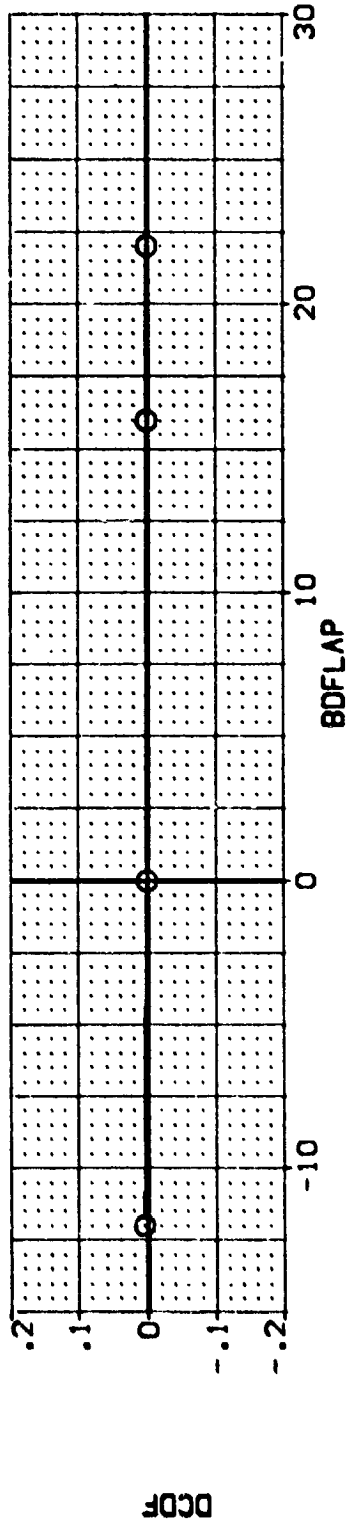
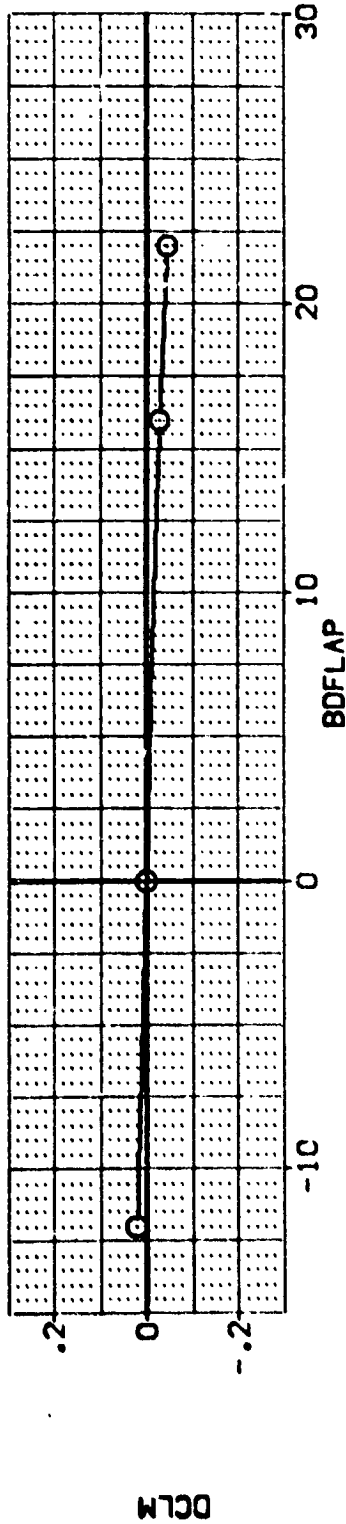


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (J0Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	BOFLAP	BOFLAP	BOFLAP	REFERENCE INFORMATION
○	-1.000	A1LR0N	.200 DELVON	.000 J0Z117	-12.000	.000	SREF	50. FT.
		SPDRK	.000 RUDDER	.000 J0Z136	16.000	22.000	LREF	INCHES
			25.000 BETA	J0Z137			SREF	INCHES
							XTRP	INCHES
							ZTRP	INCHES
							SCALE	SCALE

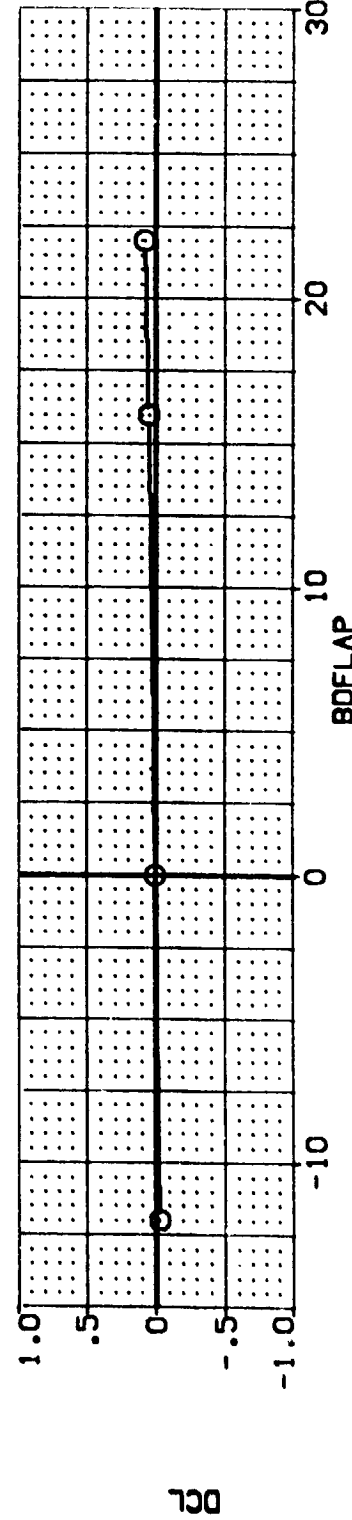
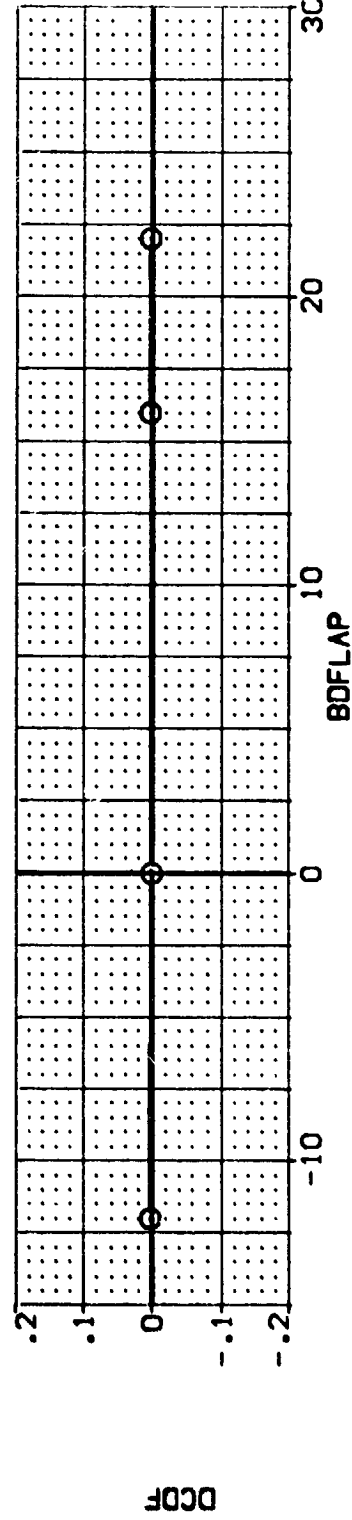
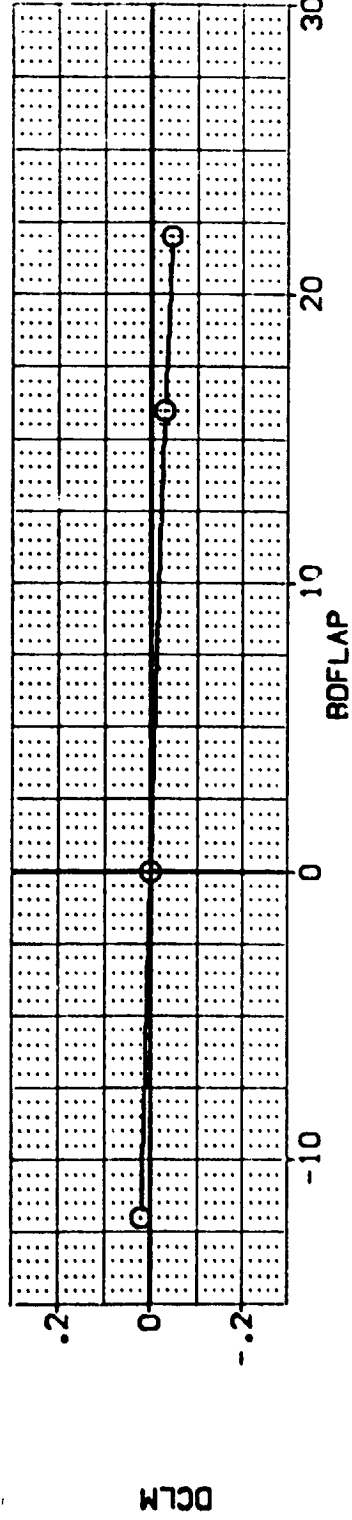


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE





(JDZ117)

0A62B B26C9 M7F8 W116E28V8R5X9

0

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
ALPHA	.000	MACH	.200	DELTA	.000	BOFLAP	0.000	SO.FT.	4.4119
AIRLON	.000	RUDDER	.000	JDZ117	.000	BOFLAP	.000	INCHES	19.2299
SPOBRK	25.000	BETA	9.250	JDZ136	.000	BOFLAP	22.000	INCHES	37.9359
						YMRP	.0000	INCHES	43.5974
						ZMRP	15.1875	INCHES	.0000
						SCALE	.0405	SCALE	.0405

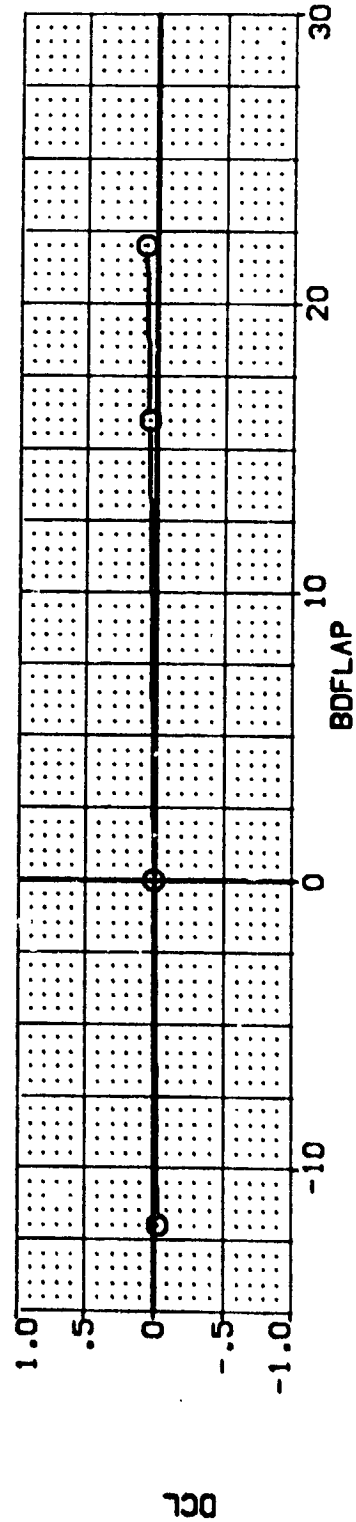
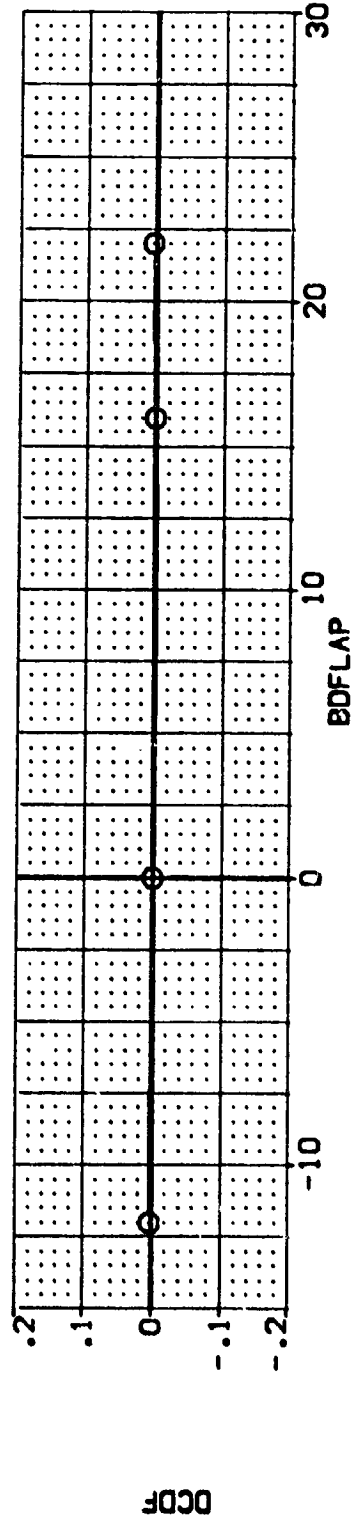
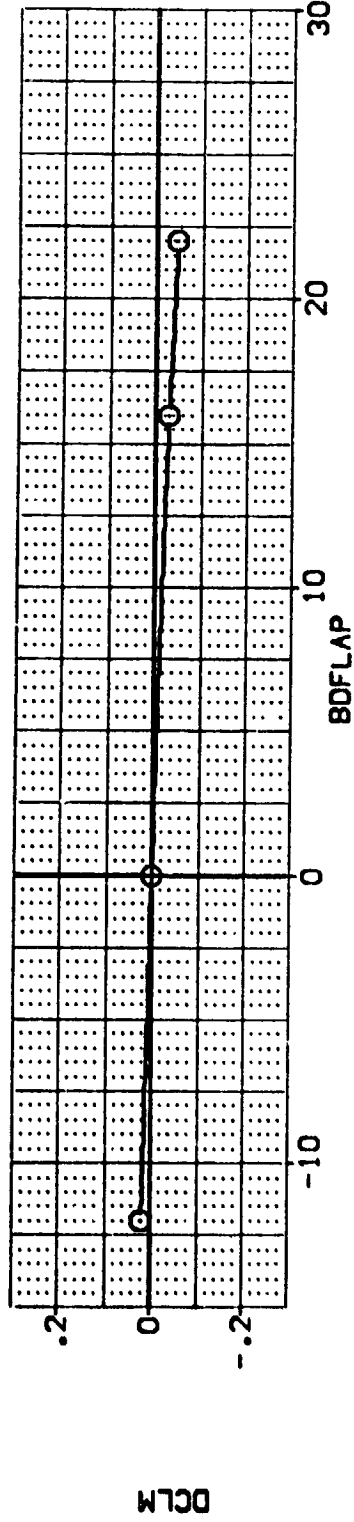


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

Vertical text along the right edge of the page, likely a scanning artifact or margin note.

0A628 B26C9 M7F8 W116E28V8RSX9 (JDZ117)

STRECH 0  
 ALPHA 1.000  
 MACH ALLRON SPOBRK  
 PARAMETRIC VALUES  
 DELVON .200  
 RUDDER .000  
 BETA 25.000  
 DATA SOURCE  
 BDFLAP -12.000  
 DATASET JDZ135  
 BDFLAP .000  
 DATASET JDZ137  
 REFERENCE INFORMATION  
 SO.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5674  
 INCHES .0000  
 INCHES 15.1875  
 INCHES .0405  
 YMRP  
 ZMRP  
 SCALE

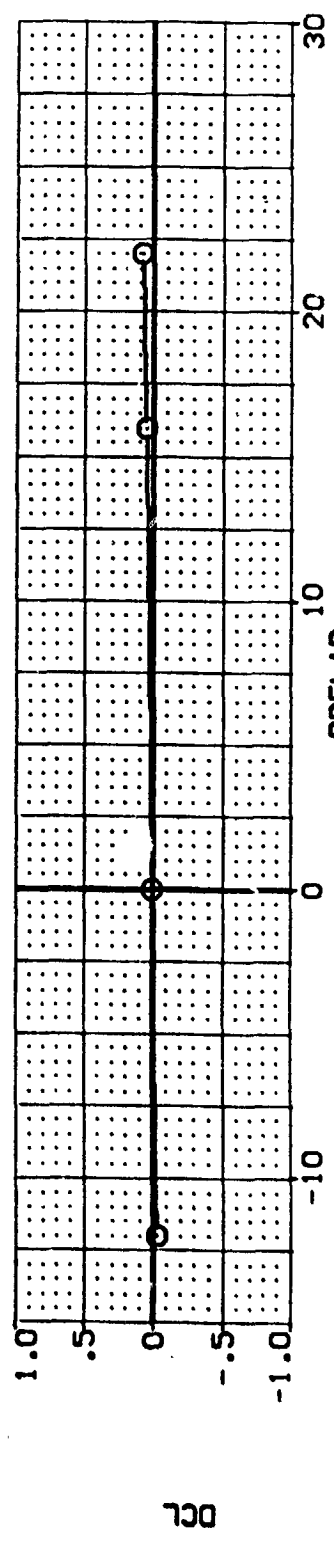
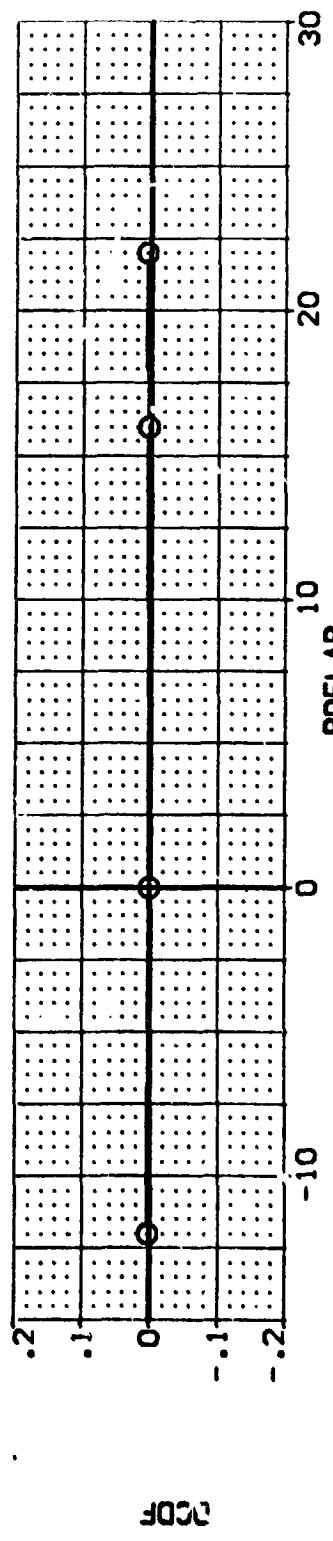
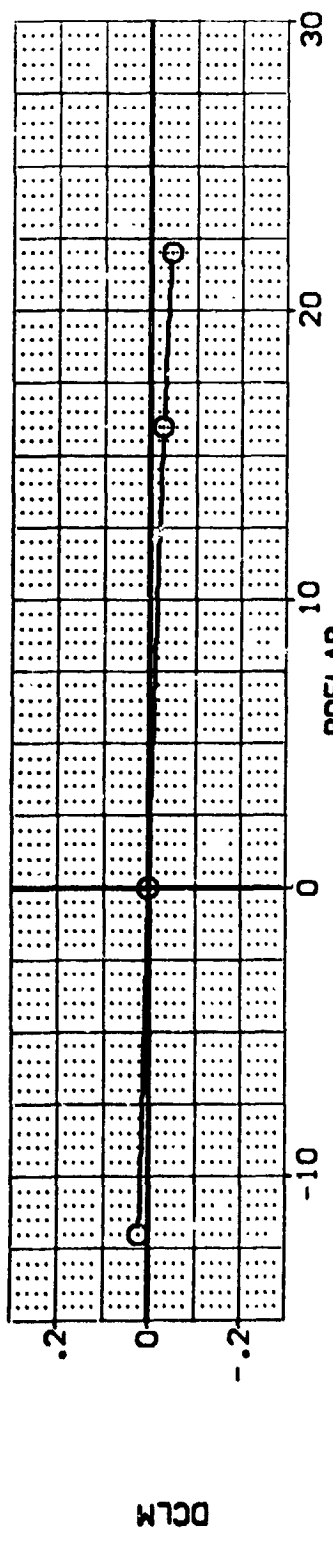


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE





(JDZ117)

0A62B 826C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	2.000	A1UR0N	.200 DELVON	BDFLAP	50.FT.
		SPOBRK	.000 FLOOR	BDREF	INCHES
		BETA	25.000	BDZ135	INCHES
				BDZ137	INCHES
				YTRP	INCHES
				ZTRP	INCHES
				SCALE	SCALE
					.0405

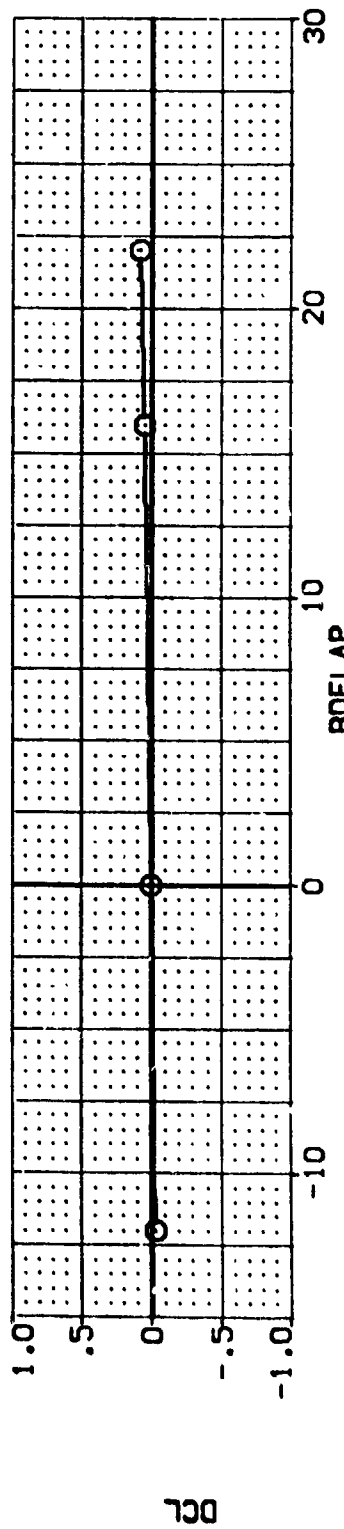
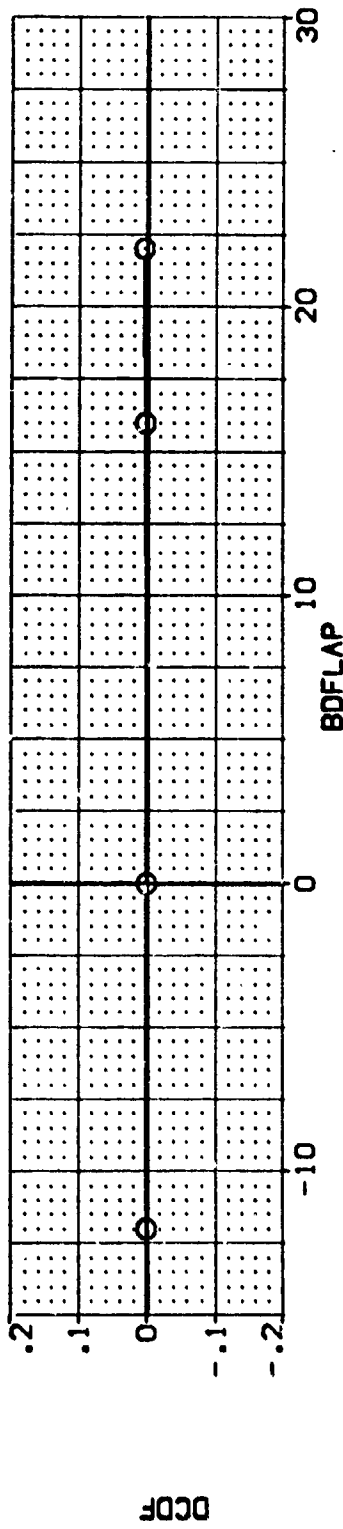
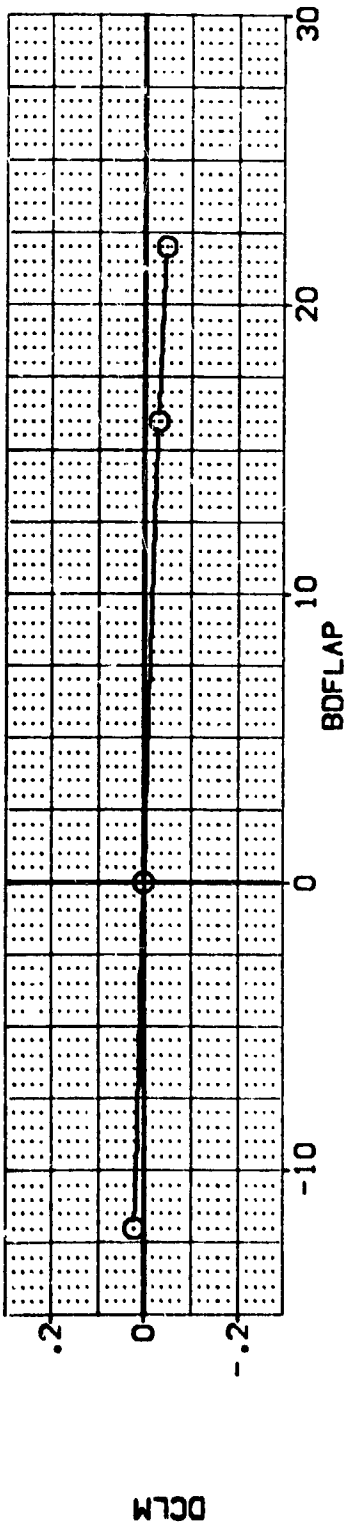


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL ALPHA MACH AILSON SPOBRK

PARAMETRIC VALUES  
 .200 DELVON  
 .000 RUDDER  
 25.000 BETA

DATA SOURCE  
 .000 DATASET  
 .000 JDZ117  
 .000 JDZ136

BOFLAP  
 -12.000  
 16.000

DATASET  
 JDZ135  
 JDZ137

SREF LREF XMRP YMRP ZMRP SCALE

REFERENCE INFORMATION  
 4.4119 SQ.FT  
 19.2299 INCHES  
 37.9369 INCHES  
 43.5974 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE

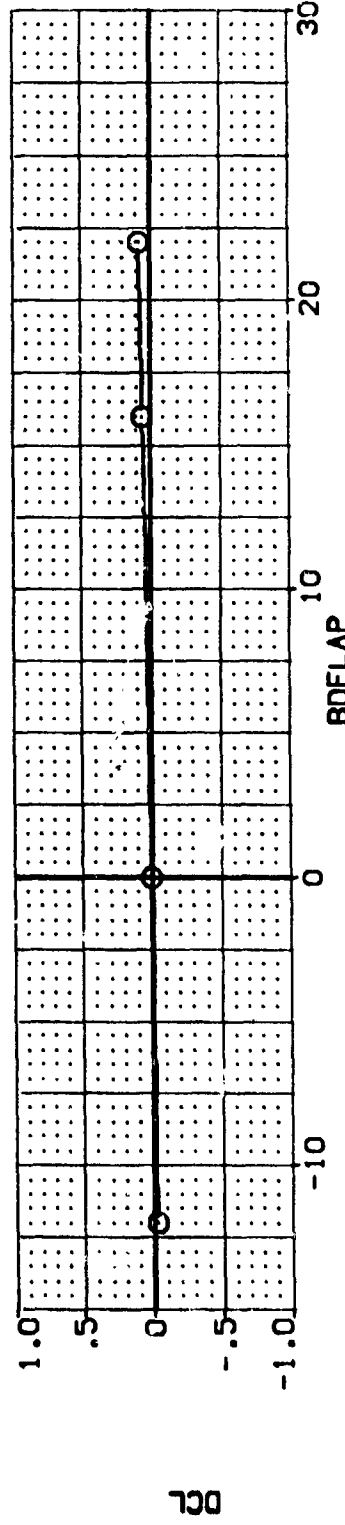
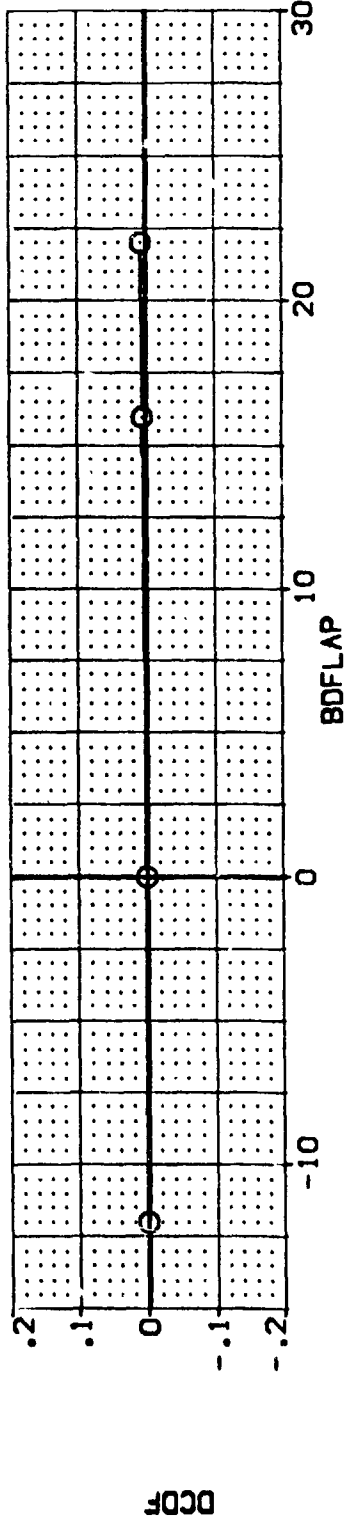
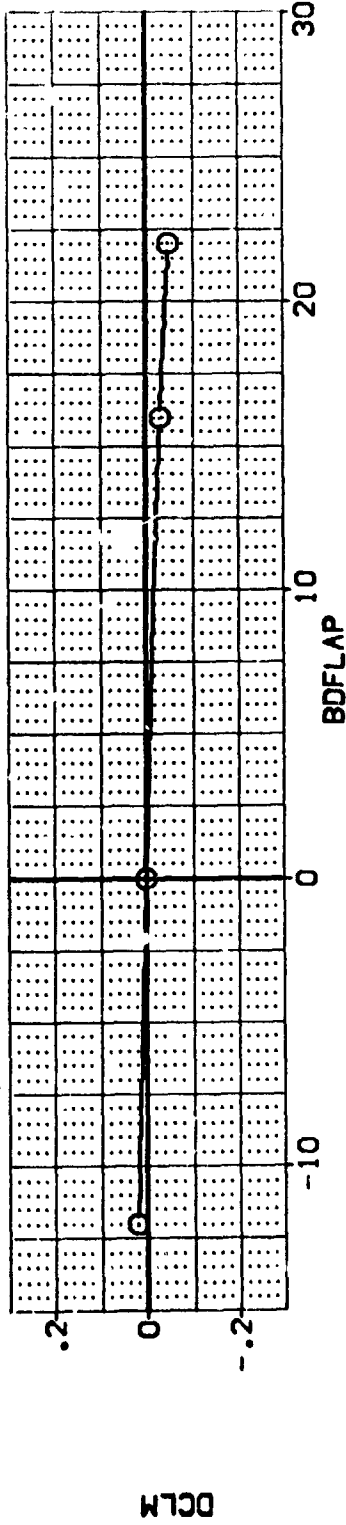


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(JDZ117)

0A62B 826C9 M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	6.000	MACH	.000	DATASET	SREF	SO.FT.
	AILRON	.200	DELVON	.000	JDZ117	LREF	INCHES
	SPOBRK	.000	RUDDR	.000	JDZ136	BREF	INCHES
		25.000	BETA	.000	JDZ137	XMRP	INCHES
						YMRP	INCHES
						ZMRP	INCHES
						SCALE	SCALE
							.0405

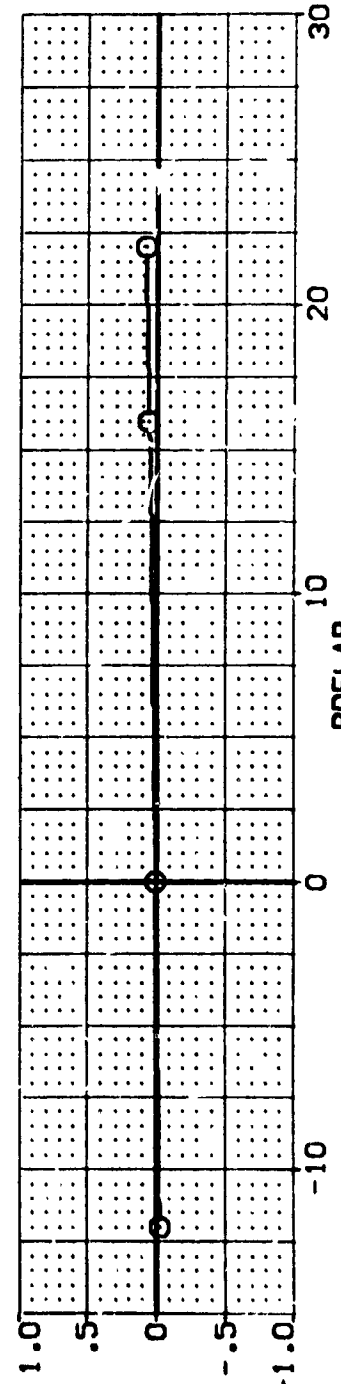
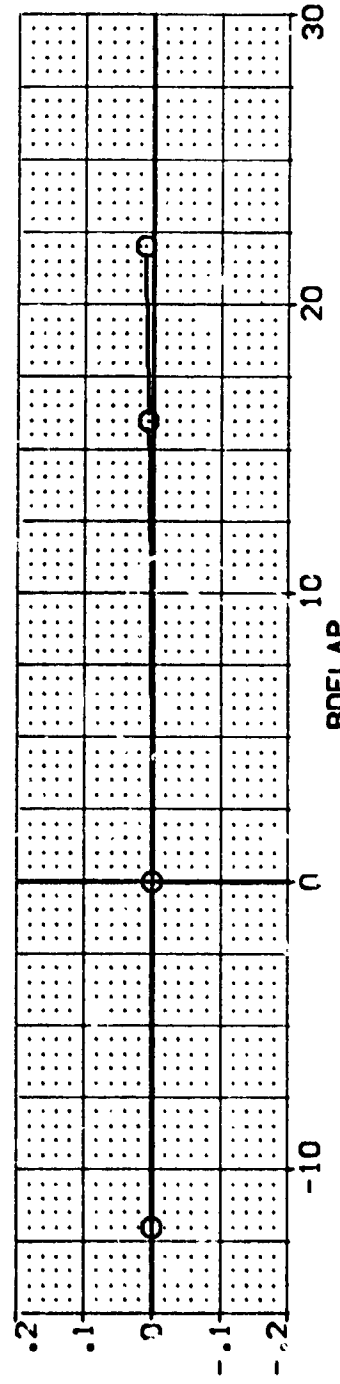
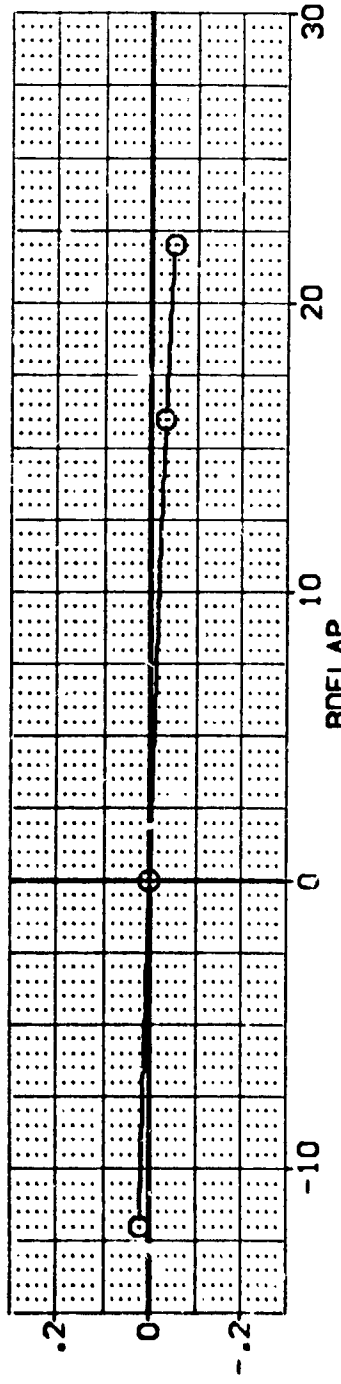


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 #116E28V8K5X9 (JDZ117)

SYMBOL	ALPHA	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	8.000	MACH	.200	DELVON	BOFLAP	-12.000	BOFLAP	REF	4.4118	SO.FT
		AILERON	.000	RUDDER	JDZ117	16.000	JDZ135	REF	19.2299	IN-ES
		SPOBRK	25.000	BETA	JDZ136		JDZ137	REF	37.9399	IN-ES
								YMRP	43.5974	IN-ES
								ZMRP	.0000	IN-ES
								SCALE	15.1875	SCALE
									.0405	

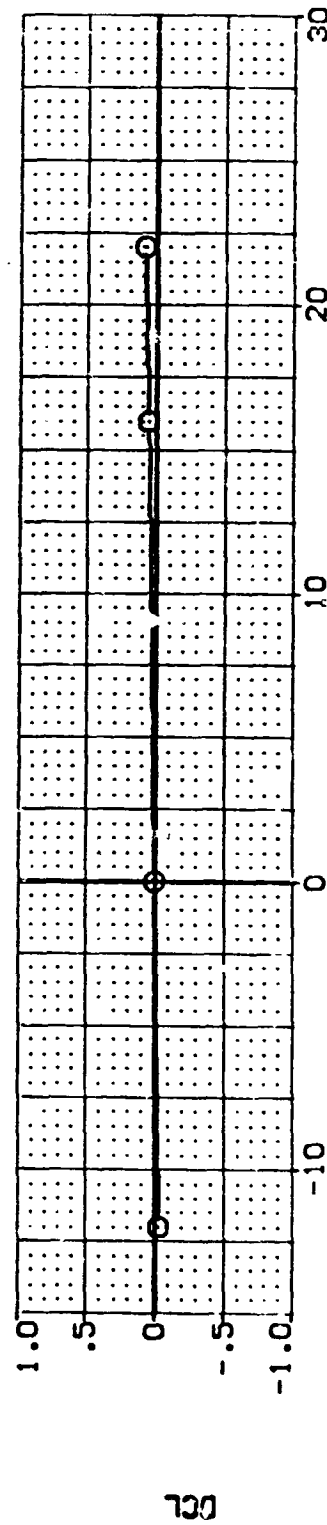
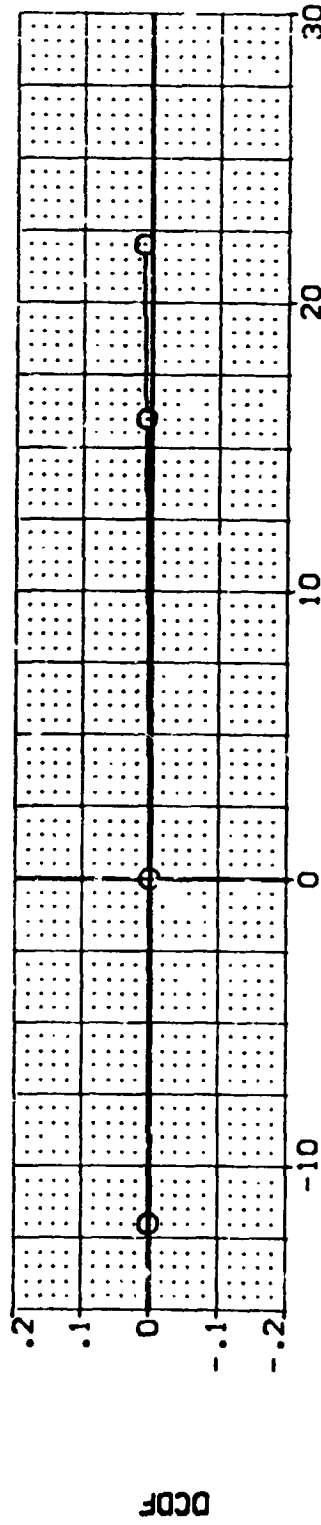
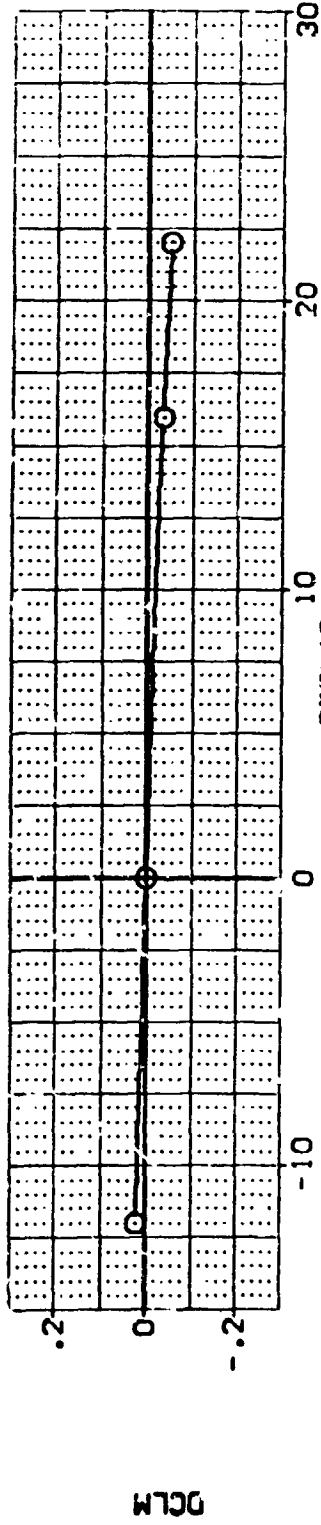


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(J02117)

W116E28V8R5X9

M7F8

B26C9

0A628

SYMBOL  
O

ALPHA  
10.000

MACH  
A1LR0N  
SPDRK

PARAMETRIC VALUES  
.200 DELVON  
.000 RUDDER  
25.000 BETA

DATA SOURCE  
BDFLAP .000 DATASET J02117  
BDFLAP -12.000 DATASET J02136  
BDFLAP 16.000 DATASET J02137

SREF .000  
LREF .000  
XTRP 22.000  
ZTRP .0000  
SCALE .0405

REFERENCE INFORMATION  
4.4119 SQ. FT.  
19.2259 INCHES  
37.5359 INCHES  
43.5974 INCHES  
15.1875 INCHES  
.0405 SCALE

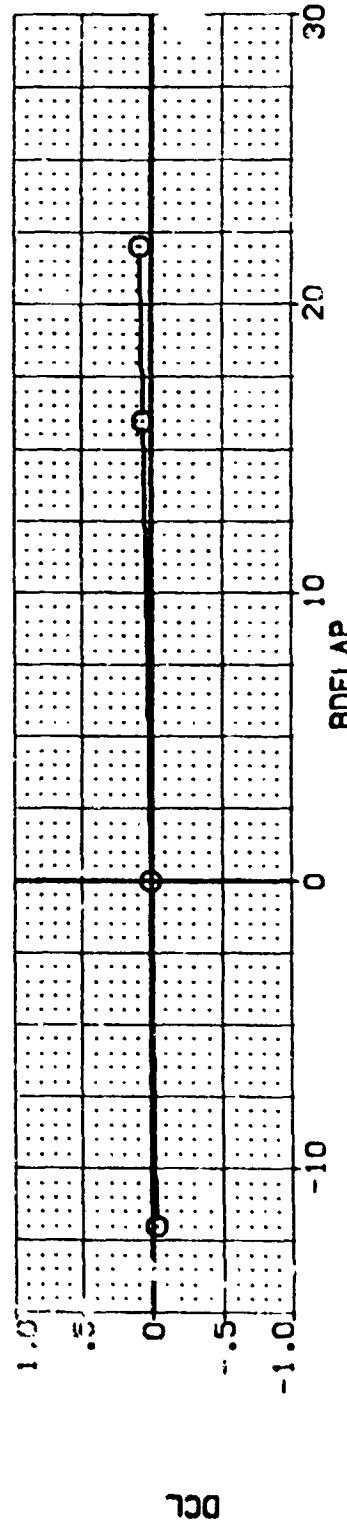
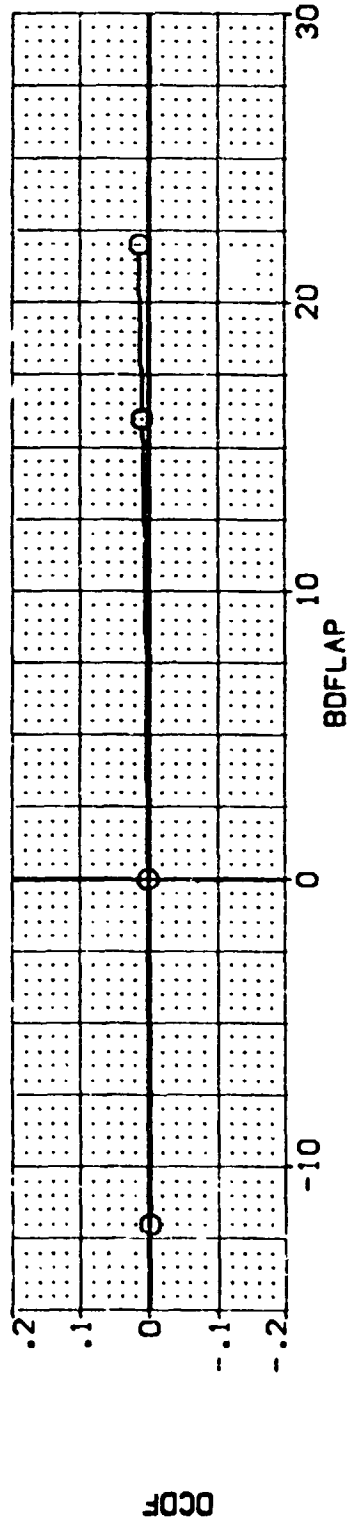
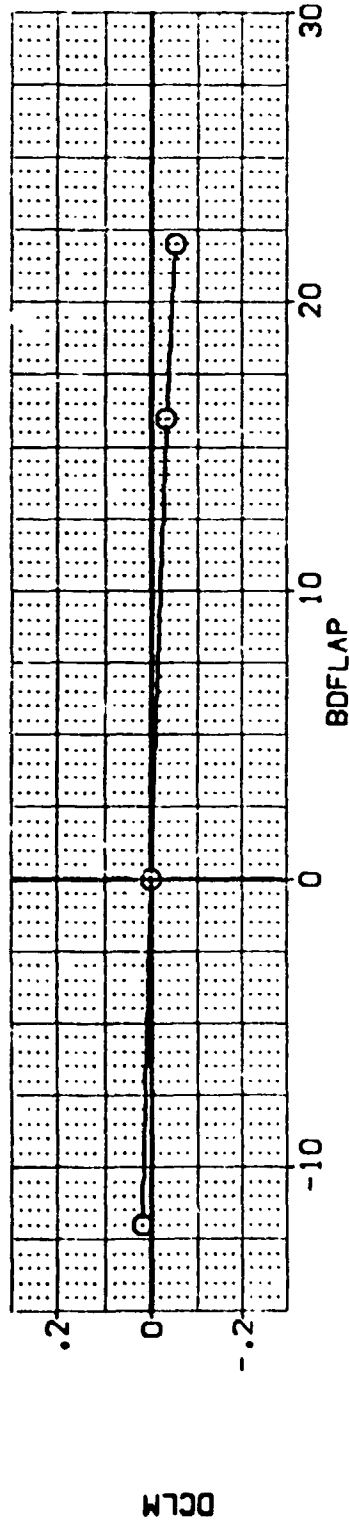
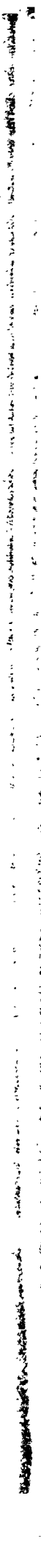


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	BDFLAP	REF	REFERENCE INFORMATION
0	12.000	A1LR0N	.200 DELVON	.000 DATASET	JDZ117	.000	4.4119	50.FT.
		SPDRK	.000 FLUDDR	.007 JDZ117	JDZ136	22.000	19.2299	INCHES
			25.000 BETA	000 JDZ136	JDZ137		37.5559	INCHES
							43.5574	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

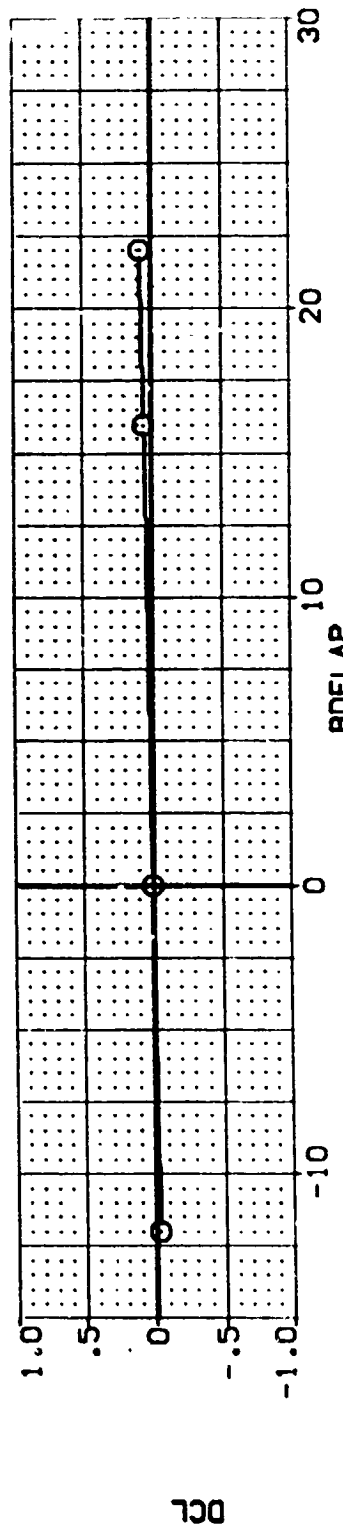
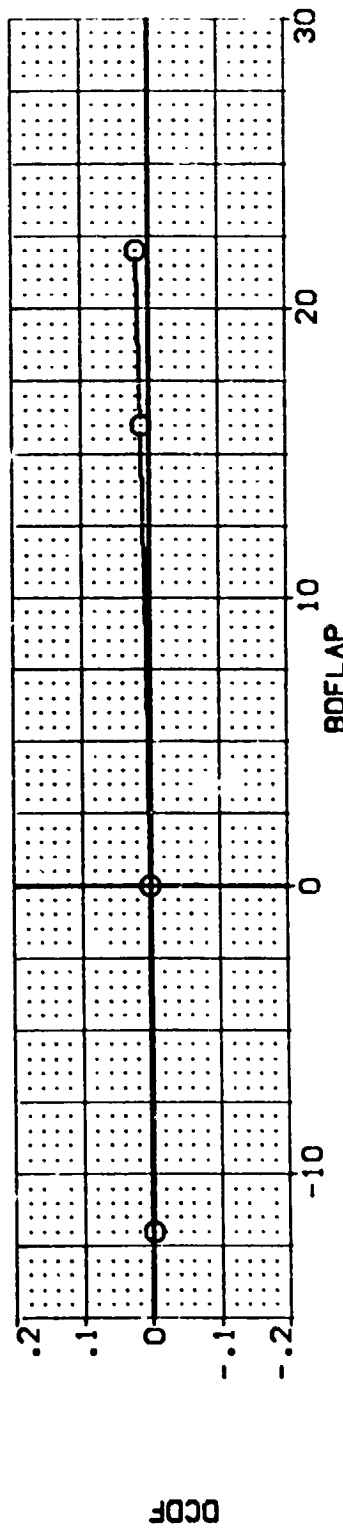
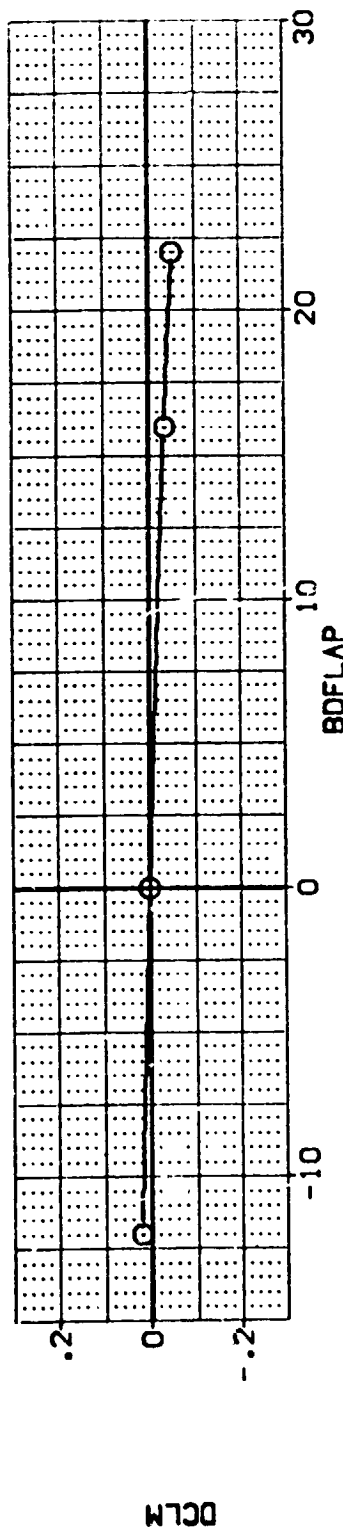


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	14.000	A1LR0N	.200 DELVON	.000 DATASET	4.4118 SQ.FT.
		SPDRK	.000 RUDER	.000 BDFLAP	19.2278 INCHES
		BETA	25.000	.000 XREF	37.9359 INCHES
				22.000 YMRP	43.5974 INCHES
				15.1675 ZMRP	15.1675 INCHES
				.0405 SCALE	.0405 SCALE

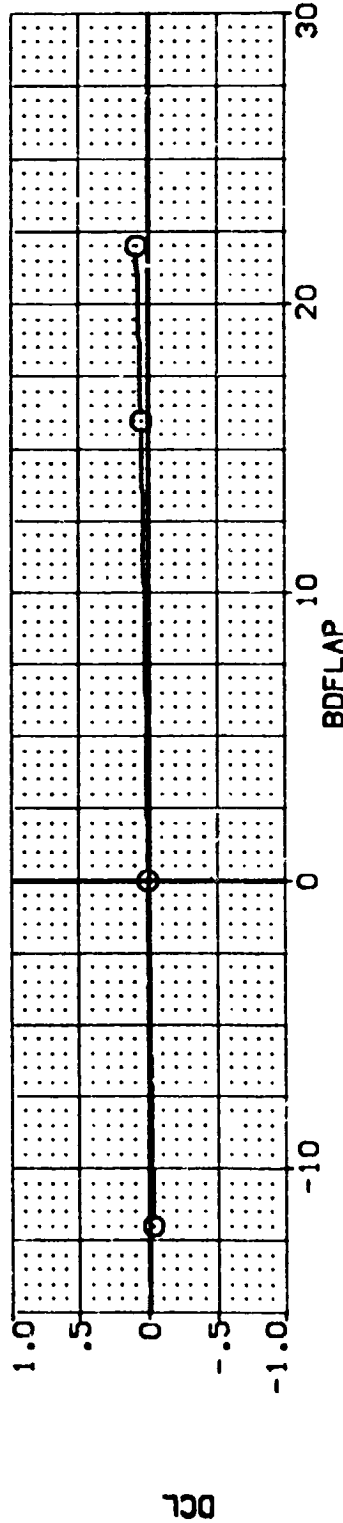
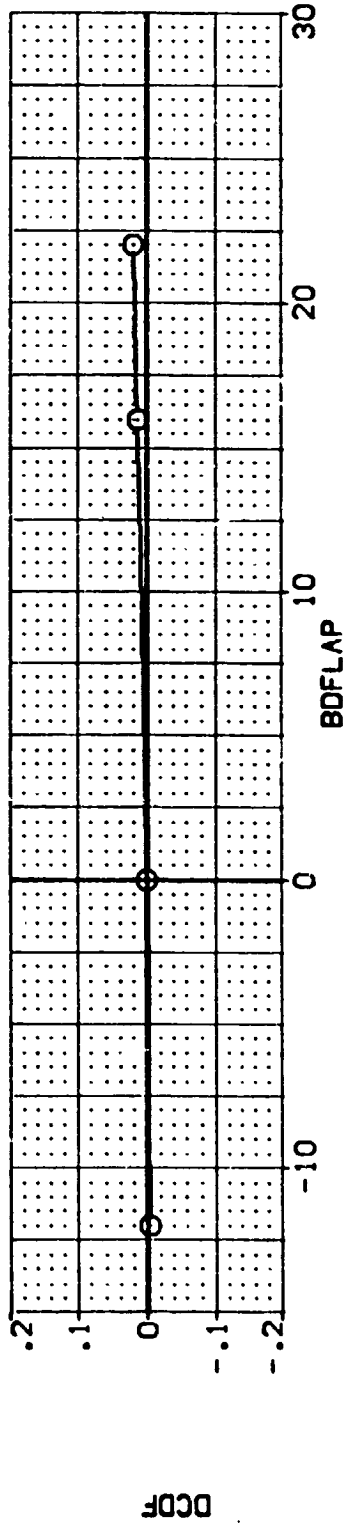
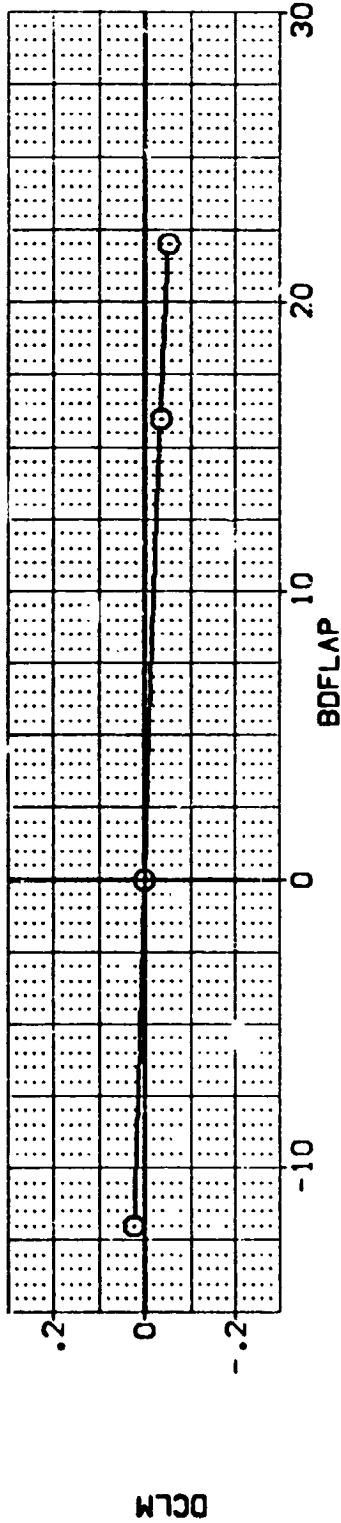


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	16.000	A1LR0N	.200 DEL/ON	.000 DATASET	SO.FT.
		SPOBRK	.000 RUDDER	.000 BDFLAP	IND-ES
			25.000 BETA	.000 LREF	IND-ES
				22.000 BREF	IND-ES
				.000 XMRP	IND-ES
				15.000 ZMRP	IND-ES
				15.1875 SCALE	SCALE
				.0405	

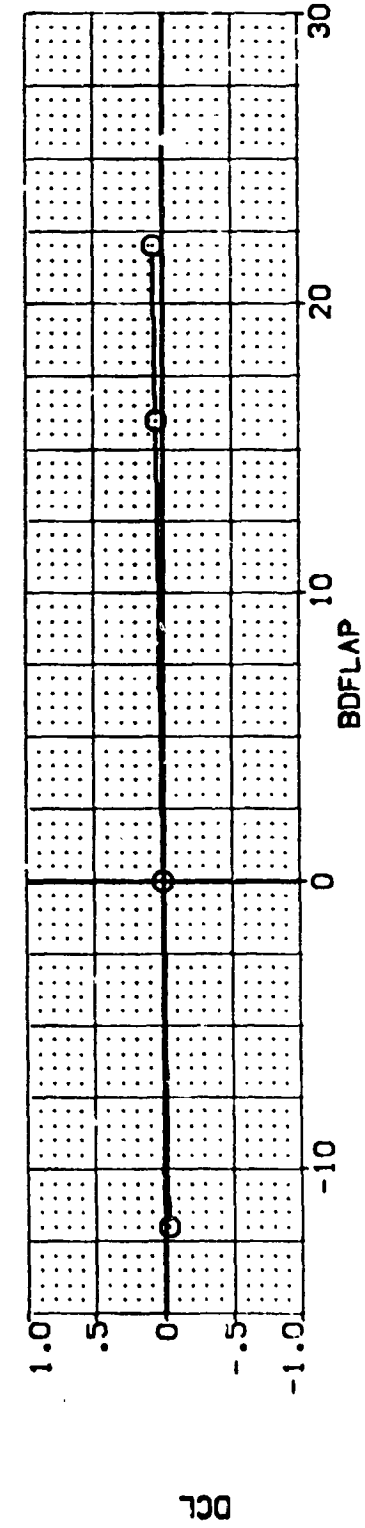
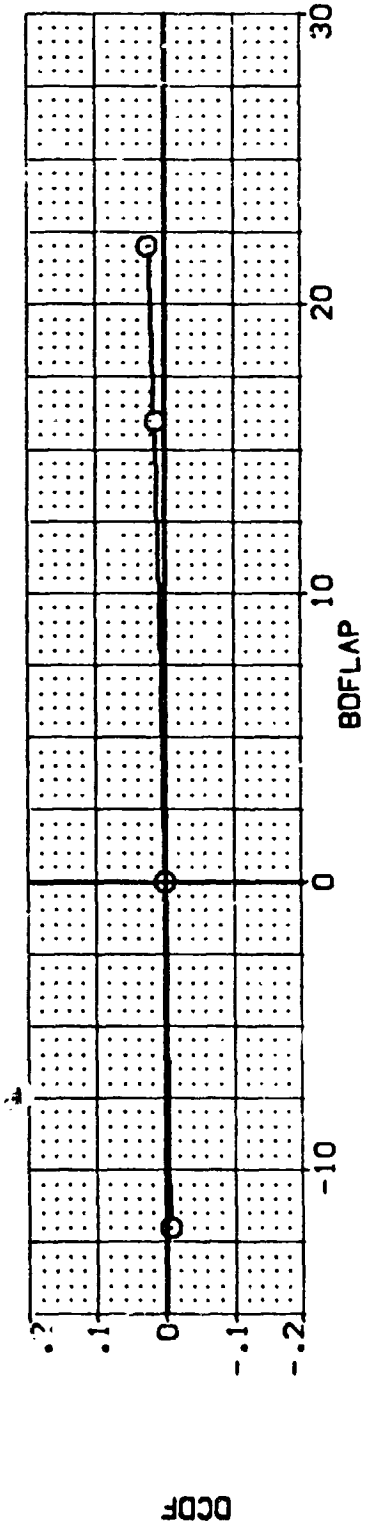
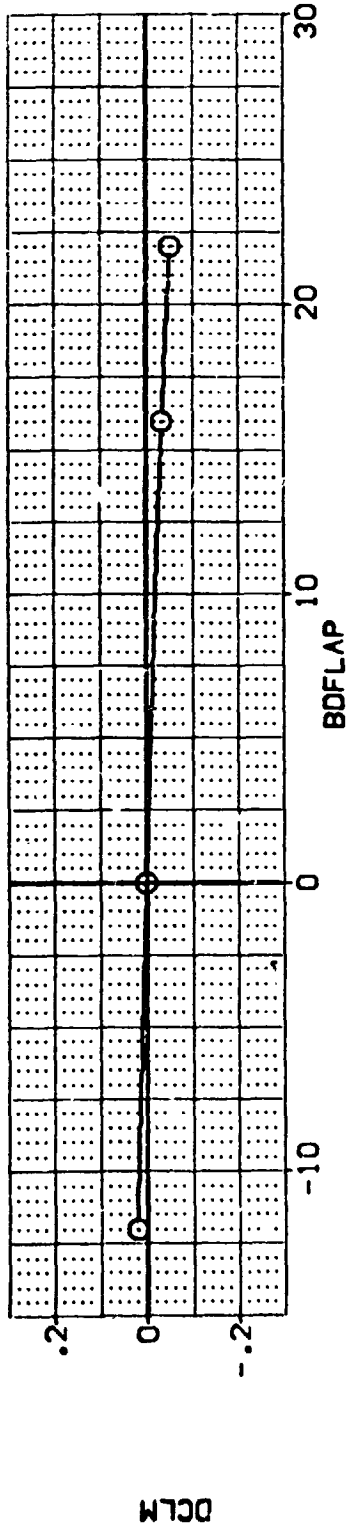


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	PH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
O	18.000	MACH	.200	DELTA	.000	BDFLAP	16.000	SO.FT.	4.4119
		AILTRON	.000	RUDDER	.000	BDREF	22.000	INCHES	19.2299
		SPDRON	25.000	BETA	.000	YREF	22.000	INCHES	37.9359
						ZTRP	22.000	INCHES	43.5974
						SCALE	15.1875	INCHES	.0405

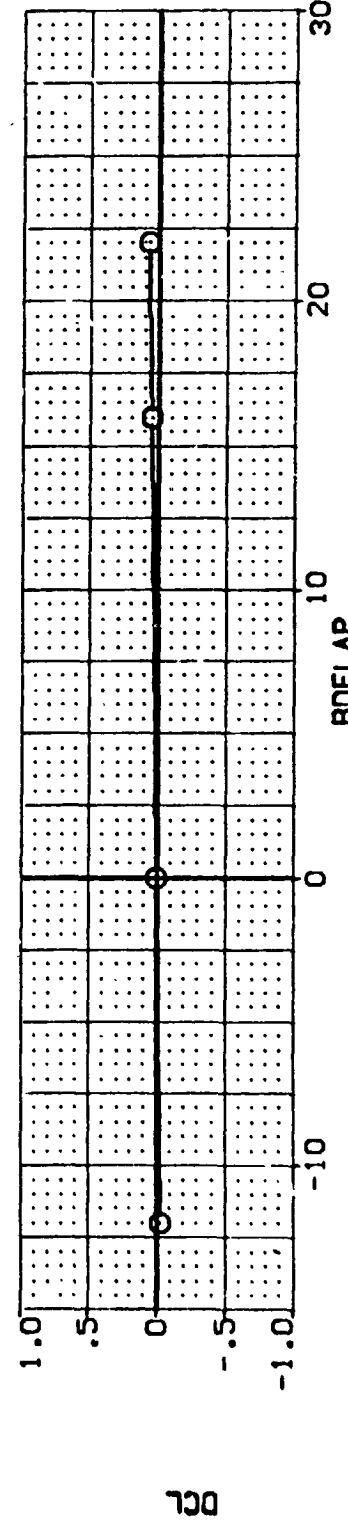
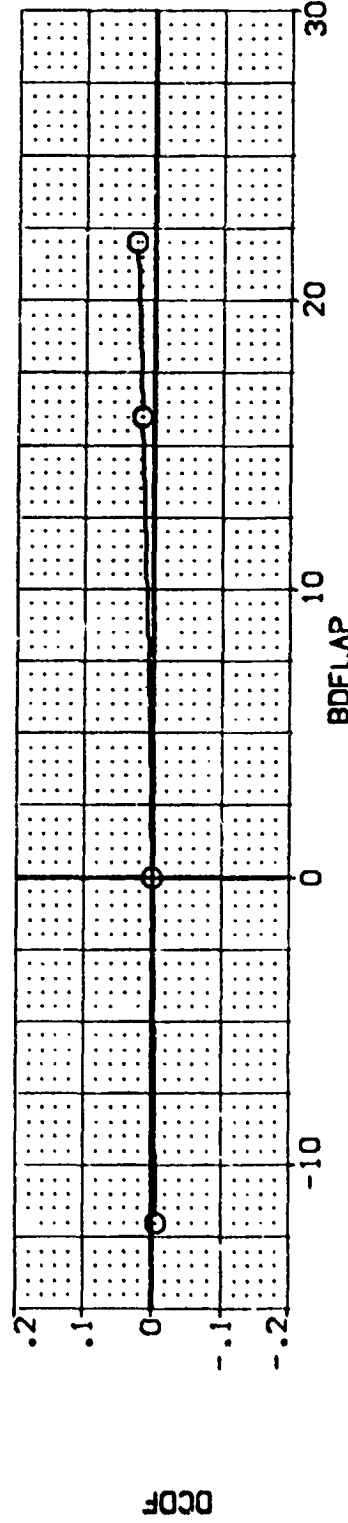
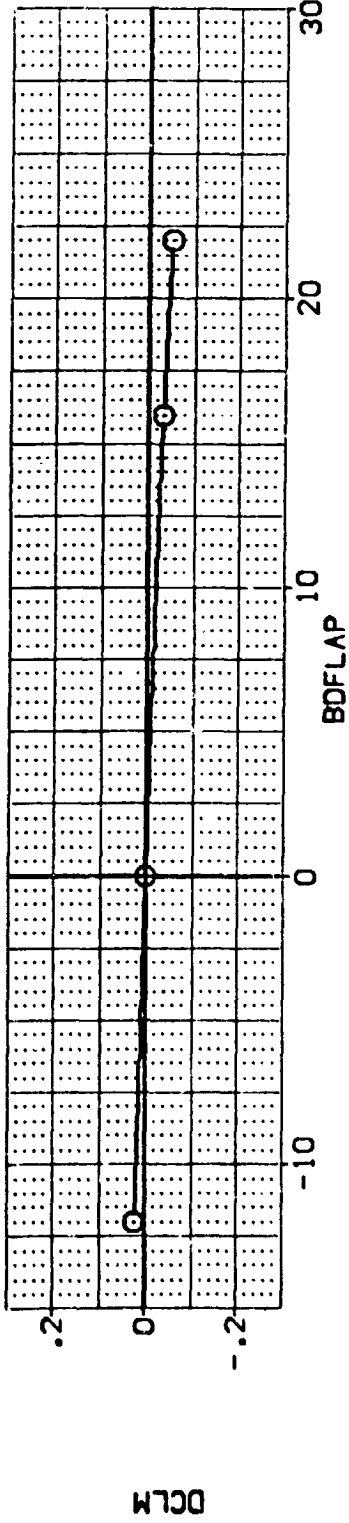


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 D26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	BOFLAP	BOFLAP	REFERENCE INFORMATION
O	20.000	A1LR0N	.200 DELVON	.000 JDZ117	.000 JDZ125	4.4119	50.FT.
		SPDRX	.000 RUDDER	.000 JDZ136	22.000	19.2288	INCHES
			25.000 BETA			37.9358	INCHES
						43.5574	INCHES
						15.0000	INCHES
						15.1875	INCHES
						.0405	SCALE

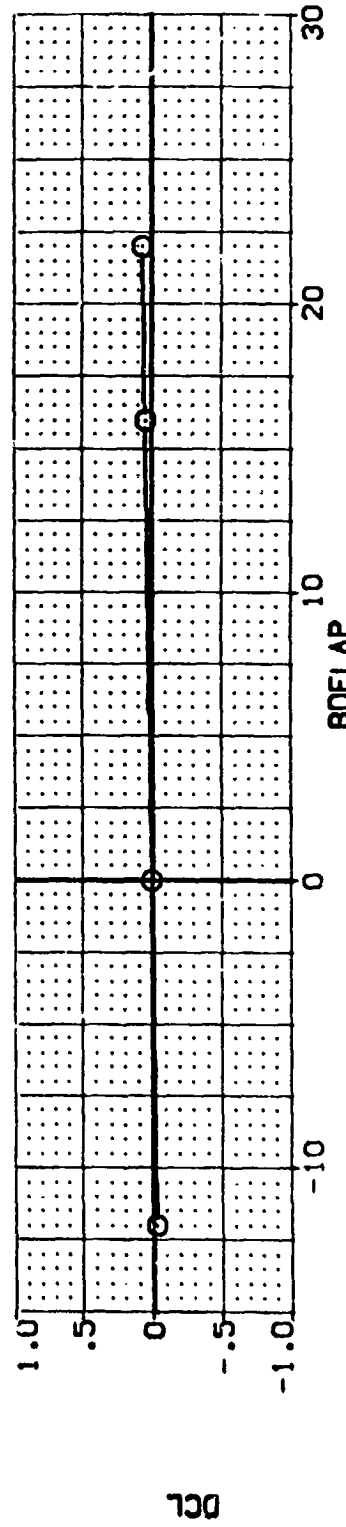
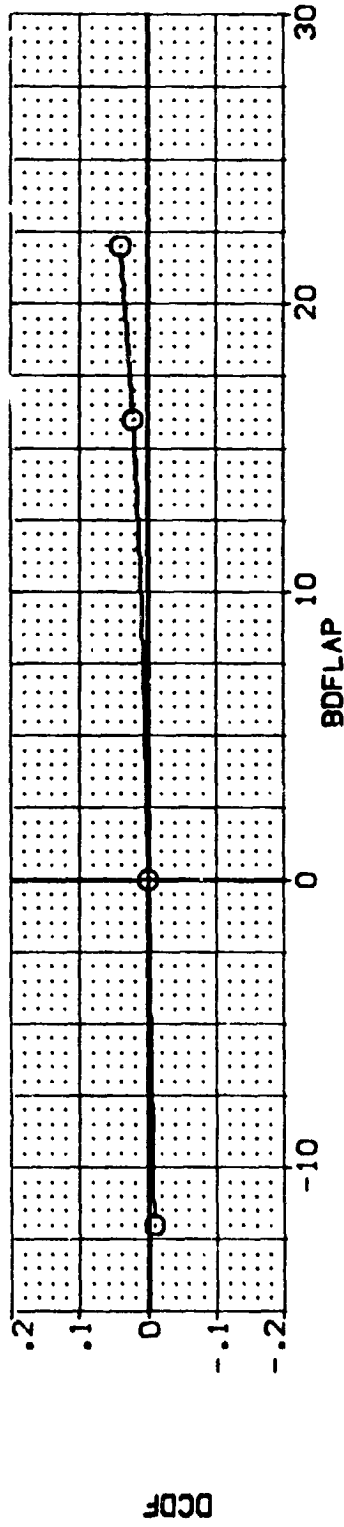
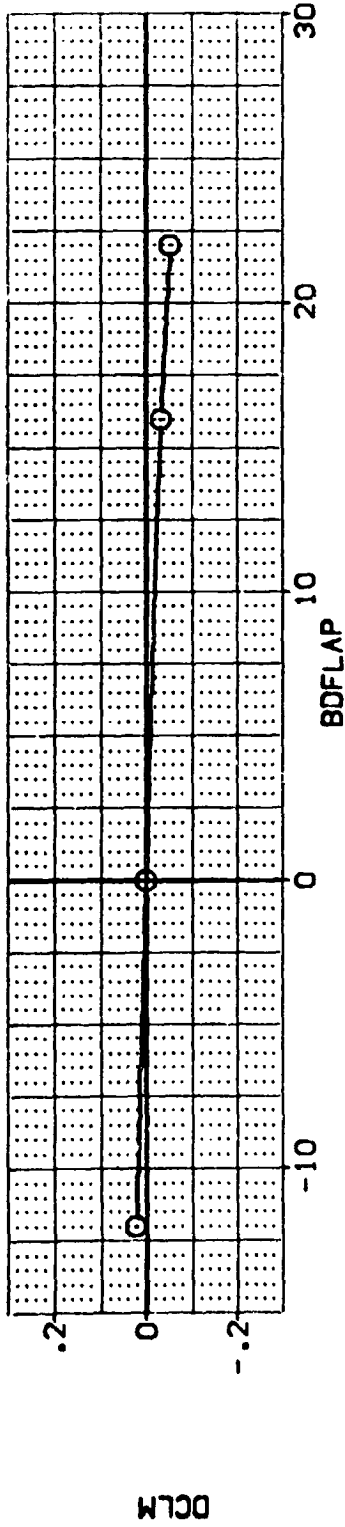


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(J0Z117)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	BDFLAP	SREF	REFERENCE INFORMATION
○	22.000		.200 DELVON	.000 DATASET	J0Z117	.000	4.419	SO, FT.
			.000 RUDDER	.000 J0Z117	J0Z135	.000	19.2399	INCHES
			25.000 BETA	.000 J0Z136	J0Z137	22.000	37.9359	INCHES
							43.5974	INCHES
							.000	INCHES
							15.1675	INCHES
							.0405	SCALE

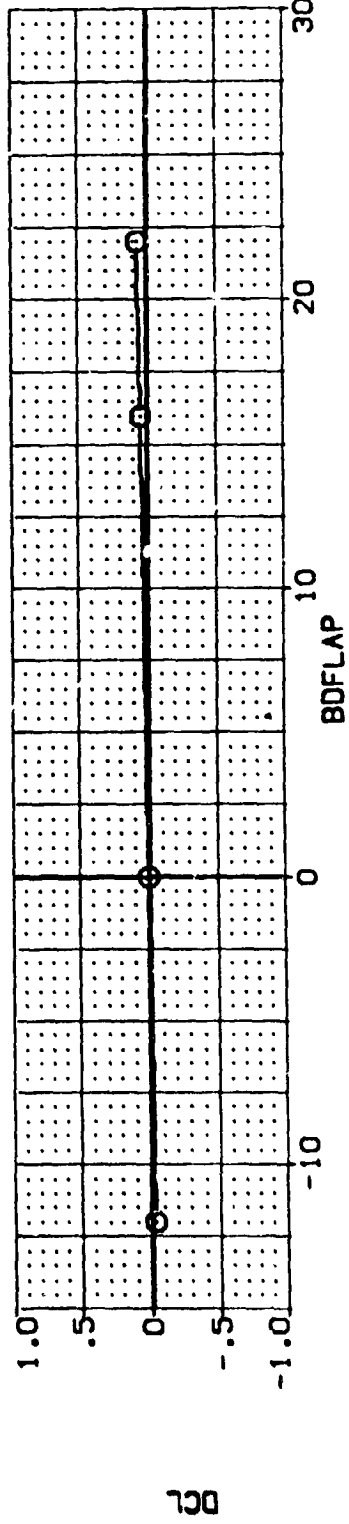
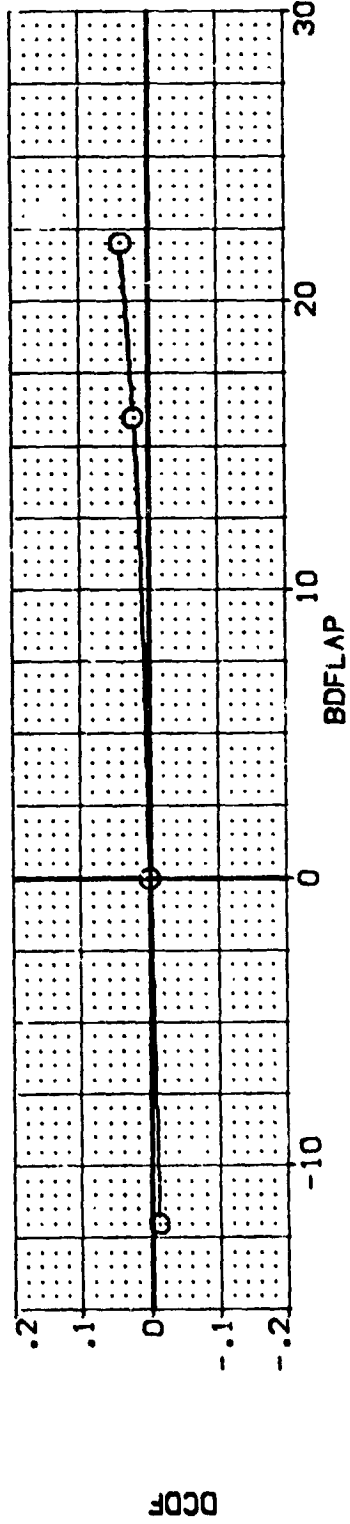
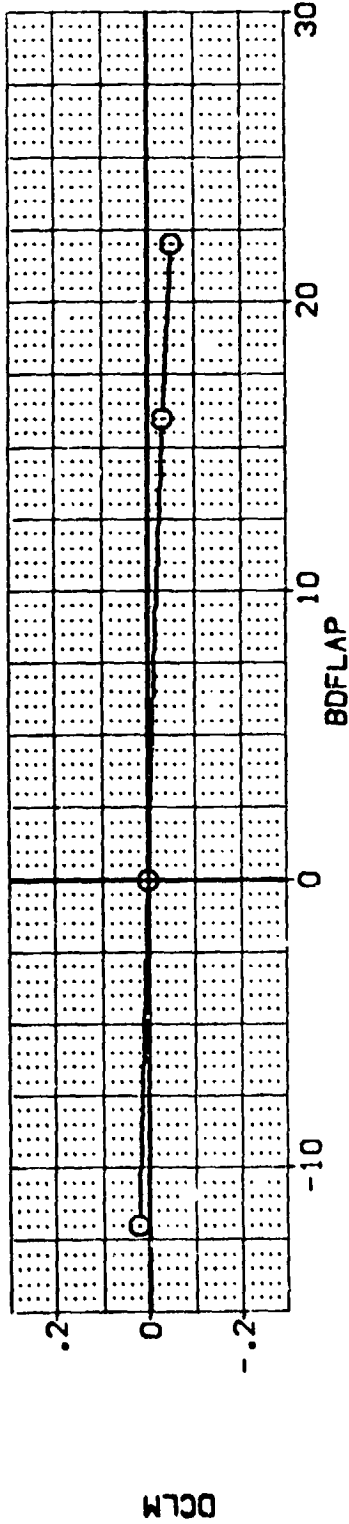


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	24.000	MURON	.200 DELVON	BOFLAP	4.4119 SQ.FT.
		SPOBRK	.000 RUDDER	BOFLAP	19.2268 INCHES
			25.000 BETA	BOFLAP	37.5359 INCHES
				BOFLAP	43.5974 INCHES
				YMRP	.0000 INCHES
				ZMRP	15.1875 INCHES
				SCALE	.0405 SCALE

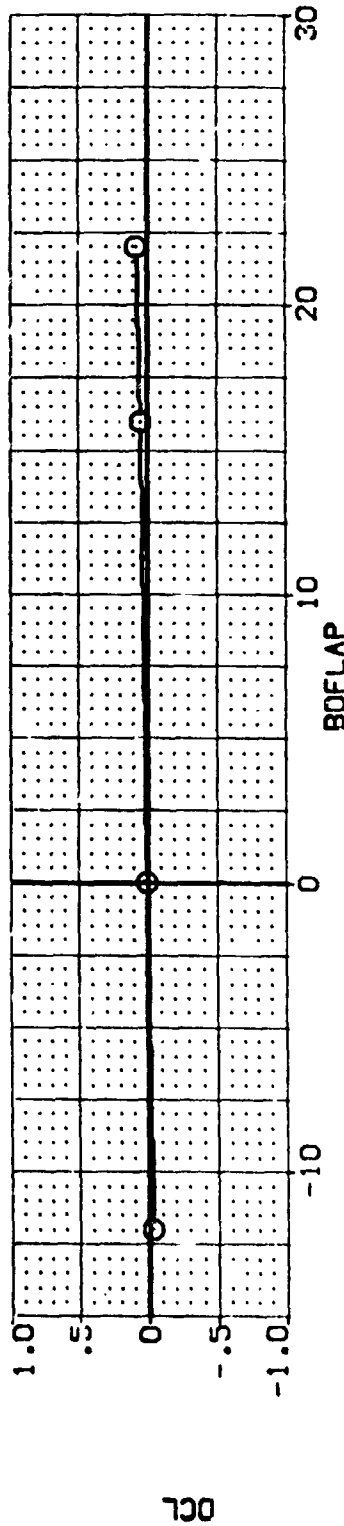
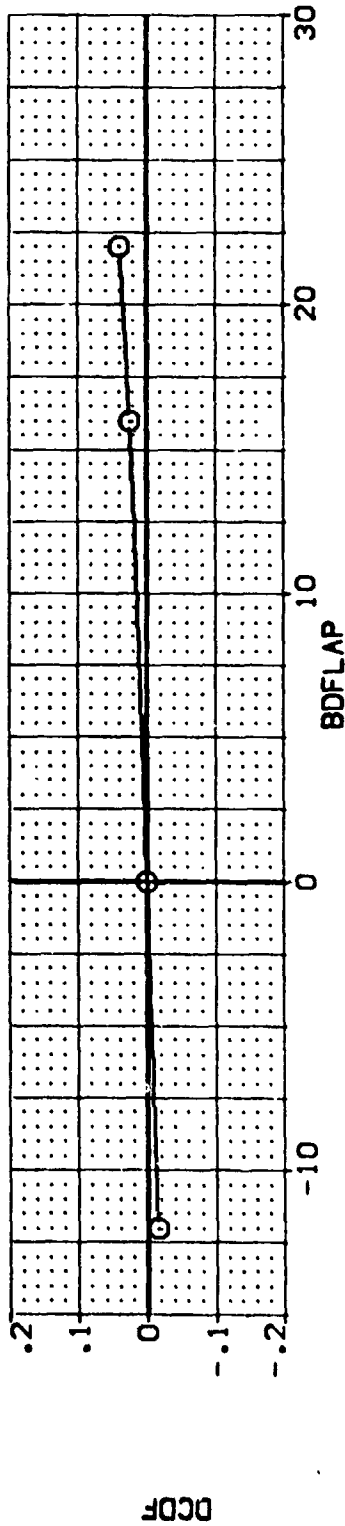
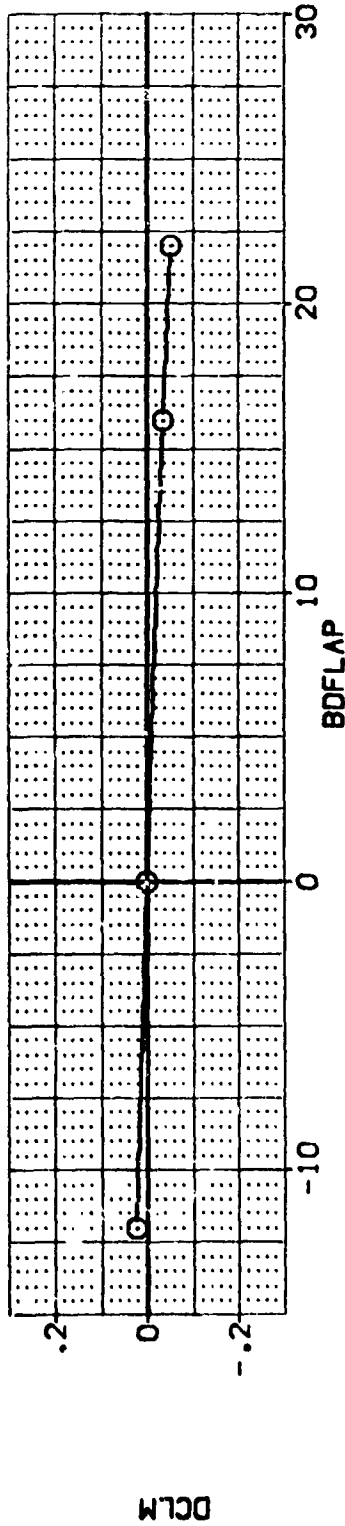


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

PARAMETRIC VALUES

MACH	.200
DELTA	.000
RUDDER	.000
BETA	25.000

DATA SOURCE

BOFLAP	-12.000
BOFLAP	16.000

DATASET

JDZ117
JDZ136

BOFLAP

REF	4.4119
REF	19.2269
REF	37.9359
REF	43.5974
REF	.0000
REF	15.1875
SCALE	.0405

REFERENCE INFORMATION

SO.FT.	4.4119
INCHES	19.2269
INCHES	37.9359
INCHES	43.5974
INCHES	.0000
INCHES	15.1875
SCALE	.0405

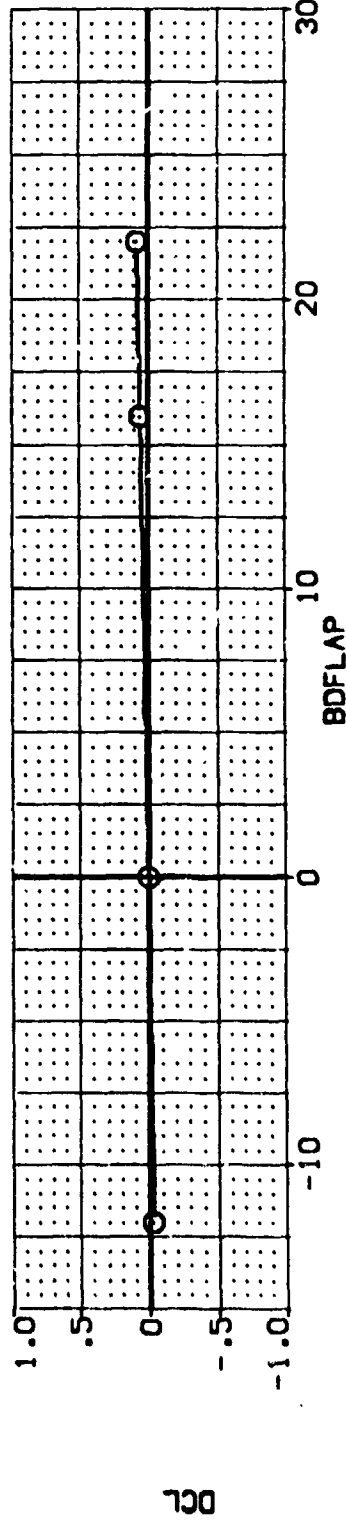
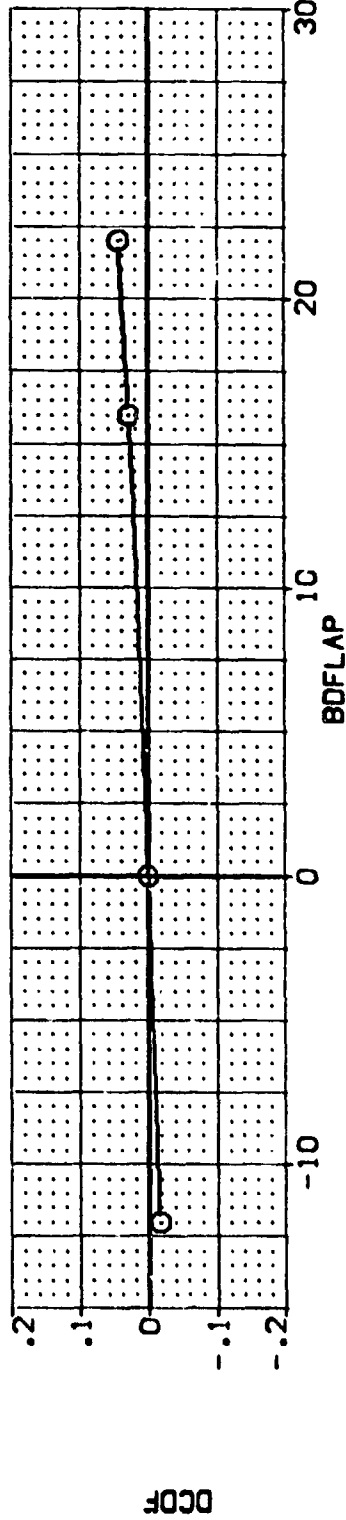
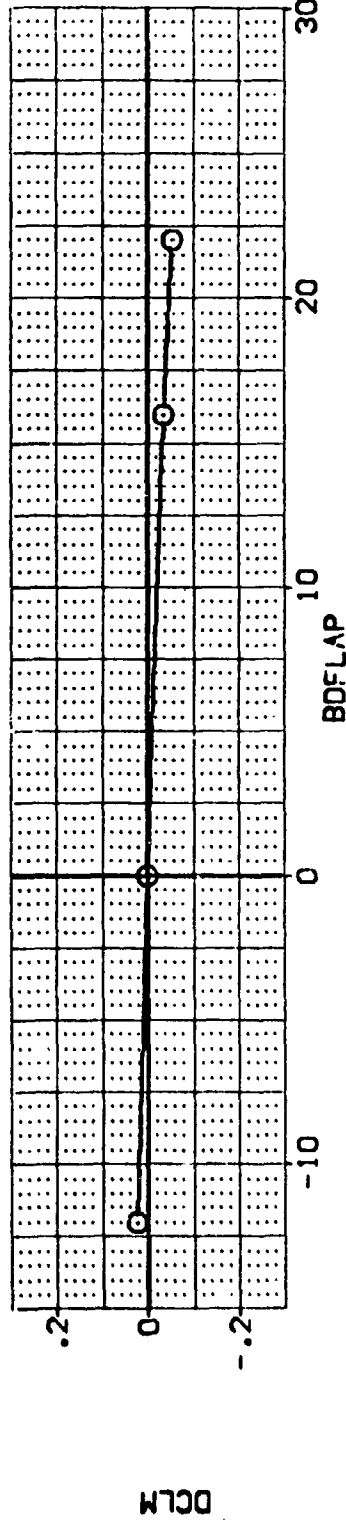


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

ST-60L	ALPHA	28.000	MACH	.200	DEL VON	.000	DATA SET	.000	DATA SOURCE	BOFLAP	BOFLAP	SREF	REFERENCE INFORMATION
○	AIRLON	.000	RUDDER	.000	JDZ117	-12.000	JDZ135	.000	LREF	.000	22.000	19.2299	SO.FT.
	SDBRK	25.000	BETA	.000	JDZ136	16.000	JDZ137	22.000	BREF	37.9359		43.5974	INCHES
									XGRP	15.0000		15.1873	INCHES
									ZGRP	.0405			SCALE

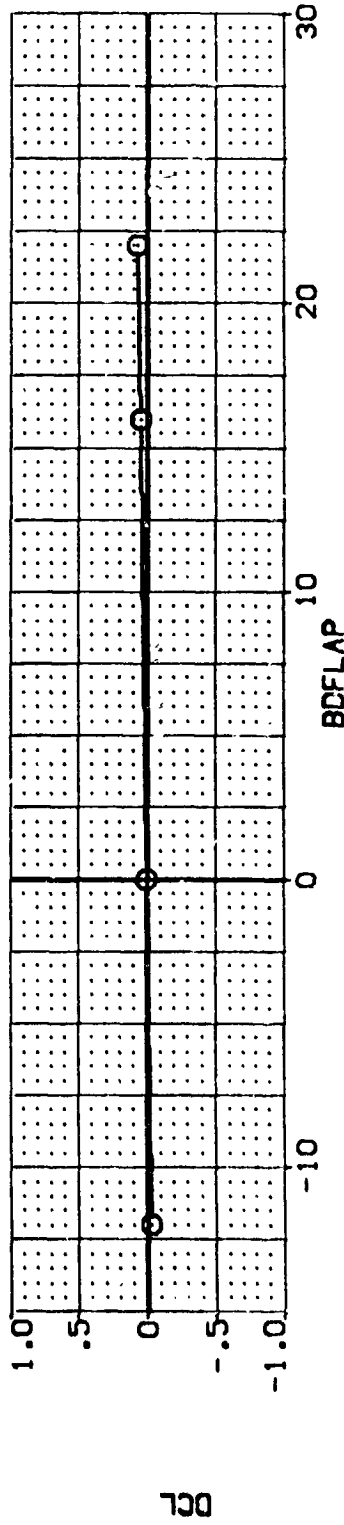
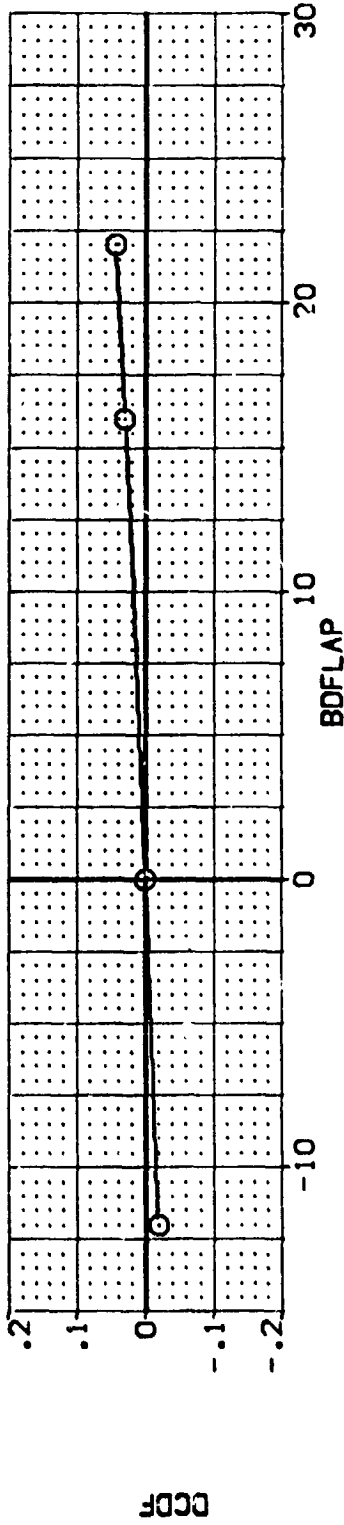
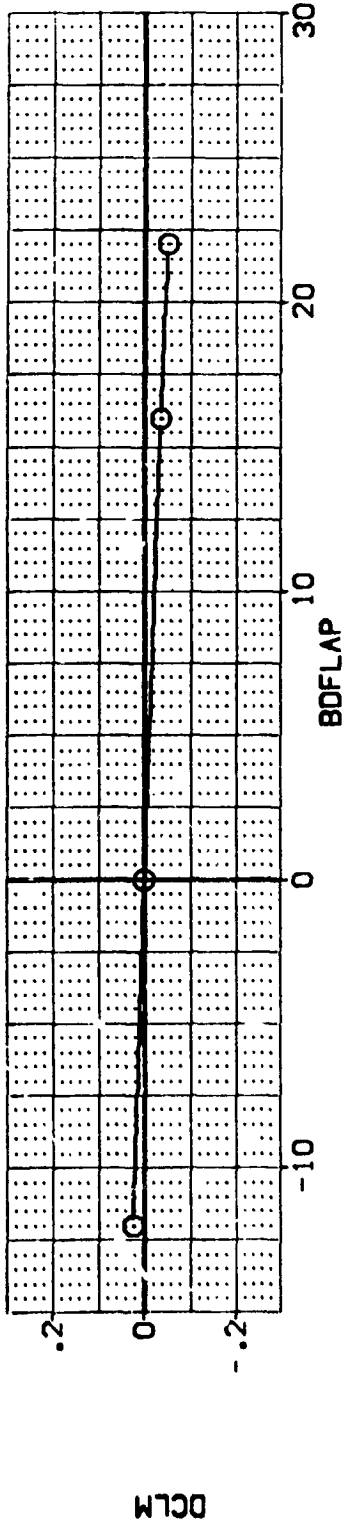


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (JDZ117)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	30.000	MACH	.000	SD.FT.	4.4119
A1LRON	.000	DELTON	.000	INCHES	19.2298
SPDRK	25.000	RUDDER	.000	INCHES	37.5359
		BETA	.000	INCHES	43.5574
				INCHES	.0000
				SCALE	15.1875
					.0405

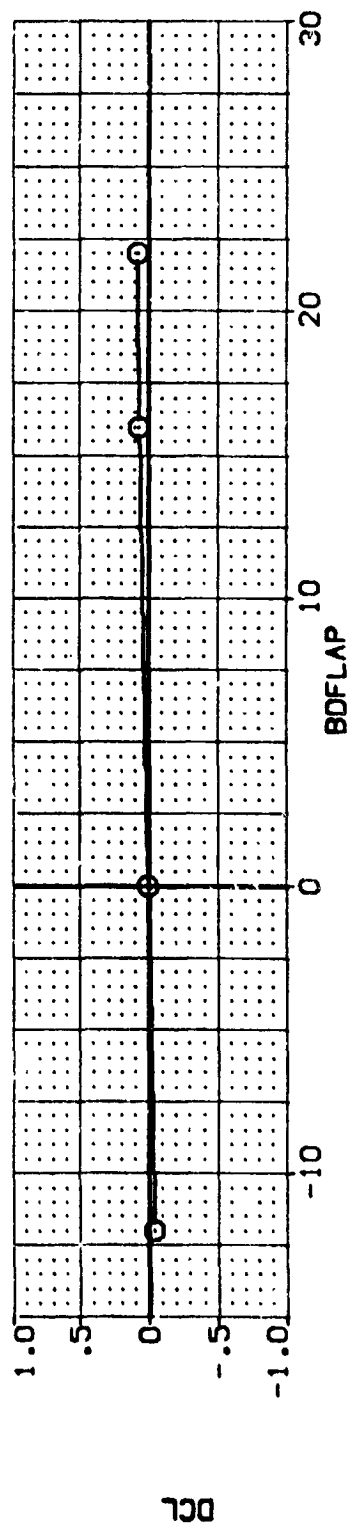
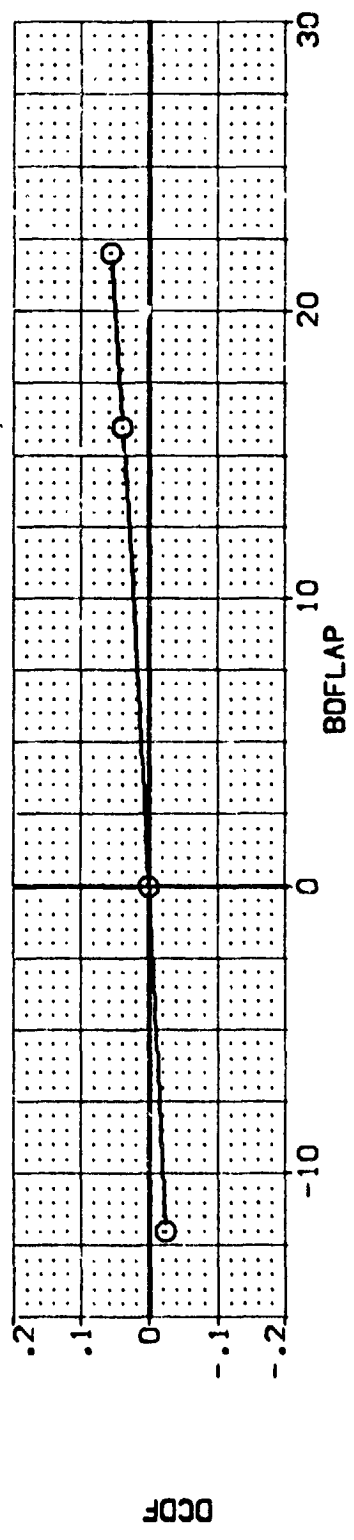
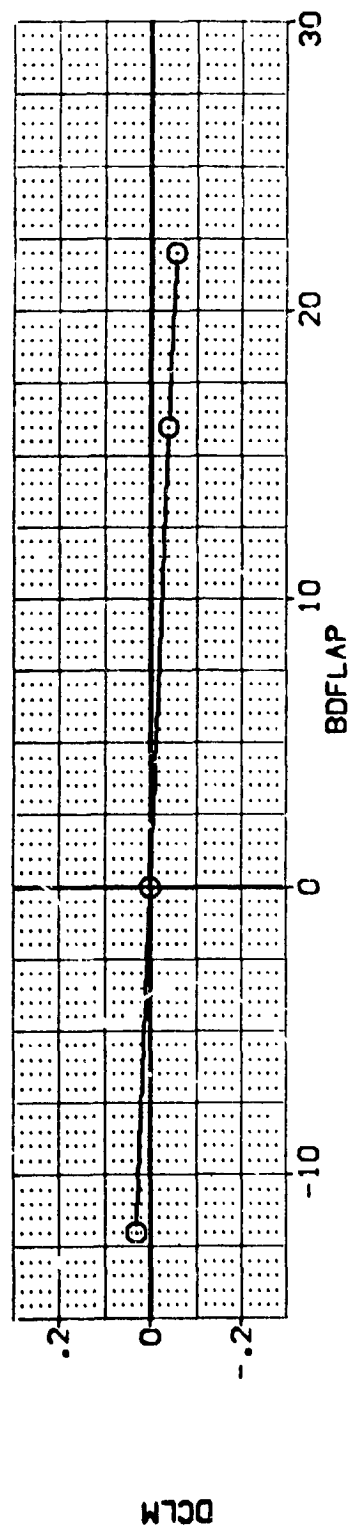


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A62B 826C9 M7F8 W116E28V8R5X3 (JDZ117)

SYMBOL O  
 ALPHA -4.000  
 MACH A1URCV  
 SPUBRK 25.000  
 PARAMETRIC VALUES  
 DELVON .200  
 RUDDER .000  
 BETA 25.000  
 DATA SOURCE  
 BOFLAP .000  
 DATASET JDZ117  
 BOFLAP -12.000  
 DATASET JDZ136  
 BOFLAP 22.000  
 DATASET JDZ137  
 REFERENCE INFORMATION  
 SO.FT. 4.419  
 INCHES 19.2289  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 SCALE .0405

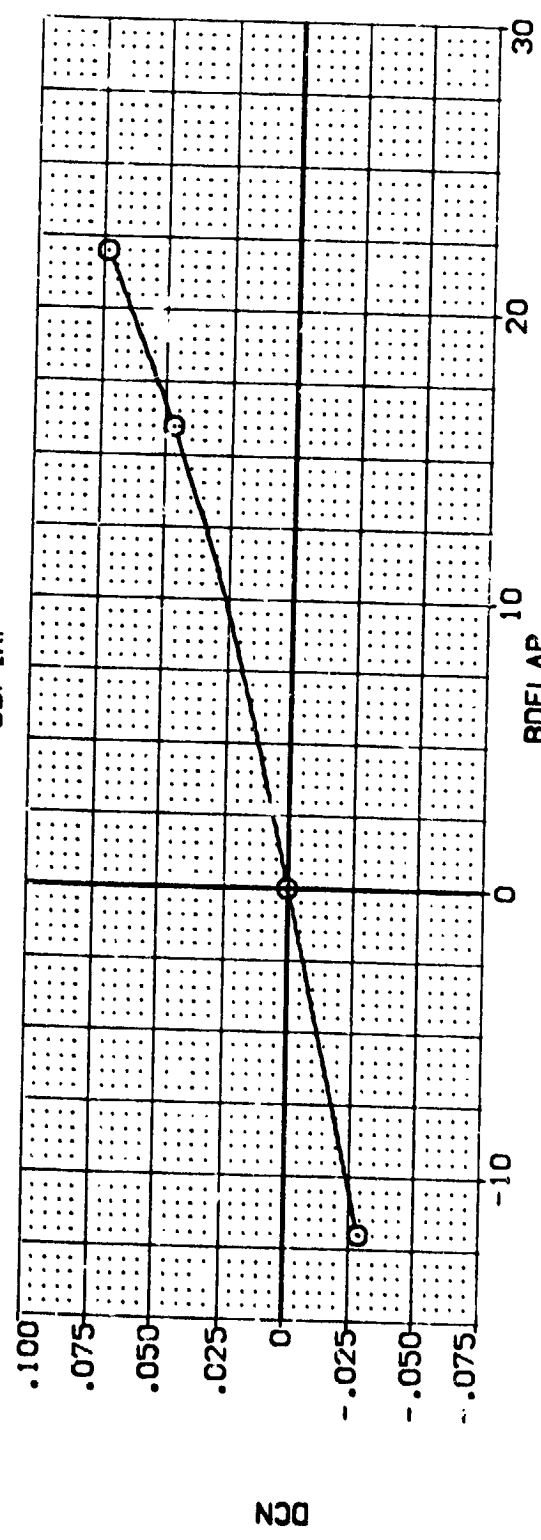
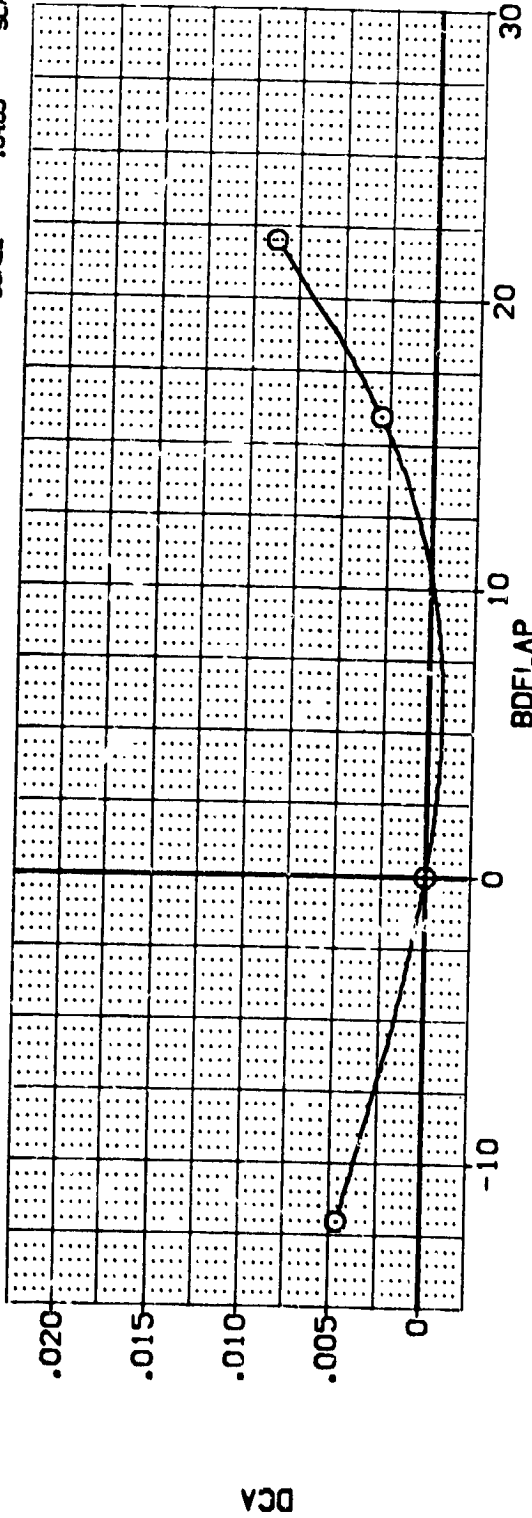


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

64

(JDZ117)

0A628 526C9 M7F8 W116E28V8R5X9

REFERENCE INFORMATION  
 SQ.FT. 4.4118  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 SCALE .0405

DATA SOURCE  
 BOFLAP BOFLAP  
 DATASET DATASET  
 JDZ117 JDZ135  
 JDZ136 JDZ137

PARAMETRIC VALUES  
 DELVON .200  
 RUDDER .000  
 BETA 25.000

MACH AILRON SPOBRK  
 -2.000  
 .000  
 .000

SYMBOL  
 O

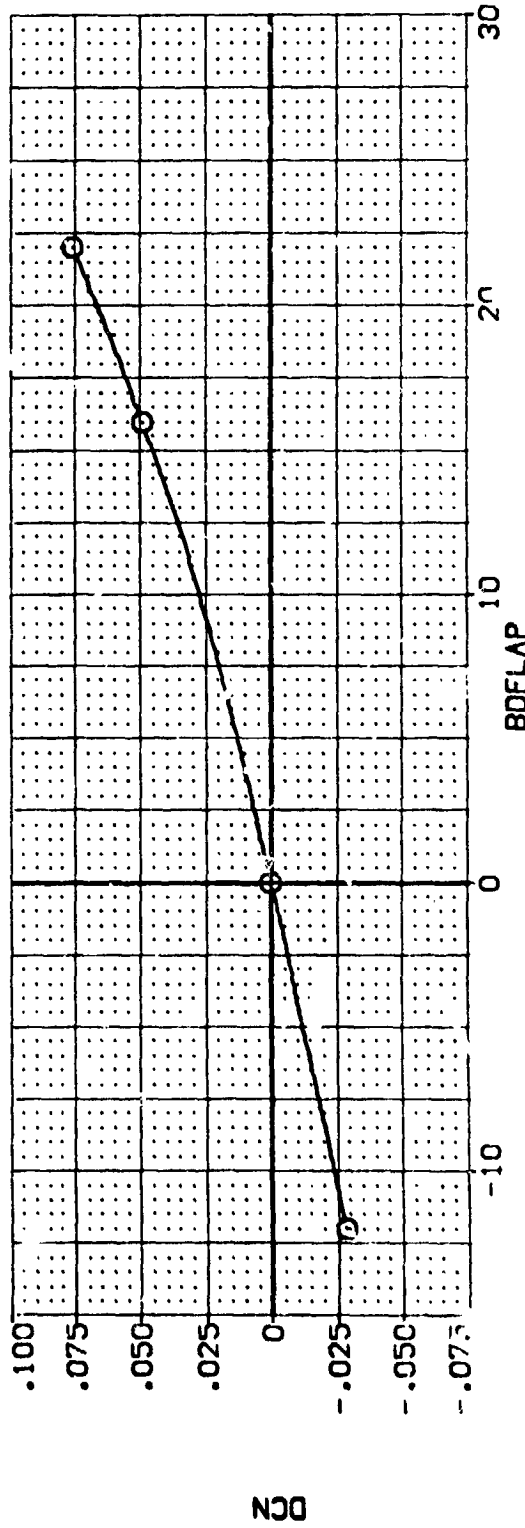
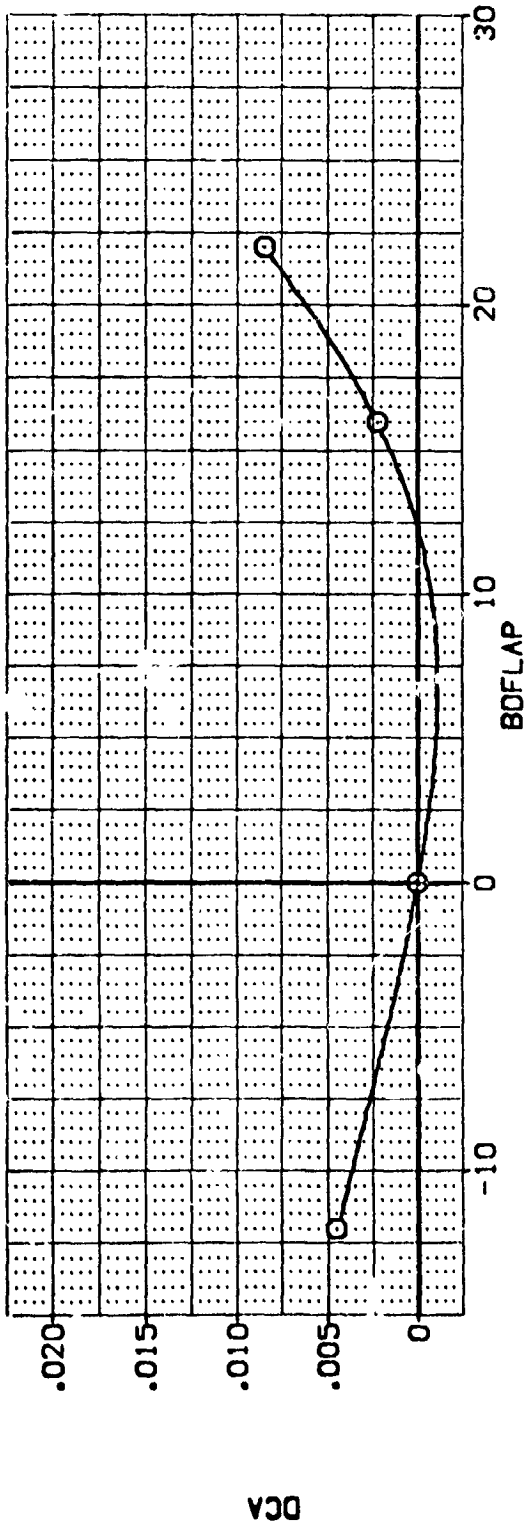


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C3 M7F8 W116E28V8R5X9 (JDZ117)

SYMBL ALPHA MACH PARAMETRIC VALUES DATA SOURCE REFERENCE INFORMATION

0	-1.000	MACH	.200	DELIVN	.000	JDZ117	BOFLAP	-12.000	JDZ135	BOFLAP	.000	SREF	4.1119	SO.FT.
		AILTRN	.000	RUDDER	.000	JDZ117	BOFLAP	16.000	JDZ137	BOFLAP	22.000	LREF	19.2299	INCHES
		SPOBRK	25.000	BETA	.000	JDZ136						BREF	37.9359	INCHES
												XTRP	43.5974	INCHES
												ZTRP	15.0000	INCHES
												SCALE	.0405	SCALE

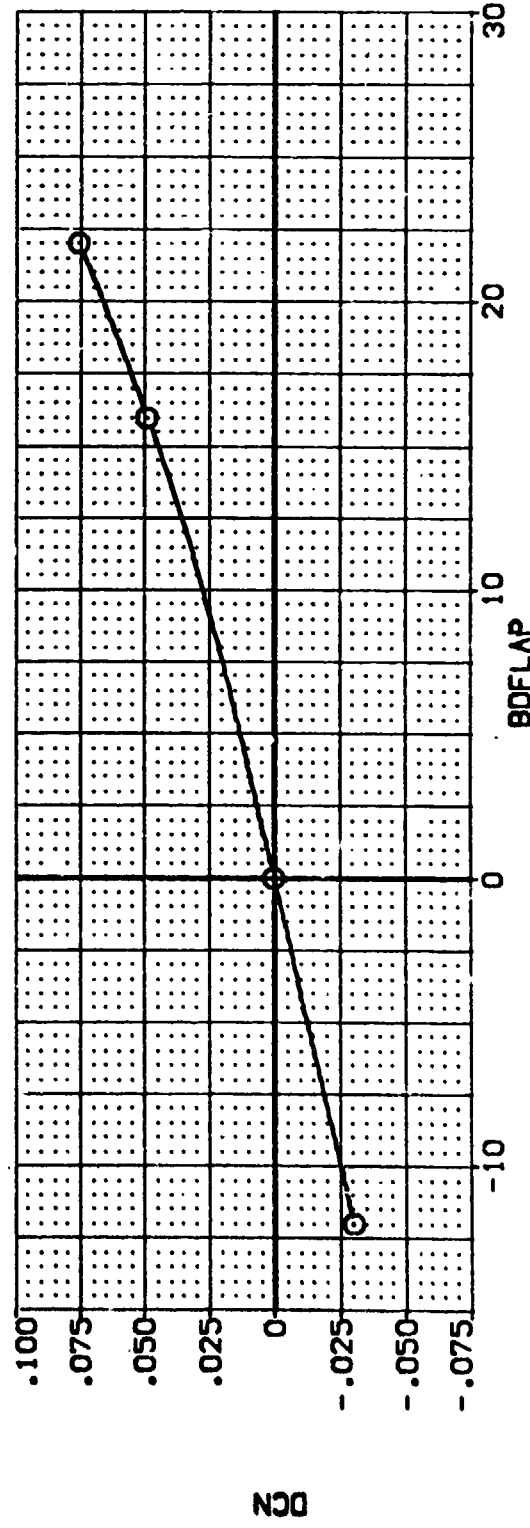
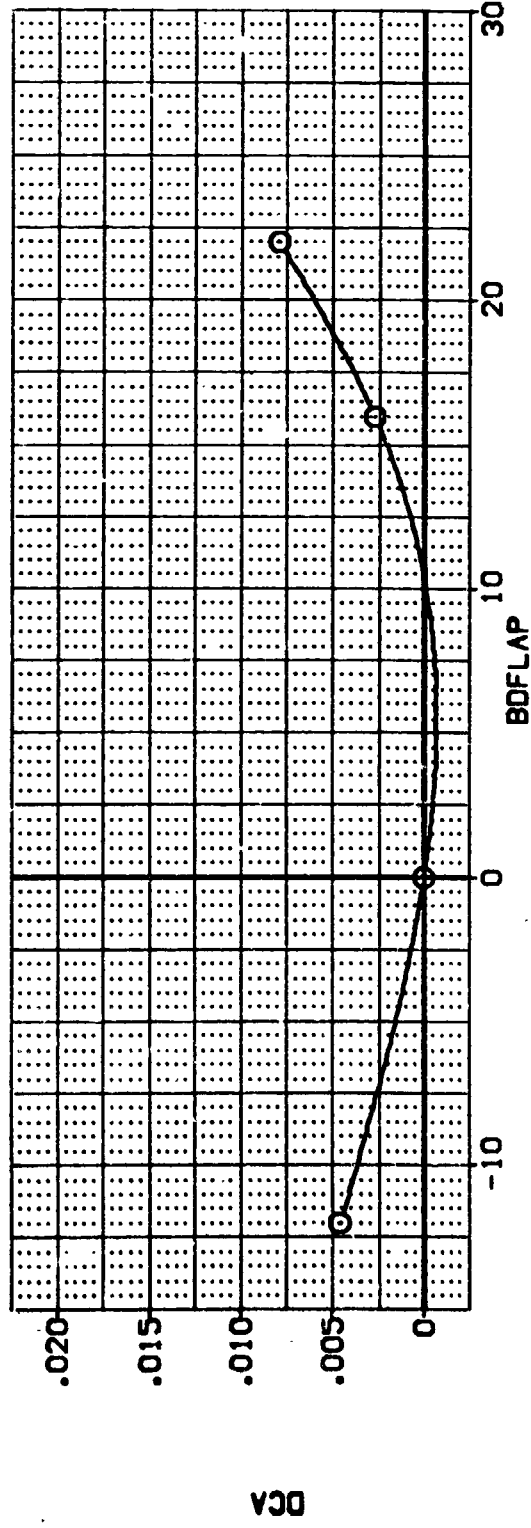


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(J02117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL O

ALPHA .000

MACH AILRON SPDRK 25.000 BETA

PARAMETRIC VALUES

.200 DELVON

.000 RUDDER

.000 J02117

.000 J02136

DATA SOURCE

BOFLAP -12.000

J02135

J02137

BOFLAP 22.000

REF

LREF

SRF

SRF

TRP

TRP

ZTRP

SCALE

4.4119

19.2299

37.9339

43.5974

.0000

.0000

15.1875

.0405

SO.FT

INCHES

INCHES

INCHES

INCHES

INCHES

SCALE

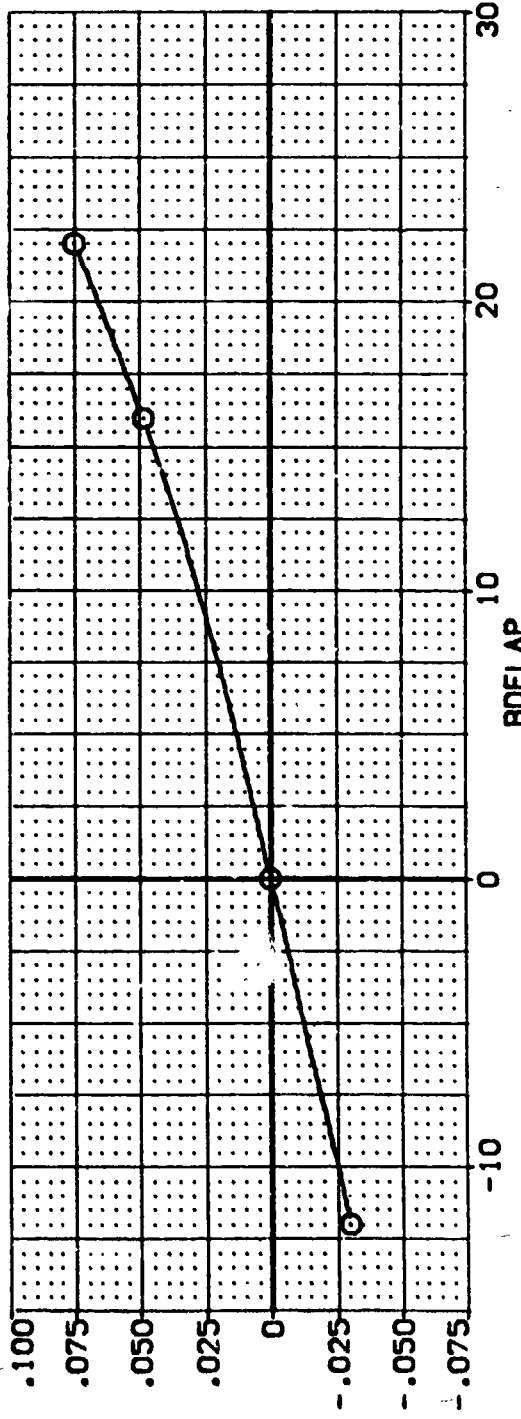
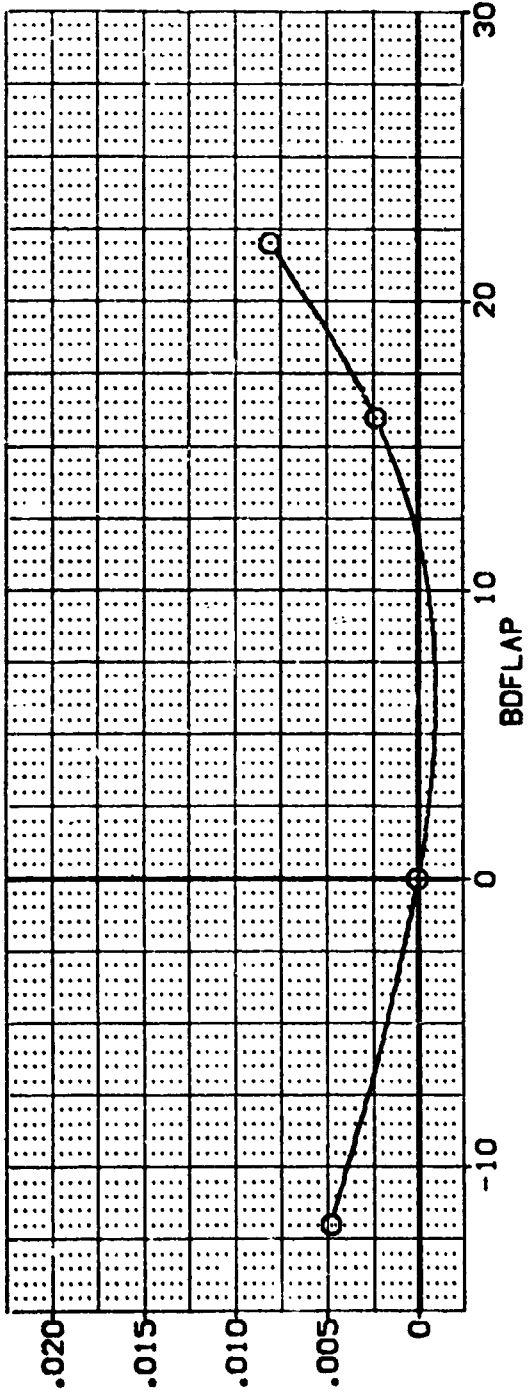


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	BOFLAP	DATESET	BOFLAP	REF	REFERENCE INFORMATION
○	1.000	.200	DELTON	.000 JDZ117	-12.000	JDZ117	.000	LINEF	90.FT.
		.000	RUDER	.000 JDZ136	16.000	JDZ137	22.000	BRKF	19.2259
		25.000	BETA					YREF	37.9359
								ZREF	43.5974
								YRPS	.0000
								ZRPS	19.1875
								SCALE	INCHES
									SCALE

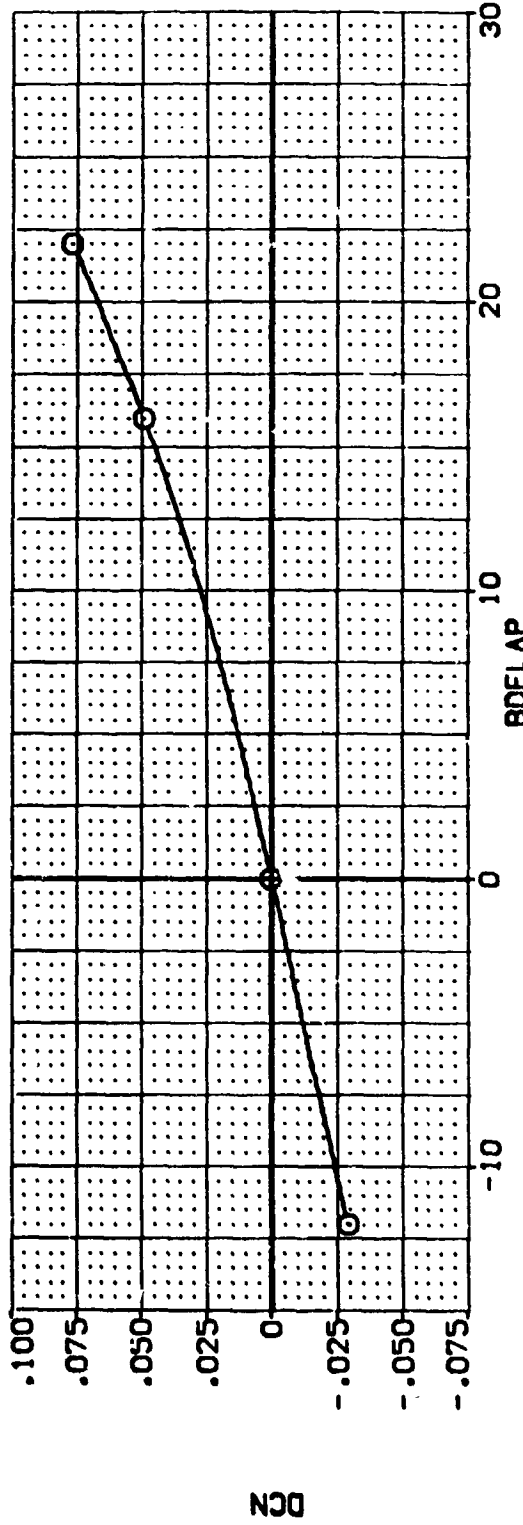
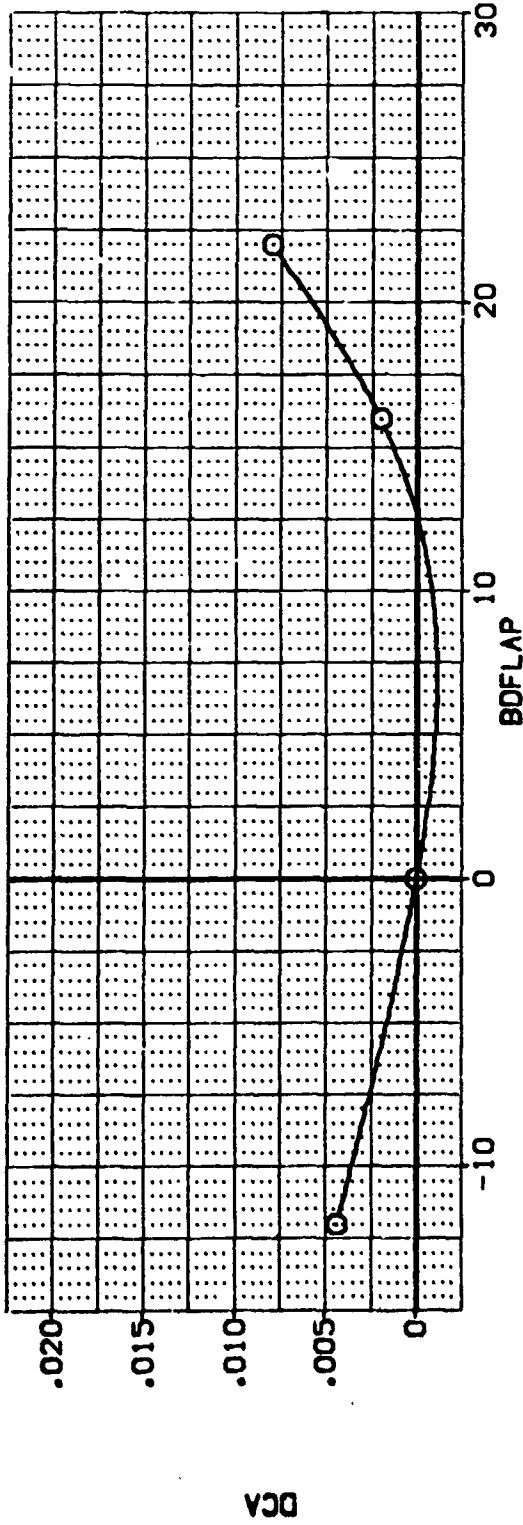


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	2.000	AILRON	.200 DELVON	.000 DATASET	4.4119 SQ.FT.
		SPOBRK	.000 RUDDER	.000 BDFLAP	19.2289 INCHES
			25.000 BETA	.000 BDFLAP	37.9359 INCHES
				22.000 BDFLAP	43.5974 INCHES
				YMRP	0.000 INCHES
				ZMRP	15.1875 INCHES
				SCALE	.0405 INCHES

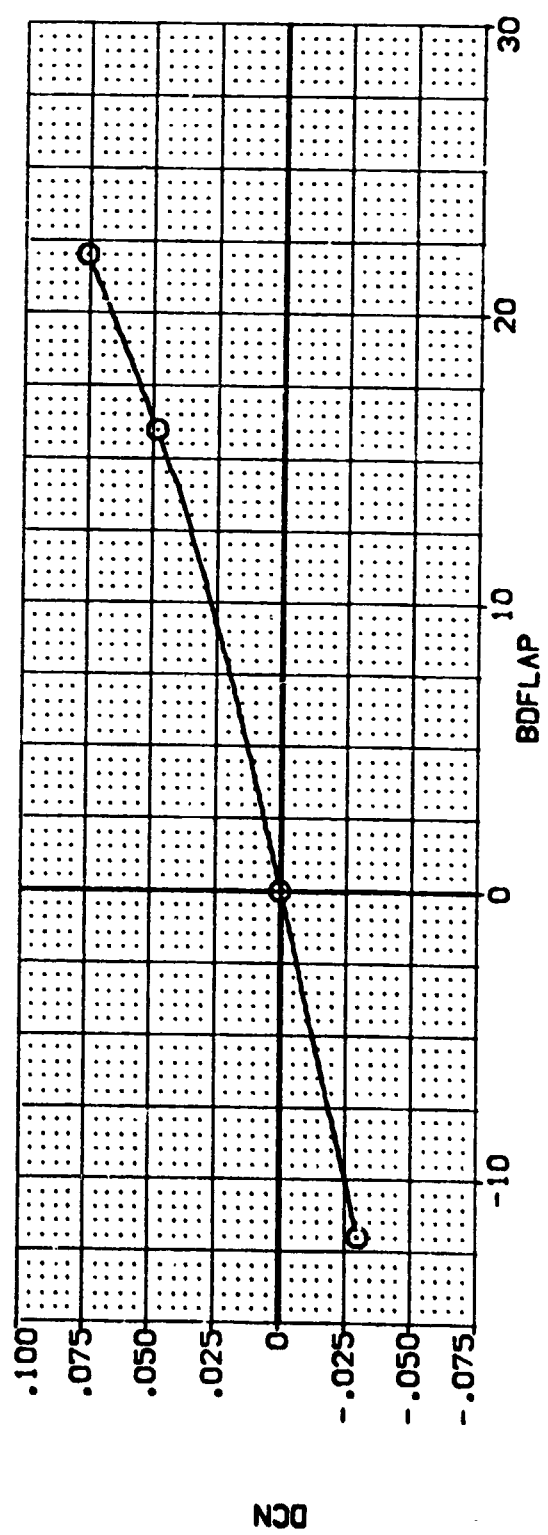
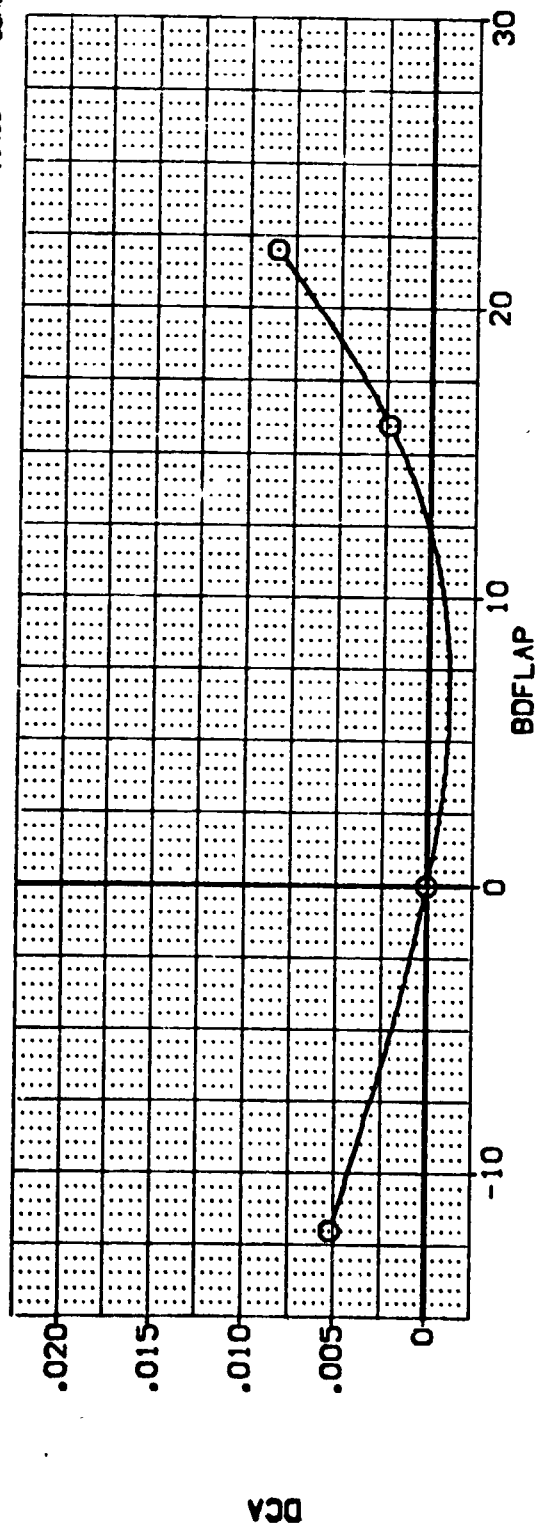
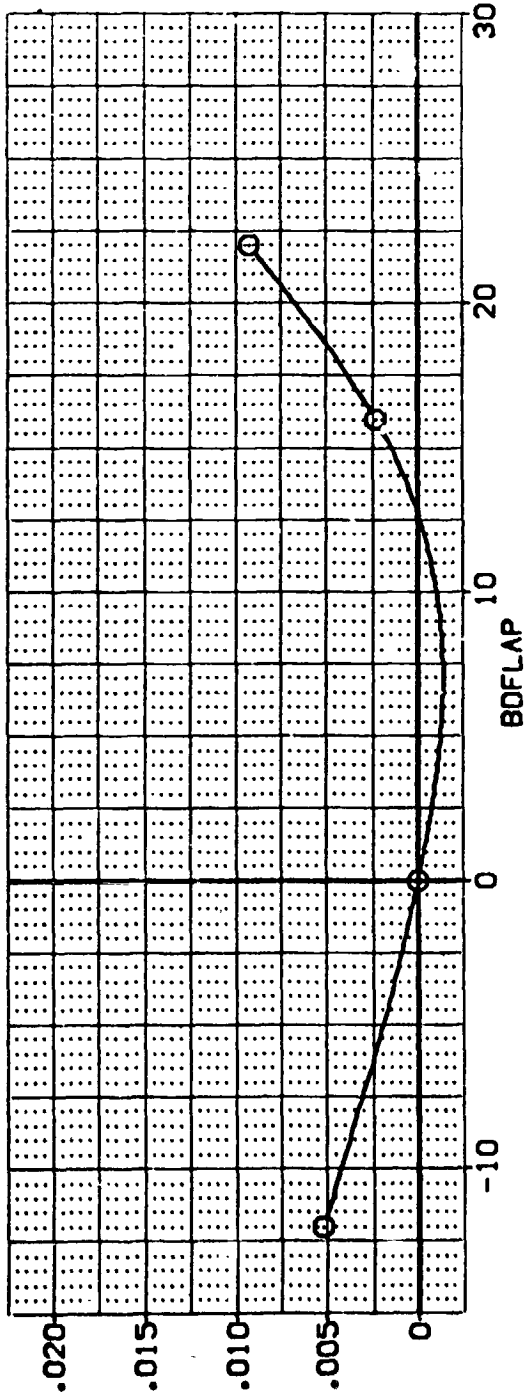


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

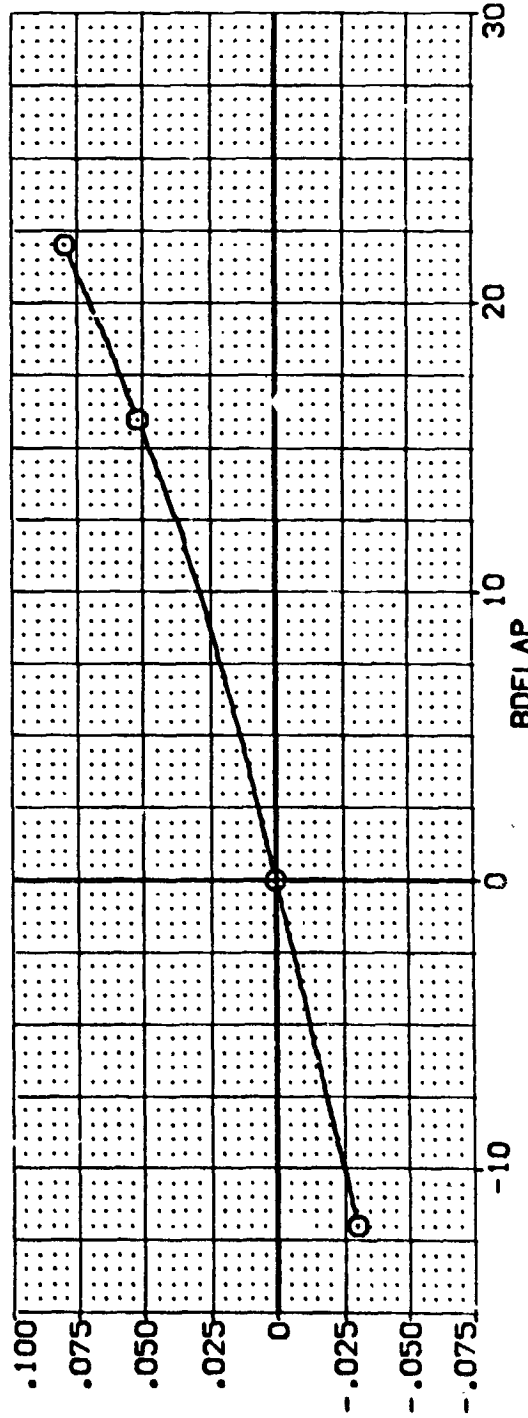
(JDZ117)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	BDFLAP	SNET	REFERENCE INFORMATION
O	4.000	A1URON	.200 DELVON	.000 DATASET	.000	REF	SO.FT.
		SPOBRK	.000 RUDDER	.000 JDZ117	22.000	REF	INDES
			25.000 BETA	.000 JDZ136		XTRP	INDES
						YTRP	INDES
						ZTRP	INDES
						SCALE	SCALE
							15.1875
							.0405



DCA



DCN

FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(J0Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	BDFLAP	REF	REFERENCE INFORMATION
0	6.000	A1URON	.200 DELVON	.000 DATASET	.000	4.4118	SQ.FT.
		SPOBRK	.000 RUDDER	J0Z117	.000	19.7288	INCHES
			25.000 BETA	J0Z136	22.000	37.9359	INCHES
				J0Z137		43.9974	INCHES
						.0000	INCHES
						15.1875	INCHES
						.0405	SCALE

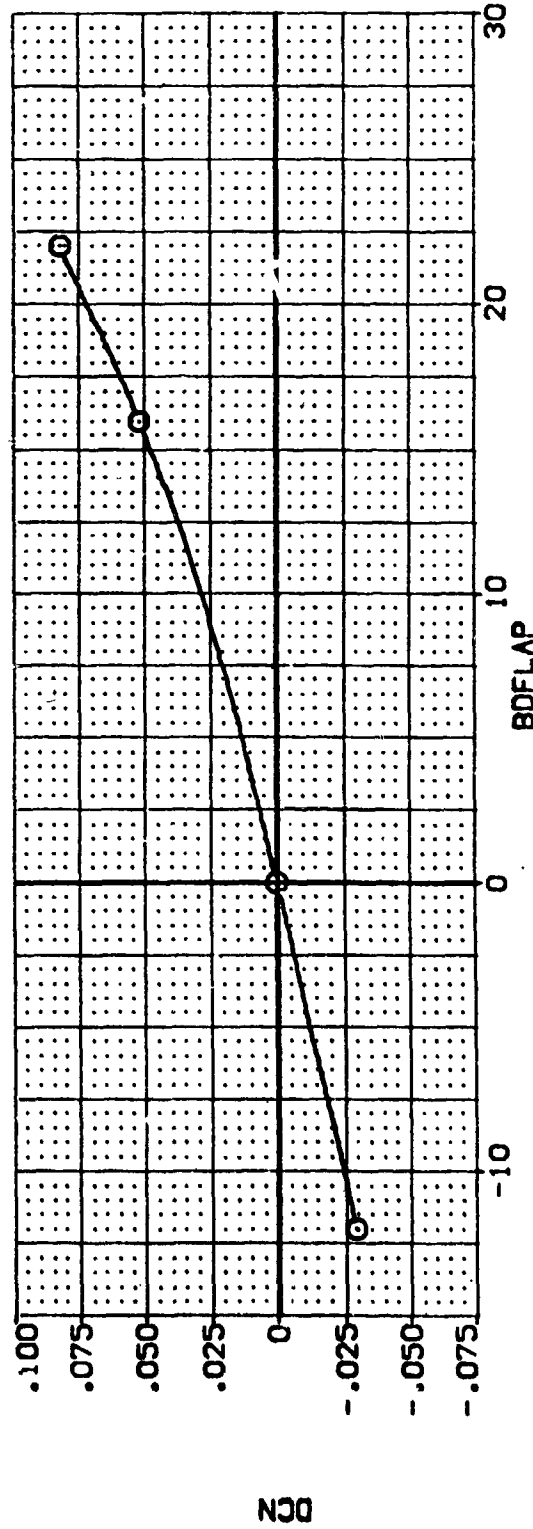
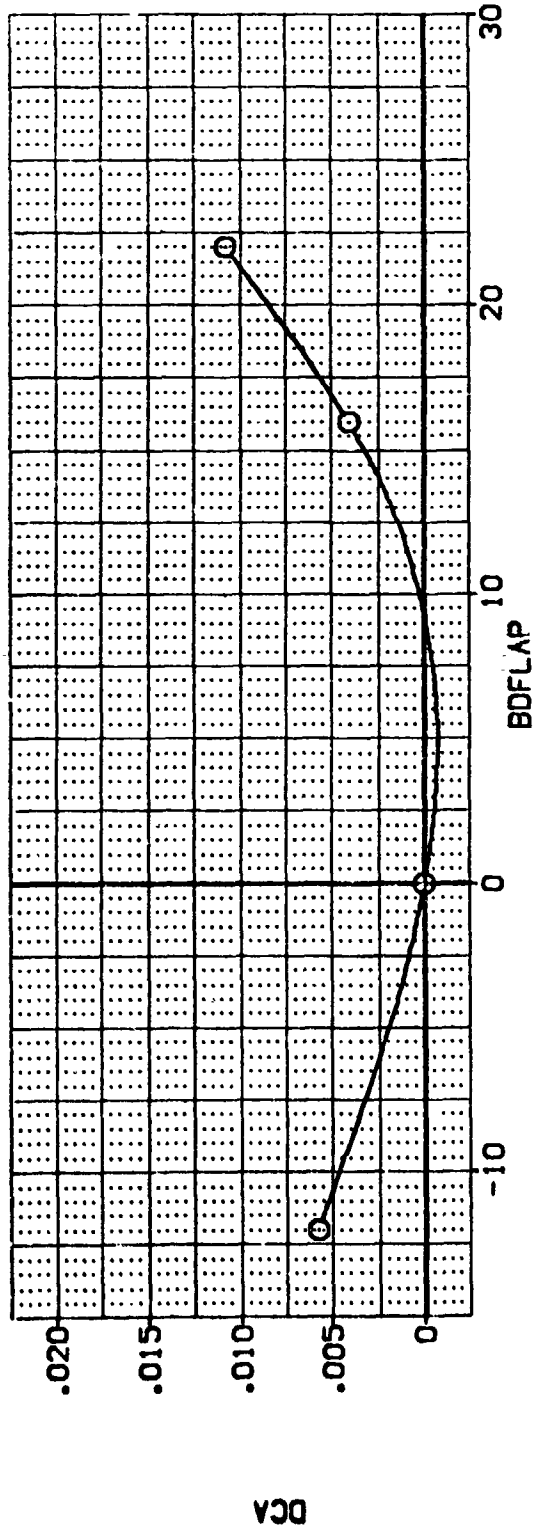


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (J0Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	BOFLAP	SREF	REFERENCE INFORMATION
O	8.000	A1LR0N	.200 DELVON	BOFLAP	J0Z117	.000	4.4119	SO.FT.
		SPOBRK	.000 RUDDER	-12.000	J0Z135	.000	19.7288	INCHES
			25.000 BETA	16.000	J0Z137	22.000	37.9539	INCHES
							43.9574	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

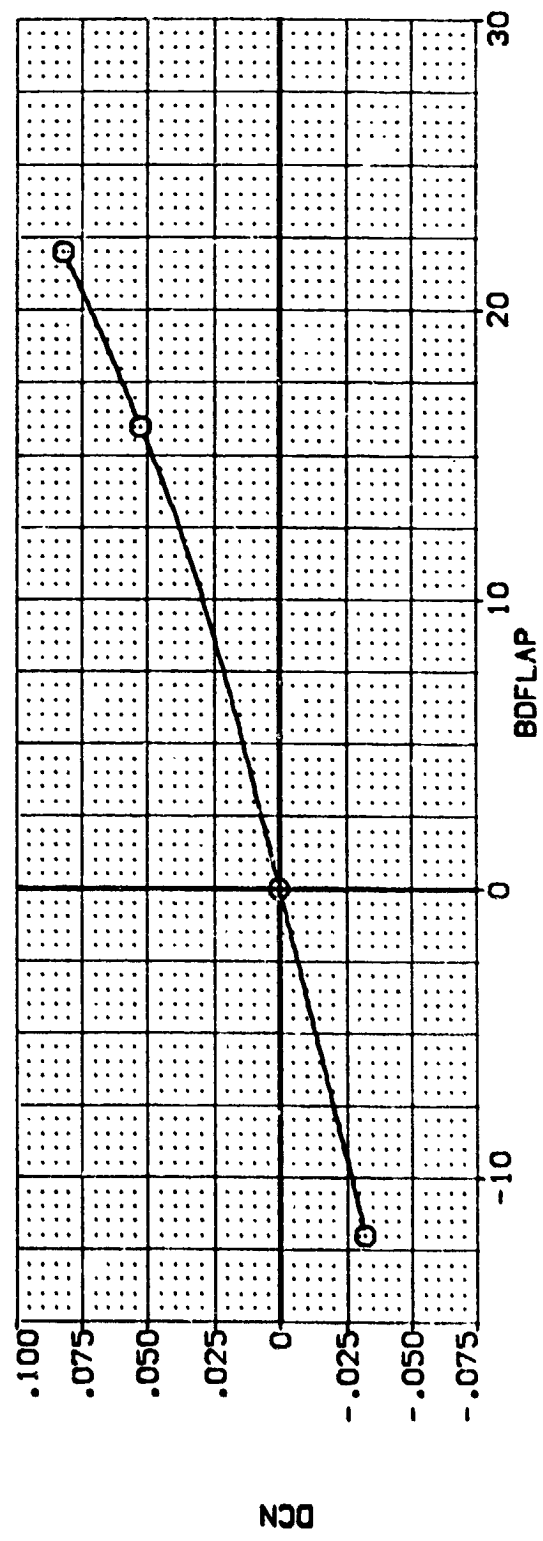
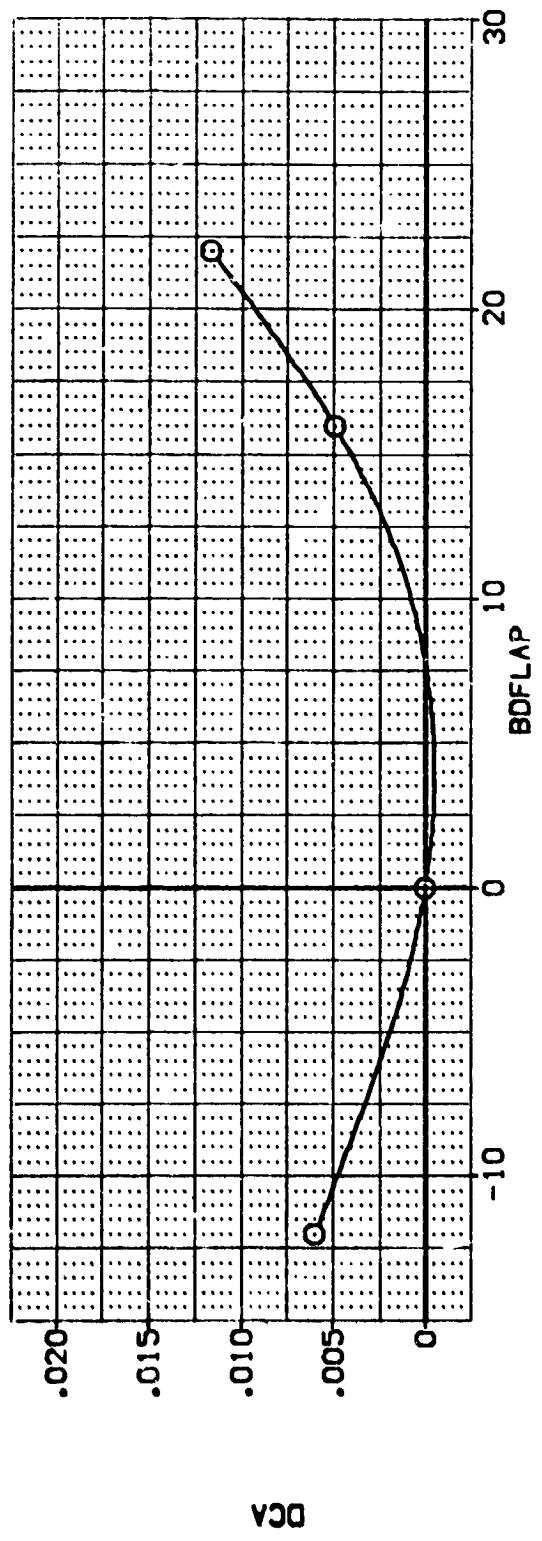


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL O

ALPHA 10.000

MACH ATURON SPDRBK

PARAMETRIC VALUES  
 .200 DELVON  
 .000 RUDDER  
 25.000 BETA

DATA SOURCE  
 .000 DATASET  
 .000 JDZ117  
 .000 JDZ136

BDFLAP -12.000  
 16.000

DATASET  
 JDZ135  
 JDZ137

BDFLAP .000  
 22.000

REFL  
 XMRP  
 ZMRP  
 SCALE

REFERENCE INFORMATION  
 4.4118 SQ.FT.  
 19.2289 INCHES  
 37.5359 INCHES  
 43.5974 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE

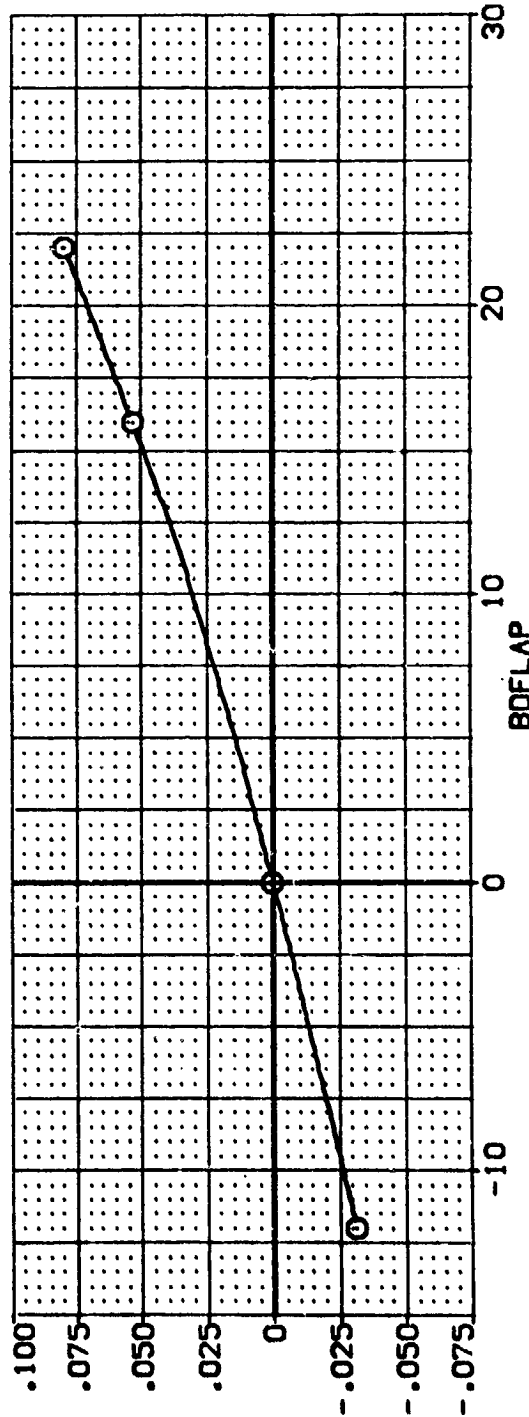
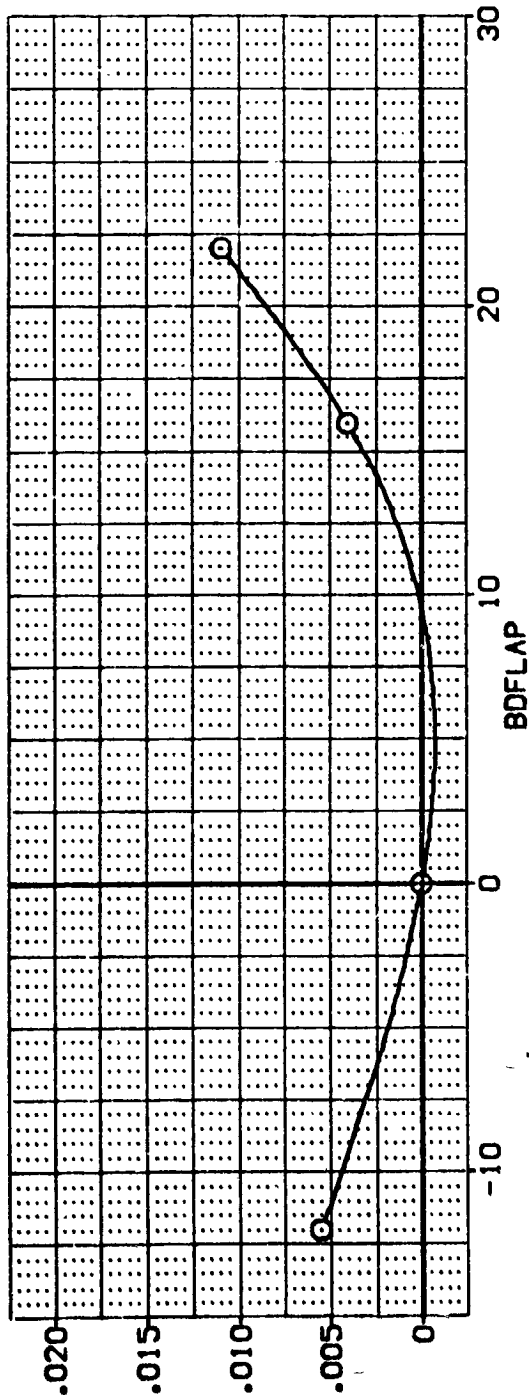


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL O

PARAMETRIC VALUES

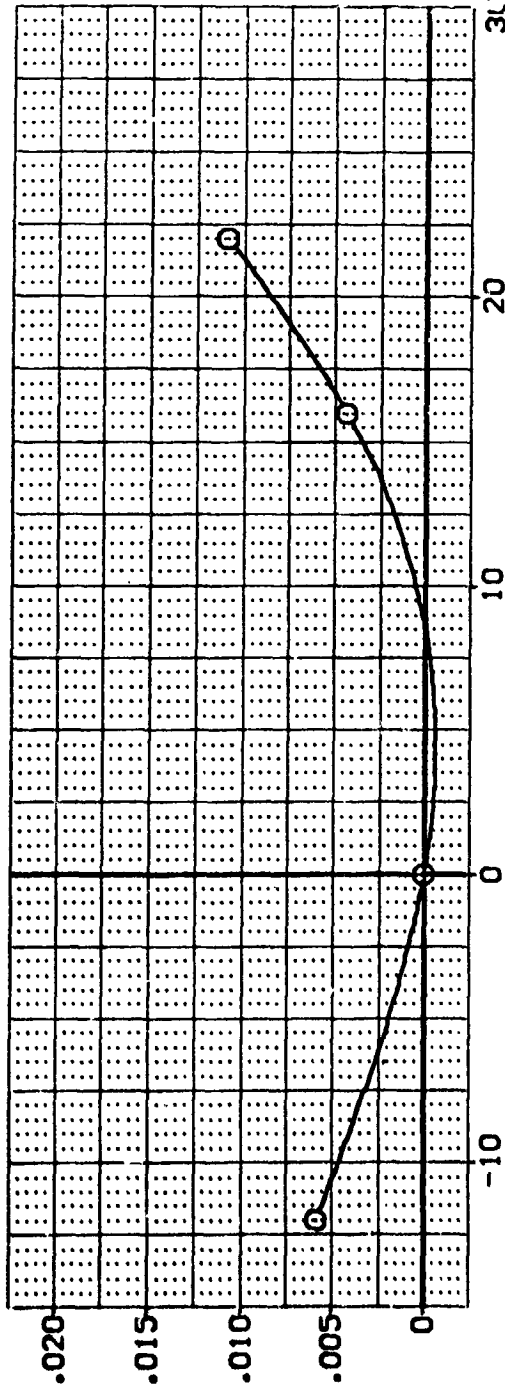
ALPHA	12.000
MACH	.200
AILRON	.000
SPDRK	25.000
DEL VON	.000
RUDDER	.000
BETA	.000

DATA SOURCE

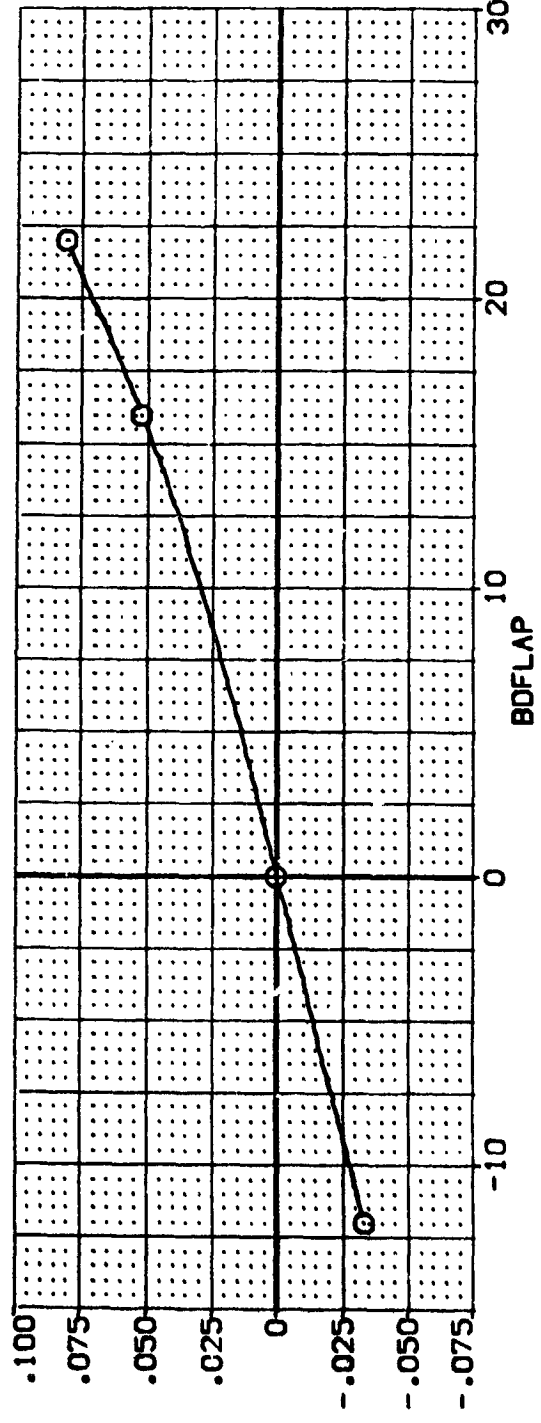
BOFLAP	-12.000
JDZ117	JDZ136
BOFLAP	22.000
JDZ135	JDZ137

REFERENCE INFORMATION

SREF	4.4119
LREF	19.2299
BREF	37.9369
XWRP	43.5971
YWRP	15.0000
ZWRP	15.1875
SCALE	.0405



DCA



DCN

FIG 49 BODY FLAP EFFECTIVENESS. 25 DEG. FLARE





0A628 B26C9 M7F8 W116E28V8R5X9

(JDZ117)

SYMBOL O

ALPHA 14.000

MACH AILRON SPDRK 25.000 BETA

PARAMETRIC VALUES

.200 DELVON

.000 RUDDER

DATA SOURCE

.000 DATASET

BOFLAP BOFLAP

-12.000

16.000

JDZ117

JDZ137

JT7135

JDZ137

REF

REF

REF

YPRP

YPRP

SCALE

SCALE

4.4119

19.2299

37.9359

43.5974

0.0000

15.1873

.0405

90.FT.

INCHES

INCHES

INCHES

INCHES

SCALE

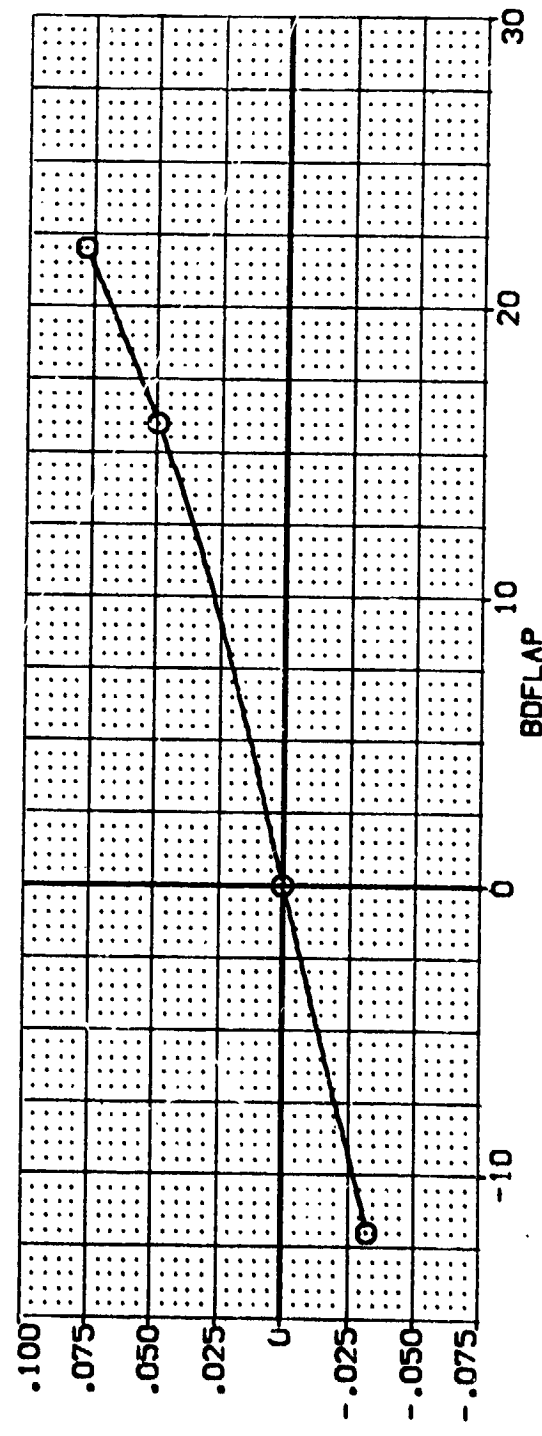
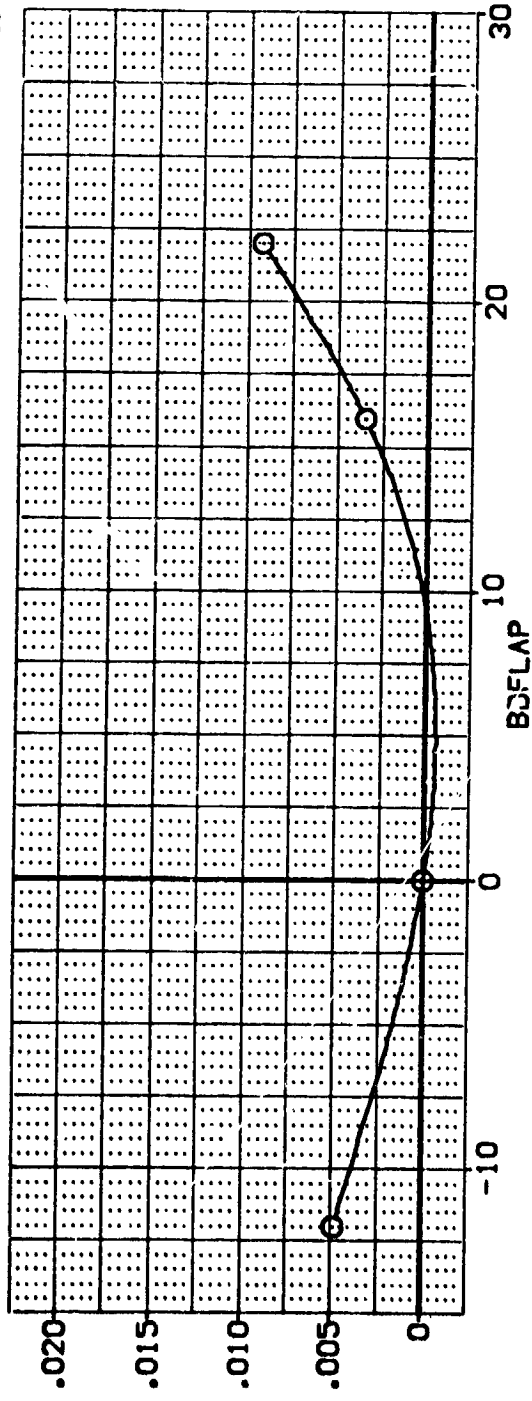


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	16.000		.200 DELVON	.000 DATASET	4.4119 50.FT.
		AILRON	.000 RUDDER	BDFLAP -12.000	19.2299 INCHES
		SPOBRK	25.000 BETA	.000 JDZ117	37.9359 INCHES
				.000 JDZ136	43.5974 INCHES
				BDFLAP 22.000	INCHES
				YMRP	INCHES
				ZMRP	INCHES
				SCALE	.0405

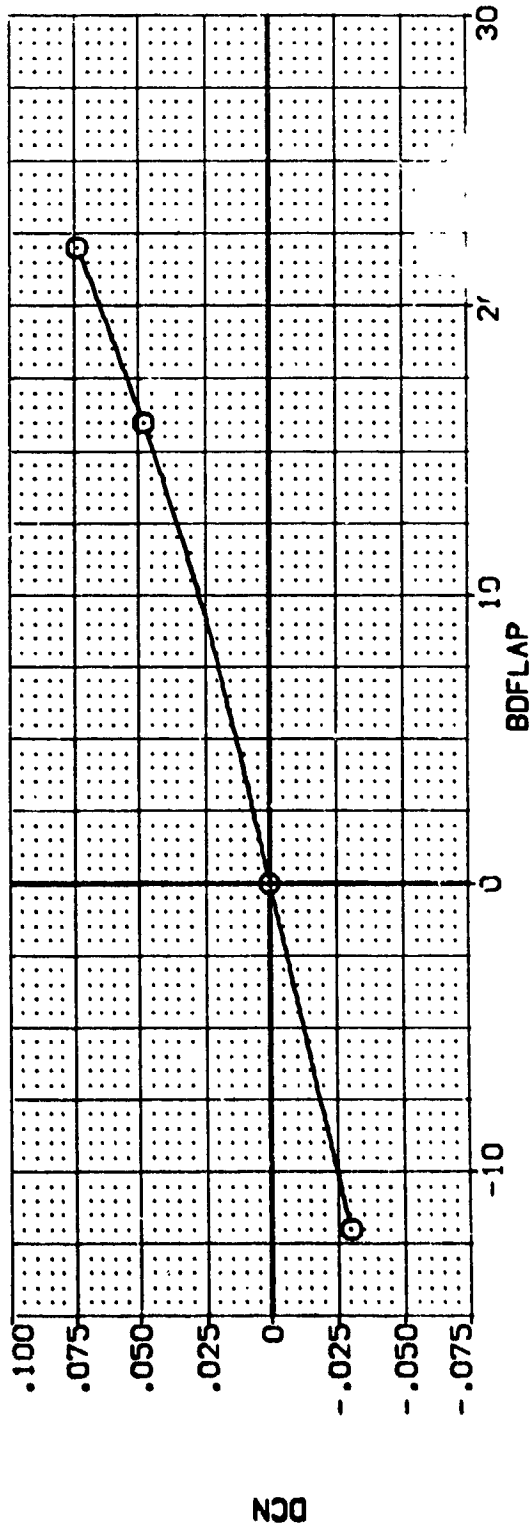
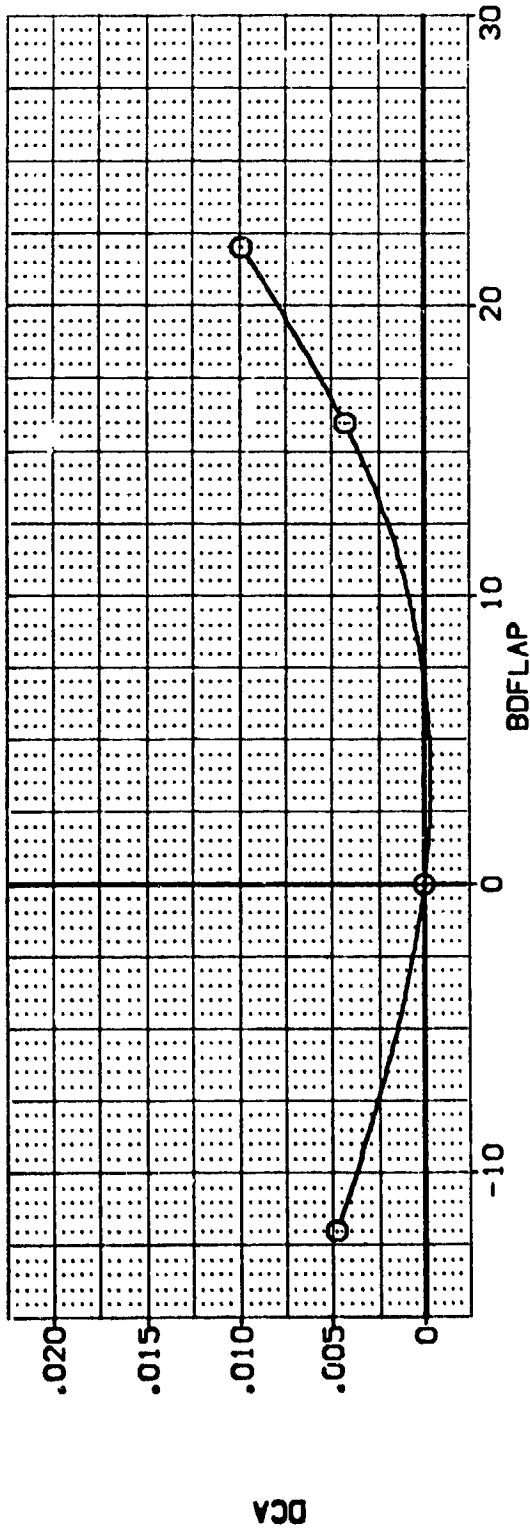


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	BOFLAP	REF	REFERENCE INFORMATION
○	18.000	A1UR0N	.200 DELVON	.000 JDZ117	.000 JDZ135	.000	4.4119	50.FT.
		SPOBRK	.000 RUDDER	.000 JDZ136	22.000	.000	19.2259	INCHES
		BETA	25.000	16.000			37.9359	INCHES
							43.5674	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE

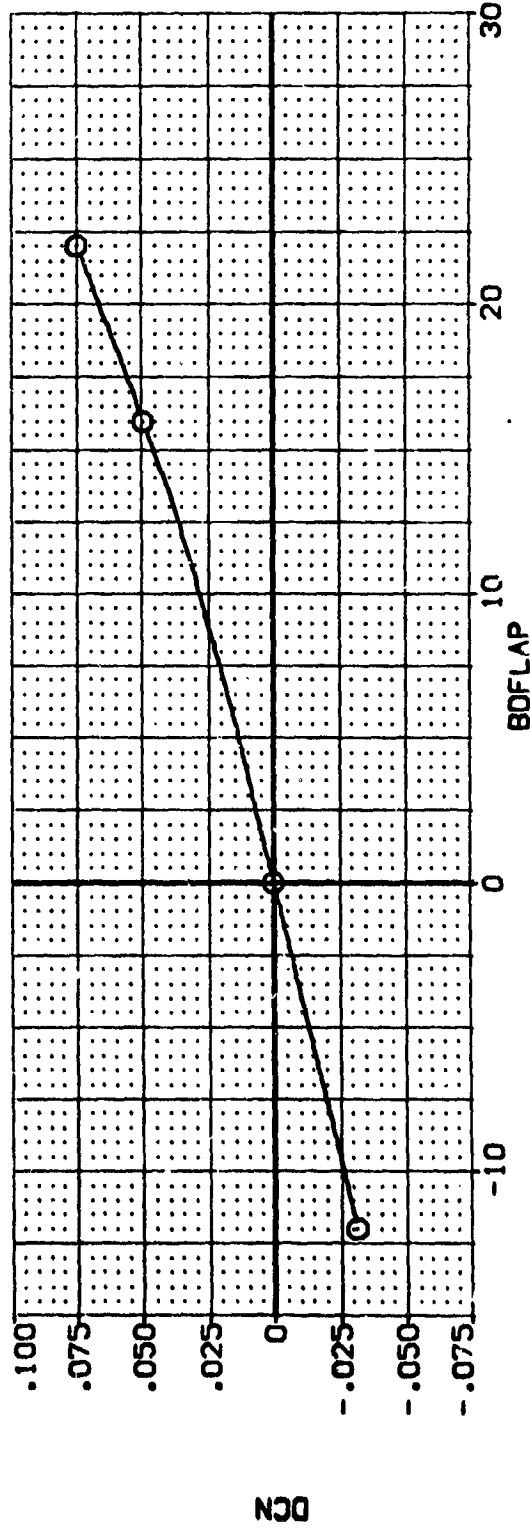
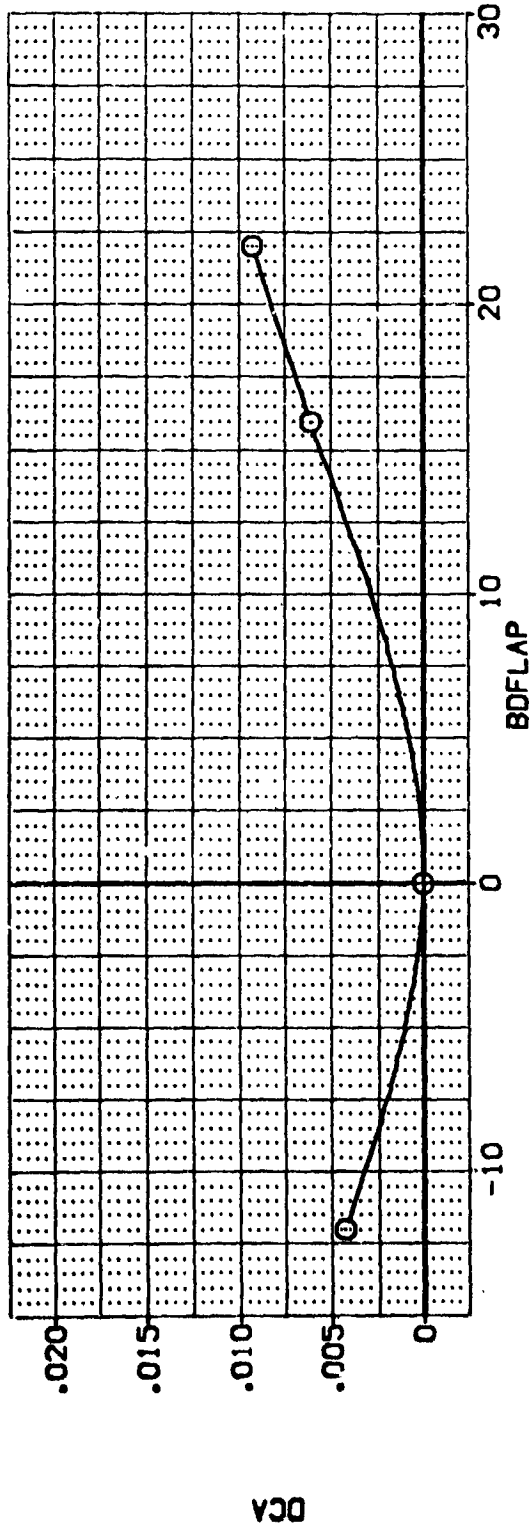


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(J02117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL O

ALPHA	20.000
MACH	.200
AIRRN	.000
SPDRK	25.000
BETA	.000

PARAMETRIC VALUES

DEL VON	.000
RUDDER	.000
BETA	.000

DATA SOURCE

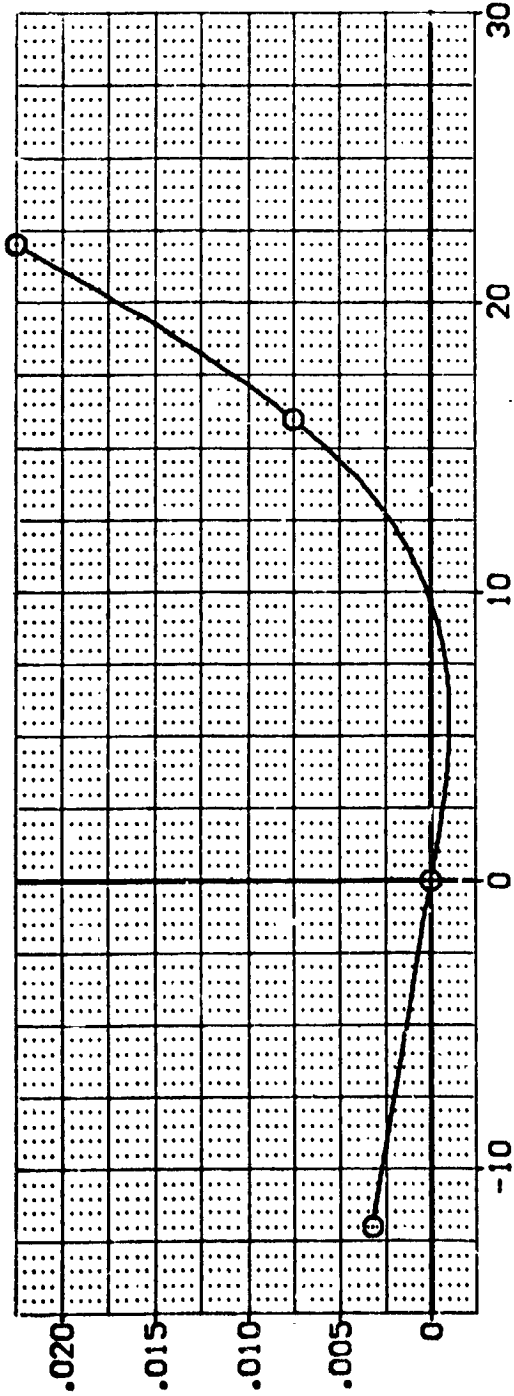
BDFLAP	-12.000
BDFLAP	16.000

DATASET J02117

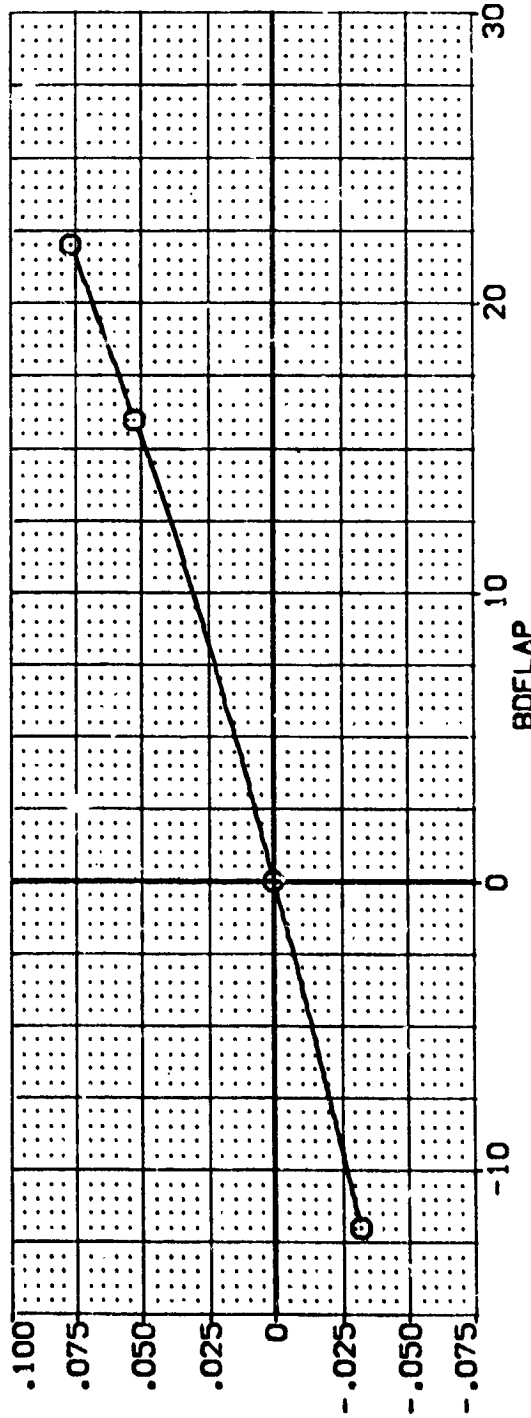
BDFLAP	000
BDFLAP	22.000

REFERENCE INFORMATION

SO.FT.	4.4119
INCHES	19.2799
INCHES	37.9359
INCHES	43.5974
INCHES	15.1875
SCALE	.1405



DCA



DCN

FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (J0Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	BDFLAP	DATA SET	BDFLAP	SCALE	REFERENCE INFORMATION
O	22.000	.200	DELTA	BDFLAP	J0Z117	.000	J0Z136	.000	SO.FT.	4.4119
		.000	RUDER	-12.000	J0Z117	.000	J0Z136	.000	INCHES	19.2239
		25.000	BETA	16.000	J0Z136	22.000	J0Z137	22.000	INCHES	37.3339
									INCHES	43.5974
									INCHES	.0000
									INCHES	15.1875
									SCALE	.0405

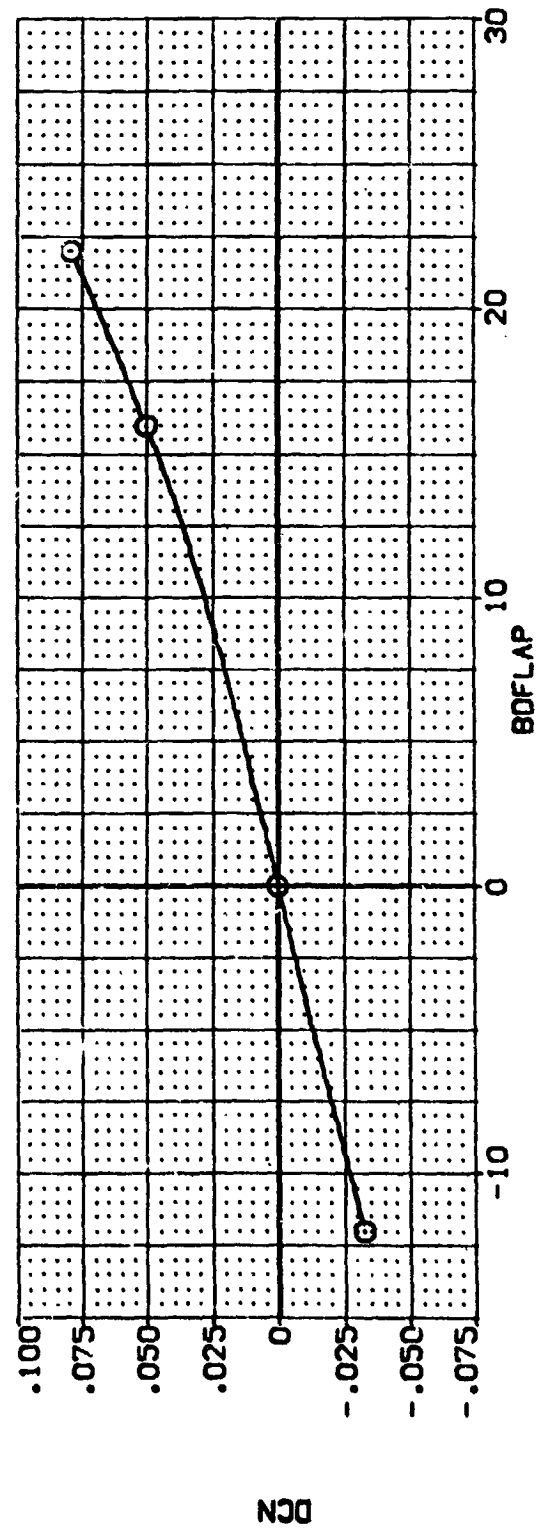
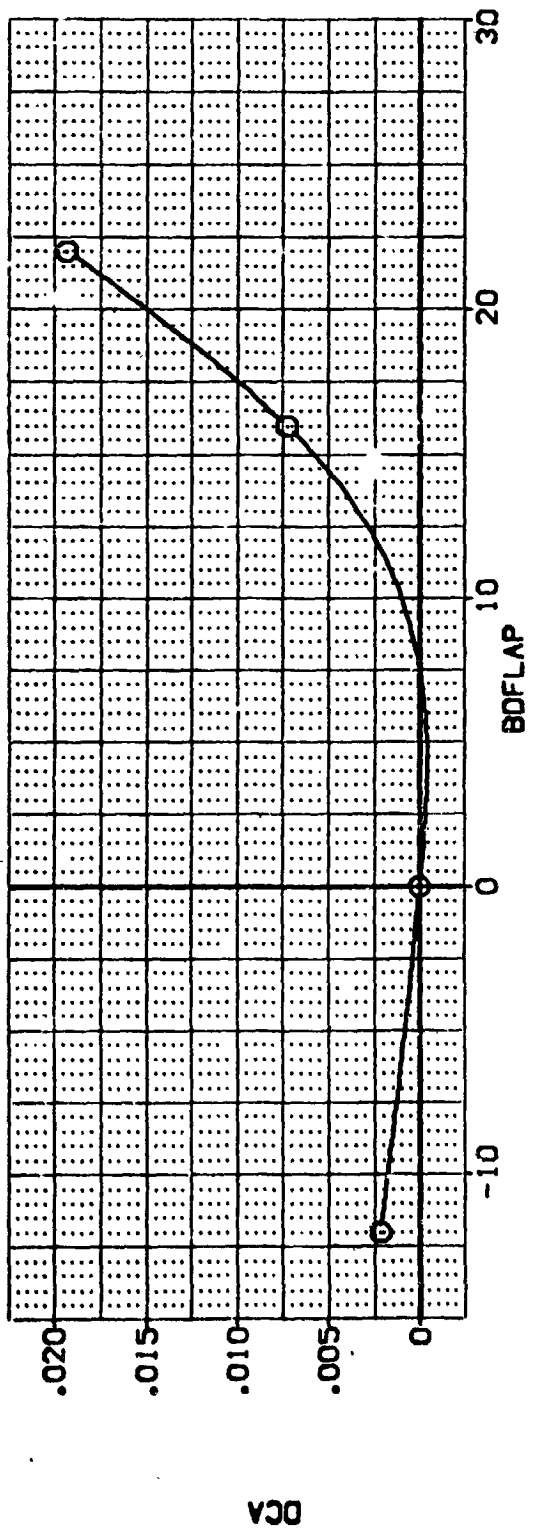


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

(JDZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	BDFLAP	REF	REFERENCE INFORMATION
○	24.000	A1LR0N	.200 DELVON	.000 JDZ117	.000 JDZ135	.500	4.4119	50. FT.
		SPDRK	.000 RUDDR	.000 JDZ136	22.000	.500	19.2289	INCHES
			25.000 BETA				37.9359	INCHES
							43.5974	INCHES
							0.000	INCHES
							15.1875	INCHES
							.0405	SCALE

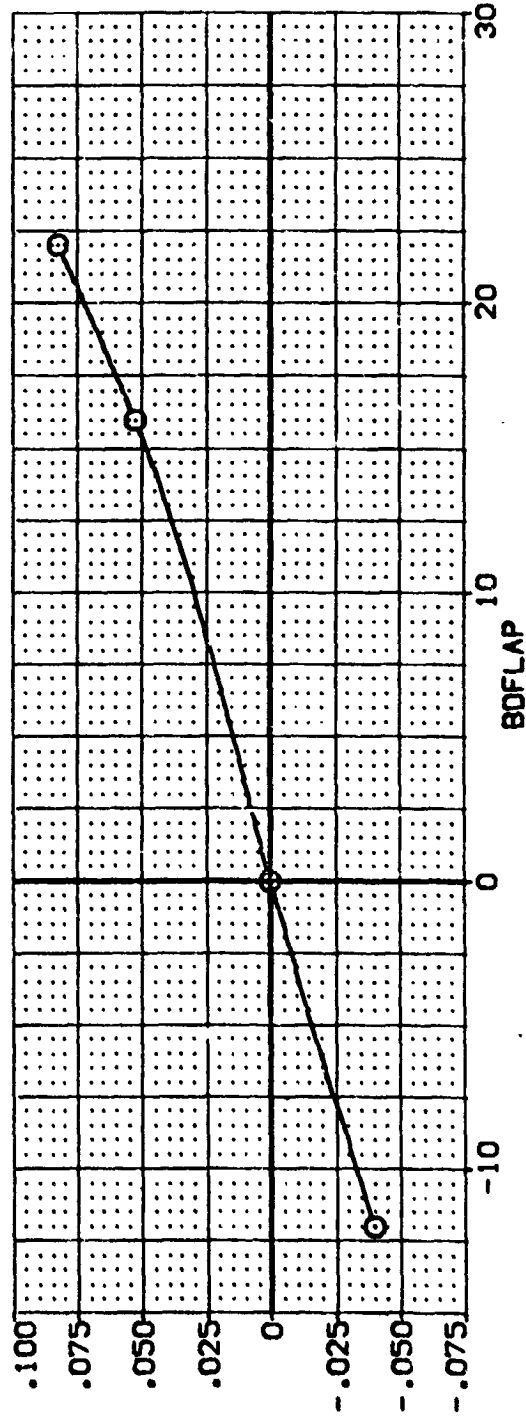
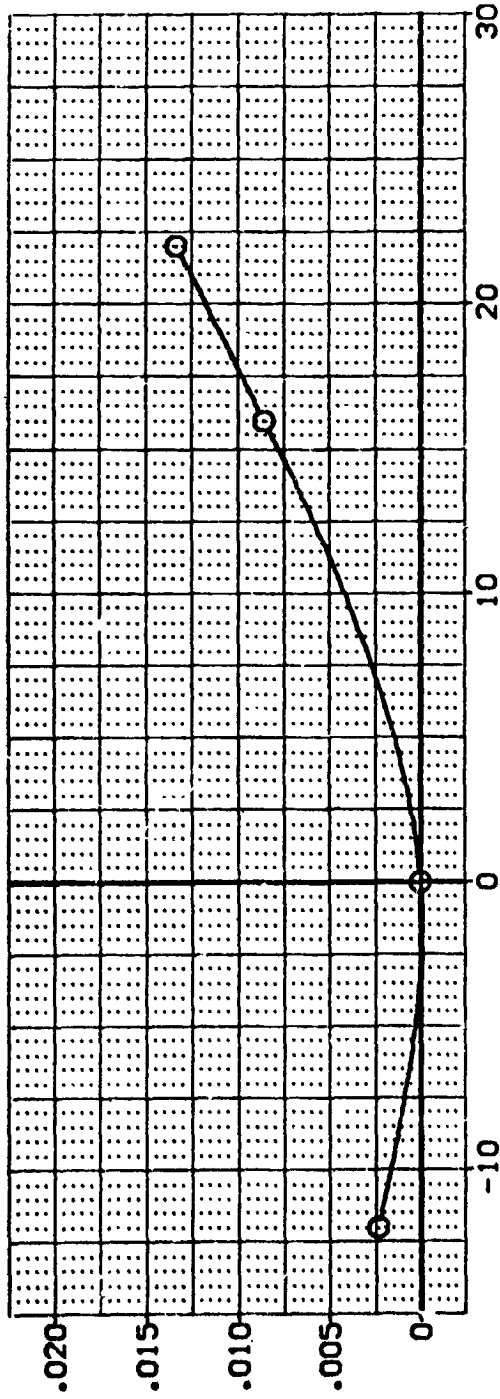


FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



(J0Z117)

0A628 826C9 M7F8 W116E28V8R5X9

ALPHA 25.000  
 MACH 0  
 ATURON 0  
 SPOBRK 0

PARAMETRIC VALUES  
 .200 DELVON  
 .000 RUDDER  
 25.000 BETA

DATA SOURCE  
 BDFLAP -12.000  
 -16.000

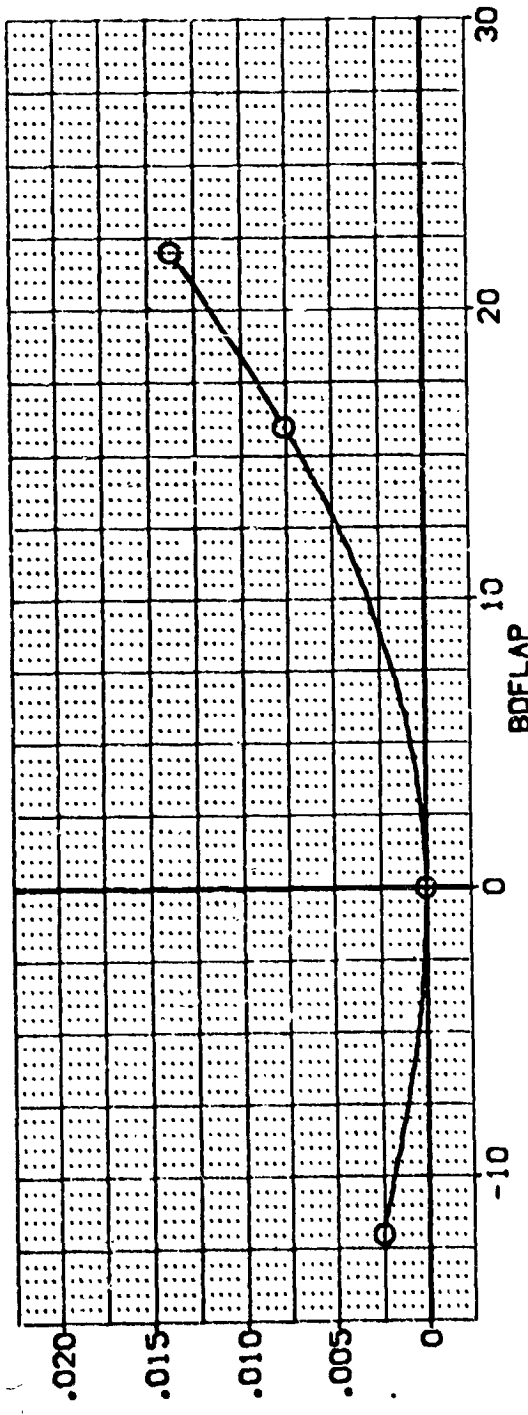
DATASET  
 J0Z117  
 J0Z136

BDFLAP  
 .000  
 22.000

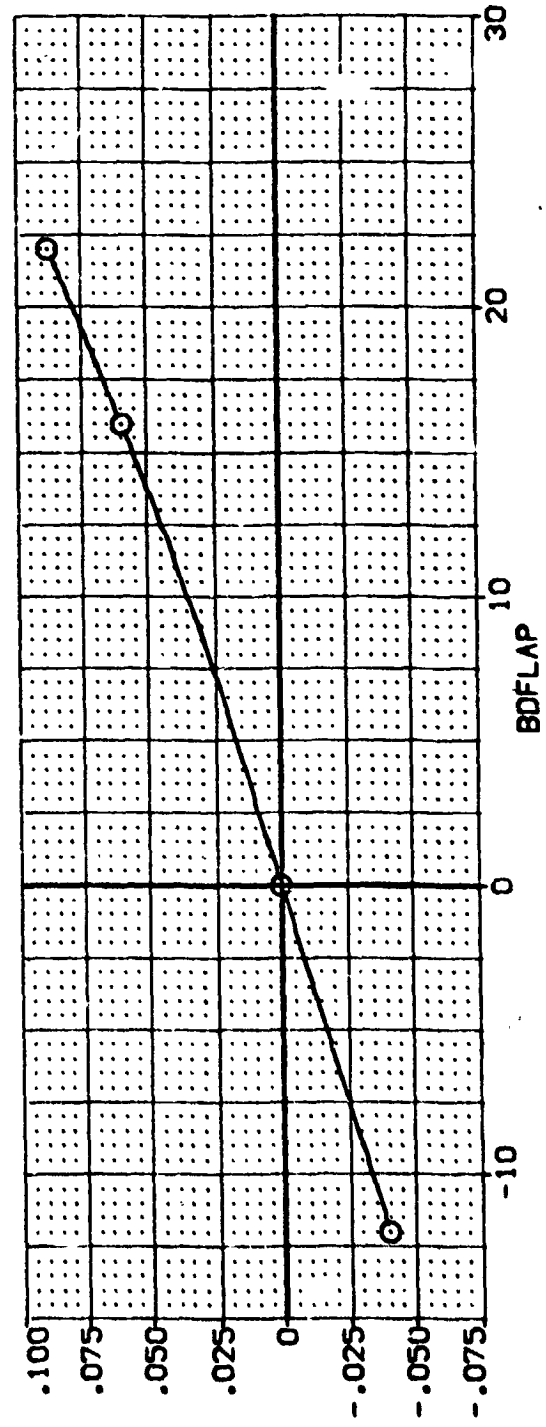
DATASET  
 J0Z125  
 J0Z137

REF. INFO  
 4.4118  
 19.2259  
 37.9559  
 43.5974  
 .0000  
 15.1875  
 .0405

SO.FY  
 INO-ES  
 INO-ES  
 INO-ES  
 INO-ES  
 INO-ES  
 INO-ES  
 SCALE



DCA

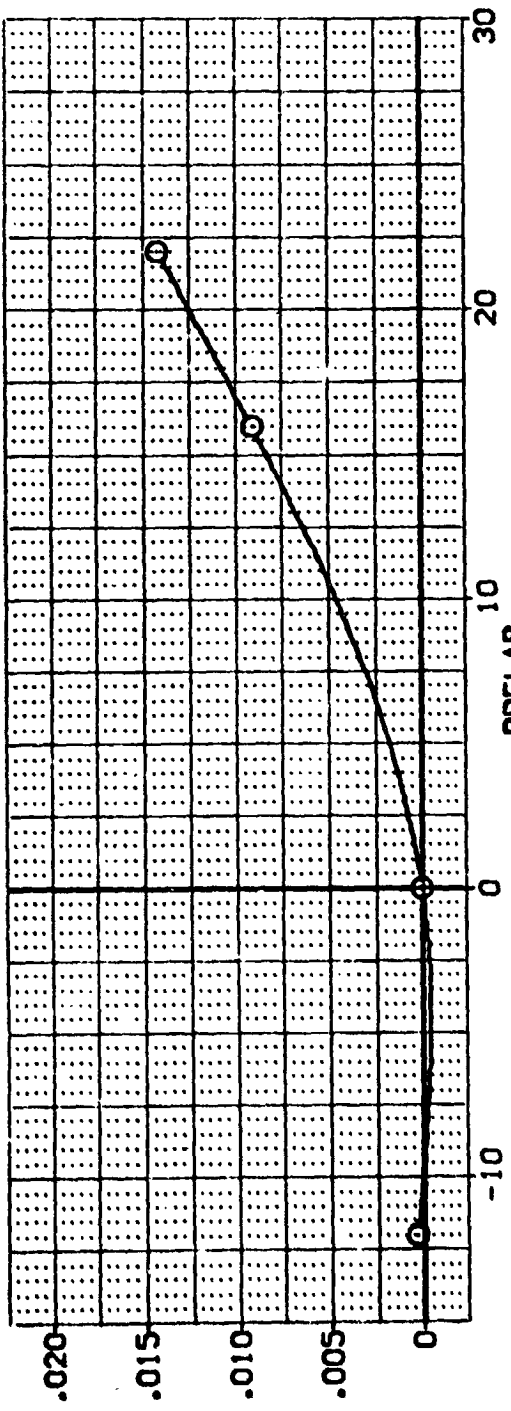


DCN

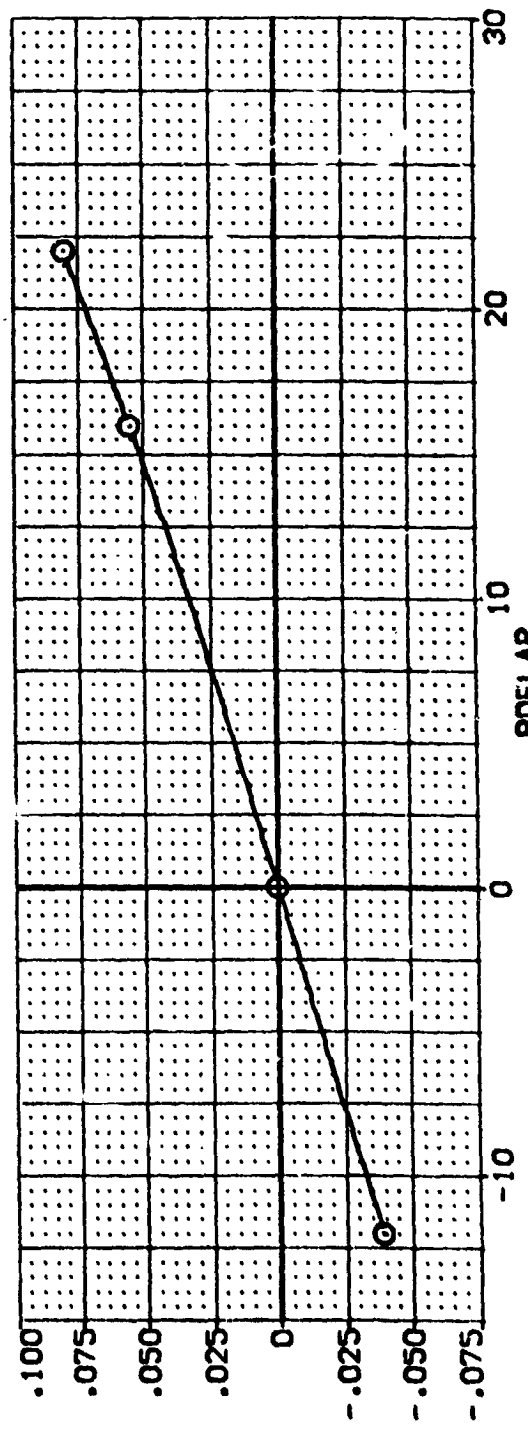
FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (J0Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	BOFLAP	BOFLAP	BOFLAP	REF. INFO
0	28.000	A1UR0N	.200 DELV0N	.000 J0Z117	J0Z135	-12.000	.000	22.000	4.4119 SO.FT.
		SPOBRK	.000 RLOOR	.000 J0Z136	J0Z137	16.000	.000		19.2289 INCH-ES
			25.000 BETA				22.000		37.8359 INCH-ES
									43.5874 INCH-ES
									.0000 INCH-ES
									15.1875 INCH-ES
									.0405 SCALE



DCA



DCN

FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE





0A628 B26C9 M7F8 W116E28V8R5X9 (JDZ117)

ALPHA  
20.000

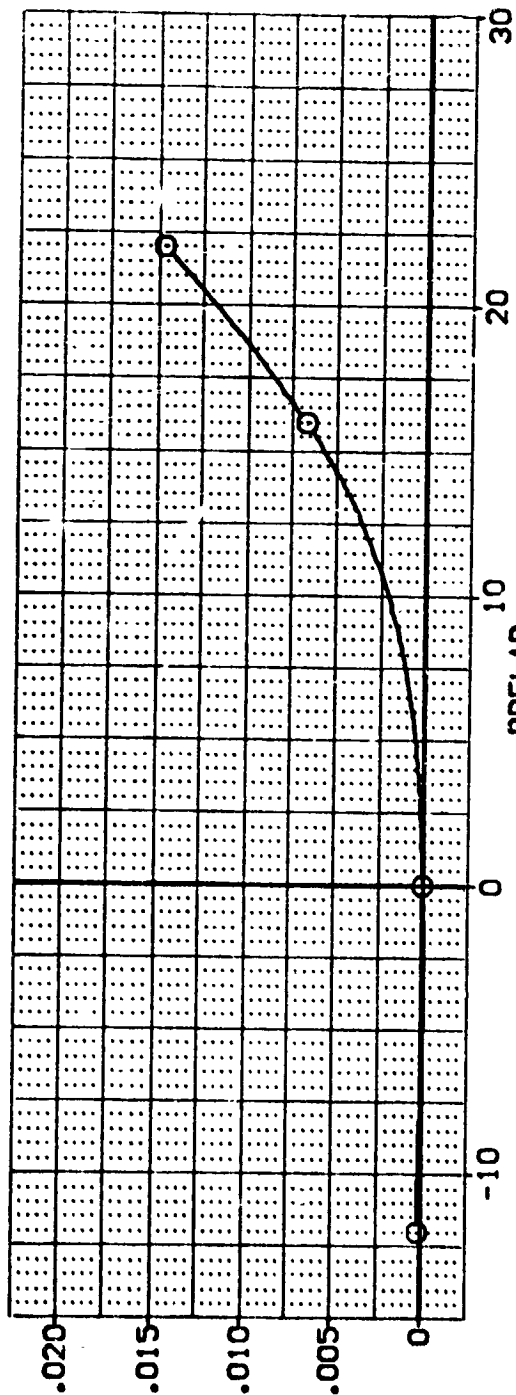
MACH  
A1LRN  
SPBRK

PARAMETRIC VALUES  
.200 DELVEN  
.000 RUDDER  
25.000 BETA

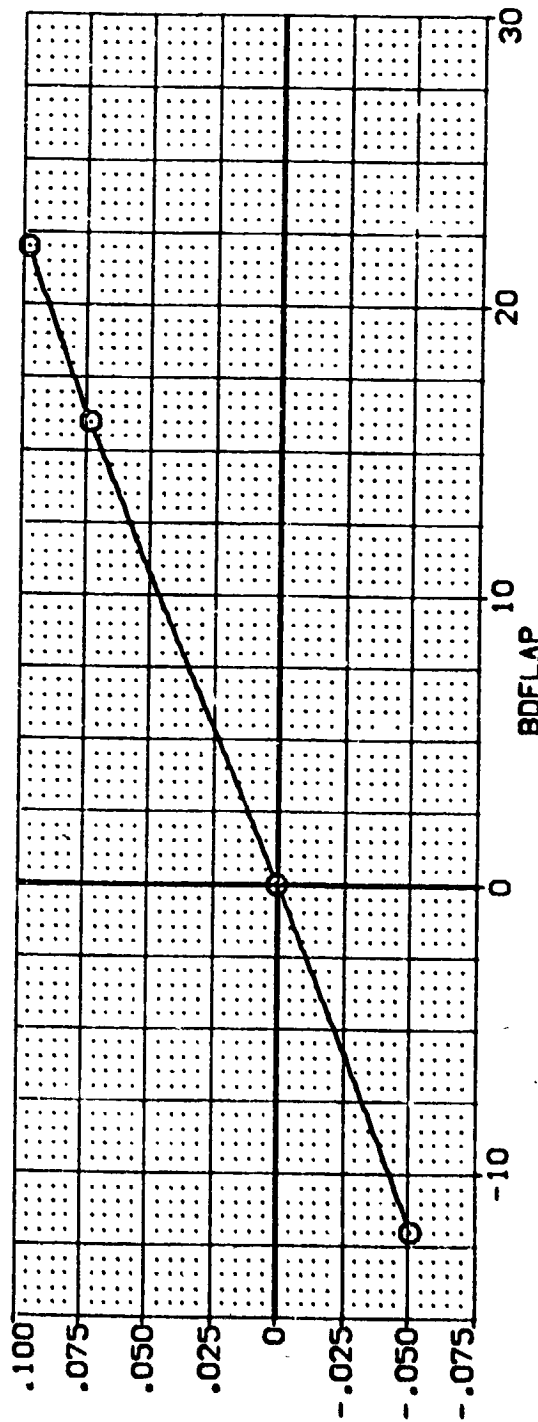
DATA SOURCE  
BDFLAP  
-12.000  
-16.000

DATASET  
JDZ117  
JDZ136  
JDZ137

REFERENCE INFORMATION  
SQ.FT. 4.4118  
INCHES 19.2289  
INCHES 37.9259  
INCHES 43.5874  
INCHES 15.0000  
SCALE 15.1675  
SCALE .0405



DCA

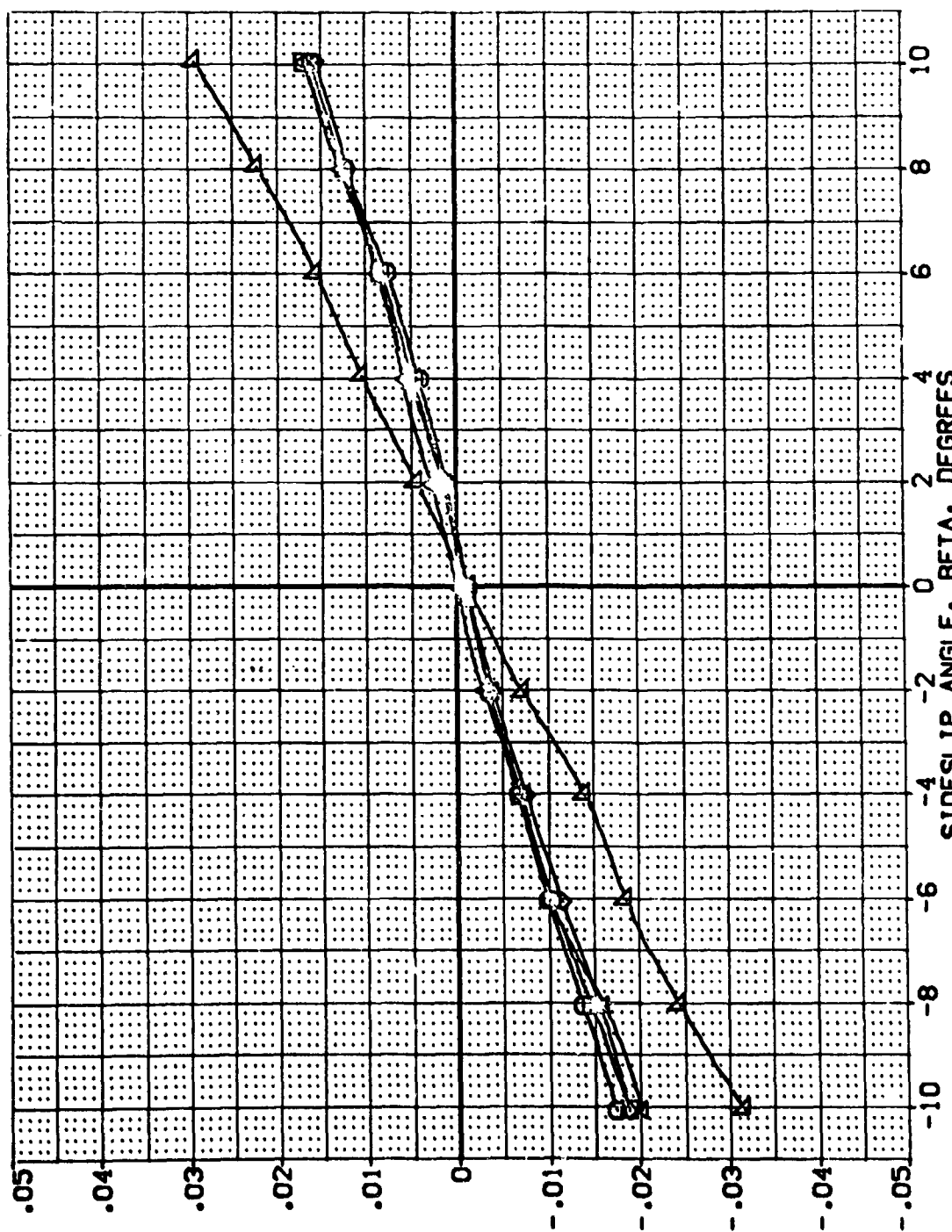


DCN

FIG 49 BODY FLAP EFFECTIVENESS, 25 DEG. FLARE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPDRBK	AILRON	REFERENCE INFORMATION
(RZ128)	04E28 026C9 M7F8 V11E28V8F5X3	.000	.000	40.000	.000	SREF 4.4119 SQ.FT.
(RZ140)	04E28 026C9 M7F8 V11E28V8F5X3	5.000	.000	40.000	.000	LREF 19.2289 INCHES
(RZ141)	04E28 026C9 M7F8 V11E28V8F5X3	10.000	.000	40.000	.000	BREF 37.9059 INCHES
(RZ142)	04E28 026C9 M7F8 V11E28V8F5X3	15.000	.000	40.000	.000	XREF 43.5974 INCHES
(RZ143)	04E28 026C9 M7F8 V11E28V8F5X3	20.000	.000	40.000	.000	YREF 15.0000 INCHES
						ZREF .0405 SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0

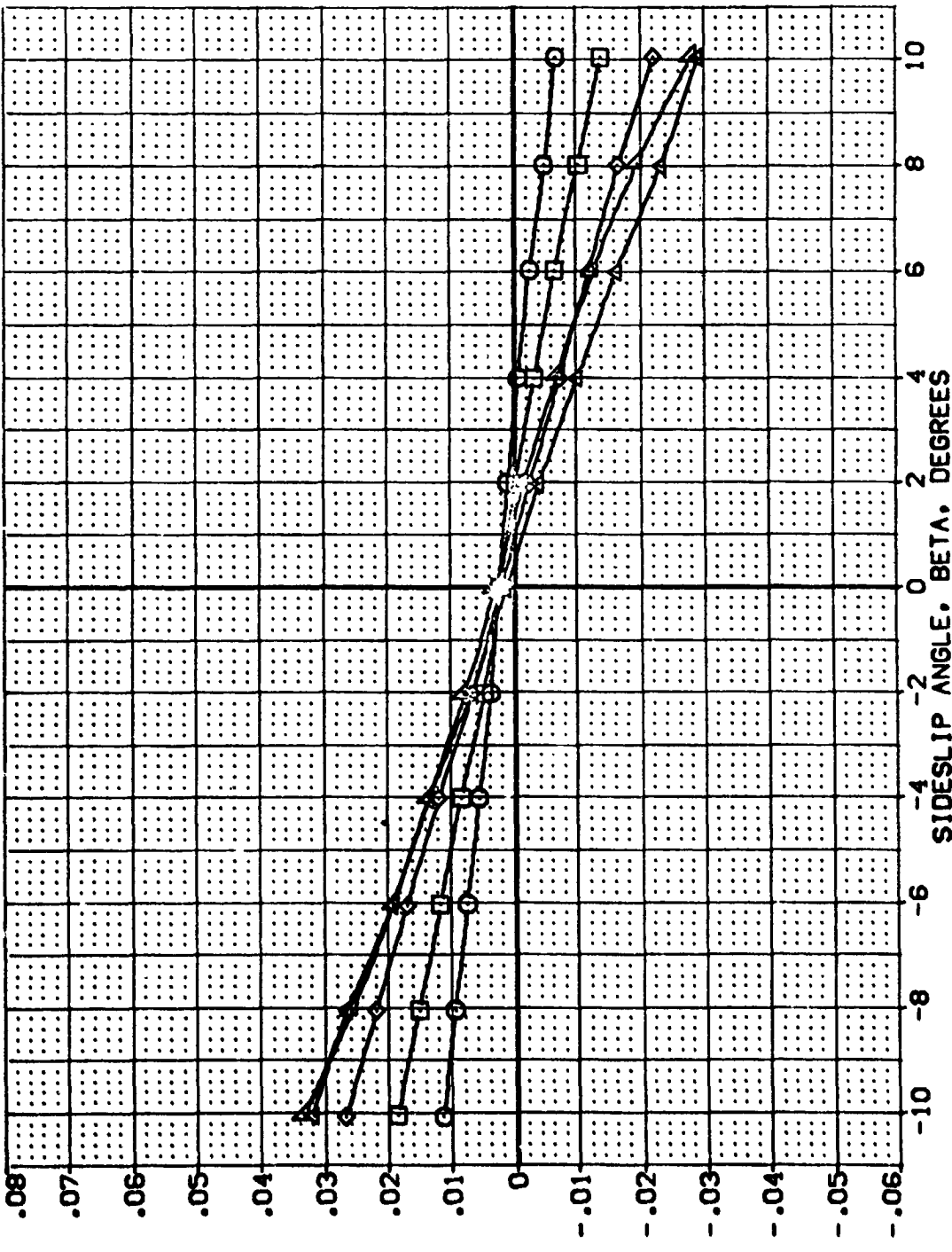
MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

[ROZ128]	0A6Z8 BZ8C3	M7F8	V116E28V8F5V3	SREF	4.4119	50.FT.
[ROZ130]	0A6Z8 BZ8C3	M7F8	V116E28V8F5V3	LREF	19.2299	INCHES
[ROZ131]	0A6Z8 BZ8C3	M7F8	V116E28V8F5V3	BREF	37.9359	INCHES
[ROZ132]	0A6Z8 BZ8C3	M7F8	V116E28V8F5V3	XTRP	43.5974	INCHES
[ROZ133]	0A6Z8 BZ8C3	M7F8	V116E28V8F5V3	YTRP	.0000	INCHES
				ZTRP	15.1873	INCHES
				SCALE	.0405	SCALE

ALPHA	RUDDER	SPOBRK	AILRON
.000	.000	40.000	.000
5.000	.000	40.000	.000
10.000	.000	40.000	.000
15.000	.000	40.000	.000
20.000	.000	40.000	.000



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

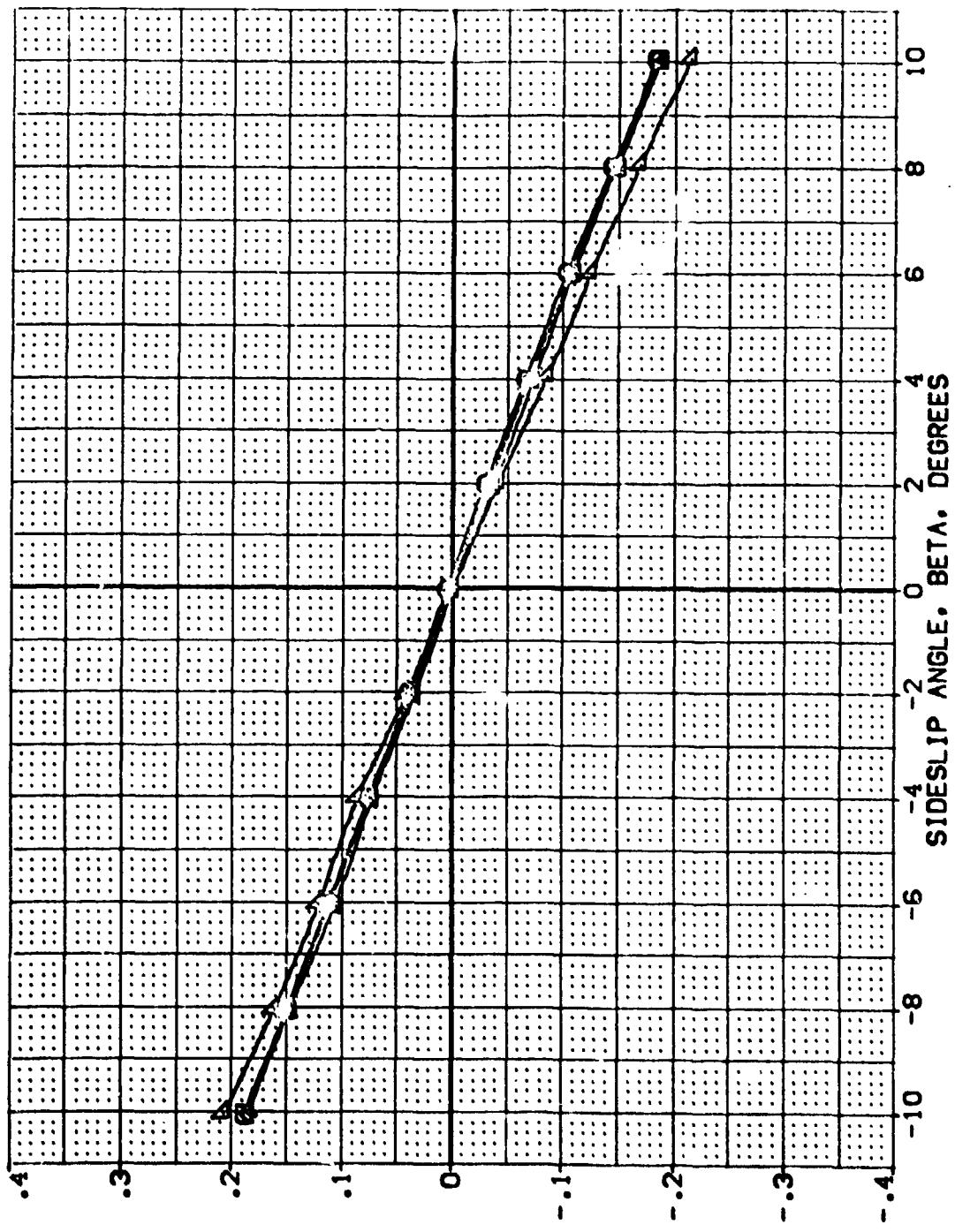
(RZ)137	0A528	B26C3	M7F8	V11E28V8E3G
(RZ)140	0A528	B26C3	M7F8	V11E28V8E3G
(RZ)141	0A528	B26C3	M7F8	V11E28V8E3G
(RZ)142	0A528	B26C3	M7F8	V11E28V8E3G
(RZ)143	0A528	B26C3	M7F8	V11E28V8E3G

ALPHA .000 .000 .000 .000 .000  
 5.000 .000 .000 .000 .000  
 10.000 .000 .000 .000 .000  
 15.000 .000 .000 .000 .000  
 20.000 .000 .000 .000 .000

RUDDER .000 .000 .000 .000 .000  
 SPDRK 40.000 40.000 40.000 40.000 40.000  
 AILRON .000 .000 .000 .000 .000

REFERENCE INFORMATION

SREF	4.4118	SO.FT.
LREF	19.2258	INCHES
BREF	37.5359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



SIDE FORCE COEFFICIENT, CY

FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0

(M)MACH = .20

(COZ139)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL  
O

SPDRNK  
40.000

MACH  
ELEVEN  
RUDDER

PARAMETRIC VALUES  
.200 BOFLAP -12.000  
.000 AILRON .000  
.000

REF REFERENCE INFORMATION  
GREF 4.4119 SQ.FT.  
LREF 19.2289 INCHES  
XREF 37.9659 INCHES  
YMRP 43.5574 INCHES  
ZMRP .0000 INCHES  
SCALE 15.1875 INCHES  
.0405 SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

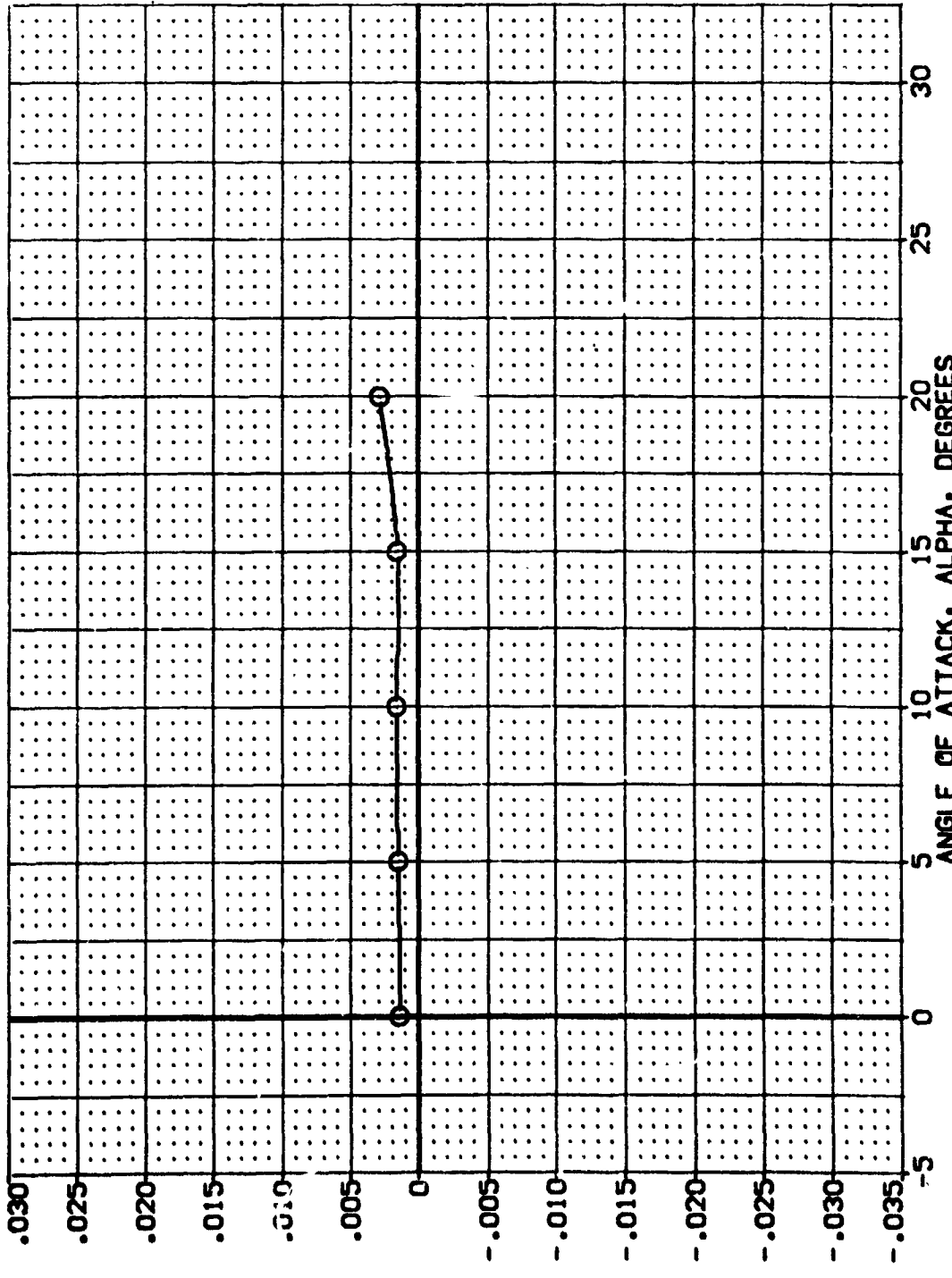


FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0

(CDZ139)

0A628 B26C9 M7F8 W116E28V8R5X9

SREF 4.4119 SO.FT.  
 LREF 19.2289 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

PARAMETRIC VALUES  
 .200 BOFLAP -12.000  
 .000 AILRON .000  
 .000 RUDER

SPDRK 40.000  
 HACH  
 ELEVON  
 RUDER

SYMBOL O

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

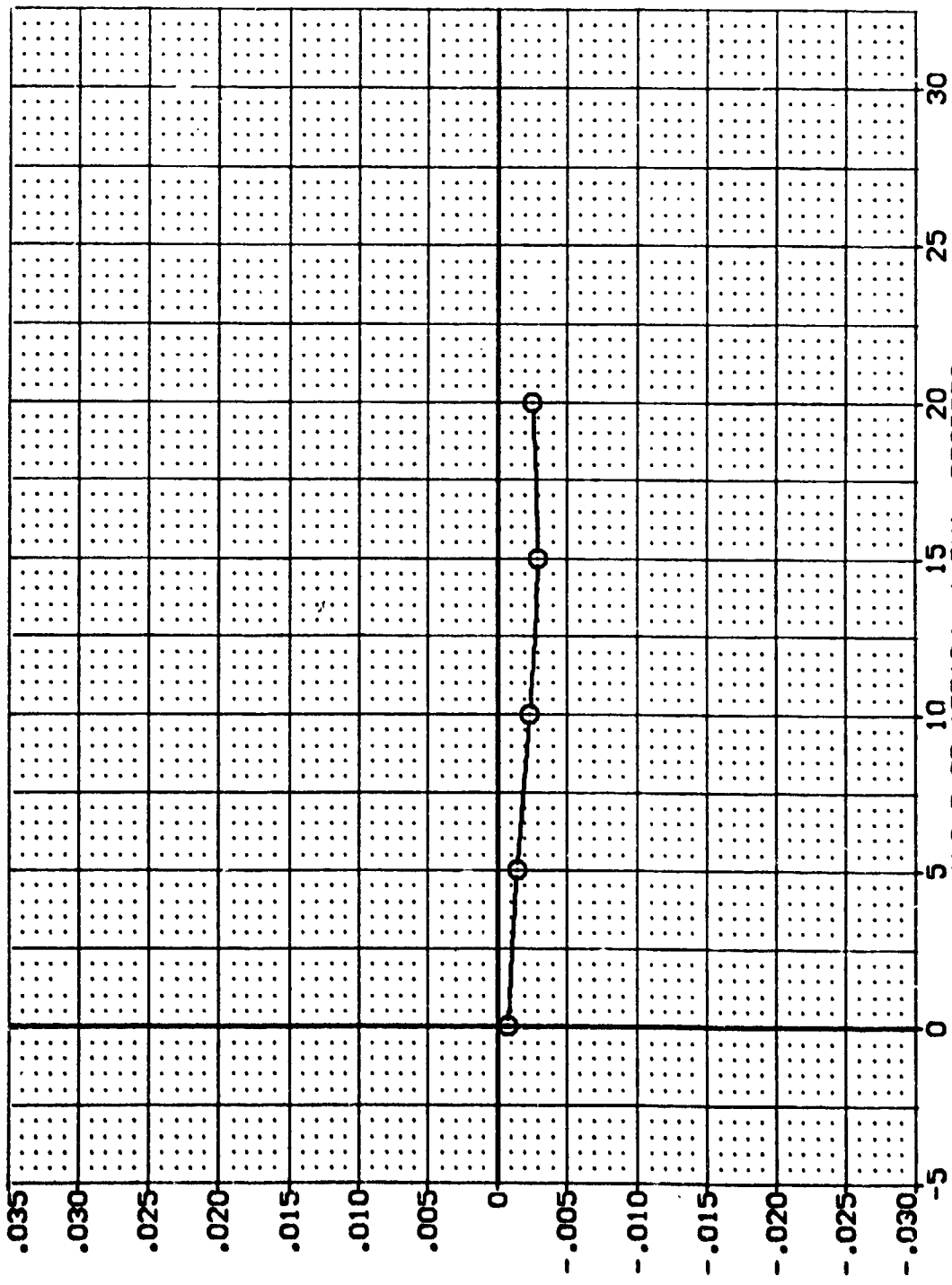


FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0



(CDZ139)

0A628 B26C9 M7F8 W116E28V8RSX9

SPEED 40.000  
 MACH .000  
 ELEVON .000  
 RUDDER .000

PARAMETRIC VALUES  
 BOFLAP -12.000  
 AIRTON .000

REFERENCE INFORMATION  
 SREF 4.4119  
 LREF 19.2299  
 BREF 37.9359  
 YTRP 43.5874  
 ZTRP .0000  
 SCALE 15.1875  
 SO.FT. INCHES  
 INCHES INCHES  
 INCHES INCHES  
 INCHES INCHES  
 INCHES INCHES  
 SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

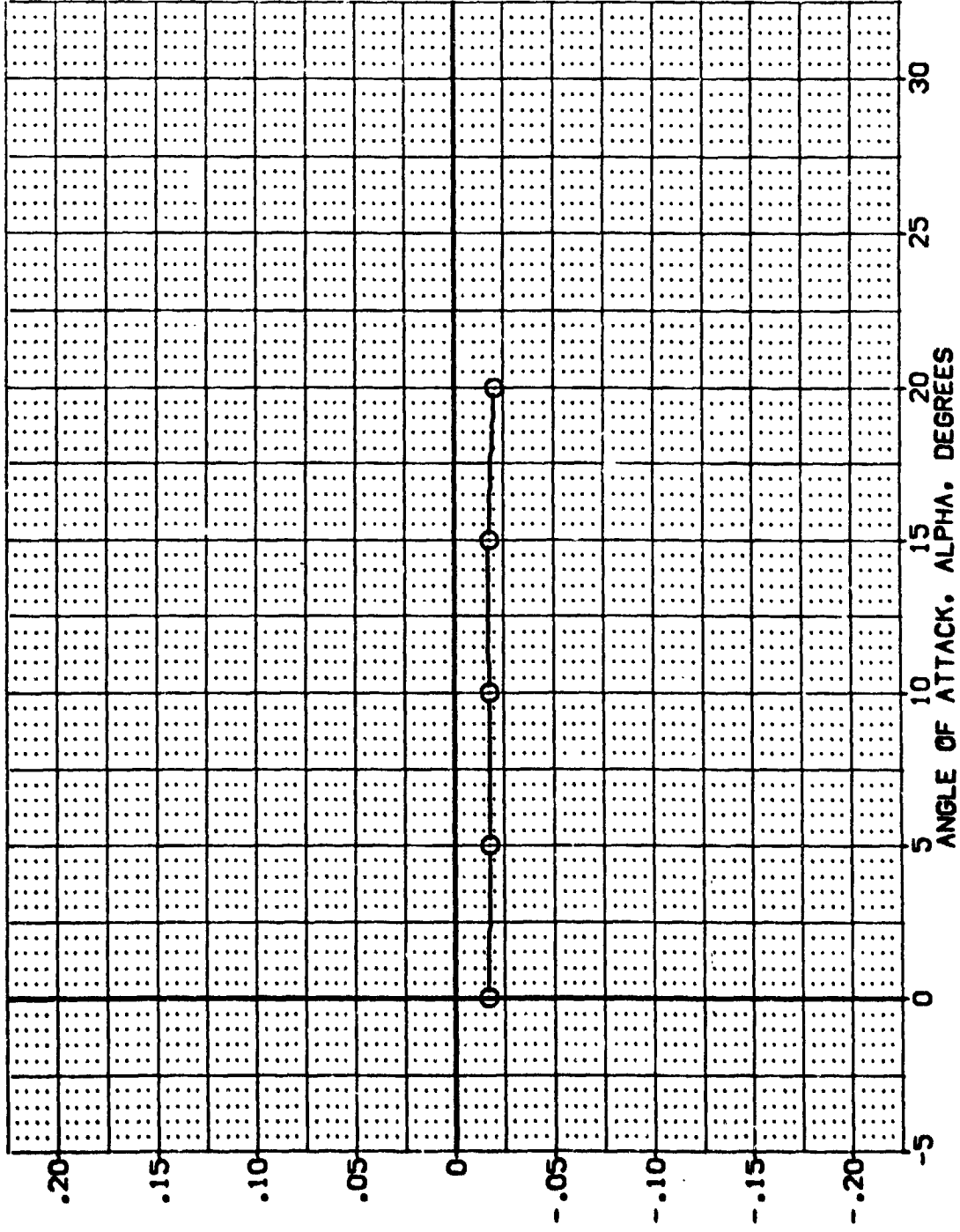


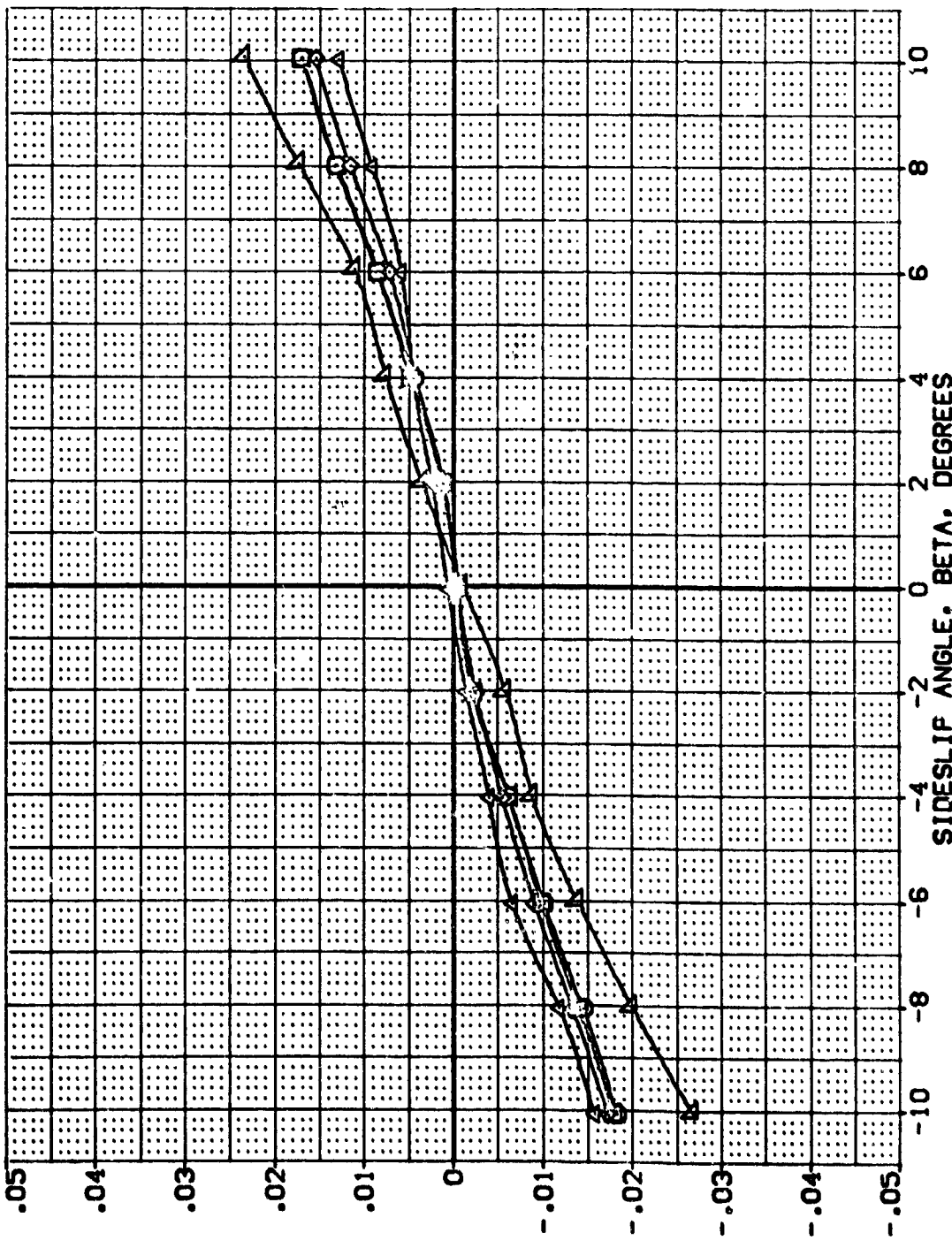
FIG 50 LATERAL DIRECTIONAL STABILITY, 40 DEG. FLARE, RUDDER = 0

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RZ145)	DA528	B25C3	M7F8	V11E2818P319
(RZ146)	DA528	B25C3	M7F8	V11E2818P319
(RZ147)	DA528	B25C3	M7F8	V11E2818P319
(RZ148)	DA528	B25C3	M7F8	V11E2818P319
(RZ149)	DA528	B25C3	M7F8	V11E2818P319

ALPHA RUDDER SPOBRK AIRION REFERENCE INFORMATION

.000	.000	.000	.000	BREF	4.4119	50. FT.
5.000	.000	85.000	.000	LA REF	19.2259	INCHES
10.000	.000	85.000	.000	BREF	37.5059	INCHES
15.000	.000	85.000	.000	XTRP	43.5974	INCHES
20.000	.000	85.000	.000	YTRP	15.0000	INCHES
				ZTRP	15.1875	INCHES
				SCALE	.0405	SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0

(M)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
{RDL145}	0A628 B26C3 M778 V116E28V85C3	.000	.000	85.000	.000	SREF 4.4119 SQ.FT.
{RDL146}	0A628 B26C3 M778 V116E28V85C3	5.000	.000	85.000	.000	LREF 19.2259 INCHES
{RDL147}	0A628 B26C3 M778 V116E28V85C3	10.000	.000	85.000	.000	BREF 37.9259 INCHES
{RDL148}	0A628 B26C3 M778 V116E28V85C3	15.000	.000	85.000	.000	YMP 43.5874 INCHES
{RDL149}	0A628 B26C3 M778 V116E28V85C3	20.000	.000	85.000	.000	ZMP 15.0000 INCHES
						SCALE .0405

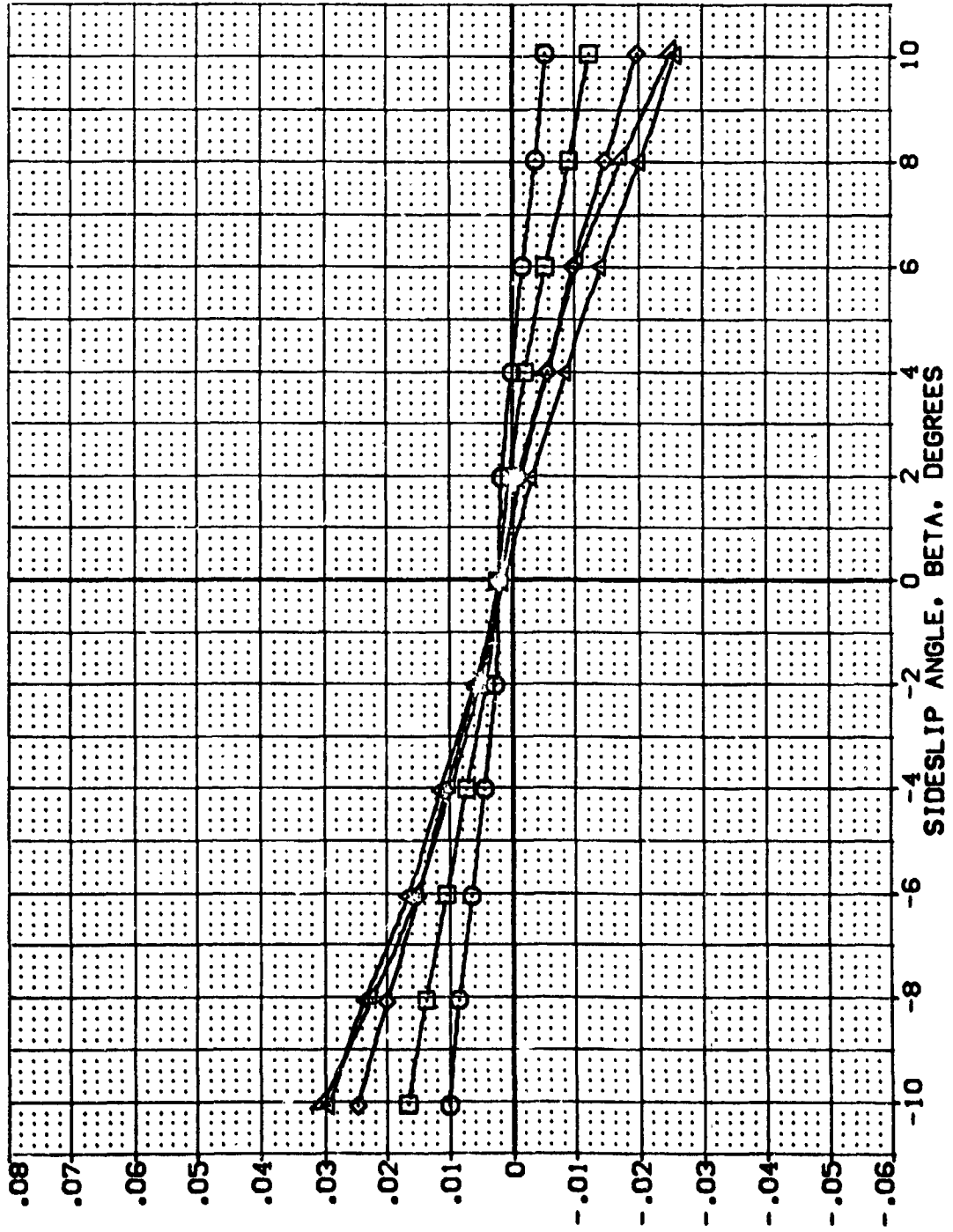


FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0

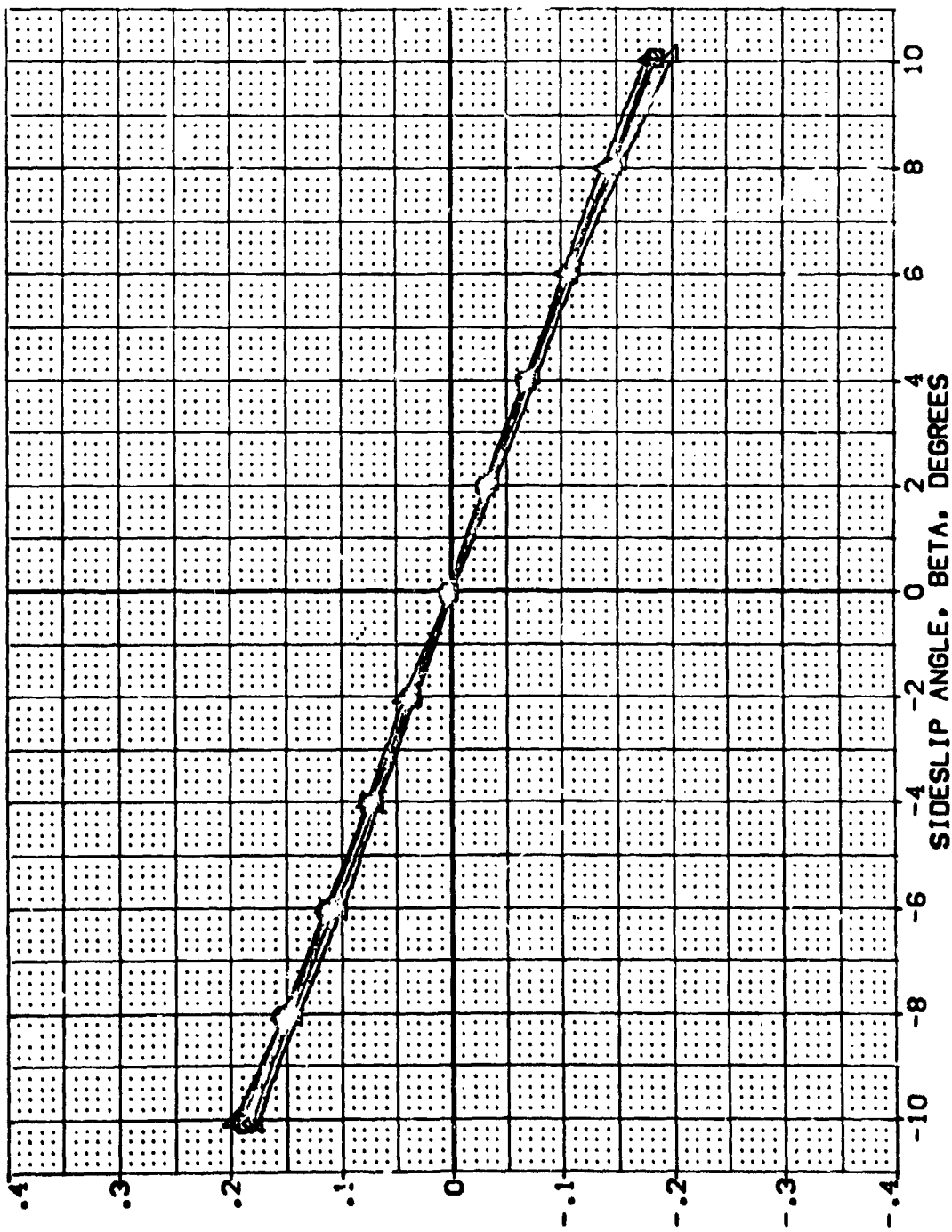
CAJMACB = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[RZ]145	0A528	02623	M7F8	V116E28/8P33
[RZ]146	0A528	02623	M7F8	V116E28/8P33
[RZ]147	0A528	02623	M7F8	V116E28/8P33
[RZ]148	0A528	02623	M7F8	V116E28/8P33
[RZ]149	0A528	02623	M7F8	V116E28/8P33

ALPHA RUDDER SPOBRK AILRON REFERENCE INFORMATION

0.000	.000	85.000	.000	SREF	4.4119	50. FT.
5.000	.000	85.000	.000	LREF	19.2299	INCHES
10.000	.000	85.000	.000	BREF	77.9359	INCHES
15.000	.000	85.000	.000	XREF	43.5974	INCHES
20.000	.000	85.000	.000	YREF	0.0000	INCHES
25.000	.000	85.000	.000	ZREF	15.1875	INCHES
				SCALE	.0405	SCALE



SIDE FORCE COEFFICIENT, CY

FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0

MA MACH = .20

(CDZ145)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL: O

SPDRK: 85.000

WACH: ELEVON RUDDER

PARAMETRIC VALUES: BOFLAP -12.000 AILRON .000

REFERENCE INFORMATION: SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE

SREF: 4.4118  
LREF: 19.2288  
BREF: 37.5359  
XMRP: 43.5674  
YMRP: .0000  
ZMRP: 15.1875  
SCALE: .0405

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

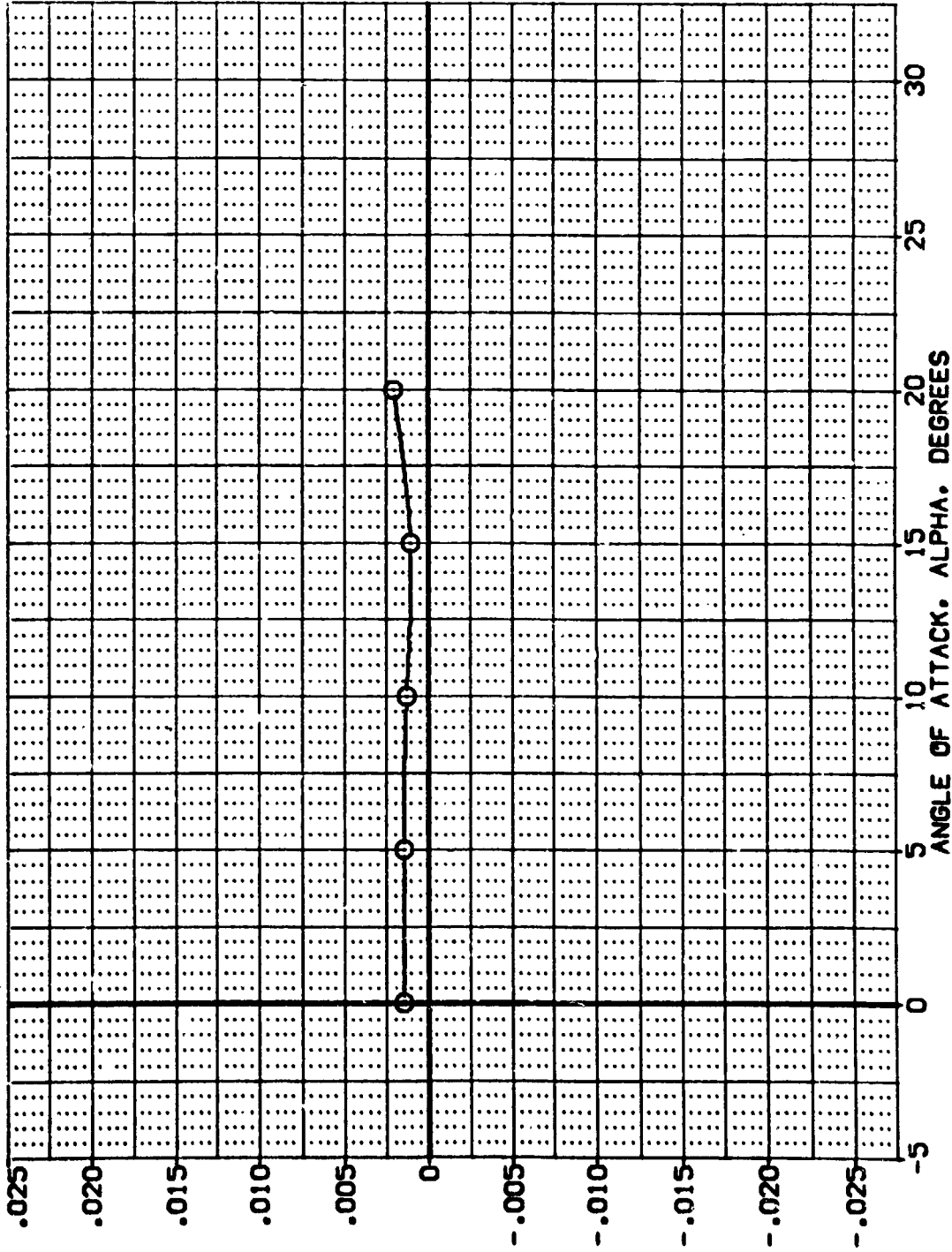


FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0

(CDZ145)

0A628 B26C9 M7F8 W116E28V8RSX9

SYMBOL  $\circ$

PARAMETRIC VALUES

WIND MACH .200 BOFLAP -12.000

ELEVON .000 AILRON .000

RUDDER .000

REF. INFORMATION

SREF 4.4119 SQ.FT.

LREF 19.2299 INCHES

BREF 37.9359 INCHES

XREF 43.5974 INCHES

YREF 10.0000 INCHES

ZREF 15.1873 INCHES

SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

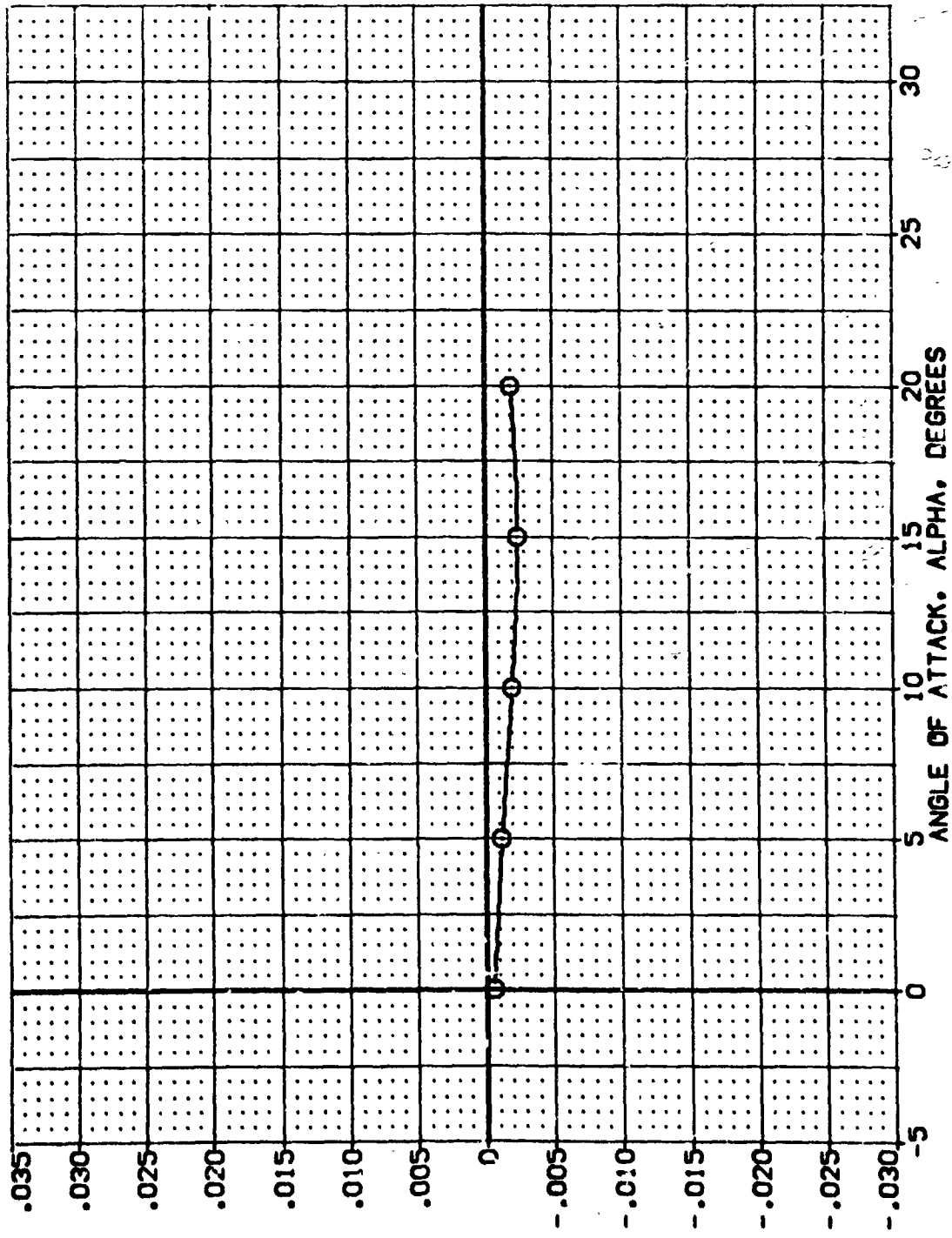


FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0



(COZ145)

DA628 B26C9 M7F8 W116E28V8R5X9

SYMBL O  
 SPDRK 85.000  
 HIGH ELEVON  
 RUDDER  
 PARAMETRIC VALUES  
 .200 BDFLAP -12.000  
 .000 AILYON .000  
 .000  
 REFERENCE INFORMATION  
 4.4118 30. FT.  
 19.2258 INCHES  
 37.5056 INCHES  
 43.5674 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

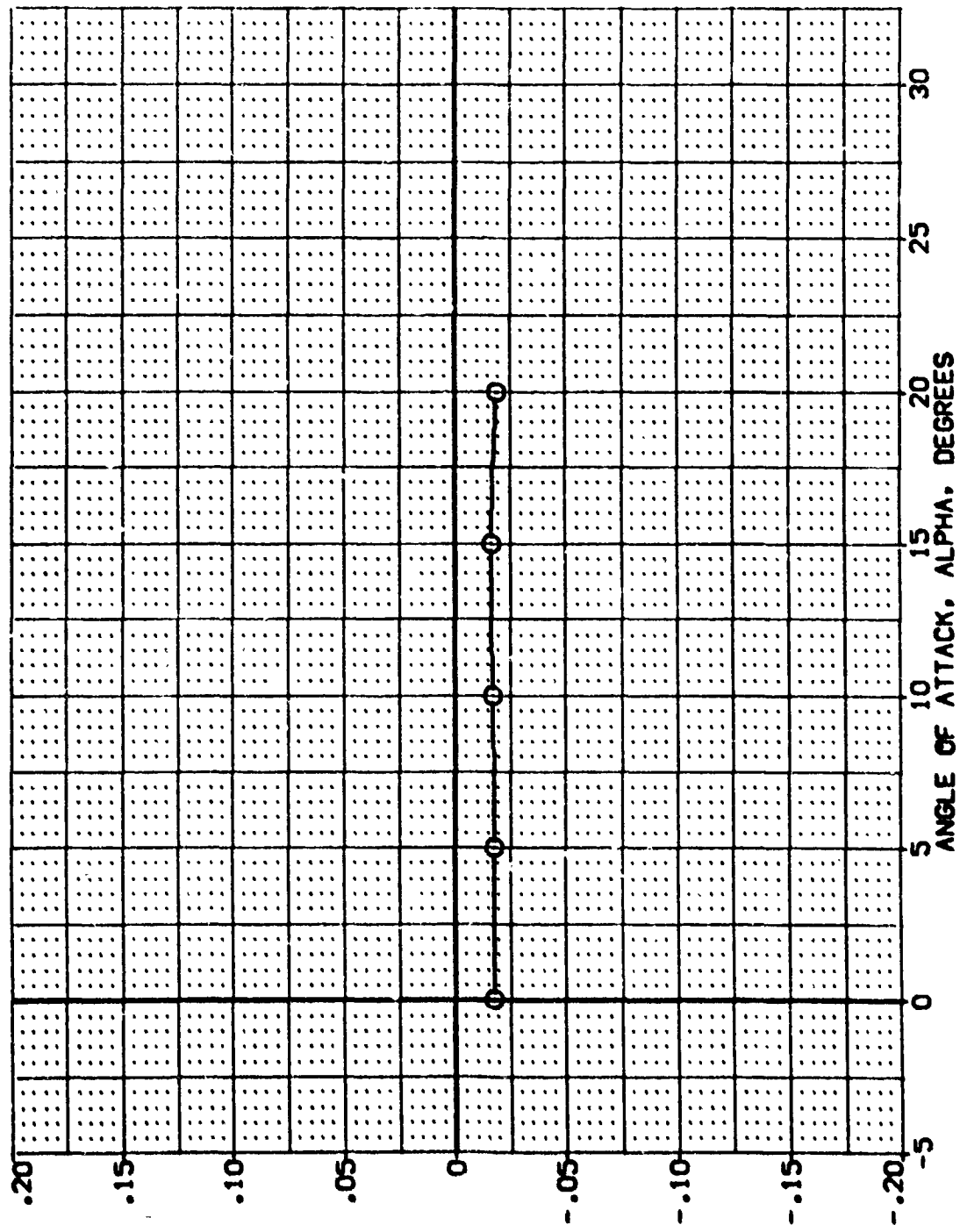
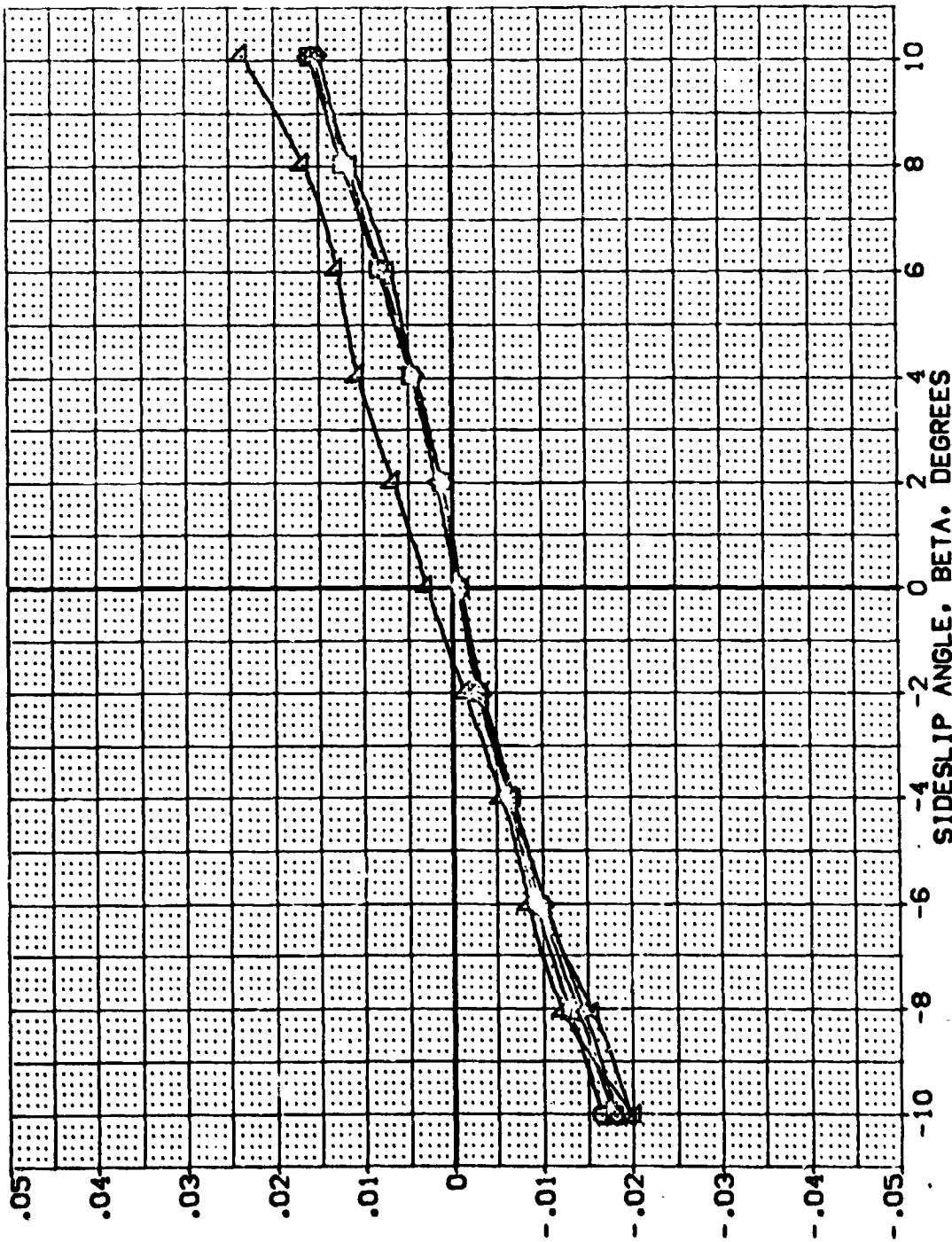


FIG 51 LATERAL DIRECTIONAL STABILITY, 85 DEG. FLARE, RUDDER = 0

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOILER	AILERON	REFERENCE INFORMATION
[R02307]	0A628 B26C3 M7F8 V116E28V8F5C3	.000	.000	55.000	.000	4.4119 SO.FT.
[R02308]	0A628 B26C3 M7F8 V116E28V8F5C3	5.000	.000	55.000	.000	19.2289 INO-ES
[R02309]	0A628 B26C3 M7F8 V116E28V8F5C3	10.000	.000	55.000	.000	37.9359 INO-ES
[R02340]	0A628 B26C3 M7F8 V116E28V8F5C3	15.000	.000	55.000	.000	43.5974 INO-ES
[R02341]	0A628 B26C3 M7F8 V116E28V8F5C3	20.000	.000	55.000	.000	15.1875 INO-ES
						.0405 SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0

(A)MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

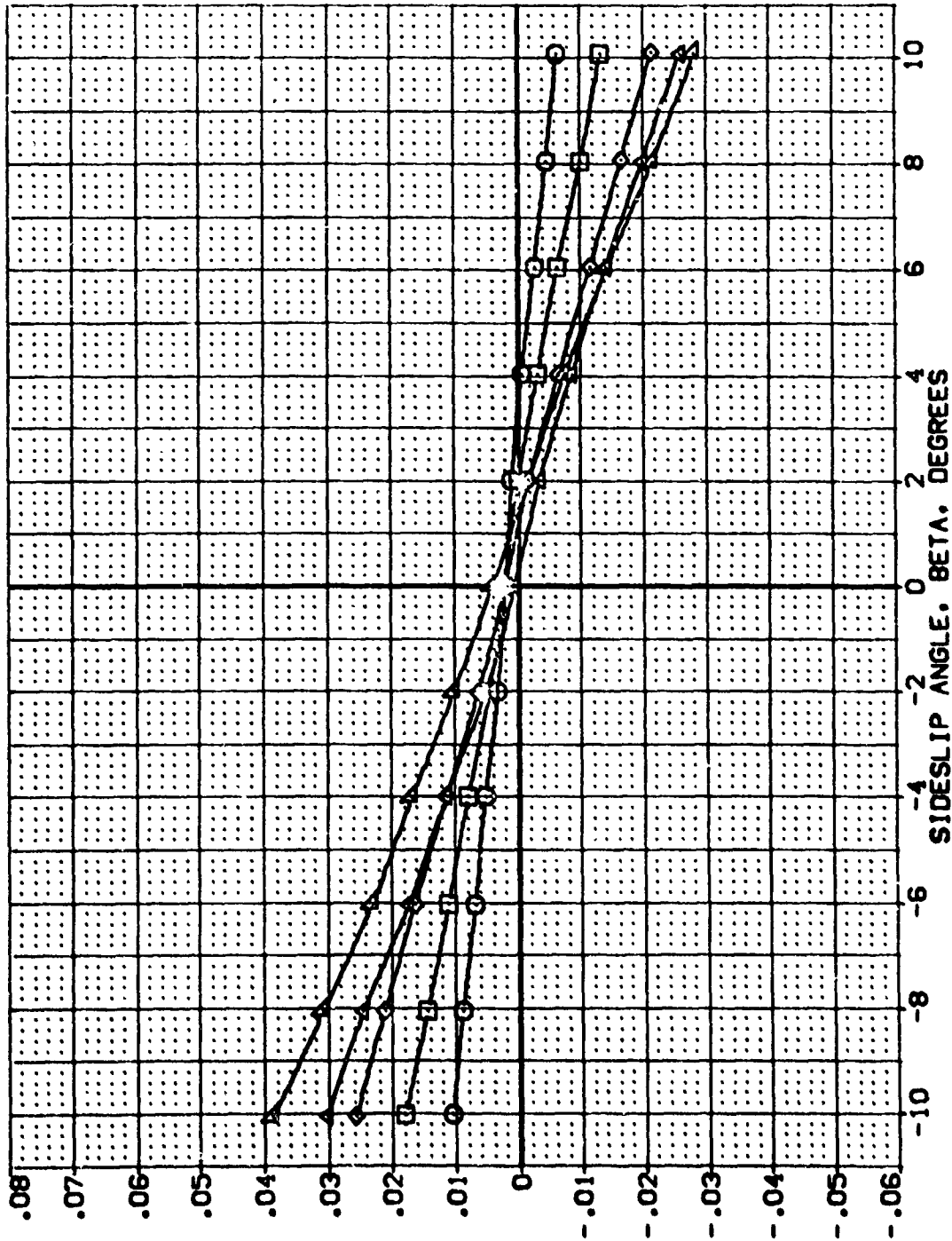
(R02207)	0A628	02003	M78	V116228V8703
(R02208)	0A628	02003	M78	V116228V8703
(R02209)	0A628	02003	M78	V116228V8703
(R02210)	0A628	02003	M78	V116228V8703
(R02211)	0A628	02003	M78	V116228V8703

ALPHA RUDDER SPORK ATLORN

.000	.000	55.000	.000
5.000	.000	55.000	.000
10.000	.000	55.000	.000
15.000	.000	55.000	.000
20.000	.000	55.000	.000

REFERENCE INFORMATION

REF	4.4118	50.FT.
REF	19.2289	INCHES
REF	37.5559	INCHES
REF	43.5574	INCHES
REF	5.0000	INCHES
REF	15.1675	INCHES
SCALE	.0405	SCALE



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBK	AIRBN	REFERENCE INFORMATION
{ROZZ07}	VI1E28V85D9	.000	.000	55.000	.000	SREF 4.4118 SD.FT.
{ROZZ08}	M7F8	5.000	.000	55.000	.000	LREF 19.2289 INCHES
{ROZZ09}	M7F8	10.000	.000	55.000	.000	BREF 37.8559 INCHES
{ROZZ10}	M7F8	15.000	.000	55.000	.000	XTRP 43.5574 INCHES
{ROZZ11}	M7F8	20.000	.000	55.000	.000	YTRP .0000 INCHES
						ZTRP 15.1875 INCHES
						SCALE .0405

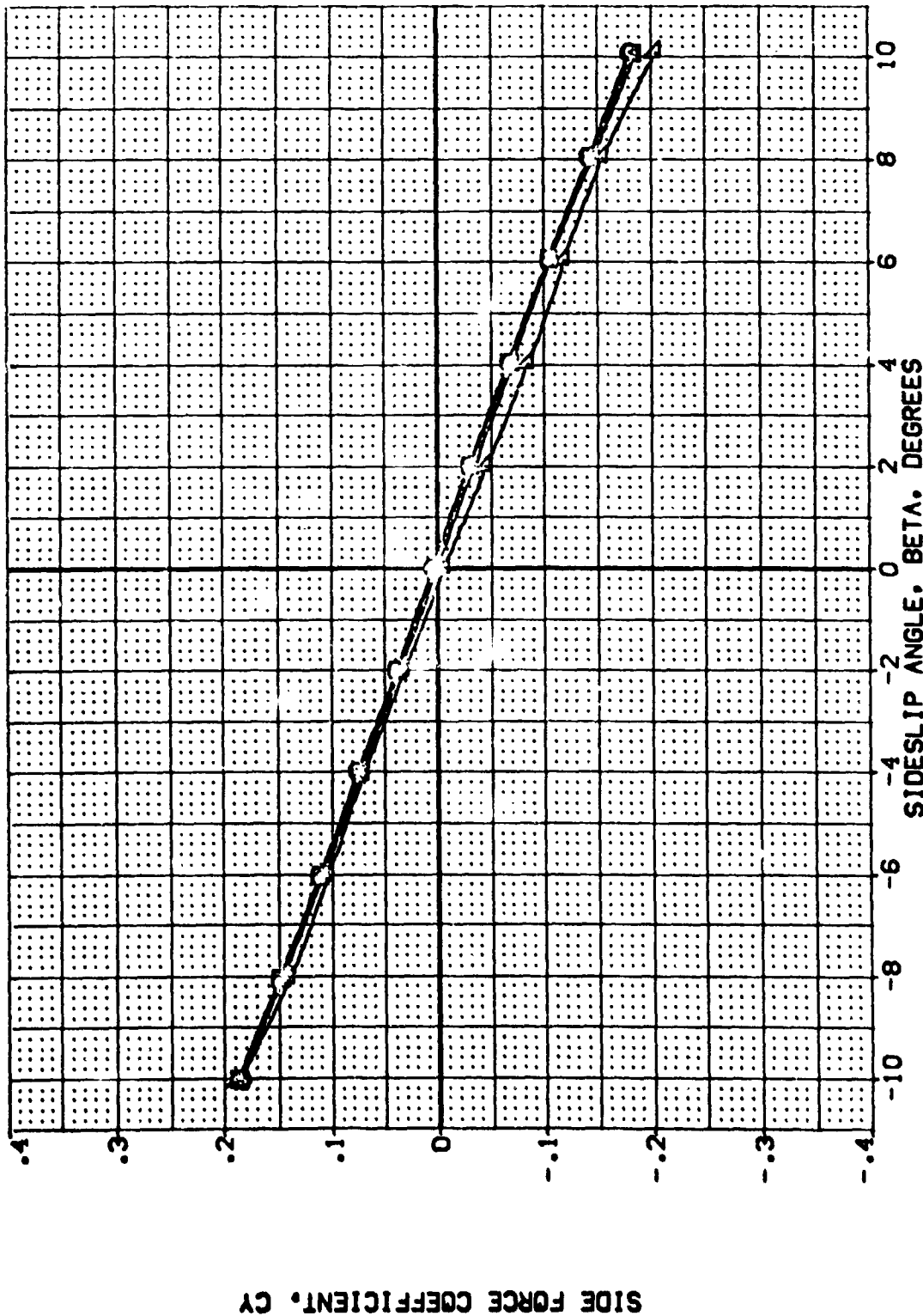


FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0

(A)MACH = .20





(COZ337)

0A628 B26C9 M7F8 W116E28V8R5X9

REF. INFO.      REFERENCE INFORMATION

SREF	4.4119	SQ.FT.
LREF	19.2259	INCHES
BREF	37.5359	INCHES
XPRP	43.5974	INCHES
YPRP	15.0000	INCHES
ZPRP	15.1875	INCHES
SCALE	.0405	SCALE

PARAMETRIC VALUES

WCH	.200	BDFLAP	-12.000
ELEVON	.000	AILRON	.000
RUDDER	.000		

SREF.      0

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET, PER DEGREE

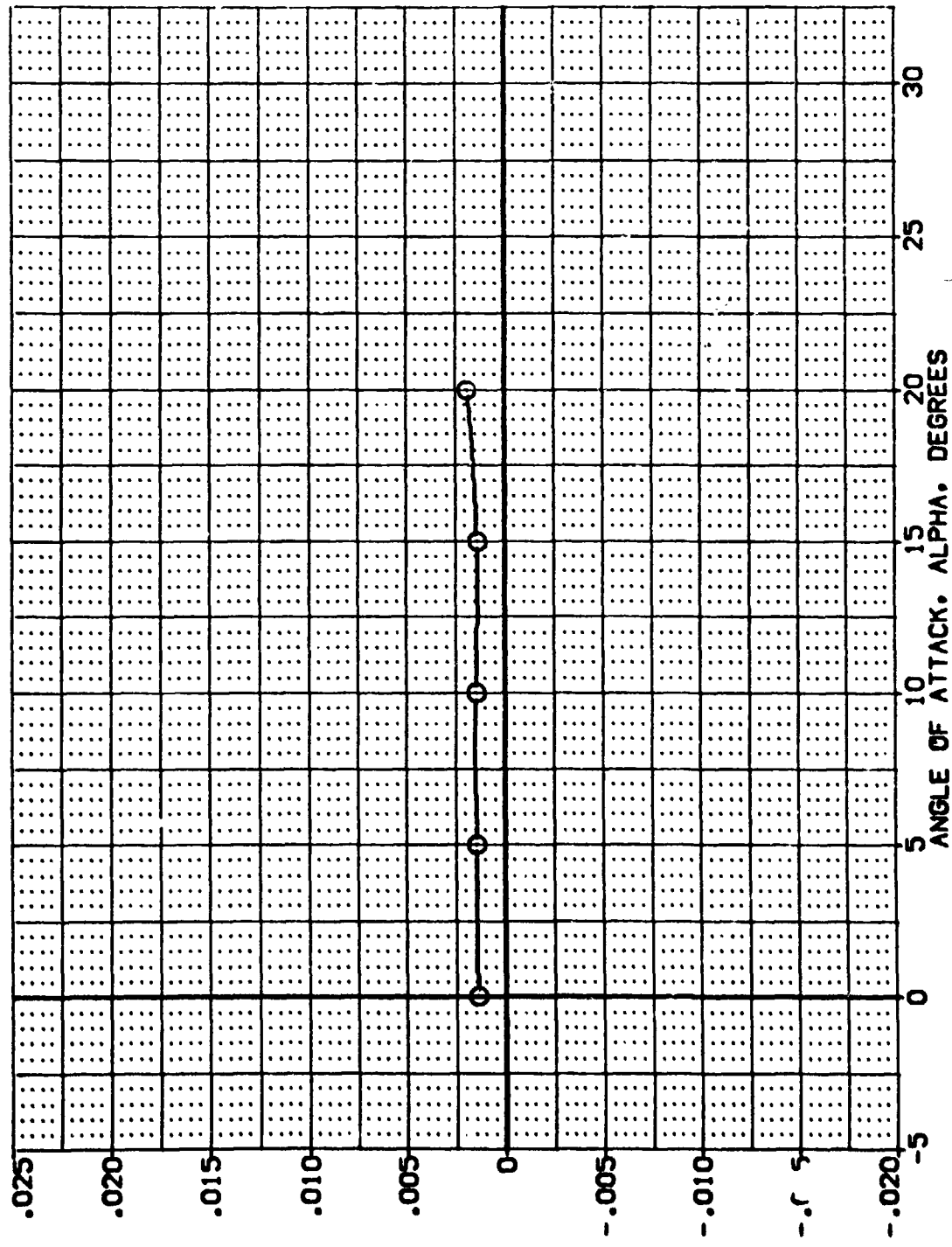


FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0

(C0Z337)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL O

SPDRK 50.000

HACH ELEVON RUDDER

PARAMETRIC VALUES

.200 BOFLAP -12.000

.000 AILRON .000

.000

REFERENCE INFORMATION

4.4119 SQ.FT.

19.2259 INCHES

37.9659 INCHES

43.5974 INCHES

.0000 INCHES

15.1875 INCHES

.0405 SCALE

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

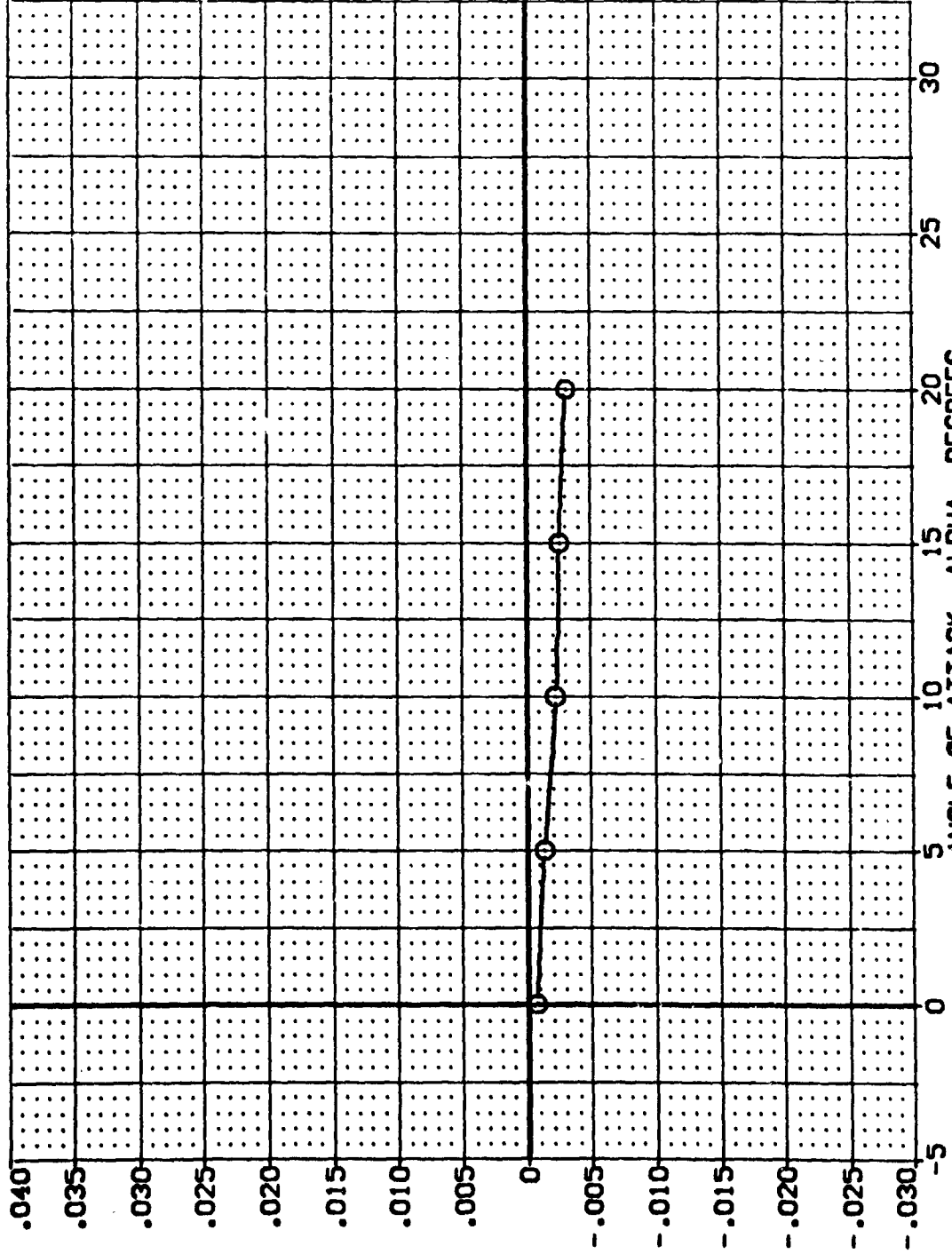


FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0



(CDZ337)

0A628 B26C9 M7F8 W116E28V8R5X9

SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5574 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1673 INCHES  
 SCALE .0405 SCALE

SPDRK 55.000  
 MAG1 .200  
 ELEVON .000  
 RUDDER .000  
 PARAMETRIC VALUES  
 BDFLAP -12.000  
 AILRON .000

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

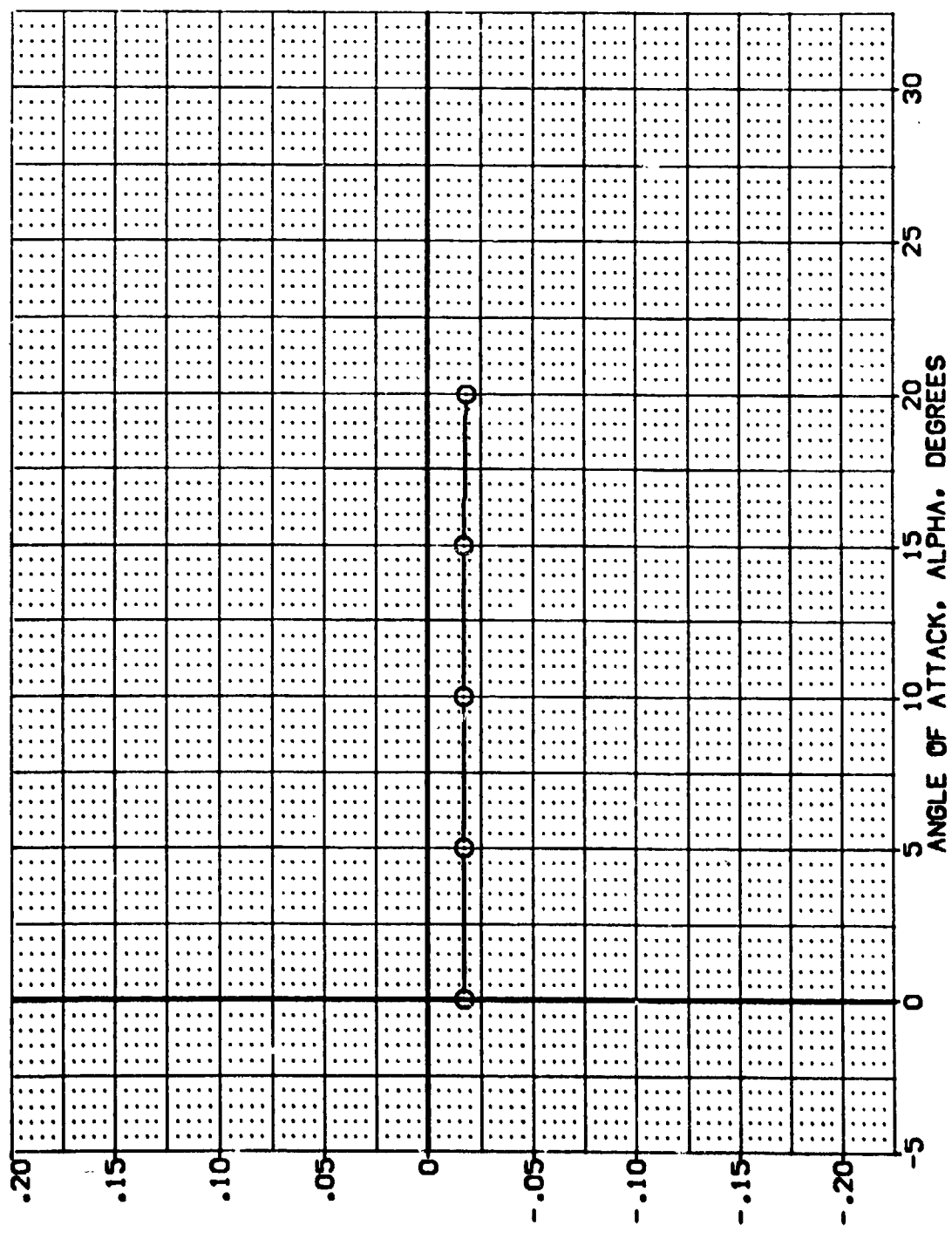


FIG 52 LATERAL DIRECTIONAL STABILITY, 55 DEG. FLARE, RUDDER = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION

{R0228}	0A628	026C9	M778	V118E28V85X9
{R0229}	0A628	026C9	M778	V118E28V85X9
{R0230}	0A628	026C9	M778	V118E28V85X9
{R0231}	0A628	026C9	M778	V118E28V85X9
{R0232}	0A628	026C9	M778	V118E28V85X9

ELEVON SPOBRK BOFLAP RUDDER REFERENCE INFORMATION

.000	.000	-12.000	.000	SREF	4.4119	50.FT.
.000	26.000	-12.000	.000	LREF	19.2269	INCHES
.000	49.000	-12.000	.000	BREF	37.9259	INCHES
.000	59.000	-12.000	.000	XMRP	43.5974	INCHES
.000	66.000	-12.000	.000	YMRP	15.0000	INCHES
				ZMRP	15.1875	INCHES
				SCALE	.0405	SCALE

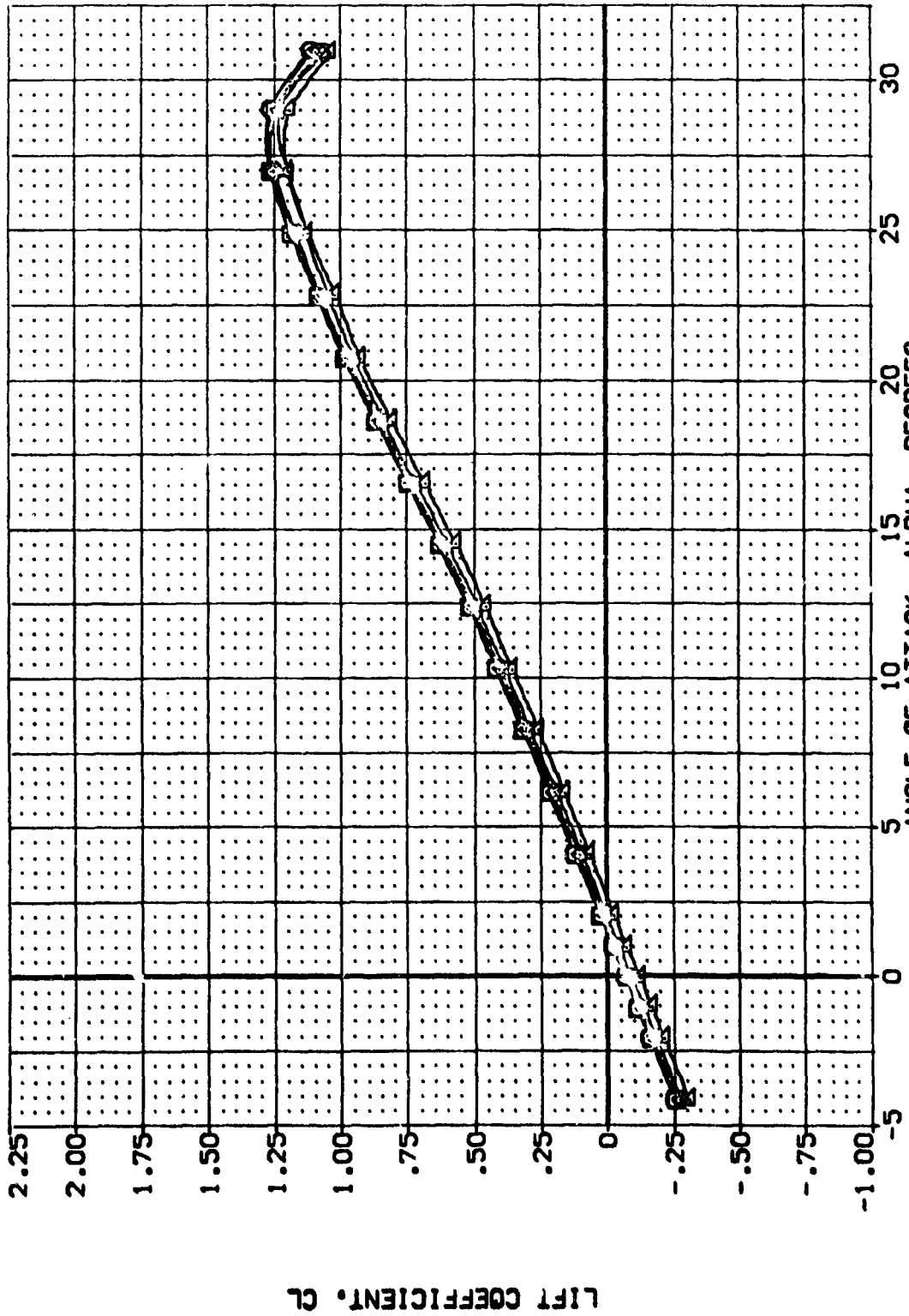


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(MACH = .20

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	EDFLAP	RUDDER	SREF	REFERENCE INFORMATION
[R02228]	0A528 B28C3 M7F8 V116E28V8R519	.000	0.00	-12.000	.000	4.4119	50. FT.
[R02152]	0A528 B28C3 M7F8 V116E28V8R519	.000	25.000	-12.000	.000	19.2259	INCHES
[R02138]	0A528 B28C3 M7F8 V116E28V8R519	.000	40.000	-12.000	.000	37.9359	INCHES
[R02306]	0A528 B28C3 M7F8 V116E28V8R519	.000	55.000	-12.000	.000	43.5974	INCHES
[R02144]	0A528 B28C3 M7F8 V116E28V8R519	.000	85.000	-12.000	.000	15.1875	INCHES
						.0405	SCALE

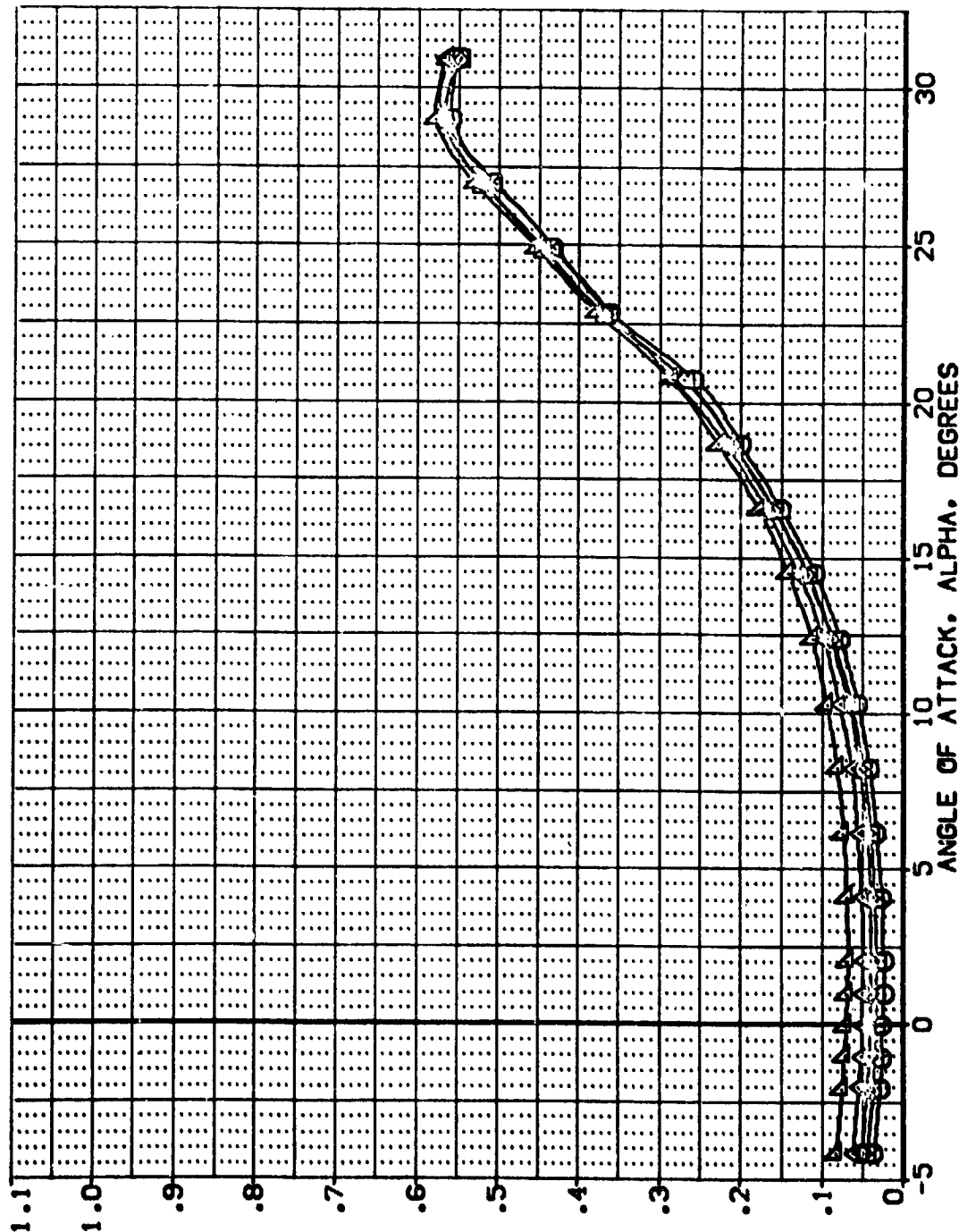


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOILER	BD/FLAP	RUDDER	REFERENCE INFORMATION
[ROZZ28]	0A6Z8 EG6C9 M7F8 V116Z28/VER5X9	.000	.000	-12.000	.000	GREF 4.4119 SQ.FT.
[ROZZ32]	0A6Z8 EG6C9 M7F8 V116Z28/VER5X9	.000	25.000	-12.000	.000	LREF 19.2259 INCHES
[ROZZ36]	0A6Z8 EG6C9 M7F8 V116Z28/VER5X9	.000	40.000	-12.000	.000	BREF 37.9359 INCHES
[ROZZ38]	0A6Z8 EG6C9 M7F8 V116Z28/VER5X9	.000	55.000	-12.000	.000	XTRP 43.5974 INCHES
[ROZZ44]	0A6Z8 EG6C9 M7F8 V116Z28/VER5X9	.000	65.000	-12.000	.000	YTRP .0000 INCHES
						ZTRP 15.1875 INCHES
						SCALE .0405 SCALE

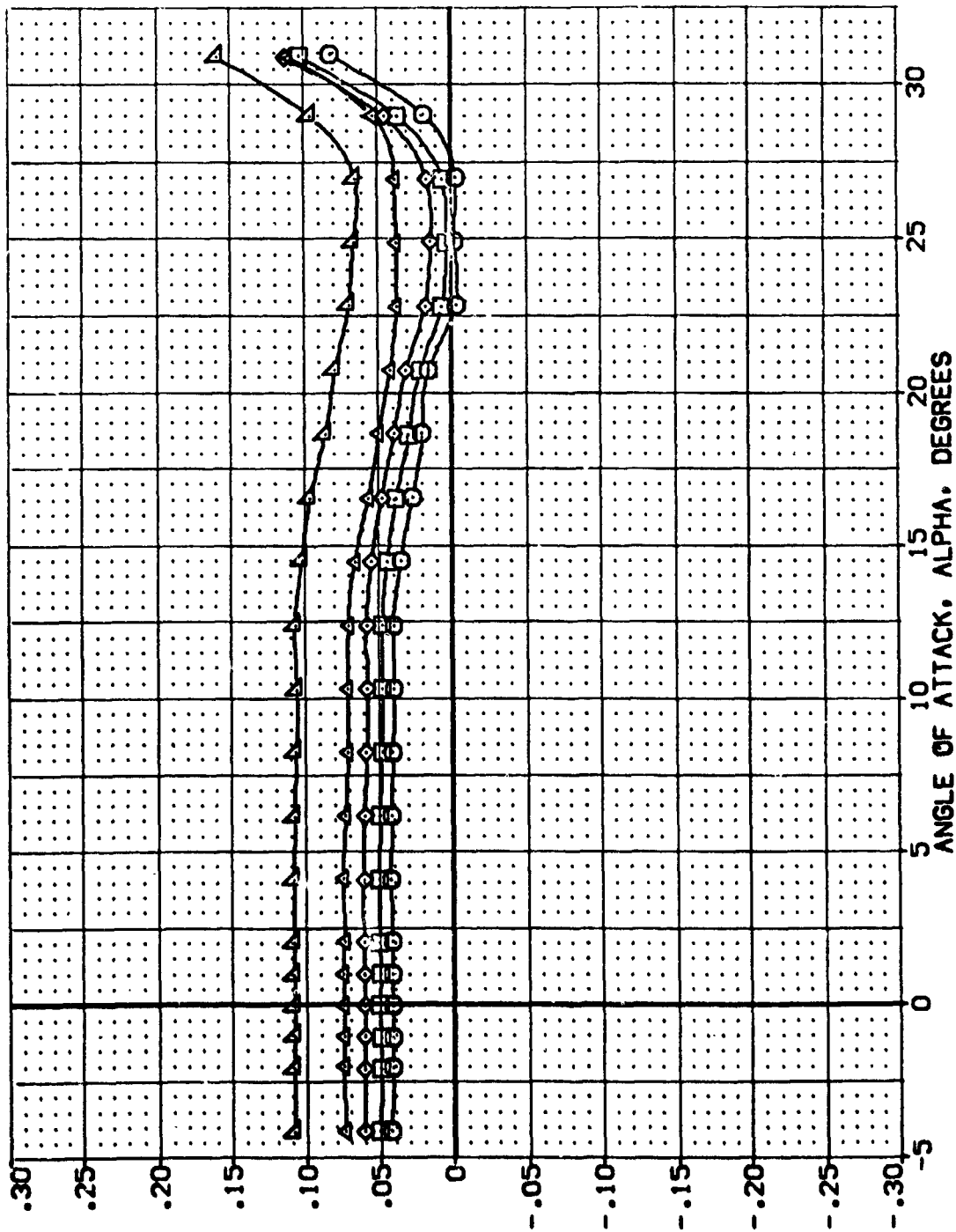
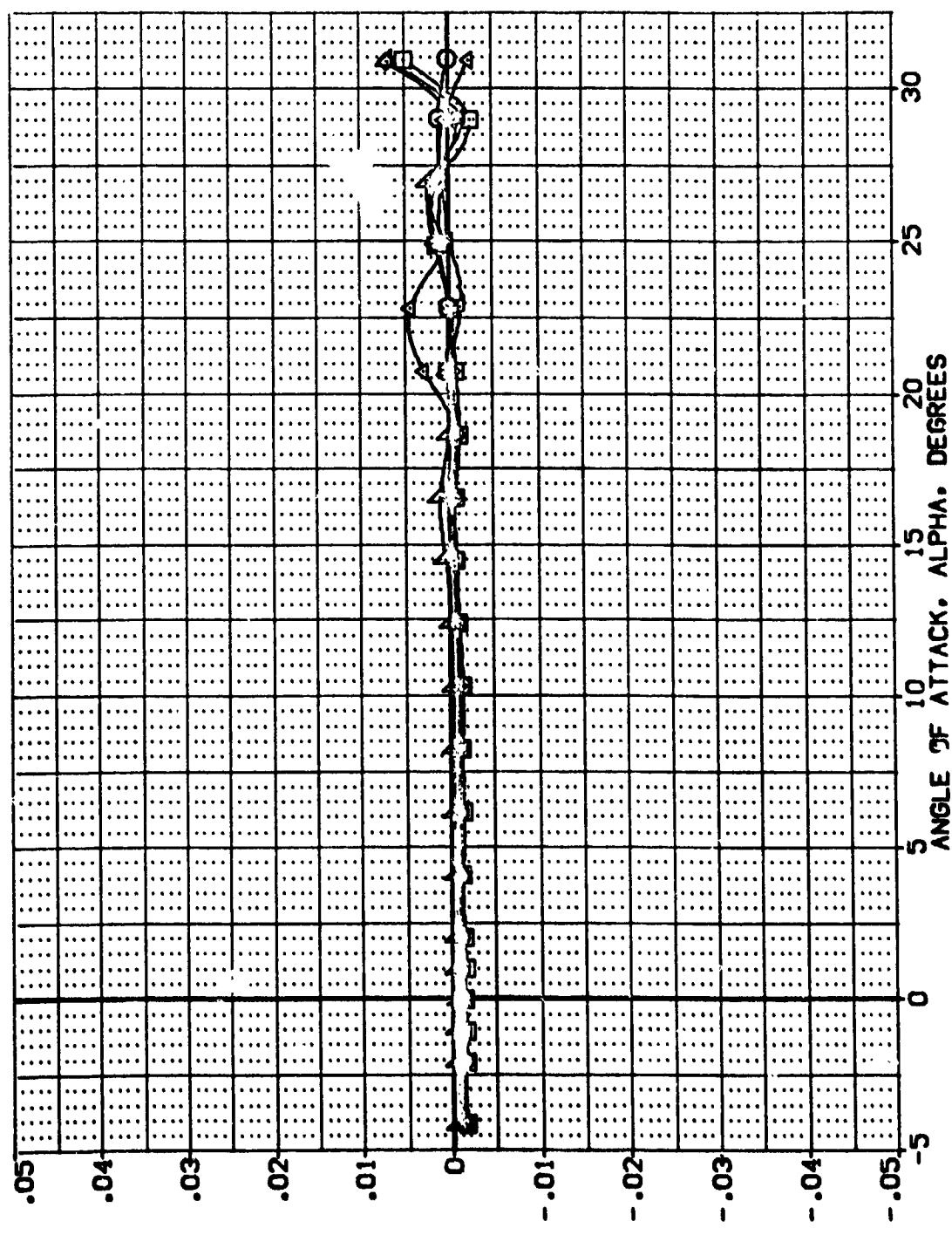


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(A)MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPORWK	BOFLAP	RUDDER	REFERENCE INFORMATION
[R02228]	0A028 B0203 M7F8 V11E28V8P5V3	.000	.000	-12.000	.000	GREF 4.4119 SQ.FT.
[R02152]	0A028 B0203 M7F8 V11E28V8P5V3	.000	25.000	-12.000	.000	LREF 19.2289 INCHES
[R02138]	0A028 B0203 M7F8 V11E28V8P5V3	.000	40.000	-12.000	.000	BREF 37.5529 INCHES
[R02136]	0A028 B0203 M7F8 V11E28V8P5V3	.000	55.000	-12.000	.000	XTRP 43.5574 INCHES
[R02144]	0A028 B0203 M7F8 V11E28V8P5V3	.000	65.000	-12.000	.000	YTRP .0000 INCHES
						ZTRP 15.1875 INCHES
						SCALE .0405

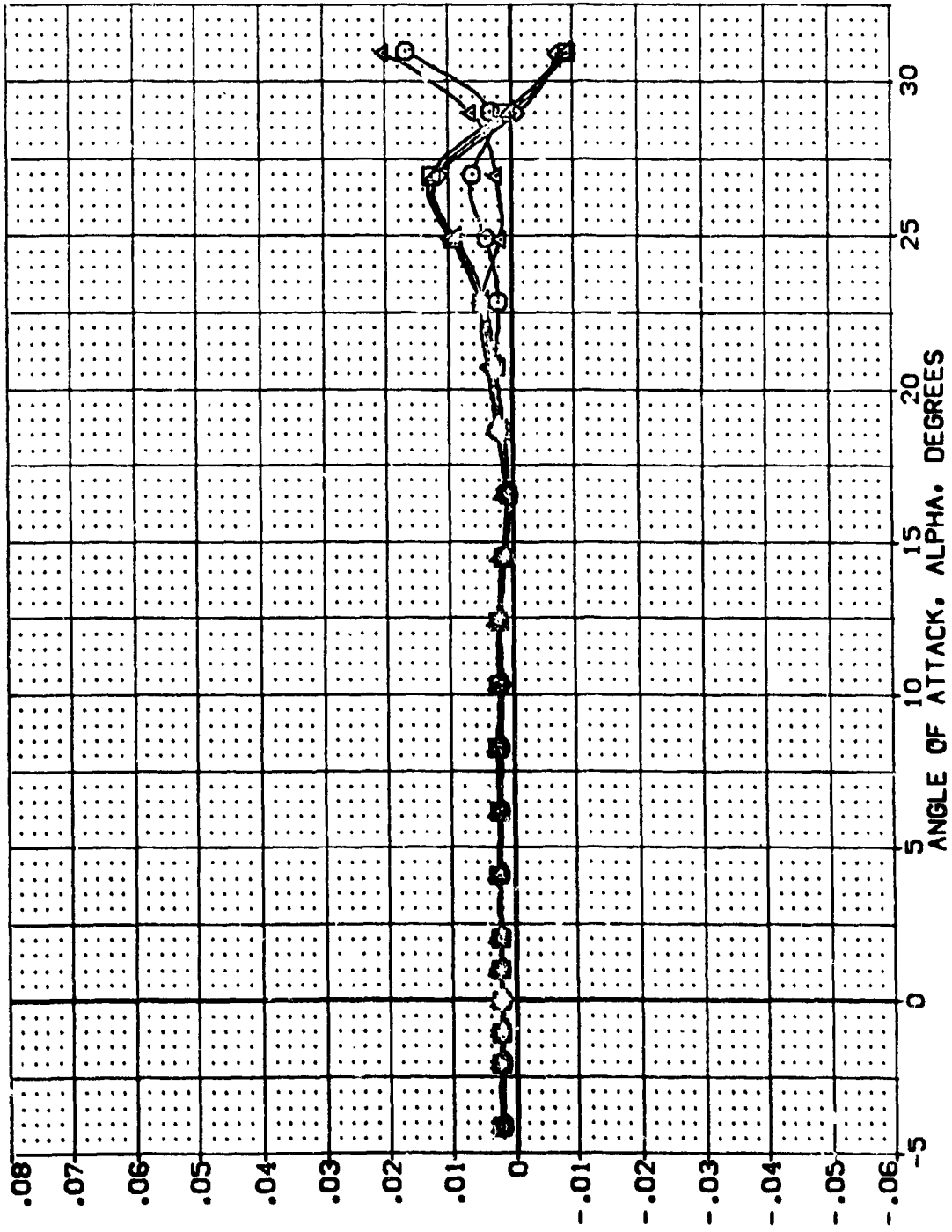


YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0  
 (A)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
{RDZ228}	0A628 026C9 M778 V116E28V85C9	.000	.000	-12.000	.000	4.4119 SQ.FT.
{RDZ157}	0A528 026C9 M778 V116E28V85C9	.000	25.000	-12.000	.000	19.2259 INCHES
{RDZ139}	0A528 026C9 M778 V116E28V85C9	.000	40.000	-12.000	.000	37.9359 INCHES
{RDZ336}	0A628 026C9 M778 V116E28V85C9	.000	55.000	-12.000	.000	43.5974 INCHES
{RDZ144}	0A628 026C9 M778 V116E28V85C9	.000	65.000	-12.000	.000	00.000 INCHES
						15.1675 INCHES
						.0405 SCALE



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(R02228)	0AS28 026C9 M7F8 V118E28V82K9	.000	.000	-12.000	.000	4.4119 SQ.FT.
(R02152)	0AS28 026C9 M7F8 V118E28V82K9	.000	28.000	-12.000	.000	19.2299 INCHES
(R02138)	0AS28 026C9 M7F8 V118E28V82K9	.000	40.000	-12.000	.000	37.5939 INCHES
(R02306)	0AS28 026C9 M7F8 V118E28V82K9	.000	85.000	-12.000	.000	43.5974 INCHES
(R02144)	0AS28 026C9 M7F8 V118E28V82K9	.000	85.000	-12.000	.000	15.1875 INCHES
						.0405 SCALE

SIDE FORCE COEFFICIENT, CY

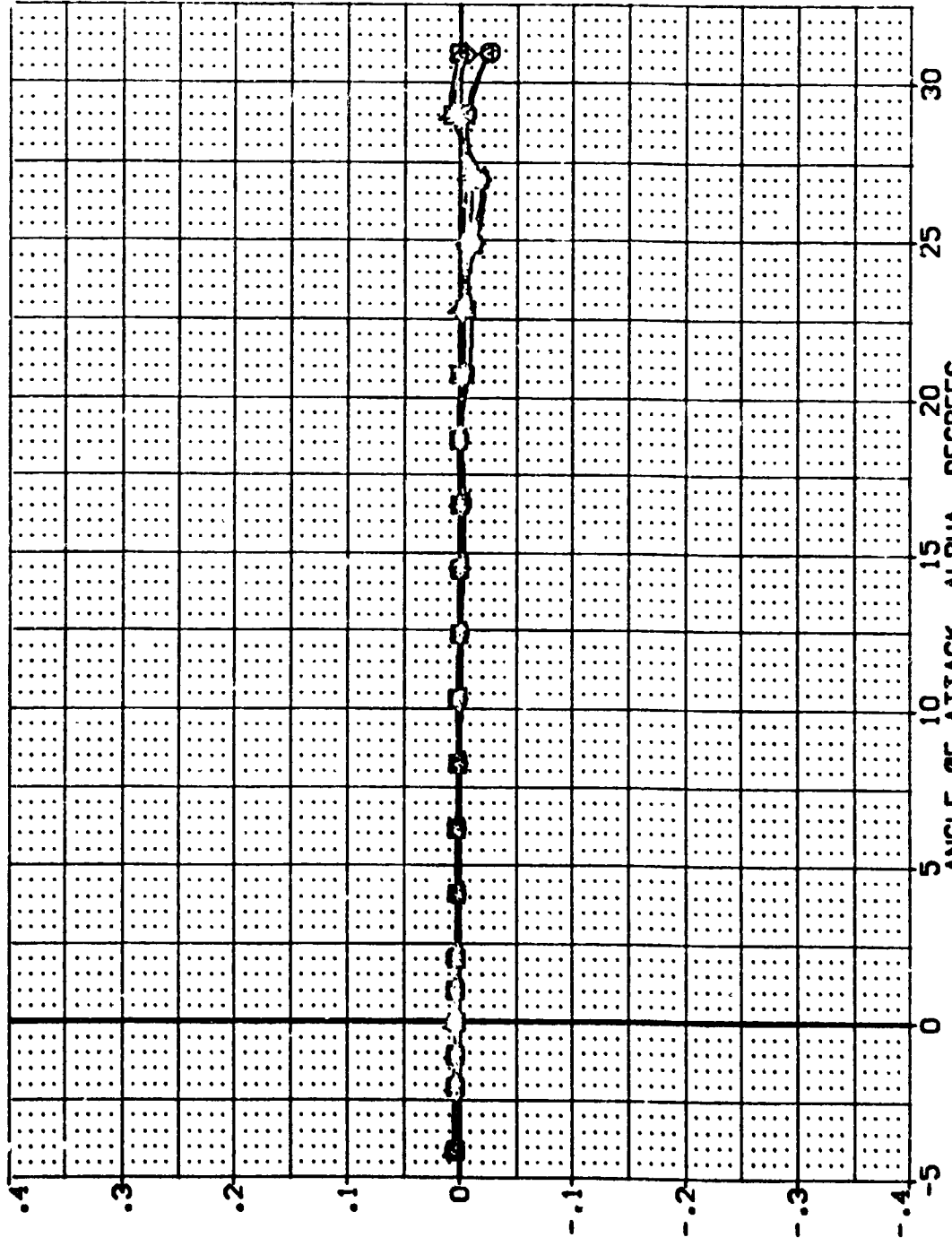


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(M)MACH = .20



(G0Z228)

0A628 B26C9 M7F8 W11r .28V8R5X9

SYMBL ALPHA  
O -1.000

PARAMETRIC VALUES  
MACH .200 DELVON  
80FLAP -12.000 AILRON  
RUDDER .000 BETA  
M-LRAD .000

DATA SOURCE  
SPDBRK .000 DATASET  
G0Z228 .000 G0Z152  
G0Z336 .000 G0Z336

REFERENCE INFORMATION  
SO.FT. 4.4119  
INCHES 19.2299  
INCHES 37.9359  
INCHES 43.5974  
INCHES .0000  
INCHES 15.1875  
SCALE .0405

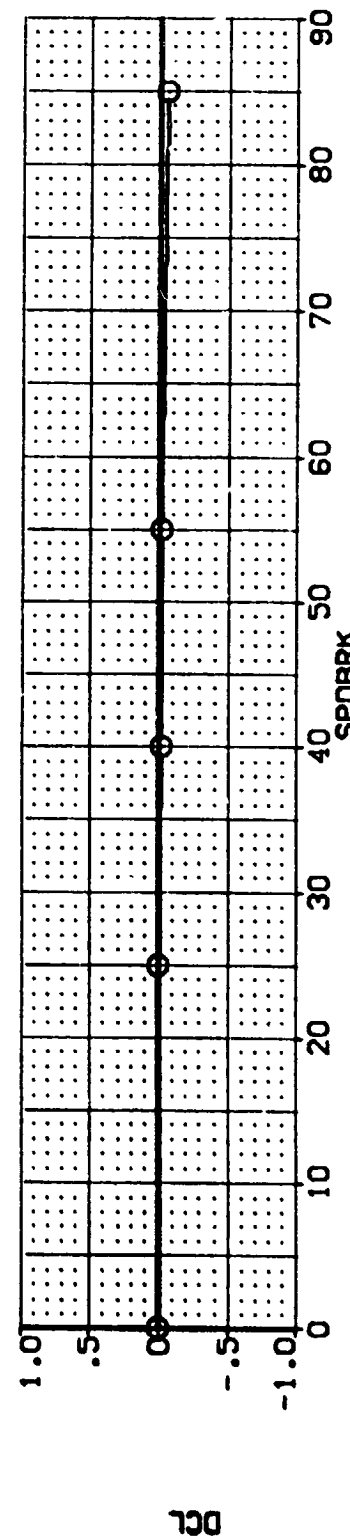
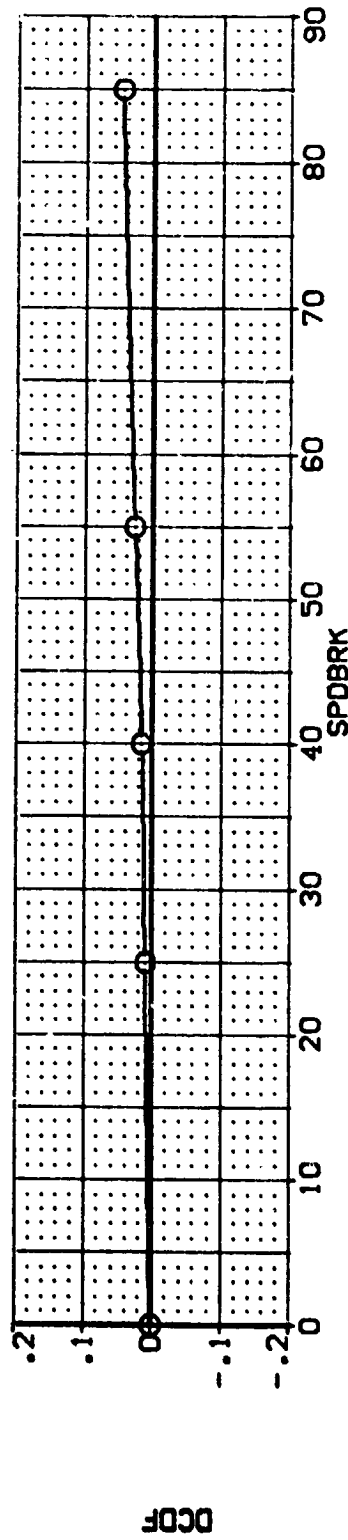
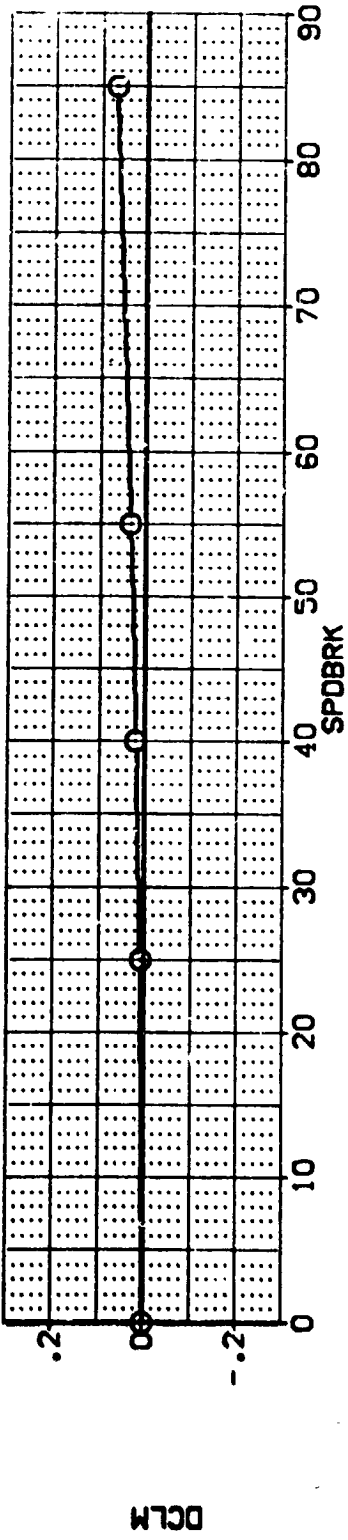


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(602228)

0A628 826C9 M7F8 W116E28V8R5X9

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
SPRDL	0	.000	SPDRK	4.4118	SO.FT.
ALPHA	-2.000	.000	SPDRK	19.2288	IN.OES
MACH	.200	.000	SPDRK	37.9558	IN.OES
BDFLAP	-12.000	.000	SPDRK	43.9574	IN.OES
RUDR	.000	40.000	SPDRK	.0000	IN.OES
RURAD	.000	65.000	SPDRK	15.1875	IN.OES
			SPDRK	.0405	SCALE

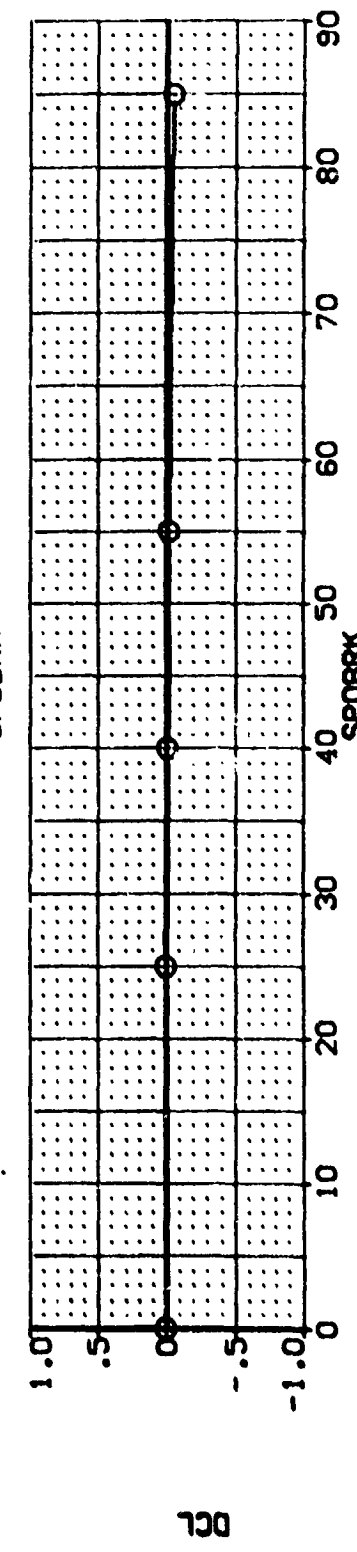
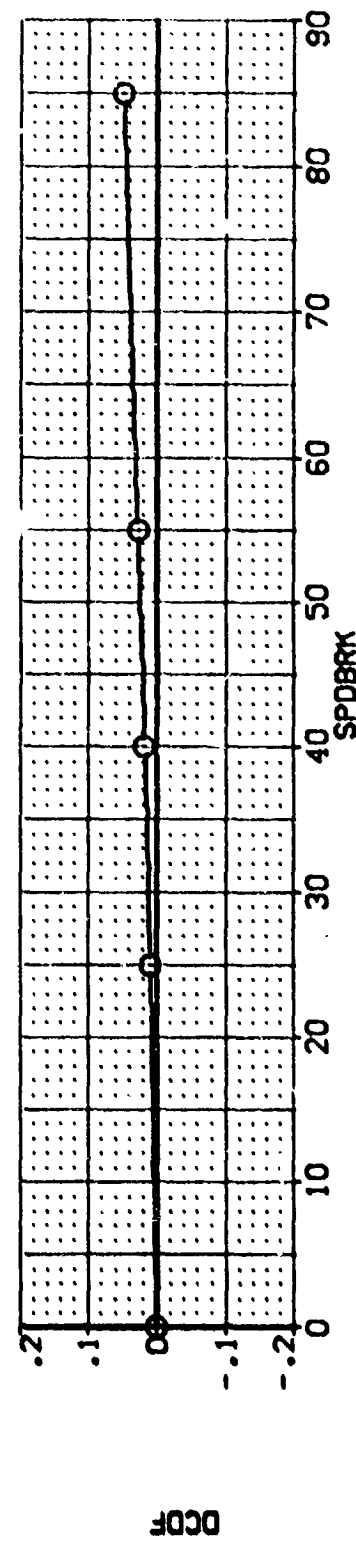
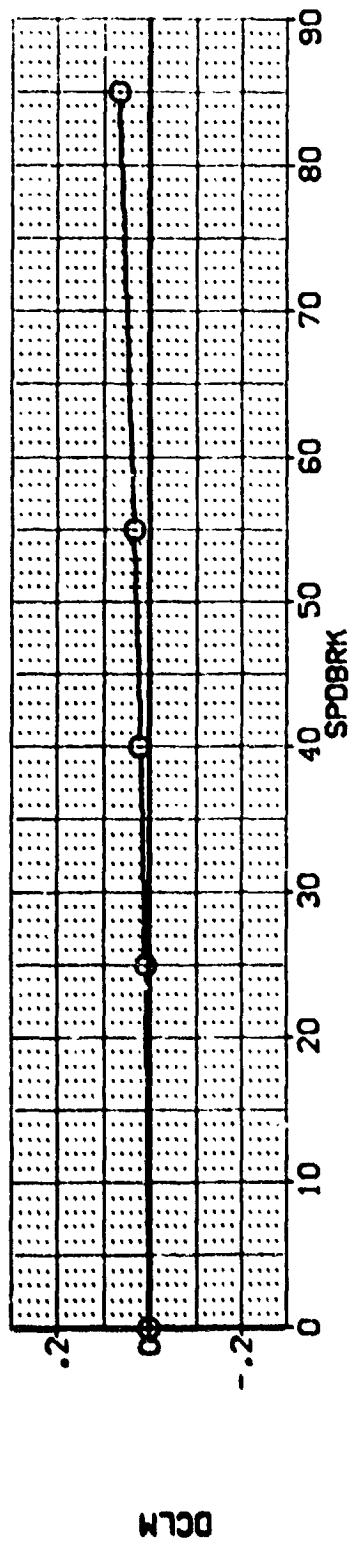


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	HACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	-1.000		.200 DELVON	.000 DATASET	4.4119 SO.FT.
			-12.000 AILRON	.000 G0Z228	19.2299 INCHES
			.000 BETA	.000 G0Z138	37.9359 INCHES
				.000 G0Z144	43.5974 INCHES
				40.000	0.000
				65.000	15.1975 INCHES
					.0405 SCALE

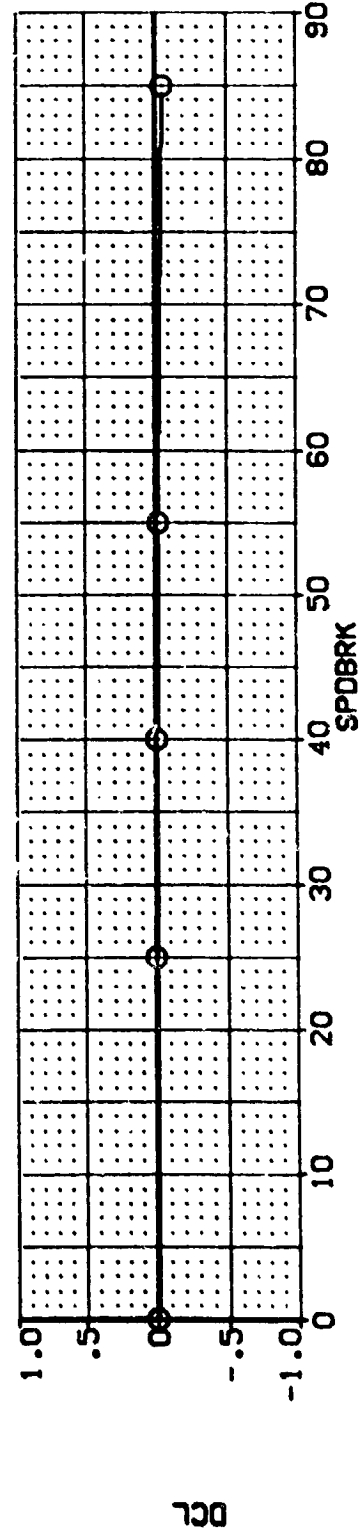
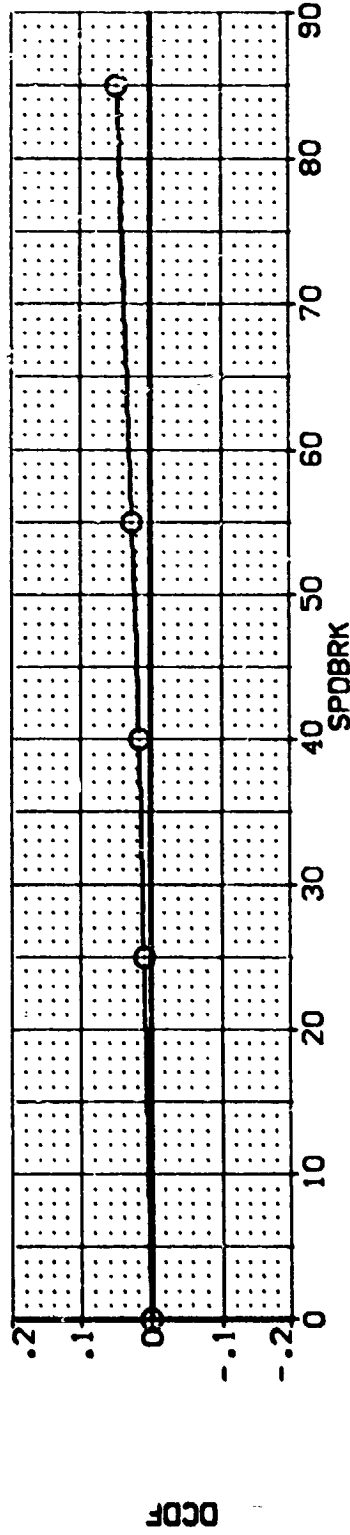
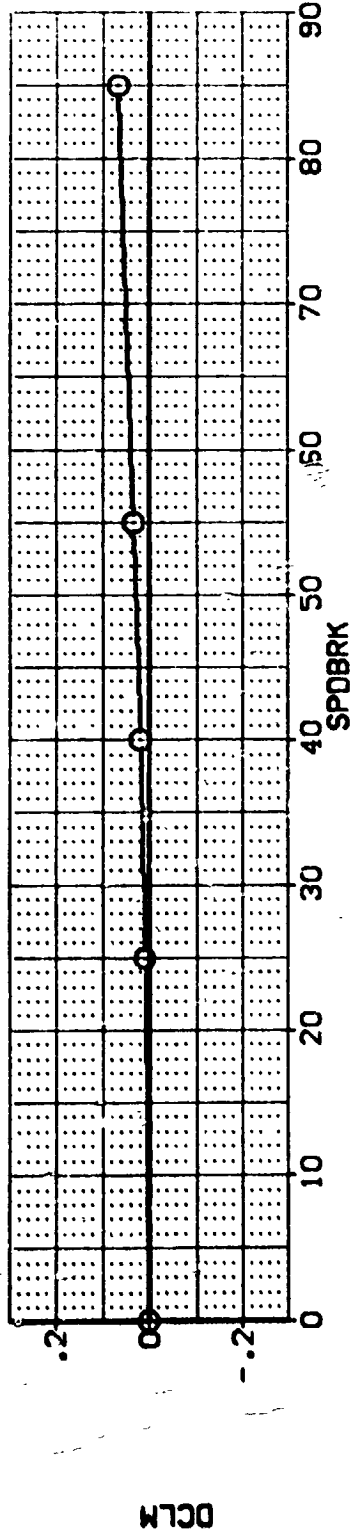


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0. BETA = 0

(G02228)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	REFLAP	RUDER	RURAD	PARAMETRIC VALUES	.000	DATASET	SPDBRK	DATA SOURCE	DATASET	SPDBRK	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	REFERENCE INFORMATION
0	.000	.200	-12.000	.000	.000	DELVON	.000	G02228	25.000	.000	G02152	25.000	19.2259	37.9369	43.5574	15.0000	.0405	80.000	IND-ES
						BETA	.000	G02138	40.000	40.000	G02336	55.000							IND-ES
							.000	G02144	65.000	65.000									IND-ES

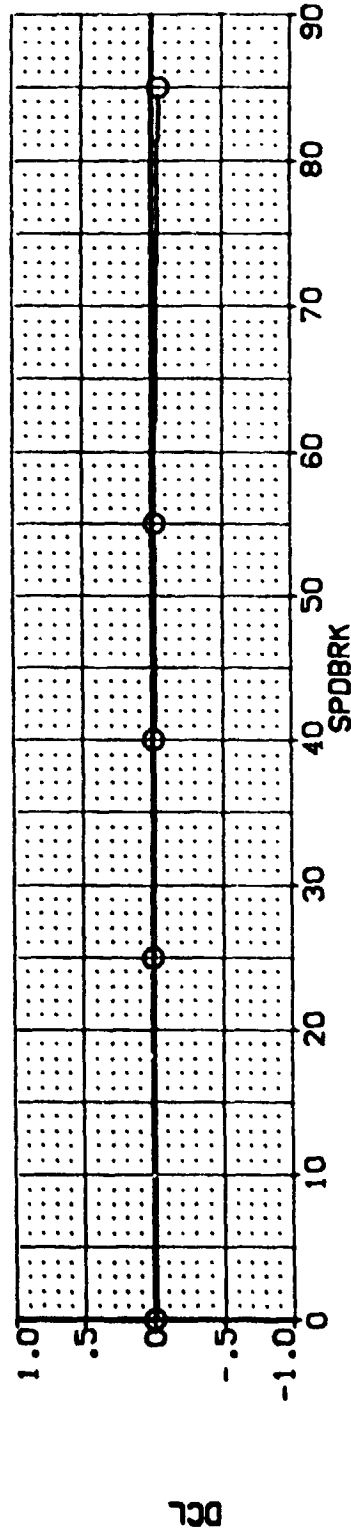
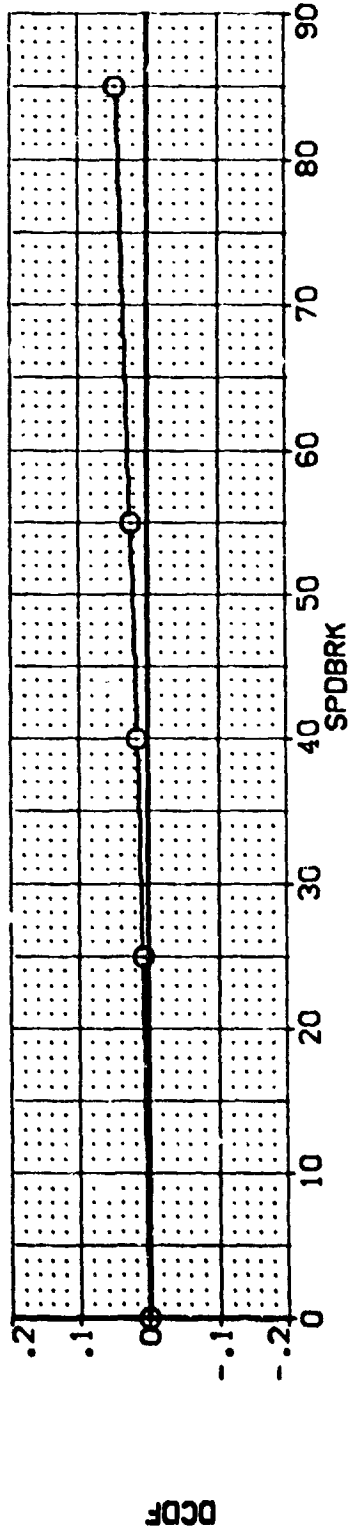
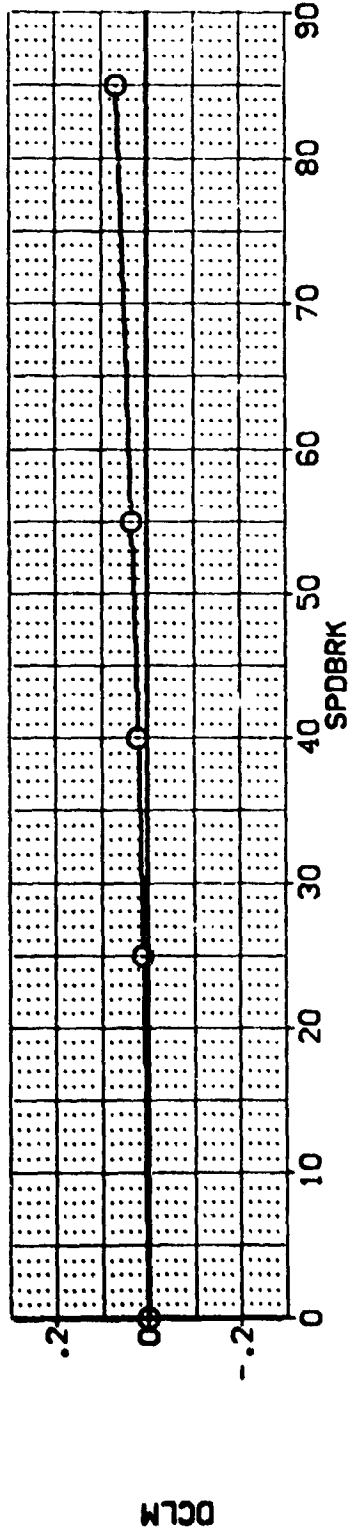


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (GDZ228)

SYMBOL ALPHA  
O 1.000

PARAMETRIC VALUES  
MACH .200 DELVON  
BDLAP -12.000 AILRON  
RUDDER .000 BETA  
R-LRAD .000

DATA SOURCE  
SPDBRK .000  
40.000  
65.000

DATASET  
GDZ152  
GDZ336

SPDBRK  
25.000  
55.000

REFERENCE INFORMATION  
4.4119 SQ. FT.  
19.2288 INCHES  
37.1359 INCHES  
43.5374 INCHES  
15.0000 INCHES  
15.1675 INCHES  
.0405 SCALE

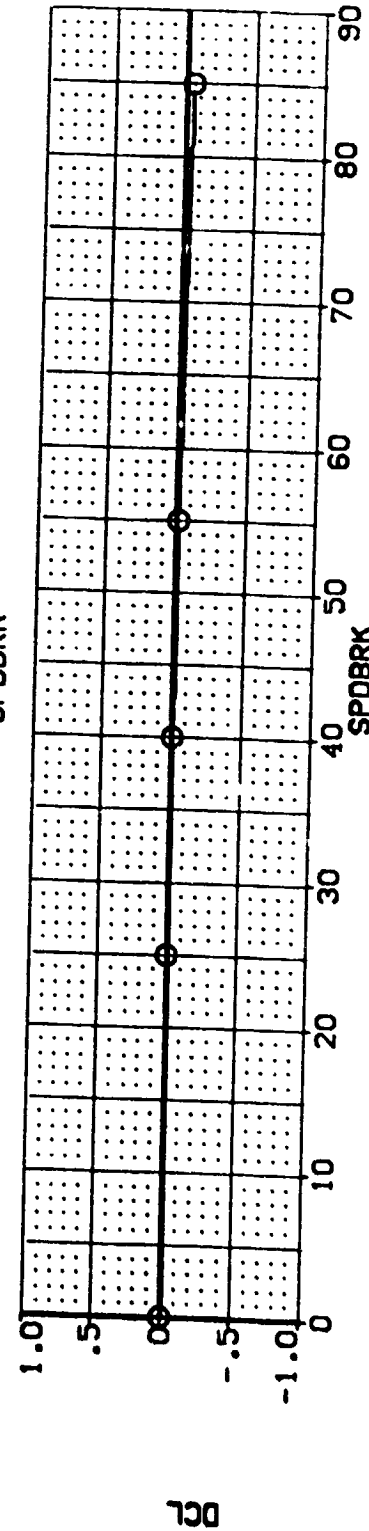
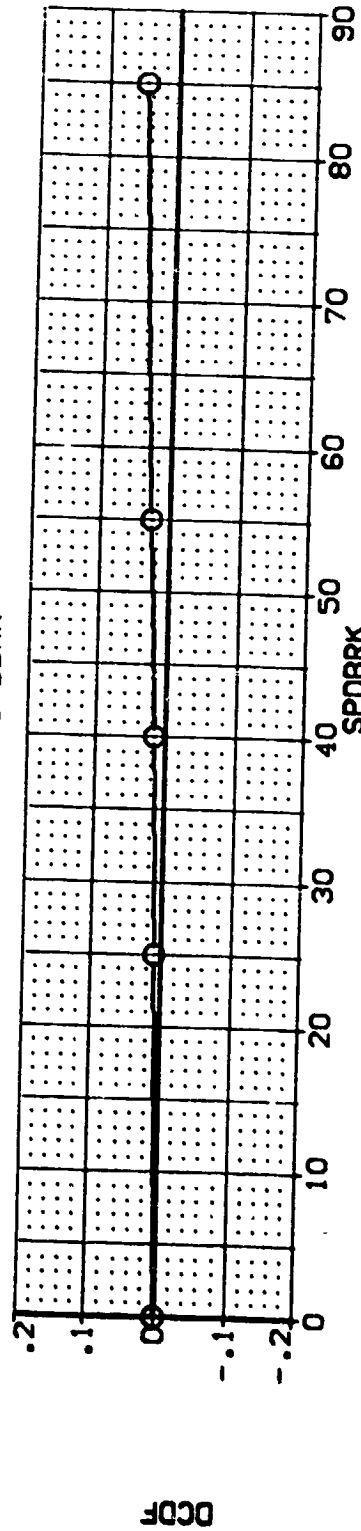
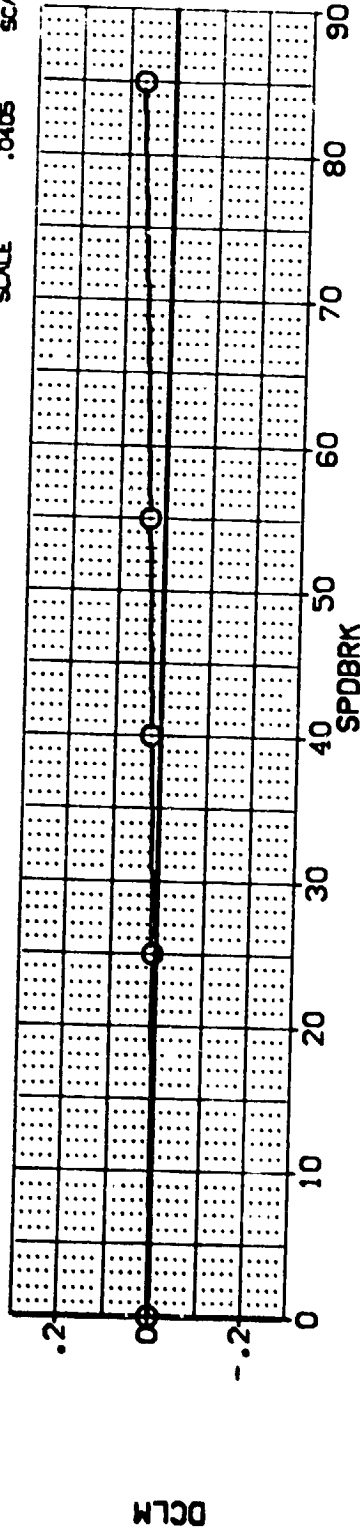


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	M-LRUD	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	2.000					.200	DELTA	.000	GDZ228	SPDBRK	SPDBRK	SPDBRK	50.FI.	
						-12.000	ALTRON	.000	GDZ152	25.000	25.000	25.000	INDES	
						.000	BETA	40.000	GDZ336	55.000	55.000	55.000	INDES	
						.000		65.000					INDES	
						.000							INDES	
													SCALE	

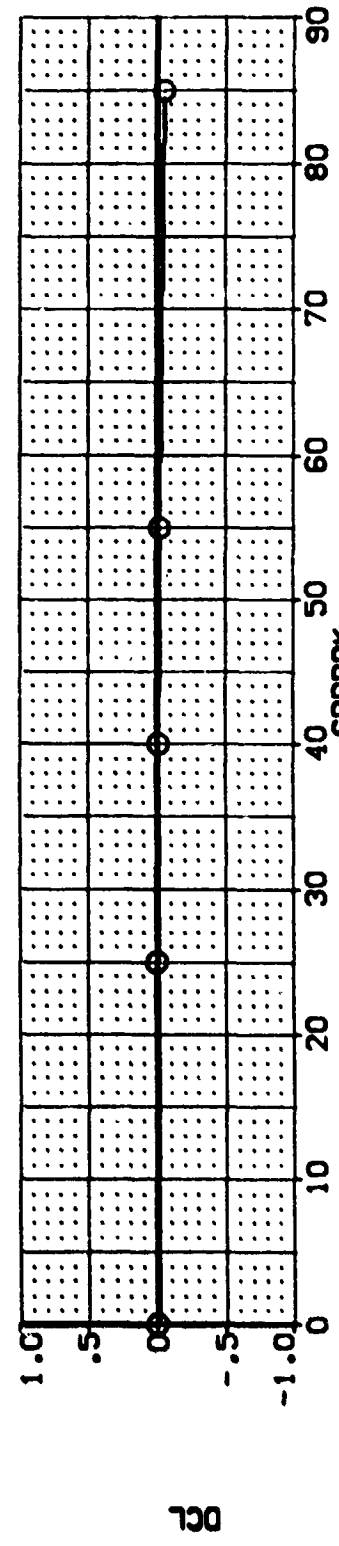
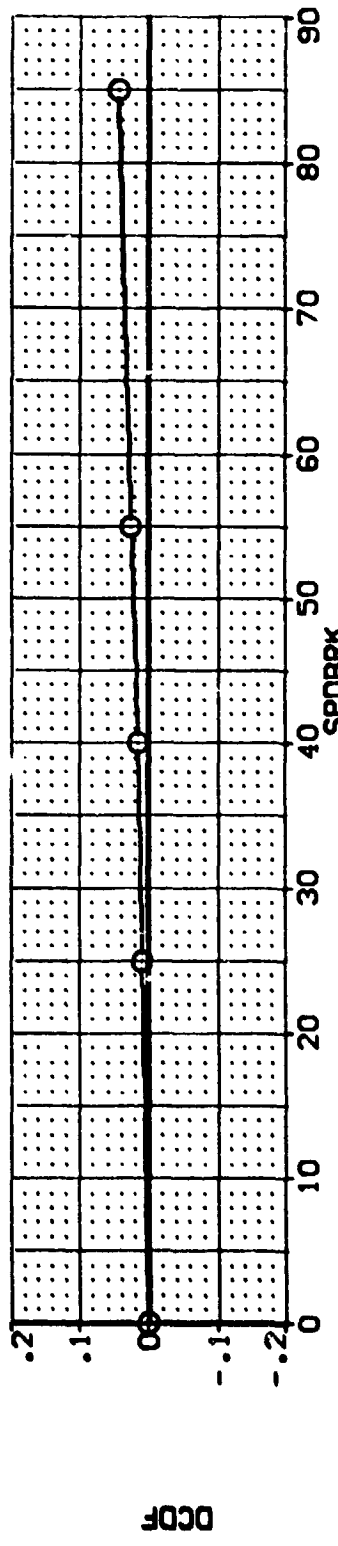
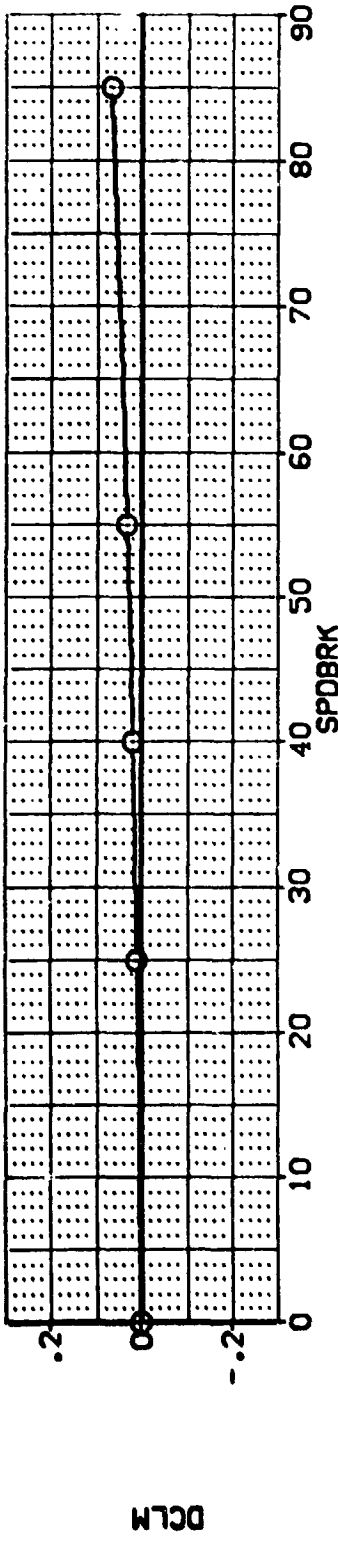


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (GDZ228)

SWEEP	ALPHA	PARAMETRIC VALUES		DATA SOURCE	REFERENCE INFORMATION	
0	4.000	MACH	.200	DELVON	SPDRK	SPDRK
		BOFLAP	-12.000	ALRON	.000	4.4119
		RUDDER	.000	BETA	GDZ28	19.2299
		RURAD	.000		GDZ36	37.9359
						43.5974
						.0000
						15.1873
						.0405
						SCALE
						92.FT.
						INCHES
						INCHES
						INCHES
						INCHES
						SCALE

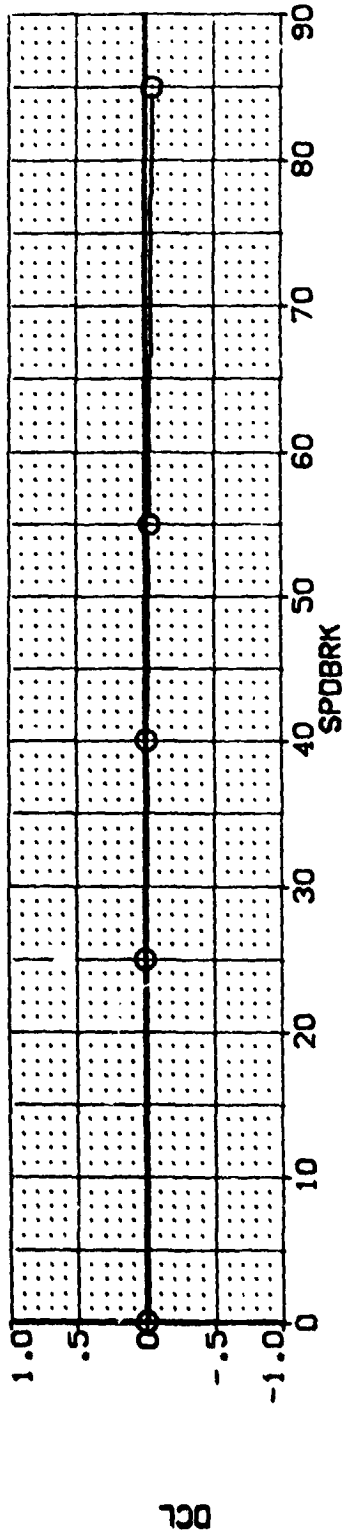
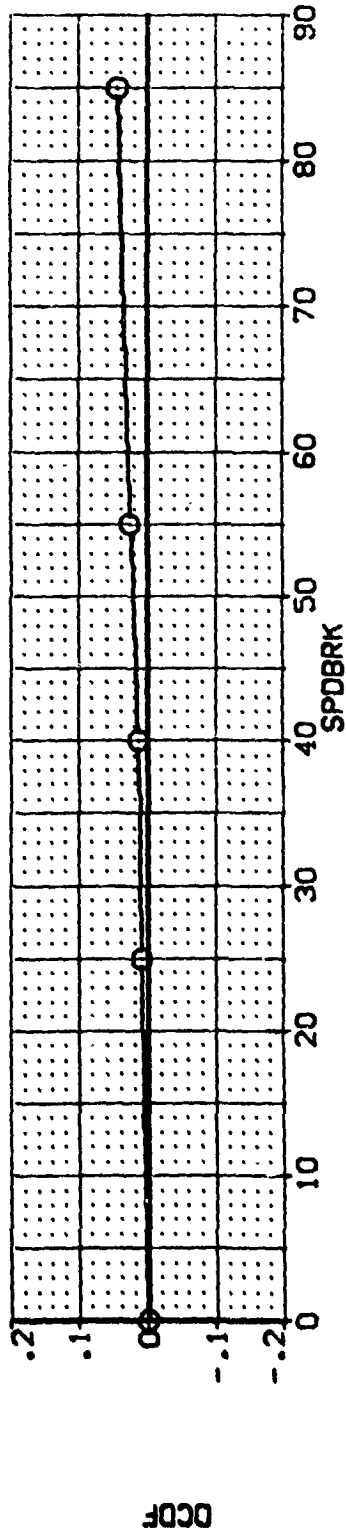
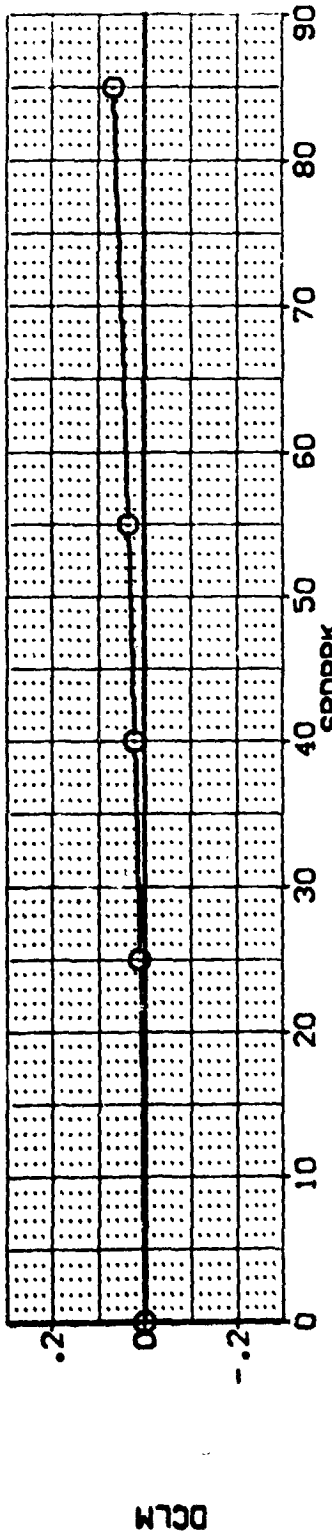


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0





0A62B B26C9 M7F9 W:16E28V8R5X9 (GDZ228)  
 SYMCL ALPHA 0.000 MACH .200 DELVON .000 DATASET SPOBRK REFERENCE INFORMATION SO.FT. INCHES  
 0 .000 BOFLAP -12.000 AILRON .000 GDZ228 .000 60Z152 25.000 LREF 4.4118 19.2259 37.9359 43.5974 15.1875 .0405  
 .000 RUDDER .000 BETA .000 60Z138 40.000 XMRP 55.000 YMRP 0.000 ZMRP 0.000 SCALE  
 .000 R-RAD .000 60Z144 85.000 SCALE

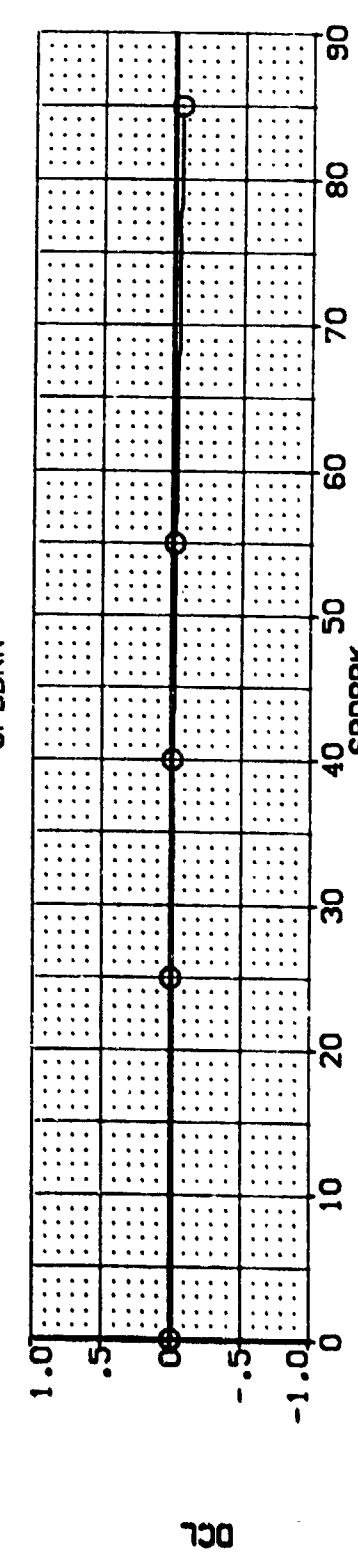
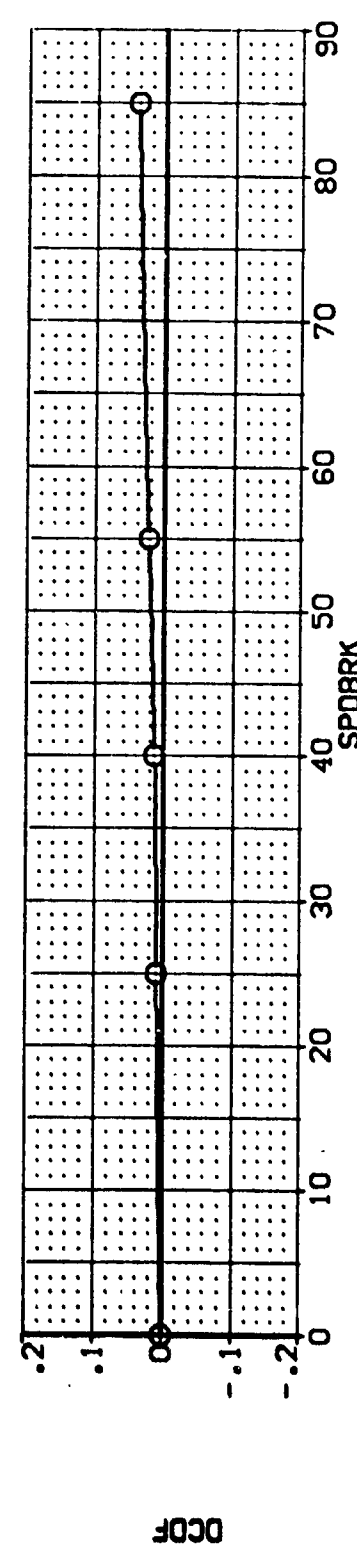
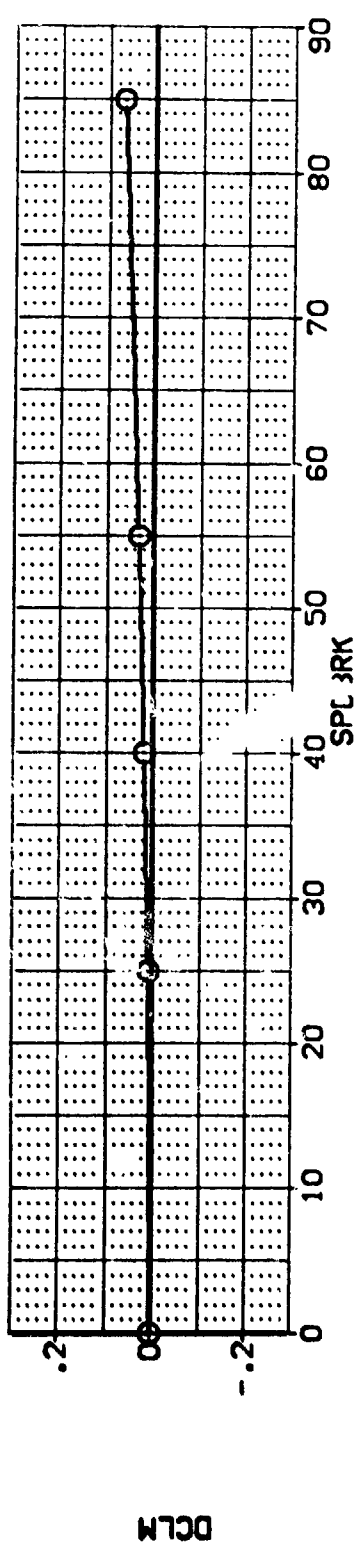


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(G0Z228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL. O

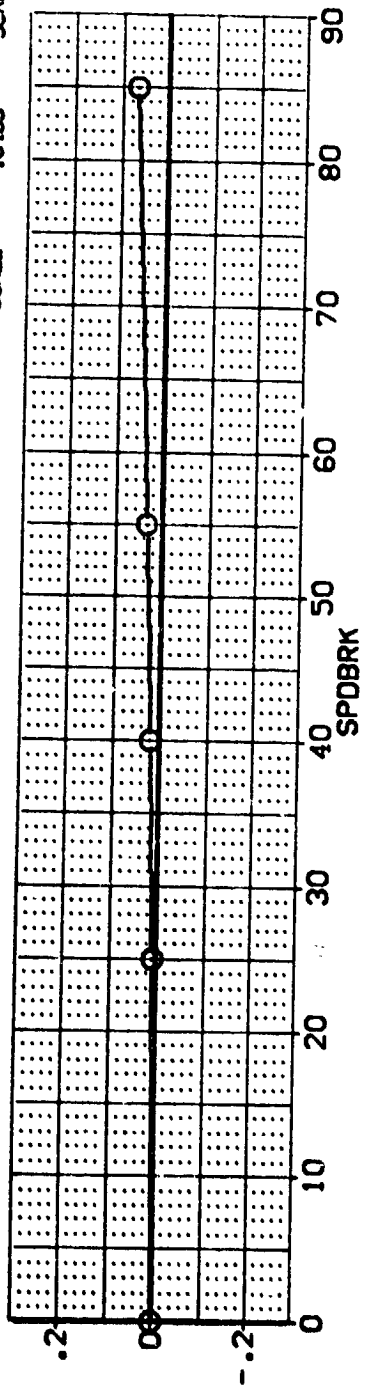
ALPHA 10.000

PARAMETRIC VALUES

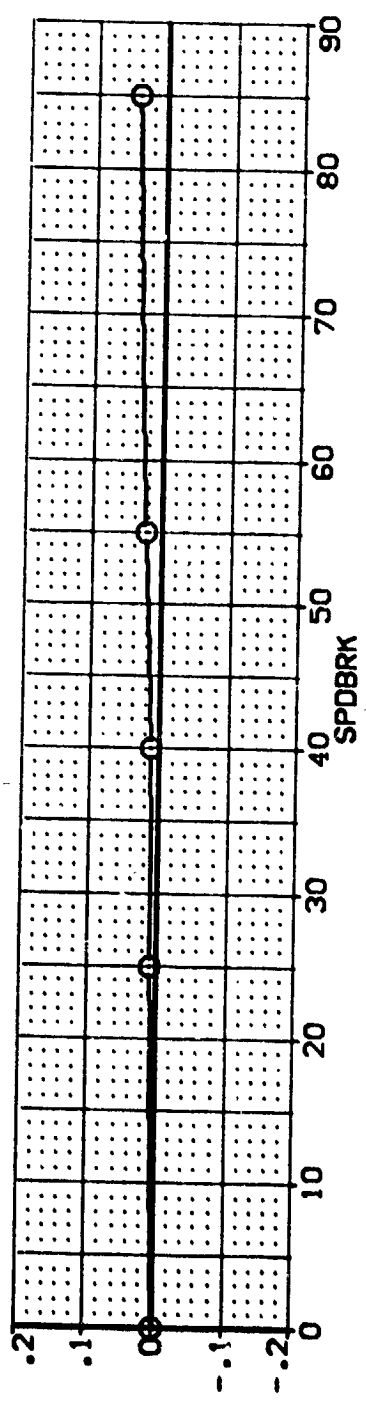
MACH	.200	DELTA	.000	DATA SOURCE	SPDBRK
SDFLAP	-12.000	AIRLON	.000	G0Z228	25.000
RUDDER	.000	BETA	.000	G0Z138	40.000
R-LRAD	.000			G0Z144	65.000

REFERENCE INFORMATION

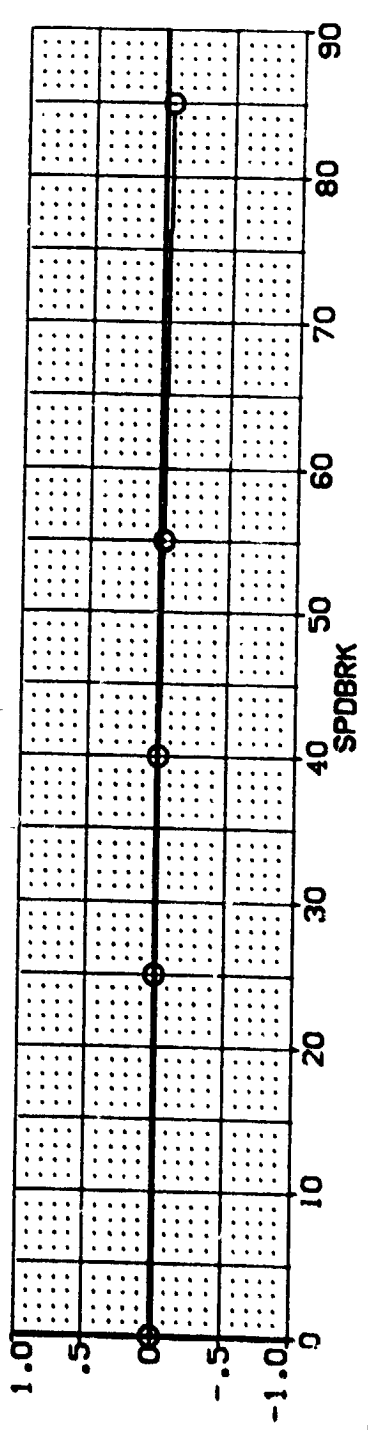
SREF	4.4119	SO.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	10.0000	INCHES
ZMRP	15.1679	INCHES
SCALE	.0405	SCALE



DCLM



DCDF



DCL

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(G0Z228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	12.000		.200	DELVON	.000	DATASET	SREF	50.FT.
		BOFLAP	-12.000	AILRON	.000	G0Z228	LREF	INCHES
		RUDDER	.000	BETA	40.000	G0Z138	BREF	INCHES
		RLUAD	.000		65.000	G0Z144	XRRP	INCHES
							ZRRP	INCHES
							ZRRP	INCHES
							SCALE	SCALE

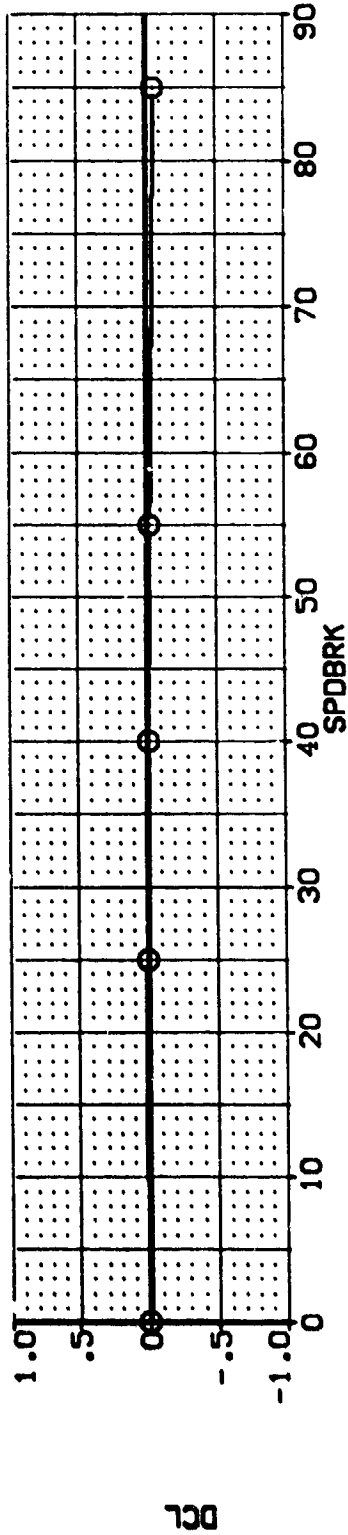
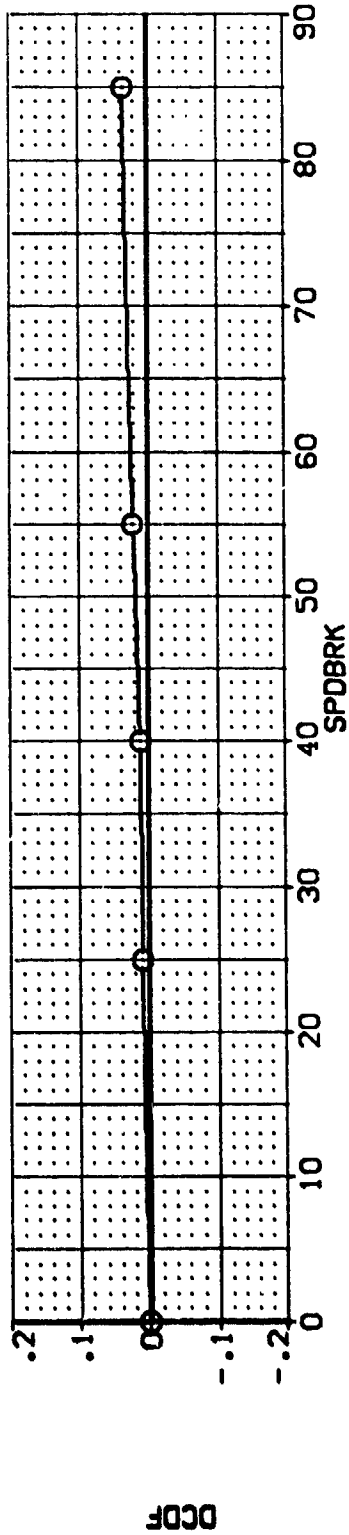
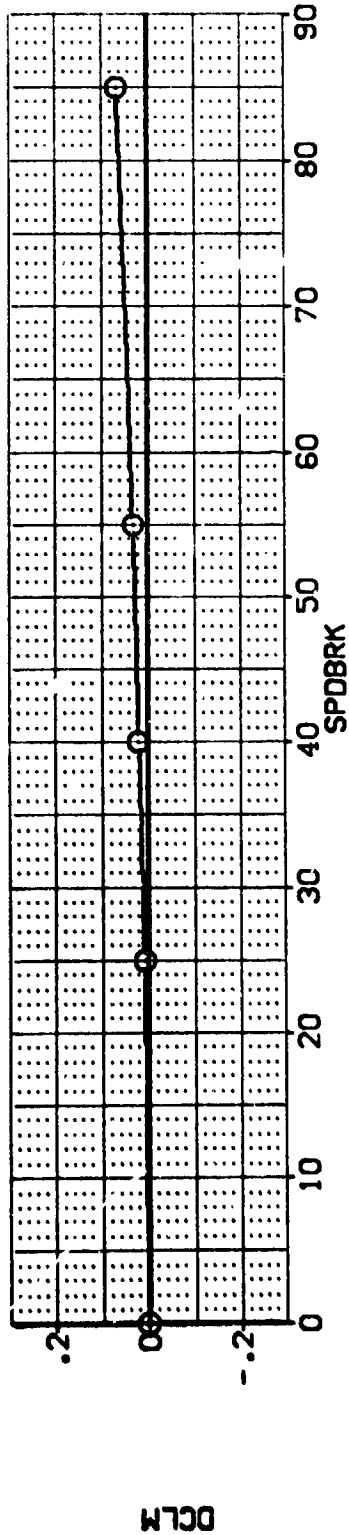


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION											
0	14.000		DELTA	AILRON	BETA	SPDBRK	DATASET	SPDBRK	SREF	LREF	XREF	YREF	ZREF	SCALE	SO.FT.	INCHES	INCHES	INCHES	INCHES	SCALE
			.200	-12.000	.000	.000	G0Z228	25.000	4.4119	19.2268	37.9358	43.5874	.0000	.0405						
				.000	.000	40.000	G0Z138	55.000												
				.000	.000	65.000	G0Z144													

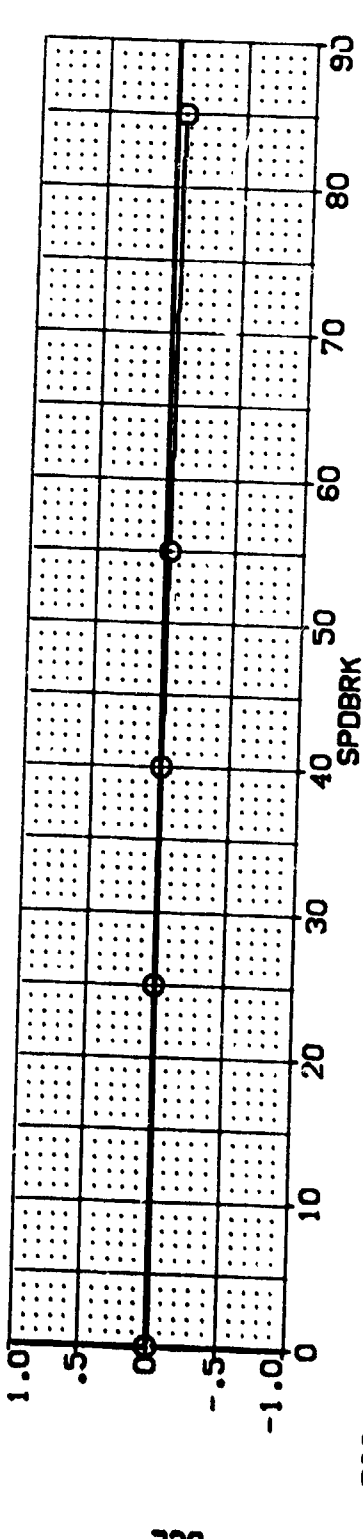
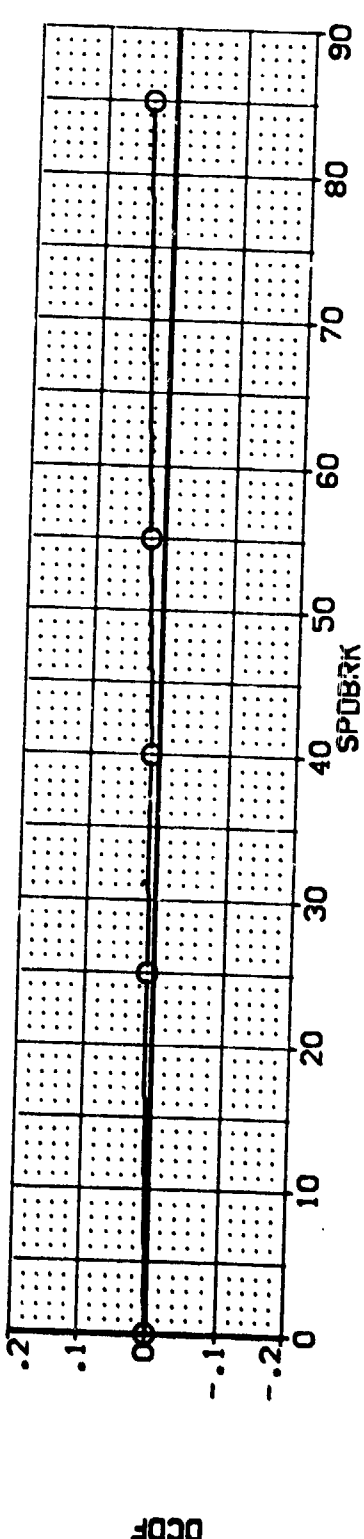
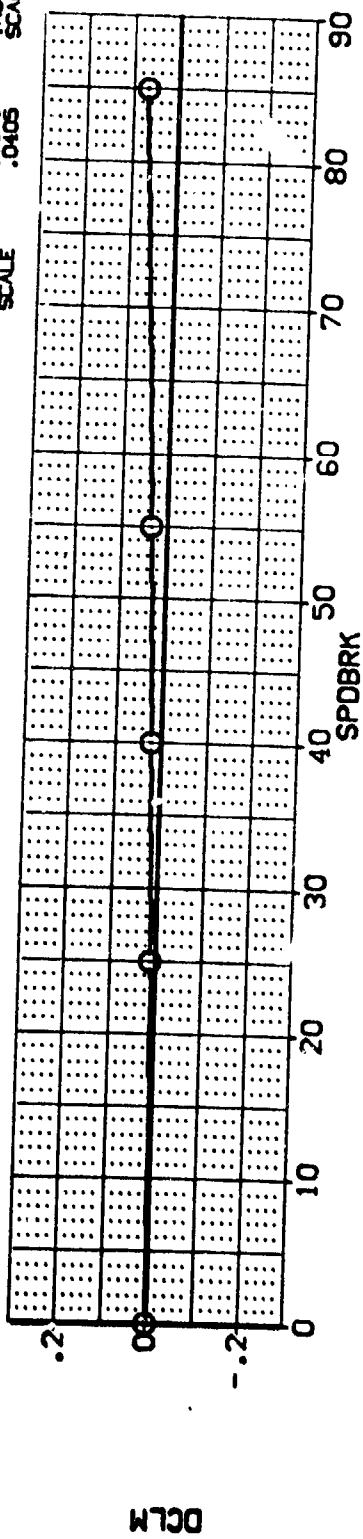


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (GDZ228)

SYMBOL		ALPHA		MACH		PARAMETRIC VALUES		DATA SOURCE		DATASET		SPDBRK		REFERENCE INFORMATION	
0	16.000	.000	.200	DELVON	.000	.000	GDZ228	.000	.000	GDZ152	25.000	SREF	4.4119	SO.FT.	
				A1LRON	.000	.000	GDZ138	40.000	40.000	GDZ336	55.000	UREF	19.2289	INCHES	
				BETA	.000	.000	GDZ144	65.000	65.000			XMRP	37.9359	INCHES	
				R-LRAD	.000	.000						YMRP	43.5574	INCHES	
												ZMRP	.0000	INCHES	
												SCALE	15.1875	INCHES	
													.0405	SCALE	

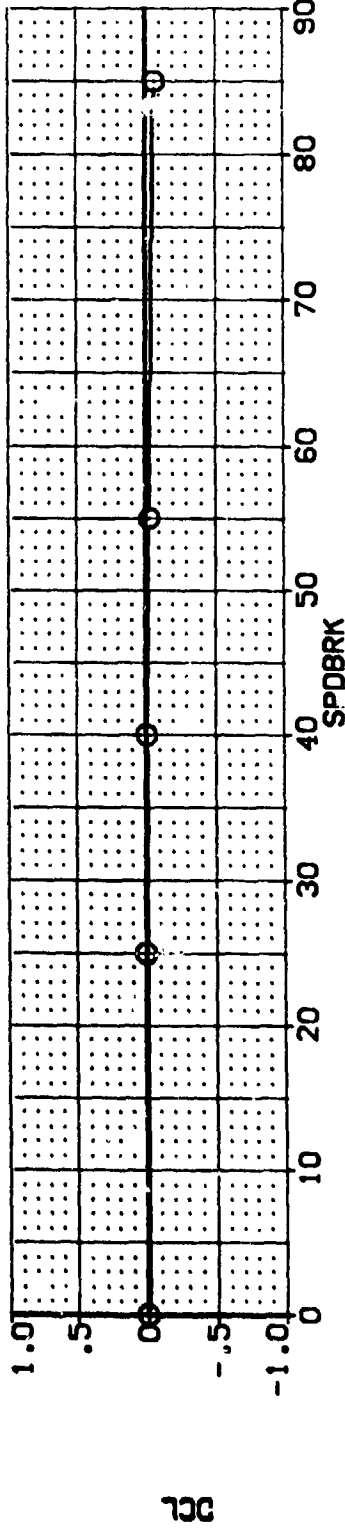
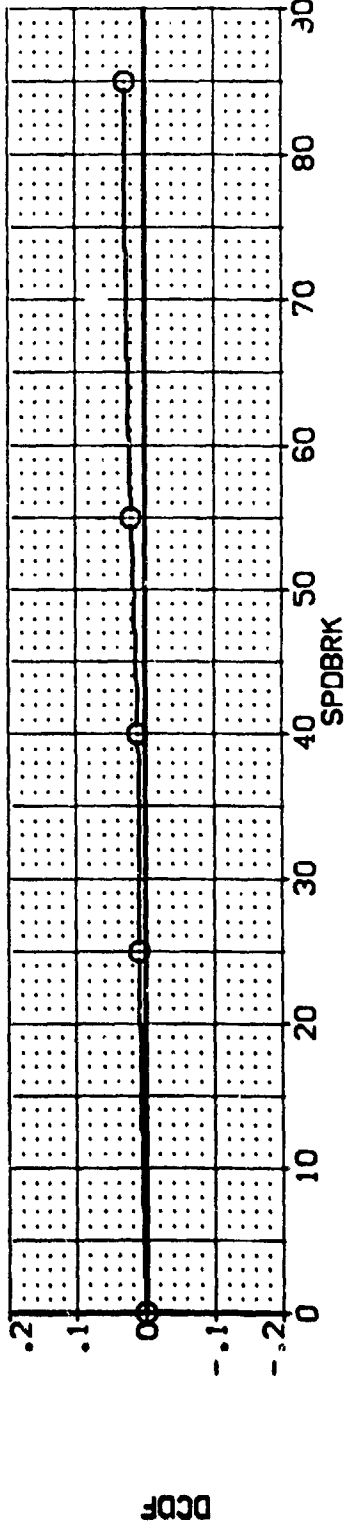
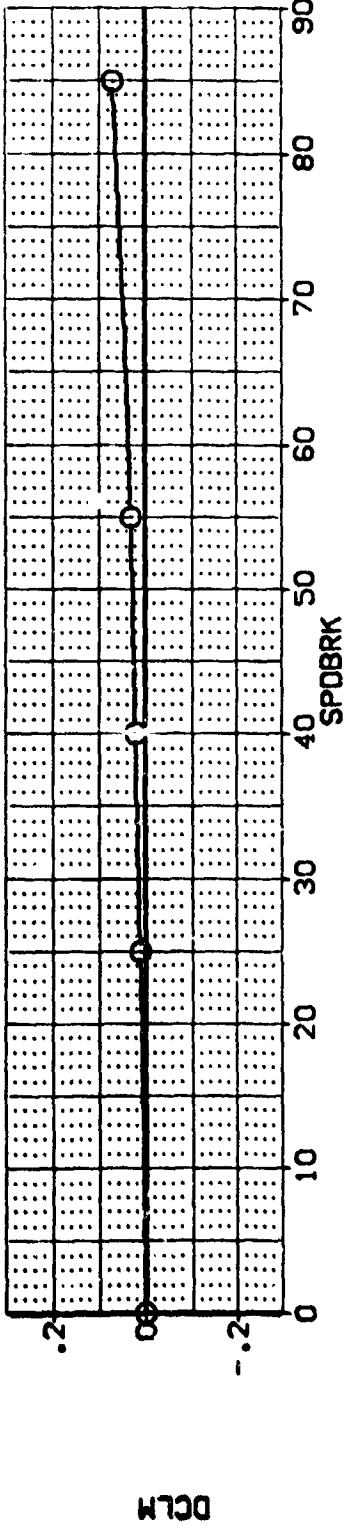


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A628 B26C9 M7F8 W116E28V8R5X9 (GDZ2228)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE	REFERENCE INFORMATION	
0	20.000	MACH	DELTA	SPDBRK	SPDBRK	SO.FT.
		BOFLAP	A11UDN	DATASET	LINEF	IN.OES
		RUDDER	BETA	GDZ132	REF	IN.OES
		R-URAD		GDZ336	XMRP	IN.OES
					YMRP	IN.OES
					ZMRP	IN.OES
					SCALE	SCALE

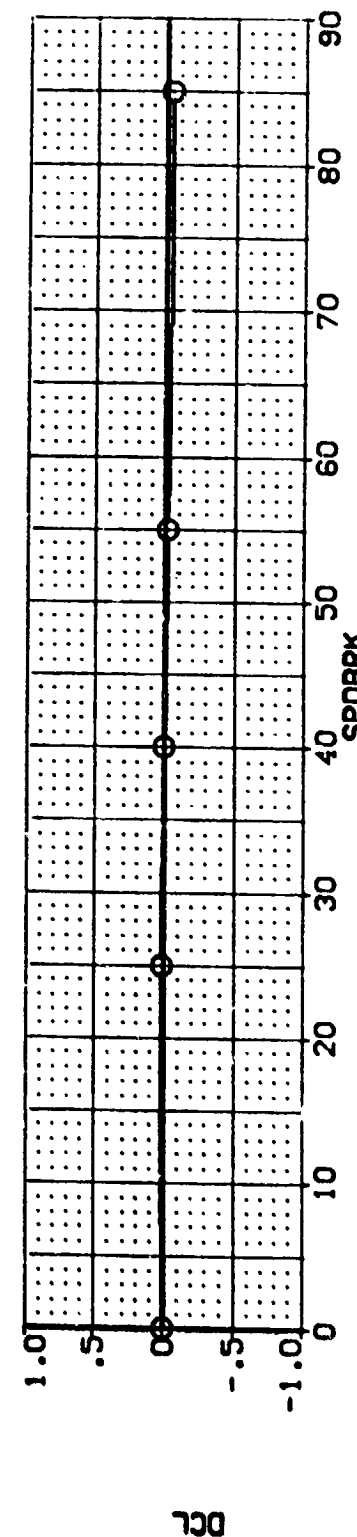
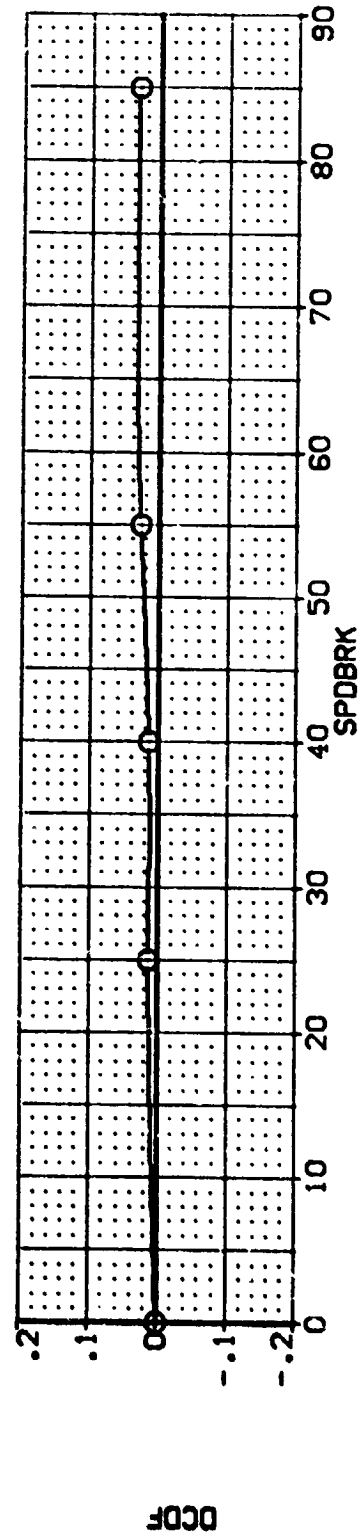
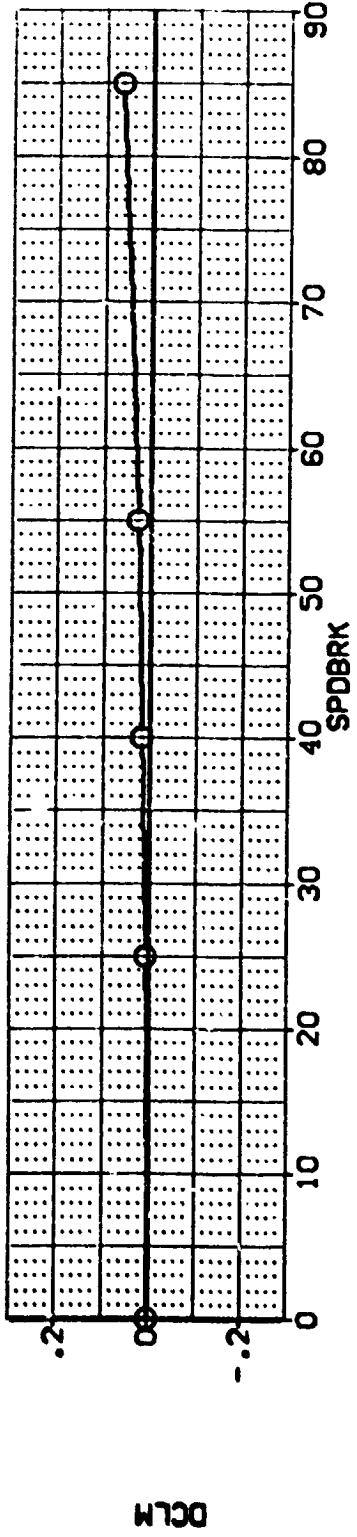


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(GDZ228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MCH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	22.000	BDFLAP	.200	DELVON	.000	DATASET	SPOBRK	SREF
		RUDDET	-12.000	A1LRON	.000	GDZ228	25.000	LINEF
		RLPAD	.000	BETA	.000	GDZ136	55.000	INCHES
			.000		40.000			INCHES
					65.000			INCHES
								INCHES
								SCALE

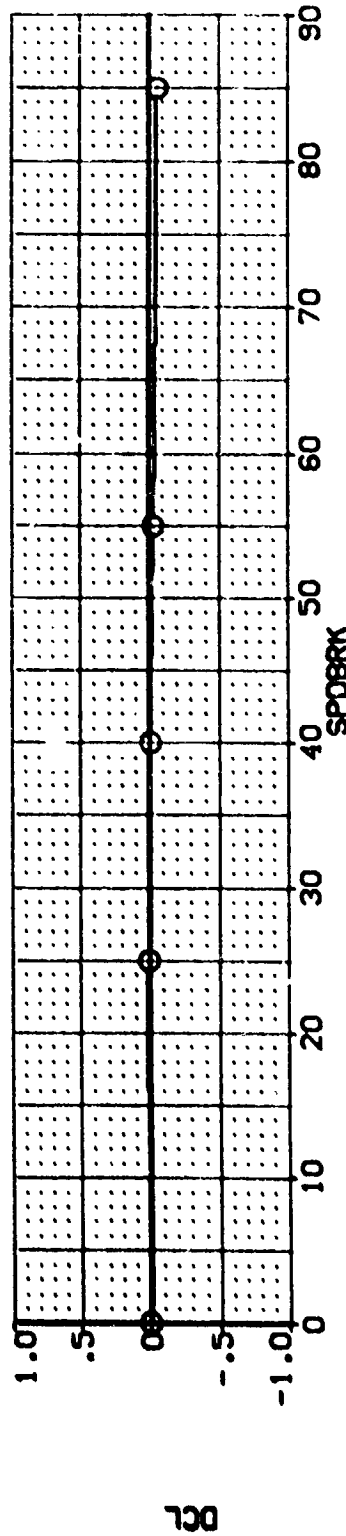
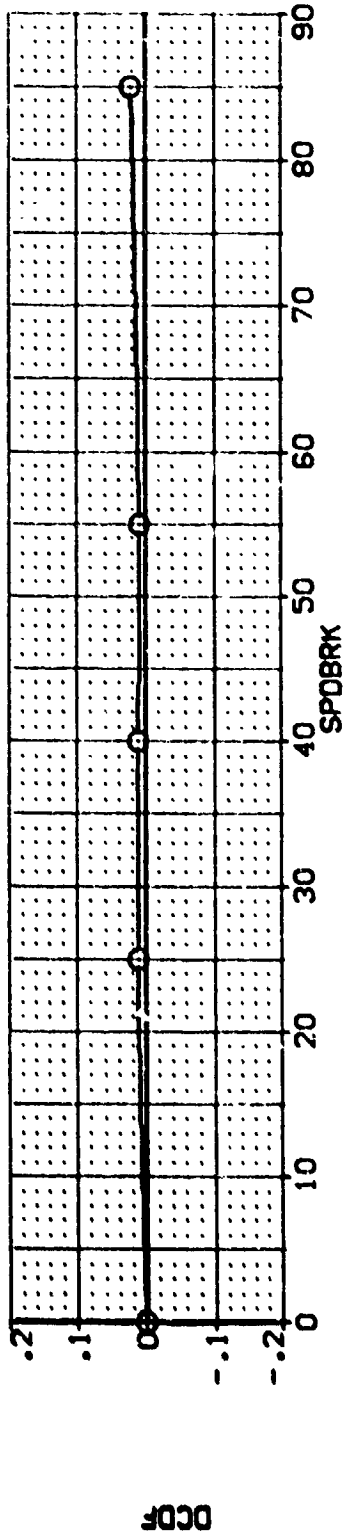
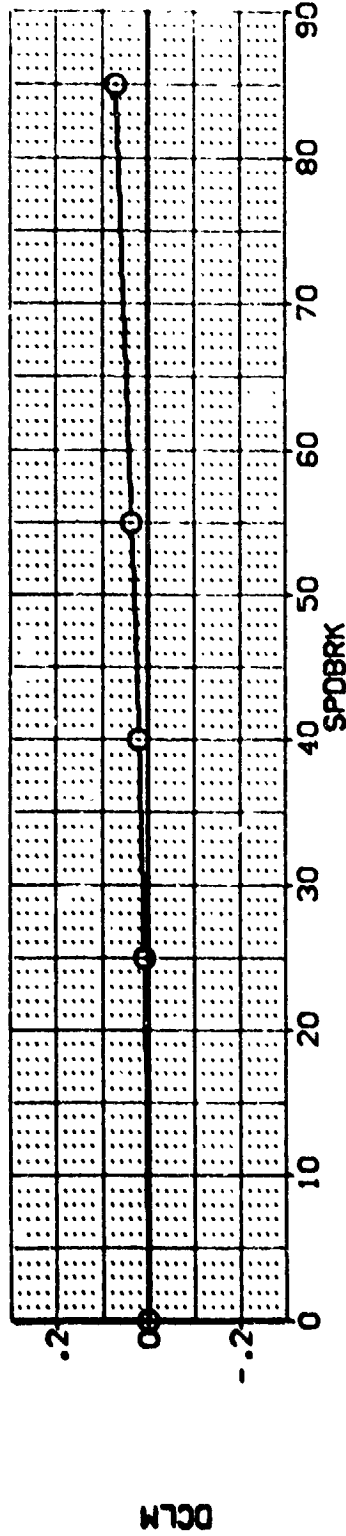


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	WACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	24.000		.200	DELTA	.000	SPDBRK	DATASET	SPDBRK	SREF	SO.FT.	
		BDFLAP	-12.000	AIRLON	.000	G0Z228	G0Z152	25.000	LREF	INCHES	
		RUDDER	.000	BETA	.000	G0Z133	G0Z336	55.000	BREF	INCHES	
		RUJRAO	.000		.000	G0Z144			XMRP	INCHES	
					65.000				YMRP	INCHES	
									ZMRP	INCHES	
									SCALE	SCALE	
										.0405	

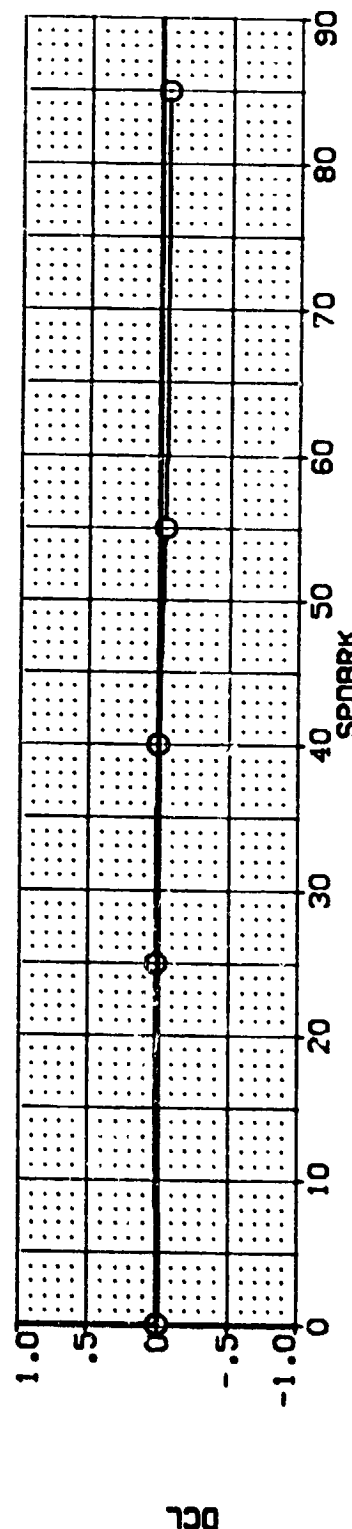
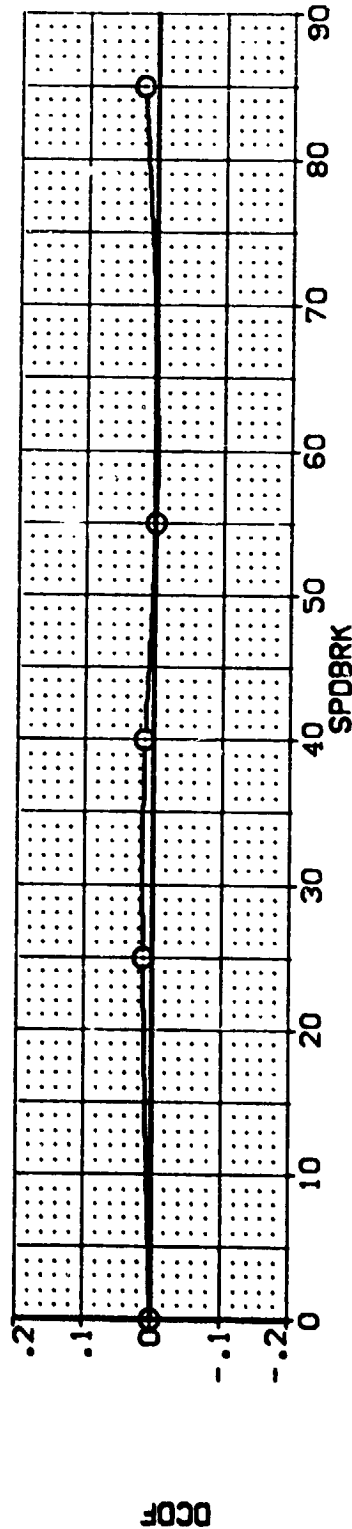
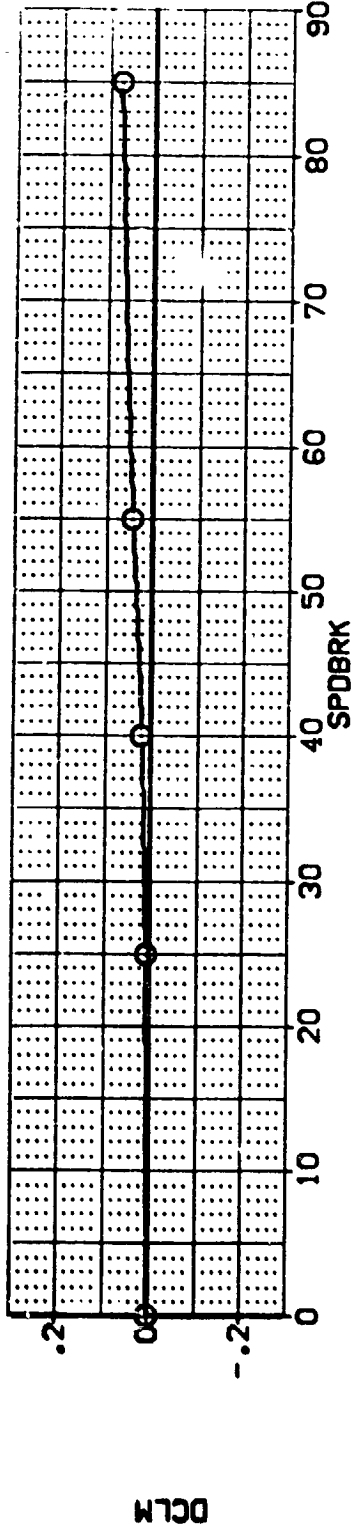


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(G0Z228)

0A628 B26C9 M7F8 W116E28V8RSX9

SYMBOL  
O

ALPHA 25.000

MACH 0.000

BD-FLAP -12.000

RUDDER .000

R-L-ROD .000

DELTA VON .200

ATL-ROD .000

BETA .000

DATA SOURCE  
SPOBRK .000  
DATASET G0Z152  
G0Z152  
G0Z336

SPOBRK 25.000  
55.000

REF LREF 4.4119  
LREF 19.2299  
LREF 37.9369  
LREF 43.5974  
LREF .0000  
LREF 15.1875  
LREF .0105

SO-FT. INCHES  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

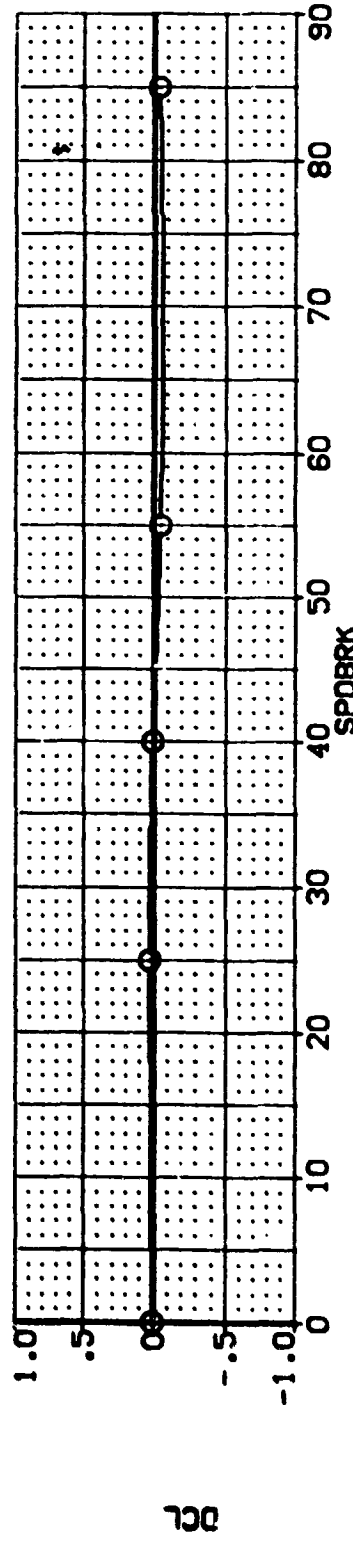
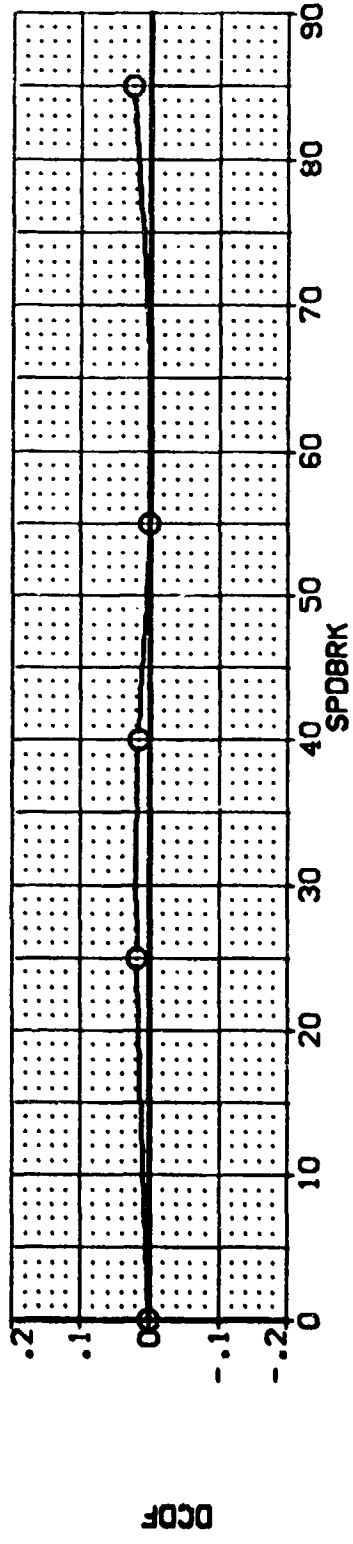
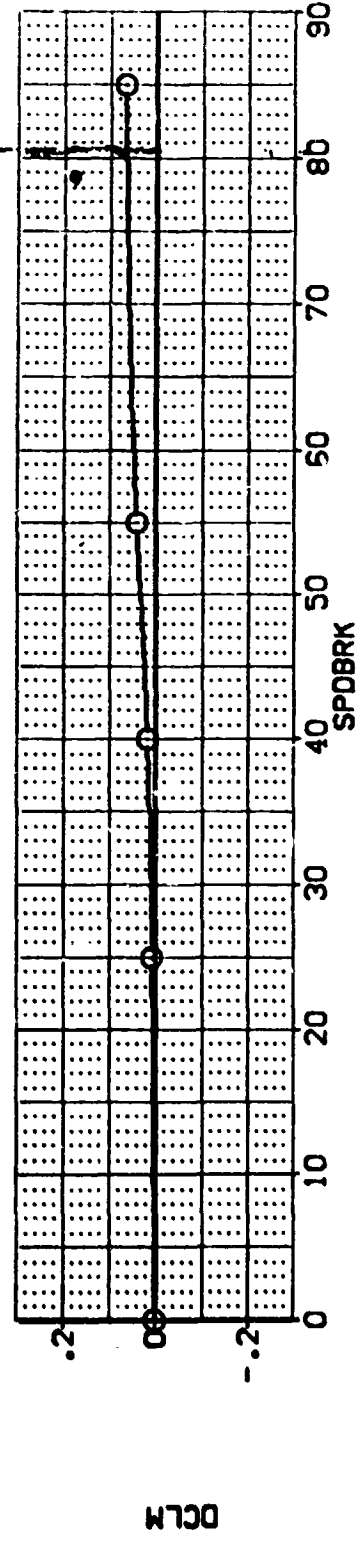


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	29.000	EDFLAP	.200	DELTA	.000	SPDBRK	G0Z152	SPDBRK	4.4119	50.FT.	
		RUDDER	-12.000	AIRLON	.000	40.000	G0Z336	25.000	19.2289	INCHES	
		R-RAD	.000	BETA	.000	65.000		55.000	37.9359	INCHES	
			.000						43.5574	INCHES	
									.0000	INCHES	
									15.1675	SCALE	
									.0405		

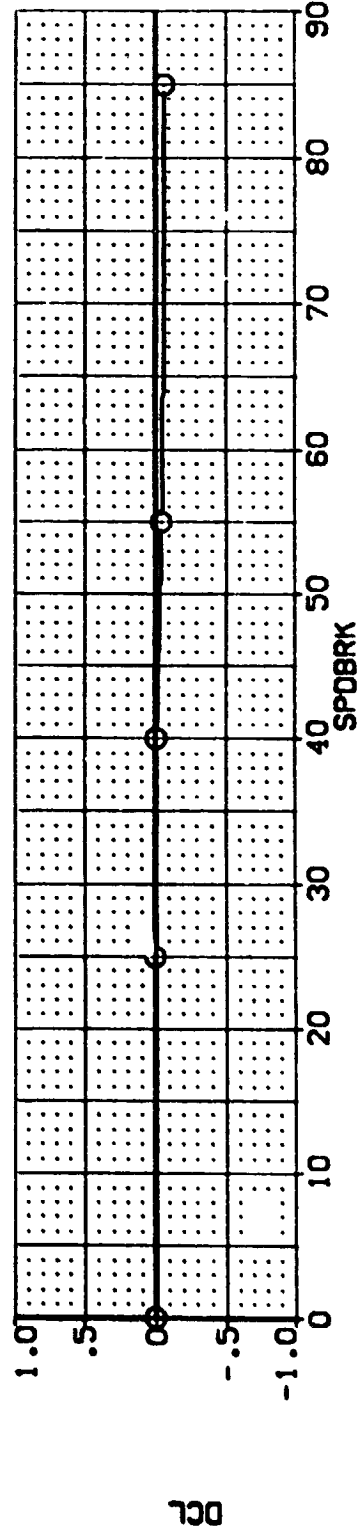
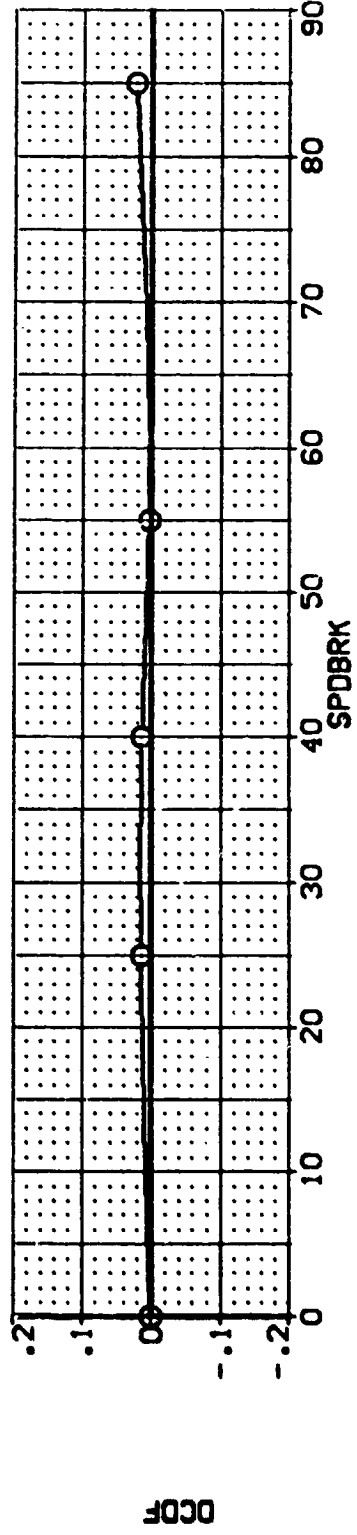
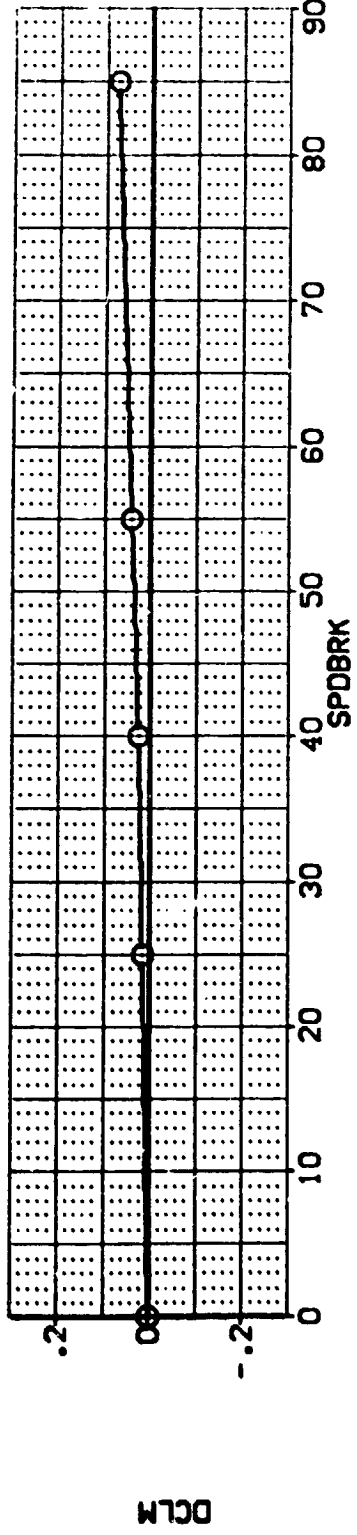


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(G0Z228)

0A628 B26C9 M7F8 W116E28V8R5XS

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	30.000		.200	DELTA	.000	SPDBRK	4.4119	SO.FT.
		BDFLAP	-12.000	A1LRON	.000	G0Z228	19.2259	INO-ES
		RUDDER	.000	BETA	.000	G0Z138	37.5359	INO-ES
		R-LRAD	.000		.000	G0Z144	43.5974	INO-ES
					85.000	YMRP	.0000	INO-ES
						ZMRP	15.1875	INO-ES
						SCALE	.0405	SCALE

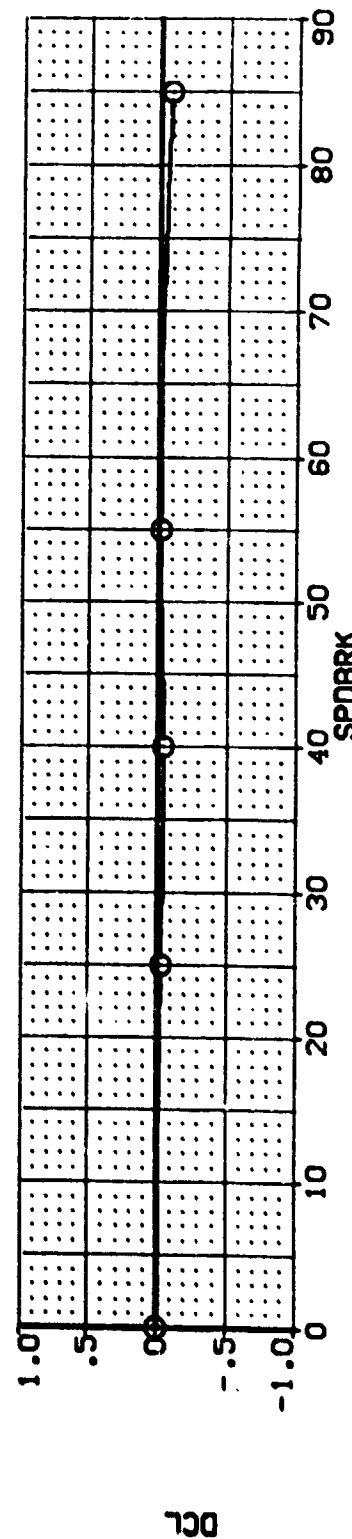
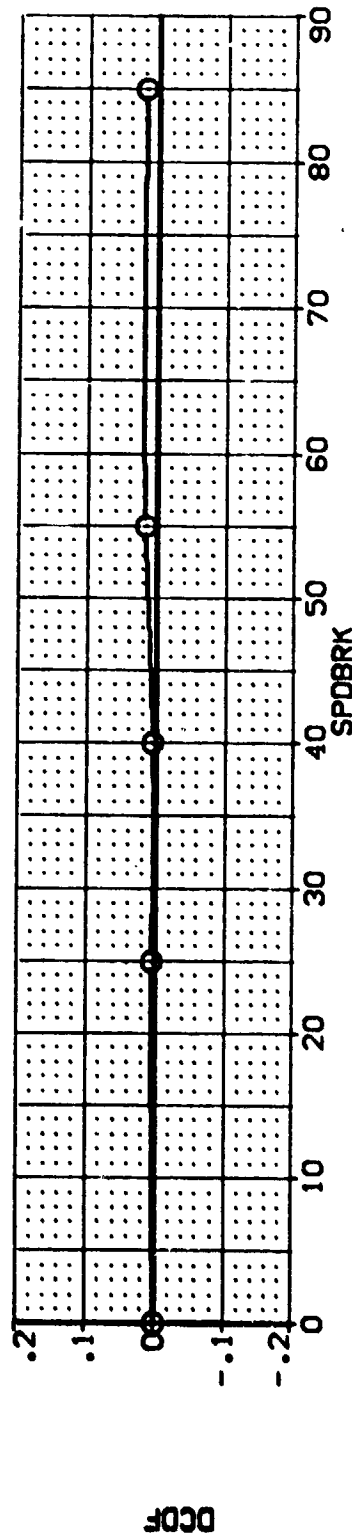
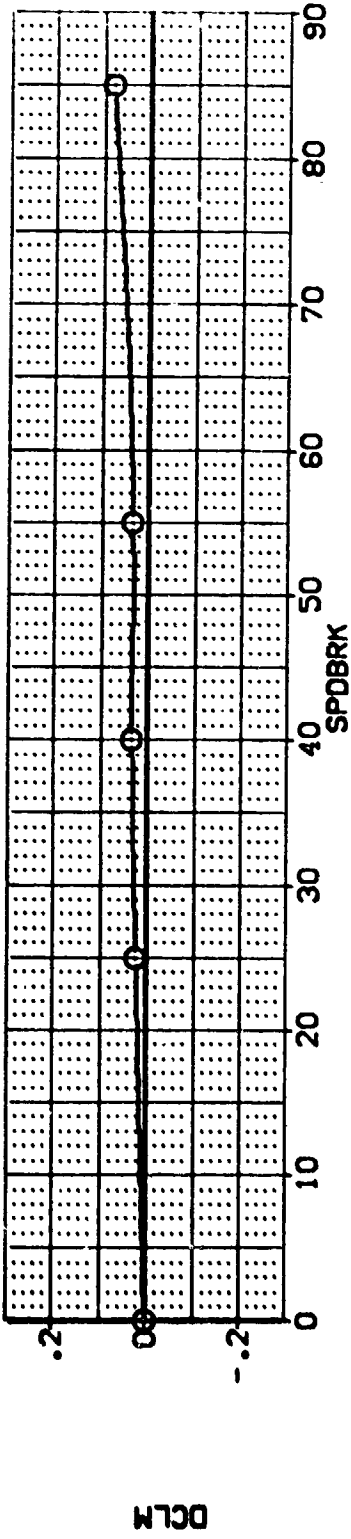


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (GDZ228)

SYMBOL	0	ALPHA	-4.000	MACH		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION
				BDFLAP	.200	DELVON	.000	SPOBRK	50.000	SO.FT.
				RUDDER	-12.000	AILRON	.000	SPOBRK	25.000	INCHES
				RU-RUD	.000	BETA	.000	DATASET	55.000	INCHES
								GOZ152		INCHES
								GOZ306		INCHES
										INCHES
										SCALE

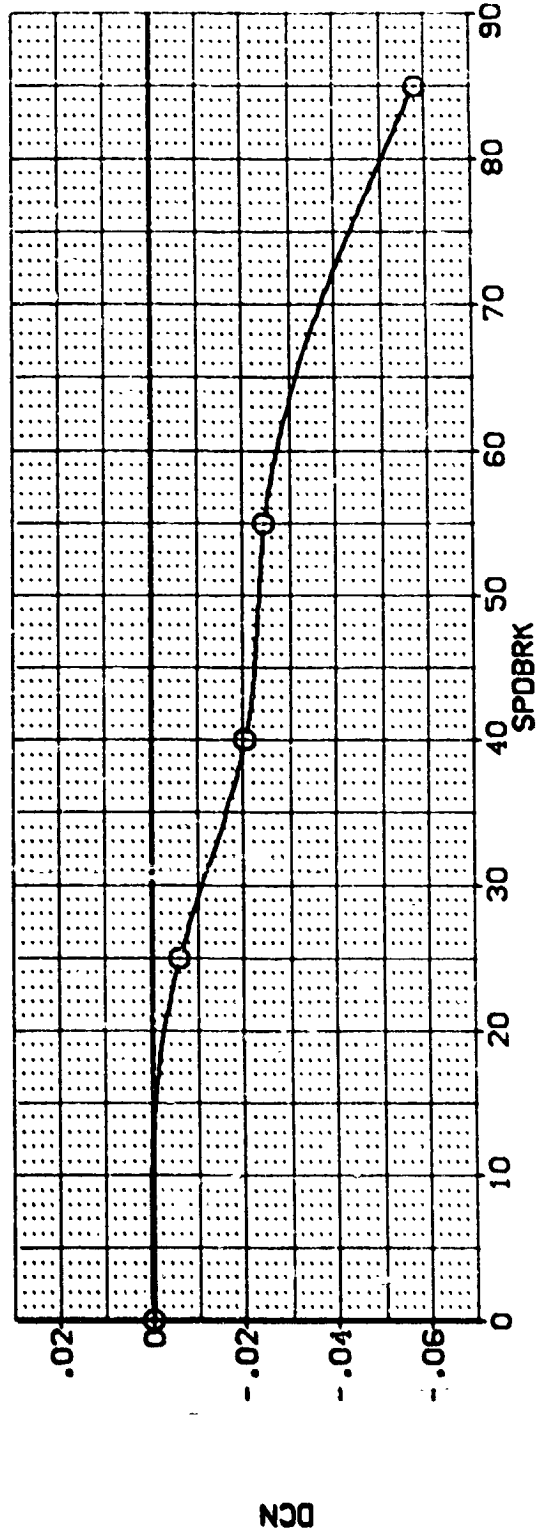
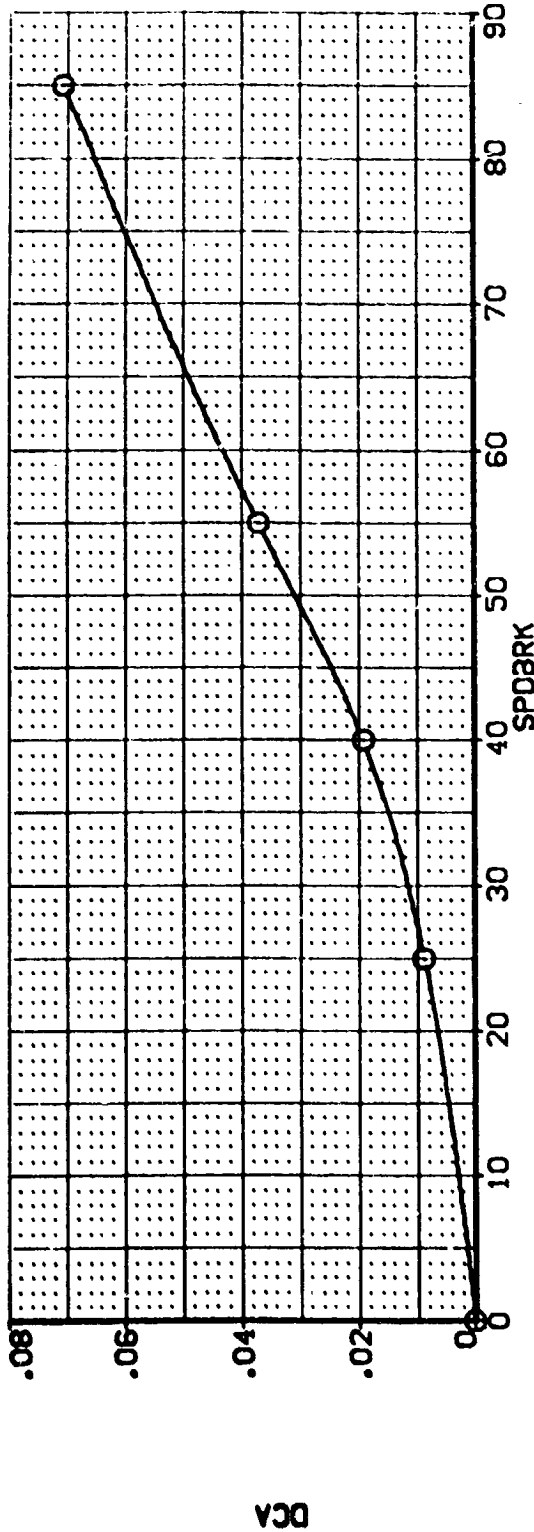


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(GDZ228)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE	SPDRBK	SPDRBK	SPDRBK	REFERENCE INFORMATION		
O	-2.000		.200	DELVEN	.000	GDZ152	25.000	4.4119	SO.FT.		
		EDFLAP	-12.000	ATLRON	.000	GDZ336	55.000	19.2258	INCHES		
		RUDDER	.000	BETA	40.000			37.9358	INCHES		
		R-LLRAD	.000		85.000			43.5974	INCHES		
								.0000	INCHES		
								15.1875	INCHES		
								SCALE	SCALE		

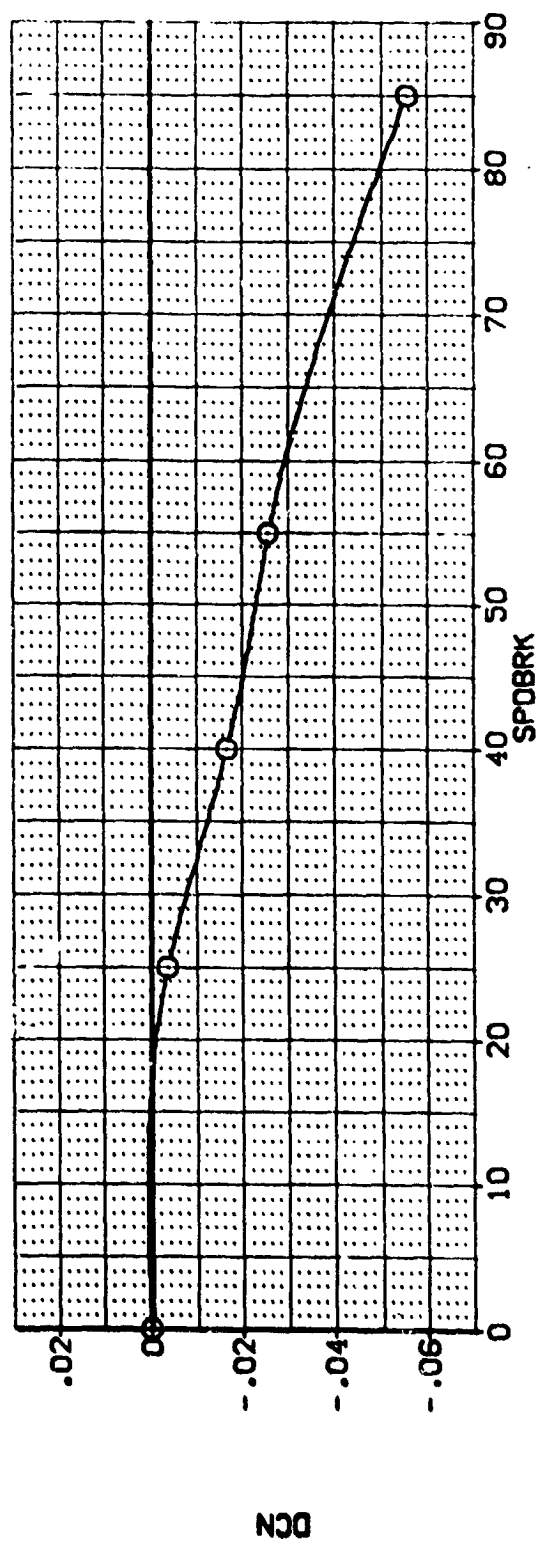
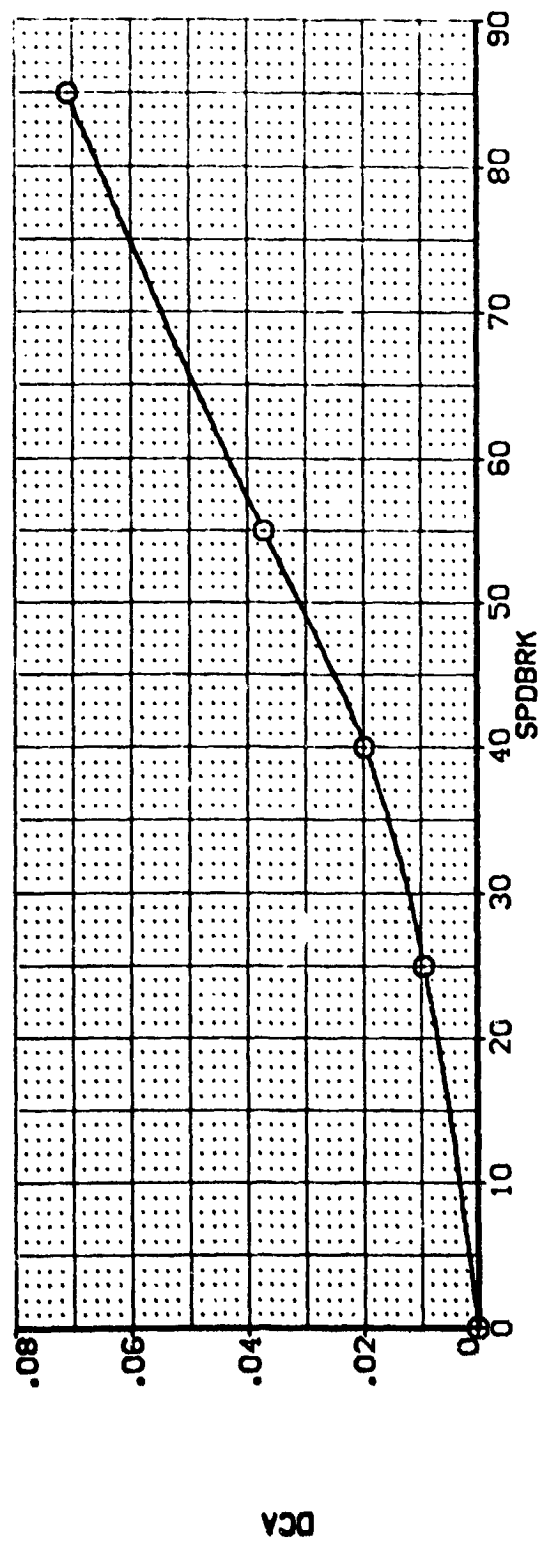


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(G0Z228)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL 0

ALPHA -1.000

MACH

REFLAP

RUDDER

REF-RAD

PARAMETRIC VALUES

.000 DATASET

DATA SOURCE

SPDBRK

REFERENCE INFORMATION

SO.FT.

INCHES

INCHES

INCHES

INCHES

INCHES

SCALE

4.4119

19.2299

37.9359

43.5374

15.0000

15.1875

.0405

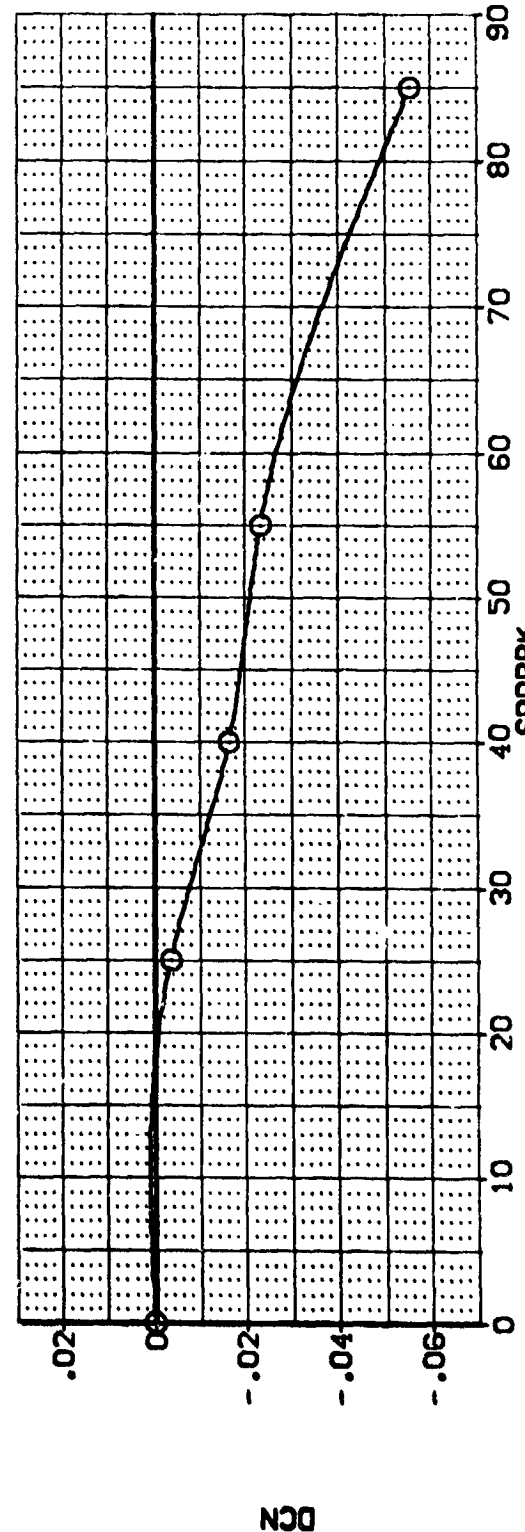
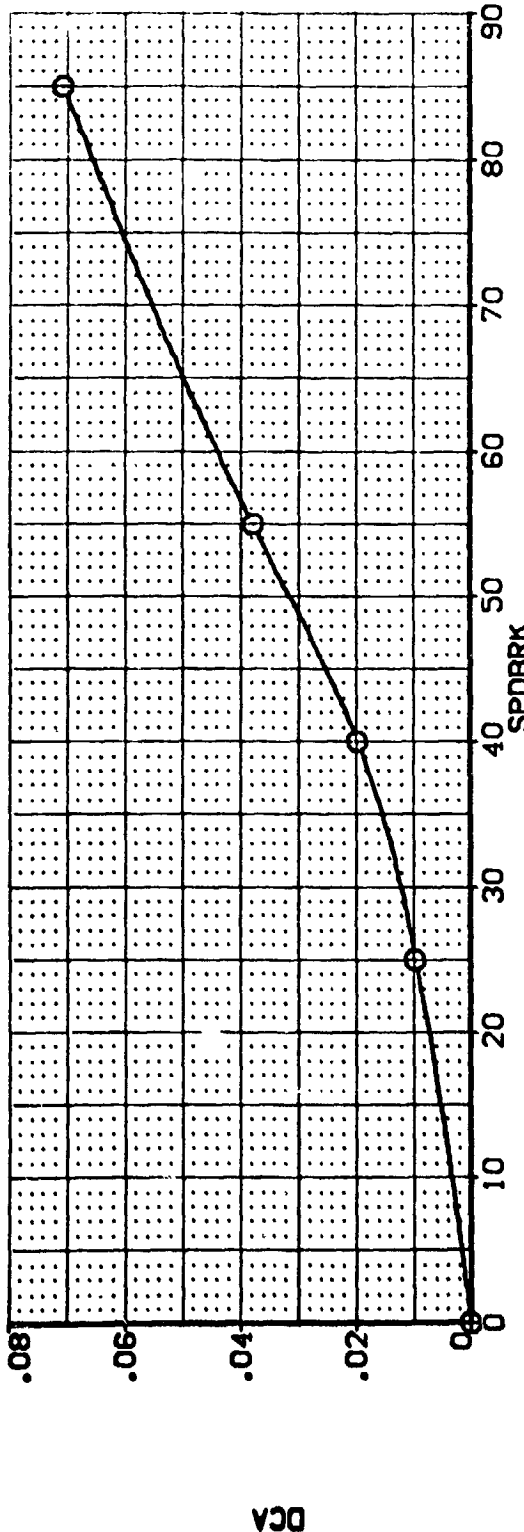


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE. RUDDER = 0. BETA = 0





(G0Z228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	.000		.200	DELVON	.000	DATASET	SPOBRK	SREF
		BDFLAP	-12.000	A1LRON	.000	G0Z152	25.000	LREF
		RUDDER	.000	BETA	40.000	G0Z336	55.000	BREF
		R-LRAD	.000		65.000			XMRP
								YMRP
								ZMRP
								SCALE
								SO, FT.
								INCHES
								INCHES
								INCHES
								INCHES
								SCALE

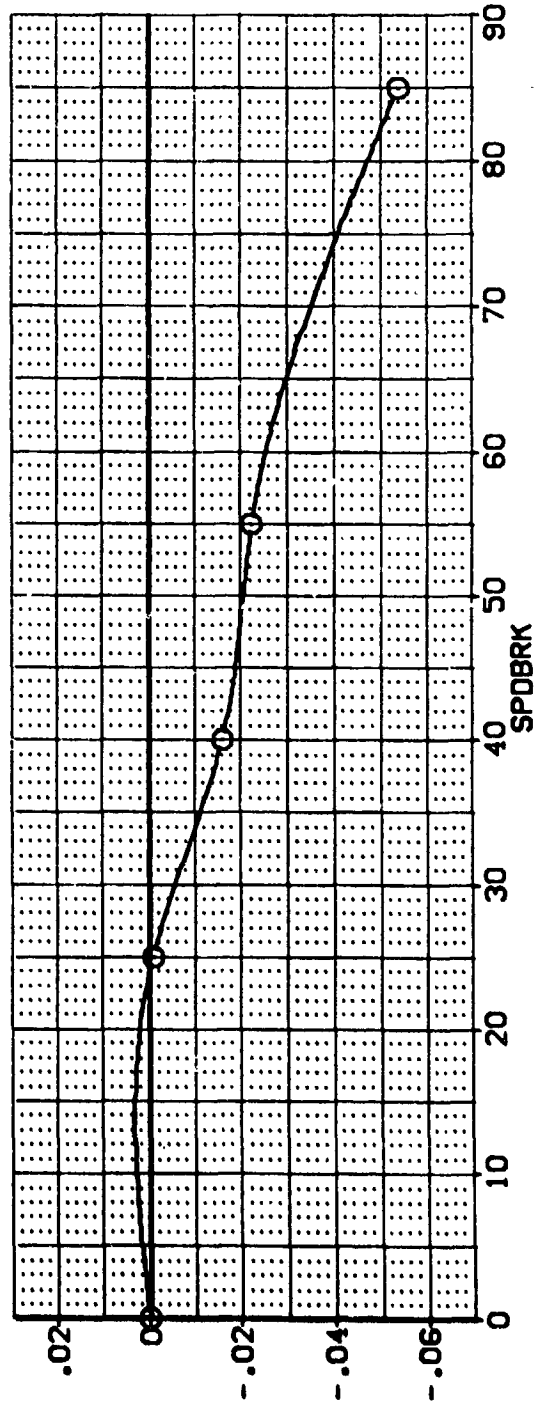
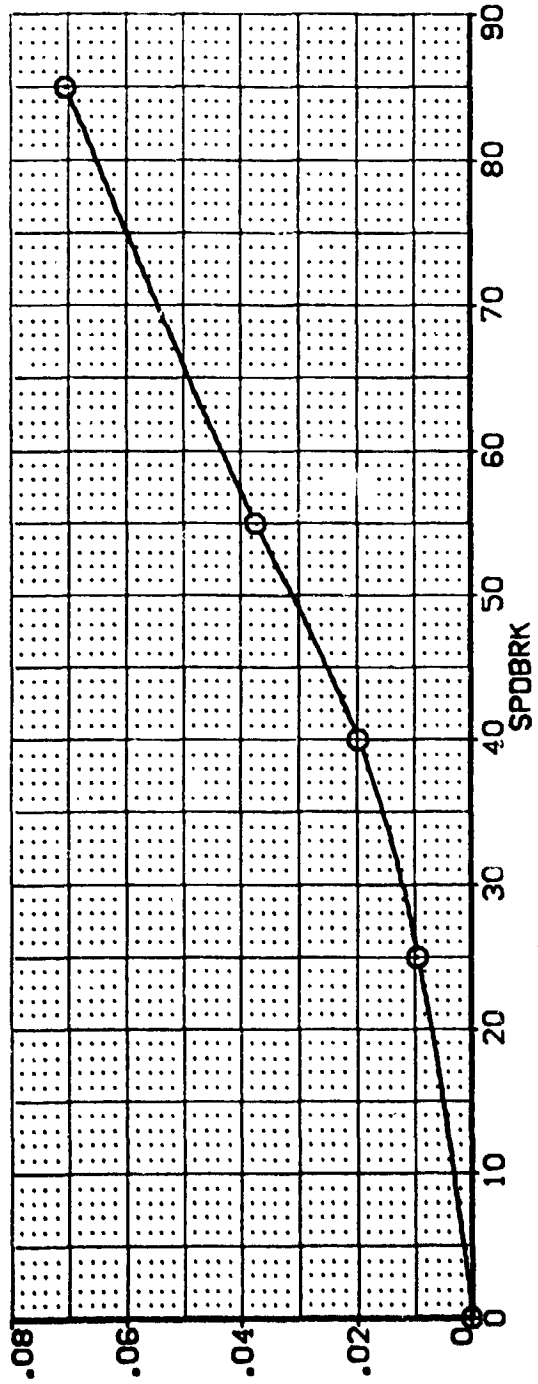


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	1.000	MACH	.200	DEL VON	.000	DATASET	SPOBRK	SPOBRK	SREF	SO.FT.
		EDFLAP	-12.000	A1LRON	.000	GDZ228	.000	25.000	LREF	INCHES
		RUDDER	.000	BETA	.000	GDZ128	40.000	55.000	BREF	INCHES
		RU-LRAD	.000		.000	GDZ144	65.000		XMRP	INCHES
									YMRP	INCHES
									ZMRP	INCHES
									SCALE	SCALE

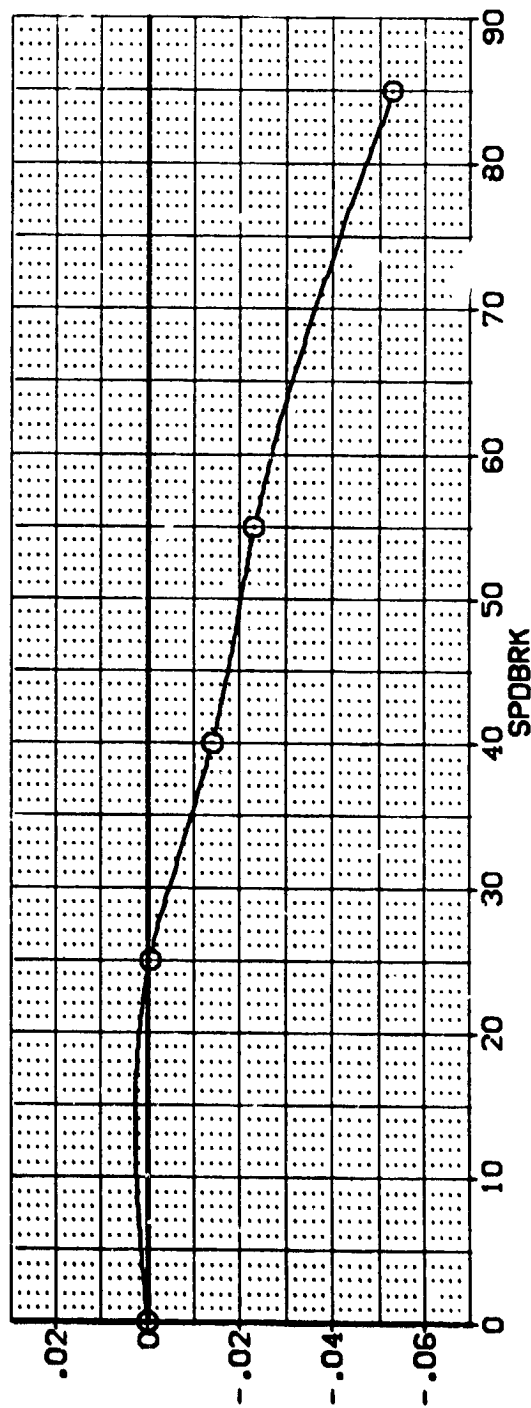
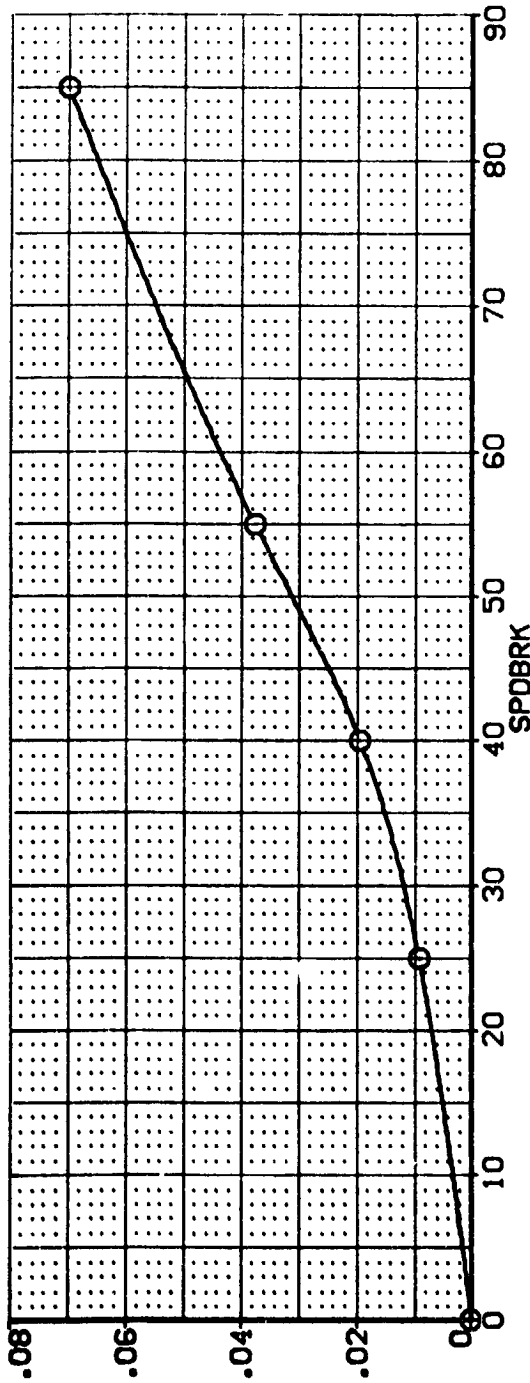
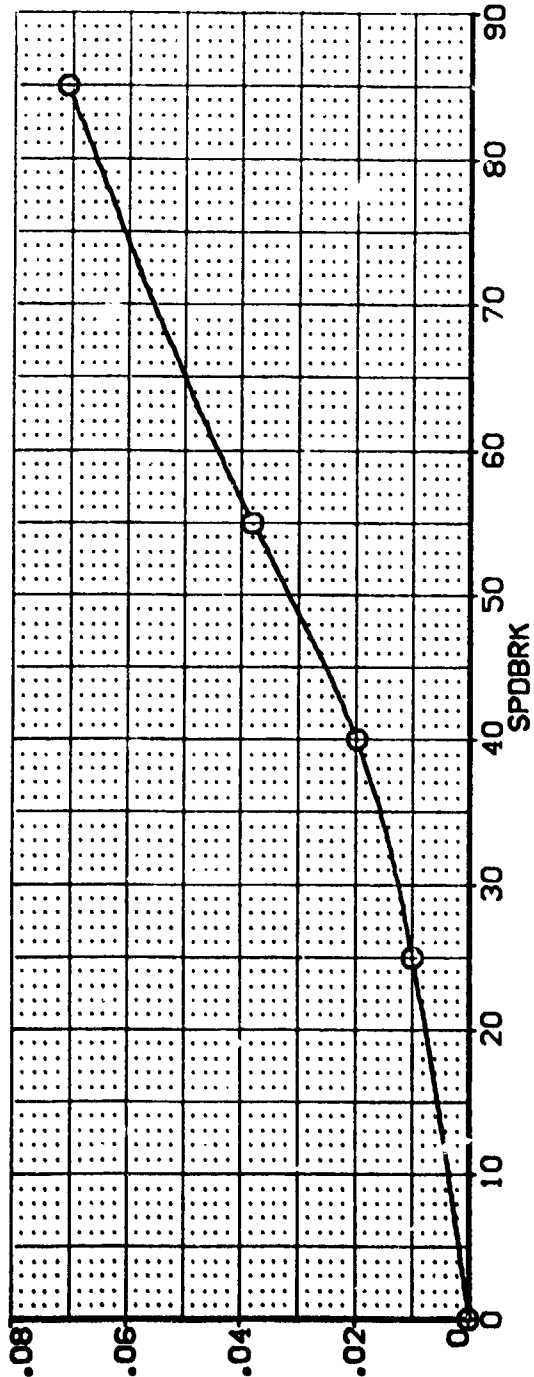


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

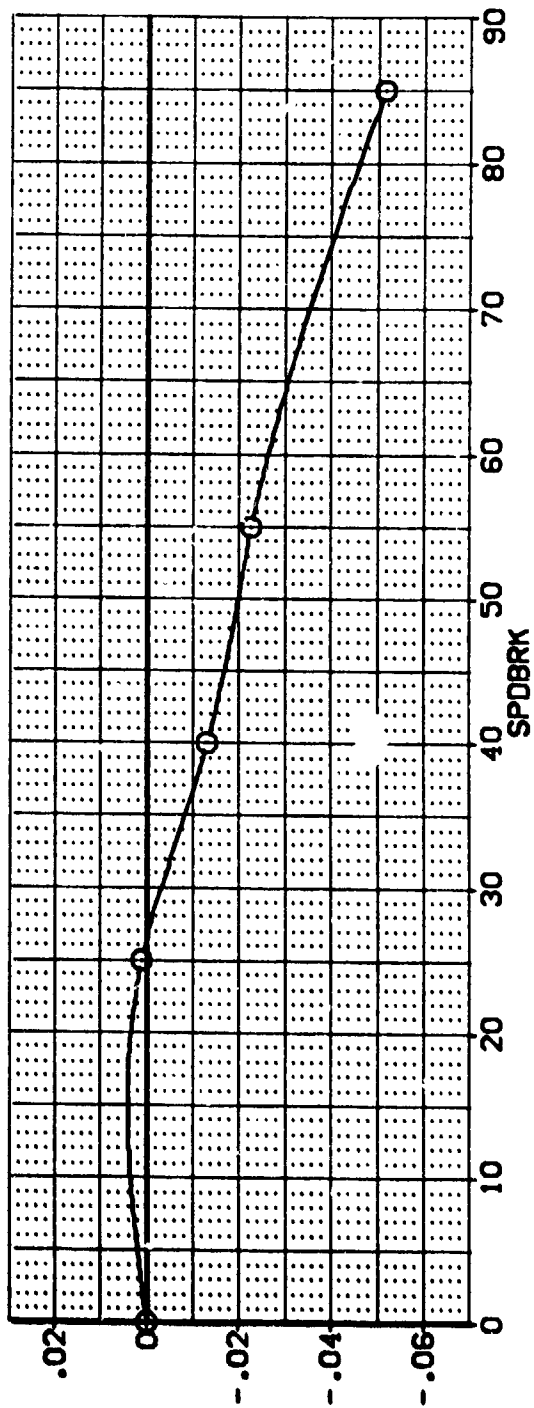


0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	2.000	BDFLAP	.200	DELVON	.000	DATASET	SPDBRK	SREF	4.4119	SO.FT.	
		RLOOR	-12.000	ALTRON	.000	G0Z228	25.000	LREF	19.7289	INCHES	
		R-LRAD	.000	BETA	.000	G0Z138	55.000	BREF	37.9399	INCHES	
					.000	G0Z144	65.000	XTRP	43.5974	INCHES	
								YTRP	.0000	INCHES	
								ZTRP	15.1875	INCHES	
								SCALE	.0405	SCALE	



C<sub>L</sub>



C<sub>L</sub>

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ2226)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	RUDDER	R-LRAD	PARAMETRIC VALUES	DELVON	ALURON	BETA	.000	.000	.000	DATASET	SPDBRK	DATA SOURCE	SPDBRK	DATASET	SPDBRK	REFERENCE INFORMATION	SO.FT.	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE
0	4.000						.200	-12.000	.000	.000	.000	.000	GDZ228	25.000	SPDBRK	55.000	GDZ152	55.000	4.4119	19.2299	37.9359	43.5974	0.000	15.1875	.0405	

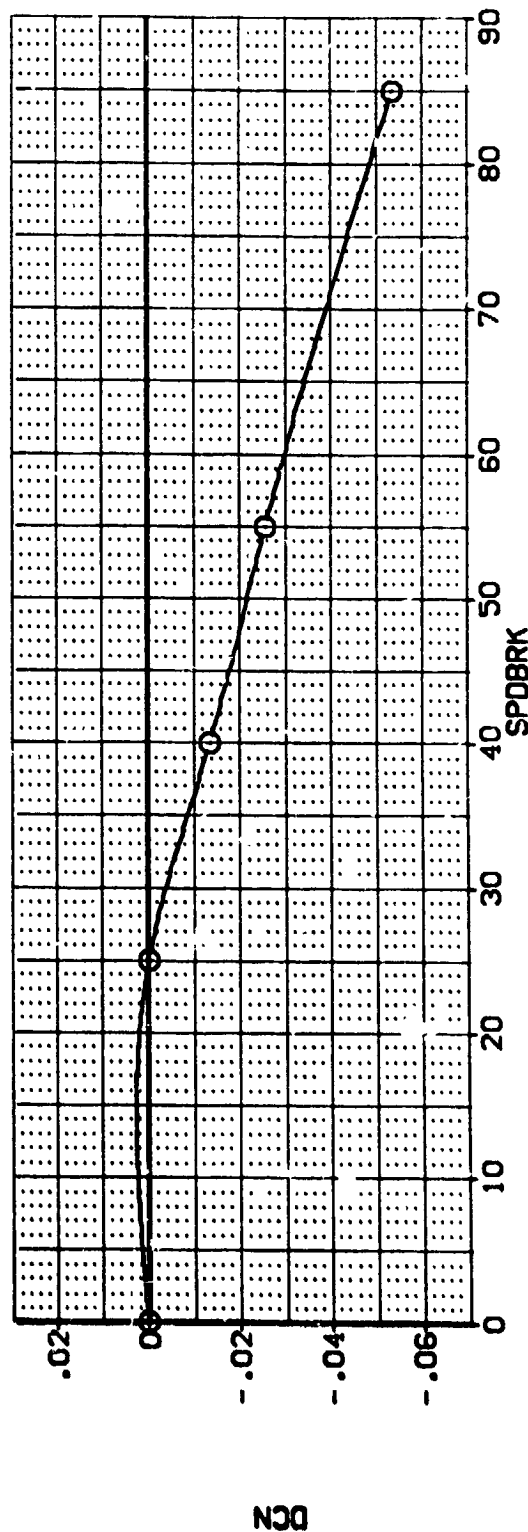
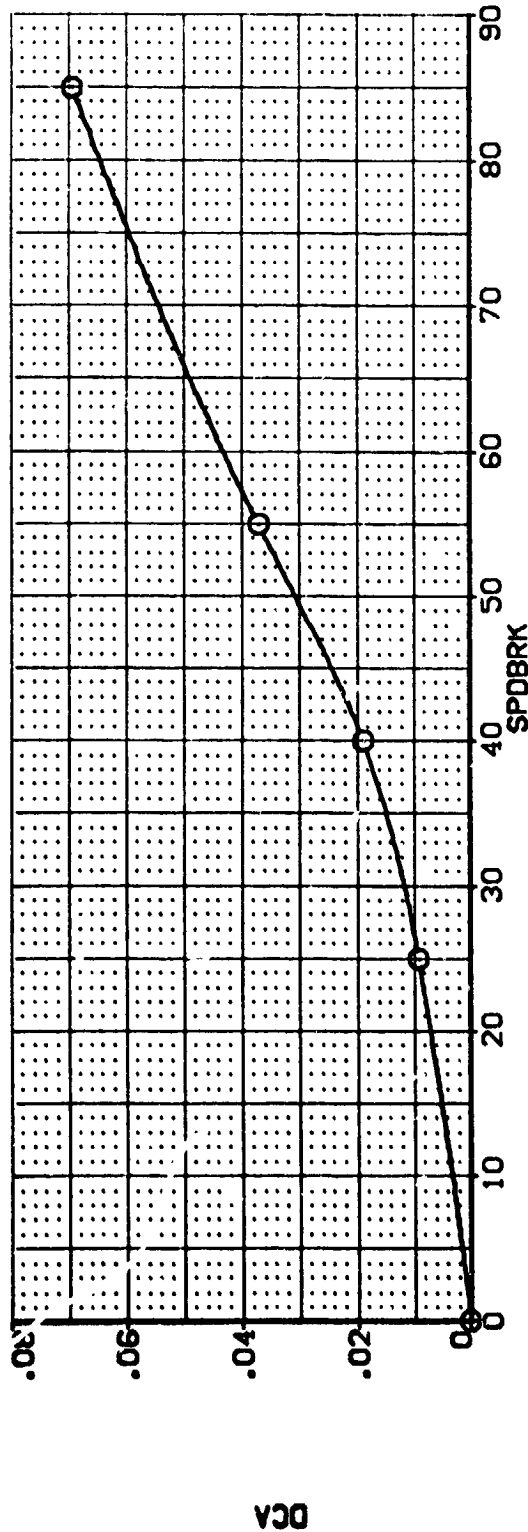


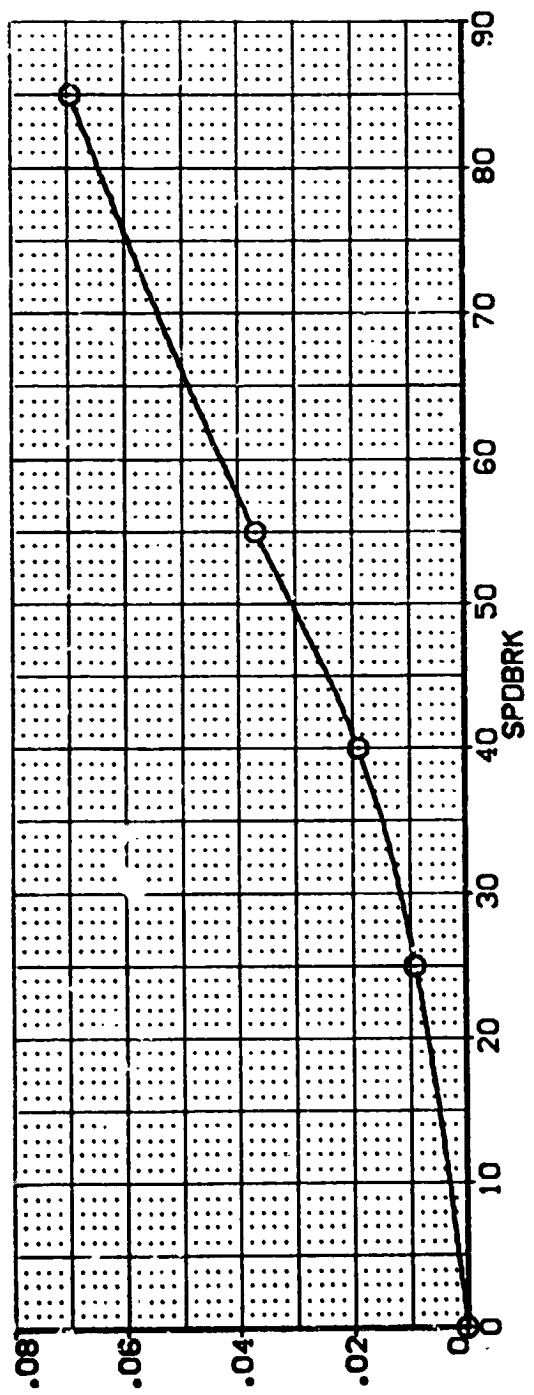
FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



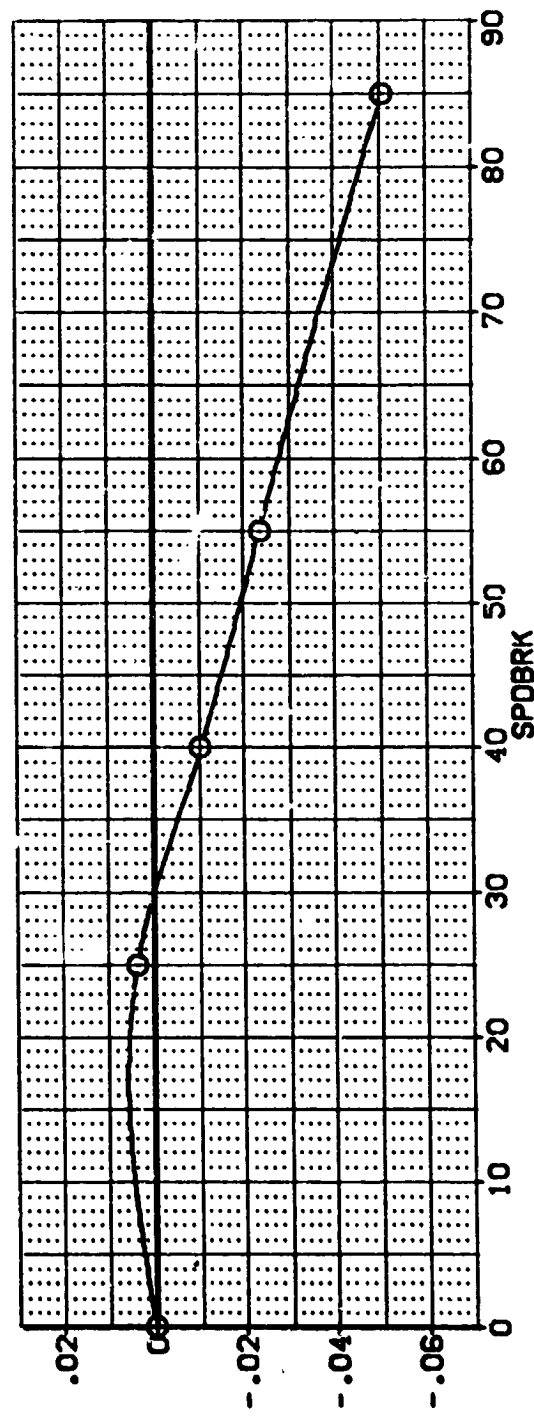
(GDZ228)

0AS28 B26C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	REFLAP	RUDDER	R-LLRAD	PARAMETRIC VALUES	.000	DATASET	SPOBRK	DATA SOURCE	DATASET	SPOBRK	BREF	REFERENCE INFORMATION
0	6.000					.200 DELVON	.000	GDZ152	25.000	.000	GDZ152	25.000	REF	90 FT
						-12.000 AILRON	40.000	GDZ138	40.000	40.000	GDZ336	55.000	REF	INCHES
						.000 BETA	85.700	GDZ144	85.700				XTRP	INCHES
						.000							ZTRP	INCHES
													SCALE	SCALE



OCA



DCN

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	EDFLAP	RUDDER	RUJRAO	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
0	9.000					.200	DELVEN	.000	DATASET	SPDBRK	.000	SPDBRK	SREF	4.4118	SO.FT.
			-12.000			.000	AIRUN	.000	G0Z228	49.000	49.000	25.000	LREF	19.2259	INCHES
			.000			.000	BETA	.000	G0Z138	65.000	65.000	55.000	BREF	37.9355	INCHES
						.000			G0Z144				YMRP	43.5974	INCHES
													ZMRP	15.1875	INCHES
													SCALE	.0405	SCALE

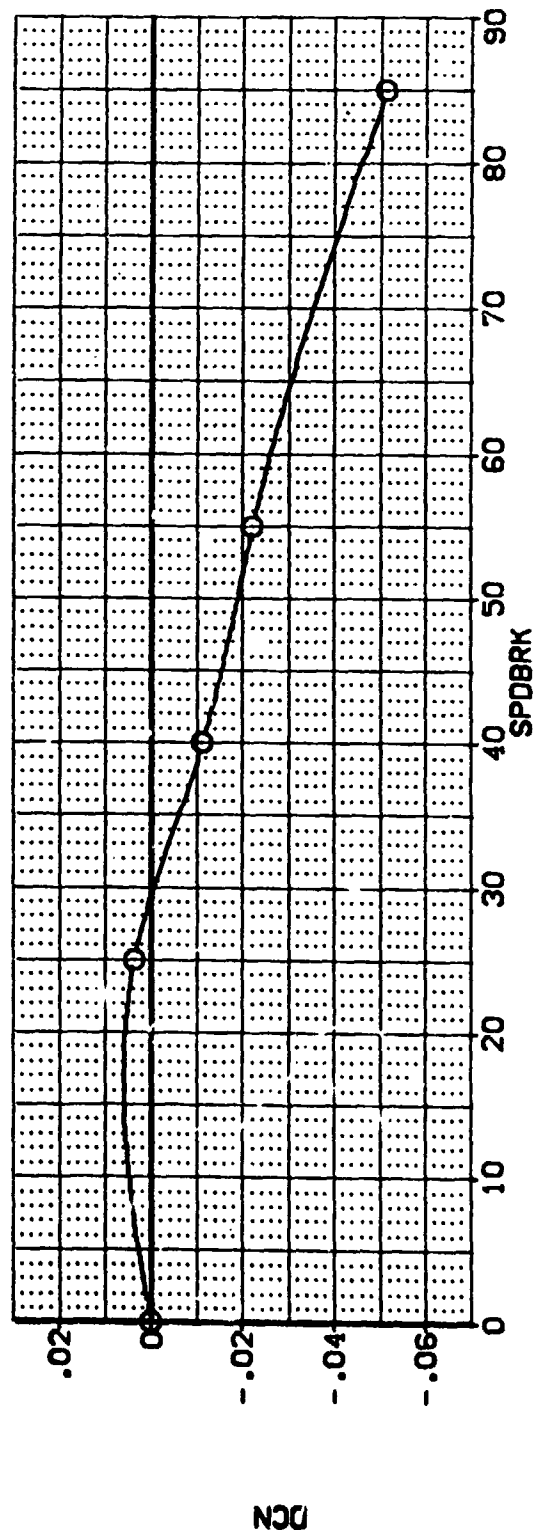
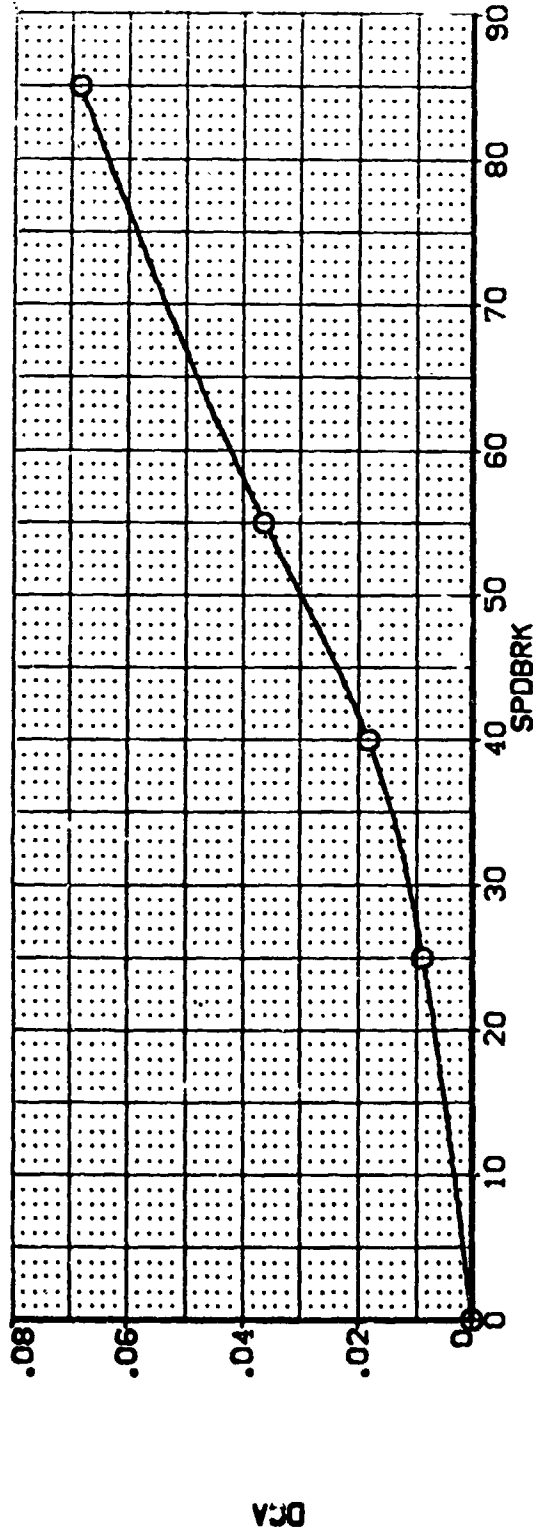


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

59

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	10.000	BOFLAP	.200 DELVGN	SPOBRK	4.4119 SC.FT
		RUDER	-12.000 AILGN	G0Z152	18.2299 INCHES
		R-LRAD	.000 BETA	G0Z306	37.5359 INCHES
			.000	G0Z144	43.5974 INCHES
					.0000 INCHES
					15.1875 SCALE
					.0405

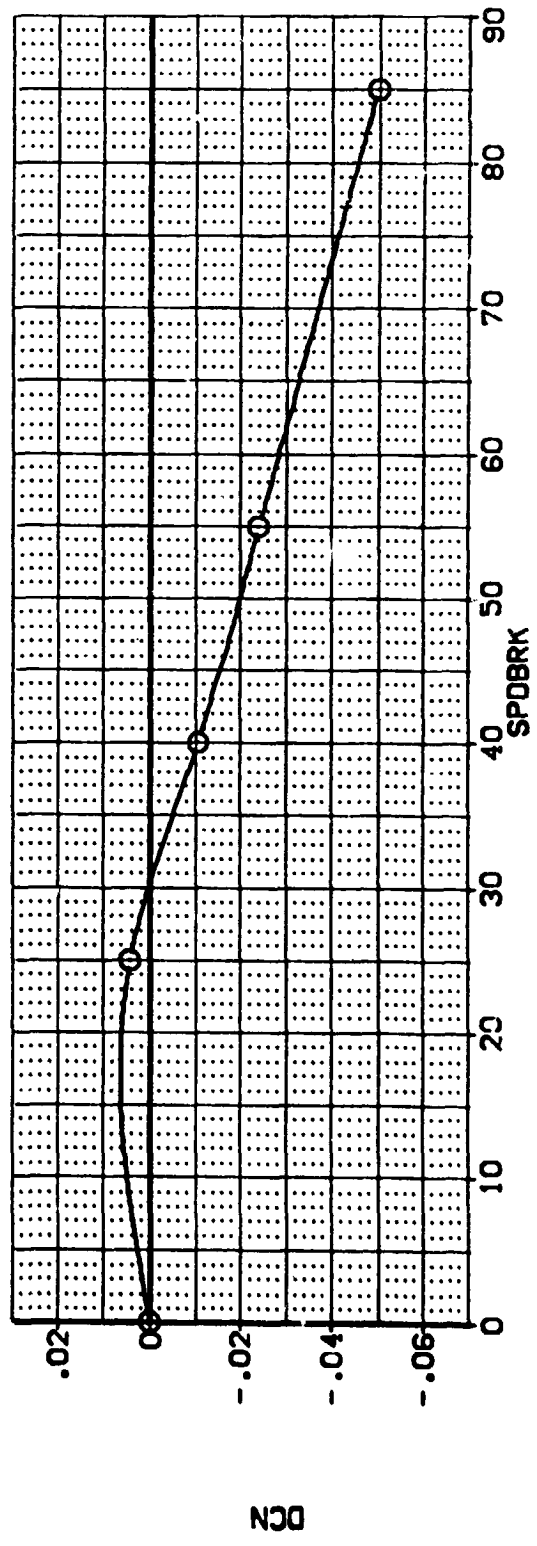
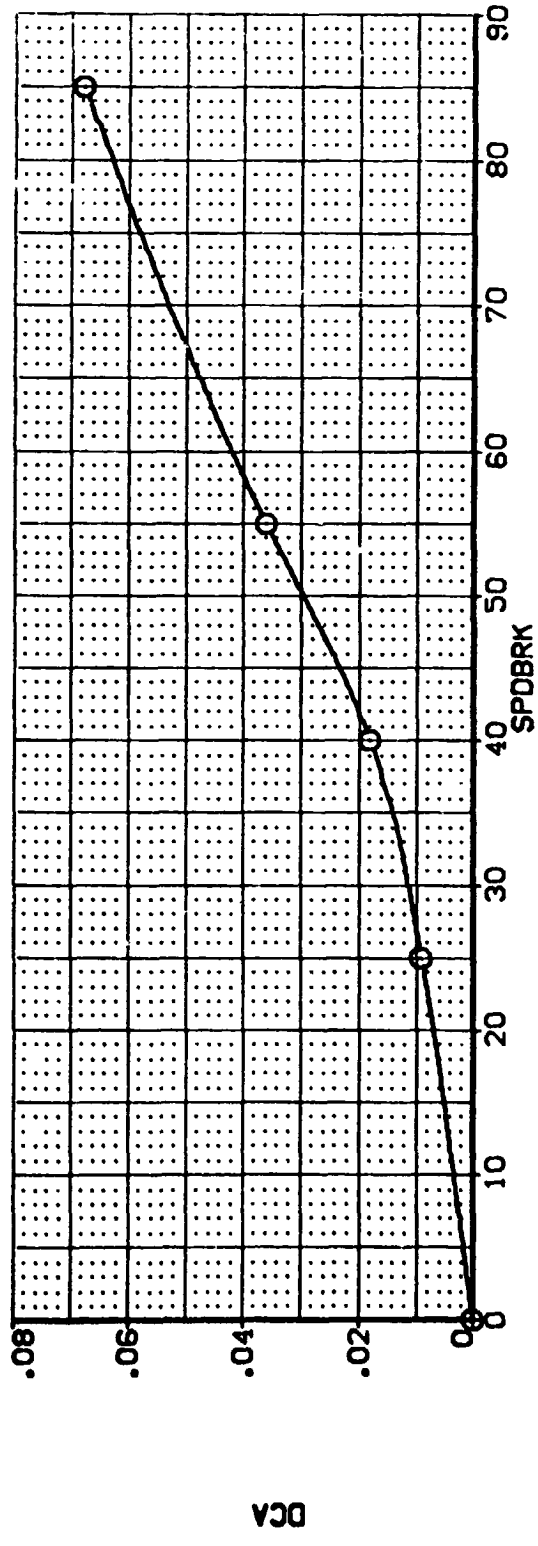


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMB.	ALPHA	MACH	BOFLAP	RUDDER	R-LRAD	PARAMETRIC VALUES	DELVON	A1LRON	BETA	.000	DATASET	SPOBRK	40.000	65.000	DATA SOURCE	SPOBRK	23.000	55.000	DATASET	G0Z152	G0Z336	REFERENCE INFORMATION	SO.FT.	4.4119
0	12.000						.200				G0Z228					LREF	19.2299		G0Z152			INCHES	19.2299	
							-12.000				G0Z138					BREF	37.9369		G0Z336			INCHES	37.9369	
							.000				G0Z141					XMRP	43.5974					INCHES	43.5974	
							.000									YMRP	.0000					INCHES	.0000	
							.000									ZMRP	15.1875					INCHES	15.1875	
																SCALE	.0405					SCALE	.0405	

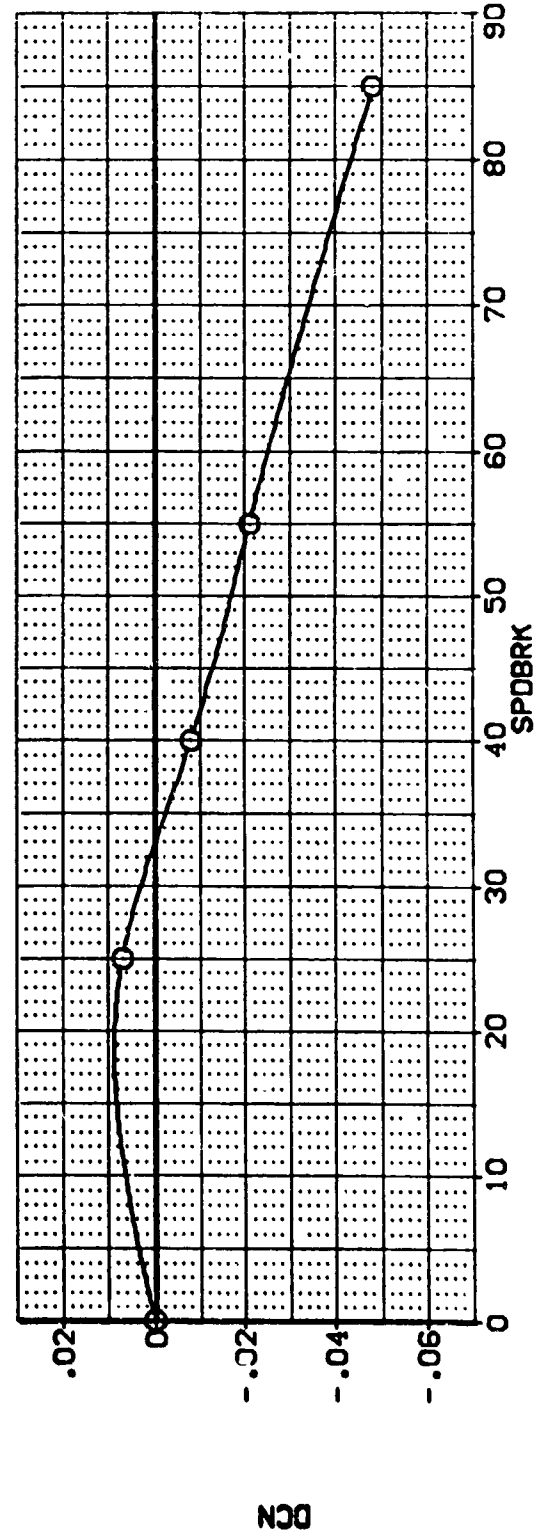
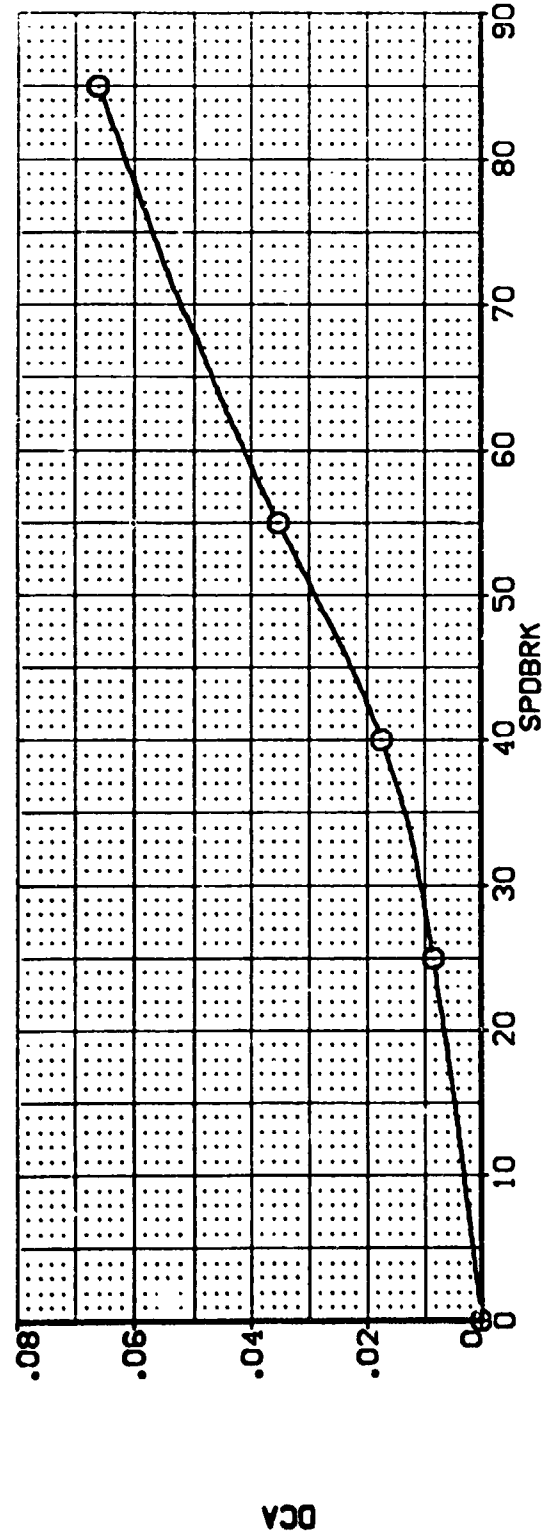


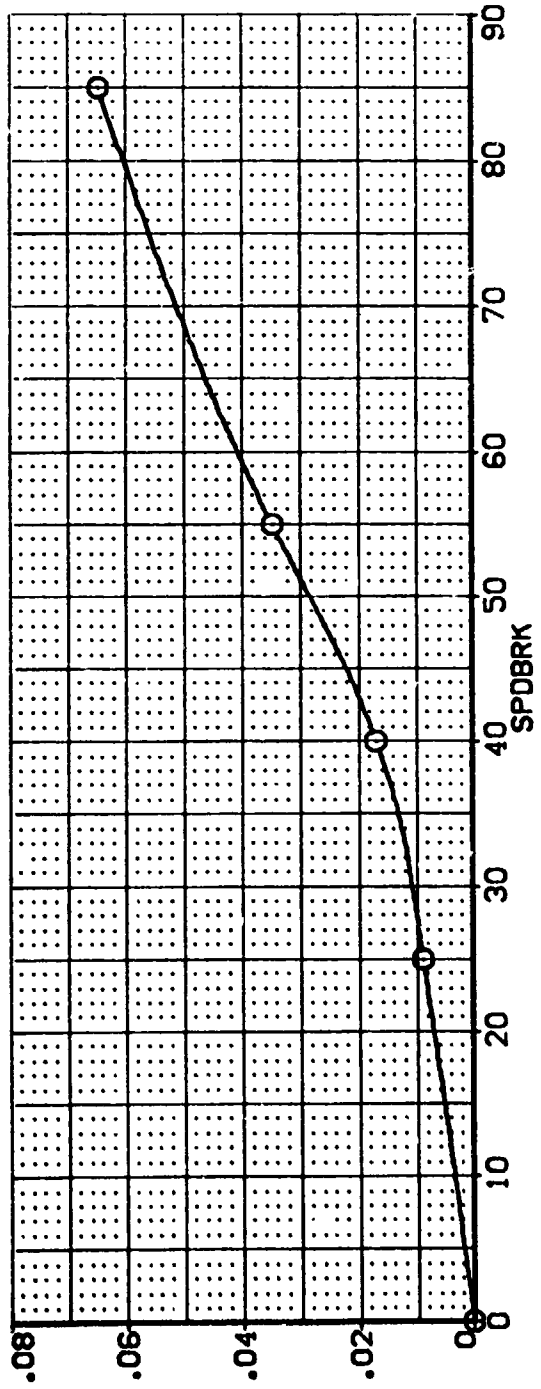
FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



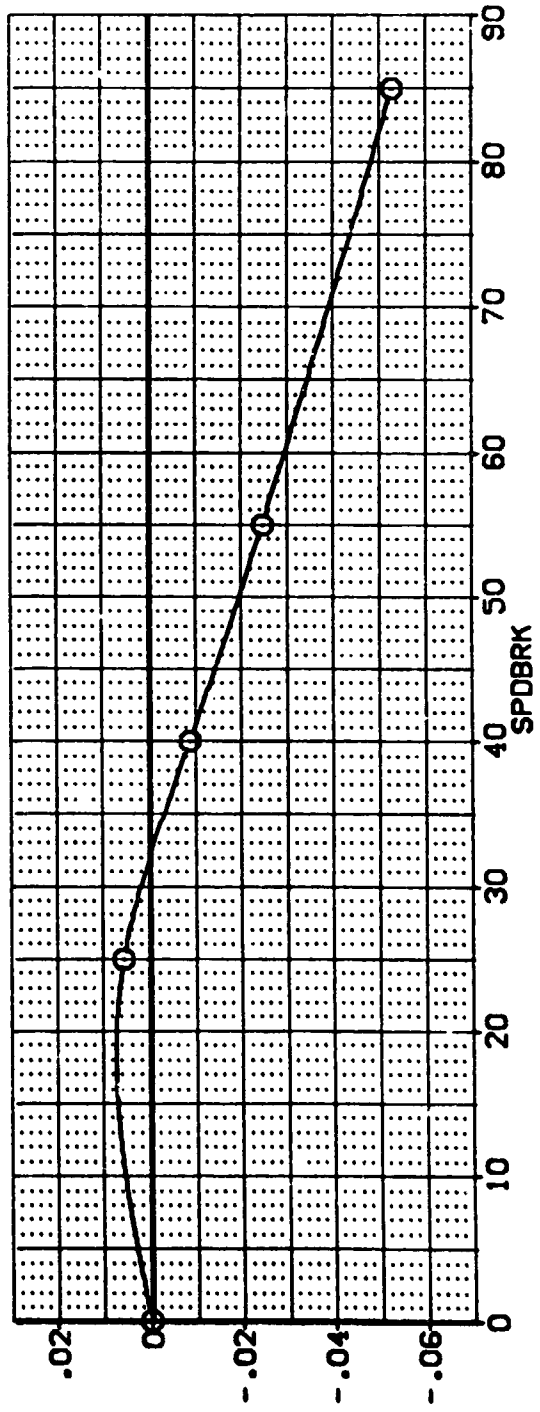


QAS28 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE	DATA SET	SPOBRK	SPOBRK	LREF	SREF	REFERENCE INFORMATION		
○	14.000		.70	DELVON	.000	G0Z228	25.000	25.000	19.2299	4.4119	SO,FT.	IND-ES	IND-ES	IND-ES
			-12.000	AILRON	.000	G0Z136	40.000	55.000	37.9359	19.2299	IND-ES	IND-ES	IND-ES	IND-ES
			.000	BETA	.000	G0Z144	65.000		43.5974	43.5974	IND-ES	IND-ES	IND-ES	IND-ES
			.000						15.0000	15.1675	IND-ES	IND-ES	IND-ES	IND-ES
										.0405	SCALE	SCALE	SCALE	SCALE



DCA



DCR

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ2228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BDFLAP	RUDDER	RHLRAD	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	16.000					.200	DELVON	.000	DATASET	SPOBRK	DATASET	SPOBRK	SREF	SO.FT.
						-12.000	AILRON	.000	GDZ228	43.000	GDZ152	25.000	REF	INCHES
						.000	BETA	43.000	GDZ138	65.000	GDZ336	55.000	BASE	INCHES
						.000		65.000	GDZ144				XMRP	INCHES
						.000							ZMRP	INCHES
													SCALE	SCALE

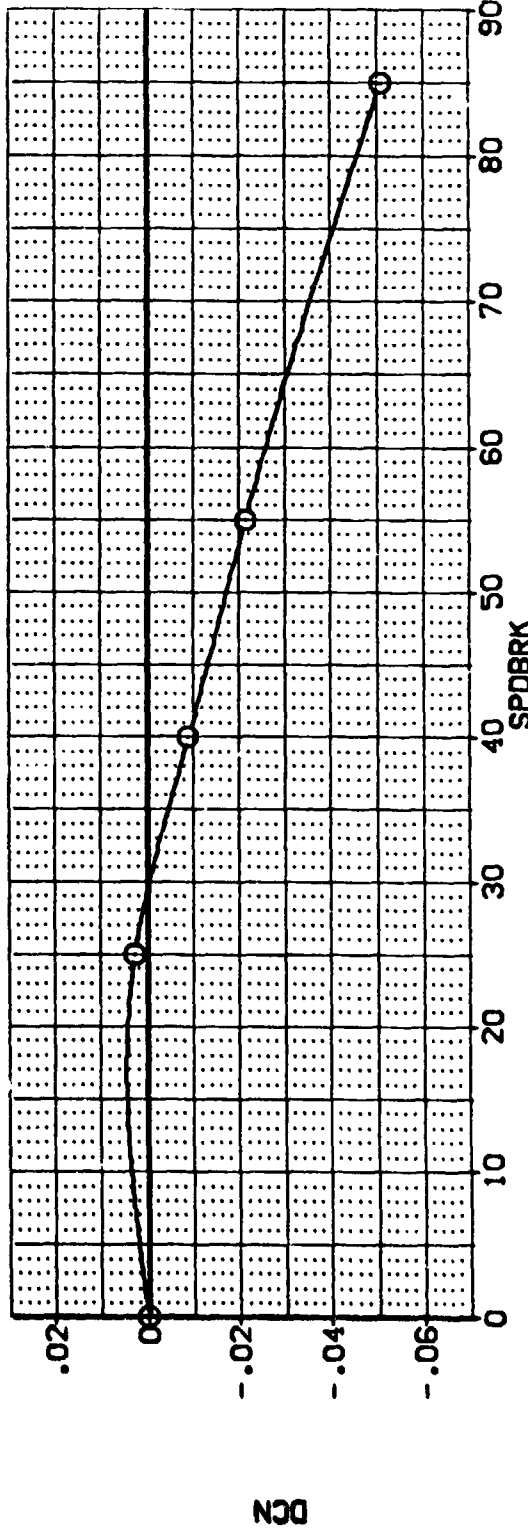
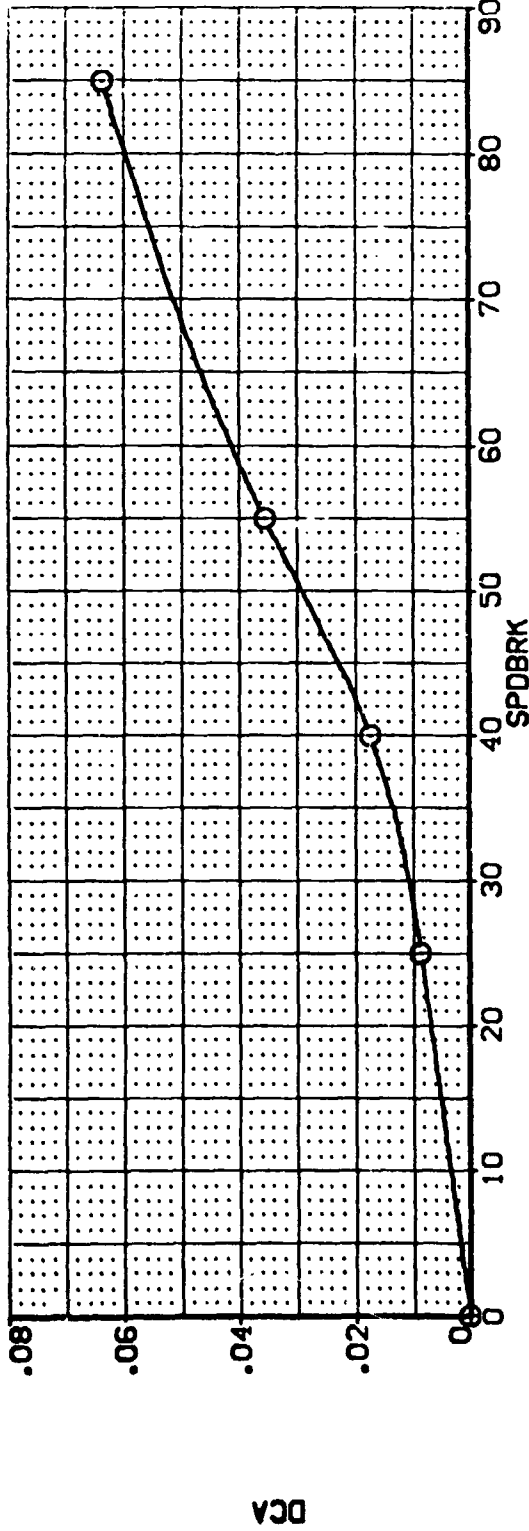
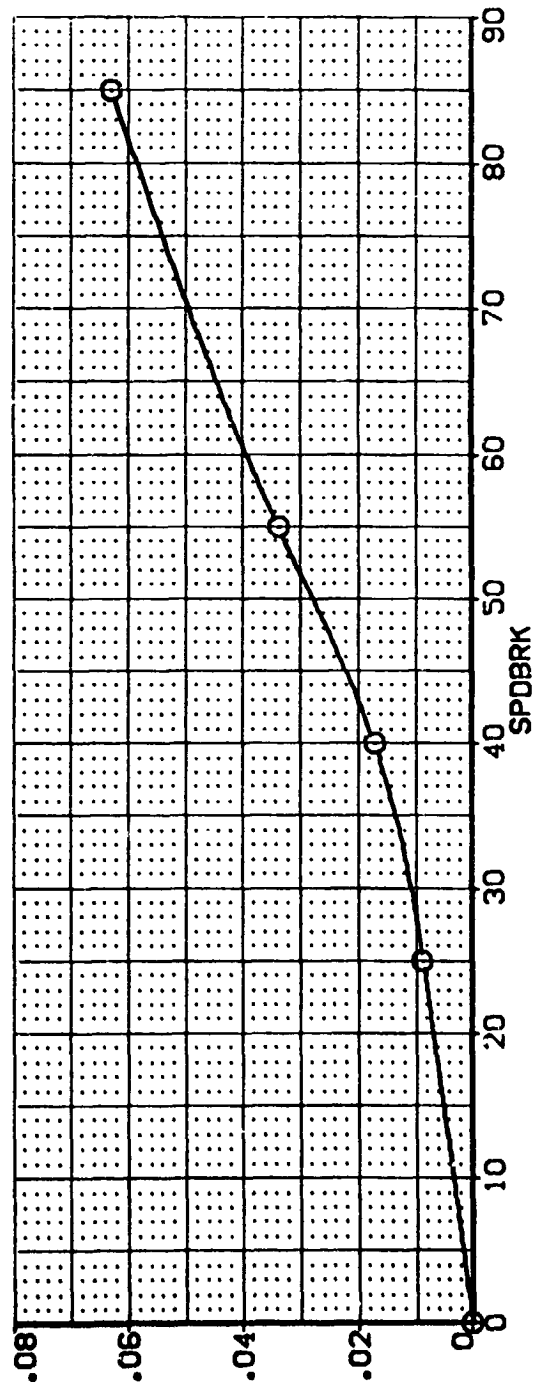


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

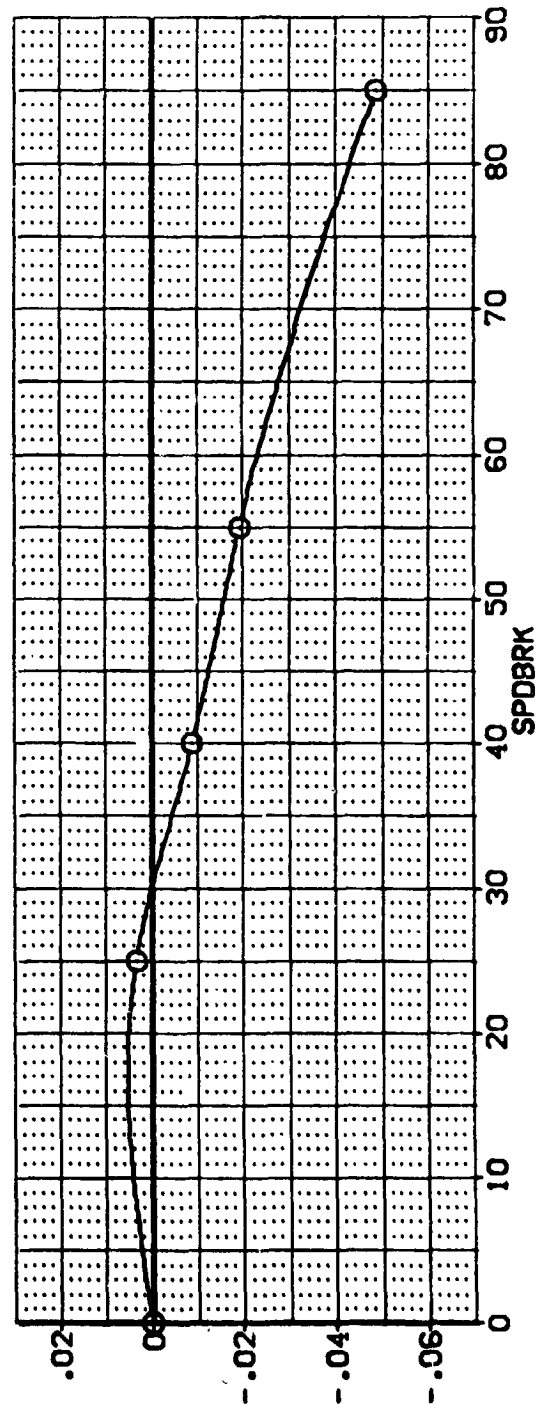


0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	ALPHA	.200	DELTA	SPDRK	SPDRK	REF	SO.FT.
	18.000	-12.000	AIRLON	.000	25.000	19.2259	INCHES
		.000	BETA	40.000	55.000	37.9359	INCHES
		.000		65.000		43.5574	INCHES
		.000				15.1875	INCHES
		.000				.0405	SCALE



DCA



DCN

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(G0Z228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	PARAMETRIC VALUES		DATA SOURCE	DATASET	SPOBRK	REFERENCE INFORMATION
0	20.000	MACH	.200	DELVEN	.000	DATASET	SREF
		EDFLAP	-12.000	ATLRON	.000	G0Z152	LREF
		RUDDER	.000	BETA	40.000	G0Z306	BREF
		R-LLWAO	.000		65.000		XTRP
							ZTRP
							SCALE
							90.FT.
							INCHES
							INCHES
							INCHES
							INCHES
							SCALE
							.0405

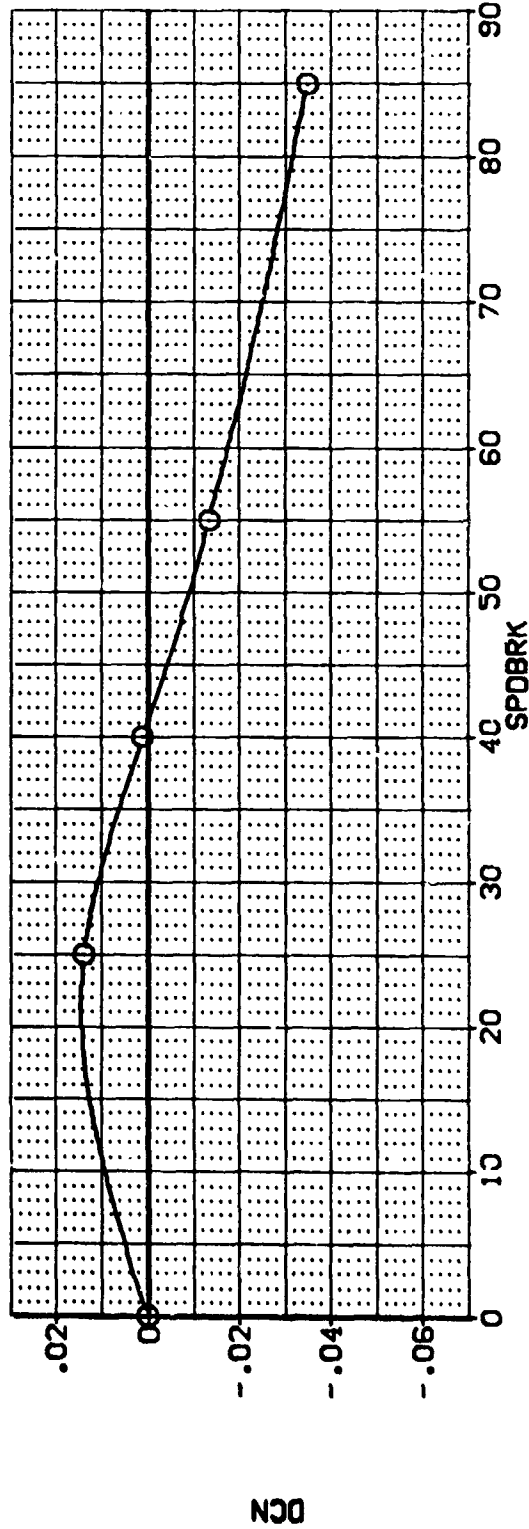
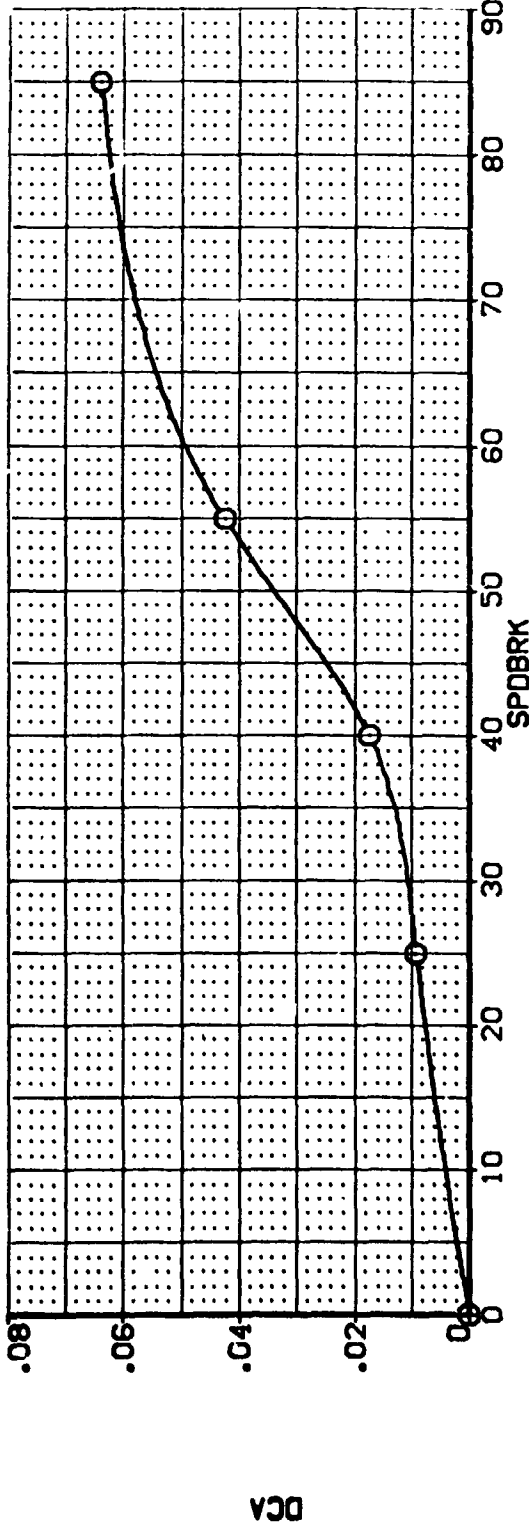


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(GDZ228)

W116E28V8RSXS

M7F8

B26C9

0A628

SYMBOL  
O

ALPHA  
22.000

MACH  
80FLAP  
RUDDER  
RHURAD

PARAMETRIC VALUES  
.200 DELVEN  
-12.000 AIRON  
.000 BETA  
.000

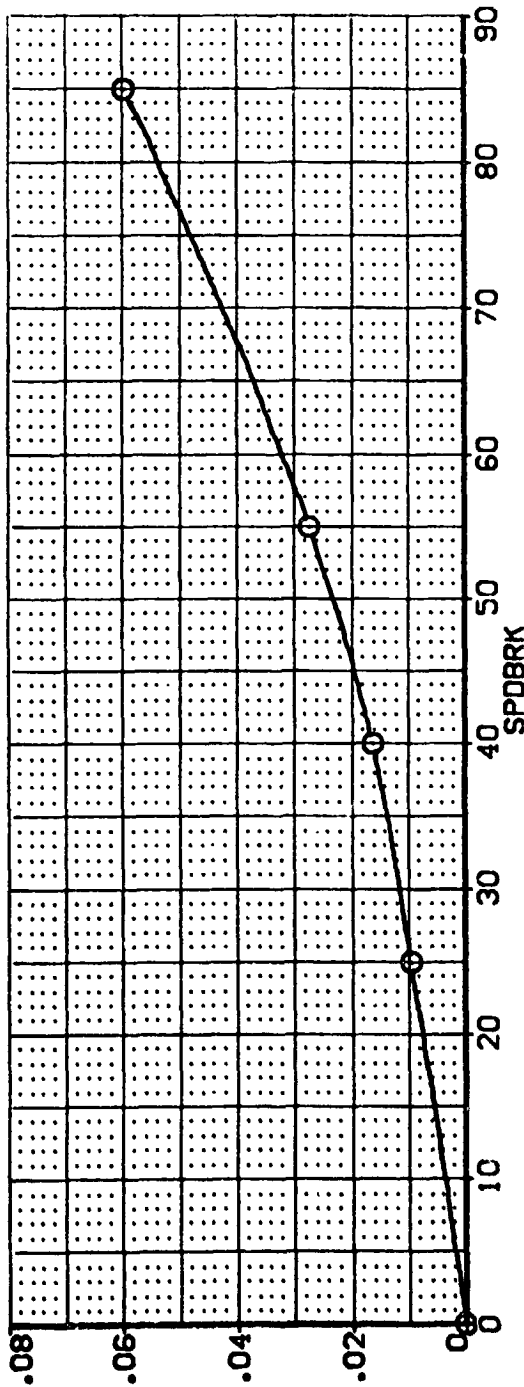
.000 DATASET  
.000 GDZ228  
.000 GDZ138  
.000 GDZ144

DATA SOURCE  
SPDBRK  
.000  
40.000  
85.000

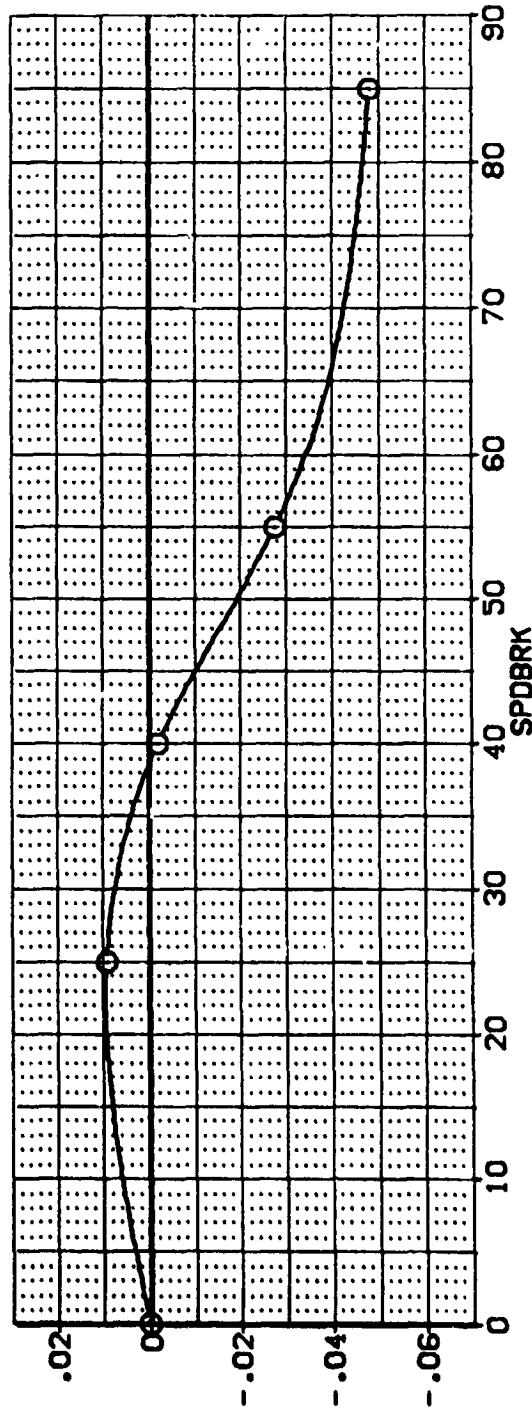
DATASET  
GDZ152  
GDZ336

SPDBRK  
25.000  
55.000

REFERENCE INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2289  
INCHES 37.9359  
INCHES 43.5974  
INCHES 15.0000  
INCHES 15.1875  
SCALE .0405



DCA



DCN

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBL	ALPHA	PARAMETRIC VALUES		DATA SOURCE	REFERENCE INFORMATION	
0	24.000	MACH	.200	SPDBRK	SPDBRK	80.FT
		DELTA	-12.000	DATASET	REF	INCHES
		ATLRN	.000	G0Z228	REF	INCHES
		BETA	.000	G0Z138	REF	INCHES
			.000	G0Z144	XTRP	INCHES
					YTRP	INCHES
					ZTRP	SCALE
					SCALE	

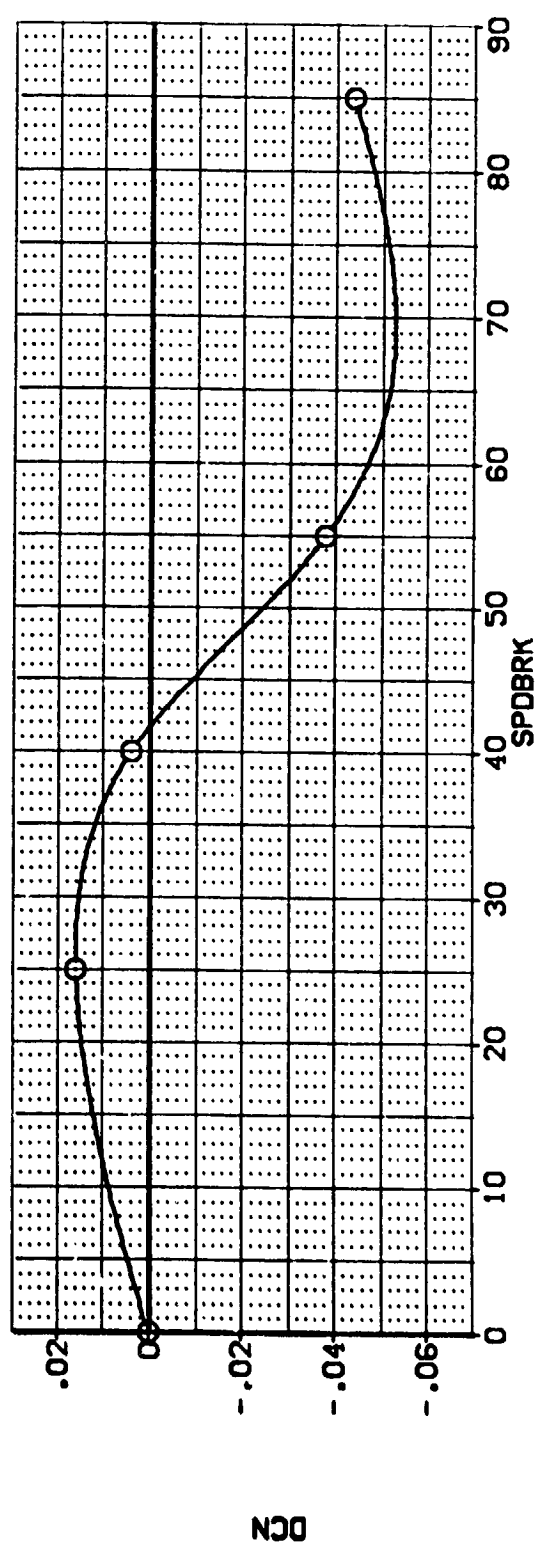
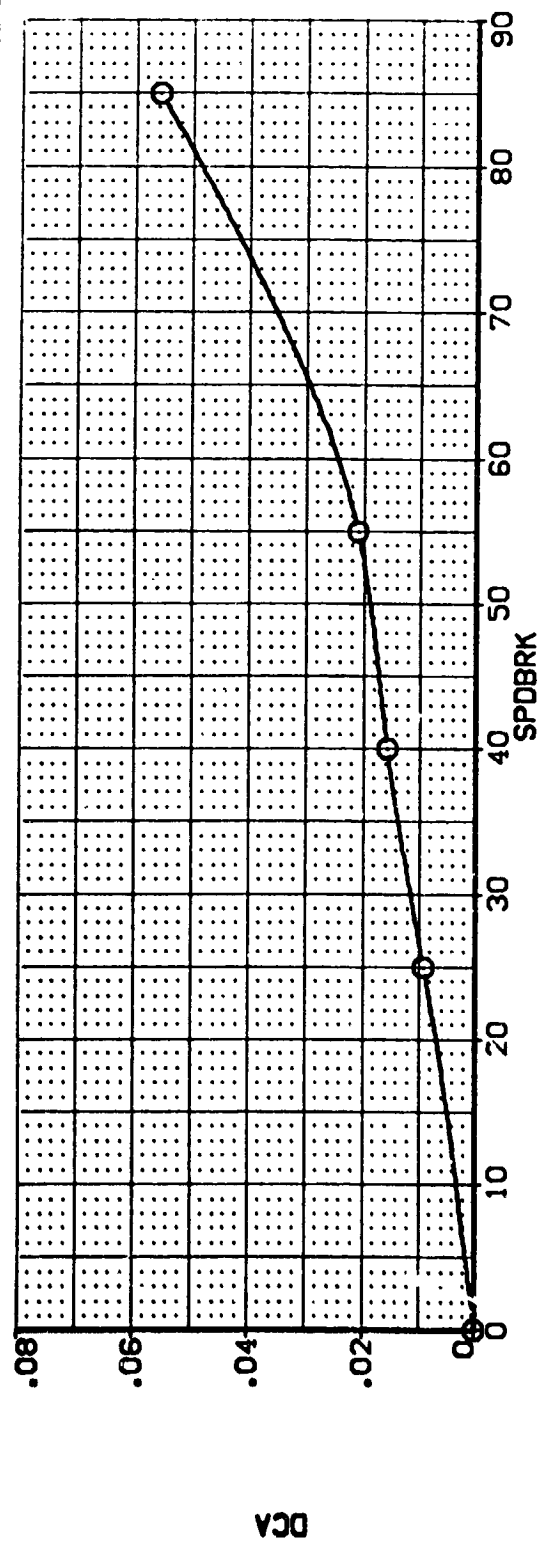


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE	REFERENCE INFORMATION
O	26.000		.200	DELVON	SPDRK	SQ.FT.
		BOFLAP	-12.000	AILRON	.000 G0Z228	19.2299
		RUDDER	.000	BETA	.000 G0Z138	37.9359
		R-LRAD	.000		.000 G0Z144	43.5974
					SPDRK	INCHES
					25.000	INCHES
					55.000	INCHES
					YFRP	INCHES
					15.1875	INCHES
					ZFRP	INCHES
					SCALE	SCALE
					.0405	

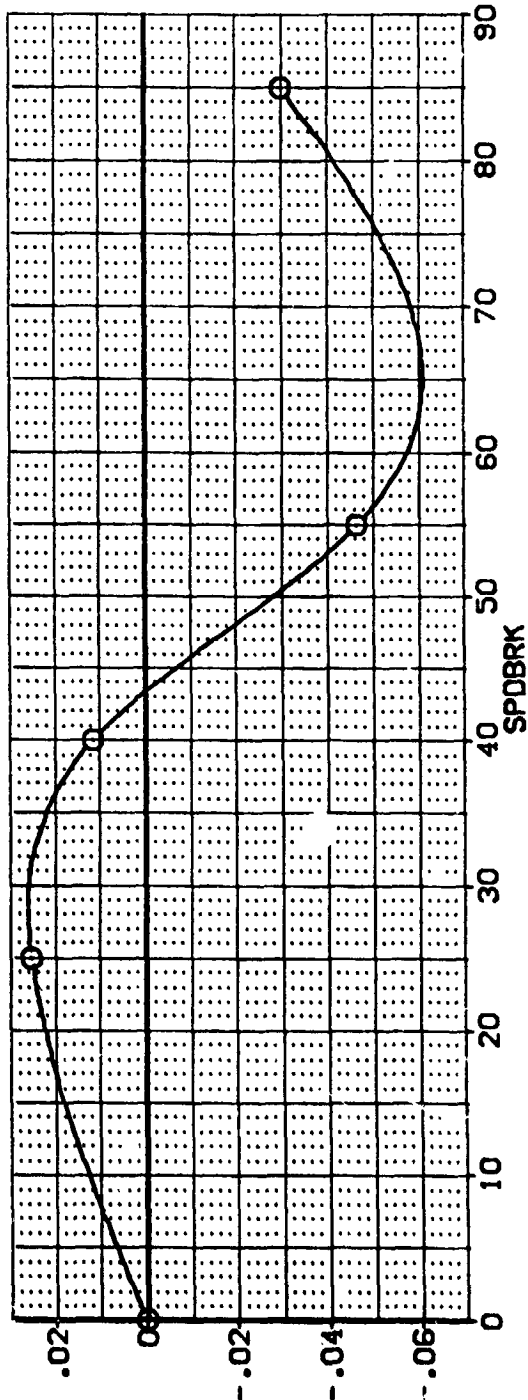
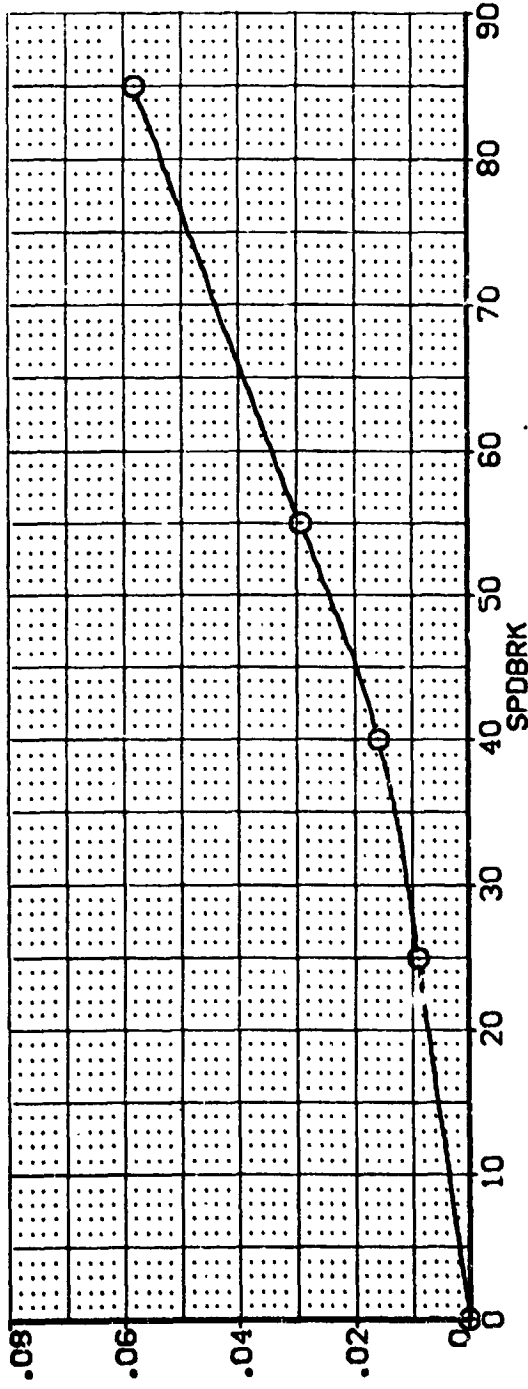


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A62B B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SPRBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	20.000		.200	DELVEN	.000	DATASET	SPOBRK	SREF
		WFLAP	-12.000	A1URON	.000	G0Z152	25.000	LREF
		RUDDER	.000	BETA	40.000	G0Z336	55.000	BREF
		RHURAD	.000		65.000			XMRP
								YMRP
								ZMRP
								SCALE
								SO.FT.
								INCHES
								INCHES
								INCHES
								INCHES
								SCALE

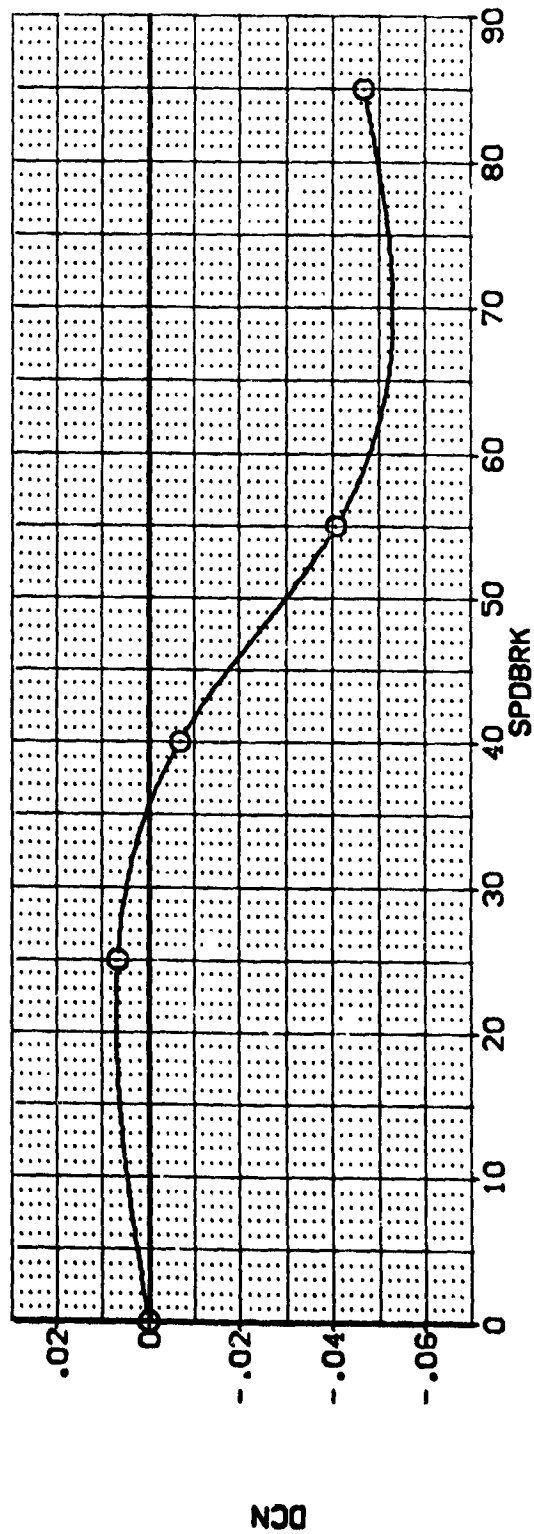
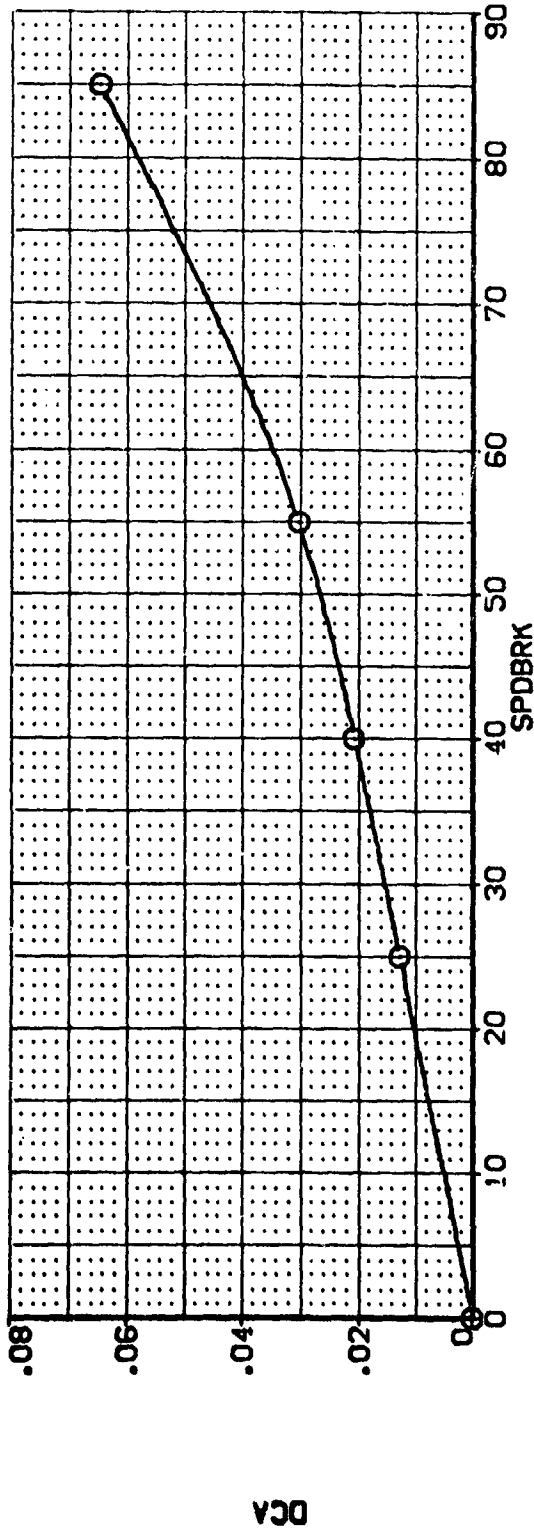
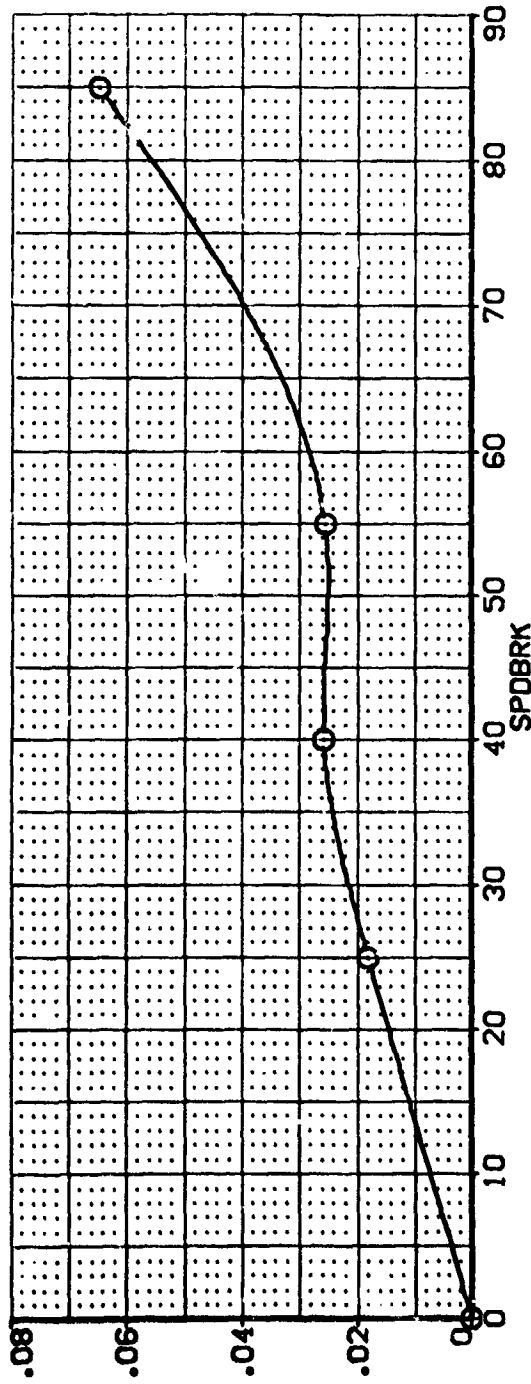


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

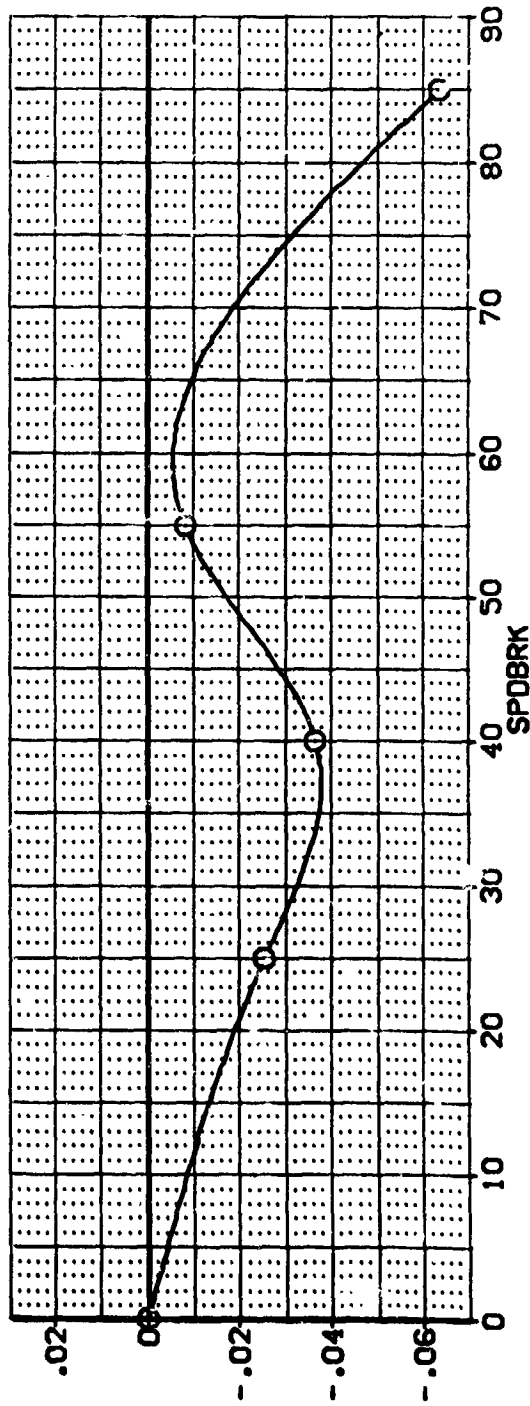


0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	30.000		.200	DELTA	.000	G0Z228	SPDBRK	G0Z152	SREF	4.4119	SO.FT.
			-12.000	ALPHA	.000	G0Z138	40.000	G0Z336	LREF	19.2289	INCHES
			.000	BETA	.000	G0Z144	85.000		BREF	37.9359	INCHES
			.000						XMRP	43.5974	INCHES
									ZMRP	.0000	INCHES
									SCALE	15.1675	SCALE



OCA



OCB

FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(002228)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	-4.000		.000 DELVGN	SPOBRK	4.4119 SQ.FT.
			.000 AILRON	.000	19.2299 INCHES
			-12.000 BETA	40.000	37.9359 INCHES
			.000 RLRAD	65.000	43.5974 INCHES
			.000		.0000
			.000		15.1875 INCHES
					.0405 SCALE

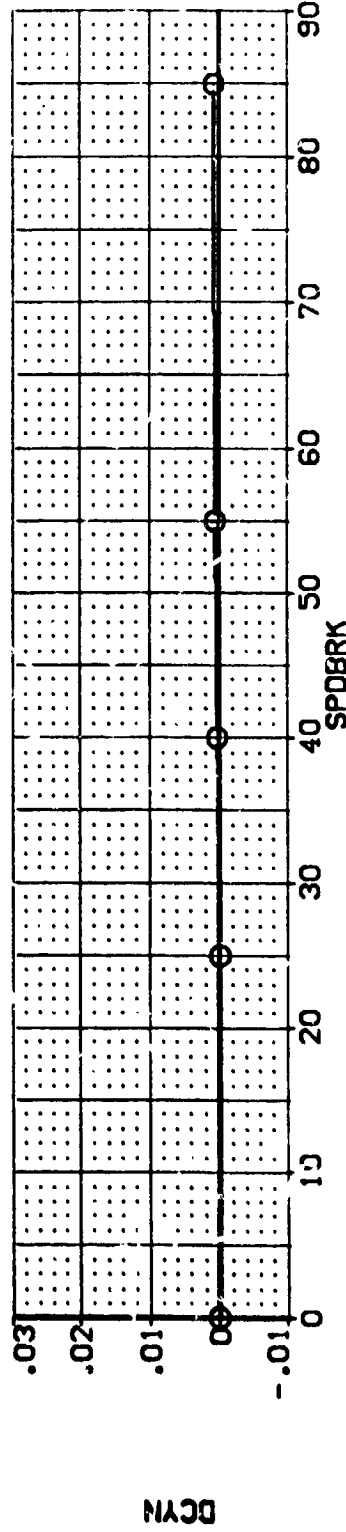
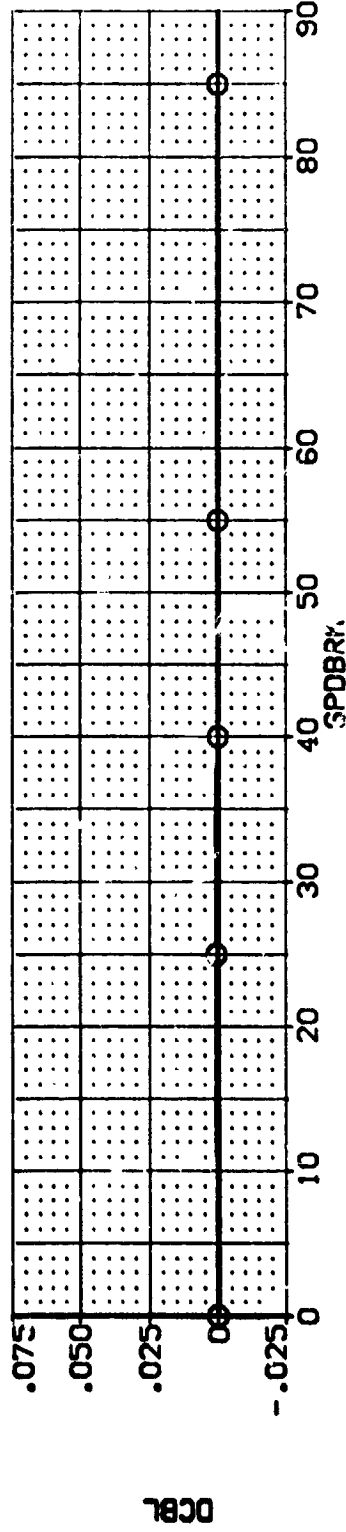
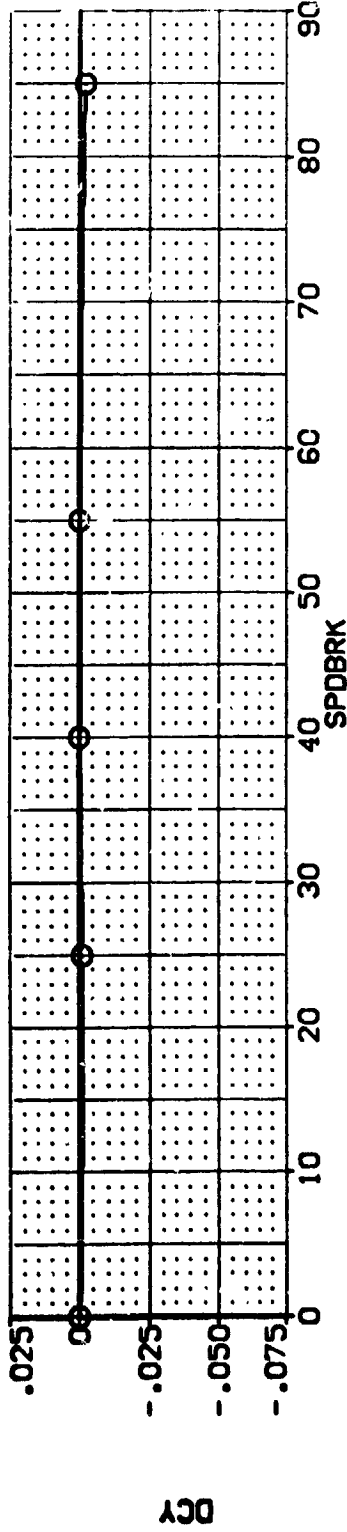


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A613 B26C9 M758 W116F28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	SPOBRK	REFERENCE INFORMATION
O	-2.100	ED-LAP	.200 JELVON	SPOBRK	.000 G0Z152	25.000	REF 4.4119 SQ.FT.
		RUDDER	-12.000 AIRUG1	.000 G0Z228	.000 G0Z138	55.000	REF 19.2299 INCHES
		R-LRAD	.000 BETA	65.000 G0Z144	.000		REF 37.9359 INCHES
			.030				REF 43.5974 INCHES
							REF 11.30 INCHES
							REF 27.60 INCHES
							SCALE 15.1875 INCHES
							SCALE .0495

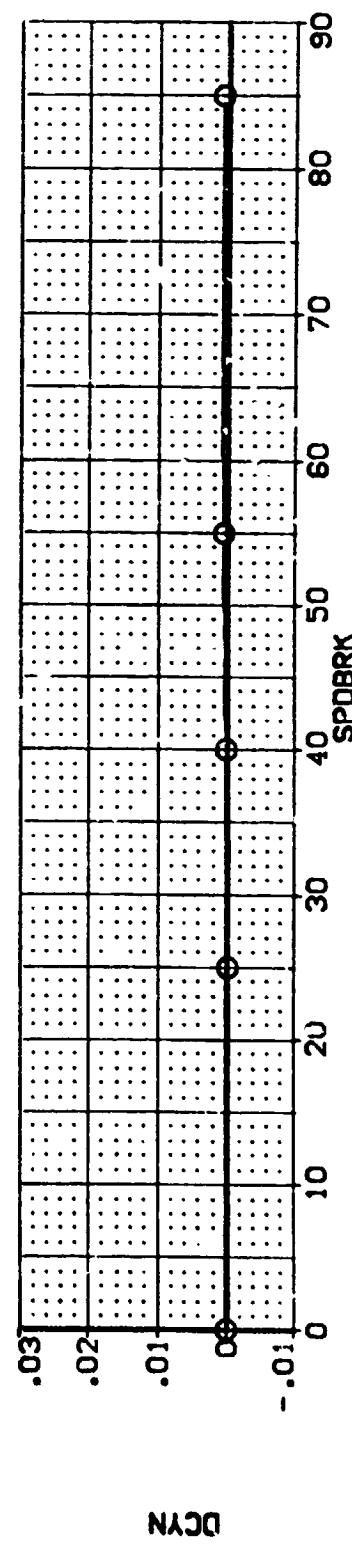
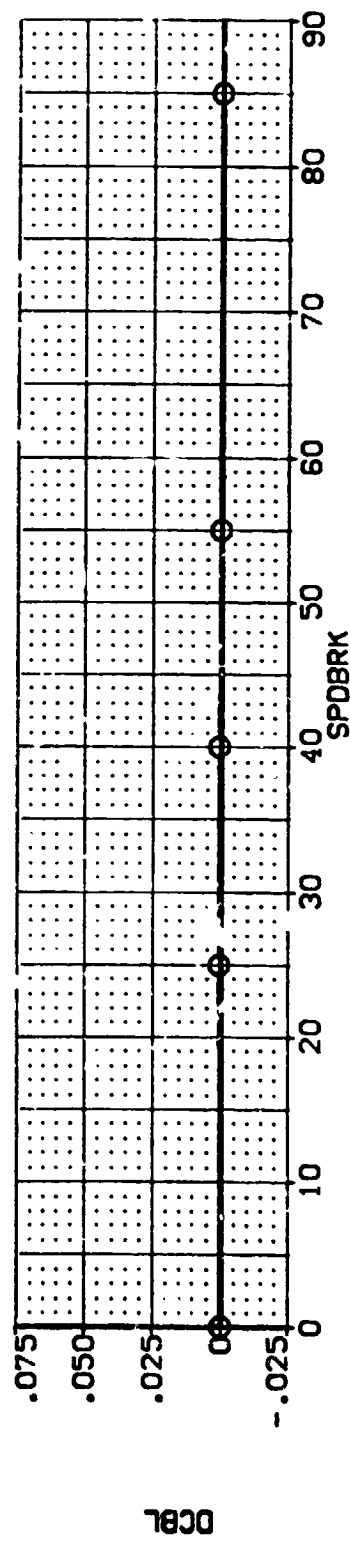
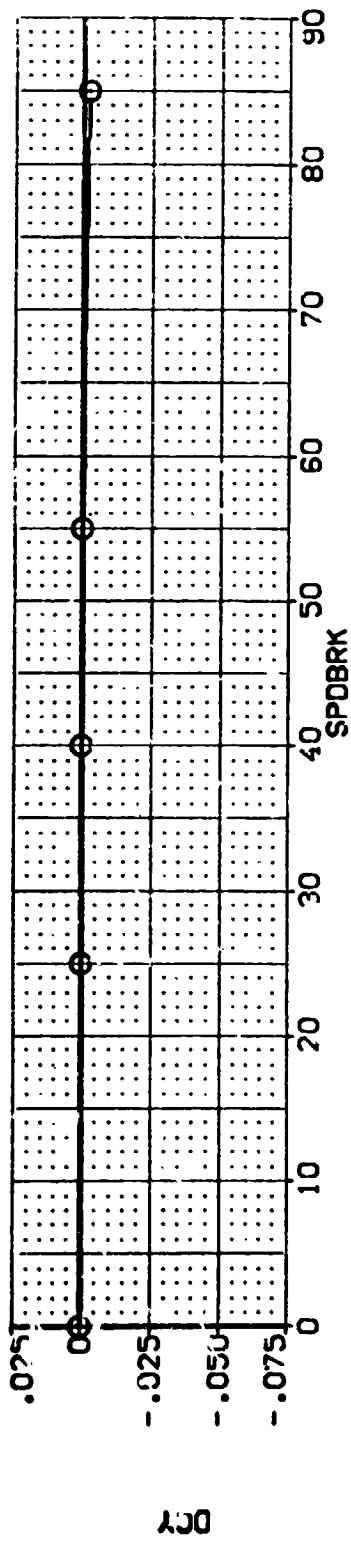


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A628 826C9 M7F8 W116E28V8R5X9 (GDZ226)

SYMBOL  
O

PARAMETRIC VALUES  
 ALPHA -.200  
 DELTA .000  
 MACH -12.000  
 AILRON .000  
 RUDDER .000  
 R-LRAD .000

DATA SOURCE  
 SPDBRK .000  
 DATASET GDZ226  
 SPDBRK 40.000  
 DATASET GDZ144  
 SPDBRK 65.000

DATA SOURCE  
 SPDBRK .000  
 DATASET GDZ152  
 SPDBRK 25.000  
 DATASET GDZ306  
 SPDBRK 55.000

REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.5359  
 INCHES 43.5974  
 INCHES 15.0000  
 INCHES 15.1875  
 SCALE .0405

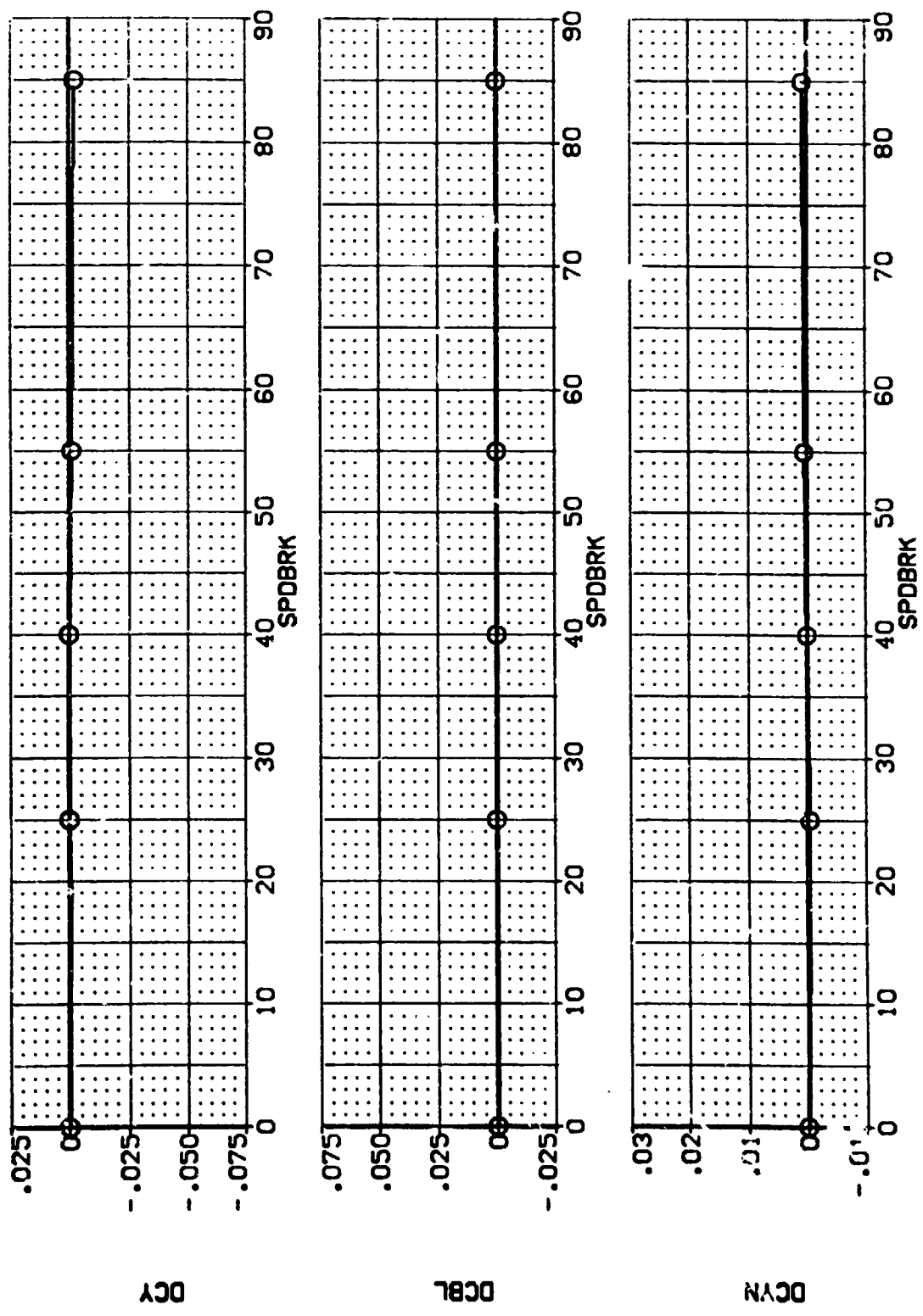


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(GDZ228)

0A62B B26C9 M7F8 W116E28V8R5X9

REFERENCE INFORMATION  
 4.4118 SO.FT.  
 19.2299 INCHES  
 37.9259 INCHES  
 43.5974 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE

DATA SOURCE  
 SPDBRK 25.000  
 DATASET 60Z152  
 SPDBRK 55.000  
 DATASET 60Z336

PARAMETRIC VALUES  
 MACH .200  
 DELVON -12.000  
 AILRON .000  
 BETA .000  
 RLRAD .000

DATA SOURCE  
 SPDBRK 40.000  
 DATASET 60Z198  
 SPDBRK 65.000  
 DATASET 60Z144

SYMBOL  
 O

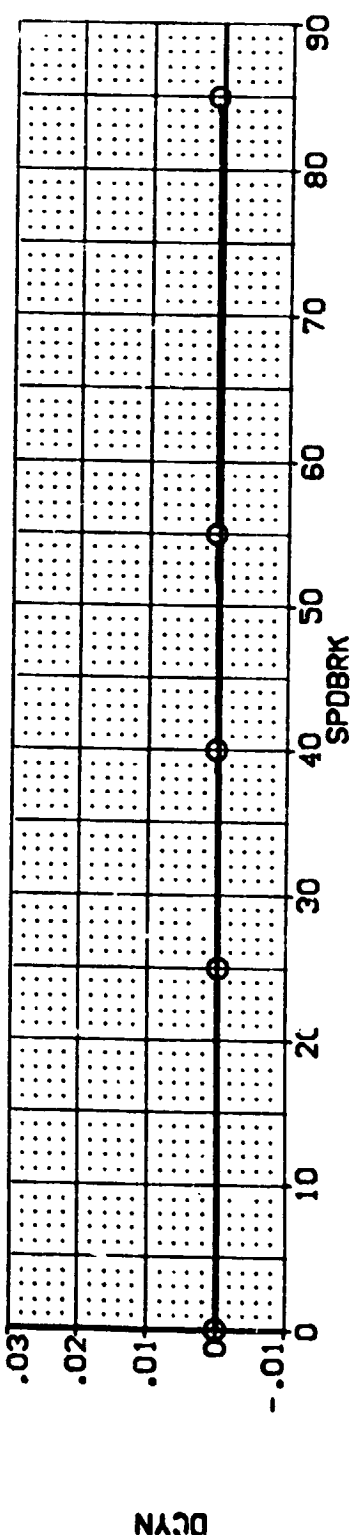
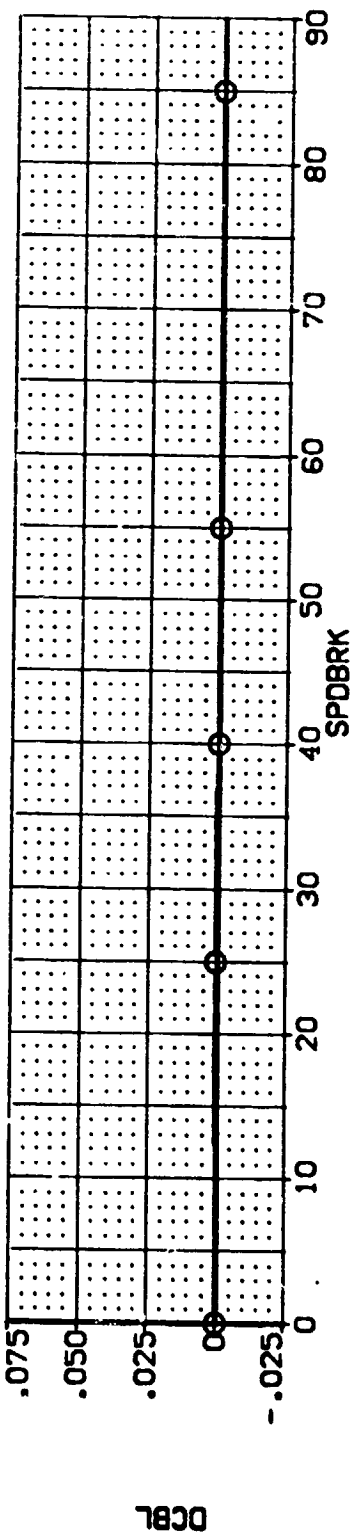
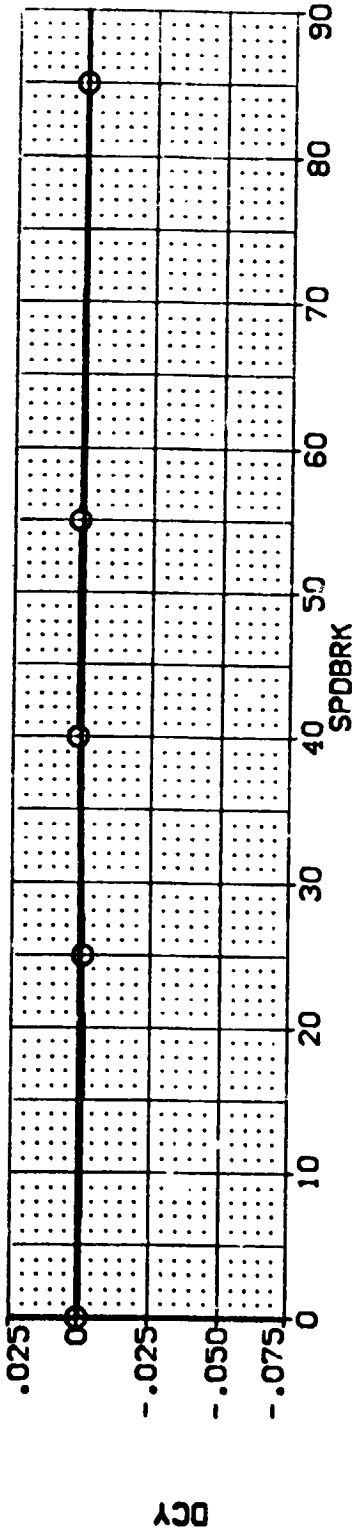


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A62B 826C9 M7F8 W116E28V8R5X9 (GDZ228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	1.000		.200	DELTA	.000	DATASET	SPOBRK	SREF	4.4119	SQ.FT.	
		BOFLAP	-12.000	AIRLON	.000	GDZ228	25.000	UREF	19.2299	INCHES	
		RUDDER	.000	BETA	.000	GDZ138	55.000	BREF	37.9359	INCHES	
		RUAD	.000		.000	GDZ144	25.000	XMRP	43.5974	INCHES	
								ZMRP	.0000	INCHES	
								SCALE	15.1875	SCALE	
									.0405		

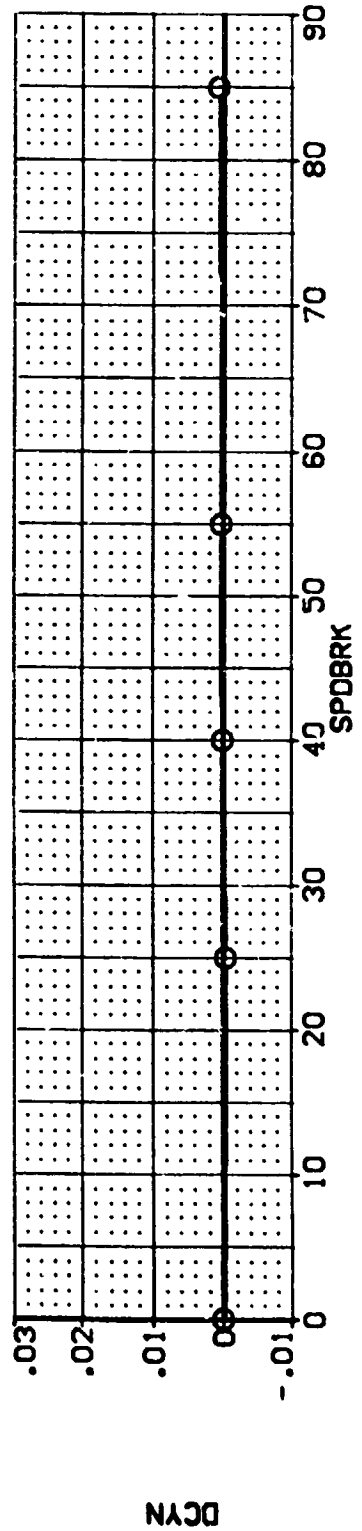
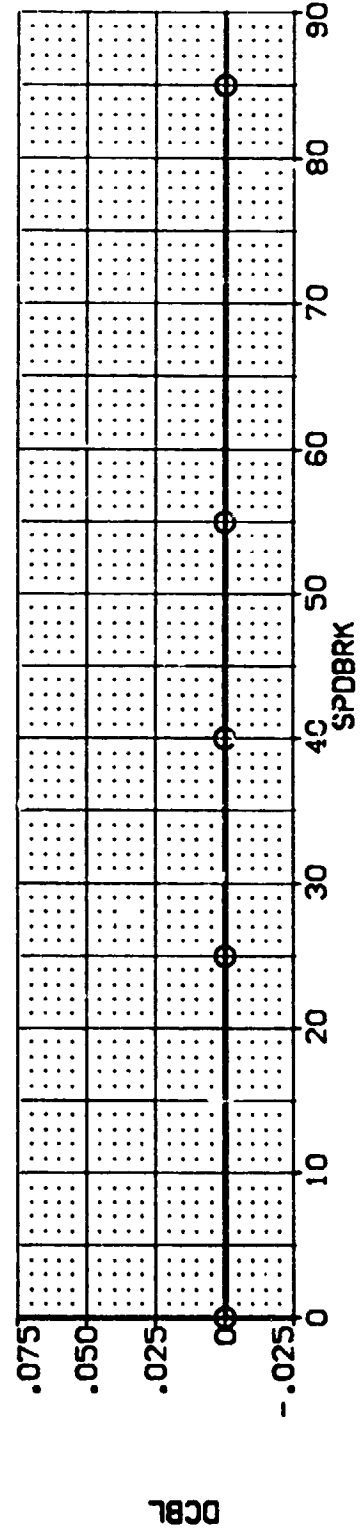
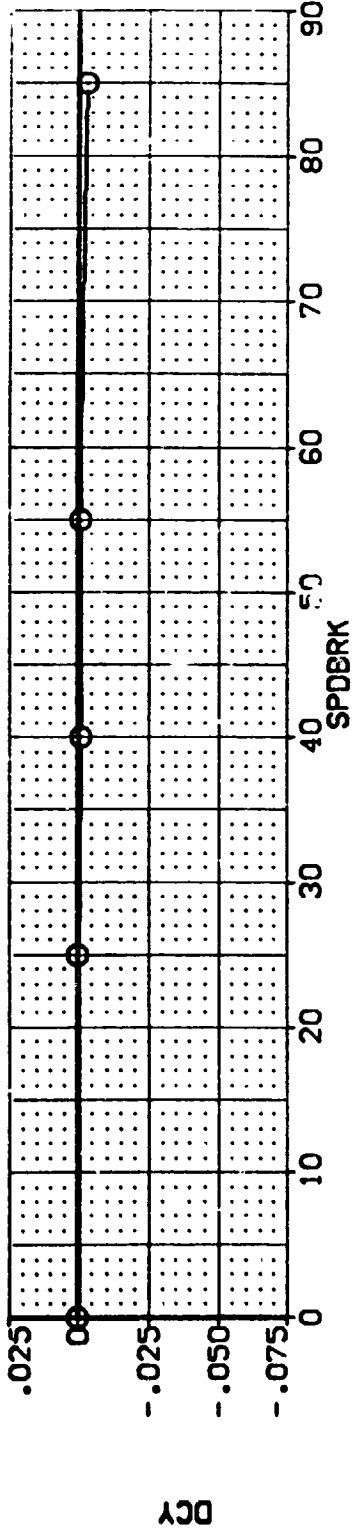


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	2.000		.200	DELVON	.000	DATASET	SPOBRK	SREF
		BDFLAP	-12.000	AILRON	.000	G0Z228	25.000	19.2299
		RUDDER	.000	BETA	.000	G0Z138	55.000	37.9359
		RH-RAD	.000		85.000	G0Z336		43.5974
								15.0000
								15.1875
								.0405
								INCHES
								INCHES
								SCALE
								90

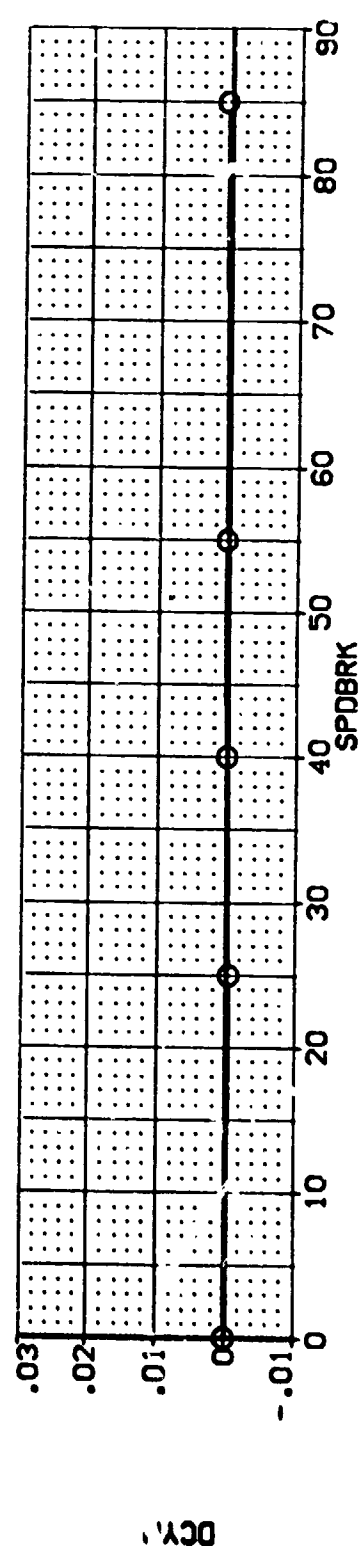
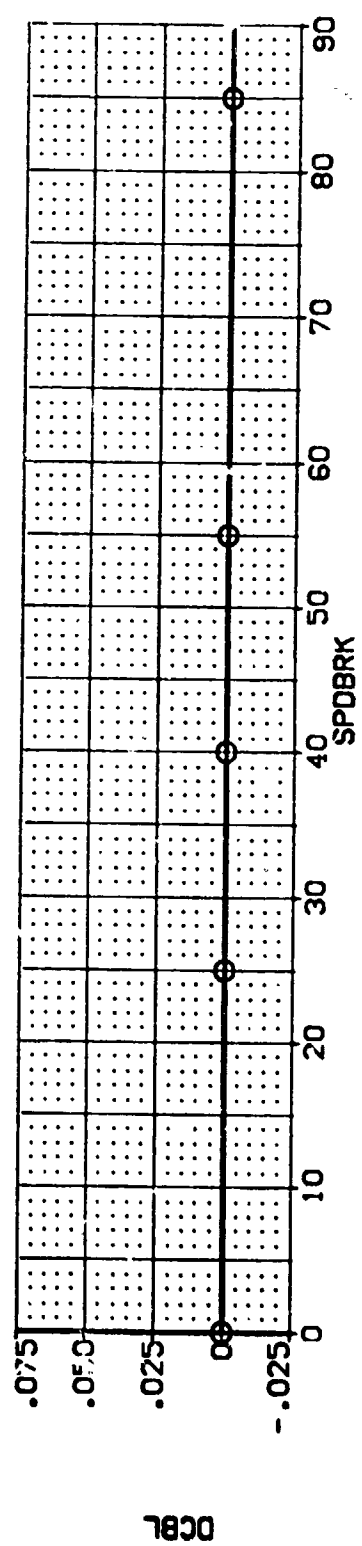
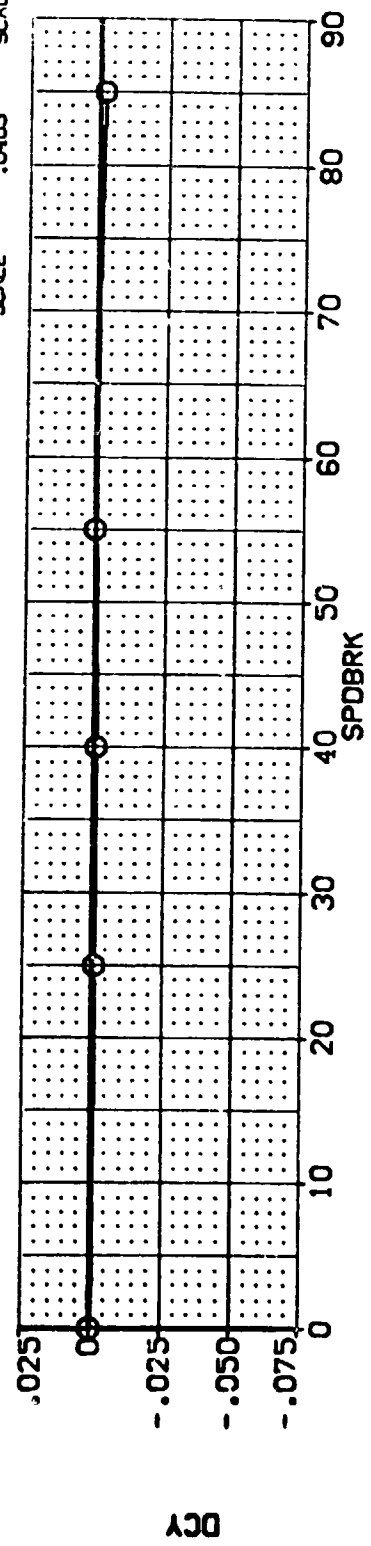


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0







0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALJ-A	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
○	R.000	MACH	.200	DELVON	.000	DATASET	SPOBRK	SREF	SO.FT.
		BOFLAP	-12.000	AILRON	.000	G0Z228	25.000	LRP	19.2298
		RUDDER	.000	BETA	.000	G0Z138	55.000	BREF	37.9559
		R-LRAD	.000		85.000	G0Z144		YMRP	43.9974
								ZMRP	.0000
								SCALE	15.1875
									INCHES
									SCALE
									INCHES

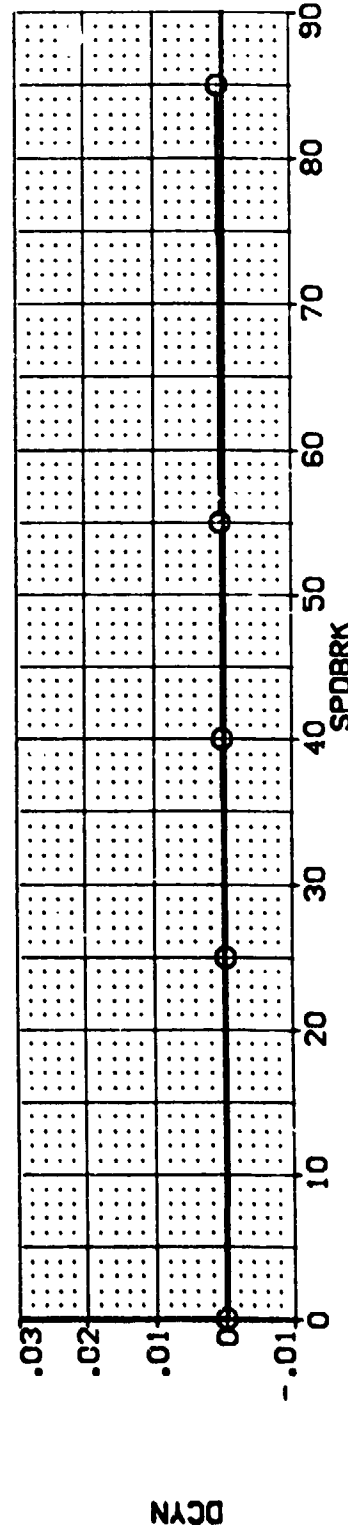
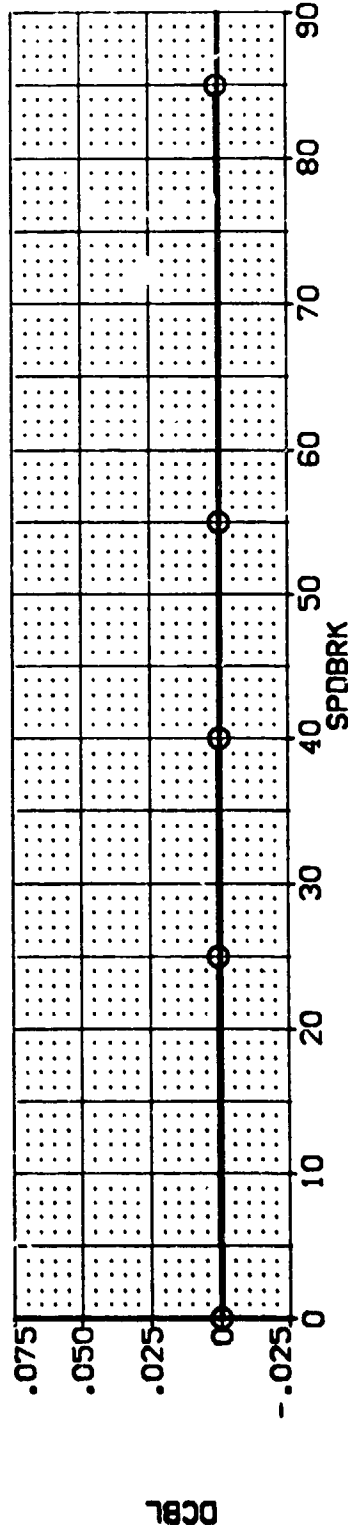
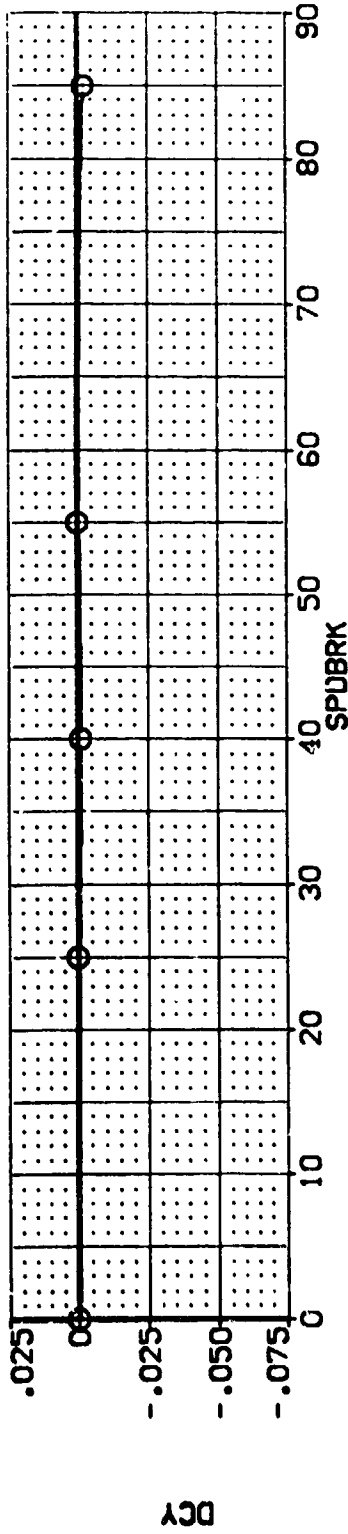


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



CA628 B26C9 M7F8 W116E28V8R5X9 (G0Z2228)

SYMBOL		ALPHA		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
O		10.000		MACH	.200	DELVON	.000	DATASET	SPOBRK	SREF	4.4119	52. FT.
				EDFLAP	-12.000	ALLRON	.000	G0Z152	25.000	LREF	19.2259	INCHES
				RUDDER	.000	BETA	40.000	G0Z336	55.000	BREF	37.9359	INCHES
				R-LRAD	.000		65.000			XMRP	43.5874	INCHES
										YMRP	.0000	INCHES
										ZMRP	15.1875	INCHES
										SCALE	.0405	SCALE

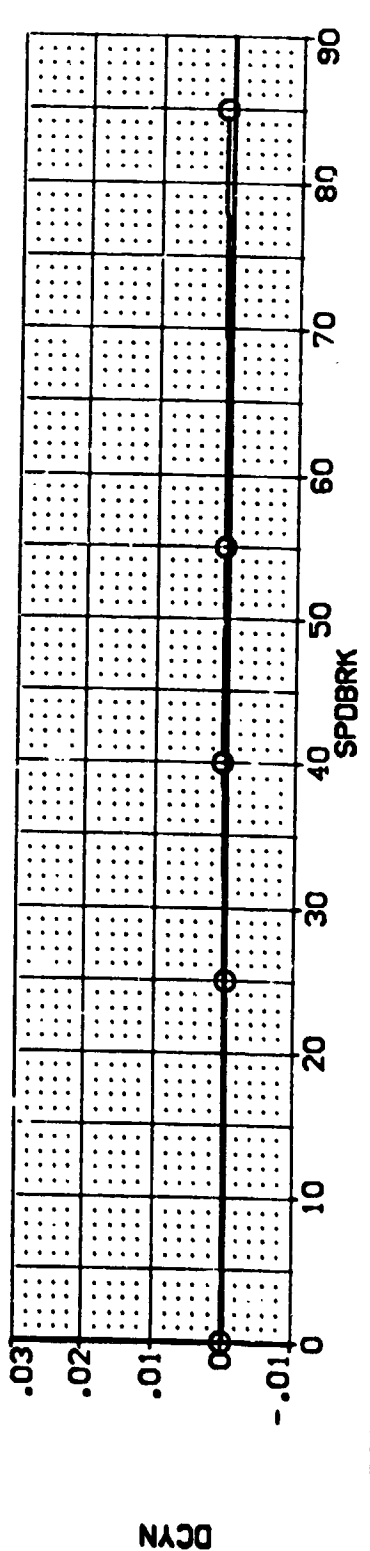
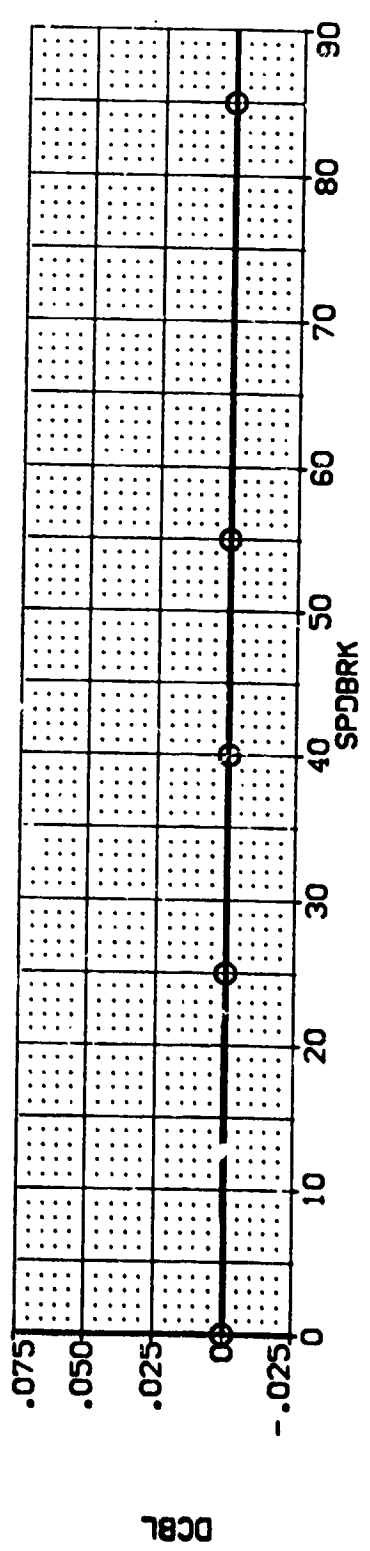
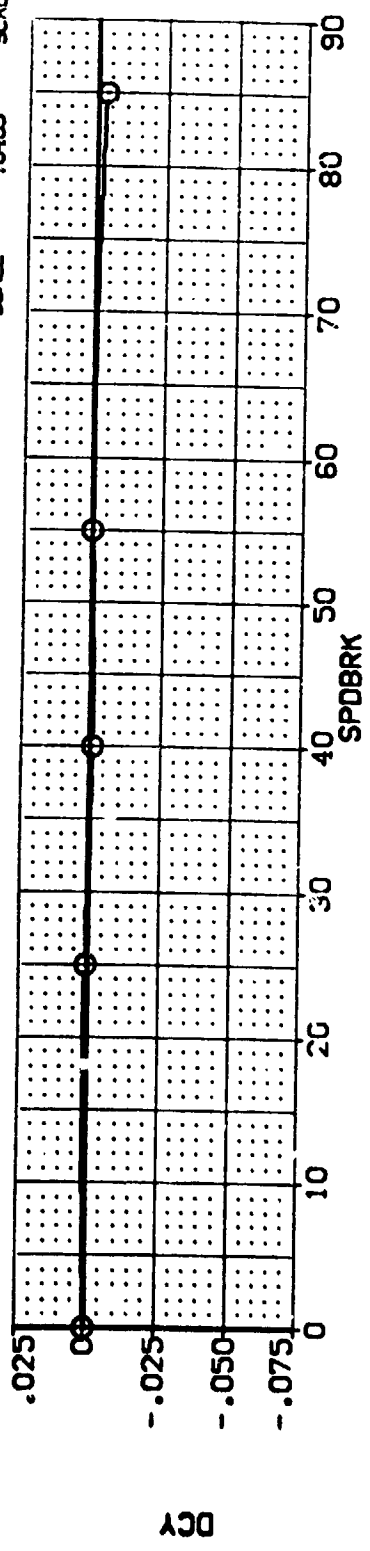


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(G0Z228)

G0628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	SPDBRK	DATA SET	SPDBRK	REF	REFERENCE INFORMATION
O	12.000	BDTFLAP	.200 DELVON	.000 DATASET	.000 SPDBRK	.000 G0Z228	25.000 LREF	4.4119 SQ.FT.	
		RUDDER	-12.000 ATURON	.000 G0Z138	40.000 SPDBRK	.000 G0Z336	55.000 XPRP	19.2288 INCHES	
		R-LRVD	.000 BETA	.000 G0Z144	85.000 SPDBRK			37.9359 INCHES	
			.000					43.5971 INCHES	
								.0000 INCHES	
								15.1873 INCHES	
								.0405 SCALE	

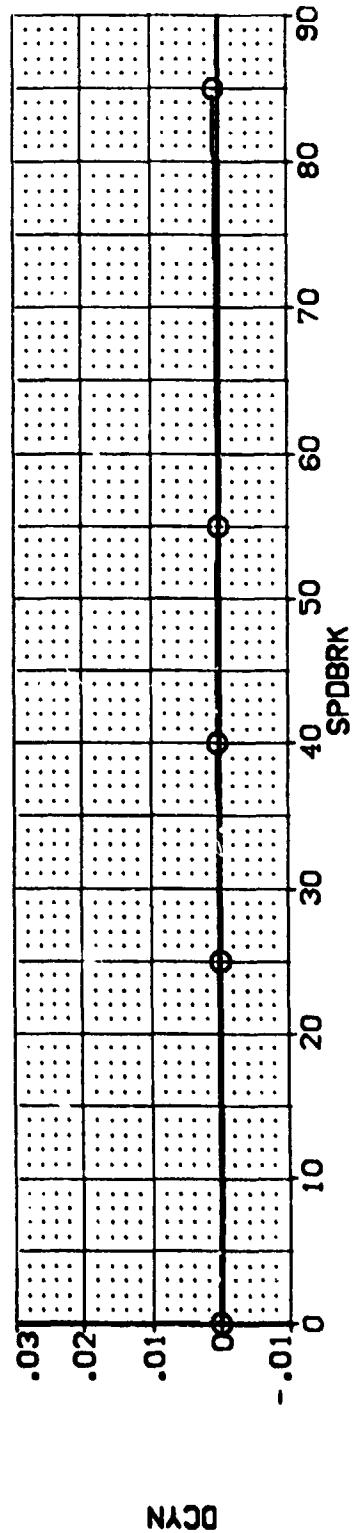
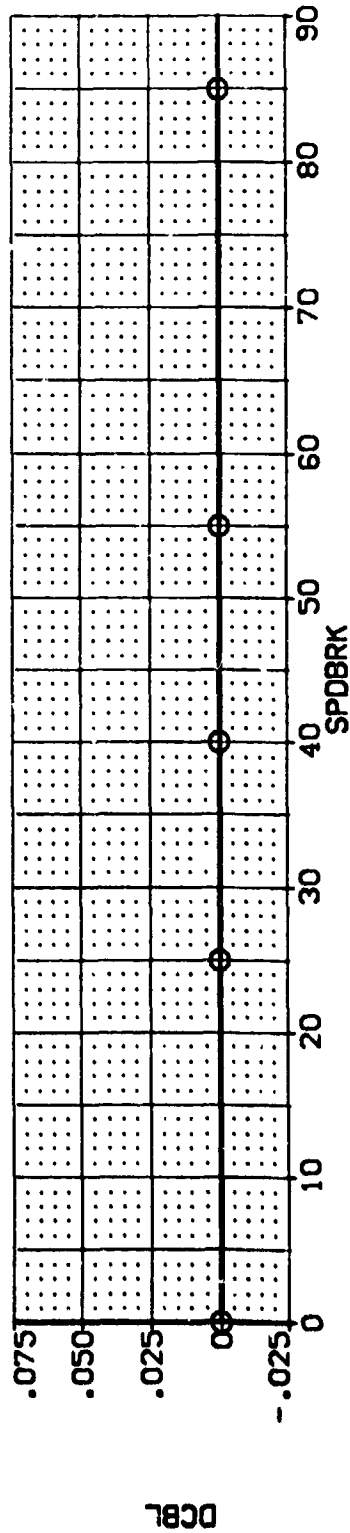
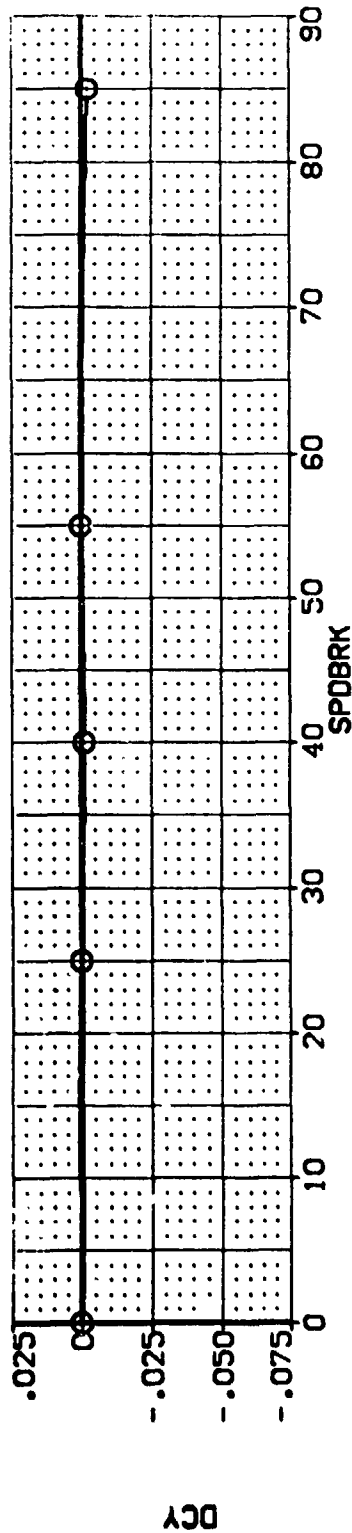


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



016:18 826C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION		
○	14.000		.200	DELVON	.000	DATASET	SPDRK	SREF	SQ.FT.
		BOFLAP	-12.000	AILRON	.000	G0Z152	25.000	LREF	19.2289
		RUDDER	.000	BETA	40.000	G0Z336	55.000	SREF	37.9359
		R-LRAD	.000		65.000			XTRP	43.5974
								ZTRP	.0000
								SCALE	15.1875
									INCHES
									SCALE

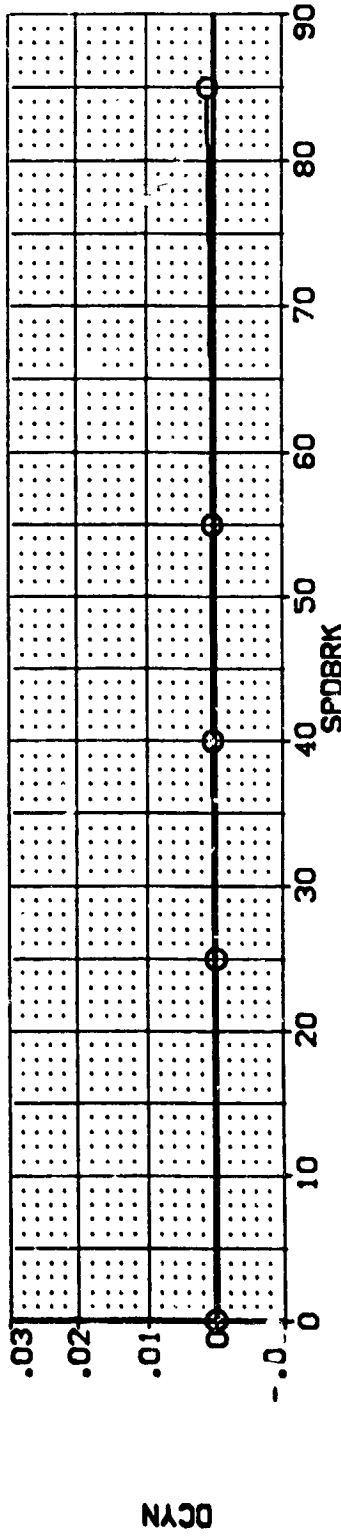
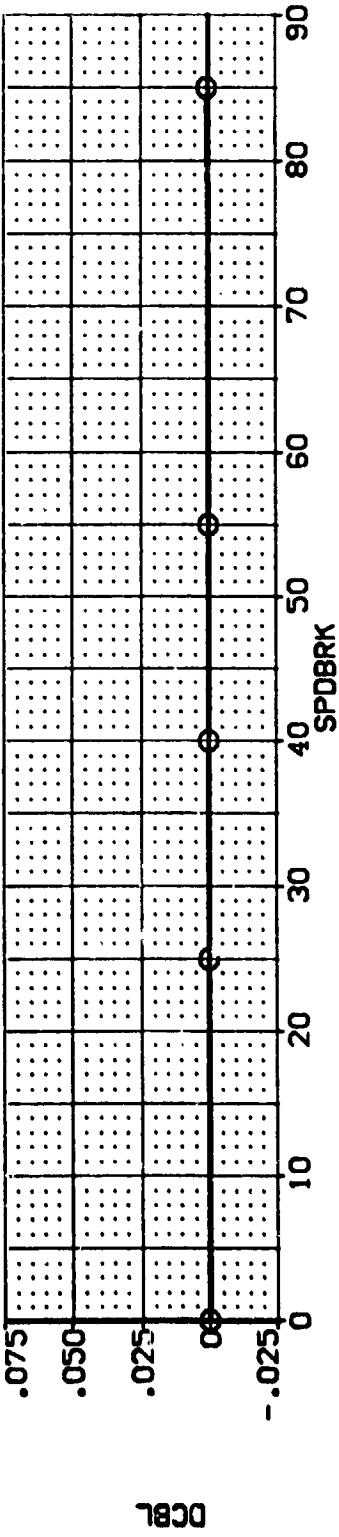
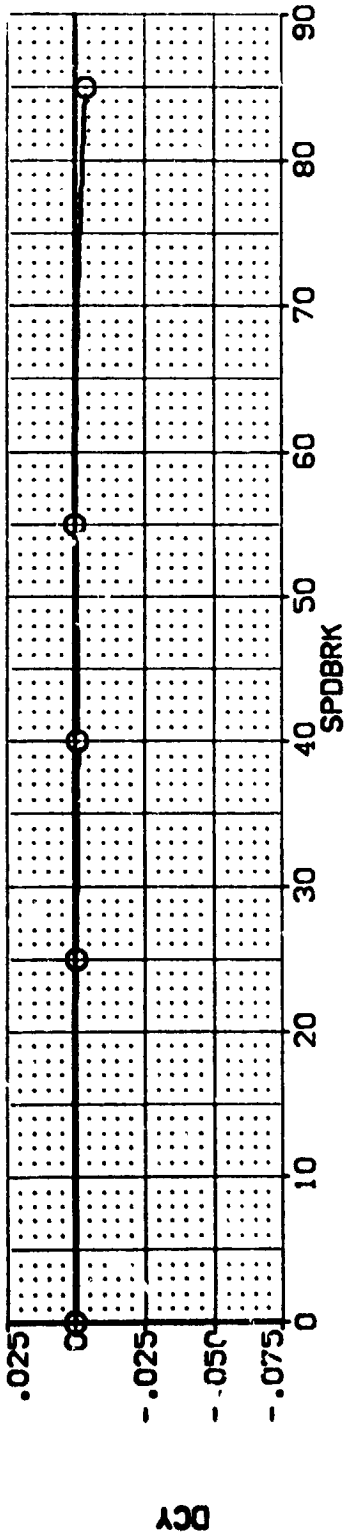


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A62B B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
O	15.000	BD-FLAP	.200	DELTA	.000	DATASET	SPDBRK	SREF	SOLE	4.4119	INCHES	
		RUDDER	-12.000	AILERON	.000	G0Z228	25.000	LREF	19.2259	INCHES		
		R-LRAD	.000	BETA	.000	G0Z138	40.000	BREF	37.9559	INCHES		
			.000		.000	G0Z144	65.000	XMRP	43.5574	INCHES		
			.000					ZMRP	.0000	INCHES		
								SCALE	15.1875	INCHES		
									.0405	SCALE		

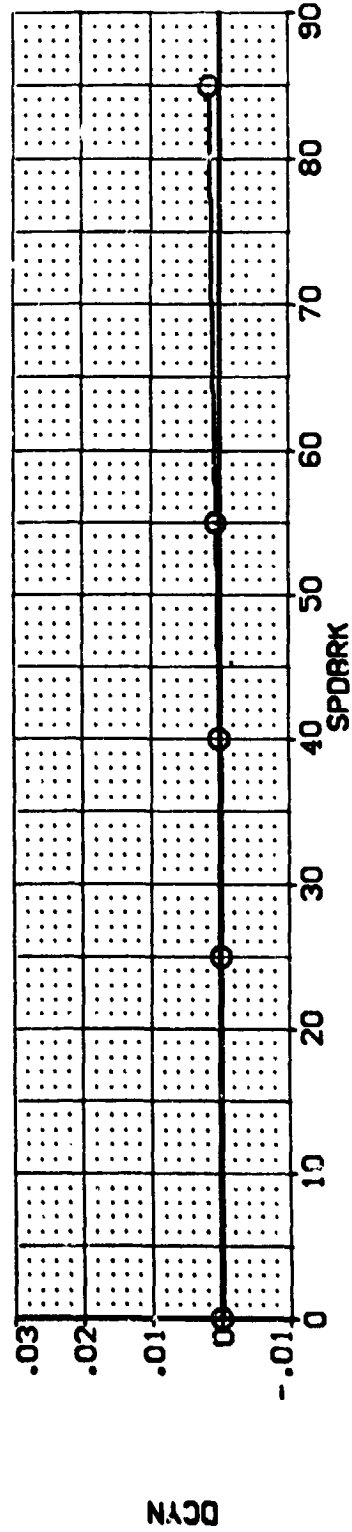
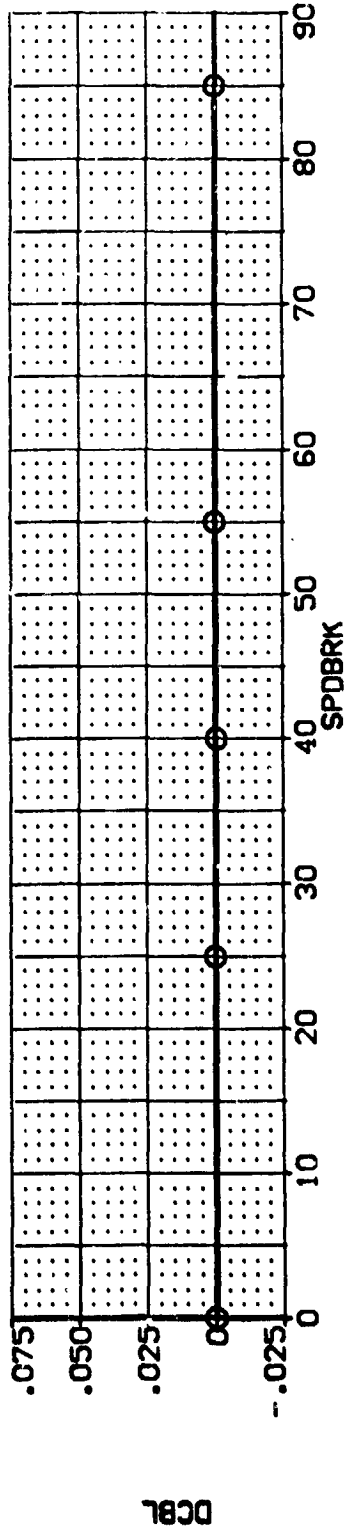
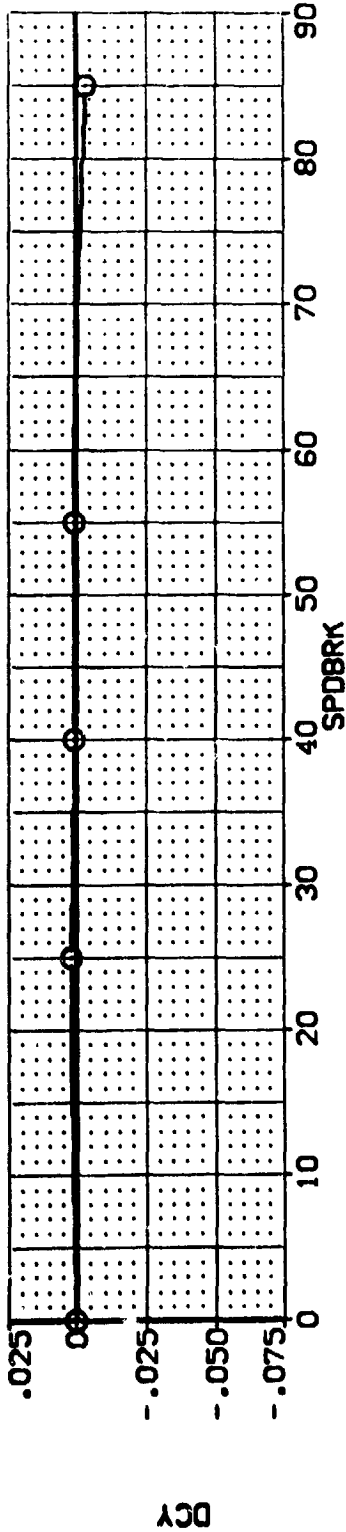


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	16.000	0.200	DELTA	.000	SPDBRK	G0Z152	REF	4.4119
		-12.000	AILRON	.000	SPDBRK	G0Z306	REF	19.2288
		.000	BETA	.000	SPDBRK		REF	37.9353
		.000		.000	SPDBRK		REF	43.5574
		.000		.000	SPDBRK		REF	.0000
		.000		.000	SPDBRK		REF	15.1875
		.000		.000	SPDBRK		REF	.0405

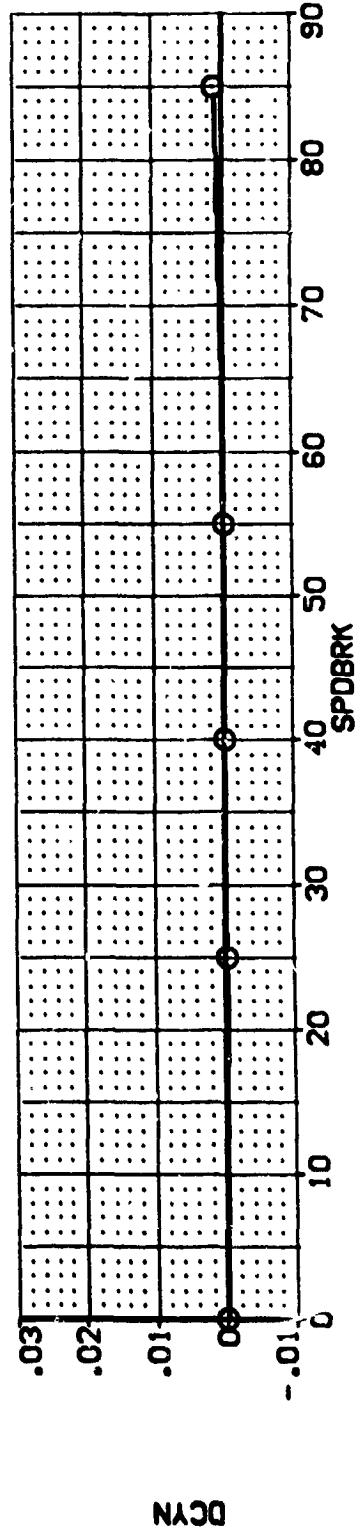
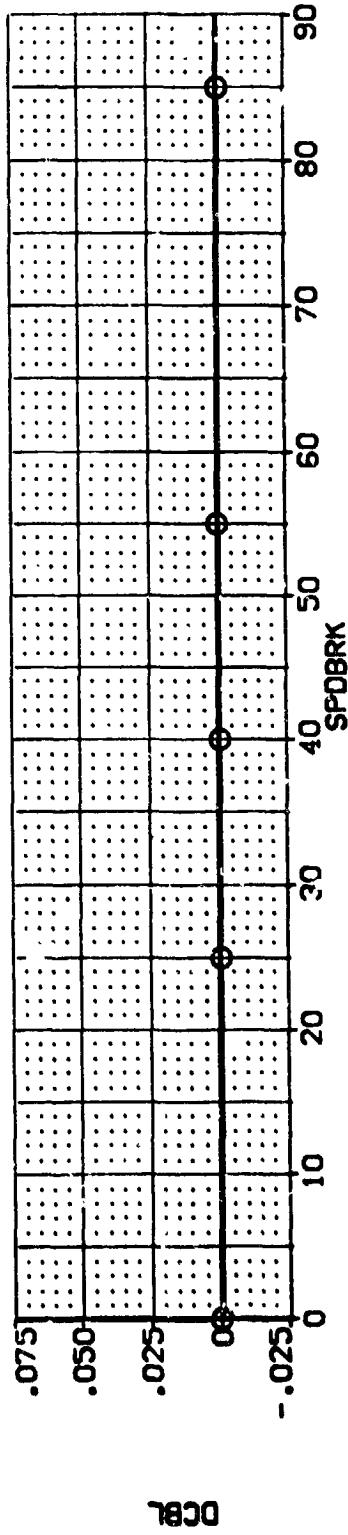
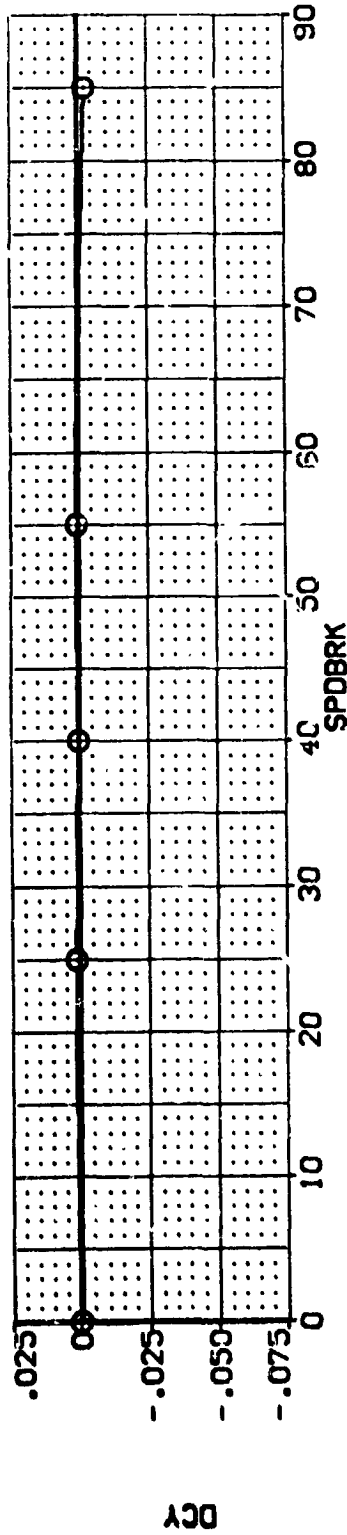


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

GA628 B26C9 17F8 W116E28V8R5X9 (G0Z228)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	20.000		.200	DELTA	.000	DATASET	SPDBRK	SREF	SC.FT.	1.4118	INCHES
		BDFLAP	-12.000	AIRLN	.000	G0Z228	25.000	LREF	19.2259	INCHES	
		RUDDER	.000	BETA	.000	G0Z138	55.000	XMRP	37.9359	INCHES	
		R-LRAD	.000		.000	G0Z144	65.000	YMRP	43.5974	INCHES	
								ZMRP	15.0000	INCHES	
								SCALE	15.1875	INCHES	
									.0405	SCALE	

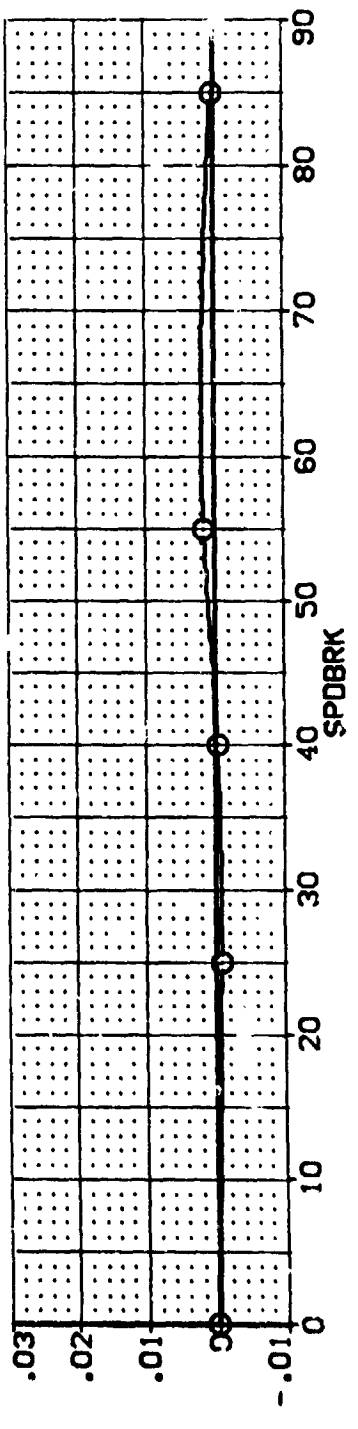
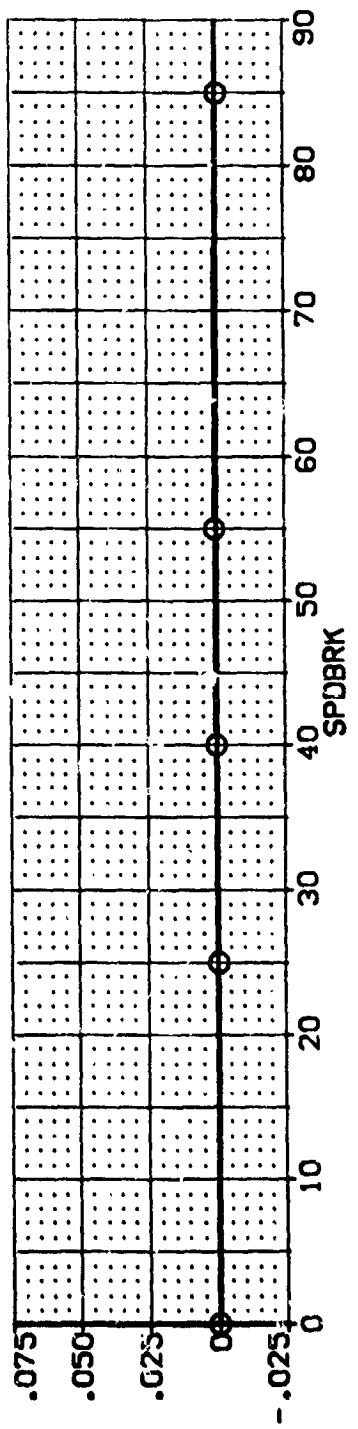
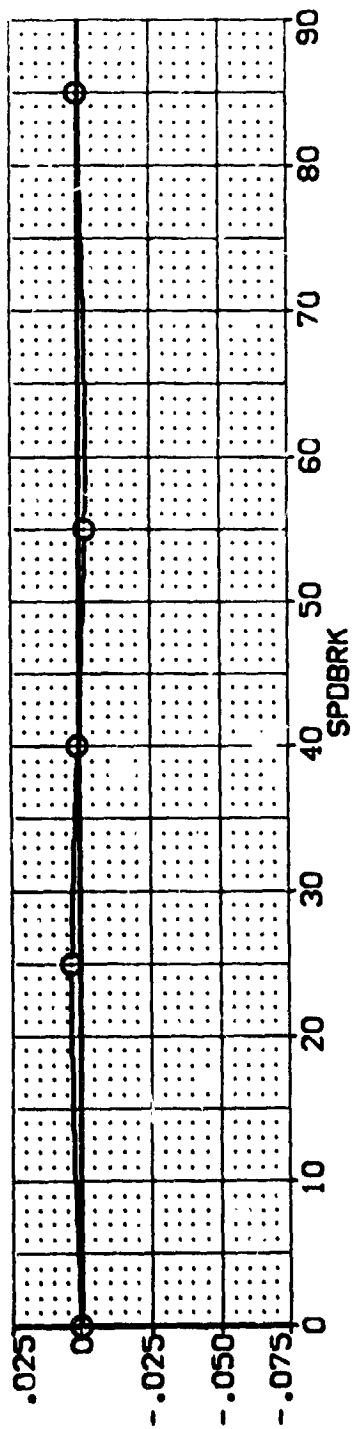


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



C-9

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBOL		ALPHA		MCH		BOFLAP		RUDDER		R-LRAD		PARAMETRIC VALUES		DATA SOURCE		DATASET		SPDBRK		REF		REFERENCE INFORMATION	
0		22.000										.000	.200	DELVON	.000	G0Z228	.000	G0Z228	25.000	4.118	90.FT.	4.118	90.FT.
												.000	-12.000	AILRON	030	G0Z152	40.000	55.000	25.000	19.2299	INCHES	19.2299	INCHES
												.000	.000	BETA	40.000	G0Z136	40.000	55.000	25.000	37.9359	INCHES	37.9359	INCHES
												.000	.000		85.000	G0Z144	85.000	55.000	25.000	43.5974	INCHES	43.5974	INCHES
												.000	.000						25.000	15.1875	INCHES	15.1875	INCHES
												.000	.000						25.000	.0405	SCALE	.0405	SCALE

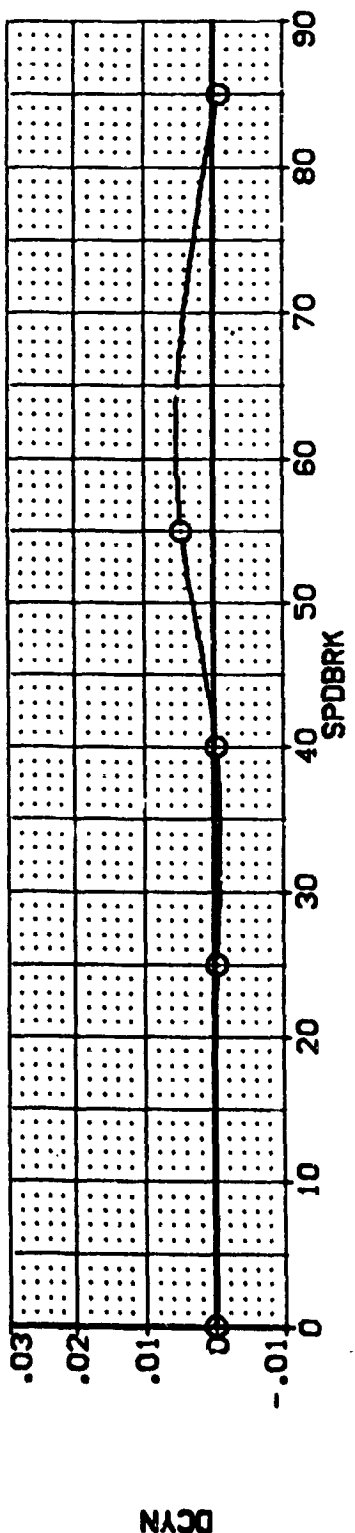
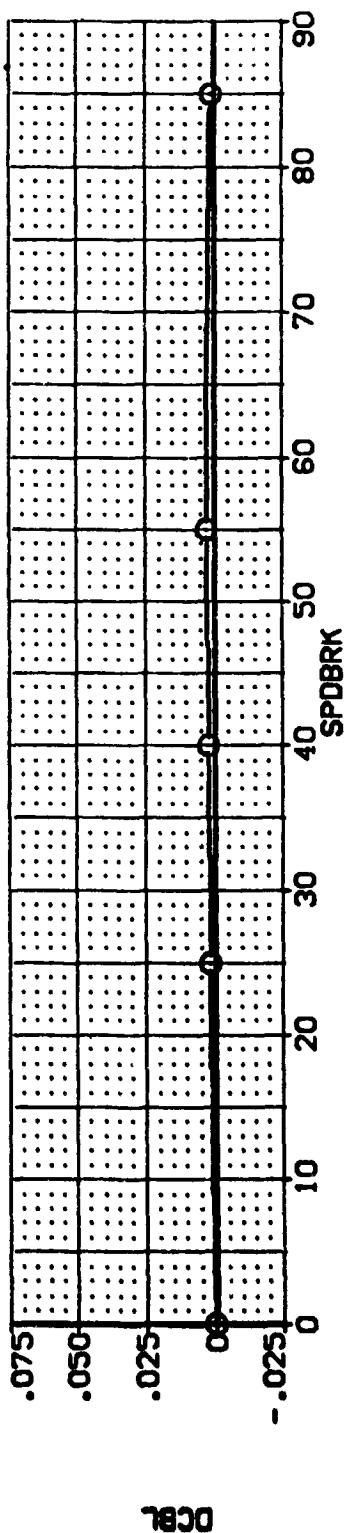
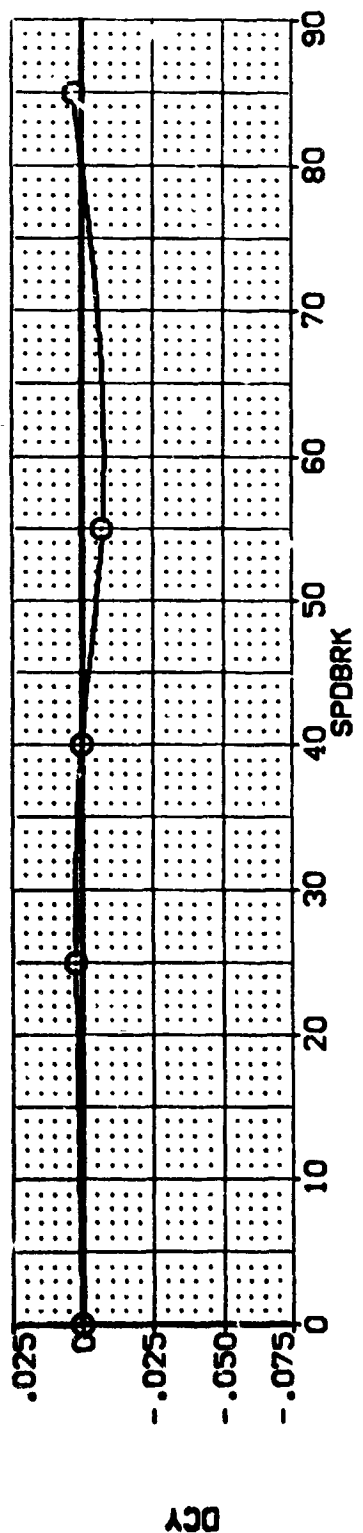


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

0A628 B26C9 M7F8 W116E28V8R5X9 (G0Z228)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
0	24.000	0.200	DELVON	.000	DATASET	SPDBRK	.000	G0Z228	SPDBRK	SREF	SO.FT.
		-12.000	AILRON	.000	G0Z228	40.000	.000	G0Z152	25.000	LREF	INCHES
		.000	BETA	.000	G0Z138	65.000	.000	G0Z306	55.000	XREF	INCHES
		.000	R-LRAD	.000	G0Z144					YREF	INCHES
										ZREF	INCHES
										SCALE	SCALE

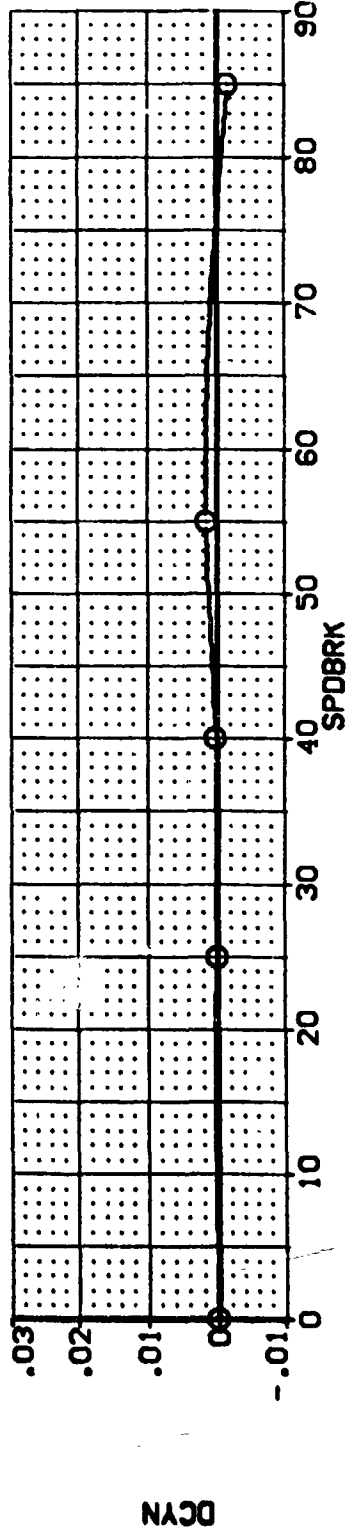
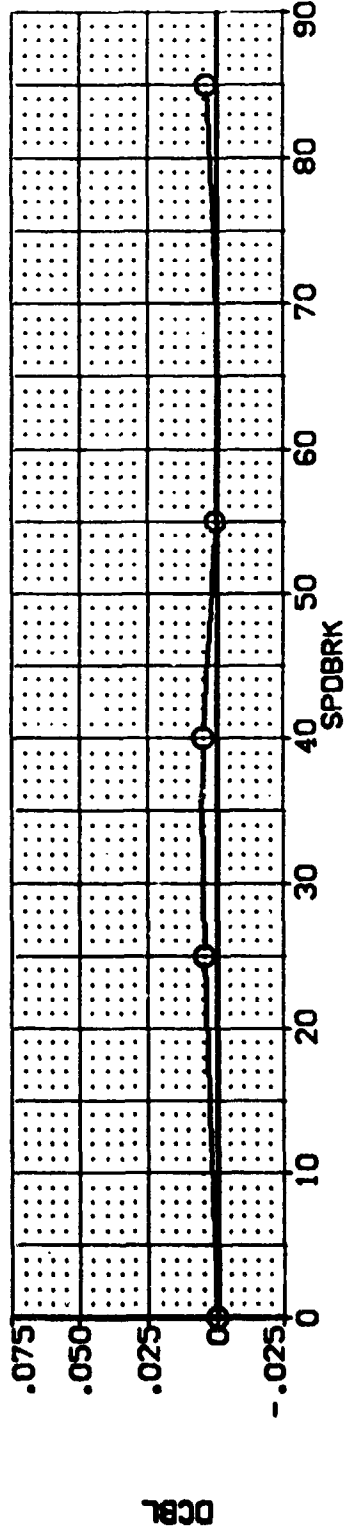
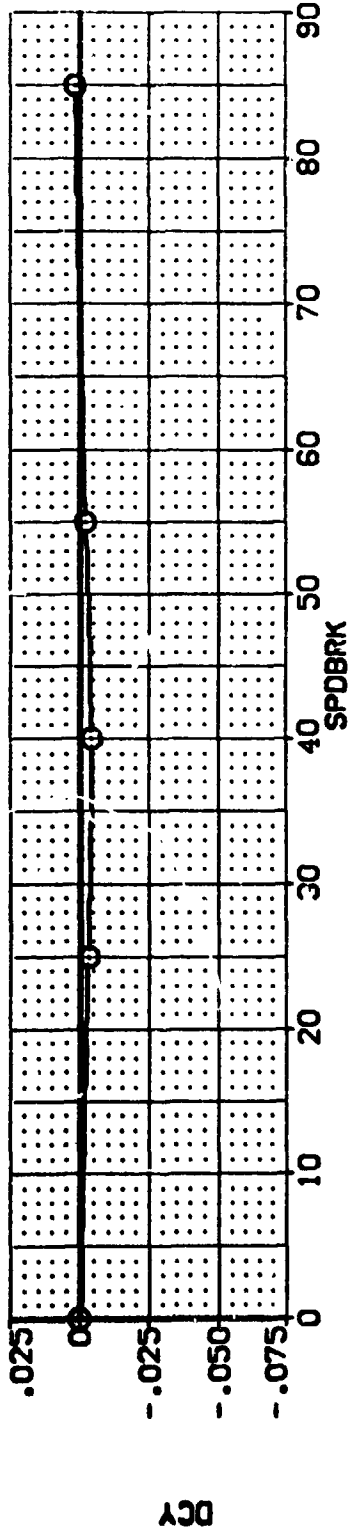


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0



(G0Z228)

0A628 B26C9 M7F8 W116E28V8RSX9

SYMBOL	ALPHA	WACH	EDFLAP	RUDDER	R-URNO	PARAMETRIC VALUES	DATA SOURCE	DATASET	SPOBRK	DATA SOURCE	DATASET	SPOBRK	REF	REF	REF	REF	REF	REF	REF	
O	26.000					.200 DELVEN -12.000 AILRON .000 BETA .000	.000 G0Z228 .000 G0Z138 .000 G0Z144	25.000 40.000 65.000		50.000 75.000 95.000	G0Z152 G0Z336	25.000 55.000	4.4119 SQ.FT. 19.2263 INCHES 37.5359 INCHES 43.5974 INCHES 15.1875 INCHES .0405 SCALE							

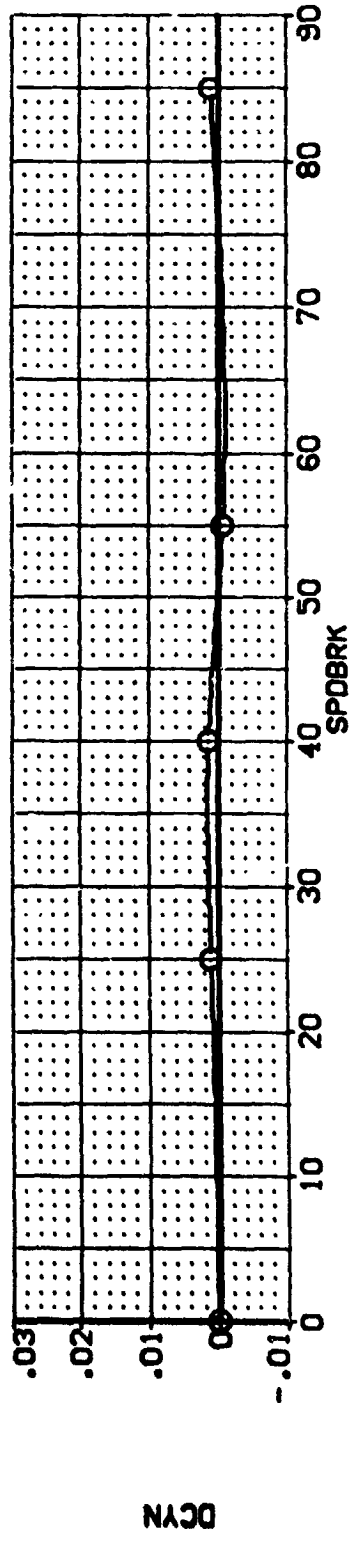
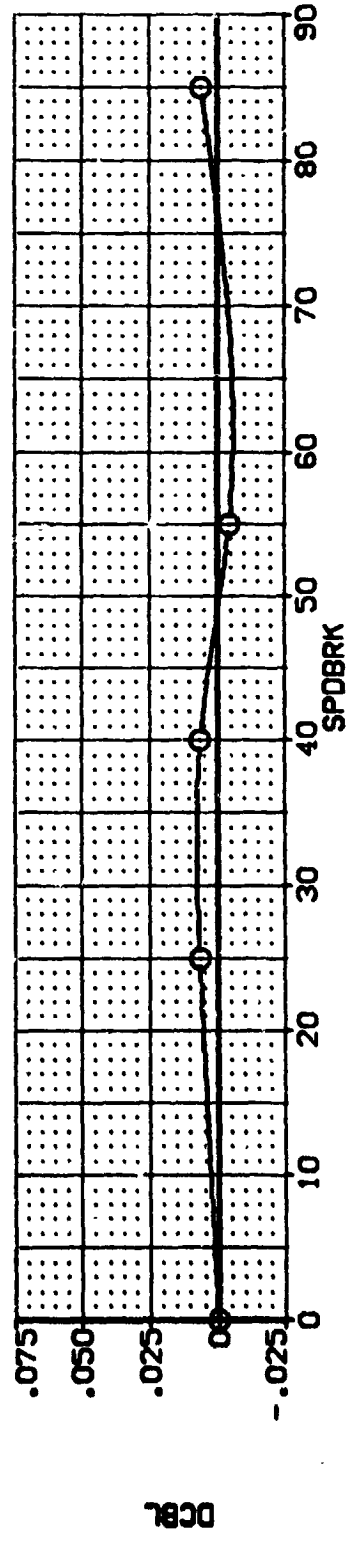
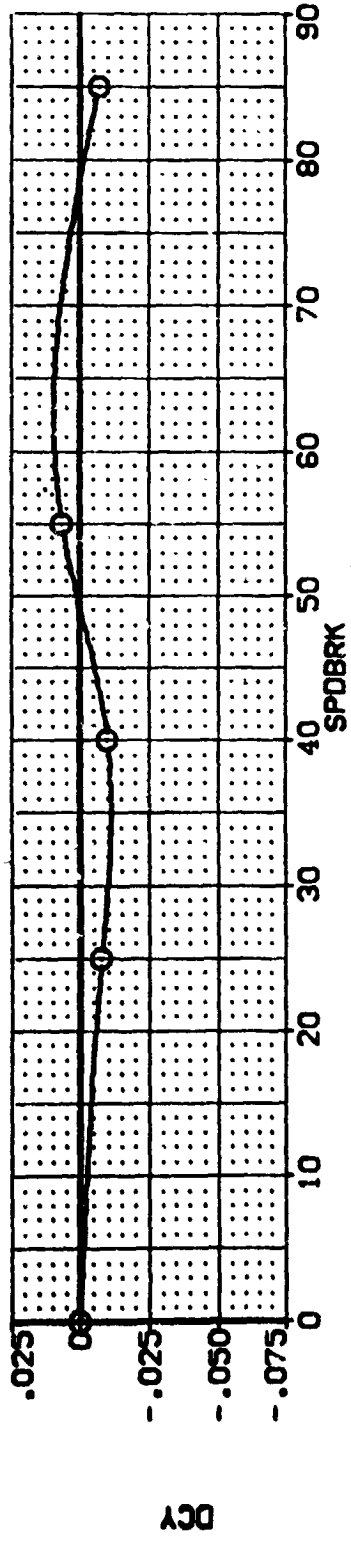


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ228)

W116E28V8R5X9

M7F8

B26C9

BAS28

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	20.000		.000	DELTA	SPDRK	SPDRK	REF	90.FT.
			.000	DELTA	SPDRK	SPDRK	LINE	INCHES
			-12.000	AIRFOIL	00Z152	25.000	REF	INCHES
			.000	BETA	00Z336	55.000	YREF	INCHES
			.000				XREF	INCHES
			.000				ZREF	INCHES
							ZMP	INCHES
							ZMP	SCALE
								.0405

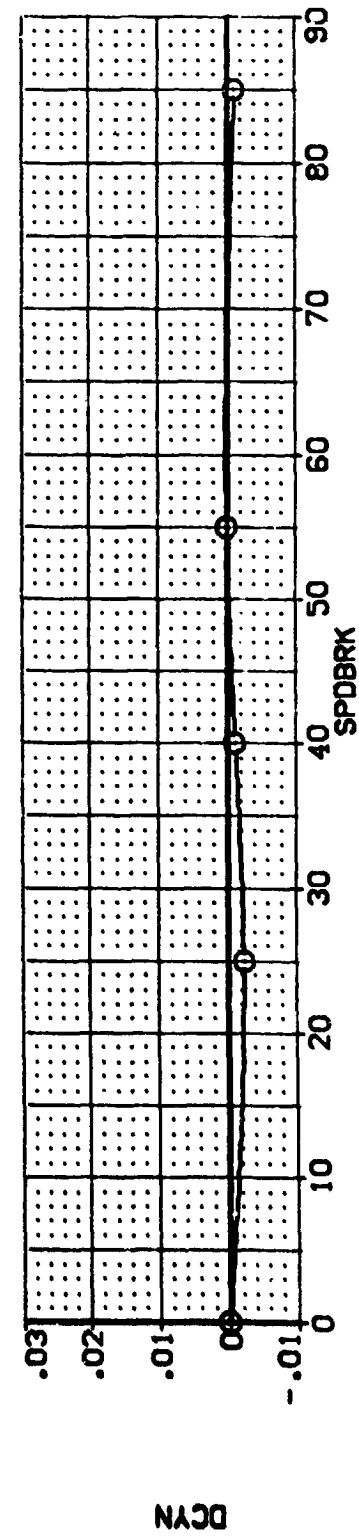
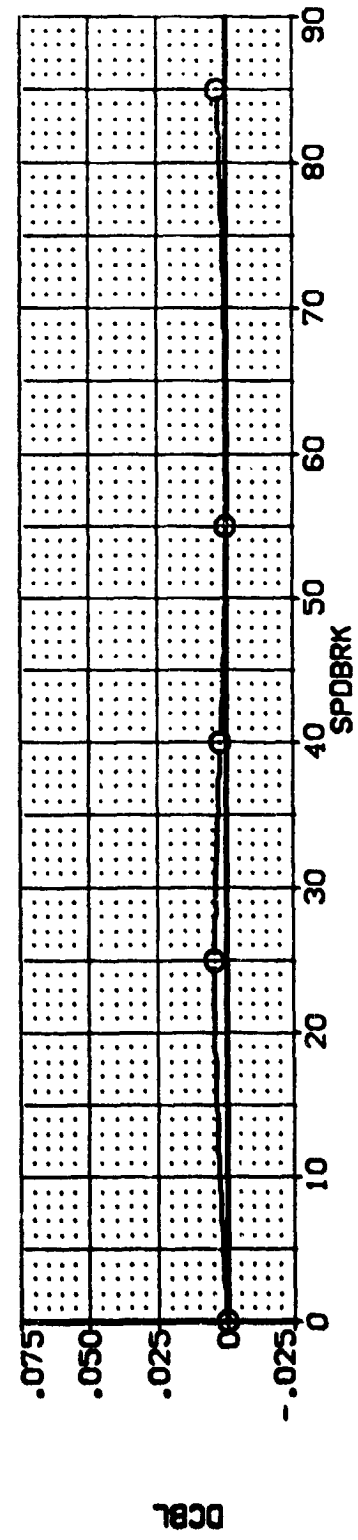
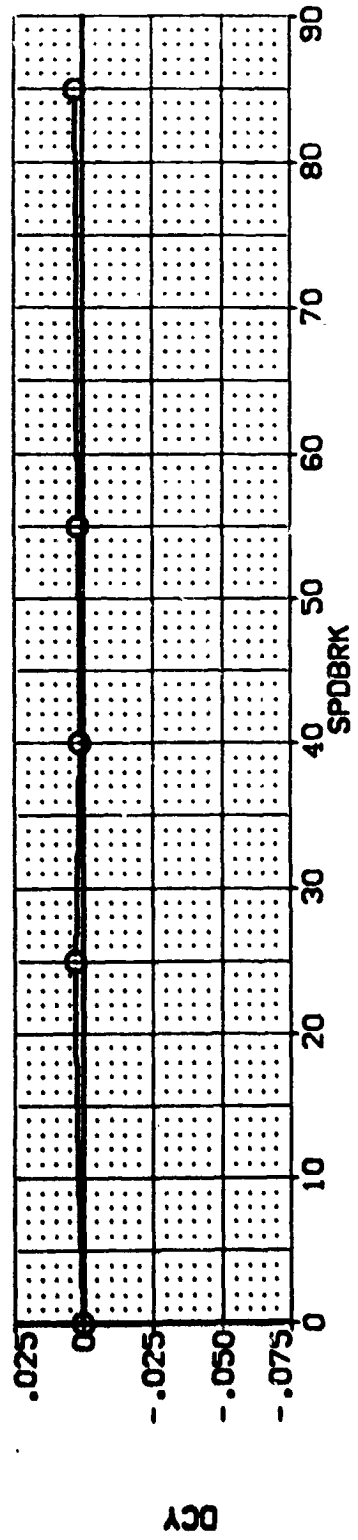


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

(GDZ228)

0A628 B26C9 M7F8 W116E28V8R5X9

SMER.	ALPHA	MACI	MACI	DELVEN	.000	DATASET	SPDBRK	DATASET	SPDBRK	REF	50 FT.
0	20.000	W0FLAP	-12.000	AILVEN	.000	GDZ228	25.000	GDZ152	25.000	LREF	INCHES
		RUDER	.000	BETA	.000	GDZ138	40.000	GDZ336	55.000	XREF	INCHES
		R-LENG	.000			GDZ144	85.000			YREF	INCHES
										ZREF	INCHES
										SCALE	SCALE

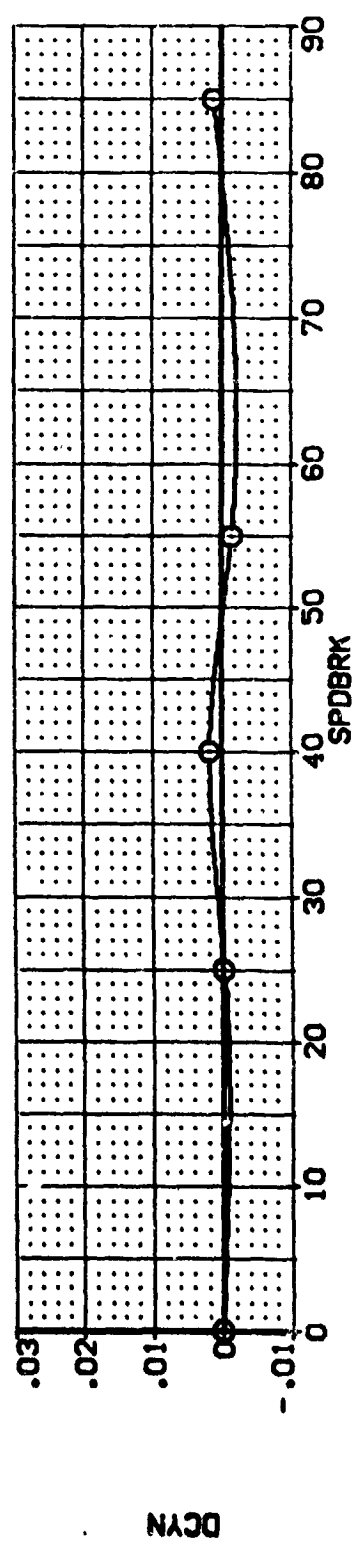
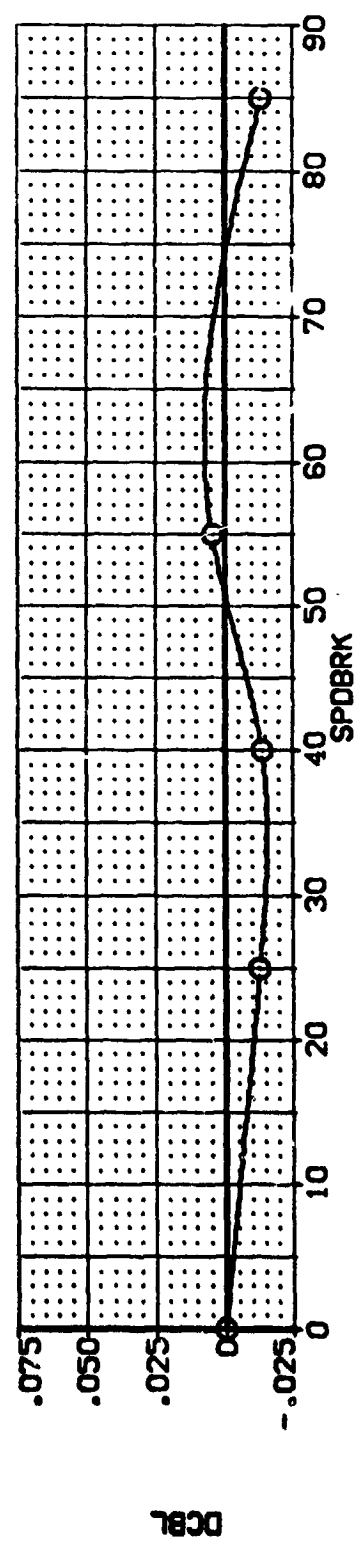
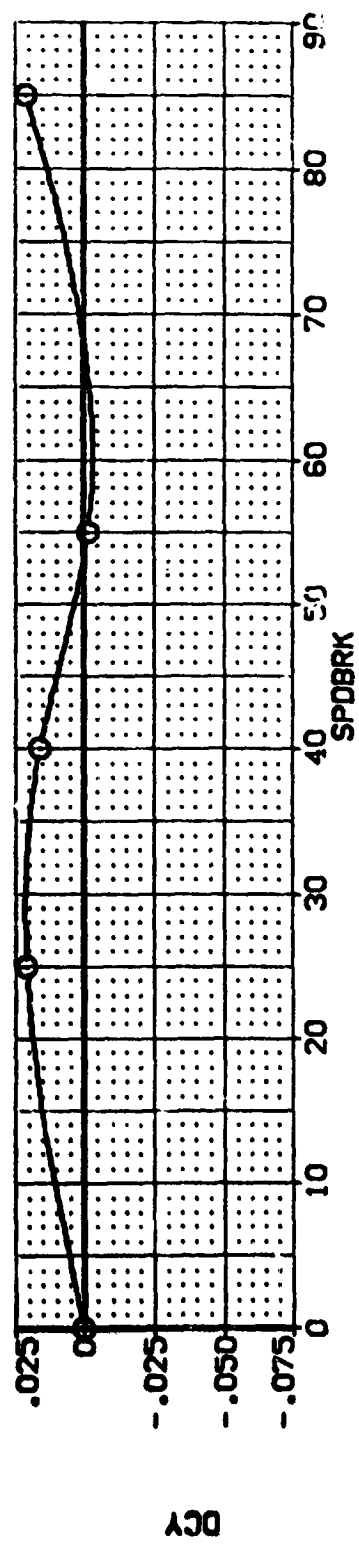


FIG 53 EFFECT OF VERTICAL TAIL FLARE ANGLE, RUDDER = 0, BETA = 0

DATA SET ORIG.	CONFIGURATION DESCRIPTION	INFT	ELEVON	EDFLAP	SPORK	REFERENCE INFORMATION
{80Z151}	0ACCB 8ACCB M7FB VII 6Z2AV8C99	.500	.000	-.12.000	25.000	4.4118 SQ.FT.
{80Z152}	0ACCB 8ACCB M7FB VII 6Z2AV8C99	.100	.000	-.12.000	25.000	19.2289 INCHES
{80Z153}	0ACCB 8ACCB M7FB VII 6Z2AV8C99	.100	.000	-.12.000	22.000	37.5359 INCHES
{80Z154}	0ACCB 8ACCB M7FB VII 6Z2AV8C99	.100	.000	-.12.000	25.000	43.5974 INCHES
{80Z155}	0ACCB 8ACCB M7FB VII 6Z2AV8C99	.100	.000	-.12.000	25.000	15.1873 INCHES
						.0405 SCALE

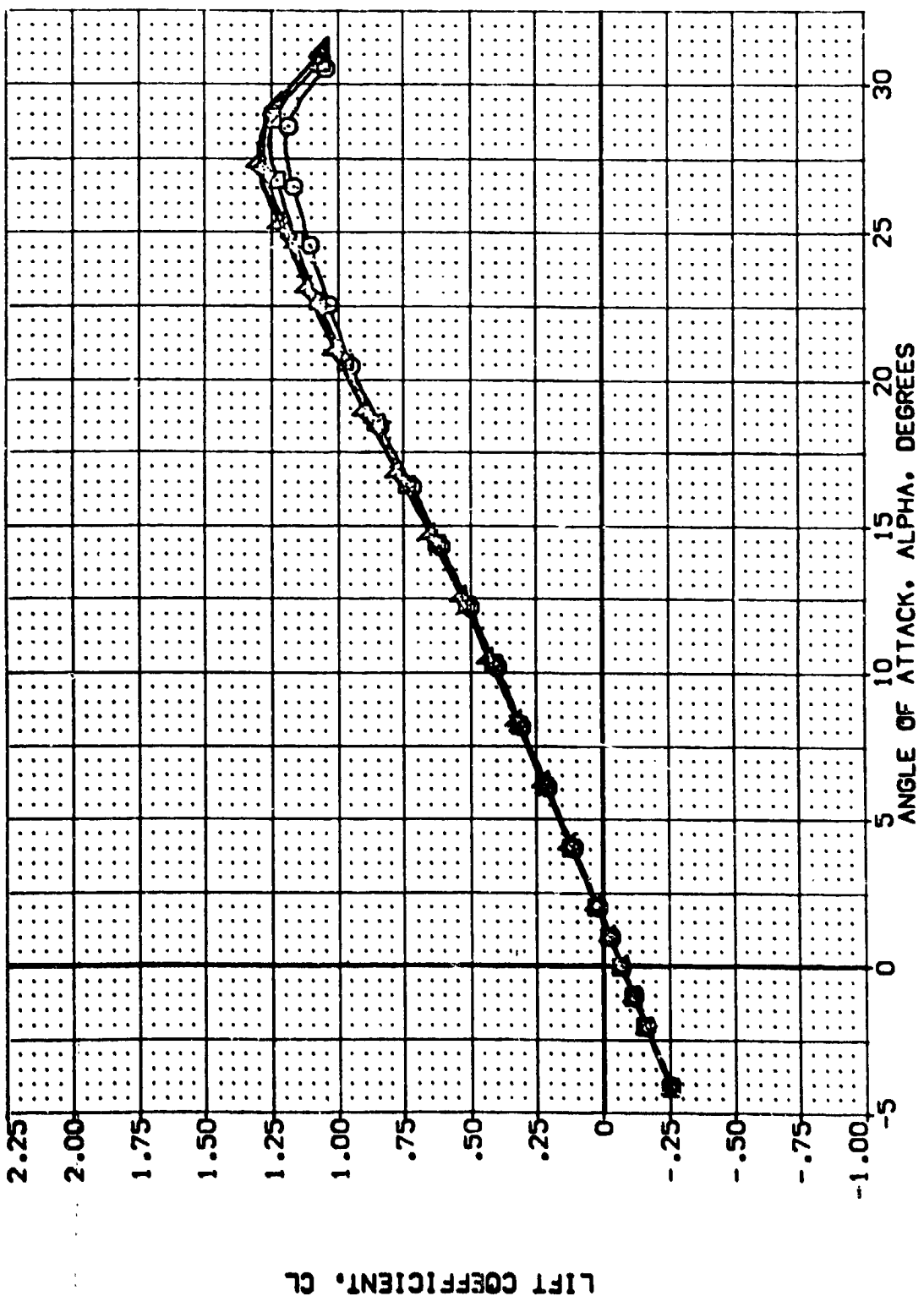


FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0.25 FLARE  
 (A)MACH = .12

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RMFT	ELEVON	EDFLAP	SPORX	REFERENCE INFORMATION
{ 80Z154 }	M7F8 VII 8Z20V803	.000	.000	-12.000	29.000	4.4119 90. FT.
{ 80Z150 }	M7F8 VII 8Z20V803	1.160	.000	-12.000	29.000	19.2299 INO-ES
{ 80Z151 }	M7F8 VII 8Z20V803	1.430	.000	-12.000	29.000	37.9359 INO-ES
{ 80Z151 }	M7F8 VII 8Z20V803	1.650	.000	-12.000	29.000	43.5974 INO-ES
{ 80Z150 }	M7F8 VII 8Z20V803	1.850	.000	-12.000	29.000	15.1873 INO-ES
					ZMP	.0405 SCALE

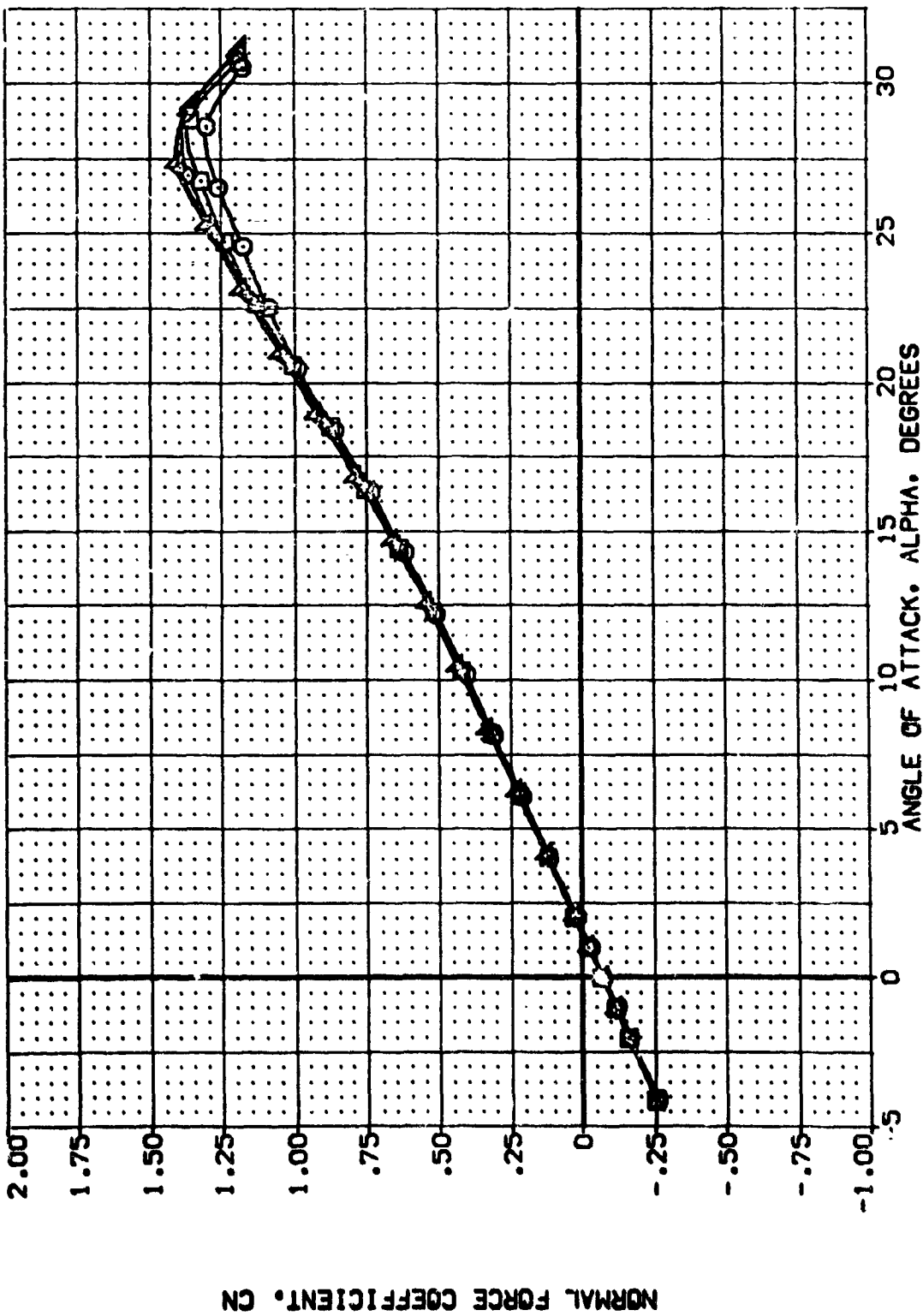


FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0. 25 FLARE  
 (M)MACH = .12 PAGE 681

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	RVUFT	ELEVON	BD/LAP	SPDRBK	REFERENCE INFORMATION
{ B0Z154 }	0A6Z8 B06C9 M7F8 V116E28V8R5X9	.820	.000	-12.000	25.000	SREF 4.4119 SQ. FT.
{ B0Z153 }	0A6Z8 B06C9 M7F8 V116E28V8R5X9	1.180	.000	-12.000	25.000	LREF 19.2299 INCHES
{ B0Z152 }	0A6Z8 B06C9 M7F8 V116E28V8R5X9	1.420	.000	-12.000	25.000	BREF 37.5369 INCHES
{ B0Z151 }	0A6Z8 B06C9 M7F8 V116E28V8R5X9	1.650	.000	-12.000	25.000	XPRP 43.5974 INCHES
{ B0Z150 }	0A6Z8 B06C9 M7F8 V116E28V8R5X9	1.650	.000	-12.000	25.000	ZPRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

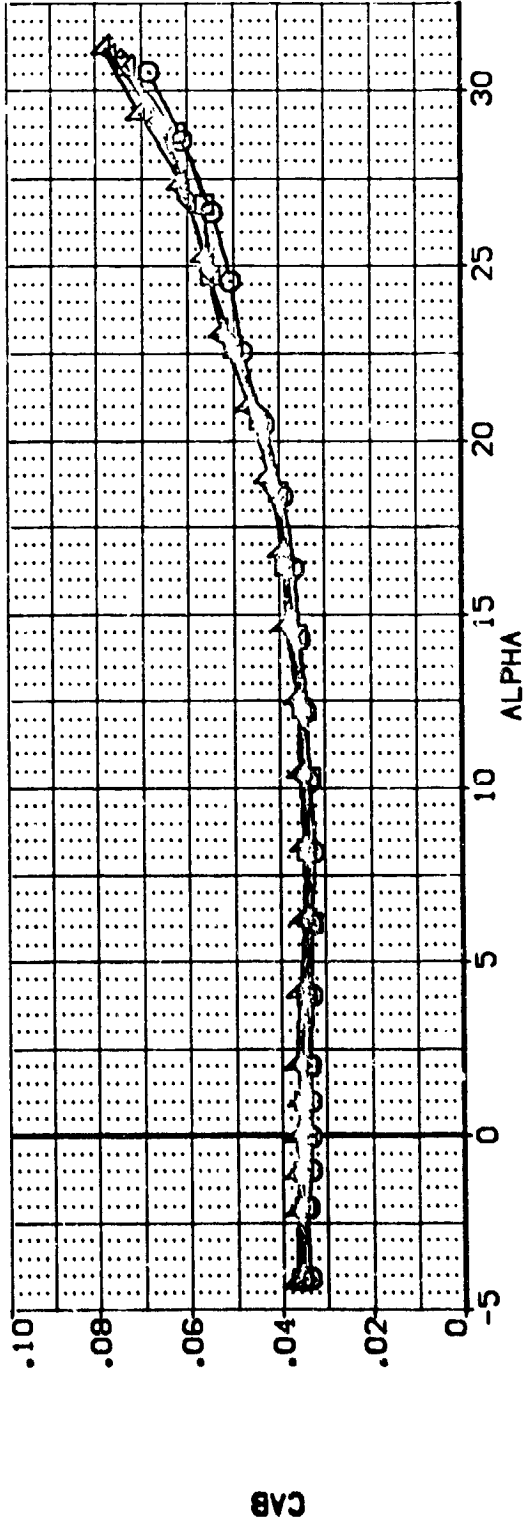
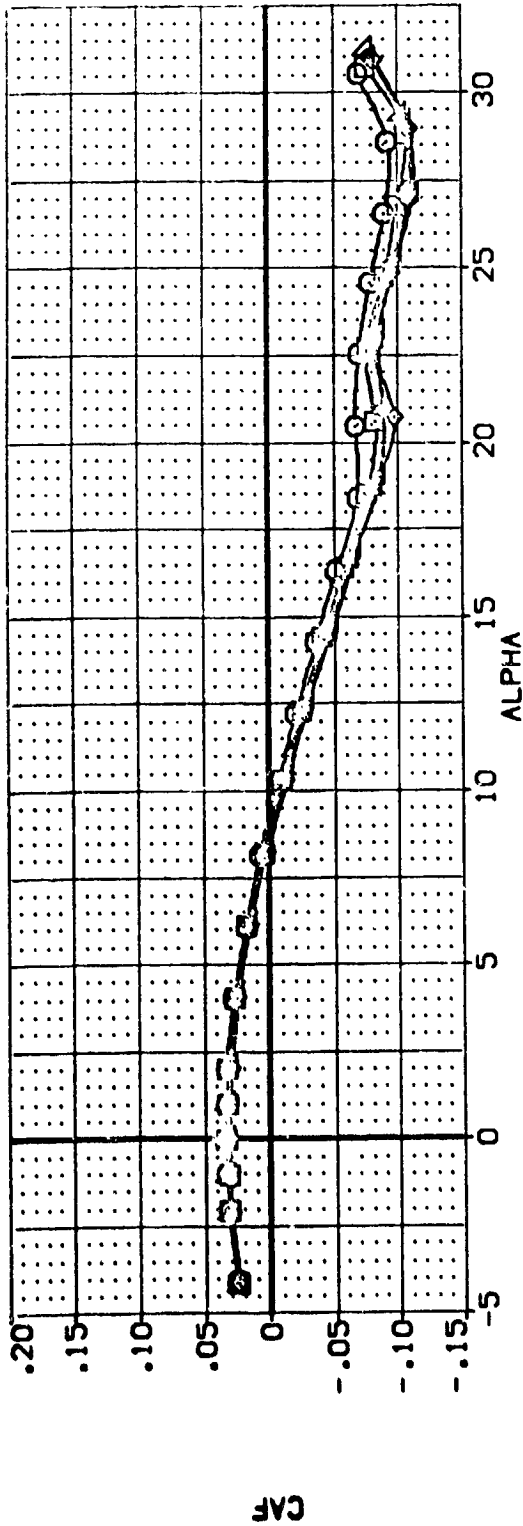
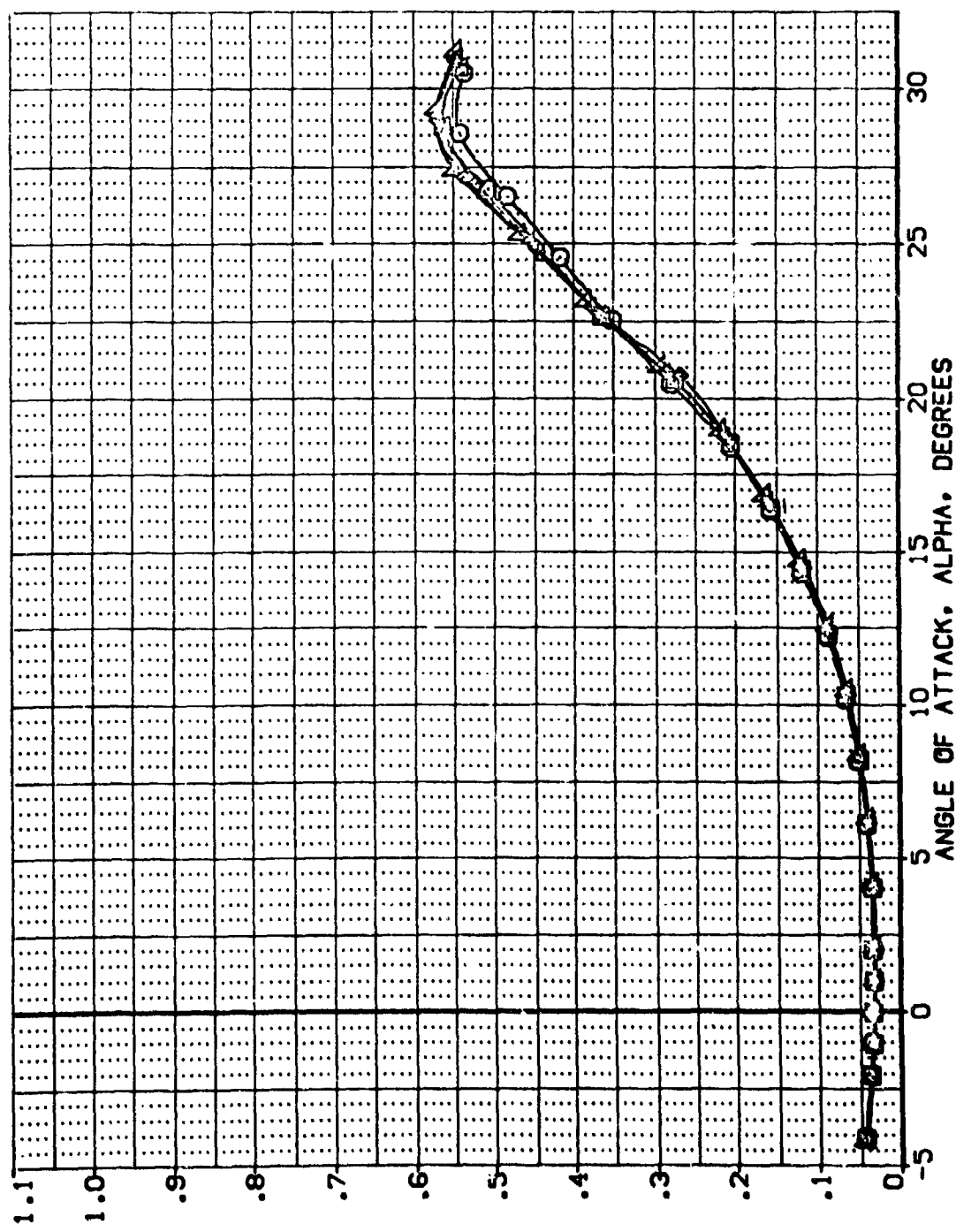


FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FLARE  
 CAJMACH = .12





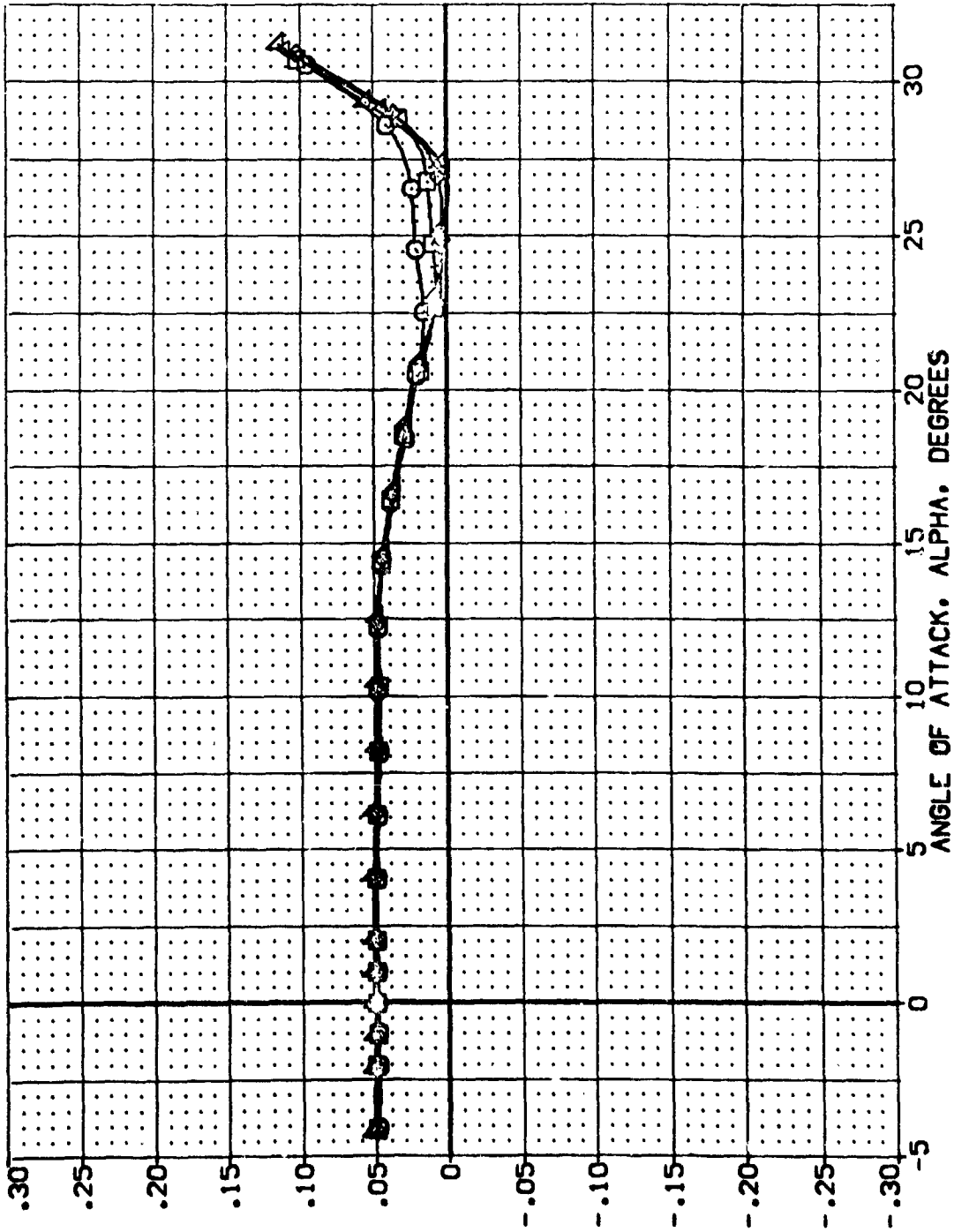
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RM/FT	ELEVON	EDFLAP	SPOBRK	REFERENCE INFORMATION
(B0Z154)	B05C9 M7F8 V116E28V8F5X9	.830	.000	-12.000	25.000	4.4119 SQ.FT.
(B0Z153)	B05C9 M7F8 V116E28V8F5X9	1.168	.000	-12.000	25.000	19.7259 INC-ES
(B0Z152)	B05C9 M7F8 V116E28V8F5X9	1.420	.000	-12.000	25.000	37.9359 INC-ES
(B0Z151)	B05C9 M7F8 V116E28V8F5X9	1.650	.000	-12.000	25.000	43.5974 INC-ES
(B0Z150)	B05C9 M7F8 V116E28V8F5X9	1.850	.000	-12.000	25.000	.0000 INC-ES
						15.1875 INC-ES
						.0405 SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FLARE  
 CAJMACH = .12 PAGE 683

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	RV/FT	ELEVON	BD/LAP	SP/GRK	REFERENCE INFORMATION
(80Z154)	0A528 B26C3 M7F8 V116E28V8F5X9	.800	.000	-12.000	25.000	SREF 4.4119 SO.FT.
(80Z153)	0A528 B26C3 M7F8 V116E28V8F5X9	1.160	.000	-12.000	25.000	LREF 19.2299 INCHES
(80Z152)	0A528 B26C3 M7F8 V116E28V8F5X9	1.470	.000	-12.000	25.000	BREF 37.9759 INCHES
(80Z151)	0A528 B26C3 M7F8 V116E28V8F5X9	1.650	.000	-12.000	25.000	XTRP 43.9574 INCHES
(80Z150)	0A528 B26C3 M7F8 V116E28V8F5X9	1.650	.000	-12.000	25.000	TRRP 15.0000 INCHES
						SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FLARE

(A)MACH = .12

DATA SET SYMBL	CONFIGURATION DESCRIPTION	RVFT	ELEVON	BDLAP	SPOBRK	REFERENCE INFORMATION
(BDZ154)	M7F8 V116Z28V8G09	.000	.000	-12.000	25.000	4.4119 SO.FT.
(BDZ153)	M7F8 V116Z28V8G09	1.180	.000	-12.000	25.000	19.2299 INCHES
(BDZ152)	M7F8 V116Z28V8G09	1.420	.000	-12.000	25.000	37.9359 INCHES
(BDZ151)	M7F8 V116Z28V8G09	1.650	.000	-12.000	25.000	43.5974 INCHES
(BDZ150)	M7F8 V116Z28V8G09	1.650	.000	-12.000	25.000	15.1875 INCHES
						.0405 SCALE

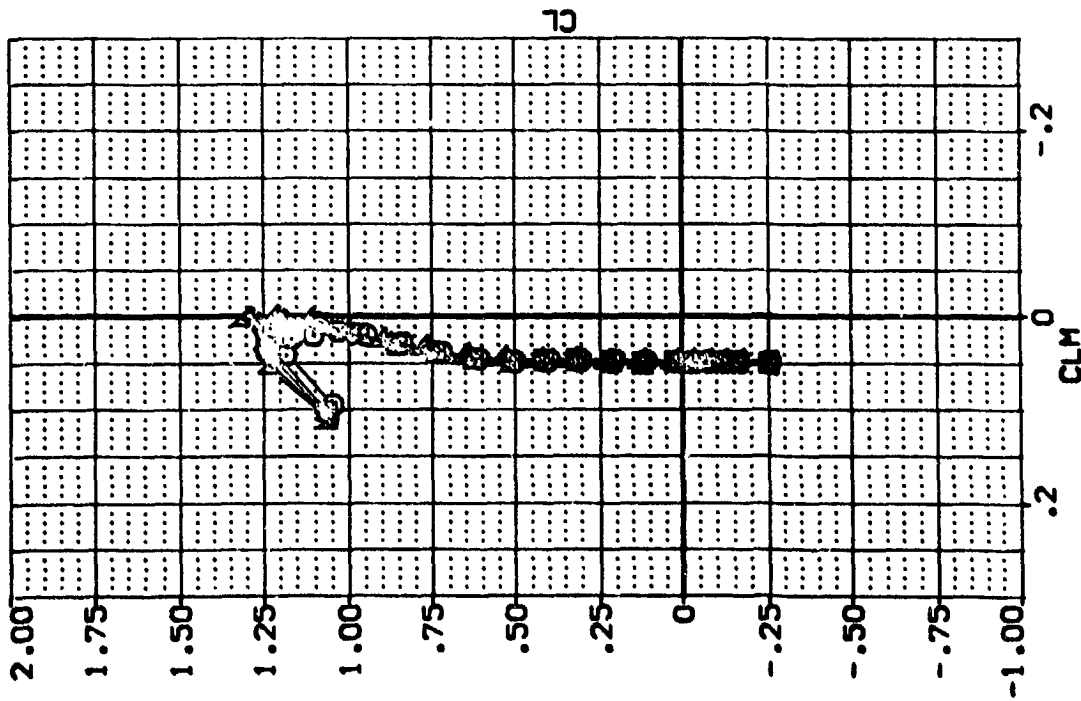
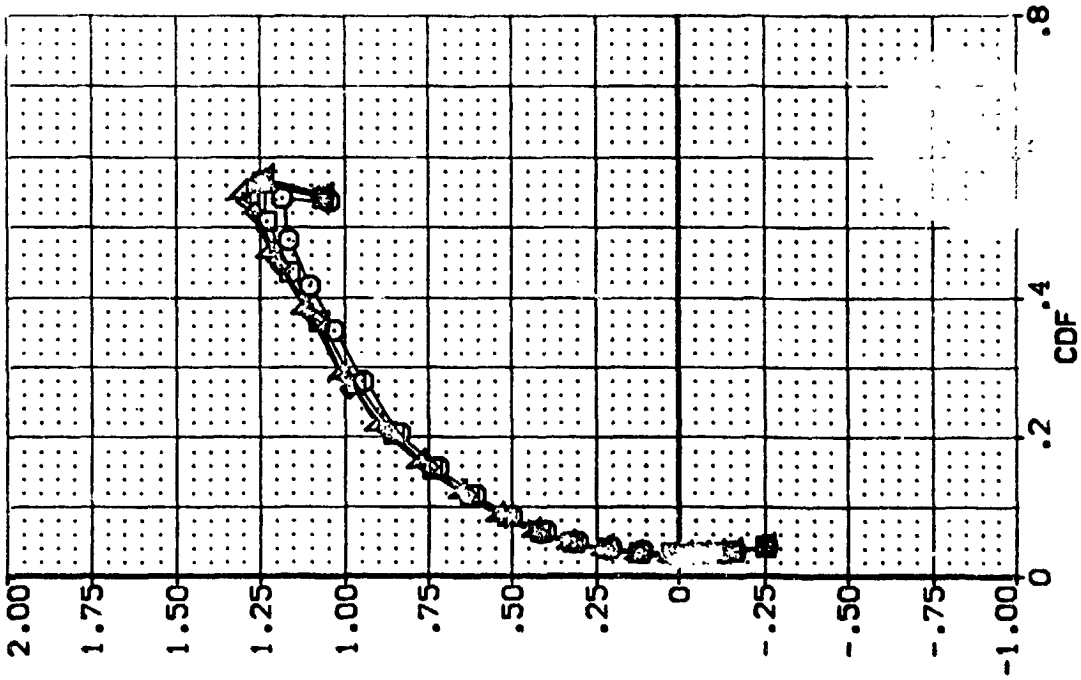


FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FLARE  
 (A) MACH = .12

DATA SET SYMBL CONFIGURATION DESCRIPTION

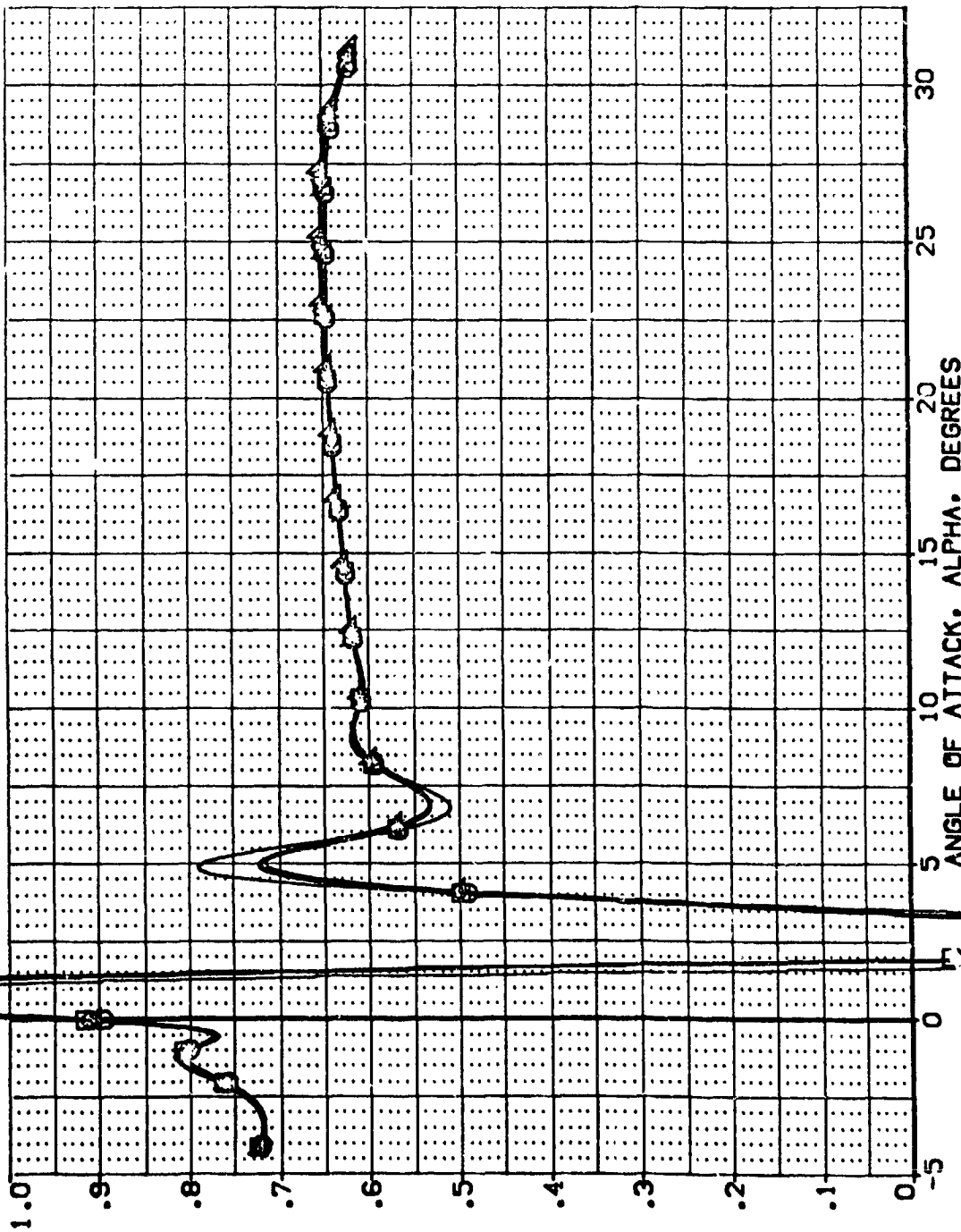
{BDZ154}	0A6Z8	8Z8C3	M78	V116Z28V83K3
{BDZ153}	0A6Z8	8Z8C3	M78	V116Z28V83K3
{BDZ152}	0A6Z8	8Z8C3	M78	V116Z28V83K3
{BDZ151}	0A6Z8	8Z8C3	M78	V116Z28V83K3
{BDZ150}	0A6Z8	8Z8C3	M78	V116Z28V83K3

RVFT ELEVON BOFLAP SPOBRK

.800	.000	-12.000	25.000
1.180	.000	-12.000	25.000
1.420	.000	-12.000	25.000
1.650	.000	-12.000	25.000
1.850	.000	-12.000	25.000

REFERENCE INFORMATION

SREF	4.4119	50.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XPRP	43.5974	INCHES
YPRP	10.000	INCHES
ZPRP	15.1673	INCHES
SCALE	.0405	SCALE



LONGITUDINAL CENTER OF PRESSURE LOCATION, XCP/L

FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FLARE

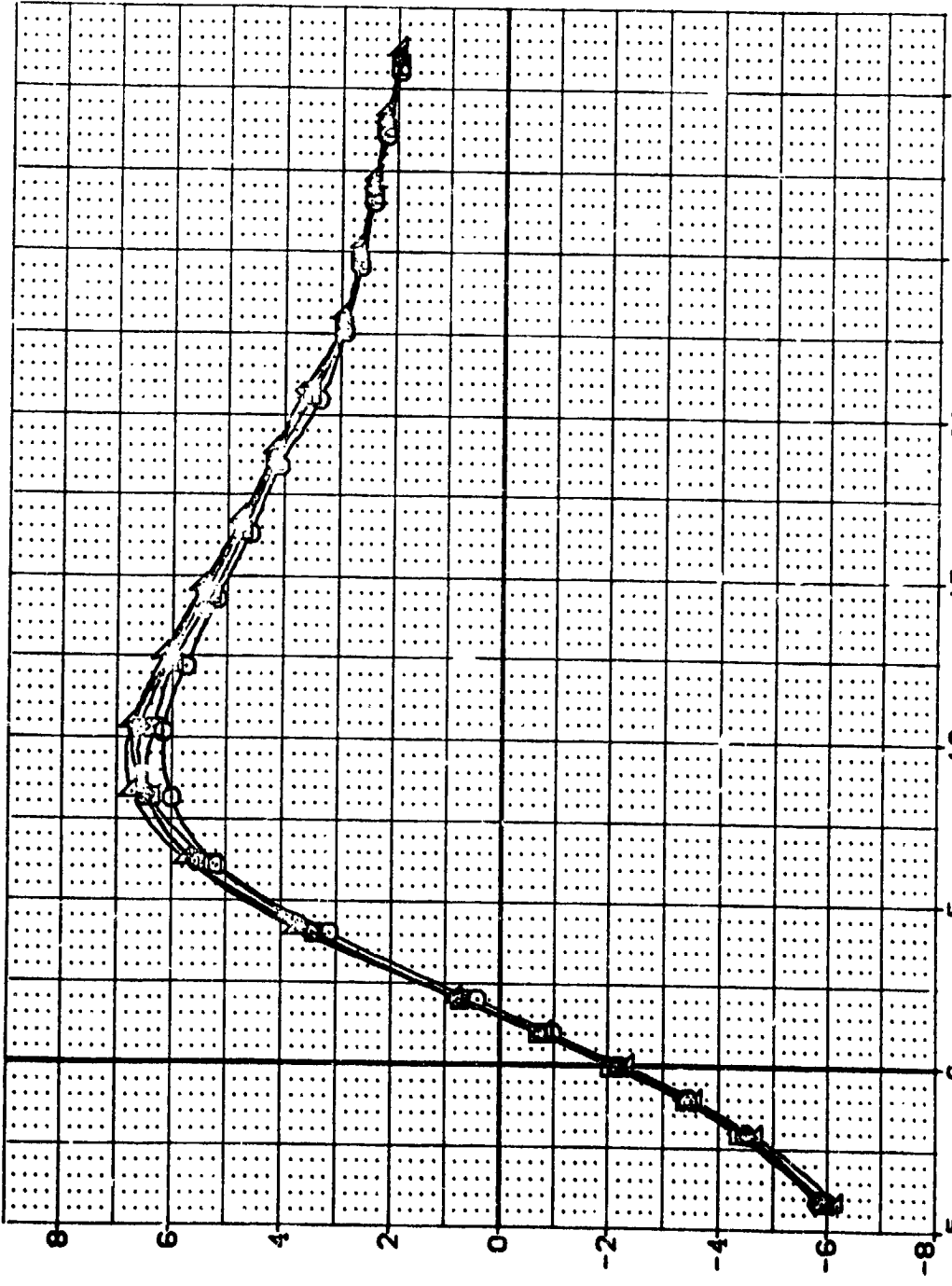
(A)MACH = .12

DATA SET SYMBOL CONFIGURATION DESCRIPTION

0001	04628	B28C3	M7F8	V116E28V8F5X9
0002	04628	B28C3	M7F8	V116E28V8F5X9
0003	04628	B28C3	M7F8	V116E28V8F5X9
0004	04628	B28C3	M7F8	V116E28V8F5X9
0005	04628	B28C3	M7F8	V116E28V8F5X9

RM/FT    ELEVON    BDFLAP    SPOBRK    REFERENCE INFORMATION

.800	.000	-12.000	25.000	SREF	4.4119	50. FT.
1.180	.000	-12.000	25.000	LREF	19.2287	INCHES
1.420	.000	-12.000	25.000	BREF	37.9359	INCHES
1.650	.000	-12.000	25.000	XTRP	43.5974	INCHES
.850	.000	-12.000	25.000	ZTRP	15.0000	INCHES
				SCALE	.0405	SCALE



FOREBODY LIFT TO DRAG RATIO, LF/DF

FIG 54 EFFECT OF REYNOLDS NO. ON LONGITUDINAL STABILITY, ELEVON = 0, 25 FL/RE  
 (A)MACH = .12      PAGE 687

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPODBK	BEFLAP	AILRON	SCALE	SO.FT.
{R02117}	0A528 B26C3 M7F8 V116E28V8R5X9	.000	25.000	-12.000	.000	4.4119	INCHES
{R02118}	0A528 B26C3 M7F8 V116E28V8R5X9	5.000	25.000	-12.000	5.000	19.2299	INCHES
{R02119}	0A528 B26C3 M7F8 V116E28V8R5X9	5.000	25.000	-12.000	10.000	27.9359	INCHES
{R02157}	0A528 B26C3 M7F3 V116E28V8R5X9	5.000	25.000	-12.000	-5.000	43.5874	INCHES
{R02158}	0A528 B26C3 M7F8 V116E28V8R5X9	10.000	25.000	-12.000	5.000	15.1875	INCHES

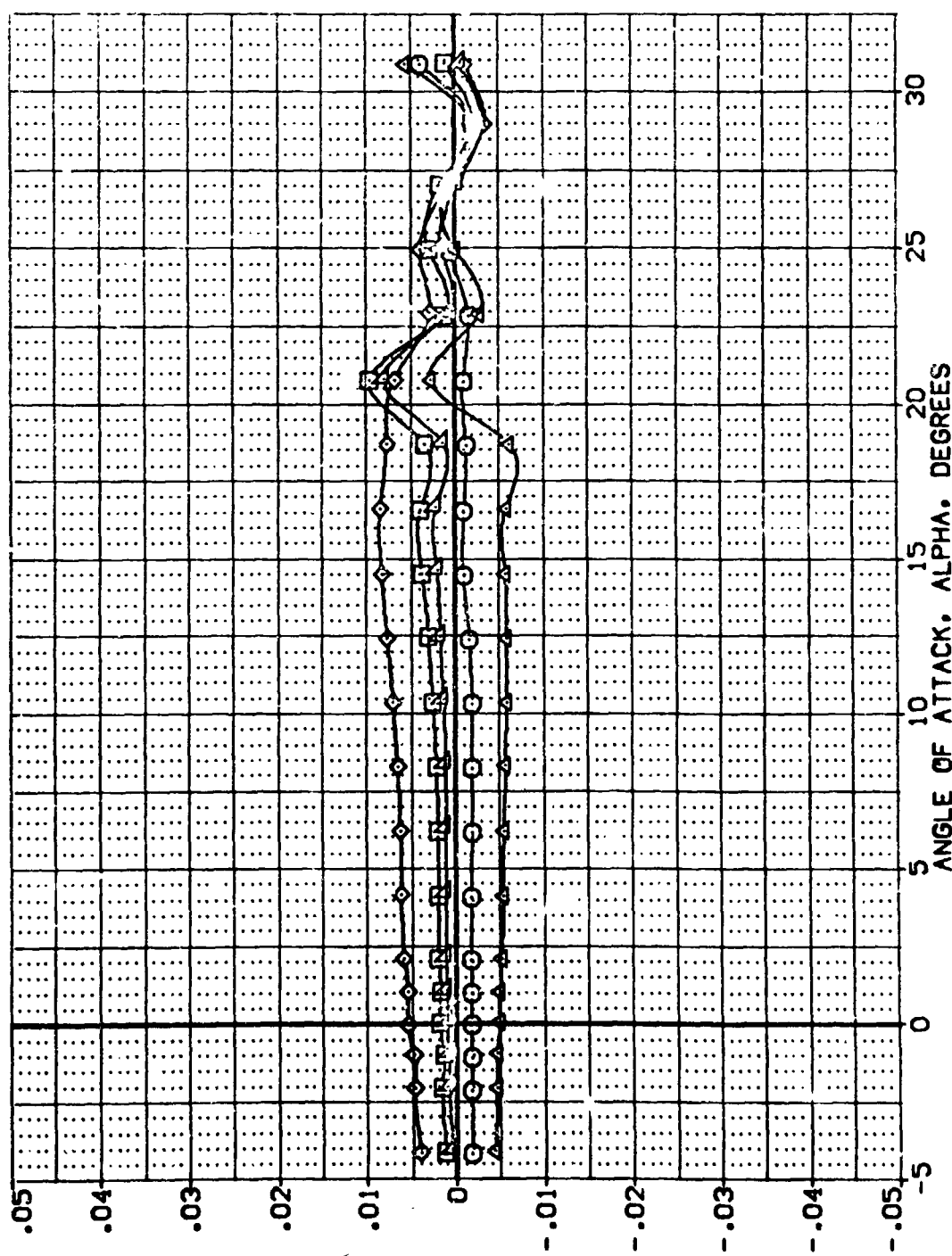
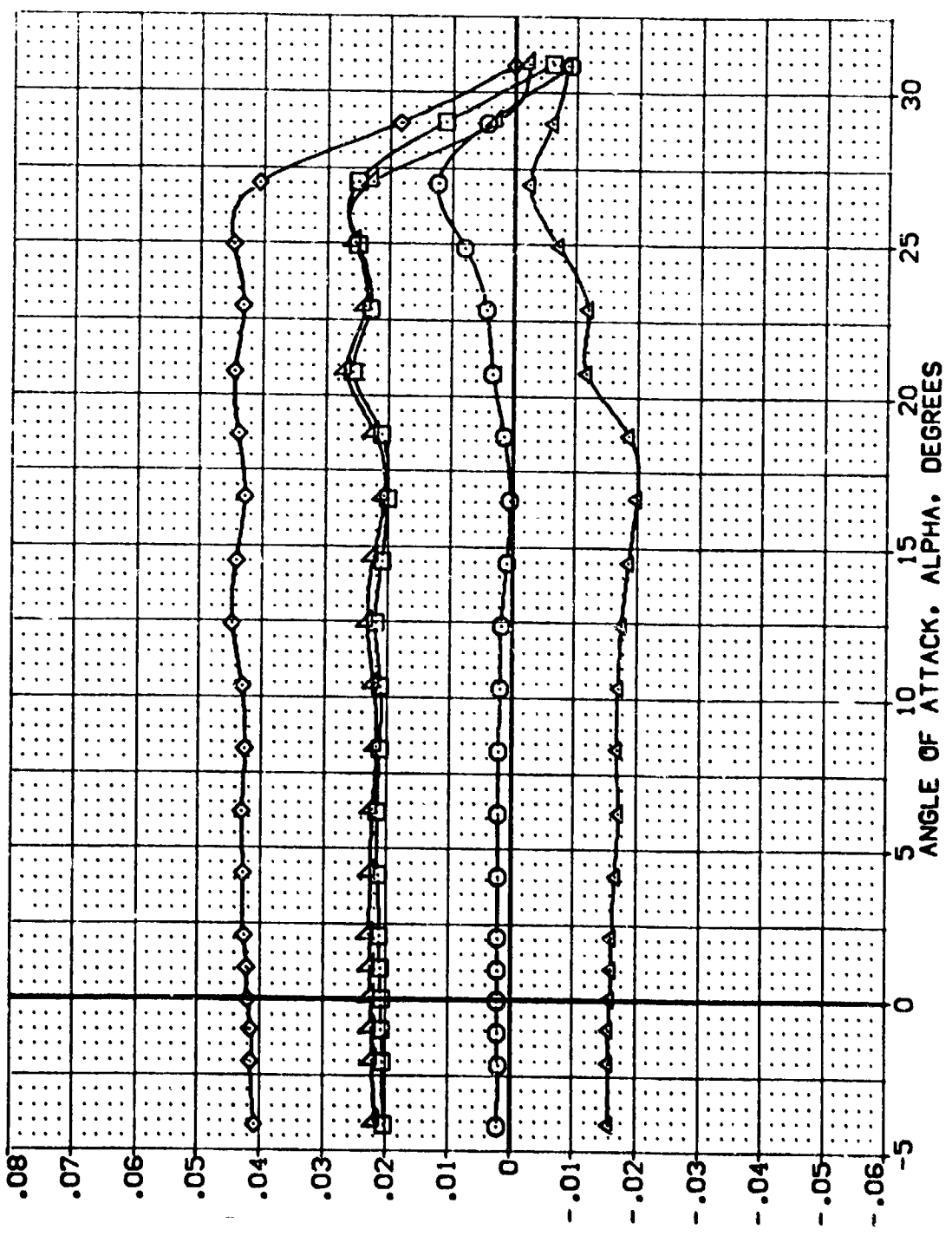


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(A)MACH = .20



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	AILERON	REFERENCE INFORMATION
(RZ117)	BAG28 B28C3 M7F8 V116E28/8PS/3	0.000	25.000	-12.000	.000	SREF 4.4119 SQ.FT.
(RZ161)	BAG28 B28C3 M7F8 V116E28/8PS/3	5.000	25.000	-12.000	5.000	LREF 19.2289 INCHES
(RZ160)	BAG28 B28C3 M7F8 V116E28/8PS/3	5.000	25.000	-12.000	10.000	BREF 37.9359 INCHES
(RZ157)	BAG28 B28C3 M7F8 V116E28/8PS/3	5.000	25.000	-12.000	-5.000	XTRP 43.5974 INCHES
(RZ159)	BAG28 B28C3 M7F8 V116E28/8PS/3	10.000	25.000	-12.000	5.000	YTRP .0000 INCHES
						ZTRP 15.1875 INCHES
						SCALE .0405

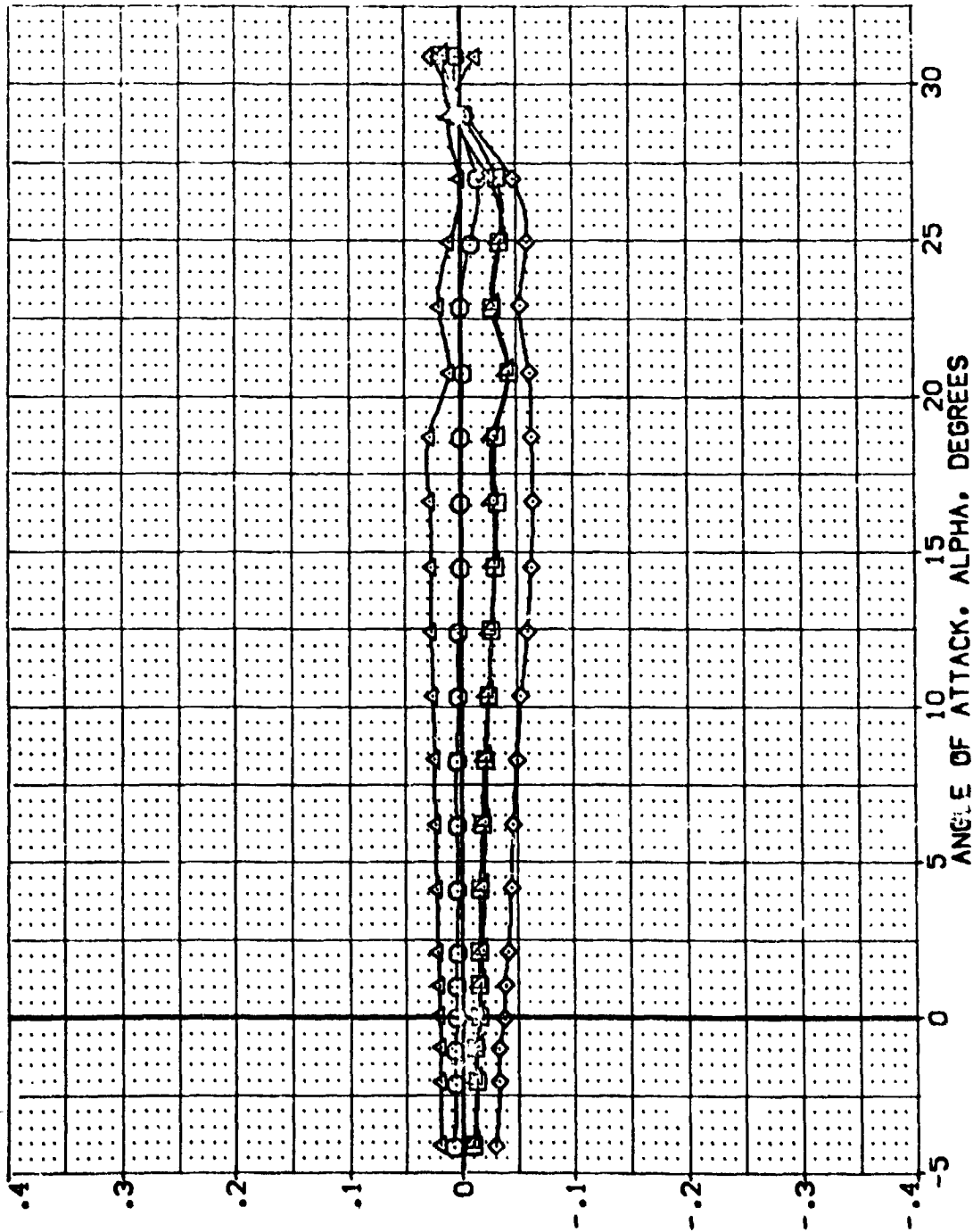


ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

CAJ MACH = .20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBK	BOFLAP	AILERON	REFERENCE INFORMATION
{R0Z117}	0A628 B26C3 M7F8 V116E28V8F5X9	0.000	25.000	-12.000	0.000	4.4119 50. FT.
{R0Z161}	0A623 B26C3 M7F8 V116E28V8F5X9	5.000	25.000	-12.000	5.000	19.2259 INCHES
{R0Z160}	0A628 B26C3 M7F8 V116E28V8F5X9	5.000	25.000	-12.000	10.000	37.9359 INCHES
{R0Z157}	0A628 B26C3 M7F8 V116E28V8F5X9	5.000	25.000	-12.000	-5.000	43.5574 INCHES
{R0Z159}	0-628 B26C3 M7F8 V116E28V8F5X9	10.000	25.000	-12.000	5.000	0.0000 INCHES
						15.1875 INCHES
						0.0405 SCALE



SIDE FORCE COEFFICIENT, CY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(MACH = .20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

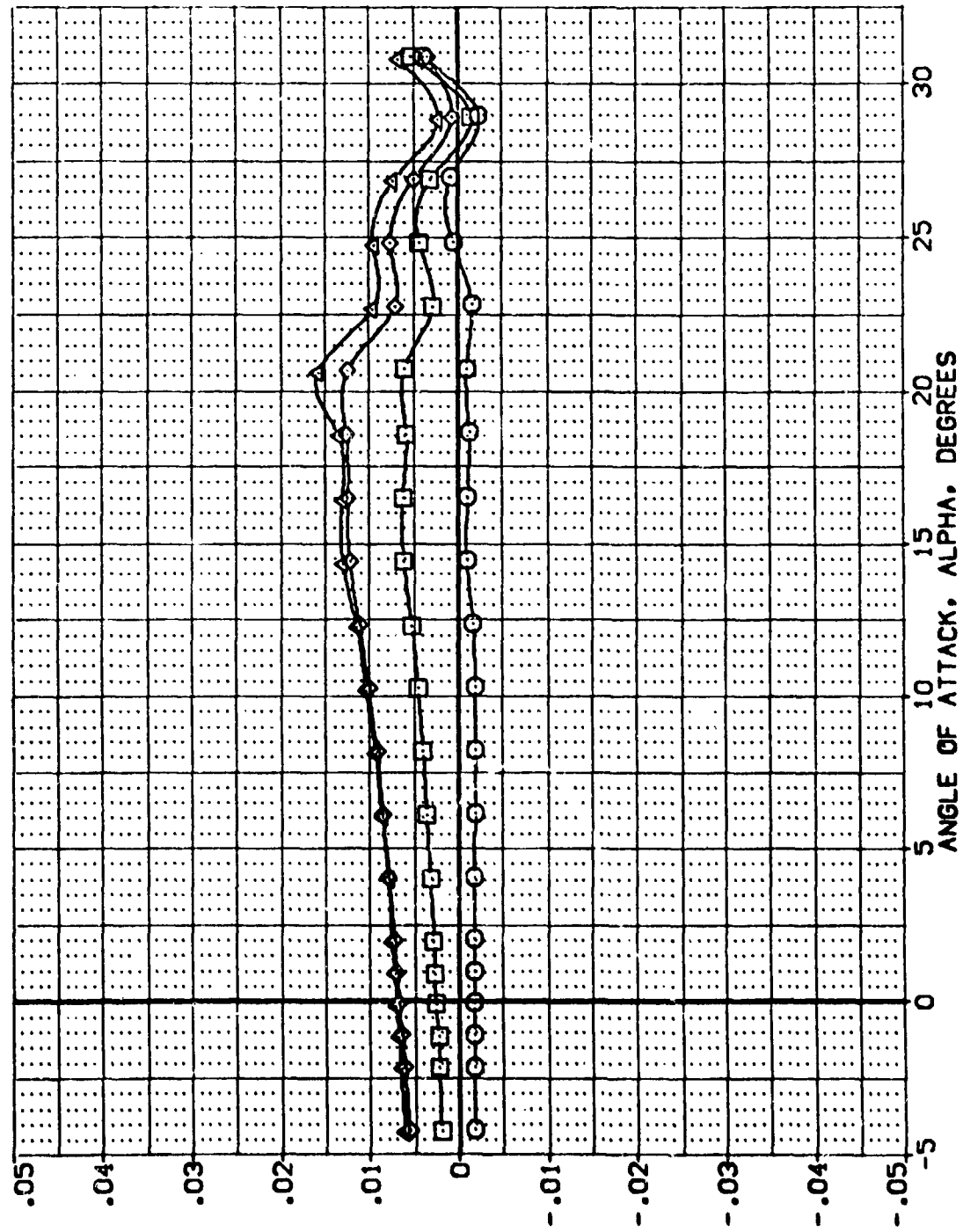
(R0Z17)	BAG2B	B26C3	M7F8	V116E28V8F5X3
(R0Z156)	BAG2B	B26C3	M7F8	V116E28V8F5X3
(R0Z159)	BAG2B	B26C3	M7F8	V116E28V8F5X3
(R0Z155)	BAG2B	B26C3	M7F8	V116E28V8F5X3

ELEVON SPOBRK BOFLAP AILRON

.000	25.000	-12.000	.000
-5.000	25.000	-12.000	5.000
-10.000	25.000	-12.000	10.000

REFERENCE INFORMATION

SREF	4.4119	50 FT
LREF	19.2299	INCHES
BREF	37.5369	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(M)MACH = .20

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

{RZ117}	0A1Z3	B26C3	M7F8	V11E28V8E3V9	SREF	4.4119	SO.FT.
{RZ118}	0A1Z3	B26C3	M7F8	V11E28V8E3V9	LREF	19.2799	INCHES
{RZ119}	0A1Z3	B26C3	M7F8	V11E28V8E3V9	BREF	37.9359	INCHES
{RZ120}	0A1Z3	B26C3	M7F8	V11E28V8E3V9	XMRP	43.5974	INCHES
					YMRP	.0000	INCHES
					ZMRP	15.1875	INCHES
					SCALE	.0405	SCALE

ELEVON SPOBRK BOFLAP AILRON

.000	25.000	-12.000	5.000
-5.000	25.000	-12.000	5.000
-10.000	25.000	-12.000	10.000

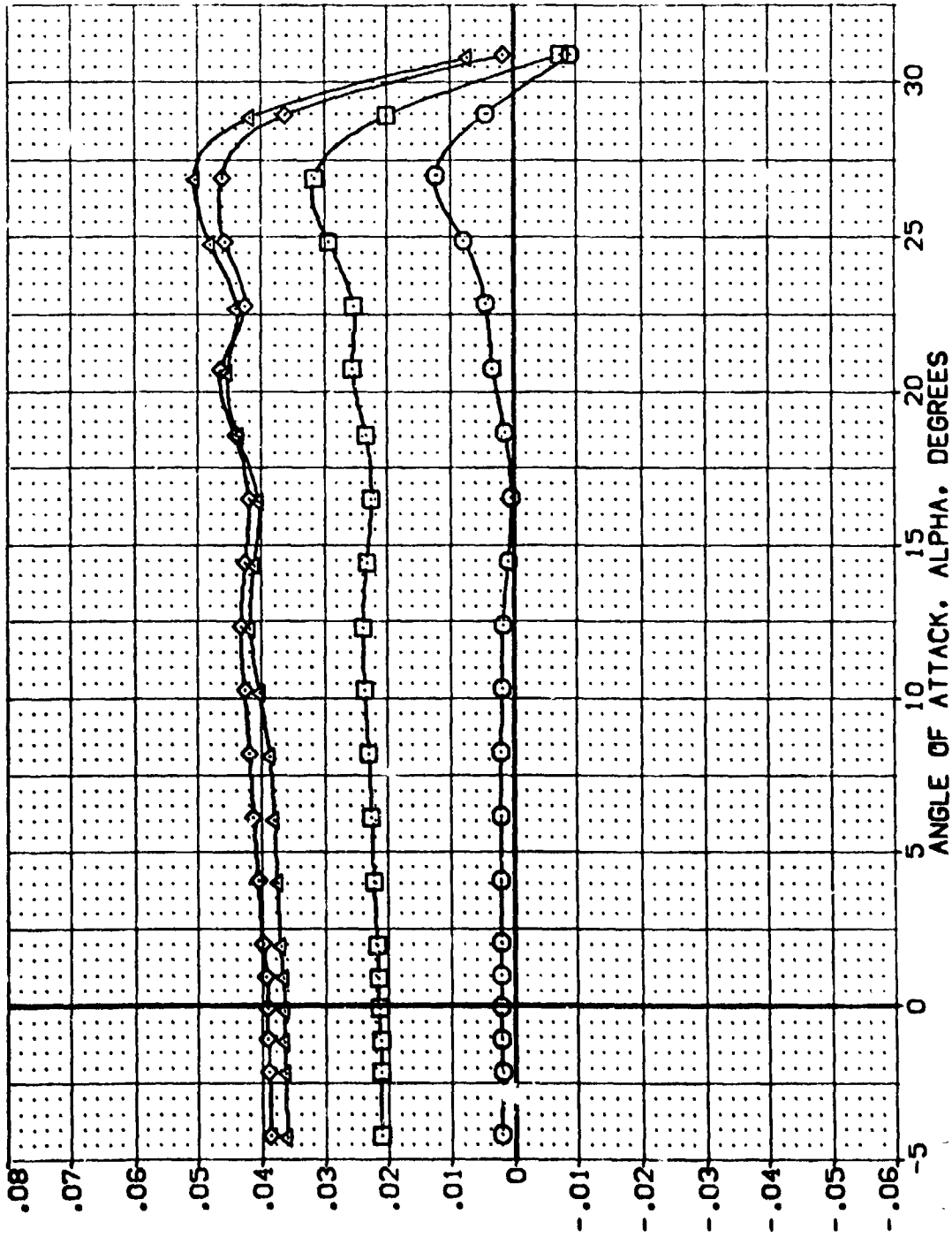
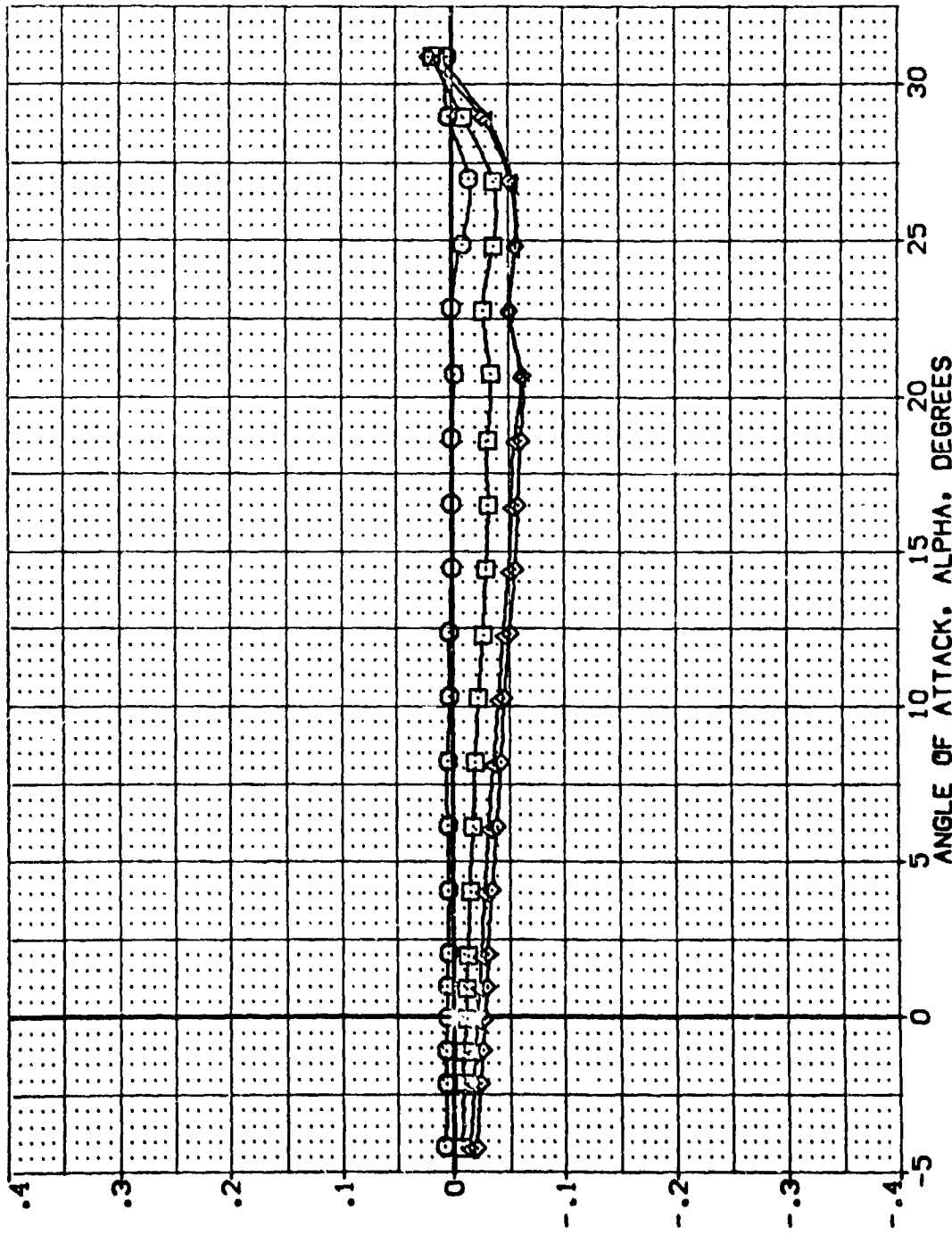


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(A)MACH = .20



DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	AILERON	REFERENCE INFORMATION
(R0Z117)	0ASZ8 BZ8C3 M7F8 V11E28V8S4S	.000	25.000	-12.000	.000	SREF 4.4119 SO.FT.
(R0Z158)	0ASZ8 BZ8C3 M7F8 V11E25V8S4S	-5.000	25.000	-12.000	5.000	LREF 19.2289 INCHES
(R0Z159)	0ASZ8 BZ8C3 M7F8 V11E28V8S4S	-5.000	25.000	-12.000	10.000	BREF 37.9359 INCHES
(R0Z155)	0ASZ8 BZ8C3 M7F8 V11E28V8S4S	-10.000	25.000	-12.000	10.000	XMRP 43.5974 INCHES
						YMRP 15.1875 INCHES
						ZMRP .0405 INCHES
						SCALE



SIDE FORCE COEFFICIENT, CY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(AJMACH = .20

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	.000	80FLAP	.200	DELTA	.000	000	000	000	SREF	4.4118	SG.FT.
		SPOBRK	-12.000	RUDDER	.000	20Z117	DC	5.000	LREF	19.2299	INCHES
			25.000	BETA	.000	20Z160	10.000		BREF	37.9359	INCHES
									XMRP	43.5974	INCHES
									YMRP	15.1875	INCHES
									ZMRP	.0405	SCALE
									SCALE		

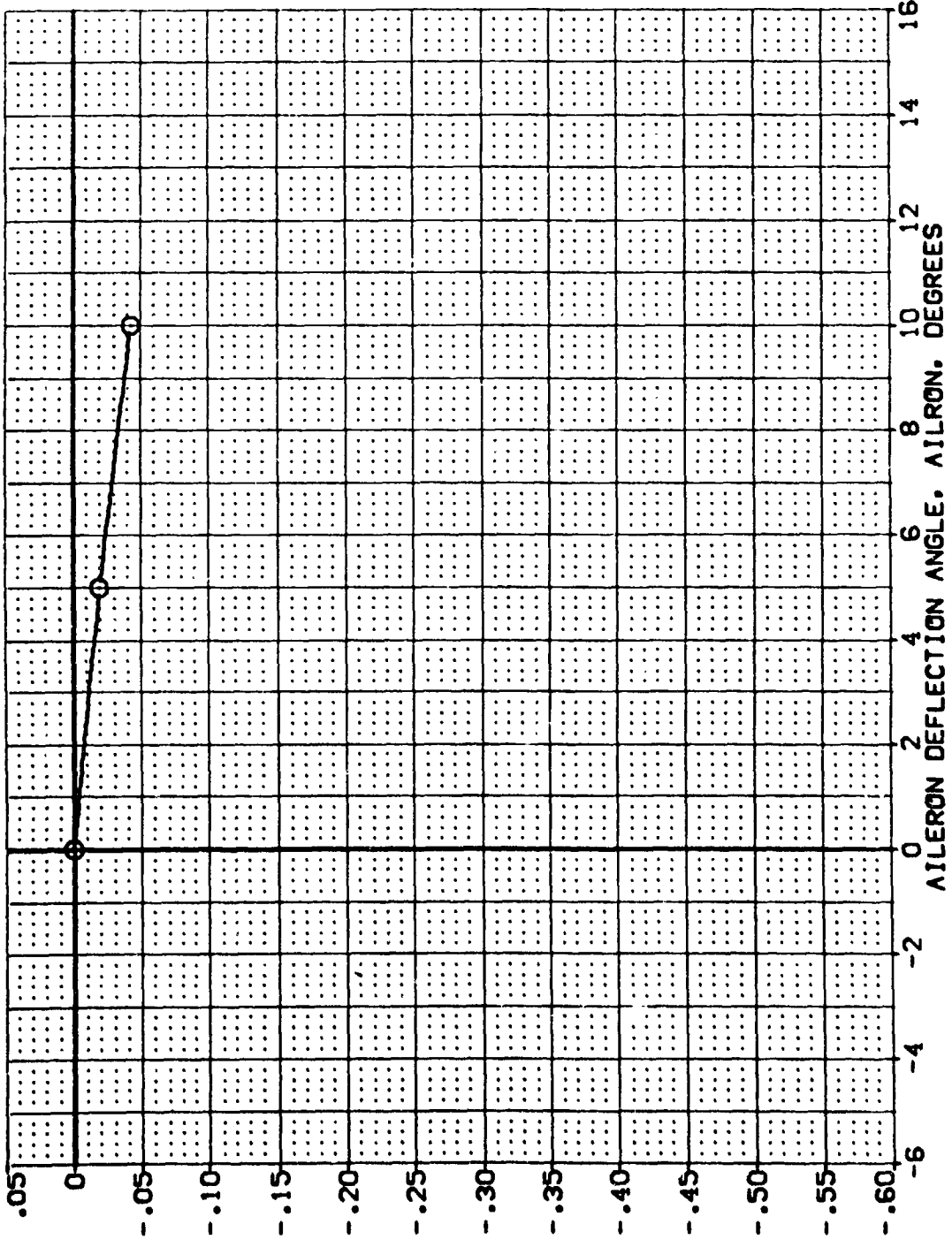
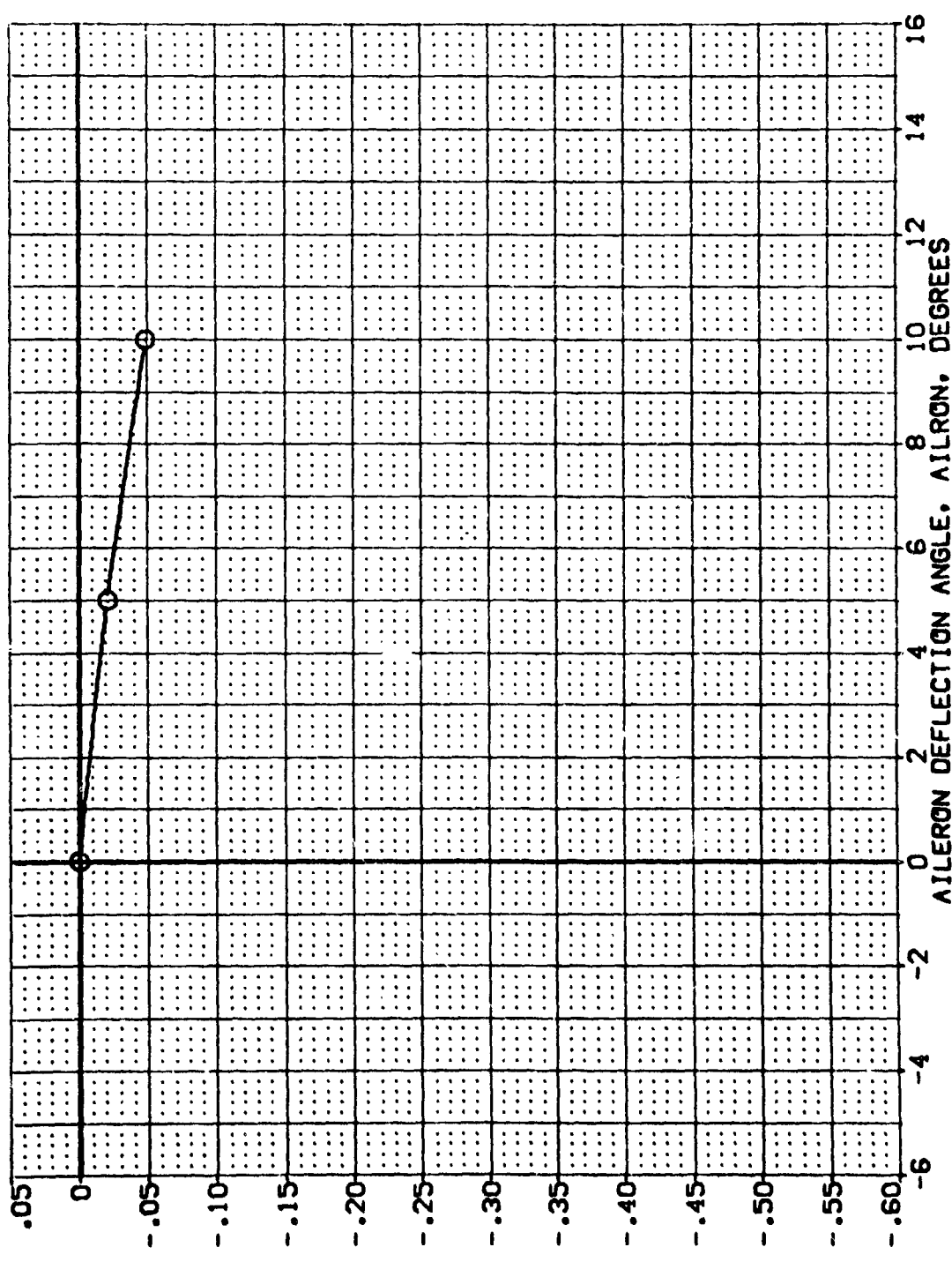


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	EDFLAP	SPOBRK	PARAMETRIC VALUES	.000	DATASET	AILRON	10.000	DATA SOURCE	AILRON	20Z161	DATASET	AILRON	5.000	REF	SCALE	INCHES	SO.FT.	
○	5.000				.200 DELVEN	.000	20Z117	.000		AILRON	20Z161	20Z161	20Z161	5.000	4.4119	19.2289	37.9558	43.9574	15.1875	.0405
					-12.000 RUDDER	.000	20Z160	10.000												
					25.000 BETA															



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	EDFLAP	SPDRK	PARAMETRIC VALUES	.000	DATASET	.000	DATASET	AILRON	DATA SOURCE	AILRON	DATASET	AILRON	SREF	REFERENCE INFORMATION
0	10.000				.200 DELVON	.000	20Z117	.000	20Z161	5.000	AILRON	5.000	20Z161	5.000	4.4119	SQ.FT.
					-12.000 RUDDER	.000	20Z160	10.000							19.2299	INCHES
					25.000 BETA	.000									37.9359	INCHES
															43.5974	INCHES
															15.1873	INCHES
															.0405	SCALE

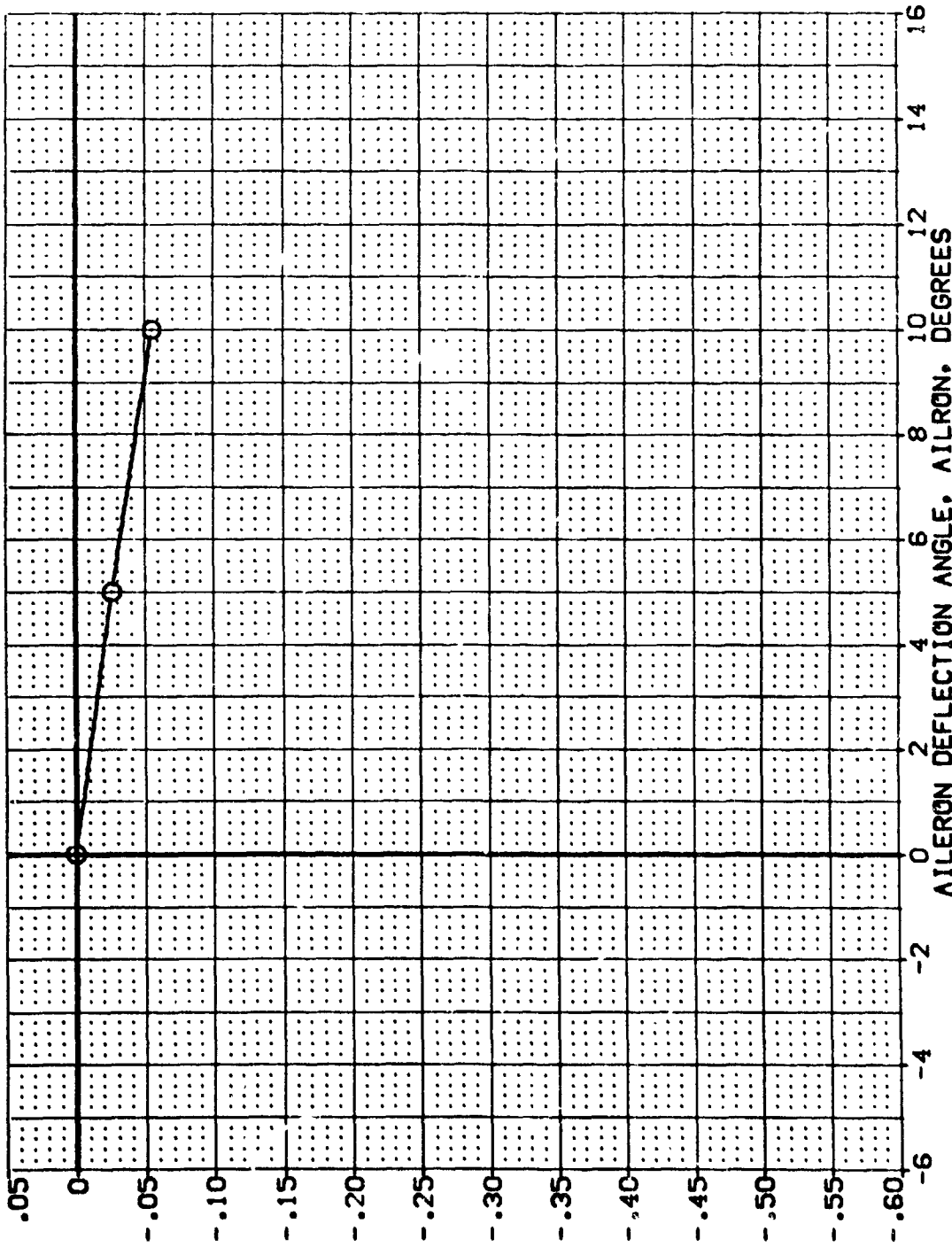
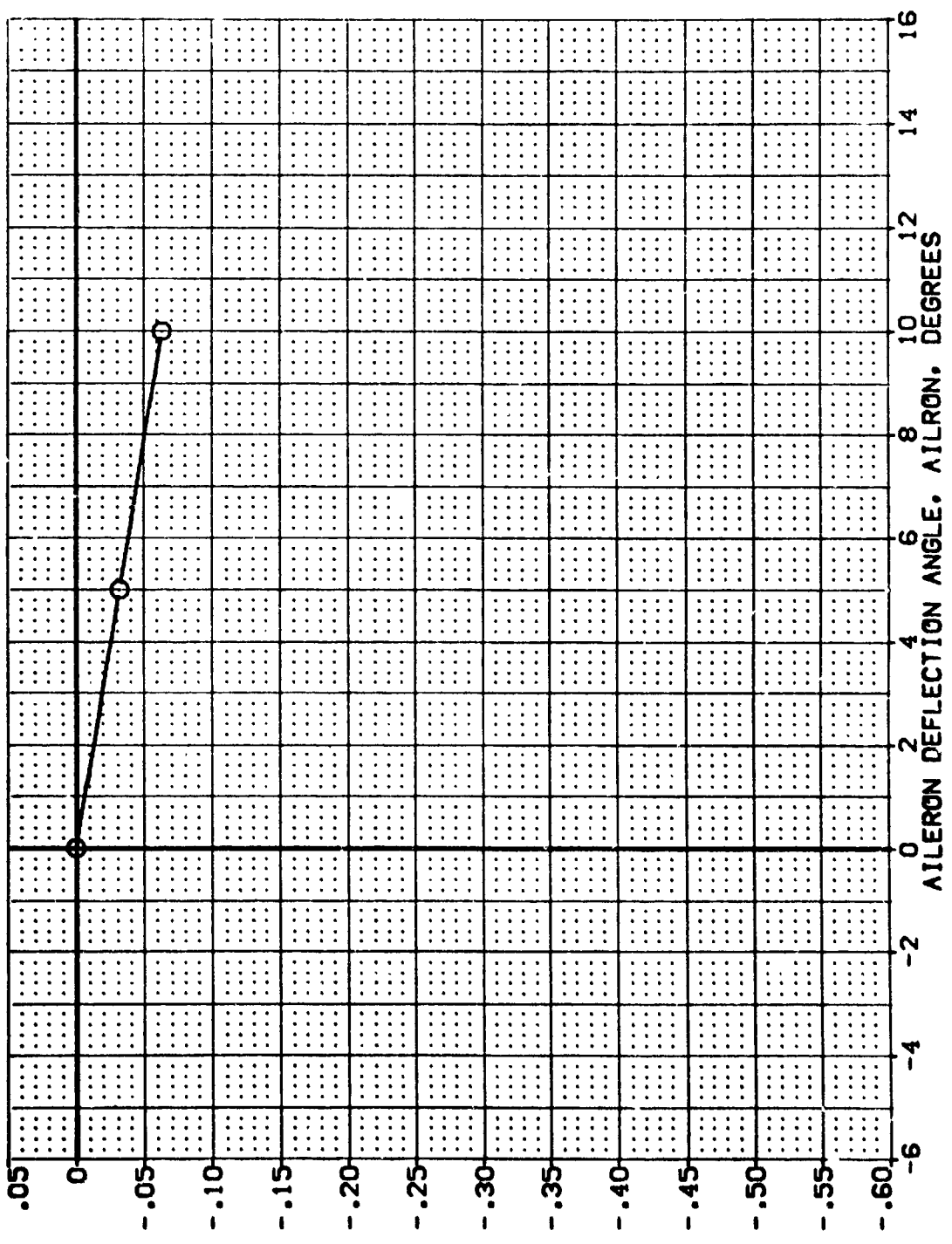


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL	ALPHA	MACH	BDFLAP	SPOBRK	PARAMETRIC VALUES	.000	DATASET	AILRON	DATA SOURCE	DATASET	AILRON	SREF	REFERENCE INFORMATION
0	15.000				.200 DELVON	.000	20Z117	.000	AILRON	20Z161	5.000	4.4119	SO.FT.
					-12.000 RUDDER	.000	20Z160	10.000				19.2299	INCHES
					25.000 BETA							37.9359	INCHES
												43.5974	INCHES
												15.1000	INCHES
												15.1673	INCHES
												.0405	SCALE



INCREMENTAL SIDE FORCE COEFFICIENT, OCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	20.000	BDFLAP	.200 DELVON	AILRON	4.4119 SQ.FT.
		SPODRK	-12.000 RUDDER	AILRON	19.2299 INCHES
			25.000 BETA	5.000	37.9359 INCHES
				20Z161	43.5974 INCHES
				10.000	.0000 INCHES
				ZMRP	15.1875 INCHES
				ZMRP	.0405 SCALE
				SCALE	

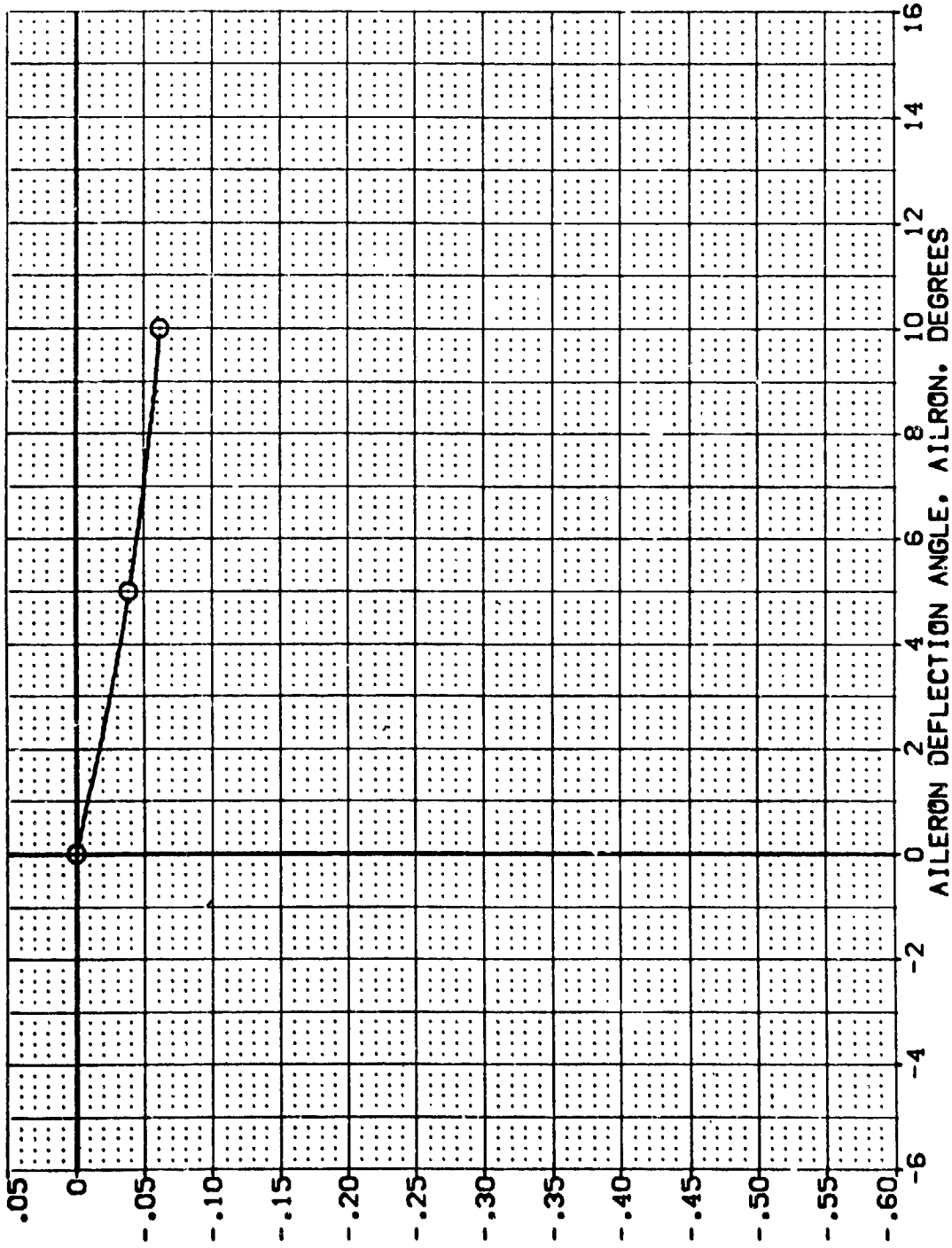


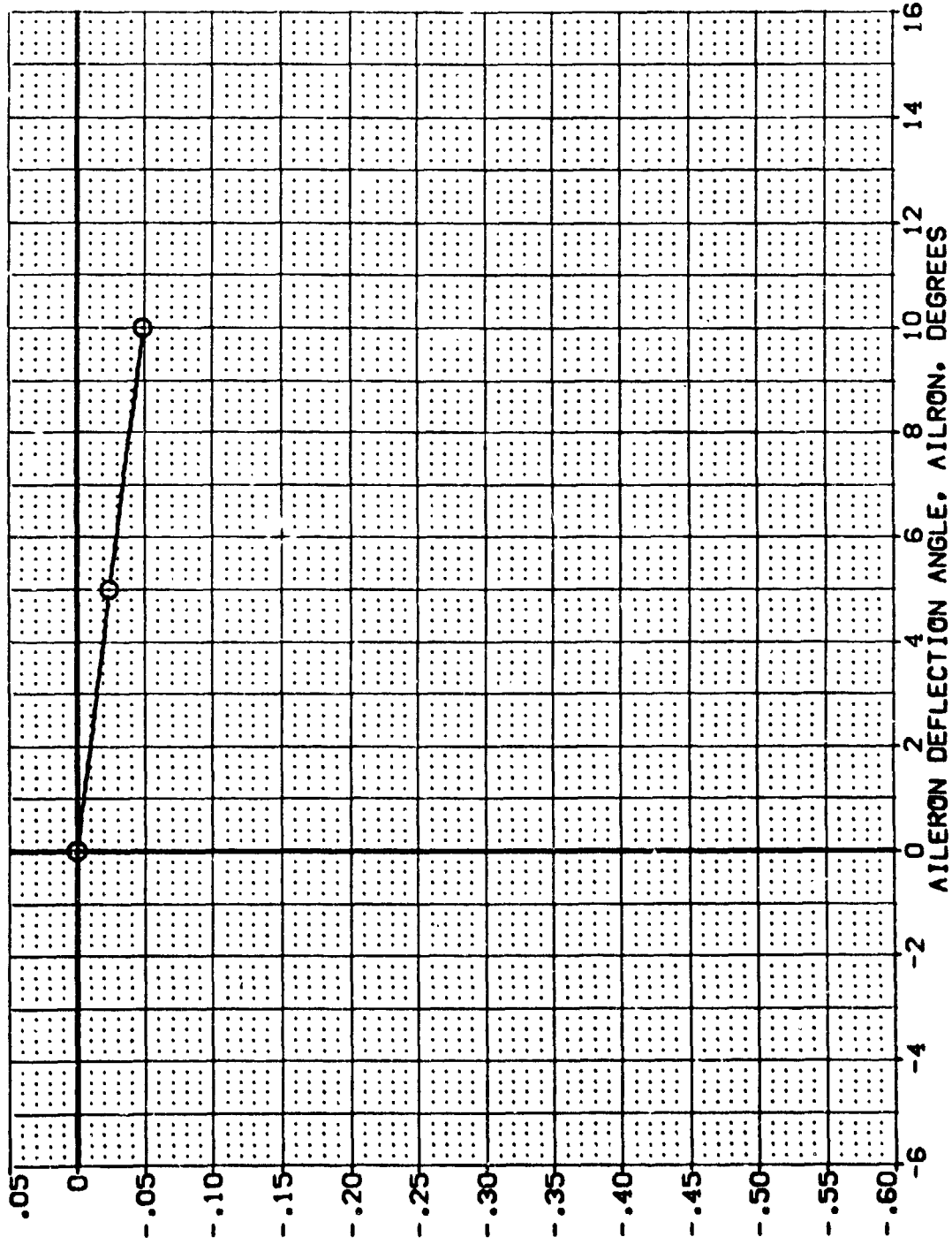
FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE





0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	SREF	REFERENCE INFORMATION
○	25.000	BOFLAP	.200 DELVN	.000 DATASET	20Z161	5.000	4.4119	SO.FT.
		SFOBRK	-12.000 RUDDER	.000 20Z117			19.2299	INCHES
			25.000 BETA	.000 20Z160			37.9359	INCHES
							43.9374	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL  
O

ALPHA 30.000  
MACH 80FLAP  
SPDRX

PARAMETRIC VALUES  
.200 DELVON  
-12.000 RAJDER  
25.000 BETA

DATA SOURCE  
A1LRON  
DATASET 20Z117  
.000 20Z167  
.000 20Z167

A1LRON 5.000  
DATASET 20Z161

REFERENCE INFORMATION  
SREF 4.4119  
LREF 19.2299  
BREF 37.9359  
XTRP 43.5974  
YTRP .0000  
ZTRP 15.1875  
SCALE .0405

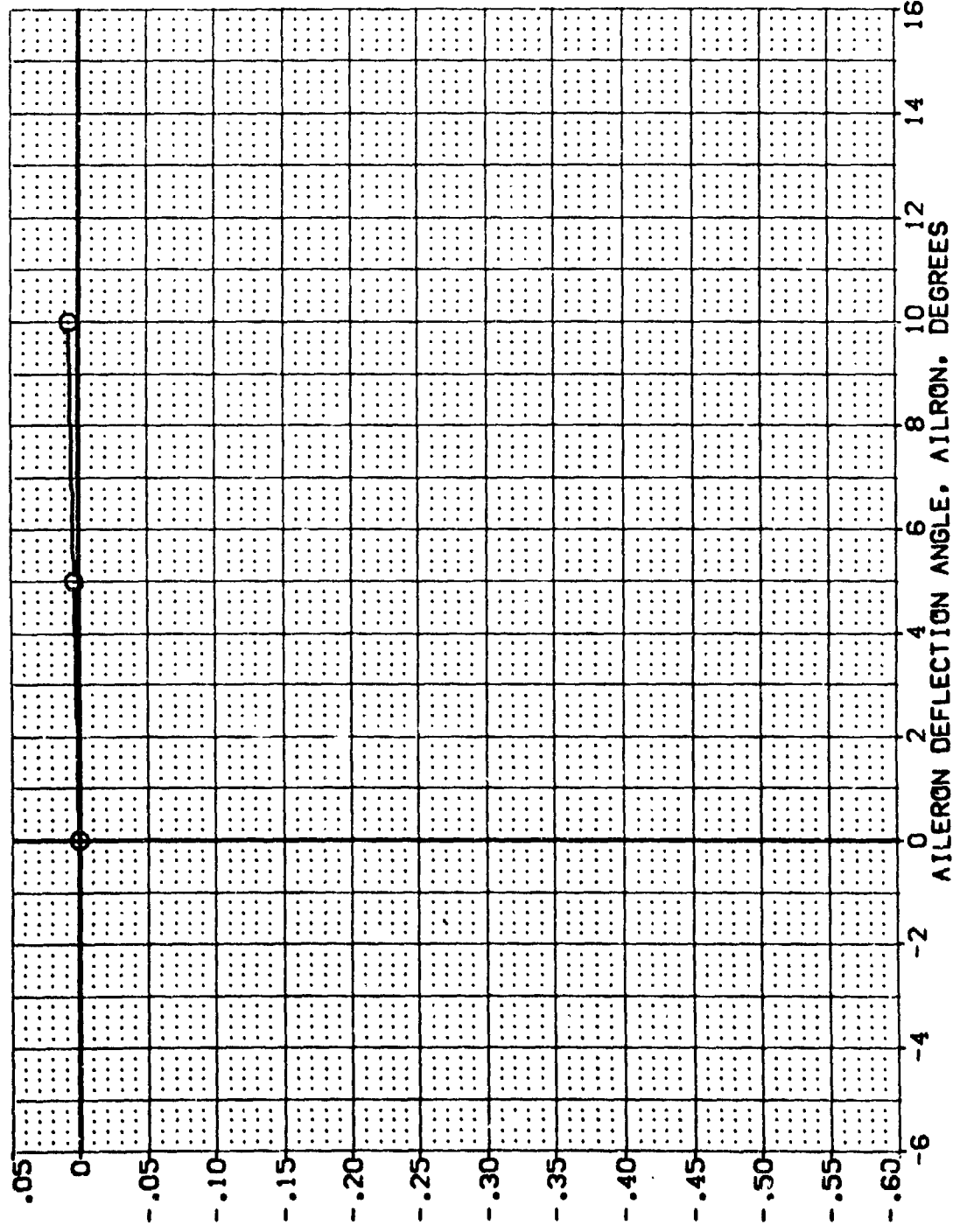


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

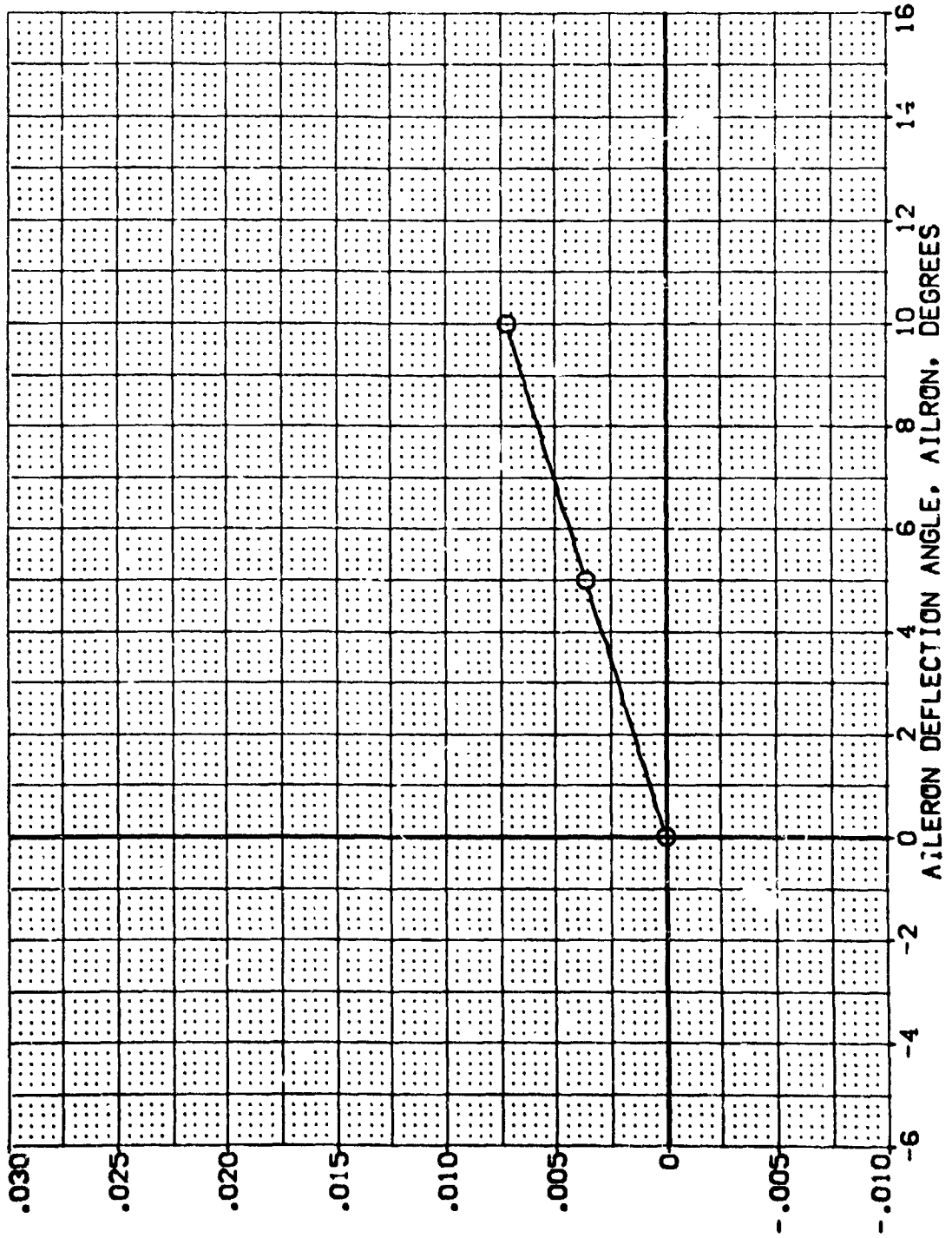
W116E28V8R5X9

M7F8

B28C9

0A628

SYMBOL	ALPHA	HACH	SOFLAP	SPUBK	PARAMETRIC VALUES	DATA SCALE	DATASET	AILRON	SREF	REFERENCE INFORMATION
O	.000	.200	-12.000	25.000	DELTA	AILRON	20Z161	5.000	4.4118	SO.FT.
					RUDER	.000			19.2259	INCHES
					BETA	10.000			37.9359	INCHES
									43.5974	INCHES
									.0000	INCHES
									15.1875	SCALE
									.0405	



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V9R5X9

SYMBL  
O

ALPHA 5.000

HASH  
BDPLAP  
SPDRK 25.000

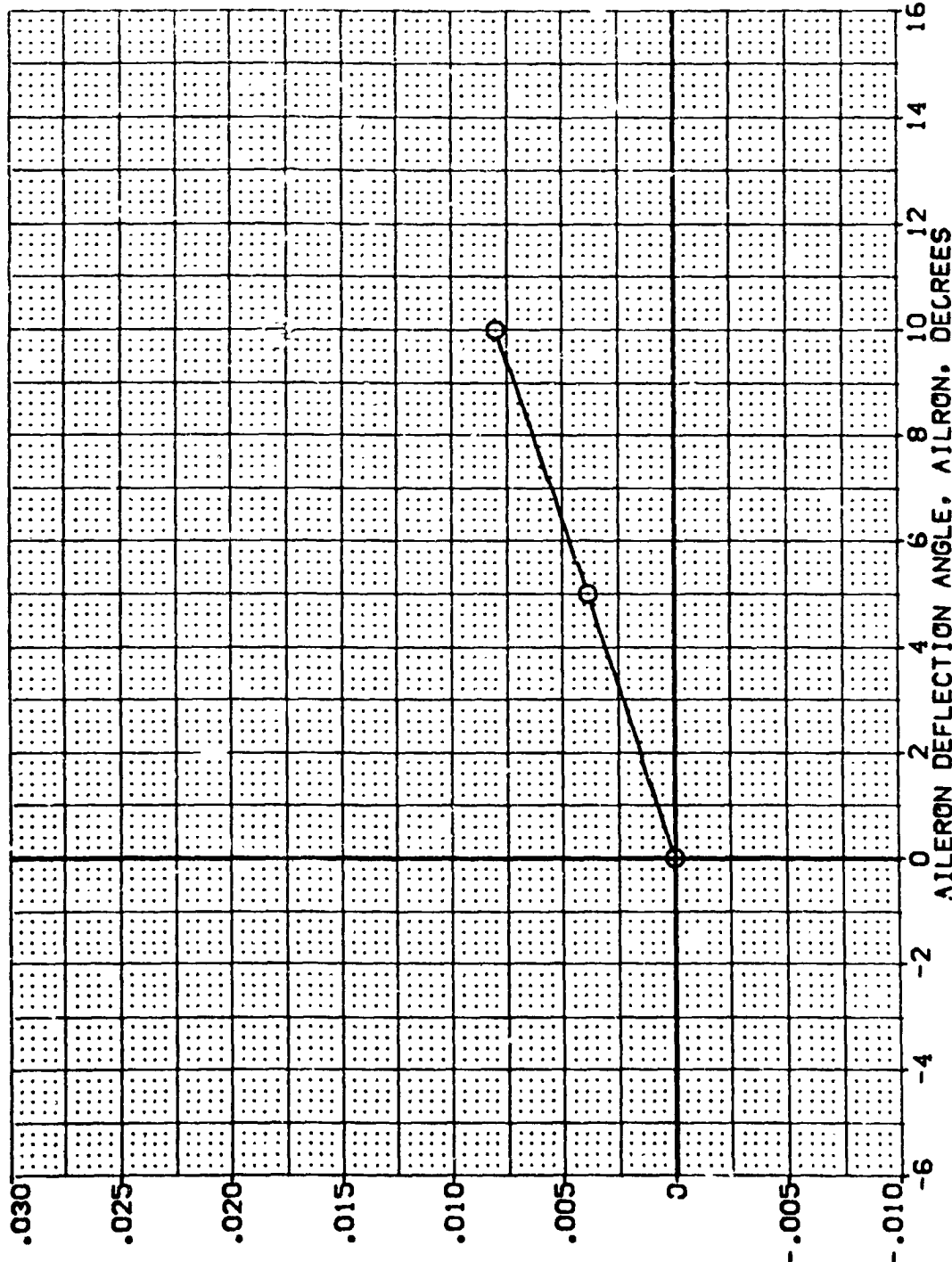
PARAMETRIC VALUES  
DELVON  
RUDDER  
BETA

DATA SOURCE  
AILRON  
AILRON 10.000

DATASET  
20Z117  
20Z160

AILRON  
5.000

REFERENCE INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2299  
INCHES 37.9359  
INCHES 43.5874  
INCHES 15.0000  
SCALE 15.1673  
SCALE .0105



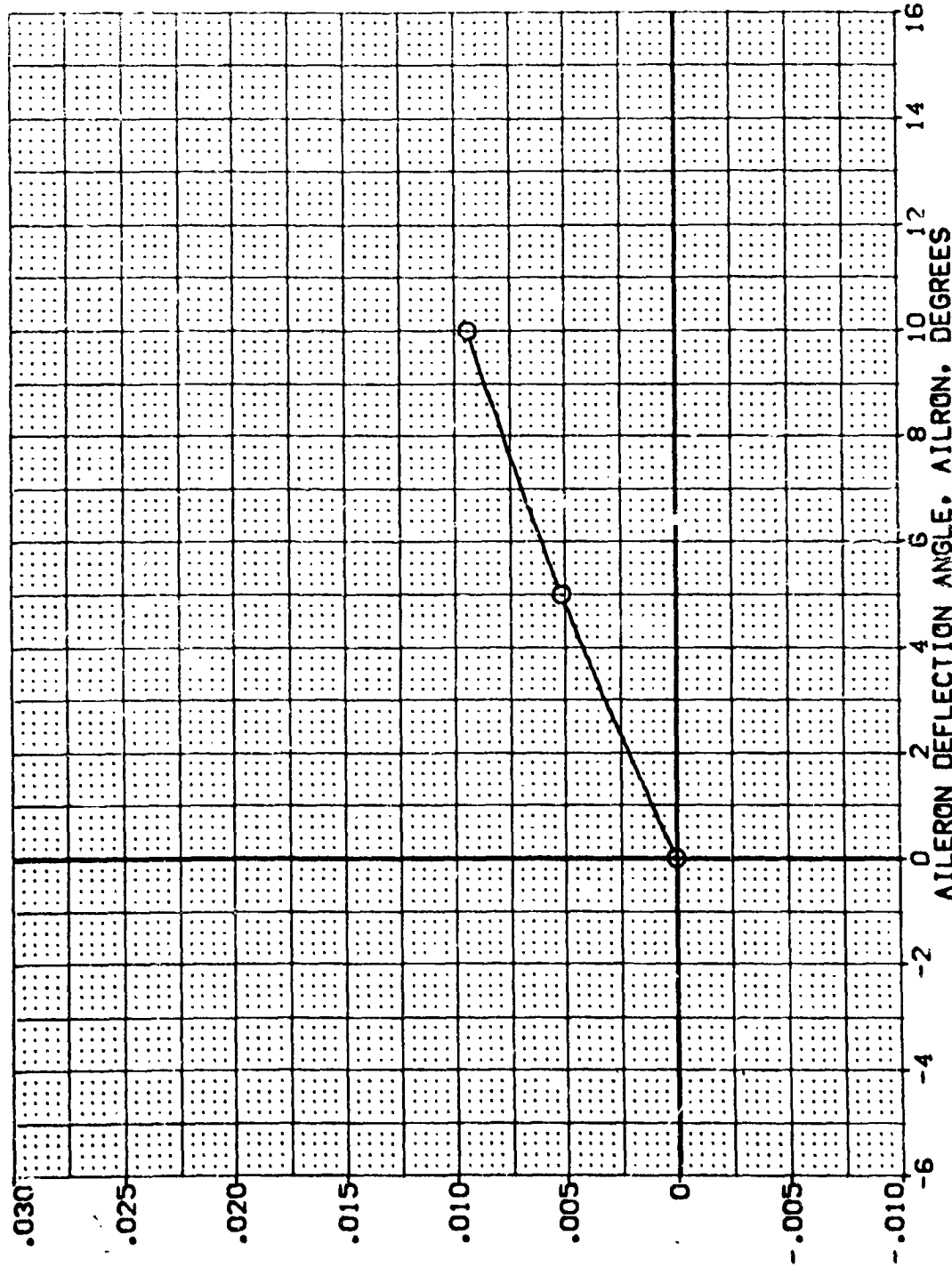
INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



01628 B26C9 M7FR W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	15.000	80FLAP	.200	DELTA	.000	DATASET	AILRON	SREF
		SPOBRK	-12.000	RUDDER	.000	20Z117	5.000	4.4119
			25.000	BETA	.000	20Z160	10.000	19.2288
								37.5358
								43.5574
								.0000
								15.1875
								.0405
								SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

W116E28V8R5X9

M7F8

B26C9

0A628

REFERENCE INFORMATION  
 SO.FT. 4.4119  
 INCHES 19.2298  
 INCHES 37.9359  
 INCHES 43.5874  
 INCHES 0.0000  
 INCHES 15.1875  
 INCHES 0.0405  
 SCALE

DATA SOURCE  
 AILREF1  
 DATASET 20Z161  
 AILRON 5.000

PARAMETRIC VALUES  
 DELVON .200  
 RUDDER -12.000  
 BETA 25.000

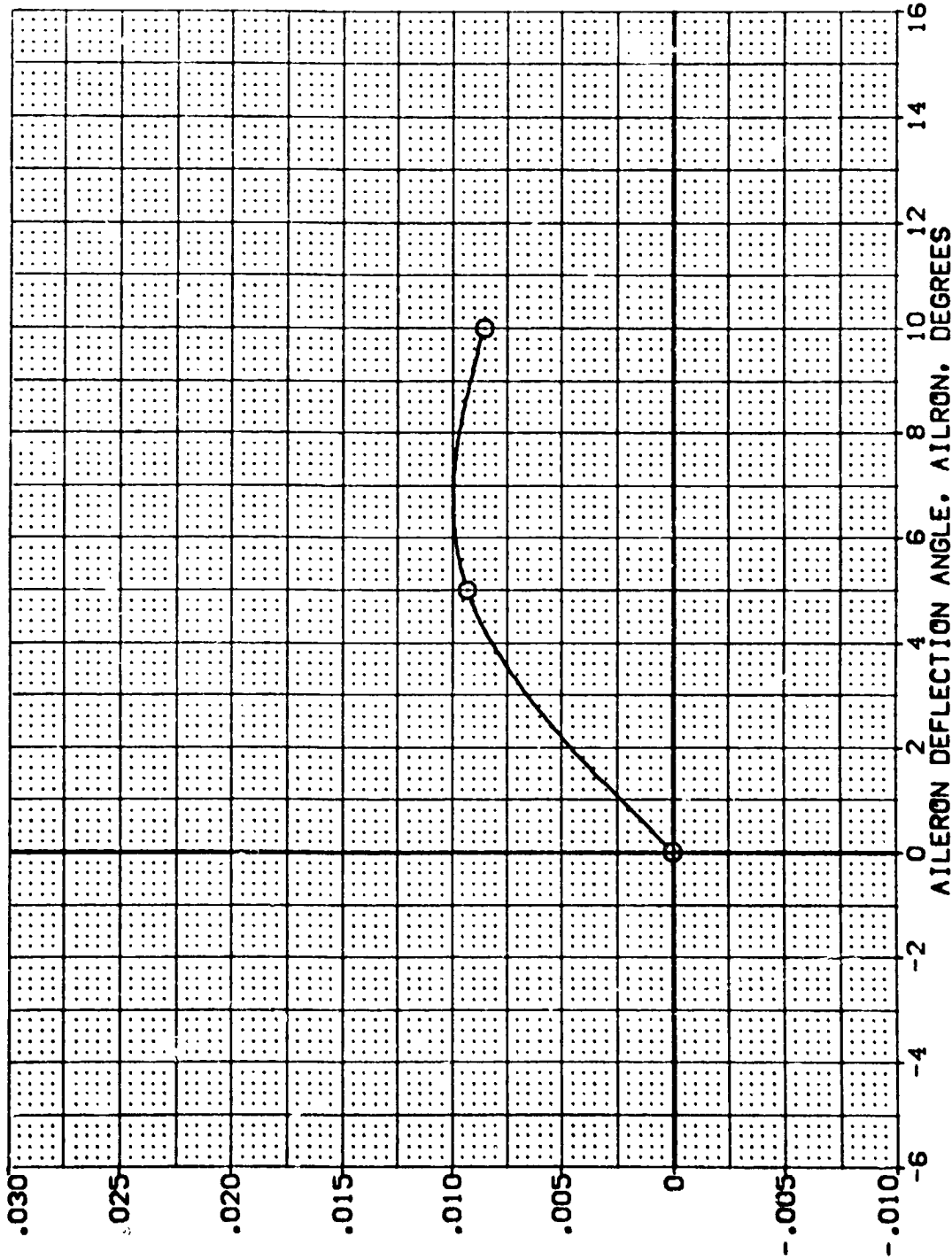
DATA SOURCE  
 AILREF1  
 DATASET 20Z160  
 AILREF1 10.000

PARAMETRIC VALUES  
 DELVON .200  
 RUDDER -12.000  
 BETA 25.000

MACH .200  
 BOTLAP -12.000  
 SPOBRK 25.000

ALPHA 20.000

SYMBOL  
 O



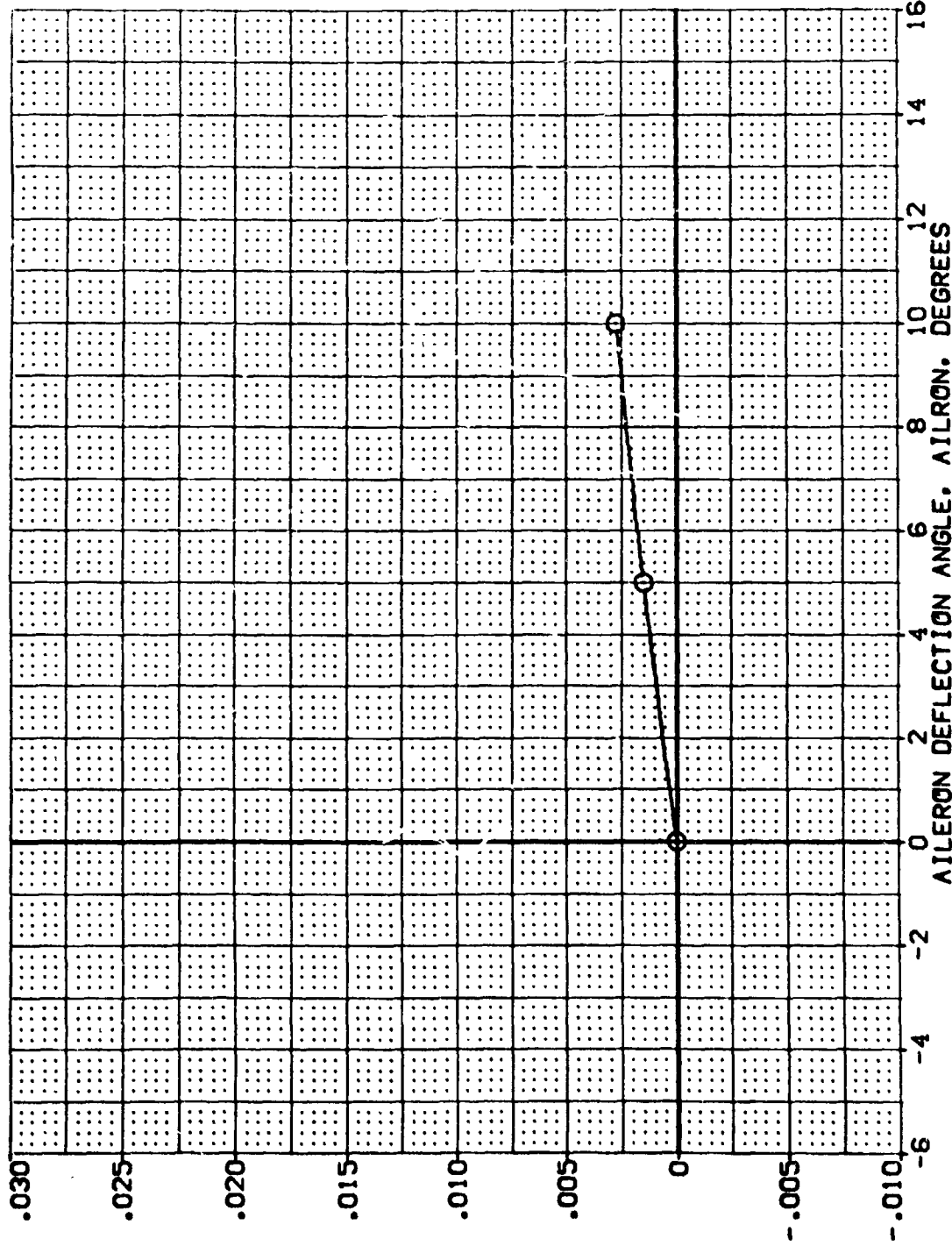
INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	SPFLAP	SPDRBK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	DATASET	AILRON	5.000	REF	4.4119
U	25.000				.200 DELVON	.000	20Z117	AILRON	AILRON	20Z161	5.000	LREF	19.2299	
					-12.000 RUDDER	.000	20Z160	10.000				BREF	37.9359	
					25.000 BETA							XTRP	43.5971	
												YTRP	.0000	
												ZTRP	15.1875	
												SCALE	.0405	

REFERENCE INFORMATION  
 90.FT. INCHES  
 19.2299 INCHES  
 37.9359 INCHES  
 43.5971 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

M7F8

W116E28V8R5X9

0A628

SYMBOL O

ALPHA 30.000

MACH 80FLAP 50FBK

PARAMETRIC VALUES

DELTA .200

RUDDER -12.000

BETA 25.000

DATA SOURCE

AILERON 20Z117

AILRON 20Z160

SCALE 10.000

REFERENCE INFORMATION

SO.FT. 4.4119

INCHES 19.2299

INCHES 37.5359

INCHES 43.5974

INCHES .0000

INCHES 15.1875

SCALE .0405

DATA SOURCE

AILRON 20Z117

AILRON 20Z160

SCALE 10.000

REFERENCE INFORMATION

SO.FT. 4.4119

INCHES 19.2299

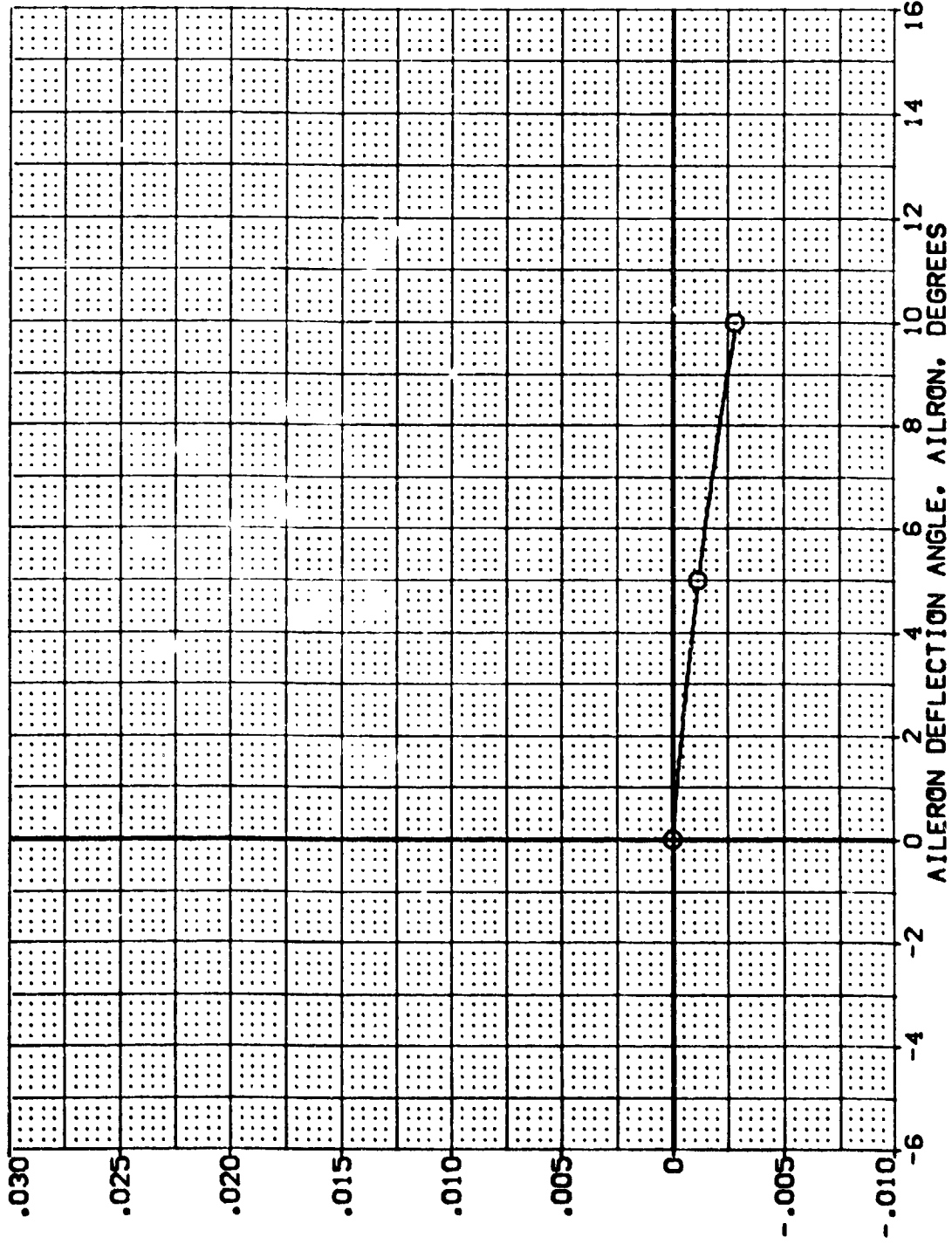
INCHES 37.5359

INCHES 43.5974

INCHES .0000

INCHES 15.1875

SCALE .0405



INCREMENTAL YAWING MOMENT COEFFICIENT, CMY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

W116E28V8R5X9

M7F8

B26C9

B26C9

0A628

SYMBOL O

ALPHA .000

MACH .200

BDTFLAP -12.000

SPOBRK 25.000

PARAMETRIC VALUES

DELVON .000

RUDDER .000

BETA 20Z160

DATA SOURCE

AILRON .000

AILRON 10.000

DATASET 20Z161

AILRON 5.000

REFERENCE INFORMATION

SREF 4.4119

LREF 19.2259

BRFP 37.9359

XMRP 43.5974

YMRP .0000

ZMRP 15.1875

SCALE .0405

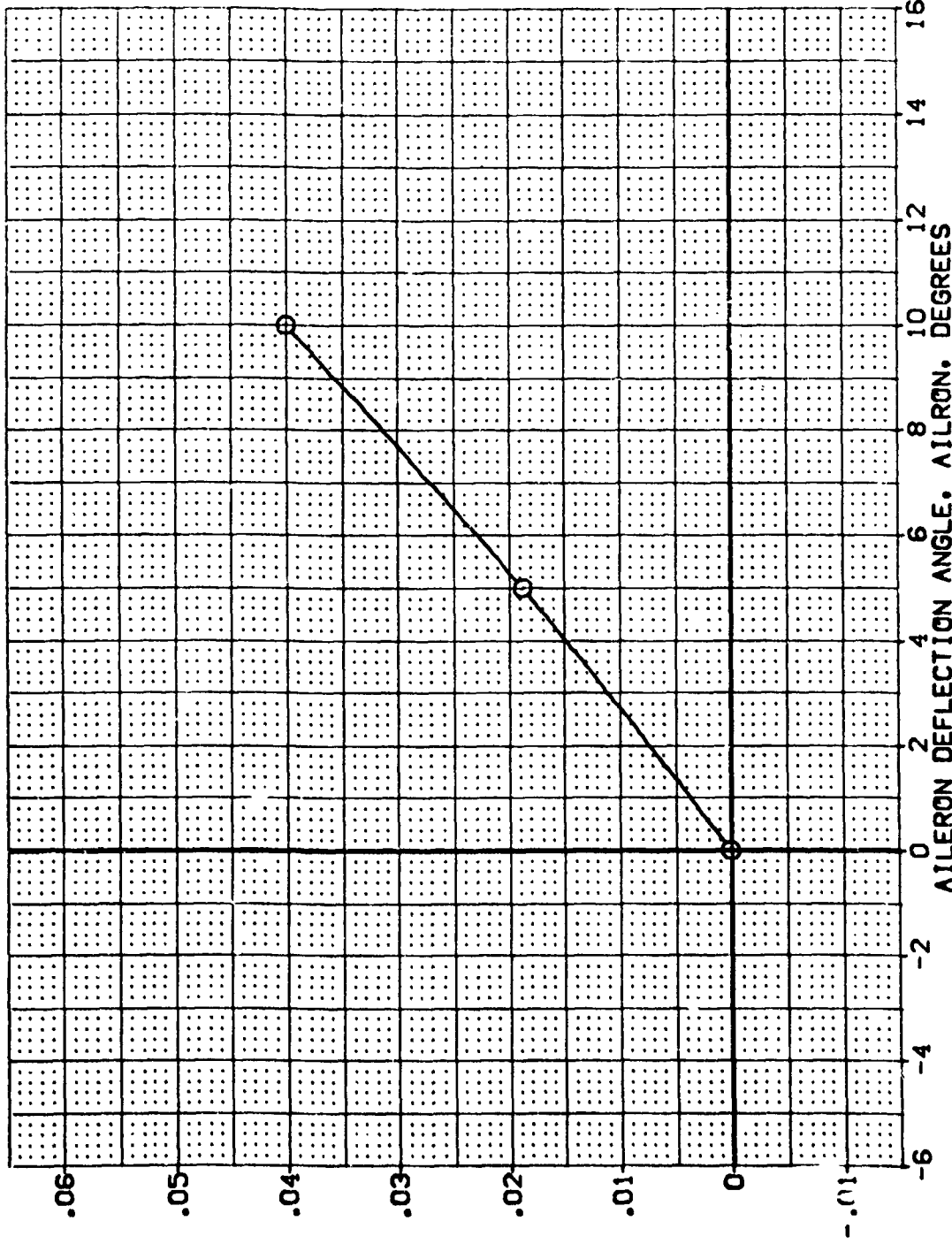
SO.FT. INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE

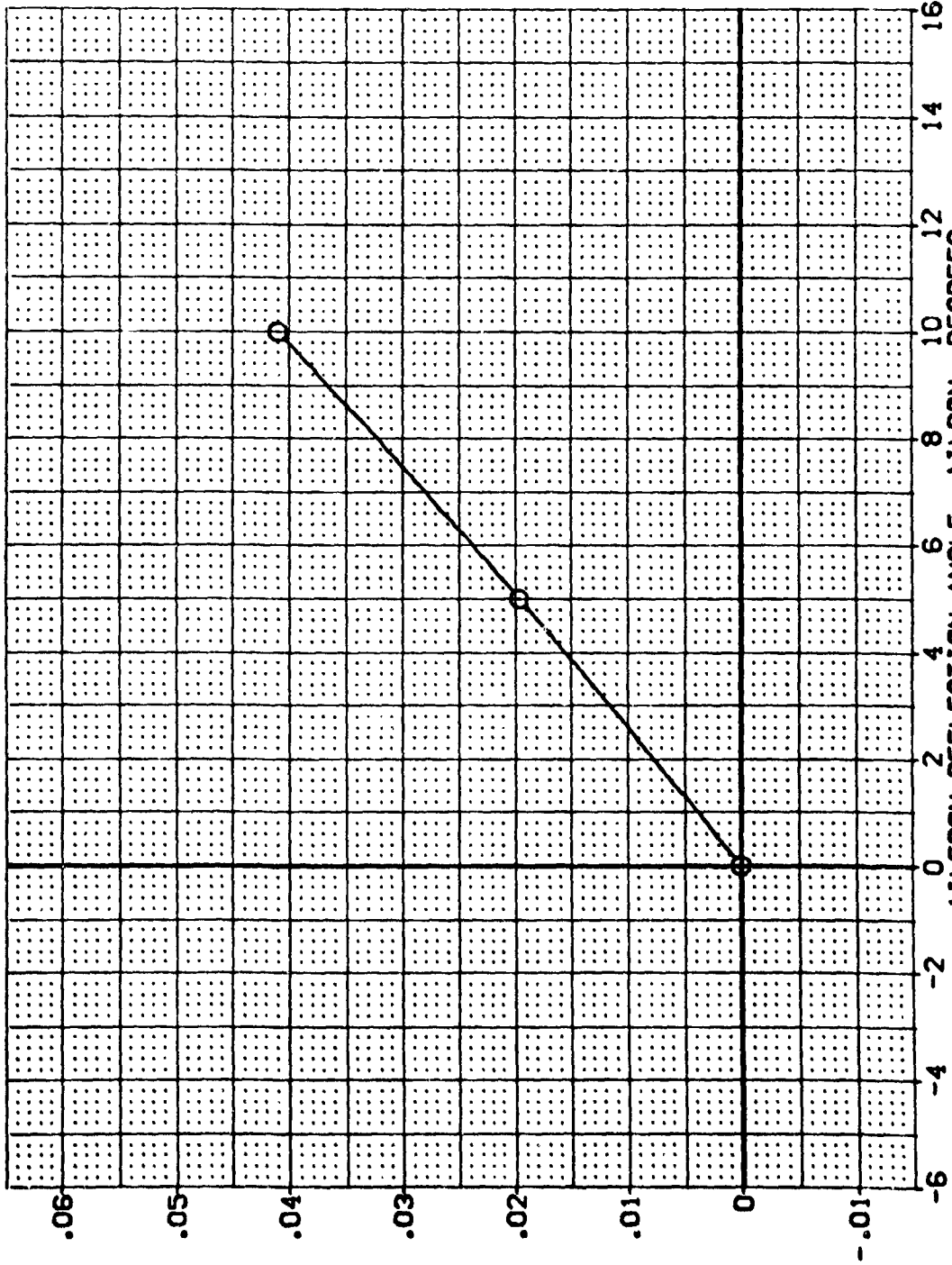


INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	5.000	.200	-12.000	25.000	DELTON RUDDER BETA	AILRON 20Z117 20Z160	SO.FT. INCHES INCHES INCHES INCHES SCALE
						AILRON 5.000	4.4119 19.2299 37.9359 43.5974 15.0000 15.1875 .0405
						REF REF XTRP YTRP ZTRP SCALE	



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCRL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	DATASET	AILERON	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	10.000				.200 DELVON	.000	20Z117	5.000		20Z161	5.000	LREF	4.4119
					-12.000 RUDDER	.000	20Z160	10.000				BREF	19.2289
					25.000 BETA							XMRP	37.9359
												ZMRP	43.5874
												SCALE	.0000
												SCALE	15.1875
												SCALE	.0405

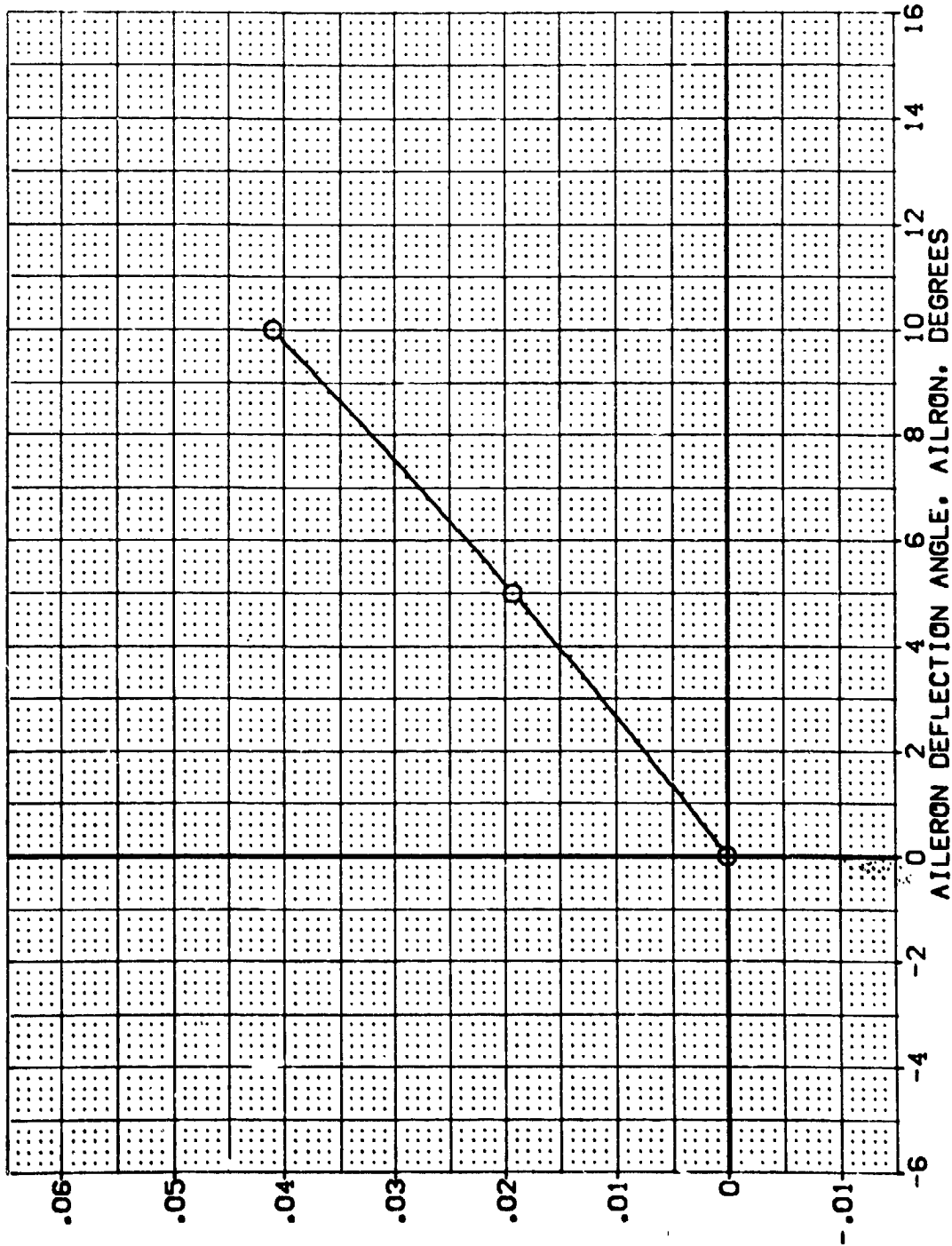
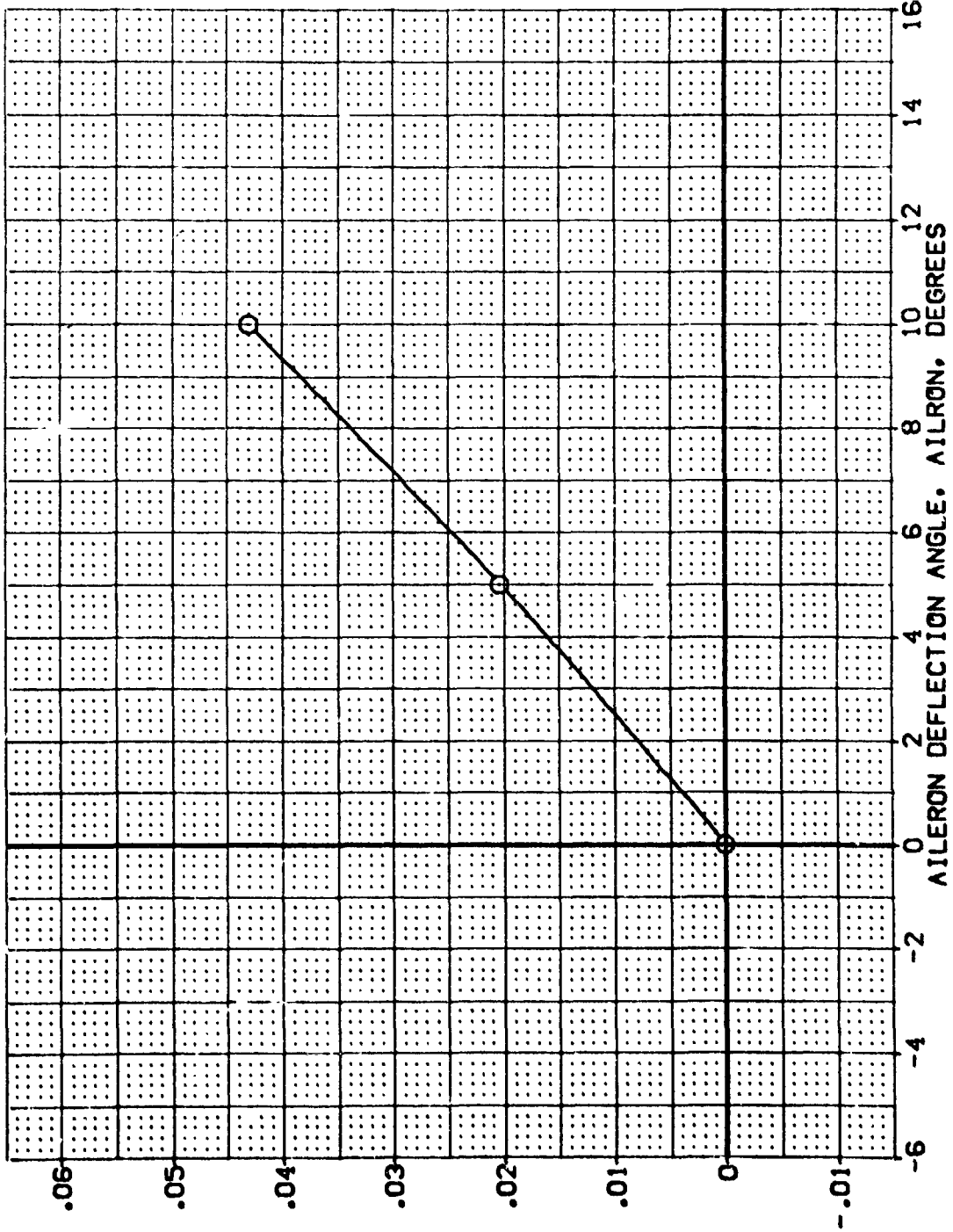


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BDFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	ATLIRON	SCALE	REFERENCE INFORMATION	SO. FT.
○	15.000				.200 DELVON -12.000 RUDDER 25.000 BETA	.000 DATASET .000 20Z117 .000 20Z160	ATLIRON	5.000	SREF LREF BREF XMRP ZMRP SCALE	4.4119 19.2299 37.9399 43.5974 .0000 15.1875 .0405	INCHES INCHES INCHES INCHES INCHES INCHES SCALE



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(2DZ117)

0A628 B26C9 M7F8 W116E28V8R5X9

DATA SOURCE

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBL ALPHA 20.000 MACH 80FLAP SPOBRK

PARAMETRIC VALUES  
 .200 DELVON  
 -12.000 RUDDER  
 25.000 BETA

.000 DATASET 20Z117  
 .000 DATASET 20Z160

AILRON 10.000  
 AILRON 10.000

AILRON 5.000  
 DATASET 20Z161

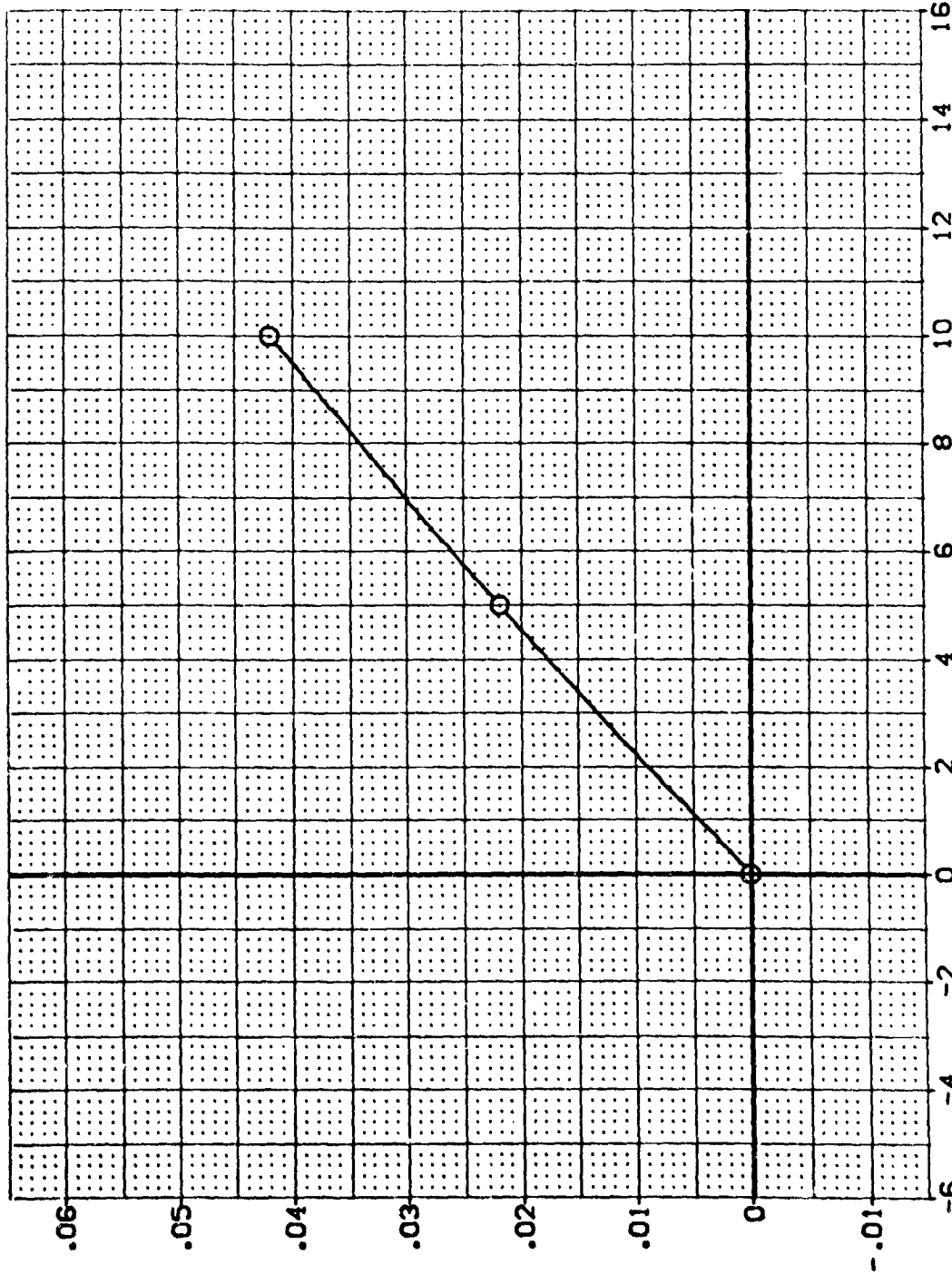
SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9369 INCHES  
 XMPB 43.5974 INCHES  
 YMPB .0000 INCHES  
 ZMPB 15.1875 INCHES  
 SCALE .0405 SCALE

AILRON 10.000  
 AILRON 10.000

.000 DATASET 20Z117  
 .000 DATASET 20Z160

AILRON 10.000  
 AILRON 10.000

SYMBL  
 O



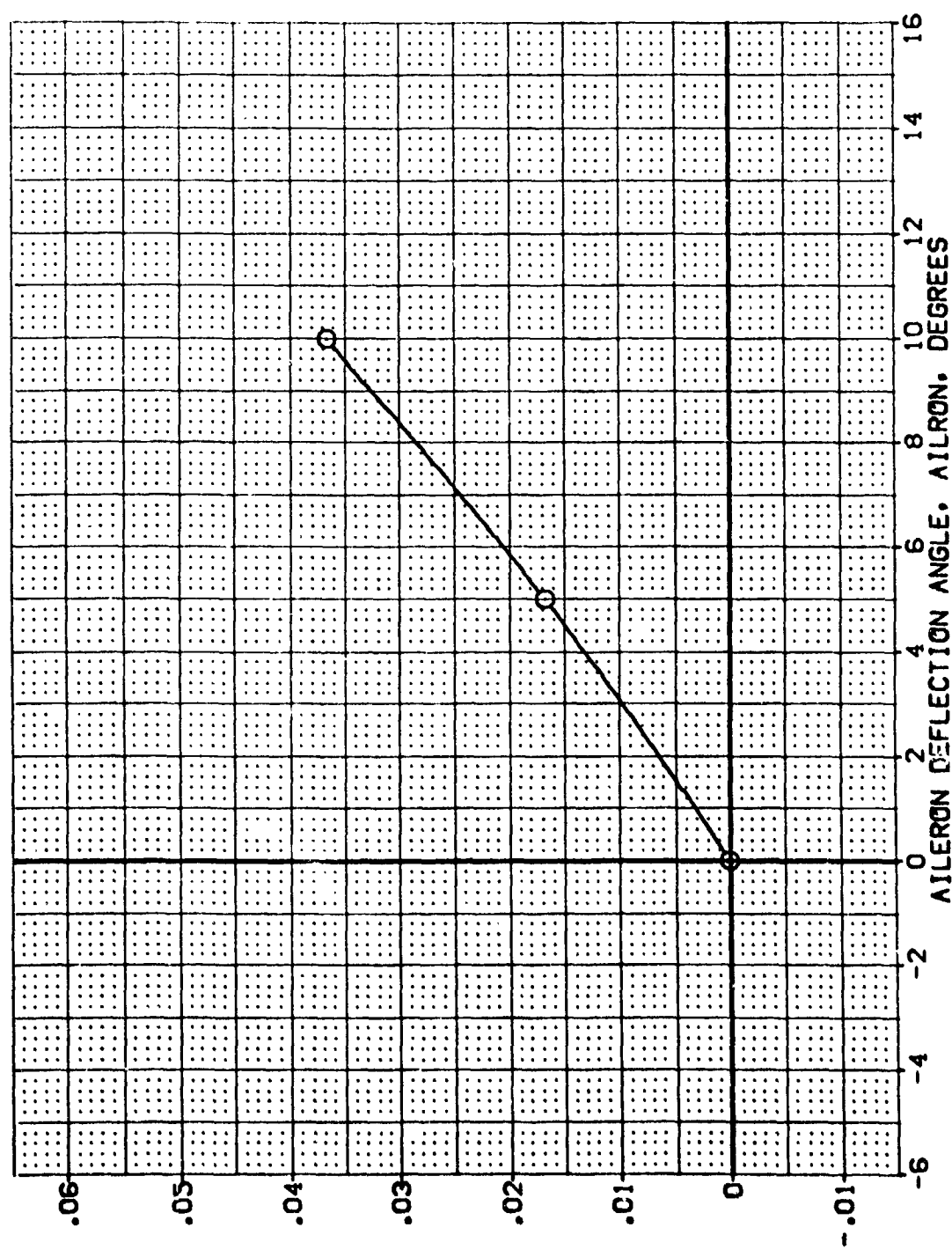
INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	25.000	BDFLAP	.200 DELVON	AIURON	SREF
		SPOBRK	-12.000 RLOOER	.000 DATASET	19.2299
			25.000 BETA	20Z117	INCHES
				.000 20Z160	37.9359
				10.000	INCHES
				AIURON	43.5874
				.000	INCHES
				AIURON	15.1873
				5.000	INCHES
				20Z161	SCALE
					.0405



INCREMENTAL ROLLING MOMENT COEFFICIENT, OCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILRON	SREF	REFERENCE INFORMATION
O	30.000		.200 DELVON	AILRON	20Z161	5.000	4.4119	SO.FT.
			-12.000 RUDDER	.000 20Z117			19.2299	INCHES
			25.000 BETA	.000 20Z160			37.9369	INCHES
							43.5974	INCHES
							.0000	INCHES
							15.1873	INCHES
							.0405	SCALE

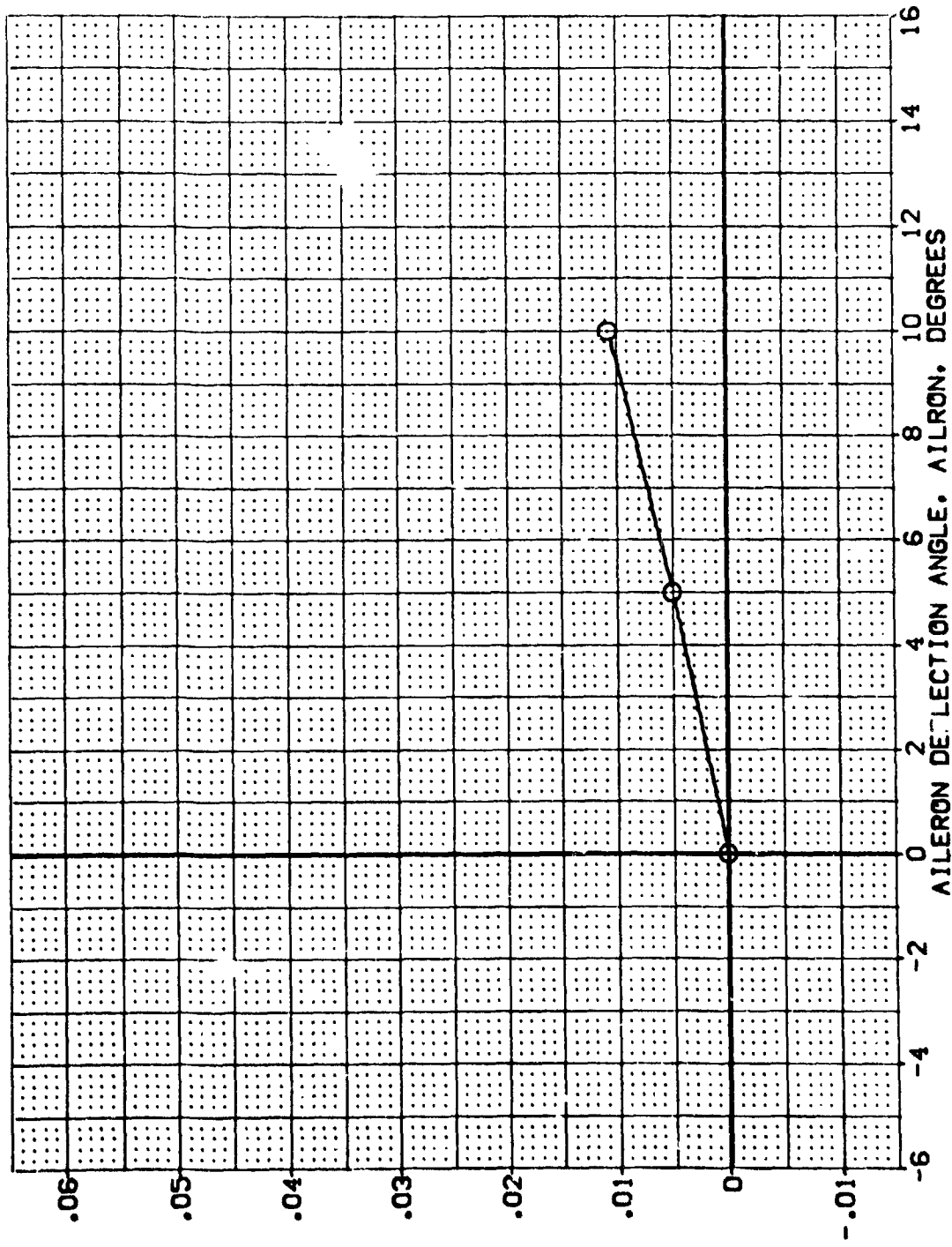
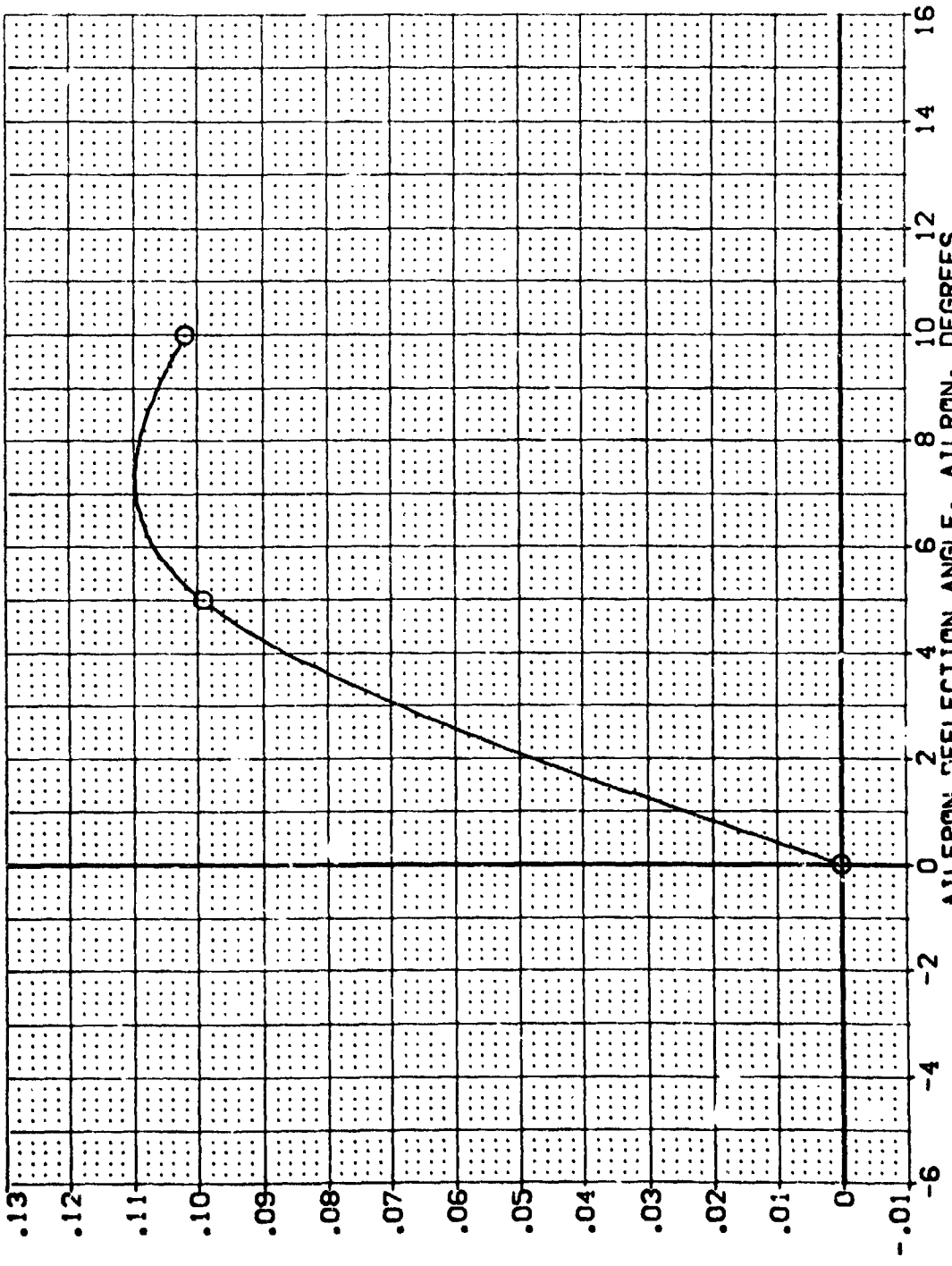


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALP-4	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
0	.000	MACH	.200	DELTA	.000	AILRON	AILRON	SREF	4.4119	SO.FT.	4.4119	INCHES	
		EDFLAP	-12.000	RUDDER	.000	AILRON	AILRON	LREF	19.2299	INCHES	19.2299	INCHES	
		SPOBRK	25.000	BETA	.000	20Z117	20Z160	BREF	37.9359	INCHES	37.9359	INCHES	
						20Z160		XMRP	43.5974	INCHES	43.5974	INCHES	
								YMRP	0.000	INCHES	0.000	INCHES	
								ZMRP	15.1875	INCHES	15.1875	INCHES	
								SCALE	.0405	SCALE	.0405	SCALE	



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	5.000	BOFLAP	.200 DELVON	11LRON	90.FT.
		SPOBRK	-12.000 RUDDER	.000 DATASET	INCHES
			25.000 BETA	20Z161	INCHES
				5.04J AILRON	INCHES
				20Z160	INCHES
				10.000	INCHES
				.000 DATASET	SCALE
				20Z117	4.4119
				20Z160	19.2299
					37.9359
					43.5974
					15.1873
					.0405

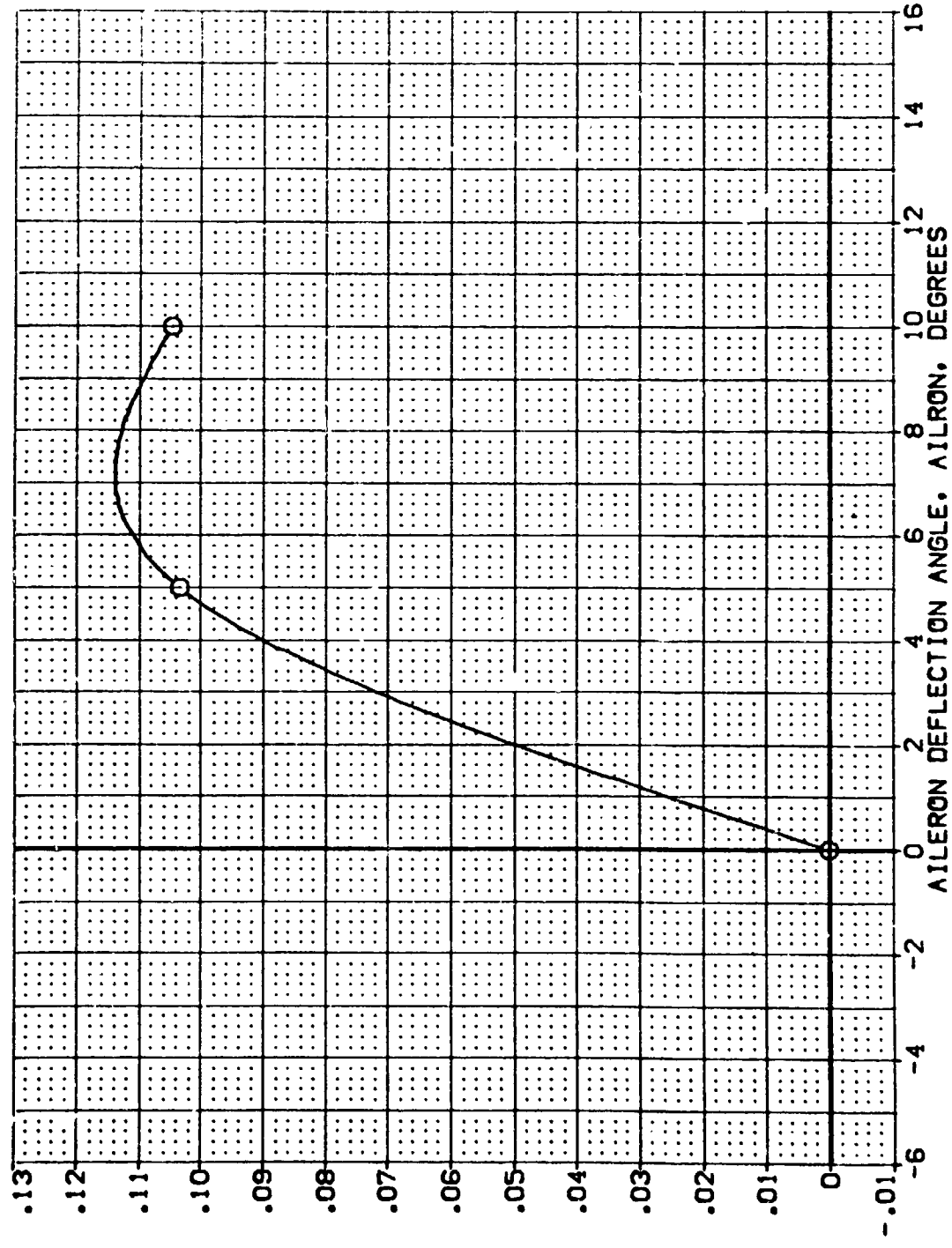
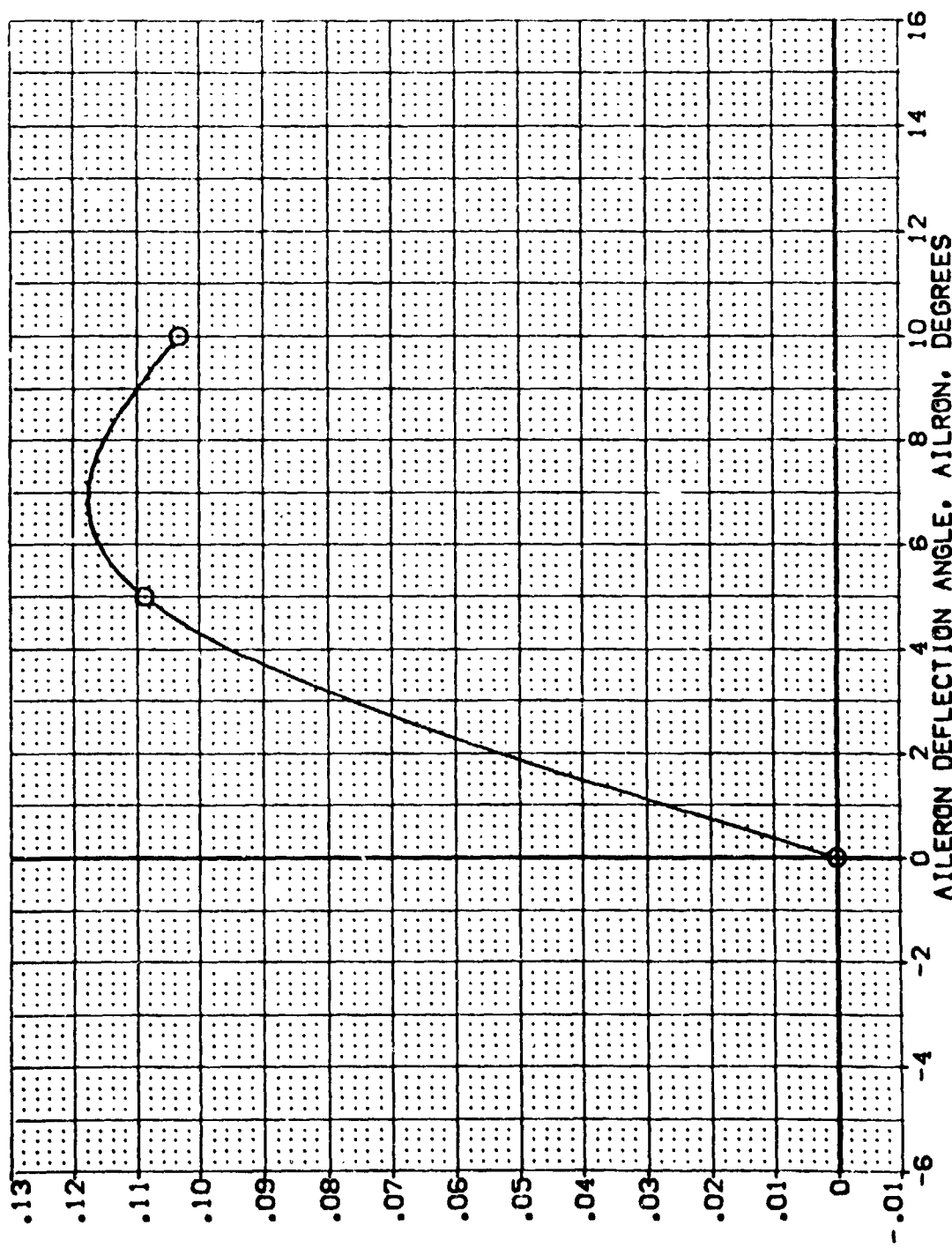


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	10.000		.200 DELVON -12.000 RUDDER 25.000 SETA	ATLUN .000 10.000	4.4118 SQ.FT. 19.2259 INCHES 37.9359 INCHES 43.5974 INCHES 15.0000 INCHES 15.1875 INCHES .0405 SCALE
				DATASET 20Z117 20Z160	SREF 5.000
					XREF 5.000
					YREF 10.000
					XTRP 10.000
					YTRP 10.000
					ZTRP 15.1875
					SCALE .0405



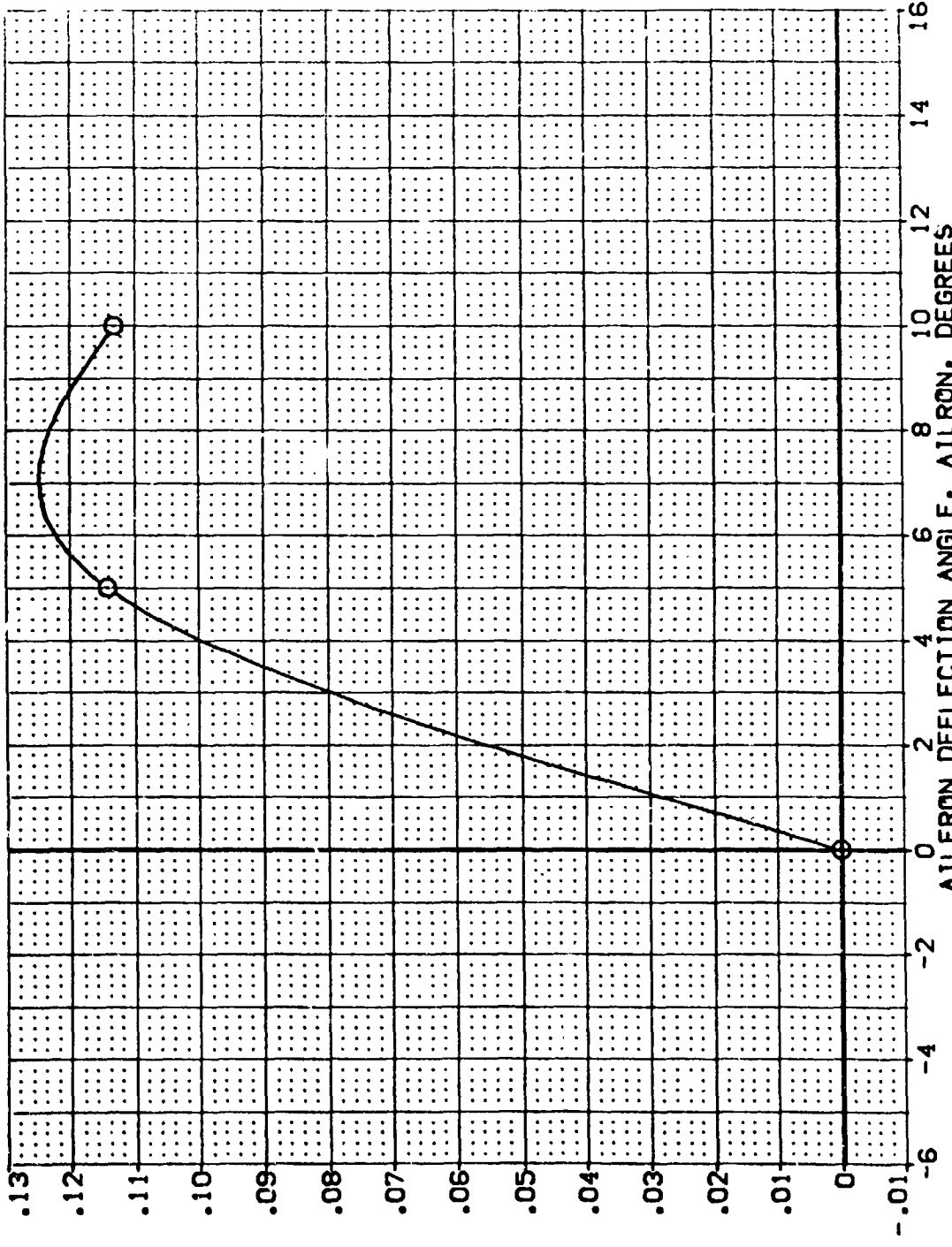
INCREMENTAL NORMAL FORCE COEFFICIENT, OCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	15.000	.200	-12.000	25.000	DELTON RLODER BETA	ATLRON ATLRON ATLRON	4.4118 SQ.FT. 19.2299 INCHES 37.9359 INCHES 43.5974 INCHES .0000 INCHES 15.1875 INCHES .0405 SCALE
						DATASET ATLRON ATLRON	SREF LREF XMRP YMRP ZMRP SCALE
						20Z161 5.000 5.000	
						.000 .000 .000	
						10.000	



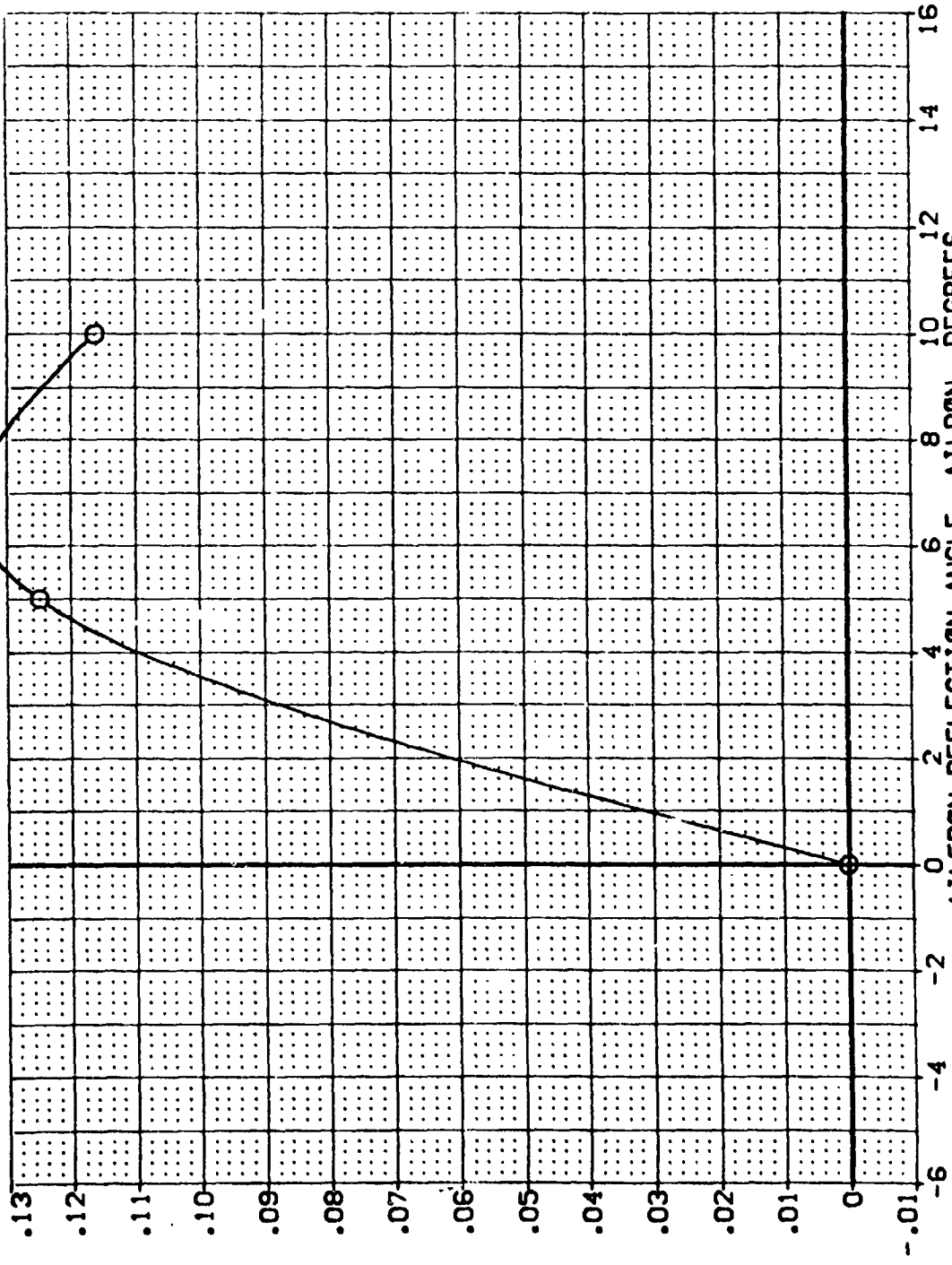
INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILRON	REF	SCALE
0	20.000	.200	-12.000	25.000	DELTON RUDDER BETA	AILRON .000 20Z117 20Z160	AILRON 5.000	SREF LREF BREF XMRP YMRP ZMRP	4.4119 19.2289 37.5359 43.5974 .0000 15.1875 .0405	SD.FT. INCHES INCHES INCHES INCHES INCHES SCALE

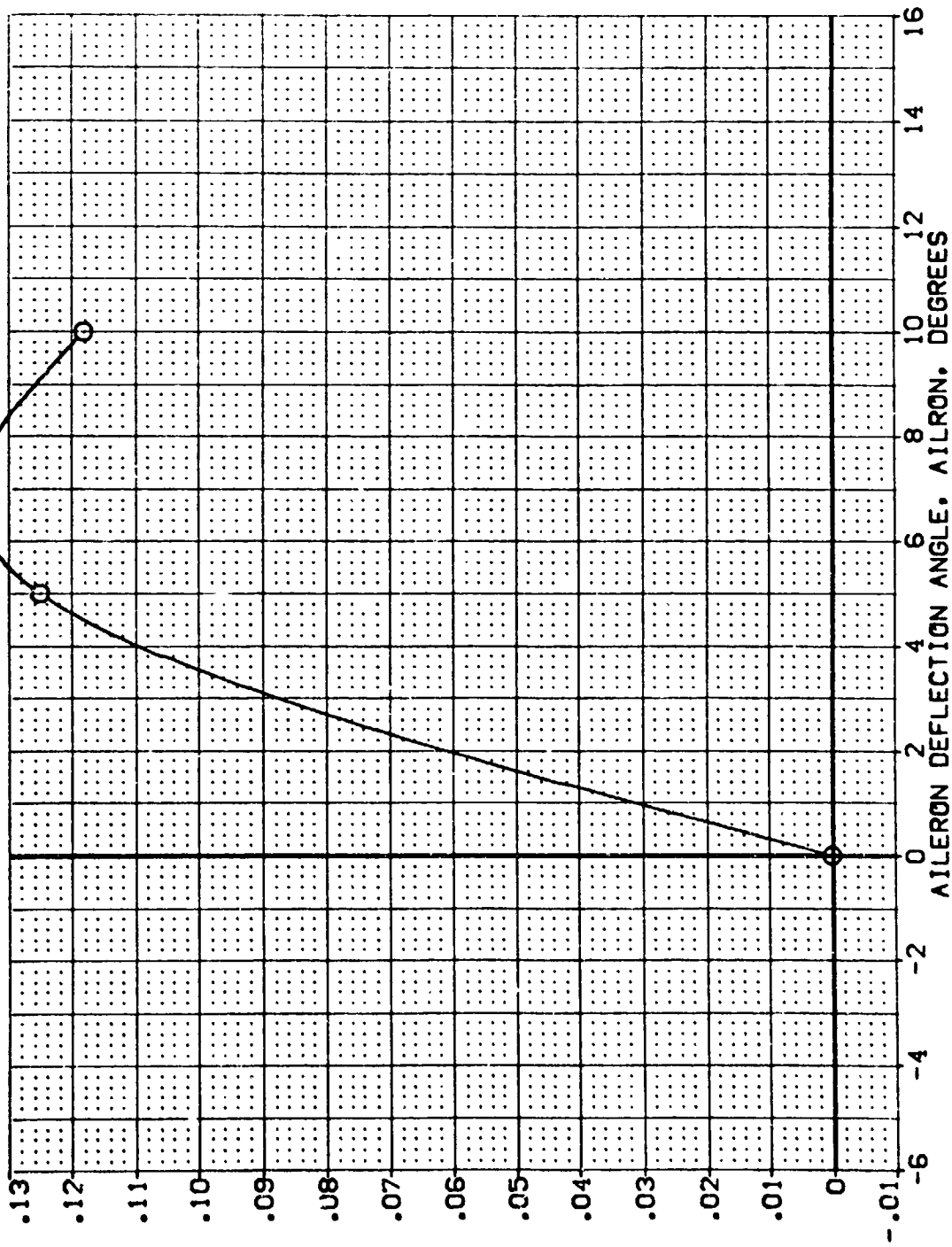


INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SFOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	25.000	.200	-12.000	25.000	DELTON RLOOR BETA	AILRON DATASET AILRON DATASET AILRON SREF LREF BREF XMRP YMRP ZMRP SCALE	SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE
					.000 .000 .000	20Z117 20Z160 20Z161 5.000 5.000	4.4119 19.2259 37.9359 43.5974 .0000 15.1875 .0405



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 826C9 M7F8 W116E28V8R5X9

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL: ○

ALPHA: 20.000

MACH: 0.200

BDFLAP: -12.000

SPOBRK: 25.000

PARAMETRIC VALUES

DELVON: .000

RUDDER: .000

BETA: .000

DATA SOURCE

AILRON: 5.000

DATASET: 20Z161

REF: 20Z117

X-REF: 20Z160

Y-REF: 10.000

Z-REF: 10.000

SCALE: .0405

REFERENCE INFORMATION

SO.FT.: 4.4119

INCHES: 19.2298

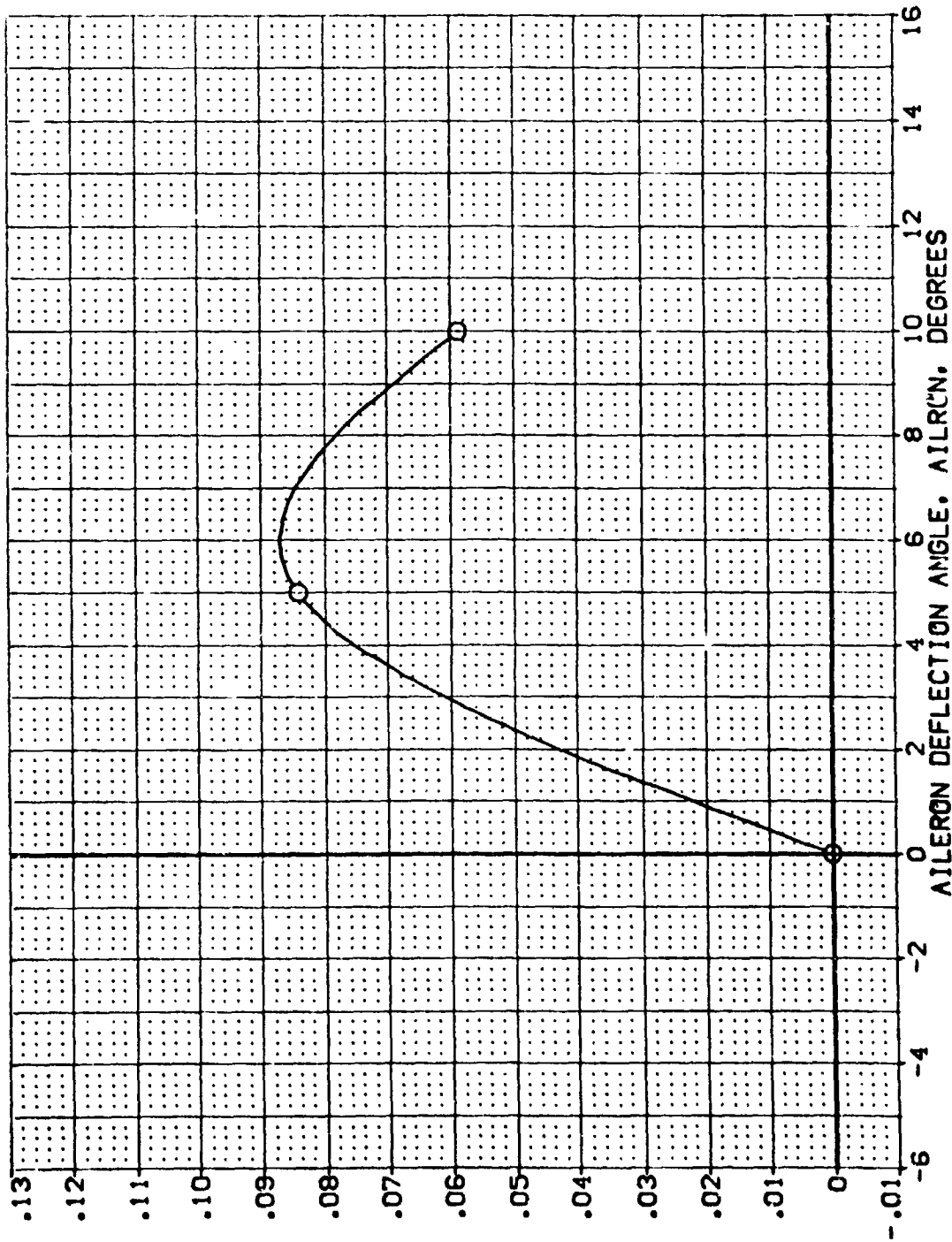
INCHES: 37.9259

INCHES: 43.5374

INCHES: .0000

INCHES: 15.1875

SCALE: .0405

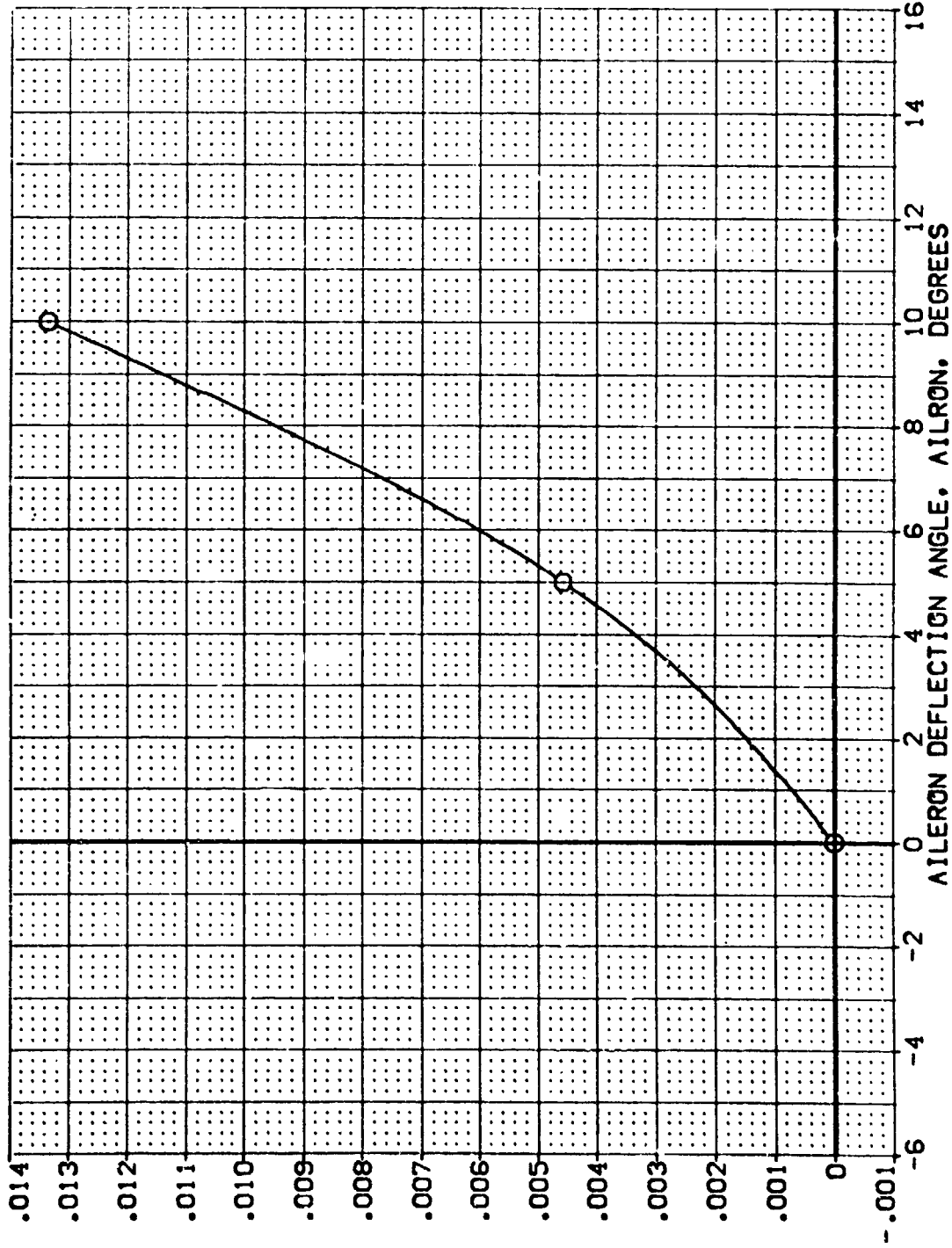


INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMB.	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	.000		.200 DELVON	.000 AILERON	.000 20Z117	5.000	4.4119	SO.FT.
			-12.000 RUDDER	.000 10.000	.000 20Z160		19.2299	INCHES
			25.000 BETA				37.9359	INCHES
							43.5974	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

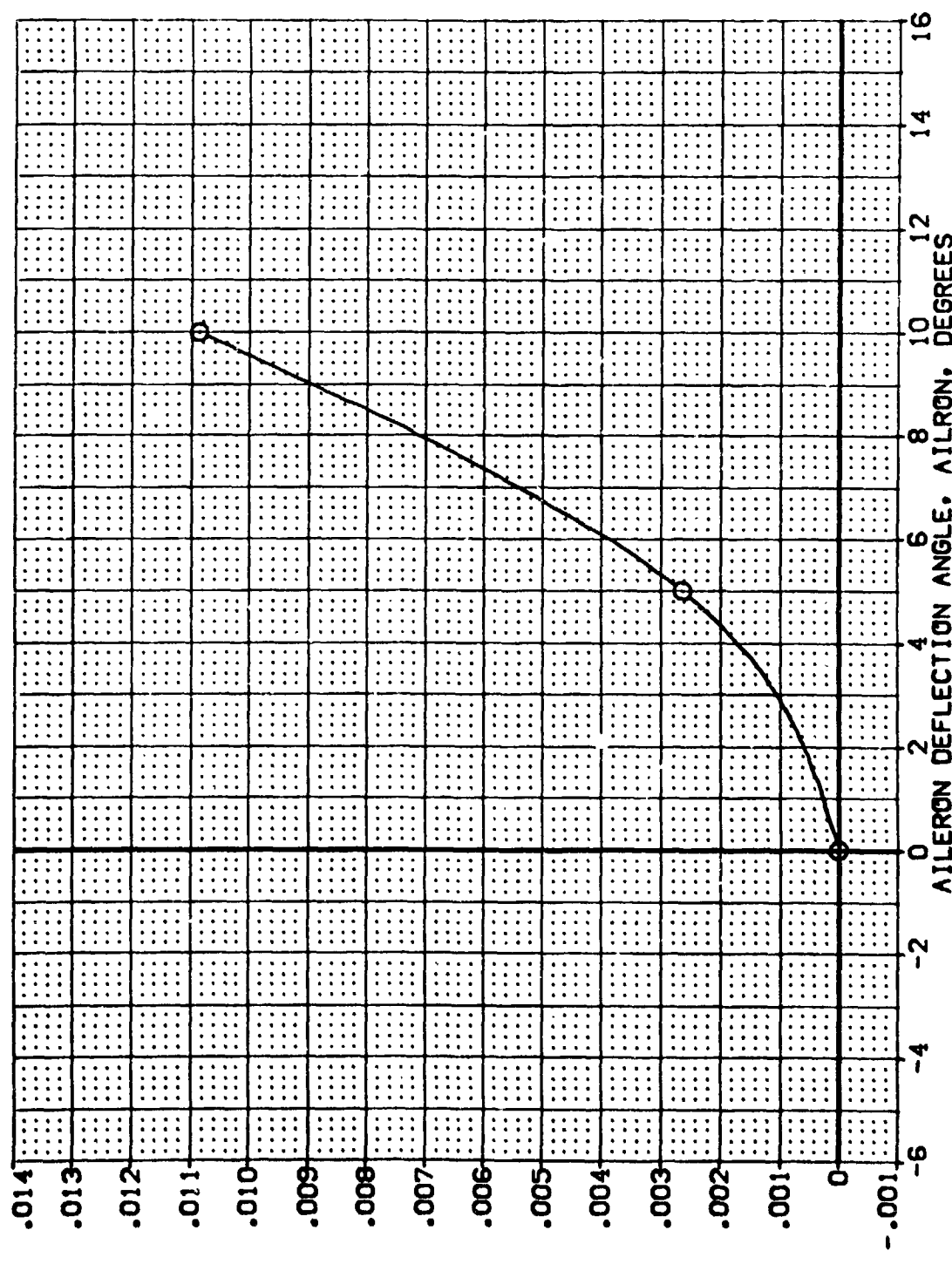
FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



00

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYGDL	ALPHA	MACH	SPDRK	BDTLP	SPDRK	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	REF	SCALE	REFERENCE INFORMATION
0	5.000					.200 DELVON -12.000 RUDDER 25.000 BETA	AILRON .000 10.000	20Z161	5.000	REF 19.2259 37.5359 43.5974 15.1673 .0405		SQ.FT. INCHES INCHES INCHES INCHES SCALE

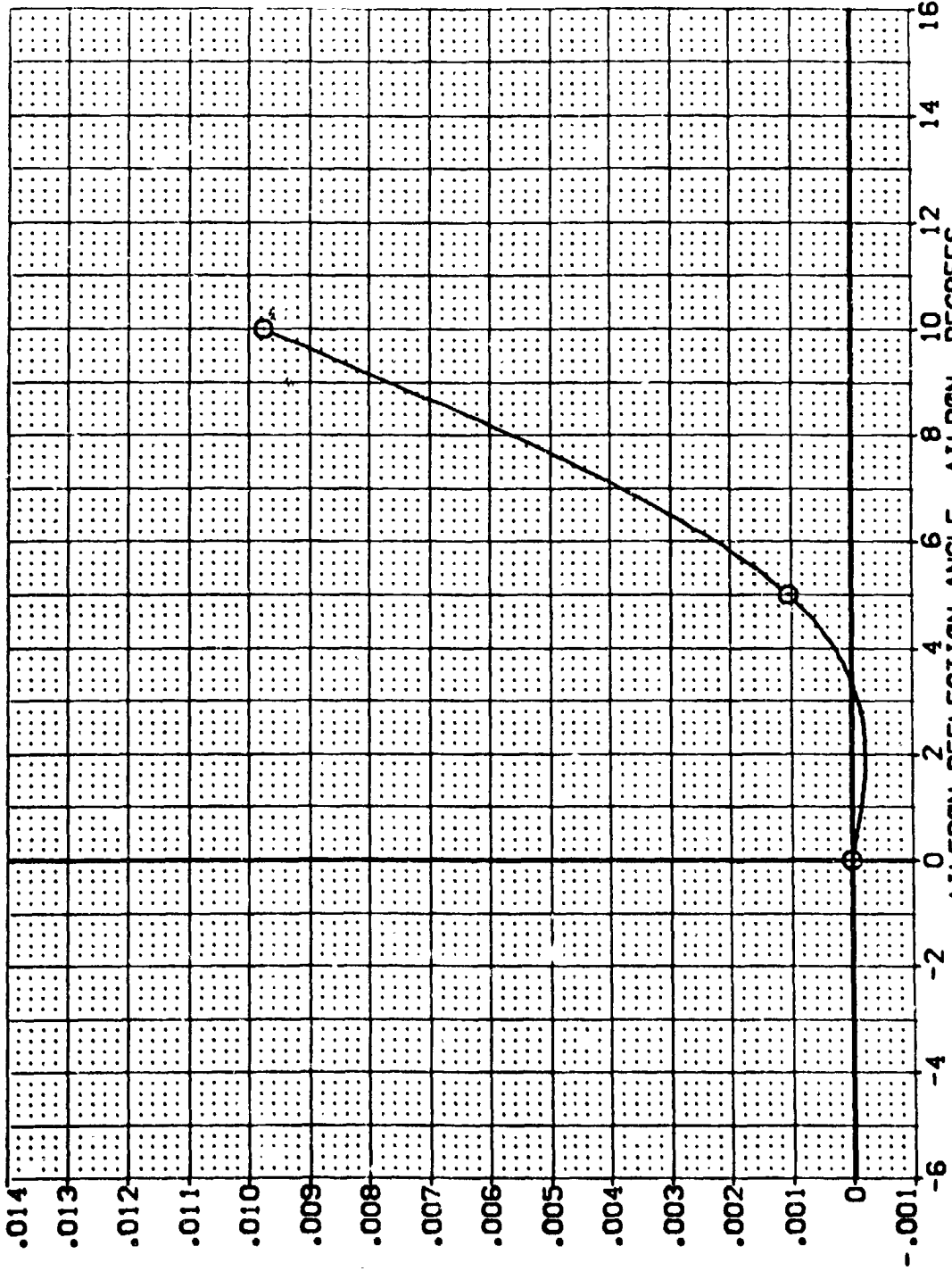


INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
O	10.000		.200	DELTON	.000	DATASET	AILERON	SREF	LREF	SO.FT.	
		80FLAP	-12.000	RUDDER	.000	20Z117	5.000	19.2259	37.5359	INCHES	
		SPOBRK	25.000	BETA	.000	20Z160	10.000	43.5974	15.0000	INCHES	
								15.1875	.0405	SCALE	



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	DATA SET	AILRON	SCALE	REFERENCE INFORMATION
O	15.000				.200 DELVON	.000 20Z117	.000 20Z161	10.000	AILRON	20Z161	5.000		SO.FT. 4.4119
					-12.000 RUDDER								INCHES 19.2299
					25.000 BETA								INCHES 37.9359
													INCHES 43.5974
													INCHES 15.0000
													INCHES 15.1675
													SCALE .0405

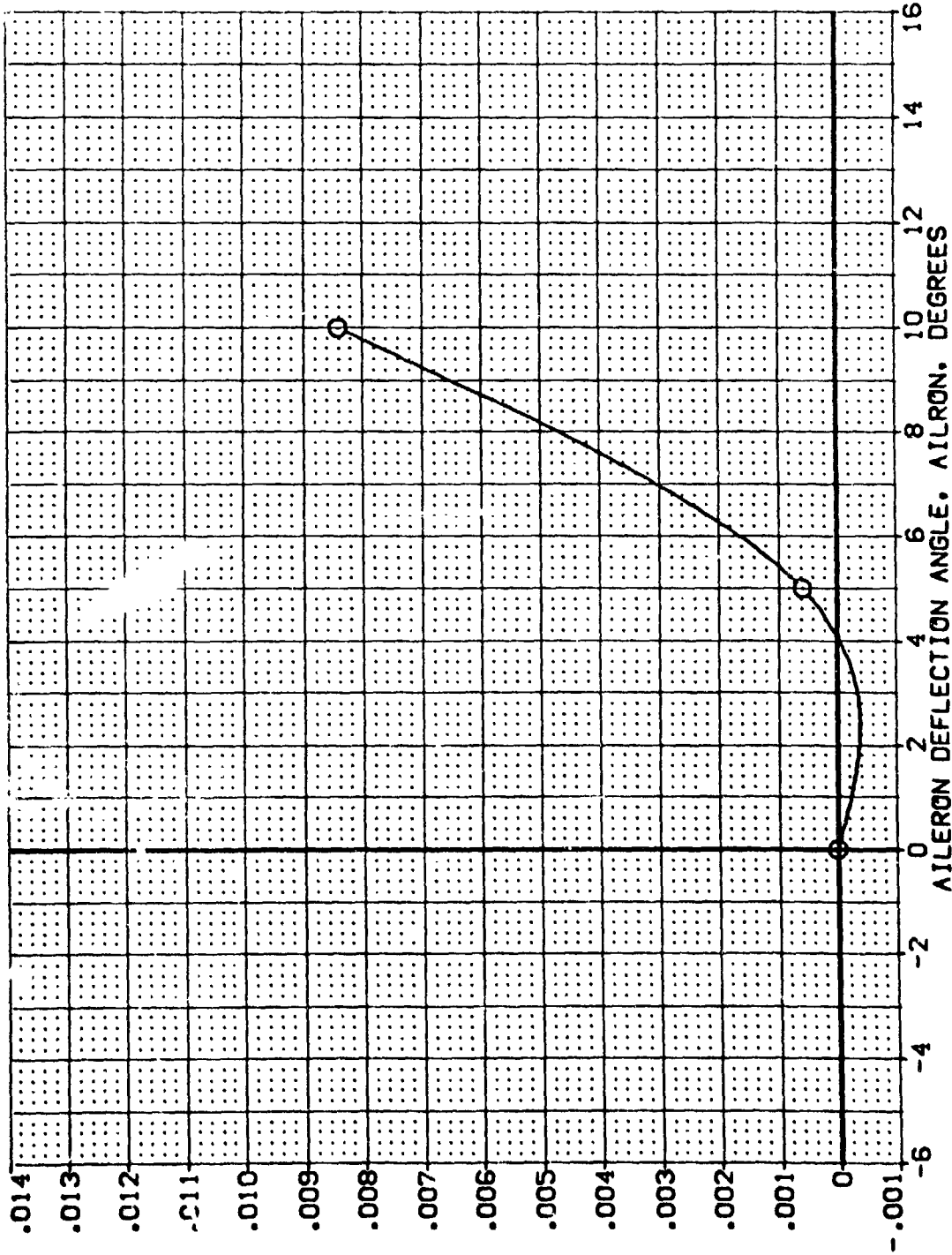


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

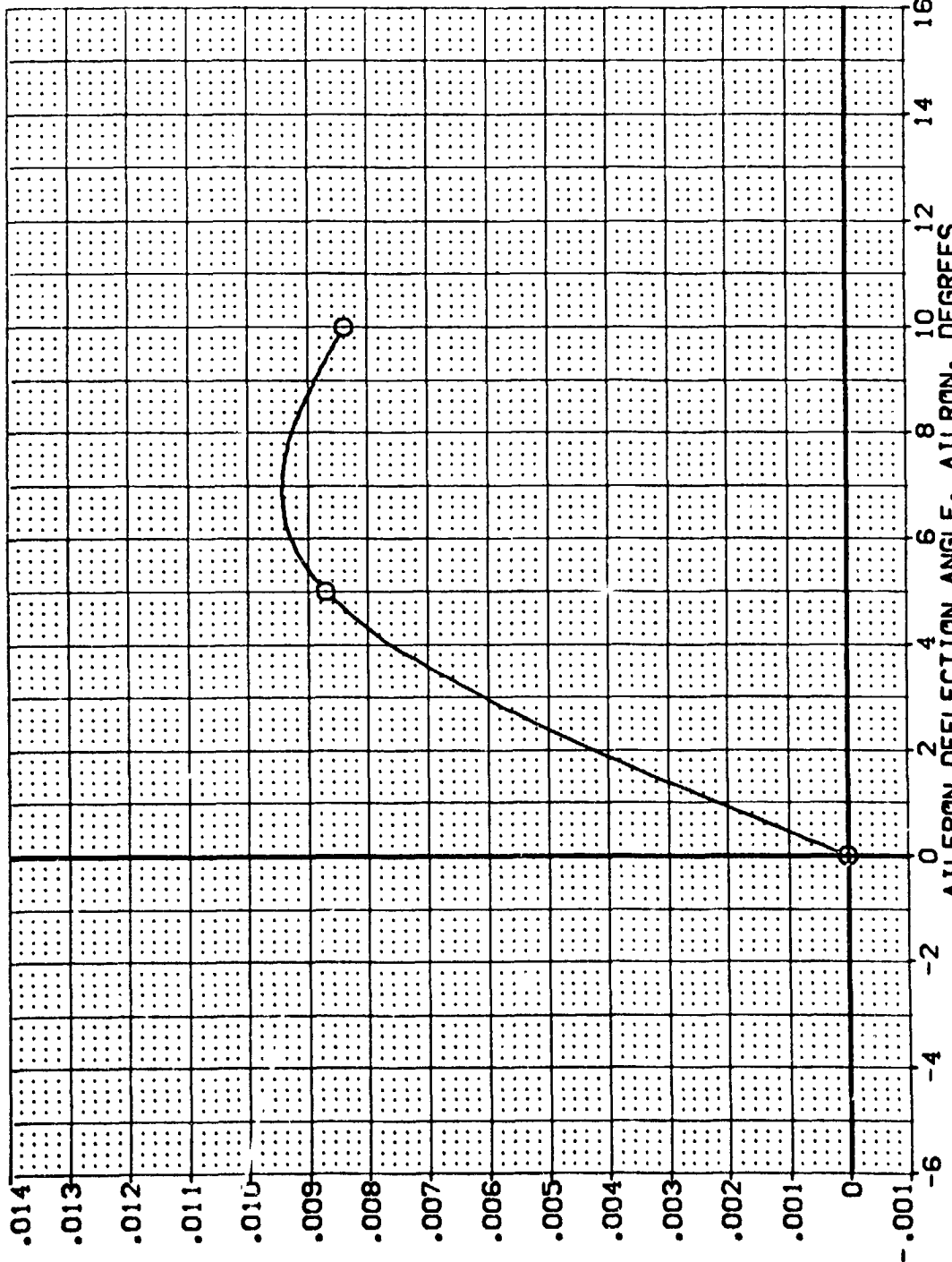
SYMBOL O

PARAMETRIC VALUES

ALPHA	20.000	MACH	.200	DELTA	.000	DATA SET	AILRON	SCALE
BOFLAP	-12.000	RUDER	20Z117	AILRON	.000	20Z161	5.000	SREF
SPDRK	25.000	BETA	20Z160	AILRON	10.000	20Z161	5.000	LREF
								BREF
								XMRP
								YMRP
								ZMRP
								SCALE

REFERENCE INFORMATION

SO.FT	4.4119
INCHES	19.2299
INCHES	37.9359
INCHES	43.5974
INCHES	.0000
INCHES	15.1875
SCALE	.0405



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

M7F8

B26C9

W116E28V8R5X9

SYMBOL  
O

ALPHA  
25.000

WCH  
80FLAP  
SPDRK

PARAMETRIC VALUES  
DELVON  
FLUDER  
BETA

DATA SOURCE  
A1LRON  
A1LRON

DATASET  
20Z161  
20Z160

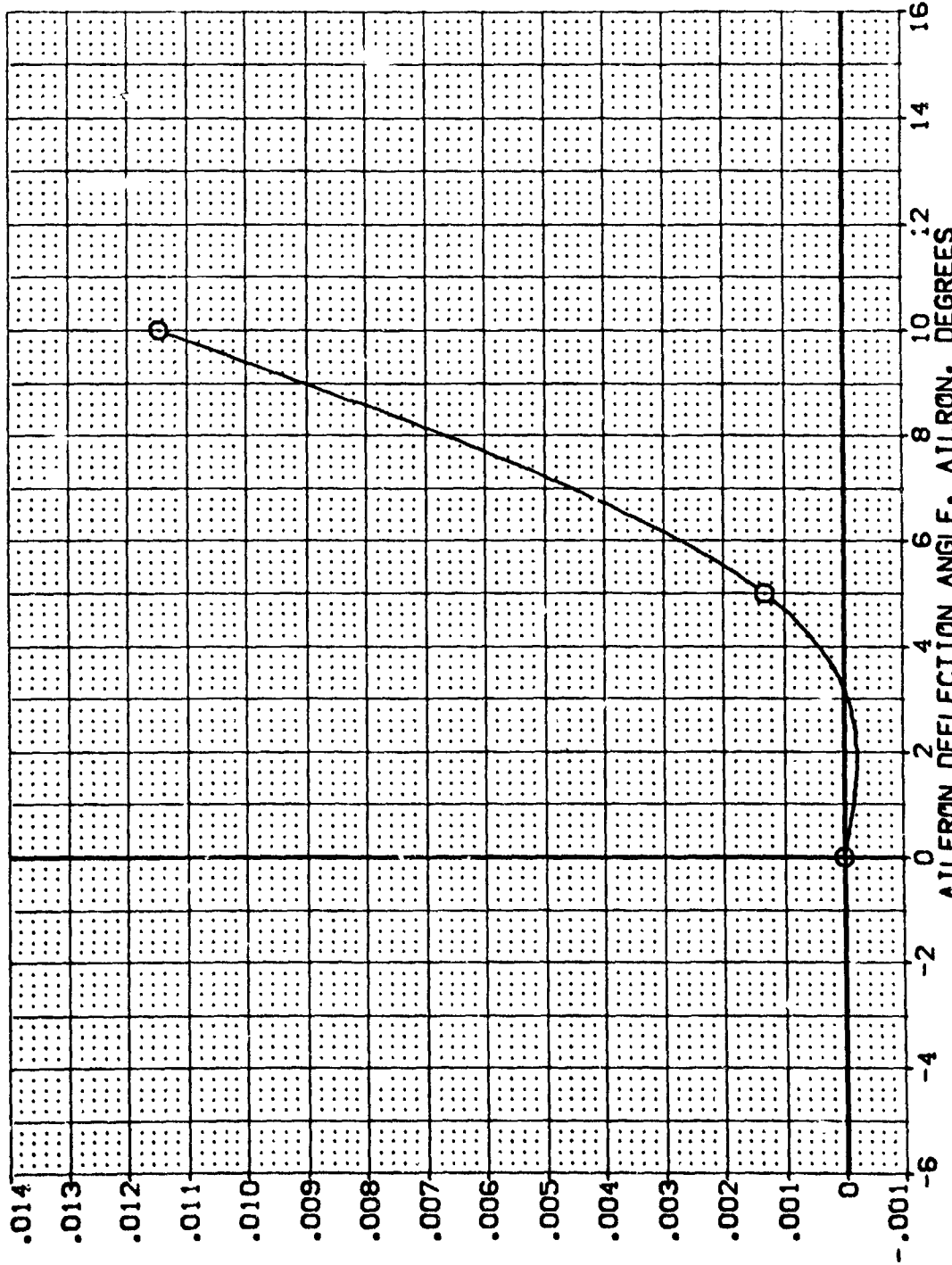
A1LRON  
5.000

REF  
5.000

SCALE  
10.000

REFERENCE INFORMATION  
SQ.FT.  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

4.4119  
19.2259  
37.5359  
43.5974  
10.000  
15.1673  
.0405



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ALPHA 30.000  
 O

PARAMETRIC VALUES  
 MACH .200 DELVON  
 SDFLAP -12.000 RUDDER  
 SPDRK 25.000 BETA

DATA SOURCE  
 AILRON .000 DATASET  
 AILRON .000 20Z117  
 10.000 20Z160

AILRON 5.000  
 DATASET 20Z161

REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9359  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 SCALE .0405

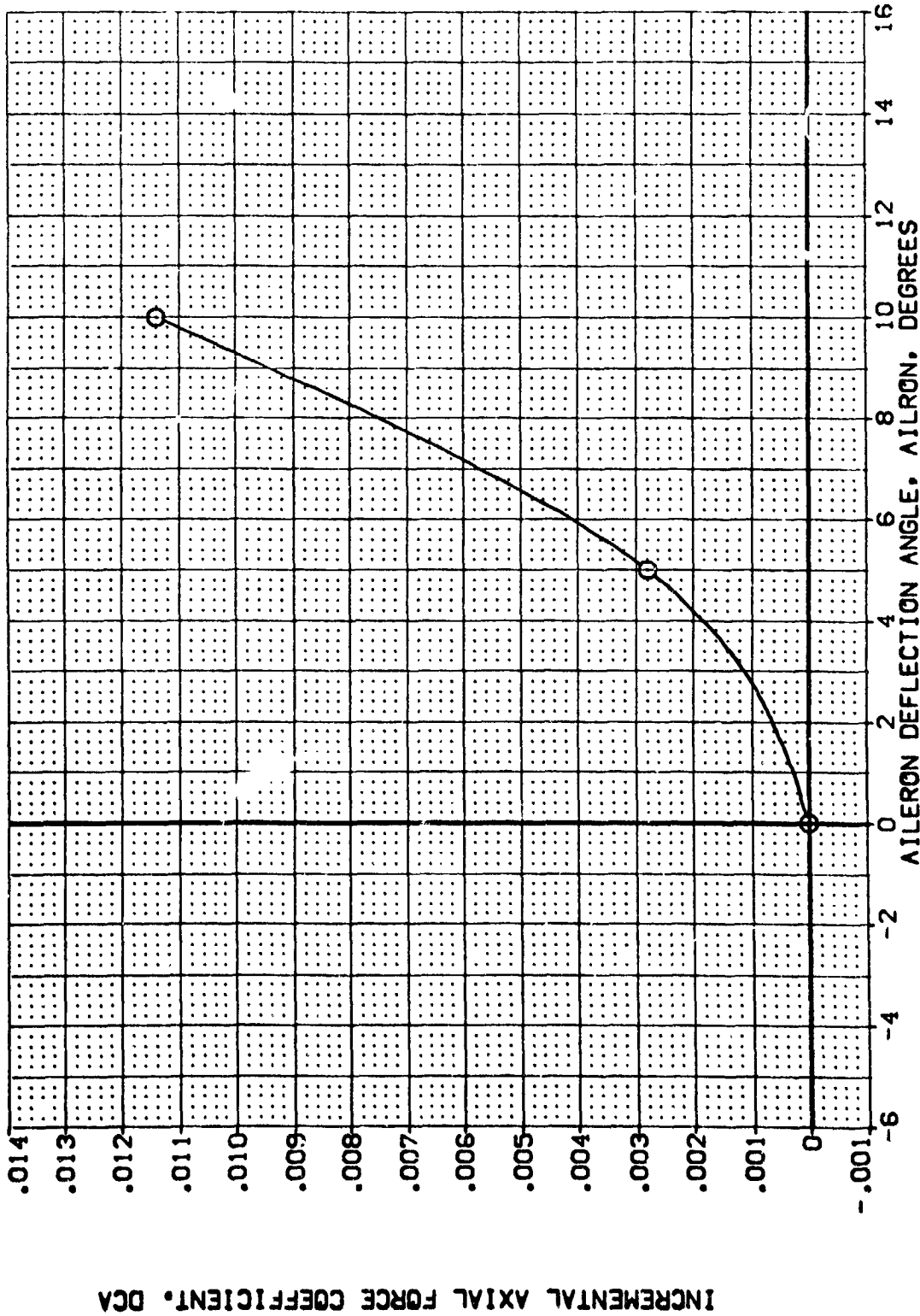
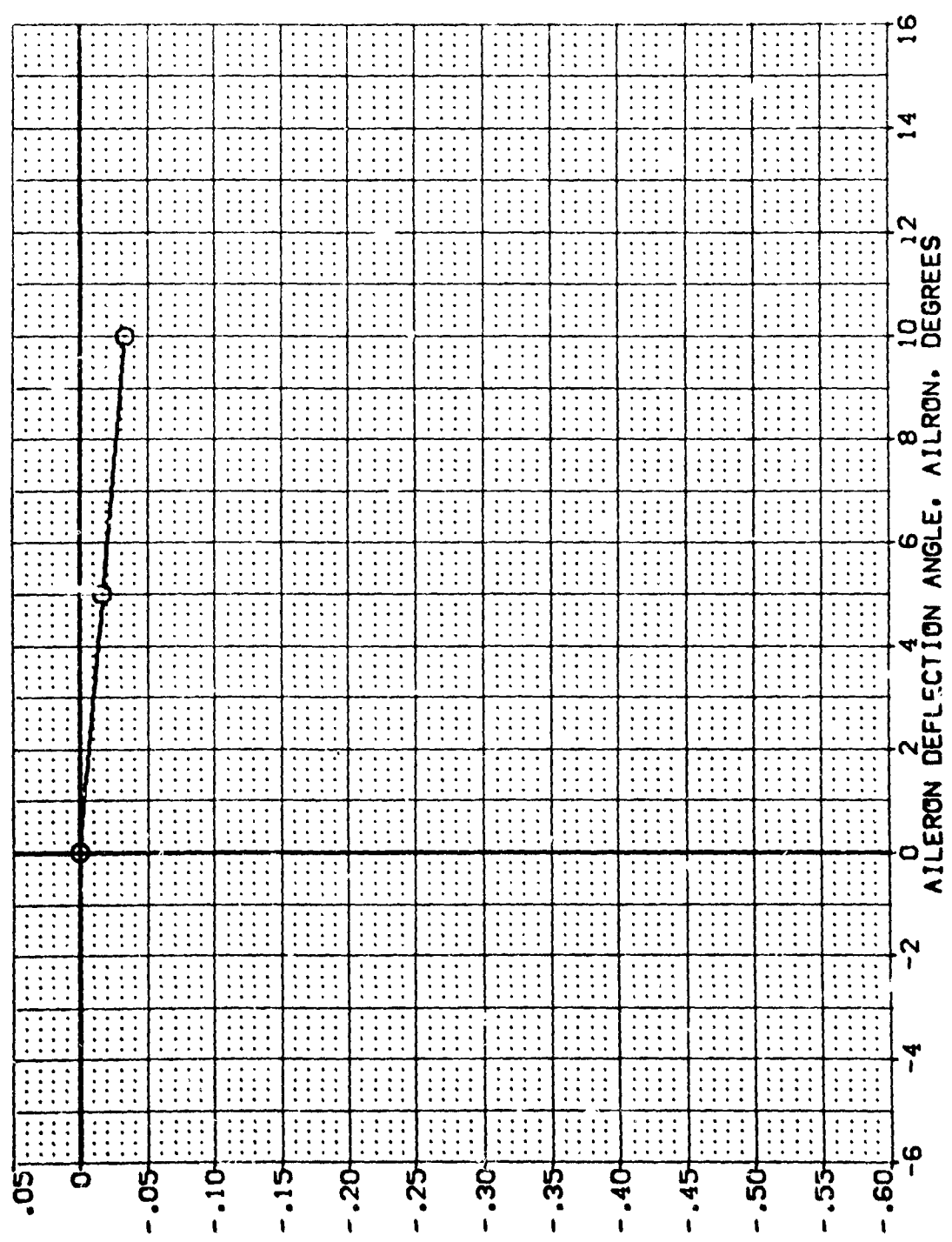


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



CA628 B26C9 M7F8 W11SE28V8R5X9 (20Z117)

SYMBL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
0	.000	MACH	.200	AILRON	AILRON	SREF	4.4119
		BDFLUP	-12.000	AILRON	5.000	LREF	19.2299
		SPDRK	25.000	AILRON	10.000	BRF	37.9359
			BETA			XMRP	43.5974
						YMRP	0.000
						ZMRP	15.1975
						SCALE	.0405



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

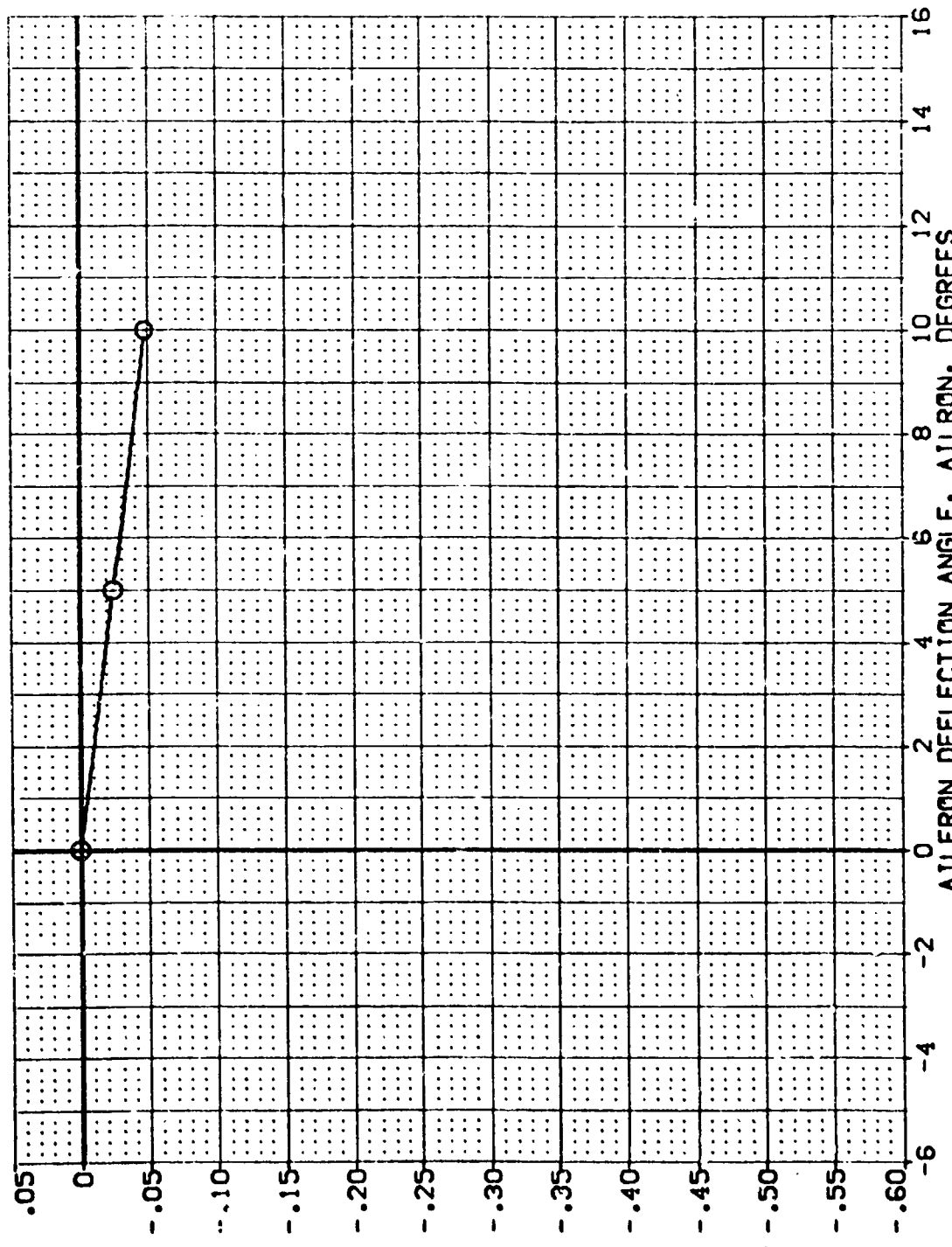






0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	10.000	BOFLAP	.200 DELVON	AILRON	20Z156	5.000	LREF	SO.FT.
		SPOBRK	-12.000 RUDDER	.000 20Z117			BREF	INCHES
			25.000 BETA	.000 20Z156			XMRP	INCHES
				.000			YMRP	INCHES
				10.000			ZMRP	INCHES
							SCALE	SCALE
								.0405



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	15.000	.200	-12.000	25.000	DELVON RUDDER BETA	AILRON AILRON AILRON	SO.FT. INCHES INCHES INCHES INCHES INCHES SCALE
						0.000 20Z117 0.000 20Z158 10.000	4.4119 19.2289 37.9359 43.5874 0.000 15.1875 0.0405
						20Z156 5.000	

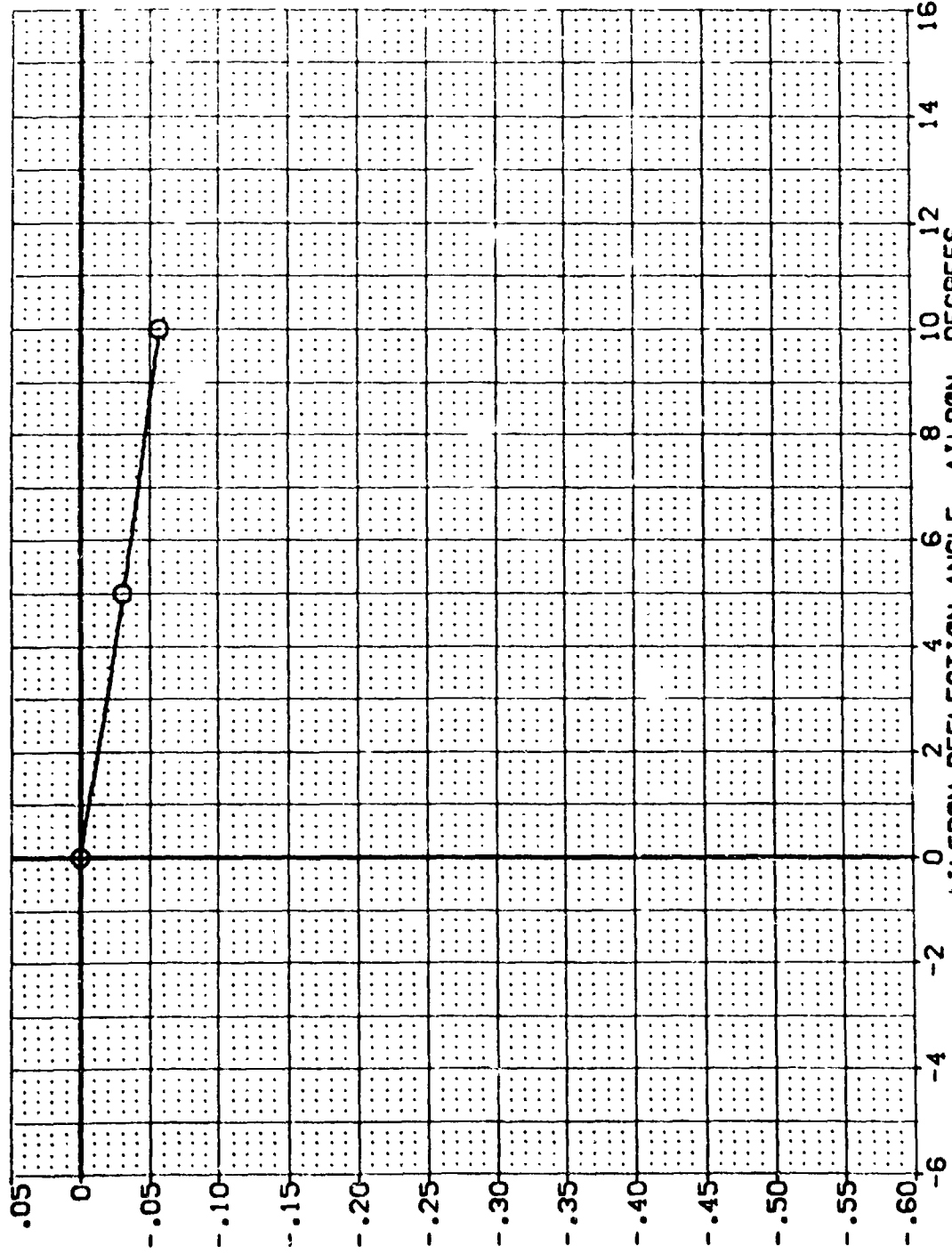


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



(20Z117)

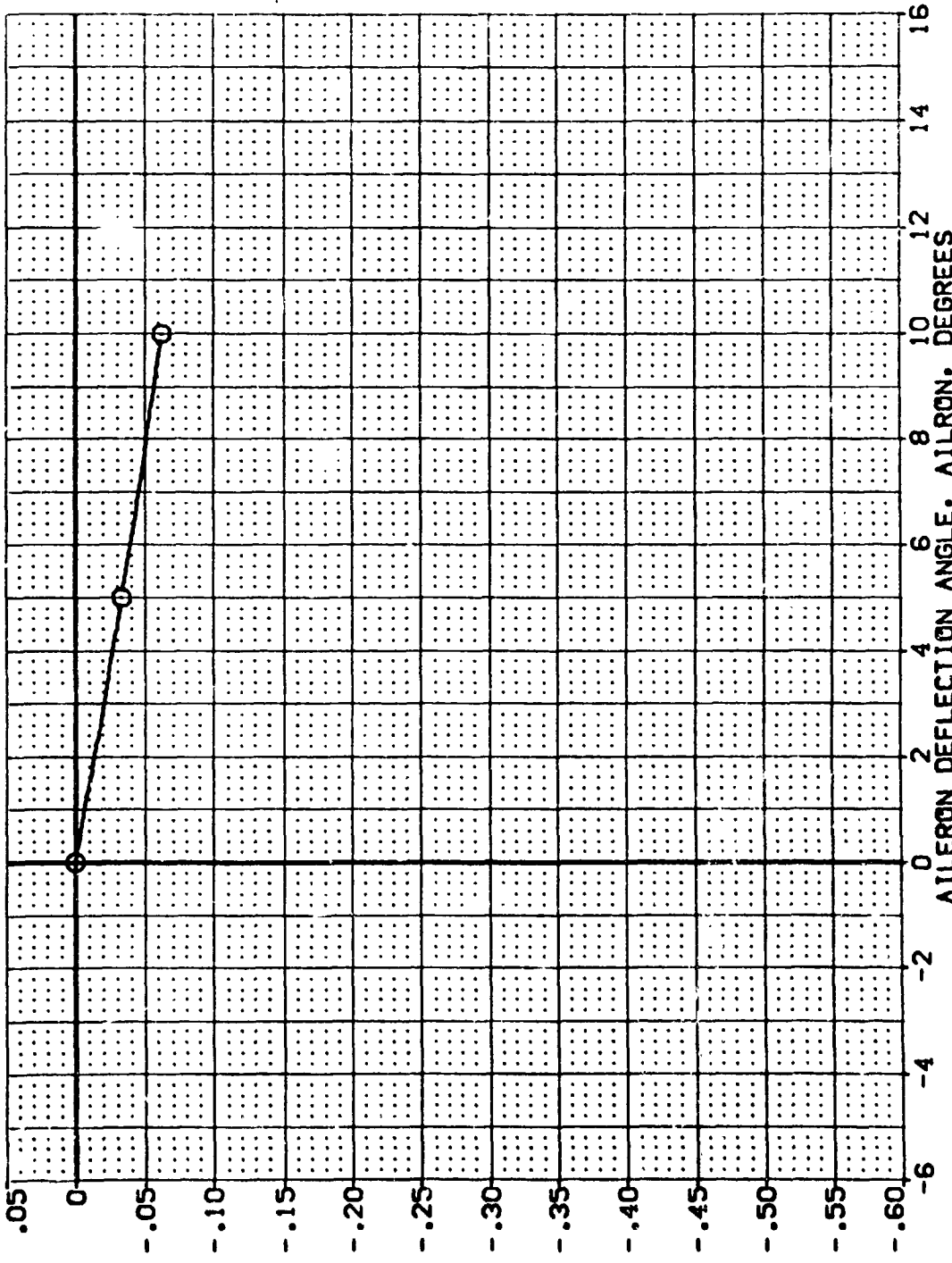
W116E28V8R5X9

M7F8

B26C9

0A62B

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
0	20.000	BOFLAP	.200	DELVON	.000	DATASET	AILRON	SREF	4.4119	SO.FT.	
		SPOBRK	-12.000	RUDDER	.000	20Z117	.000	LREF	19.2288	INCHES	
			25.000	BETA	.000	20Z156	10.000	BREF	37.5359	INCHES	
								XMRP	43.9374	INCHES	
								ZMRP	.0000	INCHES	
								SCALE	15.1875	INCHES	
										SCALE	



INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION			
O	25.000		.200	DELTA	.000	DATASET	AILRON	SREF	4.4119	SO.FT.		
		80FLAP	-12.000	RUDDER	.000	20Z117	5.000	LREF	19.2299	INCHES		
		SPDRK	25.000	BETA	.000	20Z158	10.000	BREF	37.9359	INCHES		
								XTRP	43.5974	INCHES		
								YTRP	.0000	INCHES		
								ZTRP	15.1873	INCHES		
								SCALE	.0405	SCALE		

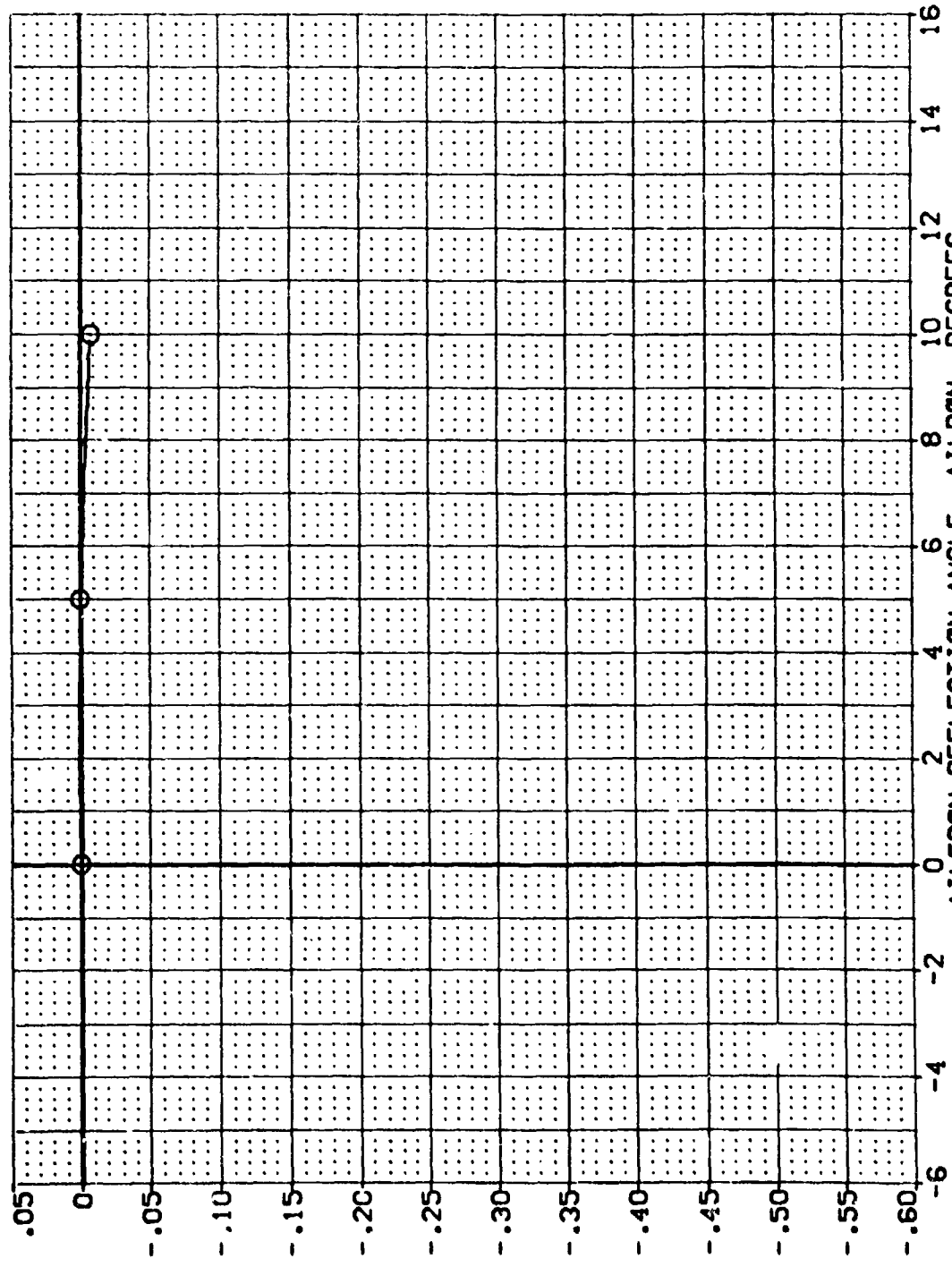


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	SOFLAP	SPDRK	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	SREF	REFERENCE INFORMATION
○	30.000				.200 DELVON -12.000 RLODR 25.000 BETA	AILRON .000 10.000	20Z117 20Z156	5.000	LREF XMRP ZMRP	4.4119 SQ.FT. 19.2298 INCHES 37.9669 INCHES 43.5974 INCHES .0000 INCHES 15.1875 INCHES .0405 SCALE

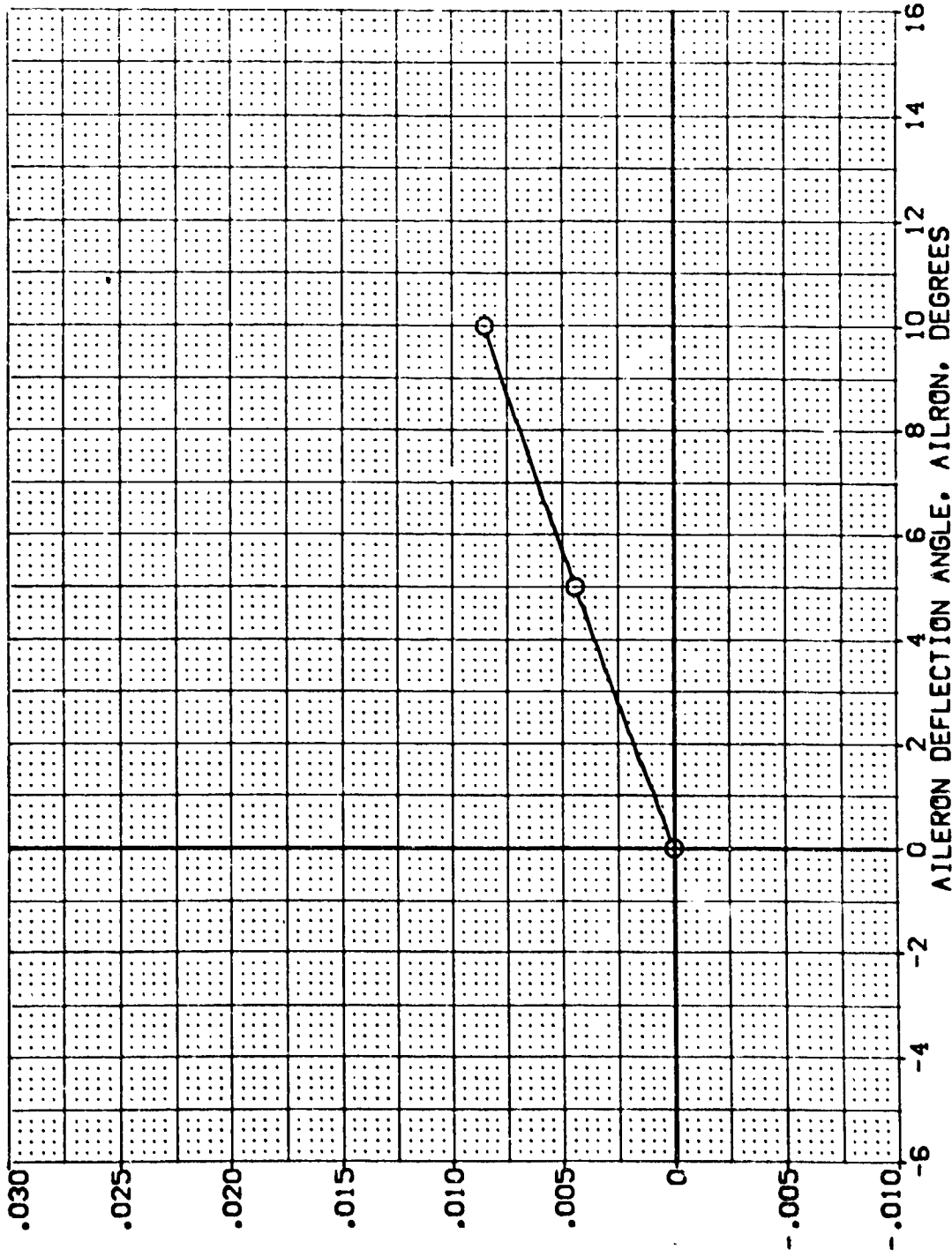


INCREMENTAL SIDE FORCE COEFFICIENT, DCY

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	EDFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILRON	AILRON	5.000	SREF	4.4118	SO.FT.
O	.000	.200	-12.000	25.000	DELTON	.000	20Z117	.000	5.000		LREF	19.2299	INCHES
					RLOOR	.000	20Z156	10.000			XMRP	37.5359	INCHES
					BETA	.000					YMRP	43.5974	INCHES
											ZMRP	.0000	INCHES
											SCALE	15.1875	INCHES
												.0405	SCALE

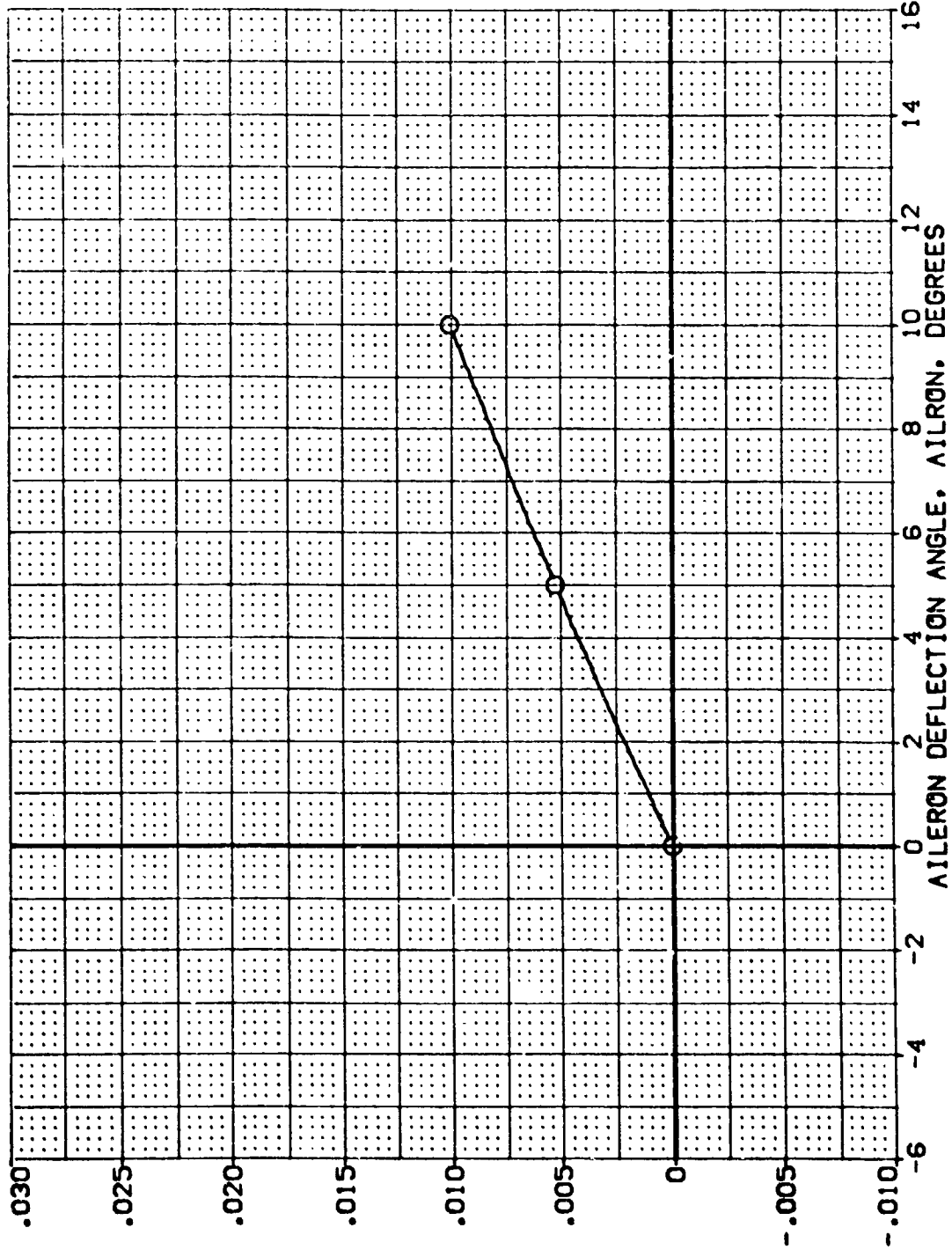


INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
○	5.000				.200 DELVON -12.000 RUDDER 25.000 BETA	.000 AILRON .000 20Z117 .000 20Z156 10.000	20Z156	5.000	LREF XMRP YMRP ZMRP SCALE	4.4119 SQ.FT. 19.2288 INCHES 37.5359 INCHES 43.5974 INCHES .0000 INCHES 15.1875 INCHES .0405 SCALE



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
ALPHA 10.000	AILRON 5.000	50 FT.
MACH .200	AILRON 10.000	INCHES
DEL VON .000	AILRON 10.000	INCHES
RUDDER -12.000	AILRON 10.000	INCHES
BETA 25.000	AILRON 10.000	INCHES
	AILRON 10.000	INCHES
	AILRON 10.000	SCALE

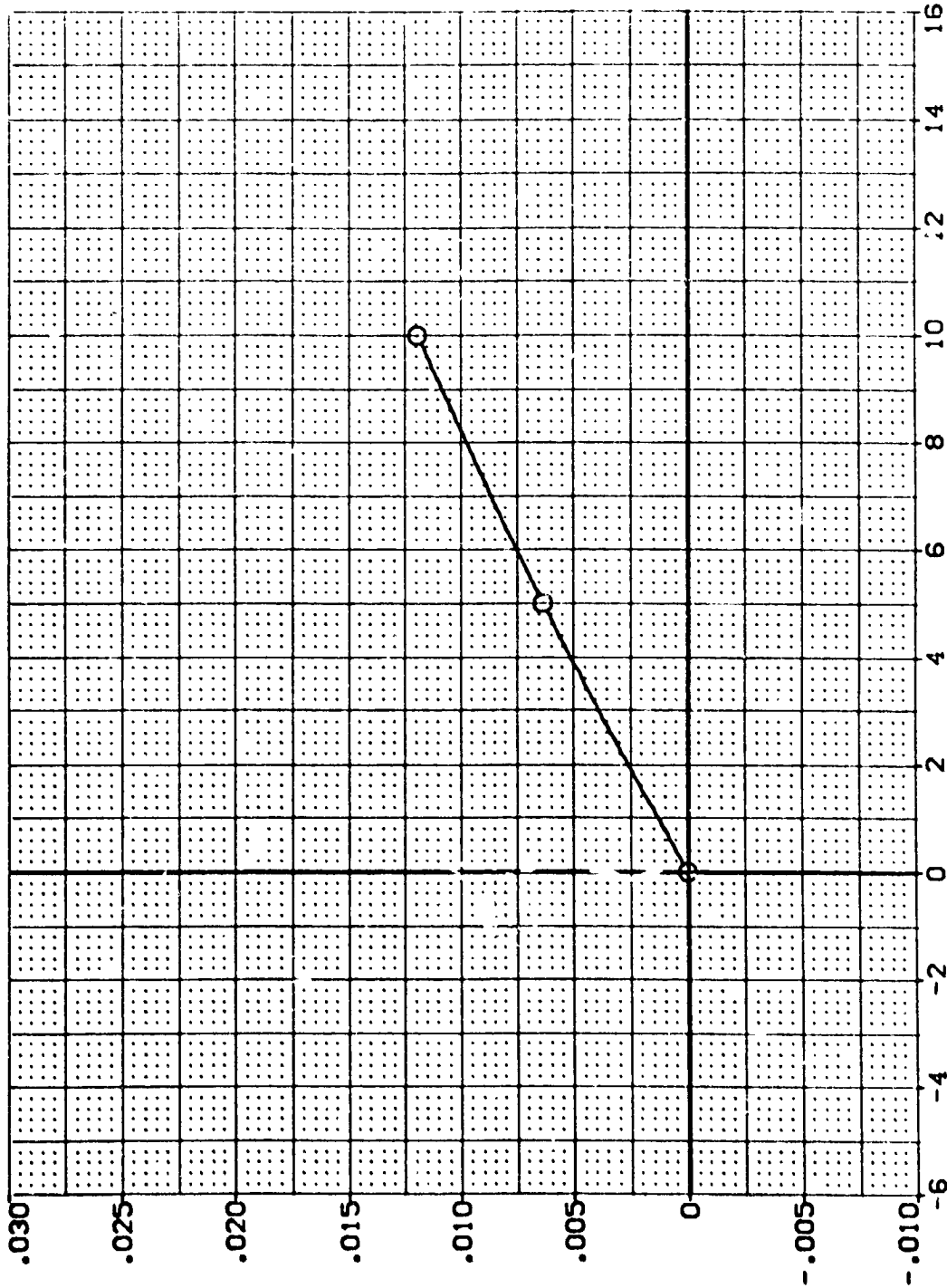
DATA SOURCE	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON

PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
AILRON 5.000	AILRON 5.000	50 FT.
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	SCALE

DATA SOURCE	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON

PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
AILRON 5.000	AILRON 5.000	50 FT.
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	INCHES
AILRON 10.000	AILRON 10.000	SCALE

DATA SOURCE	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON
AILRON	AILRON	AILRON	AILRON



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



(20Z117)

W:16E2EV8R5X9

M7F8

B26C9

0A628

SYMBOL O

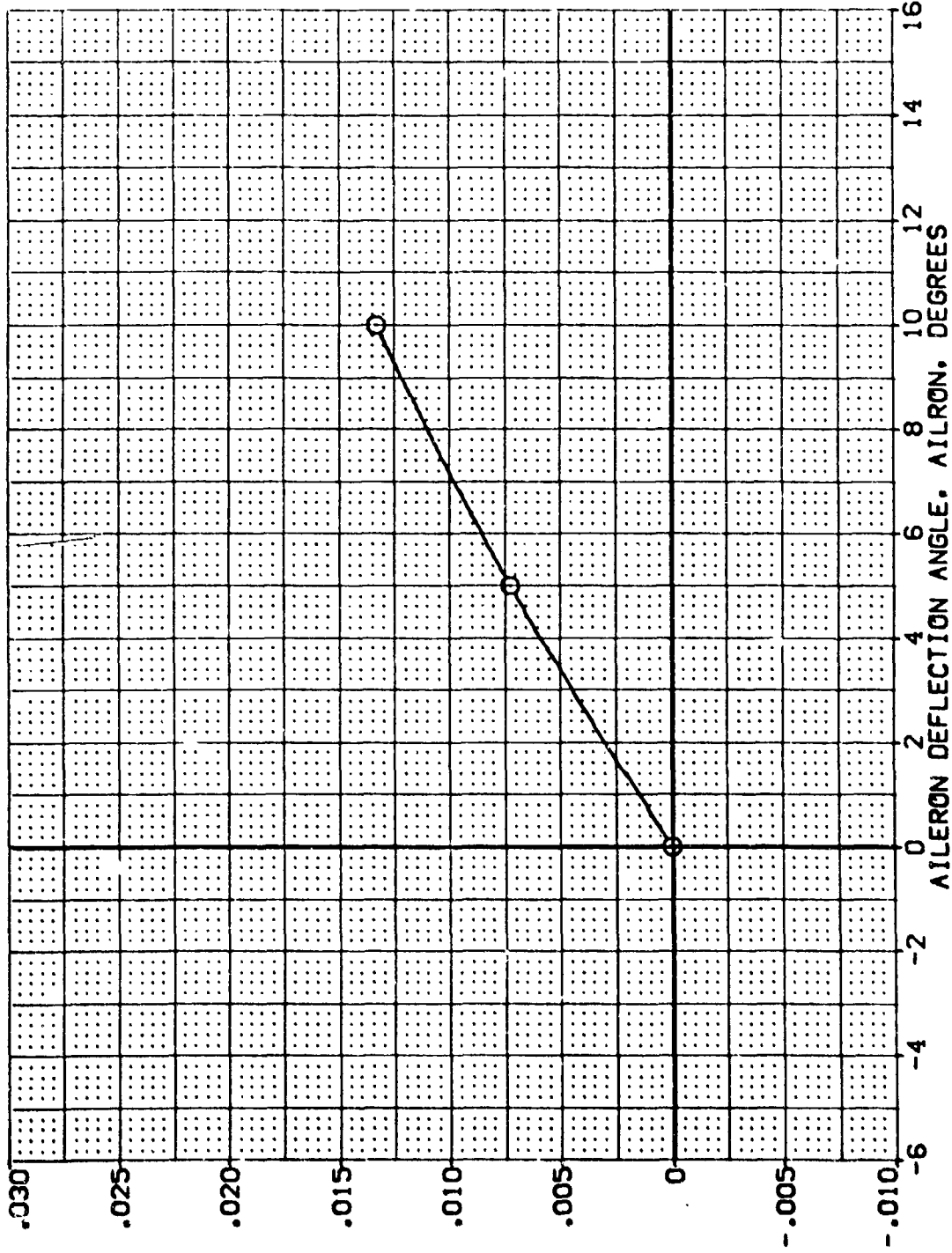
ALPHA 15.000

MACH 80FLAP SPOBRK

PARAMETRIC VALUES  
 DE\_VON .200  
 RUDDER -12.000  
 BETA 25.000

DATA SOURCE  
 AILRON .000  
 DATASET 20Z117  
 AILRON .000  
 DATASET 20Z158  
 AILRON 5.000  
 DATASET 20Z156

REFERENCE INFORMATION  
 SQ\_FT 4.4119  
 INCHES 19.2289  
 REF 37.9359  
 INCHES 43.5574  
 REF 15.0000  
 INCHES 15.1875  
 SCALE .0405

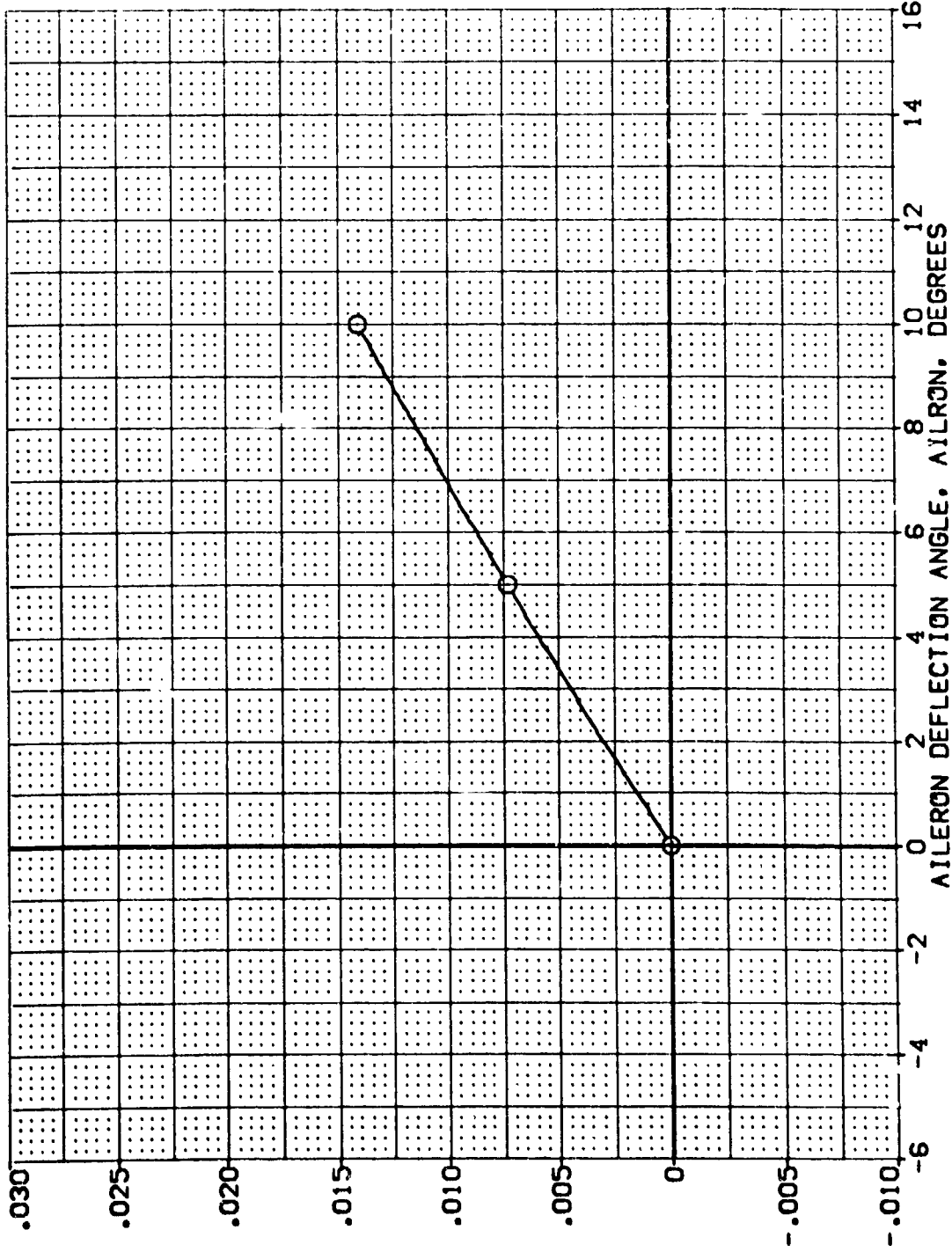


INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
O	20.000	MACH	.200	DELVON	.000	DATASET	20Z117	SREF	4.4119	SQ.FT.
		80FLAP	-12.000	RUDDER	.000	20Z117	20Z156	LREF	19.2299	INCHES
		SPOBRK	25.000	BETA	.000	20Z156		BREF	37.9369	INCHES
								XMRP	43.5974	INCHES
								YMRP	.0000	INCHES
								ZMRP	15.1875	INCHES
								SCALE	.0405	SCALE



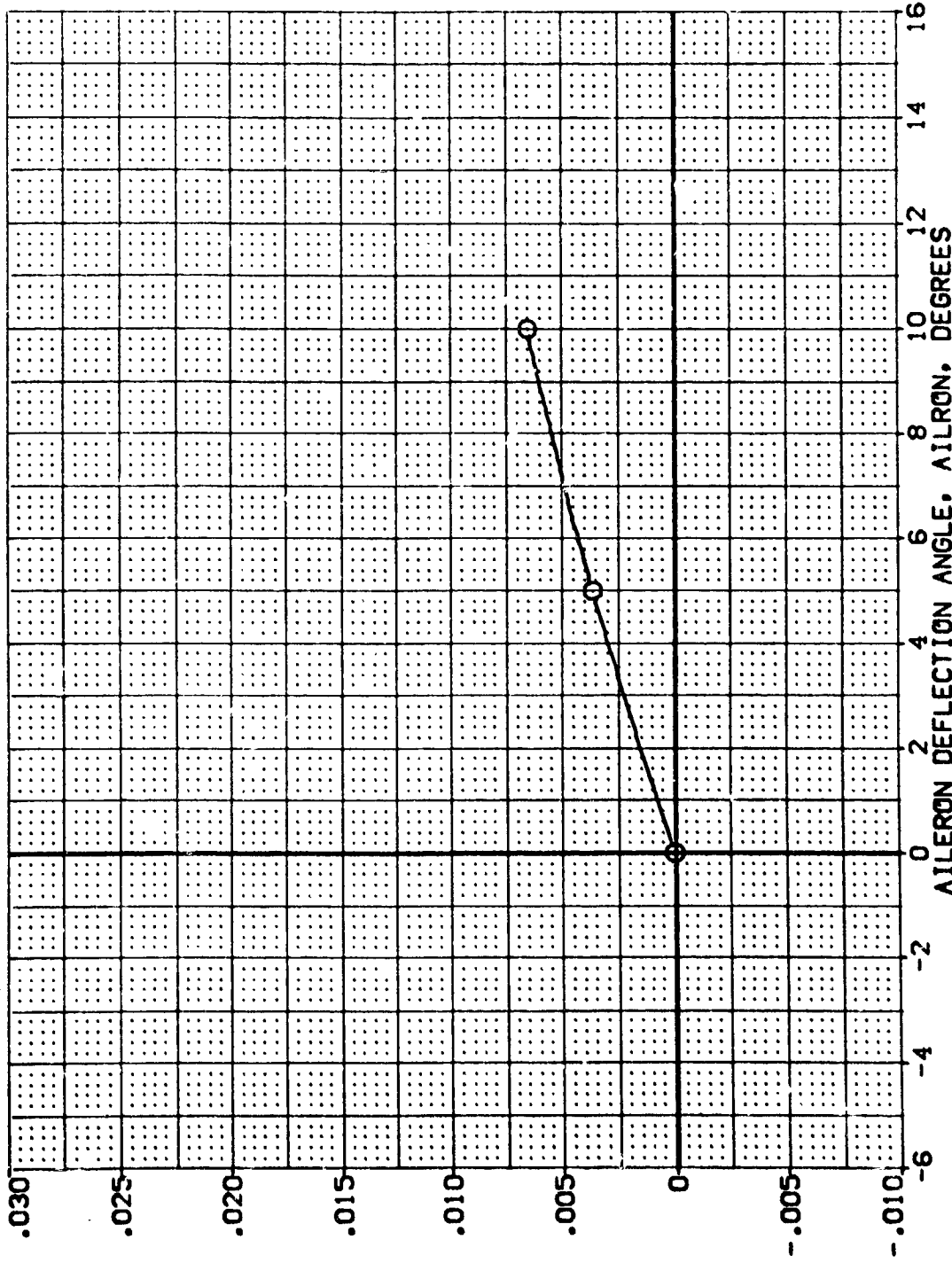
INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
0	ALPHA	.200	DELTON	.000	DATASET	AILRON	SREF	50.FT.		
	MACH	-12.000	RUDDER	.000	20Z117	.000	LINEF	INCHES		
	BOFLAP	25.000	BETA	.000	20Z156	10.000	XPRP	INCHES		
							YPRP	INCHES		
							ZPRP	INCHES		
							SCALE	SCALE		



INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	AILRON	AILRON	AILRON	SREF	4.4119	SO.FT.
O	20.000				.200 DELVON	.000 DATASET	.000 DATASET	.000 DATASET	AILRON	AILRON	AILRON	5.000	LREF	19.2259	INCHES
					-12.000 RUDDER	.000 20Z117	.000 20Z158	.000 20Z158					BREF	37.9359	INCHES
					25.000 BETA								XMRP	43.5974	INCHES
													YMRP	.0000	INCHES
													ZMRP	15.1875	INCHES
													SCALE	.0405	SCALE

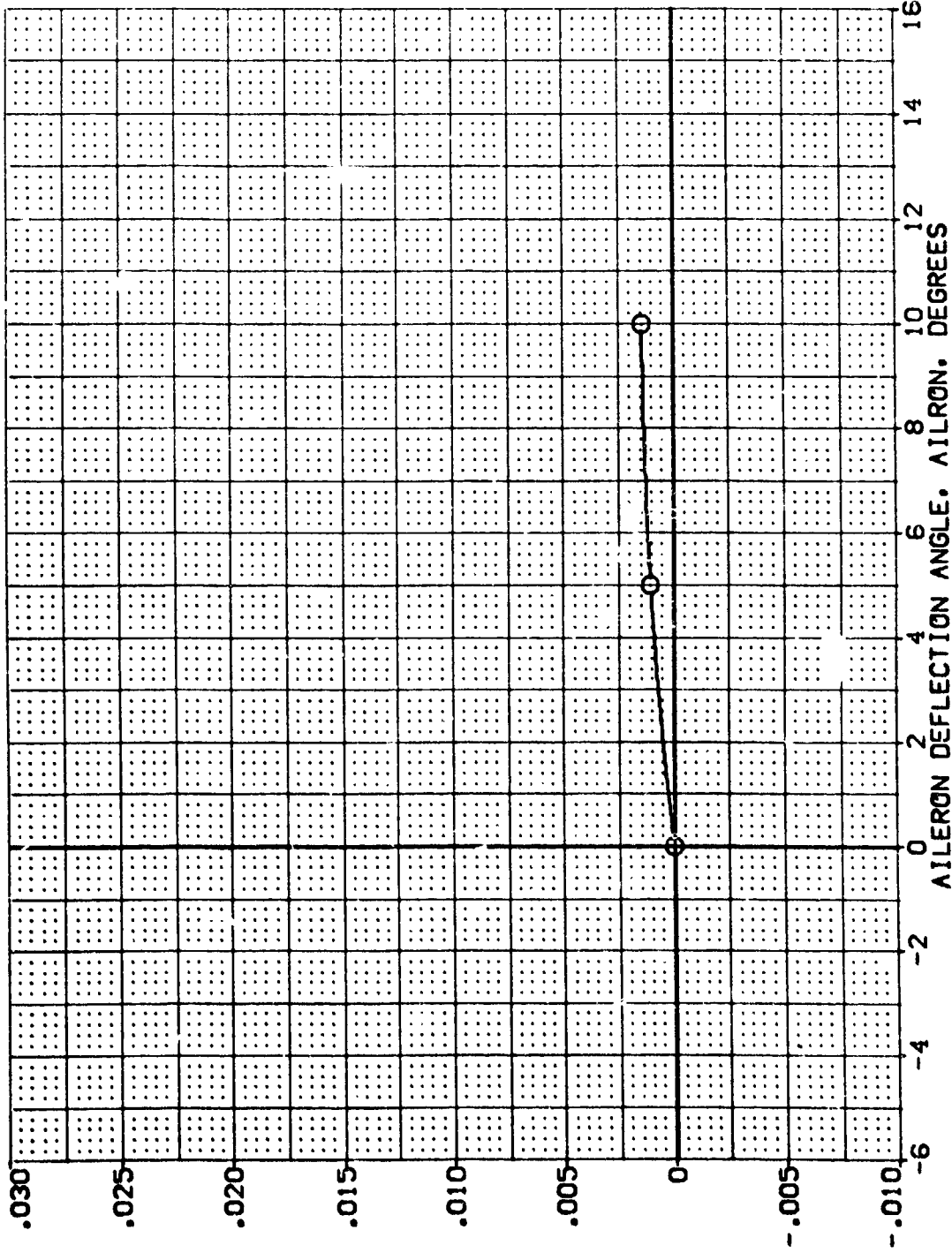


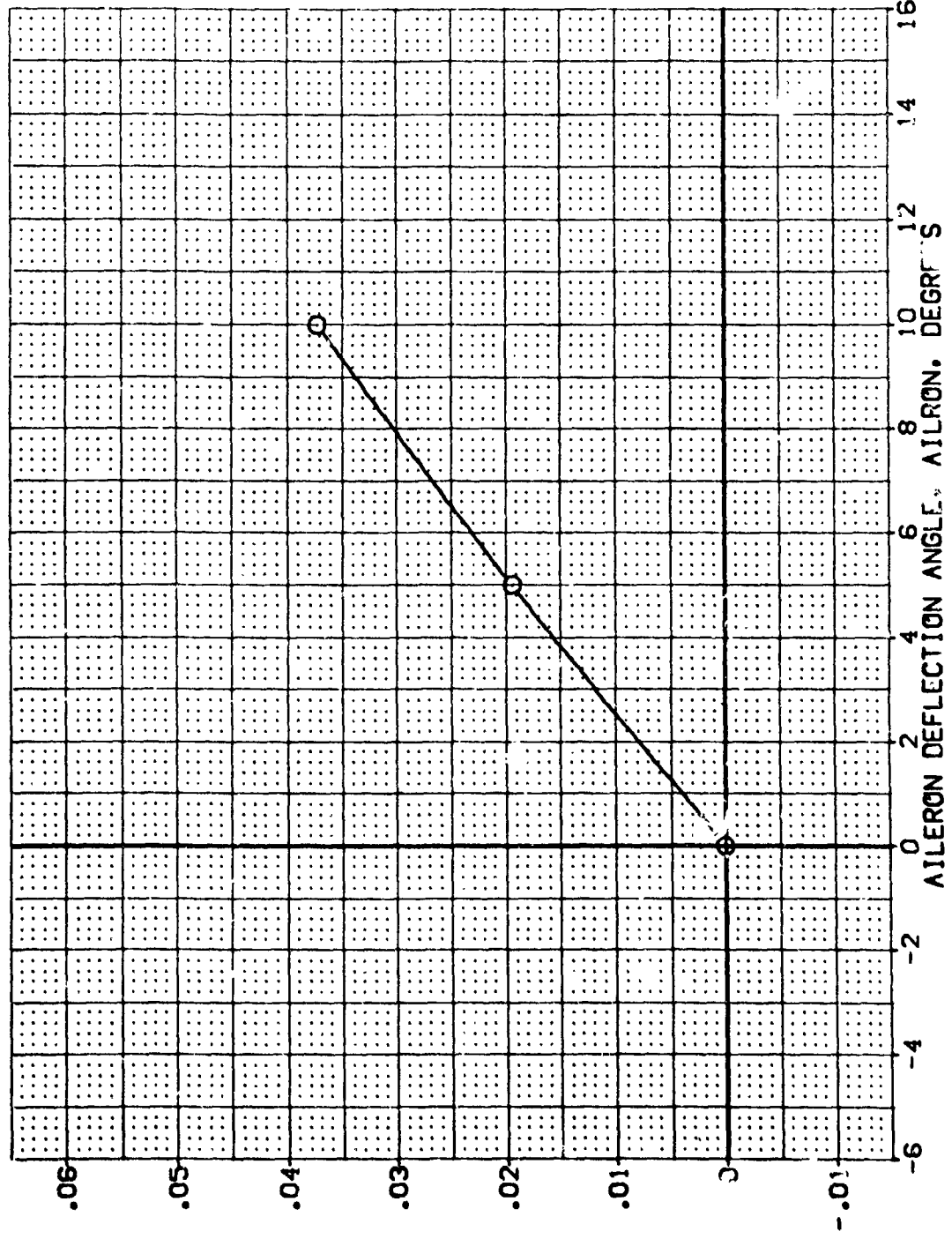
FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
0	.000	BDFLAP	.200 DELVON	AILRON	4.4119 SQ.FT.
		SPOBRK	-12.000 RUDDER	AILRON	19.2299 INCHES
			25.000 BETA	REF	37.9359 INCHES
				REF	43.5974 INCHES
				XPRP	.0000 INCHES
				YPRP	15.1875 INCHES
				ZPRP	.0405 INCHES
				SCALE	SCALE



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

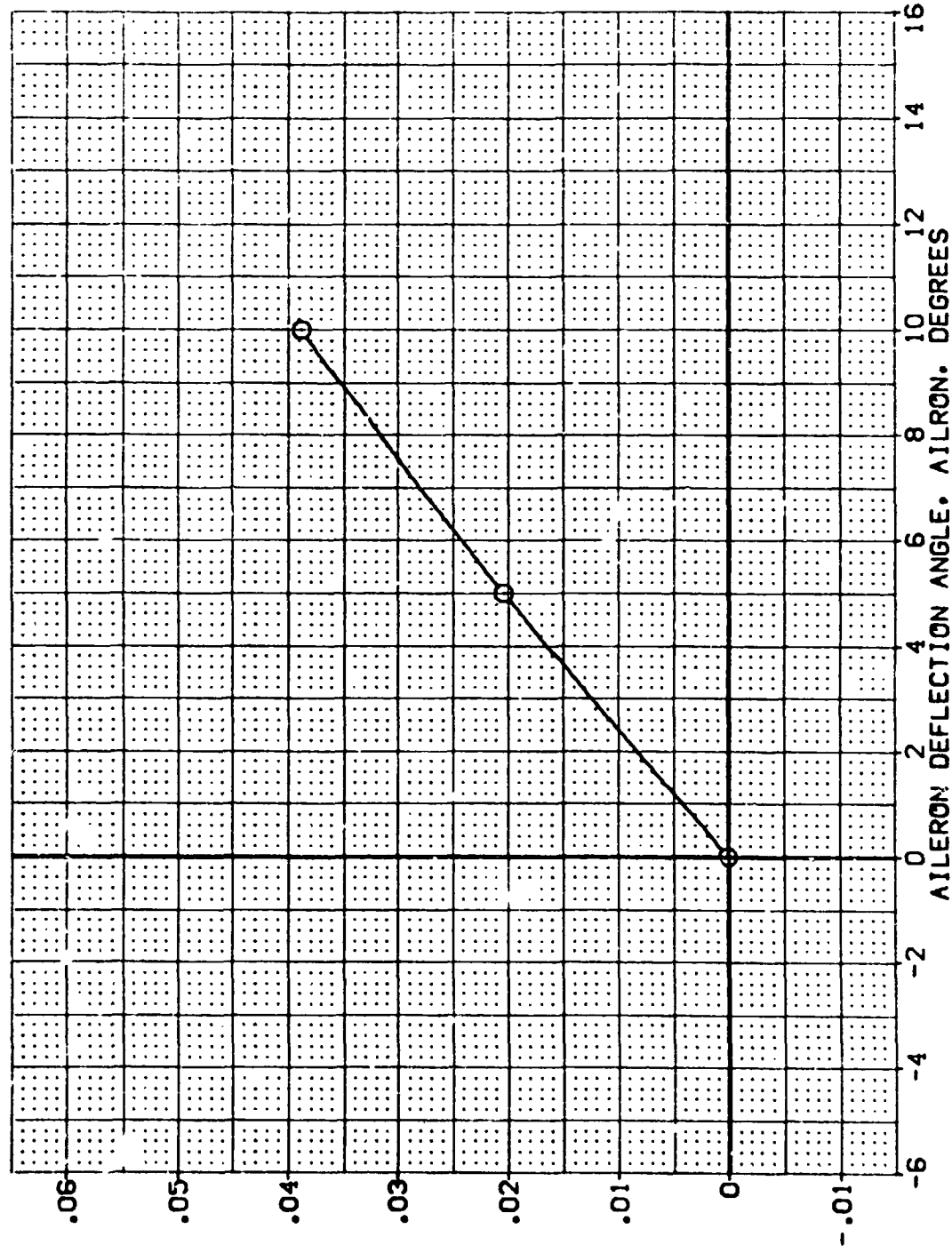
0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL ALPHA  
O 5.000

PARAMETRIC VALUES  
MACH .200  
DELTA .200  
RUDDER -12.000  
BETA 25.000

DATA SOURCE  
A1LRON  
DATASET 20Z117  
A1LRON 20Z158  
SCALE 10.000

REF. INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2299  
INCHES 37.6369  
INCHES 43.5574  
INCHES .0000  
INCHES 15.1875  
SCALE .0405



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B 826C9 M/F8 W116E28VBR5X9 (2DZ117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	10.000		.200	DELVON	.000	DATASET	A1LRON	SREF
			-12.000	RUDDER	.000	20Z117	5.000	50.FT.
			25.000	BETA	.000	20Z156		INCHES
					10.000			INCHES
								INCHES
								INCHES
								SCALE
								4.4119
								19.2289
								37.9359
								43.5974
								0.0000
								15.1875
								SCALE
								.0405

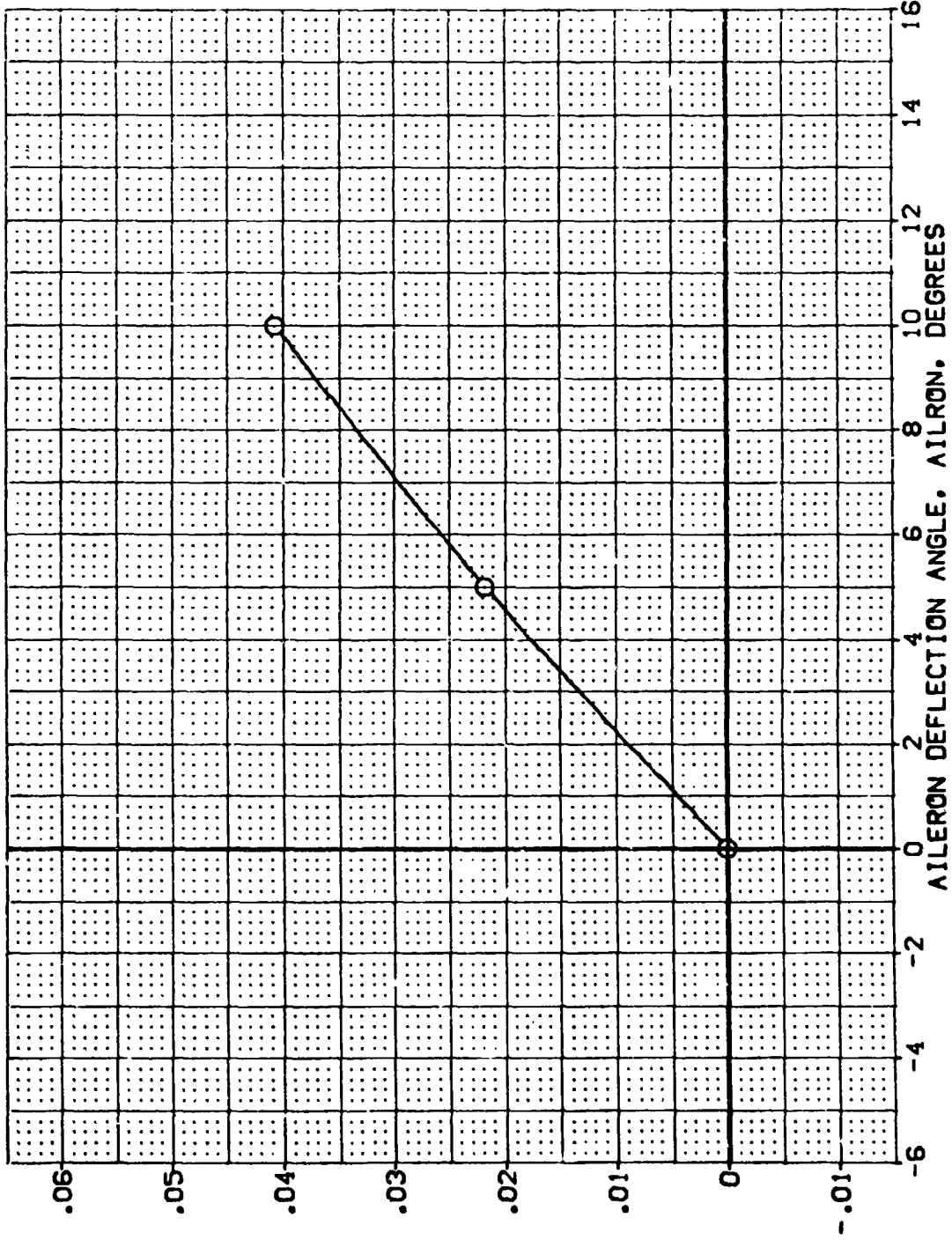
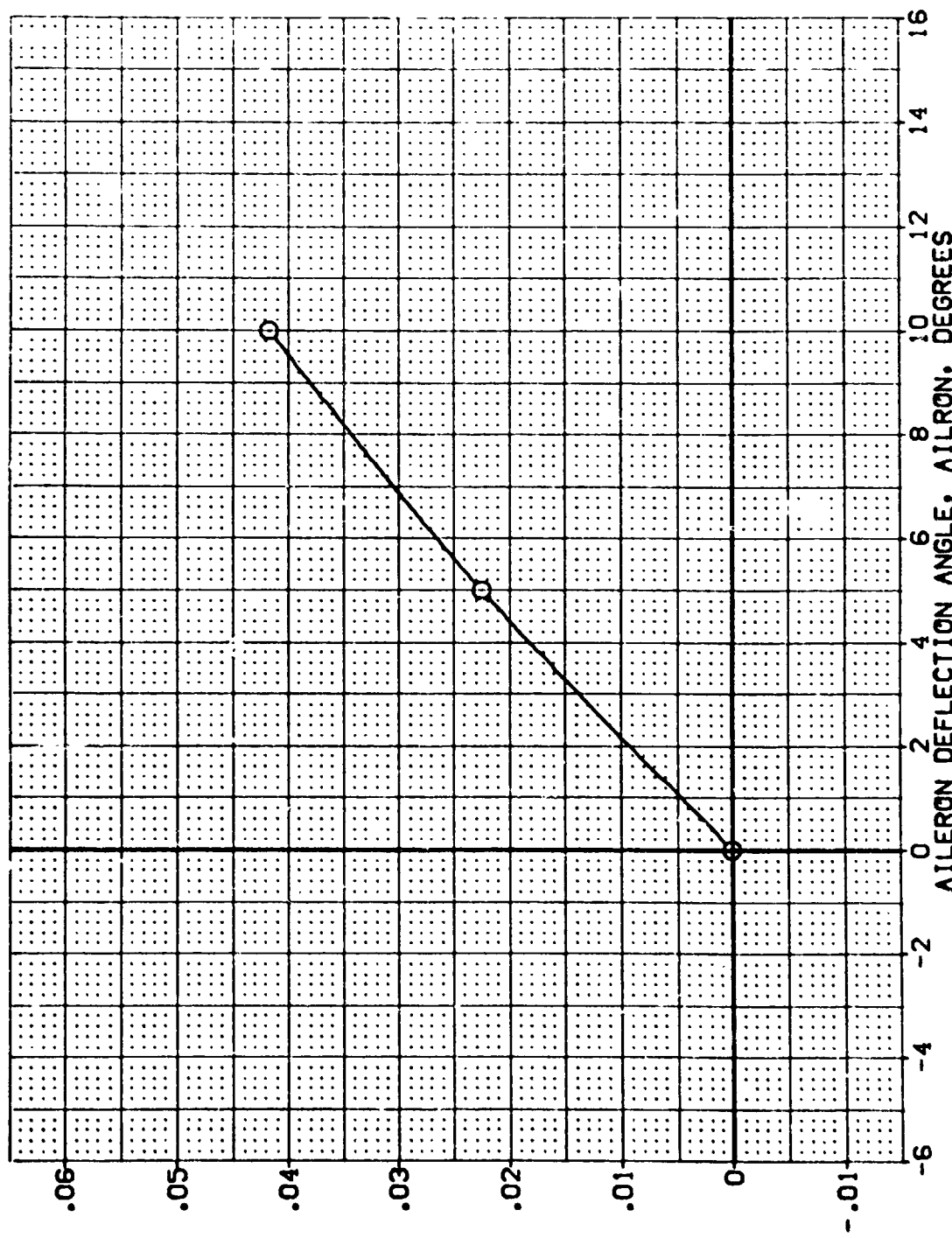


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BDFLAP	SPOBRK	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION						
O	15.000				.200	DELVON	.000	DATASET	AILRON	AILRON	SREF	SO.FT.	IN-OES	IN-OES	IN-OES	IN-OES	IN-OES	IN-OES	SCALE
					-12.000	RUDDER	.000	20Z117	.000	5.000	LREF	19.2399							
					25.000	BETA	.000	20Z158	10.000		XMRP	43.5974							
											YMRP	.0000							
											ZMRP	15.1875							
											SCALE	.0405							



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCRL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE





0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

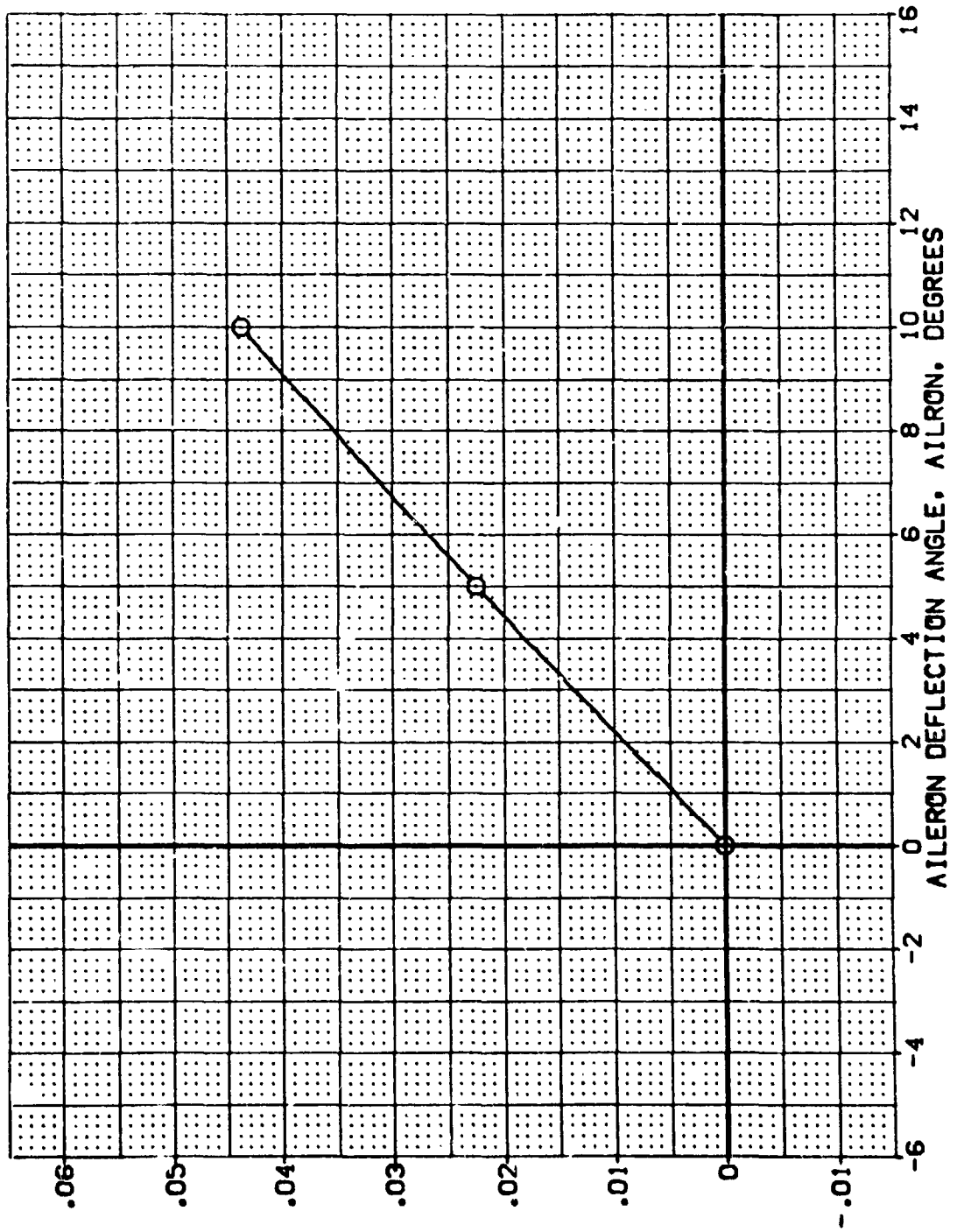
SYMBOL  
O

PARAMETRIC VALUES  
ALPHA 20.000  
MACH 80FLAP  
SPOBRK -12.000  
DELTON .200  
RUDER 25.000  
BETA

DATA SOURCE  
A1LRON  
A1LRON  
A1LRON

DATASET  
20Z117  
20Z156  
20Z156

REF. INFORMATION  
GREF 4.4119  
LREF 19.2299  
XREF 37.9359  
YREF 43.5974  
ZREF 15.0000  
SCALE 15.1873  
SCALE .0405



INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL ALPHA 25.000 MACH .200 DELVON .000 DATASET AILRON 5.000  
 BOFLAP -12.000 RUDDER .000 20Z117 AILRON 5.000  
 SPOBRK 25.000 BETA .000 20Z158 10.000  
 REFERENCE INFORMATION SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9369  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1875  
 SCALE .0405

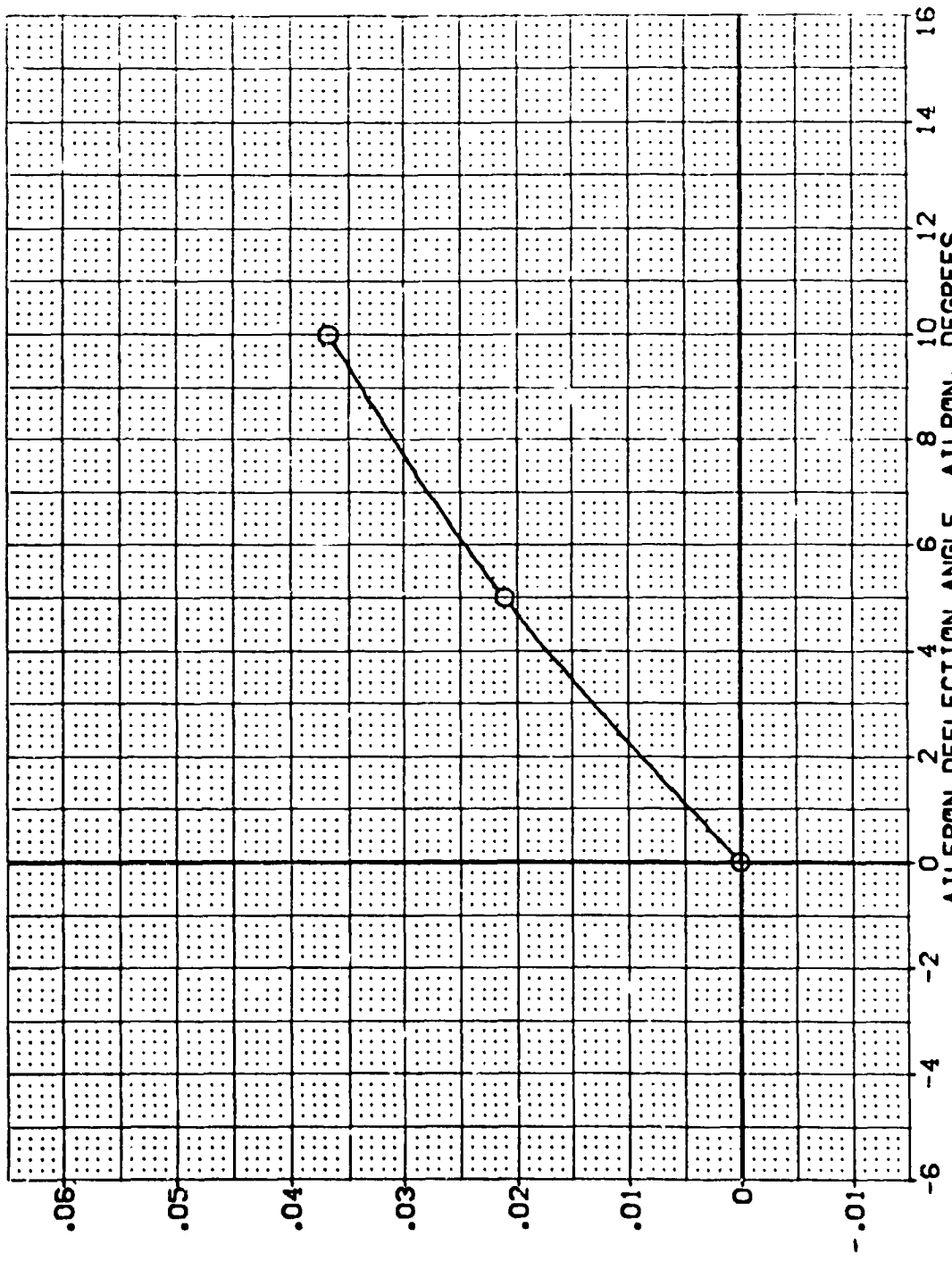


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL



(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

REFERENCE INFORMATION  
 SO.FT. 4.4118  
 INCHES 19.2289  
 INCHES 37.9359  
 INCHES 43.9574  
 INCHES .0000  
 INCHES 15.1875  
 INCHES .0405  
 SCALE

DATA SOURCE  
 AILRON .000  
 AILRON 10.000  
 DATASET 20Z156  
 DATASET 20Z156  
 AILRON 5.000  
 AILRON 10.000

PARAMETRIC VALUES  
 DELVON .200  
 RUDDER -12.000  
 BETA 25.000

MACH .000  
 DATASET 20Z117  
 DATASET 20Z158  
 BDFLAP .000  
 SPOBRK .000

ALPHA 30.000  
 SYMBOL O

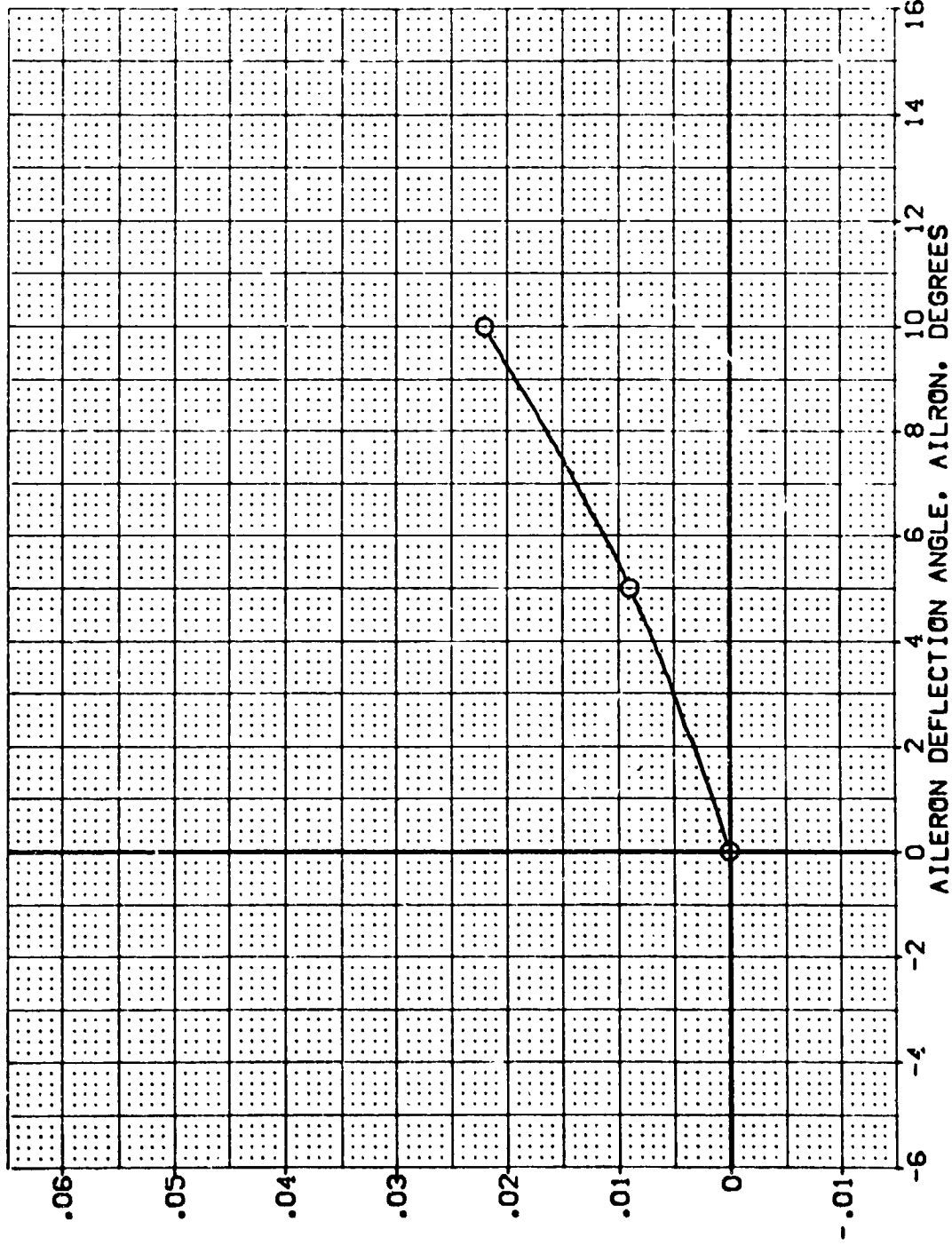


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

INCREMENTAL ROLLING MOMENT COEFFICIENT, DCRL

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	.000	DATASET	AILRON	DATA SOURCE	DATASET	AILRON	SREF	REFERENCE INFORMATION
O	.000				.200 DELVON	.000	.000	.000	.000	20Z117	AILRON	AILRON	20Z156	AILRON	5.000	4.4119 SQ.FT.
					-12.000 RUDDER	.000	.000	.000	.000	20Z158	10.000	AILRON	20Z156	5.000	19.2299 INCHES	
					25.000 BETA	.000	.000	.000	.000	20Z158	10.000	AILRON	20Z156	5.000	37.9369 INCHES	
															43.5974 INCHES	
															.0000 INCHES	
															15.1875 INCHES	
															.0405 SCALE	

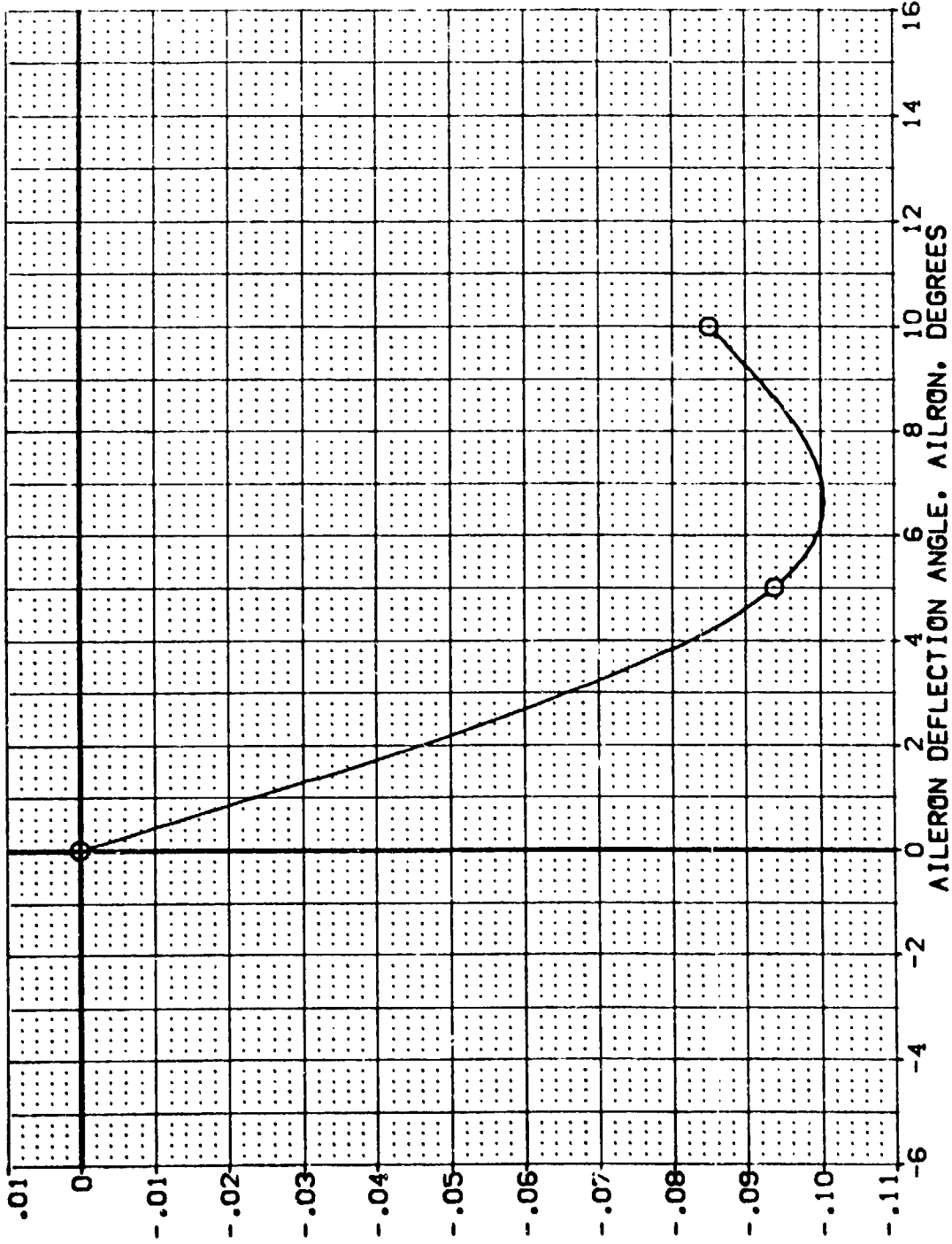
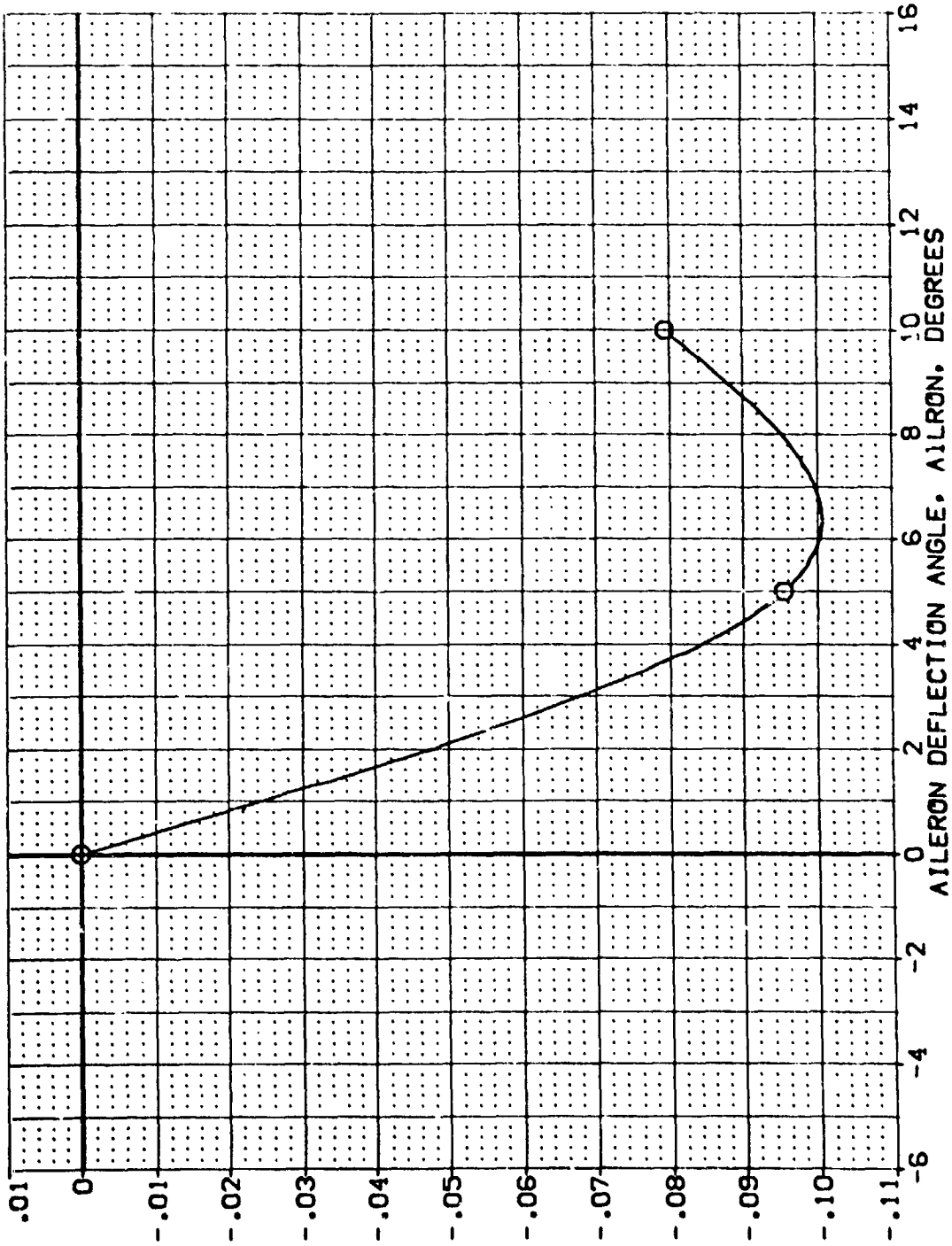


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	AILERON	SREF	REFERENCE INFORMATION
O	5.500	BDFLAP	.200 DELVON	.000 DATASET	20Z156	5.000	LREF	4.4119 SQ.FT.
		SPOBRK	-12.000 RUDDER	.000 20Z117			BREF	19.2299 INCHES
			25.000 BETA	.000 20Z158			XMRP	37.9259 INCHES
							YMRP	43.5974 INCHES
							ZMRP	15.0000 INCHES
							SCALE	.0405 SCALE



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION			
0	10.000	BOFLAP	.200	DELVON	.000	DATASET	AILRON	SREF	4.4119	50.FT.
		SPOBRK	-12.000	RUDDER	.000	20Z117	5.000	LREF	19.2299	INCHES
			25.000	BETA	.000	20Z158	10.000	BREF	37.9359	INCHES
								XREF	43.5974	INCHES
								YREF	0.0000	INCHES
								ZREF	15.1875	INCHES
								SCALE	.0405	SCALE

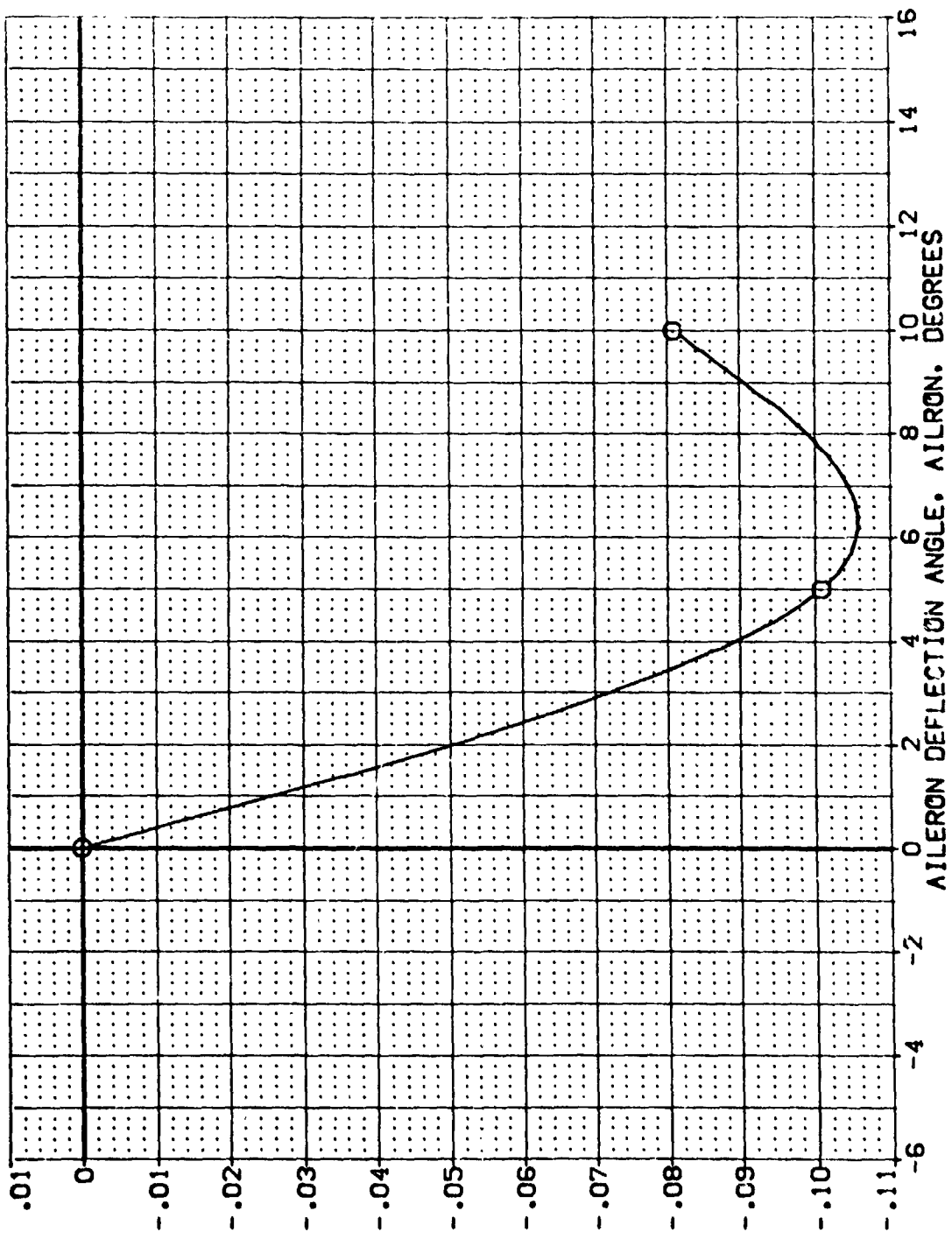
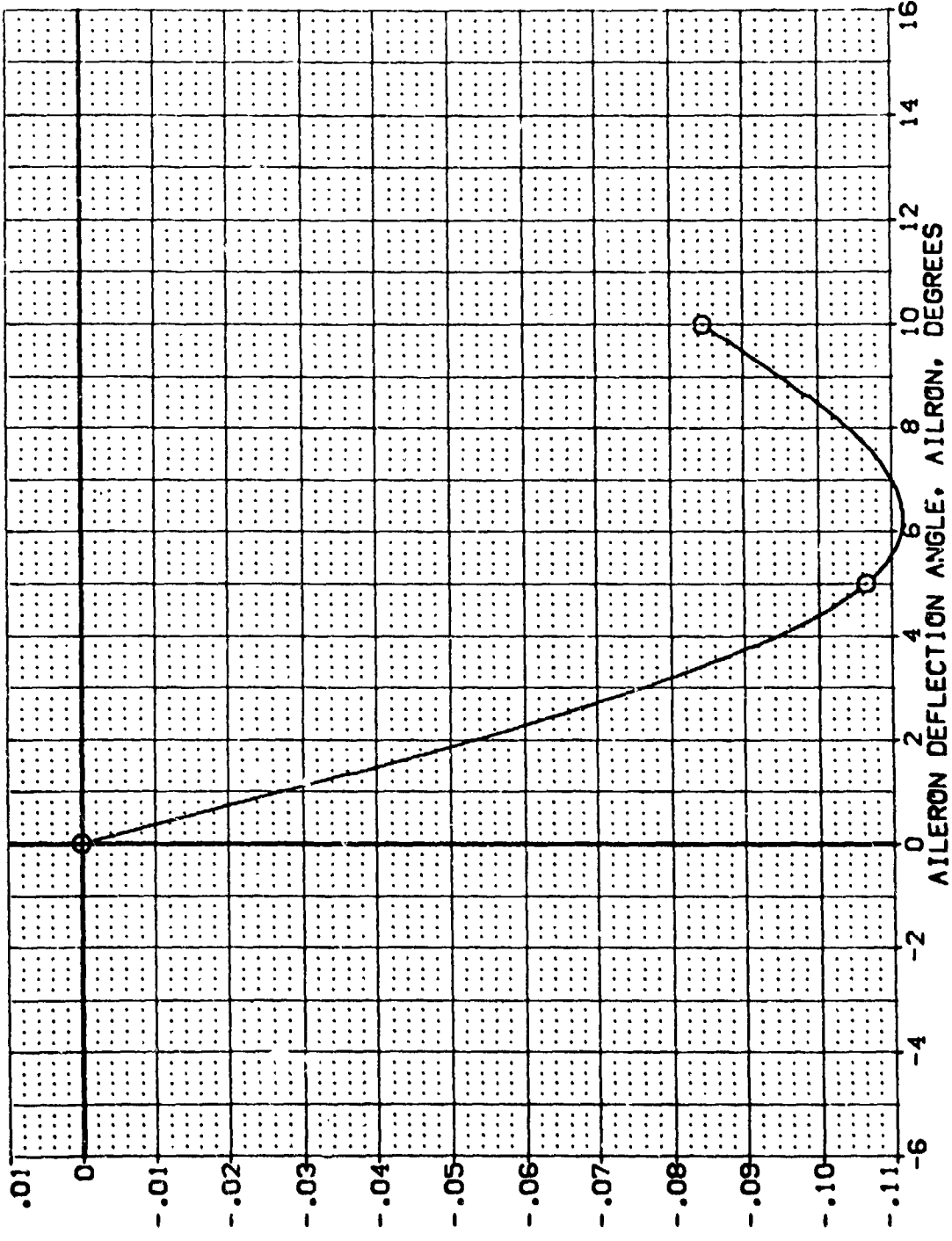


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
O	15.000				.000 DELVON .000 RUDDER .000 BETA	.000 AILRON .000 20Z117 .000 20Z158	SREF 4.4118 SQ.FT. LREF 19.2259 INCHES BREF 37.9359 INCHES XMRP 43.5974 INCHES YMRP .0000 INCHES ZMRP 15.1875 INCHES SCALE .0405 SCALE



INCREMENTAL NORMAL FORCE COEFFICIENT, DCN

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
0	20.000	80FLAP	.200	DELVON	.000	DATASET	AILRON	SREF	4.4119	4.4119	SG.FT.
		SPOBRK	-12.000	RUDDER	.000	20Z117	.000	LREF	19.2299	19.2299	INCHES
			25.000	BETA	.000	20Z156	10.000	XMRP	37.9359	37.9359	INCHES
								ZMRP	43.5974	43.5974	INCHES
								SCALE	.0000	.0000	INCHES
									15.1875	15.1875	INCHES
									.0406	.0406	SCALE

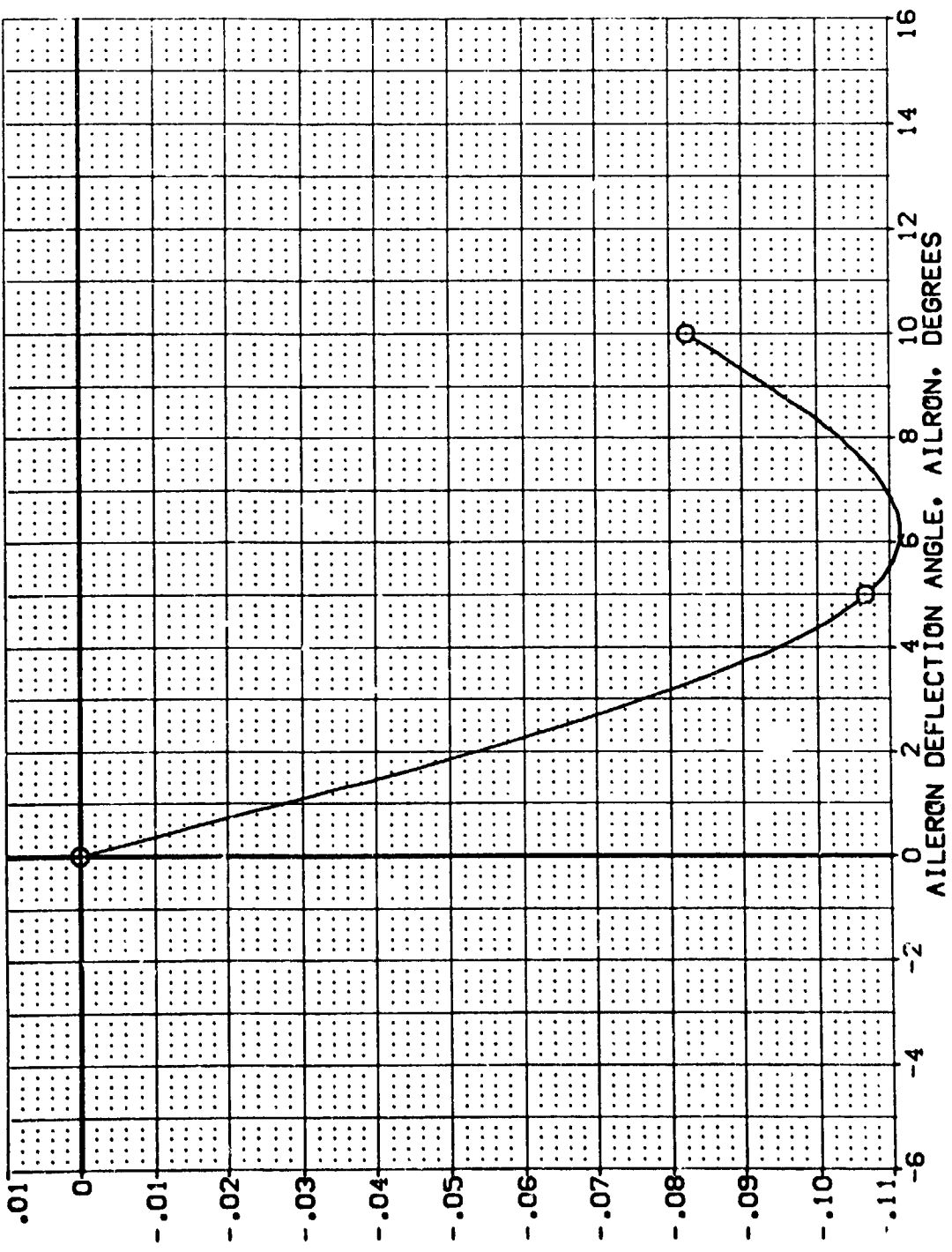


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE





(20Z117)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL O

ALPHA 25.000

MACH 0.200

BDFLAP -12.000

SPOBRK 25.000

DELTON .000

RUDDER 20Z117

BETA .000

DATA SOURCE AILRON 10.000

AILRON 20Z156

DATA SET 20Z156

AILRON 5.000

SREF 4.4119

LREF 19.2299

BREF 37.9359

XMRP 43.5974

YMRP 6.000

ZMRP 15.1875

SCALE .0405

SO.FT. INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE

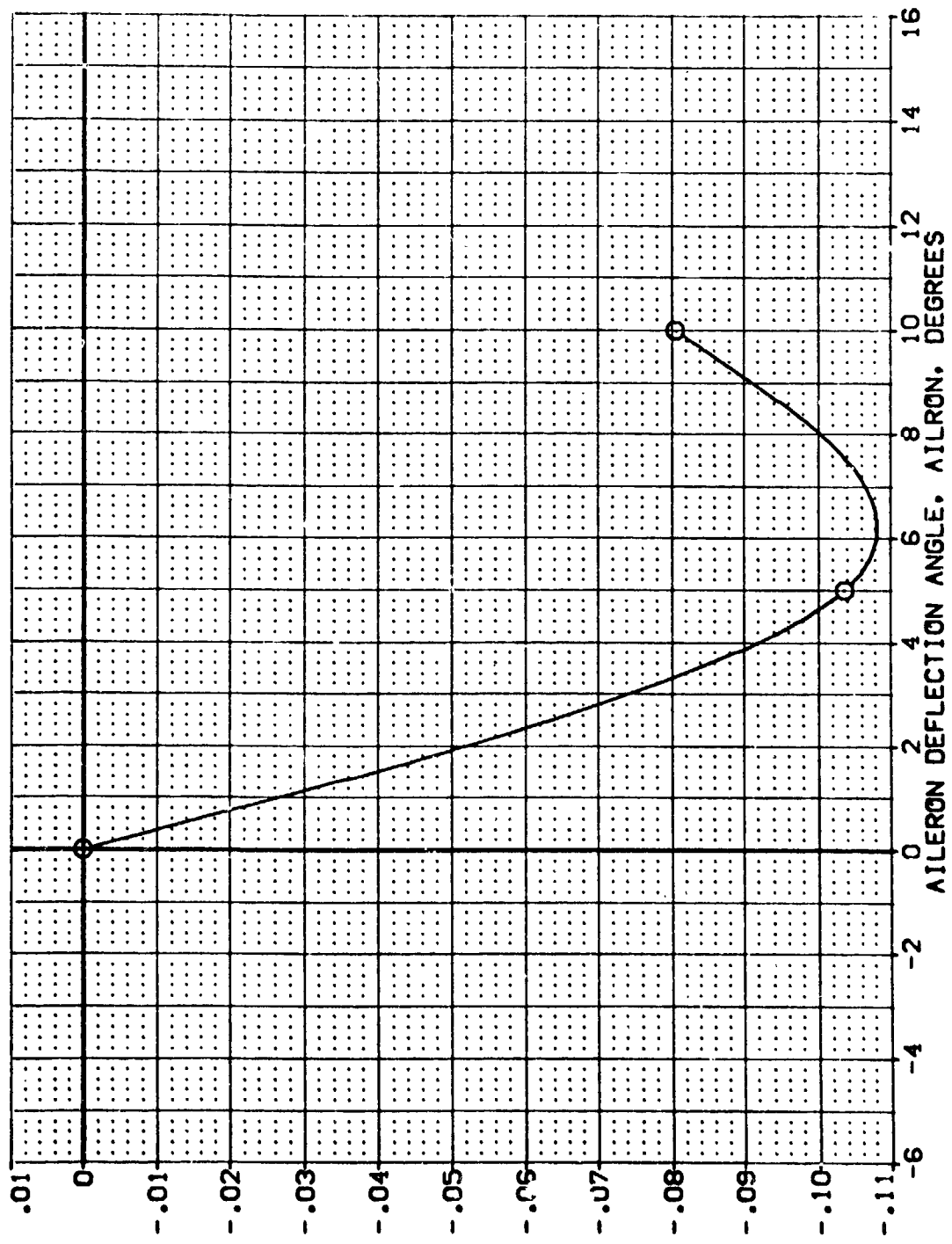


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION				
O	30.000	80FLAP	.200	DELVON	.000	DATASET	A1LRON	SREF	4.4119	SQ.FT.			
		SPOBRK	-12.000	RLODER	.000	20Z117	.000	LREF	19.2289	INCHES			
			25.000	BETA	.000	20Z156	10.000	DREF	37.9359	INCHES			
								XTRP	43.5374	INCHES			
								YTRP	.0300	INCHES			
								ZTRP	15.1875	INCHES			
								SCALE	.0405	SCALE			

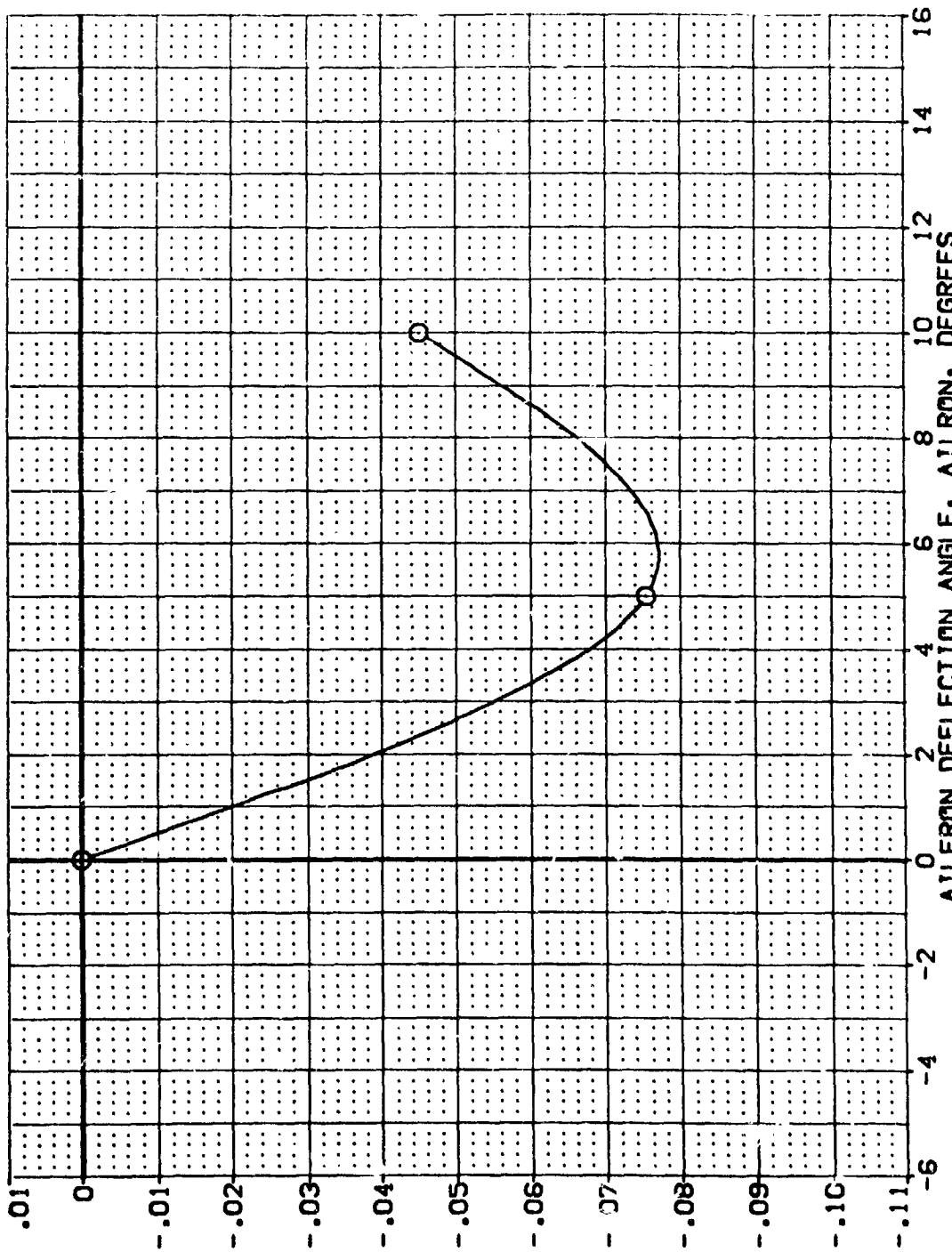
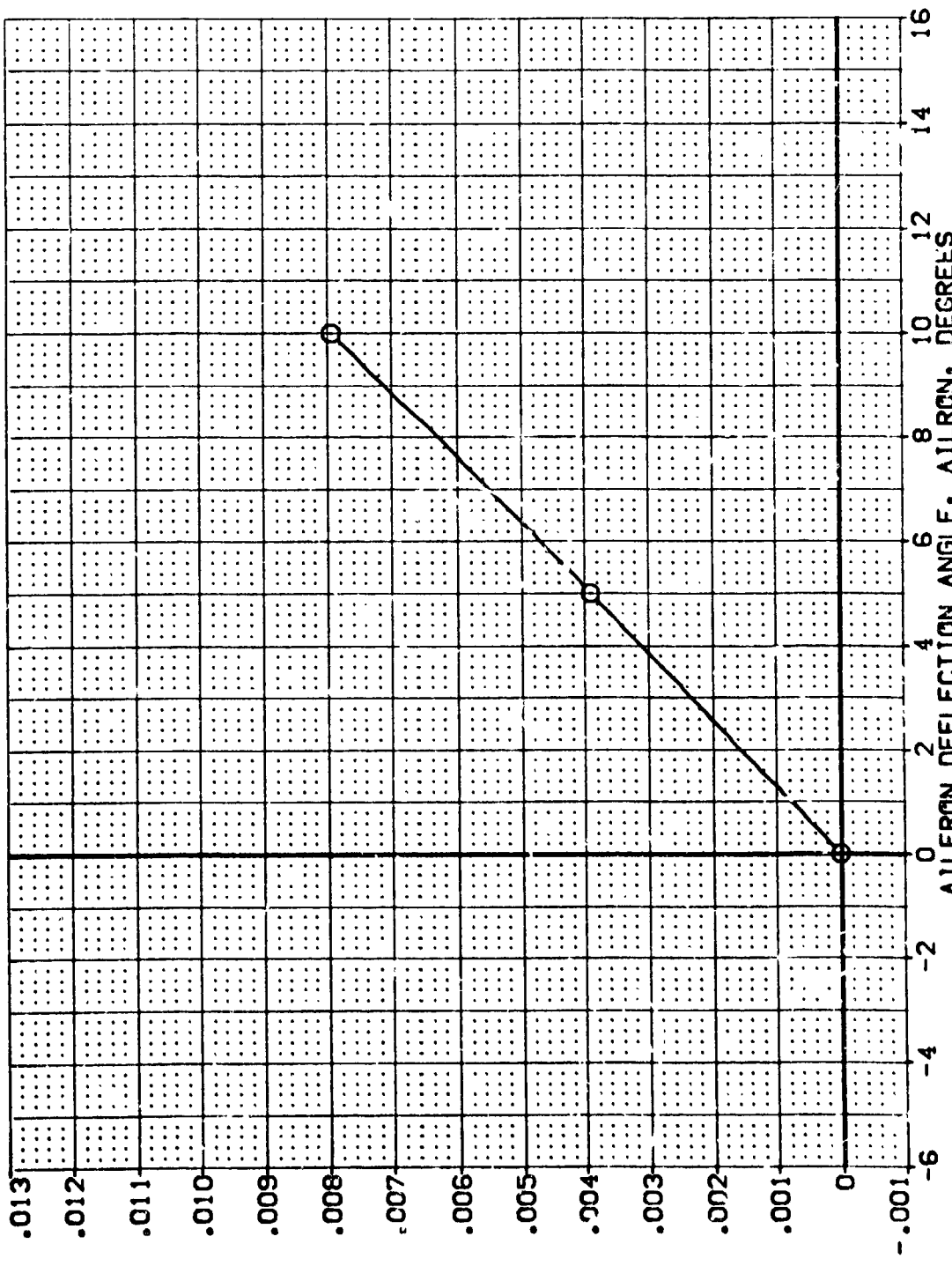


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
0	.000	BOFLAP	.200	DELTON	.000	AILRON	SREF	4.4119	SQ.FT.		
		SPOBRK	-12.000	RUDDER	.000	AILRON	LREF	19.2299	INCHES		
			25.000	BETA	.000	20Z117	XREF	37.9359	INCHES		
					.000	20Z156	YREF	43.5974	INCHES		
							ZREF	.0000	INCHES		
							SCALE	15.1875	INCHES		
								.0405	SCALE		



INCREMENTAL AXIAL FORCE COEFFICIENT, OCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

GA529 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUE		DATA SOURCE		REFERENCE INFORMATION				
○	5.700		.200	7ELVCJ	AILRON	AILRON	SREF	SO.FT.			
		BDFLAF	-12.000	RUDDER	.000	20Z117	LREF	19.2289	INCHES		
		SPOBRK	25.000	BETA	.000	20Z158	BREF	37.9359	INCHES		
							XMRP	43.5974	INCHES		
							ZMRP	.0000	INCHES		
							ZMRP	15.1875	INCHES		
							SCALE	.0405	SCALE		

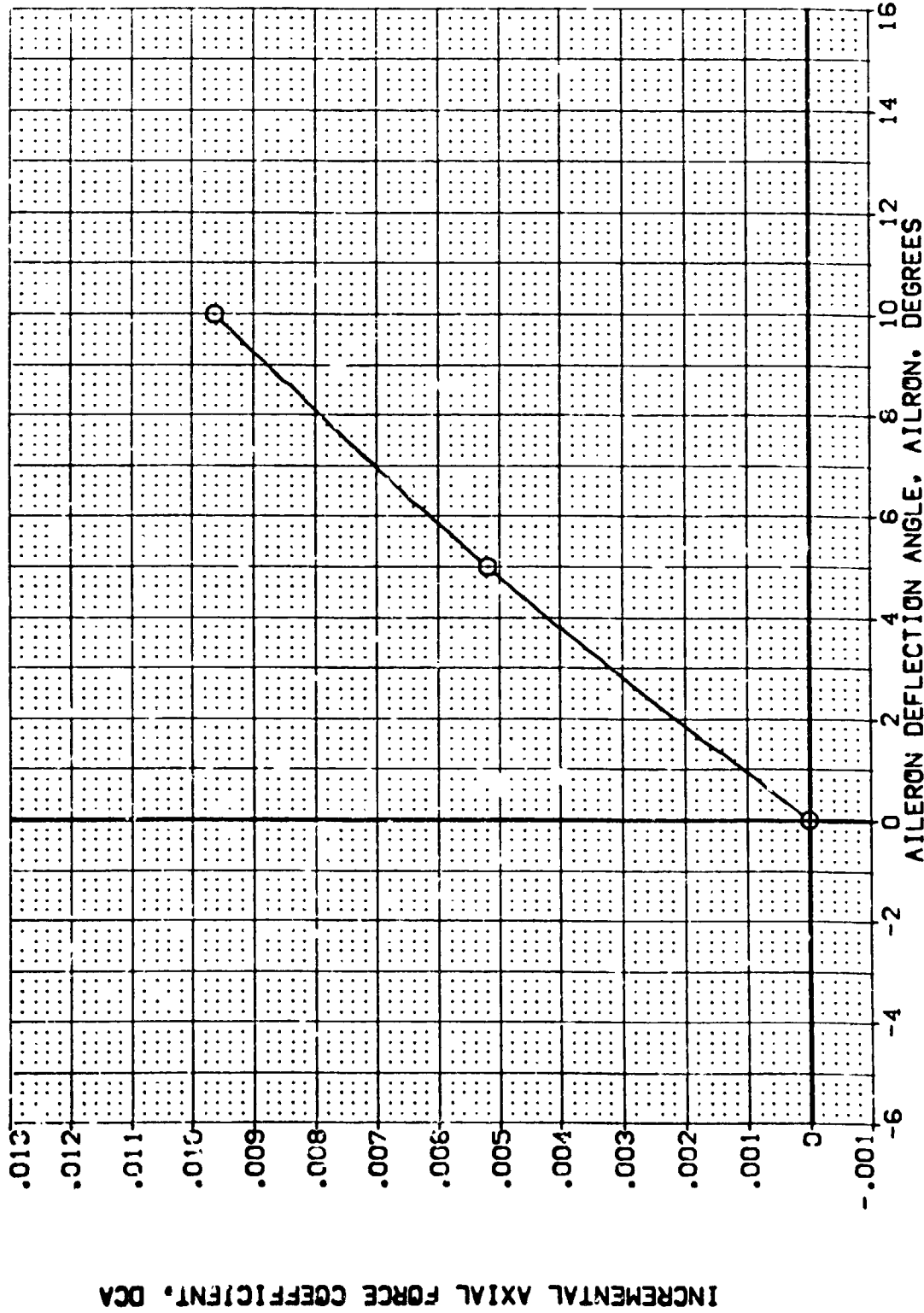
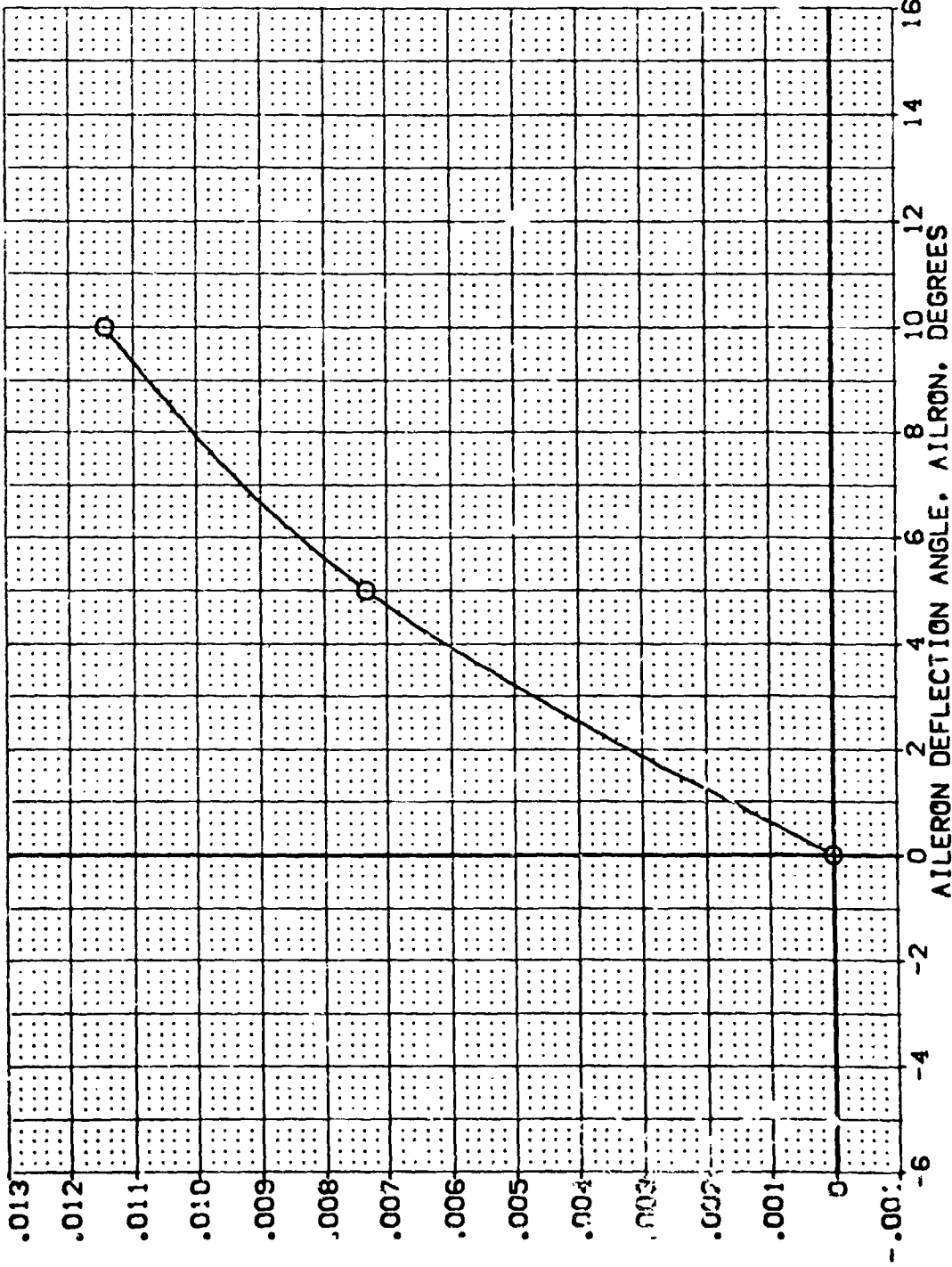


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

STP:00L O  
 ALPHA 10.000  
 MACH 10.000  
 BOFLAP 0.000  
 SPOBRK 25.000  
 PARAMETRIC VALUES  
 .200 DELVON  
 -12.000 RUDDER  
 25.000 BETA  
 DATA SOURCE  
 AILRON .000 DATASET 20Z117  
 AILRON .000 DATASET 20Z158  
 10.000  
 REFERENCE INFORMATION  
 SQ.FT. 4.4119  
 INCHES 19.2299  
 INCHES 37.9759  
 INCHES 43.5974  
 INCHES .0000  
 INCHES 15.1975  
 SCALE .0405  
 SREF  
 LREF  
 GREF  
 XTRP  
 YTRP  
 ZTRP  
 SCALE



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	AILRON	SREF	REFERENCE INFORMATION
O	15.000	BDFLAP	.200 DELVON	.000 DATASET	20Z117	5.000	LREF	4.4119 SQ.FT.
		SPOBRK	-12.000 RUDDER	.070 20Z158	20Z156		YREF	19.2269 INCHES
			25.000 BETA	10.000			ZREF	37.9359 INCHES
							YMRP	43.5574 INCHES
							ZMRP	.0000 INCHES
							SCALE	15.1875 INCHES
								.0405 SCALE

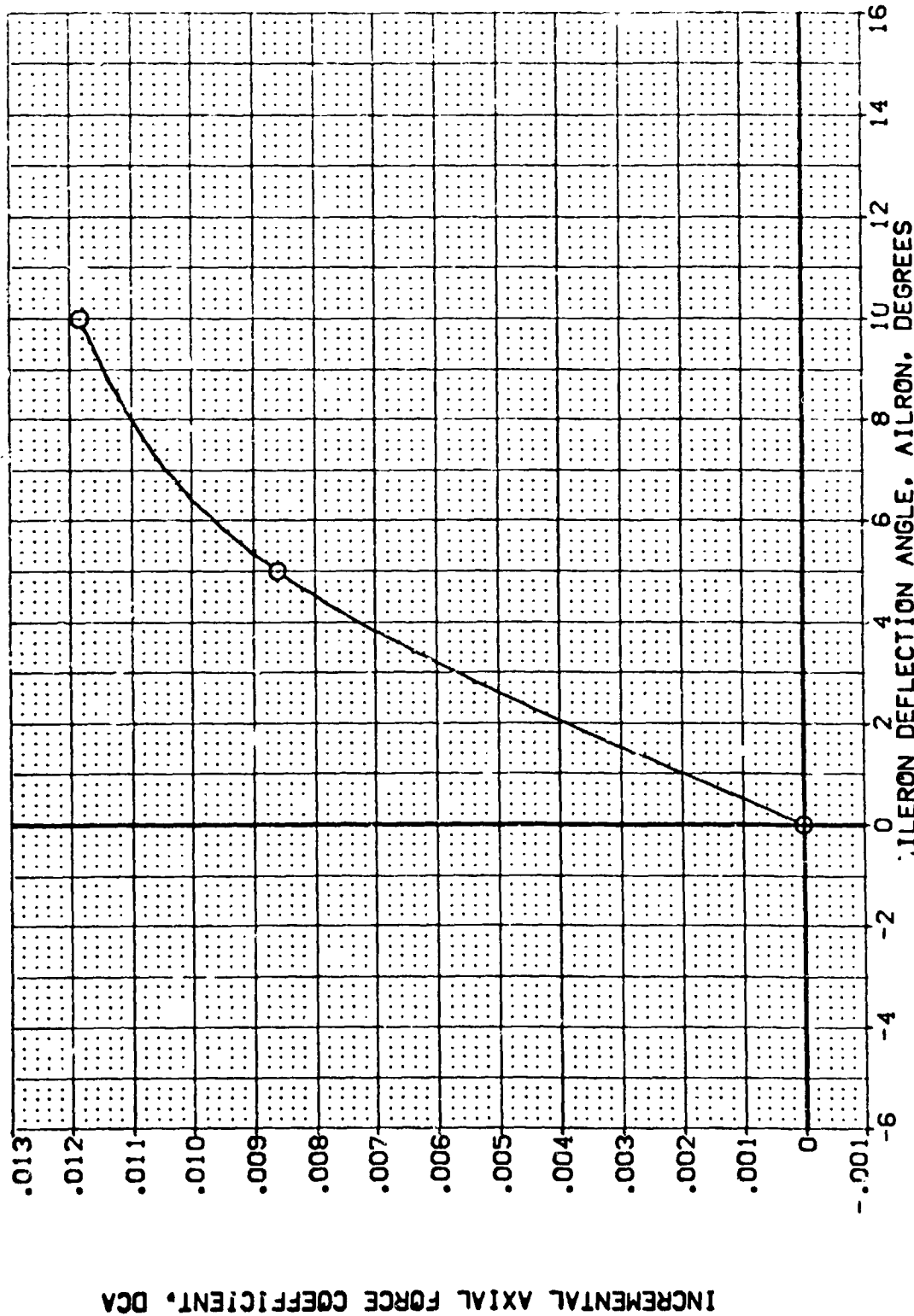
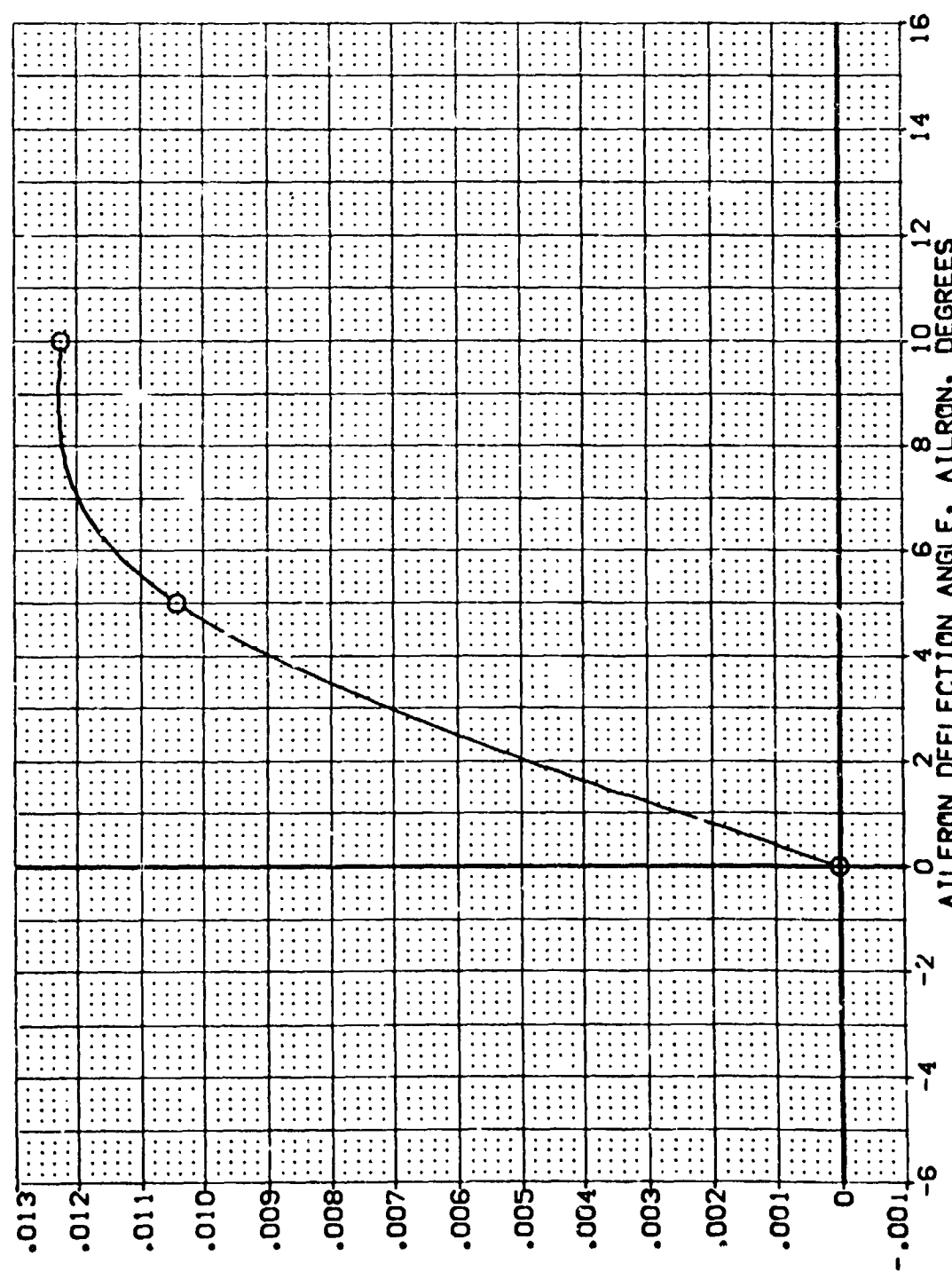


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (20Z117)

SYMBOL	ALPHA	MACH	BECLAP	SPOBRK	PARAMETRIC VALUES	.000 CATASET	.000 DELVON	.000 RUDDER	.000 BETA	DATA SOURCE	AILRON	10.000	DATASET	20Z156	AILRON	5.000	SRF	4.4119	SO.FT	19.2259	INCHES	37.9359	INCHES	43.5974	INCHES	.0700	INCHES	15.1875	SCALE	.0405	SCALE
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INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z117)

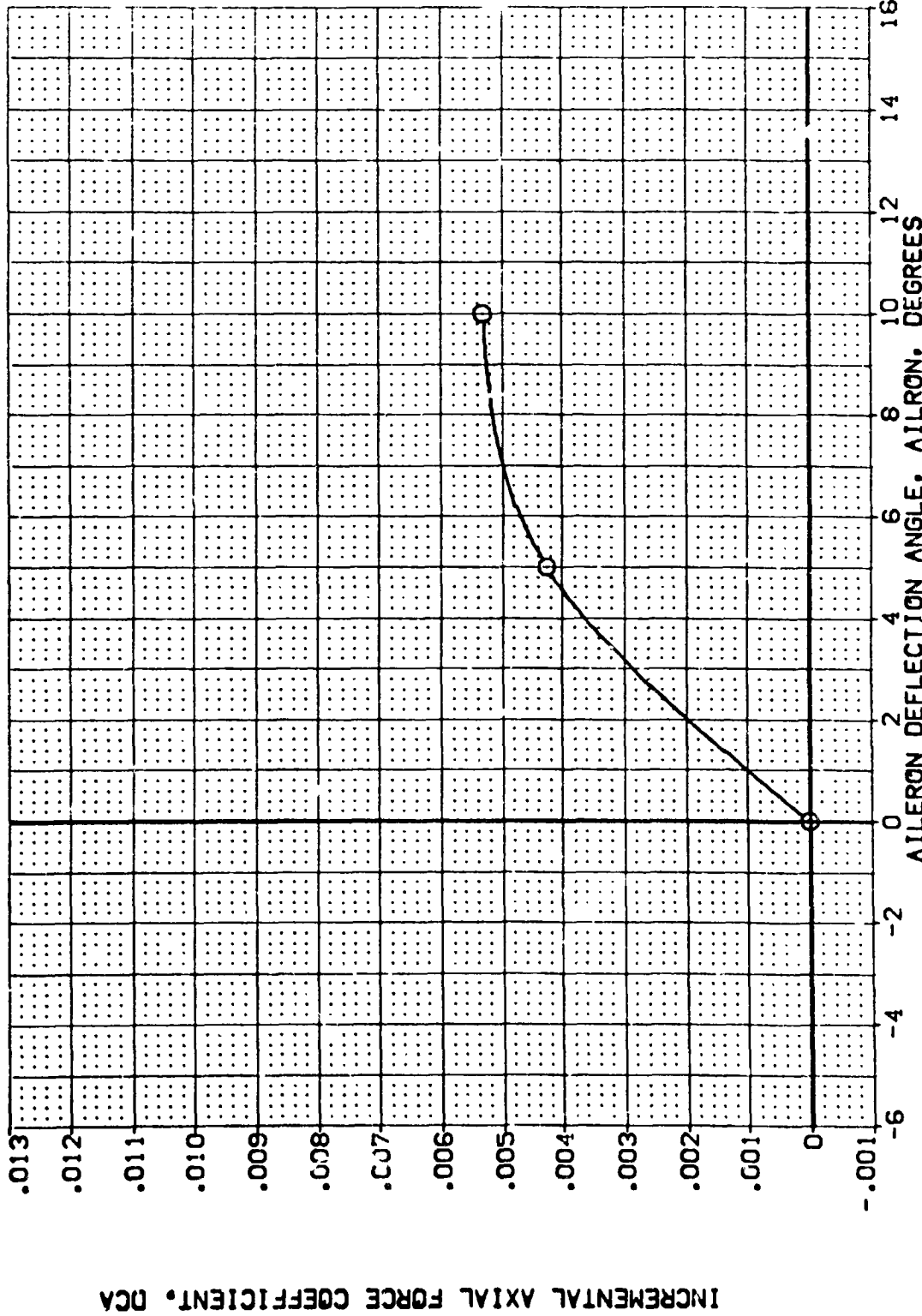
SYMBOL  
O

ALPHA 25.000  
MACH .200  
BDFLAP -12.000  
SPOBRK 25.000

PARAMETRIC VALUES  
DELTON .200  
RUDDER 10.000  
BETA 10.000

DATA SOURCE  
AILRON .000  
AILRON 10.000  
DATASET 20Z117  
20Z156  
AILRON 5.000  
DATASET 20Z156

REFERENCE INFORMATION  
SREF 4.4119  
LREF 19.2299  
BREF 37.9369  
XMRP 43.5974  
YMRP .0000  
ZMRP 15.1875  
SCALE .0405



INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ117)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	.000	.000	.000	DATA SOURCE	AILRON	0.00	10.000	AILRON	5.000	REF	4.4119	SO.FY.
○	30.000				.200	.000	.000	.000	AILRON	0.00	10.000	0.00	5.000	LREF	19.2259	INCHES	
					-12.000	.000	.000	.000	2DZ117	0.00	10.000	0.00	5.000	BREF	37.9359	INCHES	
					25.000	.000	.000	.000	2DZ158	0.00	10.000	0.00	5.000	XTRP	43.5974	INCHES	
					BETA					2TRP				YTRP	15.1875	INCHES	
										SCALE				SCALE	.0405	SCALE	

INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

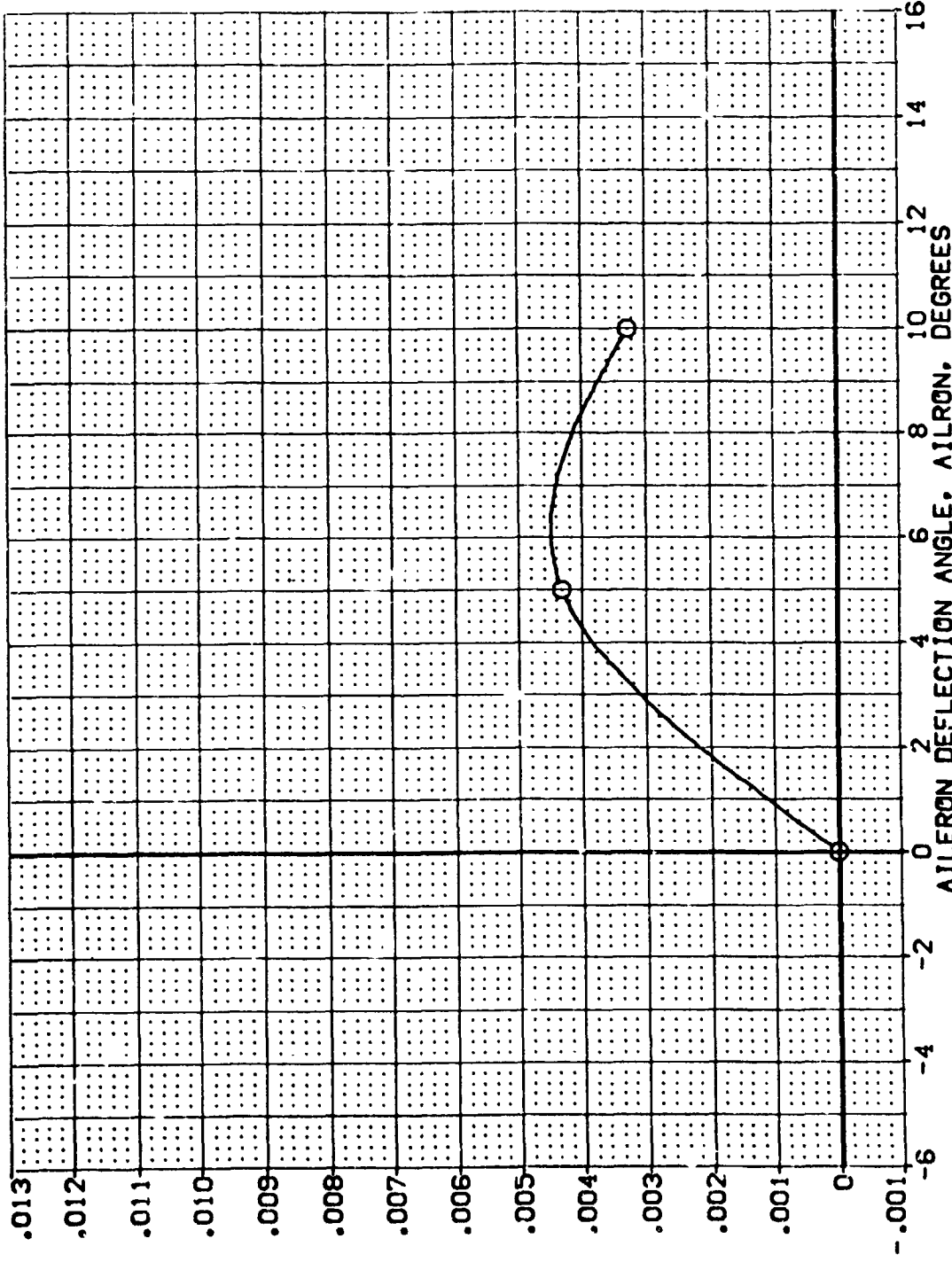


FIG 55 AILERON EFFECTIVENESS, BASELINE ELEVON GAP, 25 DEG FLARE

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (R02170)    0A628 B06C8 M7F8 V116E28V0F5X3  
 (R02164)    0A628 B06C8 M7F8 V116E28V0F5X3  
 (R02223)    0A628 B06C8 M7F8 V116E28V0F5X3

ELEVON    SPOBRK    BDFLAP    RUDDER  
 .000    25.000    -12.000    -16.200  
 .000    25.000    -12.000    -7.960  
 .000    25.000    -12.000    .000

REFERENCE INFORMATION  
 SREF    4.4119    SQ.FT.  
 LREF    19.2288    INCHES  
 BREF    37.9559    INCHES  
 XMRP    43.9974    INCHES  
 YMRP    .0000    INCHES  
 ZMRP    15.1675    INCHES  
 SCALE    .0405    SCALE

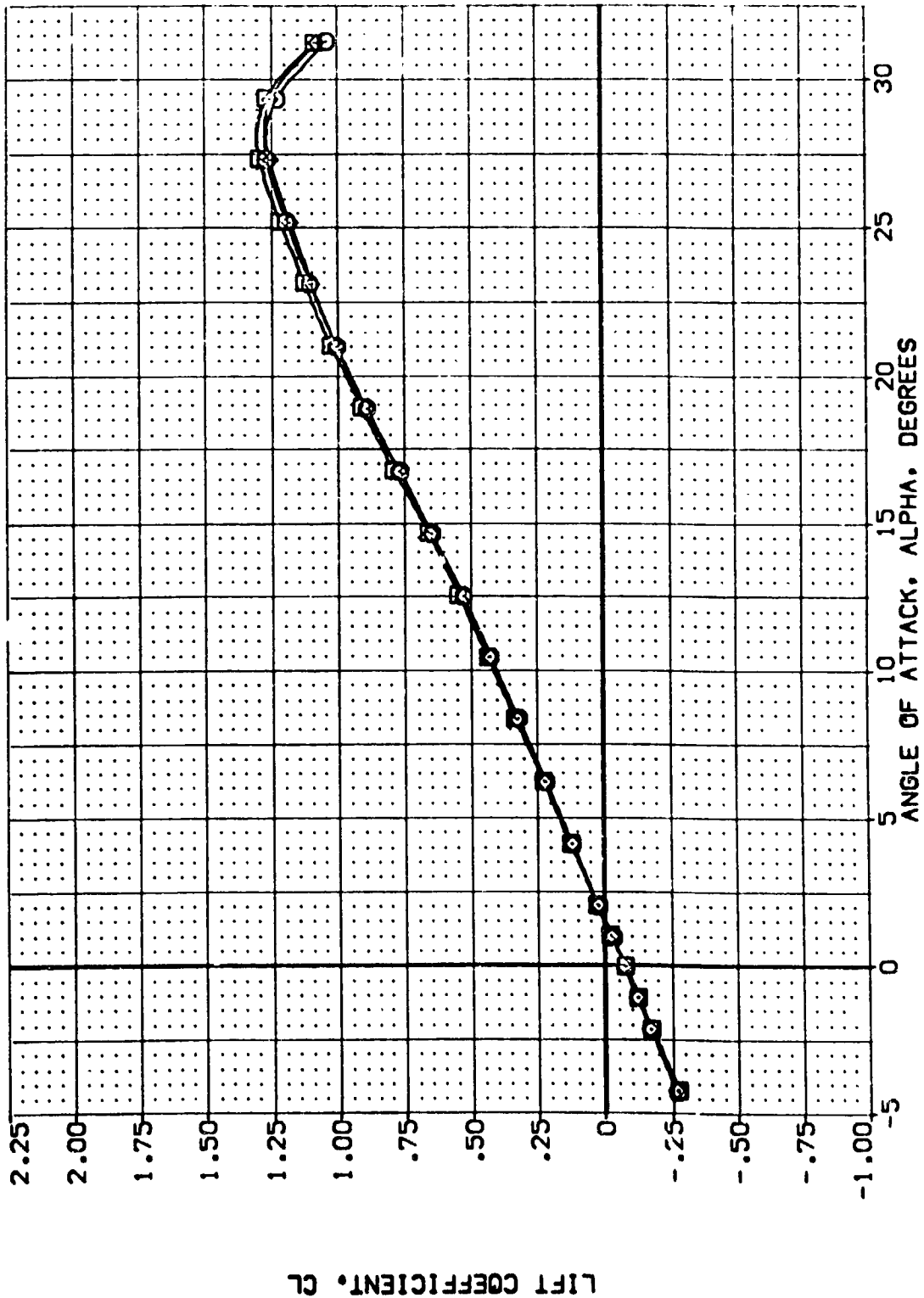
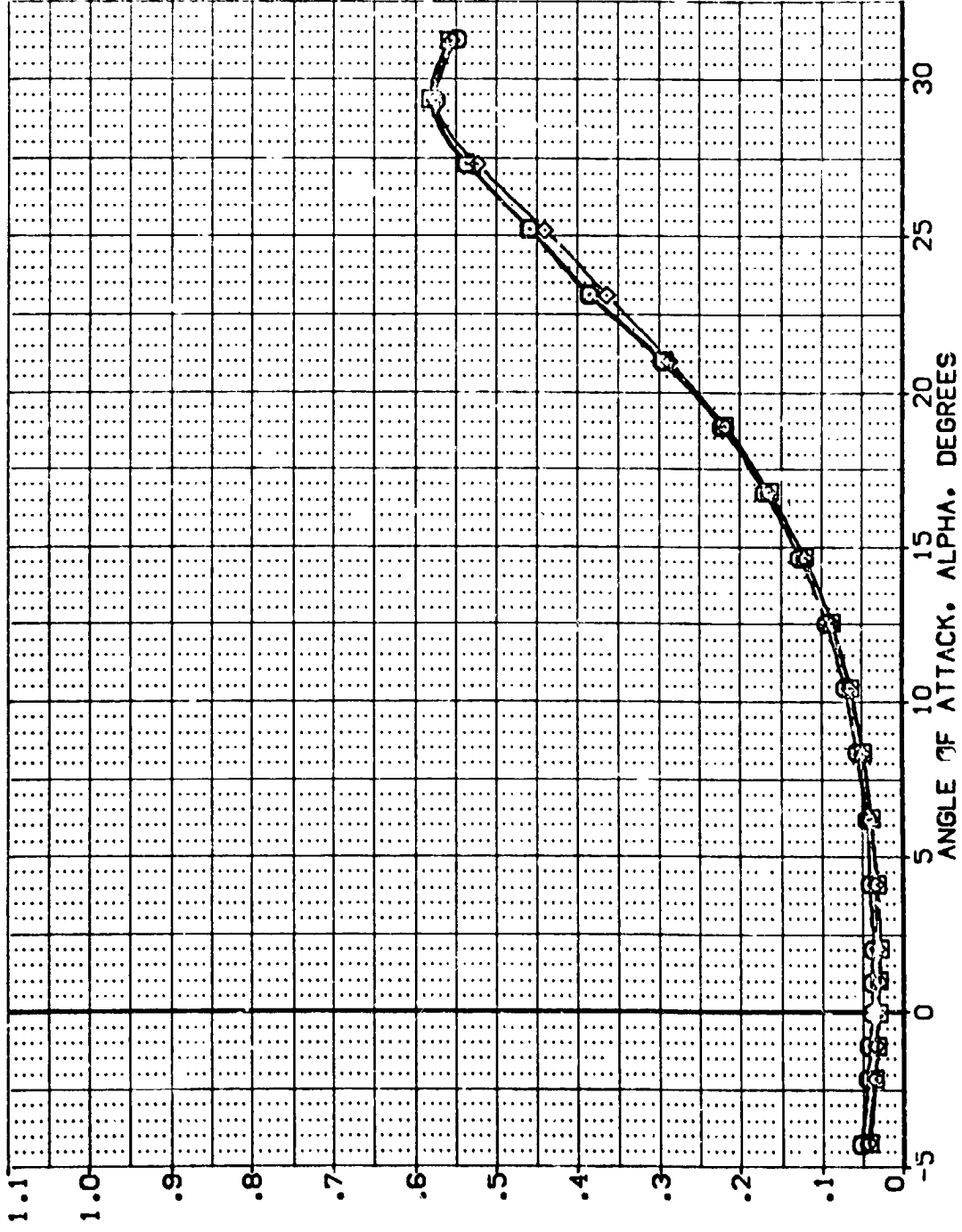


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

RAJMACH = .26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(R0Z170)	0A5Z8 B28C3 M7F8 V11E28V85X9	.000	25.000	-12.000	-15.270	SREF 4.4119 SQ.FT.
(R0Z184)	0A5Z8 B28C3 M7F8 V11E28V85X9	.000	23.000	-12.000	-7.560	LREF 19.2299 INCHES
(R0Z323)	0A5Z8 B28C3 M7F8 V11E28V85X9	.000	23.000	-12.000	.000	BREF 37.5369 INCHES
						XMRP 43.5574 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405



FOREBODY DRAG COEFFICIENT, CDF

FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BDFLAP	RUDDER	REFERENCE INFORMATION
{R02170}	BAG28 M77-8 V11B228V8S19	.000	25.000	-12.000	-15.220	4.4119 SQ.FT.
{R02164}	BAG28 M77-8 V11B228V8S19	.000	25.000	-12.000	-7.960	19.2299 INCHES
{R02223}	BAG28 M77-8 V11B228V8S19	.000	25.000	-12.000	.000	37.5359 INCHES
						43.5974 INCHES
						.0000 INCHES
						15.1875 INCHES
						.0405 SCALE

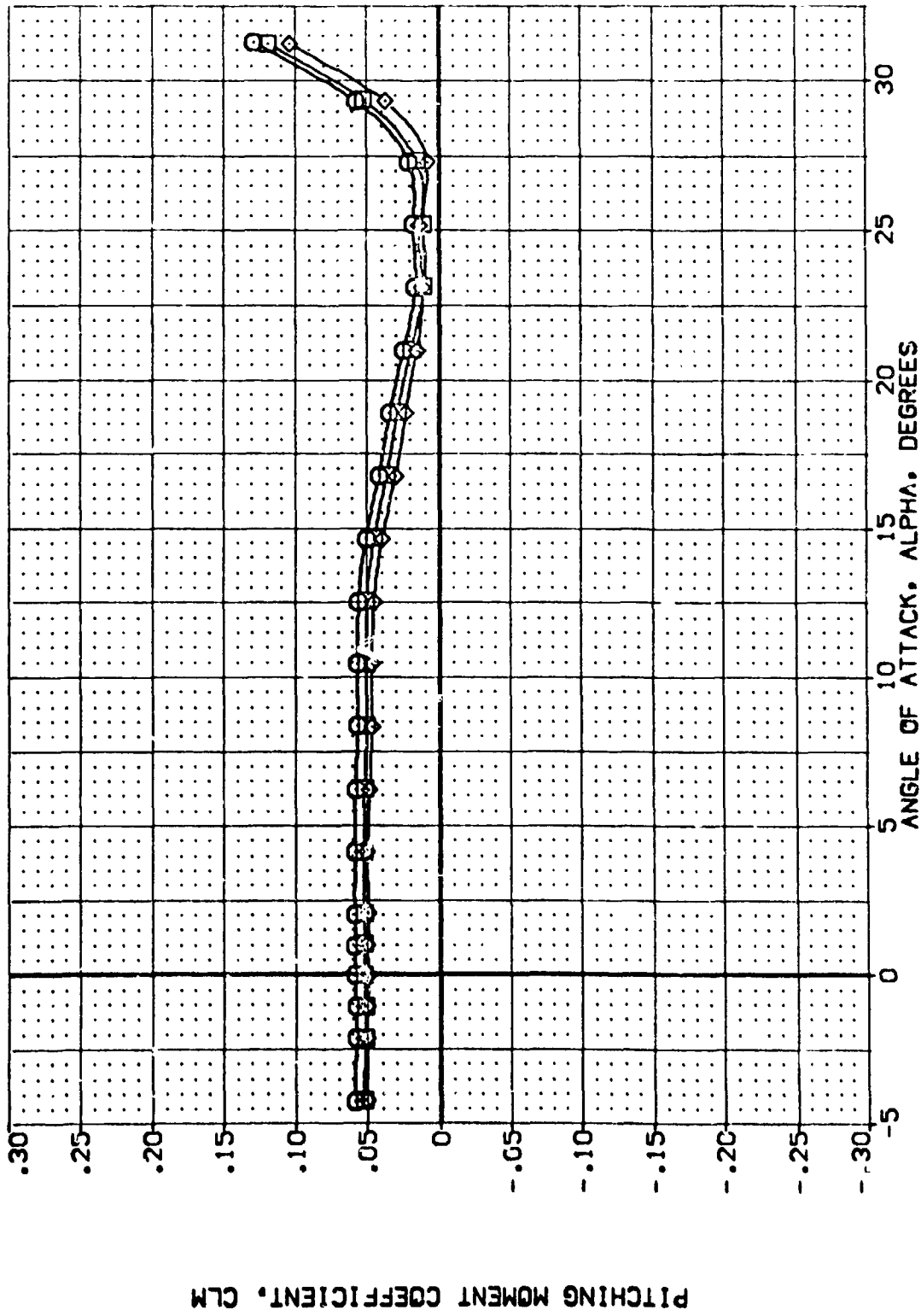


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

(A)MACH = .26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPDBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(R02170)	0A628 B26C9 M7F8 V11E28V8F6X9	.000	25.000	-12.000	-15.200	4.4119 SQ.FT.
(R0216A)	0A628 B26C9 M7F8 V11E28V8F6X9	.000	25.000	-12.000	-7.560	19.2288 INCH-ES
(R02323)	0A628 B26C9 M7F8 V11E28V8F6X9	.000	25.000	-12.000	.000	37.3359 INCH-ES
						43.5974 INCH-ES
						.0000 INCH-ES
						15.1875 INCH-ES
						.0405 SCALE

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

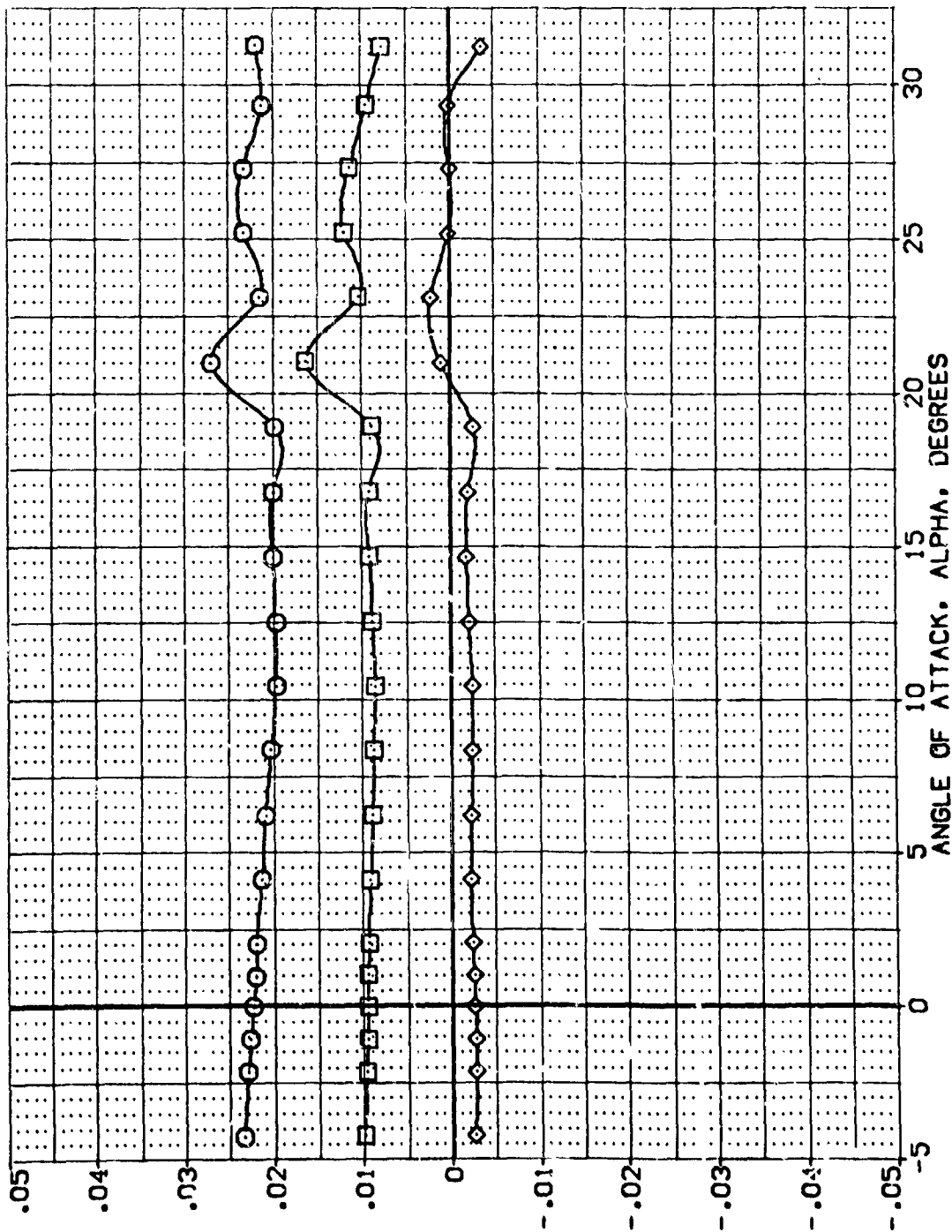


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL  
 (R02170)  
 (R02164)  
 (R02173)

CONFIGURATION DESCRIPTION  
 B4528 B28C3 M7F8 V11E28V8B5A9  
 0 528 B28C3 M7F8 V11E28V8B5A9  
 0 528 B28C3 M7F8 V11E28V8B5A9

ELEVON SPOBRK BC'LAP RUDDER  
 .000 25.000 -12.000 -16.200  
 .000 25.000 -12.000 -7.560  
 .000 25.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2259 INCHES  
 BREF 37.5359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

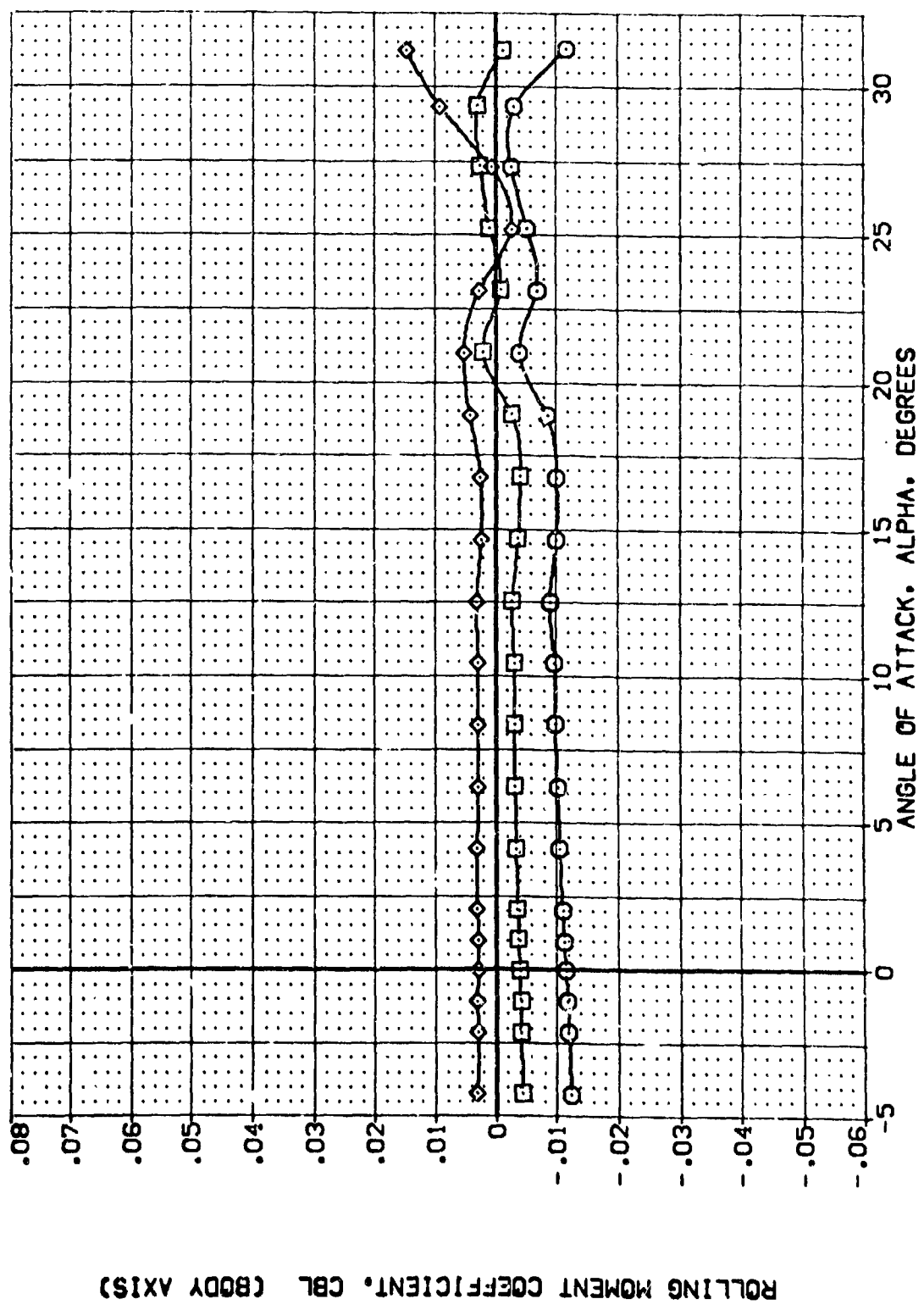


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

MACH = .26

DATA SET SYMBOLS: (RDZ170) (RDZ184) (RDZ223)

CONFIGURATION DESCRIPTION: 0A628 M7F8 V116E26V8FSX9 0A629 M7F8 V116E26V8FSX9 0A62U M7F8 V116E26V8FSX9

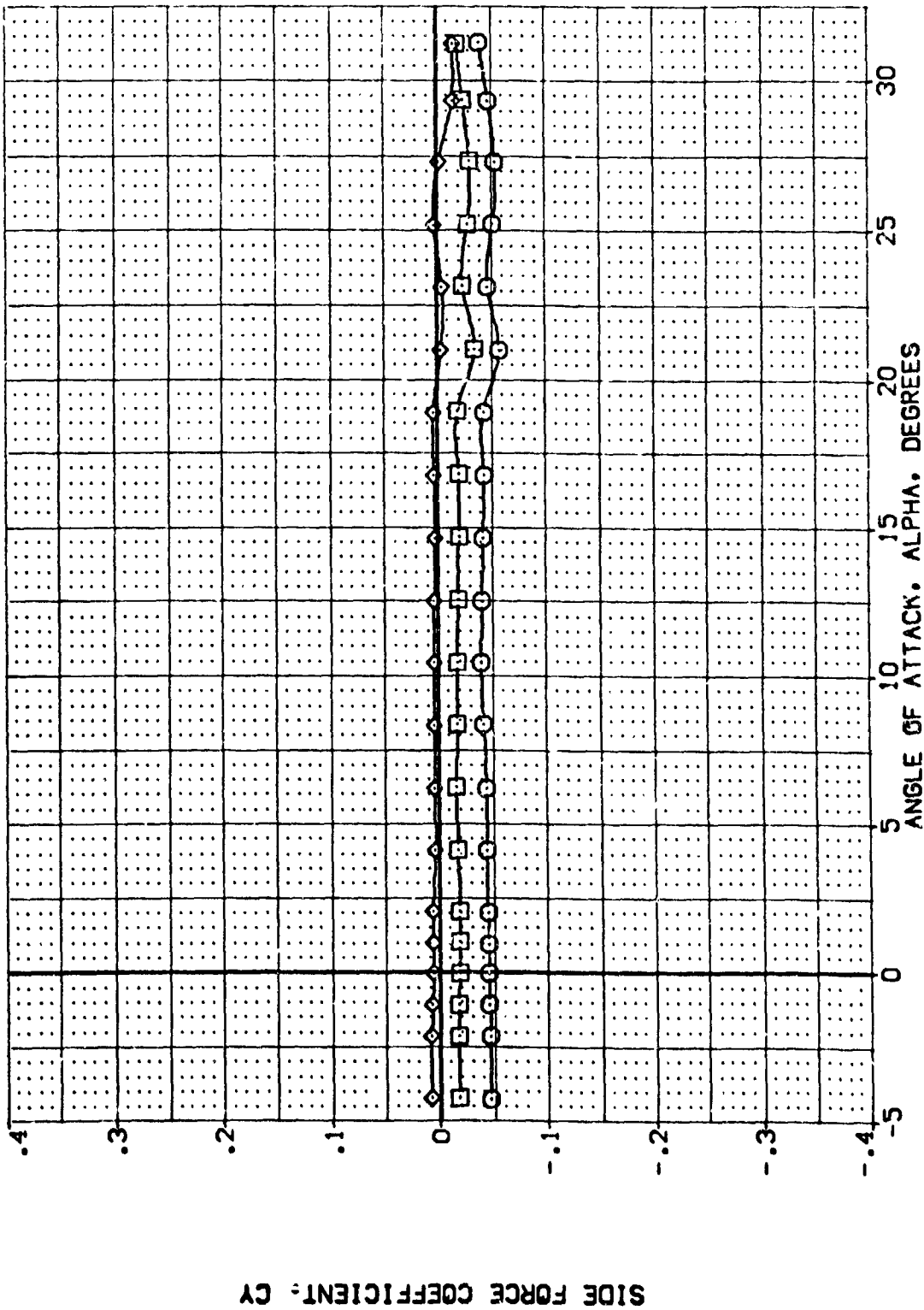
ELEVON: .000 25.000 23.000

SPORRK: 25.000 23.000

BD/FLAP: -12.000 -12.000

RUDDER: -16.200 -7.960

REFERENCE INFORMATION: 4.4119 SQ.FT. 19.2299 INCHES 37.9399 INCHES 43.0000 INCHES 15.1875 INCHES .0405 SCALE



SIDE FORCE COEFFICIENT: CY

FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

(M)MACH = .26

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION					
○	.000	MACH	.260	DELTA	.000	RUDDER	-7.960	SREF	4.4119	SCALING	INCHES
		BOFLAP	-12.000	ATLRON	.000	DATASET	20Z164	LREF	19.2798	INCHES	
		SPDR1	25.000	BETA	.000	RUDDER	-16.220	BMREF	37.9359	INCHES	
					.000	DATASET	20Z323	XMREF	13.5874	INCHES	
								YMREF	.0000	INCHES	
								ZMREF	15.1875	INCHES	
								SCALE	.0405	SCALE	

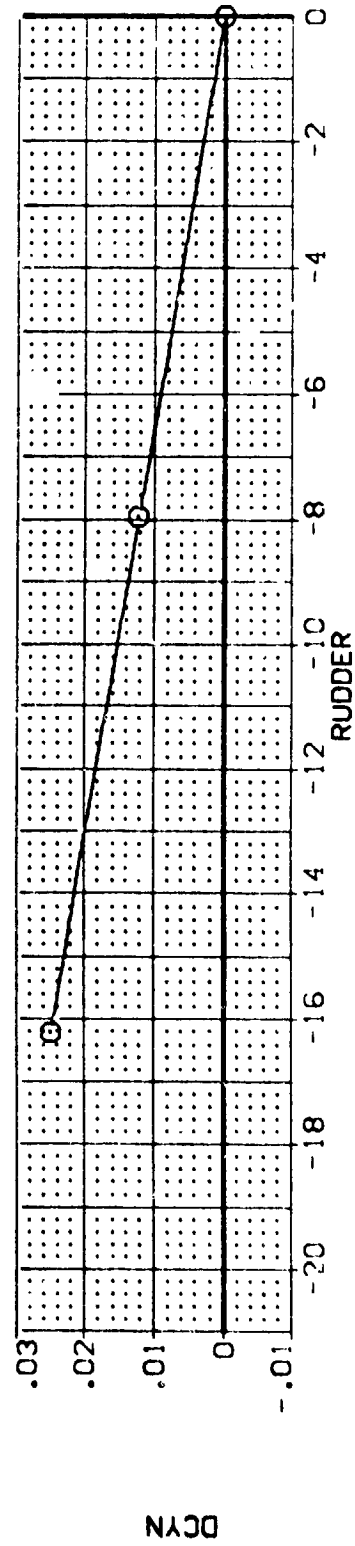
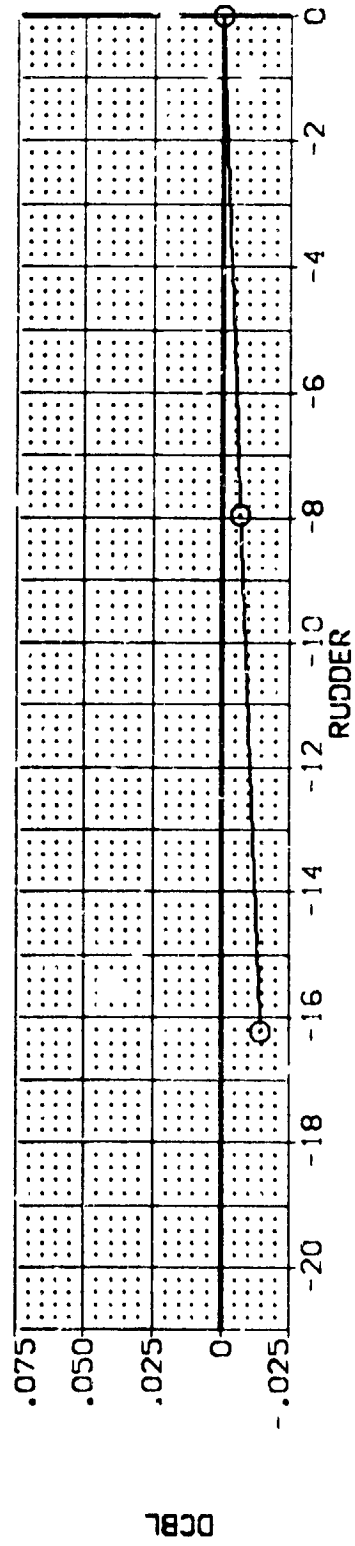
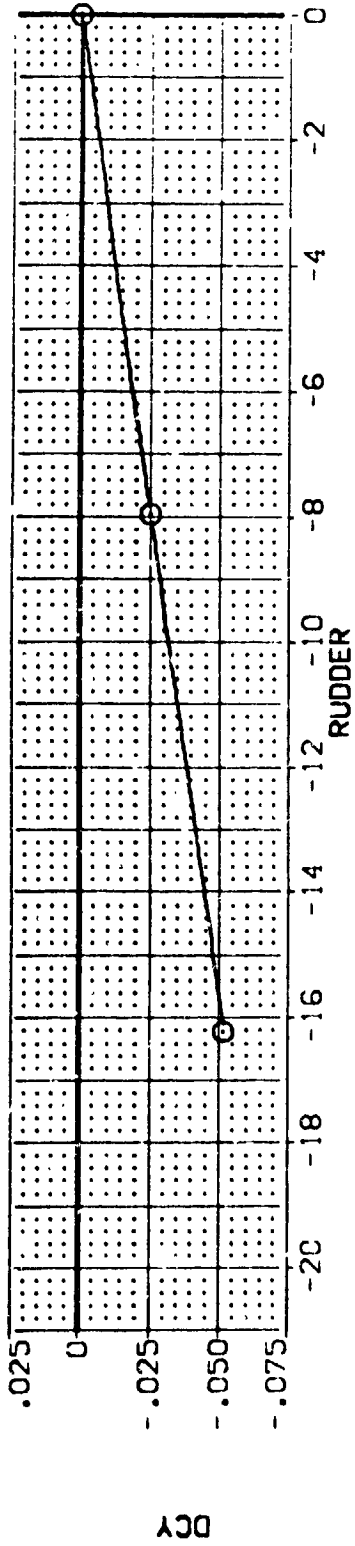


FIG 53 RUDDER EFFECTIVENESS, 25 DEG. FLARE.



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	5.000	BDFLAP	.260	DELVON	.000	DATASET	RUDDER	SREF
		SPDRK	-12.000	A1LRON	.000	20Z170	-7.960	LREF
			25.000	BETA	.000	20Z323		BREF
								XMRP
								ZMRP
								SCALE
								SO.FT.
								INCHES
								INCHES
								SCALE

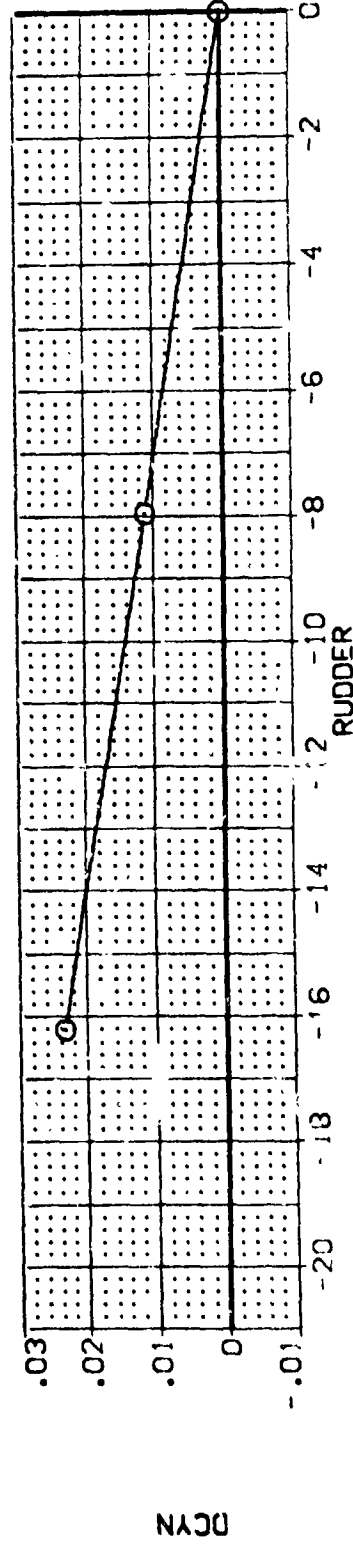
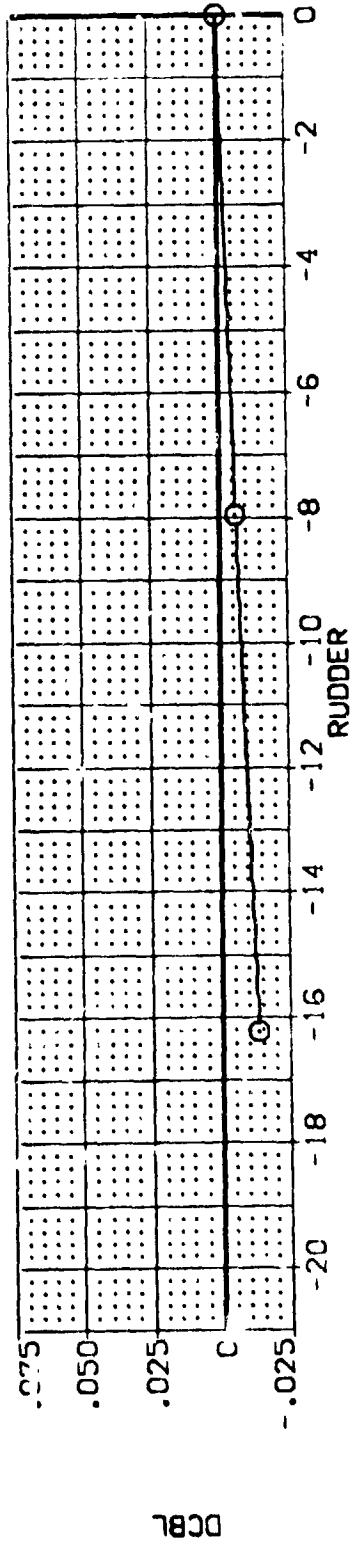
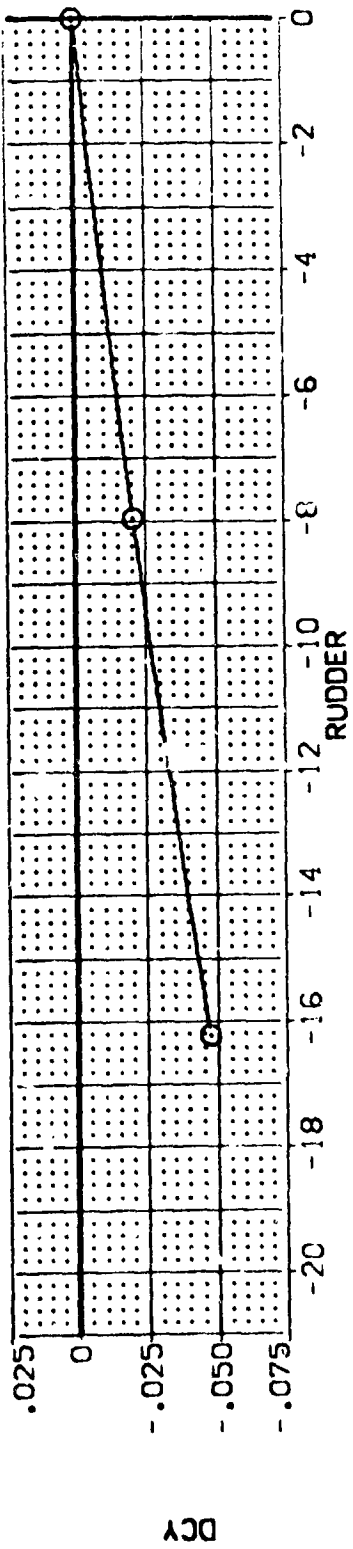


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLAPE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMS. 0

ALPHA 10.000

MACH .260

BOFLAP -12.000

SPOBRK 25.000

DELVON

ALLRON

BETA

PARAMETRIC VALUES

.000 .000 .000

DATA SOURCE

RJDDER -16.220

RUDDER -7.960

DATA SET

20Z164

20Z170

20Z323

REFERENCE INFORMATION

SCALING

4.4119

19.2799

7.9359

43.5974

10000

151.875

SCALE

.0405

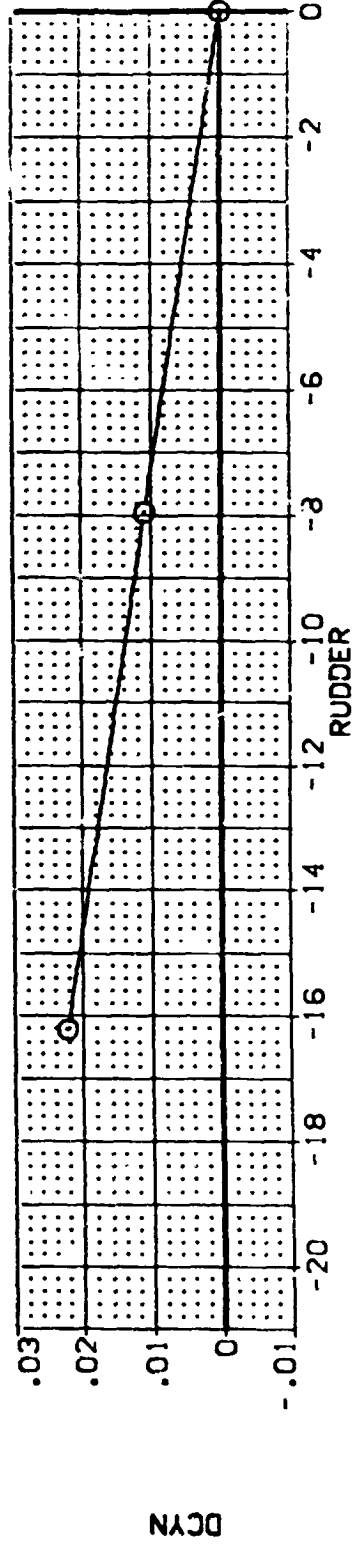
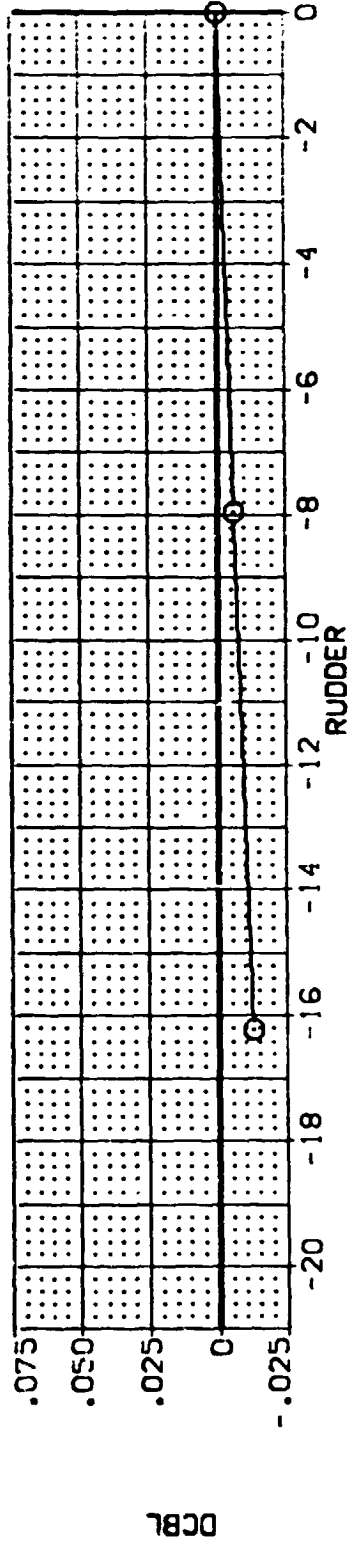
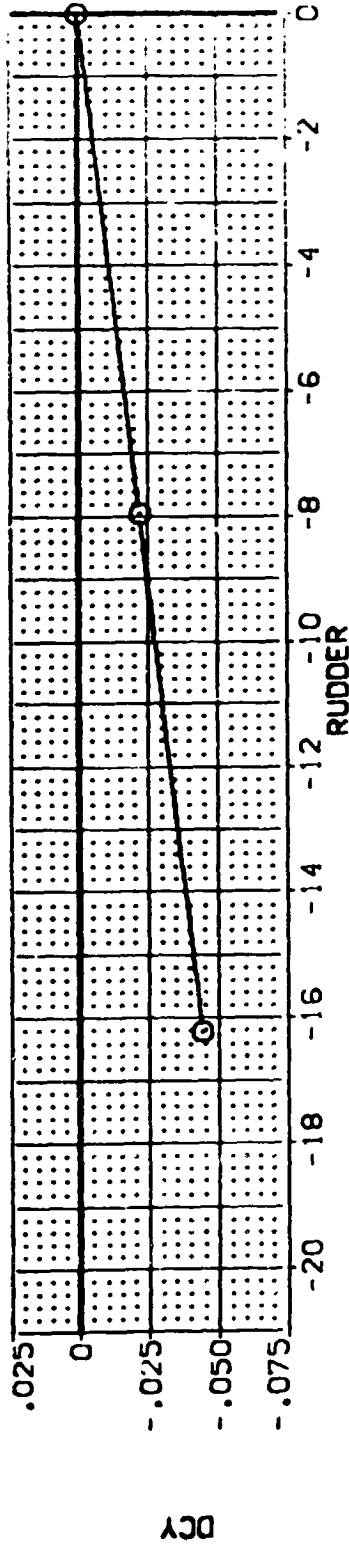


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE



C-10

(2DZ170)

W116E28V8R5X9

M7F8

B26C9

B26C9

SYMBOL  
O

ALPHA  
15.000

MACH  
0.260

DELTA  
-12.000

DELTA  
25.000

DELTA  
-16.220

DELTA  
-7.960

DELTA  
-0.000

DELTA  
15.000

DELTA  
15.1875

DELTA  
0.0405

DELTA  
0.0405

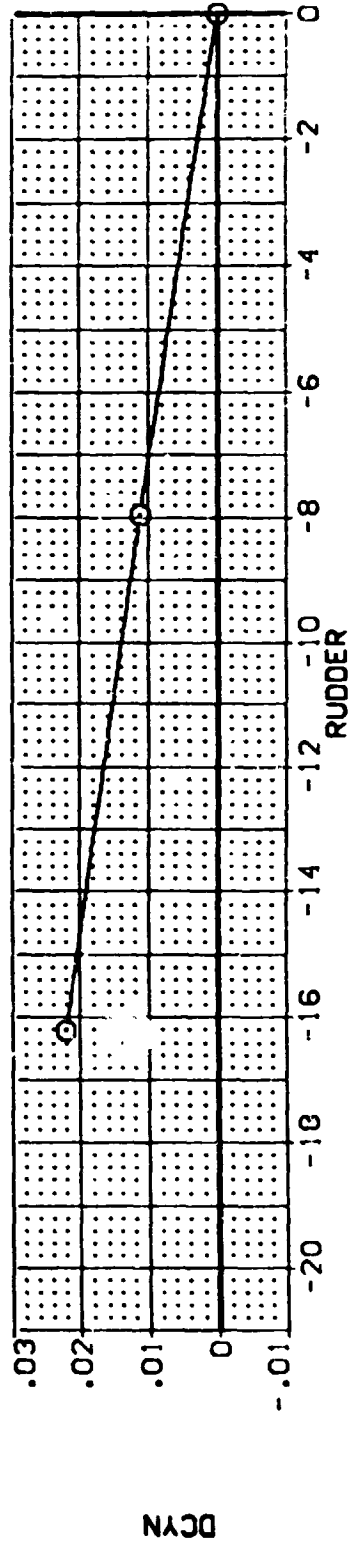
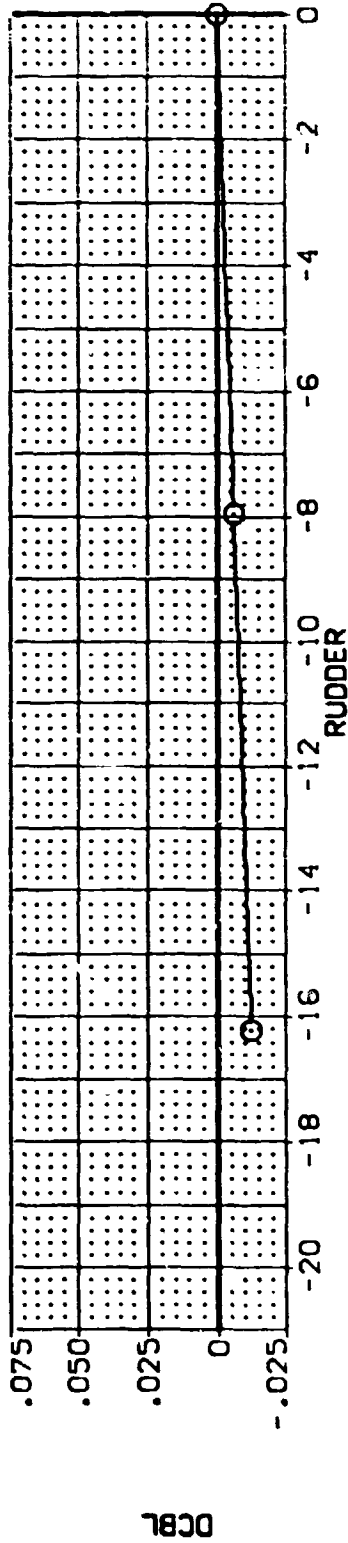
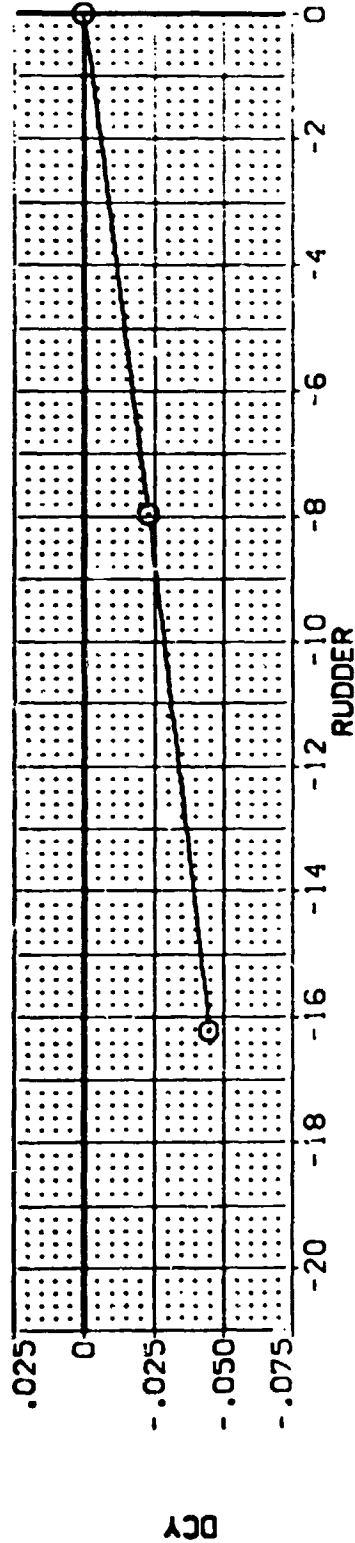


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE.

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	BOFLAP	SPOSRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	RUDDER	RUDDER	SRPF	REFERENCE INFORMATION
○	20.000	.260	-12.000	25.000	DEL VON	RUDDER	20Z164	-7.960	SRPF	4.4119	SCALE
					ALTRON				LREF	19.2799	SCALE
					BETA				BREF	37.9359	SCALE
									XMRP	43.5974	SCALE
									YMRP	.0000	SCALE
									ZMRP	15.1875	SCALE
									SCALE	.0405	SCALE

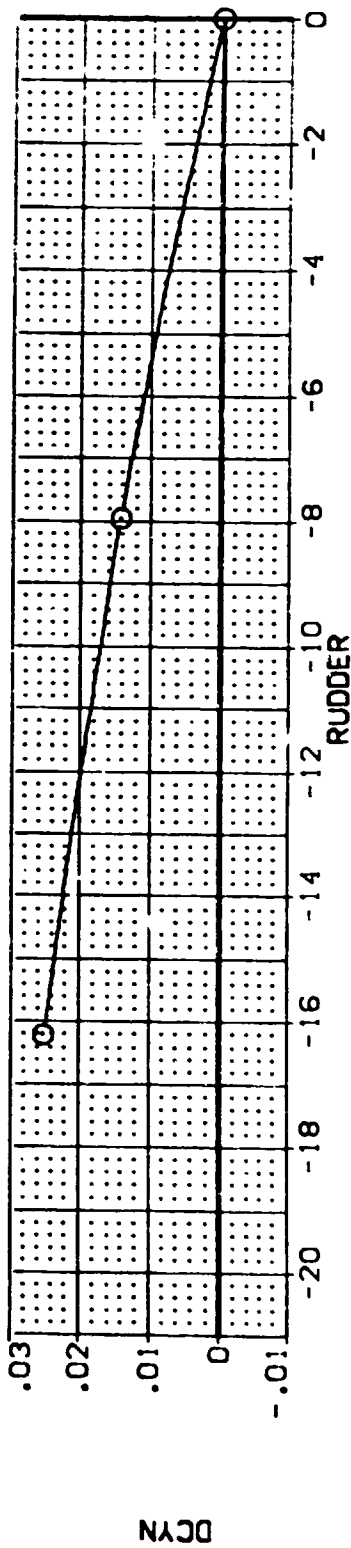
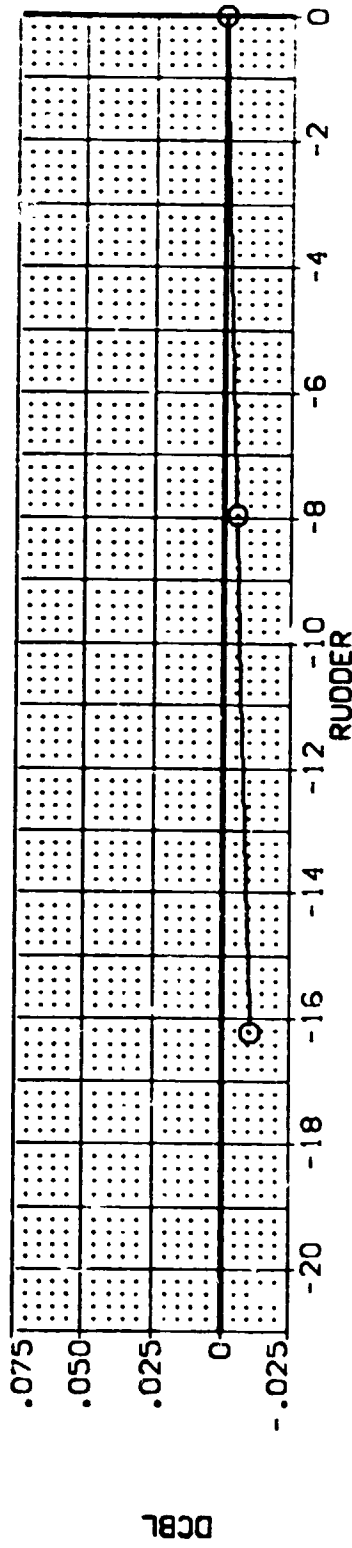
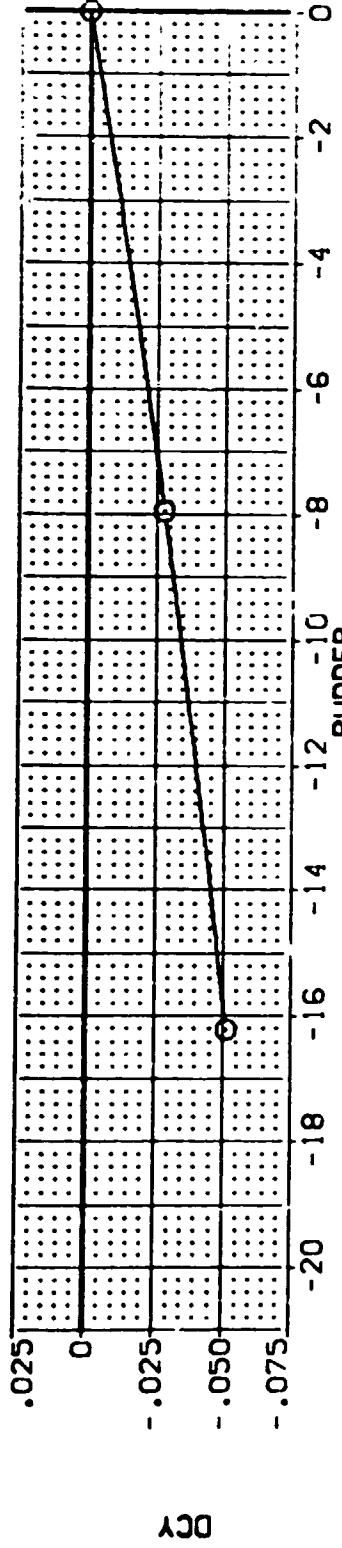


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		DATASET		RUDDER	SREF	REFERENCE INFORMATION	
O	25.000	B07LAP	.260	DELVON	.000	20Z170	20Z164	-7.960	REF	4.4119	SC.FT.	
		SPOBRK	-12.000	AILRON	.000	20Z323			BREF	19.2299	NG-FES	
			75.000	BETA	.000				XMRP	27.9359	NG-FES	
									ZMRP	43.9974	NG-FES	
									ZMPP	.0000	NG-FES	
									SCALE	15.1875	SCALE	
										.0405		

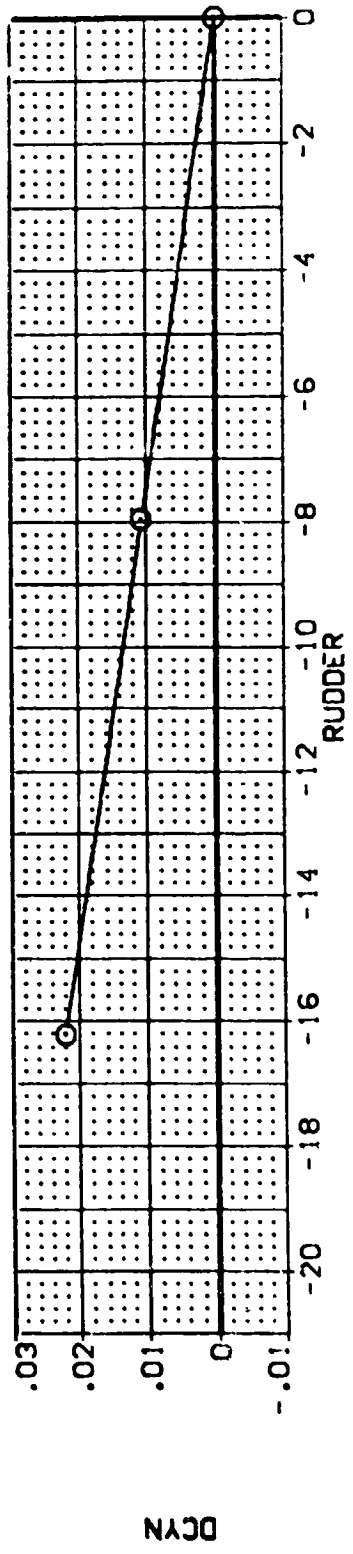
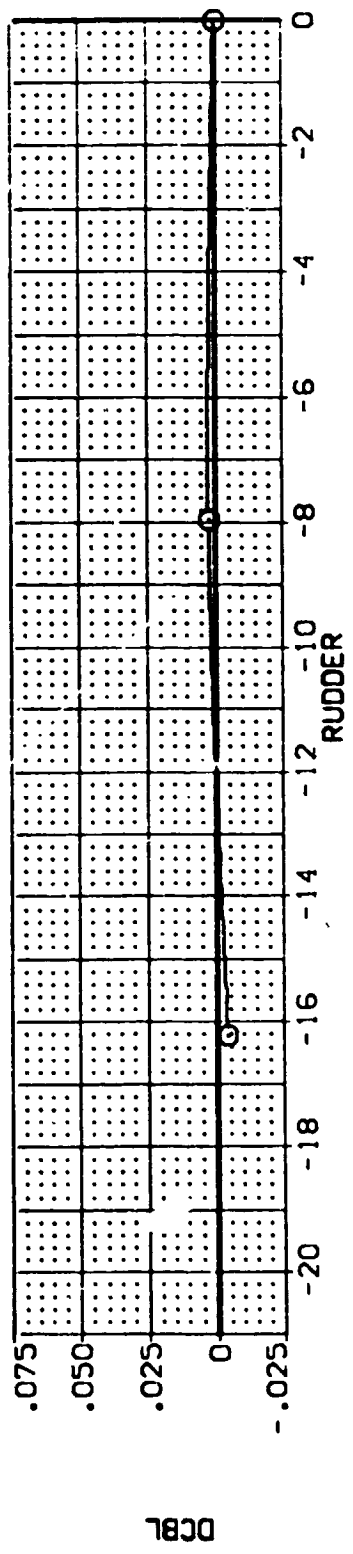
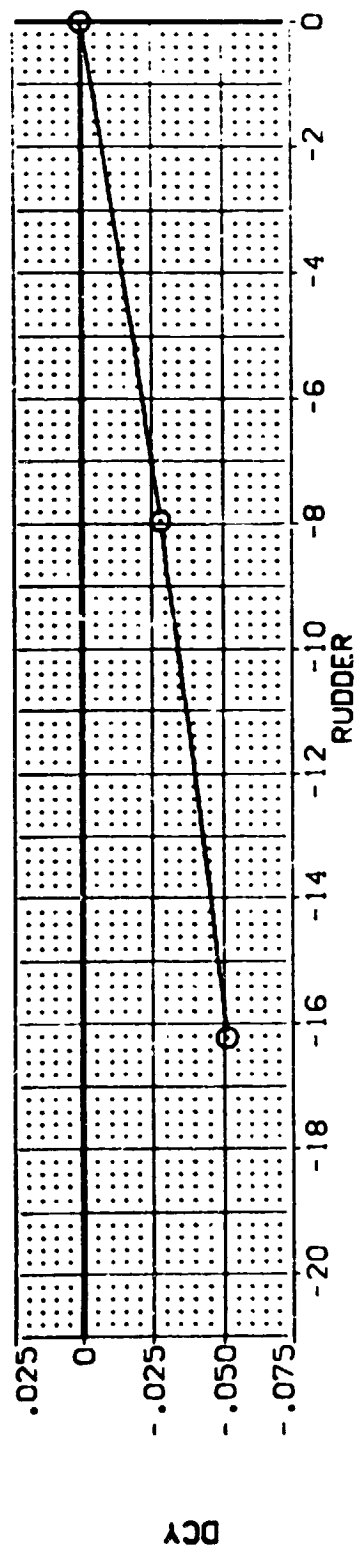


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	30.000	BDFLAP	.260	DELVON	.000	DATASET	RUDDER	SREF	4.4119	SO.FT	
		SPOBRK	-12.000	AILRON	.000	20Z170	-7.900	REF	19.2799	INCHES	
			25.000	BETA	.000	20Z323		REF	37.9359	INCHES	
								YMRP	43.5974	INCHES	
								ZMRP	.0000	INCHES	
								SCALE	15.1875	INCHES	
									.0405	SCALE	

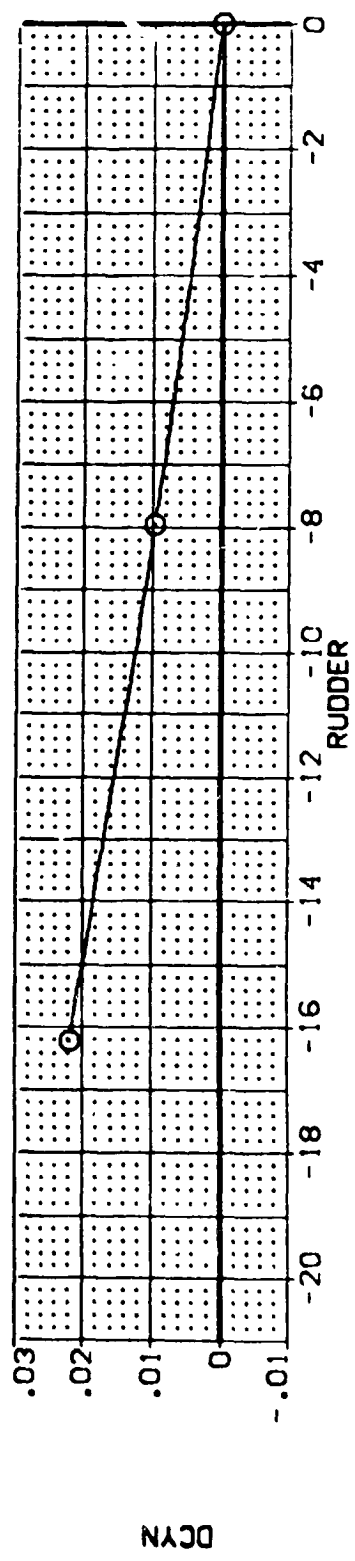
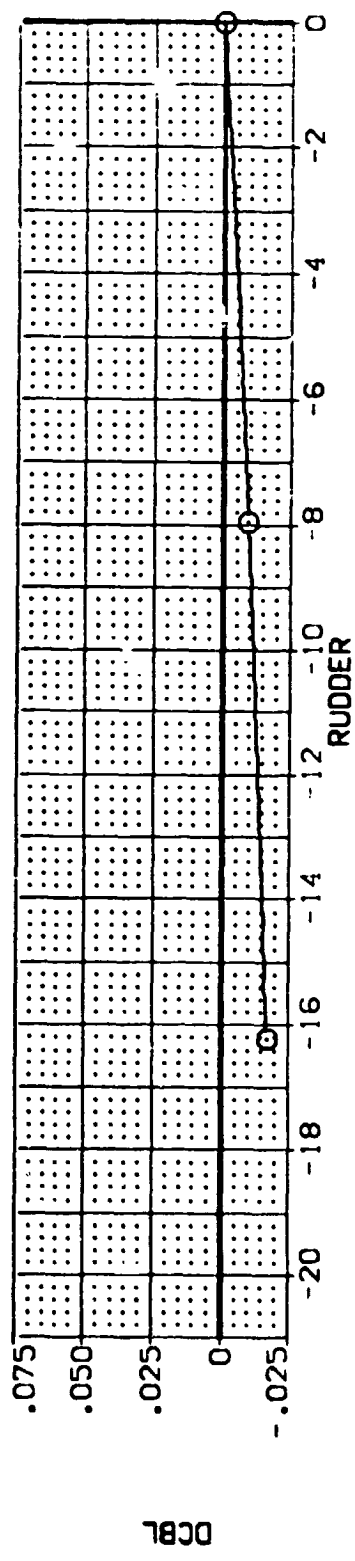
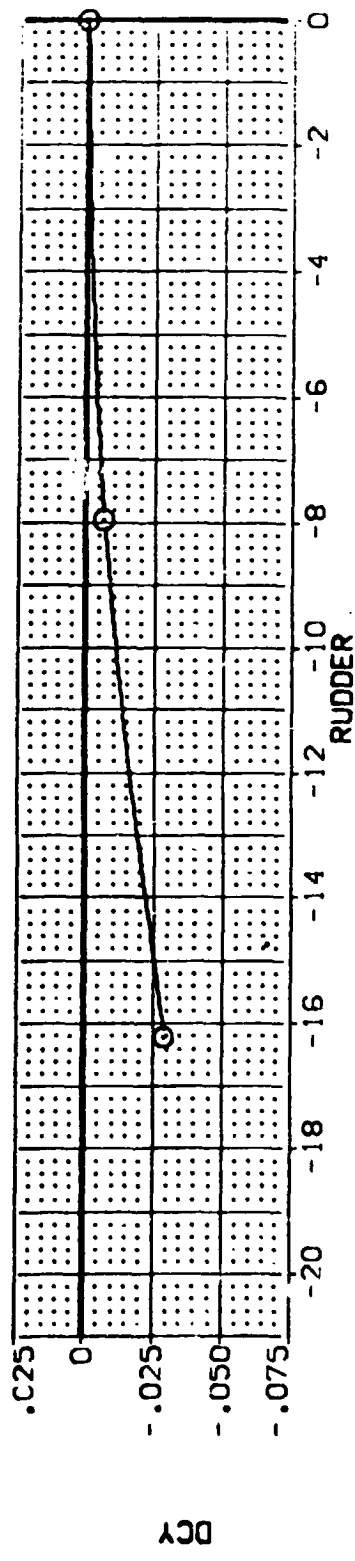


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

0A62B 826C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
○	.000	.260	DELVON	.000	20Z170	RUDDER	SREF	4.4119	SCALE	INCRS	SCALE
		-12.000	AILRON	.000	20Z323	-16.220	REF	19.2799	INCRS	INCRS	SCALE
		25.000	BETA	.000		.000	REF	37.9359	INCRS	INCRS	SCALE
							XMRP	43.5974	INCRS	INCRS	SCALE
							ZMRP	.0000	INCRS	INCRS	SCALE
							SCALE	15.1875	INCRS	INCRS	SCALE
								.0405	INCRS	INCRS	SCALE

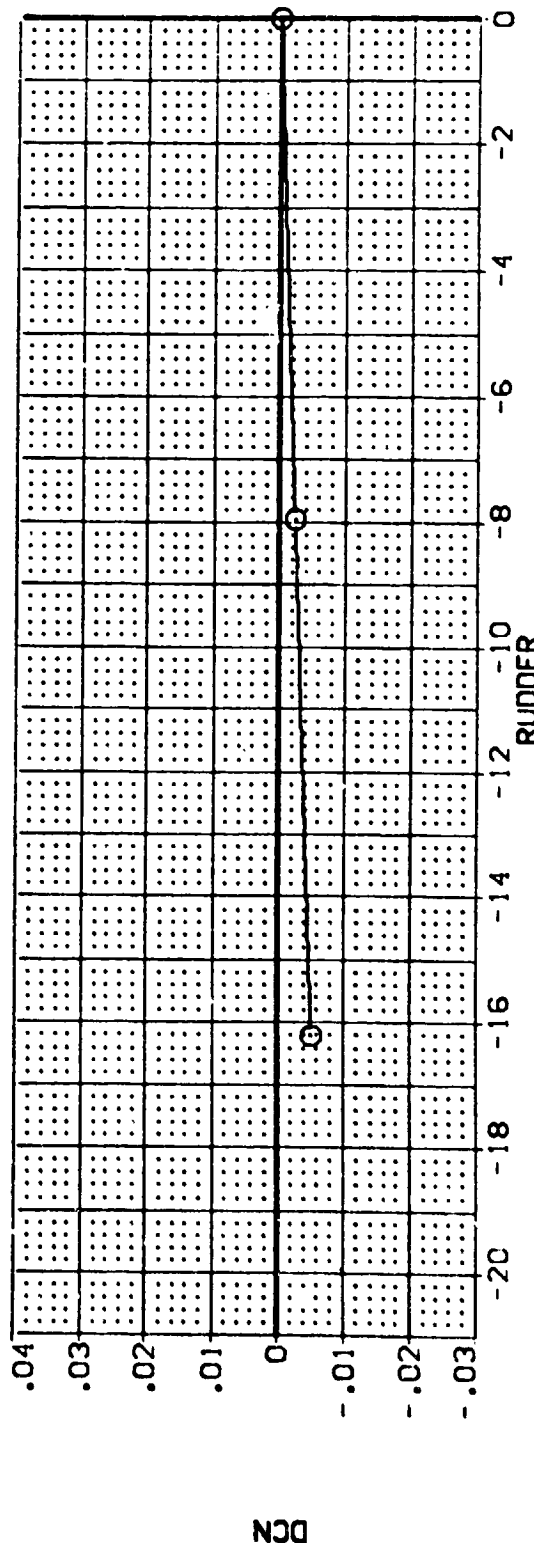
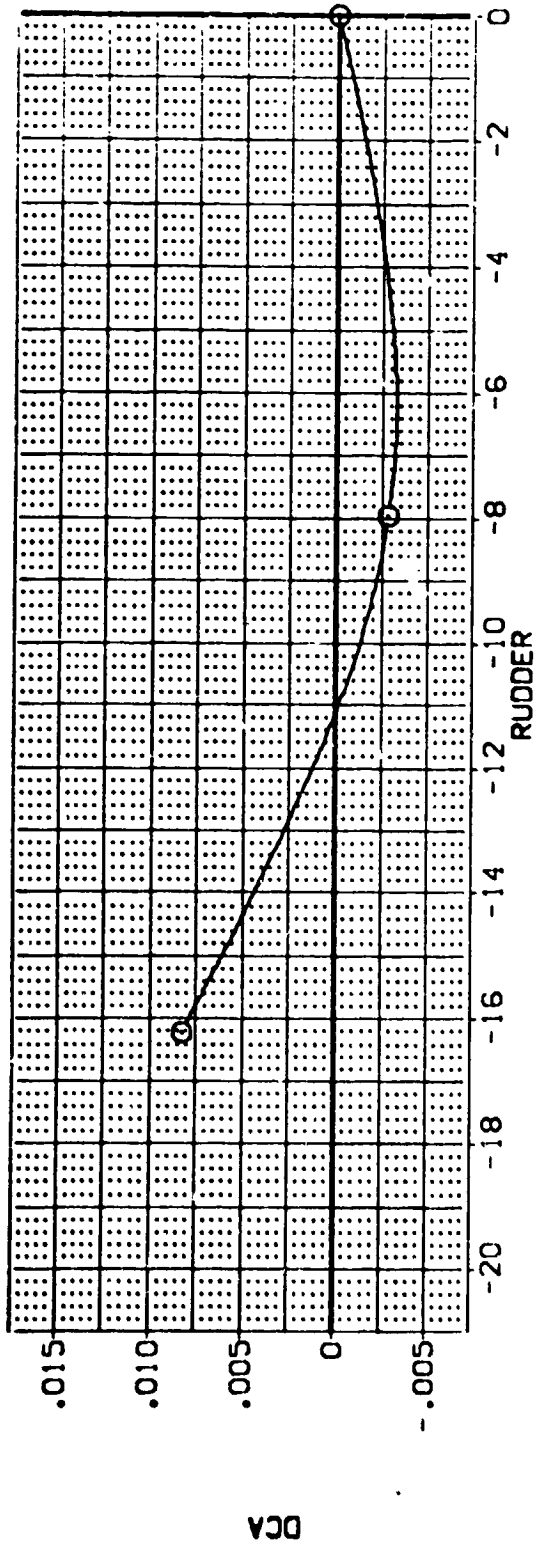


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION				
O	5.000	BD FLAP	.260	DELTA	.000	DATASET	RUDDER	SREF	LREF	SO.FT	
		SPDRK	-12.000	AIRLN	.000	20Z170	-7.960	19.2799	37.9359	INCHES	
			25.000	BETA	.000	20Z323		43.5874	0.000	INCHES	
								7MRP	15.1875	INCHES	
								SCALE	.0405	SCALE	

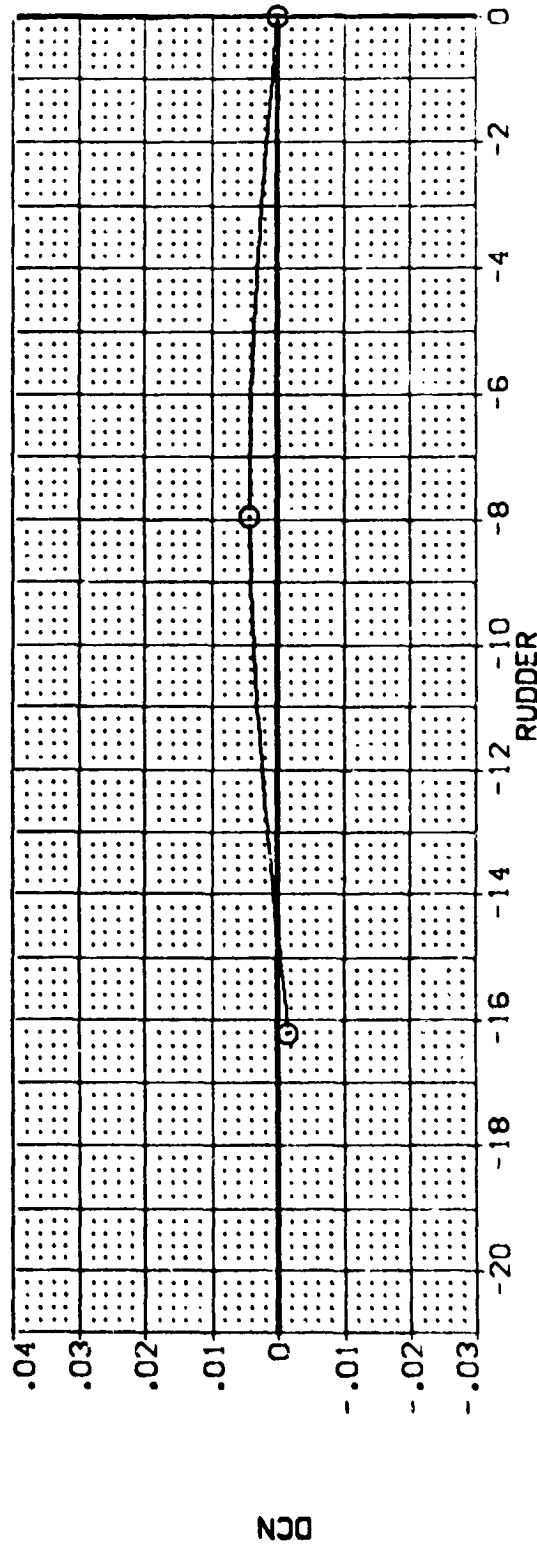
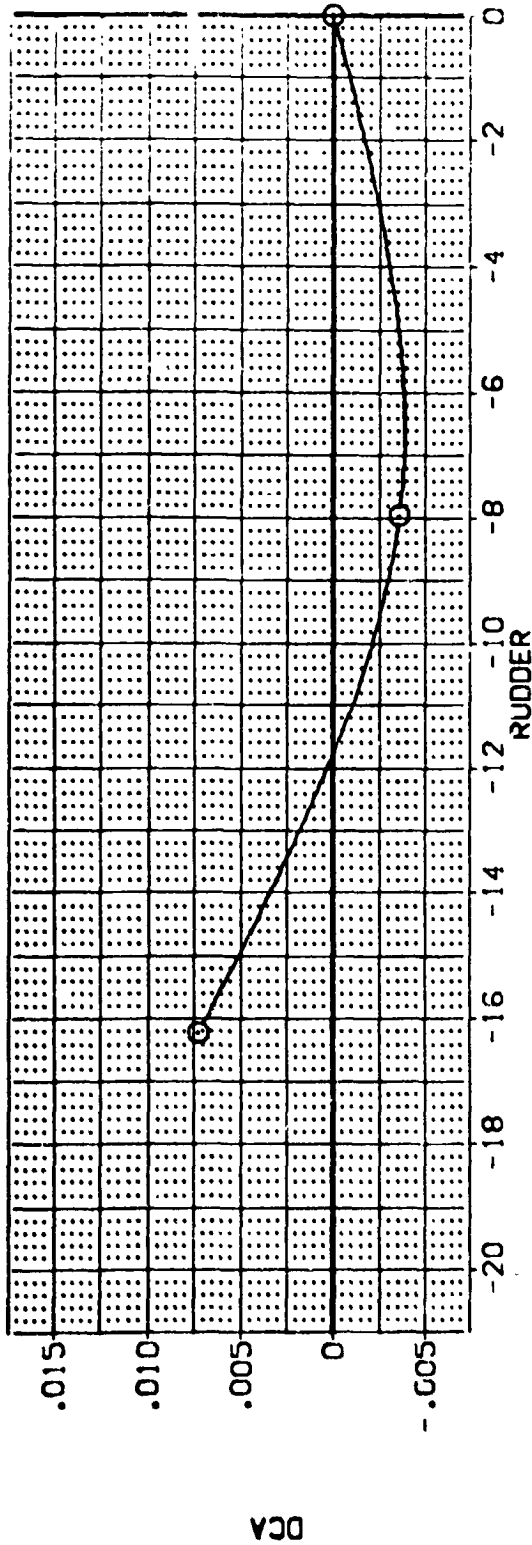


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE



(2DZ170)

W116E28V8R5X9

M7F8

B26C9

0A62B

SYMBOL  
O

ALPHA  
10.000

MACH  
80FLAP  
SPOBRK

PARAMETRIC VALUES  
.260 DELVON  
-12.000 AILRON  
25.000 BETA

.000 DATASET  
.000 2DZ170  
.000 2DZ323

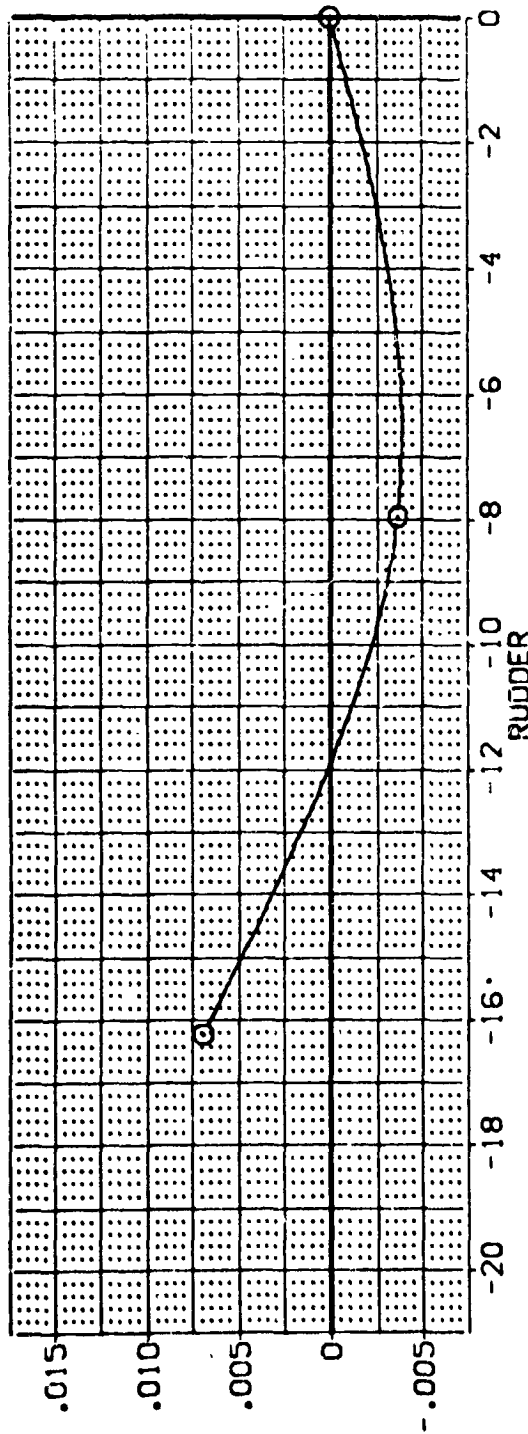
RJODER  
-16.220  
.000

DATASET  
2DZ164

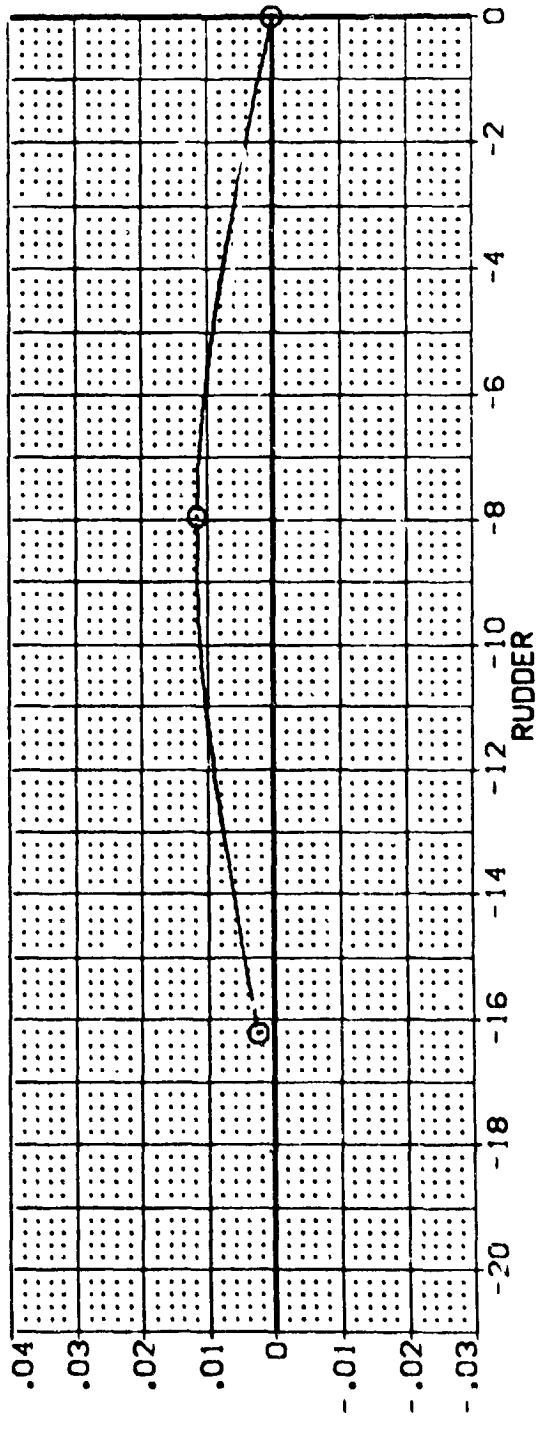
RJODER  
-7.960

SREF  
LREF  
BREF  
YWRP  
ZWRP  
SCALE

4.4119 SQ.FT.  
19.2759 INCHES  
37.9359 INCHES  
43.5974 INCHES  
15.0000 INCHES  
15.1875 INCHES  
.0405 SCALE



DCA



DCN

FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL	ALPHA	MACH	SPDRK	BD'LAP	PARAVETRIC VALUES	.000	DATA SOURCE	RUDDER	RUDDER	RUDDER	SCALE	REFERENCE INFORMATION
○	15.000	.260	-12.000	25.000	DEL'VN	20Z170	-16.220	-7.966	4.119	SO. FT.	4.119	SO. FT.
					ALL'RN	20Z170	.000		9.2799	INCHES	9.2799	INCHES
					BETA	20Z323	.000		37.9359	INCHES	37.9359	INCHES
									43.5874	INCHES	43.5874	INCHES
									.0000	INCHES	.0000	INCHES
									15.1875	INCHES	15.1875	INCHES
									.0405	SCALE	.0405	SCALE

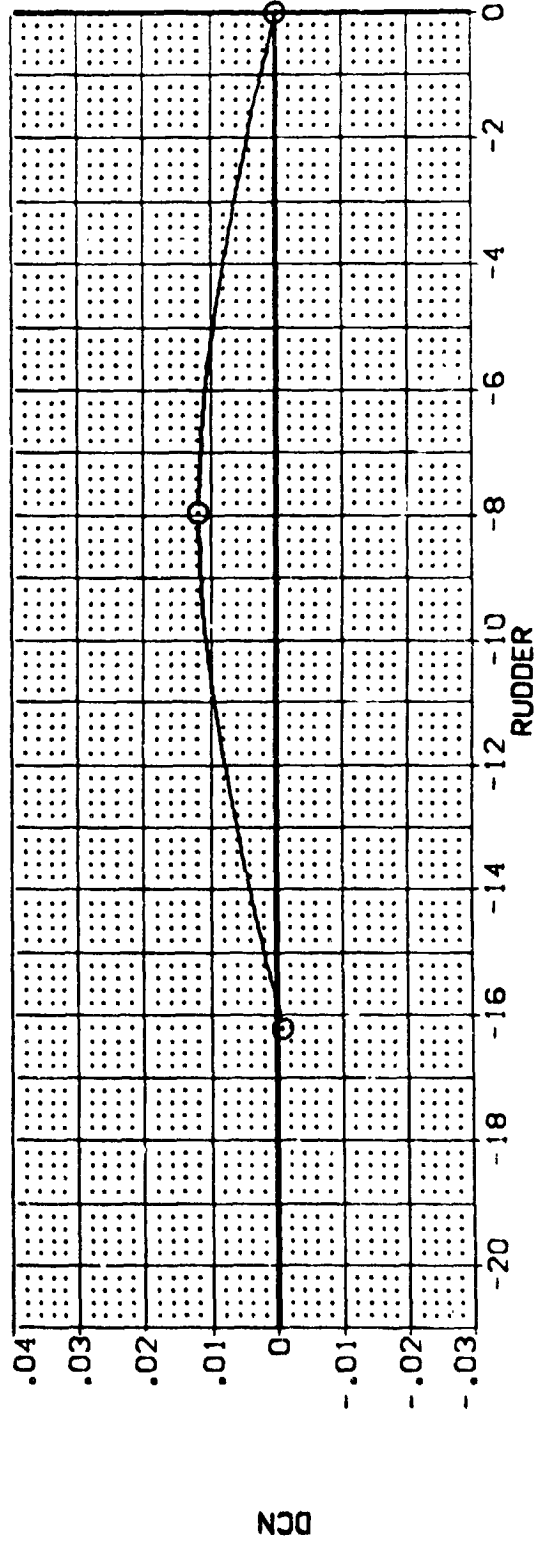
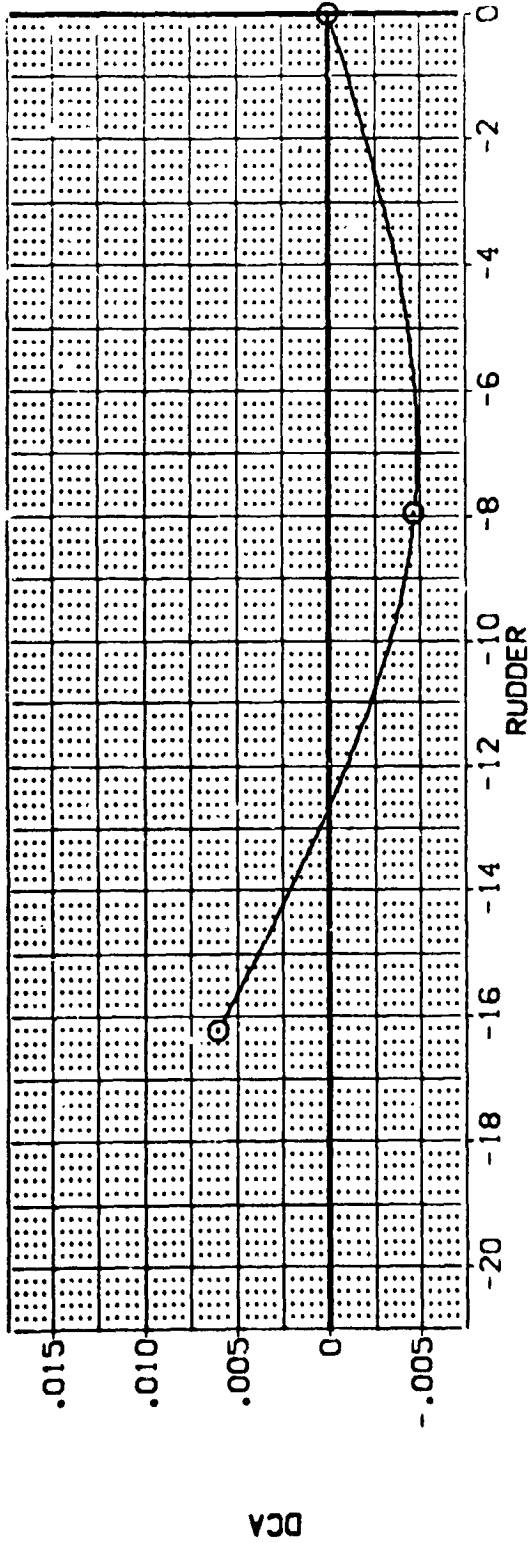


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z170)

SYMBOL ○

ALPHA 20.000

MACH BOFLAP SPOBRK

PARAMETRIC VALUES

.260 DELVON  
-12.000 AILRON  
25.000 BETA

.000 DATASET  
.000 20Z170  
.000 20Z323

DATA SOURCE

RUDDER  
-16.220  
.000

DATASET 20Z164

RUDDER -7.960

REFERENCE INFORMATION

4.4119 SQ.FT.  
19.2299 INCHES  
37.9359 INCHES  
43.5974 INCHES  
15.1875 INCHES  
.0405 SCALE

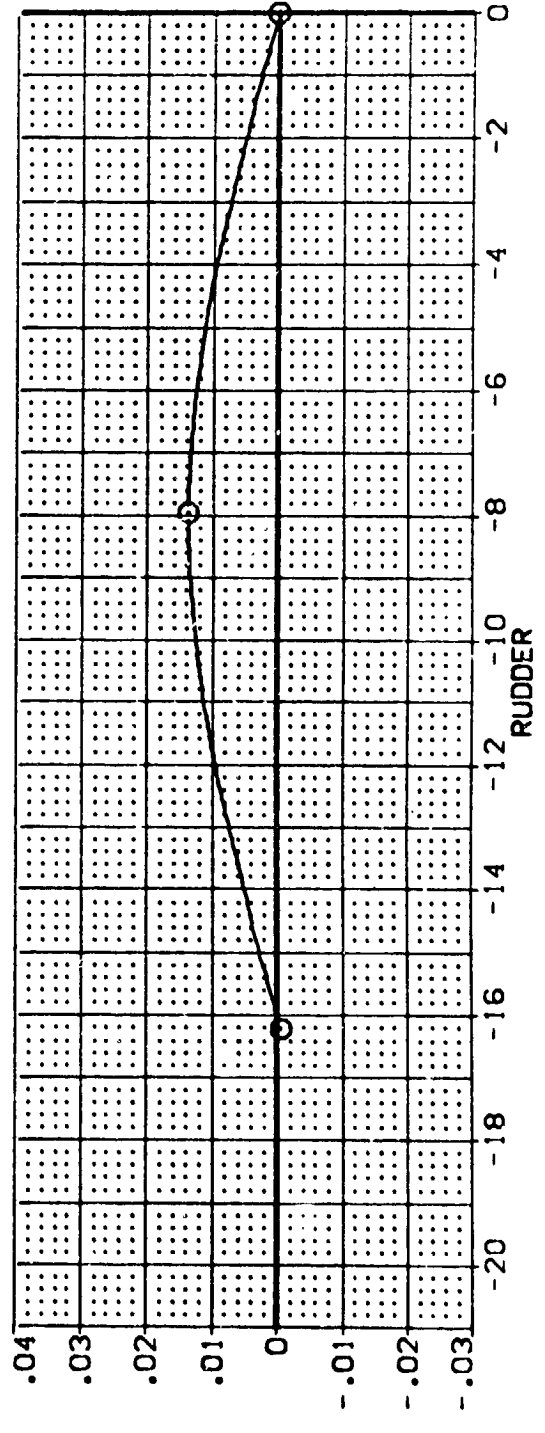
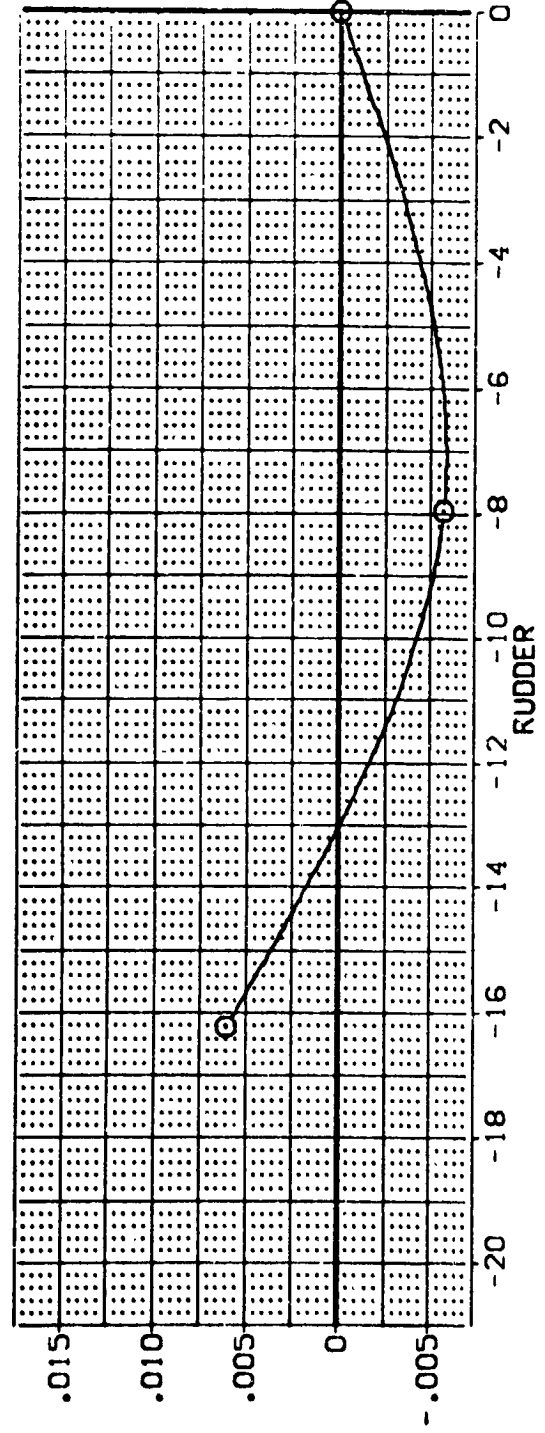


FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

(20Z170)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL ALPHA MACH BOFLAP SPOBRK

0 25.000 0.260 DELVON .000 DATASET RUDDER DATASET RUDDER

25.000 -12.000 AILRON .000 20Z170 -16.220 20Z164 -7.960

75.000 BETA .000 20Z323 .000

REFERENCE INFORMATION

4.4119 SC.FT.

19.2298 INCHES

37.9359 INCHES

43.5574 INCHES

15.0000 INCHES

15.1875 INCHES

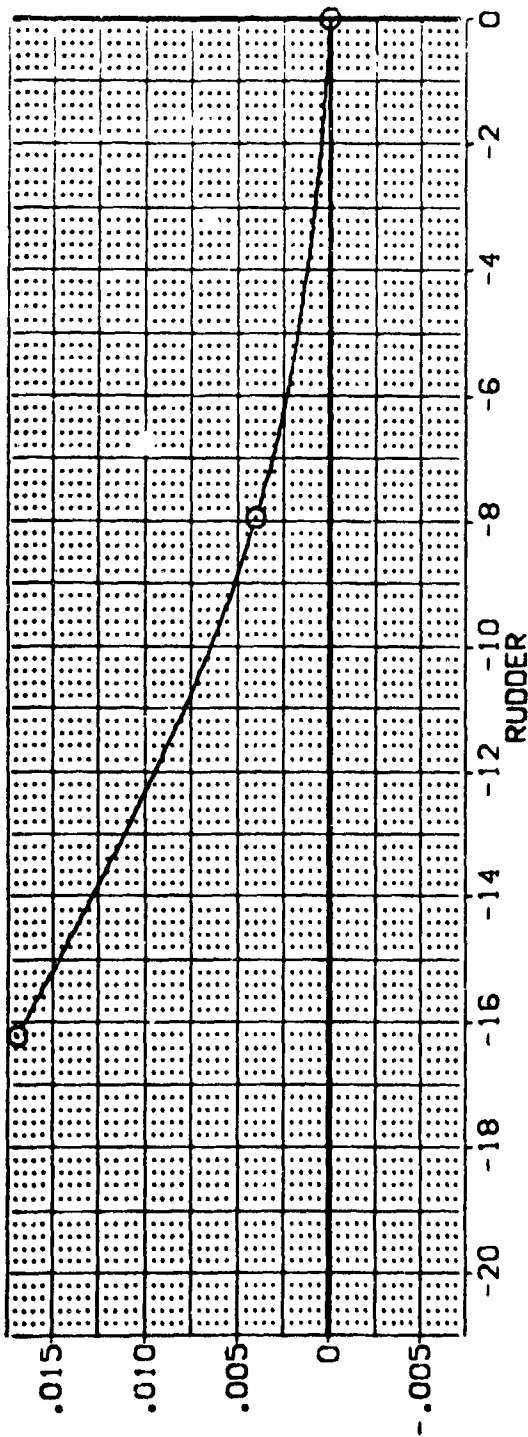
.0405 SCALE

PARAMETRIC VALUES

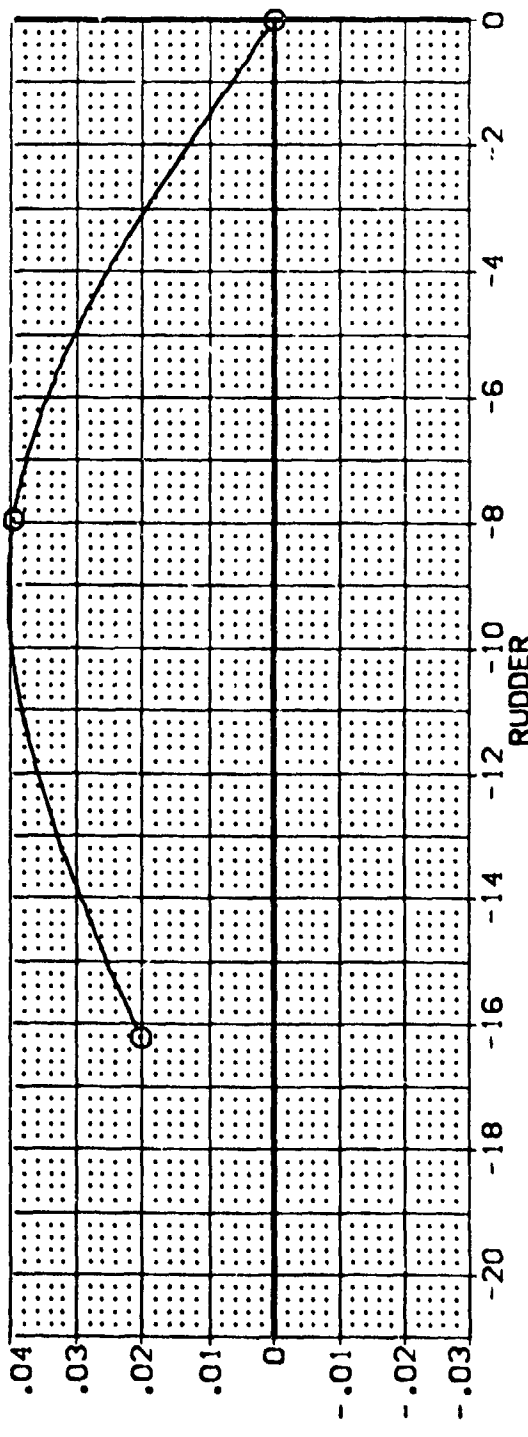
DELVON .000 DATASET RUDDER DATASET RUDDER

20Z170 -16.220 20Z164 -7.960

20Z323 .000



DCA



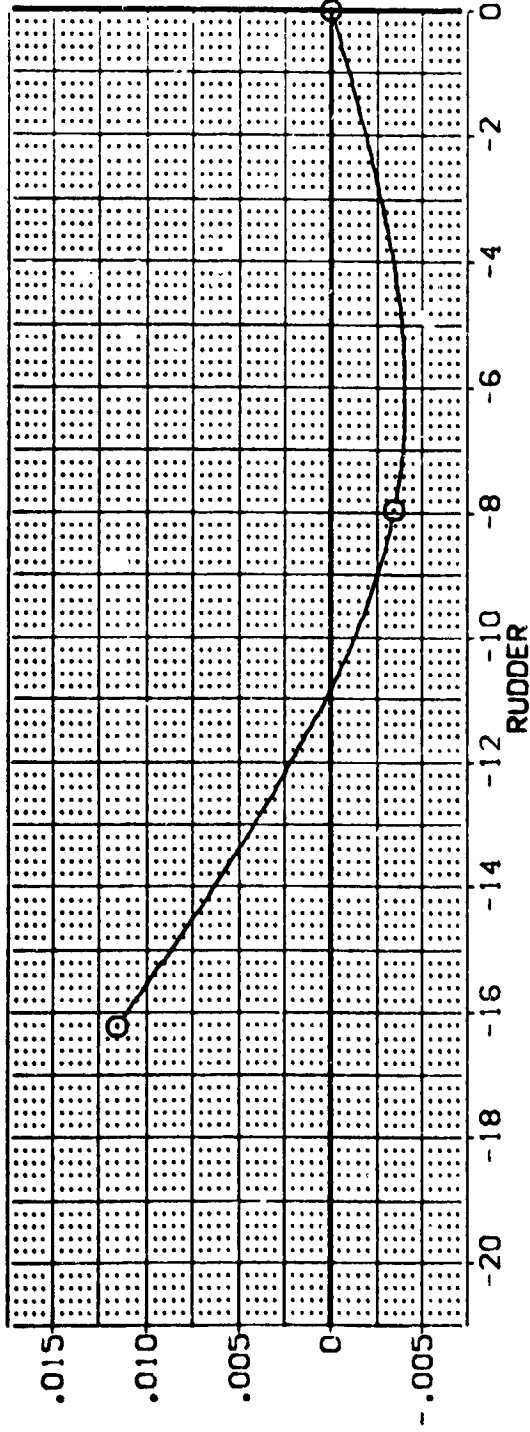
DCN

FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

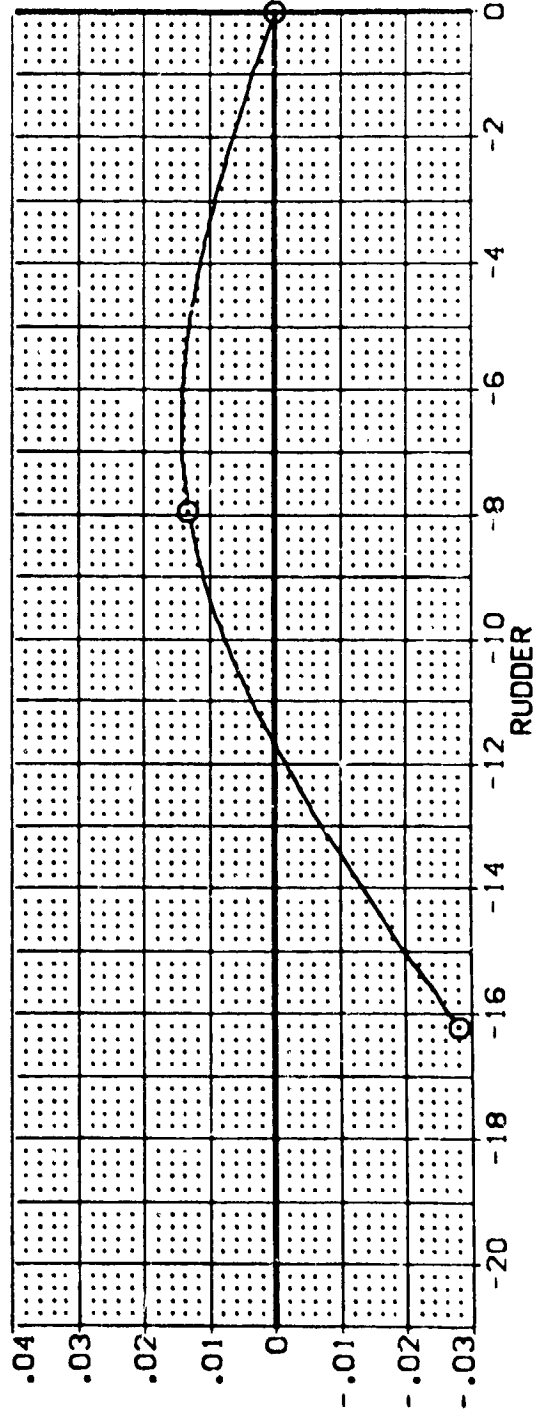


0A628 B26C9 M7F8 W116E28V8R5XS (20Z170)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATASET	RUDDER	SRF REF	REFERENCE INFORMATION
O	20.000	BDFLAP	.260 DELVON	RUDDER	20Z164	-7.960	4.119 SQ.FT.	
		SFOBRK	-12.000 AILRON	-16.220			19.2799 INCHES	
			25.000 BETA	.000			37.9359 INCHES	
							43.5974 INCHES	
							.0030 INCHES	
							15.1875 INCHES	
							SCALE	
							.0405	



DCA



DCN

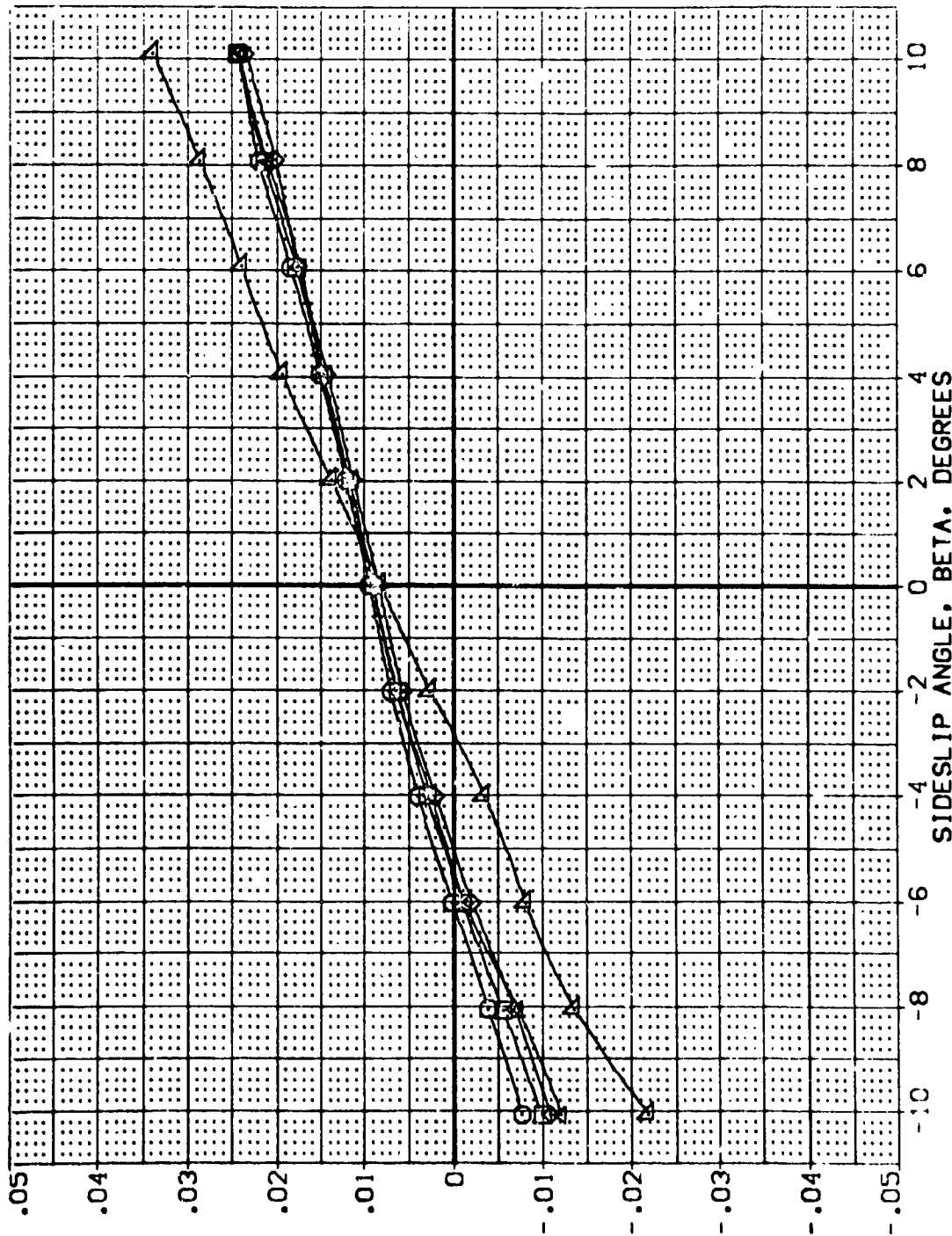
FIG 56 RUDDER EFFECTIVENESS, 25 DEG. FLARE

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(R02165)	□	0A628	B26C9	M7F8	V116E28V895X9
(R02166)	○	0A628	B26C9	M7F8	V116E28V895X9
(R02167)	△	0A628	B26C9	M7F8	V116E28V895X9
(R02168)	◇	0A628	B26C9	M7F8	V116E28V895X9
(R02169)	×	0A628	B26C9	M7F8	V116E28V895X9

ALPHA ELEVON SPDBRK BDFLAP REFERENCE INFORMATION

0.000	.000	25.000	-12.000	SREF	4.4119	SO.FT.
5.000	.000	25.000	-12.000	LREF	19.2799	INCHES
10.000	.000	25.000	-12.000	BREF	37.5379	INCHES
15.000	.000	25.000	-12.000	XMRP	43.5974	INCHES
20.000	.000	25.000	-12.000	YMRP	00.0000	INCHES
				SCALE	15.1875	INCHES
					.0400	SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE

(M)MACH = .26

DATA SET SYMBOL: (ROZ165) (ROZ166) (ROZ167) (ROZ168) (ROZ169)

CONFIGURATION DESCRIPTION: M7F8 V116E28V895X9 M7F8 V116E28V895X9 M7F8 V116E28V895X9 M7F8 V116E28V895X9 M7F8 V116E28V895X9

ALPHA: .000 5.000 10.000 15.000 20.000

ELEVON: .000 .000 .000 .000 .000

SPOBRK: 25.000 25.000 25.000 25.000 25.000

BOFLAP: -12.000 -12.000 -12.000 -12.000 -12.000

REFERENCE INFORMATION: SREF 4.4119 LREF 19.2299 BREF 37.9379 XMRP 43.5974 YMRP .000 ZMRP 15.1875 SCALE .0405

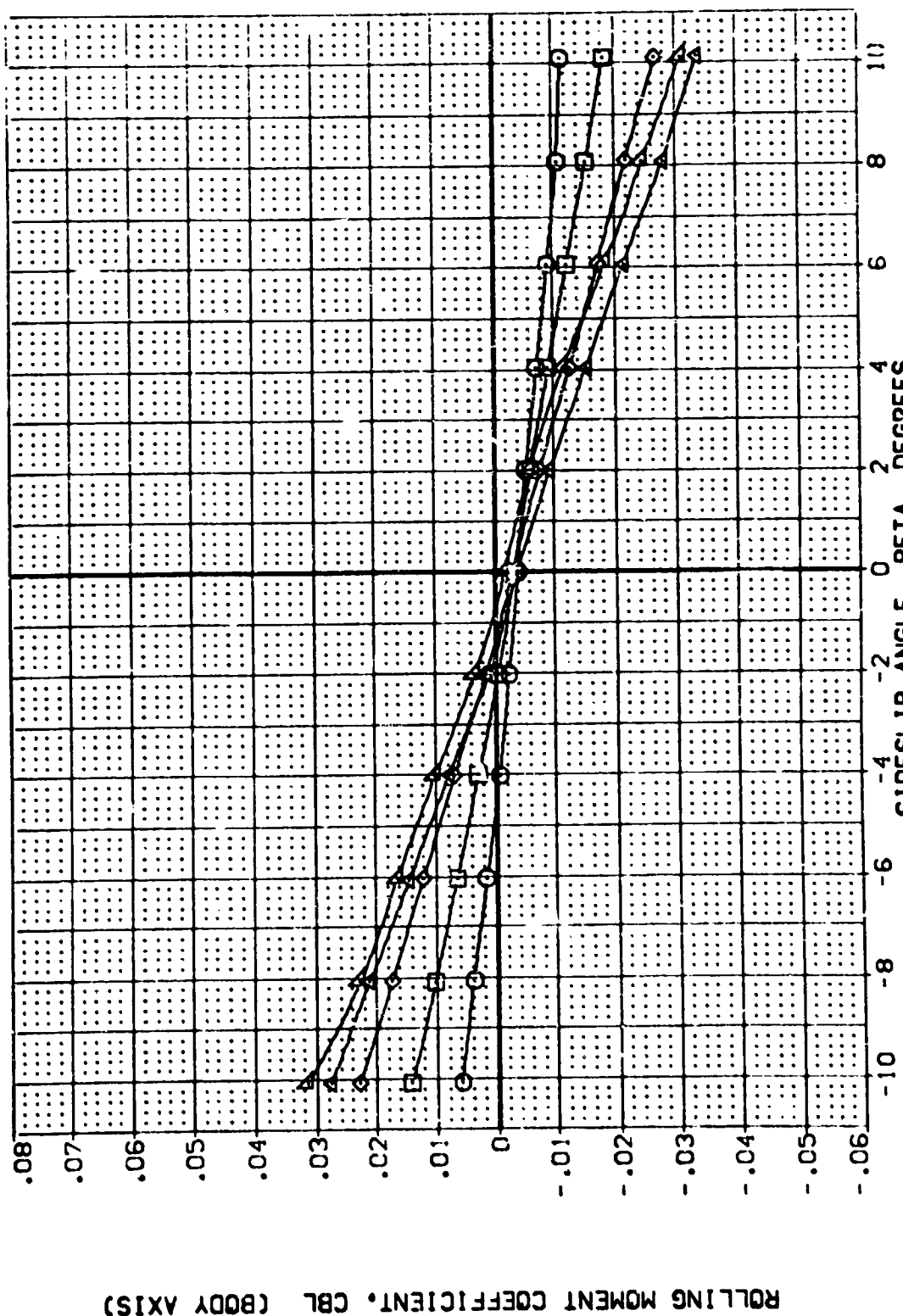


FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE  
 (A)MACH = .26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[ROZ153]	□	0A528	B76C9	M7F8	V11GE20VBR3X9
[ROZ154]	○	0A628	B76C9	M7F8	V11GE20VBR3X9
[ROZ157]	△	0A628	B76C9	M7F8	V11GE20VBR3X9
[ROZ158]	◇	0A628	B76C9	M7F8	V11GE20VBR3X9
[ROZ159]	▽	0A628	B76C9	M7F8	V11GE20VBR3X9

ALPHA ELEVON SPOBRK BDFLAP

0.000	.000	25.000	-12.000
5.000	.000	25.000	-12.000
10.000	.000	25.000	-12.000
15.000	.000	25.000	-12.000
20.000	.000	25.000	-12.000

REFERENCE INFORMATION

SREF	4.4119	52. FT.
LREF	19.2759	19. INCHES
BREF	37.9359	37. INCHES
XMRP	43.5374	43. INCHES
YMRP	15.0000	15. INCHES
ZMRP	15.1875	15. INCHES
SCALE	.0405	SCALE

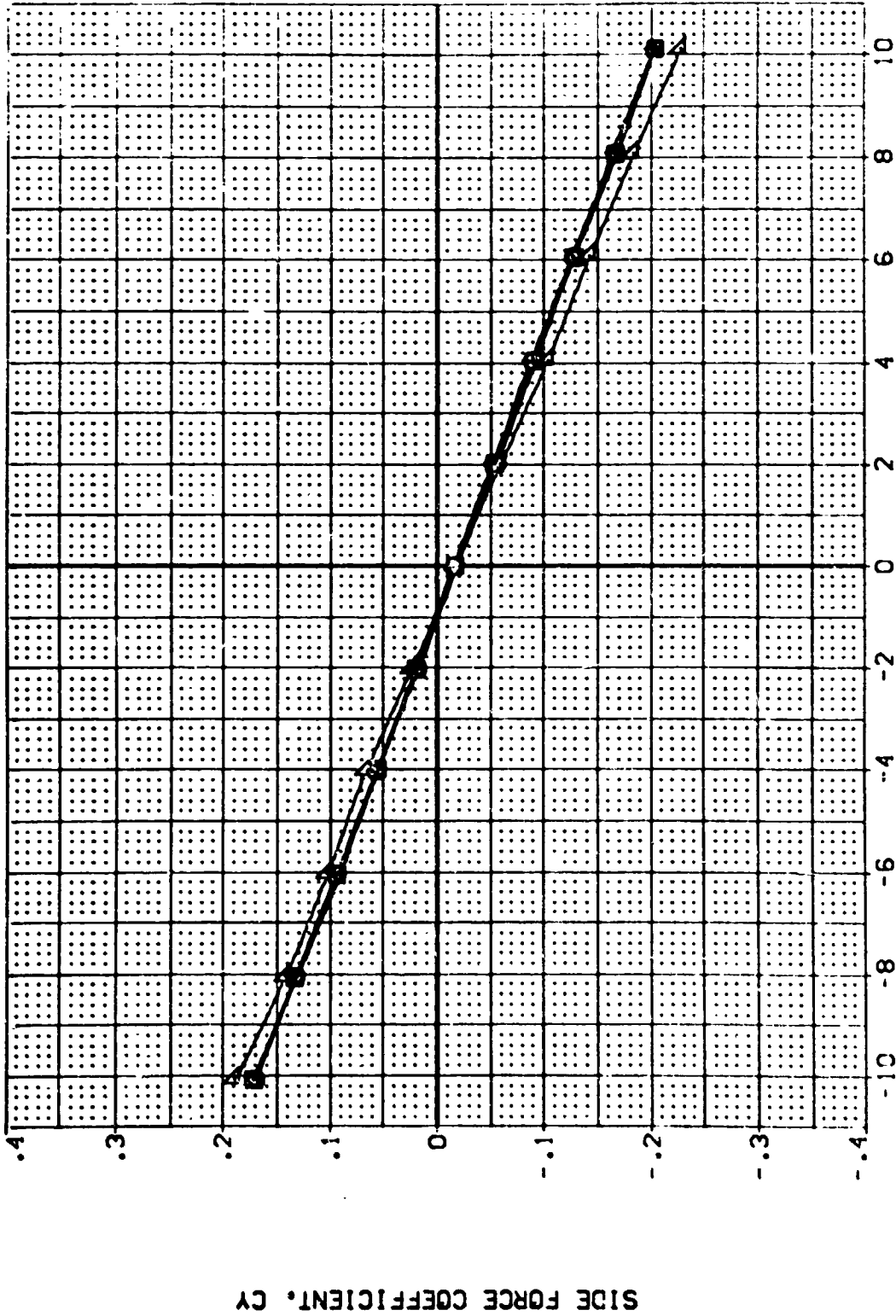


FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE

(A)MACH = .26



0A62B B26C9 M7FB W116E28V8R5X9 (COZ165)

SYMBOL: O  
 SPOBK: 25.000  
 MACH: .260  
 ELEVON: .000  
 RUDDER: -7.960  
 PARAMETRIC VALUES:  
 BOFLAP: -12.000  
 AILTRON: .000

REFERENCE INFORMATION:  
 CREF: 4.4119  
 LREF: 19.2799  
 BREF: 37.9379  
 XMRP: 43.5871  
 YMRP: .0000  
 ZMRP: 15.1875  
 SCALE: .0105

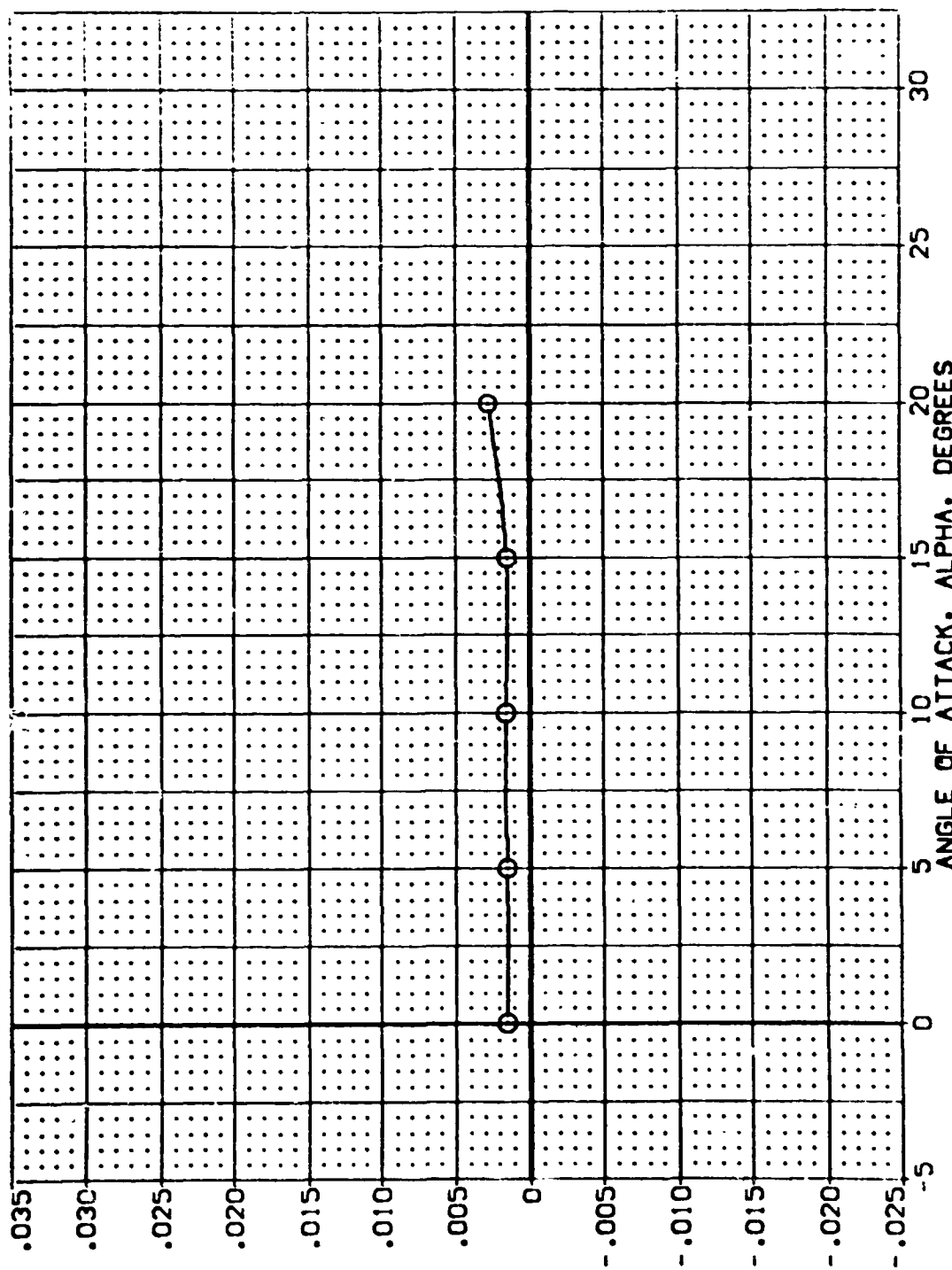


FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE

(CDZ165)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

SPOBRK  
25.000

MACH  
ELEVON  
RUDDER

PARAMETRIC VALUES  
.260 BDFLAP -12.000  
.000 AILRON .000  
-7.960

SREF  
LREF  
BREF  
XREF  
YREF  
ZREF  
SCALE

REFERENCE INFORMATION  
4.4119 SCALF1  
19.2299 SCALF2  
37.9358 SCALF3  
43.5874 SCALF4  
15.0000 SCALF5  
15.1875 SCALF6  
.0405 SCALF7

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

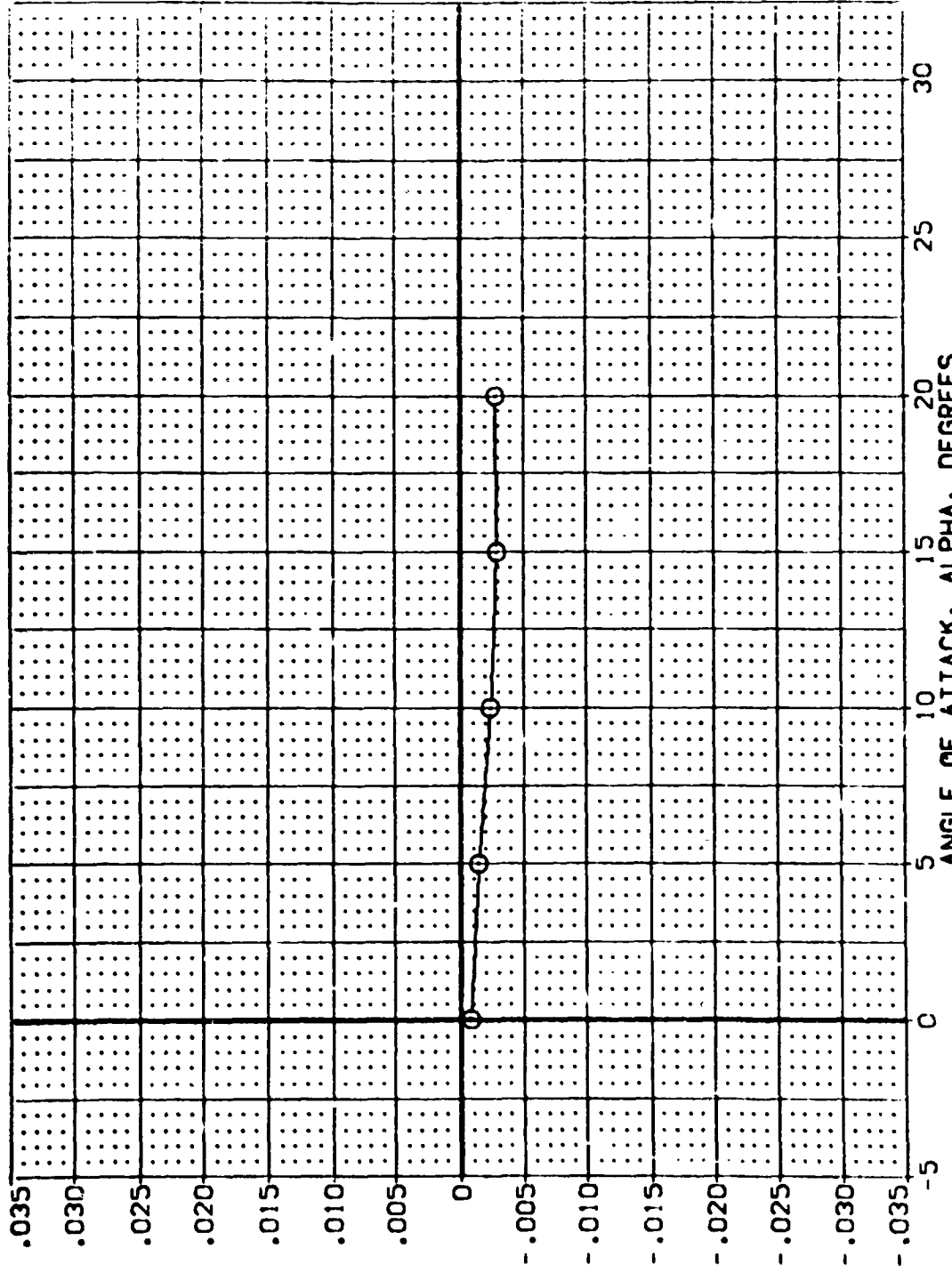


FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE



(CDZ165)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL 0

SPDRK 25.000

MACH

ELEVON

RUDDER

PARAMETRIC VALUES

.260 BDFLAP -12.000

.000 ALLRON .000

-7.960

REFERENCE INFORMATION

SPREF 4.4119

LREF 19.2799

BRKF 37.9359

XMAP 43.5874

YMAP .0000

ZMAP 15.1875

SCALE .0405

SO.1 \$

SO.2 \$

SO.3 \$

SO.4 \$

SO.5 \$

SO.6 \$

SO.7 \$

SO.8 \$

SO.9 \$

SO.10 \$

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

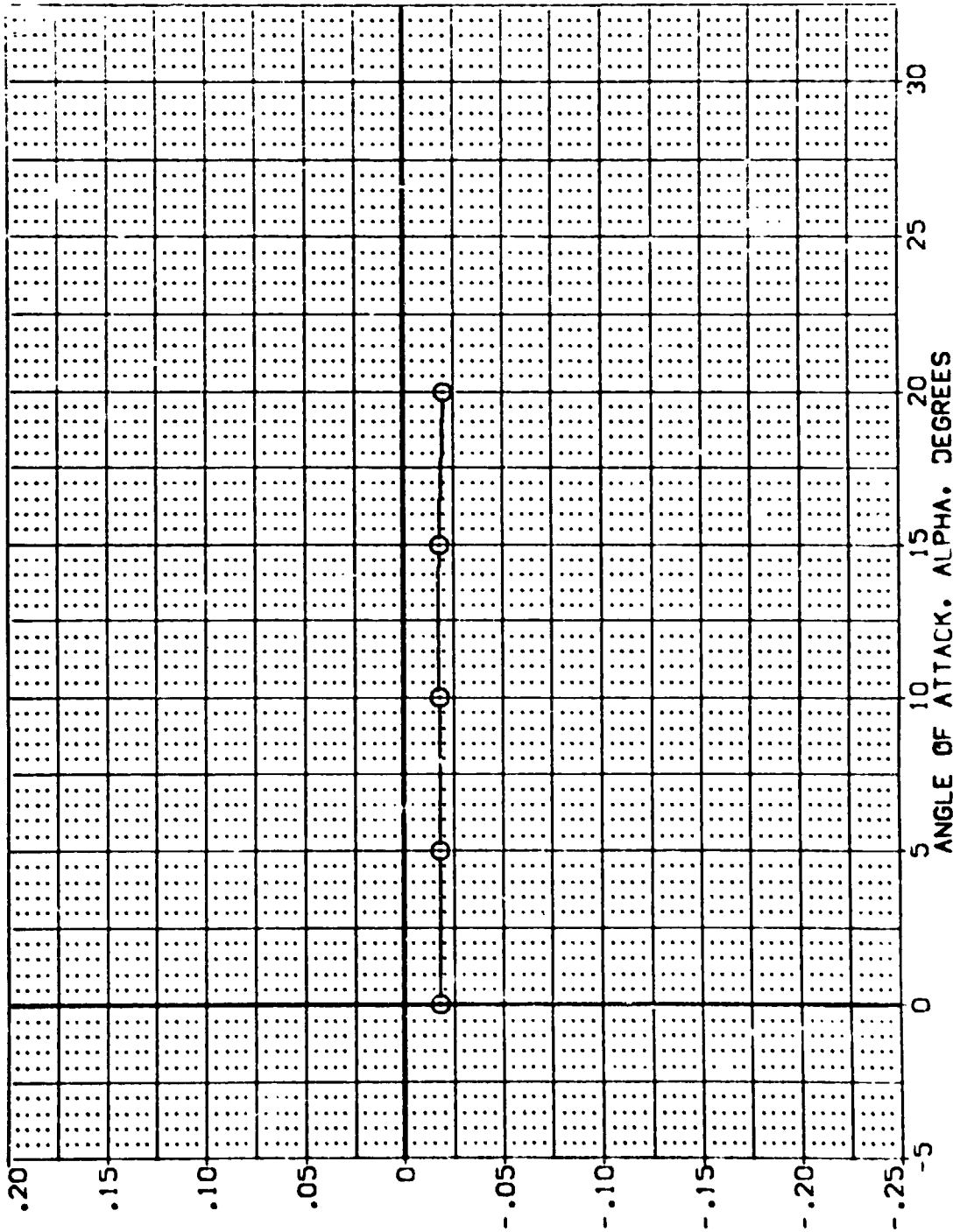


FIG 57 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96 DEG, 25 DEG FLARE

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    ELEVON    SPOBRK    BOFLAP    ALPHA    REFERENCE INFORMATION

(RZ171)	0A628 876C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	.000	SREF 4.4119
(RZ172)	0A628 876C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	.000	LREF 19.2799
(RZ173)	0A628 876C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	5.000	BREF 37.9399
(RZ174)	0A628 876C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	10.000	XMRP 43.5871
(RZ175)	0A628 876C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	20.000	ZMRP 15.1875

SCALE .0455

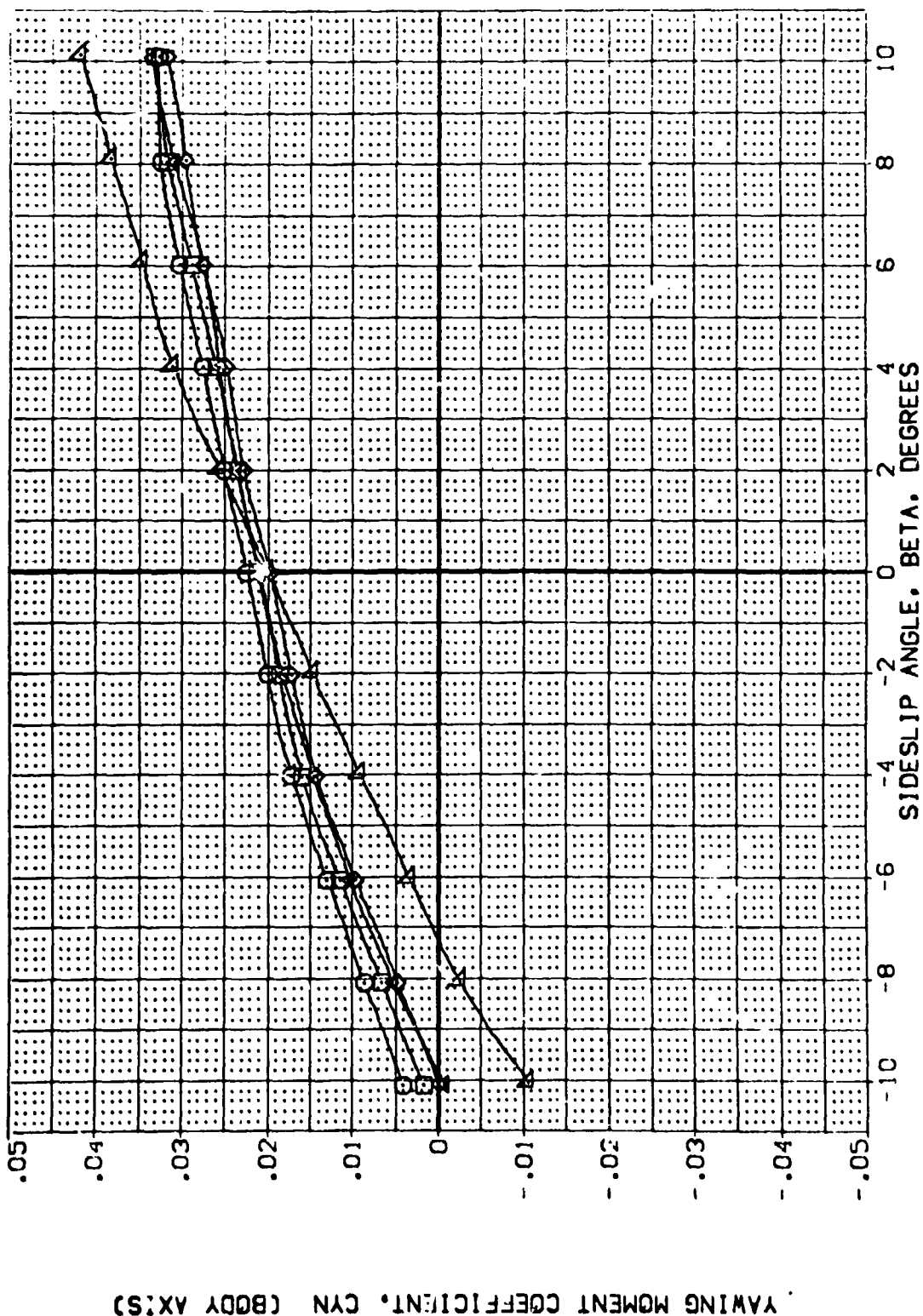
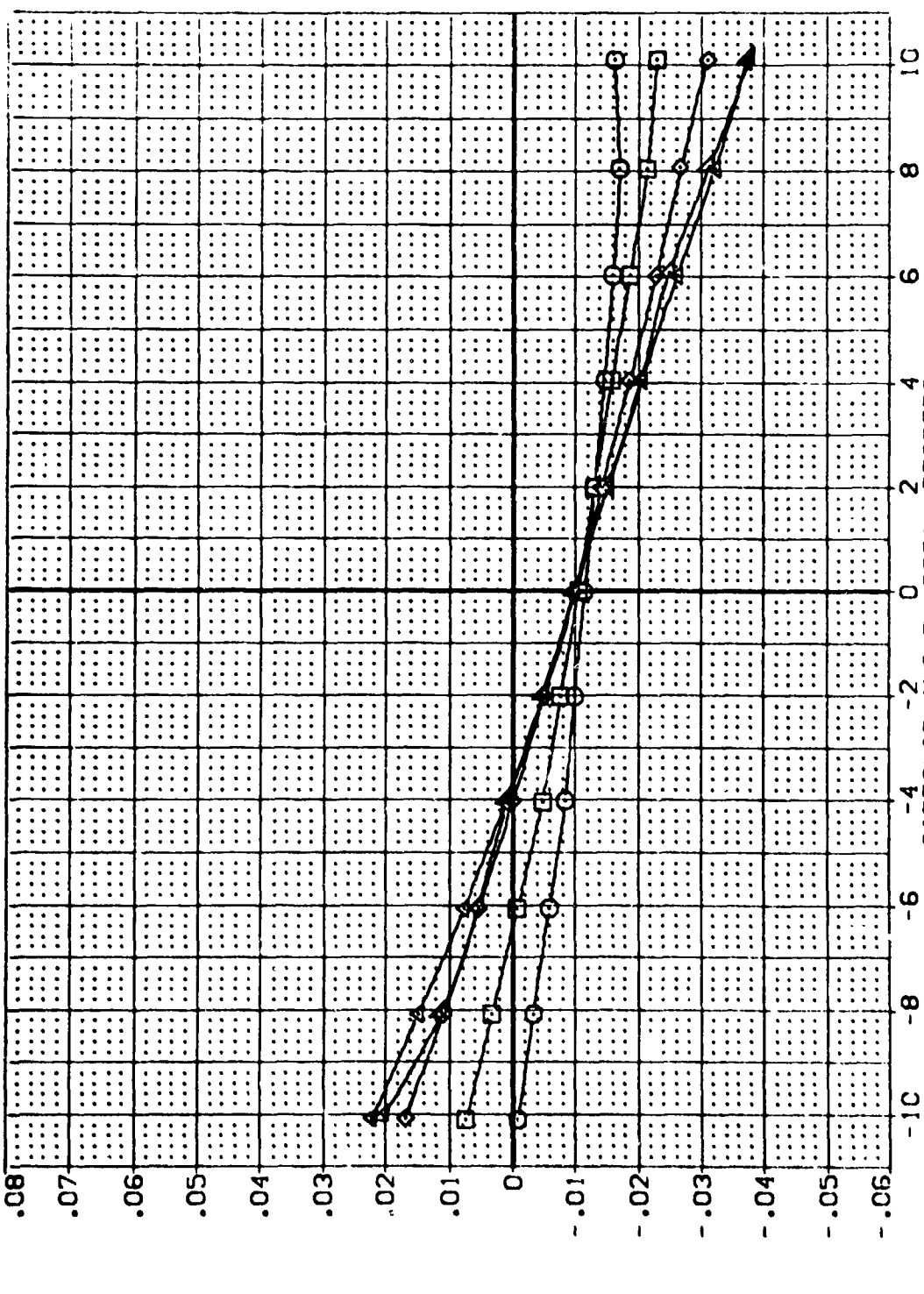


FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE  
 (A)MACH = .26      PAGE 790

DATA SET SYMBOL: [RZ171], [RZ172], [RZ173], [RZ174], [RZ175]  
 CONFIGURATION DESCRIPTION: M7F8 V116E28V8R5X9, M7F8 V116E28V8R5X9, M7F8 V116E28V8R5X9, M7F8 V116E28V8R5X9, M7F8 V116E28V8R5X9  
 REFERENCE INFORMATION: SREF 4.41 SO.F.7, LREF 19.2759 SO.F.8, BREF 37.9359 SO.F.9, XMRP 43.5974 SO.F.10, YMRP 50.000 SO.F.11, ZMRP 15.1875 SO.F.12, SCALE .0105 SCALE



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	ALPHA	REFERENCE INFORMATION
(R02171)	DAG28 BZ6C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	.000	SREF 4.4119 SC.FT
(R02172)	DAG28 BZ6C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	5.000	LREF 19.2799 SC.FT
(R02173)	DAG28 BZ6C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	10.000	BREF 37.9359 SC.FT
(R02174)	DAG28 BZ6C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	15.000	XREF 43.5574 SC.FT
(R02175)	DAG28 BZ6C9 M7F8 V116E28V8F5X9	.000	25.000	-12.000	20.000	YREF .0000 SC.FT
						ZREF 15.1873 SC.FT
						SCALE

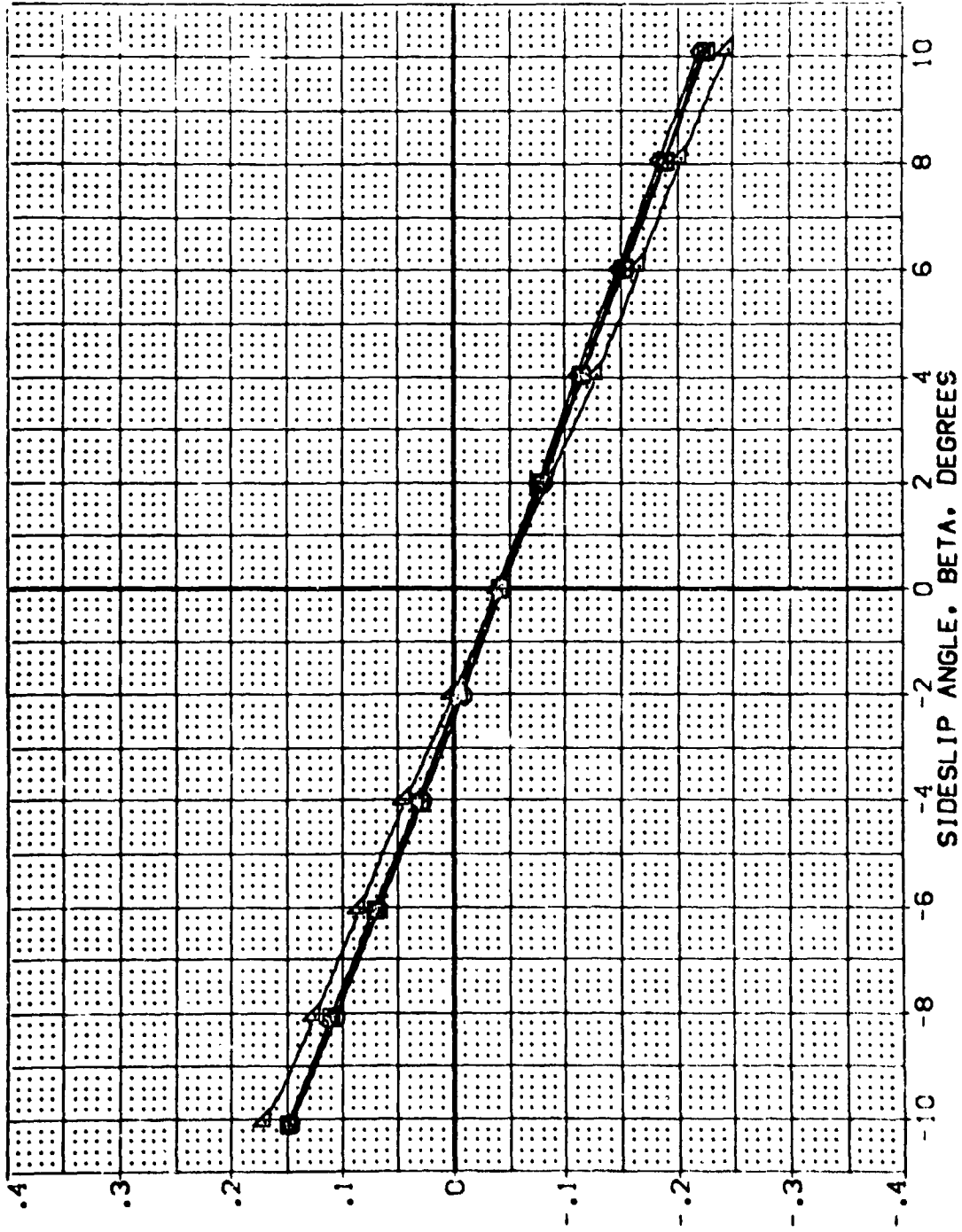


FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE

(CDZ171)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  $\bigcirc$  SPDRBK 25.000 MACH .260 BOFLAP -12.000  
 ELEVON .000 AILRON .000  
 RUDDER -16.220

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.7299 INCHES  
 BREF 37.9359 INCHES  
 YMRP 43.5874 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 .0405 SCALE

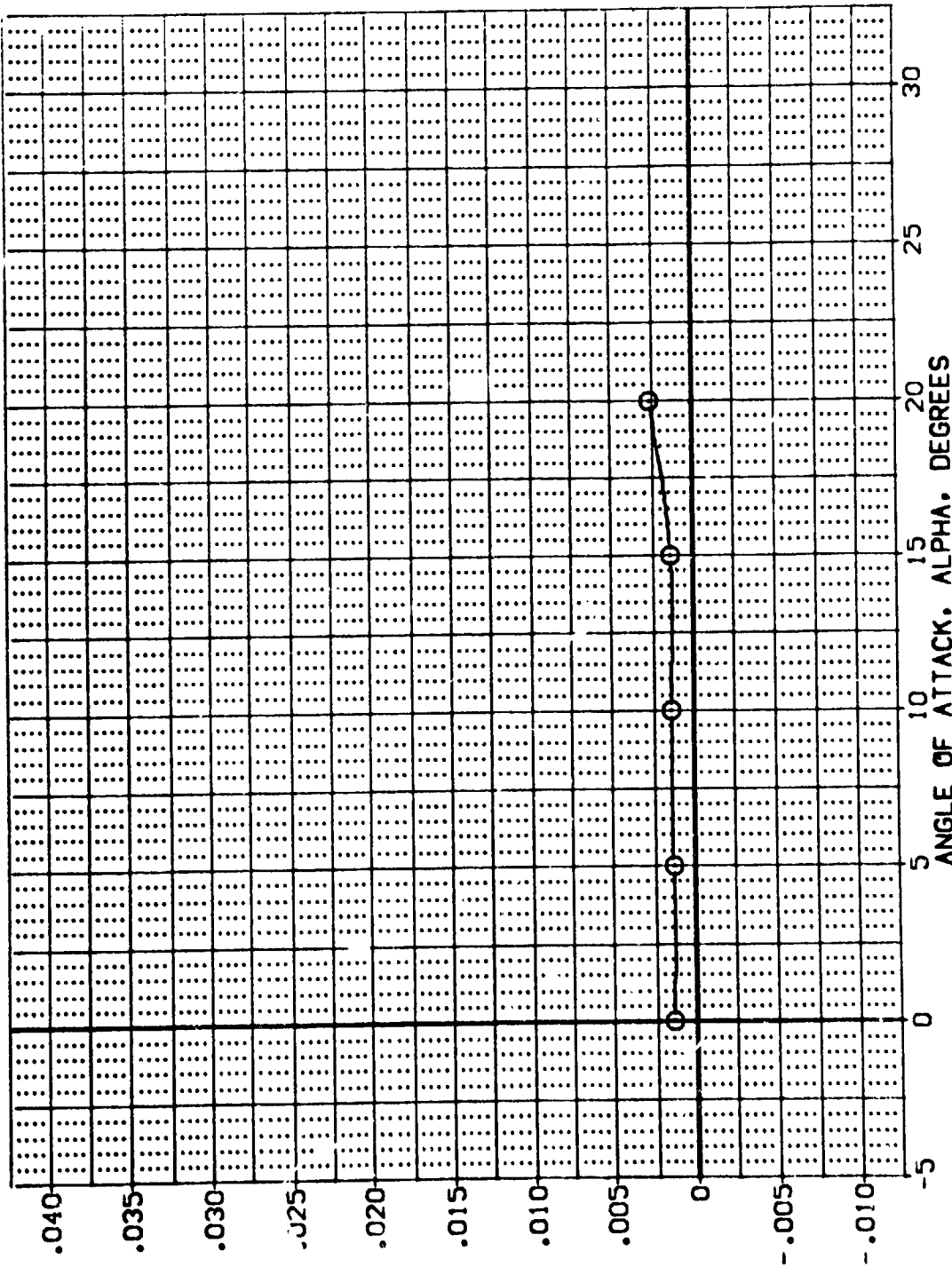


FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYMBET. PER DEGREE

(COZ171)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

SPEED  
25.000

PARAMETRIC VALUES  
MACH .260  
ELEVON .000  
RUDDER -16.220

BD/FLAP -12.000  
AILRON .000

REFERENCE INFORMATION  
SREF 4.4119  
LREF 19.2299  
XMRP 37.9355  
YMRP 43.5874  
ZMRP .0000  
SCALE 15.1875  
SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

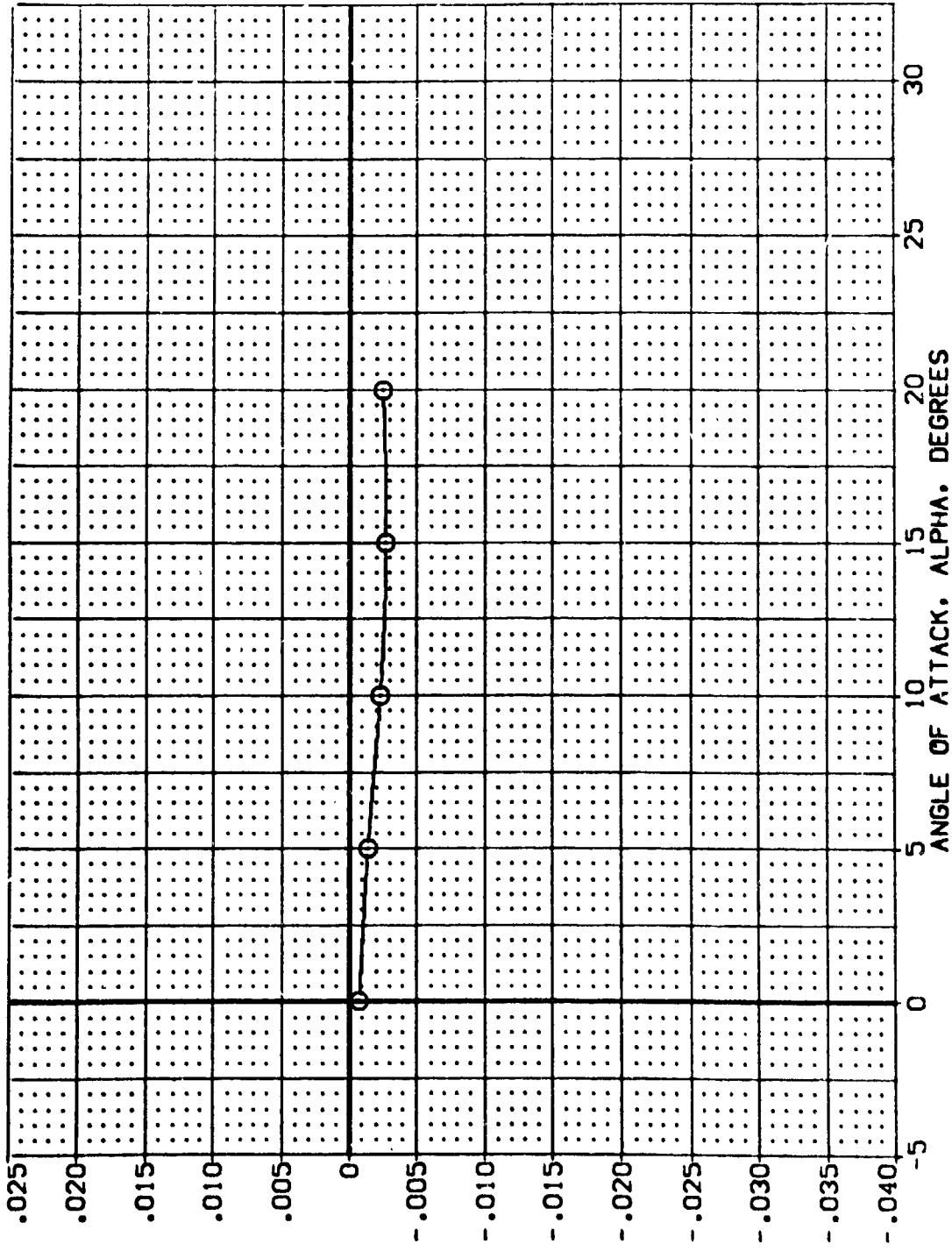


FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE



(CDZ171)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

SPDRK 25.000

MACH .260

ELEVON .000

RUDDER -16.220

PARAMETRIC VALUES

BDFLAP -12.000

AILRON .000

REFERENCE INFORMATION

SREF 4.4119

LREF 19.2299

BREF 37.9359

XMRP 43.5974

YMRP .0000

ZMRP 15.1875

SCALE .0405

SO.FT INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE

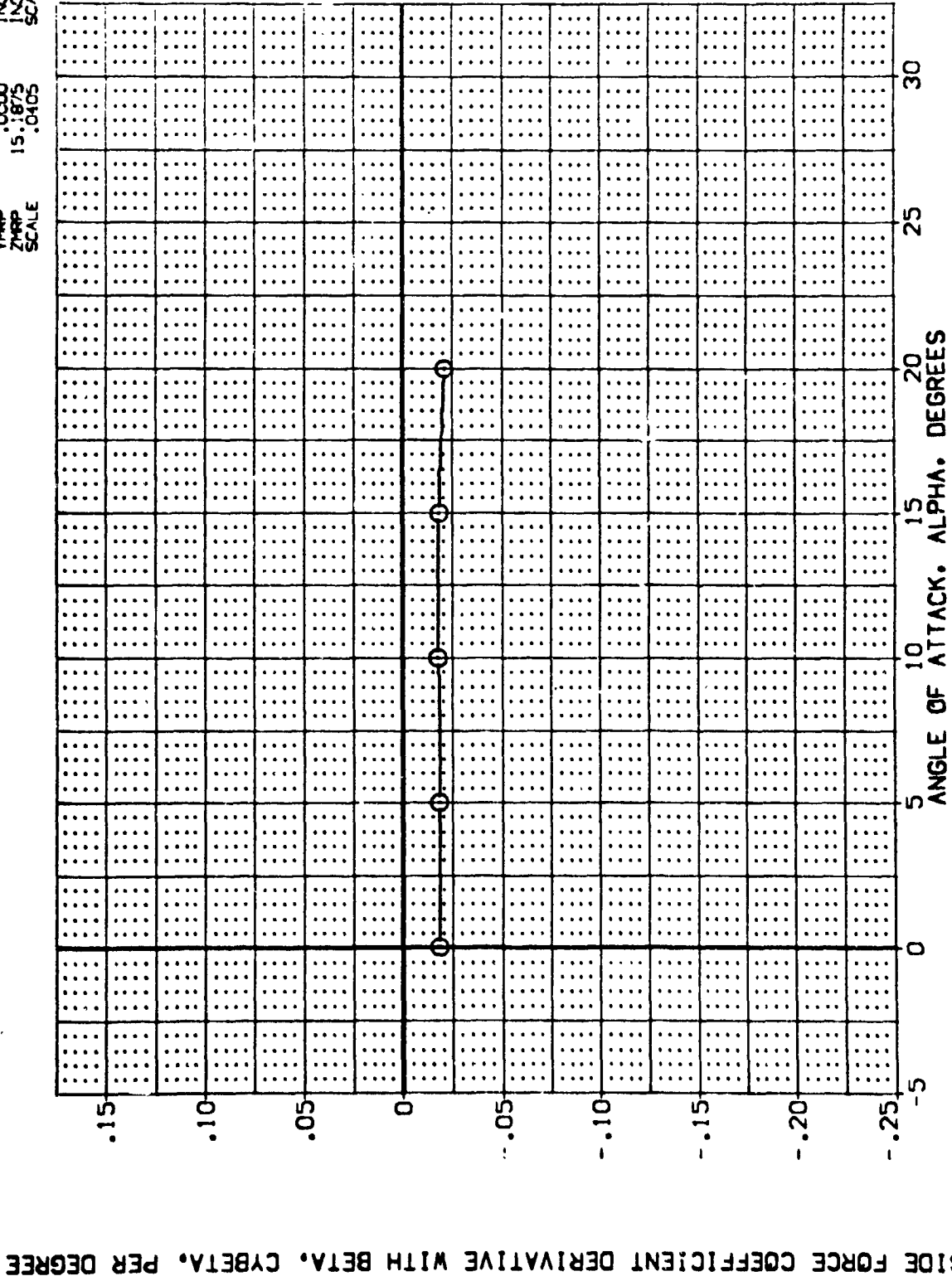


FIG 58 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22 DEG, 25 DEG FLARE

DATA SET SYMBOL: (R02176) (R02300)

CONFIGURATION DESCRIPTION

04628 826C9 M7F8 V116E28V8FS4S  
 04628 826C9 M7F8 V116E28V8FS4S

ELEVON SPOBRK BDFLAP RUDDER  
 .000 40.000 -12.000 -7.960  
 .000 40.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SC.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5574 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

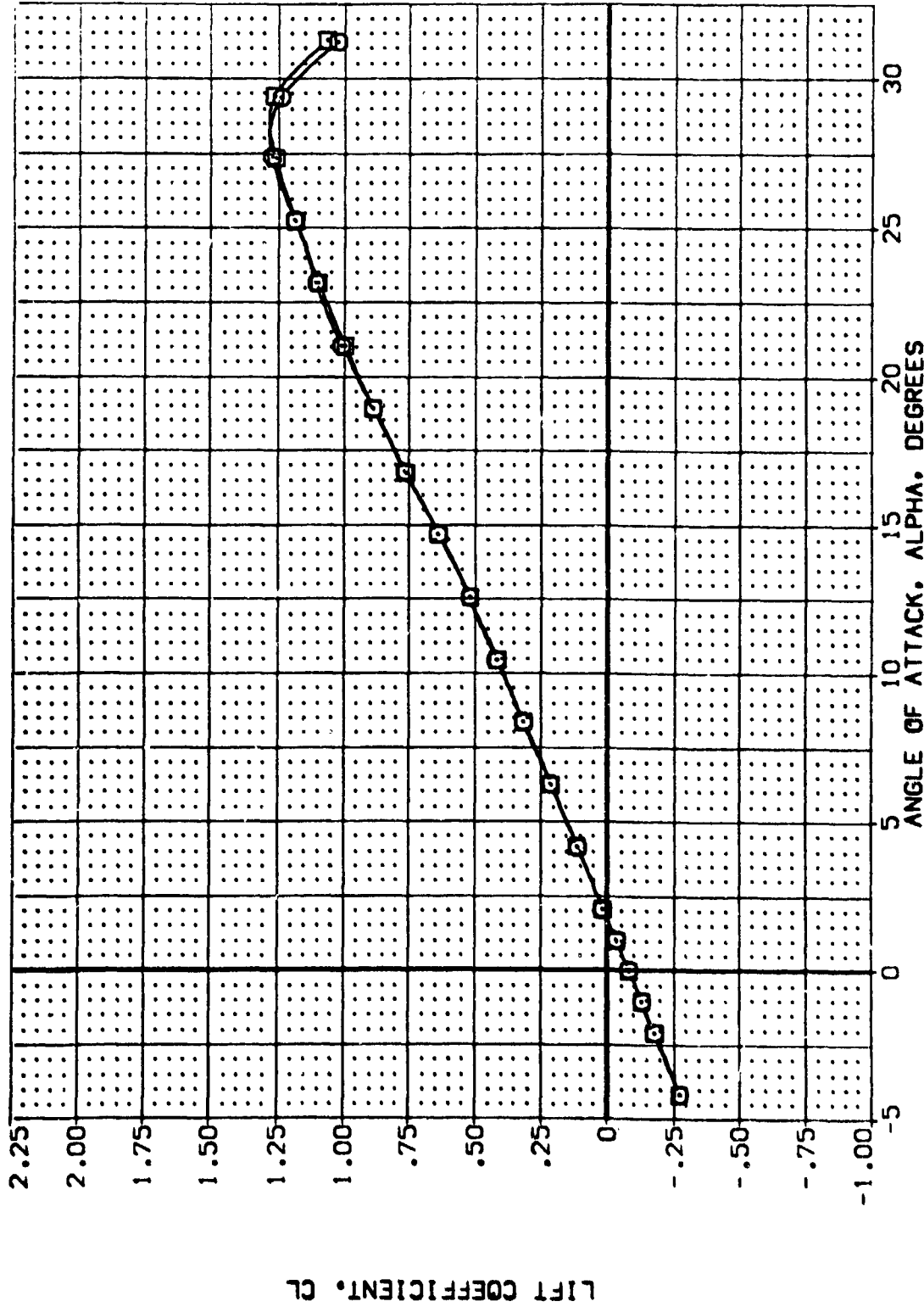


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(R02175) 0A5Z8 B26C9 M7F8 V11E28V8S49  
 (R02330) 0A5Z8 B26C9 M7F8 V11E28V8S49

ELEVON SPOBRN BDFLAP RUDDER  
 .000 40.000 -12.000 -7.960  
 .000 40.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2799 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE

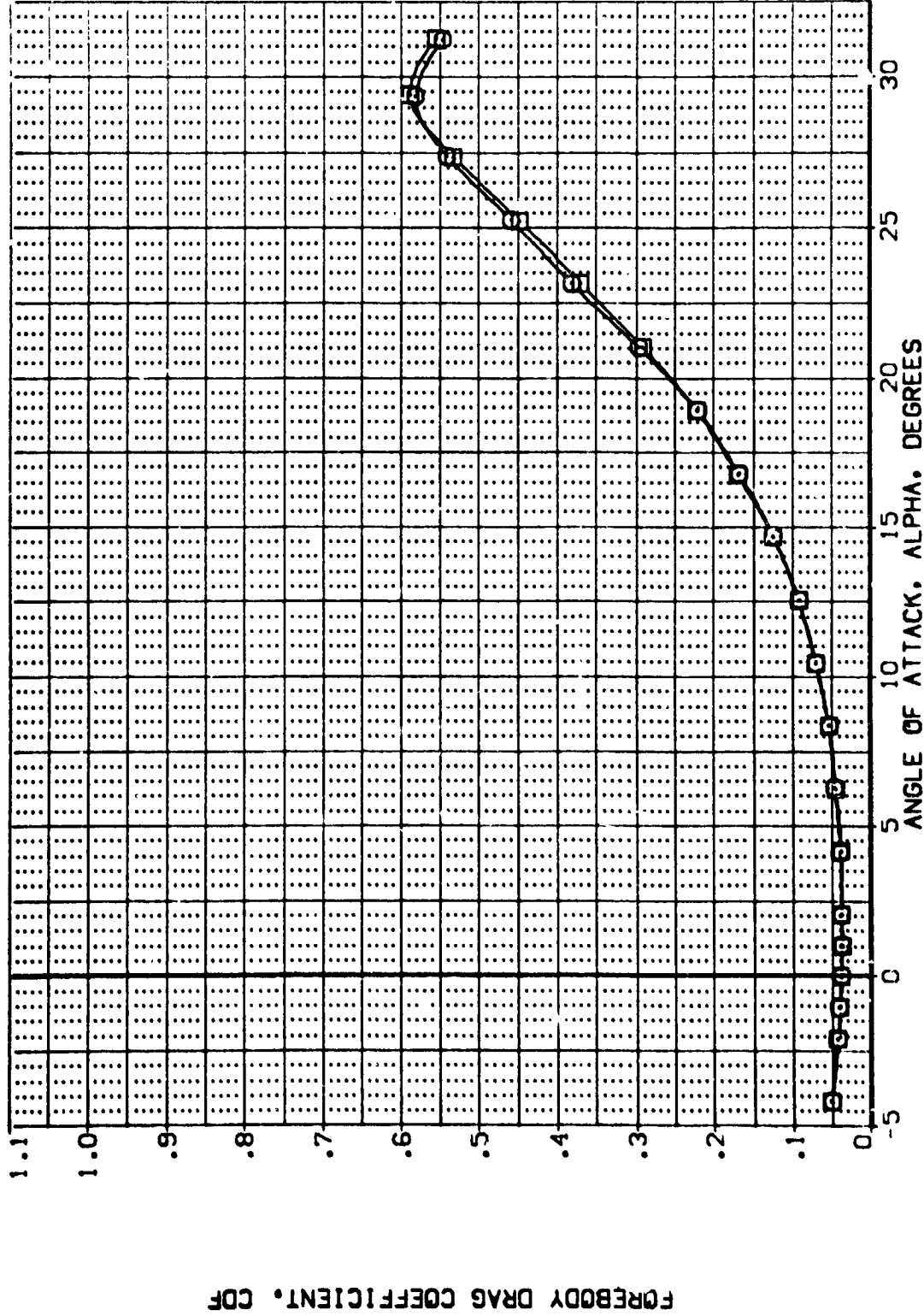


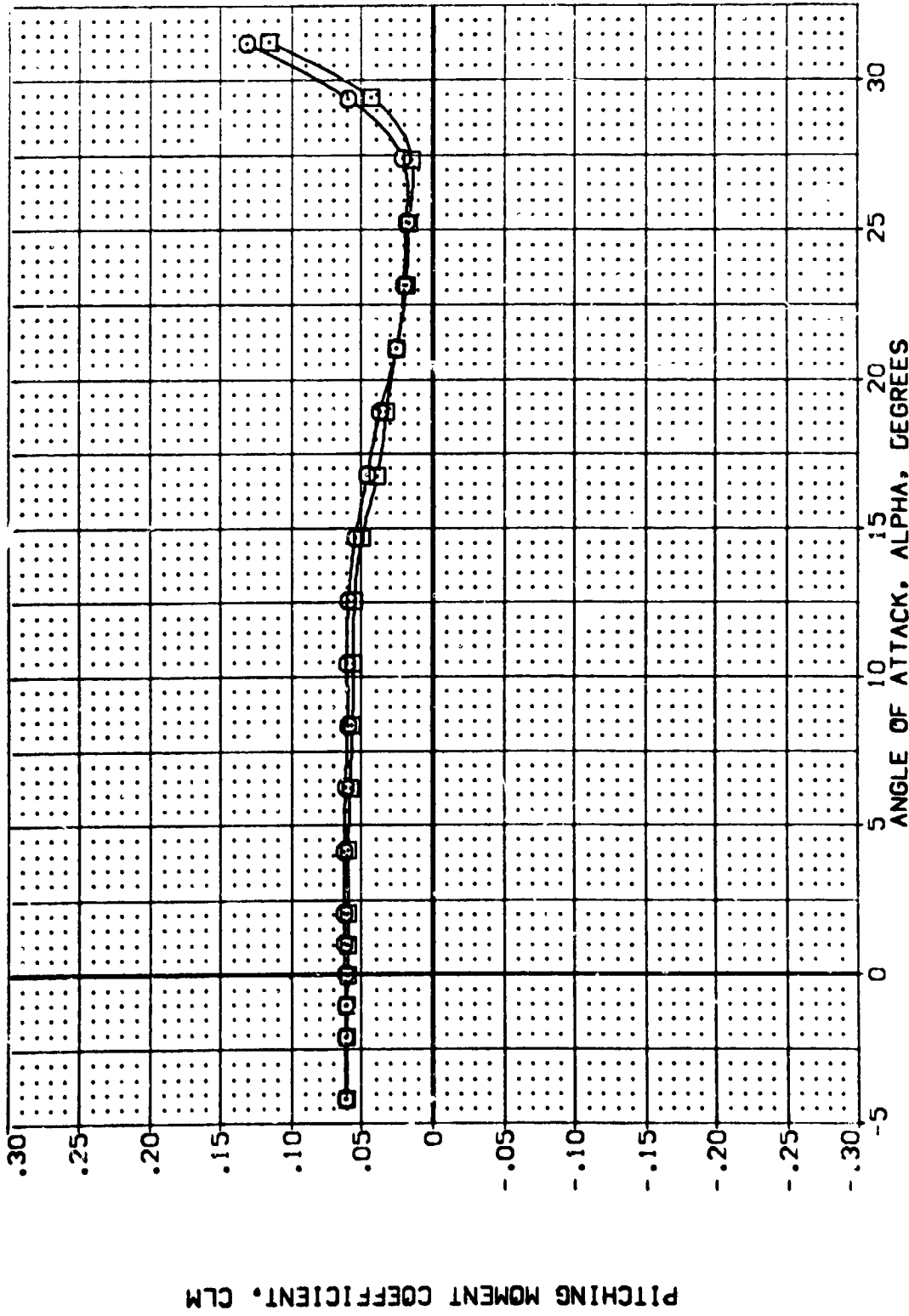
FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(M)MACH = .26

DATA SET SYMBOL (RD2176) (RD2300) CONFIGURATION DESCRIPTION 0A628 B26C9 M7F8 V11E28V85X8 0A628 B26C9 M7F8 V11E28V85X8

ELEVON SPOBRK BDFLAP RUDDER  
 .000 40.000 -12.000 -7.960  
 .000 40.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0465 INCHES



PITCHING MOMENT COEFFICIENT, CLM

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL (R02176) (R02330)

CONFIGURATION DESCRIPTION  
 CA628 B26C9 M7F8 V11SE28V875K9  
 CA628 B26C9 M7F8 V11SE28V875K9

ELEVON .000 SPODBK 40.000 BOFLAP -12.000 RUDDER -7.950  
 .000 40.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SC.F.1  
 LREF 19.2299 NC.F.5  
 BREF 37.9359 NC.F.5  
 XMAP 43.5874 NC.F.5  
 YMAP .0000 NC.F.5  
 ZMAP 15.1875 NC.F.5  
 SCALE .0405 SCALE

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

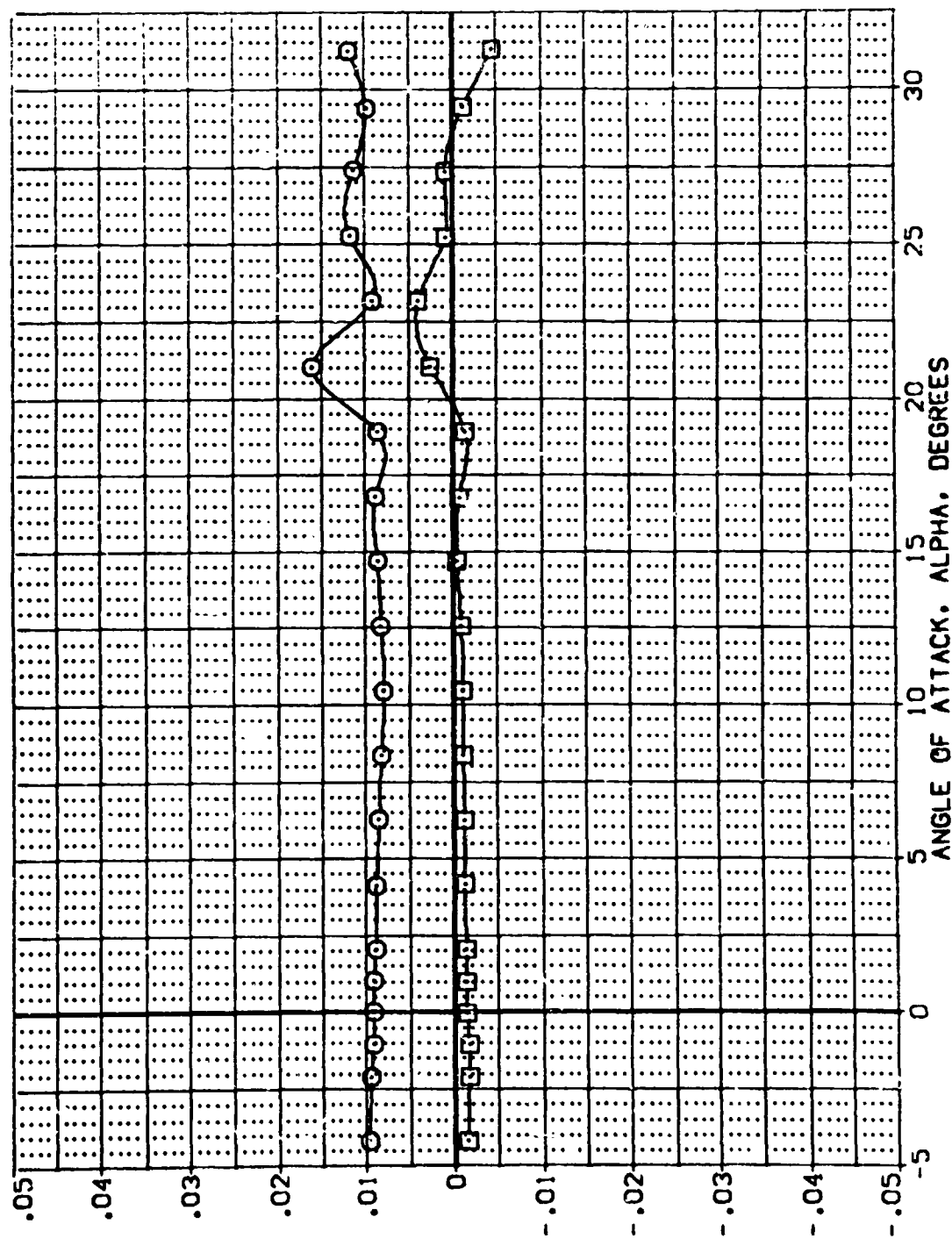
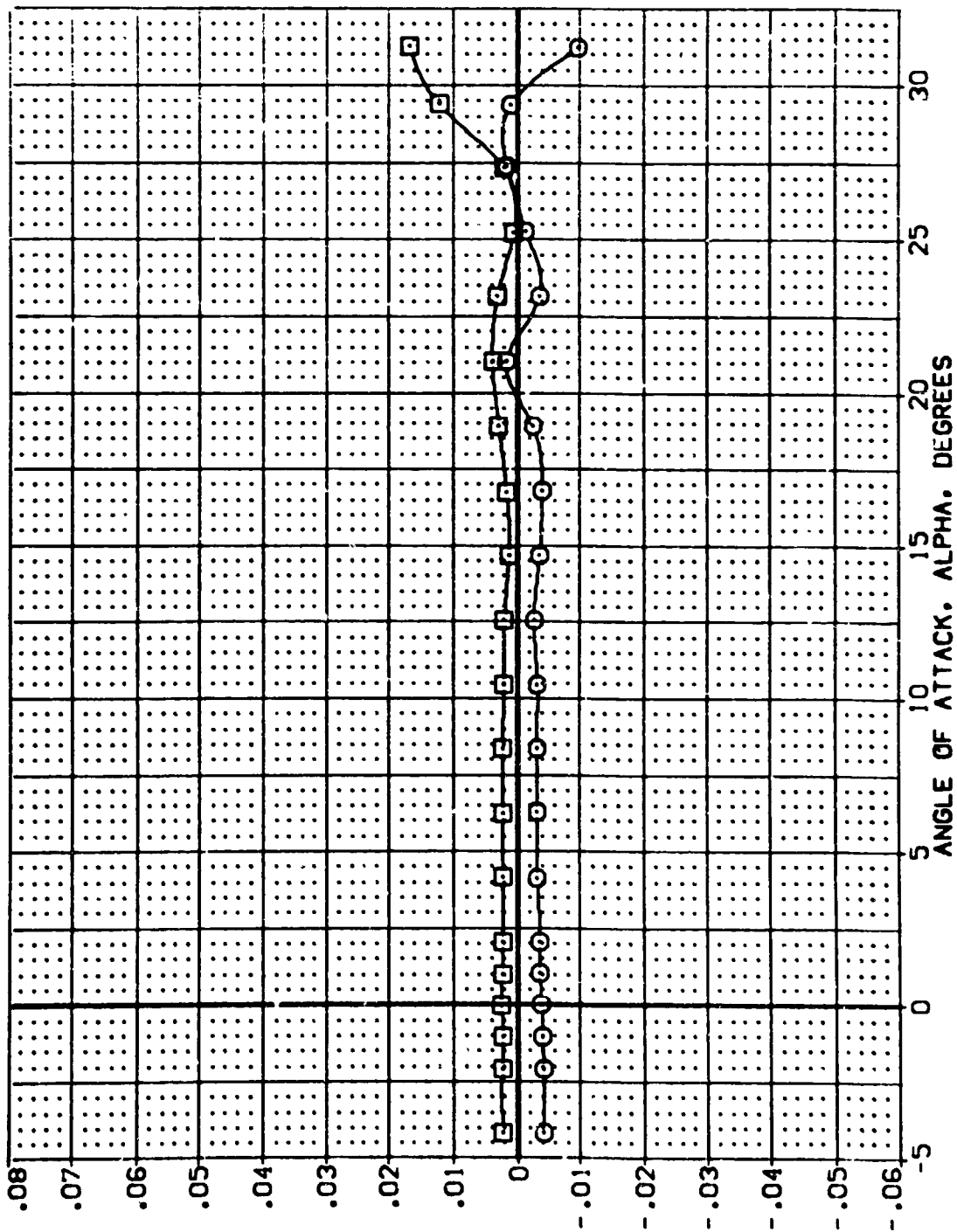


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(M)MACH = .26

DATA SET SYMBOL: (R02175) (R02330)

CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	EDFLAP	RUDDER	REFERENCE INFORMATION
0A528 826C9 M7F8 V11E28V8E5X9	.000	10.000	-12.000	-7.950	4.4119 SC.FT
0A528 826C9 M7F8 V11E28V8E5X9	.000	10.000	-12.000	.000	19.2799 INC-FS
					37.9379 INC-FS
					43.5974 INC-FS
					.0000 INC-FS
					15.1875 SCALE
					.0405 SCALE



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(A)MACH = .26

DATA SET SYMBO (ROZ176) (ROZ330) □

CONFIGURATION DESCRIPTION  
 0A528 B06C9 M778 V116E28V8F5X9  
 0A529 B26C9 M778 V116E28V8F5X9

ELEVON .000 SPOBRK 40.000 BDFLAP -12.000 RUDDER -7.960

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT 50.FT  
 LREF 19.2769 INCHES 12.45  
 BREF 37.9359 INCHES 12.45  
 XMRP 43.5974 INCHES 12.45  
 YMRP .0000 INCHES 12.45  
 ZMRP 15.1875 INCHES 12.45  
 SCALE .0105 SCALE

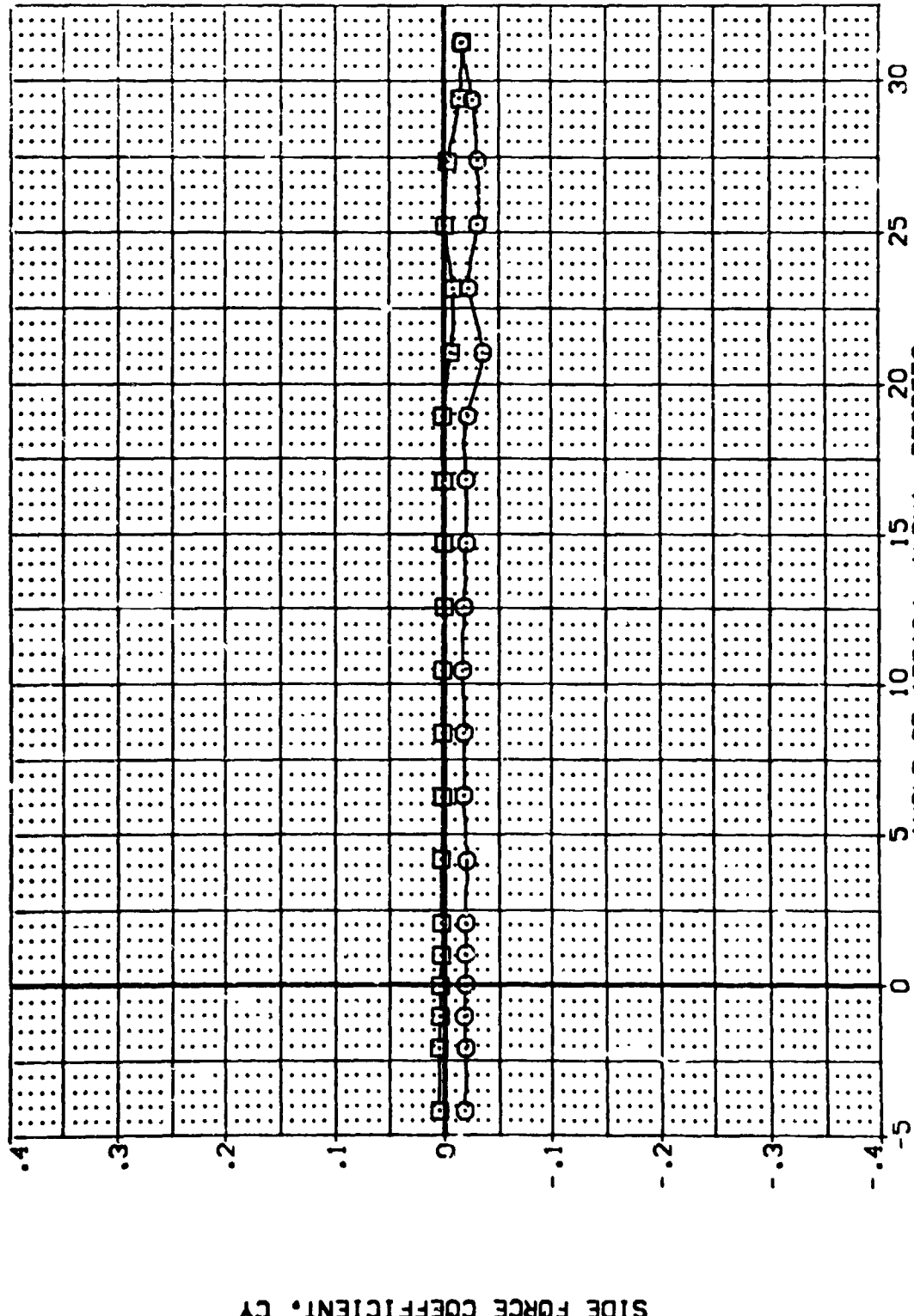


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(M)MACH = .26

(20Z176)

01628 B26C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DATA SET	RUDDER	RUDDER	SCALE	REFERENCE INFORMATION
○	.000	.260	DELVDN	.000	20Z176	-7.960	.000	.0105	SO.FT.
		.260	DELVDN	.000	20Z176	-7.960	.000	.0105	INCHES
		12.000	AILTRON	.000	20Z176	-7.960	.000	.0105	INCHES
		40.000	BETA	.000	20Z176	-7.960	.000	.0105	INCHES
								.0105	INCHES
								.0105	SCALE

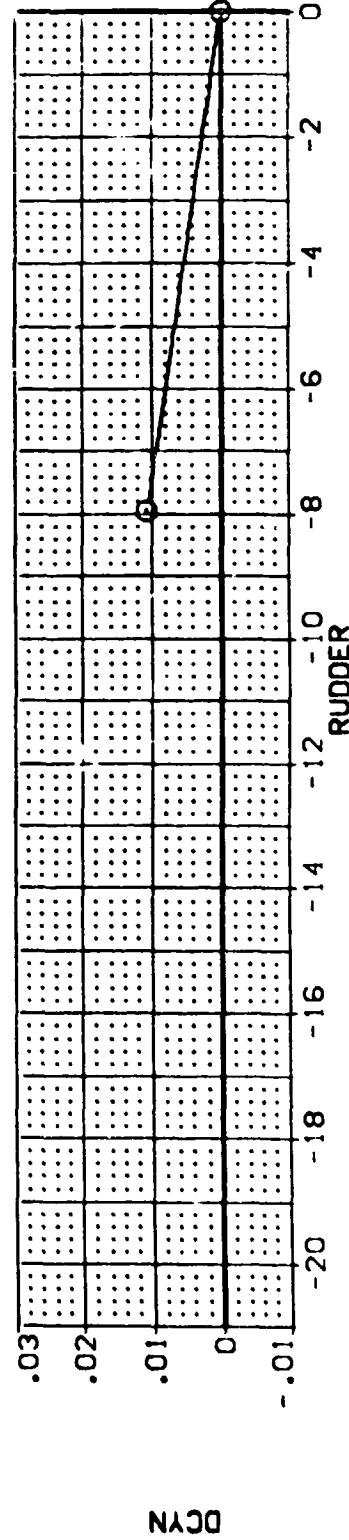
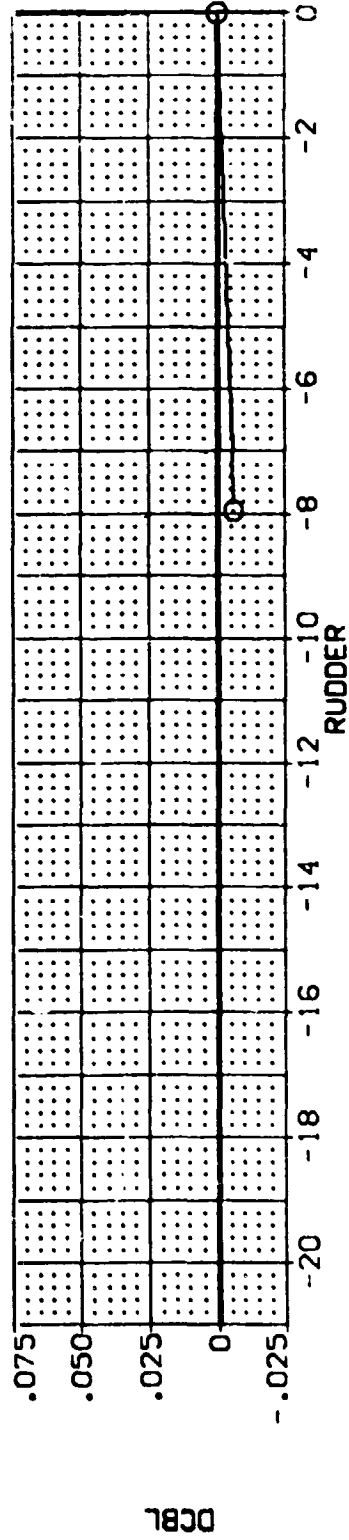
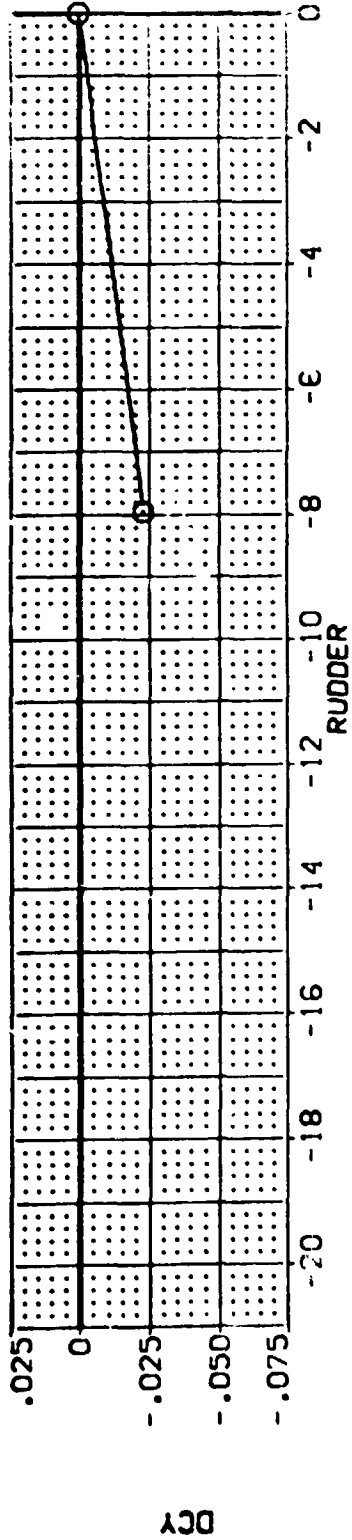


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE



(202176)

0A628 B26C9 M7F8 W116E28V8R5X9

PARAMETRIC VALUES

MACH	.760	DELVON	.000	DATASET	RUDDER	SRF
EDFLAP	-12.000	AILRON	.000	202176	.000	REF
SPOBRK	40.000	BETA	.000			XMRP

DATA SOURCE

RUDDER	-7.960	DATASET	202330
--------	--------	---------	--------

REFERENCE INFORMATION

SCAL T	4.4119
INCHES	19.2789
INCHES	37.9359
INCHES	43.5574
INCHES	.0000
INCHES	15.1875
SCALE	.0405

ALPHA 5.000

DCY

RUDDER	DCY
0	0.000
-2	-0.005
-4	-0.010
-6	-0.015
-8	-0.025
-10	-0.020
-12	-0.015
-14	-0.010
-16	-0.005
-18	-0.002
-20	-0.001

DCBL

RUDDER	DCBL
0	0.000
-2	-0.005
-4	-0.010
-6	-0.015
-8	-0.025
-10	-0.020
-12	-0.015
-14	-0.010
-16	-0.005
-18	-0.002
-20	-0.001

DCYN

RUDDER	DCYN
0	0.000
-2	-0.002
-4	-0.004
-6	-0.006
-8	-0.010
-10	-0.008
-12	-0.006
-14	-0.004
-16	-0.002
-18	-0.001
-20	-0.000

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	RUDDER	REFERENCE INFORMATION
○	10.000	BOFLAP	.260 DELVON	.000 DATASET	.000	4.4119 SO.FT.
		SPOBRK	-12.000 AILRON	-7.960 R.UDDER		19.2298 INCHES
			40.000 BETA	.000 DATASET		37.9359 INCHES
				20Z330		43.5974 INCHES
						.0000 INCHES
						15.1875 INCHES
						.0405 SCALE

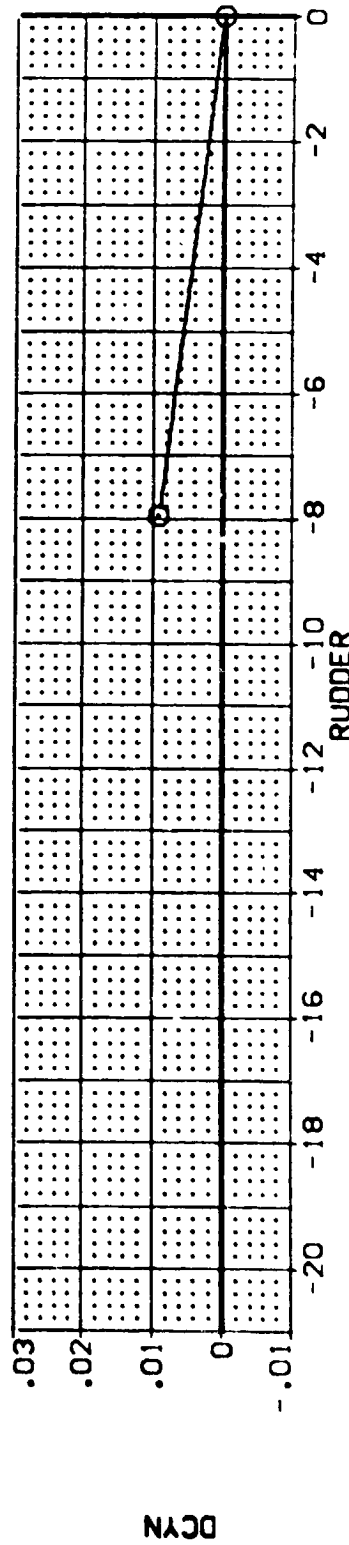
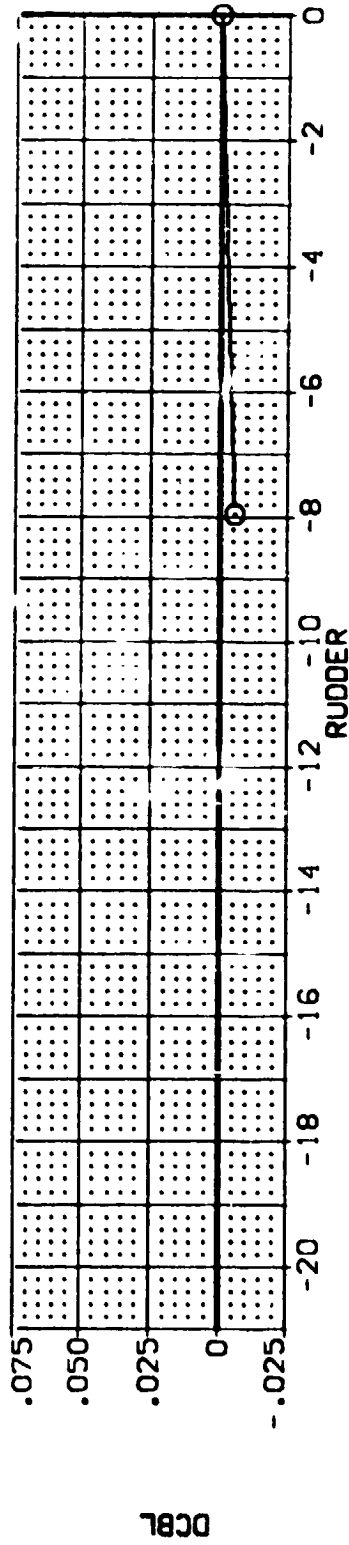
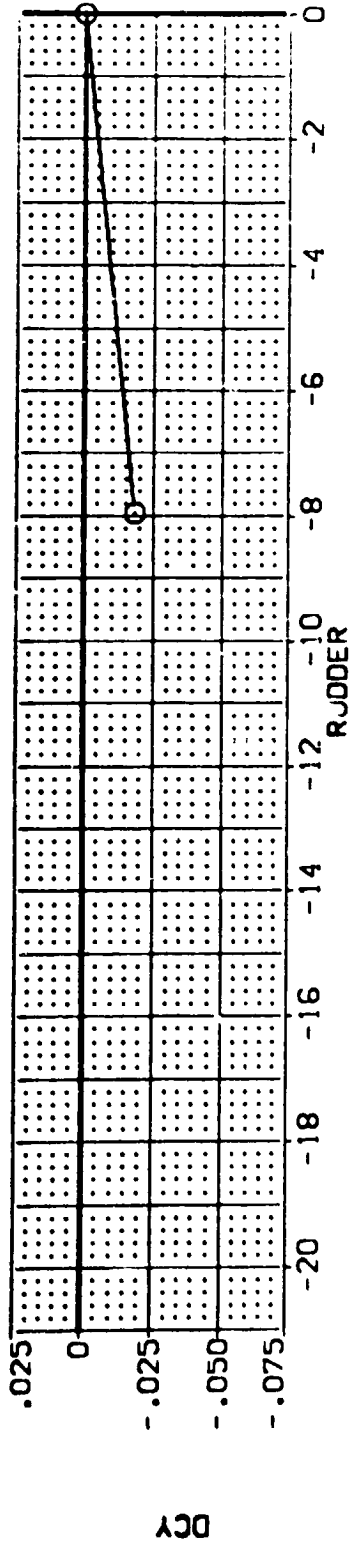


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(20Z176)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL 0

ALPHA 15.000

MACH .260

BOFLAP -12.000

SPOBRK 40.000

PARAMETRIC VALUES

DELVON .000

A1LRON .000

BETA .000

DATA SOURCE

RUDDER 20Z176

RUDDER -7.960

DATASET 20Z300

RUDDER .000

REFERENCE INFORMATION

SREF 4.4119

LREF 19.2299

BREF 37.9359

XMRP 43.5574

YMRP 0.0000

ZMRP 15.1875

SCALE .0405

SO.FT. INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE

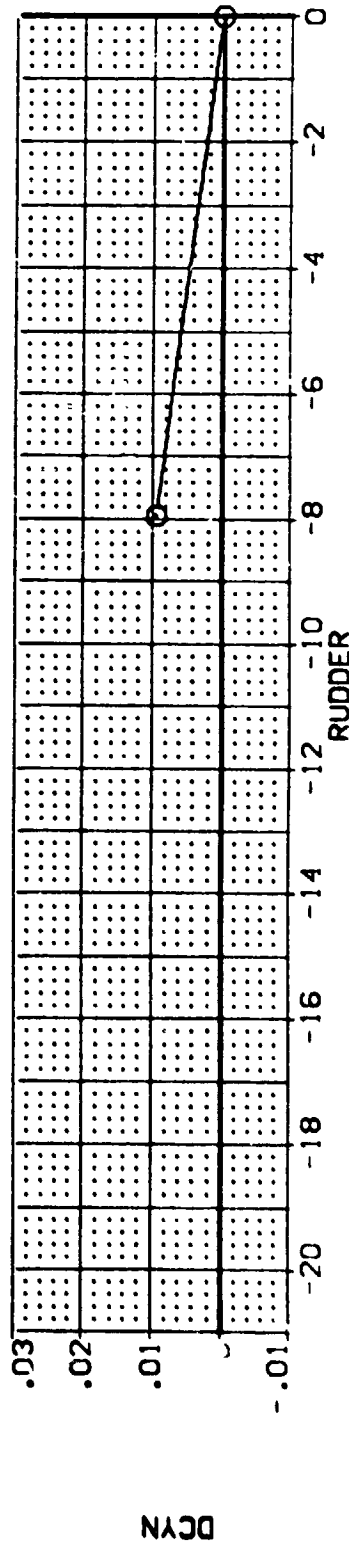
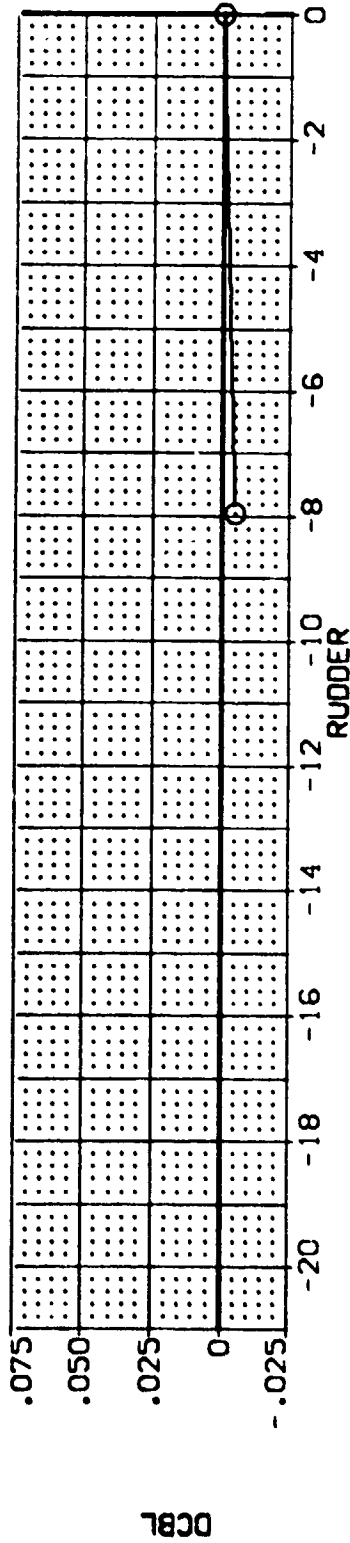
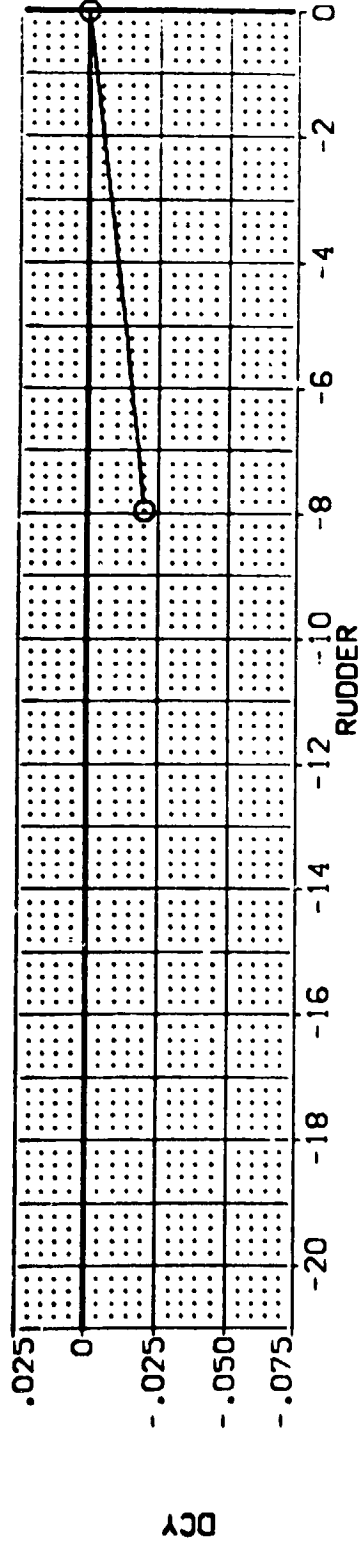


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z176)

SYMBOL  
○

PARAMETRIC VALUES  
 ALPHA 20.000  
 MACH .260  
 DELVON  
 BOFLAP -12.000  
 SPOBRK 40.000  
 ALLRON  
 BETA

DATA SOURCE  
 DATASET .000  
 DATASET 20Z176  
 RUDDER -7.960

REFERENCE INFORMATION  
 SREF 4.4119 SC.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP 15.0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405

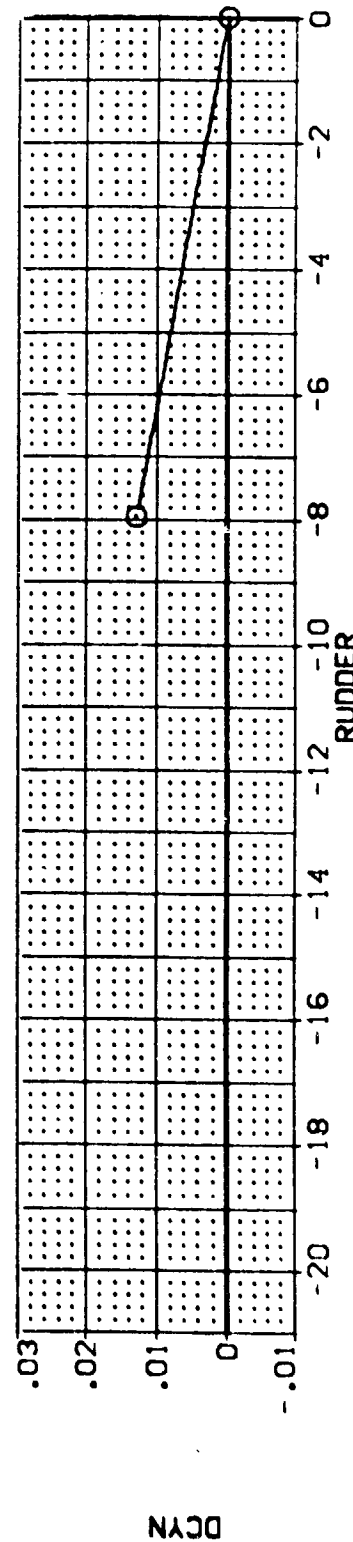
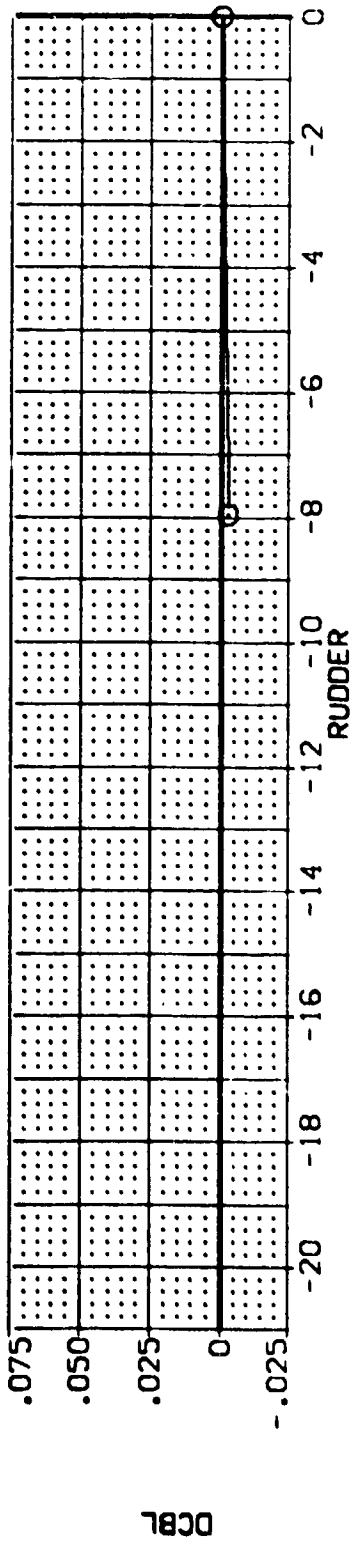
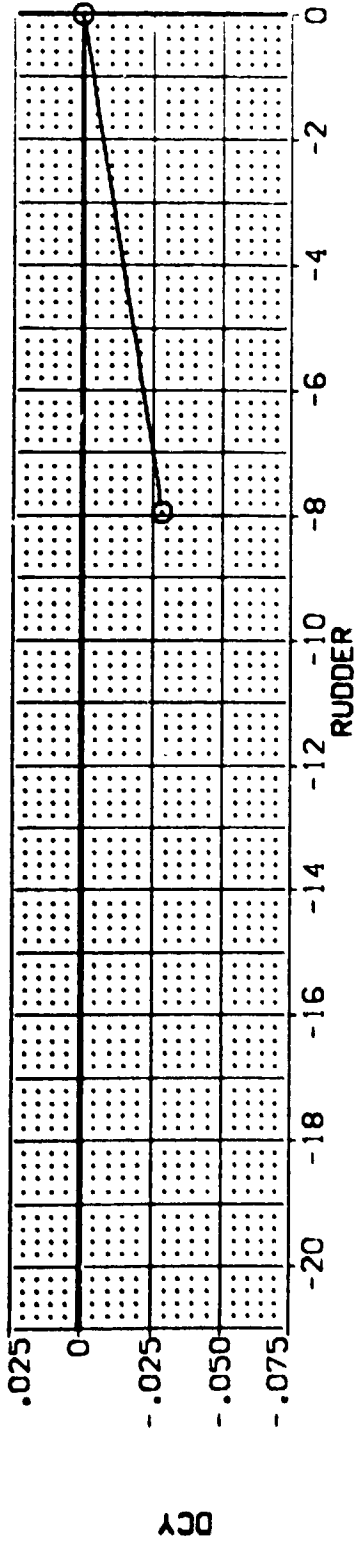


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

(20Z176)

0A628 826C9 M7F8 W116E28V8R5X9

SYMBOL	ALPHA	MACH	BOFLAP	SPDRK	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	25.000	.260	-12.000	40.000	DELVON AILRON BETA	RUDDER 20Z176 .000	SC.FT. INCHES INCHES INCHES INCHES SCALE
						RUDDER -7.960 .000	4.4119 19.2799 37.9359 43.5974 .0000 15.1875 .0405
						RUDDER 20Z330 .000	
						RUDDER SCALE	

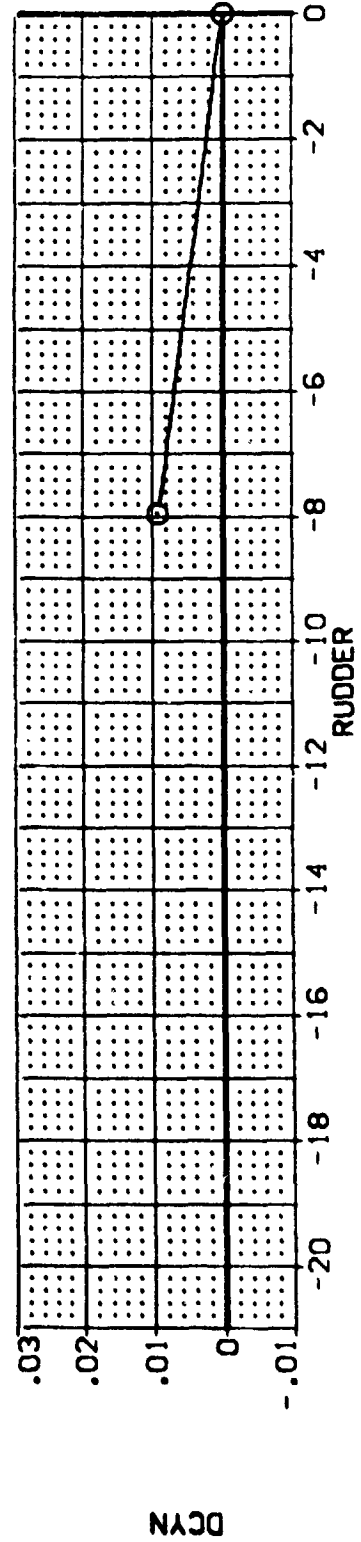
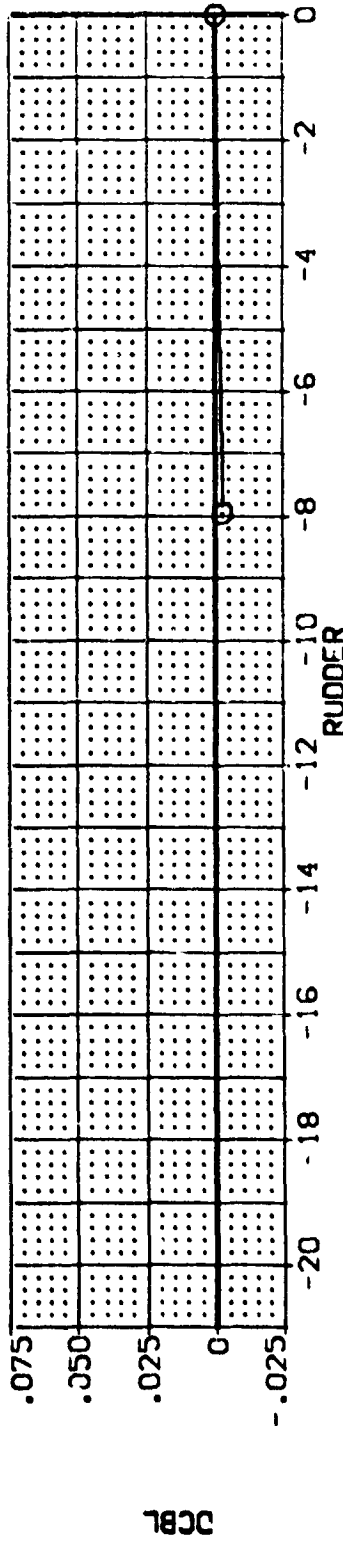
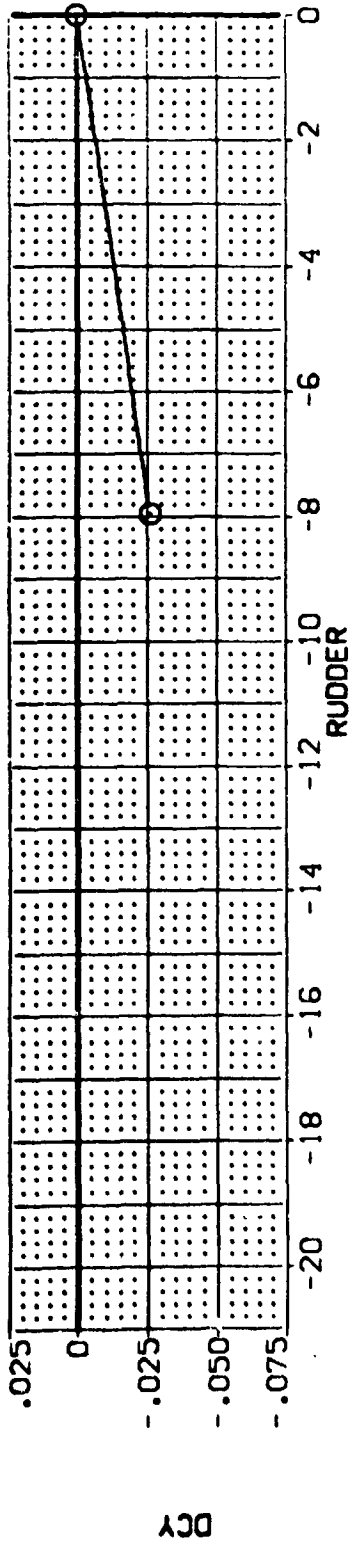


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	30.000	BD FLAP	.280	DELTA	.000	RUDDER	20Z330	50 FT.
		SPDRY	-12.000	AIRLN	.000	RUDDER	20Z330	INCHES
			40.000	BETA	.000	RUDDER	20Z330	INCHES
								INCHES
								INCHES
								SCALE

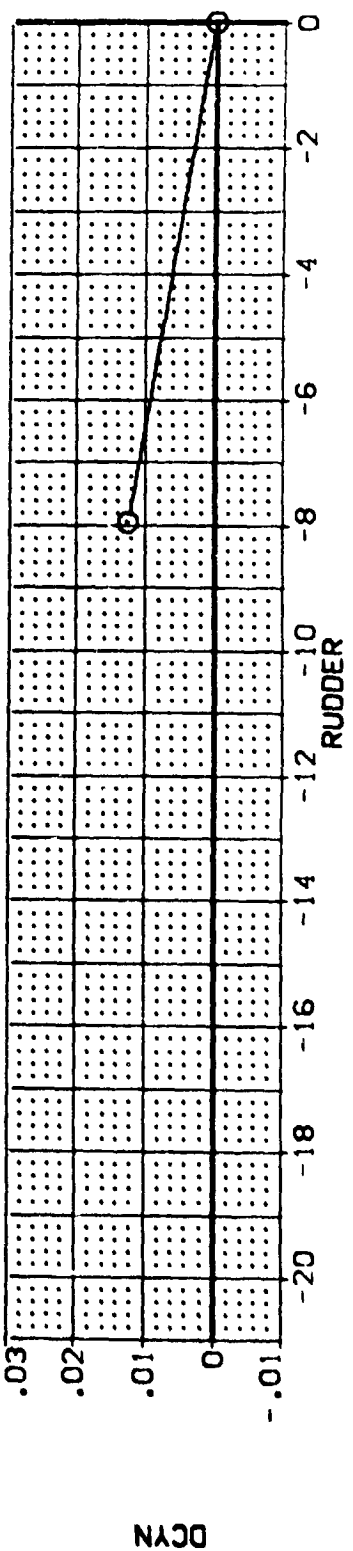
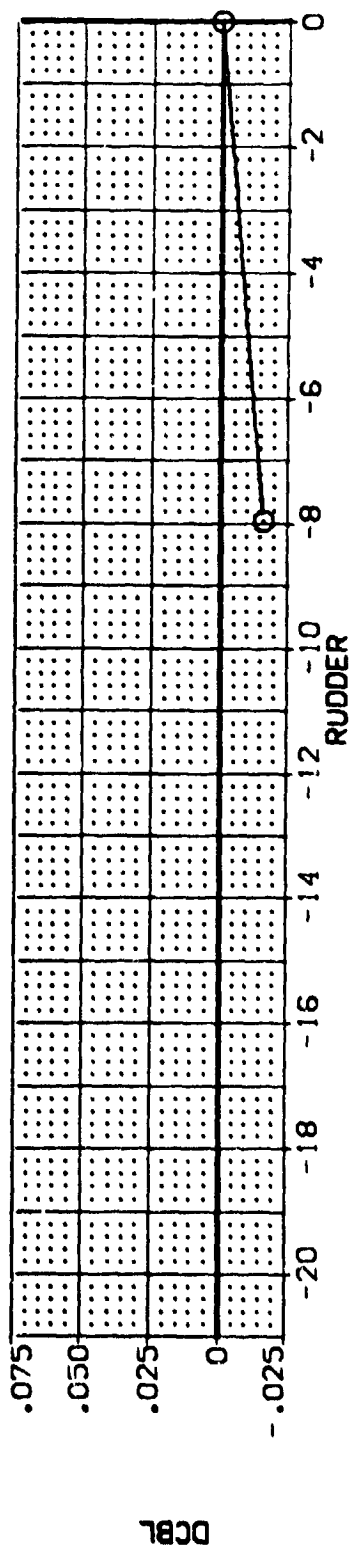
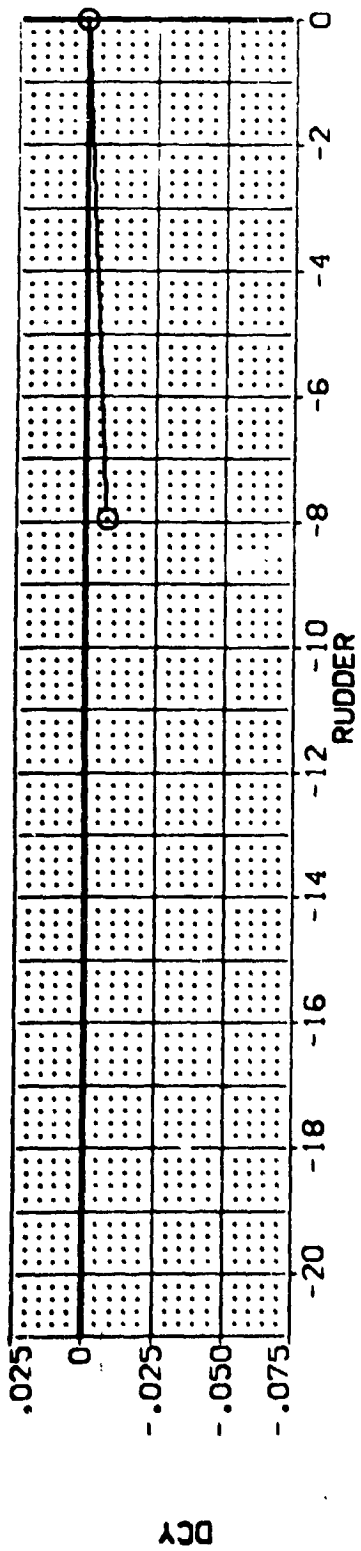


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z176)

SYMBOL ALPHA .000 MACH .760 DELVON .000 DATASET RUDDER .000 REFERENCE INFORMATION SO.F.T. INCHES INCHES INCHES INCHES INCHES INCHES  
 0 BDFLAP -12.000 AILRON 40.000 BETA .000 DATASET RUDDER .000 REFERENCE INFORMATION SO.F.T. INCHES INCHES INCHES INCHES INCHES INCHES  
 SPOBRK 40.000 BETA .000 DATASET RUDDER .000 REFERENCE INFORMATION SO.F.T. INCHES INCHES INCHES INCHES INCHES INCHES  
 .04119  
 19.2299  
 37.9359  
 43.5574  
 .0000  
 15.1875  
 .0405

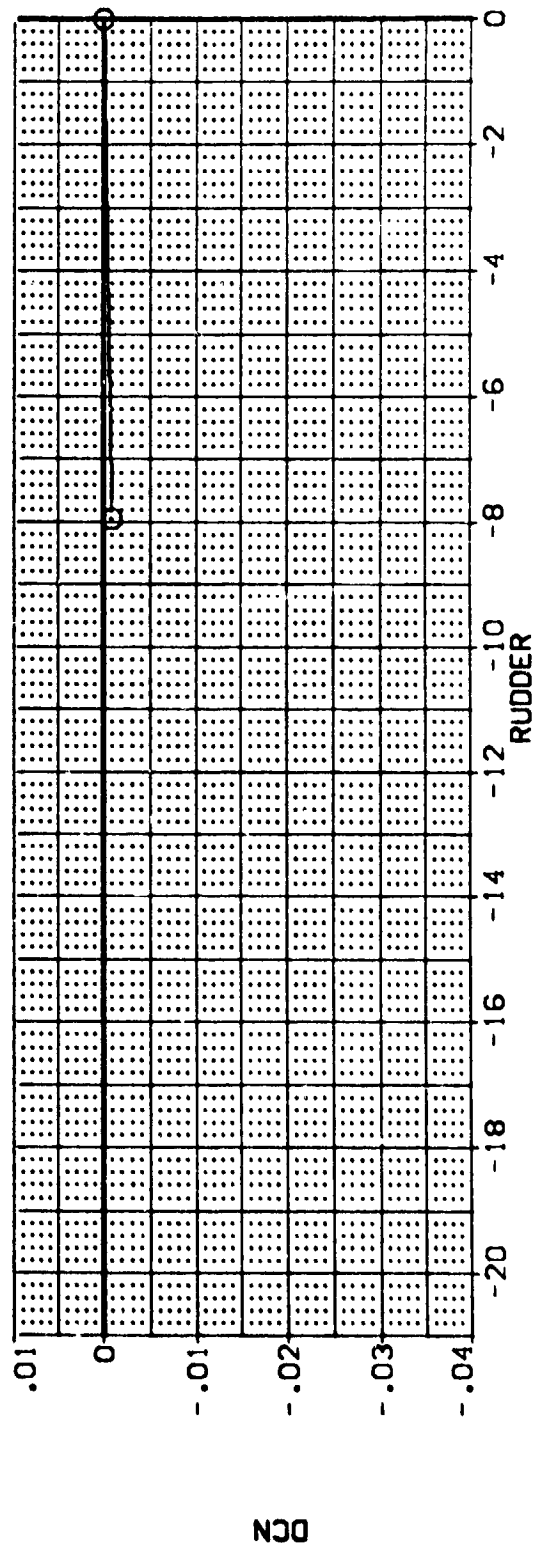
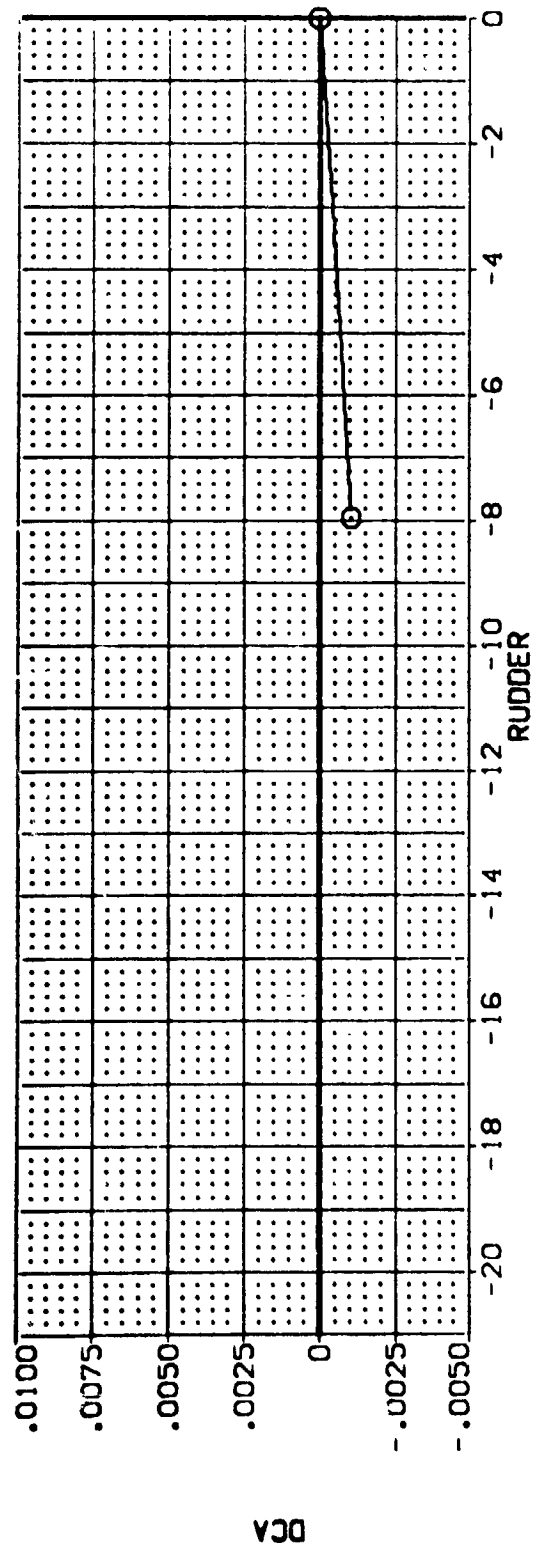
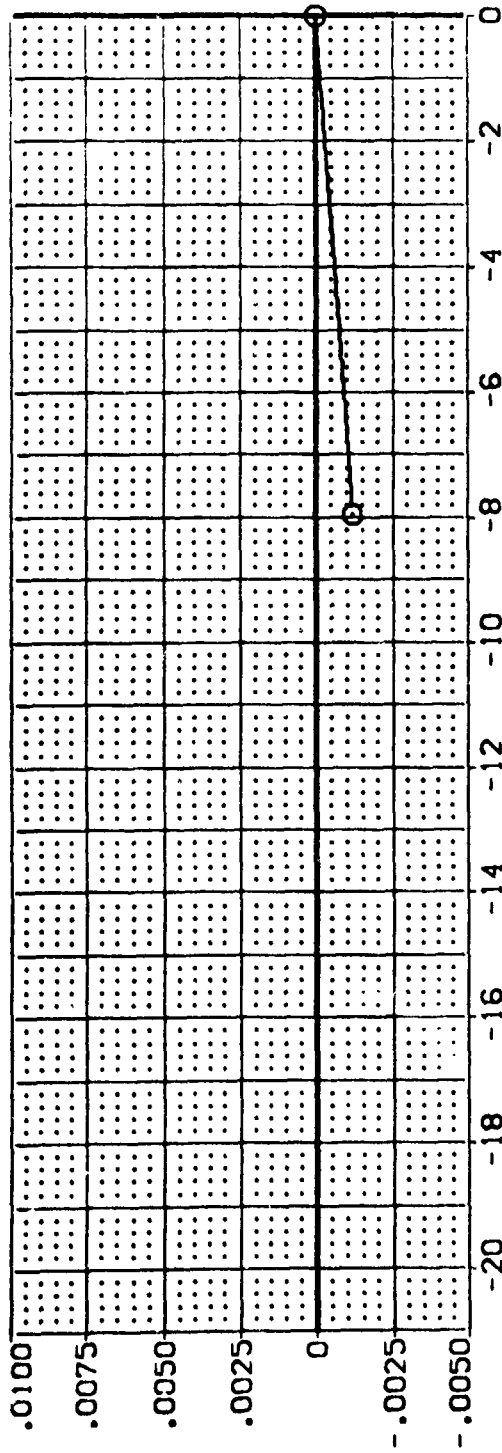


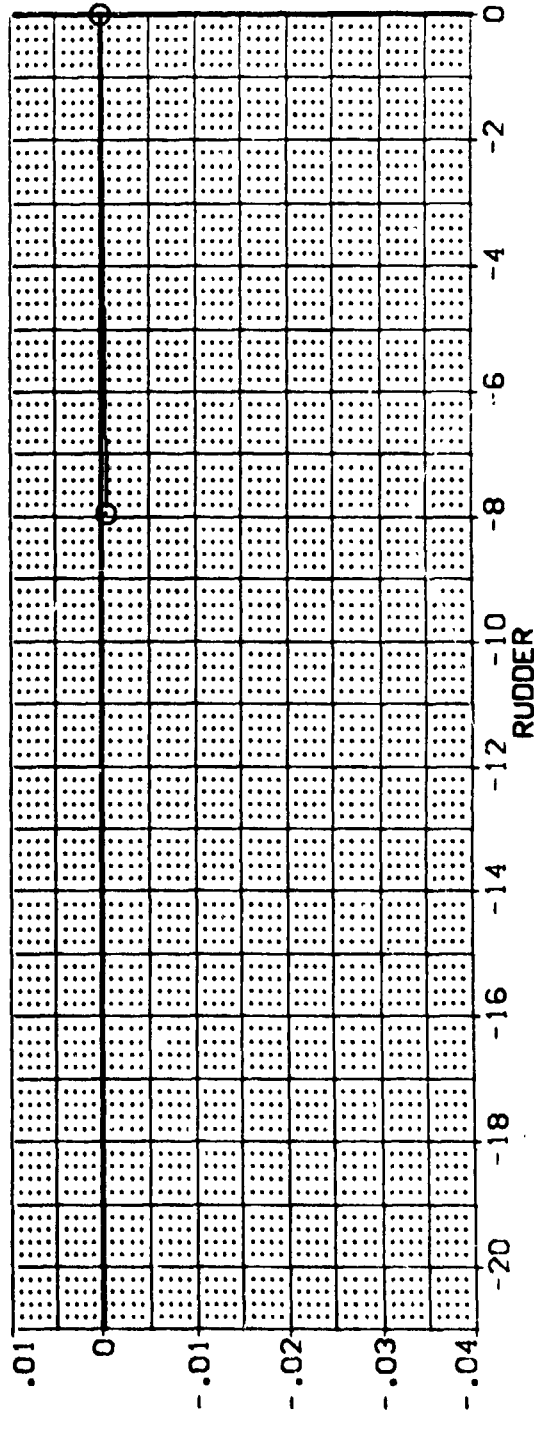
FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	5.000	EDFLAP	.260 DELVN	RUDDER	SREF
		SPOBRK	-12.000 AILRON	RUDDER	LREF
			40.000 BETA	RUDDER	BREF
				RUDDER	XMRP
				RUDDER	ZMRP
				RUDDER	SCALE
					SO.FT.
					INCH.FS
					INCH.FS
					INCH.FS
					INCH.FS
					SCALE



DCA



DCN

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE



(20Z176)

0A62B B26C9 M7F8 W116E28V8R5X9

MACH

BOFLAP

SPDRK

SYMBOL ALPHA

10.000

PARAMETRIC VALUES

.260 DELVON

-12.000 ALLRON

40.000 BETA

DATA SOURCE

RJDDER

-7.960

DATA SET

20Z330

RUDDER

.000

SREF

4.4119

LREF

19.2299

BREF

37.9359

YMRP

43.5974

ZMRP

15.0000

SCALE

.0405

REFERENCE INFORMATION

SO.FT.

INCHES

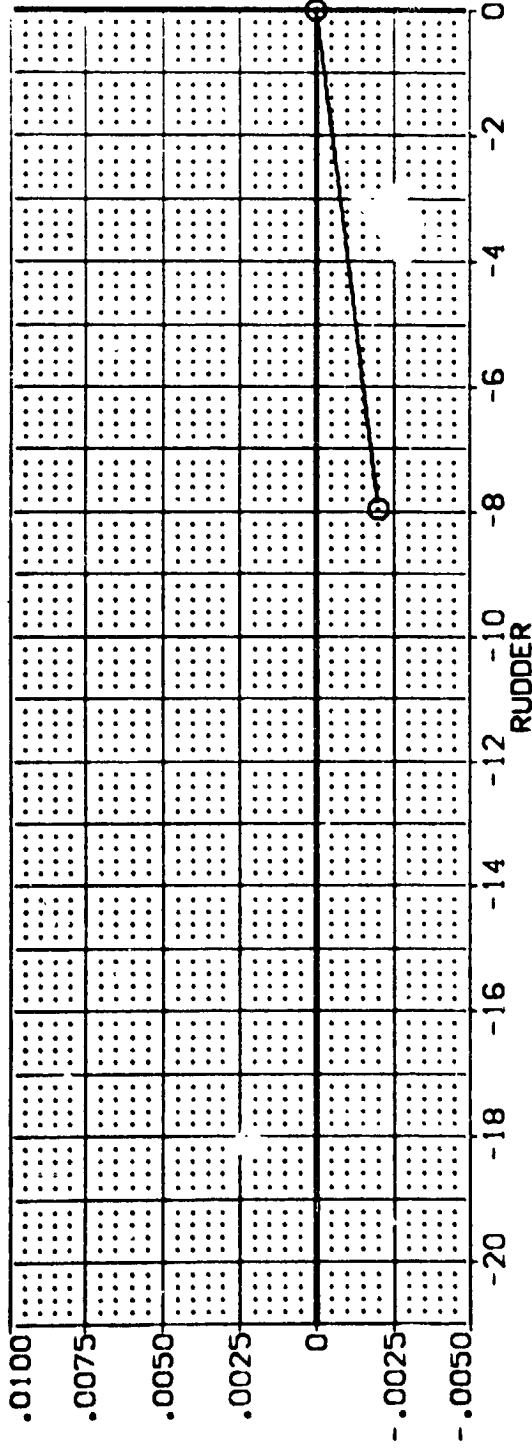
INCHES

INCHES

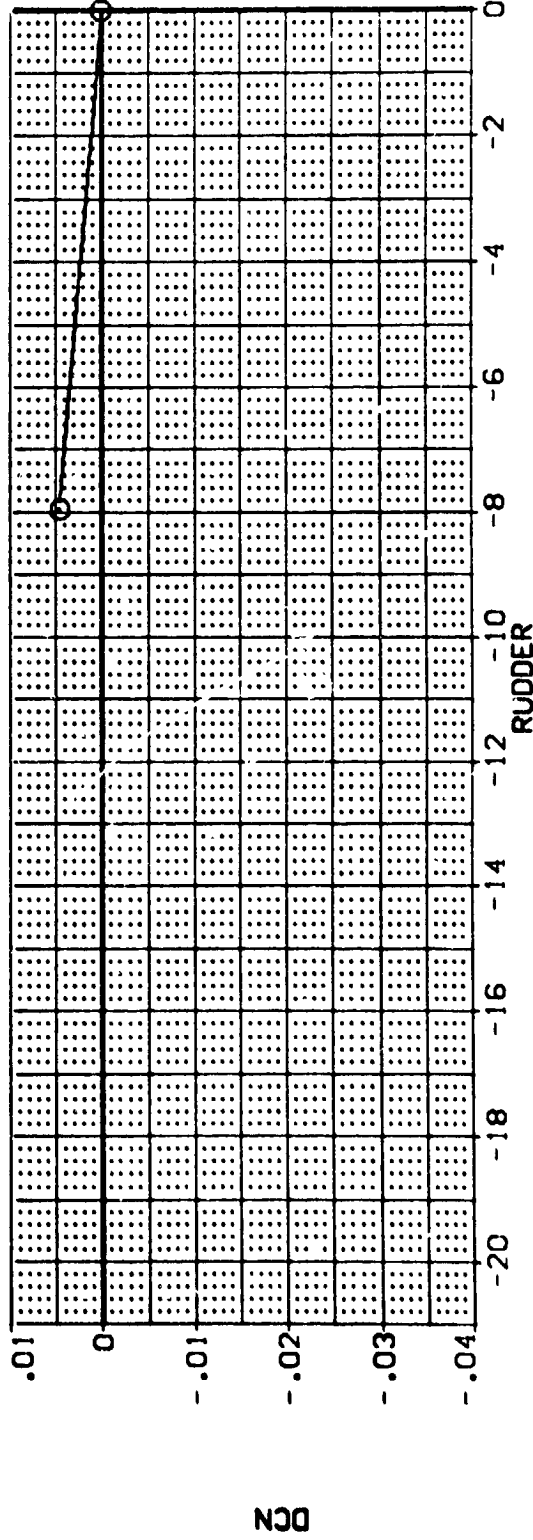
INCHES

INCHES

SCALE



VCO

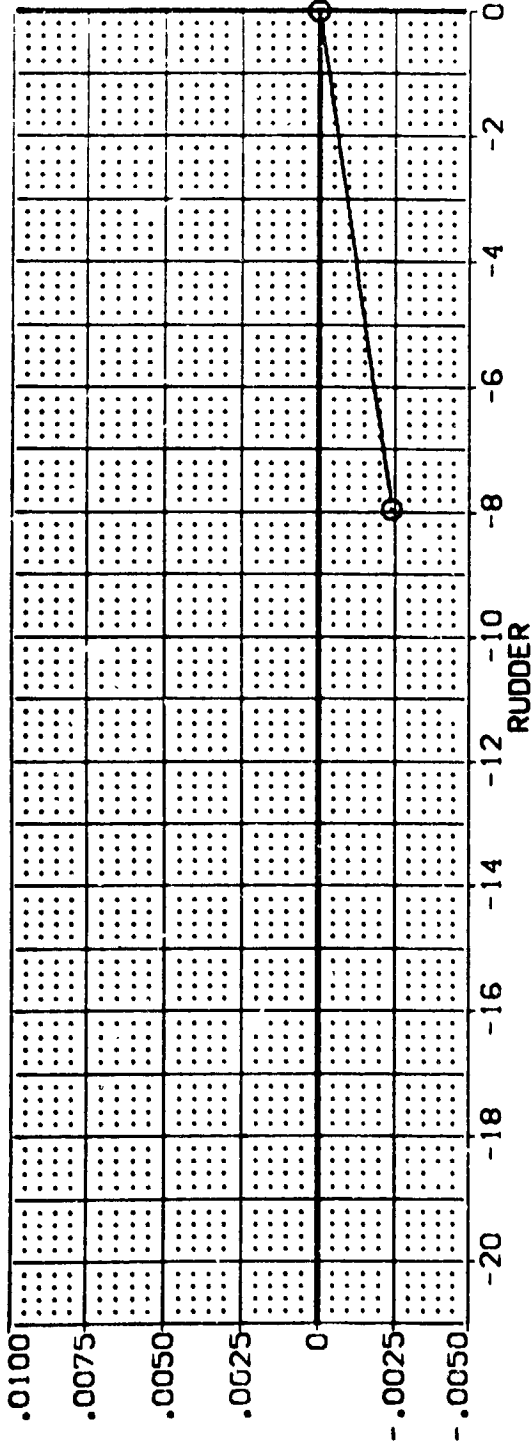


DCN

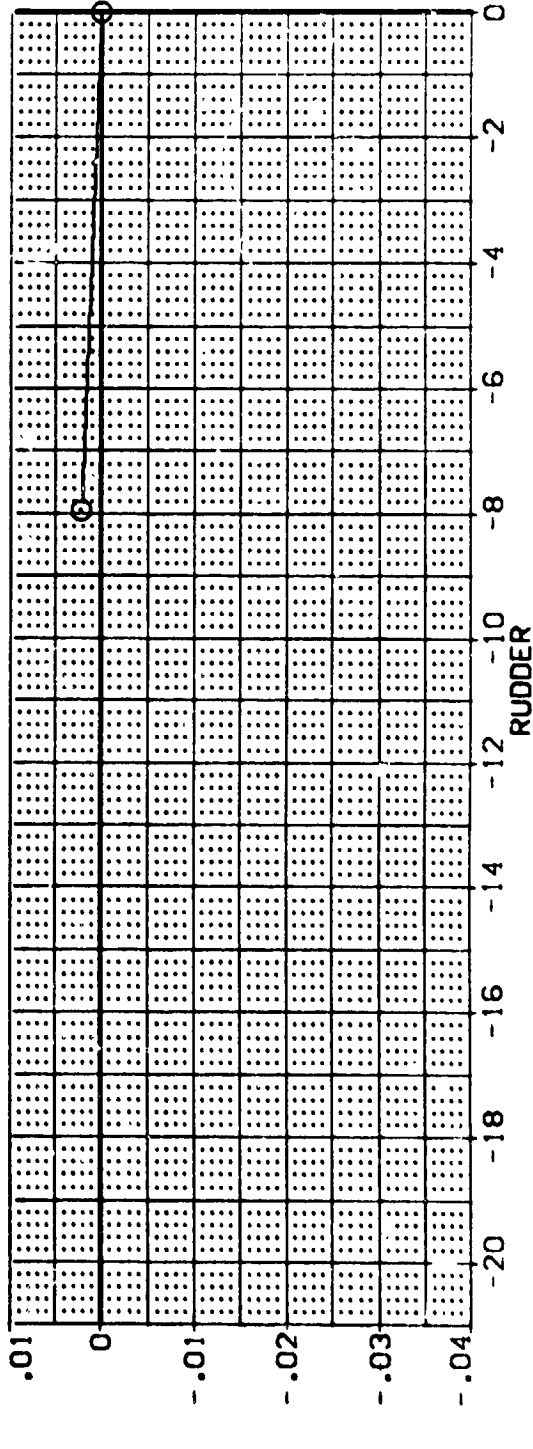
FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (2DZ176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DAVASET	RUDDER	SREF	REFERENCE INFORMATION
0	15.000	BDFLAP	.260 DELVON	RUDDER	20Z330	.000	4.4119	SO.FT.
		SPOBRK	-12.000 AILRON	-7.960			19.2298	INCHES
			40.000 BETA	.000			37.9358	INCHES
							43.5974	INCHES
							.0000	INCHES
							15.1875	INCHES
							.0405	SCALE



DCA



DCN

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X<sup>o</sup> (20Z176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
0	20.000		.260	DELTON	.000	DATASET	RUDDER	SREF	4.4119	SC.FT.	
		BDFLAP	-12.000	AILRON	.000	20Z176	.000	LREF	19.2799	INCHES	
		SPOBRK	40.000	BETA	.000			BREF	37.9359	INCHES	
								YMRP	43.5971	INCHES	
								ZMRP	.0000	INCHES	
								SCALE	15.1875	INCHES	
									.0405	SCALE	

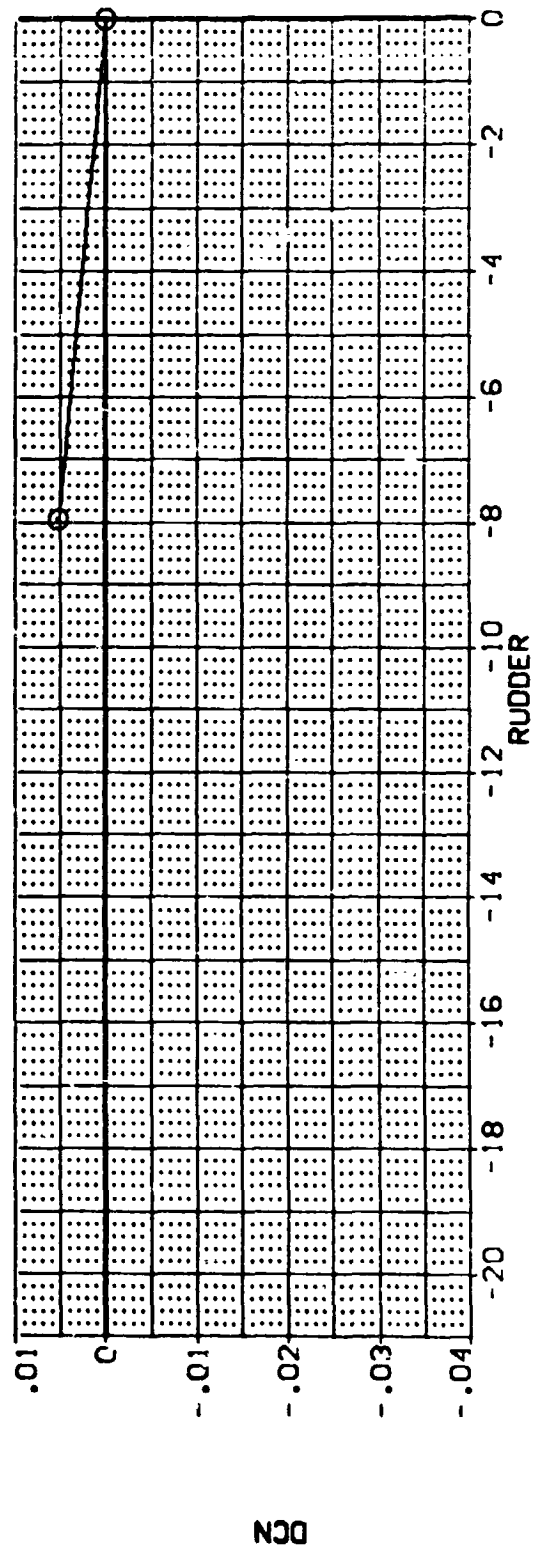
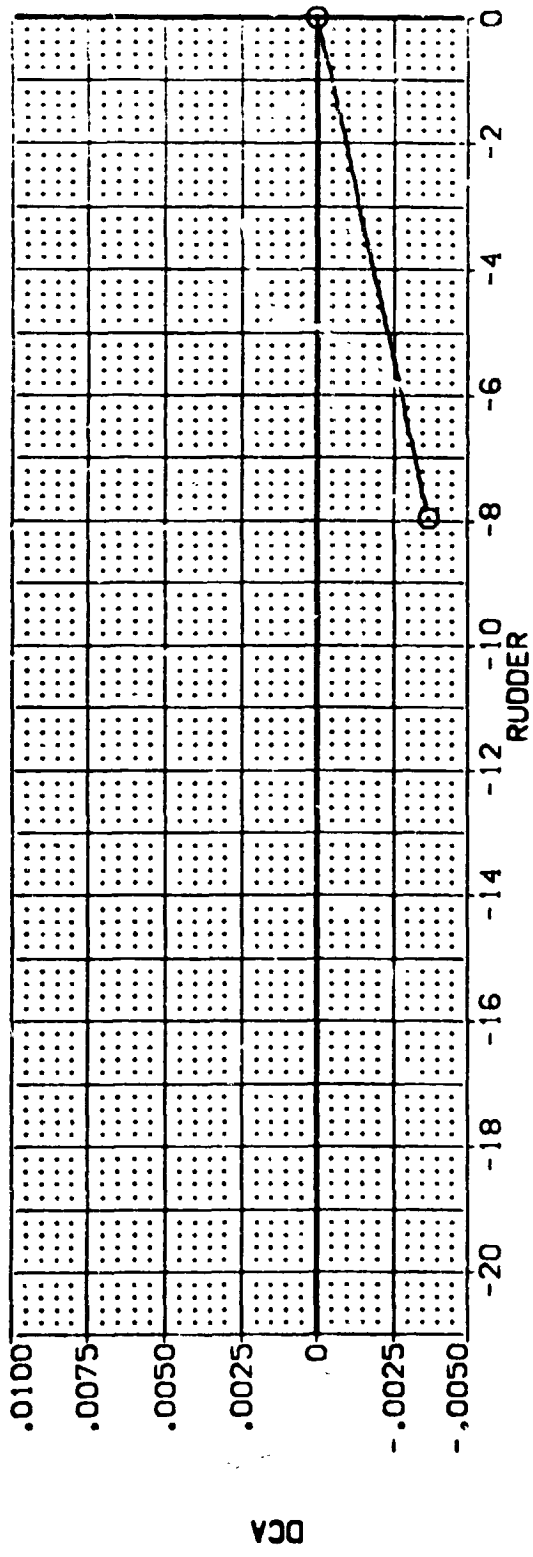
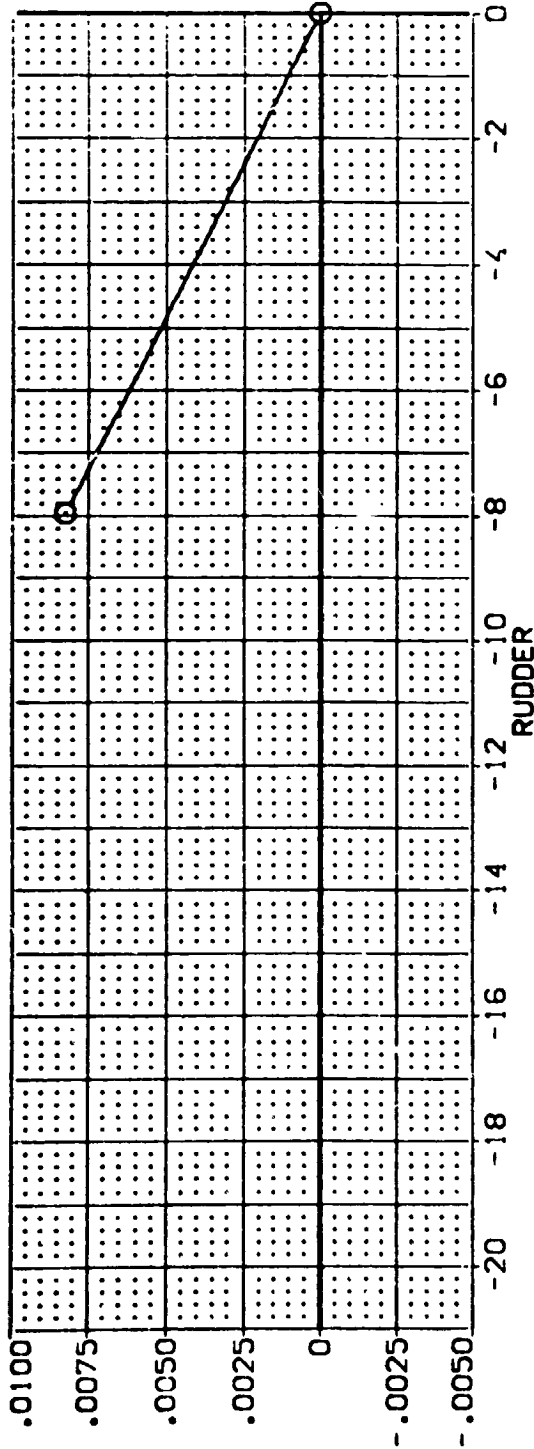


FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

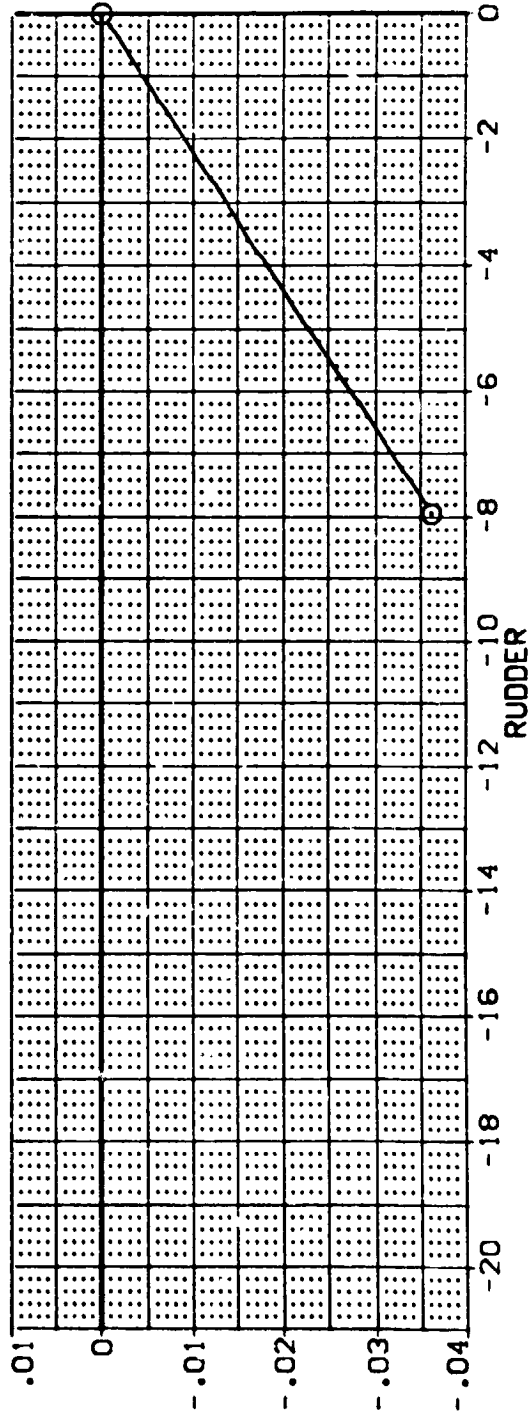


0A62B B26C9 M7F8 W116E28V8R5X9 (2DZ176)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	RUDDER	DATASET	RUDDER	SREF	REFERENCE INFORMATION
○	30.000	EDFLAP	.260 DELVON	RUDDER	-7.960	20Z330	.000	LREF	4.4119
		SPOBFX	-12.000 AILRON					BREF	19.2299
			40.000 BETA					XMRP	37.9359
								ZMRP	43.5874
								SCALE	.0000
									15.1875
									.0105
									SCALE



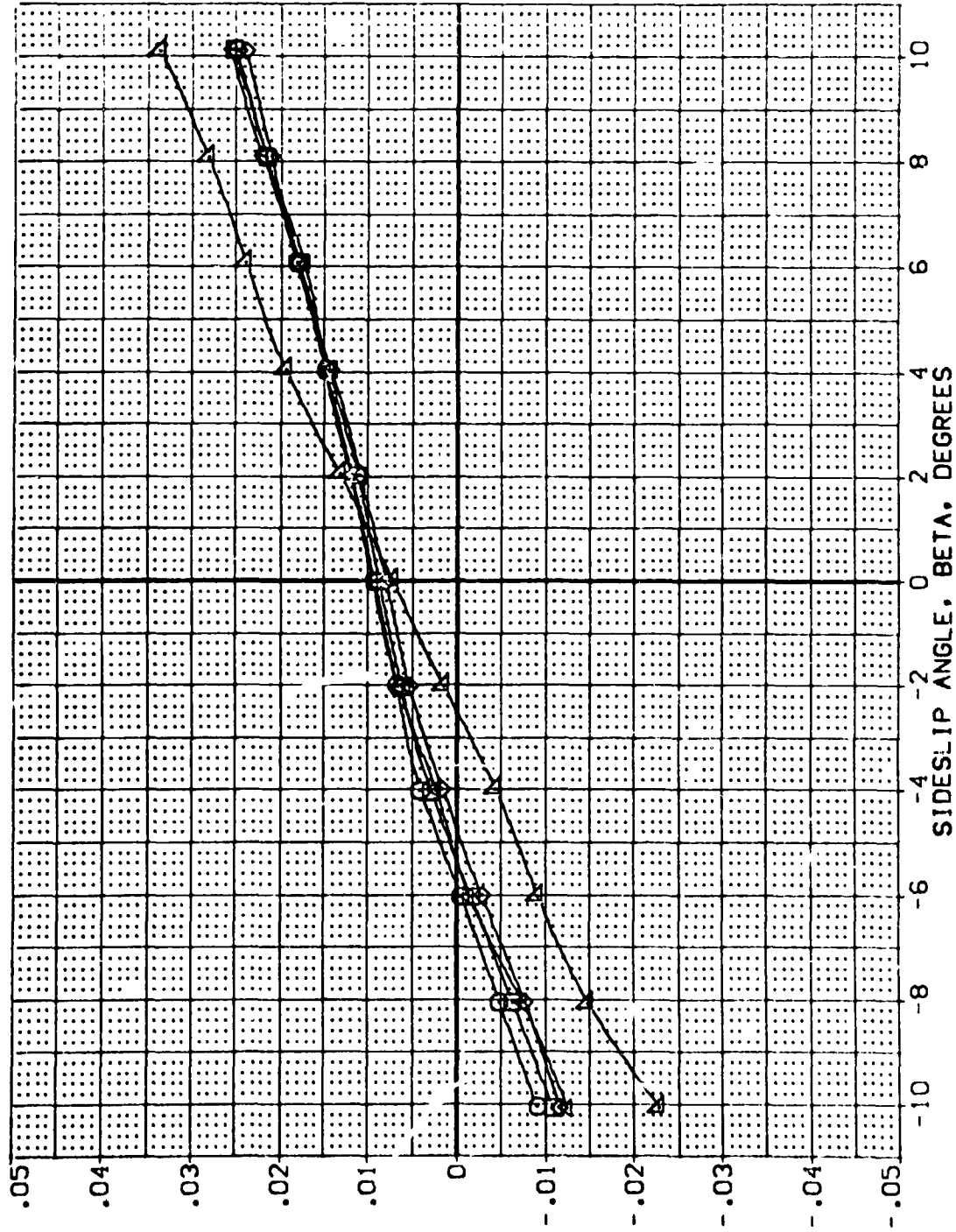
DCA



DCN

FIG 59 RUDDER EFFECTIVENESS, 40 DEG. FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOILER	BOFLAP	ALPHA	REFERENCE INFORMATION
(R0Z177)	CA628 B26C9 M7F8 V11E28V8F5X9	.000	40.000	-12.000	.000	SREF 4.4119 SC.F.T.
(R0Z178)	CA628 B26C9 M7F8 V11E28V8F5X9	.000	40.000	-12.000	5.000	LREF 19.2799 INCHES
(R0Z179)	CA628 B26C9 M7F8 V11E28V8F5X9	.000	40.000	-12.000	10.000	BREF 37.9359 INCHES
(R0Z180)	CA628 B26C9 M7F8 V11E28V8F5X9	.000	40.000	-12.000	15.000	XMRP 43.5874 INCHES
(R0Z181)	CA628 B26C9 M7F8 V11E28V8F5X9	.000	40.000	-12.000	20.000	YMRP 0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE

CAJ MACH = .26



REFERENCE INFORMATION

SREF	4.4119	SC.F.T.
LREF	19.2759	INC.F.S
BREF	37.9359	INC.F.S
XMRP	43.5974	INC.F.S
YMRP	15.0000	INC.F.S
ZMRP	15.1875	INC.F.S
SCALE	.04CS	SCALE

ALPHA

SPDRK	40.000	BUFLAP	-12.000
ELEVON	.000	ALPHA	5.000
	.000		10.000
	.000		15.000
	.000		20.000

CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONF	DESCRIPTION
(R0Z177)	M7F8	V116E28V8PS19
(R0Z178)	M7F8	V116E28V8PS19
(R0Z179)	M7F8	V116E28V8PS19
(R0Z180)	M7F8	V116E28V8PS19
(R0Z181)	M7F8	V116E28V8PS19

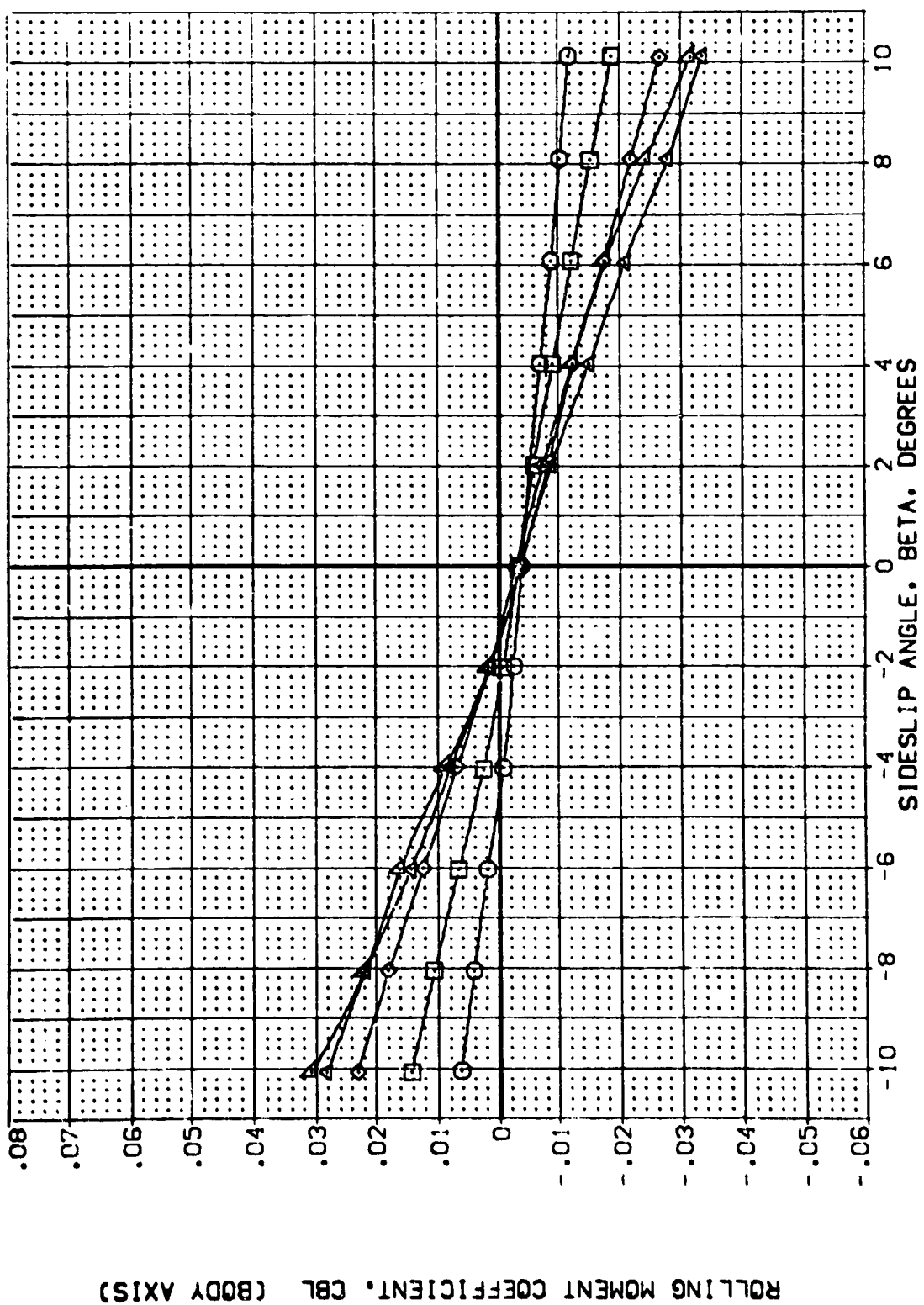


FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE

(M)MACH = .26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RDZ177)	DA628	B26C9	M7F8	V116E28V8RSX9
(RDZ178)	DA628	B26C9	M7F8	V116E28V8RSX9
(RDZ179)	DA628	B26C9	M7F8	V116E28V8RSX9
(RDZ180)	DA628	B26C9	M7F8	V116E28V8RSX9
(RDZ181)	DA628	B26C9	M7F8	V116E28V8RSX9

ELEVON SPOBRK BOFLAP ALPHA REFERENCE INFORMATION

.000	40.000	-12.000	.000	SREF	4.4119	50.FT.
.000	40.000	-12.000	5.000	LREF	19.2799	INCHES
.000	40.000	-12.000	10.000	BREF	37.9359	INCHES
.000	40.000	-12.000	15.000	XMRP	13.5974	INCHES
.000	40.000	-12.000	20.000	YMRP	15.0000	INCHES
				ZMRP	15.1873	INCHES
				SCALE	.0405	SCALE

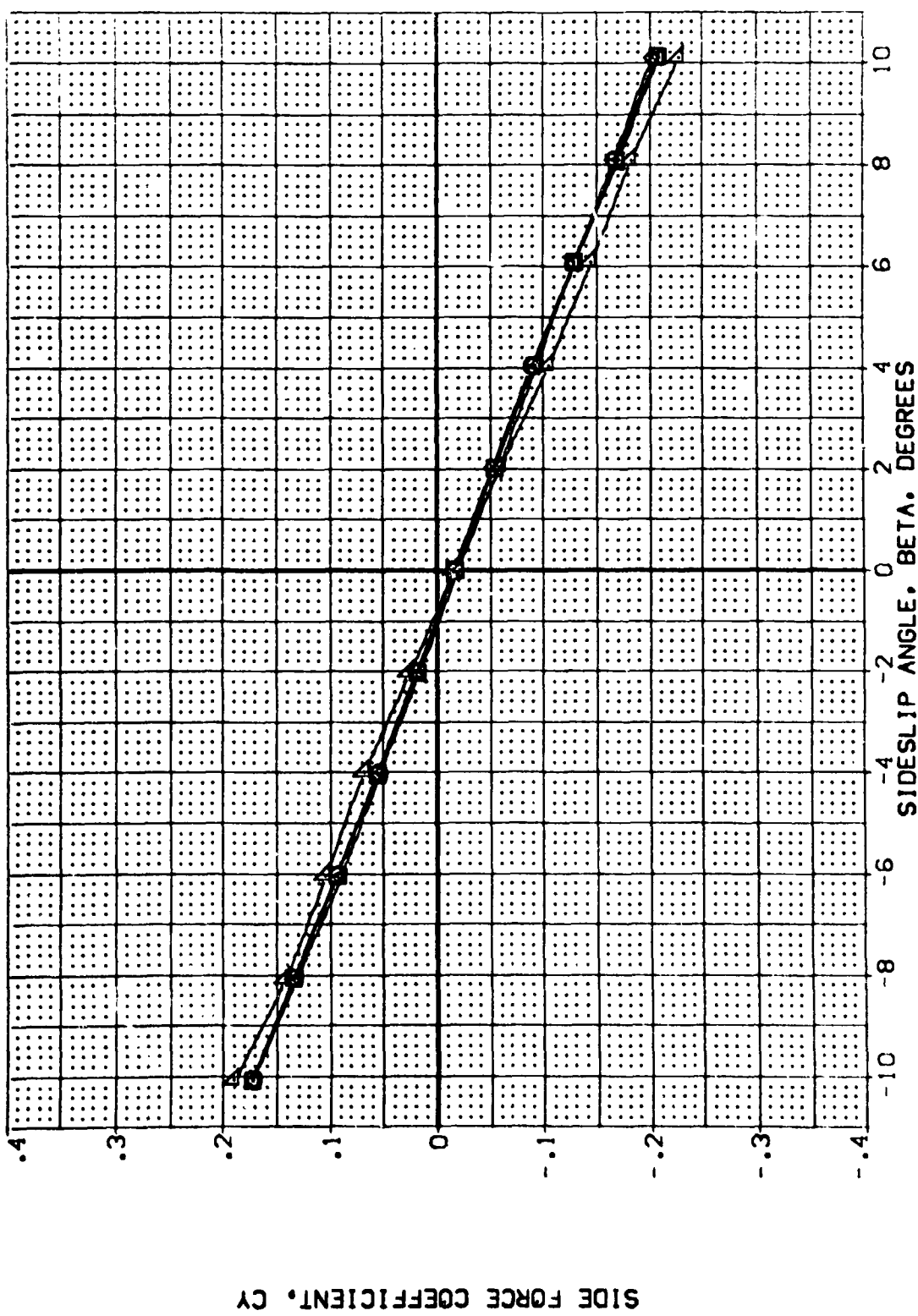


FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE



(CDZ177)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER -7.980

MACH ELEVON SPOBRK

PARAMETRIC VALUES

.260 BDLAP -12.000

.000 AILRON .000

40.000

REFERENCE INFORMATION

SREF 4.4119 SC.FT

LREF 19.2299 INCHES

BREF 37.9359 INCHES

XMRP 43.5874 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405

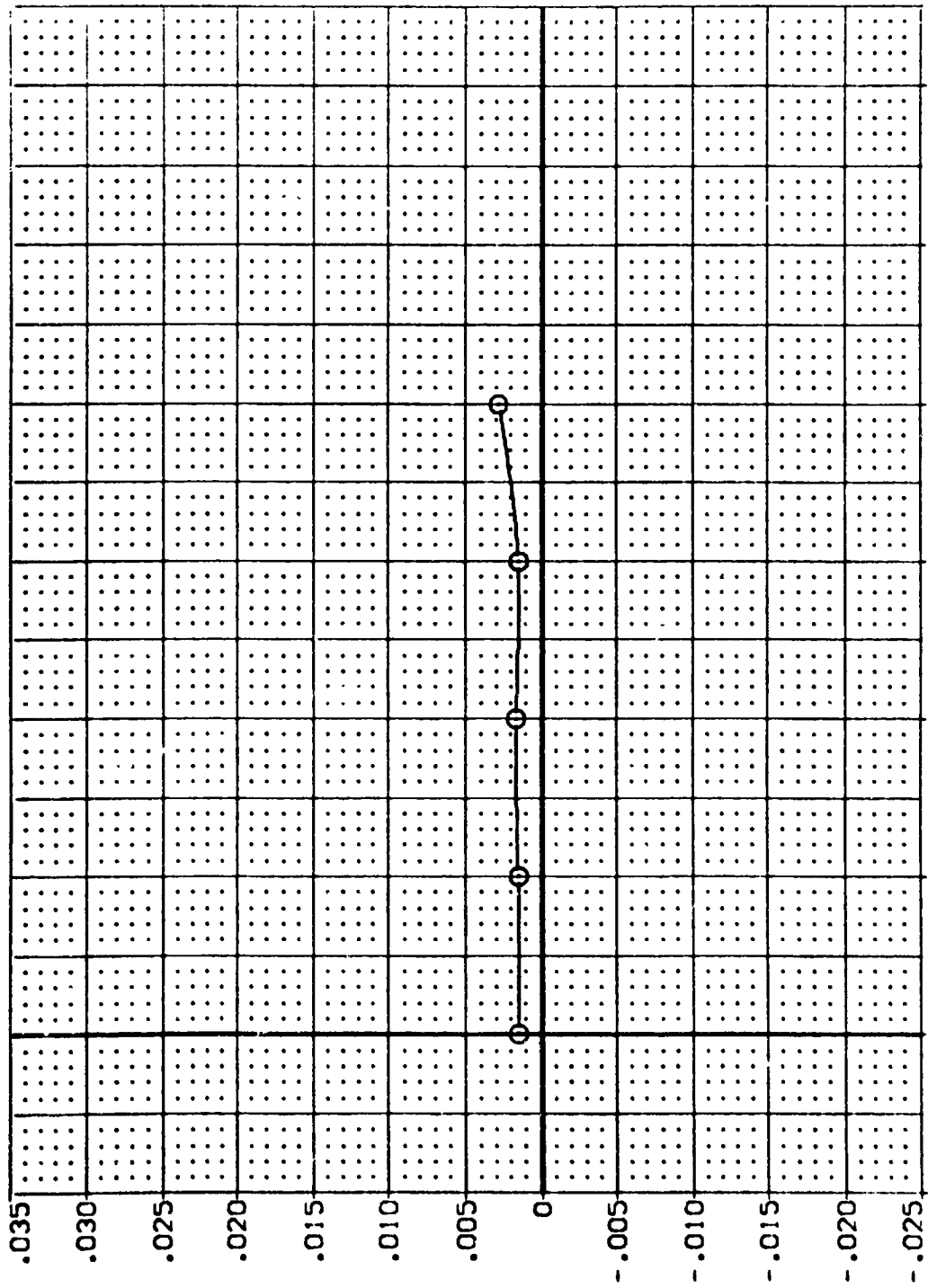


FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE

(CDZ177)

0A62B B26C9 M7FB W116E28V8R5X9

SYMBOL  
O

RUDDER  
-7.960

PARAMETRIC VALUES  
MACH .260 BOFLAP -12.000  
ELEVON .000 AILRON .000  
SPDBRK 40.000

REFERENCE INFORMATION  
SREF 4.4119 SQ.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5574 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET. PER DEGREE

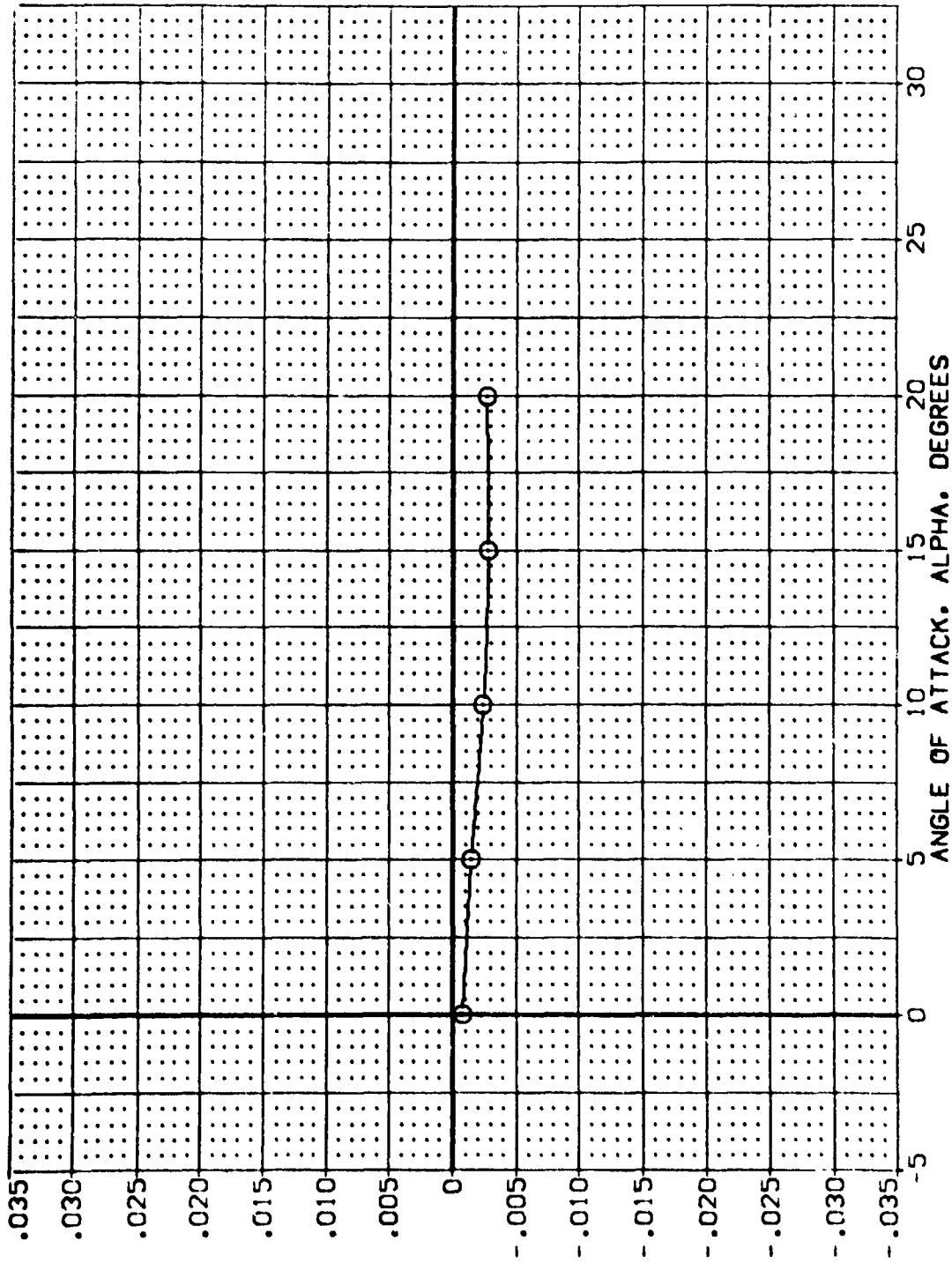


FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE

(COZ177)

0A62B B26C9 M7F8 W116E28V8R5X9

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 YMRP 43.5974 INCHES  
 ZMRP .0000 INCHES  
 SCALE 15.1875 INCHES  
 SCALE .0405

PARAMETRIC VALUES  
 MACH .760 BOFLAP -12.000  
 ELEVON .000 AILRON .000  
 SPOBRK 40.000

SYMBOL  
 O

RUDDER  
 -7.960

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

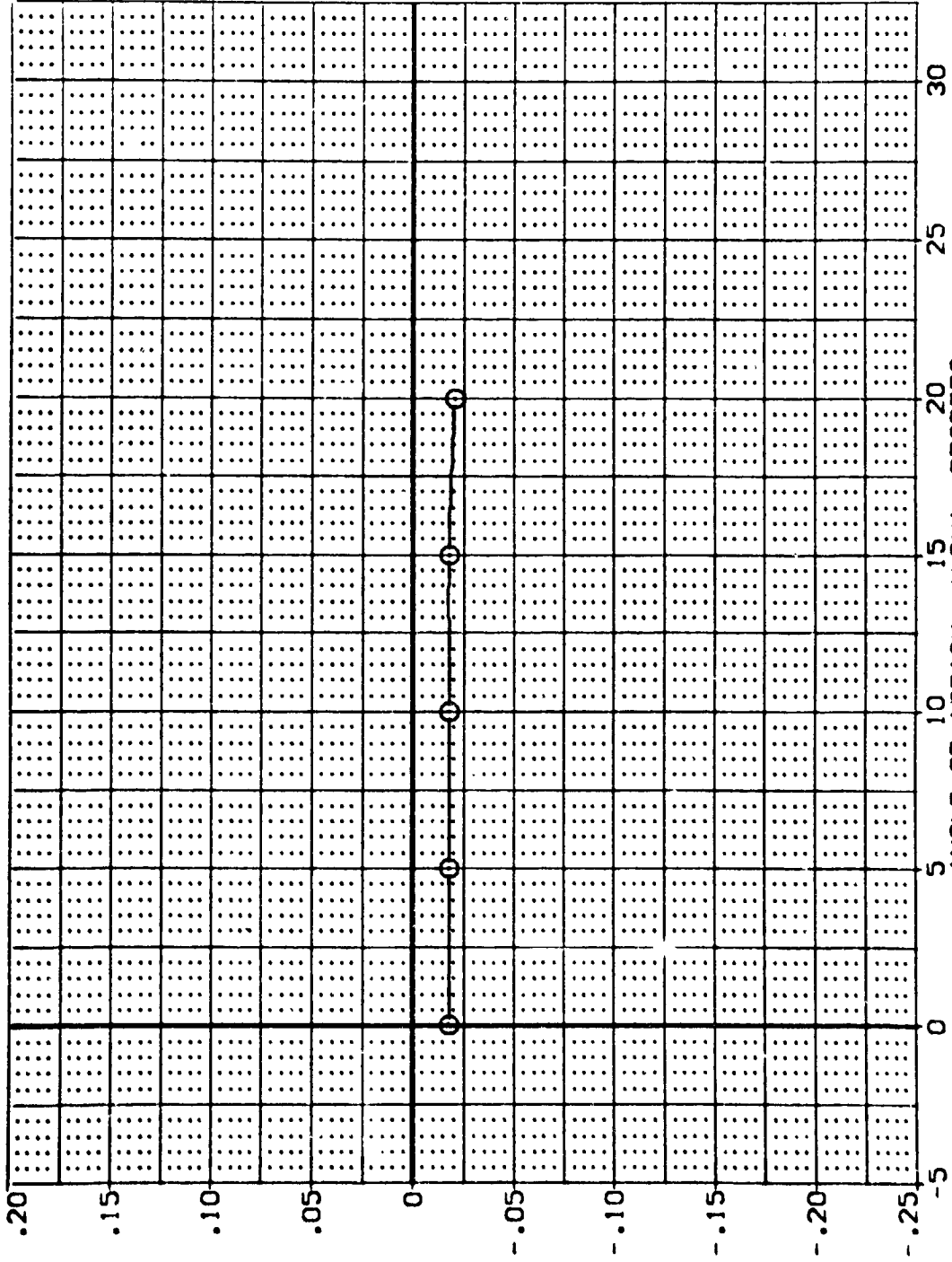


FIG 60 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 40 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVATION	SPOBRK	BDF LAP	ALPHA	REFERENCE INFORMATION
(R0Z183)	DA628 B26C9 M7F8 V116E28V8FSX9	.000	40.000	-12.000	.000	SREF 4.4119
(R0Z184)	DA628 B26C9 M7F8 V116E28V8FSX9	.000	40.000	-12.000	5.000	LREF 19.2798
(R0Z185)	DA628 B26C9 M7F8 V116E28V8FSX9	.000	40.000	-12.000	10.000	BREF 37.9359
(R0Z186)	DA628 B26C9 M7F8 V116E28V8FSX9	.000	40.000	-12.000	15.000	XMRP 43.5974
(R0Z187)	DA628 B26C9 M7F8 V116E28V8FSX9	.000	40.000	-12.000	20.000	ZMRP .0000
						SCALE 15.1875
						SCALE .0405

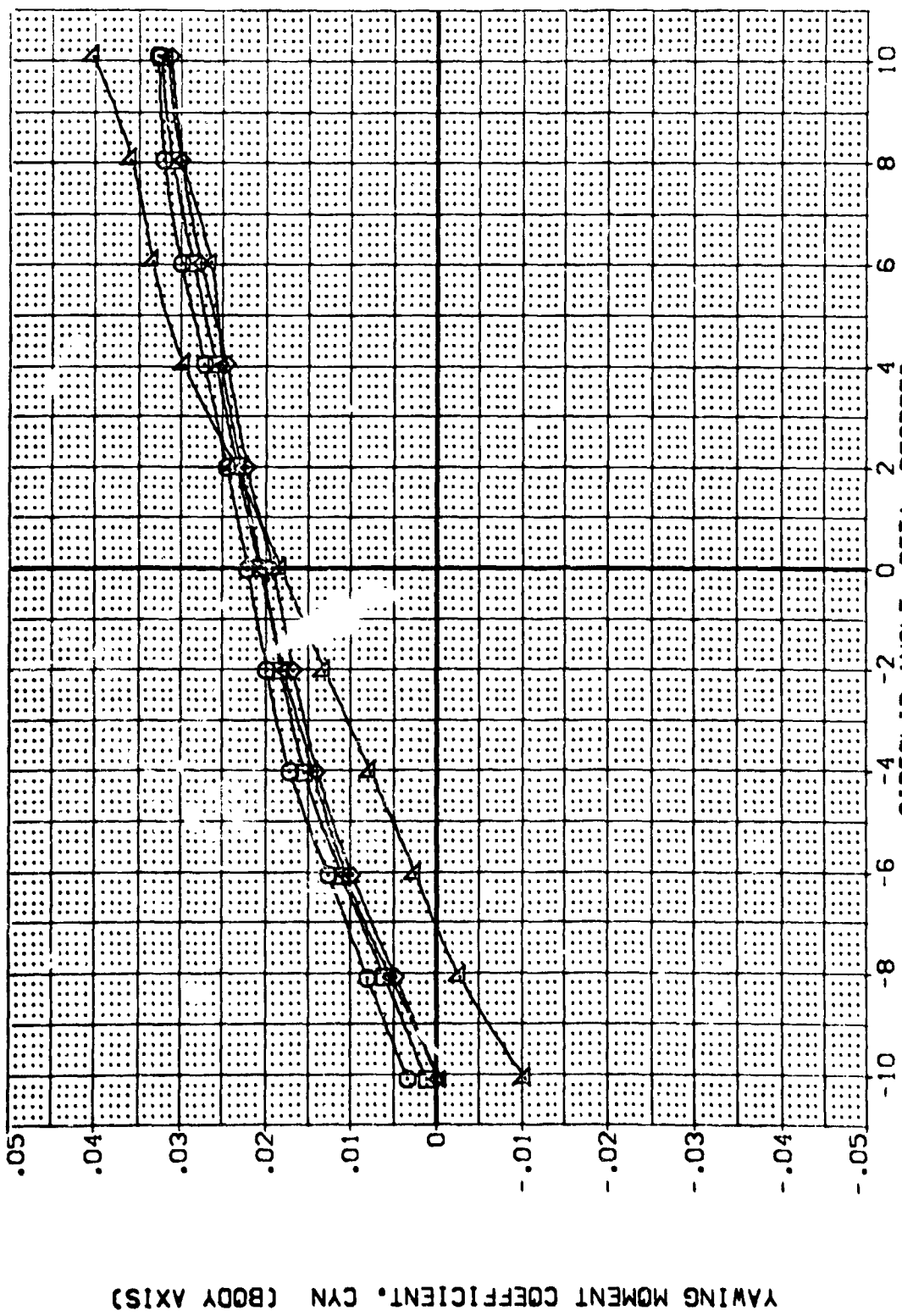
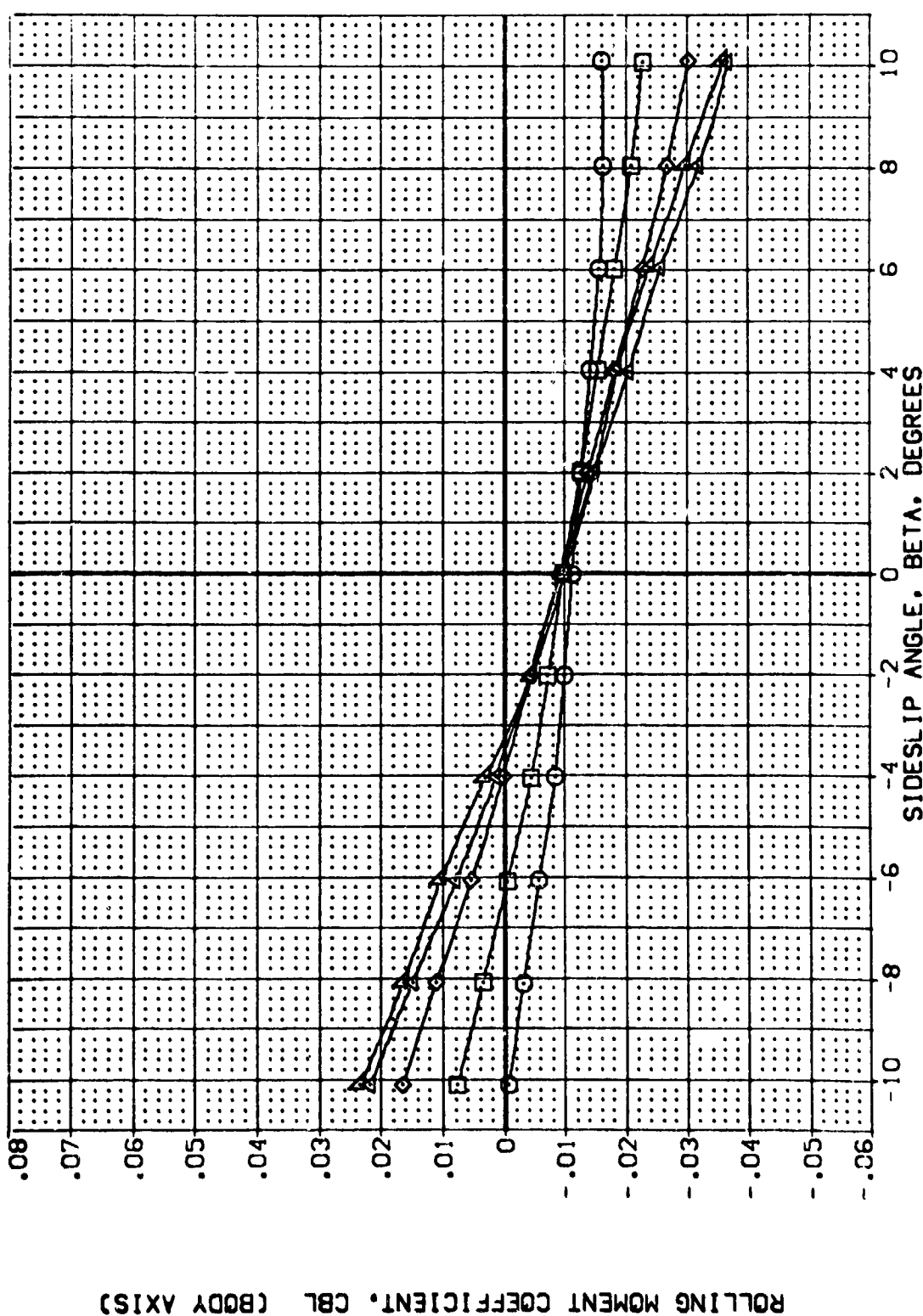


FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPEED	BOFLAP	ALPHA	REFERENCE INFORMATION
[RZ183]	0A628 B26C9 M7F8 V115E28V8RSX9	.000	40.000	-12.000	.000	SREF 4.4119 SC.FT.
[RZ184]	0A628 B26C9 M7F8 V115E28V8RSX9	.000	40.000	-12.000	5.000	LREF 19.2799 INCHES
[RZ185]	0A628 B26C9 M7F8 V115E28V8RSX9	.000	40.000	-12.000	10.000	BREF 37.9359 INCHES
[RZ186]	0A628 B26C9 M7F8 V115E28V8RSX9	.000	40.000	-12.000	15.000	XMRP 43.5874 INCHES
[RZ187]	0A628 B26C9 M7F8 V115E28V8RSX9	.000	40.000	-12.000	20.000	YMRP 15.0000 INCHES
						ZMRP 15.1673 INCHES
						SCALE .0405



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVATION	SPDRBK	BOFLAP	ALPHA	REFERENCE INFORMATION
(RDZ183)	M7F8 V116E28V8RSX9	.000	40.000	-12.000	.000	4.4119 SO.FT.
(RDZ184)	M7F8 V116E28V8RSX9	.000	40.000	-12.000	5.000	19.2299 INCHES
(RDZ185)	M7F8 V116E28V8RSX9	.000	40.000	-12.000	10.000	37.9359 INCHES
(RDZ186)	M7F8 V116E28V8RSX9	.000	40.000	-12.000	15.000	43.5974 INCHES
(RDZ187)	M7F8 V116E28V8RSX9	.000	40.000	-12.000	20.000	0000 INCHES
						15.1875 INCHES
						SCALE

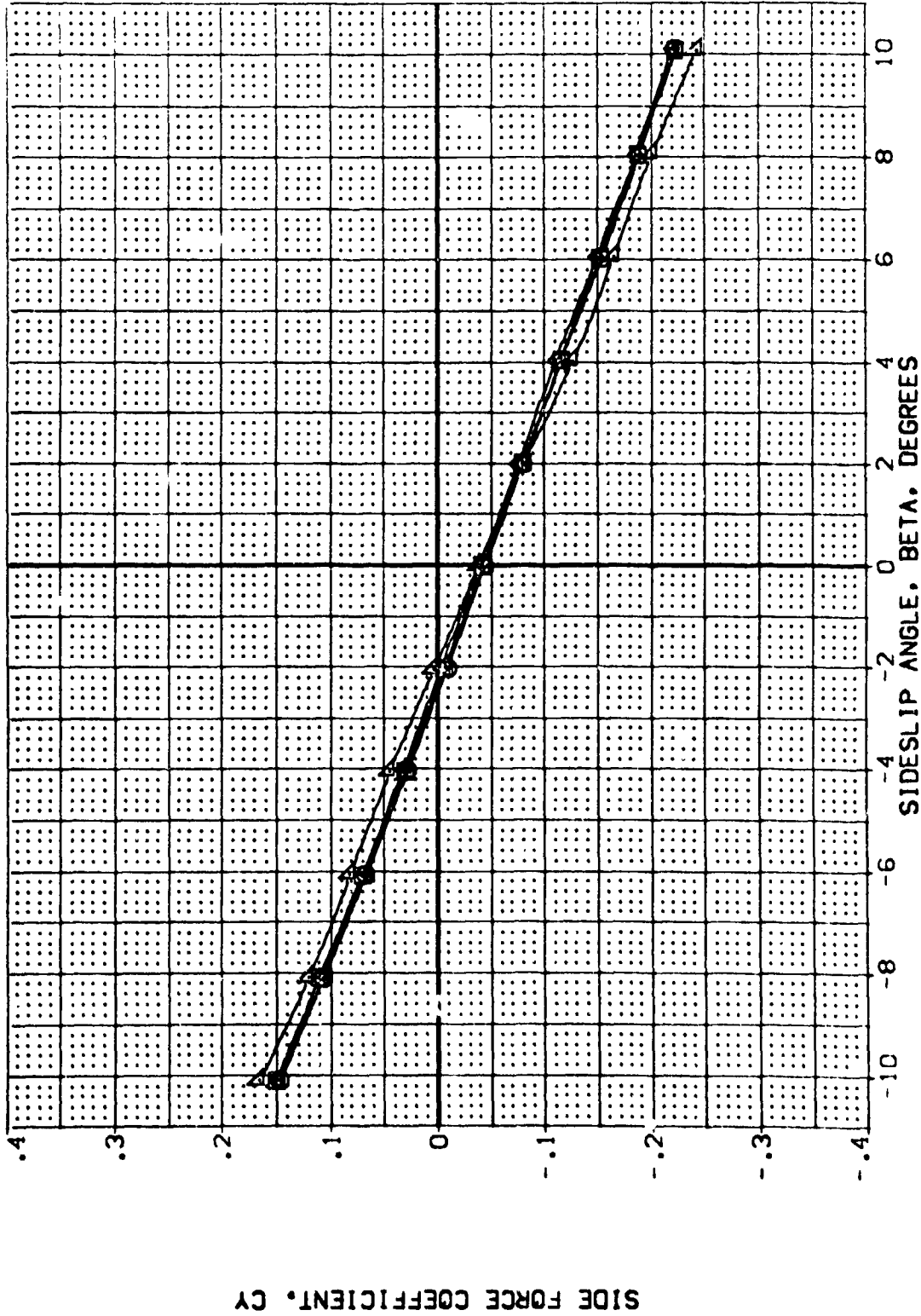


FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE

(A)MACH = .26

(CDZ183)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER -16.220

MACH .260

ELEVON .000

SPOBRK 40.000

BOFLAP -12.000

AILRON .000

PARAMETRIC VALUES

SREF 4.4119

LREF 19.2298

BREF 37.9359

XMRP 43.5974

YMRP .0000

ZMRP 15.1875

SCALE .0405

REFERENCE INFORMATION

SO.FT

INCHES

INCHES

INCHES

INCHES

SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

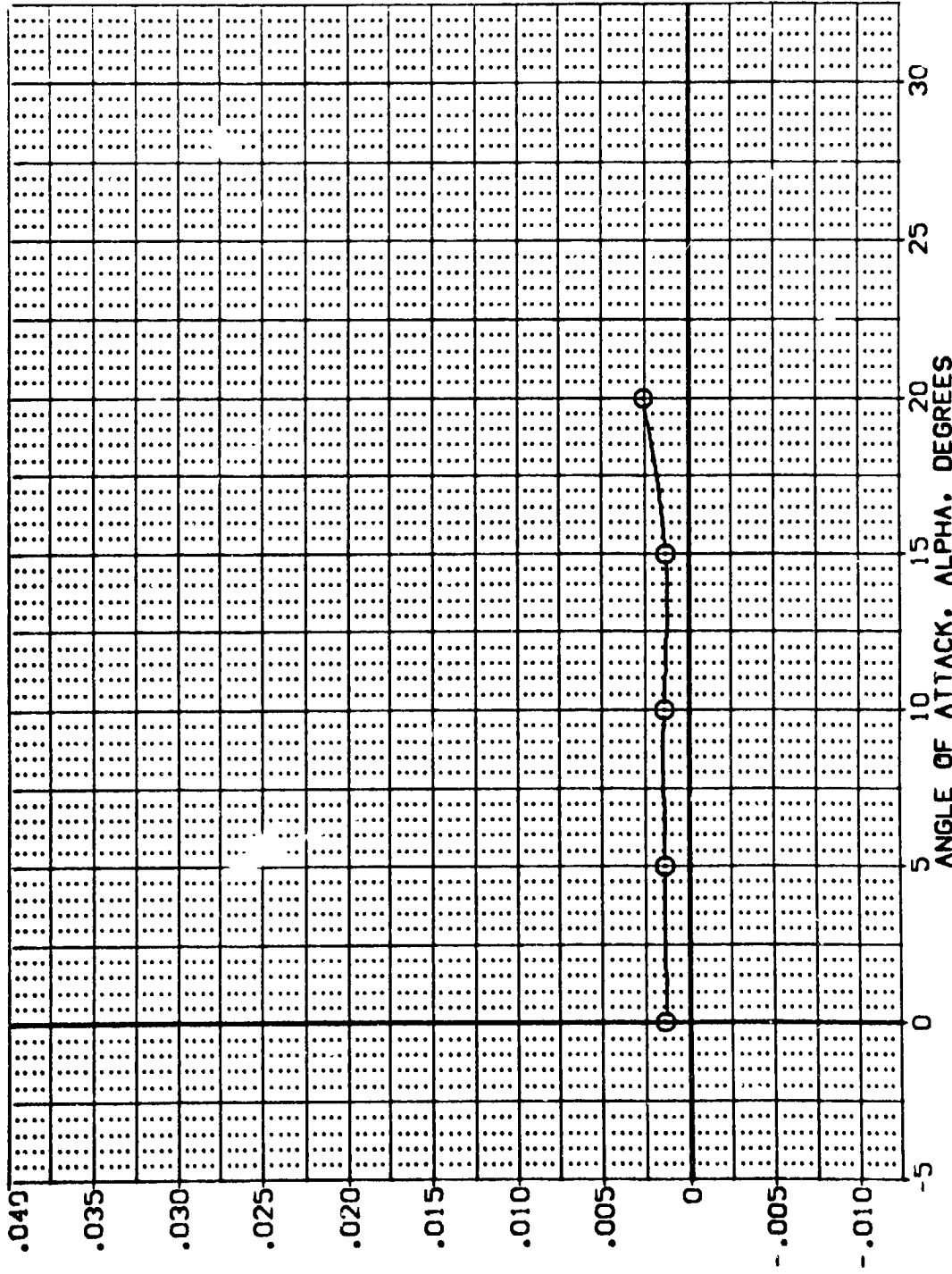


FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE

(CDZ183)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL ○  
RUDDER -16.220

MACH .290  
ELEVON .000  
SPDRK 40.000  
PARAMETRIC VALUES  
BOFLAP -12.000  
AILRON .000

REFERENCE INFORMATION  
SREF 4.4119 SQ.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
VMRP 43.5874 INCHES  
ZMRP .0000 INCHES  
SCALE 15.1875 INCHES  
SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

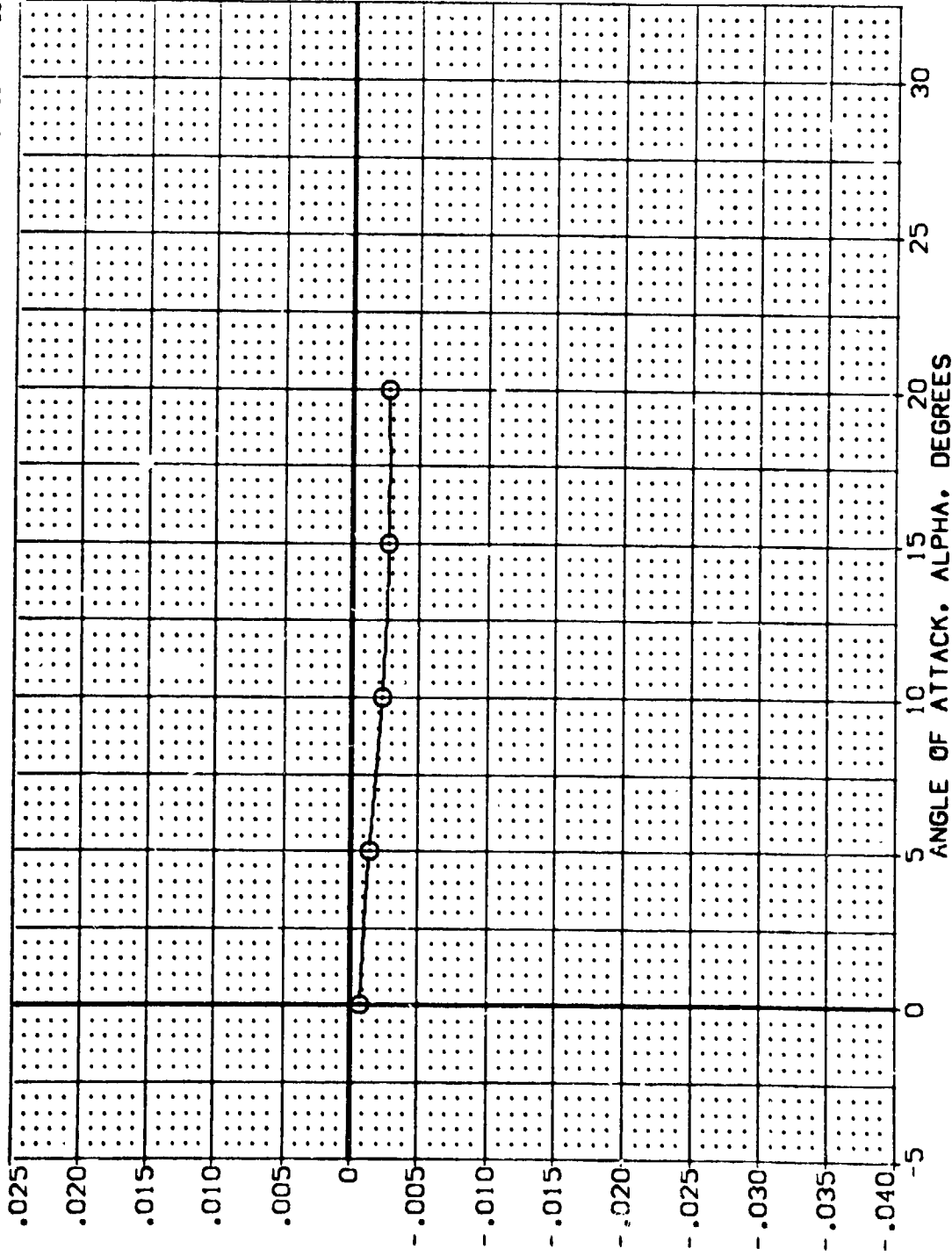


FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE



(CDZ183)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL

○

RUDDER

-16.270

MACH

ELEVON

SPOBRX 40.000

PARAMETRIC VALUES

.260

EDFLAP

-12.000

.000

AILRON

.000

REFERENCE INFORMATION

WREF	7.4119	SQ.FT.
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

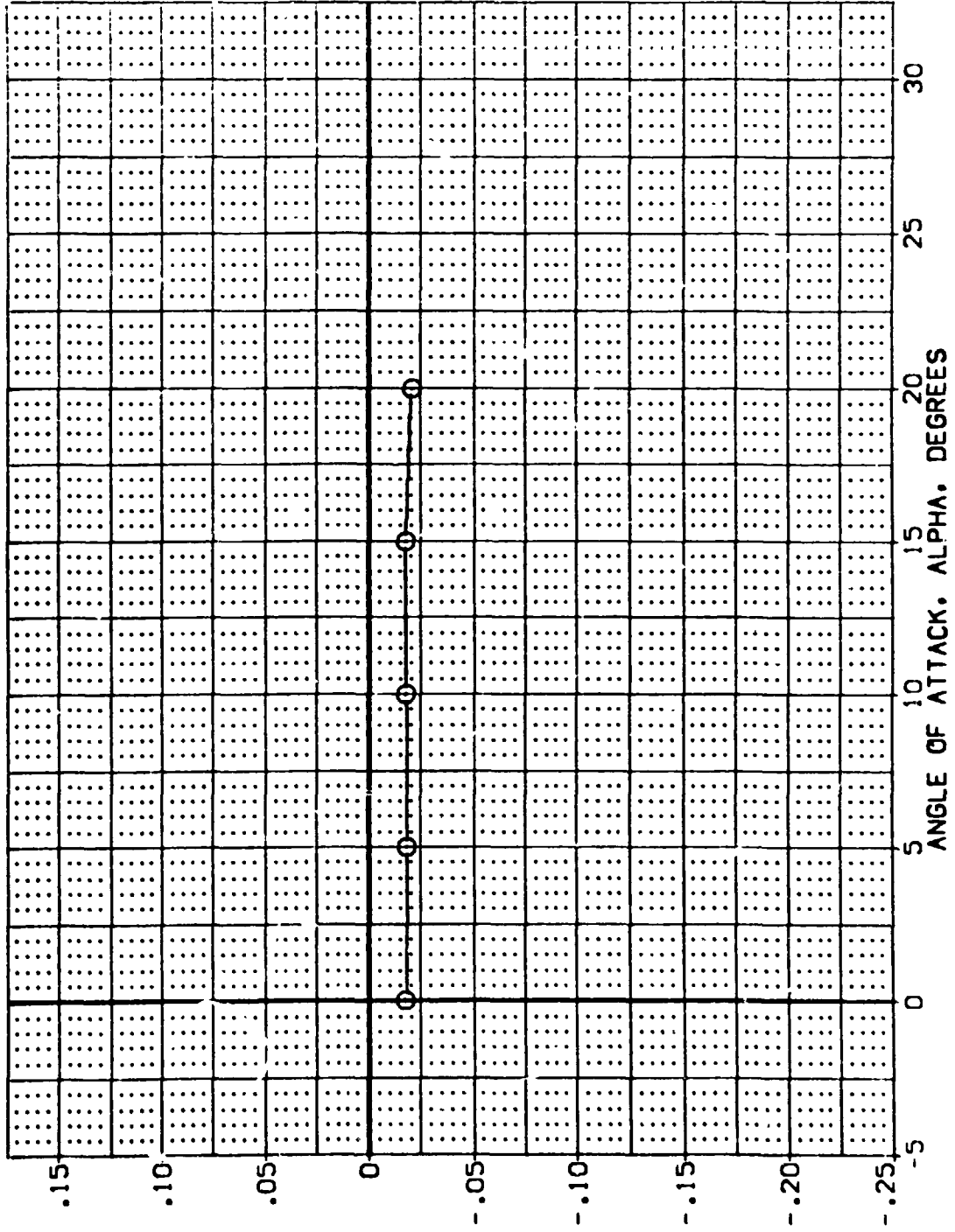


FIG 61 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 40 DEG FLARE

DATA SET SYMBOL: [R02345] [R02349] [R02343]

CONFIGURATION DESCRIPTION:  
 OAG28 B76C9 M7F8 V116E28V8F5X9  
 OAG28 B76C9 M7F8 V116E28V8F5X9  
 OAG28 B76C9 M7F8 V116E28V8F5X9

ELEVON: .000  
 SPOILER: 55.000  
 BOFLAP: -12.000  
 RUDDER: -16.220

REFERENCE INFORMATION:  
 SREF: 4.4119 SC.F.T.  
 LREF: 19.2799 INCHES  
 BREF: 37.9359 INCHES  
 XMAP: 43.5974 INCHES  
 YMAP: .0000 INCHES  
 ZMAP: 15.1875 INCHES  
 SCALE: .0405

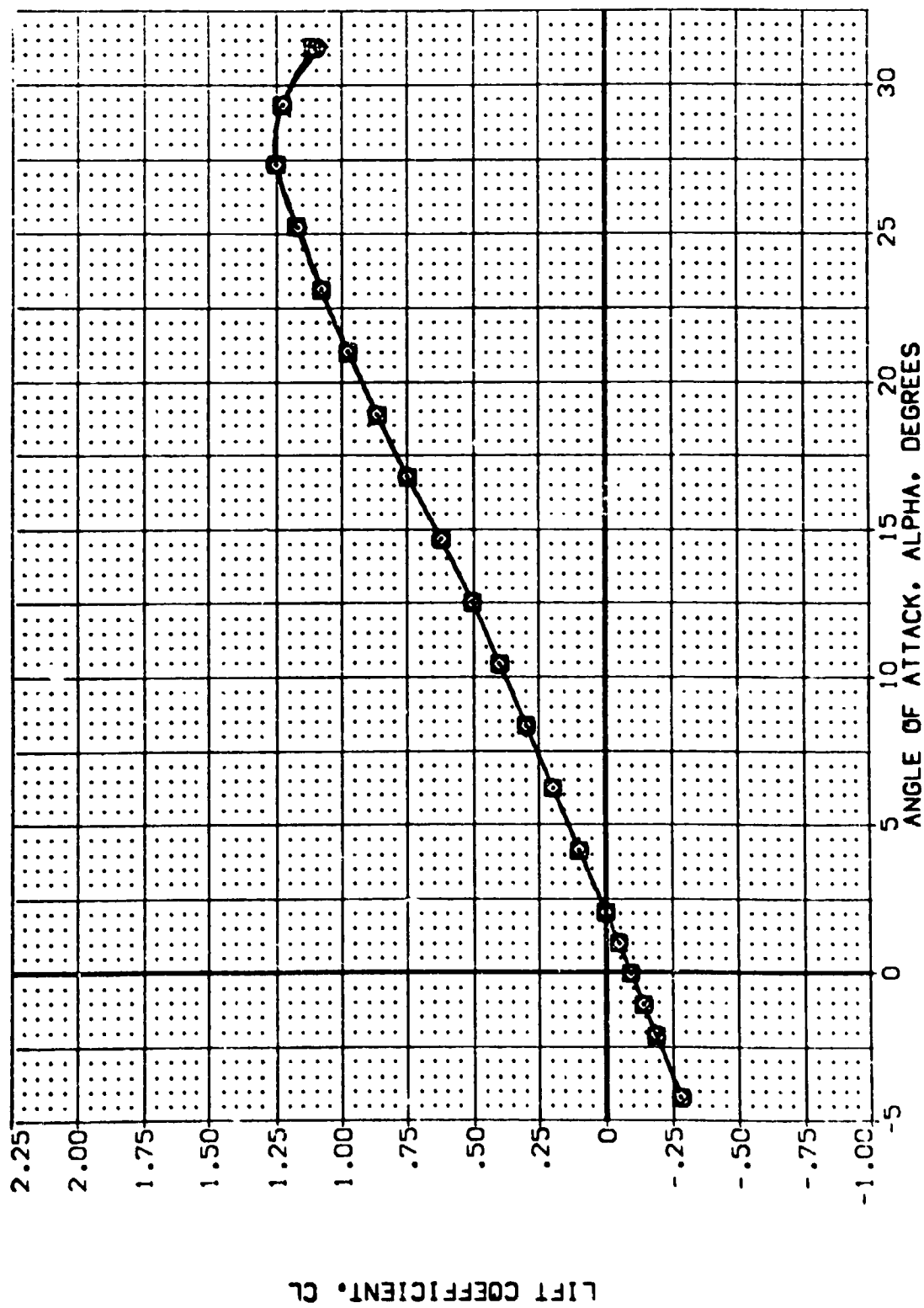


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(M)MACH = .26

DATA SET SYMBOL: (R02355) (R02349) (R02343)

CONFIGURATION DESCRIPTION: M7FB V116E28V8FSX9 M7FB V116E28V8FSX9 M7FB V116E28V8FSX9

ELEVON: .000 SPOBRK: 55.000 BOFLAP: -12.000 RUDDER: -15.270

SPOBRK: 55.000 BOFLAP: -12.000 RUDDER: -7.560

YMRP: .000 XMRP: .000 ZMRP: .000 SCALE: .0405

REFERENCE INFORMATION: 4.4119 50. FT 19.2799 INCHES 37.9359 INCHES 43.5974 INCHES 15.1875 INCHES .0405 SCALE

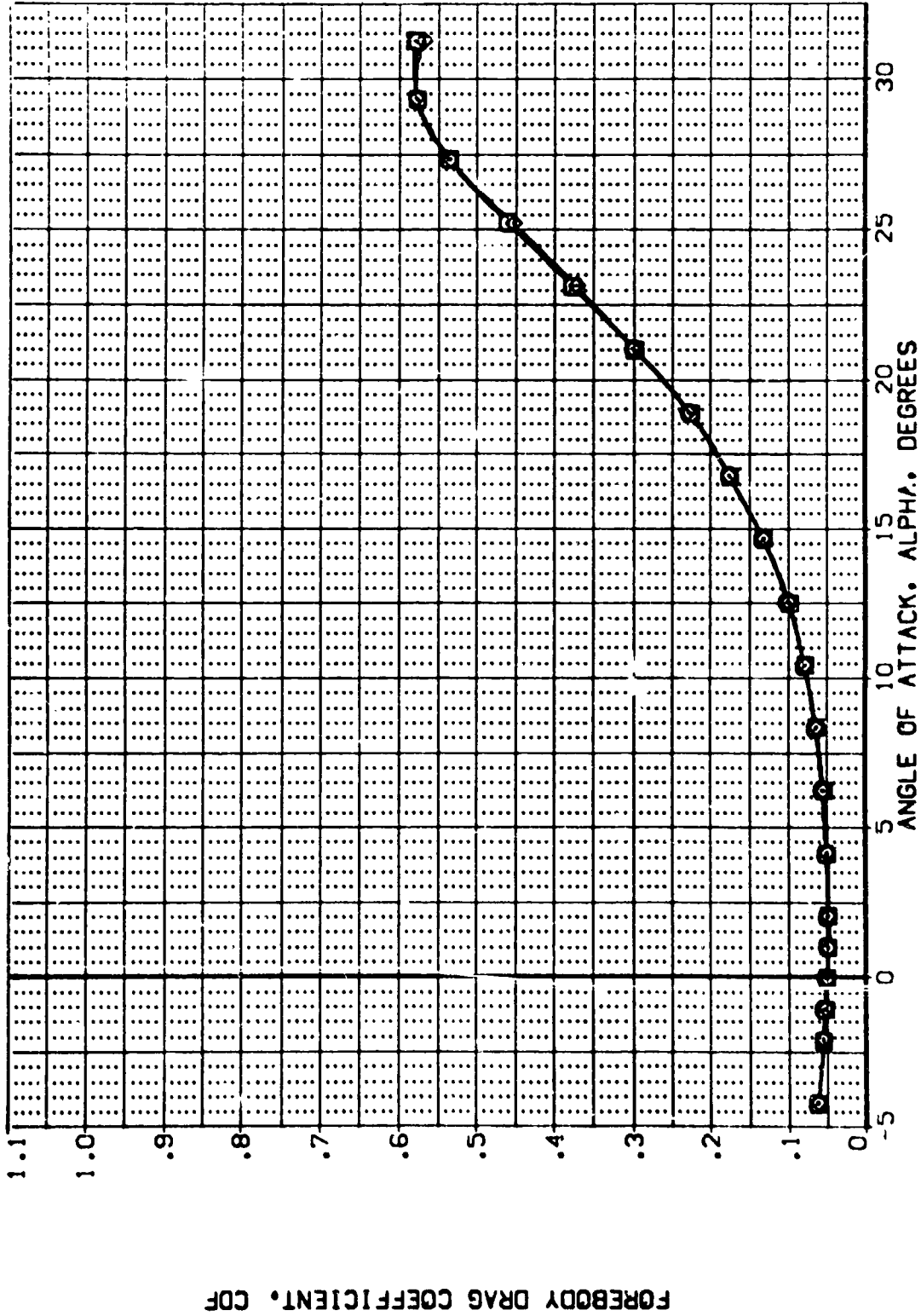


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL: (R02355) (R02349) (R02343)

CONFIGURATION DESCRIPTION: D4628 B76C9 M7F8 V116E28V8FSX9  
 D4528 B76C9 M7F8 V116E28V8FSX9  
 D4628 B76C9 M7F8 V116E28V8FSX9

ELEVON: .000 .000 .000

SPOBRK: 55.000 55.000 55.000

BDFLAP: -12.000 -12.000 -12.000

RUDDER: -16.200 -7.960 .000

REFERENCE INFORMATION: 4.4119 SQ.FT. SC.F.T.  
 19.2298 INCHES  
 37.9379 INCHES  
 43.9574 INCHES  
 .0000 INCHES  
 15.1875 INCHES  
 .0405 SCALE

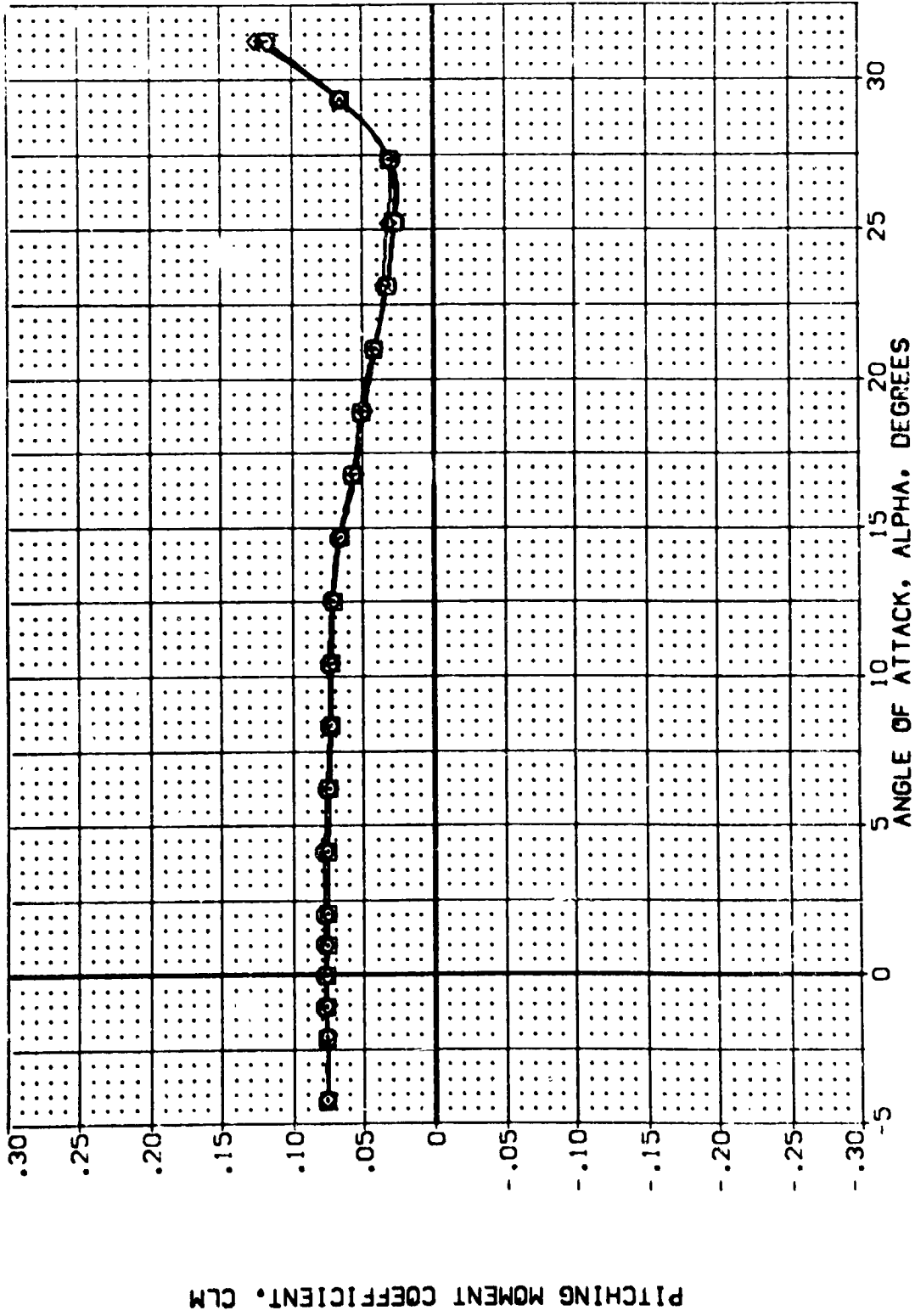


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	SPOBRK	BOFLAP	RUDDER	REFERENCE INFORMATION
(R0Z355)	0A628 B26C9 M7F8 V116E28V8A X19	.000	55.000	-12.000	-16.270	SREF 4.4119 SQ.FT.
(R0Z349)	0A628 B26C9 M7F8 V116E28V8B X19	.000	55.000	-12.000	-7.960	LREF 19.2799 INCHES
(R0Z343)	0A628 B26C9 M7F8 V116E28V8C X19	.000	55.000	-12.000	.000	BREF 37.9339 INCHES
						XMRP 43.5974 INCHES
						YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0405 SCALE

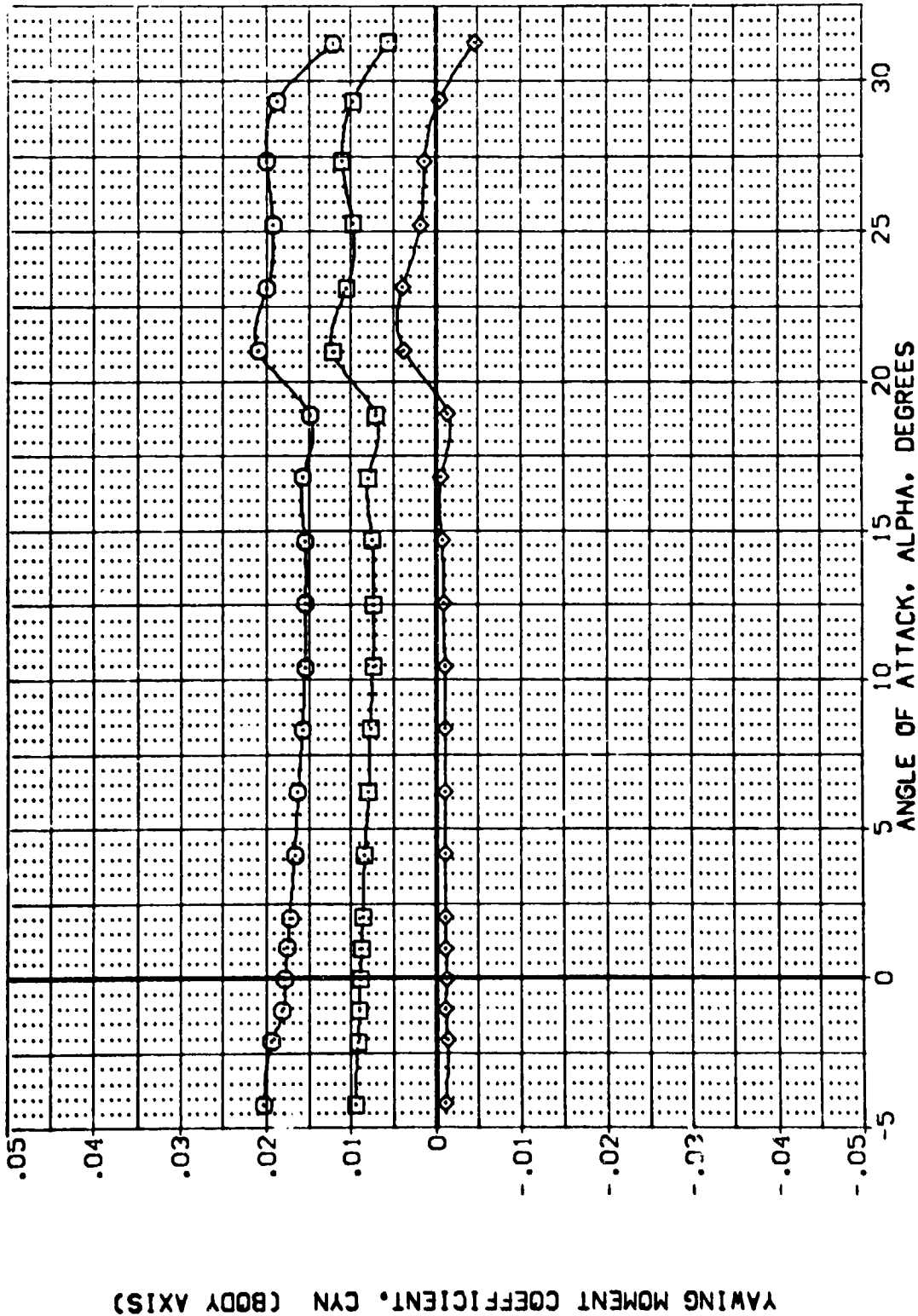


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

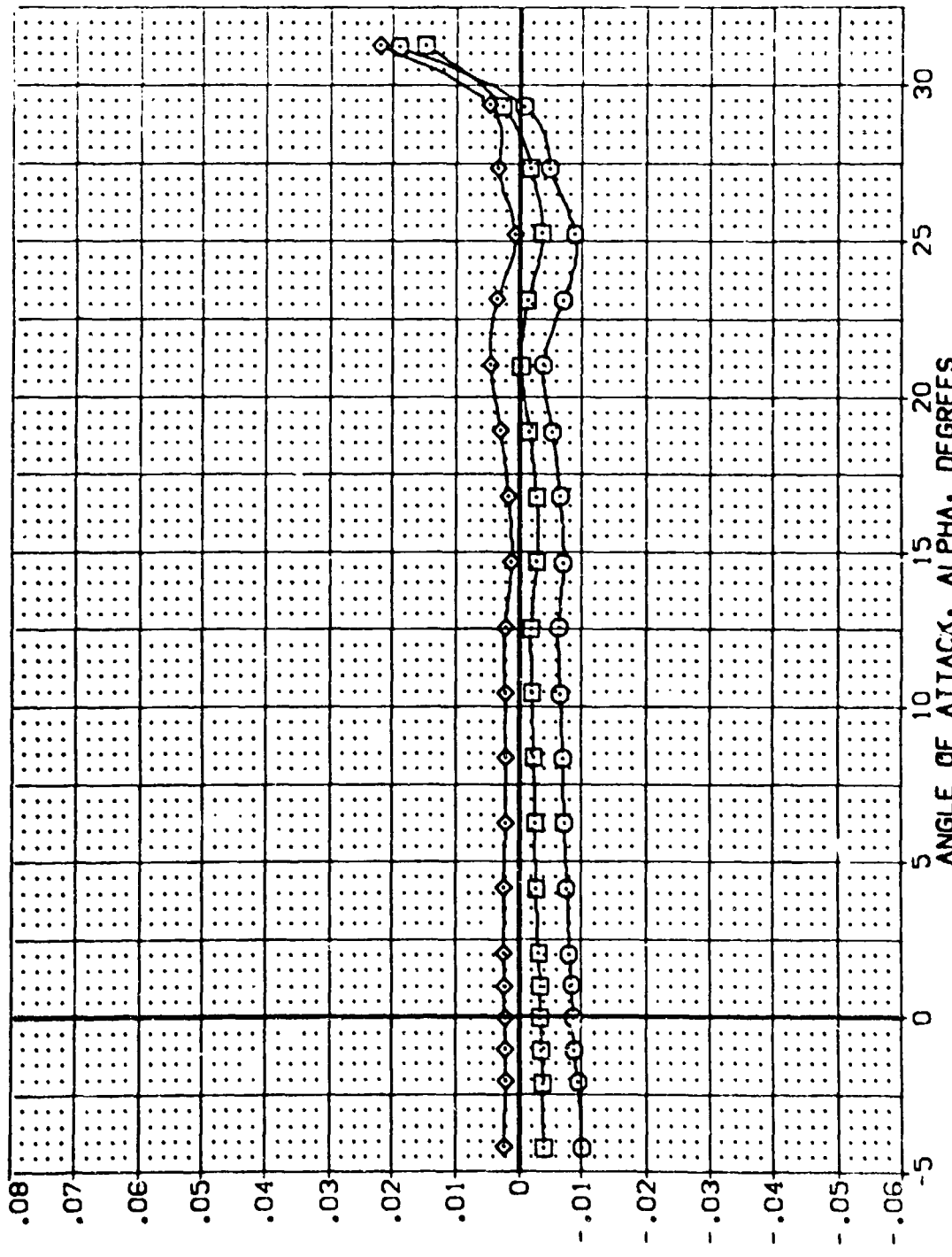
(RZ355)	0A628	B26C9	M7F8	V116E	28V8FSX9
(RZ345)	0A628	B26C9	M7F8	V116E	28V8FSX9
(RZ343)	0A628	B26C9	M7F8	V116E	28V8FSX9

ELEVON SPOBRK BOFLAP R.ODER

.000	55.000	-12.000	-16.270
.000	55.000	-12.000	-7.960
.000	55.000	-12.000	.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT
LREF	19.2758	NC+ES
BREF	37.9358	NC+ES
XMRP	43.5974	NC+ES
YMRP	15.0000	NC+ES
ZMRP	15.1875	NC+ES
SCALE	.04CS	SCALE



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

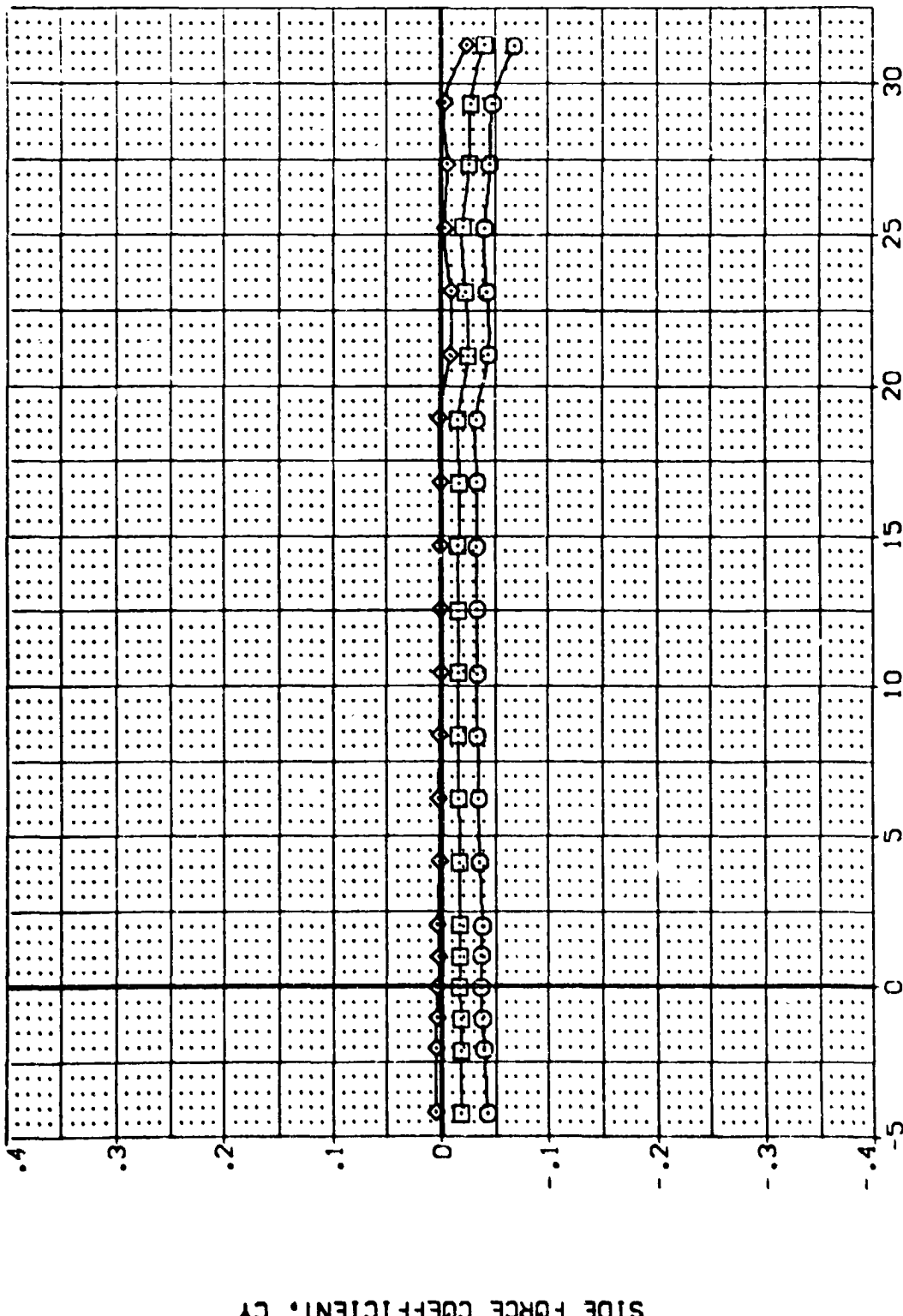
(R02355)	0A628	B76C9	M7F8	V11E28V8F5X9
(R02349)	0A628	B76C9	M7F8	V11E28V8F5X9
(R02343)	0A628	B76C9	M7F8	V11E28V8F5X9

ELEVON SPOBRK BOFLAP RUDDER

.000	55.000	-12.00	-16.270
.000	55.000	-12.00	-7.960
.000	55.000	-12.00	.000

REFERENCE INFORMATION

SREF	4.419	50. FT.
LREF	19.2298	INCHES
BREF	37.9359	INCHES
XMRP	43.5974	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE



SIDE FORCE COEFFICIENT, CY

FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(A)MACH = .26

(20Z355)

W116E28V8R5X9

M7F8

B26C9

CA628

SYMBOL ○

ALPHA .000

MACH .260

BD FLAP -12.000

SPDRBK 55.000

DEL VON

AIRLON

BETA

PARAMETRIC VALUES

.000 DATASET

.000 20Z355

.000 20Z343

DATA SOURCE

RUDDER -16.220

.000

RUDDER -7.960

DATASET 20Z349

RUDDER

SREF 4.4113

LREF 19.2299

BREF 37.9359

XMRP 43.5874

YMRP .0000

ZMRP 15.1875

SCALE .0405

REFERENCE INFORMATION

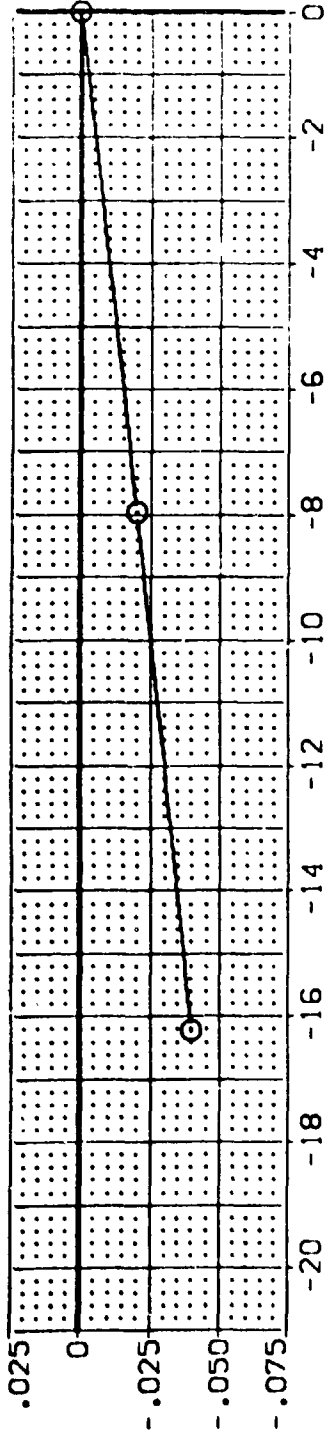
SO.FT.

INCHES

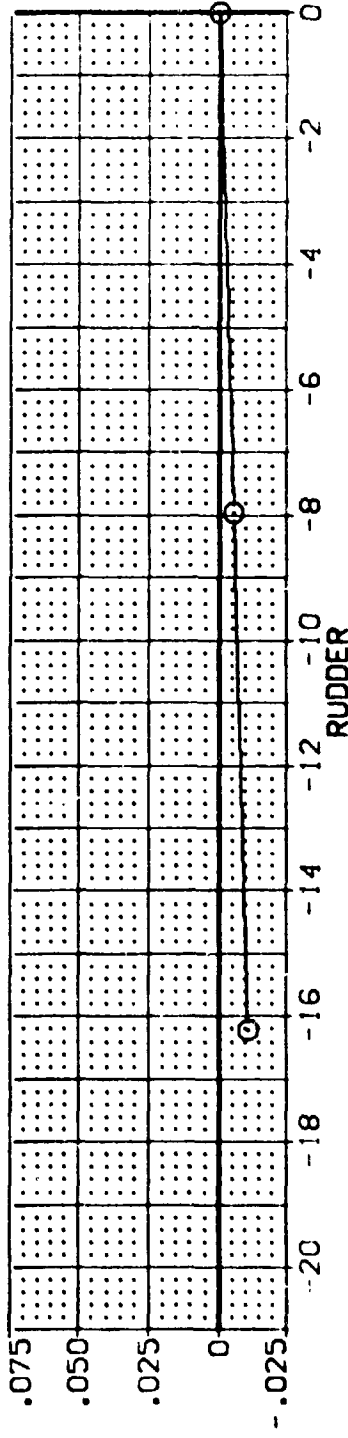
INCHES

INCHES

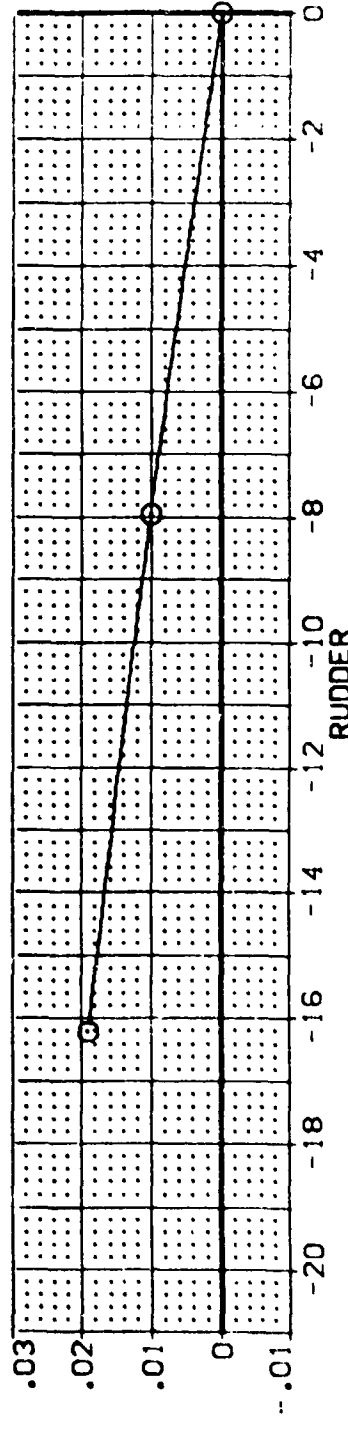
SCALE



DCY



DCBL



DCYN

FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

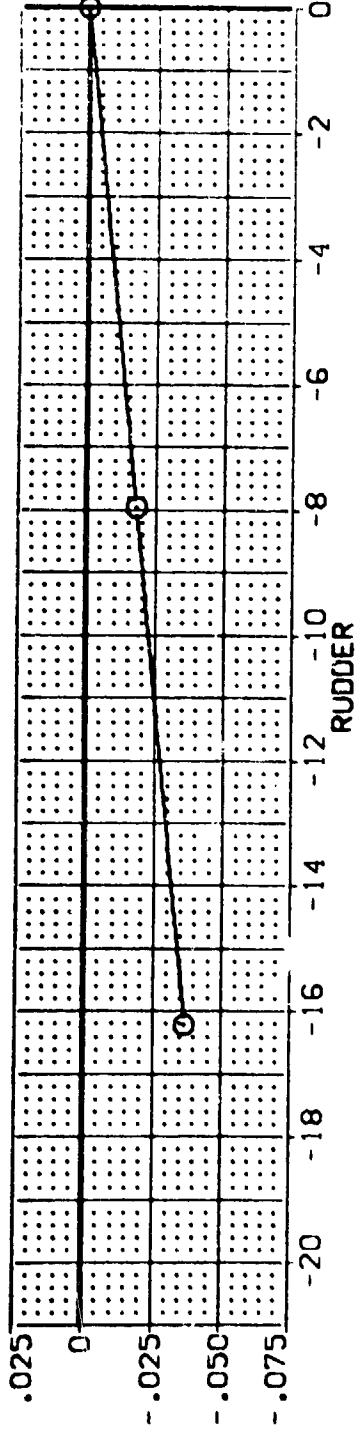




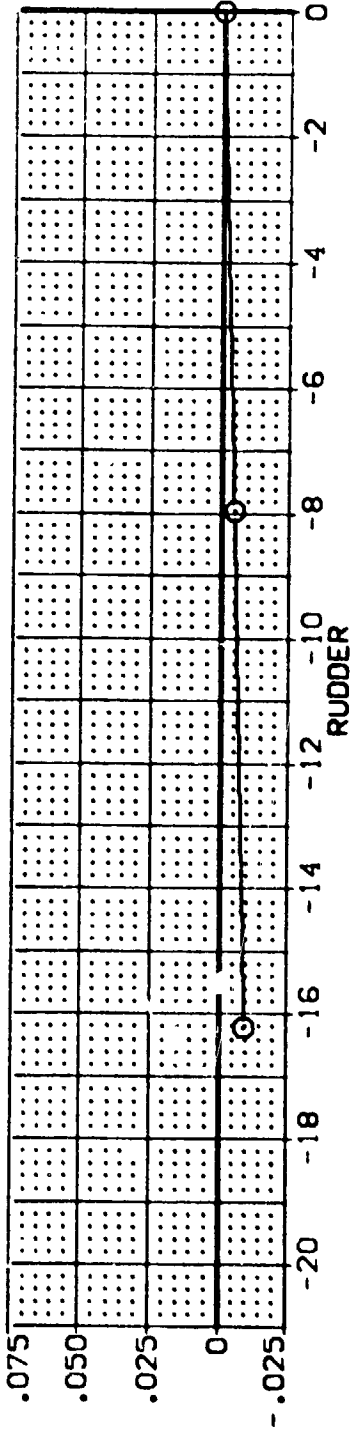
(20Z355)

0A62B B26C9 M7F8 W116E28V8R5X9

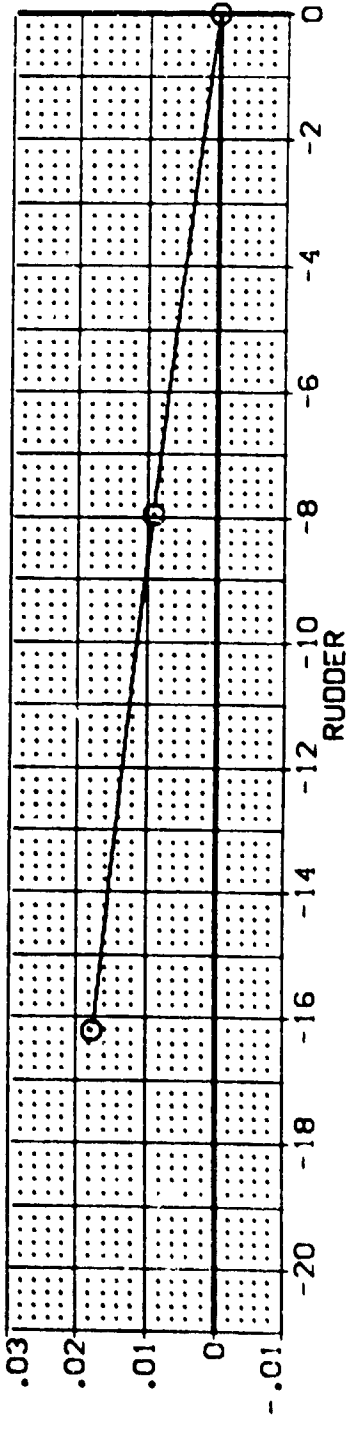
SYMBOL		ALPHA		MACH		BOFLAP		SPOBRK		PARAMETRIC VALUES		DATA SOURCE		DATASET		RUDDER		SREF		REFERENCE INFORMATION	
○		5.000		.260		.000		.000		.260			DELTON	.000		20Z355	-16.270			4.4119	SO FT
				-12.000		.000		.000		ATLRON			20Z349	-7.960						19.2299	INC-F-S
				55.000		.000		.000		BETA										37.9599	INC-F-S
																				43.5974	INC-F-S
																				.0000	INC-F-S
																				15.1875	INC-F-S
																				.0405	SCALE



DCY



DCBL



DCYN

FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z355)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	10.000	0.760	DELVON	.000	RUDDER	20Z349	SREF	4.4119
		BDFLAP	ALLRON	.000	RUDDER	20Z349	LREF	19.2259
		SPOBRK	BETA	.000	RUDDER	20Z349	XREF	37.9359
							YREF	43.5871
							ZREF	15.0000
							SCALE	.0405

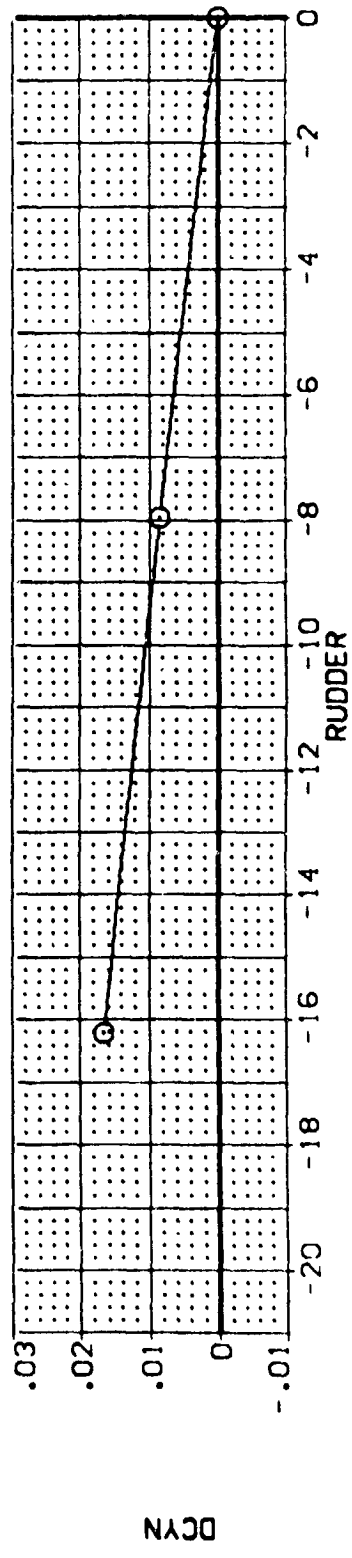
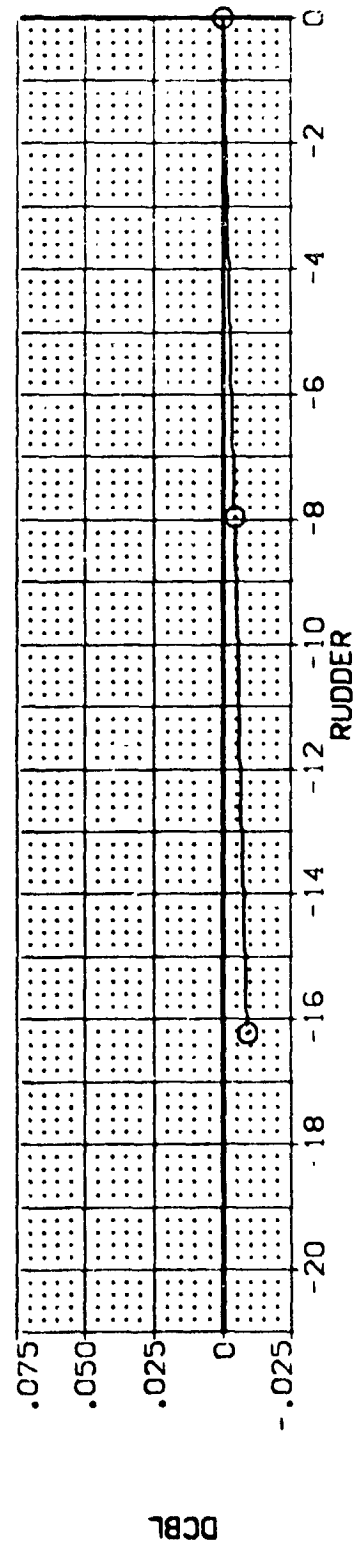
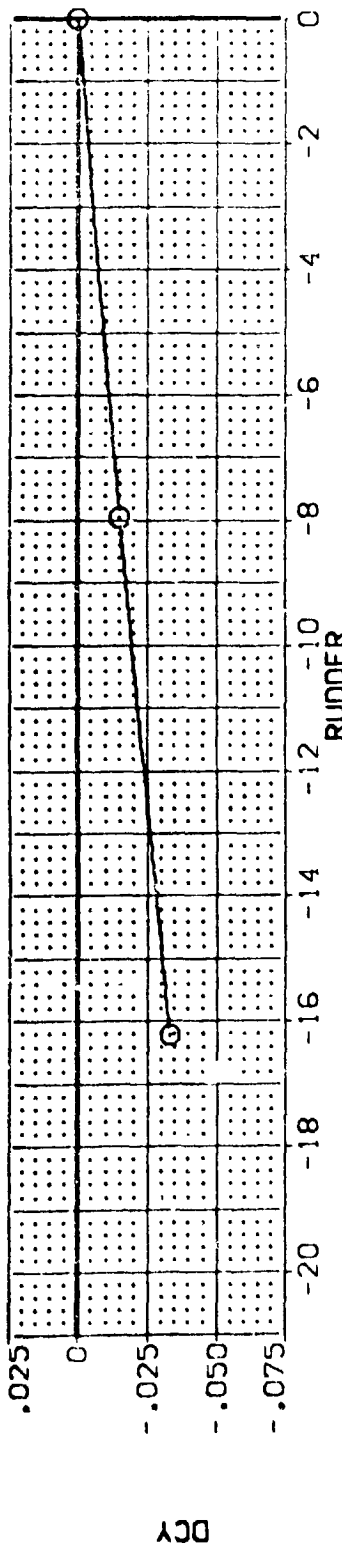


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE



(20Z355)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	.260	DELTA	.000	20Z349	4.4119	SO.FT.
	MACH	12.000	AIRLON	.000	20Z355	19.2299	INCHES
	BDFLAP	5E.000	BETA	.000	20Z343	37.9359	INCHES
	SPOBRK					43.5974	INCHES
						0.0000	INCHES
						15.1673	SCALE
						.0405	SCALE

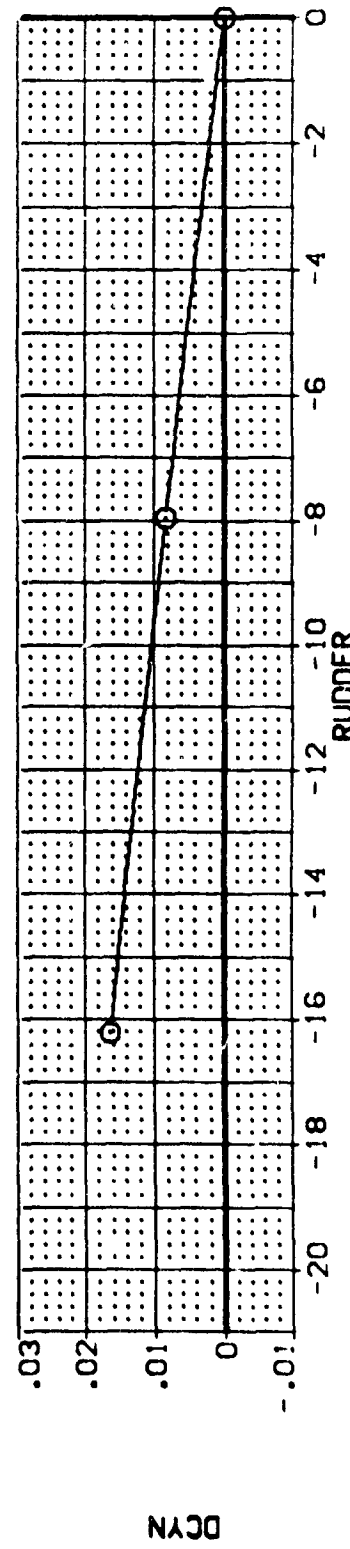
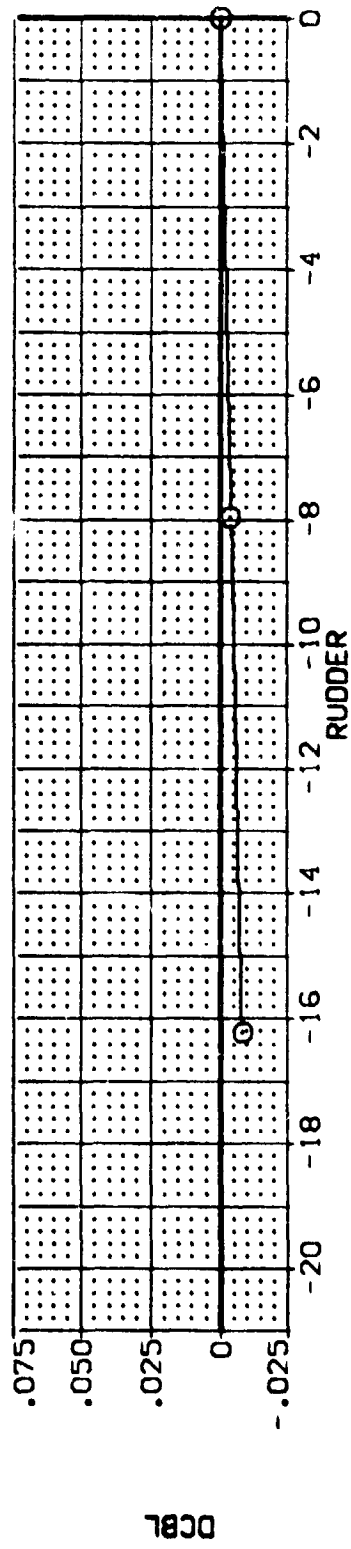
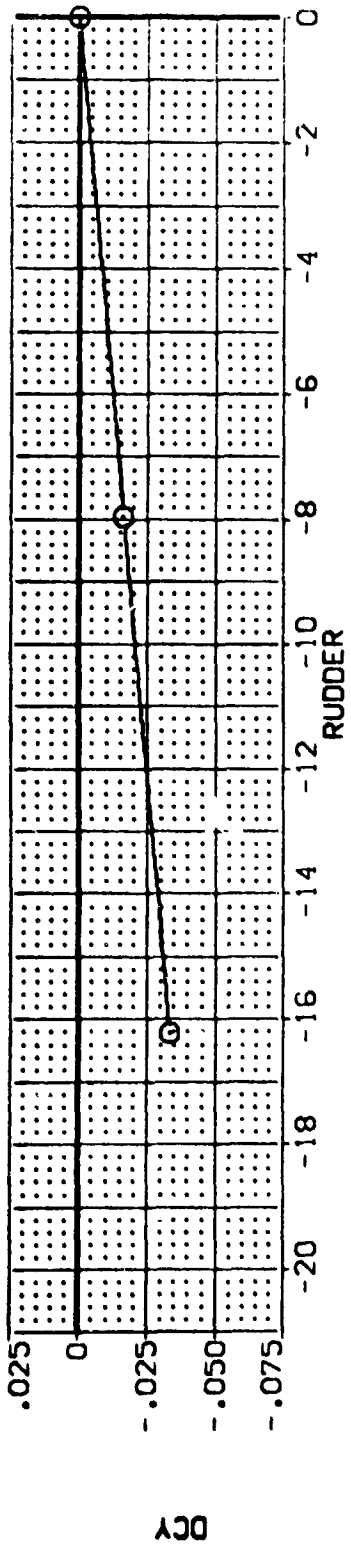


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z355)

ALPHA	20.000	MACH	.260	DELVDN	.000	DATASET	.000	RJDDER	-16.220	DATA SOURCE	20Z343	DATASET	20Z349	RJDDER	-7.960	SREF	4.4119	SO.FT.	50.000
POFLAP	-12.000	AILRON	55.000	BETA	.000	20Z355	.000	20Z343	.000	20Z343	.000	20Z349	20Z349	-7.960	LREF	19.2299	INCHES	37.9359	INCHES
SPOBRK															XMRP	43.5974	INCHES	15.1875	INCHES
															YMRP	.0000	INCHES		
															ZMRP	15.1875	INCHES		
															SCALE	.0405	SCALE		

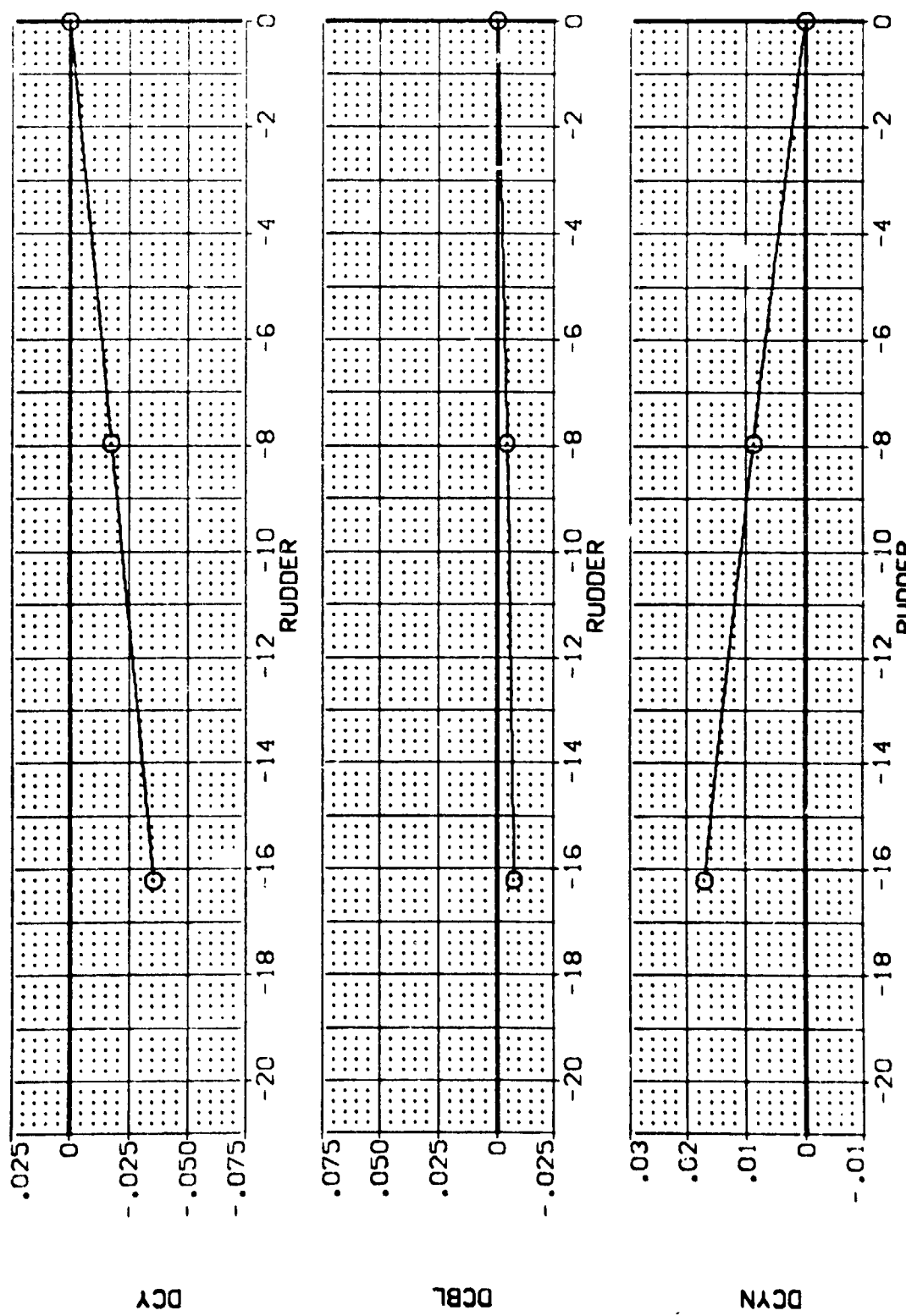


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (20Z355)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION			
○	ALPHA	25.000	.260	DELTON	.000	20Z355	20Z349	SREF	4.4119	SO.FT	4.4119
	MACH		-12.000	AILRON	.000	20Z343		LREF	19.2299	INCHES	19.2299
	BOFLAP		55.000	BETA	.000			BREF	37.9399	INCHES	37.9399
	SPOBRK							XMRP	43.5974	INCHES	43.5974
								YMRP	.0000	INCHES	.0000
								ZMRP	15.1675	INCHES	15.1675
								SCALE	.0405	SCALE	.0405

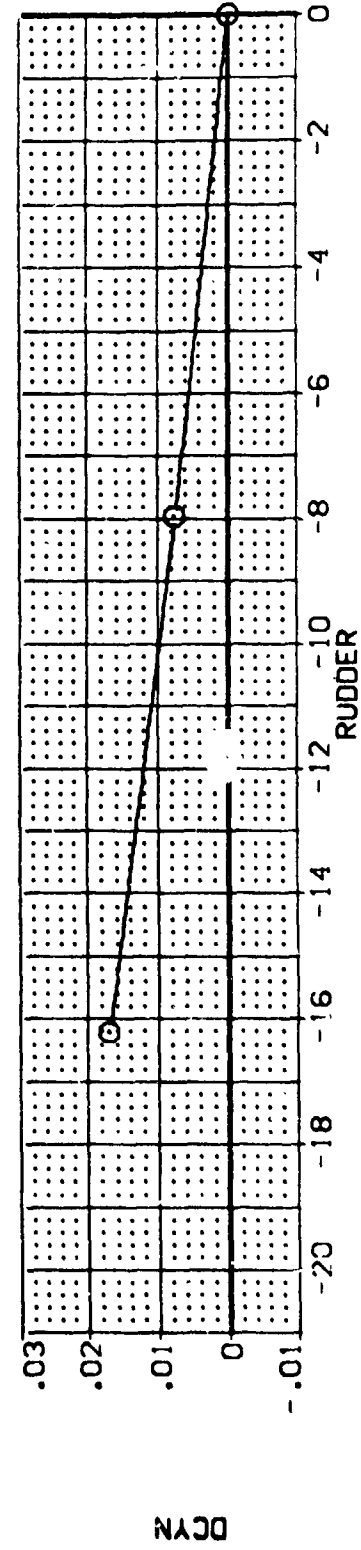
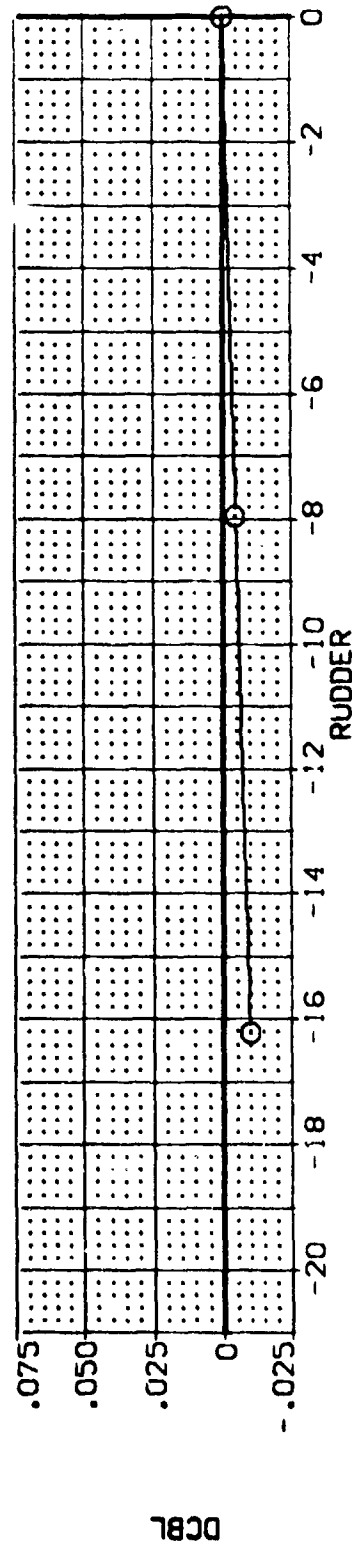
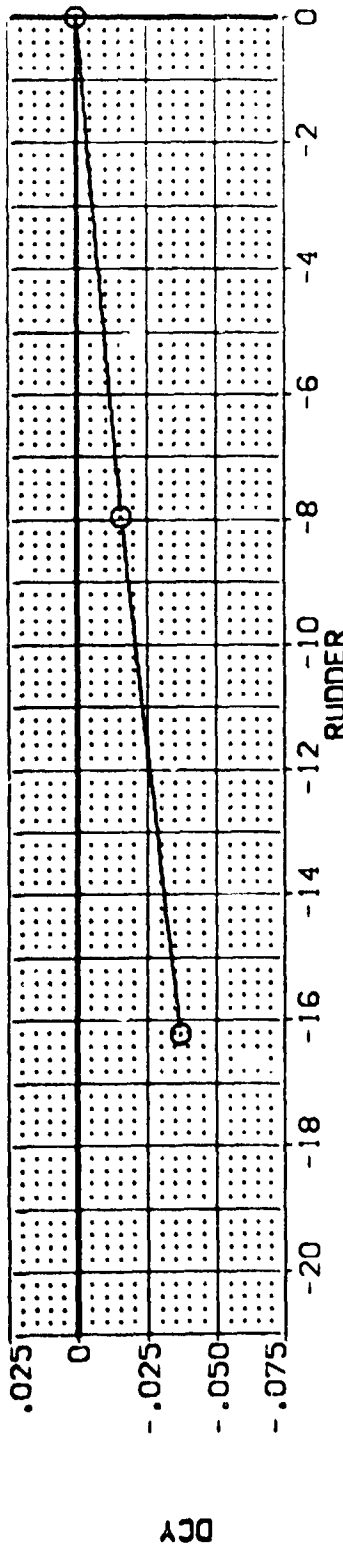


FIG 62 RUDDER EFFECTIVENESS, 55 DEC. FLARE

(20Z355)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMB: ALPHA 30.000  
 0

PARAMETRIC VALUES  
 MACH .260 DELVON  
 BDFLAP -12.000 ALLRON  
 SPOBRK 55.000 BETA

DATA SOURCE  
 DATASET 20Z349  
 RUDDER -16.220  
 RUDDER .000

REFERENCE INFORMATION  
 SO.FT 4.4119  
 LRF 19.2299  
 BR.F 37.9359  
 YMRP 43.5874  
 ZMRP 15.0000  
 SCALE .0405

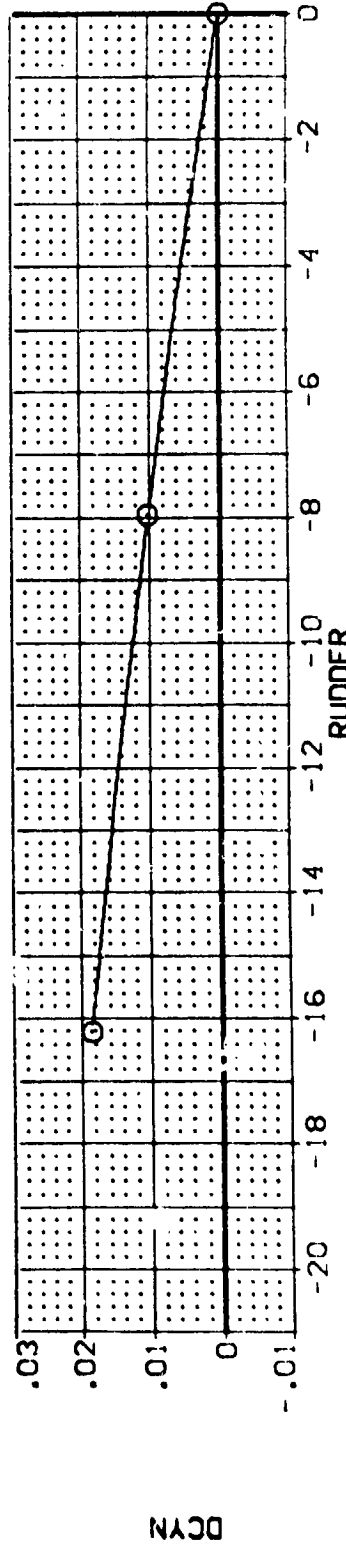
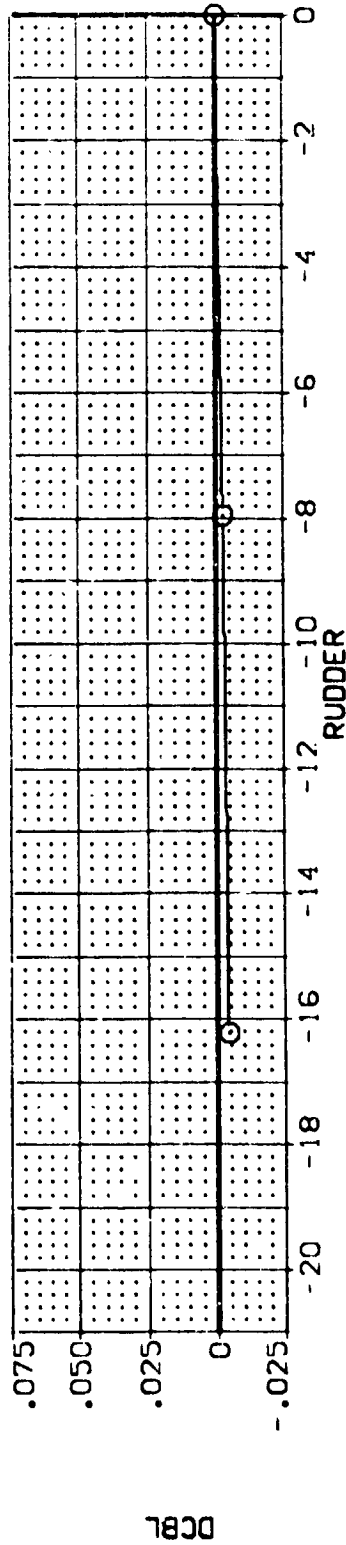
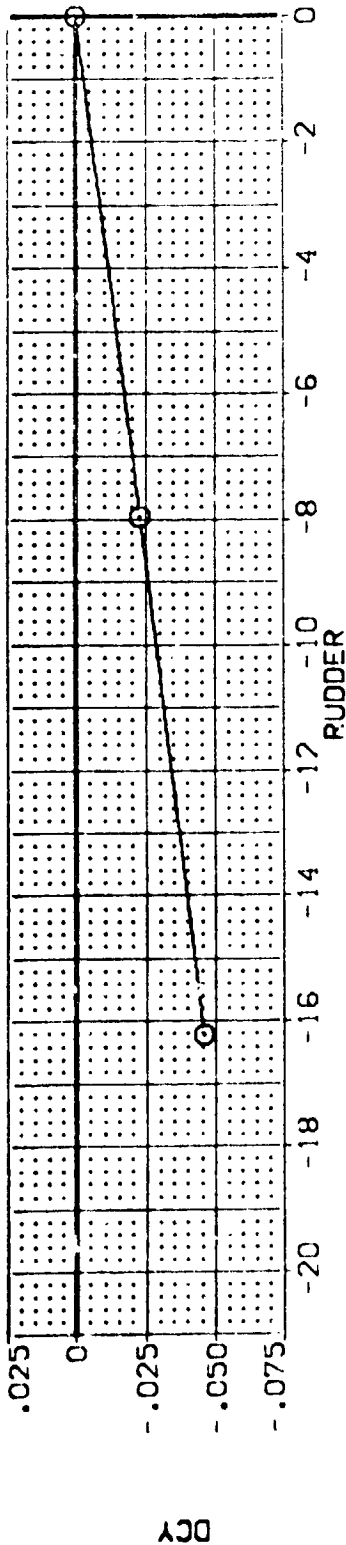


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z355)

ALPHA	.000	MACH	.260	DELTA	.000	DATASET	20Z343	RUDDER	-7.960	SREF	4.419	SCALE	.0405
BOFLAP	.12	BOFLAP	.000	AILRON	.000	20Z355				LREF	19.239	INCHES	
SPOBRK	55.000	BETA	.000		.000	20Z343				BREF	37.9359	INCHES	
										XMRP	43.5974	INCHES	
										YMRP	.0000	INCHES	
										ZMRP	15.1675	INCHES	
												SCALE	.0405

DATA SOURCE

RUDDER	-16.270
RUDDER	.000

PARAMETRIC VALUES

DELTA	.000
AILRON	.000
BETA	.000

REFERENCE INFORMATION

SREF	4.419	SCALE	.0405
LREF	19.239	INCHES	
BREF	37.9359	INCHES	
XMRP	43.5974	INCHES	
YMRP	.0000	INCHES	
ZMRP	15.1675	INCHES	
		SCALE	.0405

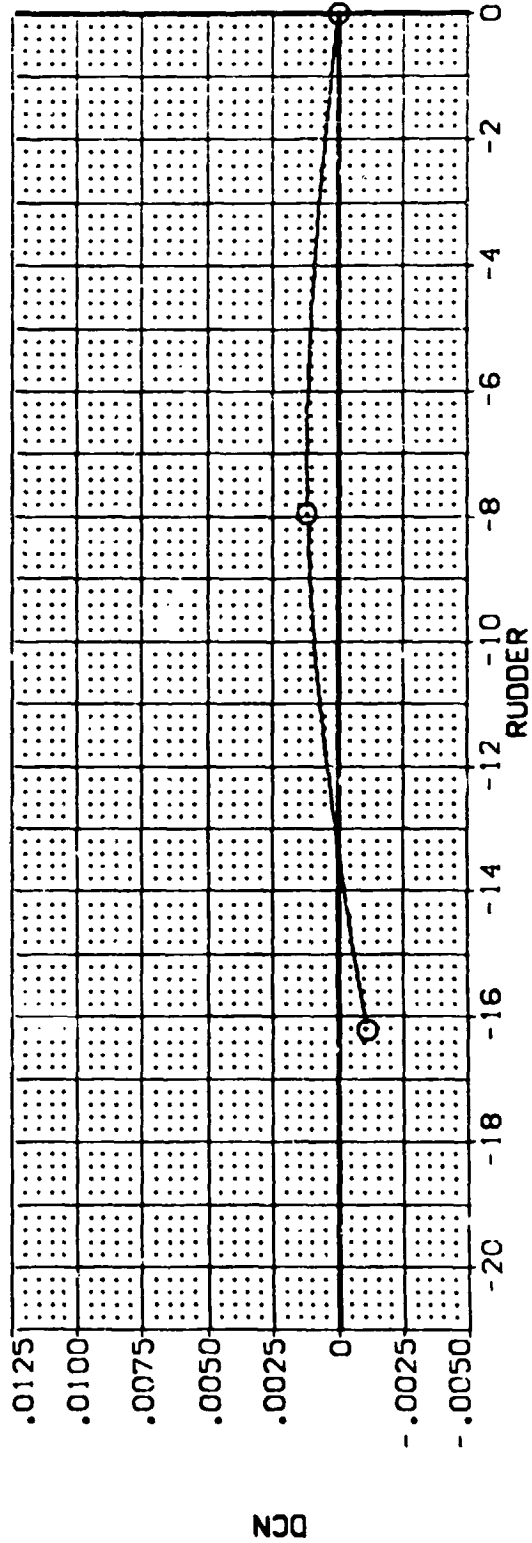
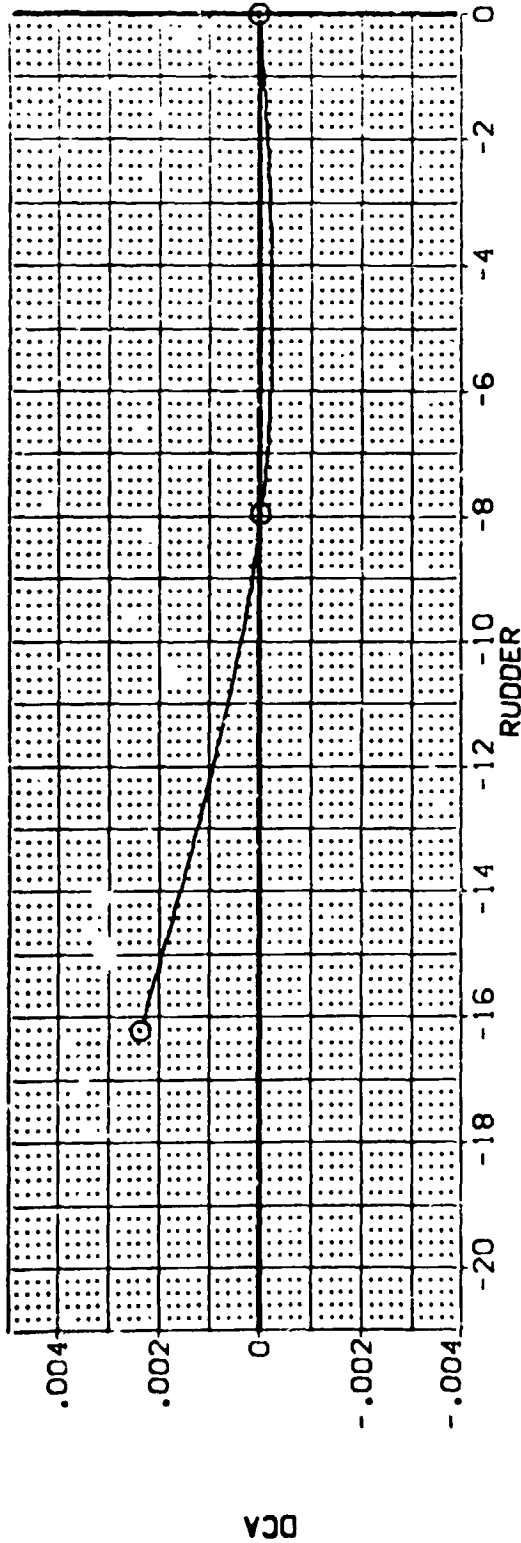


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z355)

SYMBOL ALPHA  
O 5.000

MACH  
BDFLAP  
SPOBRK

PARAMETRIC VALUES  
.260 DELIVON  
-12.000 AILRON  
55.000 BETA

DATA SOURCE  
RUDDER  
-16.220  
.000  
20Z355  
.000  
20Z343

DATASET  
20Z349

RUDDER  
-7.960

REFERENCE INFORMATION  
SQ.FT. 4.4119  
INCHES 19.2799  
INCHES 37.9359  
INCHES 43.5874  
INCHES 15.0000  
SCALE 15.1875  
SCALE .0405

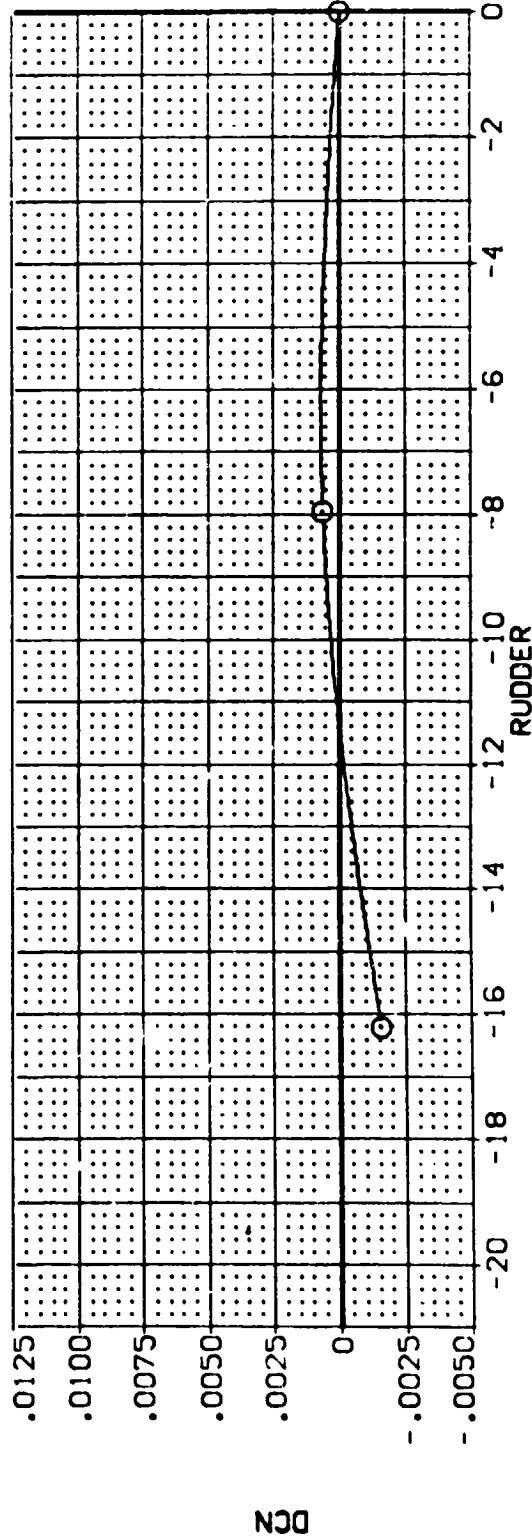
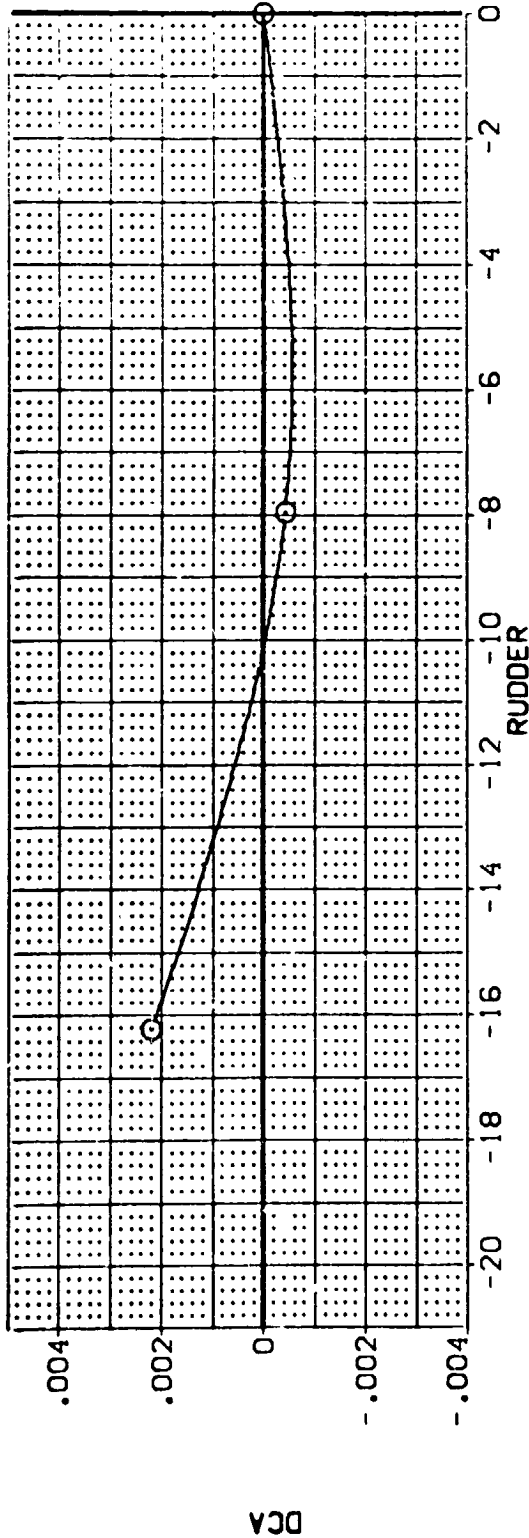


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE



0A628 B26C9 M7F8 W116E28V8RSX9 (20Z355)

SYMBOL ALPHA  
O 10.000

PARAMETRIC VALUES  
MACH .260 DELVON  
BDFLAP -12.000 AILRON  
SPOBRK 55.000 BETA

DATA SOURCE  
.000 DATASET .000  
RUDDER 20Z343  
-16.270 .000

RUDDER -7.960  
SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

REFERENCE INFORMATION  
4.4119 SC.F.T.  
19.2299 INCHES  
37.9359 INCHES  
43.5974 INCHES  
.0000 INCHES  
15.1875 INCHES  
.0405 SCALE

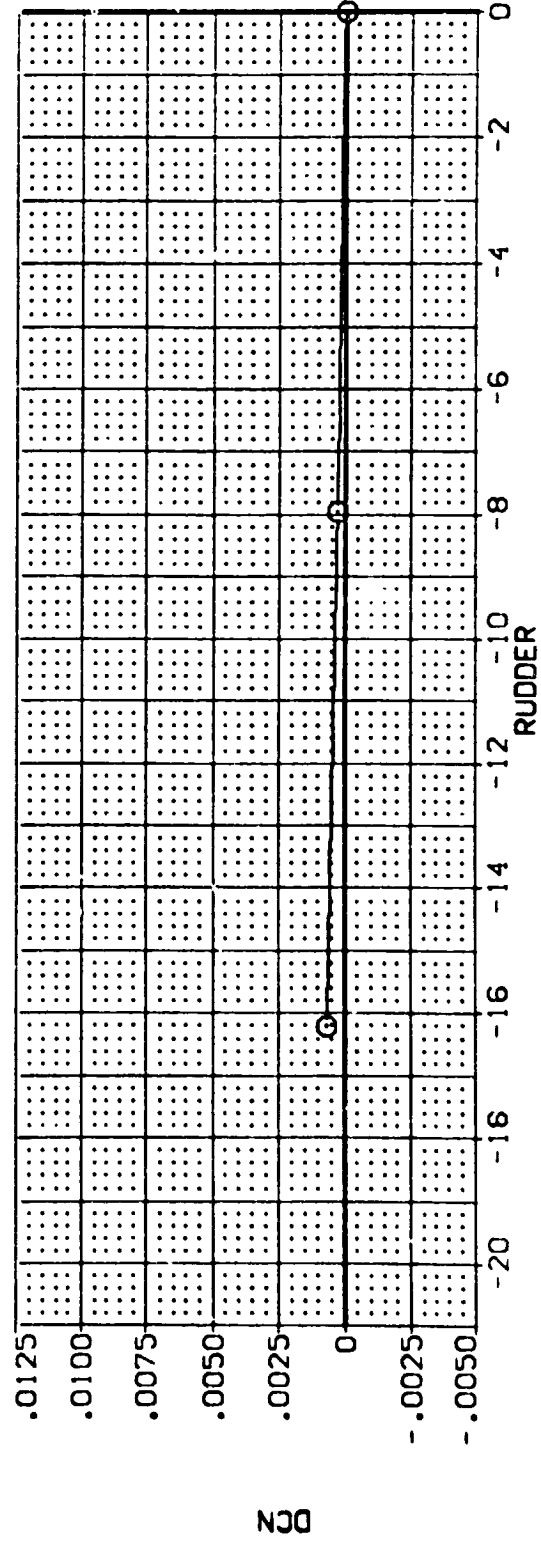
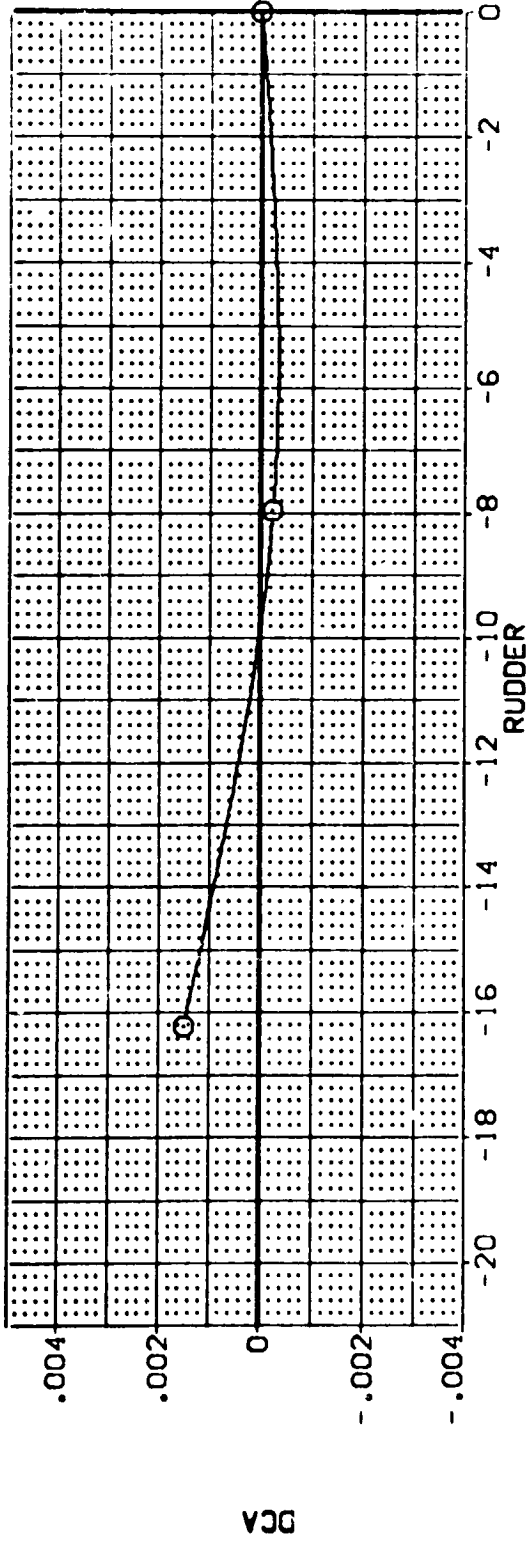


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z355)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	15.000		.260	DELVON	.000	DATASET	RUDDER	SREF	4.419	4.419	INCHES
		BOFLAP	-12.000	AILRON	.000	20Z355	-16.220	LREF	19.229	19.229	INCHES
		SPOBRK	55.000	BETA	.000	20Z343	.000	BREF	37.9359	37.9359	INCHES
								XMRP	43.5974	43.5974	INCHES
								ZMRP	15.1875	15.1875	INCHES
								SCALE	.0405	.0405	SCALE

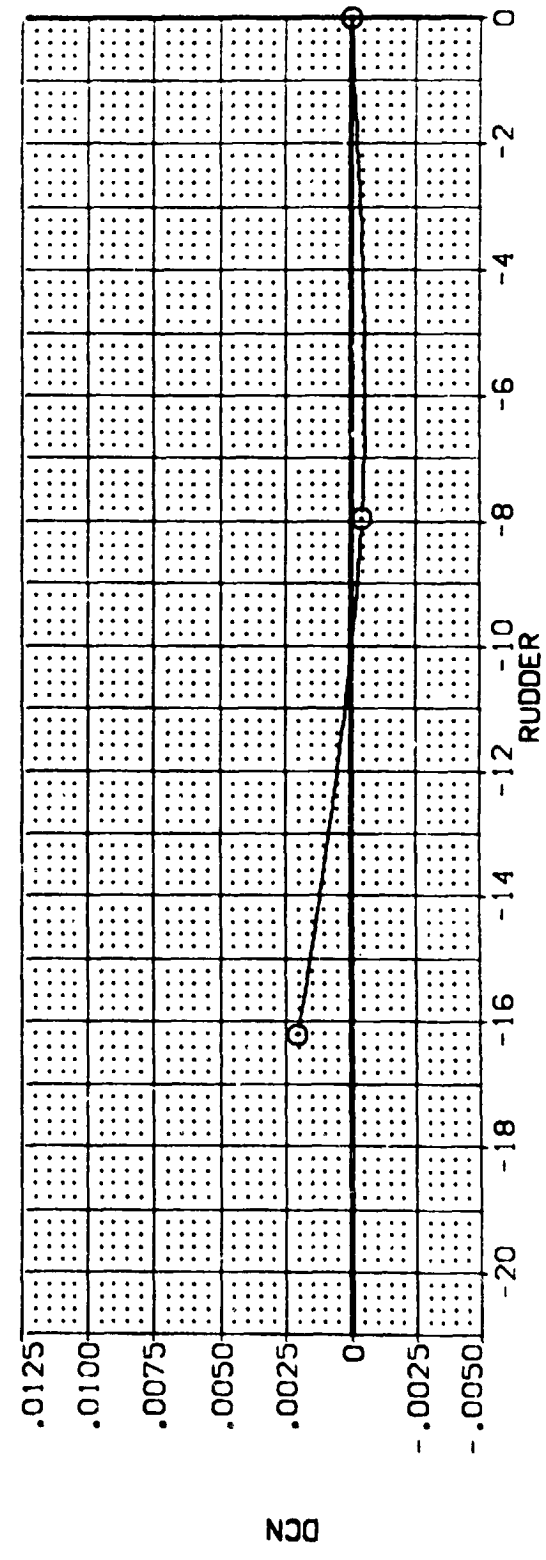
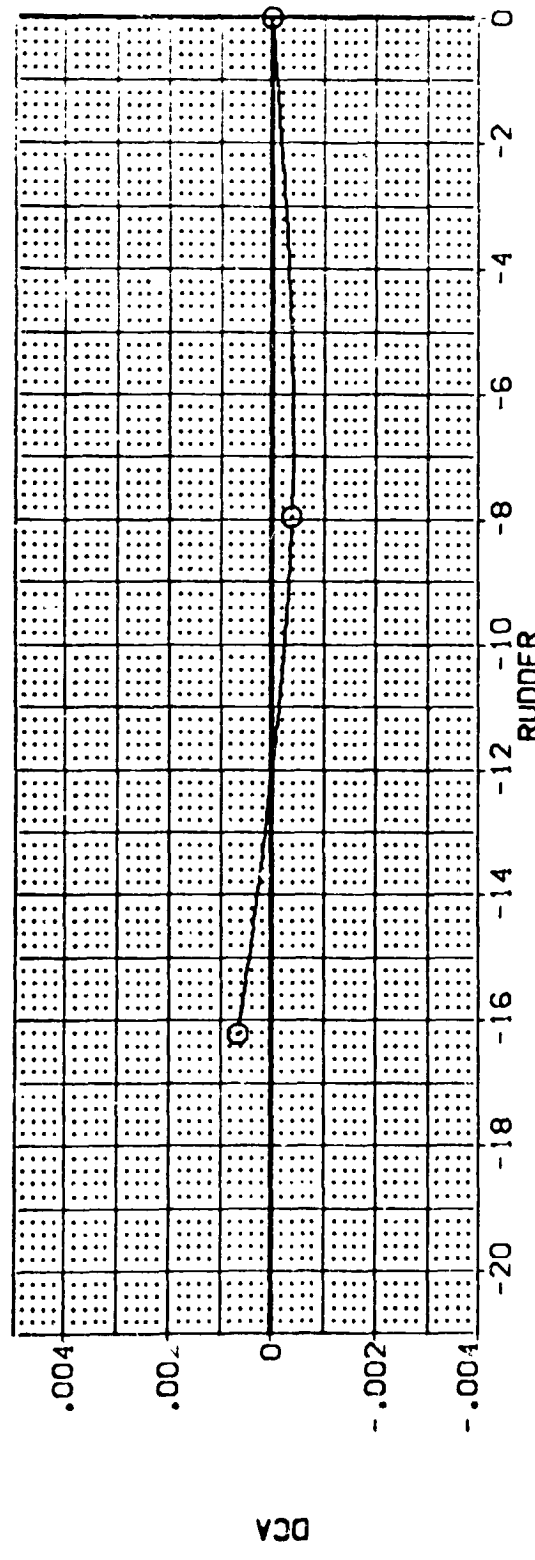


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ355)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	20.000		.760	DELVON	.000	DATASET	RUDDER	SREF	4.4119	50.FT.	
		BDFLAP	-12.000	AILRON	.000	20Z355	-7.960	LREF	19.2299	INCHES	
		SPDRK	55.000	BETA	.000	20Z343		BREF	37.9359	INCHES	
								XMRP	43.5874	INCHES	
								YMRP	.0000	INCHES	
								ZMRP	15.1675	INCHES	
								SCALE	.0405	SCALE	

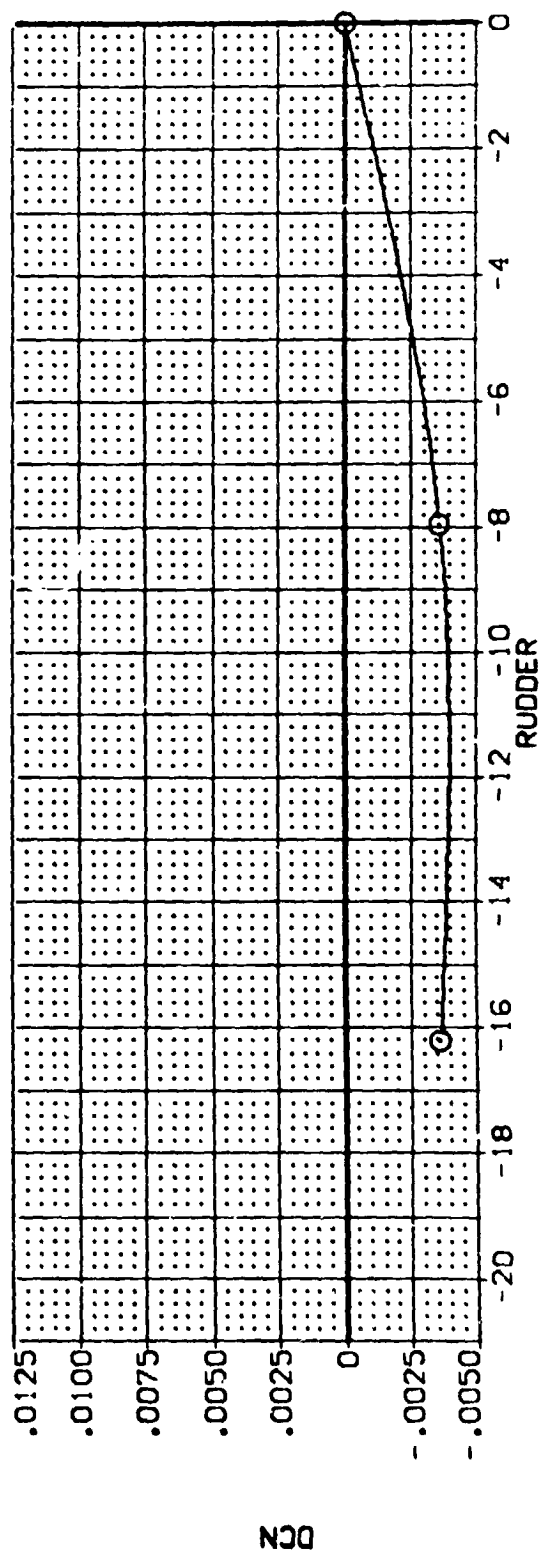
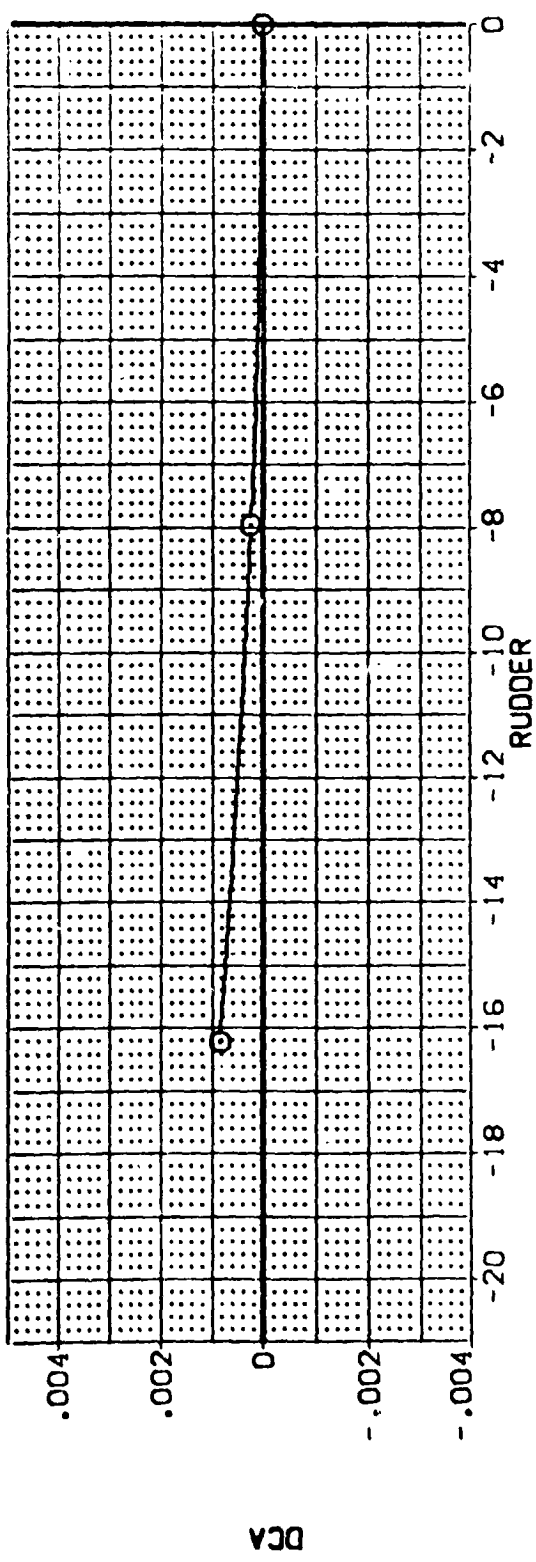


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

0A62B B26C9 M7F8 W116E28V8R5X9 (20Z355)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	75.000	BOELAP	.260	DELTON	.000	DATASET	RUDDER	SREF	4.4119	SO.FT.	
		SPDRK	-12.000	AILRON	.000	20Z355	-16.220	LREF	19.2799	INC.FTS	
			55.000	BETA	.000	20Z343	.000	BREF	37.9359	INC.FTS	
								XMRP	43.5974	INC.FTS	
								ZMRP	.0000	INC.FTS	
								SCALE	15.1673	SCALE	
									.0A05		

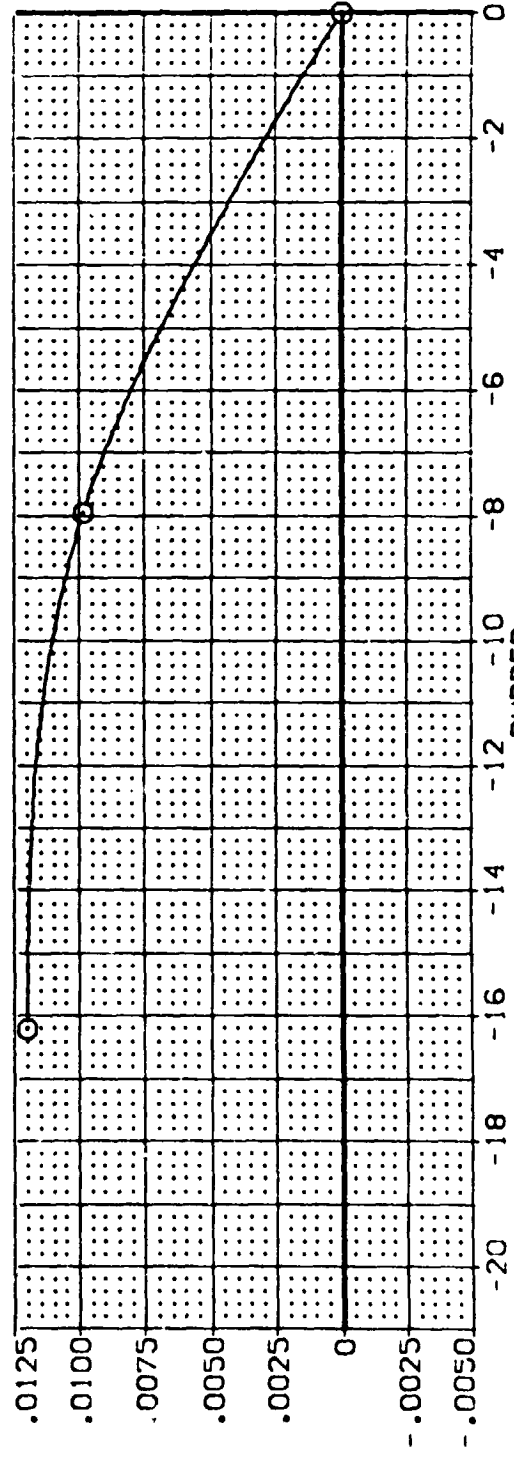
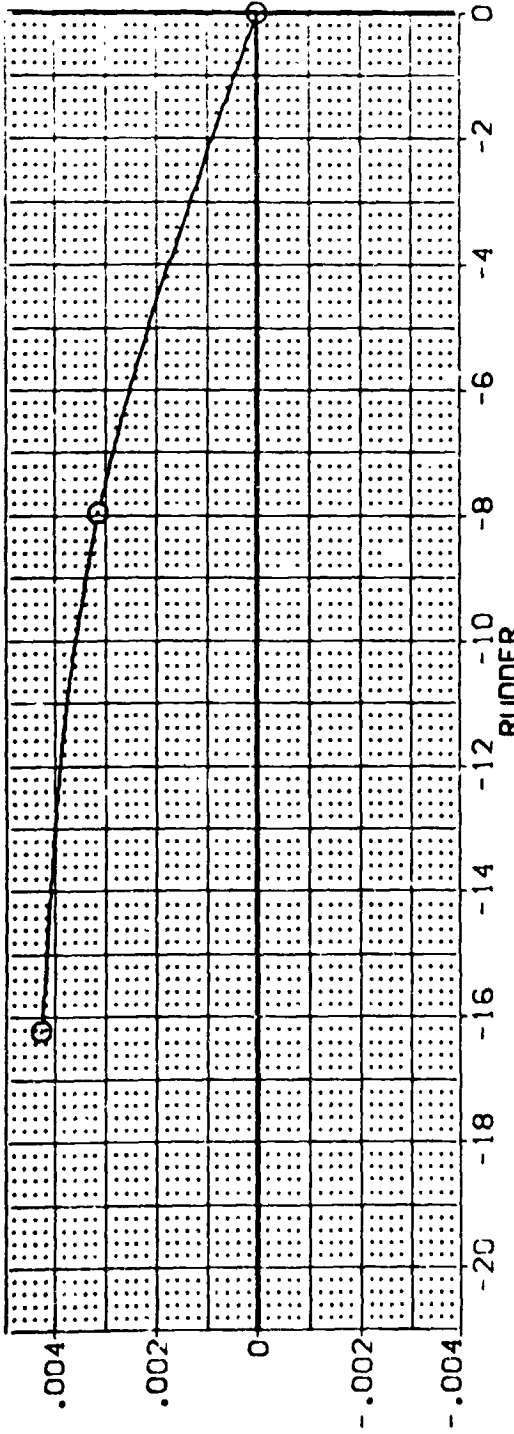


FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

(20Z355)

W116E28V8R5X3

M7F8

B26C9

0A62B

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
O	30.000	.260	DEL VON	.000	RUDDER	20Z349	RUDDER	SREF
		-12.000	ALLRON	.000	-1S.220	20Z349	LREF	19.2298
		55.000	BETA	.000	.000		BREF	37.9359
							XMRP	43.5971
							YMRP	.0000
							ZMRP	15.1875
							SCALE	.04CS
								SO.FT.
								INCHES
								INCHES
								INCHES
								INCHES
								SCALE

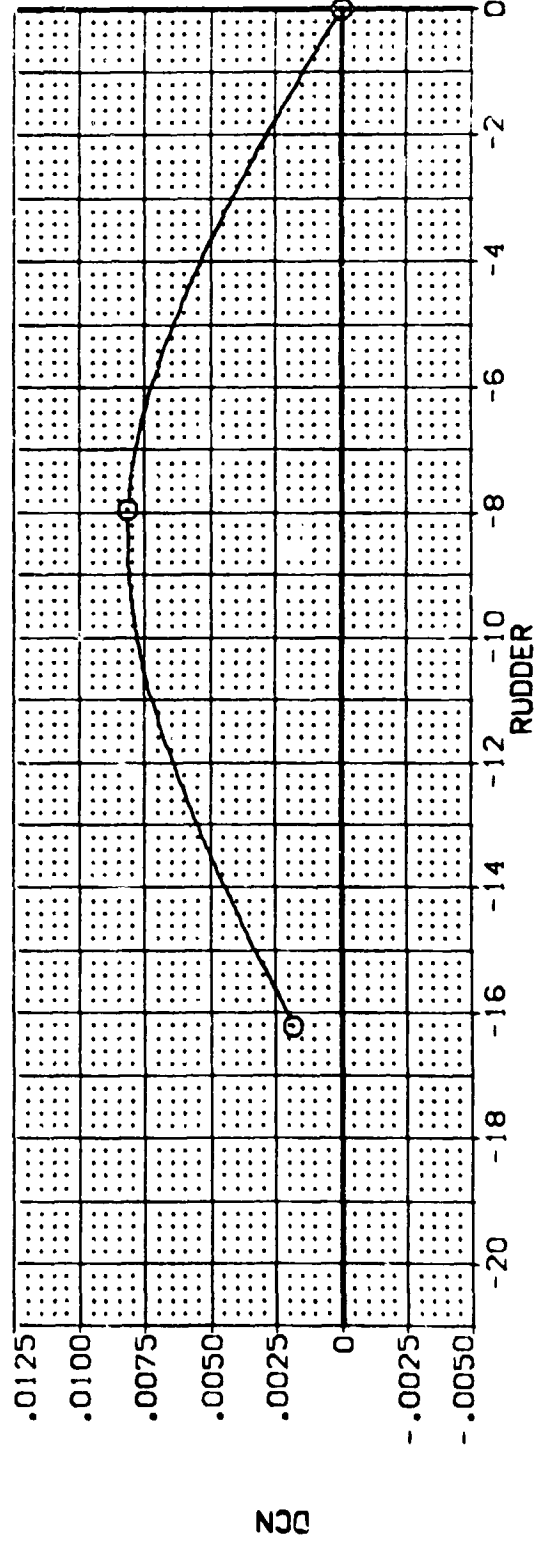
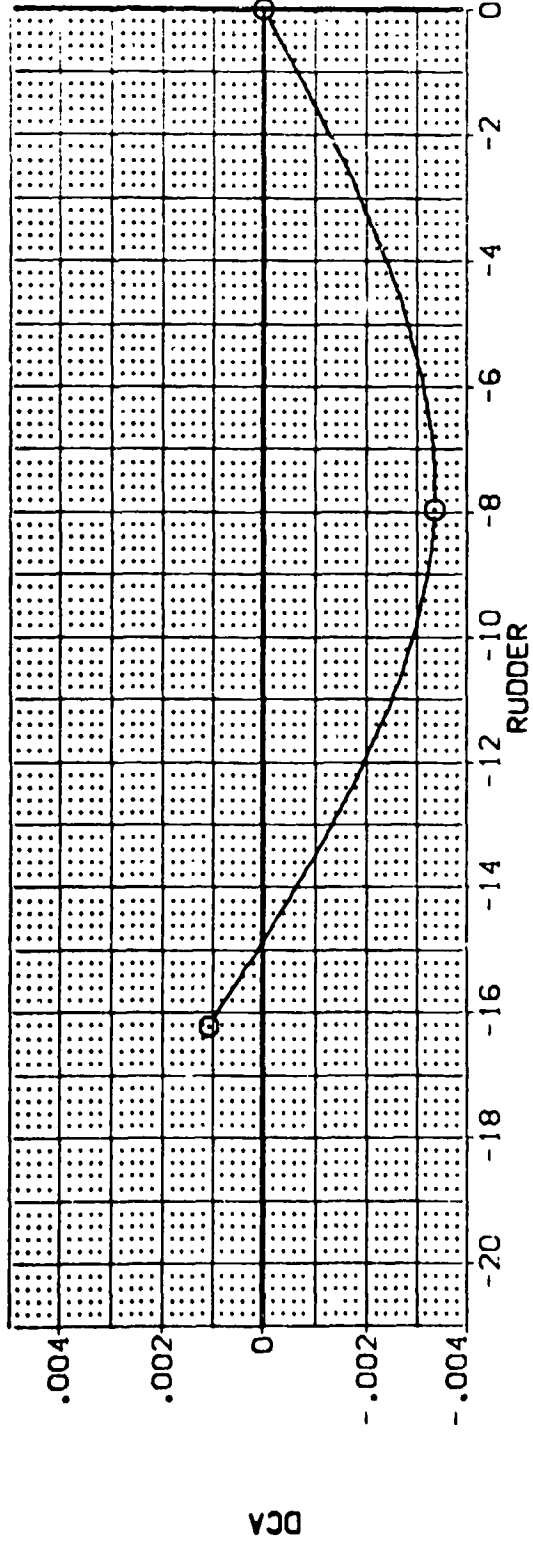


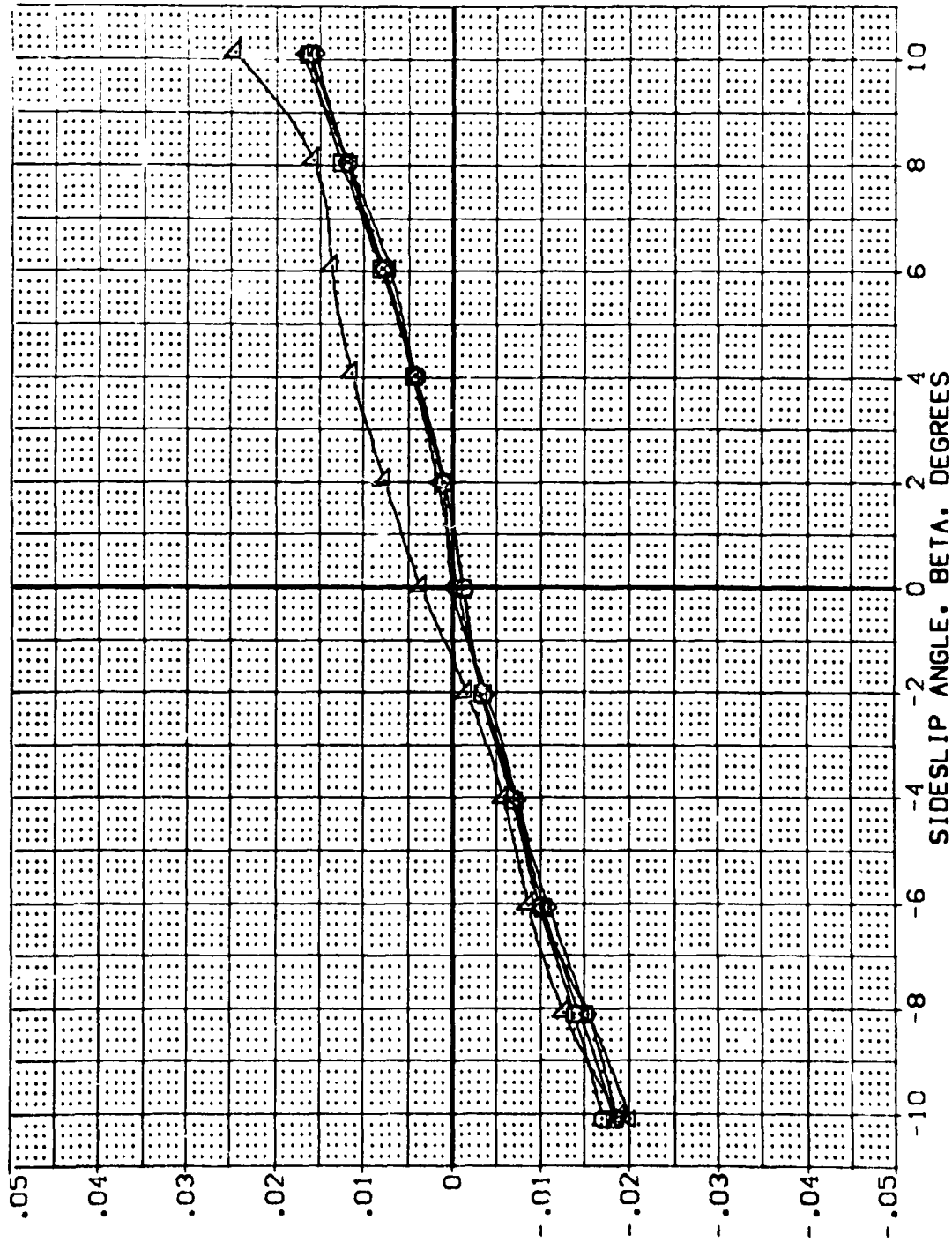
FIG 62 RUDDER EFFECTIVENESS, 55 DEG. FLARE

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(R0Z344)	DA628	B26C9	M7F8	V116E28V8F5X9
(R0Z345)	DA628	B26C9	M7F8	V116E28V8F5X9
(R0Z346)	DA628	B26C9	M7F8	V116E28V8F5X9
(R0Z347)	DA628	B26C9	M7F8	V116E28V8F5X9
(R0Z348)	DA628	B26C9	M7F8	V116E28V8F5X9

ALPHA RUDDER SPDRBK AIRRON REFERENCE INFORMATION

ALPHA	RUDDER	SPDRBK	AIRON	SREF	4.4119	SO.FT.
5.000	.000	55.000	.000	LREF	19.2298	INCHES
10.000	.000	55.000	.000	BREF	37.9259	INCHES
15.000	.000	55.000	.000	XMRP	43.5574	INCHES
20.000	.000	55.000	.000	ZMRP	.0000	INCHES
				SCALE	15.1875	SCALE

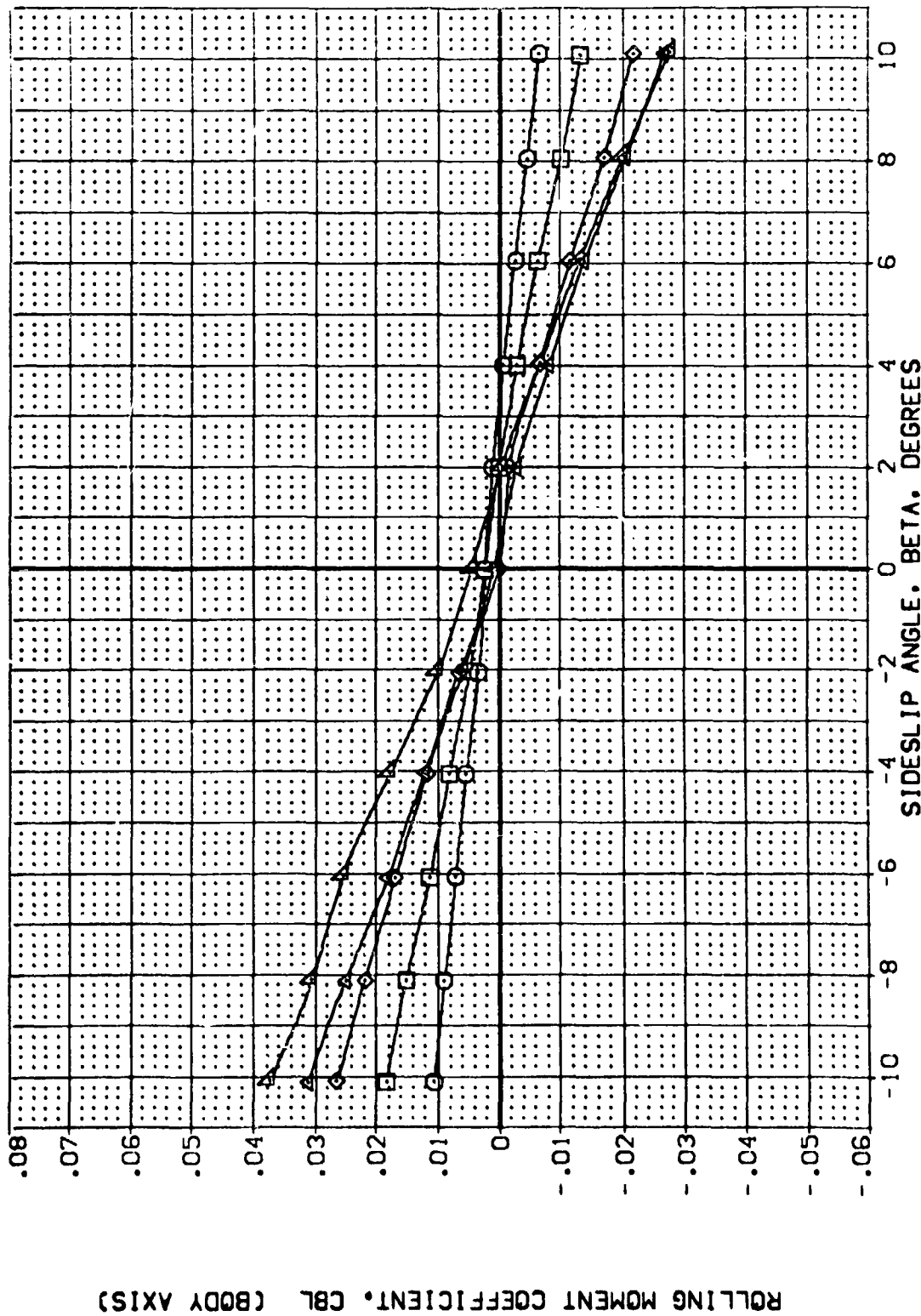


YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.55 DEG FLARE

(M)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPDRBK	AILRON	REFERENCE INFORMATION
(R0Z344)	DAG28 B26C9 M7F8 V116E28V8FSX9	.000	.000	55.000	.000	SREF 4.4119 SQ.FT.
(R0Z345)	DAG28 B26C9 M7F8 V116E28V8FSX9	5.000	.000	55.000	.000	LREF 19.2298 INCHES
(R0Z346)	DAG28 B26C9 M7F8 V116E28V8FSX9	10.000	.000	55.000	.000	BREF 37.9359 INCHES
(R0Z347)	DAG28 B26C9 M7F8 V116E28V8FSX9	15.000	.000	55.000	.000	XMRP 43.5974 INCHES
(R0Z348)	DAG28 B26C9 M7F8 V116E28V8FSX9	20.000	.000	55.000	.000	ZMRP .0000 INCHES
						SCALE .0405 INCHES



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.55 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
(R0Z344)	01628 B76C9 M7F8 V116E28V8FSX9	.000	.000	55.000	.000	SREF 4.4119 SC.F.T.
(R0Z345)	01628 B76C9 M7F8 V116E28V8FSX9	5.000	.000	55.000	.000	LREF 19.2799 INC.F.S
(R0Z346)	01628 B76C9 M7F8 V116E28V8FSX9	10.000	.000	55.000	.000	BREF 37.9359 INC.F.S
(R0Z347)	01628 B76C9 M7F8 V116E28V8FSX9	15.000	.000	55.000	.000	XMRP 43.5874 INC.F.S
(R0Z348)	01628 B76C9 M7F8 V116E28V8FSX9	20.000	.000	55.000	.000	ZMRP 15.1875 INC.F.S
						SCALE .04CS

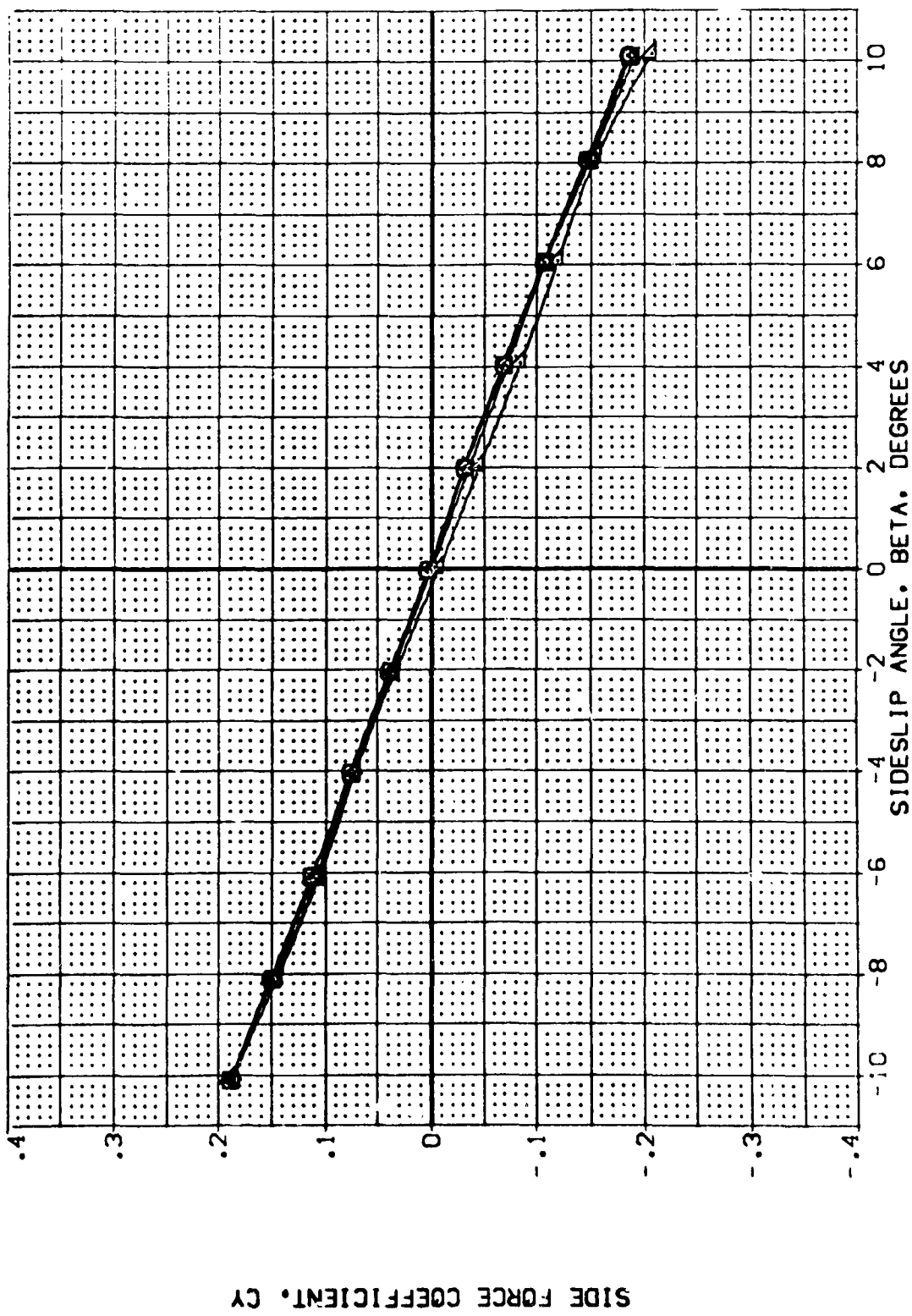


FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.55 DEG FLARE

(A)MACH = .26



0A62B B26C9 M7F8 W116E28V8R5X9 (CDZ344)

SYMBOL: O  
 RUDDER: .000  
 MACH: .260  
 ELEVON: .000  
 SPOBRK: 55.000  
 BOFLAP: -12.000  
 AILRON: .000  
 REFERENCE INFORMATION:  
 SREF: 4.4119 SC.FT.  
 LREF: 19.2299 INCHES  
 XMRP: 37.9359 INCHES  
 YMRP: 43.5974 INCHES  
 ZMRP: .0000 INCHES  
 SCALE: 15.1875 INCHES  
 .0405 SCALE

PARAMETRIC VALUES

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

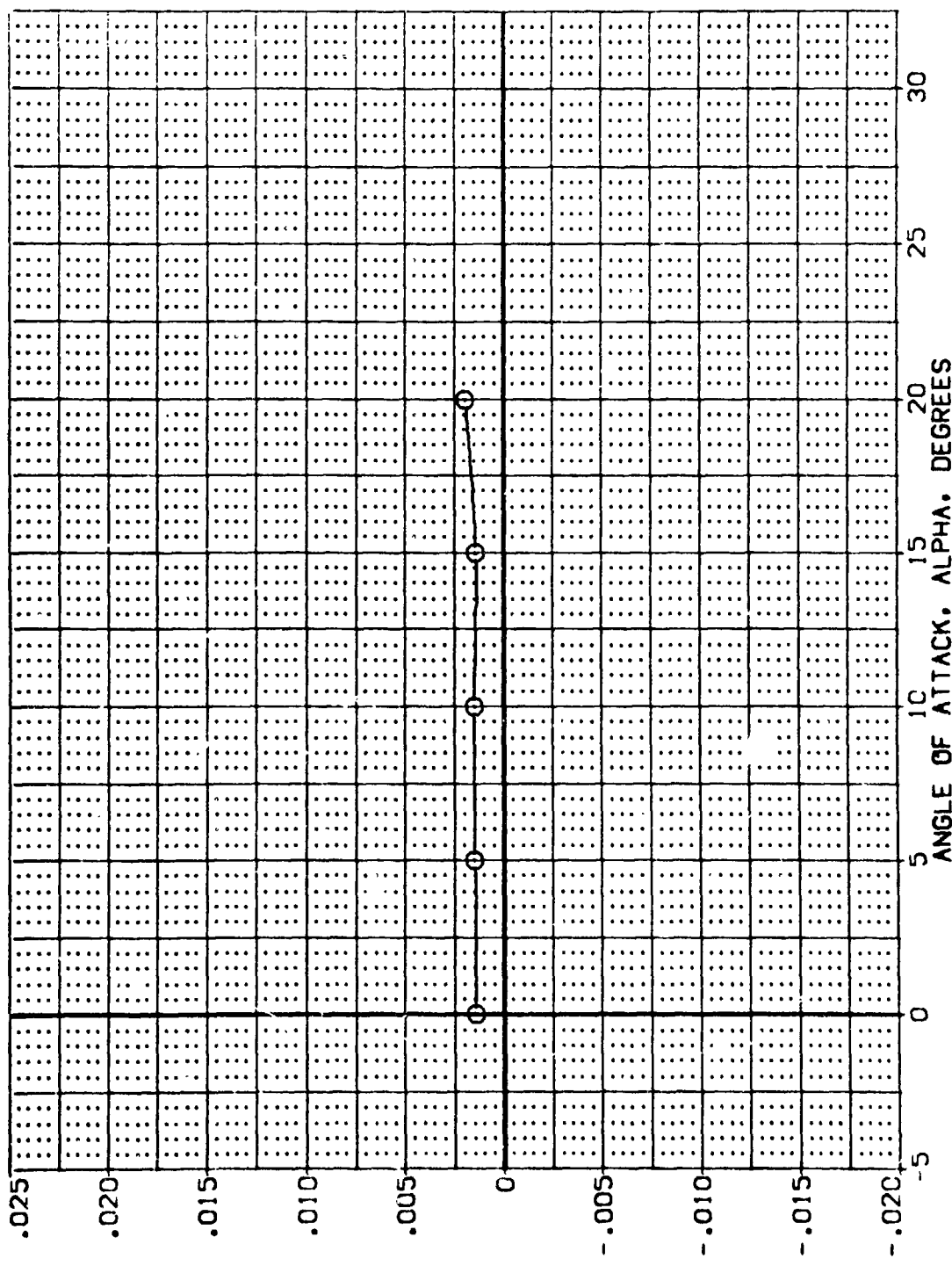


FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 55 DEG FLARE

(CDZ344)

JA62B B26C9 M7F8 W116E28V8R5X9

SYMBOL

○

RUDDER

.000

PARAMETRIC VALUES

MACH .260 BDFLAP -12.000  
ELEVON .000 ALLRON .000  
SPDRK 55.000

REFERENCE INFORMATION

SREF 4.4119 SQ.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5974 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405 SCALE

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

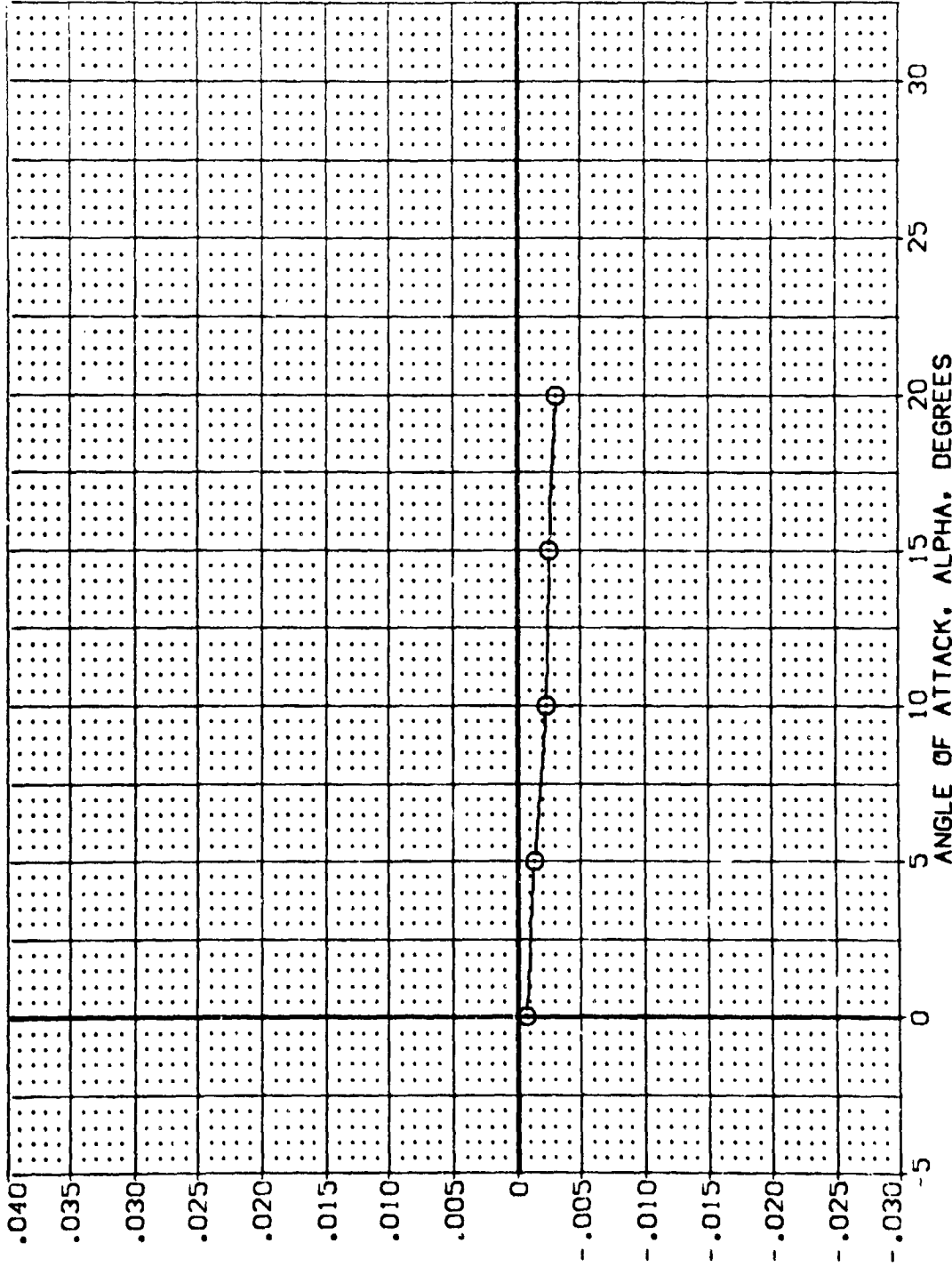


FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 55 DEG FLARE

(CDZ344)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER .000

MACH .260

ELEVON .000

SPOBRK 55.000

BDFLAP -12.000

AILRON .000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREF 4.4119 SQ. FT.

LREF 19.2298 INCHES

BREF 37.9399 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 SCALE

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

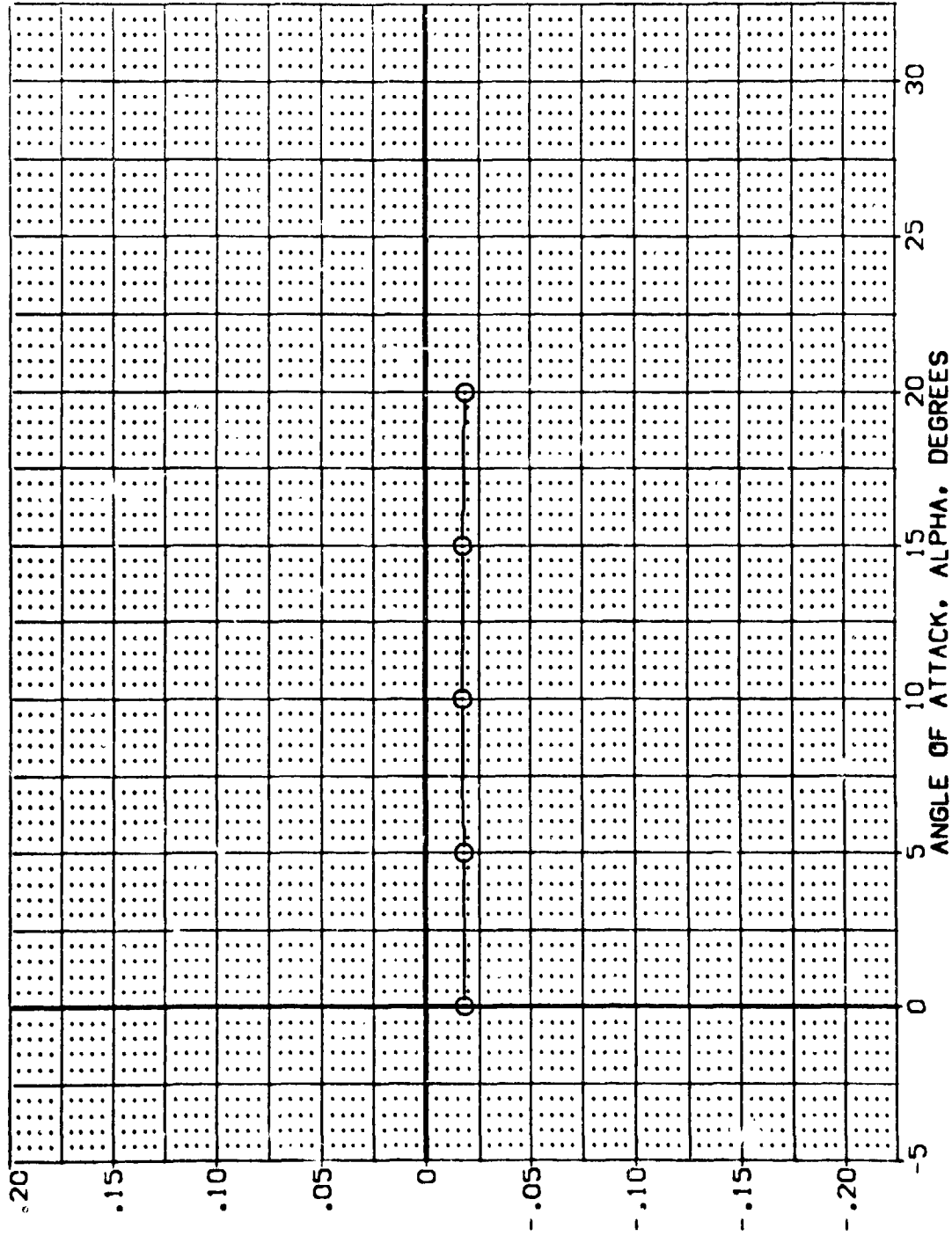
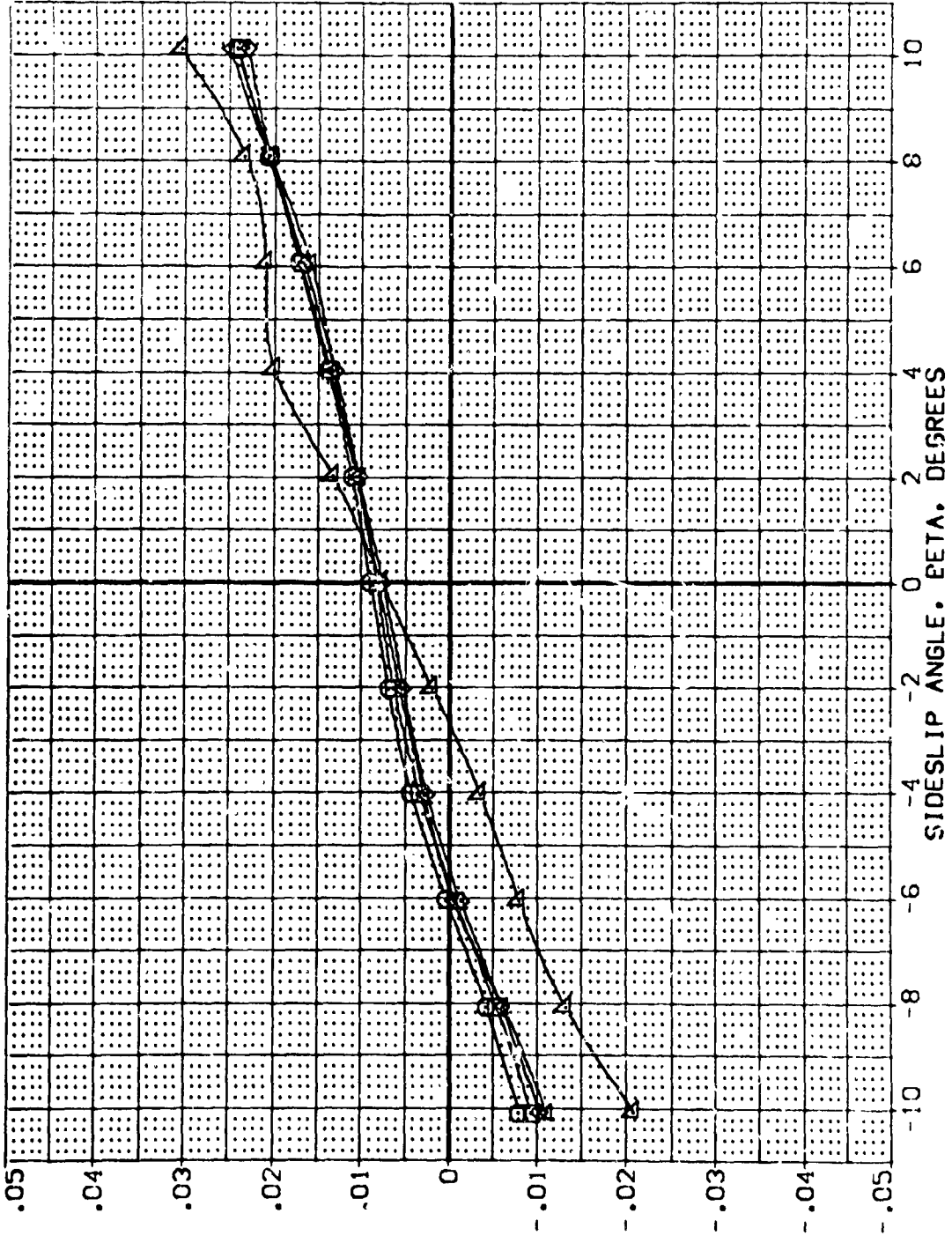


FIG 63 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 55 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOSBK	A1LRON	REFERENCE INFORMATION
(R0Z350)	DA6Z8 BZ6C9 M7F8 V116E 28VBR5X9	.000	-7.960	55.000	.000	SREF 4.4119 50.FT.S
(R0Z351)	DA6Z8 BZ6C9 M7F8 V116E 28VBR5X9	5.000	-7.960	55.000	.000	LREF 19.2799 INC.FTS
(R0Z352)	DA6Z8 BZ6C9 M7F8 V116E 28VBR5X9	10.000	-7.960	55.000	.000	BREF 37.9359 INC.FTS
(R0Z353)	DA6Z8 BZ6C9 M7F8 V116E 28VBR5X9	15.000	-7.960	55.000	.000	XMRP 43.5974 INC.FTS
(R0Z354)	DA6Z8 BZ6C9 M7F8 V116E 28VBR5X9	20.000	-7.960	55.000	.000	YMRP .0000 INC.FTS
						ZMRP 15.1875 INC.FTS
						SCALE .01CS
						SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE

(AJ)MACF = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPADBRK	AILTRON	REFERENCE INFORMATION
[RZ350]	0A628 B76C9 M7F8 V116E28VBR5X9	.000	-7.960	55.000	.000	SREF 4.4119 SO.FT
[RZ351]	0A628 B76C9 M7F8 V116E28VBR5X9	5.000	-7.960	55.000	.000	IRF1 19.2759 INCHES
[RZ352]	0A628 B76C9 M7F8 V116E28VBR5X9	10.000	-7.960	55.000	.000	BRF1 37.9259 INCHES
[RZ353]	0A628 B76C9 M7F8 V116E28VBR5X9	15.000	-7.960	55.000	.000	XMRP 43.5574 INCHES
[RZ354]	0A628 B76C9 M7F8 V116E28VBR5X9	20.000	-7.960	55.000	.000	YMRP 55.000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0105

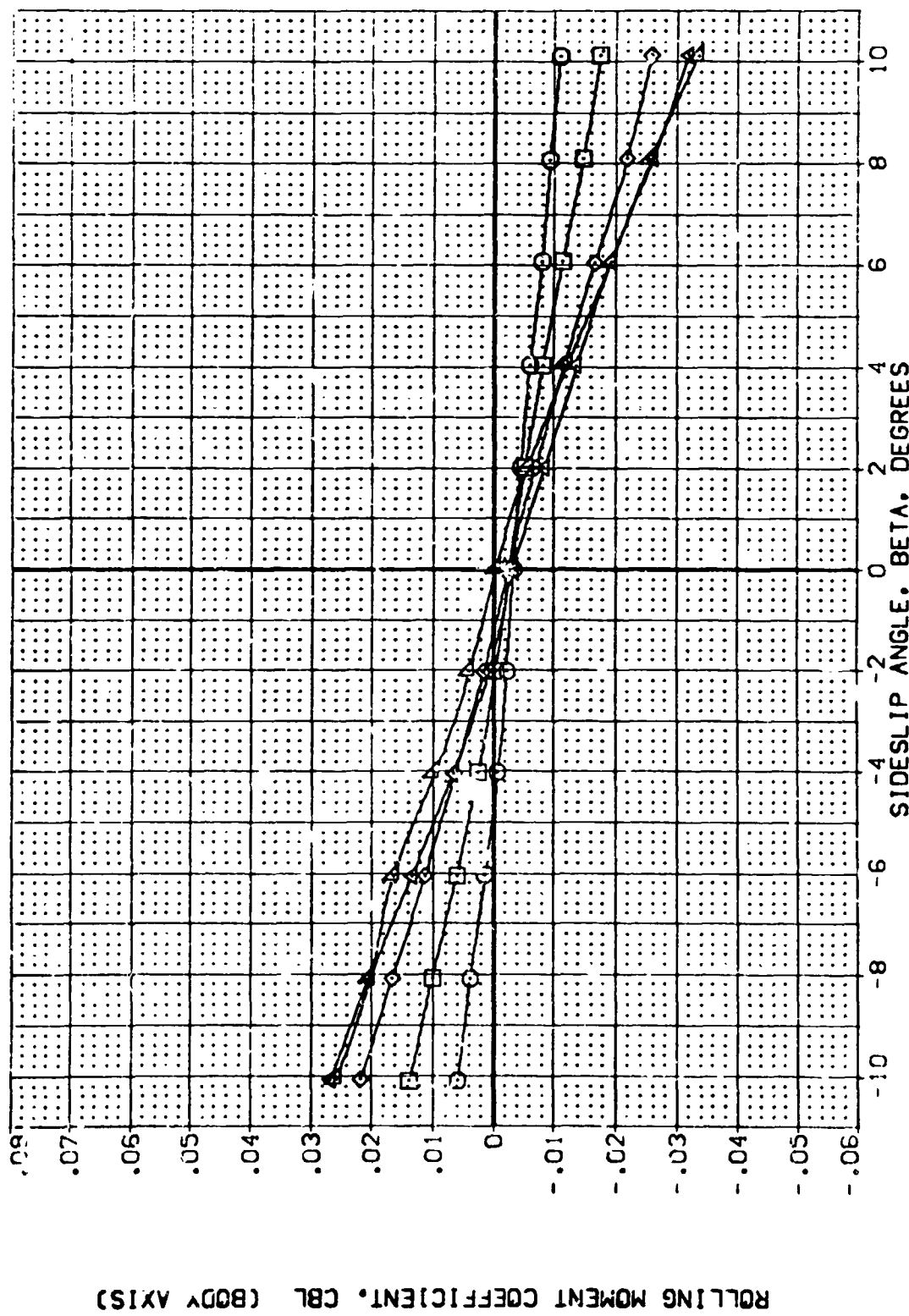


FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE

DATA SET SYMBO: (R07350) (R07351) (R07352) (R07353) (R07354)

CONFIGURATION DESCRIPTION: M7FB V116E28VBR5X9 M7FB V116E28VBR5X9 M7FB V116E28VBR5X9 M7FB V116E28VBR5X9 M7FB V116E28VBR5X9

ALPHA: .000 5.000 10.000 15.000 20.000

RUDDER: -7.960 -7.960 -7.960 -7.960 -7.960

SPOBRK: 55.000 55.000 55.000 55.000 55.000

AIRRDN: .000 .000 .000 .000 .000

REFERENCE INFORMATION: SREF 4.4119 SQ.FT. I.REF 19.2799 INCHES BREF 37.9309 INCHES XMRP 43.5974 INCHES YMRP .0000 INCHES ZMRP .0105 INCHES SCALE

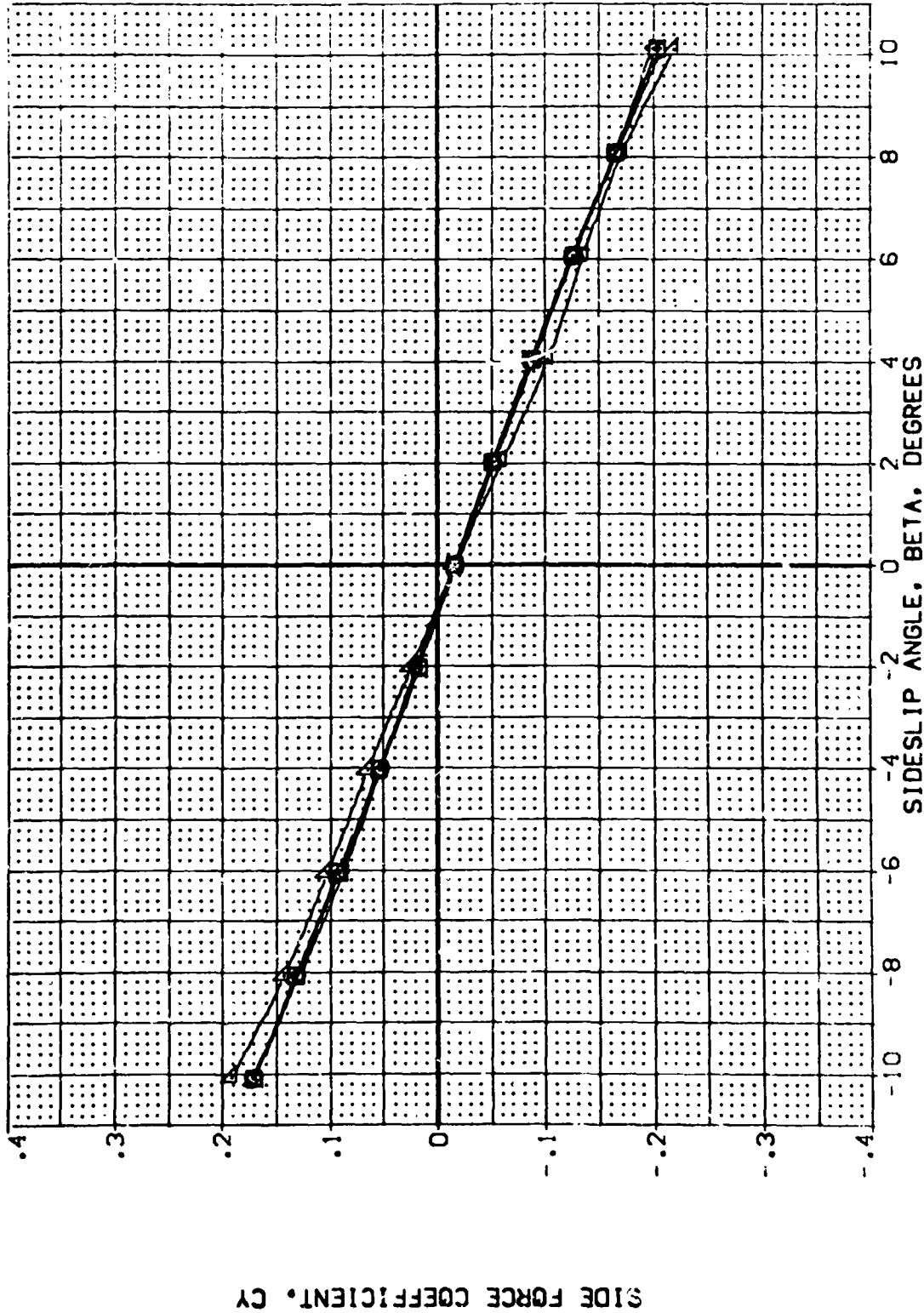


FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE

(A)MACH = .26

(CDZ350)

0A62B B26C9 M7F8 W116E28VPRK5X9

SYMBOL ○

RUDDER -7.960

MACH .260

ELEVON .000

SPOBRK 55.000

PARAMETRIC VALUES

BOTLAP -12.000

AILRON .000

REFERENCE INFORMATION

SREF 4.4119 SQ.FT.

LREF 19.2799 INCHES

BREF 37.9359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBT, PER DEGREE

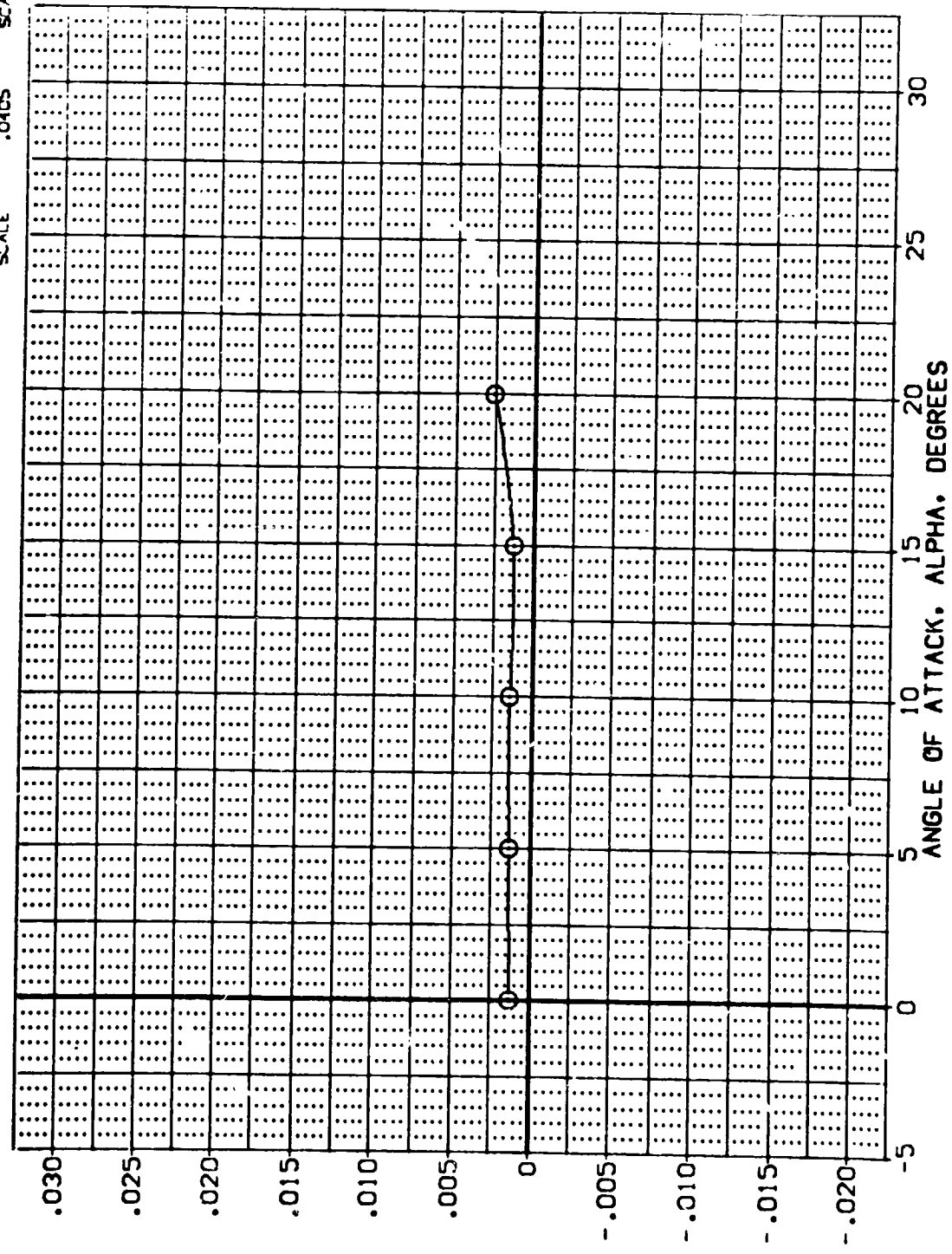


FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE

(CD7350)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

RUDDER  
-7.960

MACH  
0.450  
SPOBRK  
55.000

PARAMETRIC VALUES  
BDFLAP .260  
ALLRON .000  
A111RON .000

-12.000  
.000

SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

REFERENCE INFORMATION  
4.4119  
19.2299  
37.9359  
43.5974  
15.1875  
.0405  
SO.FT.  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

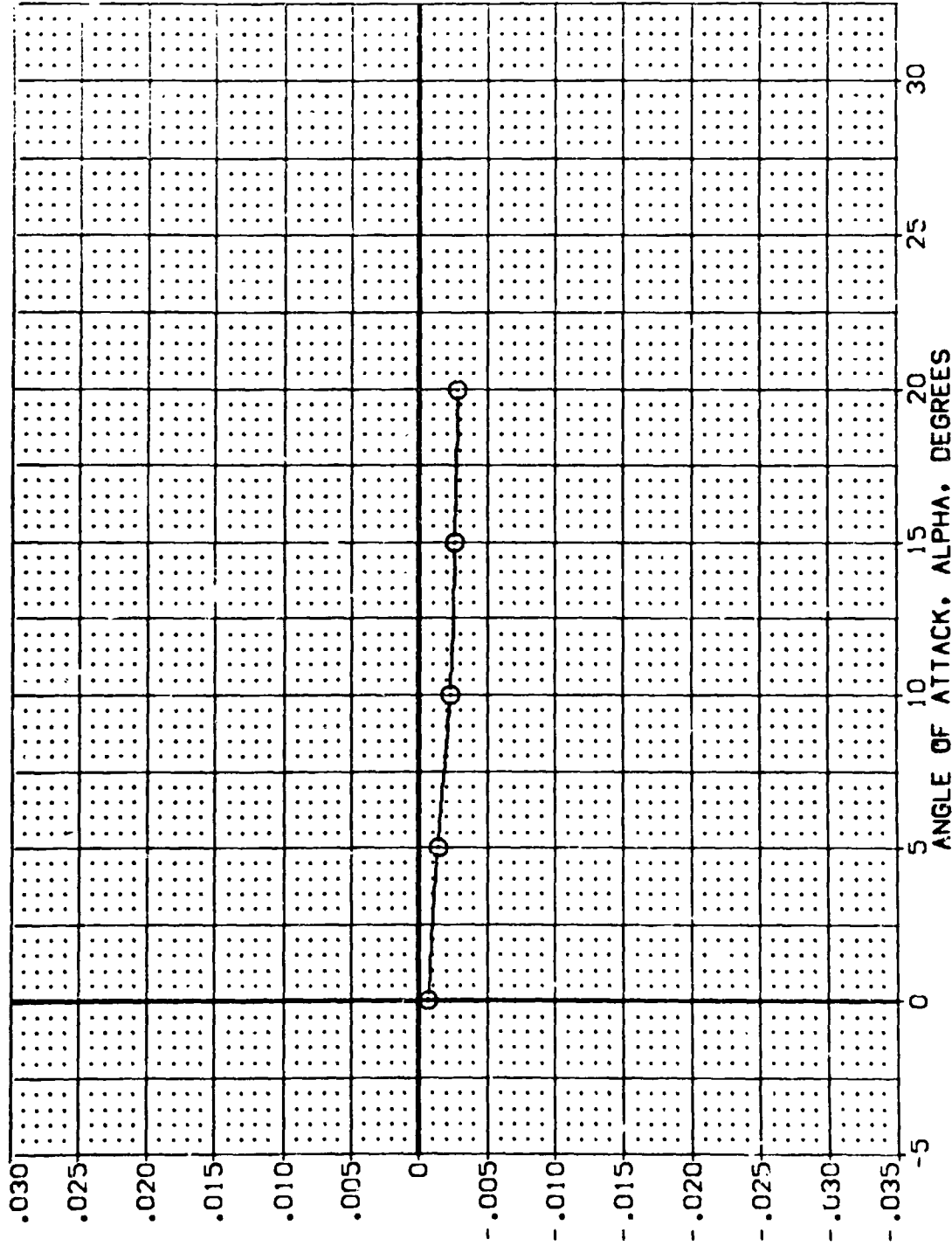


FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE





0A62B B26C9 M7F8 W116E28V8R5X9 (CDZ350)

SYMBOL  
O

RUDDER -7.960  
MACH .260  
ELEVON .000  
SPOBRK 55.000

PARAMETRIC VALUES  
BOFLAP -12.000  
AILRON .000

REFERENCE INFORMATION  
SREF 4.4119  
LREF 19.2299  
BREF 37.9359  
XMRP 43.5974  
YMRP .0000  
ZMRP 15.1875  
SCALE .0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

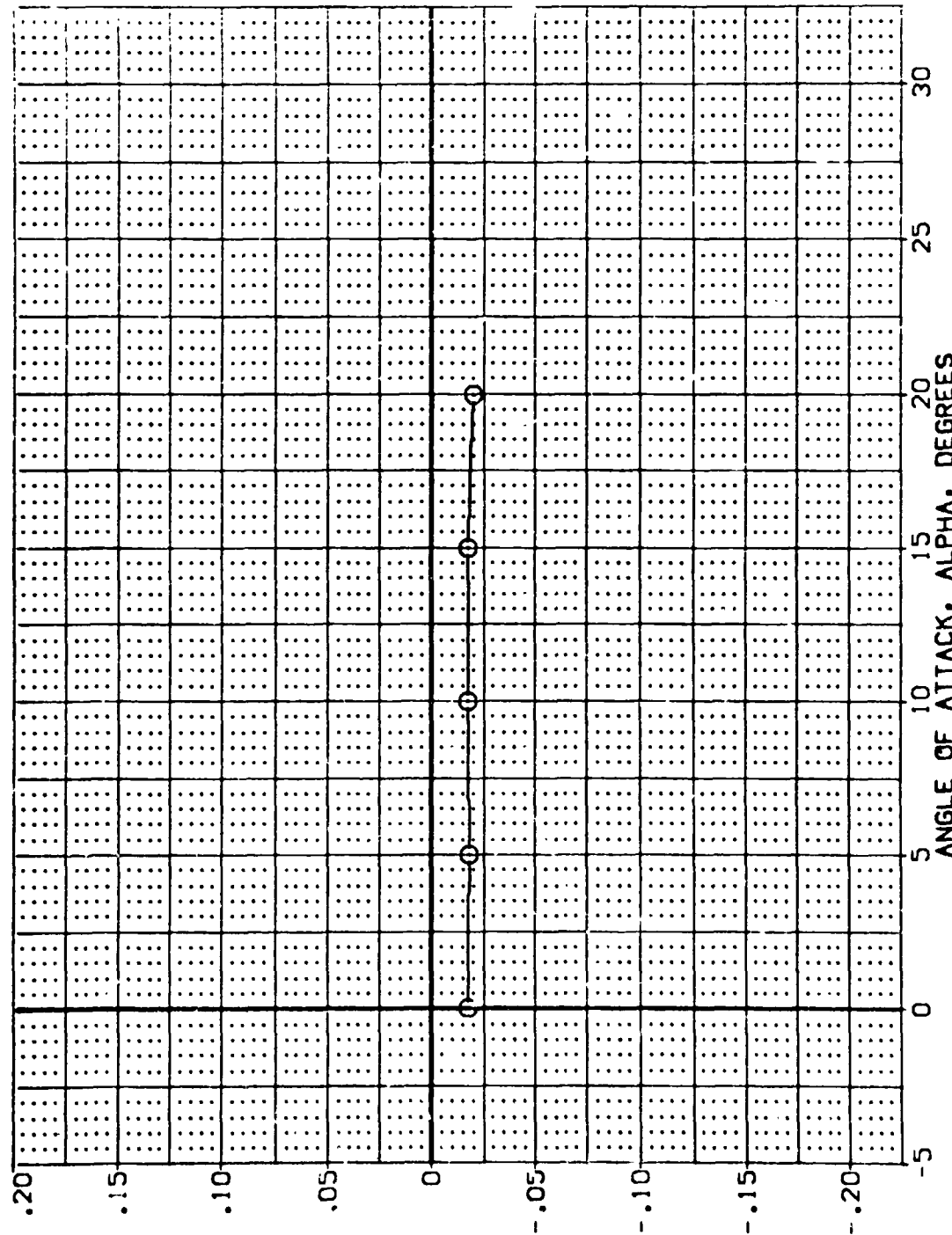


FIG 64 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 55 DEG FLARE

DATA SET SYMBO. CONFIGURATION DESCRIPTION

[RDZ356] M7F8 B26C9 V116E28V895X9

[RC357] M7F8 V116E28V895X9

[RDZ358] M7F8 V116E28V895X9

[RCZ359] M7F8 V116E28V895X9

[RDZ360] M7F8 V116E28V895X9

ALPHA RUDDER SPOBRK AILRON REFERENCE INFORMATION

.000 -16.220 55.000 .000 4.4119 50. FT.

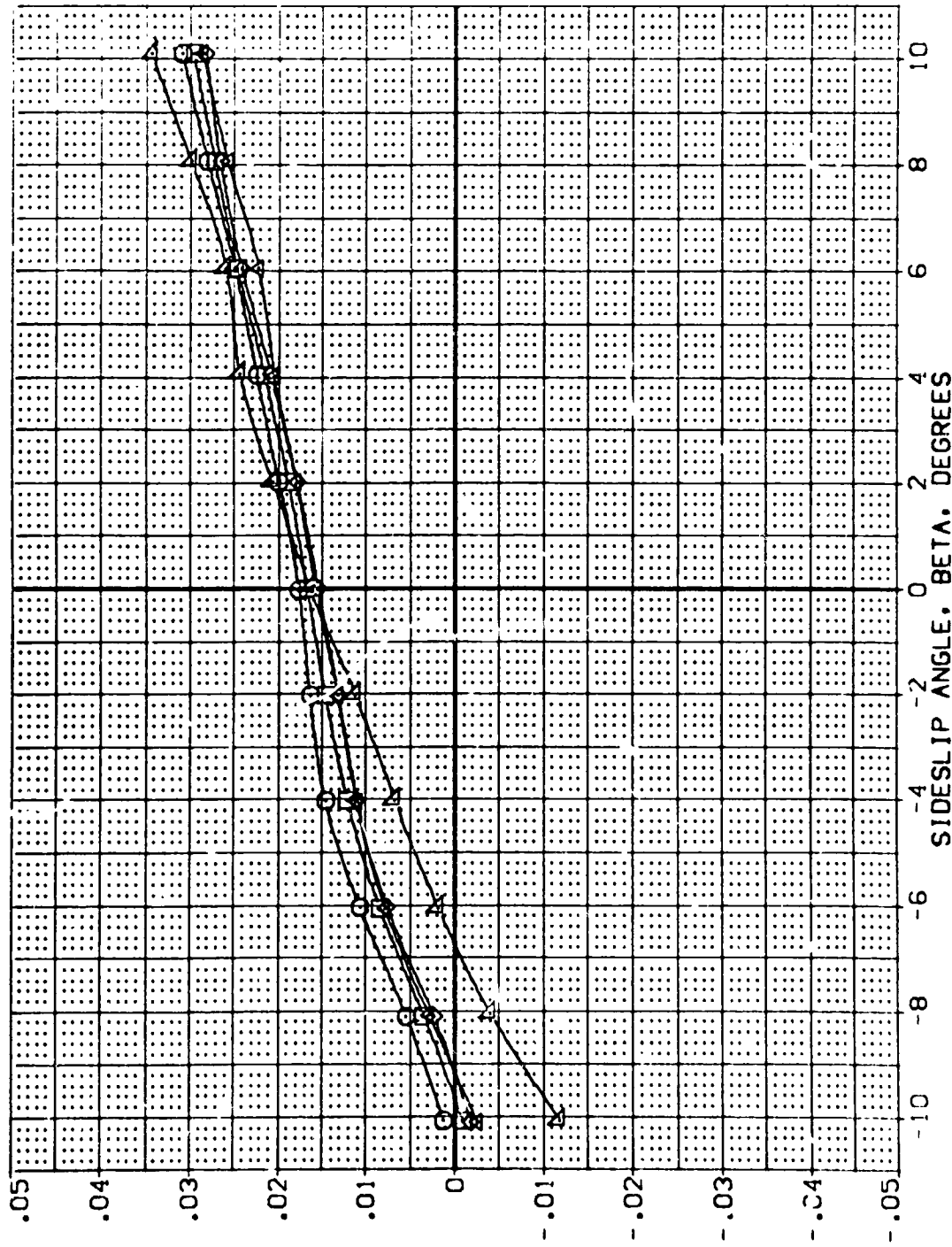
5.000 -16.220 55.000 .000 19.2299 INCHES

10.000 -16.220 55.000 .000 37.9359 INCHES

15.000 -16.220 55.000 .000 43.5974 INCHES

20.000 -16.220 55.000 .000 15.1875 INCHES

SCALE SCALE



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

(A)MACH = .26

PAGE

860



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
{RDZ356}	CA628 B26C9 MTF8 V116E28V895X9	.000	-16.220	55.000	.000	SREF 4.4119 SO.FT.
{RDZ357}	CA628 B26C9 MTF8 V116E28V895X9	5.000	-16.220	55.000	.000	LREF 19.2299 INCHES
{RDZ358}	CA628 B26C9 MTF8 V116E28V895X9	10.000	-16.220	55.000	.000	BREF 37.9359 INCHES
{RDZ359}	CA628 B26C9 MTF8 V116E28V895X9	15.000	-16.220	55.000	.000	YMRP 43.5874 INCHES
{RDZ360}	CA628 B26C9 MTF8 V116E28V895X9	20.000	-16.220	55.000	.000	ZMRP 15.0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405

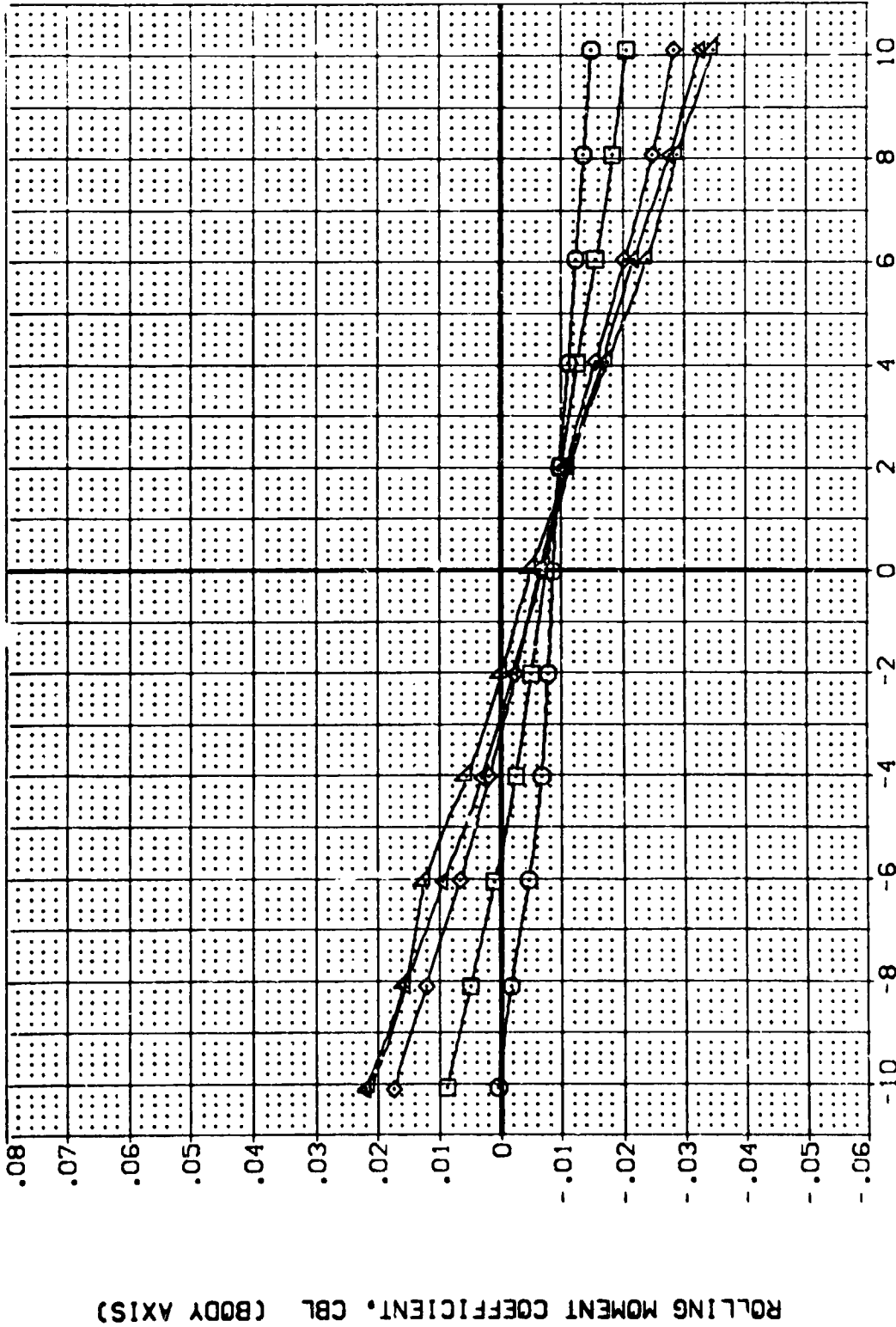


FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

DATA SET SYMBOL  
 (R0Z355)  
 (R0Z357)  
 (R0Z358)  
 (R0Z359)  
 (R0Z360)

CONFIGURATION DESCRIPTION  
 M7F8 V116E28V8F5X9  
 M7F8 V116E28V8F5X9  
 M7F8 V116E28V8F5X9  
 M7F8 V116E28V8F5X9  
 M7F8 V116E28V8F5X9

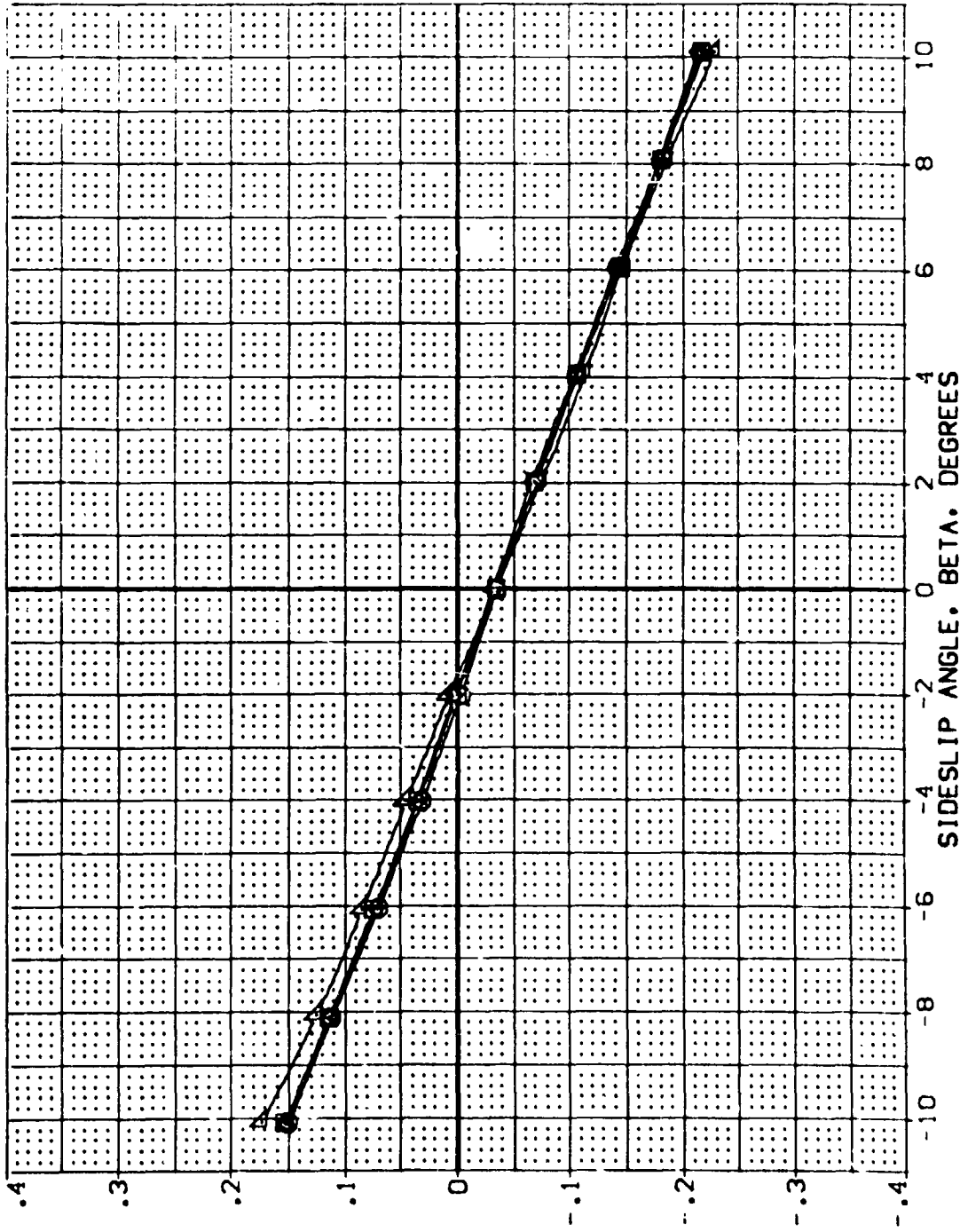
ALPHA  
 .000  
 5.000  
 10.000  
 15.000  
 20.000

RUDDER  
 -16.220  
 -16.220  
 -16.220  
 -16.220  
 -16.220

SPODBK  
 55.000  
 55.000  
 55.000  
 55.000  
 55.000

AILRON  
 .000  
 .000  
 .000  
 .000  
 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405 SCALE



SIDE FORCE COEFFICIENT,  $C_y$

FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

(A)MACH = .26



CA628 B26C9 M7F8 W116E28V8R5X9 (CDZ356)

SYMBOL ○

PARAMETRIC VALUES  
 RUDDER -16.220  
 MACH .260  
 ELEVON .000  
 SPOBRK 55.000  
 BOFLAP -12.000  
 AILRON .000

REFERENCE INFORMATION  
 SREF 4.4119 50 FT.  
 LREF 19.7299 INCHES  
 BRFL 37.9359 INCHES  
 YWRP 43.5874 INCHES  
 ZWRP 15.1000 INCHES  
 SCALE 15.1875 INCHES  
 .0105 SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

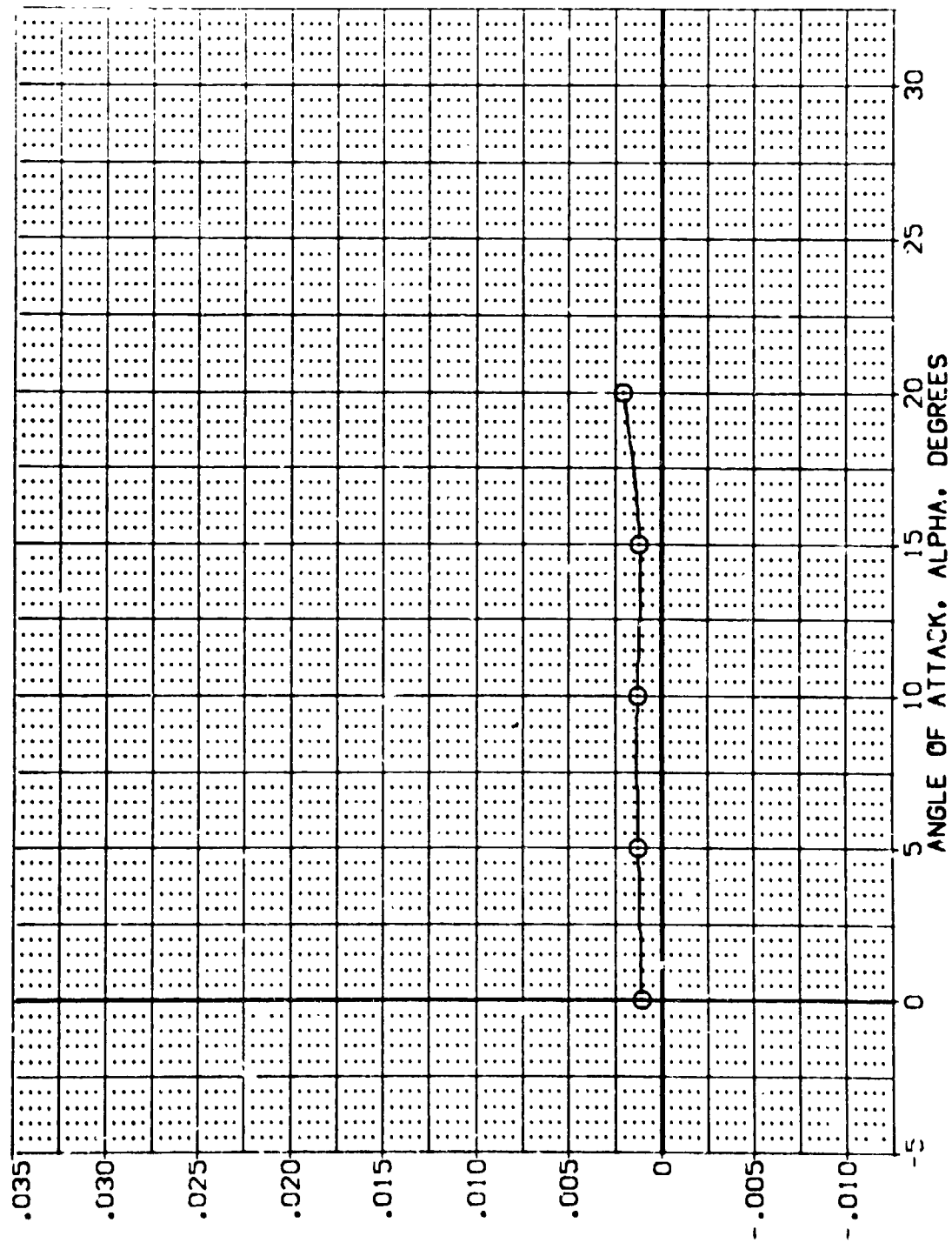


FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

(CDZ356)

0A628 B28C9 M7F8 W116E28V8R5X9

SYMBOL  
O

RUDDER  
-16.220

PARAMETRIC VALUES  
MACH .260 BDF LAP -12.000  
ELEVON .000 AILRS .000  
SPDRBK 55.000

REFERENCE INFORMATION  
SREF 4.4119  
LREF 19.2799  
BREF 37.5359  
XMRP 43.5974  
YMRP .0000  
ZMRP 15.1875  
SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

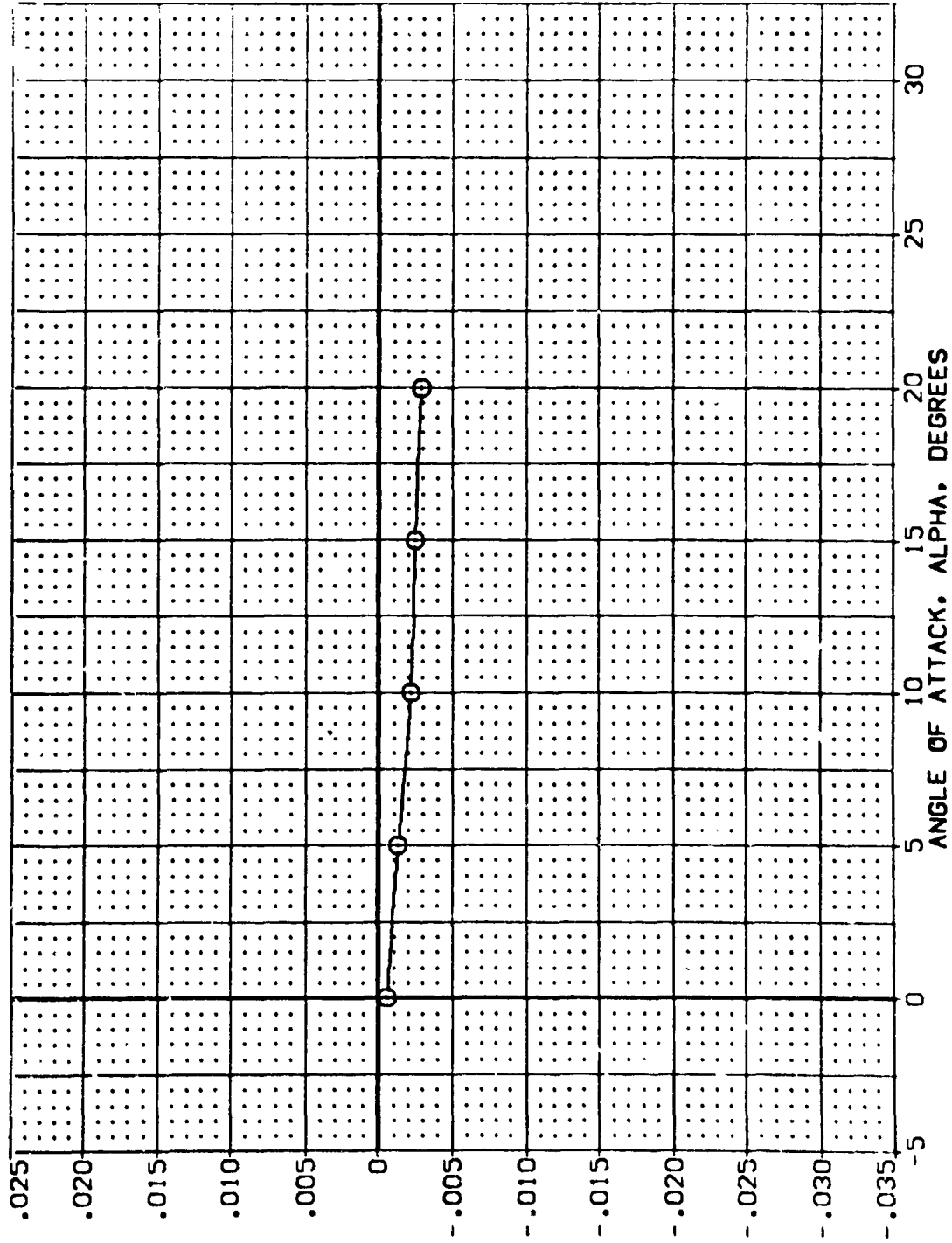


FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

(CDZ356)

W116E28V8R5X9

M7F8

B26C9

0A62B

SYMBOL  
O

RUDDER  
-16.220

PARAMETRIC VALUES  
MACH .260  
ELEVON .000  
SPDRK 55.000

BDFLAP -12.000  
AILRON .000

REFERENCE INFORMATION  
SREF 4.4119 SO.FT  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5974 INCHES  
YMRP 10.0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

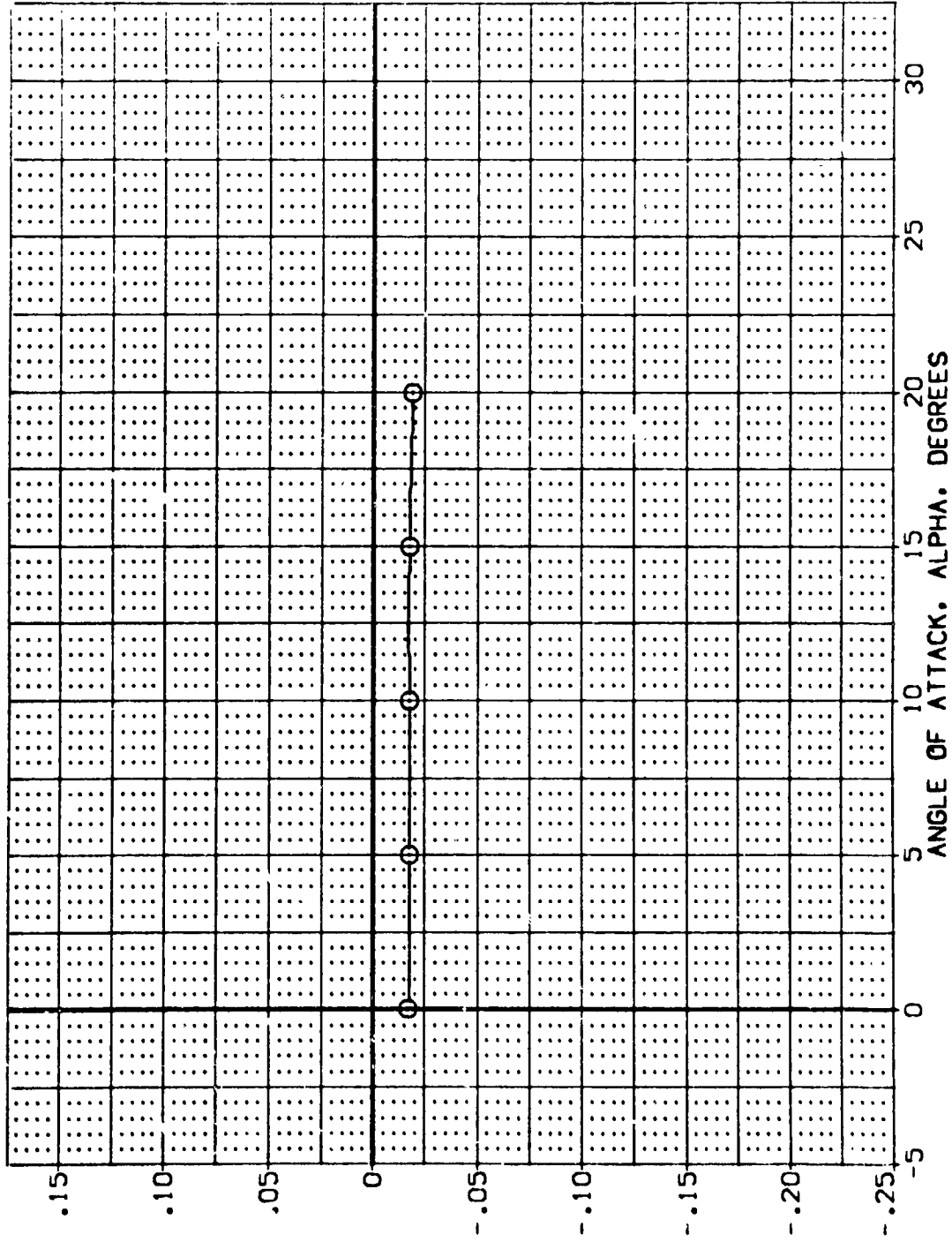
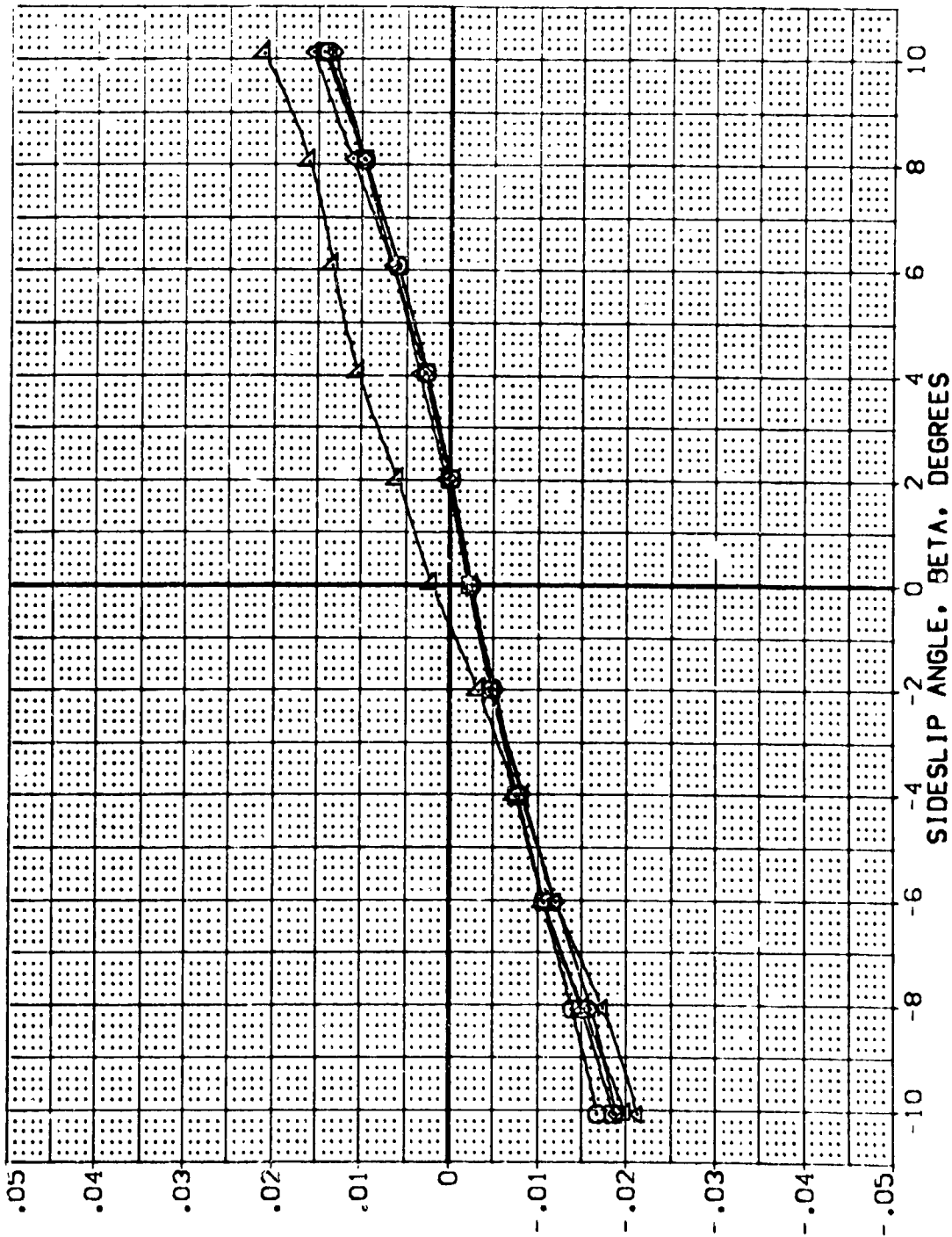


FIG 65 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 55 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
(RD324)	0A628 B26C9 M7F8 V11E28V8F5X9	.000	.000	25.000	.000	SREF 4.4119 SO.FT
(RD325)	0A628 B26C9 M7F8 V11E28V8F5X9	5.000	.000	25.000	.000	LREF 19.2799 INCHES
(RD326)	0A628 B26C9 M7F8 V11E28V8F5X9	10.000	.000	25.000	.000	BREF 37.9359 INCHES
(RD327)	0A628 B26C9 M7F8 V11E28V8F5X9	15.000	.000	25.000	.000	XMRP 43.5974 INCHES
(RD328)	0A628 B26C9 M7F8 V11E28V8F5X9	20.000	.000	25.000	.000	ZMRP .0000 INCHES
						SCALE 15.1875 INCHES
						SCALE .0405



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 66 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 25 DEG FLARE

(MACH = .26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AIRLON	REFERENCE INFORMATION
(R0Z374)	0A6Z8 BZ6C9 M7F8 V116E28V8R5X9	.000	.000	25.000	.000	SREF 4.4119 SC.FT.
(R0Z375)	0A6Z8 BZ6C9 M7F8 V116E28V8R5X9	5.000	.000	25.000	.000	LREF 19.2799 INCHES
(R0Z376)	0A6Z8 BZ6C9 M7F8 V116E28V8R5X9	10.000	.000	25.000	.000	BREF 37.9352 INCHES
(R0Z377)	0A6Z8 BZ6C9 M7F8 V116E28V8R5X9	15.000	.000	25.000	.000	XMRP 43.5974 INCHES
(R0Z378)	0A6Z8 BZ6C9 M7F8 V116E28V8R5X9	20.000	.000	25.000	.000	YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .0400 SCALE

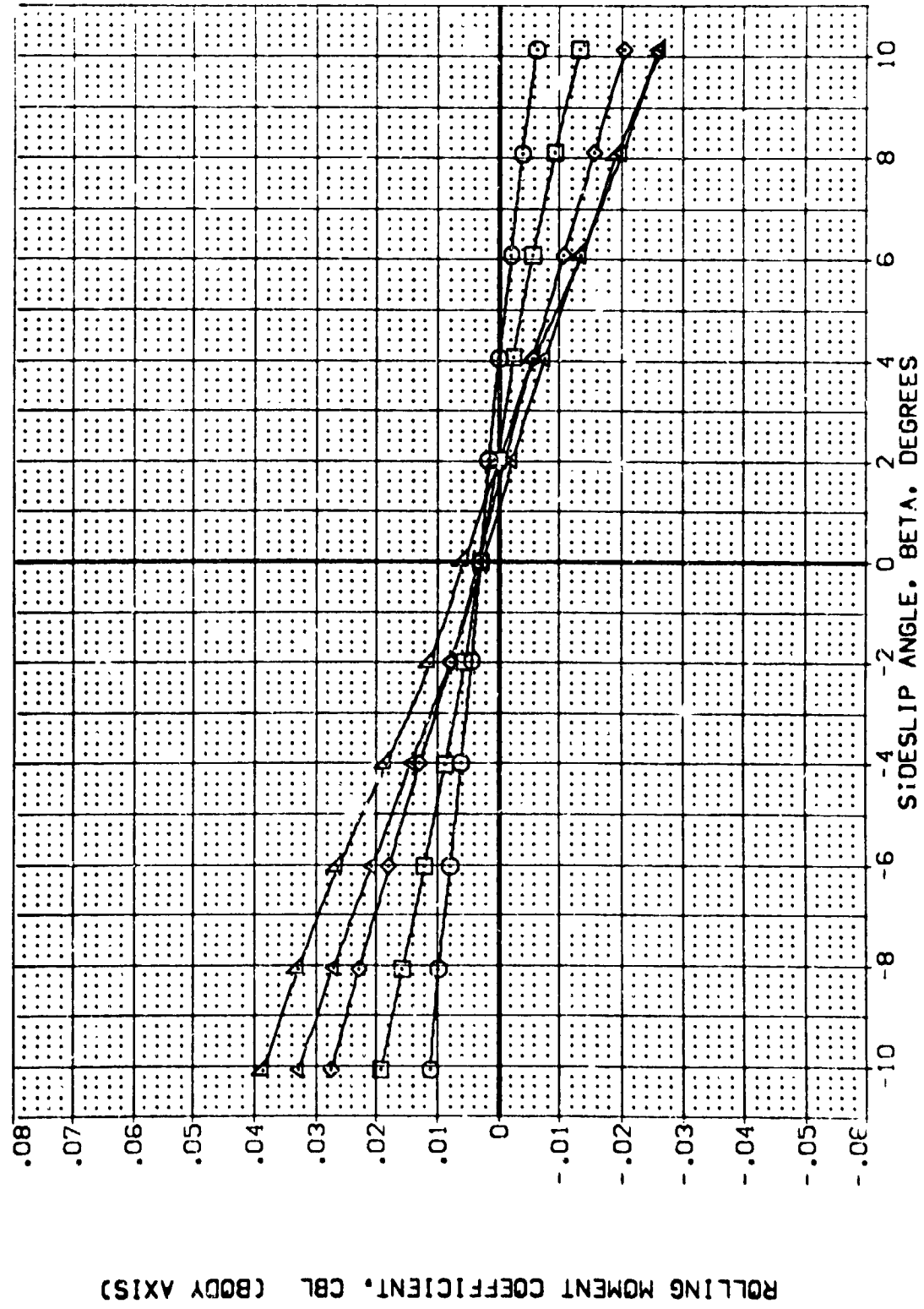


FIG 66 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.25 DEG FLARE





(COZ324)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER .000

MACH .260

ELEVON .000

SPOBRK 25.000

BDFLAP -12.000

AILRON .000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREF 4.4118

LRFL 19.2798

BRFL 37.9259

XMRP 43.5574

VMRP .0000

ZMRP 15.1875

SCALE .0405

SOFT. INCHES

INCHES

INCHES

INCHES

SCALE

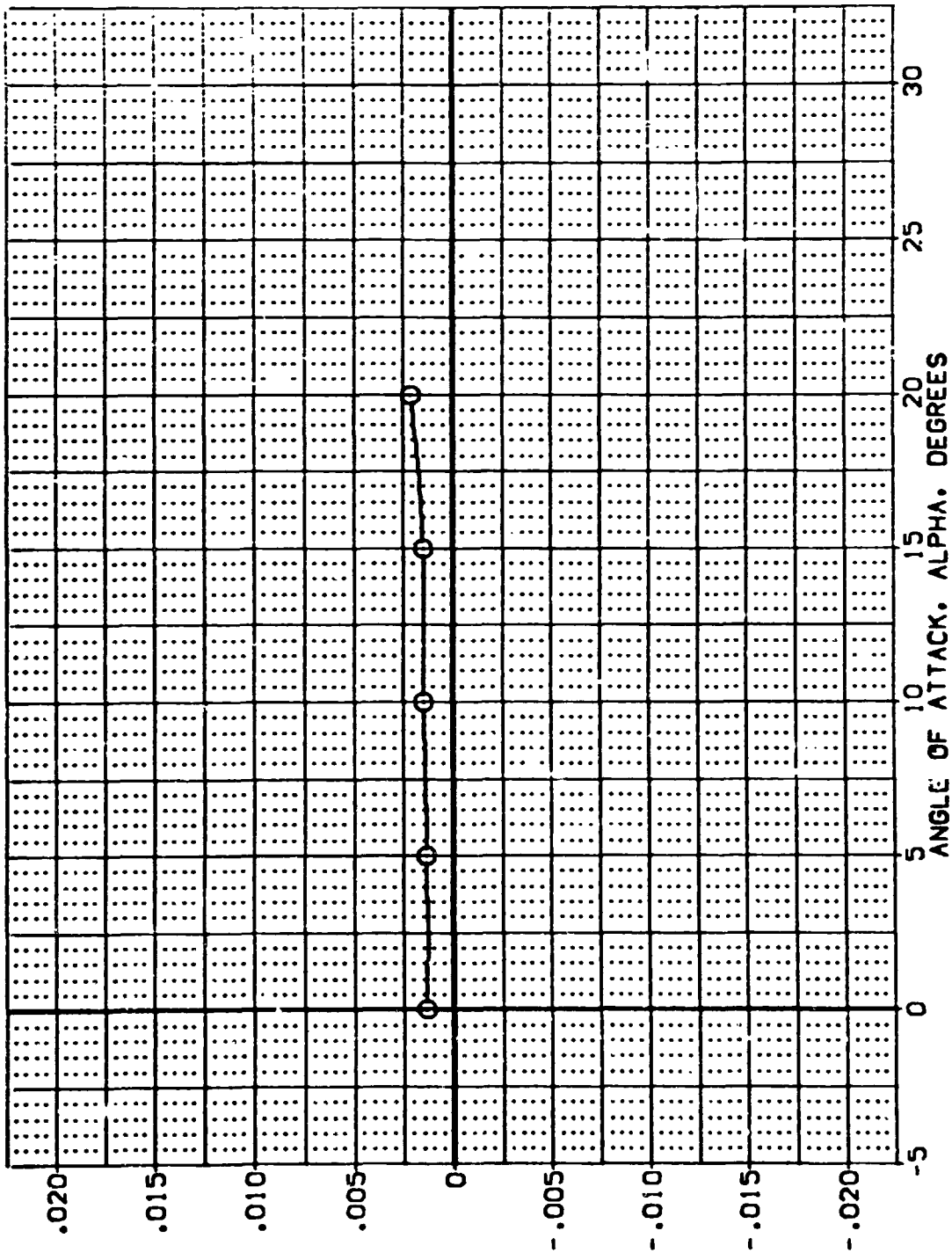


FIG 66 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 25 DEG FLARE

(CDZ324)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL: ○

RUDDER: .000

MACH: .760

ELEVON: .000

SPOBRK: 25.000

BOFLAP: -12.000

AILRON: .000

PARAMETRIC VALUES

REF: 4.4118

LREF: 19.2289

EREF: 37.9375

XREF: 43.5874

YREF: 15.0000

ZREF: 15.1873

SCALE: .0405

REFERENCE INFORMATION

SOFT: INCHES

SCALE: INCHES

SCALE: INCHES

SCALE: INCHES

SCALE: INCHES

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

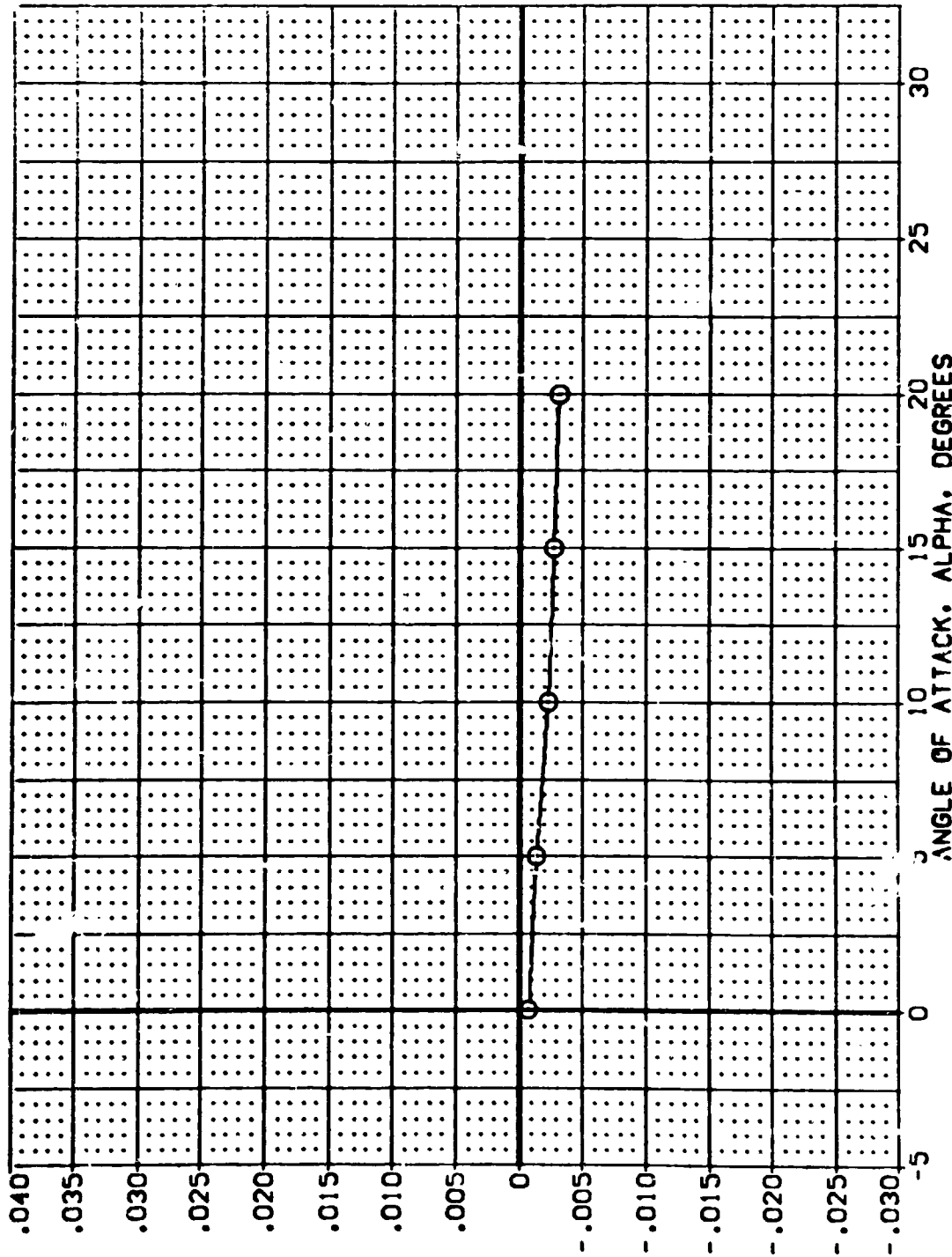


FIG 66 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 25 DEG FLARE



(CDZ324)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

MACH  
ELEVON  
SPDRK

PARAMETRIC VALUES  
.260 BOFLAP  
.000 AILRON  
25.000

-12.000  
.000

REFERENCE INFORMATION  
SREF 4.4119 SO.FT.  
LREF 39.2289 INCHES  
BREF 37.9259 INCHES  
XMRP 43.5974 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

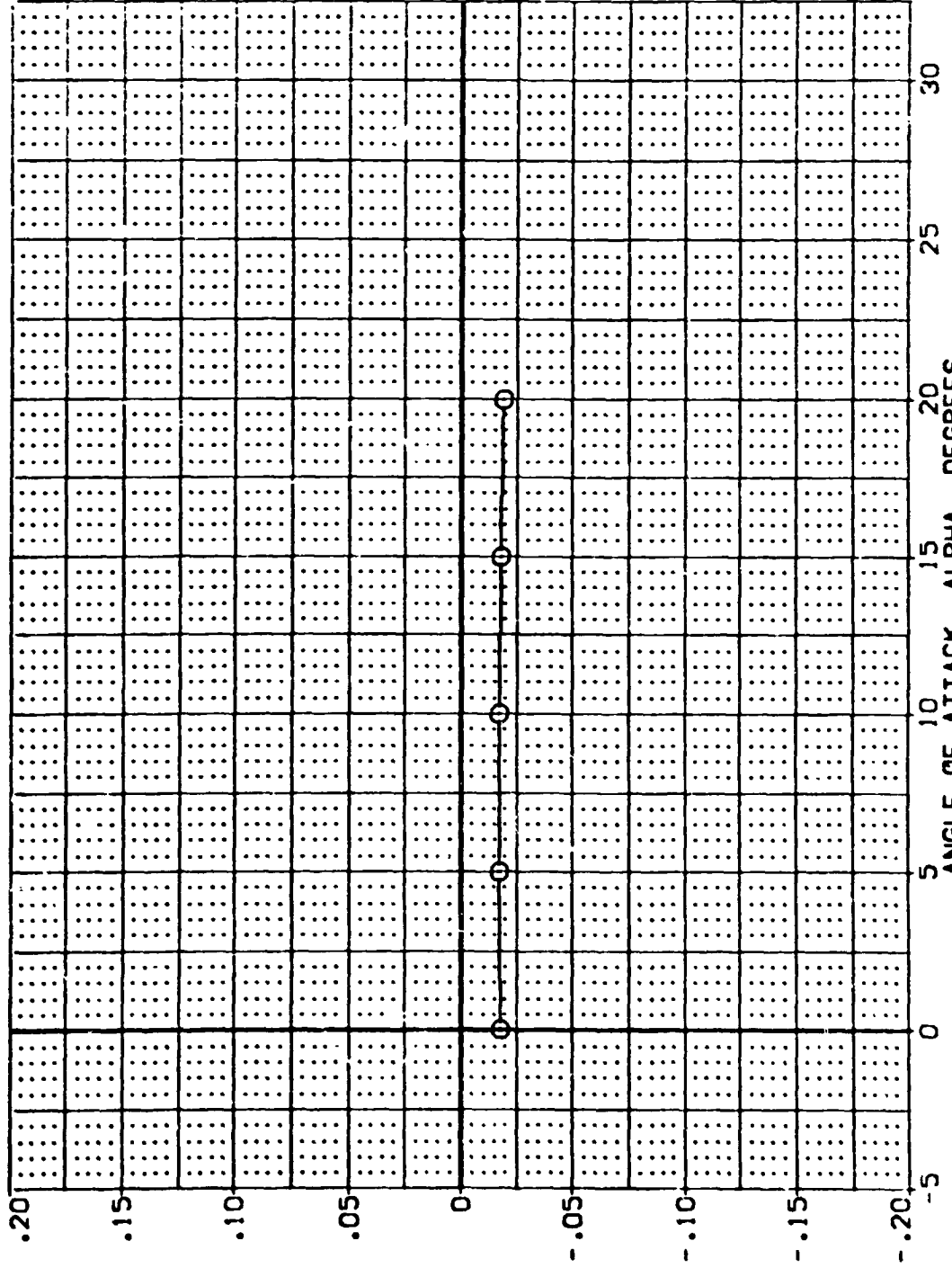
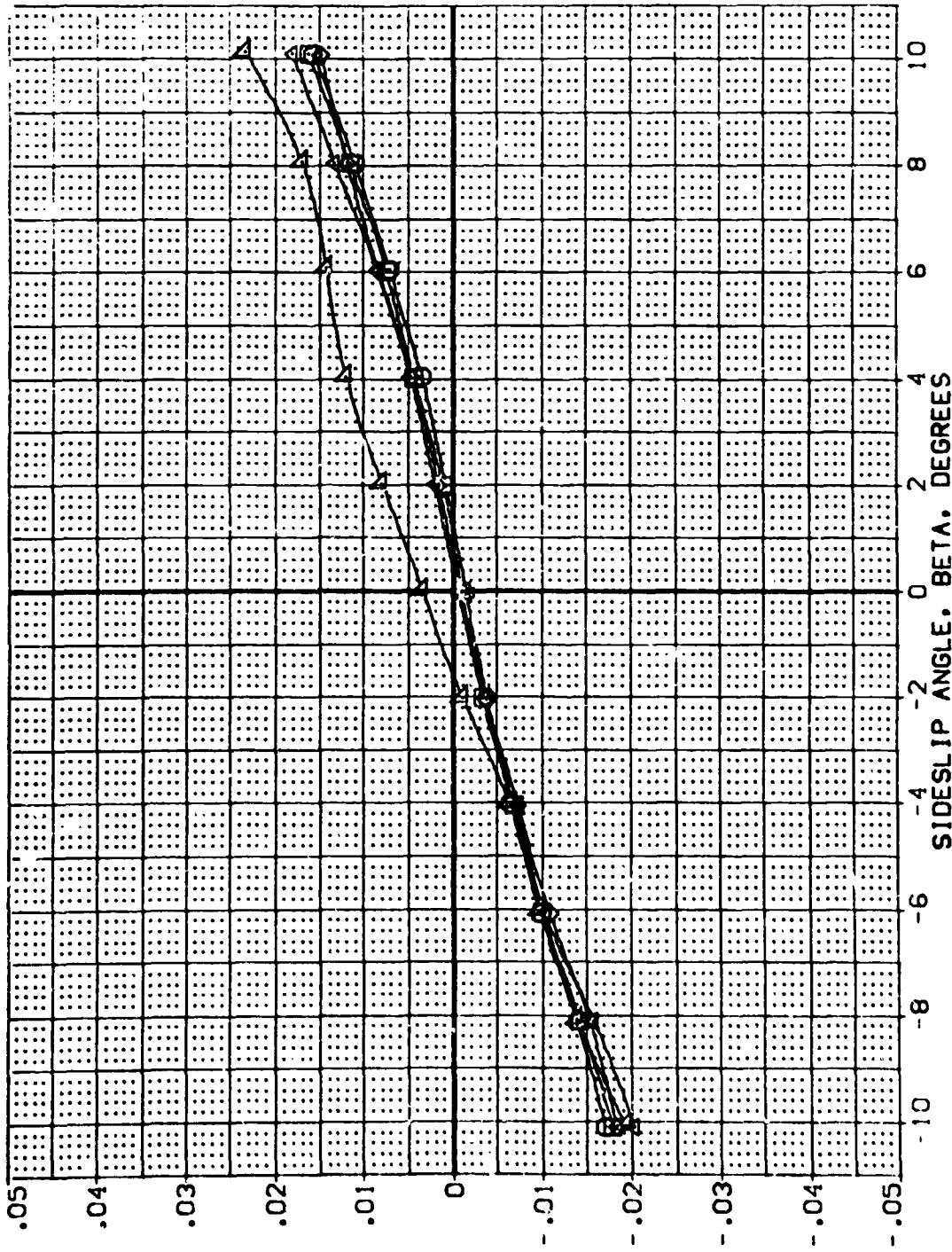


FIG 66 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 25 DEG FLARE

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    ALPHA    RUDDER    SPOBRK    AIRRON    REFERENCE INFORMATION    SQ.FT.    INCHES

(RDZ331)	QAG28 B76C9 M7F8 V1   6E28V8P5K9	.000	.000	40.000	.000	SREF	4.4119	50.0
(RDZ332)	QAG28 B76C9 M7F8 V1   6E28V8P5K9	5.000	.000	40.000	.000	LREF	19.2289	50.0
(RDZ333)	QAG28 B76C9 M7F8 V1   6E28V8P5K9	10.000	.000	40.000	.000	BREF	37.9359	50.0
(RDZ334)	QAG28 B76C9 M7F8 V1   6E28V8P5K9	15.000	.000	40.000	.000	XAPP	43.5974	50.0
(RDZ335)	QAG28 B76C9 M7F8 V1   6E28V8P5K9	20.000	.000	40.000	.000	ZAPP	15.0000	50.0
						SCALE	15.1875	50.0



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	SREF	4.4119	50.FT.
(R0Z331)	DASZ8 BZ6C9 M7F8 V118L28V8SXS	.000	.000	40.000	.000	LREF	19.2299	INCHES
(R0Z332)	DASZ8 BZ6C9 M7F8 V118L28V8SXS	5.000	.000	40.000	.000	BREF	37.9359	INCHES
(R0Z333)	DASZ8 BZ6C9 M7F8 V118L28V8SXS	10.000	.000	40.000	.000	XMRP	43.5971	INCHES
(R0Z334)	DASZ8 BZ6C9 M7F8 V118L28V8SXS	15.000	.000	40.000	.000	YMRP	.0000	INCHES
(R0Z335)	DASZ8 BZ6C9 M7F8 V118L28V8SXS	20.000	.000	40.000	.000	ZMRP	15.1875	INCHES
						SCALE	.0405	SCALE

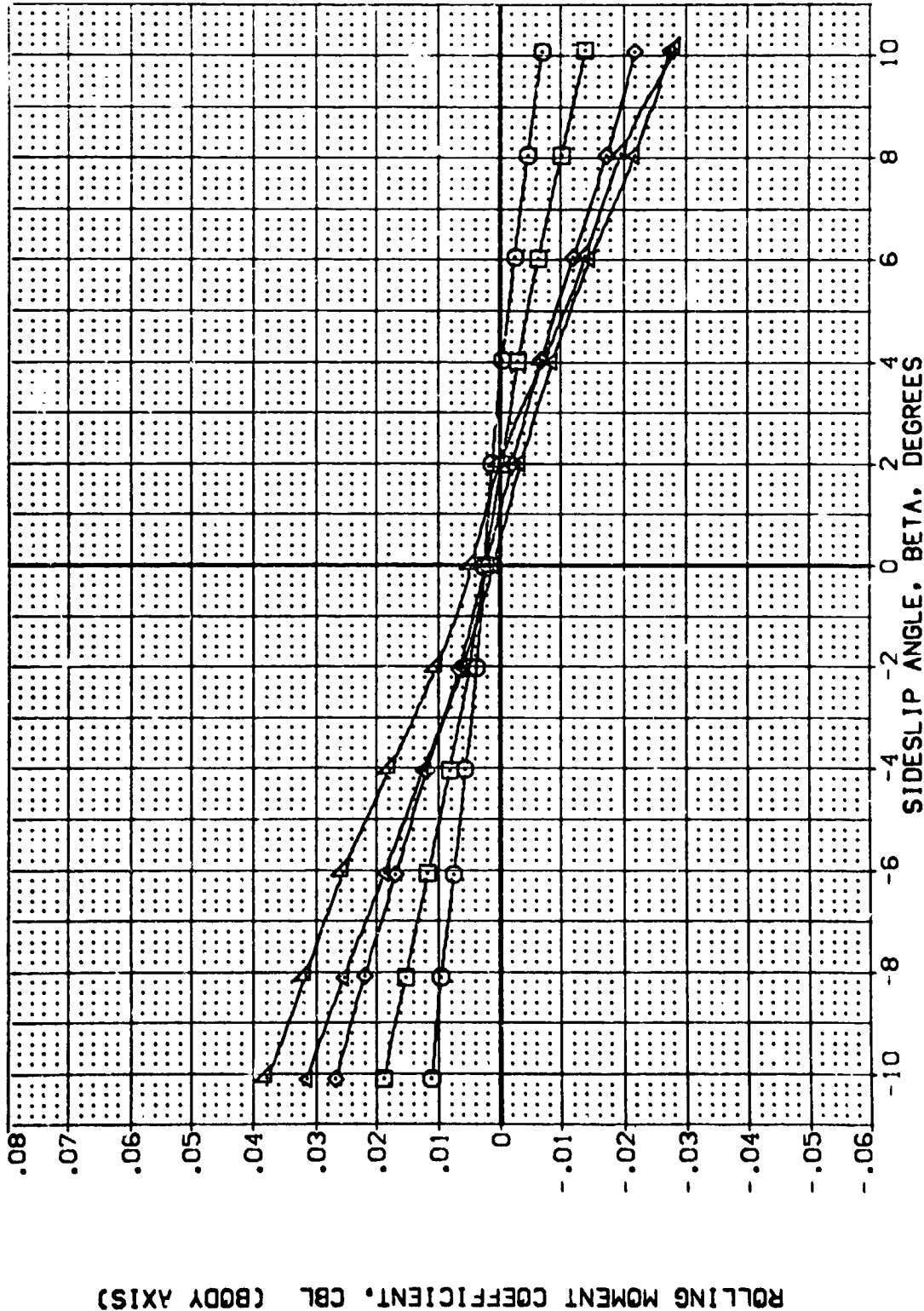


FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
(RD2331)	CA628 B26C9 M7F8 V116E28V8FSX9	.000	.000	40.000	.000	4.4119 SO.FT.
(RD2332)	CA628 B26C9 M7F8 V116E28V8FSX9	5.000	.000	40.000	.000	19.2299 INCHES
(RD2333)	CA628 B26C9 M7F8 V116E28V8FSX9	10.000	.000	40.000	.000	37.9379 INCHES
(RD2334)	CA628 B26C9 M7F8 V116E28V8FSX9	15.000	.000	40.000	.000	43.5974 INCHES
(RD2335)	CA628 B26C9 M7F8 V116E28V8FSX9	20.000	.000	40.000	.000	.0000 INCHES
						15.1875 INCHES
						.0405 SCALE

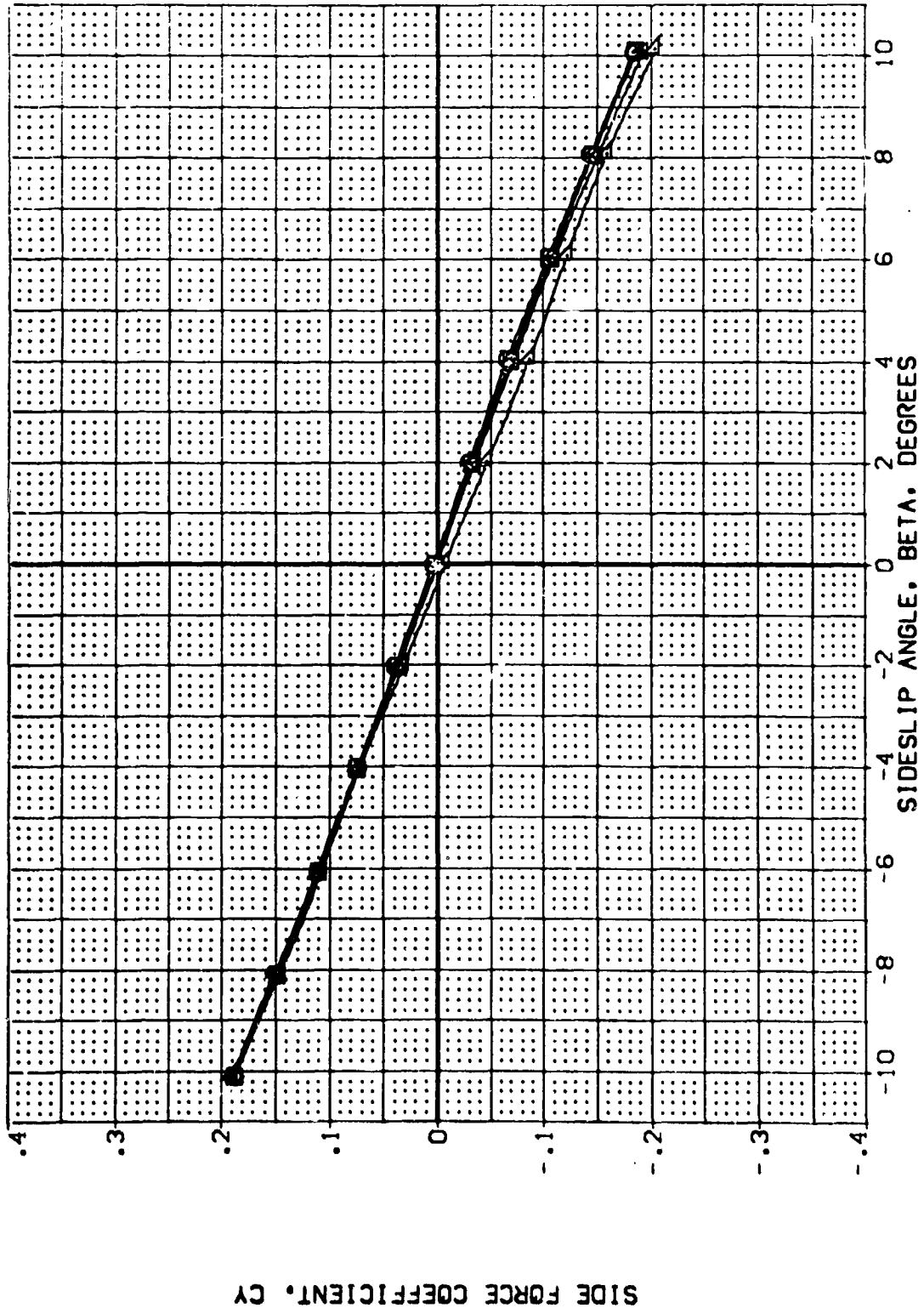


FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE

(A)MACH = .26



(CDZ331)

W116E28V8R5X9

M7F8

QAG2B 026C9

SYMBOL  
O

RUDDER  
.000

MACH  
ELEVON  
SPOBRK

PARAMETRIC VALUES  
.260 BDFLAP  
.000 AILRON  
40.000

-12.000  
.000

REFERENCE INFORMATION

SREF	4.4119	SO.FT
LREF	19.2299	INCHES
BREF	37.9359	INCHES
XMRP	43.5574	INCHES
YMRP	.0000	INCHES
ZMRP	15.1875	INCHES
SCALE	.0405	SCALE

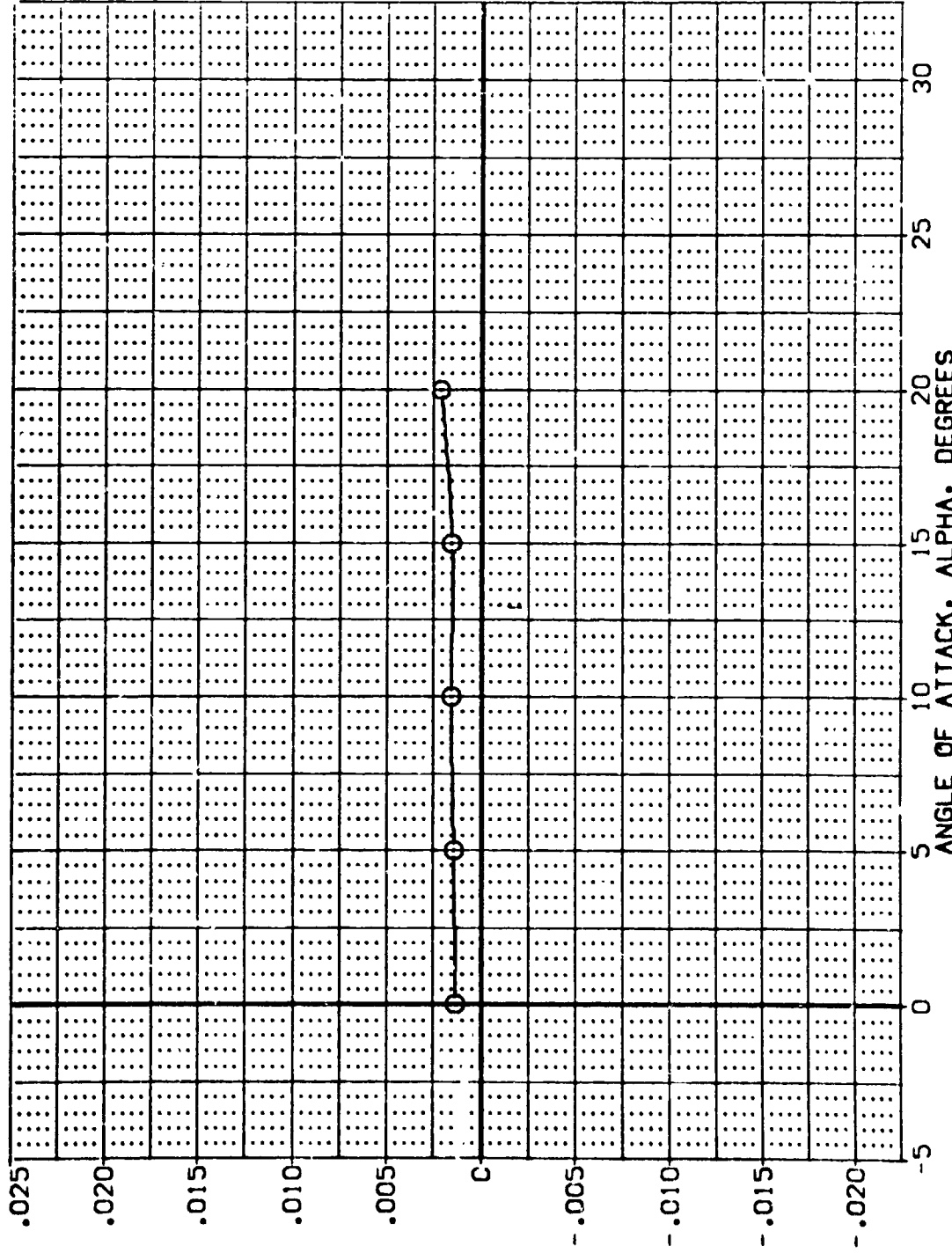


FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (CDZ331)

SYMBOL  
O

PARAMETRIC VALUES  
MACH .260 BOFLAP -12.000  
ELEVON .000 AILRON .000  
SPDBRK 40.000

REFERENCE INFORMATION  
SREF 4.4119 SC.FT.  
LREF 19.2799 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5874 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

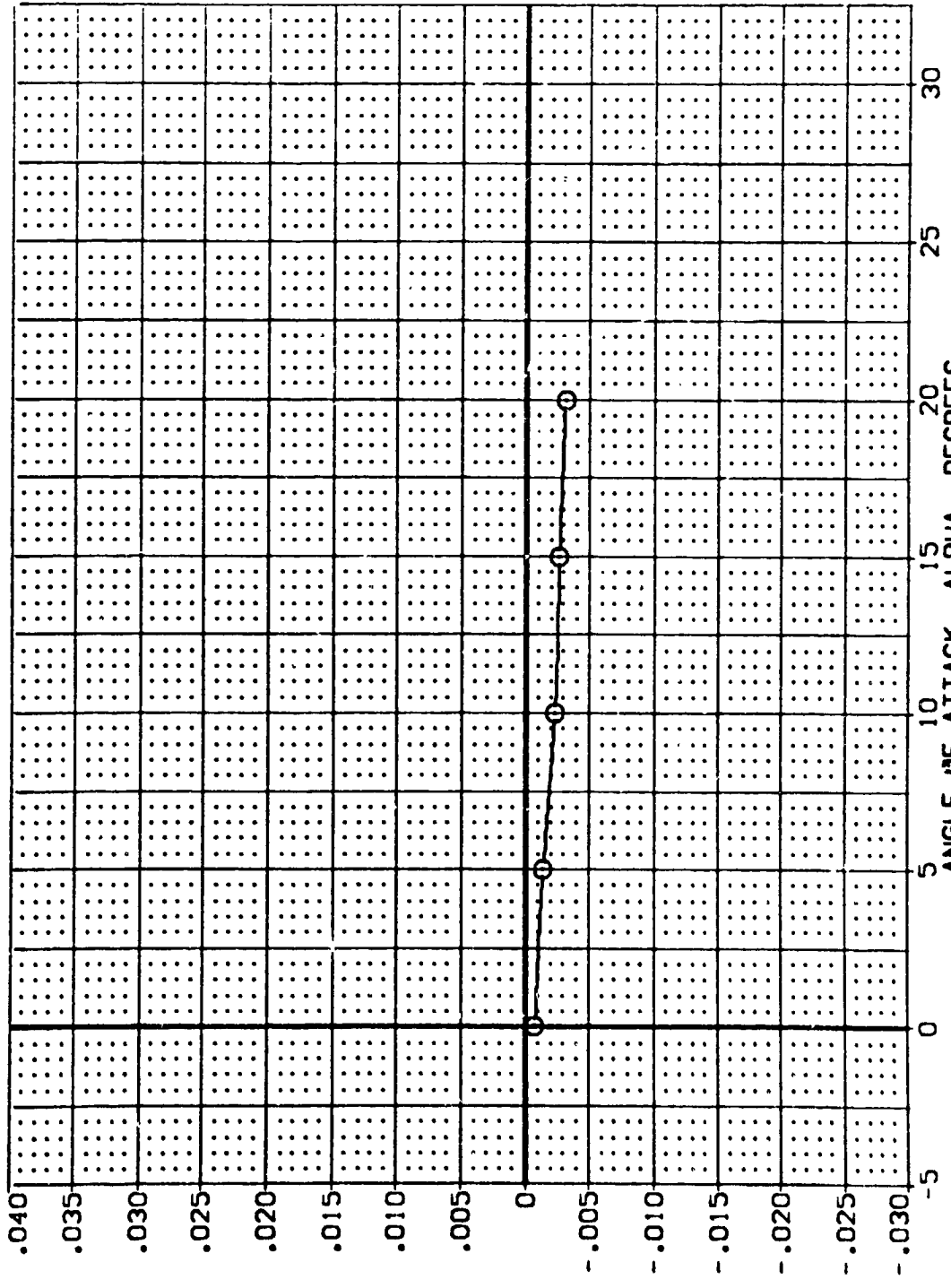


FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE



(CDZ331)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER .000

MACH .260

ELEVON .000

SPOBRK 40.000

BOFLAP -12.000

A1LHON .000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREF 4.7119 SQ.FT.

LREF 19.2299 INCHES

BREF 37.9359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

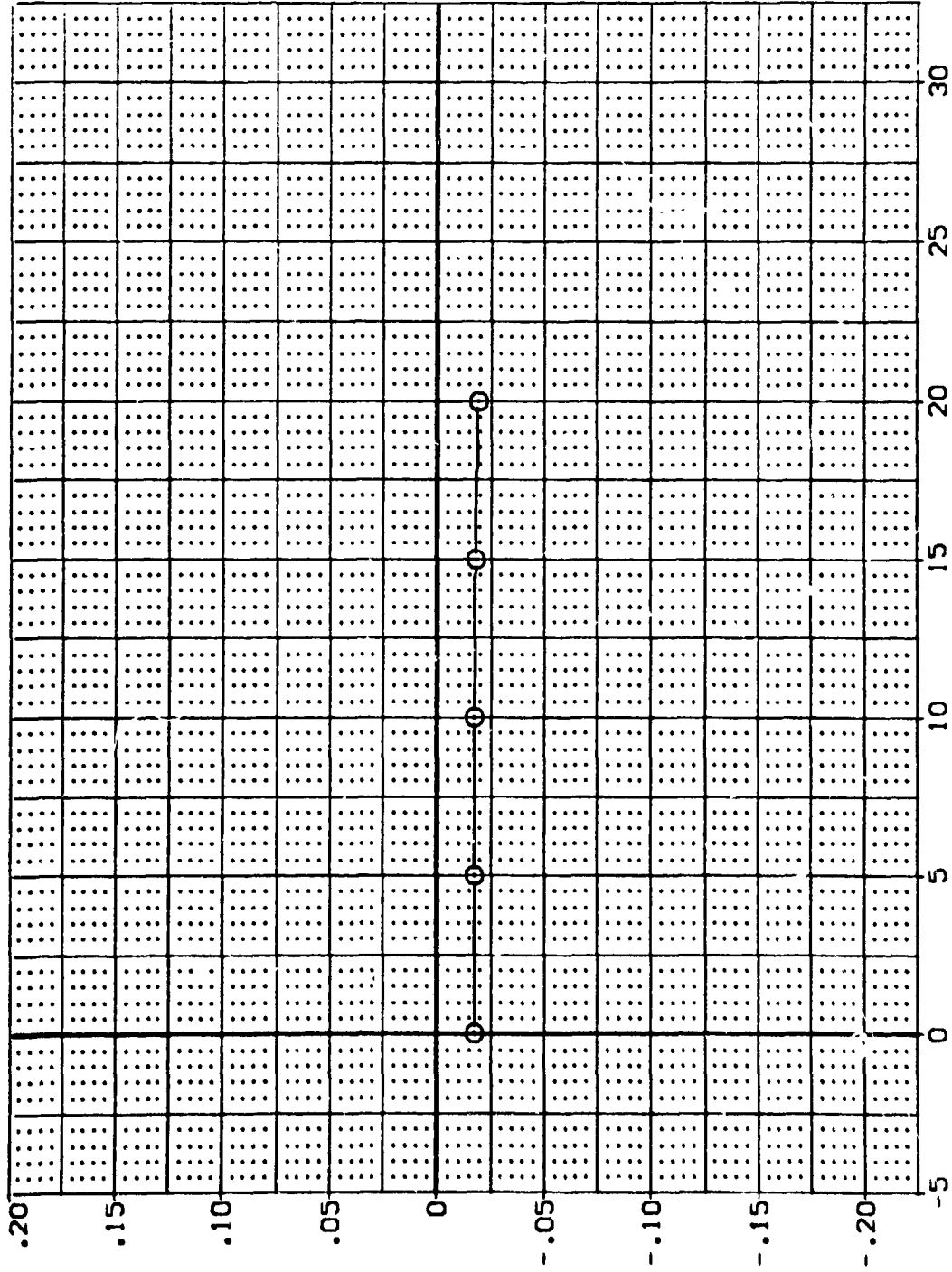


FIG 67 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 40 DEG FLARE

DATA SET SYMBOL: [R02194] [R02198] [R02361]   
 CONFIGURATION DESCRIPTION: M7F8 V116E28V8R5K9   
 M7F8 V116E28V8R5K9   
 M7F8 V116E28V8R5K9   
 REFERENCE INFORMATION: SREF 4.4119 SQ.FT.   
 LREF 19.2799 INCHES   
 BREF 37.9359 INCHES   
 XMRP 43.5974 INCHES   
 YMRP .0000 INCHES   
 ZMRP 15.1875 INCHES   
 SCALE .0405

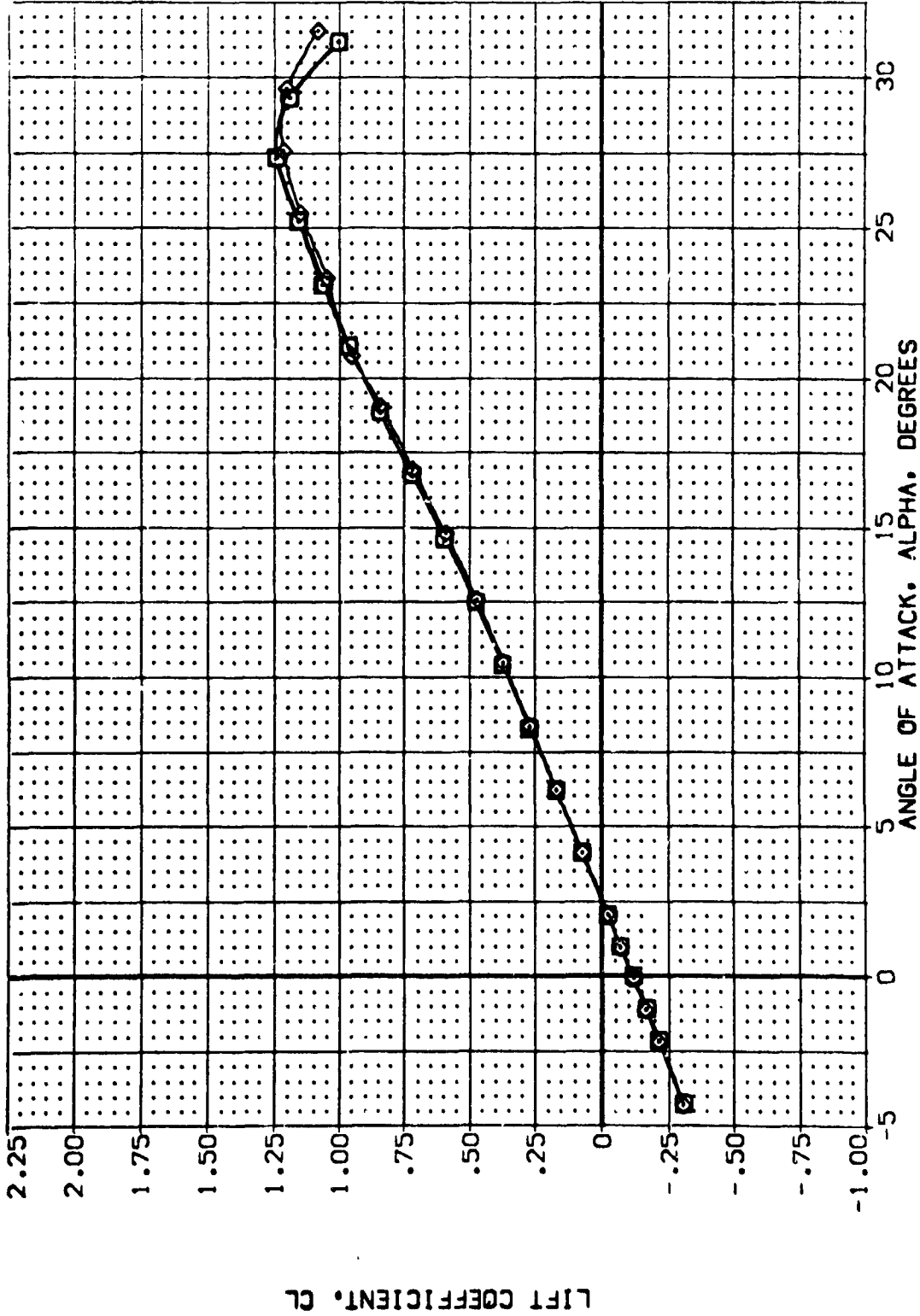


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(A)MACH = .26



DATA SET SYMBOL: (R02194), (R02188), (R02361)

CONFIGURATION DESCRIPTION: 0A628 B26C9 M7F8, 0A628 B26C9 M7F8, 0A628 B26C9 M7F8

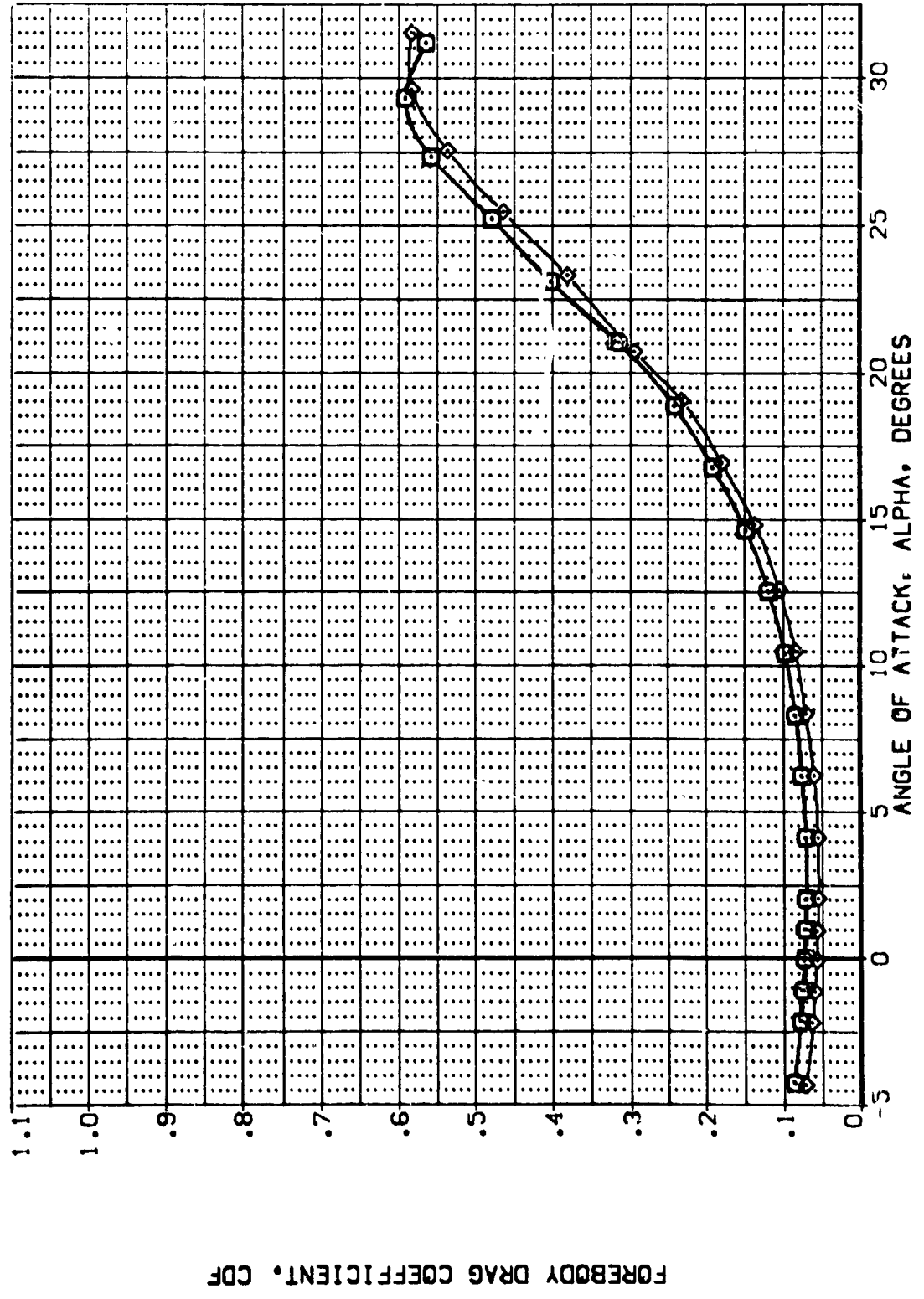
ELEVON: .000, .000

SPODBK: 85.000, 85.000, 85.000

BDFLAP: -12.000, -12.000, -12.000

RUDDER: -15.220, -7.960, .000

REFERENCE INFORMATION: 4.4119 SC.F.T., 19.2299 INCHES, 37.9339 INCHES, 43.5974 INCHES, .0000 INCHES, 15.1875 INCHES, .0405 SCALE



FOREBODY DRAG COEFFICIENT, CDF

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(A)MACH = .26

DATA SET SYMBOL  
 (R02194)  
 (R02188)  
 (R02361)

CONFIGURATION DESCRIPTION  
 0A628 B26C9 M7F8 V116E28V85X9  
 0A628 B26C9 M7F8 V116E28V85X9  
 0A628 B26C9 M7F8 V116E21V85X9

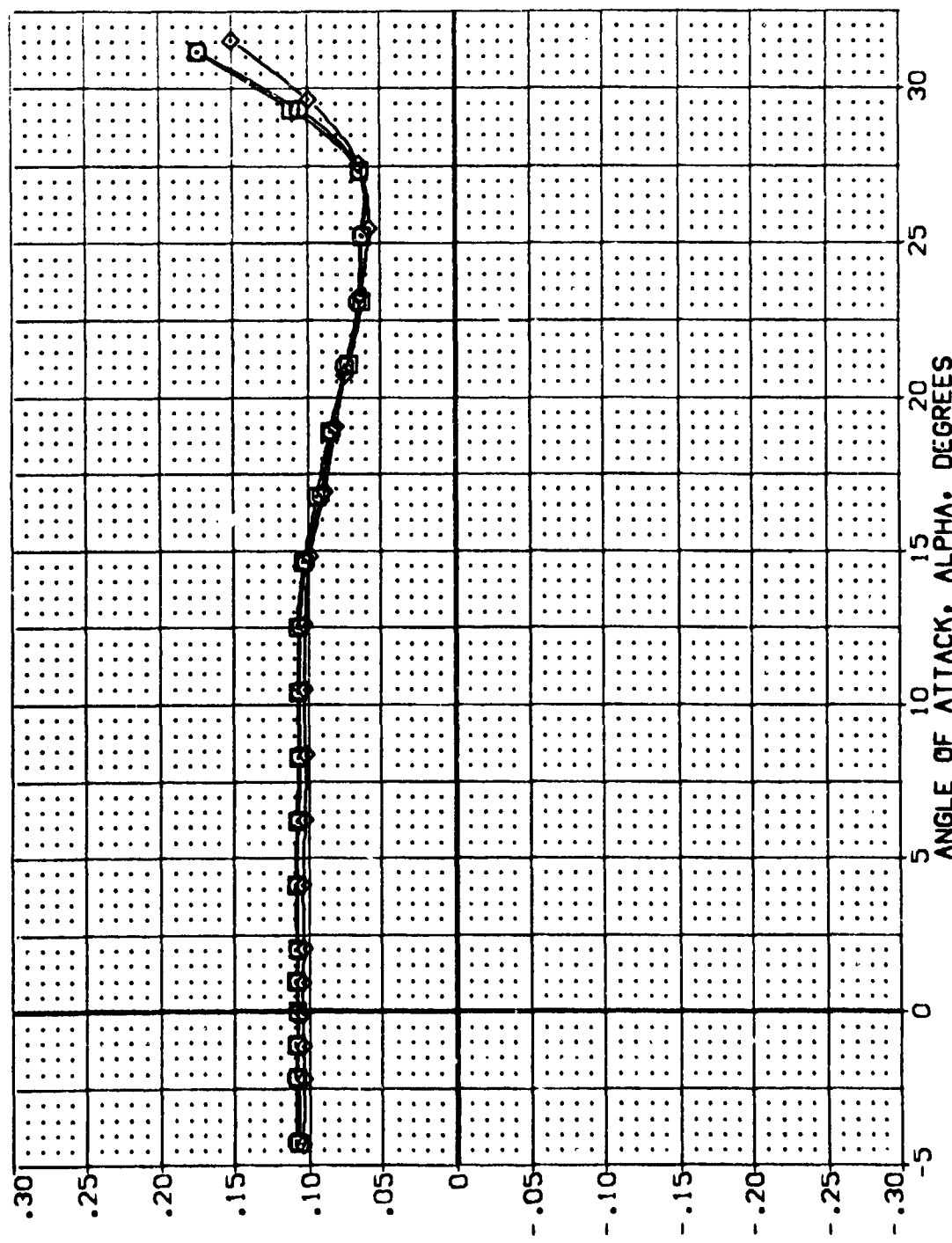
ELEVON  
 .000  
 .000

SPOBRK  
 85.000  
 85.000

BOFLAP  
 -12.000  
 -12.000

RUDDER  
 -16.220  
 -7.960

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0405



PITCHING MOMENT COEFFICIENT, CLM

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(A)MACH = .26



DATA SET SYMBOL: (R02184), (R02188), (R02361)

CONFIGURATION DESCRIPTION:  
 GAS28 B26C9 M7F8 V116E28V85SX9  
 GAS28 B26C9 M7F8 V116E28V85SX9  
 GAS28 B26C9 M7F8 V116E28V85SX9

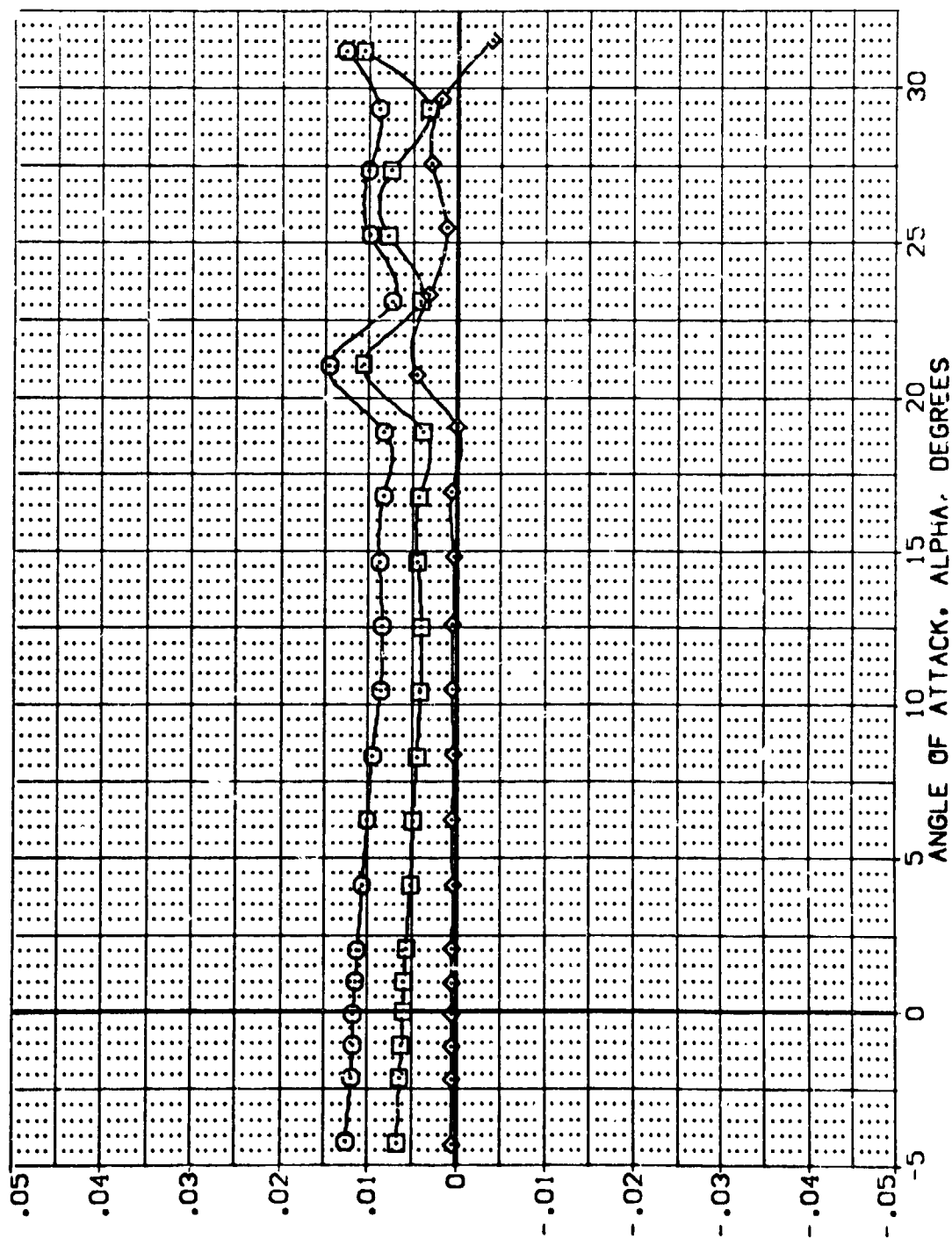
ELEVON: .000, .000, .000

SPODBK: 85.000, 85.000, 85.000

BOFLAP: -12.000, -12.000, -12.000

RUDLER: -16.220, -7.560, .000

REFERENCE INFORMATION:  
 SREF: 4.4119 SO.FT.  
 LREF: 19.2799 INCHES  
 BREF: 37.9759 INCHES  
 YMRP: 43.5974 INCHES  
 ZMRP: 15.1000 INCHES  
 SCALE: 15.1875 INCHES  
 SCALE: .0405



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(M)MACH = .26

DATA SET SYMBOL  
 (R01.94)  
 (R01.88)  
 (R01.361)

CONFIGURATION DESCRIPTION  
 QAS28 B26CS M718 V116E78V85XS  
 QAS28 B26CS M718 V116E78V85XS  
 QAS28 B26CS M718 V116E78V85XS

ELEVON SPOBRK BOFLAP RUDDER  
 .000 85.000 -12.000 -16.270  
 .000 85.000 -12.000 -7.960  
 .000 85.000 -12.000 .000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT  
 LREF 19.2759 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5974 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .0105 SCALE

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

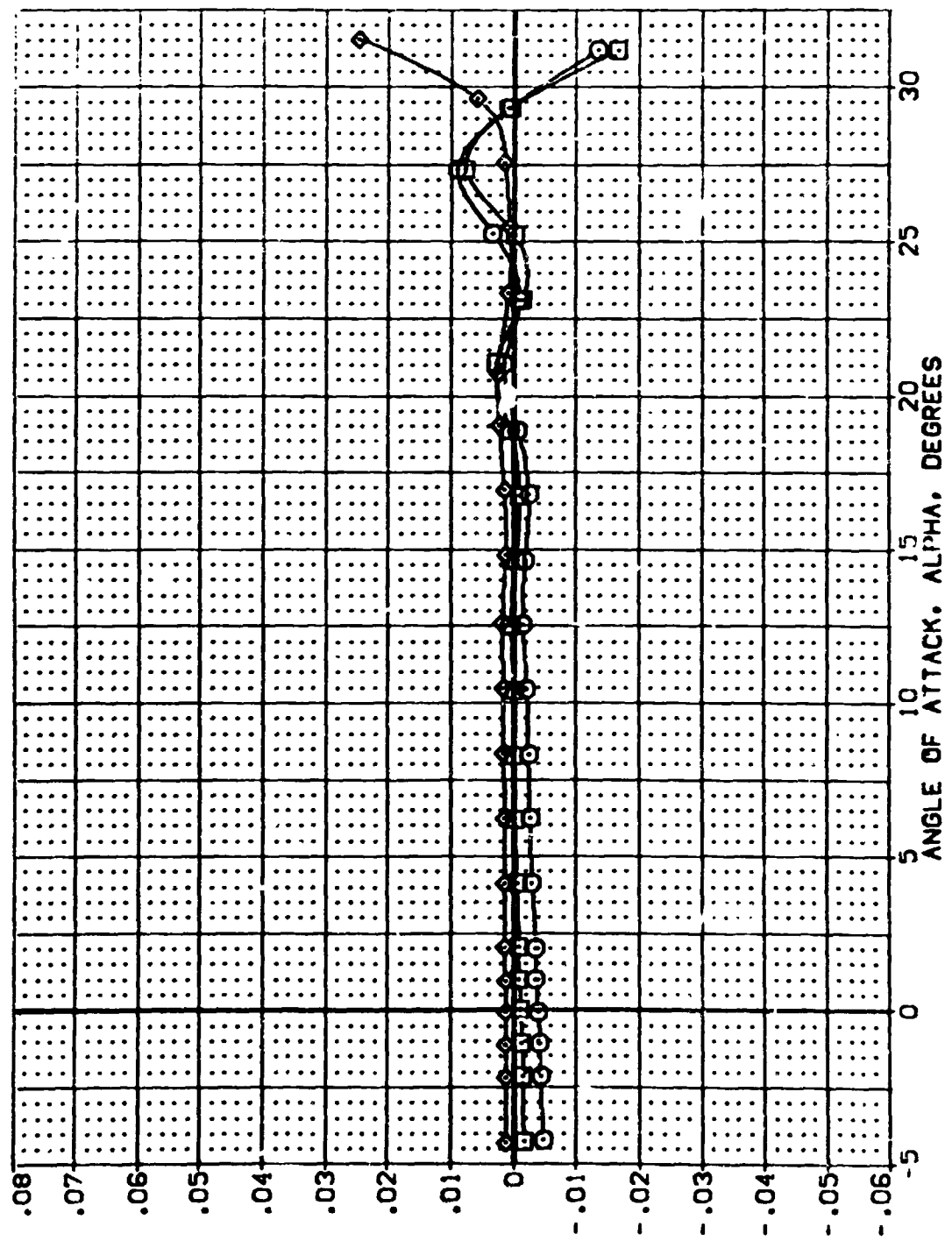


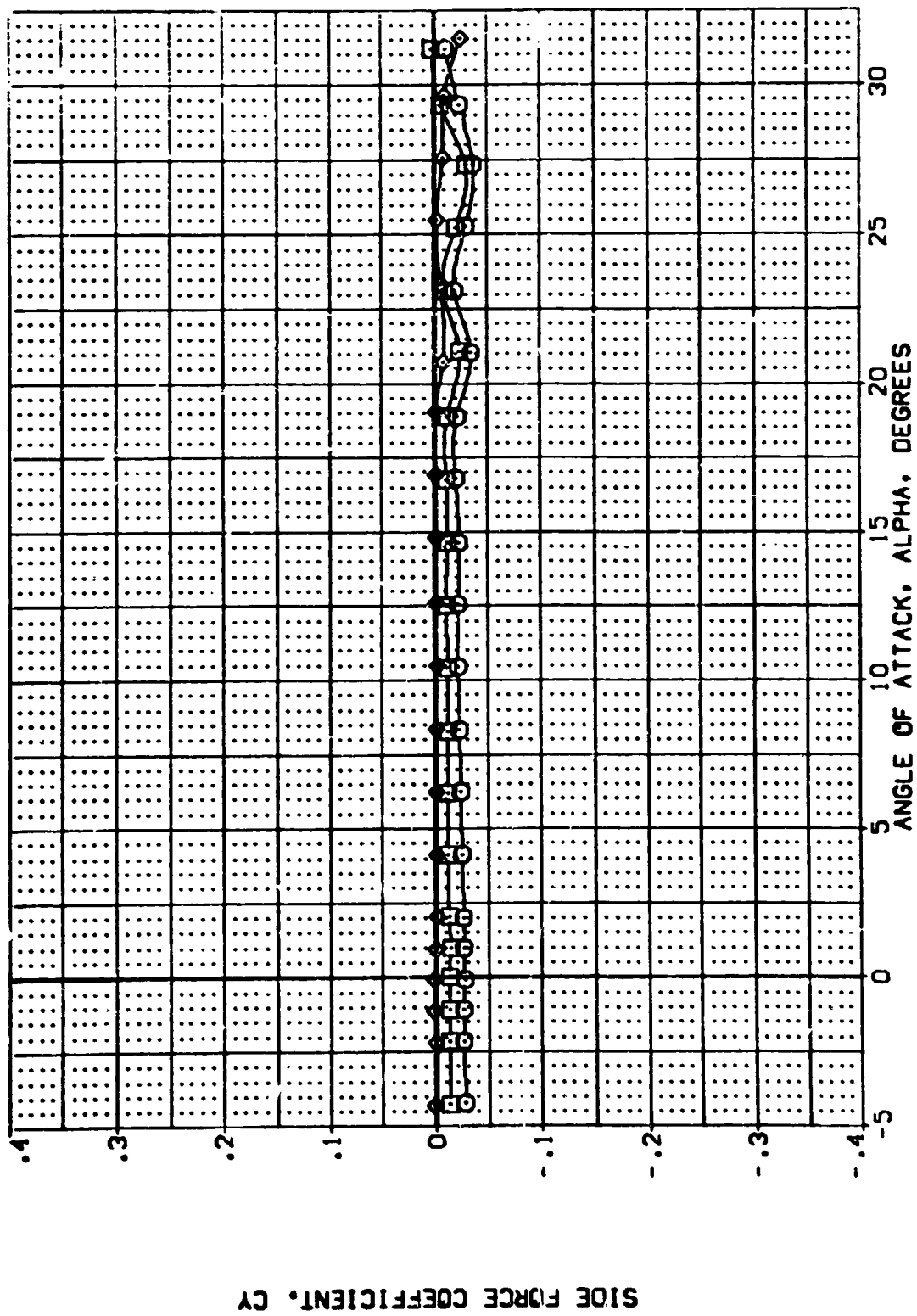
FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(A)MACH = .26



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION    SO.FT. INCHES INCHES INCHES INCHES INCHES

(R02194)	0A628 B26C9 M7E8 V116E28V85K9	SREF	4.4119						
(R02198)	0A628 B26C9 M7E8 V116E28V85K9	LREF	19.2799						
(R02261)	0A628 B26C9 M7E8 V116E28V85K9	BREF	37.5359						
		XREF	43.5974						
		YREF	.0000						
		ZREF	15.1875						
		SCALE	.0400						



SIDE FORCE COEFFICIENT, CY

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(A)MACH = .26

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATA SOURCE	DATASET	RUDDER	SRF	REFERENCE INFORMATION	
○	.000	805 LAP	.260	DEL VON	.000	20Z194	-7.960	REF	4.4119	SCALF S
		SPOBRK	-12.000	AILRON	.000	20Z194		REF	19.2299	SCALE S
			65.000	BETA	.000	20Z361		REF	37.9579	SCALE S
								REF	43.3574	SCALE S
								REF	.0000	SCALE S
								REF	15.1875	SCALE S
								REF	.0405	SCALE

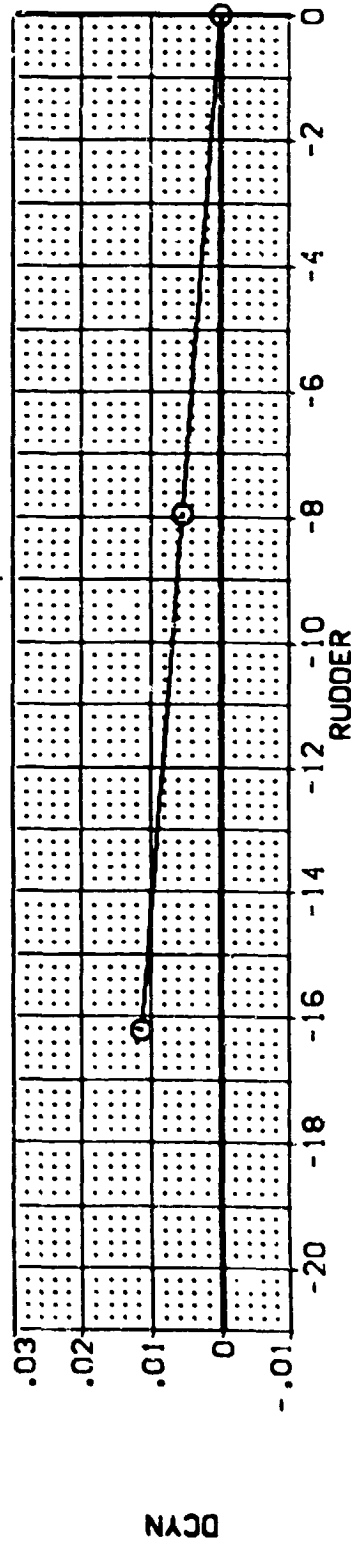
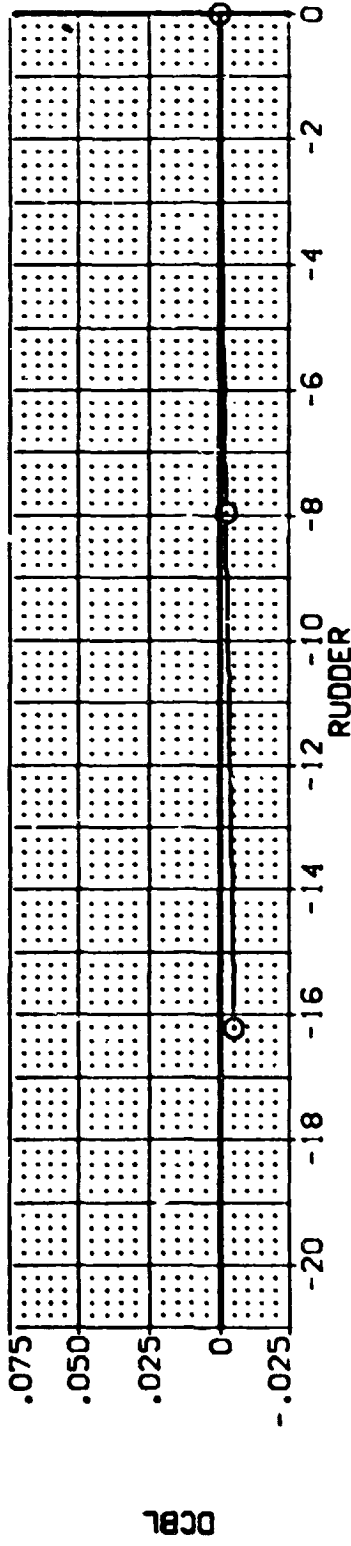
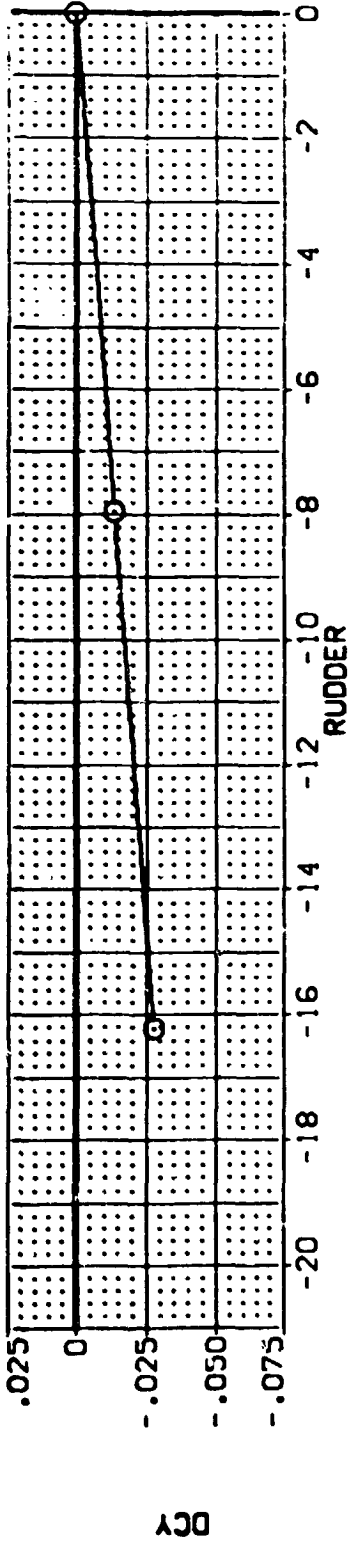


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

(20Z194)

W116E28V8R5X9

M7F8

B26C9

0A62B

SYMBOL ALPHA MACH BOFLAP SPOBRK

5.000

.260

-12.000

65.000

PARAMETRIC VALUES

DELTON

AILRON

BETA

.000

.000

.000

DATA SOURCE

RUDDER

-16.270

.000

DATASET

20Z194

20Z361

RUDDER

-7.960

REFERENCE INFORMATION

SO.F.T.

INC.F.S

INC.F.S

INC.F.S

INC.F.S

SCALE

4.4119

19.2799

37.9359

43.5974

15.0000

15.1875

.0405

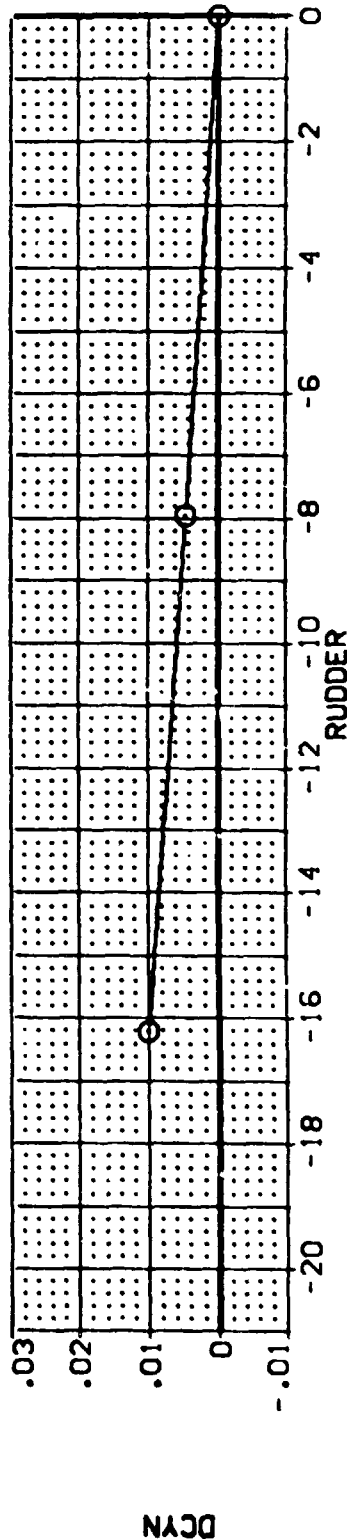
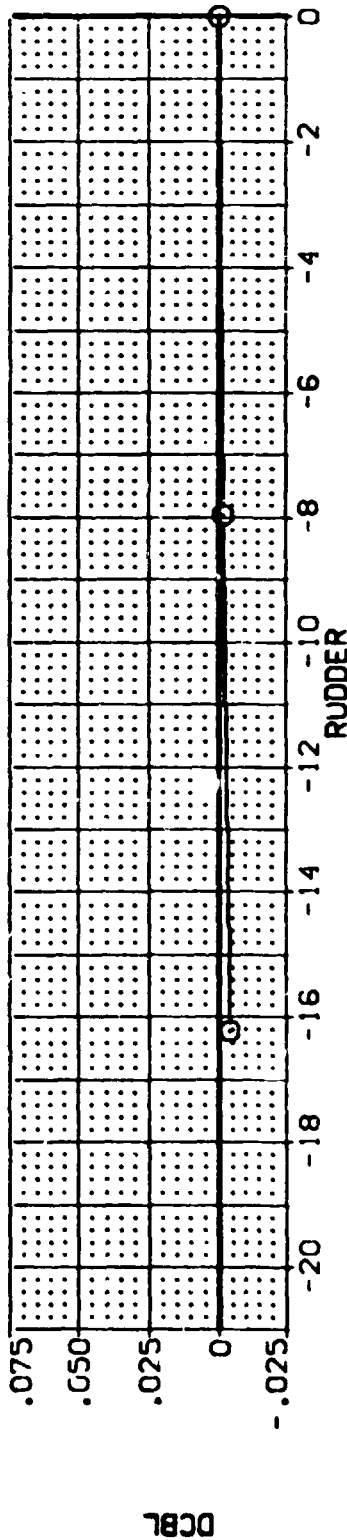
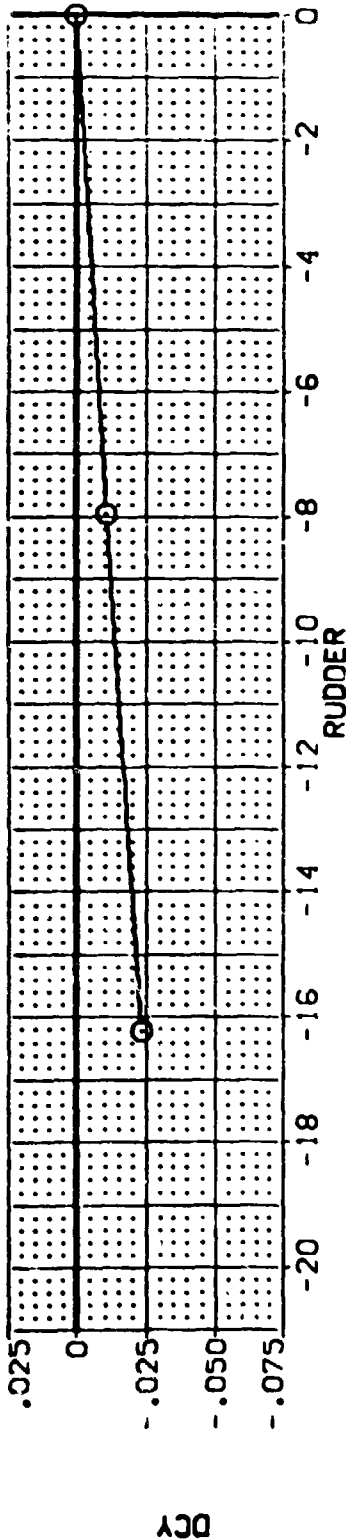


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE



0A628 826C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	15.000		.260	DELVON	.000	DATASET	RUDDER	SREF	4.4119	50. FT.	
		BOFLAP	-12.000	A1LRON	.000	20Z194	-16.200	LREF	19.2299	INCHES	
		SPOBRK	85.000	BETA	.000	20Z361	.000	BREF	37.9359	INCHES	
								XMRP	43.5874	INCHES	
								YMRP	.0000	INCHES	
								ZMRP	15.1875	INCHES	
								SCALE	.04CS	SCALE	

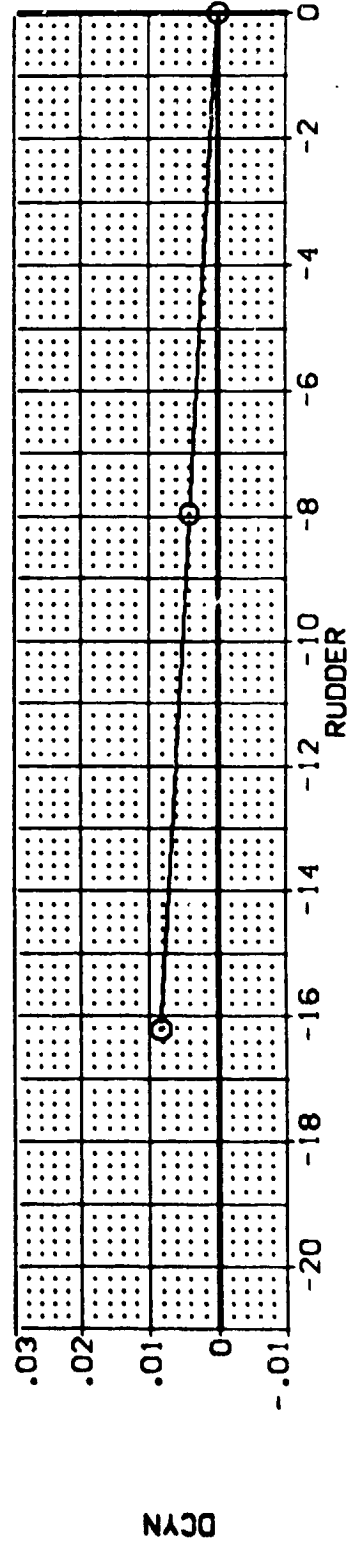
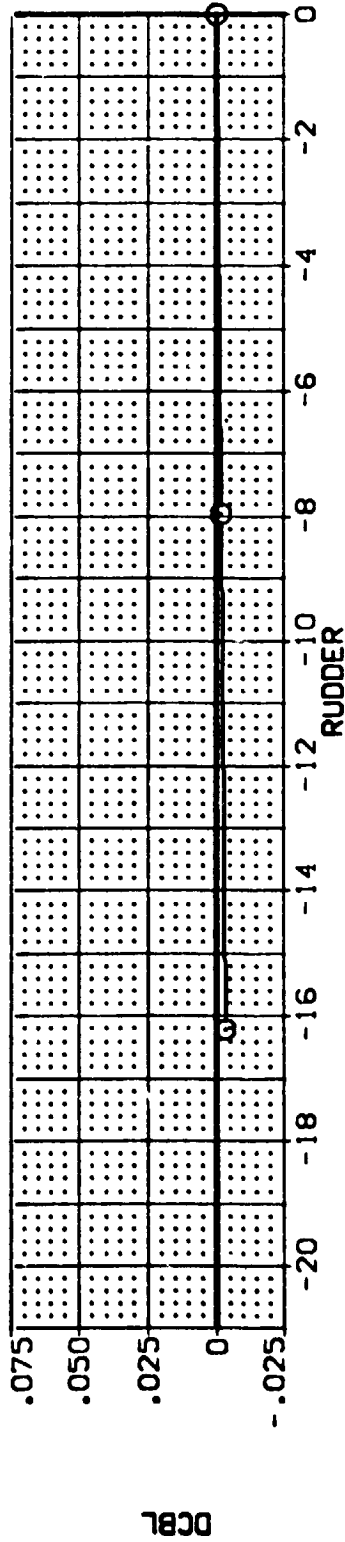
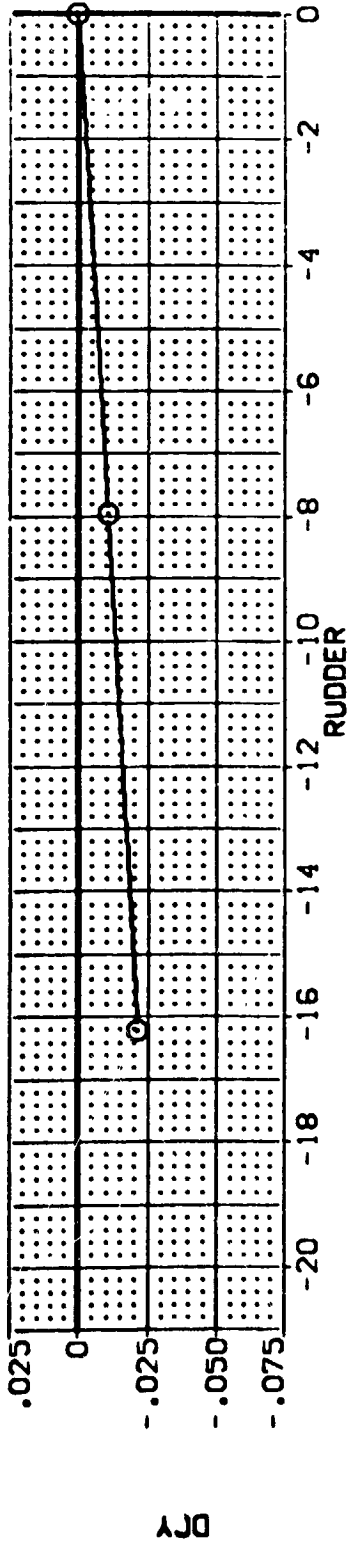


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE





(202194)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

ALPHA  
30.000

MACH  
80FLAP  
SPOBRK

PARAMETRIC VALUES  
DELVDN  
ATLRON  
BETA

DATA SOURCE  
RUDDER  
RUDDER

DATASET  
202194  
202361

RUDDER  
-16.220  
.000

RUDDER  
-7.960

REFERENCE INFORMATION  
SQ.FT  
INCHES  
INCHES  
INCHES  
INCHES  
SCALE

SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

4.4119  
19.2299  
37.9359  
43.5974  
.0000  
15.1875  
.0405

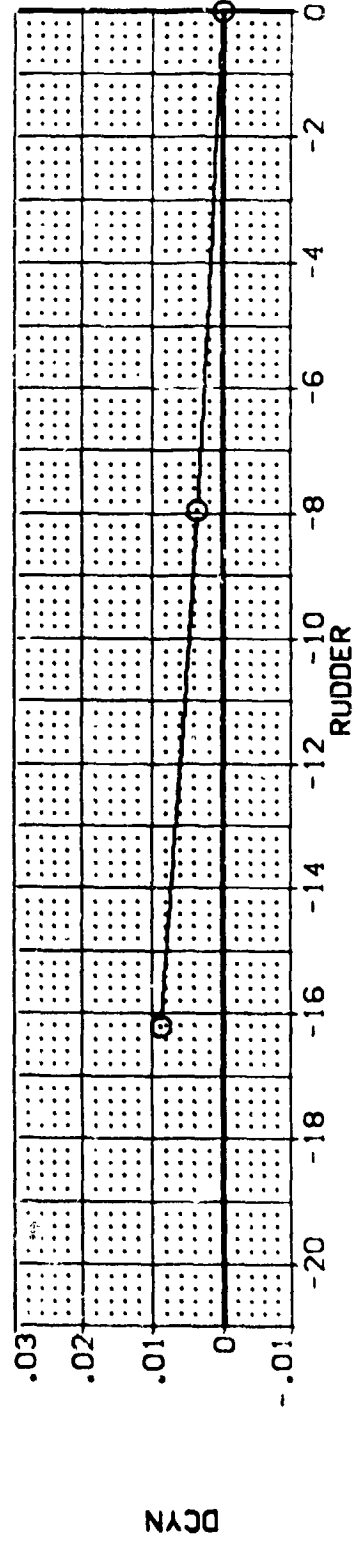
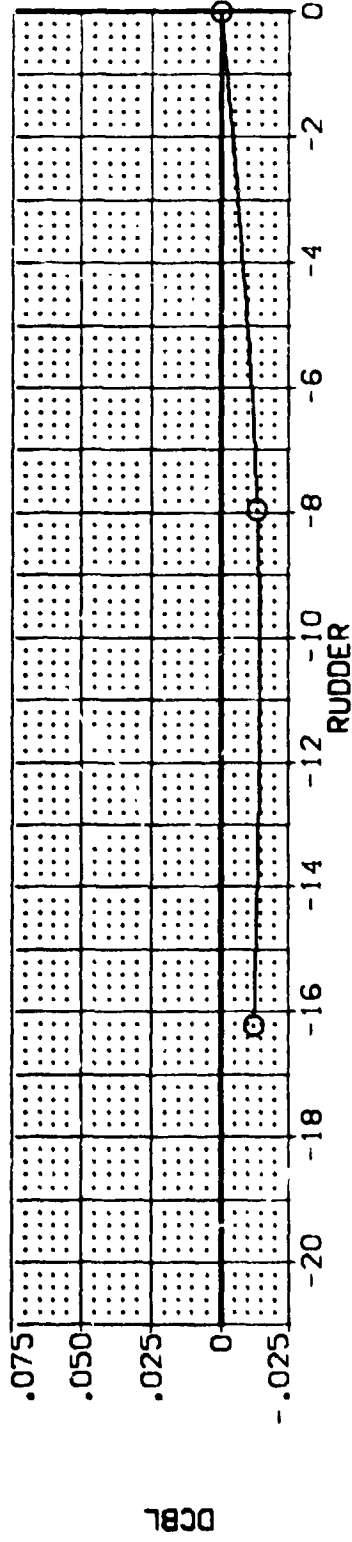
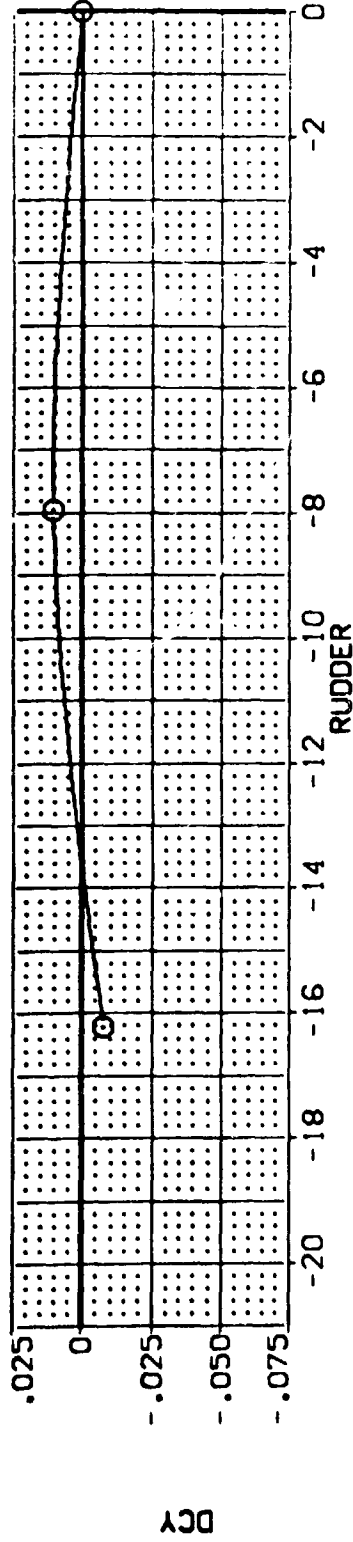


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE



(20Z194)

W116E28V8R5X9

M7F8

B26C9

0A628

SYMBOL  
O

ALPHA  
.000

MACH  
BDFLAP  
SPOBRK

PARAMETRIC VALUES  
.260 DELVDN  
-12.000 AILTRON  
65.000 BETA

.000 DATASET  
.000 20Z194  
.000 20Z361

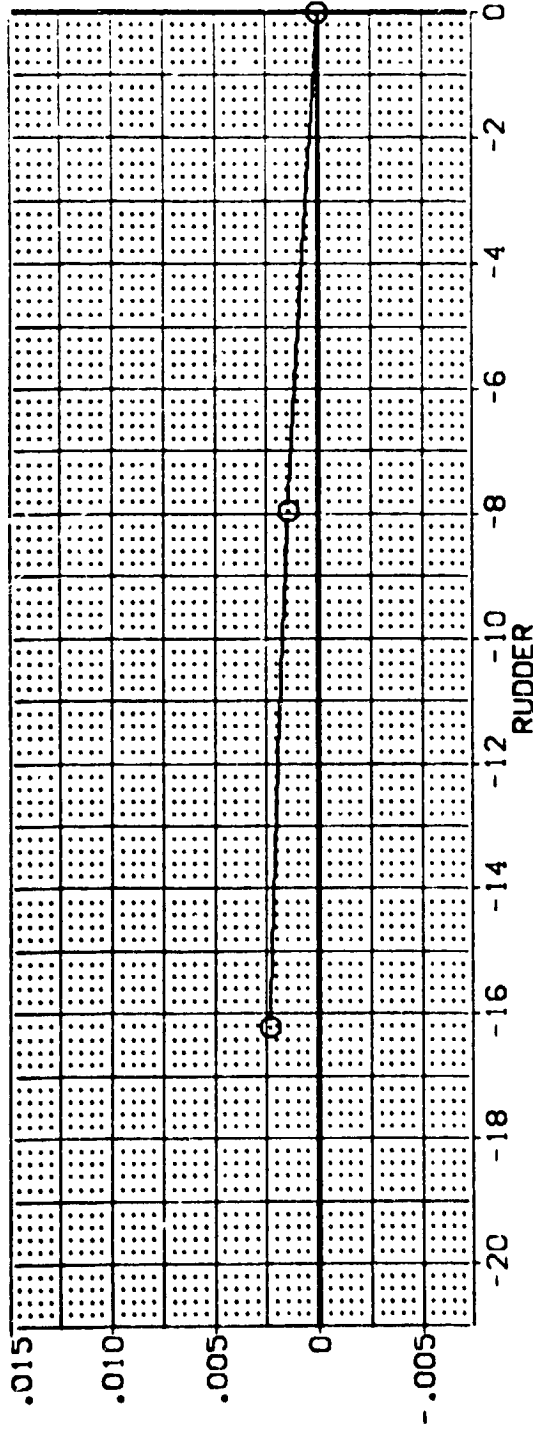
DATA SOURCE  
RUDDER  
-16.220  
.000

DATASET  
20Z188

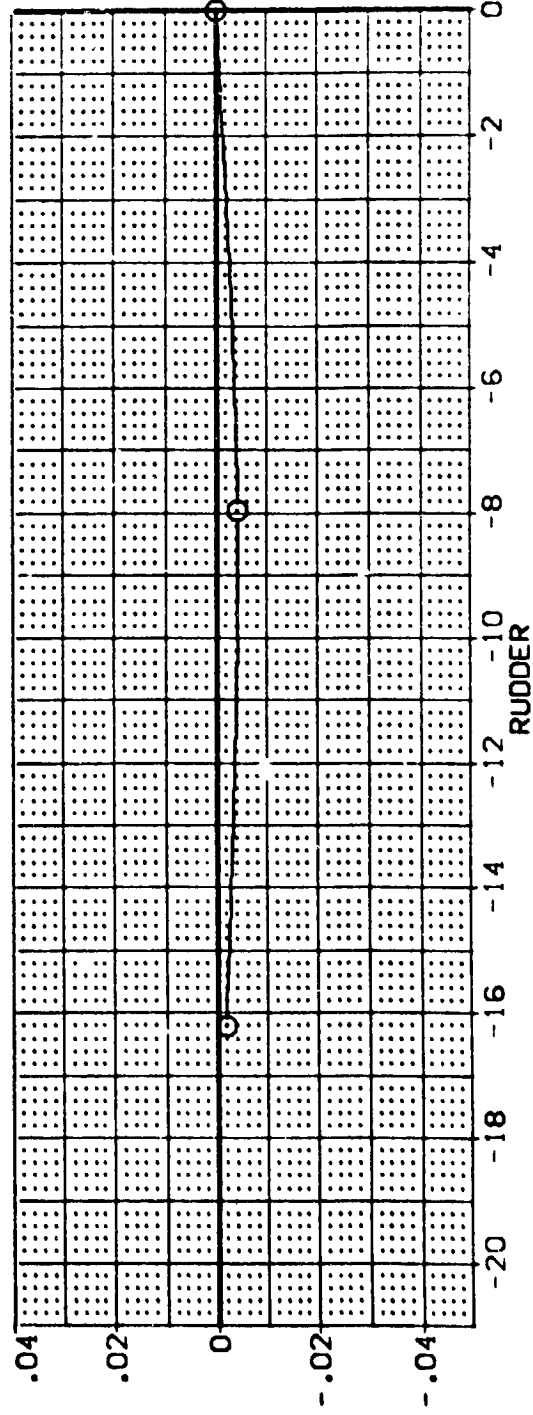
RUDDER  
-7.960

SREF  
LREF  
BREF  
XMRP  
YMRP  
ZMRP  
SCALE

REFERENCE INFORMATION  
4.4119 SO.FT  
19.2299 INCHES  
37.9359 INCHES  
43.5974 INCHES  
.0000 INCHES  
15.1875 INCHES  
.0405 SCALE



DCA



DCN

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL	ALPHA	MACH	BOFLAP	SPOBRK	PARAMETRIC VALUES	DATA SOURCE	DATA SET	RUDDER	SREF	REFERENCE INFORMATION
○	5.000	.260	-12.000	65.000	DELVON AILRON BETA	.000 .000 .000	20Z194 20Z194 20Z361	-7.960	LREF BREF XMRP YMRP ZMRP SCALE	4.4119 19.2739 37.9359 43.5974 .0000 15.1875 .0405
										SOLEF INCHES INCHES INCHES INCHES INCHES SCALE

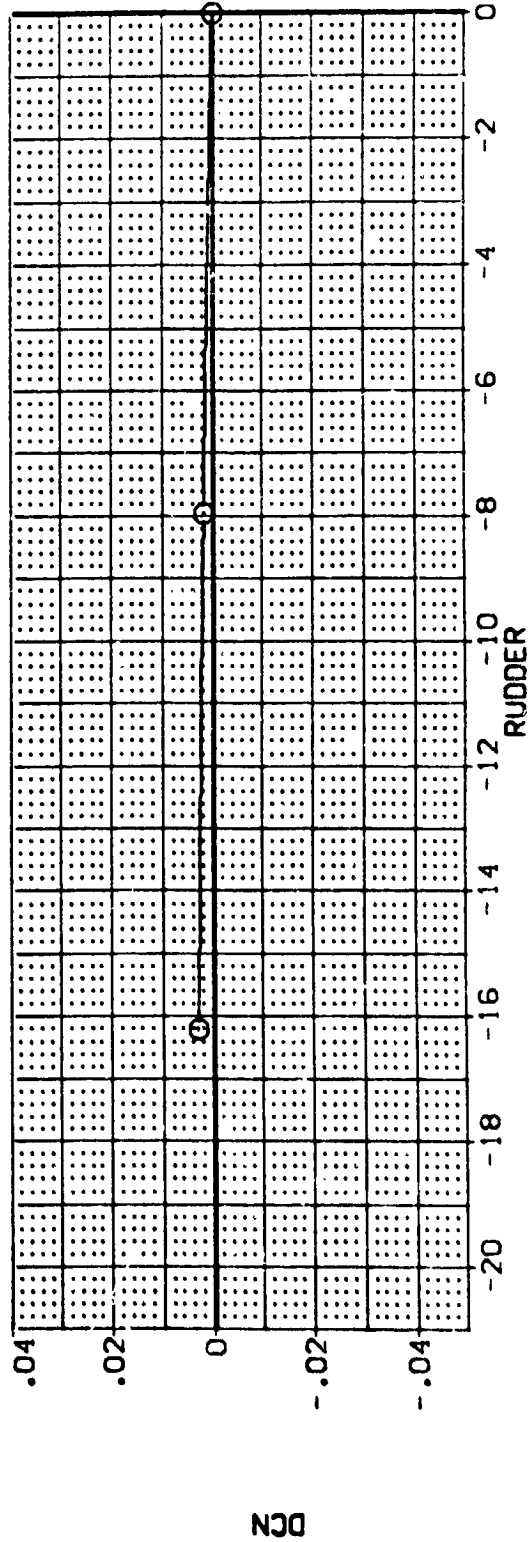
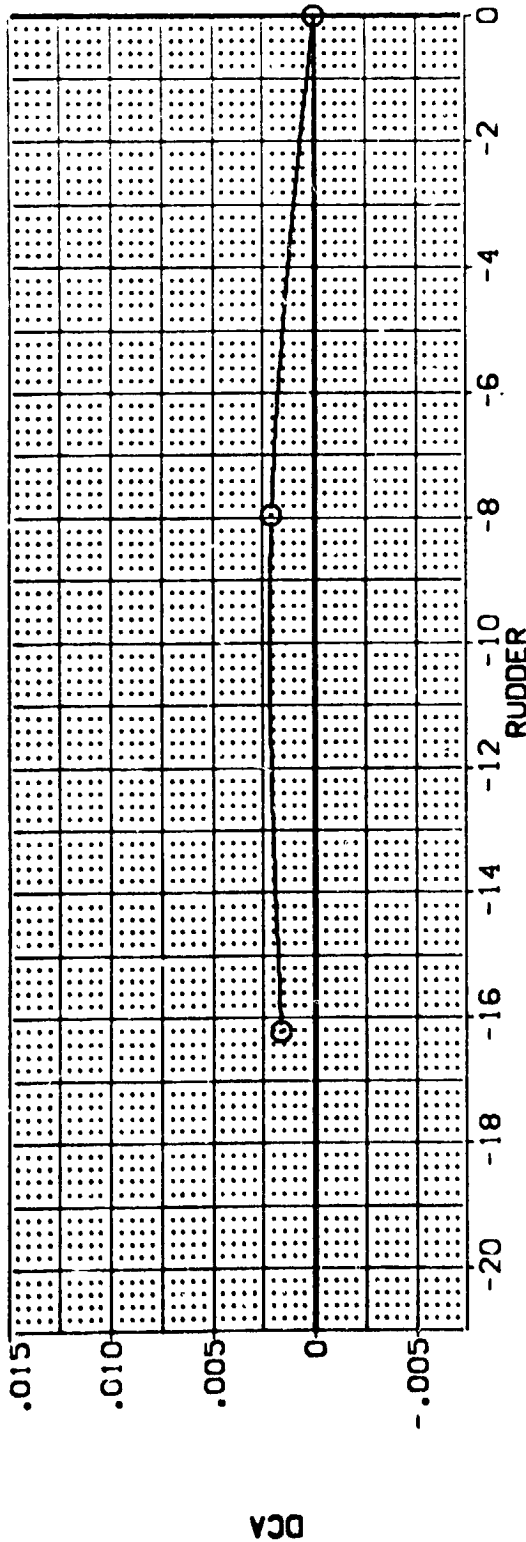
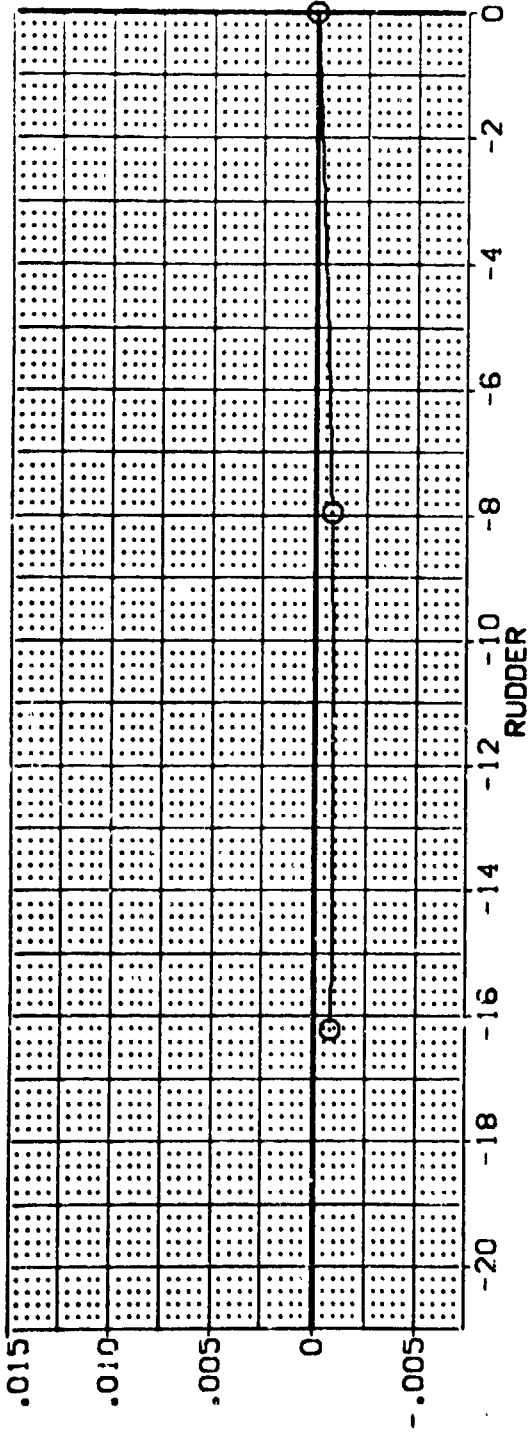


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

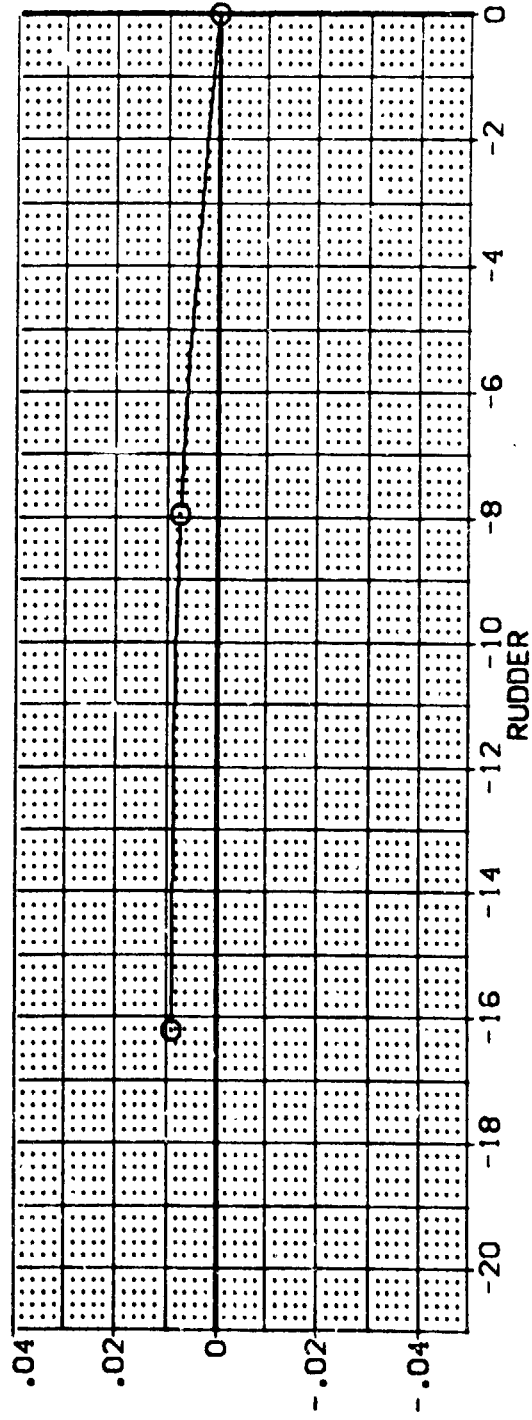


0A628 B26C9 M7F8 W116E28V8R5X9 (2DZ194)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	10.000	BDFLAP	.260	DELVON	.000	DATASET	RUDDER	20Z194	SREF	4.4119	SO.FT.
		SPOBRK	-12.000	AILRON	.000	20Z194	-16.220	20Z188	LREF	19.2299	INCHES
			85.000	BETA	.000	20Z361	.000		BREF	37.9359	INCHES
									XMRP	43.5874	INCHES
									YMRP	.0000	INCHES
									ZMRP	15.1875	INCHES
									SCALE	.0405	SCALE



DCA



DCN

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL O

ALPHA 15.000

MACH .250

BDFLAP -12.000

SPOGAK 65.000

DELTA

DELTA

BETA

PARAMETRIC VALUES

.000 DATASET 20Z194

.000 DATASET 20Z361

.000 RUDDER -16.270

.000 RUDDER -7.960

DATA SOURCE

20Z194

20Z361

REFERENCE INFORMATION

4.4119 SC.FT.

19.2299 INCHES

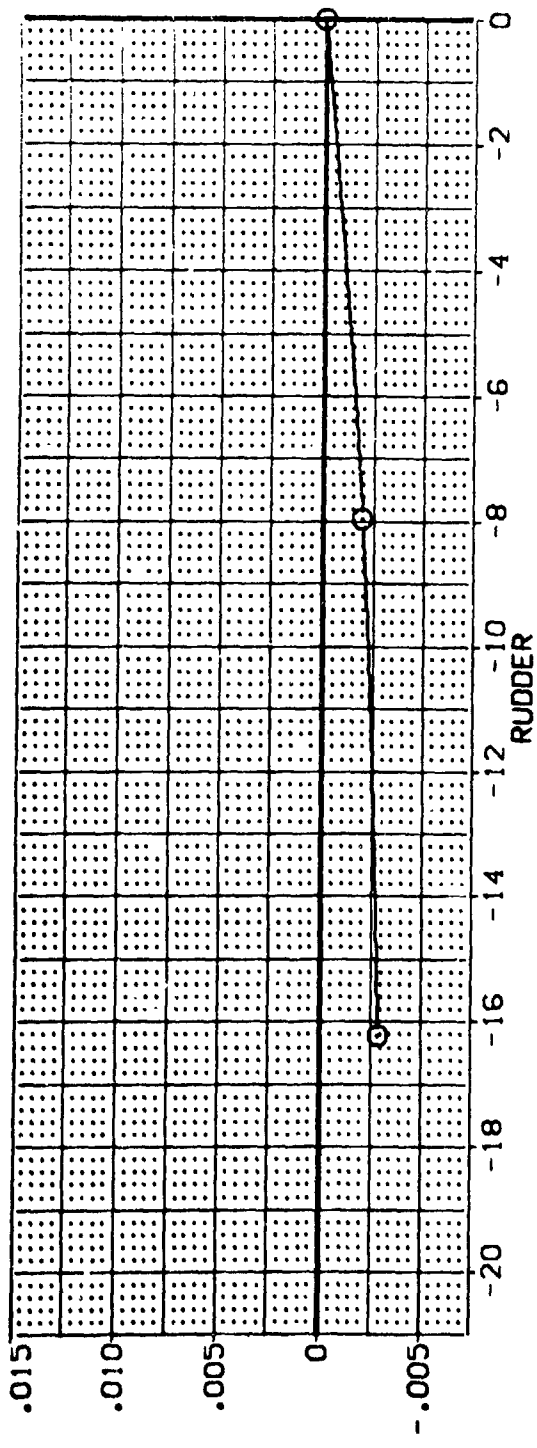
37.9359 INCHES

43.5974 INCHES

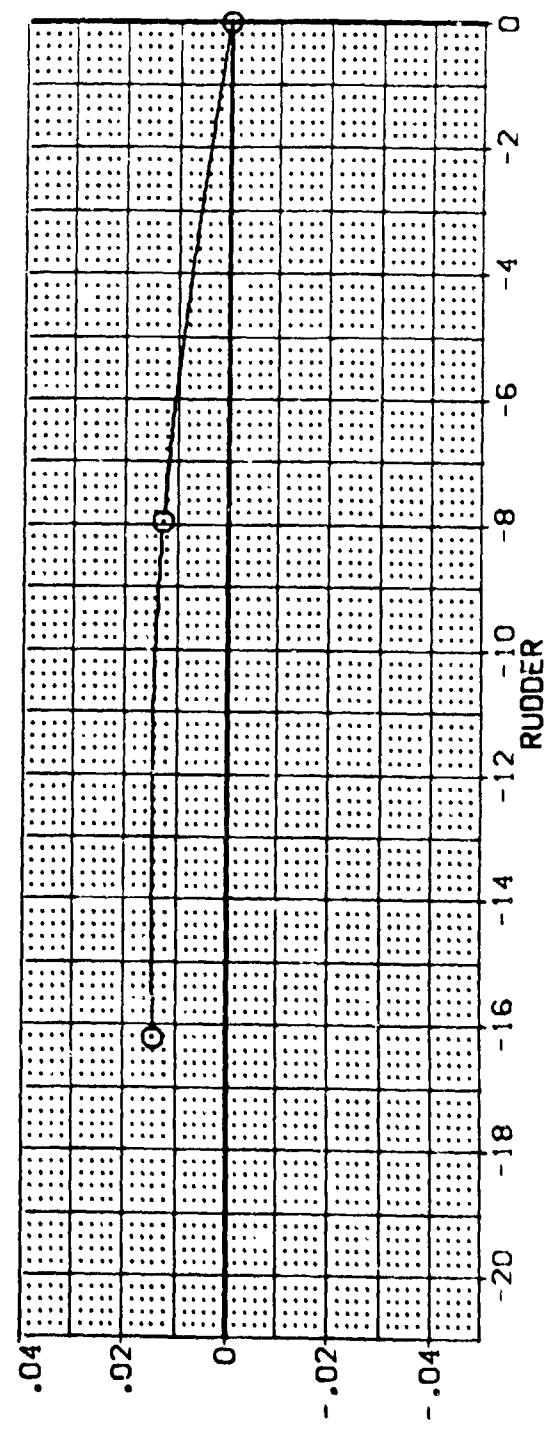
.0000 INCHES

15.1675 INCHES

.0405 SCALE



DCA

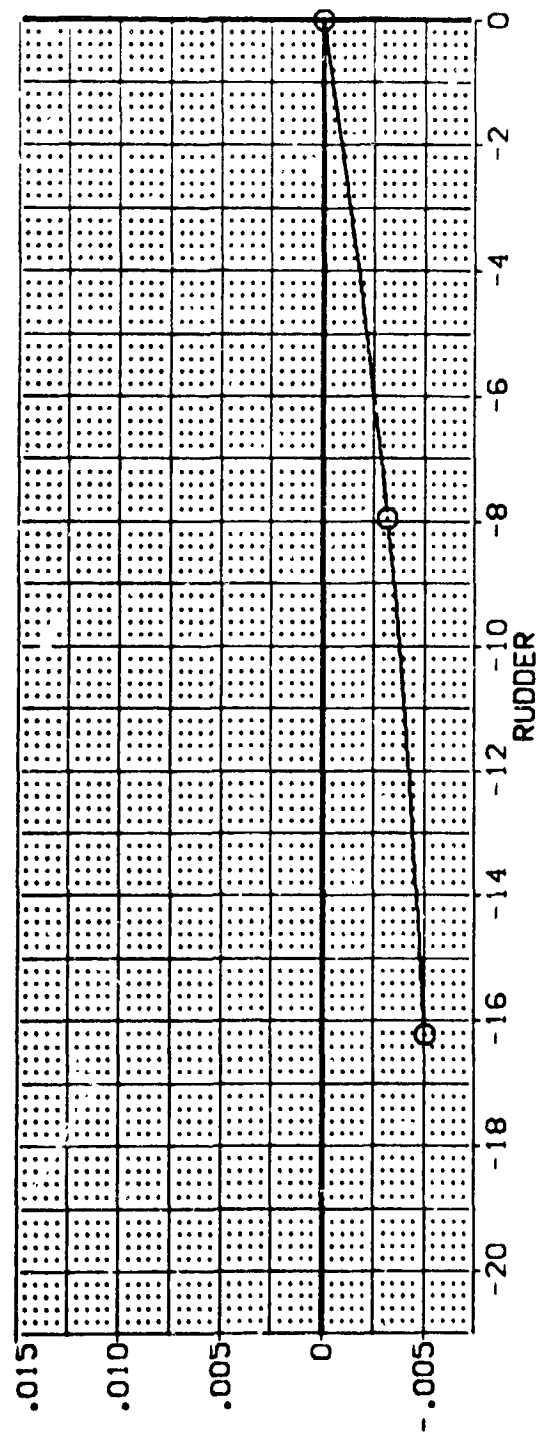


DCN

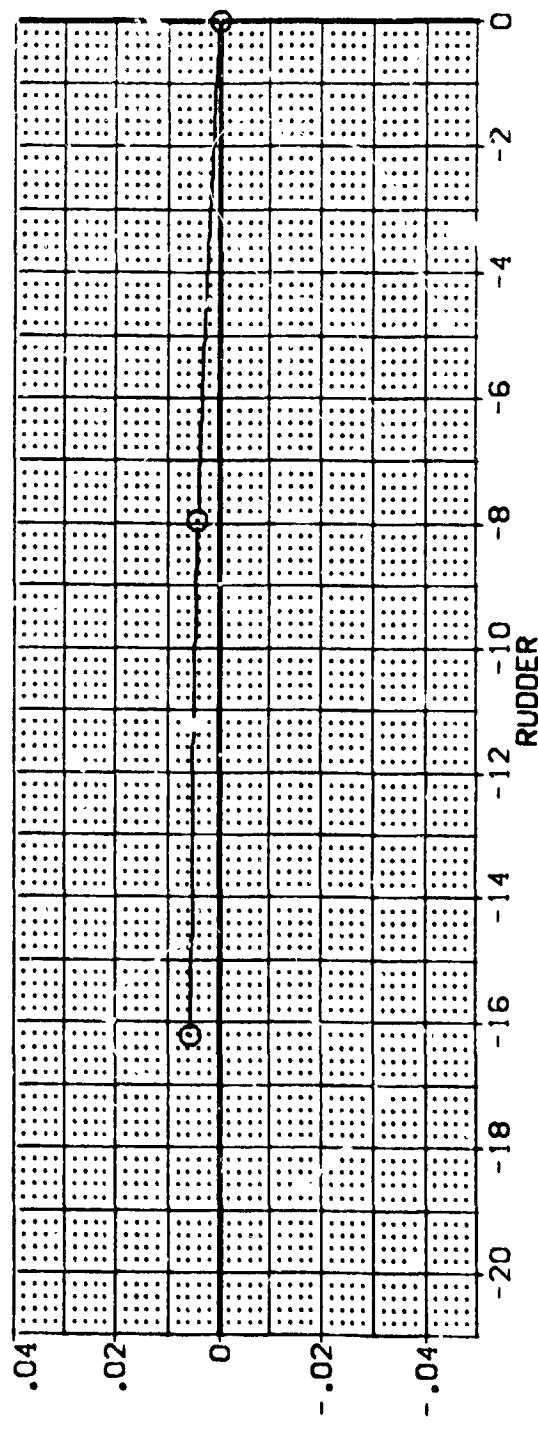
FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

01628 B26C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
O	20.000	BOFLAP	.260	DELTON	.000	20Z194	RUDDER	SREF	4.4119	SO.FT	INCHES
		SPOBRK	-12.000	AILRON	.000	20Z361	-7.960	LREF	19.2298	INCHES	
			65.000	BETA	.000			XMRP	37.9339	INCHES	
								YMRP	43.5974	INCHES	
								ZMRP	.0000	INCHES	
								SCALE	15.1875	SCALE	
									.0405		



DCA



DCN

FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE

0A628 B26C9 M7F8 W116E28V8R5X9 (20Z194)

SYMBOL	ALPHA	PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
○	25.000	MACH	.260	DELTA	RUDDER	RUDDER	SREF	4.4119	SO.F.T	
		BOFLAP	-12.000	A1LRON	-16.220	20Z194	LREF	19.2299	INC-ES	
		SPOBRK	85.000	BETA	.000	20Z251	BREF	37.9359	INC-ES	
							XMRP	43.5974	INC-ES	
							ZMRP	.0000	INC-ES	
							ZMRP	15.1875	INC-ES	
							SCALE	.0105	SCALE	

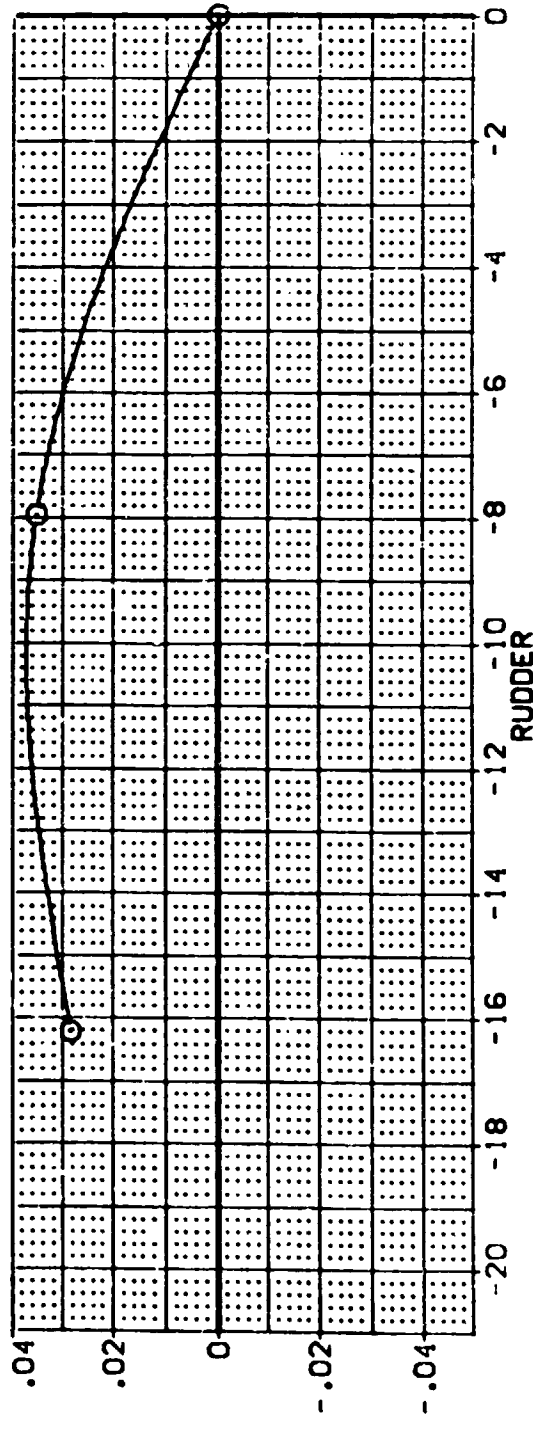
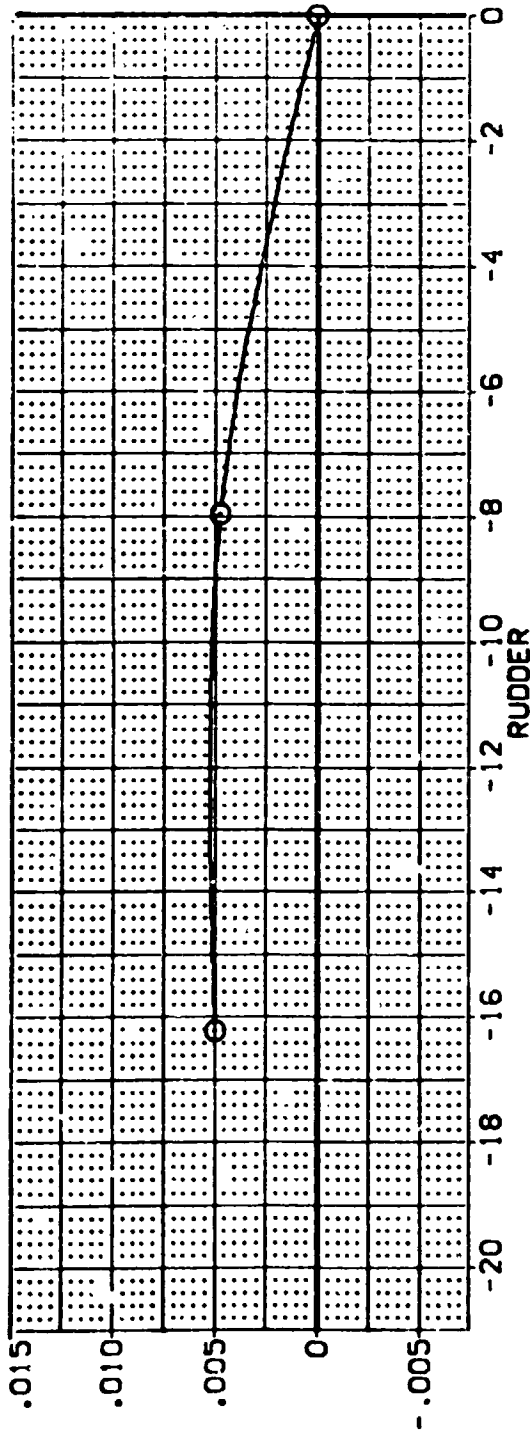


FIG 68 RUDDER EFFECTIVENESS, 85 DEG. FLARE



DATA SET SYMBOL CONFIGURATION DESCRIPTION

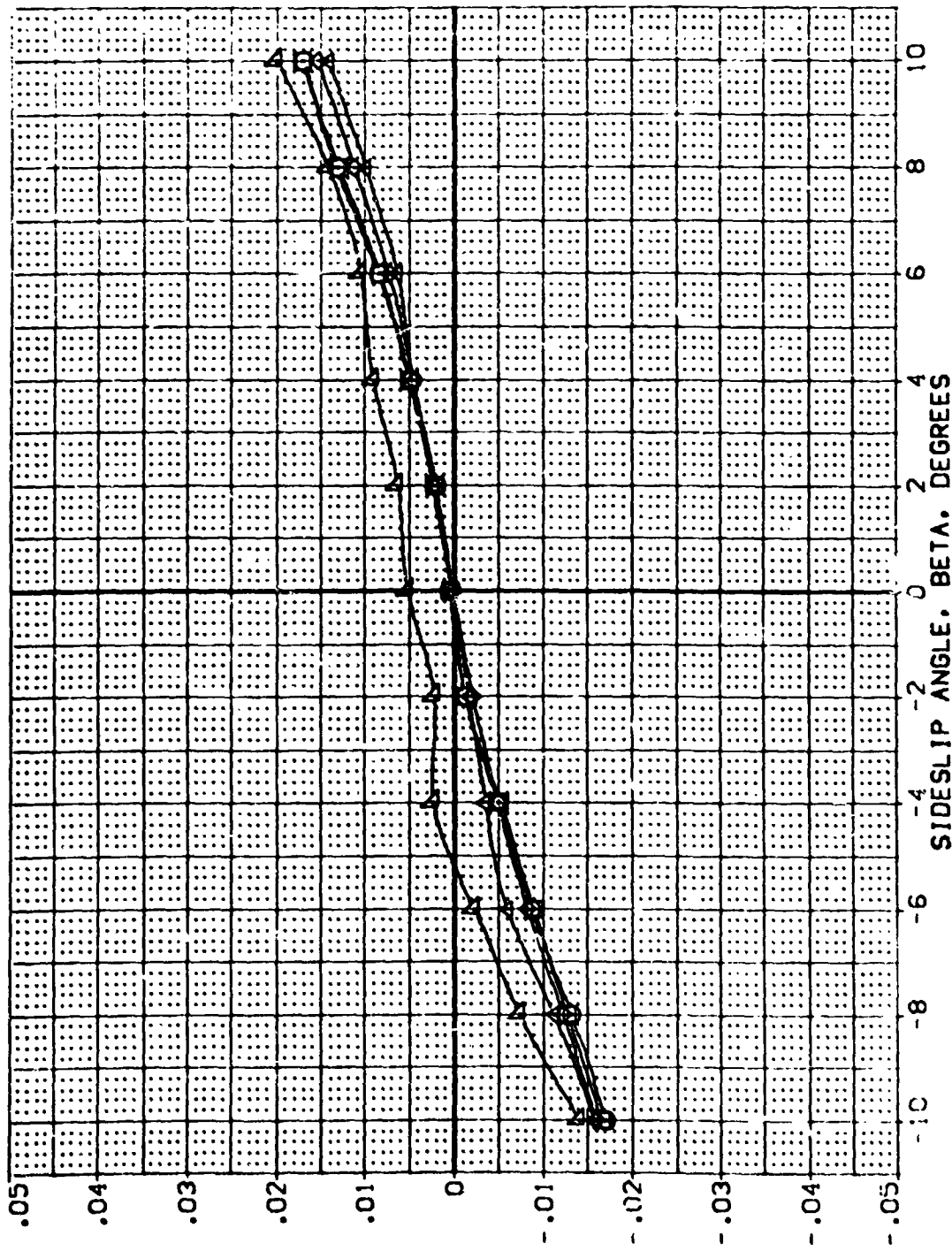
(CZ2362)	Q	DA628	B76C9	M7F8	V11E28V8P5X9
(CZ2363)	Q	DA628	B76C9	M7F8	V11E28V8P5X9
(CZ2364)	Q	DA628	B76C9	M7F8	V11E28V8P5X9
(CZ2365)	Q	DA628	B76C9	M7F8	V11E28V8P5X9
(CZ2366)	Q	DA628	B76C9	M7F8	V11E28V8P5X9

REFERENCE INFORMATION

SRFF	4.4119	SCALE
LRFF	19.2799	SCALE
BRFF	37.9379	SCALE
XREF	43.5871	SCALE
ZREF	15.0000	SCALE
YREF	15.1875	SCALE

ALPHA RUDER SPOBRK AILRON

.000	.000	.000	.000
5.000	.000	85.000	.000
10.000	.000	85.000	.000
15.000	.000	85.000	.000
20.000	.000	85.000	.000



YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 69 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.85 DEG.FLARE

(A)MACH = .26



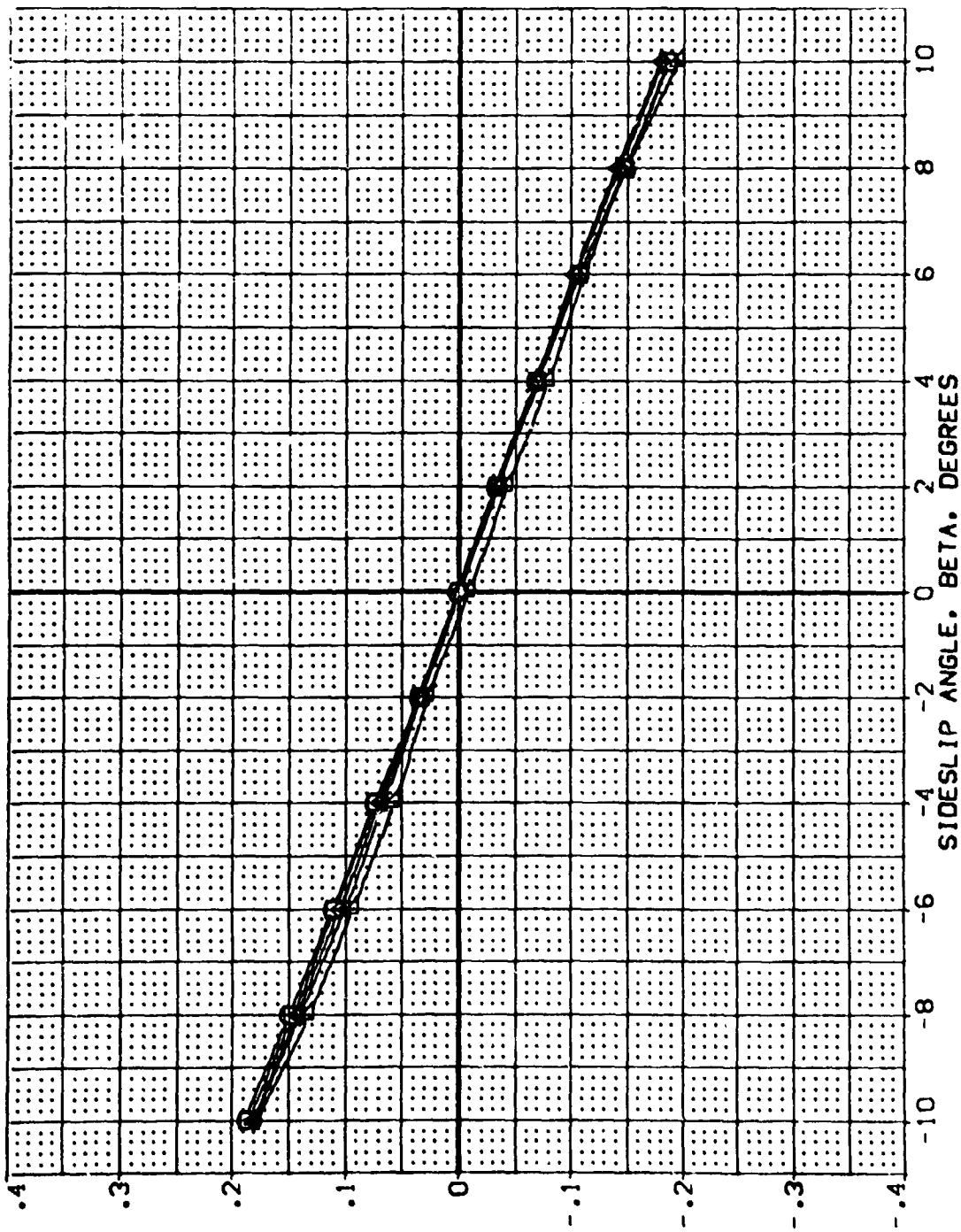


DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CDZ352)	UAG28	B26C9	M7F8	V116E28V85SX9
(CDZ353)	OAG28	B26C9	M7F8	V116E28V85SX9
(CDZ354)	OAG28	B26C9	M7F8	V116E28V85SX9
(CDZ355)	OAG28	B26C9	M7F8	V116E28V85SX9
(CDZ356)	OAG28	B26C9	M7F8	V116E28V85SX9

ALPHA RUDER SPOBRK AILRON REFERENCE INFORMATION

.000	.000	.000	.000	SREF	4.4119	SO.F.T.
5.000	.000	85.000	.000	LREF	19.2299	INCHES
10.000	.000	85.000	.000	BREF	37.9259	INCHES
15.000	.000	85.000	.000	XMRP	49.5574	INCHES
20.000	.000	85.000	.000	YMRP	.0000	INCHES
				ZMRP	15.1875	INCHES
				SCALE	.0405	SCALE



SIDE FORCE COEFFICIENT, CY

FIG 69 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 85 DEG.FLARE

(M)MACH = .26

(CDZ362)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  $\circ$  RUDDER .000 MACH .260 BOFLAP .000 AILRON .000  
 ELEVON .000 SPOBRK 85.000

REFERENCE INFORMATION  
 SREF 4.4119 SO.FT.  
 LREF 19.2299 INCHES  
 BREF 37.9559 INCHES  
 XMRP 43.9574 INCHES  
 YMRP .0000 INCHES  
 ZMRP 15.1875 INCHES  
 SCALE .04CS

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

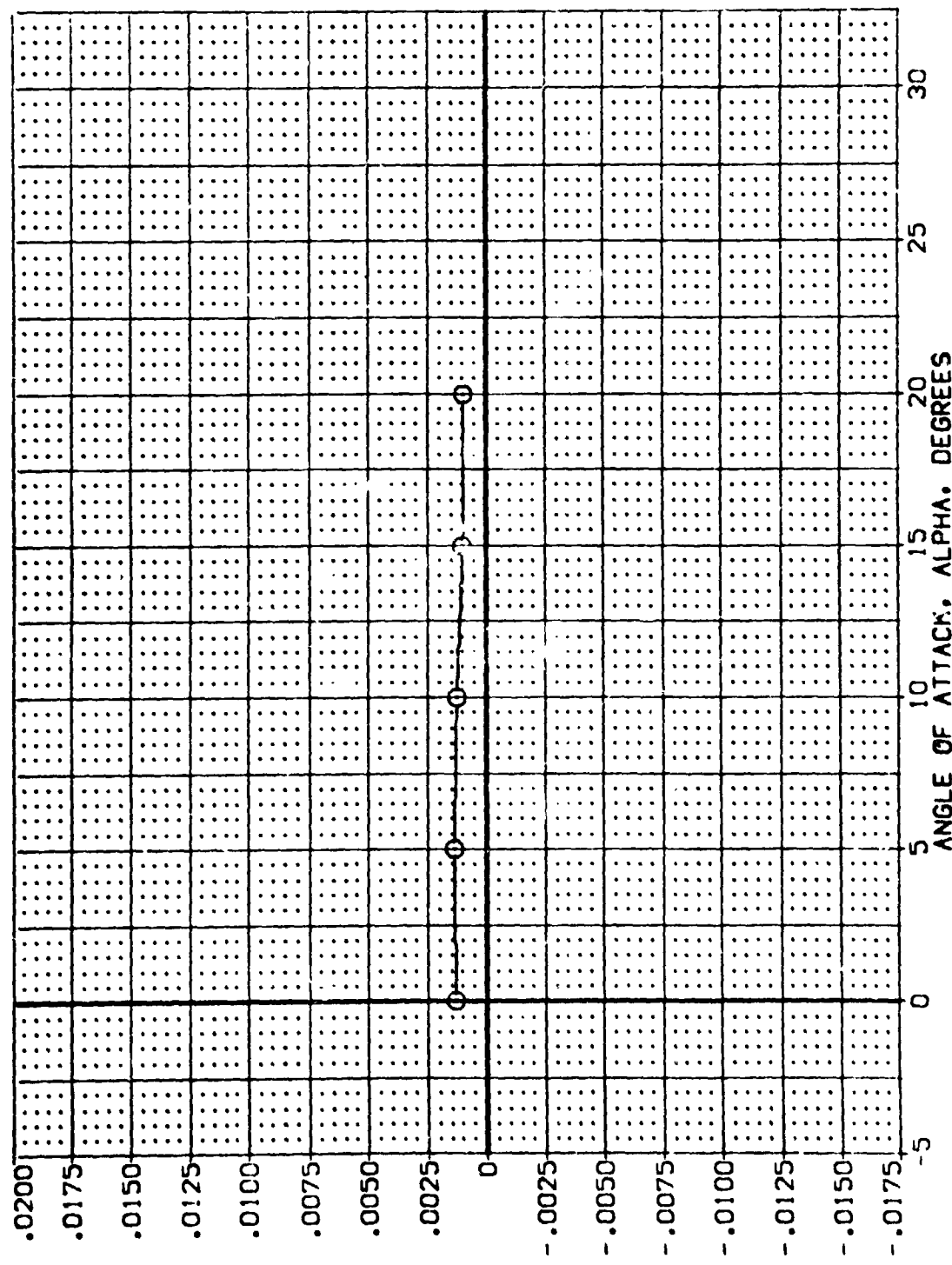


FIG 69 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0.85 DEG.FLARE

(CDZ362)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL: ○

PARAMETRIC VALUES

MACH: .260

ELEVON: .000

SPDRK: 85.000

RUDDER: .000

BD'LAP: -12.000

AILRON: .000

REFERENCE INFORMATION

SREF: 4.4119

LREF: 19.2299

BREF: 37.9359

XMRP: 43.5874

YMRP: .0000

ZMRP: 15.1875

SCALE: .0405

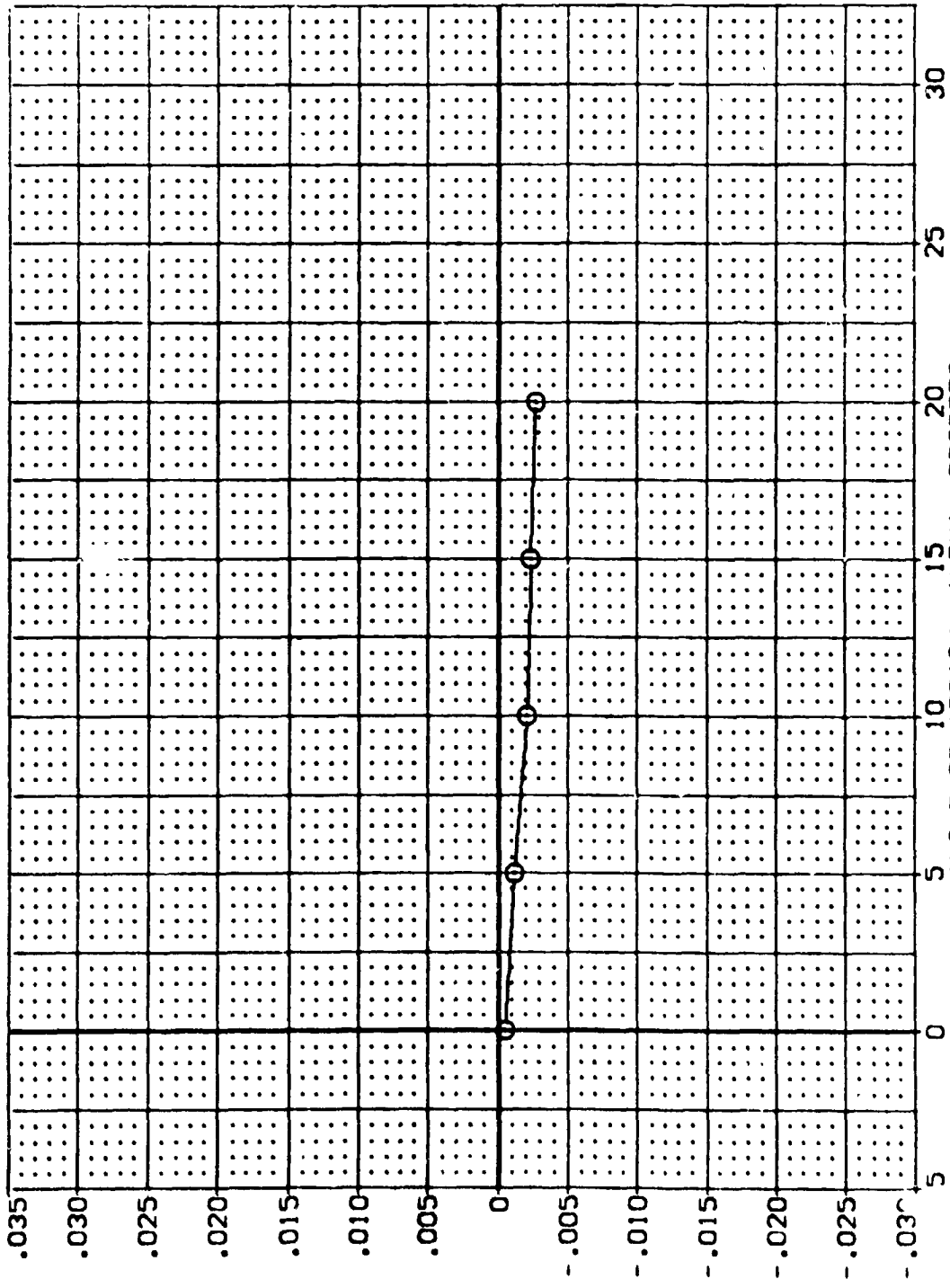
SO.FT. INCHES

INCHES INCHES

INCHES INCHES

INCHES INCHES

SCALE



ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

FIG 69 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 85 DEG.FLARE



0A62B B26C9 M7F8 W116E28V8R5X9 (CDZ362)

SYMBOL: ○  
 RUDDER: .000  
 MACH: .000  
 ELEVON: .000  
 SPOBRK: 85.000  
 PARAMETRIC VALUES  
 BOFLAP: -12.000  
 AILRON: .000

REFERENCE INFORMATION  
 SREF: 4.4119 SO.FT.  
 LREF: 19.7298 INCHES  
 BREF: 37.9329 INCHES  
 XMRP: 43.5974 INCHES  
 YMRP: .0000 INCHES  
 ZMRP: 15.1875 INCHES  
 SCALE: .04CS

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

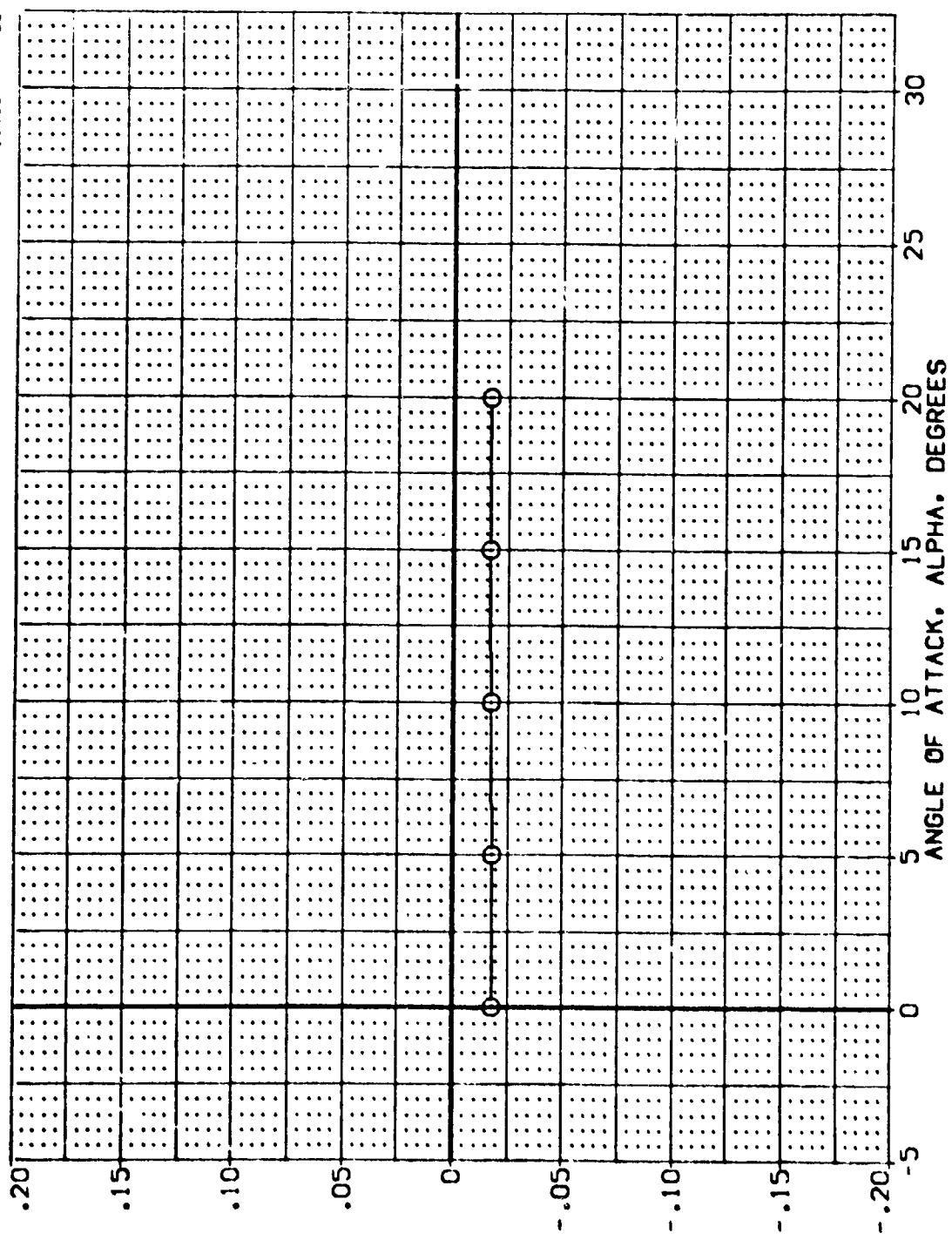
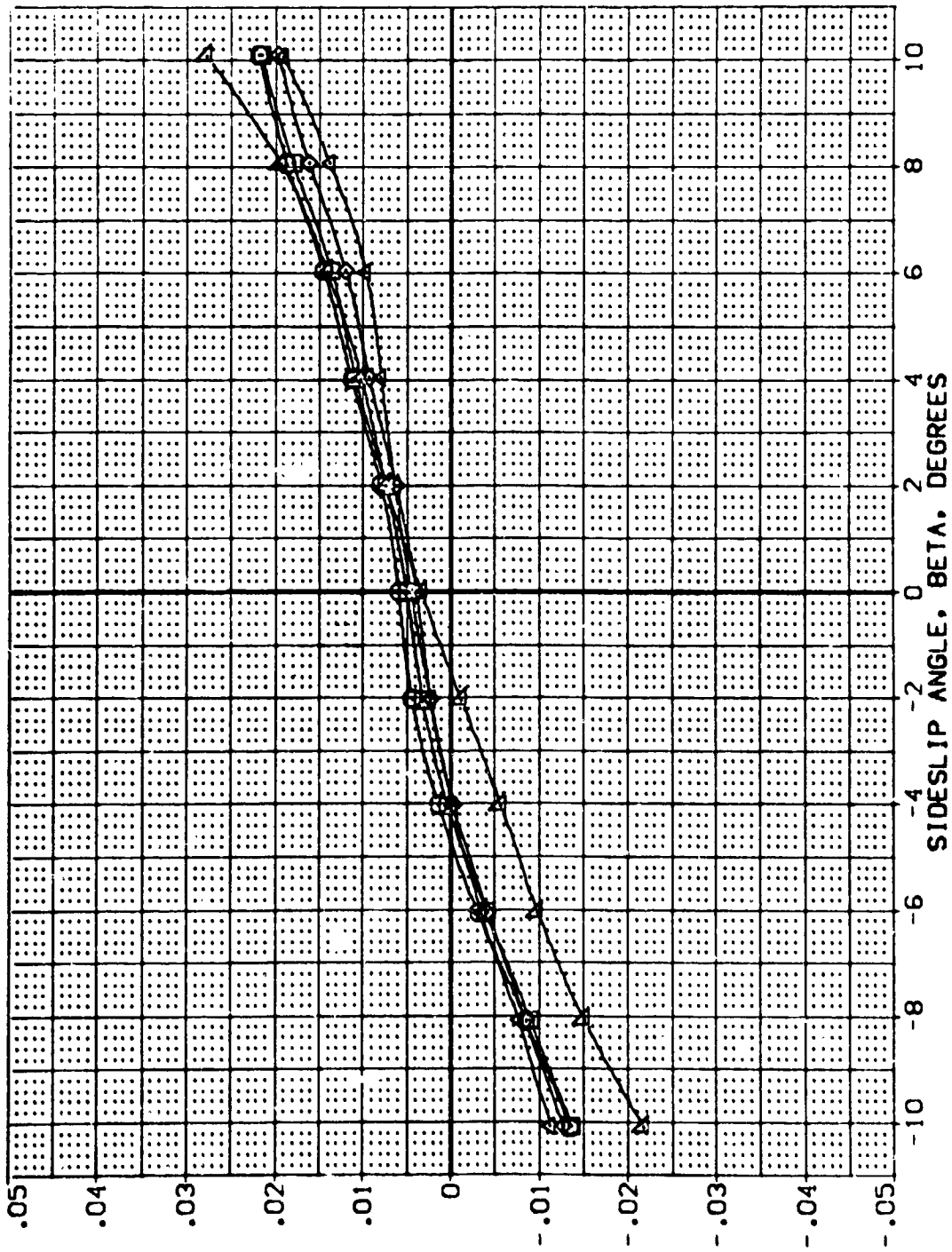


FIG 69 LATERAL-DIRECTIONAL STABILITY, RUDDER = 0, 85 DEG.FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	RON	REFERENCE INFORMATION
[ROZ189]	0A628 B26C9 M7F8 V116E28VBR5X9	.000	-7.960	85.000	.000	SREF 4.4119 SO.FT.
[ROZ190]	0A628 B26C9 M7F8 V116E28VBR5X9	5.000	-7.960	85.000	.000	LREF 19.2299 INCHES
[ROZ191]	0A628 B26C9 M7F8 V116E28VBR5X9	10.000	-7.960	85.000	.000	BREF 37.9359 INCHES
[ROZ192]	0A628 B26C9 M7F8 V116E28VBR5X9	15.000	-7.960	85.000	.000	XMRP 43.5974 INCHES
[ROZ193]	0A628 B26C9 M7F8 V116E28VBR5X9	20.000	-7.960	85.000	.000	YMRP .0000 INCHES
						ZMRP 15.1875 SCALE
						SCALE .0405



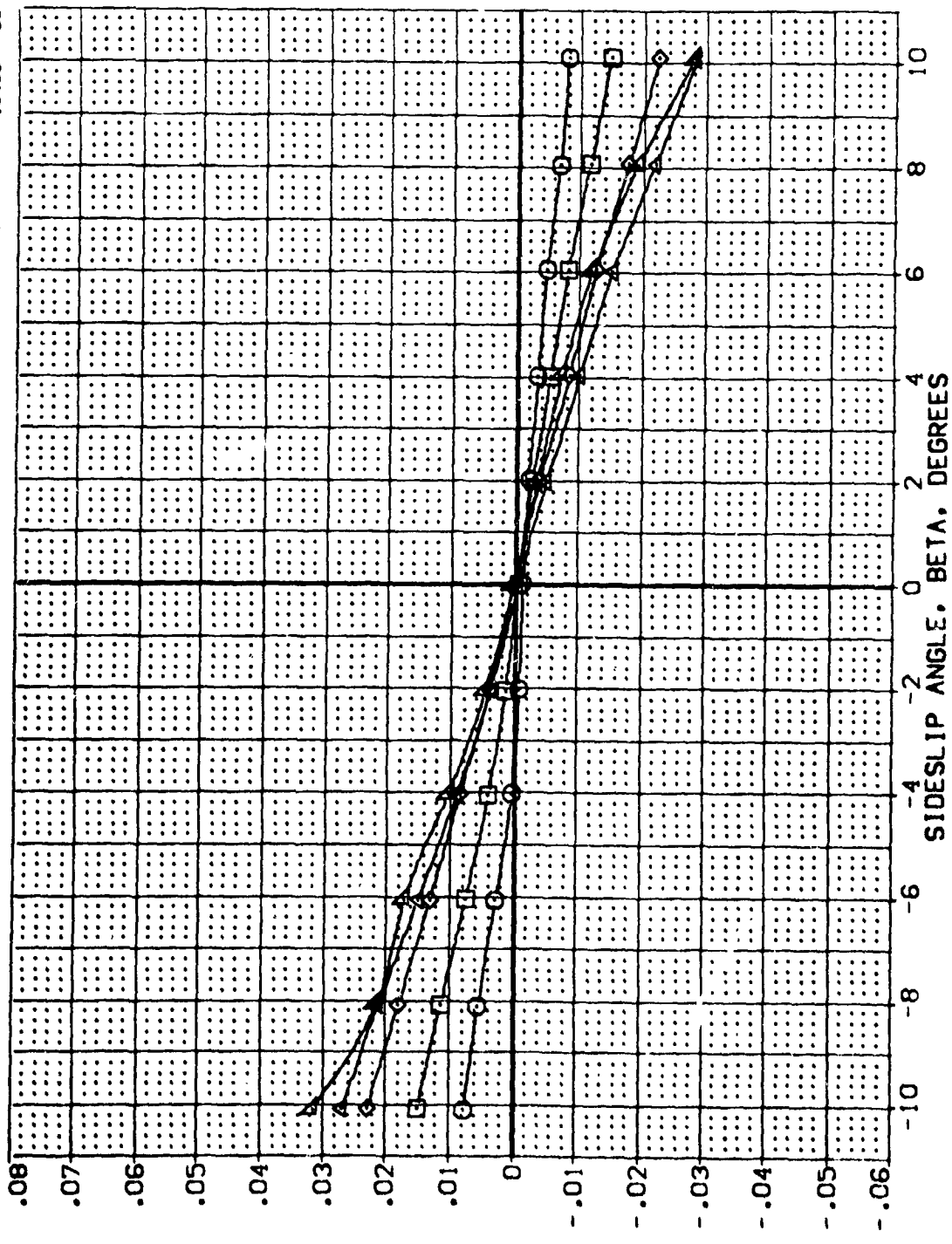
YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

FIG 70 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 85 DEG.FLARE

(AJMACH = .26

4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AIR/ON	REFERENCE INFORMATION
(RDZ188)	0A628 MTF8 V116E28V8F5X9	.000	-7.960	85.000	.000	SREF 4.4119 SO.FT
(RDZ190)	0A628 MTF8 V116E28V8F5X9	5.000	-7.960	85.000	.000	LREF 19.2799 INCHES
(RDZ191)	0A628 MTF8 V116E28V8F5X9	10.000	-7.960	85.000	.000	BREF 37.9359 INCHES
(RDZ192)	0A628 MTF8 V116E28V8F5X9	15.000	-7.960	85.000	.000	XMRP 43.5974 INCHES
(RDZ193)	0A628 MTF8 V116E28V8F5X9	20.000	-7.960	85.000	.000	YMRP .0000 INCHES
						ZMRP 15.1875 INCHES
						SCALE .04CS



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 70 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 85 DEG.FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILIRON	REFERENCE INFORMATION
(R0Z189)	DASZ8 BZ6C9 M7F8 V116E28V8RSX9	.000	-7.960	85.000	.000	SREF 4.4119 SQ.FT
(R0Z190)	DASZ8 BZ6C9 M7F8 V116E28V8RSX9	5.000	-7.960	85.000	.000	LREF 19.2799 INCHES
(R0Z191)	DASZ8 BZ6C9 M7F8 V116E28V8RSX9	10.000	-7.960	85.000	.000	BREF 37.9359 INCHES
(R0Z192)	DASZ8 BZ6C9 M7F8 V116E28V8RSX9	15.000	-7.960	85.000	.000	XMRP 43.5974 INCHES
(R0Z193)	DASZ8 BZ6C9 M7F8 V116E28V8RSX9	20.000	-7.960	85.000	.000	ZMRP .0000 INCHES
						SCALE 15.1875

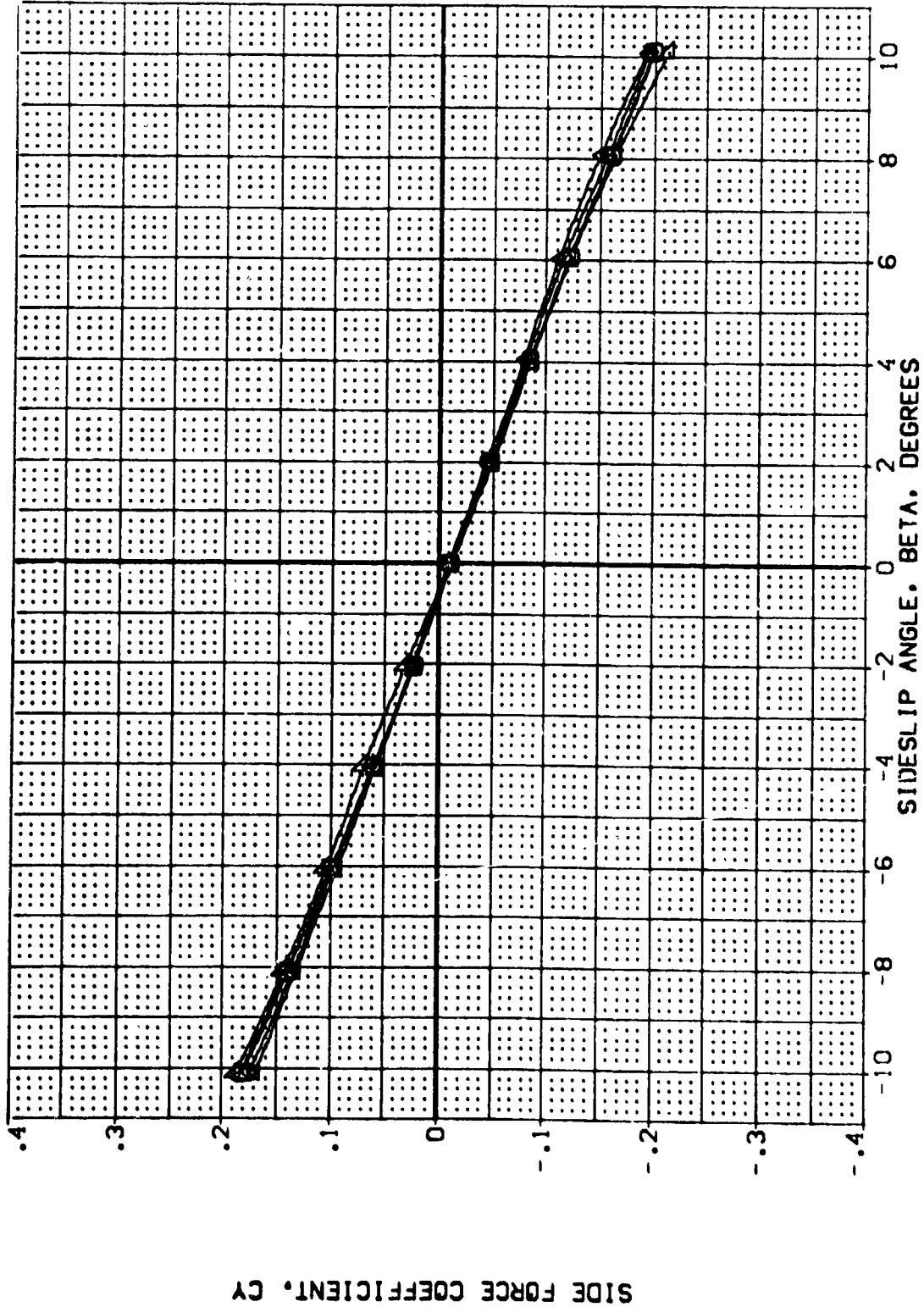


FIG 70 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 85 DEG.FLARE



(COZ189)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER -7.960

MACH .250

ELEVON .000

SPDRX 95.000

PARAMETRIC VALUES

BOFLAP -12.000

A1LRON .000

REFERENCE INFORMATION

SREF 4.4119 SO.FT. INCHES

LREF 19.2299 INCHES

BREF 37.9359 INCHES

XMRP 43.5974 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405 SCALE

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

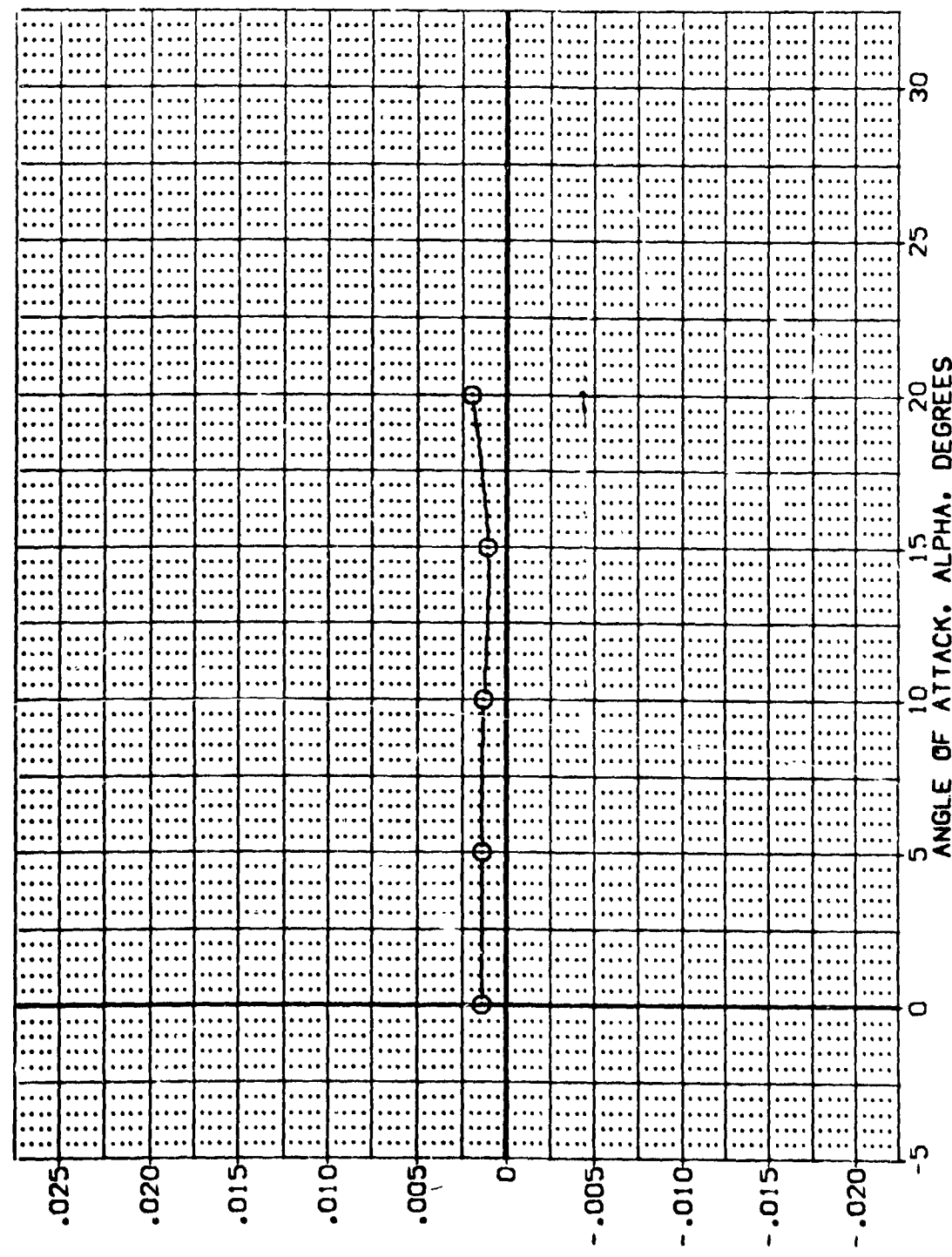


FIG 70 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 85 DEG.FLARE

(CDZ189)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL  
O

PARAMETRIC VALUES  
MAC 1 .260 BDFLAP -12.000  
ELEV IN .000 AILRON .000  
SPDR% 85.000

REFERENCE INFORMATION  
SREF 4.4119 SQ.FT.  
LREF 19.2299 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5974 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

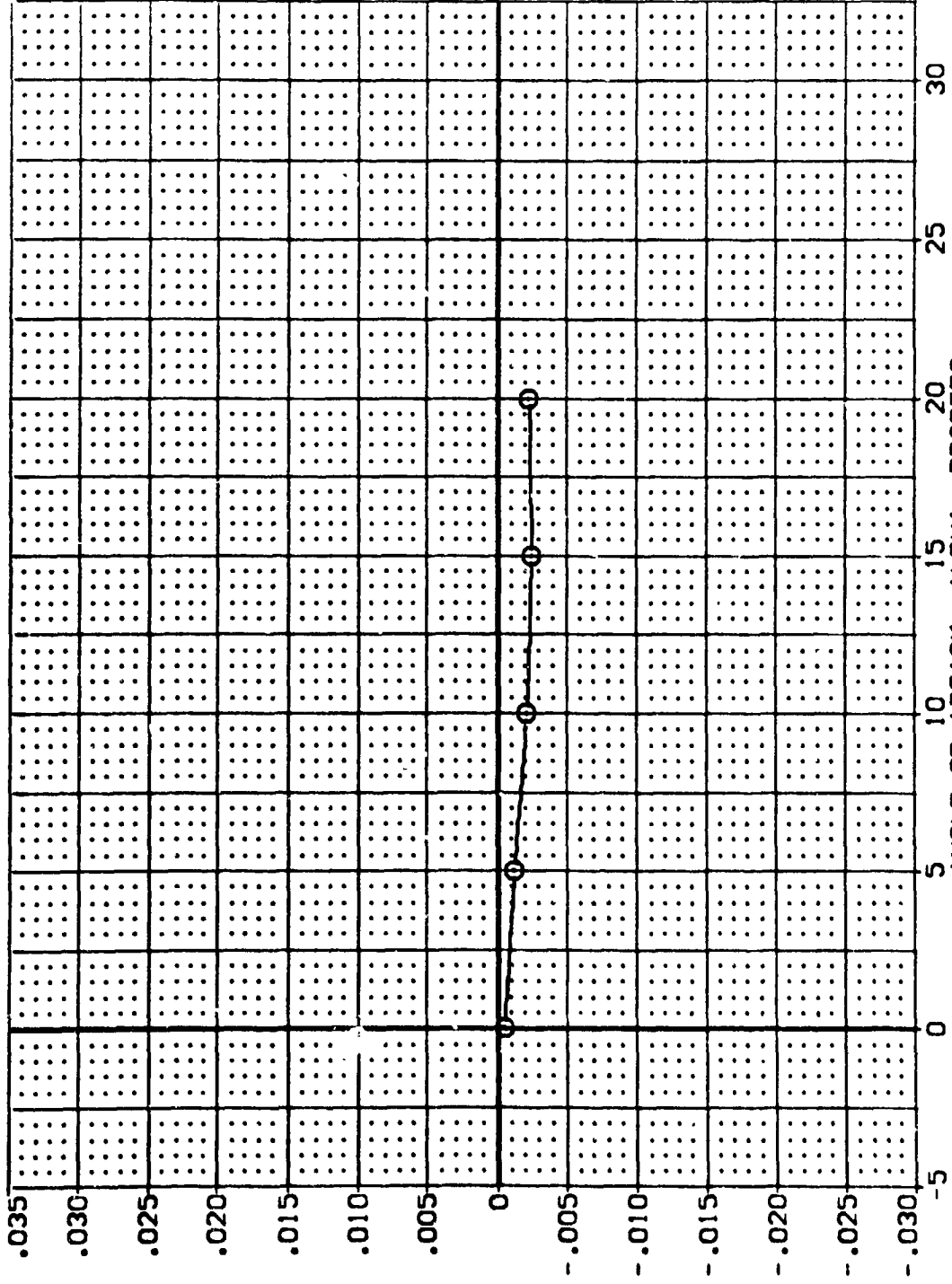


FIG 70 LATERAL-DIRECTIONAL STABILITY. RUDDER = -7.96, 85 DEG.FLARE



0A628 B26C9 M7F8 W116E28V8R5X9 (CDZ189)

SYMB. ○

RUDDER  
-7.960

MACH  
ELEVON  
SPDRK

PARAMETRIC VALUES  
.260 BD/LAP -12.000  
.000 AILRON .000  
65.000

REFERENCE INFORMATION  
SREF 4.4119 SC.FT  
LREF 19.2798 INCHES  
BREF 37.9359 INCHES  
XMRP 43.5574 INCHES  
YMRP .0000 INCHES  
ZMRP 15.1875 INCHES  
SCALE .0405

SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

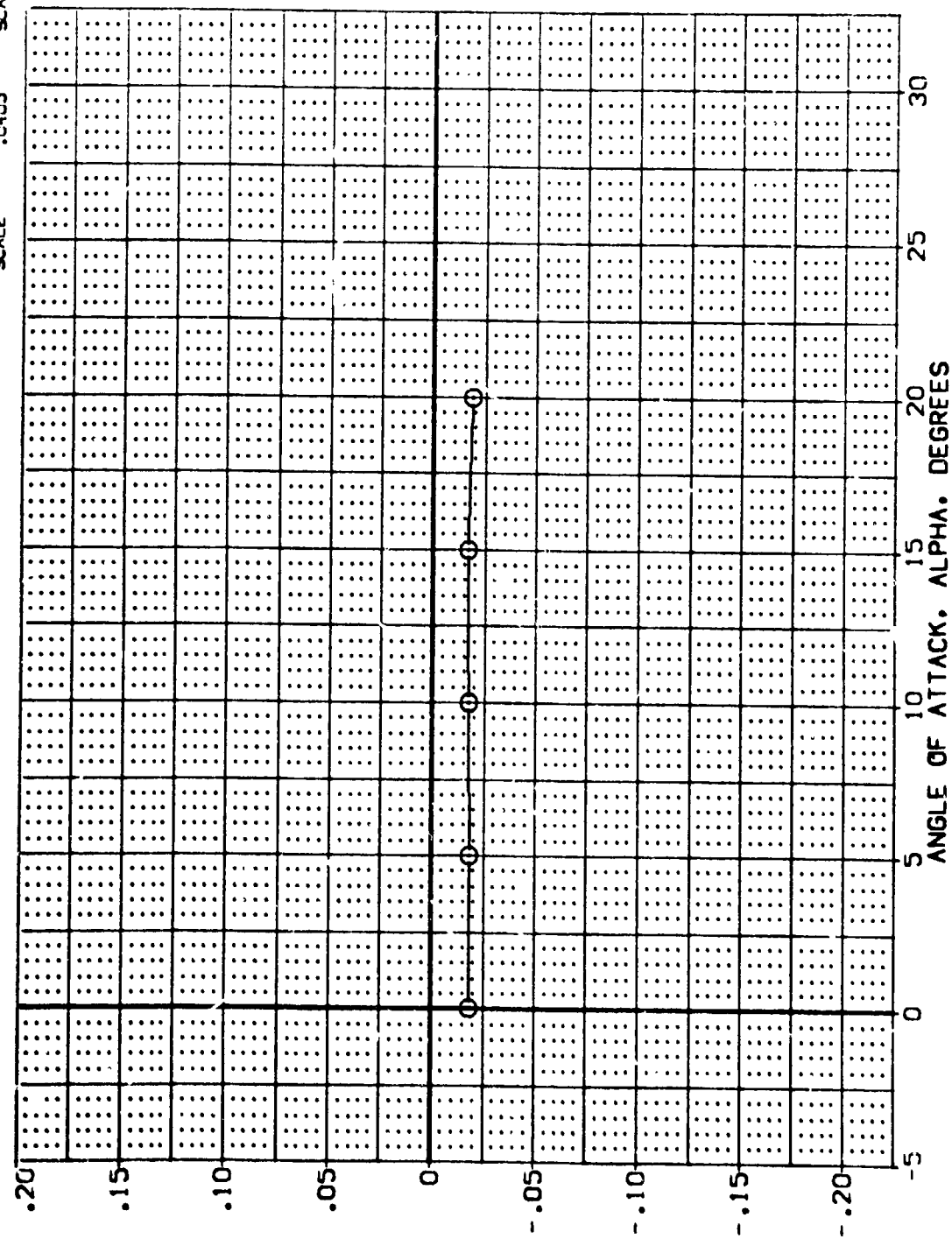


FIG 70 LATERAL-DIRECTIONAL STABILITY, RUDDER = -7.96, 85 DEG.FLARE

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILTRON	REFERENCE INFORMATION
(R02195)	0A628 B06C9 M7F8 V116E28V85X9	.000	-16.270	95.000	.000	50. FT
(R02196)	0A628 B26C9 M7F8 V116E28V85X9	5.000	-16.270	95.000	.000	INCHES
(R02197)	0A628 B26C9 M7F8 V116E28V85X9	10.000	-16.270	95.000	.000	INCHES
(R02198)	0A628 B76C9 M7F8 V116E28V85X9	15.000	-16.270	95.000	.000	INCHES
(R02199)	0A628 B76C9 M7F8 V116E28V85X9	20.000	-16.270	95.000	.000	INCHES
						SCALE
						4.4119
						19.2799
						37.9353
						43.5974
						.000
						15.1875
						SCALE

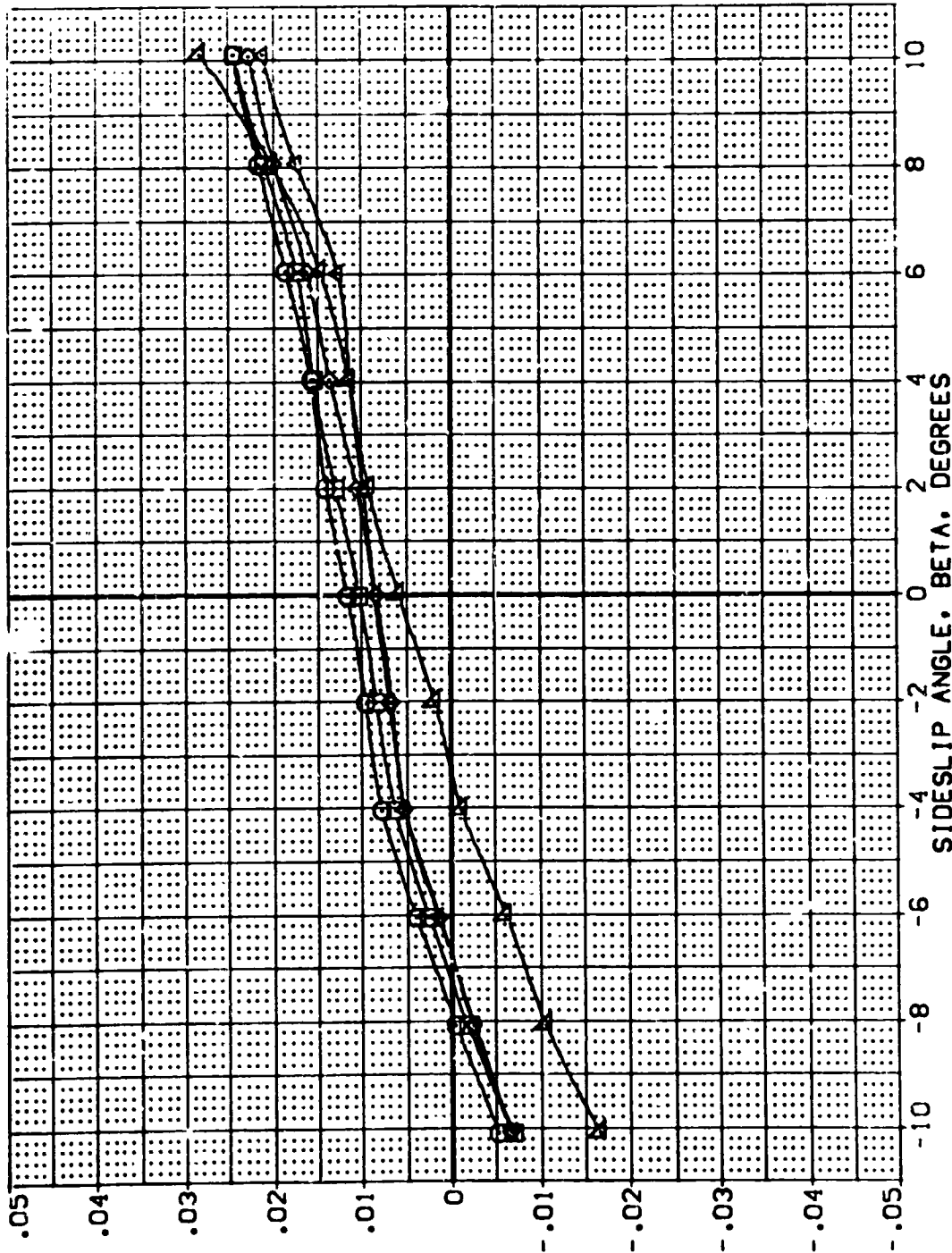
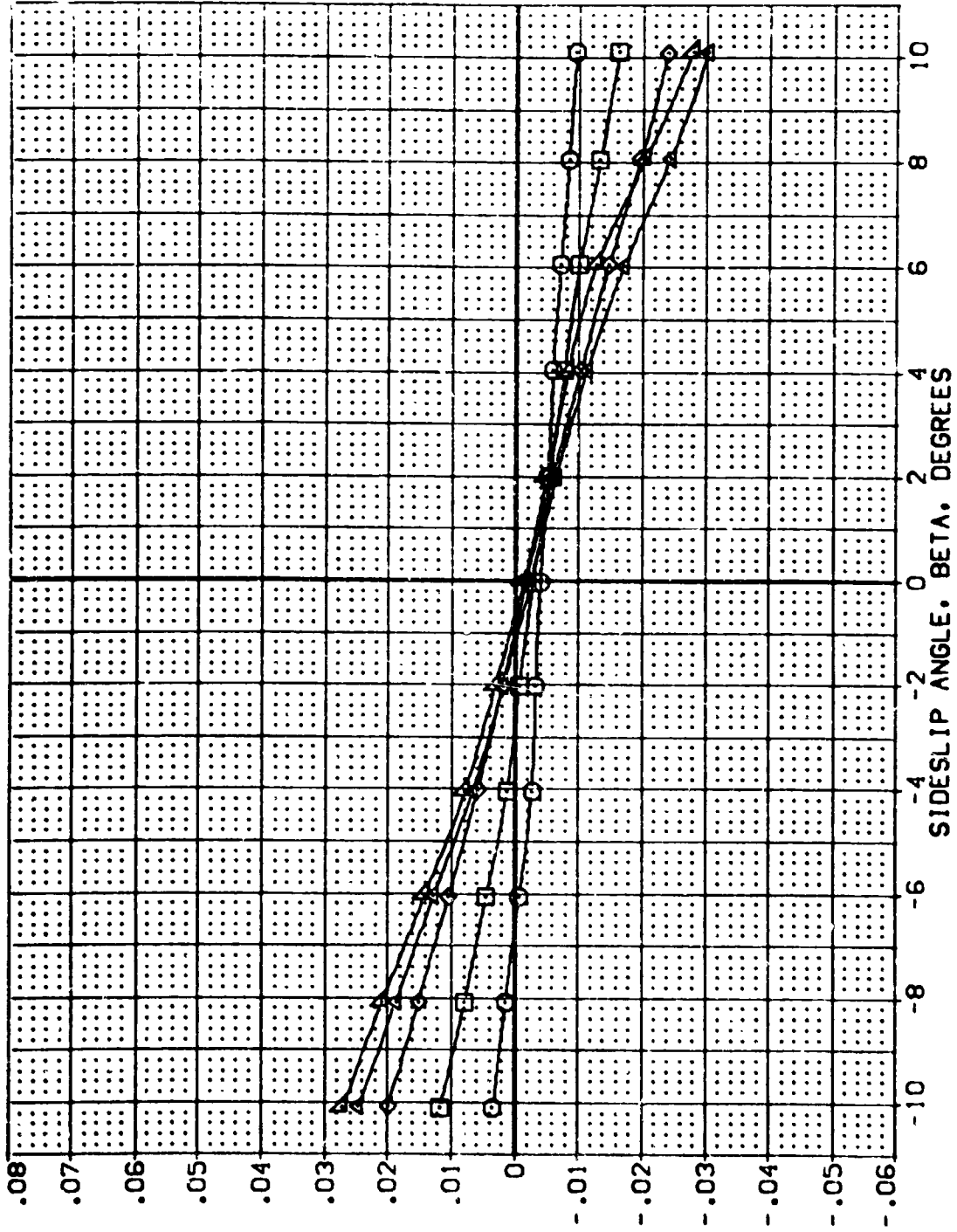


FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	SPDRBK	AILRON	REFERENCE INFORMATION
(RD195)	04628 B26C9 M7F8 V116E28V875X9	.000	-16.220	85.000	.000	SREF 4.4119 SO.FT.
(RD196)	04628 B26C9 M7F8 V116E28V875X9	5.000	-16.220	85.000	.000	LREF 19.2799 SC.FT.
(RD197)	04628 B26C9 M7F8 V116E28V875X9	10.000	-16.220	85.000	.000	BREF 37.9359 SC.FT.
(RD198)	04628 B26C9 M7F8 V116E28V875X9	15.000	-16.220	85.000	.000	XMRP 43.5874 SC.FT.
(RD199)	04628 B26C9 M7F8 V116E28V875X9	20.000	-16.220	85.000	.000	YMRP 15.0000 SC.FT.
						ZMRP 15.1873 SC.FT.
						SCALE .0405



ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE

(A)MACH = .26

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	ALPHA	RUDDER	SPOBRK	AILRON	REFERENCE INFORMATION
[RZ195]	D1628	B76C9	M7F8	V116E28V8FSX9	85.000	.000	SREF 4.4119 SO.FT
[RZ196]	D1628	B76C9	M7F8	V116E28V8FSX9	85.000	.000	LREF 19.2799 INCHES
[RZ197]	D1628	B76C9	M7F8	V116E28V8FSX9	85.000	.000	BREF 37.9399 INCHES
[RZ198]	D1628	B76C9	M7F8	V116E28V8FSX9	85.000	.000	XMRP 43.5574 INCHES
[RZ199]	D1628	B76C9	M7F8	V116E28V8FSX9	85.000	.000	ZMRP 15.1875 INCHES
							SCALE .01CS

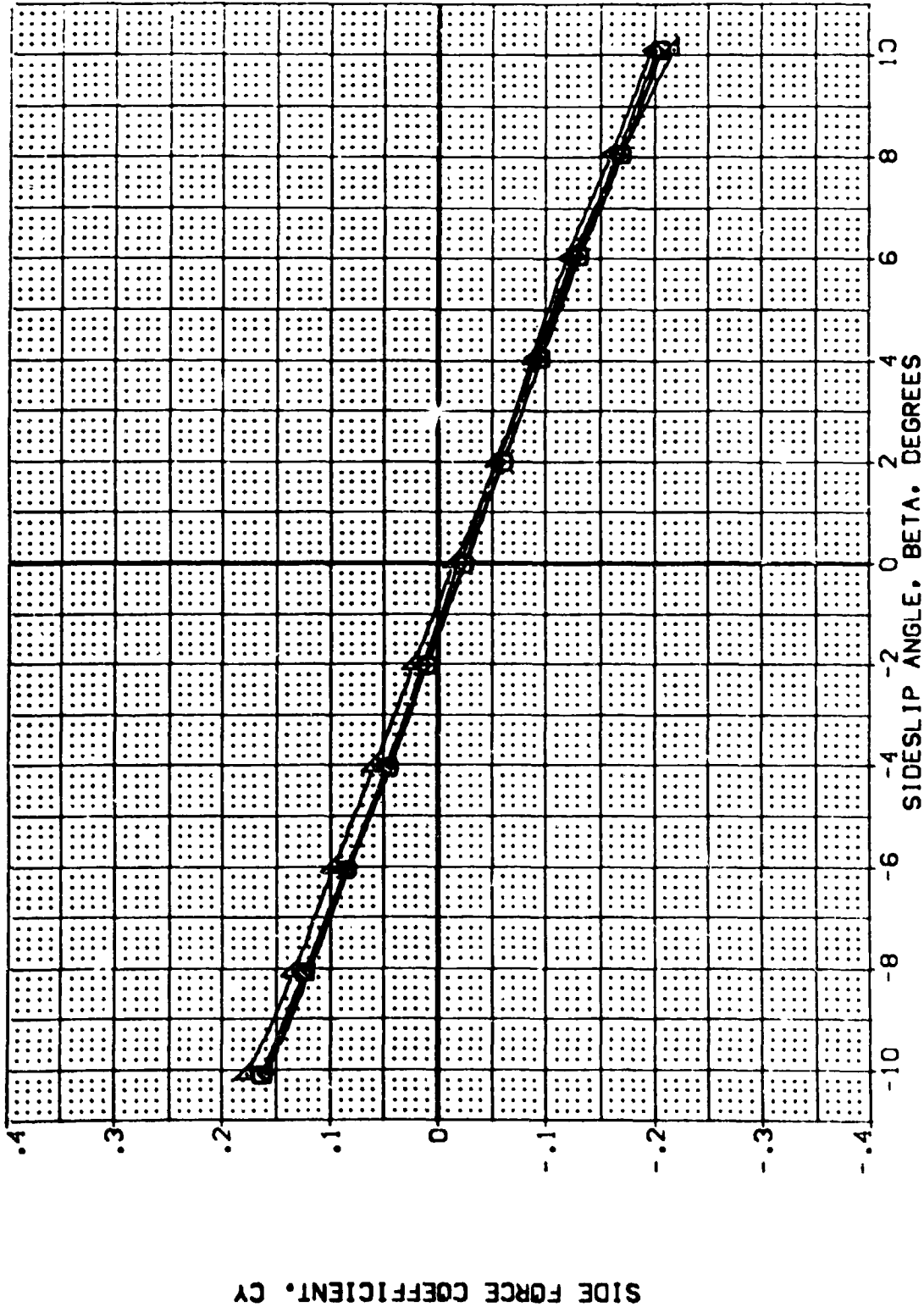


FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE

(A)MACH = .26

(CDZ195)

0A62B B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER -16.220

MACH .760

ELEVON .000

SPOBRK 85.000

PARAMETRIC VALUES

BDFLAP -12.000

A1LRON .000

REFERENCE INFORMATION

SREF 4.4118

LREF 19.2299

BREF 37.9359

XMRP 43.5974

YMRP .0000

ZMRP 15.1875

SCALE .0405

YAWING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CYNBET, PER DEGREE

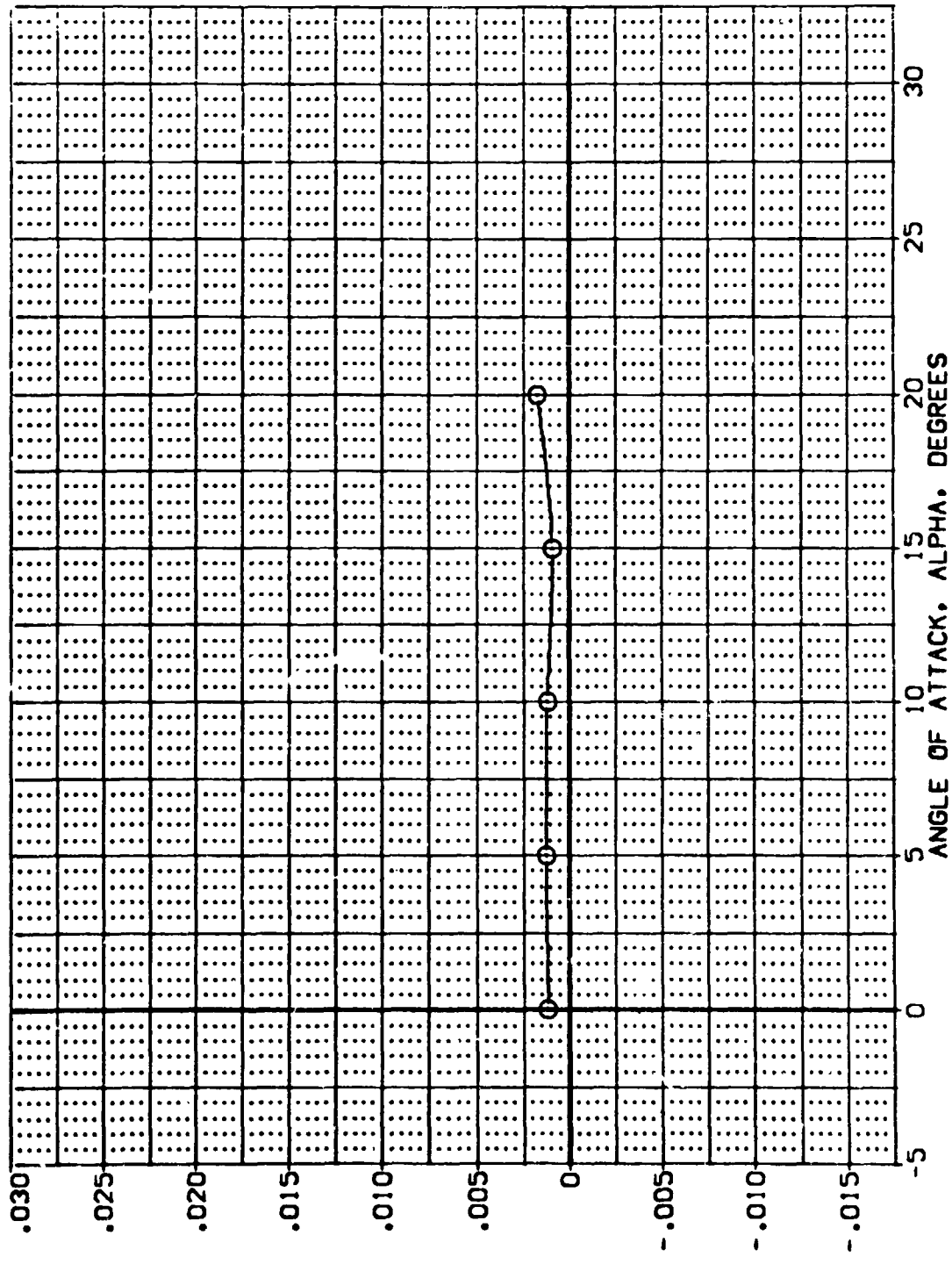


FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE

(CDZ195)

0A628 B26C9 M7F8 W116E28V8R5X9

SYMBOL ○

RUDDER -16.220

MACH .260

ELEVON .000

SPOBRK 85.000

PARAMETRIC VALUES

BDFLAP -12.000

A1LRON .000

REFERENCE INFORMATION

SREF 4.4119 SO.FT.

LREF 19.2299 INCHES

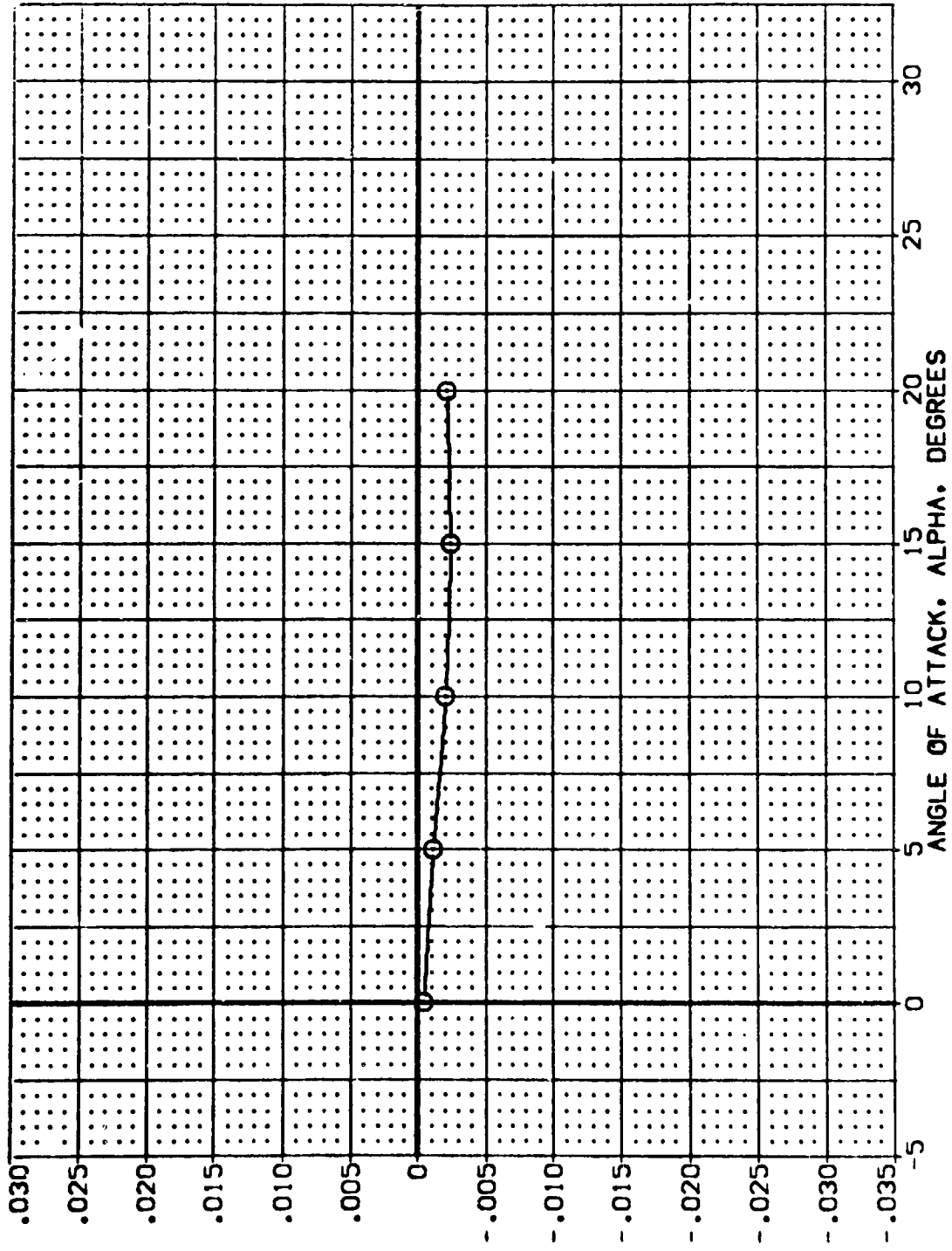
BREF 37.9359 INCHES

XMRP 43.5874 INCHES

YMRP .0000 INCHES

ZMRP 15.1875 INCHES

SCALE .0405



ROLLING MOMENT COEFFICIENT DERIVATIVE WITH BETA, CBLBET, PER DEGREE

FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE



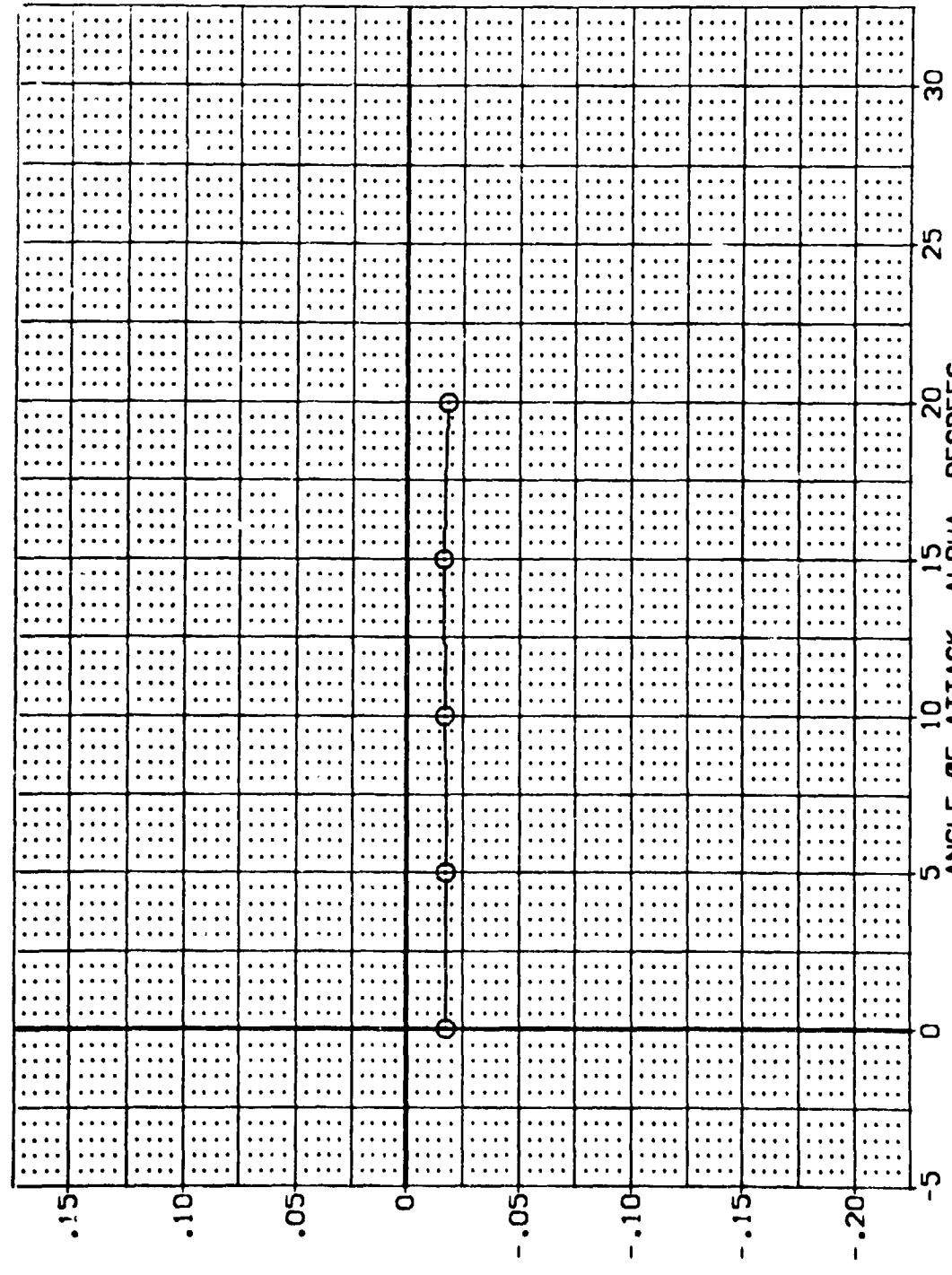


(COZ195)

0A62B 826C9 M7F8 W116E28V8R5X9

SYMBOL ○  
 RUDDER -16.220  
 MACH .260  
 ELEVON .000  
 SPOBRK 85.000  
 BOFLAP -12.000  
 ATLRON .000

REFERENCE INFORMATION  
 SREF 4.4119 SQ.FT.  
 LREF 19.7299 INCHES  
 BREF 37.9359 INCHES  
 XMRP 43.5874 INCHES  
 YMRP 1000.0 INCHES  
 ZMRP 15.1673 INCHES  
 SCALE .0405 INCHES



SIDE FORCE COEFFICIENT DERIVATIVE WITH BETA, CYBETA, PER DEGREE

FIG 71 LATERAL-DIRECTIONAL STABILITY, RUDDER = -16.22, 85 DEG.FLARE