



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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 NASA CR-141,550

RESULTS OF INVESTIGATIONS ON AN 0.015-SCALE
 MODEL (49-0) OF THE ROCKWELL INTERNATIONAL
 SPACE SHUTTLE ORBITER IN THE NASA-AMES
 RESEARCH CENTER 3.5-FOOT HYPERSONIC
 WIND TUNNEL (0A98)

(NASA-CR-141550) RESULTS OF INVESTIGATIONS
 ON AN 0.015-SCALE MODEL (49-0) OF THE
 ROCKWELL INTERNATIONAL SPACE SHUTTLE ORBITER
 IN THE NASA-AMES RESEARCH CENTER 3.5-FOOT
 HYPERSONIC WIND TUNNEL (0A98) (Chrysler

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA Management services



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WIND TUNNEL (0A98)

by

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NASA Series Number: OA98
Model Number: 49-0
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Occupancy Hours: 112

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ABSTRACT

This report presents the results of a wind tunnel test conducted in the Ames Research Center's 3.5 Foot Hypersonic Wind Tunnel from 27 March 1974 through 3 April 1974. The model used for this test was a 0.015-scale 140 A/B hybrid configuration of the Space Shuttle Orbiter.

The primary test objectives were to obtain incremental data on the effects of a sting mount on base pressures and force and moment data. The increments obtained included the addition of MPS nozzles as well as the deletion of the simulated sting mount.

Six-component aerodynamic force and moment data were recorded over an angle of attack range from 12° to 42° at 0° and 5° angles of sideslip. The testing was accomplished at Mach 5.3 and Mach 10.3. The effects of various elevon, body flap, and speed brake settings were investigated. Static pressures were measured at the fuselage base for use in force-data reduction.

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- I) CDF, CAF, CAB VS. ALPHA
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DCMVAF, DCMTAF, DCA, DCAF, DCAT, DCAB, DCAV, DCD, DCDF, DCDT,
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- K) CPV1, CPV2, CPV3, CPB1, CPB2, CPB3 VS. ALPHA
- L) CY, CYN, CBL VS. ALPHA
- M) DCY, DCYN, DCBL VS. ALPHA

NOMENCLATURE

General

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
a		speed of sound; ft/sec
M	MACH	Mach number; V/a
q	Q(PSF)	dynamic pressure; $\rho V^2/2$, psf
RN/L	RN/L	unit Reynolds number, per ft
V		velocity, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ϕ	PHI	angle of roll, degrees
ρ	RHO	mass density, slugs/ft ³

Reference & C.G. Definitions

A_b		base area, ft ²
b	BREF	wing span, ft
l_{ref}	LREF	reference length, ft
\bar{c}		mean aerodynamic chord, ft
S	SREF	wing area, ft ²
c.g.		center of gravity
	MRP	moment reference point

SUBSCRIPTS

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

NOMENCLATURE (Continued)

Body-Axis System

<u>Symbol</u>	<u>Plot 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; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

Stability-Axis System

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

NOMENCLATURE (Continued)
Additions to Standard List

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
A_i		area associated with i th pressure, ft^2
C_{A_T}	CAT	total axial force coefficient
C_{A_V}	CAV	vertical tail strut base axial force coefficient
C_{D_T}	CDT	total drag coefficient
C_{D_V}	CDV	vertical tail strut base drag coefficient
C_{L_f}	CLF	forebody lift coefficient
C_{L_T}	CLT	total lift coefficient
C_{L_V}	CLV	vertical tail strut base lift coefficient
$C_{m_{aft}}$	CLMAFT	pitching moment coefficient based on aft c.g. location
$C_{m_{fwd}}$	CLMFWD	pitching moment coefficient based on forward c.g. location
C_{m_T}	CLMT	total pitching moment coefficient
C_{N_T}	CNT	total normal force coefficient
C_{N_V}	CNV	vertical tail strut base normal force coefficient
$C_{P_{B_i}}$	CPBi	base pressure coefficient at station i

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
FRL		fuselage reference line
IML		inner mold line
l_B	LB	fuselage length, in.
MRC		moment reference center
MS		model station, in.
OML		outer mold line
P_T	PT	freestream total pressure, psi
P_0	P	freestream static pressure, psi
P_i	P	local static pressure at orifice i, psi
T_T	TT	freestream total temperature, °R
X_{MRP}	XMRP	longitudinal location of moment reference point, in.
X_0	XO	Orbiter longitudinal station, in.
Y_{MRP}	YMRP	lateral location of moment reference point, in.
Y_0	YO	Orbiter lateral station, in.
Z_{MRP}	ZMRP	vertical location of moment reference point, in.
Z_0	ZO	Orbiter vertical station, in.
ΔC_A	DCA	incremental axial force coefficient, difference between axial force coefficient of two runs
ΔC_{Ab}	DCAB	incremental base axial force coefficient, difference between base axial force coefficient of two runs
ΔC_{Af}	DCAF	incremental forebody axial force coefficient, difference between forebody axial force coefficient of two runs

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
ΔC_D	DCD	incremental drag coefficient, difference between drag coefficient of two runs
ΔC_L	DCL	incremental lift coefficient, difference between lift coefficient of two runs
ΔC_{ℓ}	DCBL	incremental rolling moment coefficient, difference between rolling moment coefficient of two runs
$\Delta C_{m_{aft}}$	DCMAFT	incremental aft pitching moment coefficient, difference between aft pitching moment coefficient of two runs
$\Delta C_{m_{fwd}}$	DCMFWD	incremental forward pitching moment coefficient, difference between forward pitching moment coefficient of two runs
ΔC_N	DCN	incremental normal force coefficient, difference between normal force coefficient of two runs
ΔC_n	DCYN	incremental yawing moment coefficient, difference between yawing moment coefficient of two runs (body axis)
ΔC_Y	DCY	incremental side force coefficient, difference between side force coefficient of two runs
δ_a	AILRON	aileron deflection angle, degrees
δ_{BF}	BDFLAP	bodyflap deflection angle, degrees
δ_e	ELEVON	elevon deflection angle, degrees
δ_{e_L}	ELEV-L	left-hand elevon deflection, inboard and outboard panels, degrees
δ_{e_R}	ELEV-R	right-hand elevon deflection, inboard and outboard panels, degrees
δ_R	RUDDER	rudder deflection angle, degrees

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
δ_{SB}	SPDBRK	speedbrake deflection angle, degrees
Λ_u		sweepback angle of speedbrake trailing edge, degrees
Λ_L		sweepback angle of the lower part of the vertical tail, degrees
C_{mY}	CMVFWD	forward vertical tail base pitching-moment coefficient
C_{NY}	CNV	vertical tail base normal-force coefficient
C_{PV1}	CPV1	base pressure coefficient on upper speed brake portion
C_{PV2}	CPV2	base pressure coefficient on lower speed brake portion
C_{PV3}	CPV3	base pressure coefficient on lower vertical tail portion
X_{V1}		longitudinal distance from $0.65 \lambda_B$ to centroid of area containing C_{PV1}
X_{V2}		longitudinal distance from $0.65 \lambda_B$ to centroid of area containing C_{PV2}
X_{V3}		longitudinal distance from $0.65 \lambda_B$ to centroid of area containing C_{PV3}
ΔC_{DV}	DCDV	incremental vertical tail base drag force coefficient
ΔC_{Df}	DCDF	incremental total forebody drag force coefficient
ΔC_{Dt}	DCDT	incremental total drag force coefficient

NOMENCLATURE (Concluded)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$C_{m_{t_f}}$	CMTFWD	forward total pitching moment coefficient
$C_{m_{t_a}}$	CMTAFT	aft total pitching moment coefficient
$C_{m_{v_f}}$	CMVAFT	aft vertical tail base pitching moment coefficient
ΔC_{L_t}	DCLT	incremental total lift-force coefficient
ΔC_{L_v}	DCLV	incremental vertical tail base lift force coefficient
ΔC_{D_b}	DCDB	incremental model body base drag force coefficient
ΔC_{N_t}	DCNT	incremental total normal force coefficient
ΔC_{N_v}	DCNV	incremental vertical tail base normal-force coefficient
ΔC_{A_v}	DCAV	incremental vertical tail base axial force coefficient
	DS	dummy sting
A_{V_i}		area associated with i th pressure orifice on the vertical tail; ft^2 ; $i = 1, 2, 3$ (see fig. 2d and page 16)
Z_{V_i}		moment arm, measured along the Z axis, from the i th pressure orifice of the vertical tail to the ZMRP; inches; $i = 1, 2, 3$
C_{p_c}	CPCAV	pressure coefficient associated with the sting cavity area

CONFIGURATIONS INVESTIGATED

The 140A/B hybrid configuration was tested with and without a dummy rear entry sting with two different OMS pod configurations.

Model 49-0 dimensional data are given for the 140A/B configuration in Table III.

The tested configuration included the following components:

<u>Component</u>	<u>Description</u>
B26	Basic 140A/B configuration fuselage
C9	Basic 140A/B configuration canopy
DS	Dummy sting
E37	Slotted elevons per model drawing SS-A00148
F8	Body flap per Rockwell Lines VL70-000145 (model drawing SS-A00147, release 12)
M7	Basic 140A/B configuration OMS/RCS pods
M14	Shortened configuration OMS/RCS pods per VL70-008457
N24	MPS Nozzles - N24
N28	Basic 140A/B configuration OMS engine nozzles
O11	B26C9E37F8M7N24N28R5V8W116
R5	Basic 140A/B configuration rudder for V8
V8	Basic 140A/B configuration vertical tail
W116	Basic 140A/B configuration wing

TEST FACILITY DESCRIPTION

The NASA-Ames 3.5-Foot Hypersonic Wind Tunnel is a closed-circuit, blowdown-type tunnel capable of operating at nominal Mach numbers of 5, 7, and 10 at pressures to 1800 psia and temperatures to 3400°R for run times to four minutes. The major components of the facility include a gas storage system where the test gas is stored at 3000 psi, a storage heater filled with aluminum-oxide pebbles capable of heating the test gas to 3400°R, axisymmetric contoured nozzles with exit diameters of 42 inches for generating the desired Mach number, and a 900,000 ft³ vacuum storage system which operates to pressures of 0.3 psia. The test section itself is an open-jet type enclosed within a chamber approximately 12-feet in diameter and 40-feet in length, arranged transversally to the flow direction.

A model support system is provided that can pitch models through an angle-of-attack range of -20 to +20 degrees, in a vertical plane, about a fixed point of rotation on the tunnel centerline. This rotation point is adjustable from 1 to 5 feet from the nozzle exit plane. The model normally is out of the test stream (strut centerline 37-inches from tunnel centerline) until the tunnel test conditions are established after which it is inserted. Insertion time is adjustable to as little as 1/2 second and models may be inserted at any strut angle.

A high-speed, analog-to-digital data acquisition system is used to record test data on magnetic tape. The present system is equipped to measure and record the outputs from 80 transducers in addition to 20 channels of tunnel parameters.

DATA REDUCTION

Standard NASA/ARC data reduction techniques were used with the following reference dimensions:

A _c	Sting cavity area	0.0341 ft ²
b	reference wing span	1.171 ft
\bar{c}	reference M.A.C.	0.5935 ft
L _B	reference body length	1.613 ft
S	reference wing area	0.6053 ft ²
XMRP	longitudinal distance, model nose OML to moment reference center	12.6255 in
YMRP	lateral distance, plane of symmetry to moment reference center	0.0 in
ZMRP	vertical distance, FRP to moment reference center	-0.375 in

Fuselage and vertical tail base force coefficients were computed as follows:

$$C_{AB} = - \frac{A_c C_{p_c}}{S} - \sum_{i=1}^5 \frac{A_{Bi} C_{p_{Bi}}}{S}$$

C_{AB} = base axial-force coefficient

$$C_{AV} = - \frac{\cos \Lambda_U}{S} (A_{V1} C_{p_{V1}} + A_{V2} C_{p_{V2}}) - \frac{\cos \Lambda_L A_{V3} C_{p_{V3}}}{S}$$

C_{AV} = vertical tail base axial-force coefficient

$$C_{NV} = \frac{\sin \Lambda_U}{S} (A_{V1} C_{p_{V1}} + A_{V2} C_{p_{V2}}) + \frac{\sin \Lambda_L A_{V3} C_{p_{V3}}}{S}$$

DATA REDUCTION (Continued)

C_{N_V} = vertical tail base normal-force coefficient

$$C_{m_{V0.65}} \lambda_B = - [A_{V1} C_{P_{V1}} (Z_{V1} \cos \Lambda_u + X_{V1} \sin \Lambda_u) + A_{V2} C_{P_{V2}} (Z_{V2} \cos \Lambda_u + X_{V2} \sin \Lambda_u) + A_{V3} C_{P_{V3}} (Z_{V3} \cos \Lambda_L + X_{V3} \sin \Lambda_L)] / \bar{c} S$$

The following full scale dimensional values were utilized in effecting a solution to the above equations.

<u>Symbol</u>	<u>Dimensions</u>	<u>Value</u>
AB1	ft ²	48.0
AB2	ft ²	89.3
AB3	ft ²	45.9
AB4	ft ²	78.2
AB5	ft ²	12.4
AC	ft ²	151.56
XV1	in	581.1
XV2	in	531.9
XV3	in	432.2
ZV1	in	351.0
ZV2	in	251.1
ZV3	in	165.7
Λ_u	deg.	26.25°
Λ_L	deg.	63.85°

DATA REDUCTION (Concluded)

The areas of influence applicable to the pressure coefficients in the above equations are a function of speedbrake deflection as defined in the following tabular array.

Symbol	Dimensions	Value	
		δSB = 55°	δSB = 85°
A _{V1}	ft ²	50.4	82.3
A _{V2}	ft ²	67.4	109.9
A _{V3}	ft ²	19.77	19.77

The equations below define the relationships employed to obtain the indicated force coefficients.

$$CDV = CAV \cos \alpha + CNV \sin \alpha$$

$$CLV = CNV \cos \alpha - CAV \sin \alpha$$

$$CMVAFT = CMVFWD + (0.675 - 0.65) (\ell_B) CNV/\bar{c}$$

$$CLMAFT = CLMFWD + (0.675 - 0.65) (\ell_B) CN/\bar{c}$$

$$CDT = CD + CDV$$

$$CLT = CL + CLV$$

$$CAT = CA + CAV$$

$$CNT = CN + CNV$$

$$CMTFWD = CLMFWD + CMVFWD$$

$$CMTAFT = CLMAFT + CMVAFT$$

$$CAF = CAT - CAB$$

$$CDF = CAF \cos \alpha + CNT \sin \alpha$$

$$CDB = CDT - CDF$$

RESULTS AND DISCUSSION

The model was installed in the tunnel on the ARC MK II 400565 D balance. The balance was attached to the W-11015 sting by means of a vertical tail blade strut. To determine sting effects, the model was tested with and without a dummy sting assembly installed between the tunnel support blade and the rear of the model. The dummy sting did not touch the model at any point.

The base pressure arrangement was varied with the test configuration. This was necessitated by a shortage of available transducer connections in the tunnel. These arrangements are shown on figure 2d.

Adapters were utilized on both stings to obtain $\beta = 5^\circ$ for certain tests. During runs 8 and 9, the model was covered with impregnated oil and tested at a constant angle of attack to obtain flow patterns.

TABLE II.

TEST: <u>AMES 3.5-190 ΦA98</u>		DATE SET/RUN NUMBER COLLATION SUMMARY										DATE: <u>03 August 1974</u>									
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBERS												
		α	β		δ_{SE}	δ_{SR}	δ_{SR}	5.3	10.3												
BAEQ001	OII-MV+MI4	A	0	0	-11.7	55	0	2	1	25											
02									2	24											
03									3	23											
04								1	4												
05										27											
06										28											
07										29											
08										30											
09	-N24									20											
10										21											
11										22											
12										31											
13	+DS									14											
14										11											
15										10											
16										12											
R SETS:																					
CN	ICY	ICA	ICLM	ICYN	ICBL	ICL	ICD														
A SETS:																					
CPB1	ICPB2	ICPB3	ICPB4	ICPCAY	ICPB5	ICPV3	ICPV2	ICPY1													
TYPE OF DATA		A: 12, 16, 20, 24, 28, 32, 36, 40, 42										COEFFICIENT SCHEDULES									
α OR β												IDVAR (1)		IDVAR (2)		NDV					
SCHEDULES												MACH		ALPHA		8					

TABLE II. Concluded

TEST: AMES 3.5-190 ϕ A98		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 03 August 1974			
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES					NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		α	β	δ_e	δ_{BE}	δ_R		5.3	10.3						
RAEQO17	011-M7+M14-N24+DS	A	0	0	-11.7	55	0	2	34	17					
18				-10					36	15					
19				-40					37	16					
20				0		85			35						
21						16.3	55			18					
22						0				19					
23			5		-11.7					33					
24			5		-40					32					
TEST RUN NUMBERS															
RSETS:															
CN	CY	CA	CLM	CYN	CBF	CL	CD				MACH	ALPHA		8	
ASSETS:															
CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	CPB14	CPB15	CPB16
TYPE OF DATA															
α OR β A: 12, 16, 20, 24, 28, 32, 36, 40, 42															
COEFFICIENT SCHEDULES															
SCHEDULES															

TABLE III MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B₂₆

GENERAL DESCRIPTION : Configuration 140 A/B orbiter fuselage

NOTE: B₂₆ is identical to B₂₄ except underside of fuselage has been
refaired to accept W₁₁₆.

MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Release 12

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

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OML: Fwd Sta $X_o = 235$), In.	1293.3	19.400
Length (IML: Fwd Sta. $X_o = 238$), In.	1290.3	19.355
Max Width (At $X_o = 1528.3$), In.	264.0	3.960
Max Depth (At $X_o = 1464$), In.	250.0	3.750
Fineness Ratio	0.264	0.264
Area - Ft ²		
Max. Cross-Sectional	340.88	0.077
Planform		
Wetted		
Base		

TABLE III (Cont'd)

MODEL COMPONENT : CANOPY - C₉

GENERAL DESCRIPTION : Configuration 3A. Canopy used with fuselage B₂₆

MODEL SCALE: 0.015

MODEL DWG: SS-A00147, Release 12

DRAWING NUMBER: VL70-000143A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length ($X_o = 434.643-578$), In.	<u>143.357</u>	<u>2.150</u>
Max Width (At $X_o = 513.127$), In.	<u>152.412</u>	<u>2.286</u>
Max Depth (At $X_o = 485.0$), In.	<u>25.000</u>	<u>0.375</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 (Cont'd)

MODEL COMPONENT: ELEVON - E₃₇

GENERAL DESCRIPTION: Configuration 140A/B orbiter elevon

E₃₇ is a slotted version of E₂₆. Data is for one side.

MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Release 12

DRAWING NUMBER: VL70-000200, -006089, -006092

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>210.00</u>	<u>0.0473</u>
Span (equivalent), In.	<u>349.2</u>	<u>5.238</u>
Inb'd equivalent chord, In.	<u>118.004</u>	<u>1.770</u>
Outb'd equivalent chord, In.	<u>55.192</u>	<u>0.828</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline (Product of Area and \bar{c})	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hingeline), Ft ³	<u>1587.25</u>	<u>0.00536</u>
Mean Aerodynamic Chord, In.	90.7	1.361

TABLE III (Cont'd)

MODEL COMPONENT : BODY FLAP - F_g

GENERAL DESCRIPTION : Configuration 140A/B orbiter body flap

Hingeline located at X_o = 1528.3, Z_o = 284.3

MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Rel. 12

DRAWING NUMBER: VL70-000140A, -000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X _o = 1520 to 1613), In.	<u>93.00</u>	<u>1.395</u>
Max Width, In.	<u>262.00</u>	<u>3.930</u>
Max Depth (X _o = 1520), In.	<u>23.00</u>	<u>0.345</u>
Fineness Ratio	<u> </u>	<u> </u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u>150.525</u>	<u>0.0339</u>
Wetted	<u> </u>	<u> </u>
Base	<u>41.847</u>	<u>0.0094</u>

TABLE III (Cont'd)

MODEL COMPONENT : OMS PODS - M₇

GENERAL DESCRIPTION : Configuration 140A/B orbiter OMS/RCS pods

MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Rel. 12

DRAWING NUMBER : VL70-000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta $X_o = 12330.$)	<u>327.00</u>	<u>4.905</u>
Max Width (At $X_o = 1450$), In.	<u>94.50</u>	<u>1.418</u>
Max Depth (At $X_o = 1493$), In.	<u>109.000</u>	<u>1.635</u>
Fineness Ratio	_____	_____
Area	_____	_____
Max. Cross-Sectional	_____	_____
Planform	_____	_____
Wetted	_____	_____
Base	_____	_____

TABLE III (Cont'd)

MODEL COMPONENT : OMS POD - M₁₄

GENERAL DESCRIPTION : Preliminary IML version of short OMS pod. (First used on 0.015 scale Model 36-O for test No. OA83.)

MODEL SCALE: 0.015

DRAWING NUMBER : VL70-008457

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta $X_o = 1311$), In.	<u>254.00</u>	<u>3.810</u>
Max Width (At $X_o = 1511$), In.	<u>135.6</u>	<u>2.034</u>
Max Depth (At $X_o = 1511$), In.	<u>73.6</u>	<u>1.104</u>
Fineness Ratio	<u>2.541</u>	<u>2.541</u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>54.507</u>	<u>0.012</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III (Cont'd)

MODEL COMPONENT: MPS NOZZLES - N 24

GENERAL DESCRIPTION: Configuration 140A/B orbiter MPS nozzles.

MODEL SCALE: 0.015 MODEL DRAWING: SS-A00147, Release 12

DRAWING NUMBER: VL70-005030A, VL70-000140A

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	<u>157.0</u>	<u>2.355</u>
Throat to Exit Plane	<u>99.2</u>	<u>1.488</u>
Diameter - In.		
Exit	<u>91.00</u>	<u>1.410</u>
Throat	<u> </u>	<u> </u>
Inlet	<u> </u>	<u> </u>
Area - ft ²		
Exit	<u>45.166</u>	<u>0.0102</u>
Throat	<u> </u>	<u> </u>
Gimbal Point (Station) - In.		
Upper Nozzle		
X	<u>1445.00</u>	<u>23.675</u>
Y	<u>0.0</u>	<u>0.0</u>
Z	<u>443.0</u>	<u>6.645</u>
Lower Nozzles		
X	<u>1468.17</u>	<u>22.023</u>
Y	<u>+ 53.00</u>	<u>+ 0.795</u>
Z	<u>342.640</u>	<u>5.140</u>
Null Position - Deg.		
Upper Nozzle		
Pitch	<u>16</u>	<u>16</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch	<u>10</u>	<u>10</u>
Yaw	<u>3.5</u>	<u>3.5</u>

TABLE III (Cont'd)

MODEL COMPONENT: OMS NOZZLES - N₂₈

GENERAL DESCRIPTION: Configuration 140A/B orbiter OMS nozzles.

MODEL SCALE: 0.015

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

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	_____	_____
Throat to Exit Plane	_____	_____
Diameter - In.		
Exit	_____	_____
Throat	_____	_____
Inlet	_____	_____
Area - ft ²		
Exit	_____	_____
Throat	_____	_____
Gimbal Point (Station) - In.		
Left Upper Nozzle		
X _o	<u>1518.0</u>	<u>22.770</u>
Y _o	<u>- 88.0</u>	<u>-1.320</u>
Z _o	<u>492.0</u>	<u>7.380</u>
Right Lower Nozzles		
X _o	<u>1518.00</u>	<u>22.770</u>
Y _o	<u>88.0</u>	<u>1.320</u>
Z _o	<u>492.0</u>	<u>7.380</u>
Null Position - Deg.		
Left Upper Nozzle		
Pitch	<u>±8°</u>	<u>±8°</u>
Yaw	<u>13°17'</u>	<u>13°17'</u>
Right Lower Nozzle		
Pitch	<u>±8°</u>	<u>±8°</u>
Yaw	<u>13°17'</u>	<u>13°17'</u>
	Outboard	Outboard
	Inboard	Inboard
	2°30'	2°30'
	2°30'	2°30'

TABLE III (Cont'd)

MODEL COMPONENT: RUDDER - R₅

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

MODEL SCALE: 0.015

DRAWING NUMBER: VL70-000146B, -000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>100.15</u>	<u>0.023</u>
Span (equivalent), In.	<u>201.00</u>	<u>3.015</u>
Inb'd equivalent chord, In.	<u>91.585</u>	<u>1.374</u>
Outb'd equivalent chord, In.	<u>50.833</u>	<u>0.762</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> </u>	<u> </u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
(Product of area & \bar{c})		
Area Moment (Normal to hingeline), Ft ³	<u>610.92</u>	<u>0.00021</u>
Mean Aerodynamic Chord, In.	<u>73.2</u>	<u>1.098</u>

TABLE III (Cont'd)

MODEL COMPONENT: VERTICAL - V₈

GENERAL DESCRIPTION: Configuration 140C orbiter vertical tail

(identical to configuration 140A/B vertical tail).

MODEL SCALE: 0.015

DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS: FULL SCALE MODEL SCALE

TOTAL DATA

Area (Theo) - Ft ²		
Planform	<u>413.253</u>	<u>0.093</u>
Span (Theo) - In.	<u>315.72</u>	<u>4.736</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>45.00</u>	<u>45.000</u>
Trailing Edge	<u>26.25</u>	<u>26.250</u>
0.25 Element Line	<u>41.13</u>	<u>41.13</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>4.028</u>
Tip (Theo) WP	<u>108.47</u>	<u>1.627</u>
MAC	<u>199.81</u>	<u>2.997</u>
Fus. Sta. of .25 MAC	<u>1463.35</u>	<u>21.950</u>
W.P. of .25 MAC	<u>635.52</u>	<u>9.533</u>
B.L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle - Deg.	<u>10.00</u>	<u>10.00</u>
Trailing Wedge Angle - Deg.	<u>14.92</u>	<u>14.92</u>
Leading Edge Radius	<u>2.00</u>	<u>0.030</u>
Void Area	<u>13.17</u>	<u>0.00296</u>
Blanketed Area	<u>0.0</u>	<u>0.0</u>

TABLE III (CONL'D)

MODEL COMPONENT: WING-W₁₁₆

GENERAL DESCRIPTION: Configuration 4

NOTE: Identical to W₁₁₄ except airfoil thickness. Dihedral angle is along trailing edge of wing. Geometric twist = 0.

MODEL SCALE: 0.015

TEST NO.

DWG. NO. VL70-000140A, -000200

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo.) Ft²

Planform

2690.00

0.605

Span (Theo In.

936.68

14.050

Aspect Ratio

2.265

2.265

Rate of Taper

1.177

1.177

Taper Ratio

0.200

0.200

Dihedral Angle, degrees

3.500

3.500

Incidence Angle, degrees

0.500

0.500

Aerodynamic Twist, degrees

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

10.339

Tip, (Theo) B.P.

137.85

2.068

MAC

474.81

7.122

Fus. Sta. of .25 MAC

1136.83

17.052

W.P. of .25 MAC

290.58

4.359

B.L. of .25 MAC

182.13

2.732

EXPOSED DATA

Area (Theo) Ft²

1751.50

0.394

Span, (Theo) In. BP108

720.68

10.810

Aspect Ratio

2.059

2.059

Taper Ratio

0.245

0.245

Chords

Root BP108

562.09

8.431

Tip 1.00 $\frac{b}{2}$

137.85

2.068

MAC

392.83

5.892

Fus. Sta. of .25 MAC

1185.98

17.790

W.P. of .25 MAC

294.30

4.415

B.L. of .25 MAC

251.77

3.777

Airfoil Section (Rockwell Mod NASA)

XXXX-64

Root $\frac{t}{c}$ =

0.113

0.113

Tip $\frac{t}{c}$ =

0.120

0.120

Data for (1) of (2) Sides

Leading Edge Cuff

Planform Area Ft²

113.18

0.025

Leading Edge Intersects Fus M. L. @ Sta

500.00

7.50

Leading Edge Intersects Wing @ Sta

1024.0

15.36

TABLE IV
DATASET COMBINATIONS USED TO OBTAIN INCREMENTAL DATA

RESULTING DATASET	MINUEND DATASET	SUBTRAHEND DATASET	RESULTING DATA	β	δ_e	δ_{BF}	δ_{SB}
1, Z, YEQ009	REQ009	REQ001	Nozzle increment	0	0	-11.7	55
	REQ010	REQ002	Nozzle increment	0	-10	-11.7	55
	REQ011	REQ003	Nozzle increment	0	-40	-11.7	55
	REQ012	REQ008	Nozzle increment	5	-40	-11.7	55
1, Z, YEQ017	REQ017	REQ001	Nozzle increment	0	0	-11.7	55
	REQ018	REQ002	Nozzle increment + sting tare	0	-10	-11.7	55
	REQ019	REQ003		0	-40	-11.7	55
	REQ020	REQ004		0	0	-11.7	85
	REQ021	REQ005		0	0	16.3	55
	REQ022	REQ006		0	0	0	55
	REQ023	REQ007		5	0	-11.7	55
	REQ024	REQ008		5	-40	-11.7	55
3EQ007	REQ007	REQ001	Increment due to 5° sideslip	$\Delta=5$	0	-11.7	55
	REQ008	REQ003		$\Delta=5$	-40	-11.7	55
	REQ023	REQ017		$\Delta=5$	0	-11.7	55
	REQ024	REQ019		$\Delta=5$	-40	-11.7	55
	REQ012	REQ011		$\Delta=5$	-40	-11.7	55

NOTE:

- VERTICAL TAIL REPLACED WITH NON-METRIC BLADE STRUT. INCREMENTAL FORCES ON VERTICAL TAIL ESTIMATED FROM PRESSURES RECORDED IN SPEEDBRAKE BASE REGION.
- [NOZZLE INCREMENT] = [MODEL + STRUT] - [MODEL + STRUT + NOZZLE]
- [NOZZLE INCREMENT + STING TARE] = [MODEL + STRUT + DUMMY STING] - [MODEL + STRUT + NOZZLE]
- [SIDESLIP INCREMENT] = [$\beta = 5^\circ$] - [$\beta = 0$]

Notes:

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

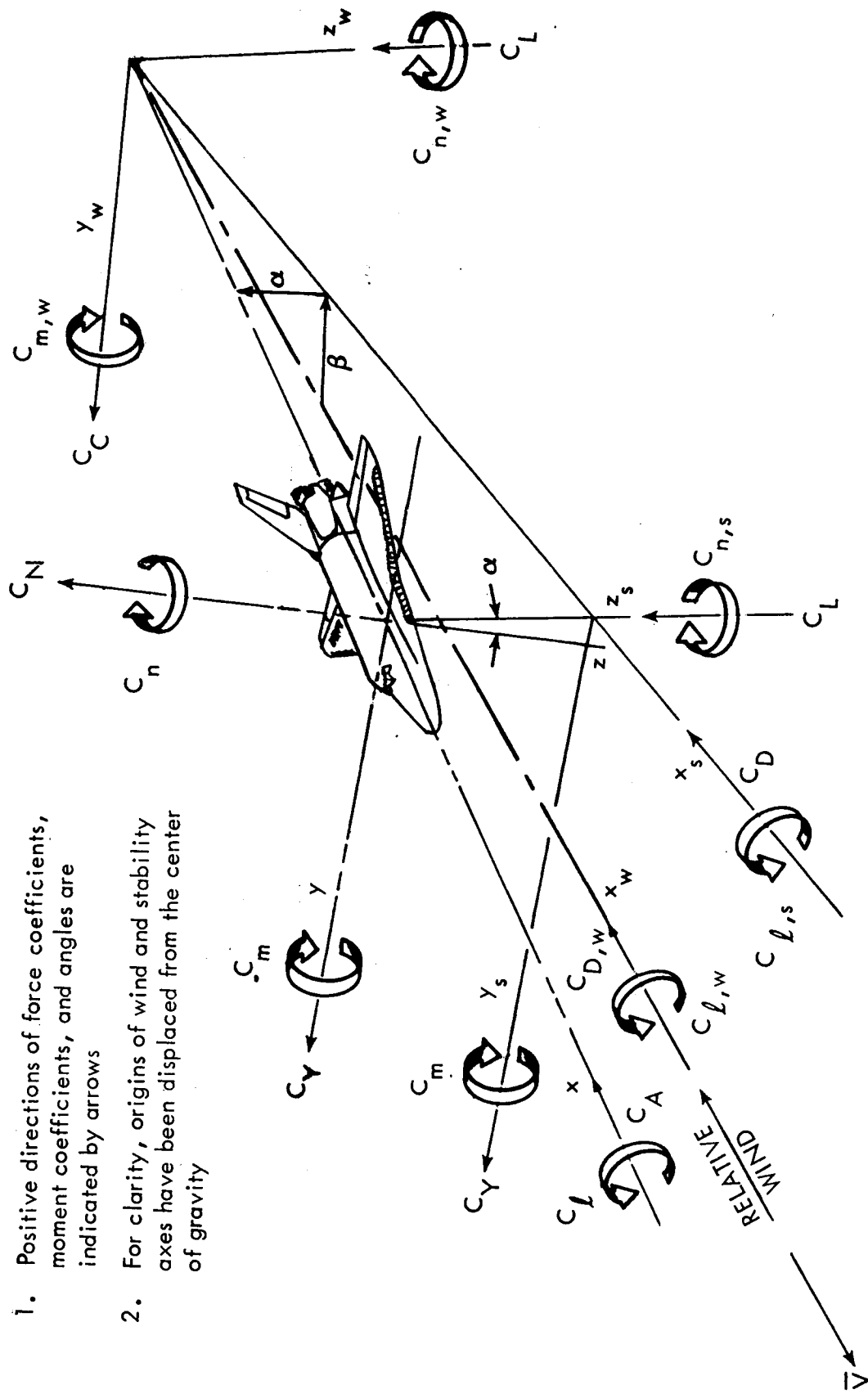
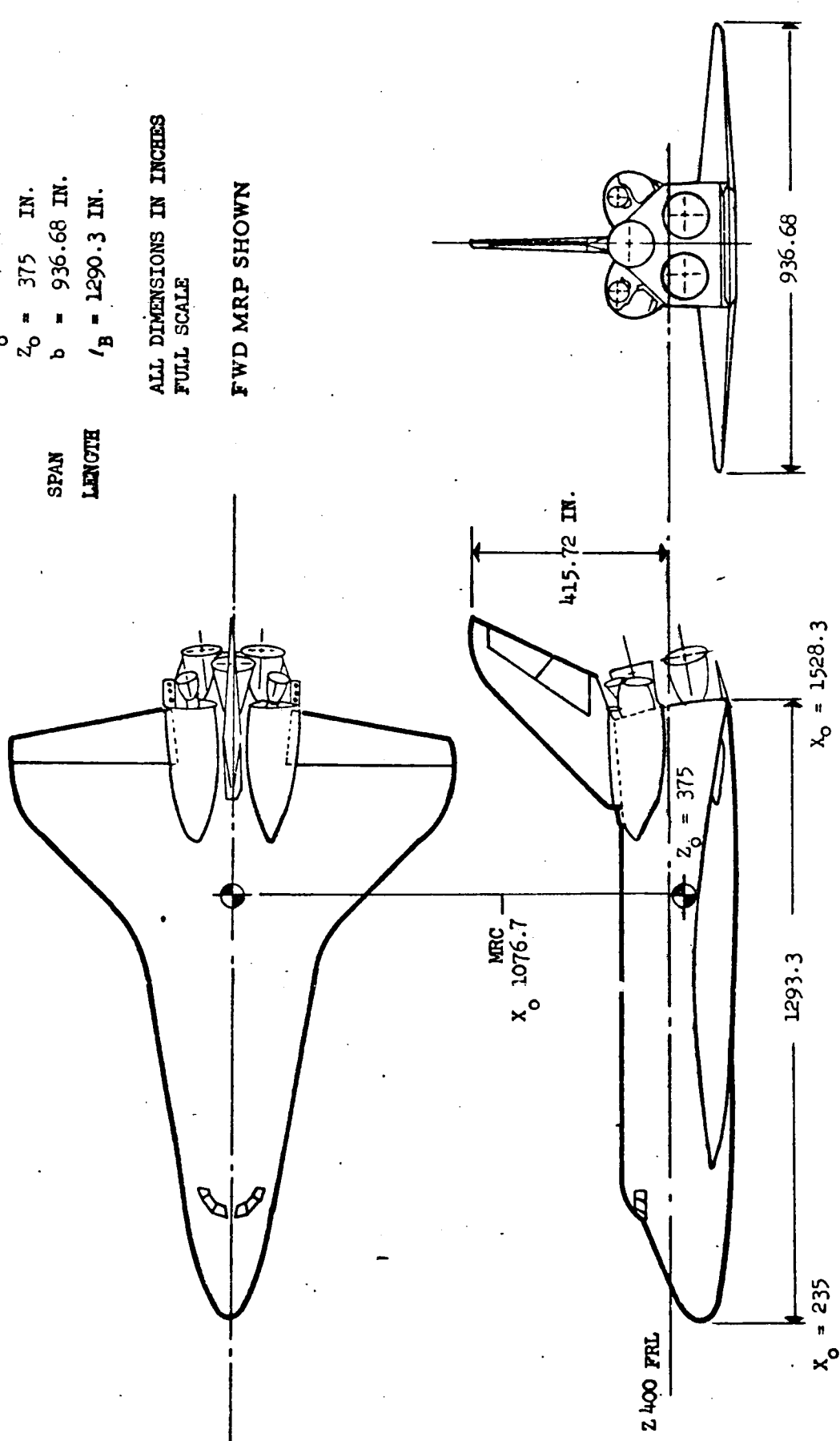


Figure 1. - Axis systems.

REFERENCE	DIMENSIONS
AREA	$S = 2690 \text{ FT}^2$
MAC	$\bar{C} = 474.8 \text{ IN.}$
C.G.	$X_o = 1076.7 \text{ IN.}$
SPAN	$Z_o = 375 \text{ IN.}$
LENGTH	$b = 936.68 \text{ IN.}$
	$l_B = 1290.3 \text{ IN.}$

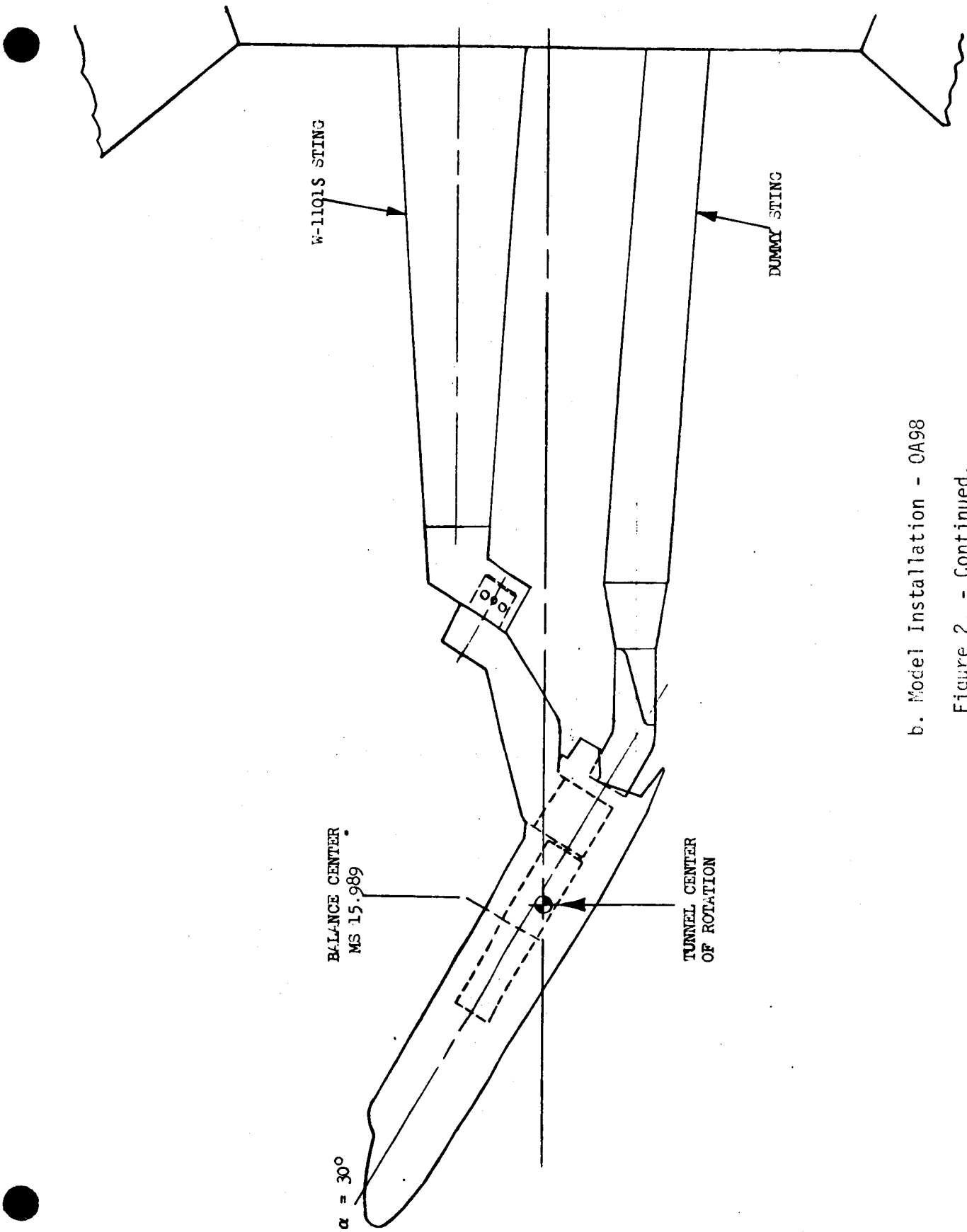
ALL DIMENSIONS IN INCHES
FULL SCALE

FWD MRP SHOWN



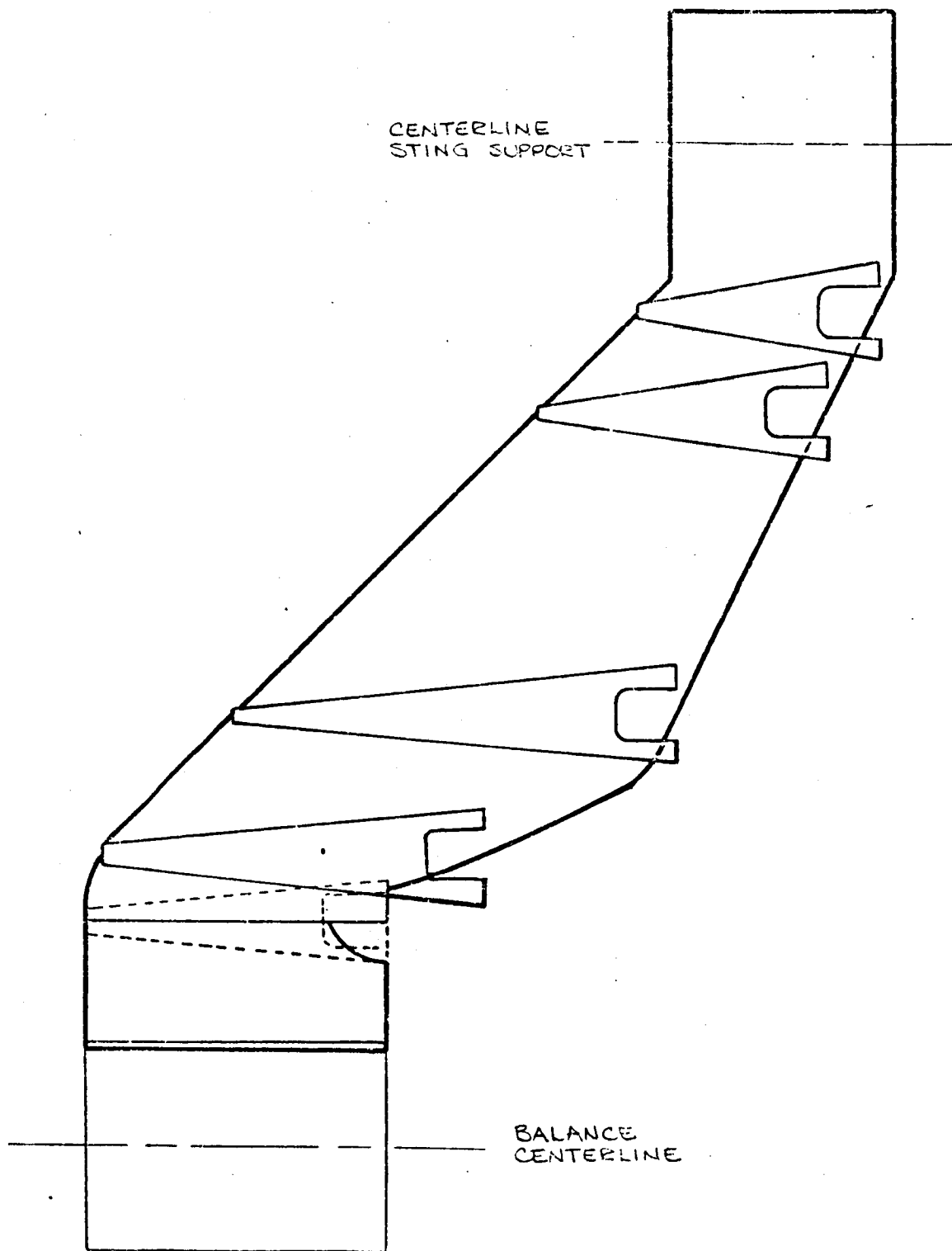
a. SSV Orbiter Configuration 14CA/B

Figure 2. - Model sketches.



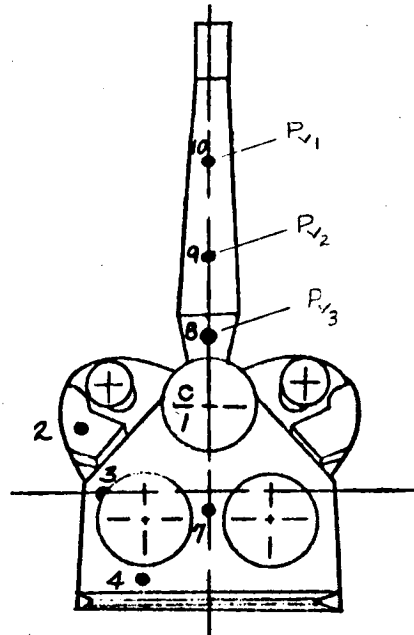
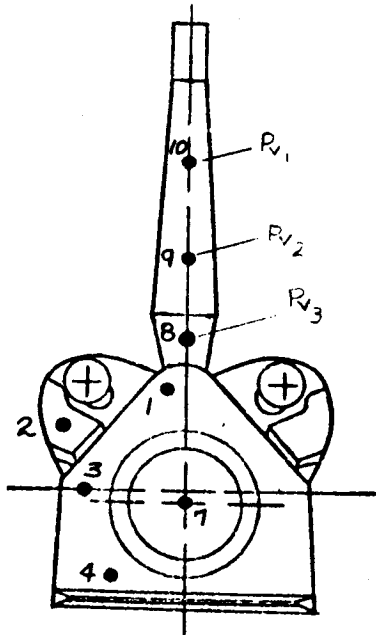
b. Model Installation - OA98

Figure 2. - Continued.



c. Vertical Tail Sting Strut

Figure 2. - Continued.



STRUT MOUNT
DUMMY STING IN

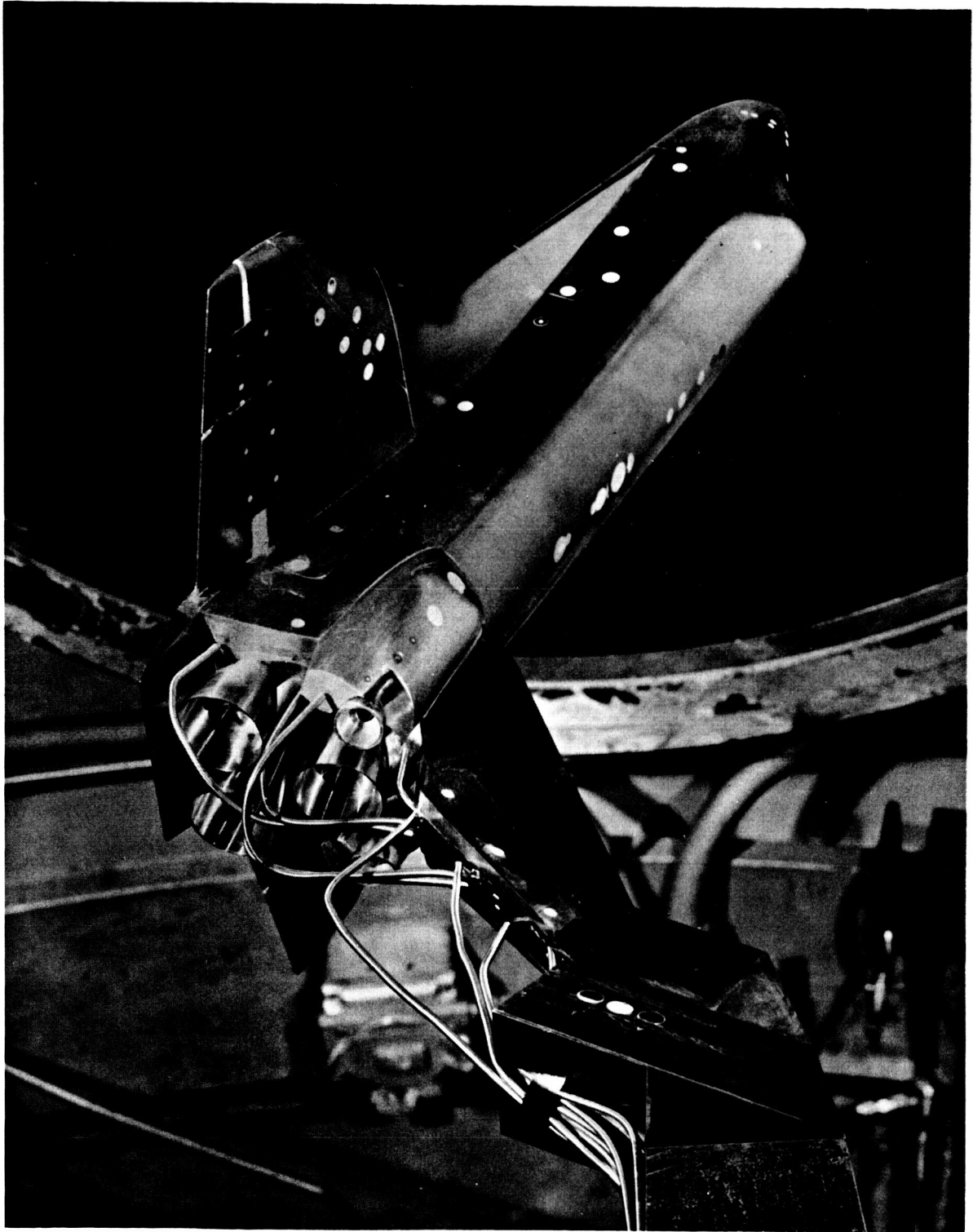
- 3 VERTICAL TAIL BASE (8,9,10)
- 1 OMS POD BASE (2)
- 3 FUSELAGE BASE (1,3,4)
- 1 STING CAVITY BASE (7)
- 1 BALANCE CAVITY (5)
- 1 STRUT CLEARANCE SLOT (11)

STRUT MOUNT
DUMMY STING OUT

- 3 VERTICAL TAIL BASE (8,9,10)
- 1 OMS POD BASE (2)
- 4 FUSELAGE BASE (1,3,4,7)
- 1 BALANCE CAVITY (5)
- 1 STRUT CLEARANCE SLOT (11)

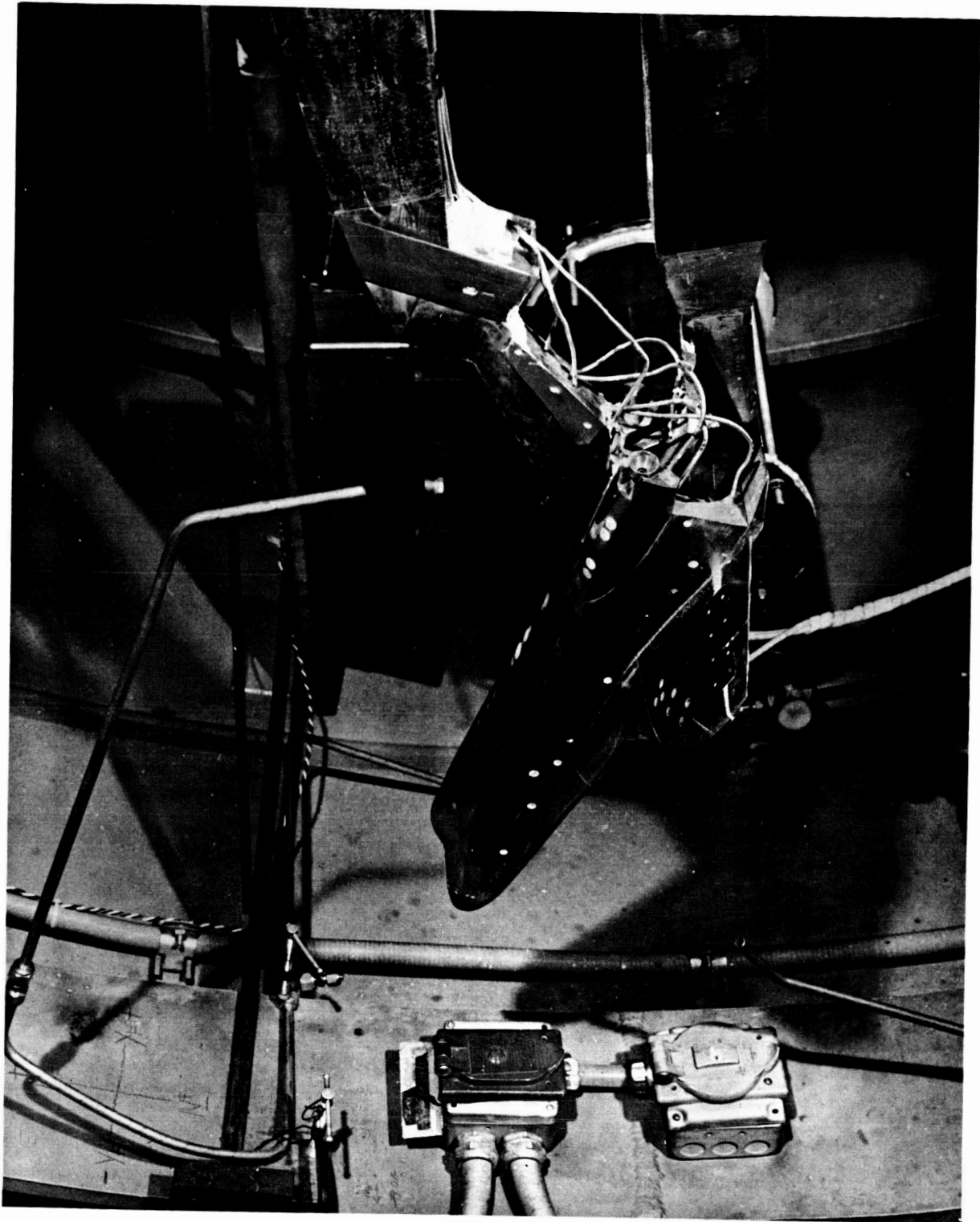
d. Base and Cavity Pressure Locations

Figure 2. - Concluded.



a. Installation With Dummy Sting Out

Figure 3. - Model installation photographs.



b. Installation With Dummy Sting In

Figure 3. - Continued

ORIGINAL PAGE IS
OF POOR QUALITY



c. Model With Basic M₇ OMS Pod

Figure 3. - Continued.



d. Model With Shortened M₁₄ OMS Pod

Figure 3. - Concluded.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0001) AMES 3.5-190 0A98 (011-M7-M14)
 (CE0002) AMES 3.5-190 0A98 (011-M7-M14)
 (CE0003) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPDRBK REFERENCE INFORMATION
 .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -40.000 -11.700 55.000 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

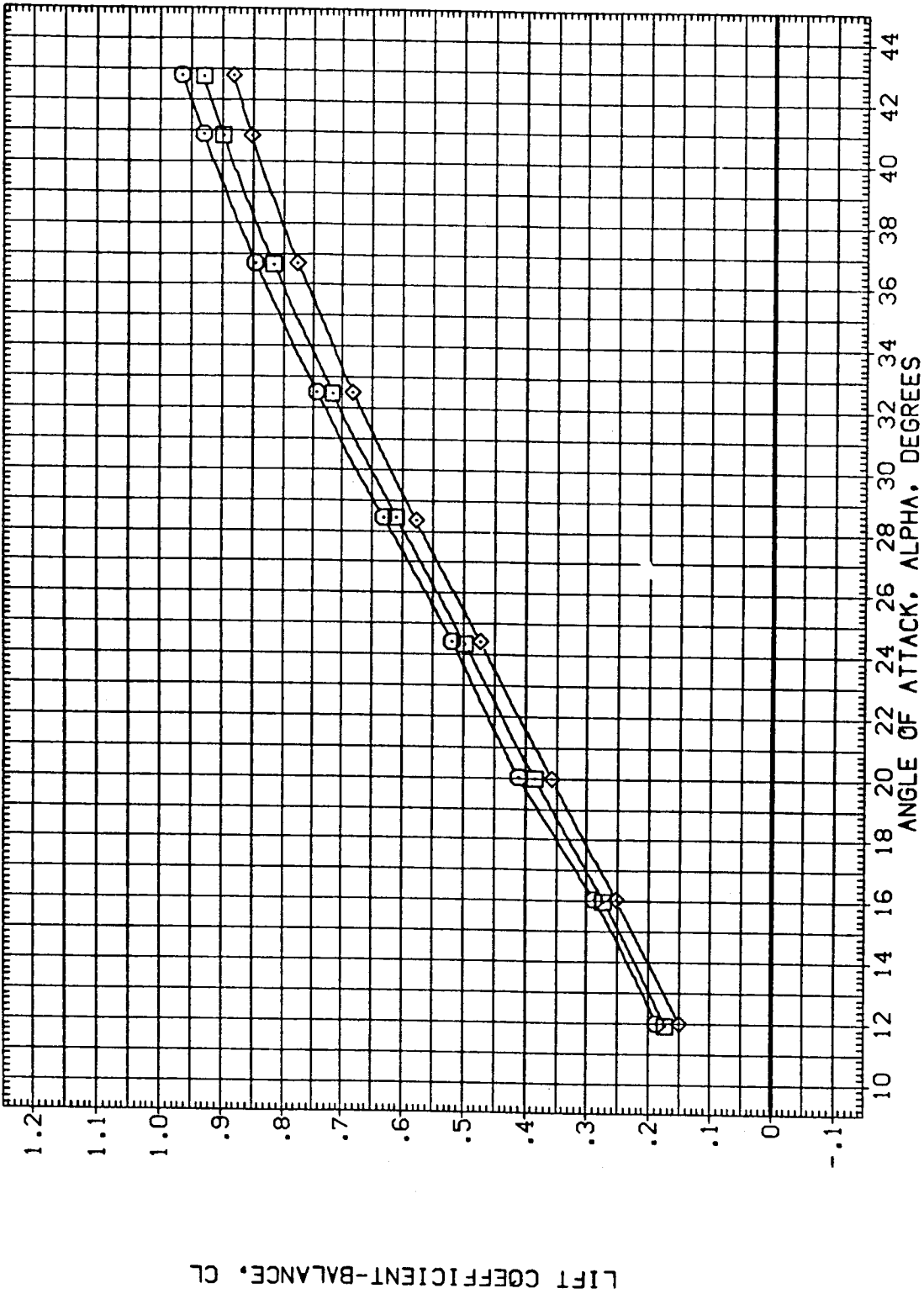


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 DASH (011-M7+M14)

(CE0002) AMES 3.5-190 DASH (011-M7+M14)

(CE0003) AMES 3.5-190 DASH (011-M7+M14)

BETA .000

ELEVON .000

BDFLAP -11.700

SPDBRK 55.000

55.000

55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

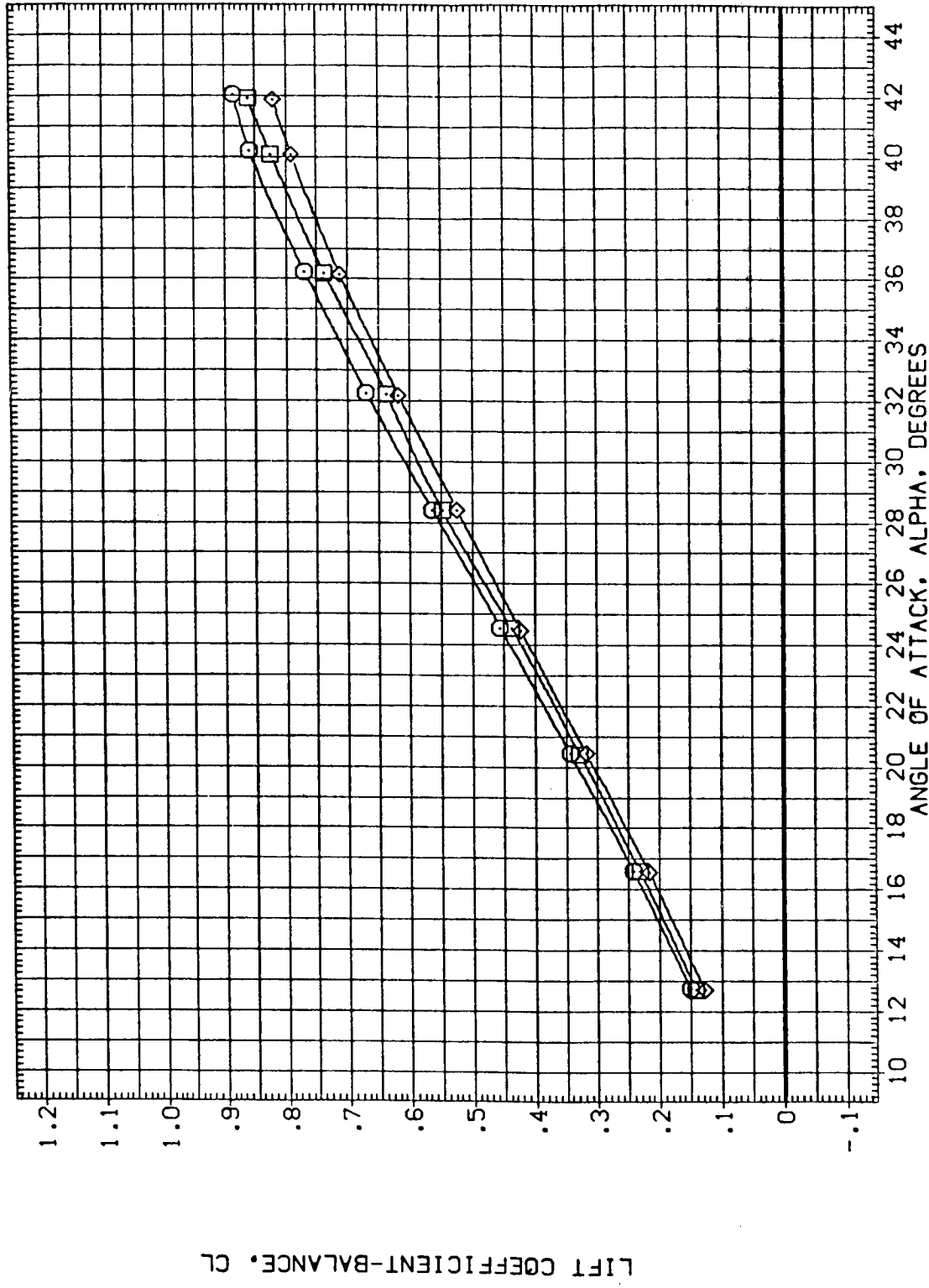
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0




SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL
 (CE0001) 
 (CE0002) 
 (CE0003) 

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

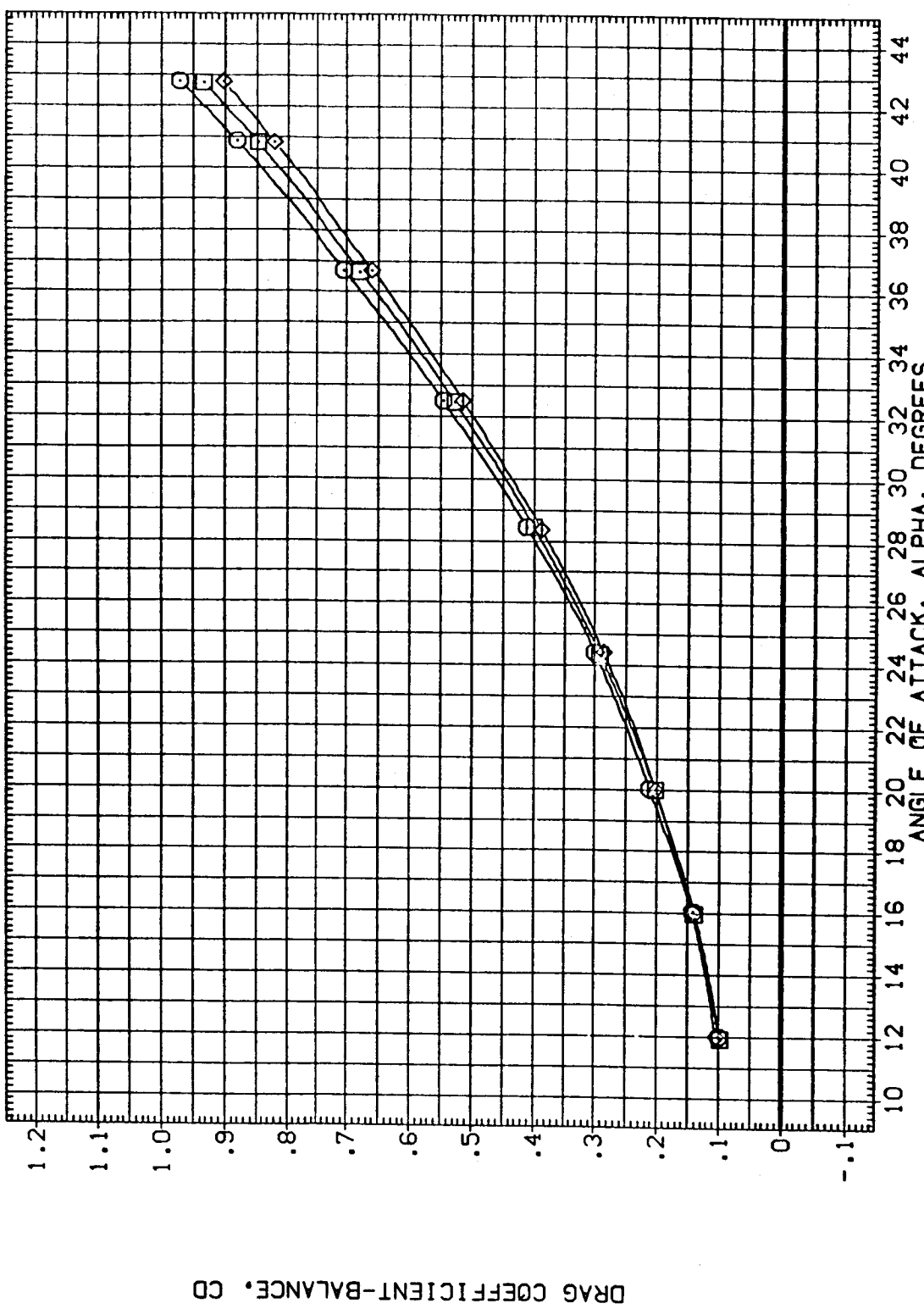


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25
 PAGE 3

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CEG001) AMES 3.5-190 GA98 (011-M7-M14)
 (CEG002) AMES 3.5-190 GA98 (011-M7-M14)
 (CEG003) AMES 3.5-190 GA98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

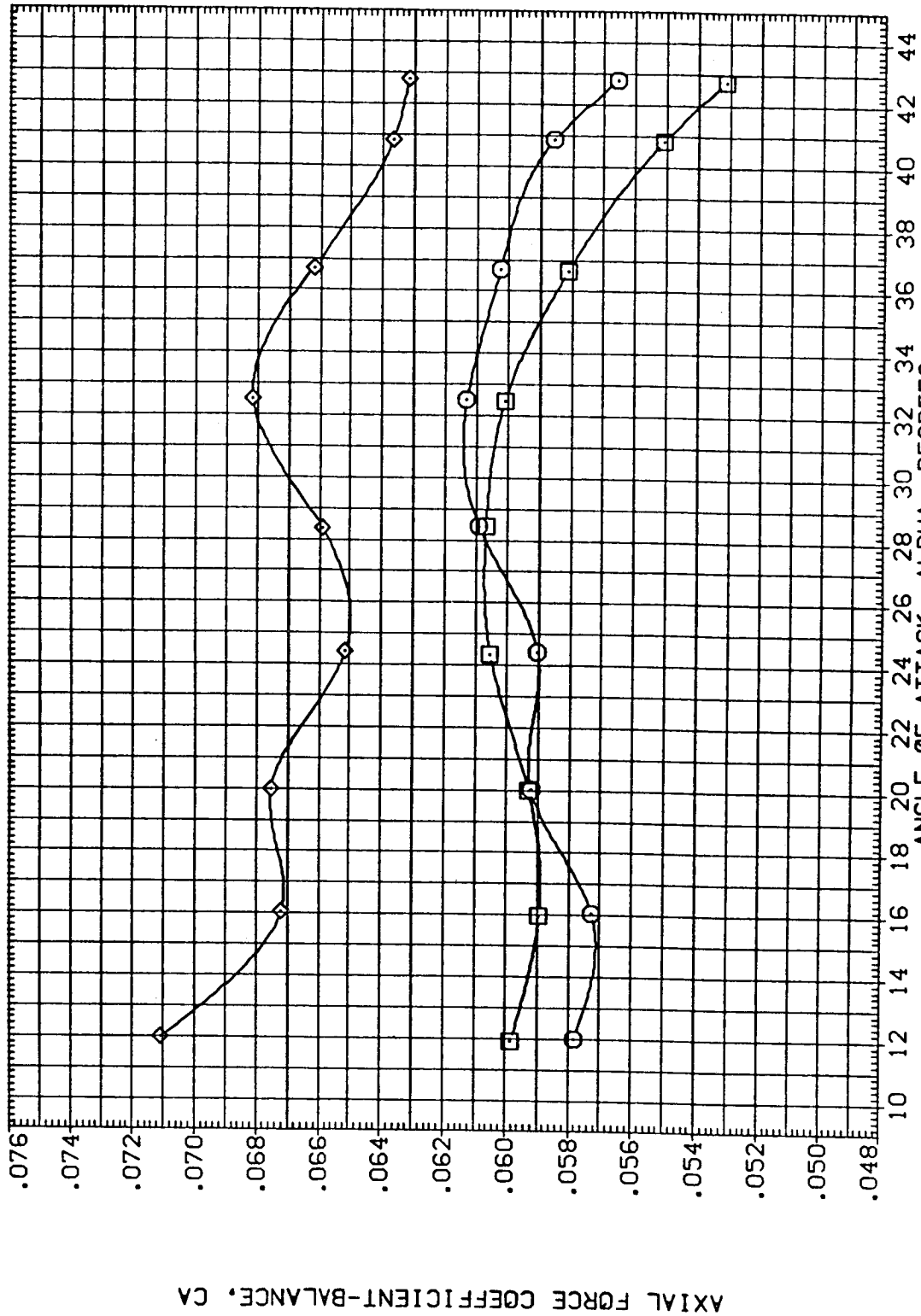


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 OA98 (011-M7+M14)

(CE0002) AMES 3.5-190 OA98 (011-M7+M14)

(CE0003) AMES 3.5-190 OA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

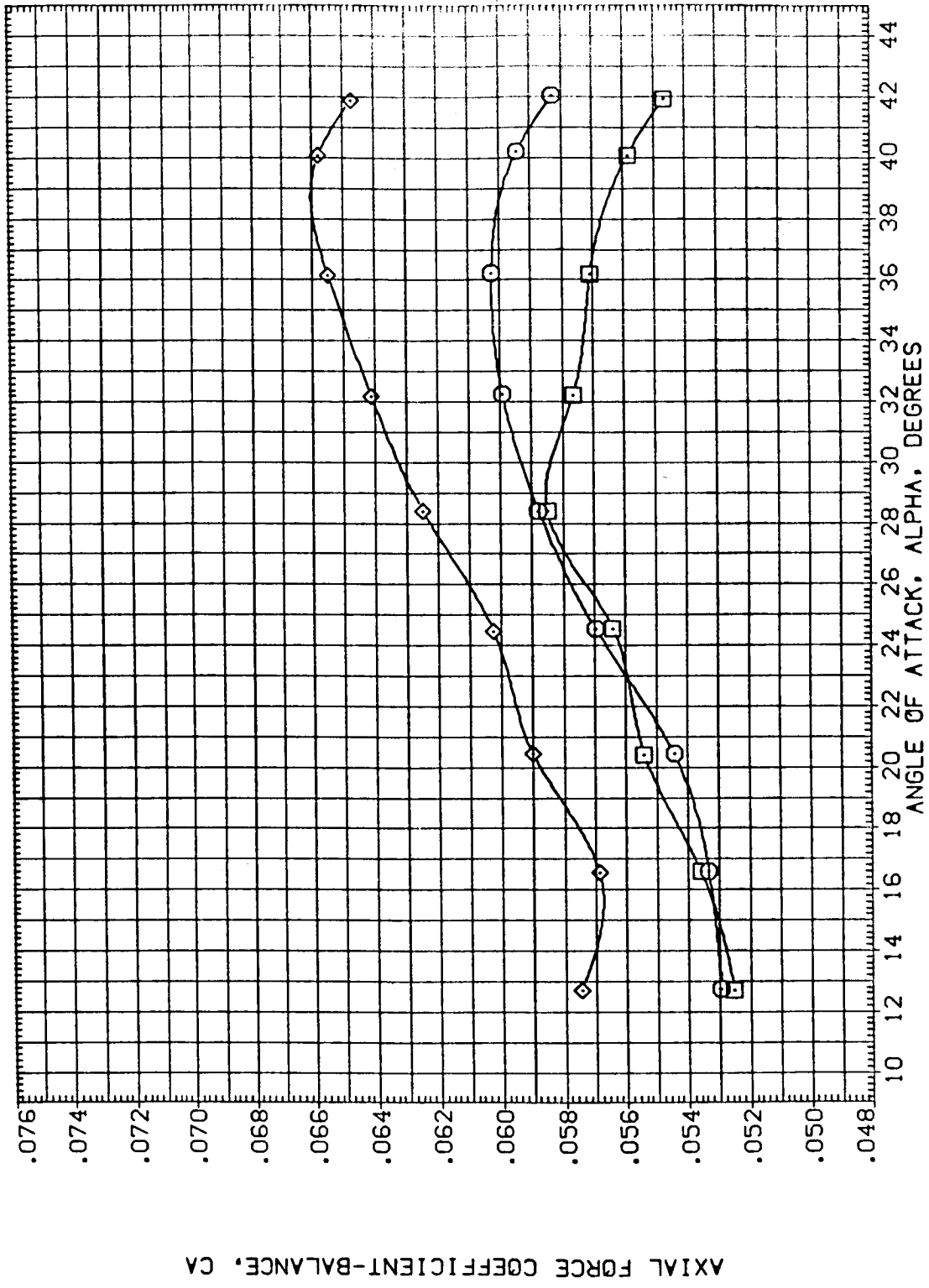


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-47+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0002)	AMES 3.5-190 0A98 (011-47+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0003)	AMES 3.5-190 0A98 (011-47+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

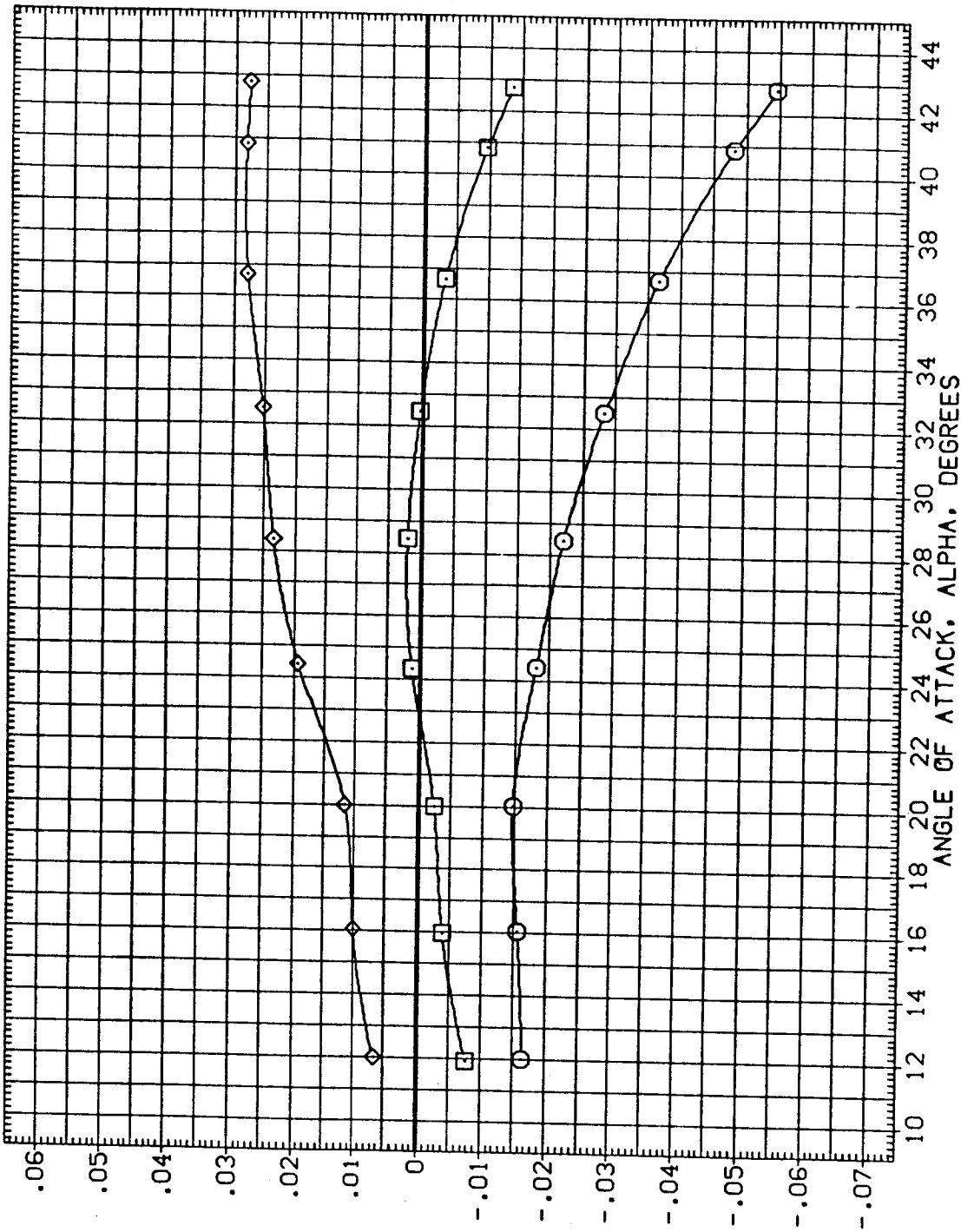


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL
 (CE0001)
 (CE0002)
 (CE0003)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON BOFLAP
 .000
 -10.000
 -40.000

SPDRBK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 IN.Y0
 IN.X0
 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

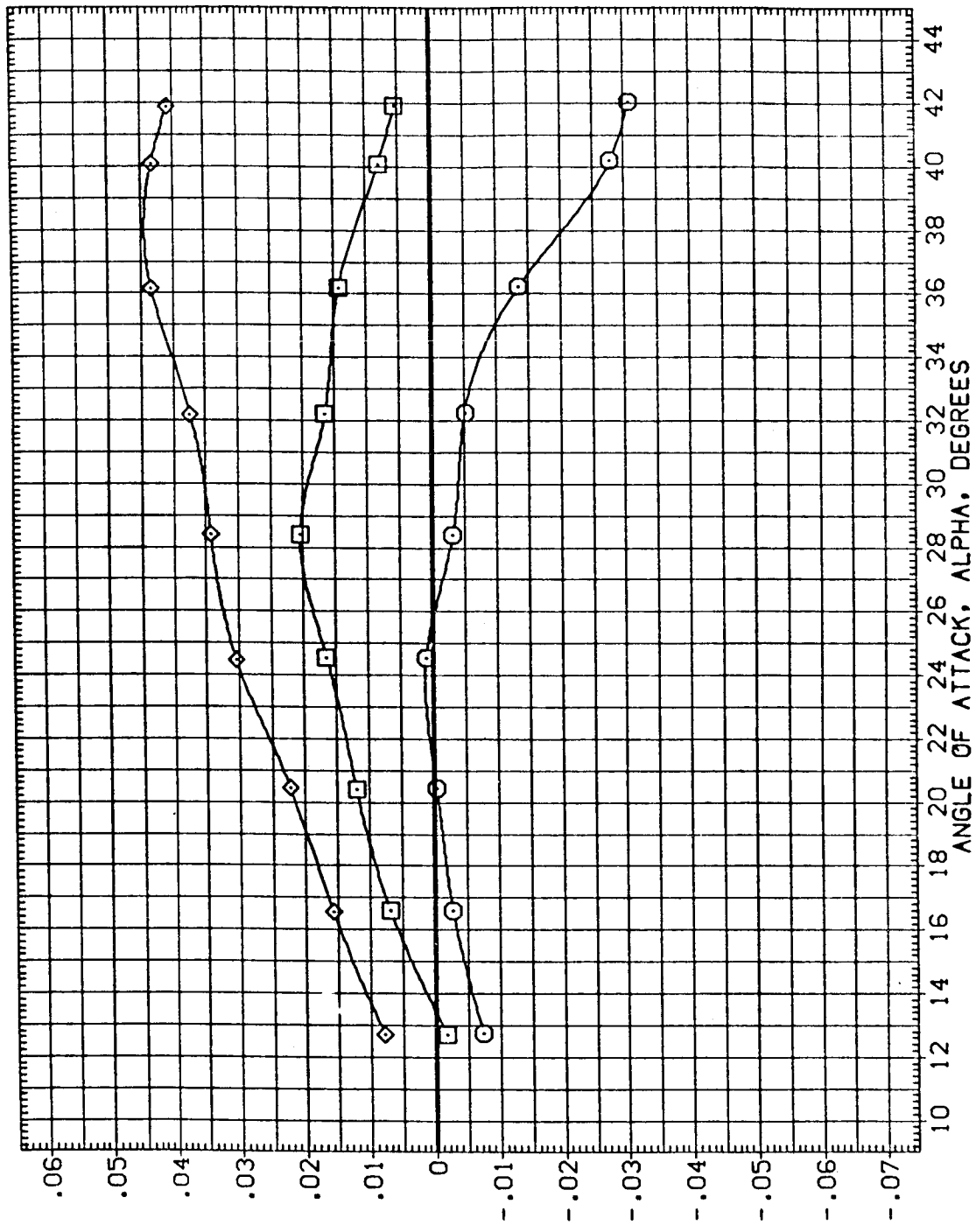


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(CB)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 BASS (011-M7+M14)

(CE0002) AMES 3.5-190 BASS (011-M7+M14)

(CE0003) AMES 3.5-190 BASS (011-M7+M14)

DATA SET SYMBOL ELEVON BOFLAP SPOSBRK

(CE0001) .000 -11.700 55.000

(CE0002) .000 -10.000 55.000

(CE0003) .000 -40.000 55.000

BETA REFERENCE INFORMATION

.000 SREF 2690.0000 50.FT.

.000 LREF 474.8000 IN.

.000 BREF 936.6800 IN.

.000 XMRP 1076.7000 IN. X0

.000 YMRP .0000 IN. Y0

.000 ZMRP 375.0000 IN. Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

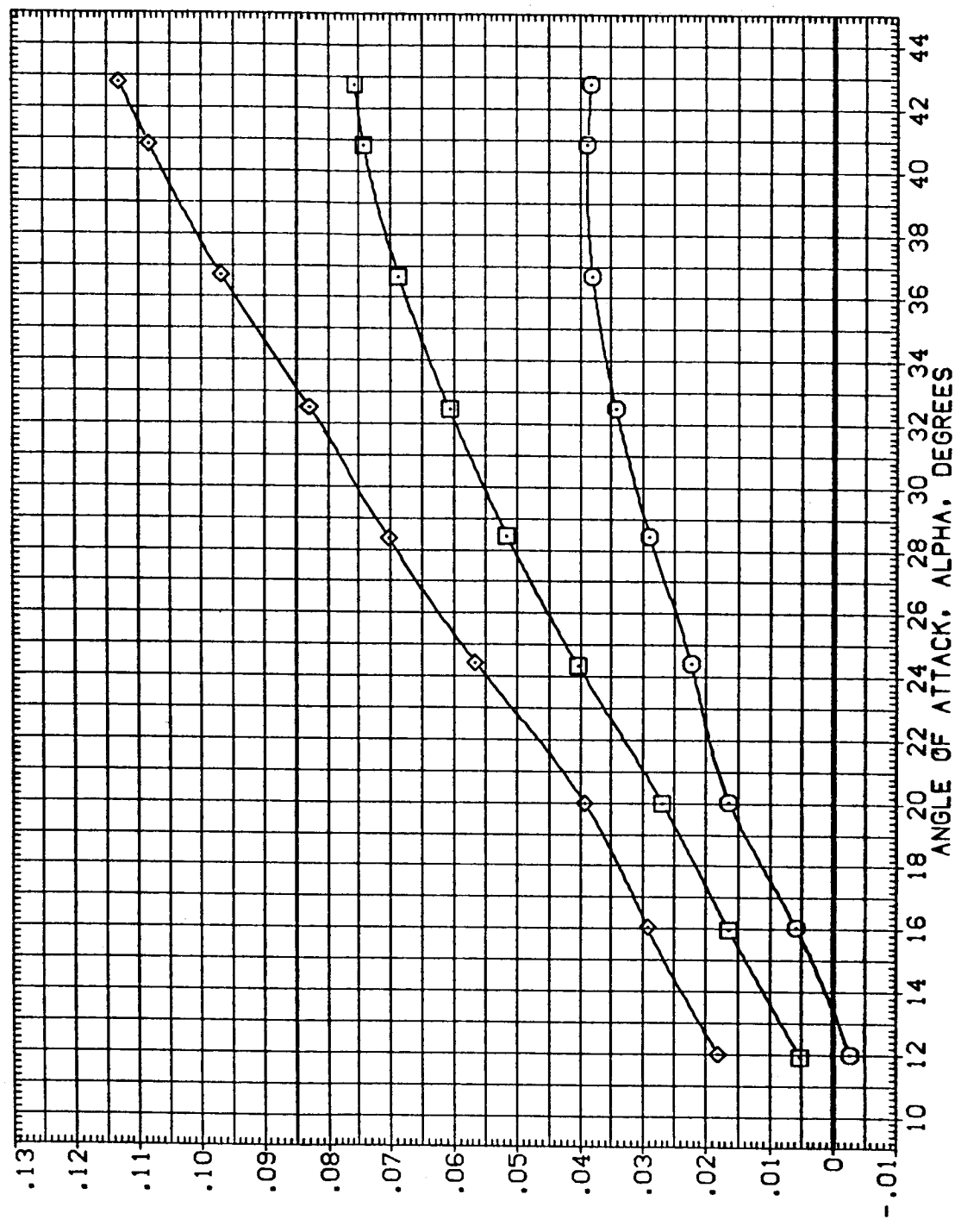


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 0A98 (011-17+M14)

(CE0002) AMES 3.5-190 0A98 (011-17+M14)

(CE0003) AMES 3.5-190 0A98 (011-17+M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.8800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

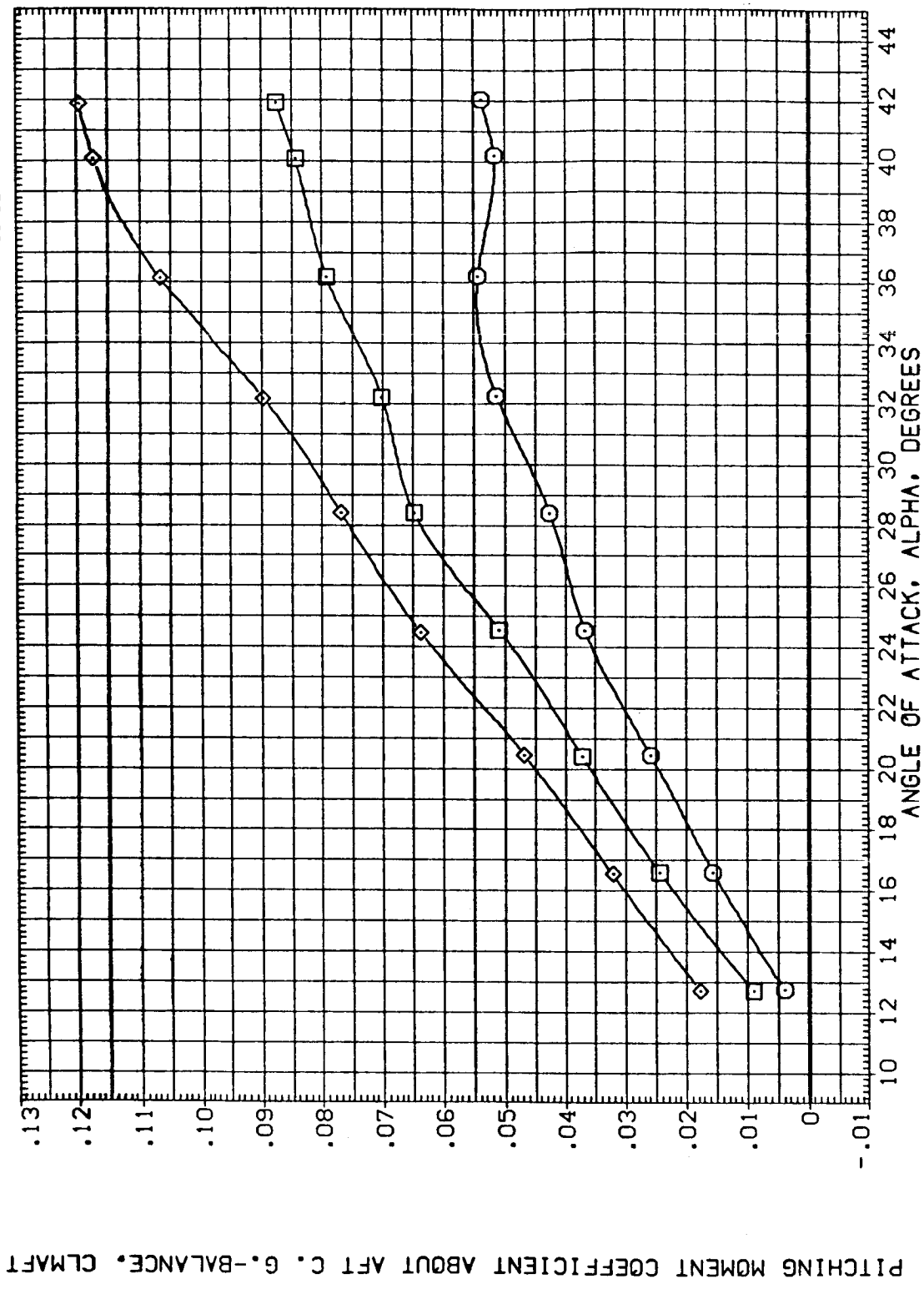


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
(B)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 0A98 (011-M7+M14)

(CE0002) AMES 3.5-190 0A98 (011-M7+M14)

(CE0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

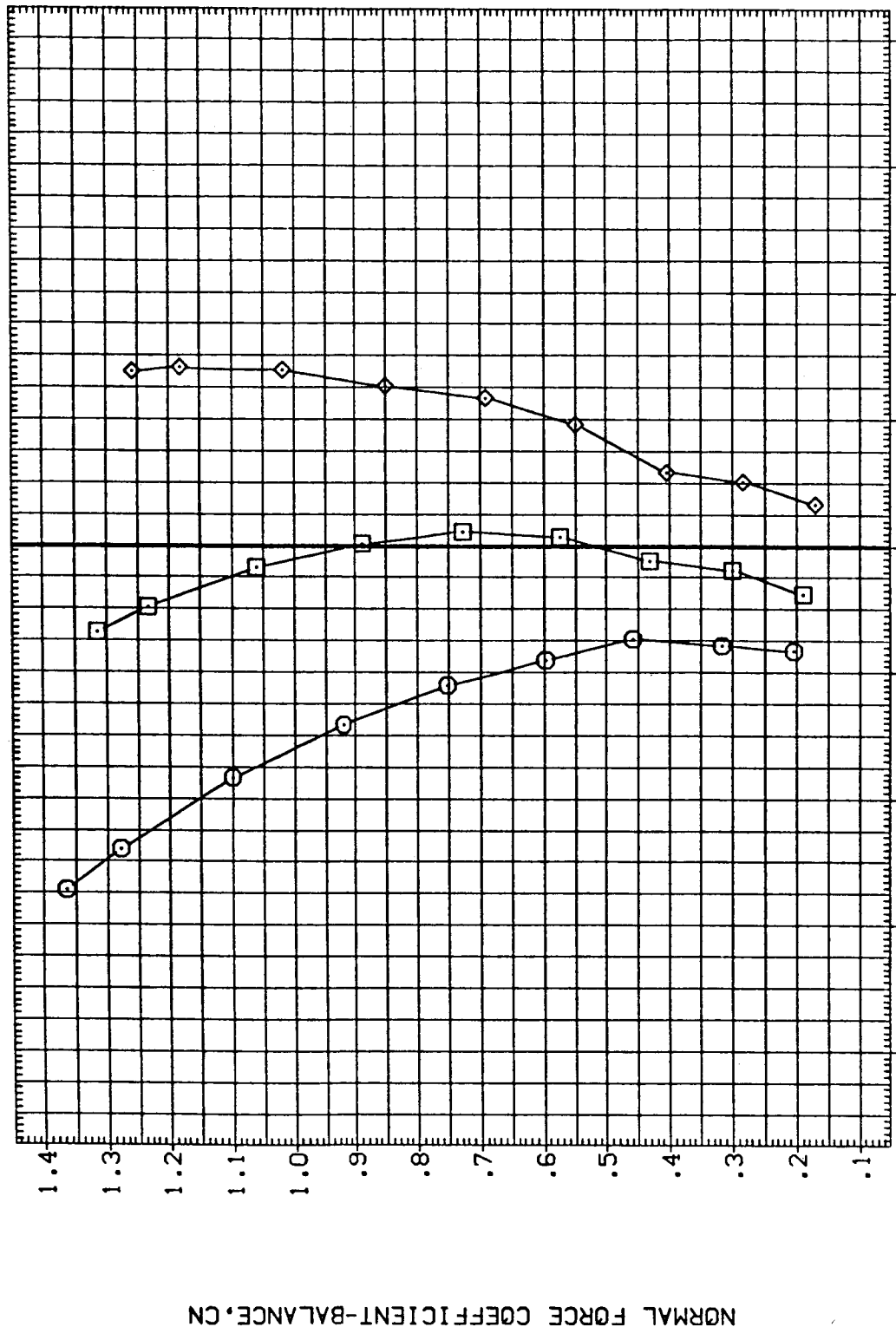
BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG001) AMES 3.5-190 0A98 (011-M7+M14)

(CEG002) AMES 3.5-190 0A98 (011-M7+M14)

(CEG003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

.000 .000 .000 2690.0000 SQ.FT.

.000 .000 -11.700 55.000 SREF

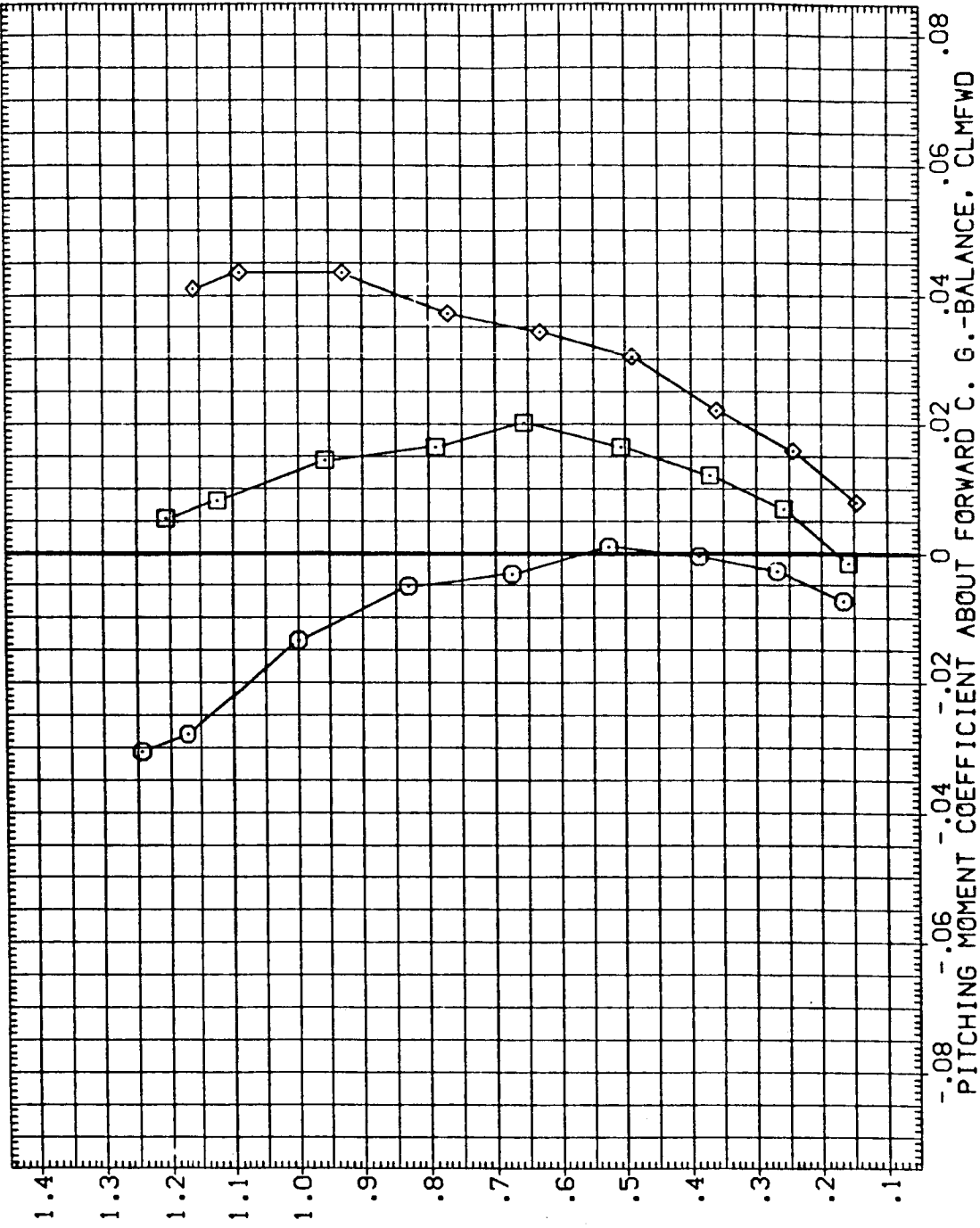
.000 -10.000 -11.700 55.000 LREF

.000 -40.000 -11.700 55.000 BREF

YMRP 1076.7000 IN. X0

ZMRP .0000 IN. Y0

SCALE .0150 IN. Z0



NORMAL FORCE COEFFICIENT-BALANCE, CN

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 CA98 (011-M7-M14)

(CE0002) AMES 3.5-190 CA98 (011-M7-M14)

(CE0003) AMES 3.5-190 CA98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

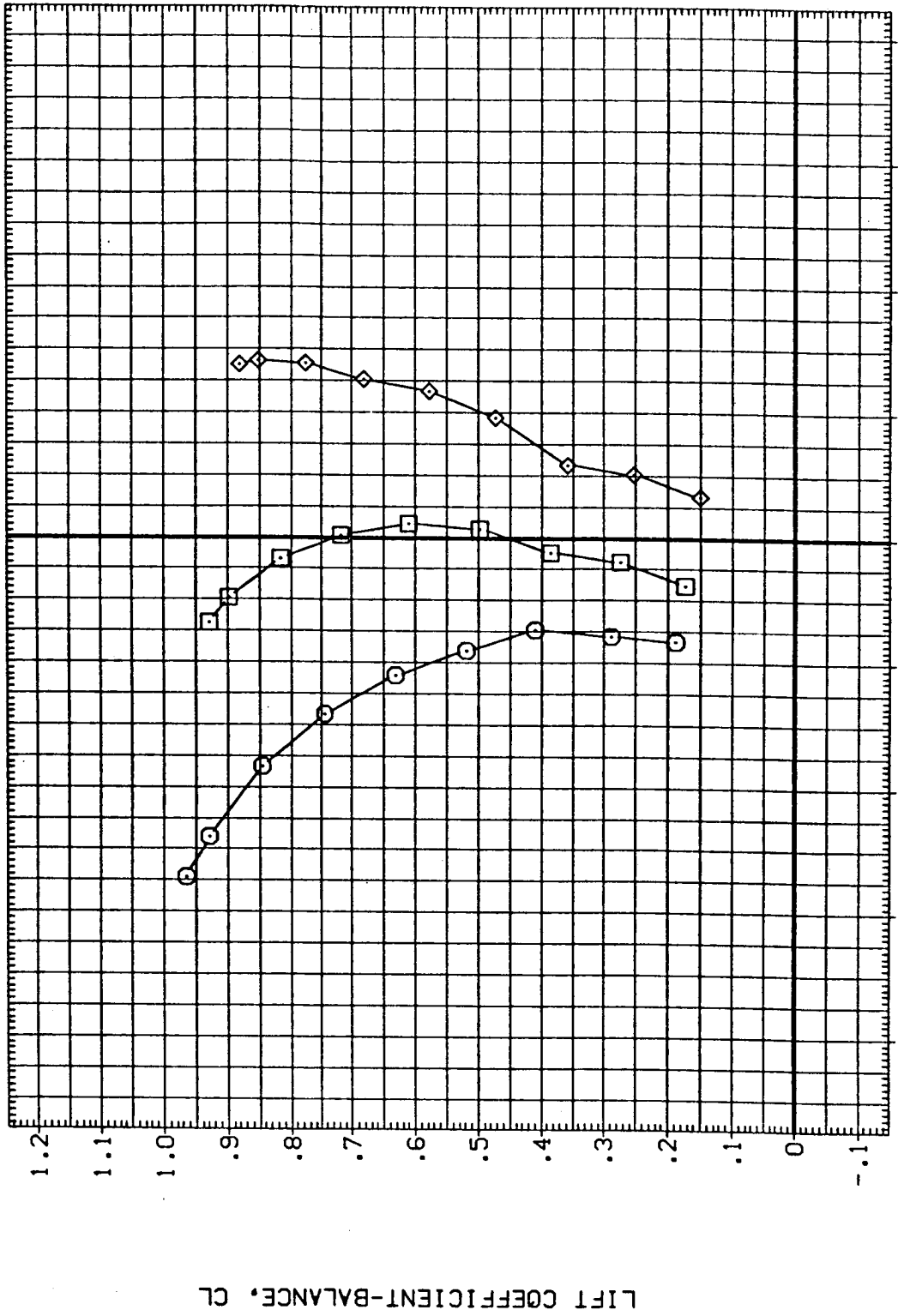
BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

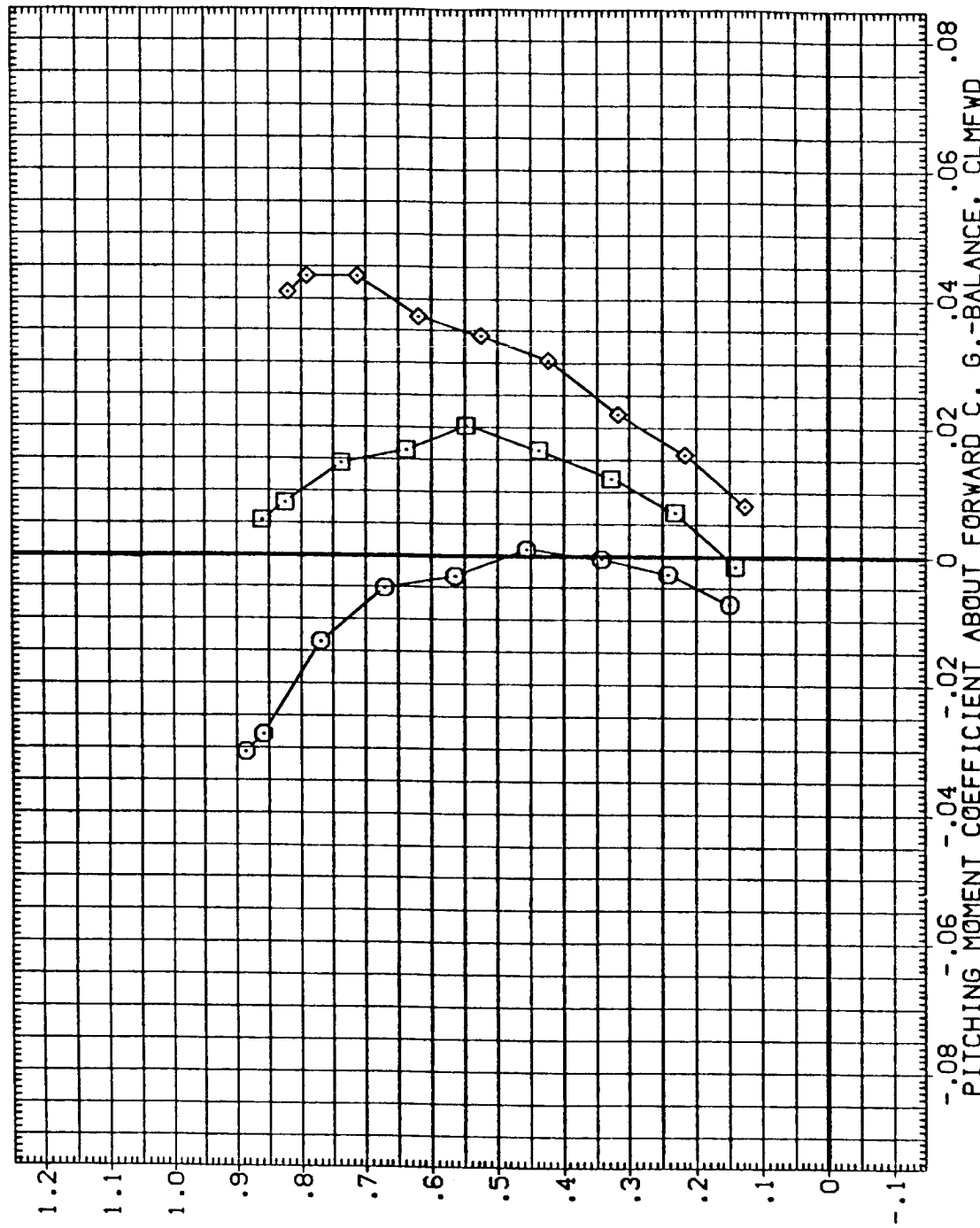
PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0001) AMES 3.5-190 0A98 (011-M7+M14)
 (CE0002) AMES 3.5-190 0A98 (011-M7+M14)
 (CE0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPDRBK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 0A98 (011-M7+M14)

(CE0002) AMES 3.5-190 0A98 (011-M7+M14)

(CE0003) AMES 3.5-190 0A98 (011-M7+M14)

□ ○ ◇

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

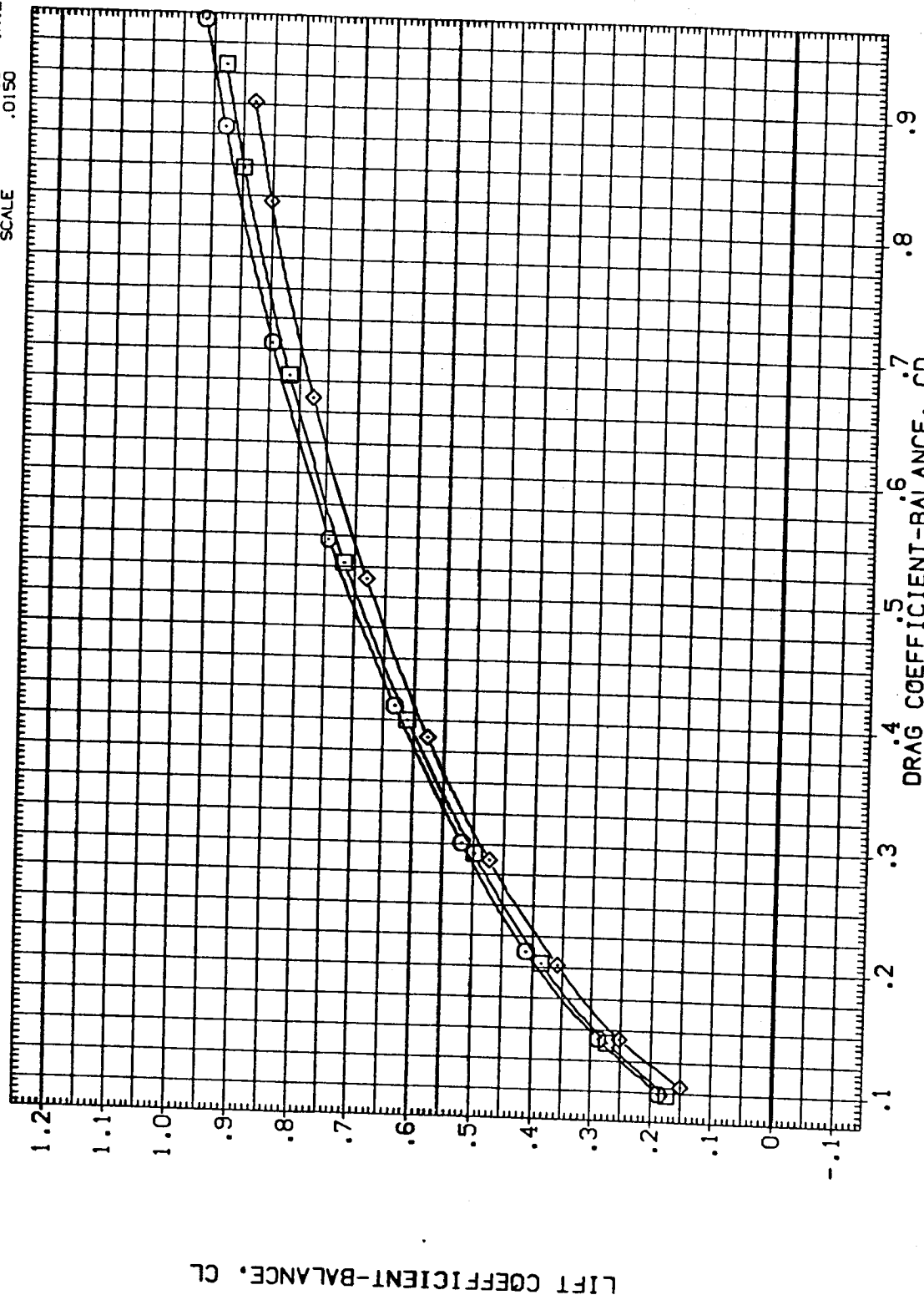
BREF 936.6900 IN.

YMRP 1076.7000 IN.X0

ZMRP .0000 IN.Y0

SCALE 375.0000 IN.Z0

 .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001)	AMES 3.5-190 OA98 (011-M7+M14)
(CE0002)	AMES 3.5-190 OA98 (011-M7+M14)
(CE0003)	AMES 3.5-190 OA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

REFERENCE INFORMATION SQ.FT.

SREF	2690.0000	IN.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.
YMRP	.0000	IN.
ZMRP	375.0000	IN.
SCALE	.0150	

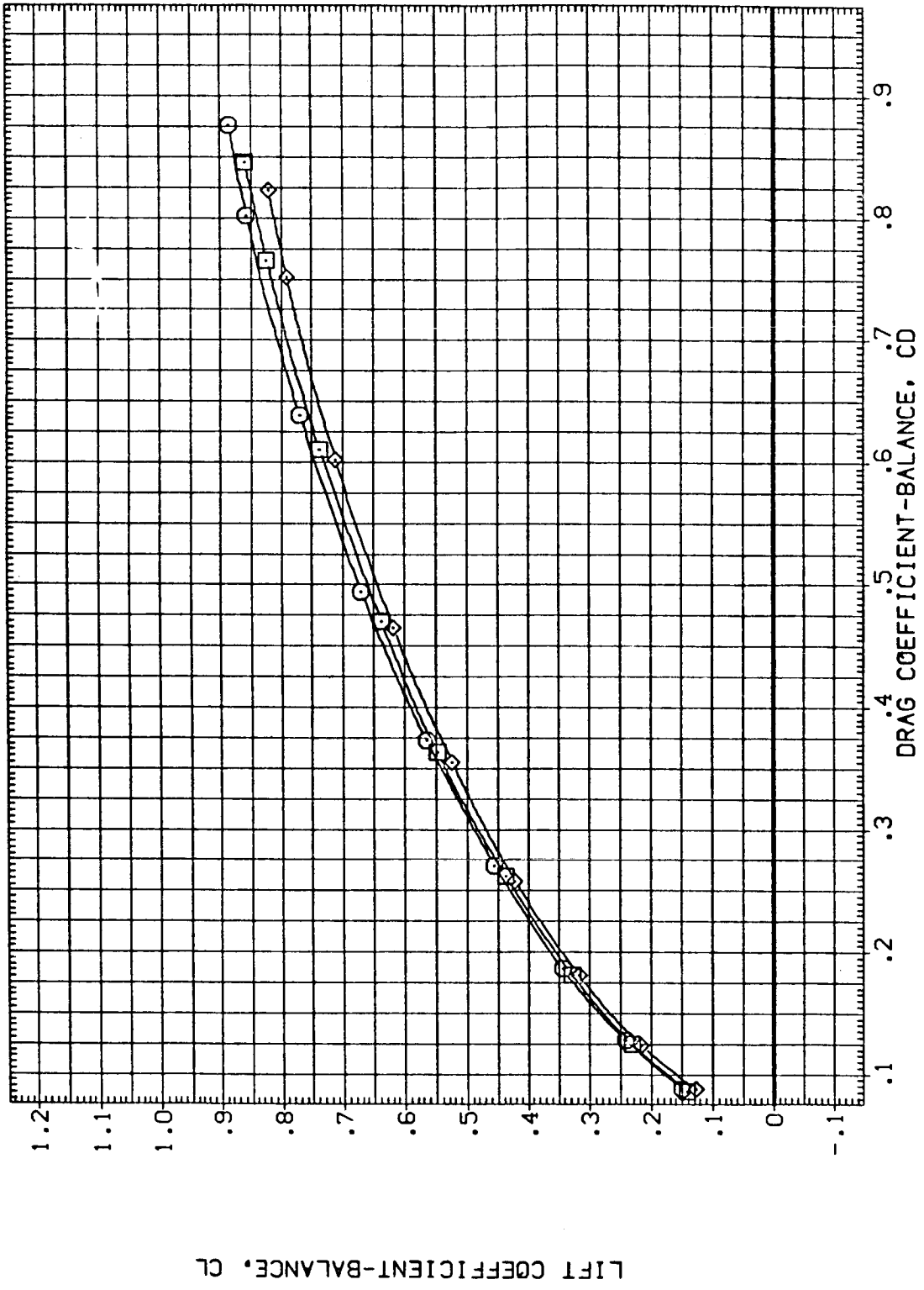


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 0A98 (011-M7+M14)

(EE0002) AMES 3.5-190 0A98 (011-M7+M14)

(EE0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8000 IN.

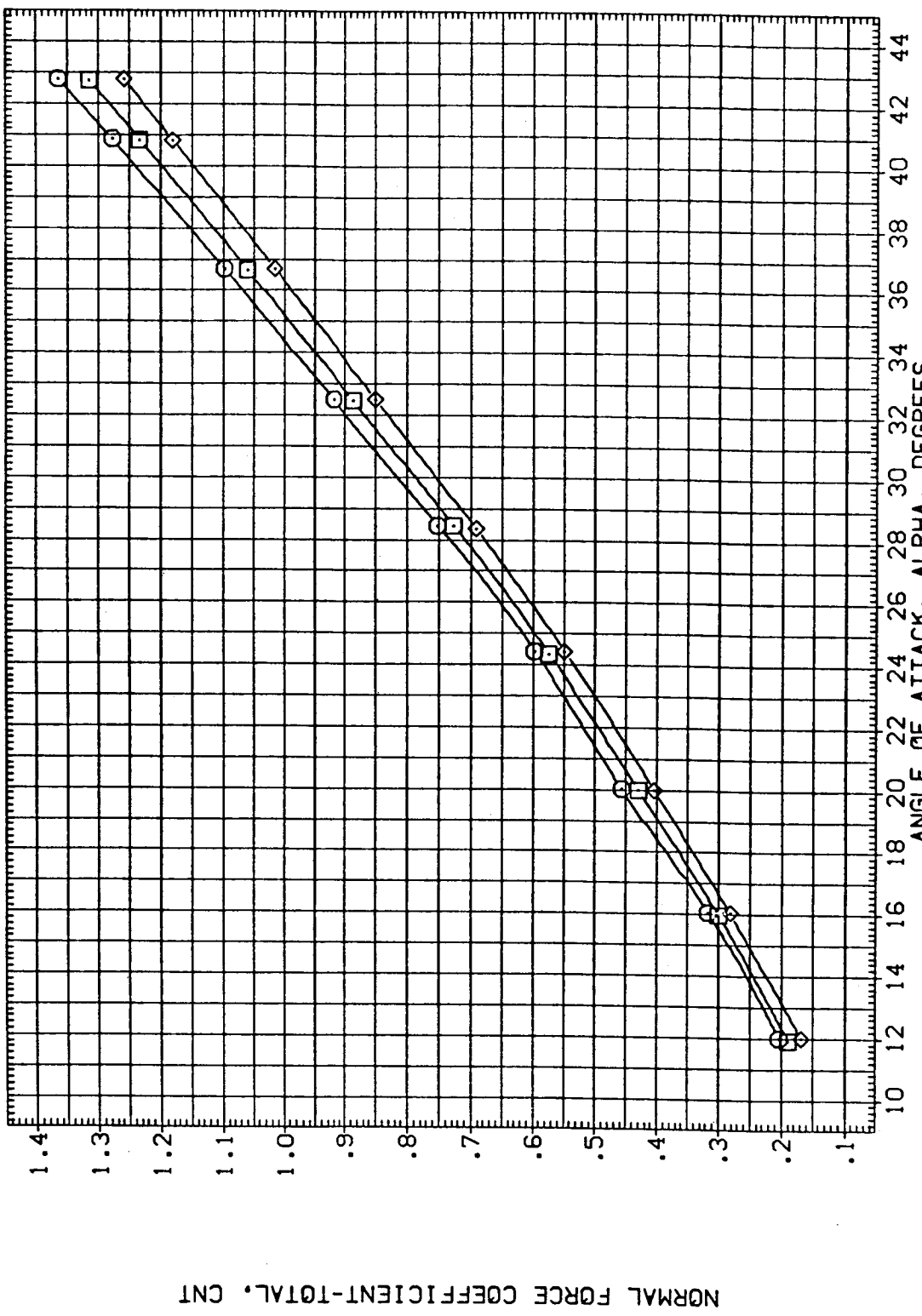
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CN_T

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

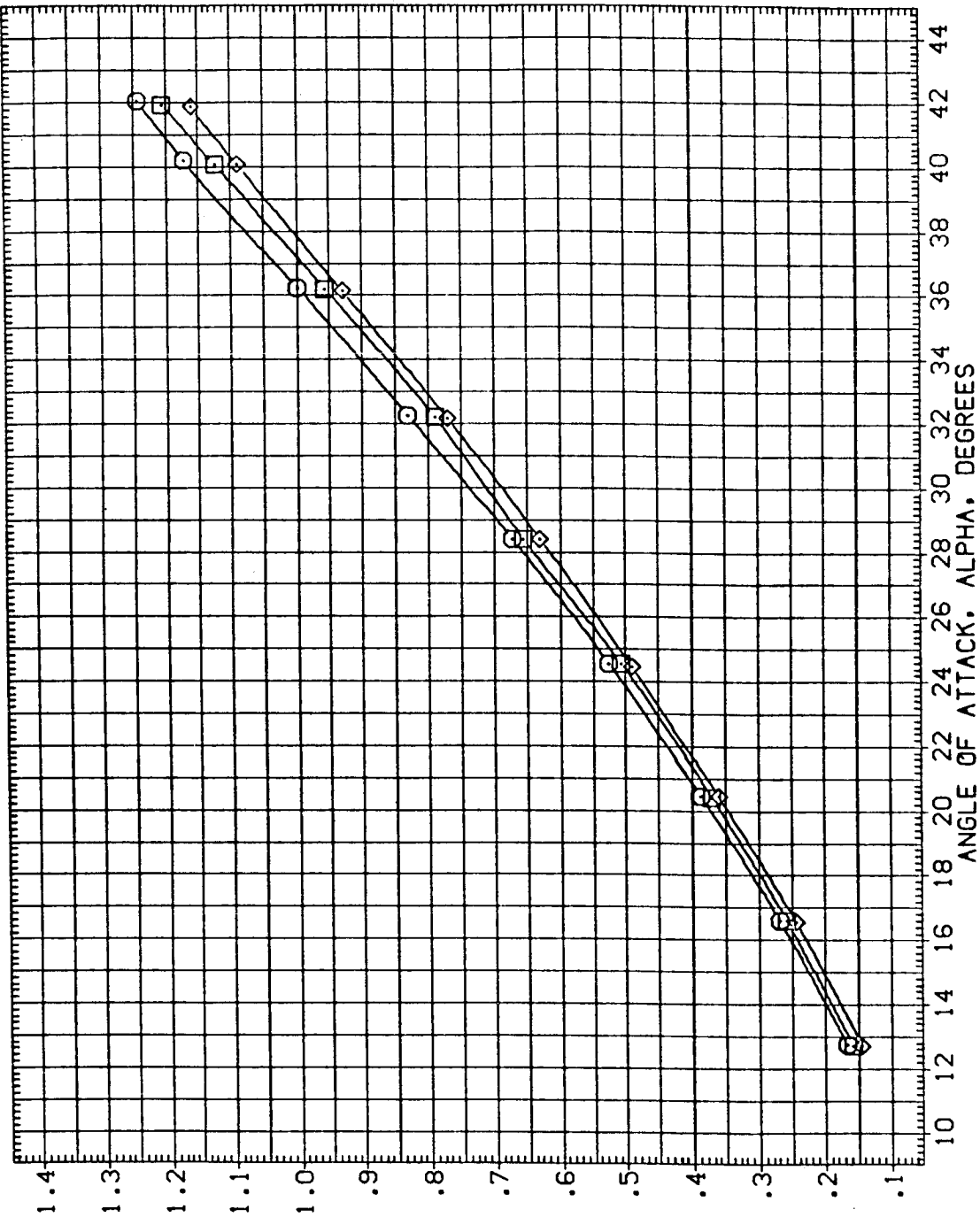
(EEG0001)	AMES 3.5-190 0A98 (011-M7-M14)
(EEG0002)	AMES 3.5-190 0A98 (011-M7-M14)
(EEG0003)	AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

REFERENCE INFORMATION

SREF	2690.0000	SG.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0150	



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 GA98 (011-M7+M14)

(EE0002) AMES 3.5-190 GA98 (011-M7+M14)

(EE0003) AMES 3.5-190 GA98 (011-M7+M14)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 .000 -10.000 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

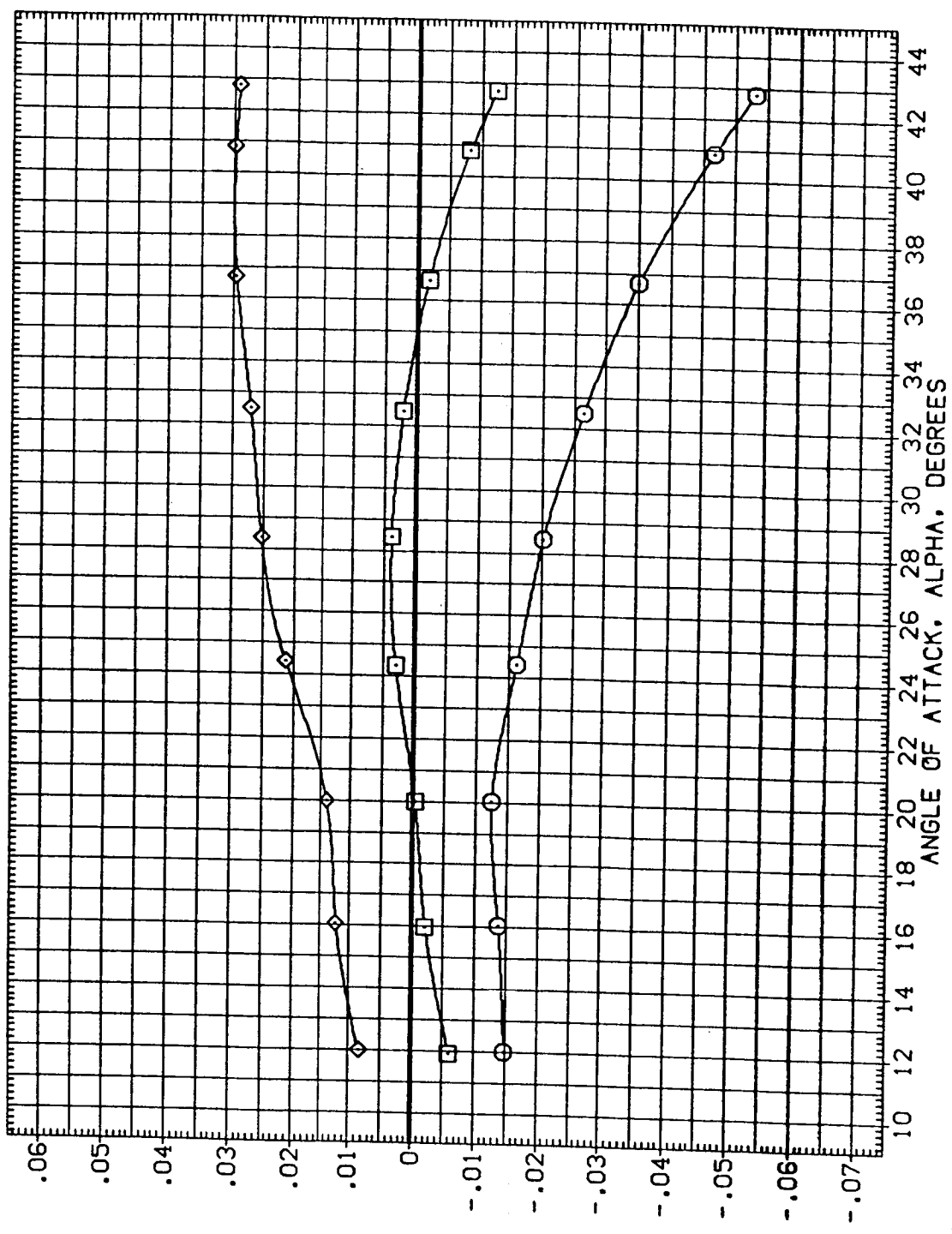


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
(A)MACH = 5.25 PAGE 19

DATA SET SYMBOL
 (EE0001)
 (EE0002)
 (EE0003)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON BOFLAP SPOBRK
 .000
 -11.700
 -11.700

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.6000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP .0000
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

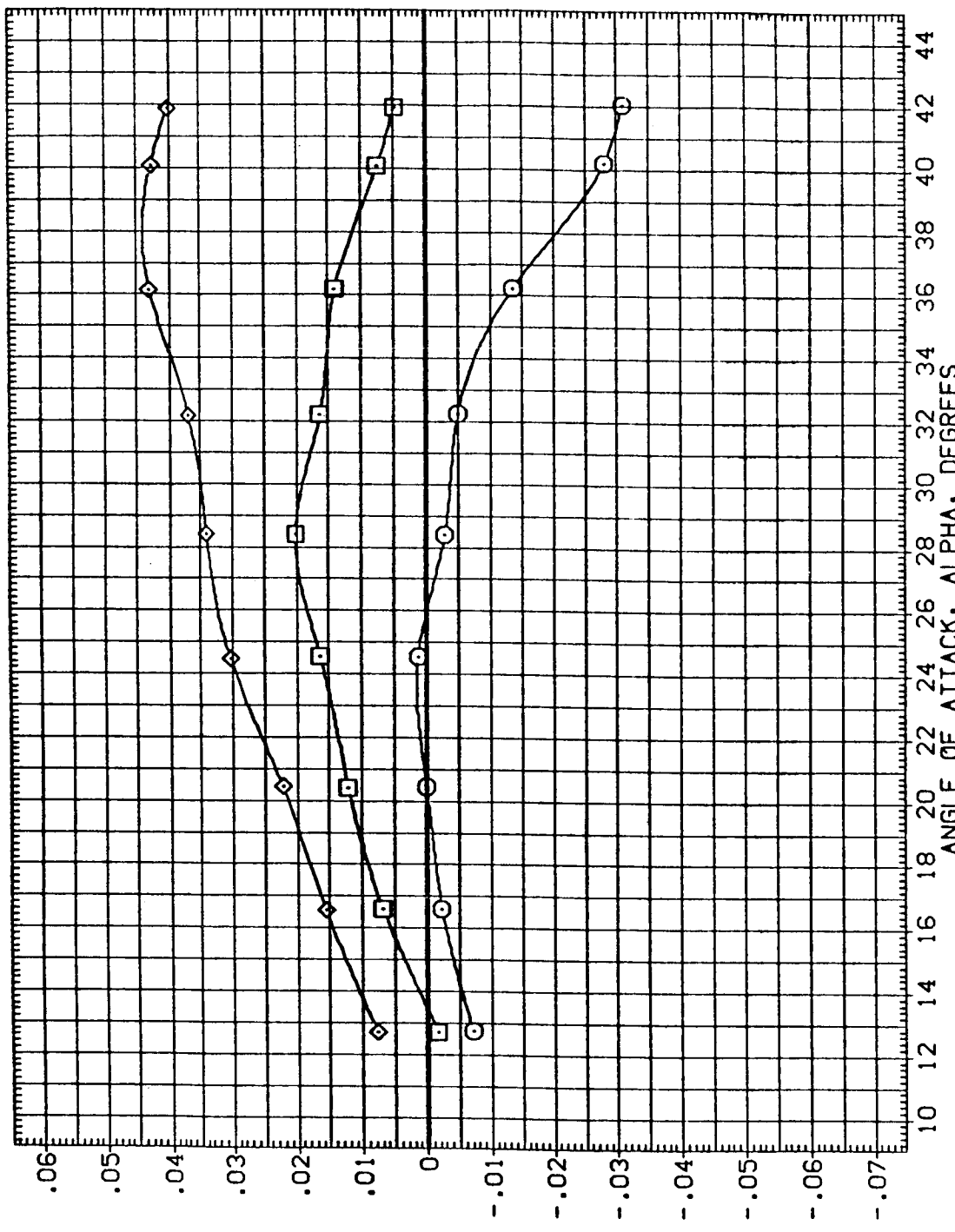


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 20

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 D498 (011-M7+M14)

(EE0002) AMES 3.5-190 D498 (011-M7+M14)

(EE0003) AMES 3.5-190 D498 (011-M7+M14)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

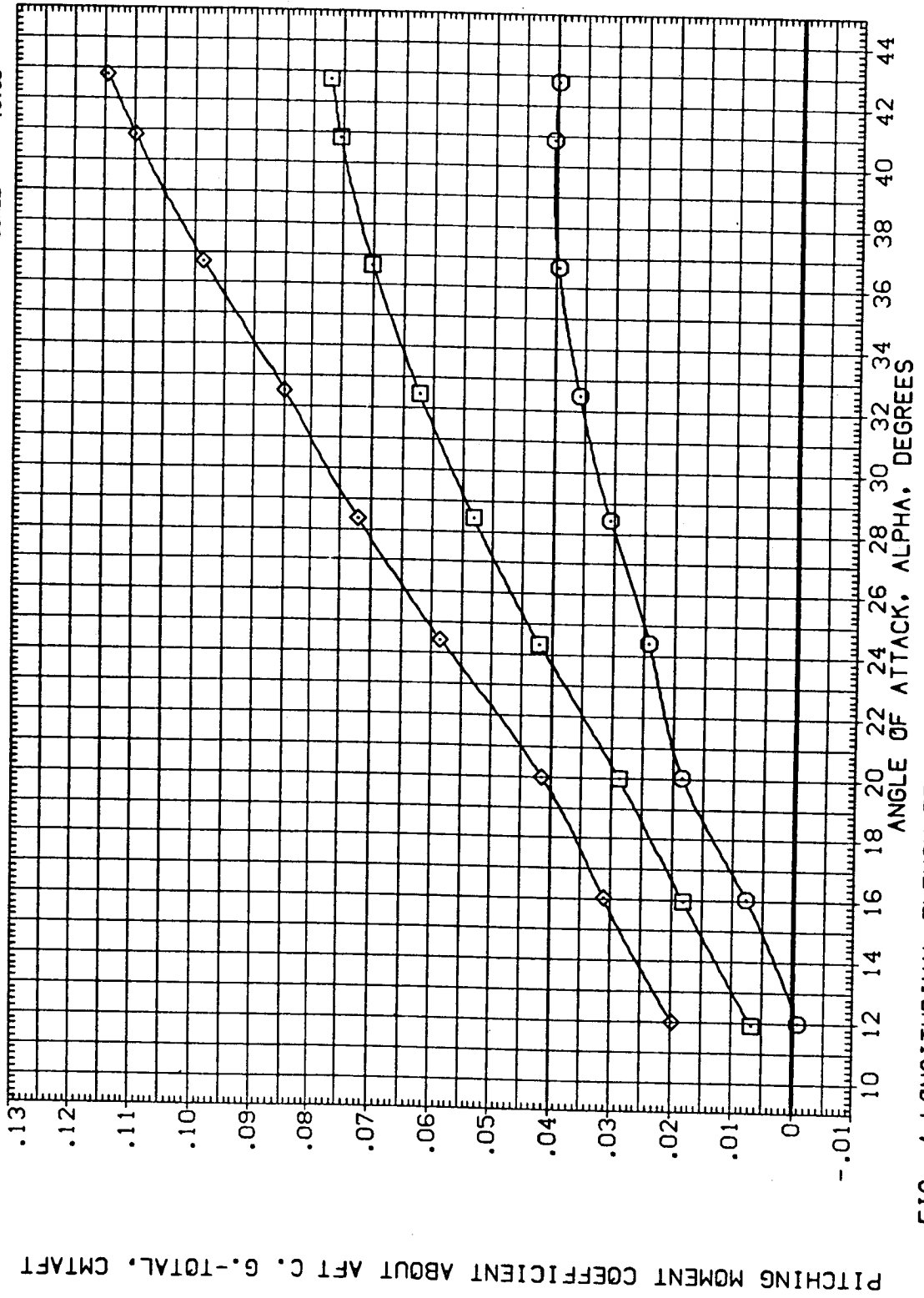
BREF 936.8800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT AFT C. G. - TOTAL, CMAFT

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 0A98 (011-M7+M14)
 (EE0002) AMES 3.5-190 0A98 (011-M7+M14)
 (EE0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDRK 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

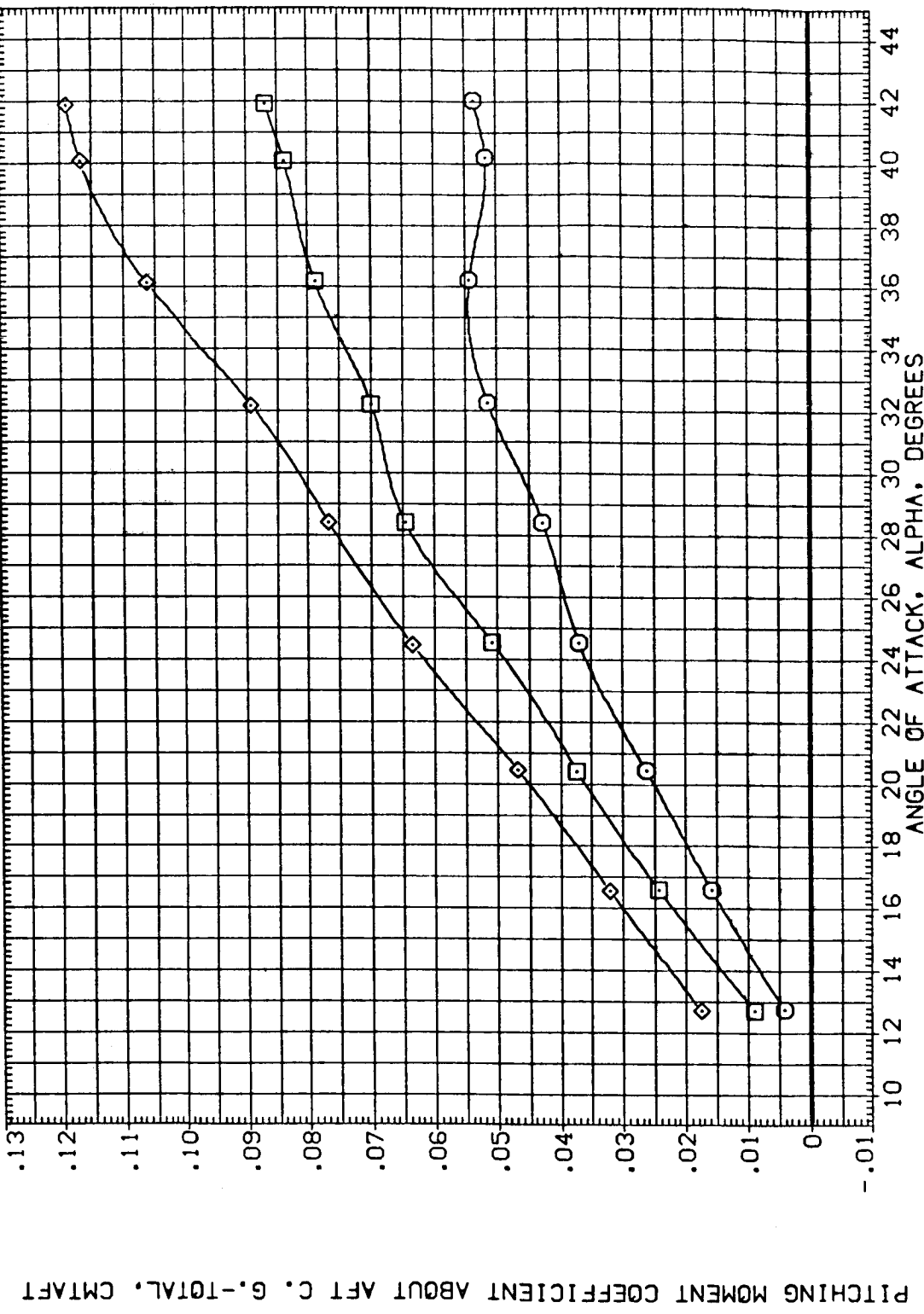


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 22

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 GA98 (011-M7-M14)

(EE0002) AMES 3.5-190 GA98 (011-M7-M14)

(EE0003) AMES 3.5-190 GA98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

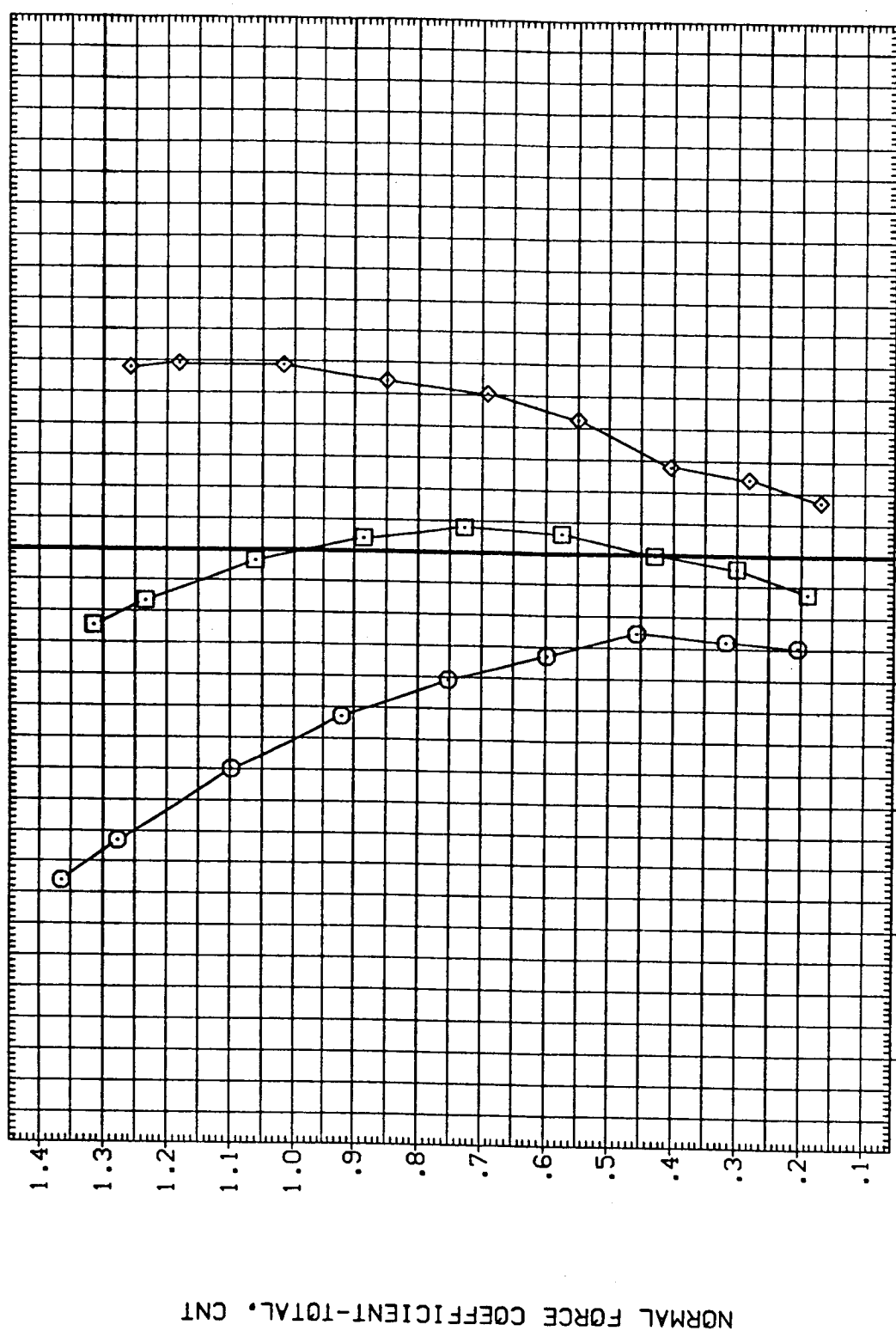
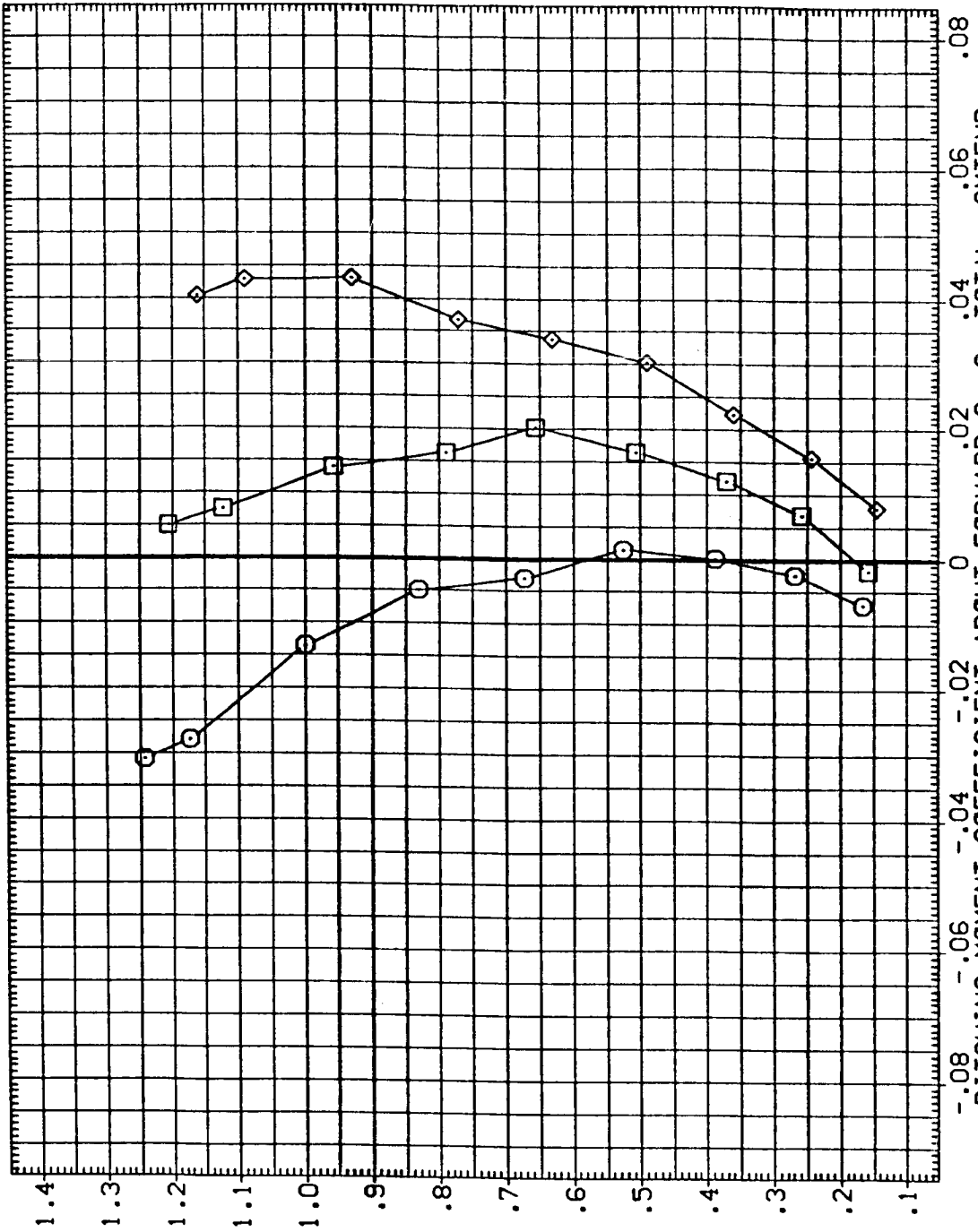


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25 PAGE 23

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 CA98 (011-M7+M14)
 (EE0002) AMES 3.5-190 CA98 (011-M7+M14)
 (EE0003) AMES 3.5-190 CA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000




REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 XMRP 936.6800 IN.
 YMRP 1076.7000 IN.
 ZMRP .0000 IN.
 SCALE 375.0000 IN.ZO
 .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL
 (EE0001) 
 (EE0002) 
 (EE0003) 

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

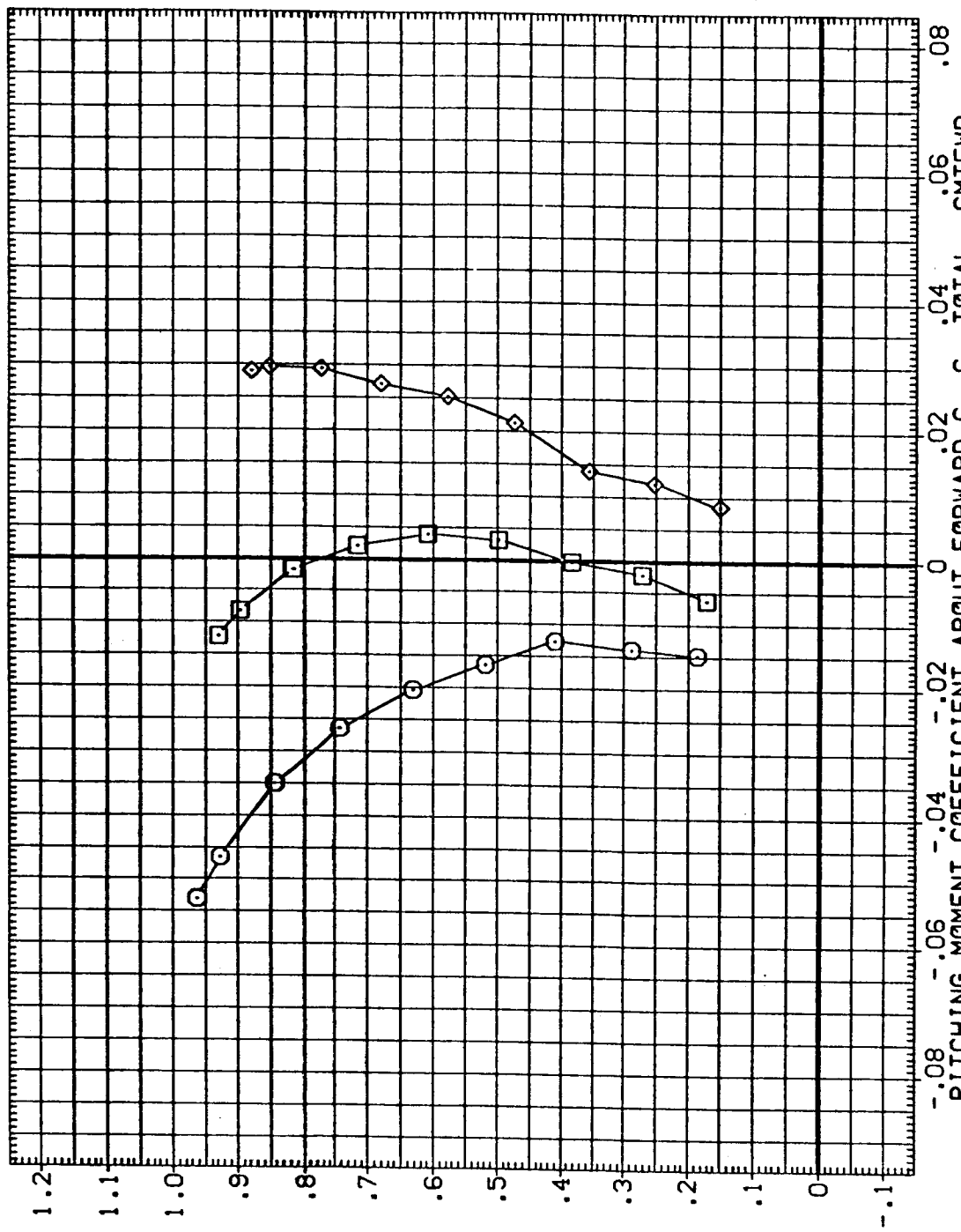
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CL1

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25 PAGE 25

DATA SET SYMBOL
 (EE0001)
 (EE0002)
 (EE0003)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-47+11.4)
 AMES 3.5-190 GA98 (011-47+11.4)
 AMES 3.5-190 GA98 (011-47+11.4)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BDFLAP
 55.000
 -11.700
 -11.700

SPDRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

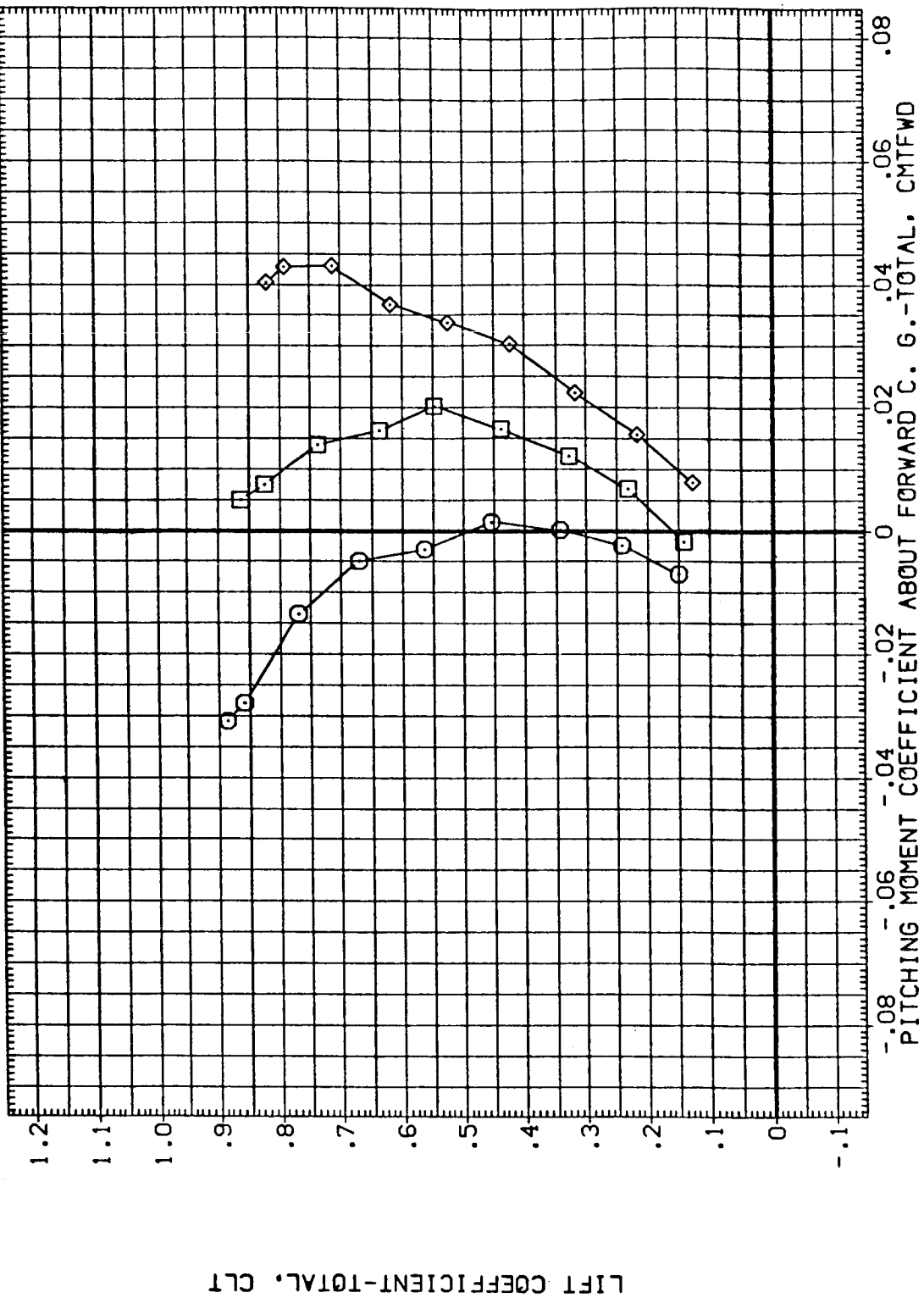


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 26

DATA SET SYMBOL
 (EE0001)
 (EE0002)
 (EE0003)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BDFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

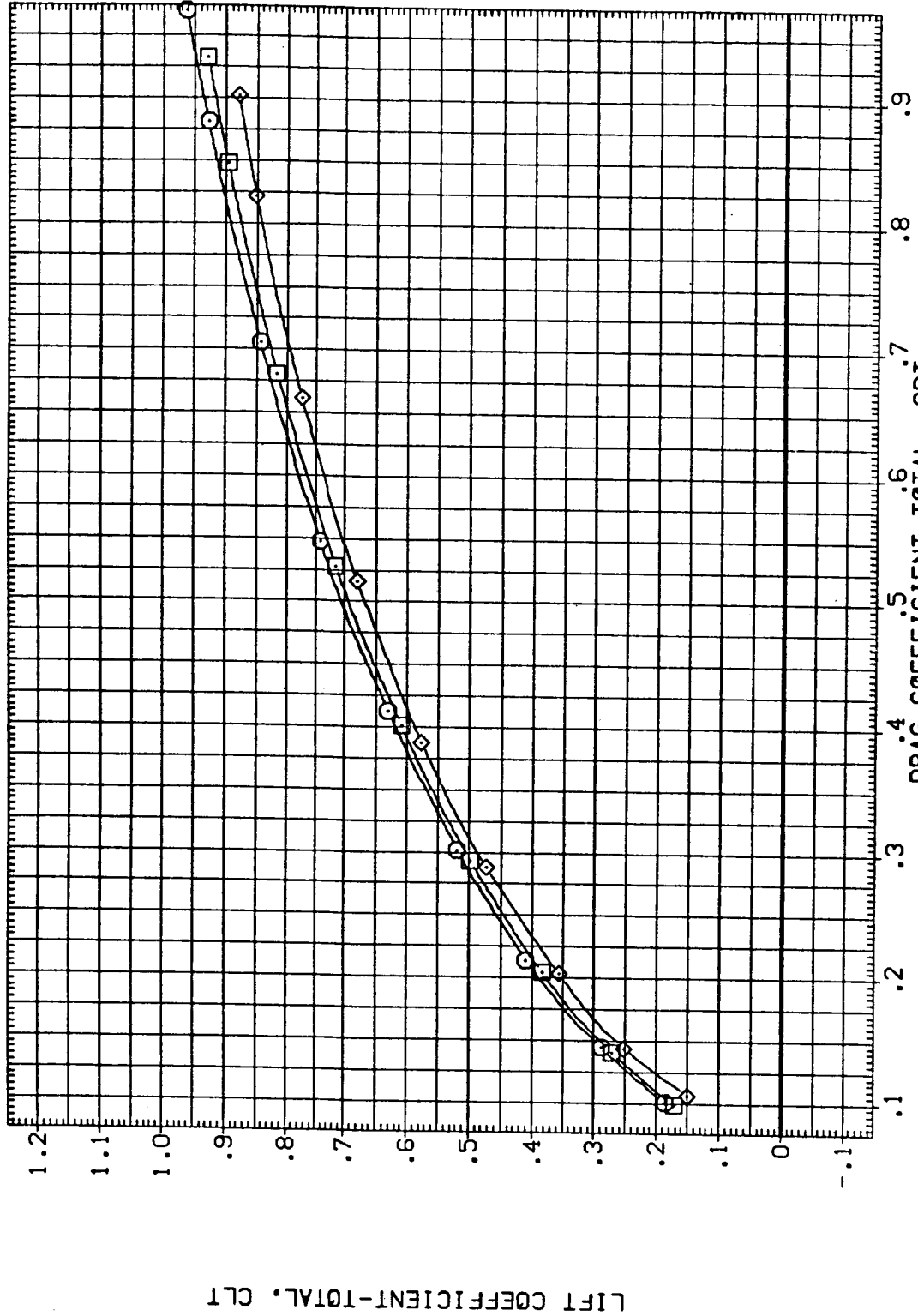


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 DA98 (011-M7+M14)
 (EE0002) AMES 3.5-190 DA98 (011-M7+M14)
 (EE0003) AMES 3.5-190 DA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

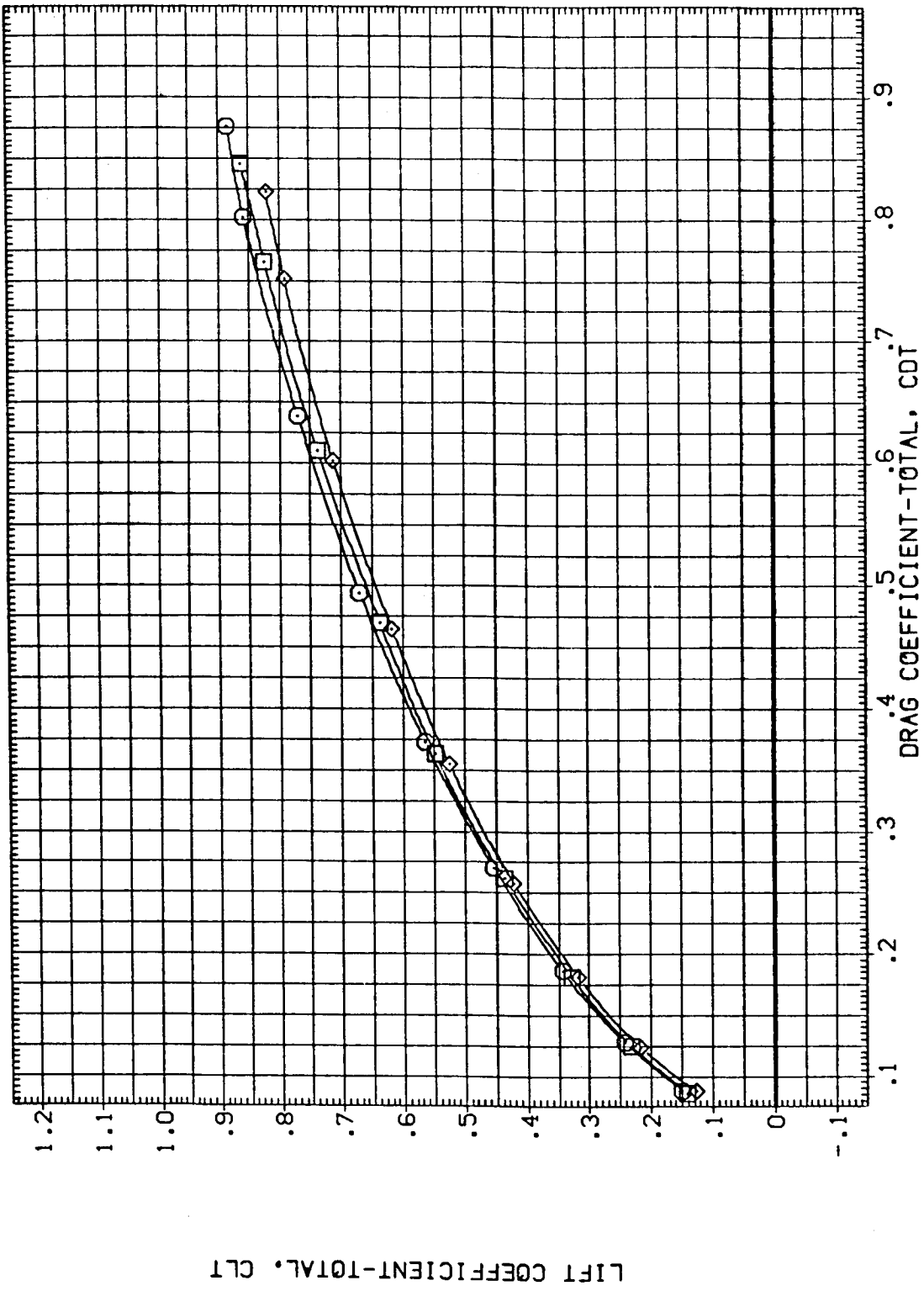


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 28

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 OA98 (011-M7+M14)
 (EE0002) AMES 3.5-190 OA98 (011-M7+M14)
 (EE0003) AMES 3.5-190 OA98 (011-M7+M14)

BETA ELEVON BDFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

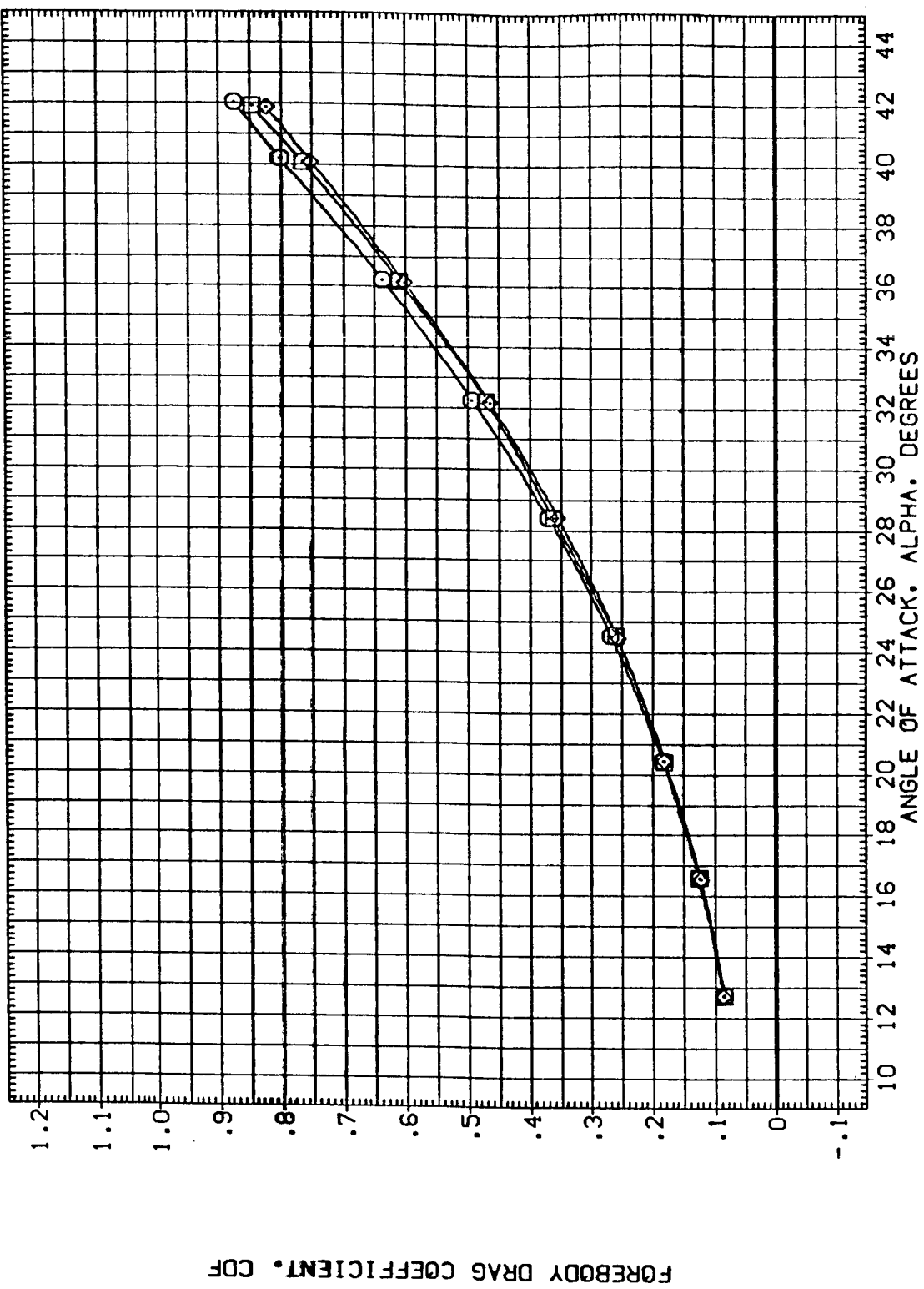


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL
 (EE0001)
 (EE0002)
 (EE0003)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-M14)
 AMES 3.5-190 0A98 (011-M7-M14)
 AMES 3.5-190 0A98 (011-M7-M14)

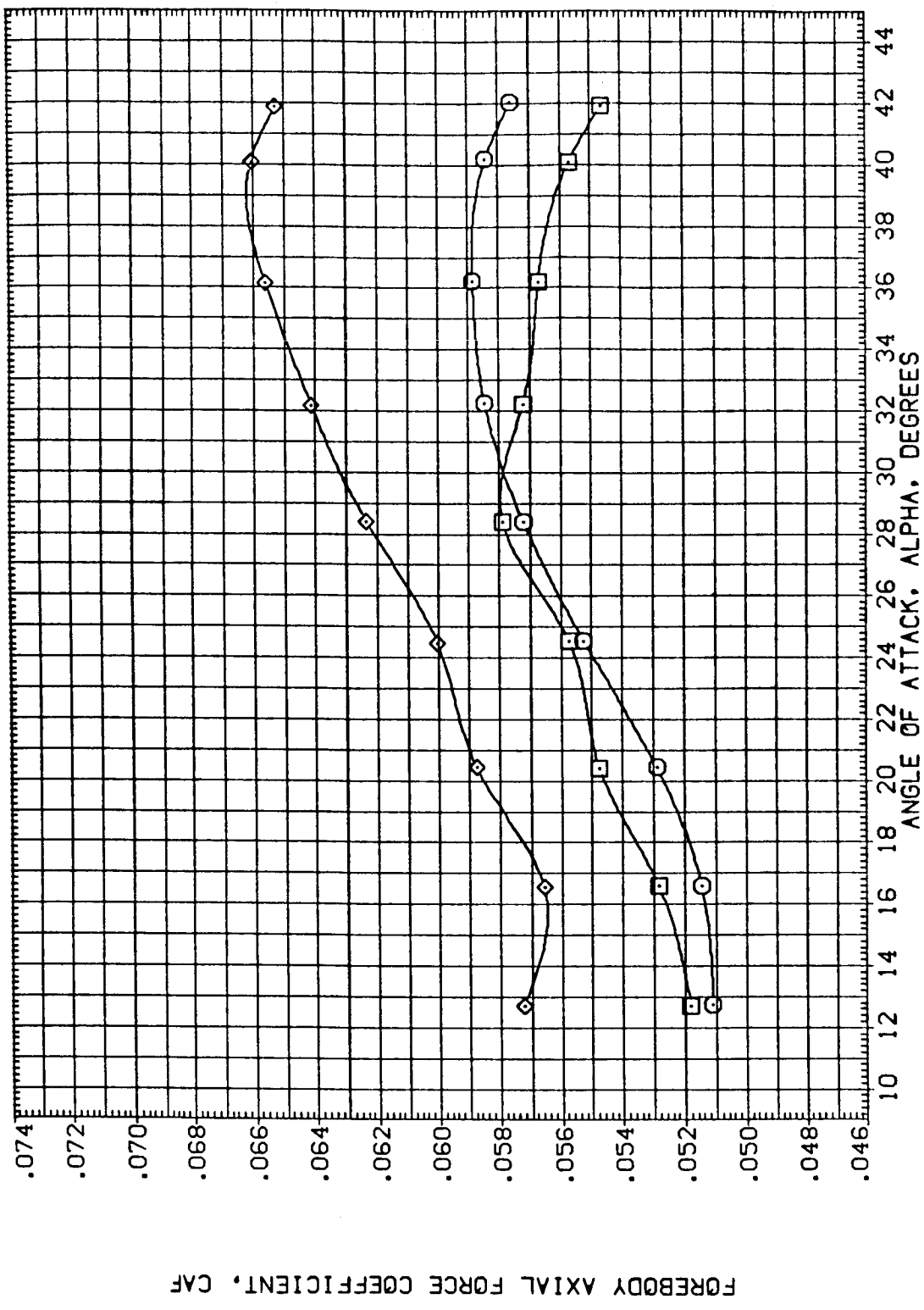


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 32

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 OA98 (011-M7+M14)
 (EE0002) AMES 3.5-190 OA98 (011-M7+M14)
 (EE0003) AMES 3.5-190 OA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

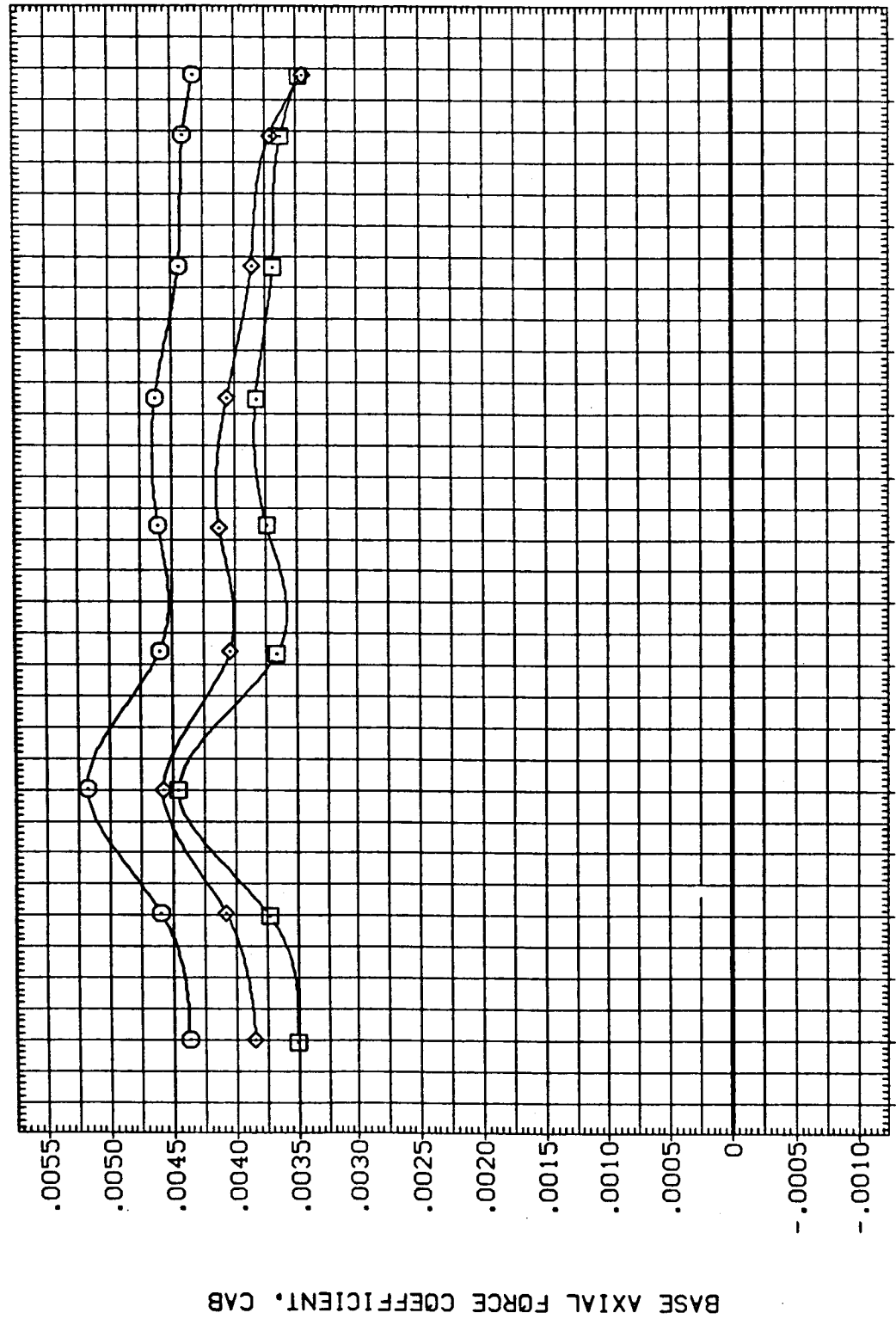


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL
 (EE0001)
 (EE0002)
 (EE0003)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

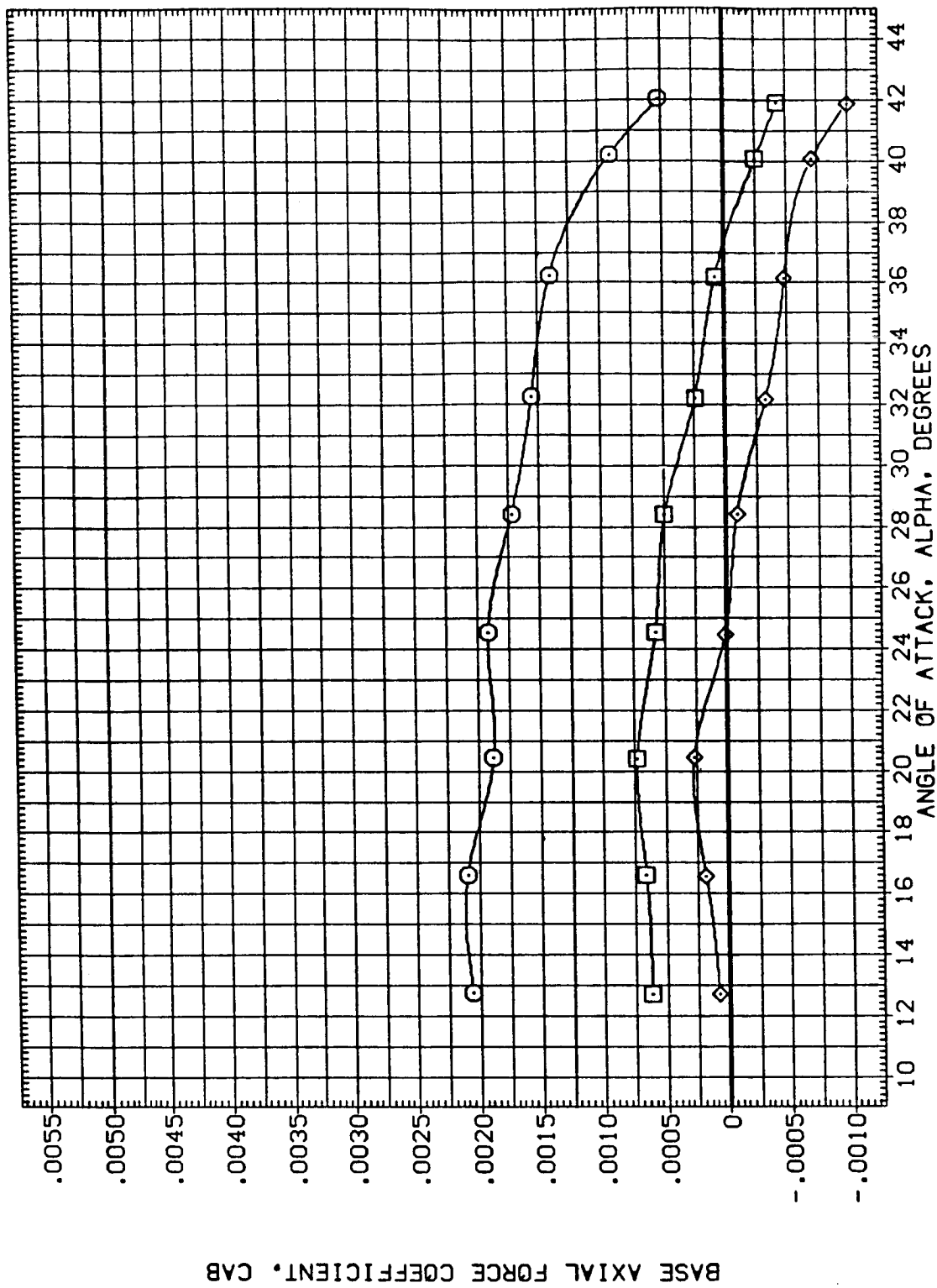
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPDRBK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP .0000 IN.Y0
 SCALE 375.0000 IN.Z0
 .0150



BASE AXIAL FORCE COEFFICIENT, CAB

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEG001) AMES 3.5-190 0A98 (011-M7+M14)

(BEG002) AMES 3.5-190 0A98 (011-M7+M14)

(BEG003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

ZMRP YMRP XMRP LREF SREF

375.0000 .0000 1076.7000 474.8000 2690.0000

IN.ZD IN.YD IN.XD IN. SQ.FT.

SCALE .0150

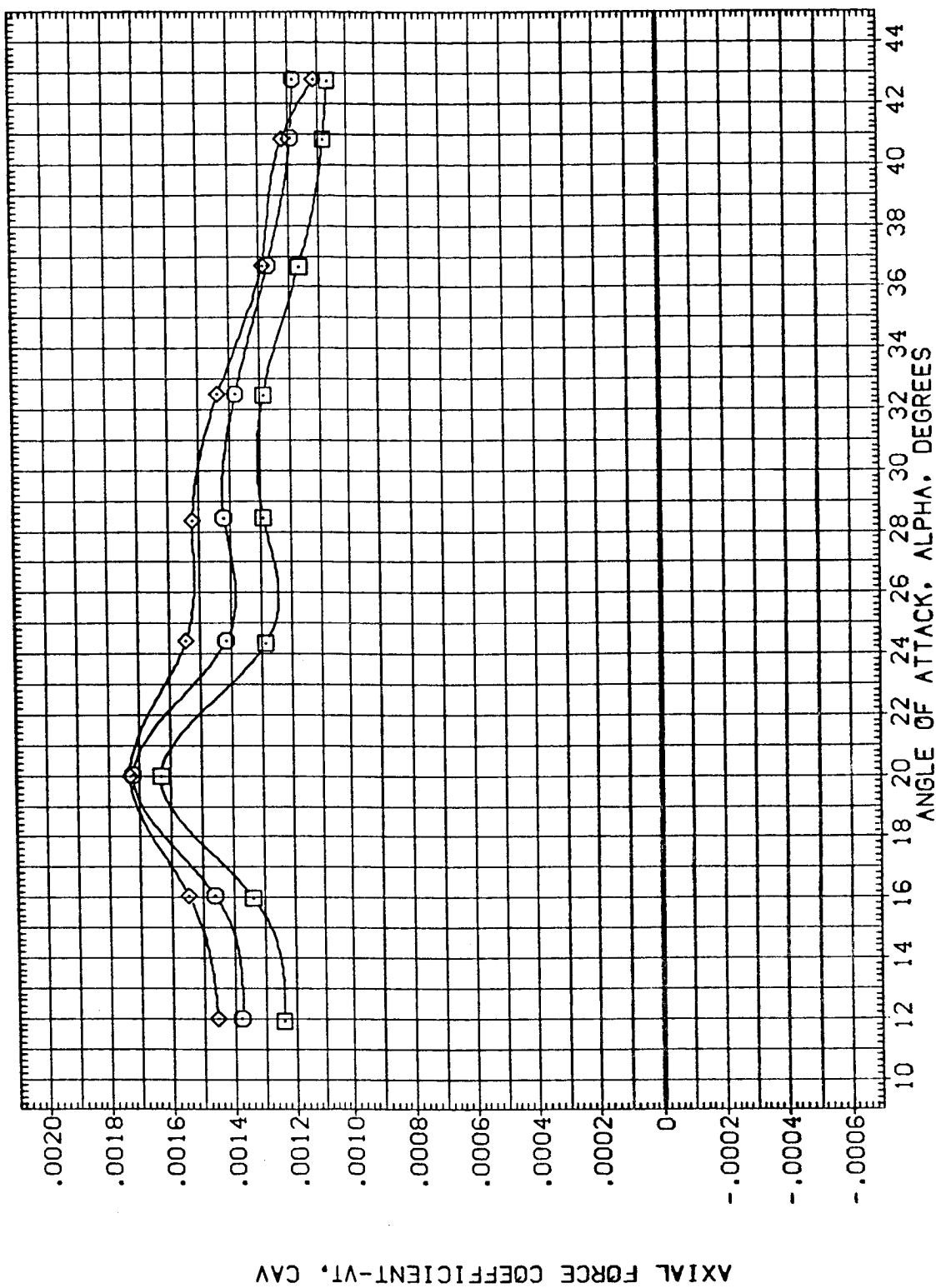
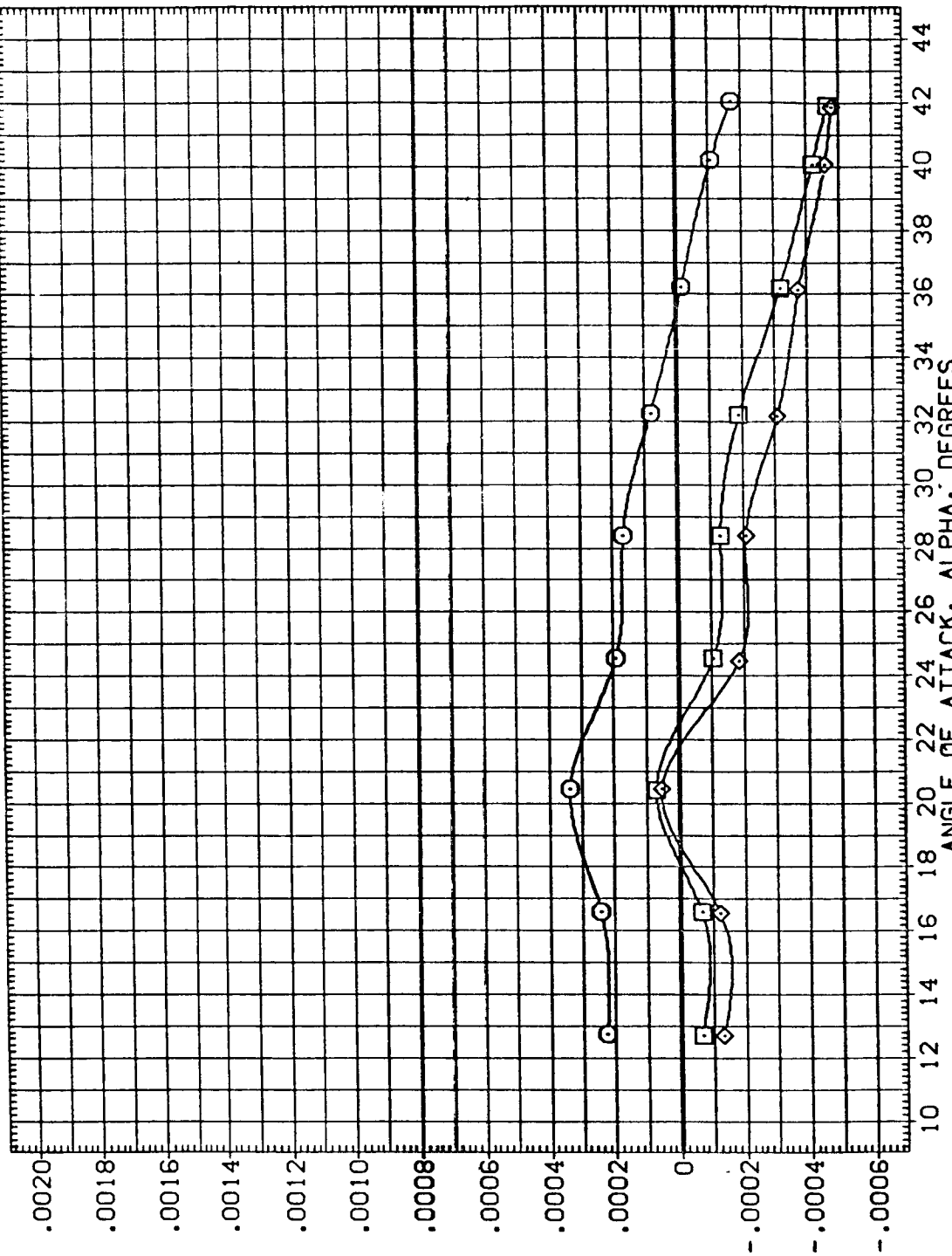


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

AXIAL FORCE COEFFICIENT-VT, CAV



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BEG001) AMES 3.5-190 0A98 (011-M7+M14)
 (BEG002) AMES 3.5-190 0A98 (011-M7+M14)
 (BEG003) AMES 3.5-190 0A98 (011-M7+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000
 REFERENCE INFORMATION SQ. FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.5900 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 36

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0001) ◻ AMES 3.5-190 OAS8 (011-M7+M14)
 (BE0002) ◻ AMES 3.5-190 OAS8 (011-M7+M14)
 (BE0003) ◻ AMES 3.5-190 OAS8 (011-M7+M14)

BETA ELEVON BDFLAP SPDBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

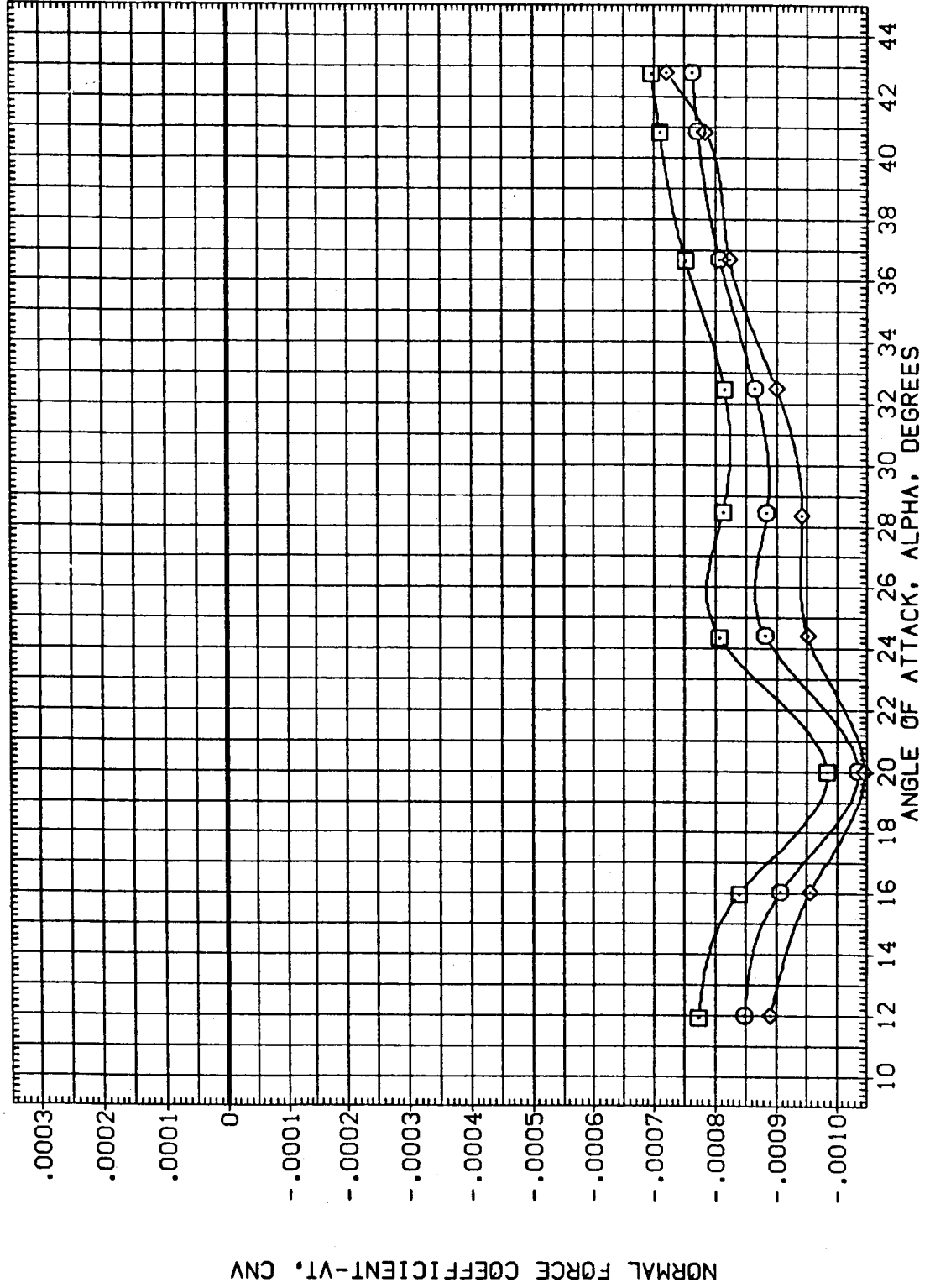


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (BE0001) (BE0002) (BE0003)

CONFIGURATION DESCRIPTION APES 3.5-190 GA98 (011-M7+M14) APES 3.5-190 GA98 (011-M7+M14) APES 3.5-190 GA98 (011-M7+M14)

BETA .000 .000 .000

ELEVON .000 -10.000 -40.000

BOFLAP -11.700 -11.700 -11.700

SPDRBK 55.000 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 LREF 474.8000 BREF 936.6800 XMRP 1076.7000 YMRP .0000 ZMRP 375.0000 SCALE .0150

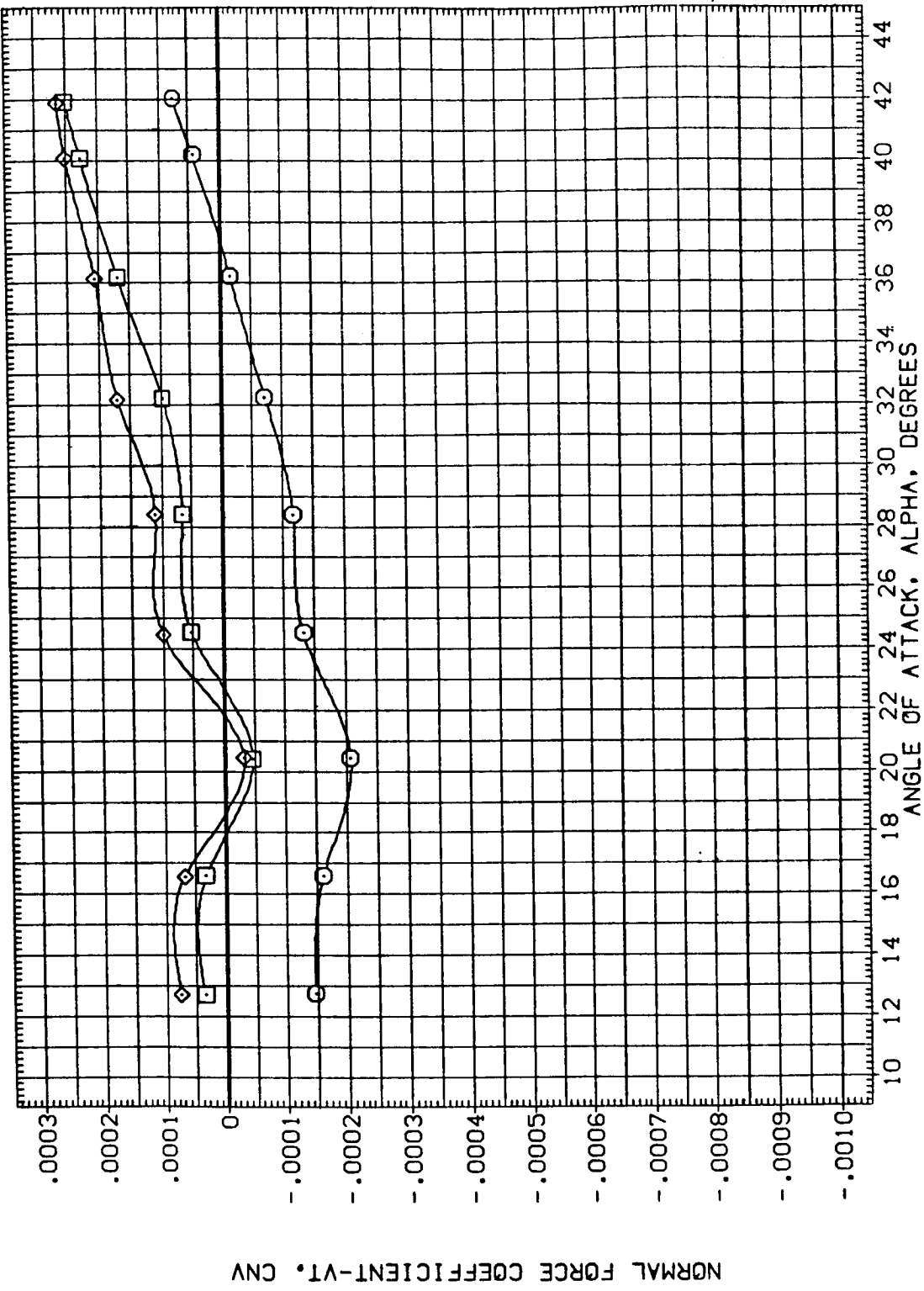


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 38

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0001)	AMES 3.5-190 0A98 (011-M7+M14)
(BE0002)	AMES 3.5-190 0A98 (011-M7+M14)
(BE0003)	AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
YMRP	1076.7000	IN.X0
ZMRP	.0000	IN.Y0
SCALE	375.0000	IN.Z0
	.0150	

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMFWD

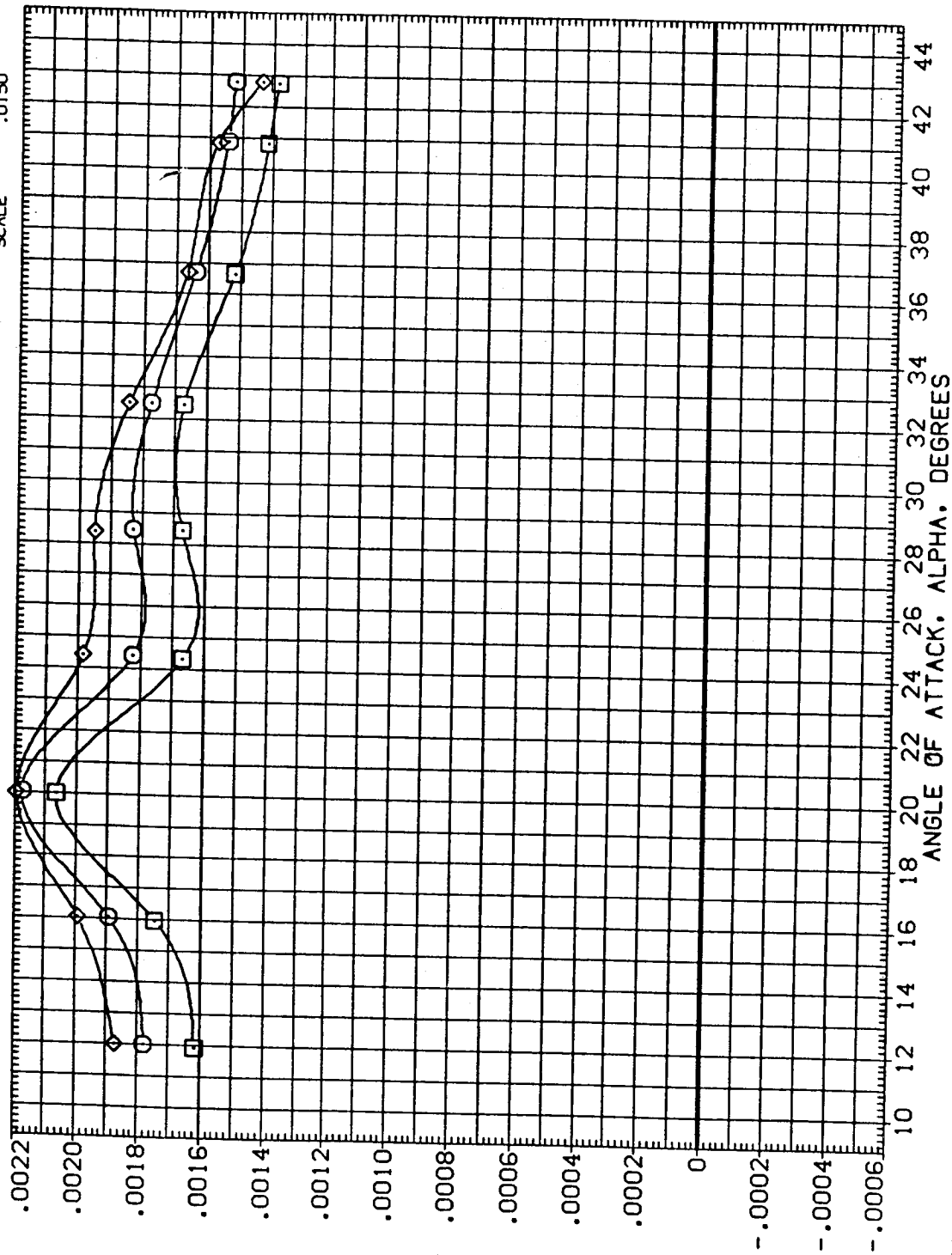


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0001) AMES 3.5-190 GA98 (011-M7-M14)
 (BE0002) AMES 3.5-190 GA98 (011-M7-M14)
 (BE0003) AMES 3.5-190 GA98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT. CMVAFT

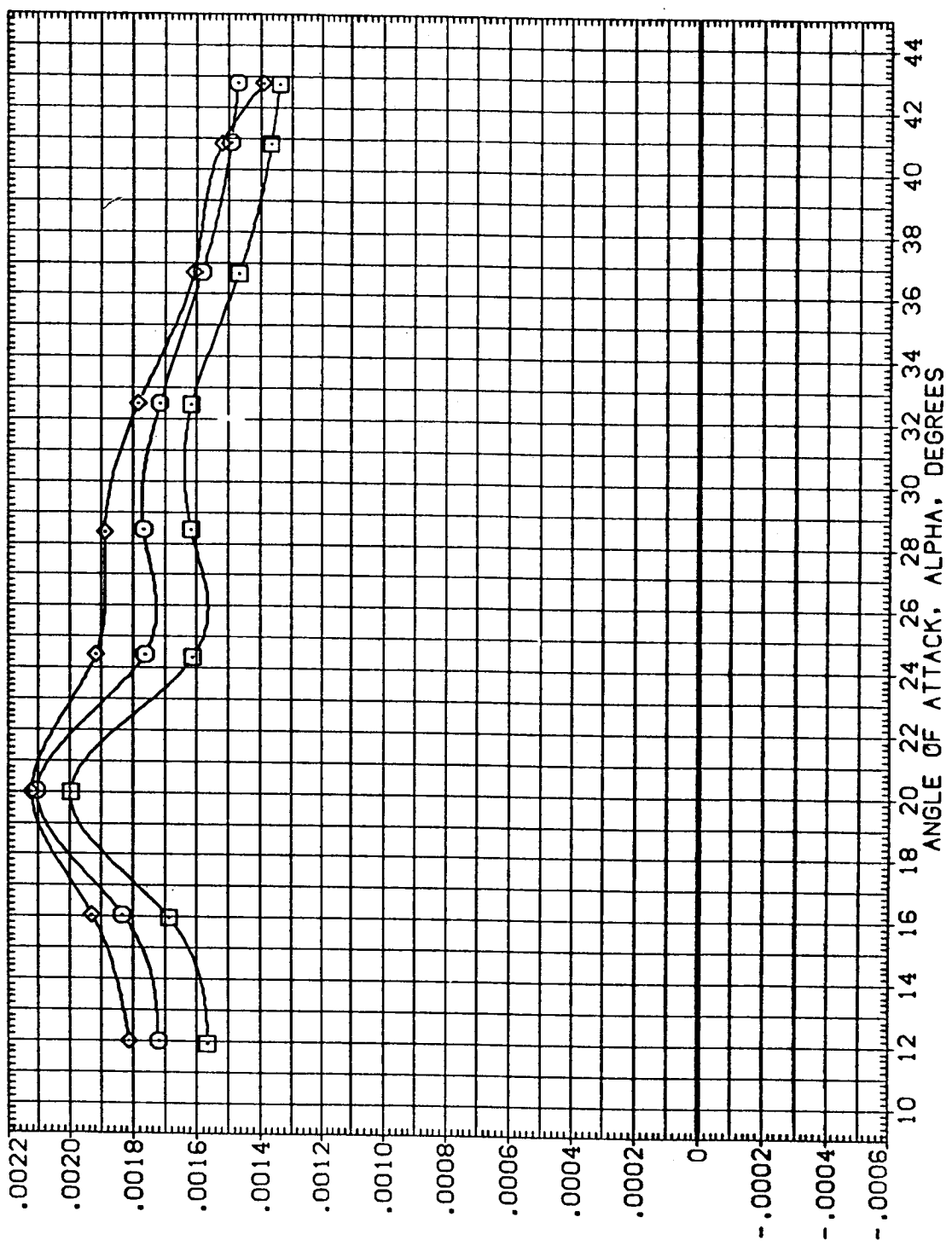


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G. -V1, CMVAFT

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0001) AMES 3.5-190 GA98 (011-M7+M14)
 (BE0002) AMES 3.5-190 GA98 (011-M7+M14)
 (BE0003) AMES 3.5-190 GA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION
 .000 .000 -11.700 55.000 2650.0000 SQ.FT.
 .000 -10.000 -11.700 55.000 474.8000 IN.
 .000 -40.000 -11.700 55.000 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

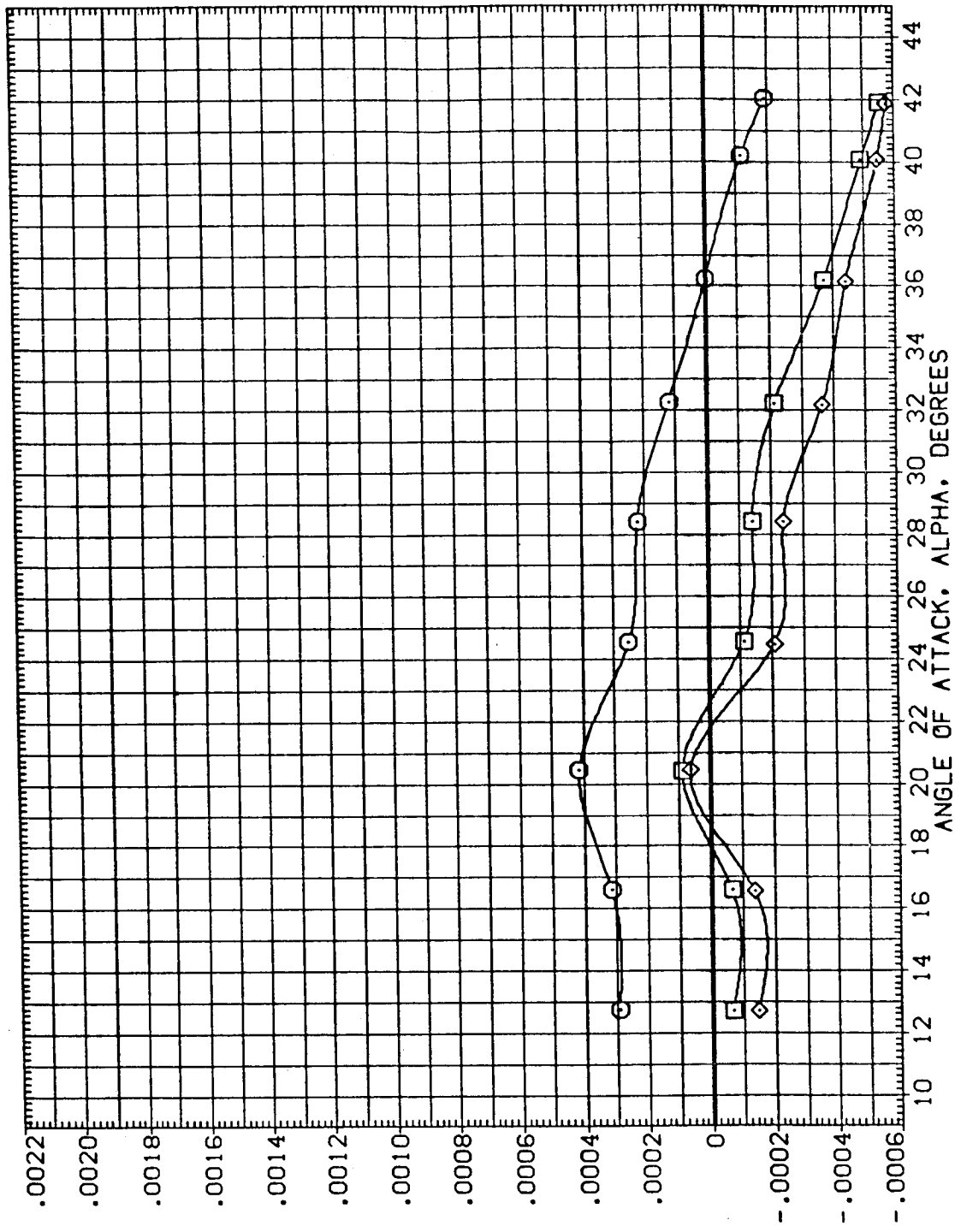


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0009) AMES 3.5-190 CAS8 (011-M7+M14-N24)
 (CE0010) AMES 3.5-190 CAS8 (011-M7+M14-N24)
 (CE0011) AMES 3.5-190 CAS8 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

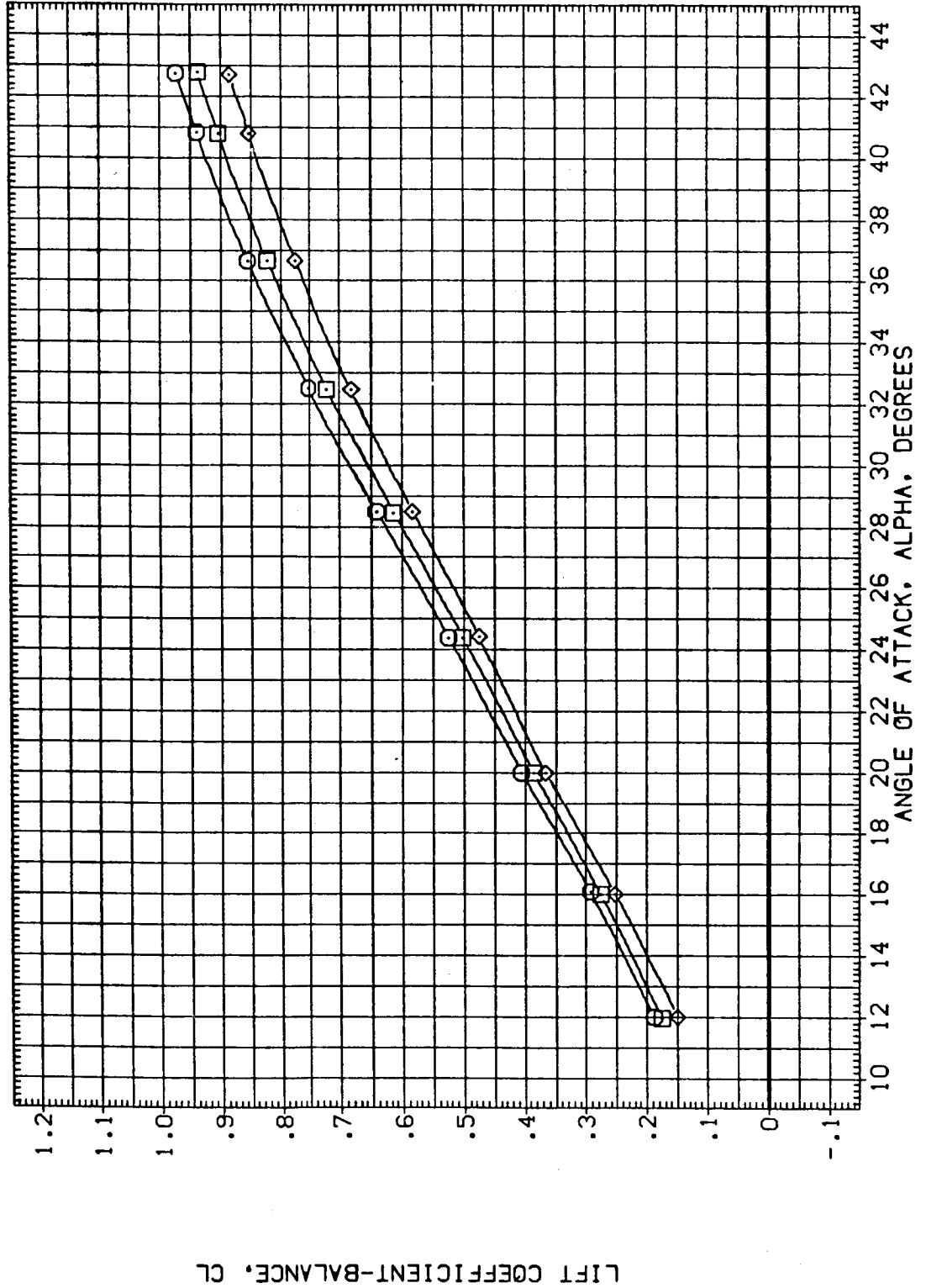


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CE0010) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CE0011) AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

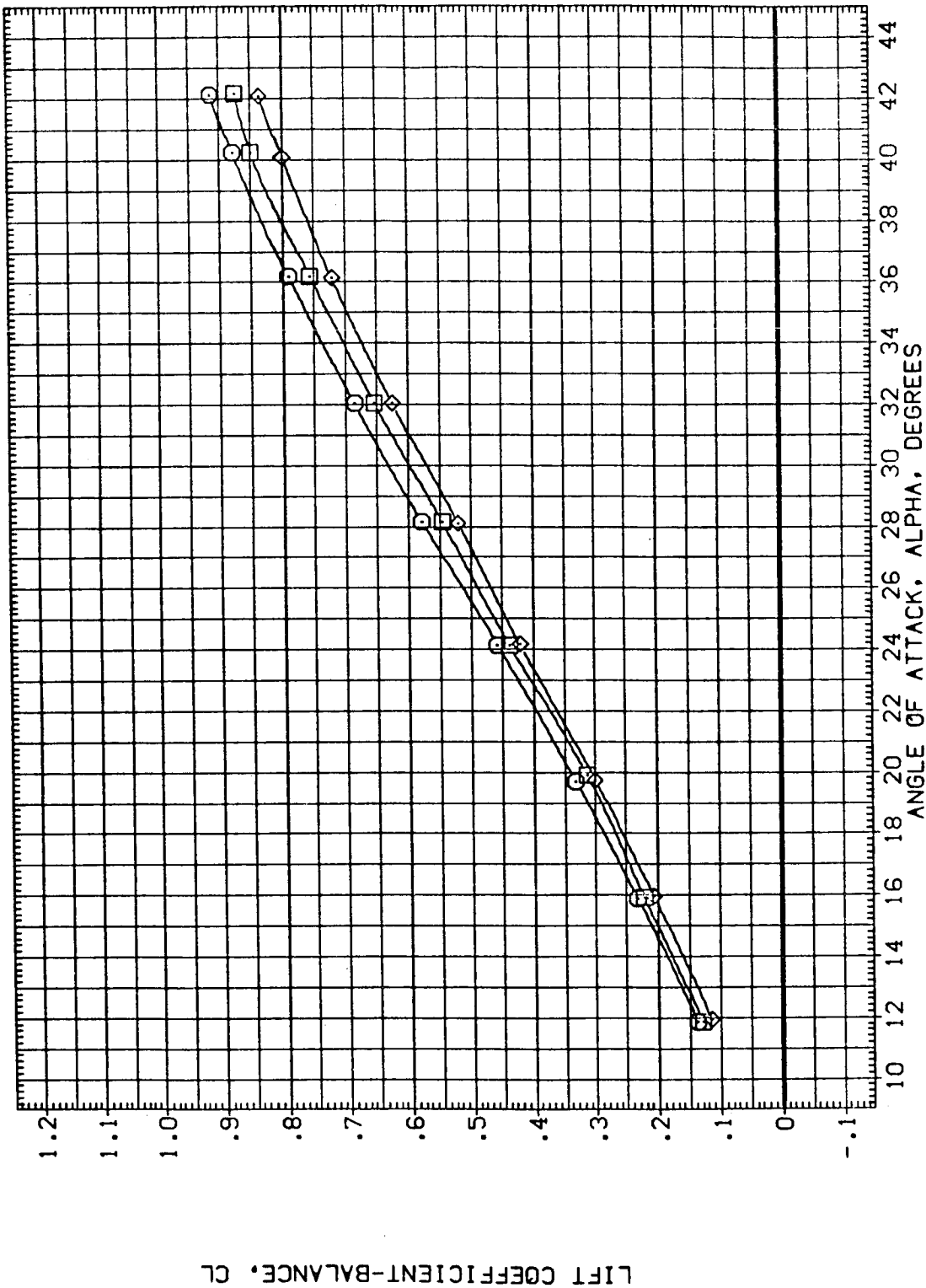


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG009) AMES 3.5-190 0A98 (011-M7-M14-N24)

(CEG010) AMES 3.5-190 0A98 (011-M7-M14-N24)

(CEG011) AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

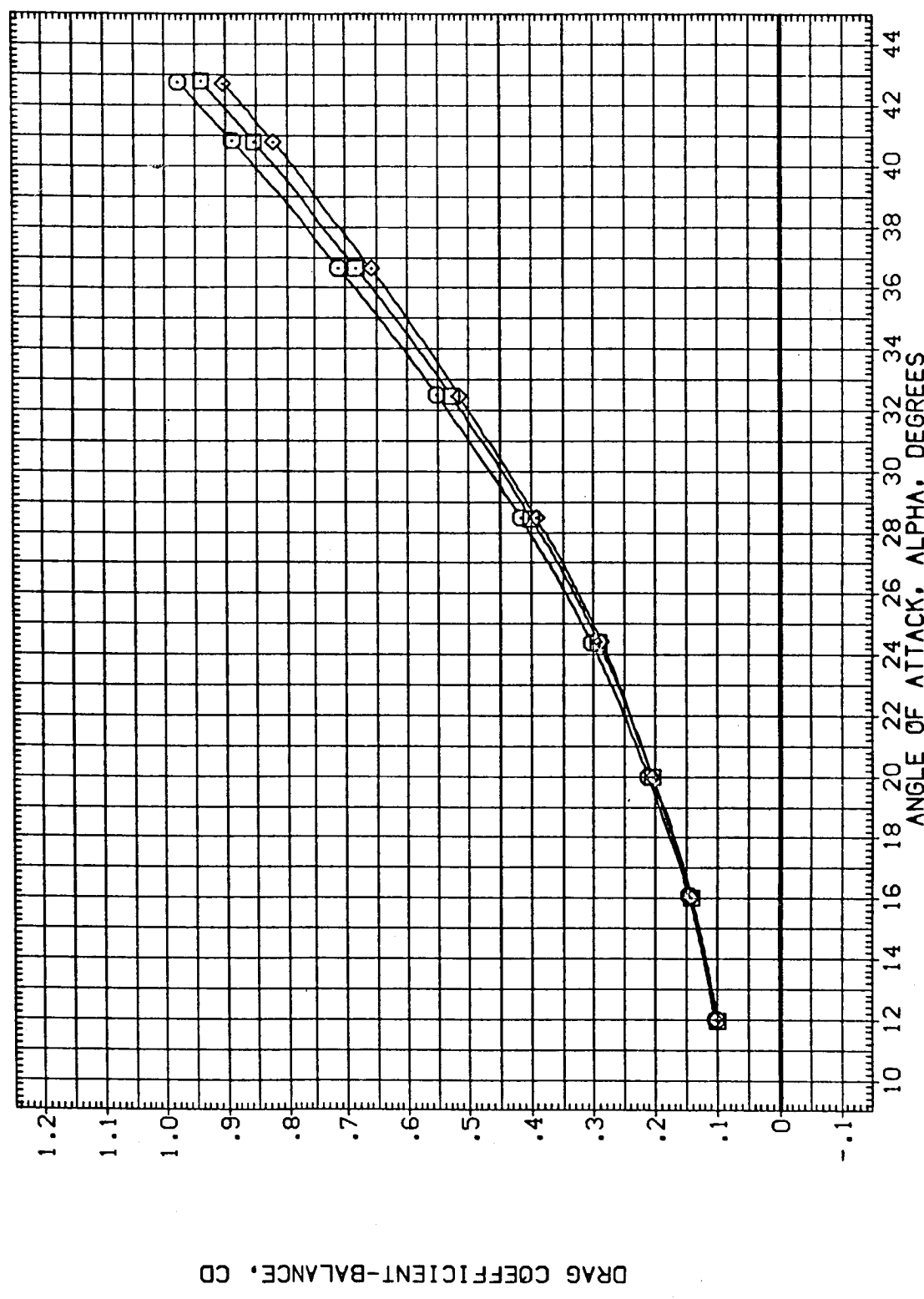


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (CE0009)
 (CE0010)
 (CE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)

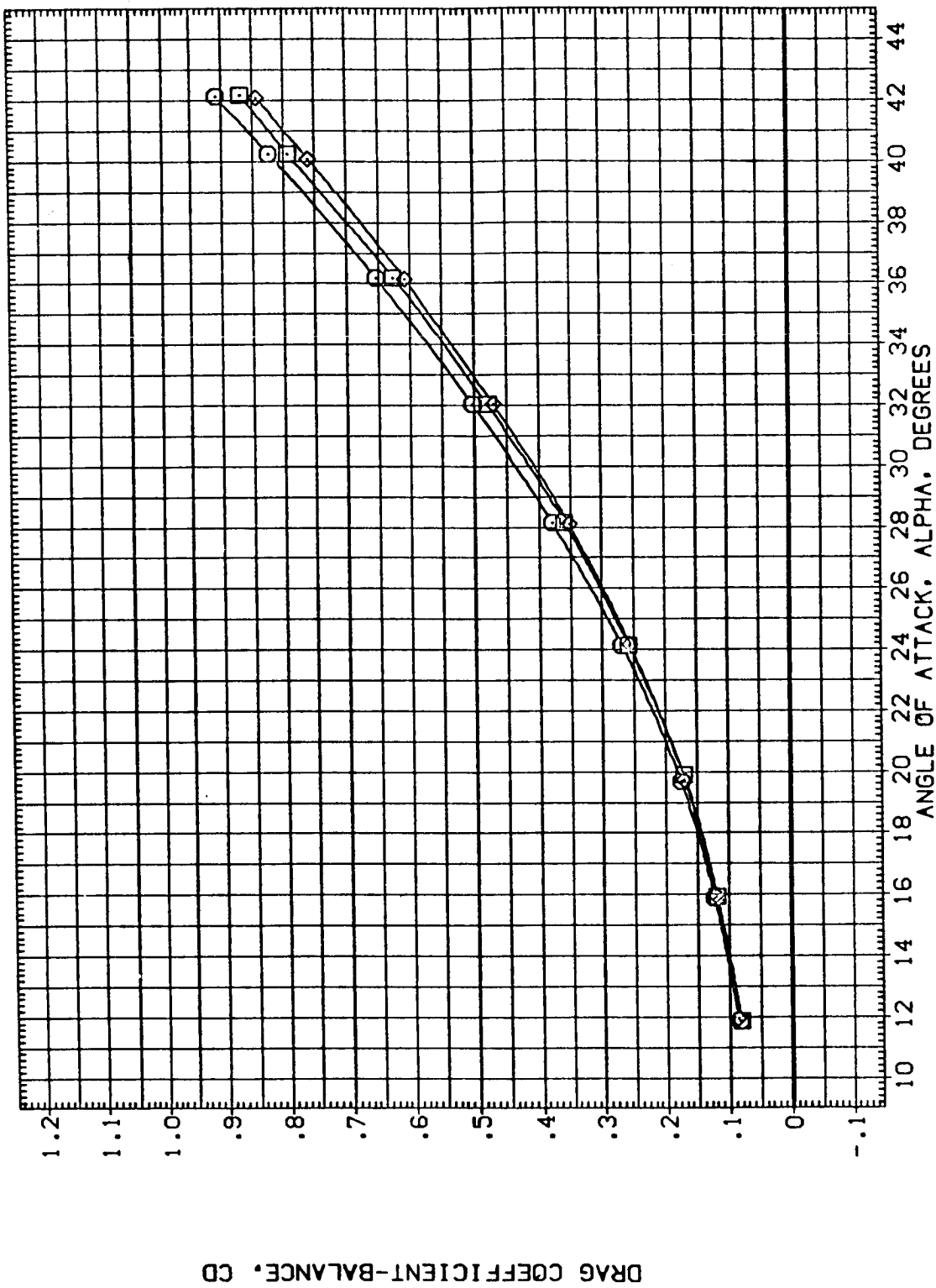
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SO.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 IN.XD
 IN.YD
 IN.ZD
 SCALE .0150



DRAG COEFFICIENT-BALANCE, CD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 46

DATA SET SYMBOL
 (CE0009)
 (CE0010)
 (CE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N7+M14-N24)
 AMES 3.5-190 OA98 (011-N7+M14-N24)
 AMES 3.5-190 OA98 (011-N7+M14-N24)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BDFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

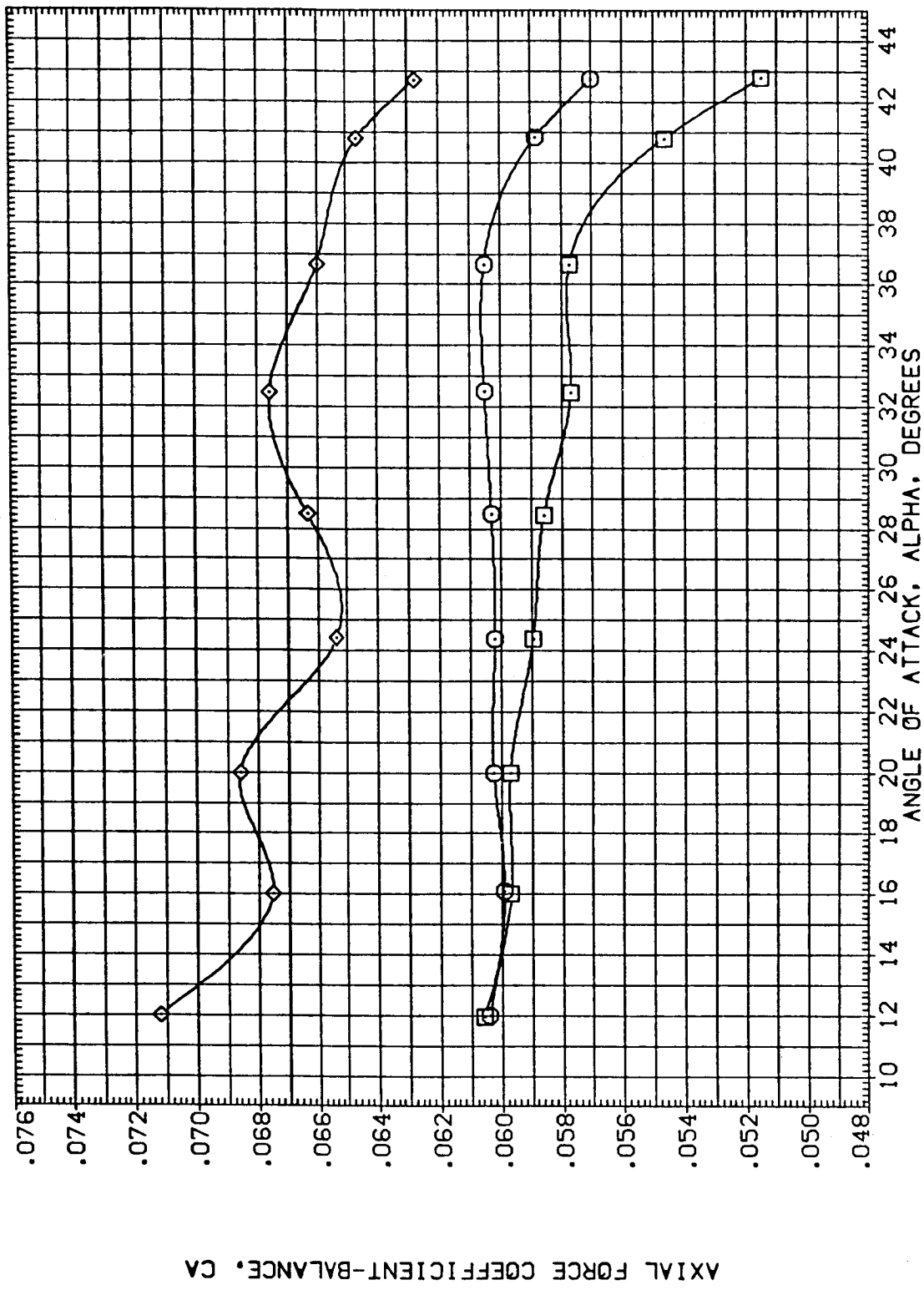


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0009) AMES 3.5-190 GA98 (011-M7-M14-N24)
 (CE0010) AMES 3.5-190 GA98 (011-M7-M14-N24)
 (CE0011) AMES 3.5-190 GA98 (011-M7-M14-N24)

BETA ELEVON 80FLAP SPOBRK REFERENCE INFORMATION SQ.FT.
 .000 .000 -11.700 55.000 SREF 2690.0000 IN.
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

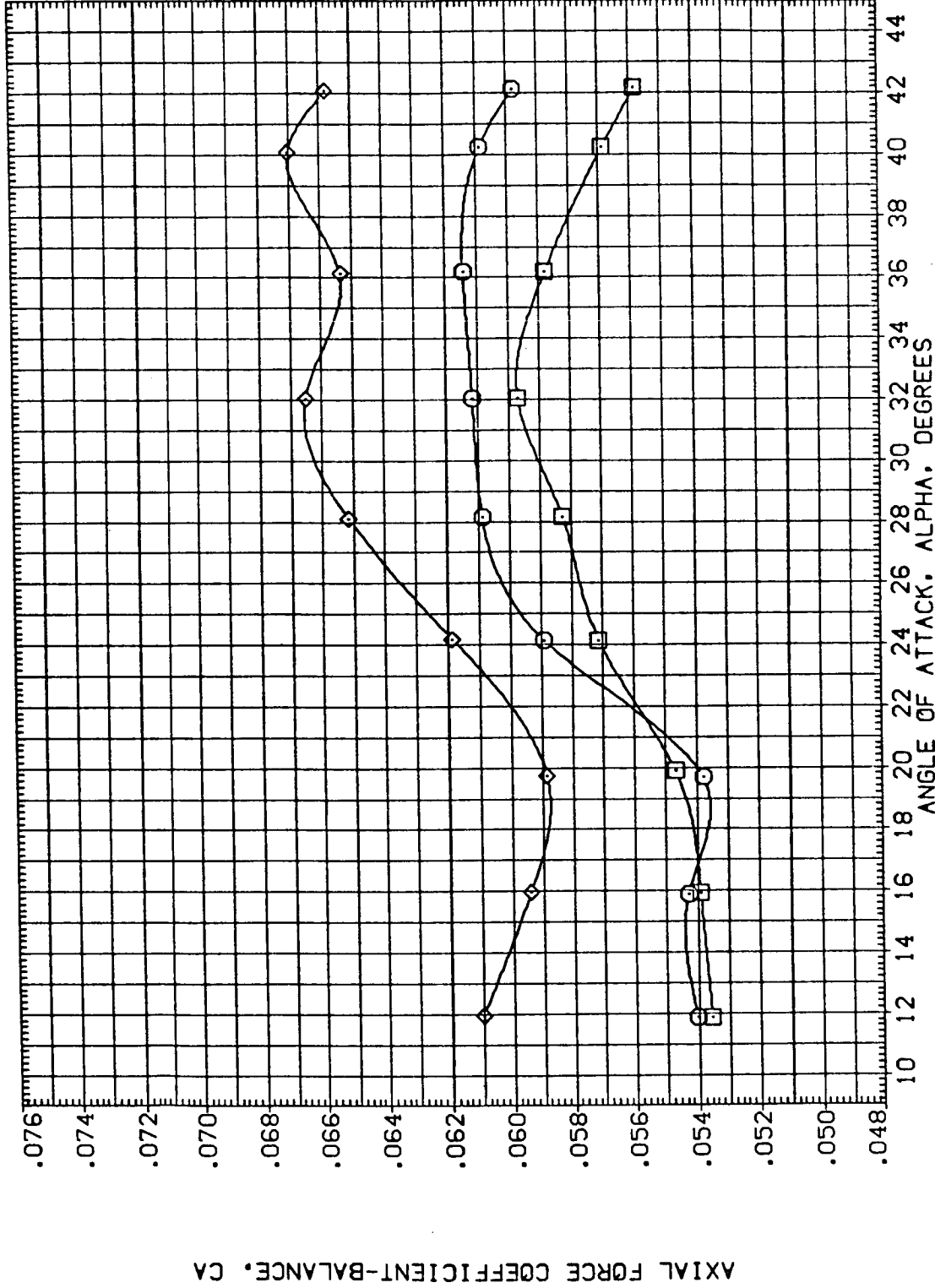


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 48

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CEG010) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CEG011) AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 .000

-10.000 -11.700 55.000

-40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.XG

YMRP .0000 IN.YG

ZMRP 375.0000 IN.ZO

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

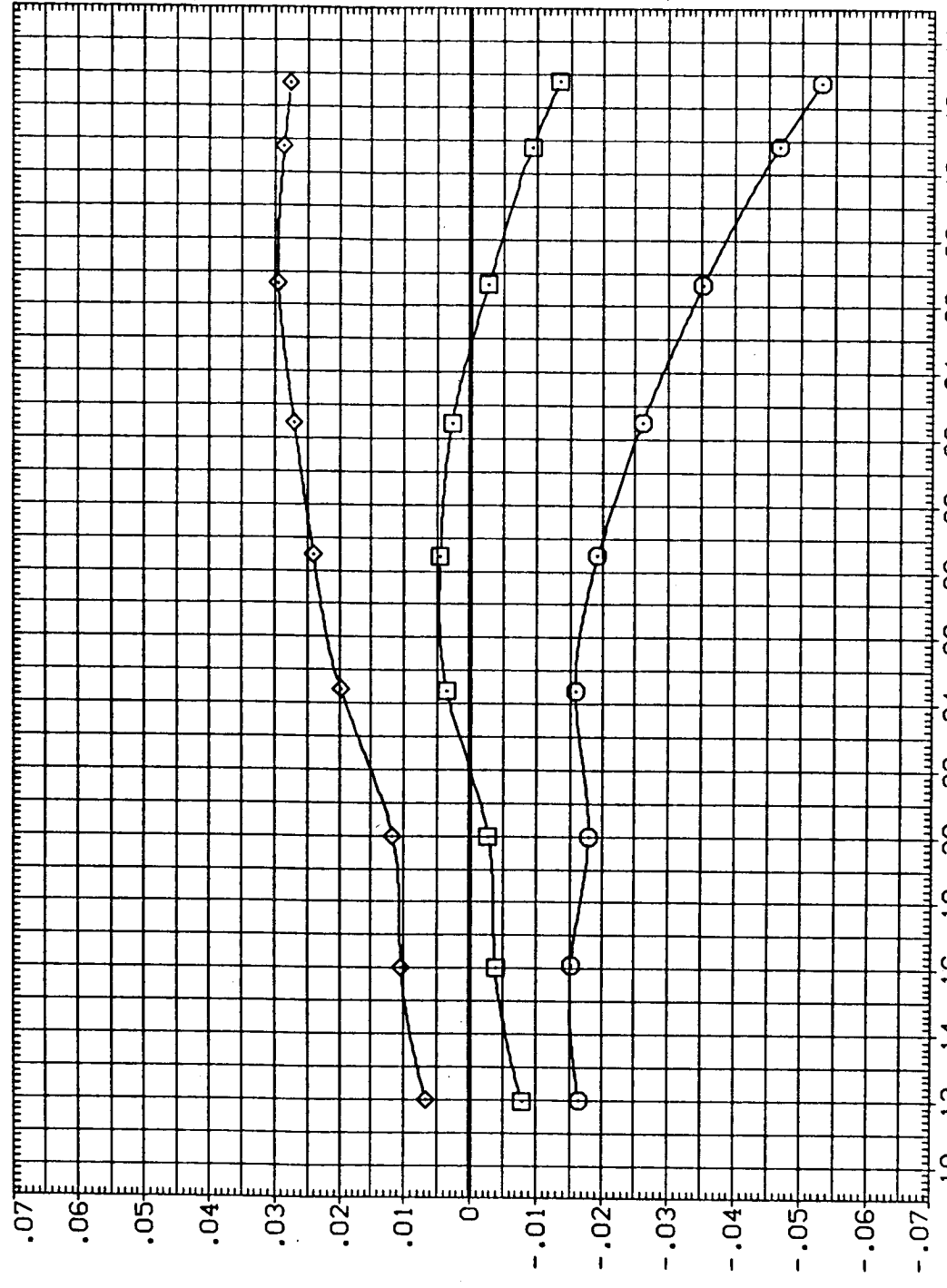


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)

(CE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)

(CE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

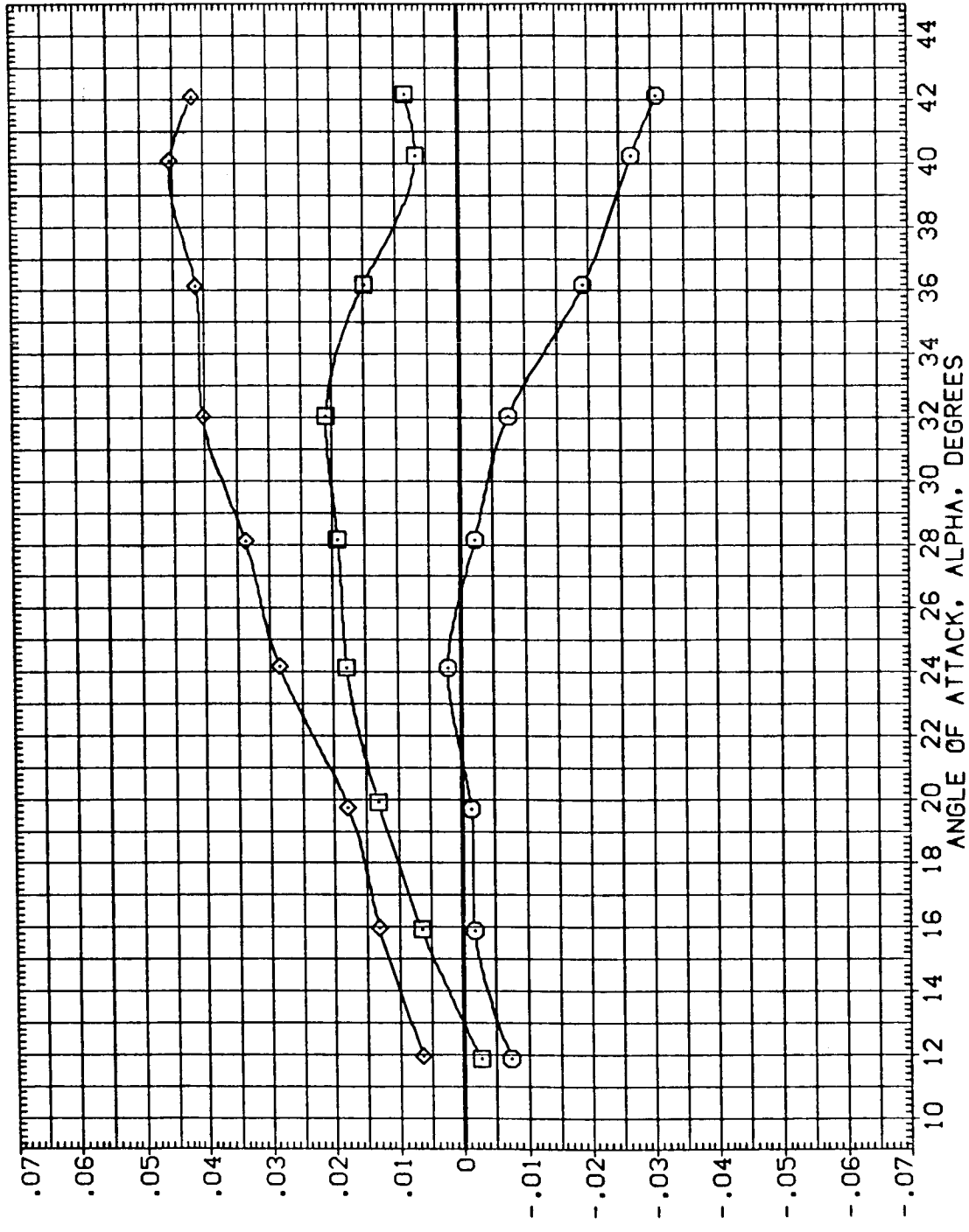


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0009) AMES 3.5-190 GA98 (011-M7-M14-N24)

(CE0010) AMES 3.5-190 GA98 (011-M7-M14-N24)

(CE0011) AMES 3.5-190 GA98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

YMRP 1076.7000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP 375.0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

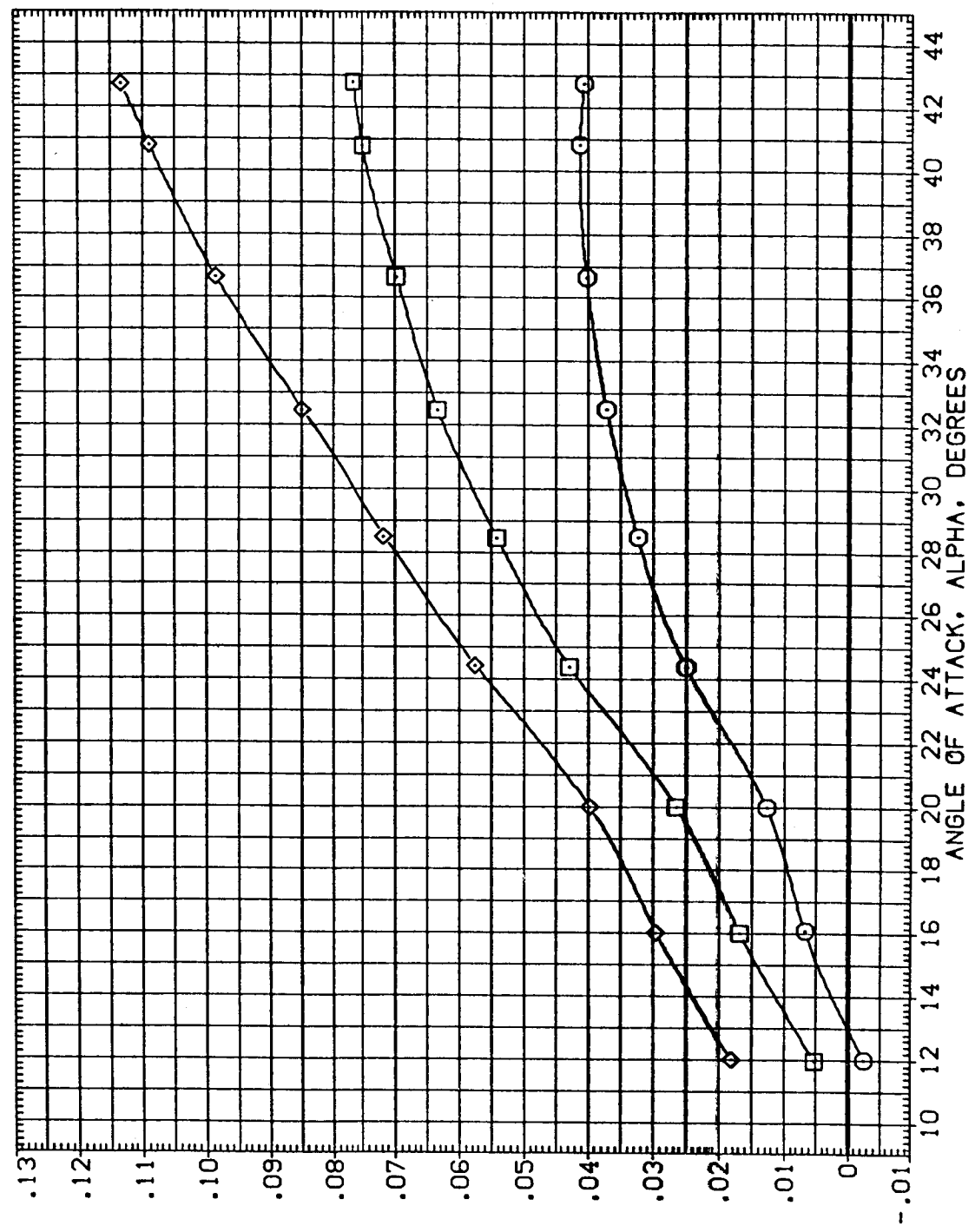


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(M)MACH = 5.25

0.2

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0009) AMES 3.5-190 C198 (011-M7-M14-N24)
 (CE0010) AMES 3.5-190 C198 (011-M7-M14-N24)
 (CE0011) AMES 3.5-190 C198 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION SO.FT.
 .000 .000 -11.700 55.000 SREF 2690.0000 IN.
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

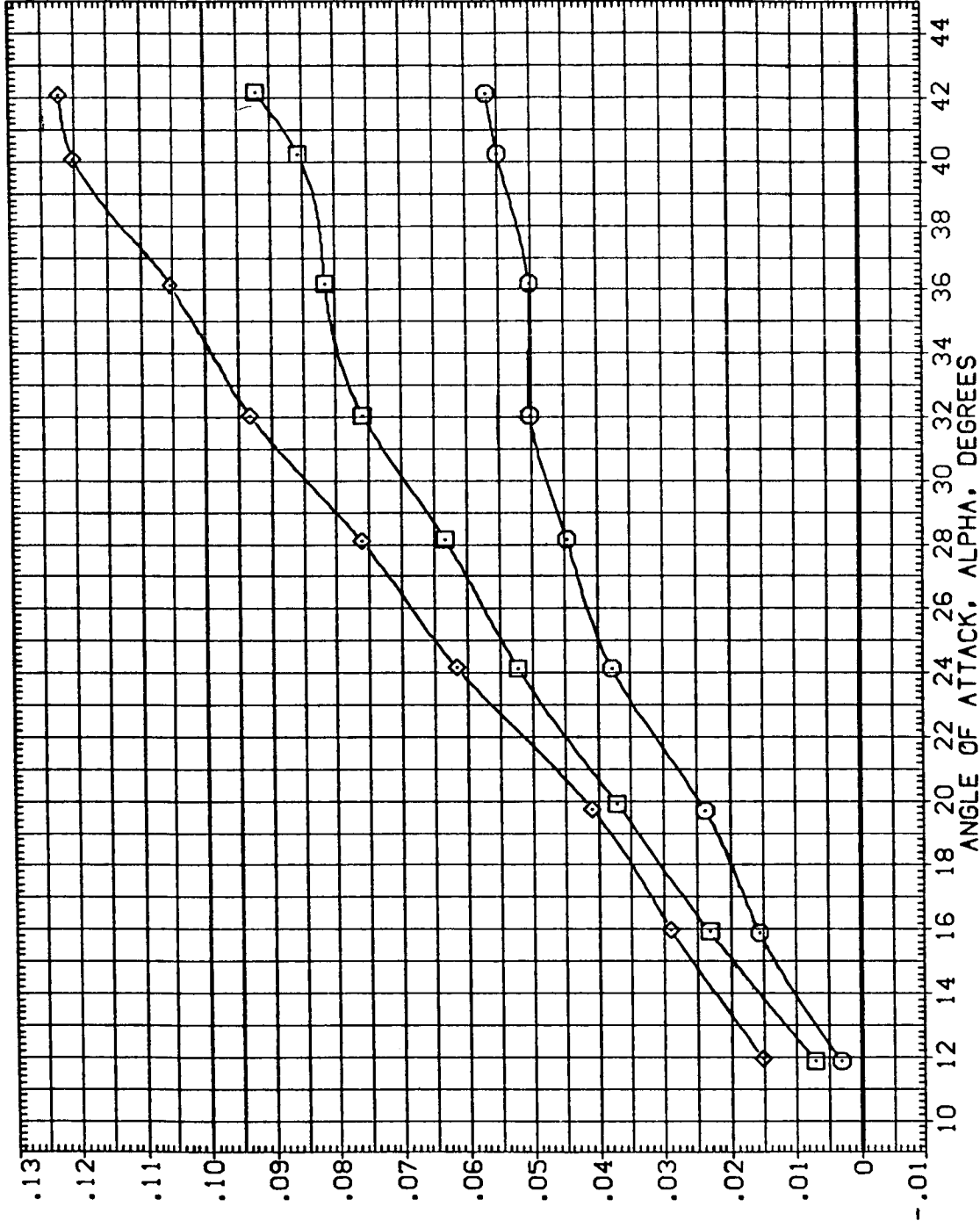


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

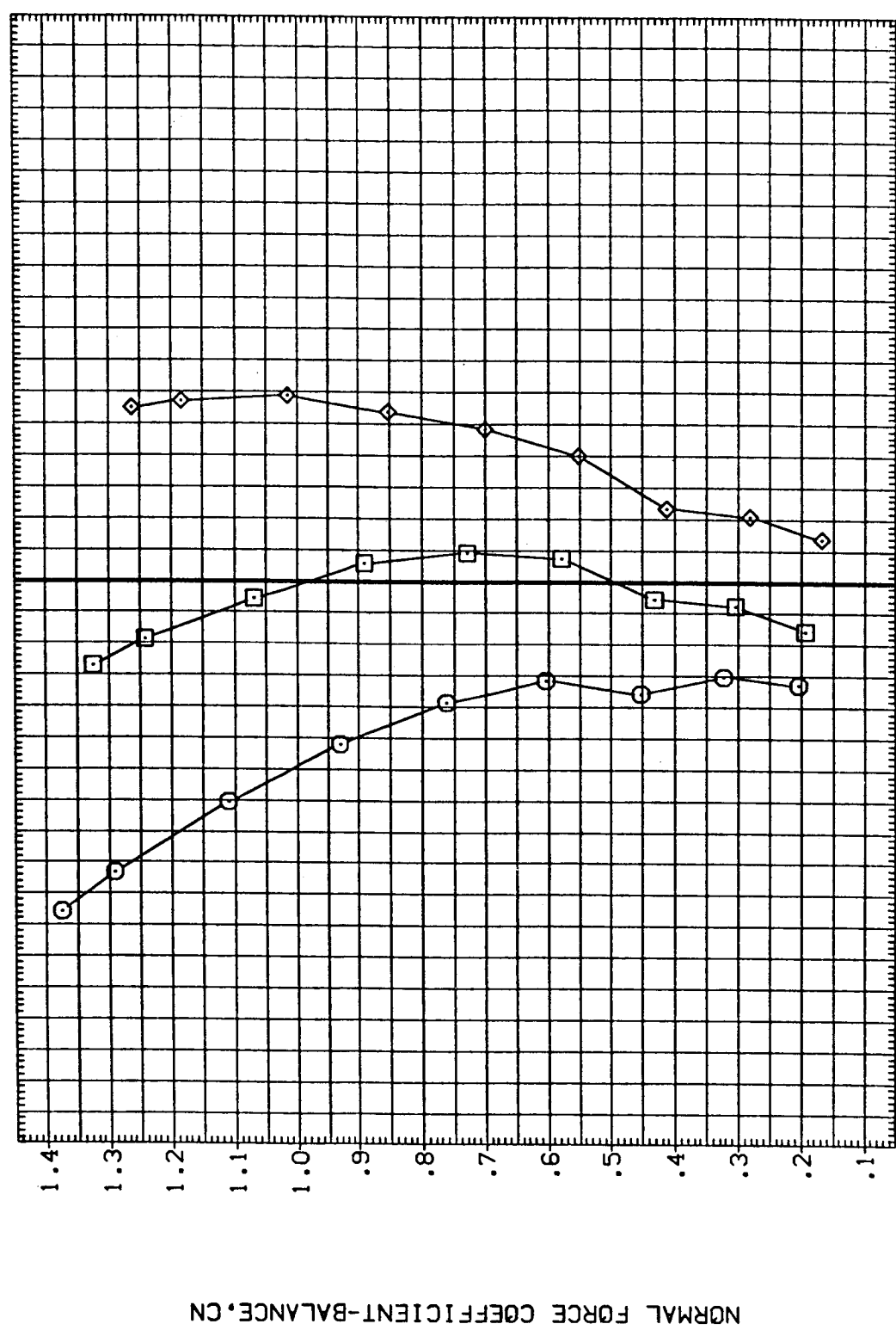
(B)MACH = 10.27

DATA SET SYMBOL (CE0009) (CE0010) (CE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7-M14-N24)
 AMES 3.5-190 CA98 (011-M7-M14-N24)
 AMES 3.5-190 CA98 (011-M7-M14-N24)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (CE0009)
 (CE0010)
 (CE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-47+M14-N24)
 AMES 3.5-190 0A98 (011-47+M14-N24)
 AMES 3.5-190 0A98 (011-47+M14-N24)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.XG
 XMRP 1076.7000 IN.YD
 YMRP .0000 IN.ZD
 ZMRP 375.0150
 SCALE

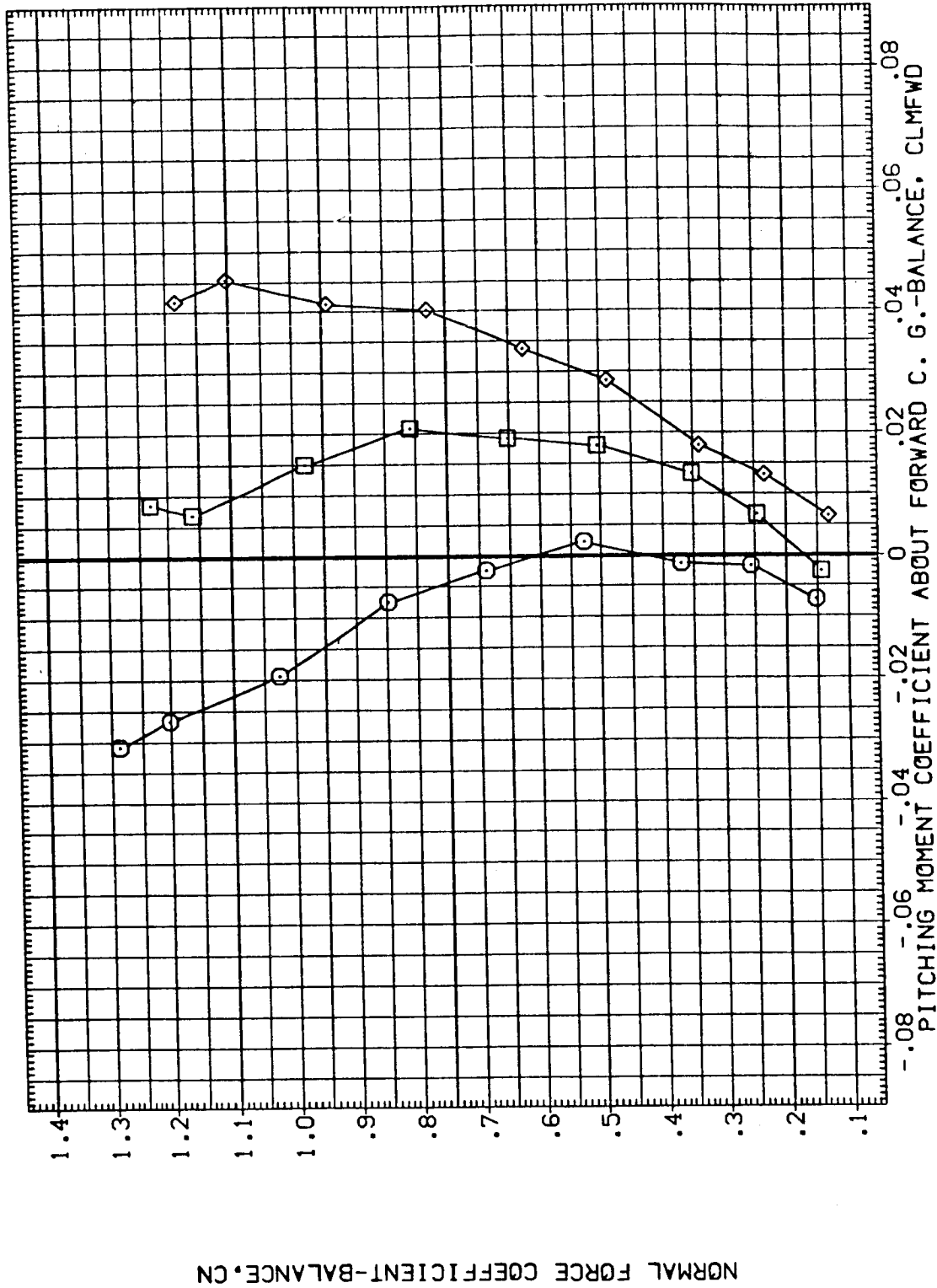


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

LIFT COEFFICIENT-BALANCE, CL

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

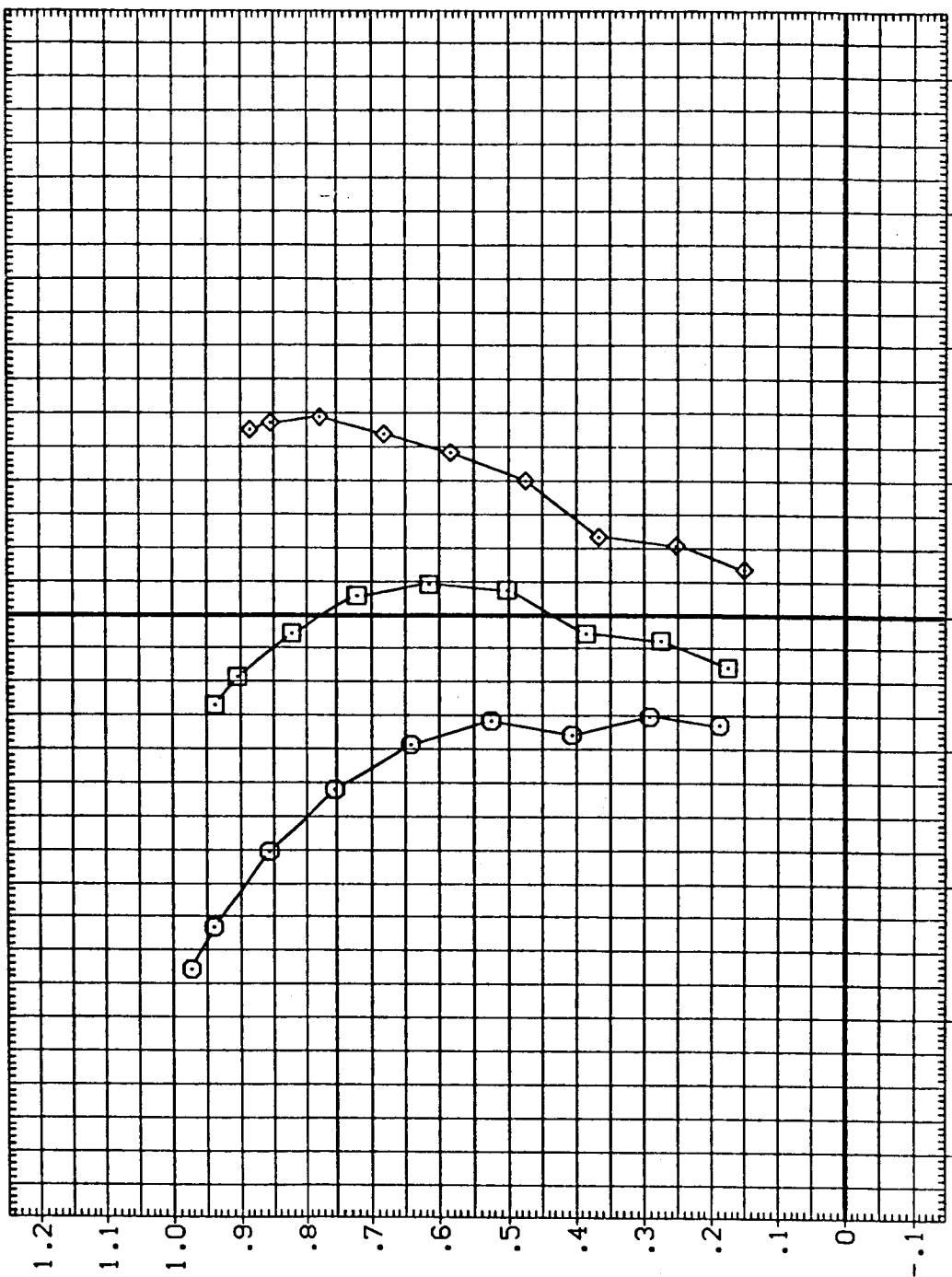


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0008) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CE0010) AMES 3.5-190 GA98 (011-M7+M14-N24)

(CE0011) AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

ZMRP SCALE

.0000 .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

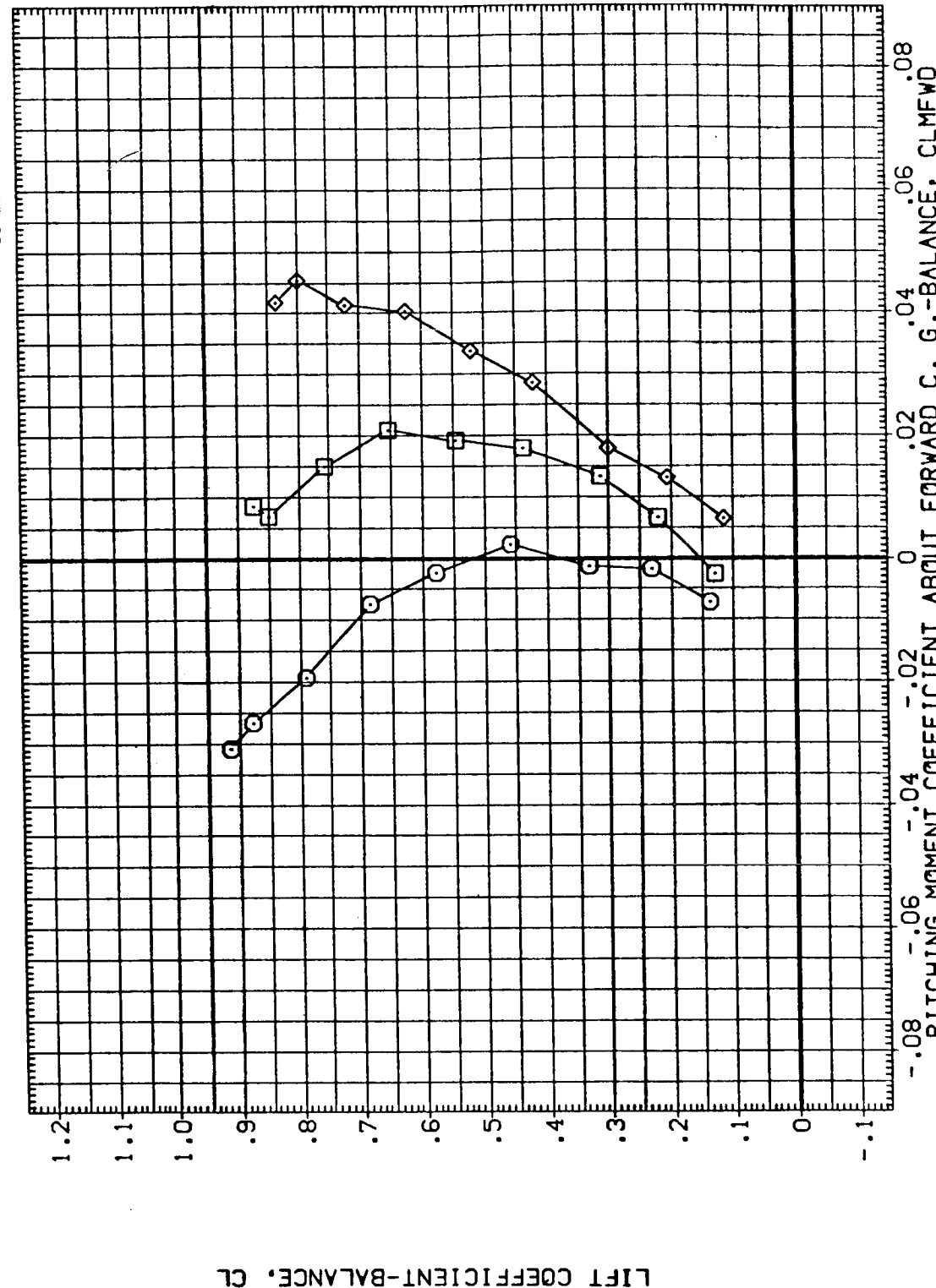


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 56

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0009) ◻ AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0010) ◻ AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0011) ◻ AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

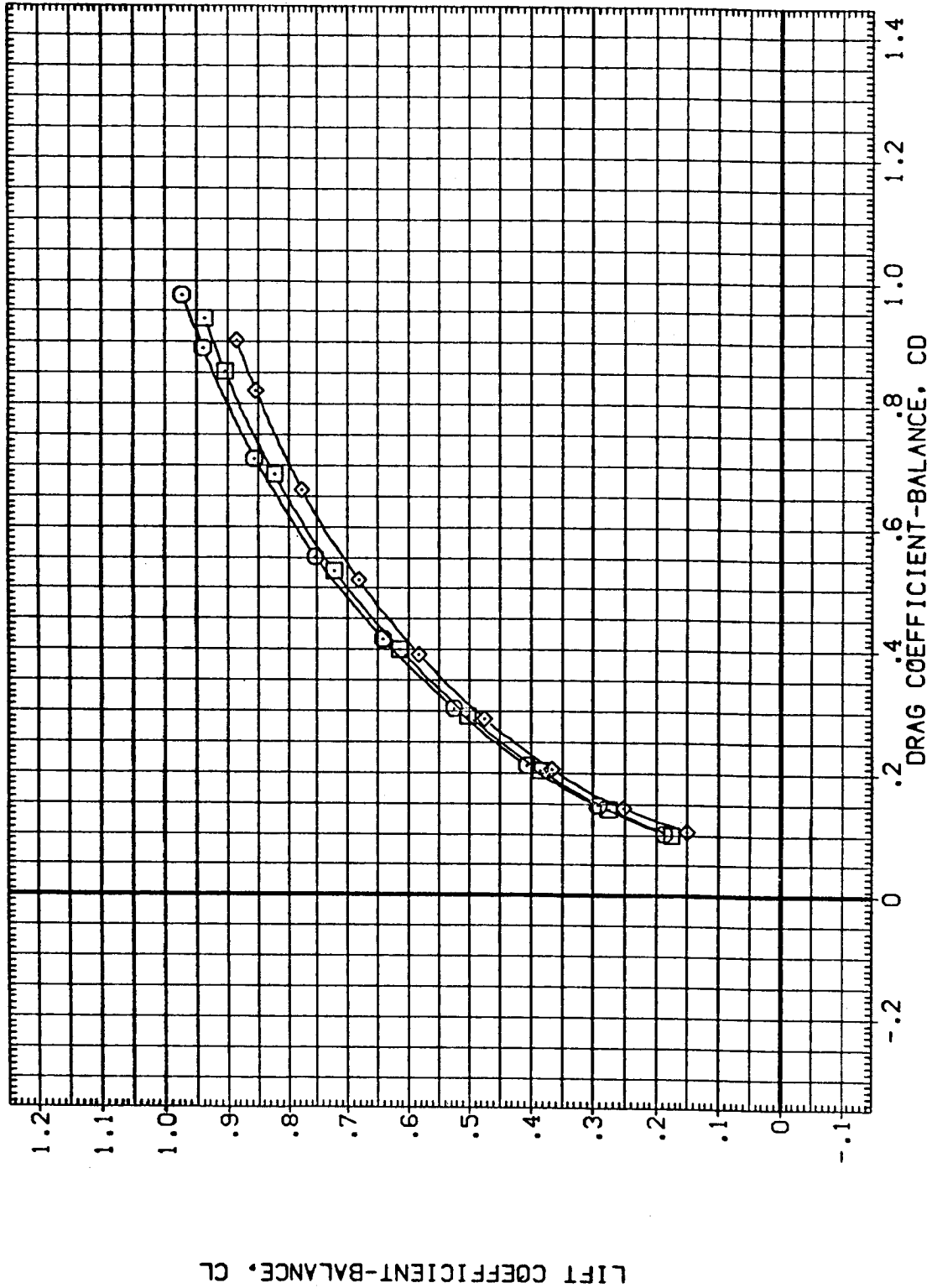


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0009) AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0010) AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0011) AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

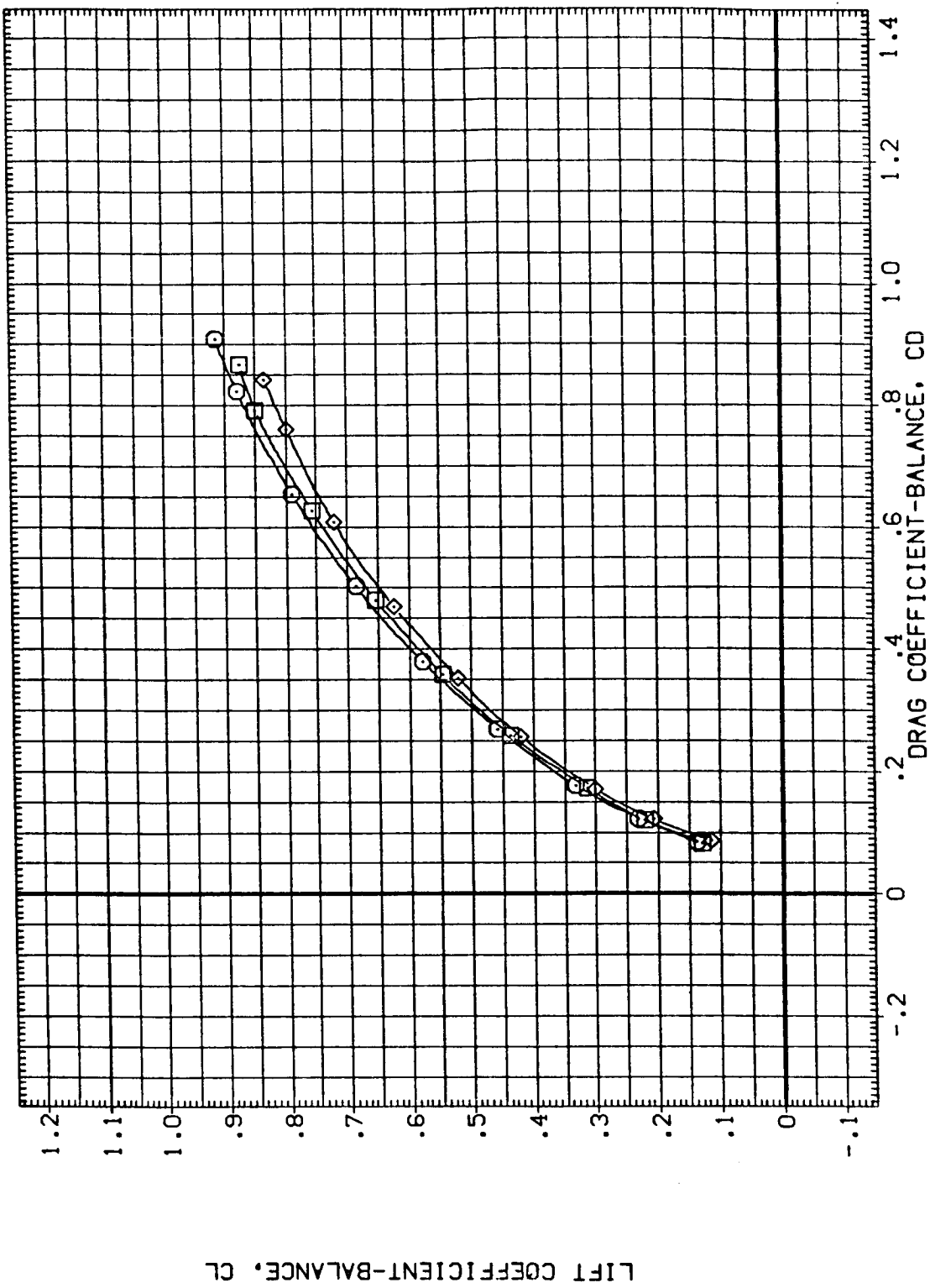
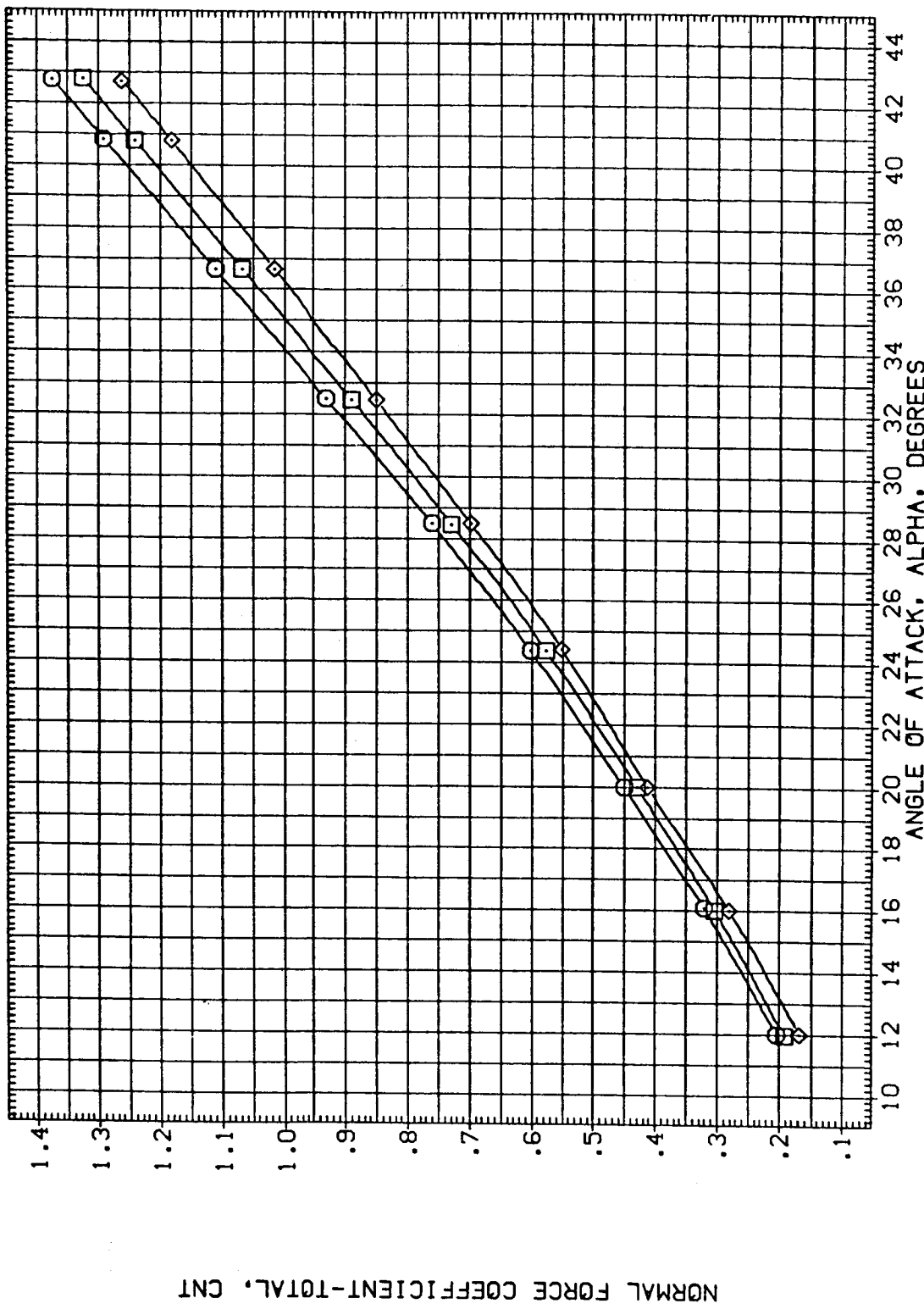


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP 375.0000 IN.Y0
						SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

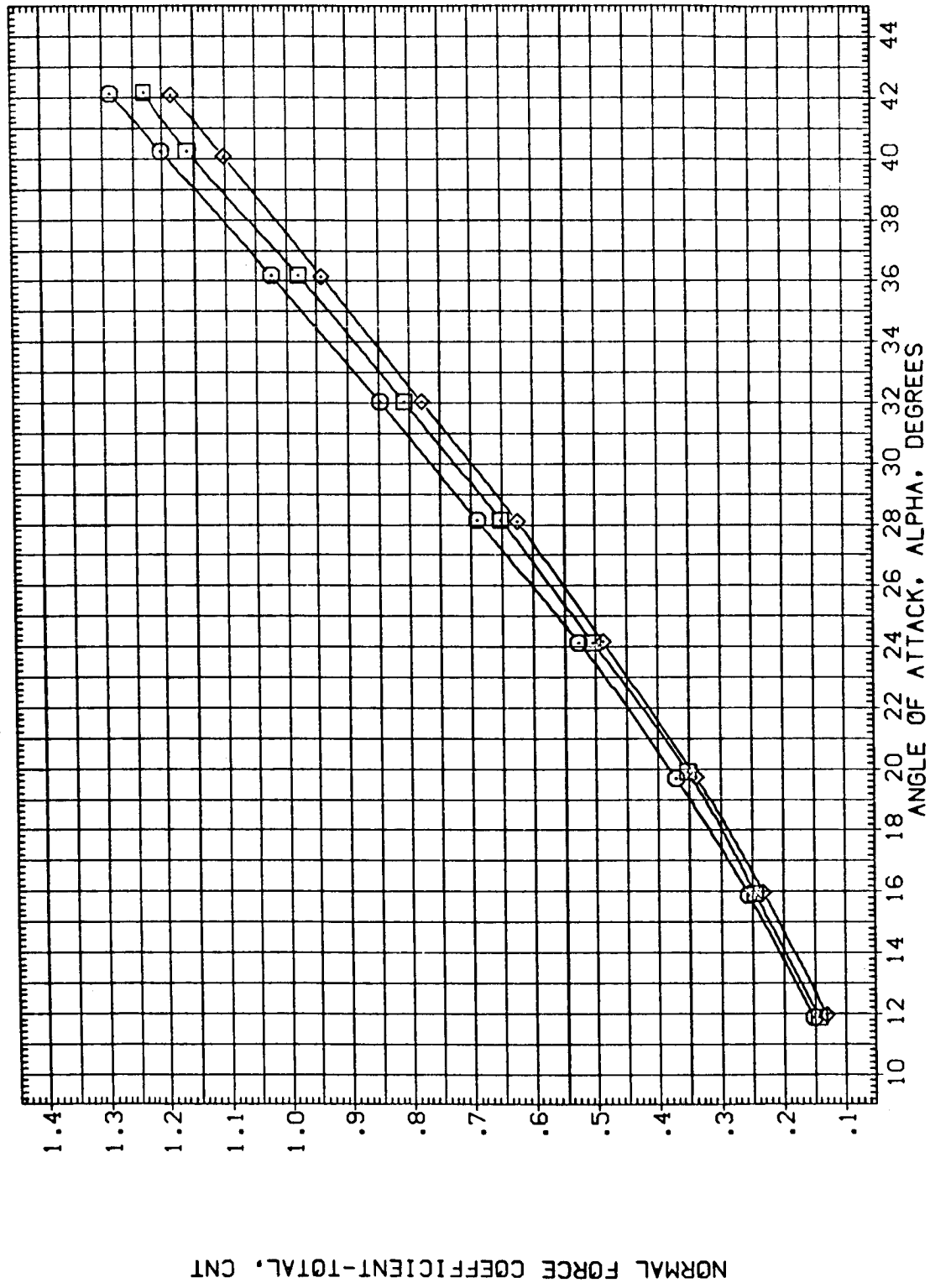


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(EE0009)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	SREF	2690.0000	SG.FT.
(EE0010)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	LREF	474.8000	IN.
(EE0011)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	BREF	936.6800	IN.
		XMRP	1076.7000	IN. X0
		YMRP	.0000	IN. Y0
		ZMRP	375.0000	IN. Z0
		SCALE	.0150	

BETA ELEVON BOFLAP SPDBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

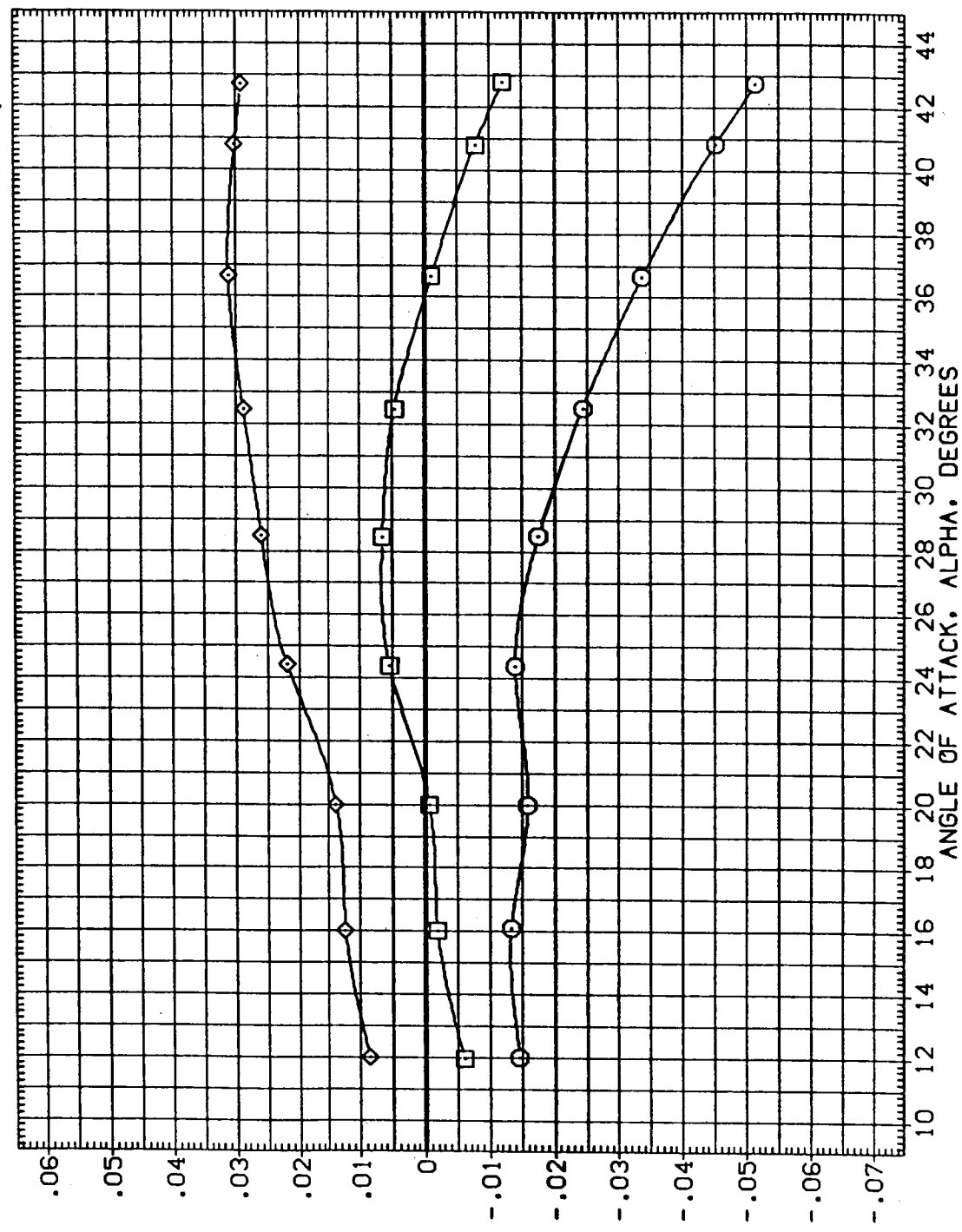


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPDRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

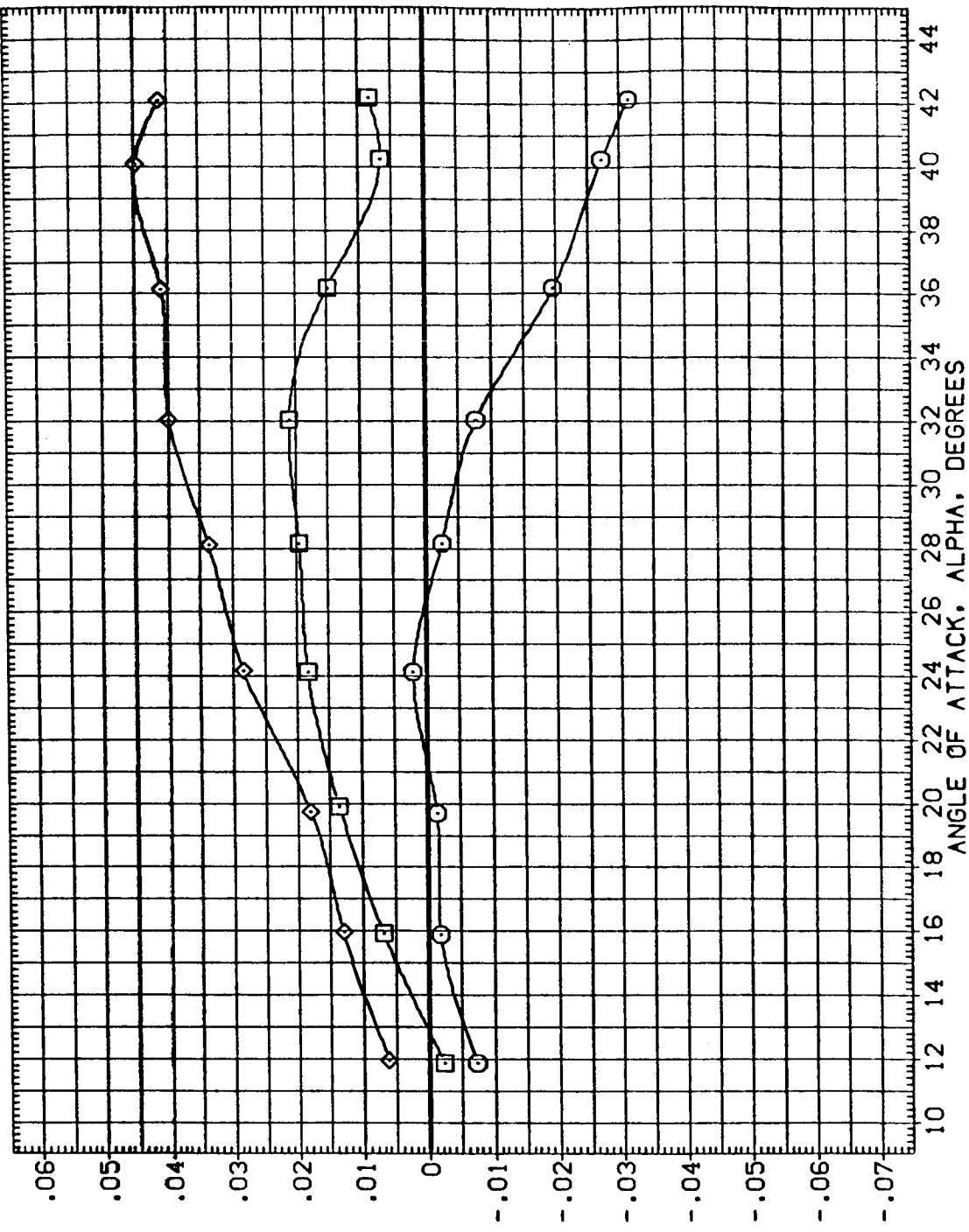


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 62

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)
 (EE0010) AMES 3.5-190 GA98 (011-M7+M14-N24)
 (EE0011) AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

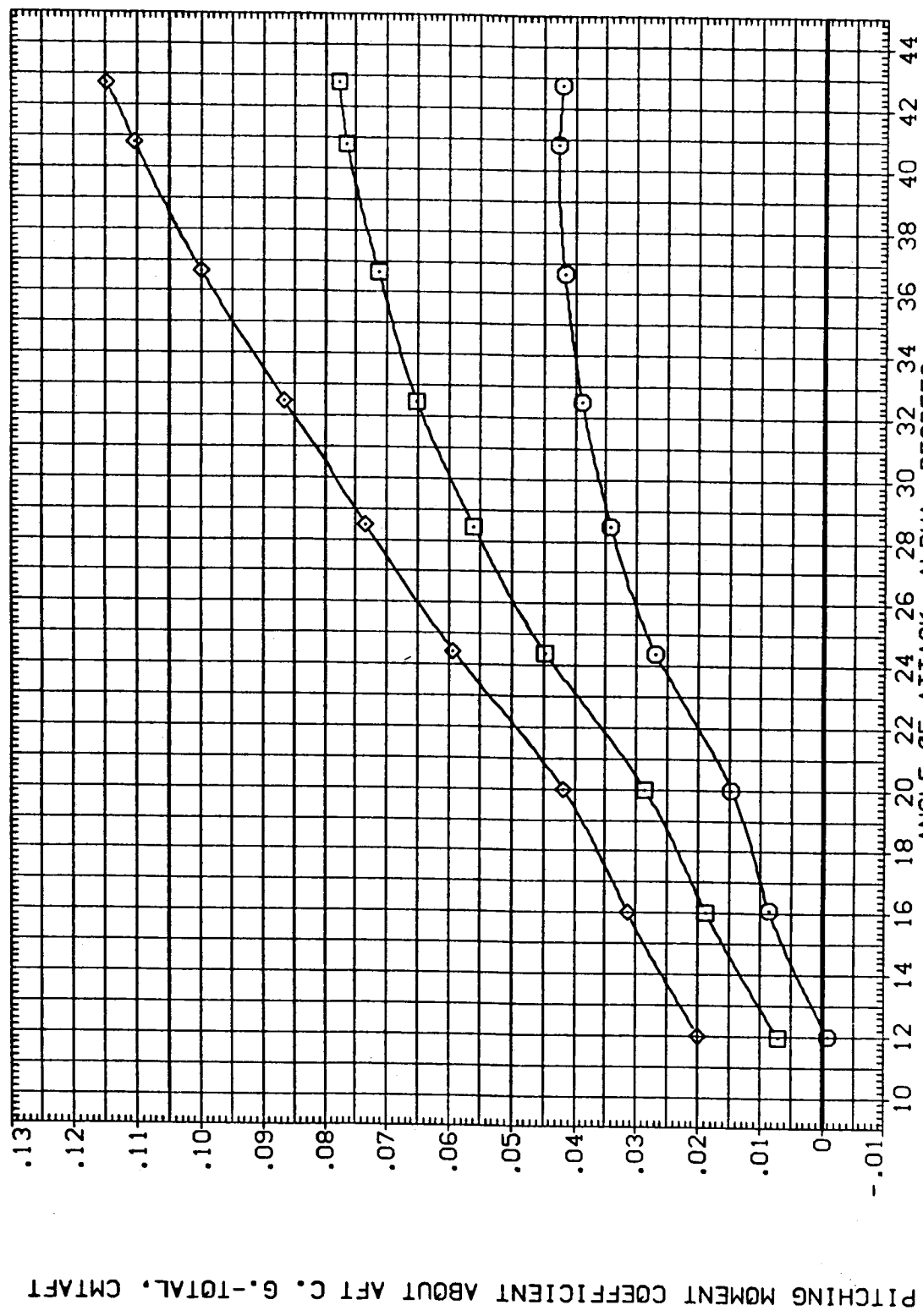


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.



DATA SET SYMBOL
 (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)

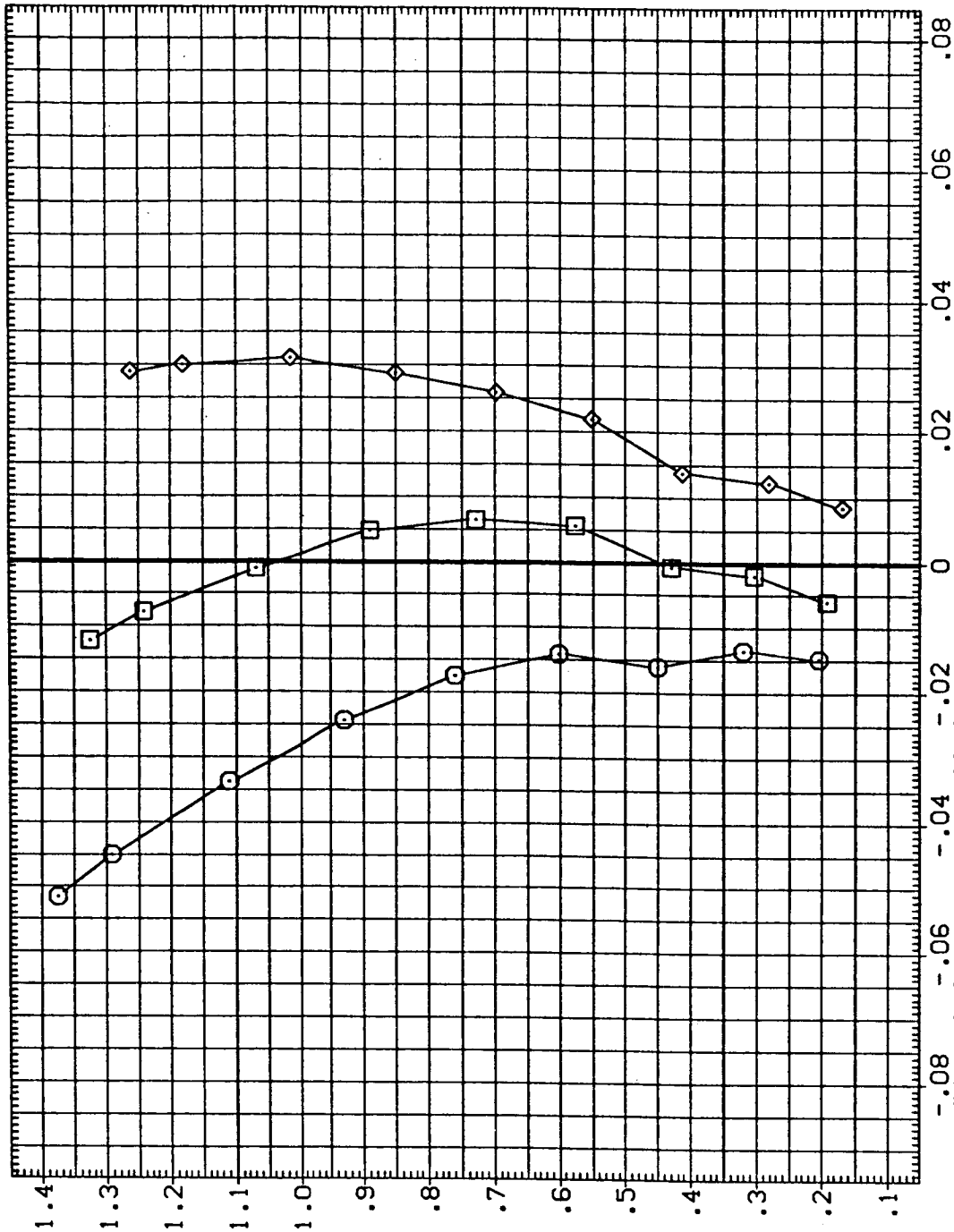
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SFOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN. X0
 YMRP 1076.7000 IN. Y0
 ZMRP .0000 IN. Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOELAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

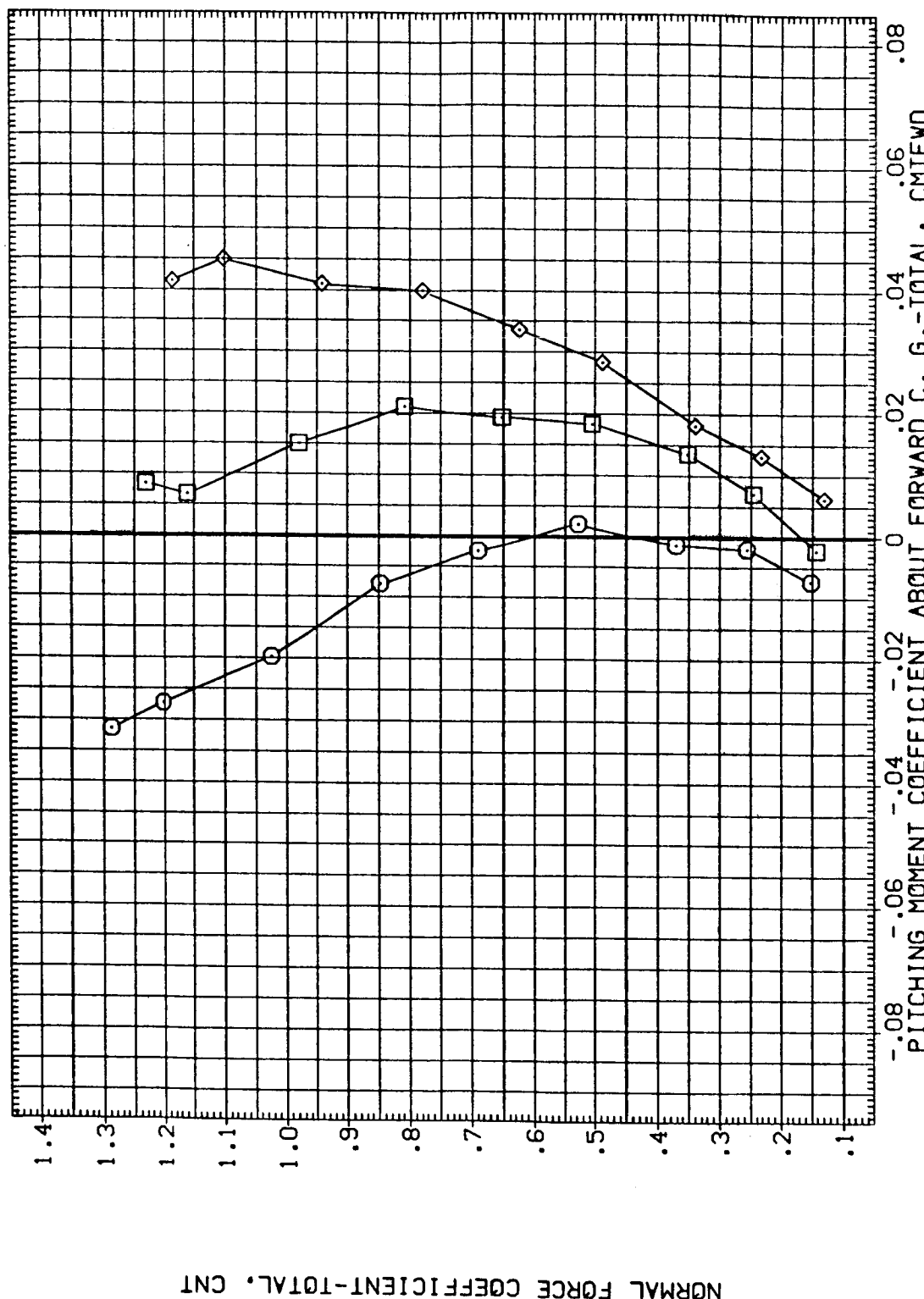


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL
 (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)

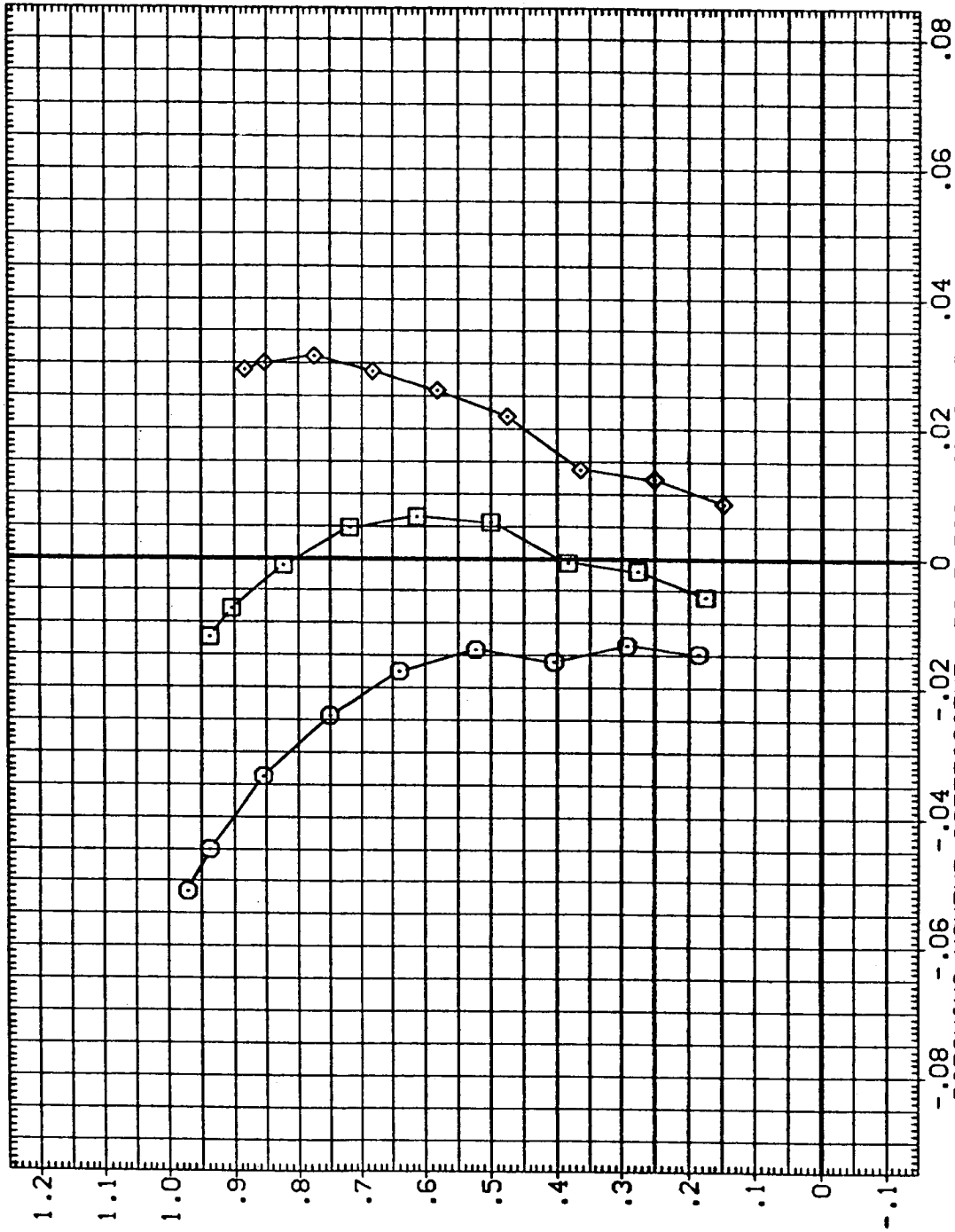
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPDBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL (EE0009)
 (EE0010)
 (EE0011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24)

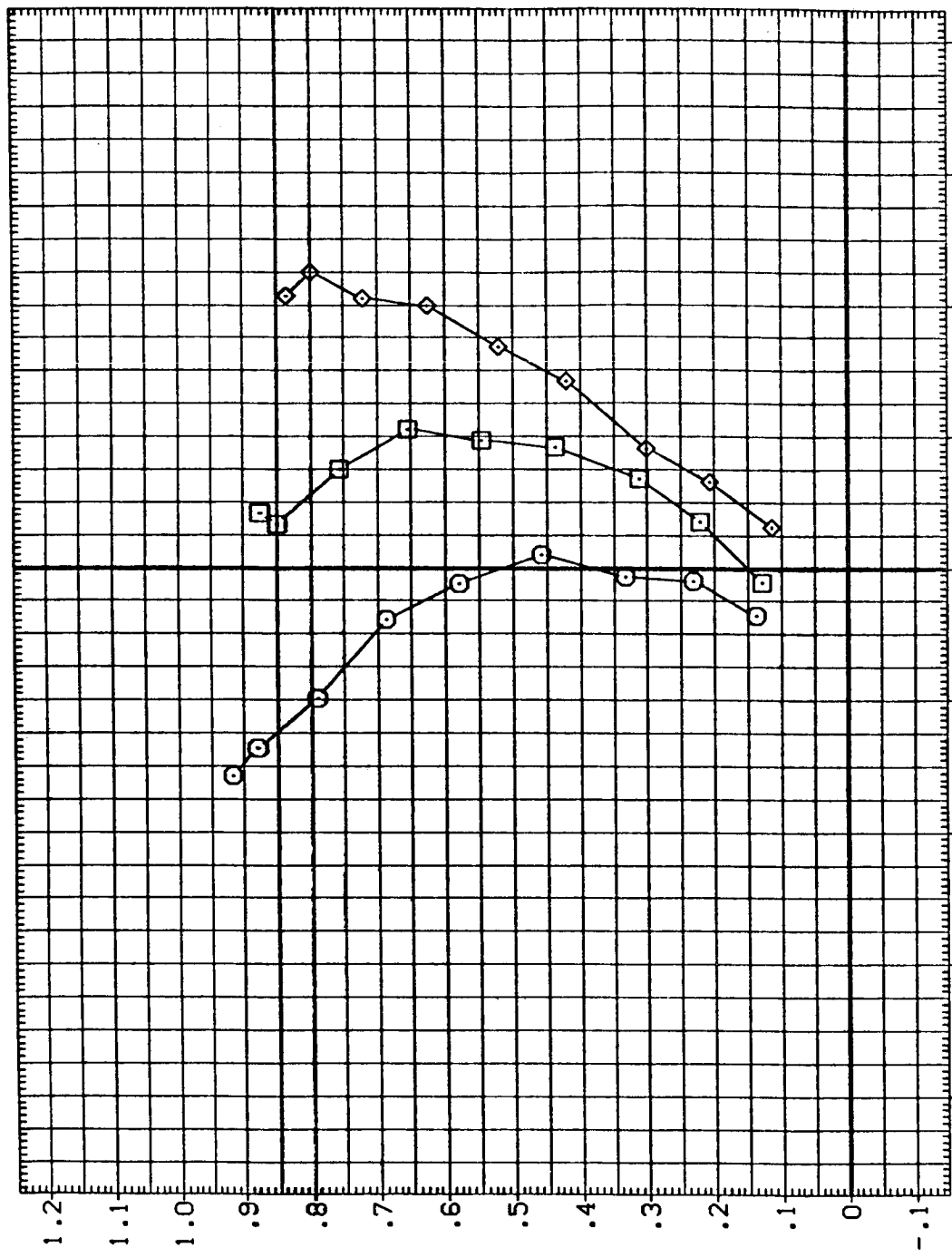
BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 536.6800
 IN. X0 1076.7000
 IN. Y0 .0000
 IN. Z0 375.0000
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CL1

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

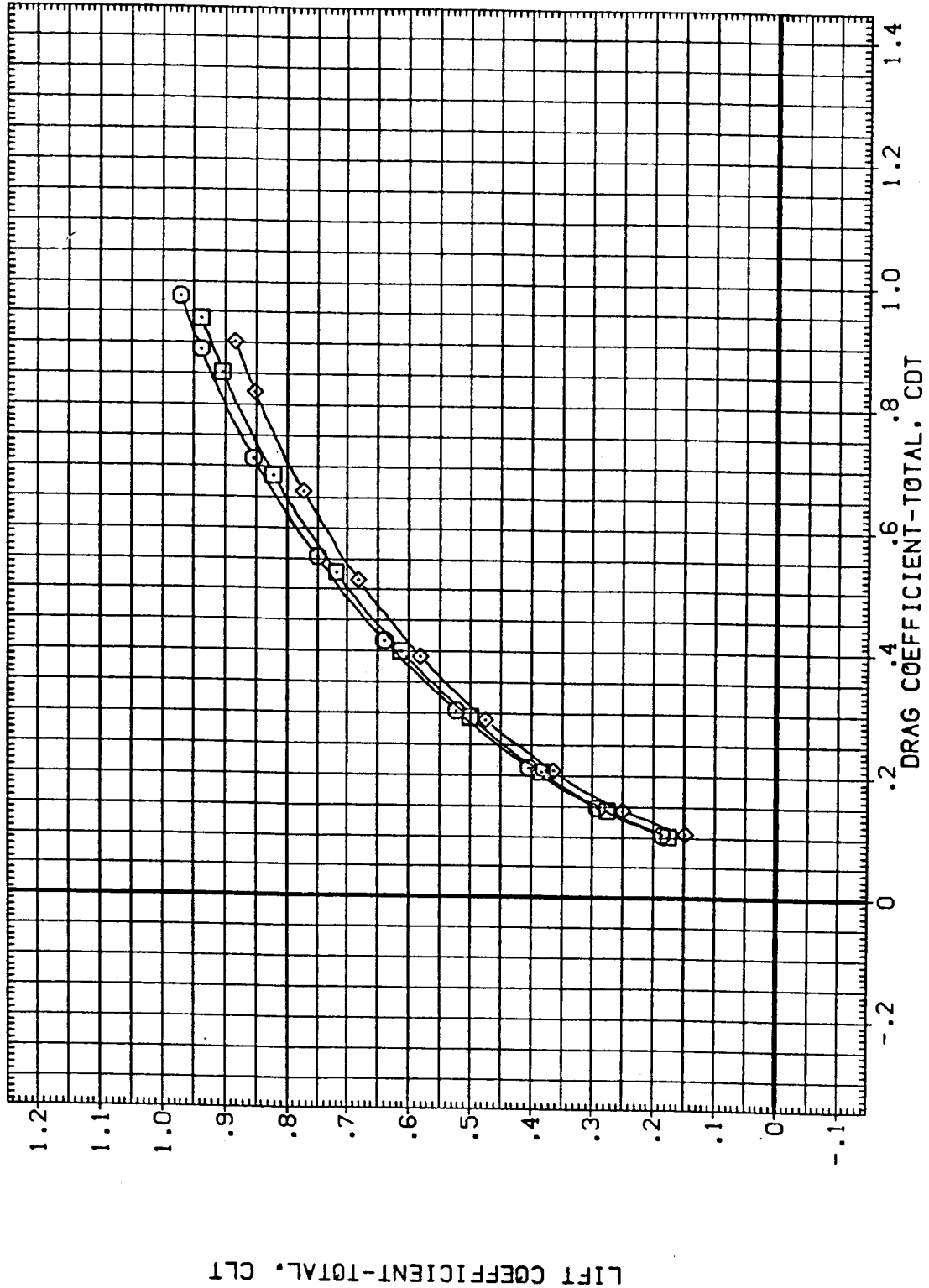
FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (EE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (EE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0009) AMES 3.5-190 0A98 (011-M7-M14-N24)

(EE0010) AMES 3.5-190 0A98 (011-M7-M14-N24)

(EE0011) AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

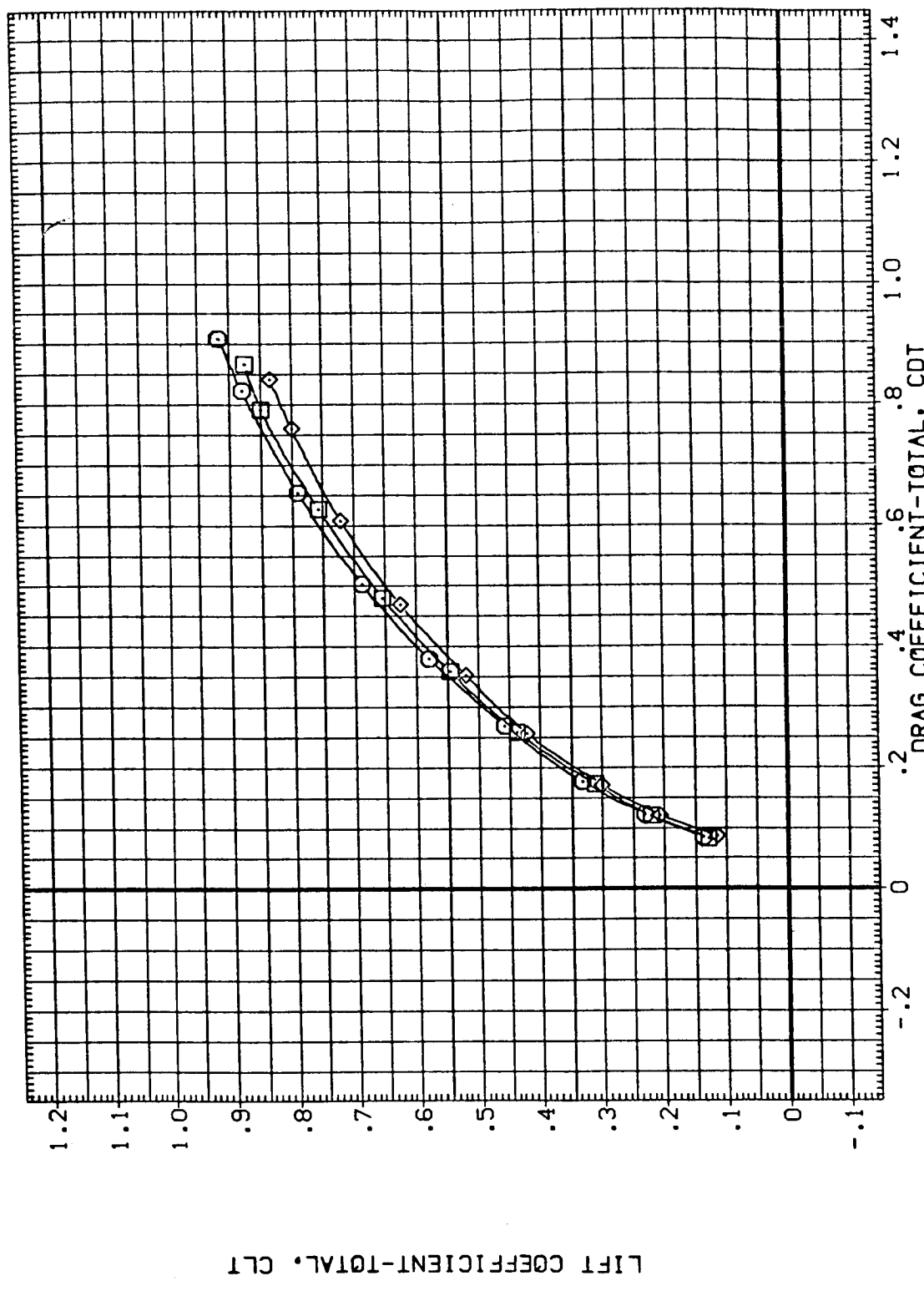


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

PAGE 70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E0009) AMES 3.5-190 0A98 (011-M7+M14-N24)

(E0010) AMES 3.5-190 0A98 (011-M7+M14-N24)

(E0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.8800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

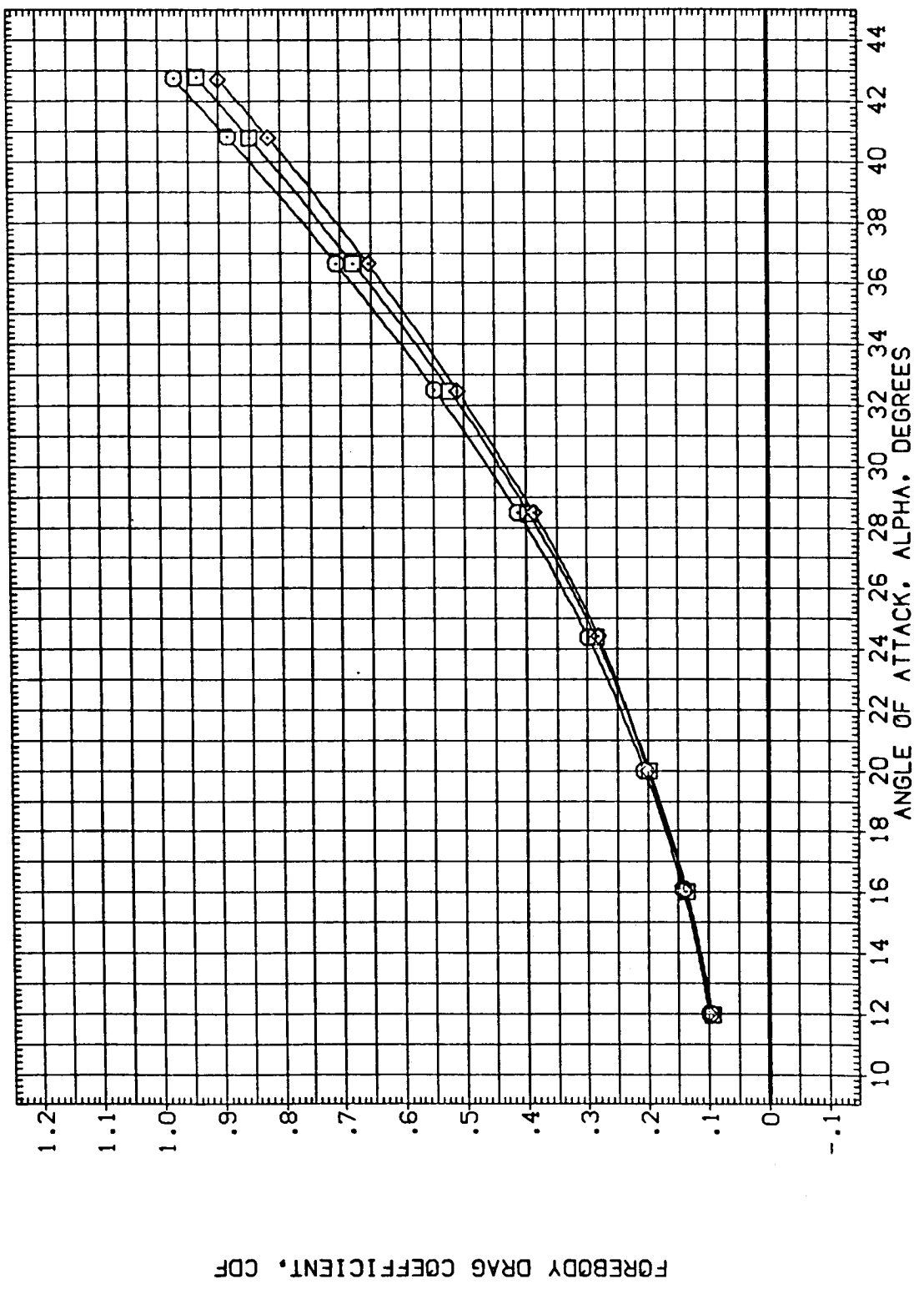


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E0009) AMES 3.5-190 OAS8 (011-M7+M14-N24)
 (E0010) AMES 3.5-190 OAS8 (011-M7+M14-N24)
 (E0011) AMES 3.5-190 OAS8 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDRBK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

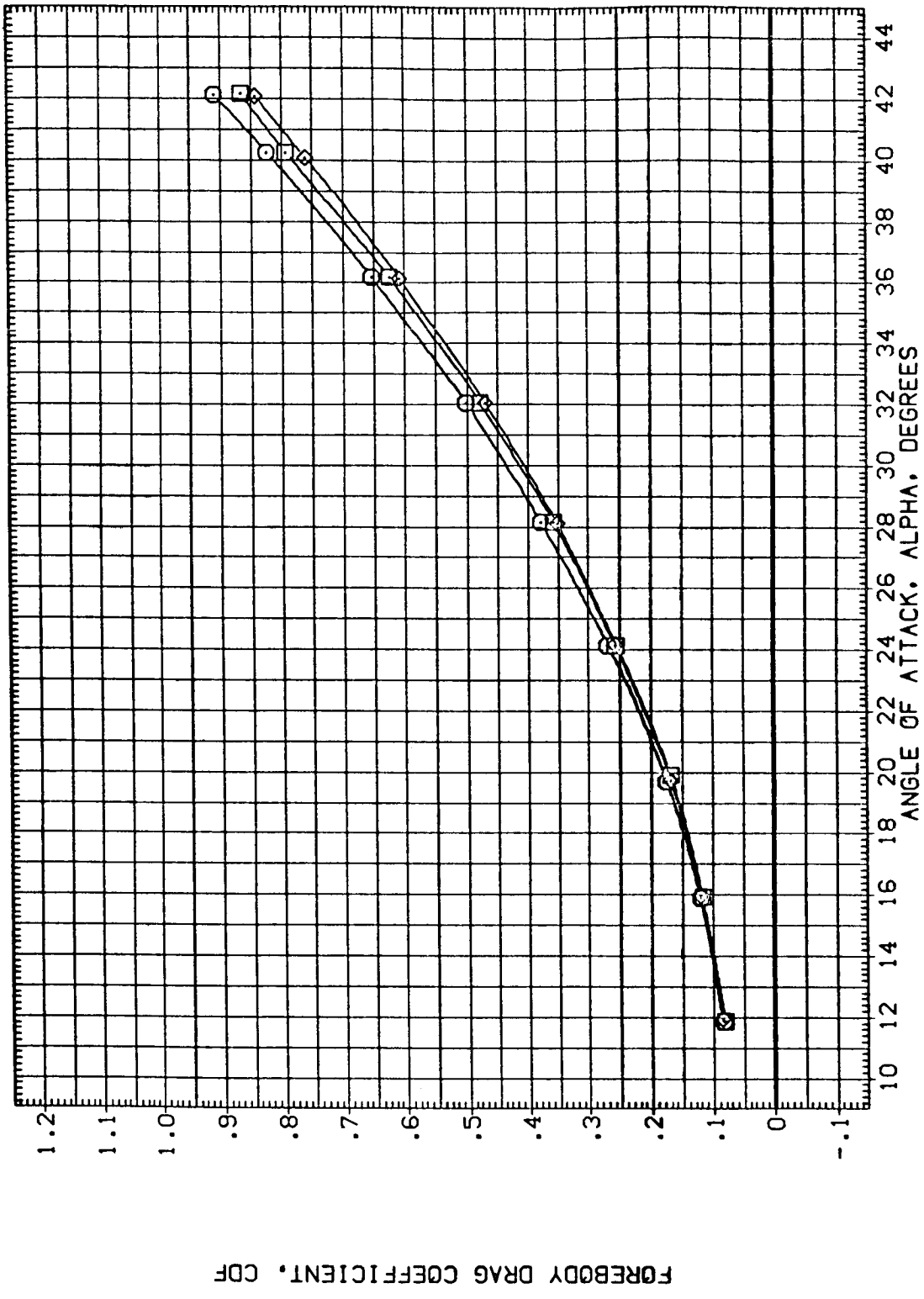


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 72

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0009) AMES 3.5-190 OA98 (011-M7-M14-N24)
 (EE0010) AMES 3.5-190 OA98 (011-M7-M14-N24)
 (EE0011) AMES 3.5-190 OA98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8900 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

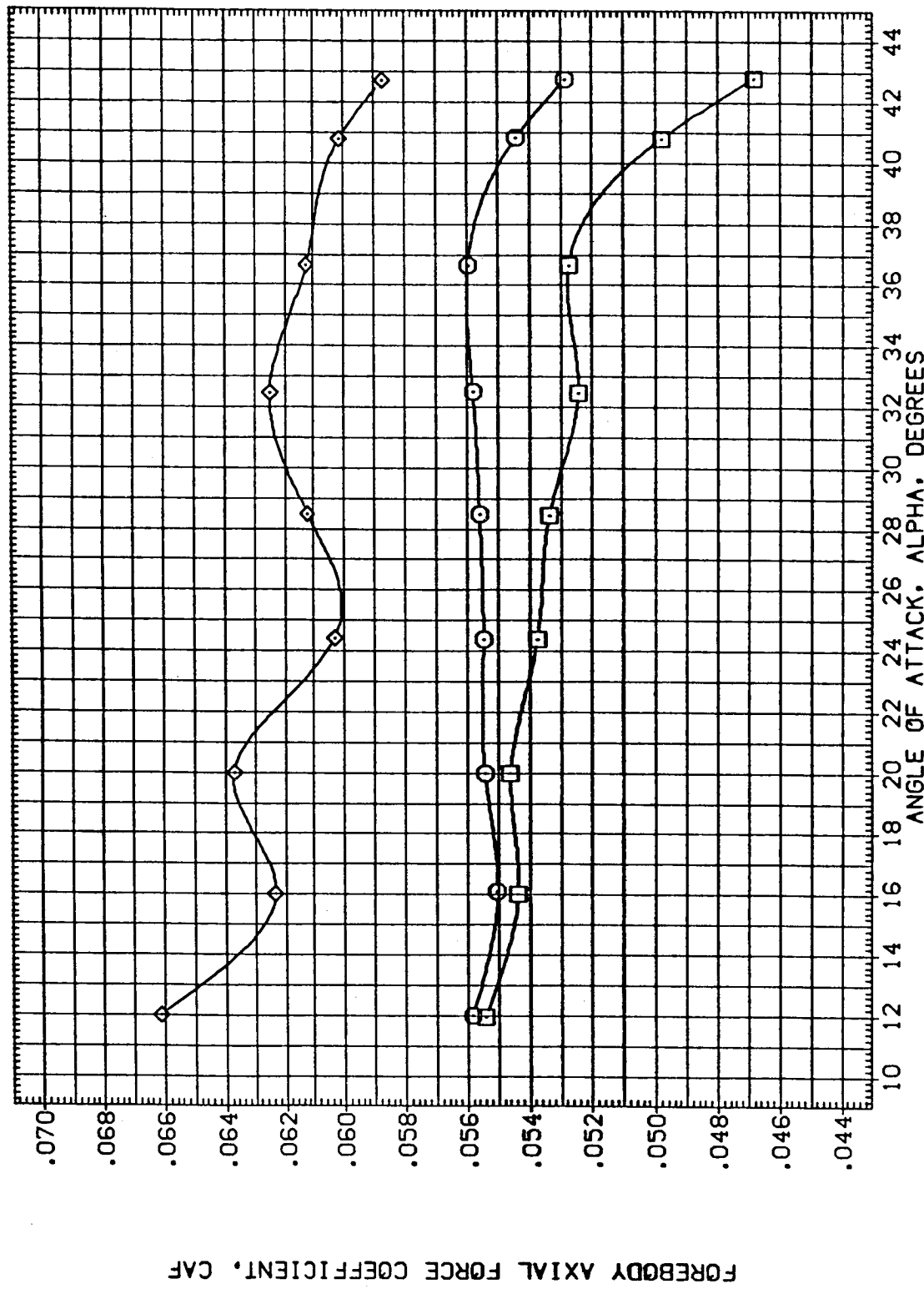


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0009) AMES 3.5-190 OA98 (011-M7+M14-N24)

(EE0010) AMES 3.5-190 OA98 (011-M7+M14-N24)

(EE0011) AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDGRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

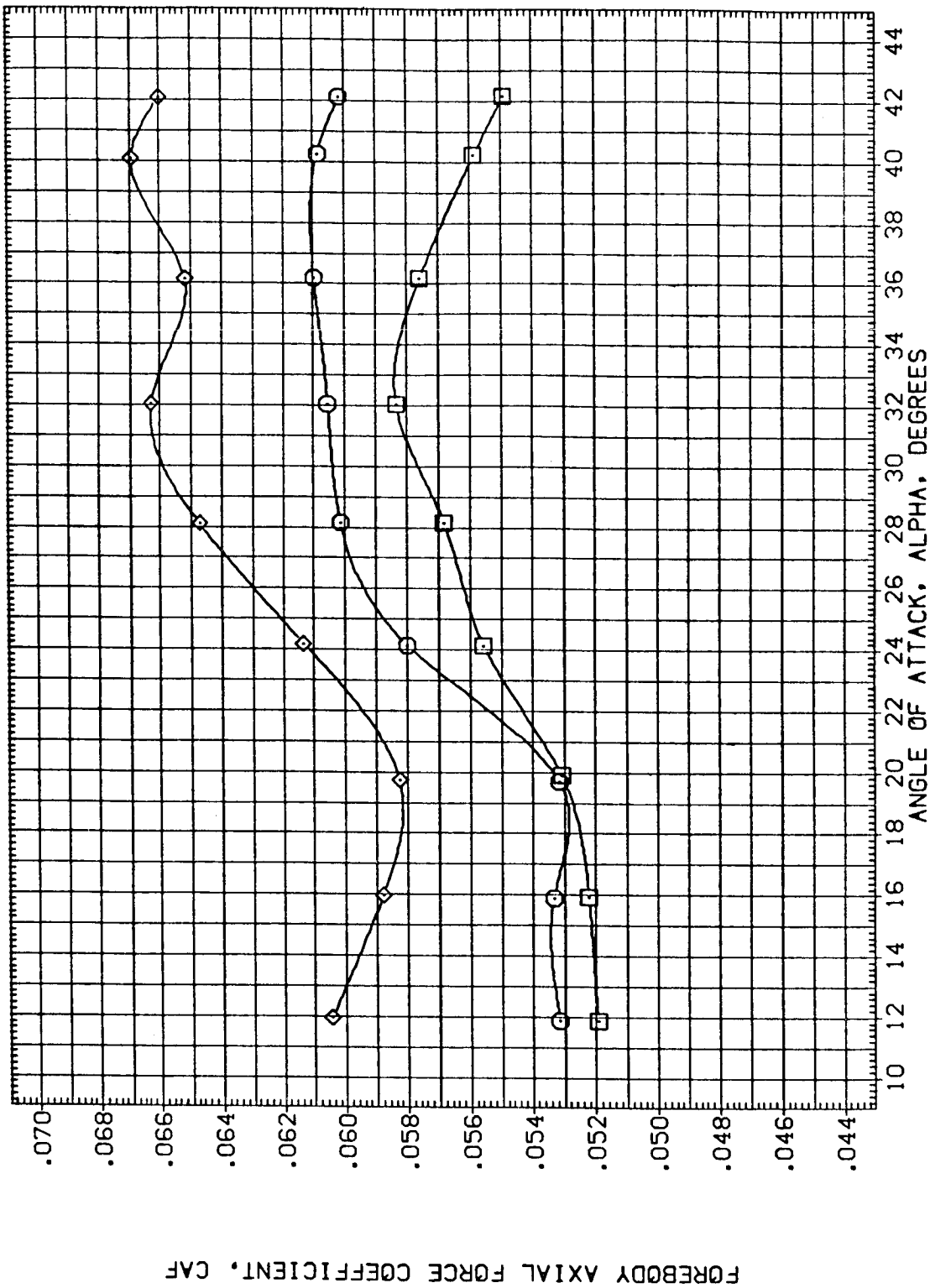
BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150



FOREBODY AXIAL FORCE COEFFICIENT, CAF

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 74

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0009) AMES 3.5-190 OAS8 (011-M7+M14-N24)

(EE0010) AMES 3.5-190 OAS8 (011-M7+M14-N24)

(EE0011) AMES 3.5-190 OAS8 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

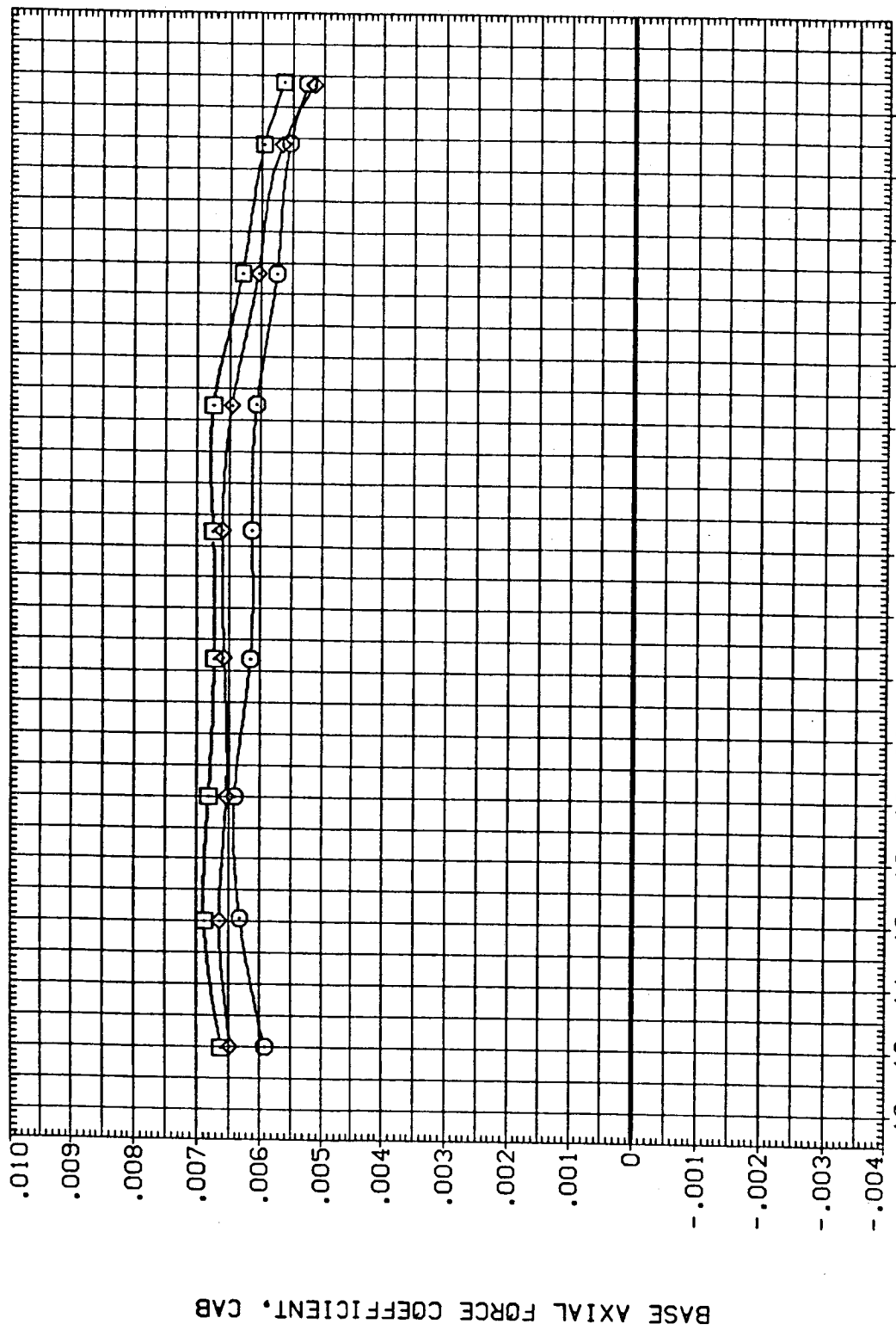


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EEG008) AMES 3.5-190 GA98 (011-M7+H14-N24)

(EEG010) AMES 3.5-190 GA98 (011-M7+H14-N24)

(EEG011) AMES 3.5-190 GA98 (011-M7+H14-N24)

BETA ELEVON BOFLAP SPDGRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

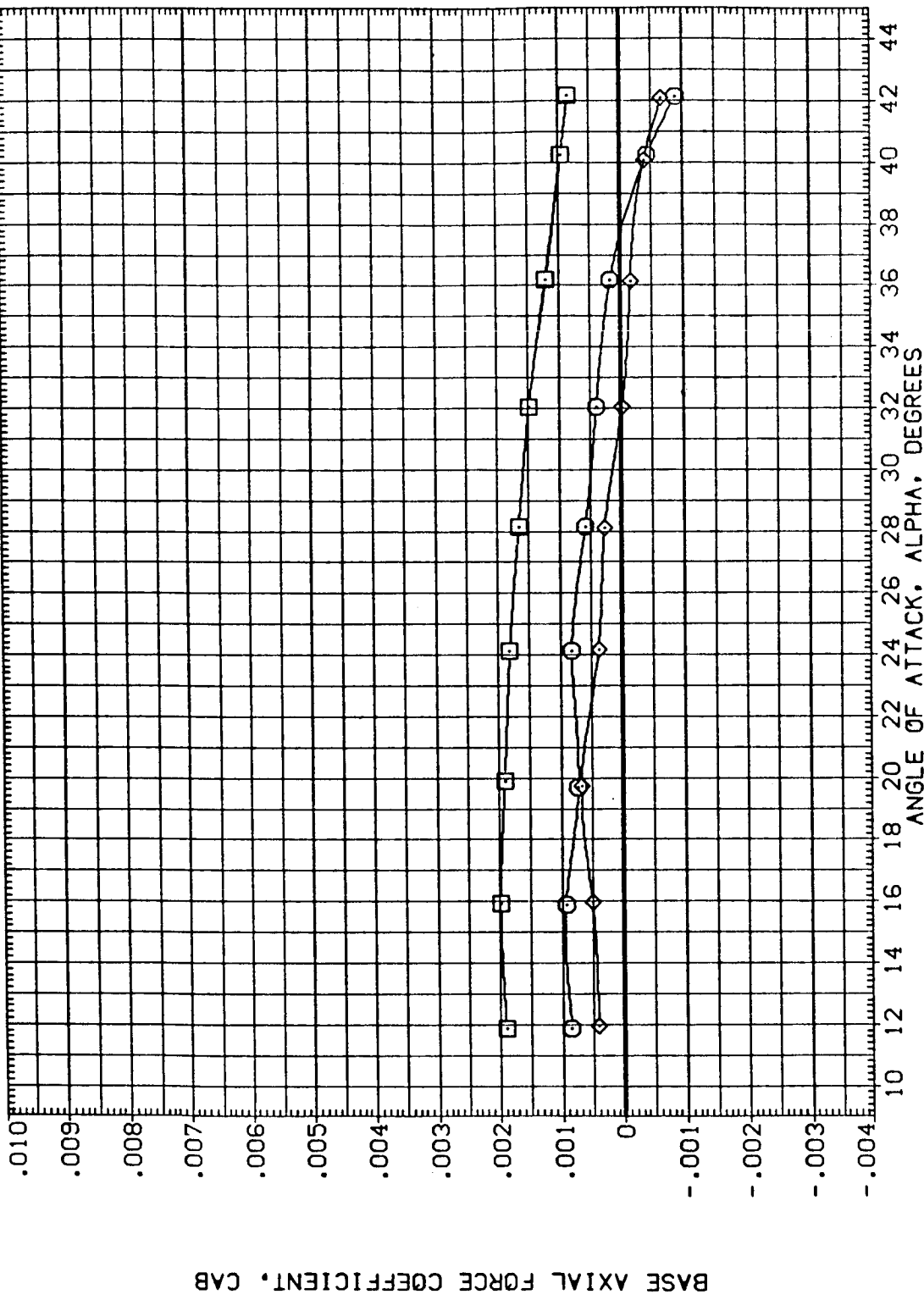
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



BASE AXIAL FORCE COEFFICIENT, CAB

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 76

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(BE0010) AMES 3.5-190 GA98 (011-M7+M14-N24)

(BE0011) AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

YMRP .0000

ZMRP .0000

SCALE .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

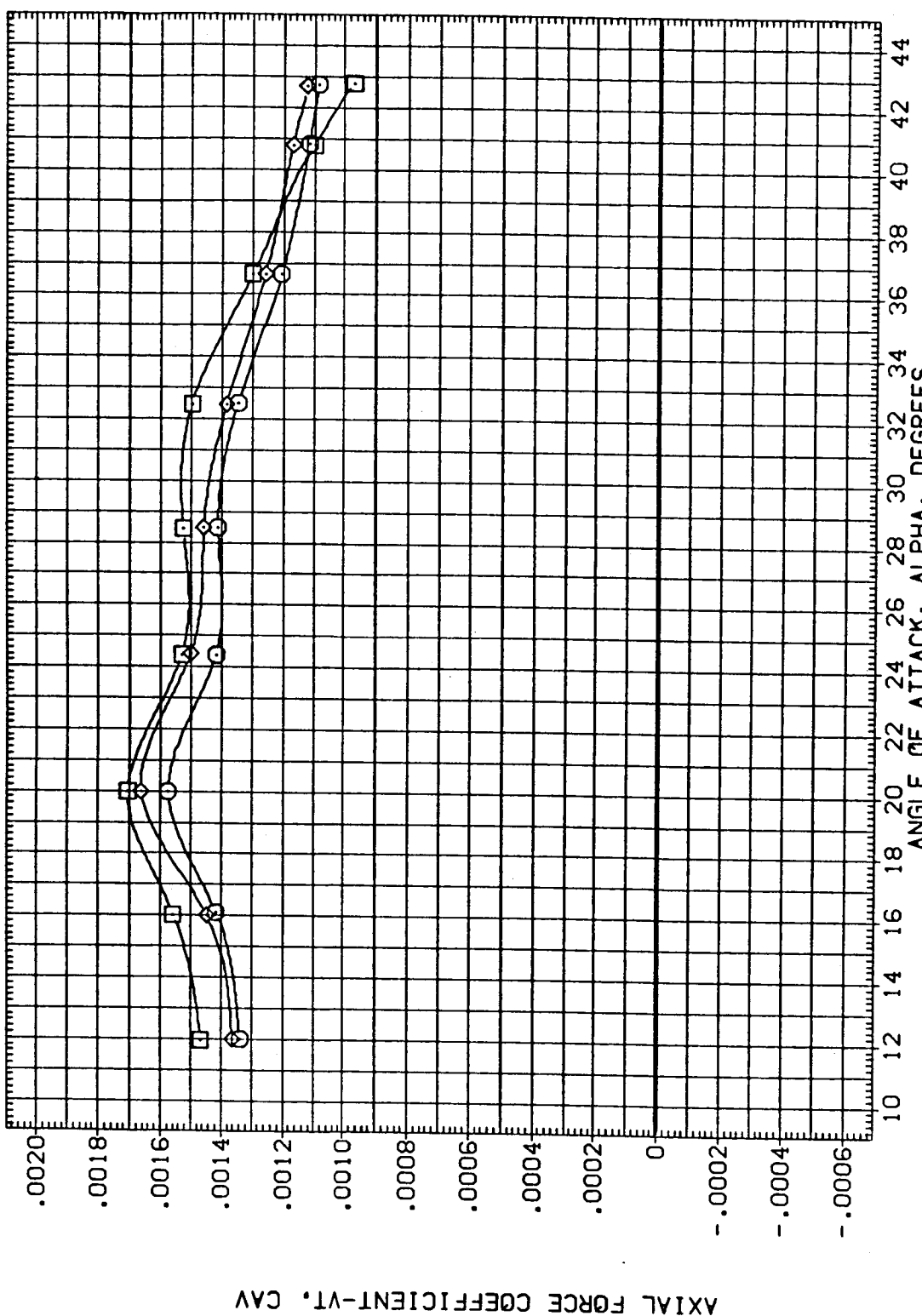
LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0



AXIAL FORCE COEFFICIENT-Vt, Cav

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

AXIAL FORCE COEFFICIENT-VI, CAV

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0009) AMES 3.5-190 O/A98 (011-M7+M14-N24)

(BE0010) AMES 3.5-190 O/A98 (011-M7+M14-N24)

(BE0011) AMES 3.5-190 O/A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.XB

YMRP .0000 IN.YB

ZMRP 375.0000 IN.ZB

SCALE .0150

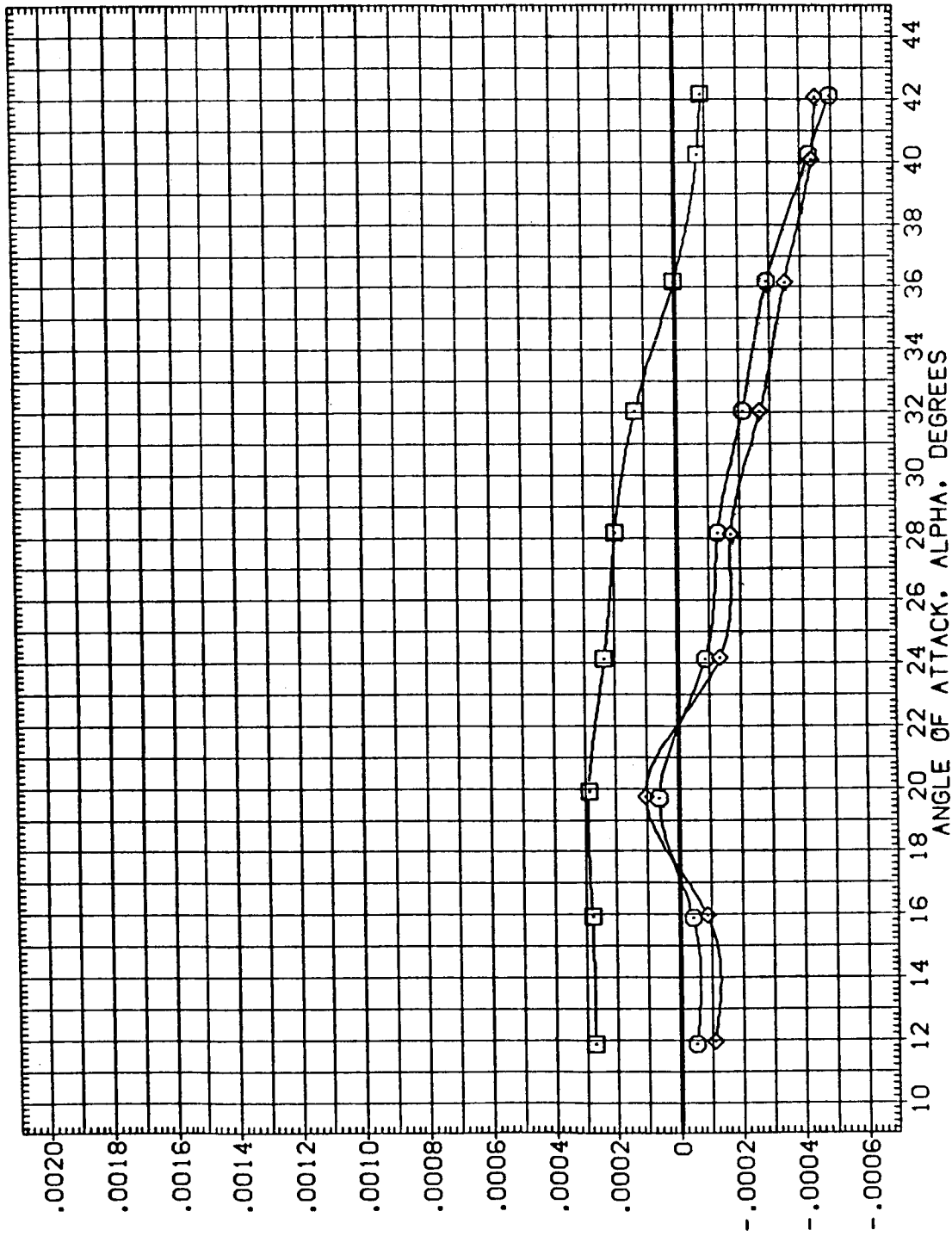


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BEG009) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (BEG010) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (BEG011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

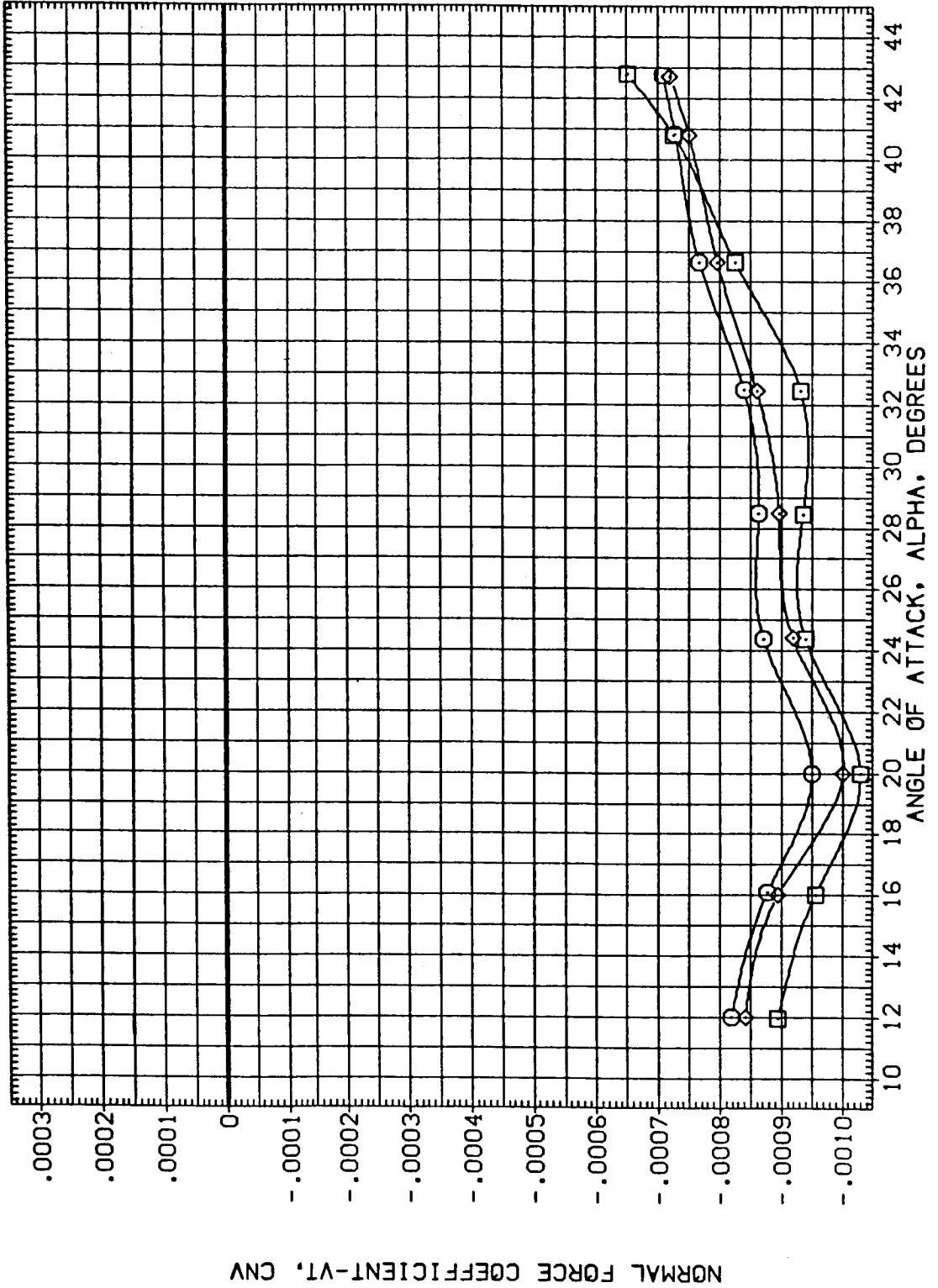


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(BE0009)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0011)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

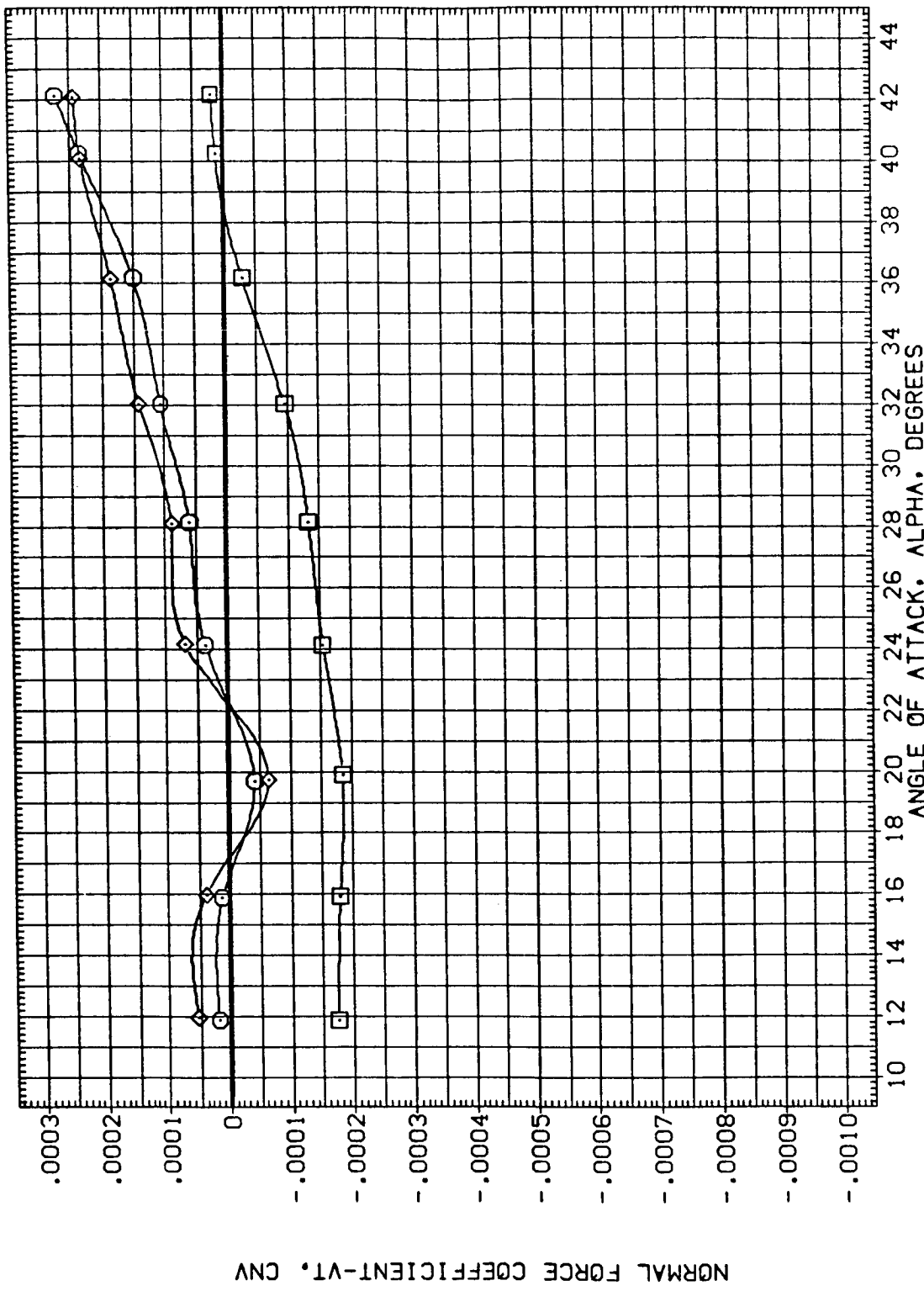


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(BEG009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000	50.FT.
(BEG010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000	IN.
(BEG011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800	IN.
						XMRP 1076.7000	IN. X0
						YMRP .0000	IN. Y0
						ZMRP 375.0000	IN. Z0
						SCALE .0150	

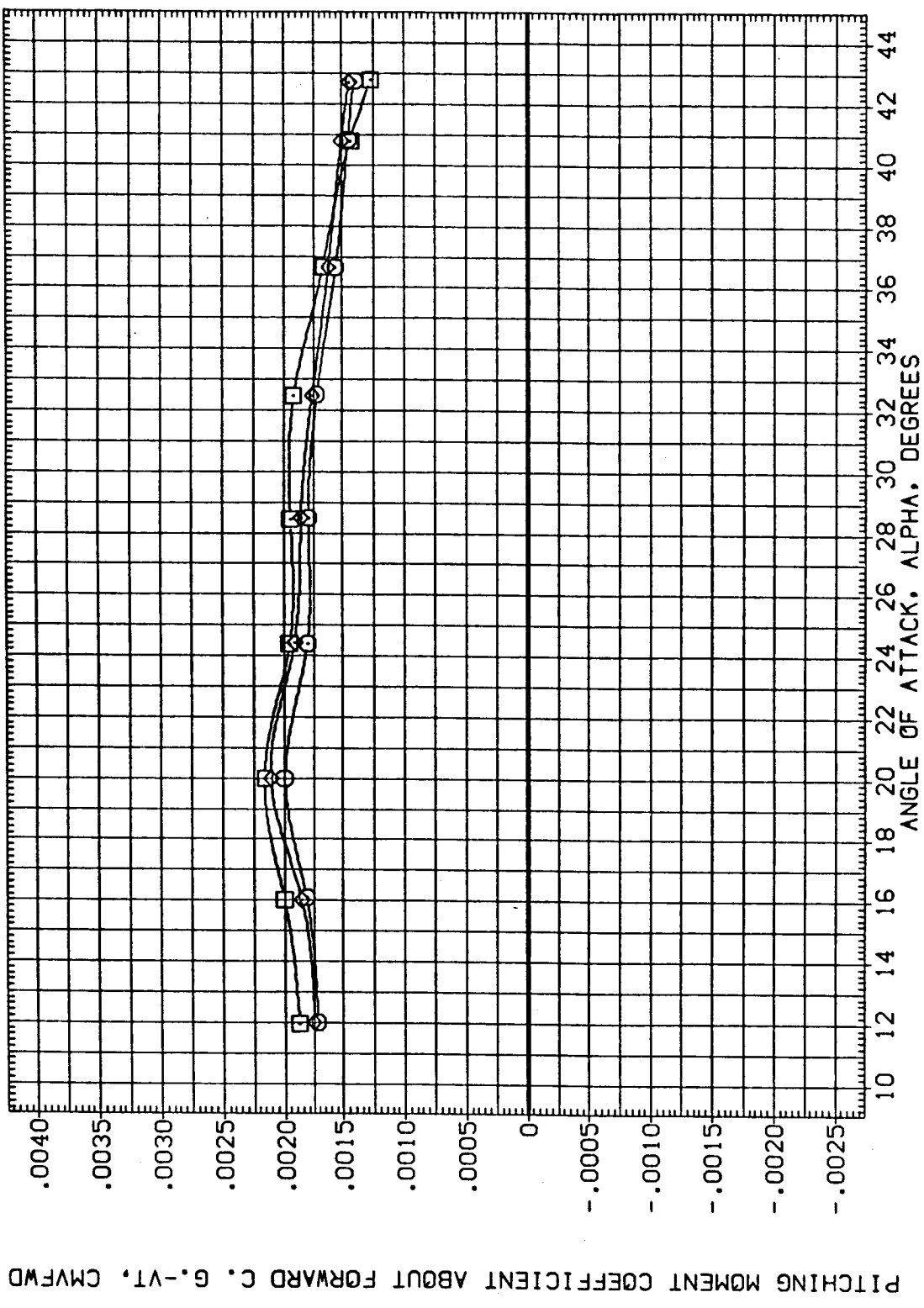


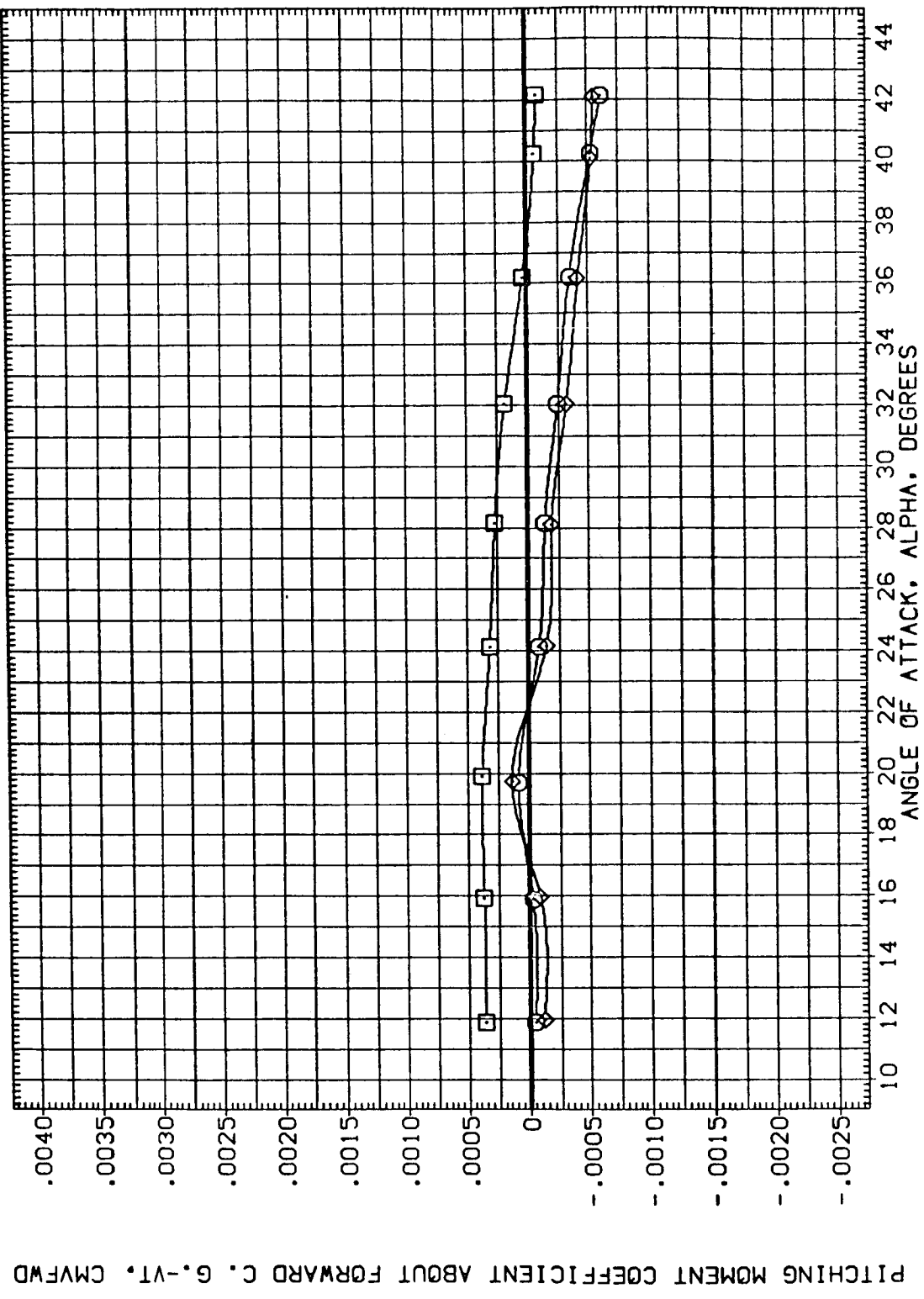
FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0009) AMES 3.5-190 0A98 (011-M7-M14-N24)
 (BE0010) AMES 3.5-190 0A98 (011-M7-M14-N24)
 (BE0011) AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPDRK REFERENCE INFORMATION

.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
				XMRP 1076.7000 IN. X0
				YMRP .0000 IN. Y0
				ZMRP 375.0000 IN. Z0
				SCALE .0150



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEG009)	AMES 3.5-190 0A98 (011-M7+M14-N24)
(BEG010)	AMES 3.5-190 0A98 (011-M7+M14-N24)
(BEG011)	AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

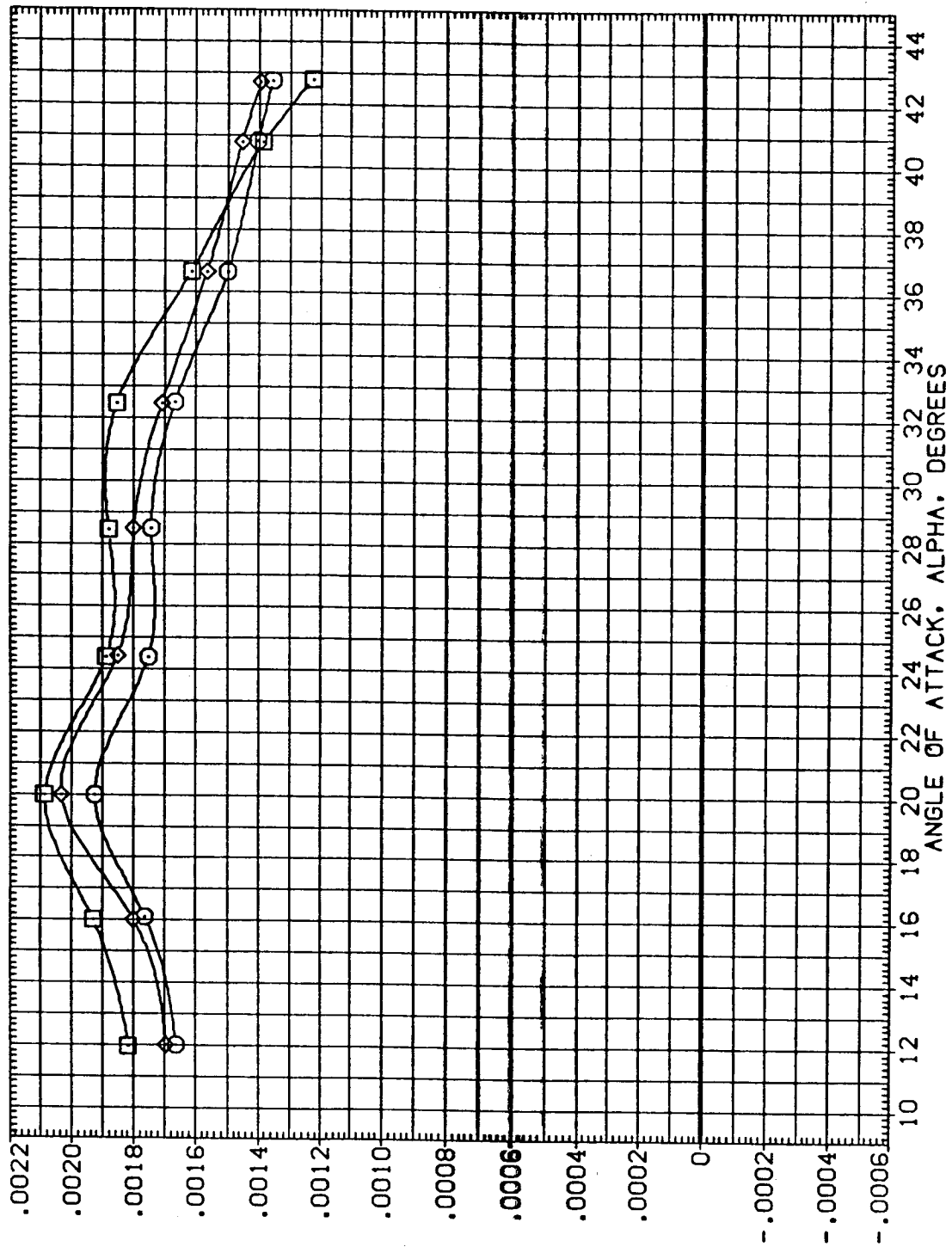


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (BEG009) (BEG010) (BEG011)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA .000
 ELEVON .000
 BOFLAP -11.700

SPDBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

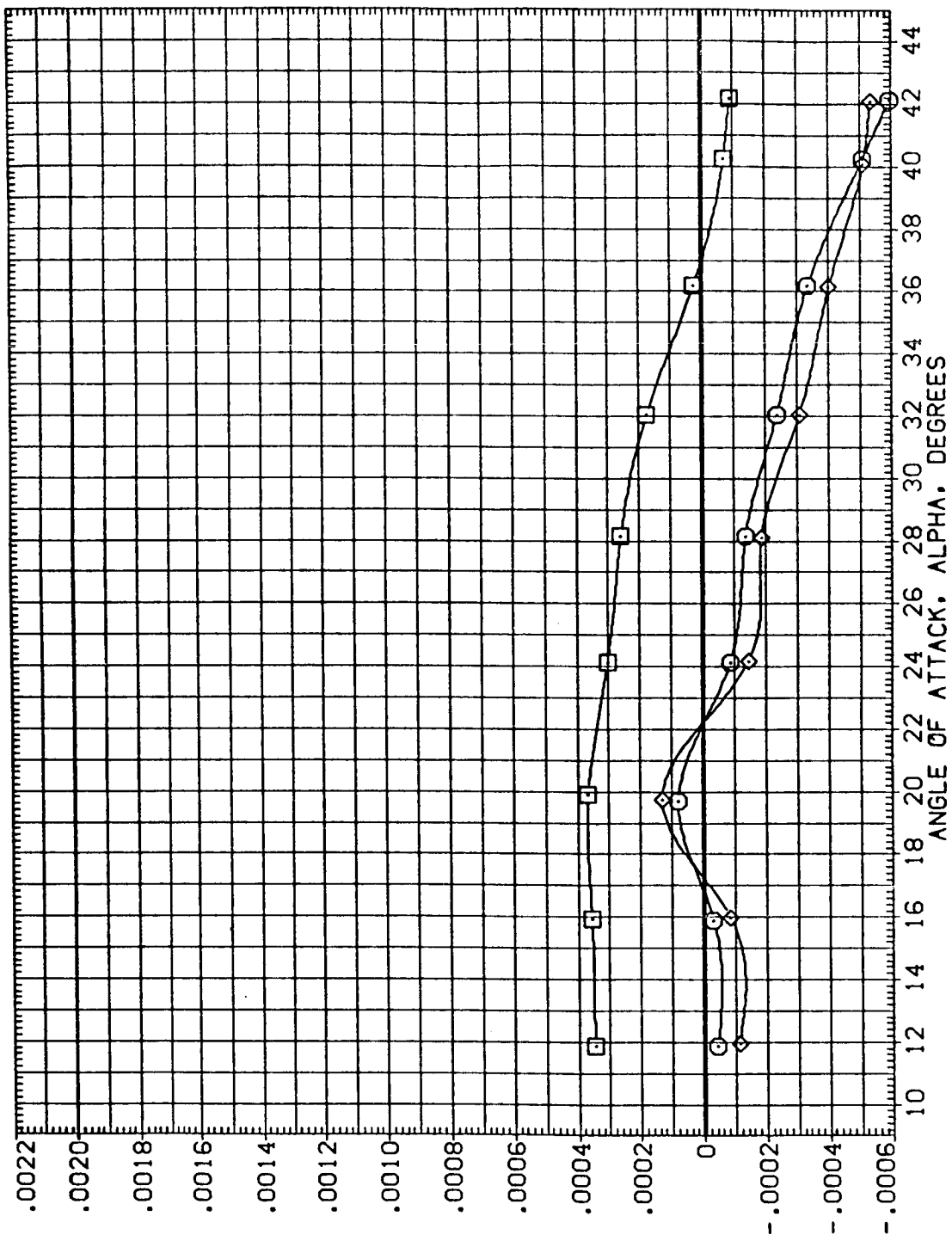


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEG017)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 59.FT.
(CEG018)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEG019)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

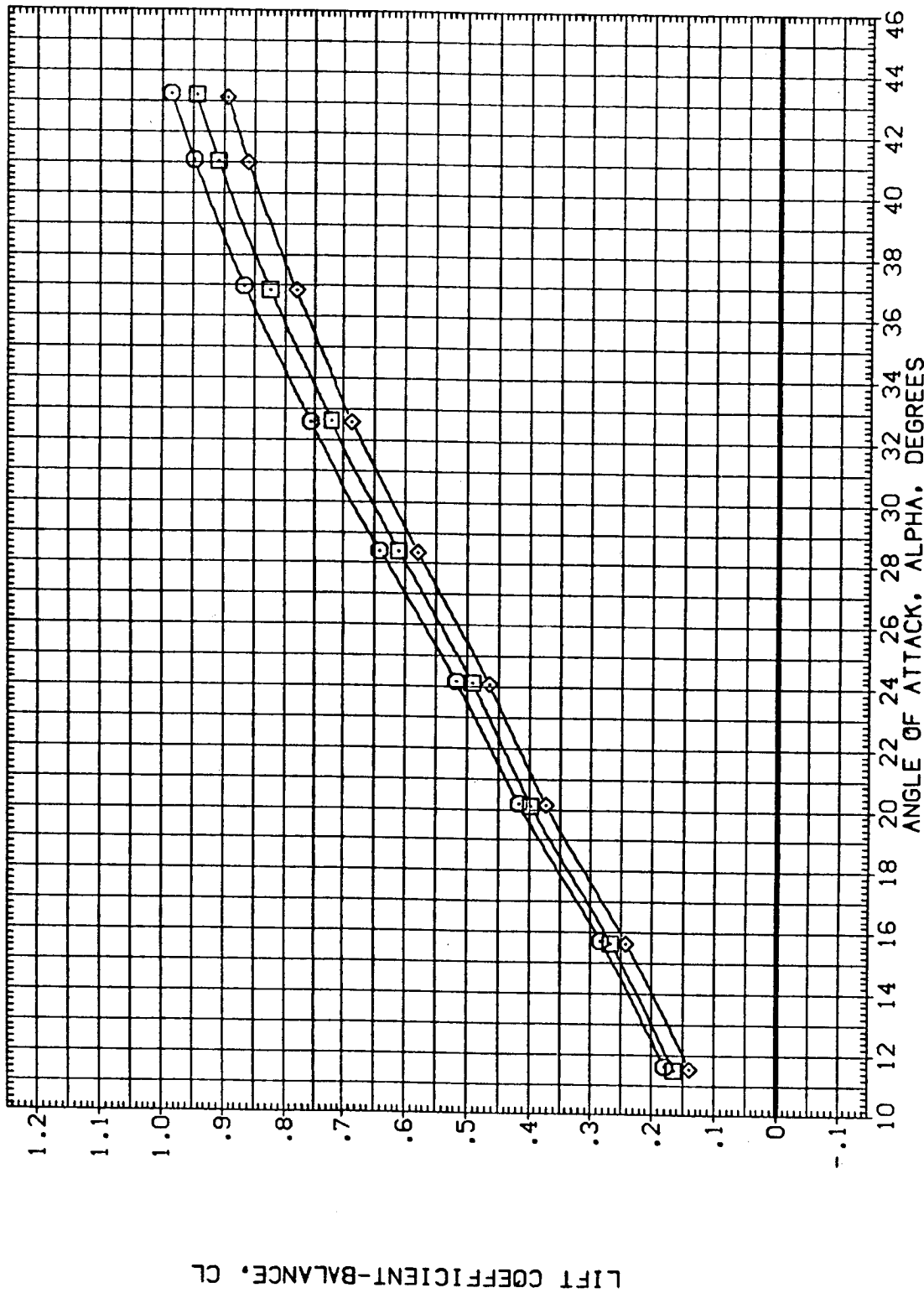


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL

(CE0017)
(CE0018)
(CE0019)



CONFIGURATION DESCRIPTION

AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)
AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)
AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA

.000
.000
.000

ELEVON

.000
-10.000
-40.000

BOFLAP

-11.700
-11.700
-11.700

SPOBRK

55.000
55.000
55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.XD
YMRP .0000 IN.YD
ZMRP 375.0000 IN.ZD
SCALE .0150

LIFT COEFFICIENT-BALANCE, CL

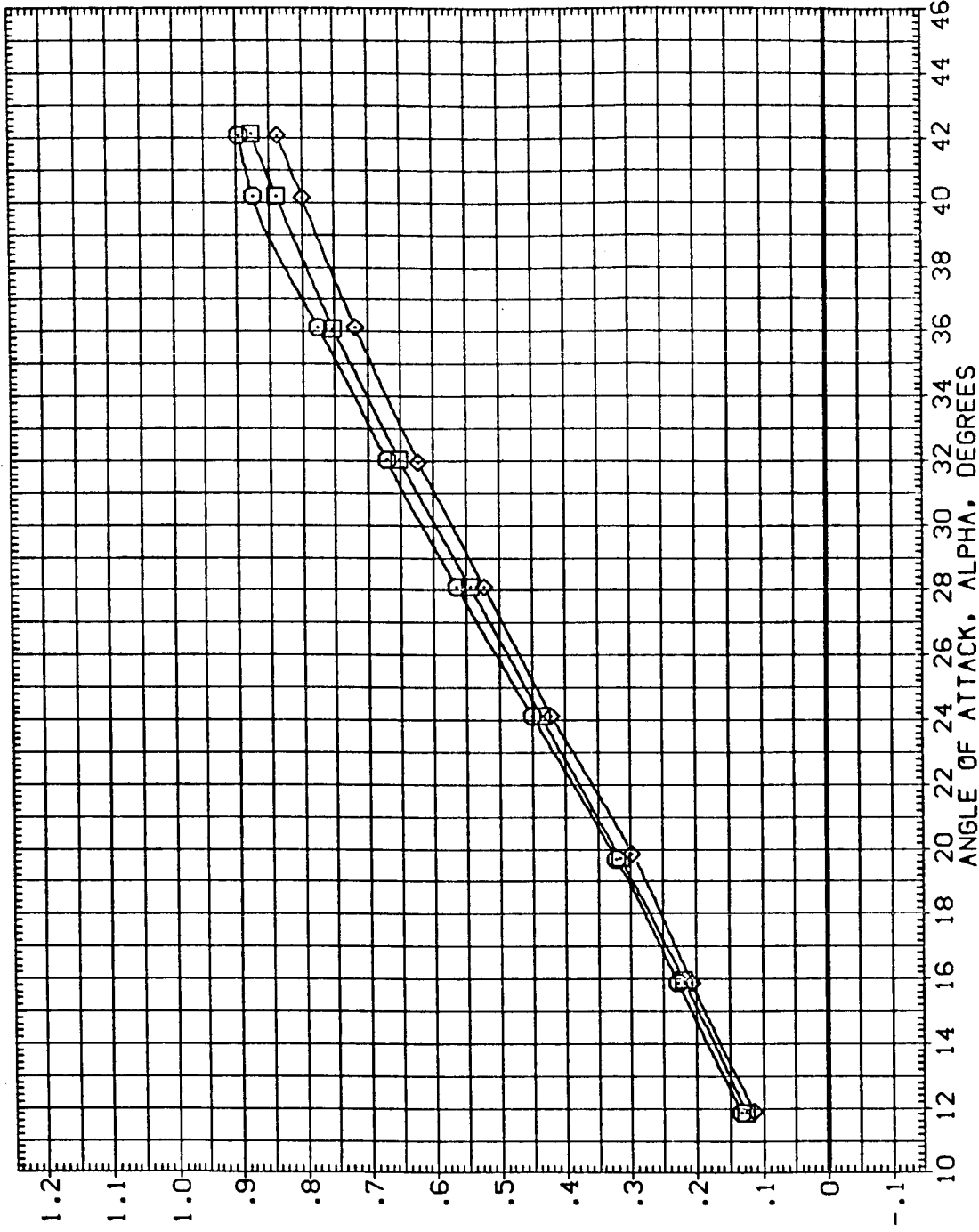


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0
						.0150

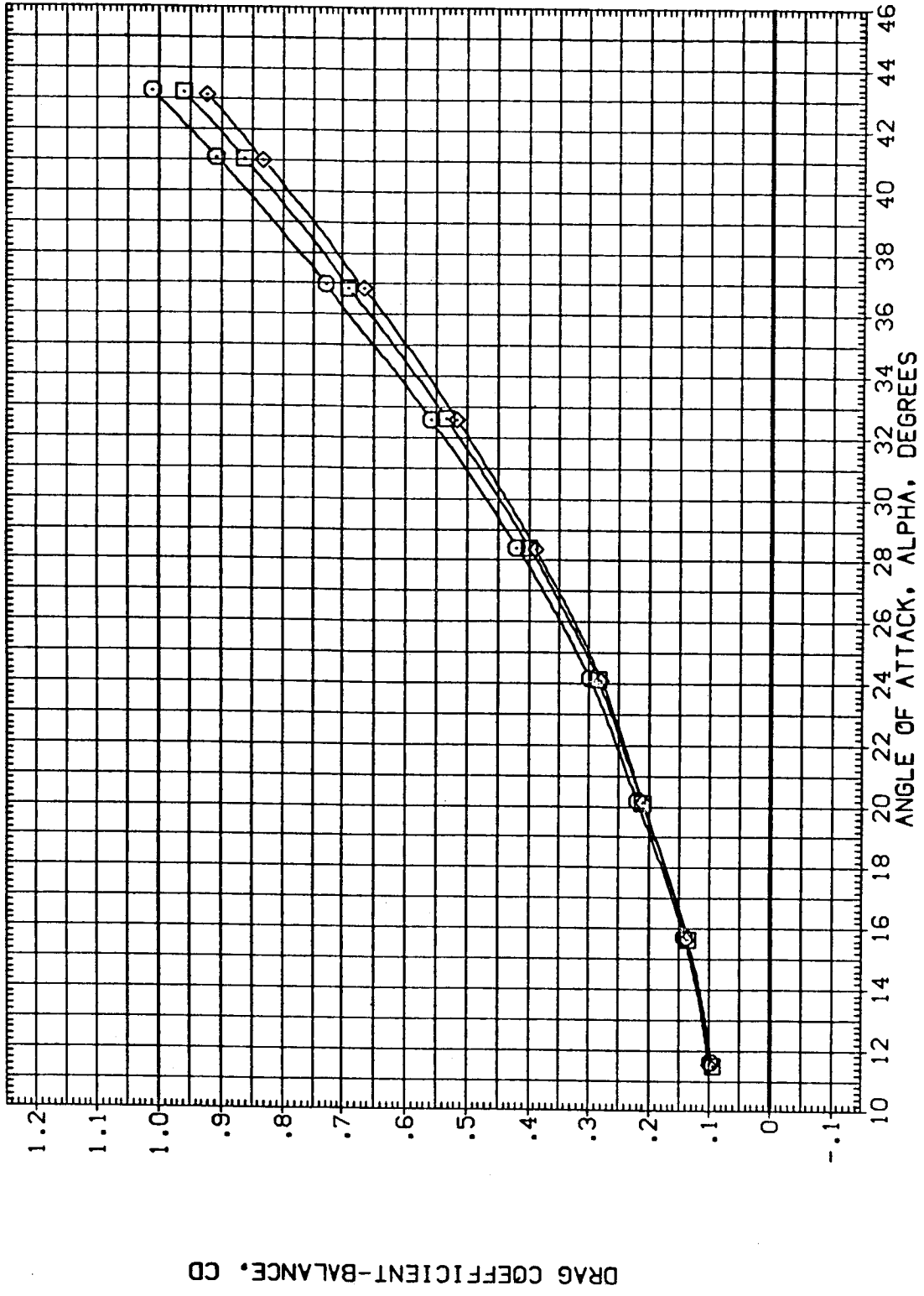


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CAJ MACH = 5.25

DATA SET SYMBOL
 (CE0017)
 (CE0018)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

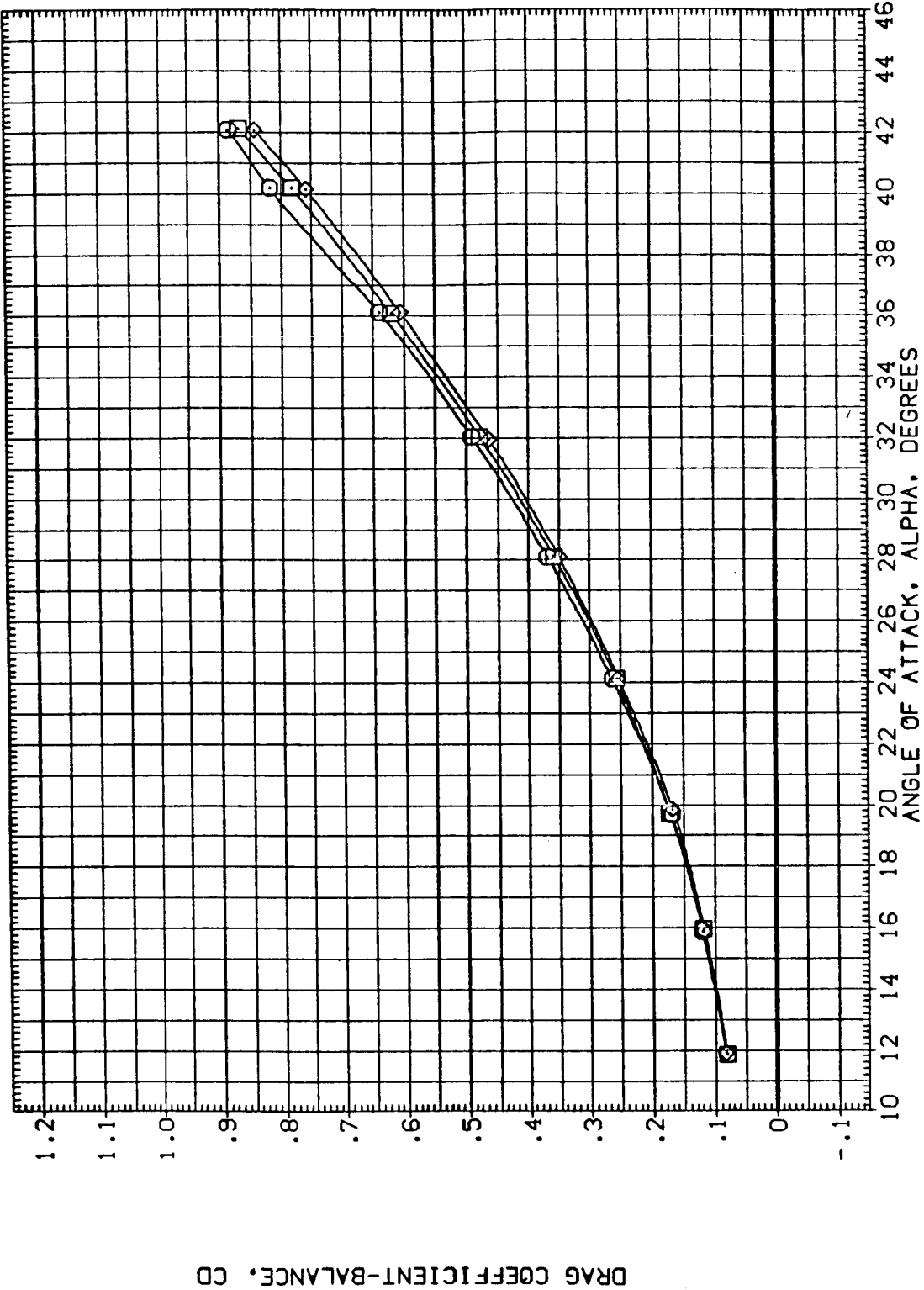
BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X9
 YMRP .0000 IN.Y9
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DRAG COEFFICIENT-BALANCE, CD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG0017) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

(CEG0018) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

(CEG0019) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

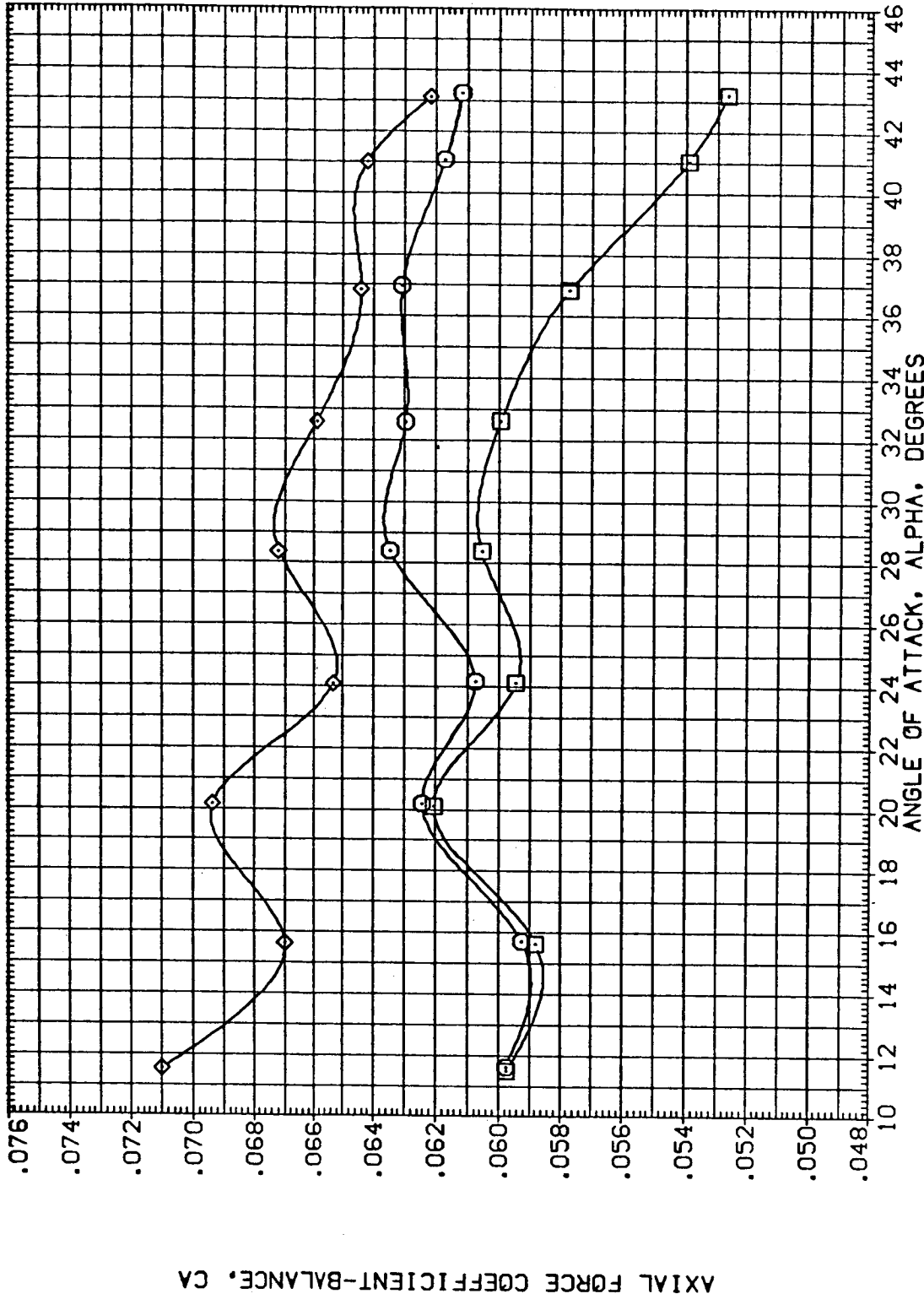
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BDFLAP SPOBRK REFERENCE INFORMATION

(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800
						XMRP 1076.7000
						YMRP .0000
						ZMRP 375.0000
						SCALE .0150
						50.FT.

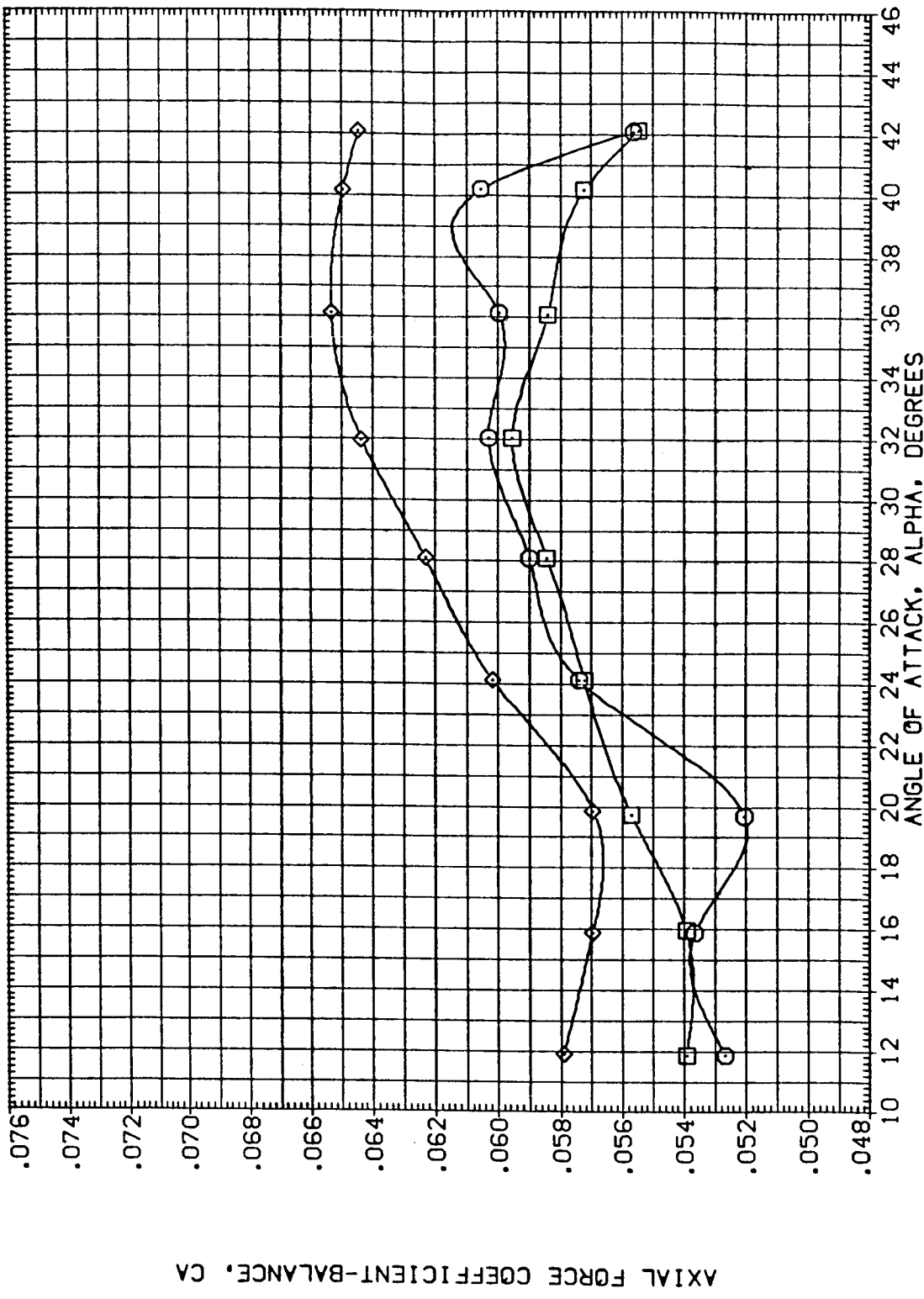


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 2690.0000 50.FT.
 (CE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 474.8000 IN.
 (CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 936.6800 IN.
 XMRP 1076.7000 IN.XIG
 YMRP .0000 IN.YIG
 ZMRP 375.0000 IN.ZIG
 SCALE .0150

ANGLE OF ATTACK, ALPHA, DEGREES

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

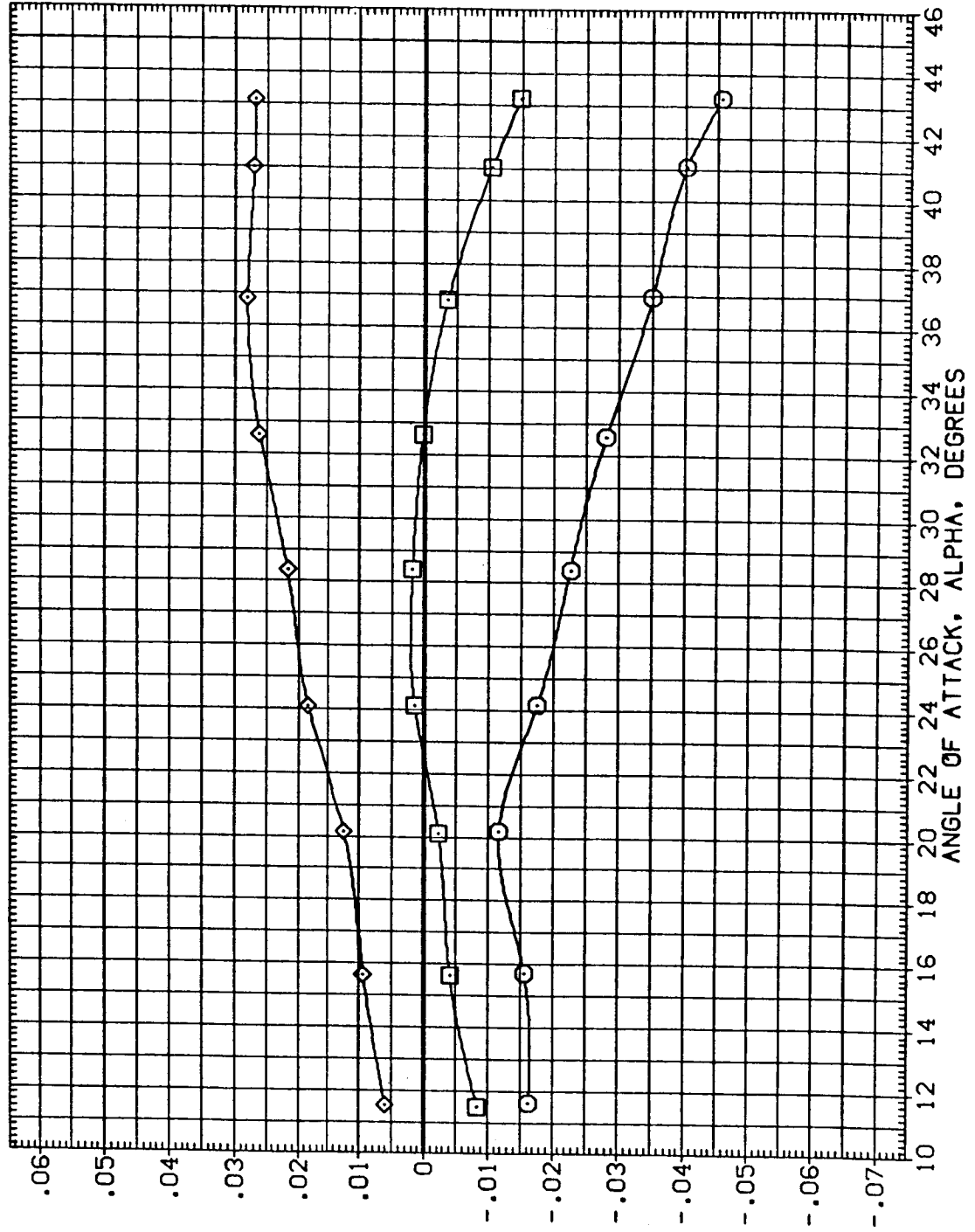


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (CE0017)
 (CE0018)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPDRBK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

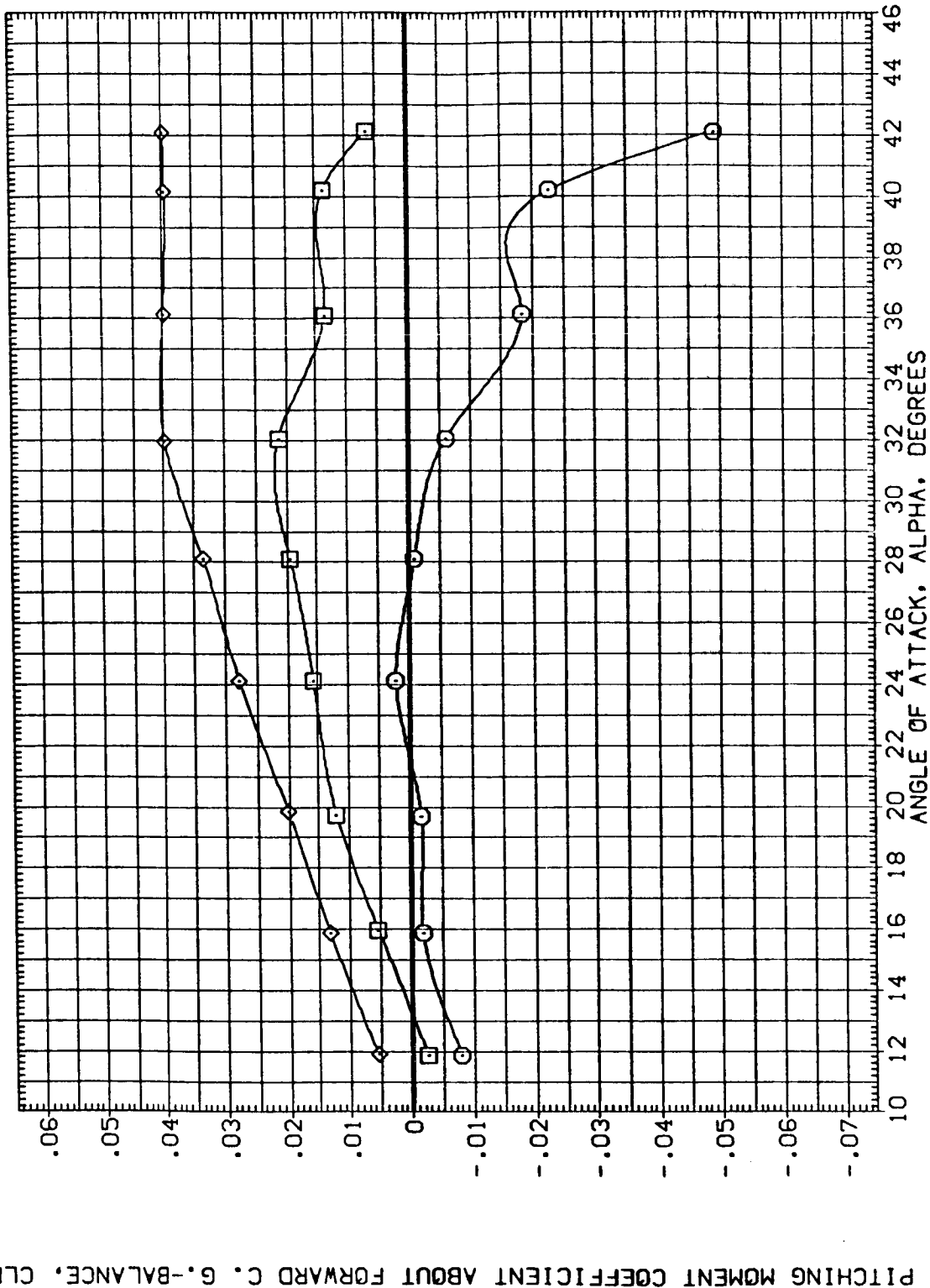


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(CE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

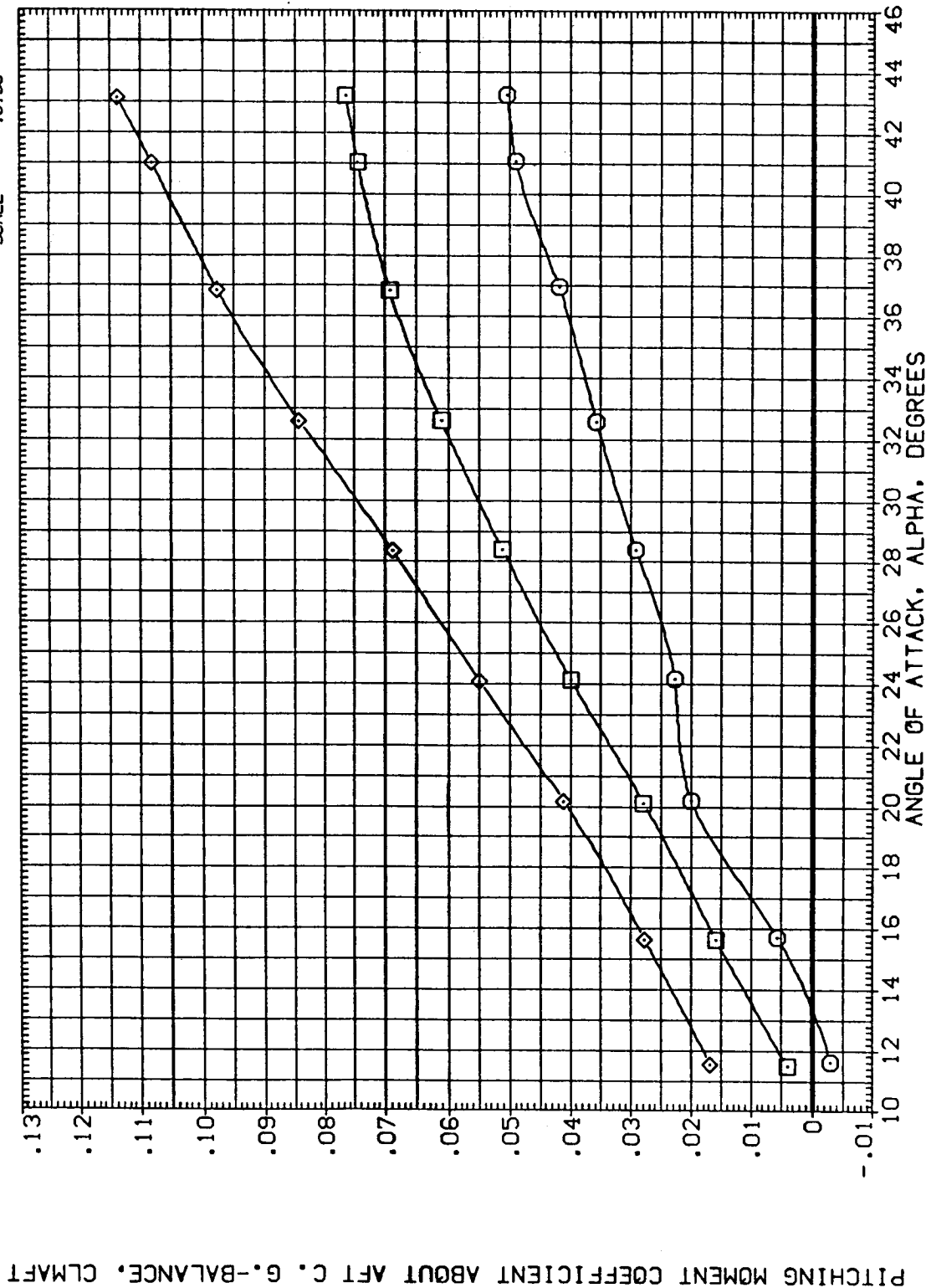


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25 PAGE 93

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0017) AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 SO.FT.

(CE0018) AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(CE0019) AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZO
 SCALE .0150

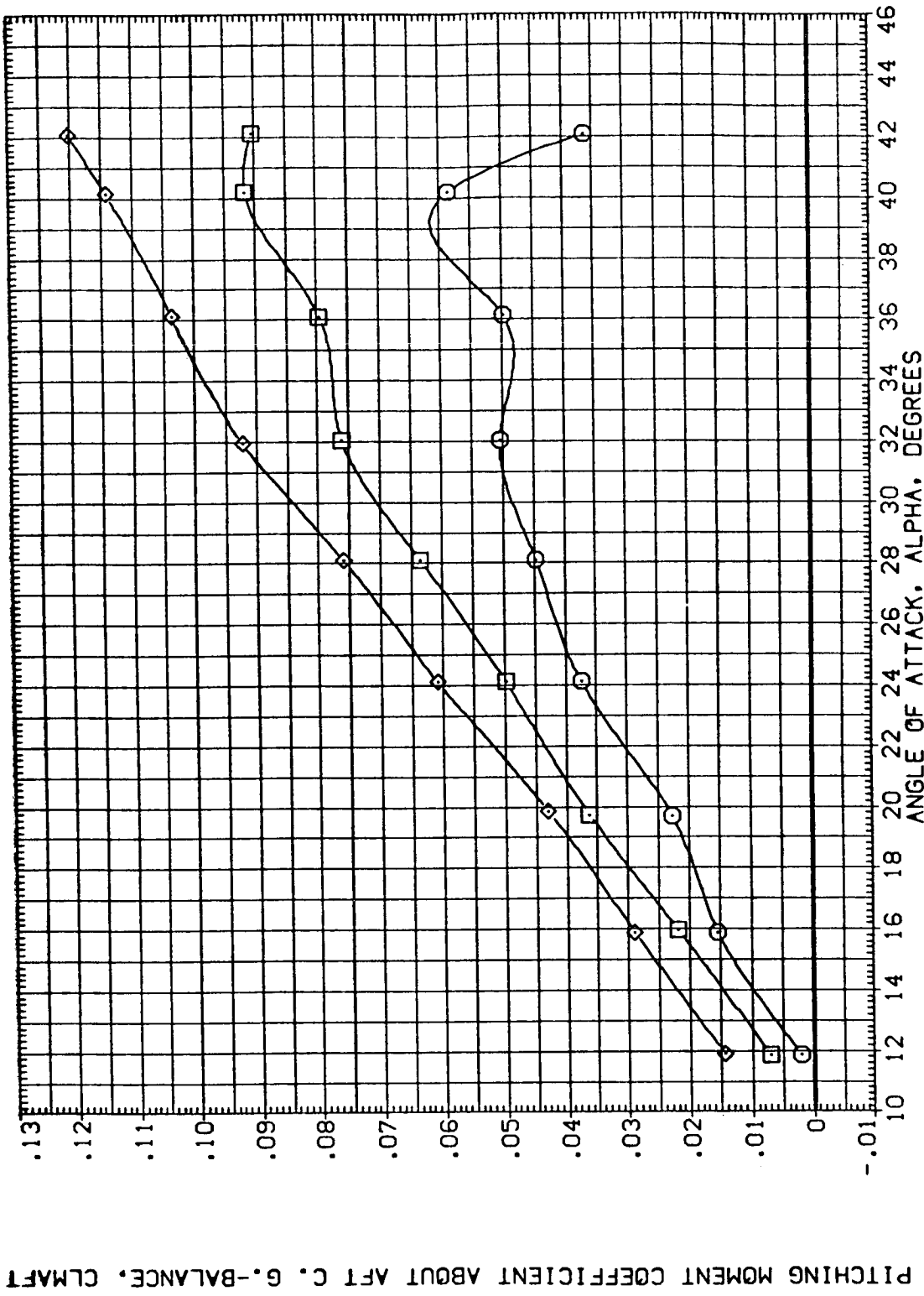


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG017) AMES 3.5-190 GA98 (011-M7-H14-N24-DUMMY STING)

(CEG018) AMES 3.5-190 GA98 (011-M7-H14-N24-DUMMY STING)

(CEG019) AMES 3.5-190 GA98 (011-M7-H14-N24-DUMMY STING)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

YMRP 1076.7000 IN.XIG

ZMRP 375.0000 IN.ZB

SCALE .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

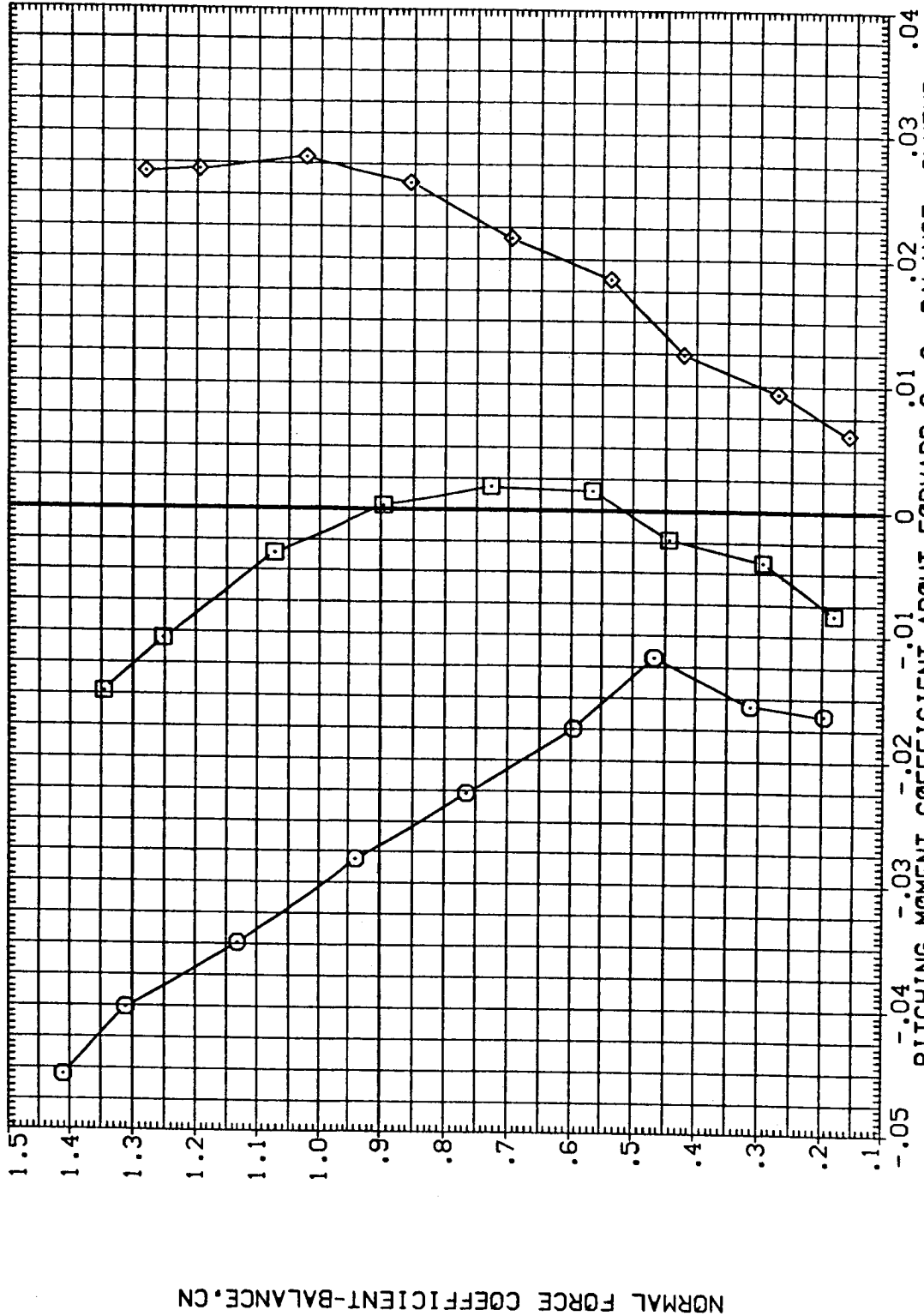
LREF 474.8000 IN.

BREF 936.6800 IN.

YMRP 1076.7000 IN.XIG

ZMRP 375.0000 IN.ZB

SCALE .0150



NORMAL FORCE COEFFICIENT-BALANCE, CN

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

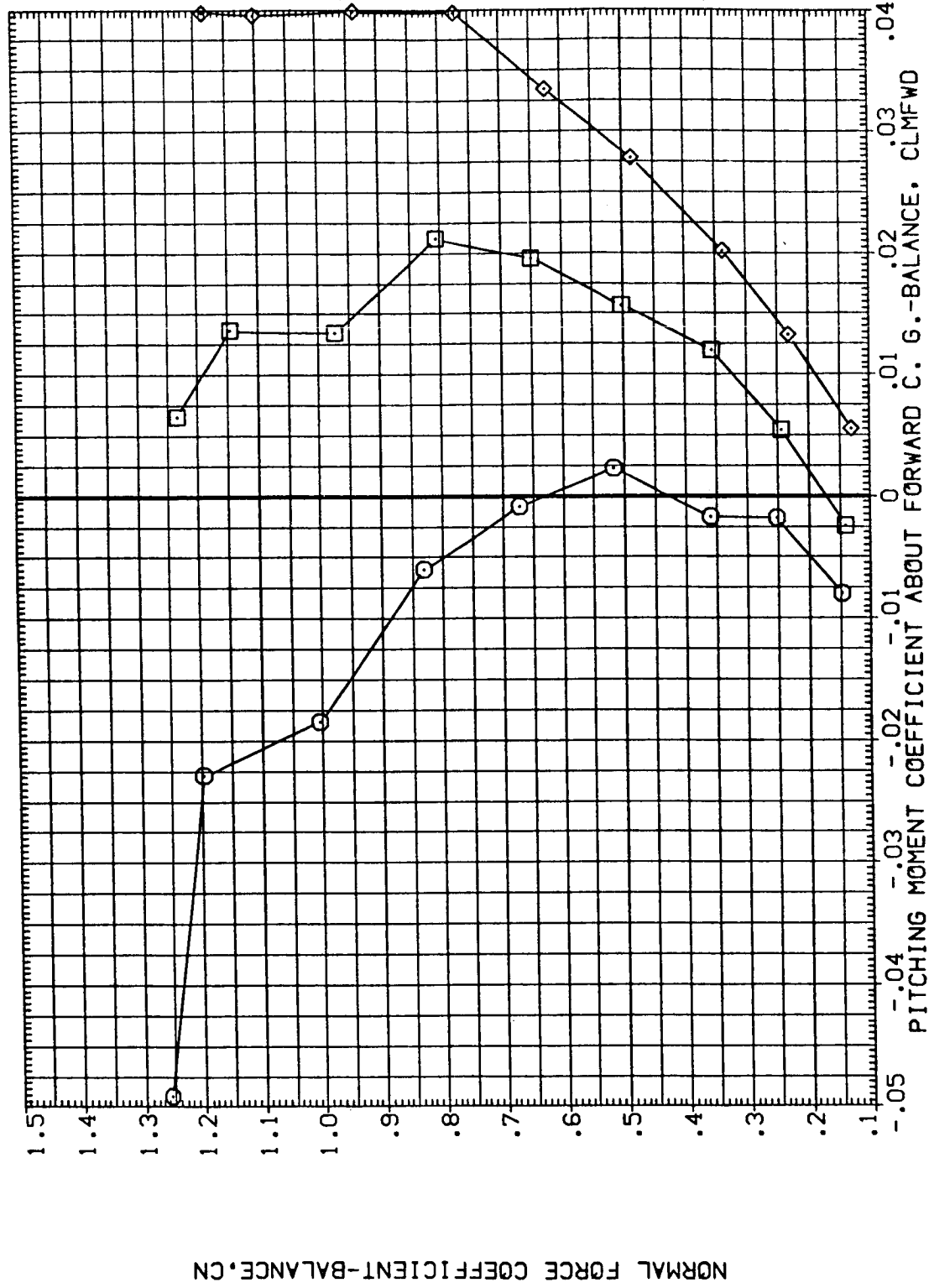
(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(CE0017)	AMES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	SREF	2690.0000	SQ.FT.
(CE0018)	AMES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	LREF	474.8000	IN.
(CE0019)	AMES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	BREF	936.6800	IN.
		XMRP	1076.7000	IN. X0
		YMRP	.0000	IN. Y0
		ZMRP	375.0000	IN. Z0
		SCALE	.0150	

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000



NORMAL FORCE COEFFICIENT-BALANCE, CN

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(CE0017) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(CE0018) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(CE0019) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BREF 996.6900 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

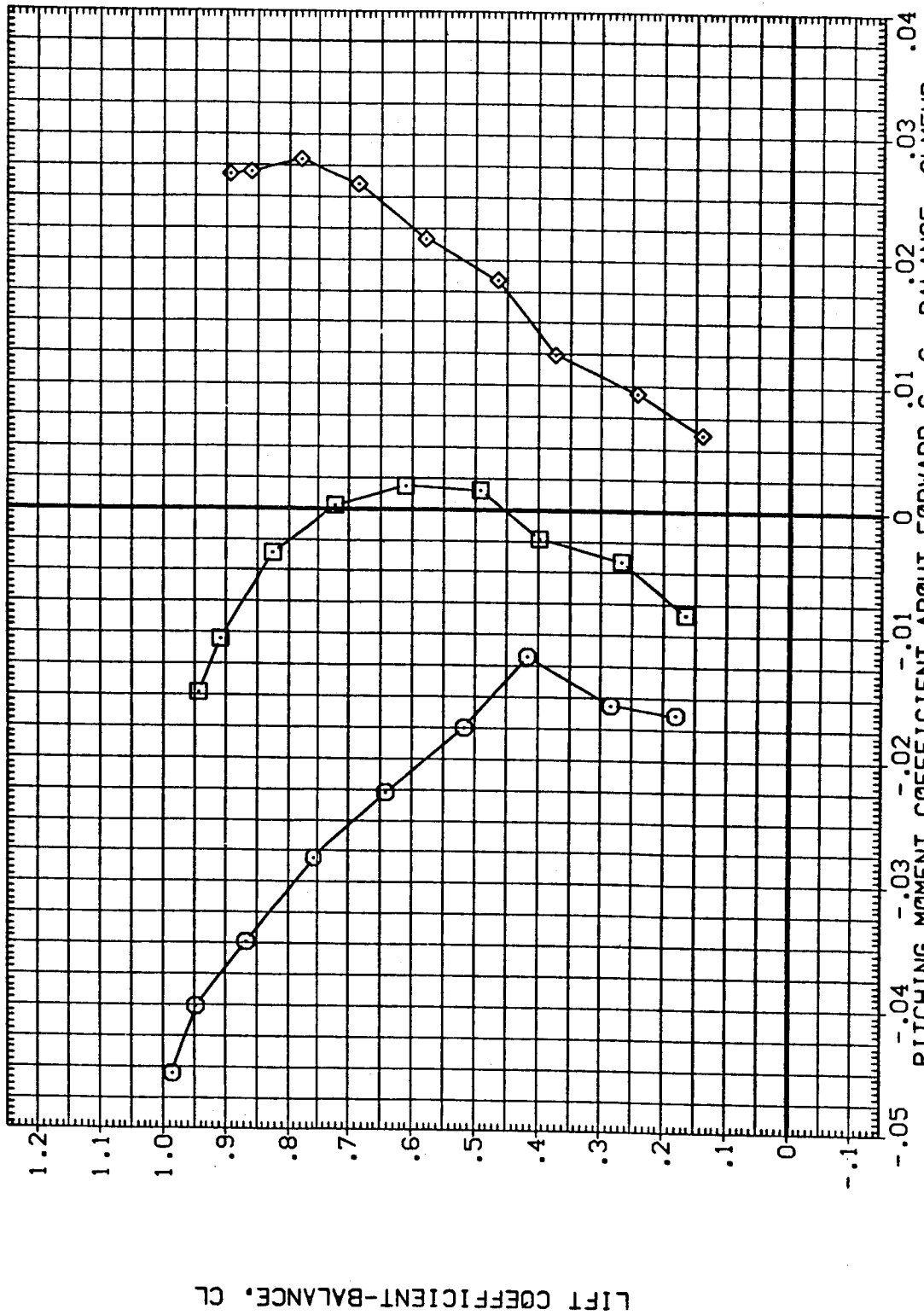


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25 PAGE 97

DATA SET SYMBOL
 (CE0017)
 (CE0018)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

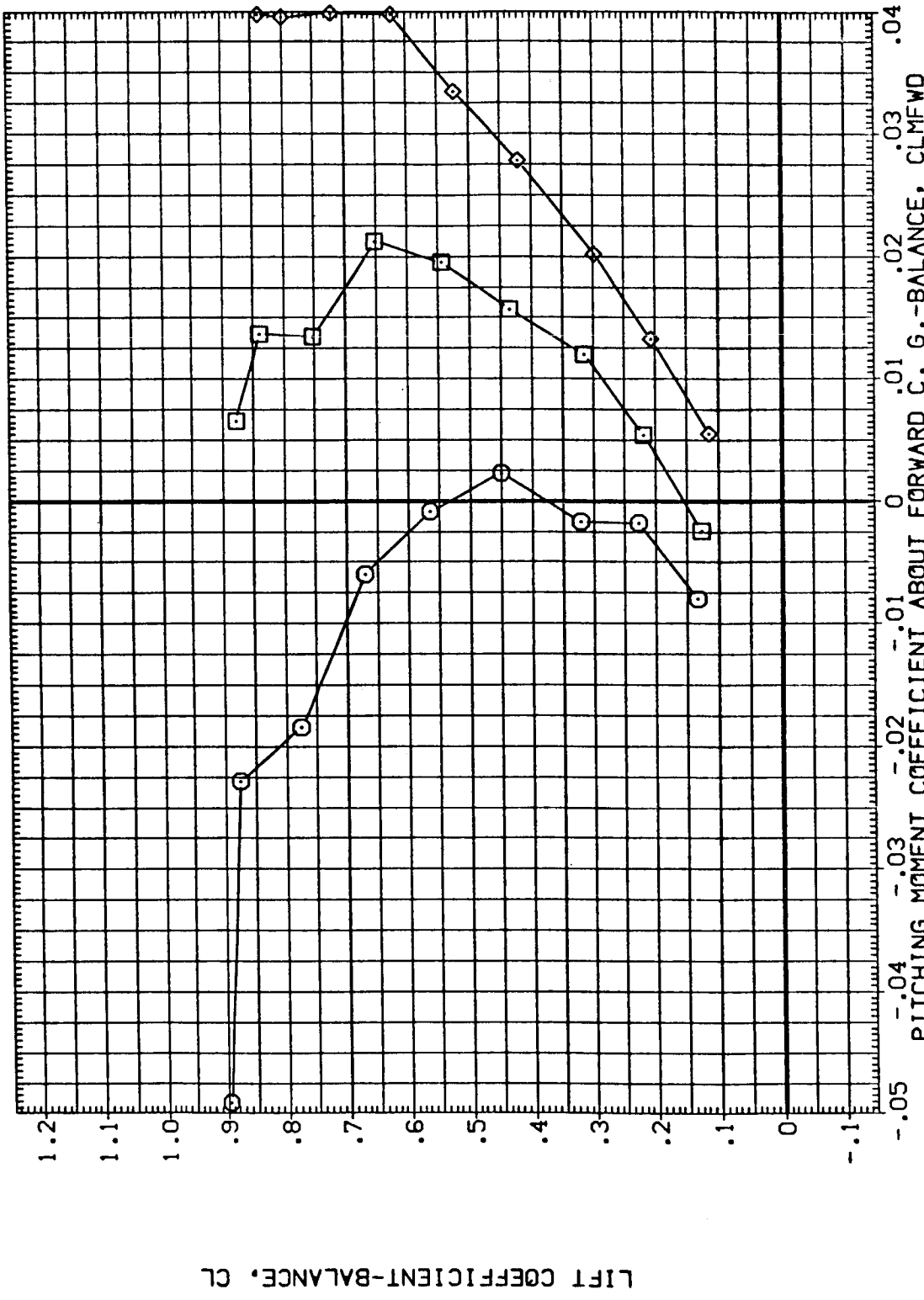


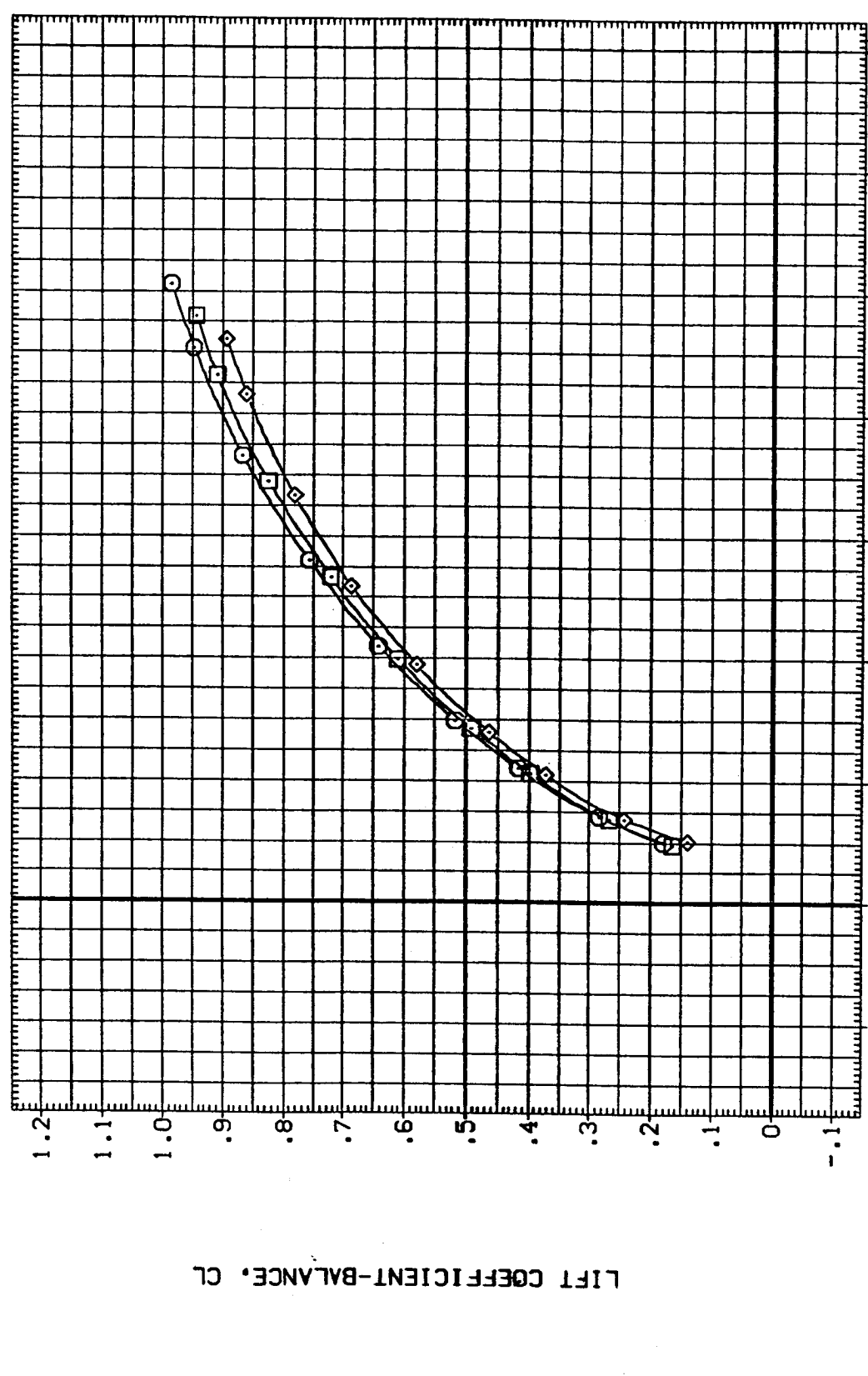
FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 98

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.

(CE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

DRAG COEFFICIENT-BALANCE, CD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0017) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

(CE0018) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

(CE0019) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPDRBK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6000 IN.

XMRP 1076.7000 IN.YD

YMRP .0000 IN.YD

ZMRP 375.0000 IN.ZD

SCALE .0150

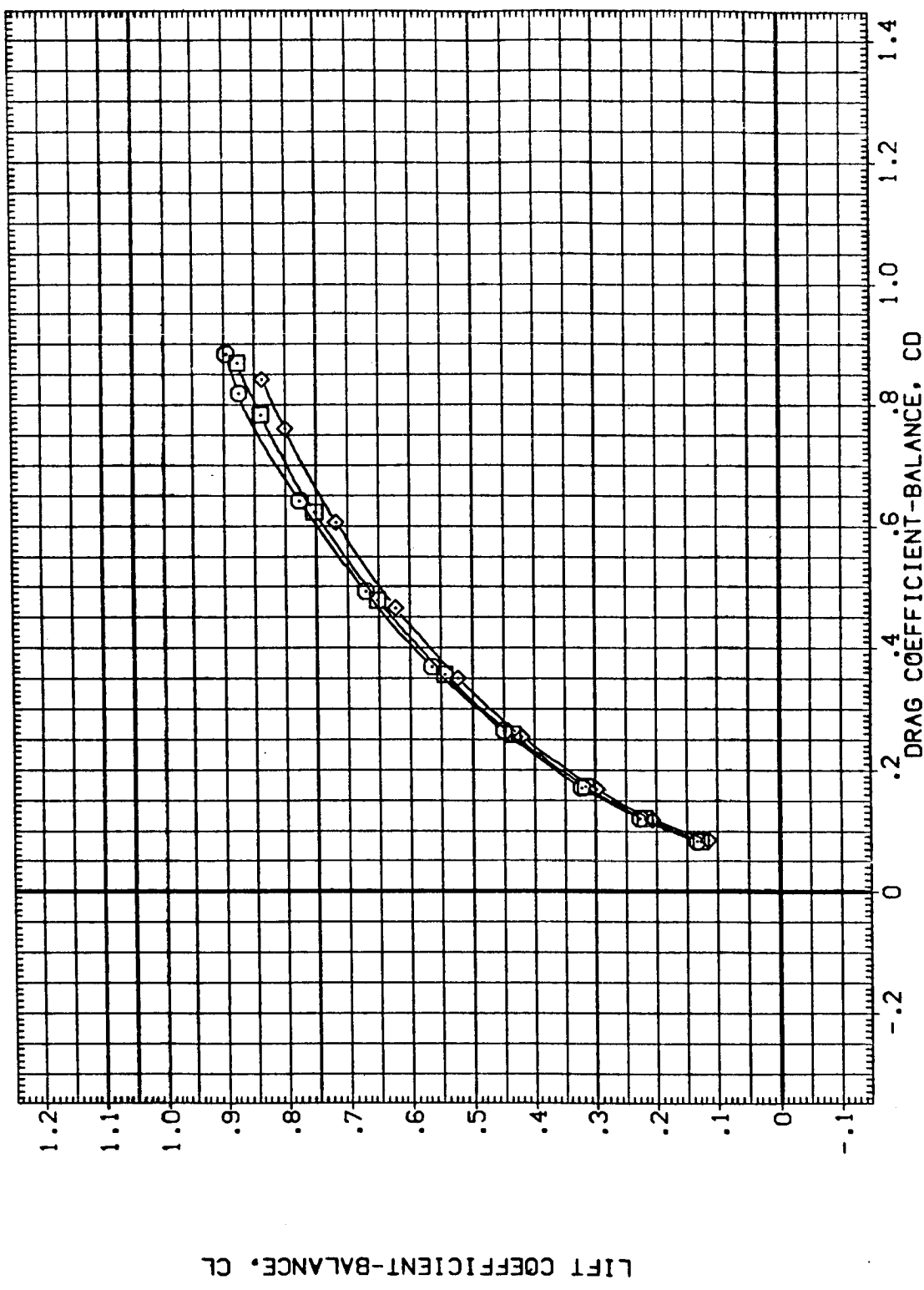
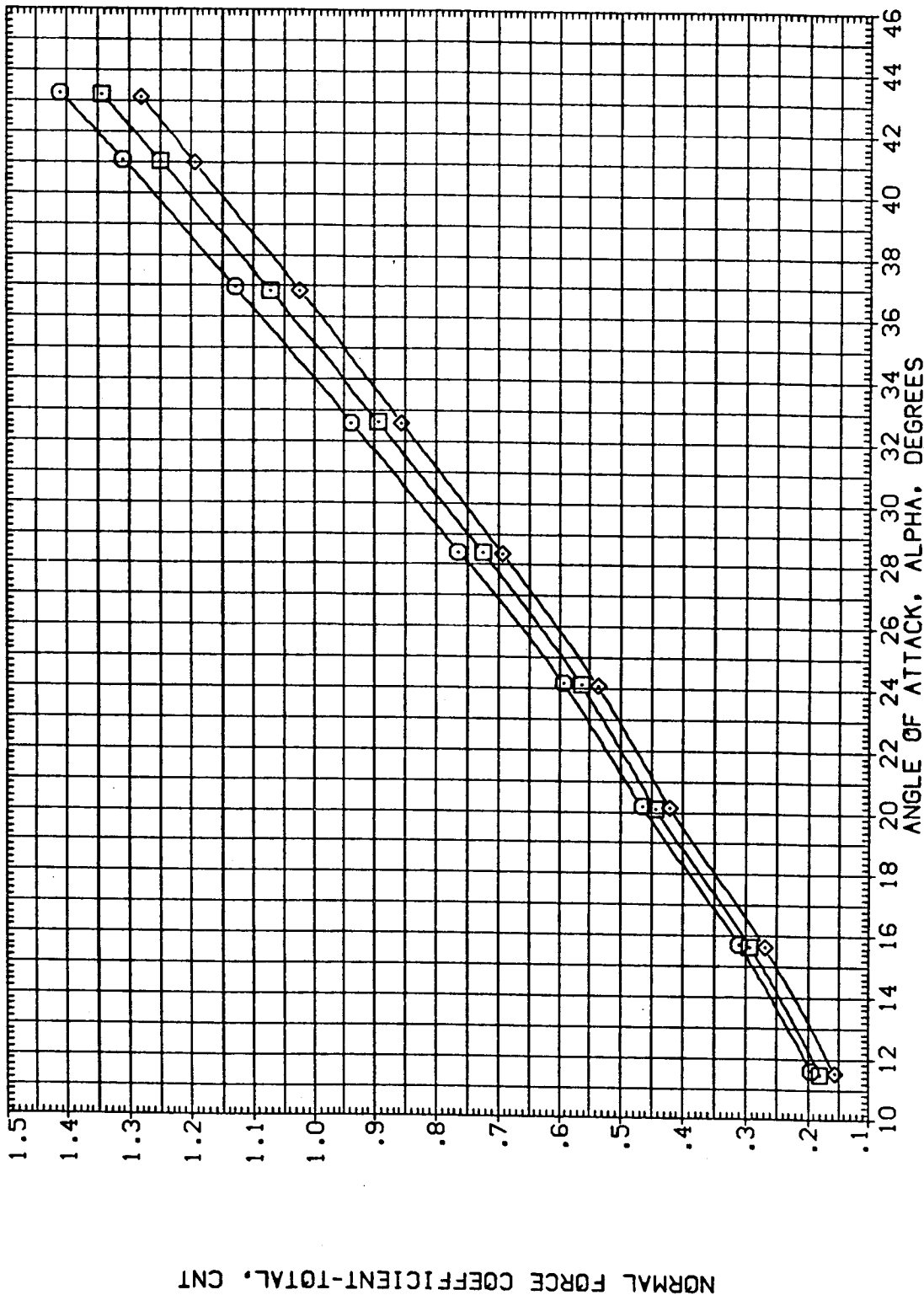


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27 PAGE 100

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNt

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

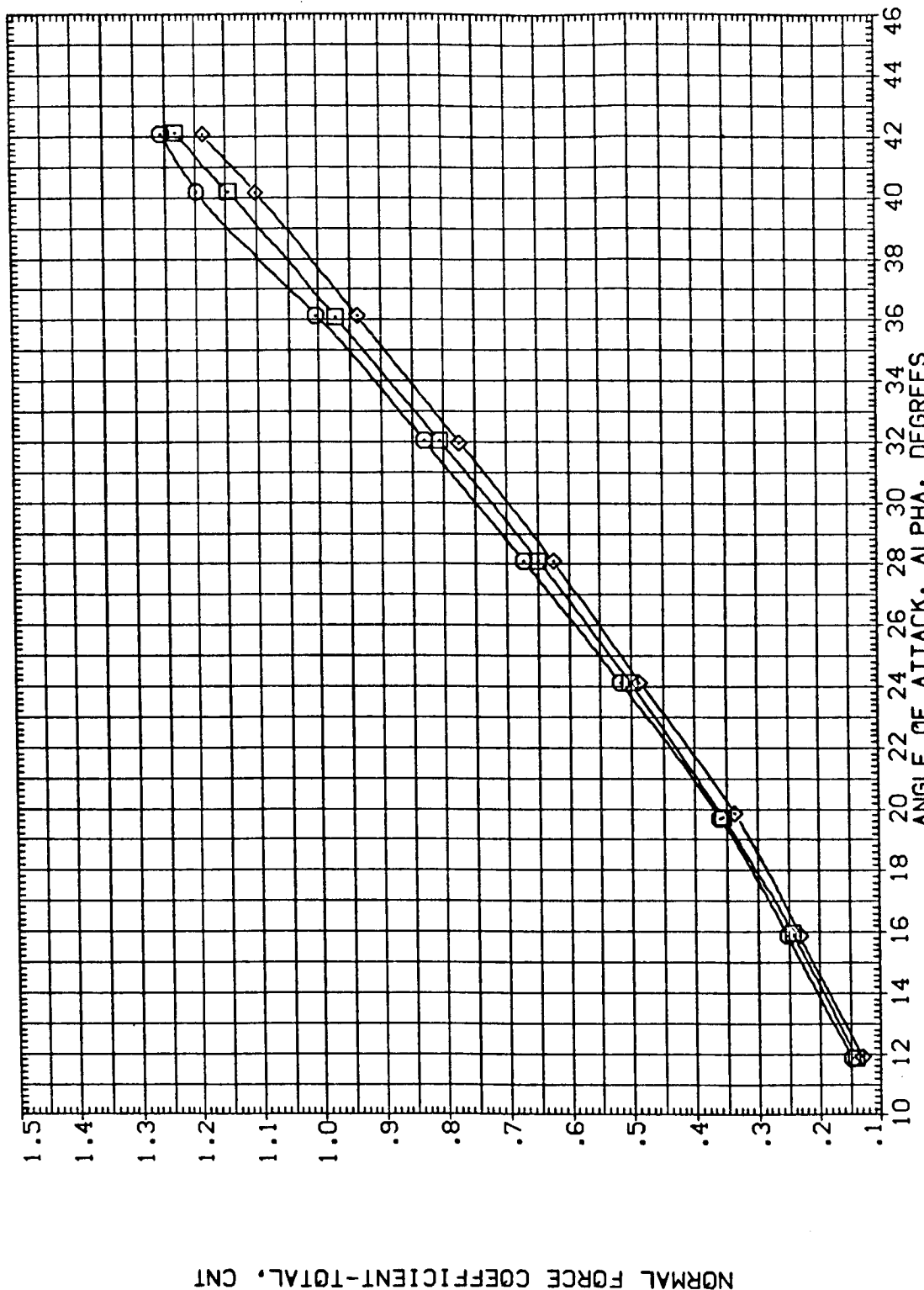
DATA SET SYMBOL
 (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700

SPDBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.6800
 IN.X0 1076.7000
 IN.Y0 .0000
 IN.Z0 375.0000
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 102

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BDFLAP SPOBRK REFERENCE INFORMATION

(E0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000
(E0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000
(E0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800
						XMRP 1076.7000
						YMRP .0000
						ZMRP .0000
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

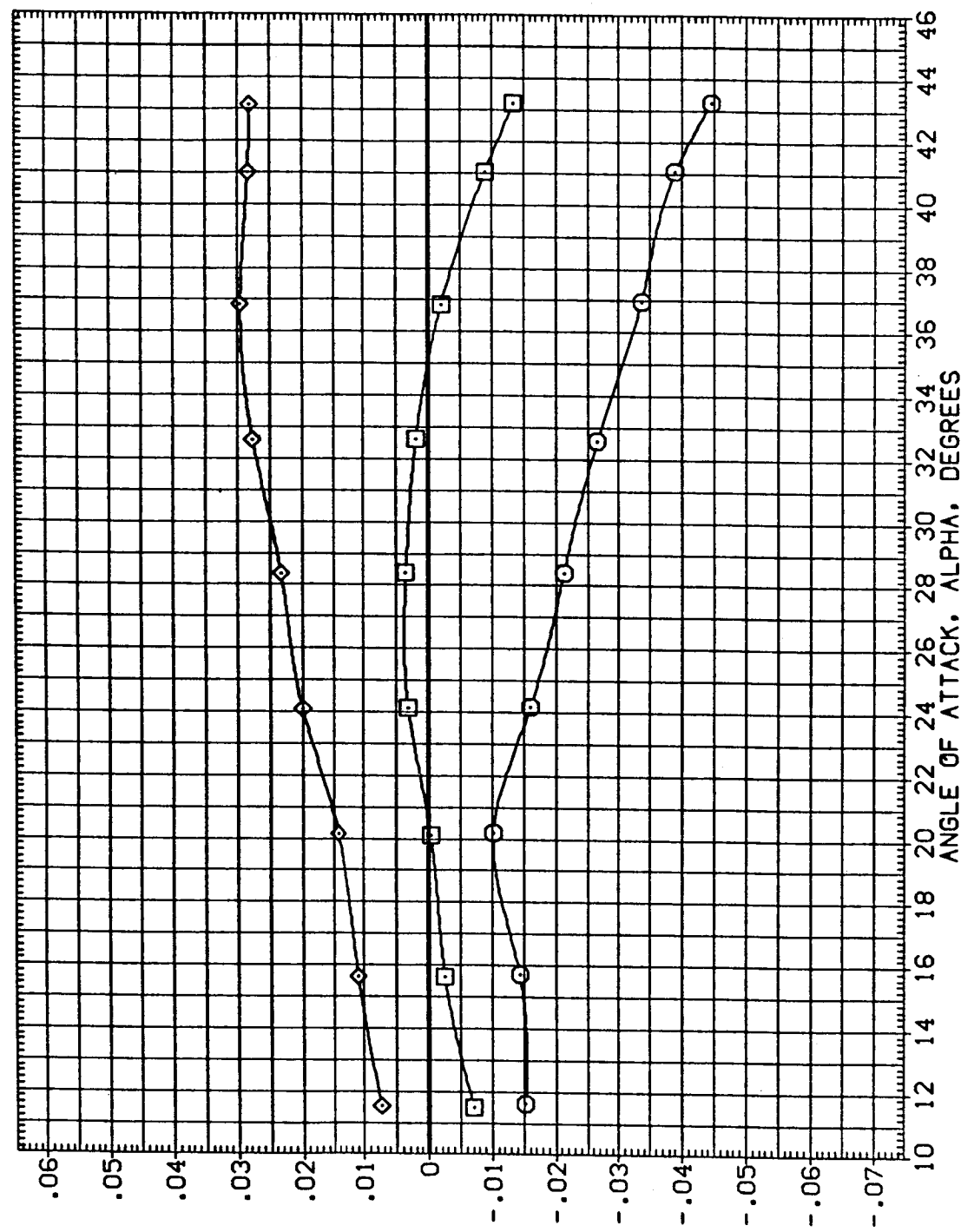


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)
 AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)
 AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

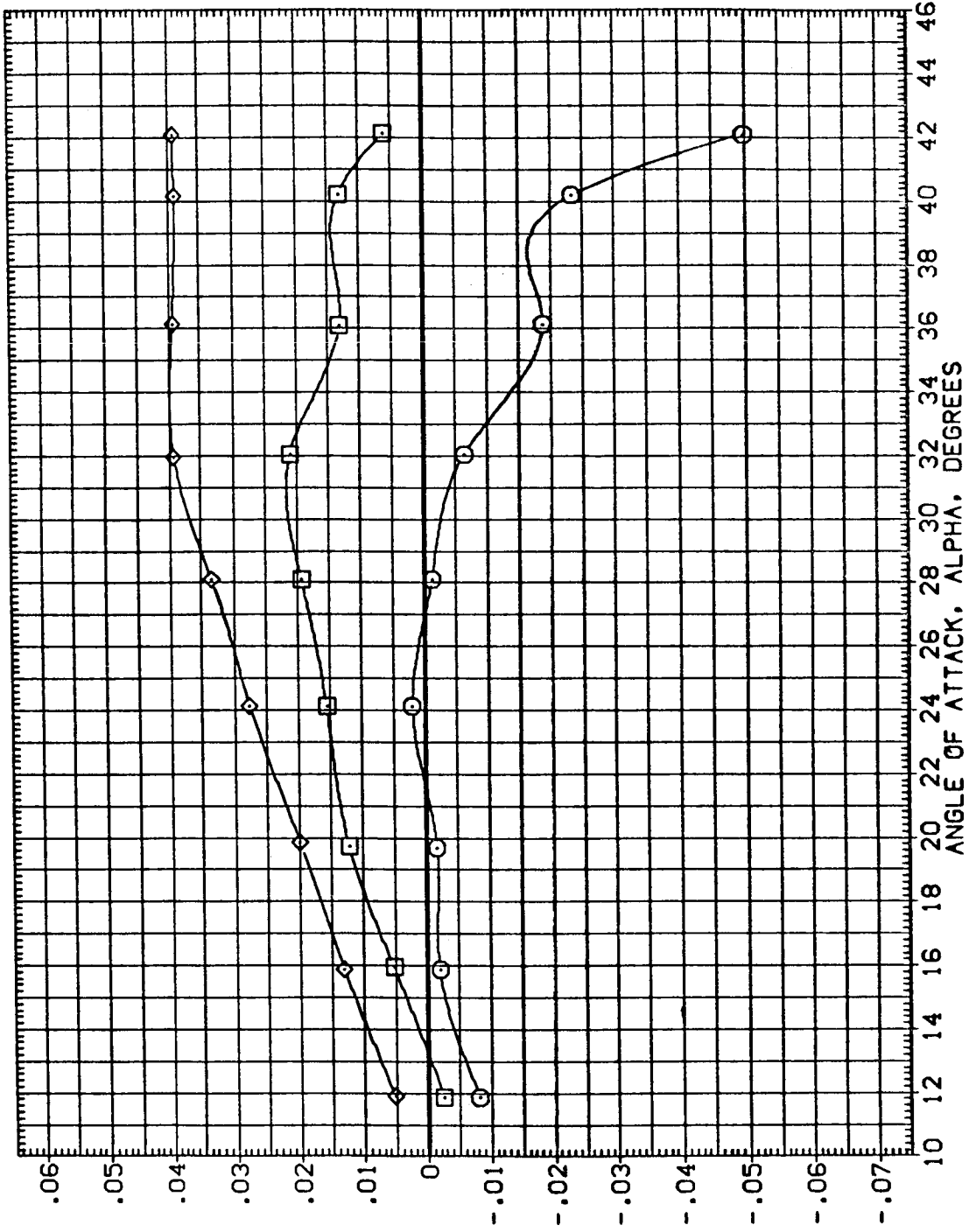


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (8)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 956.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

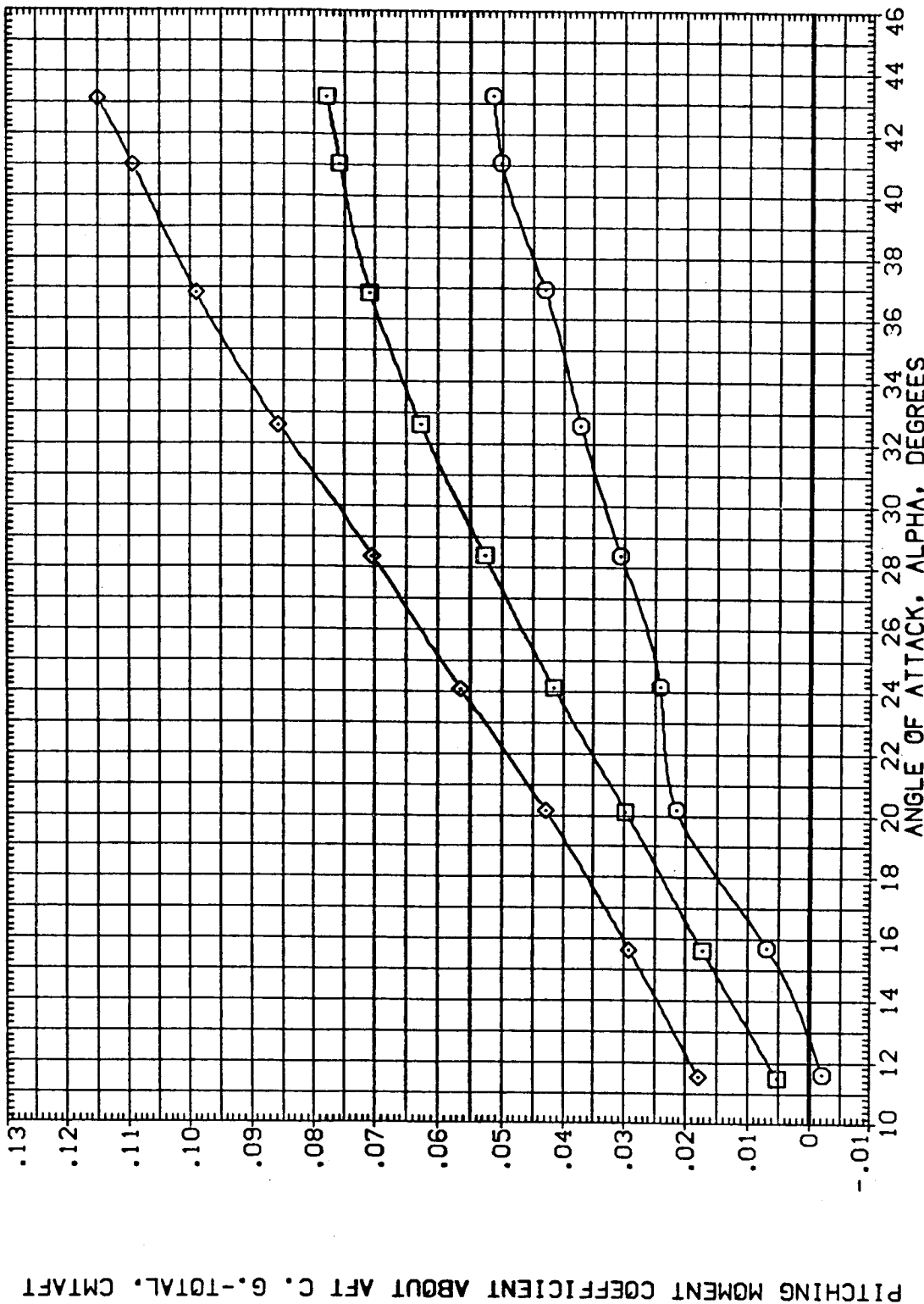


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL
 (E0017)
 (E0018)
 (E0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPDRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

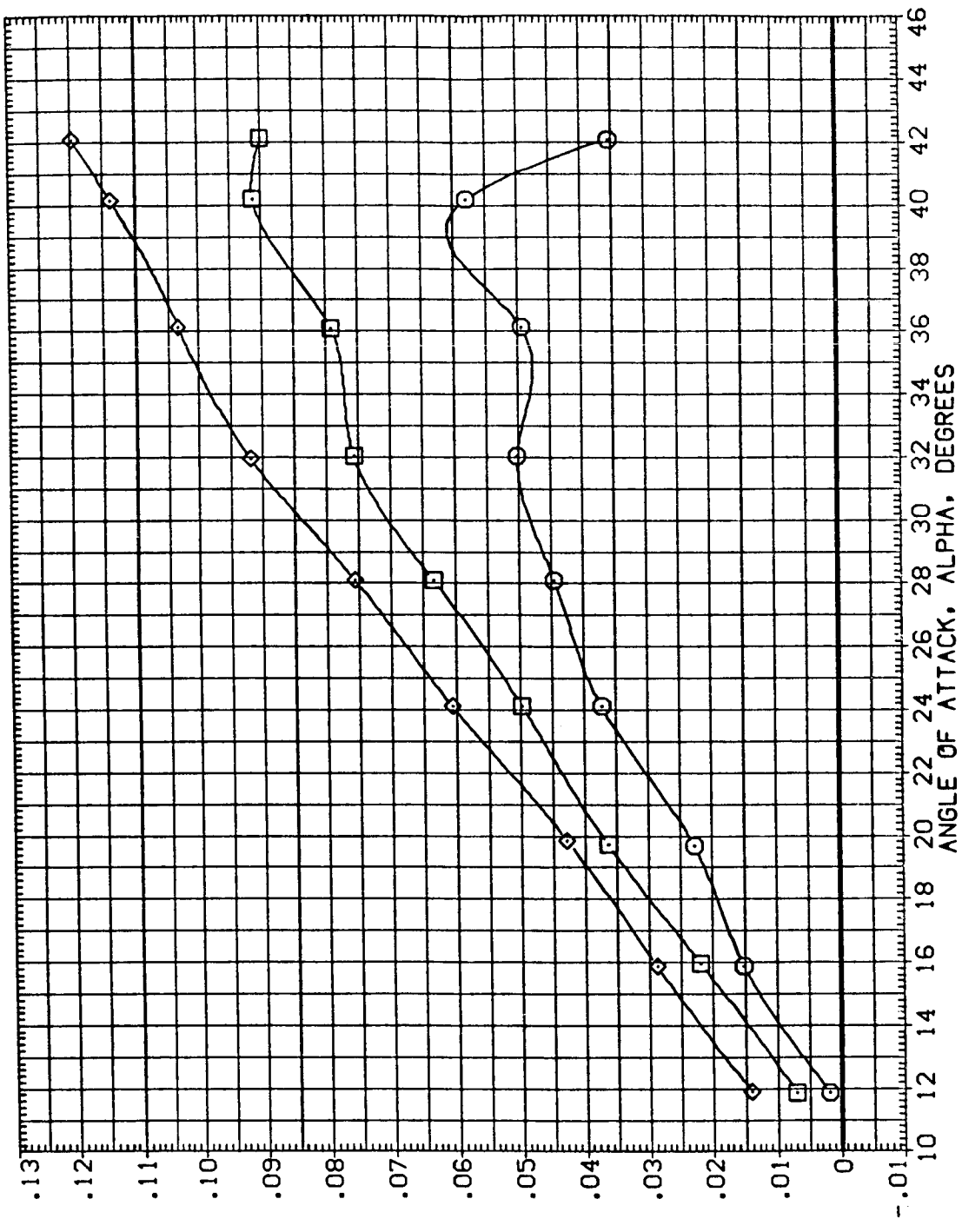


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 106

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(E0017) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(E0018) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(E0019) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BRREF 936.6800 IN. X0
 YMRP 1076.7000 IN. Y0
 ZMRP .0000 IN. Z0
 SCALE .0150

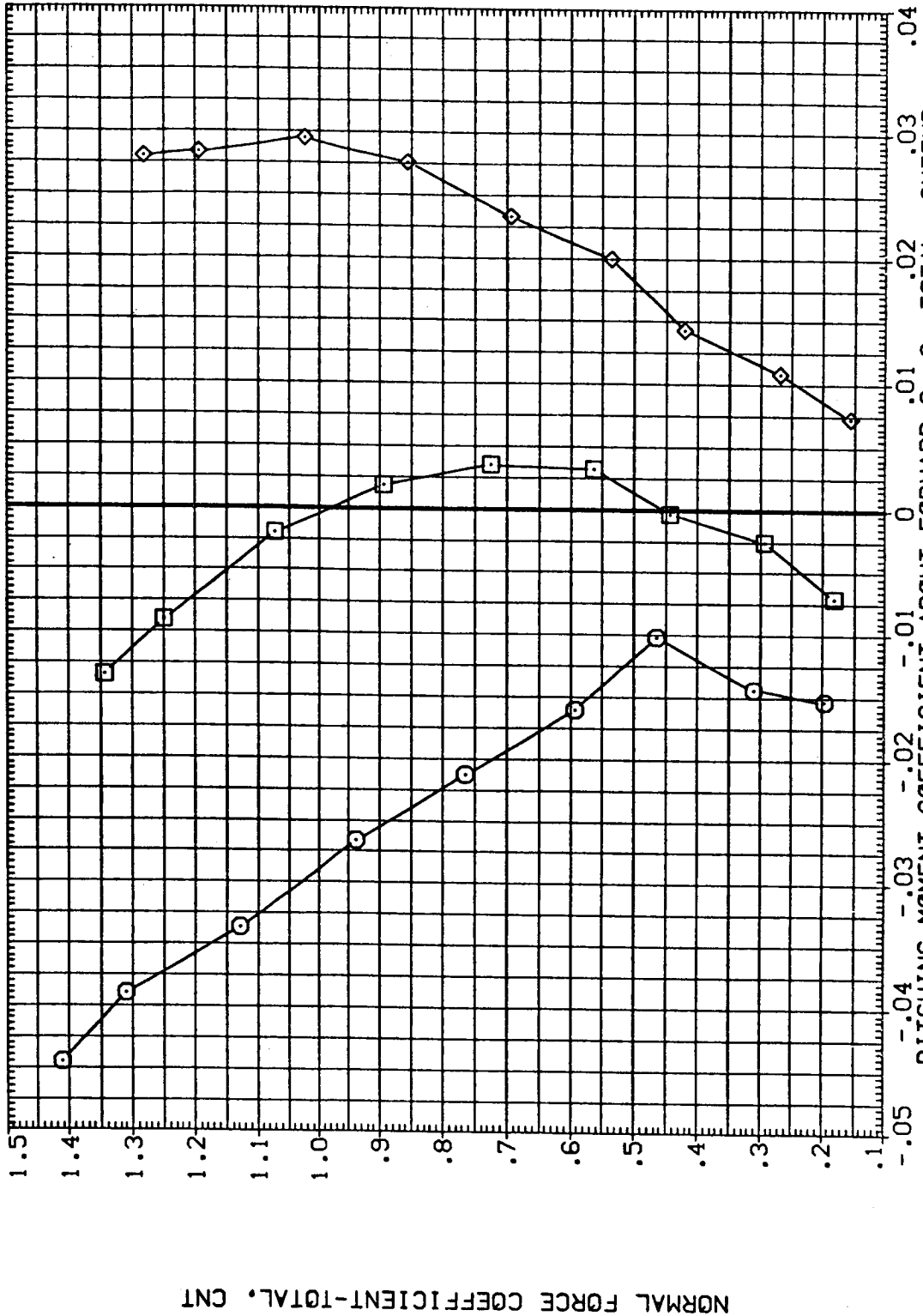


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(E0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(E0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

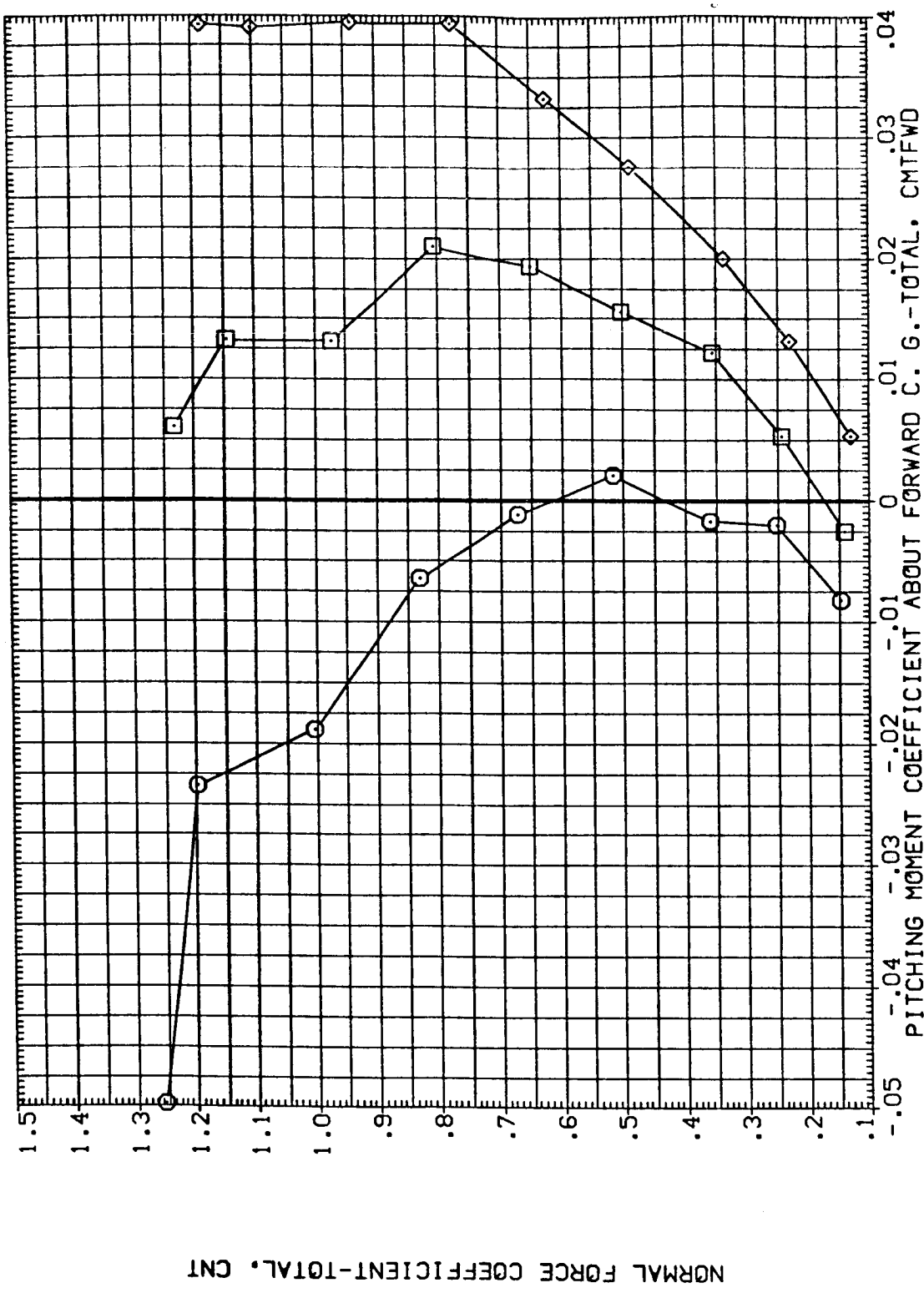
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNt

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

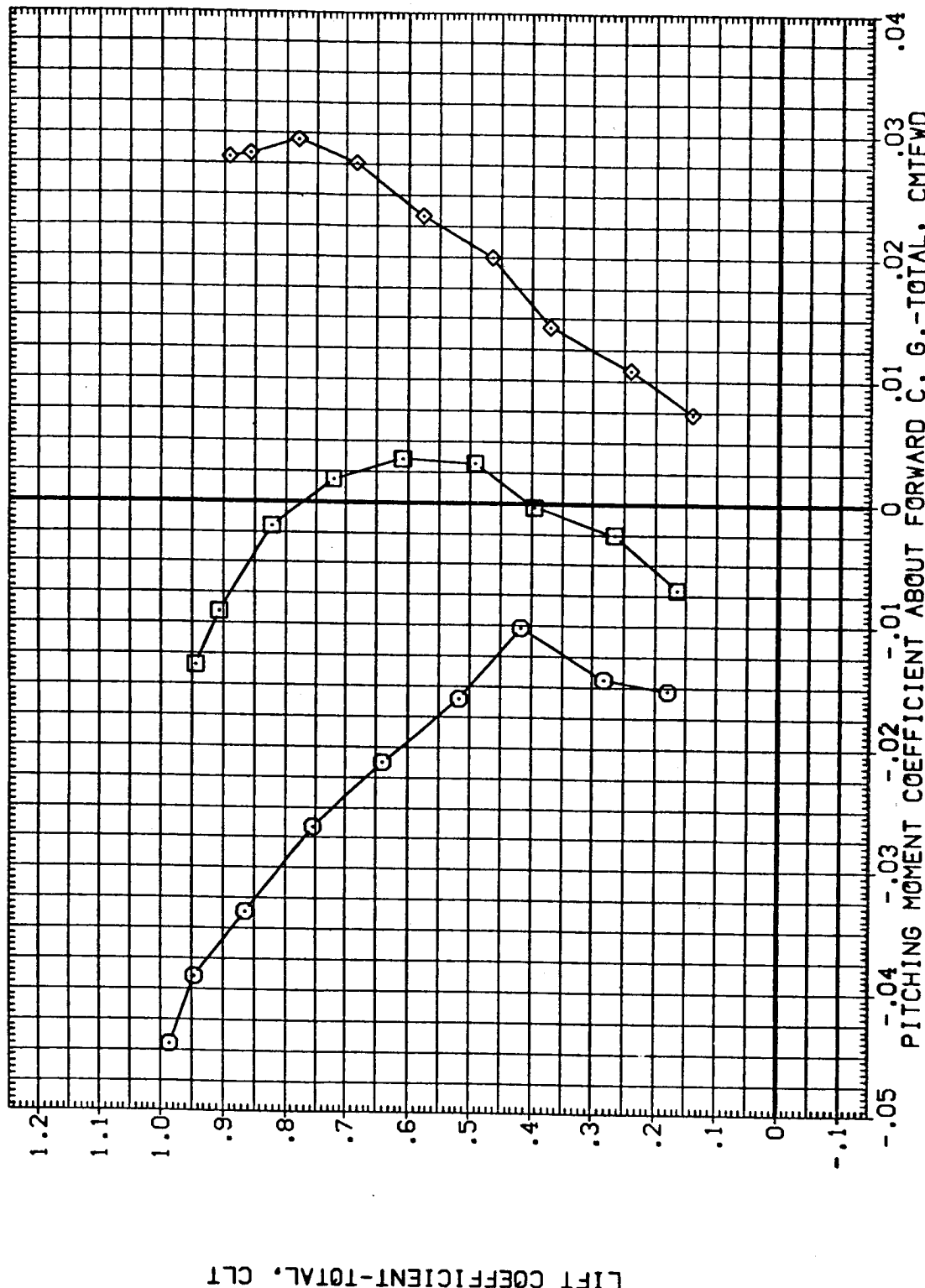
(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(EE0017) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.

(EE0018) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(EE0019) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CL1

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 2690.0000 SQ.FT.
 474.8000 IN.
 936.6800 IN.
 1076.7000 IN.XB
 .0000 IN.YB
 375.0000 IN.ZB
 SCALE .0150

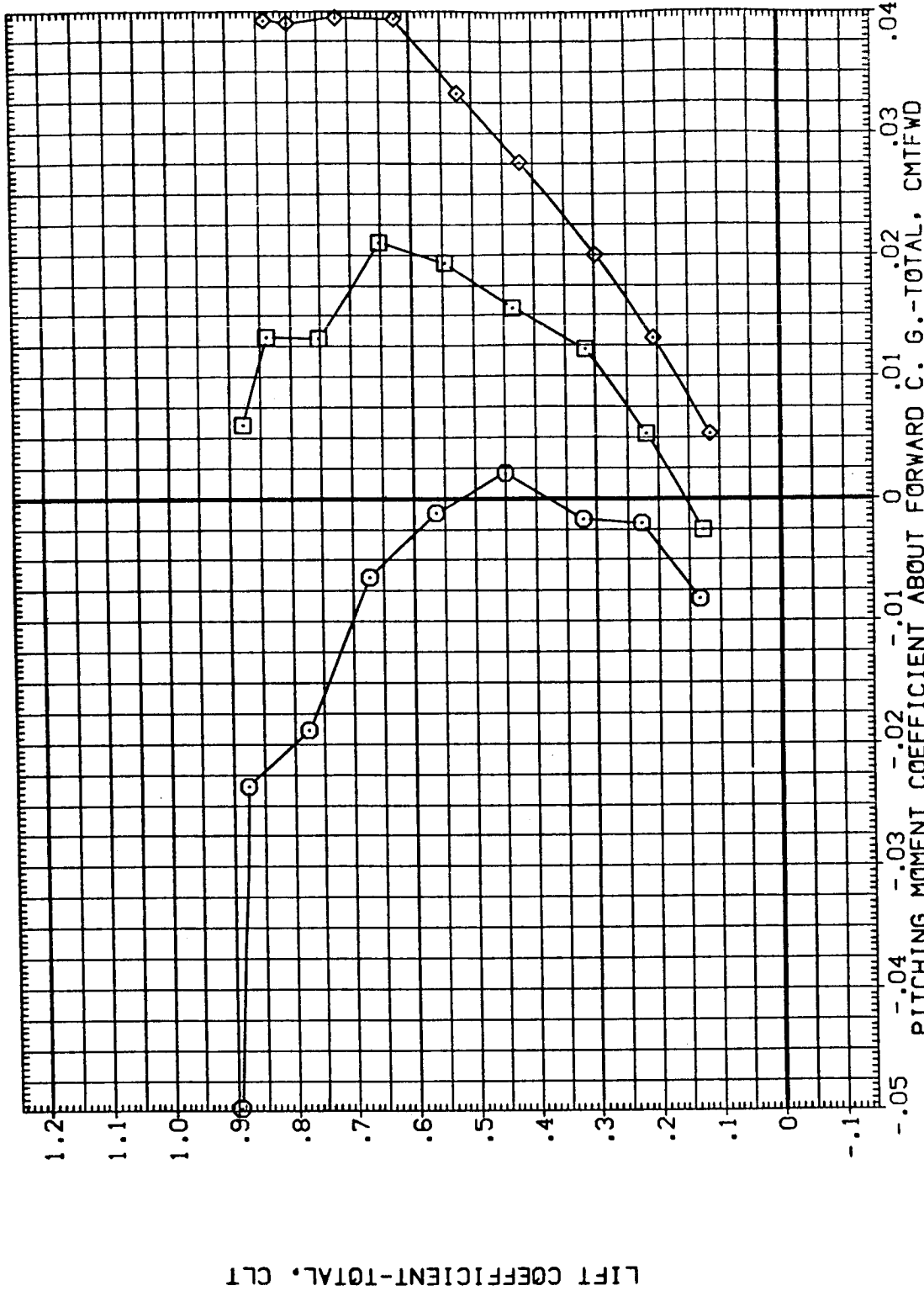


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

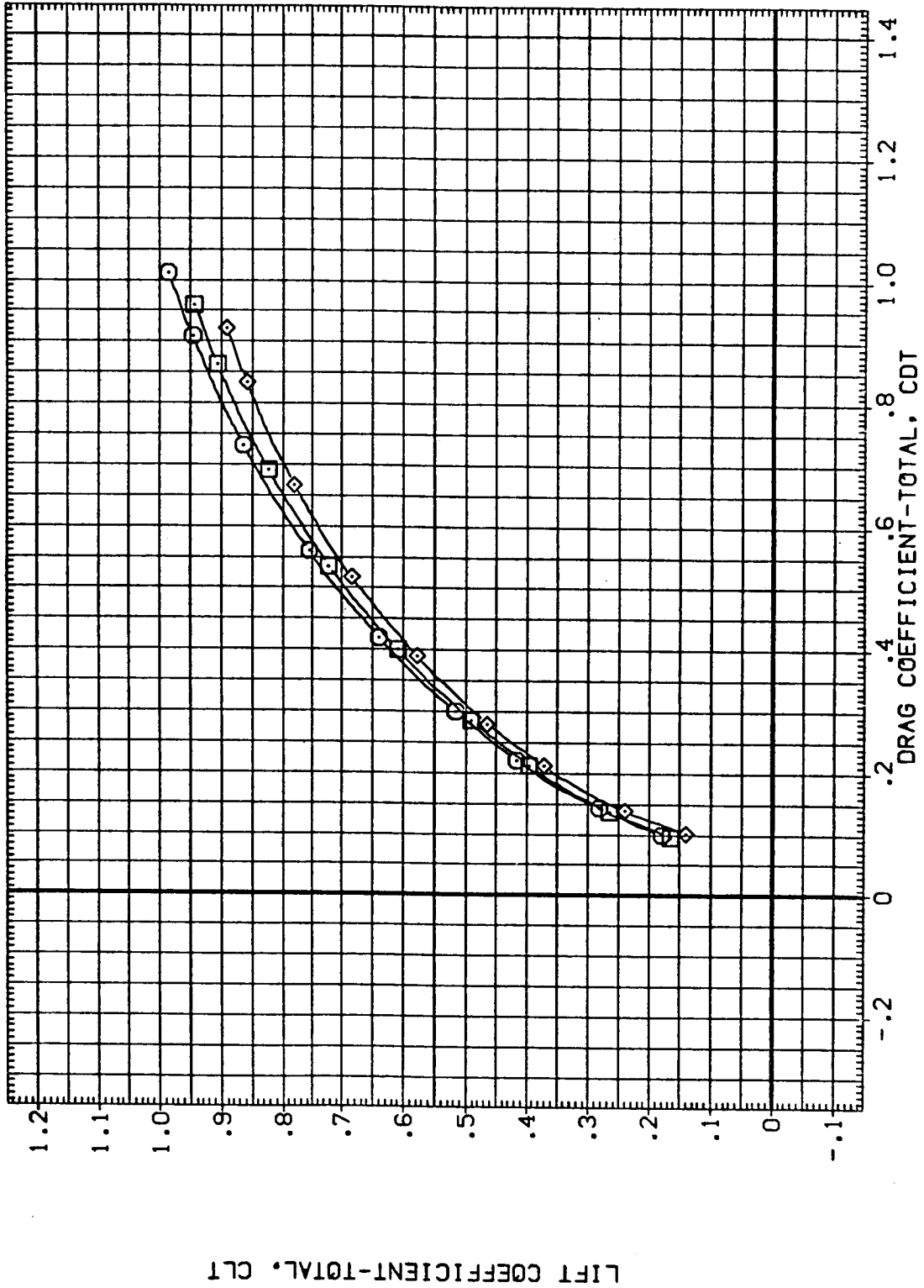


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

LIFT COEFFICIENT-TOTAL, CL1

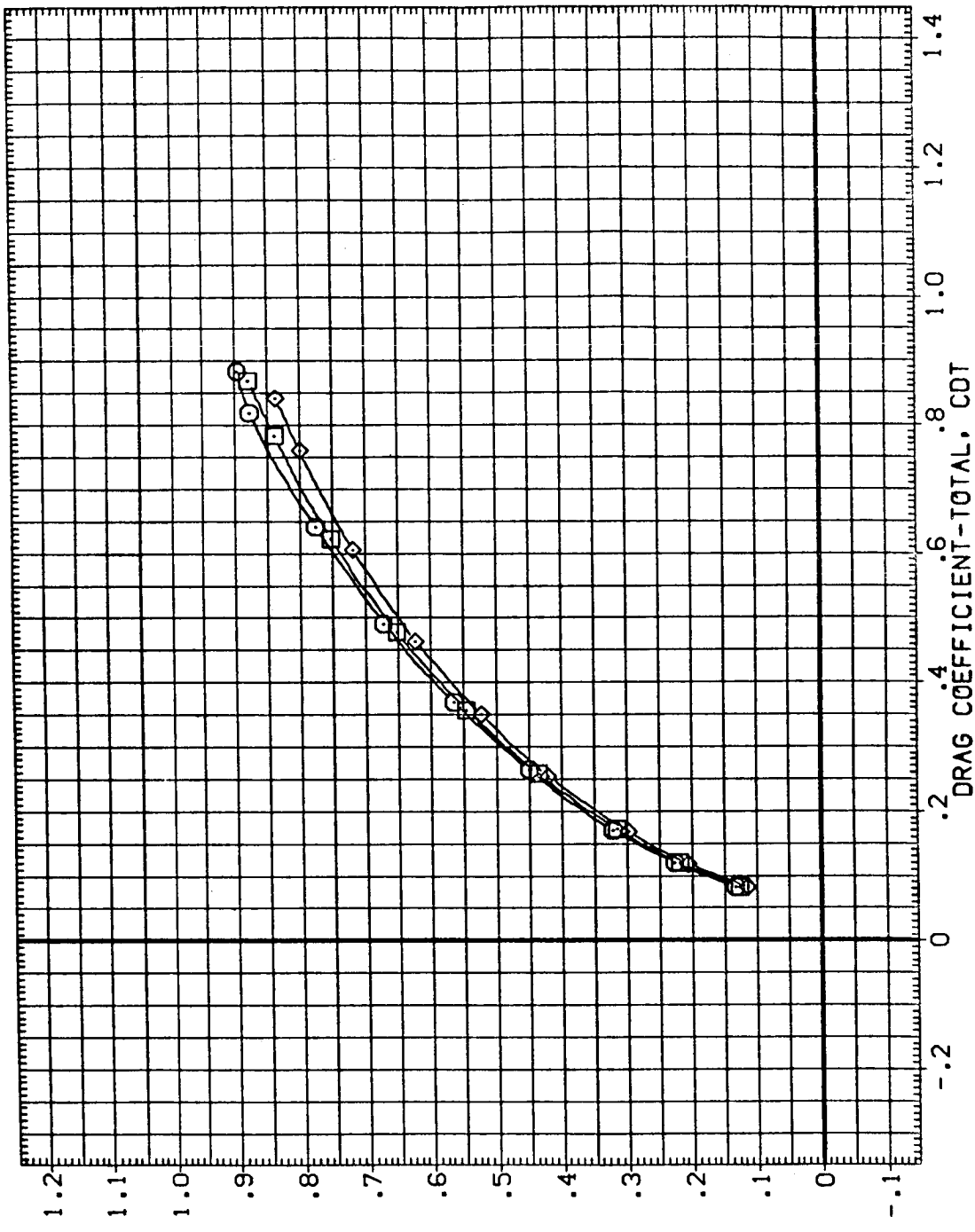


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 112

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 536.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

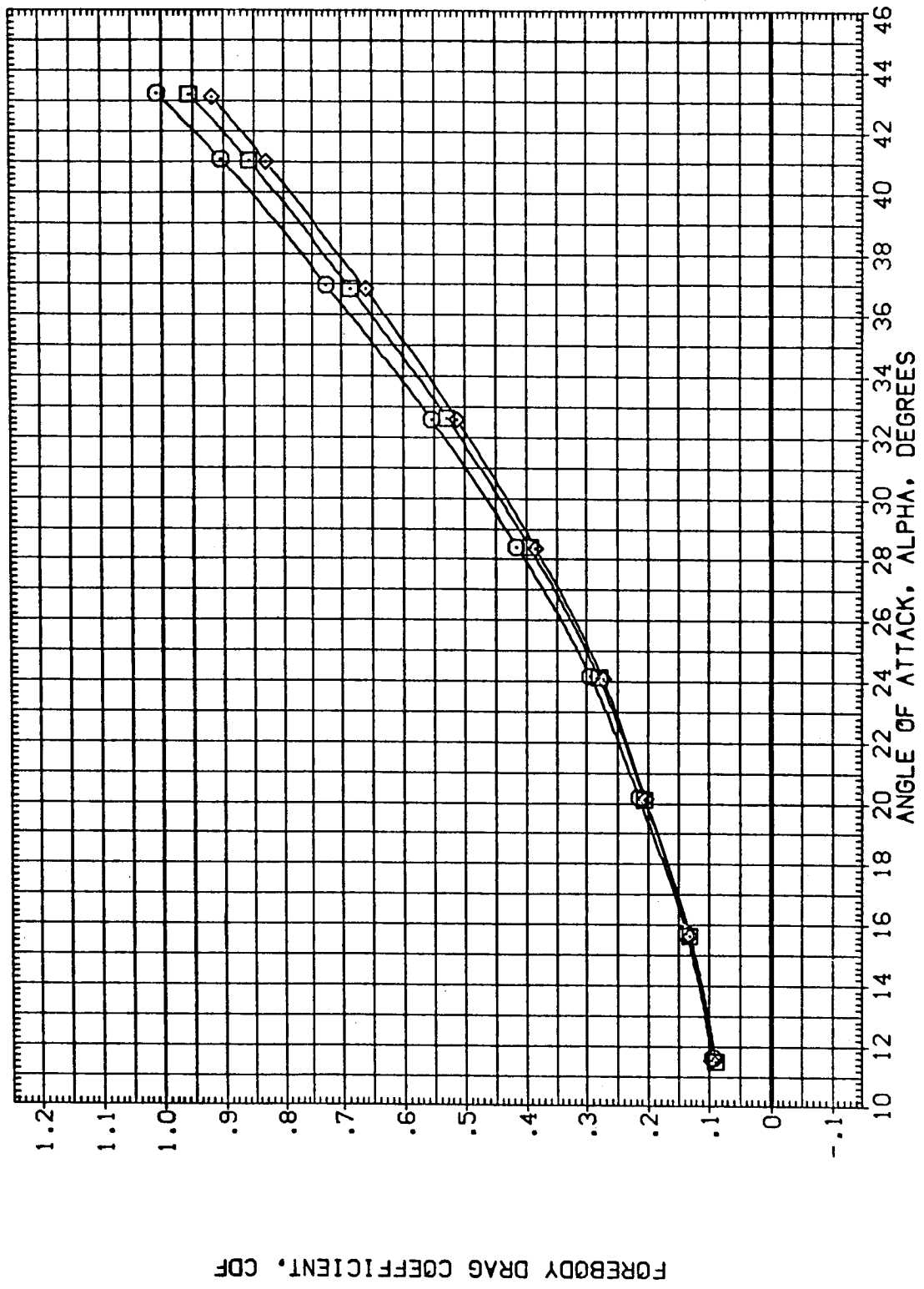


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 5.25
 PAGE 113

DATA SET SYMBOL (E0017) (E0018) (E0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 -10.000 -40.000

BOFLAP -11.700 -11.700 -11.700

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

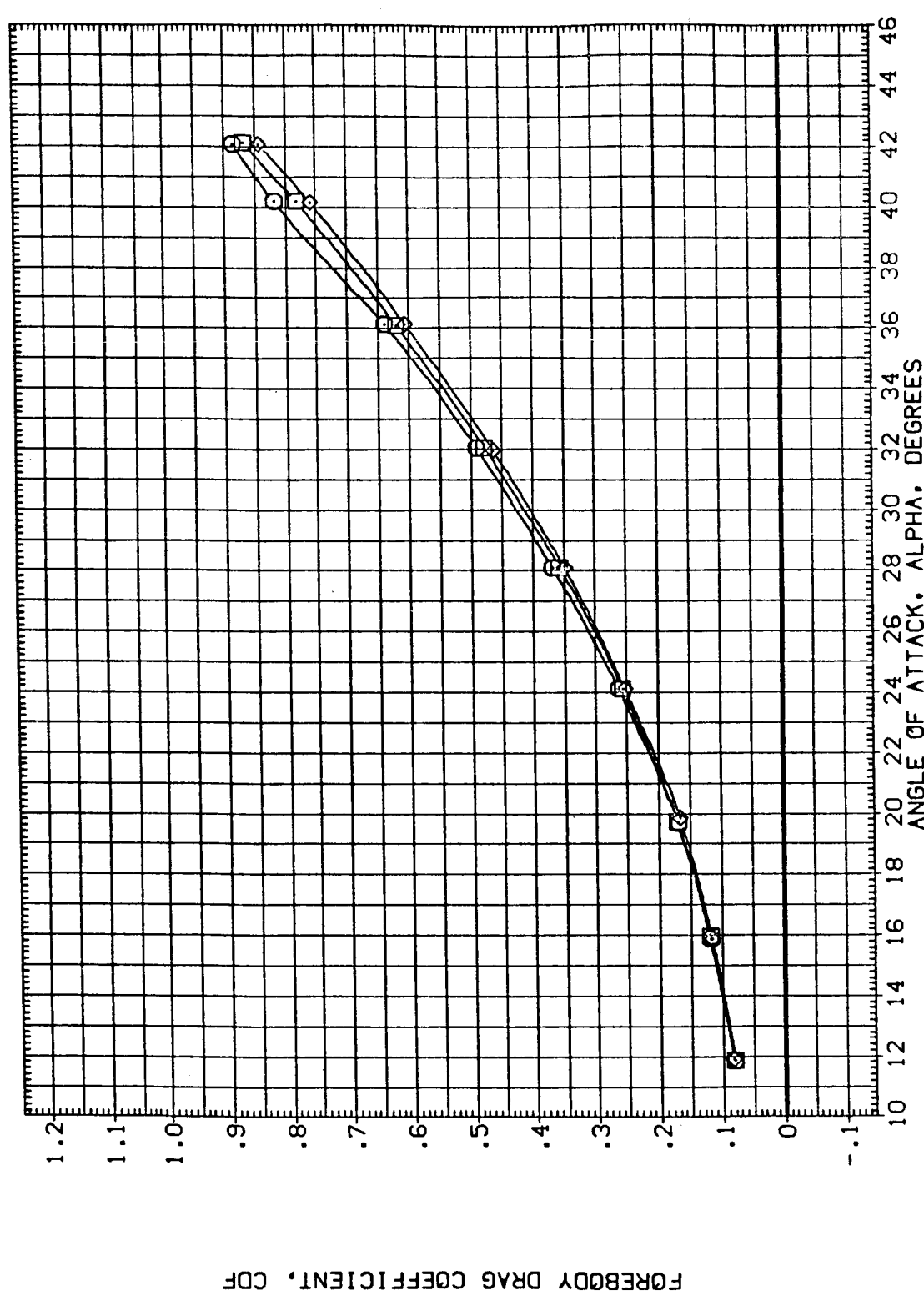


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 114

DATA SET SYMBOL
 (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 -10.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

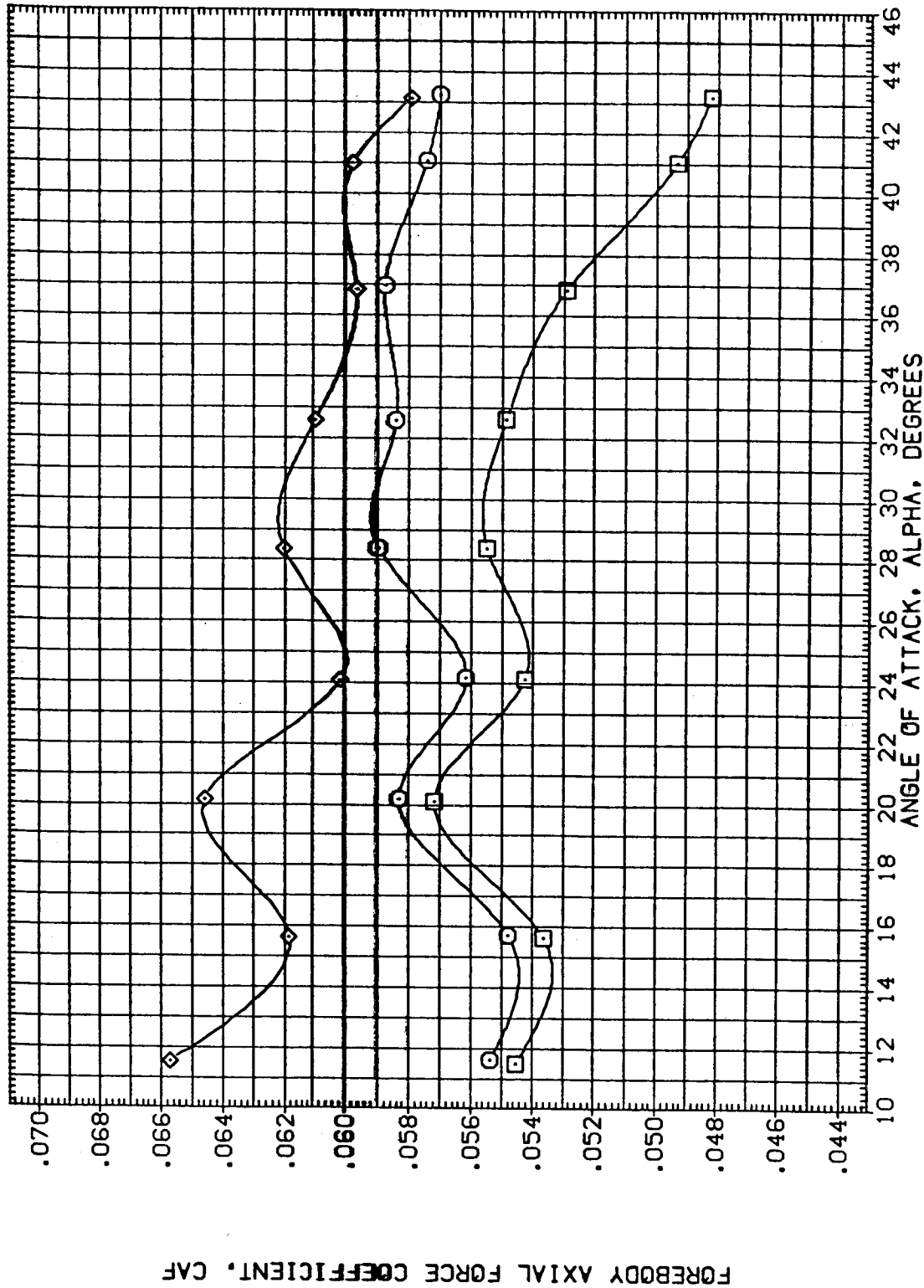


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (EE0017)
 (EE0018)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

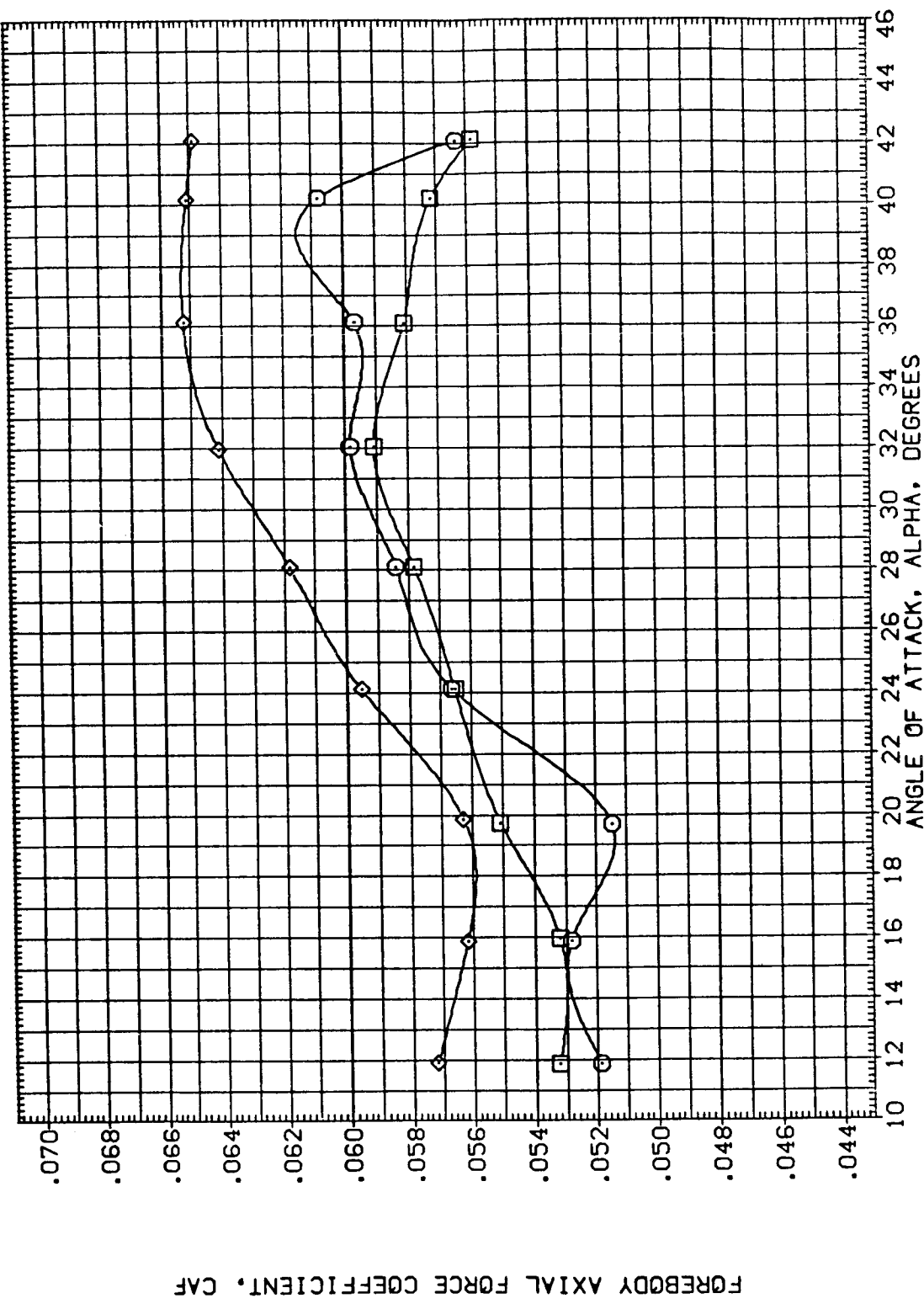


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27
 PAGE 116

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E00017) AMES 3.5-190 0A98 (011-07+H14-N24+DUMMY STING)
 (E00018) AMES 3.5-190 0A98 (011-07+H14-N24+DUMMY STING)
 (E00019) AMES 3.5-190 0A98 (011-07+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

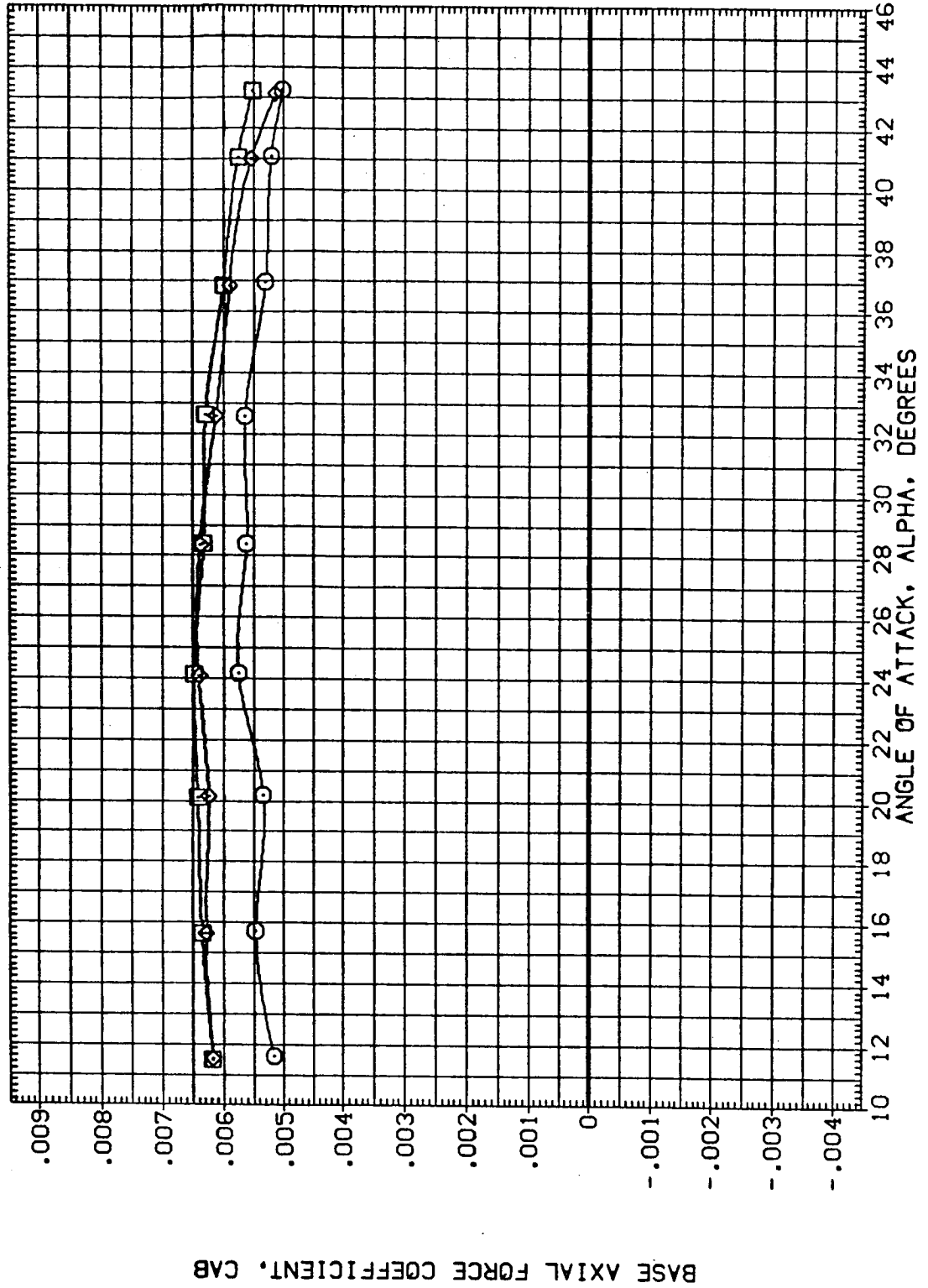


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(EE0018) AMES 3.5-190 0A98 (011-M7+M14-N2+DUMMY STING)

(EE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

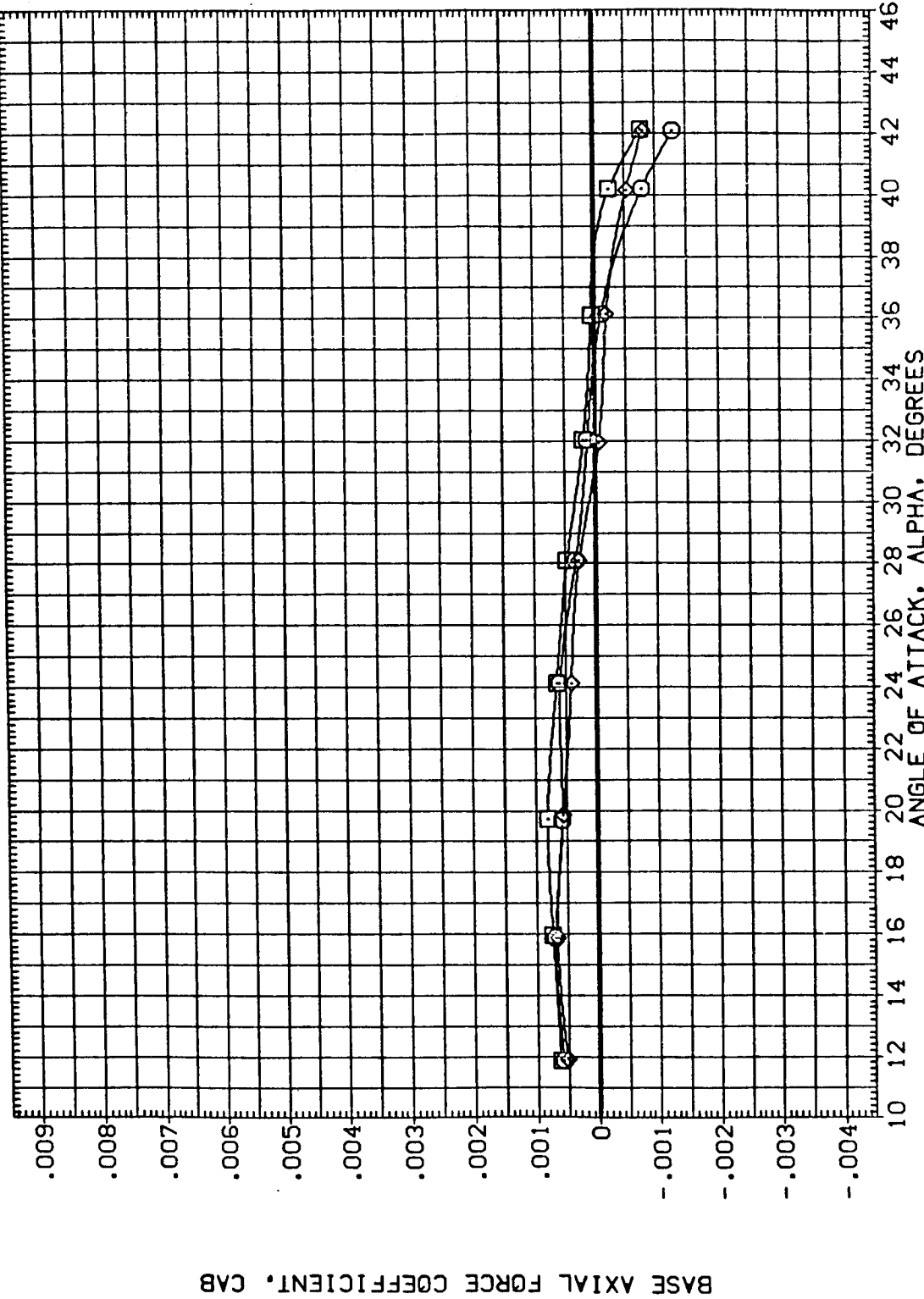
BREF 936.6800 IN.

XMRP 1076.7000 IN.XG

YMRP .0000 IN.YG

ZMRP 375.0000 IN.ZG

SCALE .0150



BASE AXIAL FORCE COEFFICIENT, CAB

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(BE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(BE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(BE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

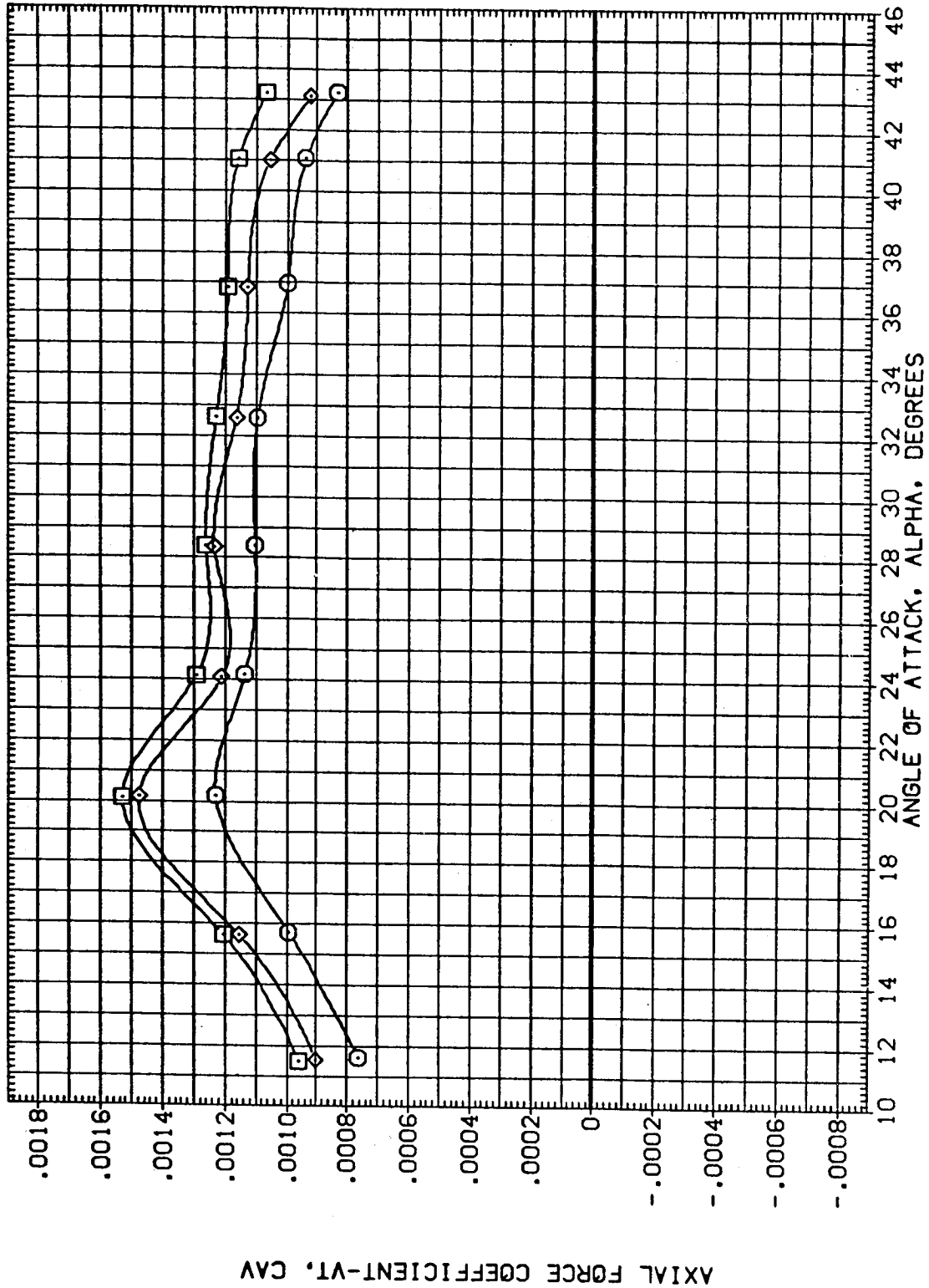


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 CA/MACH = 5.25 PAGE 119

DATA SET SYMBOL (BEG017)
 (BEG018)
 (BEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-17+H) 4-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-17+H) 4-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-17+H) 4-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

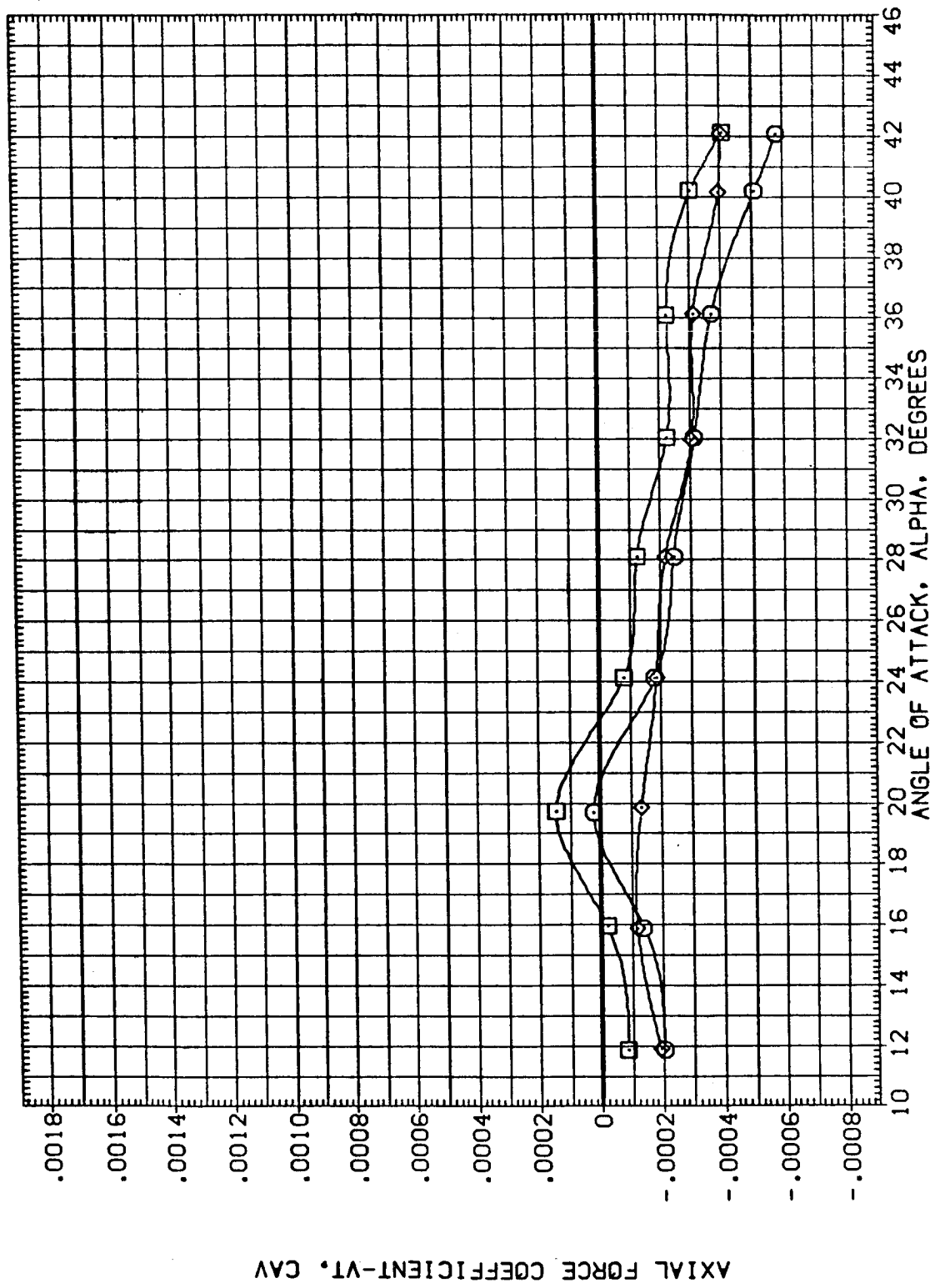


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SFDBRK	REFERENCE INFORMATION
(BEO017)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEO018)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEO019)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.9800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

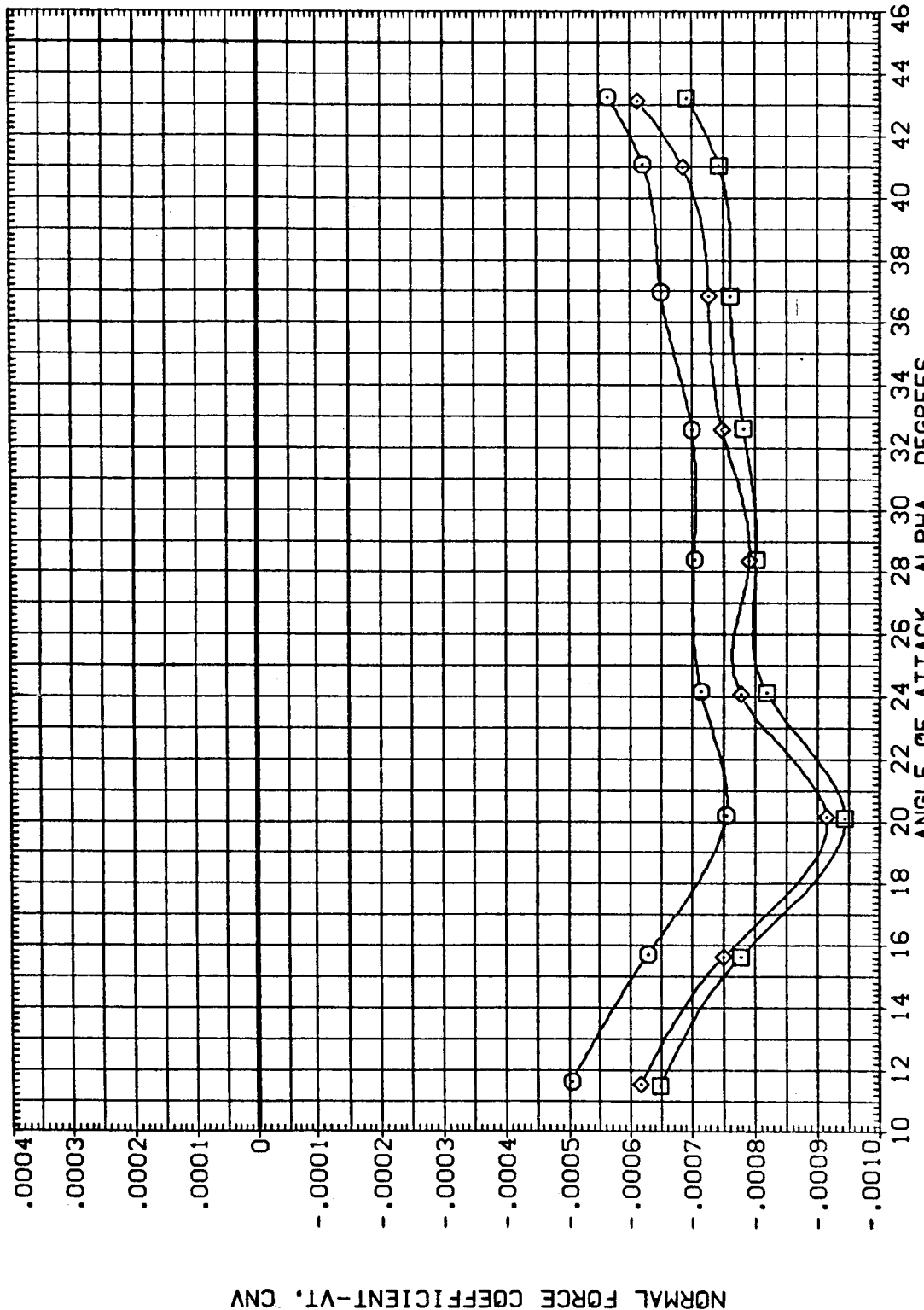


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (BE0017)
 (BE0018)
 (BE0019)

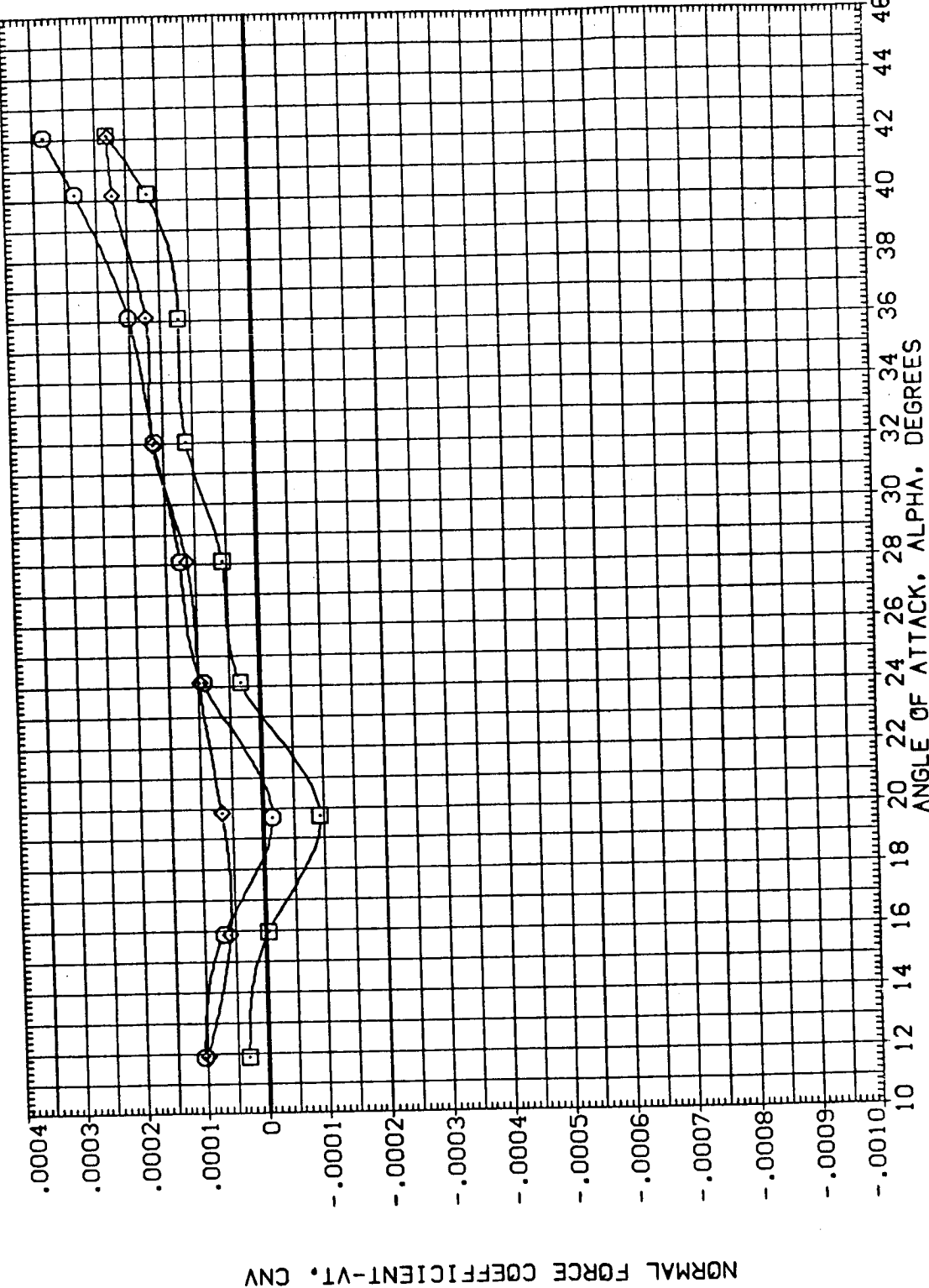
BETA
 .000
 .000
 .000

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

SPDRBK
 55.000
 55.000
 55.000

BOFLAP
 -11.700
 -11.700
 -11.700

ELEVON
 .000
 -10.000
 -40.000



REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEG0017) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(BEG0018) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(BEG0019) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

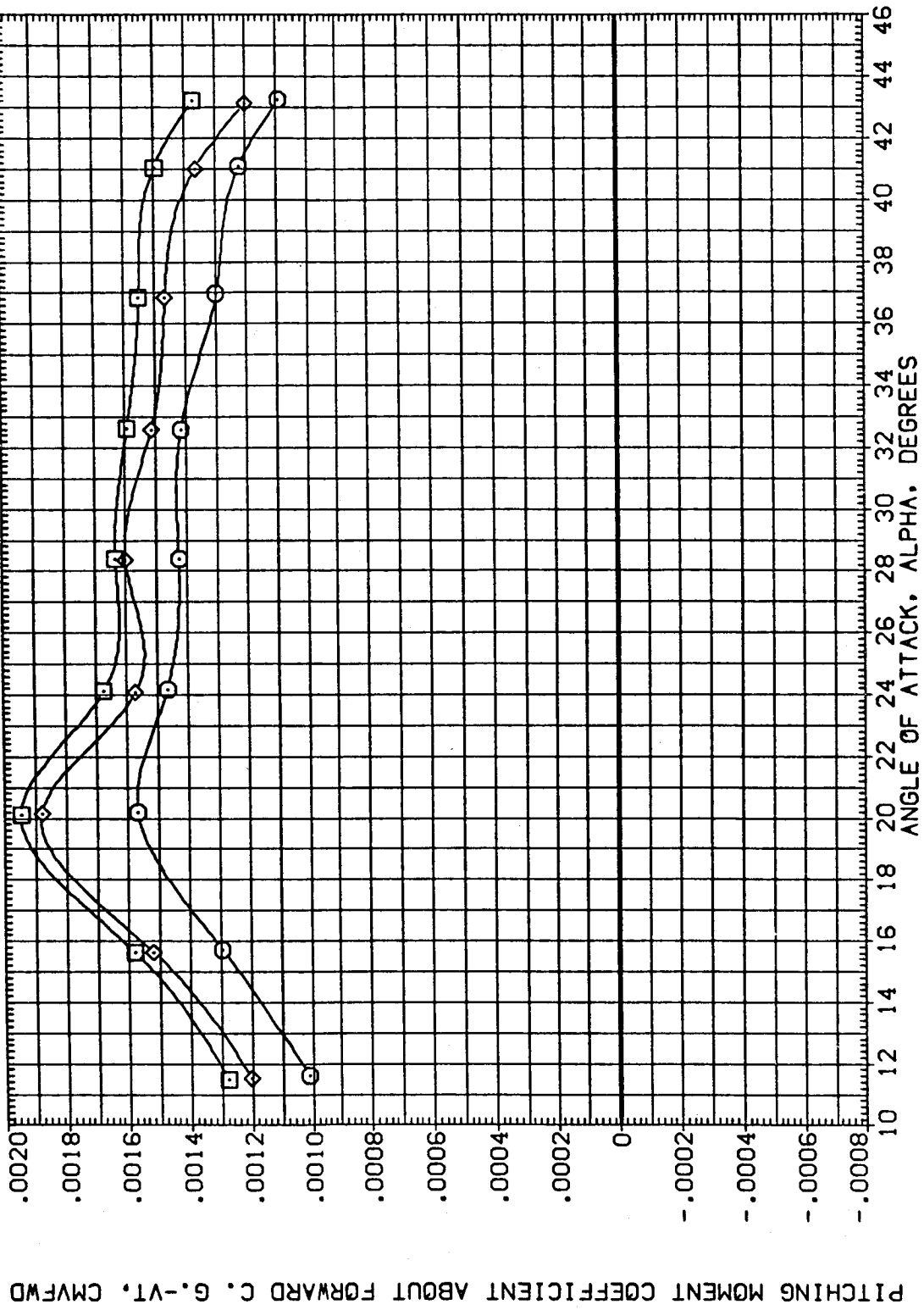


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (BEO017)
 (BEO018)
 (BEO019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 -10.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

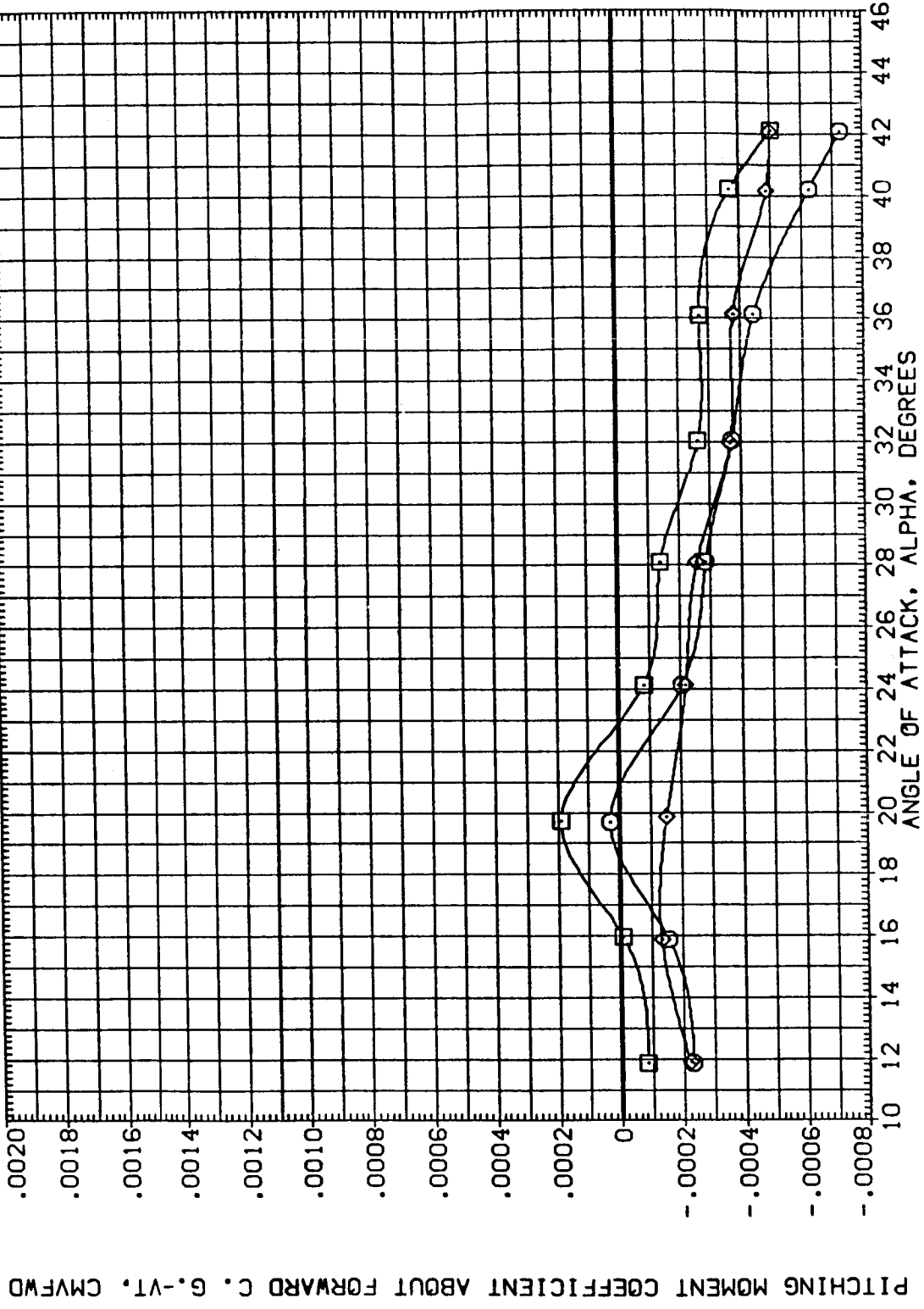


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(BEG017) AMES 3.5-190 0A98 (011-17+114-N24+DUMMY STING) .000 .000 -11.700 55.000 2690.0000 SQ.FT.

(BEG018) AMES 3.5-190 0A98 (011-17+114-N24+DUMMY STING) .000 -10.000 -11.700 55.000 474.8000 IN.

(BEG019) AMES 3.5-190 0A98 (011-17+114-N24+DUMMY STING) .000 -40.000 -11.700 55.000 936.6800 IN.
 YMRP 1076.7000 IN.XD
 ZMRP .0000 IN.YD
 SCALE 375.0000 IN.ZD
 .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

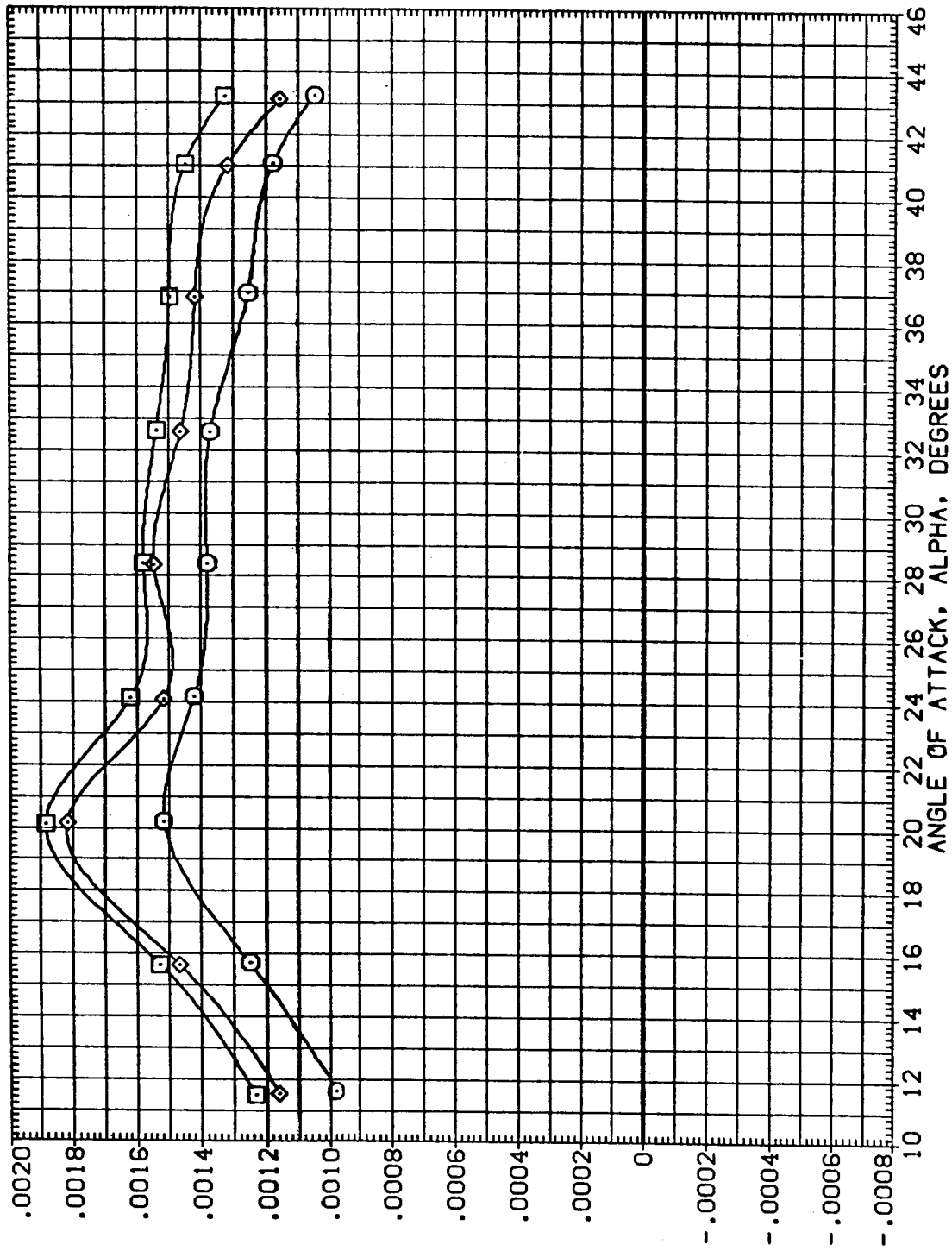


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL
 (BEG017)
 (BEG018)
 (BEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-150 CAS8 (011-M7-M14-N24+DUMMY STING)
 AMES 3.5-150 CAS8 (011-M7-M14-N24+DUMMY STING)
 AMES 3.5-150 CAS8 (011-M7-M14-N24+DUMMY STING)

BETA .000
ELEVON .000
BOFLAP -11.700
SPOBRK 55.000
SREF 2650.0000
LREF 474.8000
BREF 936.6800
XMRP 1076.7000
YMRP .0000
ZMRP 375.0000
SCALE .0150

REFERENCE INFORMATION
SQ.FT.
 IN.
 IN.
 IN.
 IN.
 IN.
 IN.
 IN.

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

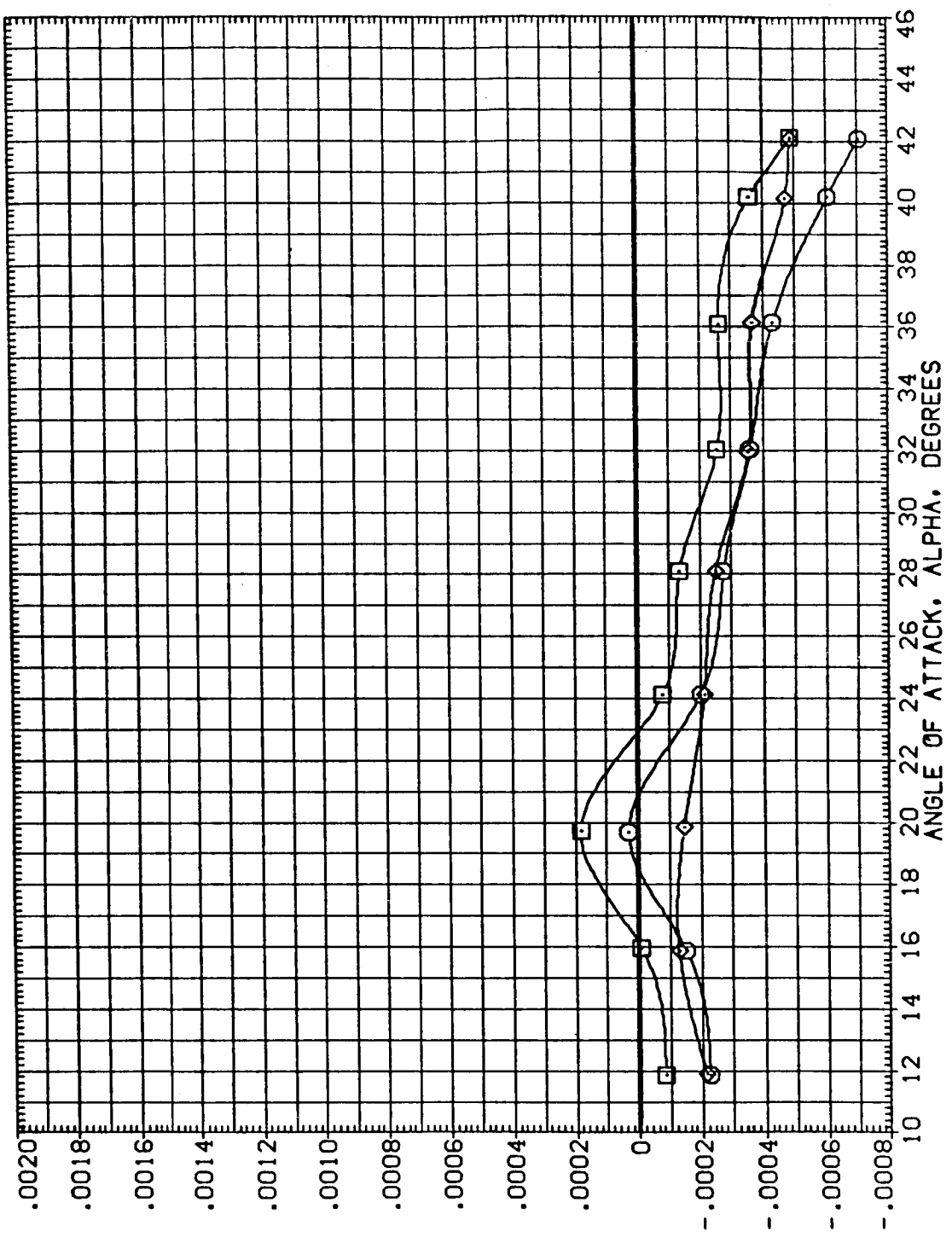


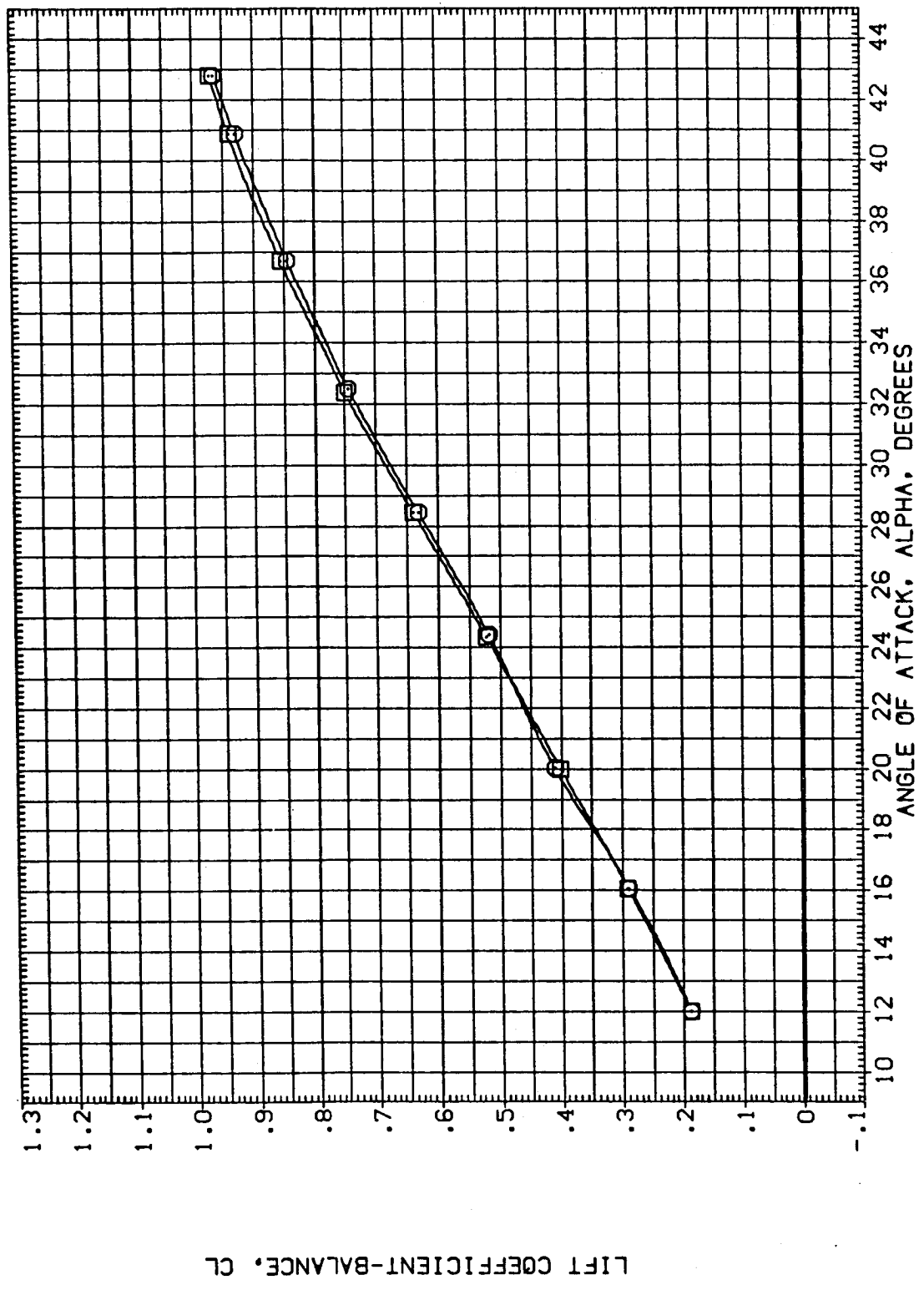
FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (JEG001) □ AMES 3.5-190 D498 (011-M7+M14)
 (CEG004) □ AMES 3.5-190 D498 (011-M7+M14)

BETA ELEVON BDFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN, X0
 YMRP .0000 IN, Y0
 ZMRP 375.0000 IN, Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JEG0001) (CEG0004) □

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14)

BETA .000
 .000
 ELEVON .000
 .000
 BOFLAP -11.700
 -11.700
 SPOBRK 55.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

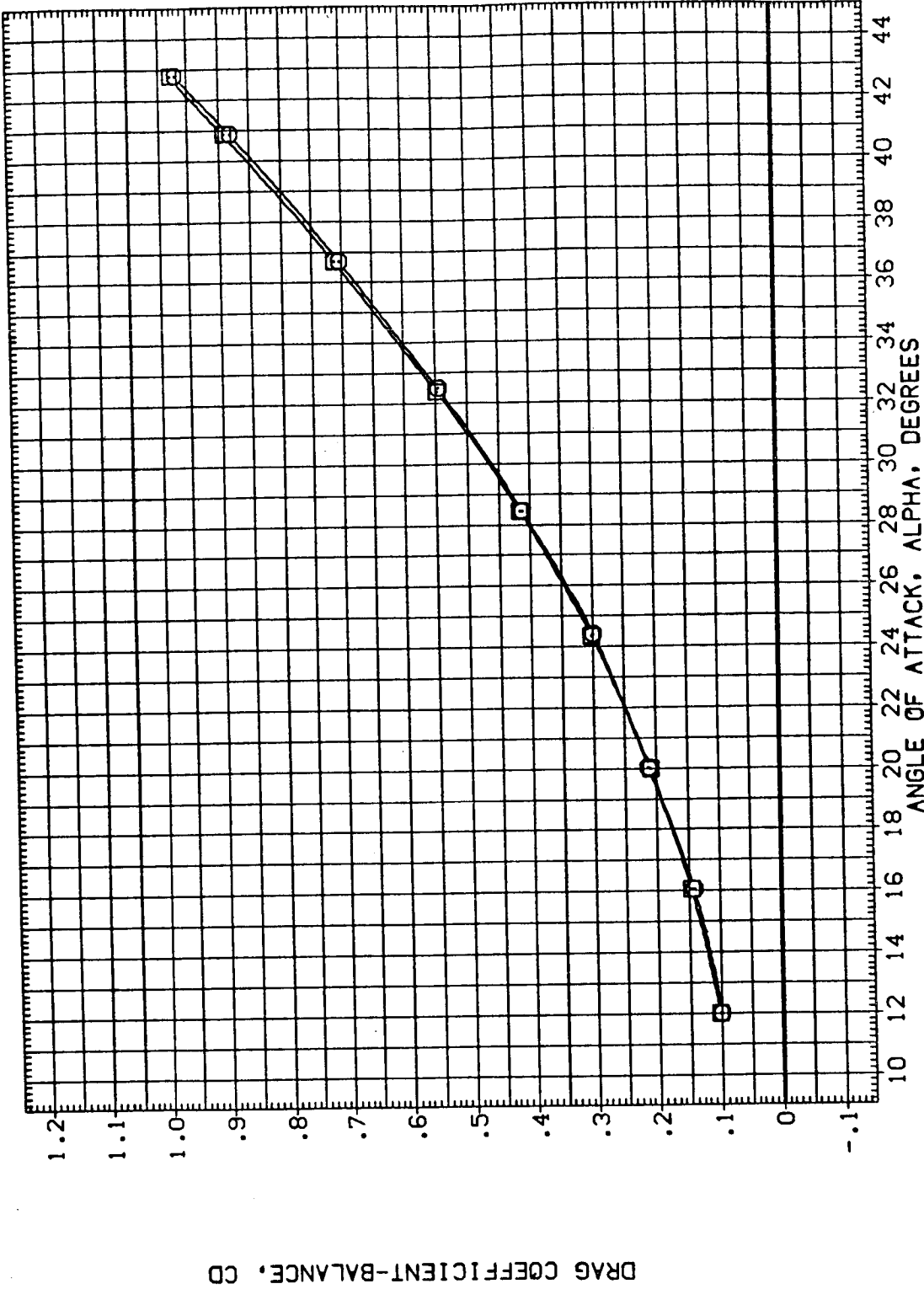


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25
 PAGE 128

DATA SET SYMBOL (JE0001) (CE0004)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7-M14)
 AMES 3.5-190 OA98 (011-M7-M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

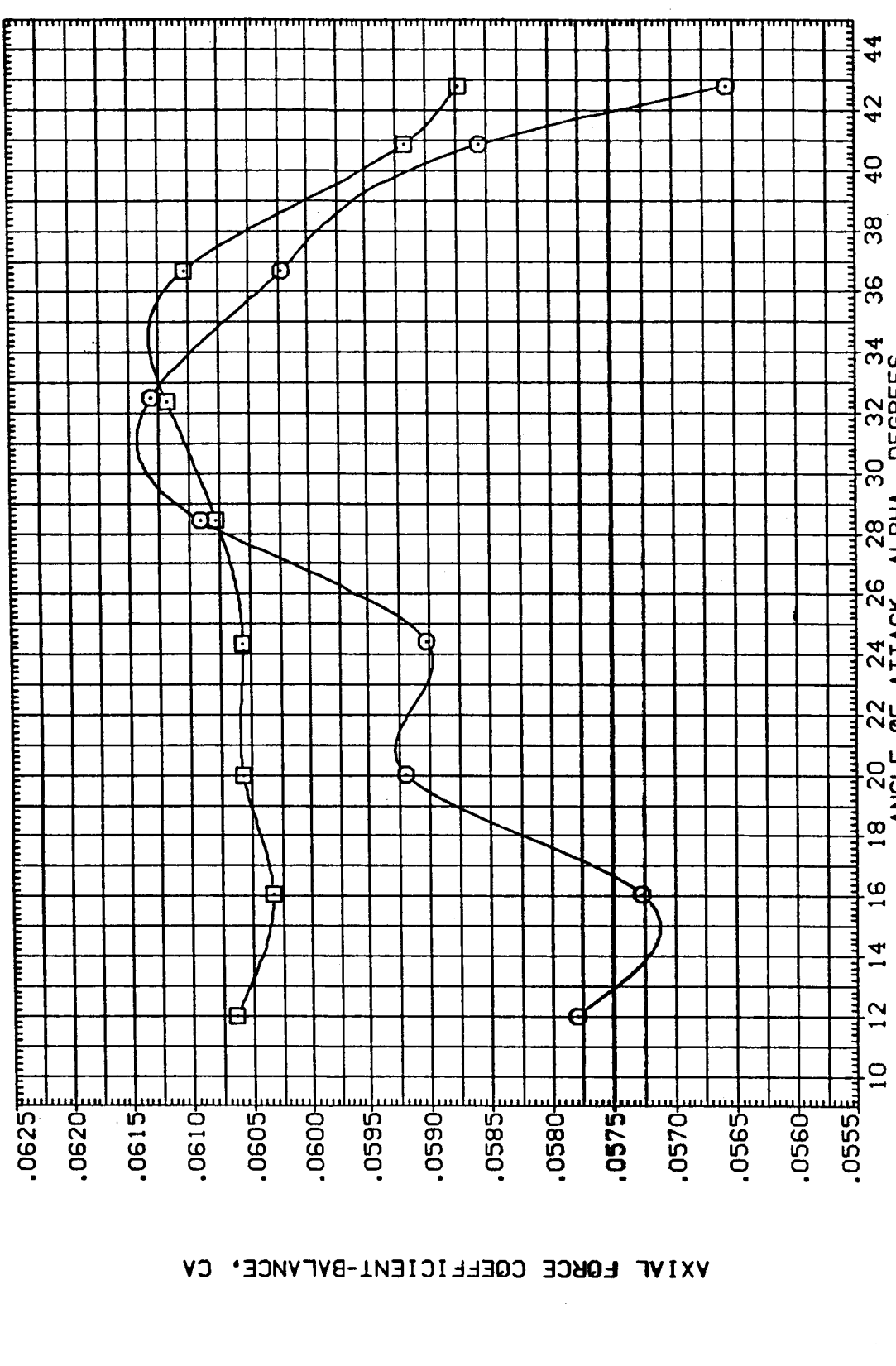


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (JEG0001) (CE0004)

BETA .000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OAS8 (011-47+M14)
 AVES 3.5-190 OAS8 (011-47+M14)

ELEVON .000 .000

SPDRBK 55.000 85.000

BOFLAP -11.700 -11.700

SPDRBK 55.000 85.000

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

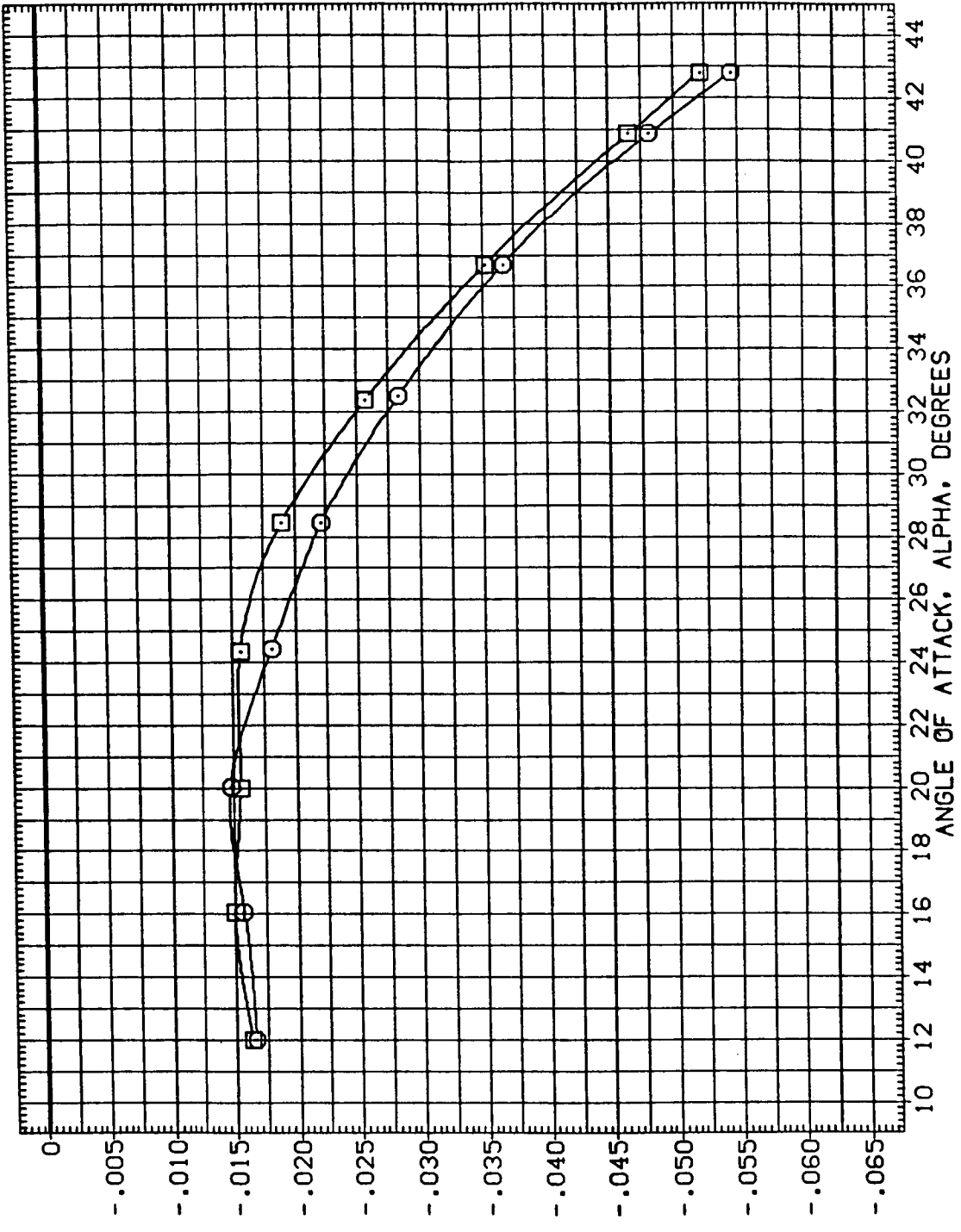


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JE0001) (CE0004)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 YMRP 375.0000 IN.Y0
 ZMRP .0150 IN.Z0
 SCALE

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMPT

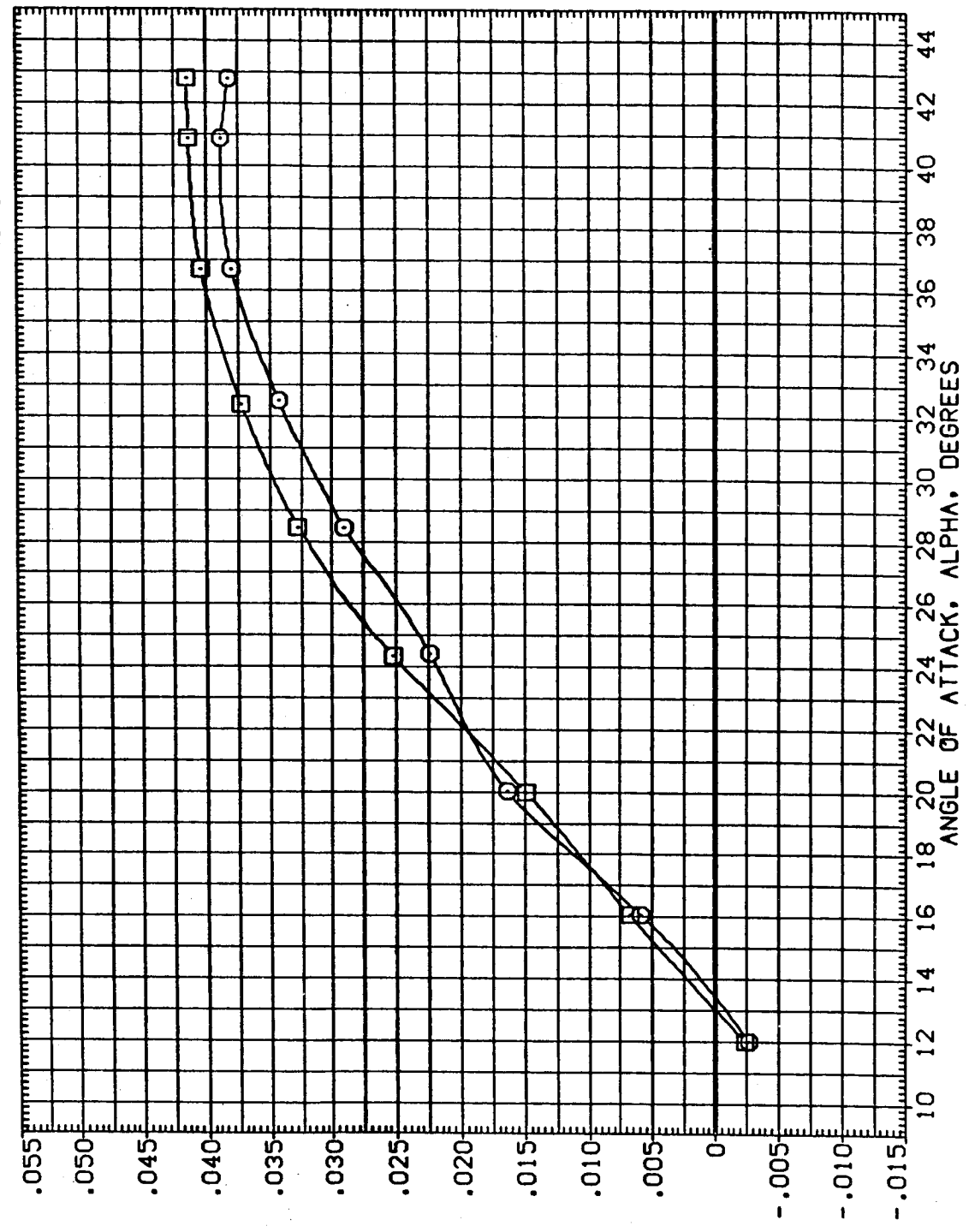
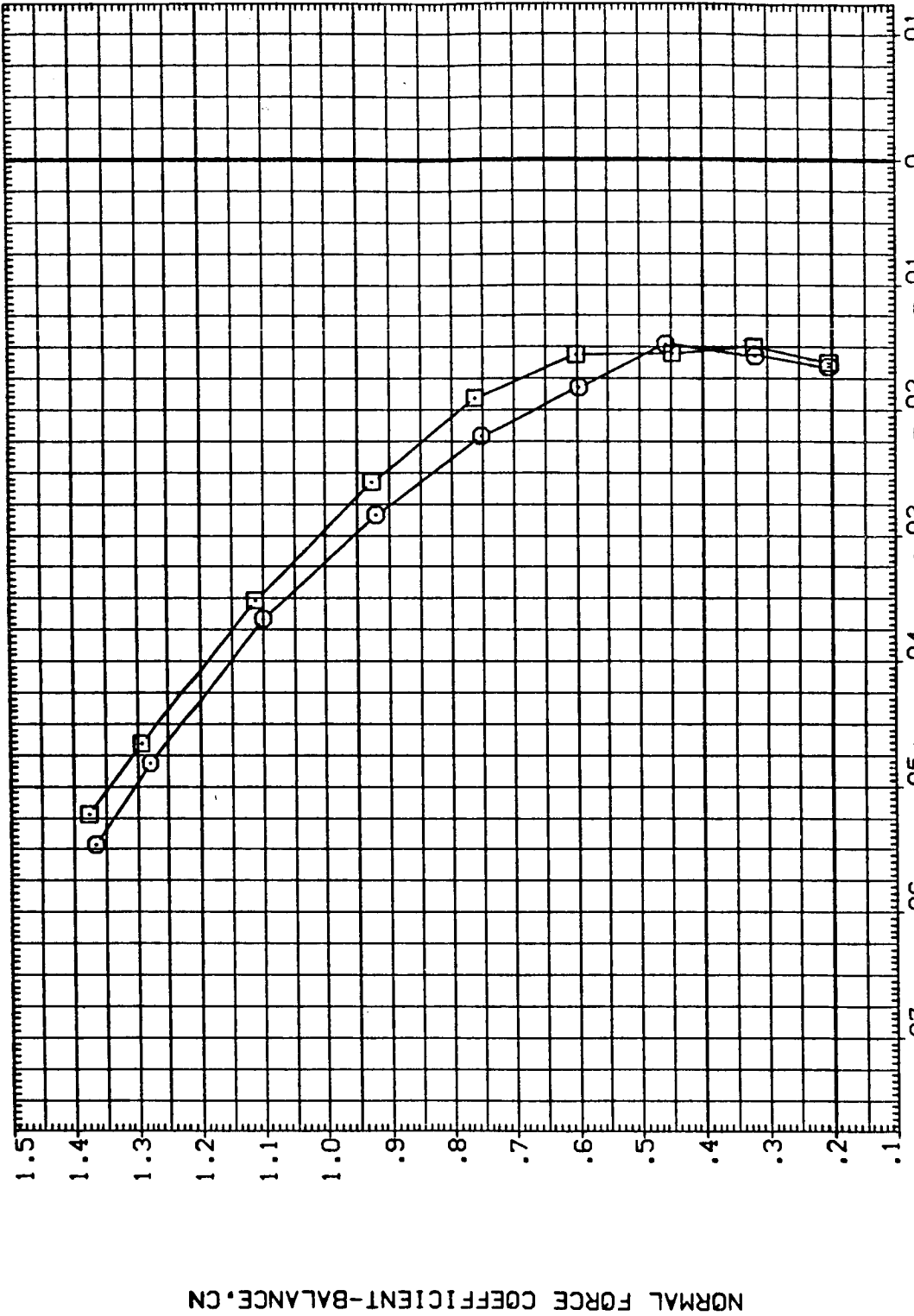


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (JEG001) AHES 3.5-190 GAS8 (011-H7+H14)
 (CEG004) AHES 3.5-190 GAS8 (011-H7+H14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000
 85.000


REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

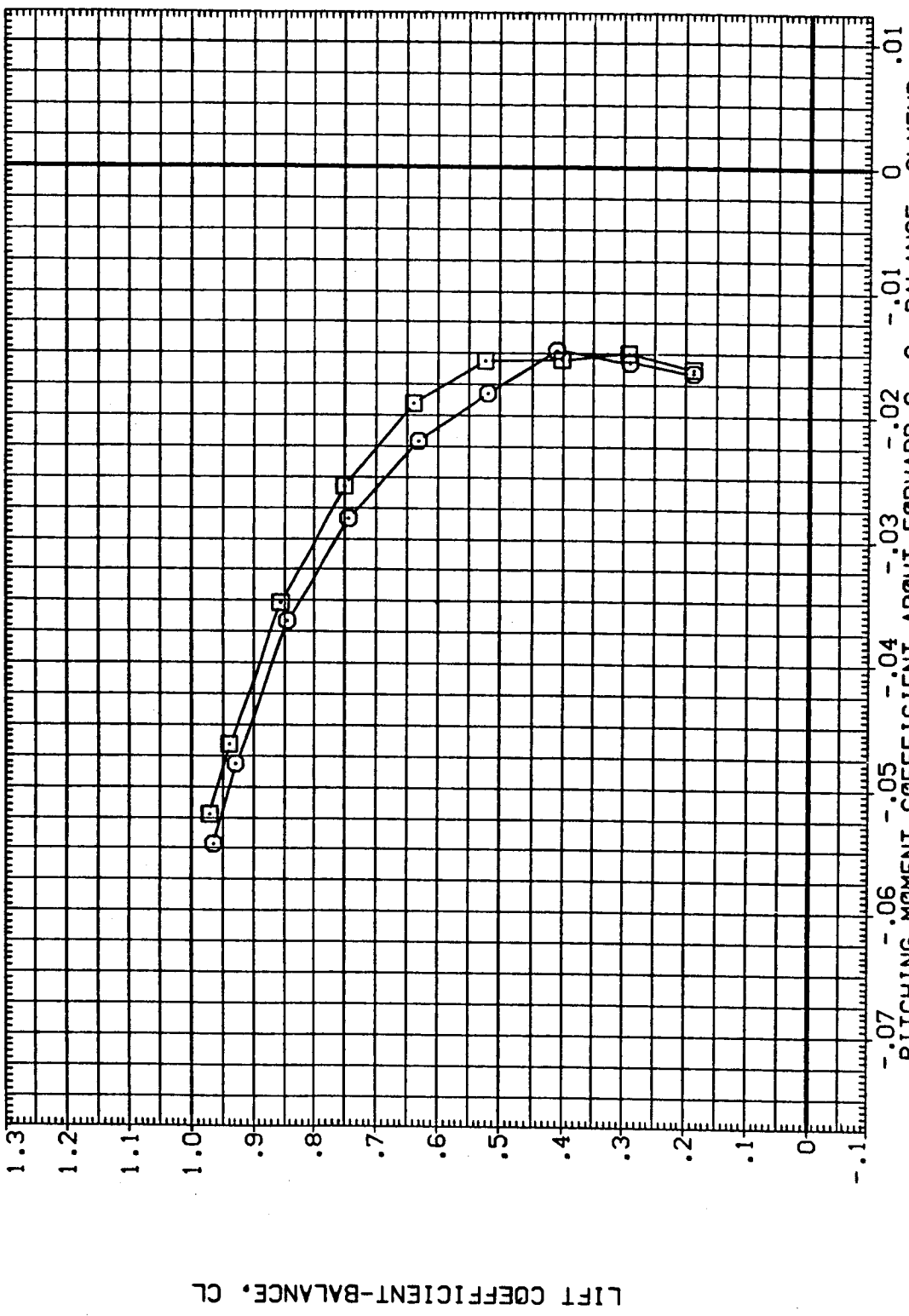
FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JEC001) (CE004)  CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-17+M14) AMES 3.5-190 0A98 (011-17+M14)

BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPEEDBRK 55.000 85.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.8800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

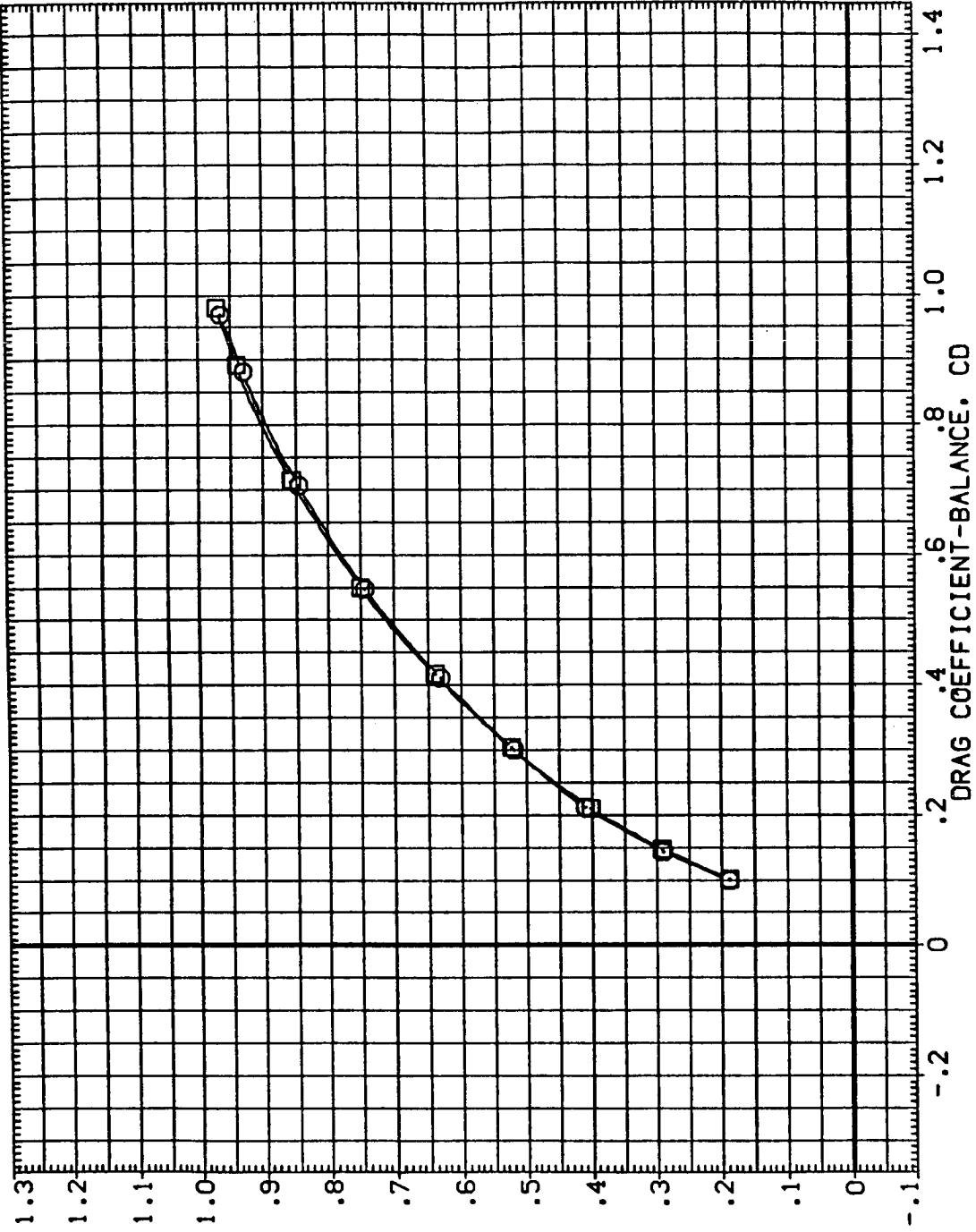
FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (JEG001) AMES 3.5-190 CAS8 (011-17-M14)
 (CEG004) AMES 3.5-190 CAS8 (011-17-M14)

BETA .000
 .000
 .000
 .000
 .000
 .000
 .000
 .000
 .000
 .000
 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

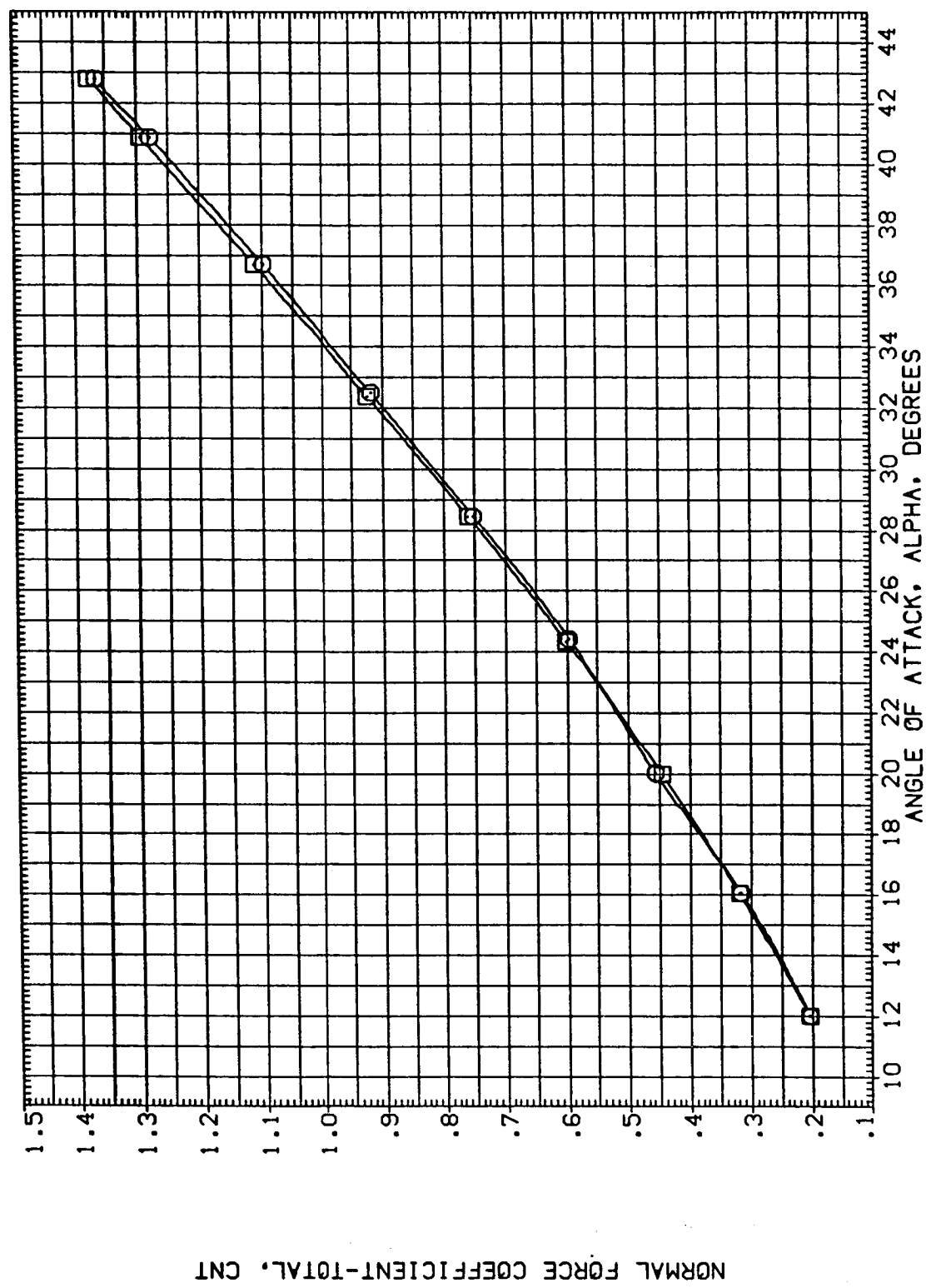
FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (KEG001) AMES 3.5-190 0A98 (011-M7-M14)
 (EEQ004) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEV/ON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 65.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

DATA SET SYMBOL (KE0001) (EE0004)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700

SPOBRK 55.000
 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

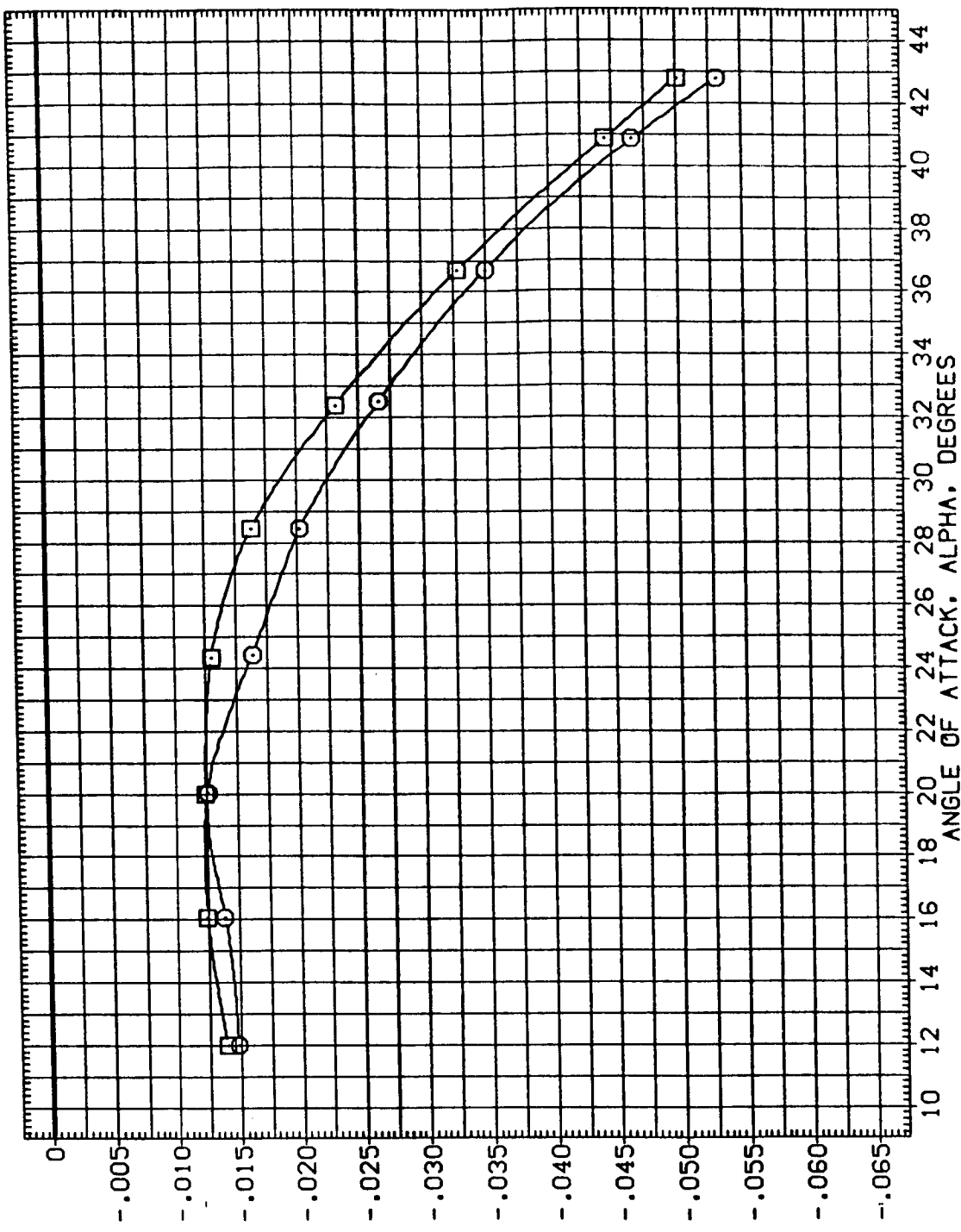


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (KE0001) \square AMES 3.5-150 OA98 (011-M7+M14)
 (EE0004) \circ AMES 3.5-150 OA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

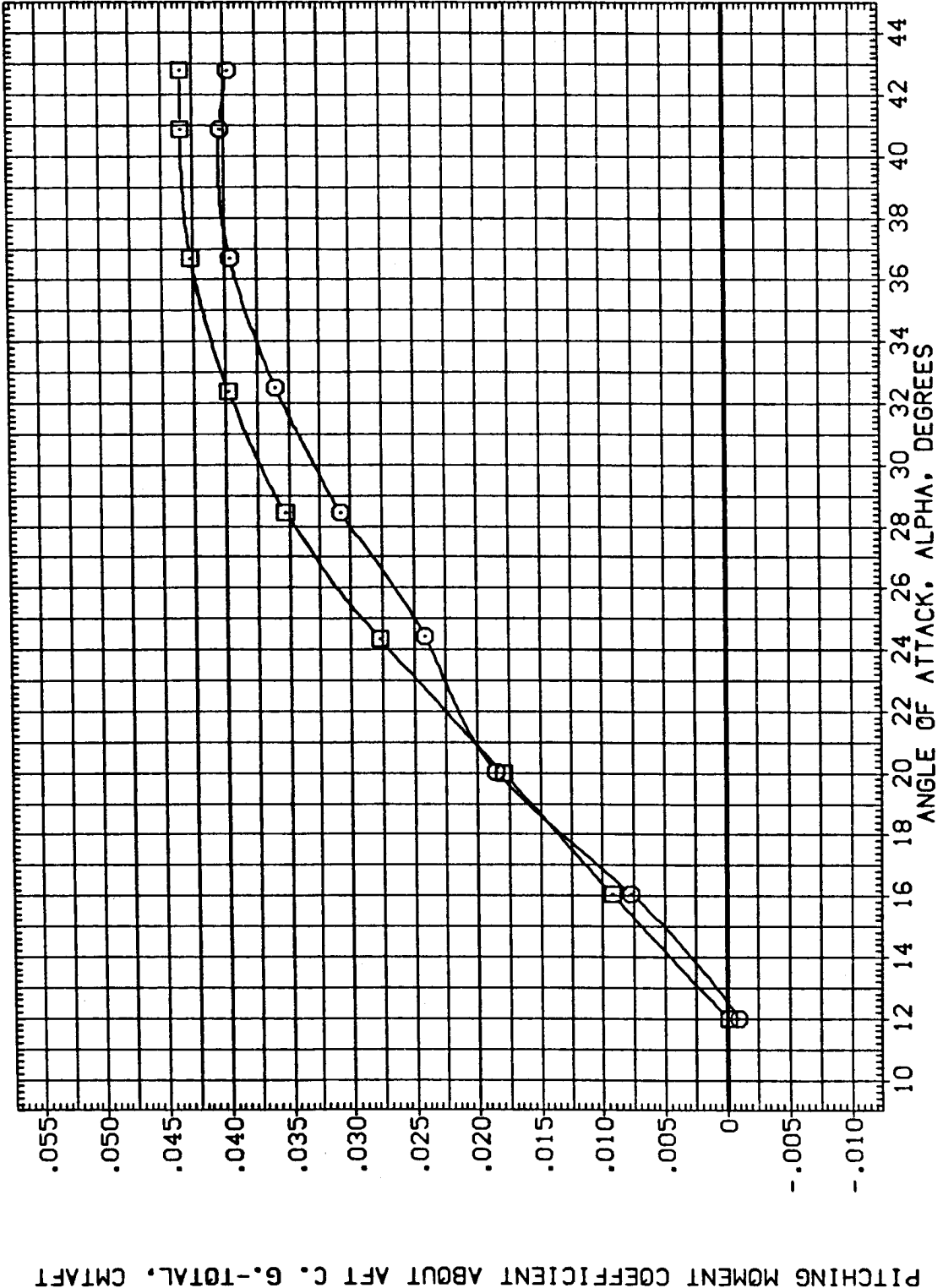


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (KE0001) (EE0004)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

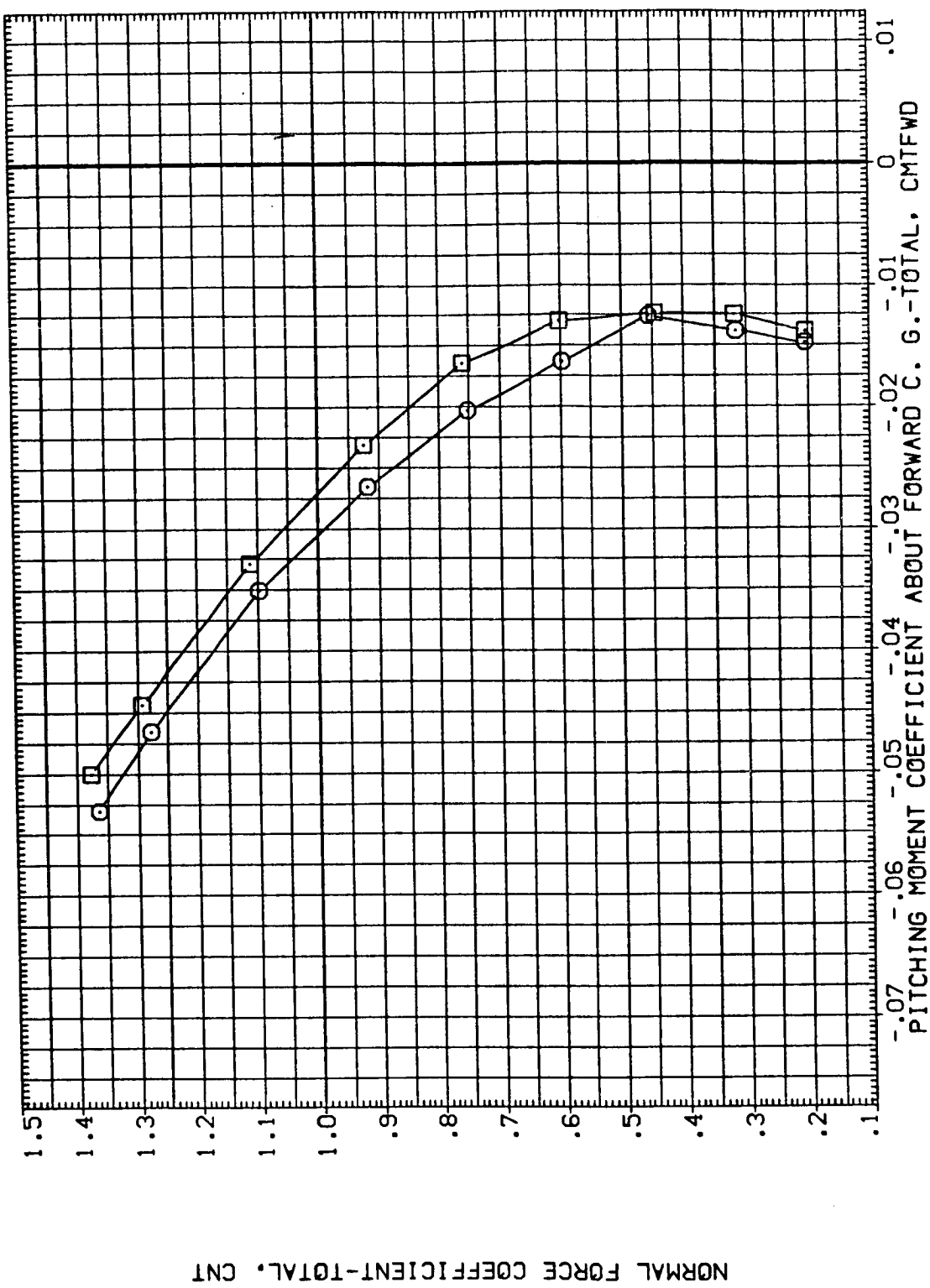


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (KEG001) \square AMES 3.5-190 DA98 (011-M7+M14)
 (EEG004) \circ AMES 3.5-190 DA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN, X0
 YMRP .0000 IN, Y0
 ZMRP 375.0000 IN, Z0
 SCALE .0150

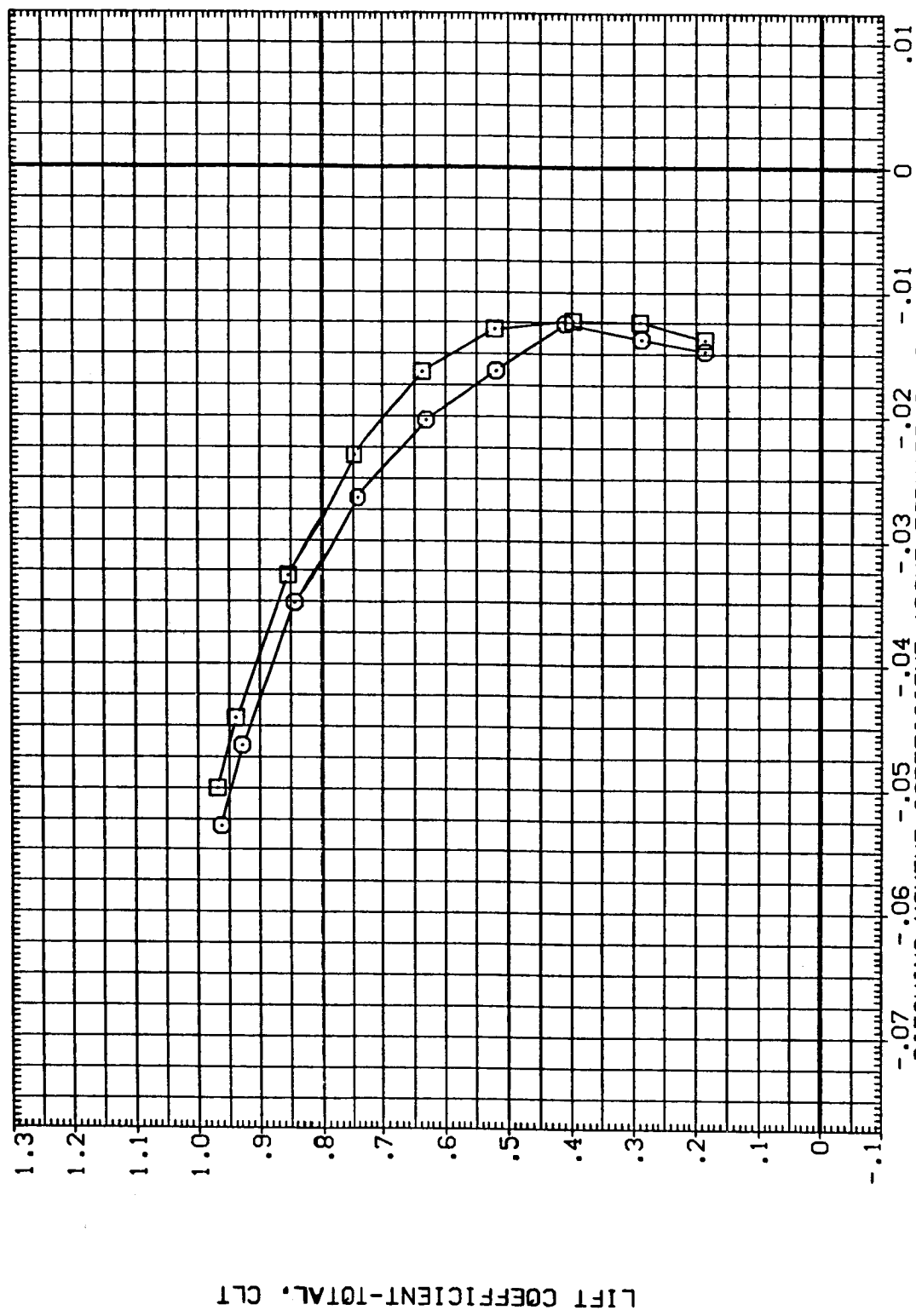


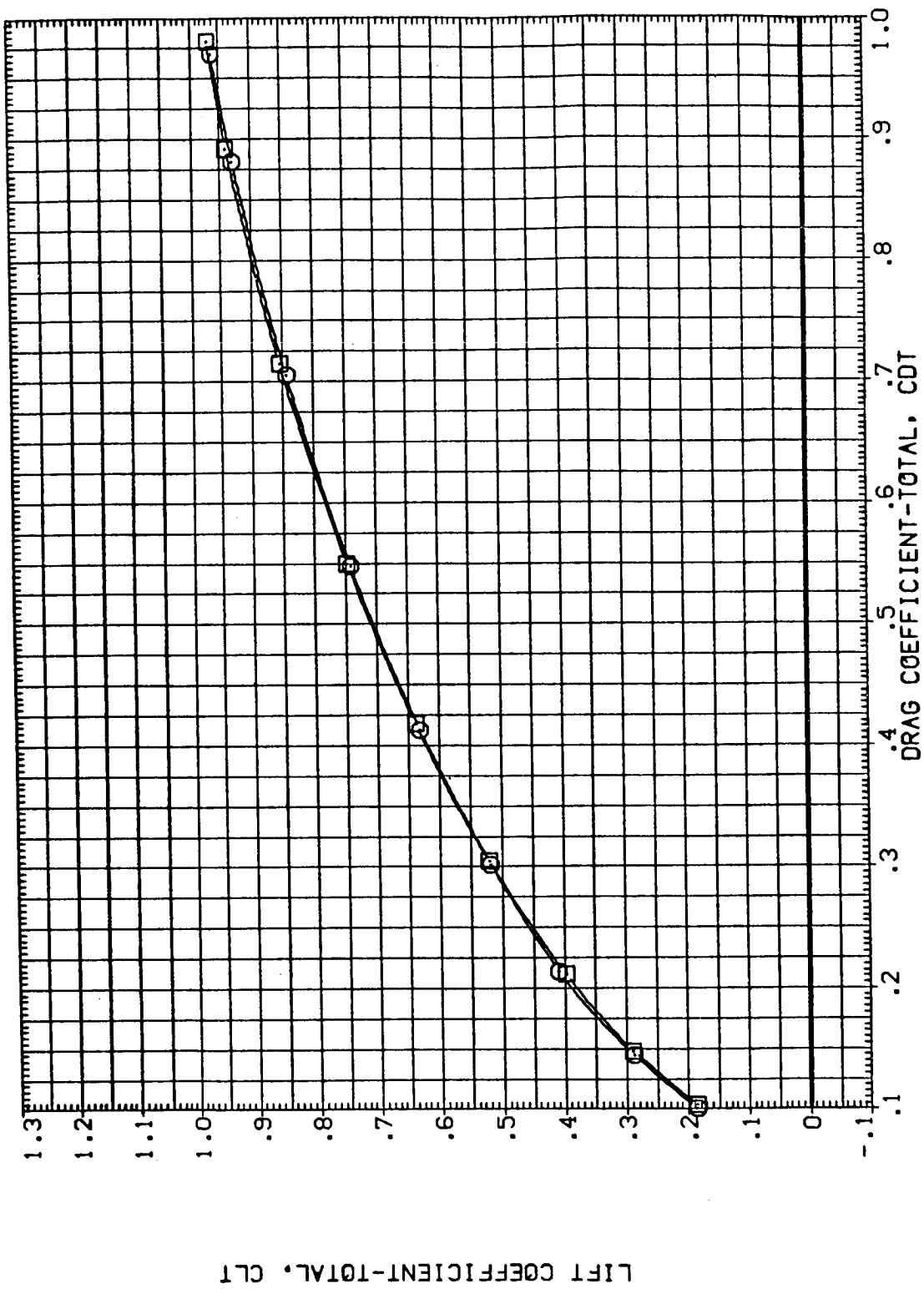
FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

BETA .000
 ELEVON .000
 BDFLAP -11.700
 SPOBRK 55.000
 85.000

DATA SET SYMBOL (EE0004)
 CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)



LIFT COEFFICIENT-TOTAL, CLT

DRAG COEFFICIENT-TOTAL, CDT

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (KE0001) (EE0004)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8600 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

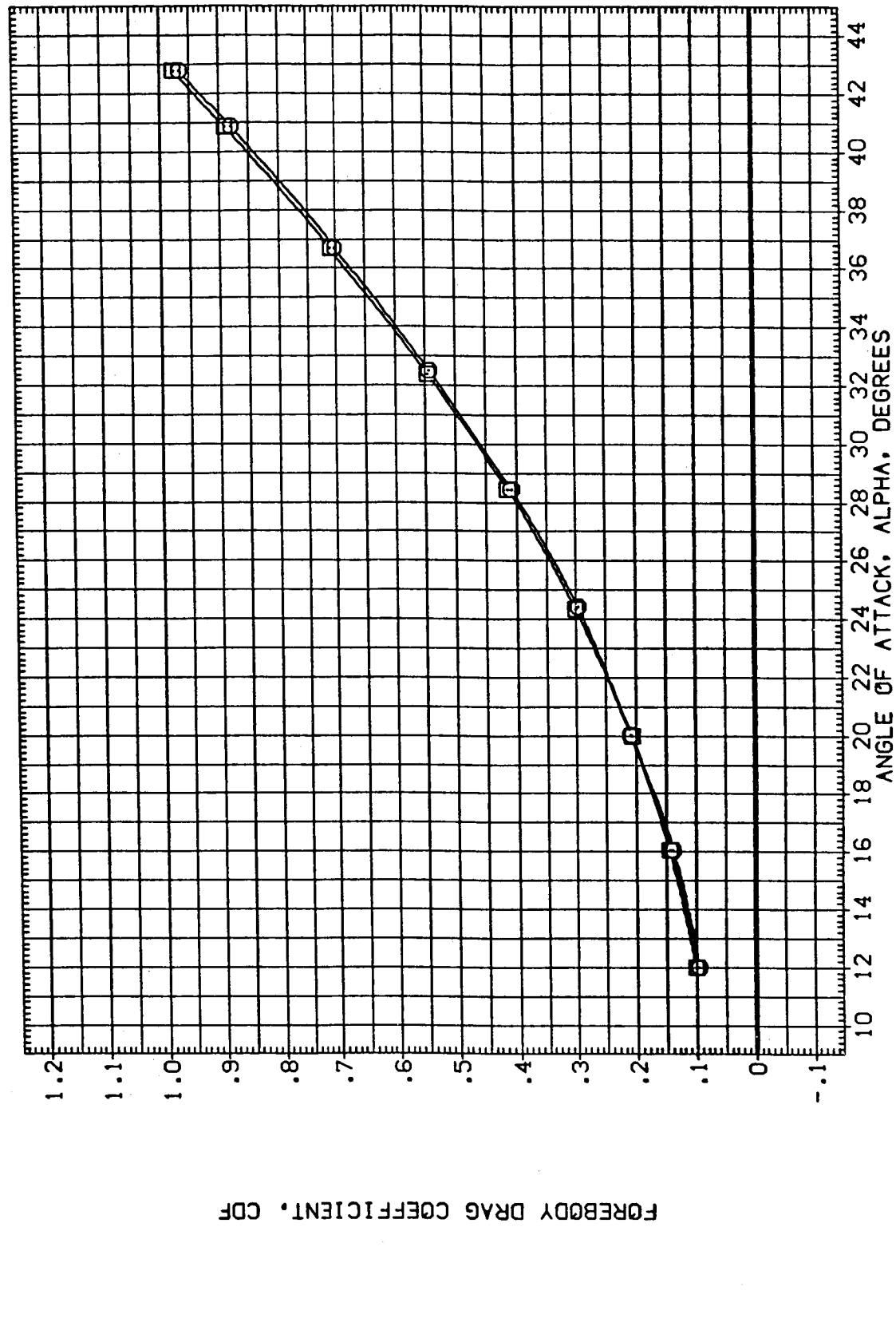


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(M)MACH = 5.25

DATA SET SYMBOL (1E0001) (1E0004)

CONFIGURATION DESCRIPTION
 ARES 3.5-190 CAS8 (011-M7-M14)
 ARES 3.5-190 CAS8 (011-M7-M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.6800
 IN. 1076.7000
 IN. 375.0000
 IN. 20

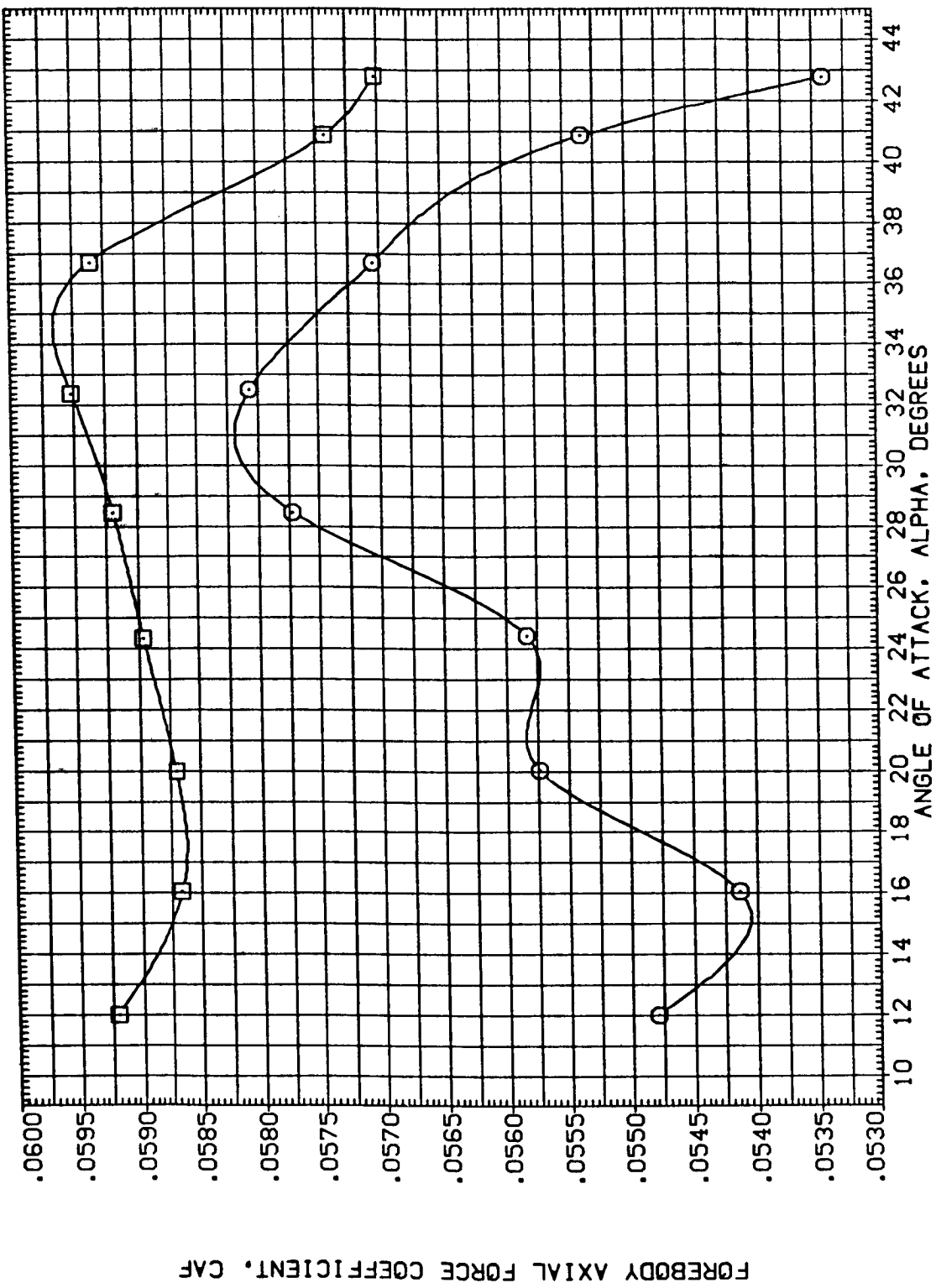


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (M)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (KE0001) ◻ AMES 3.5-190 0/98 (011-M7+M14)
 (EE0004) ◻ AMES 3.5-190 0/98 (011-M7+M14)

BETA ELEVON BDFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8000 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

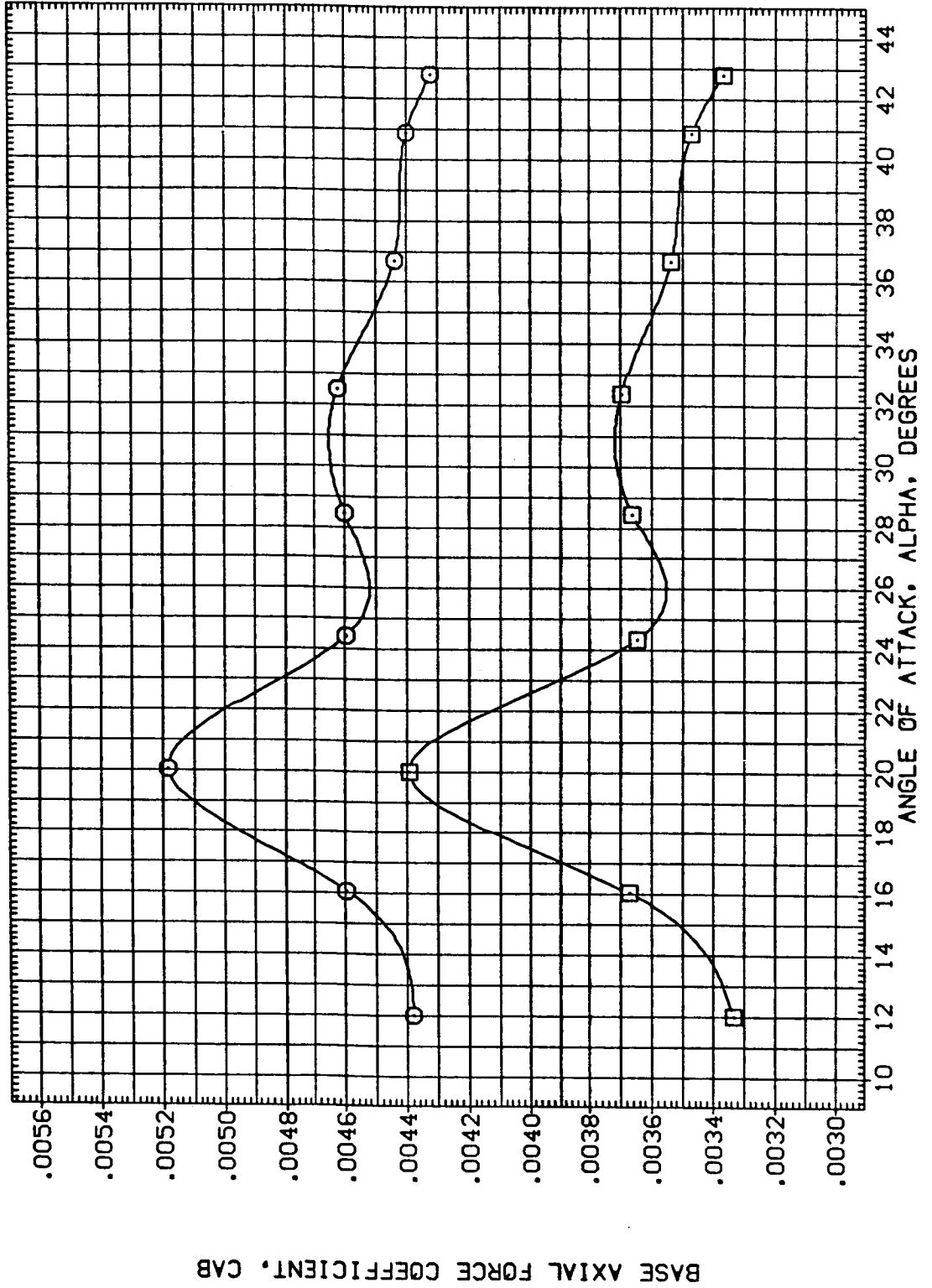


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL
(1E0001)
(BEG0004)

CONFIGURATION DESCRIPTION
AVES 3.5-190 DA98 (011-M7+M14)
AVES 3.5-190 DA98 (011-M7+M14)

BETA .000
ELEVON .000
BOFLAP -11.700

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 926.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150

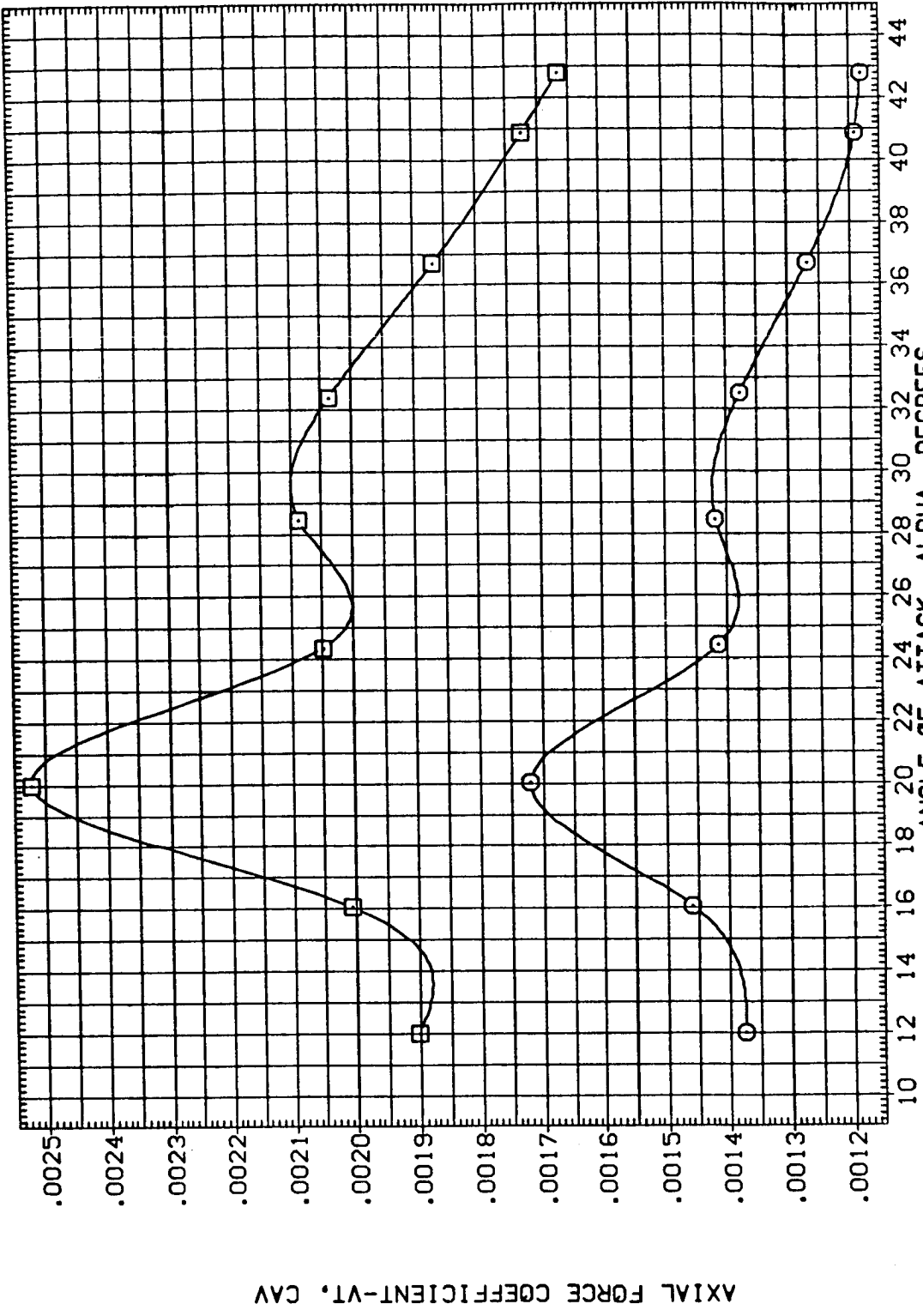



FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
(A)MACH = 5.25

DATA SET SYMBOL (1E0001) (BE0004)  CONFIGURATION DESCRIPTION
 ANES 3.5-190 GA98 (011-47+M14)
 ANES 3.5-190 GA98 (011-47+M14)

BETA .000
 .000
 .000
 .000
 ELEVON .000
 .000
 .000
 .000
 BOFLAP -11.700
 -11.700
 -11.700
 -11.700
 SPOBRK 55.000
 65.000
 65.000
 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

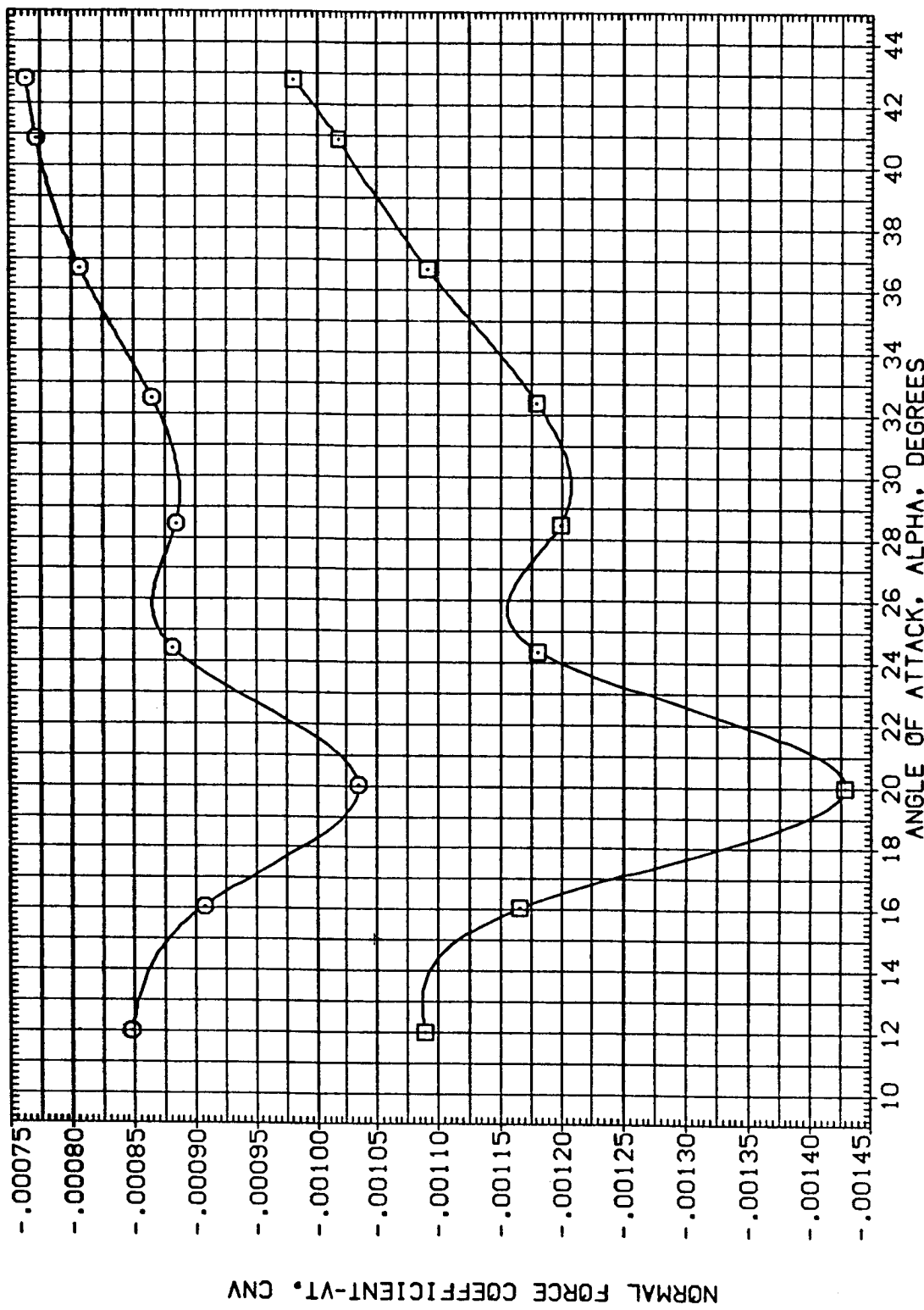


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1E0001) (BEG004) CONFIGURATION DESCRIPTION APES 3.5-190 GA98 (011-M7+M14) APES 3.5-190 GA98 (011-M7+M14)

BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 55.000 65.000 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

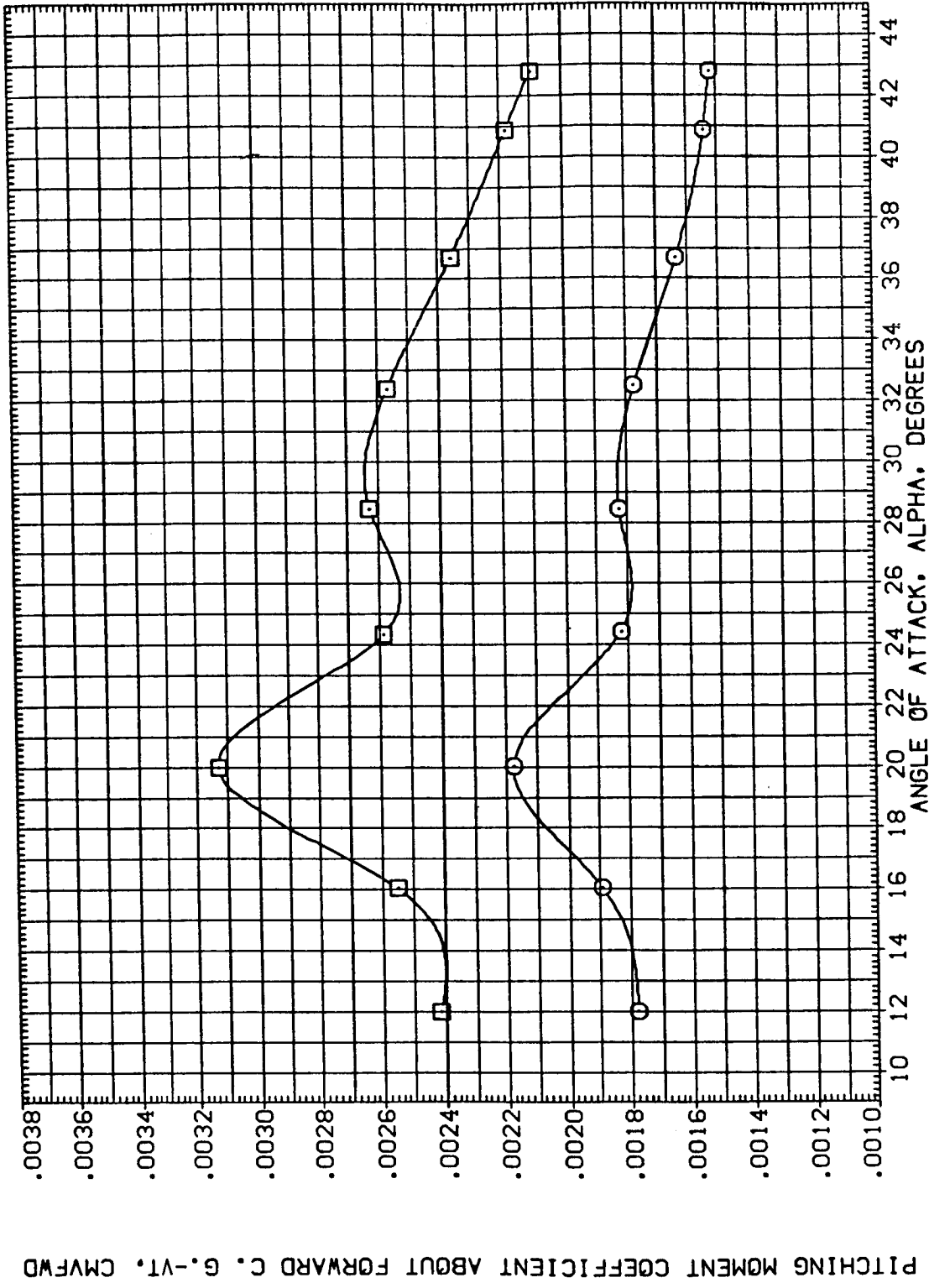


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25
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DATA SET SYMBOL (1E0001) (BE0004)

CONFIGURATION DESCRIPTION AMES 3.5-190 OAS8 (011-M7+M14)

BETA .000 .000

ELEVON .000 .000

BDLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION SREF 2690.0000 50.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. XD YMRP 375.0000 IN. YD ZMRP .0150 IN. ZD SCALE

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

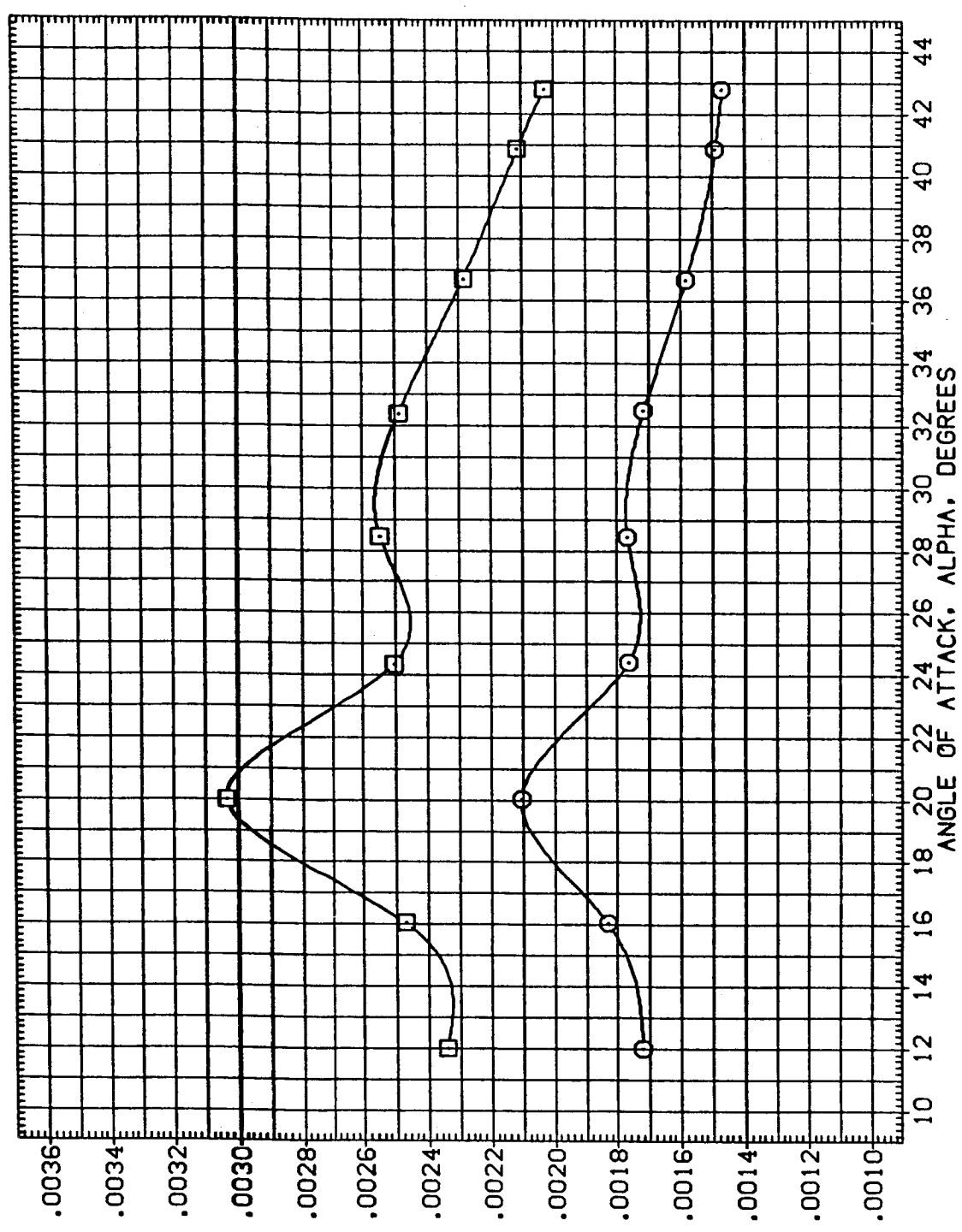


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (JEC0017) (CEC020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DASH (011-M7+H14-N24+DUMMY STING)
 AMES 3.5-190 DASH (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDRBK 55.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

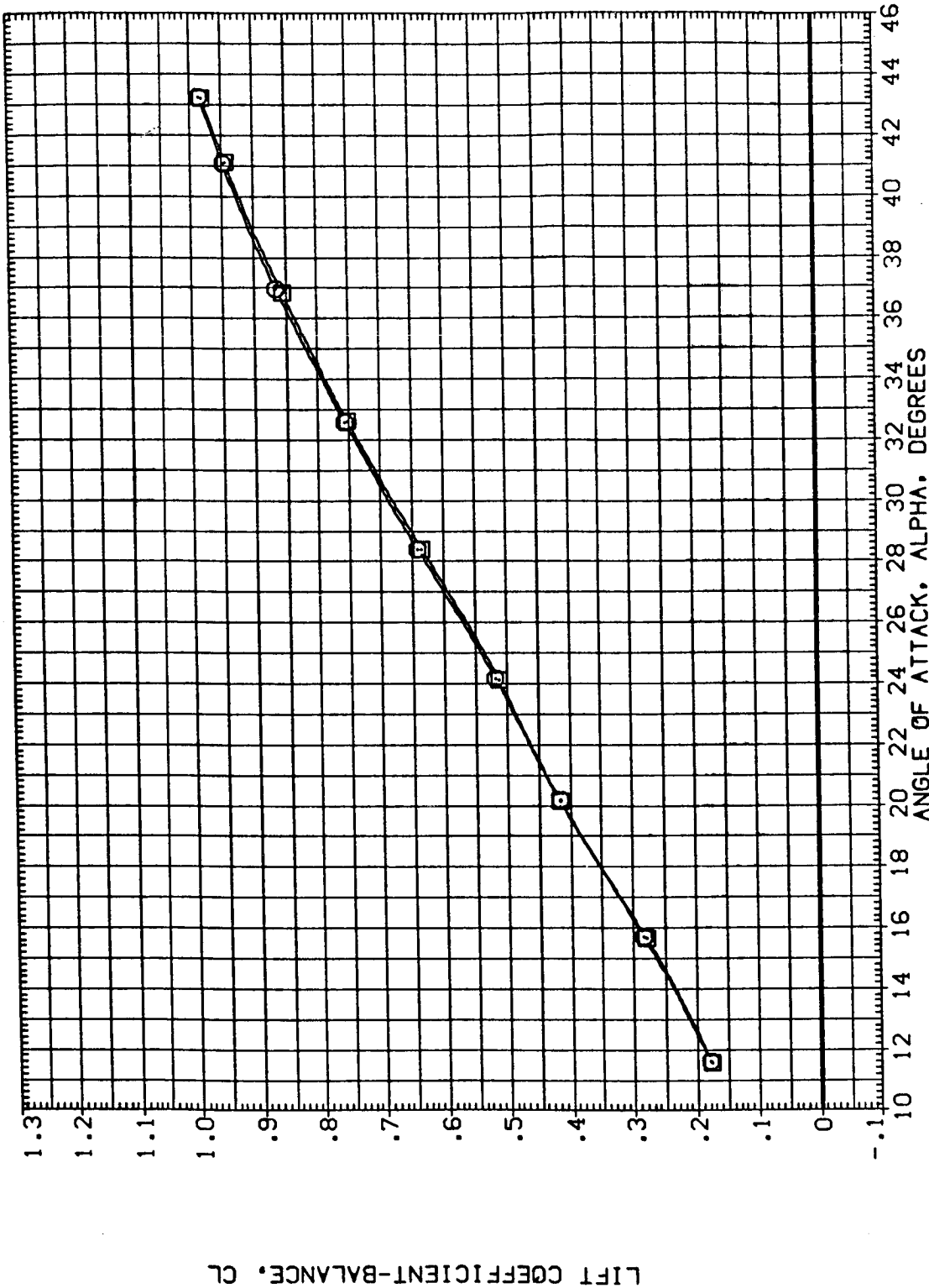


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(JEG017)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG020)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

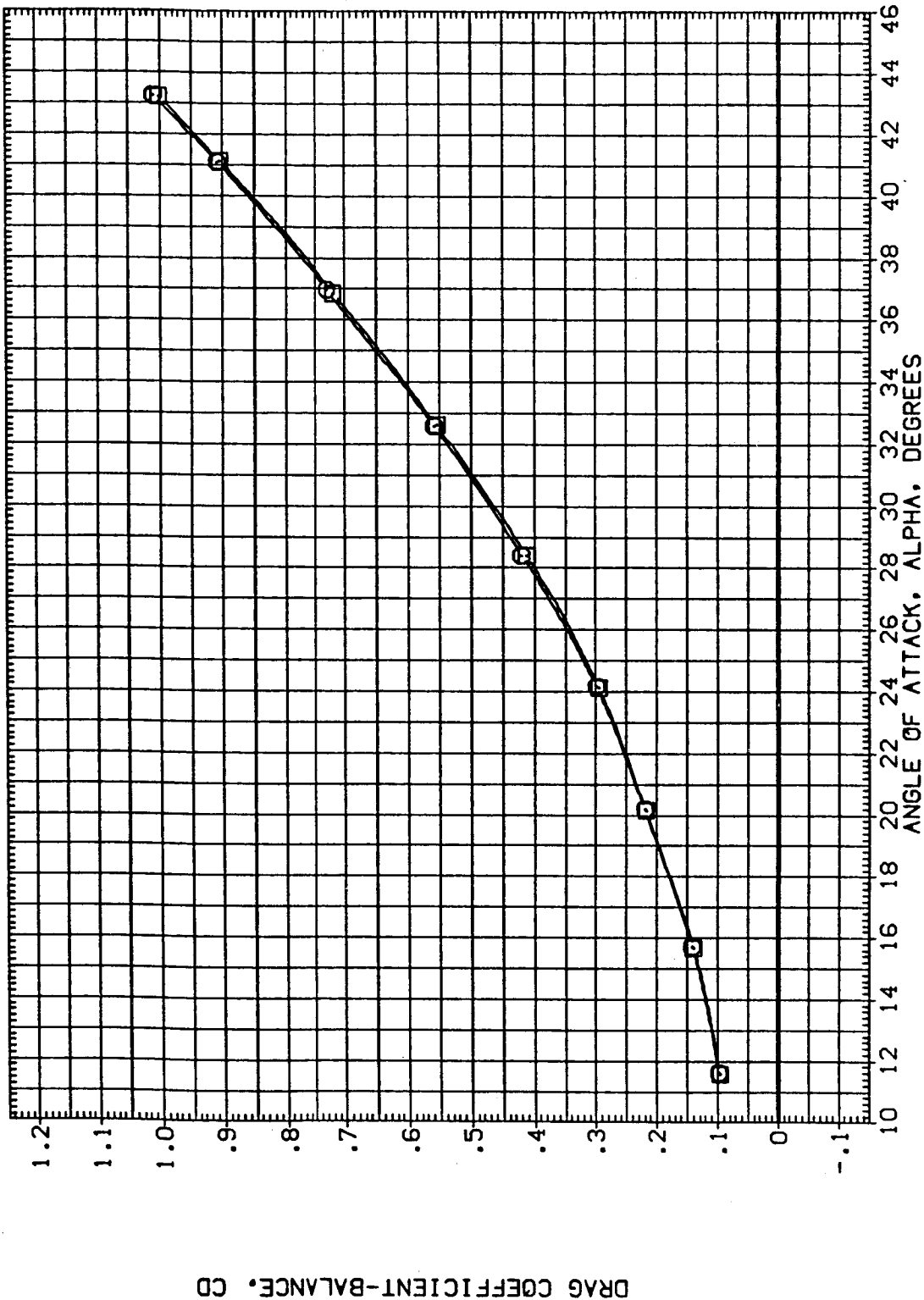


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JEG017) (CE0020)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 CAS8 (011-M7-M14-N24-DUMMY STING)
 ANES 3.5-190 CAS8 (011-M7-M14-N24-DUMMY STING)

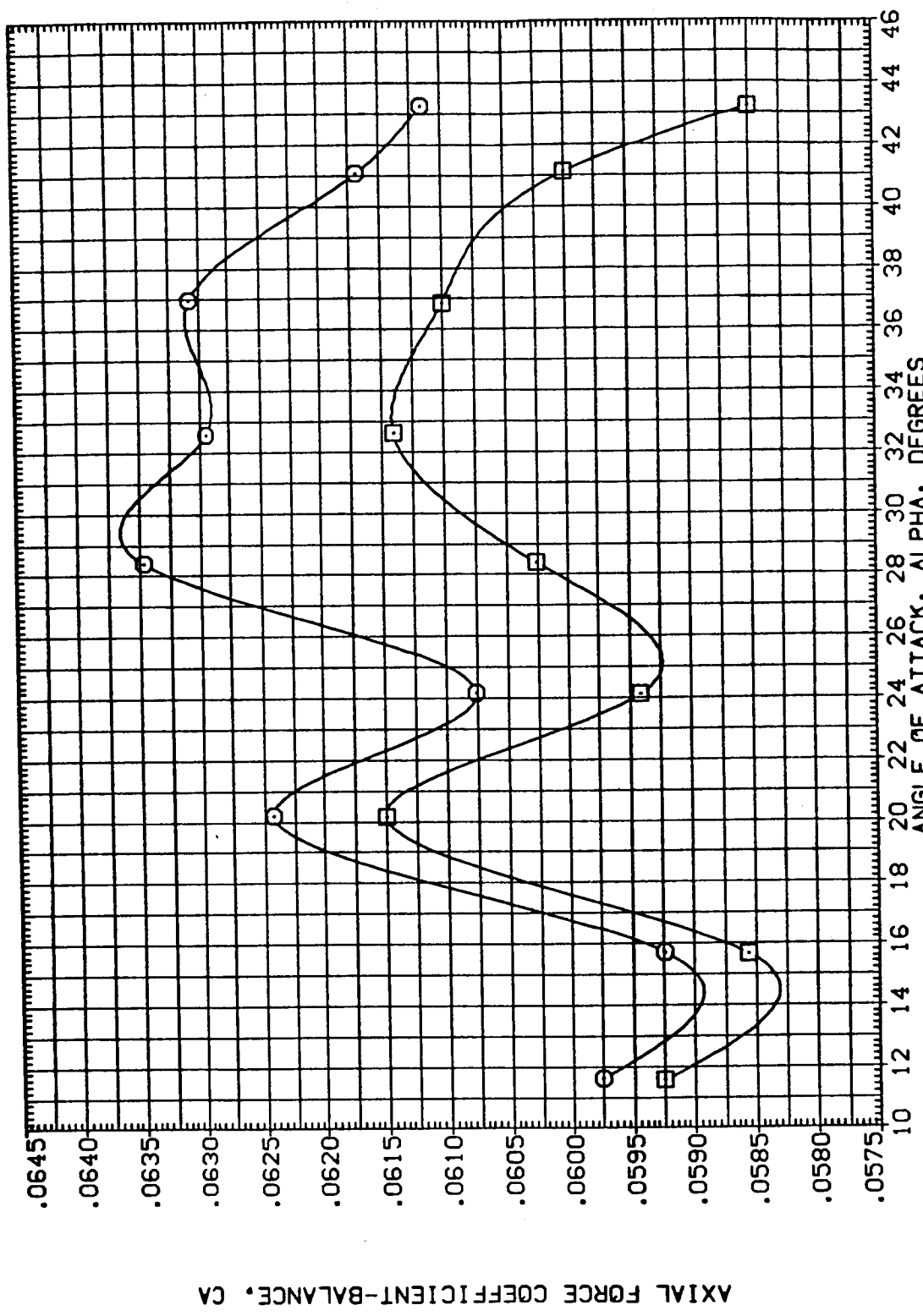
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JEG017) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

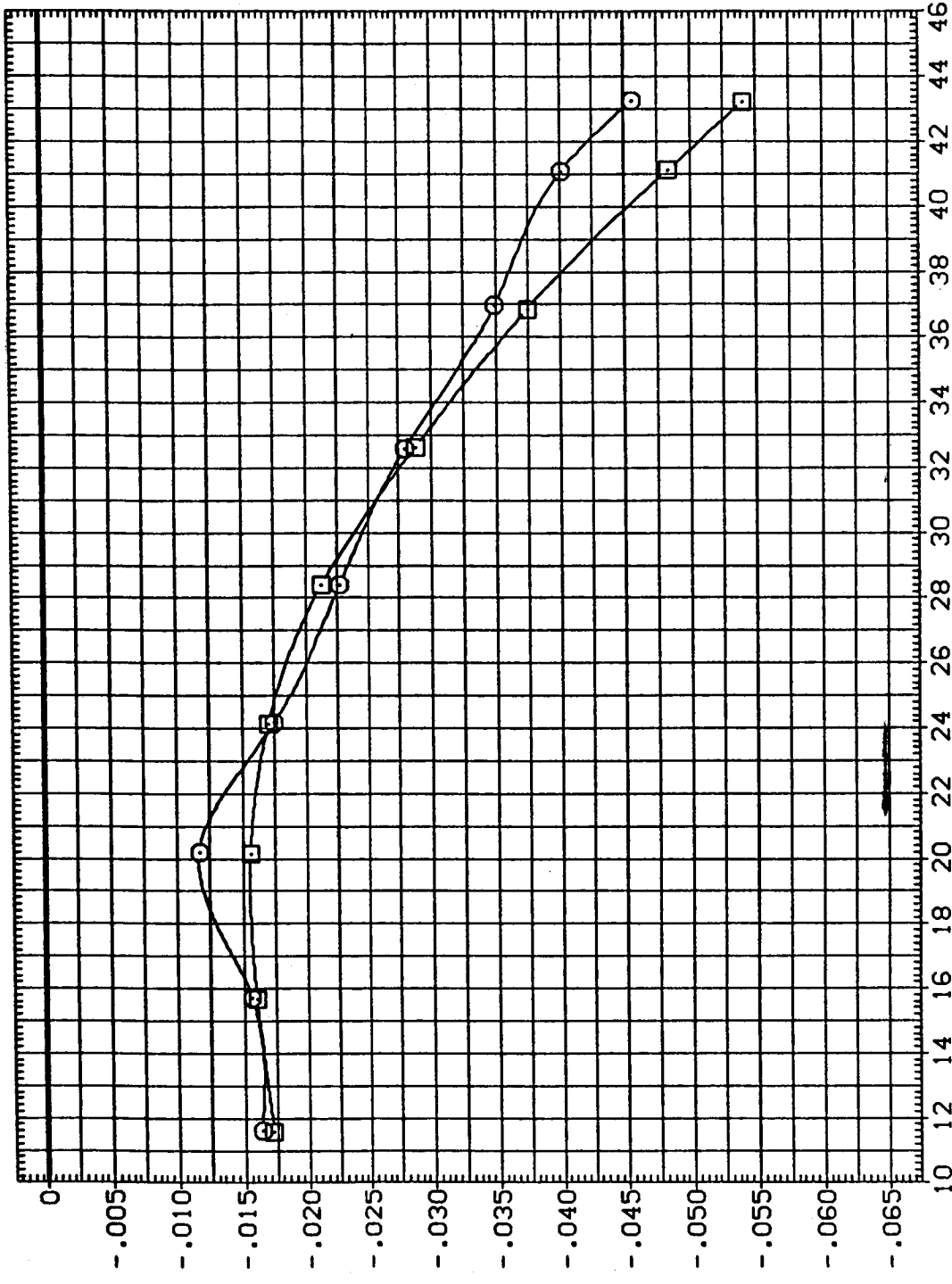


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

CAJ MACH = 5.25

DATA SET SYMBOL (JE0017) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.X0
 YMRP 1076.7000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

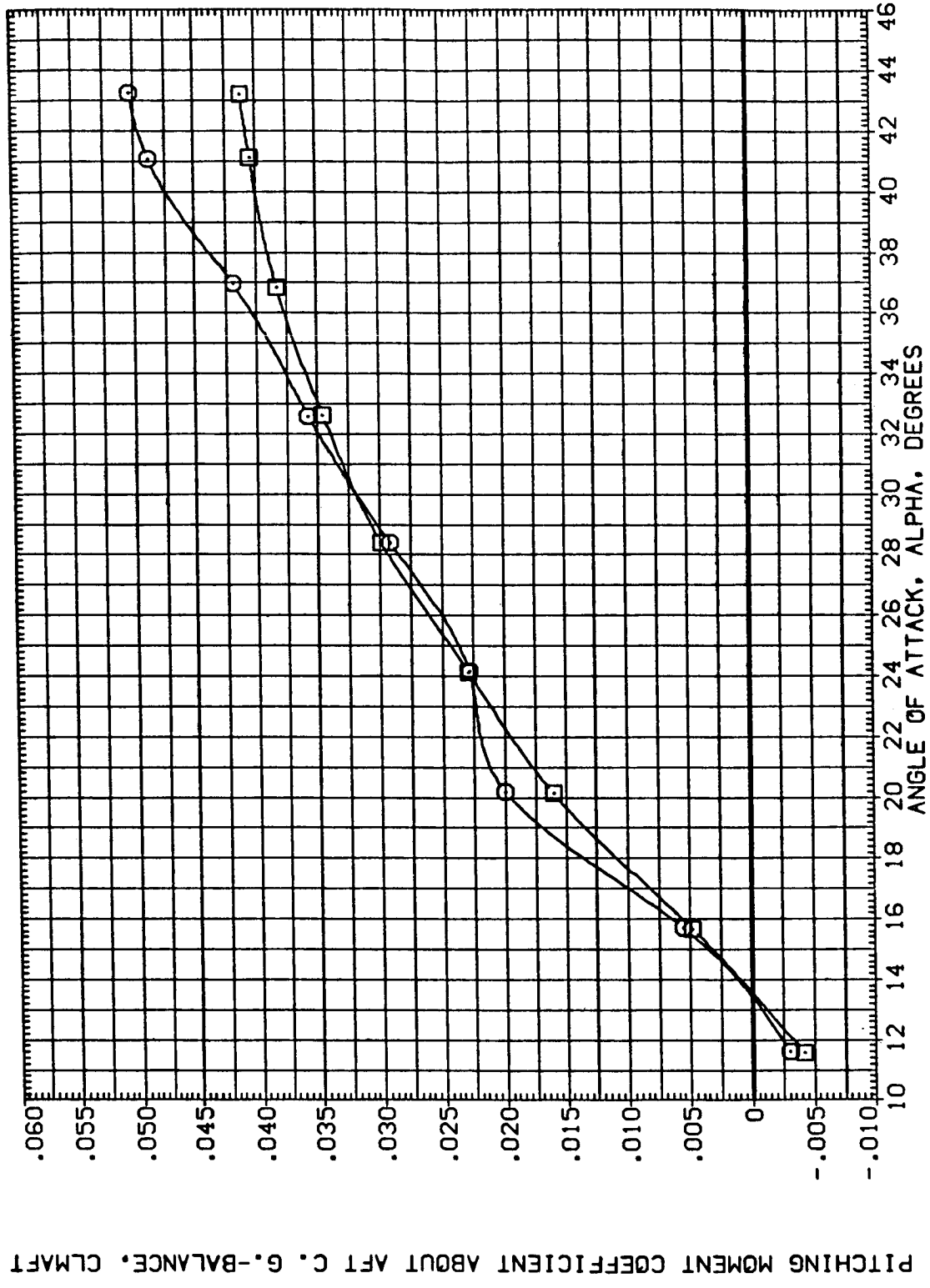


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A) MACH = 5.25

DATA SET SYMBOL (JED017) (CE020)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 (A98 (011-M7+M14-N24+DUMMY STING))
 ANES 3.5-190 (A98 (011-M7+M14-N24+DUMMY STING))

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

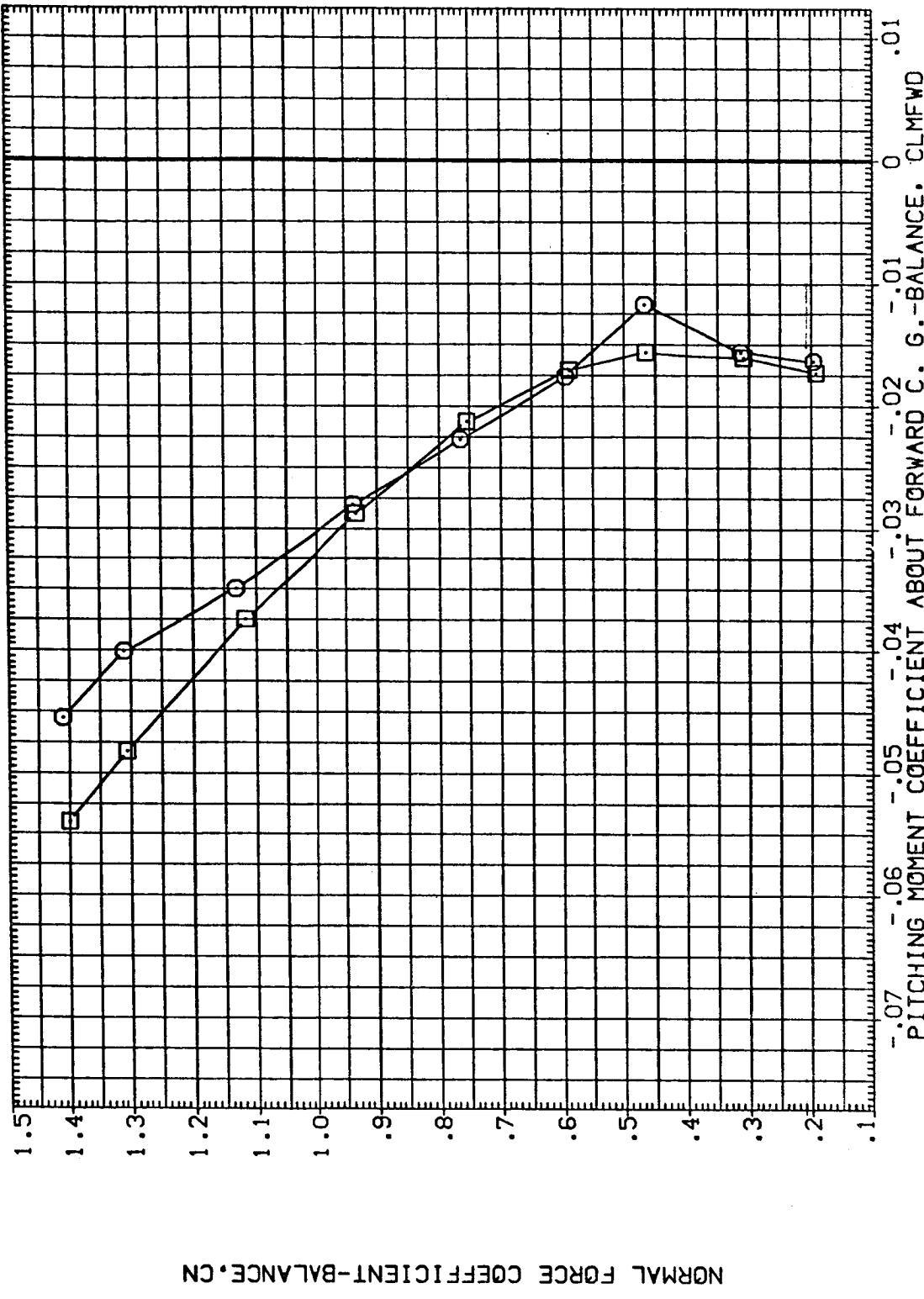


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (JEC0017) (CE00020)
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-47+M14-N2+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

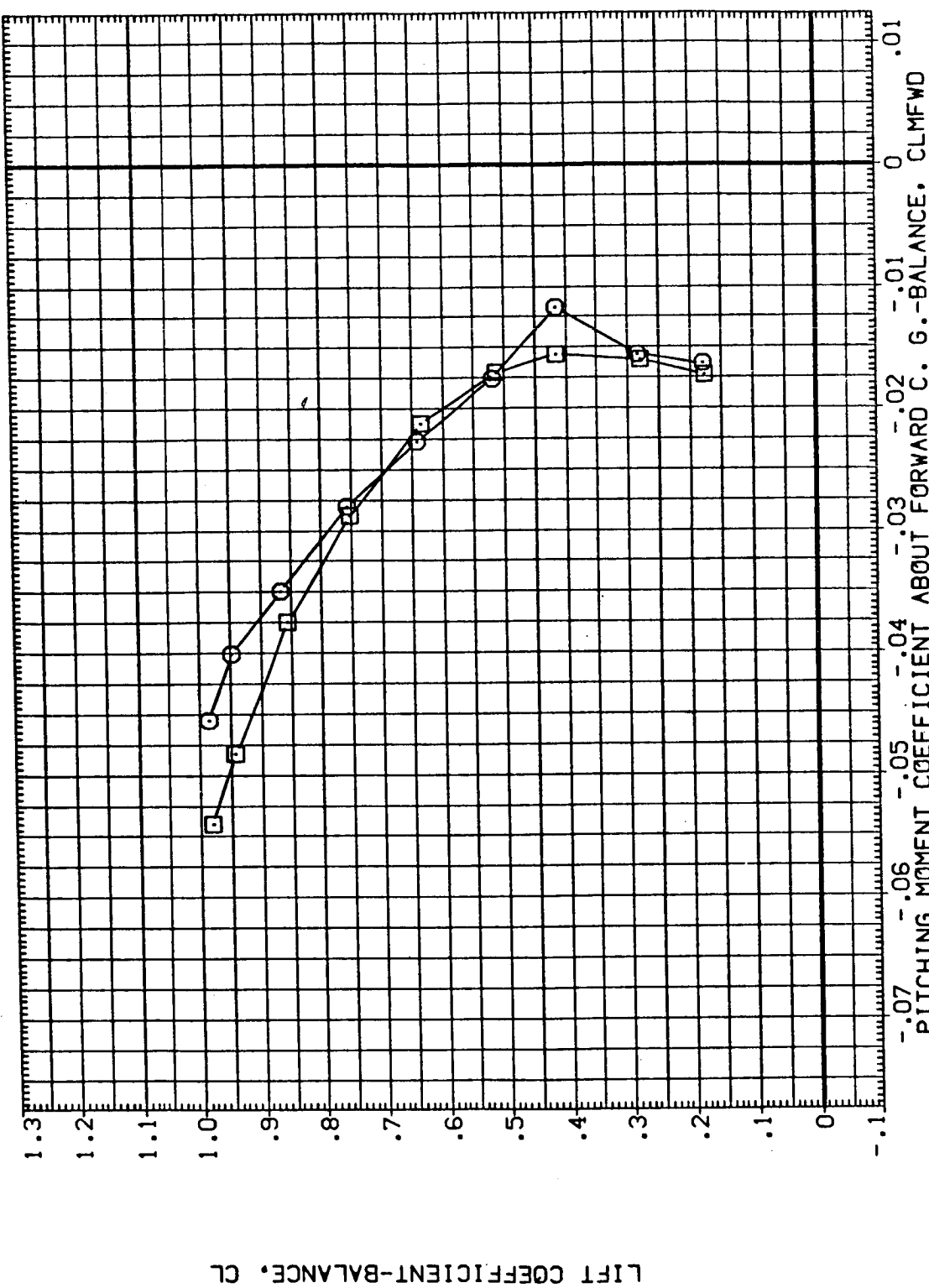


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25
 PAGE 154

DATA SET SYMBOL (JEG0017) (CEG020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

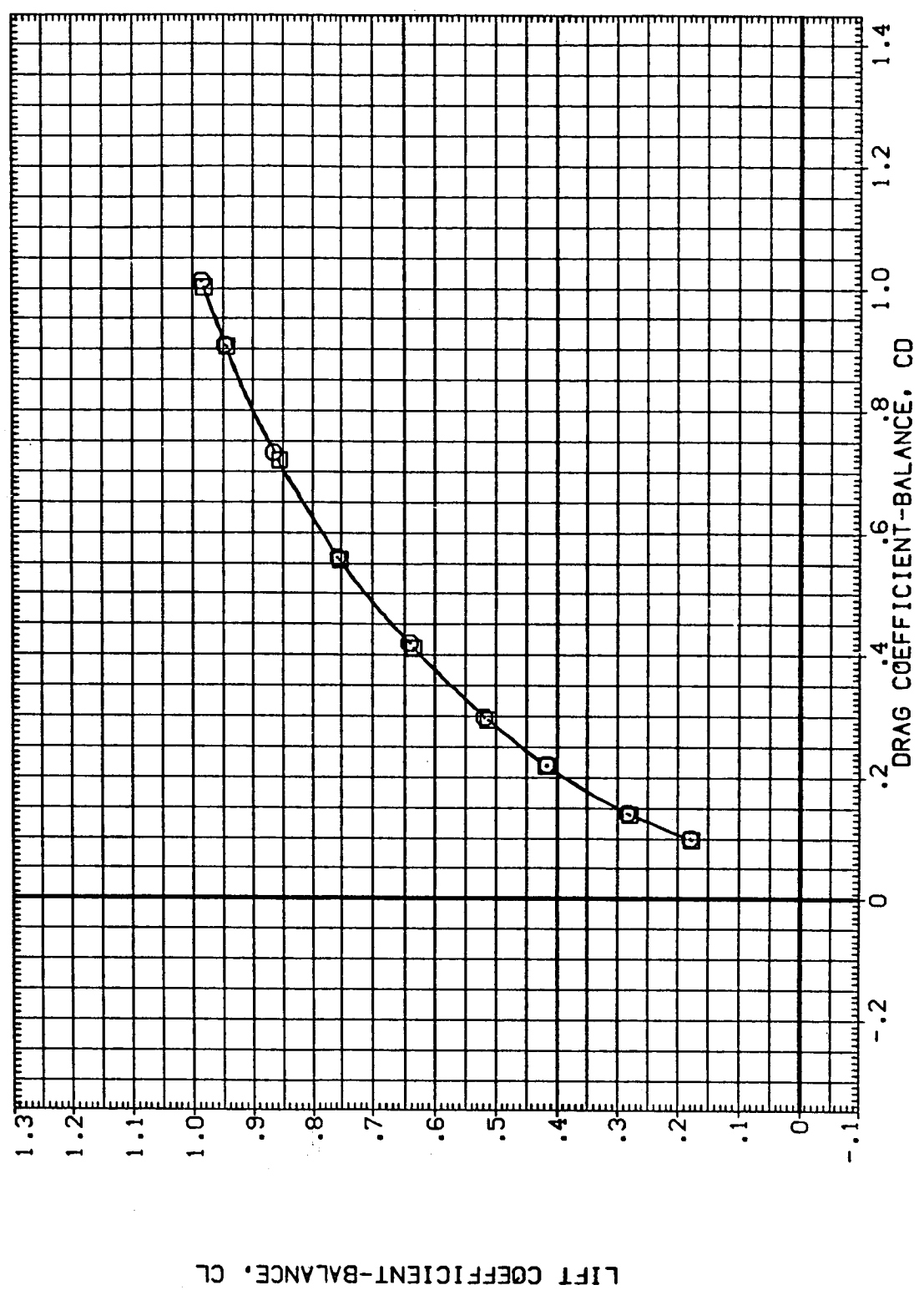
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (KEG017) (EEG020)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDRK 55.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

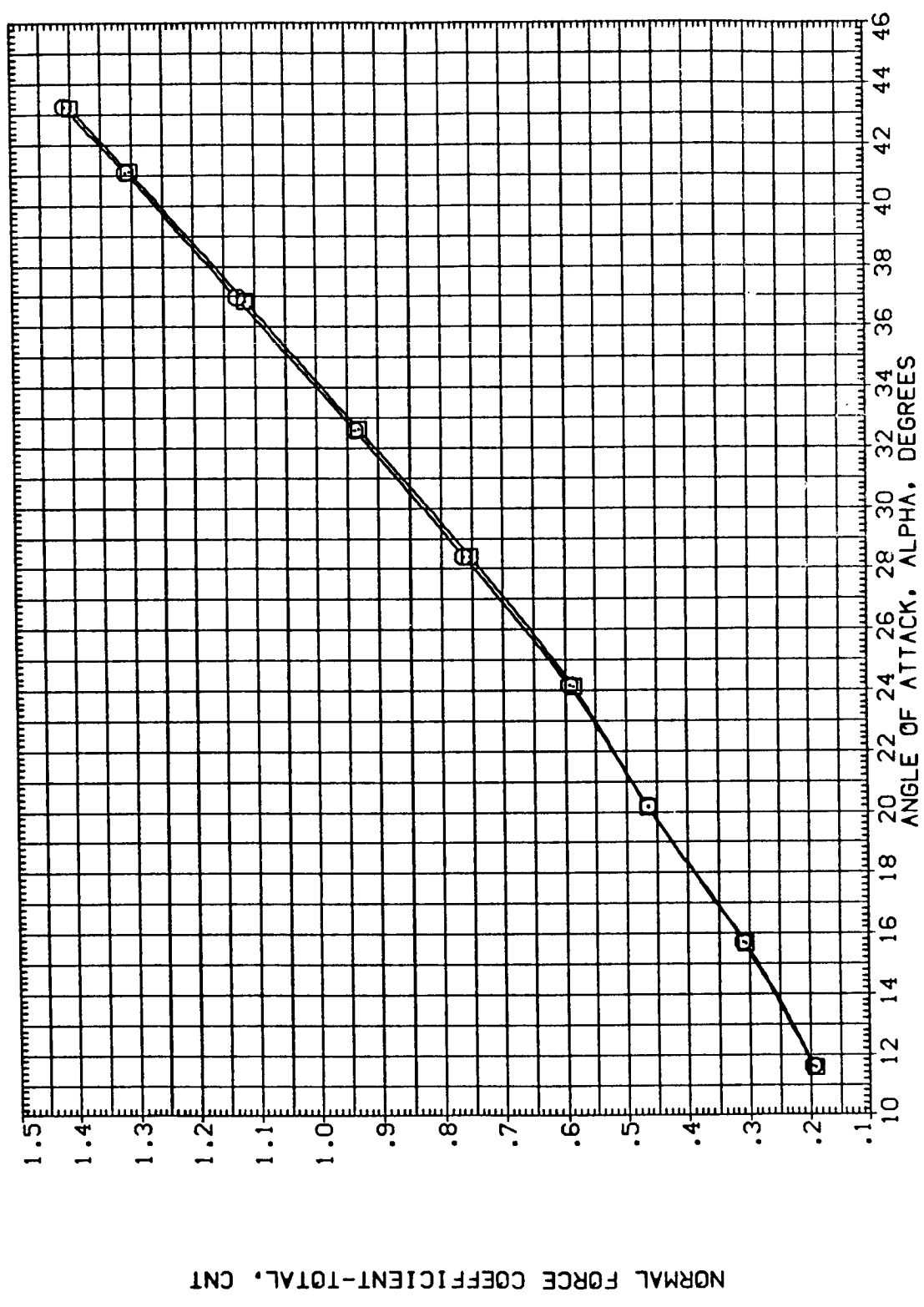


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (KEG017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 (EEG020) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

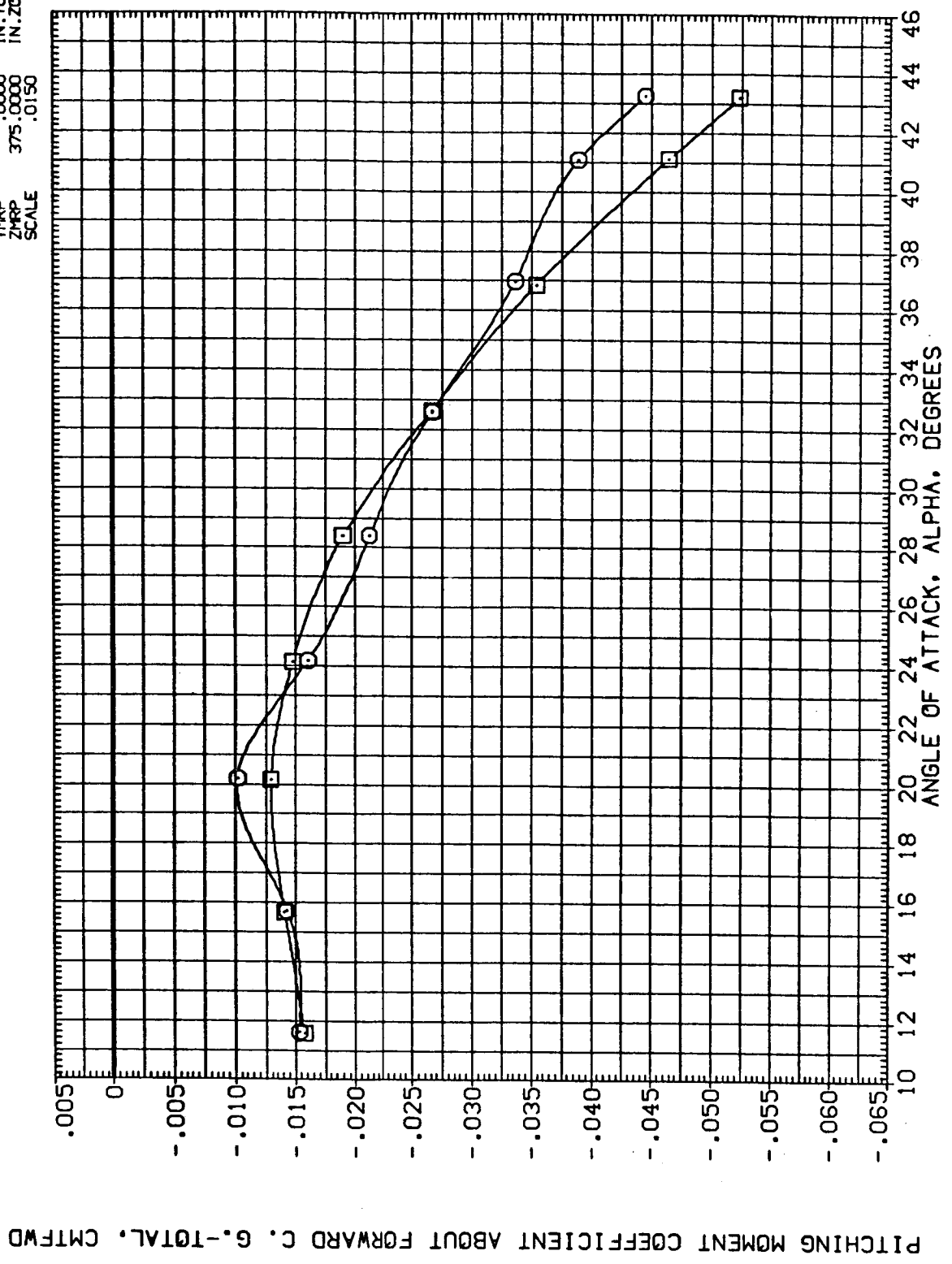


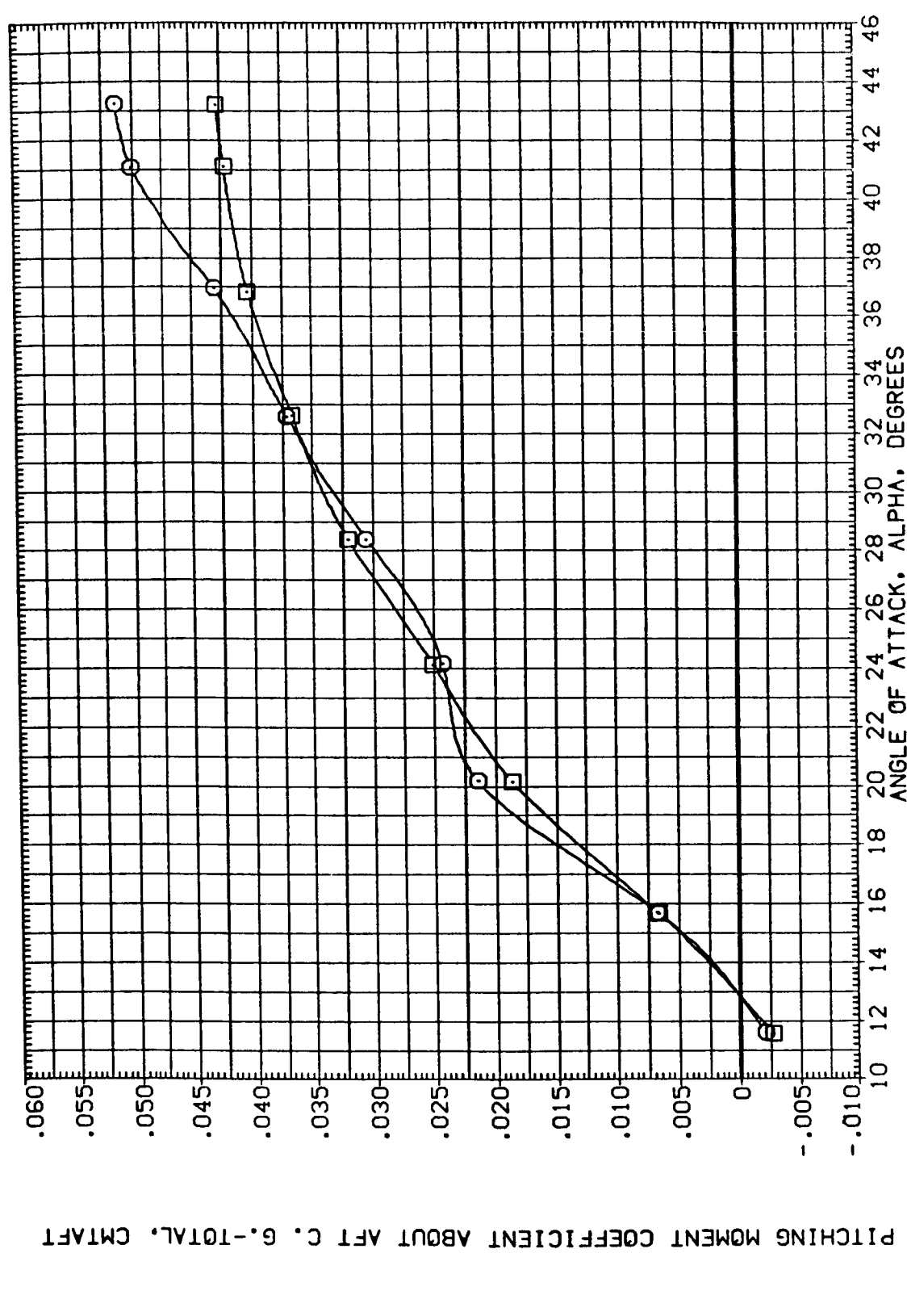
FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

DATA SET SYMBOL (KE0017) (E00020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

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DATA SET SYMBOL CONFIGURATION DESCRIPTION

(KE0017) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(EE0020) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 85.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LRREF 474.8000 IN.

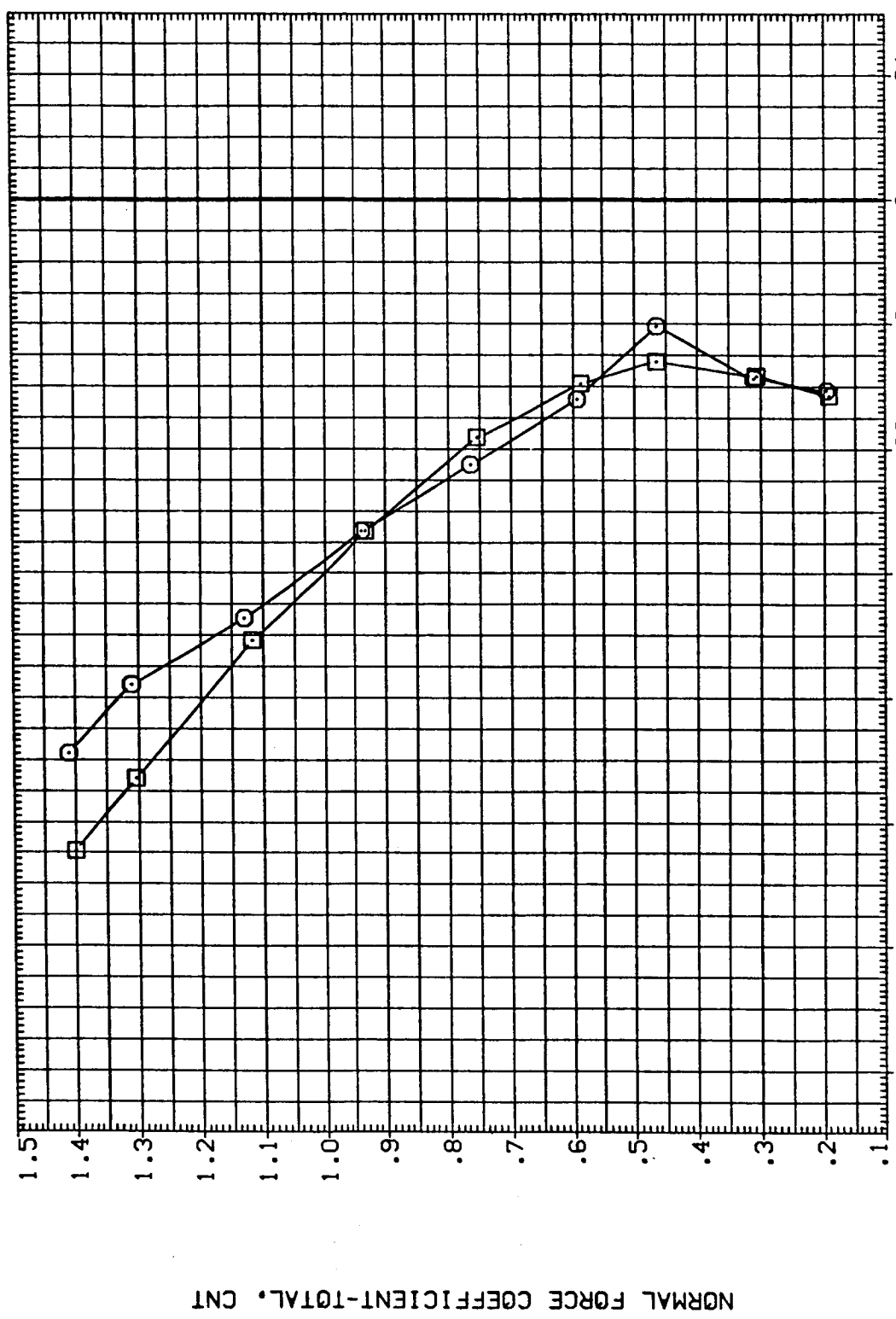
BRREF 936.6900 IN.

XTRP 1076.7000 IN. X0

YTRP .0000 IN. Y0

ZTRP 375.0000 IN. Z0

SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

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DATA SET SYMBOL (KE0017) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 B498 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 B498 (011-M7+M14-N24+DUMMY STING)

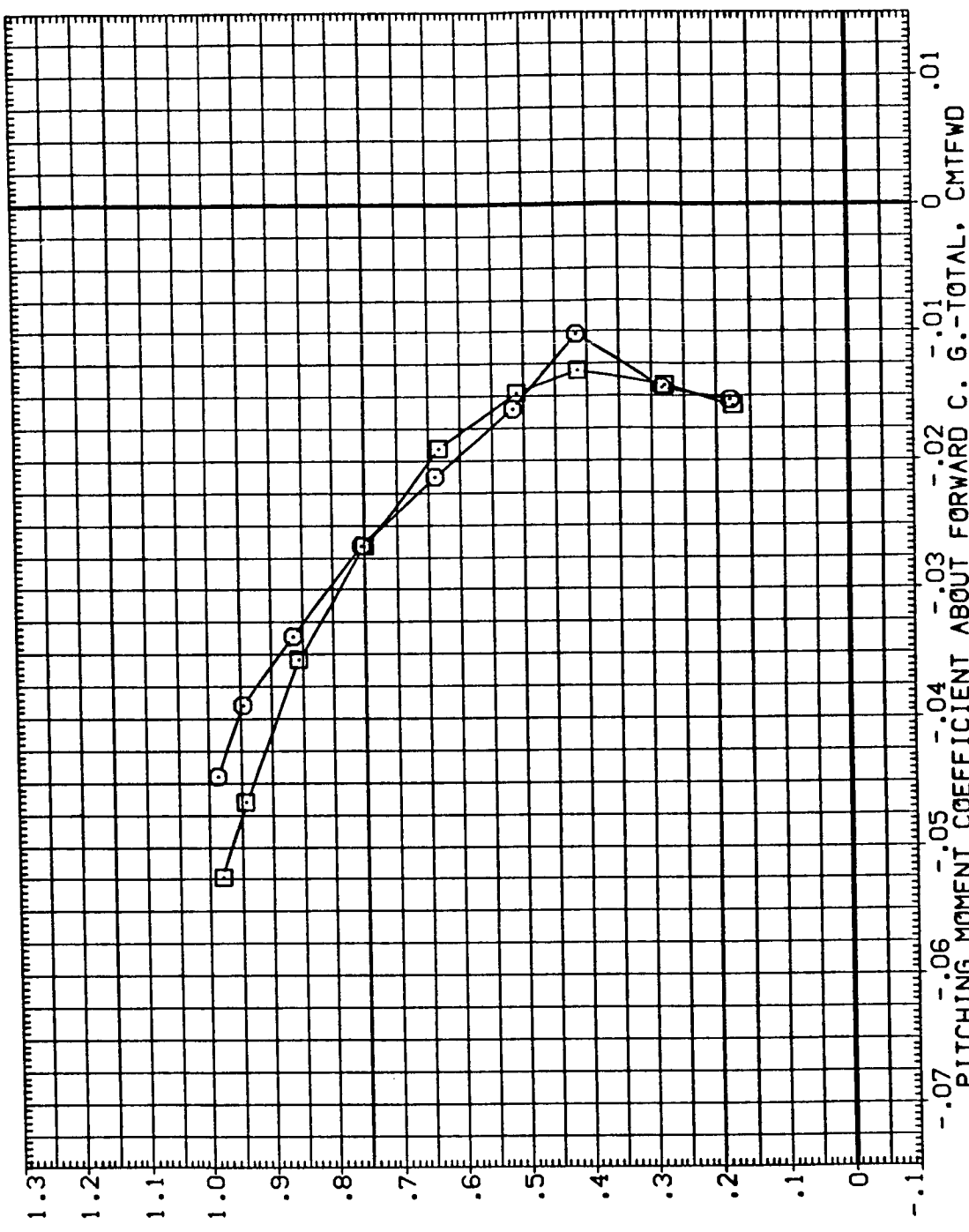
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SFDBRK 55.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(KE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

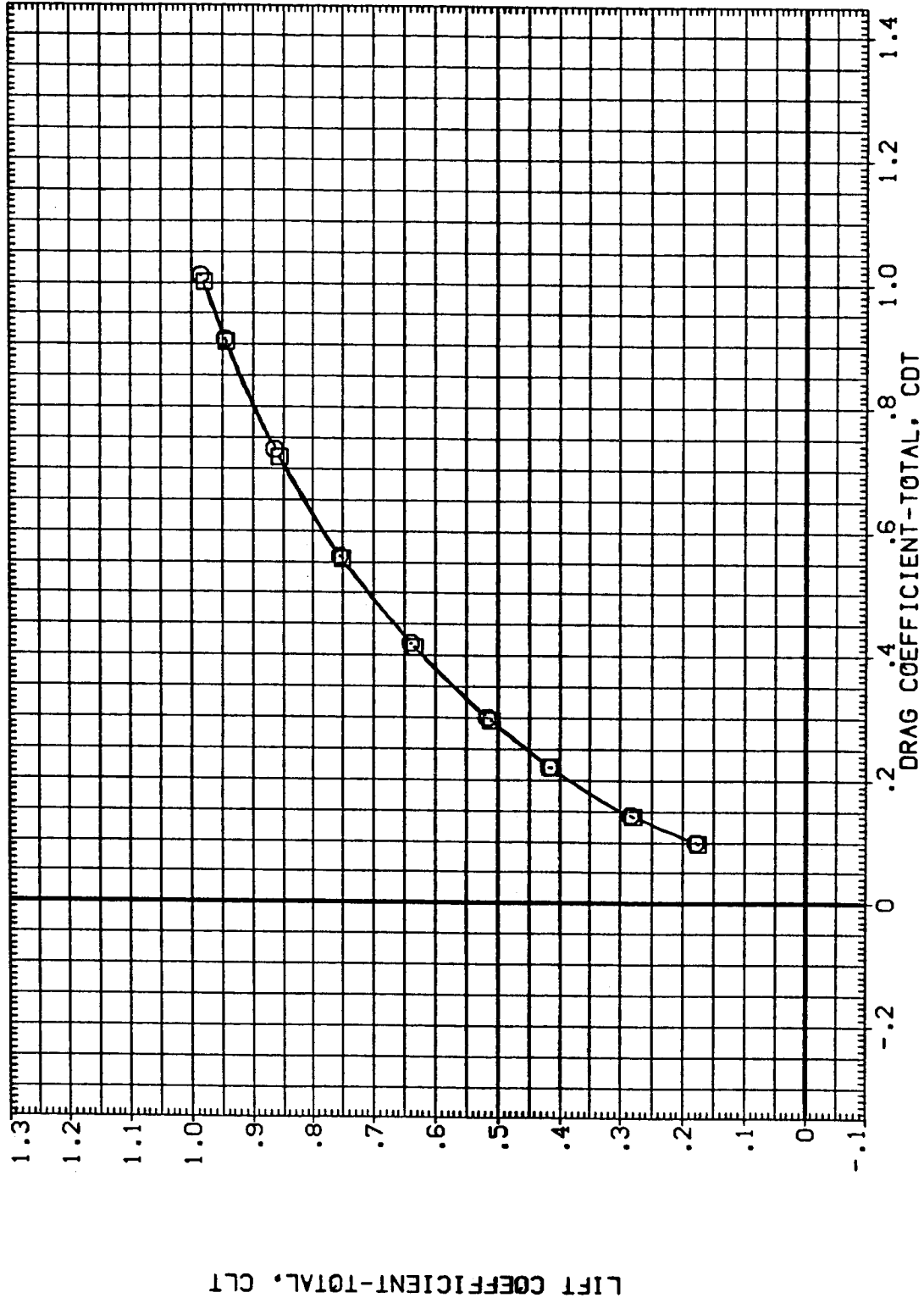


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

DATA SET SYMBOL (KEG0017) (EE0020)

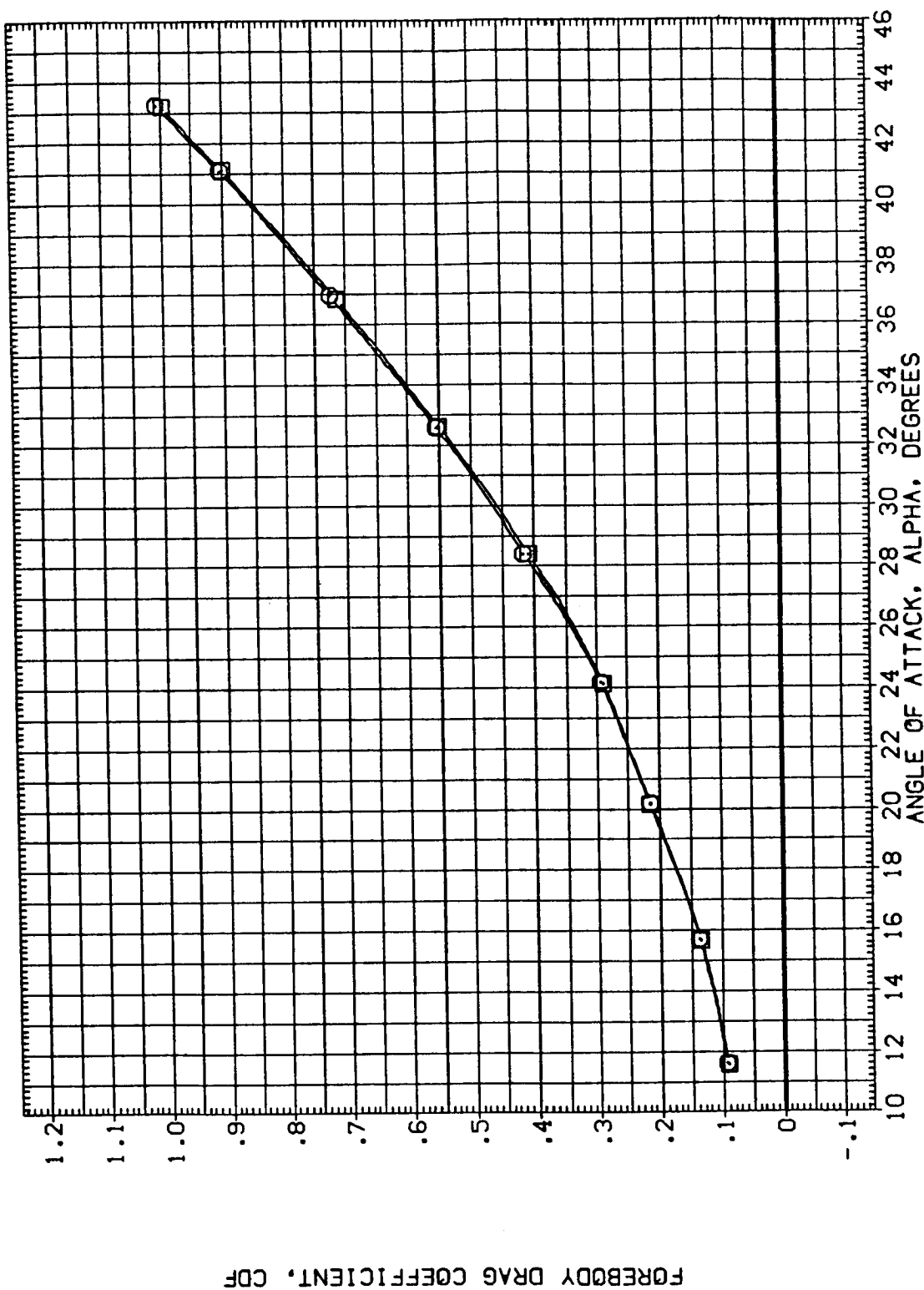
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 556.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



FOREBODY DRAG COEFFICIENT, CDF

FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (KE0017) (EE0020)

CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION SQ. FT. SREF 2690.0000 LREF 474.8000 BREF 936.8800 XMRP 1076.7000 IN. X0 IN. Y0 IN. Z0 375.0000 SCALE .0150

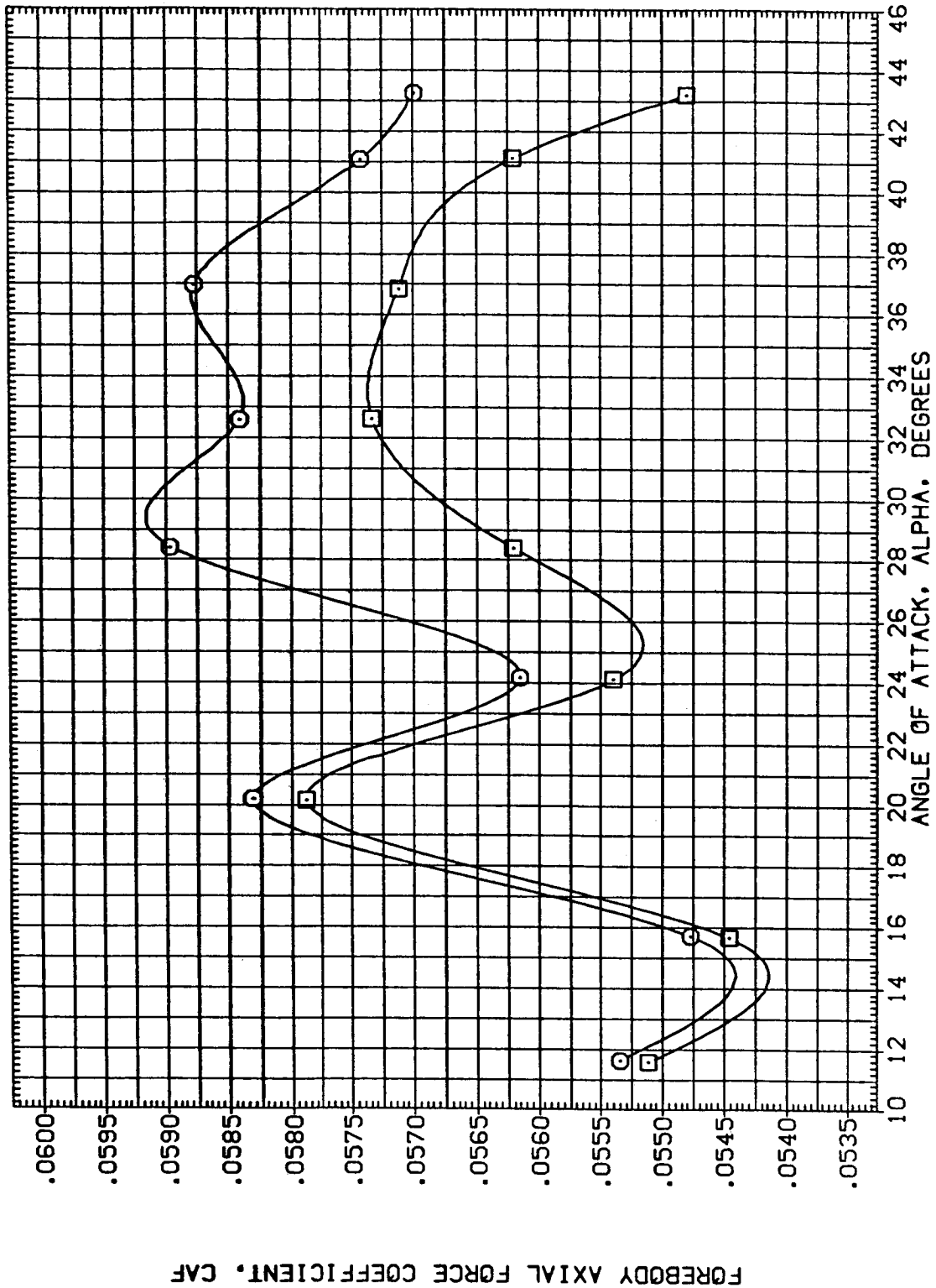


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 CA)MACH = 5.25 PAGE 163

DATA SET SYMBOL (KE0017) (LEG0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CAS8 (011-M7-M14-N24-DUMMY STING)
 AMES 3.5-190 CAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

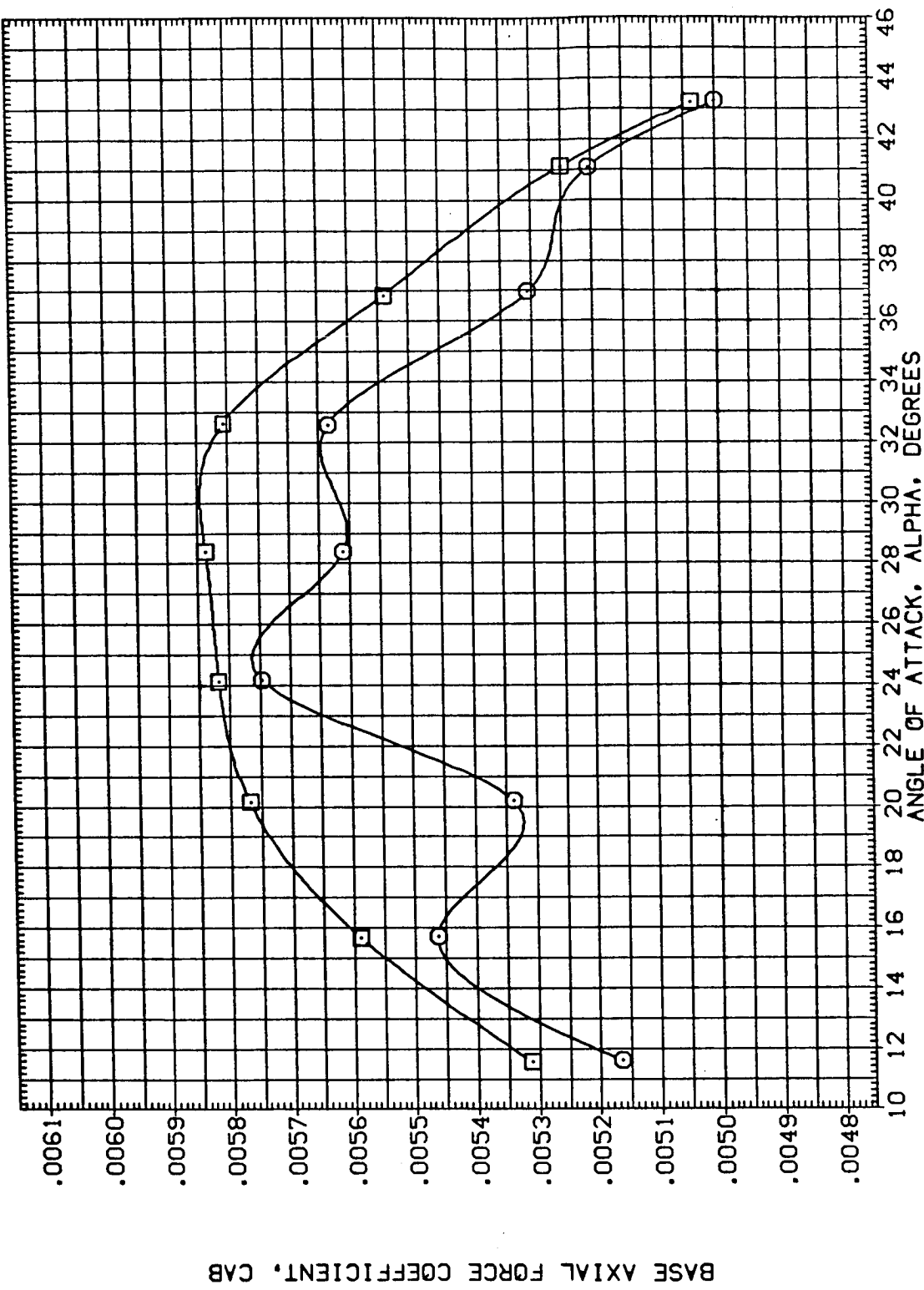


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (CA)MACH = 5.25



DATA SET SYMBOL (1E0017) (BEG0020) \square CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

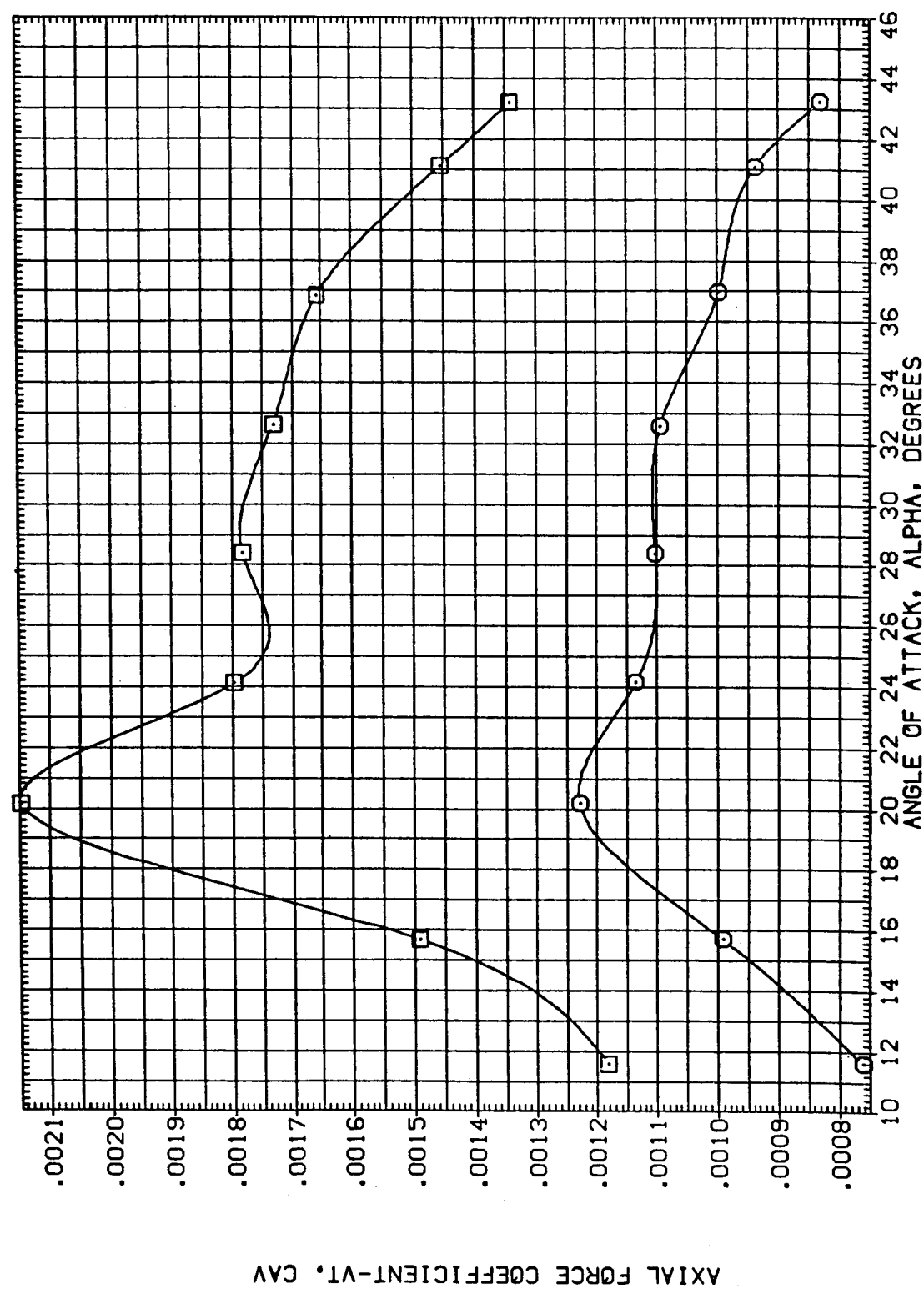


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
CAJ MACH = 5.25

DATA SET SYMBOL (1E0017) (BE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)
 AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

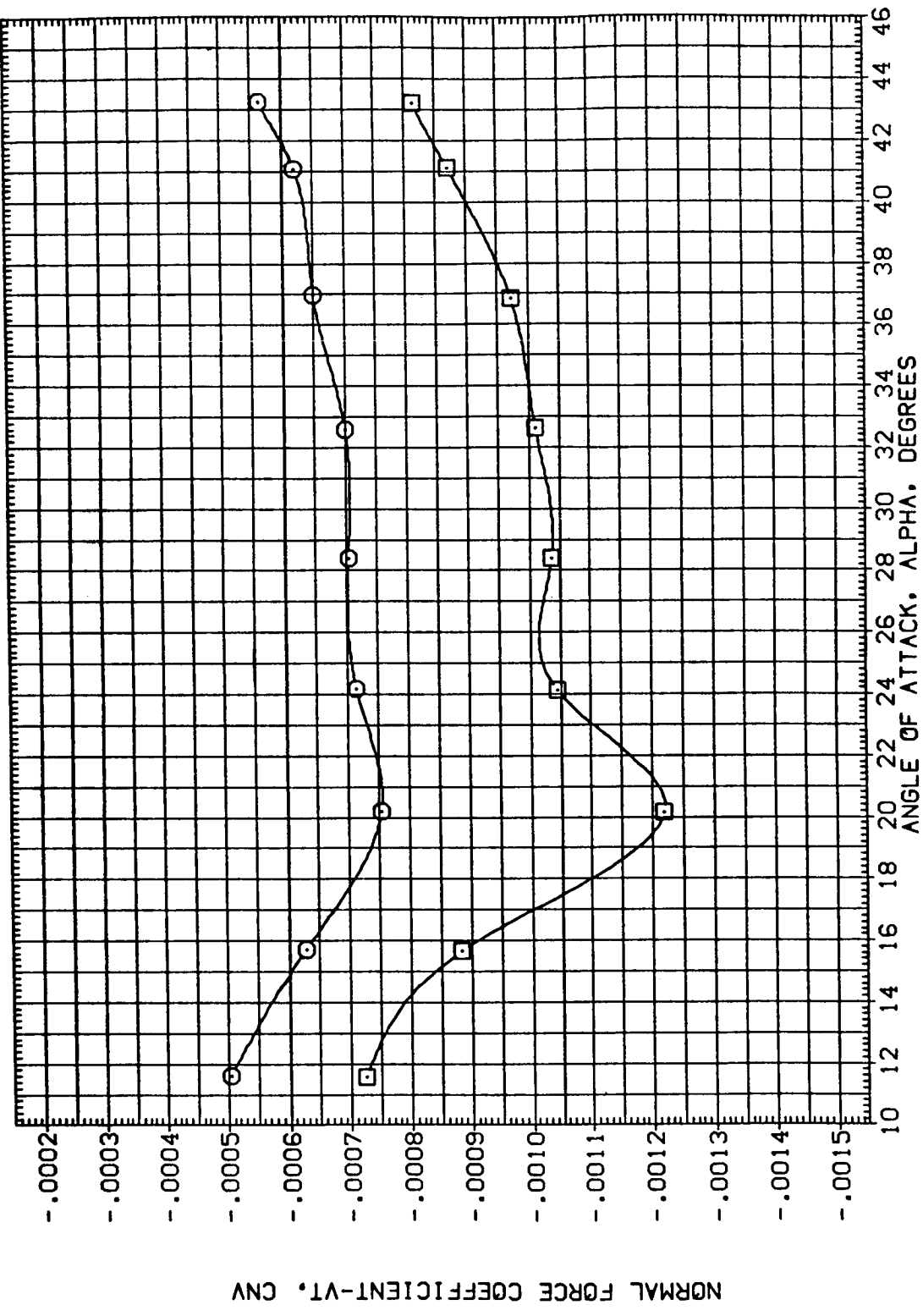


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1E0017) (B0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION
 SQ. FT. SREF 2690.0000
 IN. LREF 474.8000
 IN. BREF 936.6800
 IN. XMRP 1076.7000
 IN. YMRP .0000
 IN. ZMRP 375.0000
 IN. ZD .0150
 SCALE

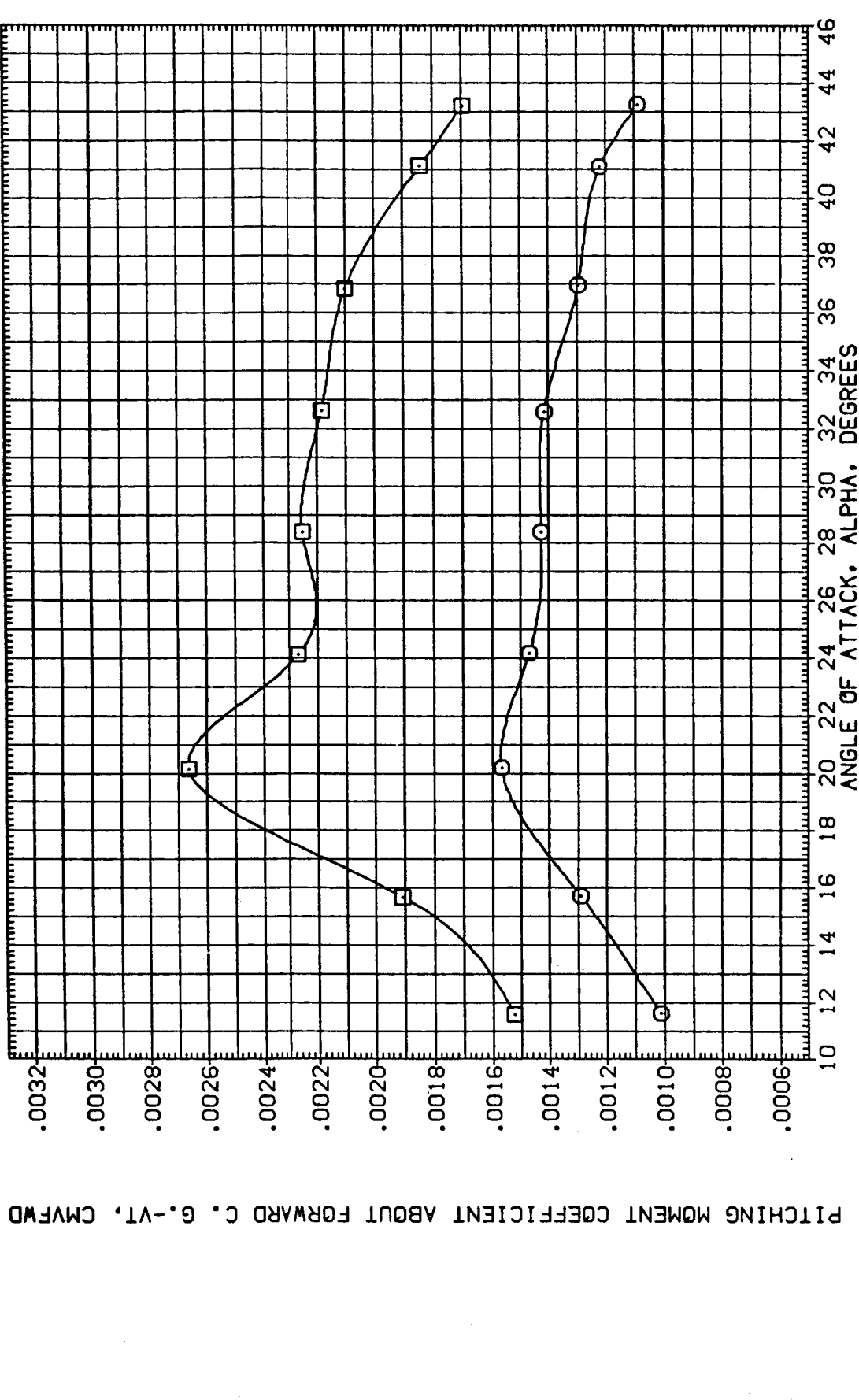


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25

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DATA SET SYMBOL (1EQ017) (BEQ020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAB8 (011-M7-M14-N24+DUMMY STING)
 AMES 3.5-190 GAB8 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SPOBRK 55.000 95.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMFRP 1076.7000 IN.
 YMFRP .0000 IN.
 ZMFRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-V1, CMVAFT

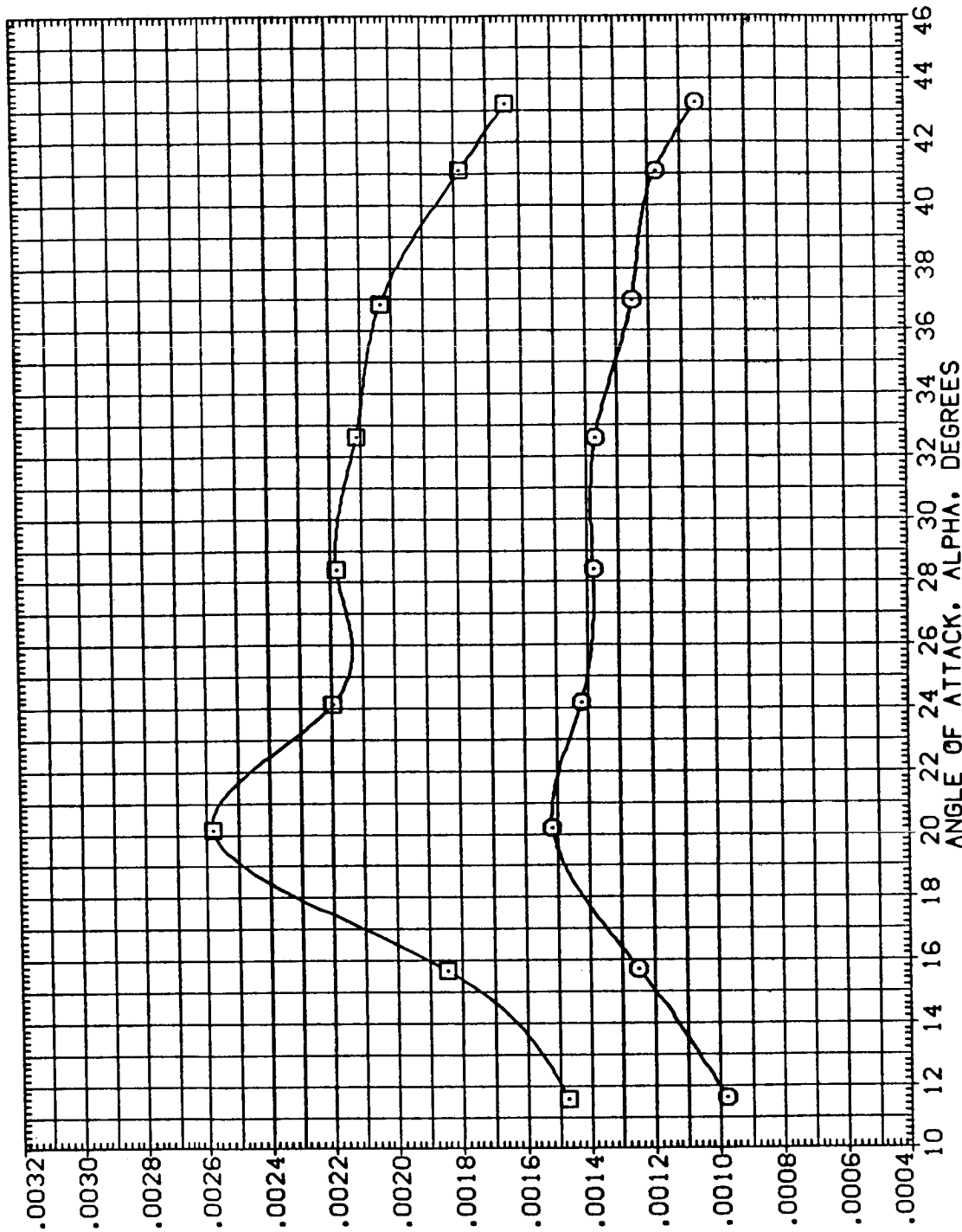


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.
 (A)MACH = 5.25 PAGE 168

DATA SET SYMBOL (CEG013)
 (CEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDRK SPOBRK
 55.000 55.000

SREF 2690.0000
 LREF 474.8000

BREF 956.6800
 XMRRP 1076.7000

YMRRP .0000
 ZMRRP 375.0000

SCALE .0150
 SO.FT. IN.
 IN. IN.
 IN. IN.
 IN. IN.

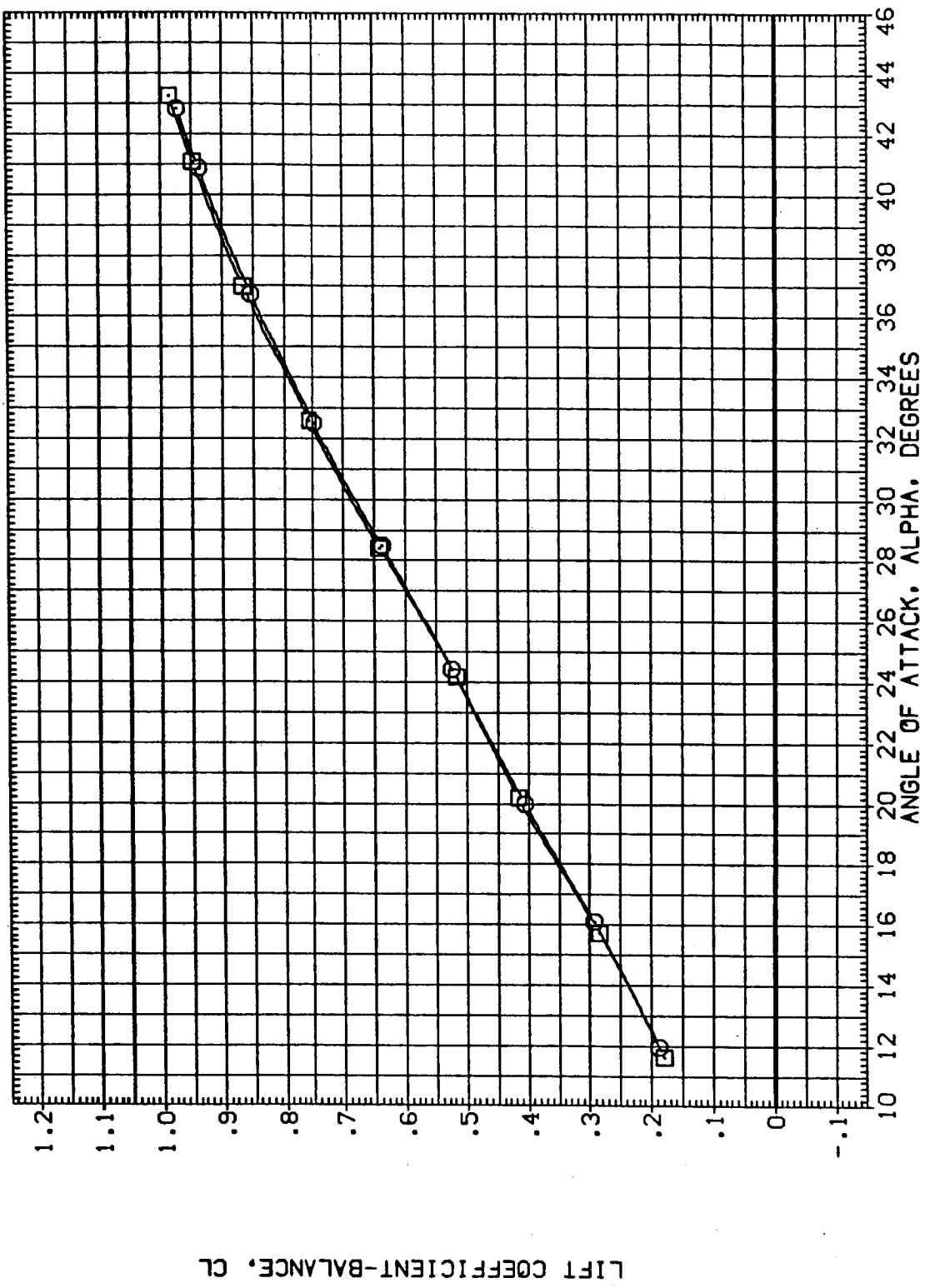


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0013) (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

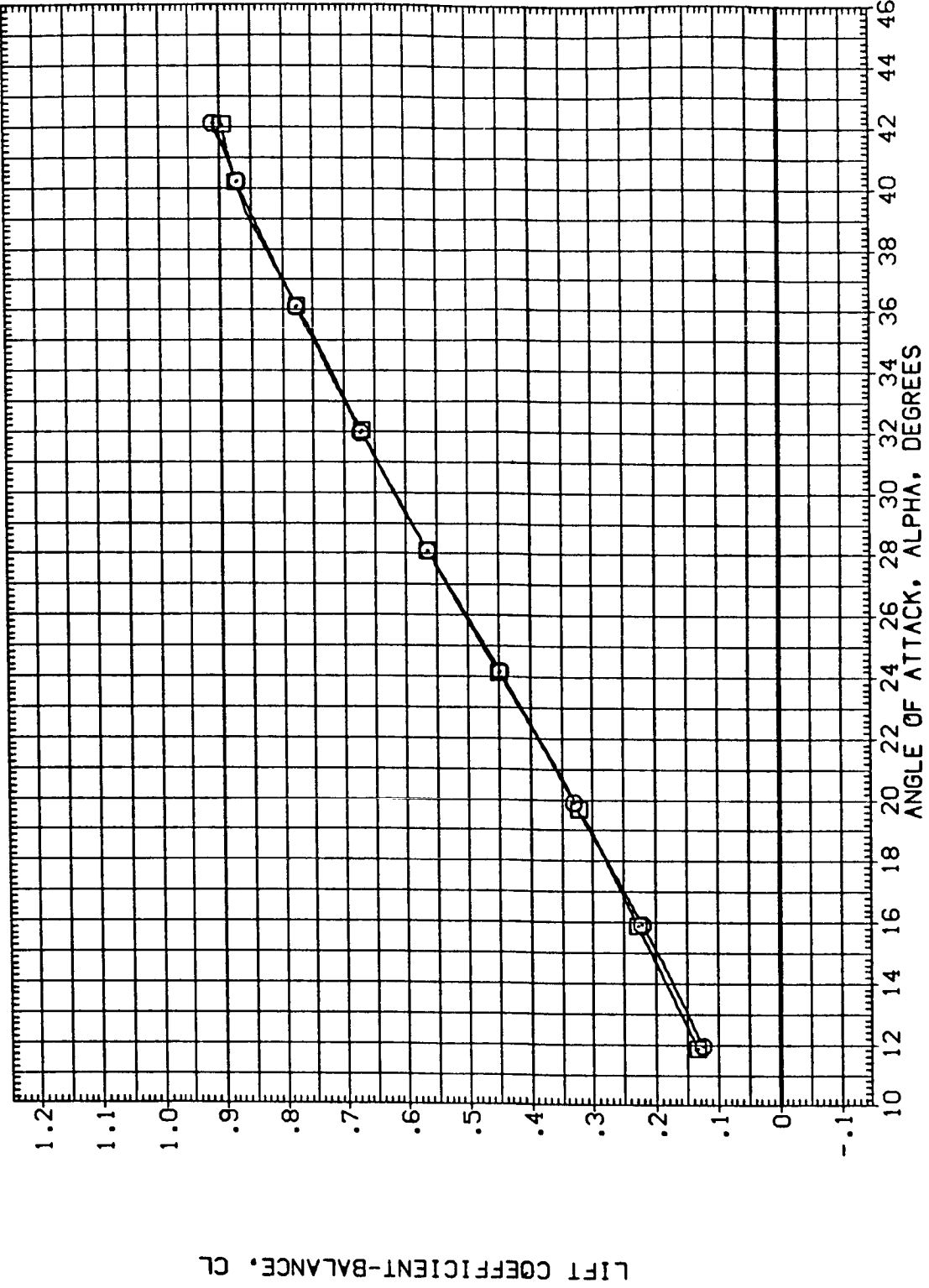
BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CEG013) (CEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

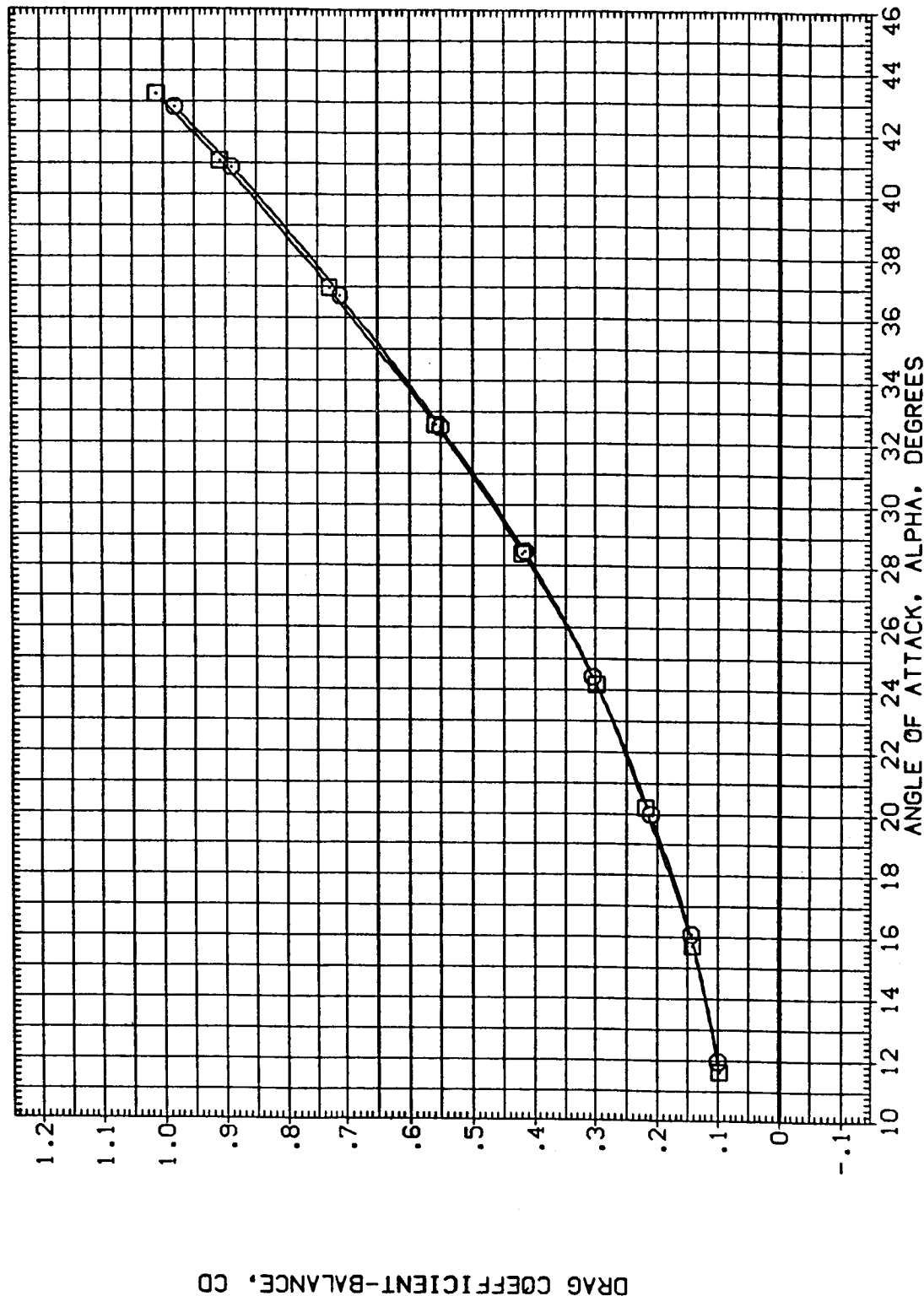


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0013) (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

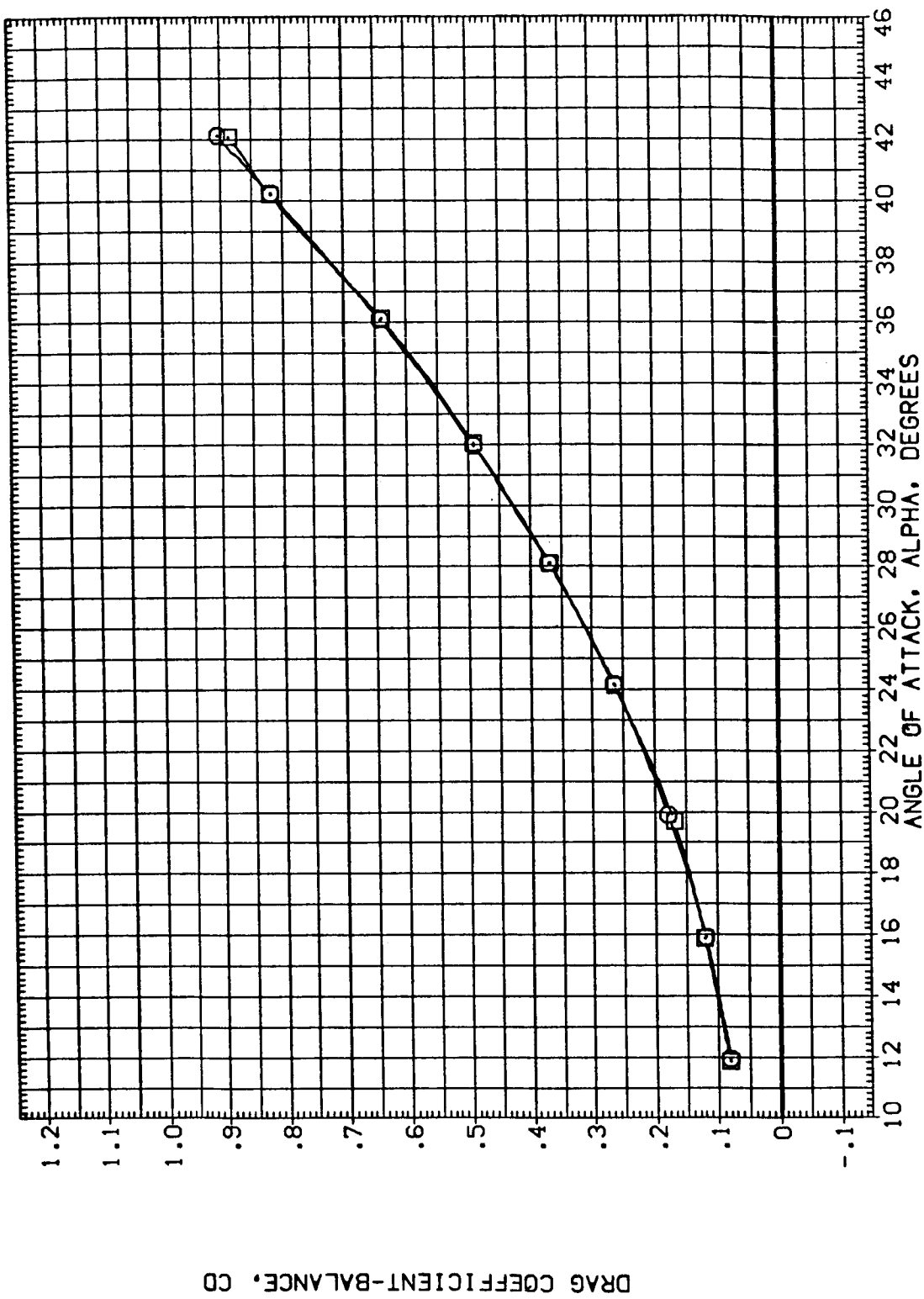


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEG013)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG017)	AMES 3.5-190 OA98 (011-M7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

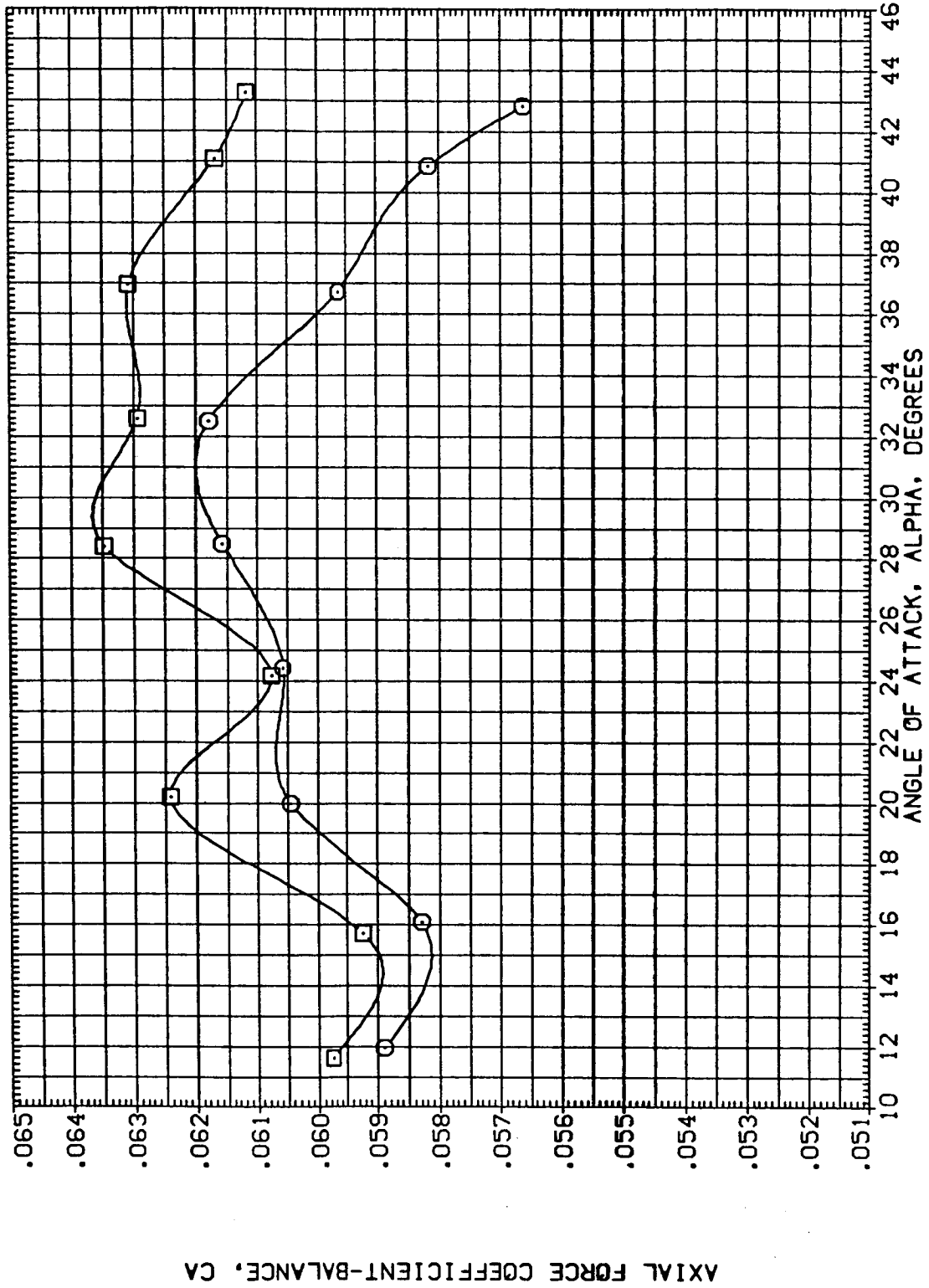


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL (CE0013)
 (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 OAS8 (011-N7+H14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700

SPDBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

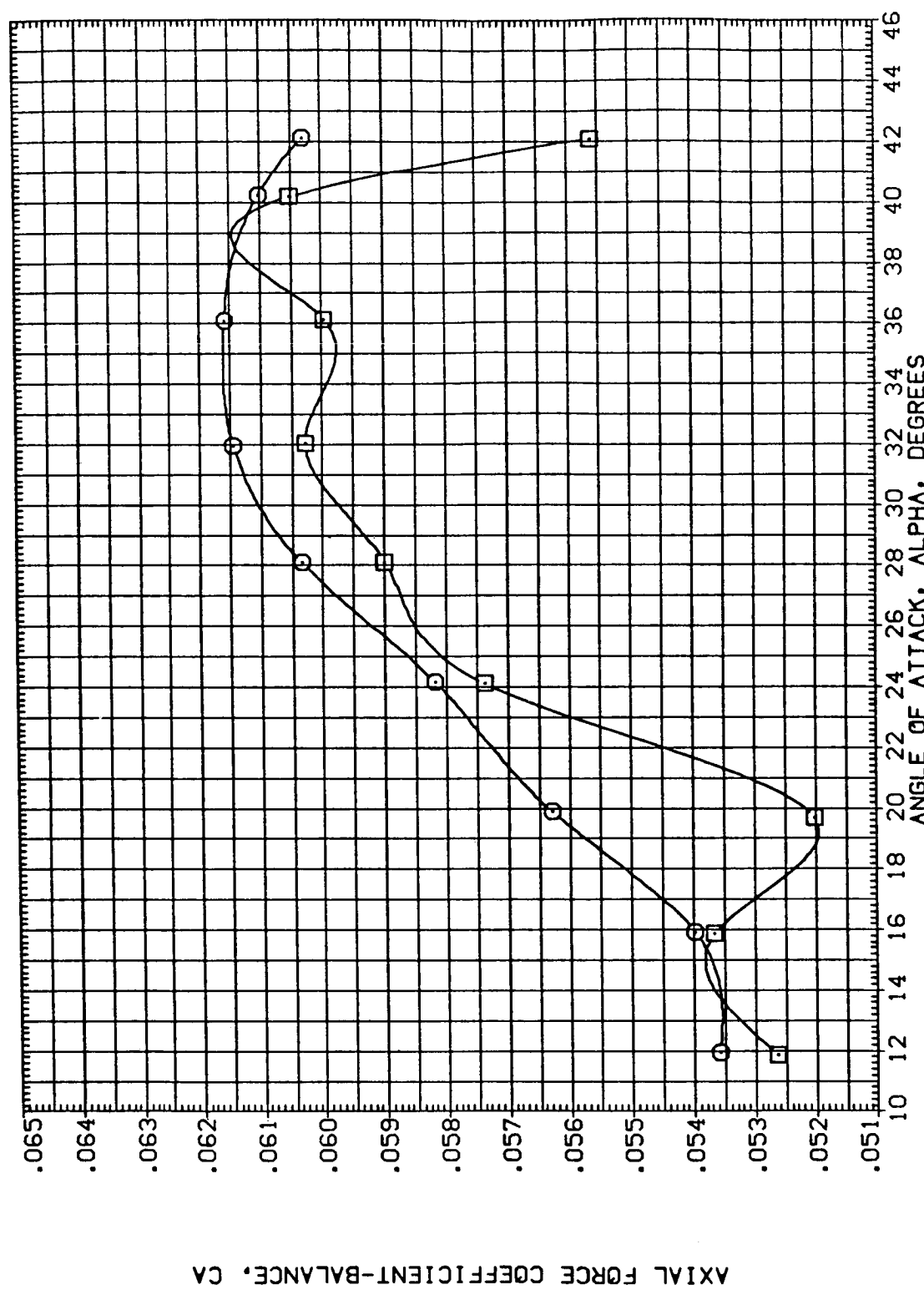


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CEG0013) (CEG0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-H7+H14-N24+DUPPY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

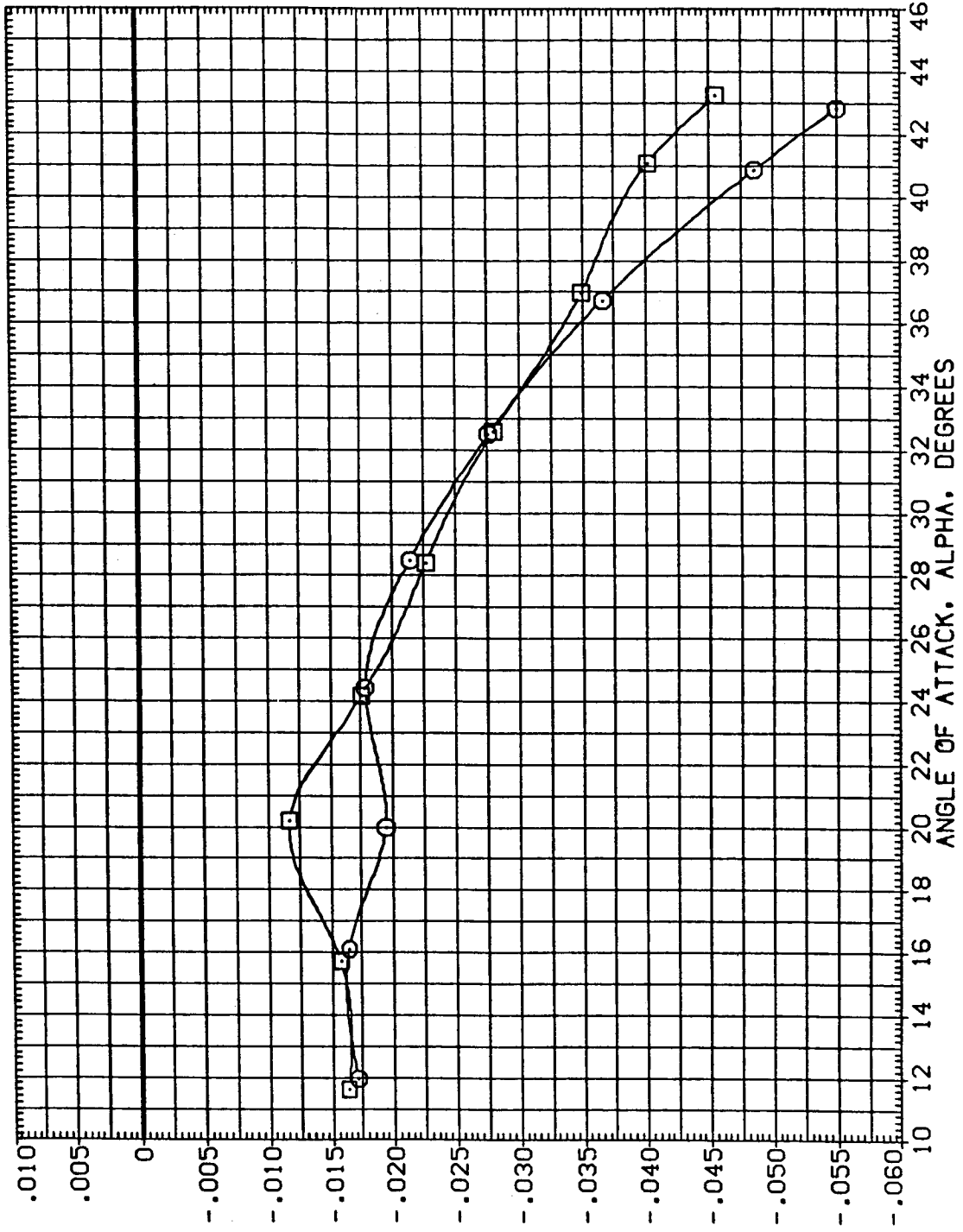


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0013) Ⓞ AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 (CE0017) □ AMES 3.5-190 OA98 (011-N7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X9
 YMRP .0000 IN.Y6
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

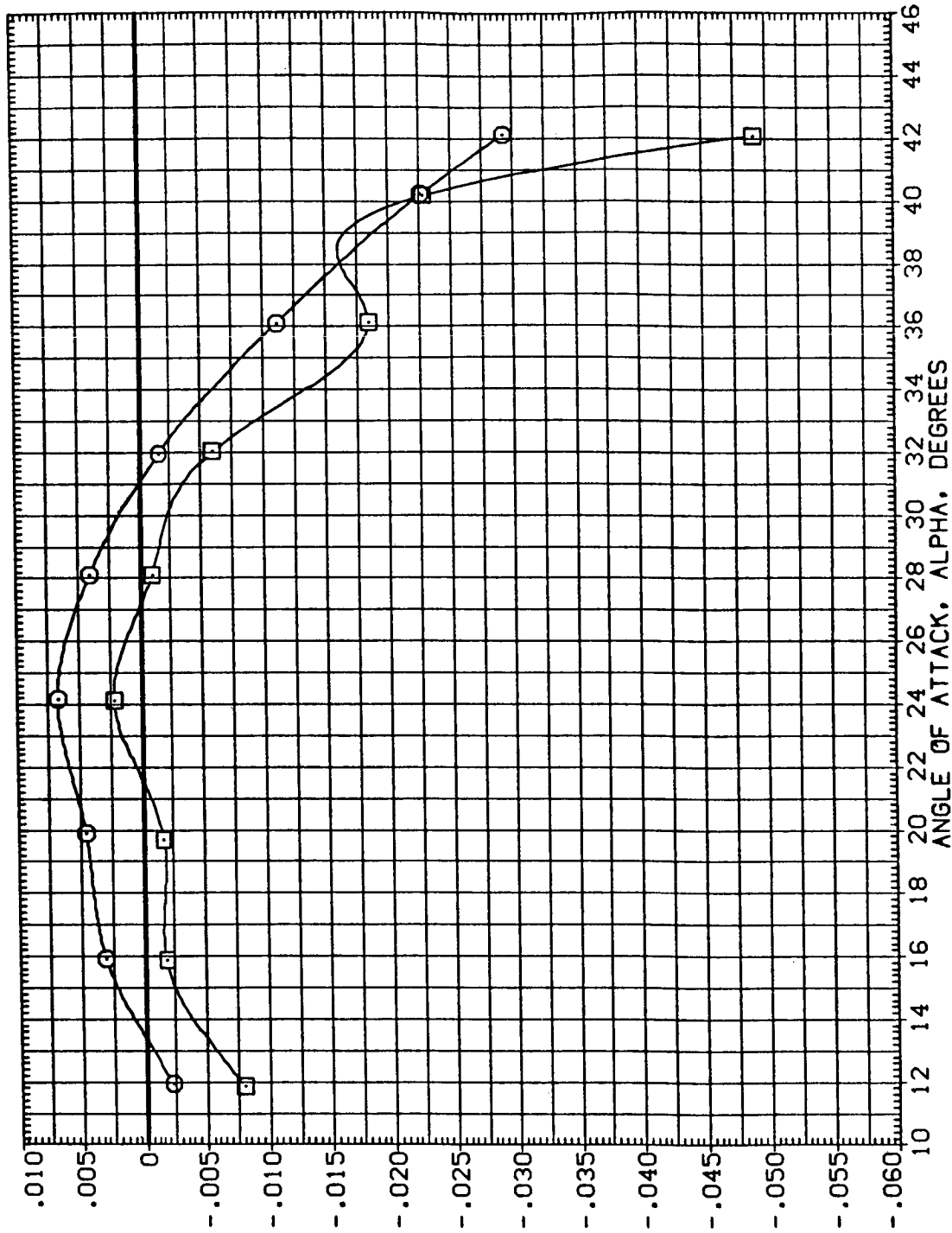


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0013) \square AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 (CE0017) \square AMES 3.5-190 GA98 (011-H7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFI

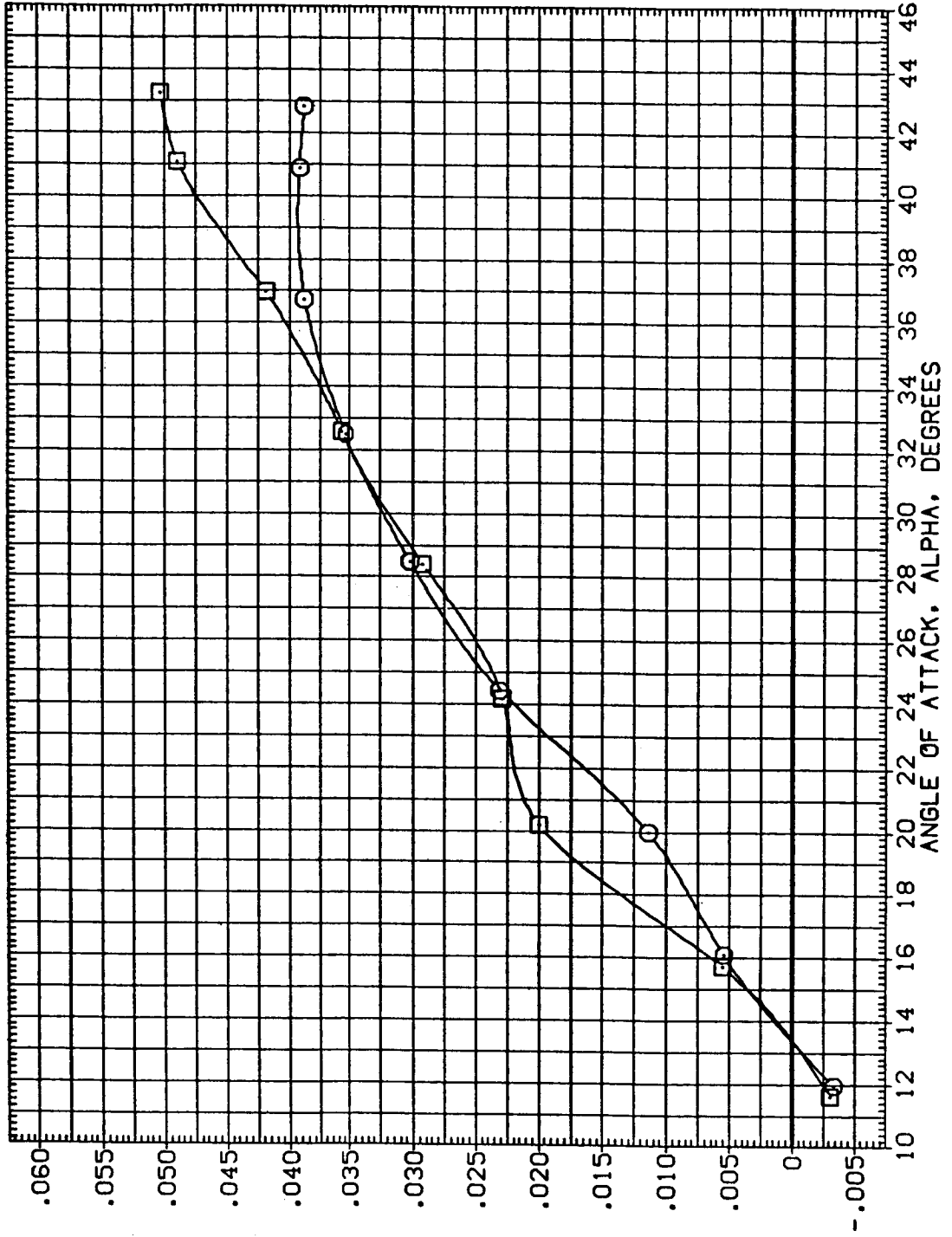


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJ MACH = 5.25

DATA SET SYMBOL: (CE0013) (CE0017)

CONFIGURATION DESCRIPTION:
 AVES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AVES 3.5-190 OAS8 (011-M7-H14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION:

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0150	

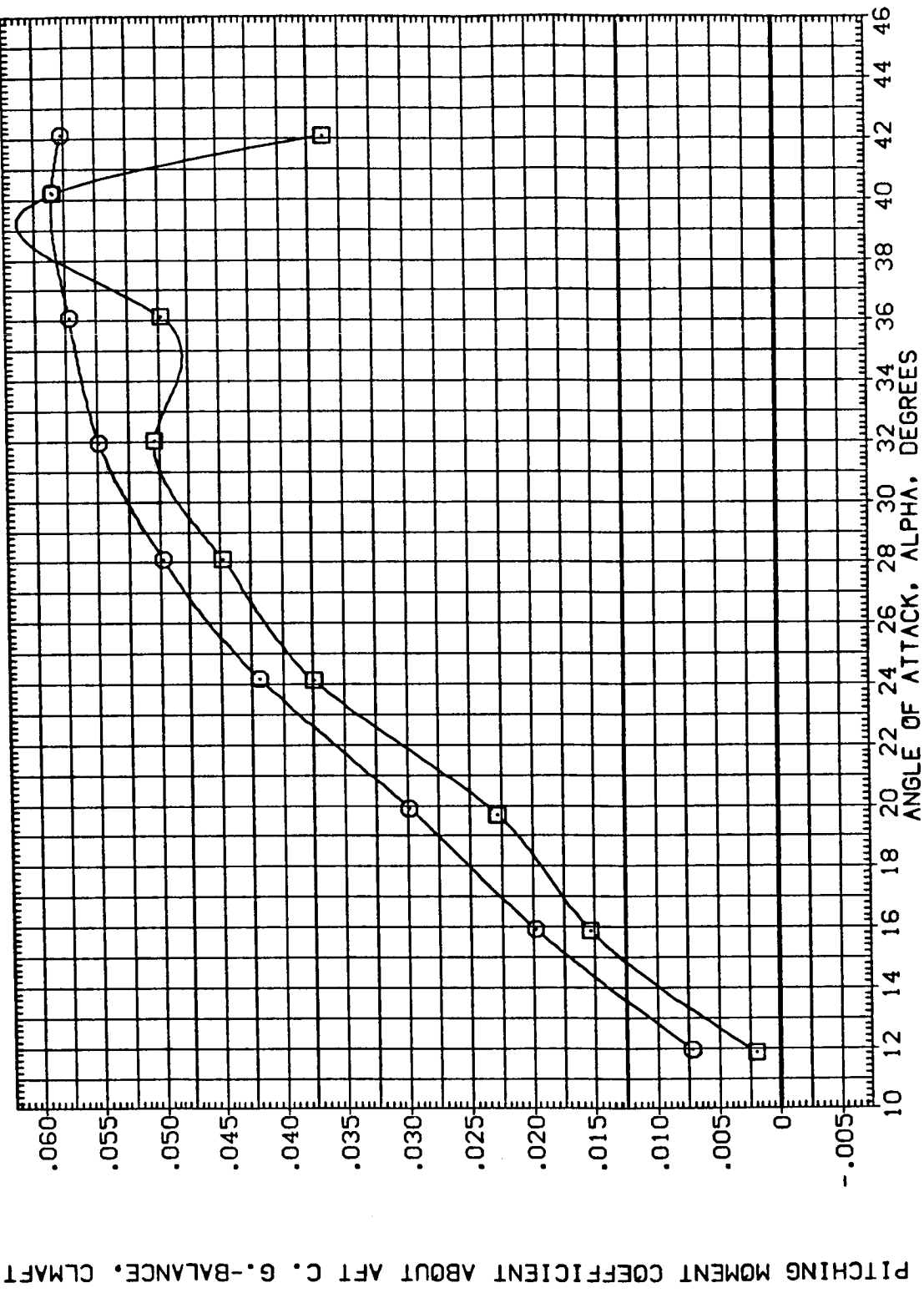


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CE0013) (CE0017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-N24+DUMMY STING)
 AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

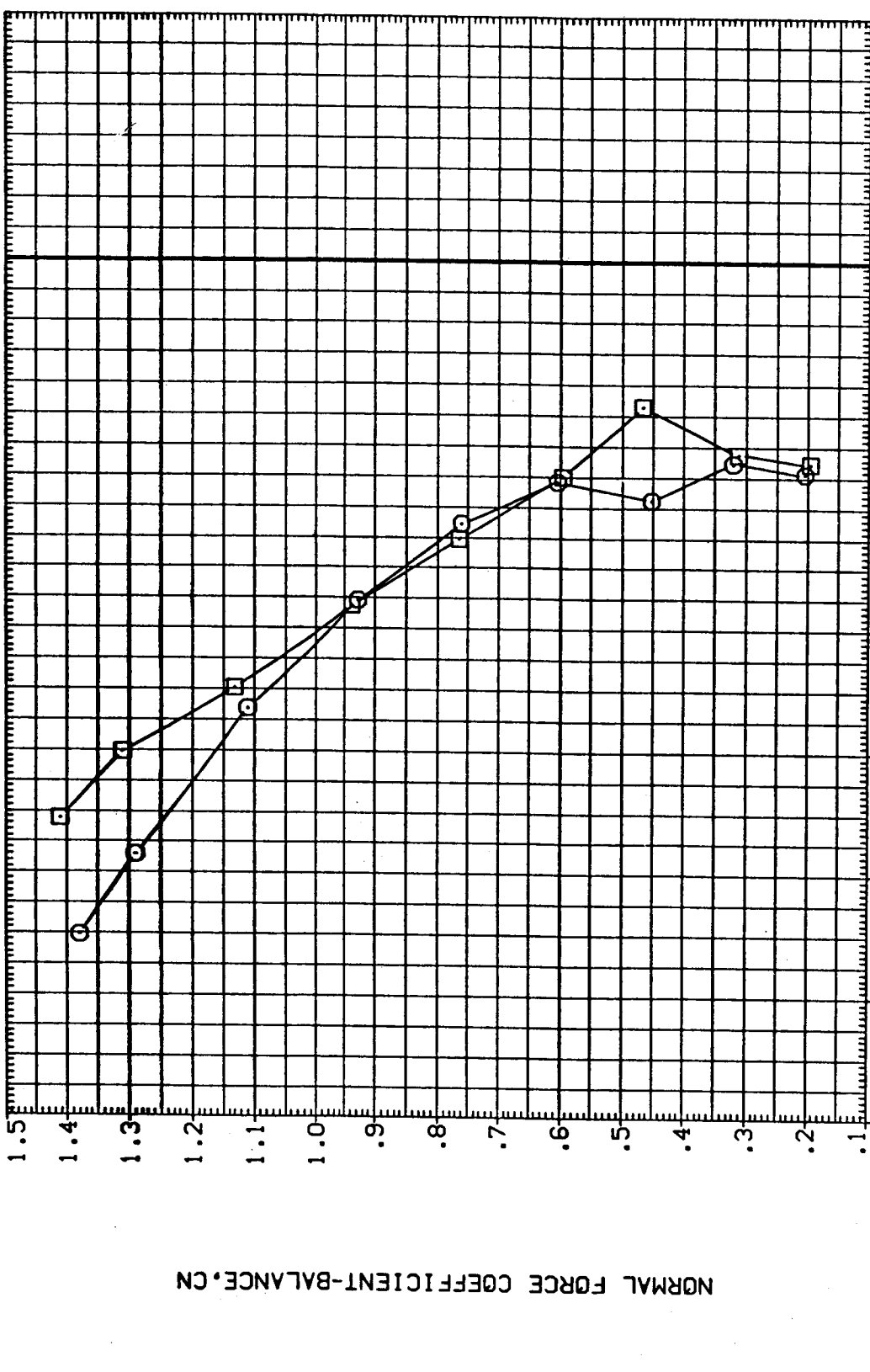
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-BALANCE, CN

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0013)
 CONFIGURATION DESCRIPTION (011-N24+DUMMY STING)
 REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

BETA .000
 ELEVON .000
 BDFLAP -11.700
 SPOBRK 55.000

AVES 3.5-190 GAB8 (011-N24+DUMMY STING)
 AVES 3.5-190 GAB8 (011-N24+DUMMY STING)

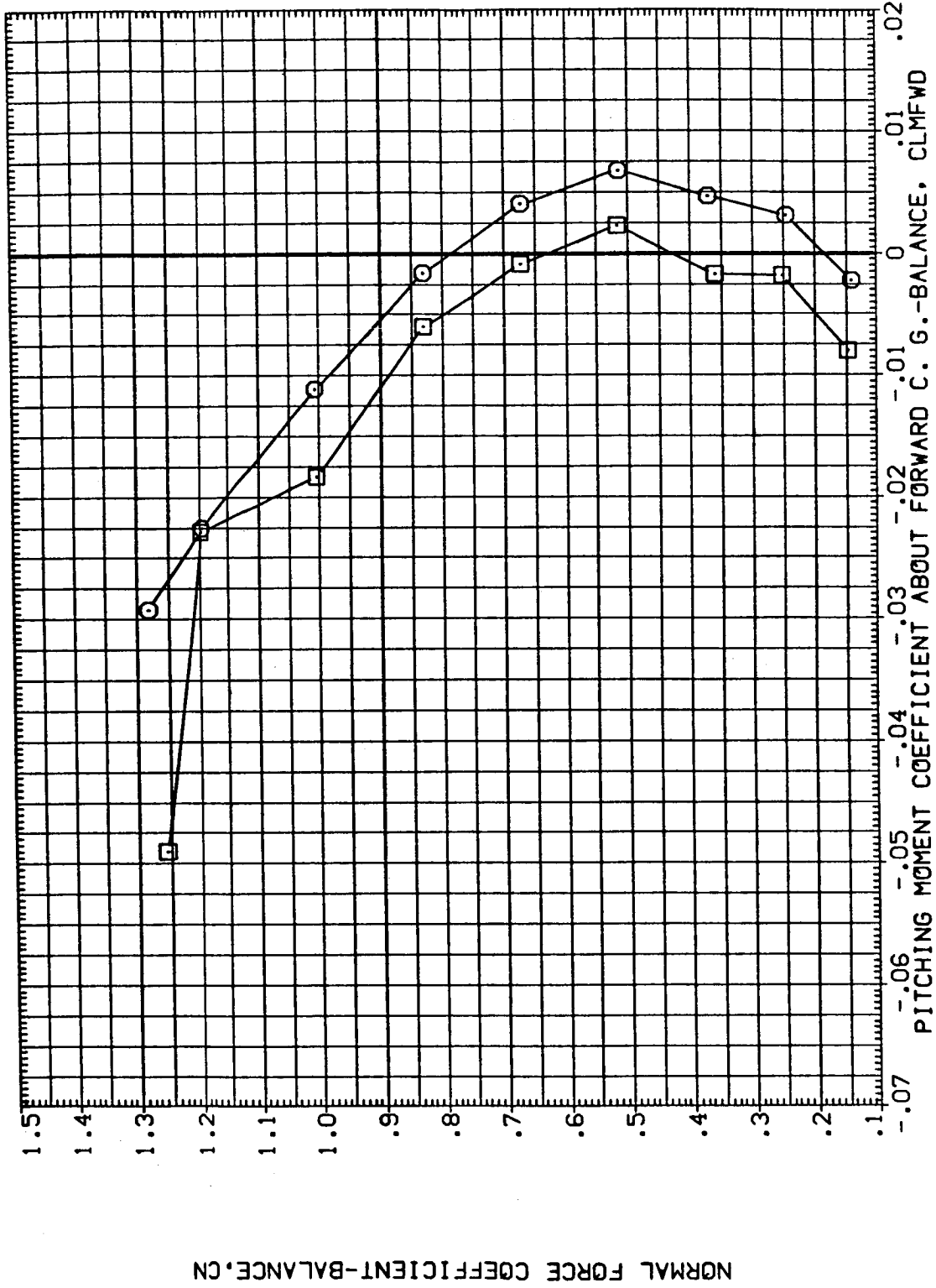


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CEG013) (CEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAB8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAB8 (011-H7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

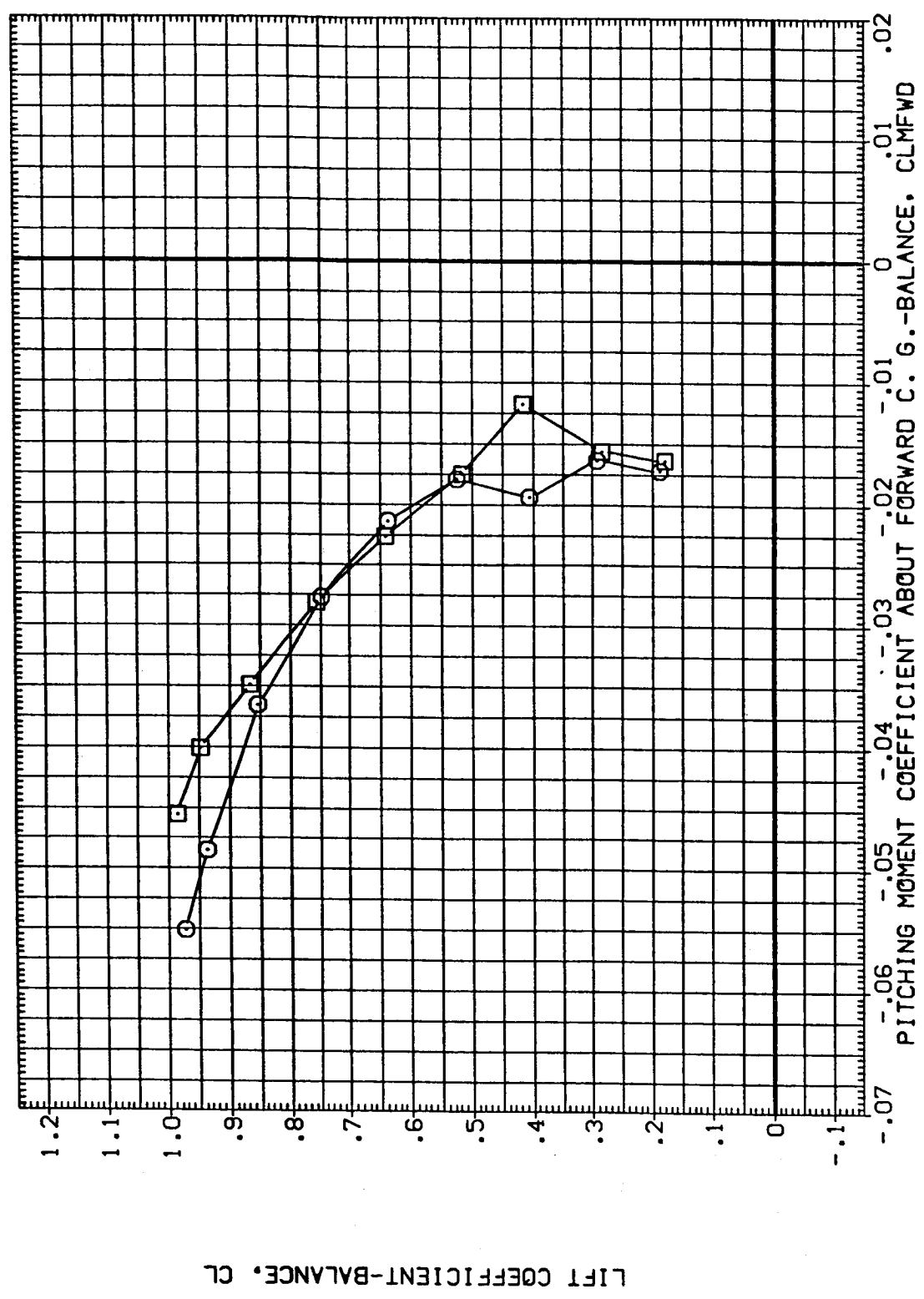


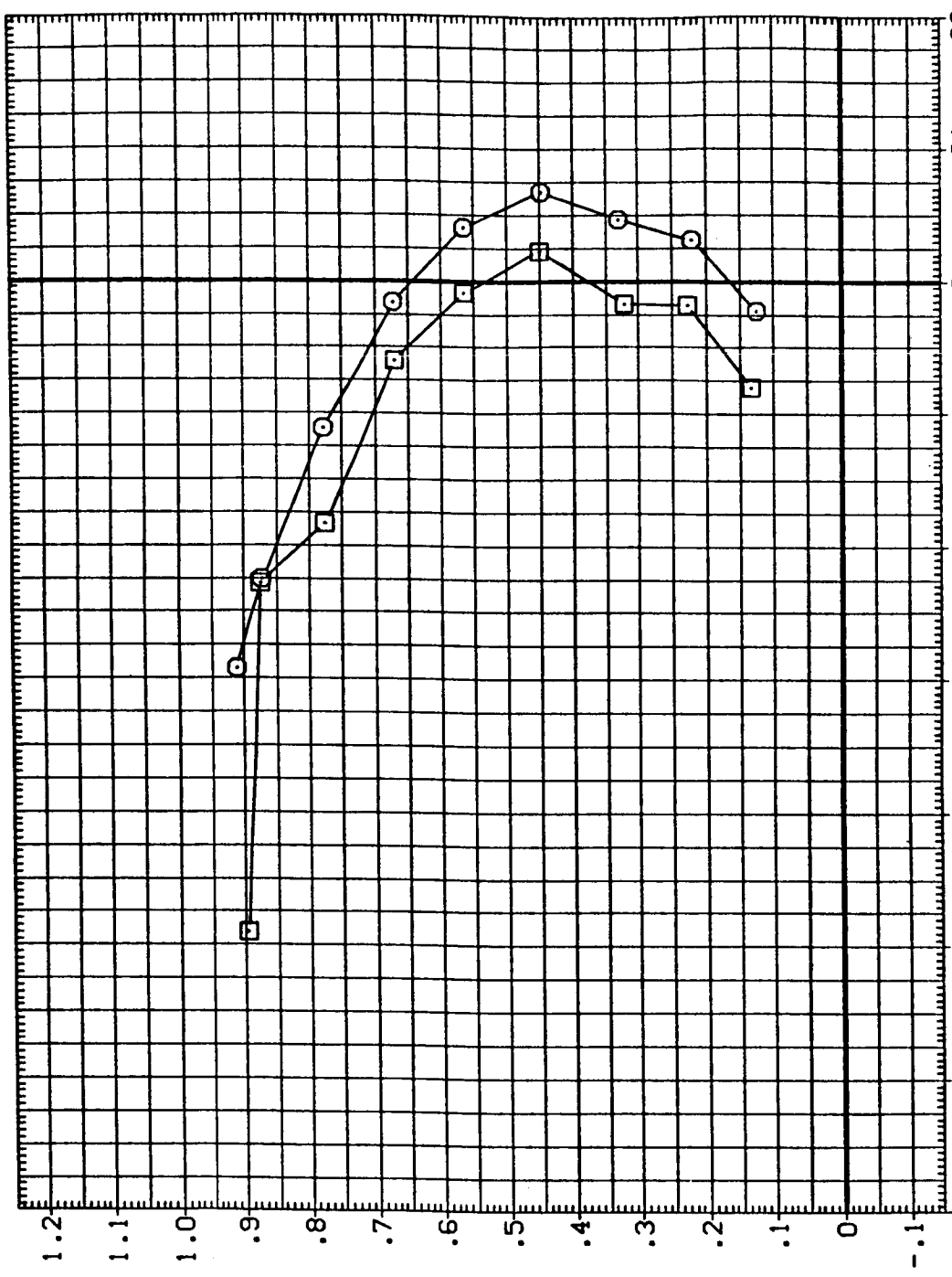
FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0013)
 CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 (CE0017) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CE0012) (CE0017)
 CONFIGURATION DESCRIPTION
 AVES 3.5-190 CAS8 (011-N24+DUMMY STING)
 AVES 3.5-190 CAS8 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

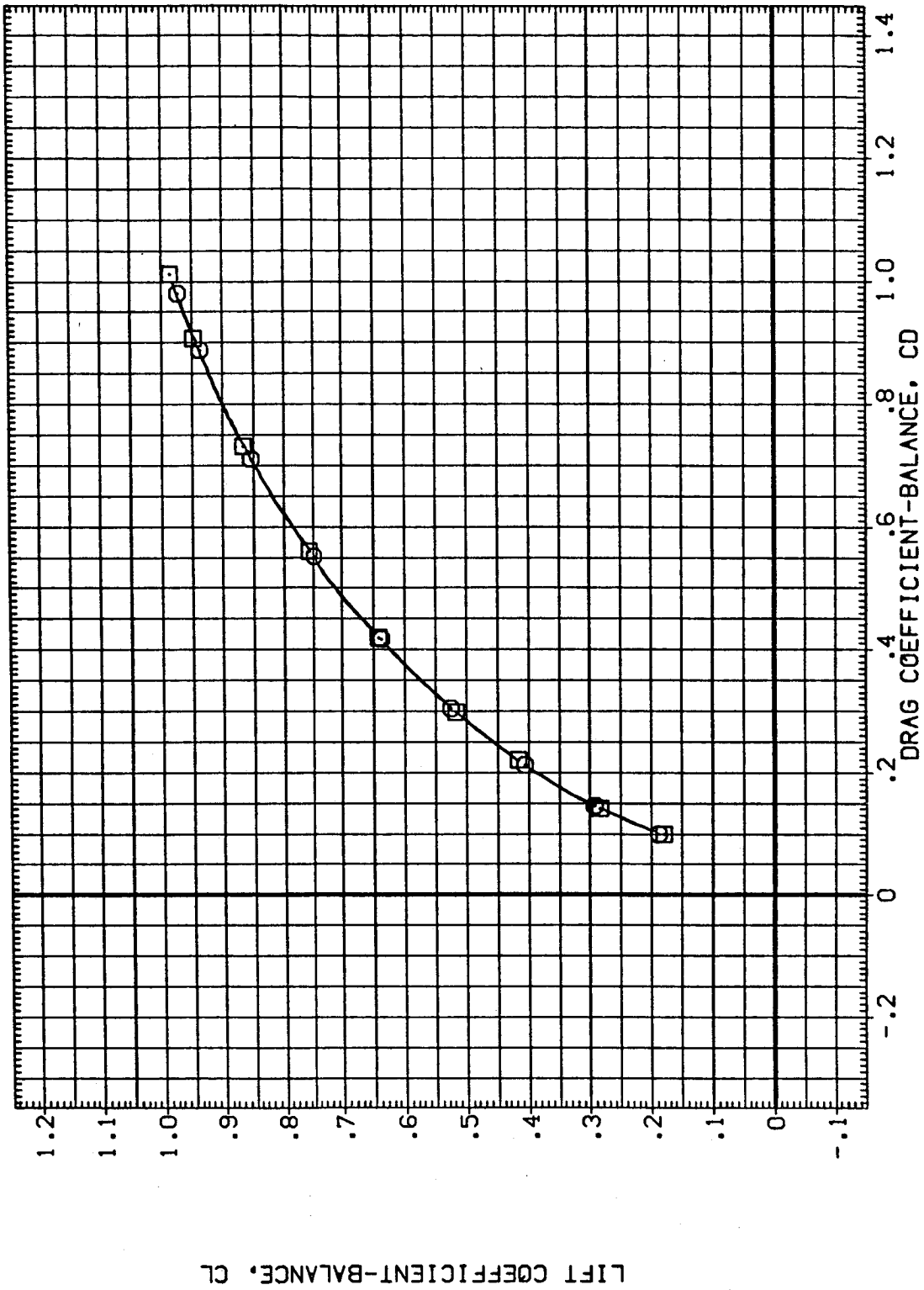


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CALMACH = 5.25

DATA SET SYMBOL: (CE0013) (CE0017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 (011-N24+DUMMY STING) (011-N7+M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPDRRY: 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BRREF 936.6800 IN. X0 XMRP 1076.7000 IN. Y0 YMRP .0000 IN. Z0 ZMRP 375.0000 IN. SCALE .0150

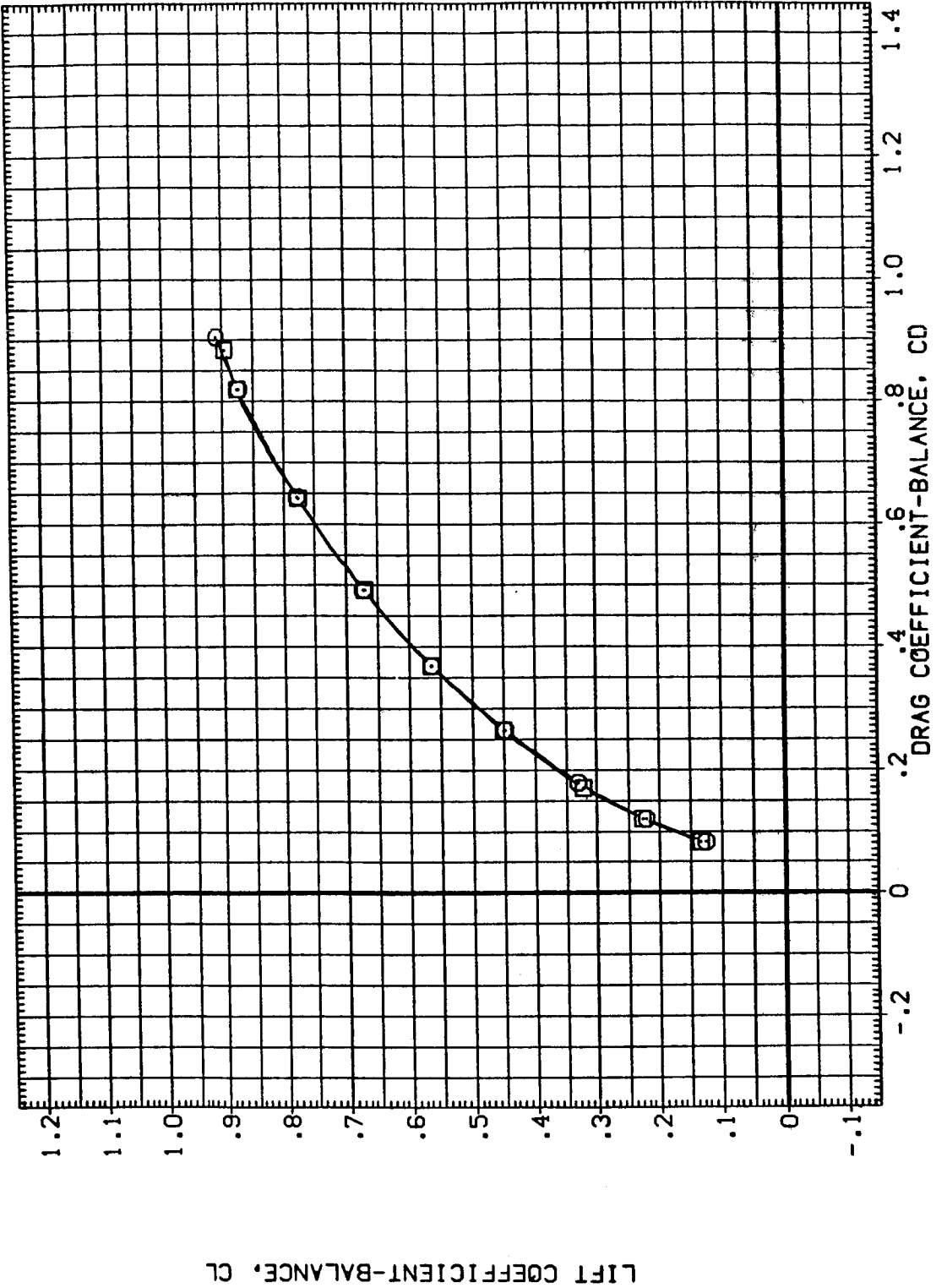


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-N24+DUMMY STING)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

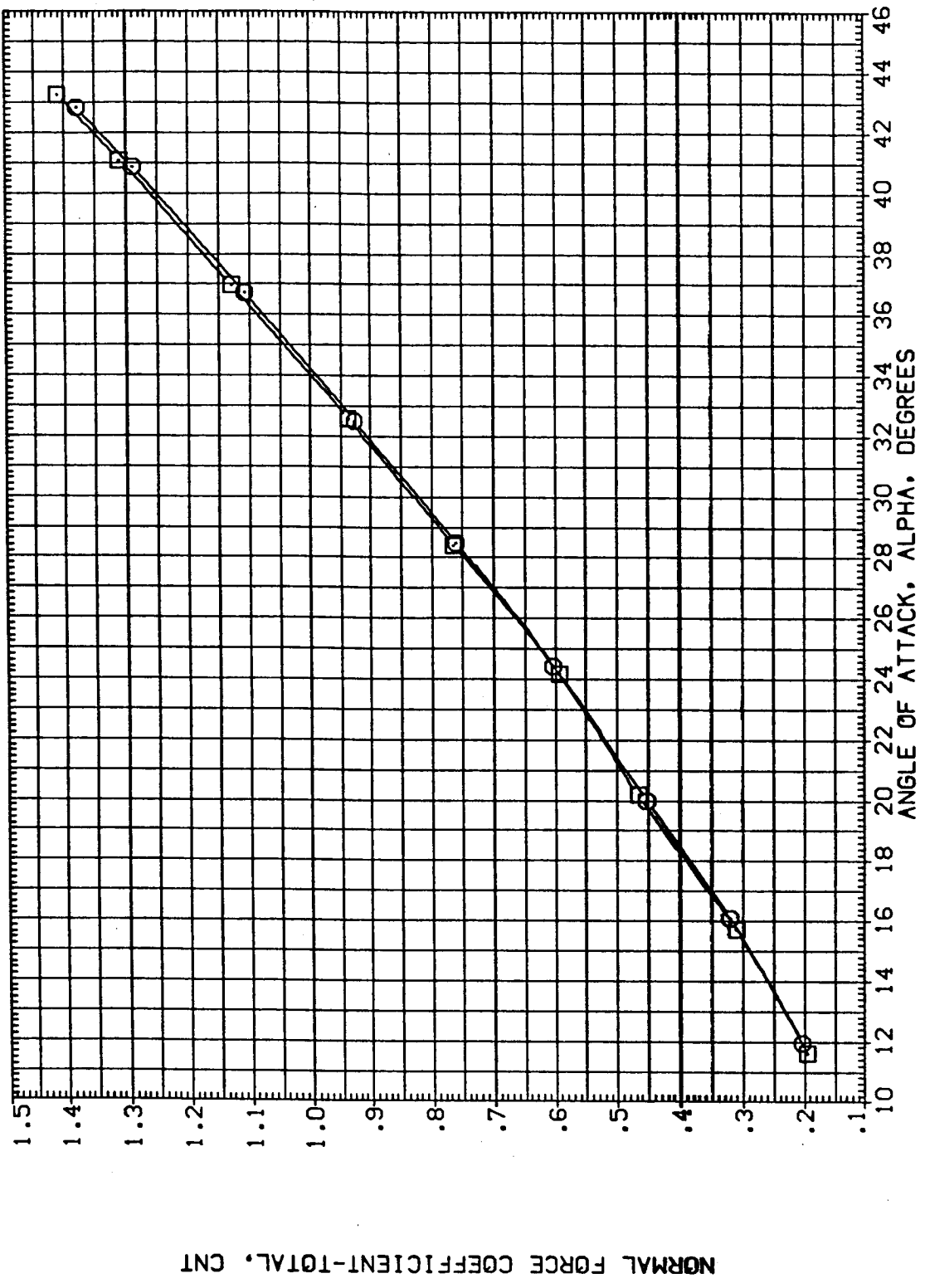


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(AJMACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-N24+DUMMY STING)
 APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

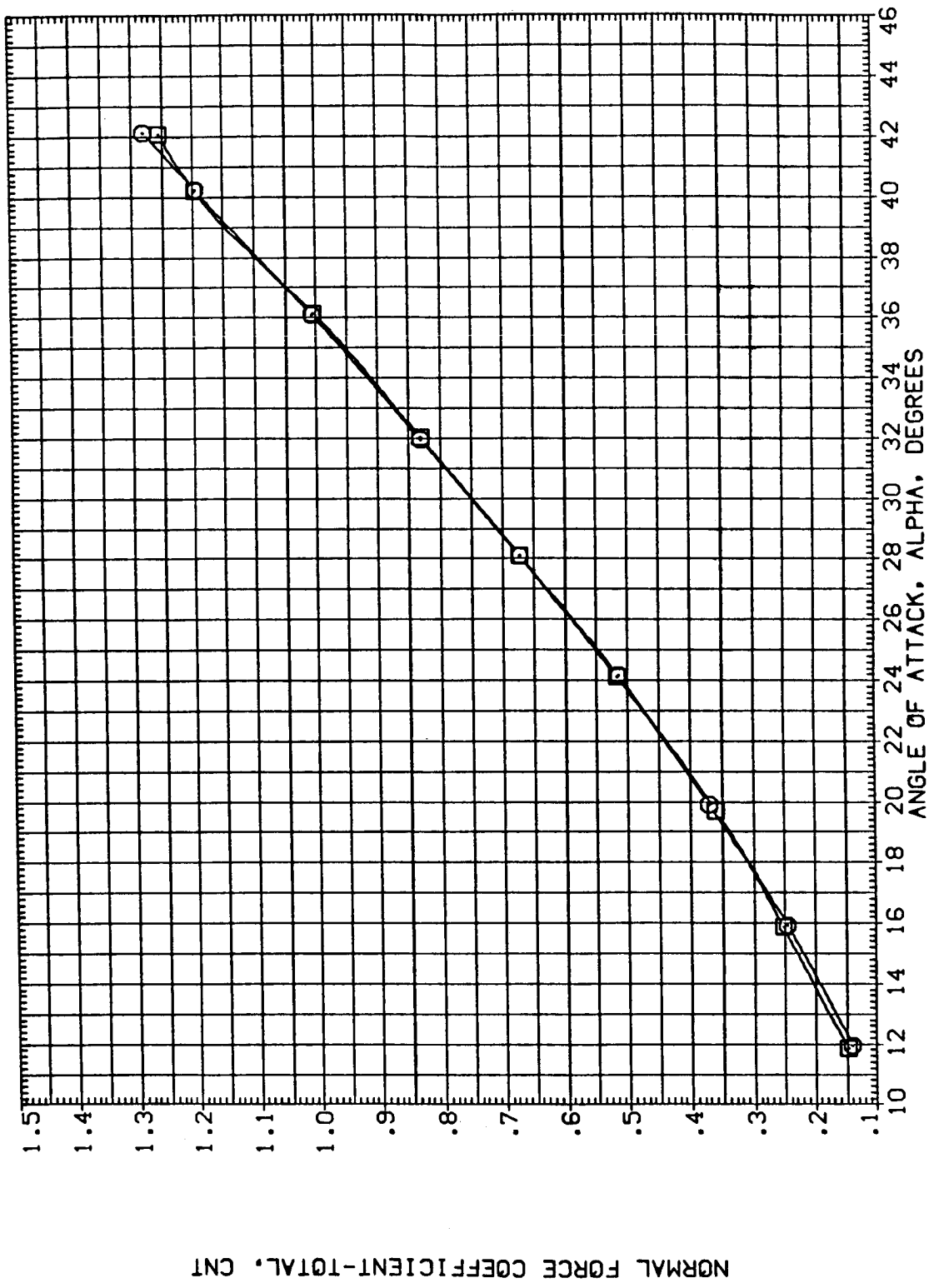
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CN1

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-N24+DUMMY STING)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

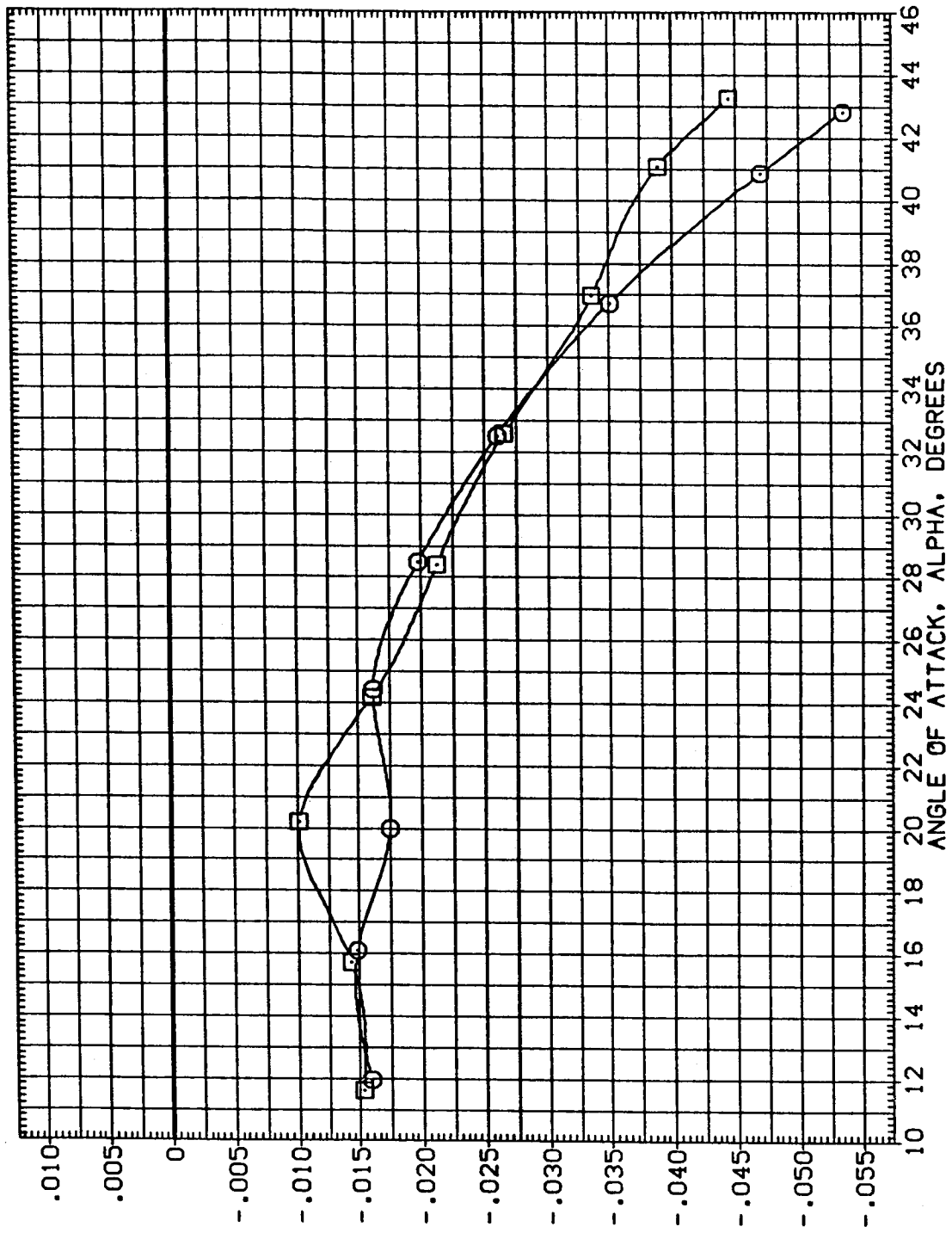


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GA98 (011-N24-DUMMY STING)
 AVES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

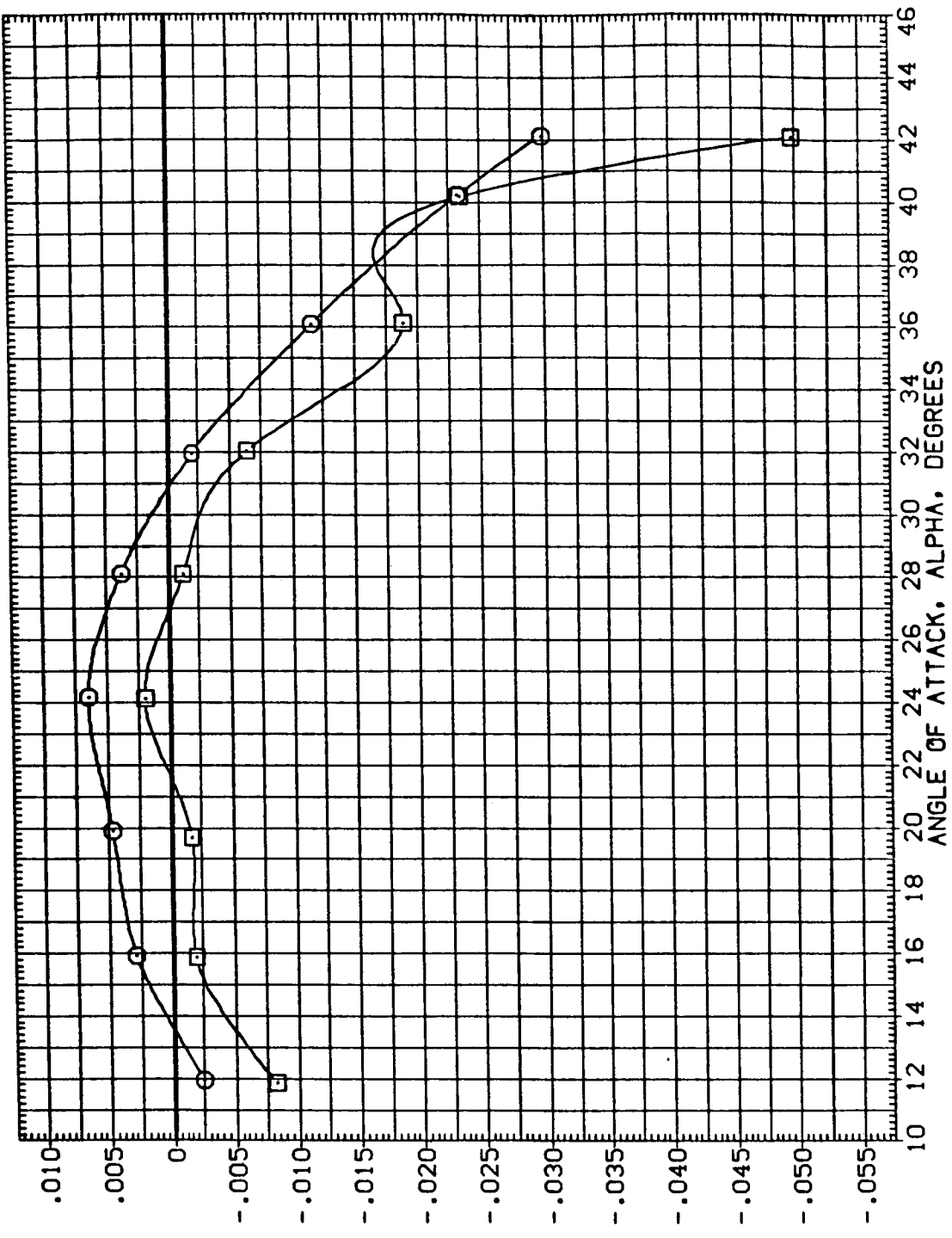


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

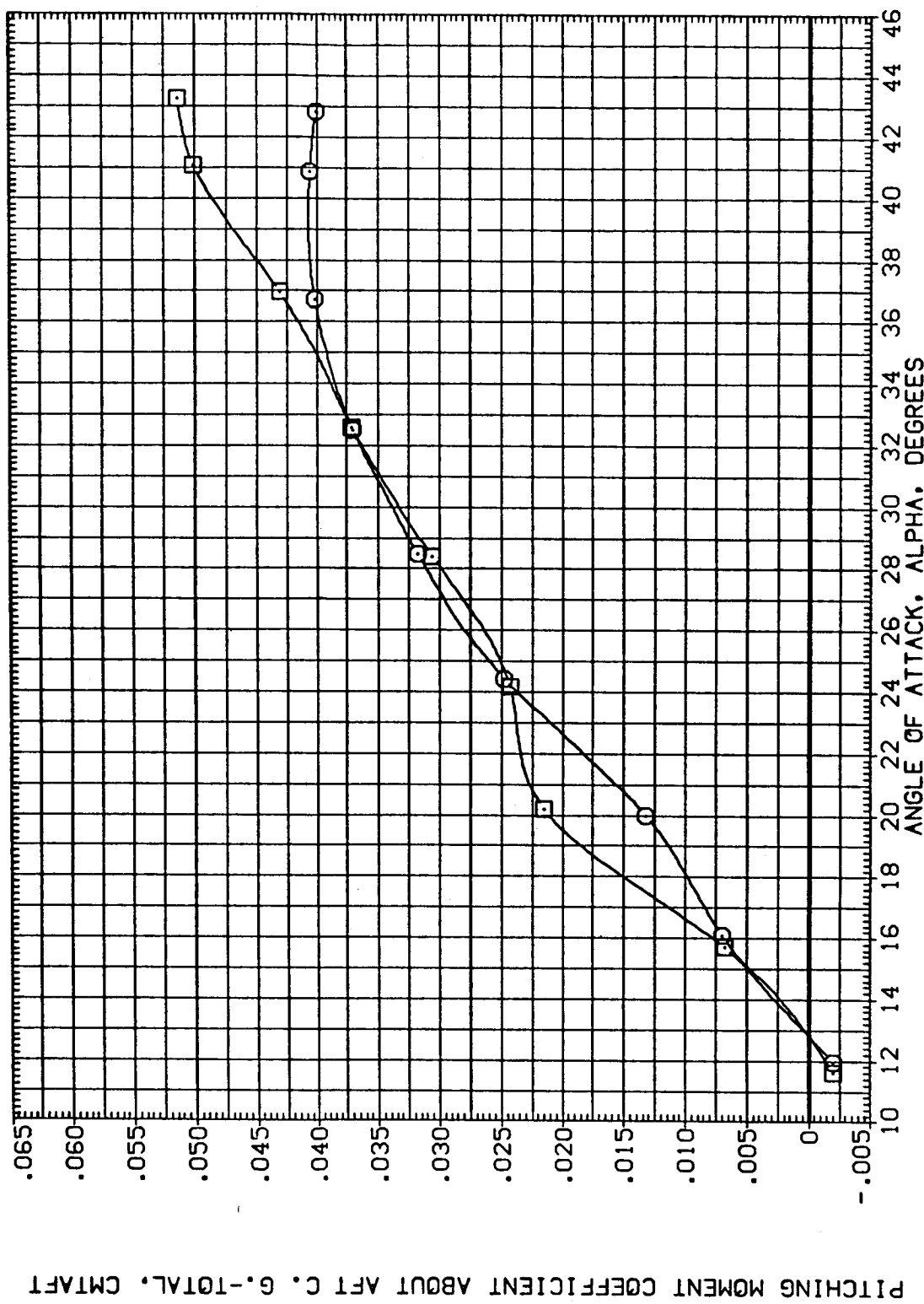


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E00013) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (E00017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

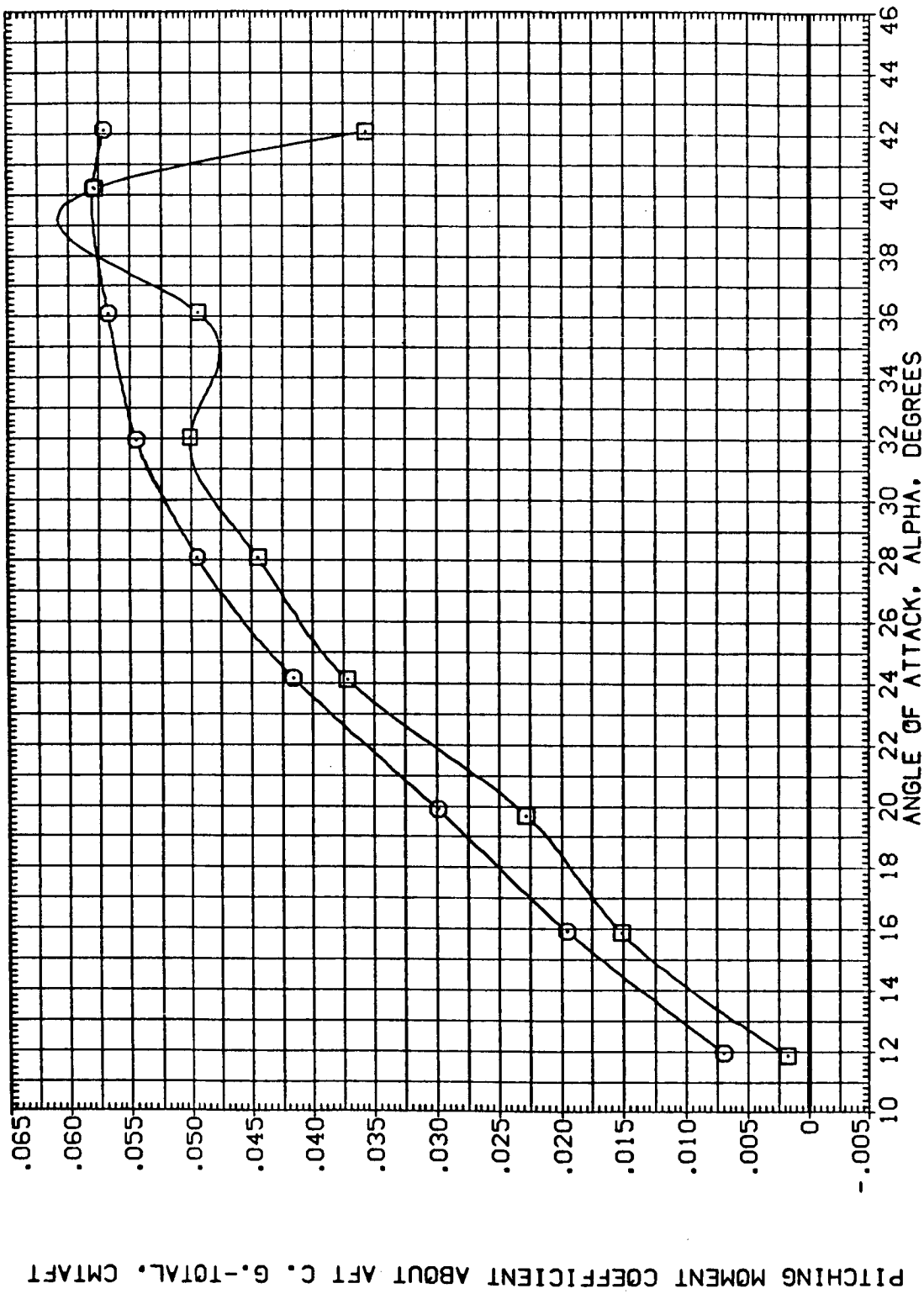


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

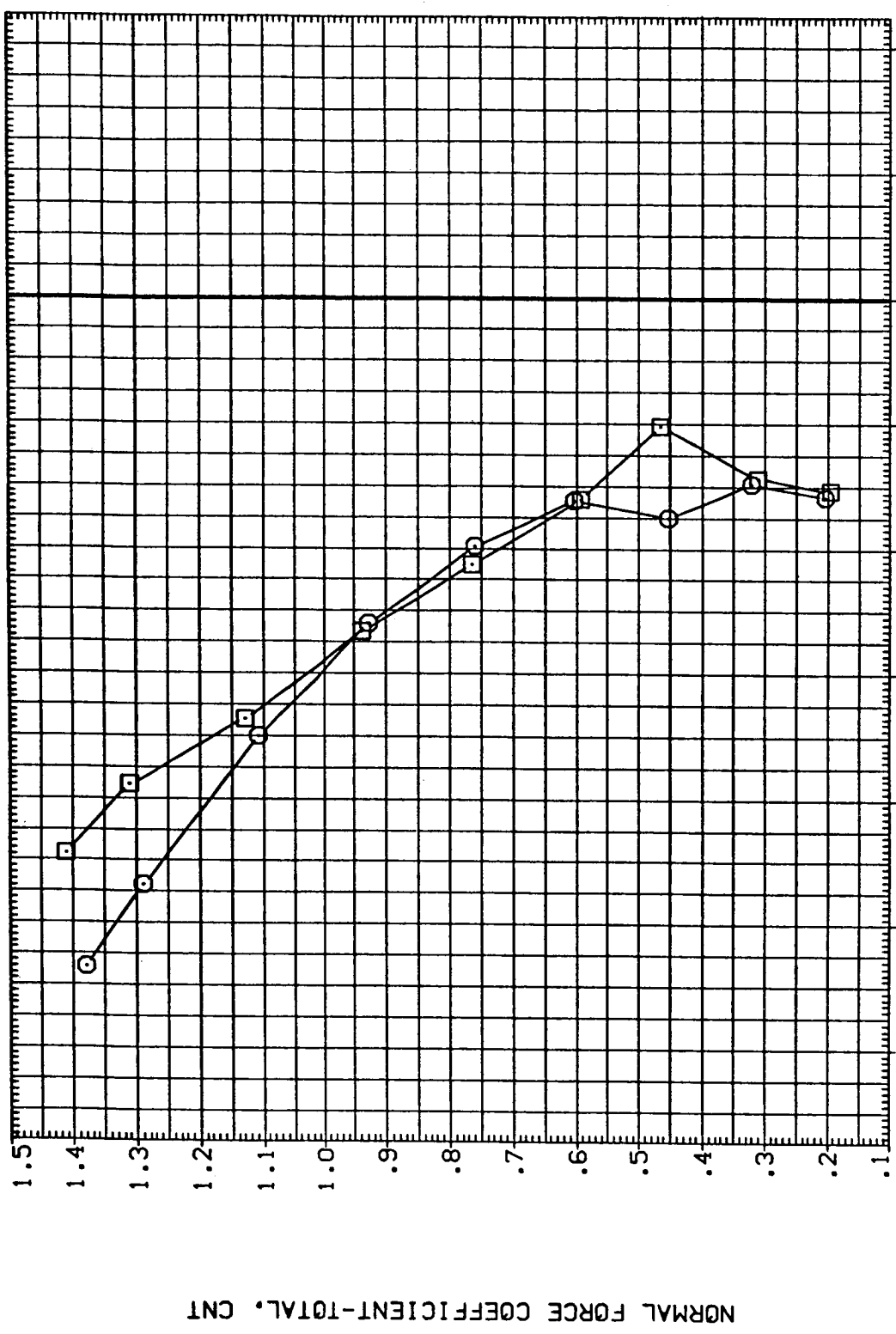
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 59. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION APES 3.5-190 O/A98 (011-N24+DUMMY STING) APES 3.5-190 O/A98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

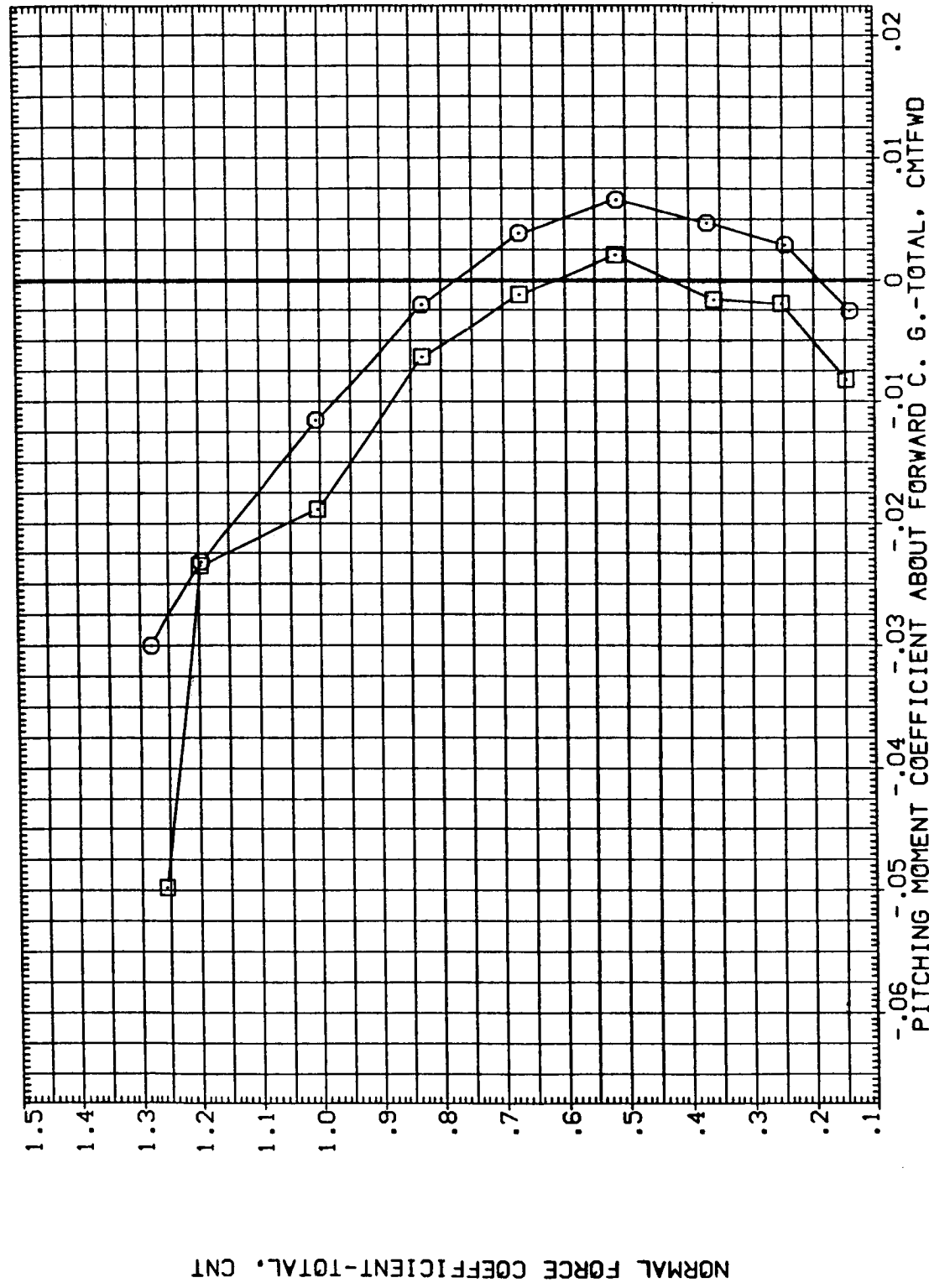


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

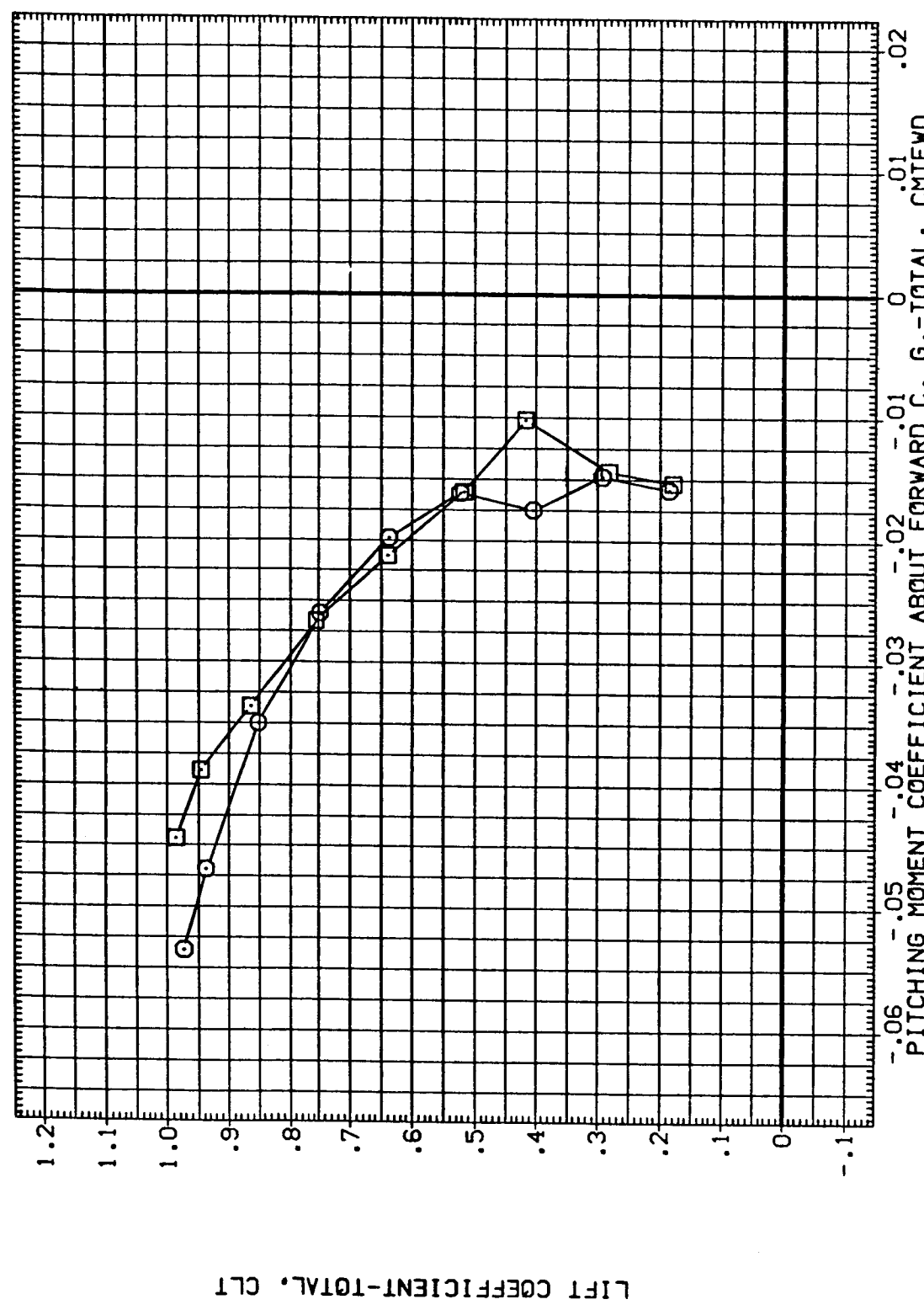


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAB8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAB8 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

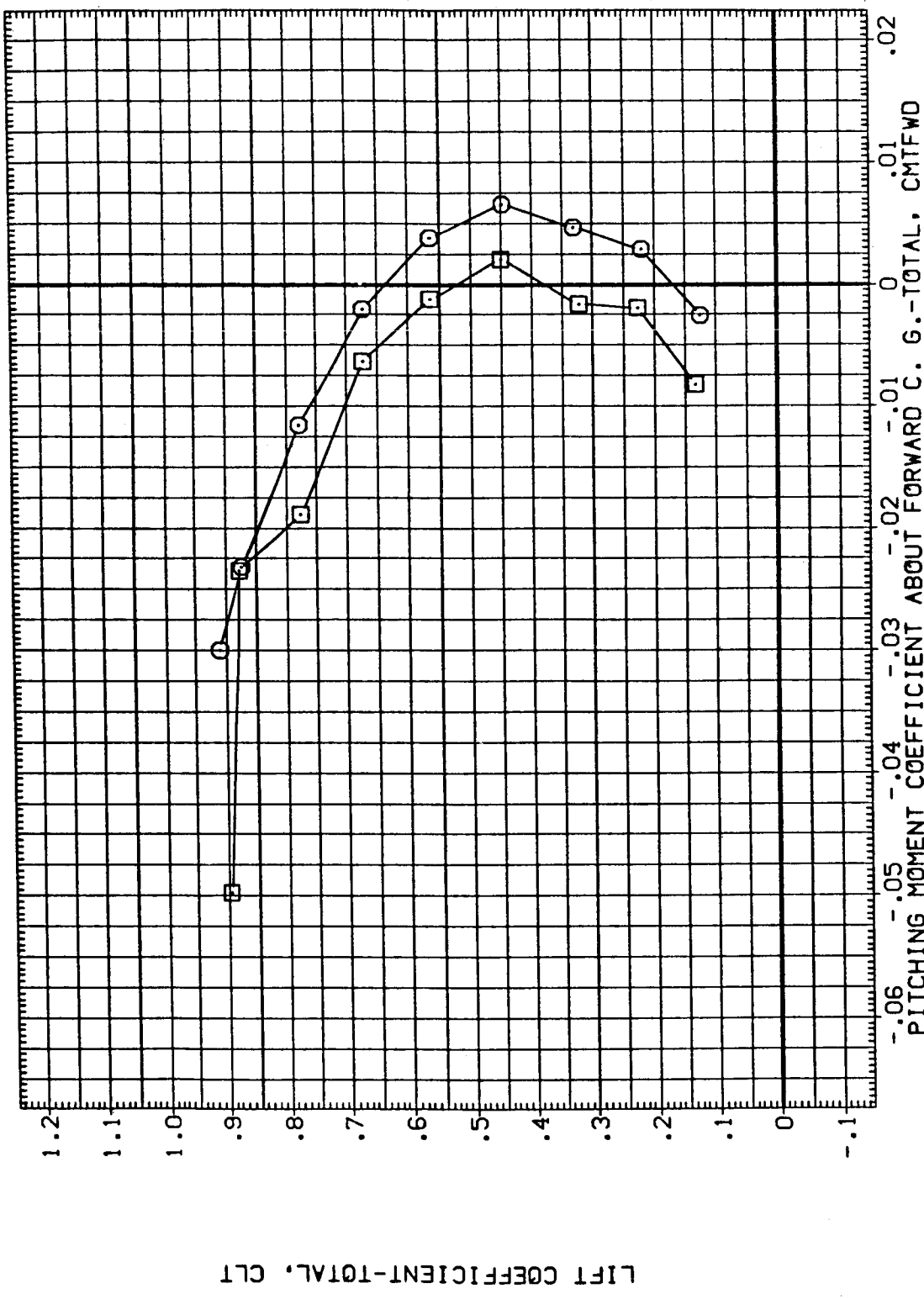


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0013) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (EE0017) AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

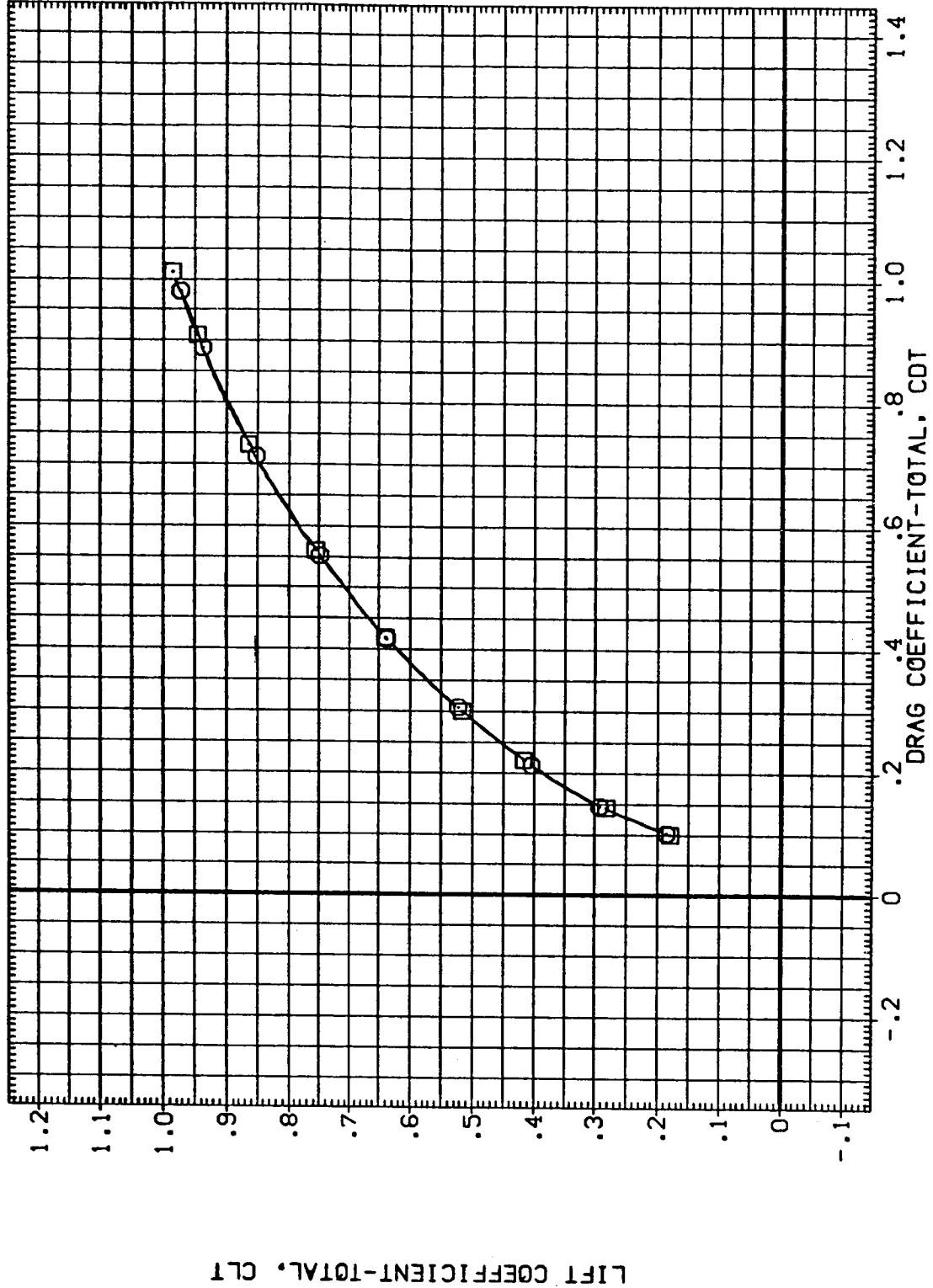


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E60013) (E60017)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 GA98 (011-N24+DUMMY STING)
 ANES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

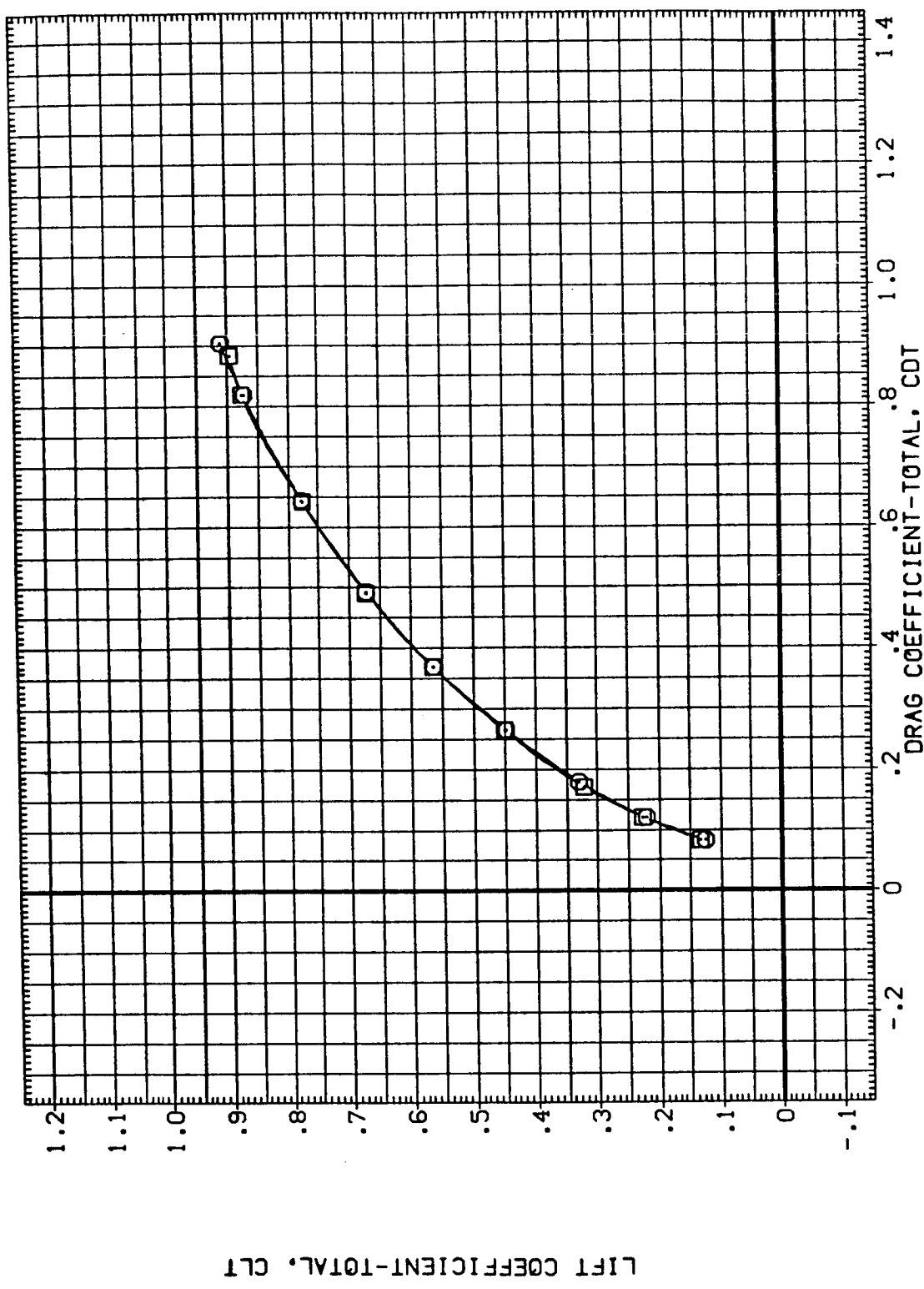
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CL1

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

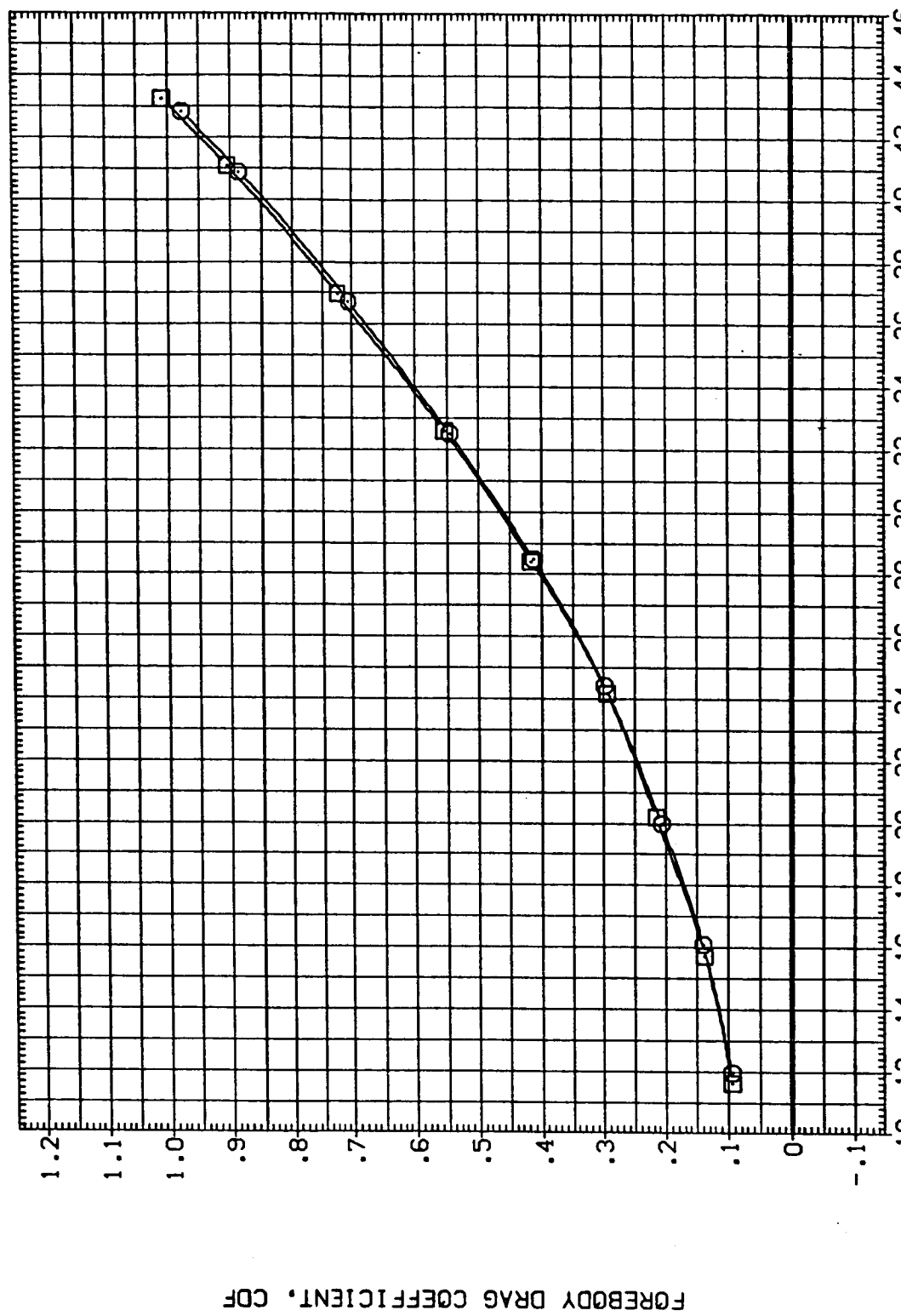
BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



FOREBODY DRAG COEFFICIENT, CDF

ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA)MACH = 5.25

DATA SET SYMBOL: (EEG013) (EEG017)

CONFIGURATION DESCRIPTION:
 ANES 3.5-190 0A98 (011-N24+DUMMY STING)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN.X0
 YMRP: .0000 IN.Y0
 ZMRP: 375.0000 IN.Z0
 SCALE: .0150

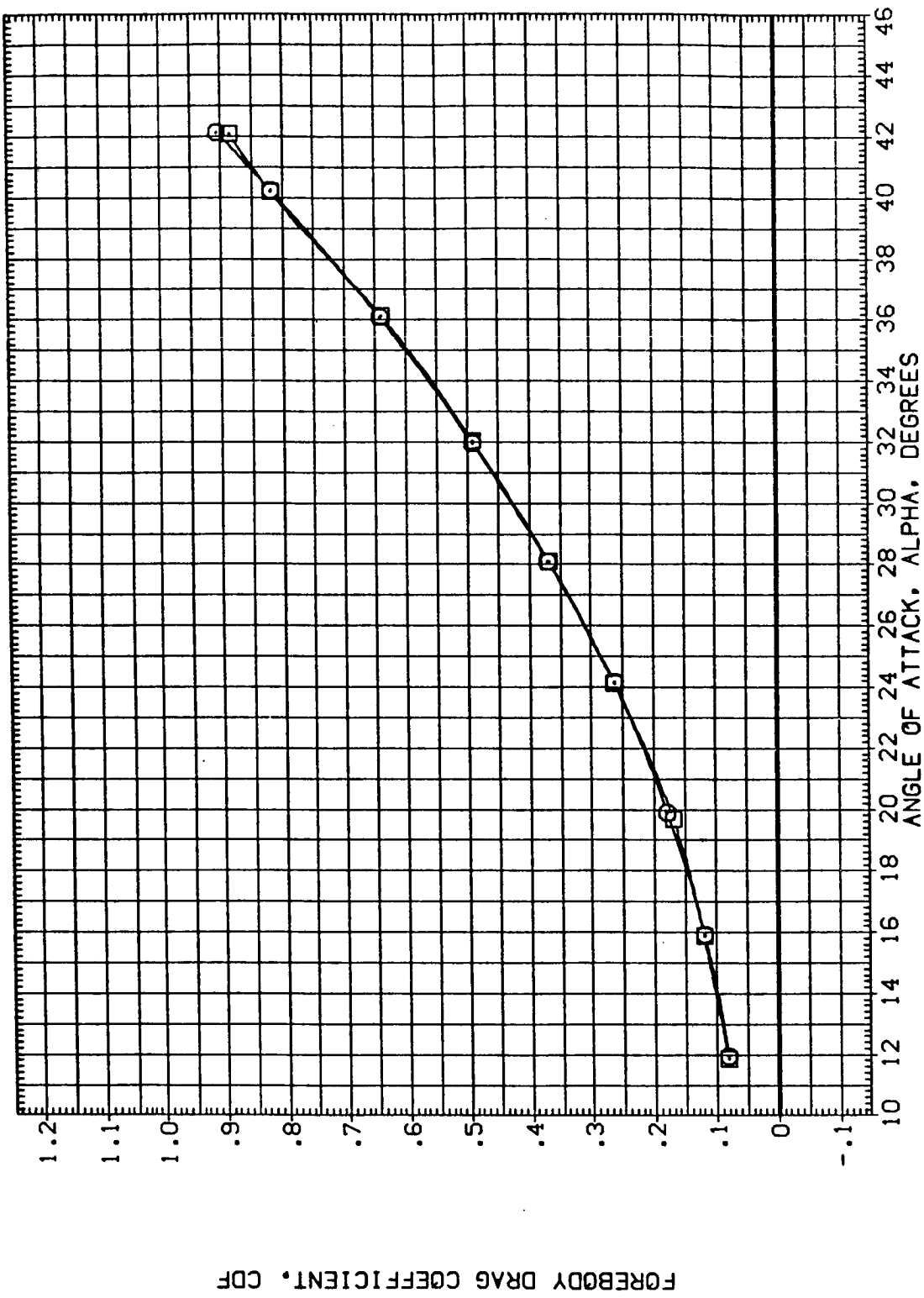


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (EE0013) (EE0017) CONFIGURATION DESCRIPTION (011-N24+DUMMY STING) (011-M7+M14-N24+DUMMY STING) BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPDBRK 55.000 55.000 REFERENCE INFORMATION SQ.FT. IN. IN. IN. X0 IN. Y0 IN. Z0 SCALE

SREF 2690.0000
 LREF 474.8000
 BREF 536.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

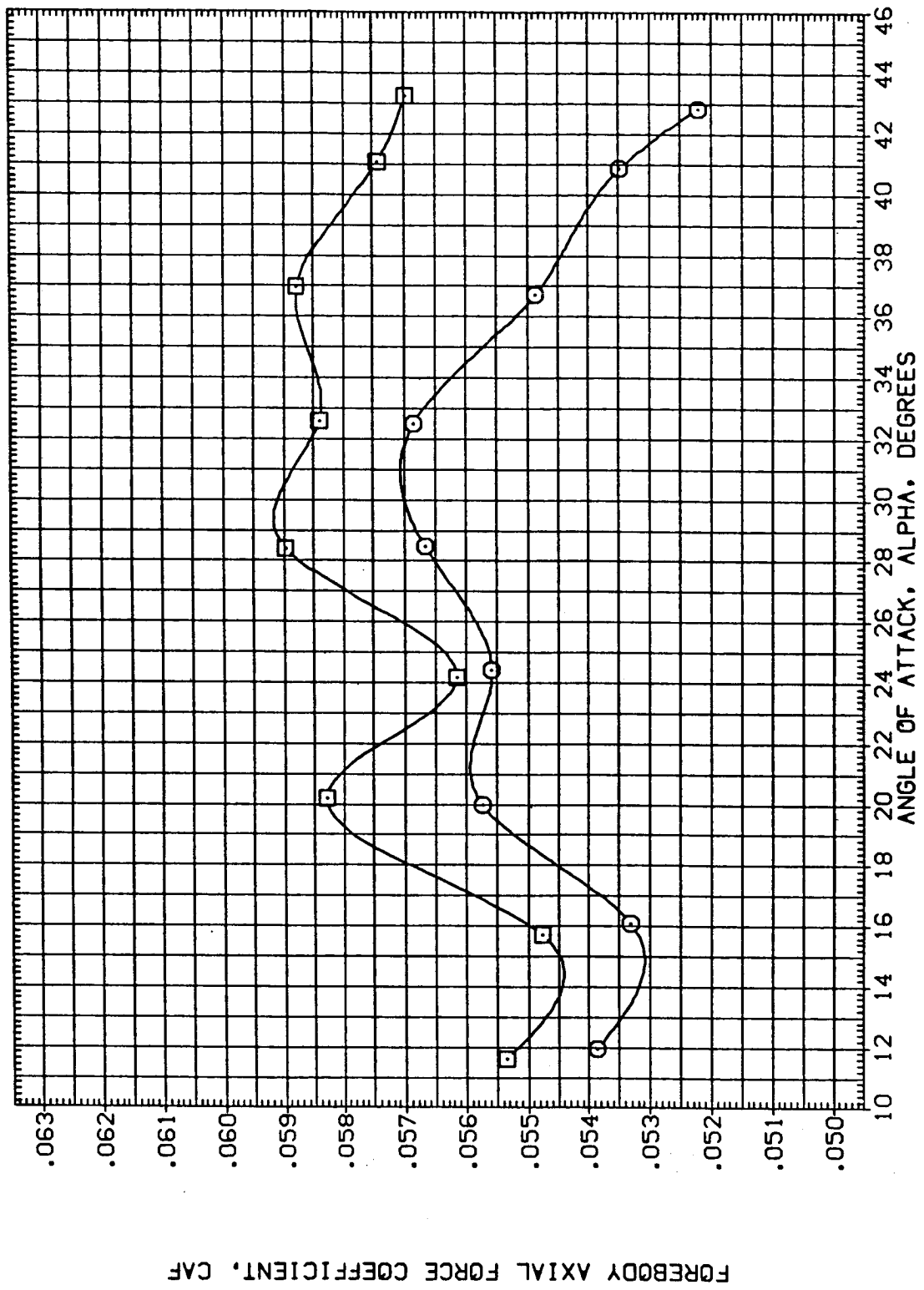


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-N24+DUMMY STING)
 APES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

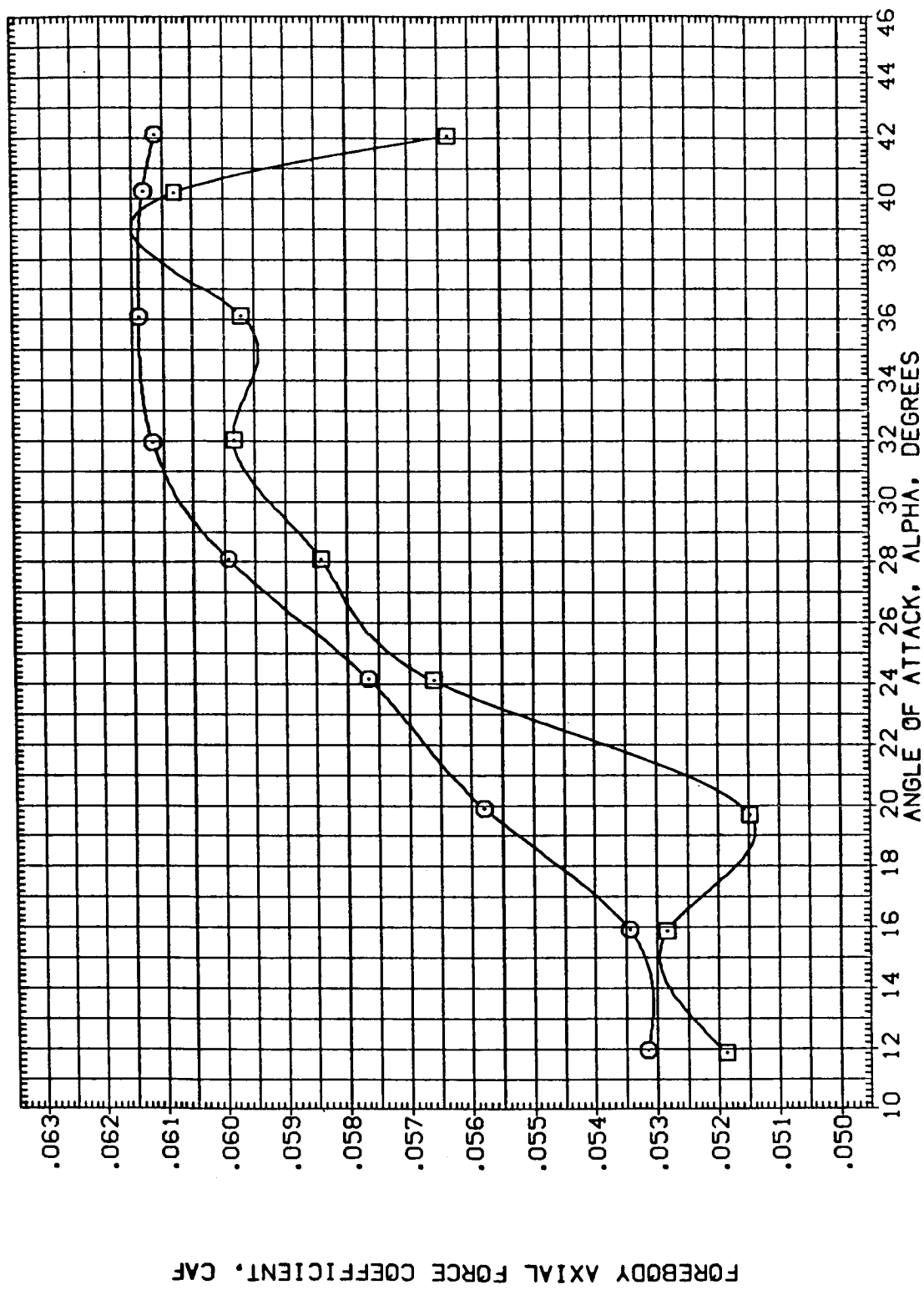


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(8)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 OAS98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 OAS98 (011-N7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XD
						YMRP .0000 IN.YD
						ZMRP 375.0000 IN.ZD
						SCALE .0150

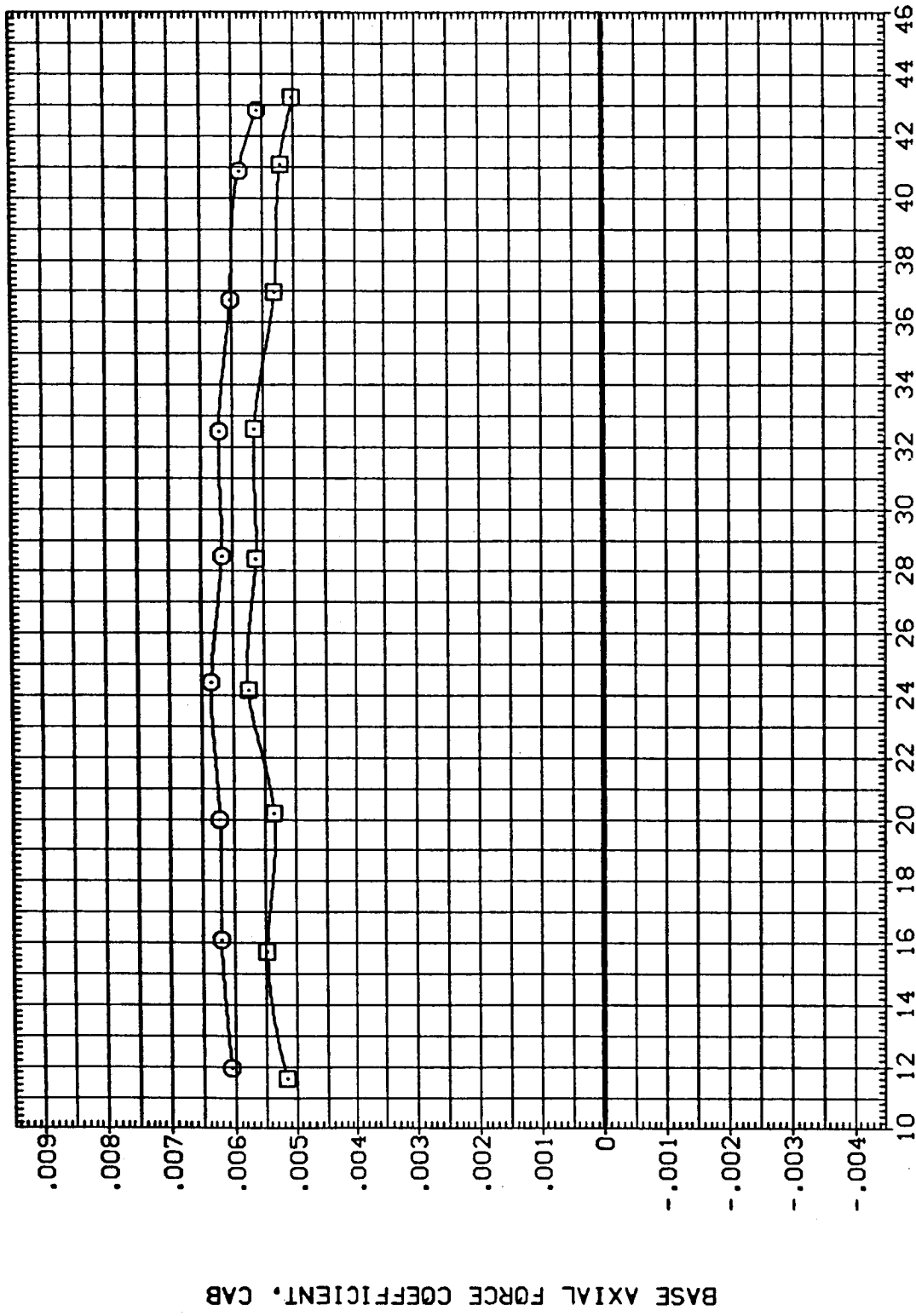


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017) CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-N24+DUMMY STING) AMES 3.5-190 GA98 (011-H7+H14-N24+DUMMY STING)

BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

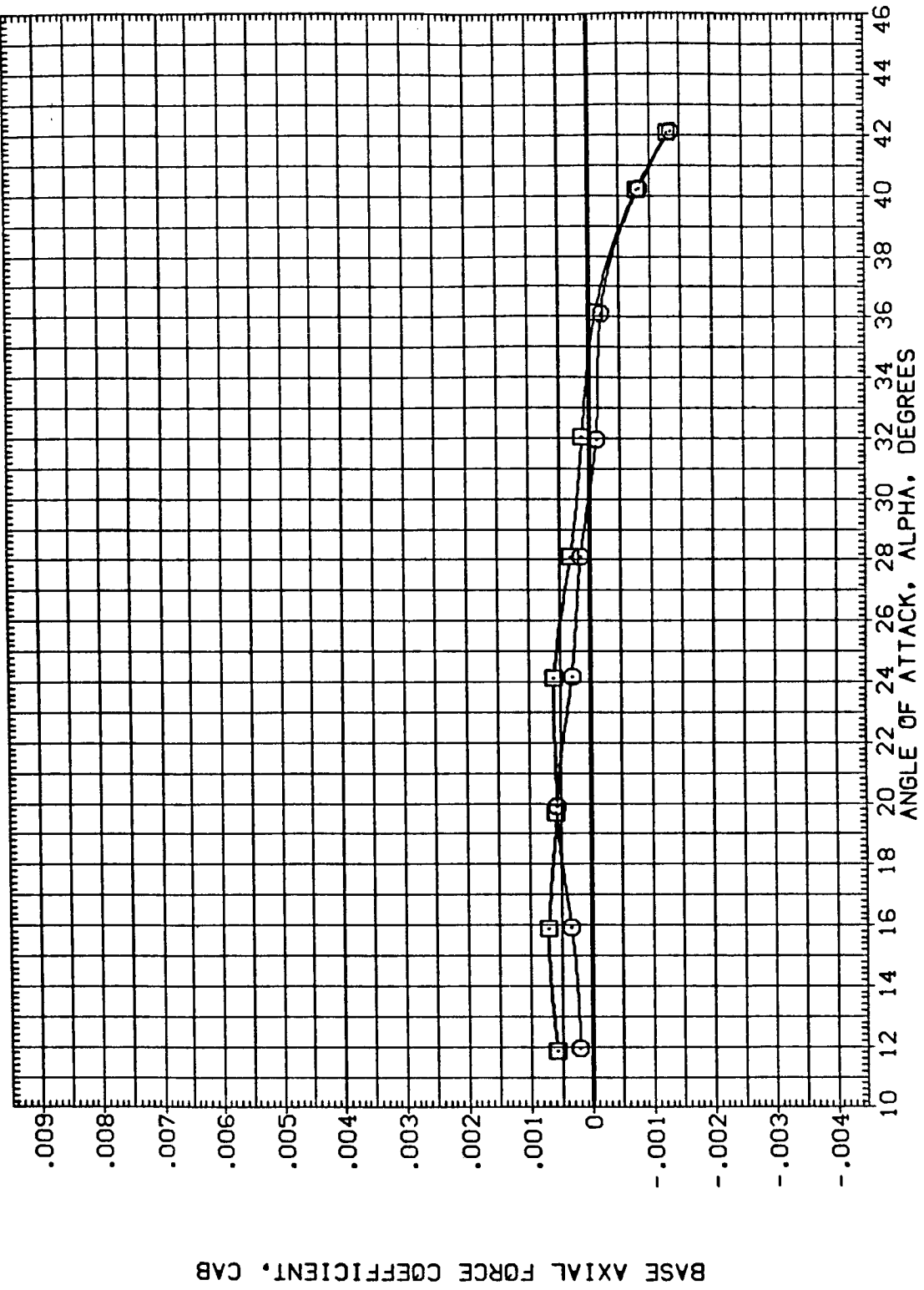


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (BEG013) (BEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-H7-H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

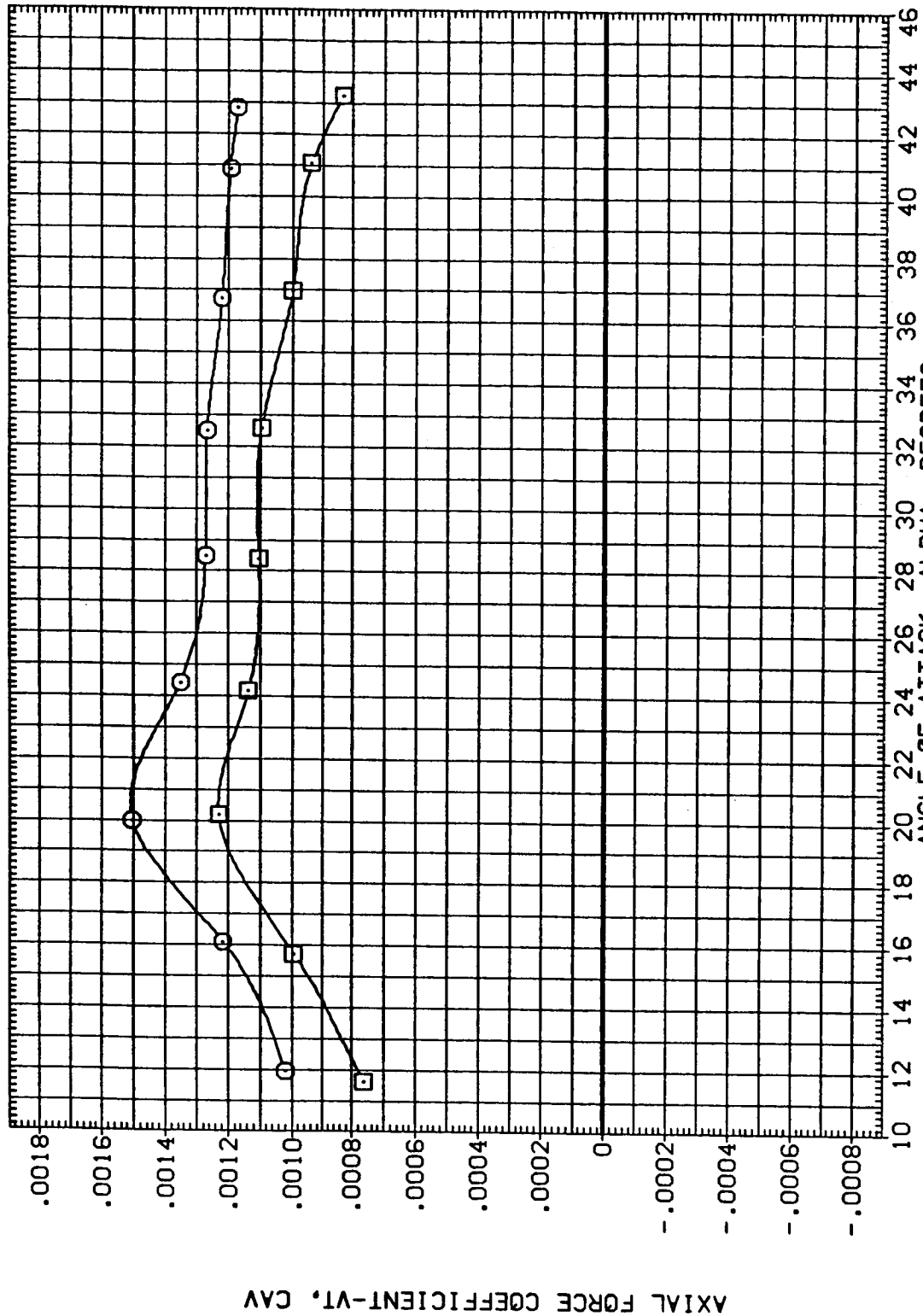




FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(AJMACH = 5.25

DATA SET SYMBOL (B0013)  (B0017) 

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON BOFLAP
 .000 -11.700
 .000 -11.700

SPOBRK
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

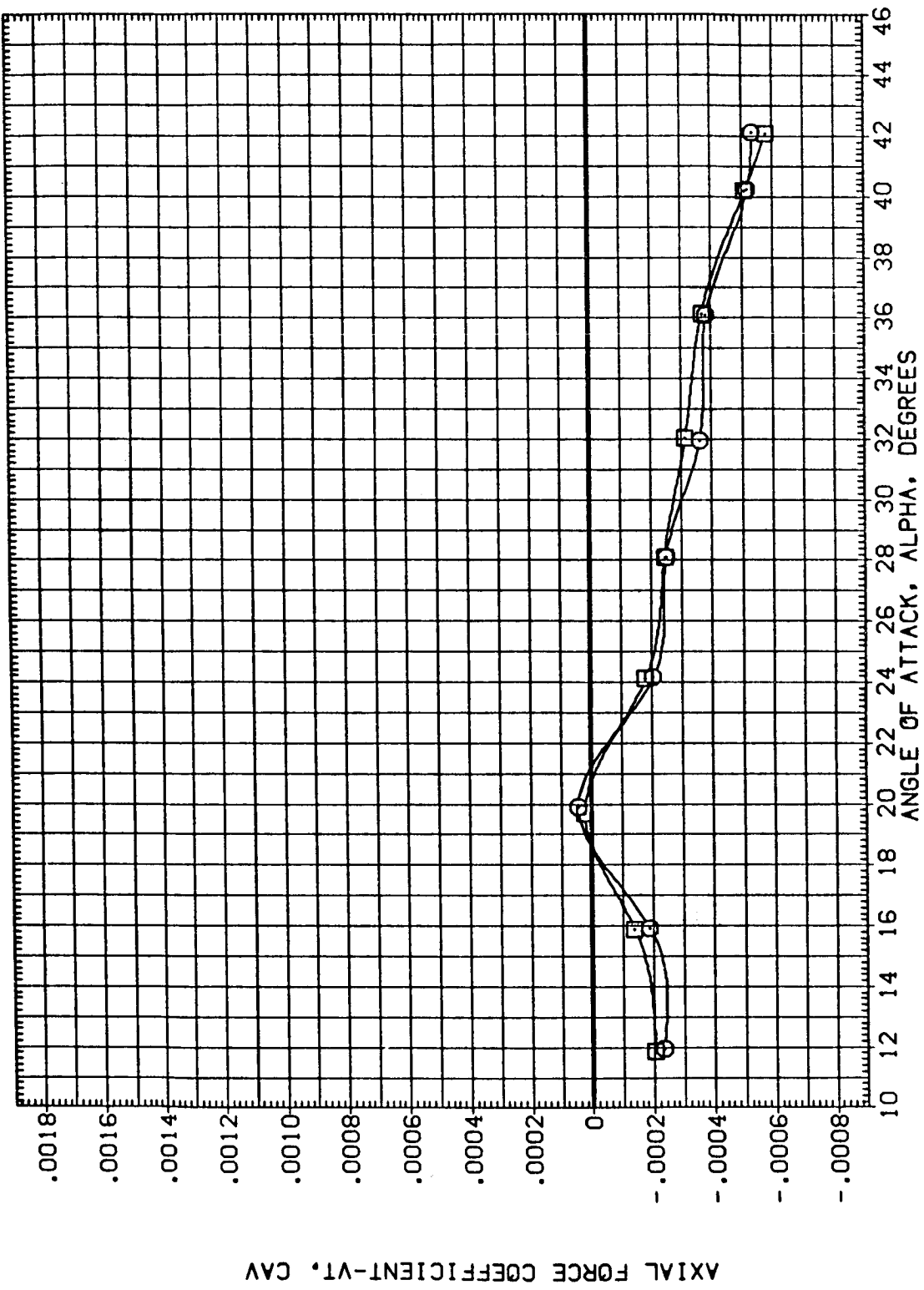


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (BE0012) (BE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 CAS8 (011-M7+14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

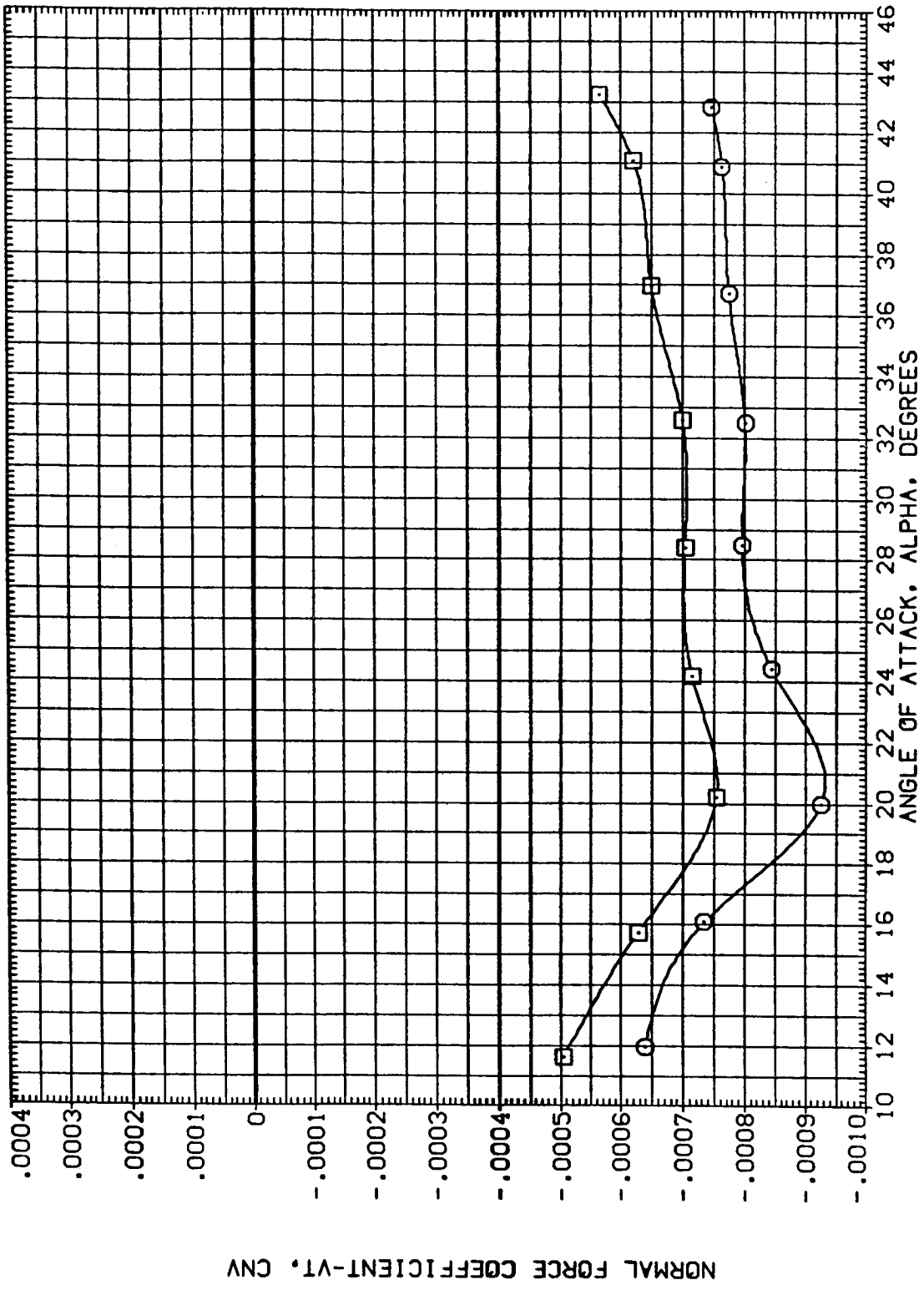


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEG0013) (BEG0017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GA98 (011-N24+DUMMY STING)
 AVES 3.5-190 GA98 (011-H7+H1.4-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Z0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

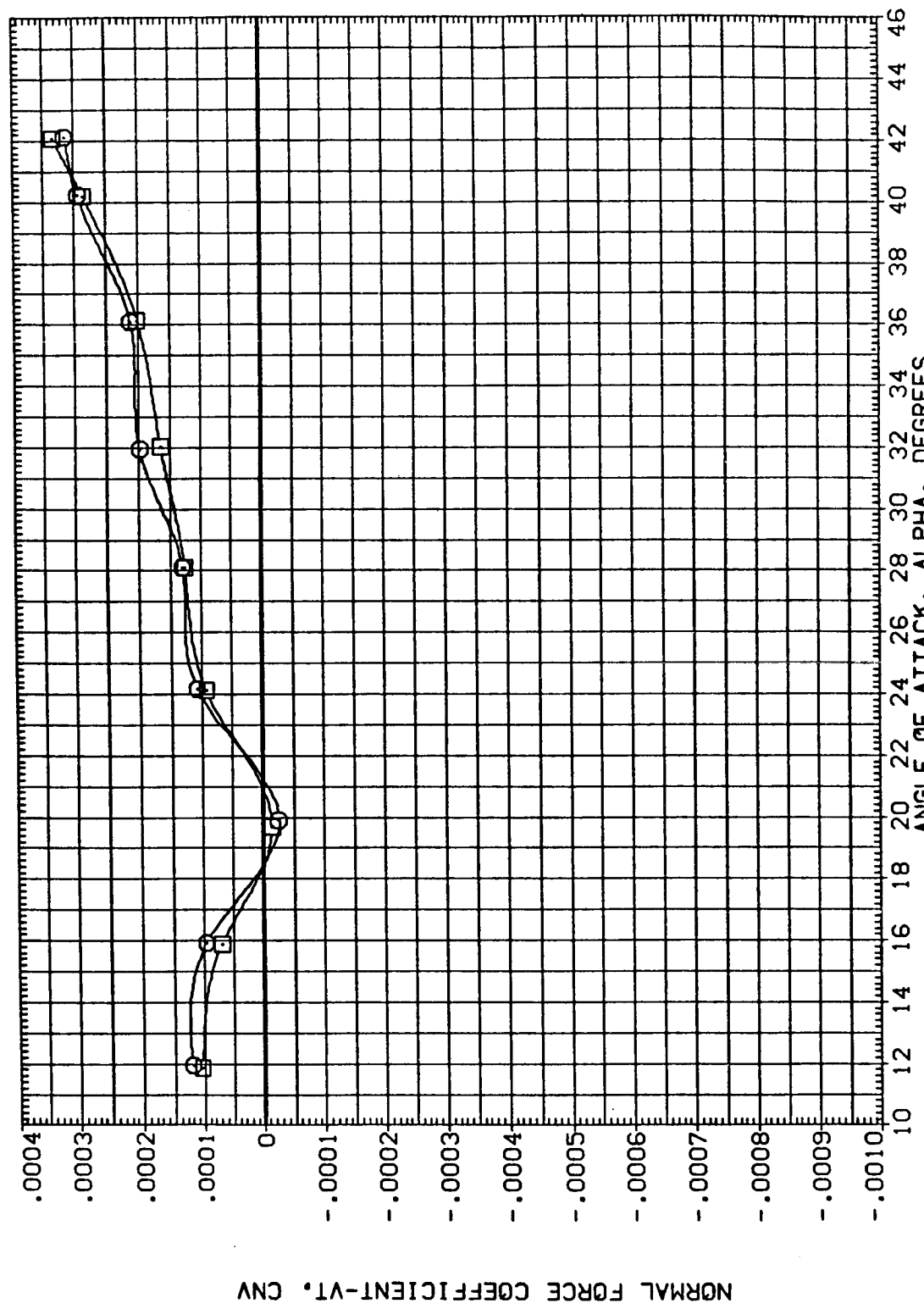


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0013) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (BE0017) AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA .000
 .000
 ELEVON .000
 .000
 BOFLAP -11.700
 -11.700
 SPDRBK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

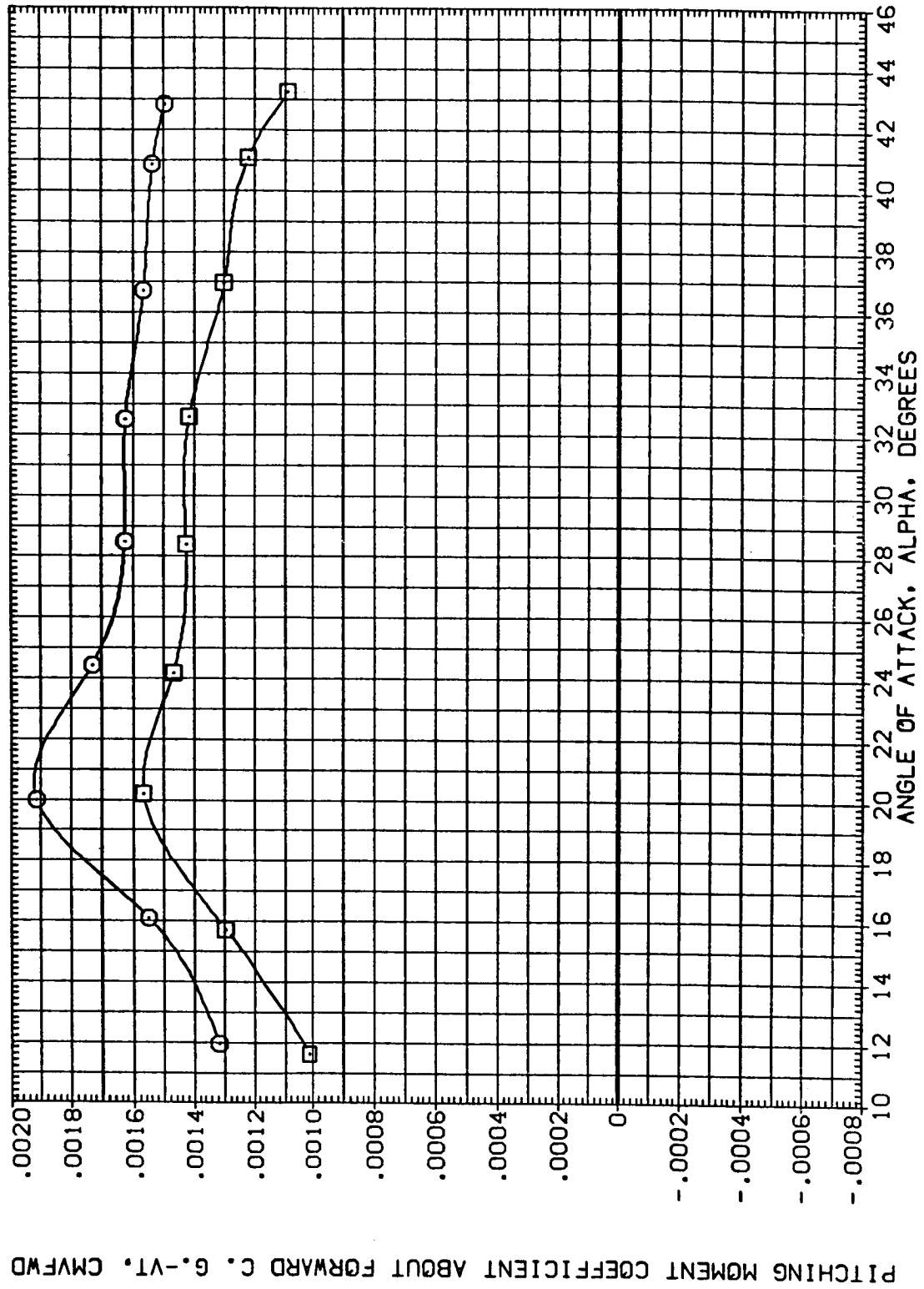


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (B0013) (B0017)

CONFIGURATION DESCRIPTION AMES 3.5-190 OAS8 (011-N24+DUMMY STING) AMES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SFOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

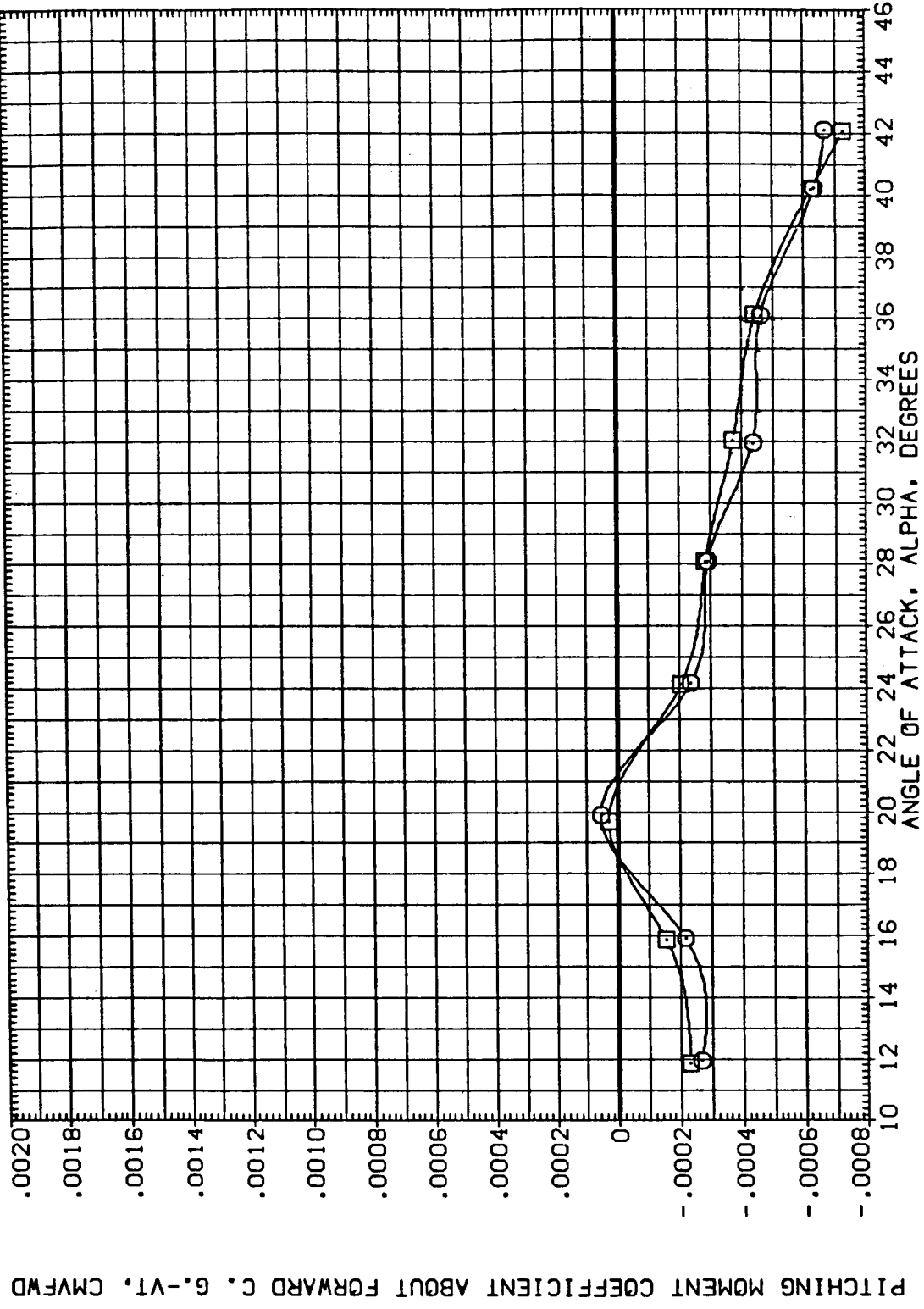


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (BEO013) (BEO017)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 OAS98 (011-N24+DUMMY STING)
 ANES 3.5-190 OAS98 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP .0000 IN.Y0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

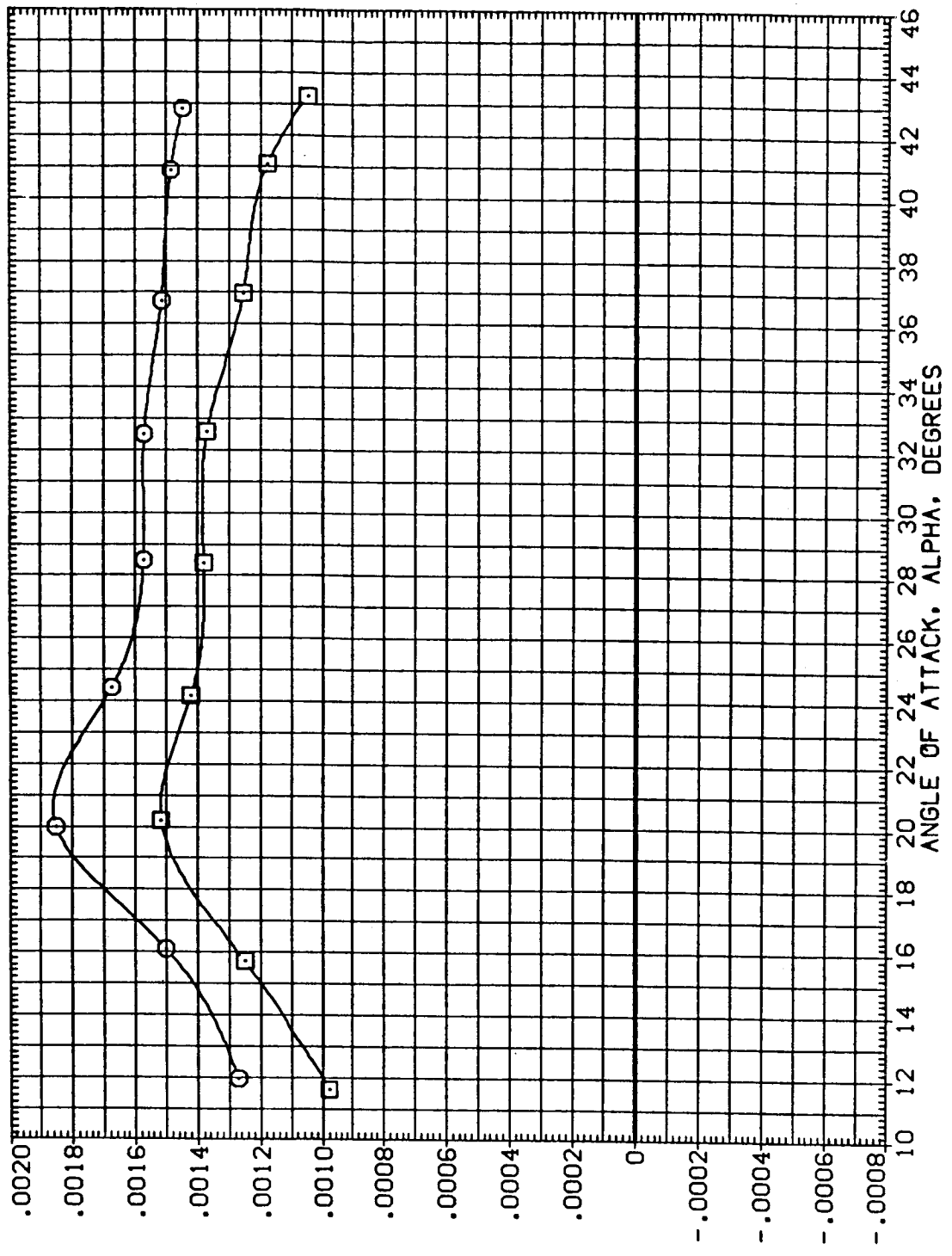


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEG013) (BEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

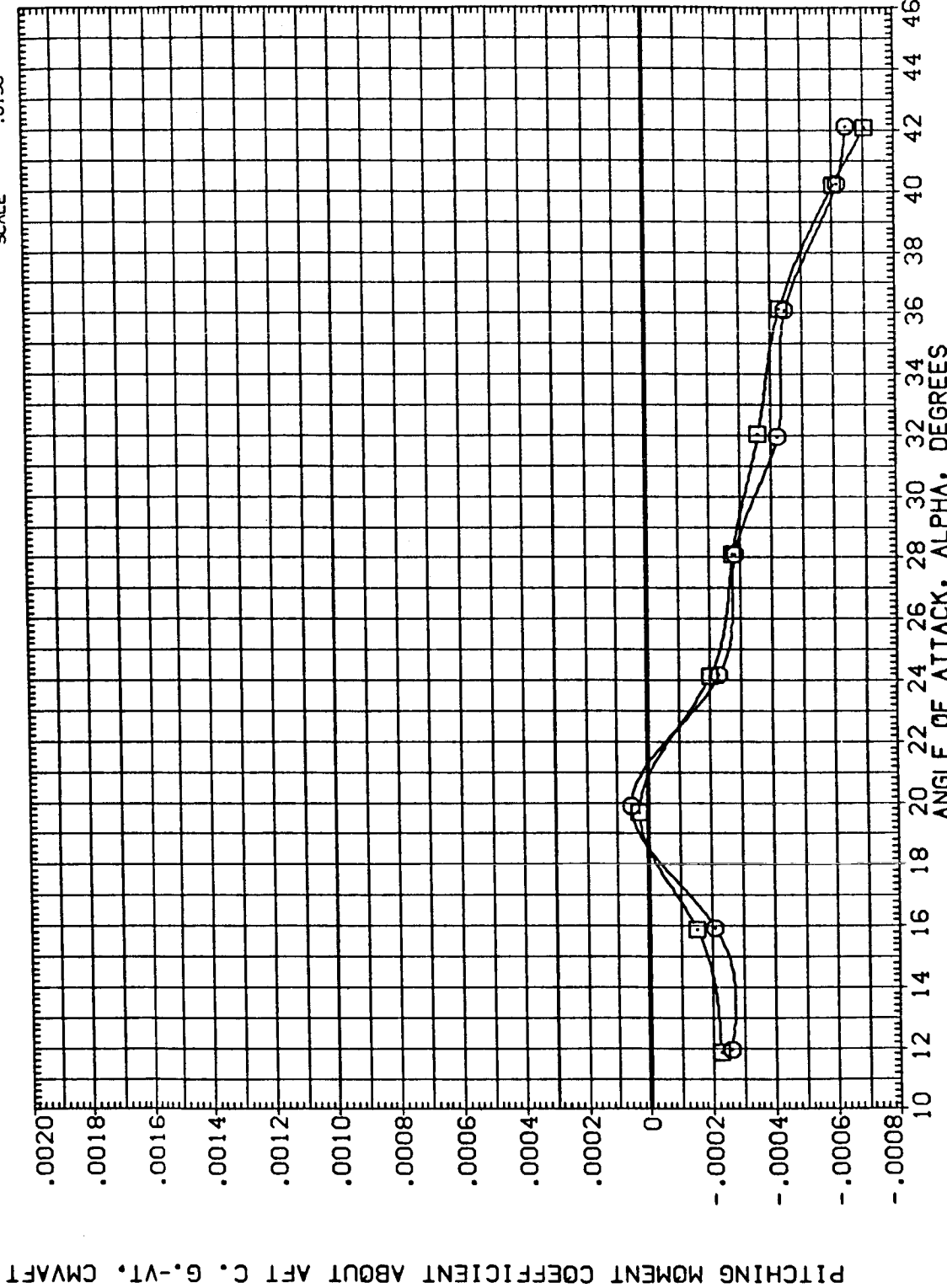


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

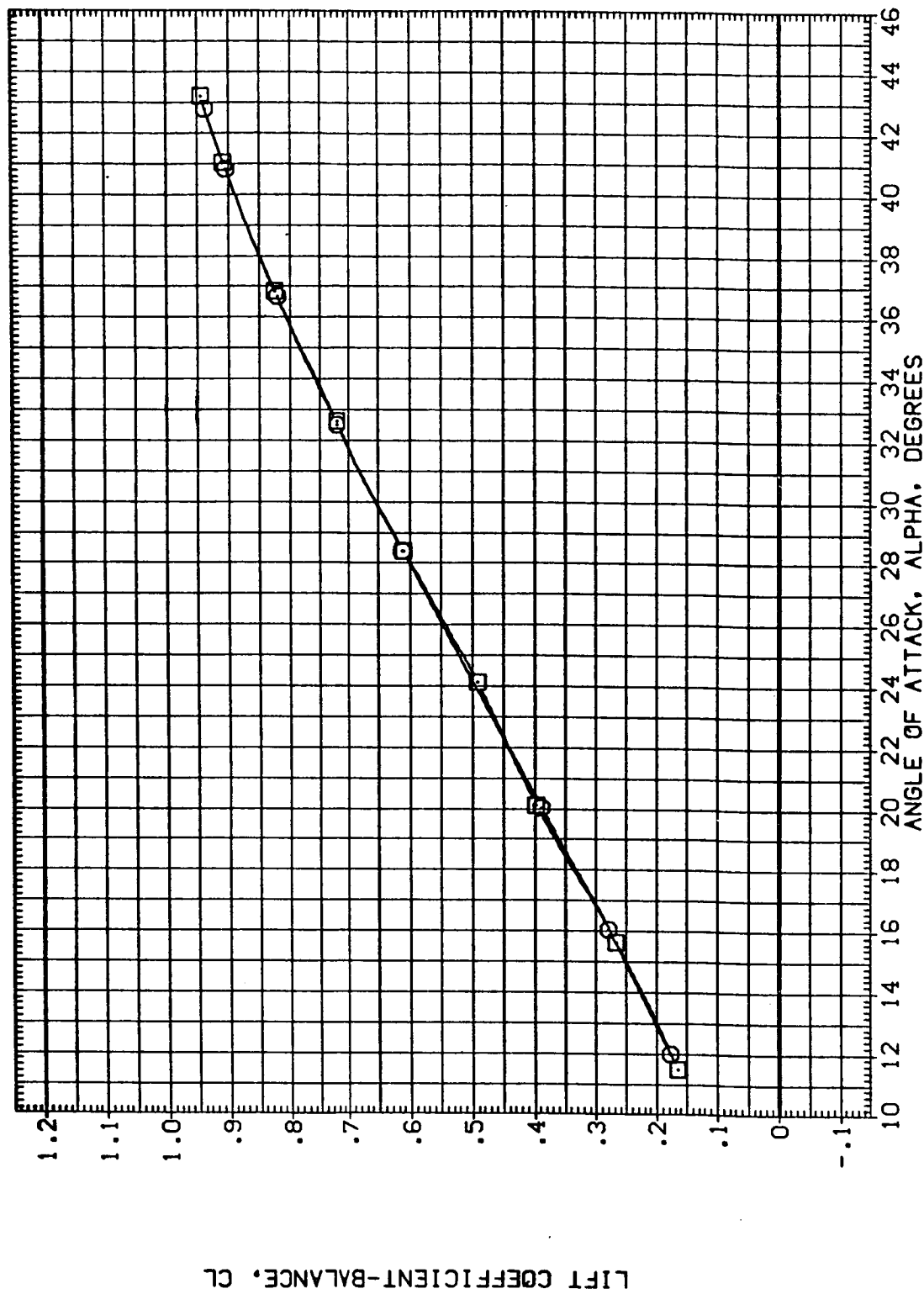
DATA SET SYMBOL (CEG014) (JEG018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 CAS8 (011-N7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000
 SPDBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP 375.0000 IN. Y0
 ZMRP .0150 IN. Z0
 SCALE



LIFT COEFFICIENT-BALANCE, CL

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJ MACH = 5.25

DATA SET SYMBOL (JEG018) CONFIGURATION DESCRIPTION (011-N24+DUMMY STING) AMES 3.5-190 0/98 (011-N24+DUMMY STING) AMES 3.5-190 0/98 (011-N24+DUMMY STING)

BETA .000 ELEVON -10.000 BOFLAP -11.700 SPOBRK 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 996.8900 IN. XMRRP 1076.7000 IN.XD ZMRP .0000 IN.YD SCALE 375.0000 IN.ZD .0150

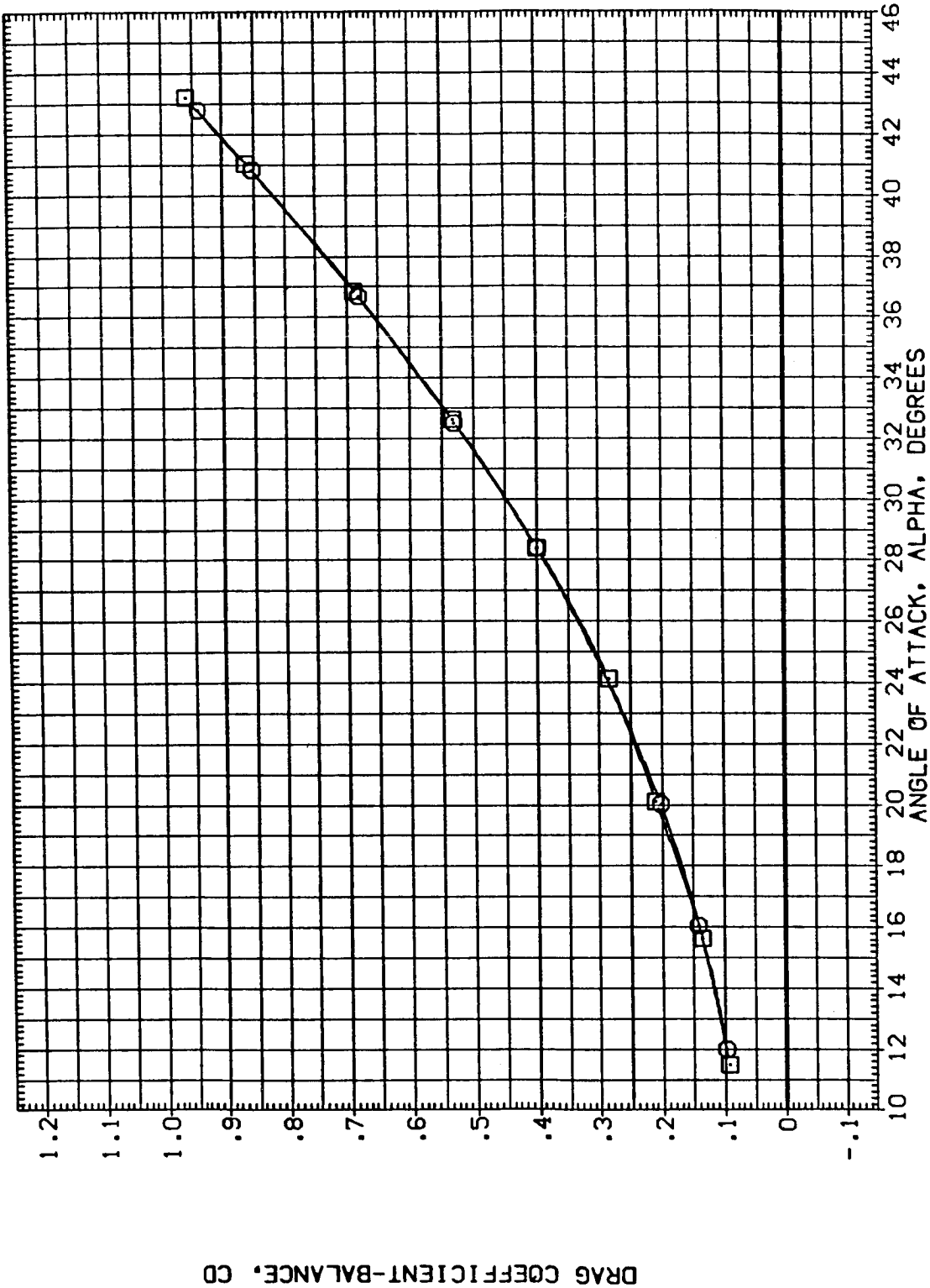


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0014) (JEC018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

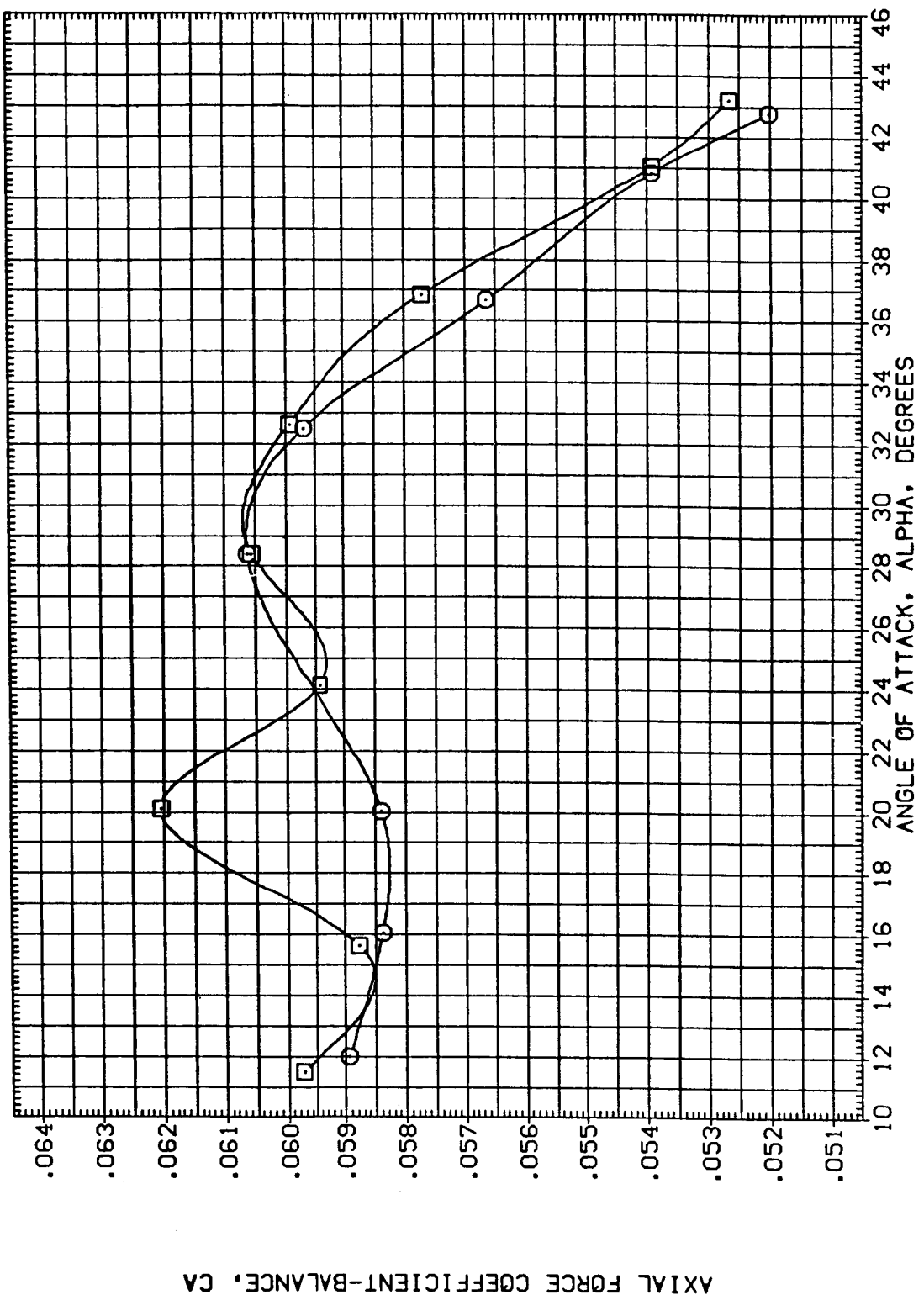
BETA .000 .000

ELEVON -10.000 -10.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0014) (JEC0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

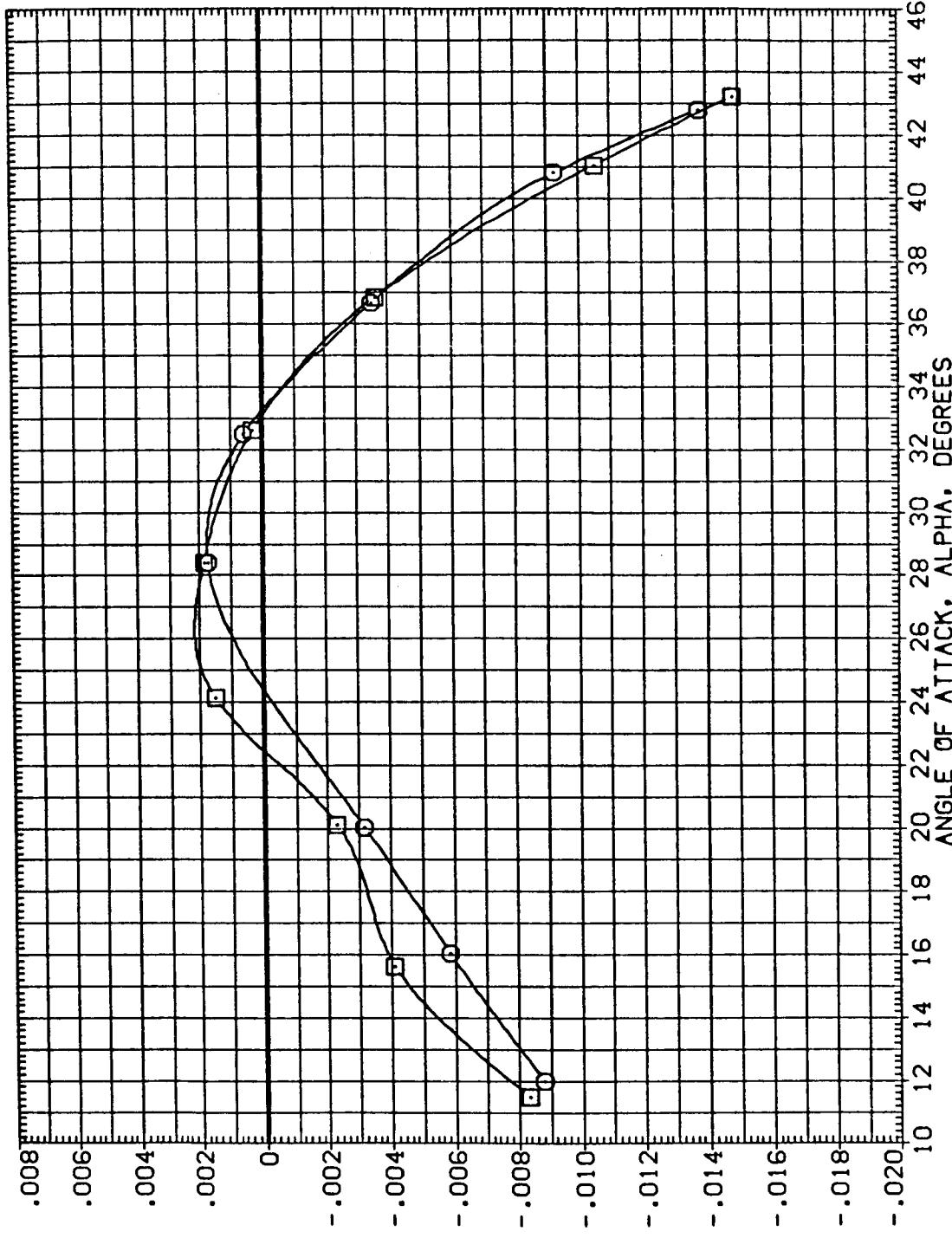


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL (JEG018) (JEG014)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPDBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

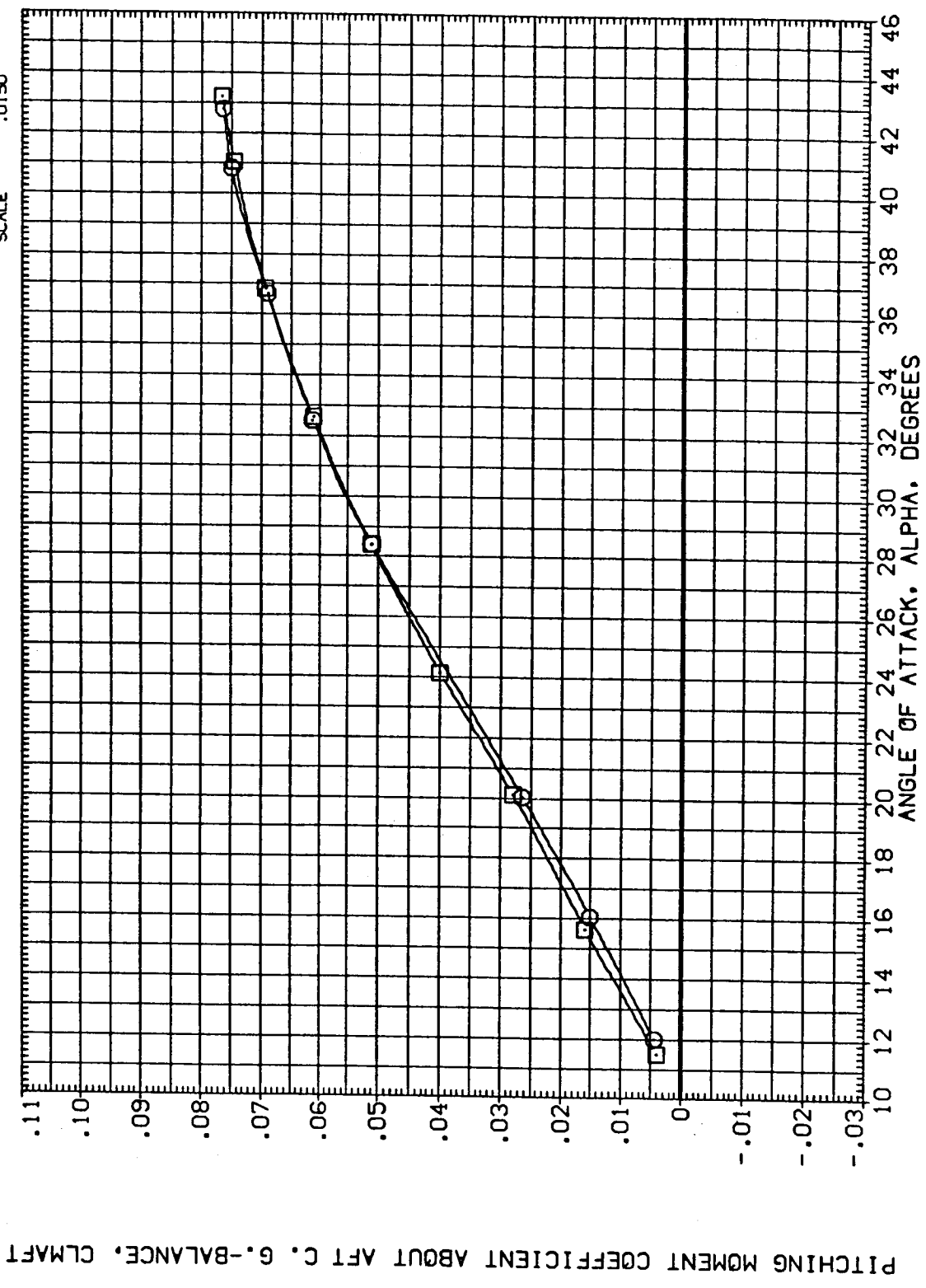


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (CE0014) (JEG0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BDFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

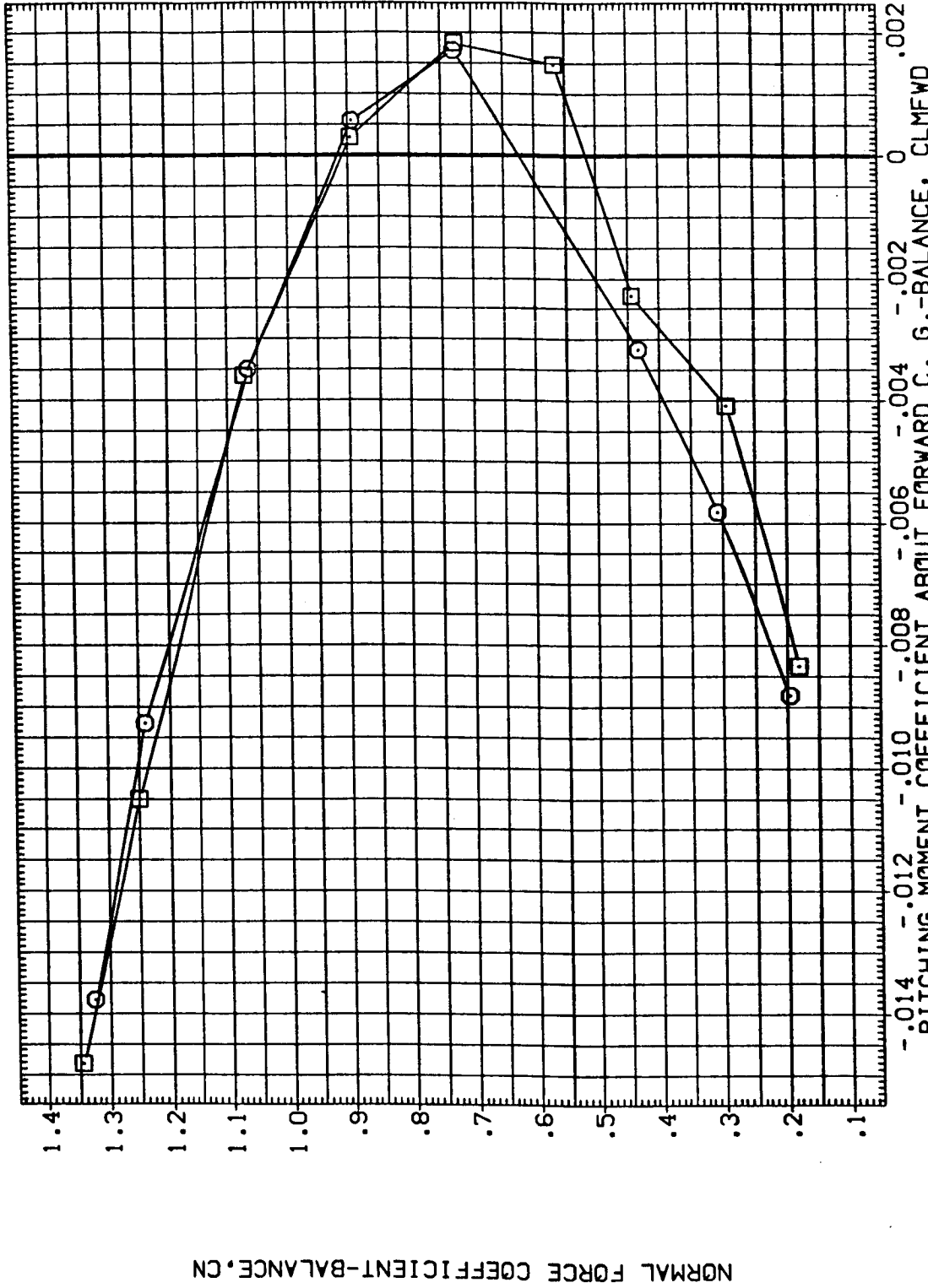


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CEG014) AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 (JEG018) AMES 3.5-190 OA98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDRBK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

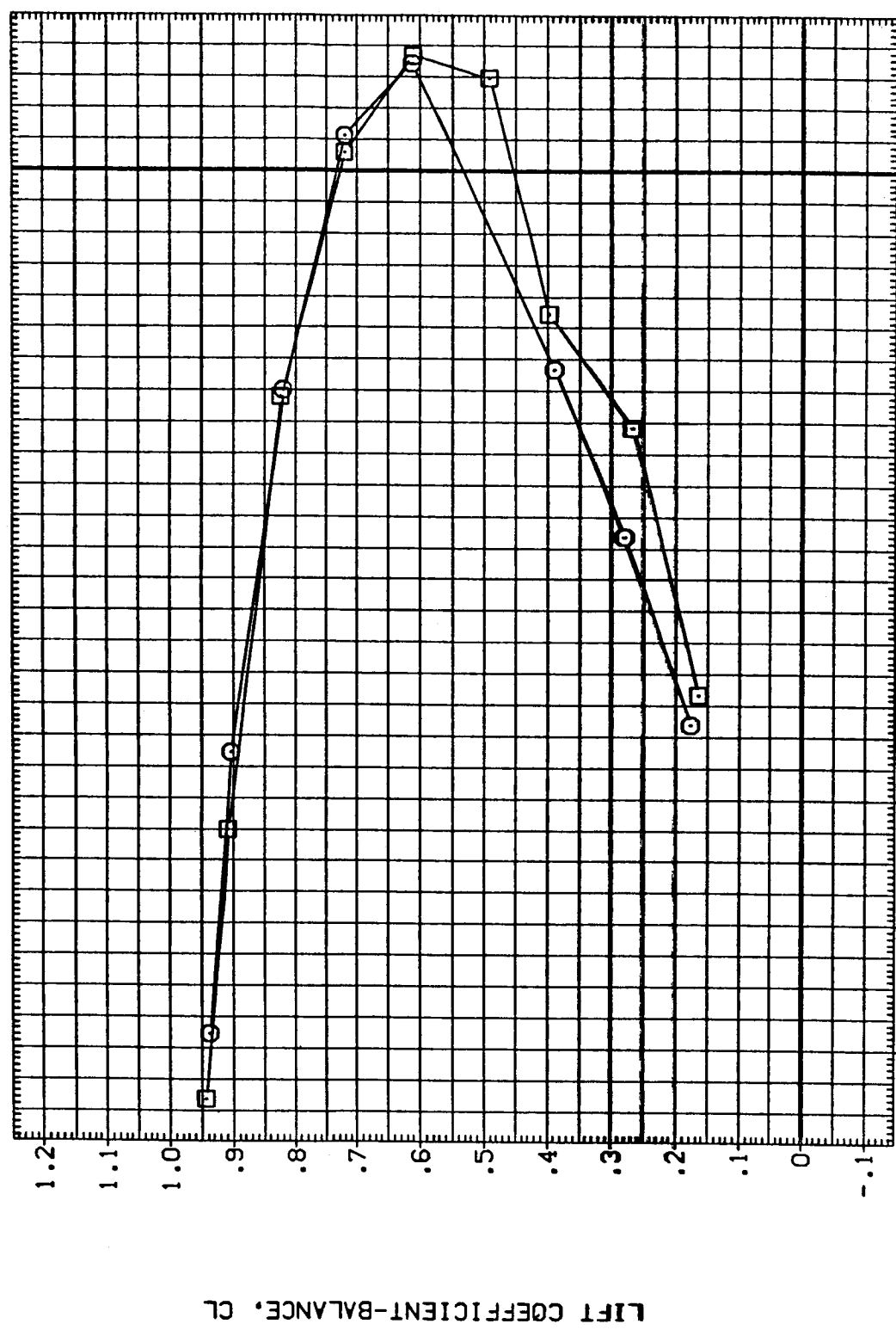


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.
 CLMFW

CLMFW

DATA SET SYMBOL (CE0014) (JEC018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 OAS8 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 2690.0000
 SREF 474.8000
 LREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. 59.000
 IN. 1076.6800
 IN.X0 1076.7000
 IN.Y0 0.0000
 IN.Z0 375.0000

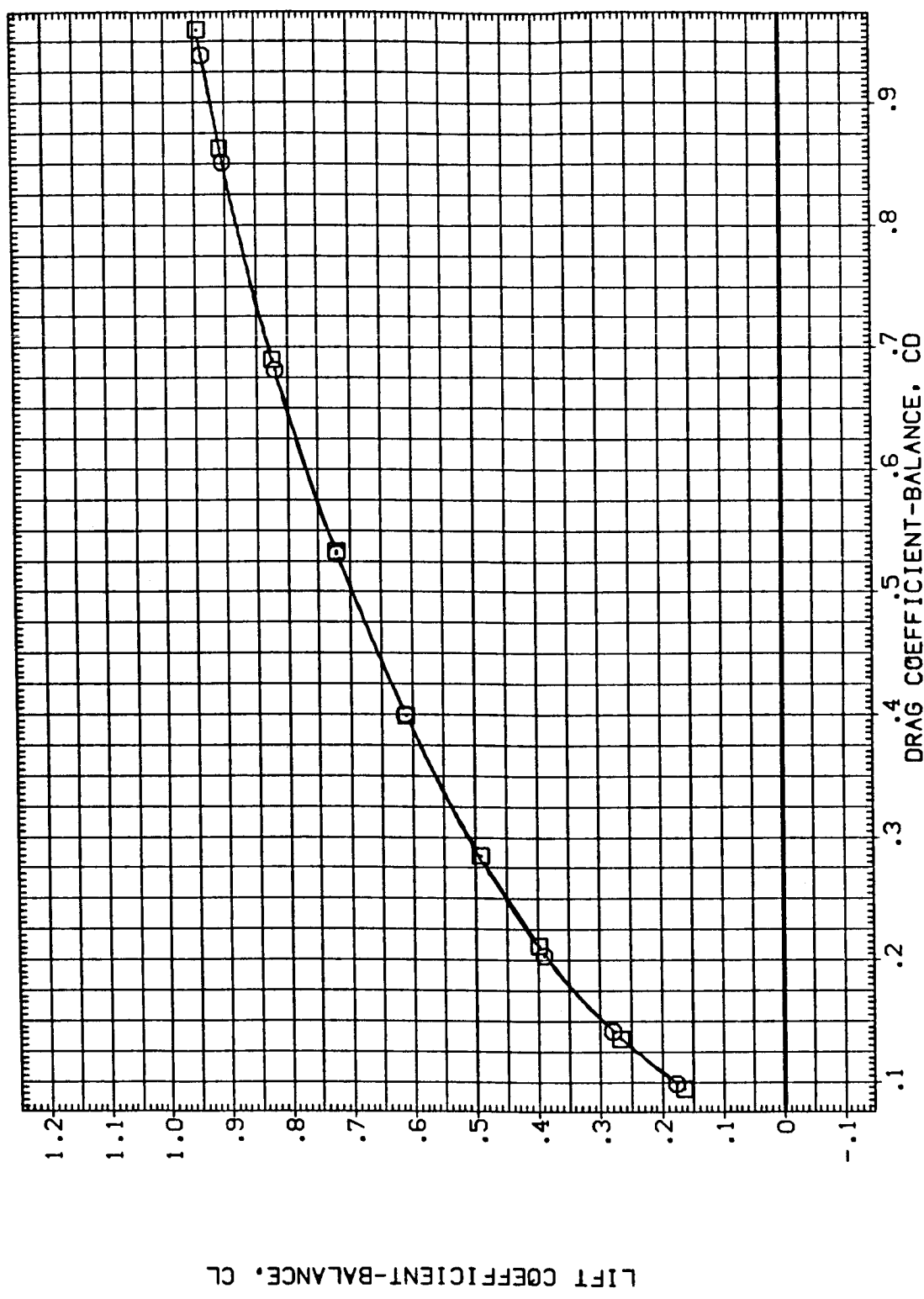


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E0014) (K0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24-DUMMY STING)
 AMES 3.5-190 0A98 (011-N7+H14-N24-DUMMY STING)

BETA .000
 ELEVON -10.000
 BDFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

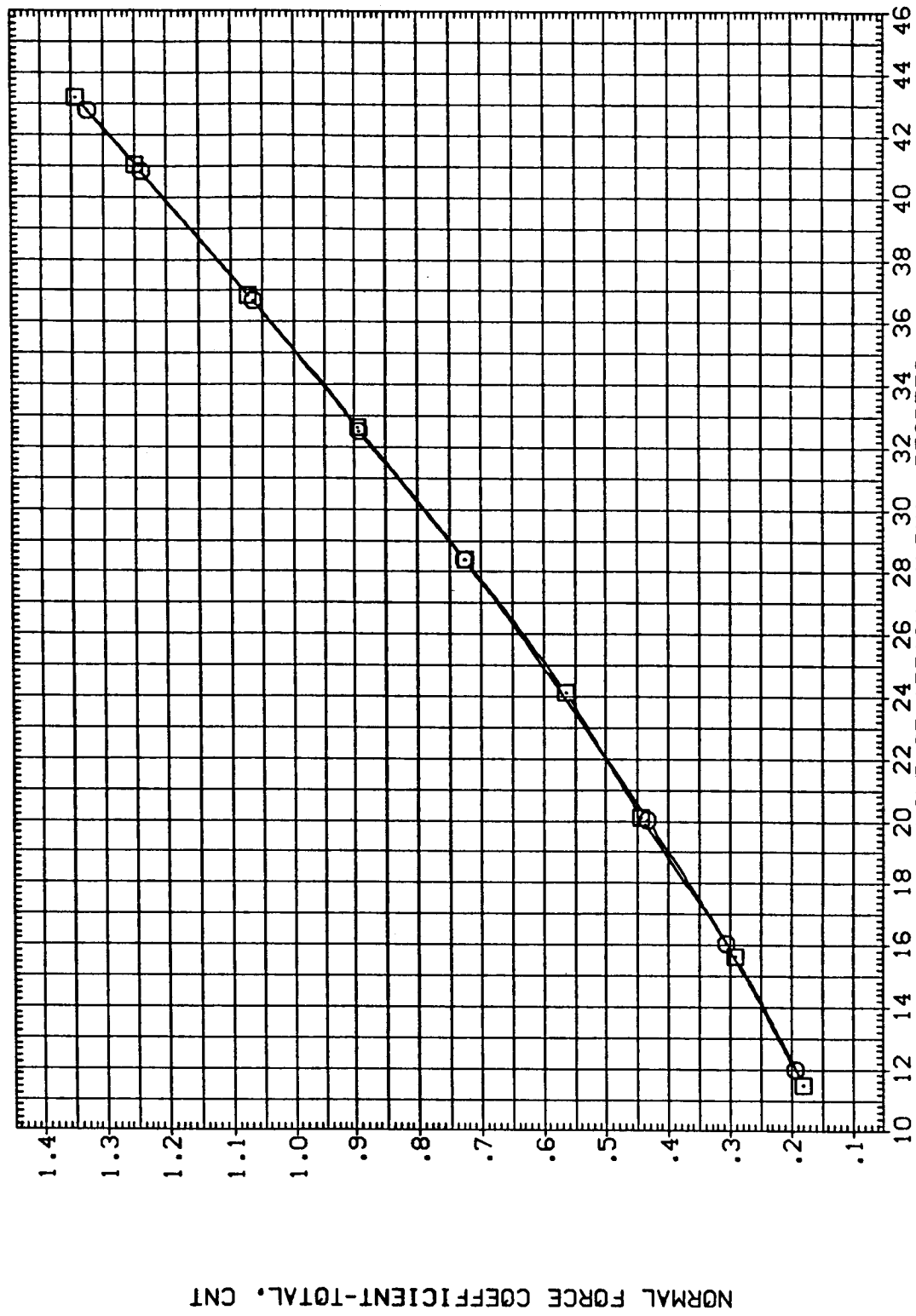


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0014) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (KE0018) AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

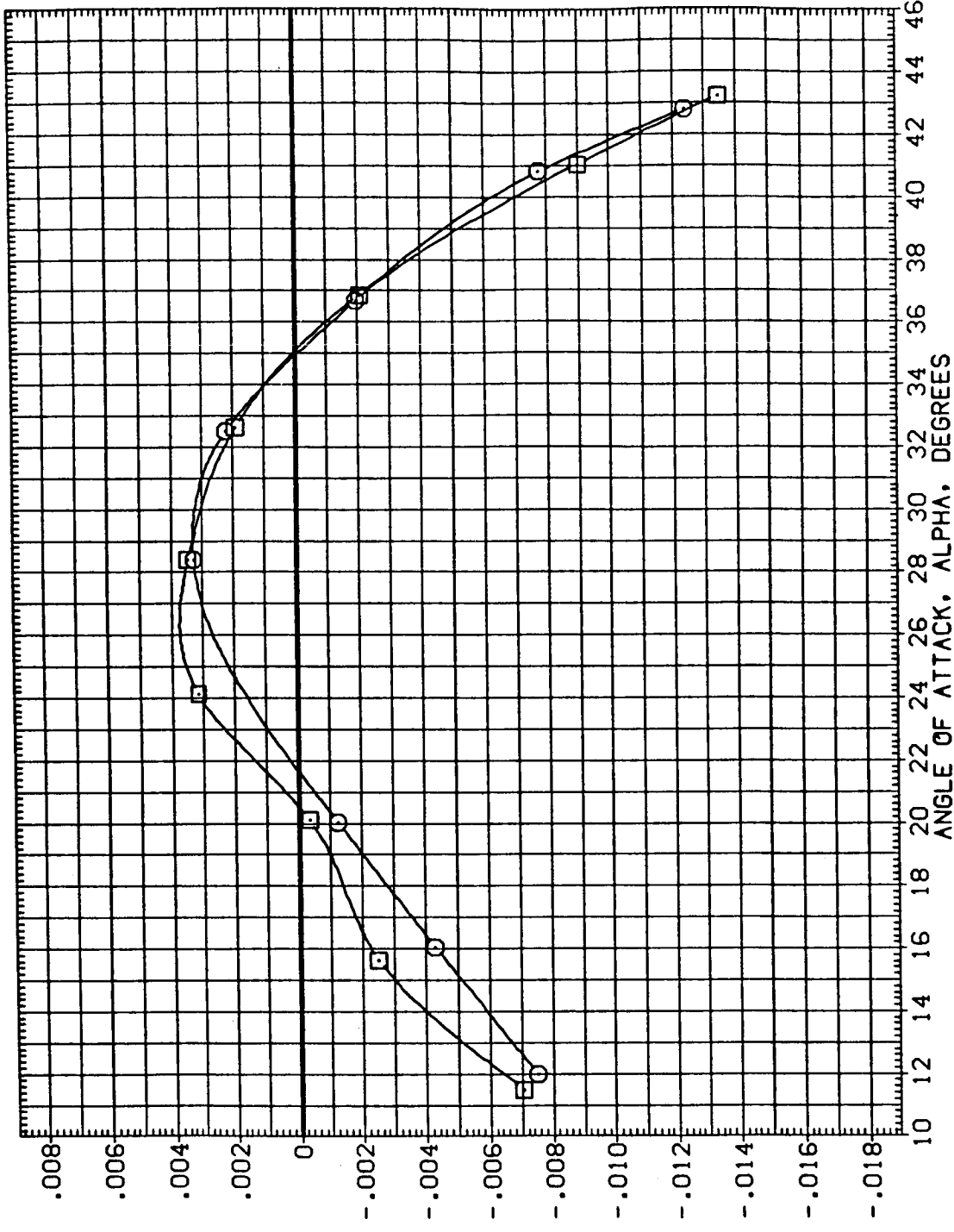


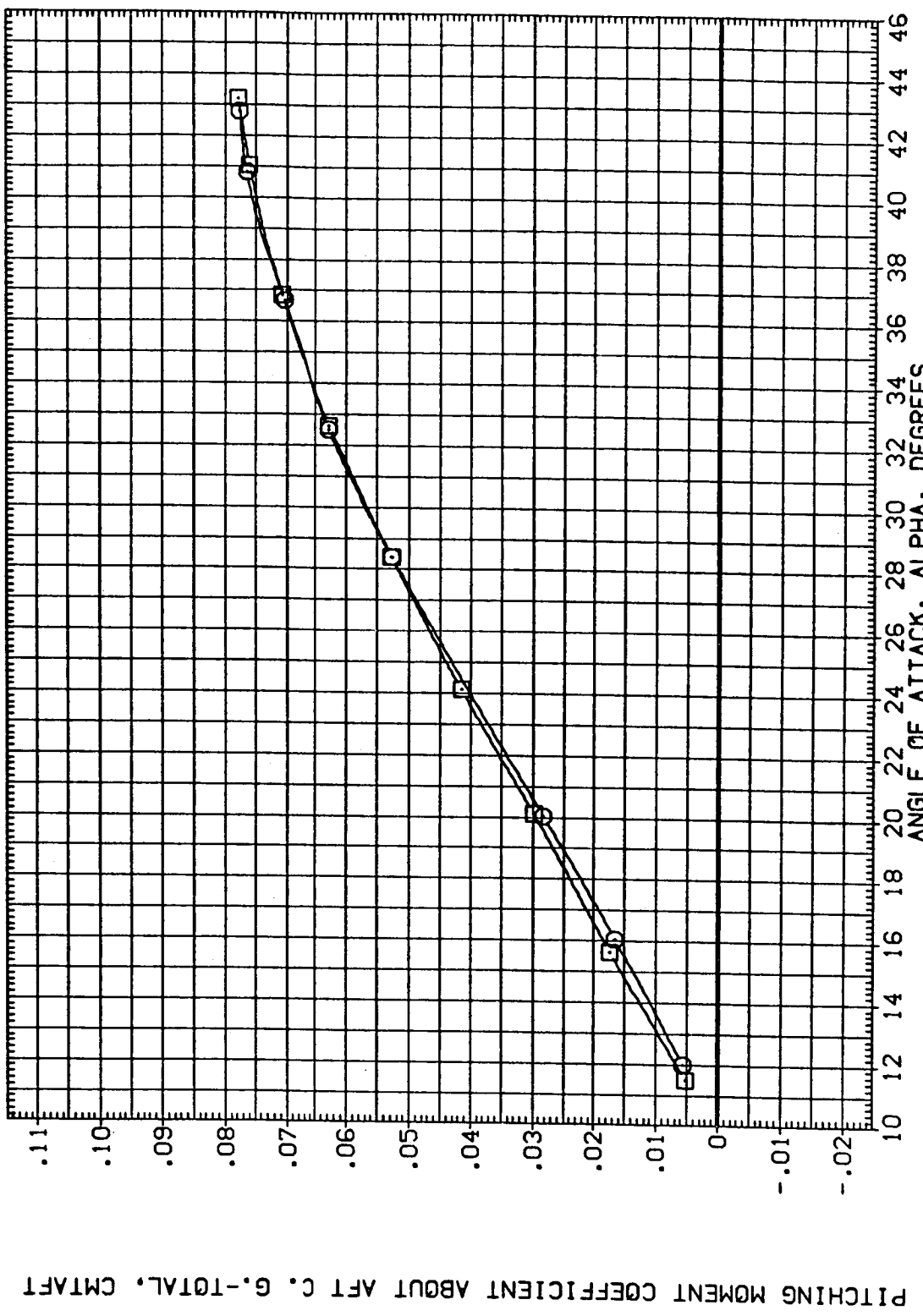
FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0014) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (KE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E00014) (KE0018)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 CA98 (011-N24+DUMMY STING)
 ANES 3.5-190 CA98 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON -10.000 -10.000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRRP 1076.7000 IN.X0
 YMRRP .0000 IN.Y0
 ZMRRP 375.0000 IN.Z0
 SCALE .0150

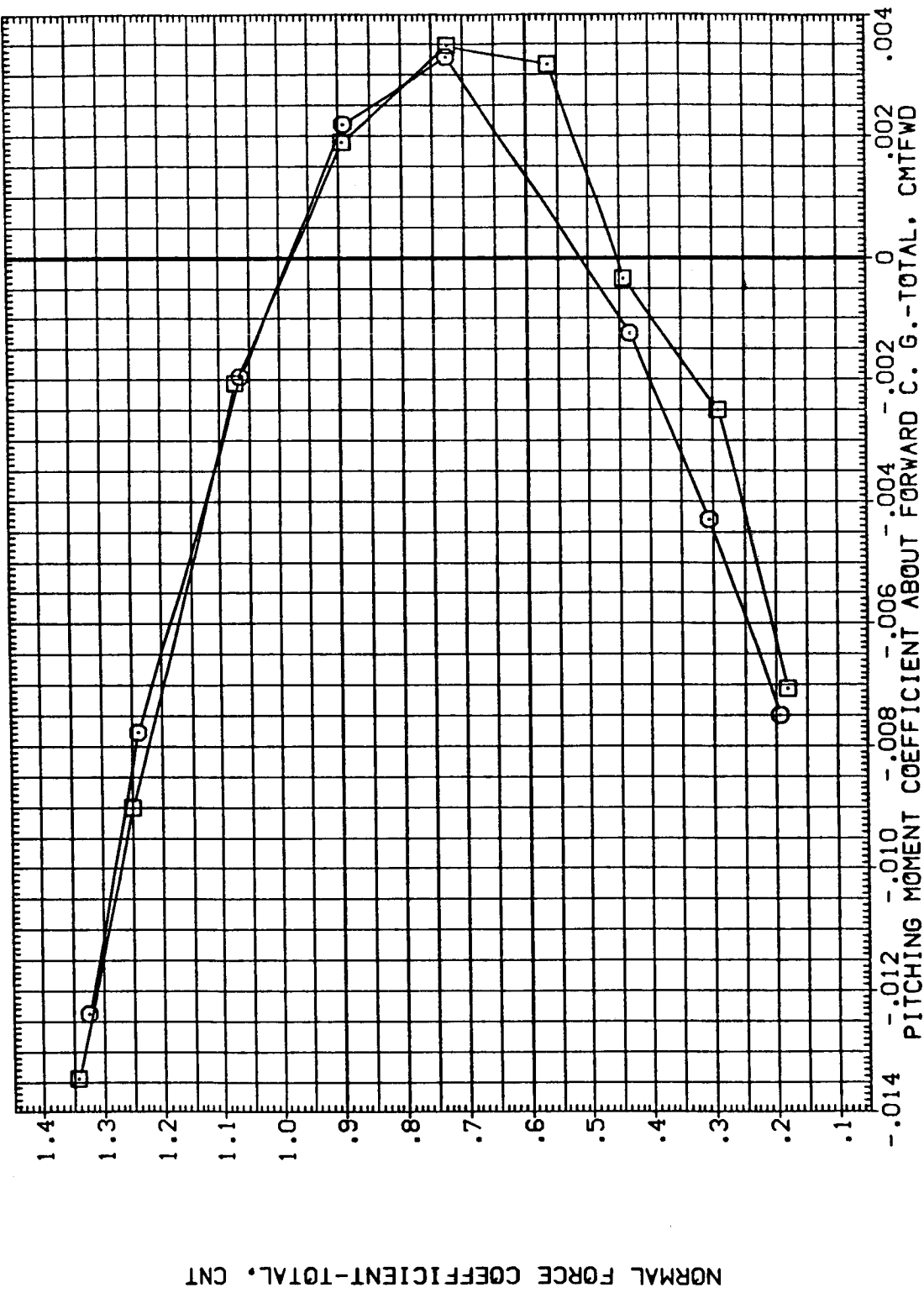


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0014) (KE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DASH (011-N24+DUMMY STING)
 AMES 3.5-190 DASH (011-N7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

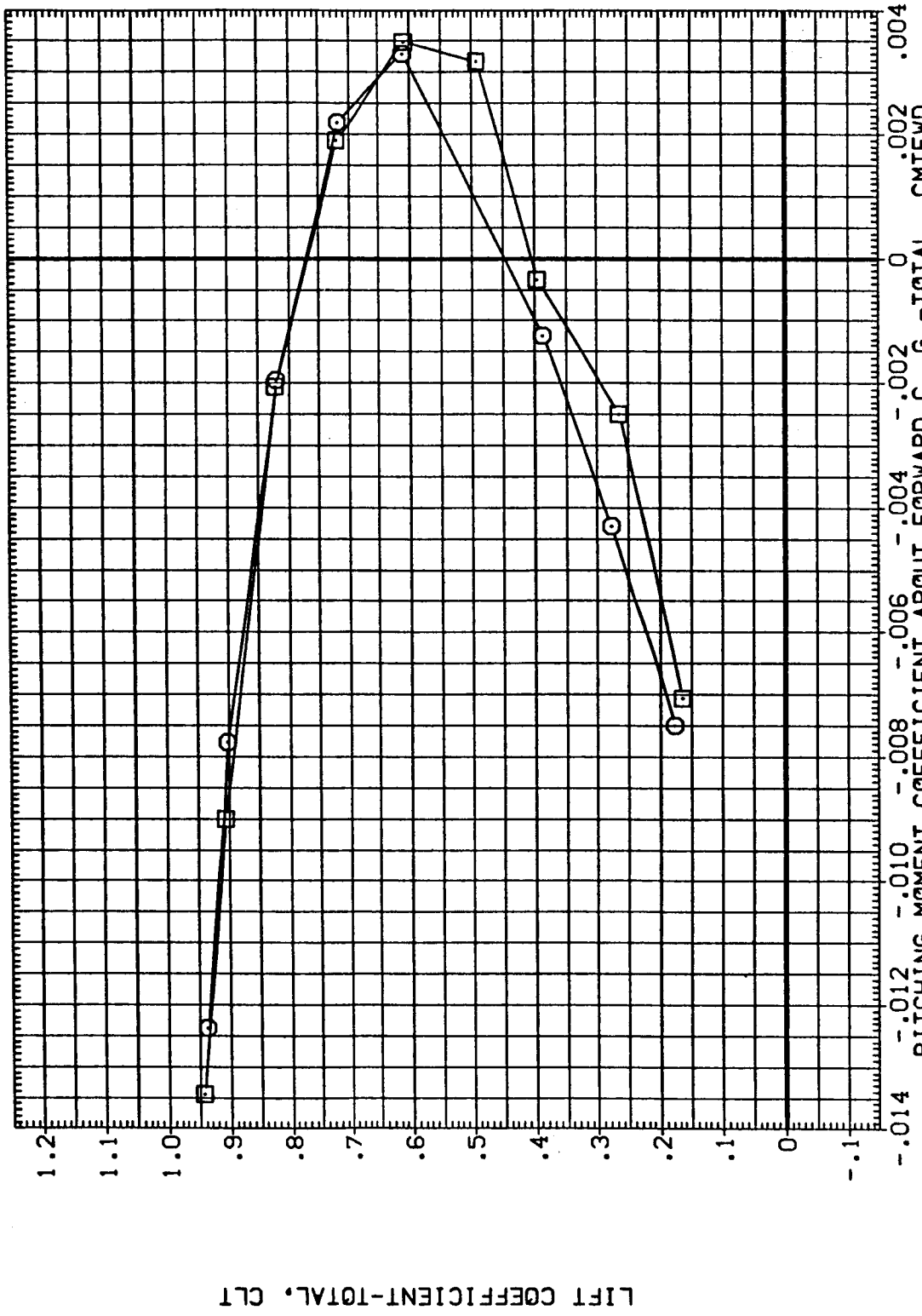


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (REG0014) (REG0018)

CONFIGURATION DESCRIPTION
 APES 3.5-190 CA98 (011-N24+DUMMY STING)
 APES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

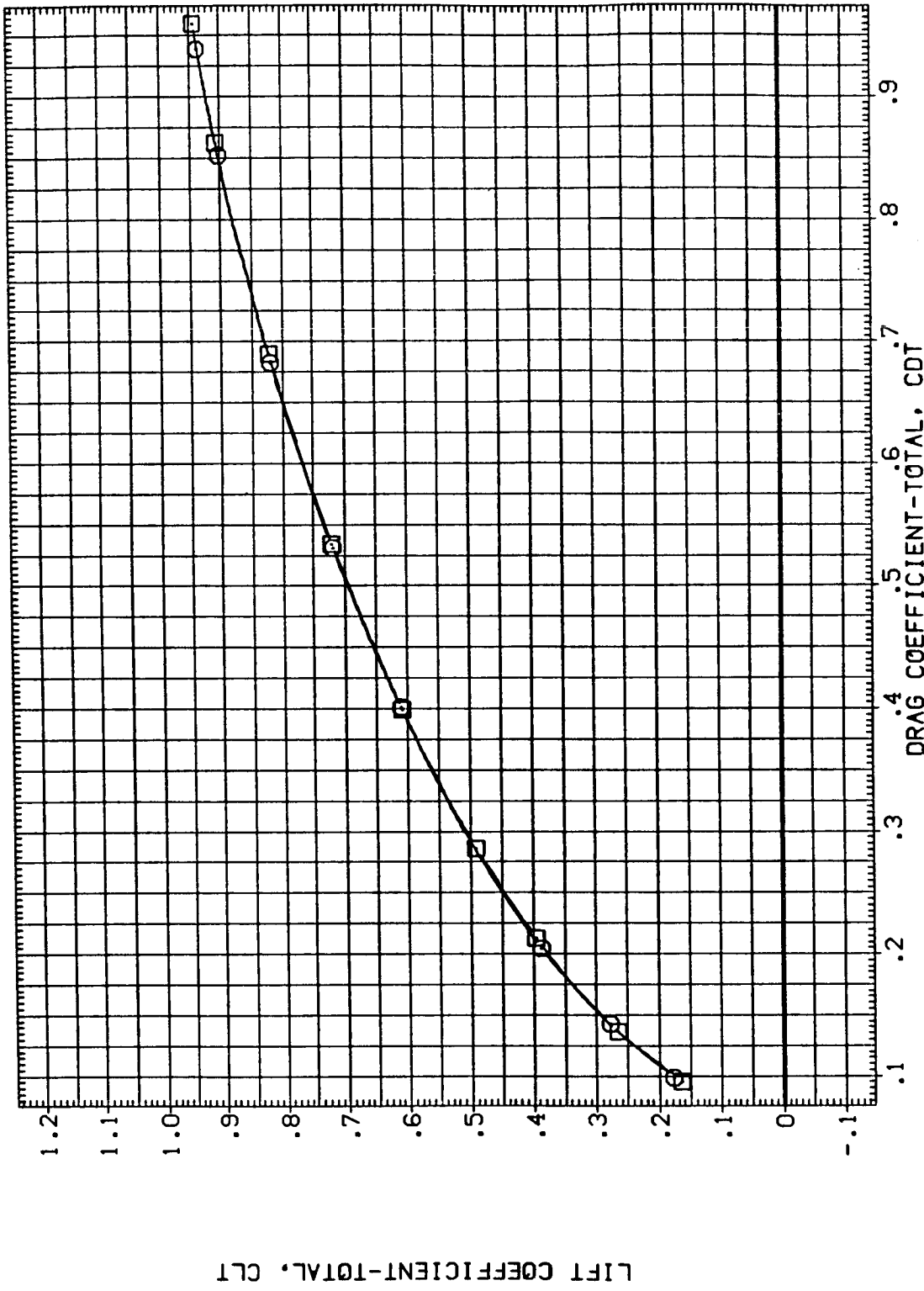


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA/MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0014) AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(KE0018) AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000

ELEVON -10.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.X0

YMRP 1076.7000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

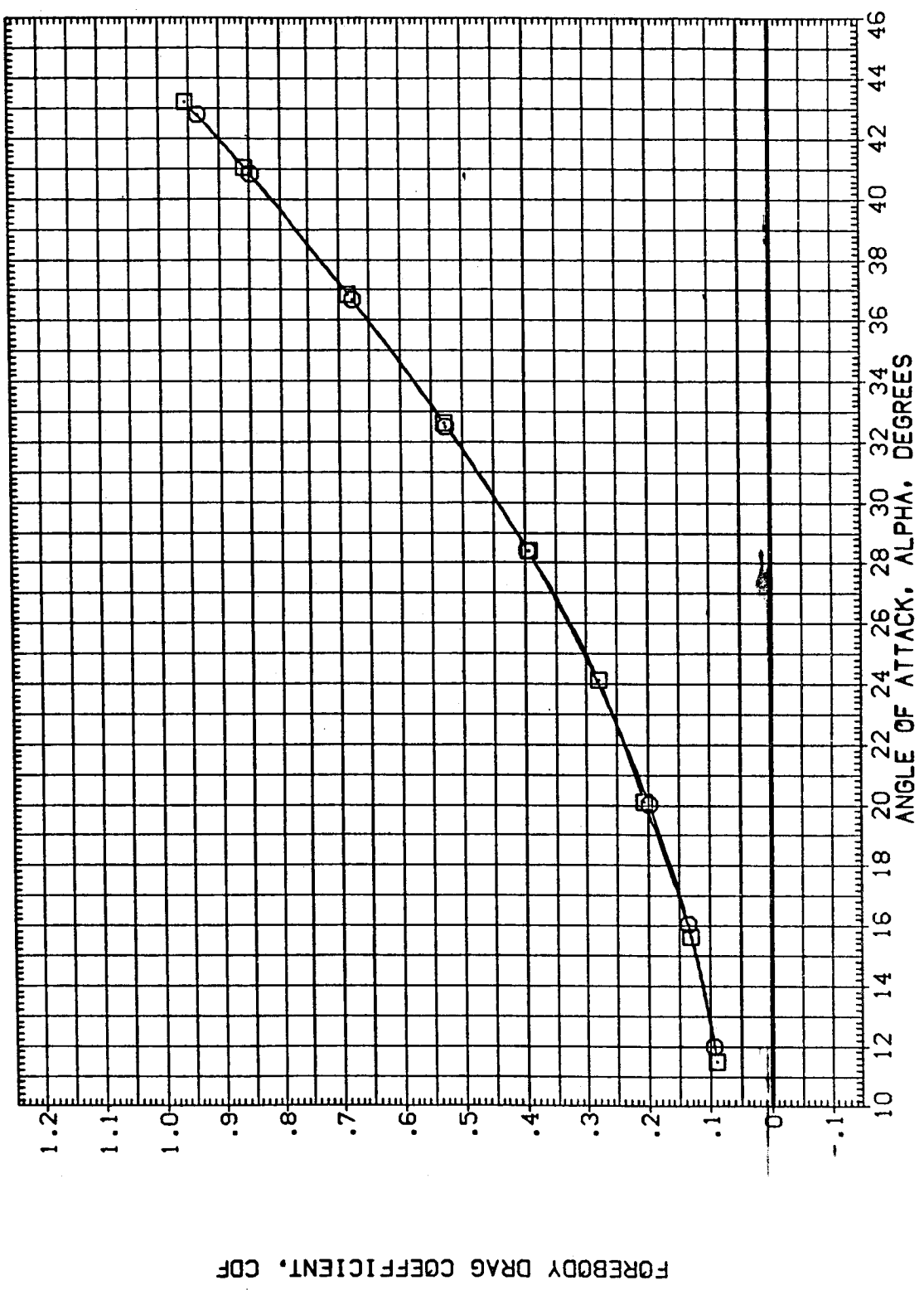


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

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DATA SET SYMBOL (EE0014) (KE0016)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-N24+DUPPY STING)
 APES 3.5-190 GA98 (011-H7+H14-N24+DUPPY STING)

BETA .000 .000

ELEV/ON -10.000 -10.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

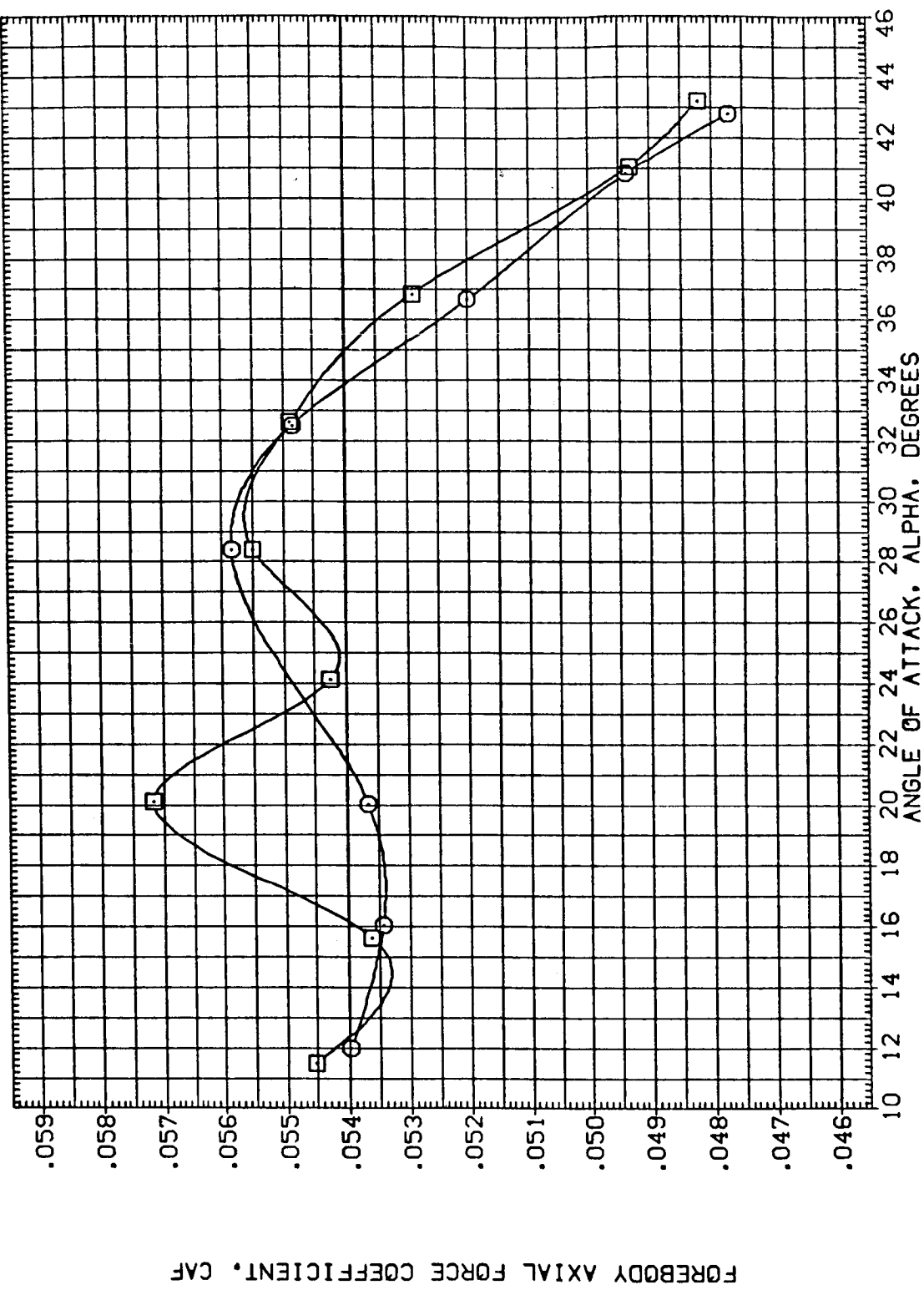


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0014) (KE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

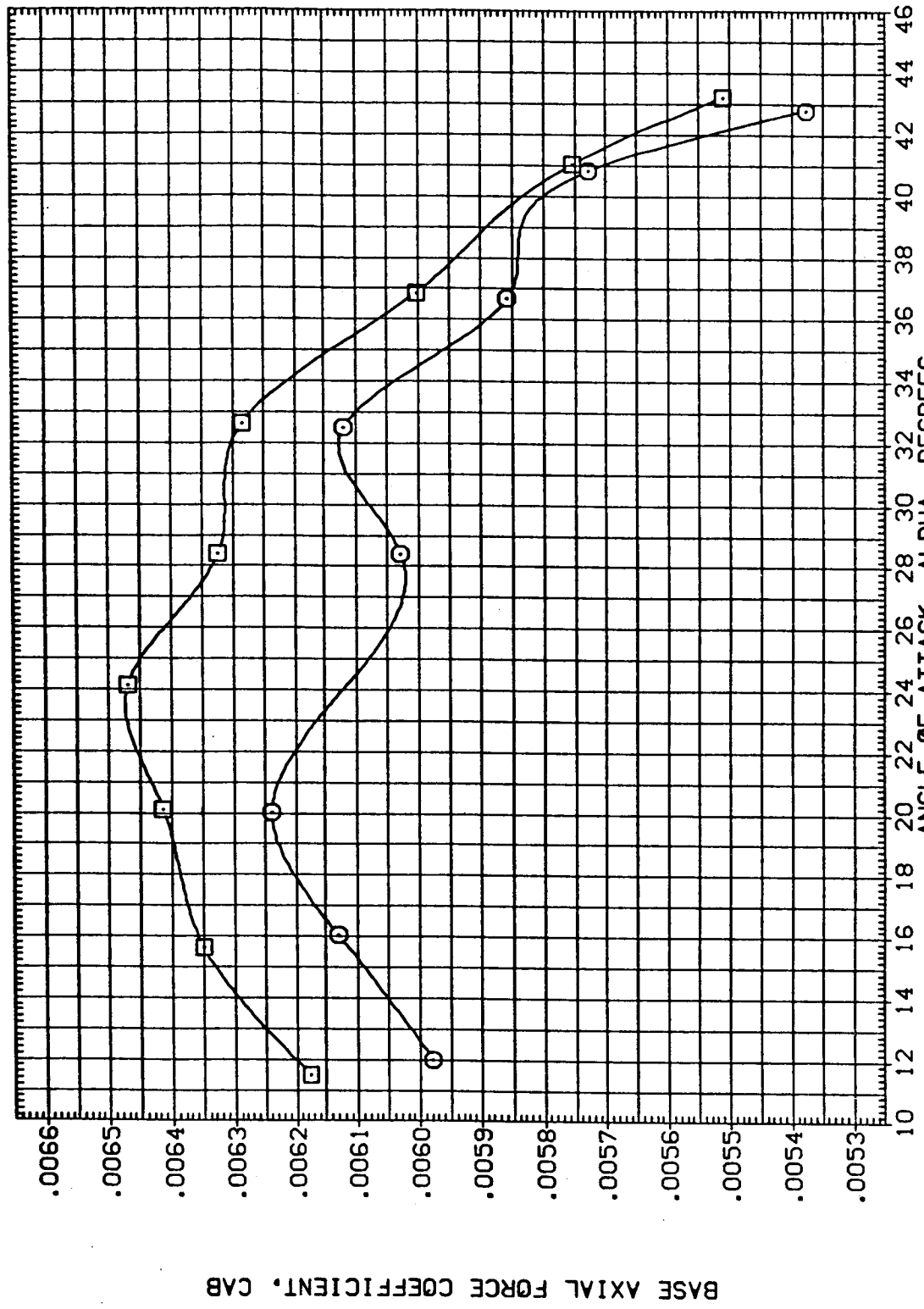


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BE0014) (1E0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUPPY STING)
 AMES 3.5-190 OAS8 (011-M7+H14-N24+DUPPY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

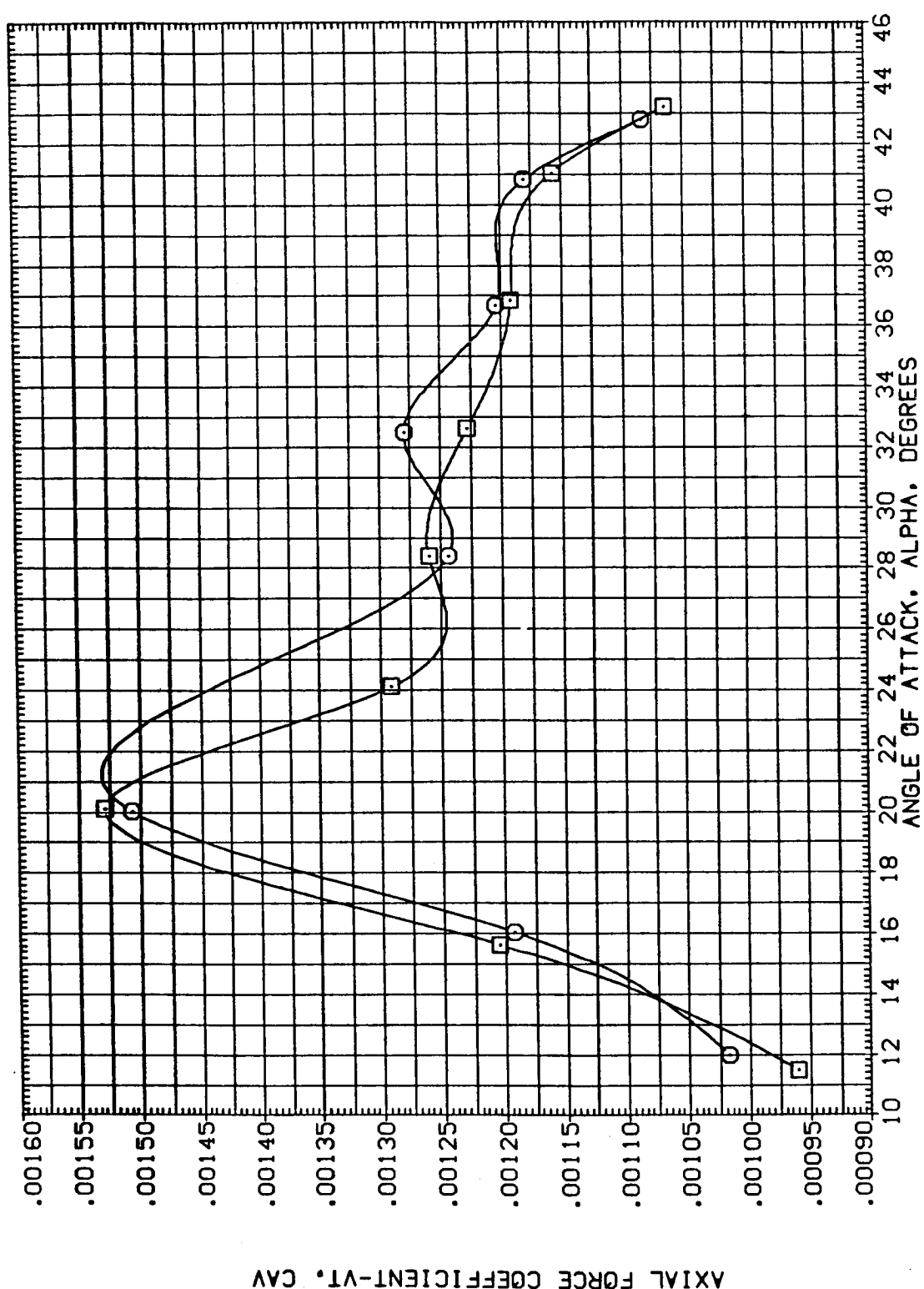


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BEG014) AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 (TEG018) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 996.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

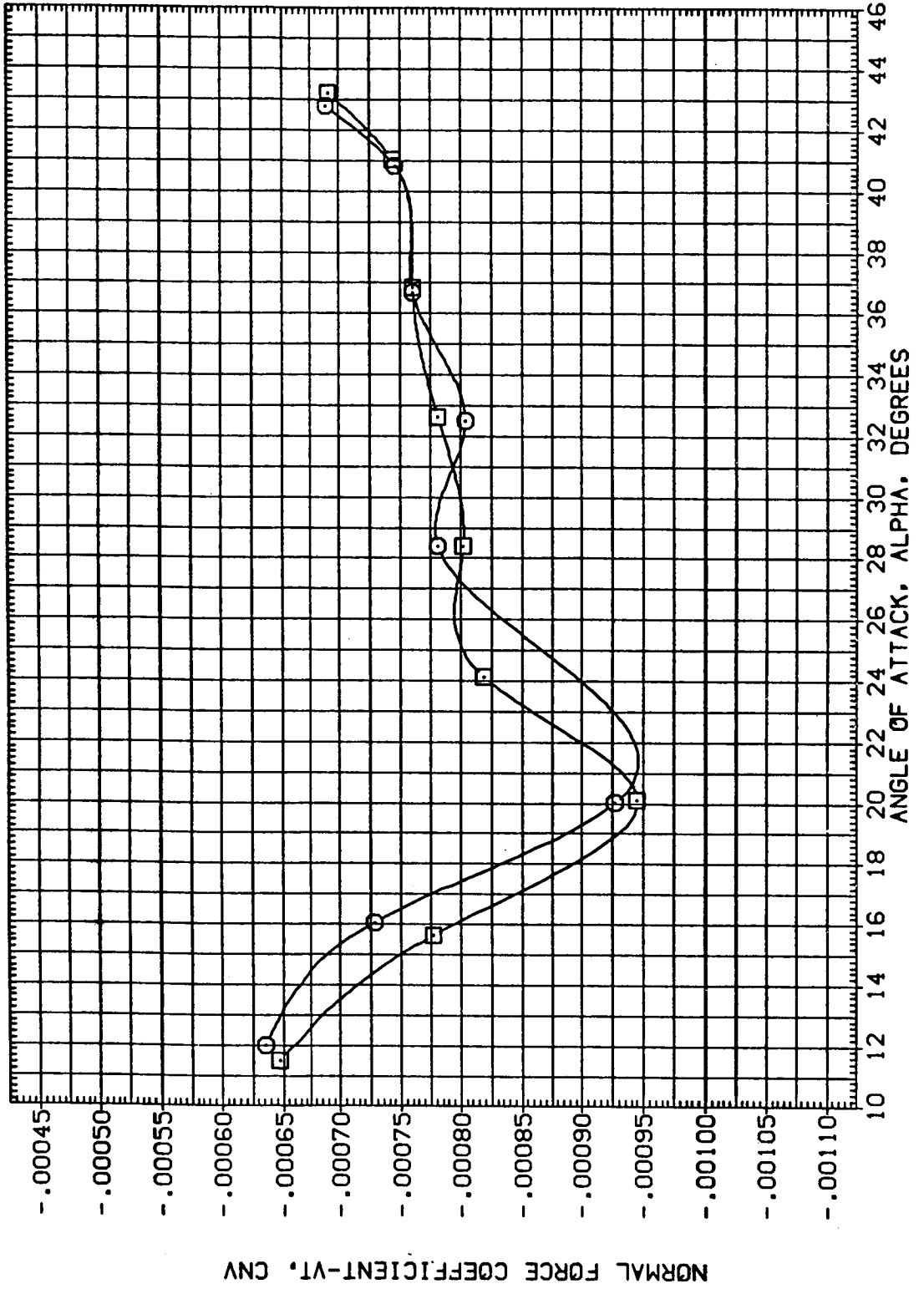


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (1E0018) (BEG014)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

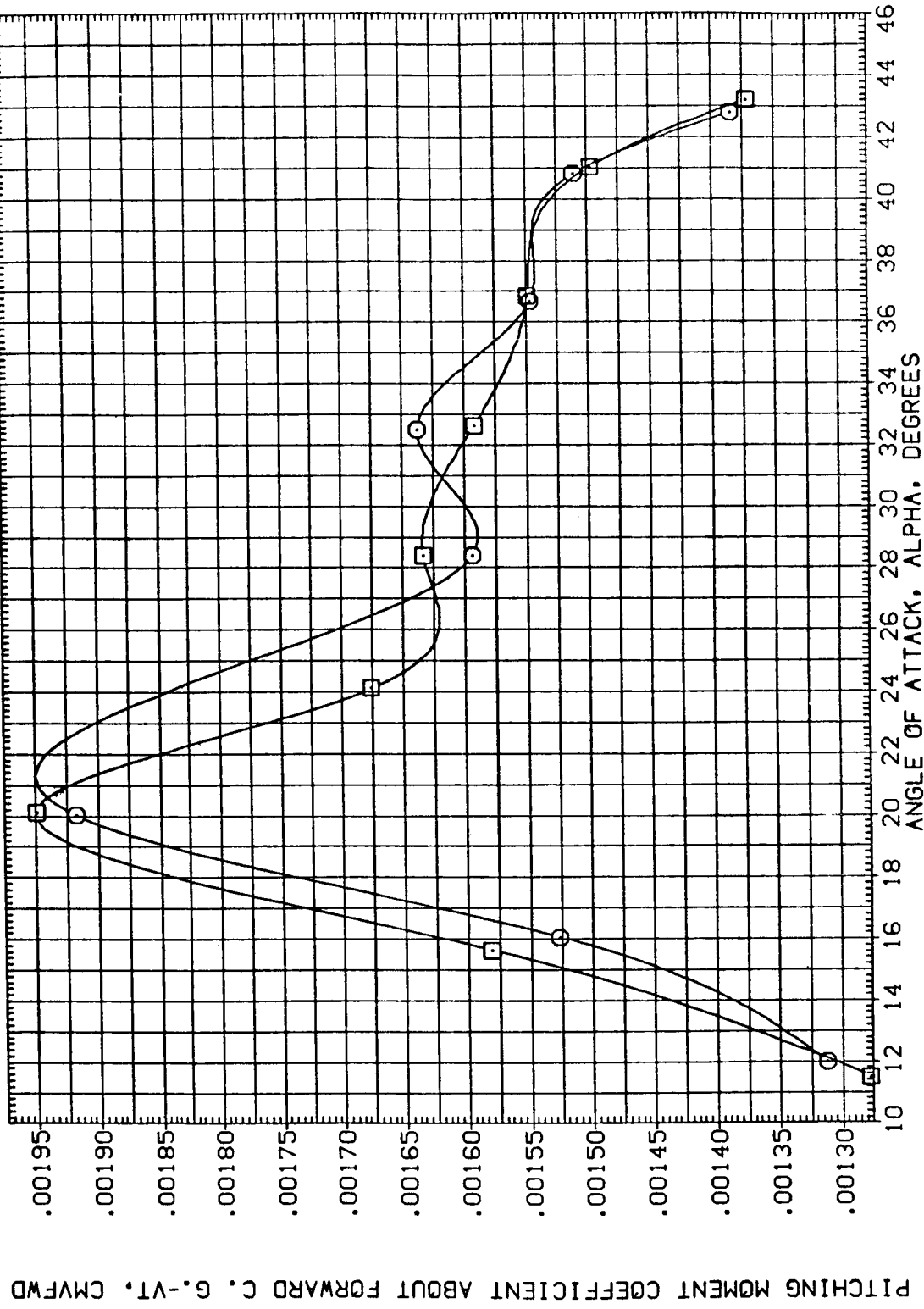


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEO014) (LEO018)
 CONFIGURATION DESCRIPTION AMES 3.5-190 CA98 (011-N24+DUMMY STING) AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON -10.000 -10.000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X9 YMRP .0000 IN.Y9 ZMRP 375.0000 IN.Z9 SCALE .0150

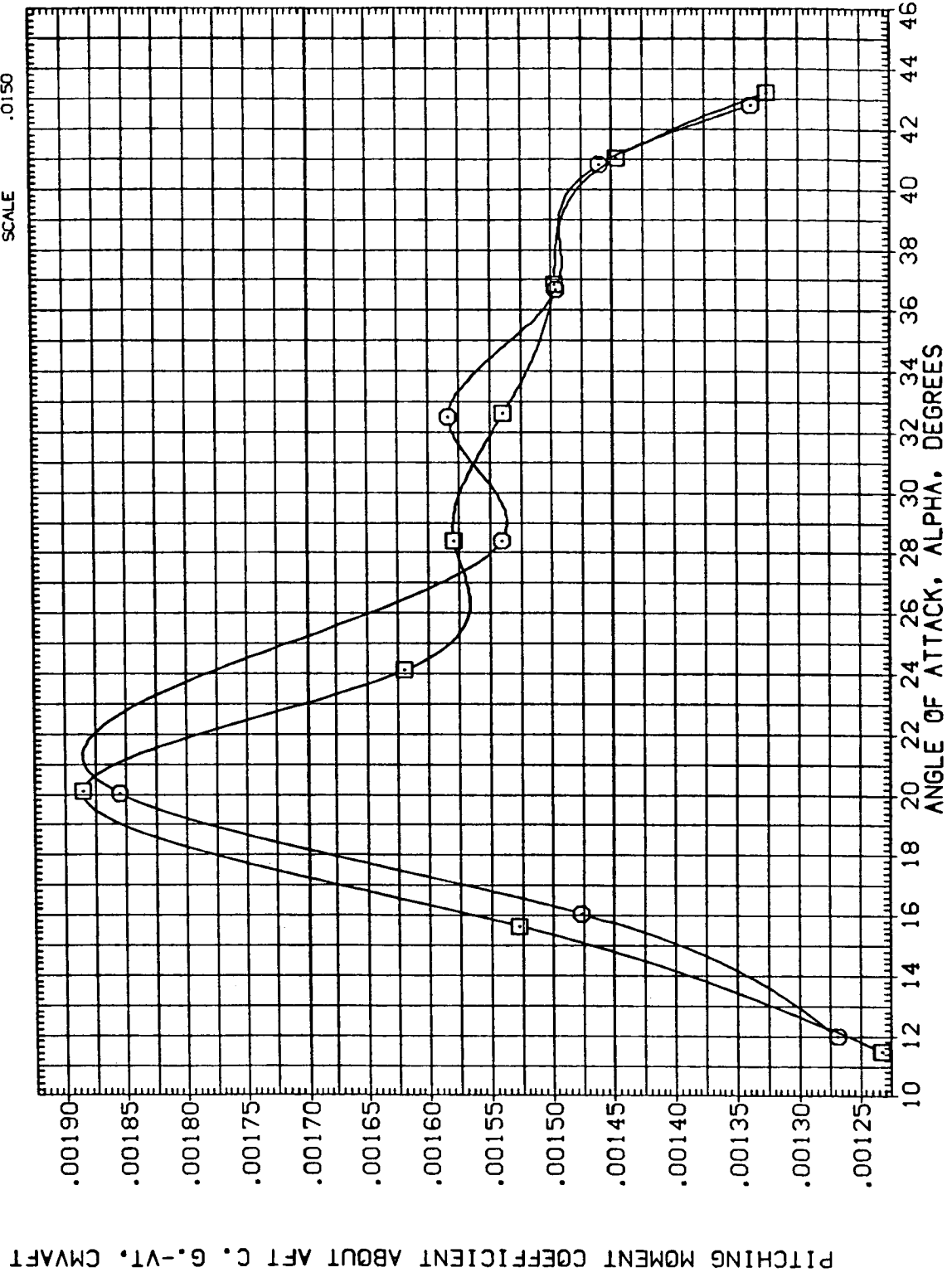


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0015) (JEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPDRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

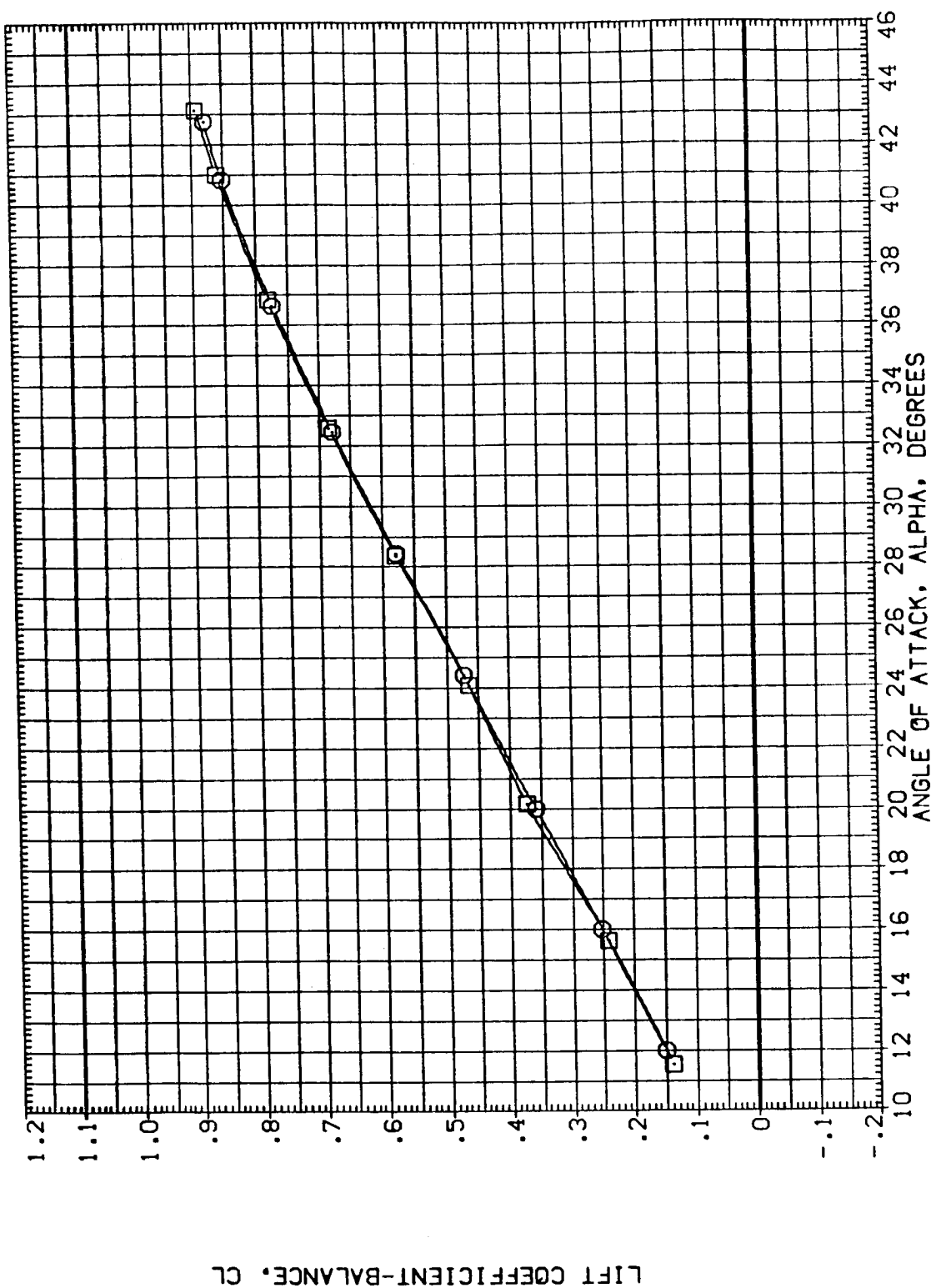


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(AJMACH = 5.25

DATA SET SYMBOL (JEC0019) AMES 3.5-190 (011-N24+DUMMY STING)

CONFIGURATION DESCRIPTION AMES 3.5-190 (011-N24+DUMMY STING)

BETA .000

ELEVON -40.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 836.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

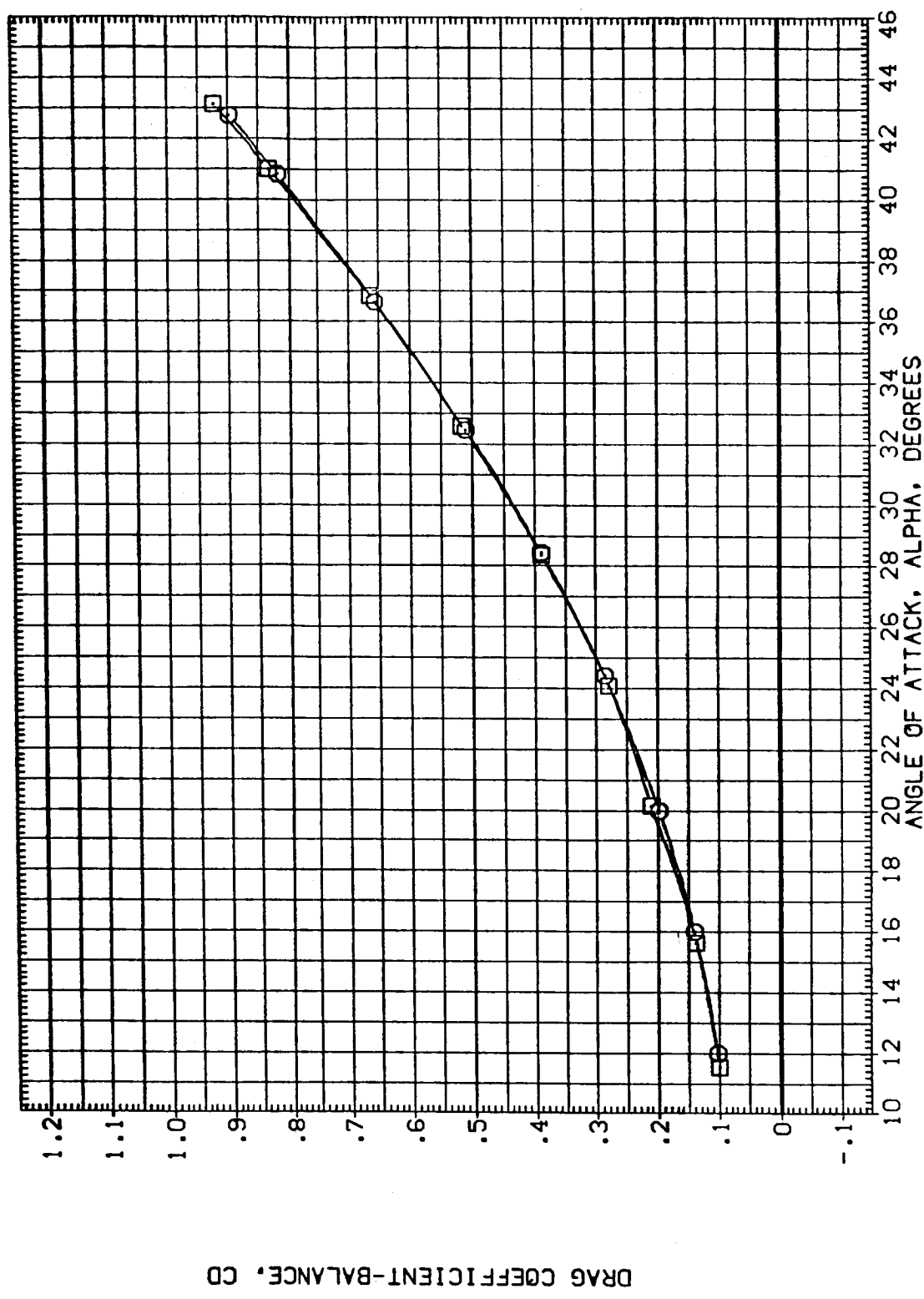


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0015) (JEC0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 OAS8 (011-M7+H14-N24+DUPPY STING)

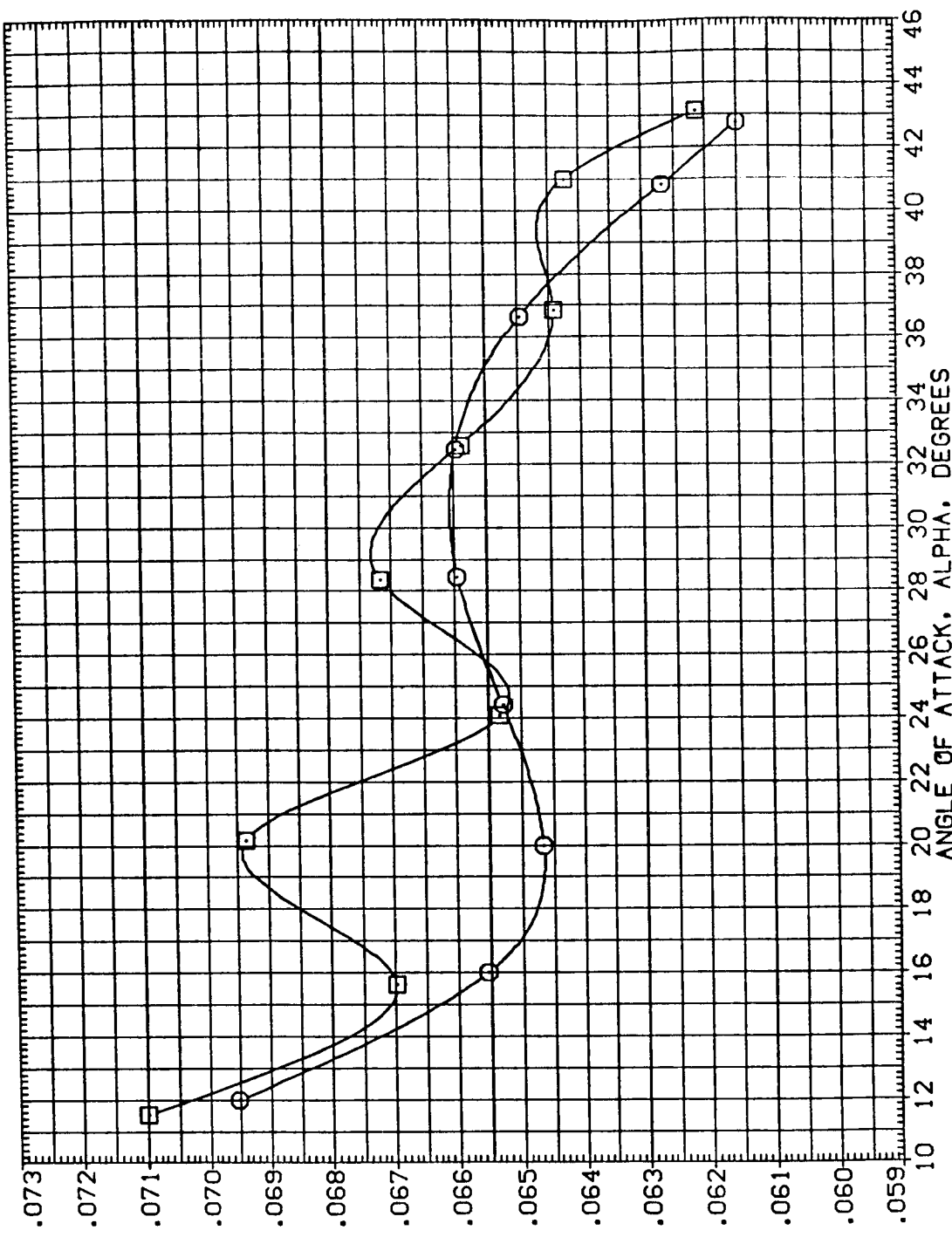
BETA .000
 .000

ELEVON -40.000
 -40.000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



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FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CEG015) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (JEG019) AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

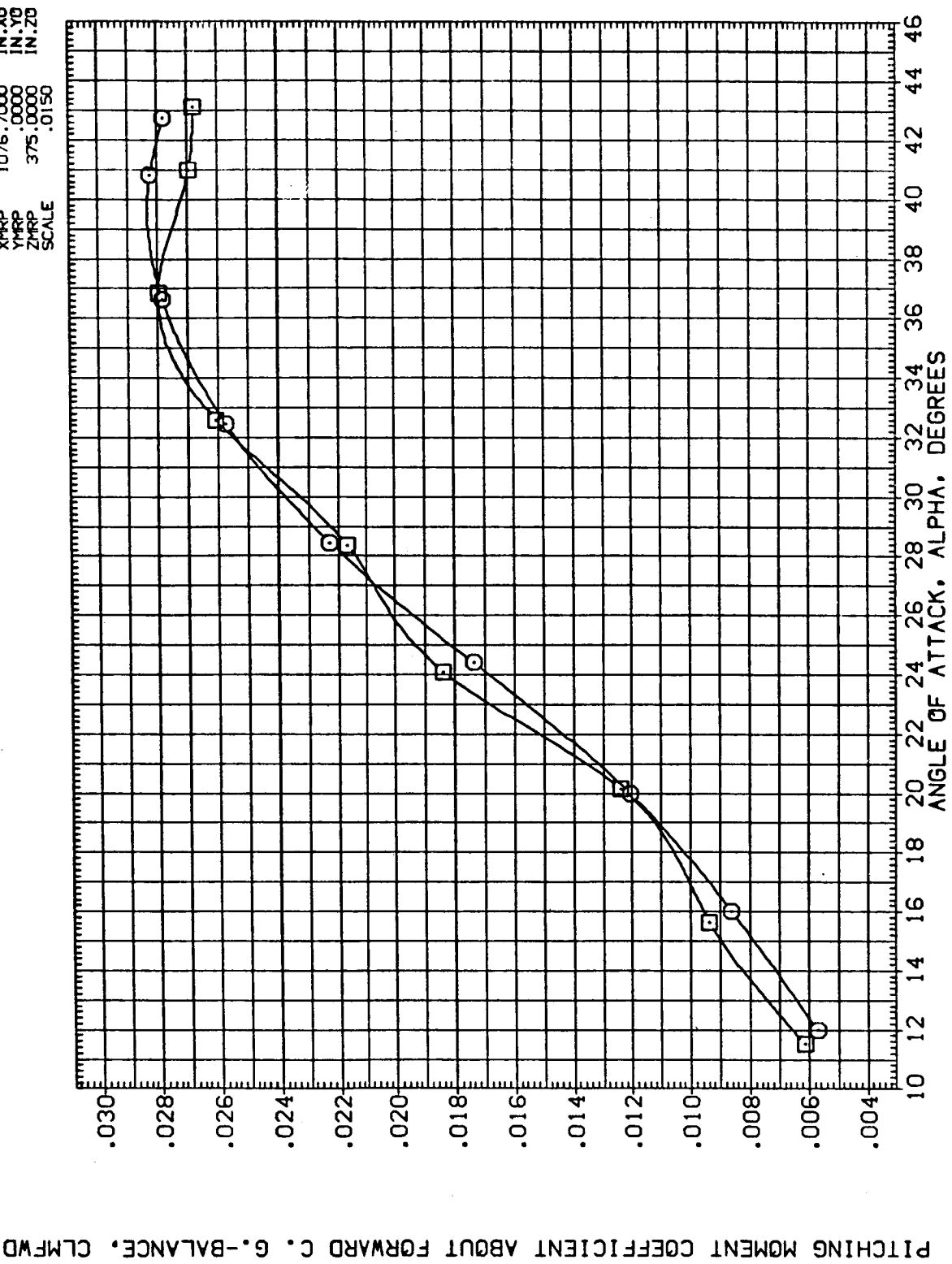


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (CE0015) (JEG015)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BDFLAP -11.700

SPDRBK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

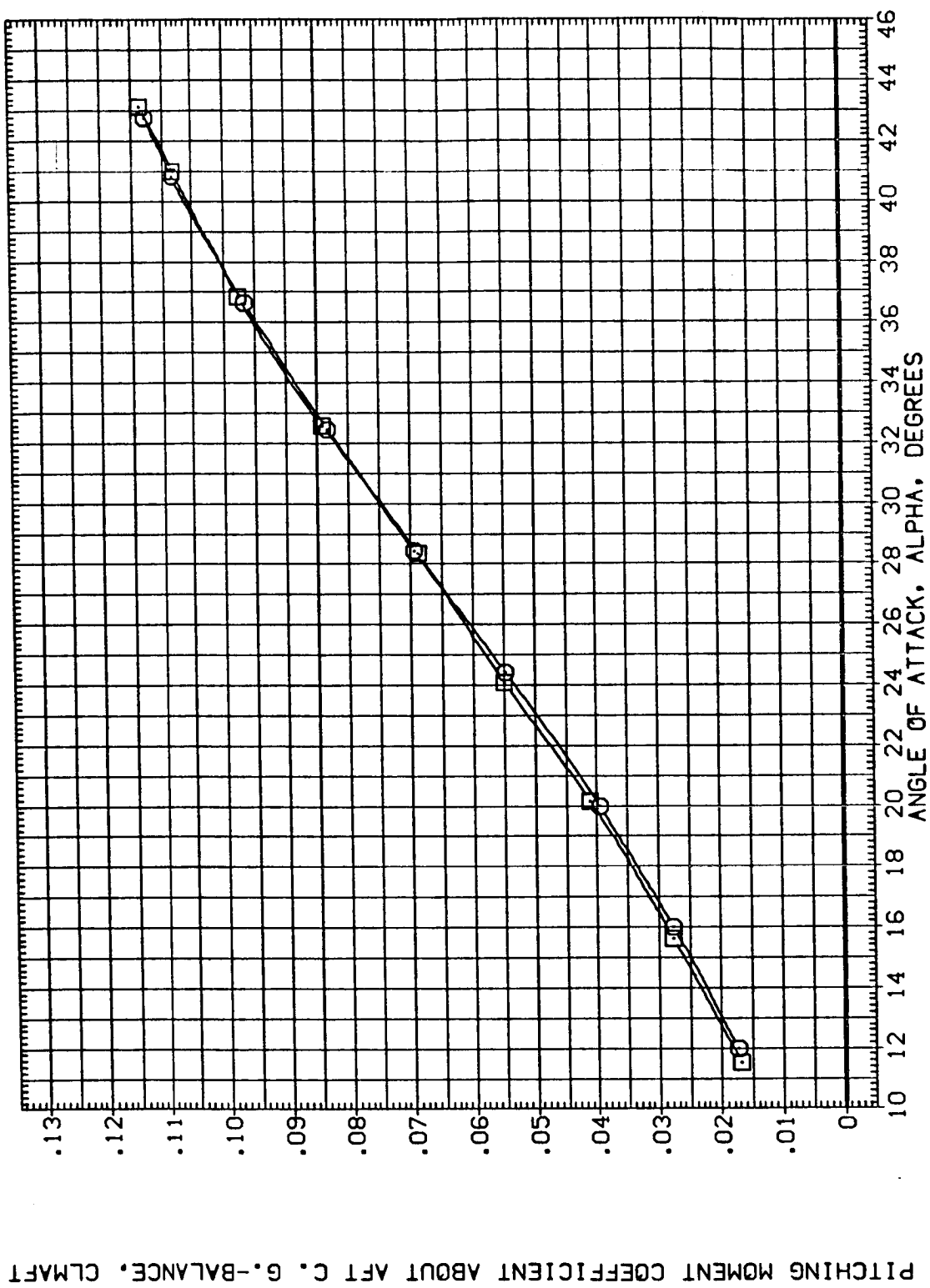


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0015) (JE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAS8 (011-N7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPDBRK 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 SREF 474.8000
 LREF 956.6800
 BREF 1076.7000
 XMRP .0000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

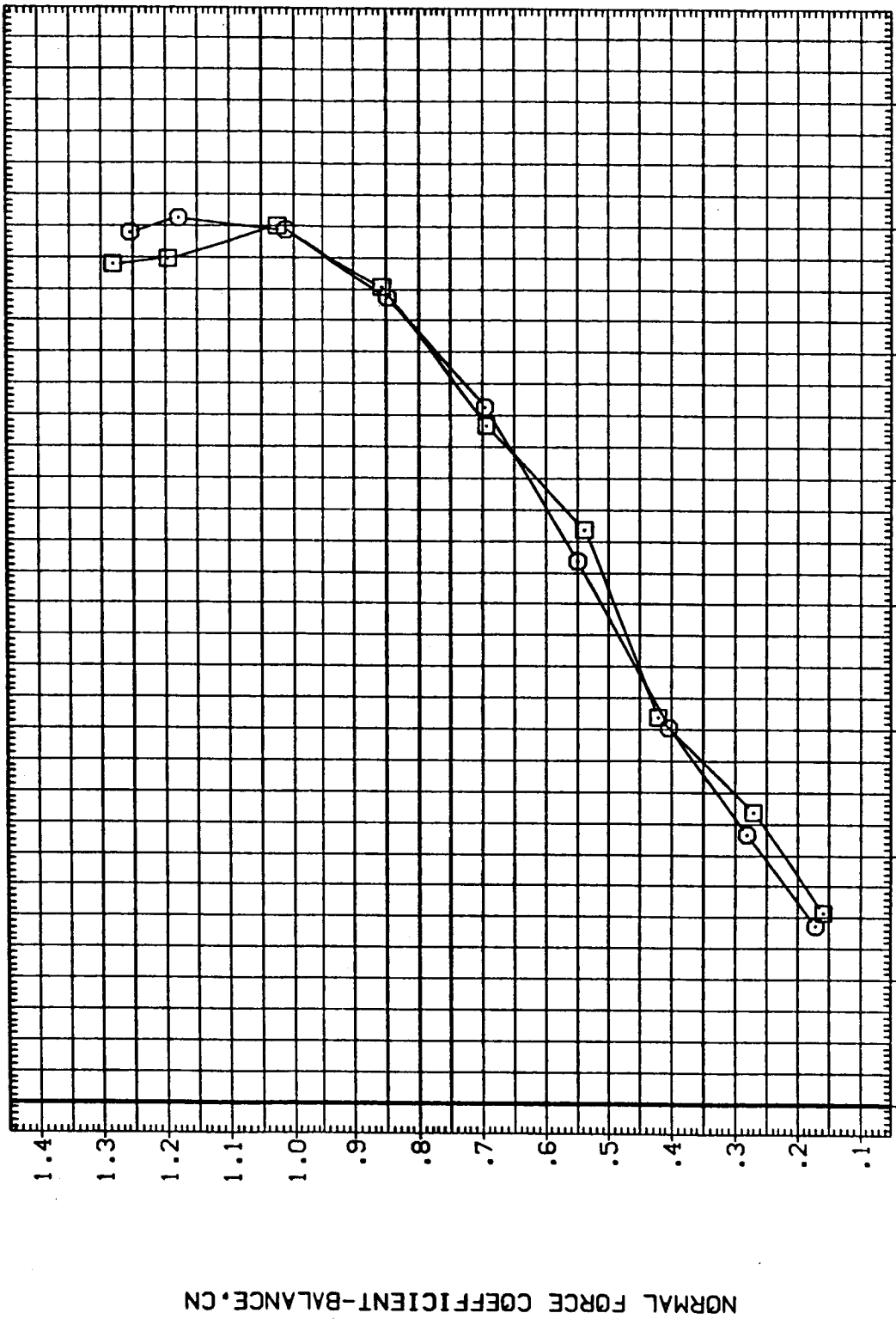


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJMACB = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CED015) AMES 3.5-190 BASH (011-N24+DUMMY STING)
 (JED019) AMES 3.5-190 BASH (011-N7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

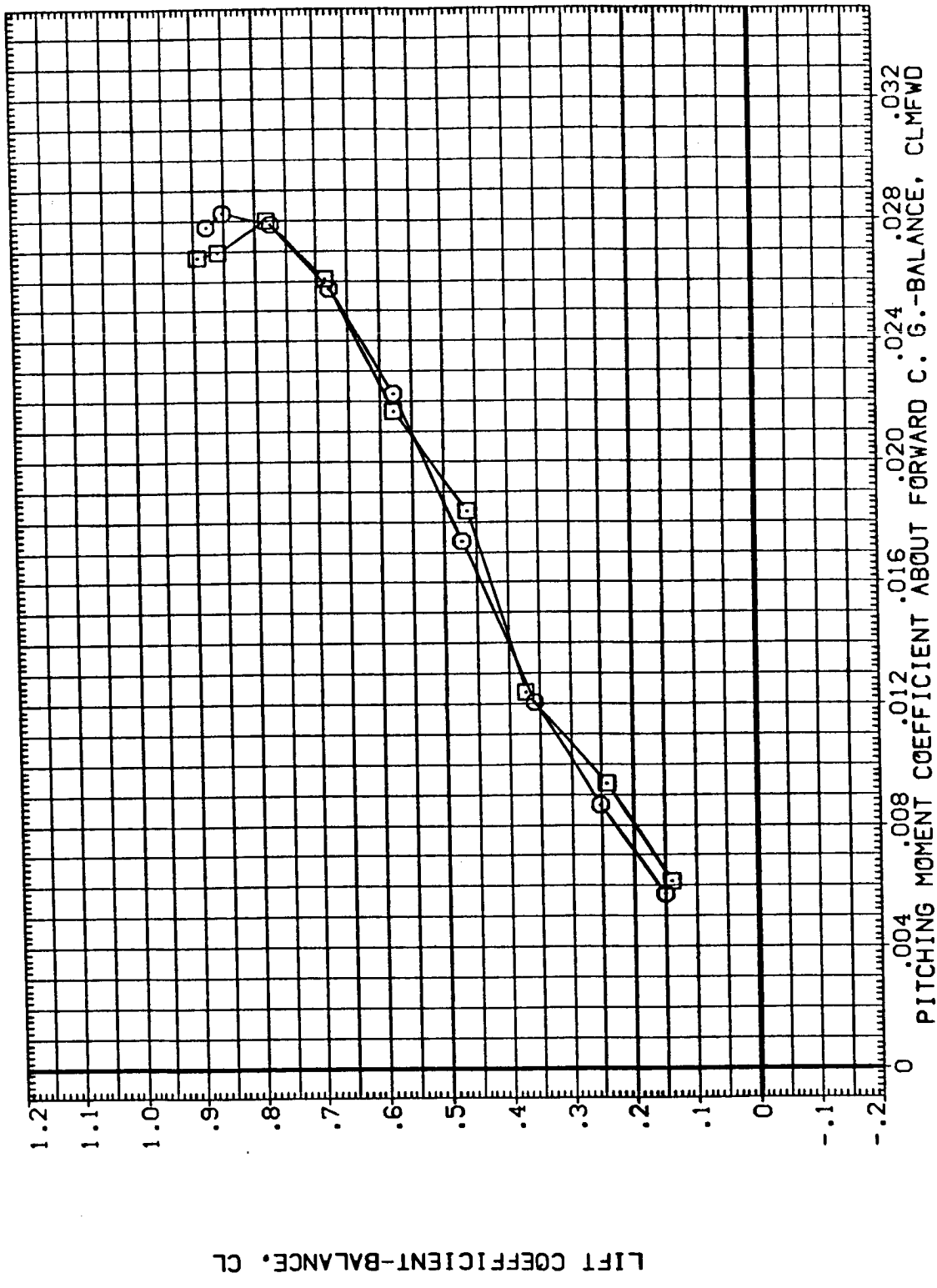


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CEG015) (JEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

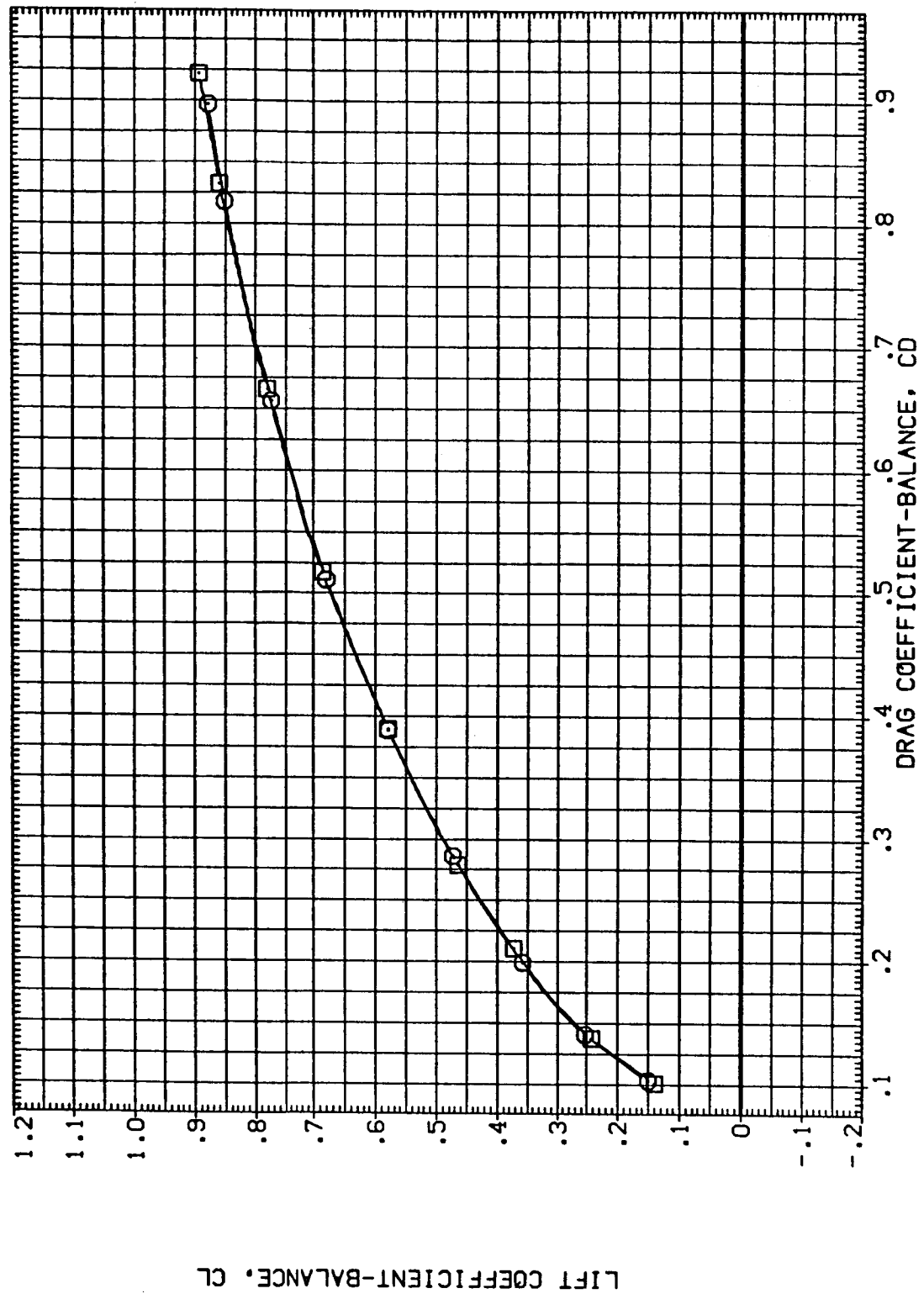


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0015) (KE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-N7+H14-N24+DUPPY STING)

BETA .000
 .000

ELEVON -40.000
 -40.000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

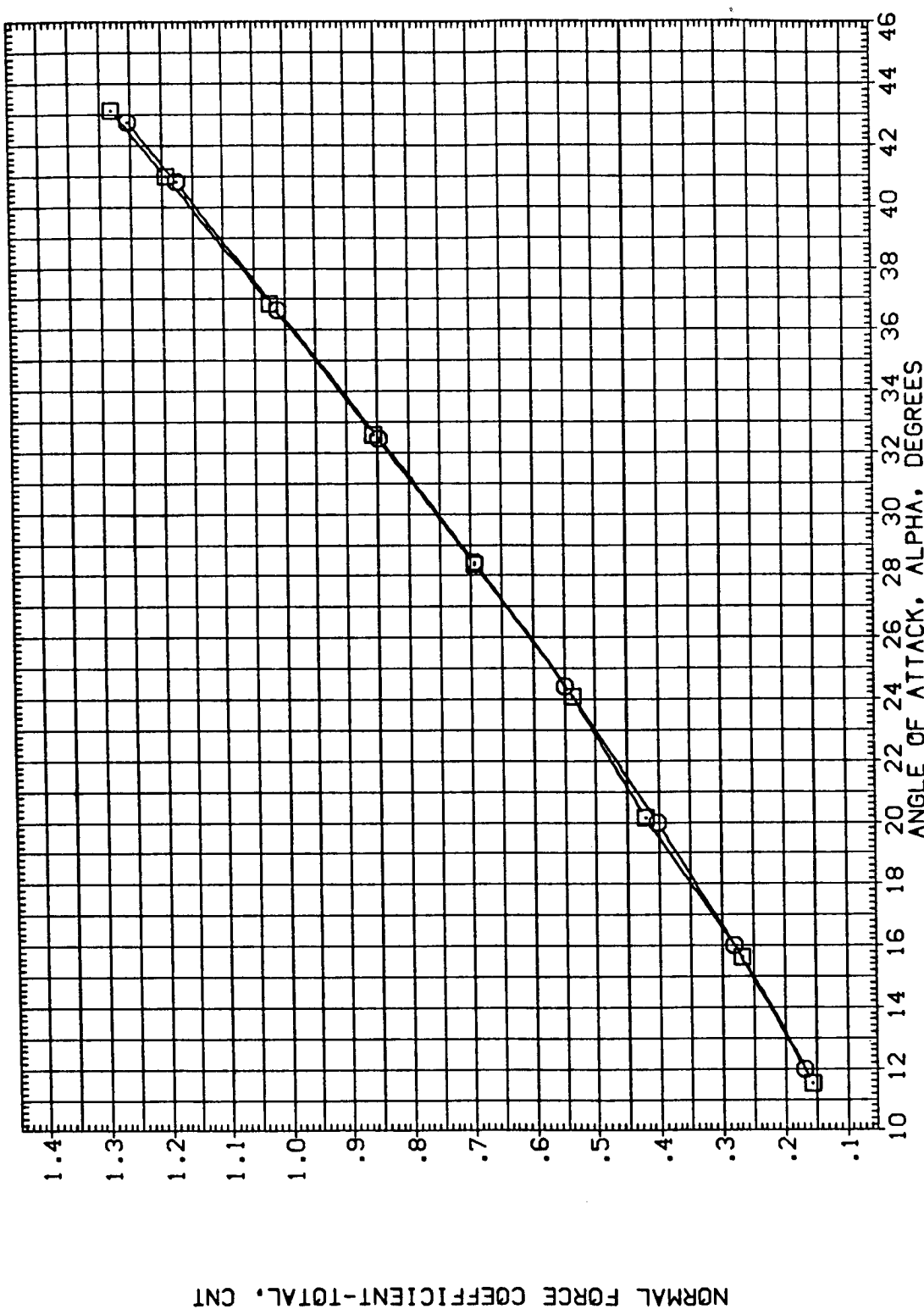


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (REG019)
 (REG015)
 CONFIGURATION DESCRIPTION
 ANES 3.5-190 CA98 (011-N24+DUMMY STING)
 ANES 3.5-190 CA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

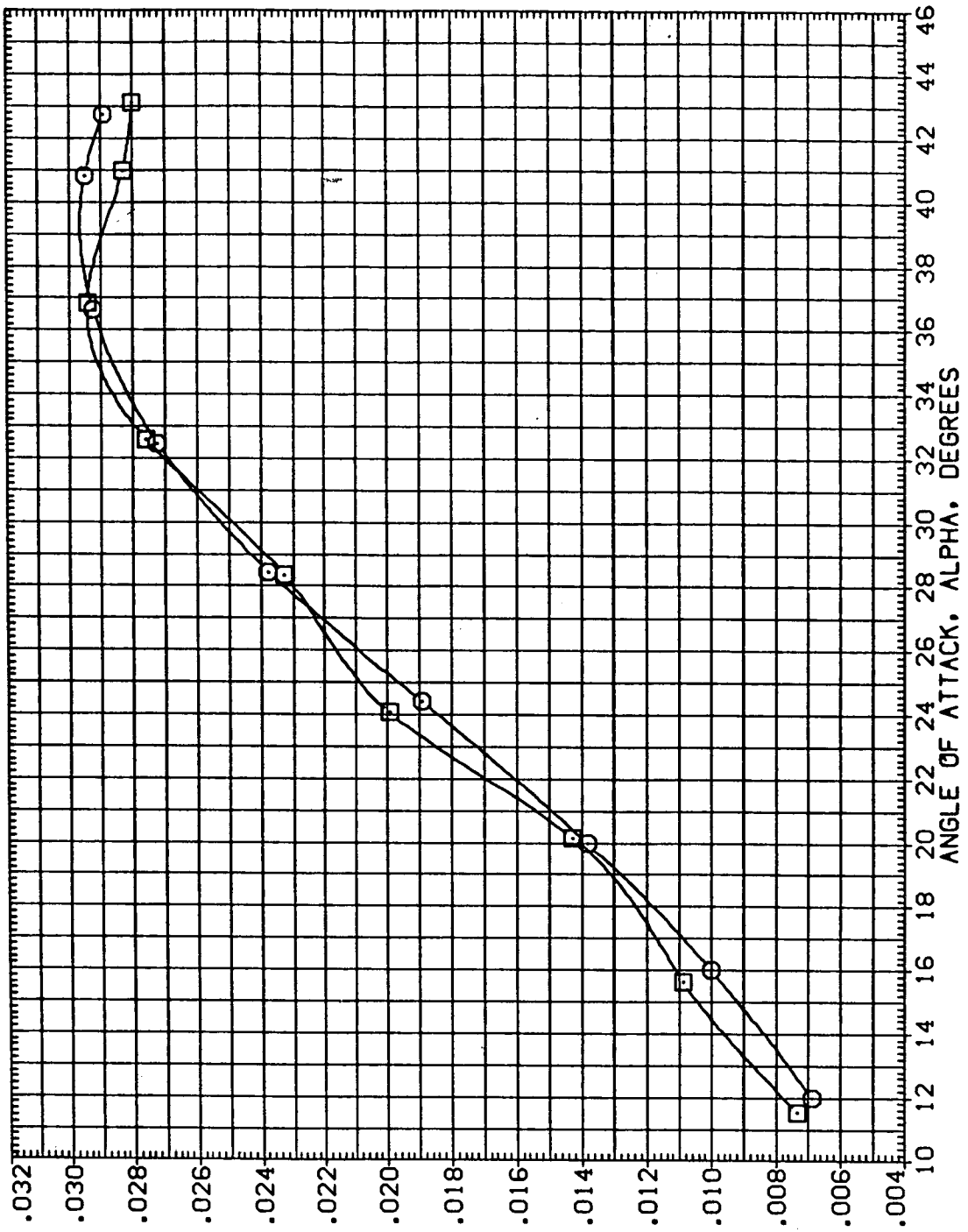


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000
 SPDRK 55.000

DATA SET SYMBOL (REG015)
 CONFIGURATION DESCRIPTION APES 3.5-190 QAS8 (011-N24+DUMMY STING)
 APES 3.5-190 QAS8 (011-M7-M14-N24+DUMMY STING)

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

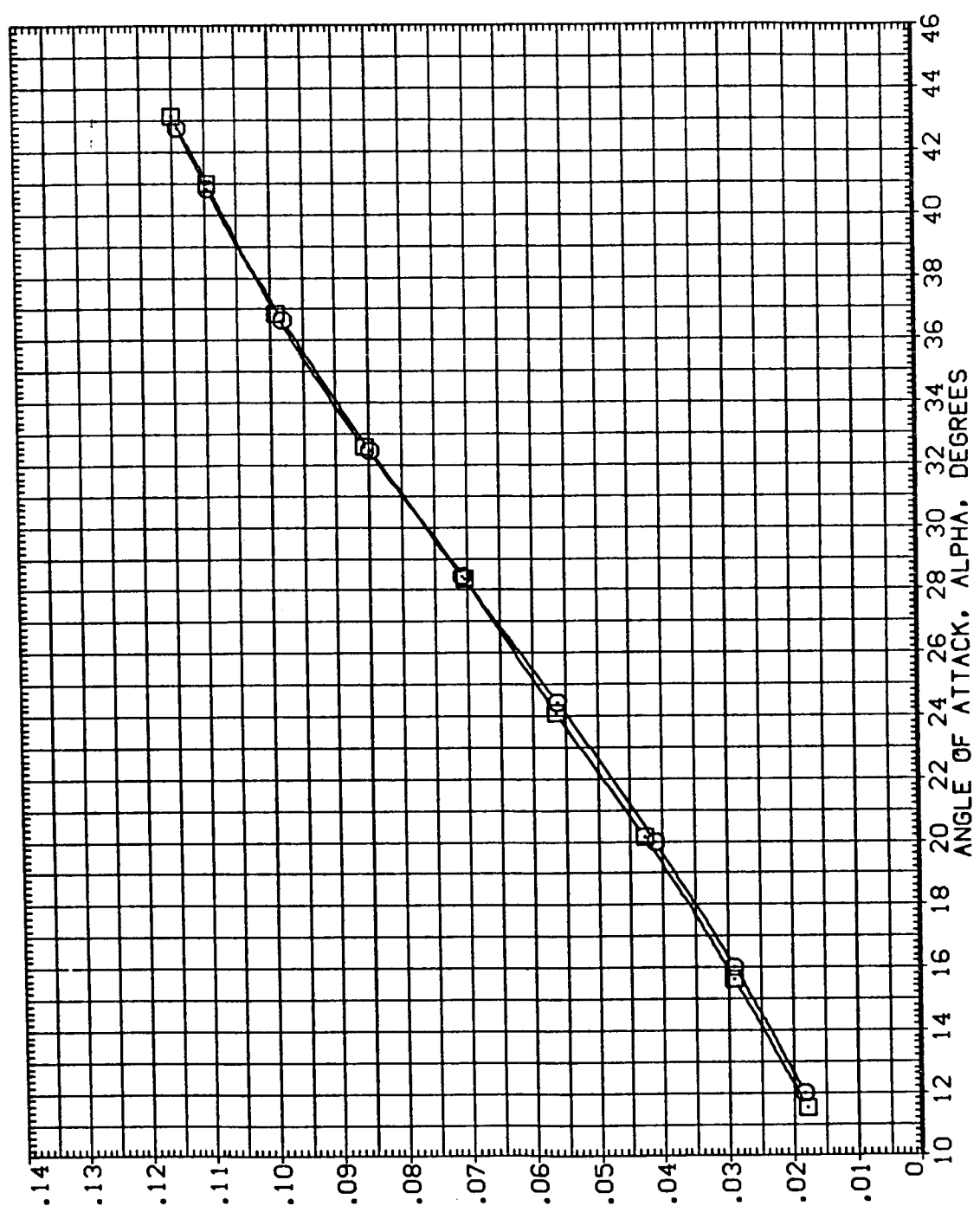


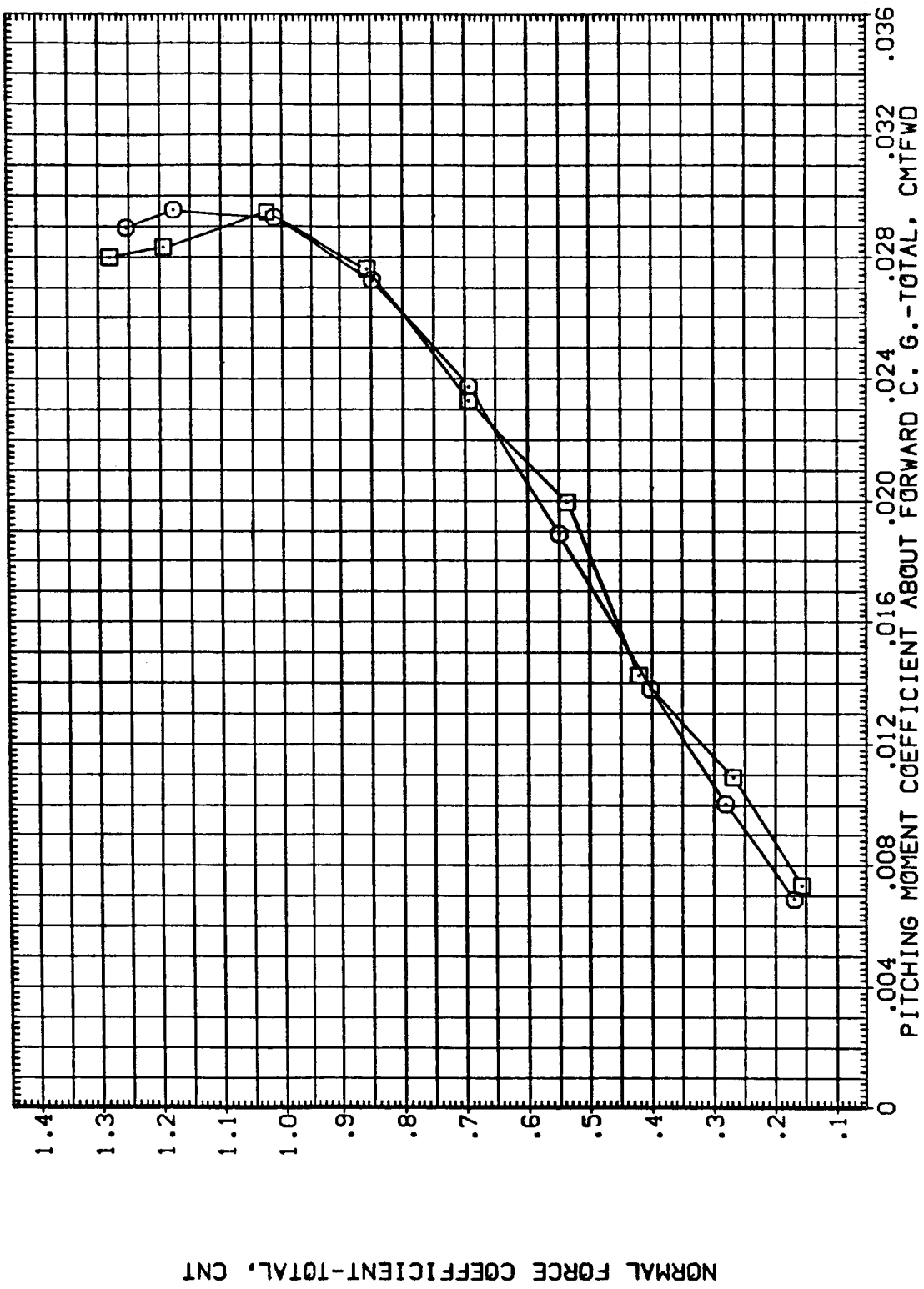
FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (K0015) (K0019) AMES 3.5-190 CA98 (011-N24+DUMMY STING) AMES 3.5-190 CA98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000
ELEVON -40.000 -40.000
BOFLAP -11.700 -11.700
SPDBRK 55.000 55.000

CONFIGURATION DESCRIPTION
REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150



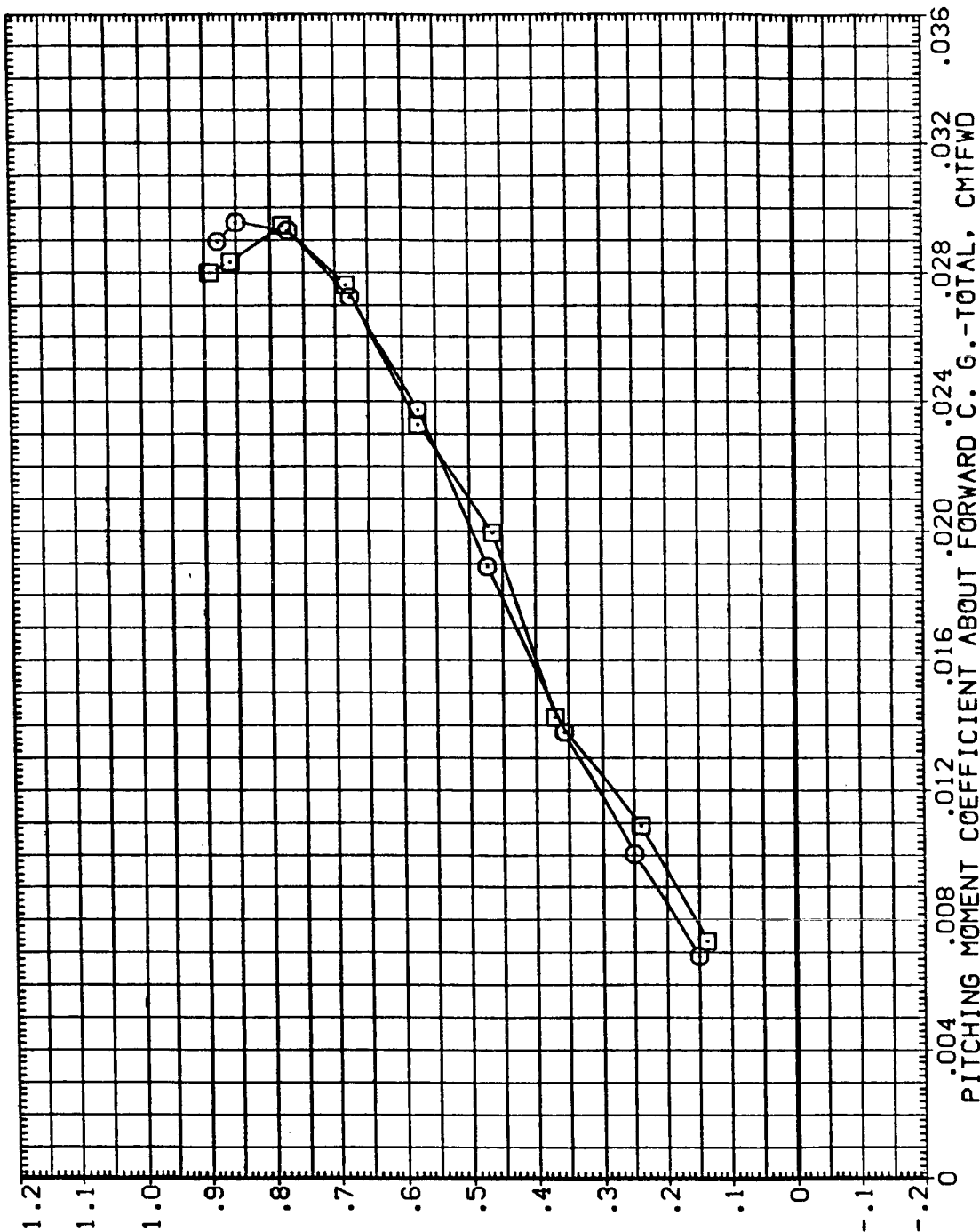
NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(EE0015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000	SO.FT.
(KE0019)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000	IN.
						BREF 936.6800	IN.
						XMRP 1076.7000	IN.
						YMRP .0000	IN.
						ZMRP 375.0000	IN.
						SCALE .0150	



LIFT COEFFICIENT-TOTAL, CLT

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E0015) (K0019)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AVES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

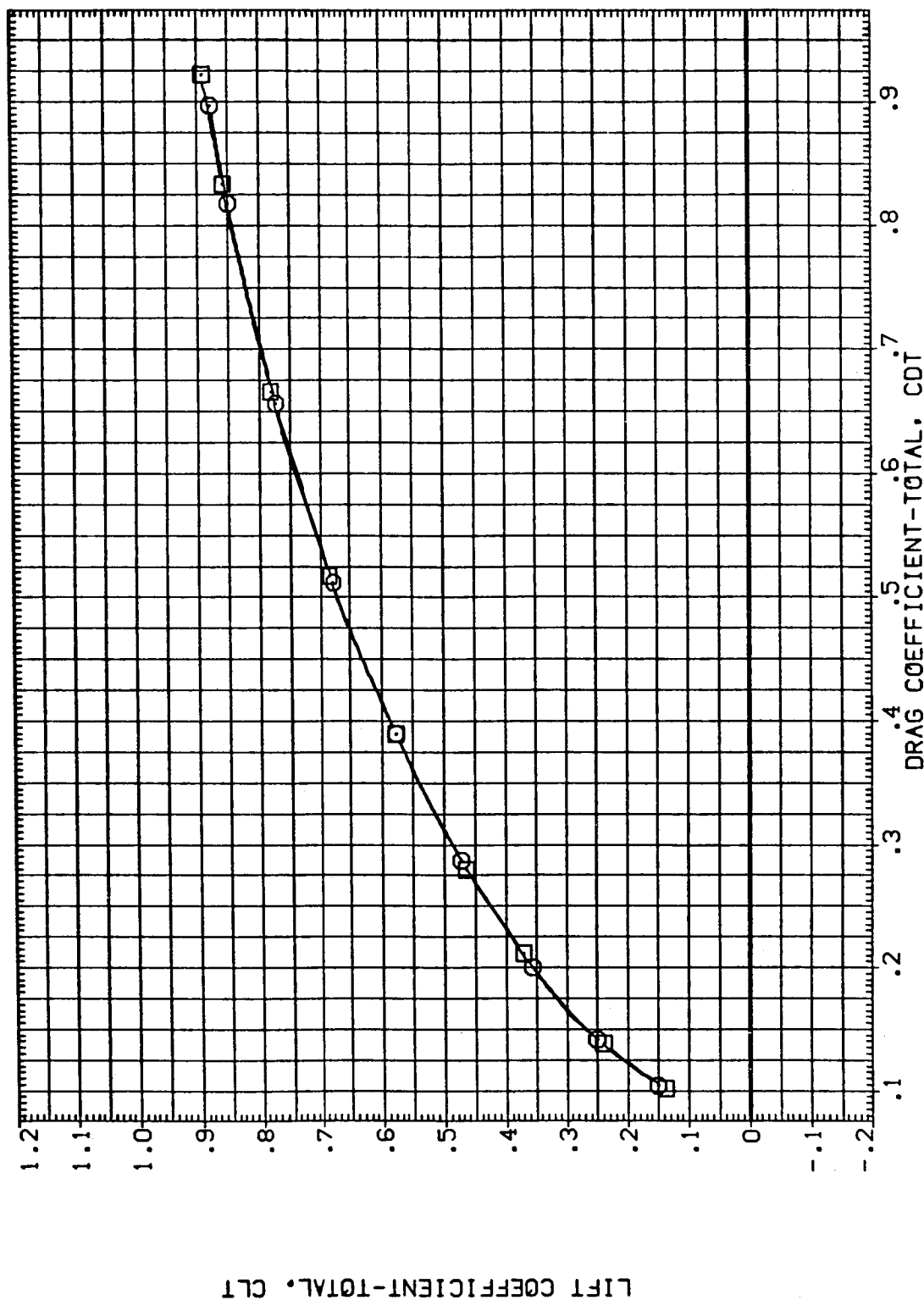


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJMACB = 5.25

DATA SET SYMBOL (EE0015) (KE0019) CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-N24+DUMMY STING) AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000 ELEVON -40.000 -40.000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SQ.FT. 2690.0000 IN. 474.8000 IN. 936.6800 IN. X0 1076.7000 IN. Y0 375.0000 IN. Z0 375.0000 IN. SCALE .0150

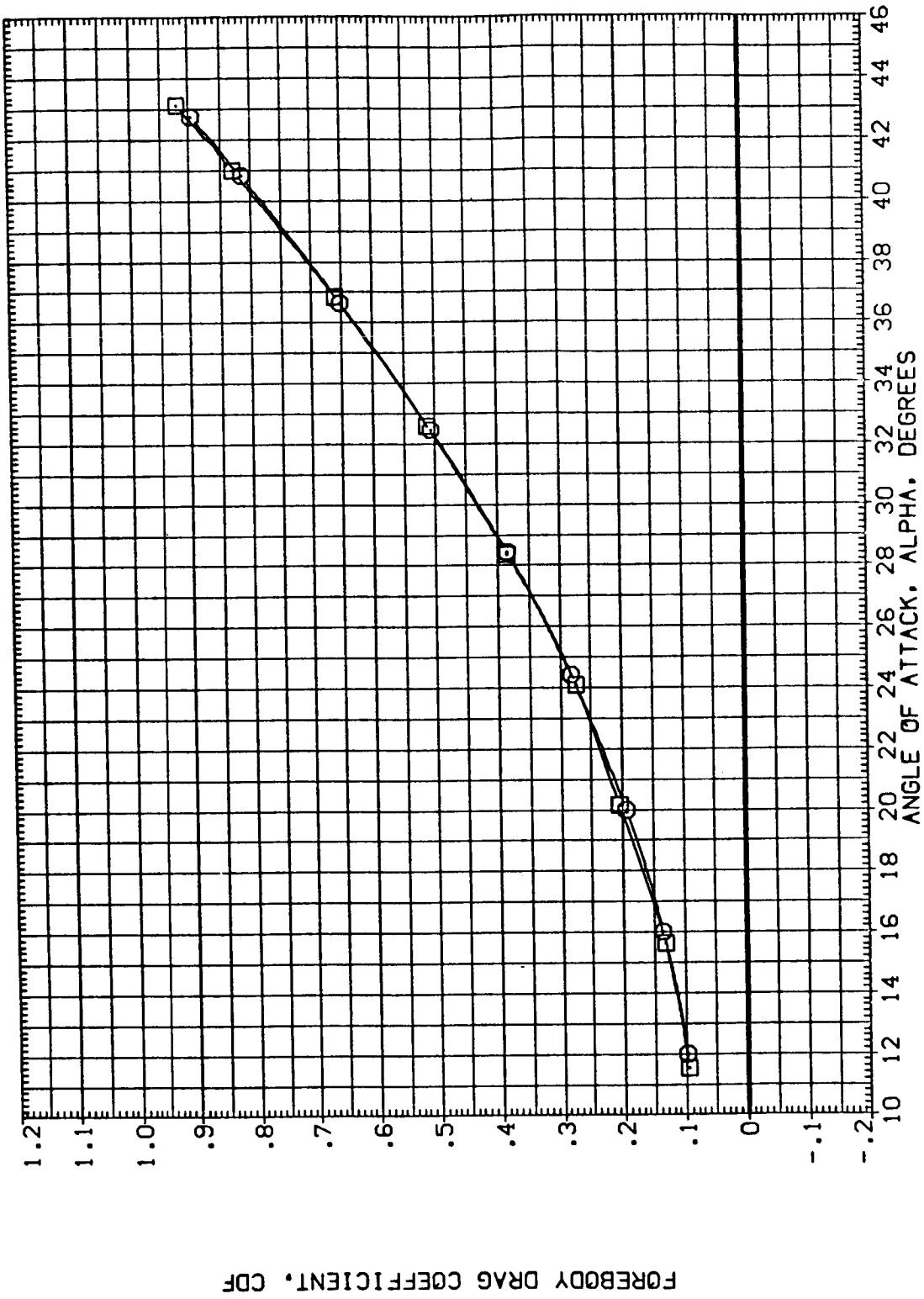


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

C-4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(E0015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(K0019)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

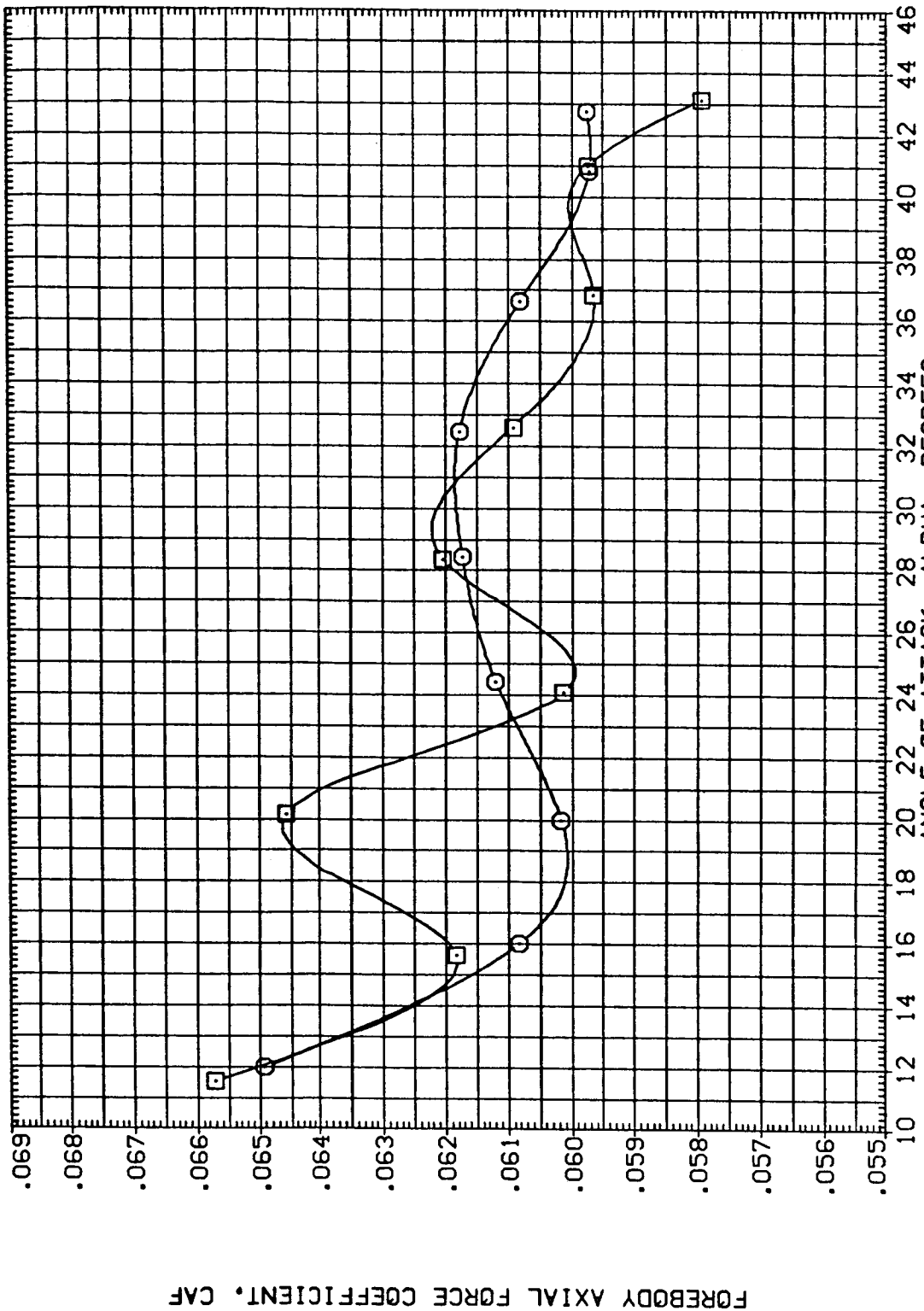


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (EE0015) (KE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAS8 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

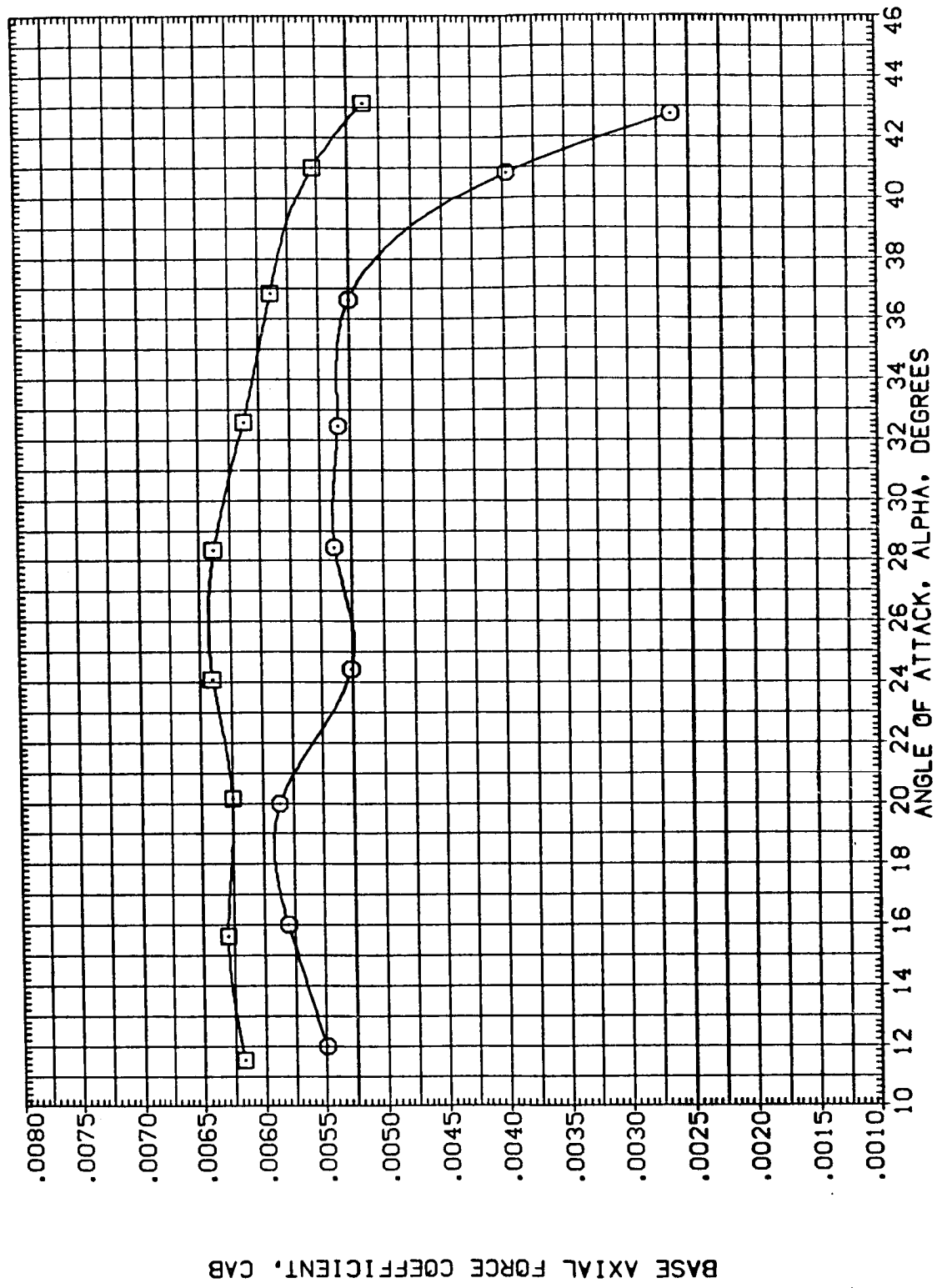


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (B0015) (100019) \square

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-N24+DUMMY STING)
 AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

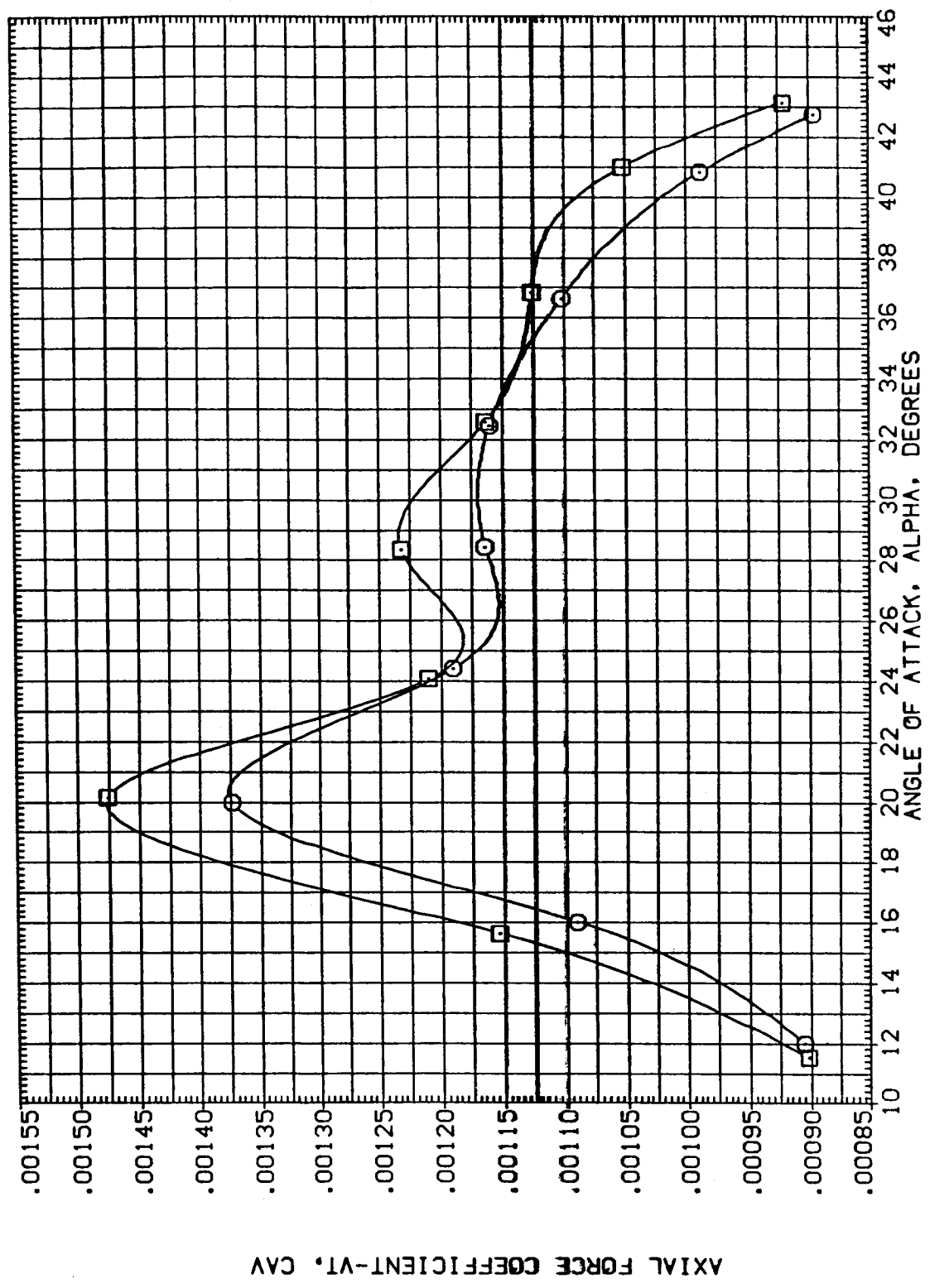


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BE0015) (1EG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

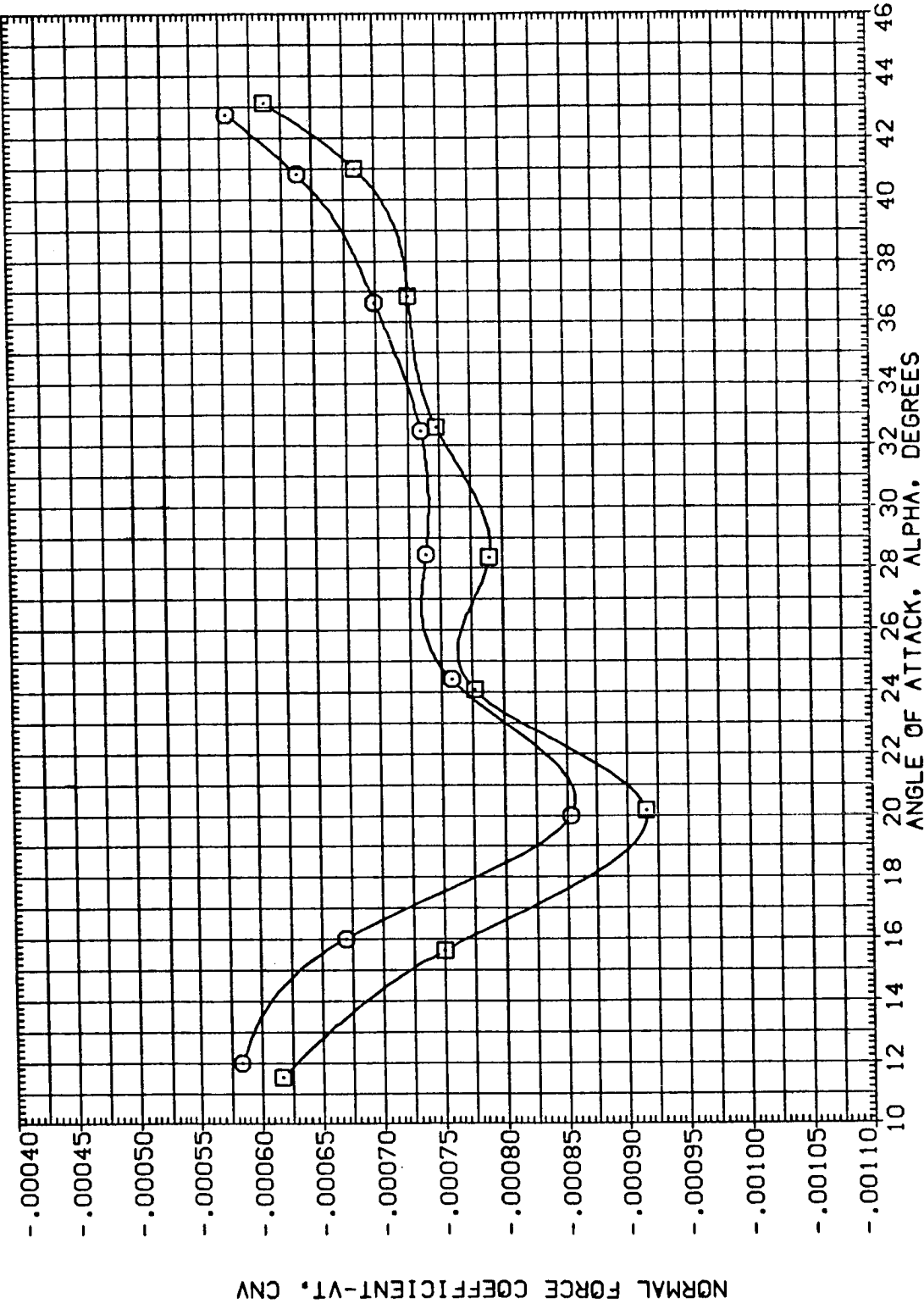


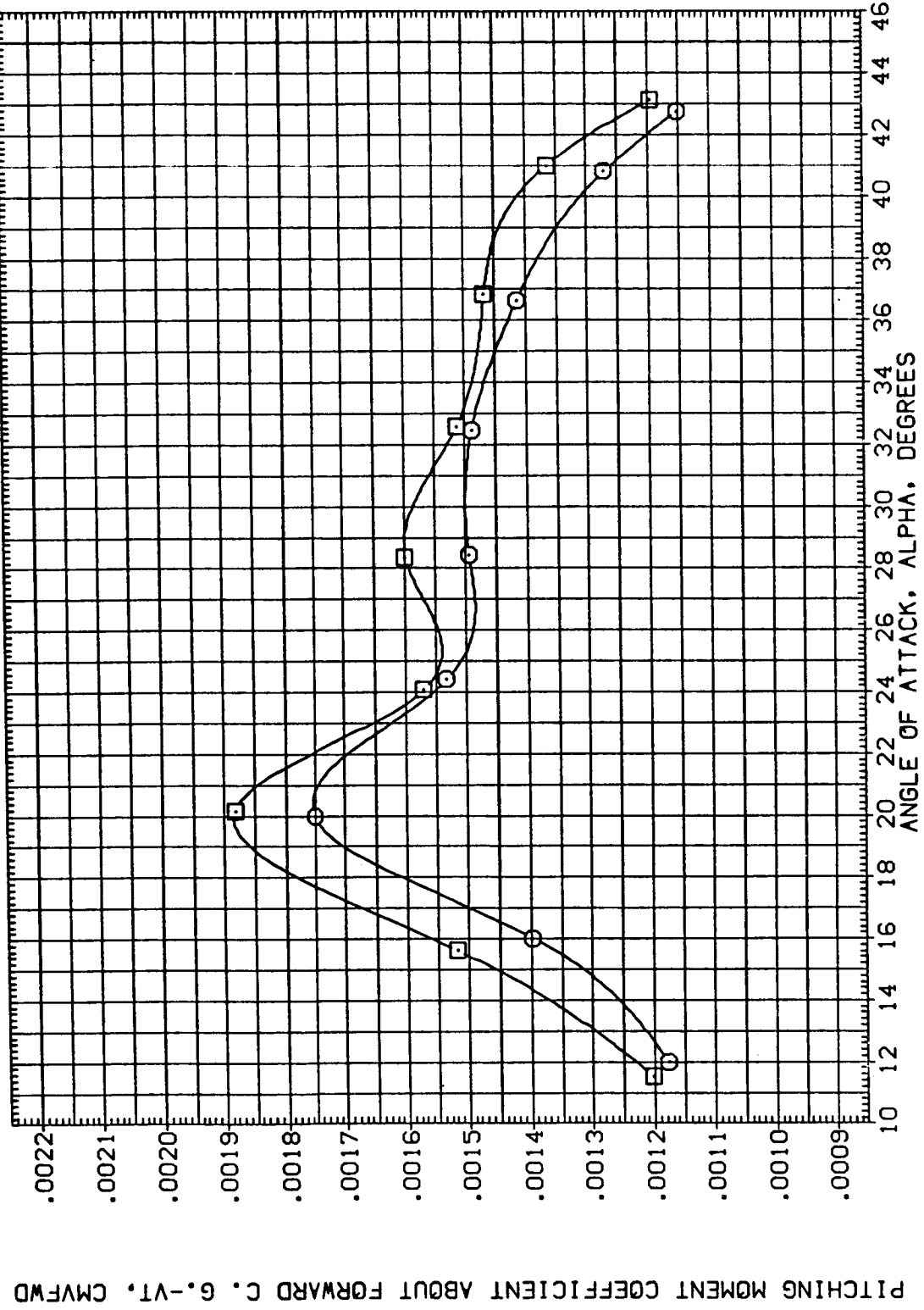
FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (1E0019) \square
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPDBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VI, CMFWD

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BE0015) (TE0019) \square AMES 3.5-190 OA98 (011-N7-M14-N24+DUMMY STING) AMES 3.5-190 OA98 (011-N24+DUMMY STING)

BETA .000
ELEVON -40.000
BOFLAP -11.700
SPDBRK 55.000

REFERENCE INFORMATION
SREF 2690.0000 SO.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.YD
YMRP .0000 IN.YD
ZMRP 375.0000 IN.ZD
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

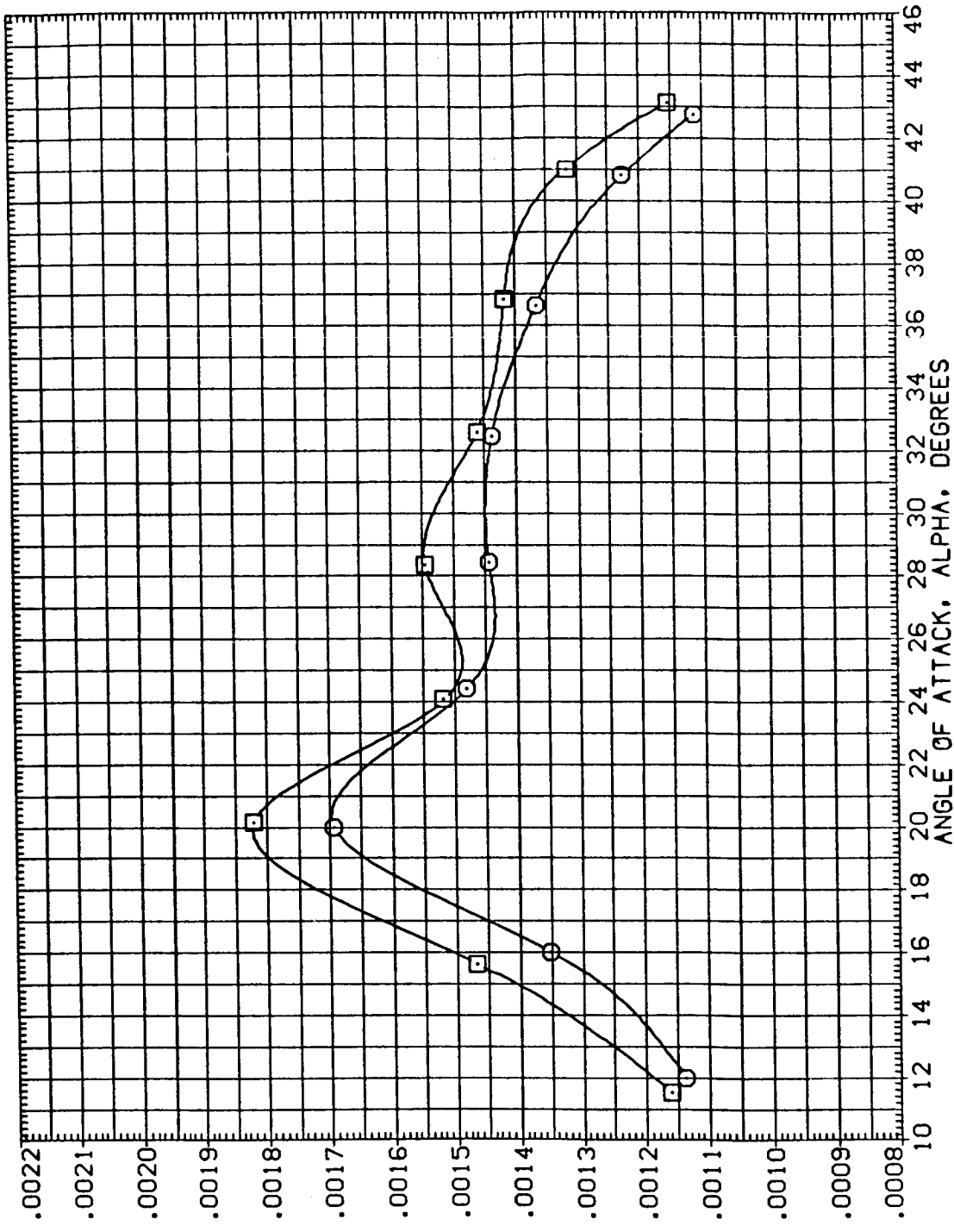


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0016) (CE0020) AMES 3.5-190 (011-N24+DUMMY STING) AMES 3.5-190 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 85.000 85.000

CONFIGURATION DESCRIPTION (011-N24+DUMMY STING) (011-N7+M14-N24+DUMMY STING)

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. X0 1076.7000 IN. Y0 375.0000 IN. Z0 0.0150 SCALE

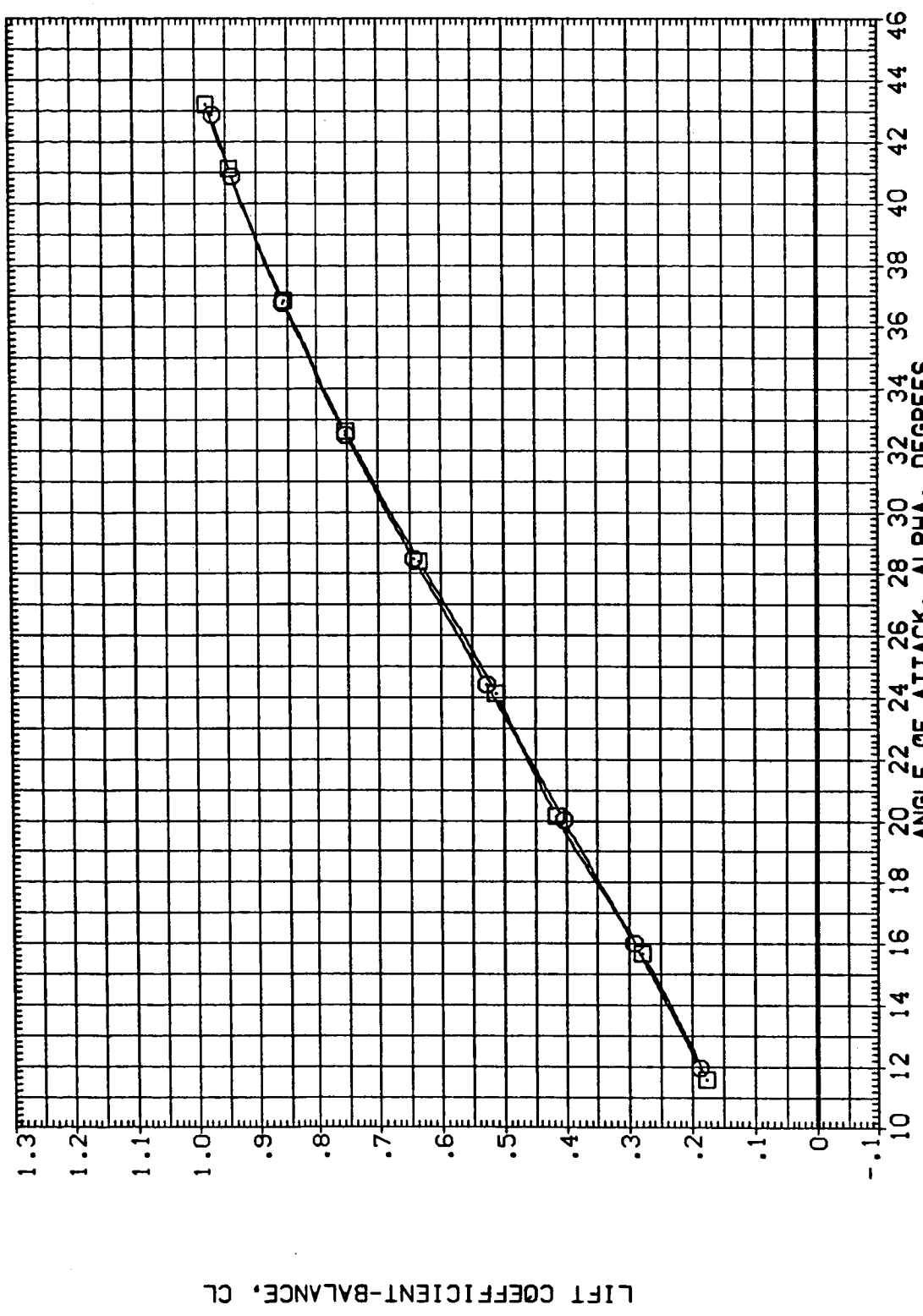


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0016) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7-H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0150	

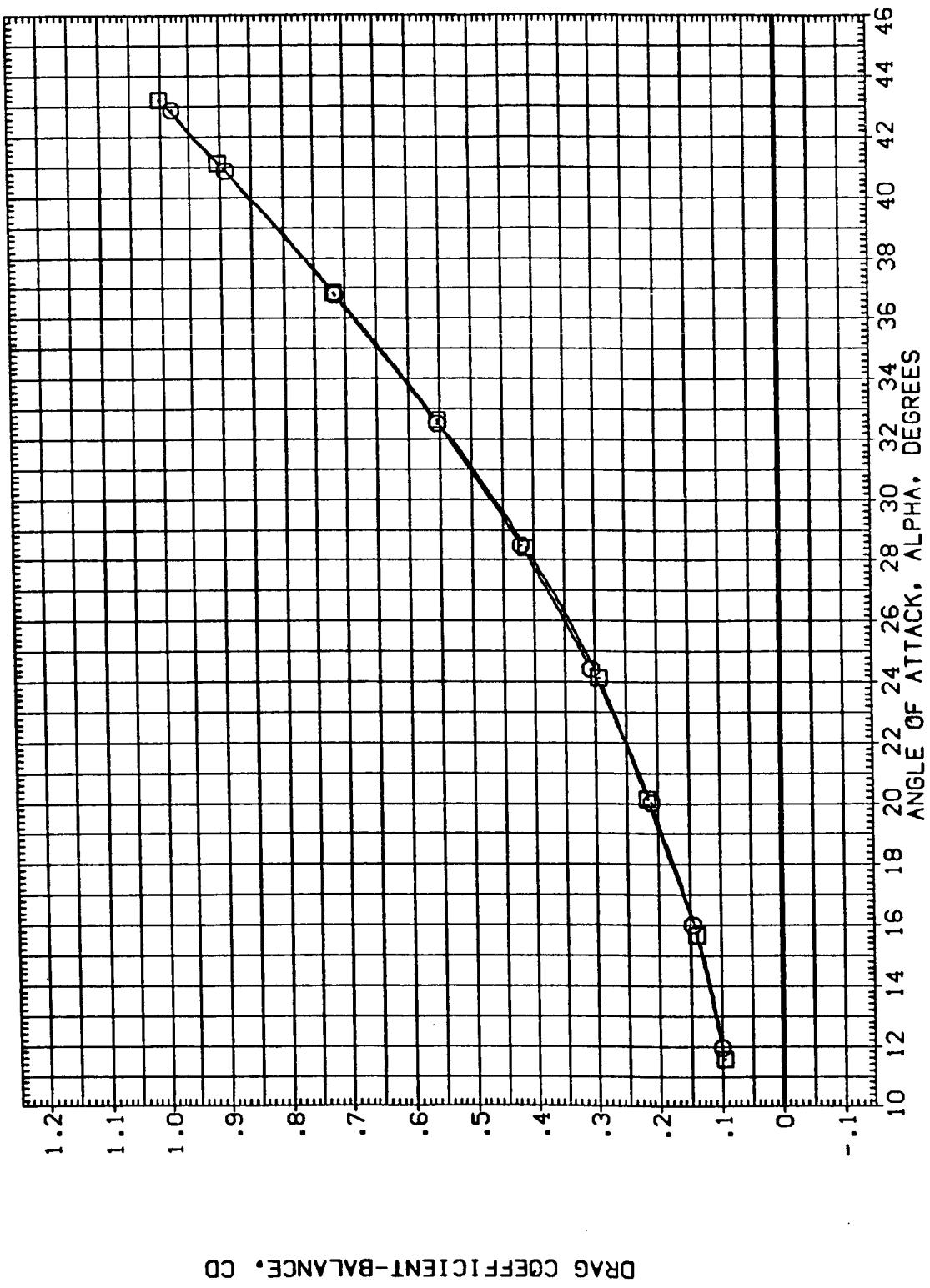


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0016) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (CE0020) AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 85.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 90.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

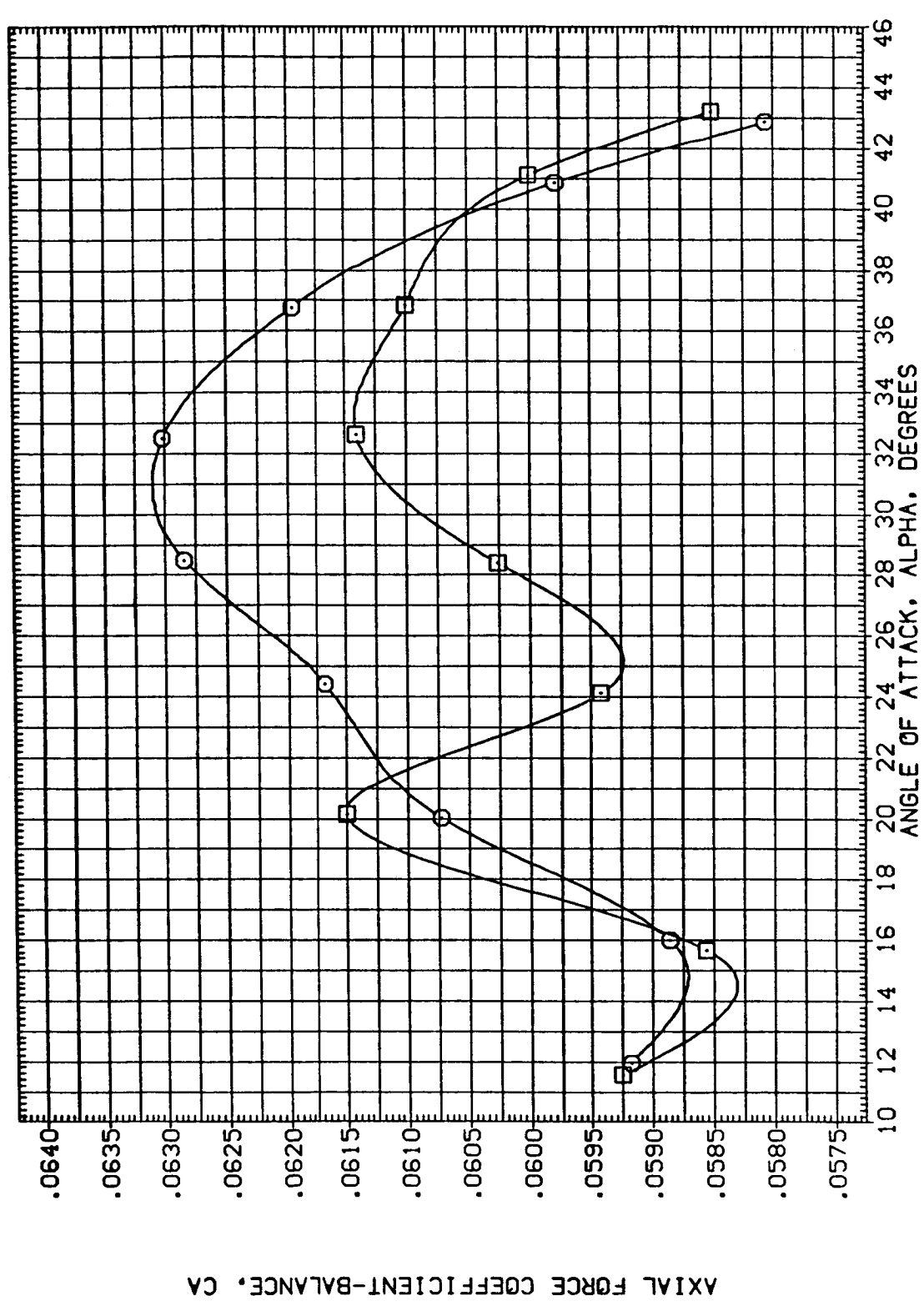


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA/MACH = 5.25

DATA SET SYMBOL (CE0016)
 (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAB8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAB8 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

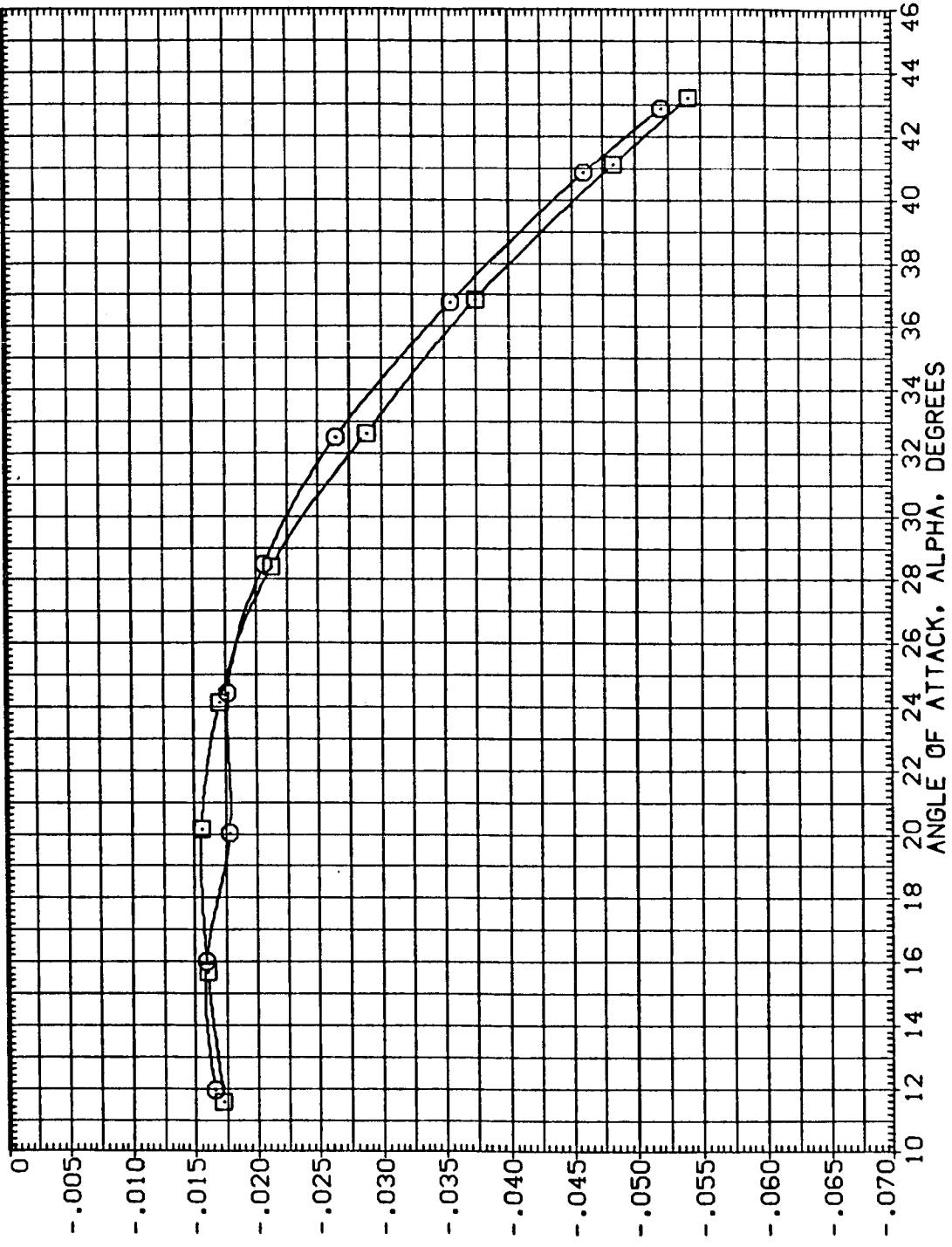


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CEG0016) ◻ AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 (CEG0020) ◻ AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPDBRK
 .000 .000 -11.700 85.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

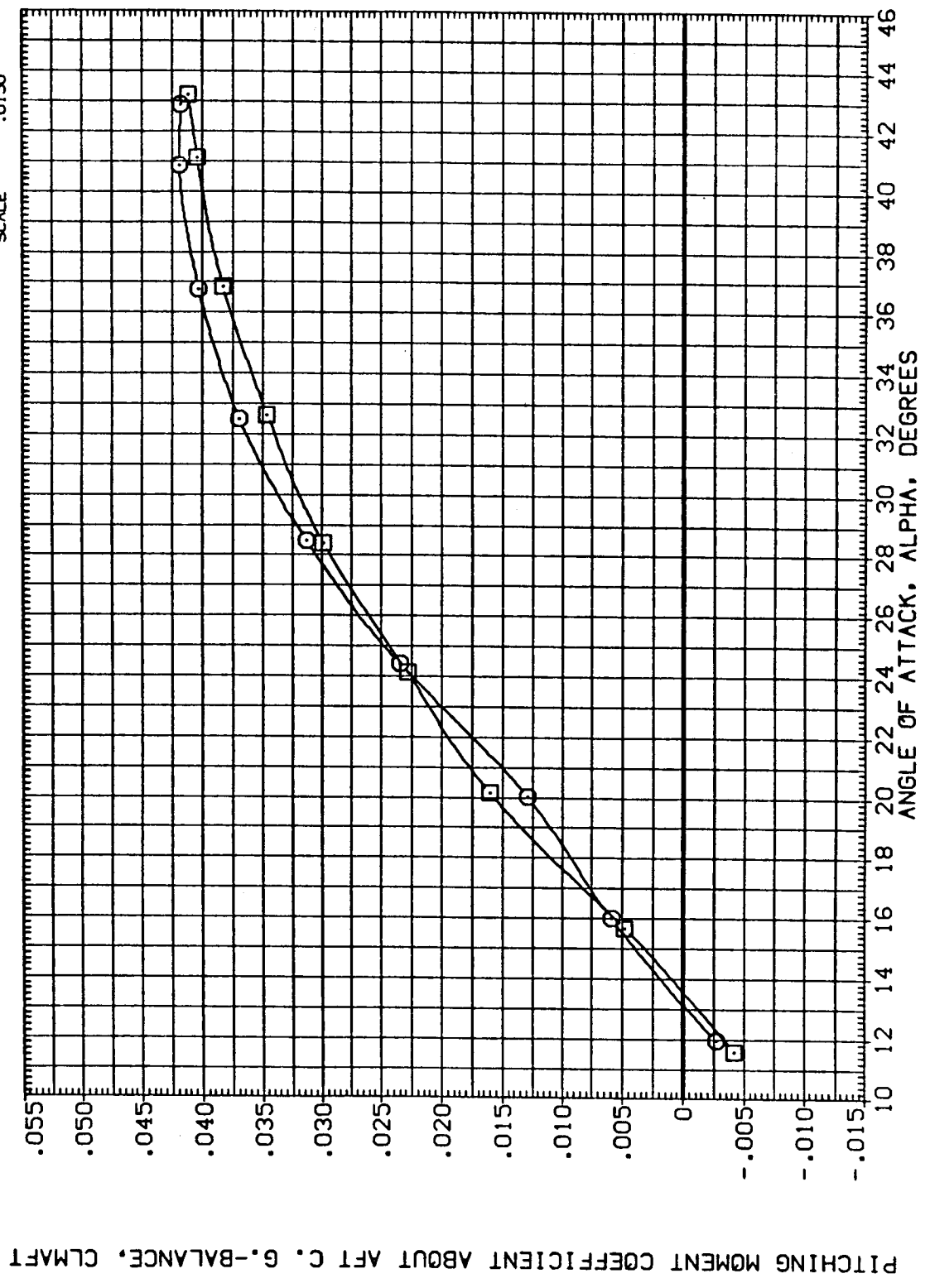


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CEG0016)
 (CEG0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAB8 (011-N24+DUMMY STING)
 AMES 3.5-190 GAB8 (011-N7+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2630.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

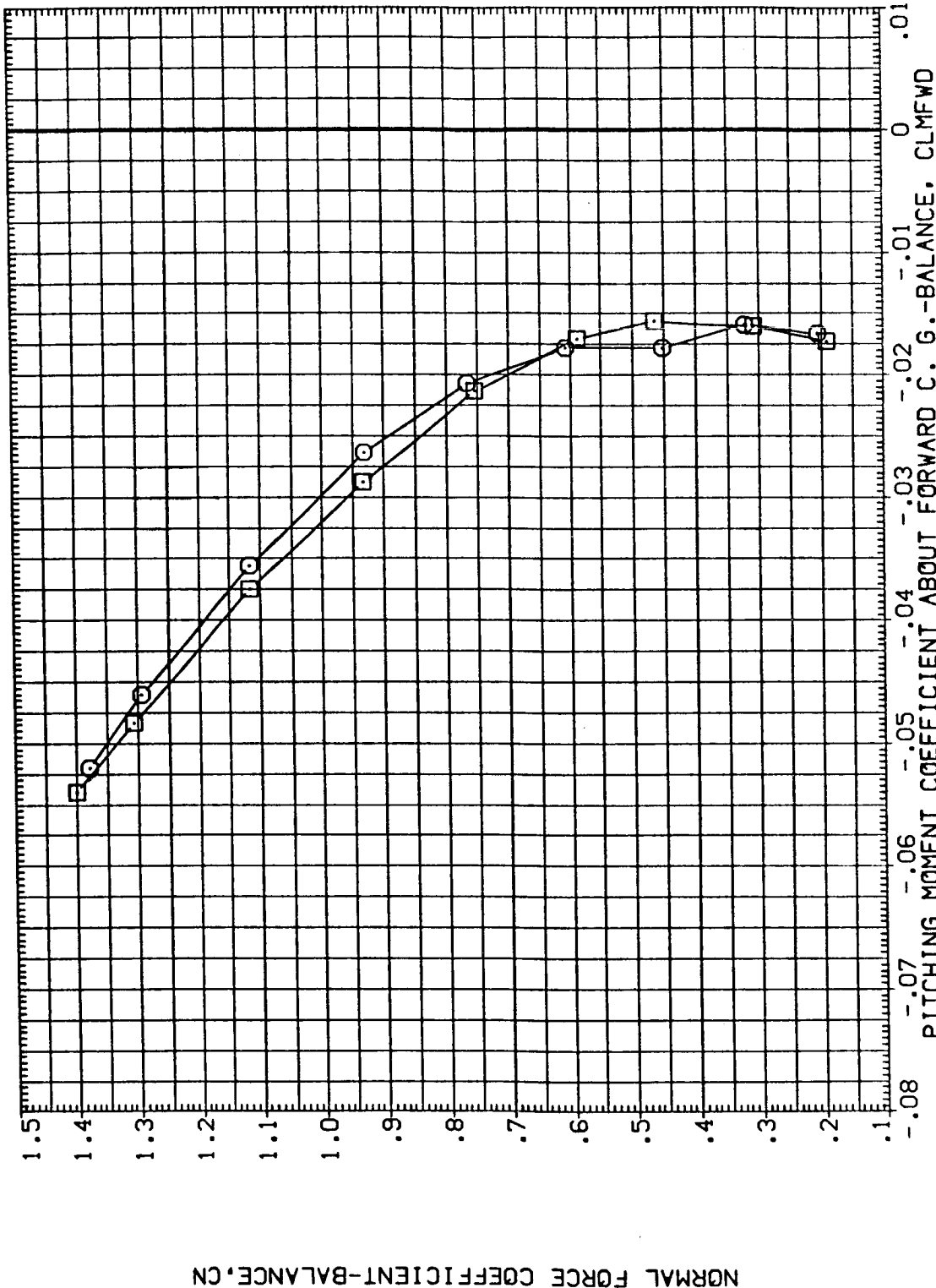


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0016) AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 (CE0020) AMES 3.5-190 OAS8 (011-N7+H14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPOBRK
 .000 .000 -11.700 85.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

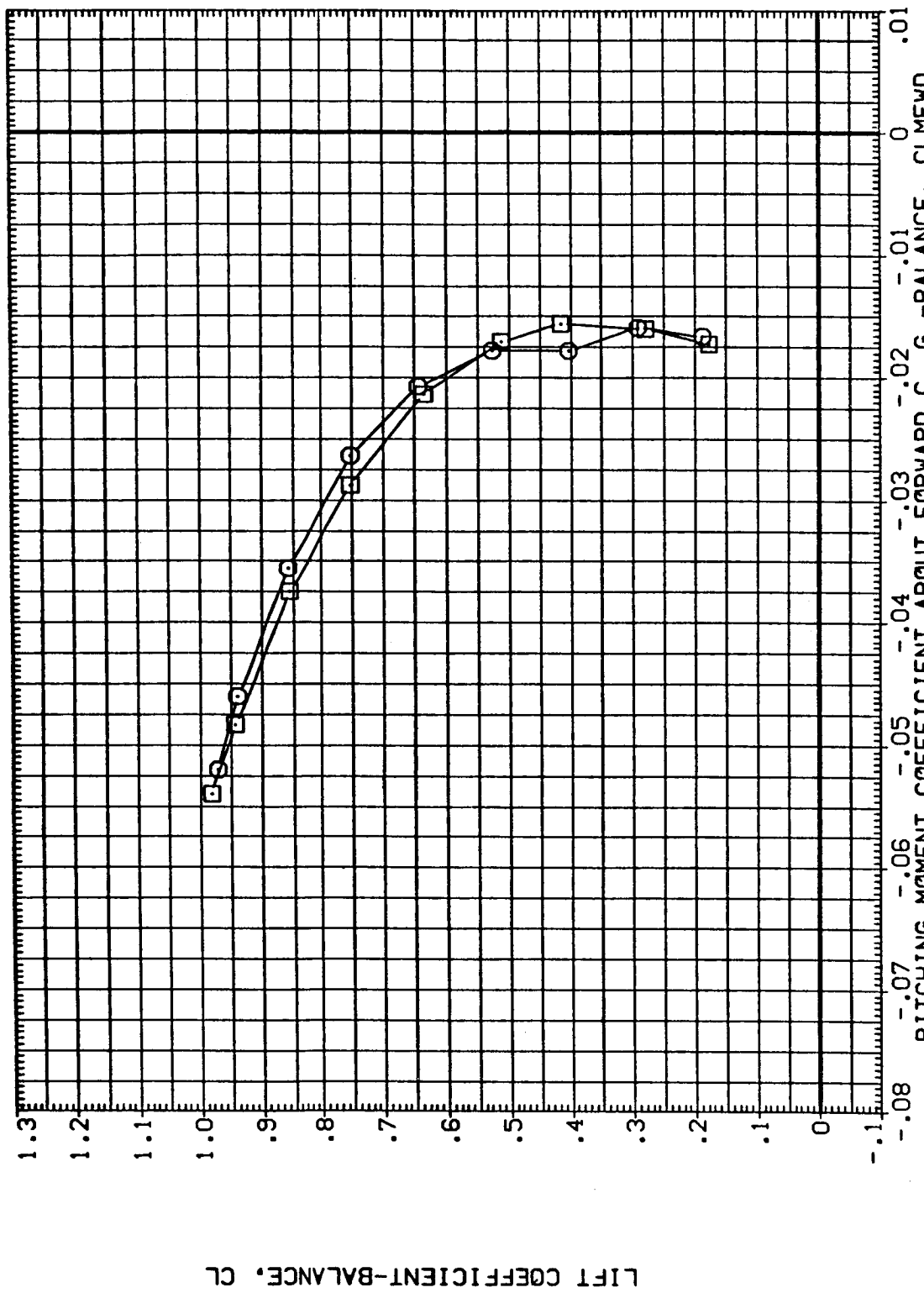


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJ MACH = 5.25

DATA SET SYMBOL (CE0016) (CE0020)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 CAS8 (011-N24+DUMMY STING)
 ANES 3.5-190 CAS8 (011-M7+M14-N24+DUMMY STING)

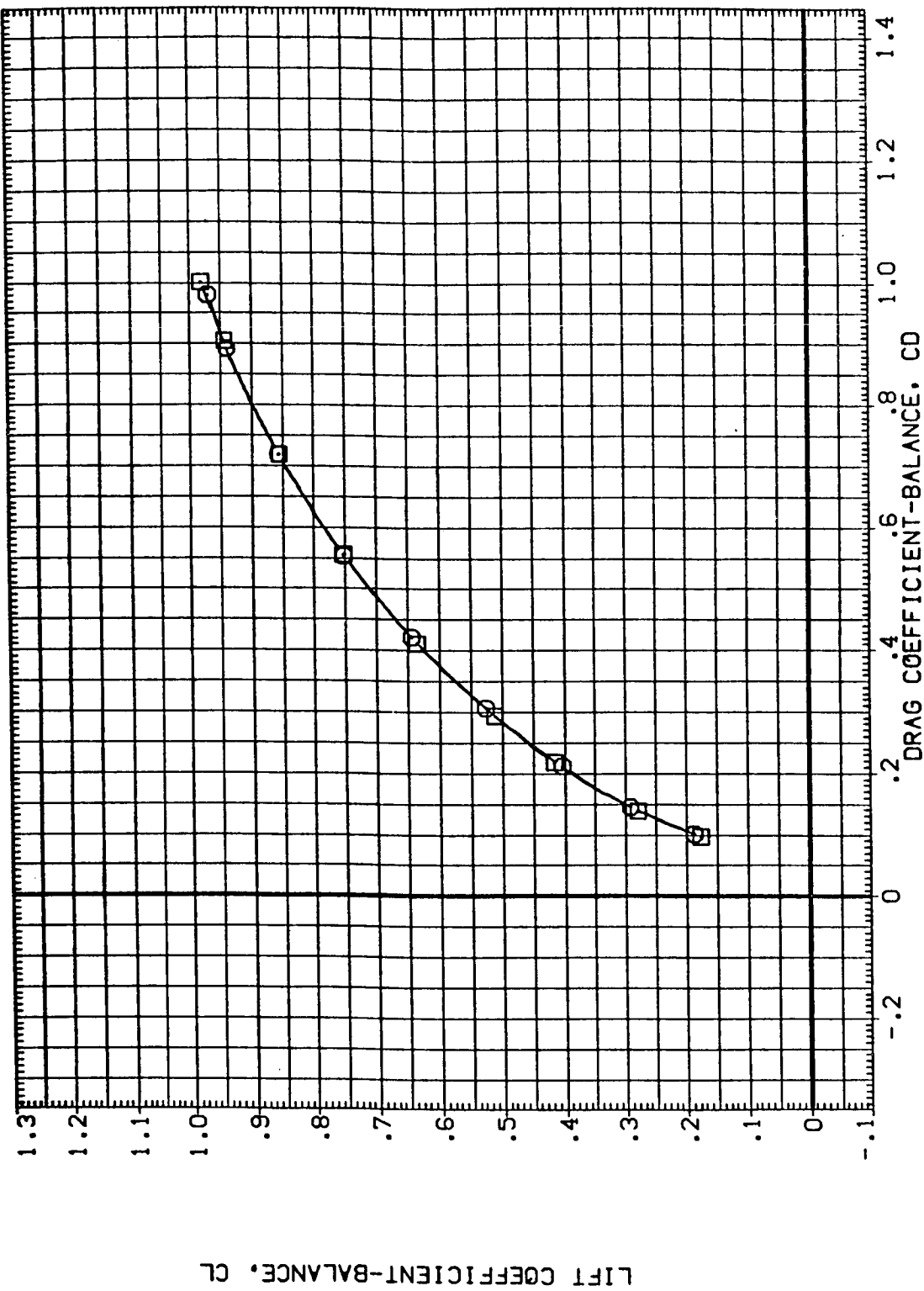
BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

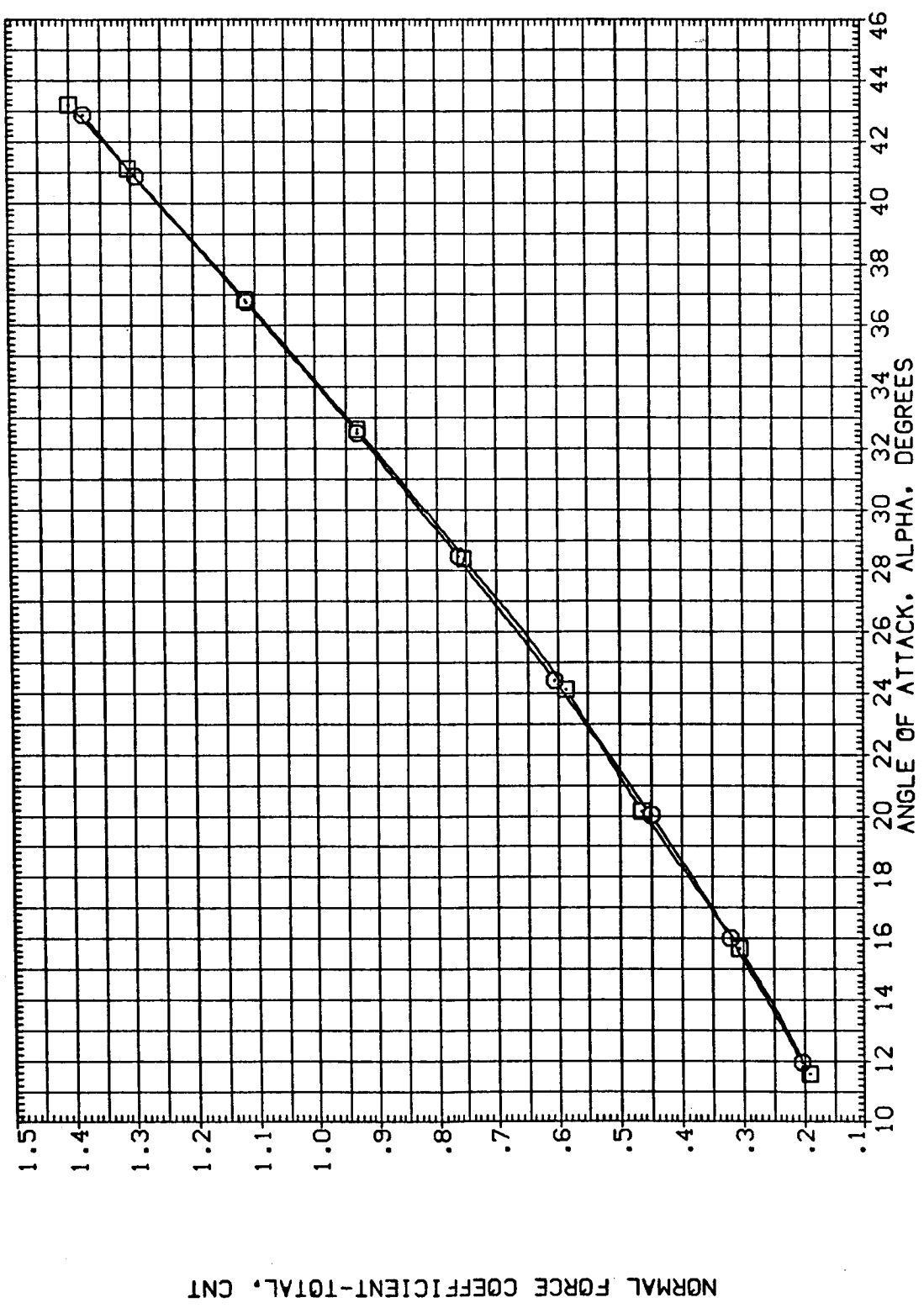
FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0016) (EE0020)
 CONFIGURATION DESCRIPTION (011-N24+DUMMY STING) (011-N7+M14-N24+DUMMY STING)
 AMES 3.5-190 OAS8 AMES 3.5-190 OAS8

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 SREF 474.8000
 LREF 936.6800
 BREF 1076.7000
 XMRP .0000
 YMRP 375.0000
 ZMRP .0150
 IN.XD
 IN.YD
 IN.ZD



NORMAL FORCE COEFFICIENT-TOTAL, Cn

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA)MACH = 5.25

DATA SET SYMBOL (EE0016) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-N24+DUMMY STING)
 AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP 375.0000 IN.Y0
 SCALE .0150

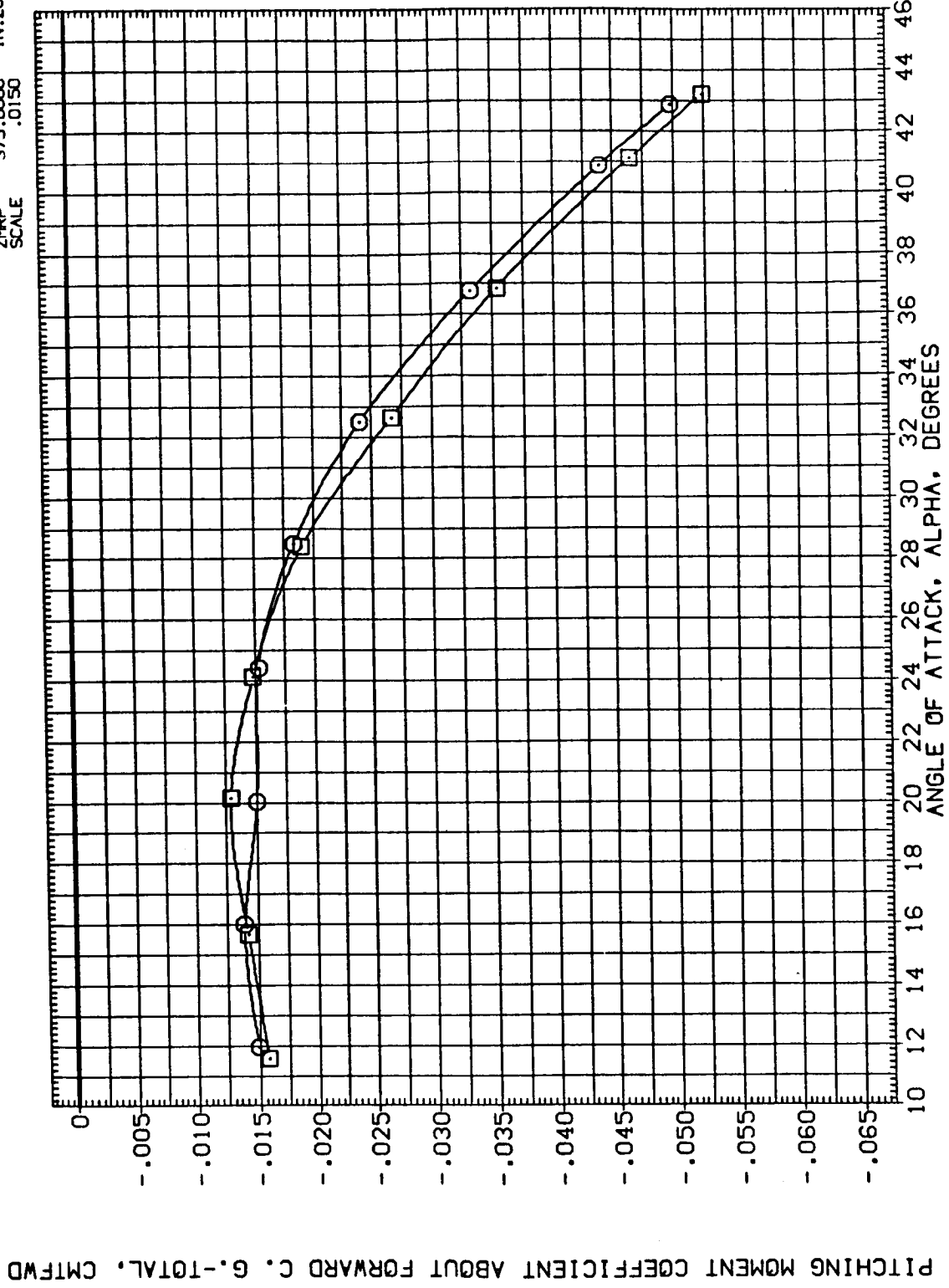


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0016) AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 (EE0020) AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 85.000

.000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 XMRP 936.6600 IN.
 YMRP 1076.7000 IN.
 ZMRP .0000 IN.
 SCALE 375.0000 IN.ZO
 .0150

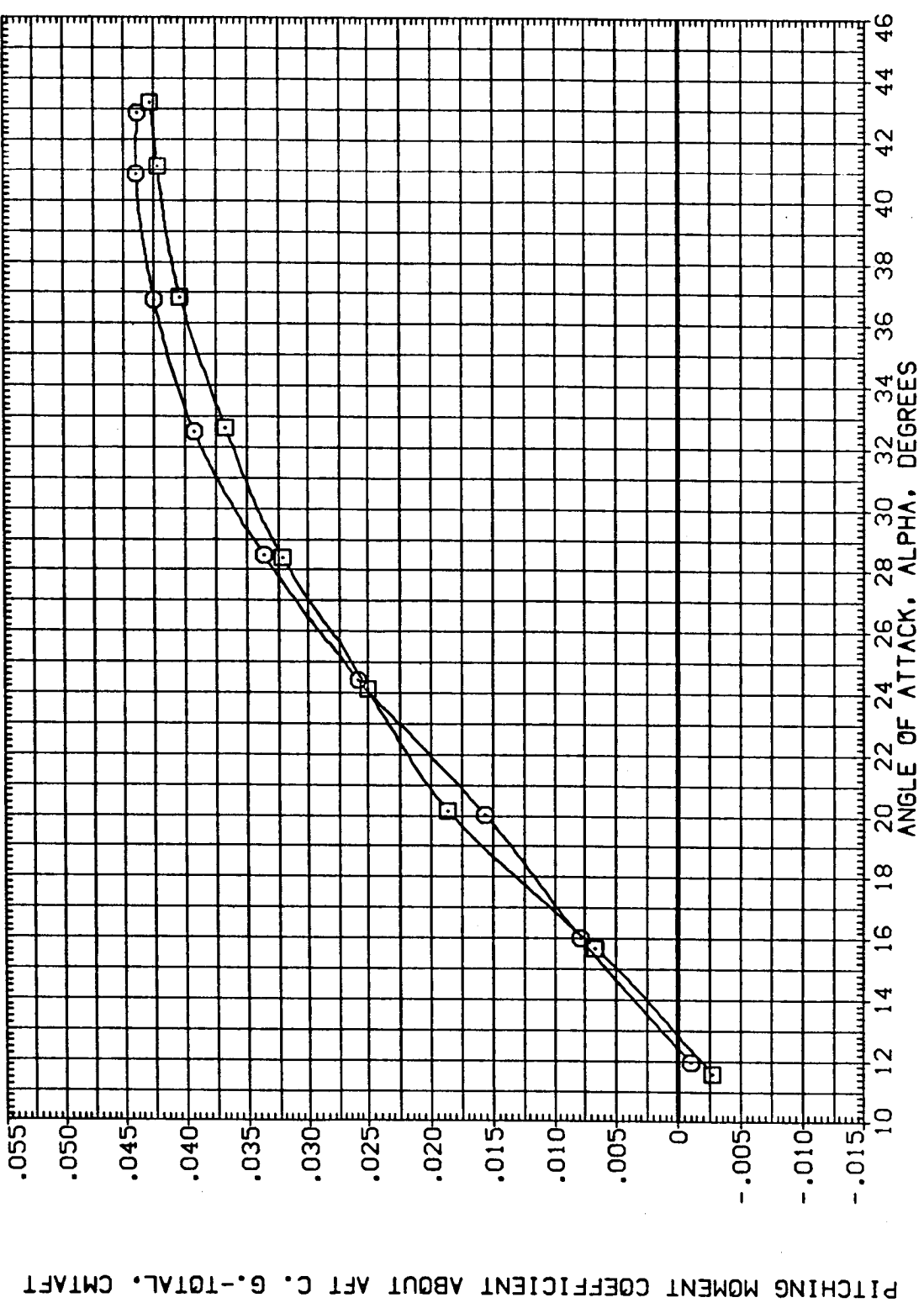


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0016) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

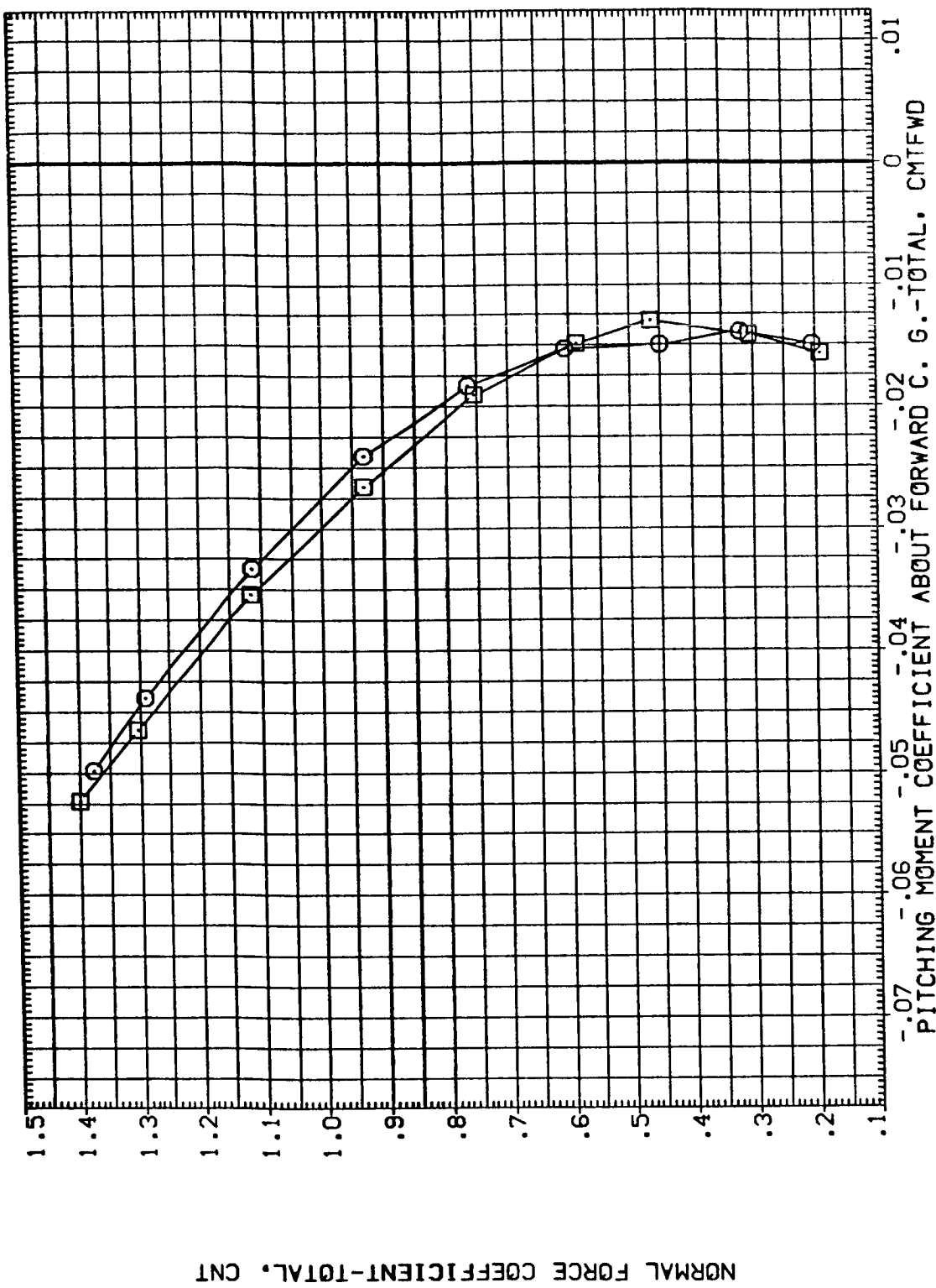


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(EEO016)	AMES 3.5-190 CAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EEO020)	AMES 3.5-190 CAS8 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

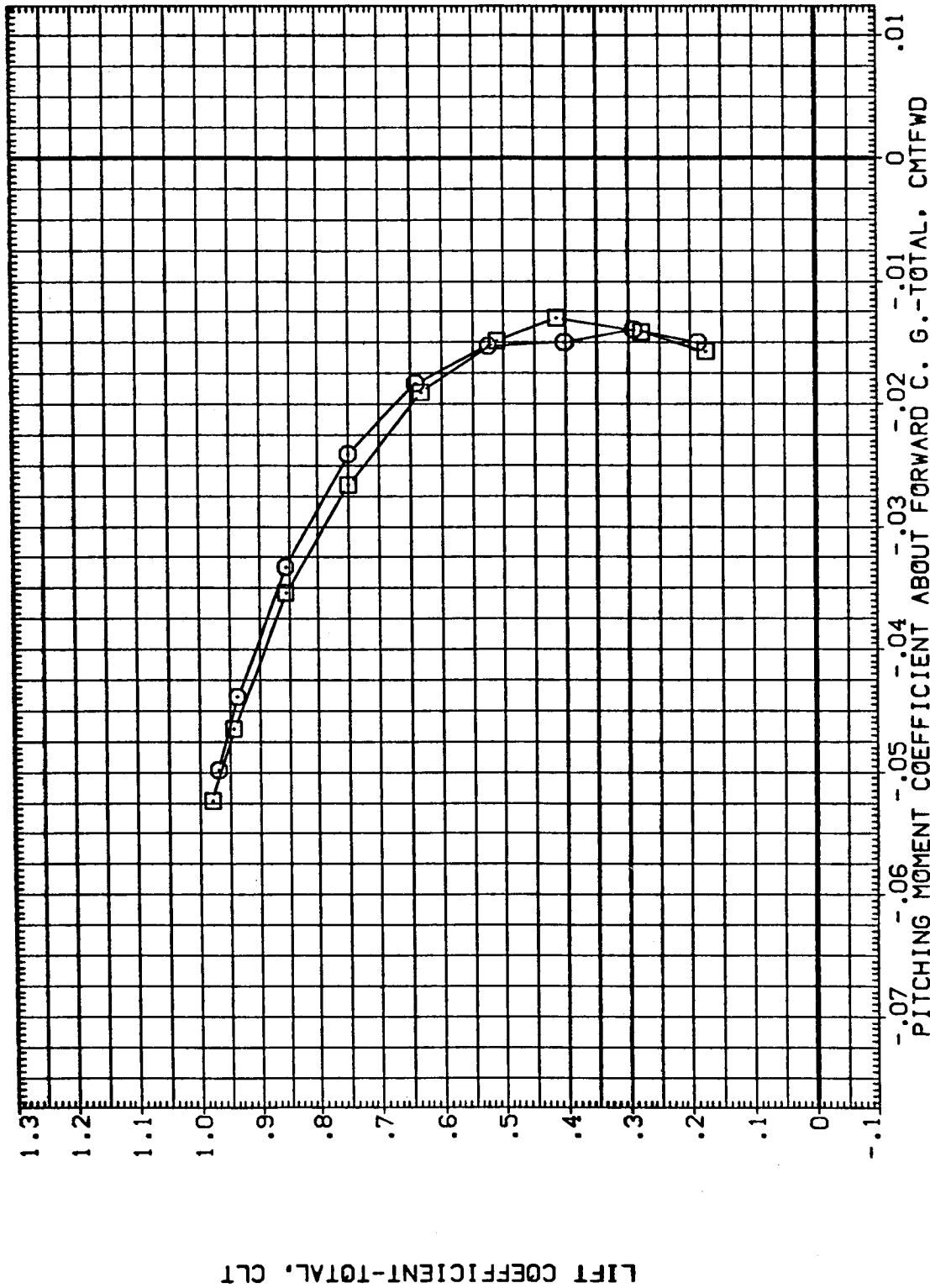
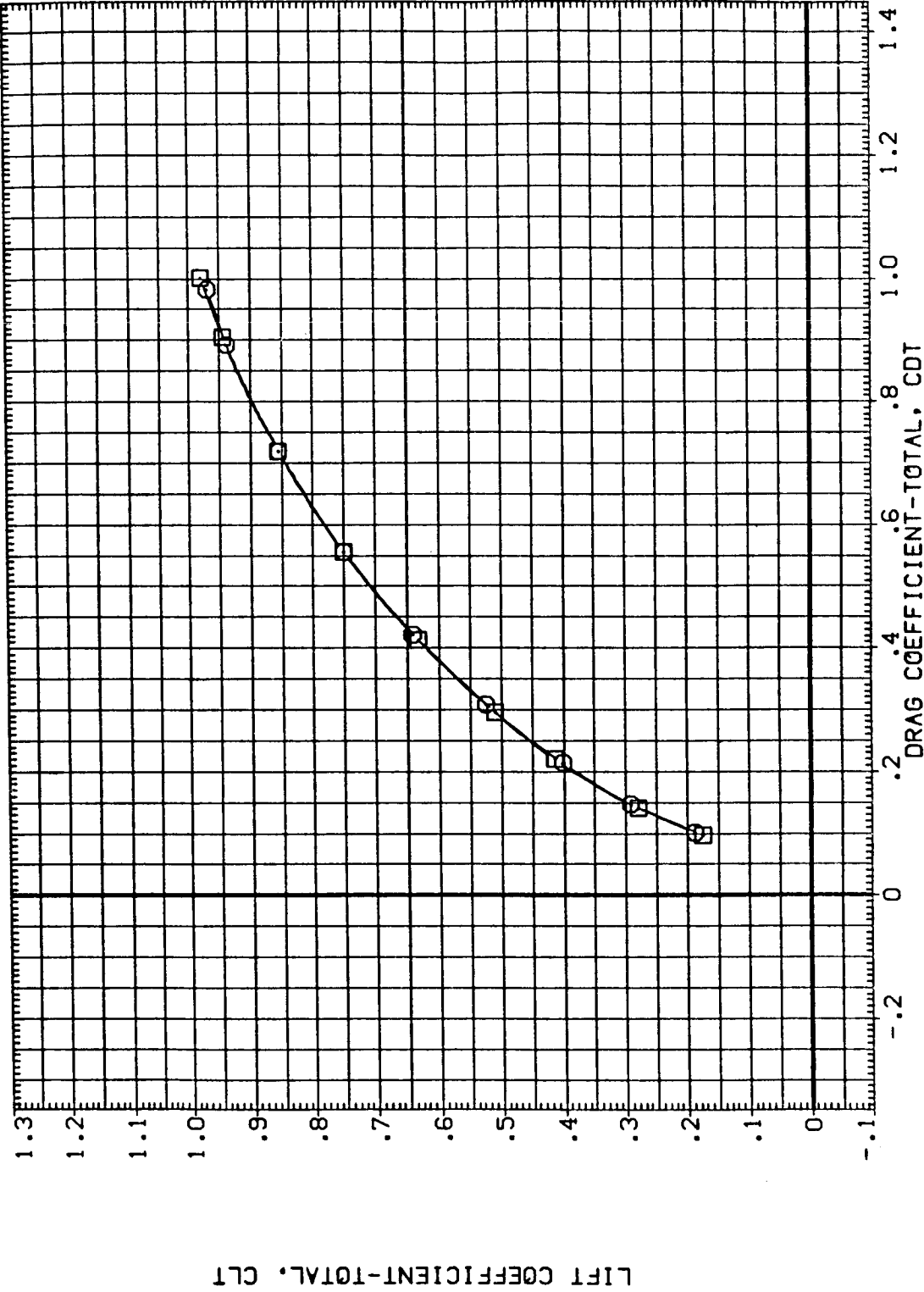


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

DATA SET SYMBOL (EE0016)
 CONFIGURATION DESCRIPTION (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPDBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CL1

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E00016) (E00020) □

CONFIGURATION DESCRIPTION AMES 3.5-190 CAS8 (011-N24+DUMMY STING) AMES 3.5-190 CAS8 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVATION .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. X0 YMRP .0000 IN. Y0 ZMRP 375.0000 IN. Z0 SCALE .0150

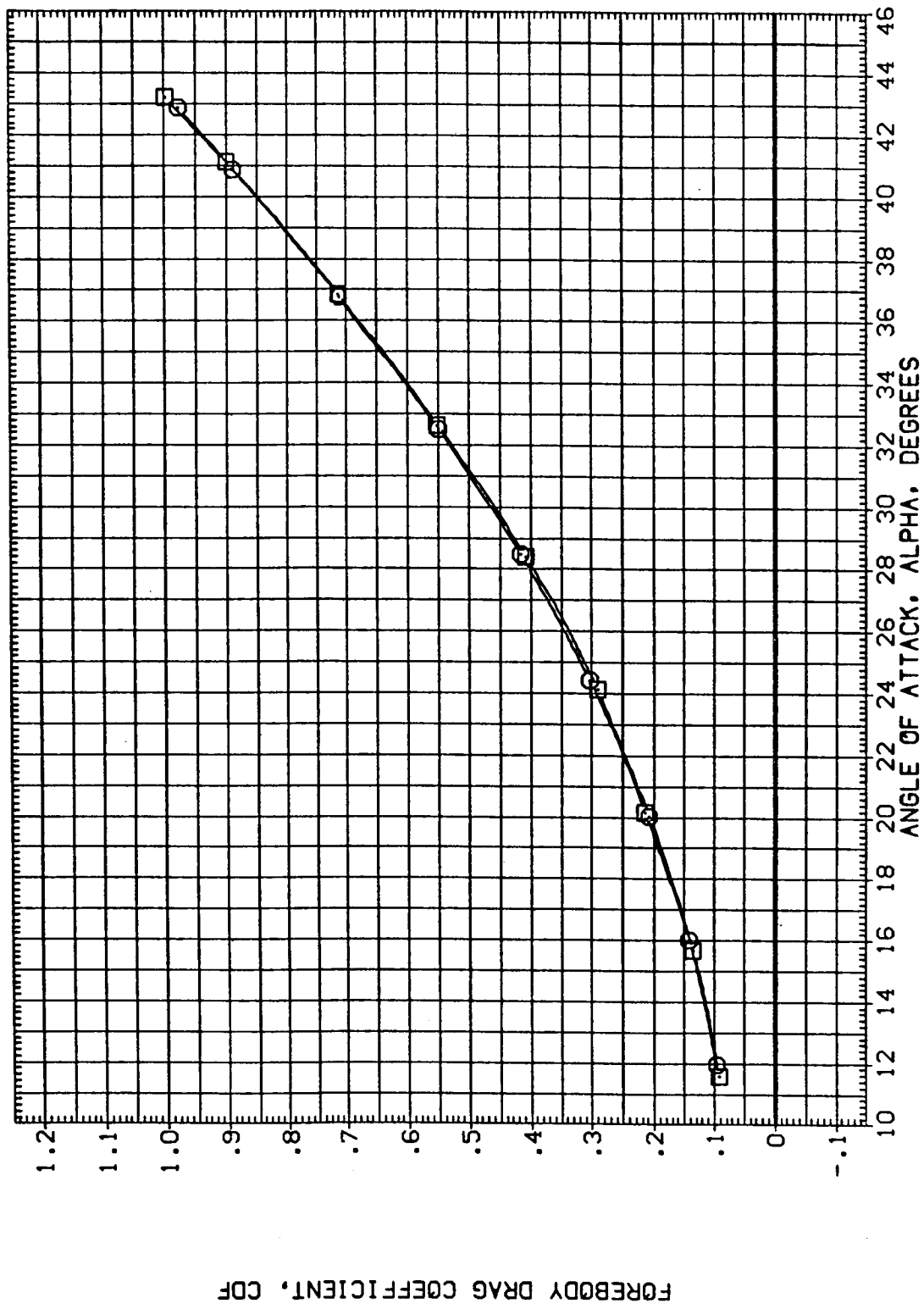


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0016) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP .0000 IN.Y0
 375.0000 IN.Z0
 SCALE .0150

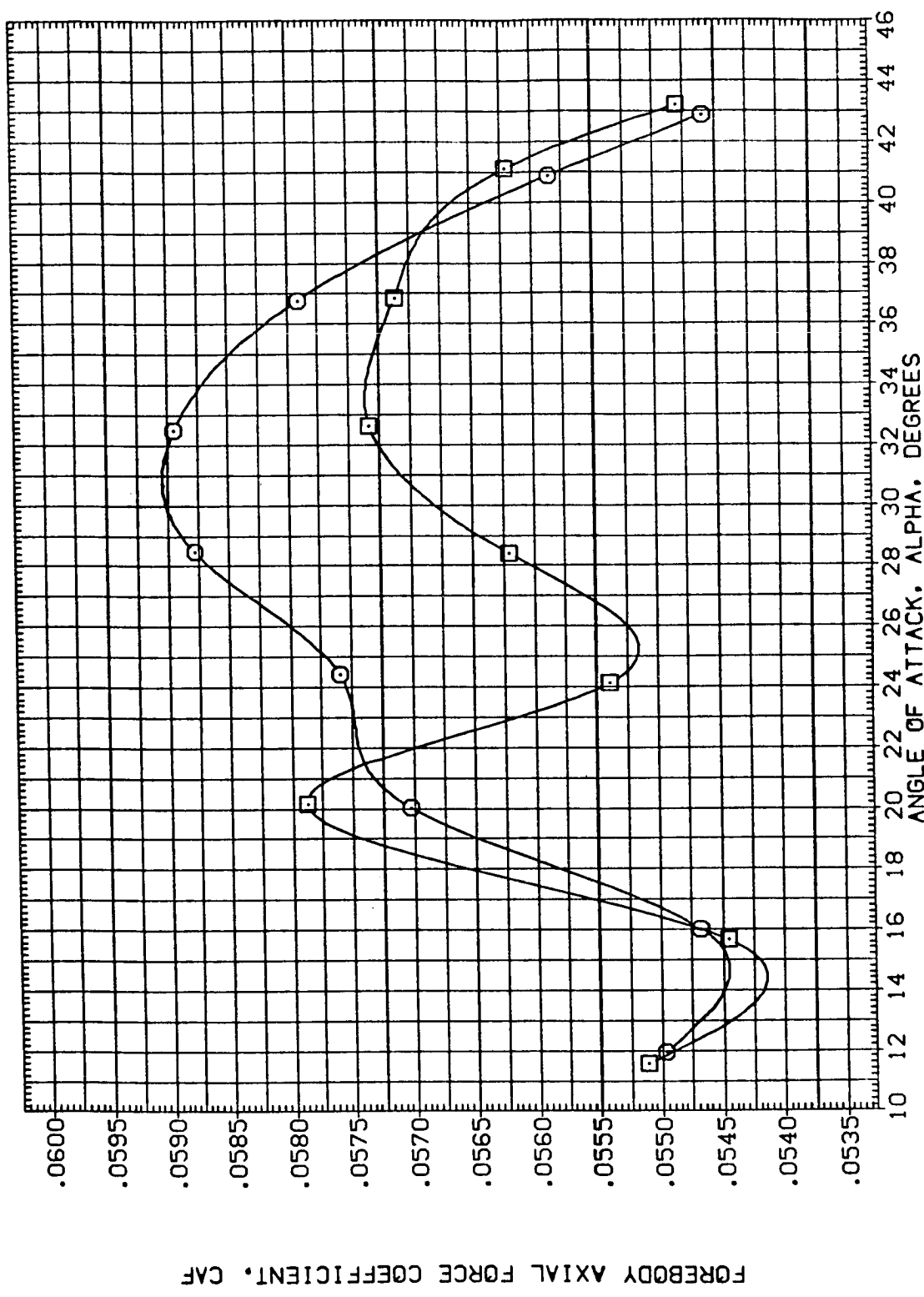


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E00016) (E00020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-N24+DUMMY STING)
 AMES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

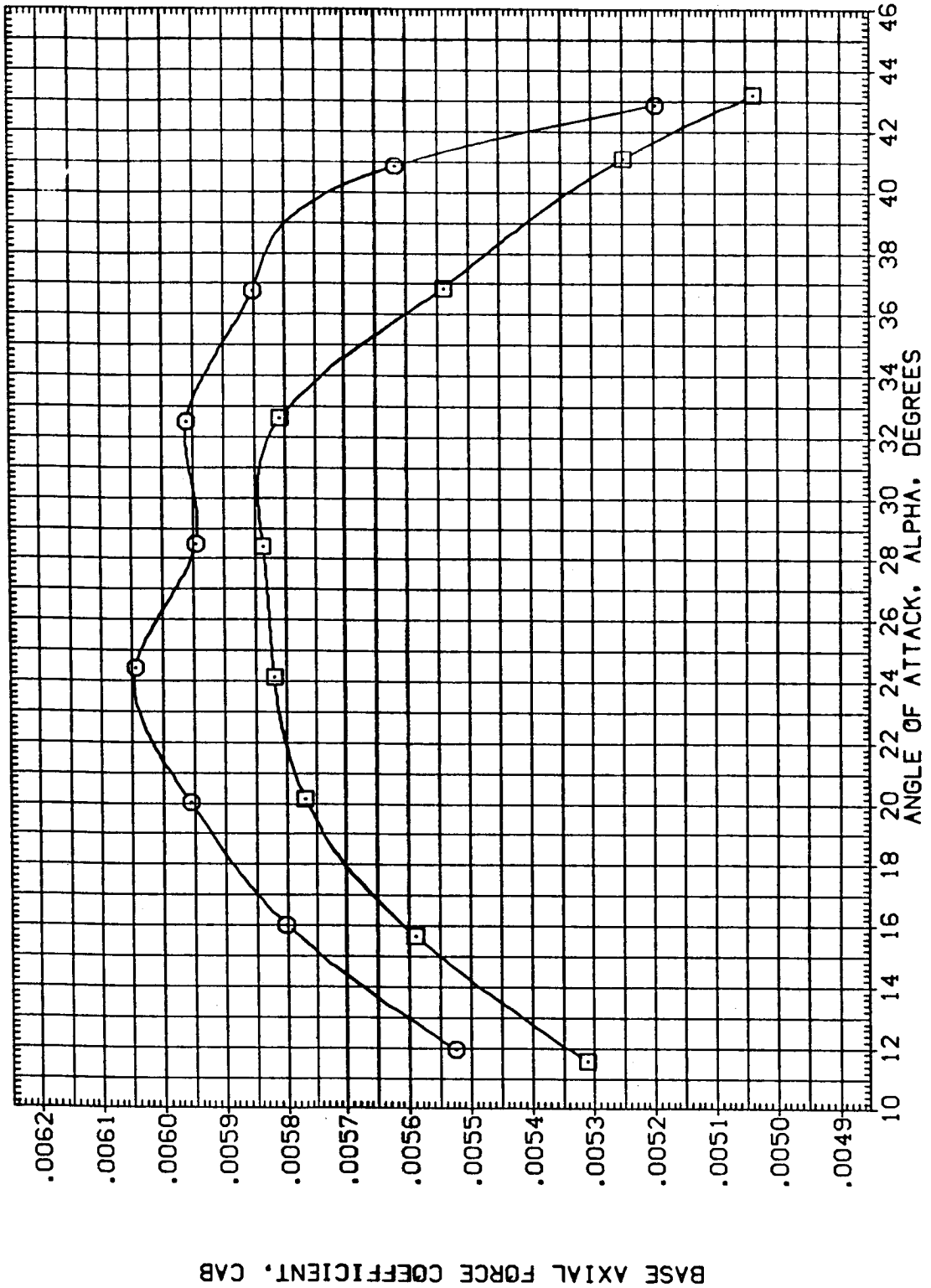


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

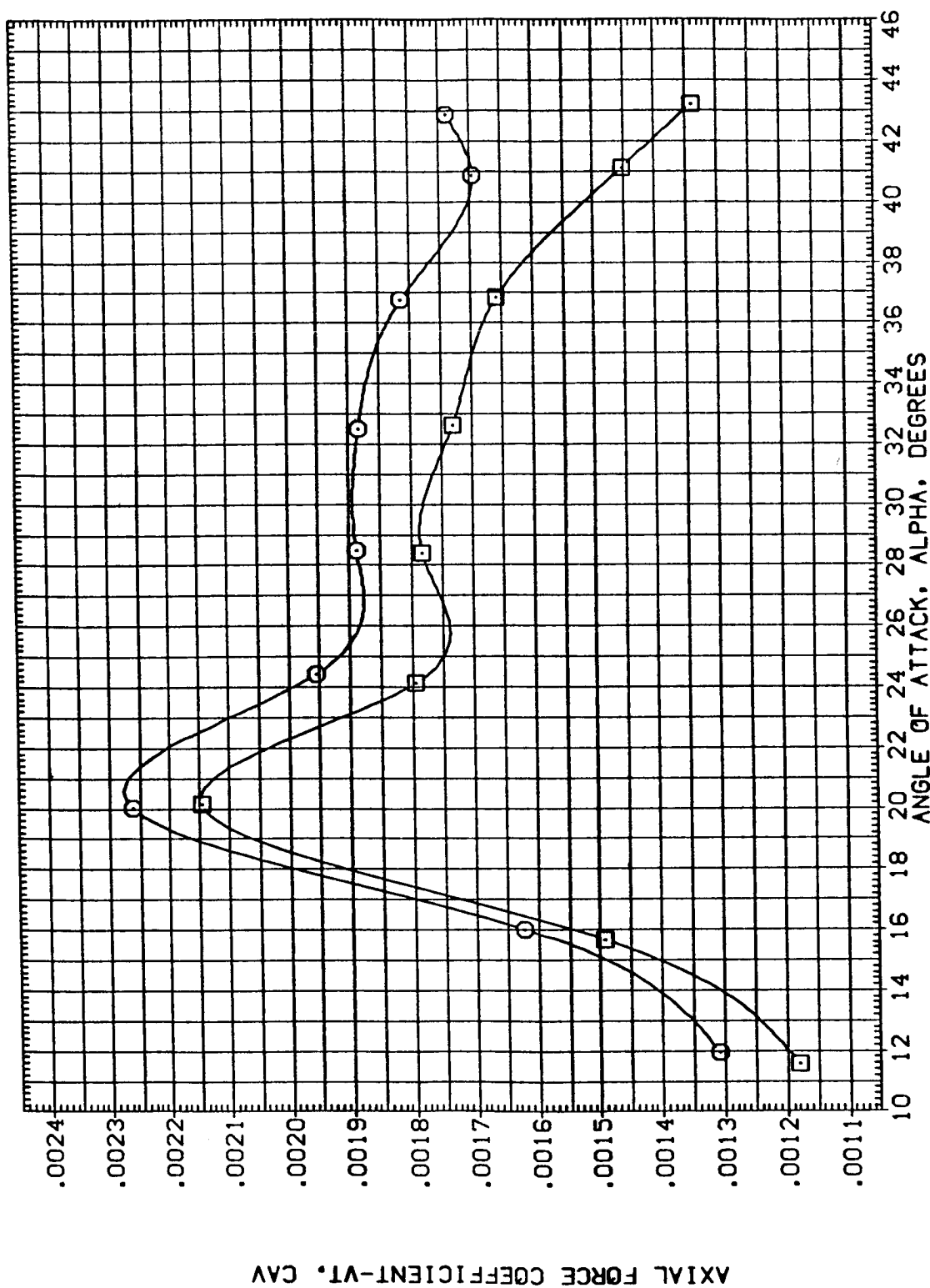
(A)MACH = 5.25

DATA SET SYMBOL (BE0016) (BE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



AXIAL FORCE COEFFICIENT-VI, CAV

ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL: AMES 3.5-190 (011-N24+DUMMY STING)
 (BEG0016) (011-N24+DUMMY STING)
 (BEG0020) (011-N24+DUMMY STING)

BETA: .000
 ELEVON: .000
 BOFLAP: -11.700
 SPOBRK: 85.000

REFERENCE INFORMATION:
 SREF: 2650.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN.X0
 YMRP: .0000 IN.Y0
 ZMRP: 375.0000 IN.Z0
 SCALE: .0150

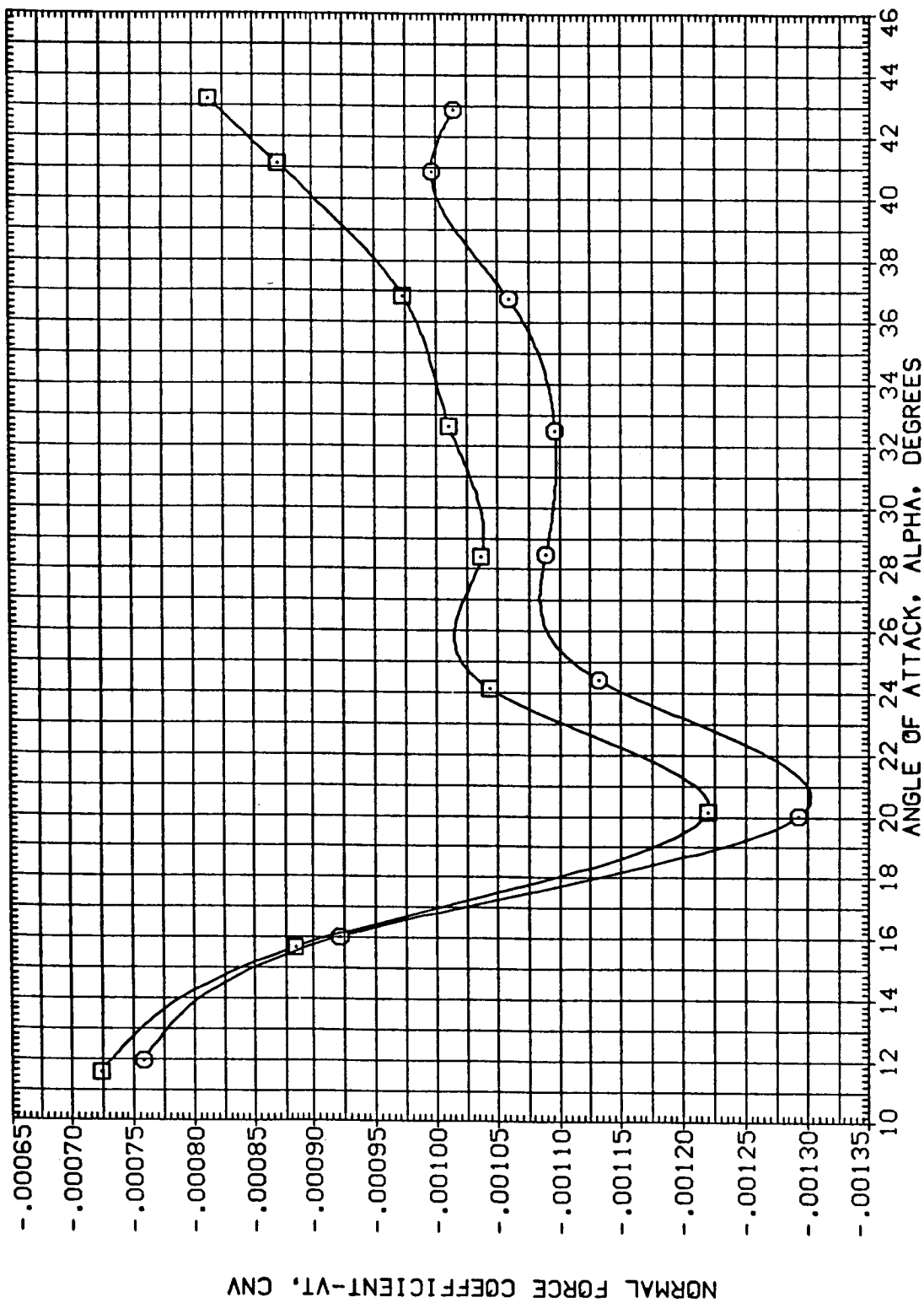


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (BEG016) (BEG020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N2A+DUMMY STING)
 AMES 3.5-190 0A98 (011-N7+H1+N2+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

80FLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMFRP 1076.7000 IN. X0
 YMFRP .0000 IN. Y0
 ZMFRP 375.0000 IN. Z0
 SCALE .0150

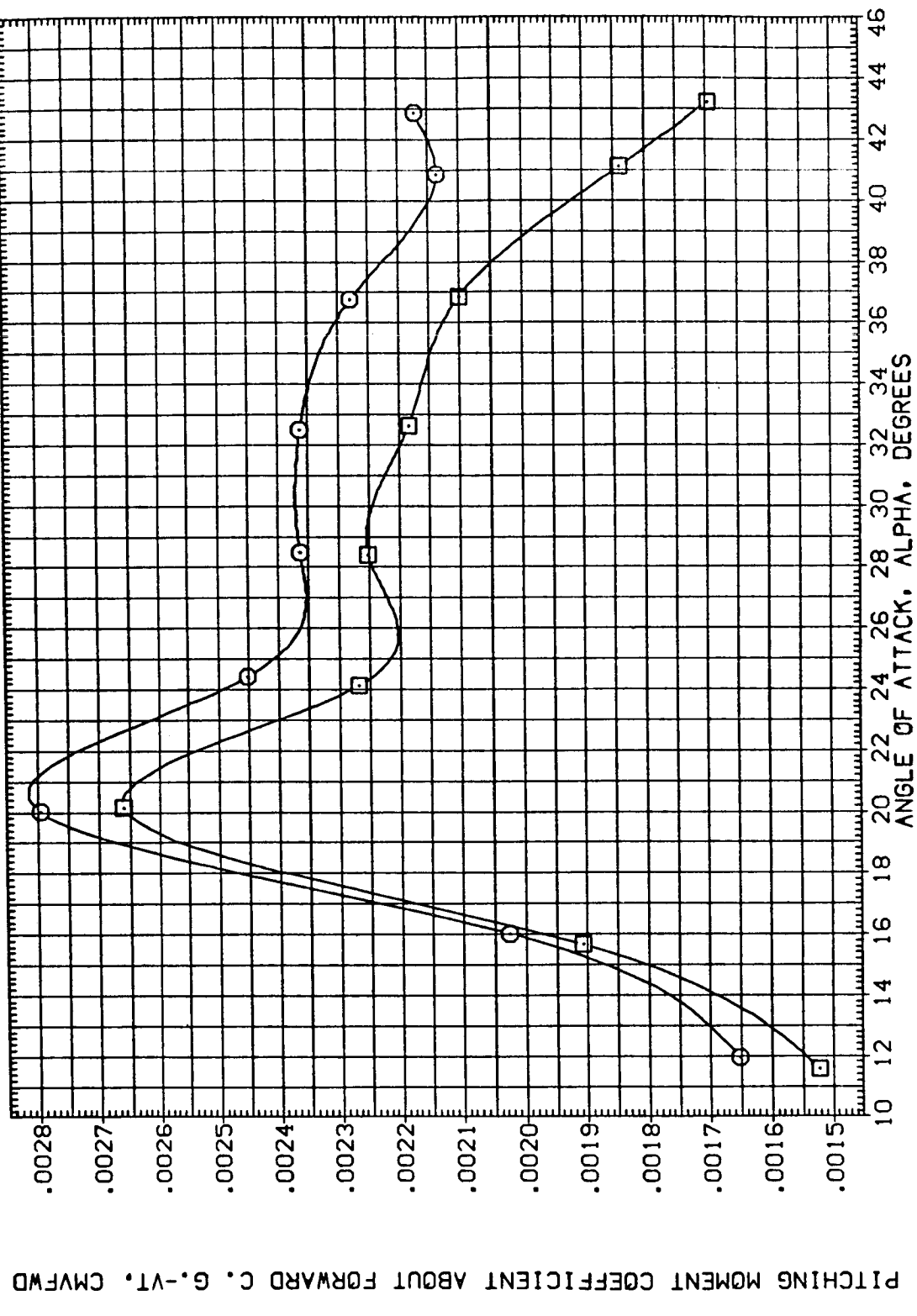


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0016) \square AMES 3.5-190 OASB (011-N24+DUMMY STING)
 (BE0020) \square AMES 3.5-190 OASB (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

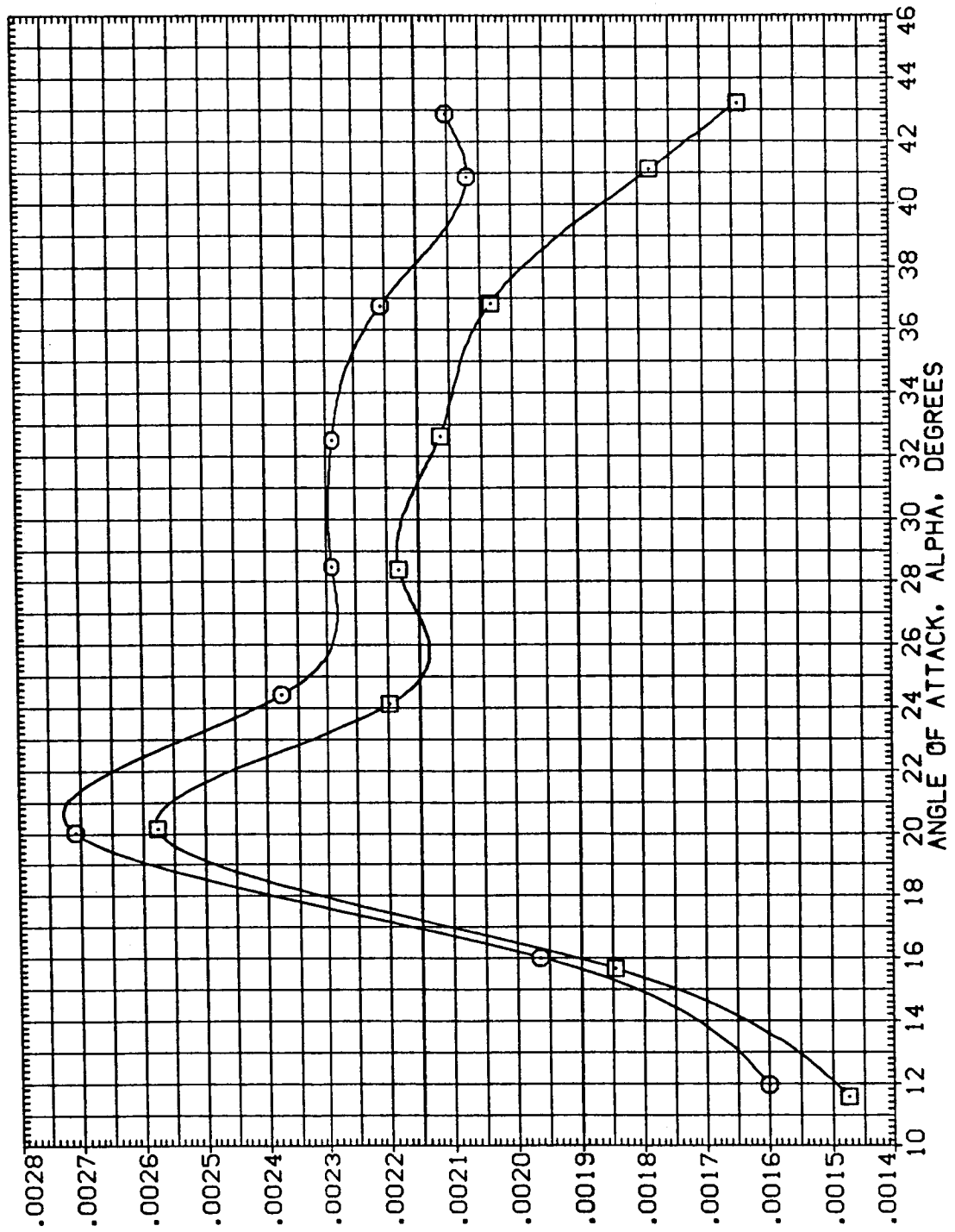


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (MEG001) AMES 3.5-190 0A98 (011-47+M14)
 (CEG005) AMES 3.5-190 0A98 (011-47+M14)
 (CEG006) AMES 3.5-190 0A98 (011-47+M14)

BETA .000
 .000
 .000
 ELEVON .000
 .000
 .000
 8DELAP -11.700
 16.300
 .000
 SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

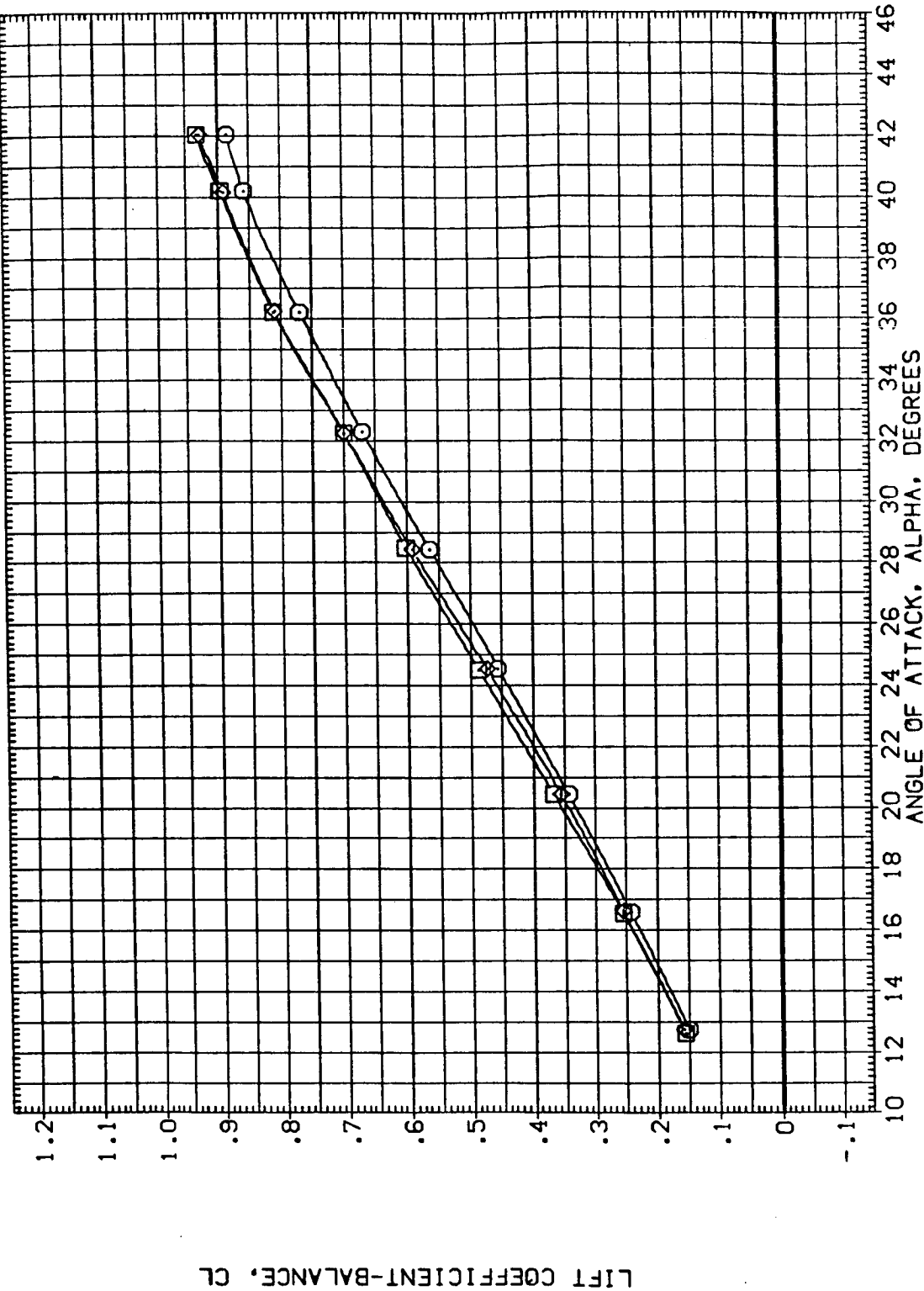


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27
 PAGE 274

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(ME0001)	AMES 3.5-190	0A98	(011-M7-M14)
(SE0005)	AMES 3.5-190	0A98	(011-M7-M14)
(SE0006)	AMES 3.5-190	0A98	(011-M7-M14)

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	.000	16.300	55.000
.000	.000	.000	55.000

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

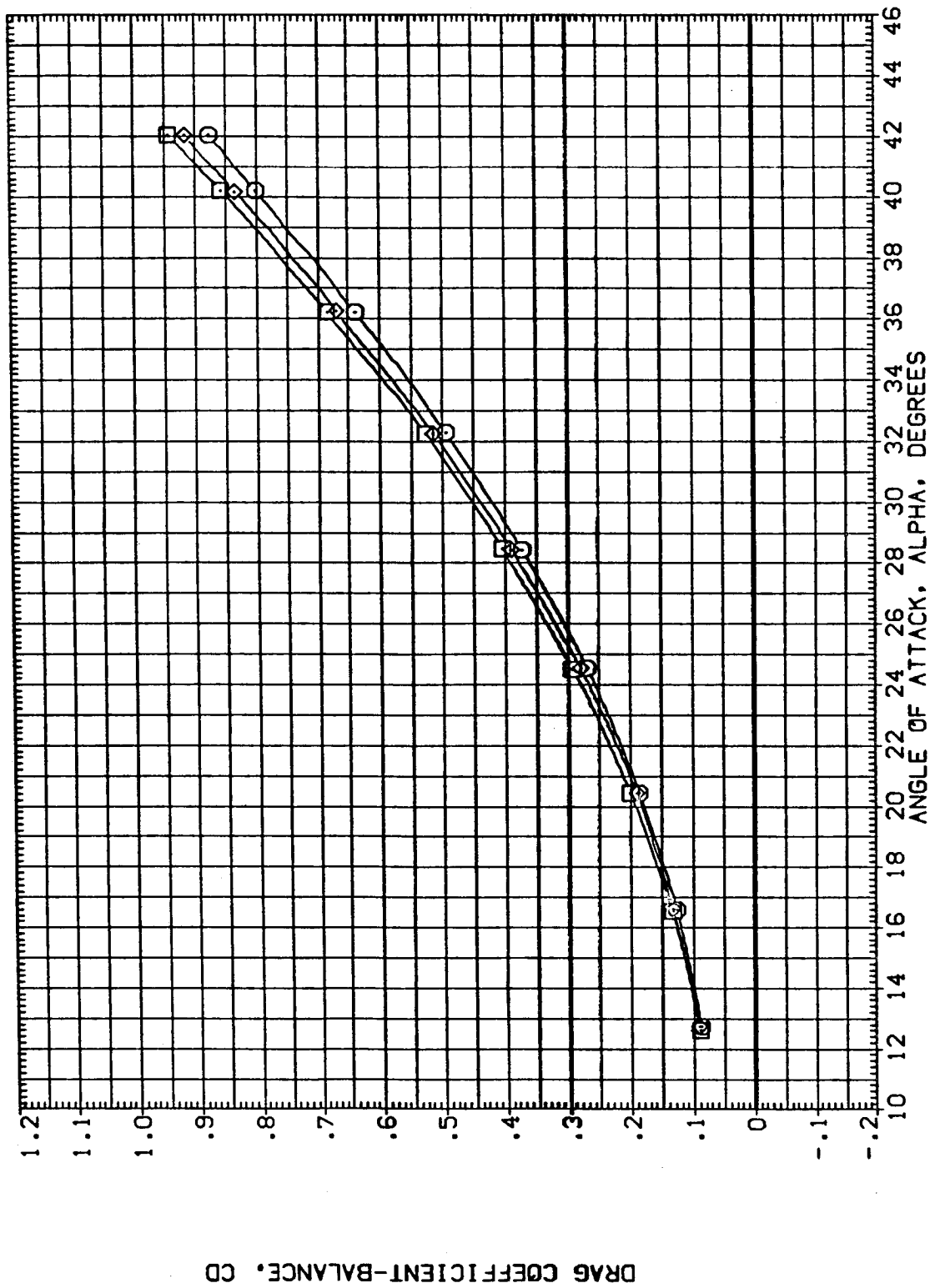


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(ME0001) AMES 3.5-190 OAS8 (011-M7+M14)

(CE0005) AMES 3.5-190 OAS8 (011-M7+M14)

(CE0006) AMES 3.5-190 OAS8 (011-M7+M14)

BETA ELEVON BODYFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 16.300 55.000

.000 .000 .000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.XG

YMRP .0000 IN.YG

ZMRP 375.0000 IN.ZG

SCALE .0150

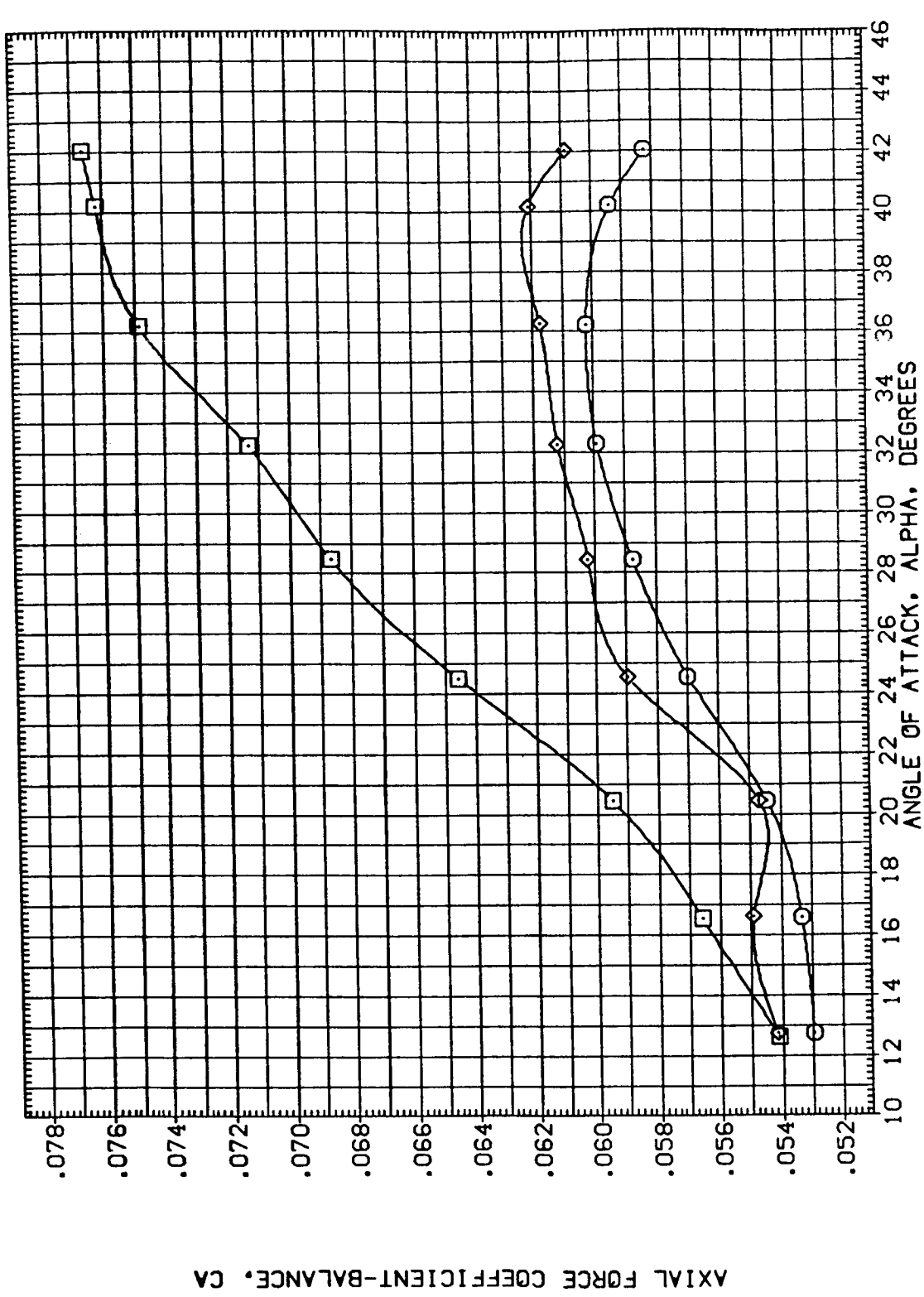


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 276

DATA SET SYMBOL (ME0001) (CE0005) (CE0006)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

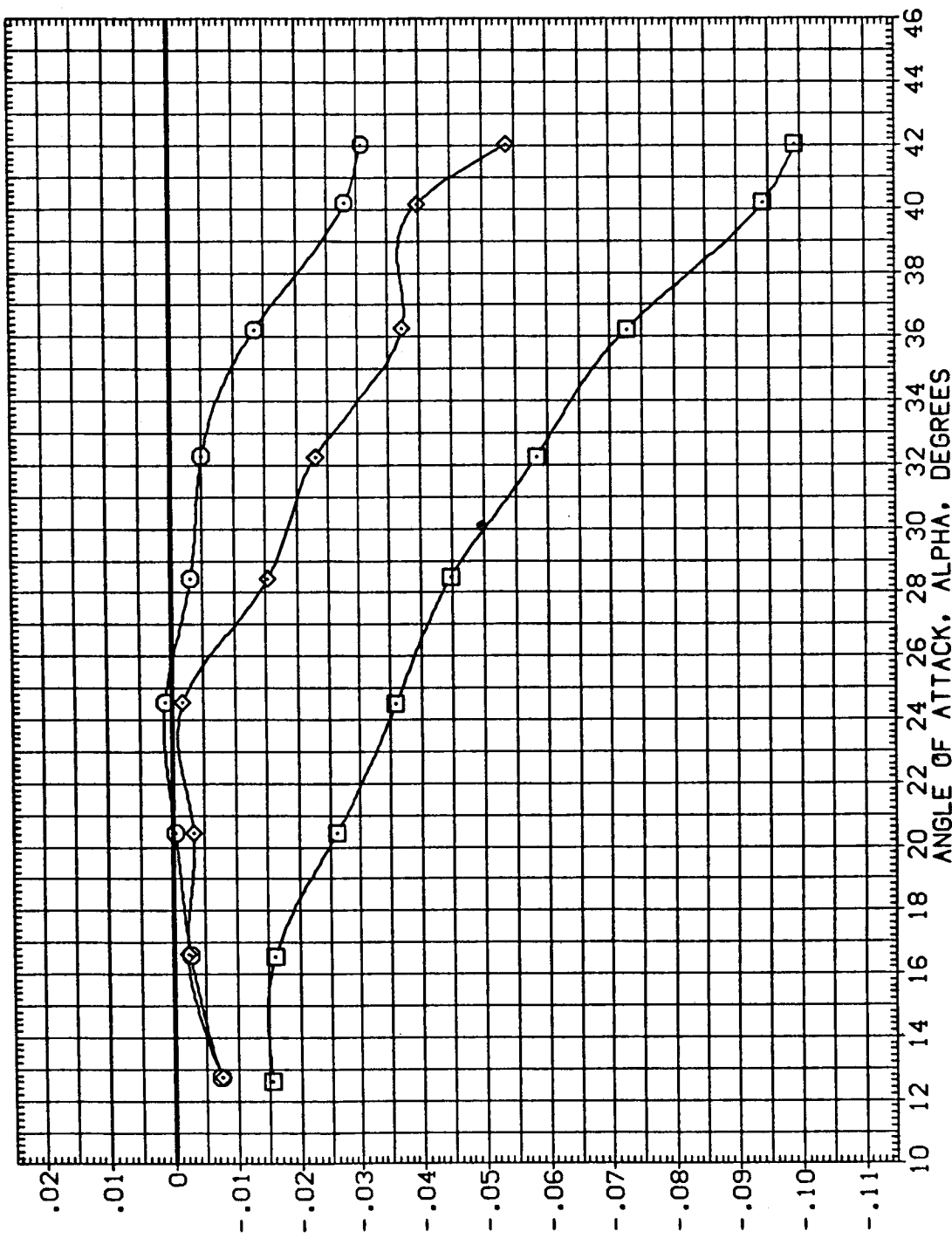


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 277

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(ME0001) AMES 3.5-190 0A98 (011-M7+M14)

(CE0005) AMES 3.5-190 0A98 (011-M7+M14)

(CE0006) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BODYFLAP SPODBRY

.000 .000 -11.700 55.000

.000 .000 16.300 55.000

.000 .000 .000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

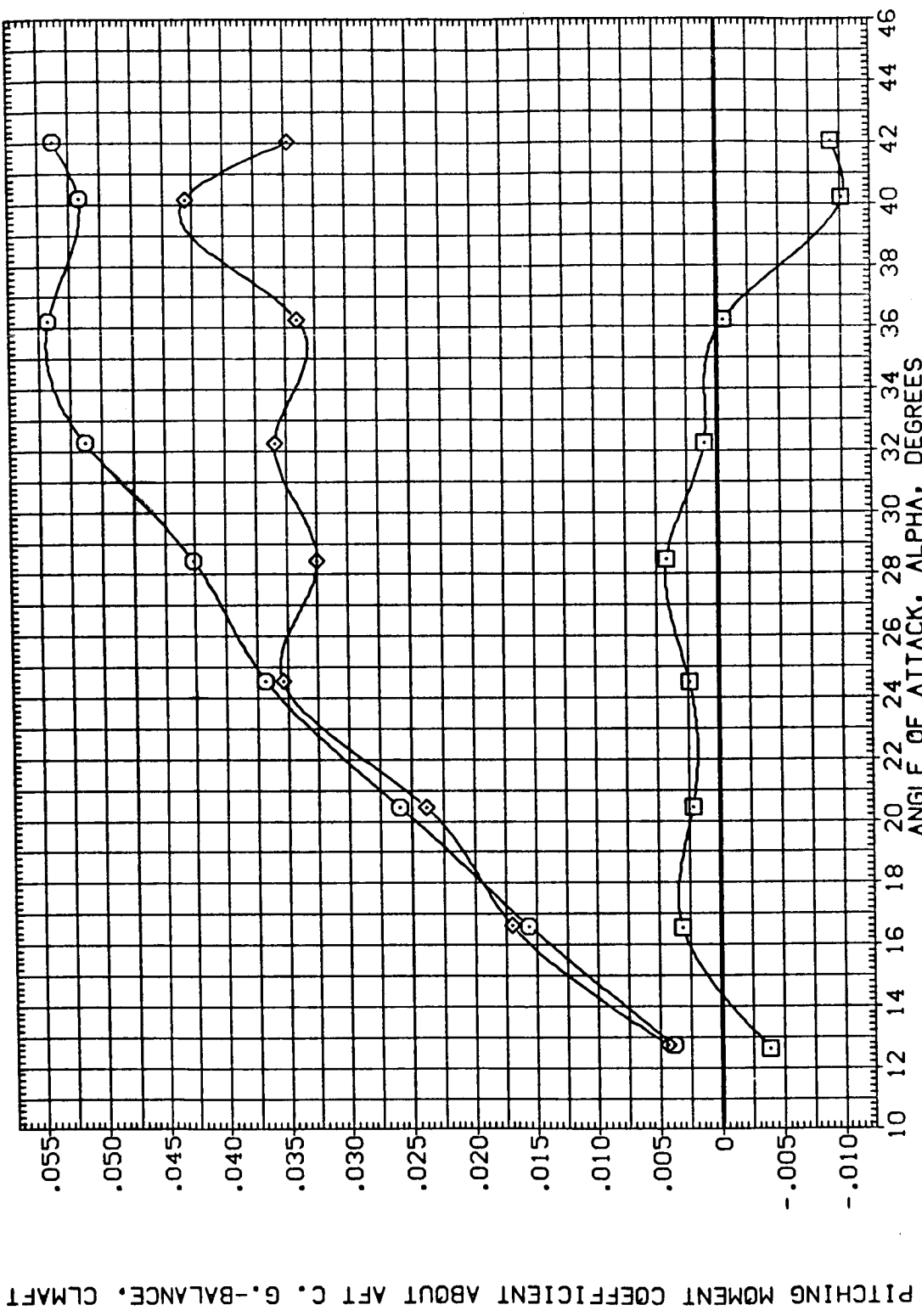


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

PAGE 278

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (ME0001) ◻ AMES 3.5-190 OA98 (011-M7+M14)
 (CE0005) ◻ AMES 3.5-190 OA98 (011-M7+M14)
 (CE0006) ◻ AMES 3.5-190 OA98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 16.300 55.000
 .000 .000 .000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

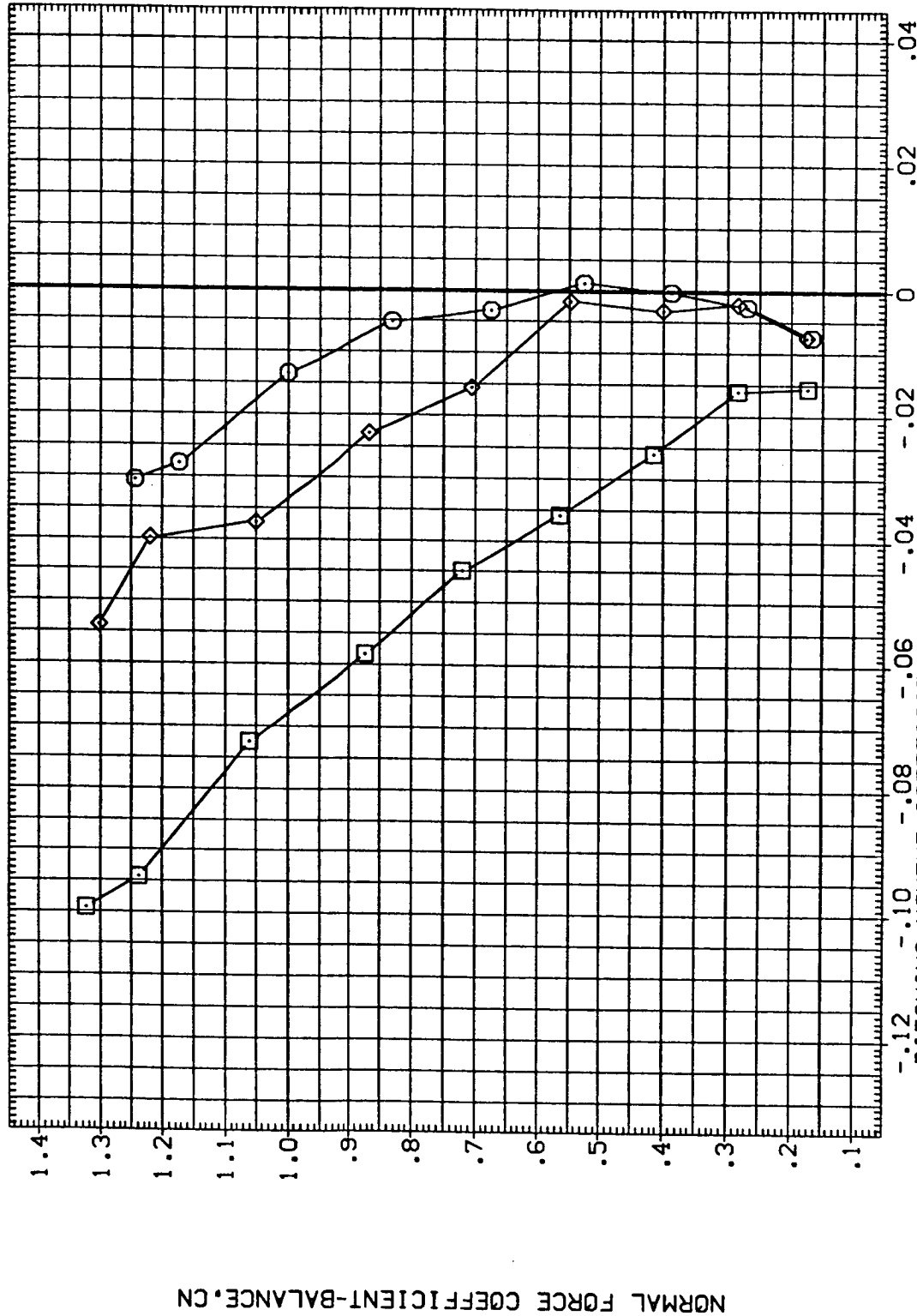


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 CAJMACH = 10.27 PAGE 279

DATA SET SYMBOL (ME0001) (CE0005) (CE0006)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 16.300
 .000

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

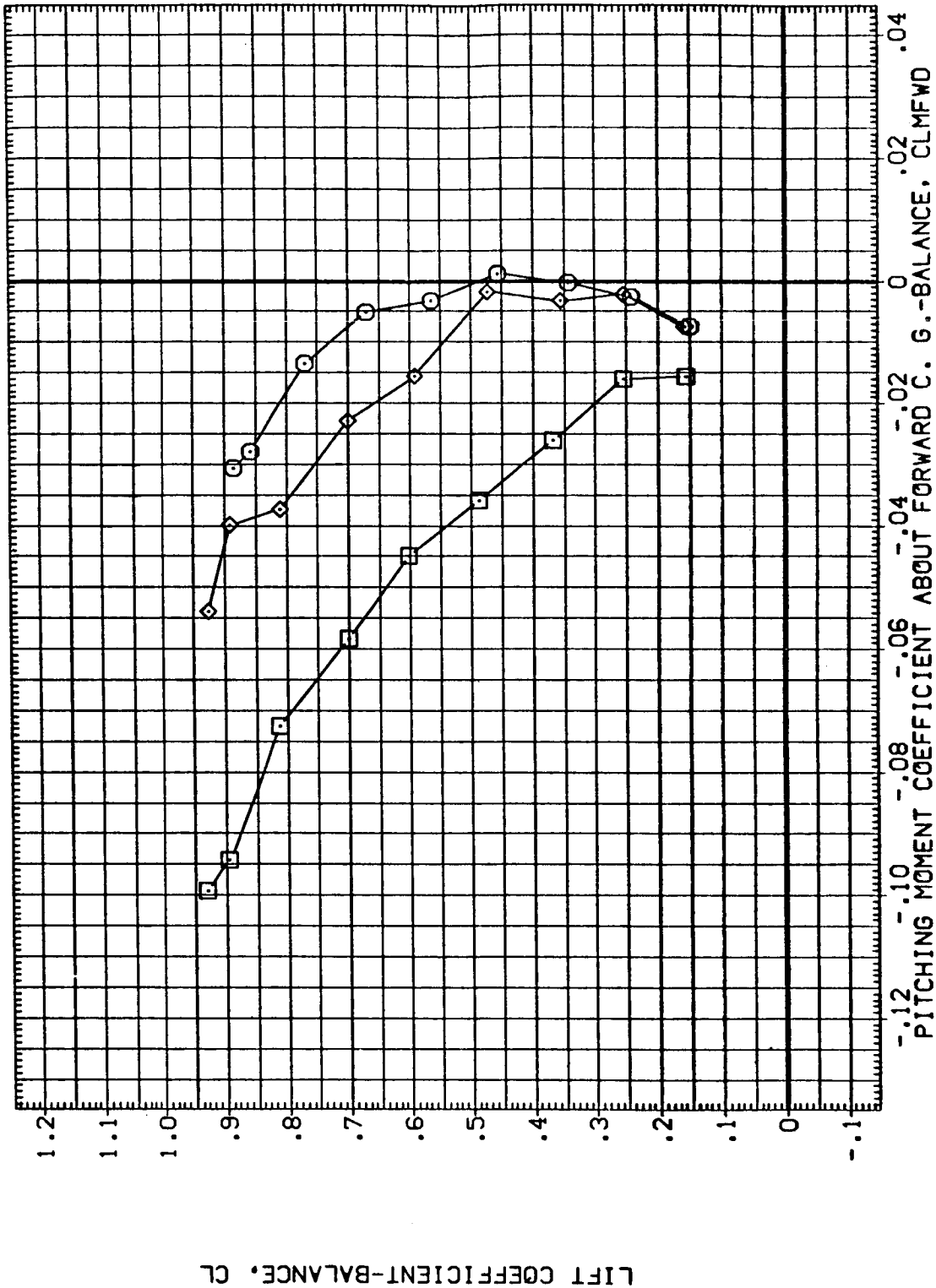


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (MEG001) AMES 3.5-190 OASB (011-M7-M14)
 (CEG005) AMES 3.5-190 OASB (011-M7-M14)
 (CEG006) AMES 3.5-190 OASB (011-M7-M14)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP .0000 IN.Y0
 SCALE 375.0000 IN.Z0
 .0150

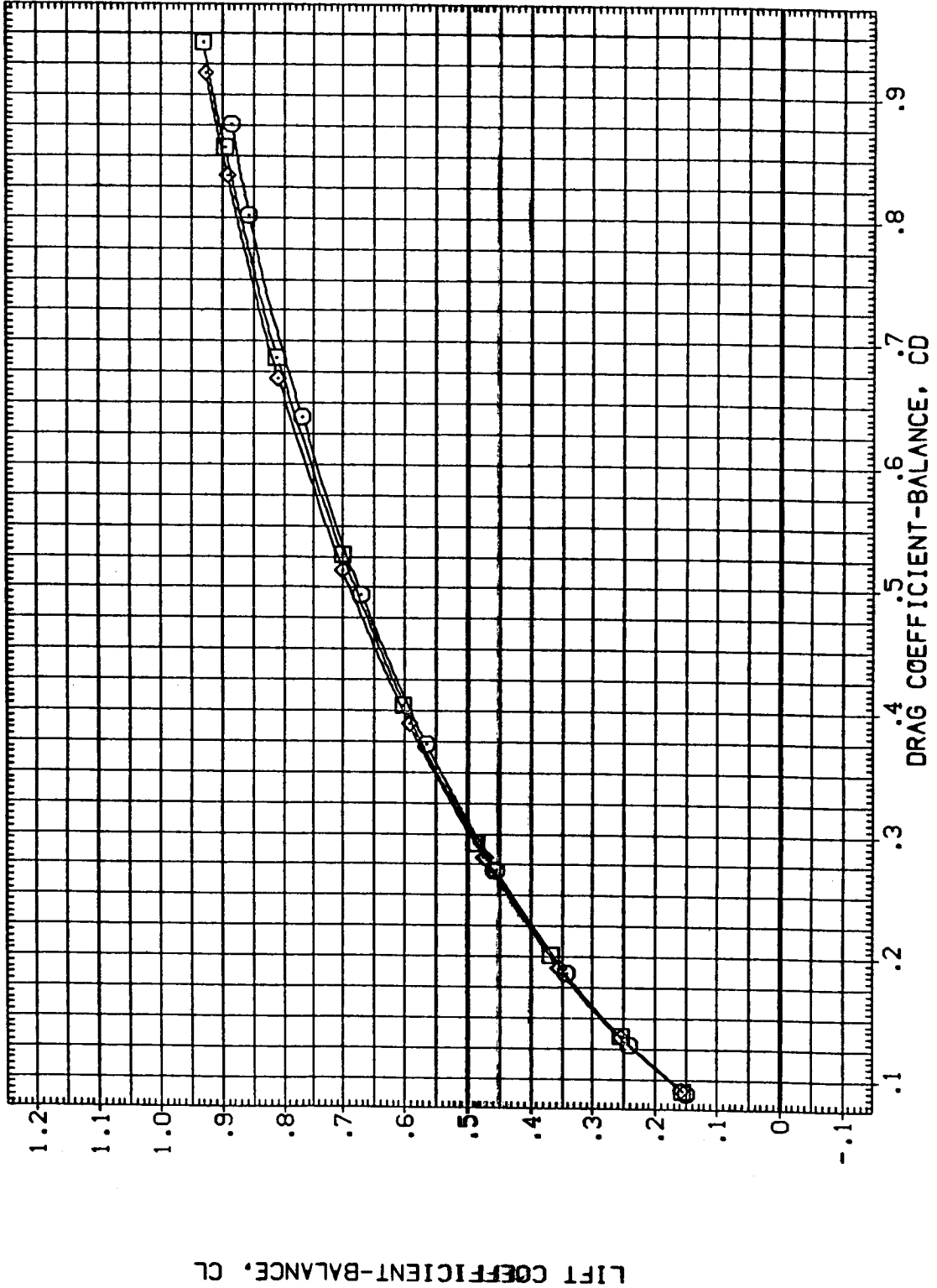


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (NE0001)
 (EE0005)
 (EE0006)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.XG
 XMRP 1076.7000 IN.YG
 YMRP .0000 IN.ZG
 SCALE 375.0150

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OAS8 (011-17+M14)
 AVES 3.5-190 OAS8 (011-17+M14)
 AVES 3.5-190 OAS8 (011-17+M14)

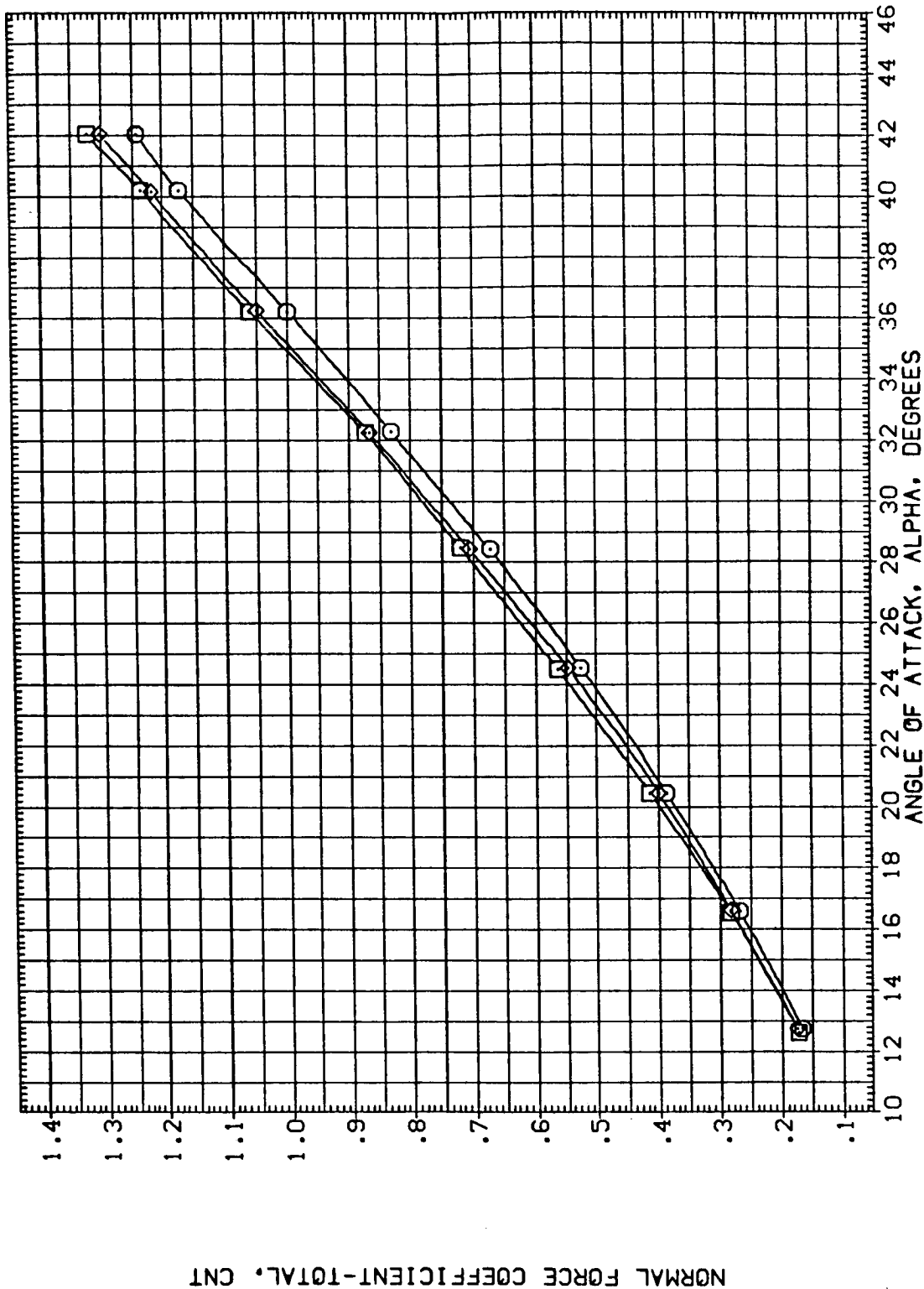


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	.000	16.300	55.000	LREF 474.8000 IN.
.000	.000	.000	55.000	BREF 936.6800 IN.
				XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(NE0001)	AMES 3.5-190 GA98 (011-M7-M14)
(EE0005)	AMES 3.5-190 GA98 (011-M7-M14)
(EE0006)	AMES 3.5-190 GA98 (011-M7-M14)

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

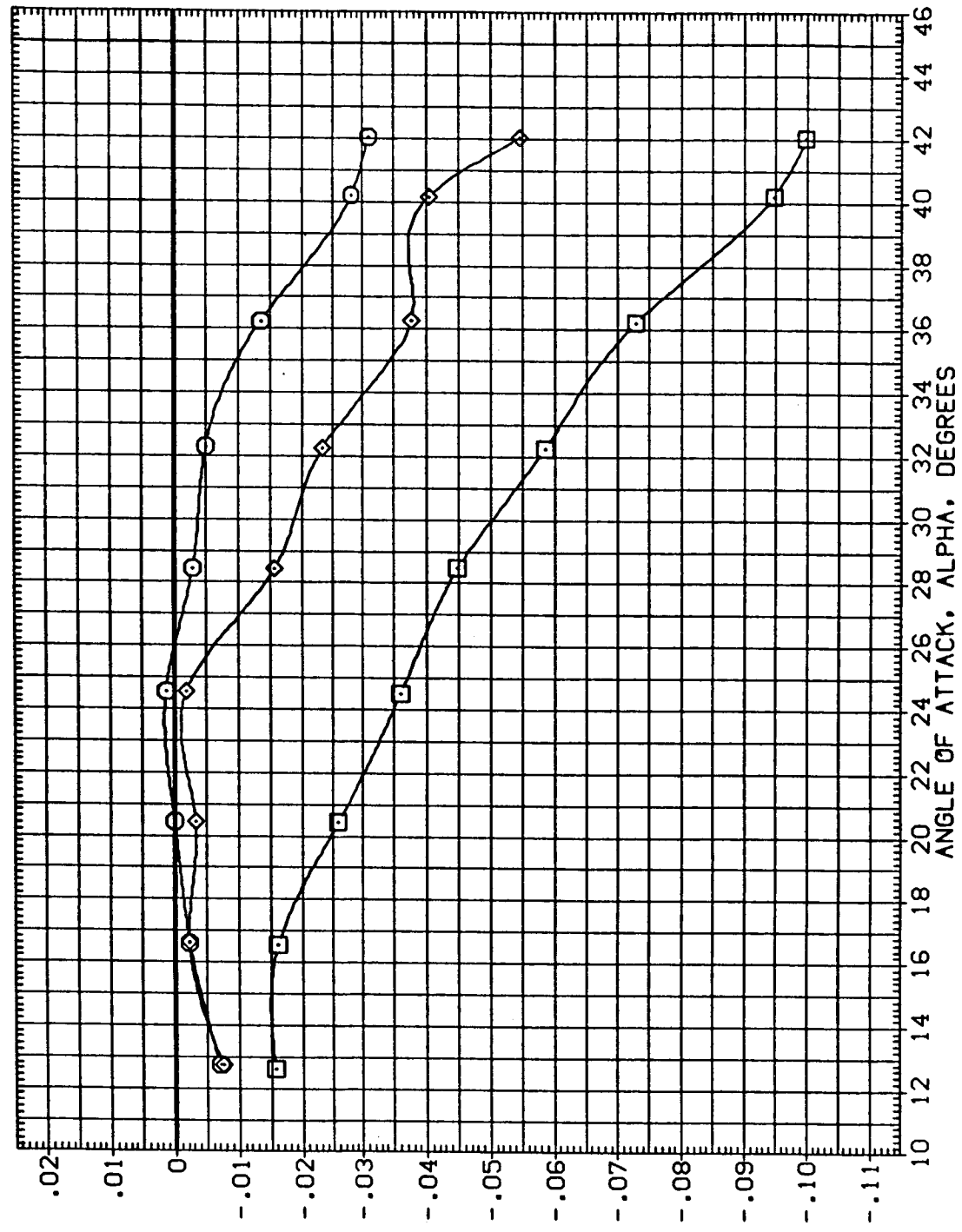


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (NEG001) AMES 3.5-190 0A98 (011-17+114)
 (EEG005) AMES 3.5-190 0A98 (011-17+114)
 (EEG006) AMES 3.5-190 0A98 (011-17+114)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 16.300 55.000
 .000 .000 .000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

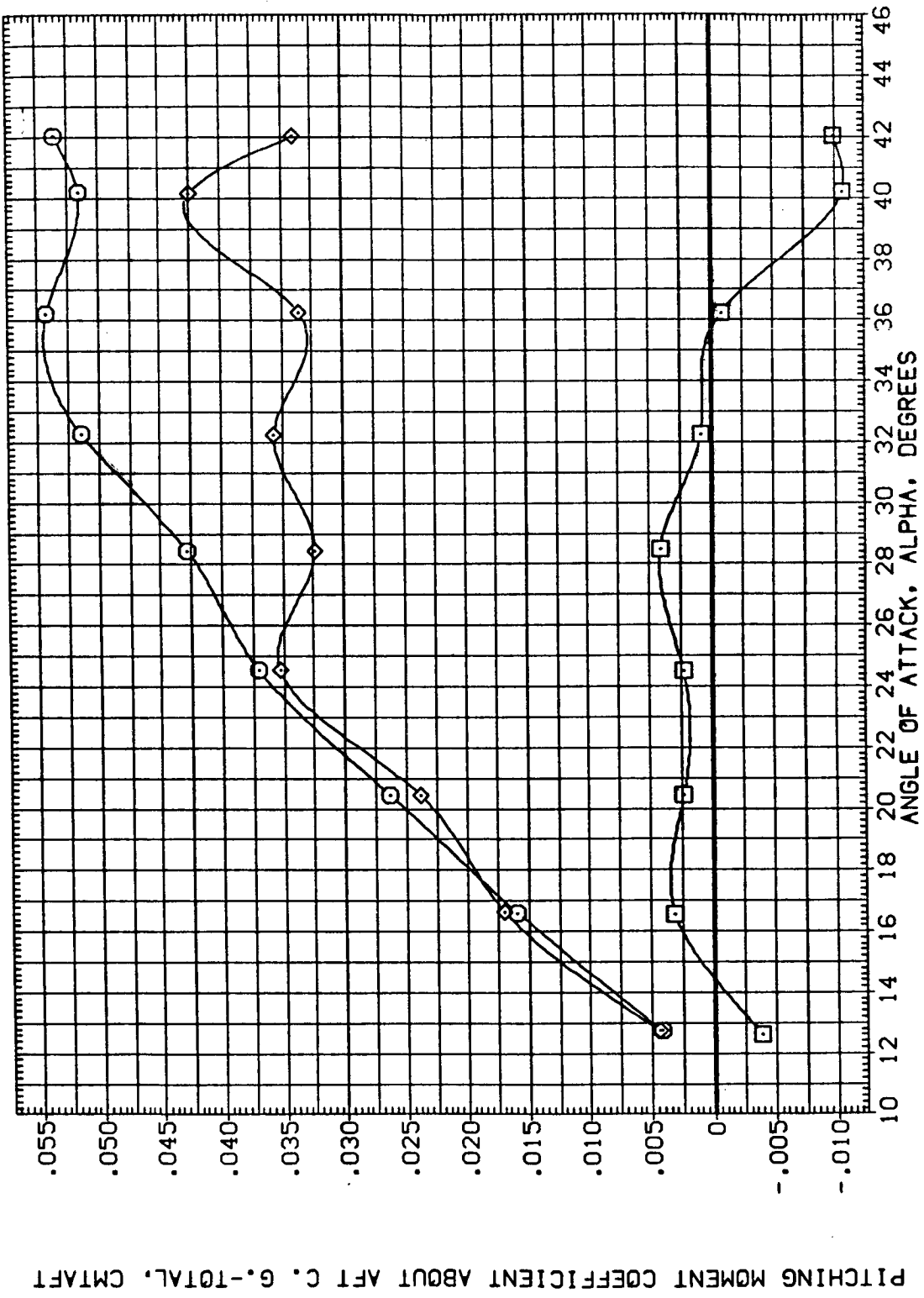


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27



DATA SET SYMBOL
 (NE0001)
 (EE0005)
 (EE0006)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPDBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

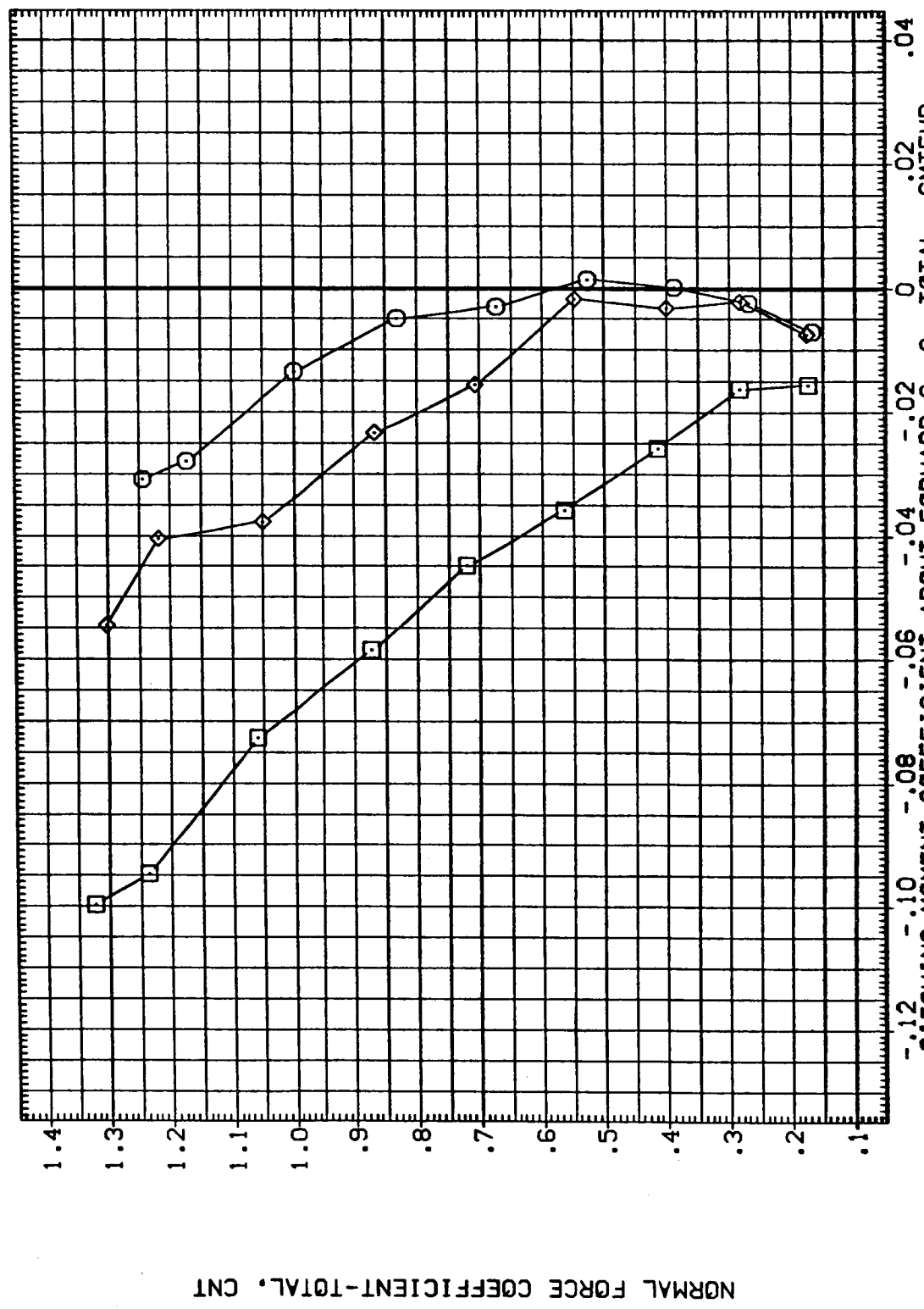


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27
 PAGE 285

DATA SET SYMBOL
 (NE0001)
 (EE0005)
 (EE0006)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

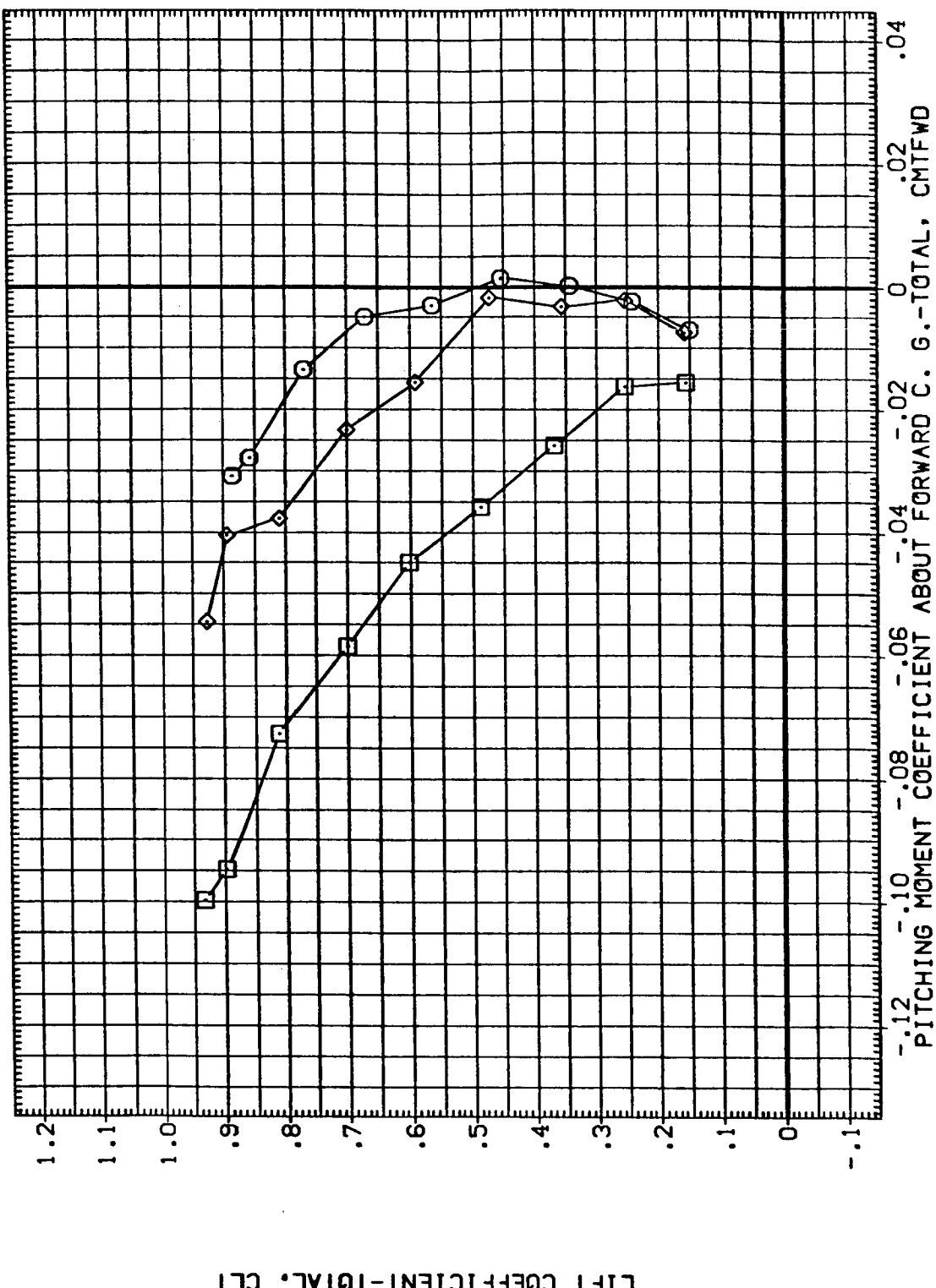


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (NEG001) AMES 3.5-190 GA98 (011-M7+M14)
 (EEG005) AMES 3.5-190 GA98 (011-M7+M14)
 (EEG006) AMES 3.5-190 GA98 (011-M7+M14)

BETA .000
 .000
 .000
 ELEVON .000
 .000
 .000
 BOFLAP -11.700
 16.300
 .000
 SPOBRK 55.000
 55.000
 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

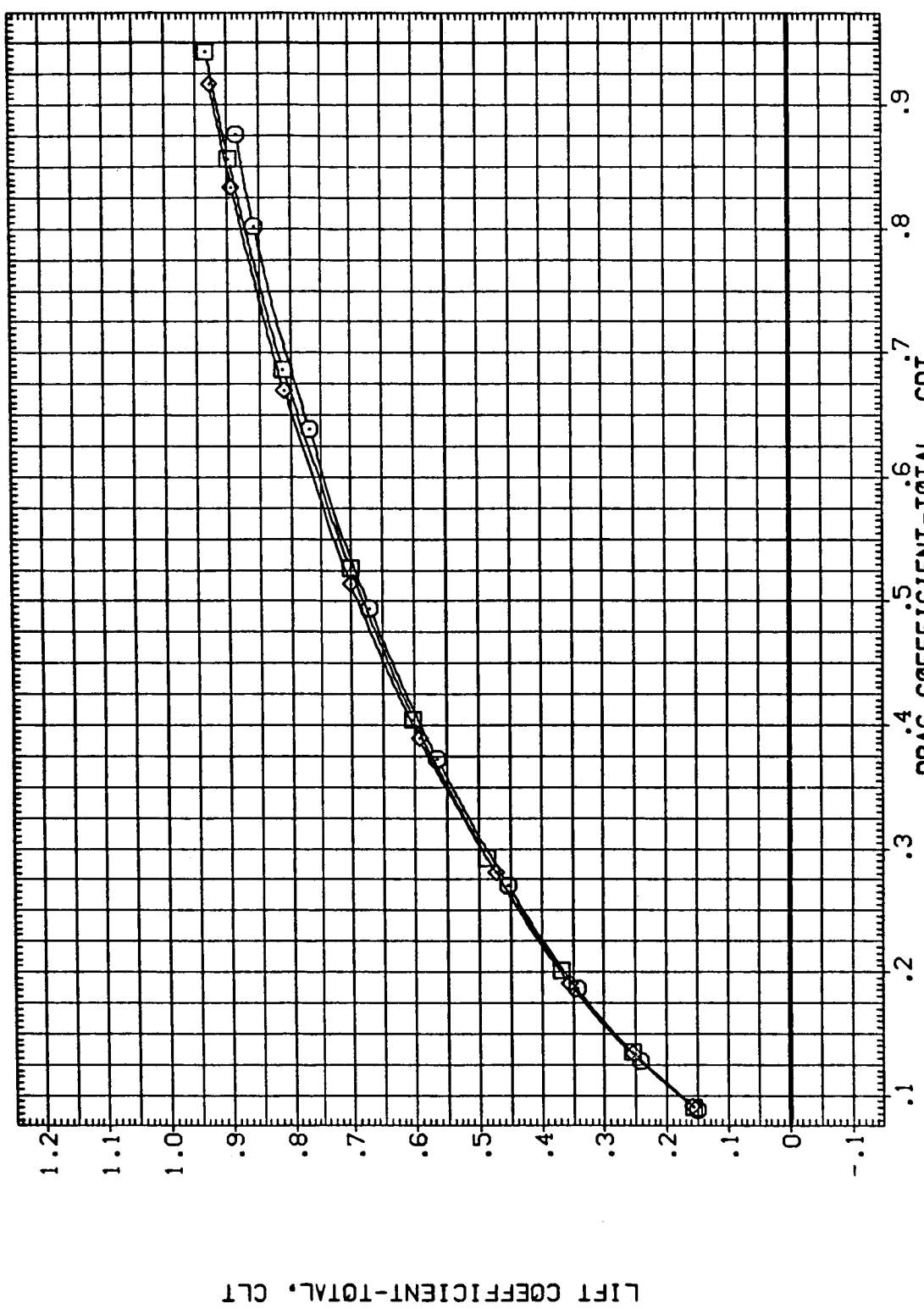


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 287

DATA SET SYMBOL
 (NE0001)
 (EE0005)
 (EE0006)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

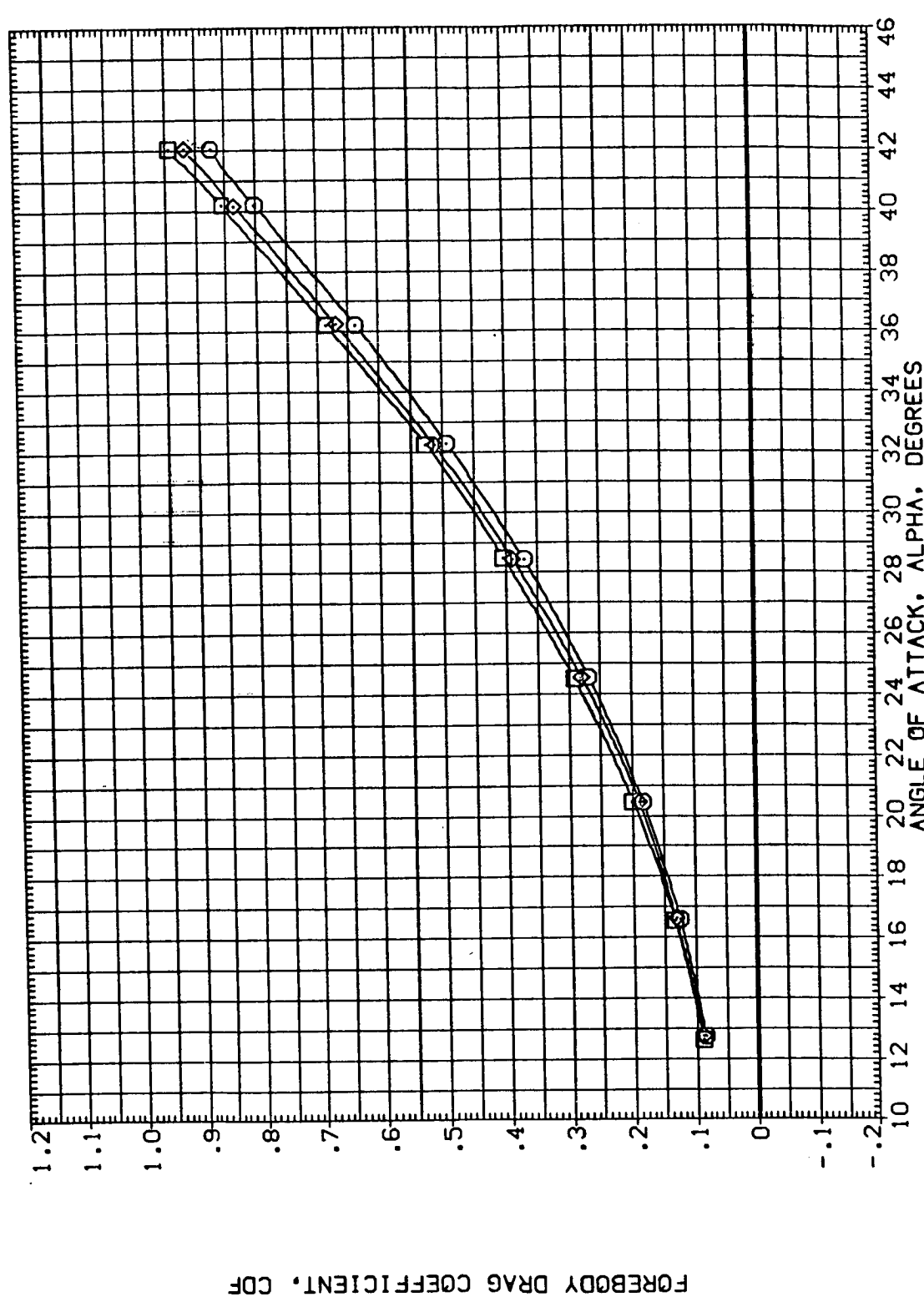


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (M)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (NE0001) AMES 3.5-190 D/98 (011-M7+H14)
 (EE0005) AMES 3.5-190 D/98 (011-M7+H14)
 (EE0006) AMES 3.5-190 D/98 (011-M7+H14)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 16.300
 .000

SPDRBK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

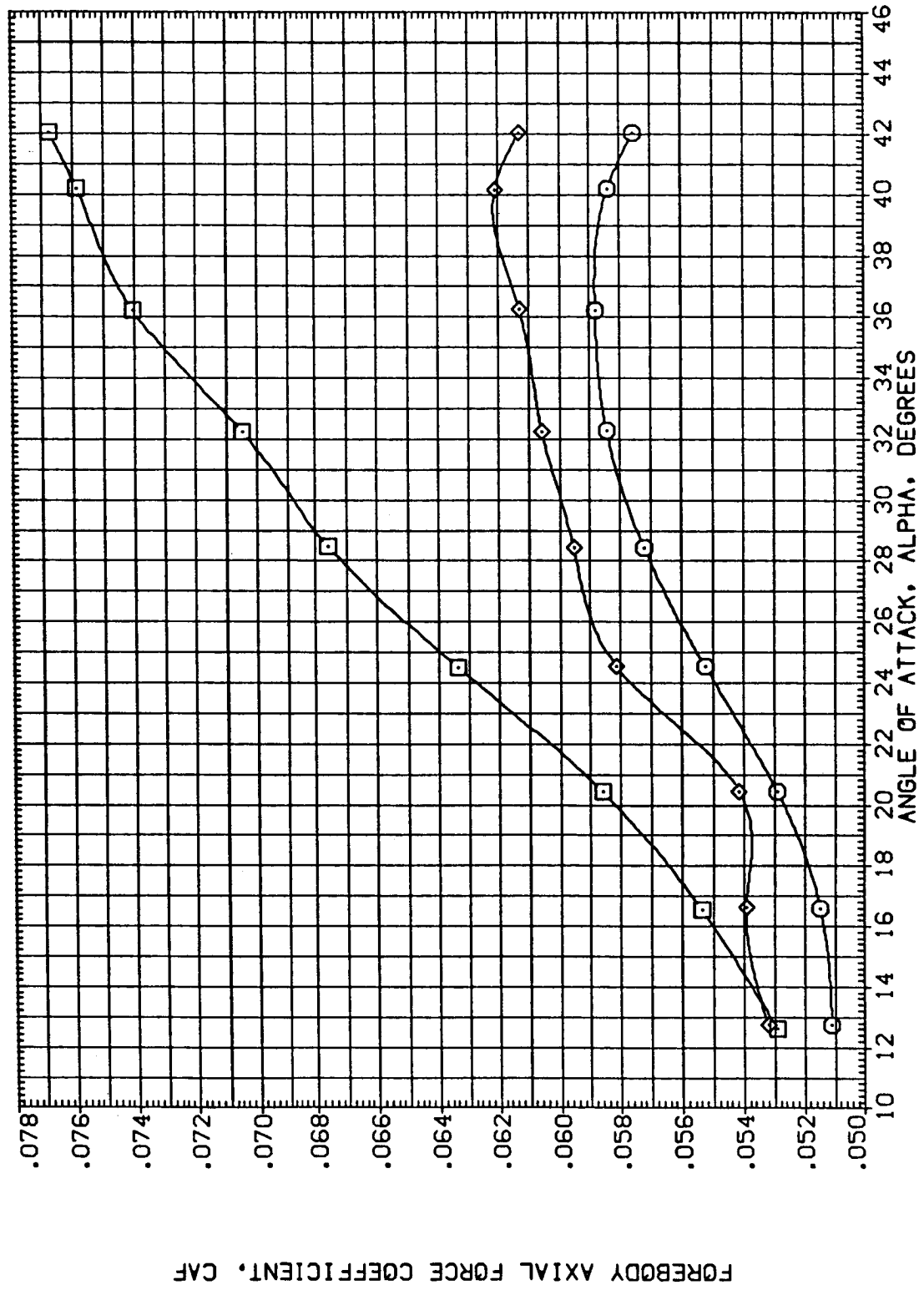


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27
 PAGE 289

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (NEG001) AMES 3.5-190 GA98 (011-47+H14)
 (EEG005) AMES 3.5-190 GA98 (011-47+H14)
 (EEG006) AMES 3.5-190 GA98 (011-47+H14)

BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION
 .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.
 .000 .000 16.300 55.000 LREF 474.8000 IN.
 .000 .000 .000 55.000 XMRP 936.6800 IN.
 .000 .000 .000 55.000 YMRP 1076.7000 IN.XD
 .000 .000 .000 55.000 ZMRP 375.0000 IN.YD
 SCALE .0150

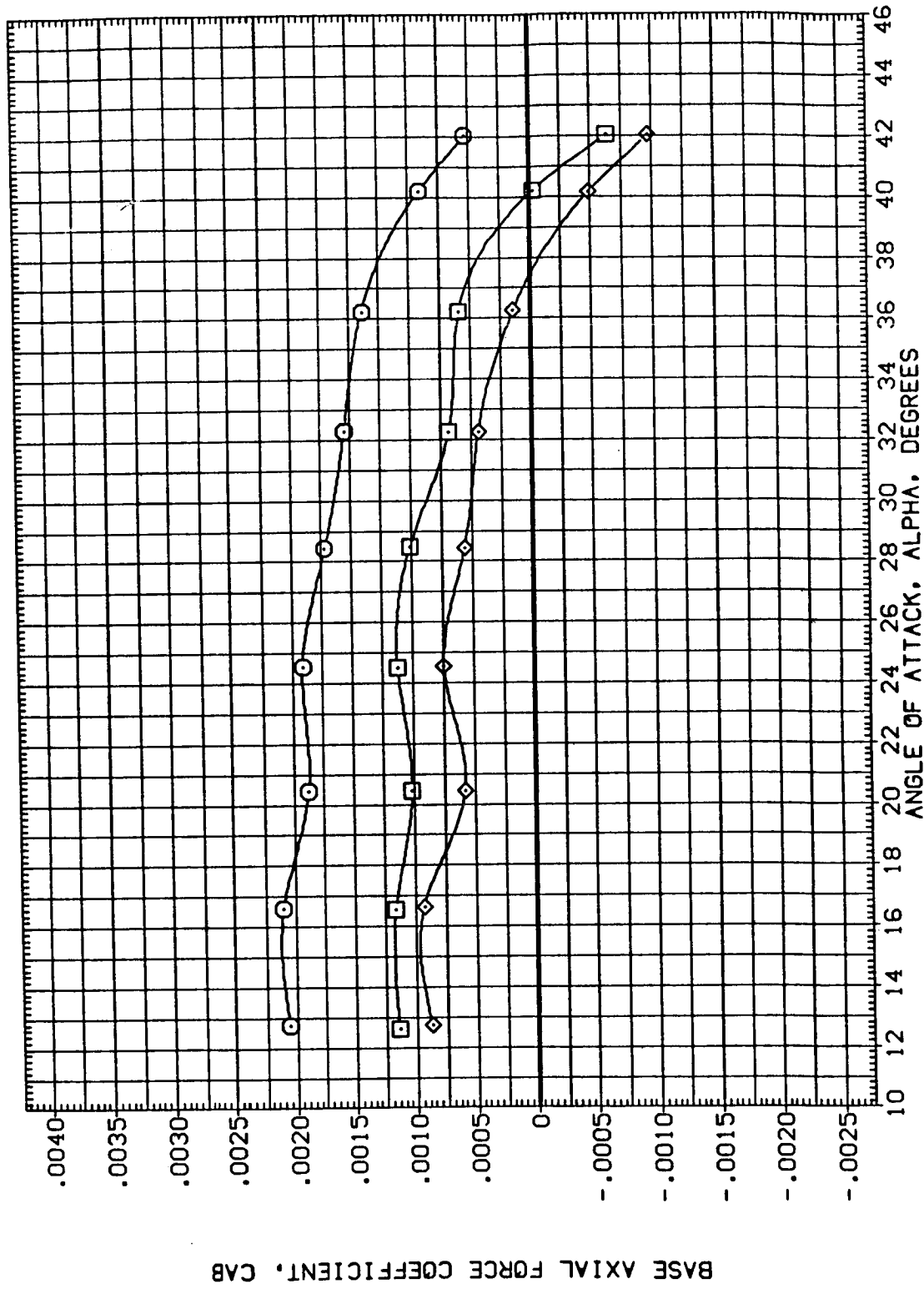


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27
 PAGE 290

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(LE0001)	AMES 3.5-190 CAS8 (011-M7+M14)	SREF	2690.0000	SG.FT.
(BE0005)	AMES 3.5-190 CAS8 (011-M7+M14)	LREF	474.8000	IN.
(BE0006)	AMES 3.5-190 CAS8 (011-M7+M14)	BREF	936.6800	IN.
		XMRP	1076.7000	IN. X0
		YMRP	.0000	IN. Y0
		ZMRP	375.0000	IN. Z0
		SCALE	.0150	

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	.000	16.300	55.000
.000	.000	.000	55.000

ANGLE OF ATTACK, ALPHA, DEGREES

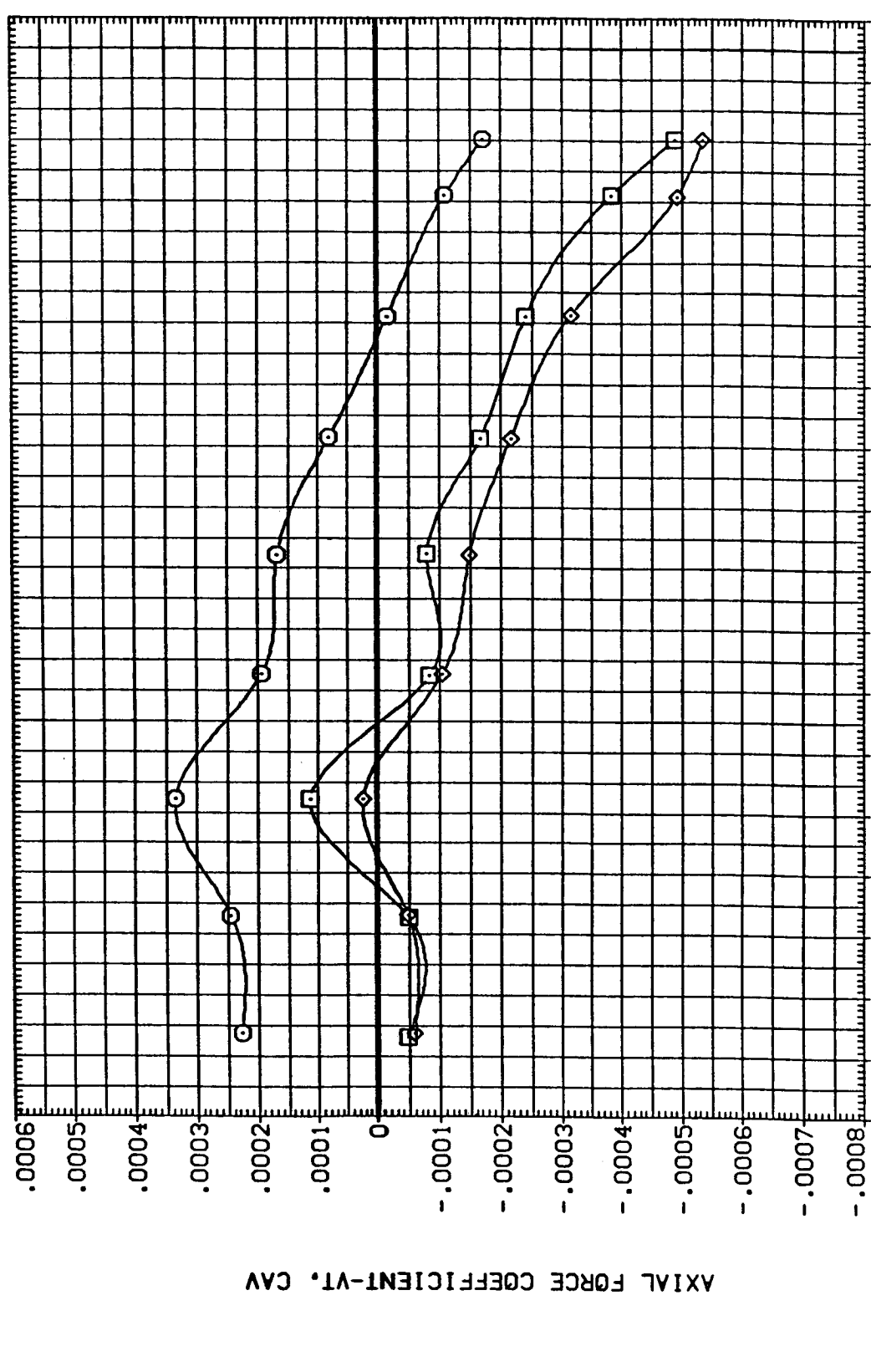


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 291

DATA SET SYMBOL
 (LEG001) □
 (BEG005) ◇
 (BEG006) ○

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

CONFIGURATION DESCRIPTION
 AMES 3.5-190 QAS8 (011-M7+M14)
 AMES 3.5-190 QAS8 (011-M7+M14)
 AMES 3.5-190 QAS8 (011-M7+M14)

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

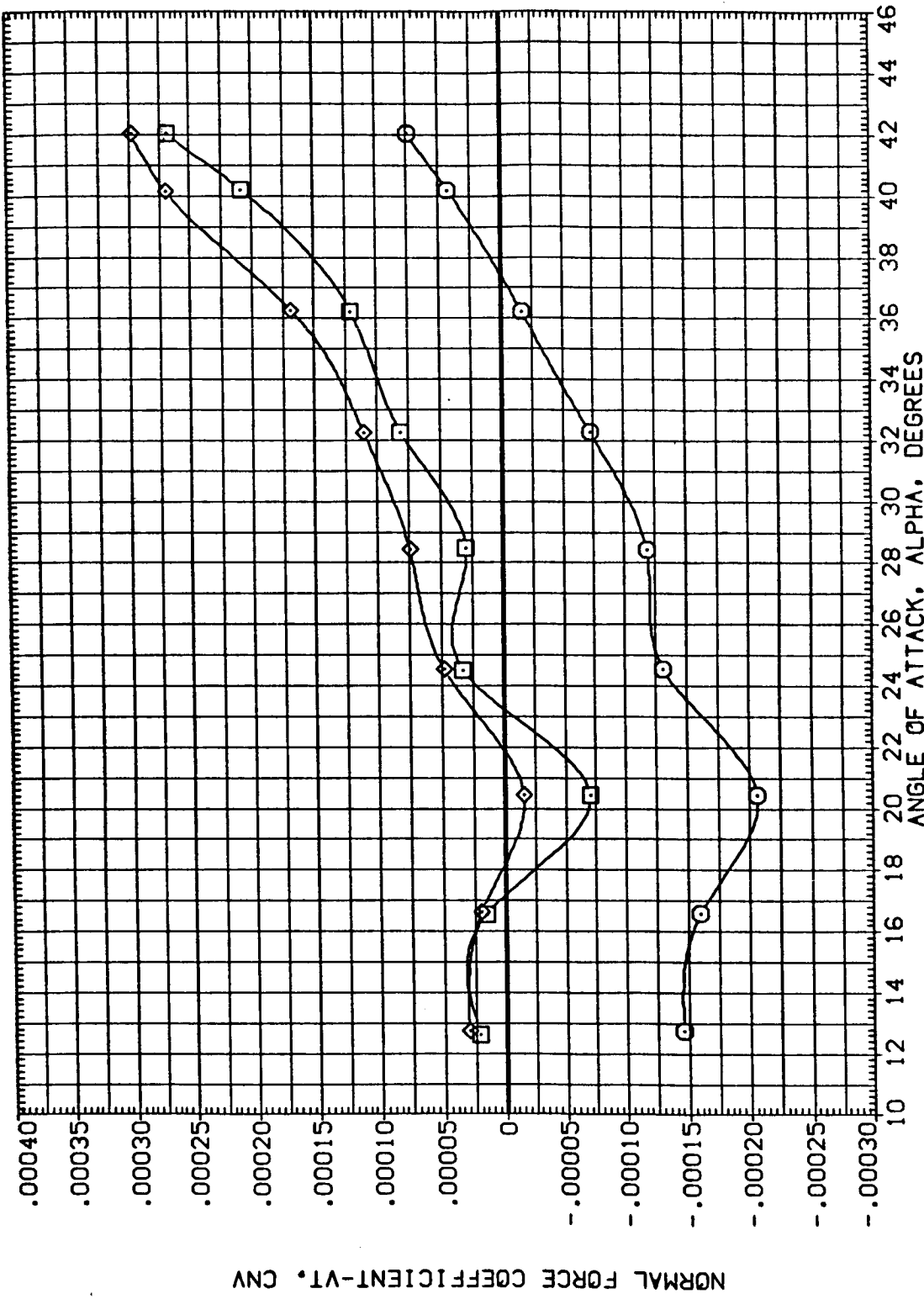


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27
 PAGE 292

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(LE0001) ◯ AMES 3.5-190 0A98 (011-M7+M14)

(BE0005) ◻ AMES 3.5-190 0A98 (011-M7+M14)

(BE0006) ◇ AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 16.300 55.000

.000 .000 .000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

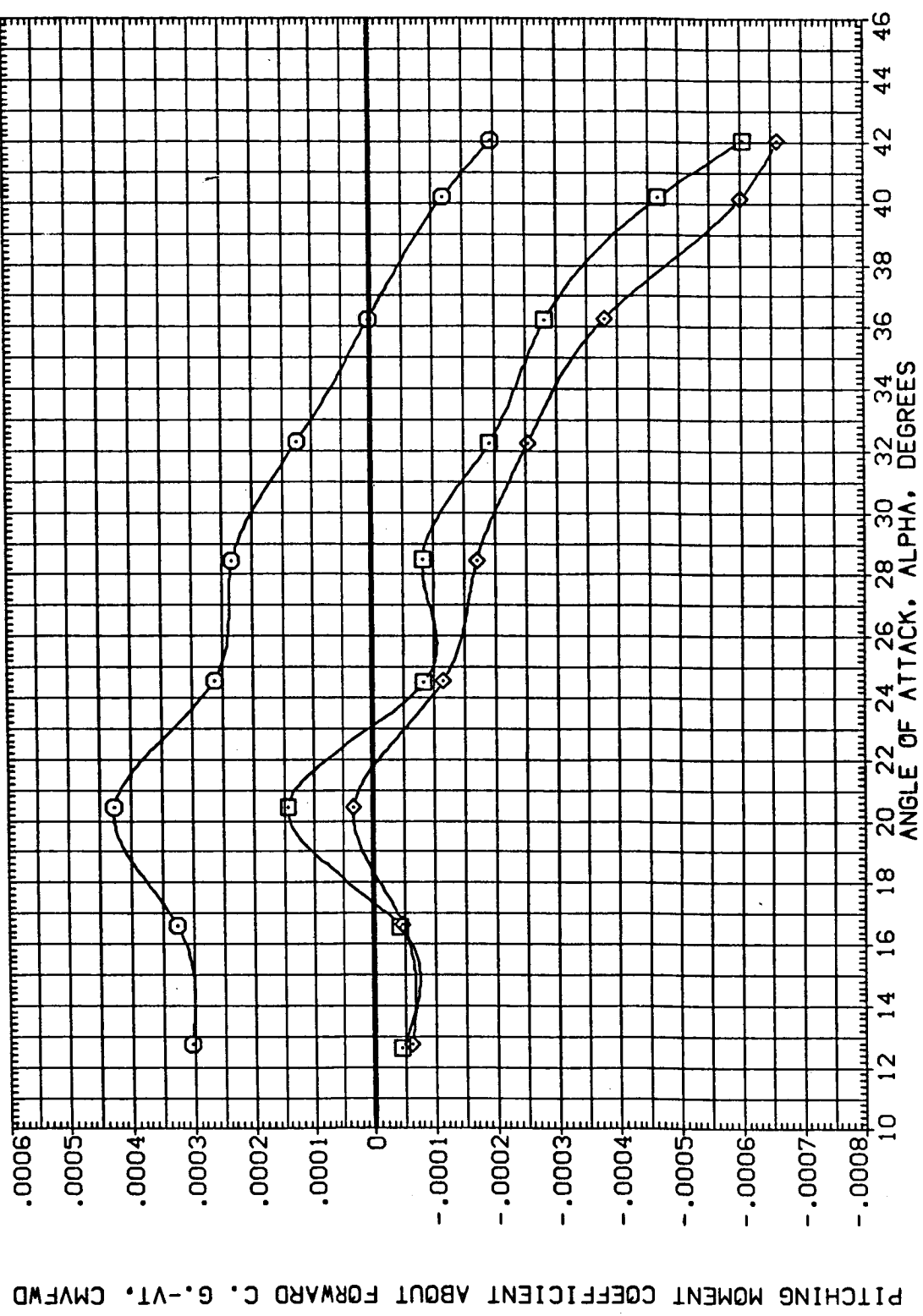


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 293

DATA SET SYMBOL
 (LE0001)
 (BE0005)
 (BE0006)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14)

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

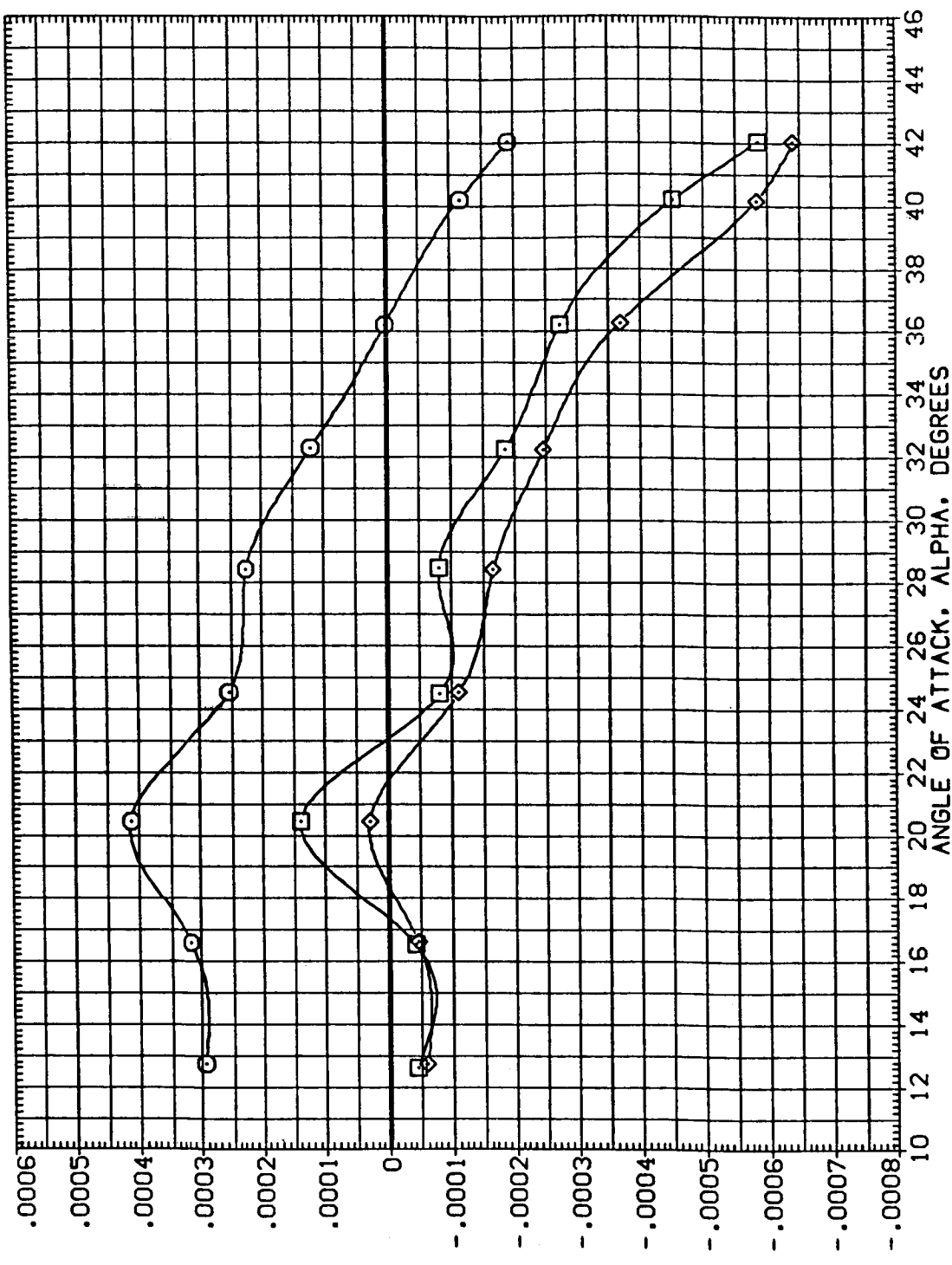


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A) MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ME0017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0022)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

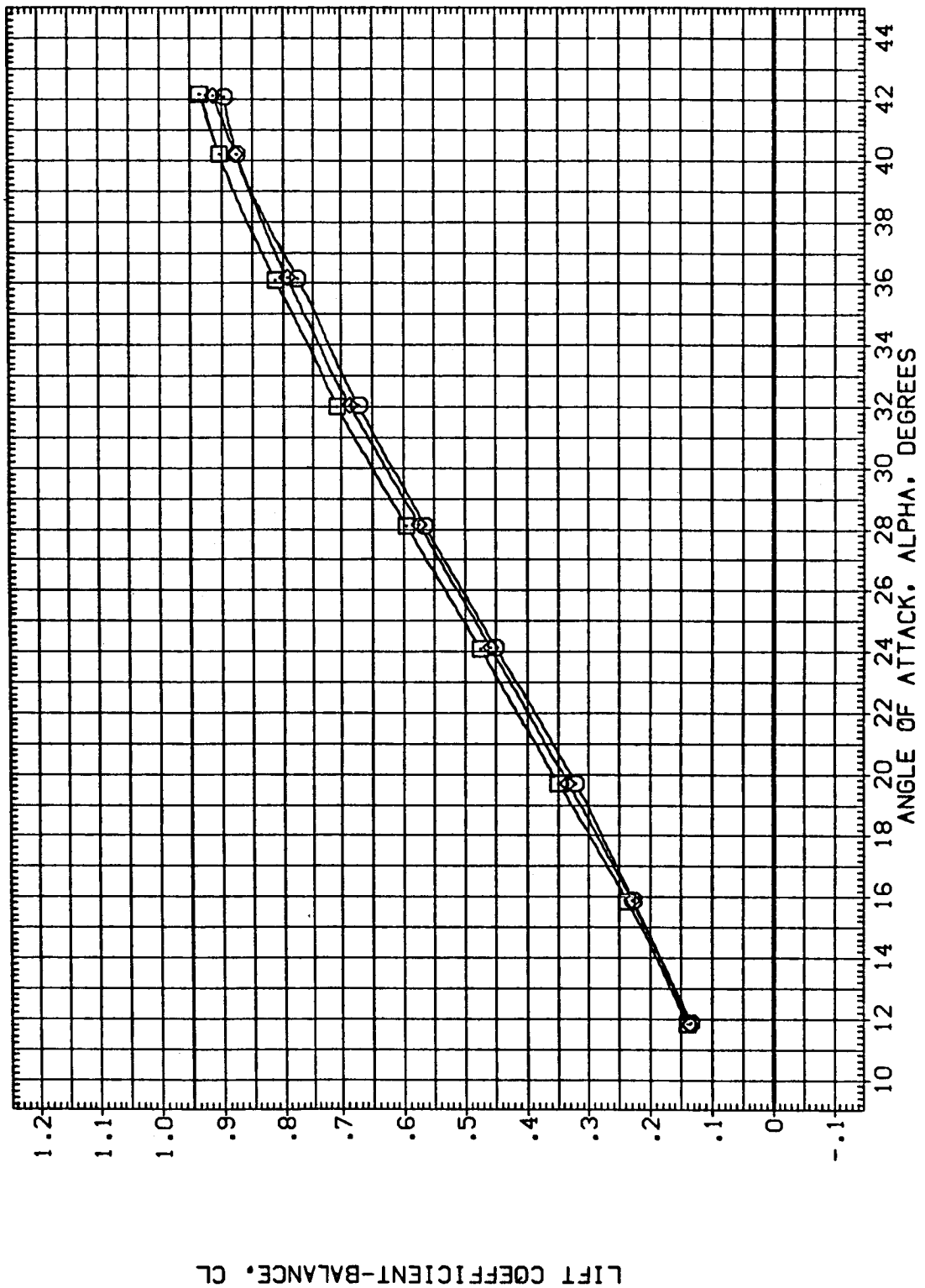


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(ME0017) AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

(CE0021) AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

(CE0022) AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

55.000

55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.

YMRP .0000 IN.

ZMRP 375.0000 IN.

SCALE .0150

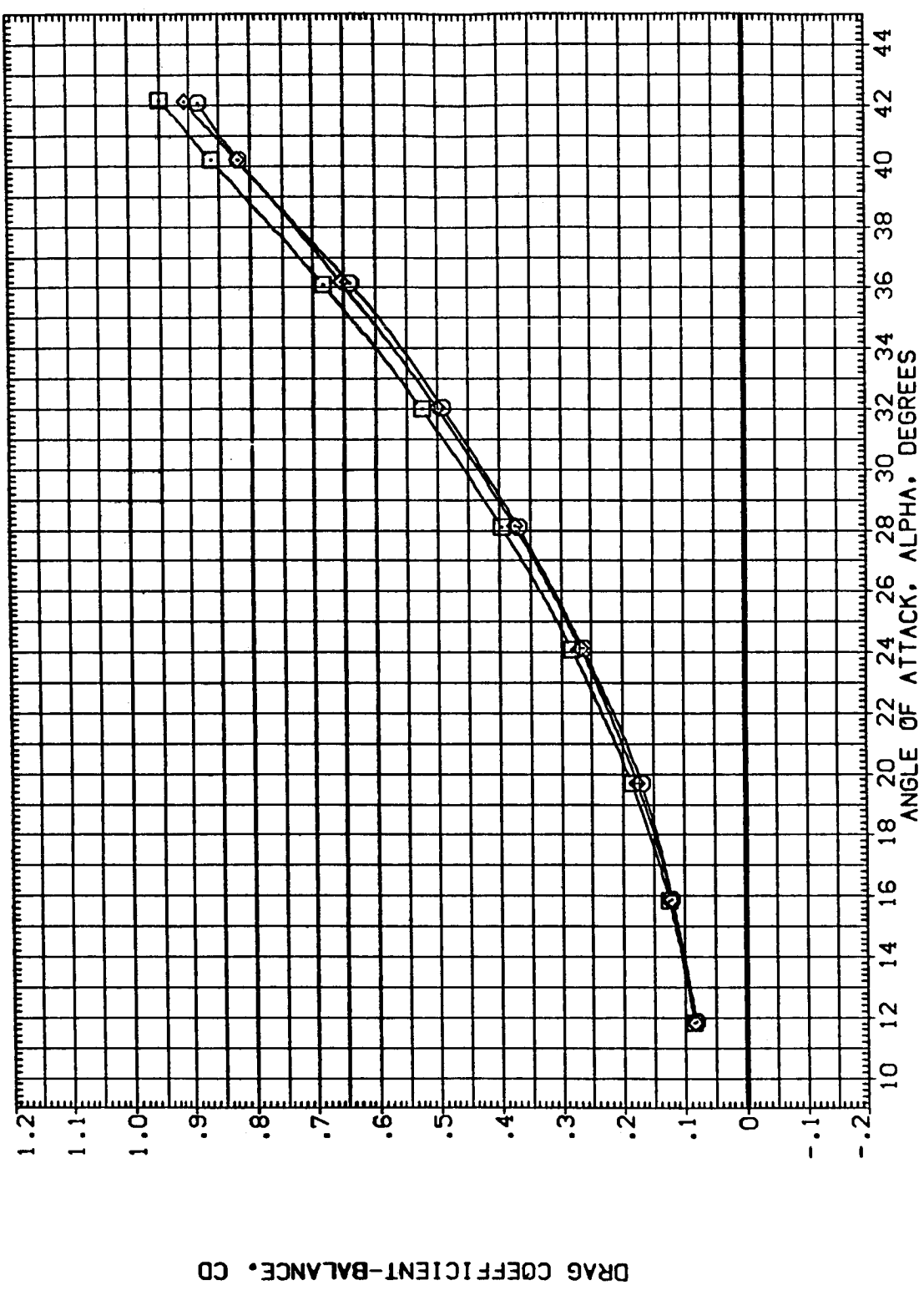


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL (ME0017) (CE0021) (CE0022)

CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (01|-N7+M1|-N24+DUMMY STING) AMES 3.5-190 GA98 (01|-N7+M1|-N24+DUMMY STING) AMES 3.5-190 GA98 (01|-N7+M1|-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BDFLAP -11.700 16.300 .000

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION SQ. FT. SREF 2690.0000 LREF 474.8000 BREF 936.6800 XMRP 1076.7000 YMRP .0000 ZMRP .0000 IN. X0 IN. Y0 IN. Z0

SCALE .0150

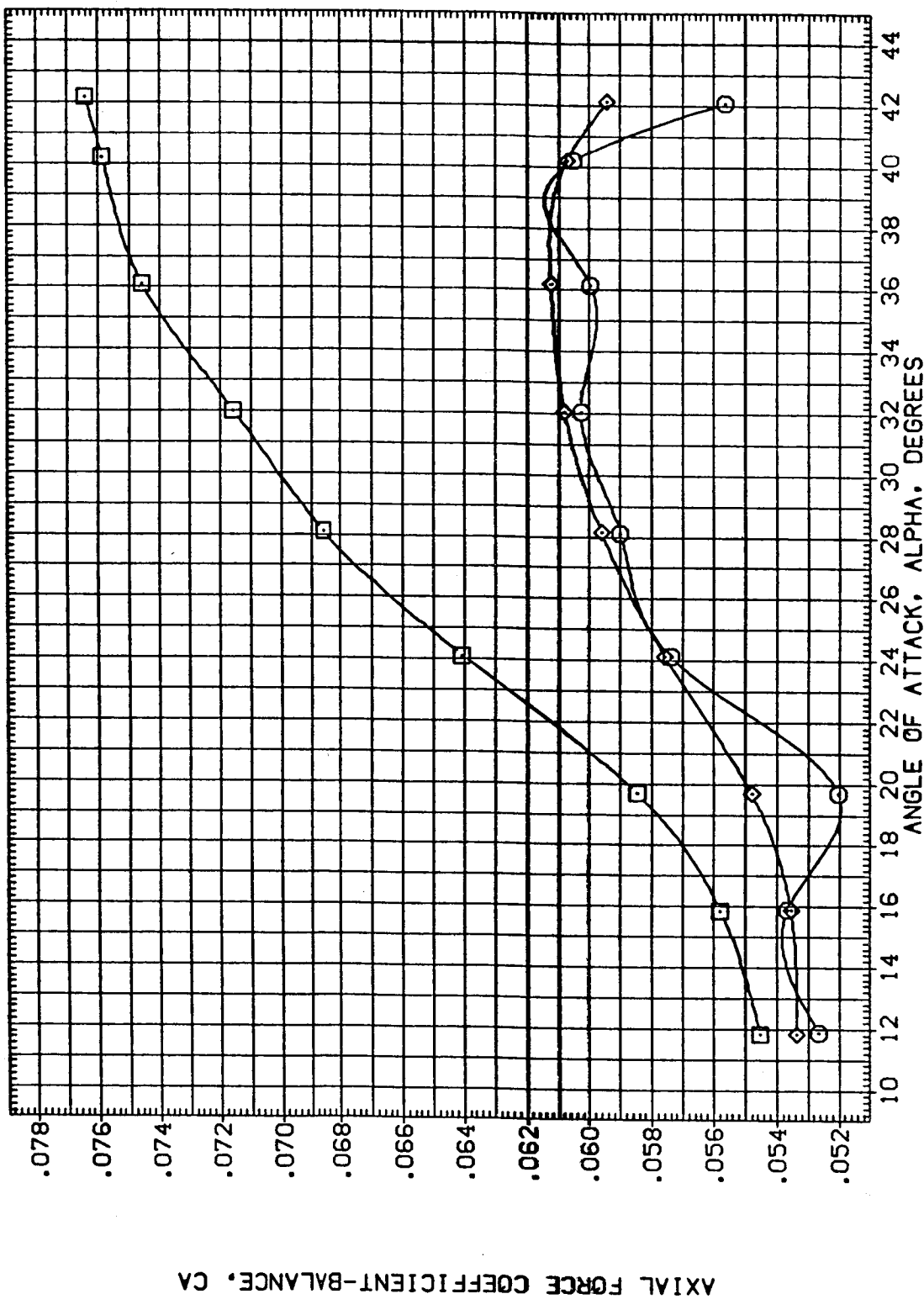


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (ME0017)
 (CE0021)
 (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011 -M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011 -M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011 -M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0150 IN.ZD
 SCALE .0150

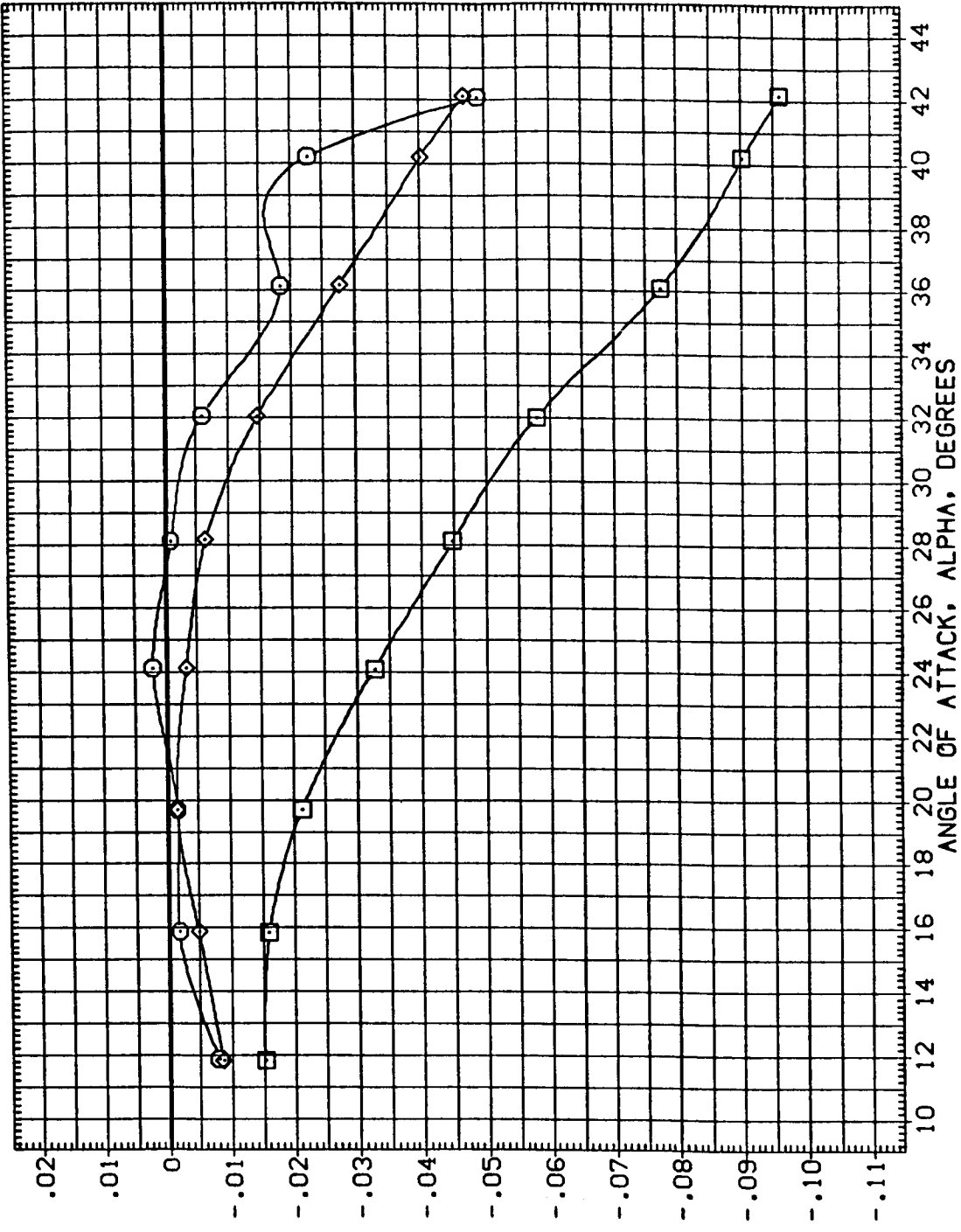


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 CA)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDRBK REFERENCE INFORMATION

(ME0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(CE0021) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 16.300 55.000 LREF 474.8000 IN.

(CE0022) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 .000 55.000 BREF 936.6800 IN.

YMRP 1076.7000 IN.X0
ZMRP .0000 IN.Y0
SCALE .0150

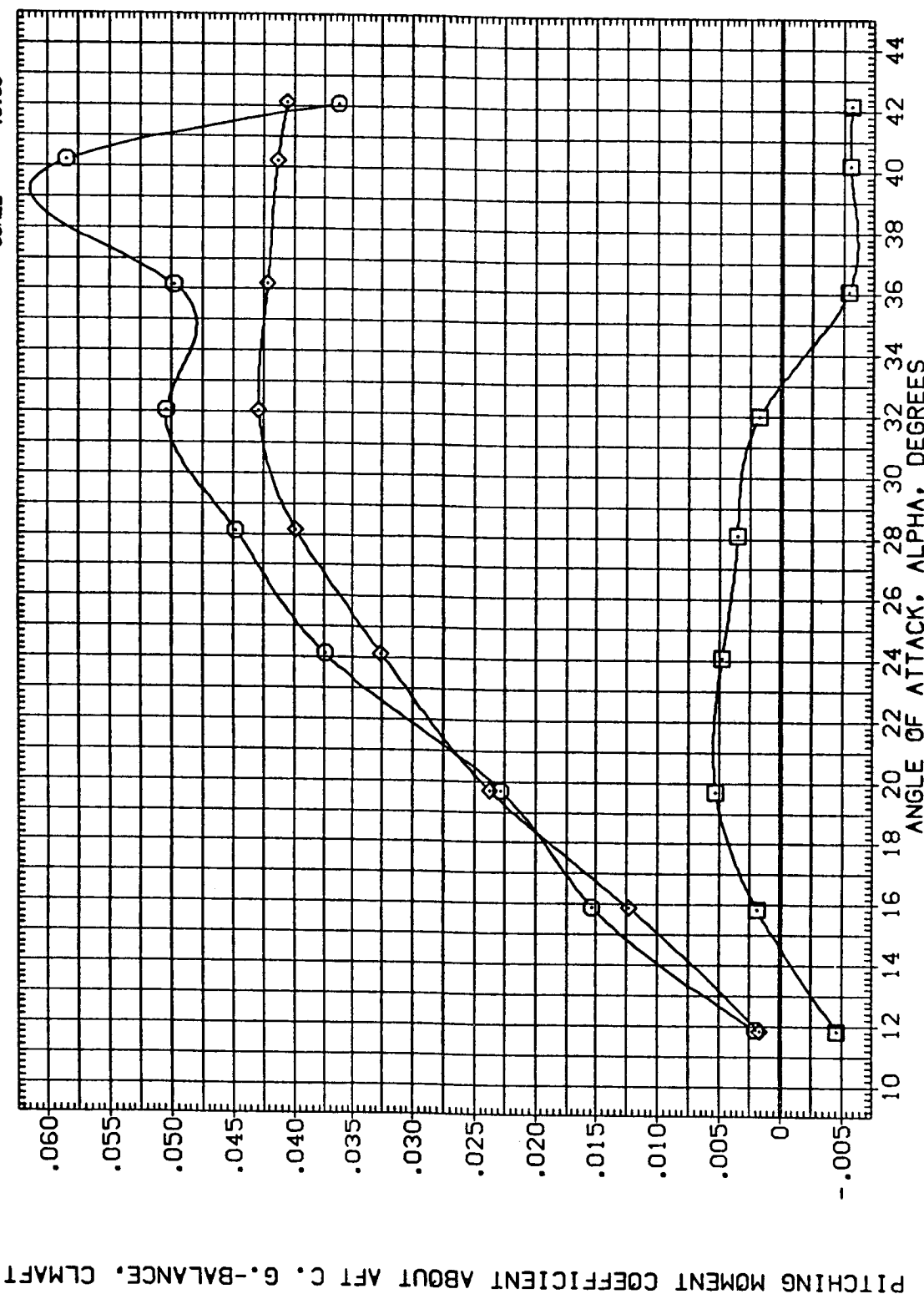


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL (M0017) (CE0021) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

SPDRBK 55.000
 SFLAP -11.700
 ELEVON .000
 BETA .000
 SPOBRK 55.000
 SFLAP 16.300
 ELEVON .000
 BETA .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Z0
 ZMRP 375.0150 IN.Z0
 SCALE

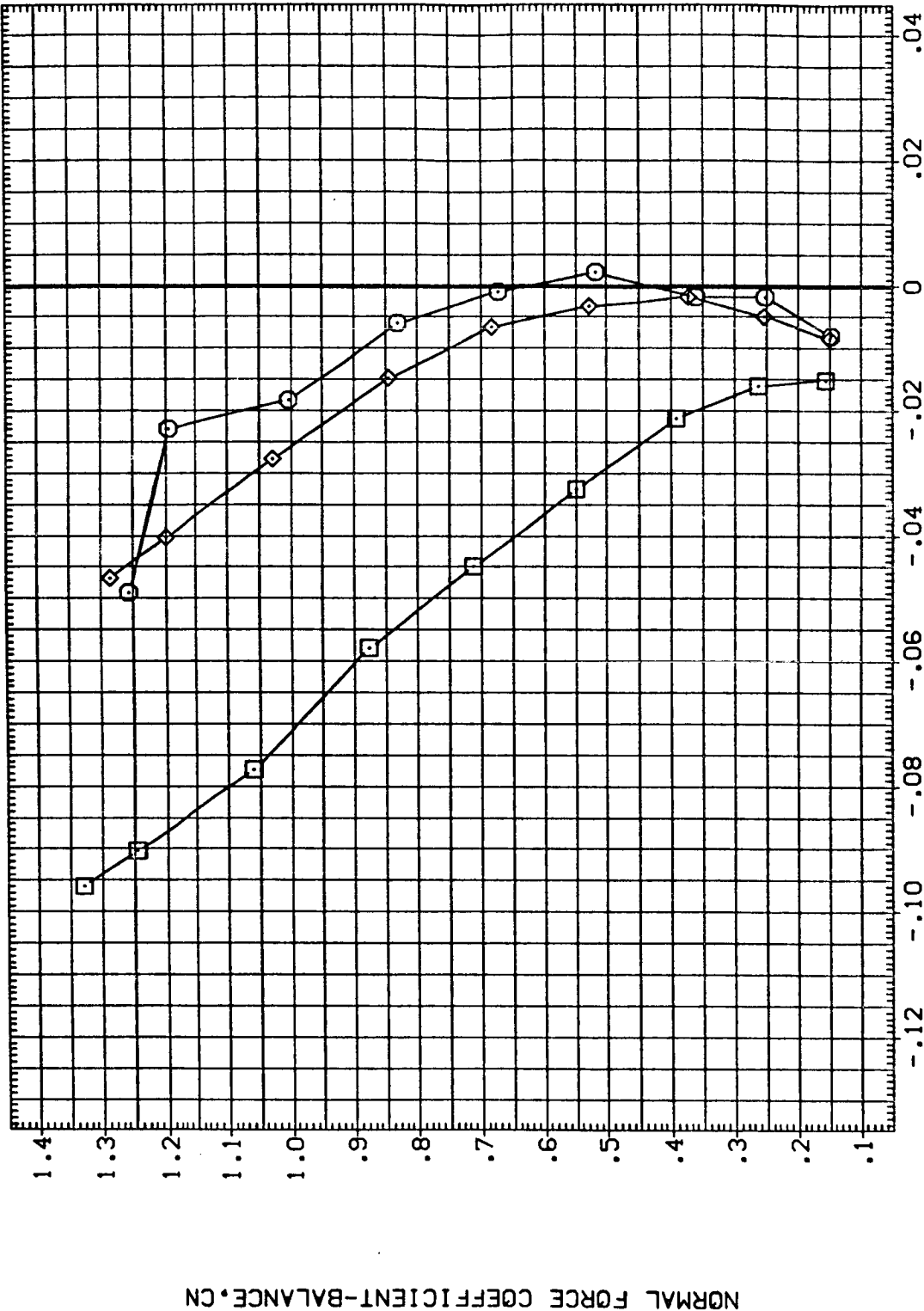


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ME0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

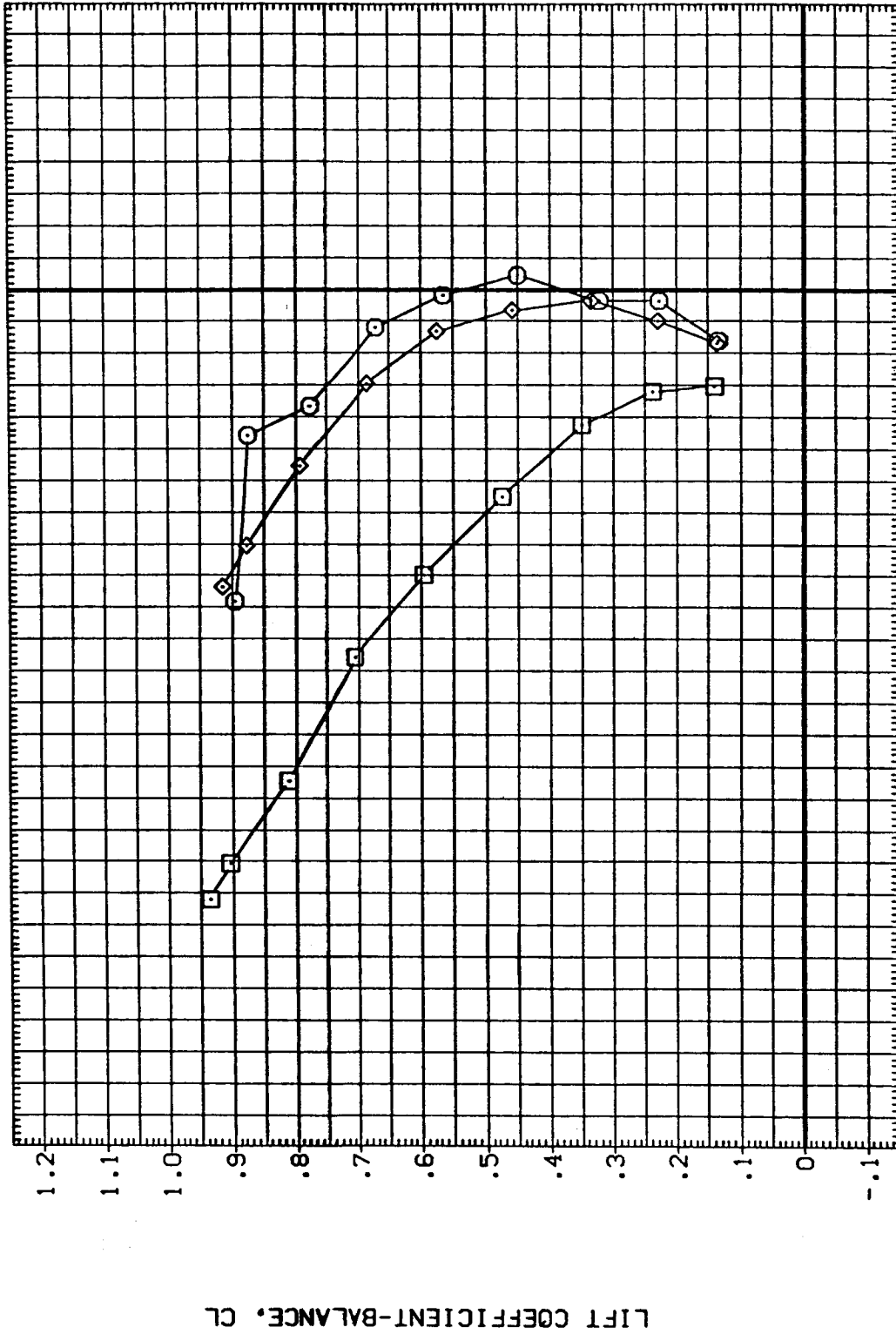


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL
 (W0017)
 (C0021)
 (C0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPDBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

LIFT COEFFICIENT-BALANCE, CL

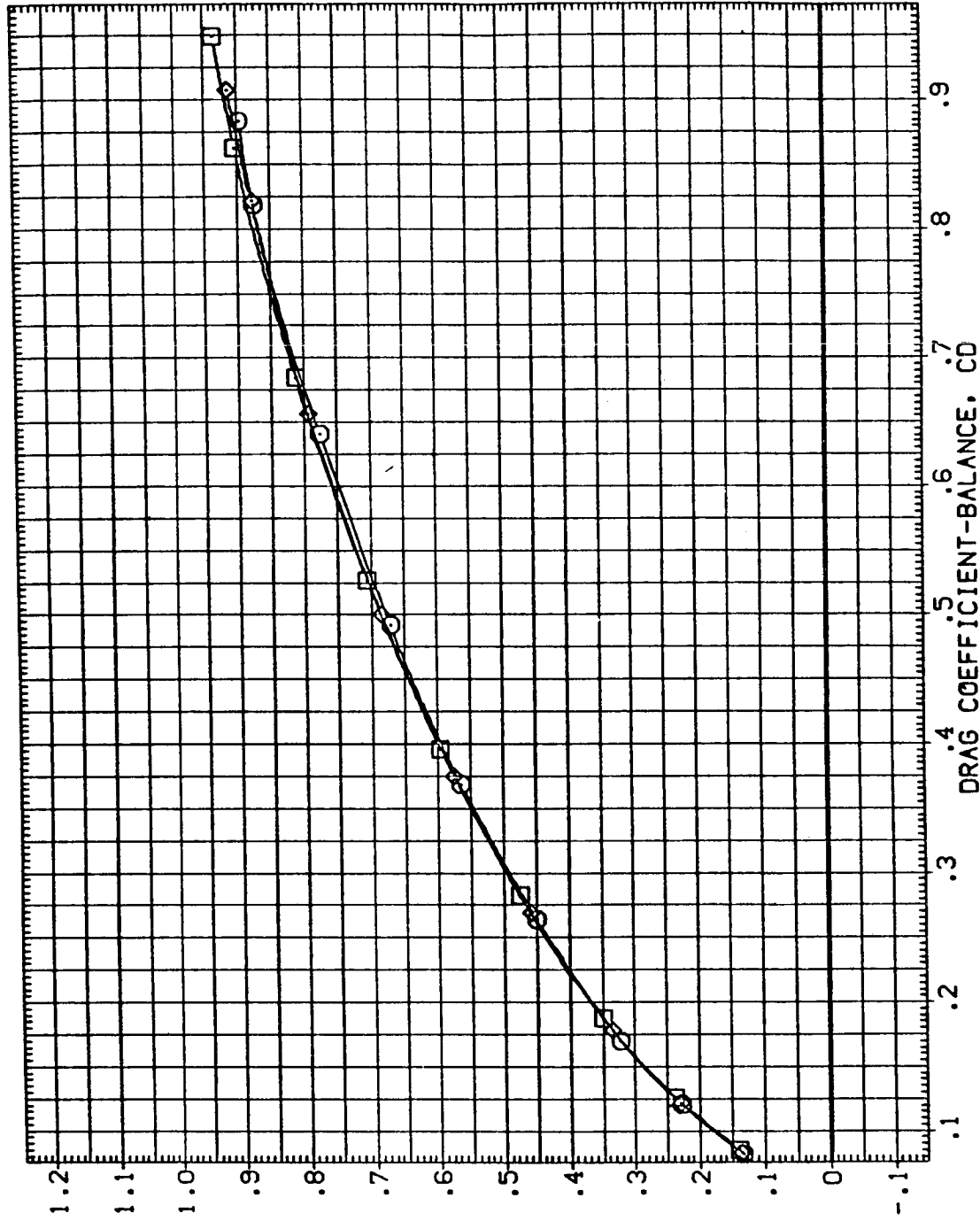


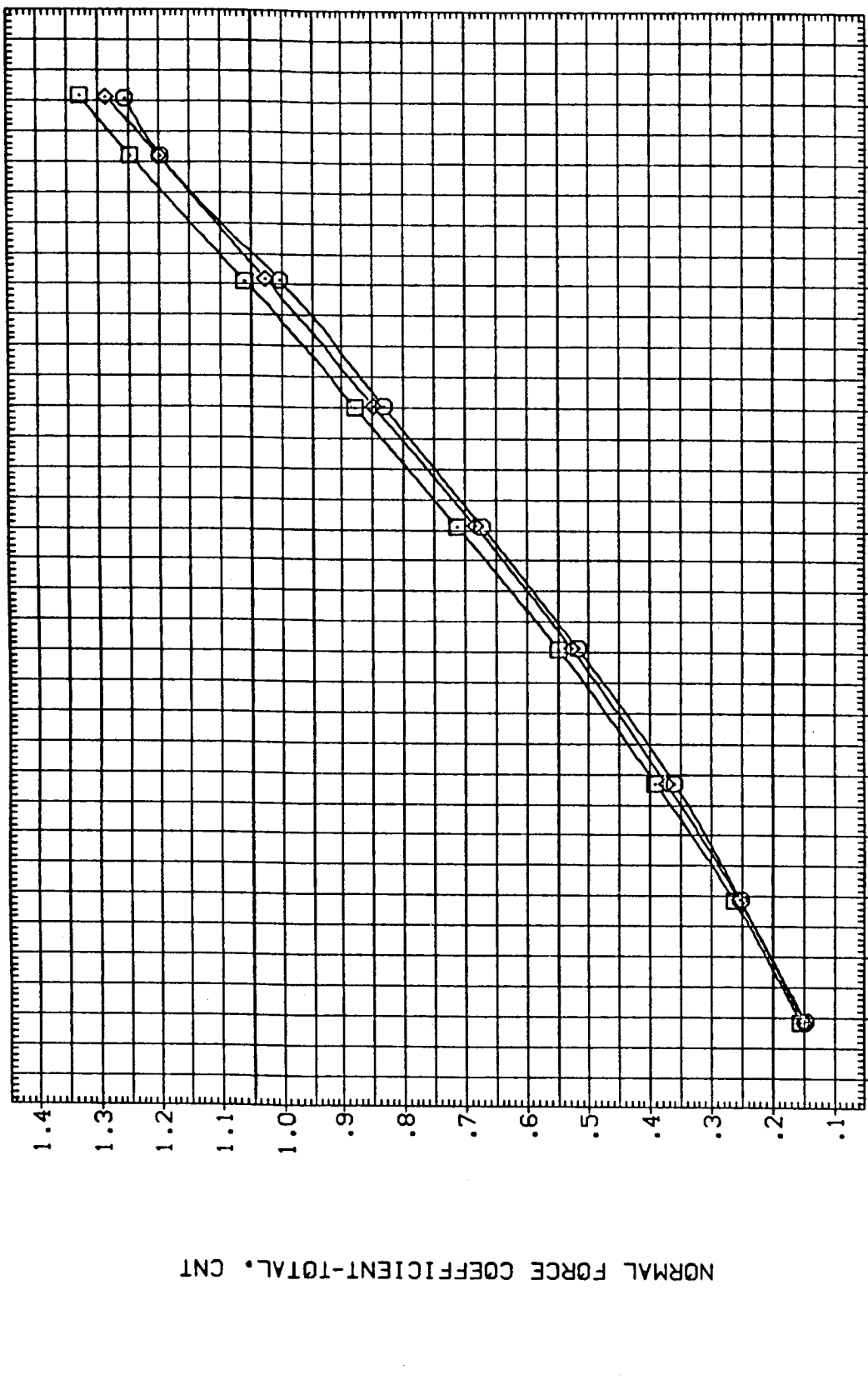
FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 CAJMACH = 10.27

DATA SET SYMBOL (NE0017) (EE0021) (EE0022)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 ANES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 ANES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(NE0017) APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

(EE0021) APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

(EE0022) APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

SCALE .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

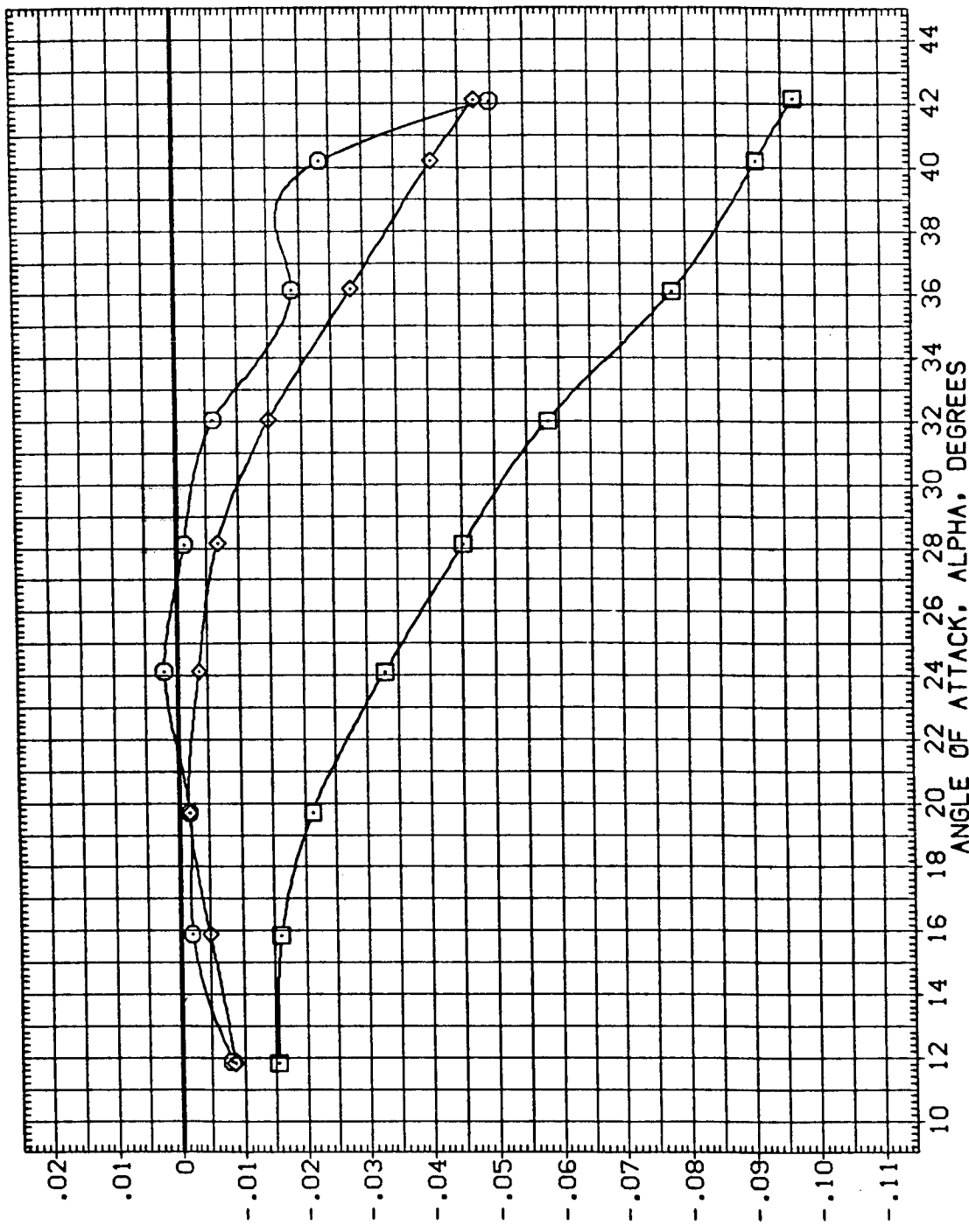
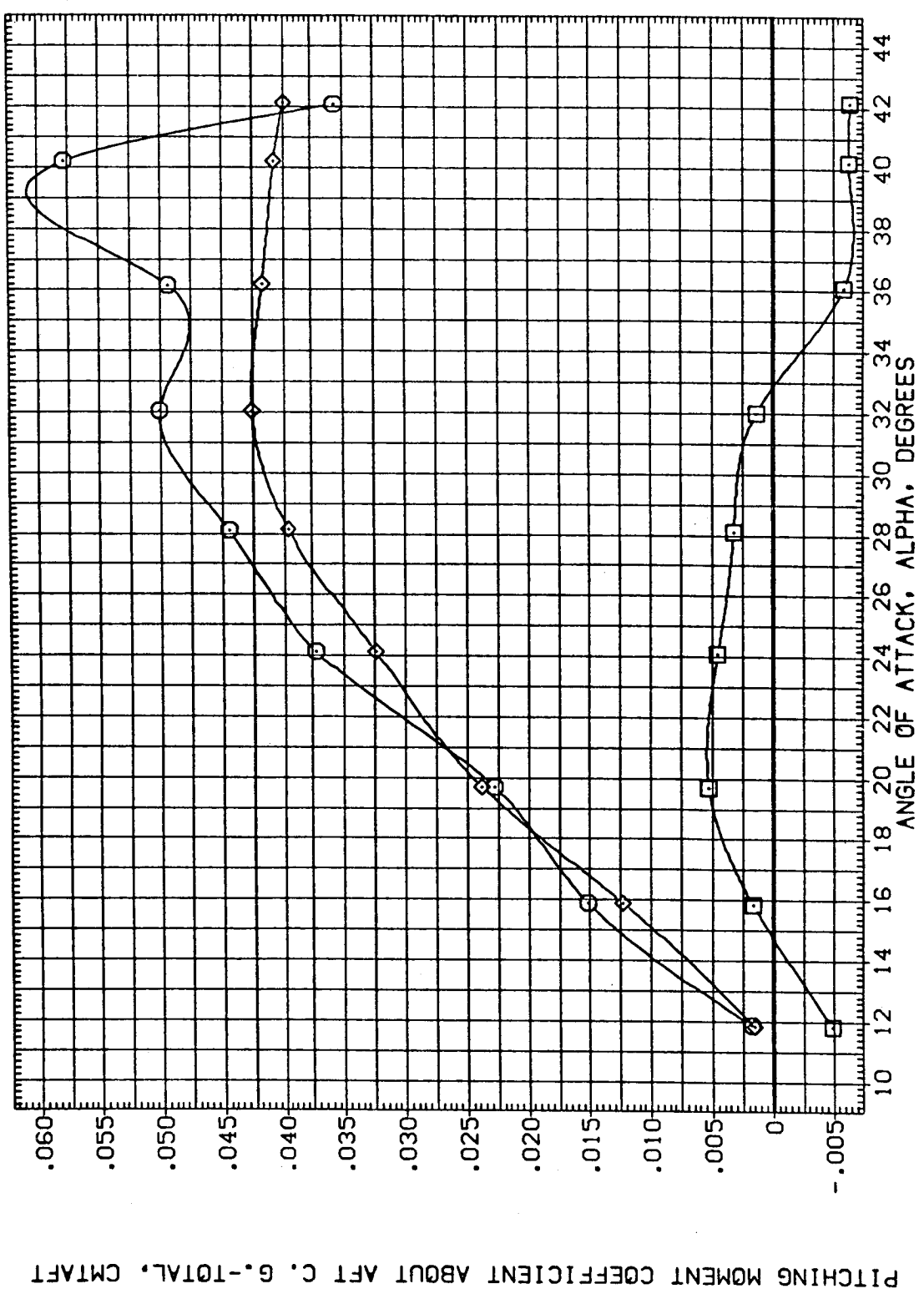


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(NE0017)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT AFT C. G. - TOTAL, CMAFT

FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 305

DATA SET SYMBOL: (NE0017), (EE0021), (EE0022)

CONFIGURATION DESCRIPTION:
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

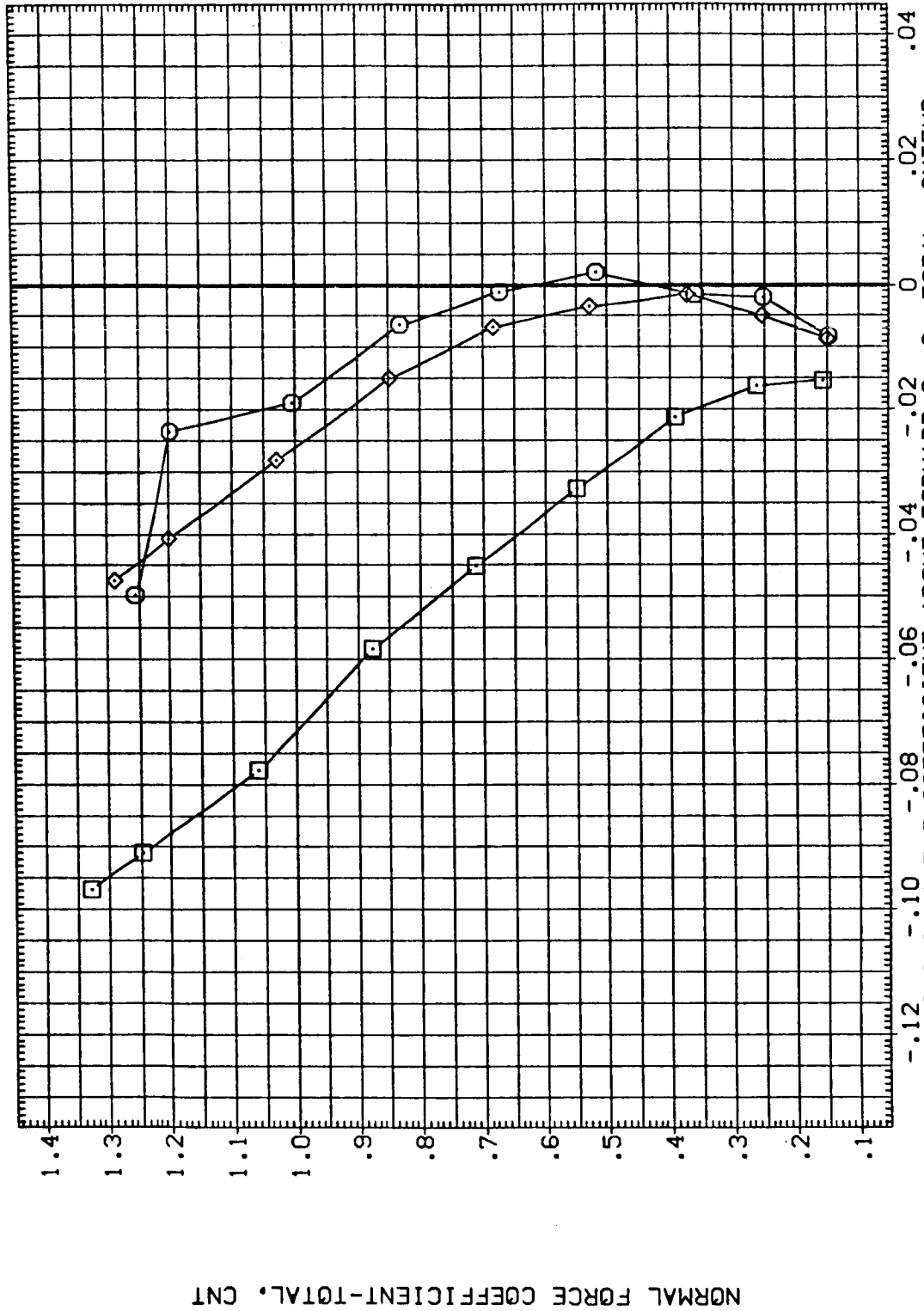
BETA: .000, .000, .000

ELEVATION: .000, .000, .000

BOFLAP: -11.700, 16.300, .000

SPODBRK: 55.000, 55.000, 55.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN. X0
 YMRP: .0000 IN. Y0
 ZMRP: 375.0000 IN. Z0
 SCALE: .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPDRBK	REFERENCE INFORMATION
(NE0017)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.Y0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

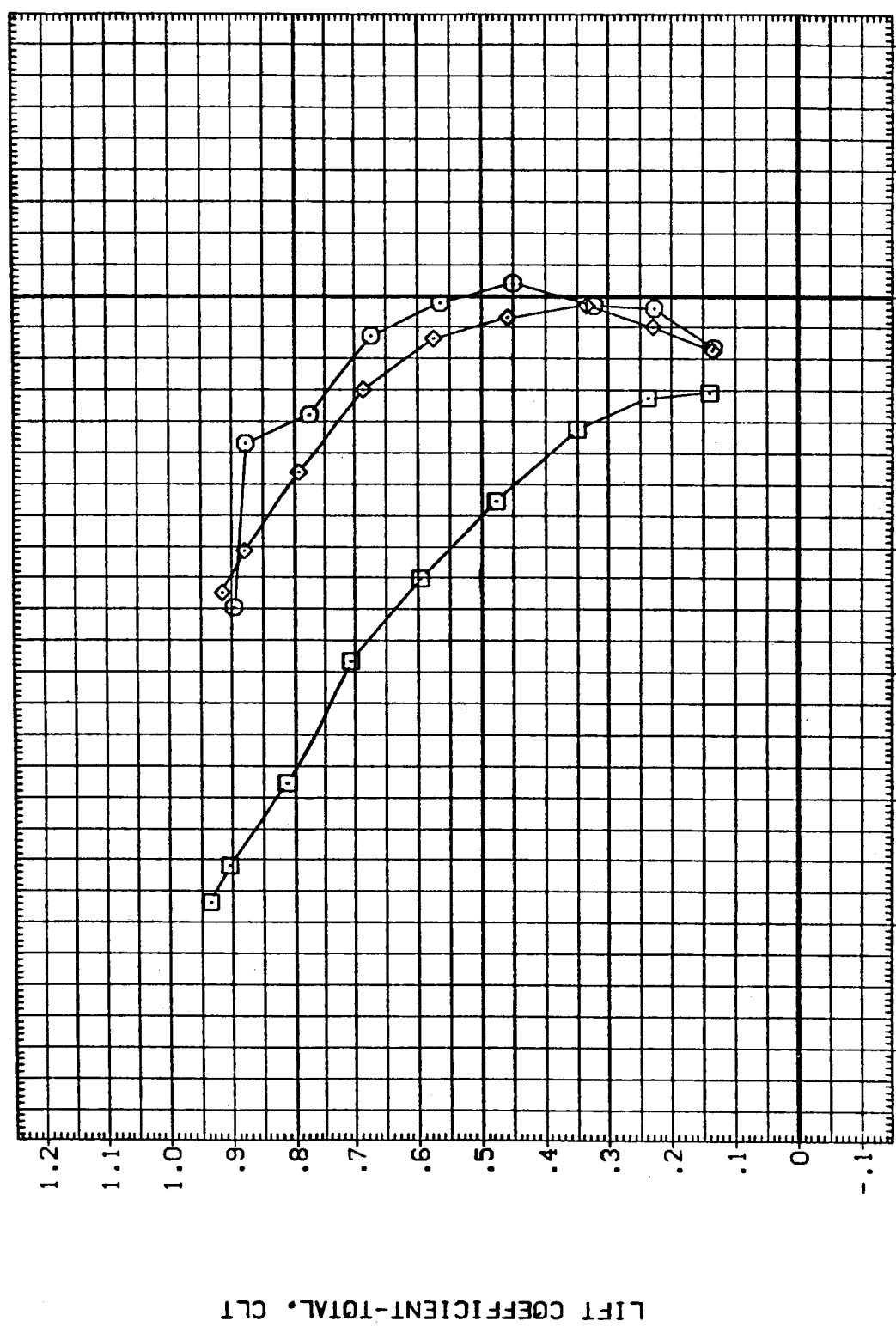


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL (NE0017)
 (EE0021)
 (EE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 16.300
 .000

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

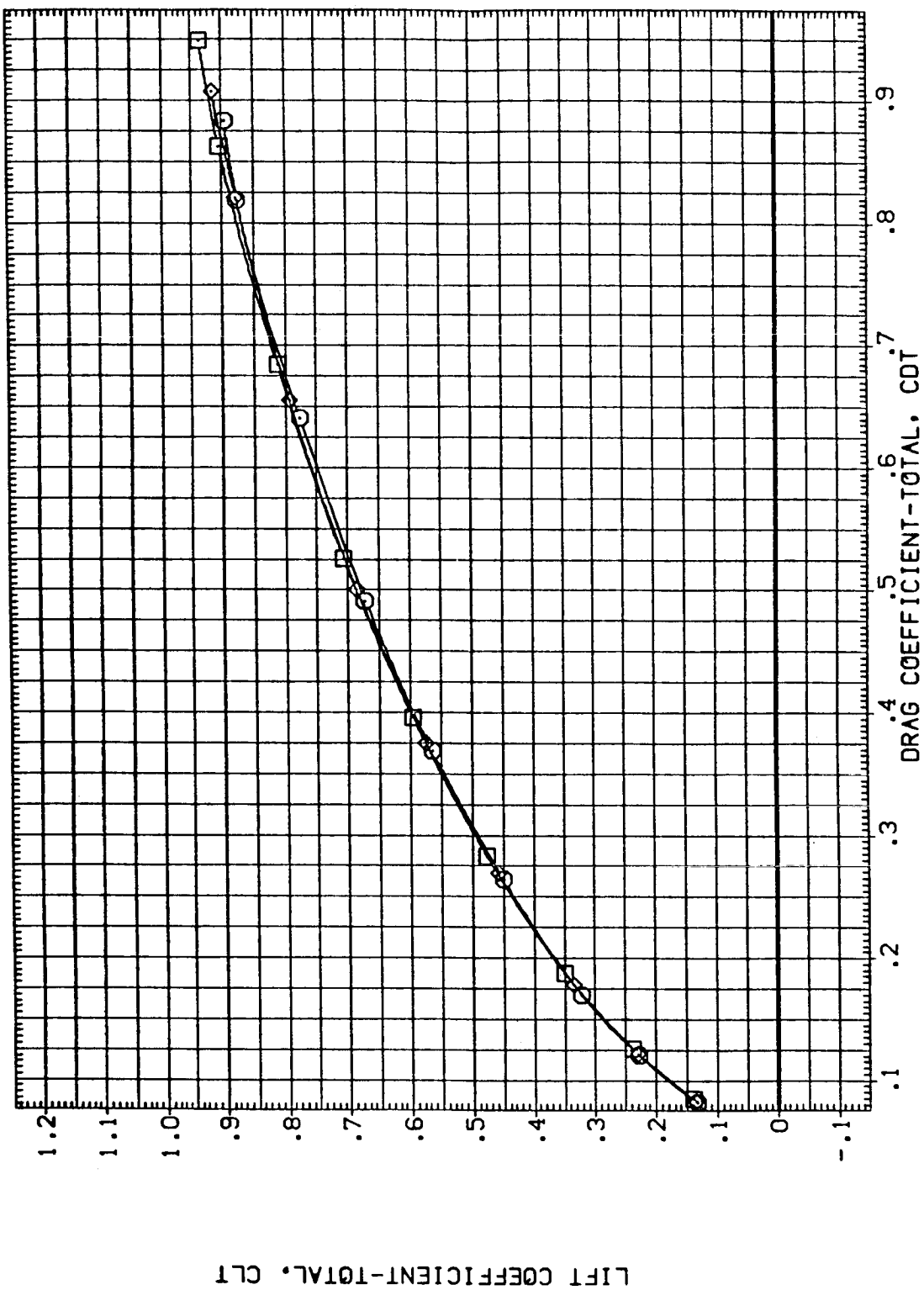


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(NEG017) \square AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(EE0021) \diamond AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(EE0022) \circ AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 16.300 55.000

.000 .000 .000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.8800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0

SCALE .0150

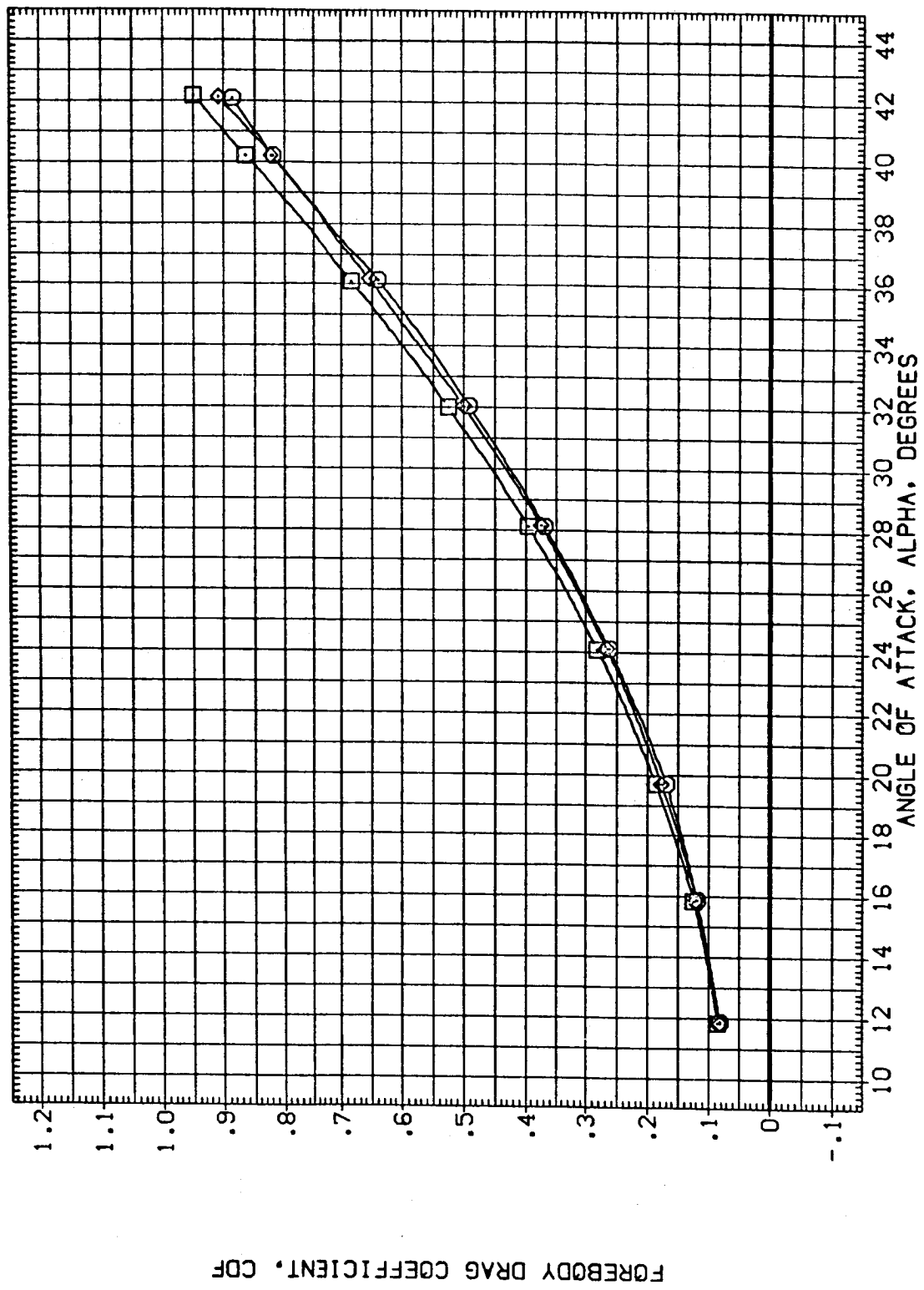


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

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DATA SET SYMBOL
 (NE0017)
 (EE0021)
 (EE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 16.300
 .000

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

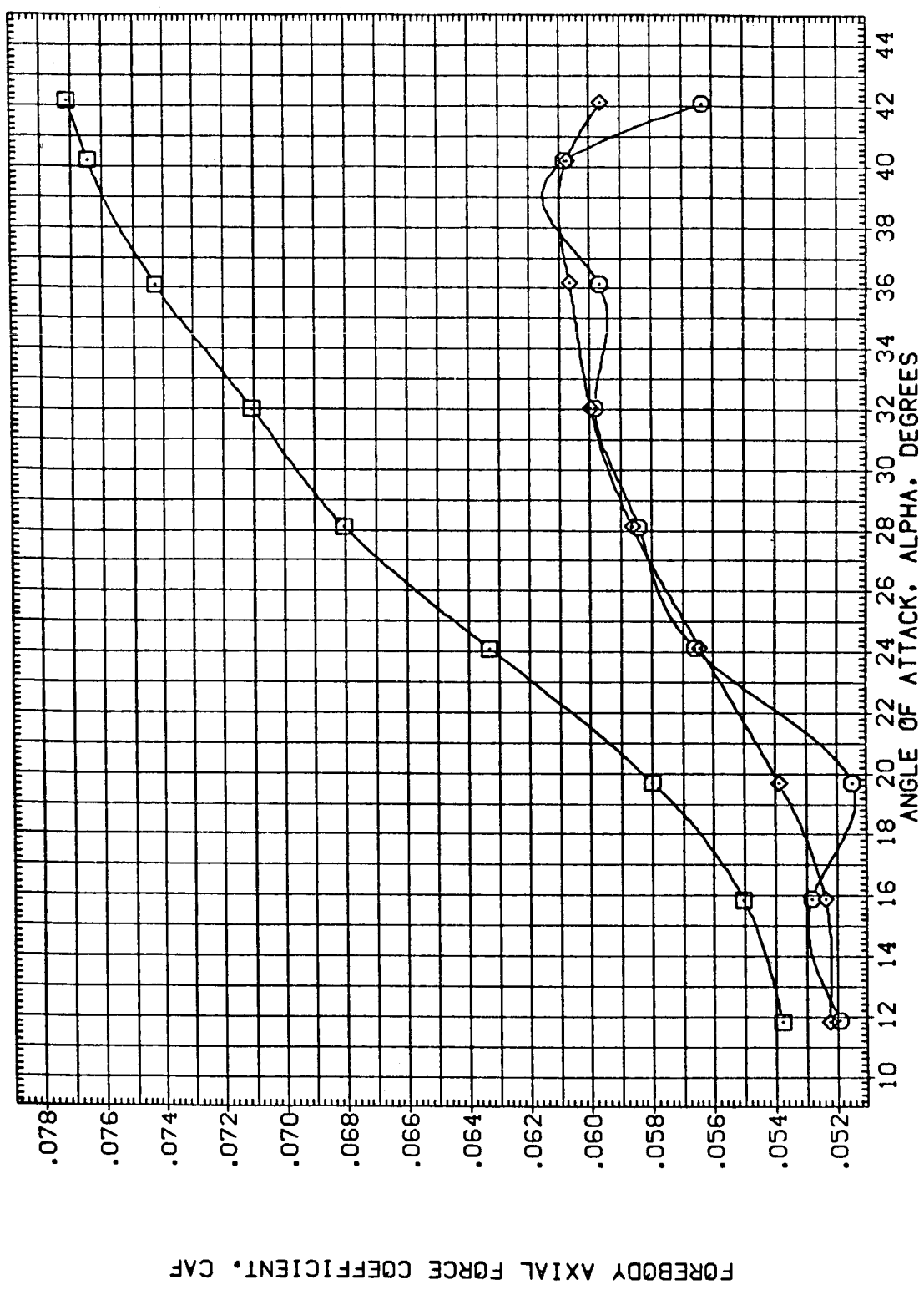


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (M)MACH = 10.27
 PAGE 310

BASE AXIAL FORCE COEFFICIENT, CAB

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(NE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN. X0
						YMRP 1076.7000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE 375.0000
						.0150

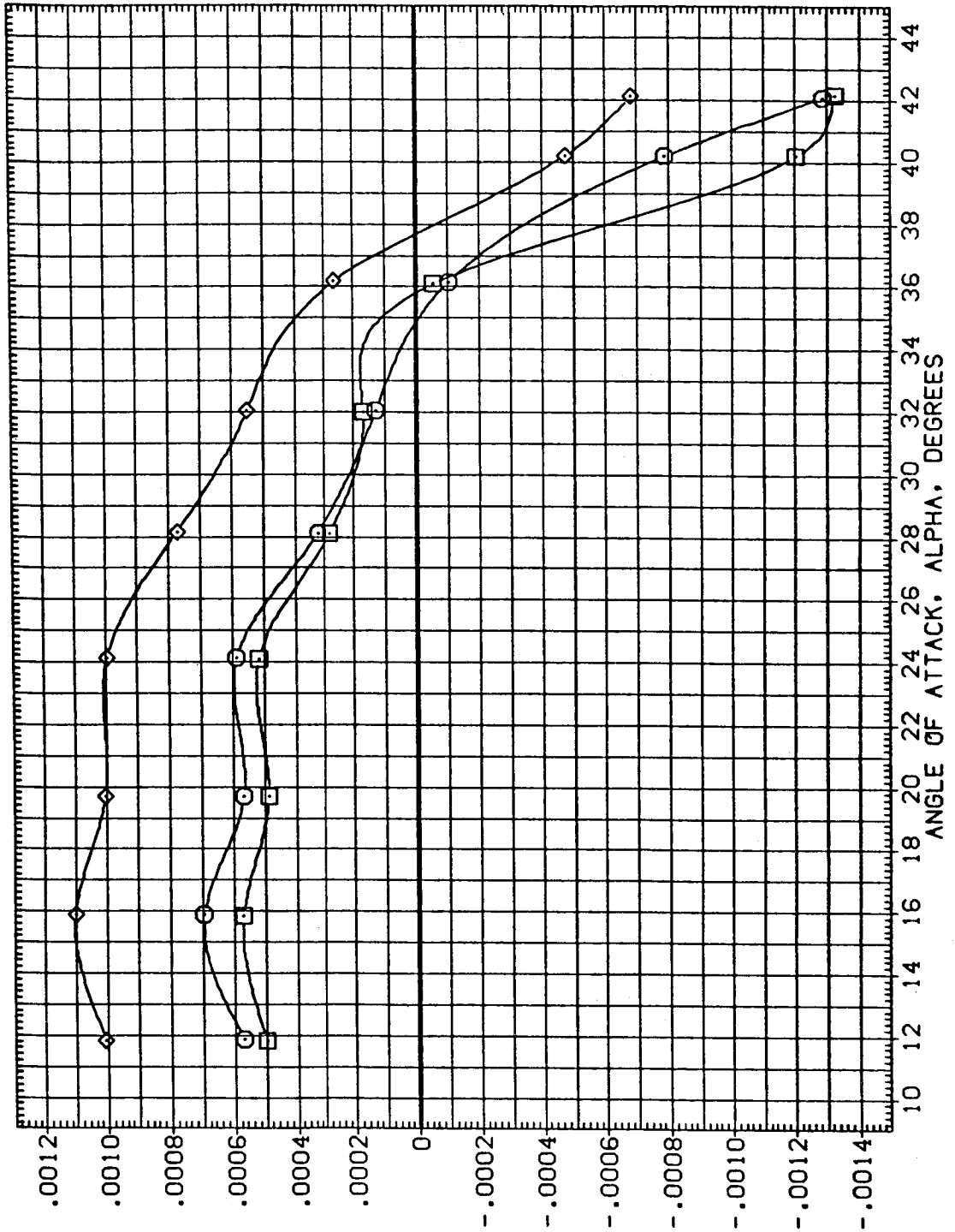


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (LEQ017) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24-DUMMY STING)
 (BEO021) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24-DUMMY STING)
 (BEO022) ◻ AMES 3.5-190 0A98 (011-M7+M14-N24-DUMMY STING)

BETA ELEVON BOFLAP SPDBRK
 .000 .000 -11.700 55.000
 .000 .000 16.300 55.000
 .000 .000 .000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

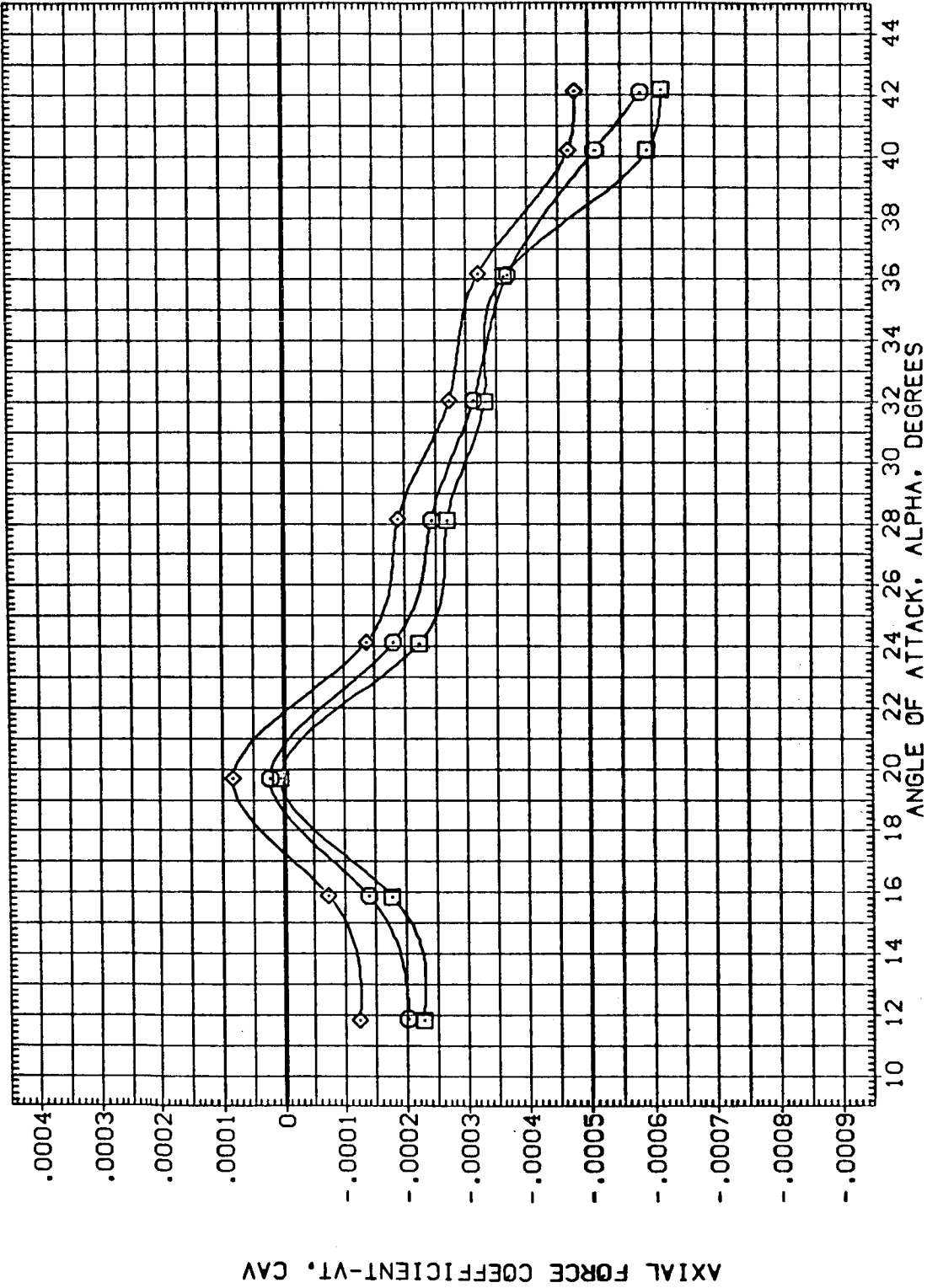


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 312

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BODYFLAP SPODBRK REFERENCE INFORMATION

(LE0017) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(BE0021) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) .000 .000 16.300 55.000 LREF 474.8000 IN.

(BE0022) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) .000 .000 .000 55.000 BRREF 936.6800 IN. X9
 XMRP 1076.7000 IN. Y9
 YMRP .0000 IN. Z9
 ZMRP 375.0000 IN. Z0
 SCALE .0150

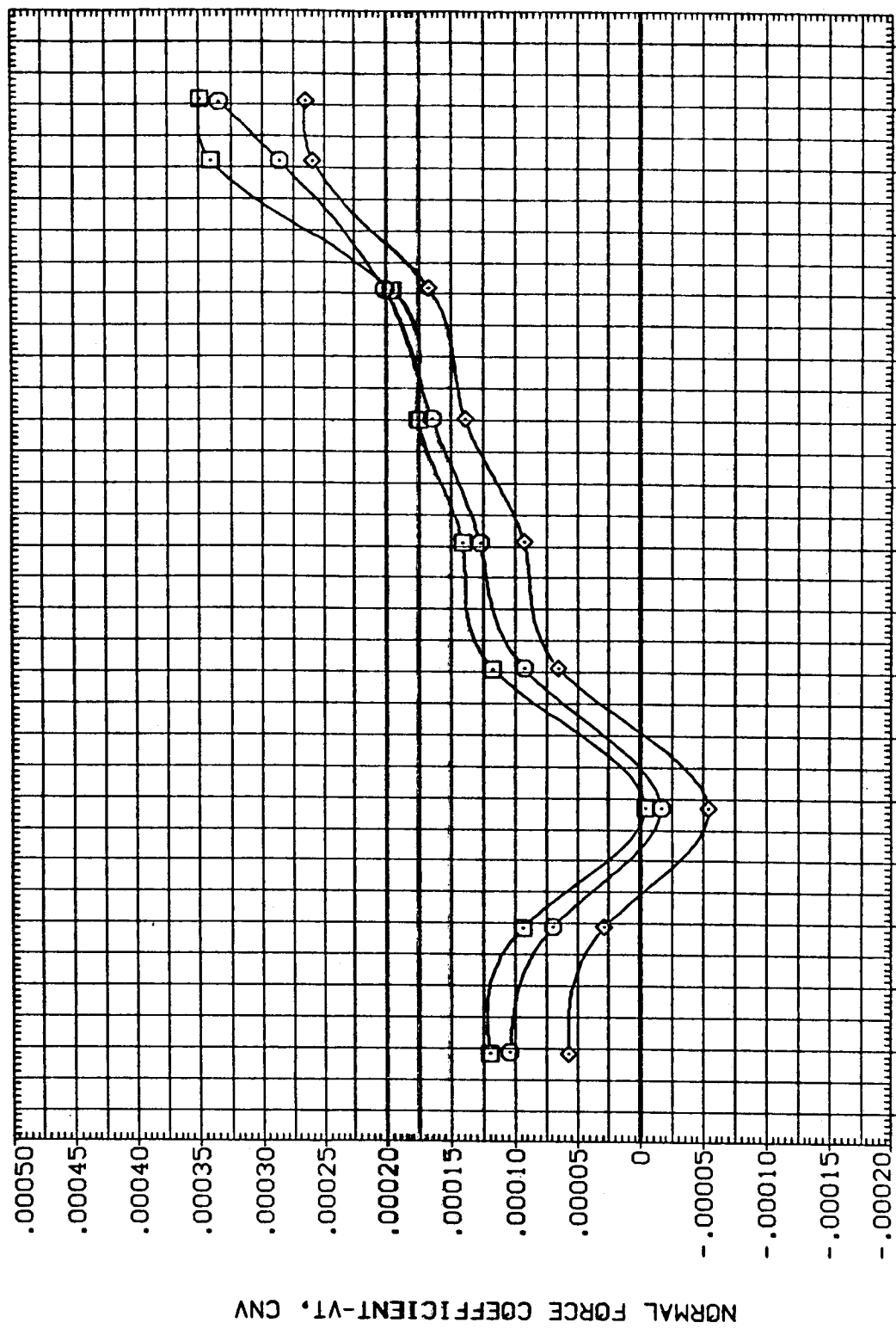


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 313

DATA SET SYMBOL (LEG0017) (BE0021) (BE0022)

CONFIGURATION DESCRIPTION
 APES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)
 APES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)
 APES 3.5-190 0/A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 16.300
 .000

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

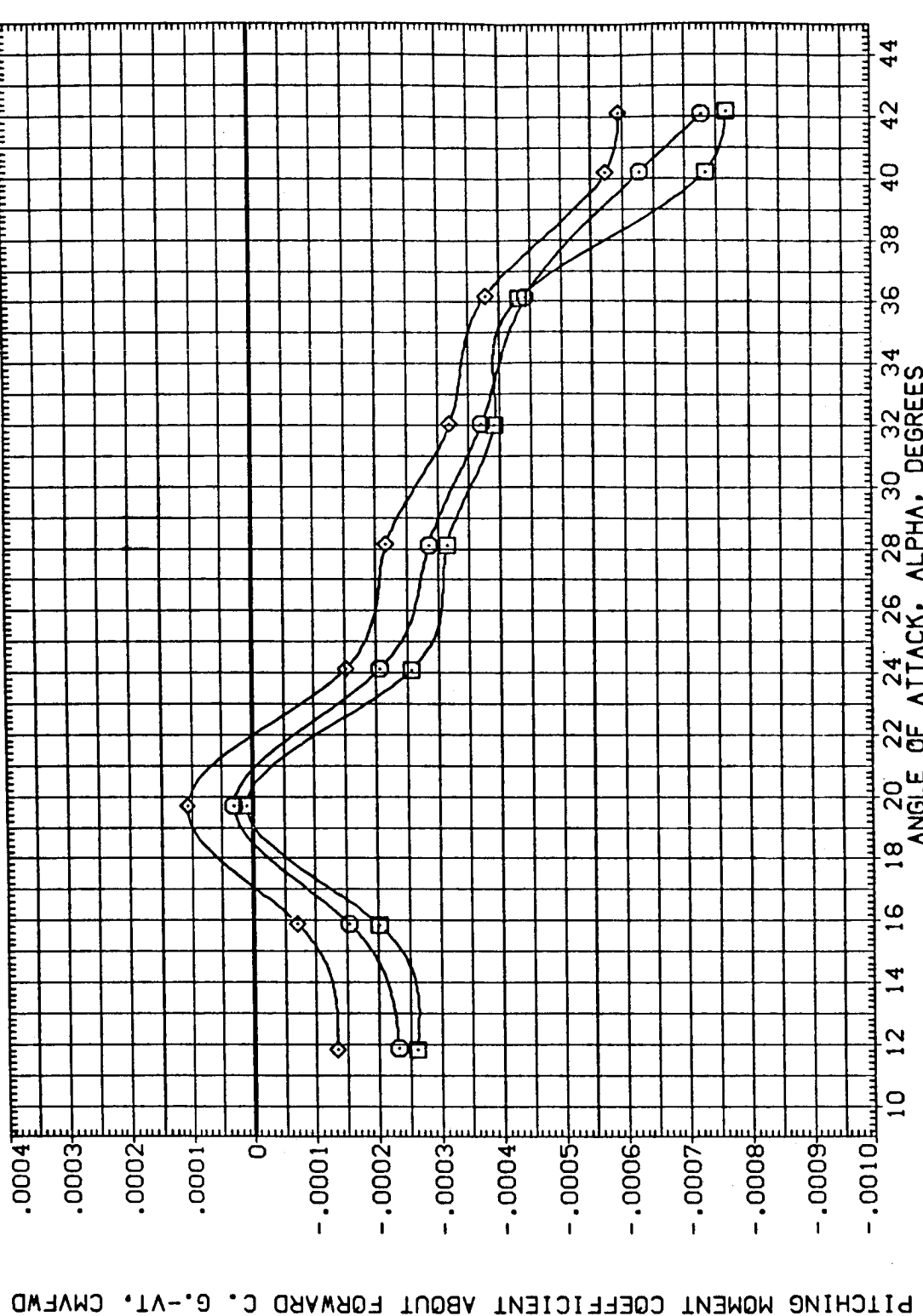


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVATION BODYFLAP SPODBRK REFERENCE INFORMATION

(LE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.

(BE0021) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 16.300 55.000 LREF 474.8000 IN.

(BE0022) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 .000 .000 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

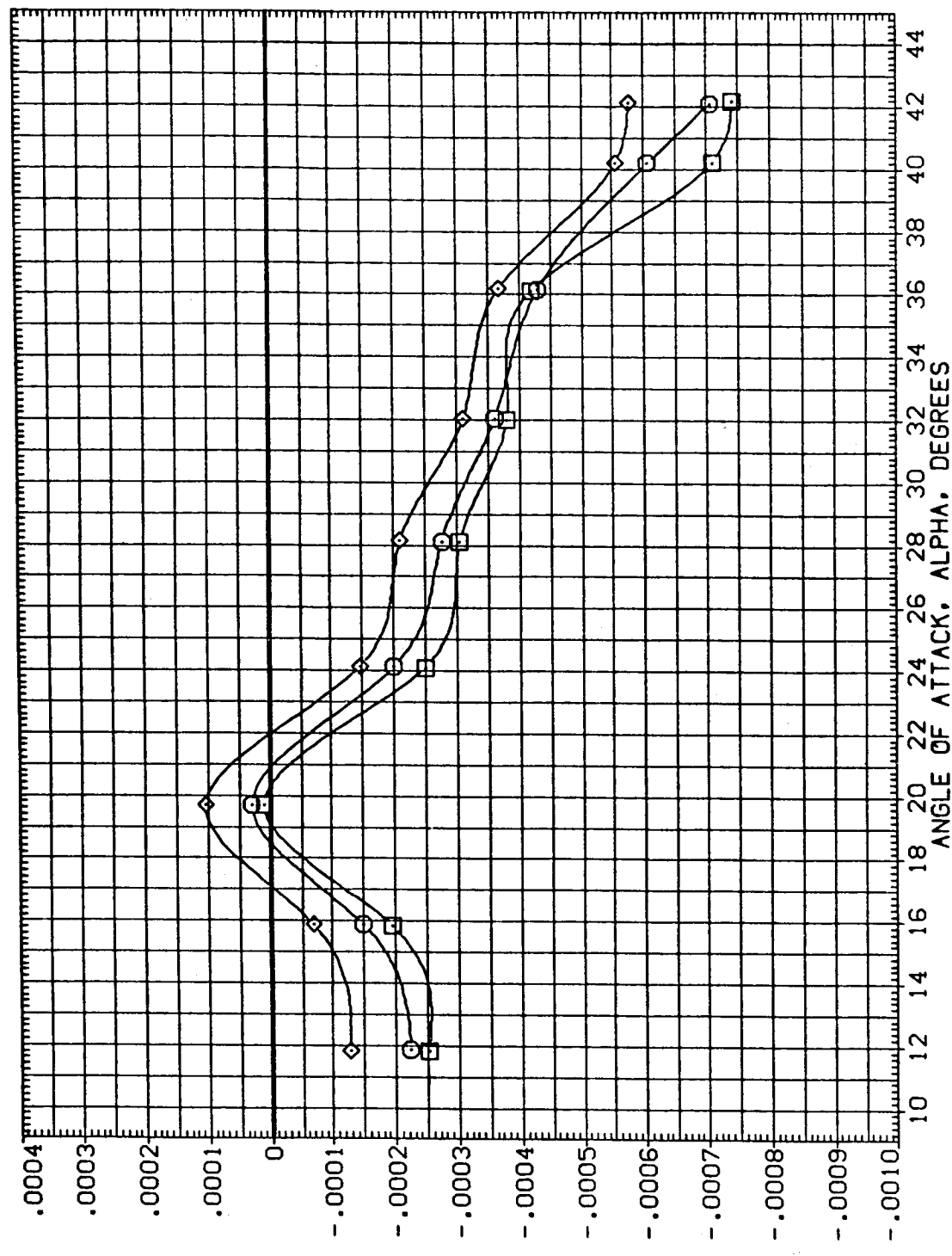
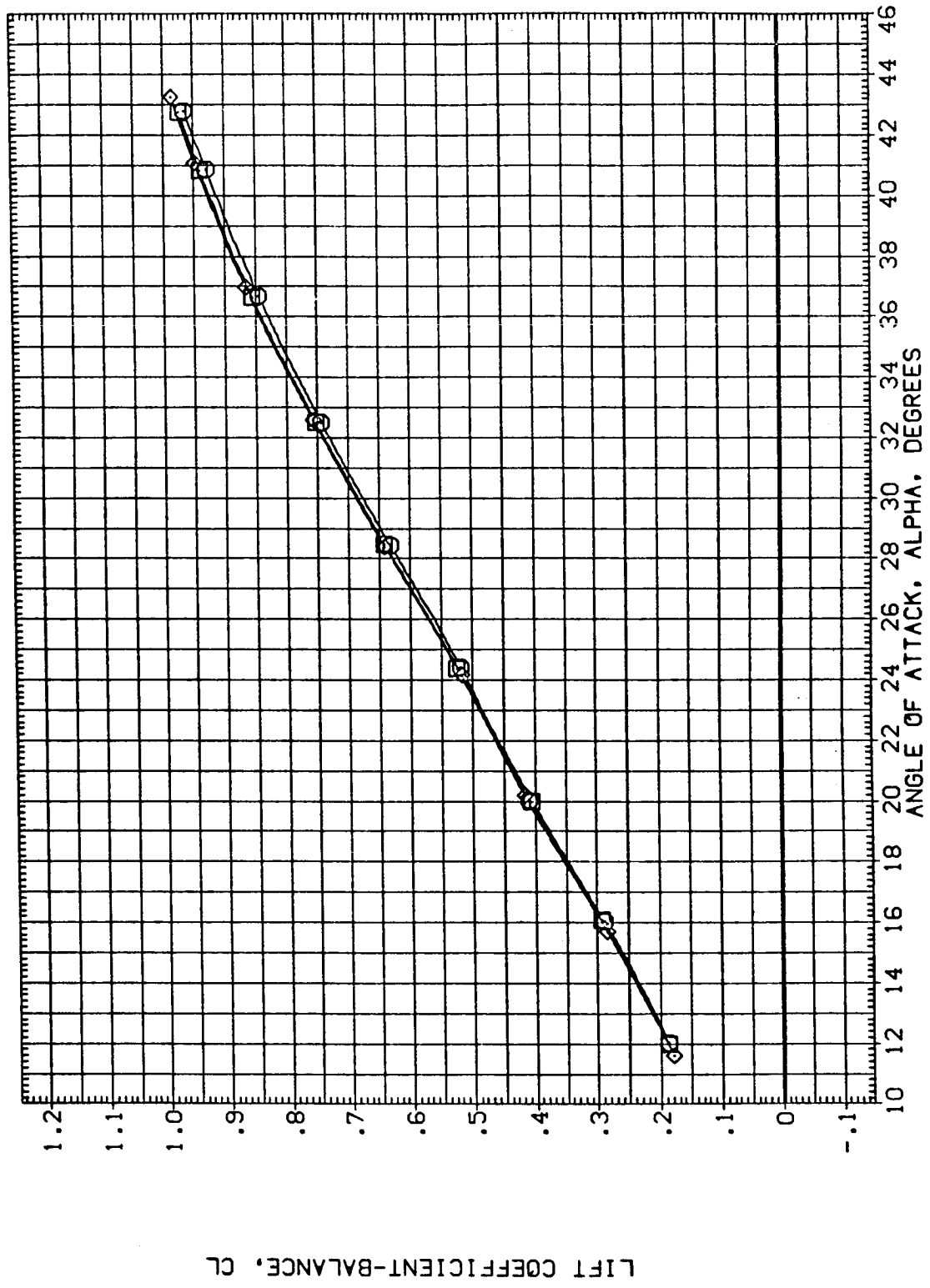


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.
 (A)MACH = 10.27 PAGE 315

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0001) AMES 3.5-190 0A98 (011-M7+M14)
 (CE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (CE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON 8DFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(CE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6900 IN.
						YMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

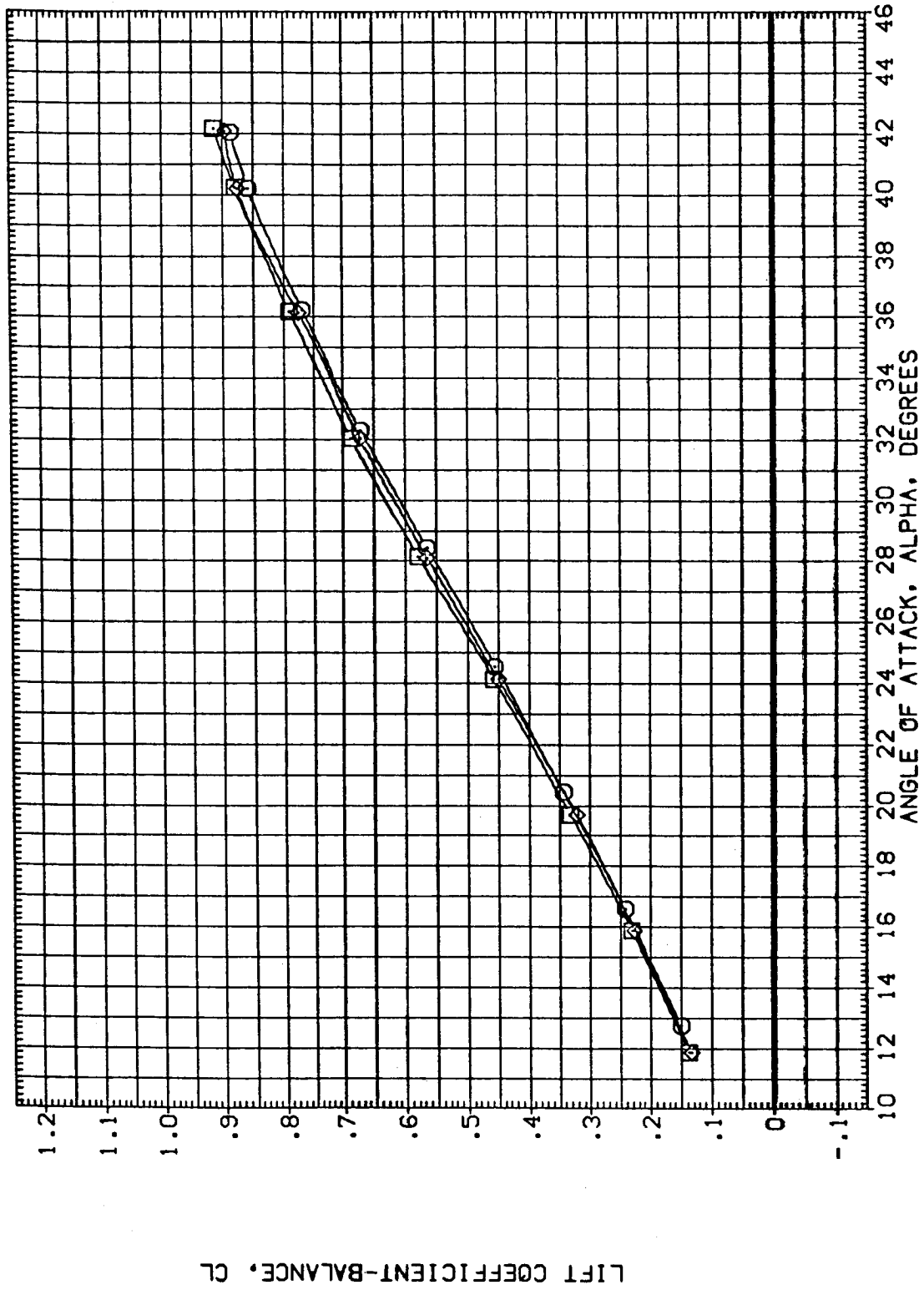


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
 (B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CEG001) AMES 3.5-190 GA98 (011-M7+H14)
 (CEG009) AMES 3.5-190 GA98 (011-M7+H14-N24)
 (CEG017) AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

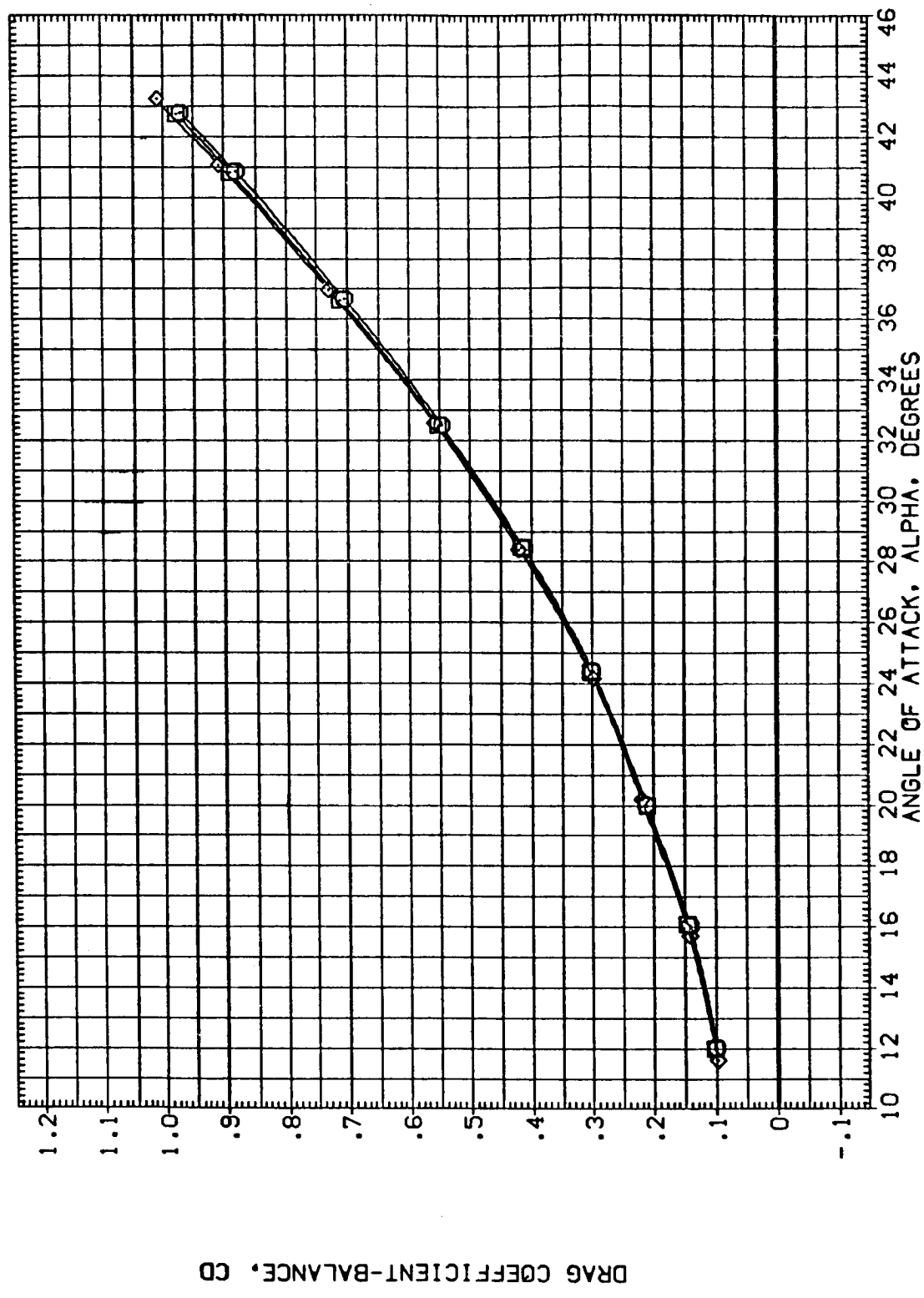


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL
 (CE0001)
 (CE0009)
 (CE0017)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

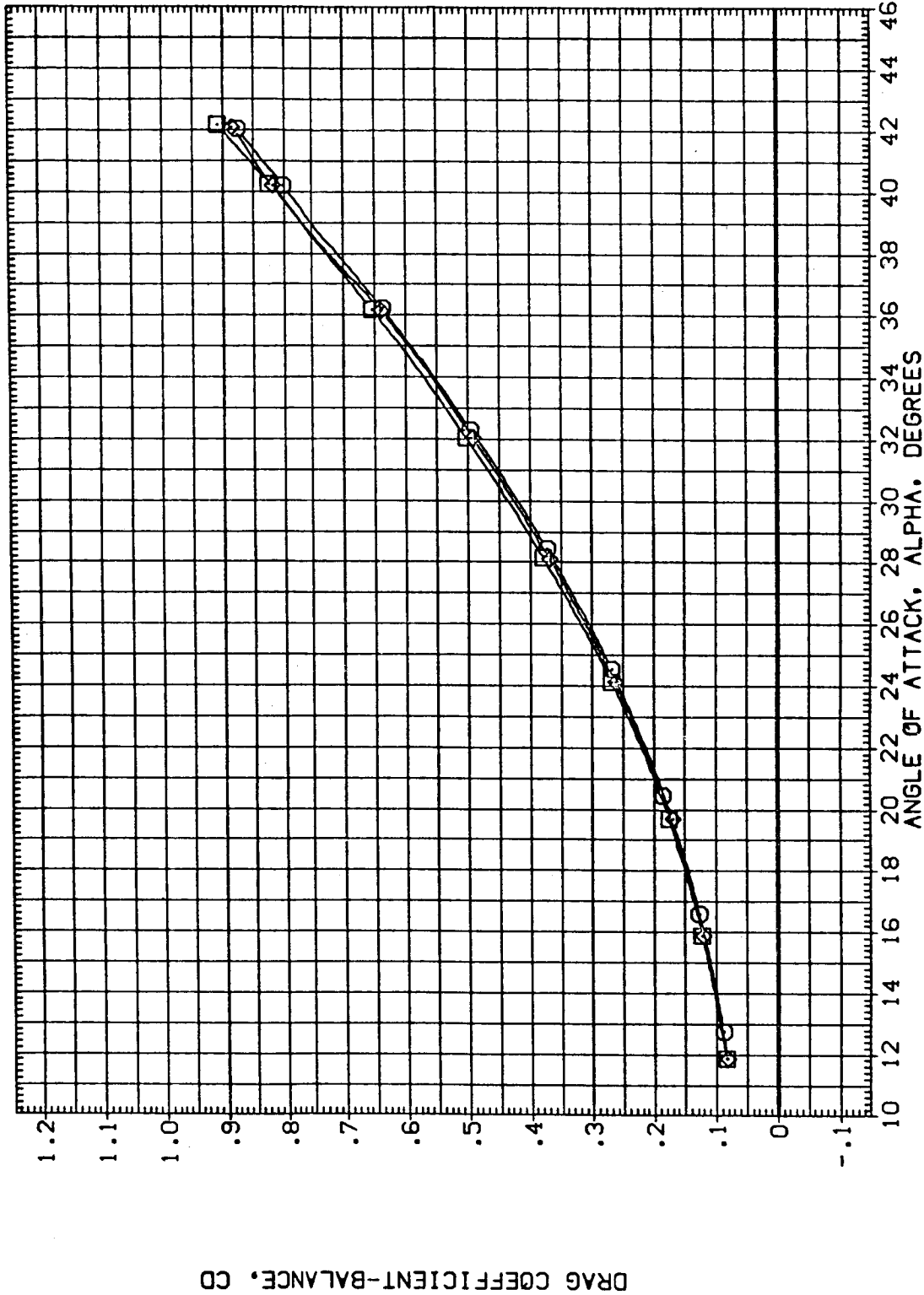
BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DRAG COEFFICIENT-BALANCE, CD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (CE0001)
 (CE0008)
 (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0

SCALE .0150

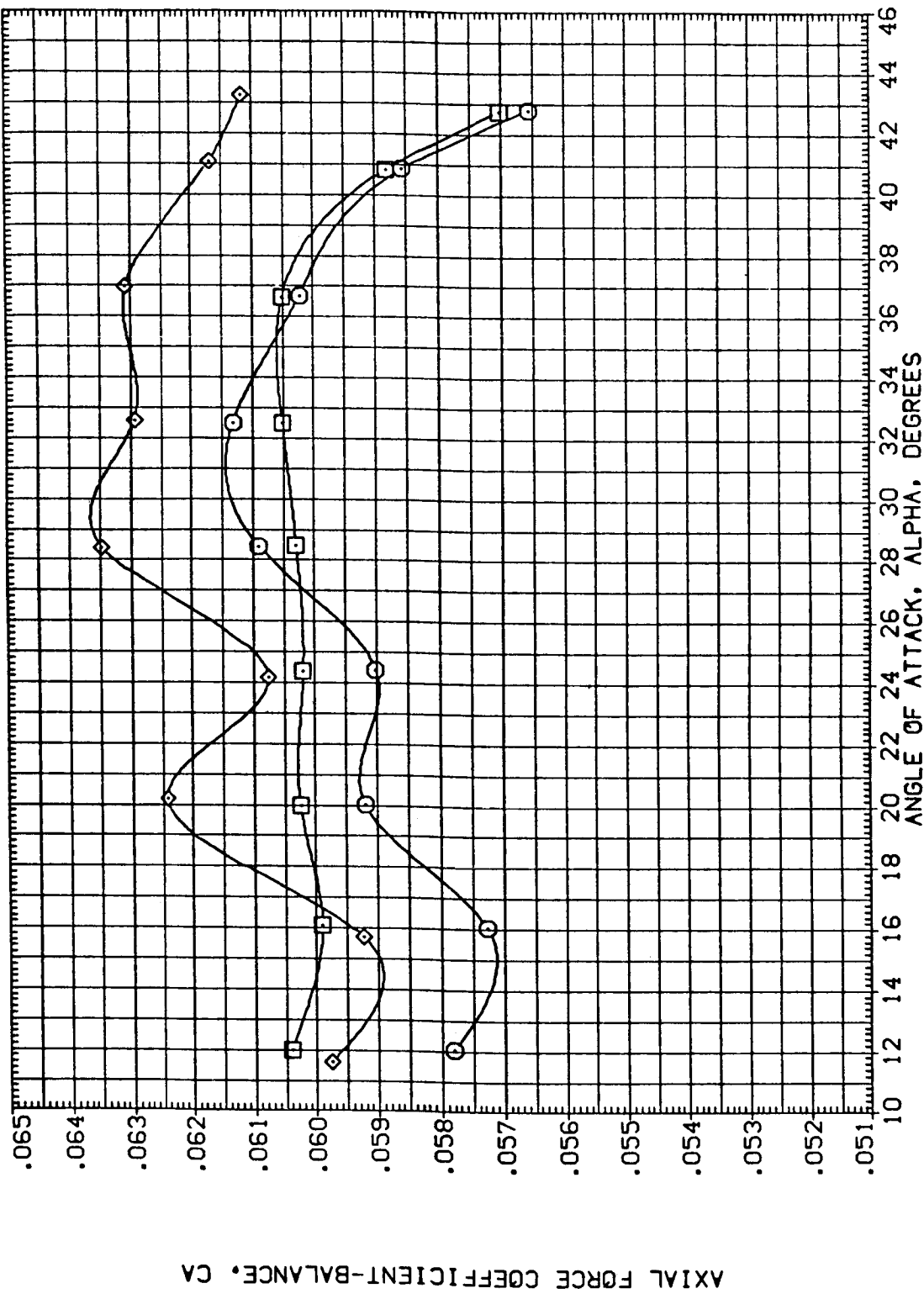


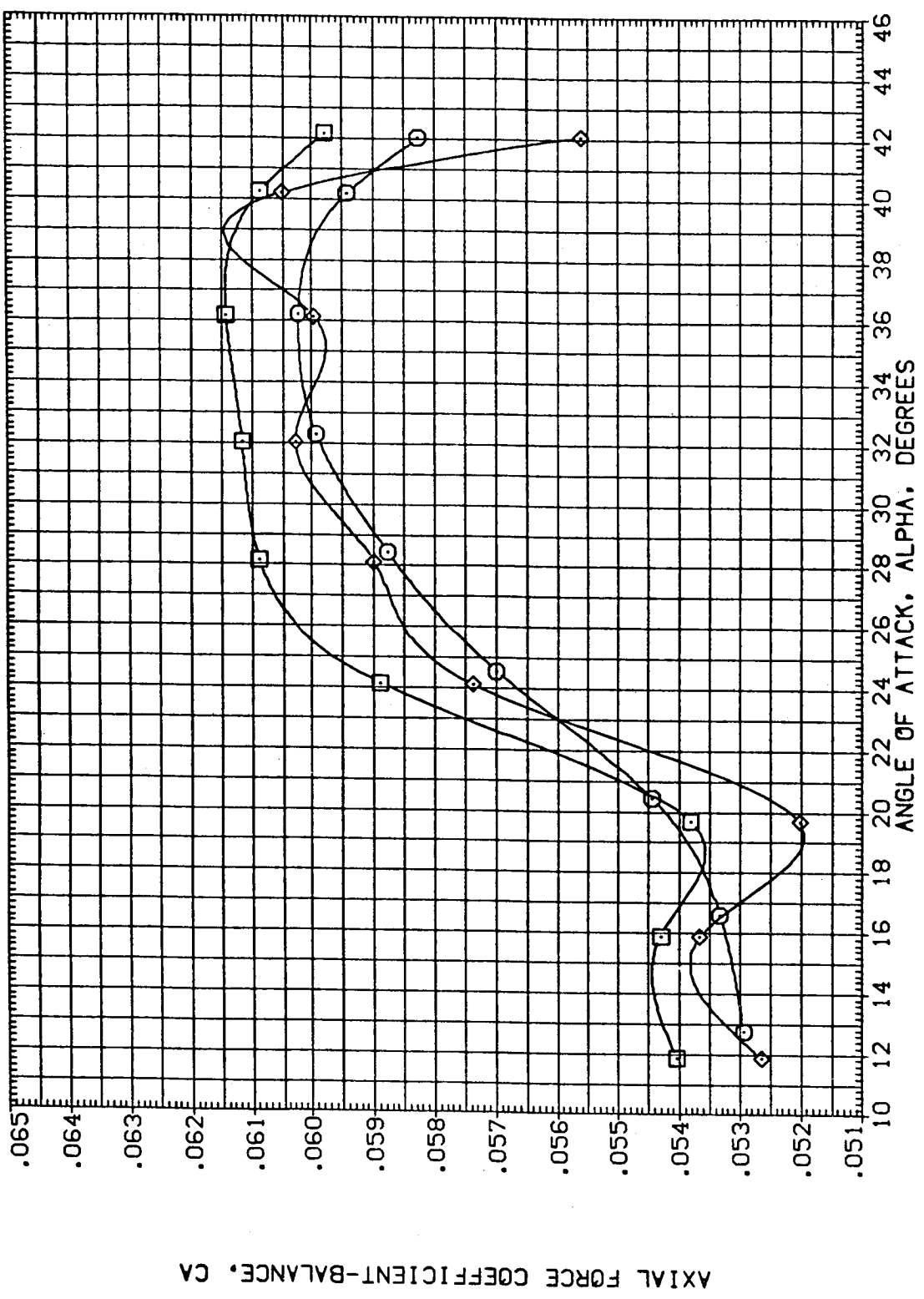
FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BDF/LAP SPOBRK REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDF/LAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 DAS8 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0001)	AMES 3.5-190 CAS8 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000	SQ.FT.
(CE0009)	AMES 3.5-190 CAS8 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000	IN.
(CE0017)	AMES 3.5-190 CAS8 (011-M7+M14-N24+DUMPPY STING)	.000	.000	-11.700	55.000	BREF 936.8800	IN.
						YMRF 1076.7000	IN. X0
						ZMRF .0000	IN. Y0
						SCALE 375.0000	IN. Z0

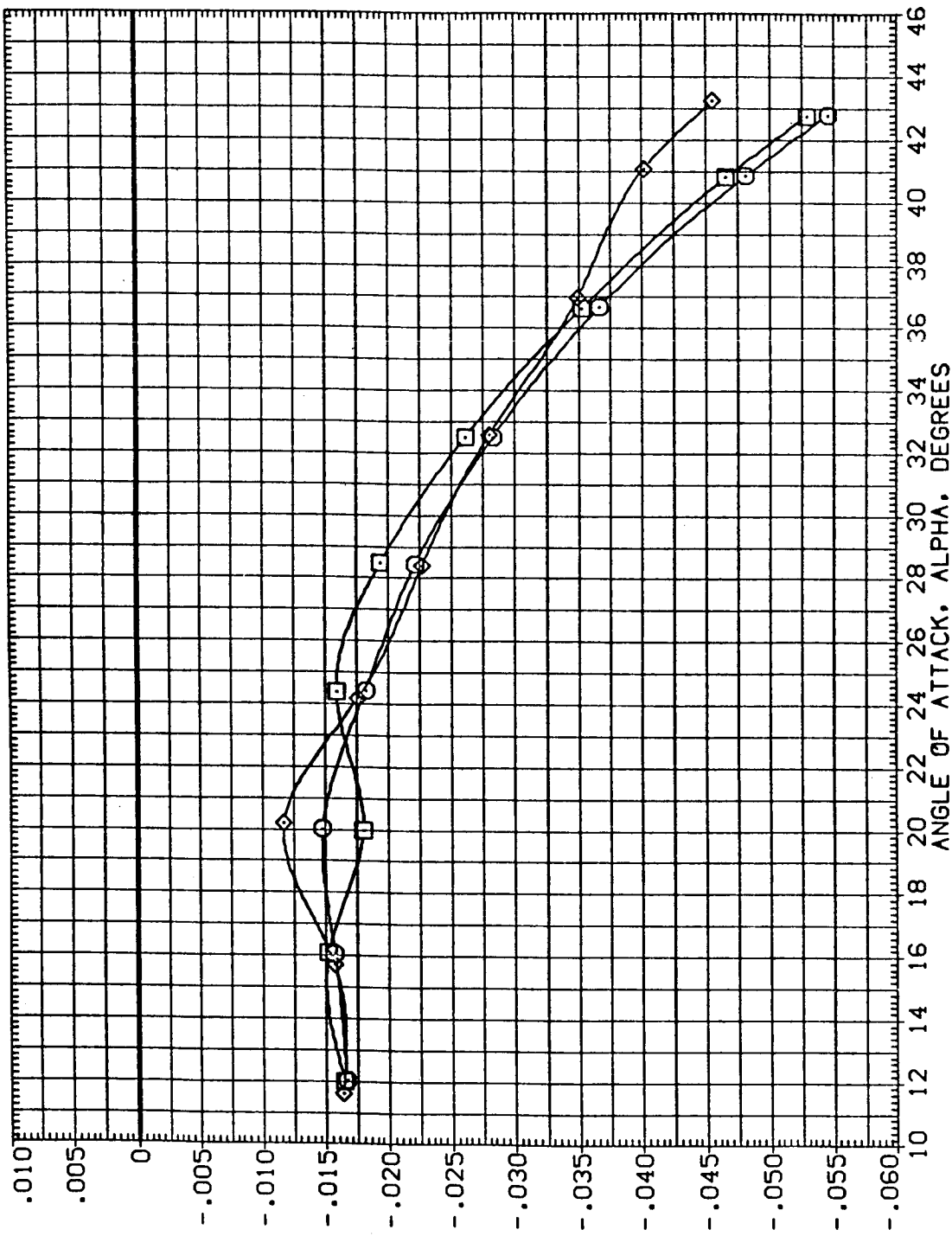


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001)	AMES 3.5-190	011-M7+M14	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0009)	AMES 3.5-190	011-M7+M14-N24	.000	.000	-11.700	55.000	SREF 2690.0000
(CE0017)	AMES 3.5-190	011-M7+M14-N24+DUMMY STING	.000	.000	-11.700	55.000	LREF 474.8000
			.000	.000	-11.700	55.000	BREF 936.6800
							XMRP 1076.7000
							YMRP .0000
							ZMRP .0000
							SCALE .0150
							50.FT.
							IN.
							IN.
							IN. X0
							IN. Y0
							IN. Z0

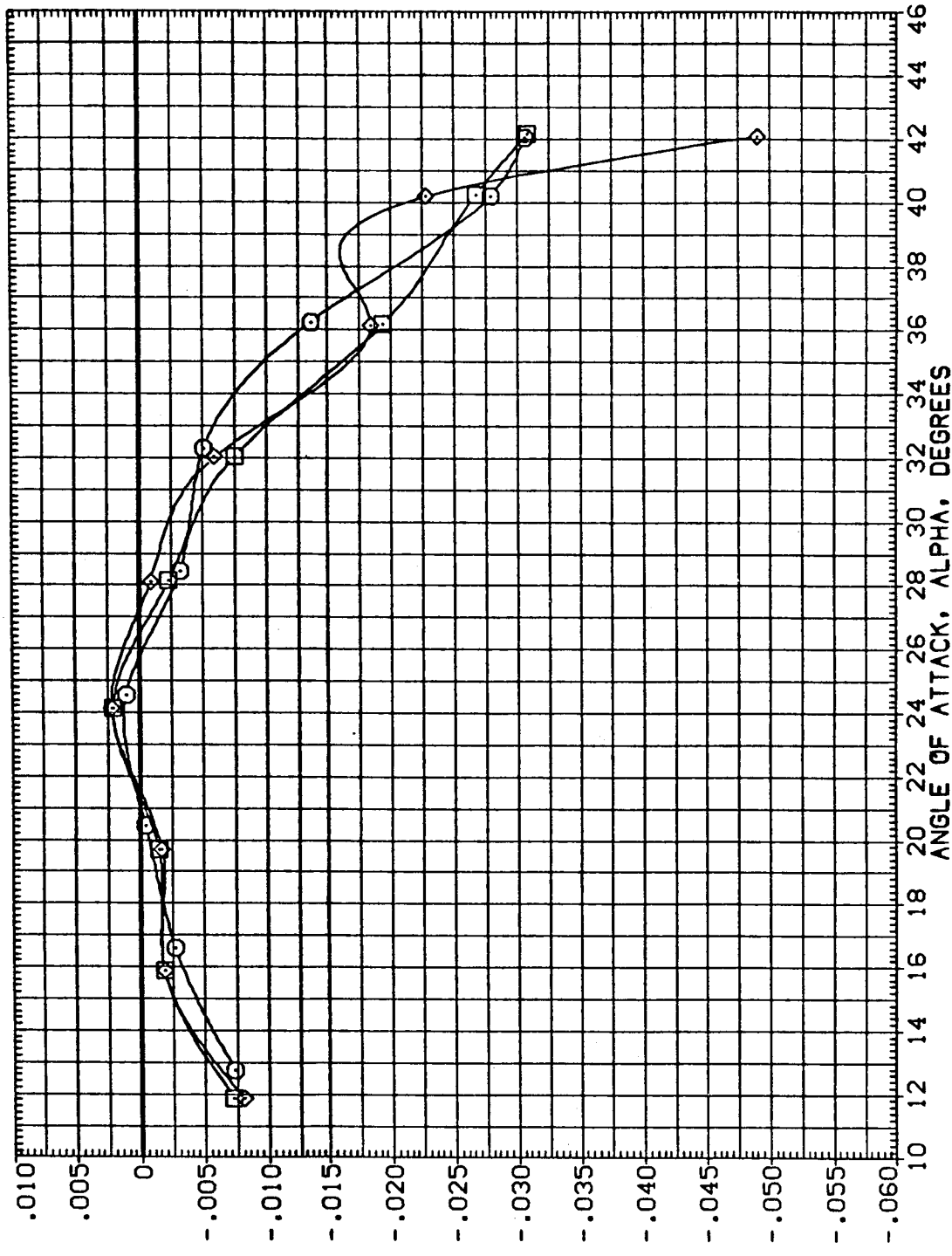


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (CE0001)
 (CE0009)
 (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 D/98 (011-M7+M14)
 AMES 3.5-190 D/98 (011-M7+M14-N24)
 AMES 3.5-190 D/98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

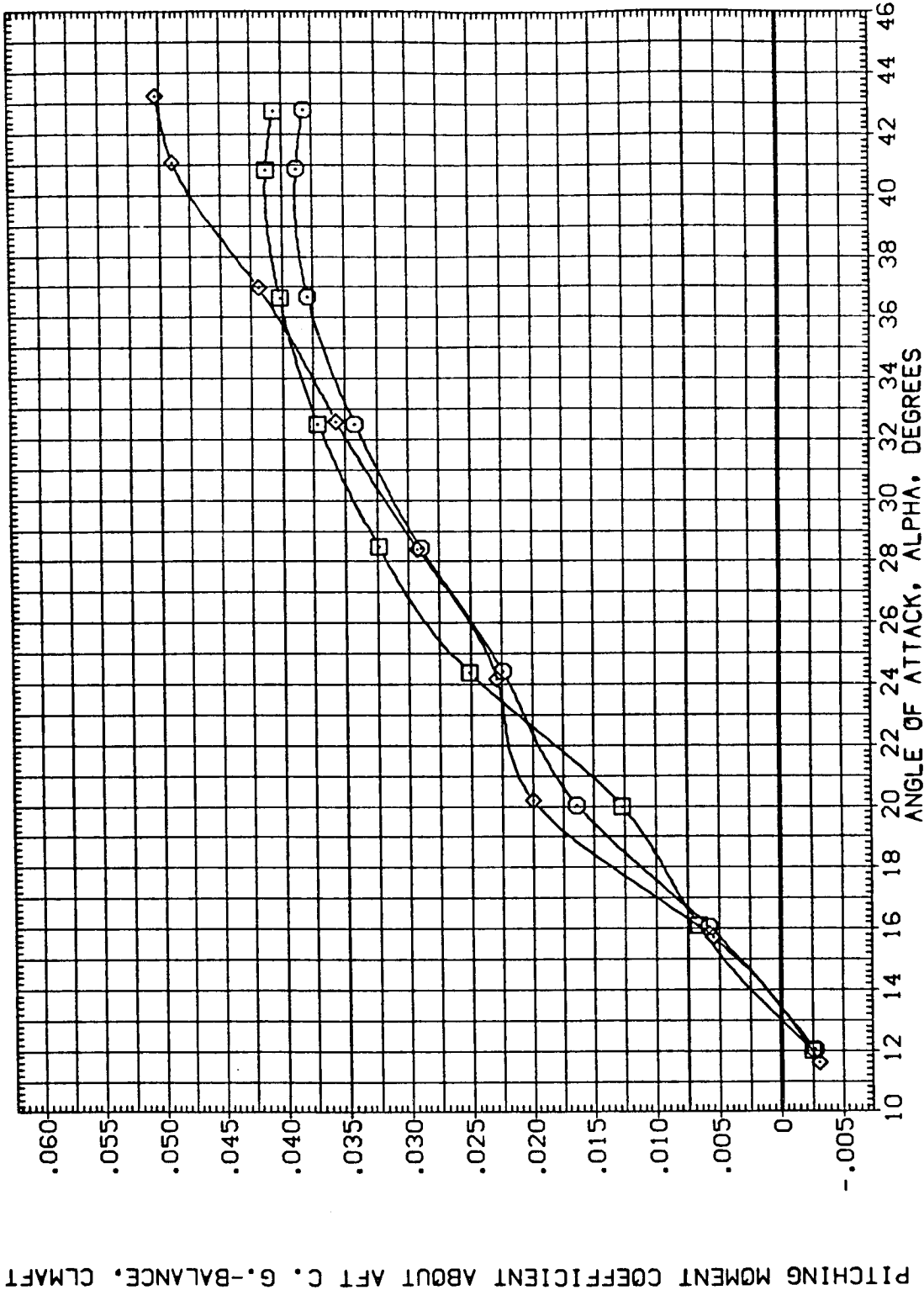


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(CEG001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000	SQ.FT.
(CEG009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000	IN.
(CEG017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800	IN. XD
						XMRP 1076.7000	IN. YD
						YMRP .0000	IN. ZD
						ZMRP 375.0000	IN. ZD
						SCALE .0150	

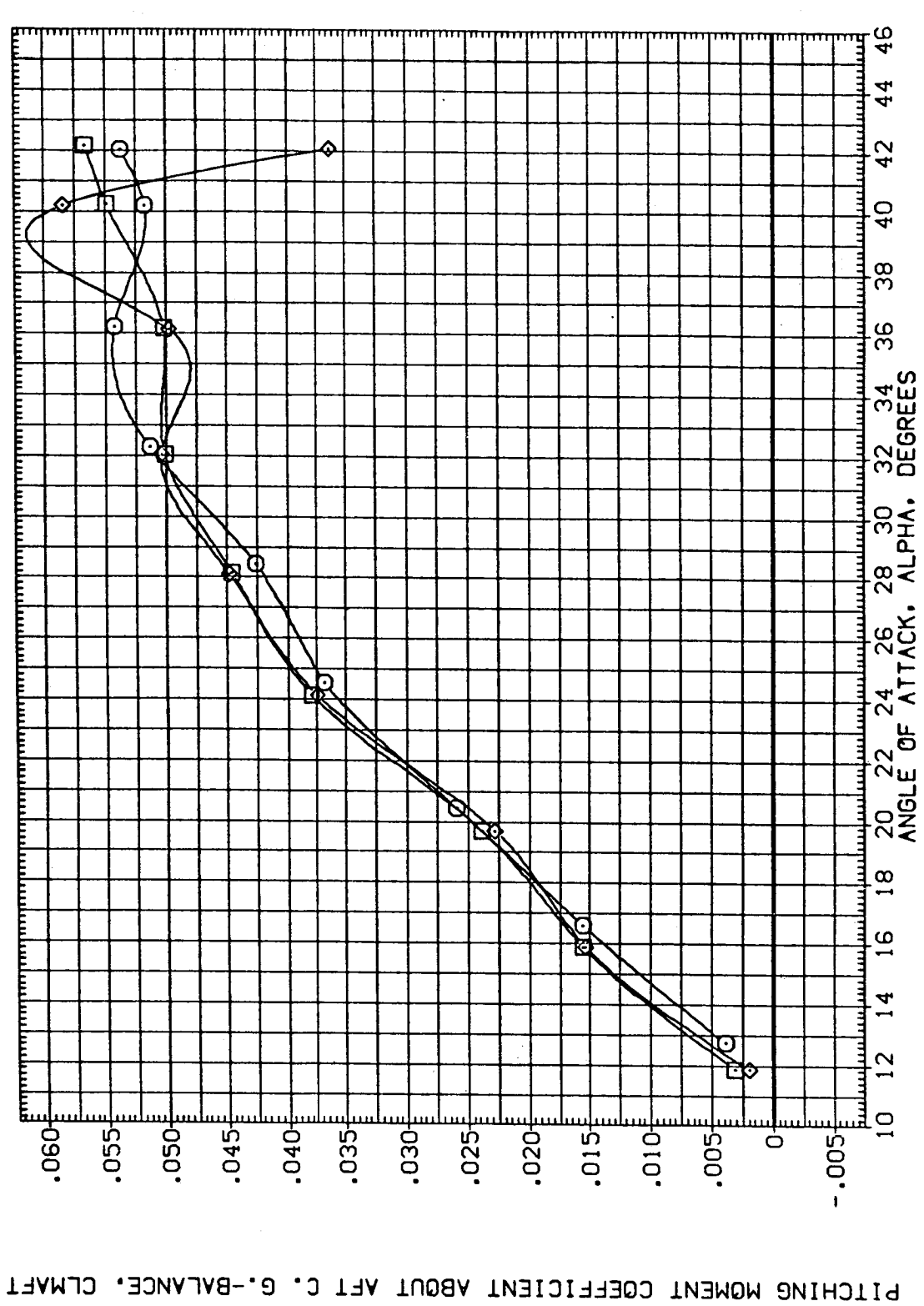


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (CE0001) (CE0009) (CE0017)

CONFIGURATION DESCRIPTION
 APES 3.5-190 0A98 (011-M7-M14)
 APES 3.5-190 0A98 (011-M7-M14-N24)
 APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000 .000
 ELEVON .000 .000 .000
 BOFLAP -11.700 -11.700 -11.700
 SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Z0
 ZMRP 375.0000
 SCALE .0150

NORMAL FORCE COEFFICIENT-BALANCE, CN

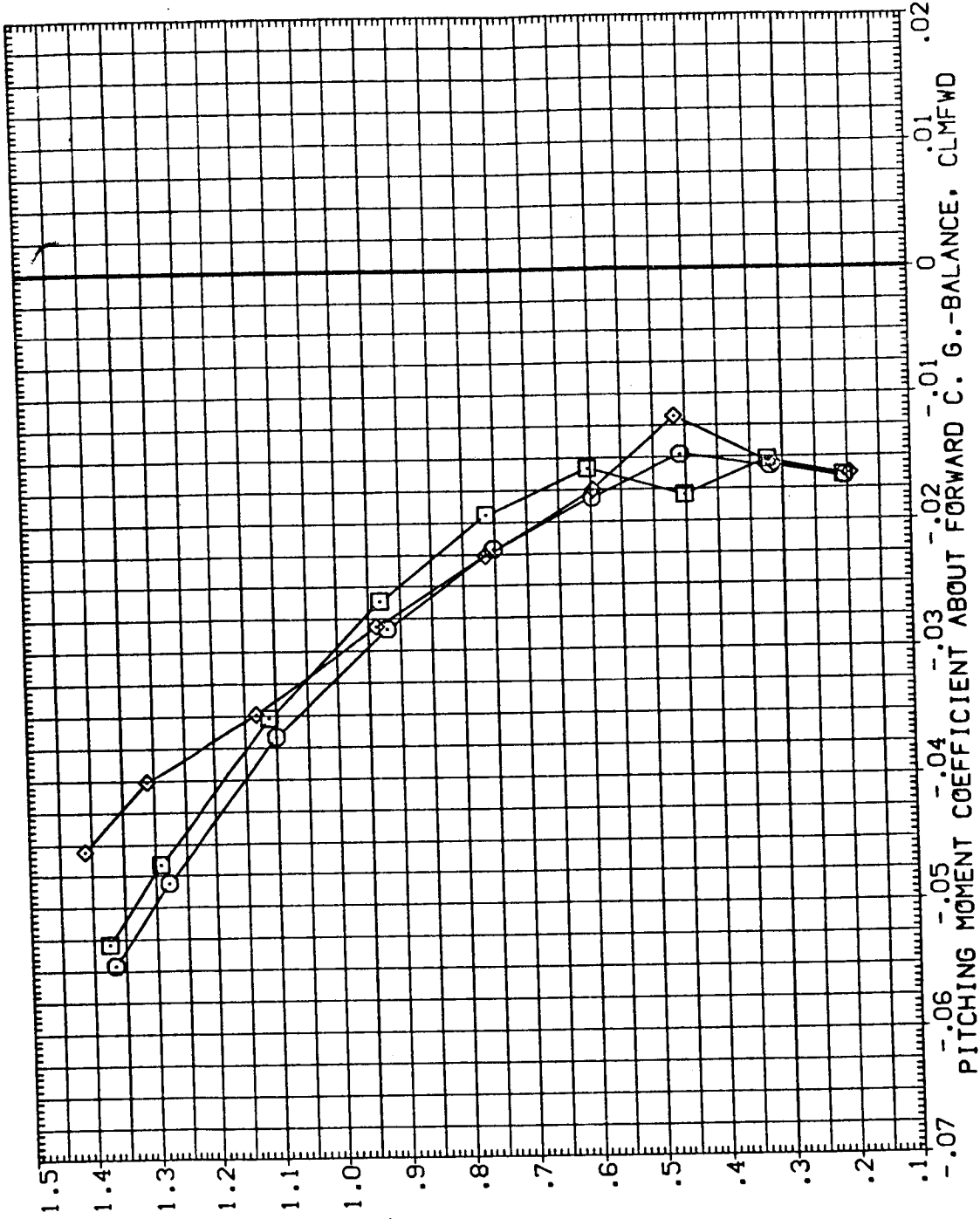


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 GA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0008)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 996.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

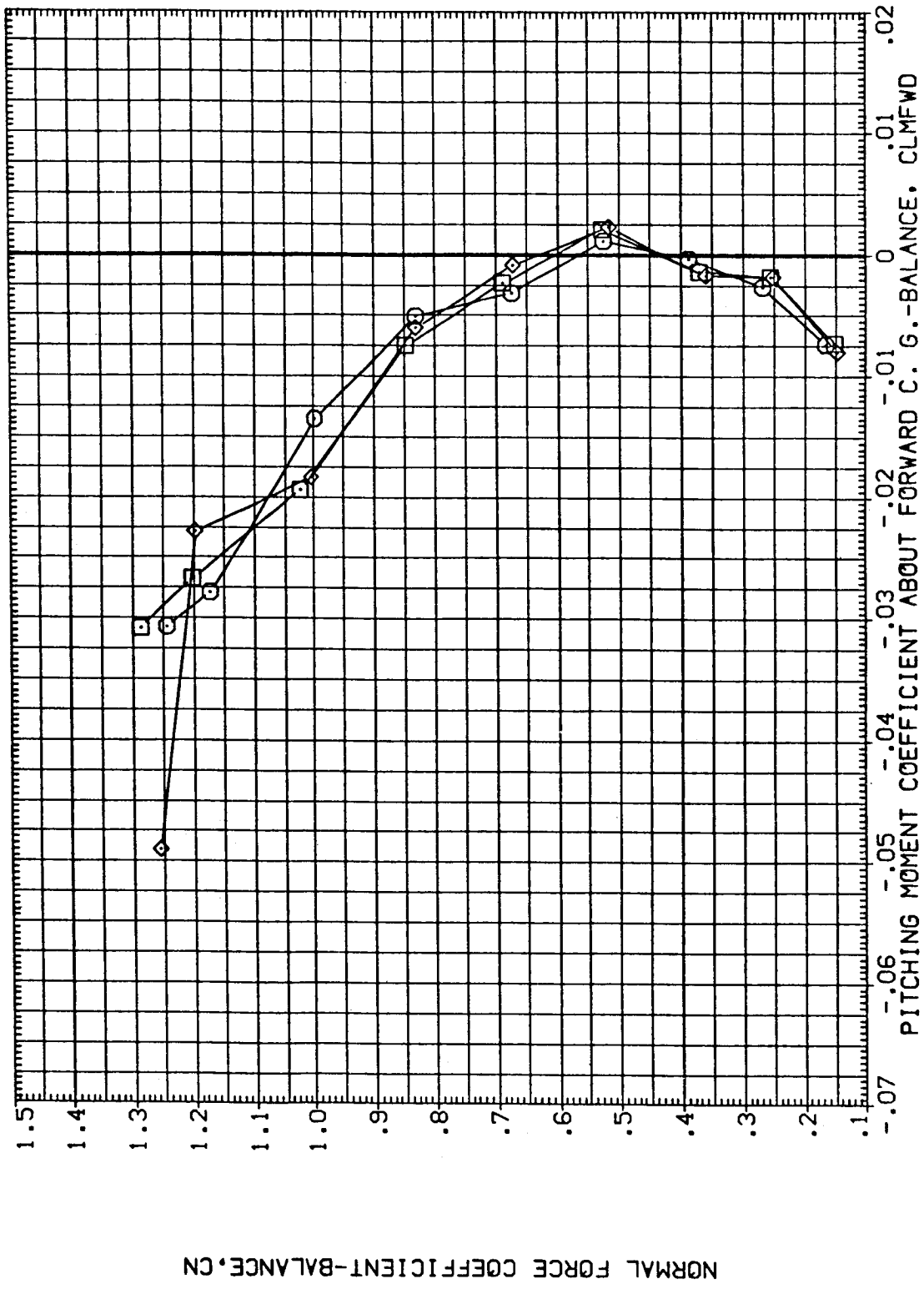


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (CEG001)
 (CEG009)
 (CEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7-H14)
 AMES 3.5-190 CA98 (011-M7-H14-N24)
 AMES 3.5-190 CA98 (011-M7-H14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 95.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.XD
 XMRP 1076.7000 IN.YD
 YMRP .0000 IN.ZD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

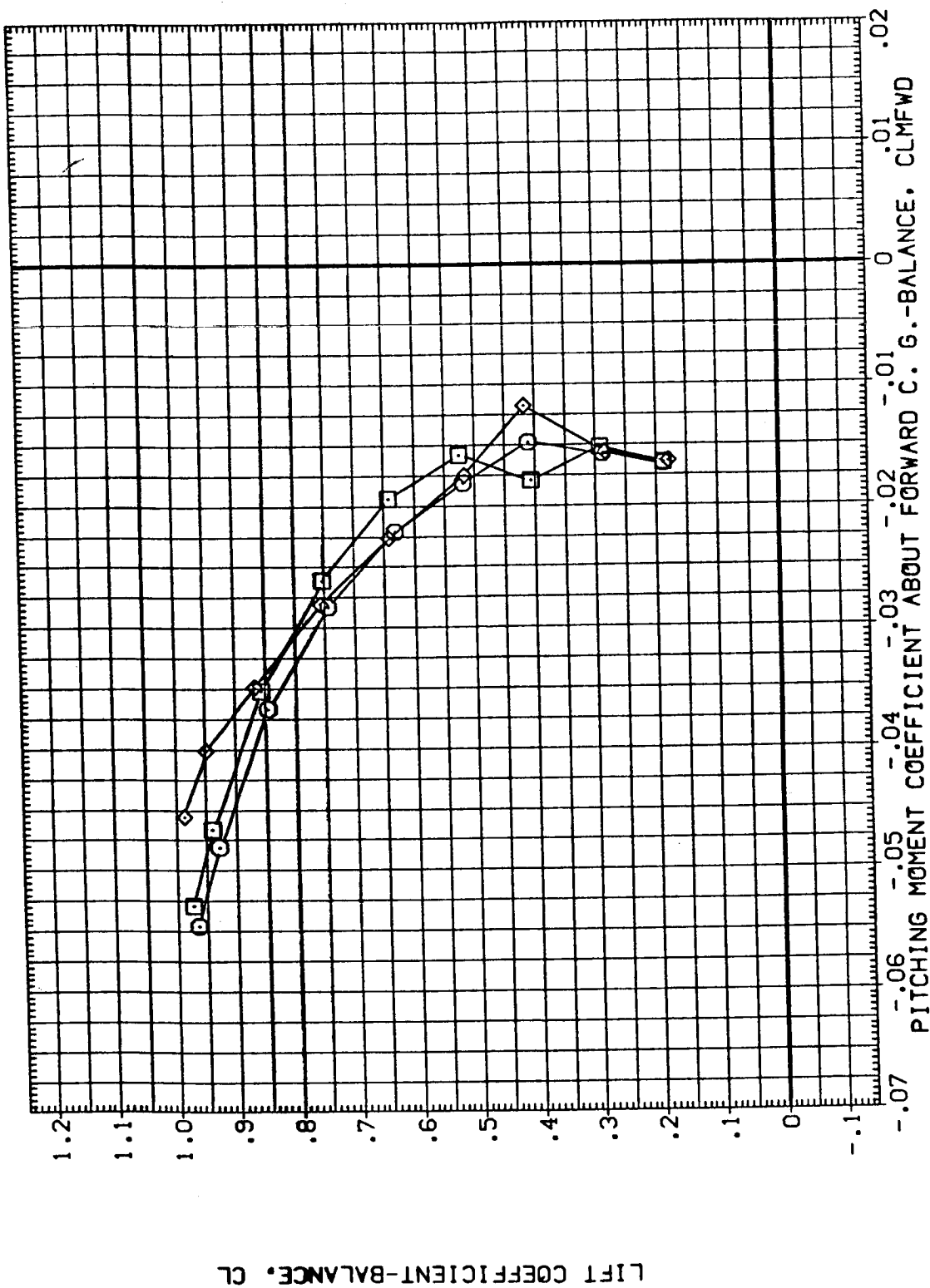


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG001) AMES 3.5-190 CAS8 (011-M7+M14)

(CEG009) AMES 3.5-190 CAS8 (011-M7+M14-N24)

(CEG017) AMES 3.5-190 CAS8 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.8800 IN.

XMRP 1076.7000 IN.

YMRP .0000 IN.

ZMRP 375.0000 IN.

SCALE .0150

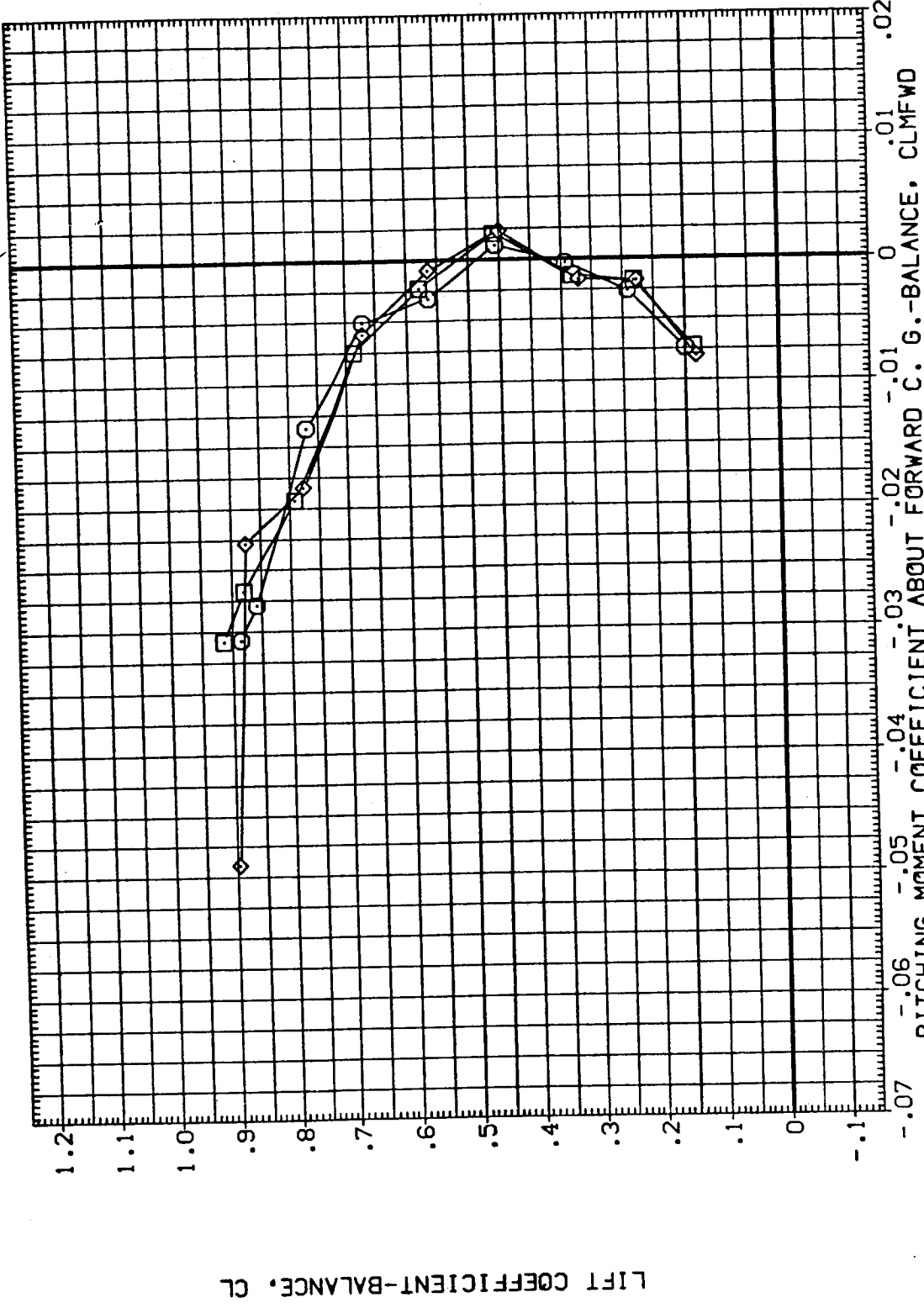


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 OA98 (011-M7+M14)

(CE0009) AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0017) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

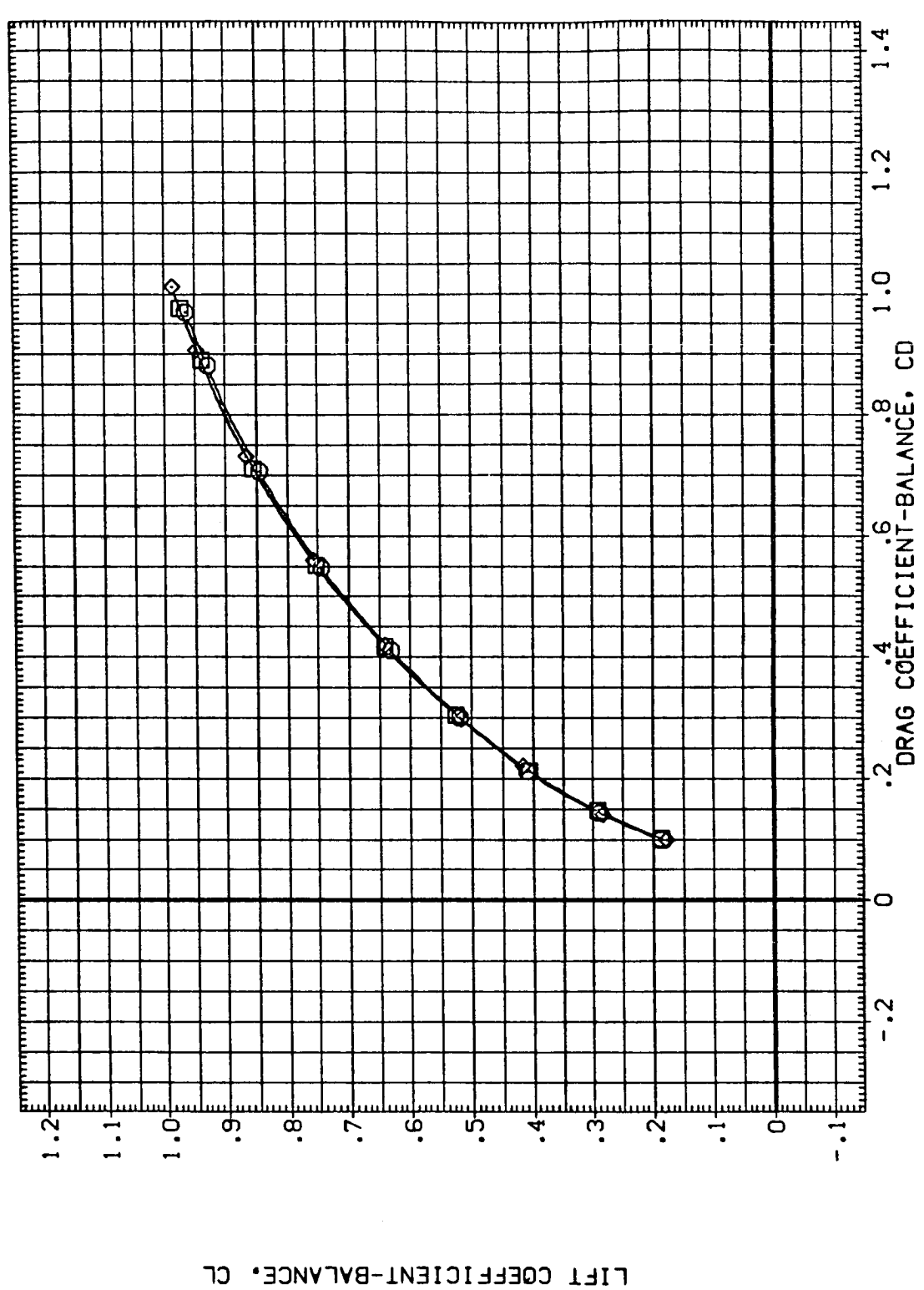
BREF 936.6800 IN.

XMRP 1076.7000 IN.Y0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0001)
 (CE0009)
 (CE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPDBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

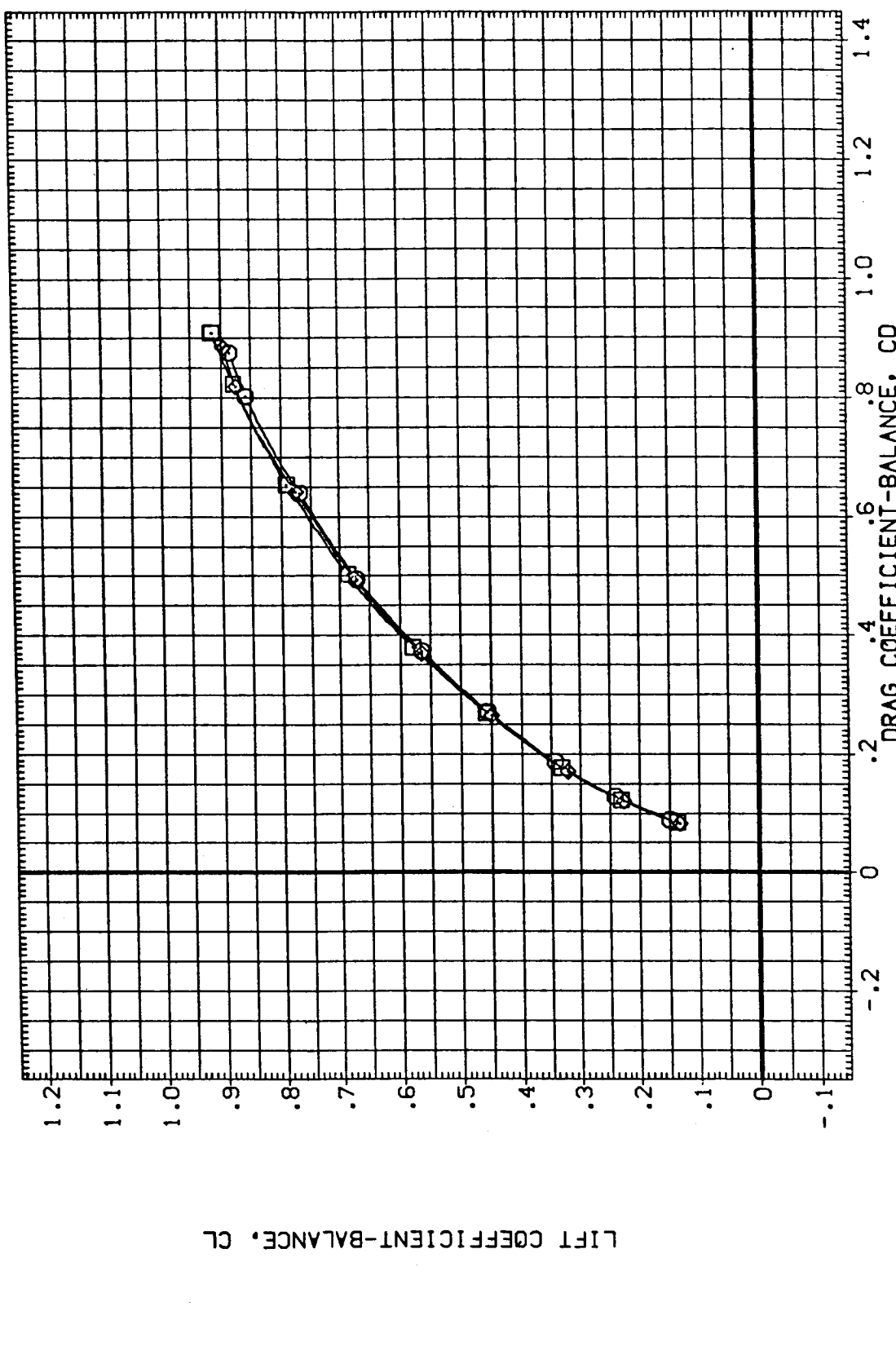


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 OAS8 (011-M7+M14)
 (EE0009) AMES 3.5-190 OAS8 (011-M7+M14-N24)
 (EE0017) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

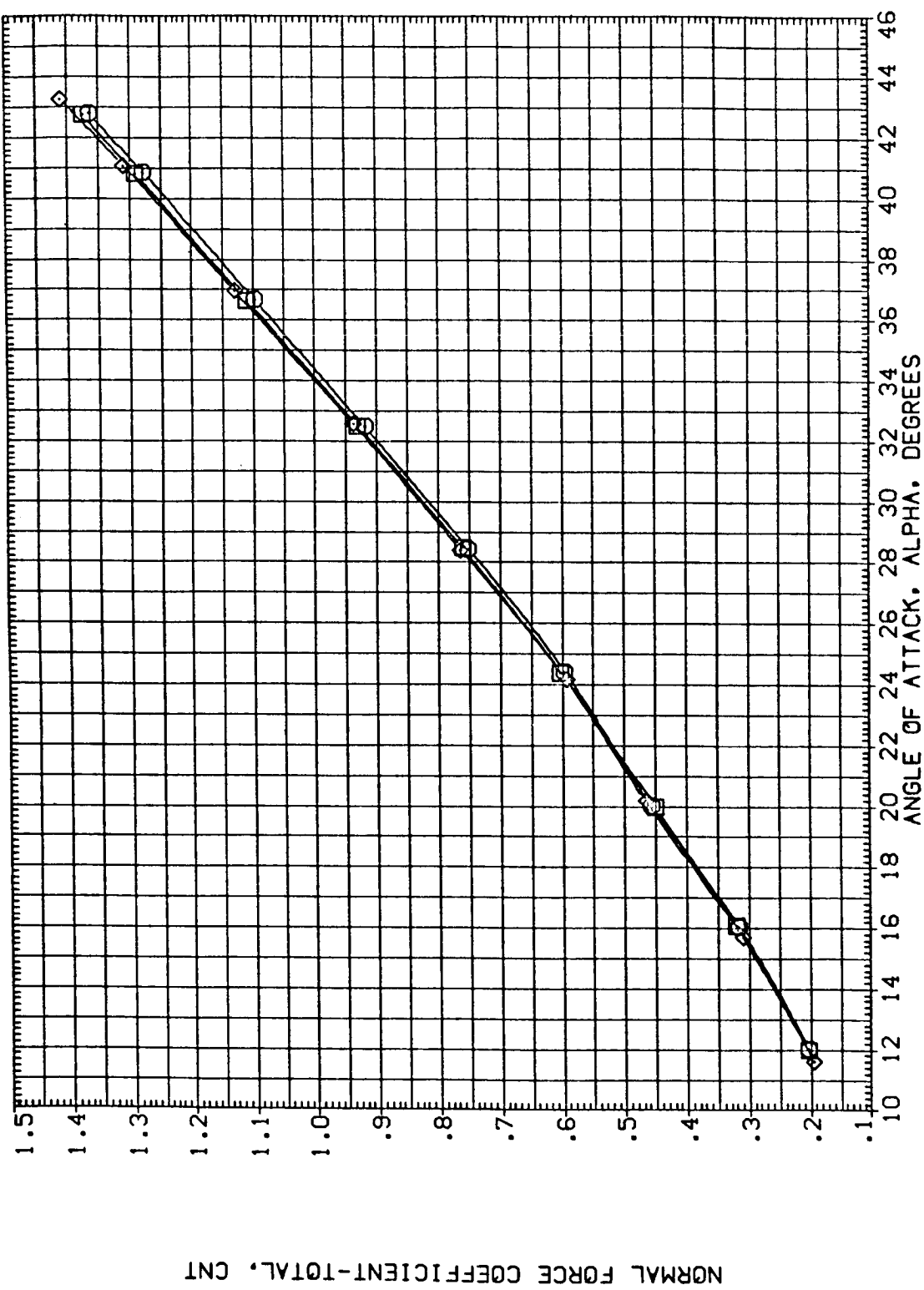
BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPDRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

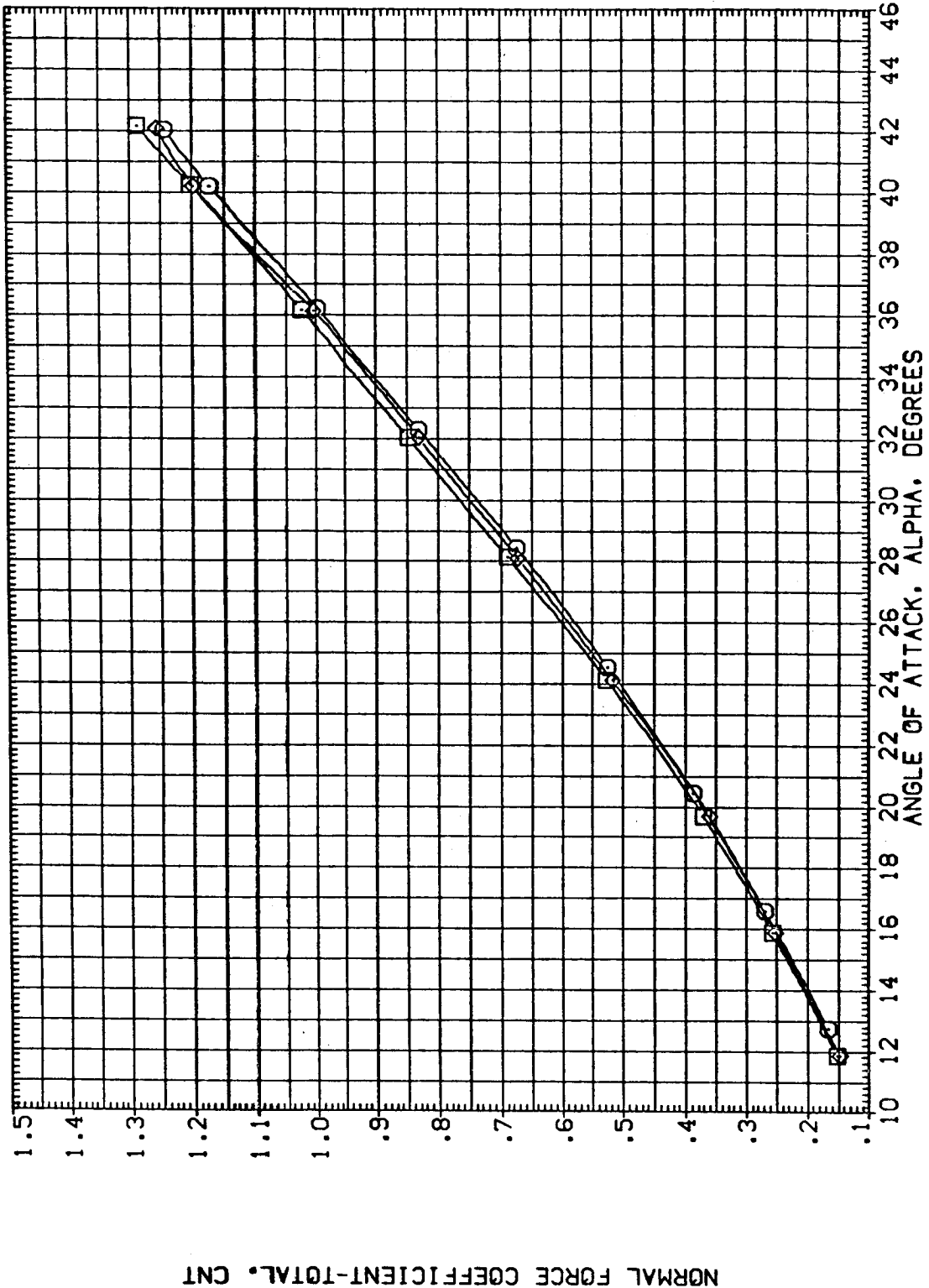


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (EE0001) (EE0009) (EE0017)

CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-17+M14) AMES 3.5-190 0A98 (011-17+M14-N24) AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 -11.700 -11.700

SFOBRK 55.000 55.000 55.000

REFERENCE INFORMATION SQ.FT. IN. IN. XG IN. YG IN. ZG

SREF 2690.0000 474.8000 936.6800 1076.7000 .0000 .0000 .0000

YMRP 375.0150

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

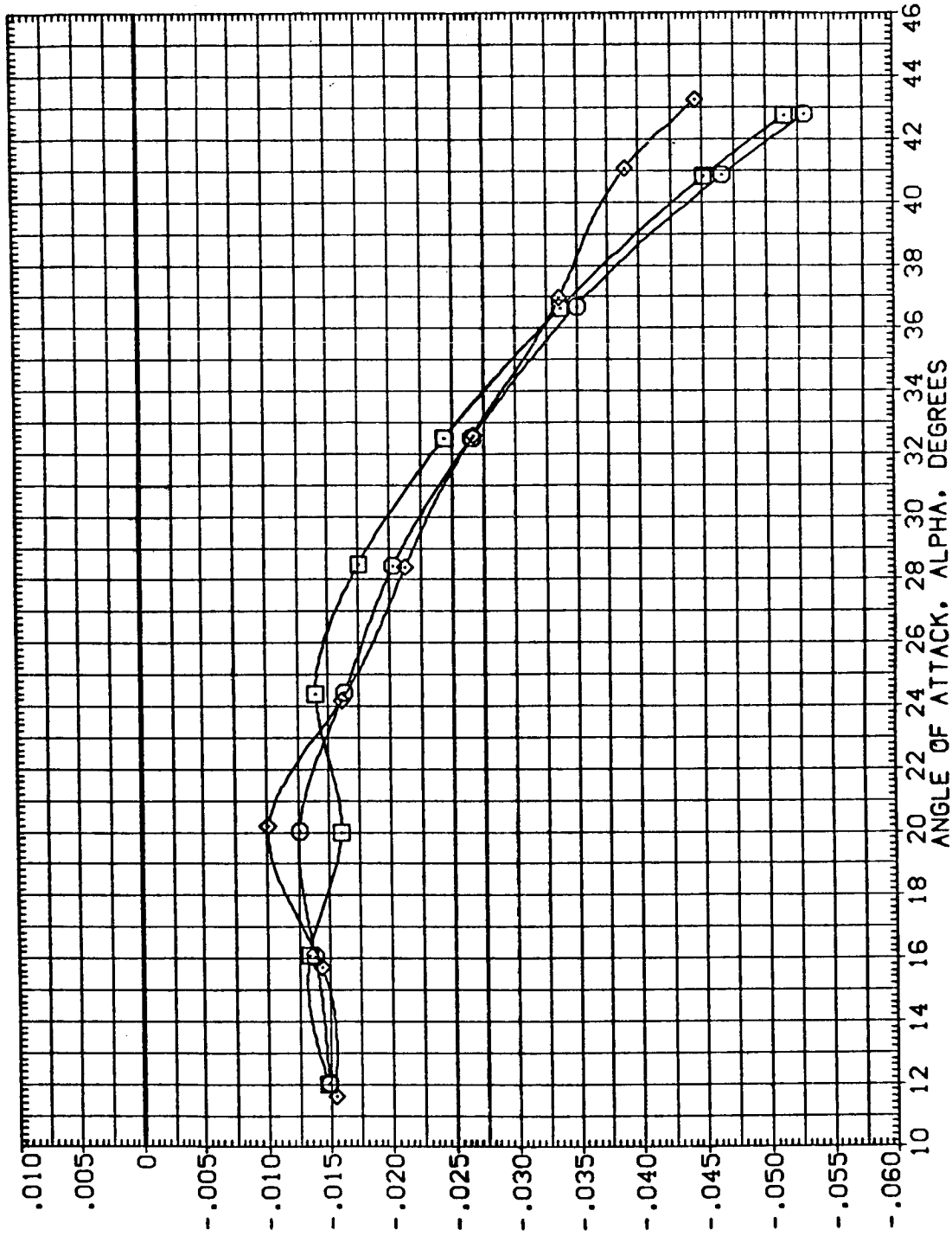


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(EE0001) AMES 3.5-190 GA98 (011-M7-M14) .000 .000 -11.700 55.000 SREF 2690.0000 50.FT.

(EE0009) AMES 3.5-190 GA98 (011-M7-M14-N24) .000 .000 -11.700 55.000 LREF 474.8000 IN.

(EE0017) AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING) .000 .000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

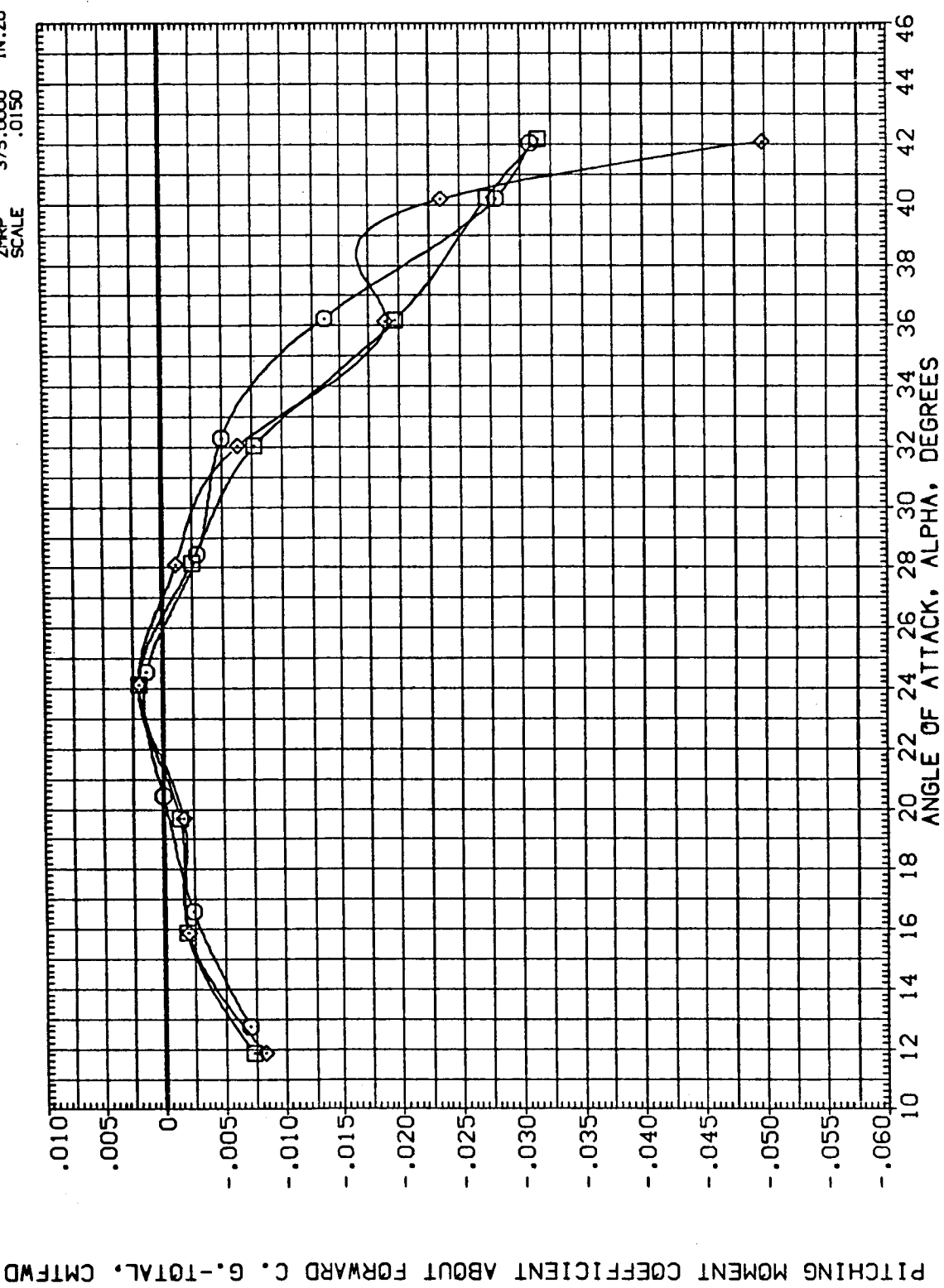


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 GA98 (011-M7+M14)

(EE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 GA98 (011-M7+M14-N24+JUMPY STING)

BETA ELEVON BOFLAP SFD8RK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

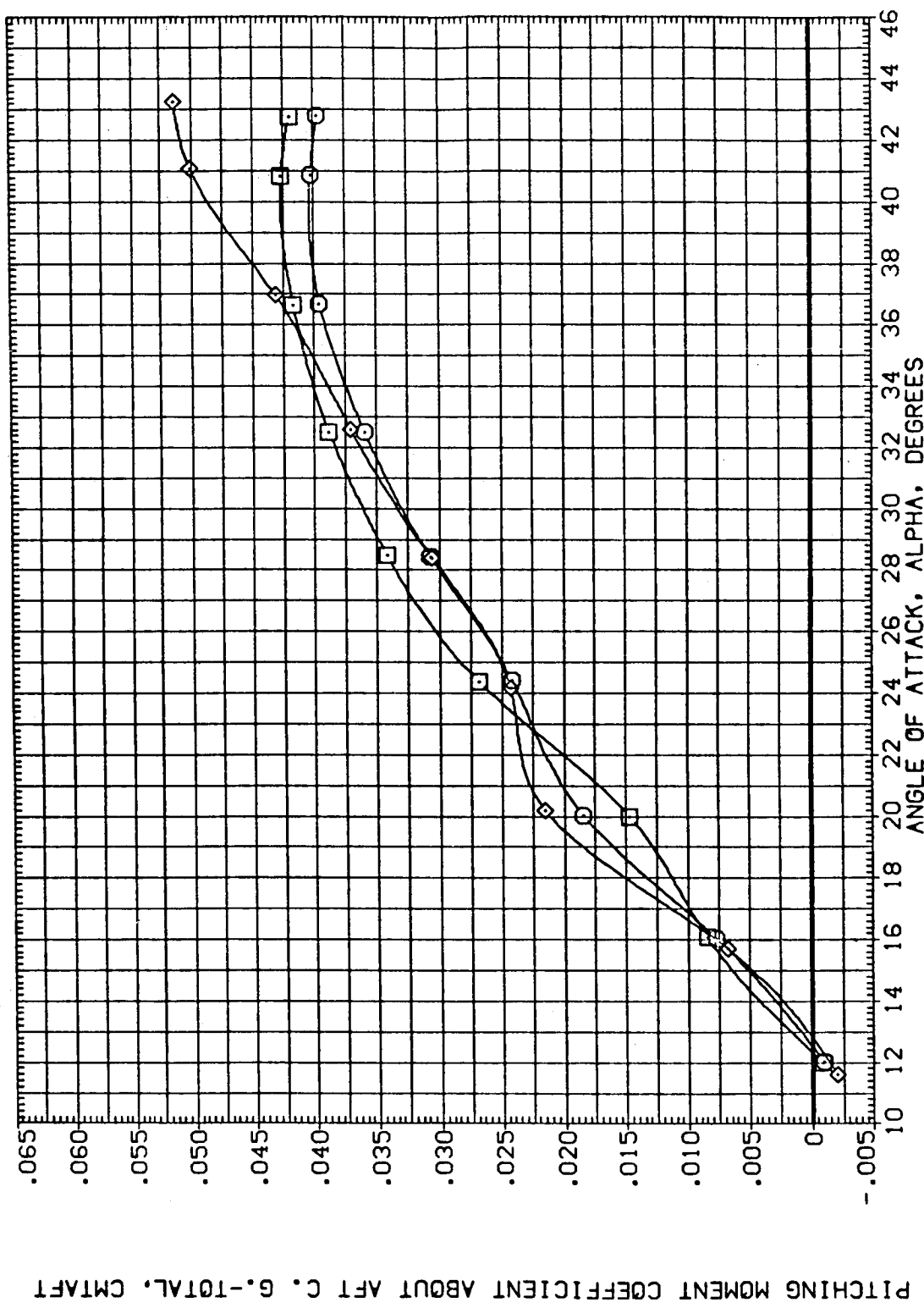


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 0A98 (011-M7-H14)

(EE0009) AMES 3.5-190 0A98 (011-M7-H14-N24)

(EE0017) AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPDRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

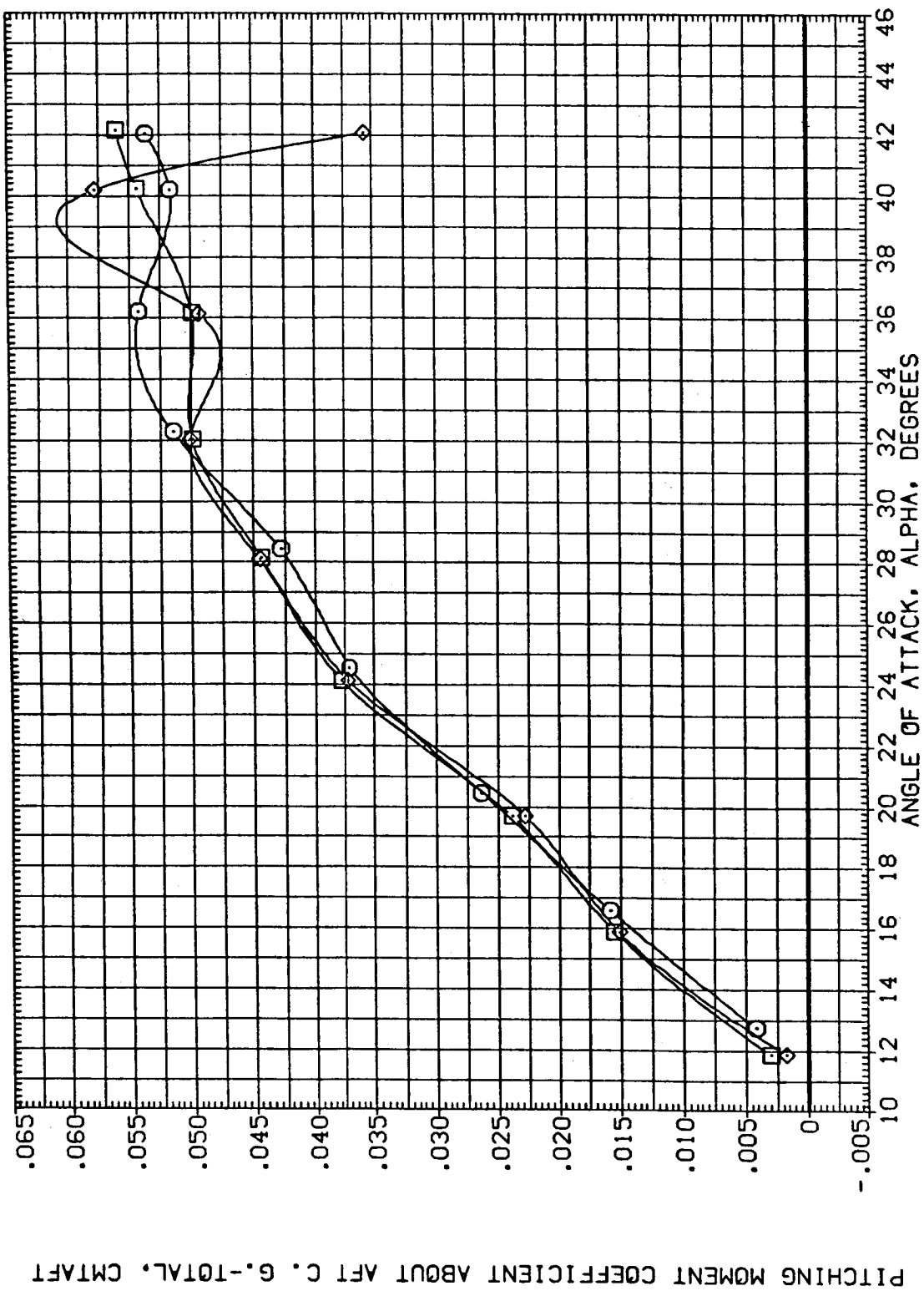


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 0A98 (011-M7+M14)

(EE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

SPDRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

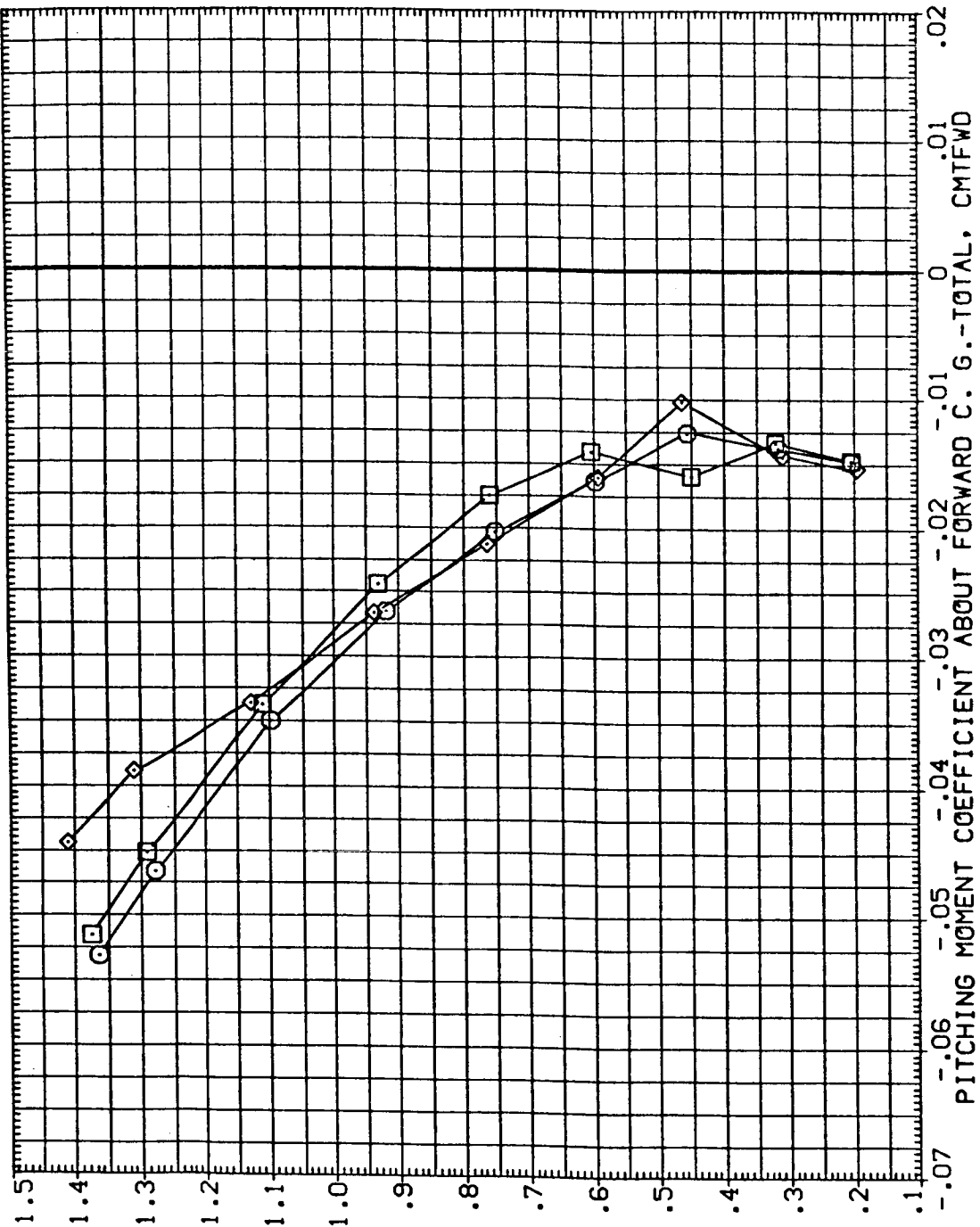
BREF 936.6800 IN.

XMRP 1076.7000 IN.XG

YMRP .0000 IN.YG

ZMRP 375.0000 IN.ZD

SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, Cn

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C.G.-TOTAL, CmTFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 GA98 (011-M7+M14)

(EE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

YMRP .0000

ZMRP .0000

SCALE .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

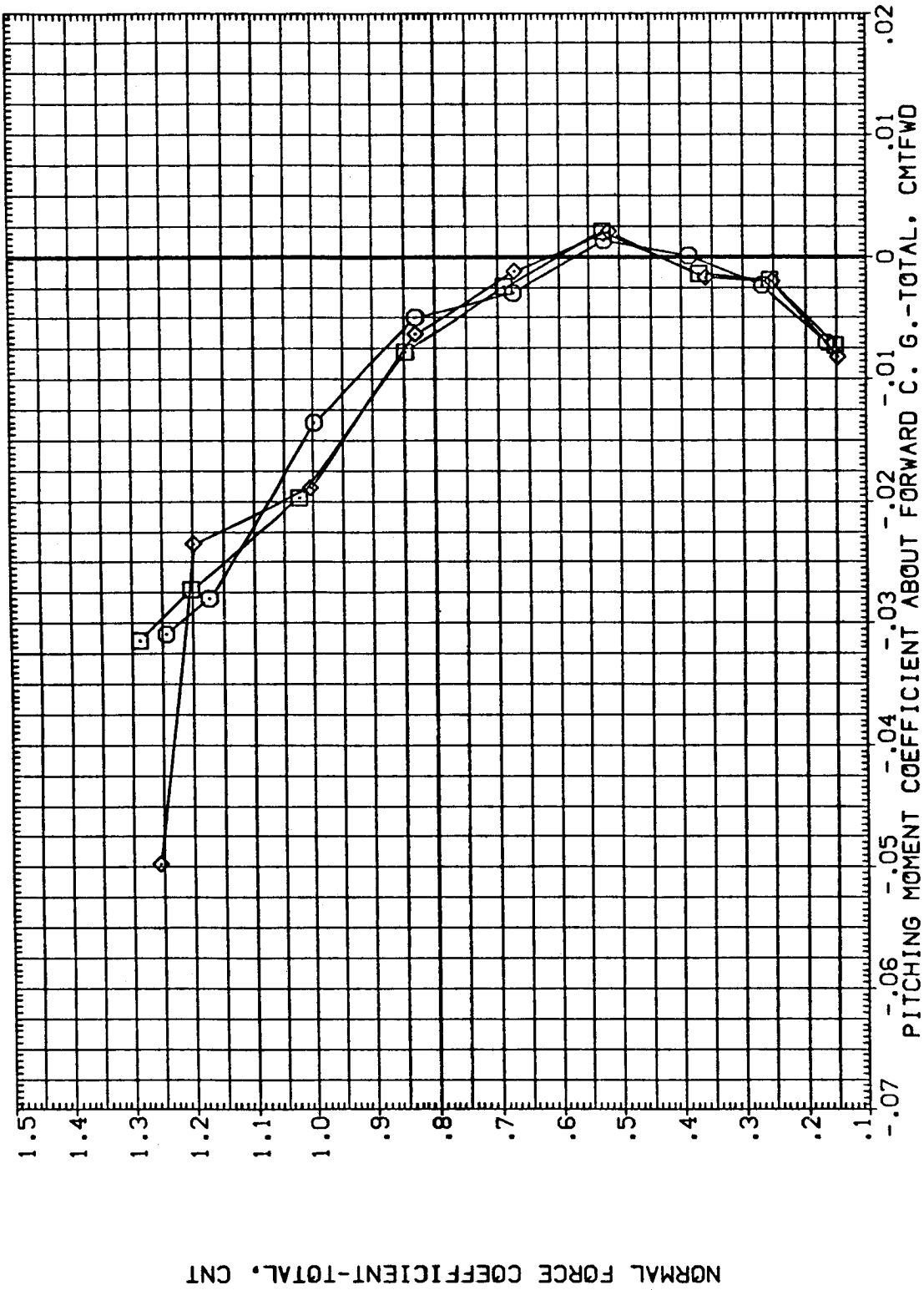
LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 DASH (011-M7+M14)
 (EE0009) AMES 3.5-190 DASH (011-M7+M14-N24)
 (EE0017) AMES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

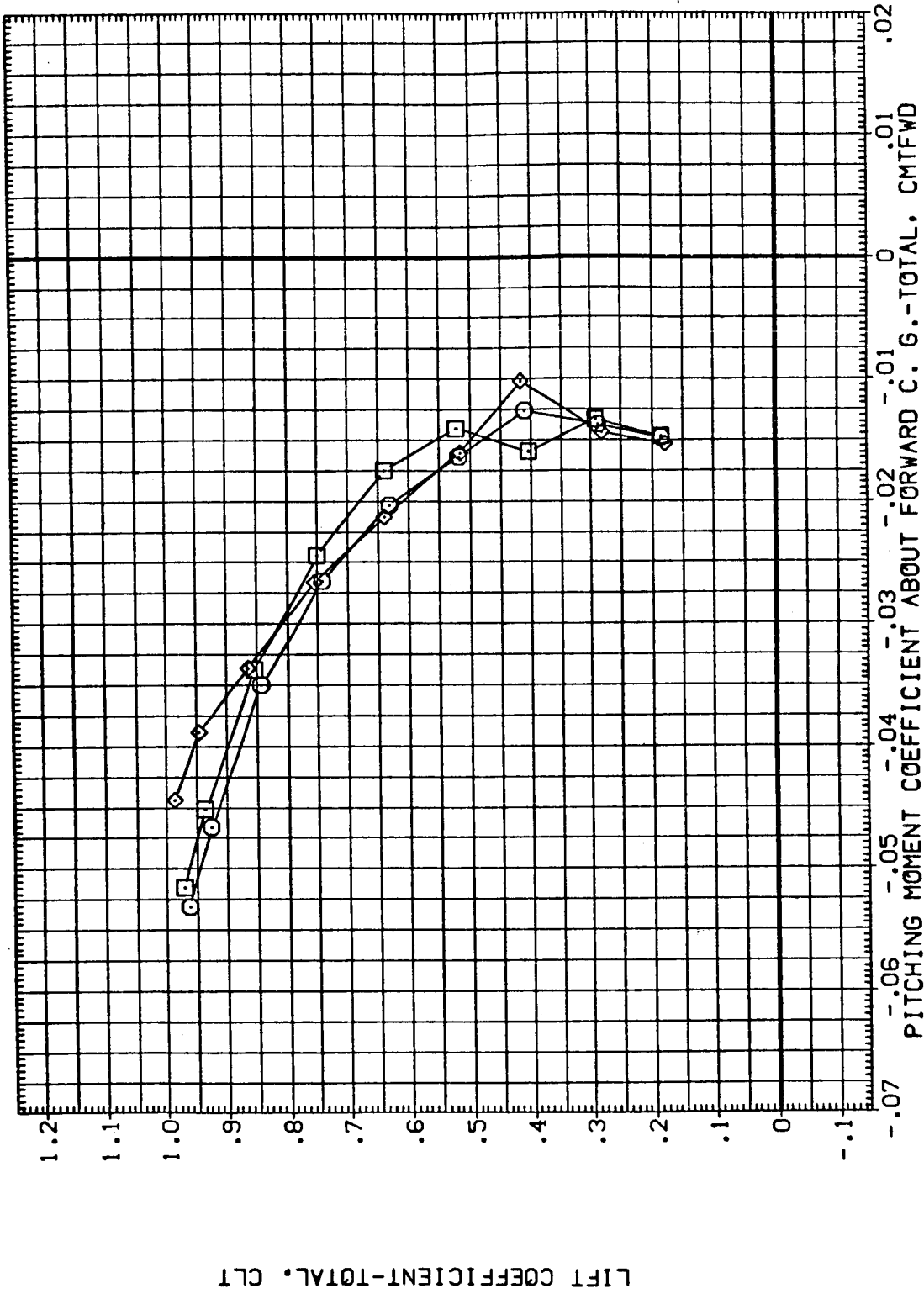


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 GA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(EE0009)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 926.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

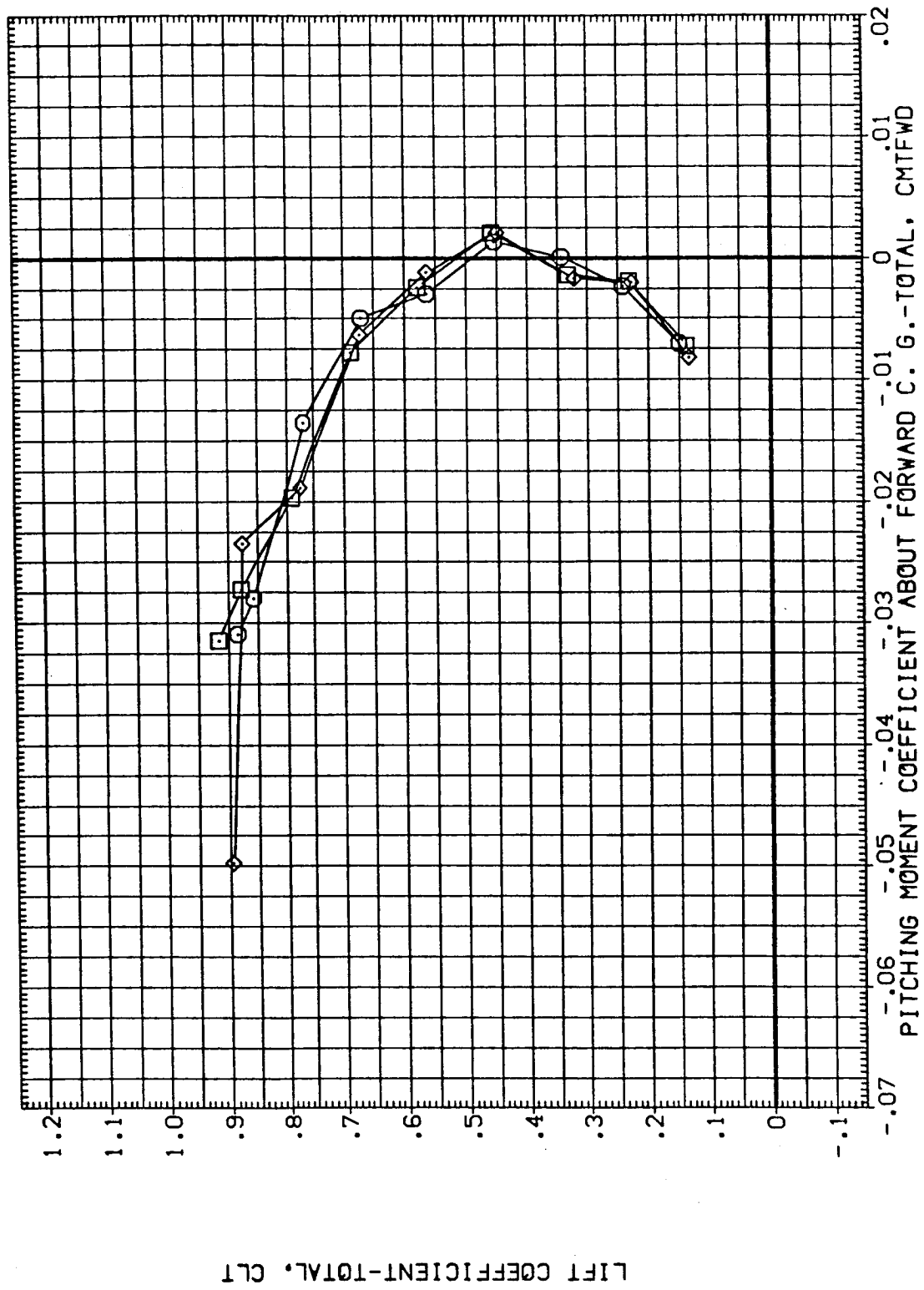


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 GA98 (011-M7+M14)

(EE0009) AMES 3.5-190 GA98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

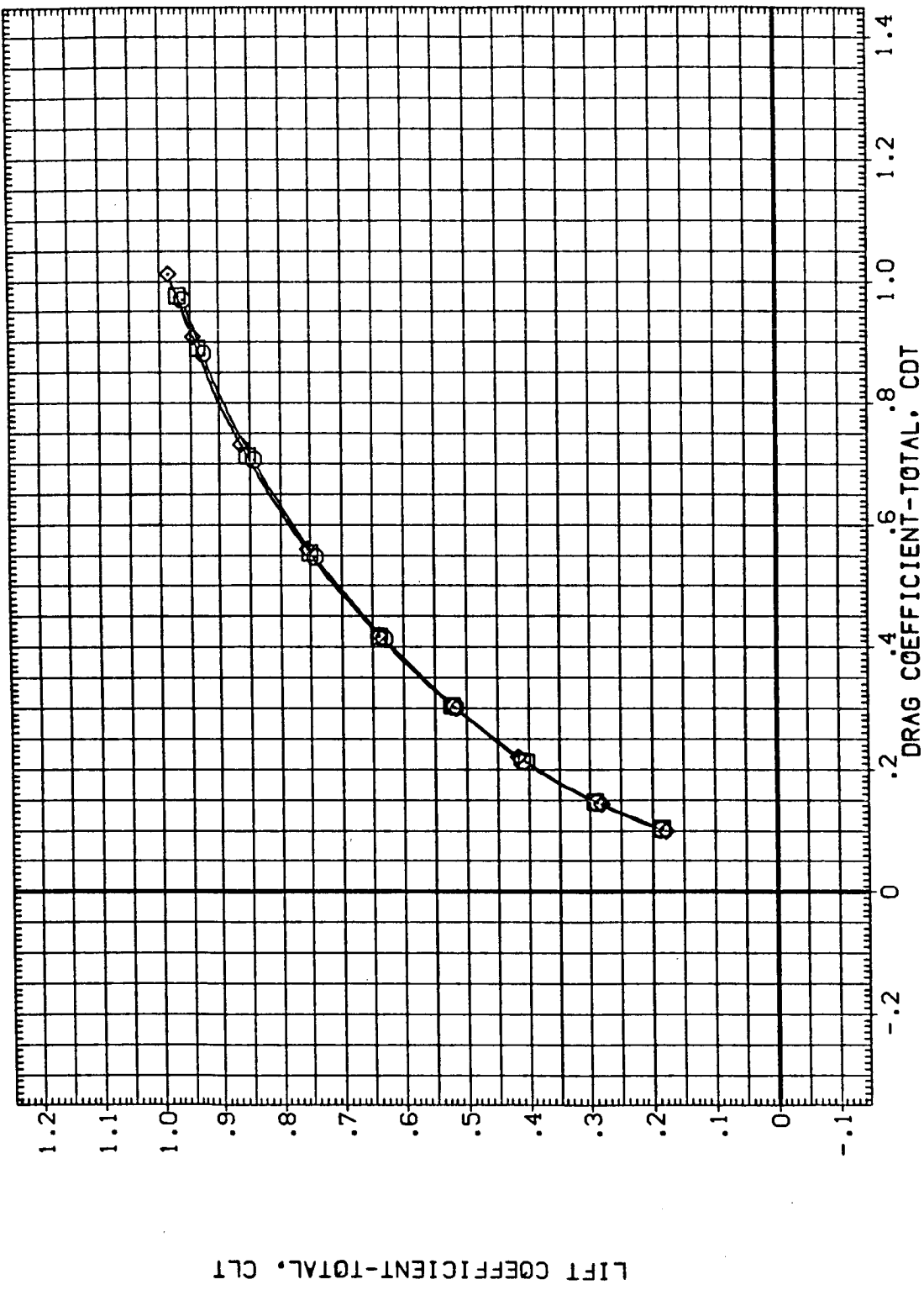


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0001) AMES 3.5-190 0A98 (011-M7+M14)
 (EE0009) AMES 3.5-190 0A98 (011-M7+M14+N24)
 (EE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN. X0
 YMRP 1076.7000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

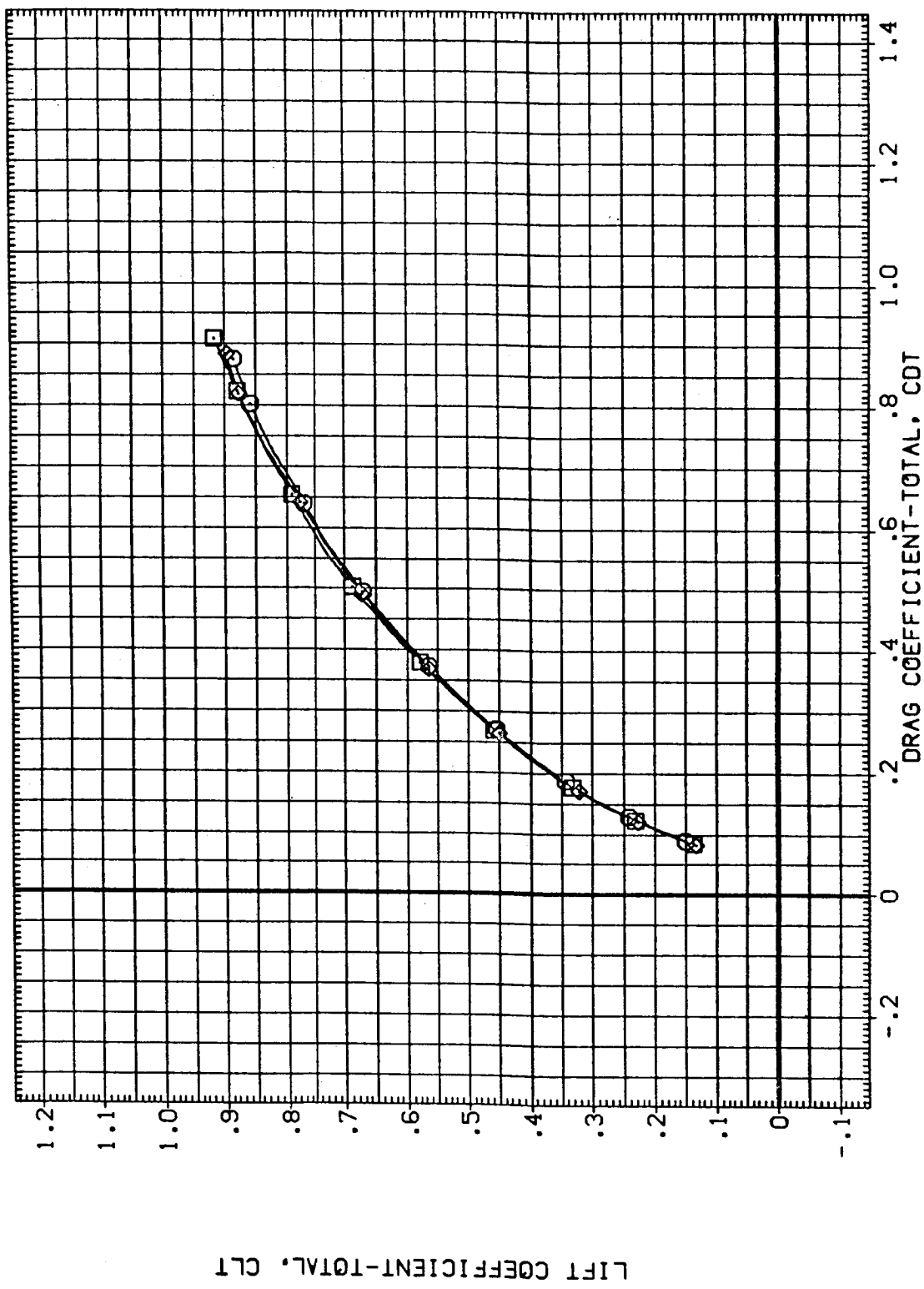


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 OA98 (011-M7+M14)

(EE0009) AMES 3.5-190 OA98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON .000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

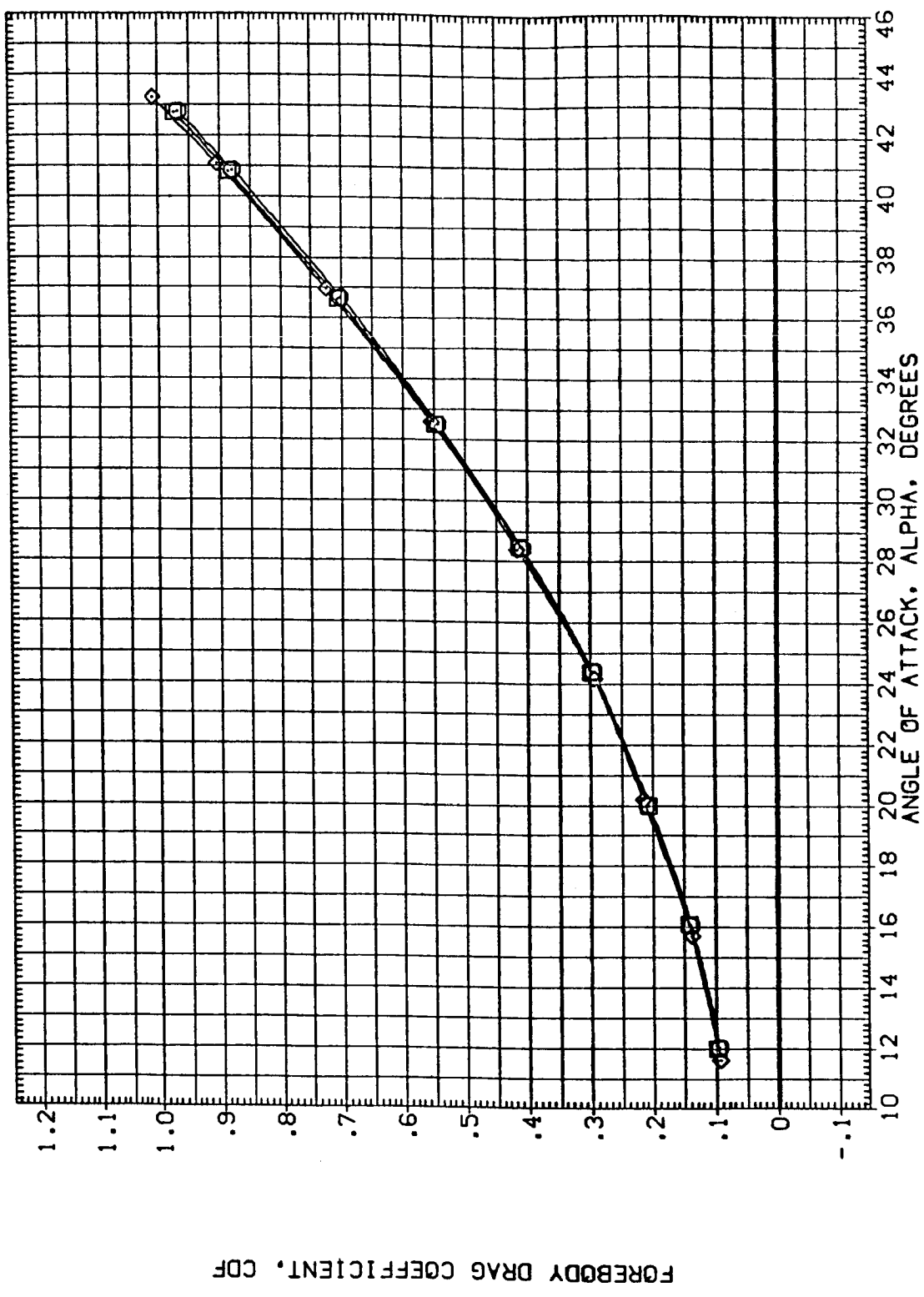


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 DA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

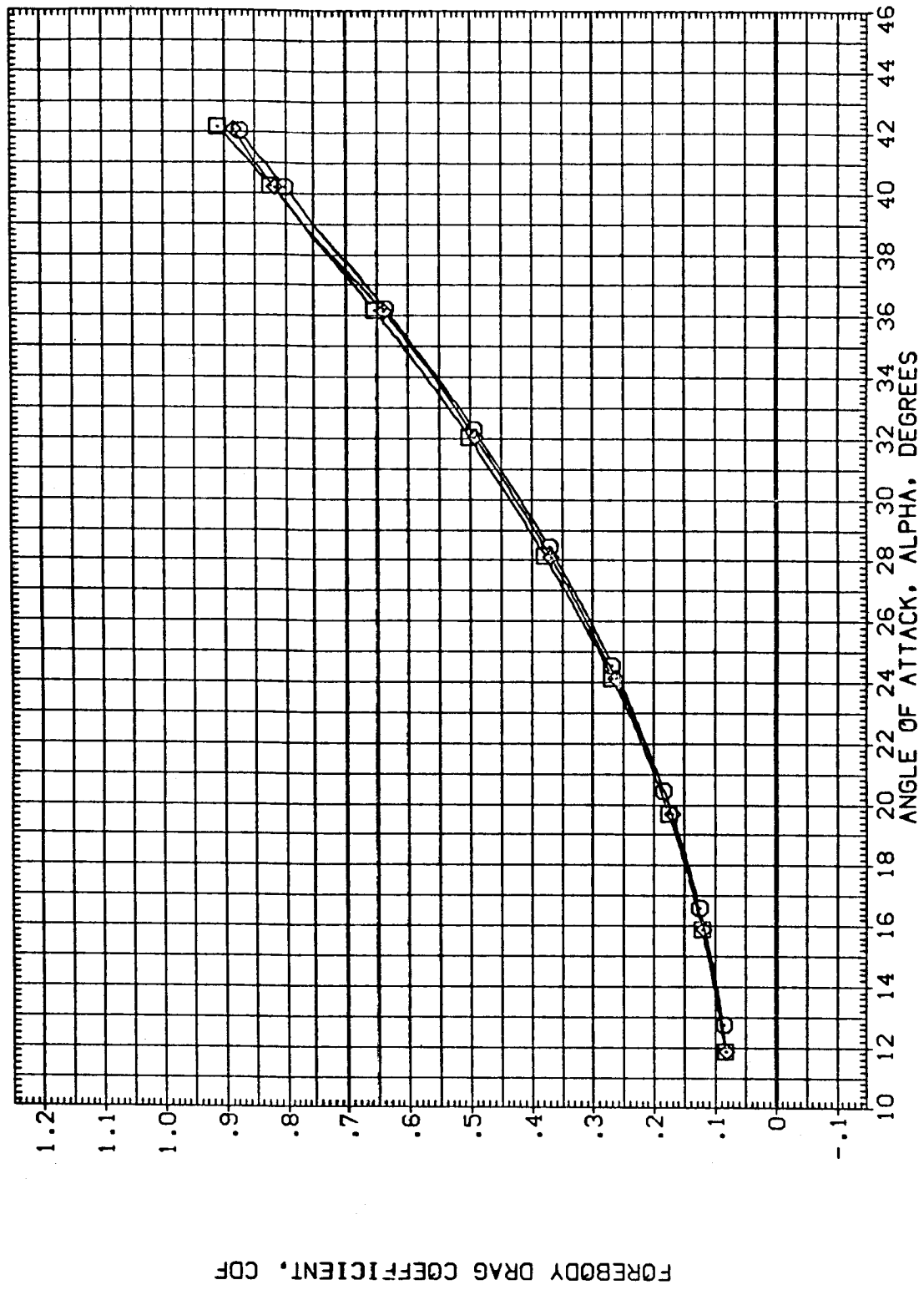


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(8)MACH = 10.27

DATA SET SYMBOL (EE0001)
 (EE0009)
 (EE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7-H14)
 AMES 3.5-190 CA98 (011-M7-H14-N24)
 AMES 3.5-190 CA98 (011-M7-H14-N24-DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.5800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

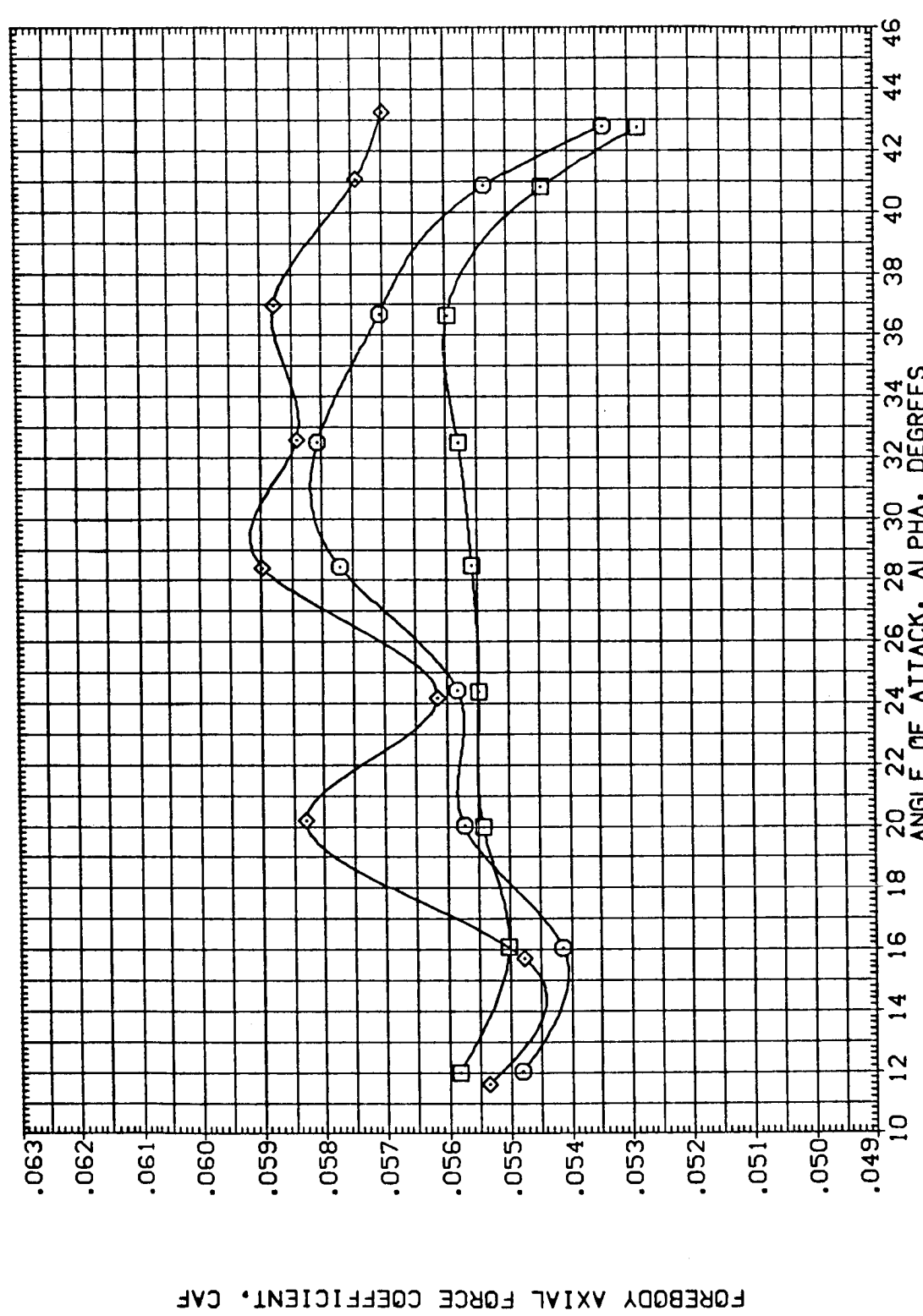


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SFOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-47+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-47+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

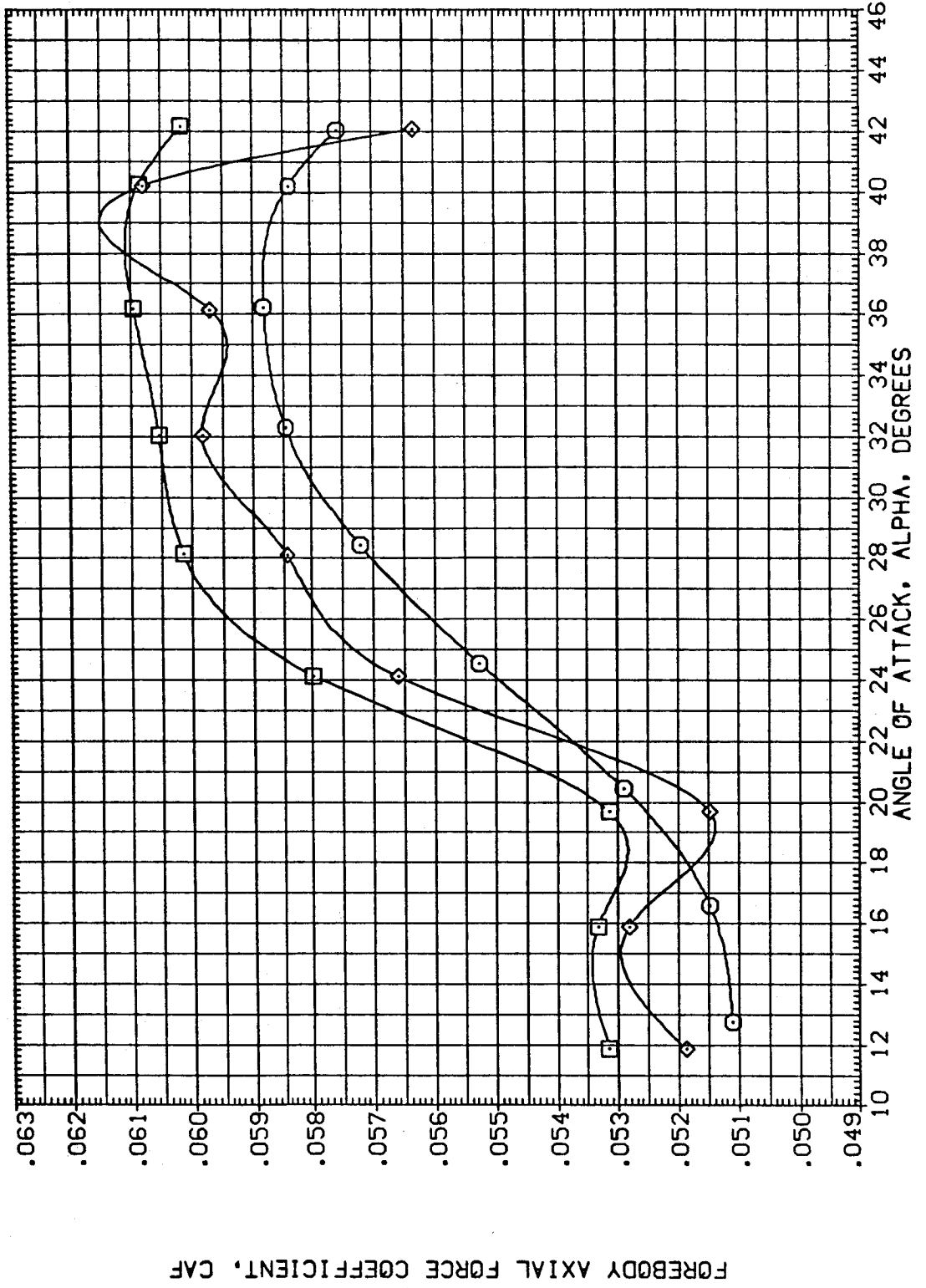


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EEG001) AMES 3.5-190 OA98 (011-M7-M14)
 (EEG009) AMES 3.5-190 OA98 (011-M7-M14-N24)
 (EEG017) AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0150	

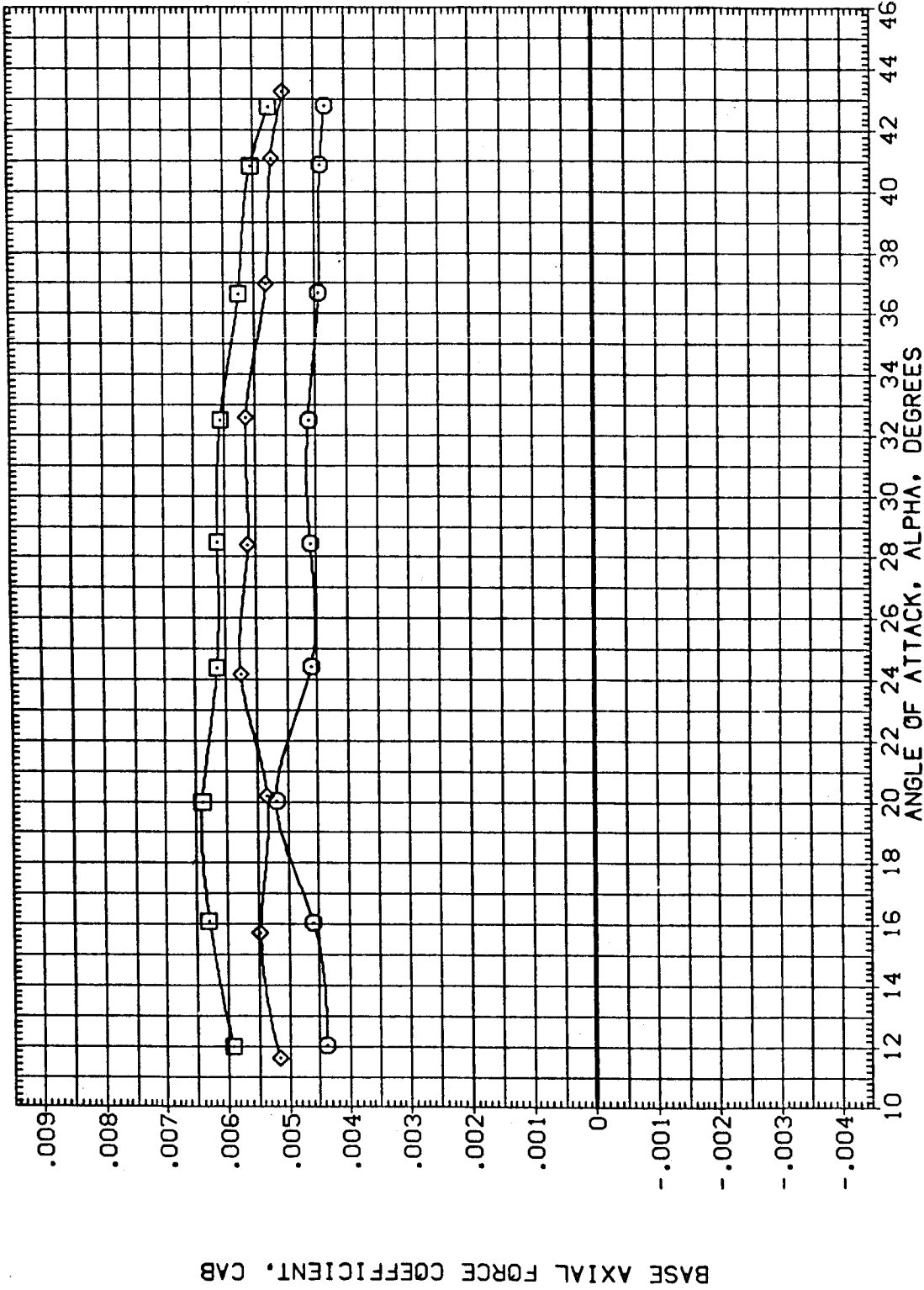


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.XB
						ZMRP .0000 IN.YB
						SCALE .0150

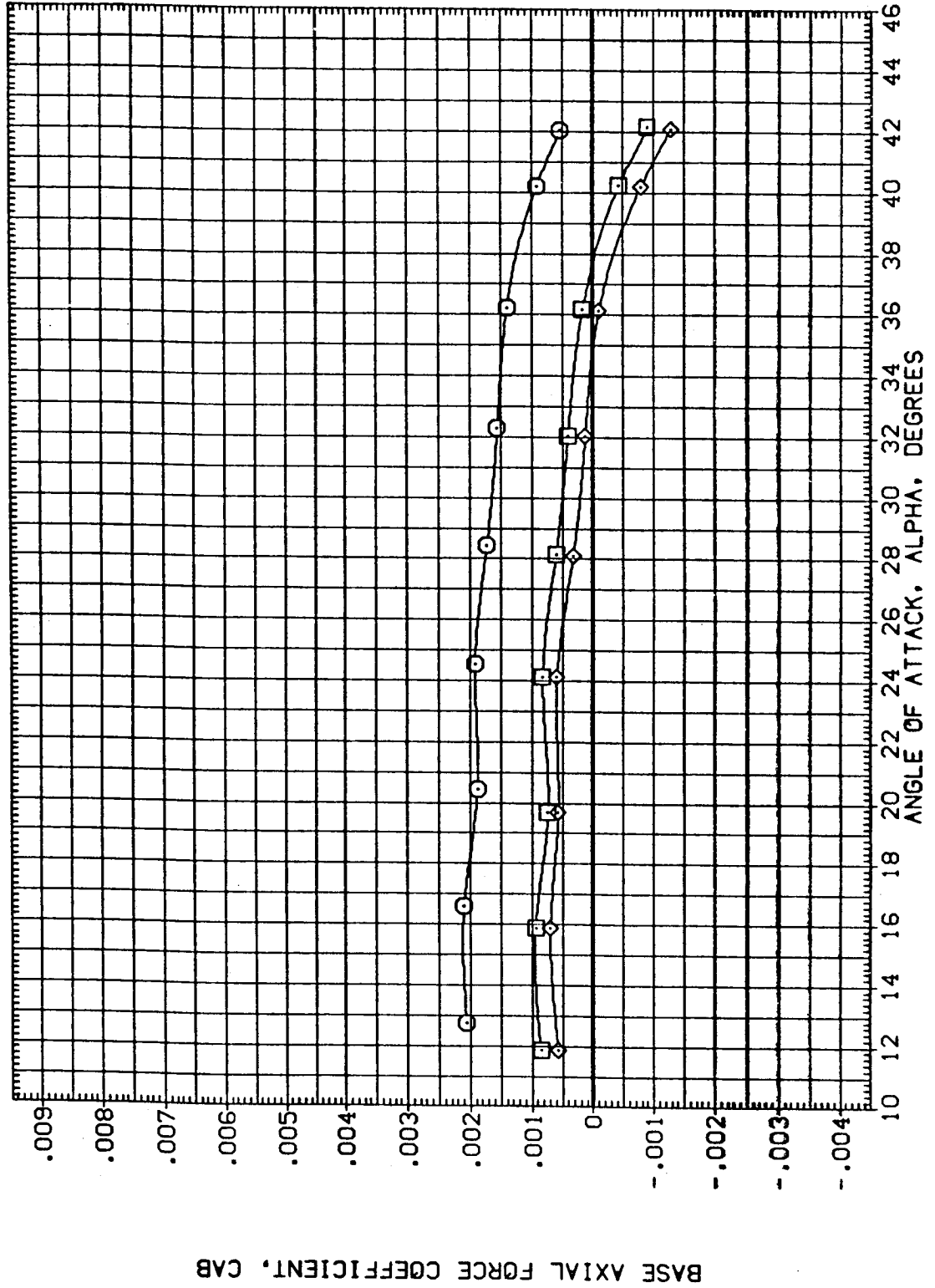


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (BE0001) (BE0009) (BE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-47-M14)
 AMES 3.5-190 GA98 (011-47-M14-N24)
 AMES 3.5-190 GA98 (011-47-M14-N24-DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 -11.700 -11.700

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Z0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

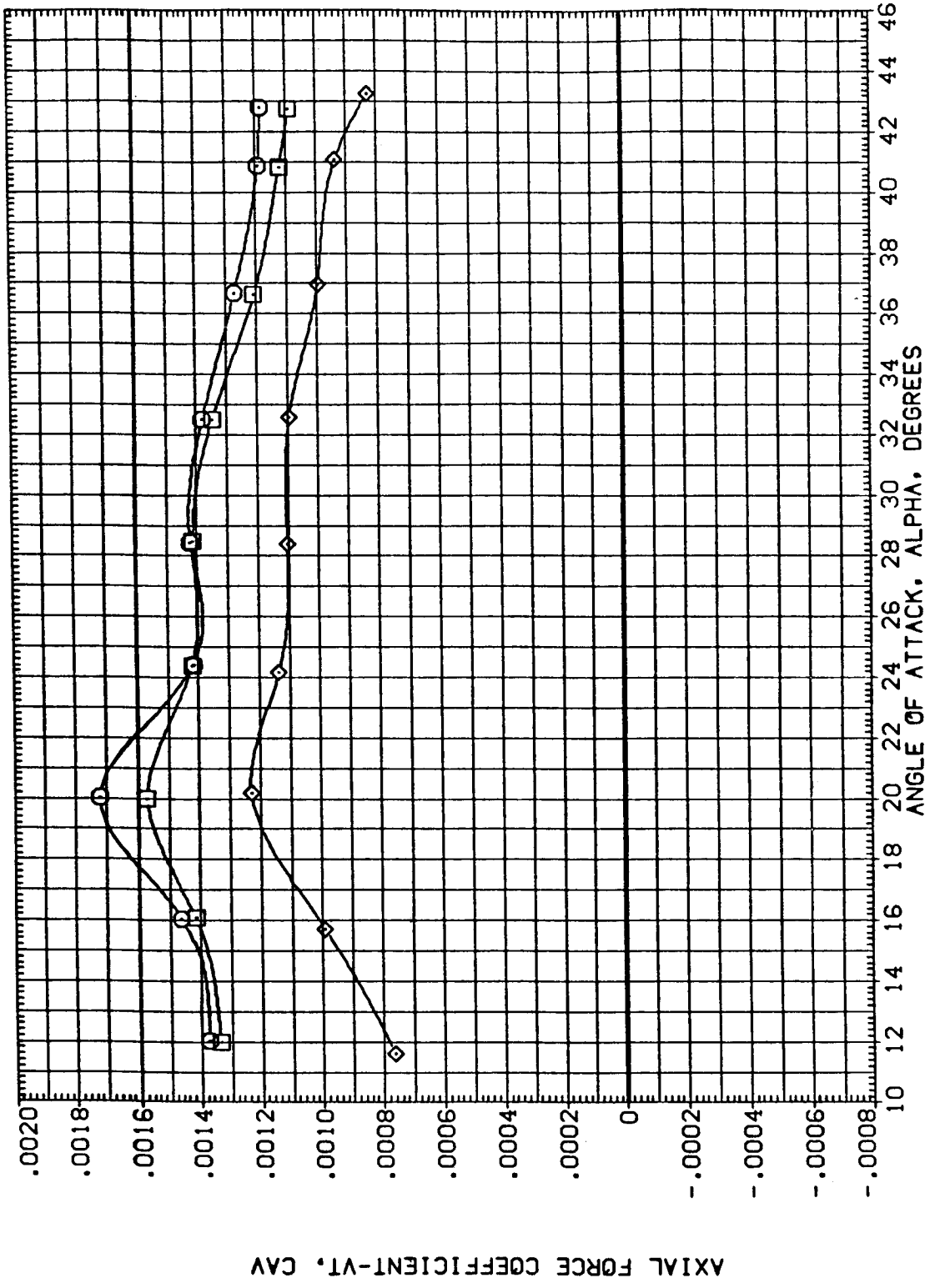


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0001)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BE0009)	AMES 3.5-190 OAS8 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(BE0017)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

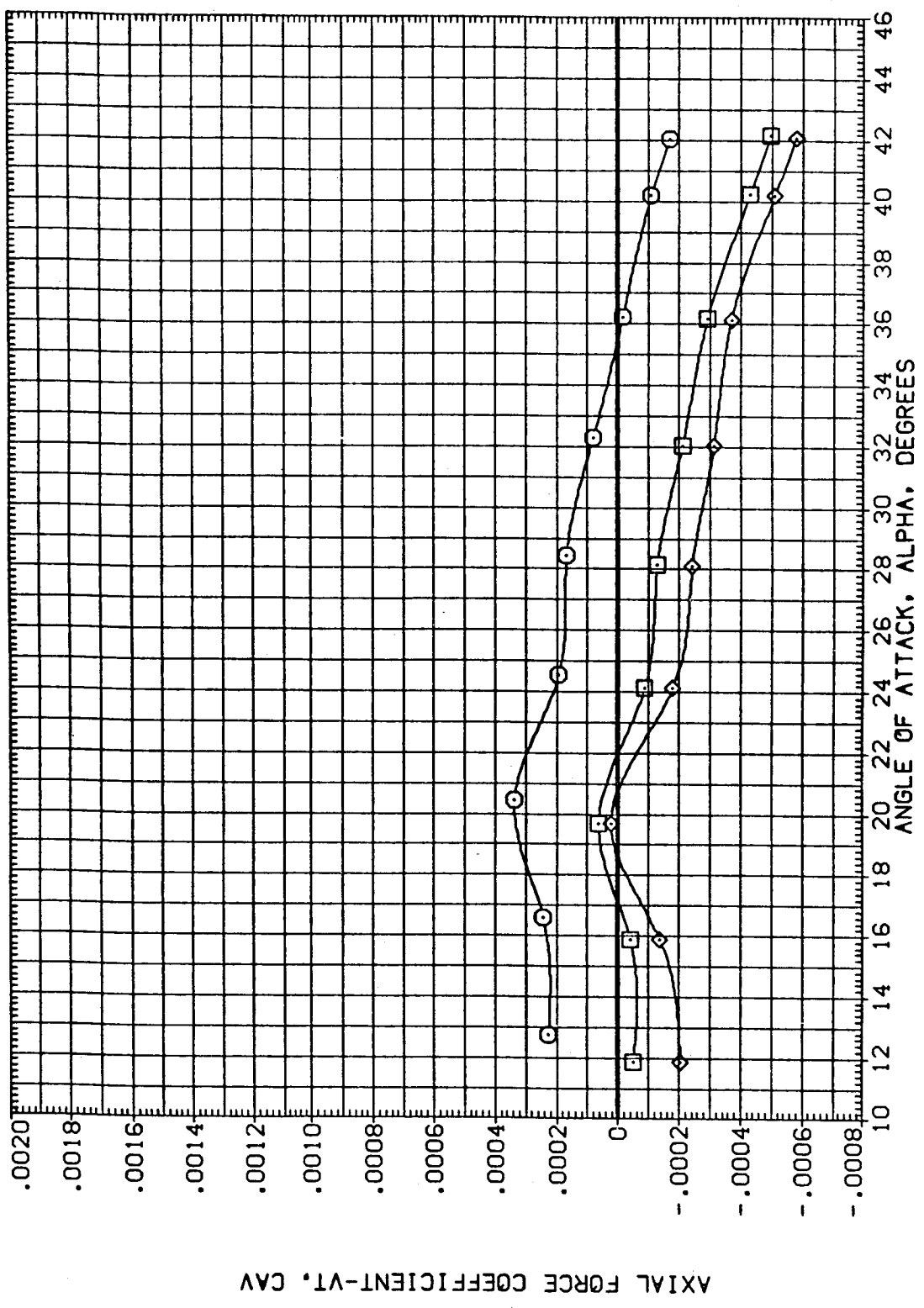


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (BE0001) (BE0009) (BE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14)
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPDBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

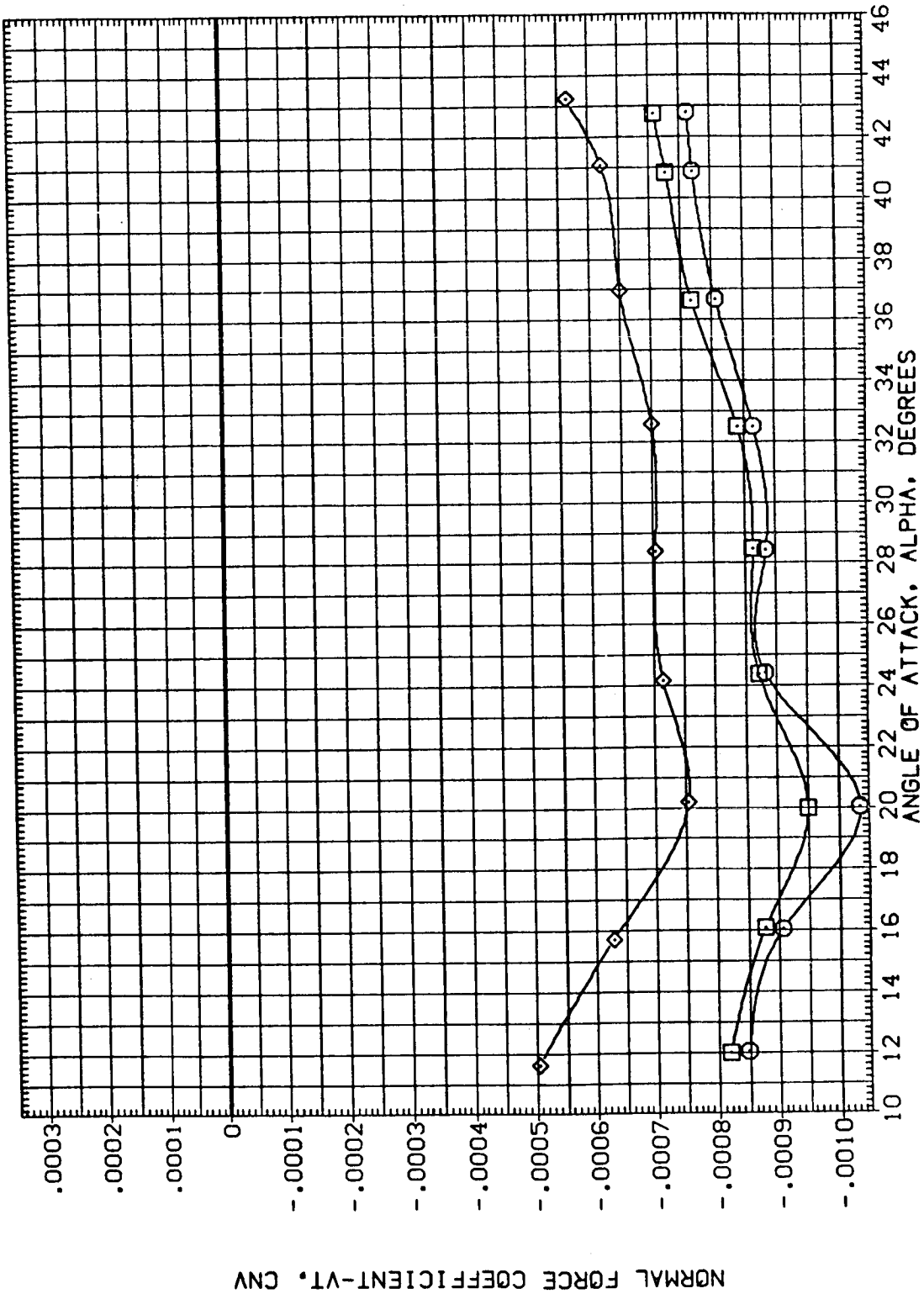


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL
 (BE0001)
 (BE0009)
 (BE0017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 DA98 (011-M7+M14)
 AVES 3.5-190 DA98 (011-M7+M14-N24)
 AVES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

BOFLAP
 -11.700
 -11.700
 -11.700

SPDRBK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8600 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

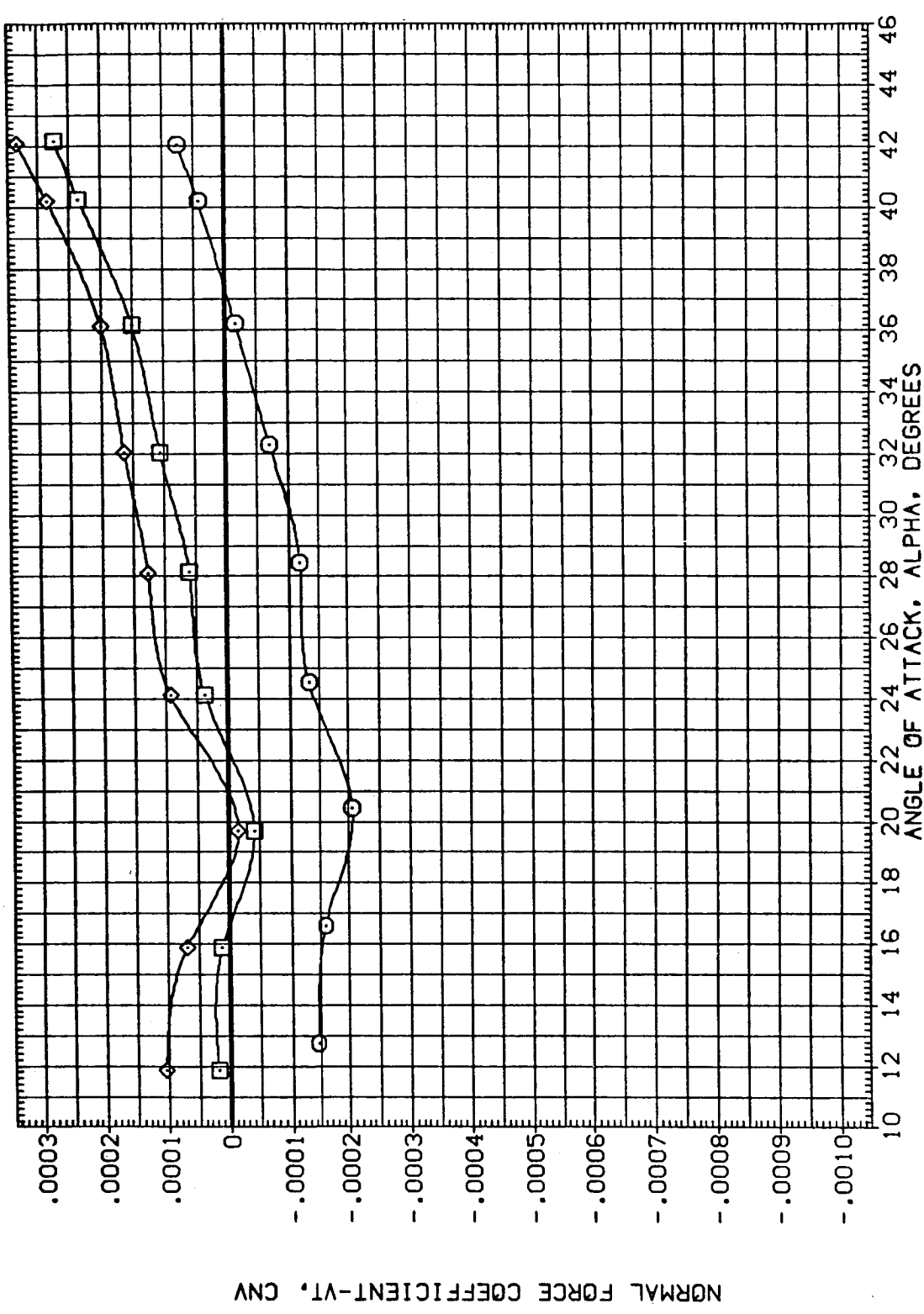


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (BE0001) □
 (BE0009) ◇
 (BE0017) ◇

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OAS8 (011-17+M14)
 AVES 3.5-190 OAS8 (011-17+M14-N24)
 AVES 3.5-190 OAS8 (011-17+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON .000
 .000
 .000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

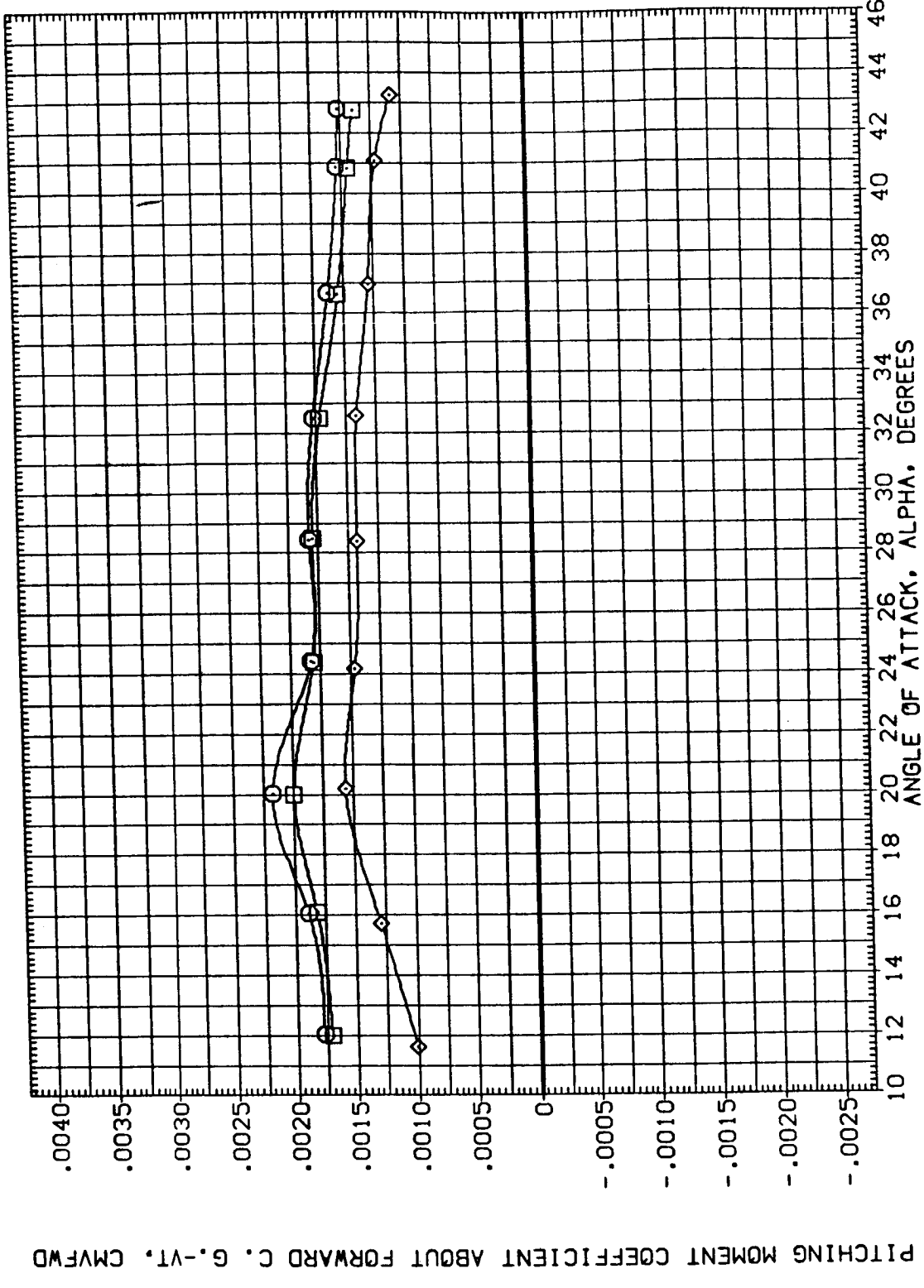


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEG001) AMES 3.5-190 0A98 (011-M7-M14)

(BEG009) AMES 3.5-190 0A98 (011-M7-M14-N24)

(BEG017) AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

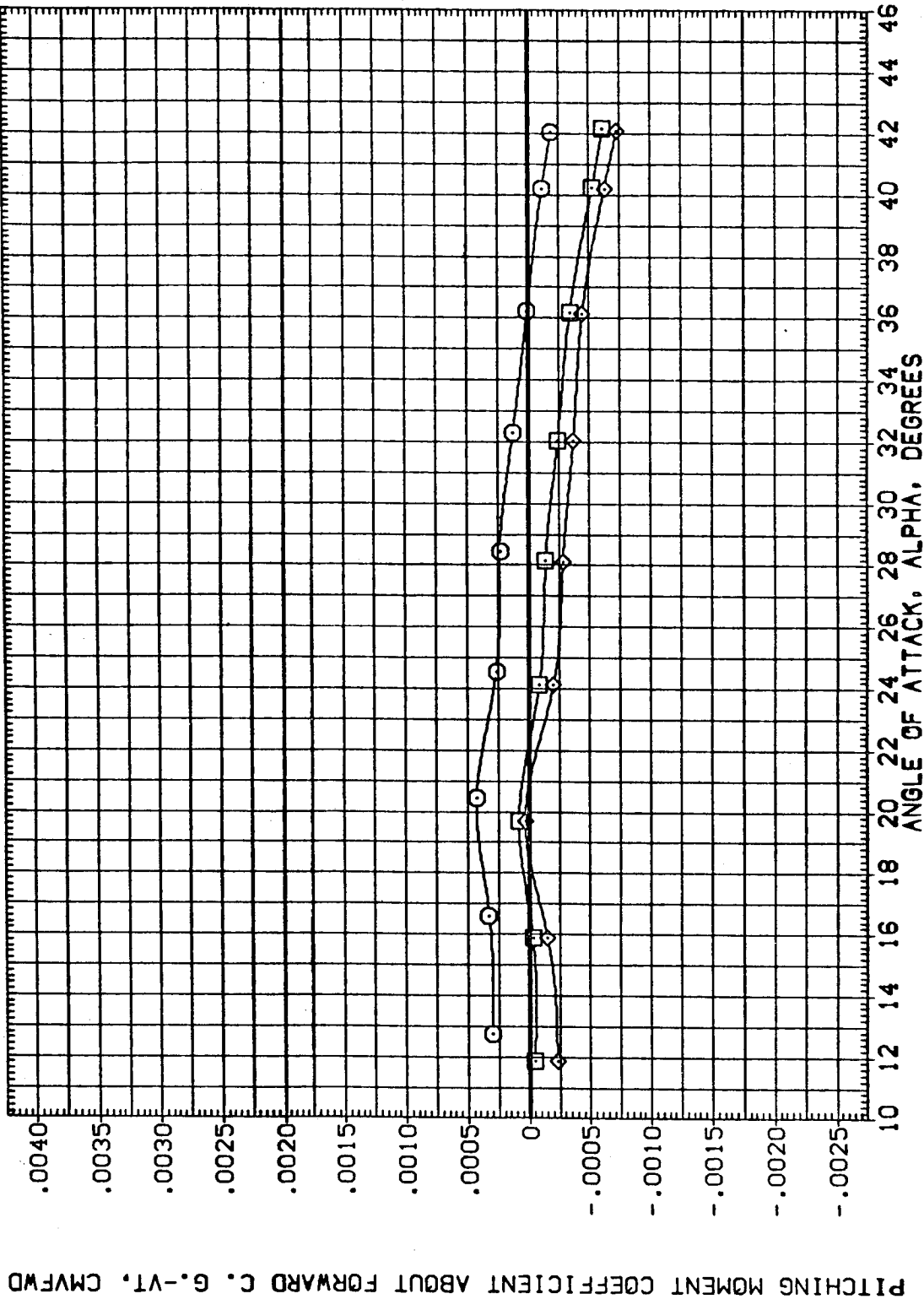


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMAFT

DATA SET SYMBOL (BE0001) (BE0009) (BE0017)

CONFIGURATION DESCRIPTION AVES 3.5-190 OA98 (011-N7+M14) AVES 3.5-190 OA98 (011-N7+M14-N24) AVES 3.5-190 OA98 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 -11.700 -11.700

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION SQ.FT. SREF 2690.0000 LREF 474.8000 BREF 936.6800 XMRP 1076.7000 YMRP .0000 ZMRP 375.0000 SCALE .0150

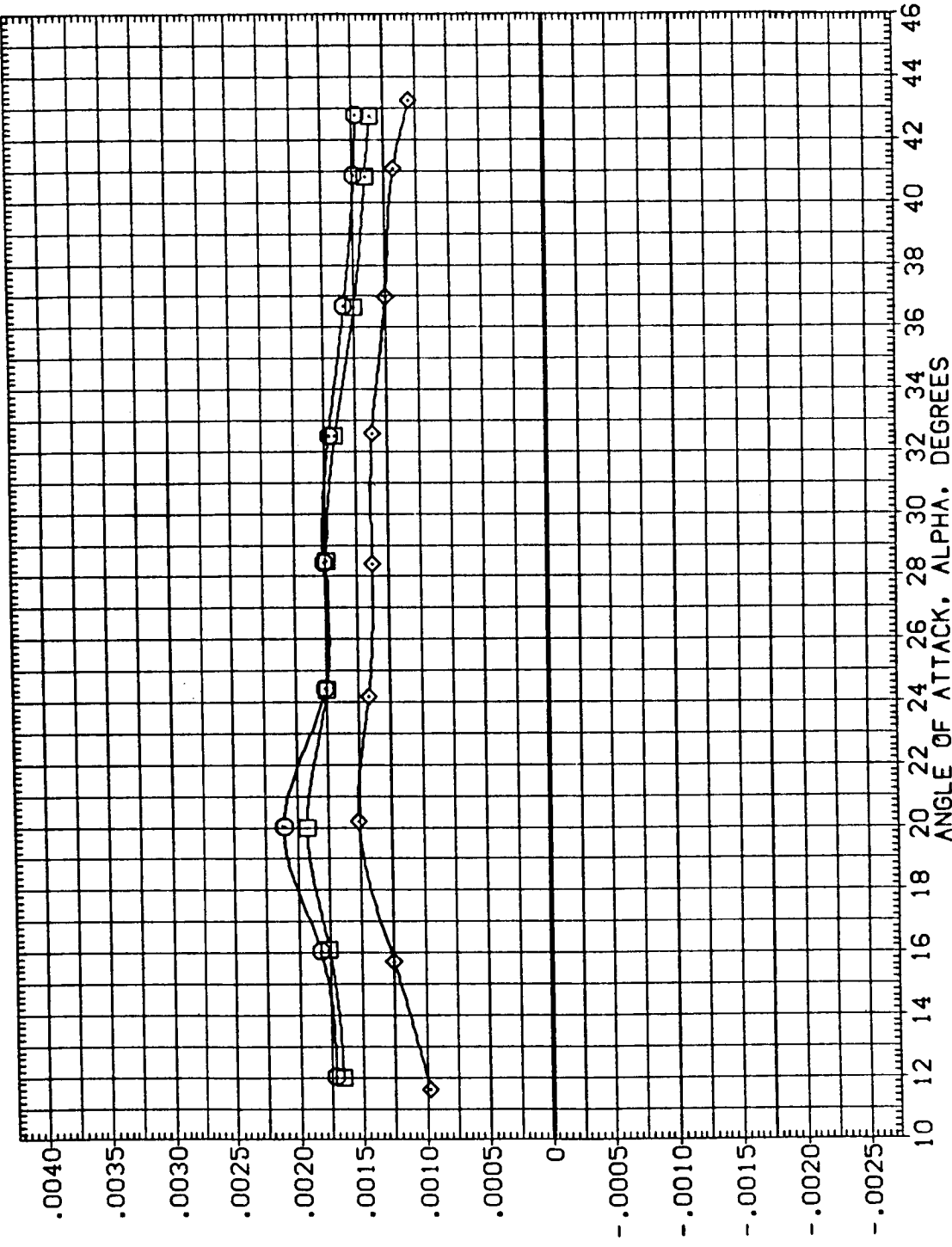


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

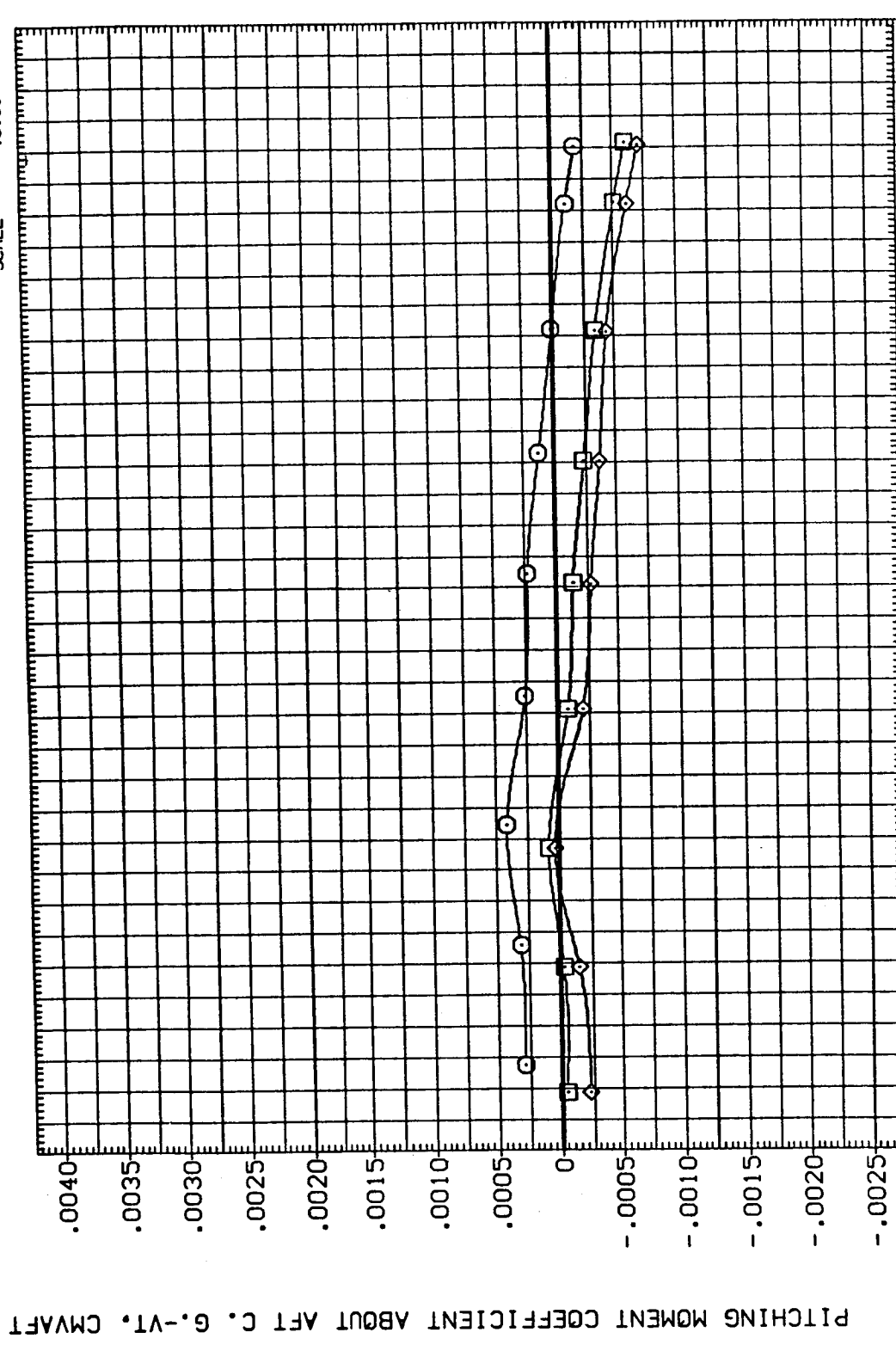
DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(BEG001)	AMES 3.5-190 GA98 (011-M7-M14)	SREF 2690.0000	SO.FT.
(BEG009)	AMES 3.5-190 GA98 (011-M7-M14-N24)	LREF 474.8000	IN.
(BEG017)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	BREF 936.6800	IN.
		XMRP 1076.7000	IN.X0
		YMRP .0000	IN.Y0
		ZMRP 375.0000	IN.Z0
		SCALE .0150	

BETA ELEVON BOFLAP SPOBRK

.000	.000	-11.700	55.000
.000	.000	-11.700	55.000
.000	.000	-11.700	55.000

ANGLE OF ATTACK, ALPHA, DEGREES



PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (YEQ009) (YEQ017)

CONFIGURATION DESCRIPTION
 AHES 3.5-190 0A98 (011-M7-M14-N24)
 AHES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

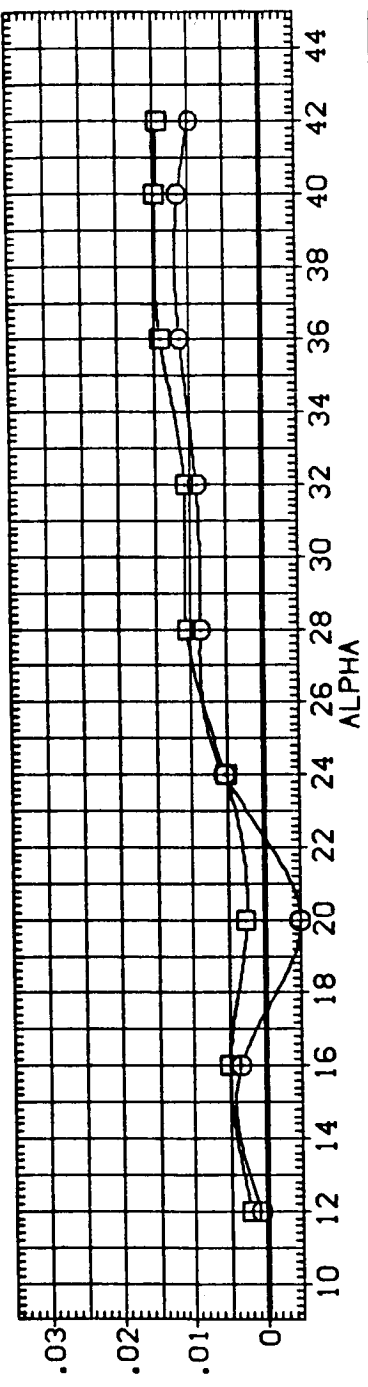
BETA .000
 .000

ELEVON .000
 .000

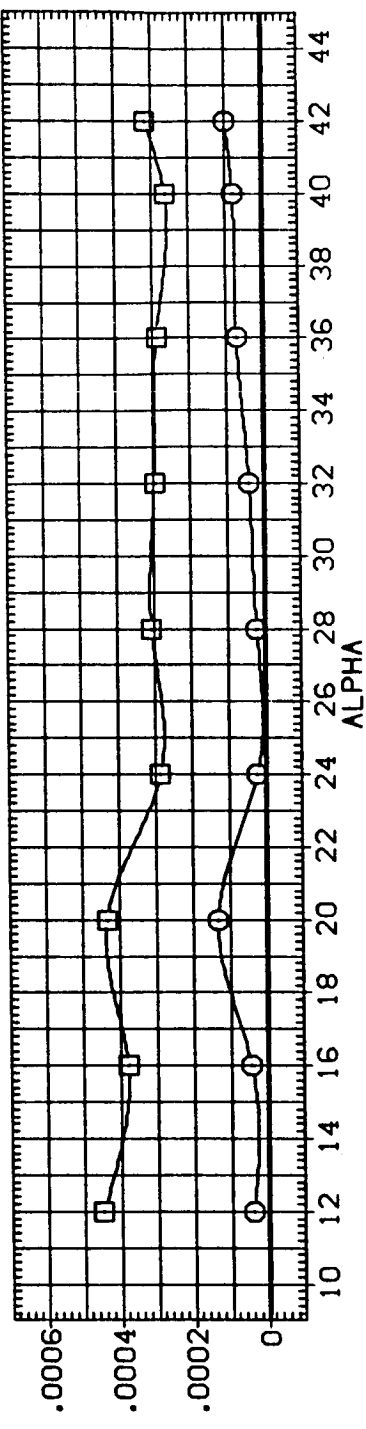
BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

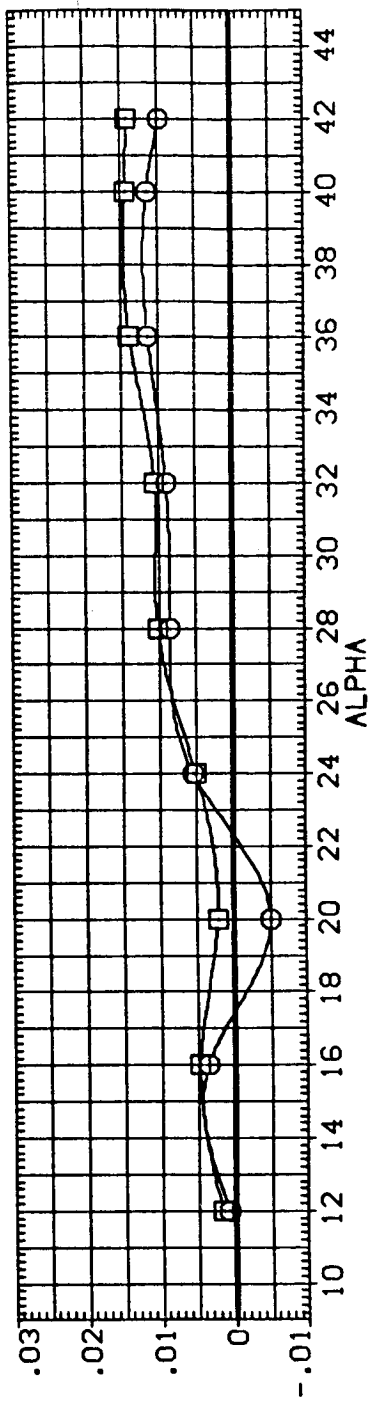
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DCLT



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL: (YEQ009) (YEQ017)
 CONFIGURATION DESCRIPTION: AMES 3.5-190 GA98 (011-M7-M14-N24) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)
 BETA: .000 .000
 ELEVEN: .000 .000
 BOFLAP: -11.700 -11.700
 SPOBRK: 55.000 55.000
 REFERENCE INFORMATION: SREF 2690.0000 59. FT. LREF 474.8000 IN. BREF 936.6800 IN. XG 1076.7000 IN. YG 0.0000 IN. YG 0.0000 IN. ZG 375.0000 IN. ZG SCALE .0150

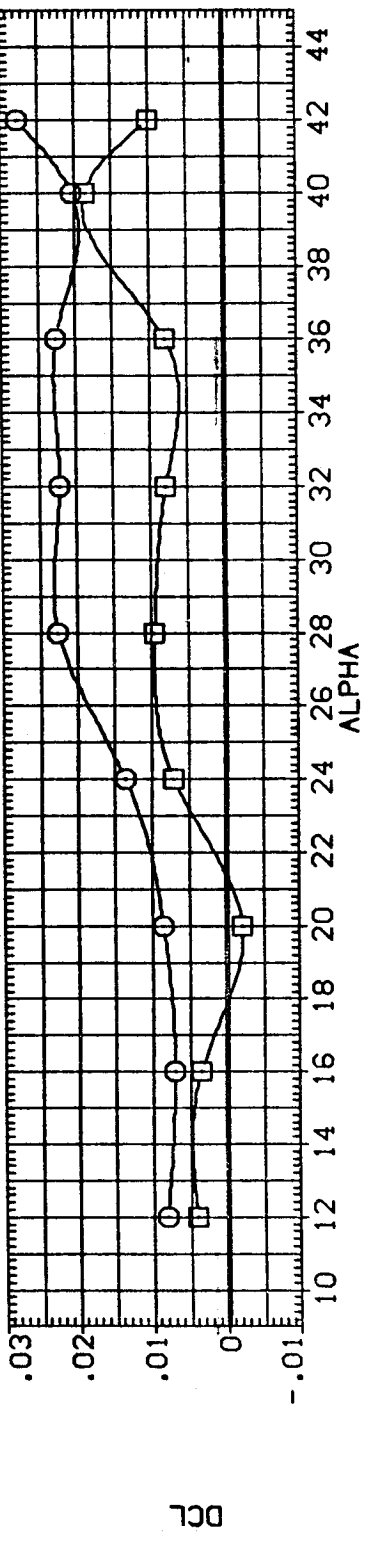
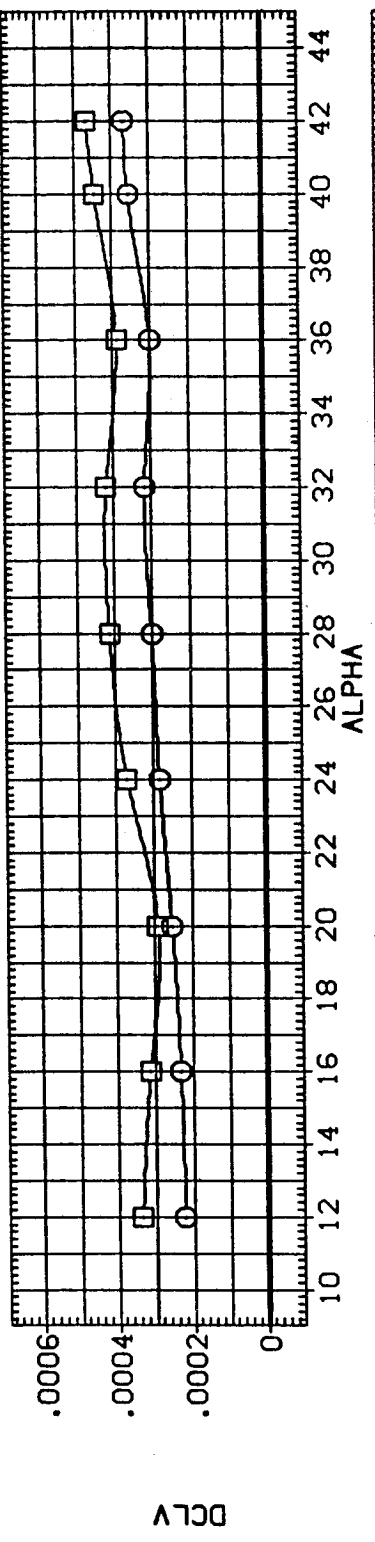
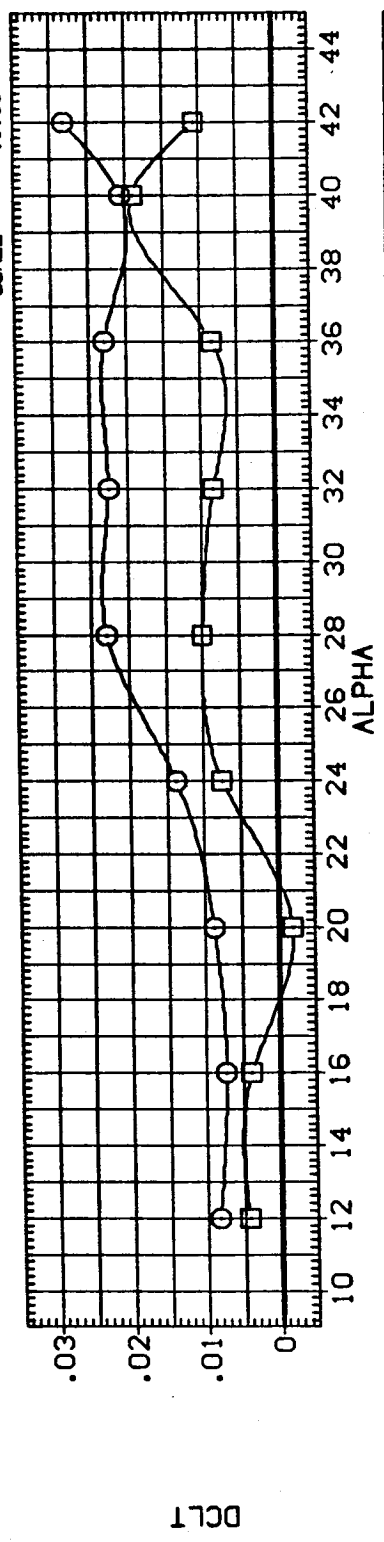


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
(B)MACH = 10.30

DATA SET SYMBOL (ZEG009) (ZEG0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+H14-N24)
 AMES 3.5-190 OAS8 (011-M7+H14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 936.8800
 1076.7000
 IN.X0
 IN.Y0
 IN.Z0
 375.0000
 SCALE .0150

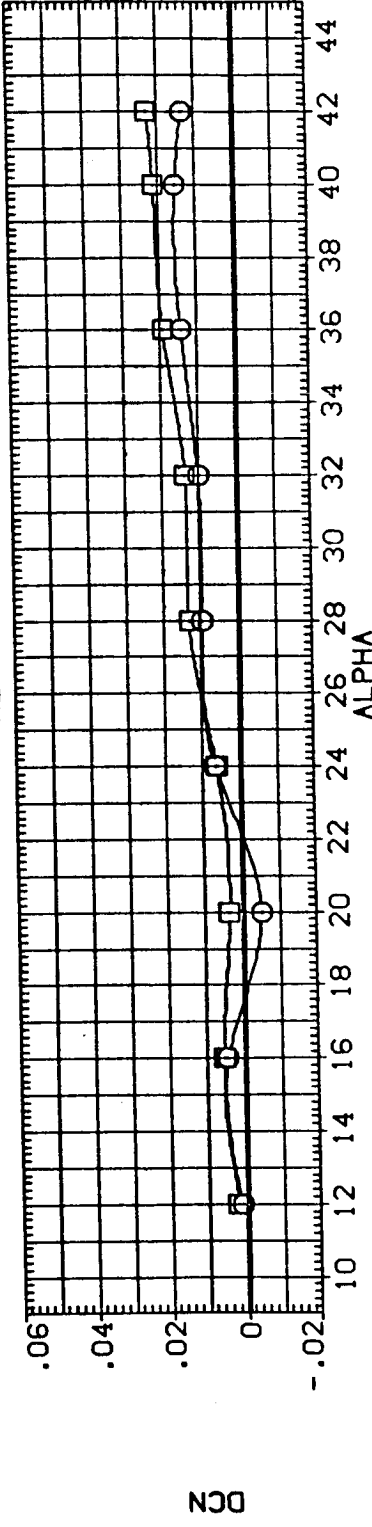
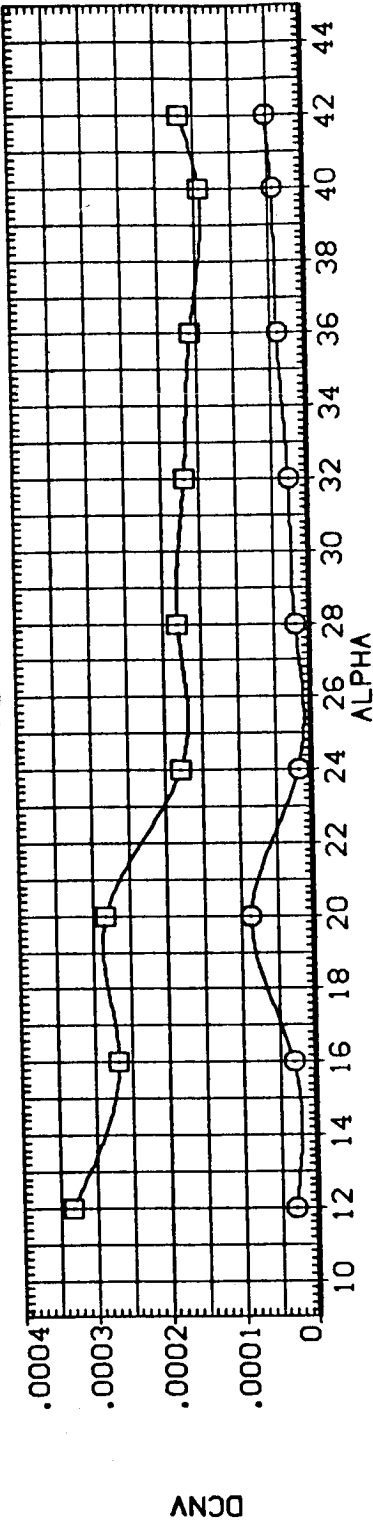
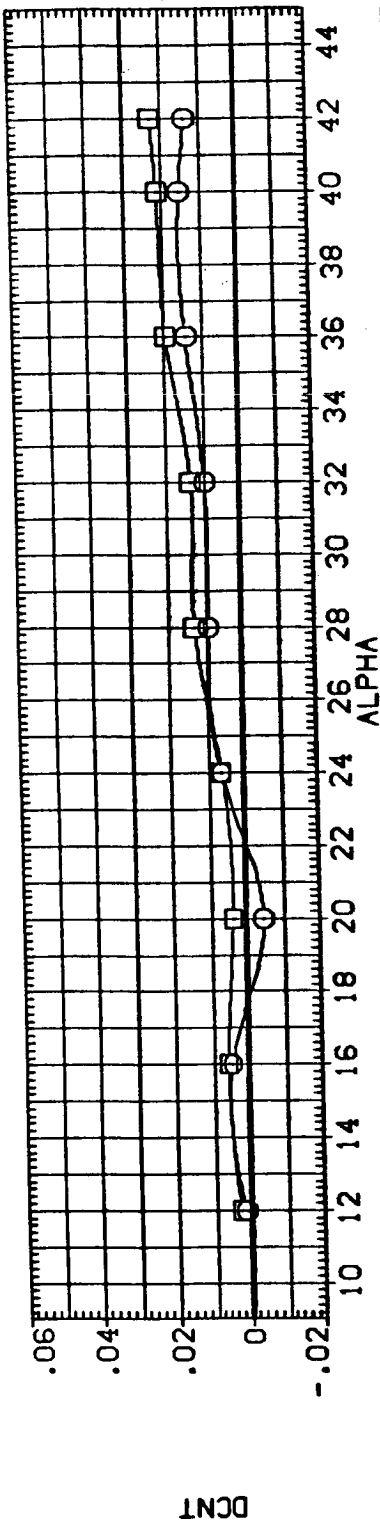


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (ZEG009) (ZEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-M7-M14-N24)
 AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

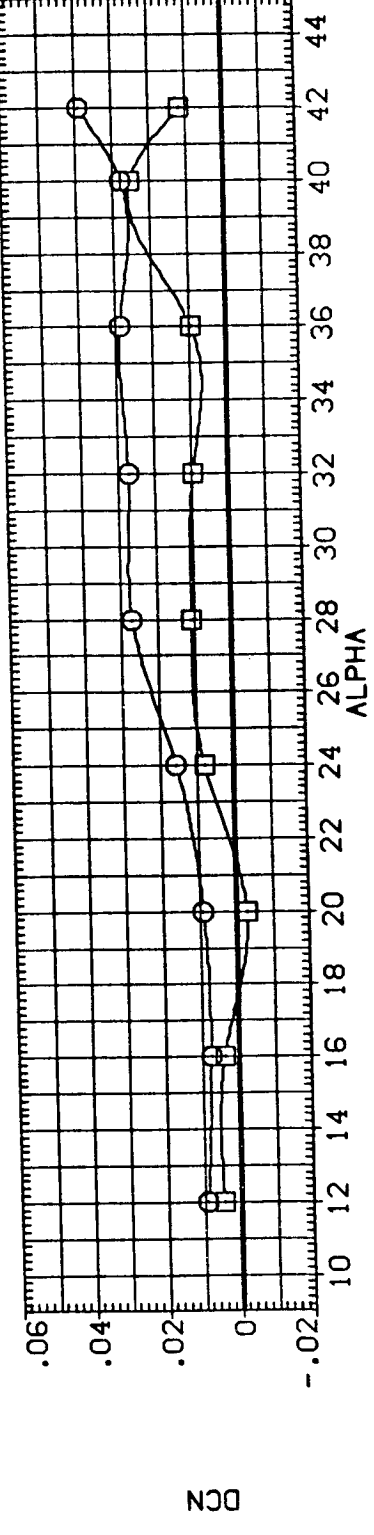
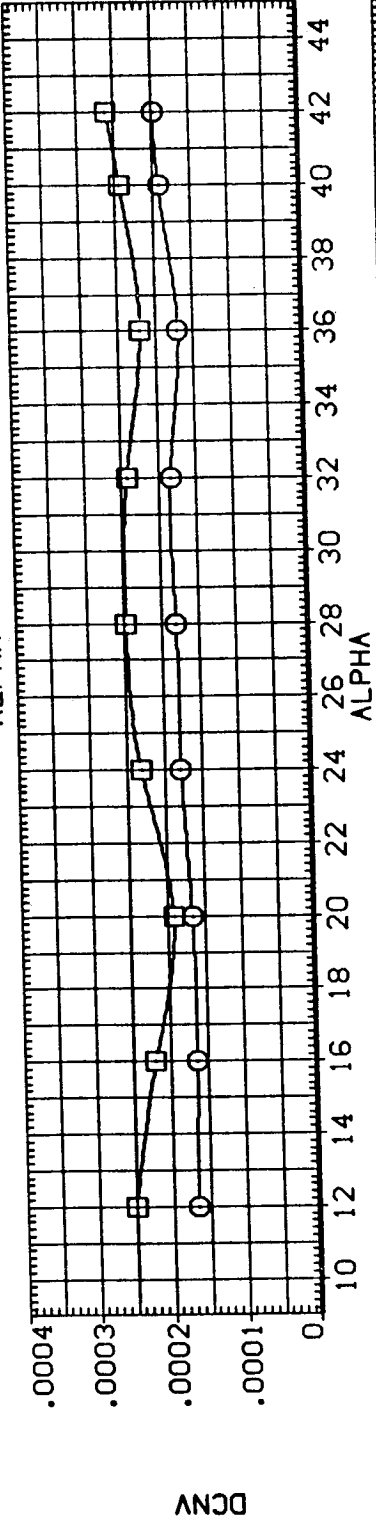
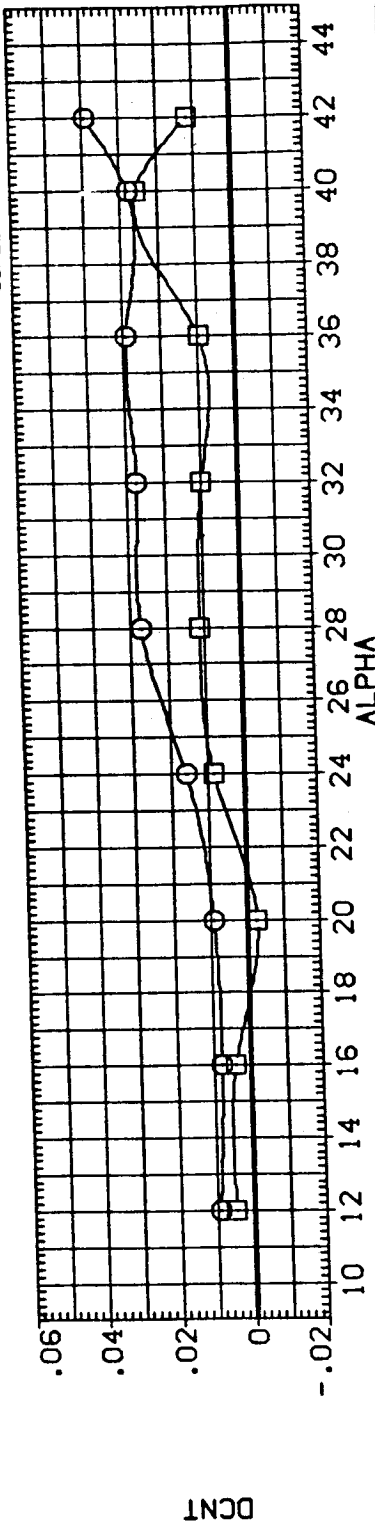


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZE0009) (ZE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14-N24)
 AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

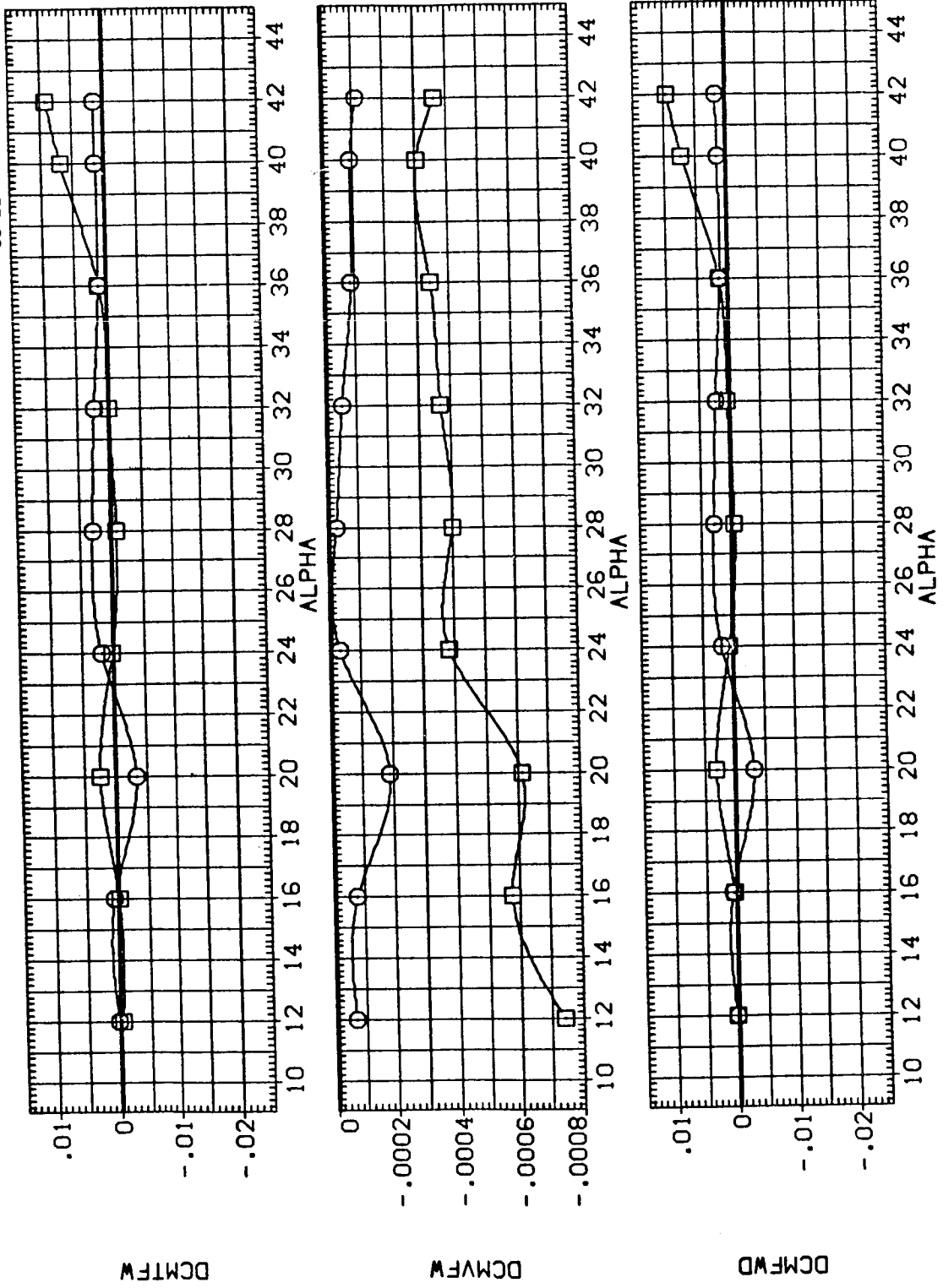


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJMACH = 5.30



DATA SET SYMBOL (ZEG0009) (ZEG0017) CONFIGURATION DESCRIPTION APES 3.5-190 GA98 (011-M7+H14-N24) APES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

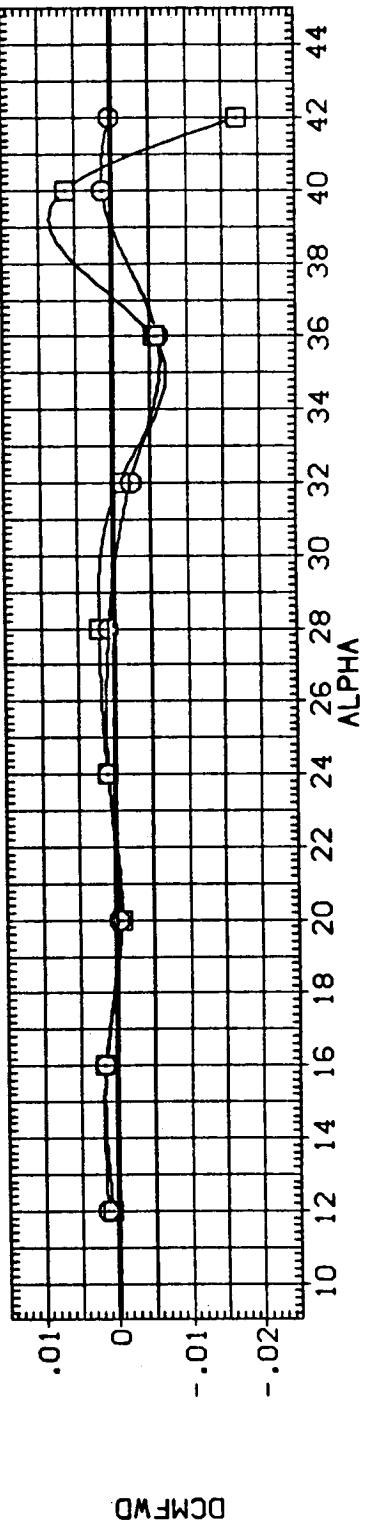
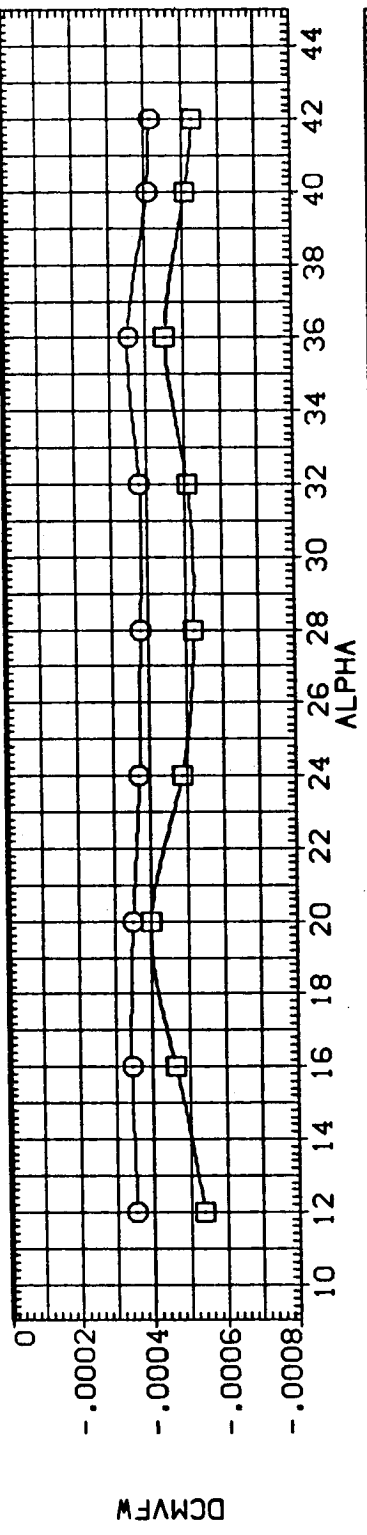
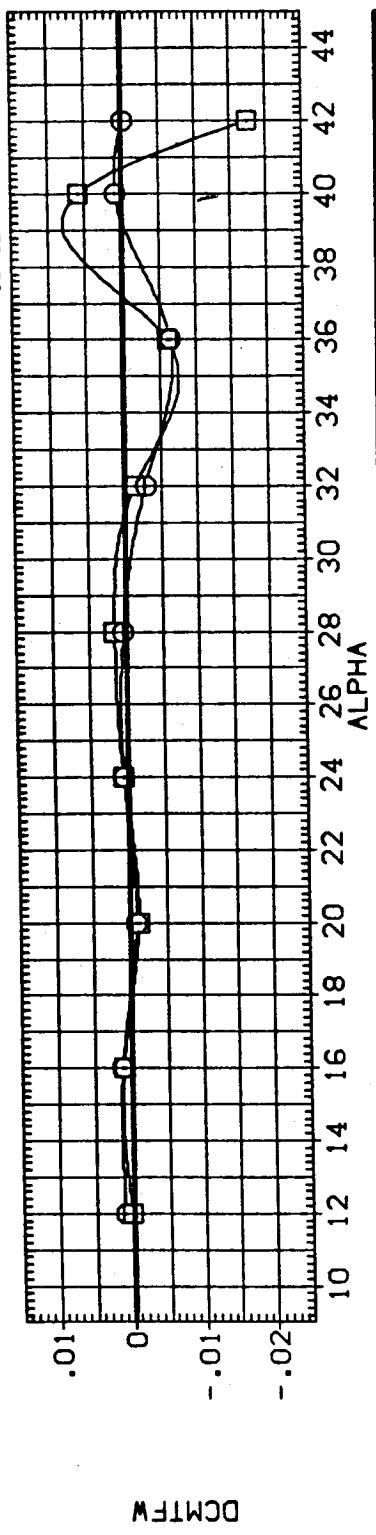


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZEG009) (ZEG017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OA98 (011-M7+M14-N24)
 AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

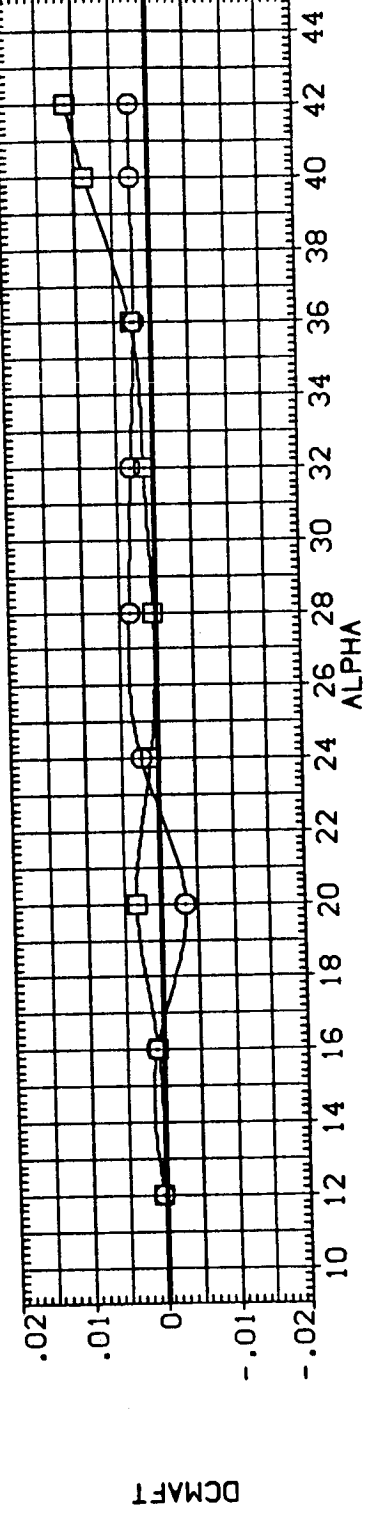
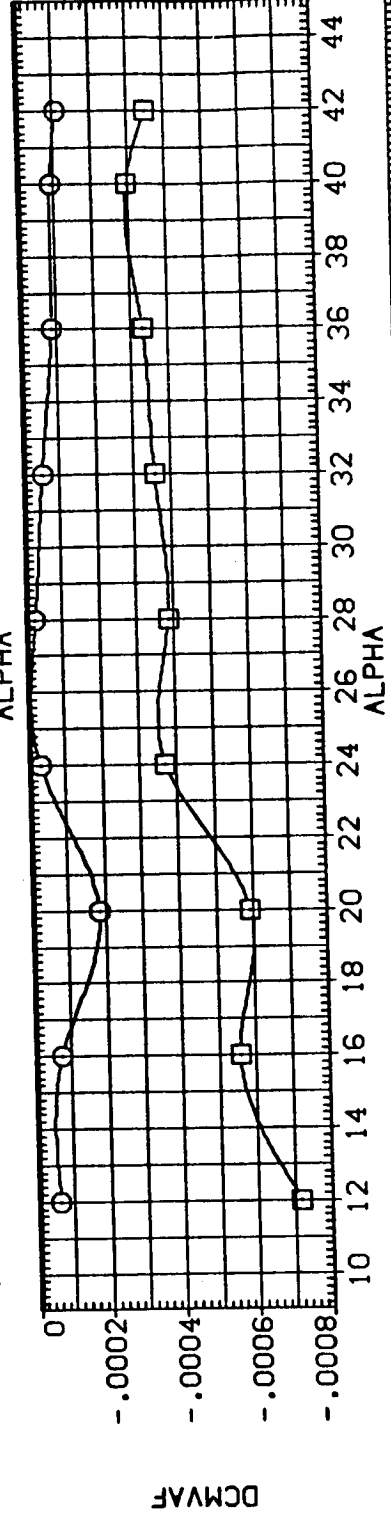
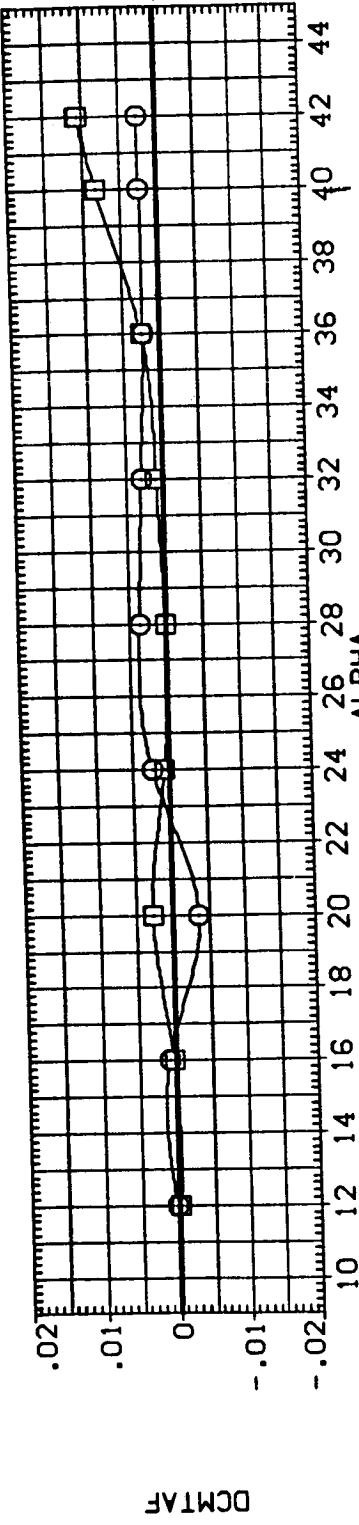


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (ZE0009) (ZE0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

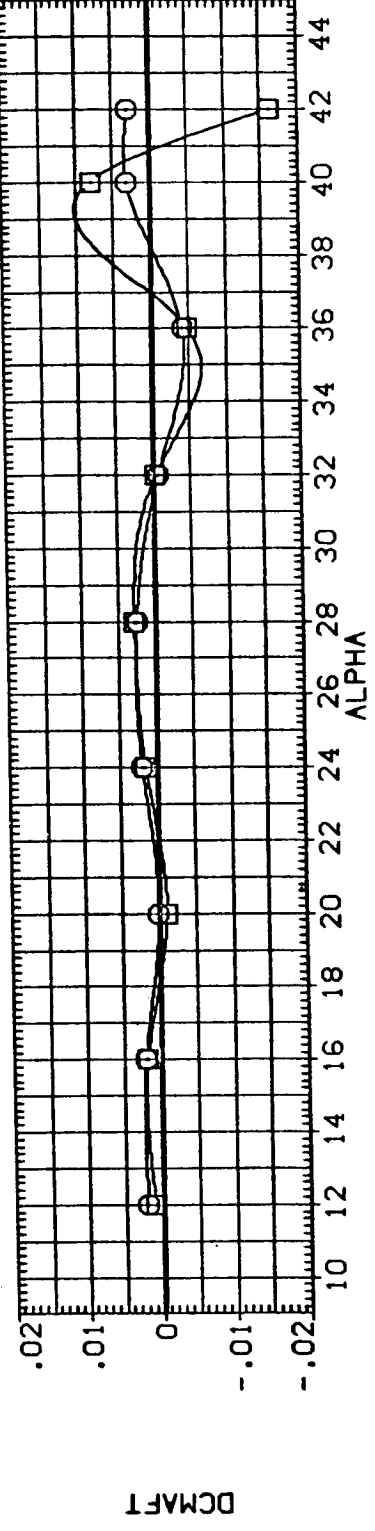
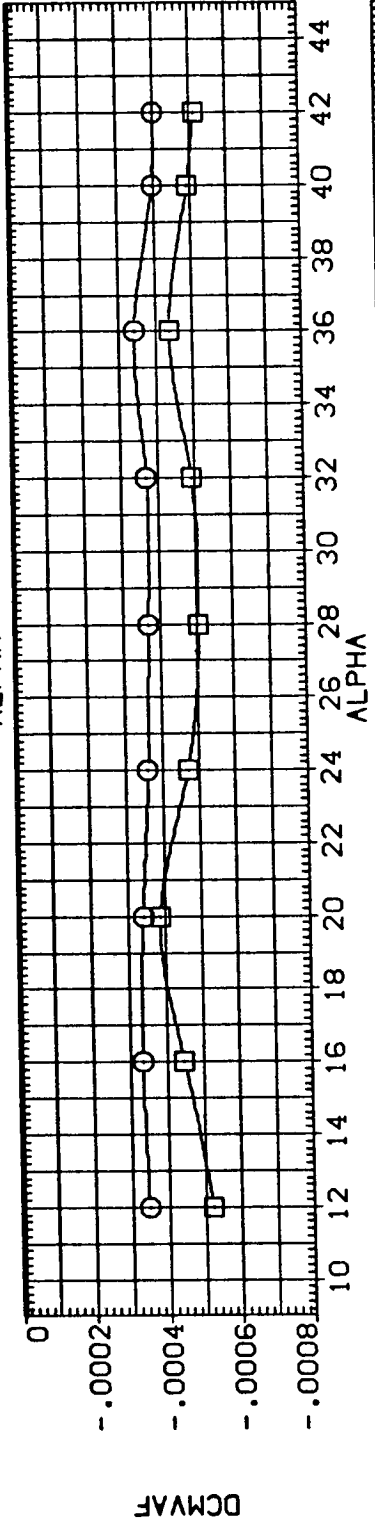
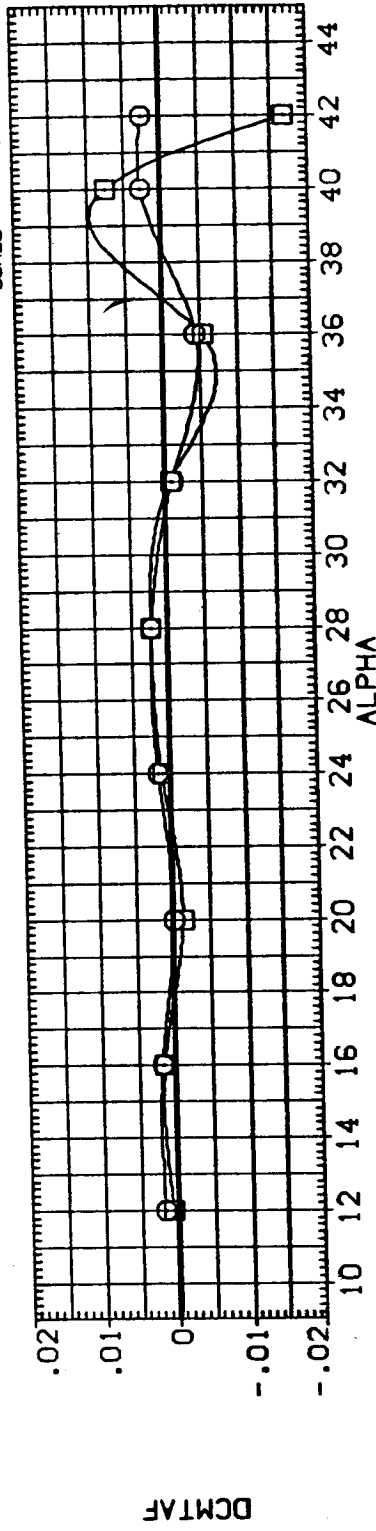


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (1E0009) (1E0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7-M14-N24)
 AMES 3.5-190 OAS8 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150

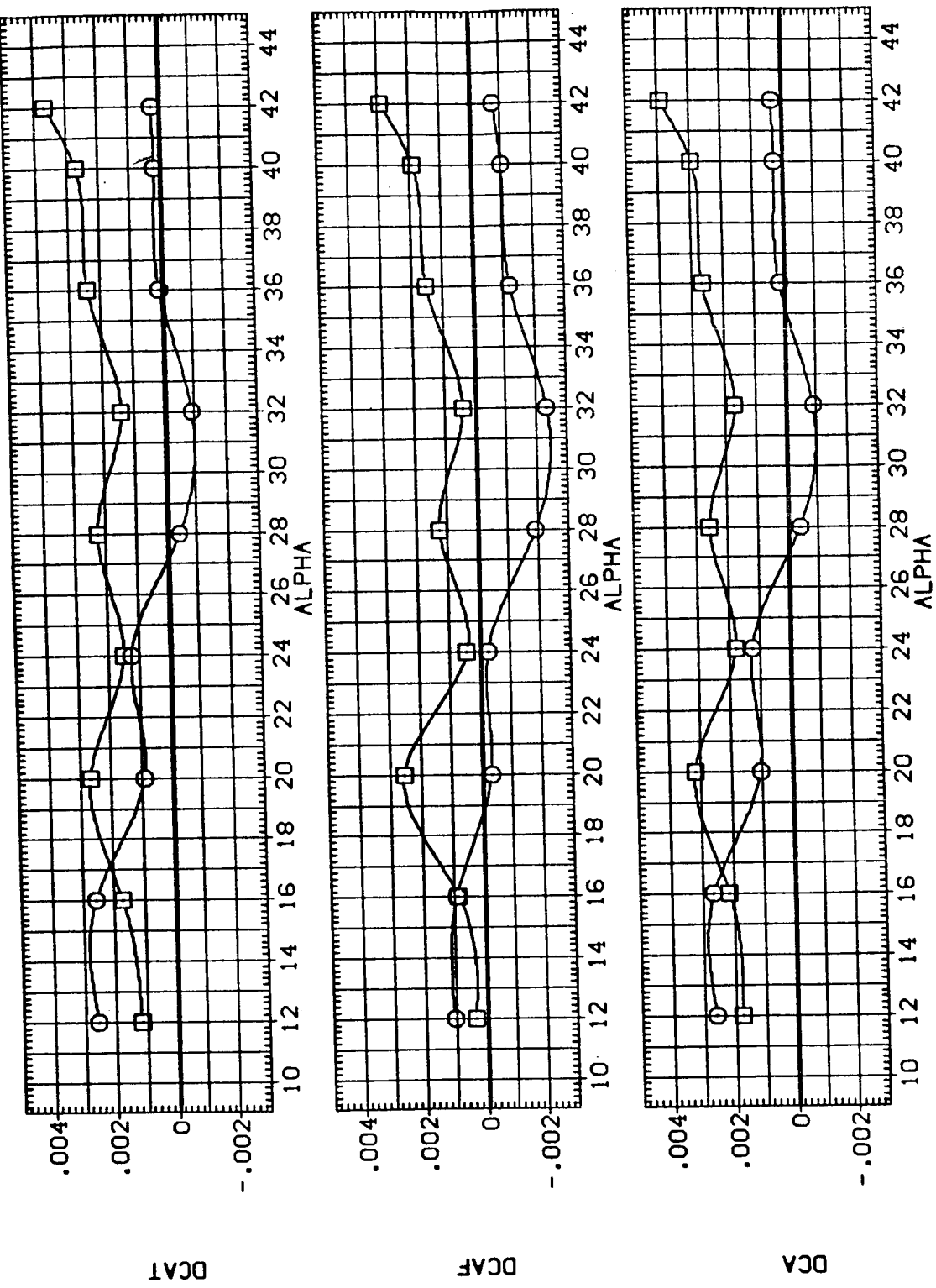


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL (1EQ009) (1EQ017) □

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON BOFLAP SPOBRK
 .000 -11.700 55.000
 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

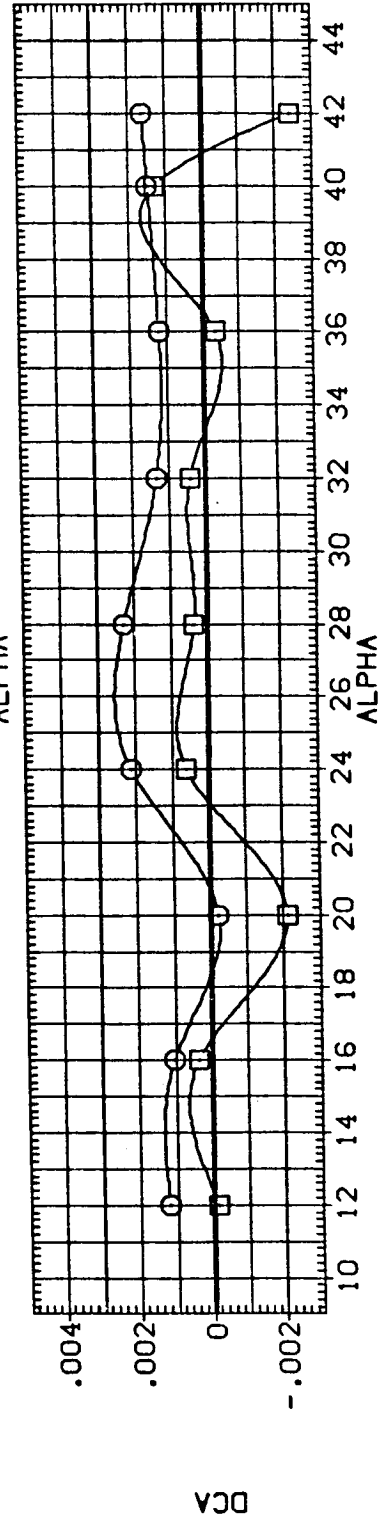
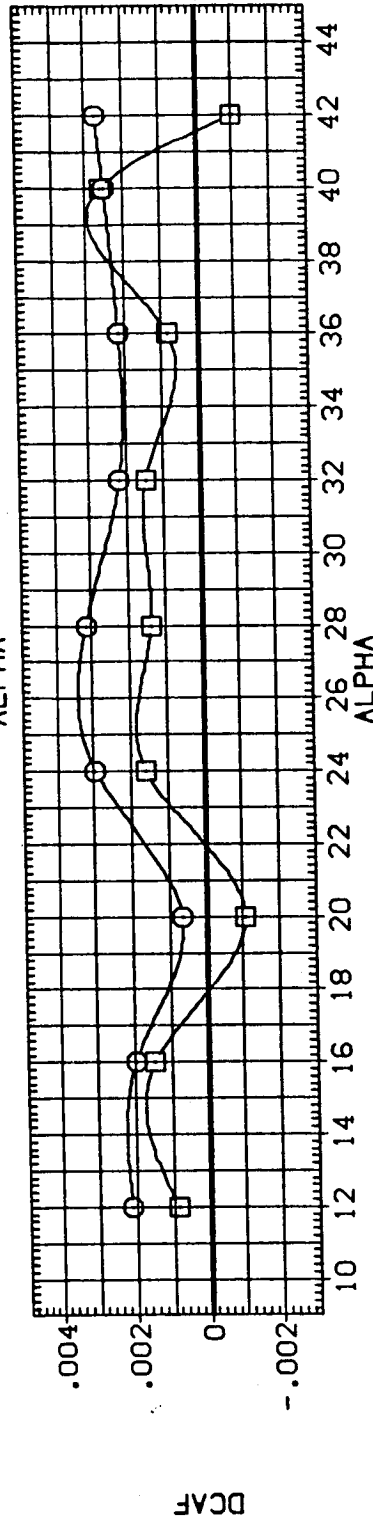
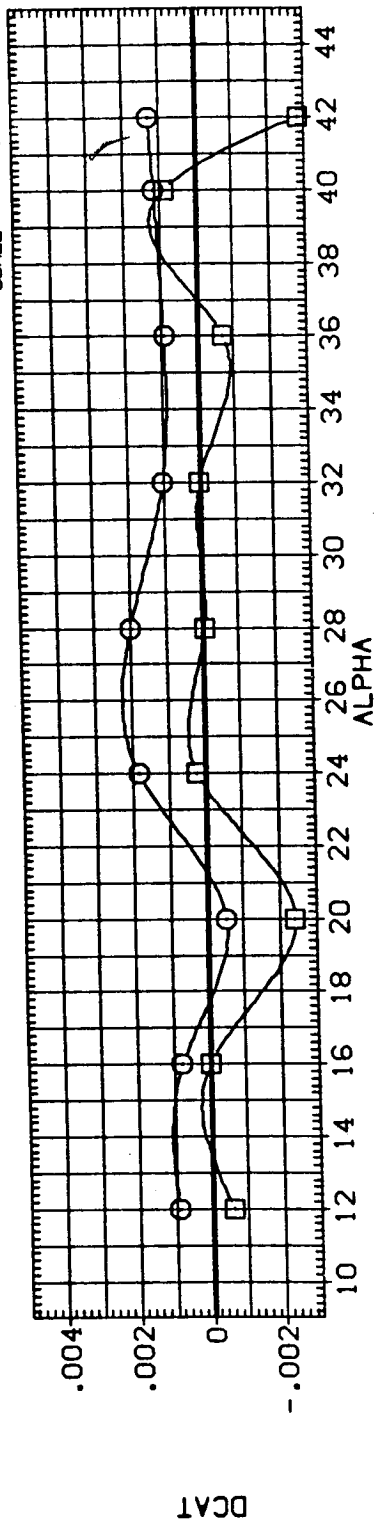


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (1E0009) (1E0017) \square

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.X0
 YMRP 1076.7000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150

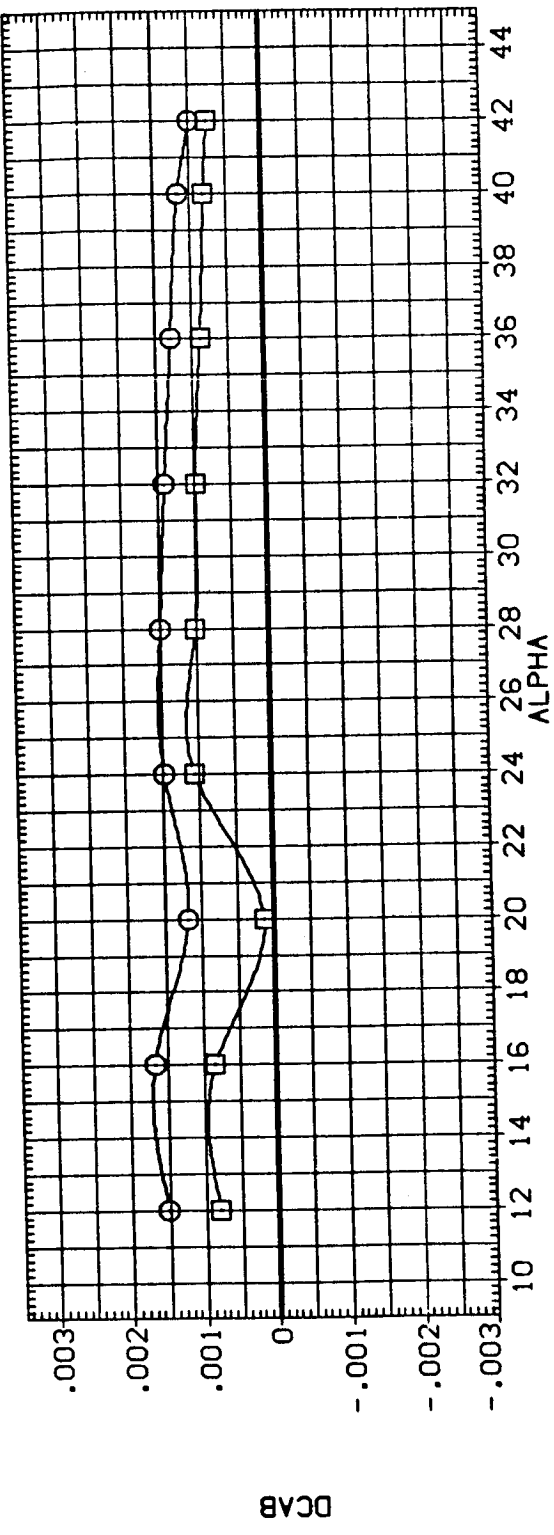
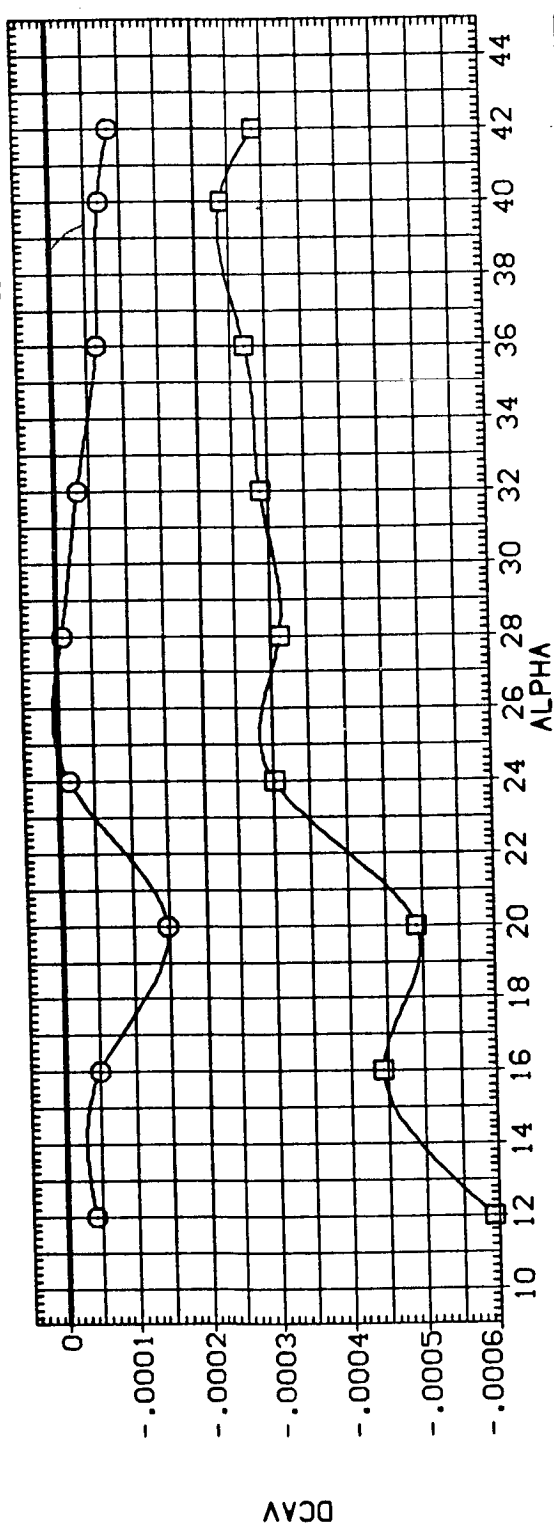


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (1EG009) (1EG017)
 CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-M7+H14-N24)
 AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.XD
 YMRP 1076.7000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

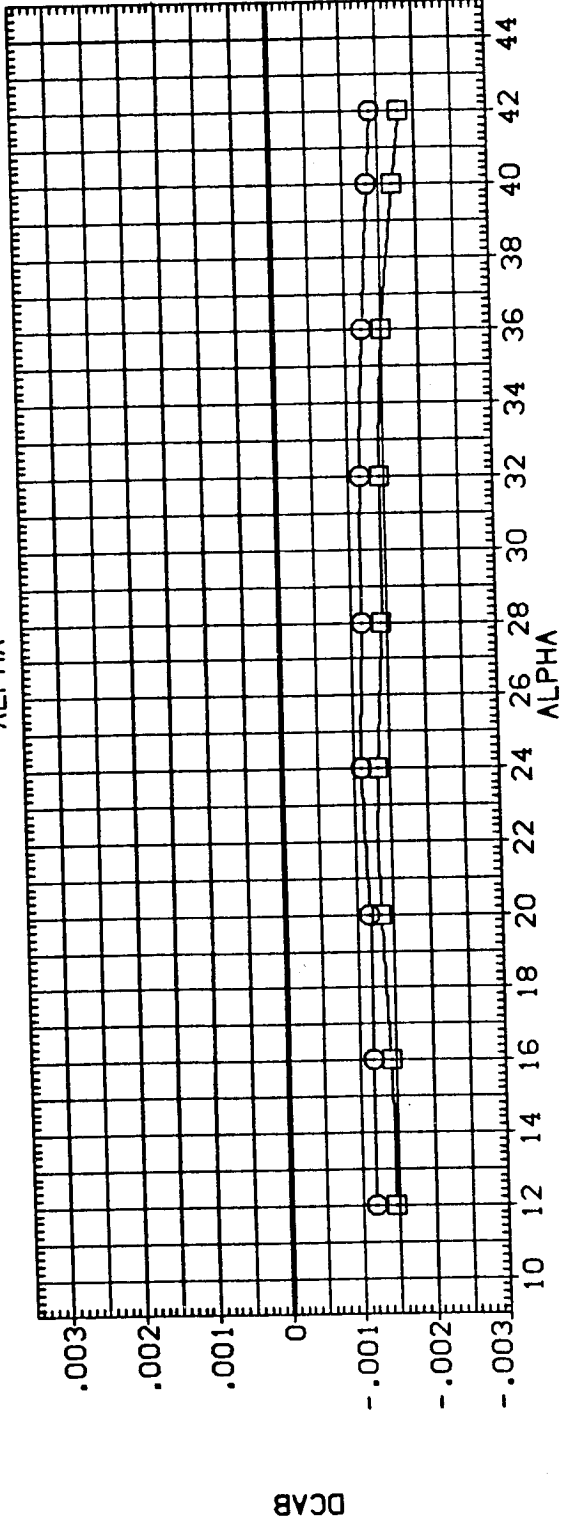
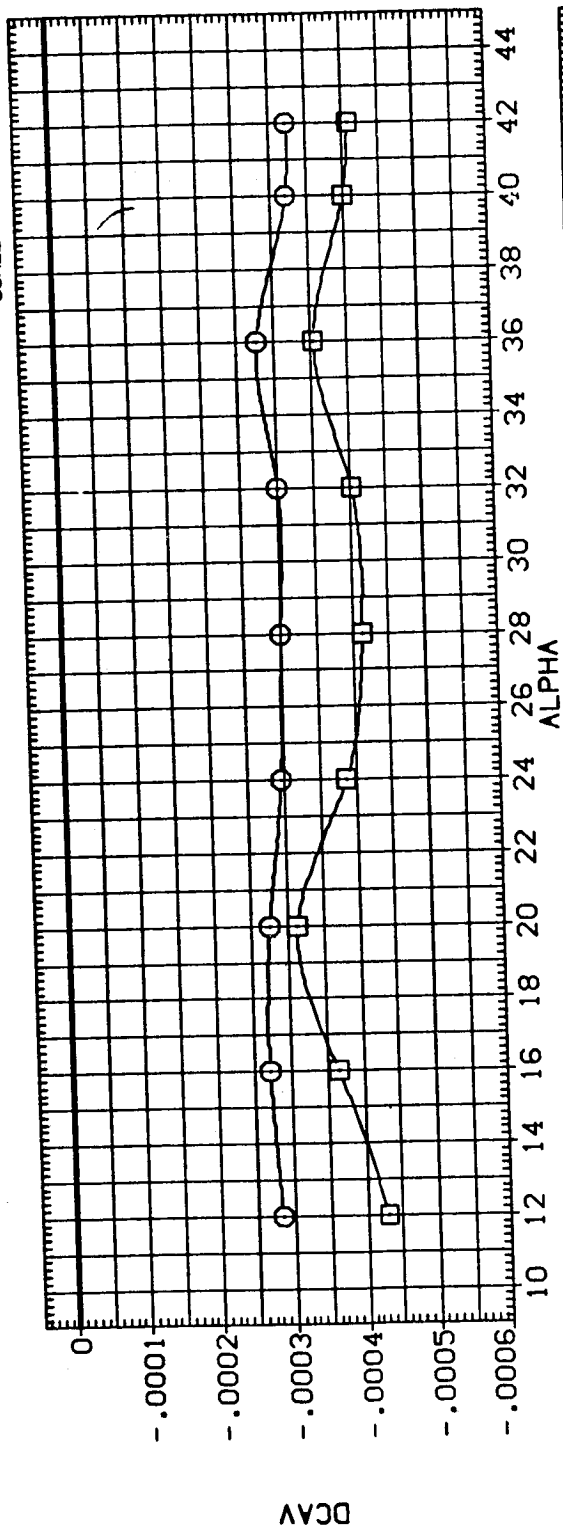


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (YEQ009) (YEQ017)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-M7-M14-N24)
 AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8900 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

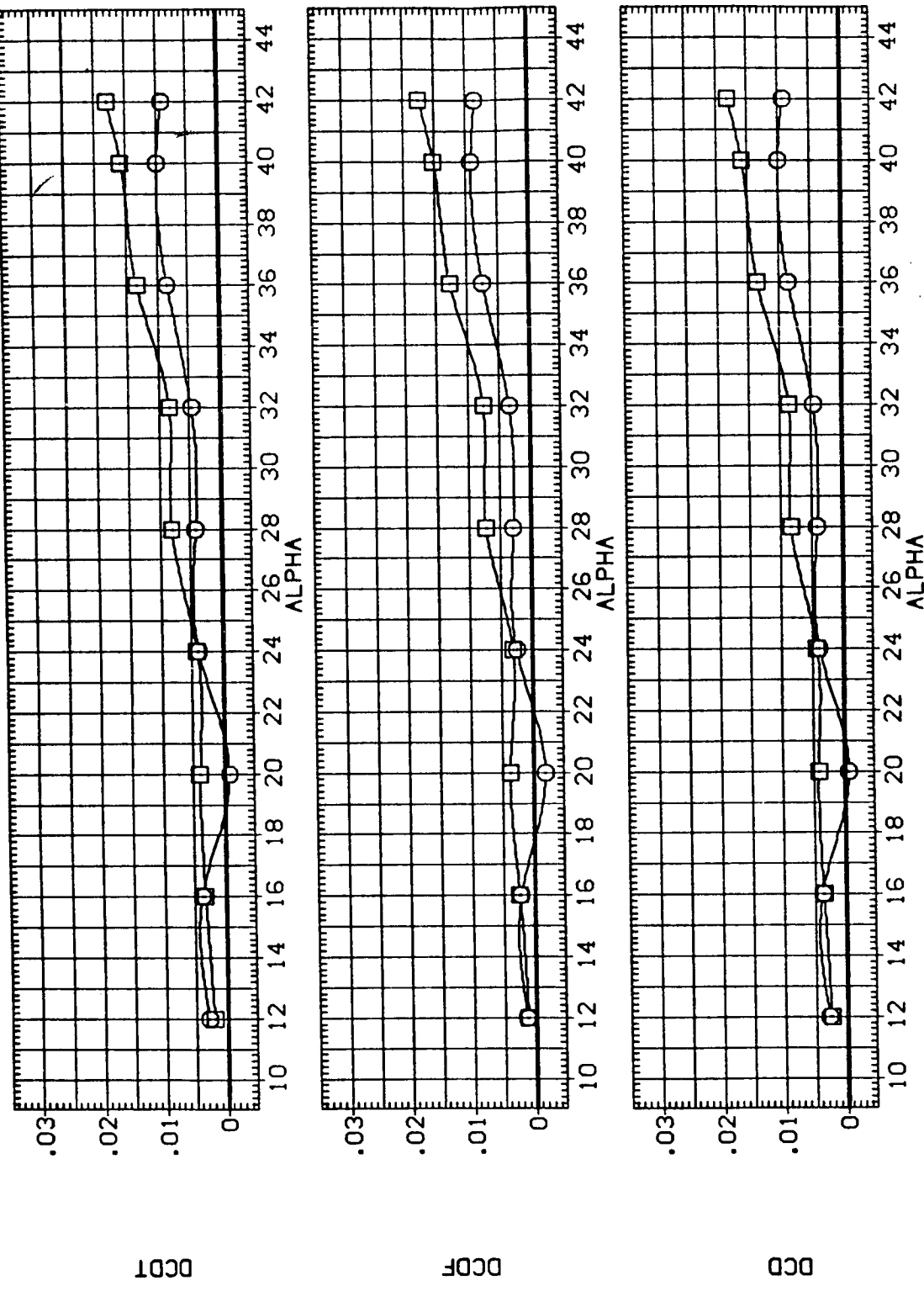


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YEG009) (YEG017)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-M7-HI4-N24)
 APES 3.5-190 GA98 (011-M7-HI4-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

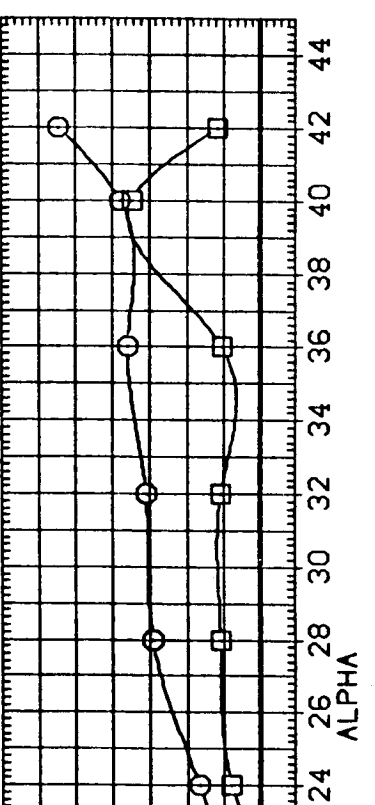
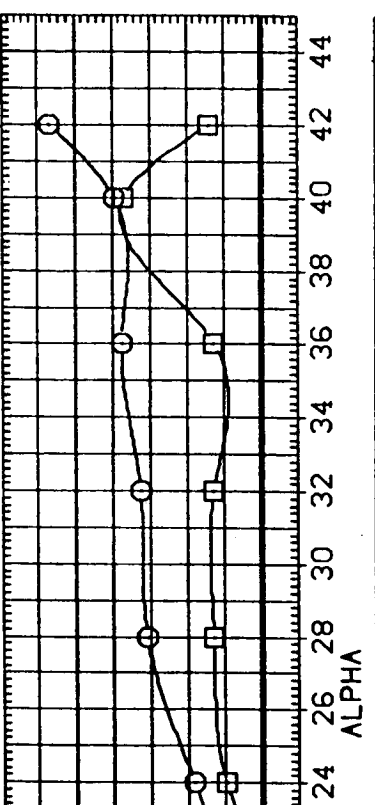
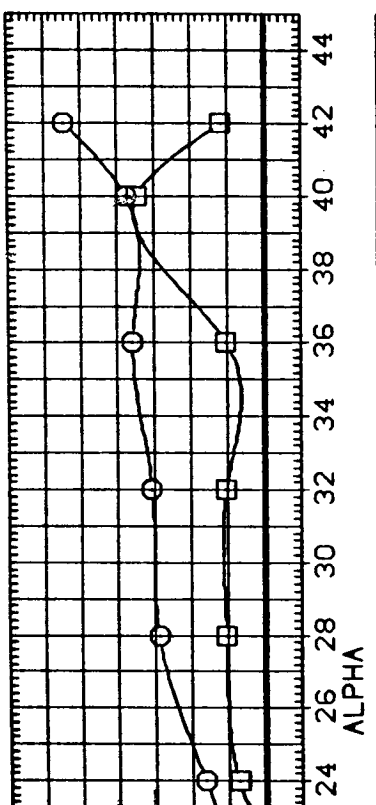


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (YEG009) (YEG017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

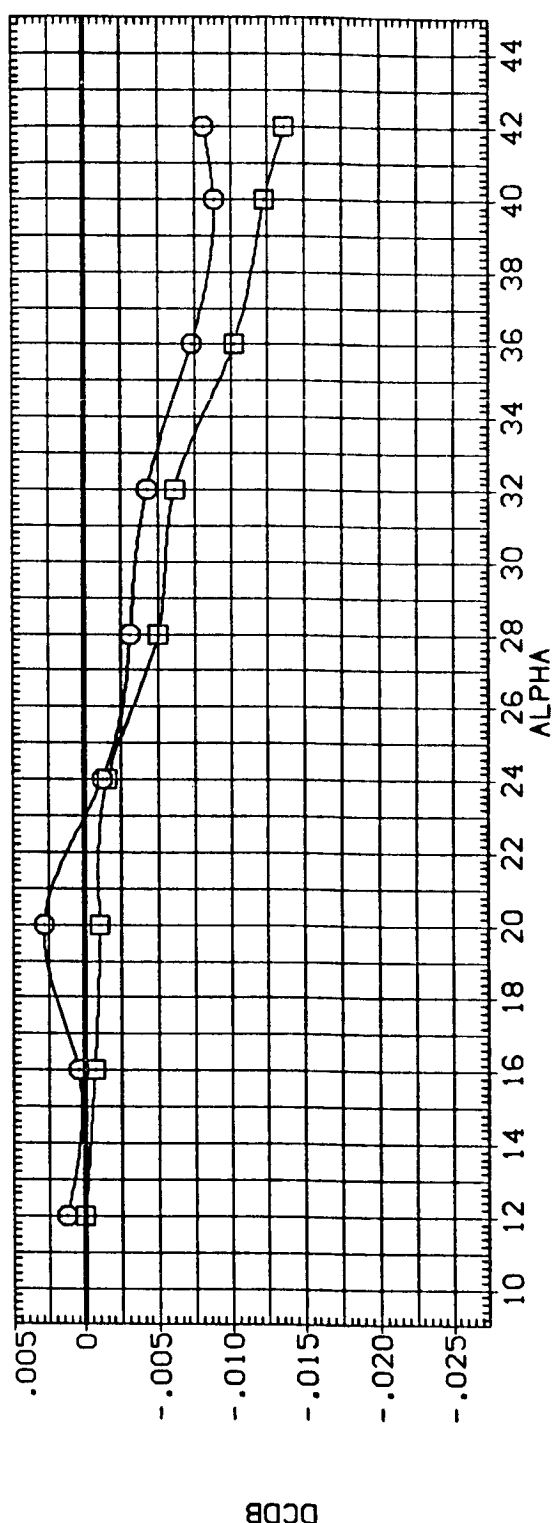
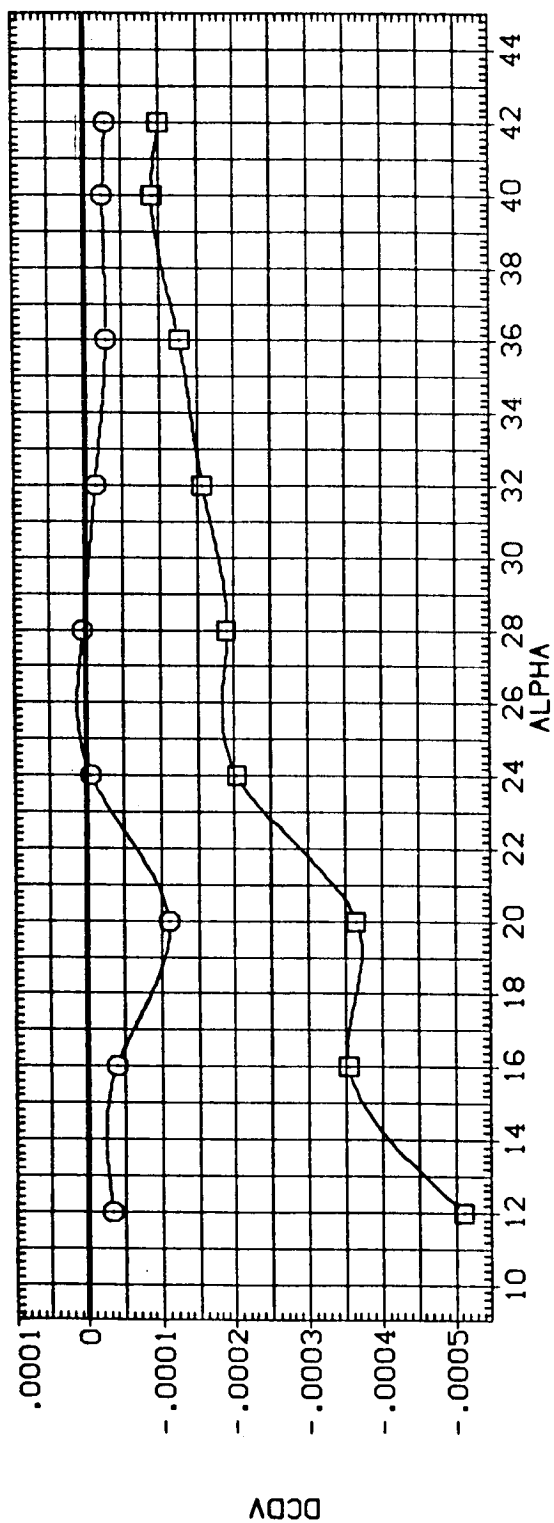



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YEG009) (YEG017)  CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+JUMMY STING)

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	.000	-11.700	55.000	LREF 474.8000 IN.
				BREF 936.6800 IN.
				XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

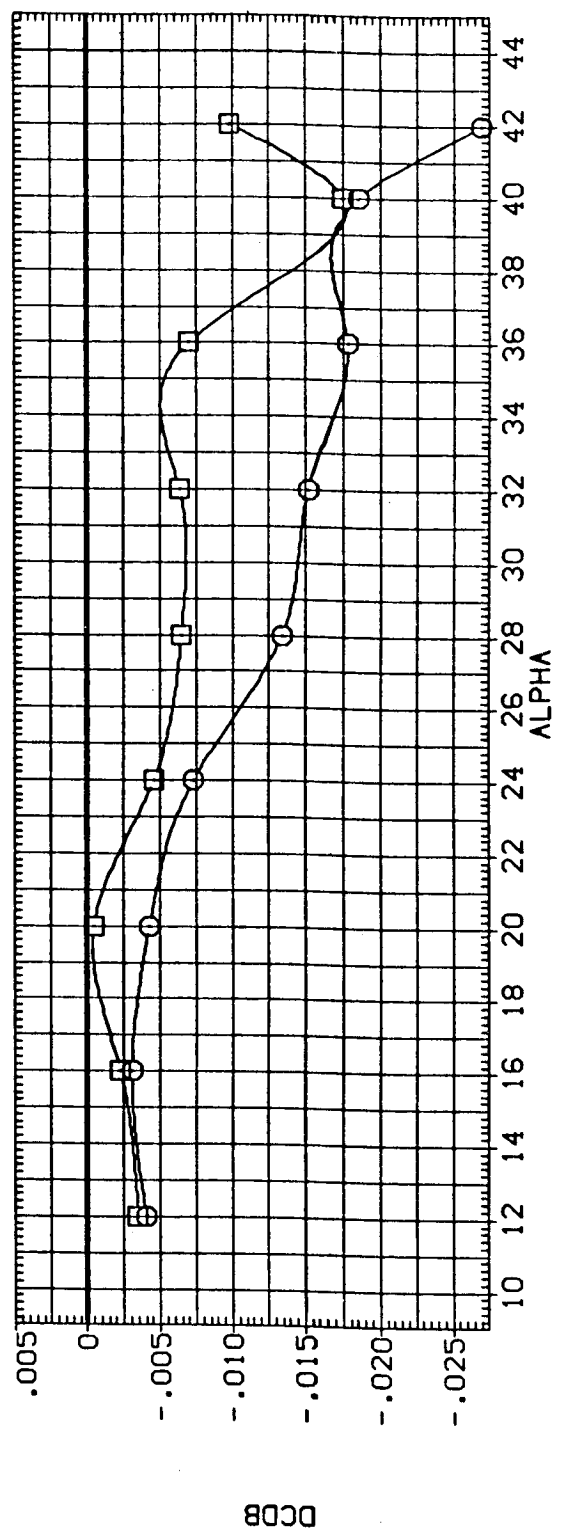
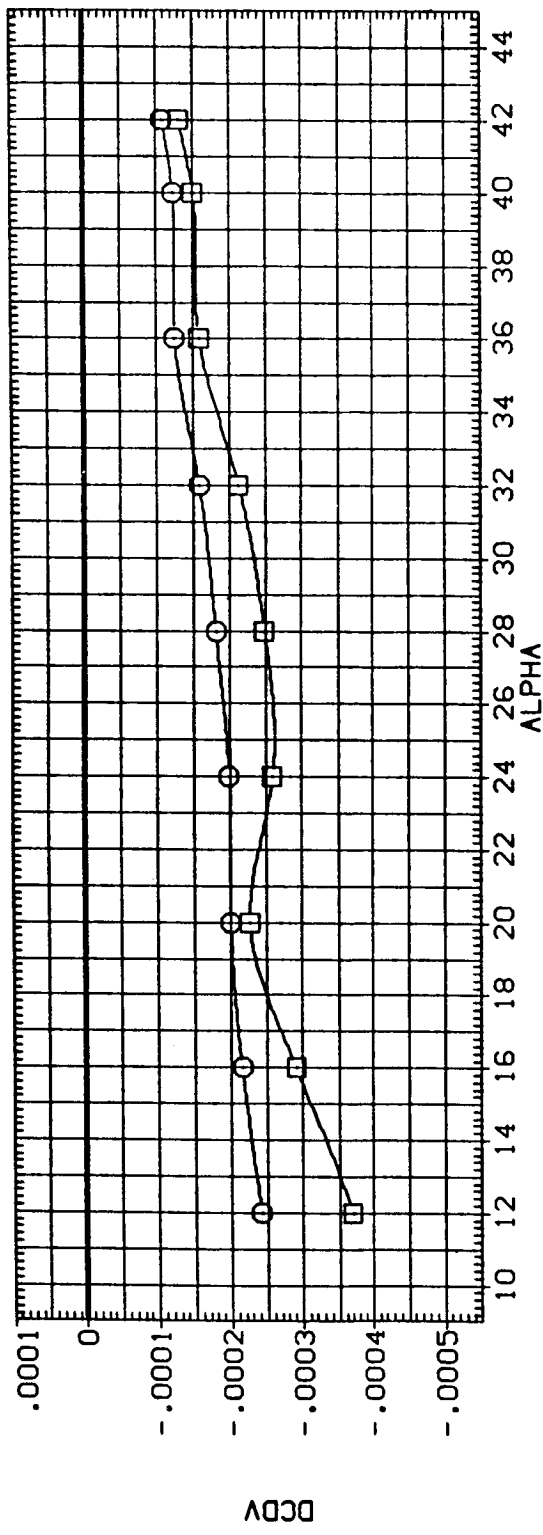


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL: (AE0001) (AE0008) (AE0017)

CONFIGURATION DESCRIPTION:
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA: .000 .000 .000

ELEVON: .000 .000 .000

BOFLAP: -11.700 -11.700 -11.700

SPOBRK: 55.000 55.000 55.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN.X0
 YMRP: .0000 IN.Y0
 ZMRP: 375.0000 IN.Z0
 SCALE: .0150

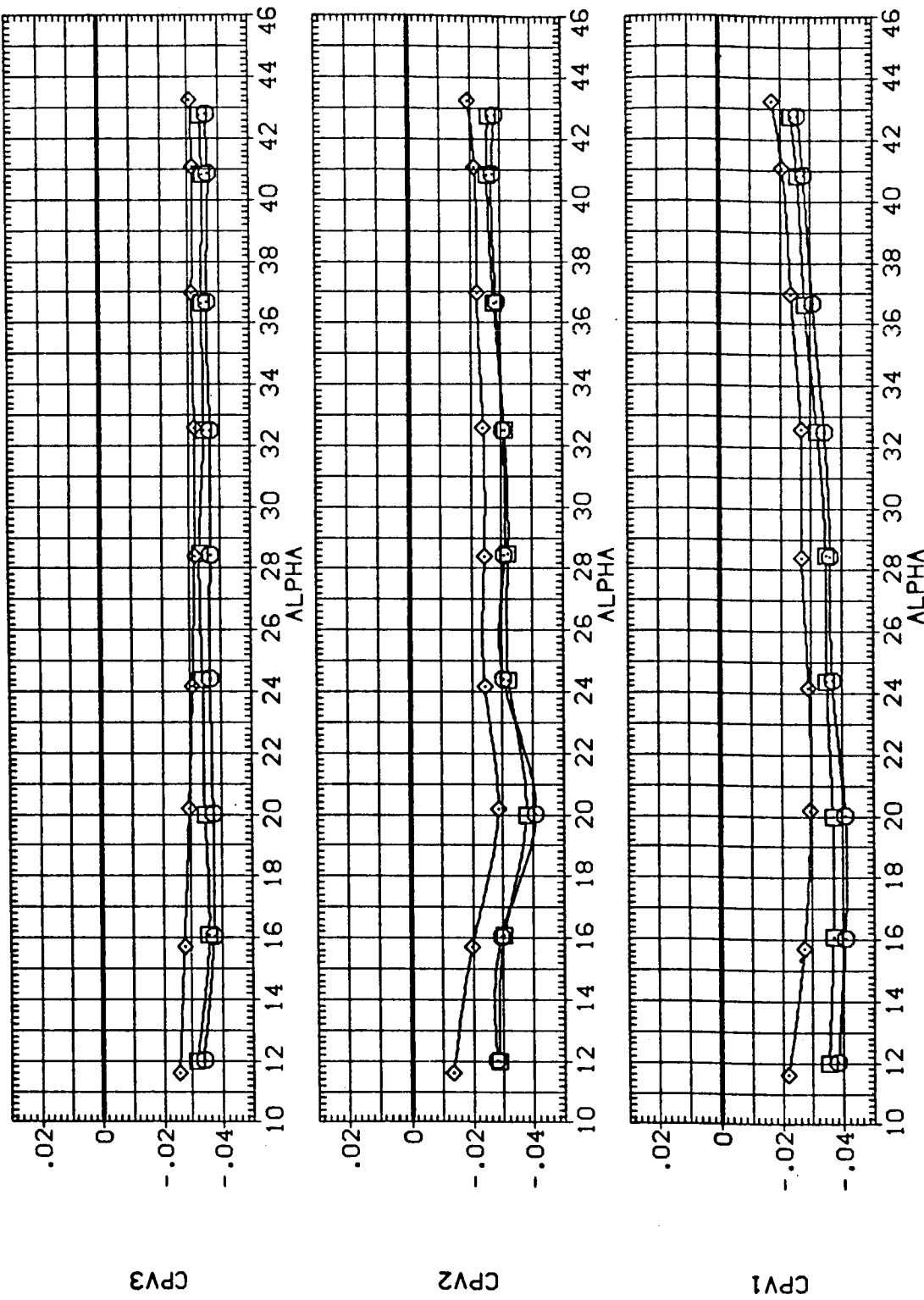
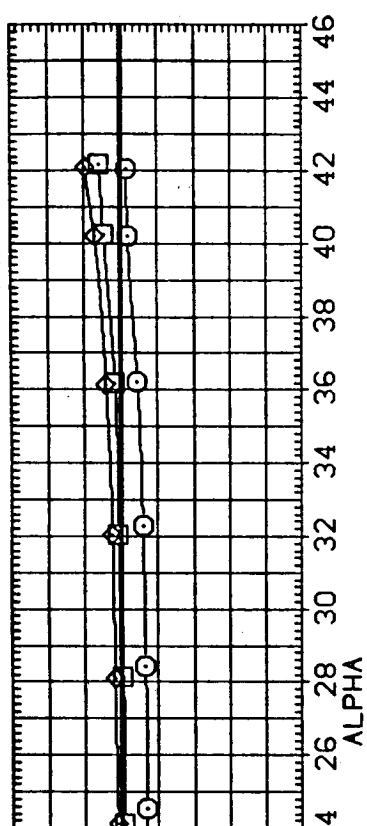


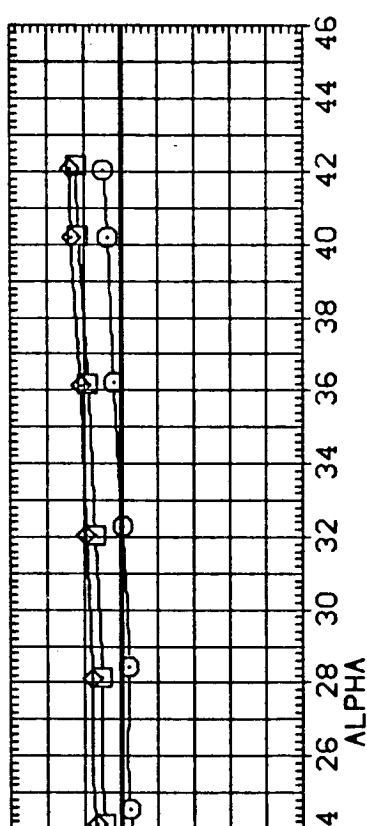
FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

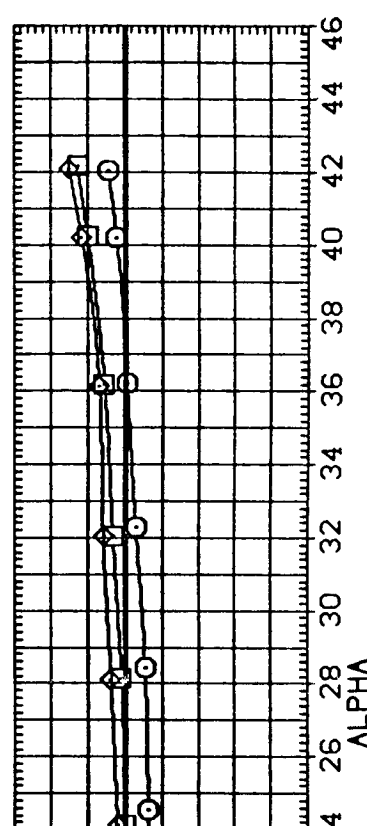
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AE0001)	AMES 3.5-190 O/A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(AE0009)	AMES 3.5-190 O/A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(AE0017)	AMES 3.5-190 O/A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XHRP 1076.7000 IN.X0
						YHRP .0000 IN.Y0
						ZHRP .0000 IN.Z0
						SCALE .0150



CPV3



CPV2



CPV1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

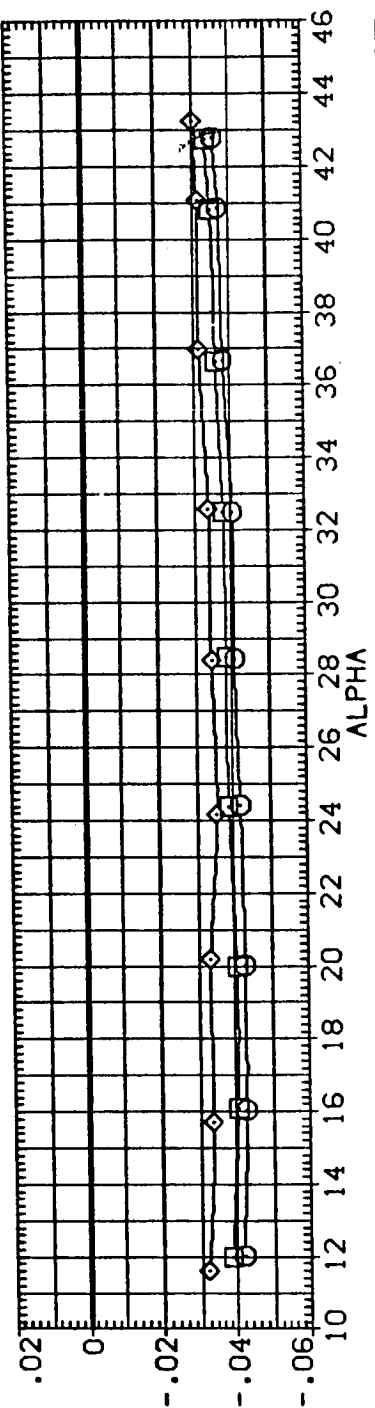
DATA SET SYMBOL (AEG001) (AEG009) (AEG0017)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14)
 AMES 3.5-190 DA98 (011-M7+M14-N24)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

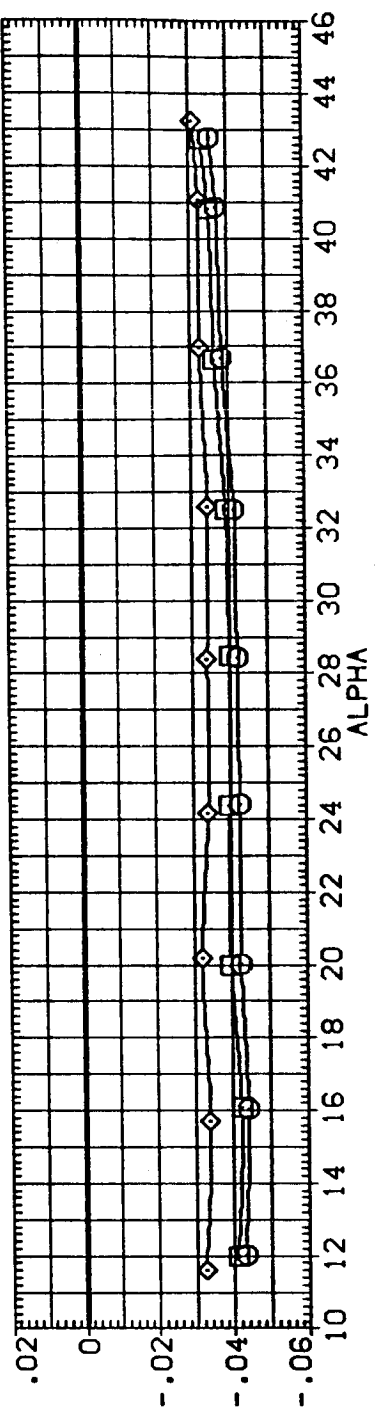
BETA .000
 ELEVON .000
 BOFLAP -11.700

SPOBRK 55.000
 SPOBRK 55.000
 SPOBRK 55.000

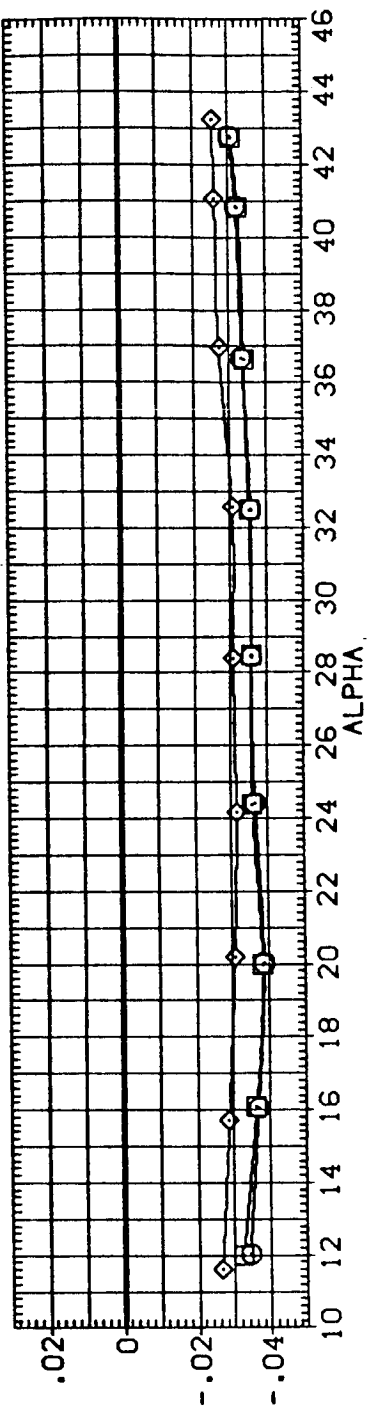
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 536.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150



CPB3



CPB2



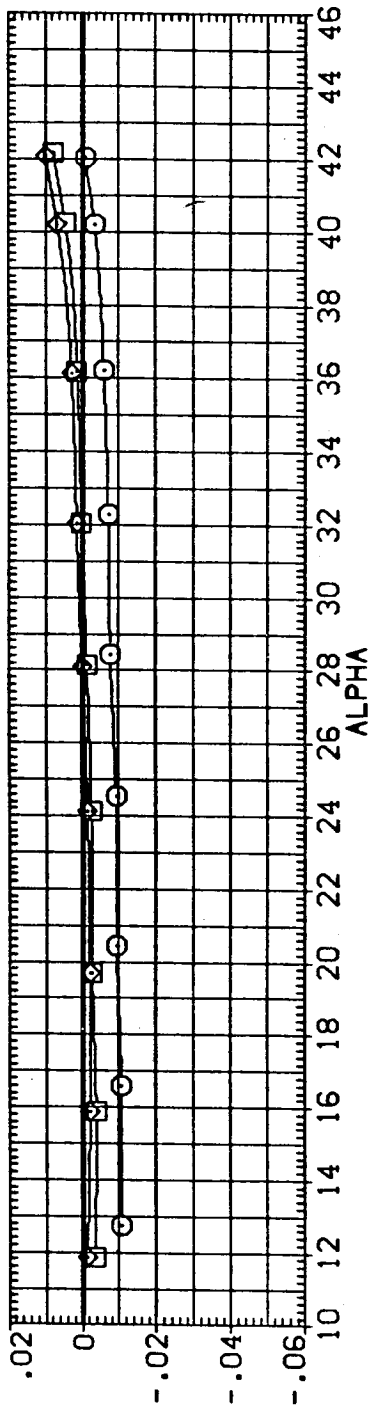
CPB1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

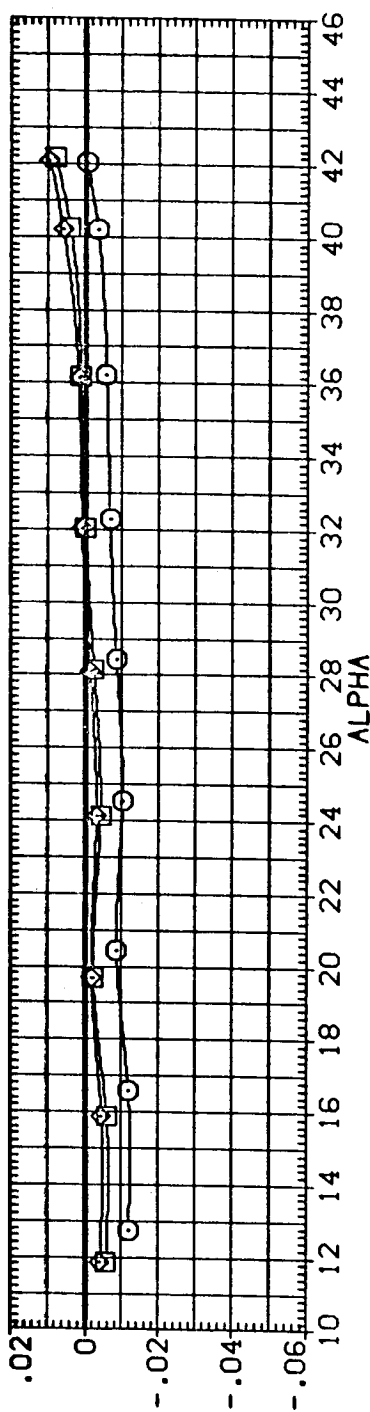
(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

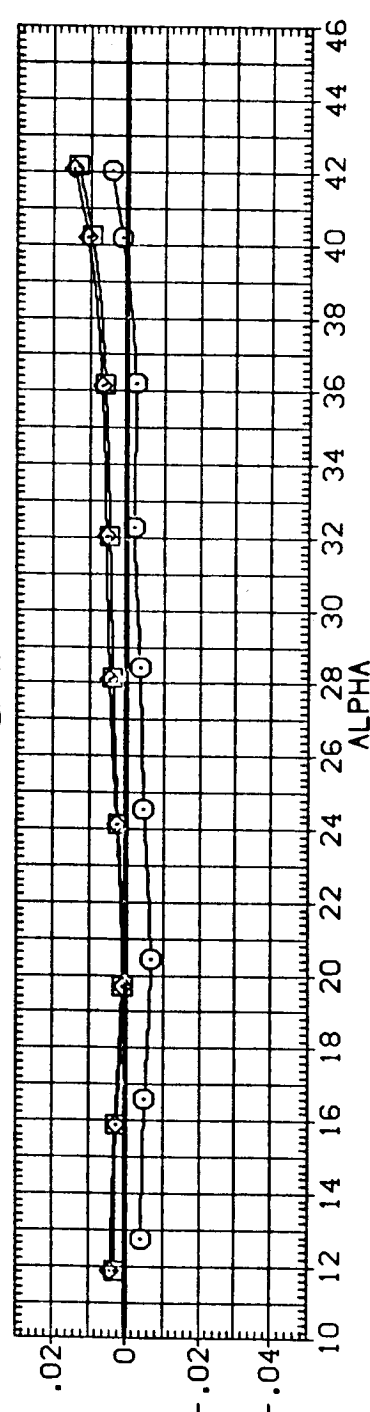
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEG001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(AEG017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



CPB3



CPB2



CPB1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(CE0010)	AMES 3.5-190 OAS8 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

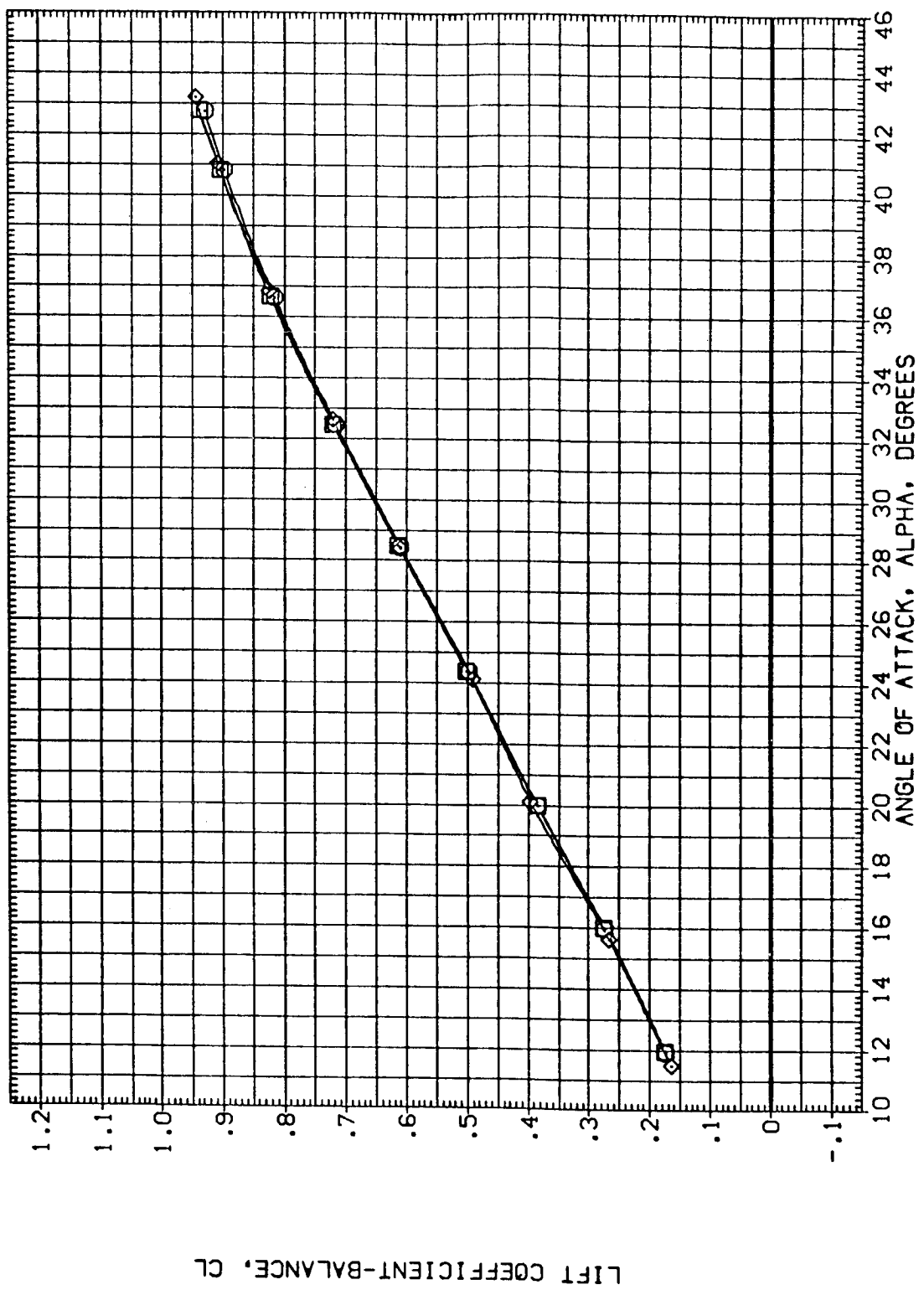
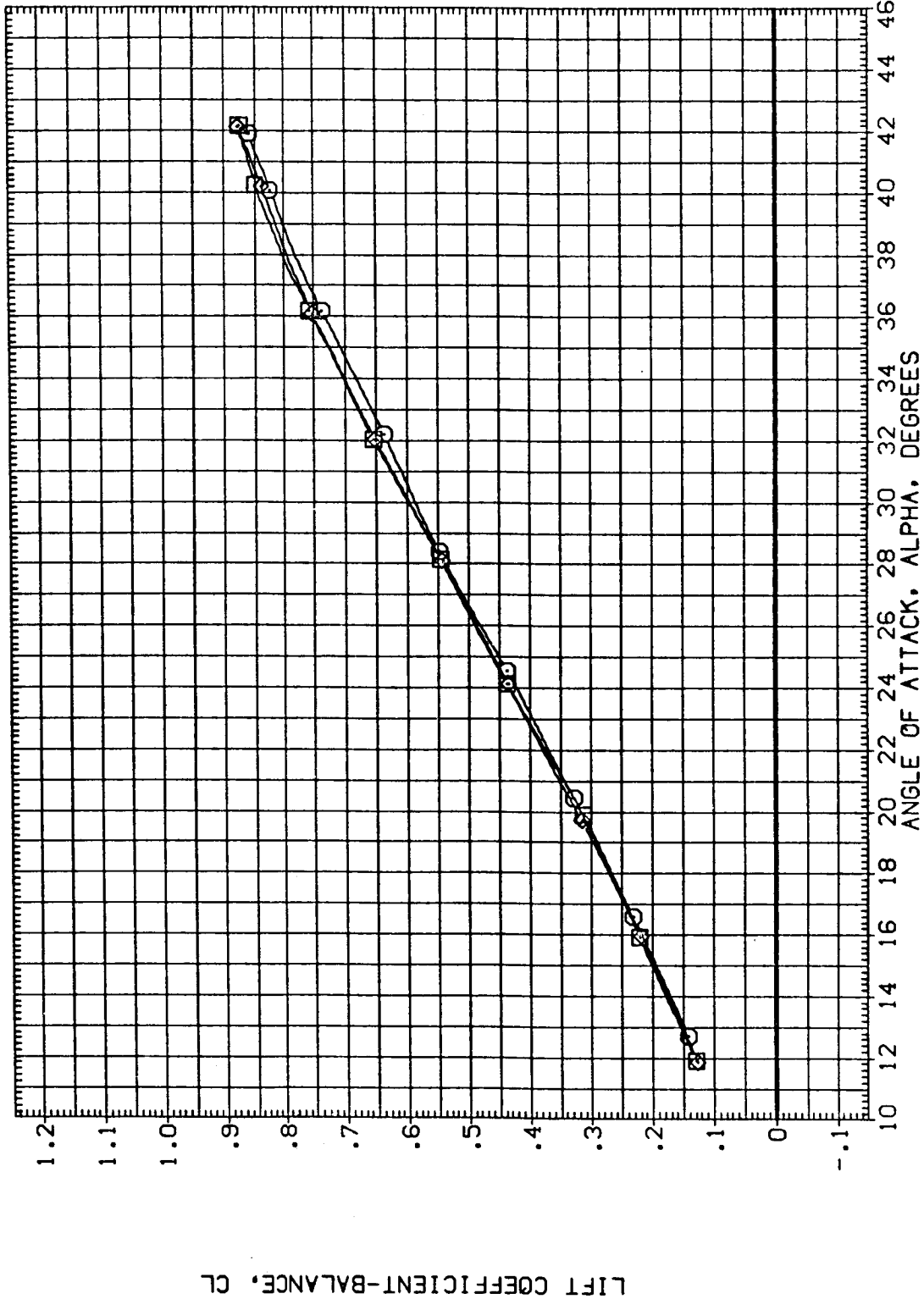


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(CEG002)	AMES 3.5-190 GA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG010)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEG018)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0002) AMES 3.5-190 0A98 (011-M7+M14)
 (CE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (CE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION
 .000 -10.000 -11.700 55.000 SREF 2690.0000 SQ.FT.
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -10.000 -11.700 55.000 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X
 YMRP .0000 IN.Y
 ZMRP .0000 IN.Z
 SCALE .0150

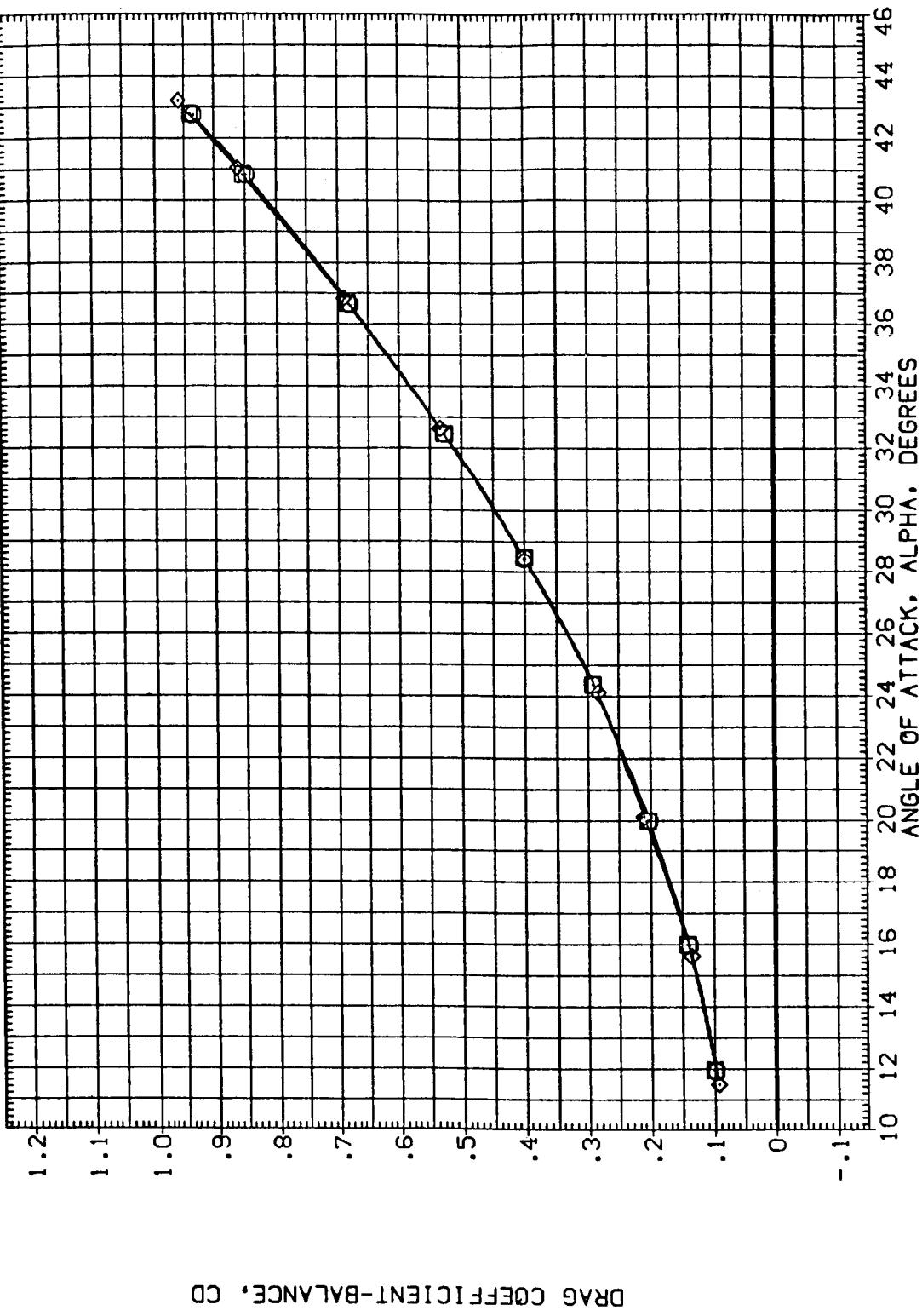


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
 (A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0002) AMES 3.5-190 OA98 (011-M7+M14)

(CE0010) AMES 3.5-190 OA98 (011-M7+M14-N24)

(CE0018) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

YMRP ZMRP SCALE

1076.7000 375.0000 .0150

IN.X0 IN.Y0 IN.Z0

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP 375.0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

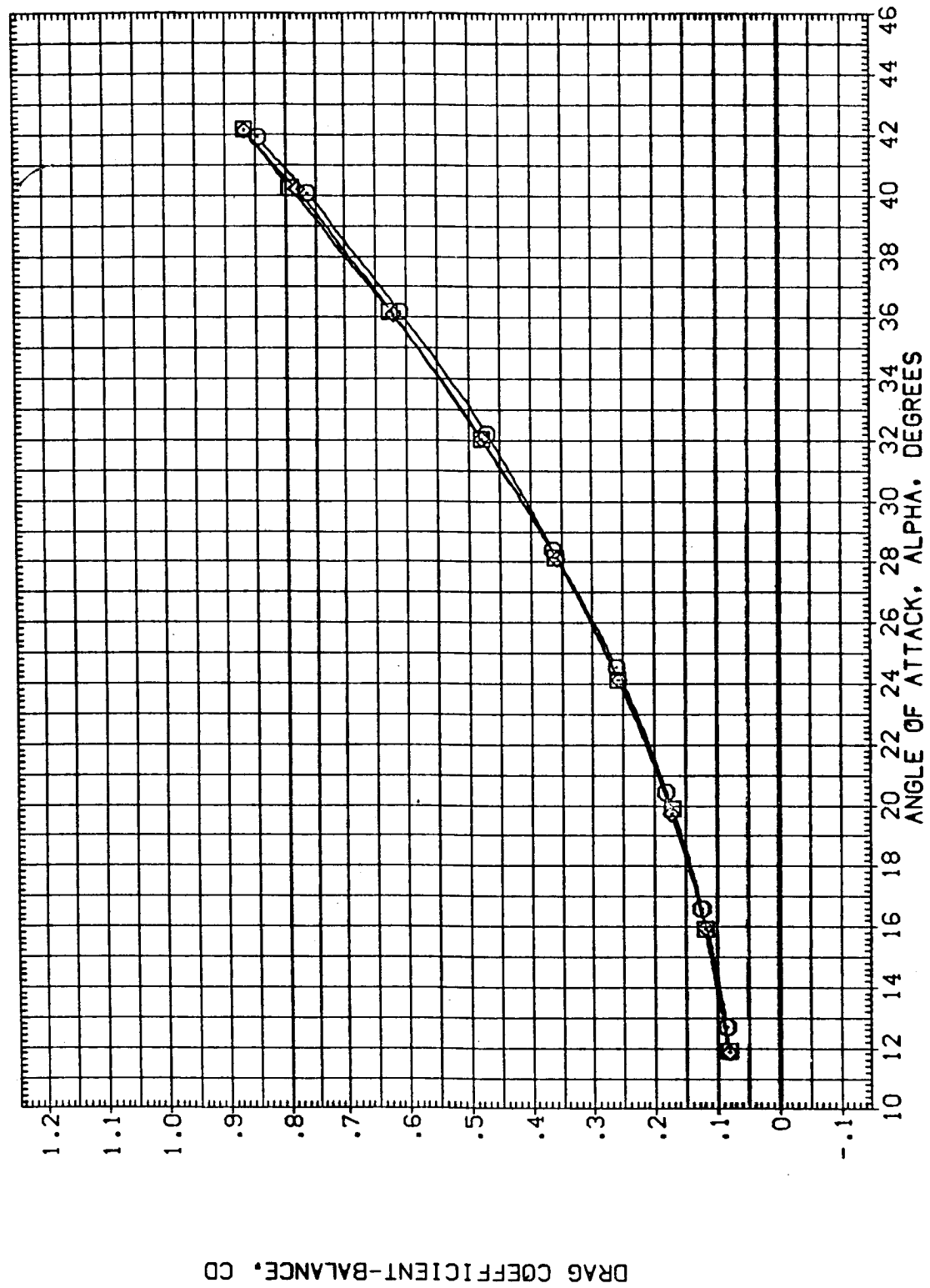


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0002) AMES 3.5-190 0A98 (011-M7+M14)

(CE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)

(CE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

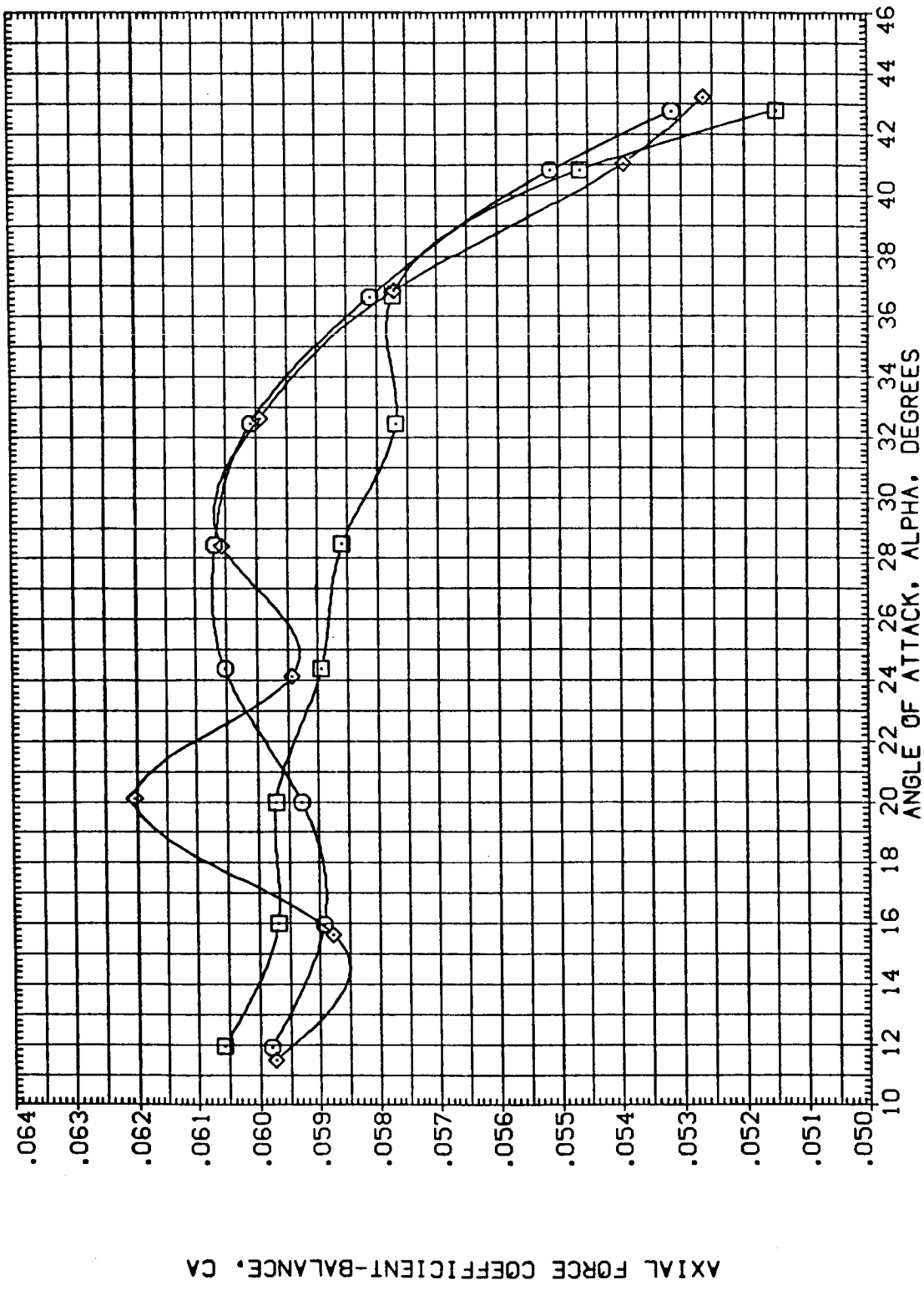
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(CE0010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X10
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

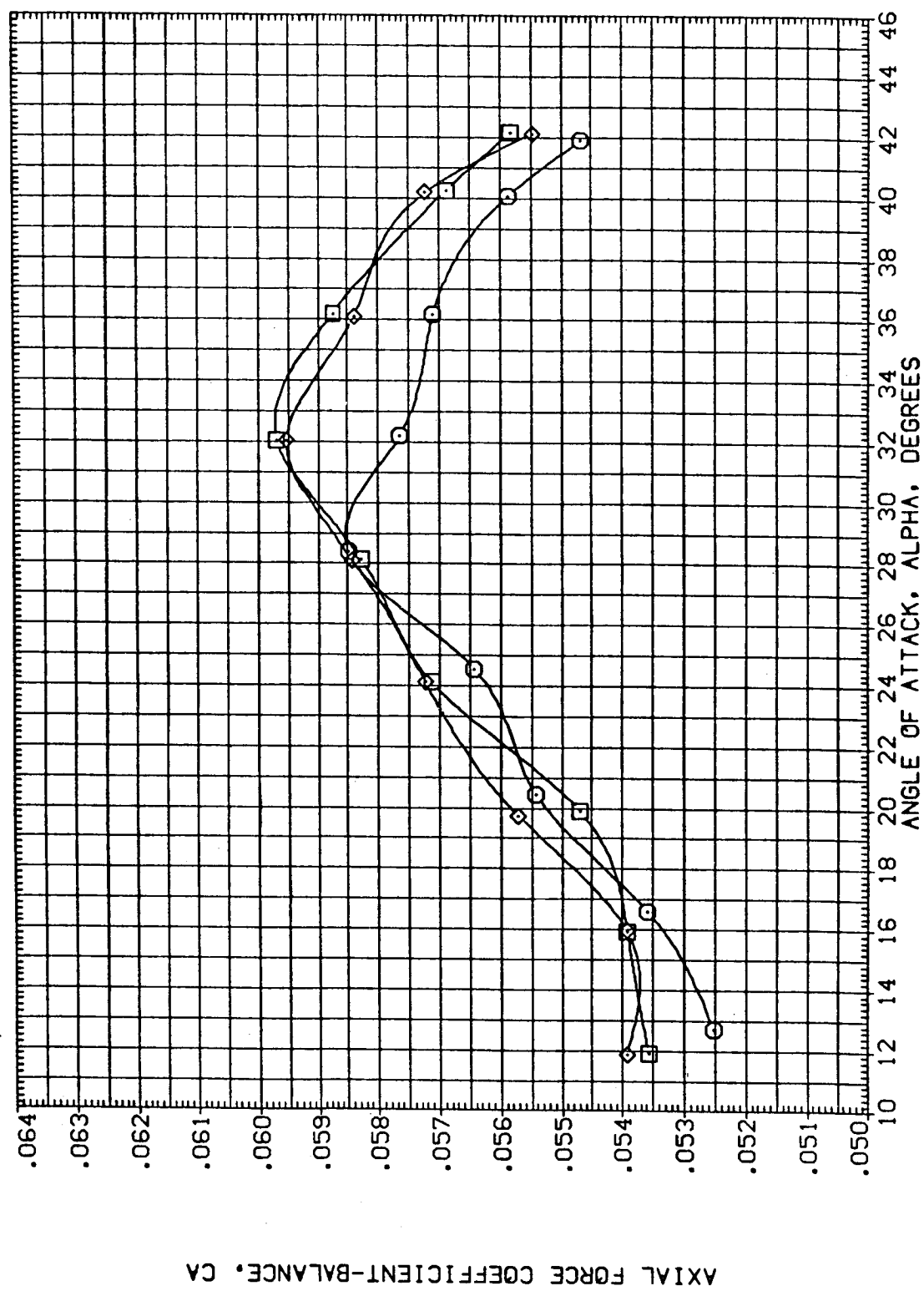


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0002) AMES 3.5-190 0A98 (011-177+M14)
 (CE0010) AMES 3.5-190 0A98 (011-177+M14-N24)
 (CE0018) AMES 3.5-190 0A98 (011-177+M14-N24+DUMMY STING)

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

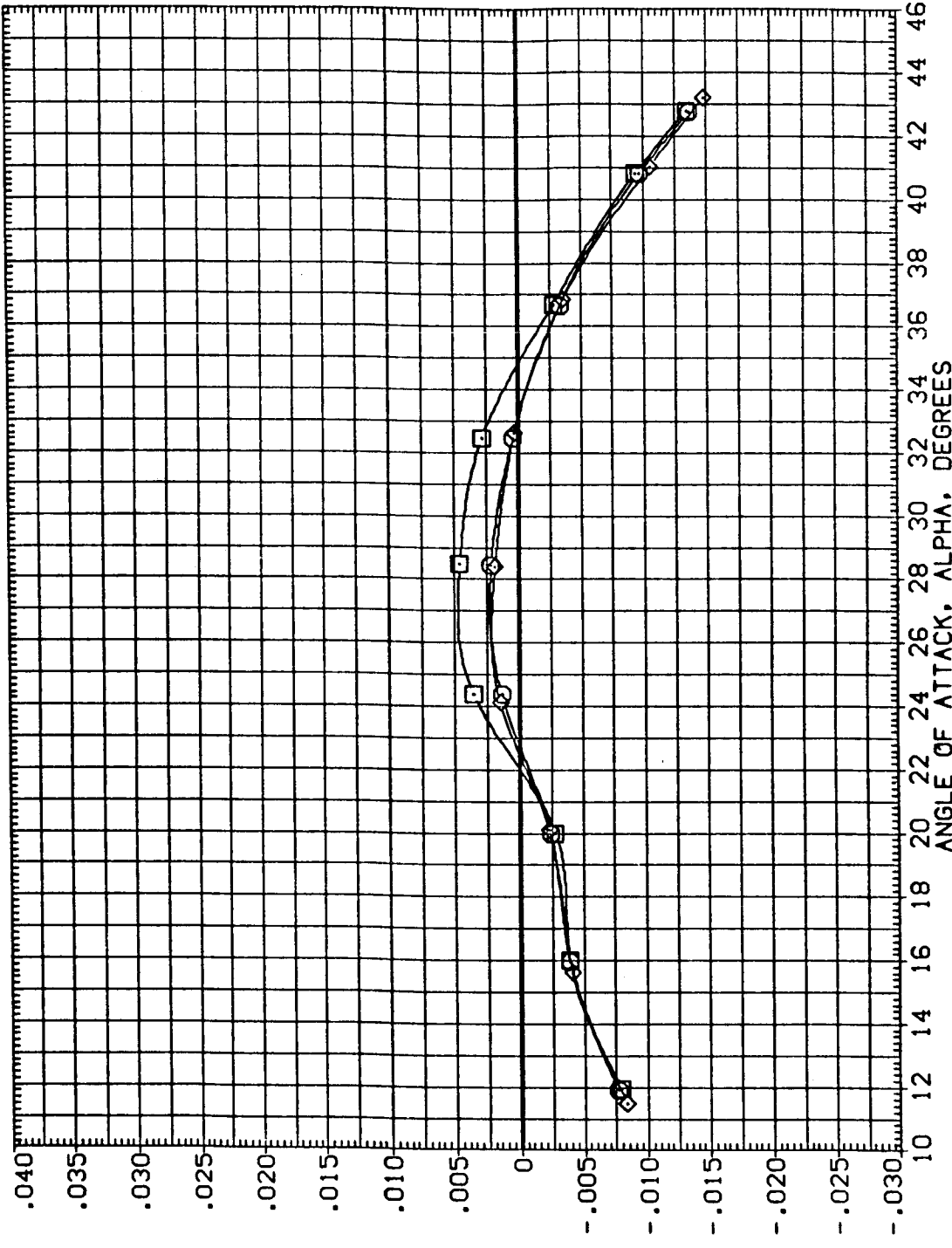


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0002) AMES 3.5-150 0A98 (011-M7+M14)

(CE0010) AMES 3.5-150 0A98 (011-M7+M14-N24)

(CE0018) AMES 3.5-150 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

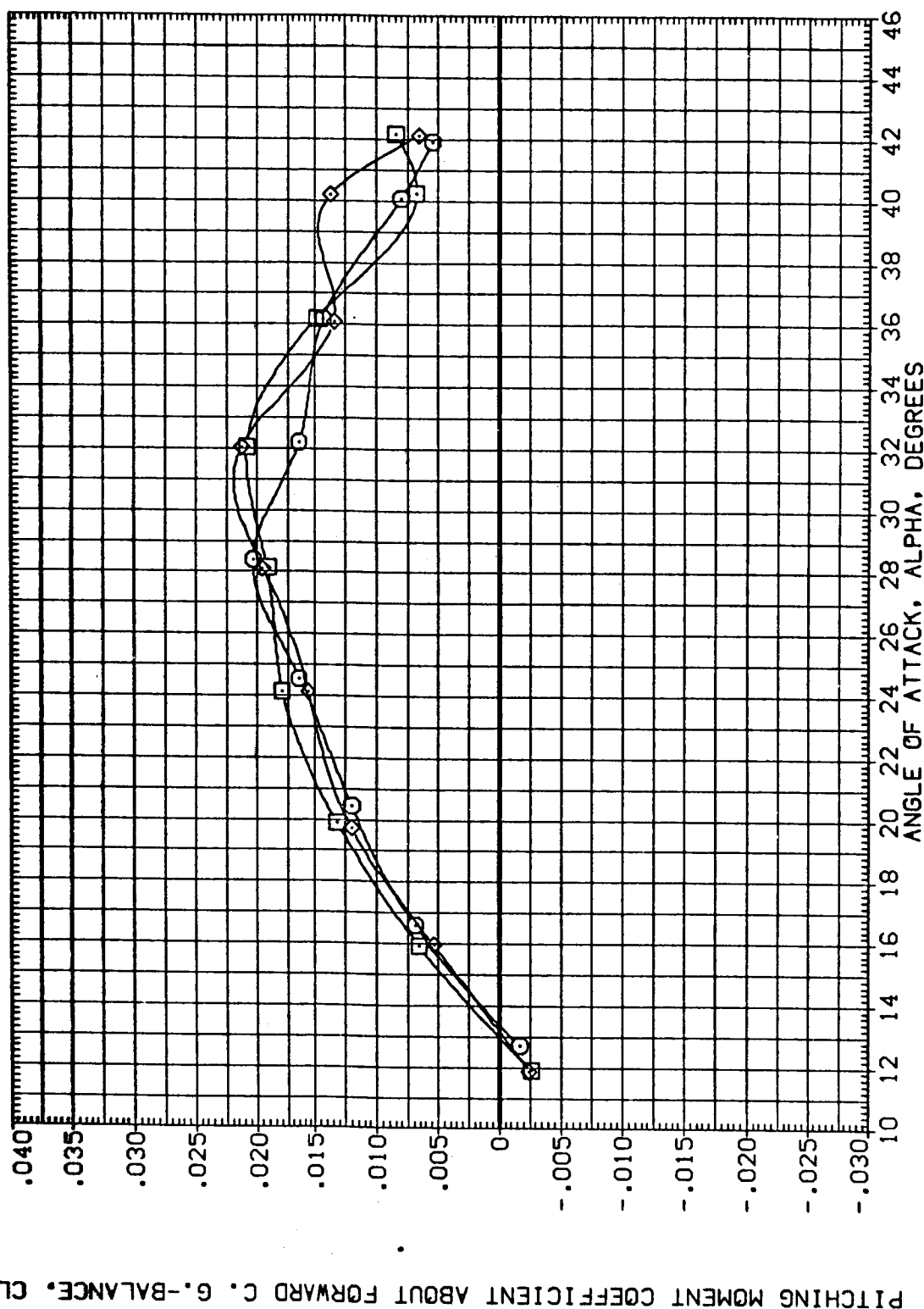
BREF 936.6800 IN.

XMRP 1076.7000 IN.XB

YMRP .0000 IN.YB

ZMRP 375.0000 IN.ZB

SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0002) AMES 3.5-190 CAS8 (011-M7+M14)
 (CE0010) AMES 3.5-190 CAS8 (011-M7+M14-N24)
 (CE0018) AMES 3.5-190 CAS8 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

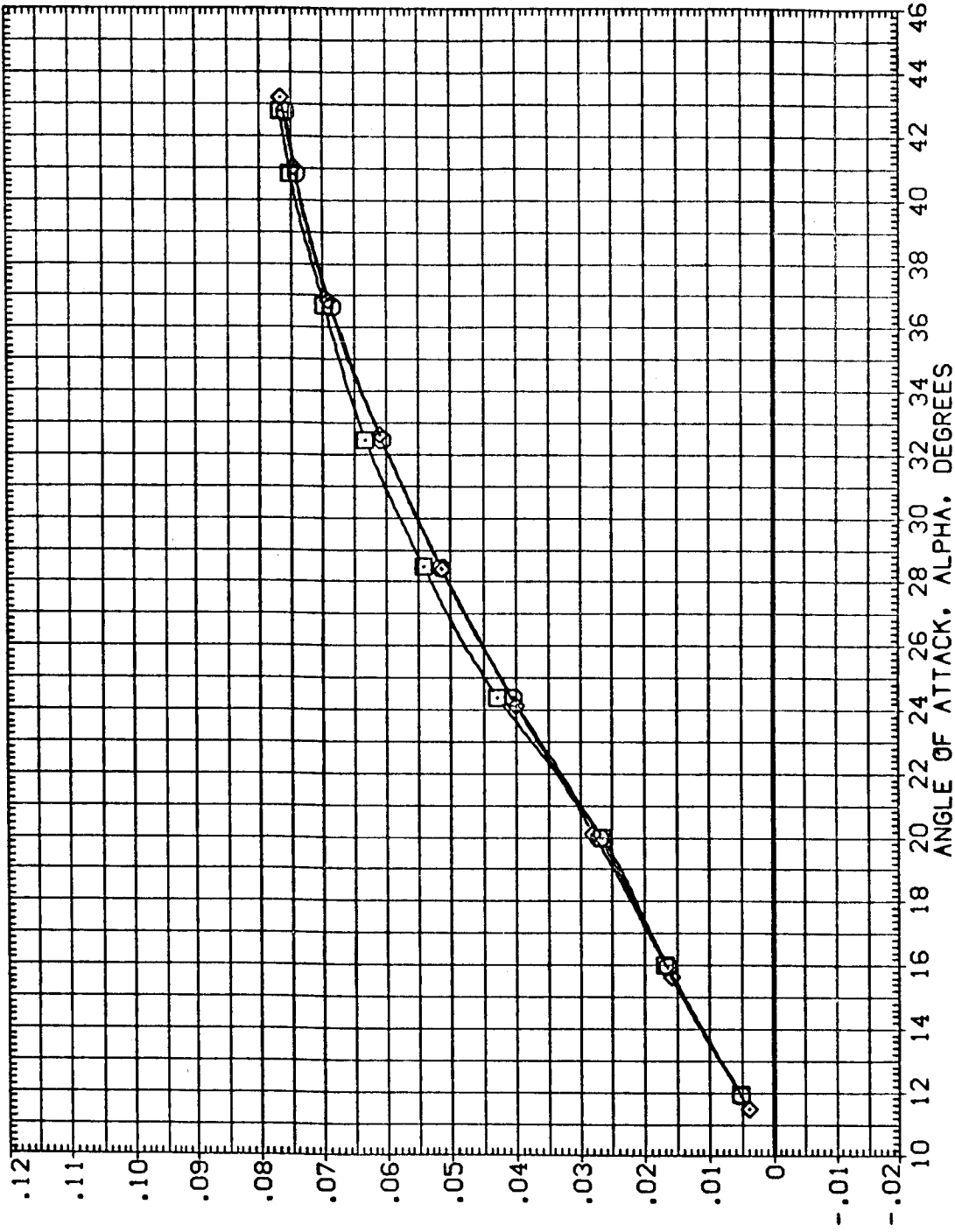


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XD
						YMRP .0000 IN.YD
						ZMRP 375.0000 IN.ZD
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

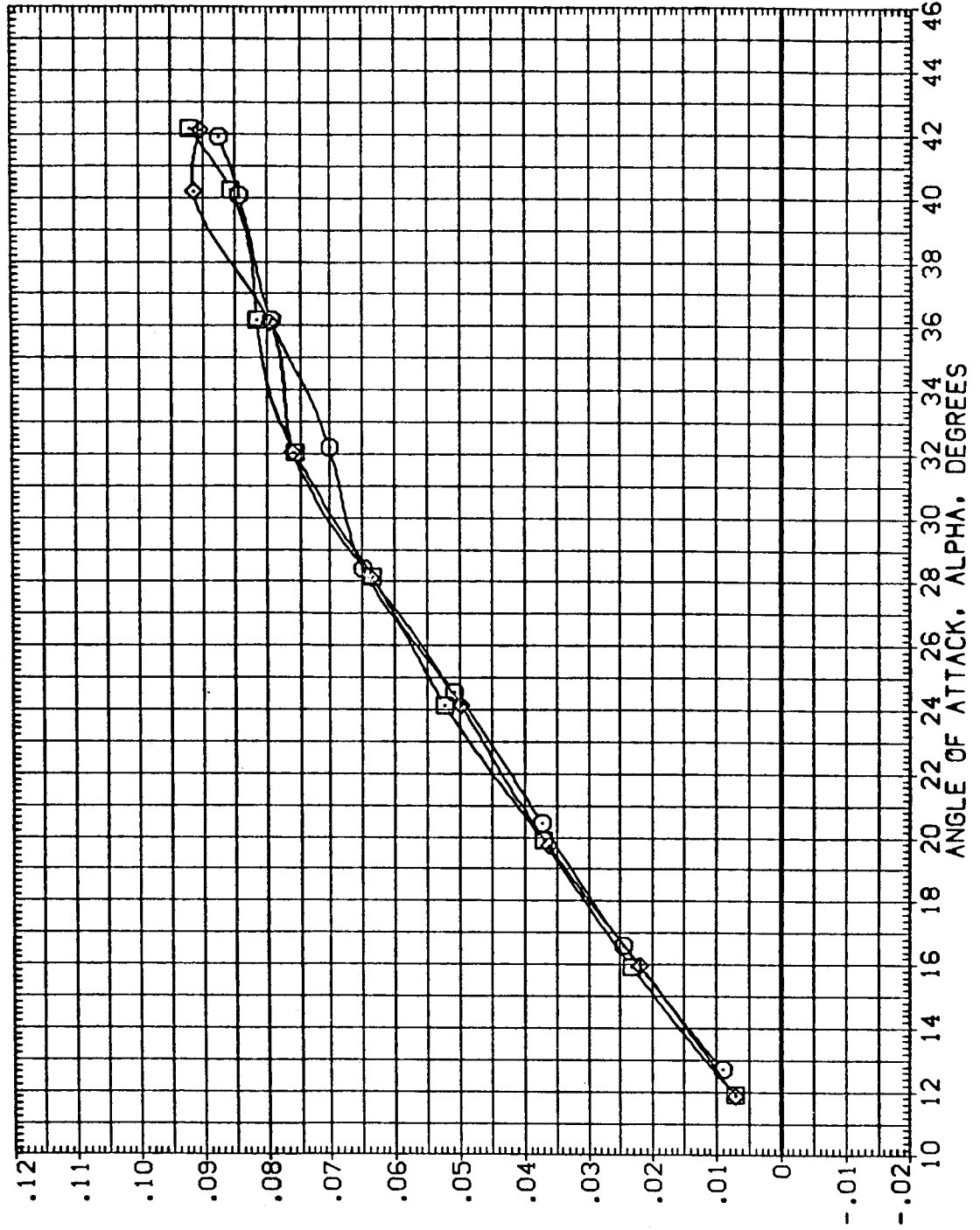


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CEG002)	AMES 3.5-190 GA98 (011-M7+H14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG010)	AMES 3.5-190 GA98 (011-M7+H14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEG018)	AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

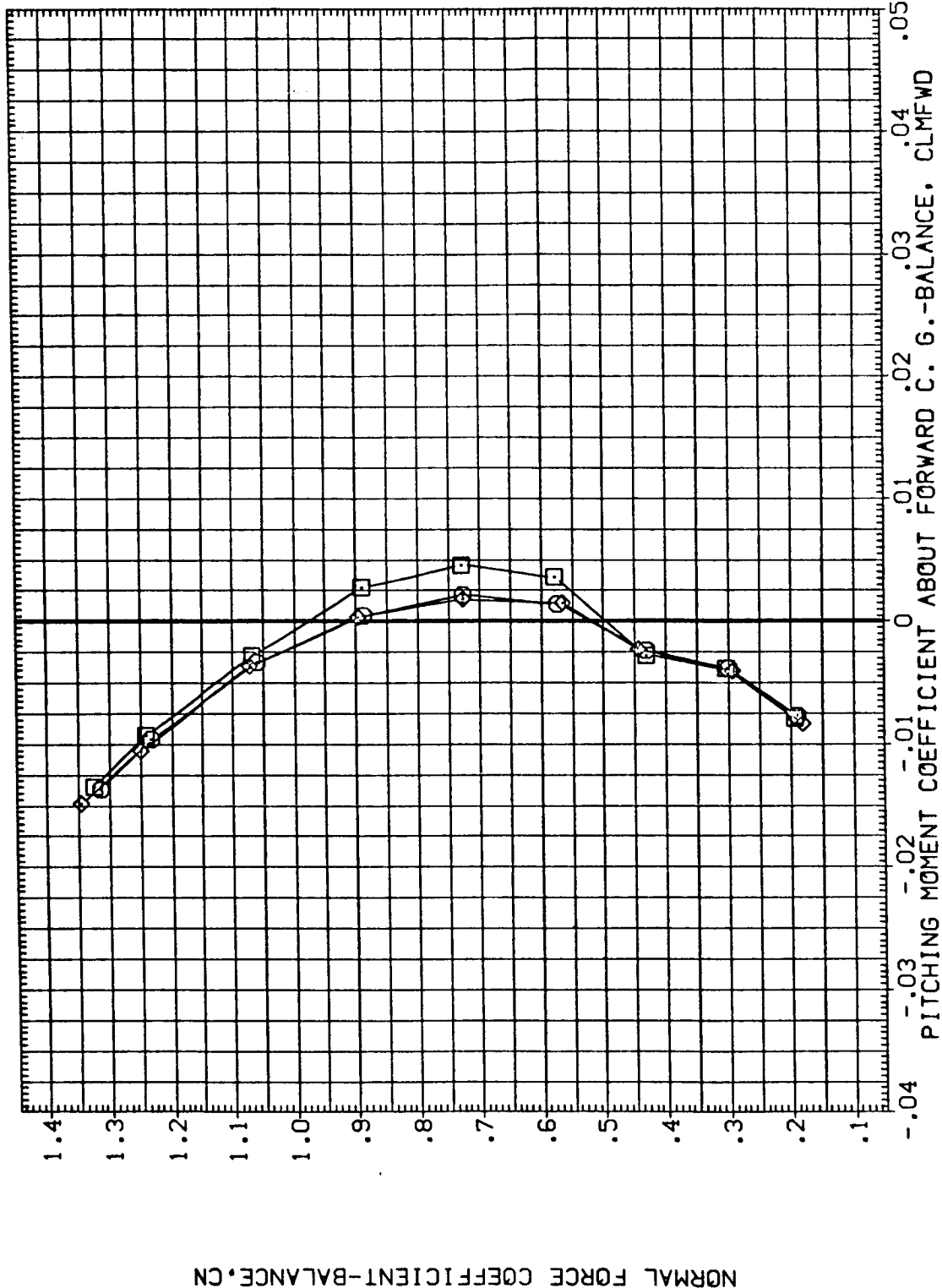


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CEG002) AMES 3.5-190 DASH (011-N7+M14)

(CEG010) AMES 3.5-190 DASH (011-N7+M14-N24)

(CEG018) AMES 3.5-190 DASH (011-N7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

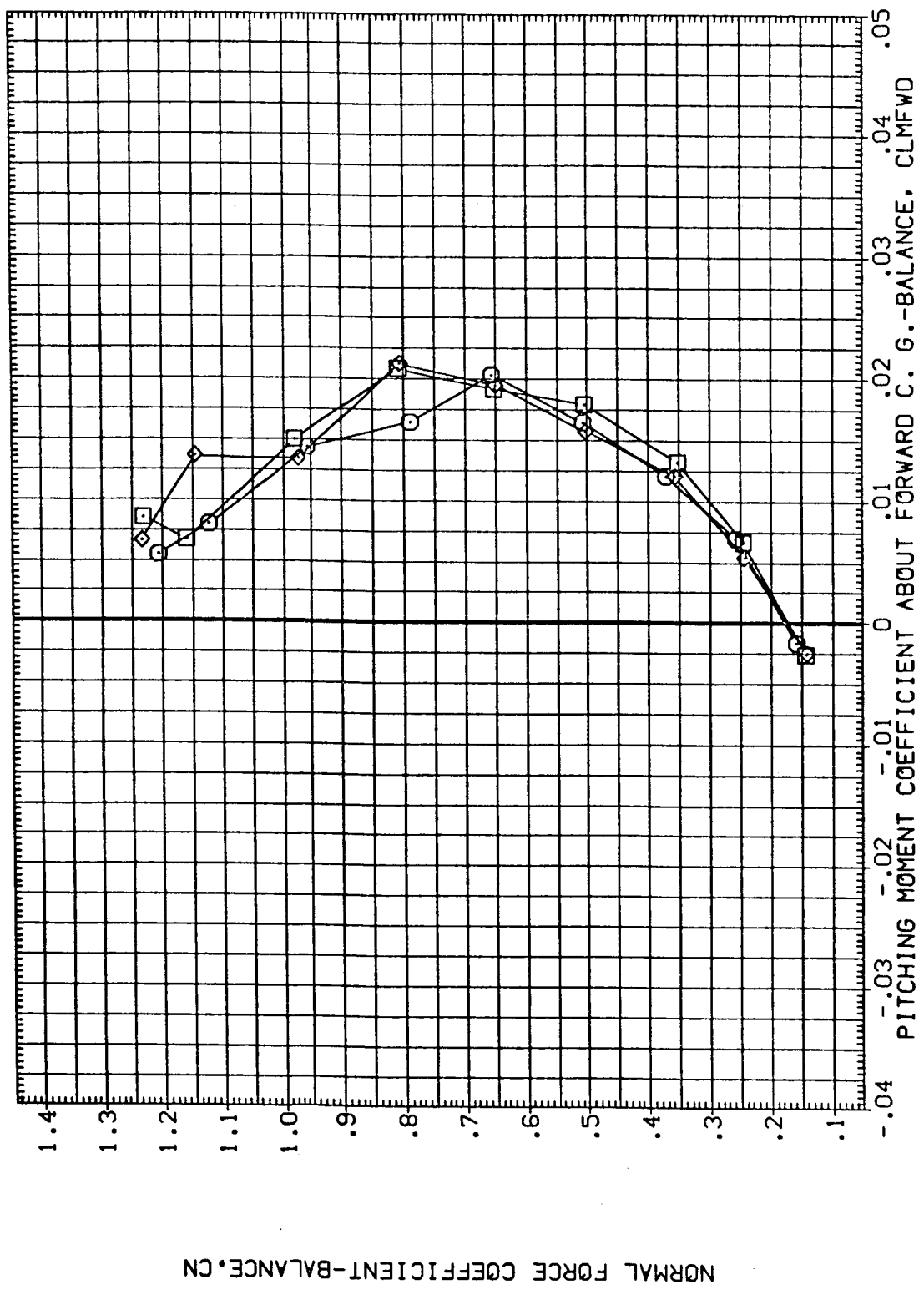


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7-M14)

AMES 3.5-190 0A98 (011-M7-M14-N24)

AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -10.000
 -10.000
 -10.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ. FT.

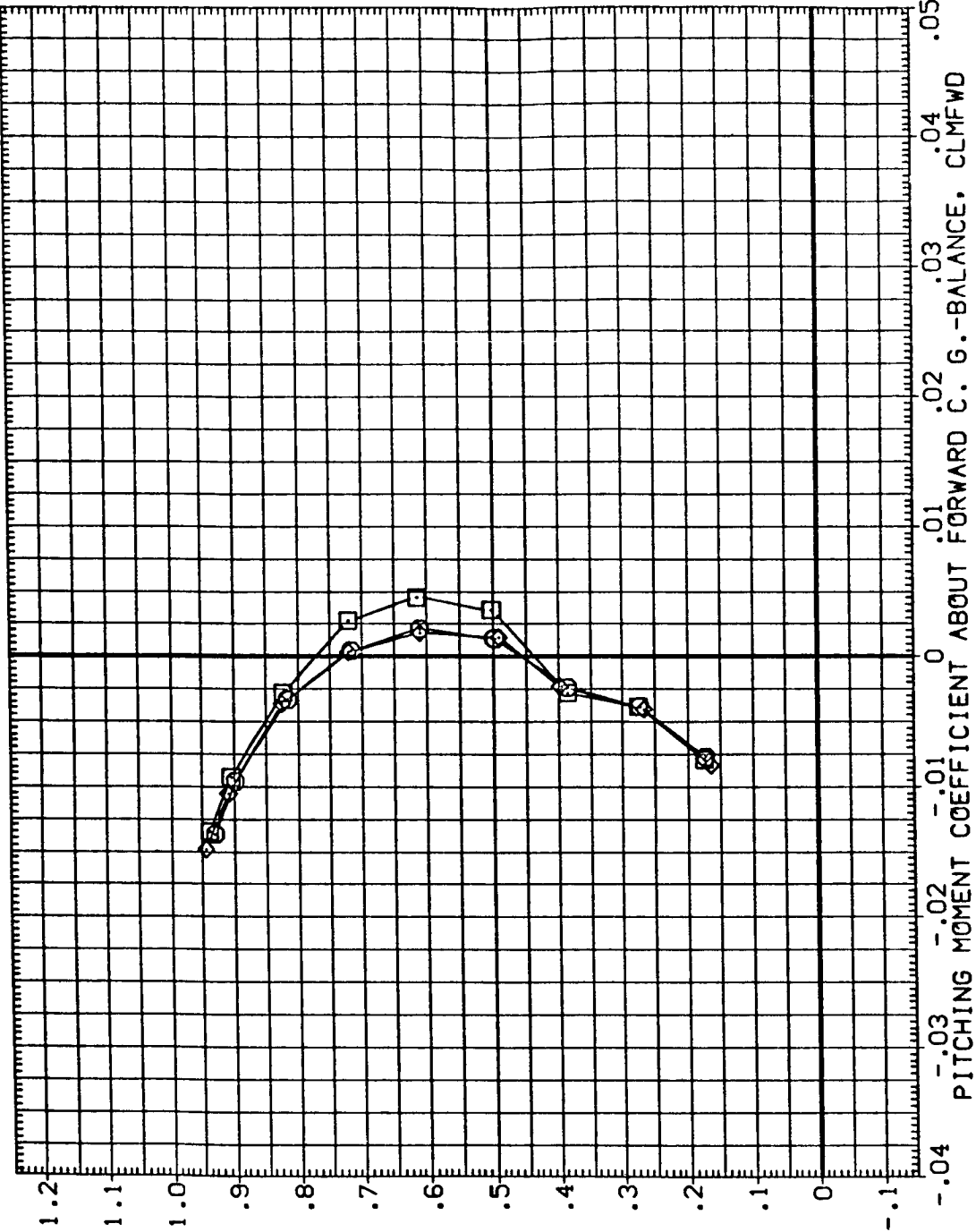
LREF 474.8000 IN.

BREF 936.6800 IN.

YMRP 1076.7000 IN. X0

ZMRP .0000 IN. Y0

SCALE 375.0000 IN. Z0
 .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL
 (CE0002)
 (CE0010)
 (CE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 -10.000
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

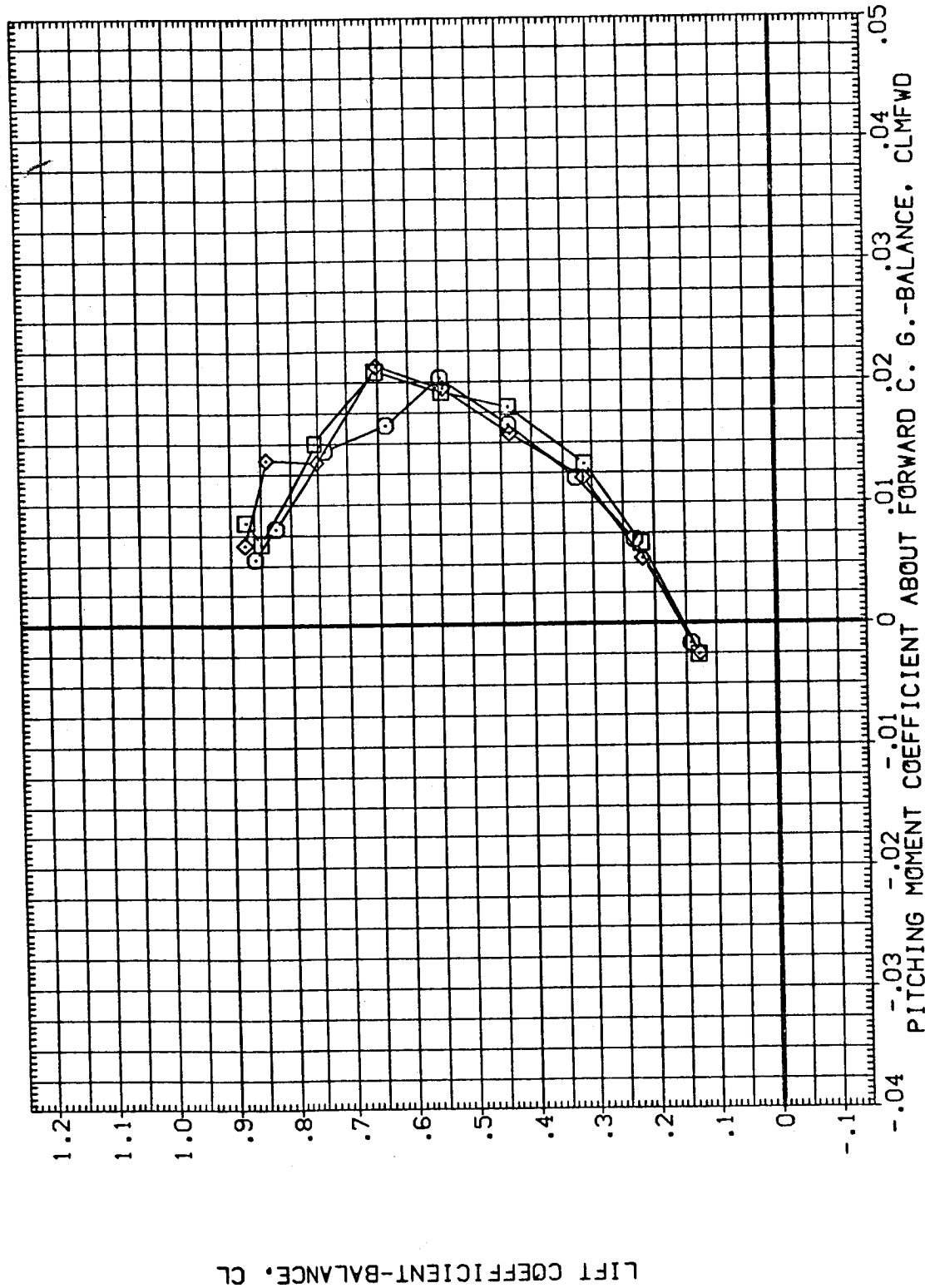


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (CE0002)
 (CE0010)
 (CE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -10.000
 -10.000
 -10.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

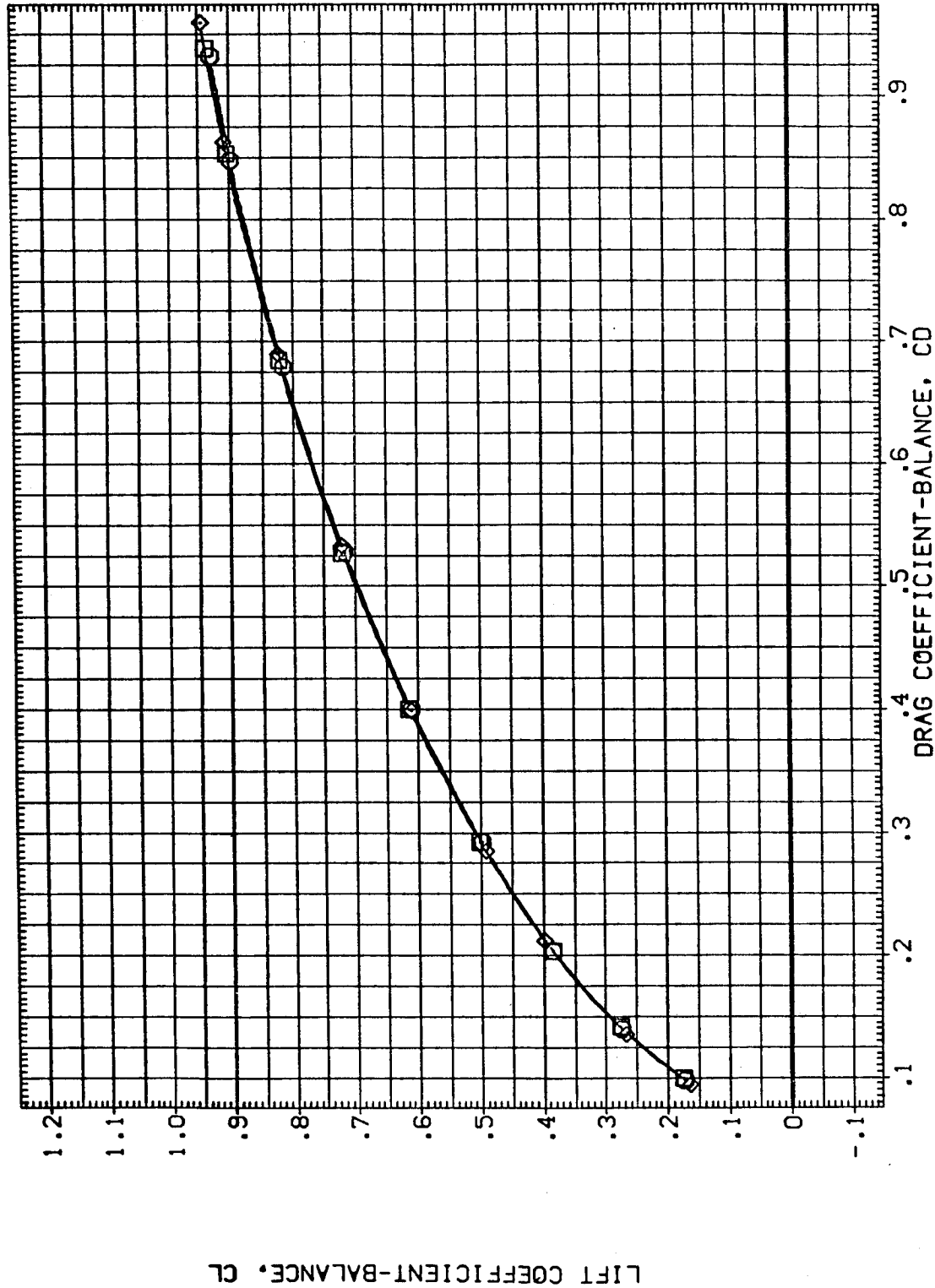


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0002) (CE0010) (CE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -10.000
 -10.000
 -10.000

BDFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 SREF 474.8000
 LREF 936.6800
 BREF 1076.7000
 XMRP .0000
 YMRP 375.0000
 ZMRP .0150
 SCALE

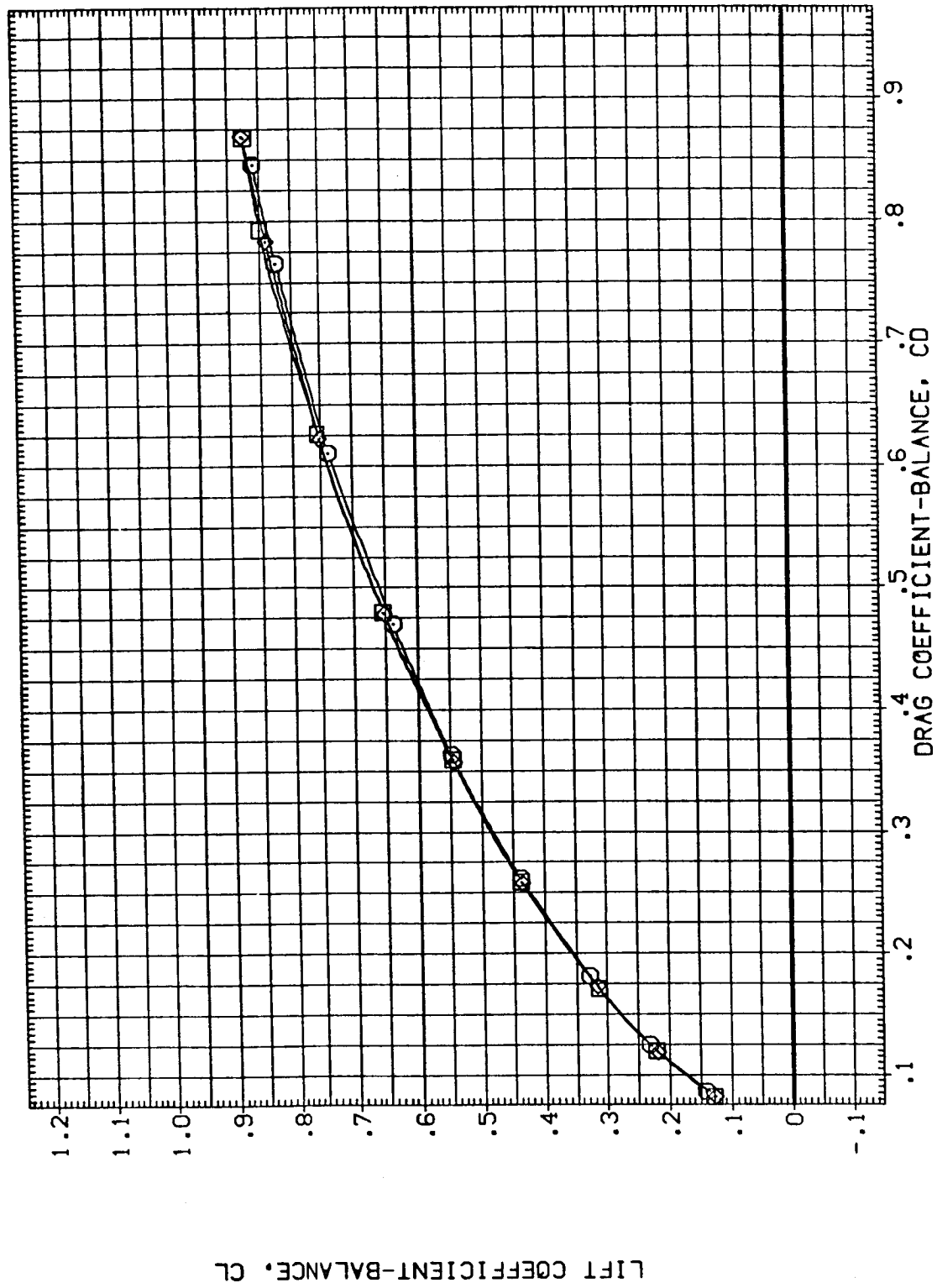


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (EE0002) (EE0010) (EE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BDFLAP -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

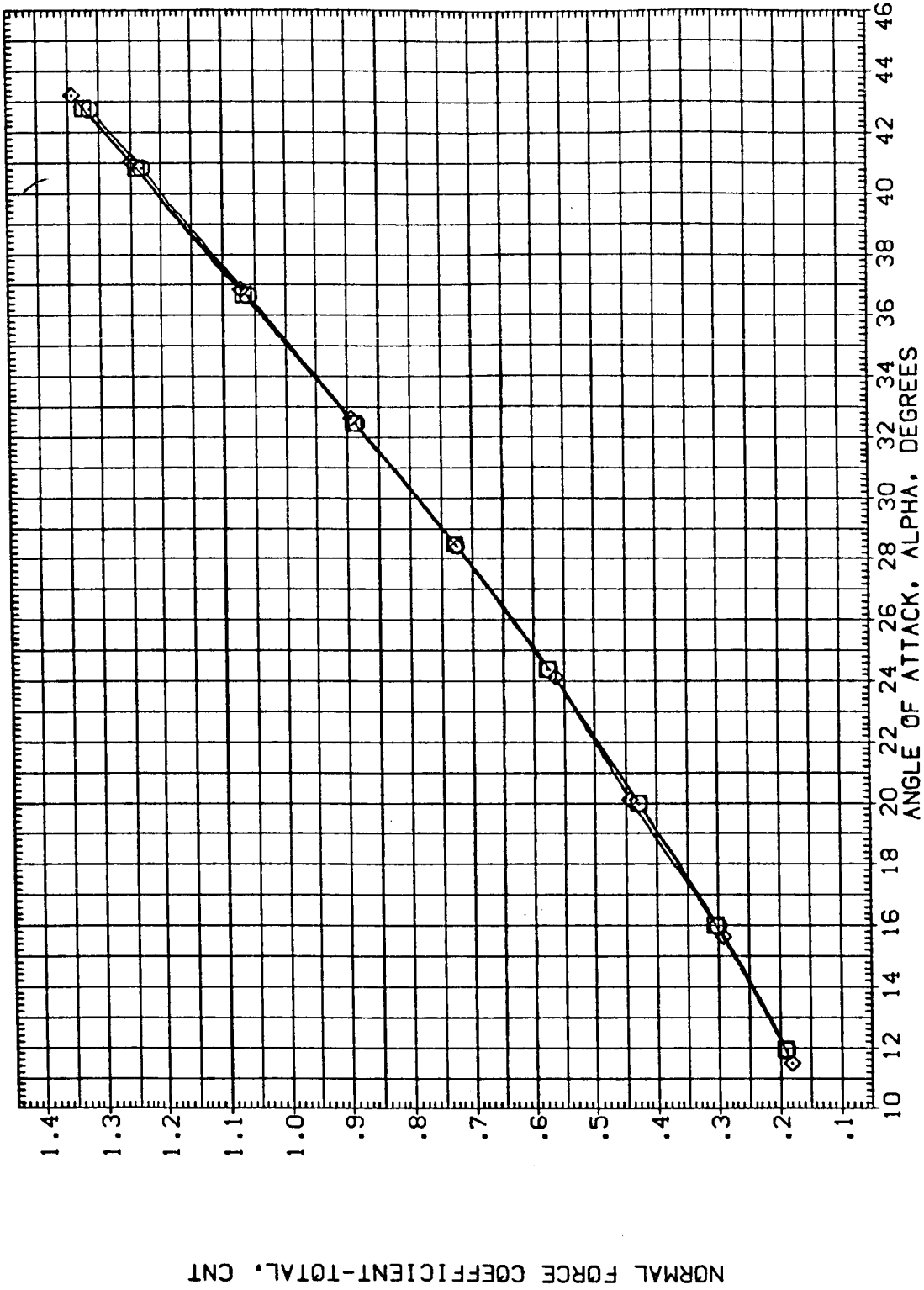


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BD/LAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

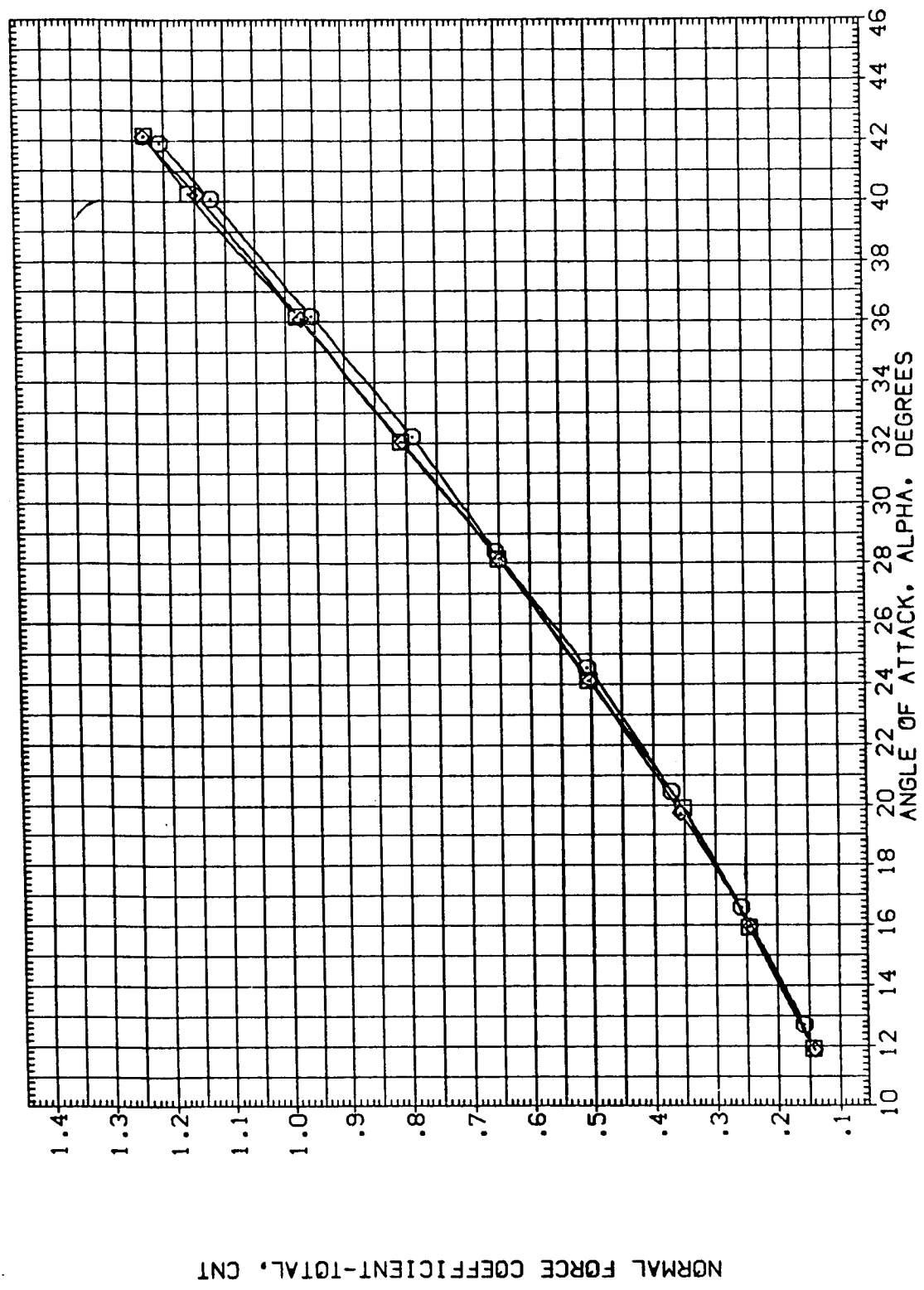


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0002) AMES 3.5-190 0A98 (011-M7+M14)

(EE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON -10.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.XIG

YMRP .0000 IN.YIG

ZMRP 375.0000 IN.ZIG

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

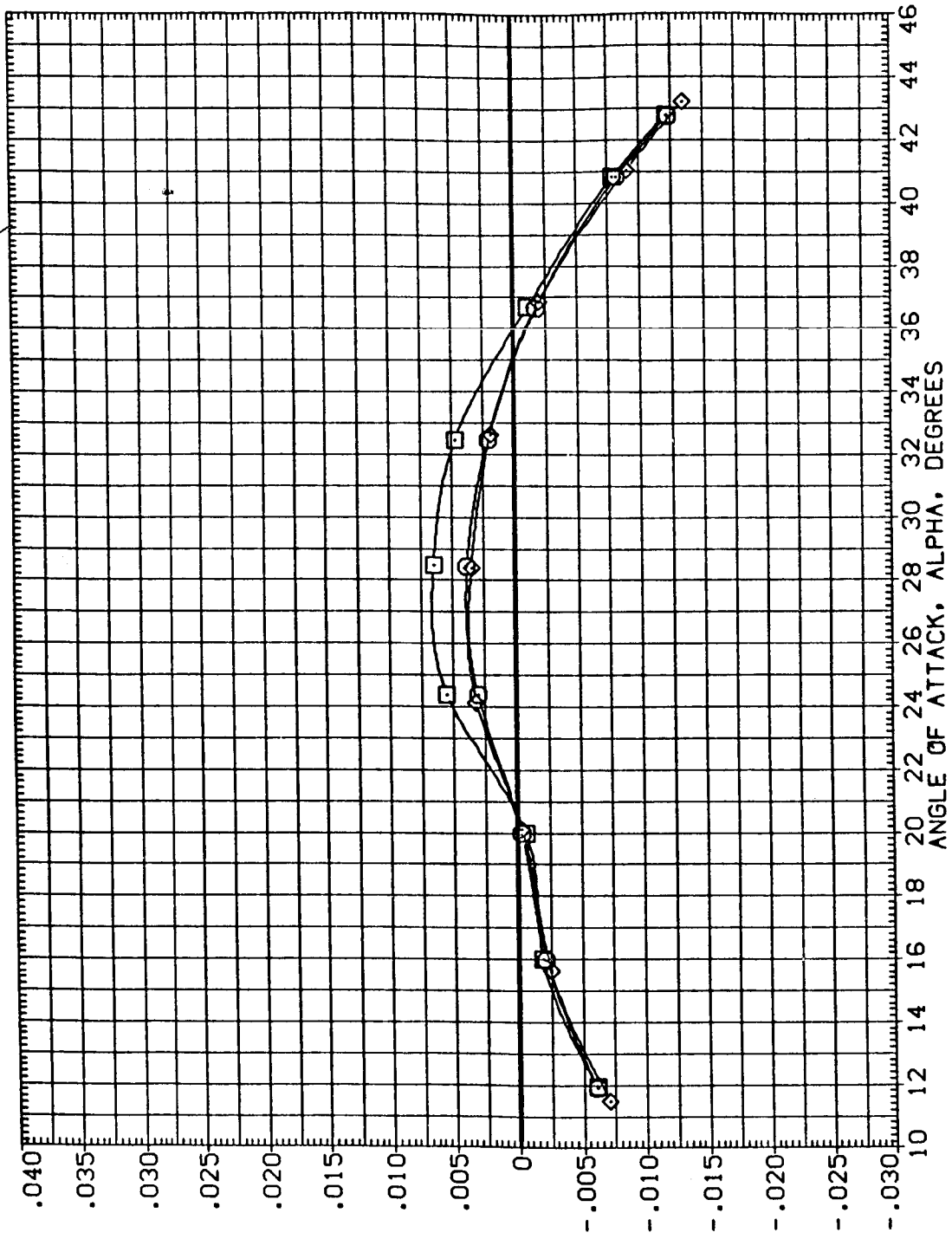


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION SQ. FT.

(EE0002) AMES 3.5-190 OA98 (011-M7+M14) .000 -10.000 -11.700 55.000 SREF 2690.0000 IN.

(EE0010) AMES 3.5-190 OA98 (011-M7+M14-N24) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.

(EE0018) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 BREF 936.8800 IN. X0

YMRP .0000 IN. Y0

ZMRP .0000 IN. Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G. - TOTAL, CMTFWD

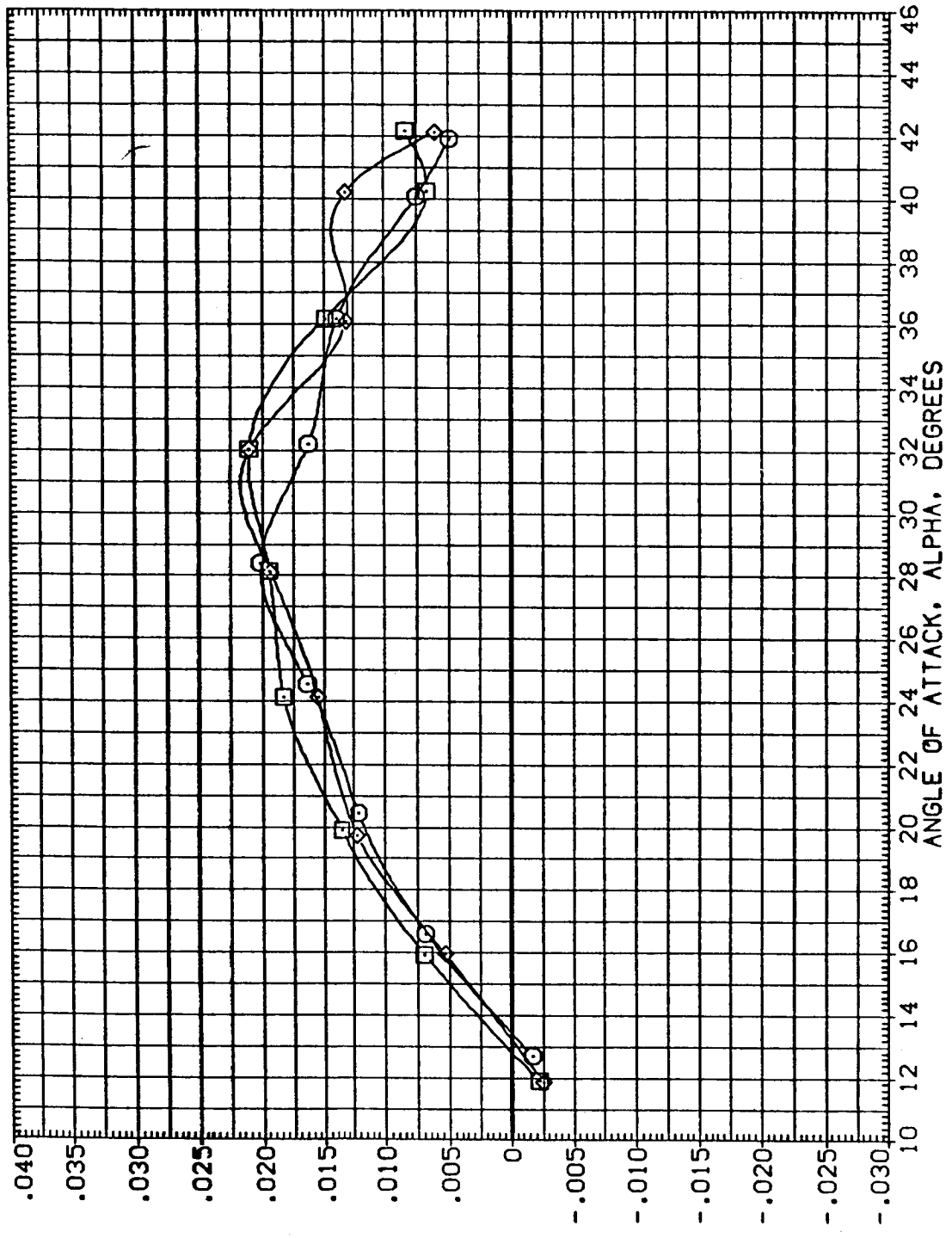


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0002) AMES 3.5-190 CAS8 (011-M7-M14)
 (EE0010) AMES 3.5-190 CAS8 (011-M7-M14-N24)
 (EE0018) AMES 3.5-190 CAS8 (011-M7-M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.X0
 XMRP 1076.7000 IN.Y0
 YMRP .0000 IN.Z0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

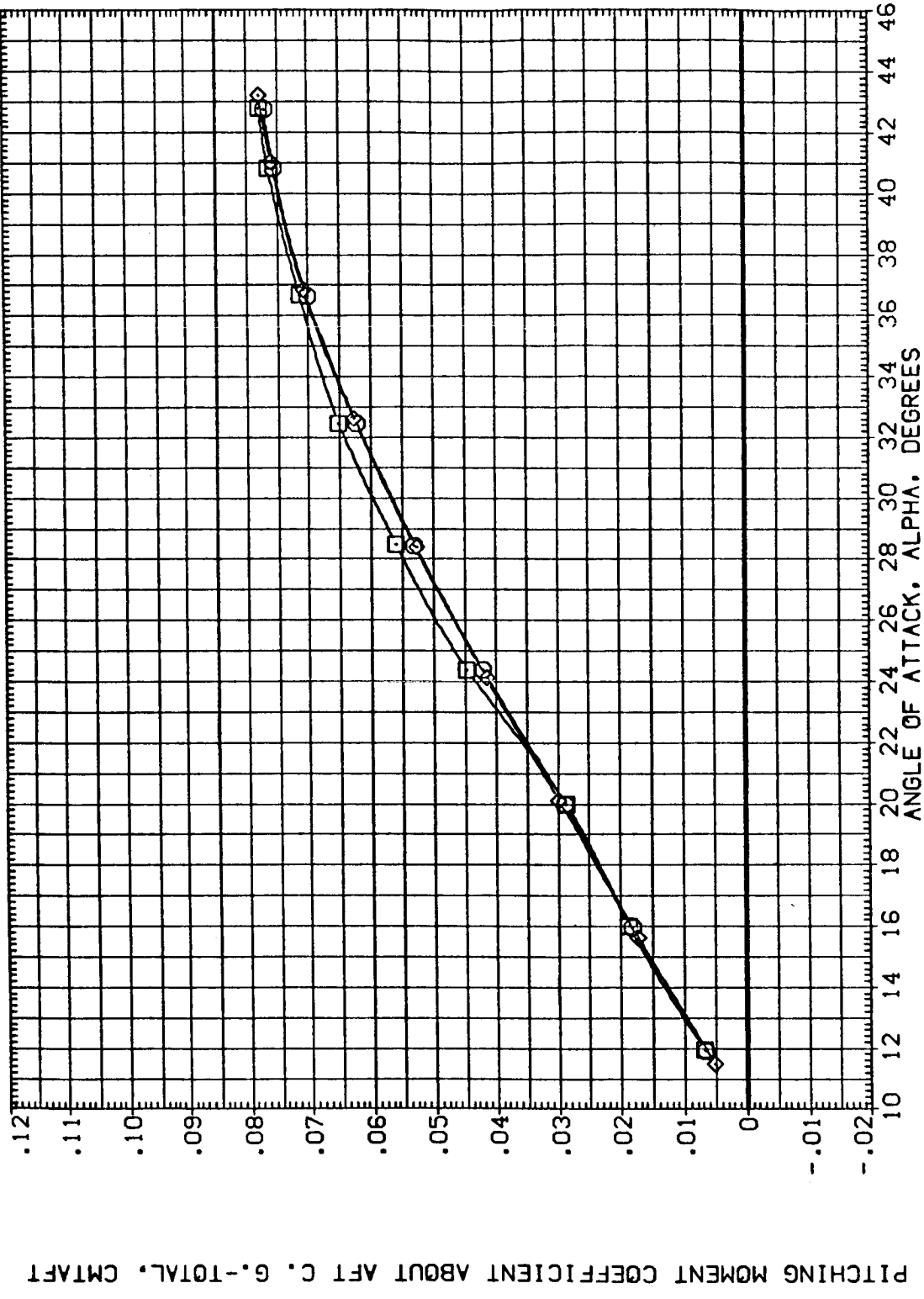


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EEG002) AMES 3.5-190 OA98 (011-M7+M14)
 (EEG010) AMES 3.5-190 OA98 (011-M7+M14-N24)
 (EEG018) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

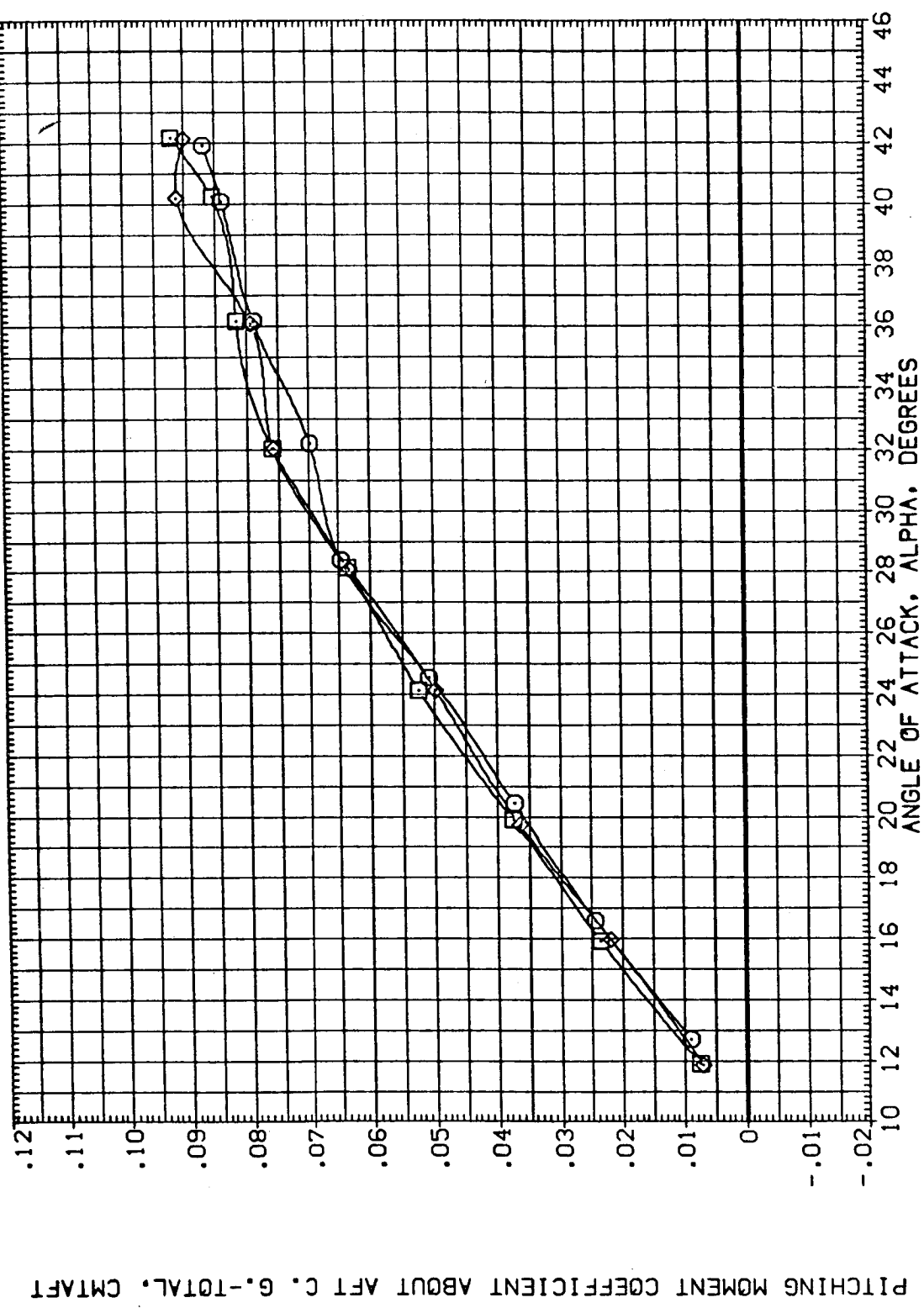


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0002) ANES 3.5-190 GAS8 (011-M7+M14)

(EE0010) ANES 3.5-190 GAS8 (011-M7+M14-N24)

(EE0018) ANES 3.5-190 GAS8 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

YMRP ZMRP SCALE

.0000 .0000 .0150

375.0000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0

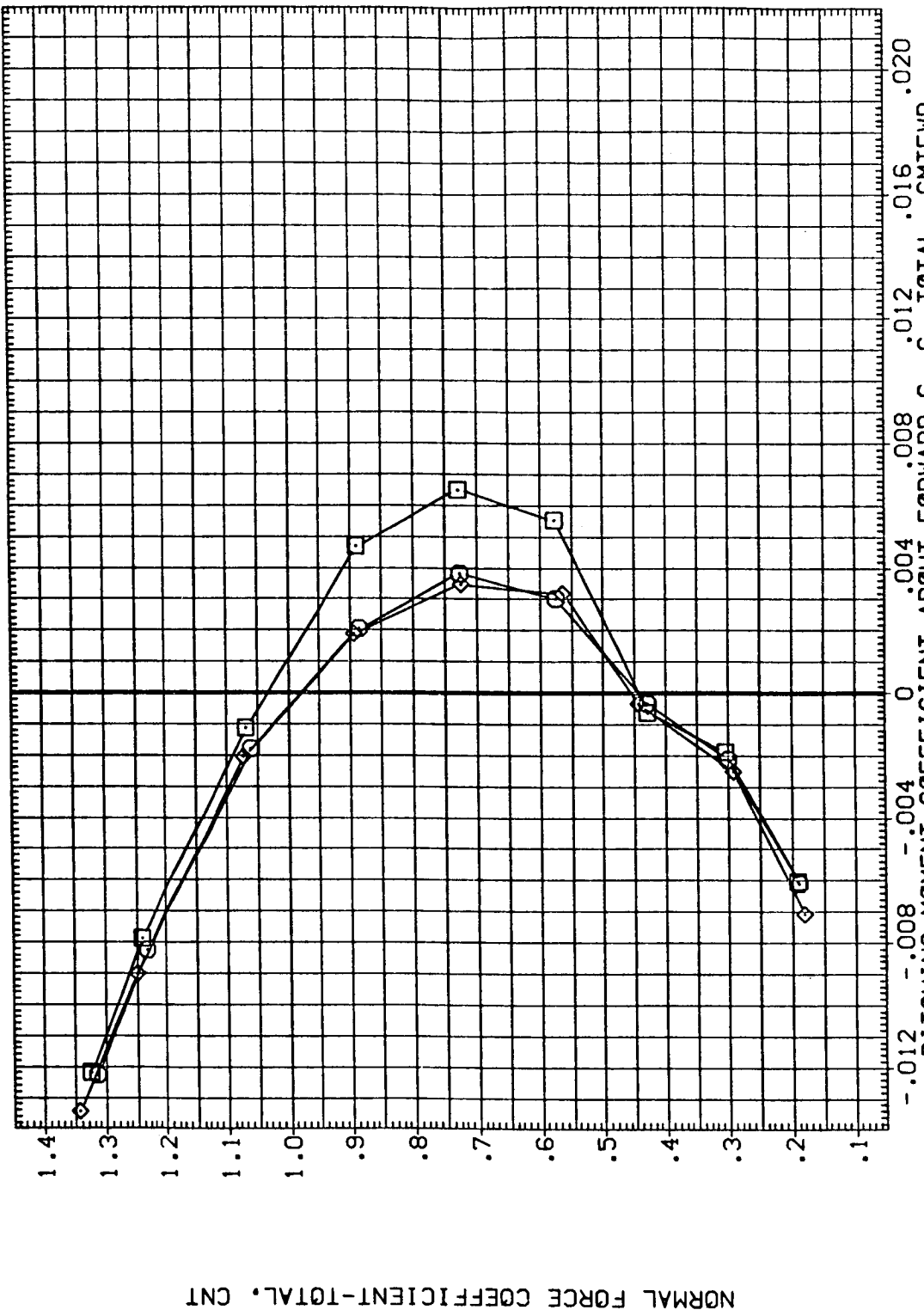


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

NORMAL FORCE COEFFICIENT-TOTAL, CN1

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

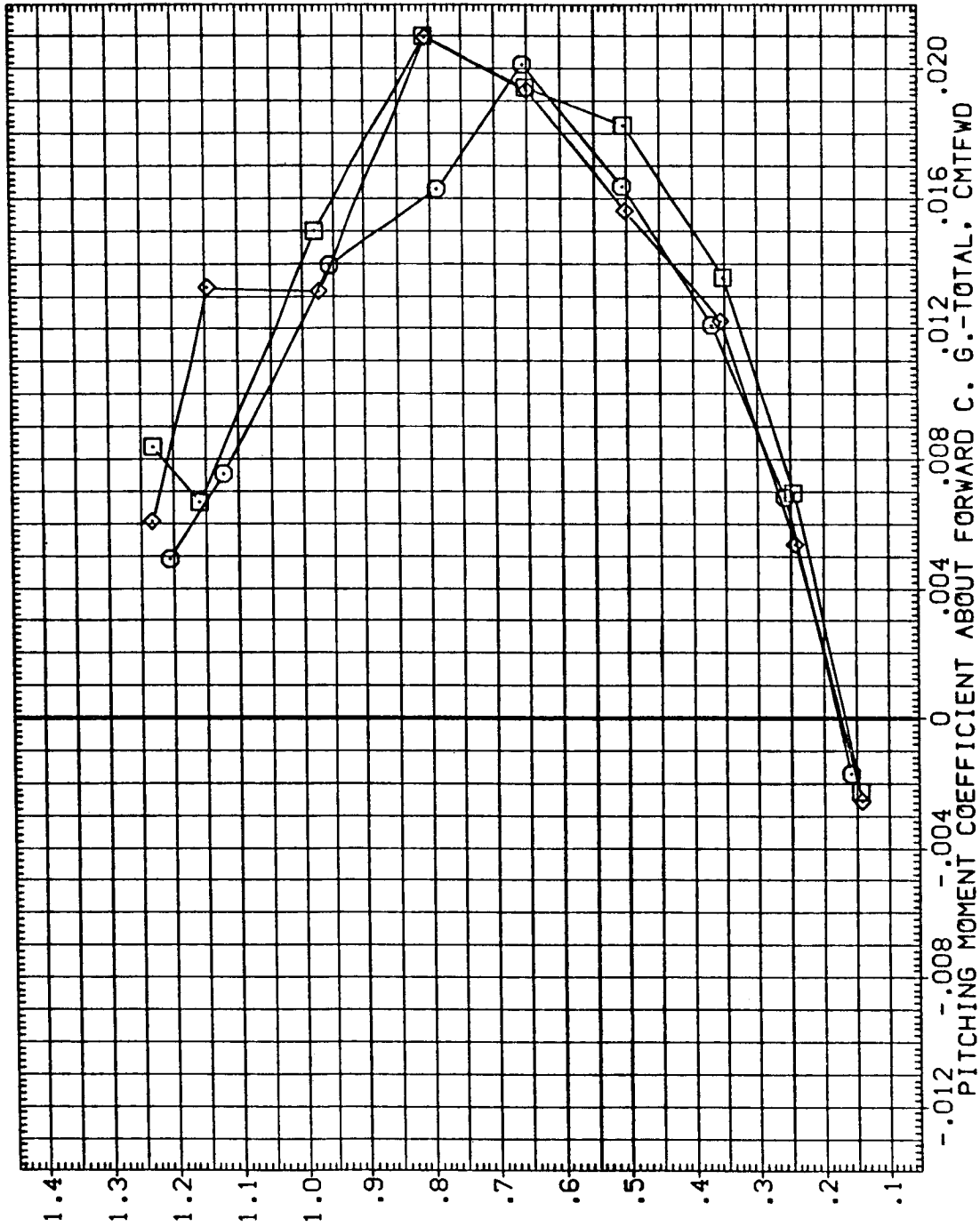


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL: (EE0002), (EE0010), (EE0018)

CONFIGURATION DESCRIPTION: AMES 3.5-190 D498 (011-N7+M14), AMES 3.5-190 D498 (011-N7+M14-N2A), AMES 3.5-190 D498 (011-N7+M14-N2+DUMMY STING)

BETA: .000, .000, .000

ELEVON: -10.000, -10.000, -10.000

BOFLAP: -11.700, -11.700, -11.700

SPOBRK: 55.000, 55.000, 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT., LREF 474.8000 IN., BREF 936.6800 IN., XMRP 1076.7000 IN., YMRP .0000 IN., ZMRP 375.0000 IN., SCALE .0150

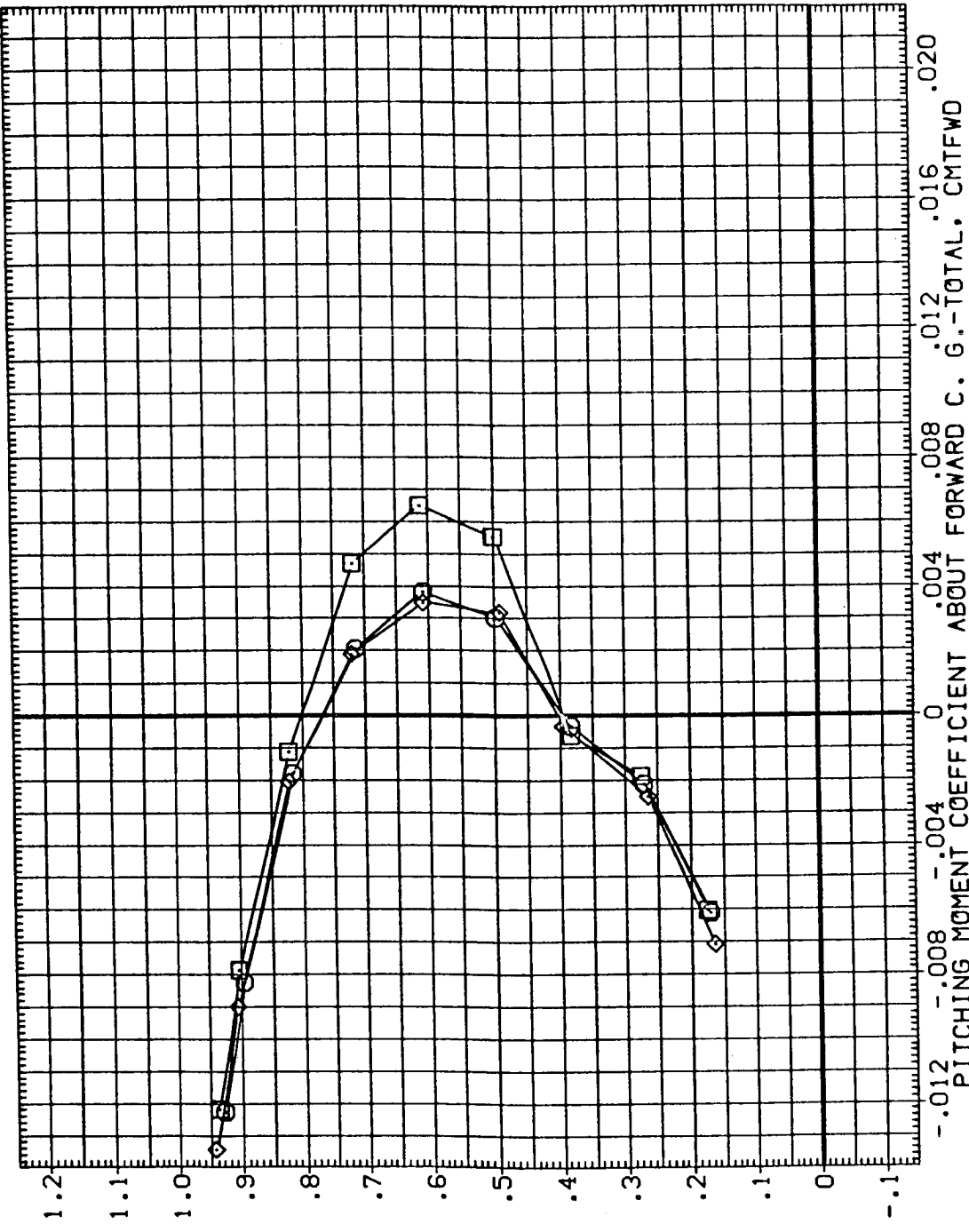


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL
 (EE0002)
 (EE0010)
 (EE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

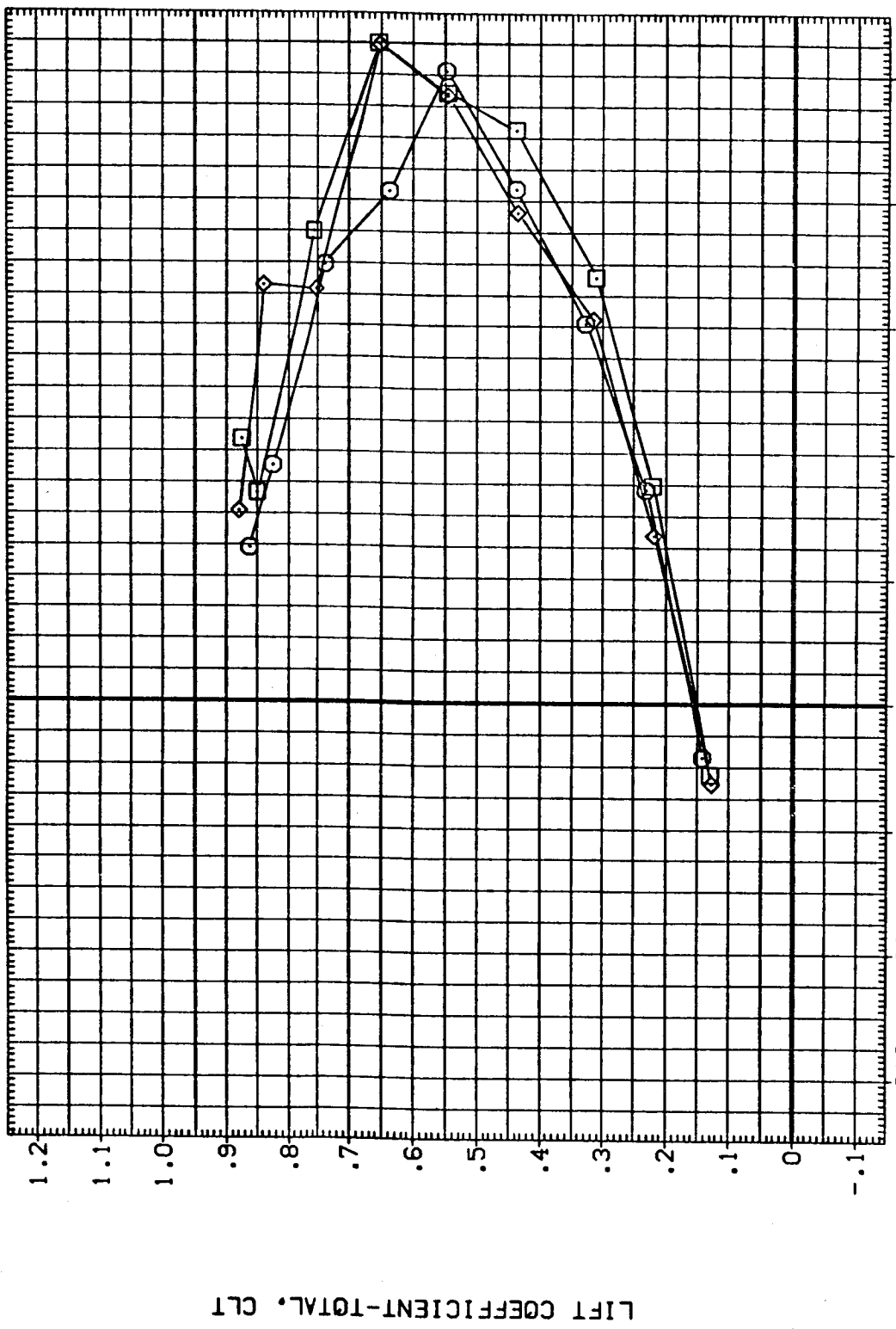
BETA
 .000
 .000
 .000

ELEVON
 -10.000
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0002) AMES 3.5-150 GA98 (011-M7+H14)

(EE0010) AMES 3.5-150 GA98 (011-M7+H14-N24)

(EE0018) AMES 3.5-150 GA98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

YMRP ZMRP SCALE

.0000 .0000 .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

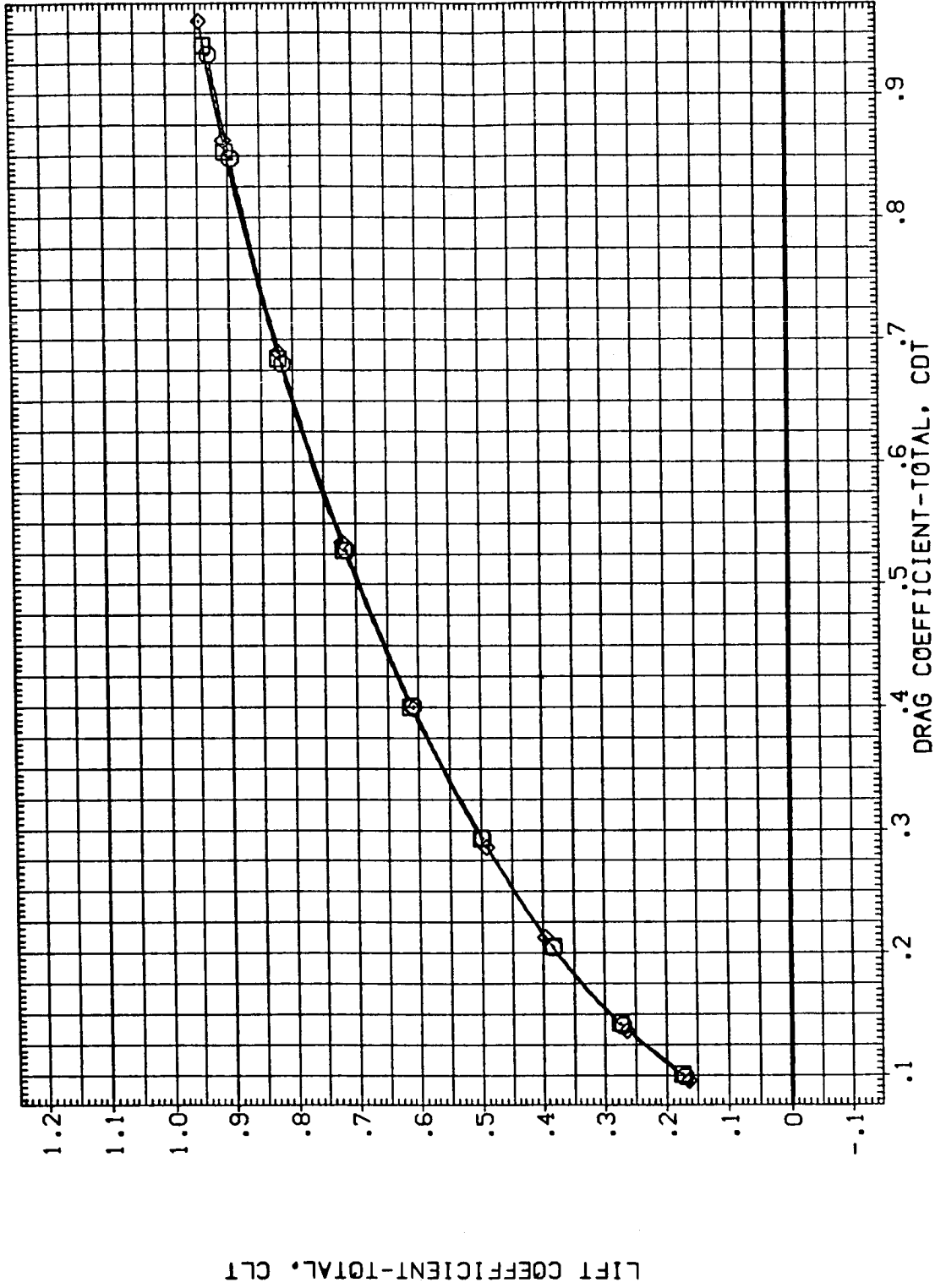
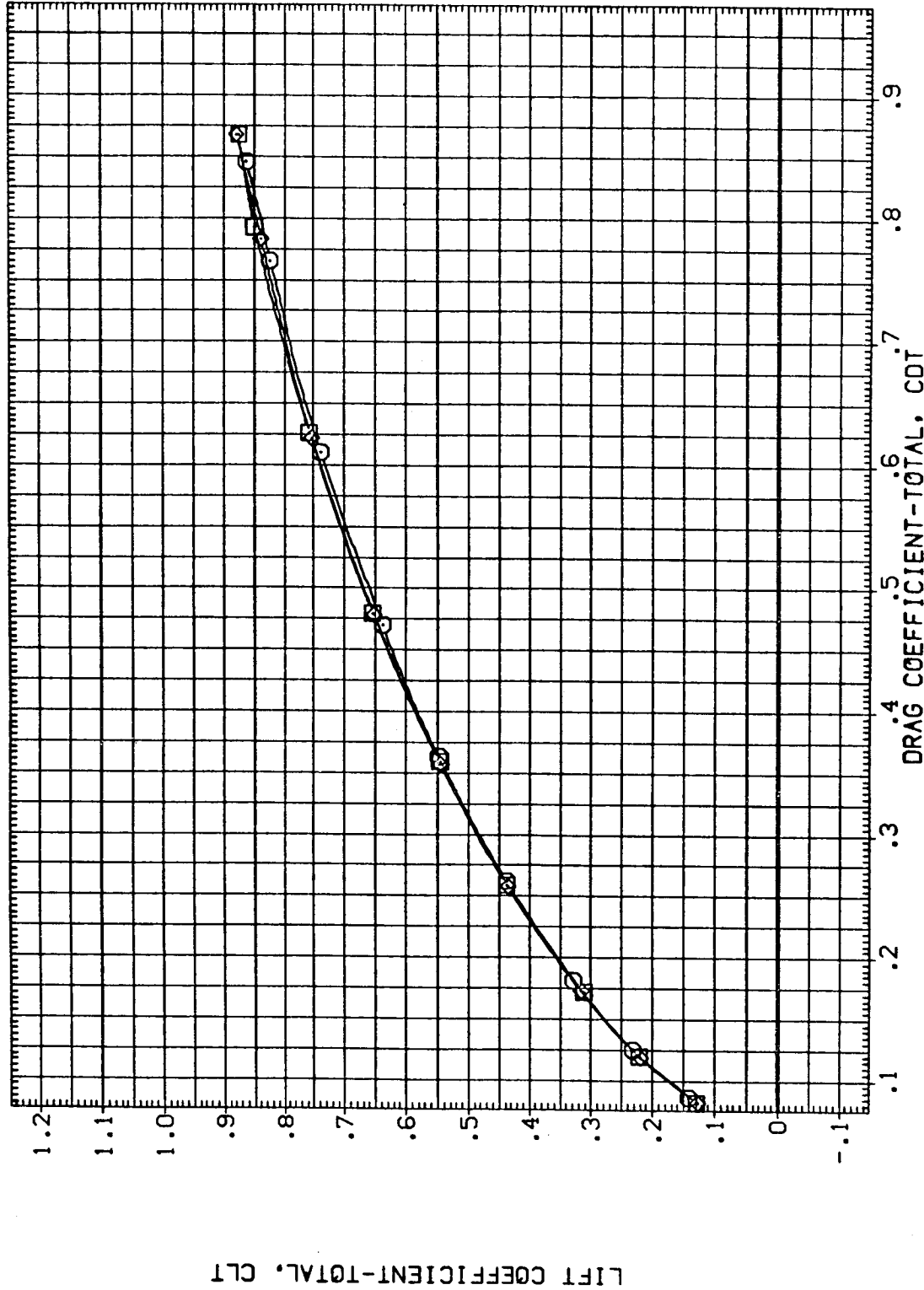


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

(EE0002) AMES 3.5-190 0A98 (011-M7+M14)
 (EE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (EE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)



LIFT COEFFICIENT-TOTAL, CLT

DRAG COEFFICIENT-TOTAL, CDT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (EE0002)
 (EE0010)
 (EE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 -10.000
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700
 -11.700

SFOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 IN. X0
 IN. Y0
 IN. Z0
 SCALE .0150

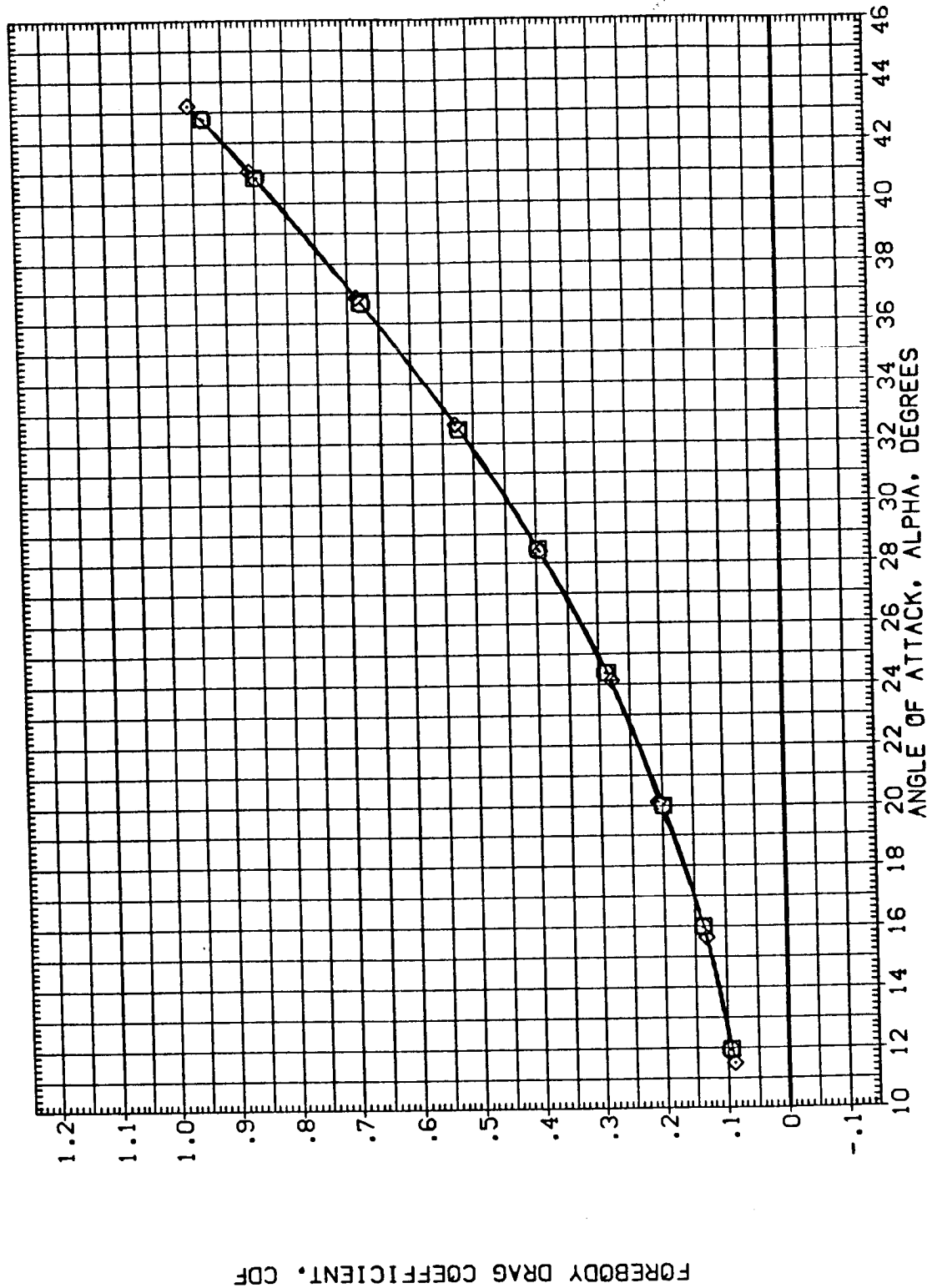


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 DAS8 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

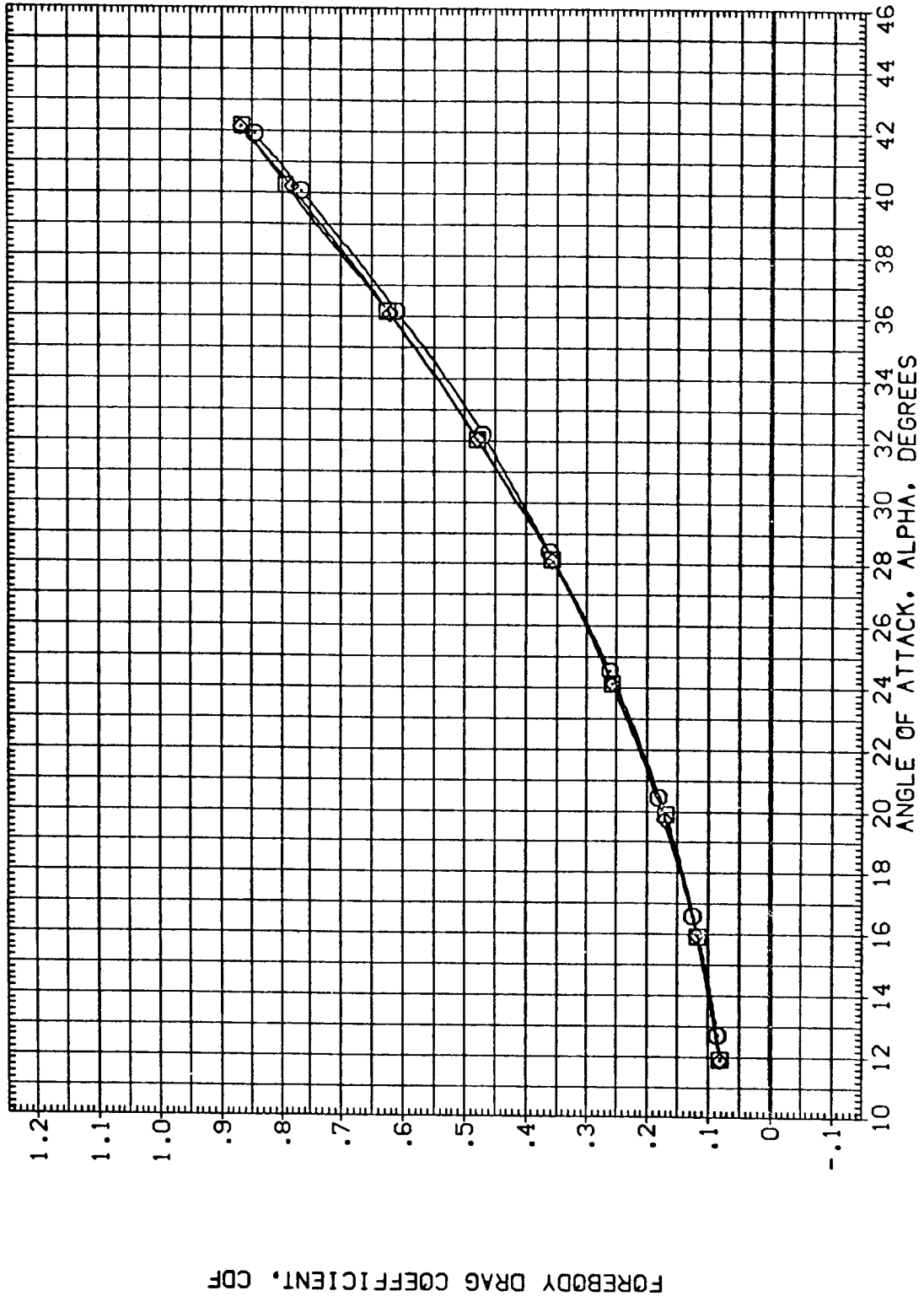


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EEG002) AMES 3.5-190 GA98 (011-M7+H14)

(EEG010) AMES 3.5-190 GA98 (011-M7+H14-N24)

(EEG018) AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

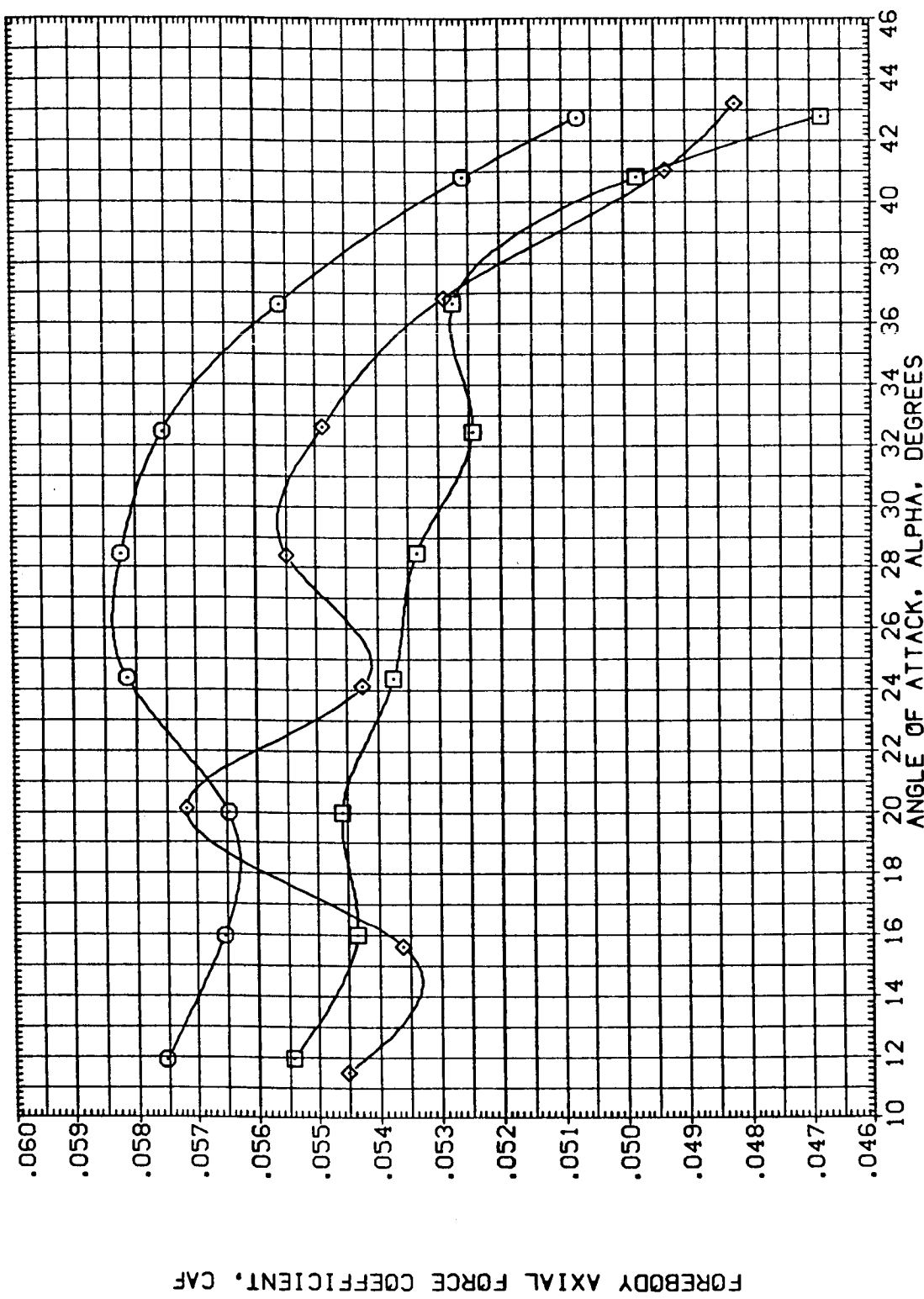
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP 0.0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



FOREBODY AXIAL FORCE COEFFICIENT, CAF

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0002) AMES 3.5-190 GA98 (011-M7-M14)
 (EE0010) AMES 3.5-190 GA98 (011-M7-M14-N24)
 (EE0018) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

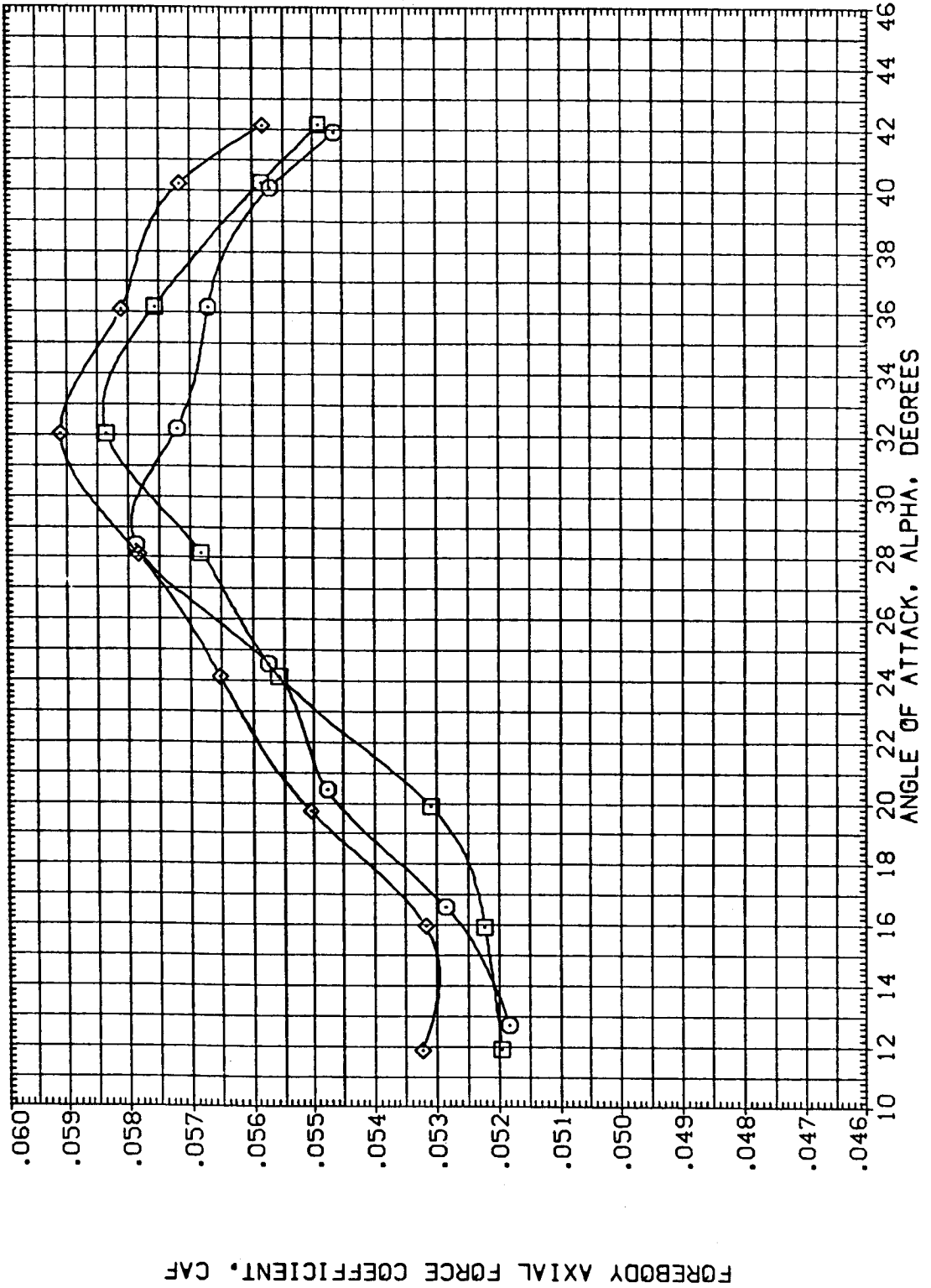


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (EE0002)
 (EE0010)
 (EE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DAS8 (011-M7+M14)
 AMES 3.5-190 DAS8 (011-M7+M14-N24)
 AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 -10.000
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

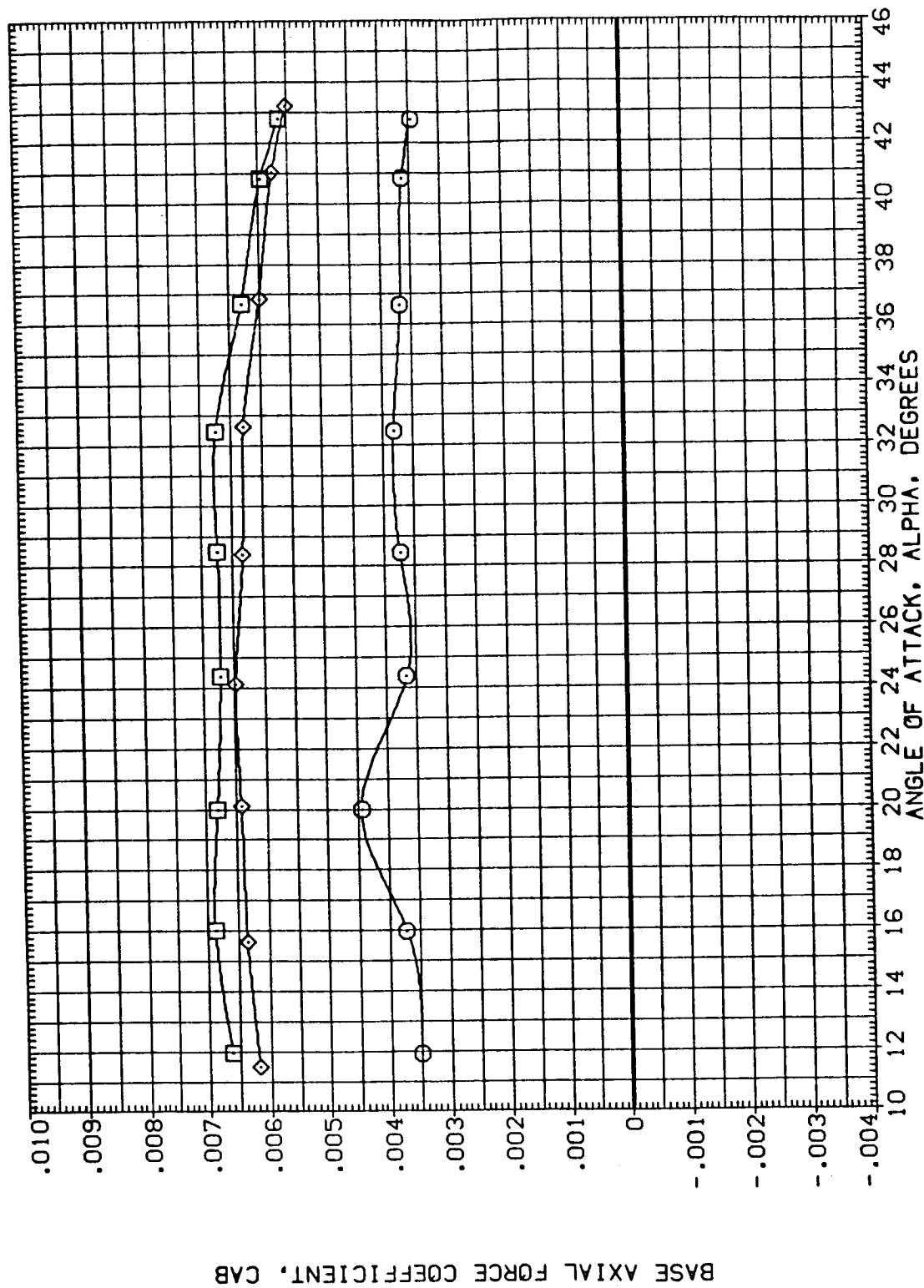


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJ MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

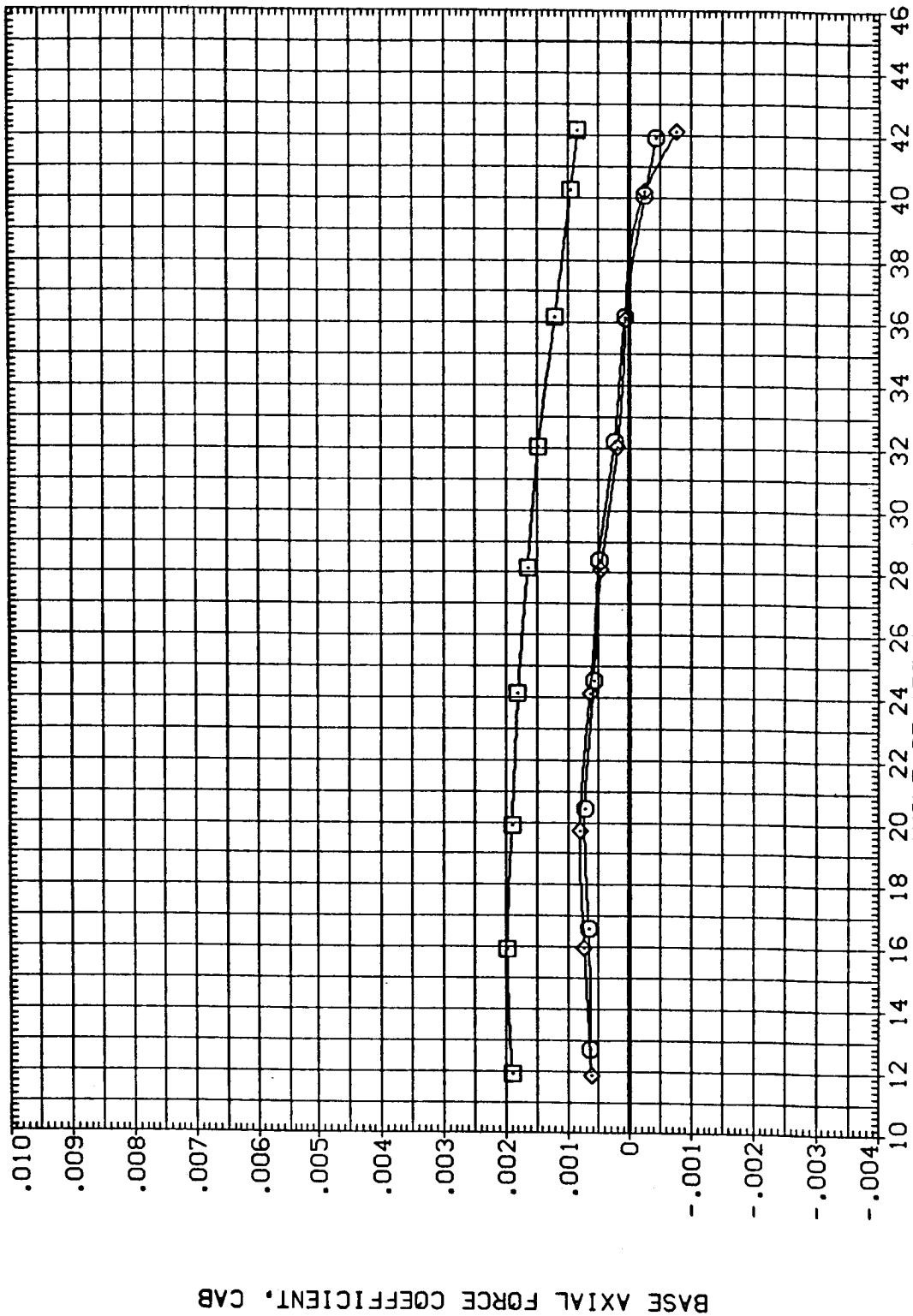


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (BEG002) (BEG010) (BEG018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+H14)
 AMES 3.5-190 GA98 (011-M7+H14-N24)
 AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPDRK 55.000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. IN. IN. IN. X0 IN. Y0 IN. Z0

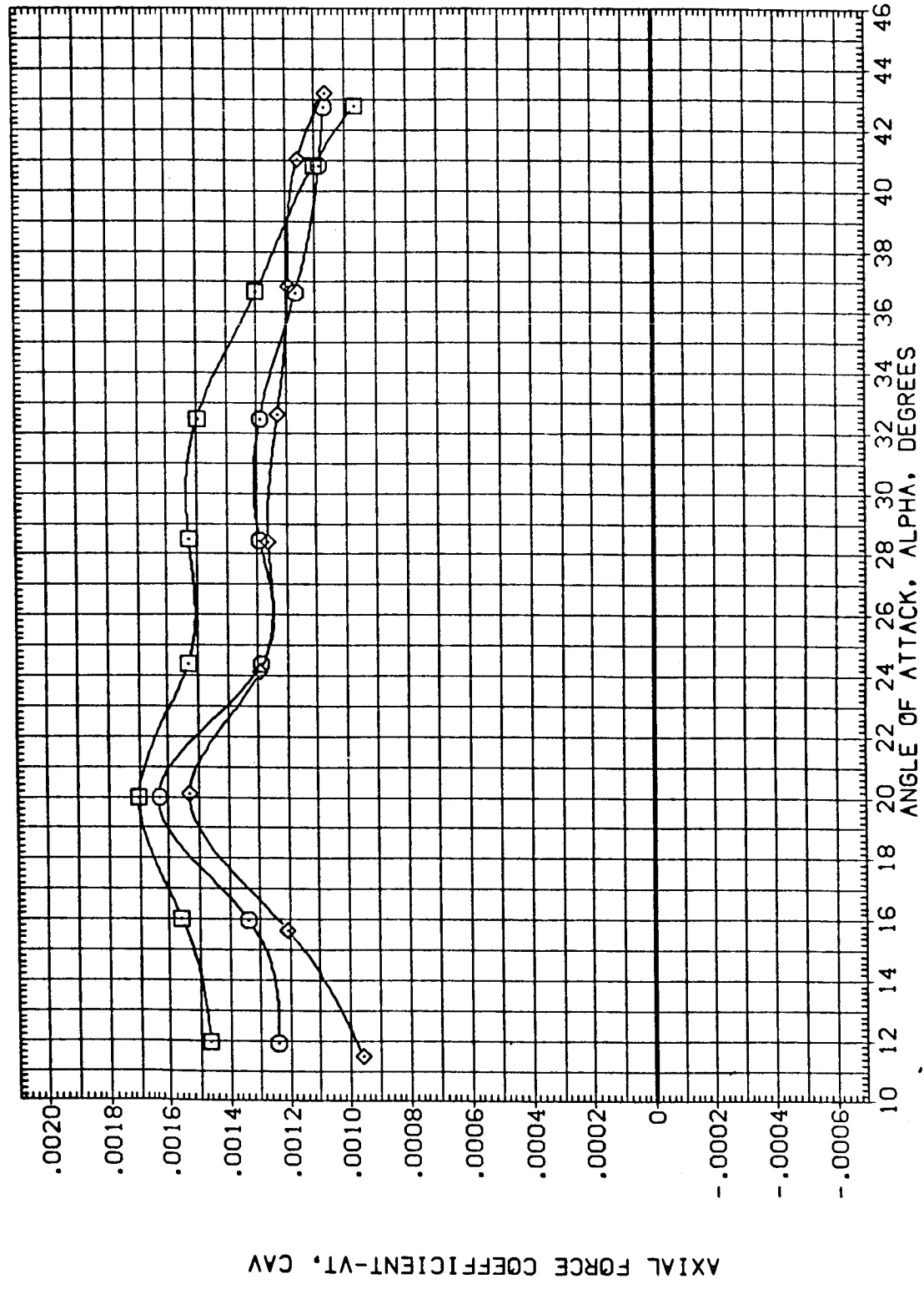


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BE0002) (BE0010) (BE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14-N24)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPOBRK 55.000
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

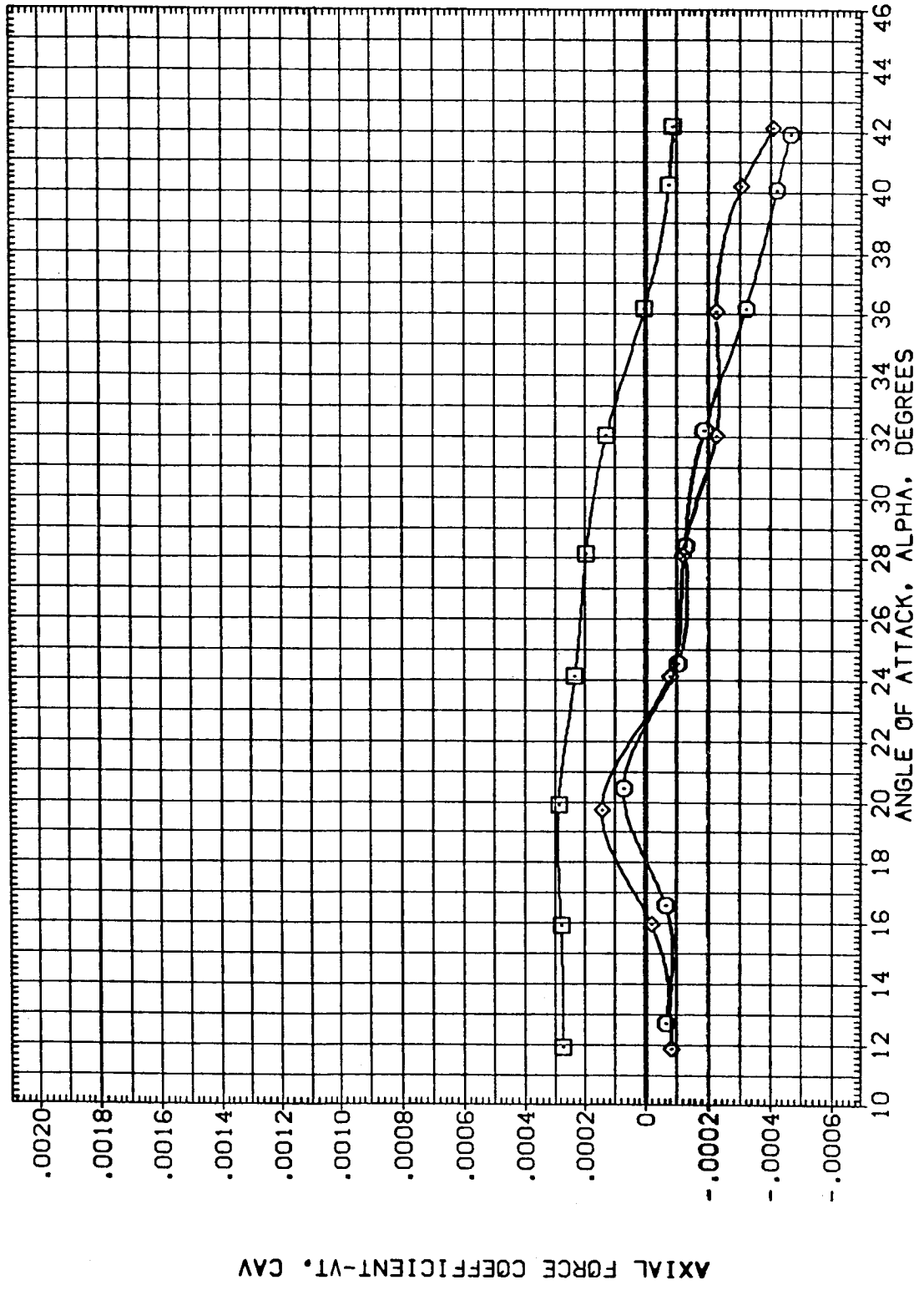


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(BEG002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BEG010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

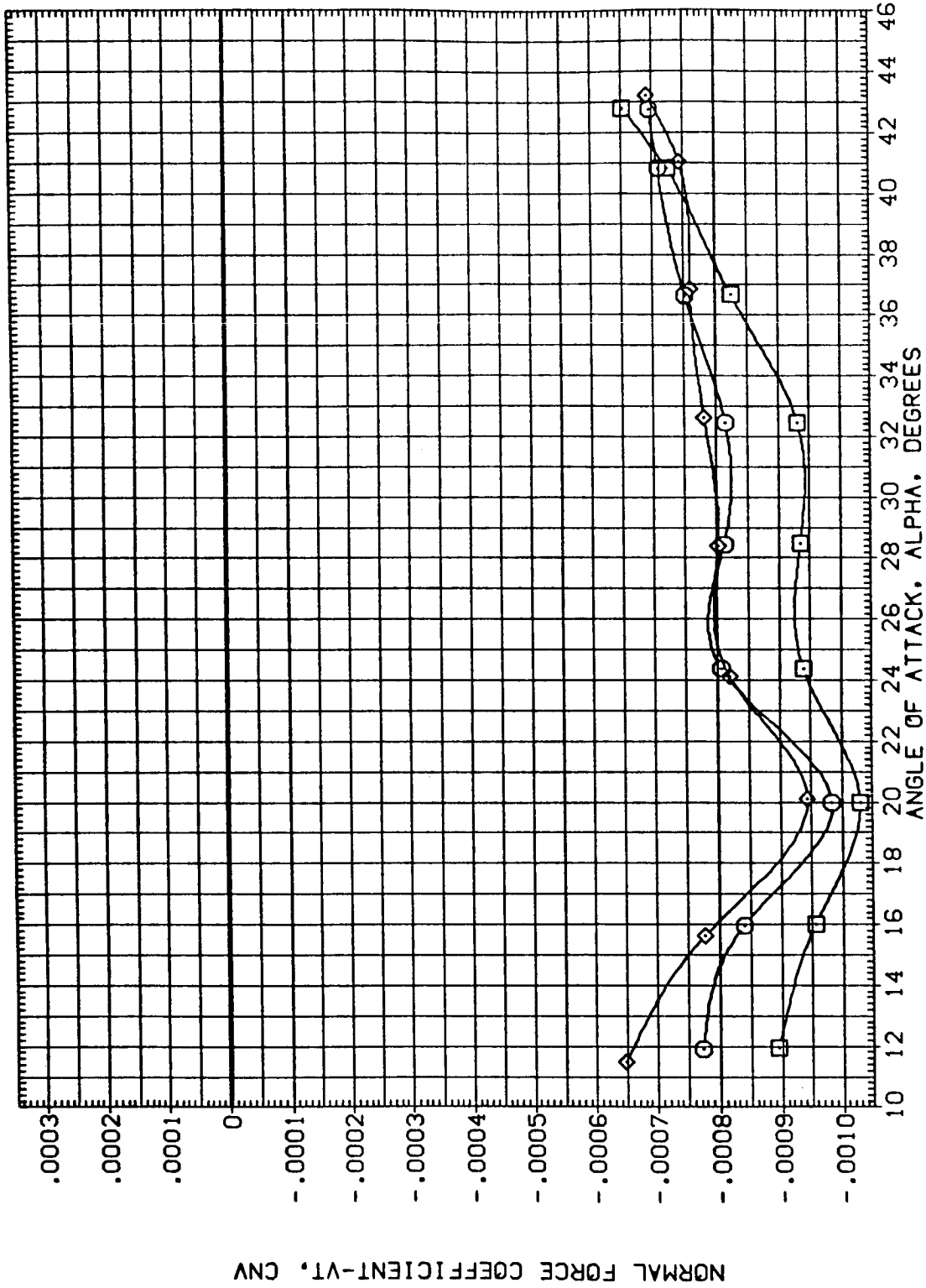


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0002)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 926.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

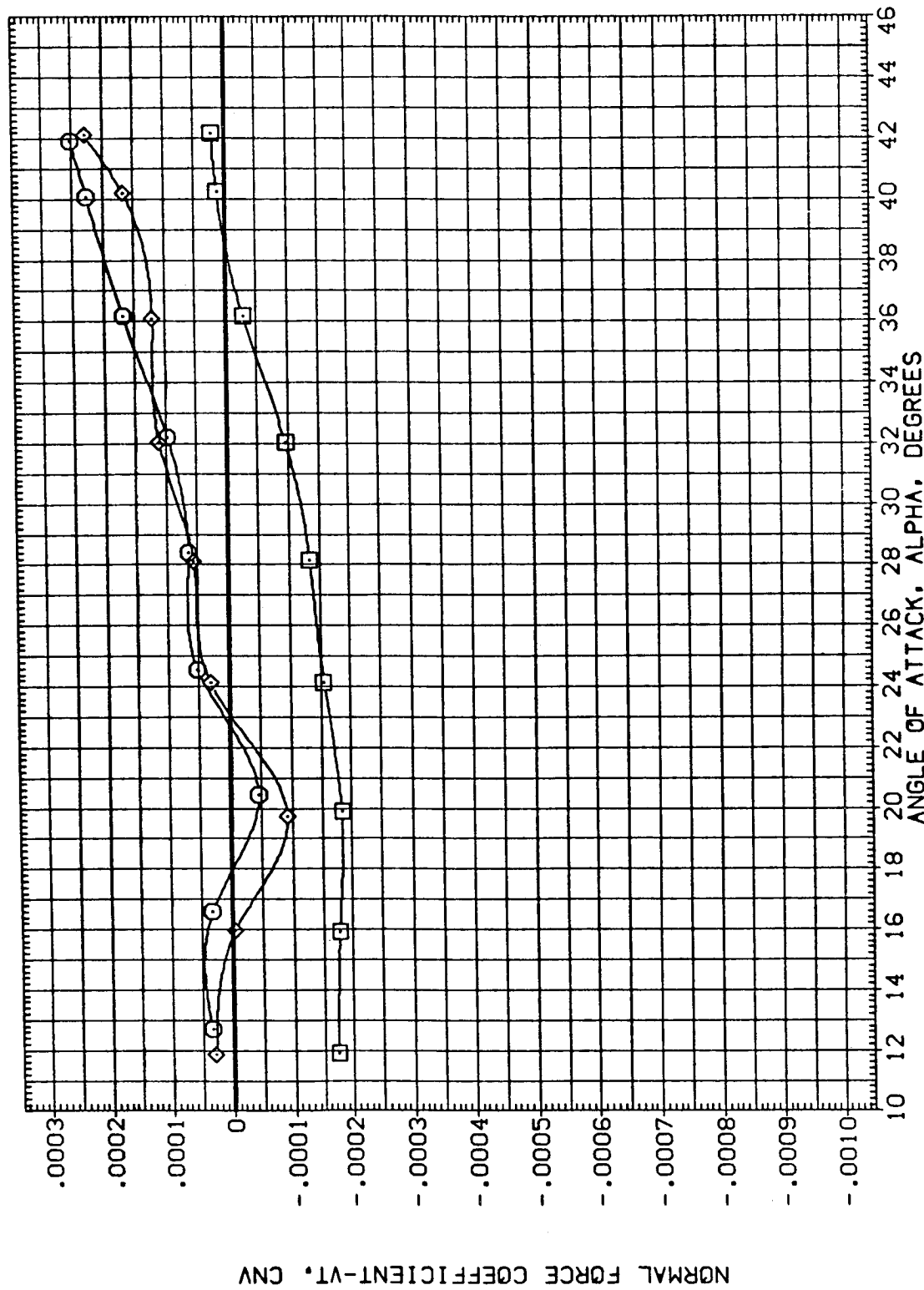


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDRBK REFERENCE INFORMATION SQ.FT.
 (BE0002) AMES 3.5-190 0A98 (011-M7+M14) .000 -10.000 -11.700 55.000 SREF 2690.0000 IN.
 (BE0010) AMES 3.5-190 0A98 (011-M7+M14-N24) .000 -10.000 -11.700 55.000 LREF 474.8000 IN.
 (BE0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

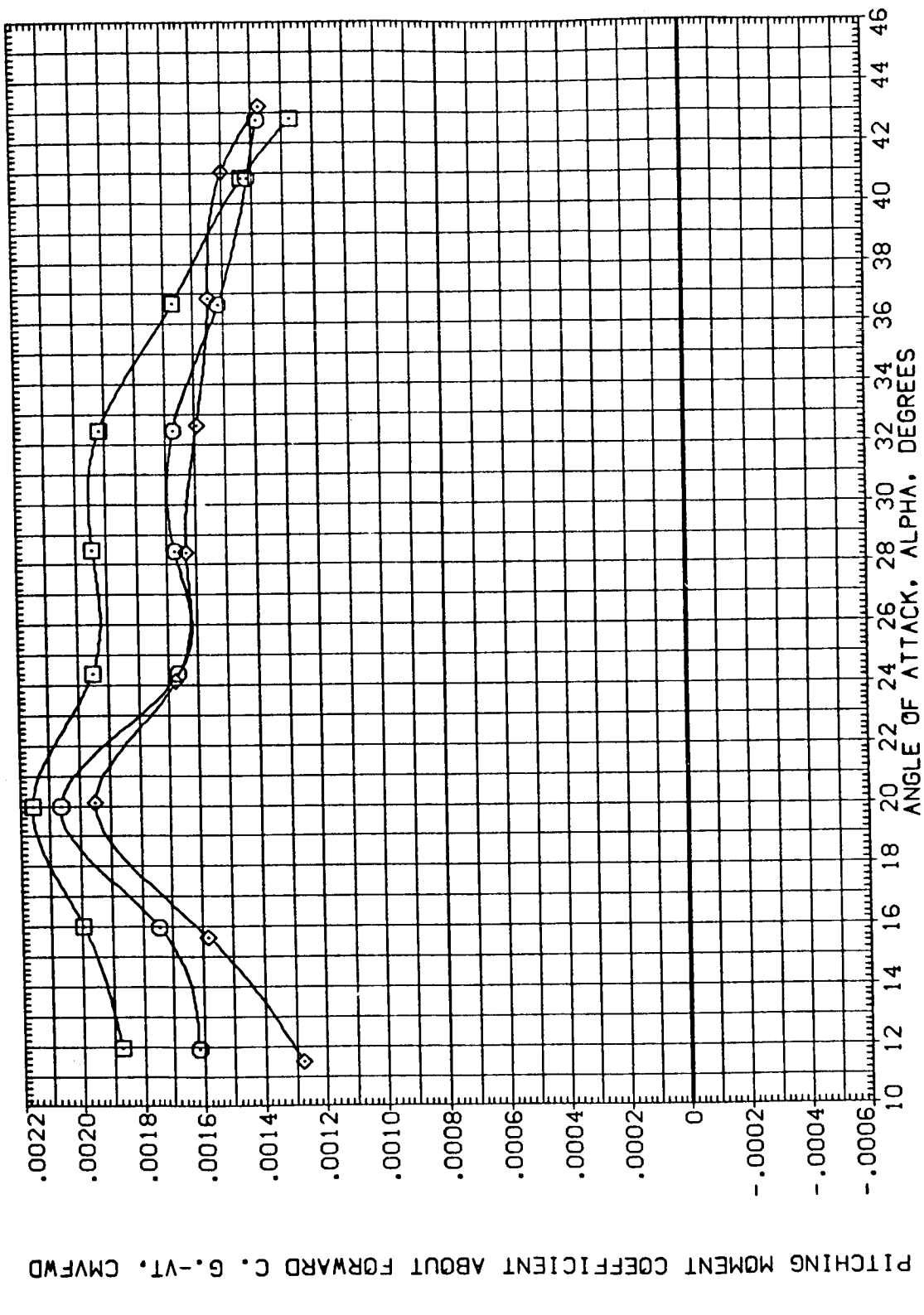


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(BE0002)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000
(BE0010)	AMES 3.5-190 OAS8 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000
(BE0018)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800
						XMRP 1076.7000
						YMRP .0000
						ZMRP 375.0000
						SCALE .0150

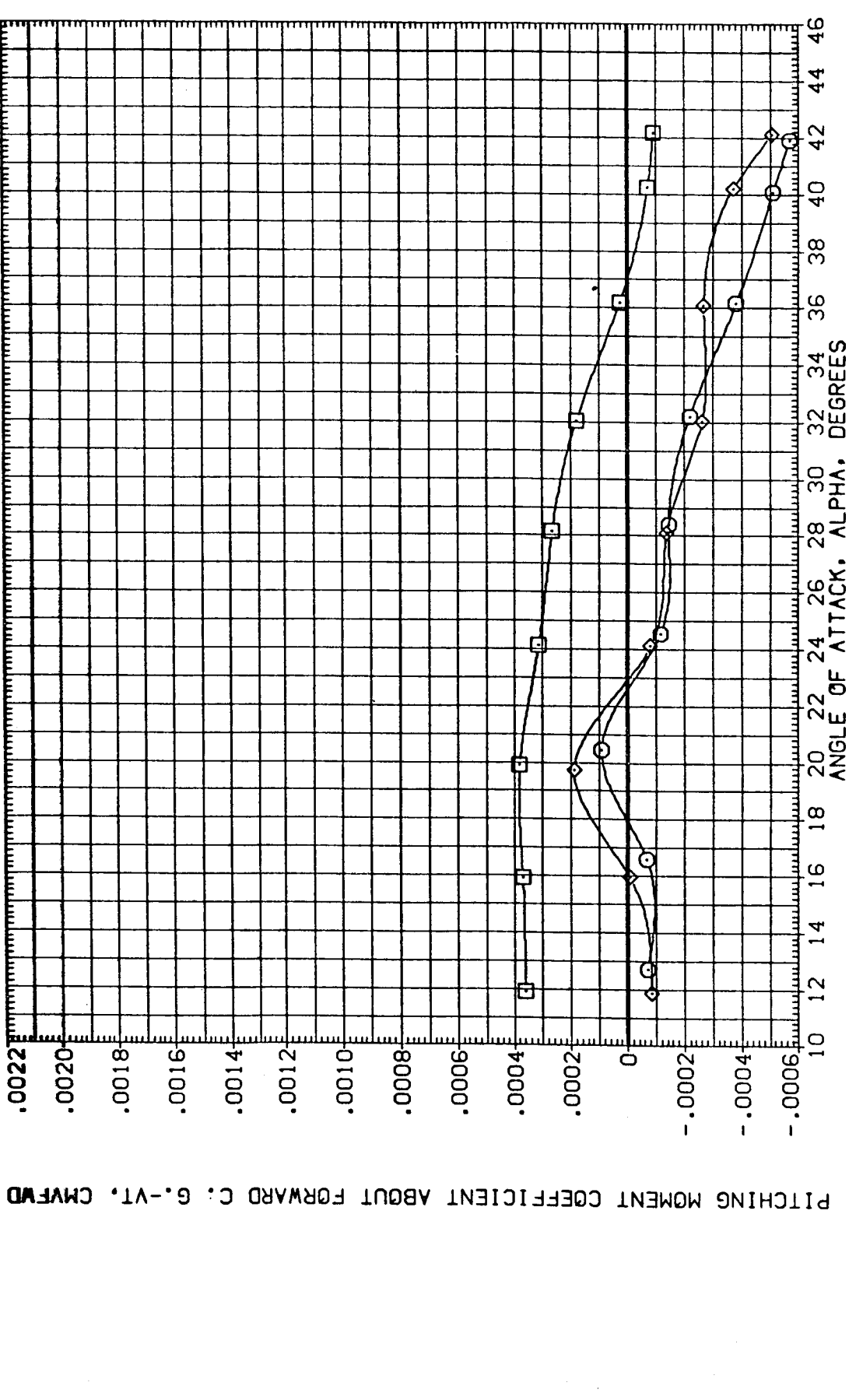


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BEG002) AMES 3.5-190 DAS8 (011-M7+M14)

(BEG010) AMES 3.5-190 DAS8 (011-M7+M14-N24)

(BEG018) AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -10.000
 -10.000
 -10.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION

SQ.FT. 2690.0000

SREF 474.8000

LREF 936.6800

BRFP 1076.7000

XMRF .0000

YMRP 375.0000

IN.Y0 .0150

IN.Z0

SCALE

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

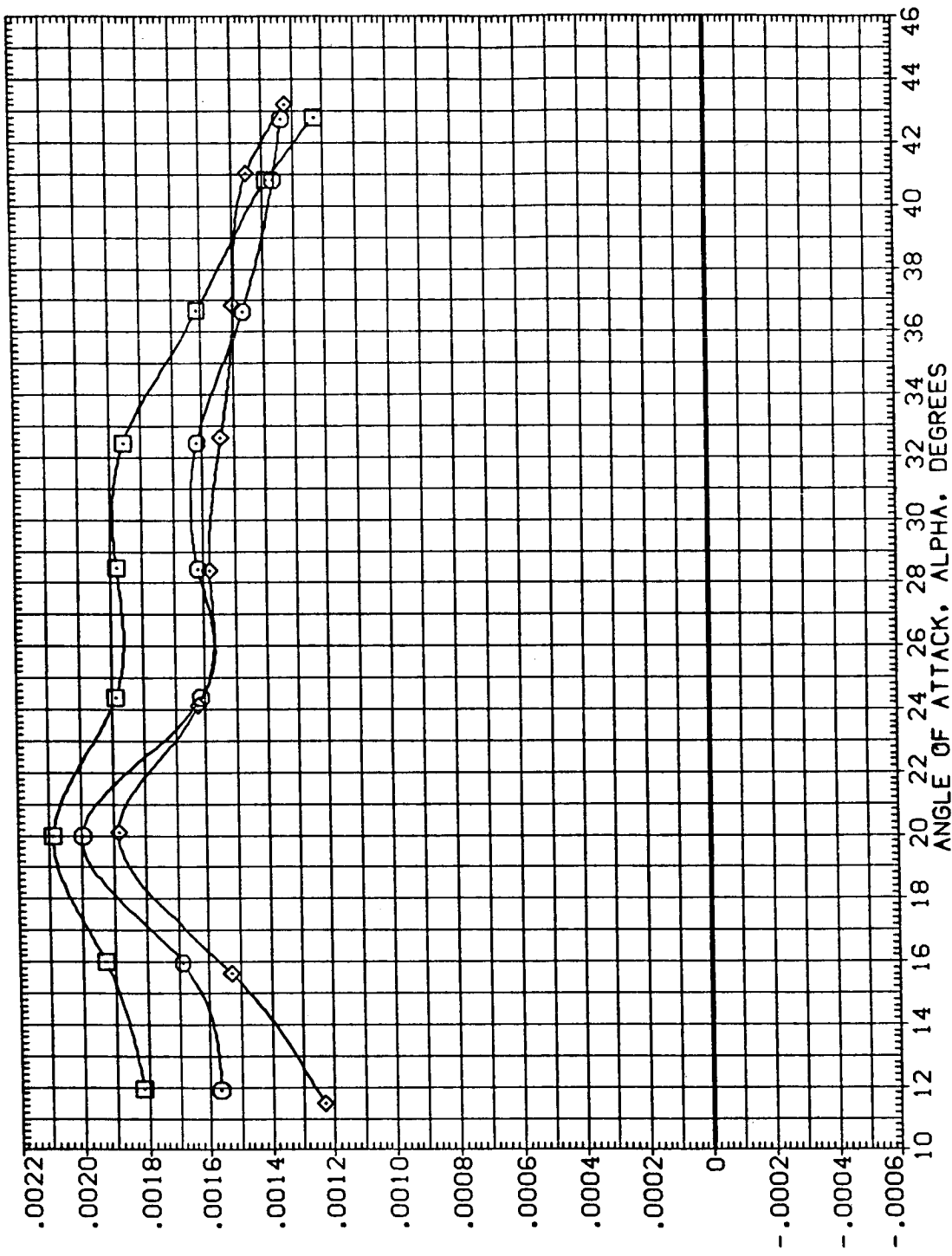


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0002) AMES 3.5-190 GA98 (011-M7+H14)

(BE0010) AMES 3.5-190 GA98 (011-M7+H14-N24)

(BE0018) AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

YMRP ZMRP SCALE

1076.7000 IN.X0

375.0000 IN.Y0

.0150 IN.Z0

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

ZMRP 375.0000 IN.Y0

SCALE .0150 IN.Z0

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

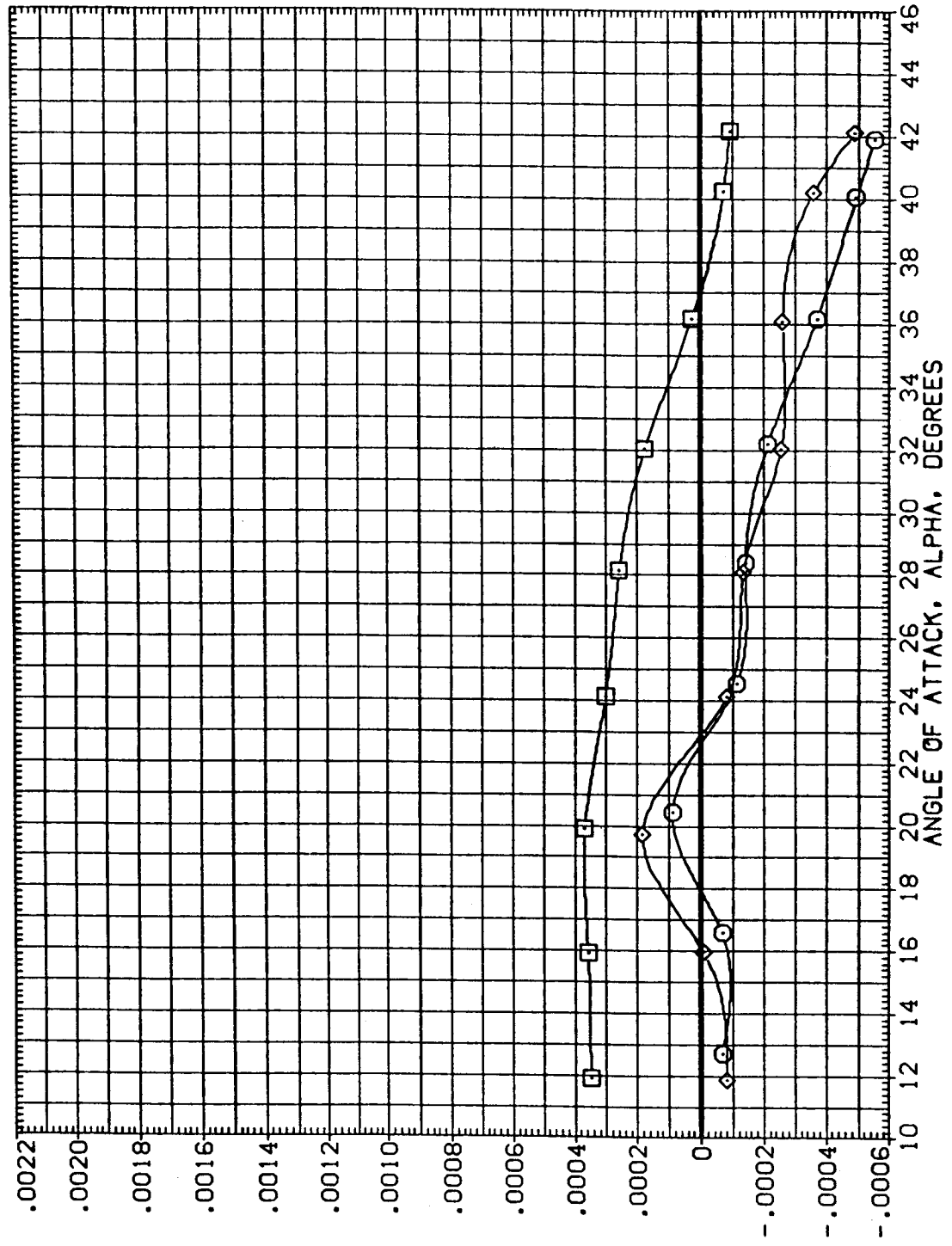


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

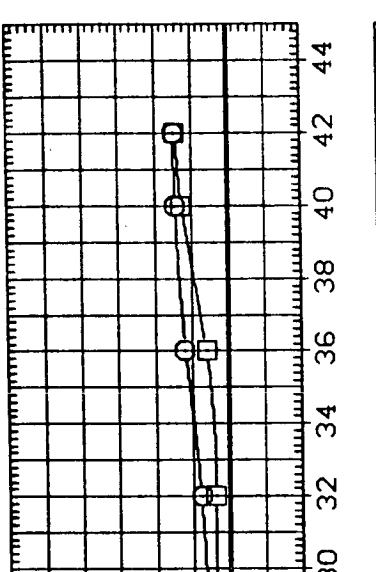
(B)MACH = 10.27

DATA SET SYMBOL (YEO010) (YEO018)

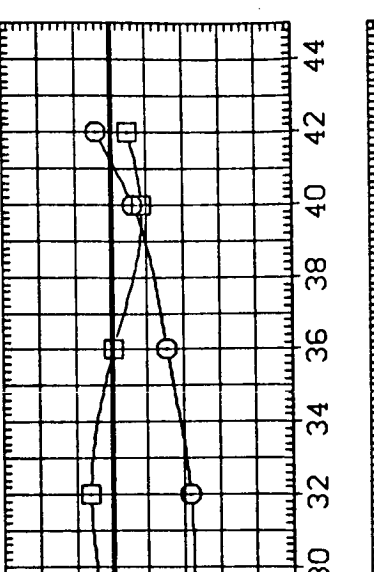
CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+H14-N24)
 AMES 3.5-190 OA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000

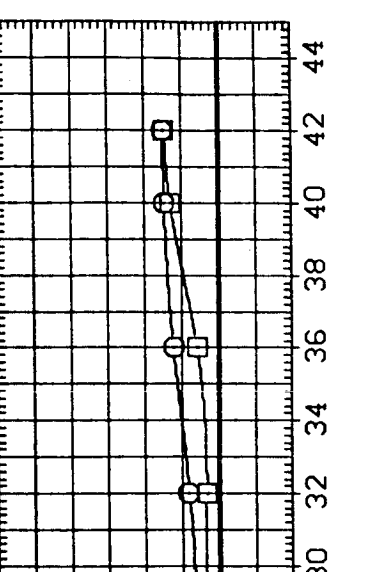
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DCLT



A7CO



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YEO010) (YEO018)
 CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-M7+M14-N24) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)
 BETA .000 -10.000 -10.000
 ELEVON -10.000 -11.700 -11.700
 BOFLAP 55.000 55.000
 SPOBRK 2690.0000 474.8000 936.6800 1076.7000
 REFERENCE INFORMATION SQ.FT. IN. IN. XG IN. YG IN. ZG
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP .0000
 SCALE .0150

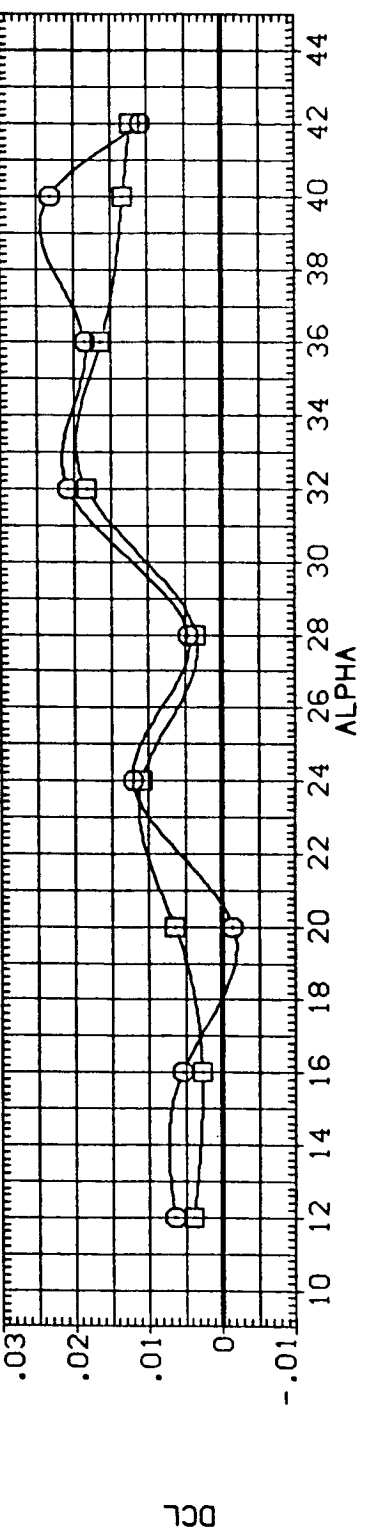
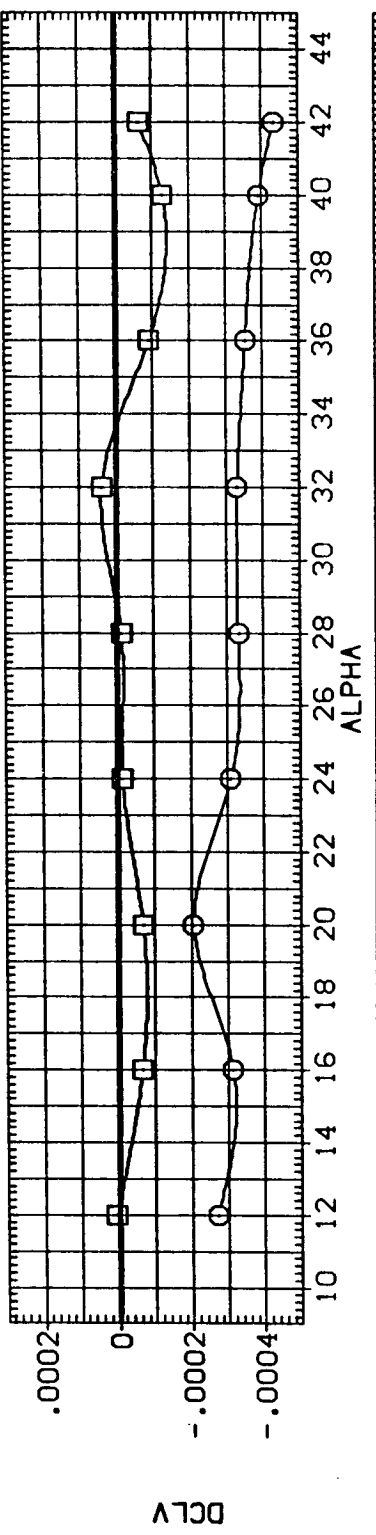
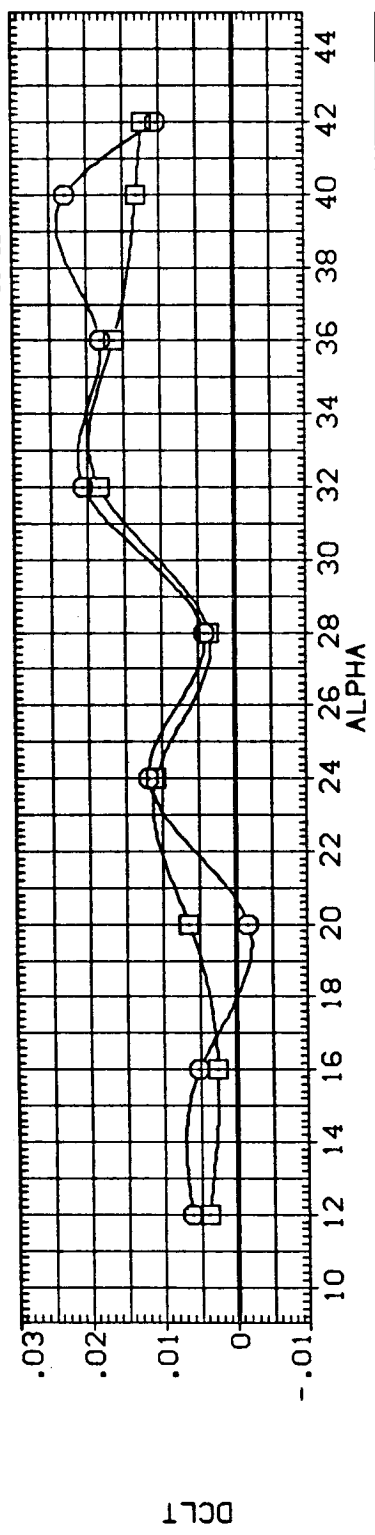


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZE0010) (ZE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

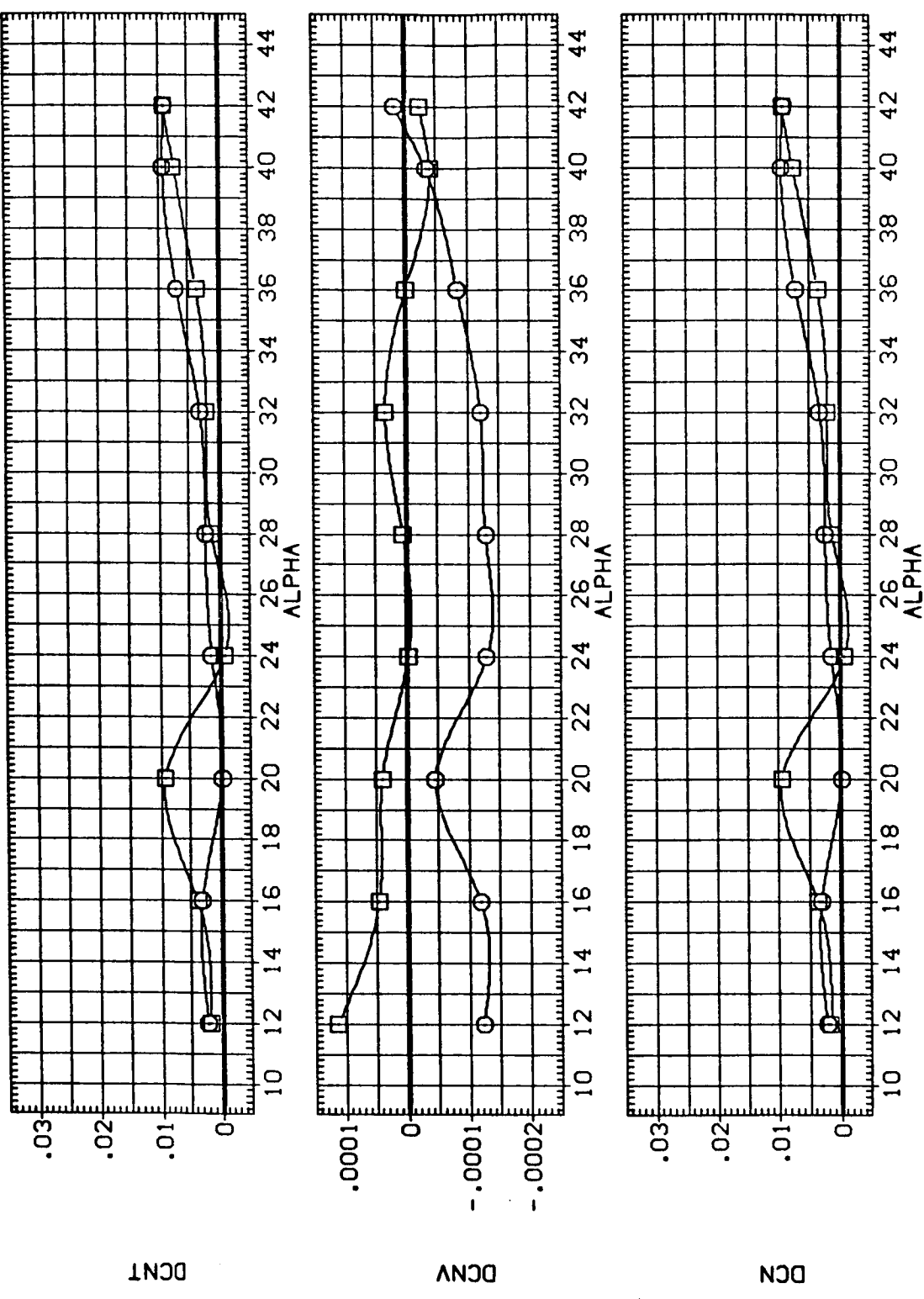


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (ZE0010) (ZE0018)
 CONFIGURATION DESCRIPTION (011-M7+M14-N24) (011-M7+M14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON -10.000 -10.000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

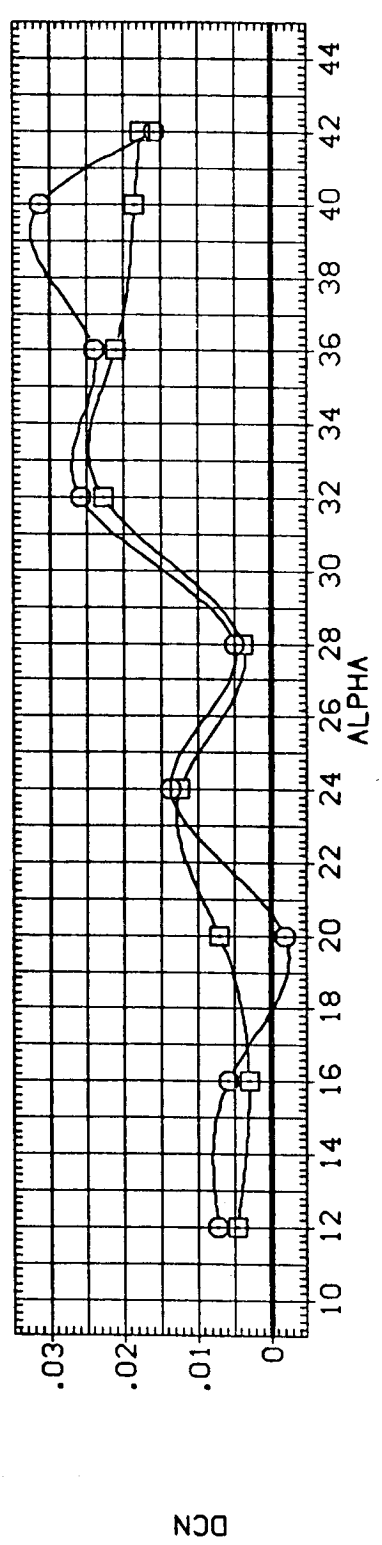
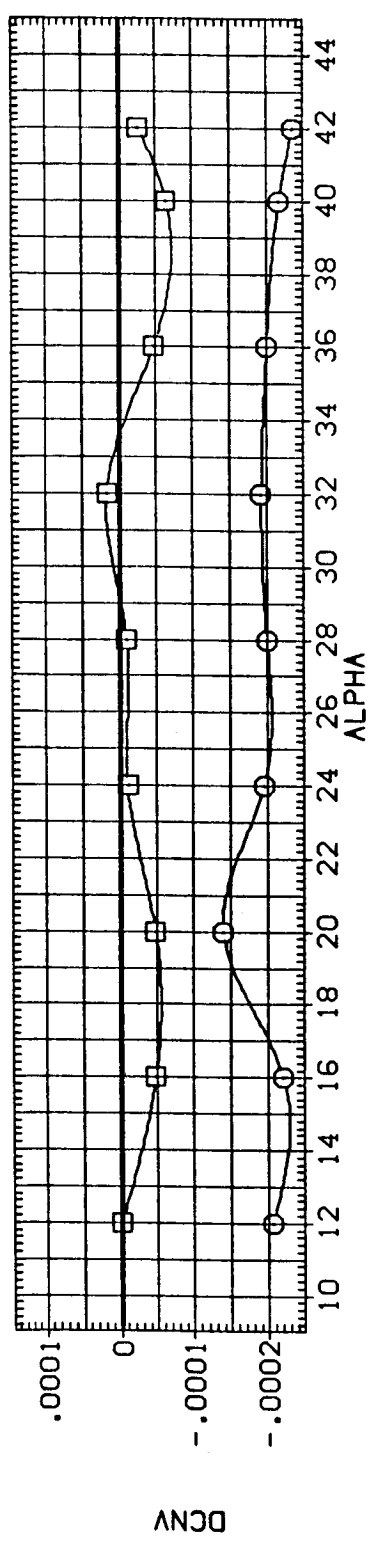
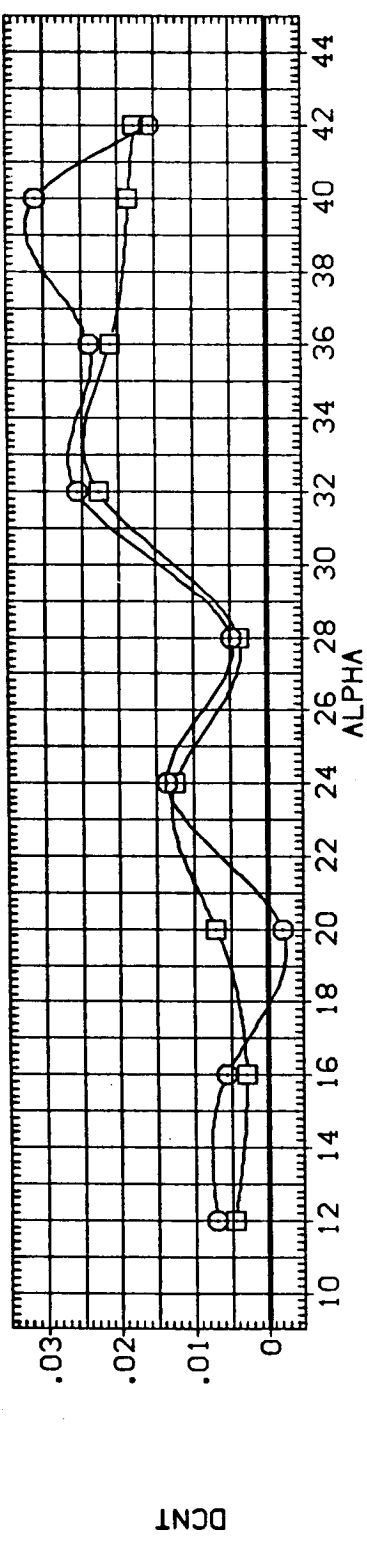


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZEG010) (ZEG018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.6000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

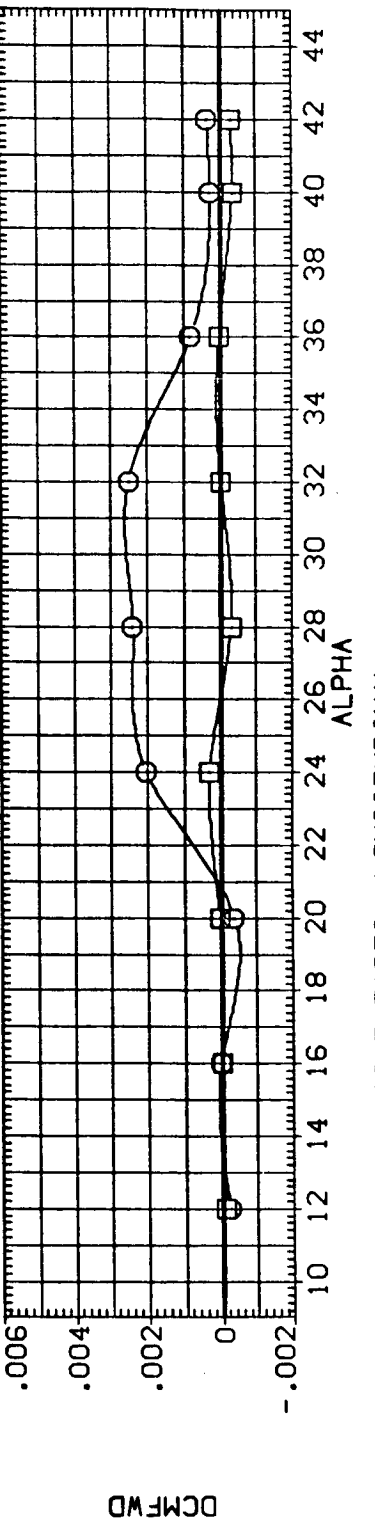
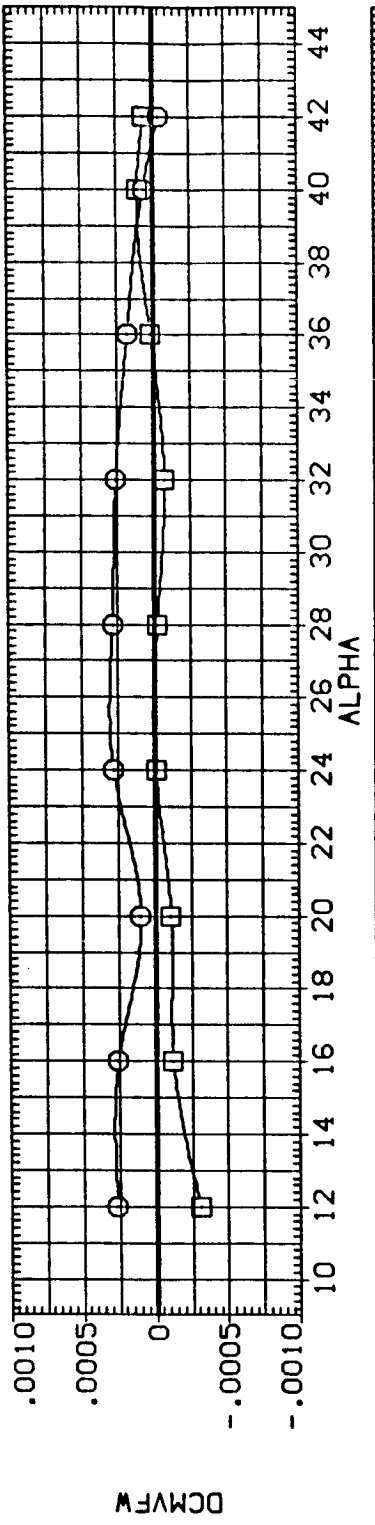
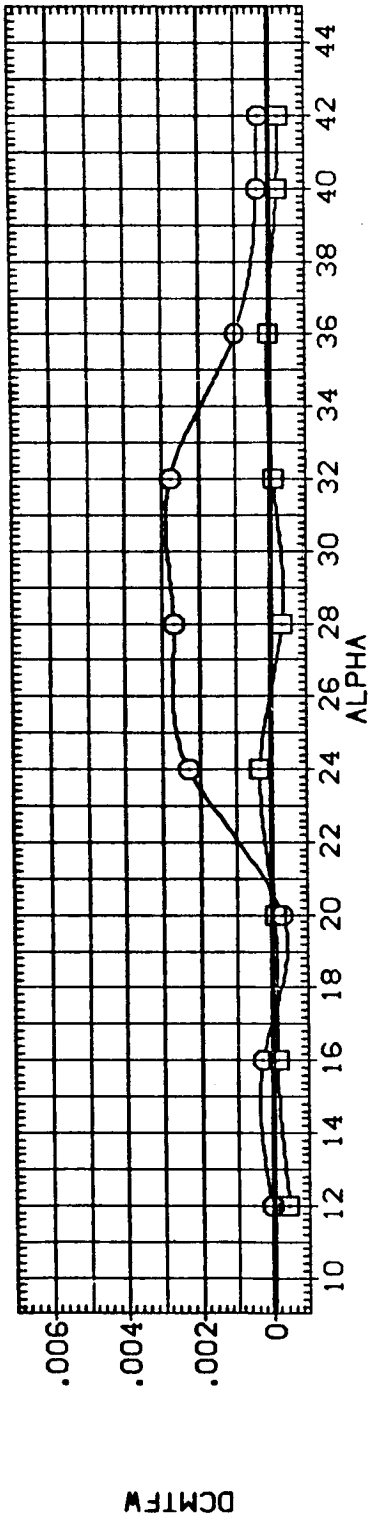


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (ZE0010) (ZE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-M7-H14-N24)
 AMES 3.5-190 GAS8 (011-M7-H14-N24+DUMMY STING)

BETA .000 .000

ELEVON -10.000 -10.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

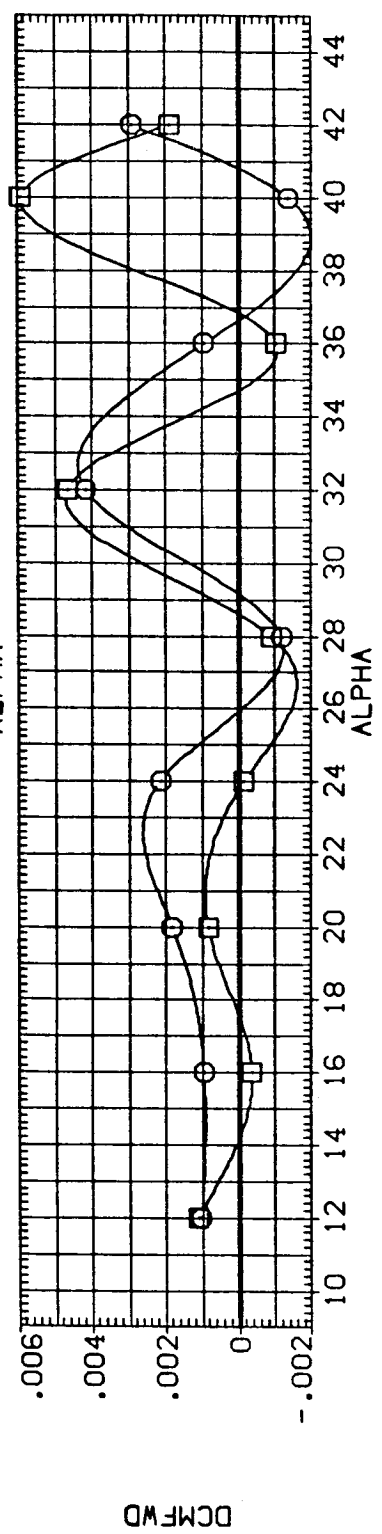
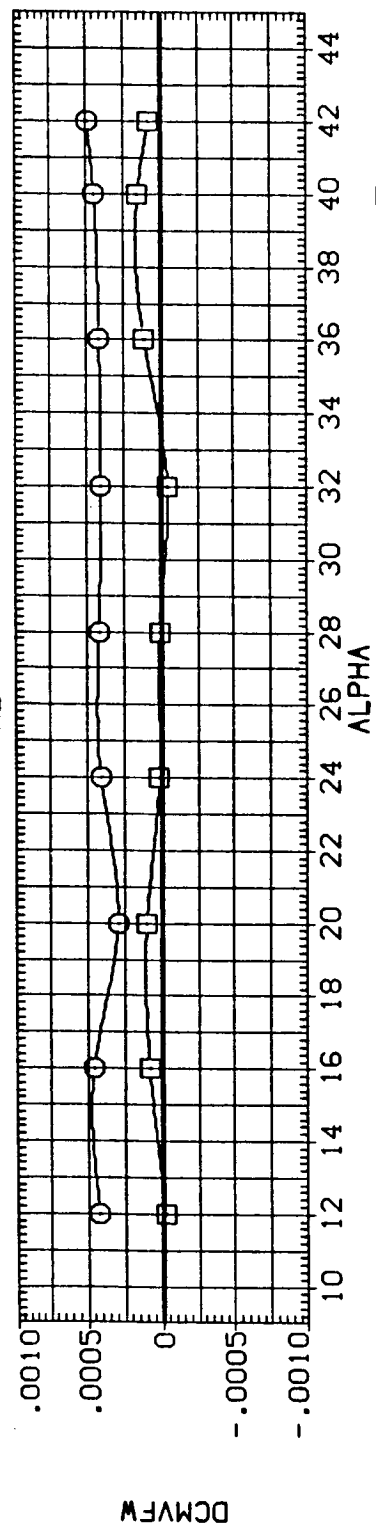
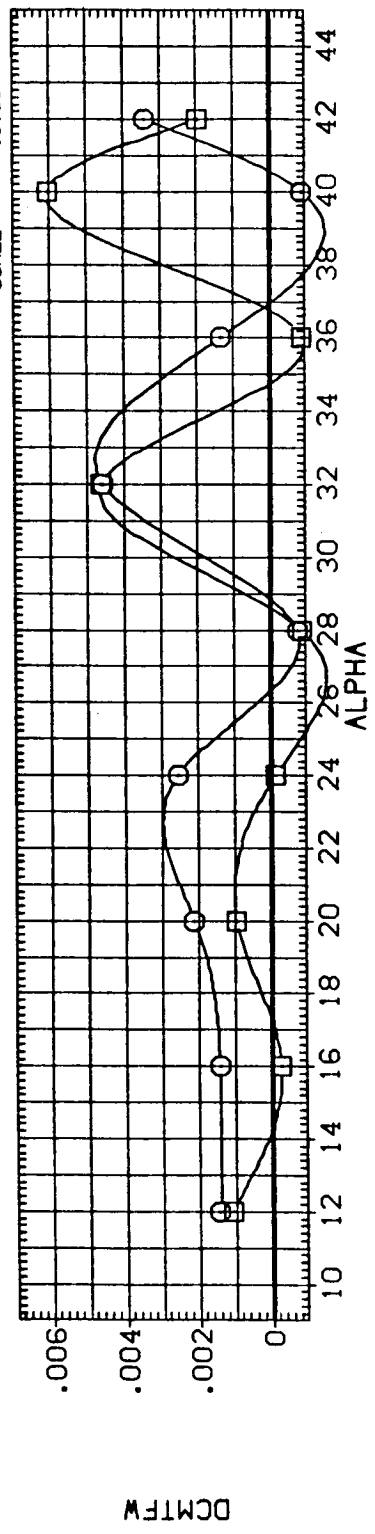


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (Z00010) (Z00018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14-N24)
 AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700

SPDRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

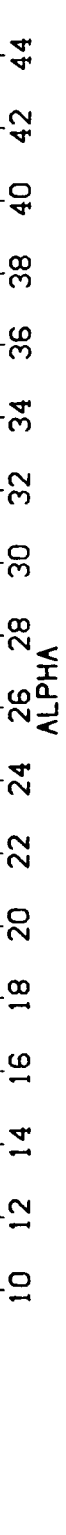
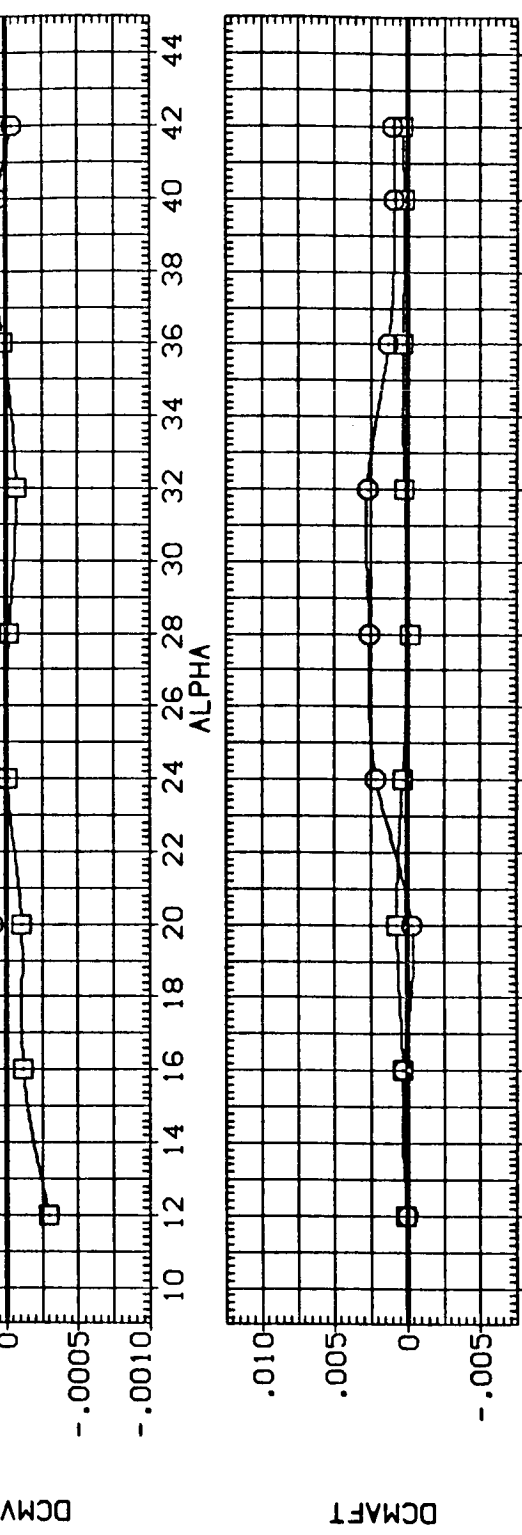
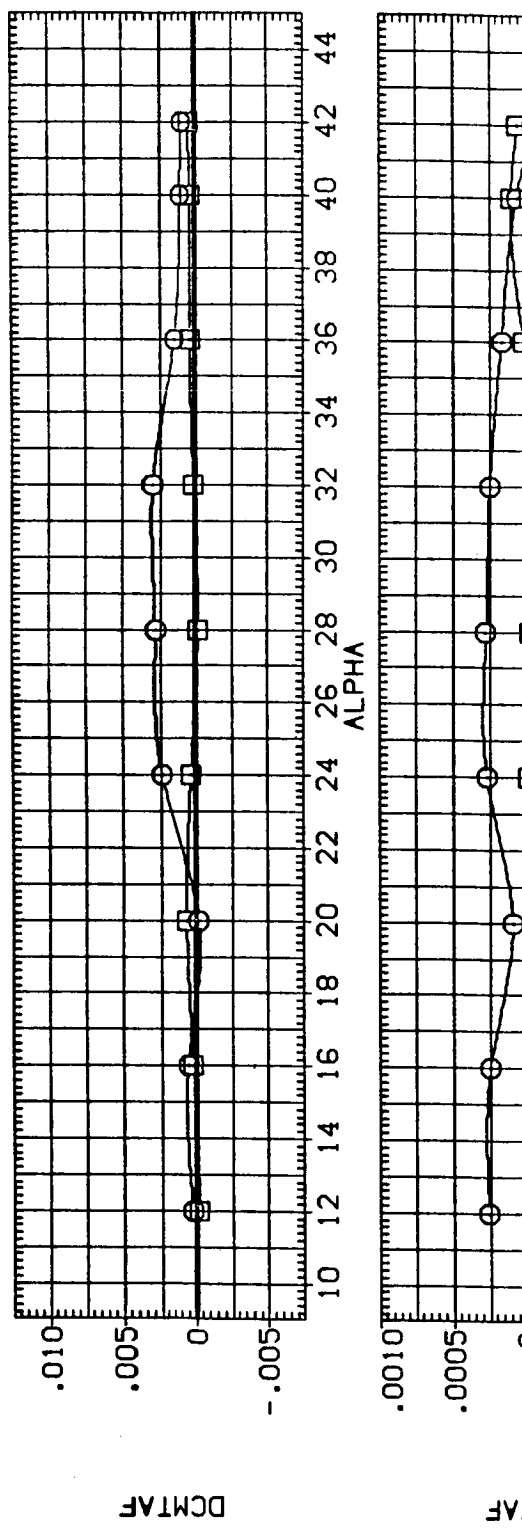




FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL (ZEG010) (ZEG018)  

CONFIGURATION DESCRIPTION
AMES 3.5-190 0A98 (011-47+M14-N24)
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA .000
.000

ELEVON -10.000
-10.000

BOFLAP -11.700
-11.700

SPDRBK 55.000
55.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150

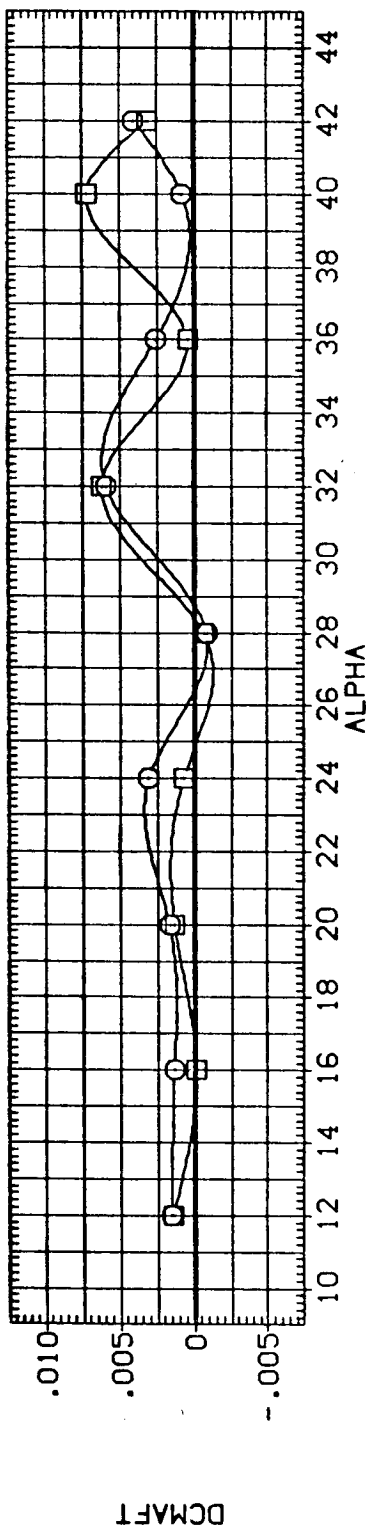
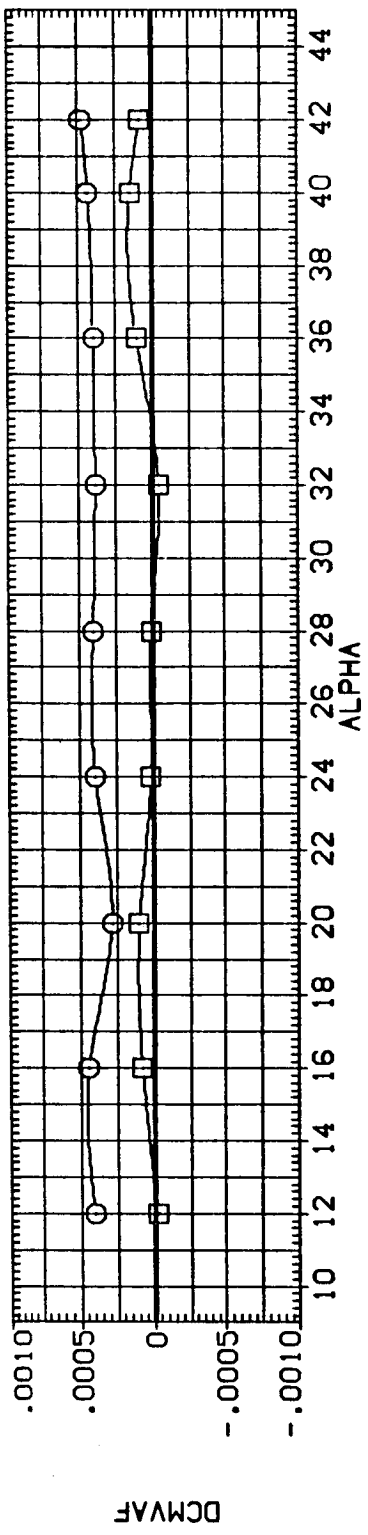
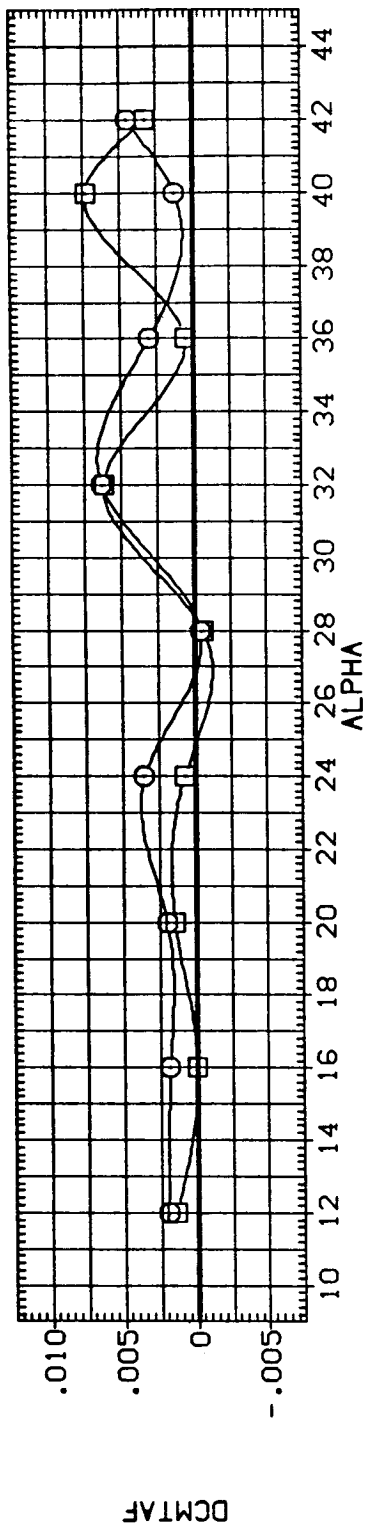


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (1E0010) (1E0018)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+M14-N24)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

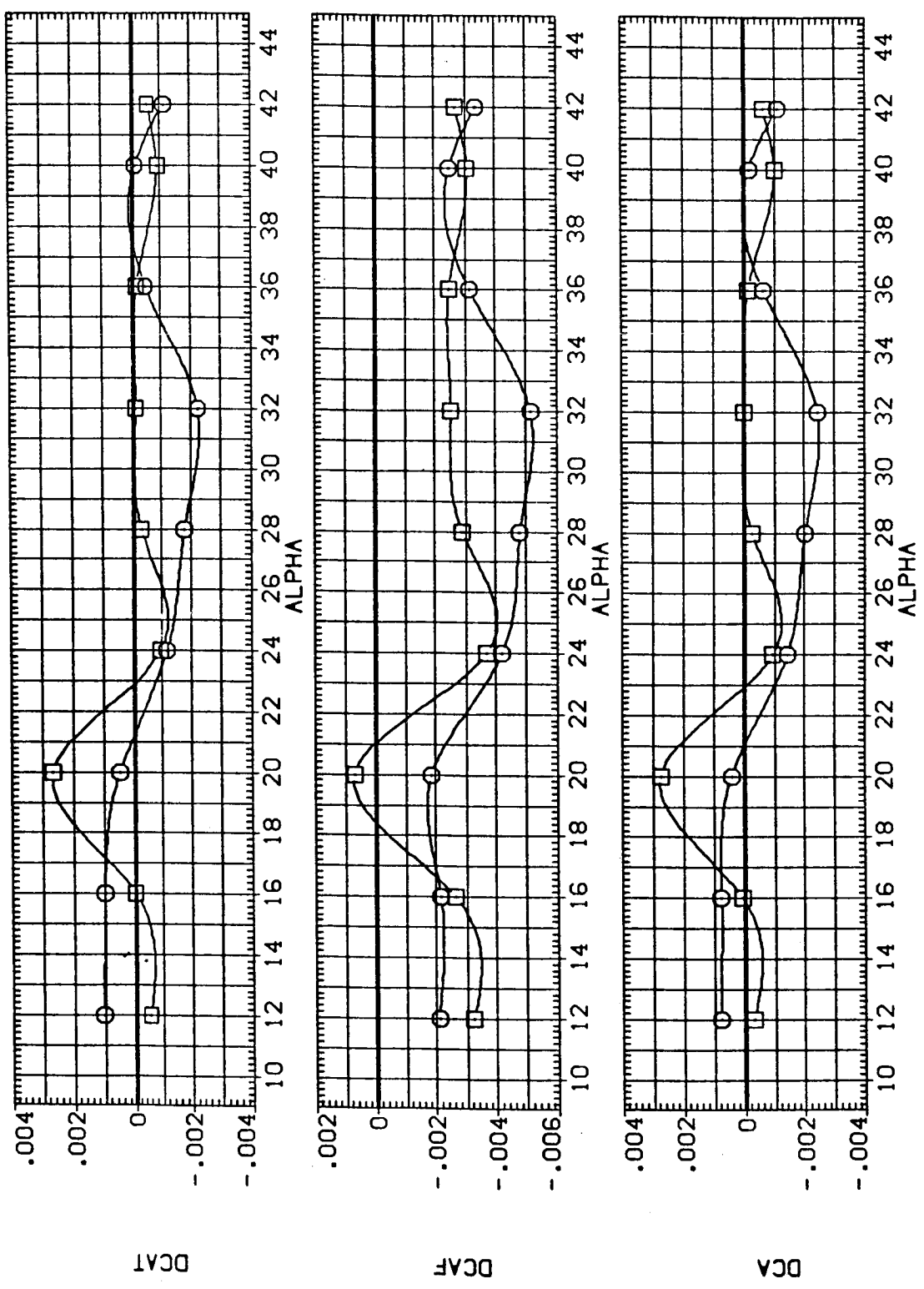


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (1E0010) (1E0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000

ELEVON
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700

SPDBRK
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

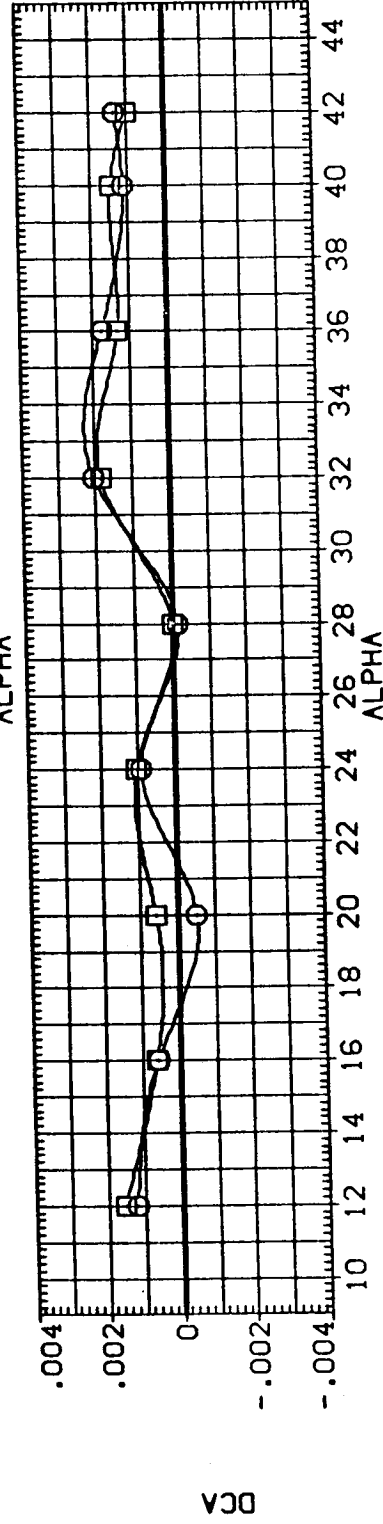
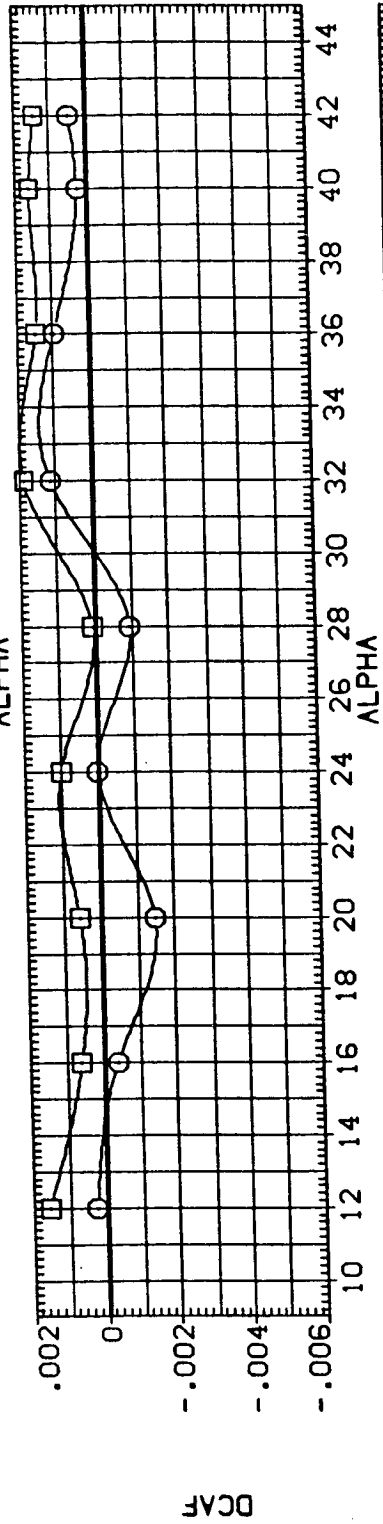
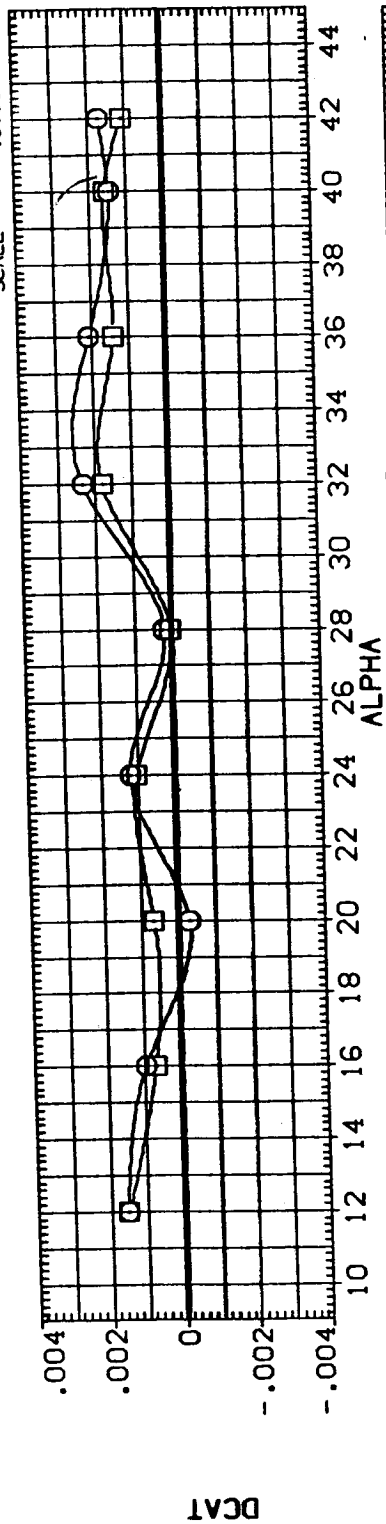


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL
 (1E0010)
 (1E0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS98 (011-M7+M14-N24)
 AMES 3.5-190 OAS98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000

ELEVON
 -10.000
 -10.000

BOFLAP
 -11.700
 -11.700

SPOBRK
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

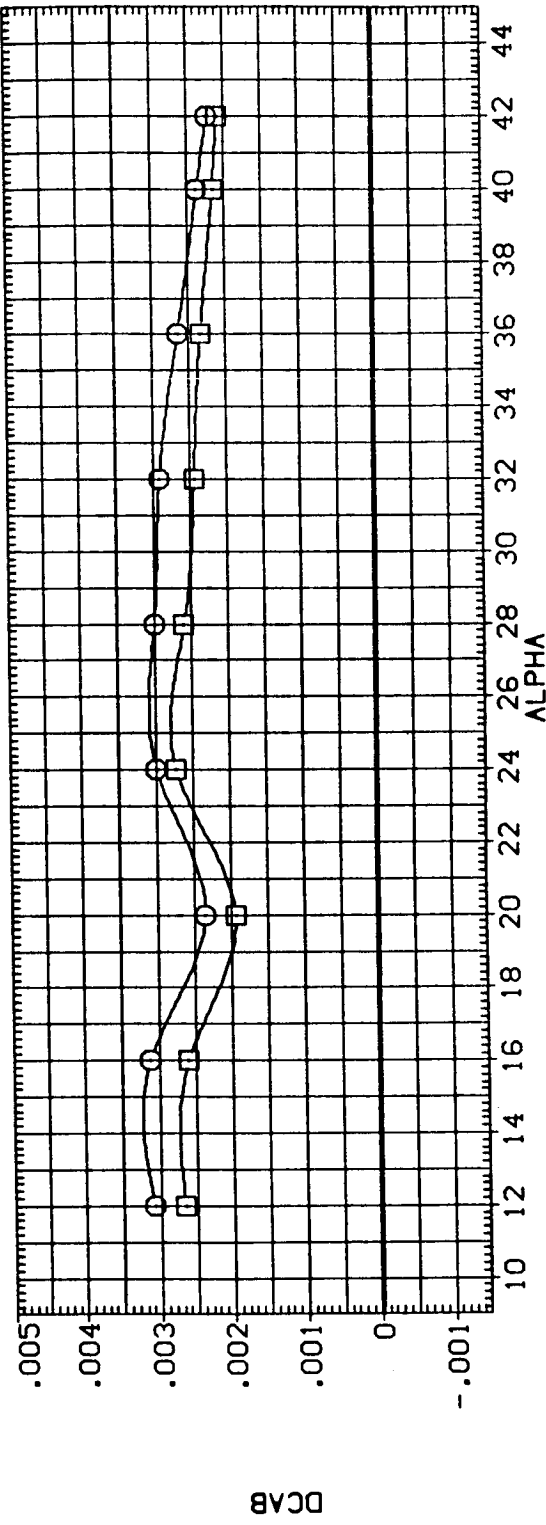
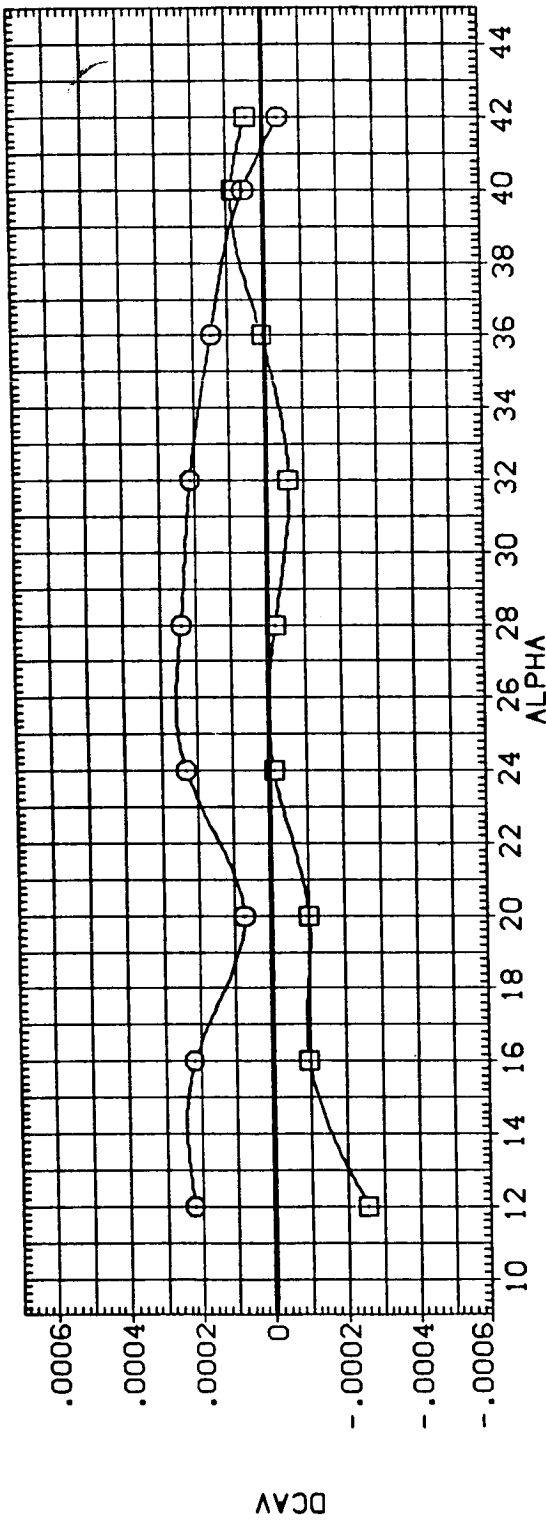


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 5.30

DATA SET SYMBOL (1E0010) (1E0018)
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON -10.000 -10.000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.YG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

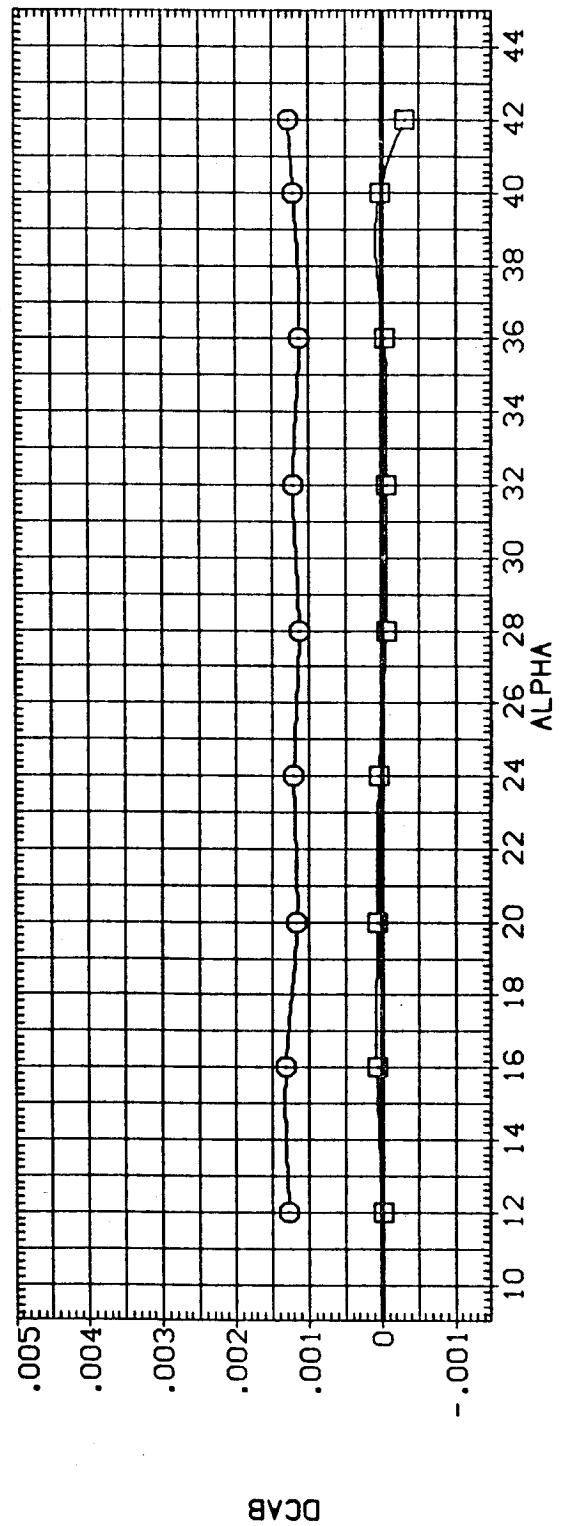
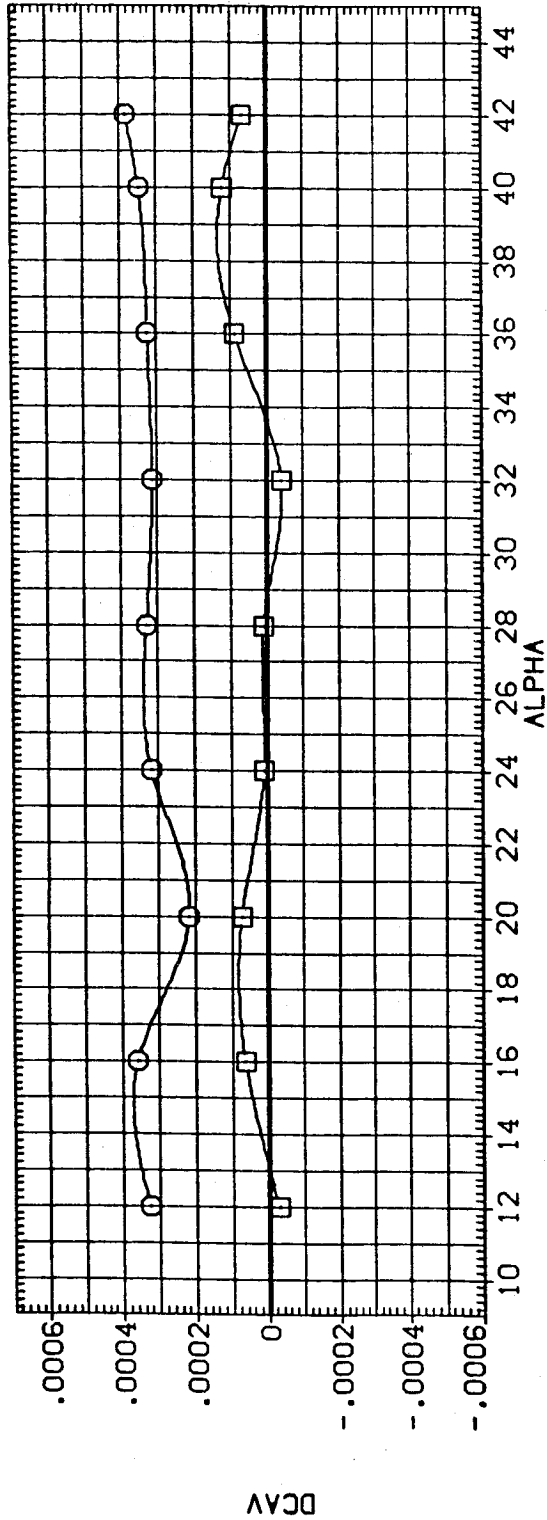


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (VEG0010) (VEG0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+M14-N24)
 AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

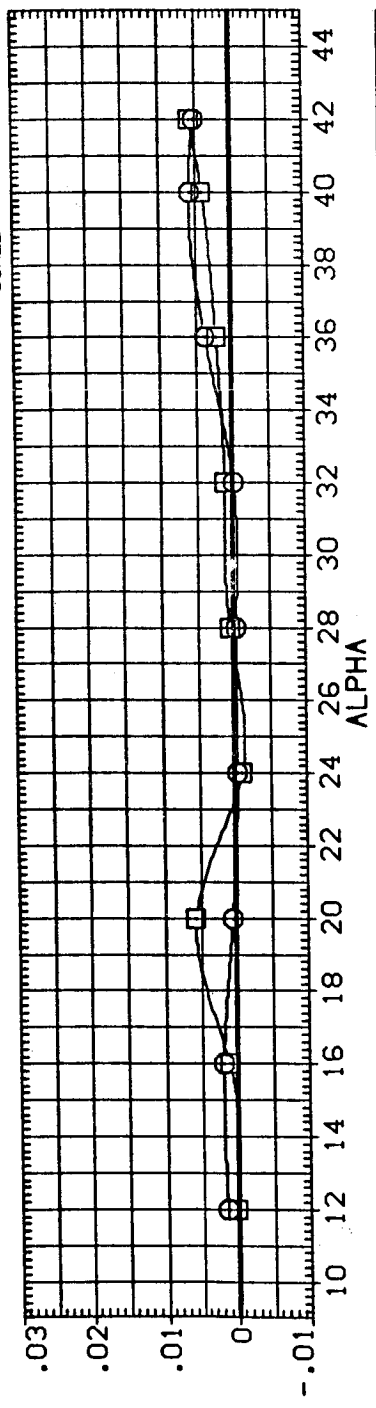
BETA .000
 .000

ELEVON -10.000
 -10.000

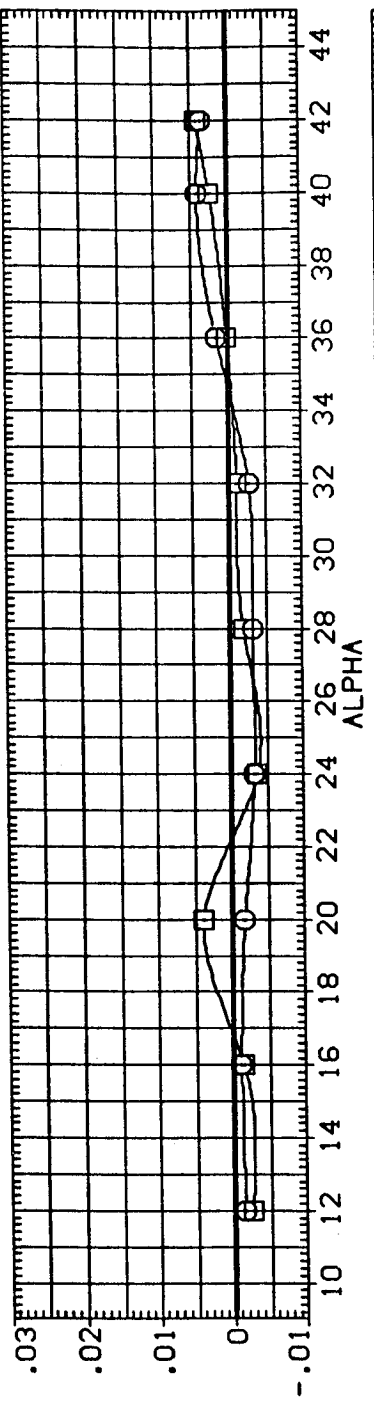
BOFLAP -11.700
 -11.700

SPDBRK 55.000
 55.000

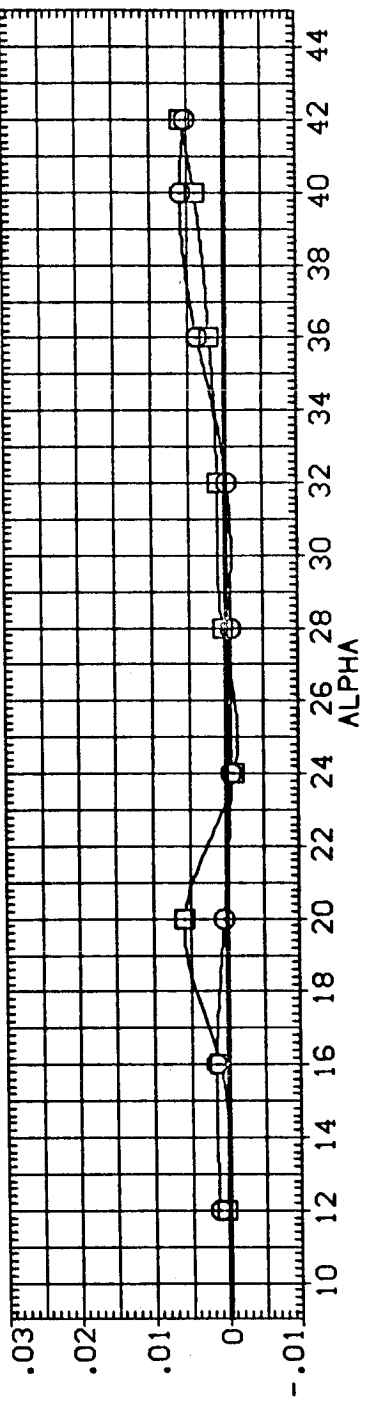
REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DCDT



DCDP



DCD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YEQ010) (YEQ018)
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON -10.000 -10.000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

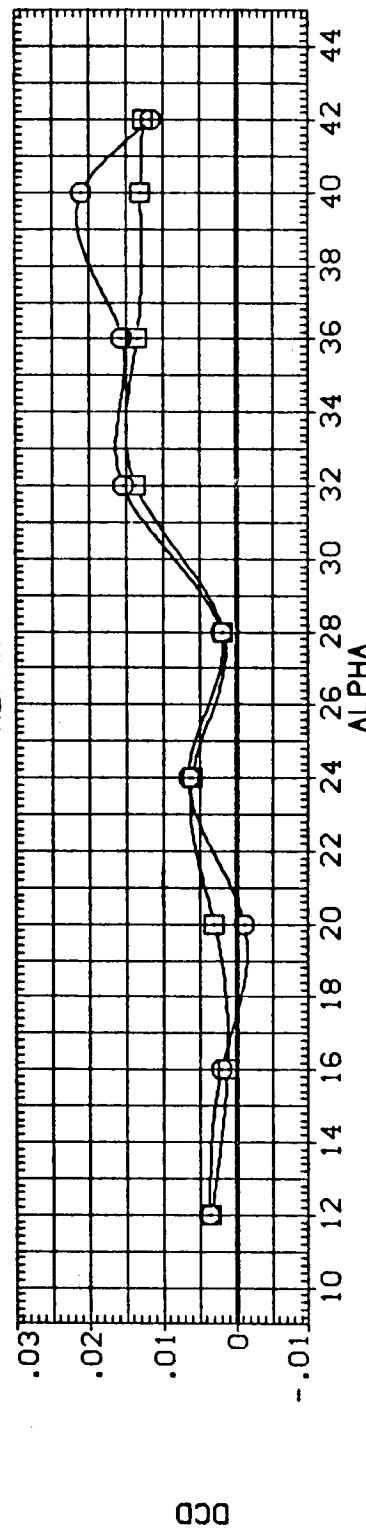
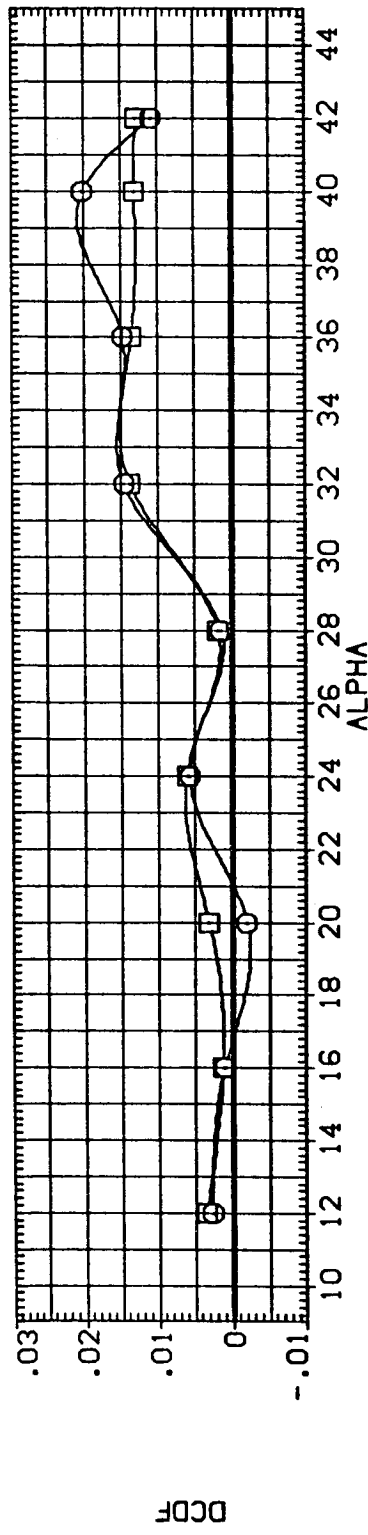
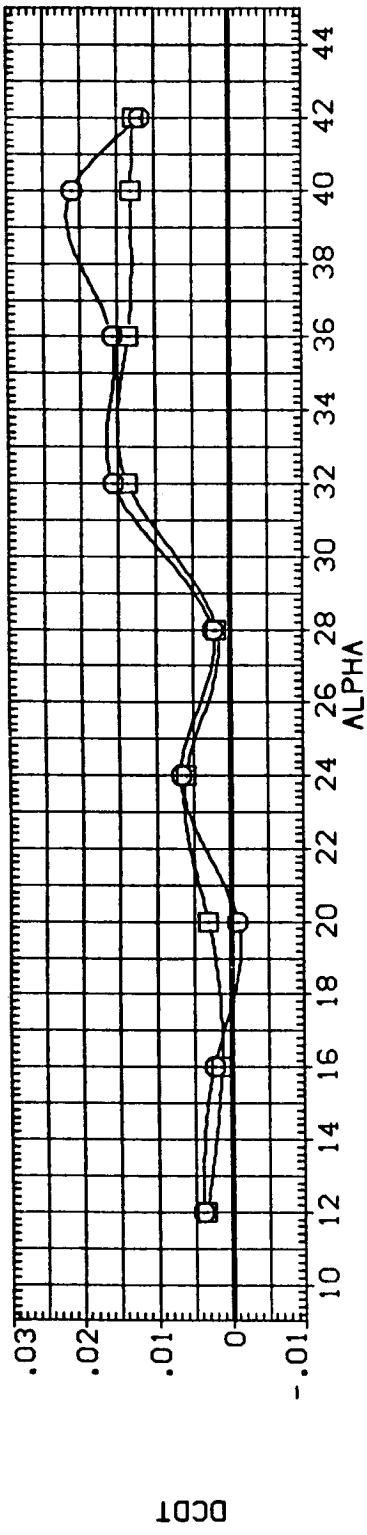


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (YEQ010) (YEQ018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -10.000
 BOFLAP -11.700
 SFDBRK 55.000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. IN. IN. X0 IN. Y0 IN. Z0

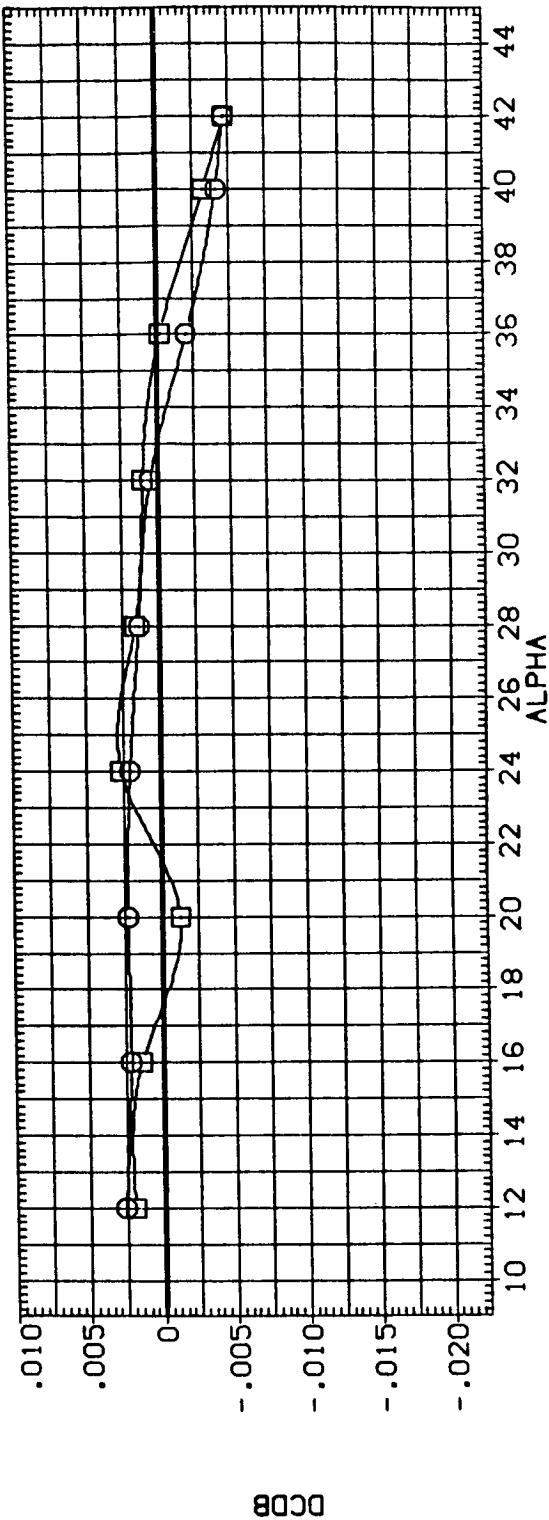
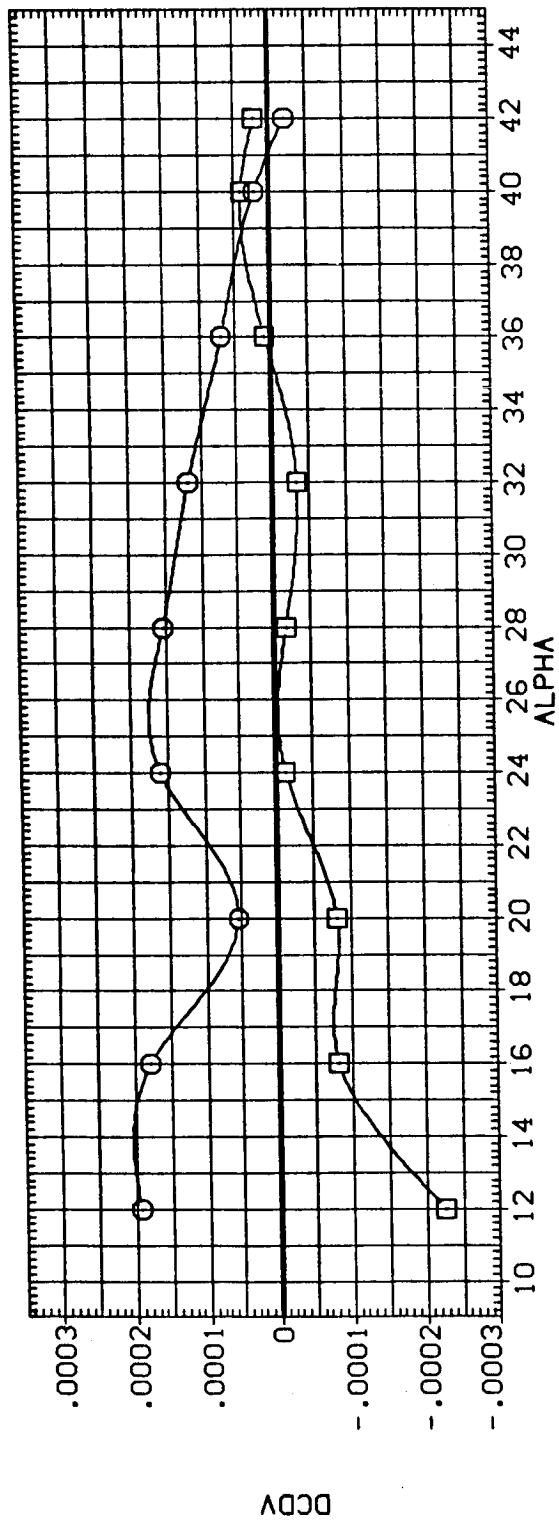



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 5.30

DATA SET SYMBOL (YED010) (YED018)  CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
				BREF 936.6800 IN.
				XMRP 1076.7000 IN. X0
				YMRP .0000 IN. Y0
				ZMRP .0000 IN. Z0
				SCALE .0150

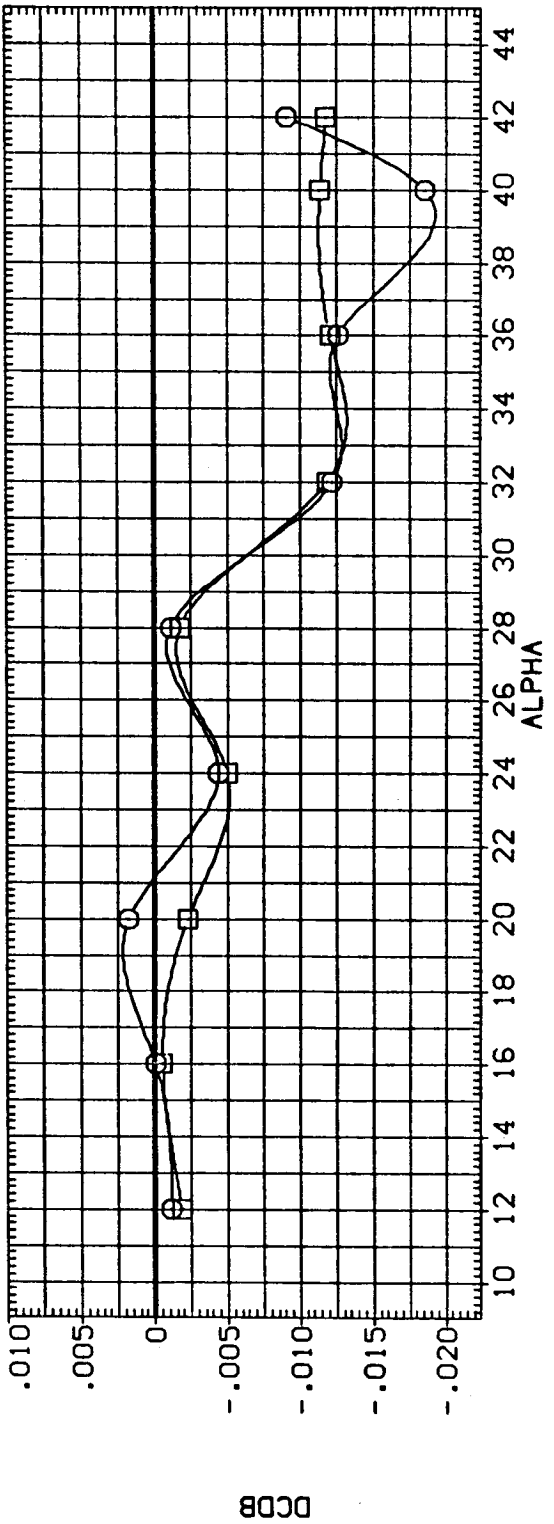
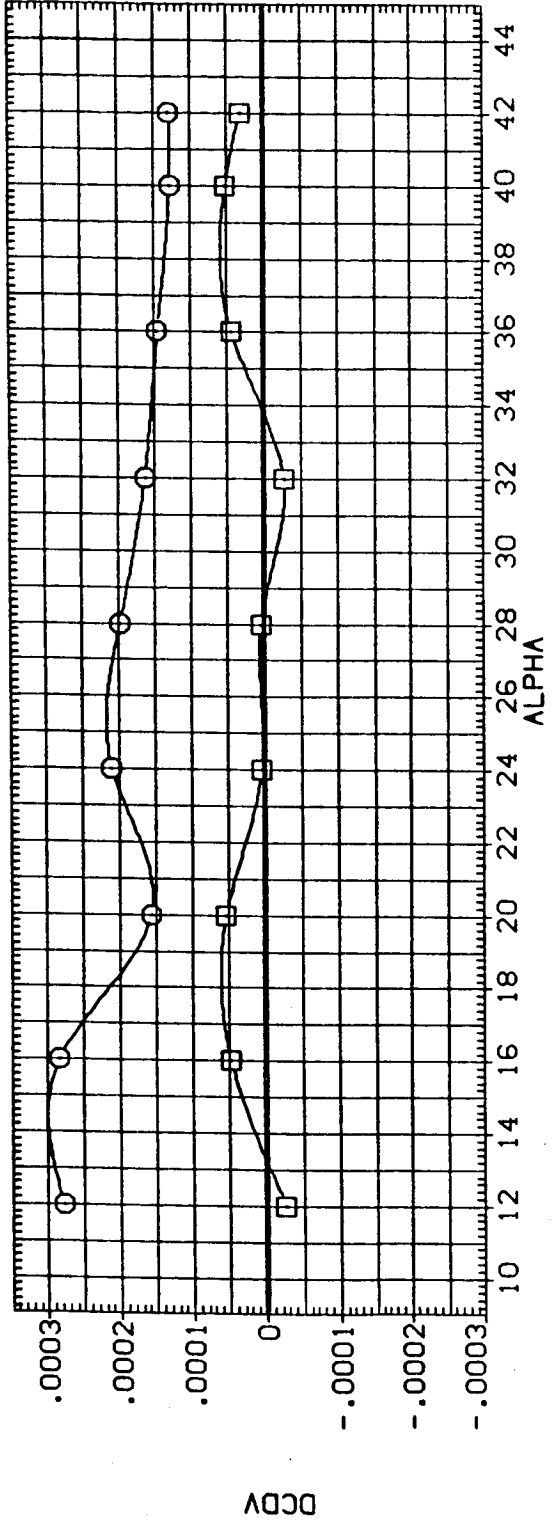


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (AE0002)
 (AE0010)
 (AE0018)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -10.000
 -10.000
 -10.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.X0
 YMRP 1076.7000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150

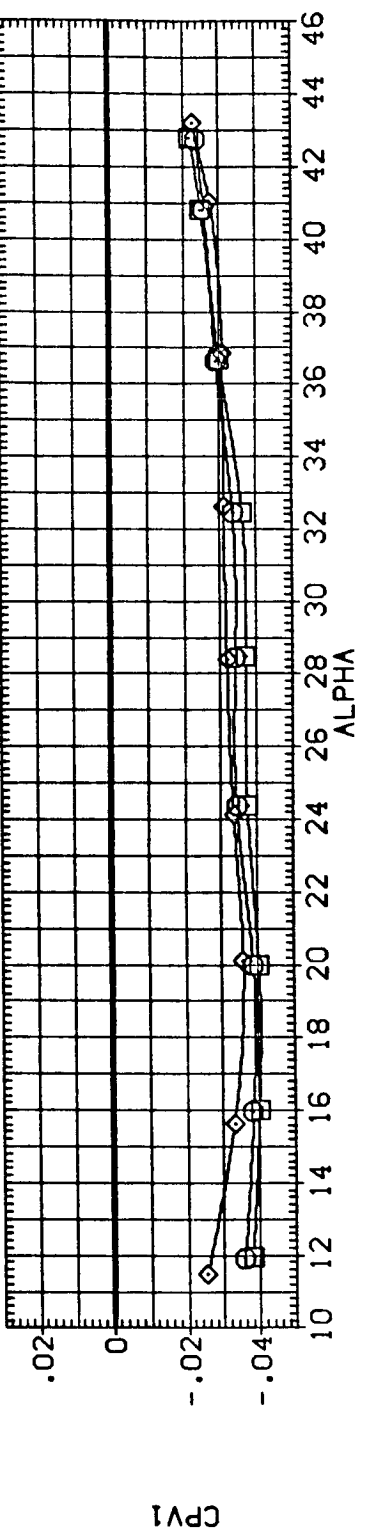
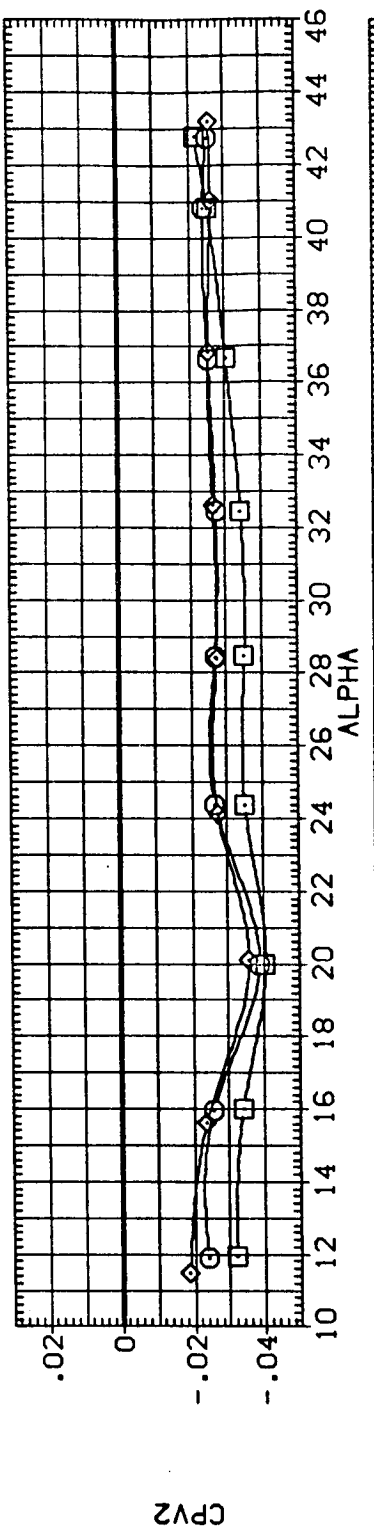
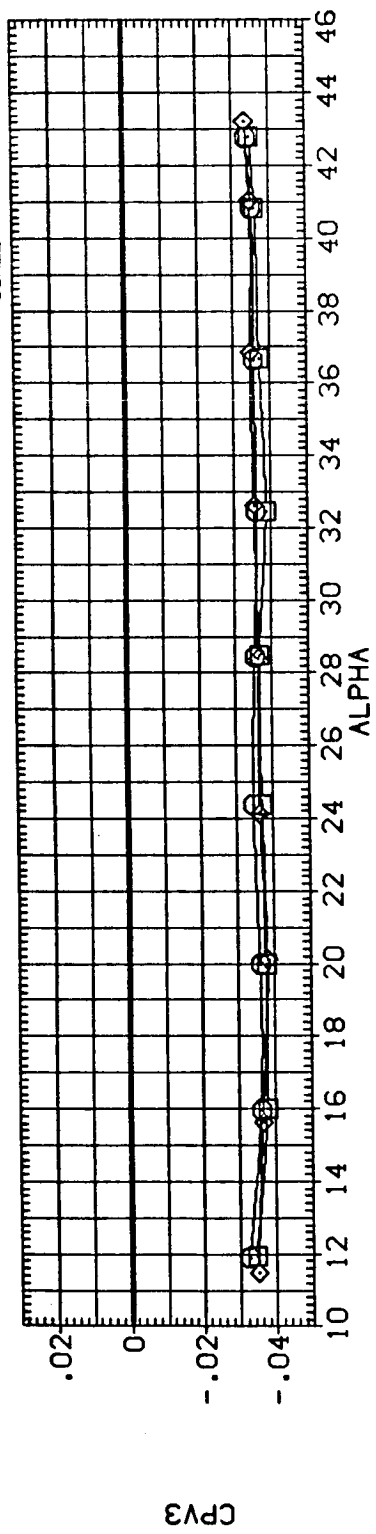


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPODBRK	REFERENCE INFORMATION
(AEG0002)	AMES 3.5-190 OA98 (011-N7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG0010)	AMES 3.5-190 OA98 (011-N7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(AEG0018)	AMES 3.5-190 OA98 (011-N7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

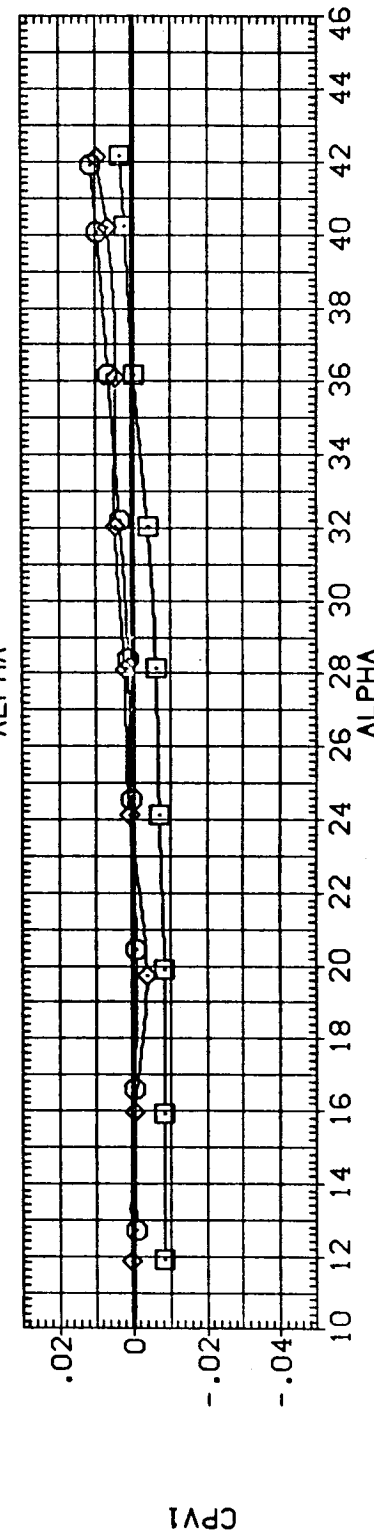
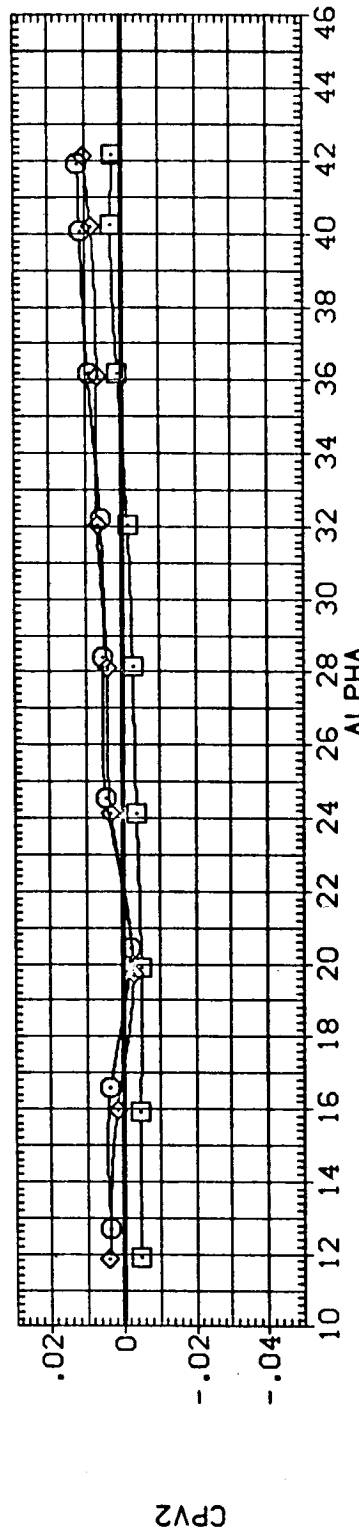
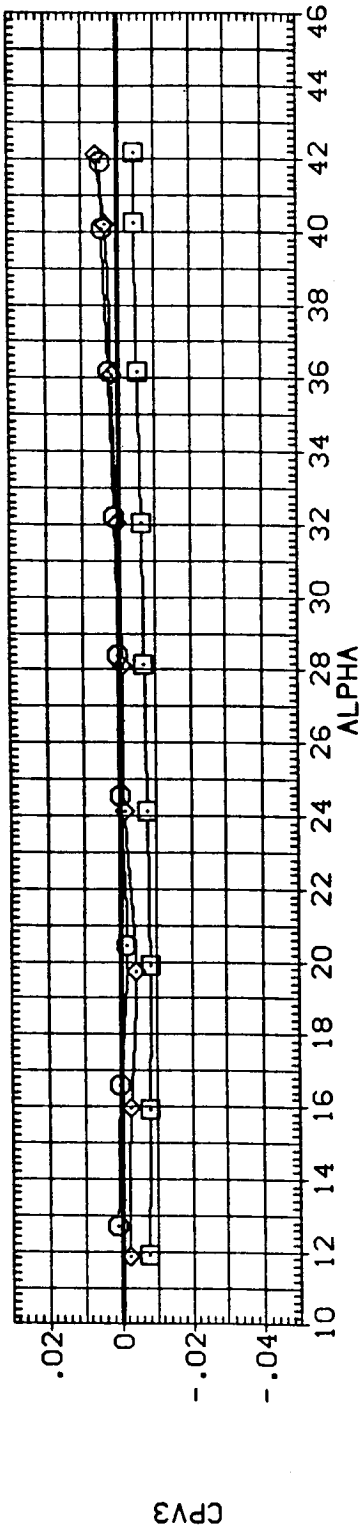


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(AEG002) APES 3.5-190 GA98 (011-M7+M14) SREF 2690.0000 SQ.FT.

(AEG010) APES 3.5-190 GA98 (011-M7+M14-N24) LREF 474.8000 IN.

(AEG018) APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING) BREF 936.6800 IN.

BETA ELEVON BOFLAP SPOBRK XMRP YMRP ZMRP SCALE

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

375.0000 IN.ZD

.0150

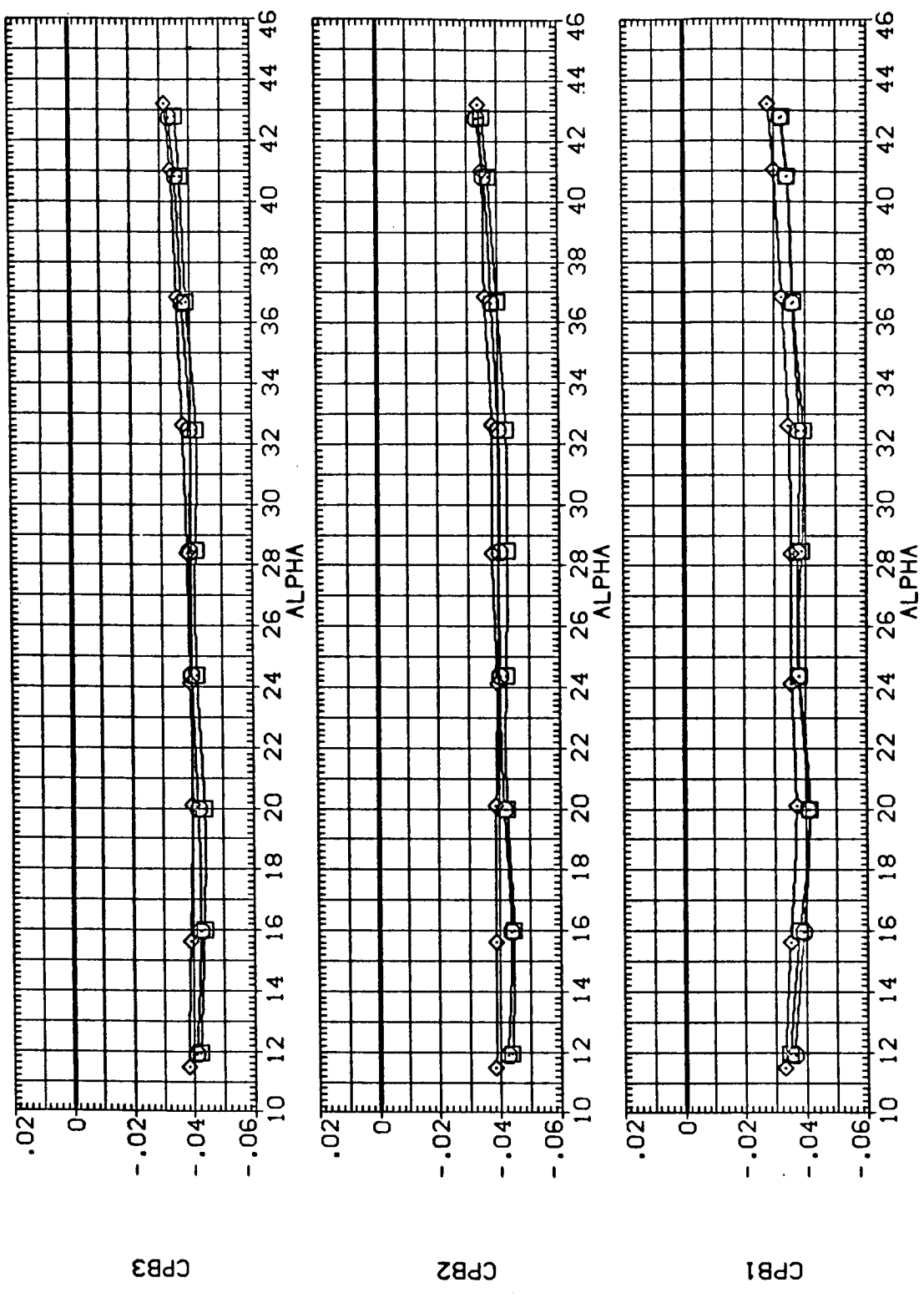


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

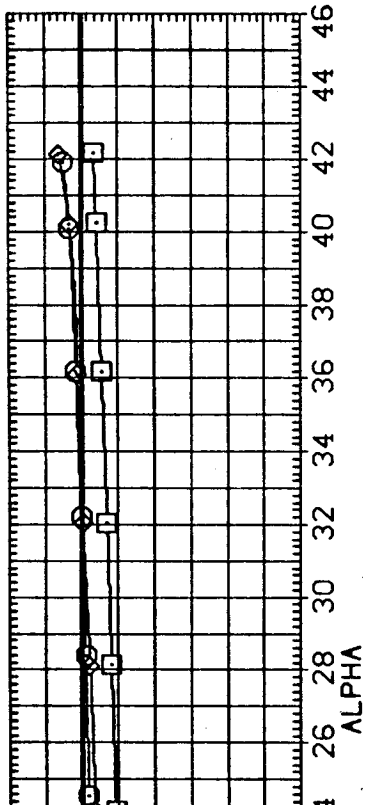
DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION SQ.FT.

(AEO002) AVES 3.5-190 DA98 (011-M7+M14) .000 -10.000 -11.700 55.000 2690.0000

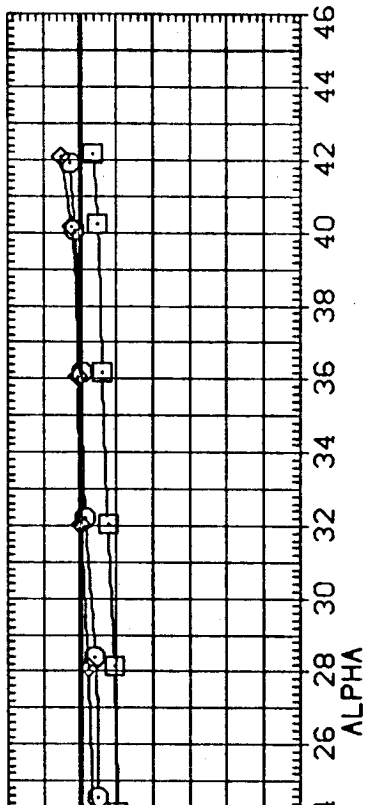
(AEO010) AVES 3.5-190 DA98 (011-M7+M14-N24) .000 -10.000 -11.700 55.000 474.8000

(AEO018) AVES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING) .000 -10.000 -11.700 55.000 936.6800

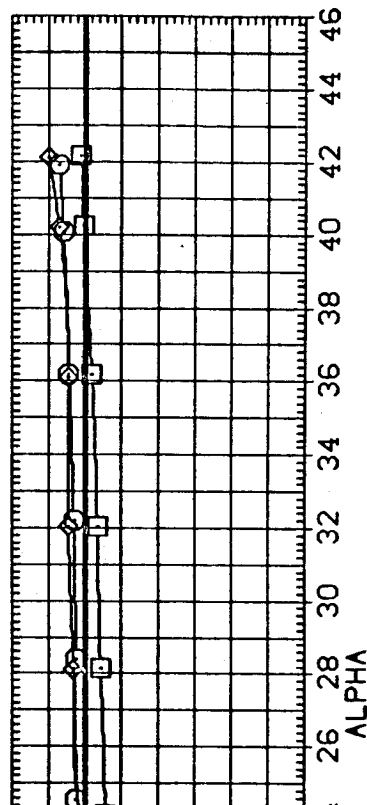
YMRP .0000 IN.X0
ZMRP .0000 IN.Y0
SCALE .0150 IN.Z0



CPB3



CPB2



CPB1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (CE0003)
 (CE0011)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-M14)
 AMES 3.5-190 0A98 (011-M7-M14-N24)
 AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

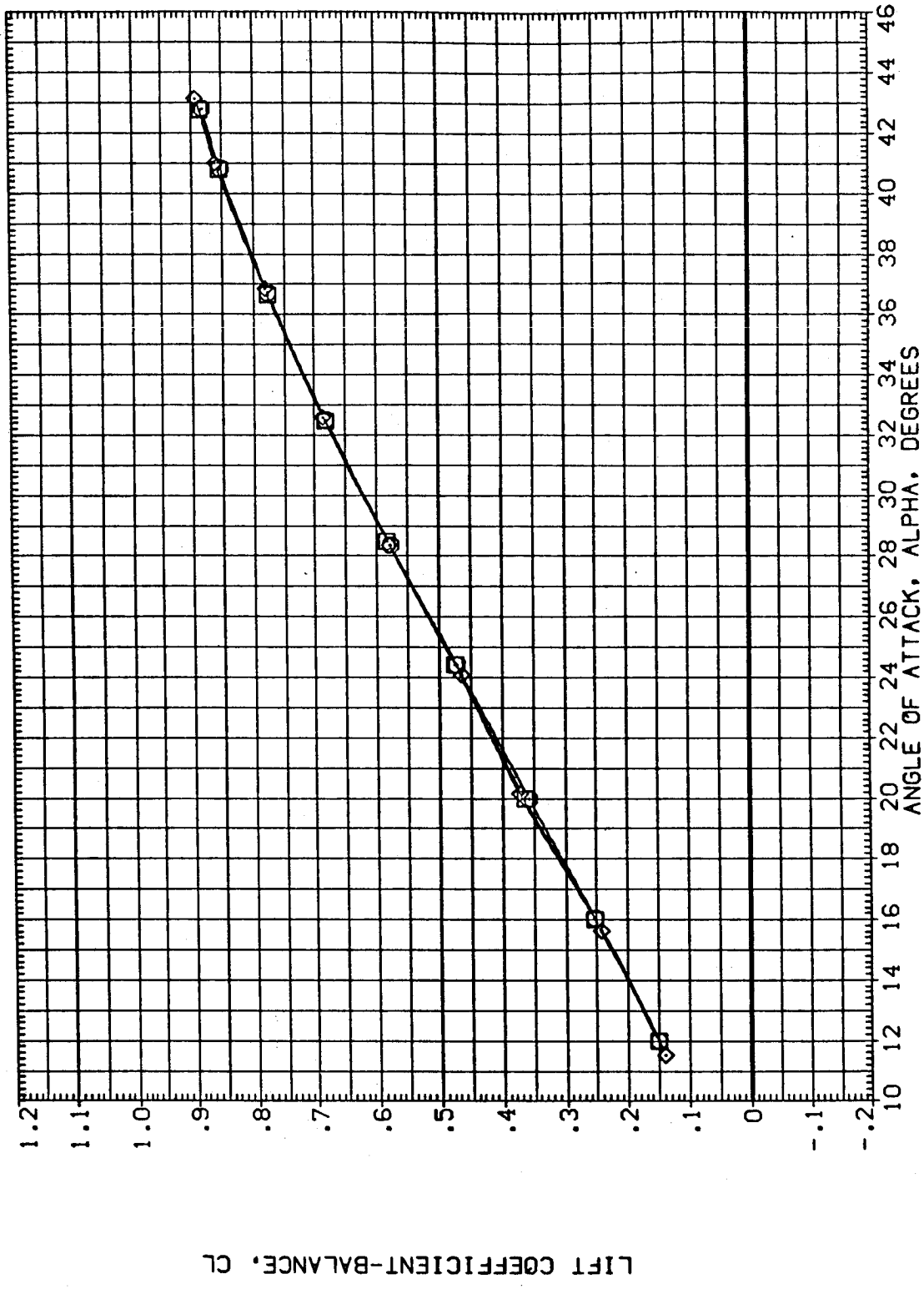


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(CE0003) AMES 3.5-190 0A98 (011-M7+M14) .000 -40.000 -11.700 55.000 2690.0000 SO.FT.

(CE0011) AMES 3.5-190 0A98 (011-M7+M14-N24) .000 -40.000 -11.700 55.000 474.8000 IN.

(CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 936.6800 IN.

1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0

SCALE 375.0150

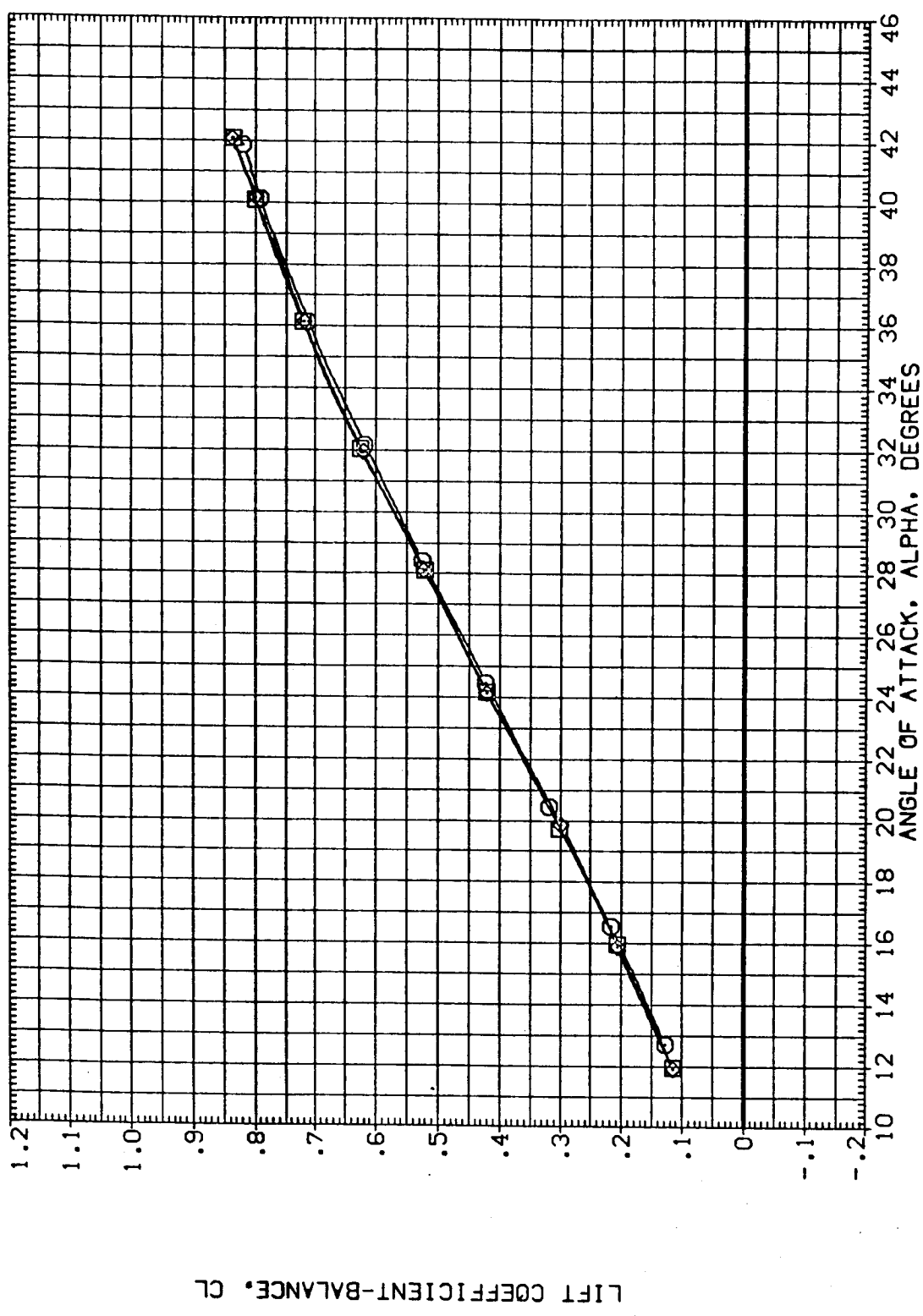


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0003) AMES 3.5-190 0A98 (011-47+M14)

(CE0011) AMES 3.5-190 0A98 (011-47+M14-N24)

(CE0019) AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPDBRK

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

YMRP ZMRP SCALE

.000 .000 .0150

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

YMRP 1076.7000 IN. X0

ZMRP .0000 IN. Y0

SCALE 375.0000 IN. Z0

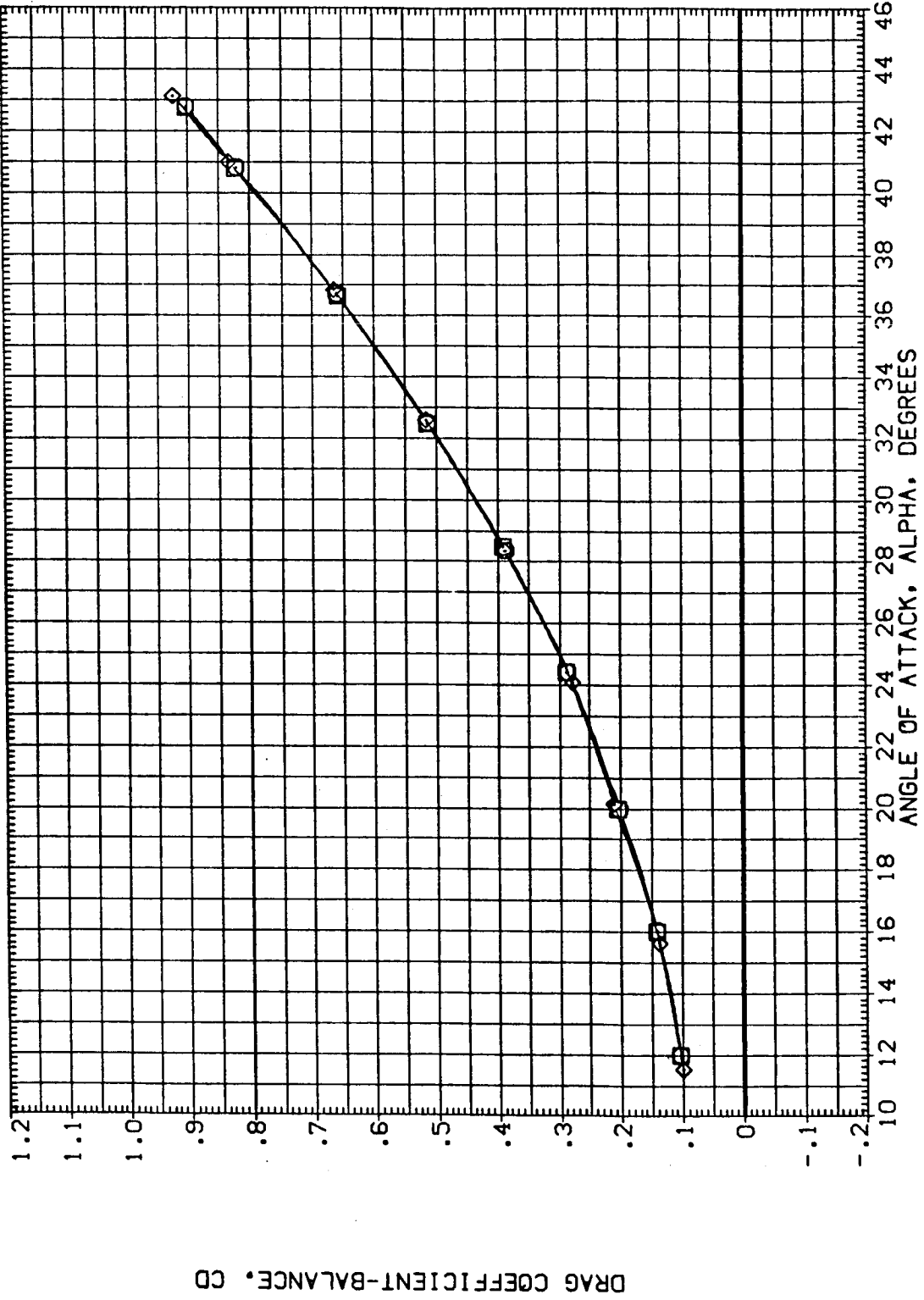


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 OAS8 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

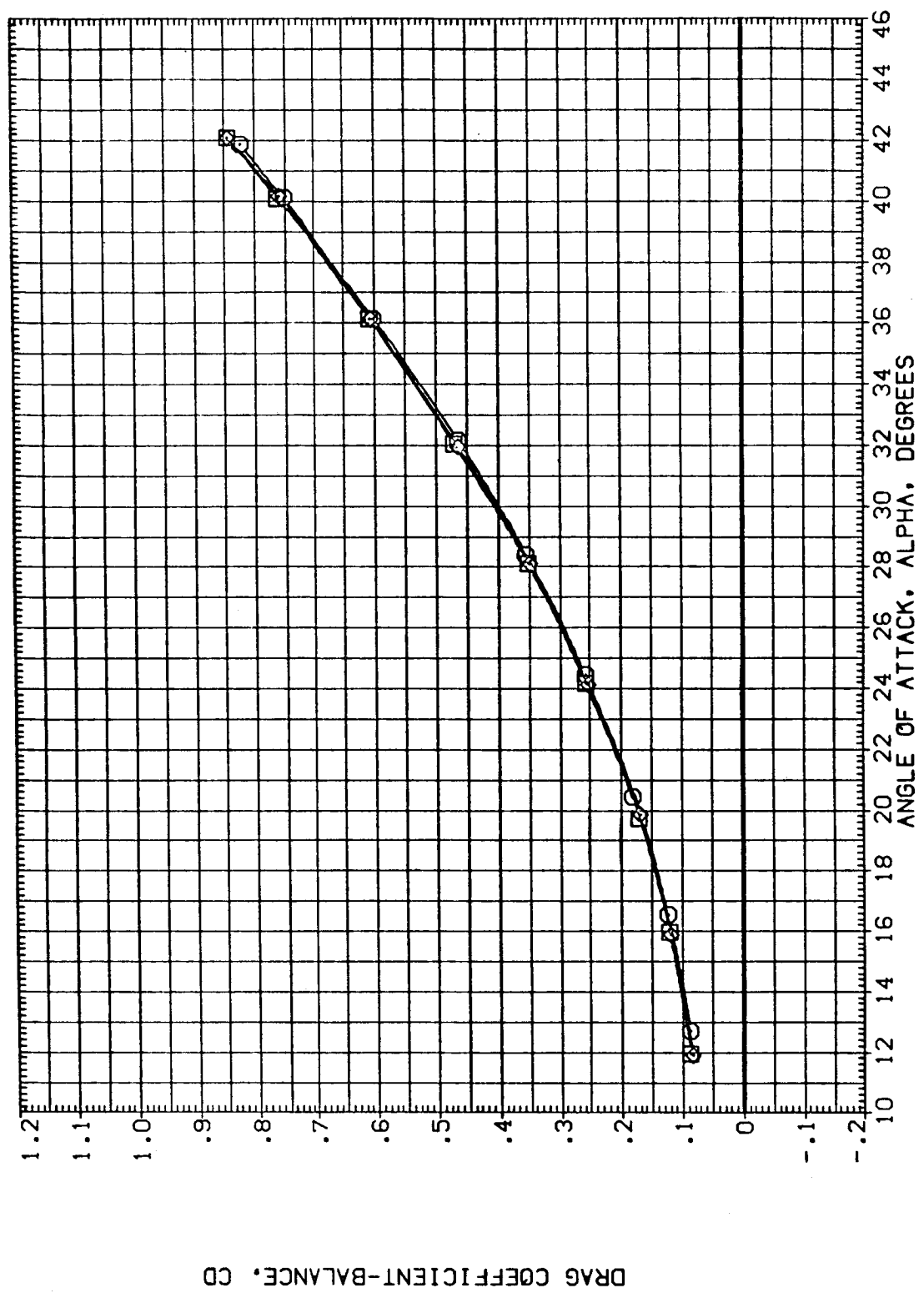


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
(B)MACH = 10.27

DATA SET SYMBOL (CE0003)
 (CE0011)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14-N24)
 AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 .000
 .000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

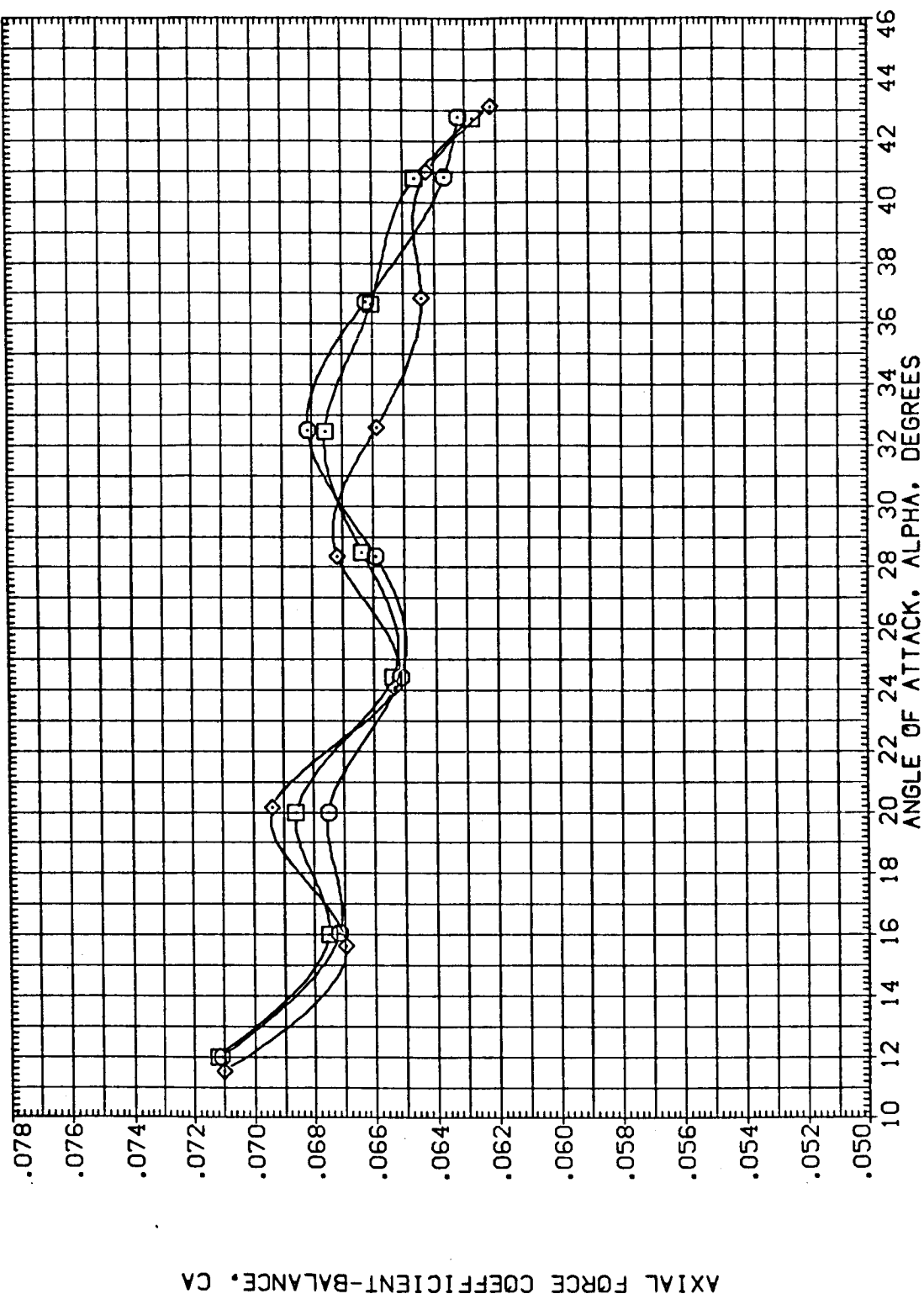


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0003) AMES 3.5-190 0A98 (011-M7+M14)

(CE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

(CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

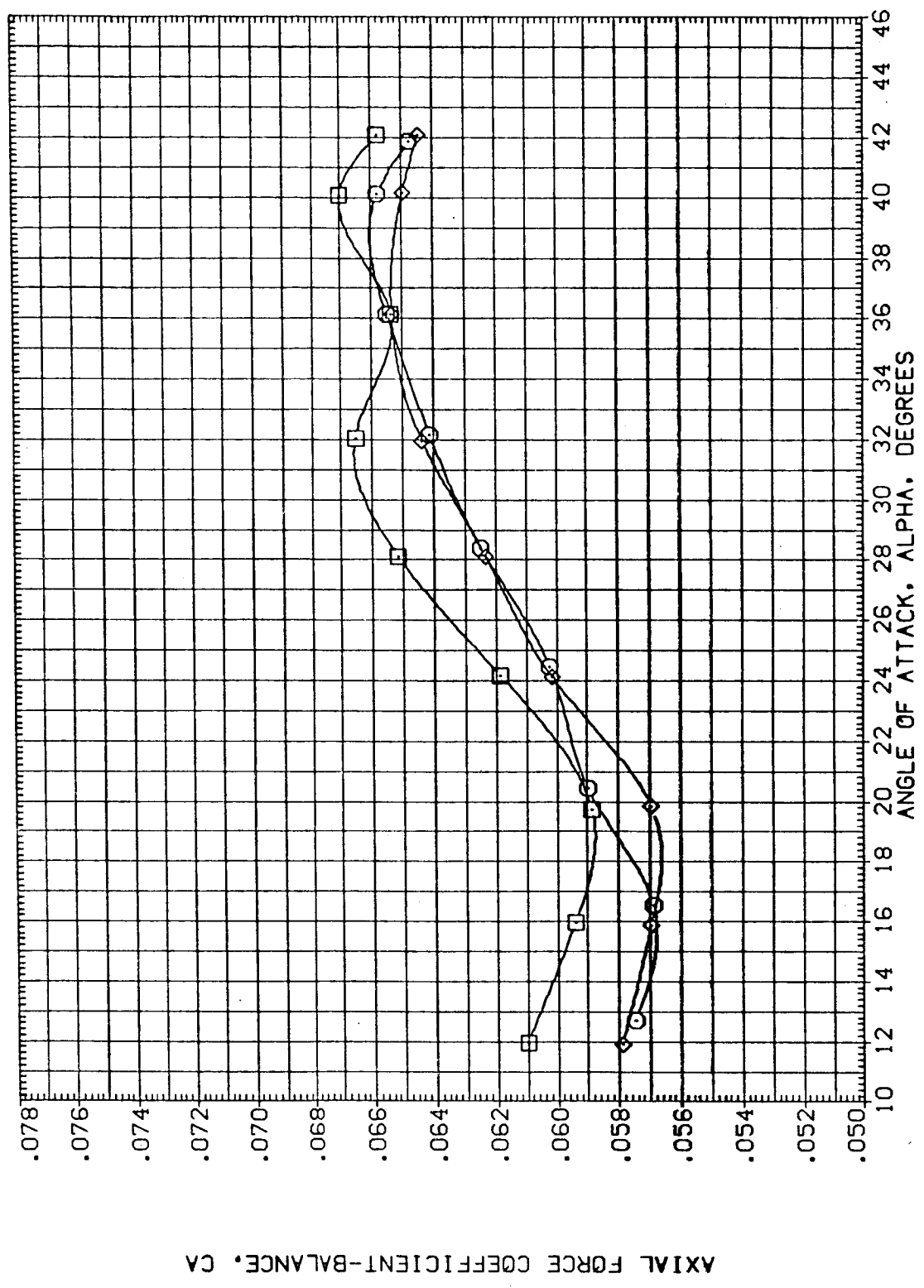


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

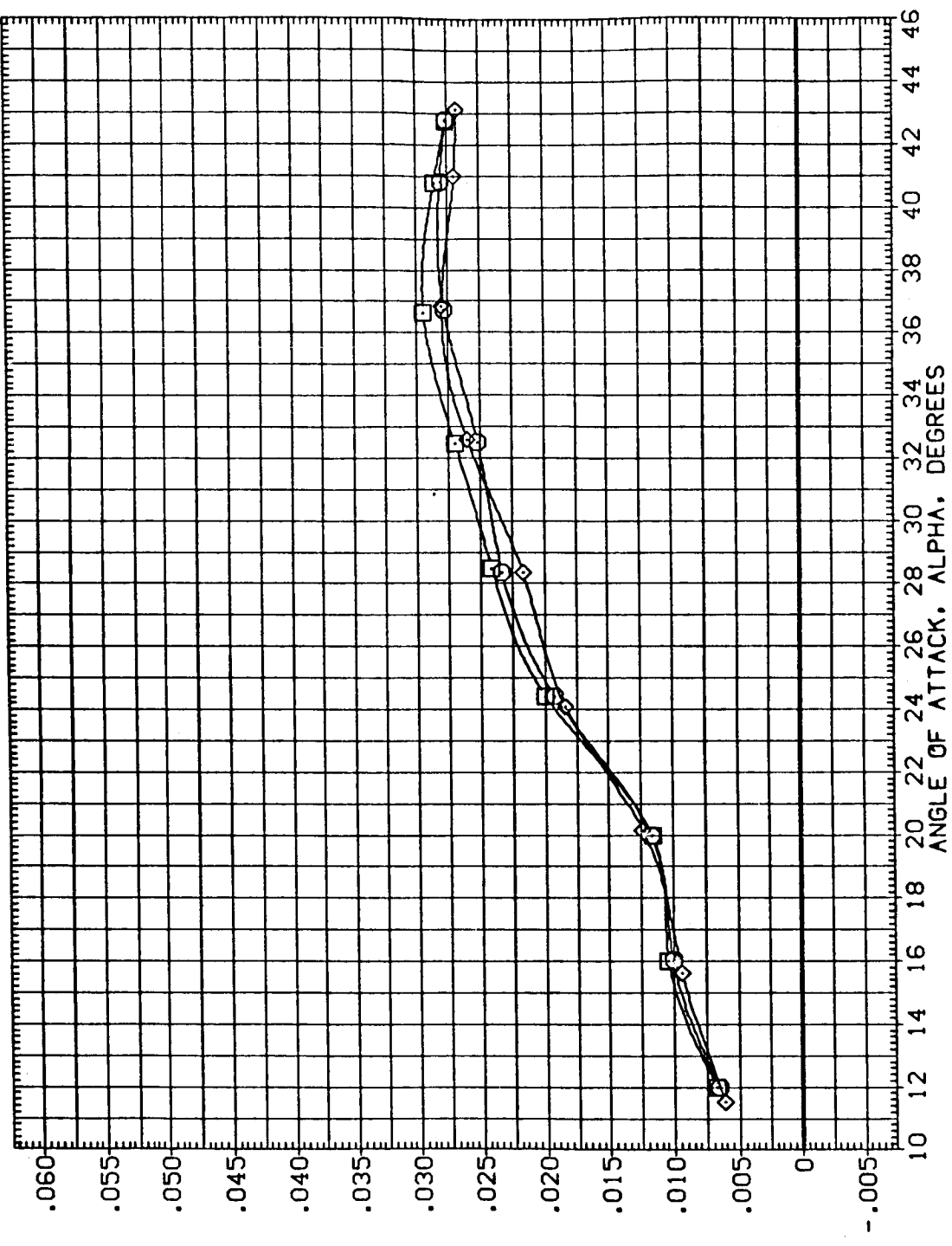
(B)MACH = 10.27

DATA SET SYMBOL (CE0003) (CE0011) (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+H14)
 AMES 3.5-190 GA98 (011-M7+H14-N24)
 AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPDBRK 55.000
 SREF 2690.0000
 LREF 474.8000
 BRFP 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. IN. IN. IN. X0 IN. Y0 IN. Z0



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0003) AMES 3.5-190 GAS8 (011-M7-M14)
 (CE0011) AMES 3.5-190 GAS8 (011-M7-M14-N24)
 (CE0019) AMES 3.5-190 GAS8 (011-M7-M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

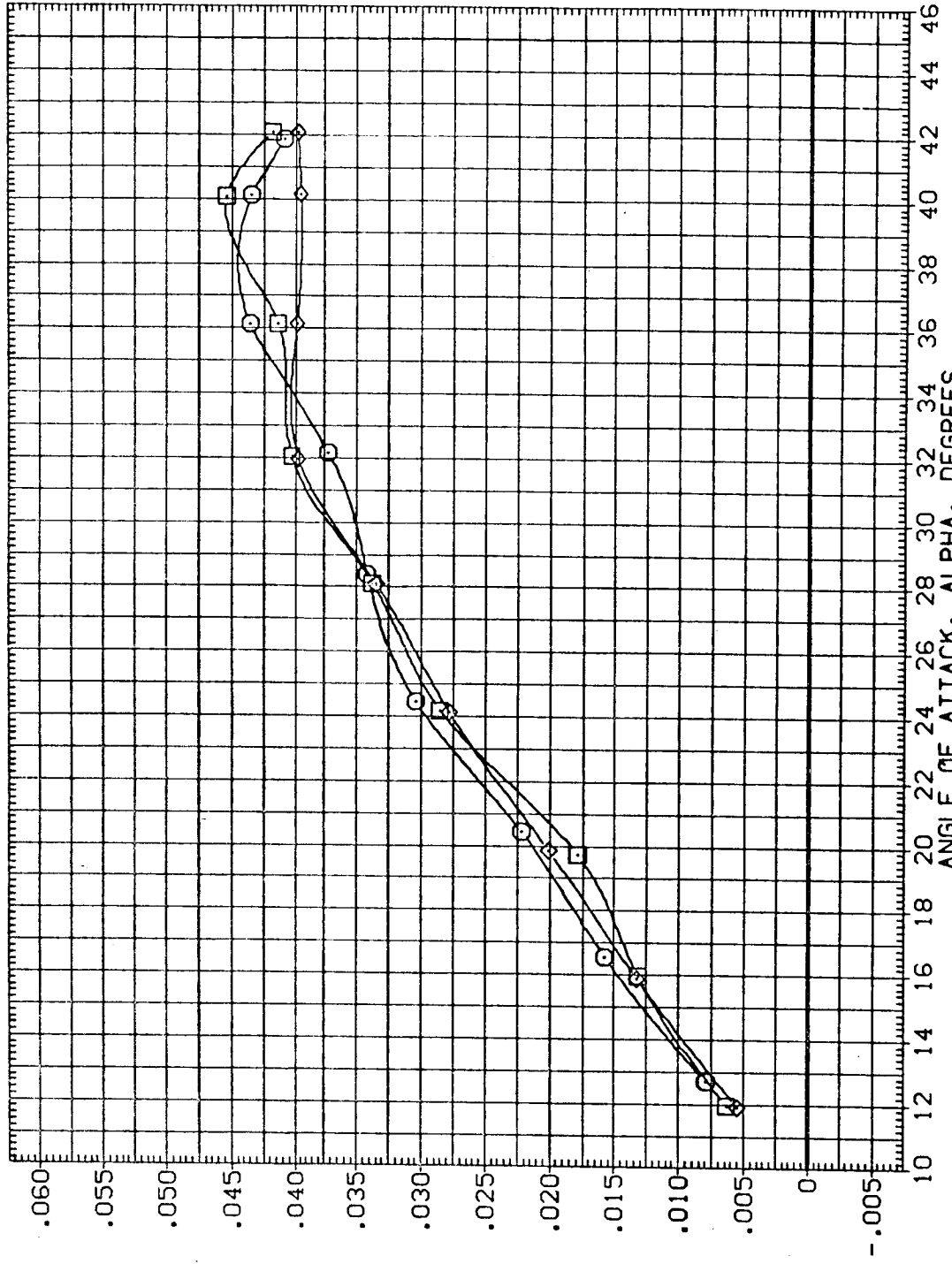


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0003) AMES 3.5-190 CA98 (011-M7+M14)
 (CE0011) AMES 3.5-190 CA98 (011-M7+M14-N24)
 (CE0019) AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

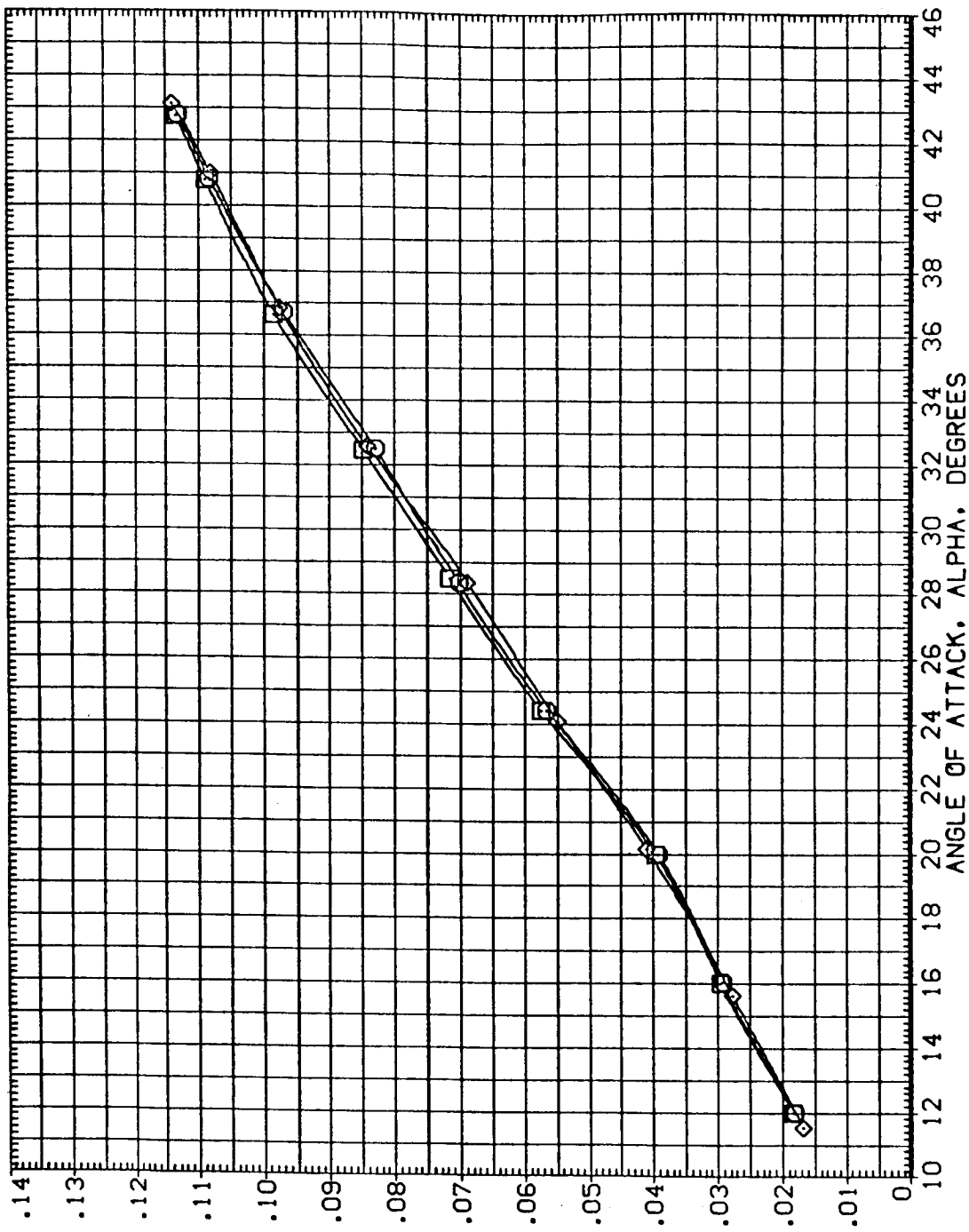


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEG003)	AMES 3.5-190 CA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG011)	AMES 3.5-190 CA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CEG019)	AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

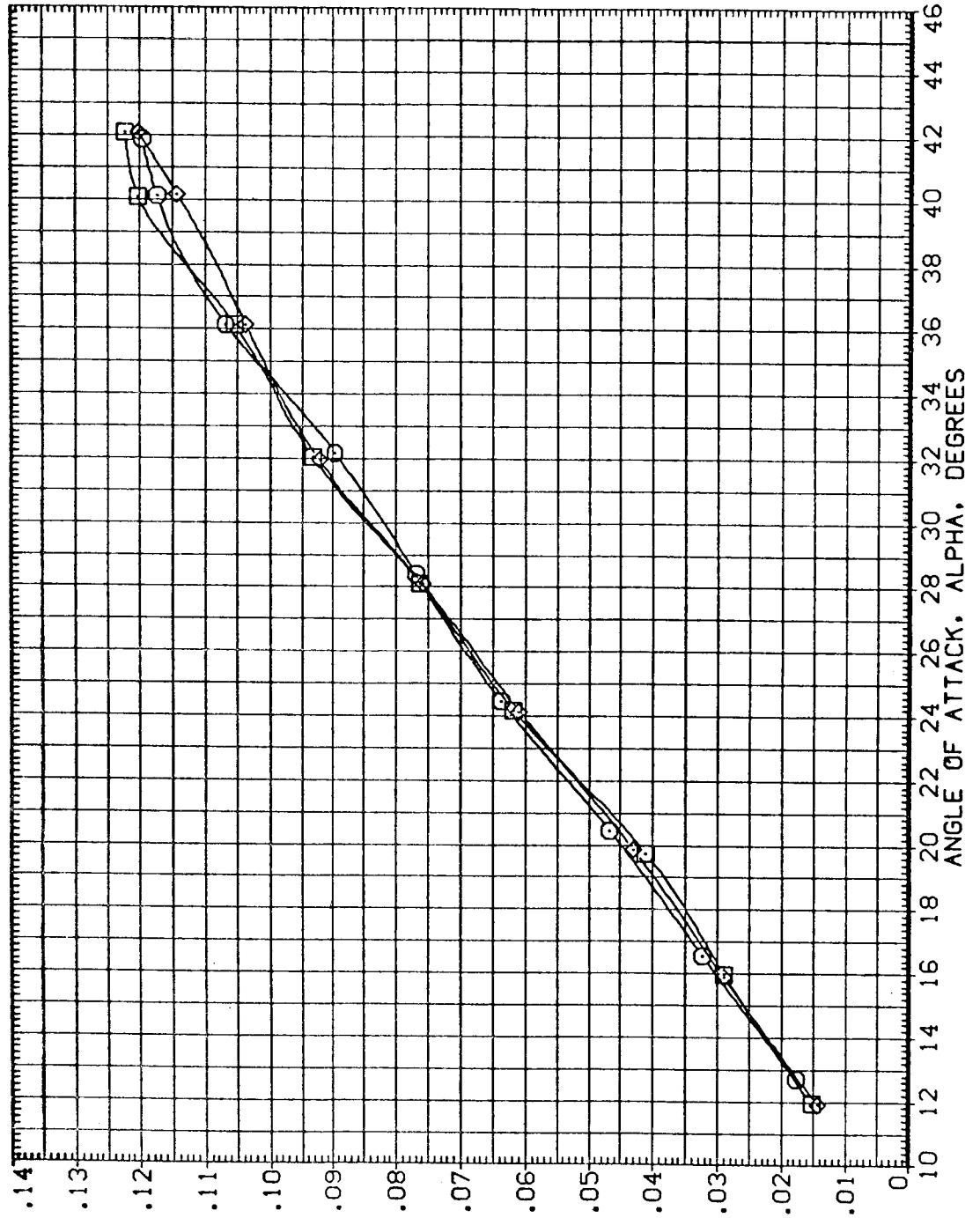


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0003) AMES 3.5-190 GA98 (011-M7-M14)
 (CE0011) AMES 3.5-190 GA98 (011-M7-M14-N24)
 (CE0019) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION
 .000 -40.000 -11.700 55.000 SREF 2690.0000 SQ.FT.
 .000 -40.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -40.000 -11.700 55.000 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

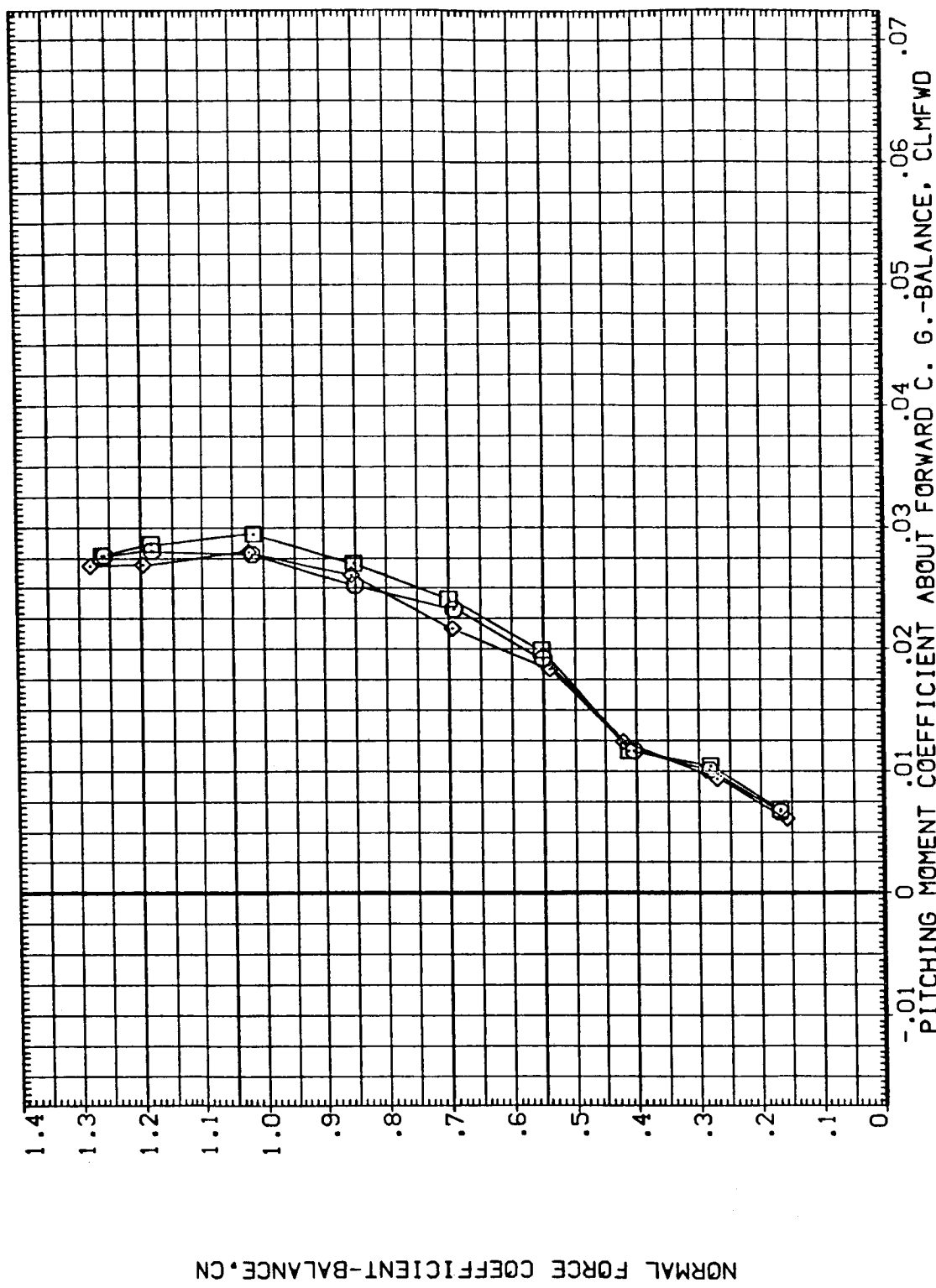


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF	2690.0000	SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF	474.8000	IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF	936.6800	IN.
						XMRP	1076.7000	IN. X0
						YMRP	.0000	IN. Y0
						ZMRP	375.0000	IN. Z0
						SCALE	.0150	

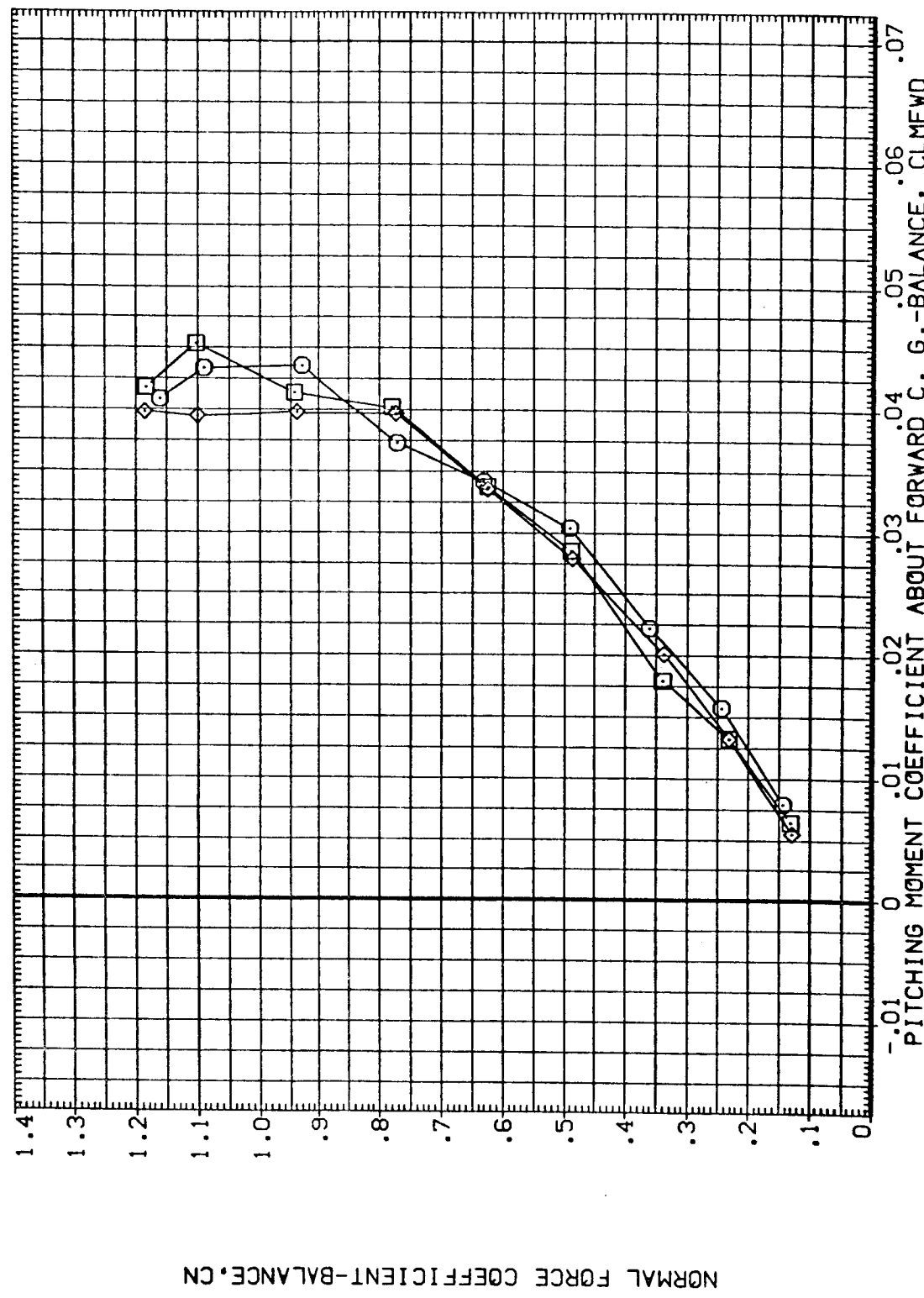


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (CE0003)
 (CE0011)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14-N24)
 AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 .000
 .000

ELEVON -40.000
 -40.000
 -40.000

BDFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

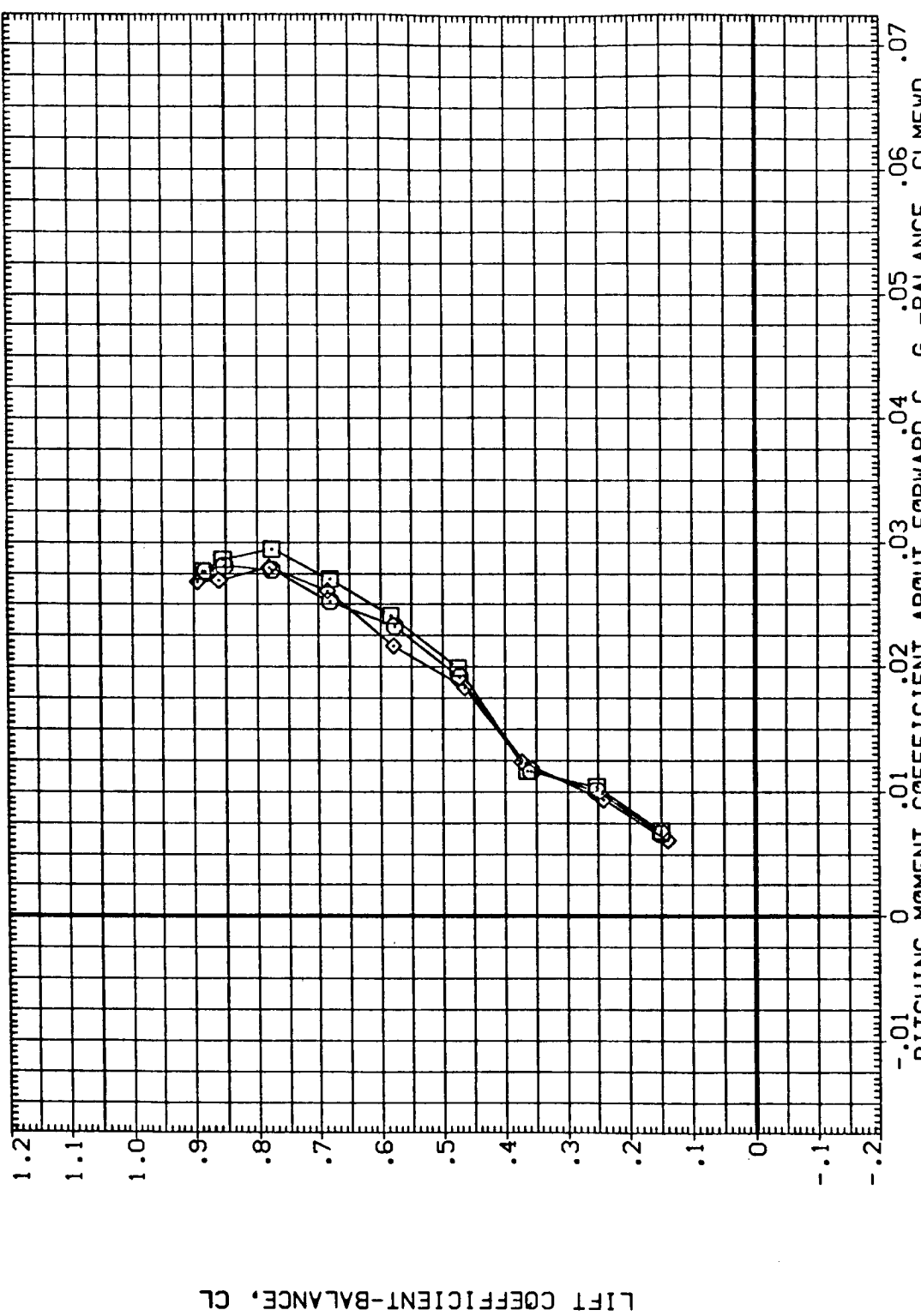


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0003) AMES 3.5-190 0A98 (011-M7+M14)

(CE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

(CE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON -40.000

BDFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

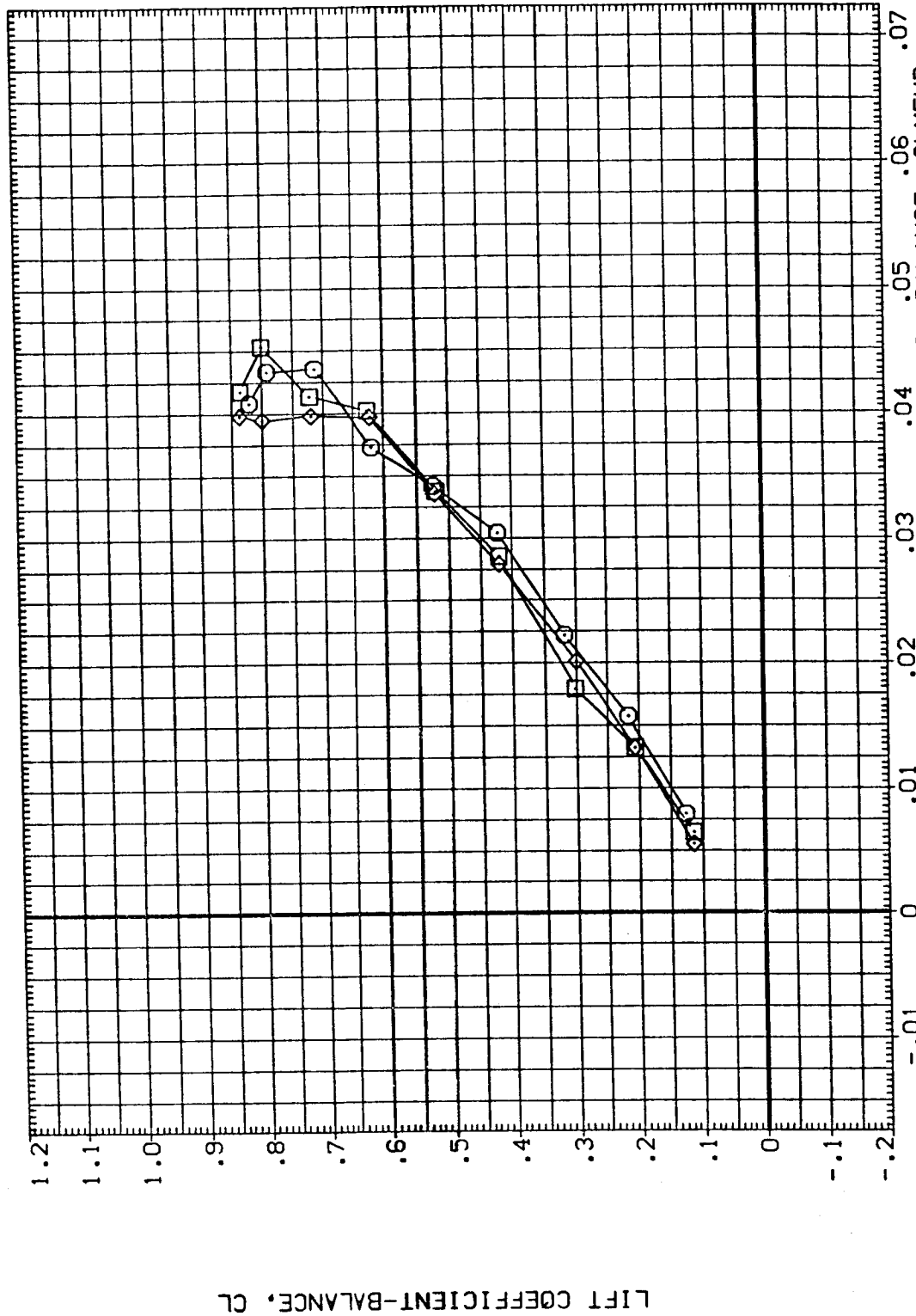
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (CE0003)
 (CE0011)
 (CE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14-N24)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEV/ON
 -40.000
 -40.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 SPDRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

LIFT COEFFICIENT-BALANCE, CL

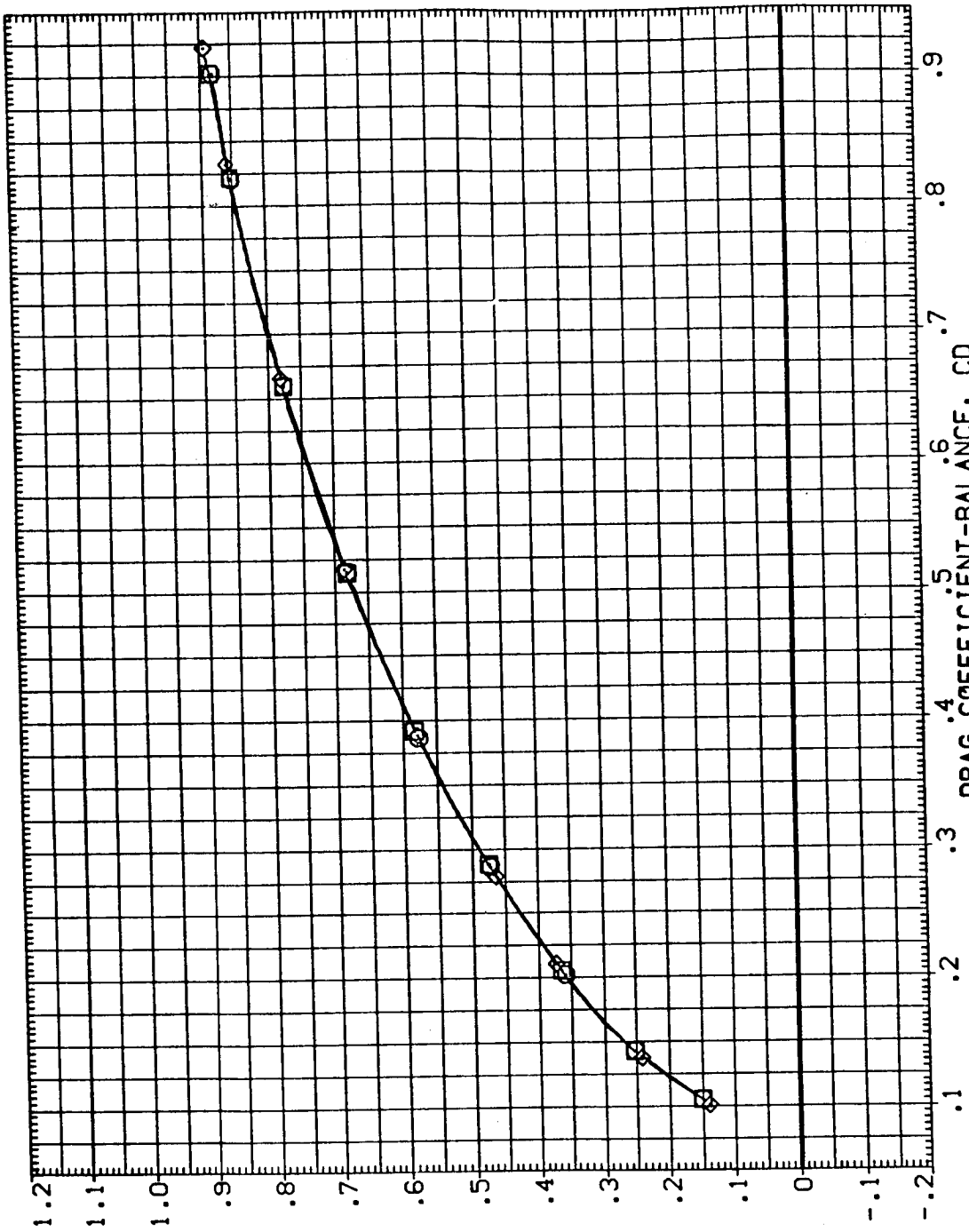


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN. X0
						XMRP 1076.7000 IN. Y0
						YMRP .0000 IN. Z0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

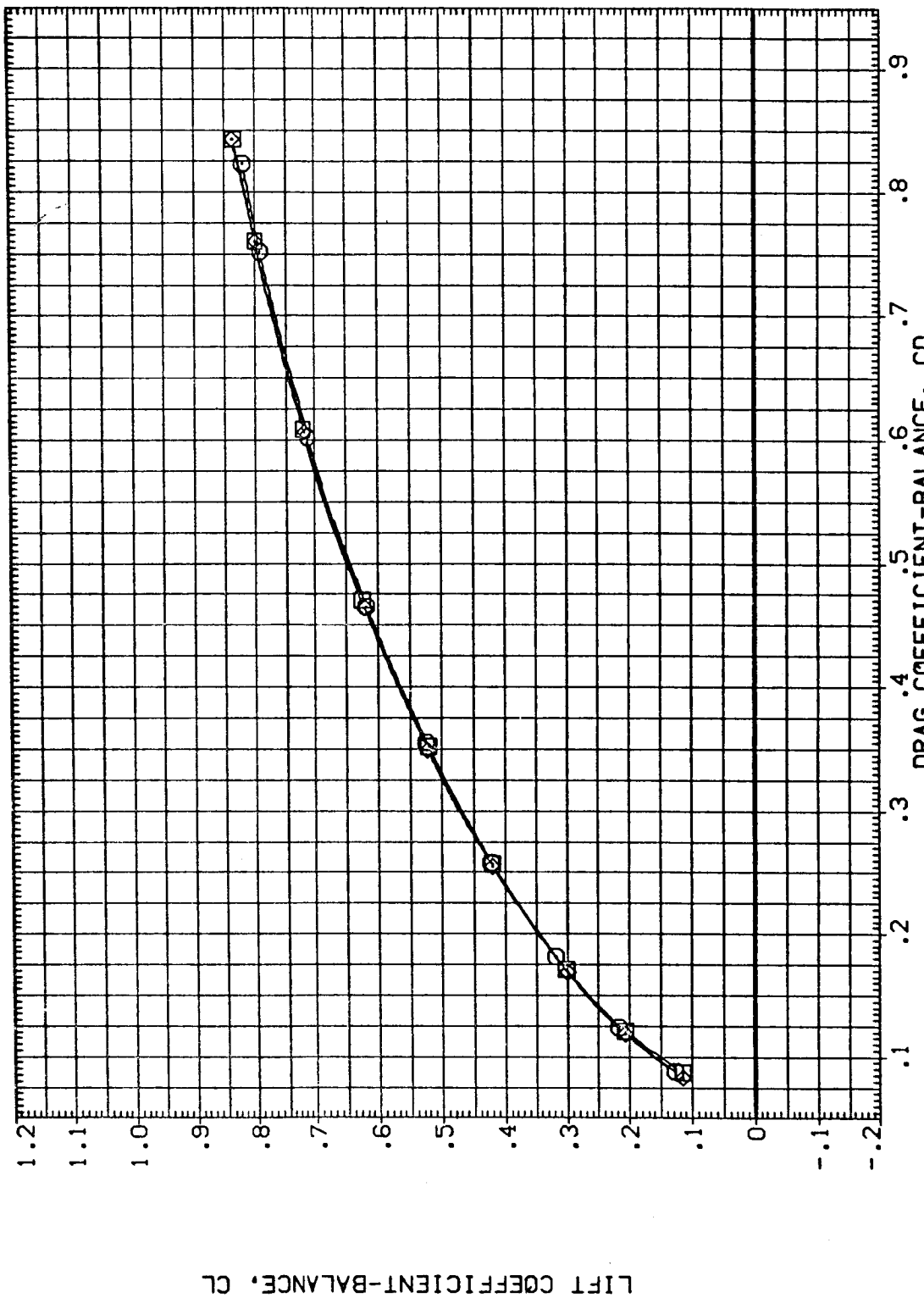


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

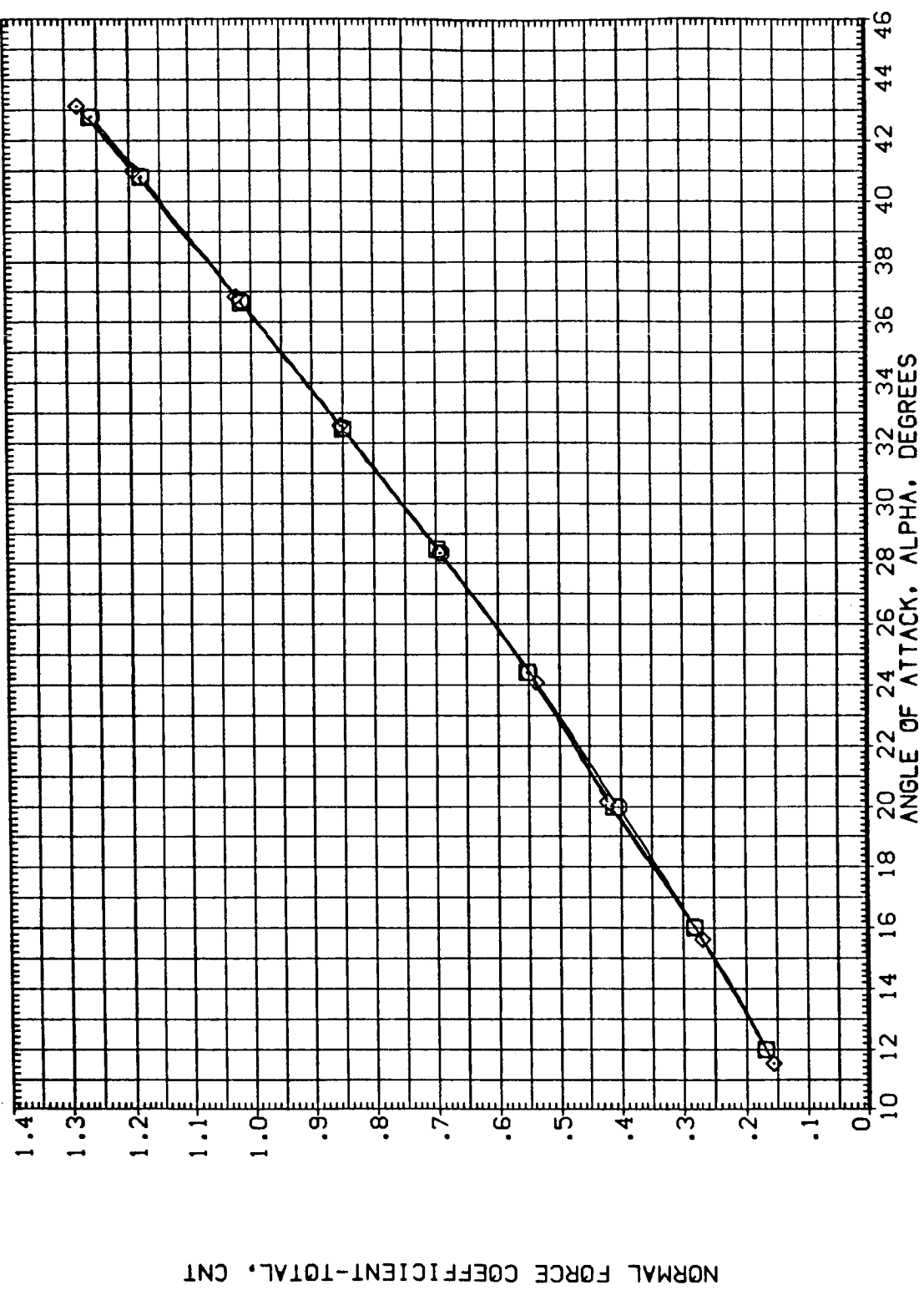
DATA SET SYMBOL (EE0003)
 (EE0011)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7-M14)
 AMES 3.5-190 OAS8 (011-M7-M14-N24)
 AMES 3.5-190 OAS8 (011-M7-M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPOBRK 55.000
 LREF 474.8000
 BRFP 936.8600
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0150

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.8600
 IN. 1076.7000
 IN. .0000
 IN. 375.0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	SREF 2690.0000	SO.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	LREF 474.8000	IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	BREF 936.6800	IN.
		XMRP 1076.7000	IN.X0
		YMRP .0000	IN.Y0
		ZMRP 375.0000	IN.Z0
		SCALE .0150	

BETA ELEVON BOFLAP SPOBRK

.000	-40.000	-11.700	55.000
.000	-40.000	-11.700	55.000
.000	-40.000	-11.700	55.000

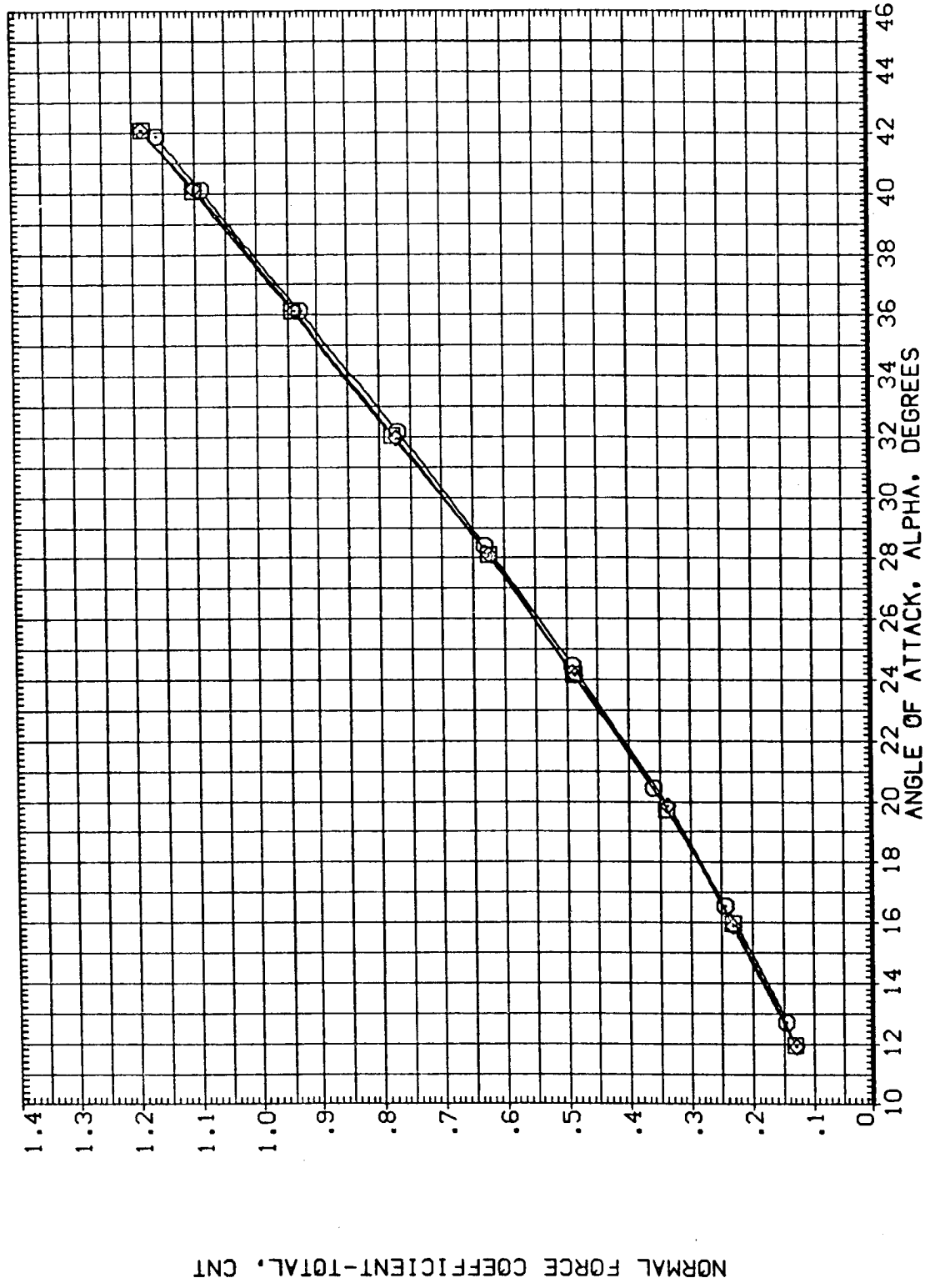


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

DATA SET SYMBOL (EE0003) (EE0011) (EE0019)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 GA98 (011-M7+H14)
 ANES 3.5-190 GA98 (011-M7+H14-N24)
 ANES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 .000
 .000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BREF 926.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

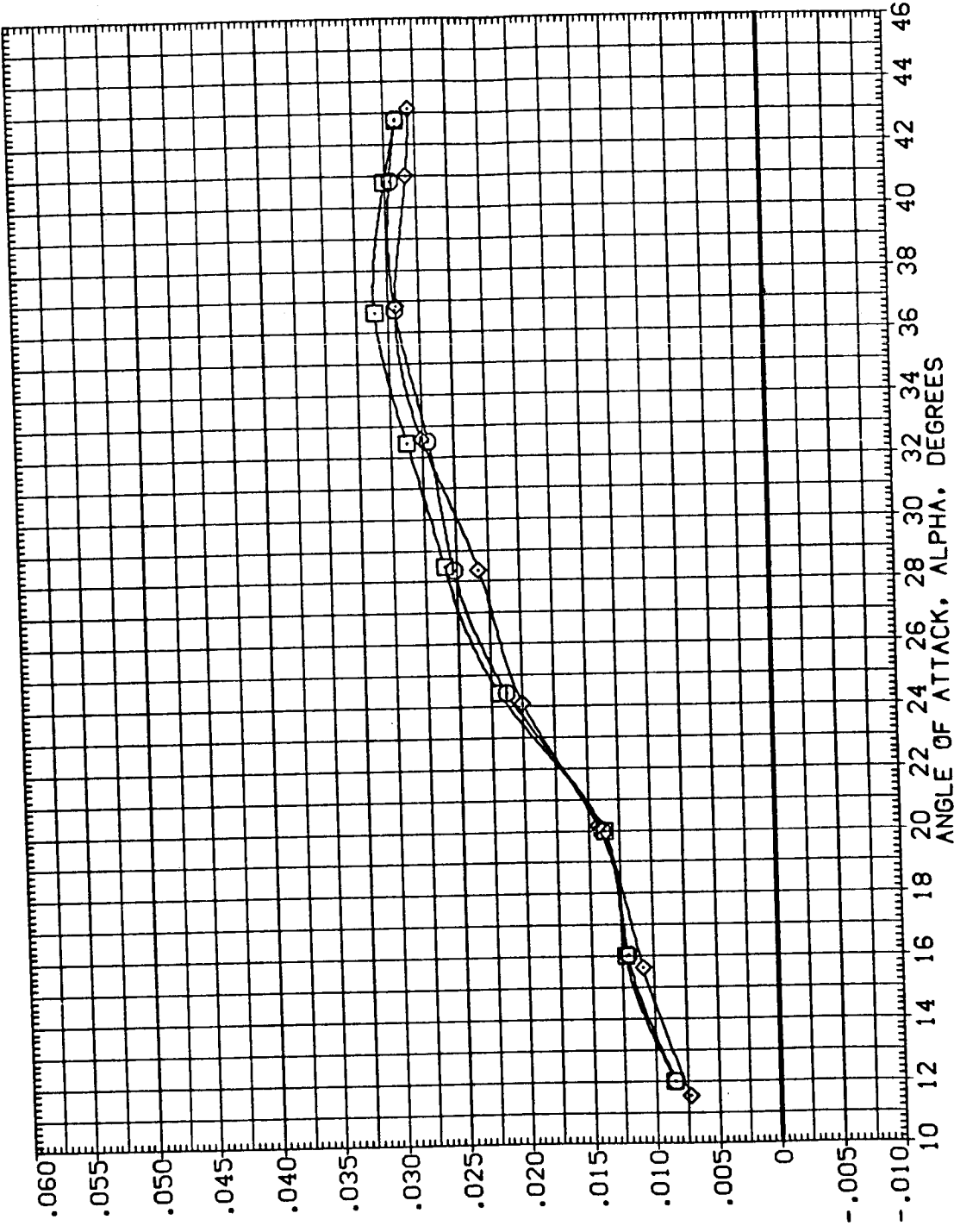


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL
 (EE0003)
 (EE0011)
 (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0/98 (011-M7+M14)
 AMES 3.5-190 0/98 (011-M7+M14-N24)
 AMES 3.5-190 0/98 (011-M7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 -40.000
 -40.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 2690.0000
 474.8000
 936.6800
 1076.7000
 375.0000
 .0150

SREF
 LREF
 BREF
 XMRP
 YMRP
 ZMRP
 SCALE

IN.
 IN.
 IN.
 IN.
 IN.
 IN.
 IN.

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

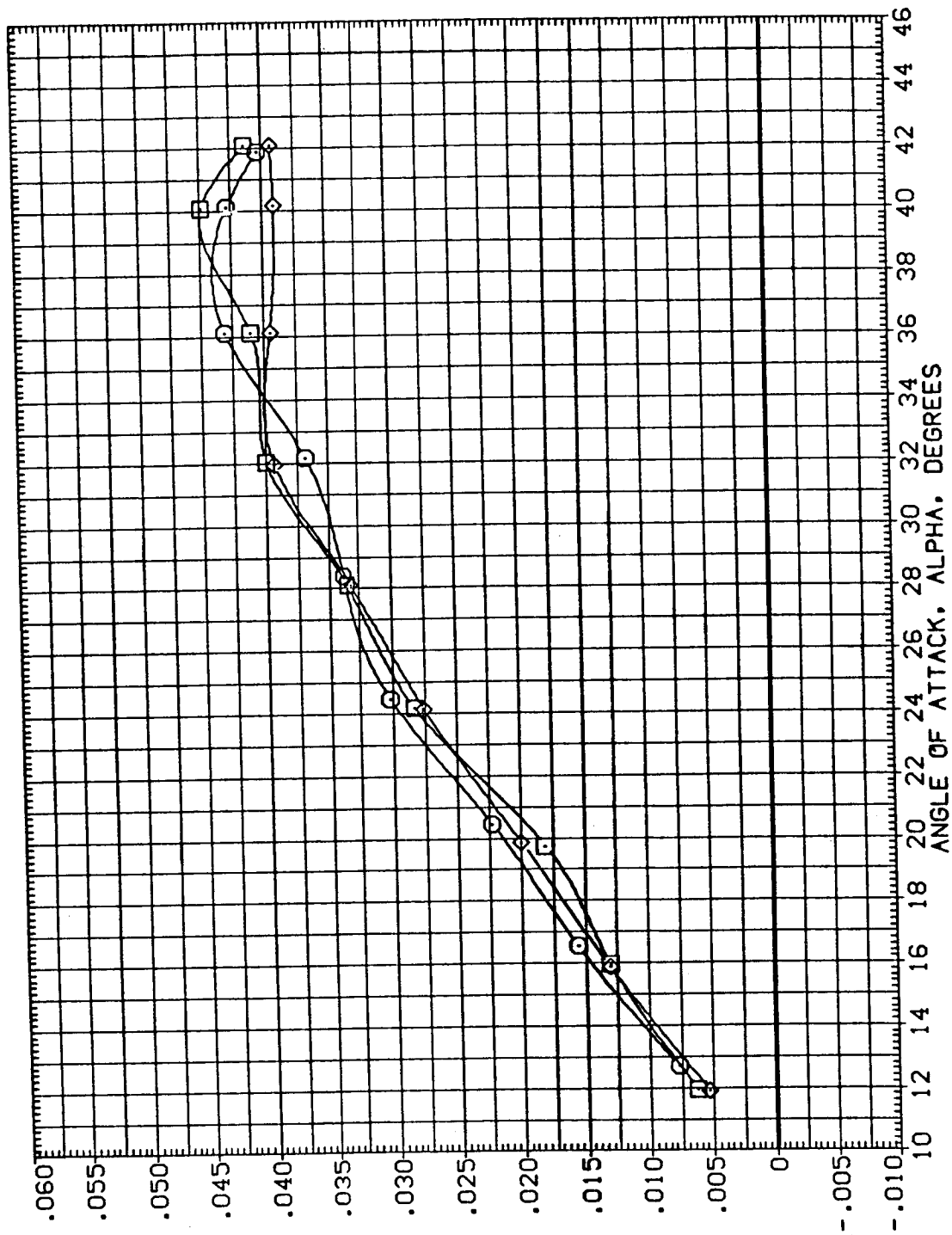


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.8000
 IN. 1076.7000
 IN. 375.0000
 IN. 375.0000
 IN. 0150

SPOBRK 55.000
 55.000
 55.000
 55.000

BDFLAP -11.700
 -11.700
 -11.700
 -11.700

ELEVON -40.000
 -40.000
 -40.000
 -40.000

BETA .000
 .000
 .000
 .000

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

DATA SET SYMBOL
 (EE0003)
 (EE0011)
 (EE0019)

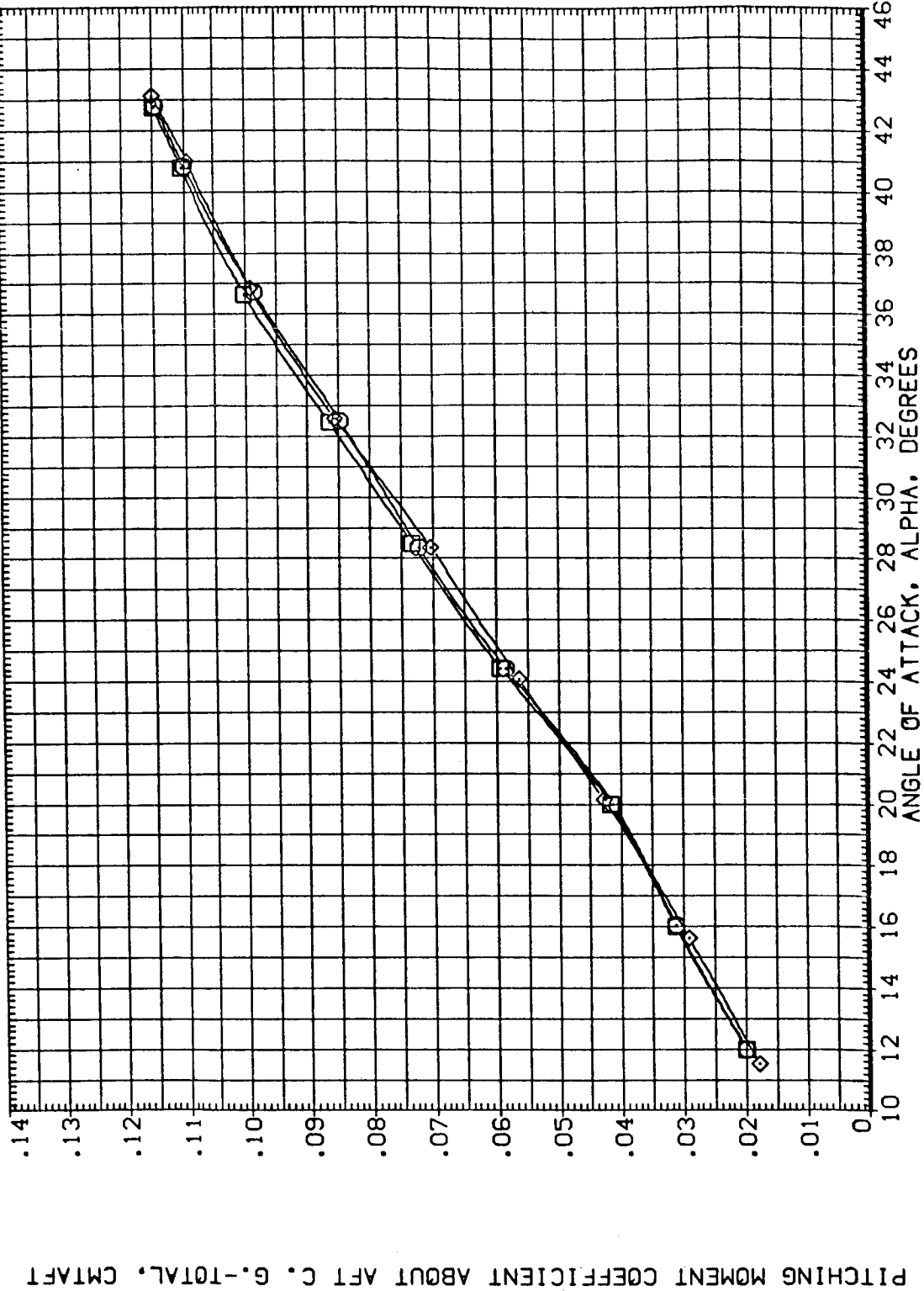


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	SQ.FT.
(EE0003)	AMES 3.5-190 CA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	474.8000							IN.
(EE0011)	AMES 3.5-190 CA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	936.6800							IN.
(EE0019)	AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	1076.7000							IN. X0

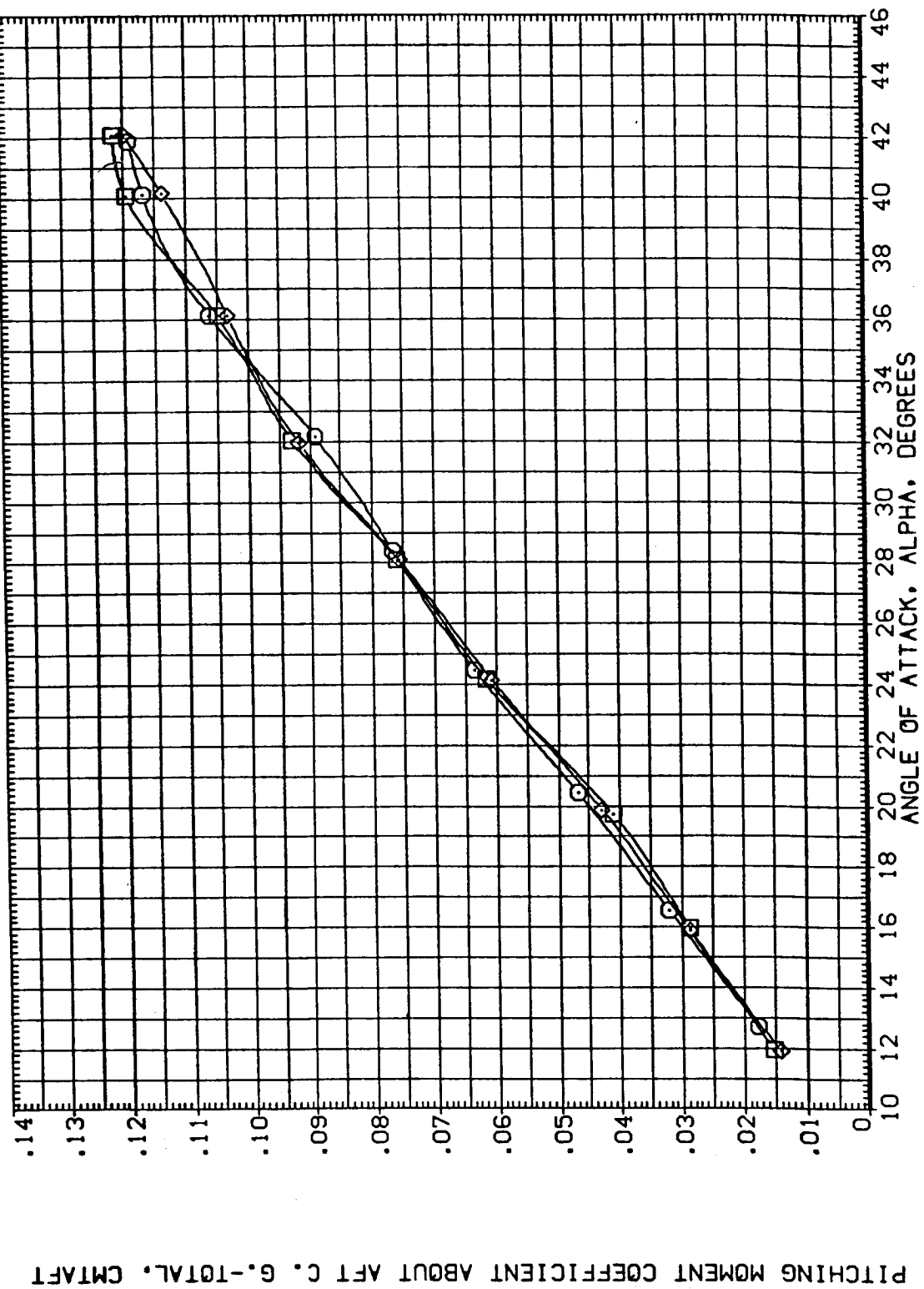


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL: (EEG003), (EEG011), (EEG019)

CONFIGURATION DESCRIPTION:
 AYES 3.5-190 GA98 (011-M7+H14)
 AYES 3.5-190 GA98 (011-M7+H14-N24)
 AYES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA: .000, .000, .000

ELEVON: -40.000, -40.000, -40.000

BOFLAP: -11.700, -11.700, -11.700

SPOBRK: 55.000, 55.000, 55.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN.
 YMRP: .0000 IN.
 ZMRP: 375.0000 IN.
 SCALE: .0150

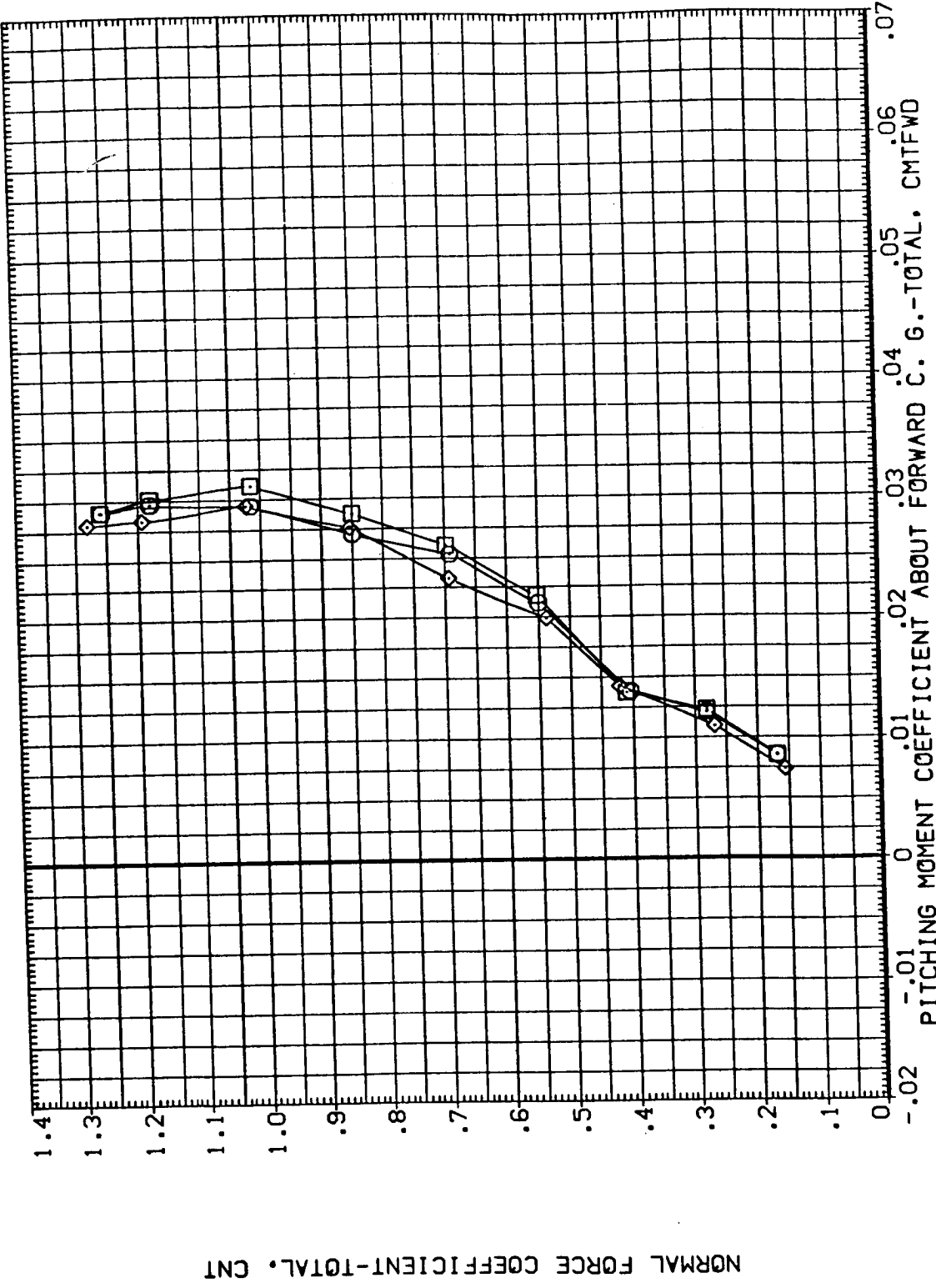


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0003) AMES 3.5-190 GA98 (011-M7+M14)

(EE0011) AMES 3.5-190 GA98 (011-M7+M14-N24)

(EE0019) AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDBRK

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

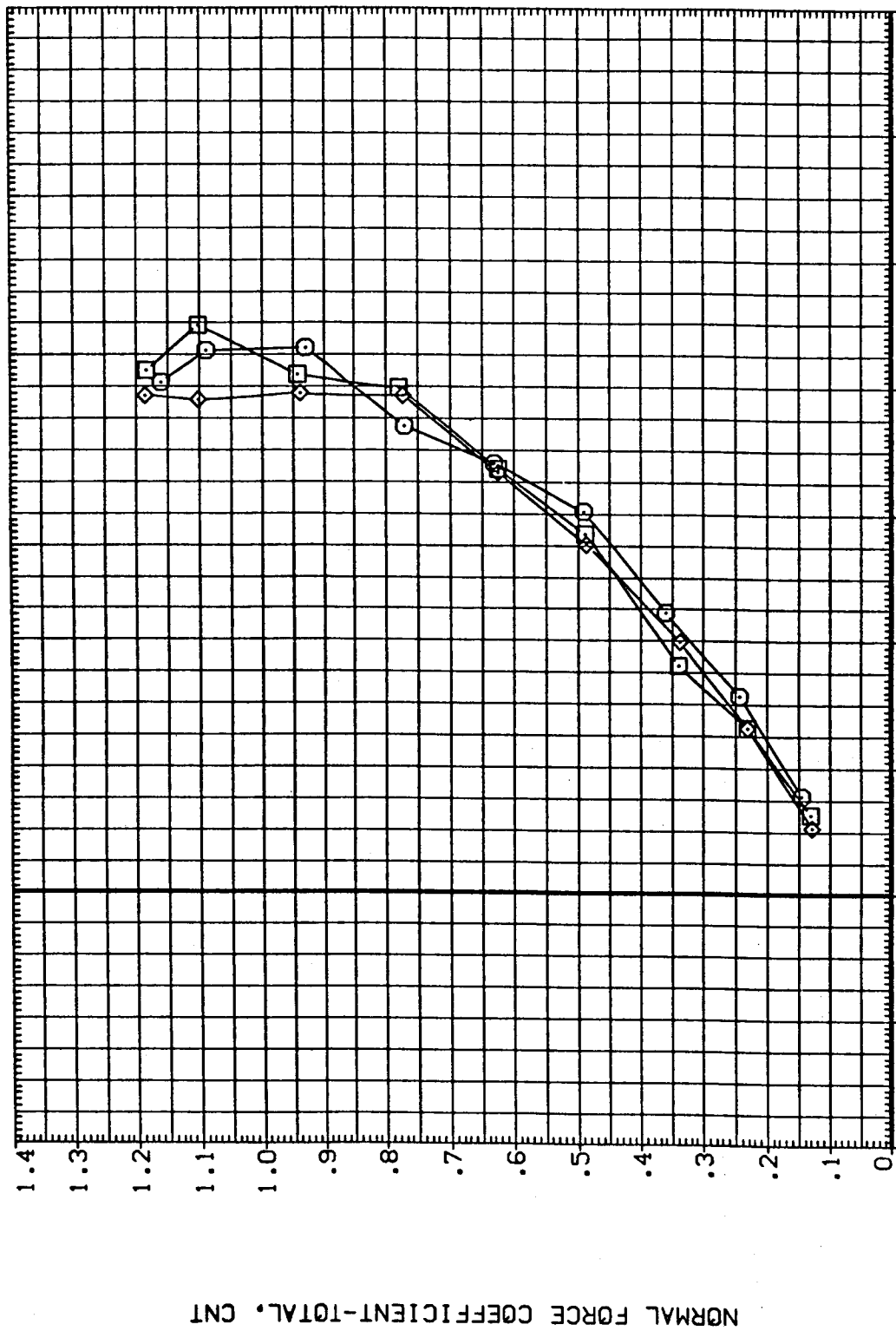
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C.G.-TOTAL, CMTFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (EE0003) (EE0011) (EE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-H14)
 AMES 3.5-190 0A98 (011-M7-H14-N24)
 AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN.XD 936.6800
 IN.YD 1076.7000
 IN.ZD 375.0000
 SCALE .0150

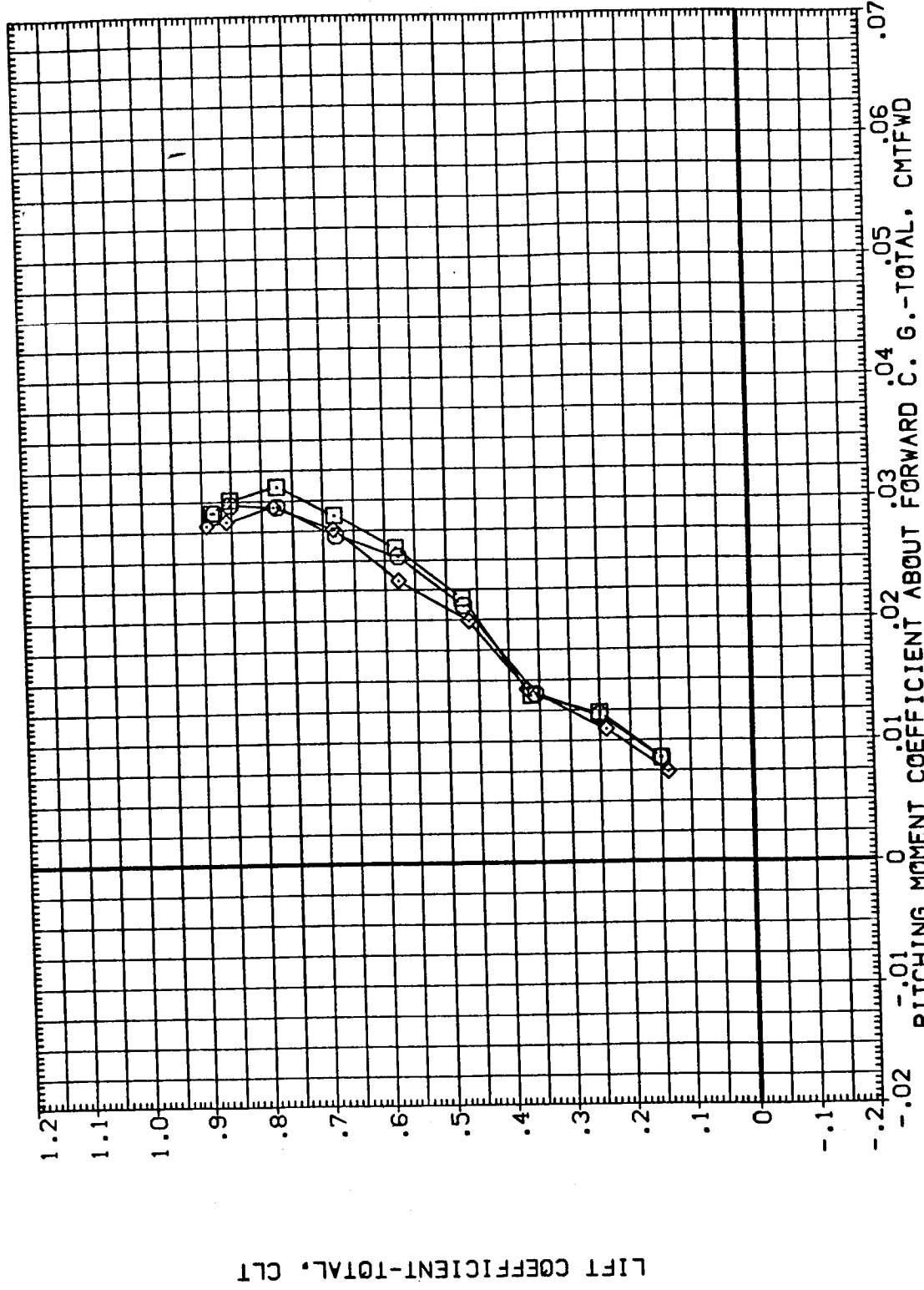


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJ MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0003) AMES 3.5-190 0A98 (011-M7+M14)

(EE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

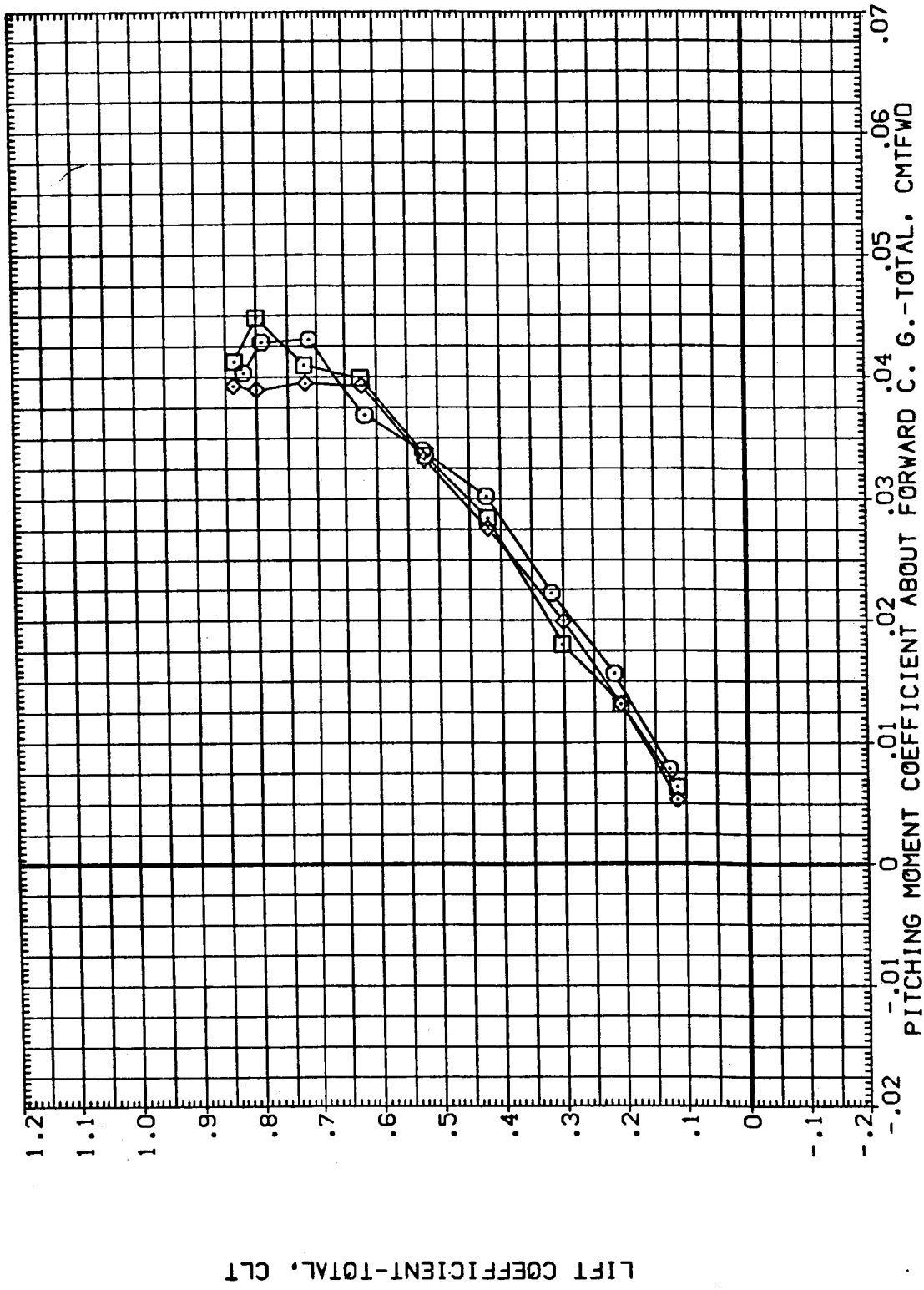
BRFREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0003) AMES 3.5-190 0A98 (011-M7+M14)

(EE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON -40.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

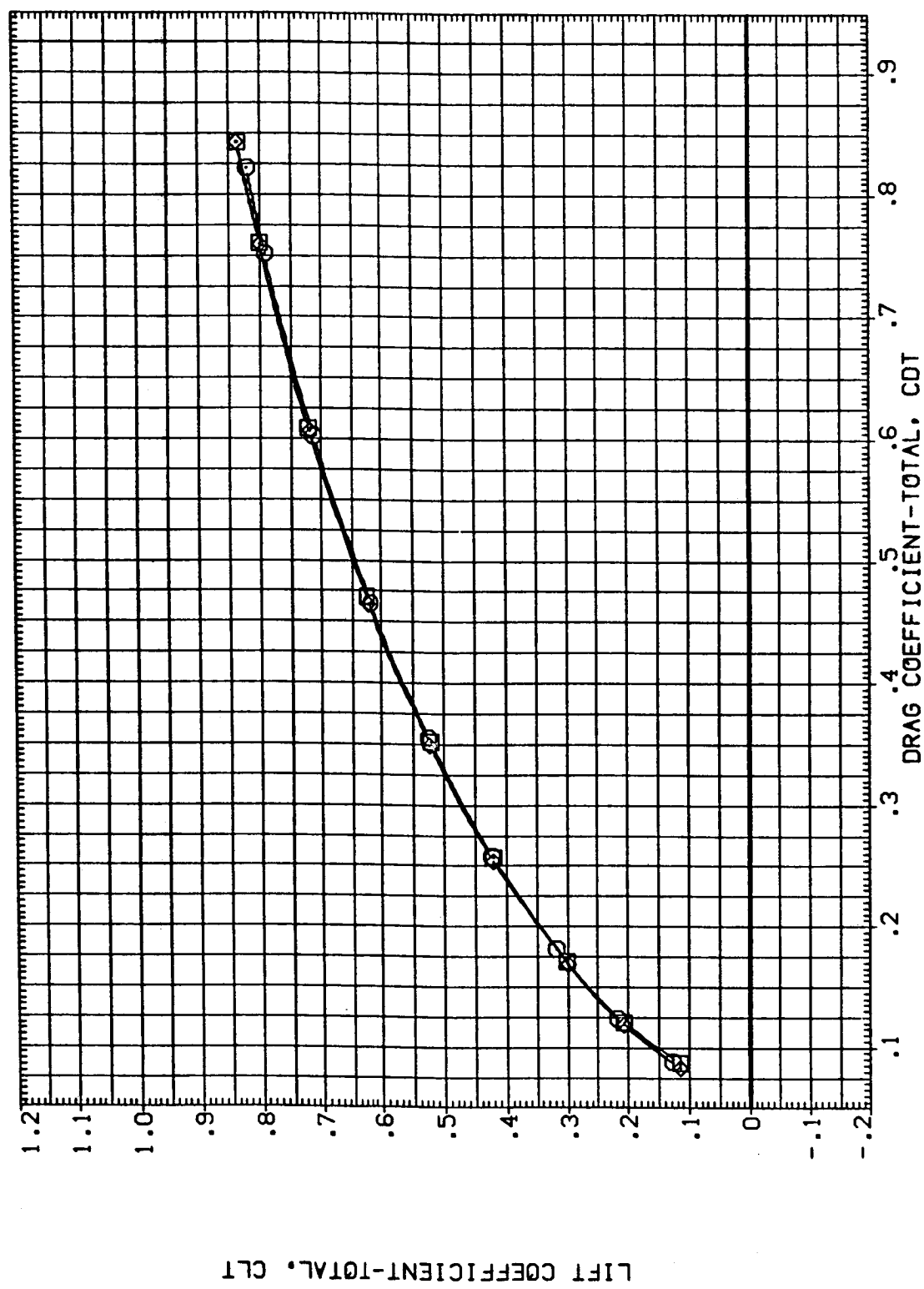


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0003) AMES 3.5-190 0A98 (011-M7+M14)

(EE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000

ELEVON -40.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

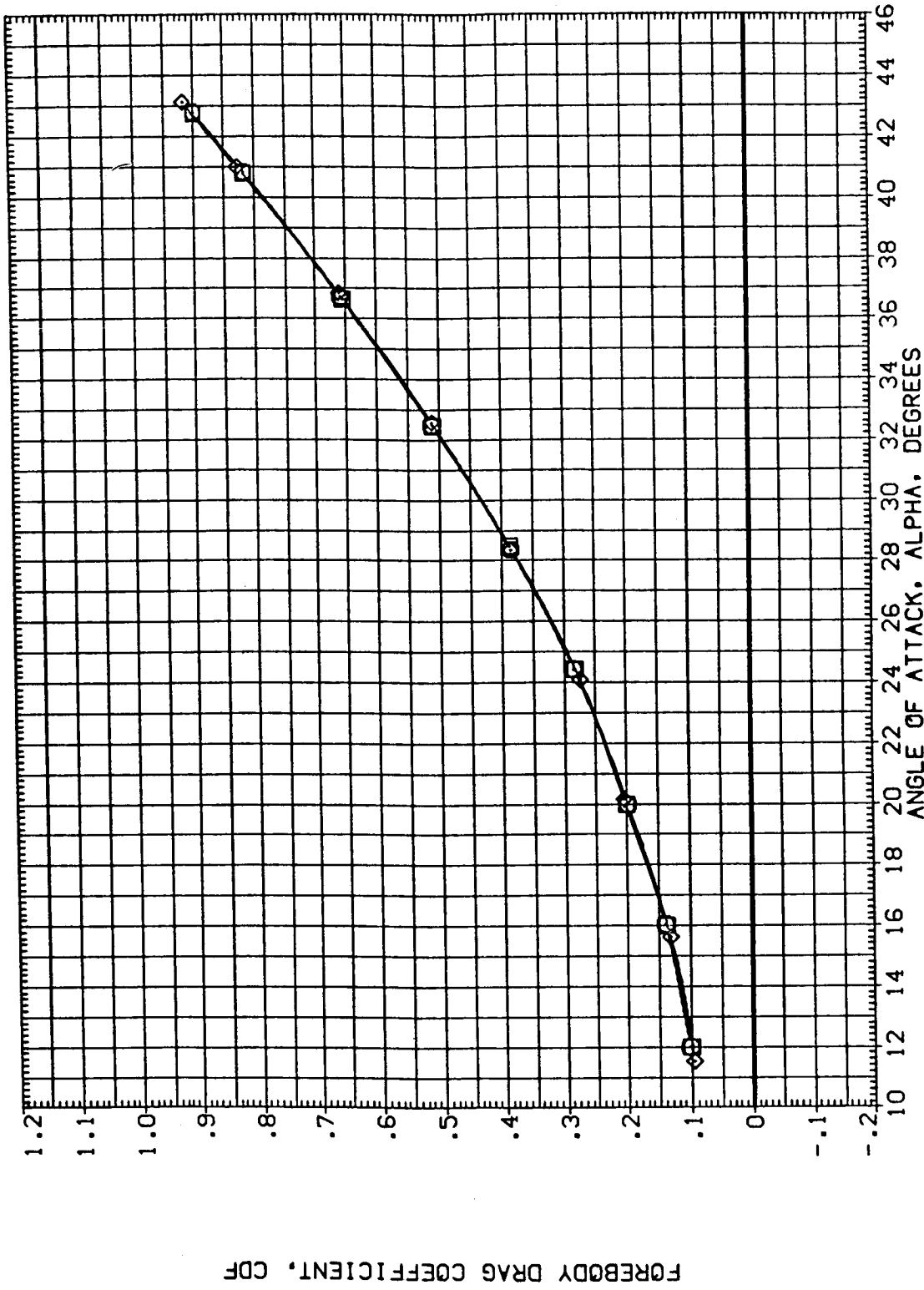


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVATION	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 DA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 DA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 DA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.8600 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

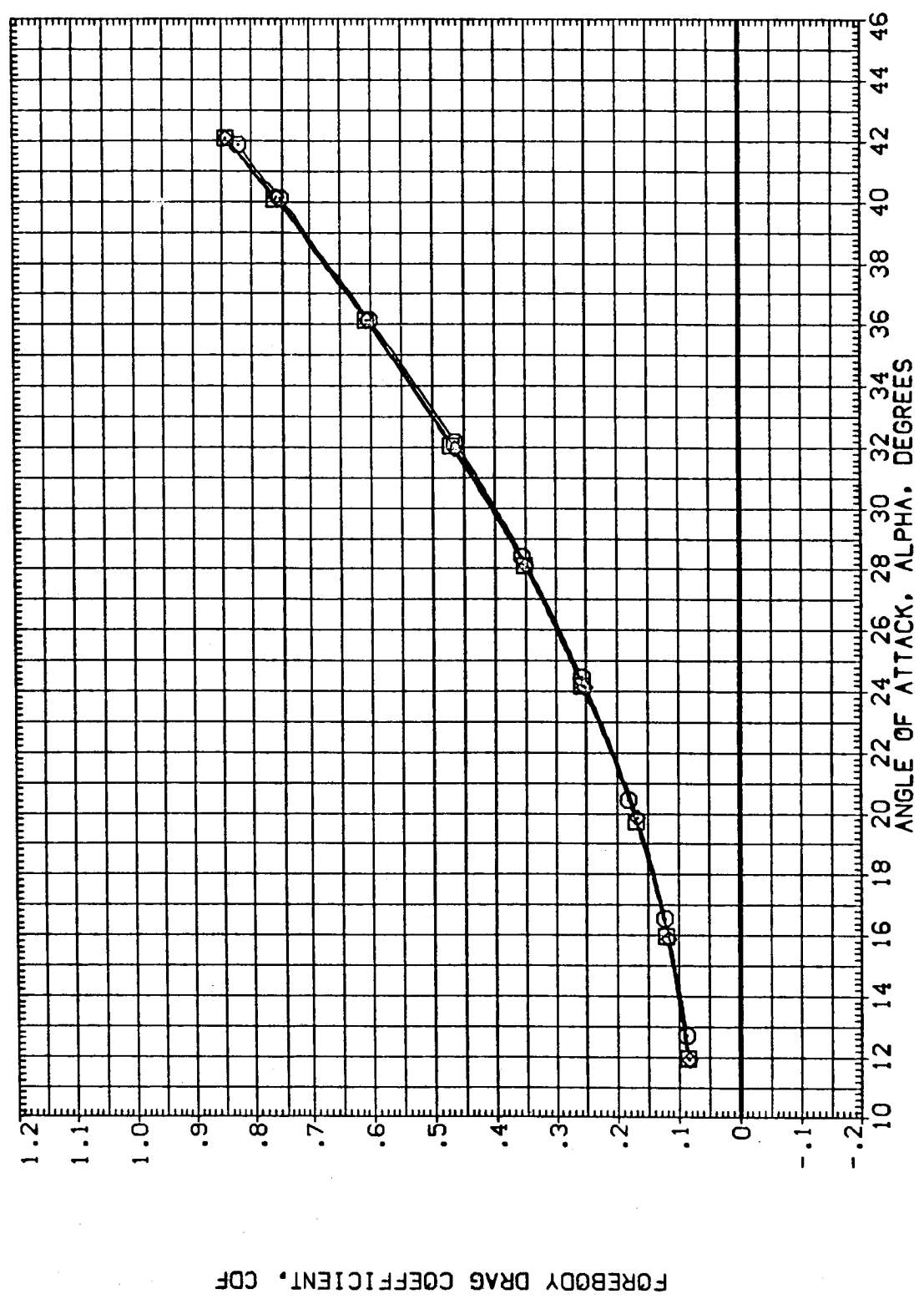


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0003) AMES 3.5-190 OAS8 (011-M7+M14)
 (EE0011) AMES 3.5-190 OAS8 (011-M7+M14-N24)
 (EE0019) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION
 .000 -40.000 -11.700 55.000 SREF 2690.0000 SQ.FT.
 .000 -40.000 -11.700 55.000 LREF 474.8000 IN.
 .000 -40.000 -11.700 55.000 BRFF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

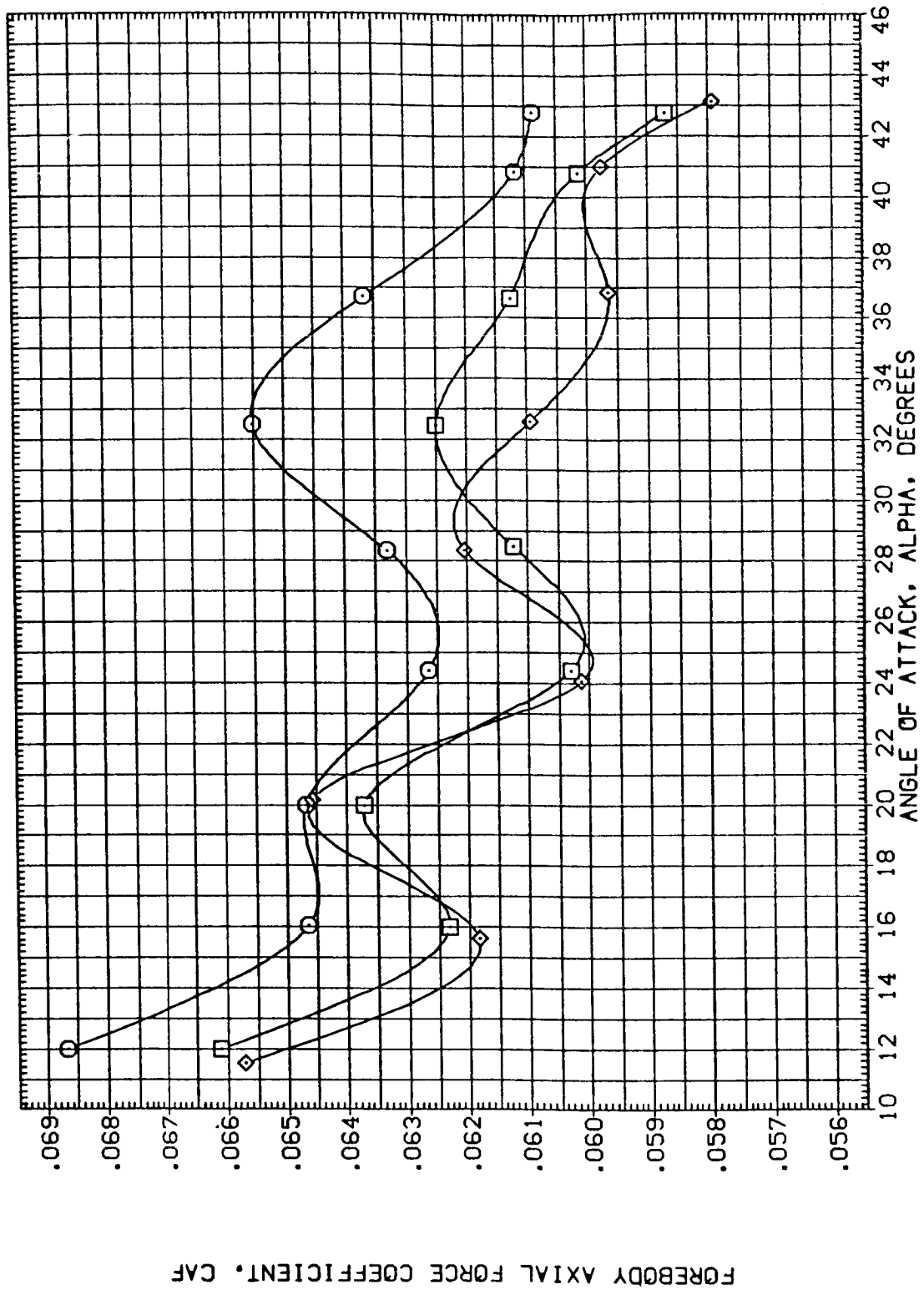


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(EEG003)	AMES 3.5-190 0A98 (011-M7+M14)	SREF	2690.0000	50.FT.
(EEG011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	LREF	474.8000	IN.
(EEG019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	BREF	936.6800	IN.
		XMRP	1076.7000	IN. XB
		YMRP	.0000	IN. YB
		ZMRP	375.0000	IN. ZB
		SCALE	.0150	

BETA .000 ELEVON -40.000 BOFLAP 55.000 SPOBRK 55.000

BETA .000 ELEVON -40.000 BOFLAP 55.000 SPOBRK 55.000

BETA .000 ELEVON -40.000 BOFLAP 55.000 SPOBRK 55.000

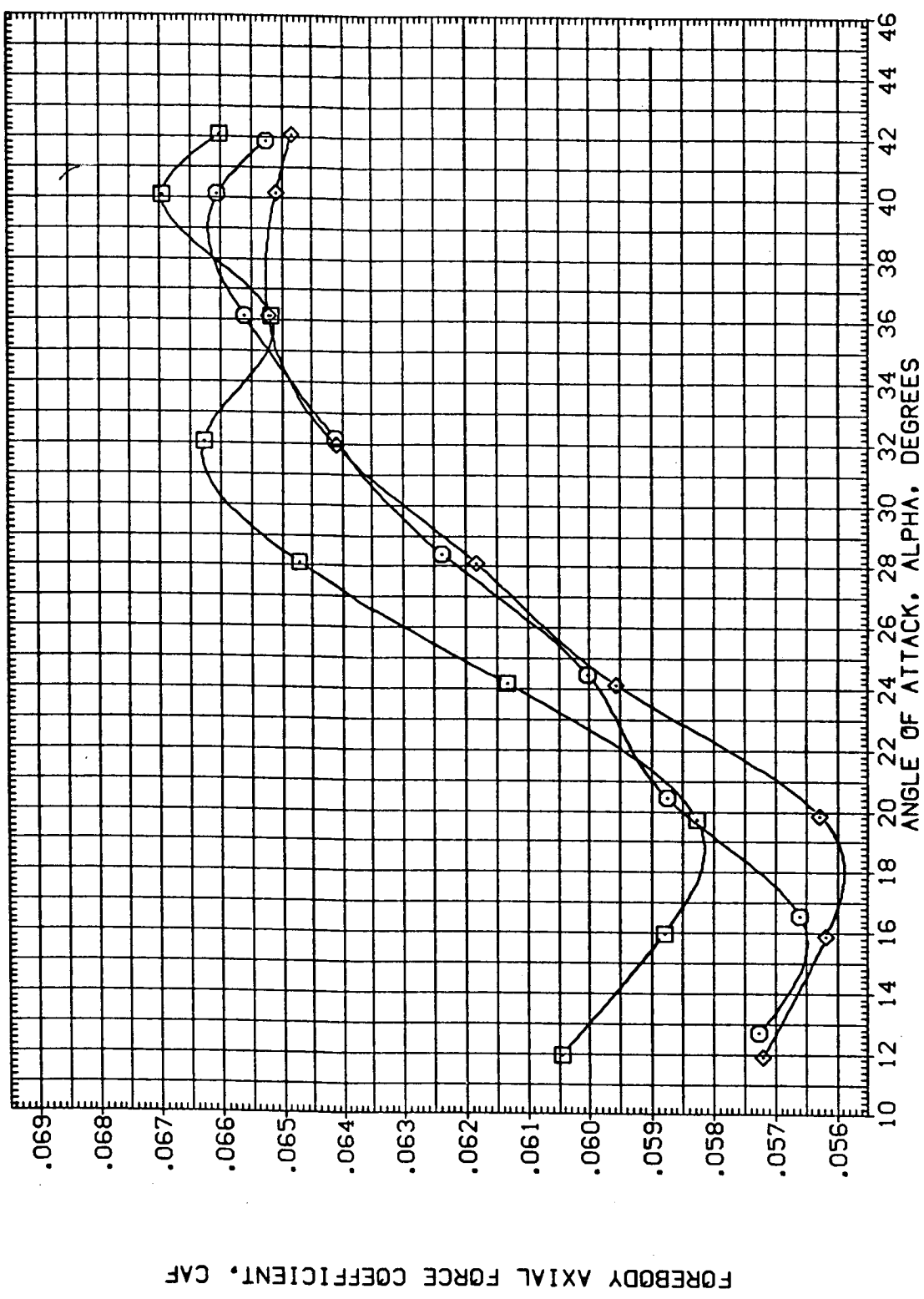


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (EEQ003)
 (EEQ011)
 (EEQ019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-M14)
 AMES 3.5-190 0A98 (011-M7-M14-N24)
 AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 .000
 .000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SFOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

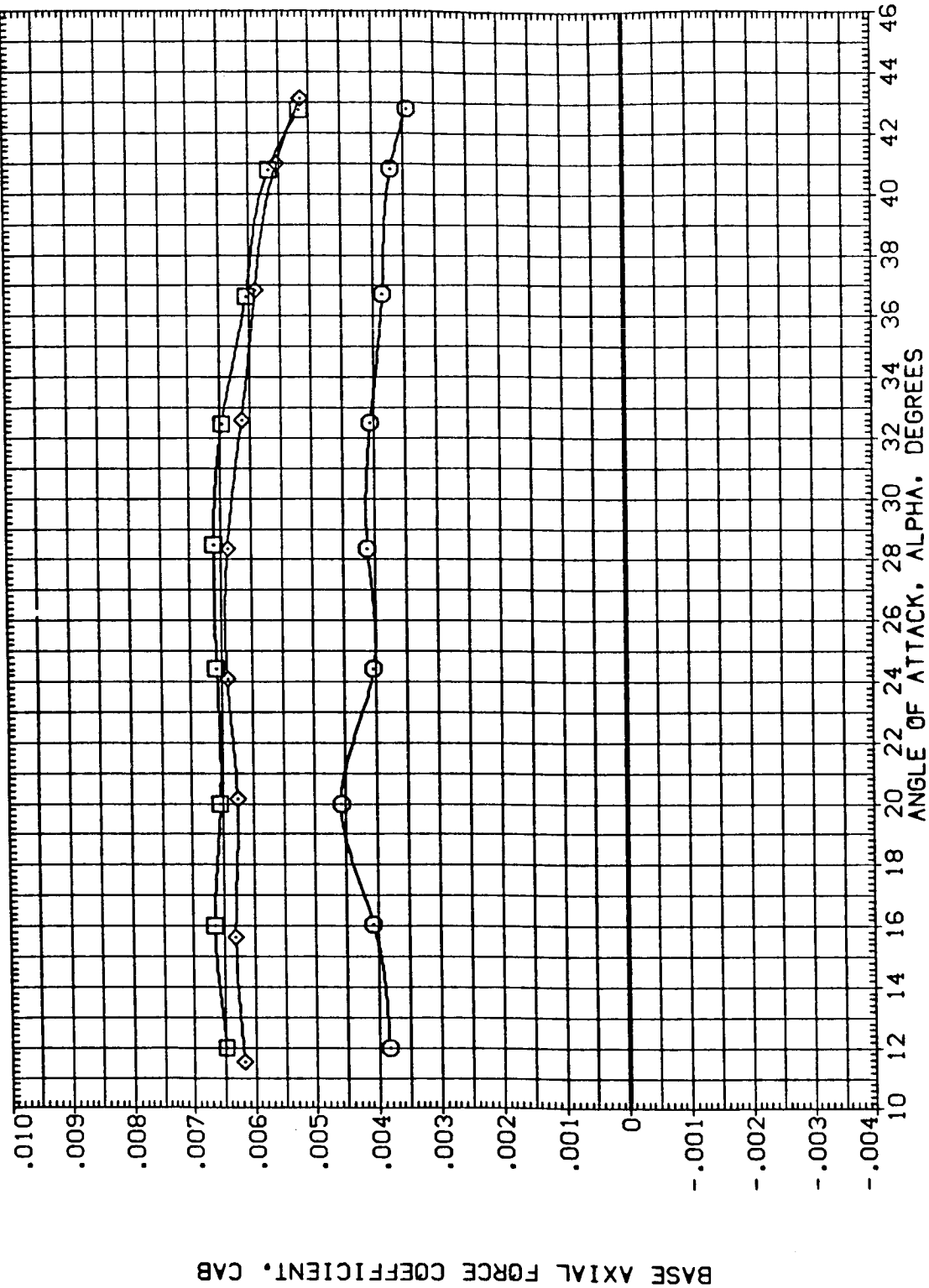


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-17+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 0A98 (011-17+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

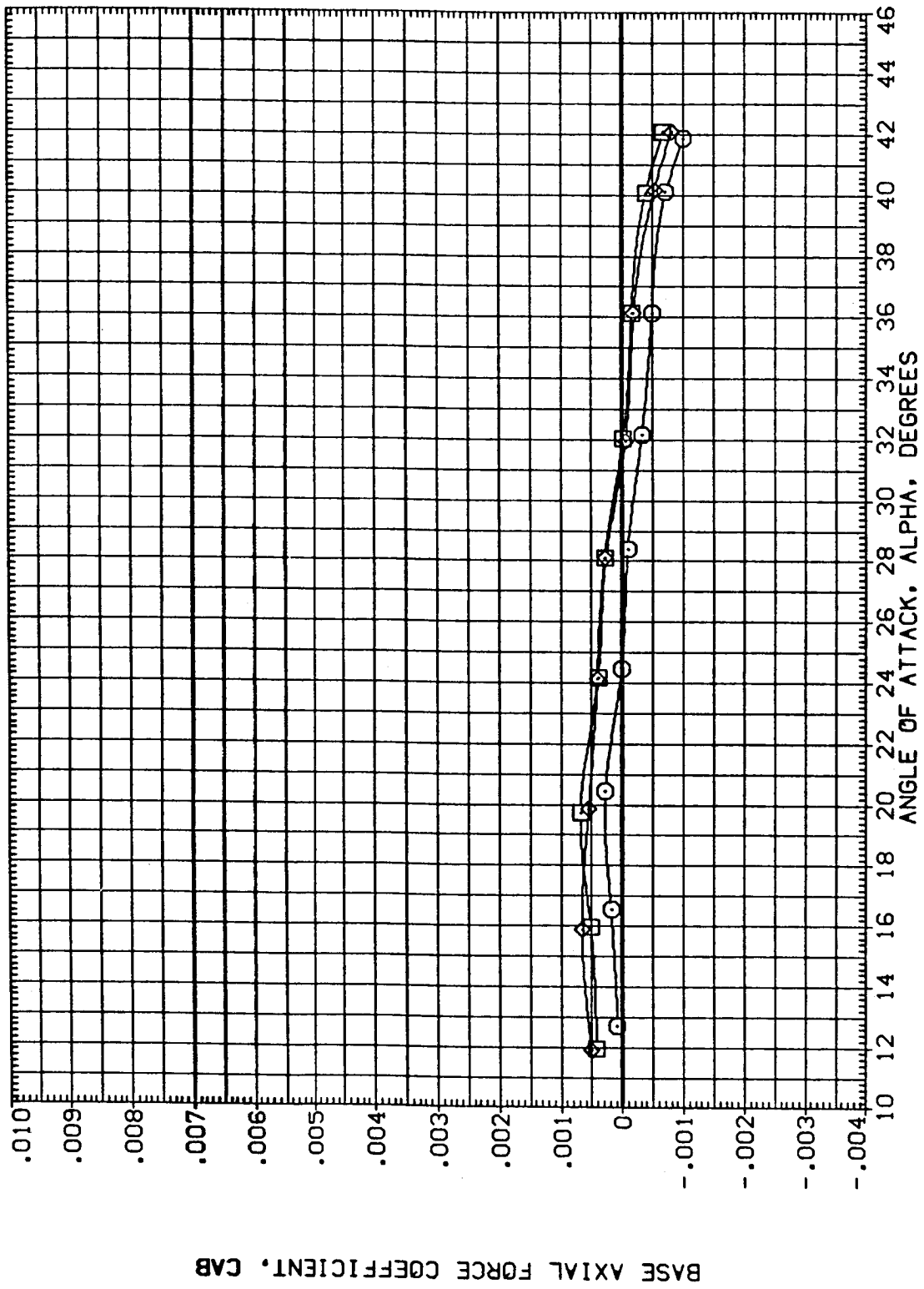


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL
 (BEG003)
 (BEG011)
 (BEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DASH (011-N7+M14)
 AMES 3.5-190 DASH (011-N7+M14-N24)
 AMES 3.5-190 DASH (011-N7+M14-N24+DUMMY STING)

BETA
 .000
 .000
 .000

ELEVON
 -40.000
 -40.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.XG
 XMRP 1076.7000 IN.YB
 YMRP .0000 IN.ZB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

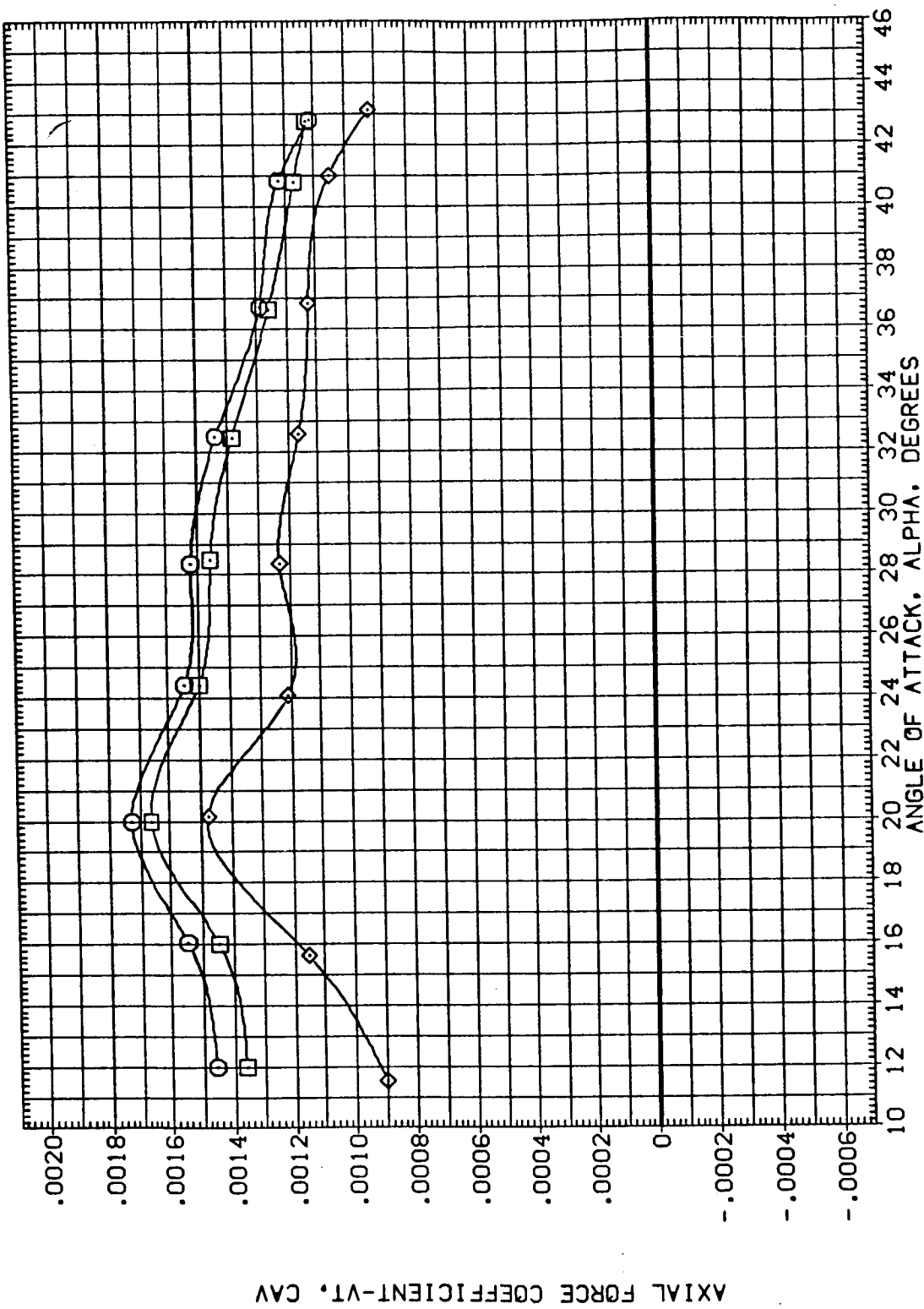


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0003)	AMES 3.5-190 DA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0011)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN. X0
						ZMRP .0000 IN. Y0
						SCALE 375.0000 IN. Z0

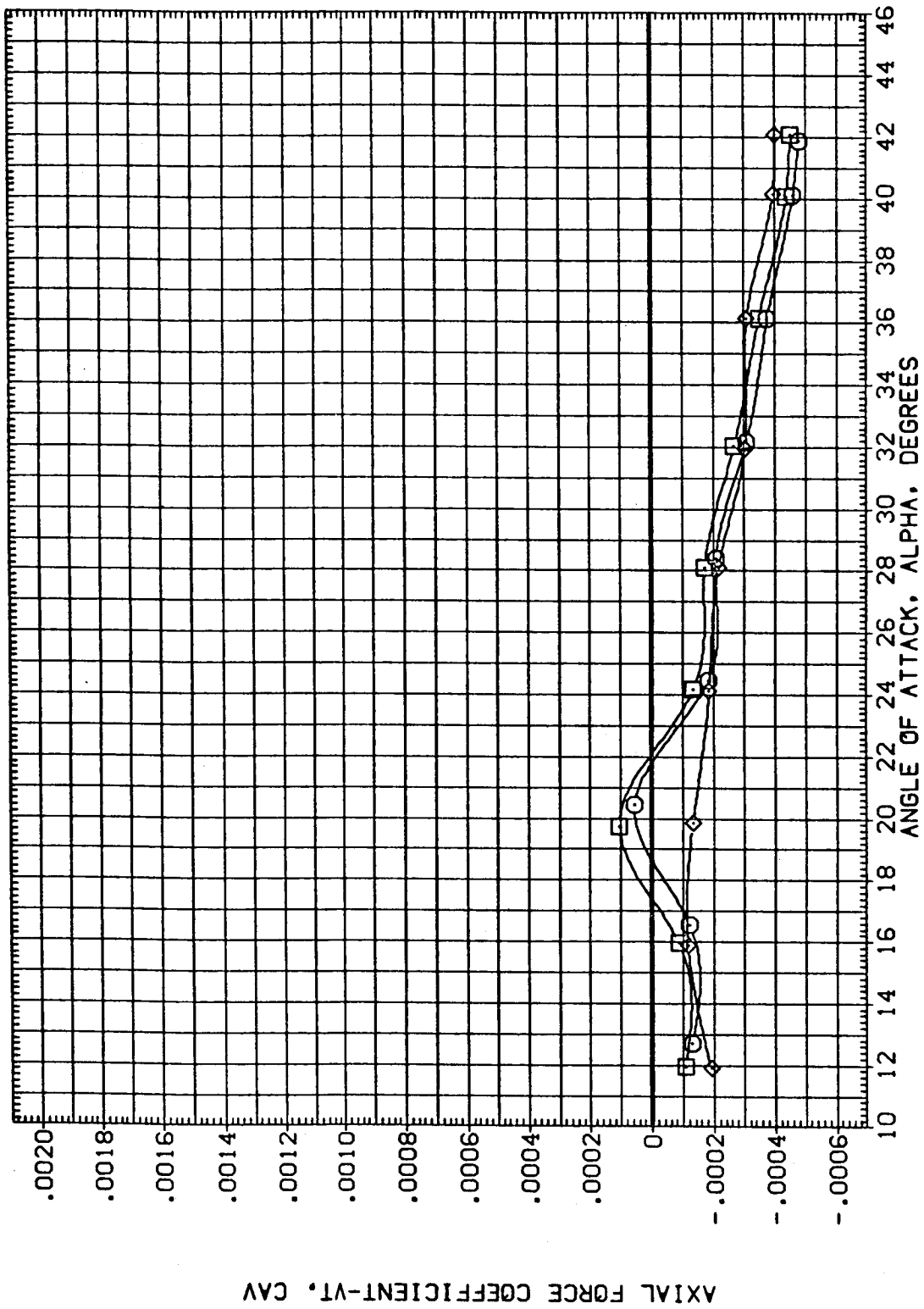


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0003) AMES 3.5-190 CA98 (011-M7+M14)

(BE0011) AMES 3.5-190 CA98 (011-M7+M14-N24)

(BE0019) AMES 3.5-190 CA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

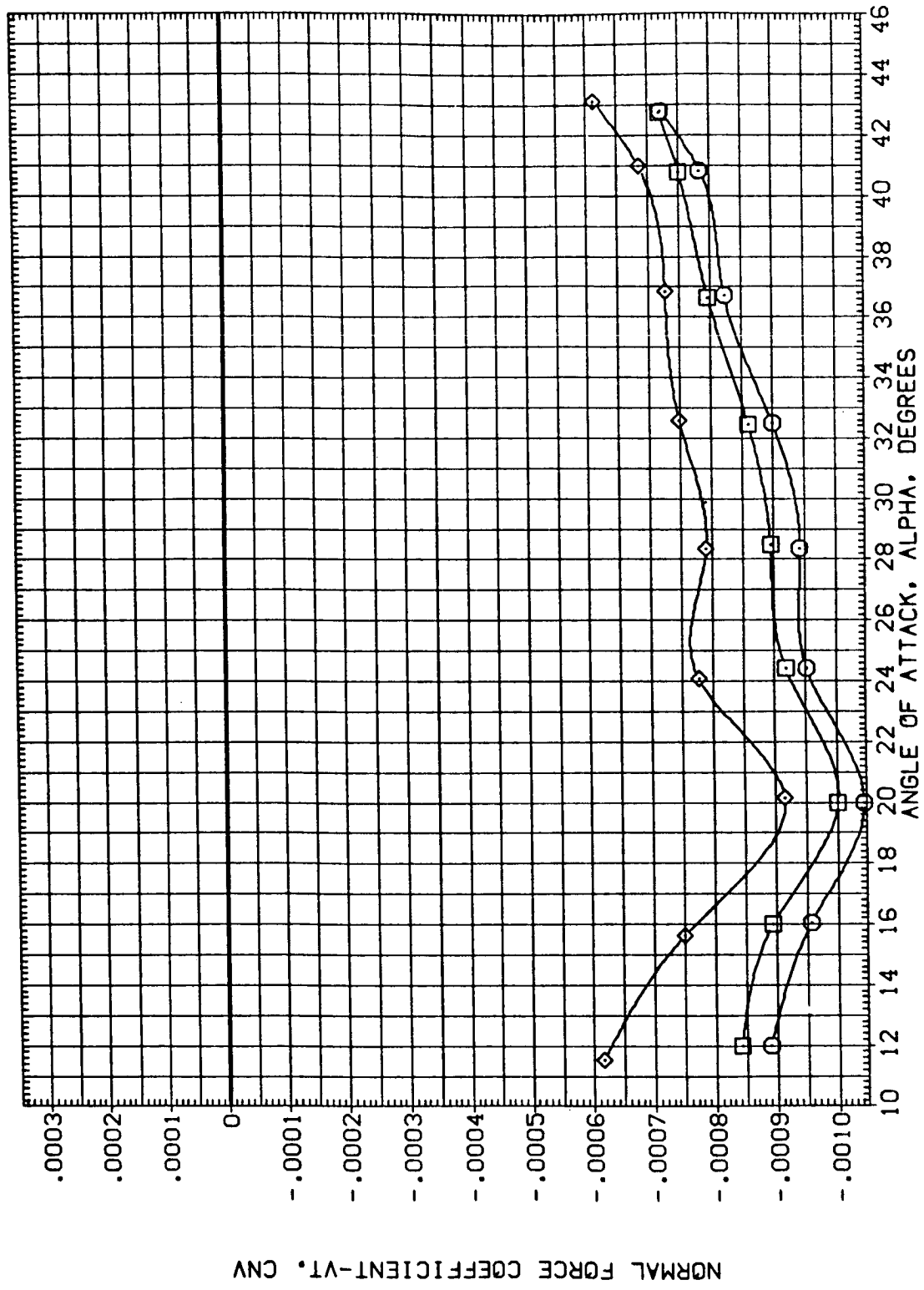


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	SREF	SO.FT.
(BE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	2690.0000	IN.
(BE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	474.8000	IN.
(BE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	936.6800	IN.

XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

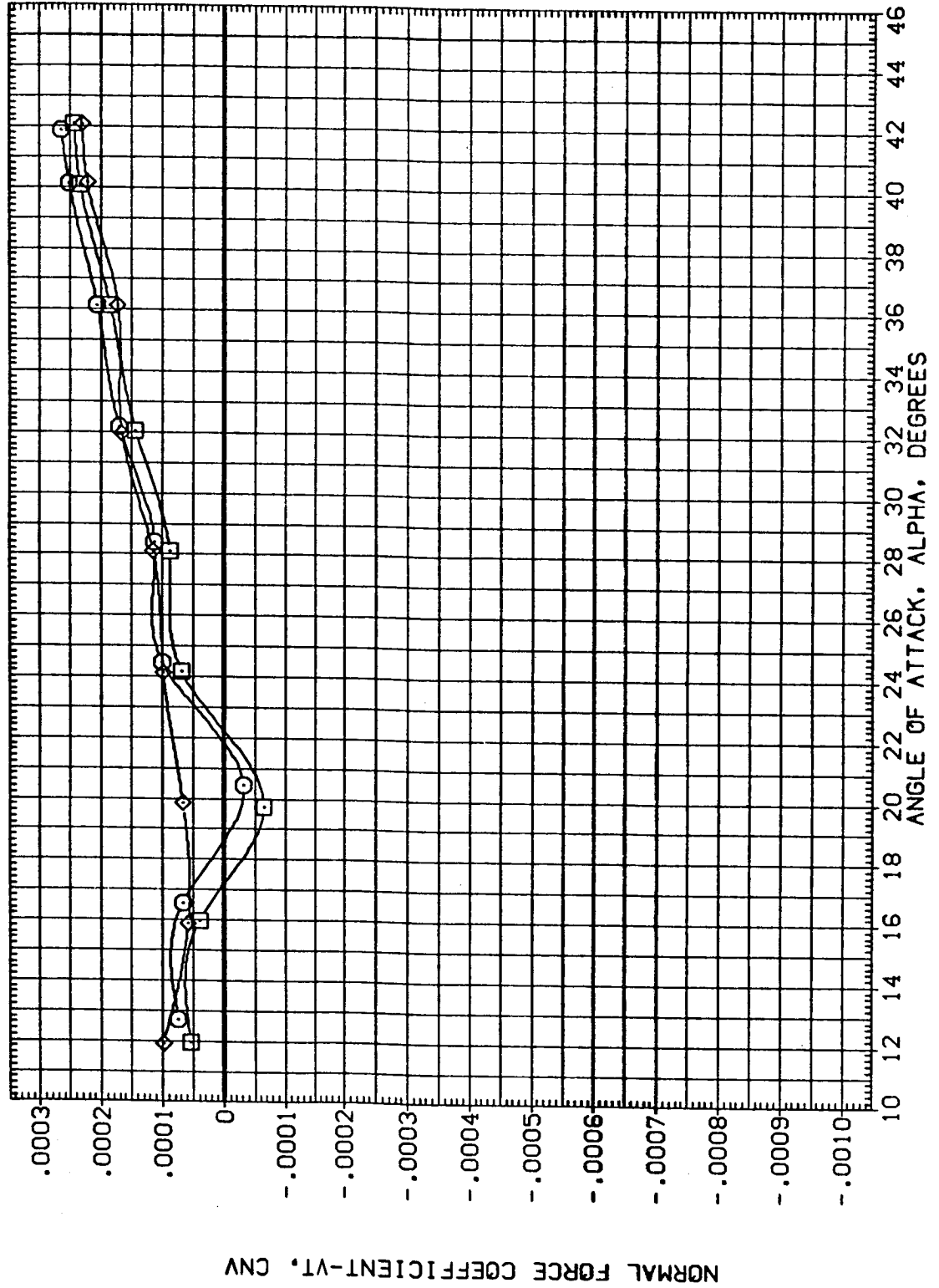


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B) MACH = 10.27

DATA SET SYMBOL (BEG003) (BEG011) (BEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON -40.000 -40.000 -40.000

BOFLAP -11.700 -11.700 -11.700

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

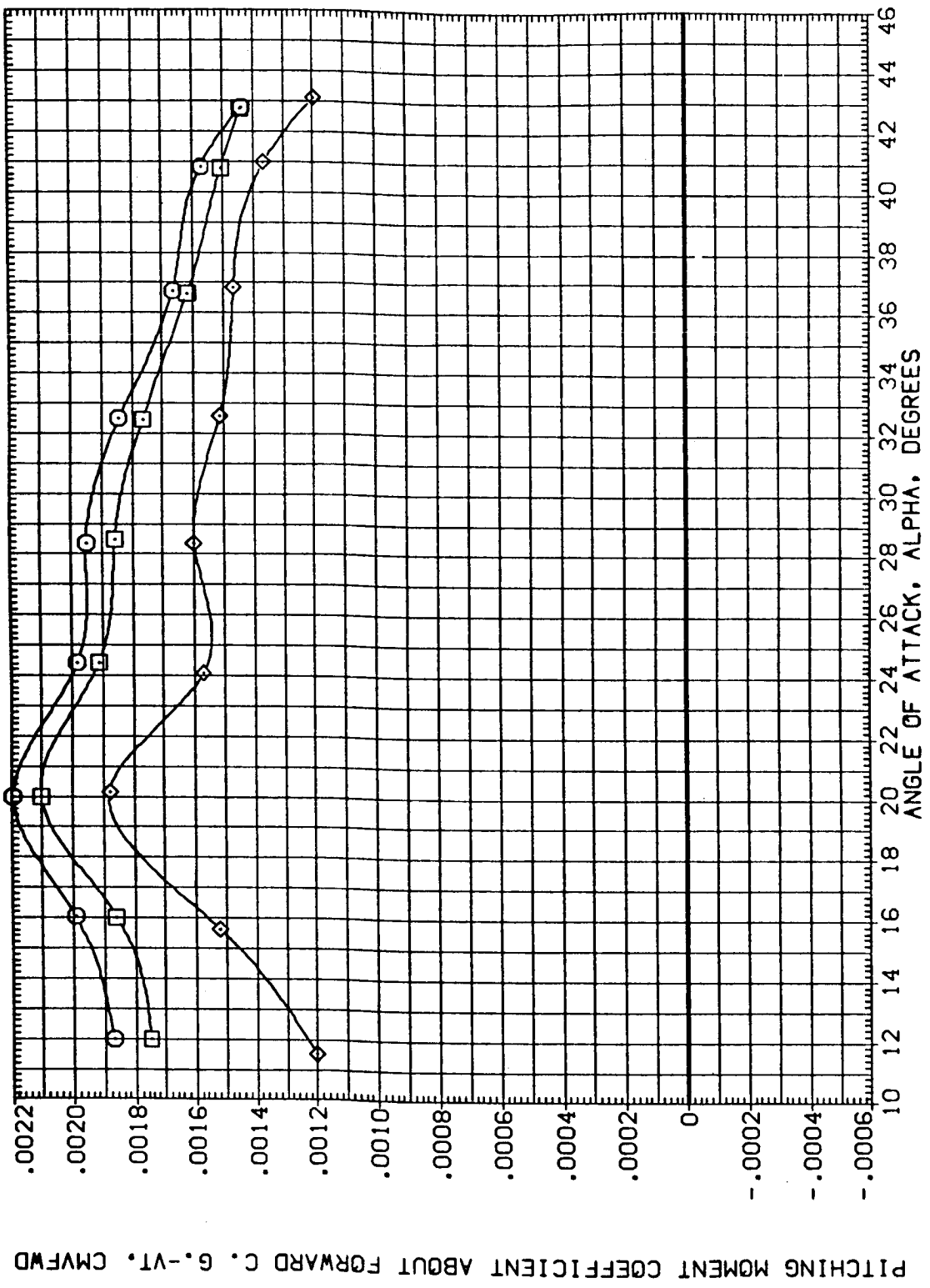


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(BE0003) AMES 3.5-190 DA98 (011-M7+M14) .000 -40.000 -11.700 55.000 SREF 2690.0000 50.FT.

(BE0011) AMES 3.5-190 DA98 (011-M7+M14-N24) .000 -40.000 -11.700 55.000 LREF 474.8000 IN.

(BE0019) AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

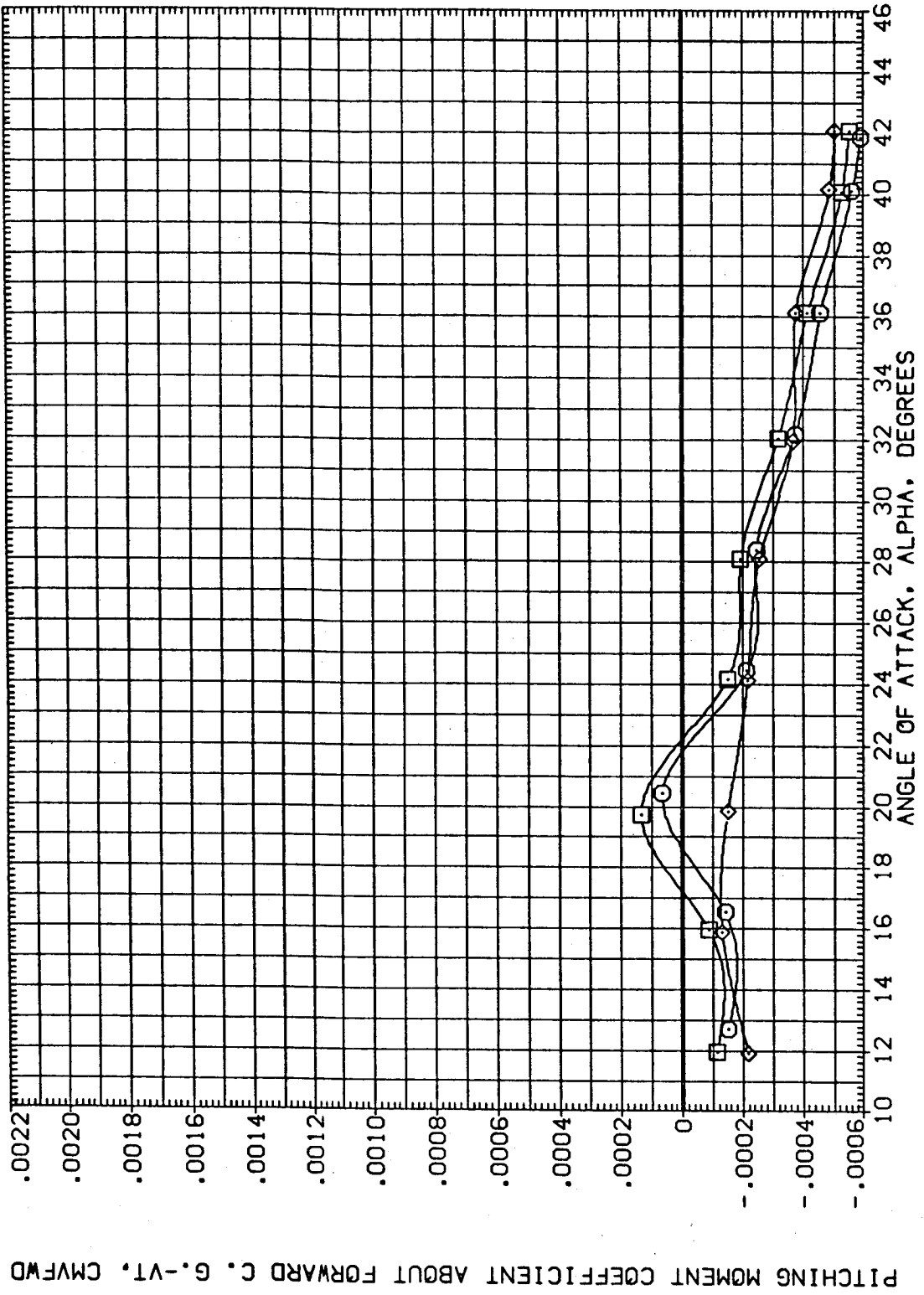


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BE0003) AVES 3.5-190 GA98 (011-M7-H14)
 (BE0011) AVES 3.5-190 GA98 (011-M7-H14-N24)
 (BE0019) AVES 3.5-190 GA98 (011-M7-H14-N24-DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

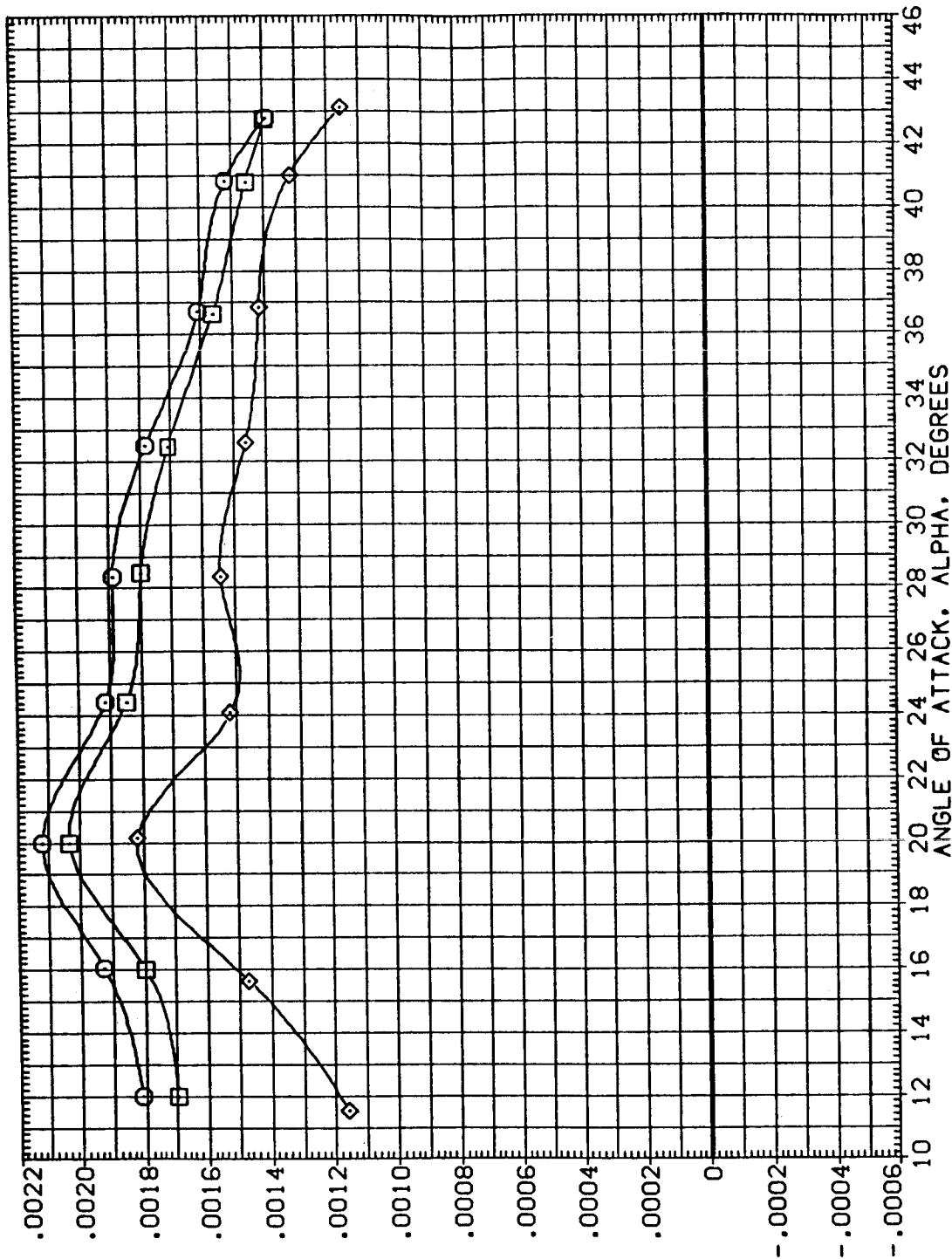


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION SQ. FT.

(BE003) AMES 3.5-190 DIA98 (011-M7+M14) .000 -40.000 -11.700 55.000 2690.0000 IN.

(BE001) AMES 3.5-190 DIA98 (011-M7+M14-N24) .000 -40.000 -11.700 55.000 474.8000 IN.

(BE019) AMES 3.5-190 DIA98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP .0000 IN. Z0
 SCALE 375.0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

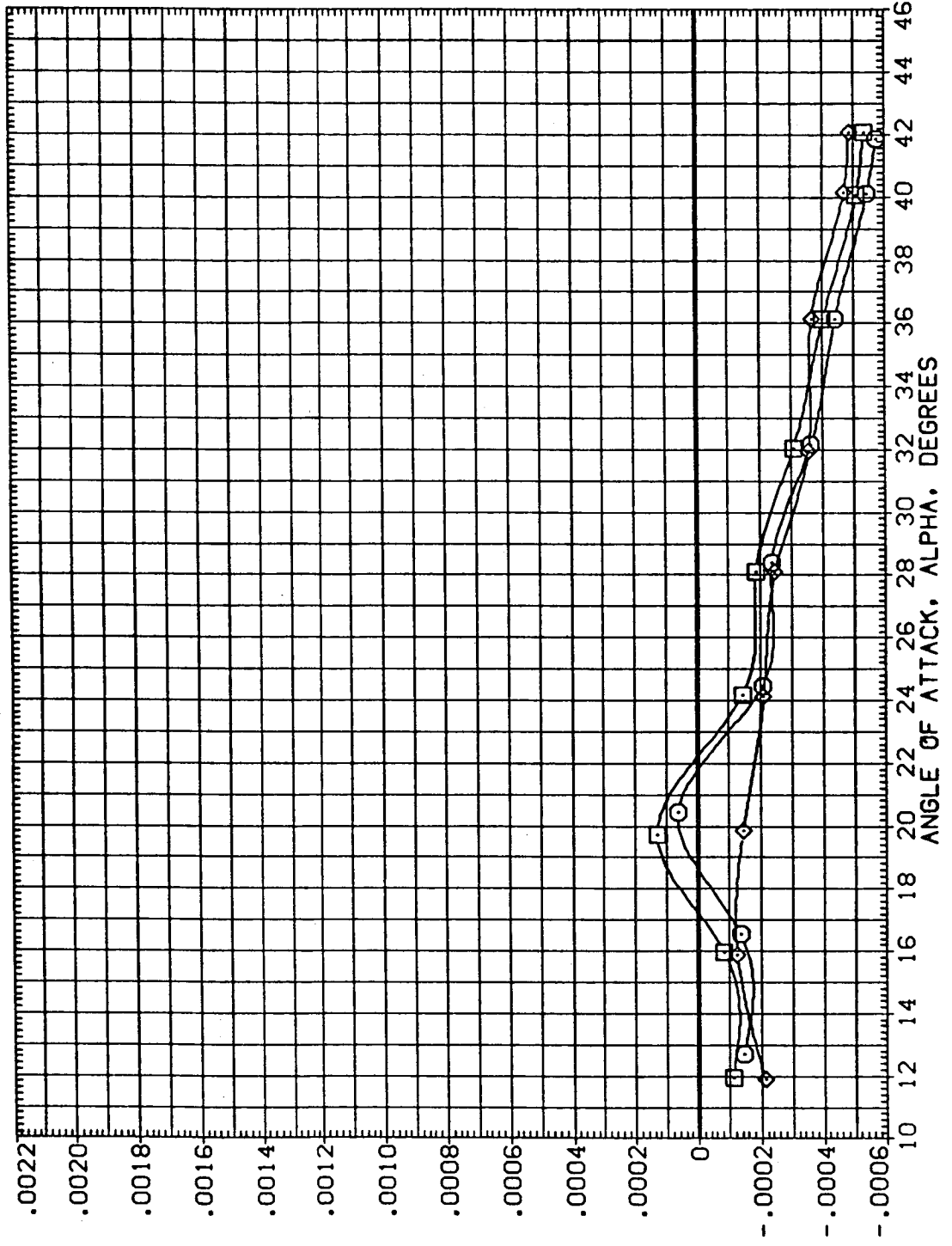


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

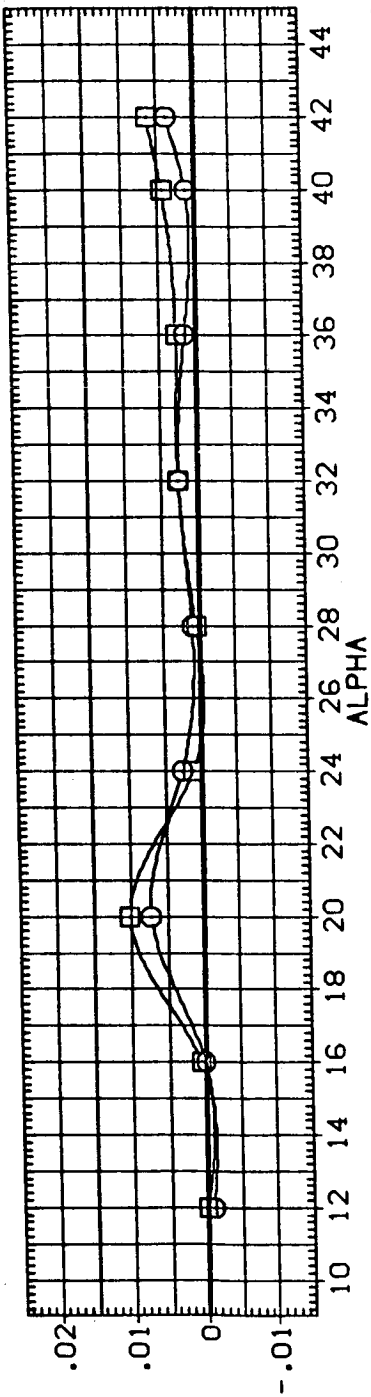
DATA SET SYMBOL (VE0011) (VE0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7-H14-N24)
 AMES 3.5-190 CA98 (011-M7-H14-N24-DUMMY STING)

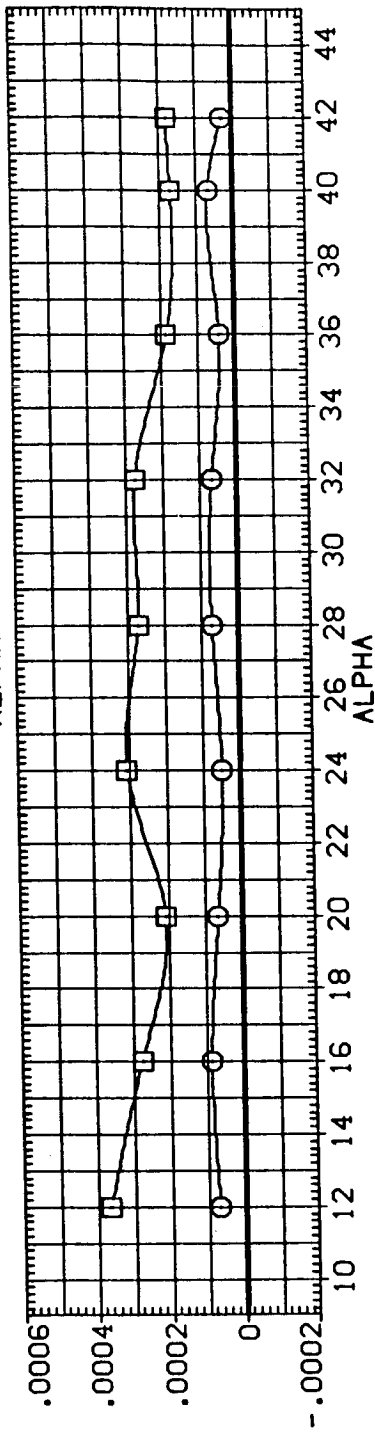
BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPDBRK 55.000
 55.000

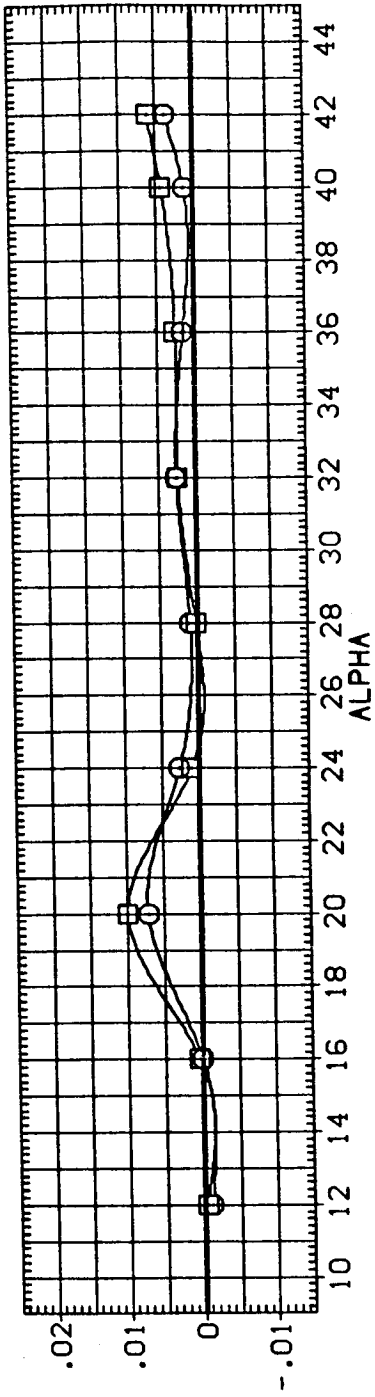
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150



DCLT



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.30

DATA SET SYMBOL (YEO011) (YEO019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14-N24)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

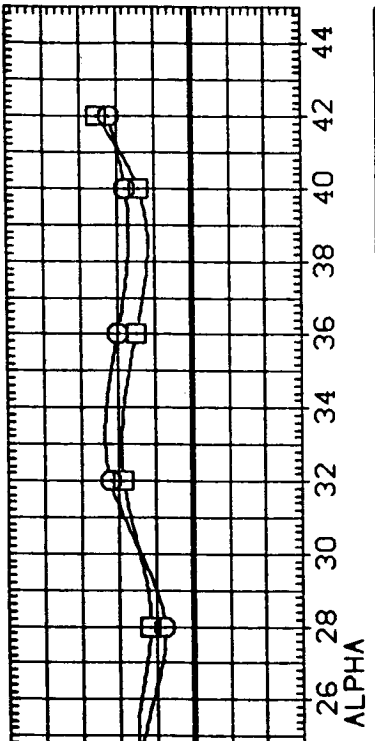
BETA .000
 .000

ELEVON -40.000
 -40.000

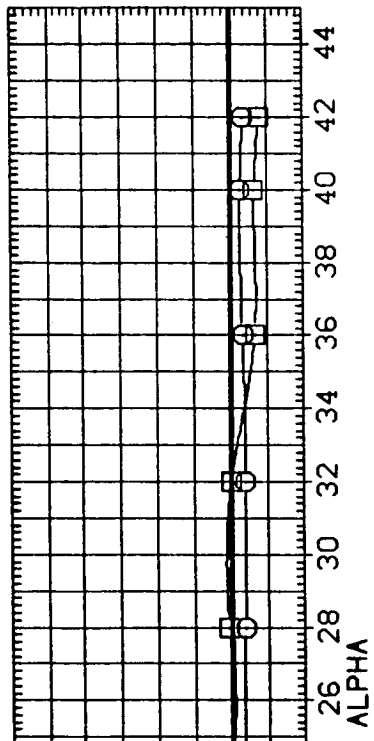
BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

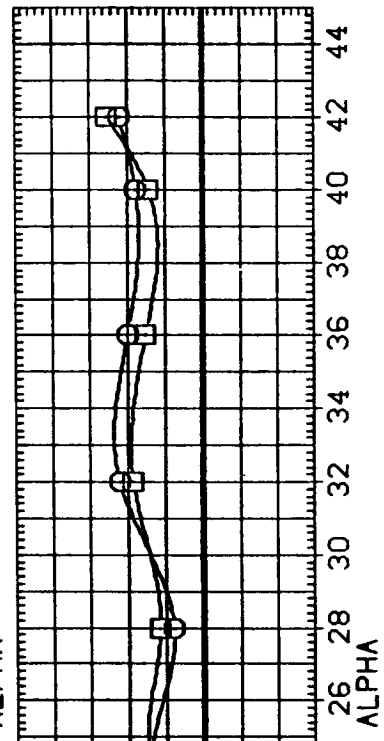
REFERENCE INFORMATION
 SQ.FT. 2690.0000
 SREF 474.8000 IN.
 LREF 936.6800 IN.
 BREF 1076.7000 IN.
 XMRP .0000 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE .0150



DCL1



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (Z00011) (Z00019)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OAS8 (011-N7+M14-N24)
 AVES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BDFLAP -11.700

SPDBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

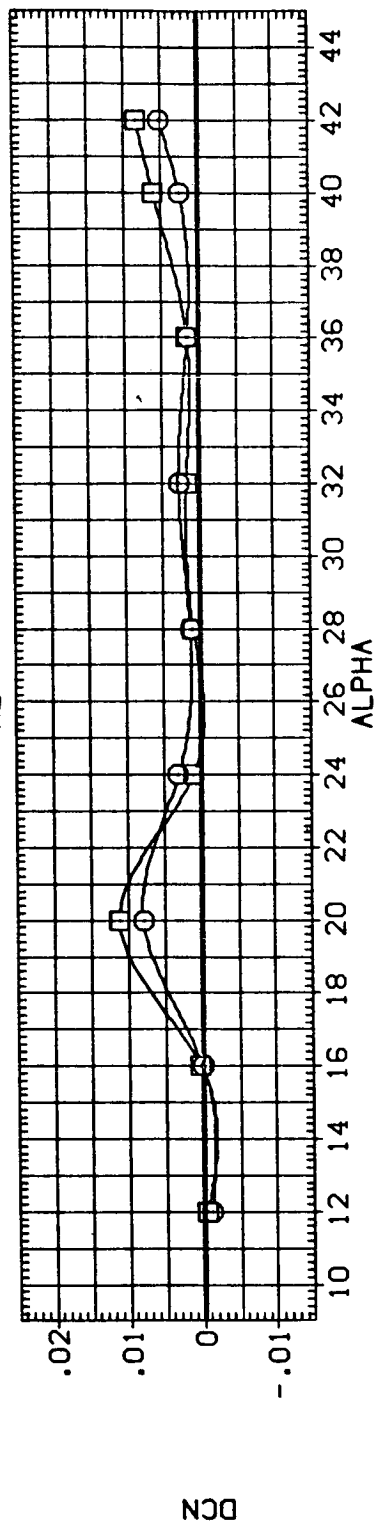
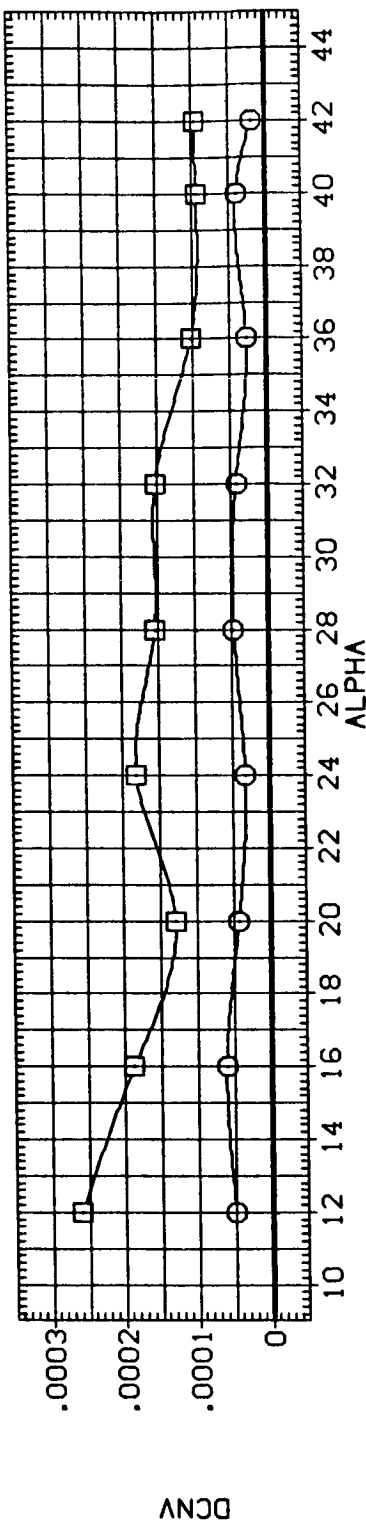
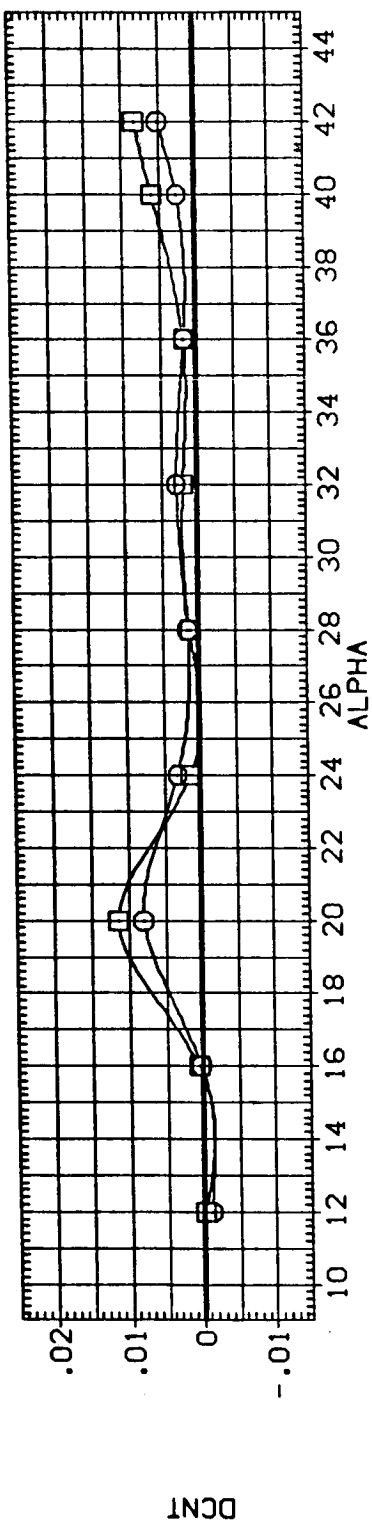



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.30



DATA SET SYMBOL (Z00011) (Z00019)  CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-N7+M14-N24) AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON -40.000 -40.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF	2650.0000	SG.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.X0
XMRP	1076.7000	IN.Y0
YMRP	.0000	IN.Z0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

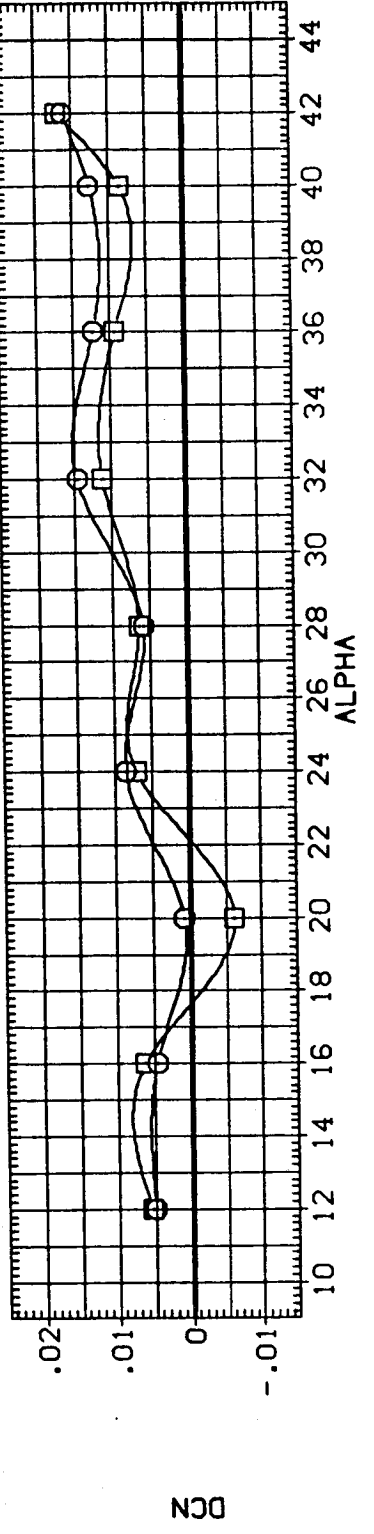
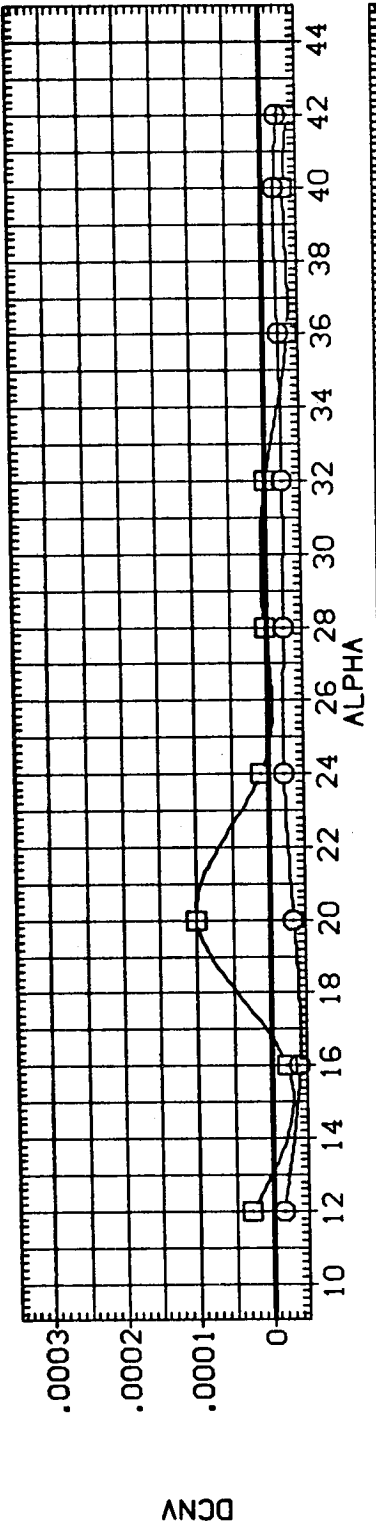
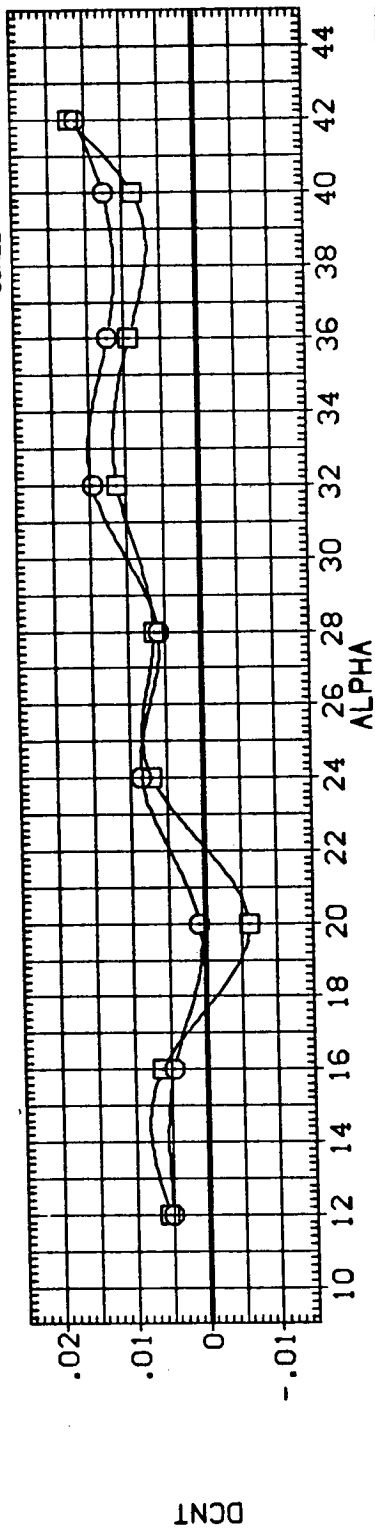


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZEG011) (ZEG019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-17+M14-N24)
 AMES 3.5-190 OAS8 (011-17+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SFDBRK 2690.0000
 LRF 474.8000
 BRP 936.8800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.8800
 IN. 1076.7000
 IN. 375.0000
 IN. 20

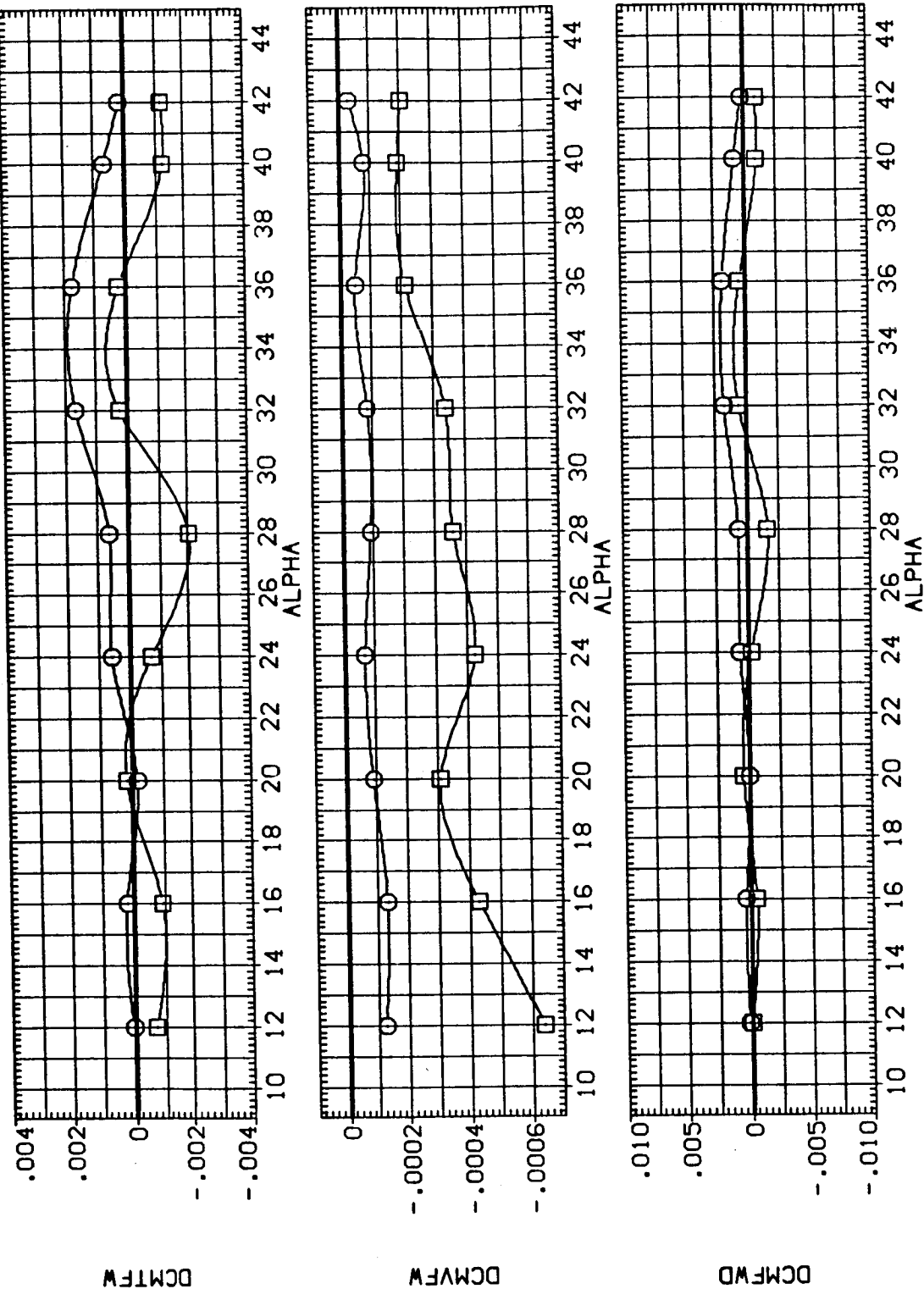


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION (ON
 (Z00011) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (Z00019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

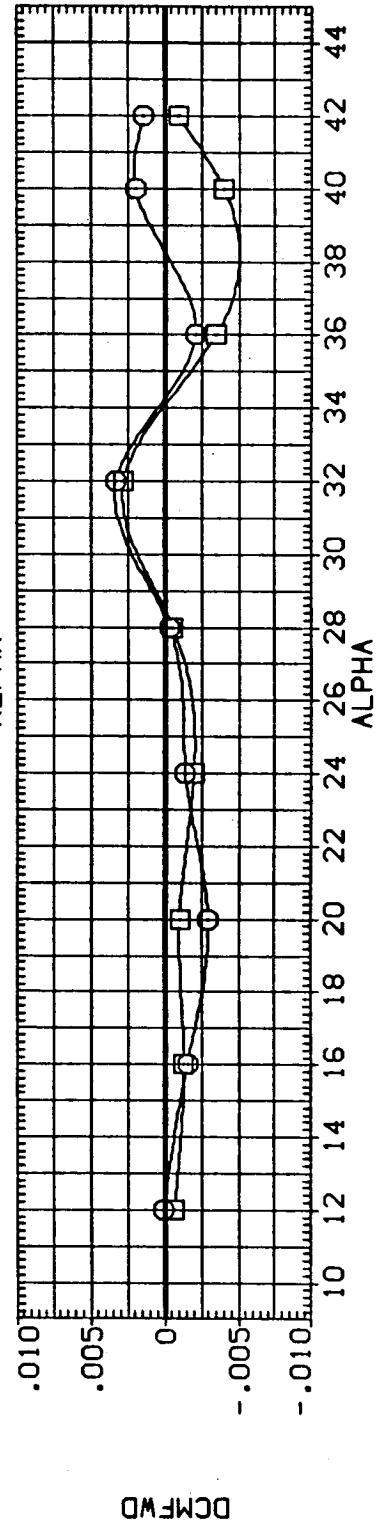
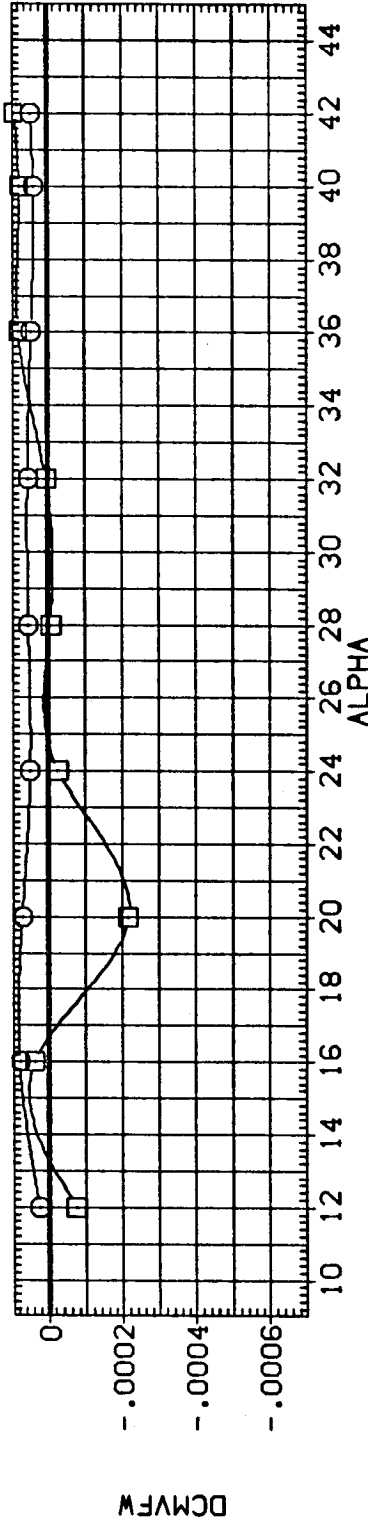
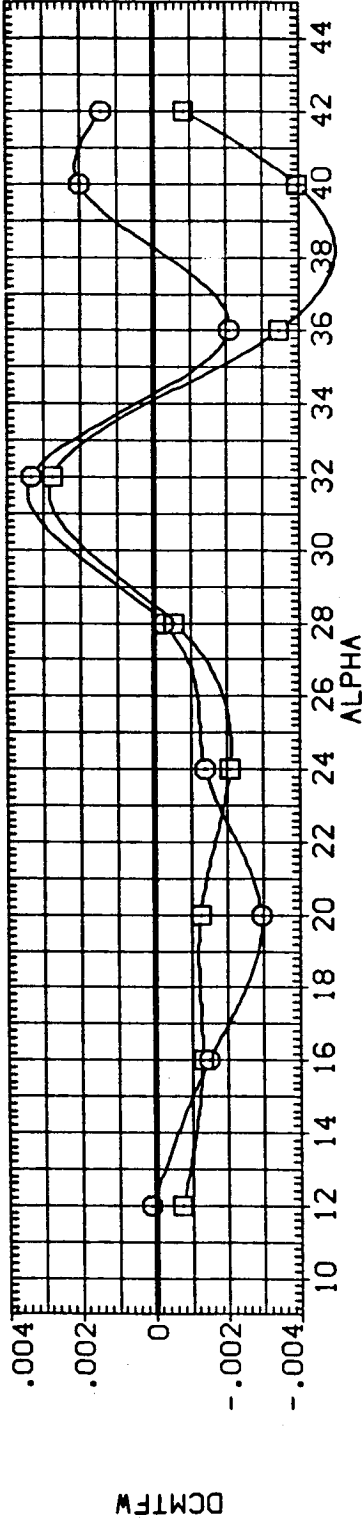


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZEG011) (ZEG019)
 CONFIGURATION DESCRIPTION AMES 3.5-190 CAS8 (011-47-414-N24)
 AMES 3.5-190 CAS8 (011-47-414-N24+DUMMY STING)

BETA .000 .000
 ELEVON -40.000 -40.000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

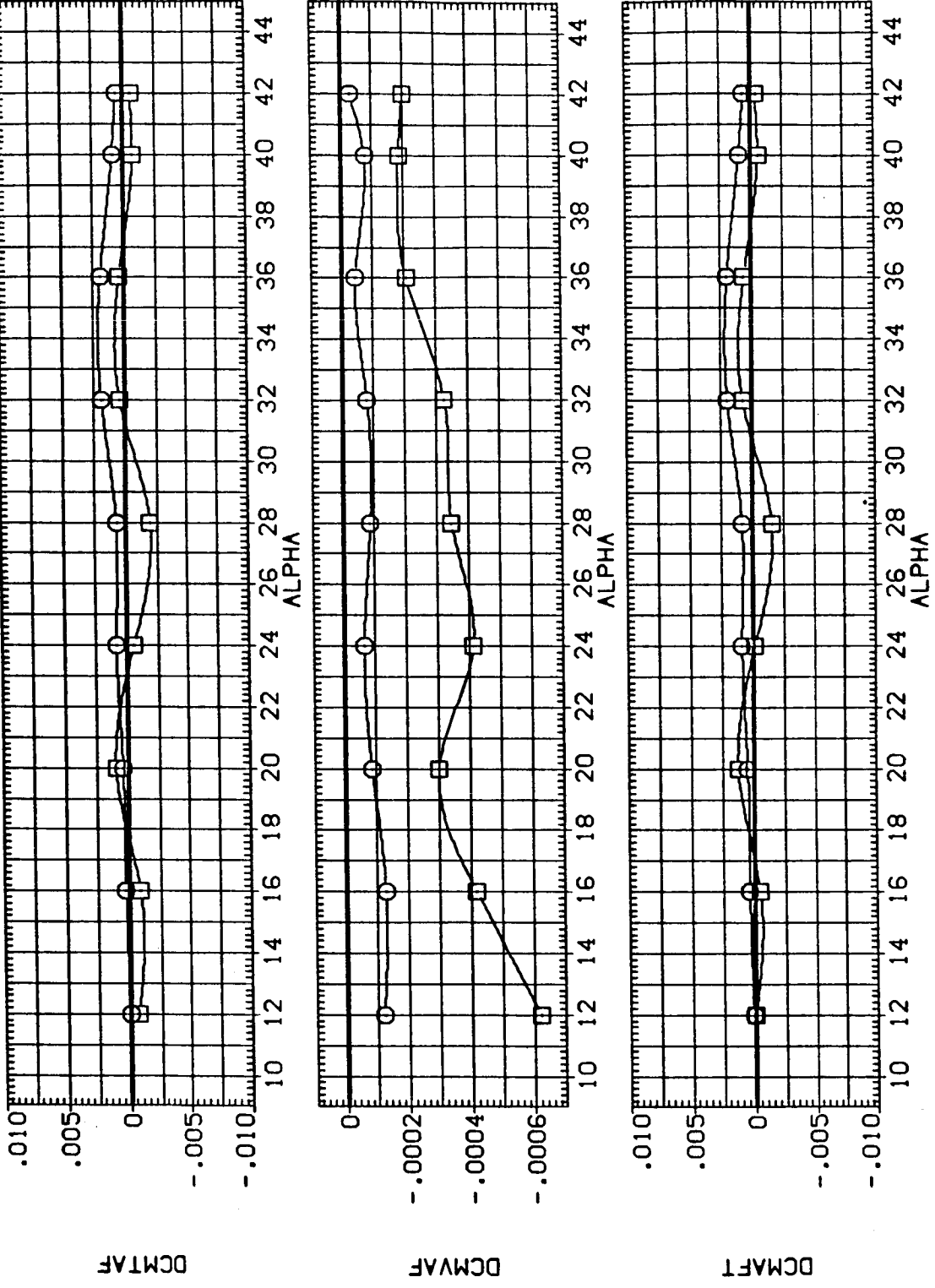


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (Z00011) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (Z00019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BDFLAP SPOBRK
 .000 -40.000 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

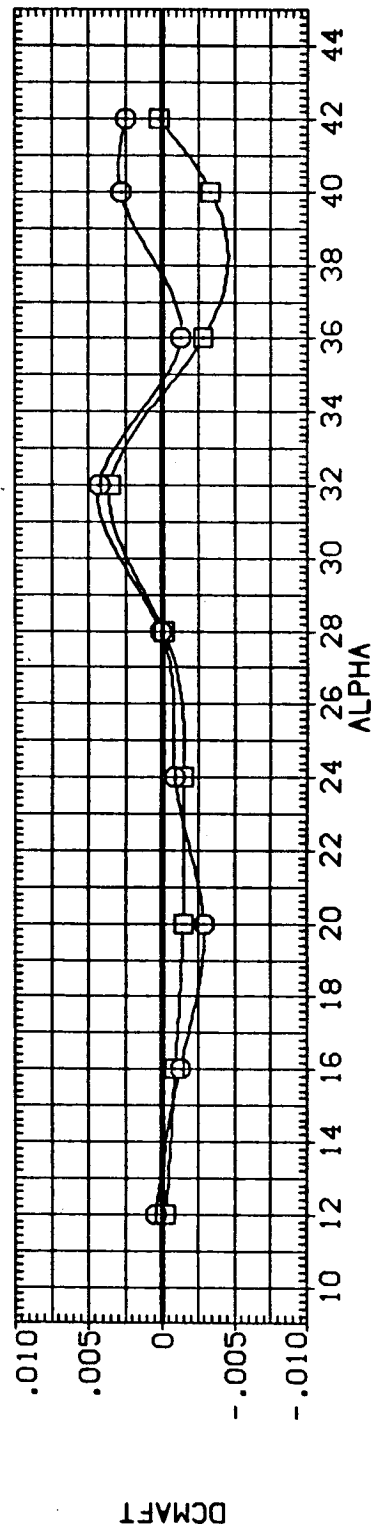
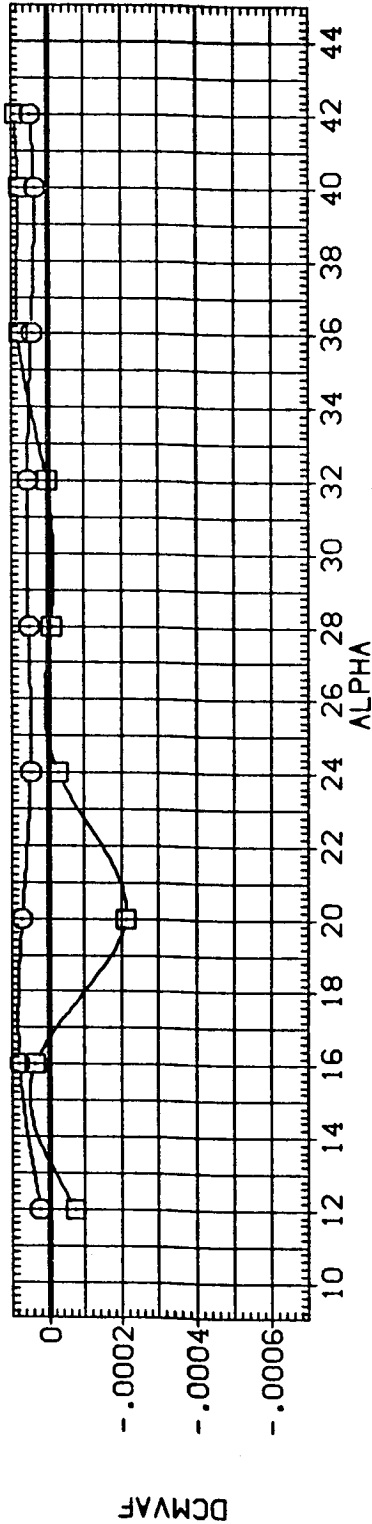
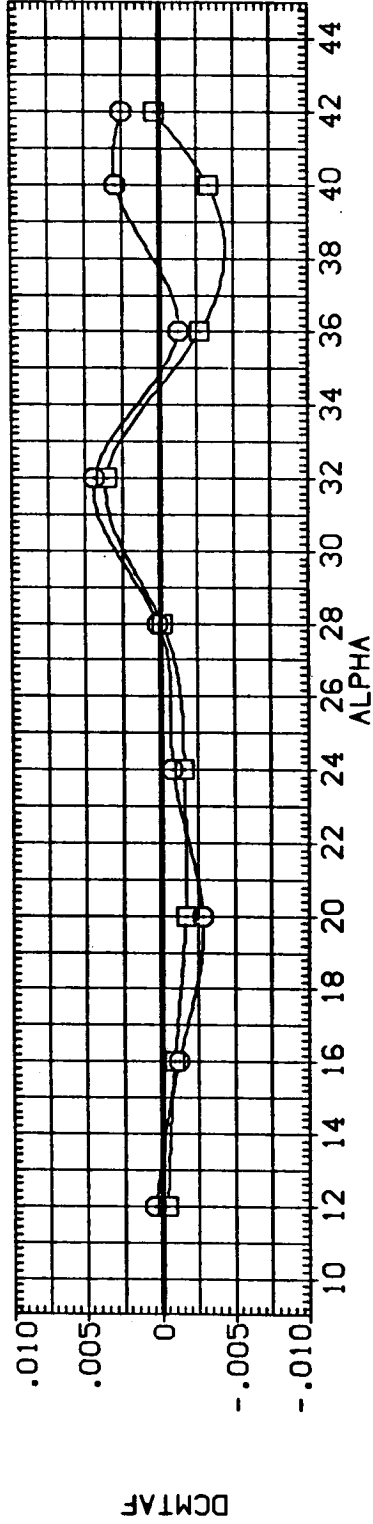


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (1EQ011) (1EQ019)

CONFIGURATION DESCRIPTION AMES 3.5-190 CAS8 (011-177-M14-N24)

AMES 3.5-190 CAS8 (011-177-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON -40.000 -40.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

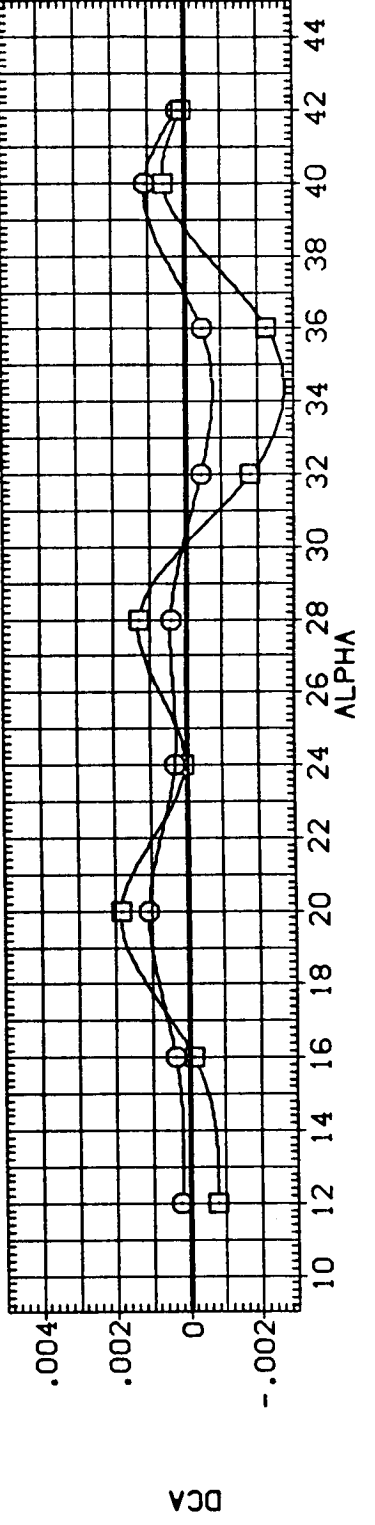
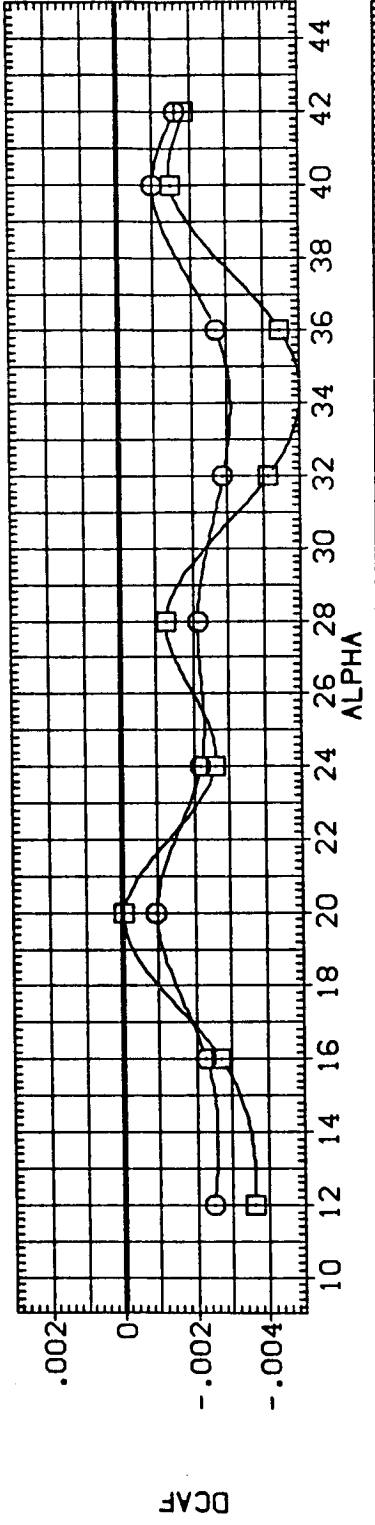
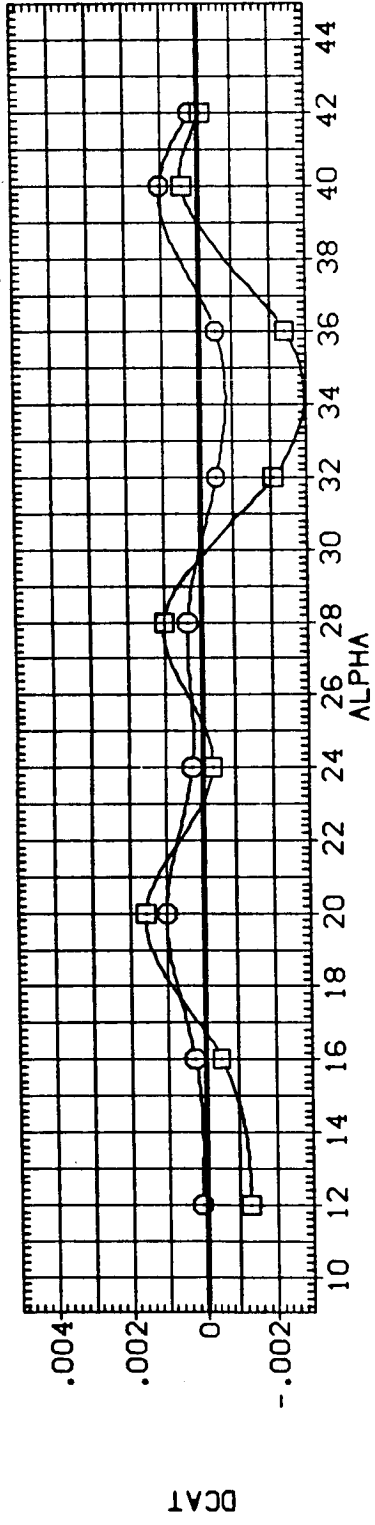


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (1E0011) (1E0019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7-M14-N24)
 AMES 3.5-190 OA98 (011-M7-M14-N24-DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 90.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

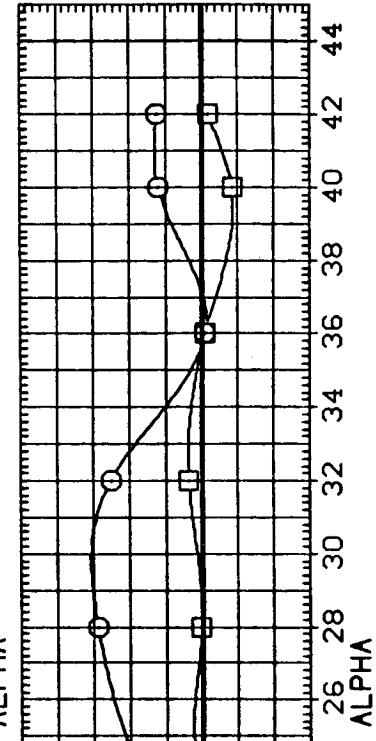
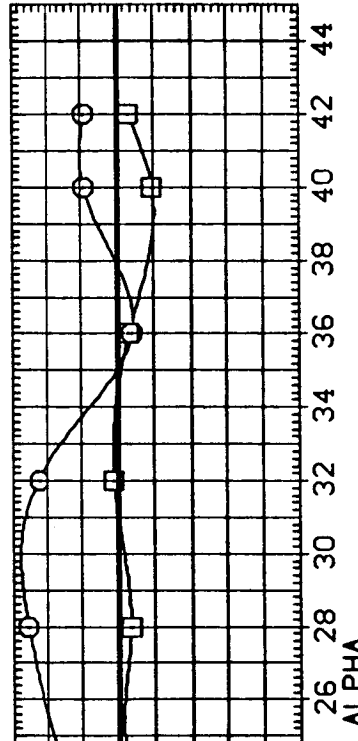
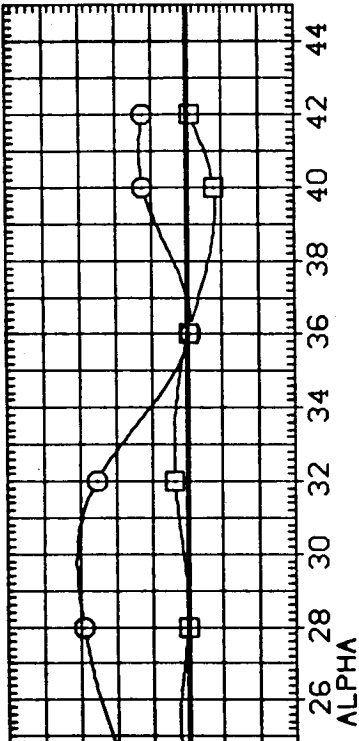


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (11EQ011) (11EQ019)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7-M14-N24)
 AMES 3.5-190 CA98 (011-M7-M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON -40.000
 -40.000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

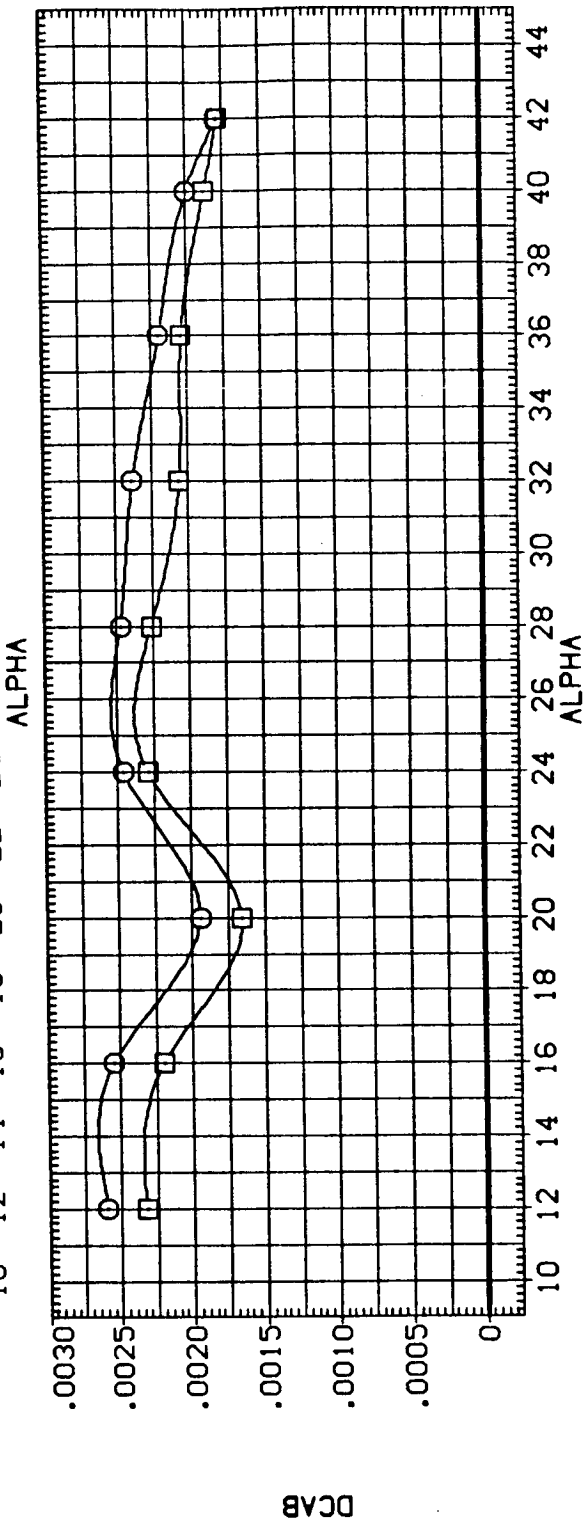
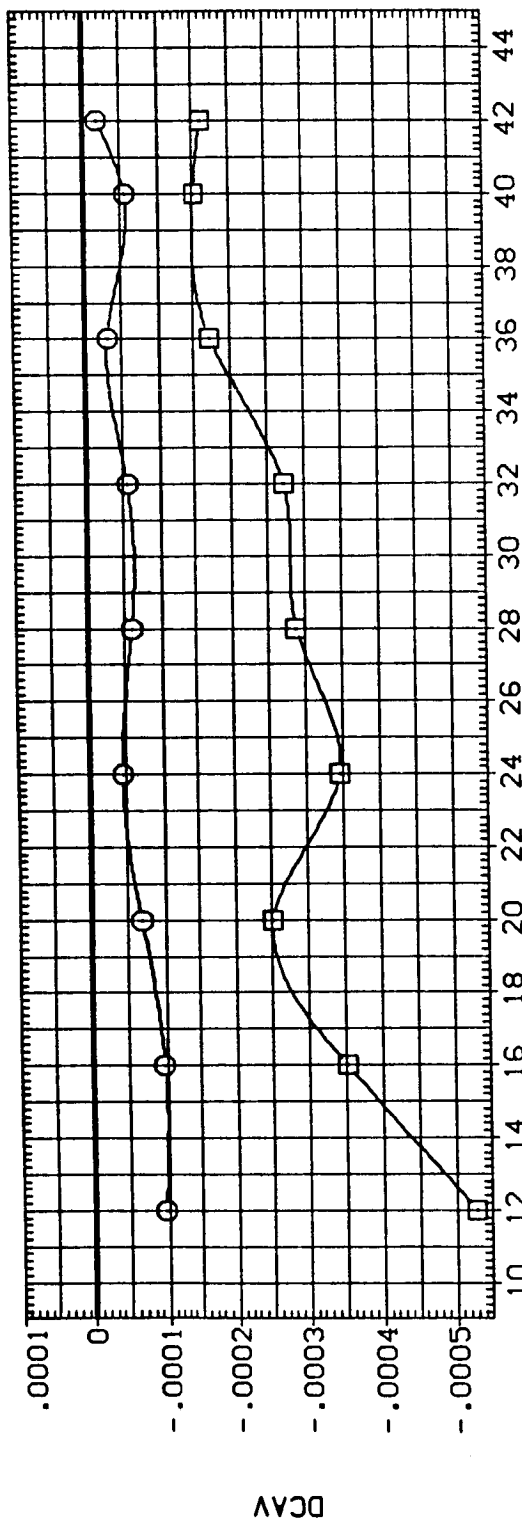


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(1EQ011) APES 3.5-190 QAS8 (011-M7+M14-N24) .000 -40.000 -11.700 55.000 SREF 2690.0000 SQ.FT.

(1EQ019) APES 3.5-190 QAS8 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 LREF 474.8000 IN.

XMRP 936.6800 IN.

YMRP 1076.7000 IN.

ZMRP .0000 IN.

SCALE 375.0000 IN.20

.0150

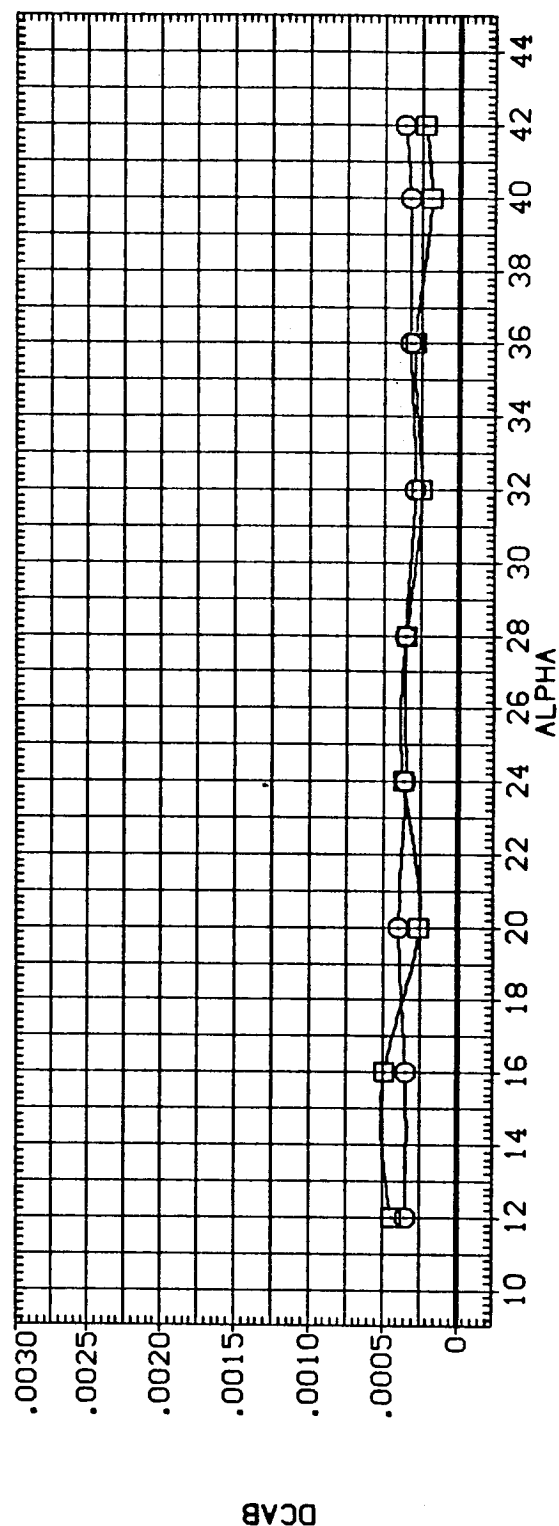
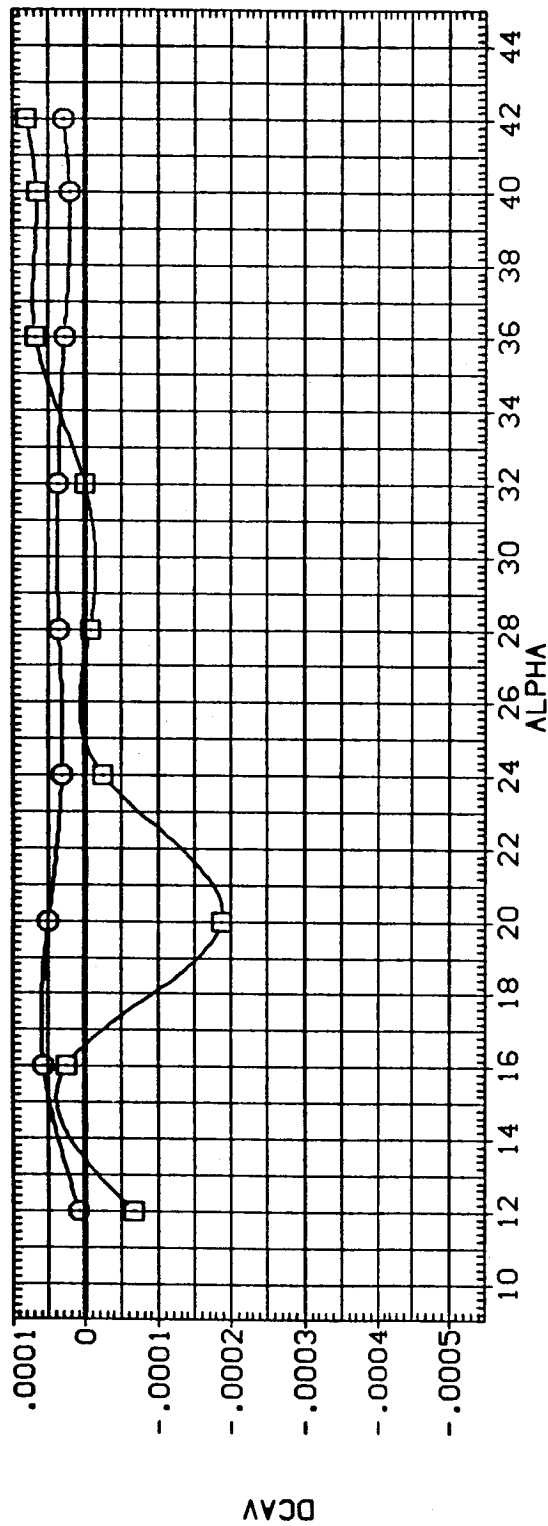


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (YEG011) AMES 3.5-190 0A98 (011-M7+M14-N24)
 (YEG019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

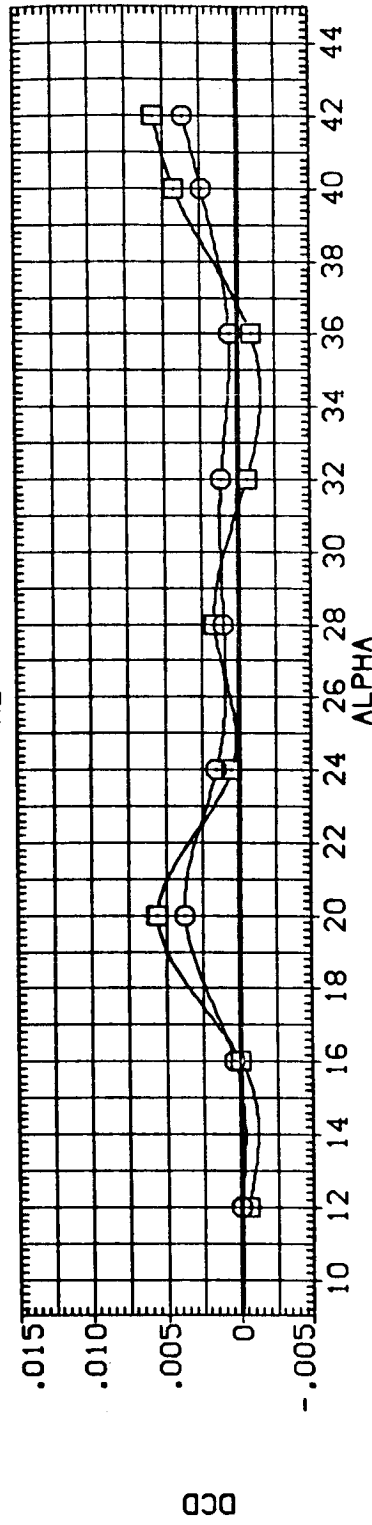
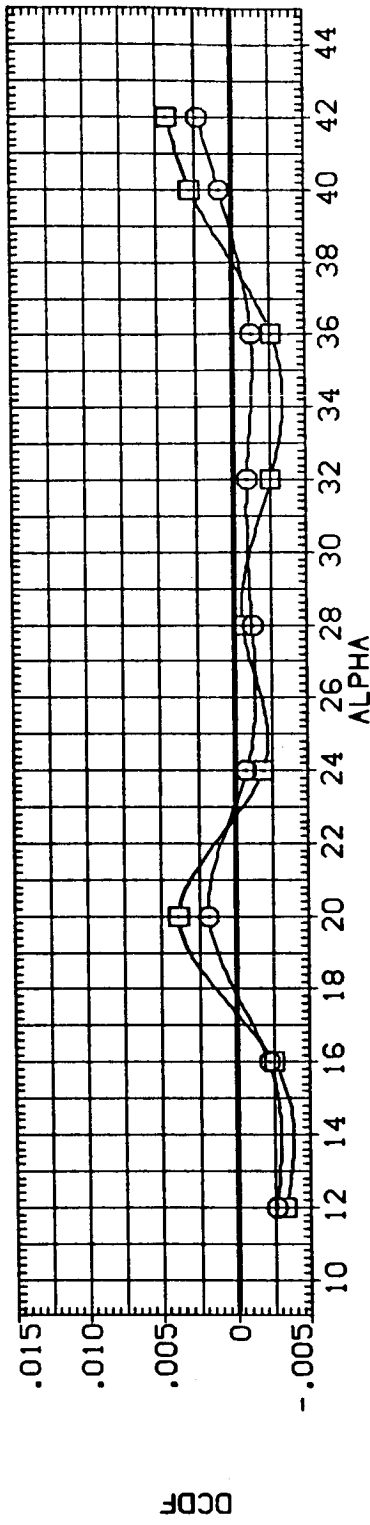
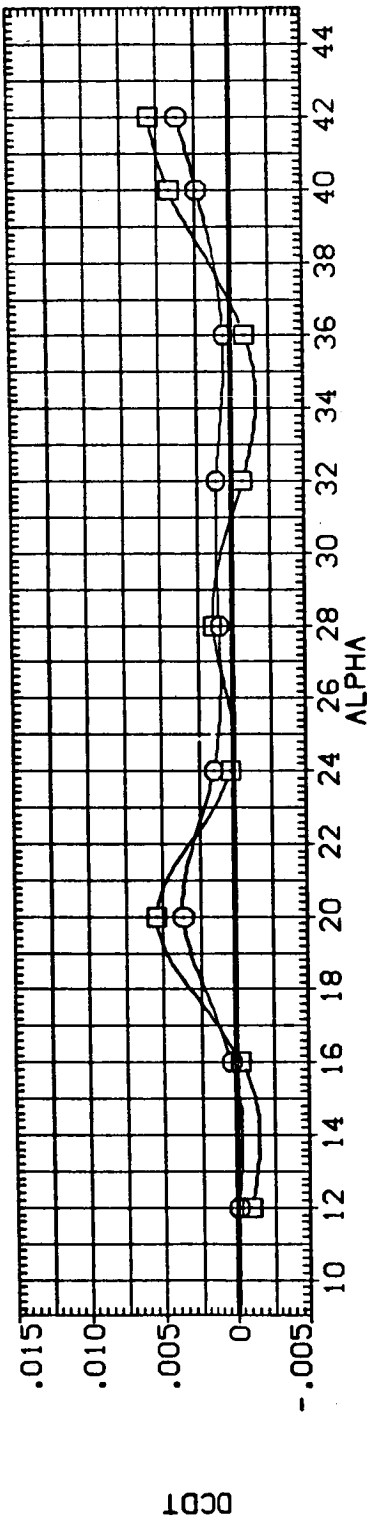



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YE0011) (YE0019)  CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-M7+M14-N24) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
				BREF 936.6800 IN.
				XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

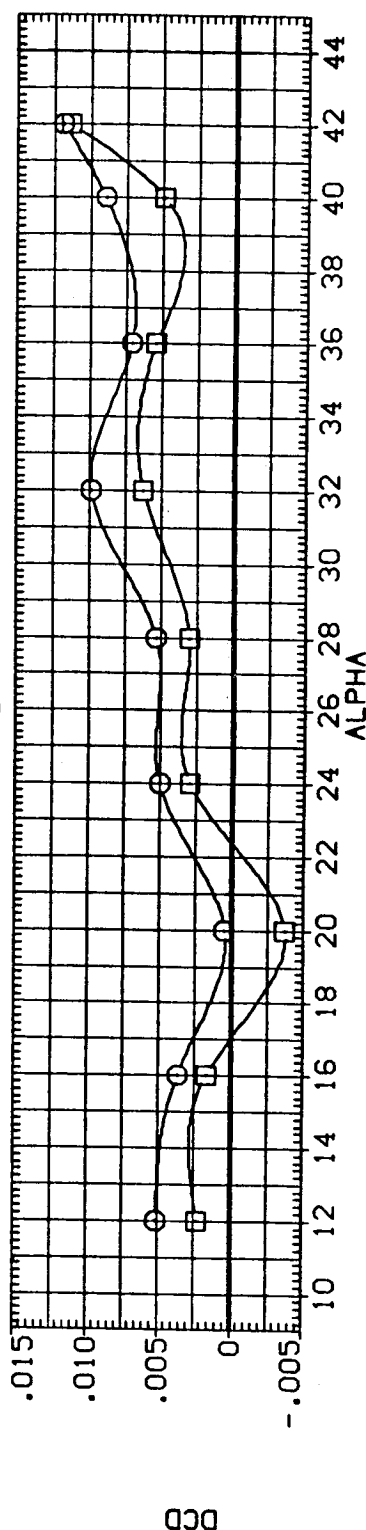
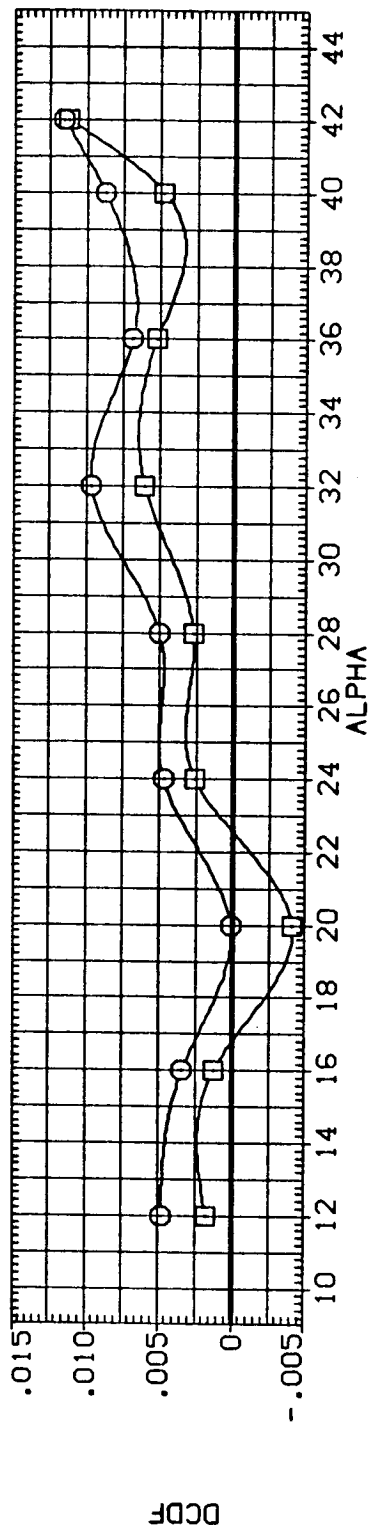
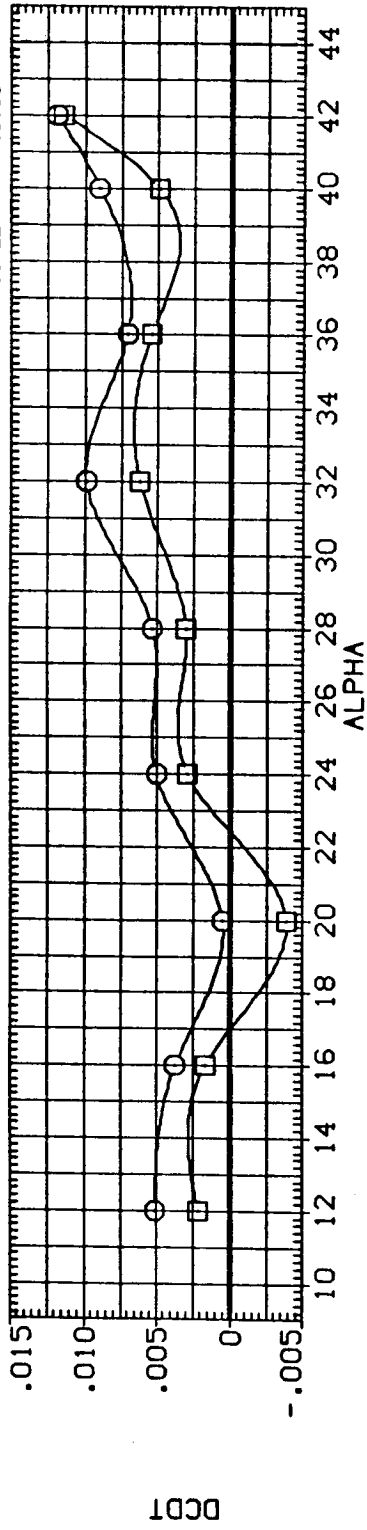


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (YEG011) (YEG019)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 GA98 (011-M7+M14-N24)
 ANES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPOBRK 55.000
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

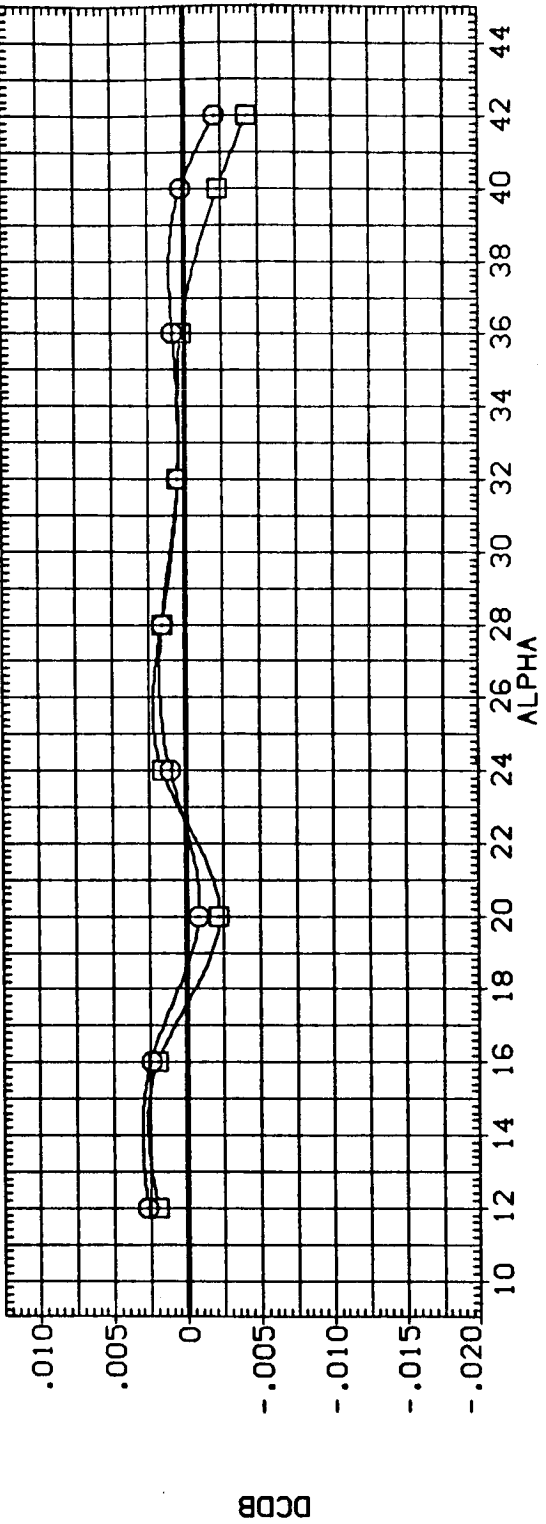
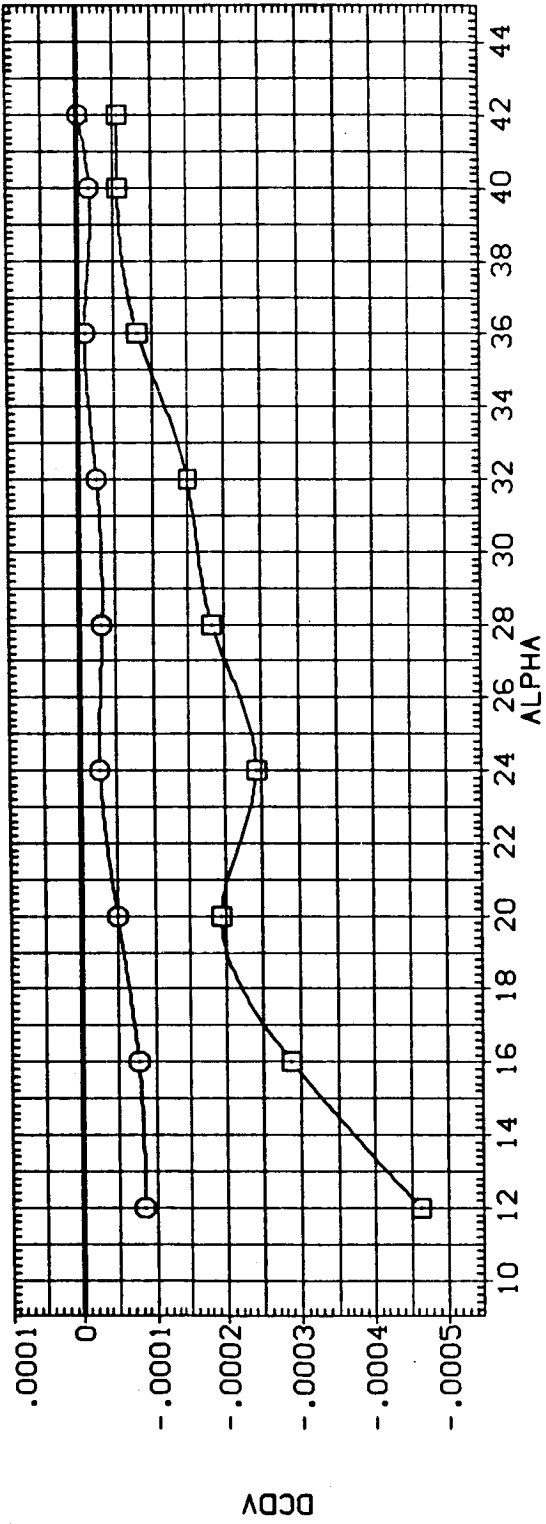



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (YEG011) (YEG019)  CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-M7-M14-N24) AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING) BETA .000 .000 ELEVON -40.000 -40.000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

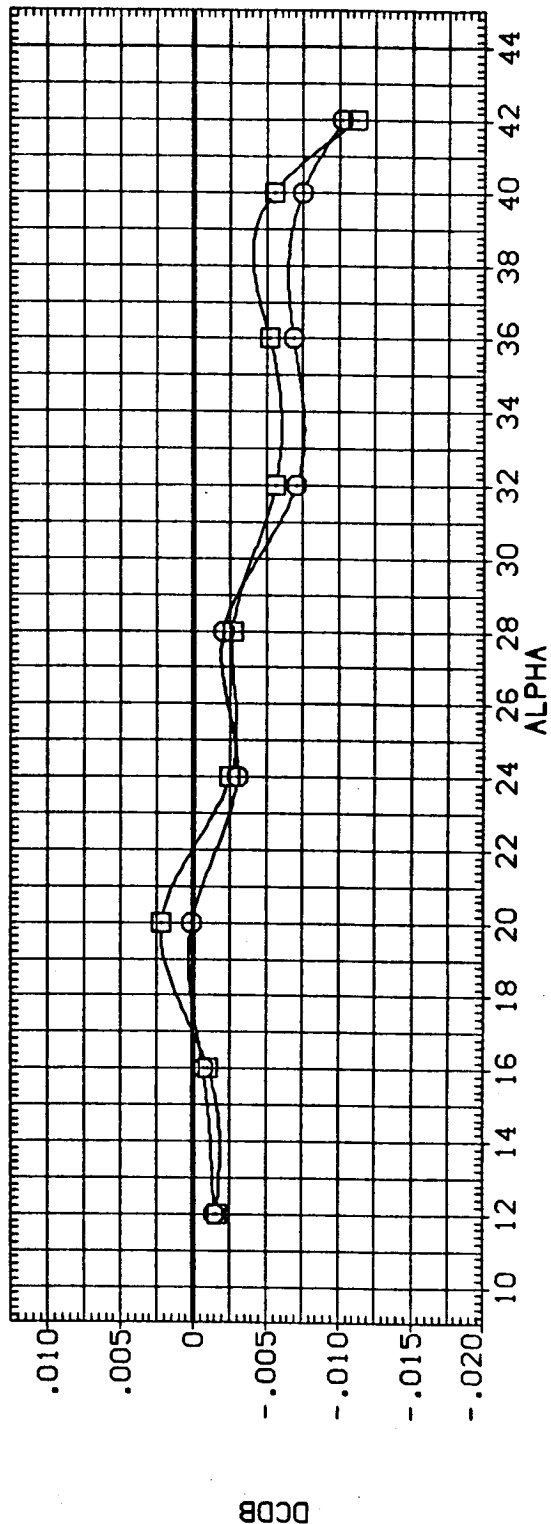
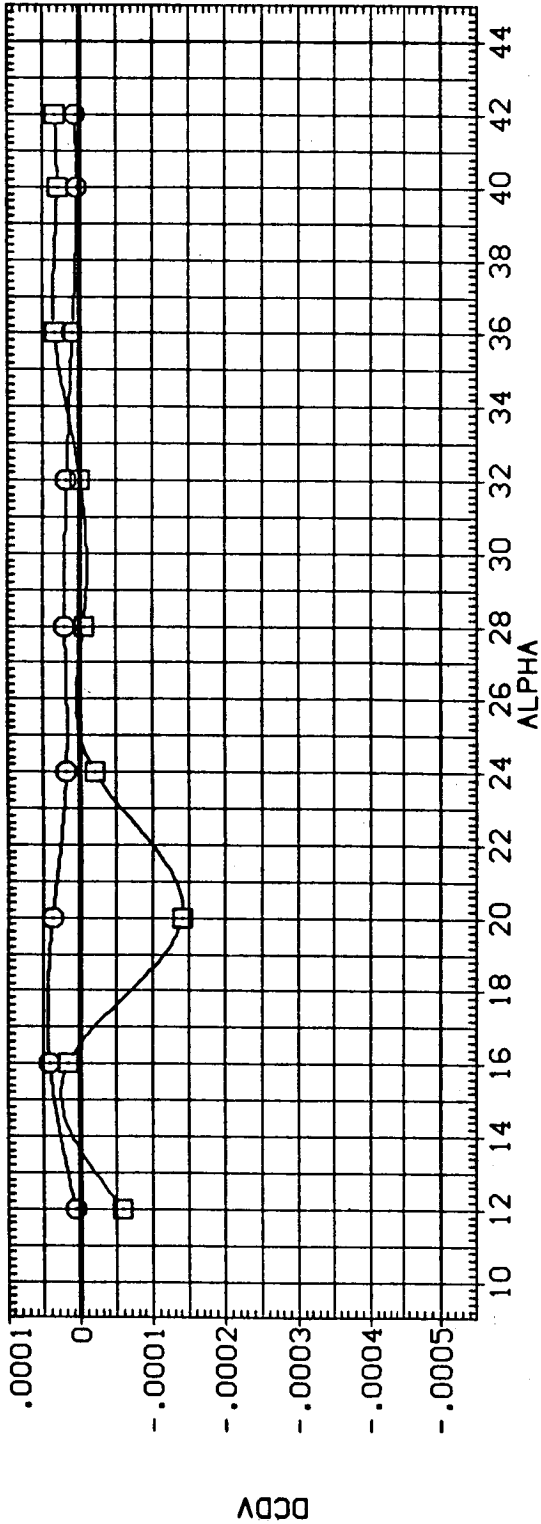


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (AEG0003) (AEG0011) (AEG0019)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-M7+H14)
 APES 3.5-190 GA98 (011-M7+H14-N24)
 APES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.XD
 XMRP 1076.7000 IN.YD
 YMRP .0000 IN.ZD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

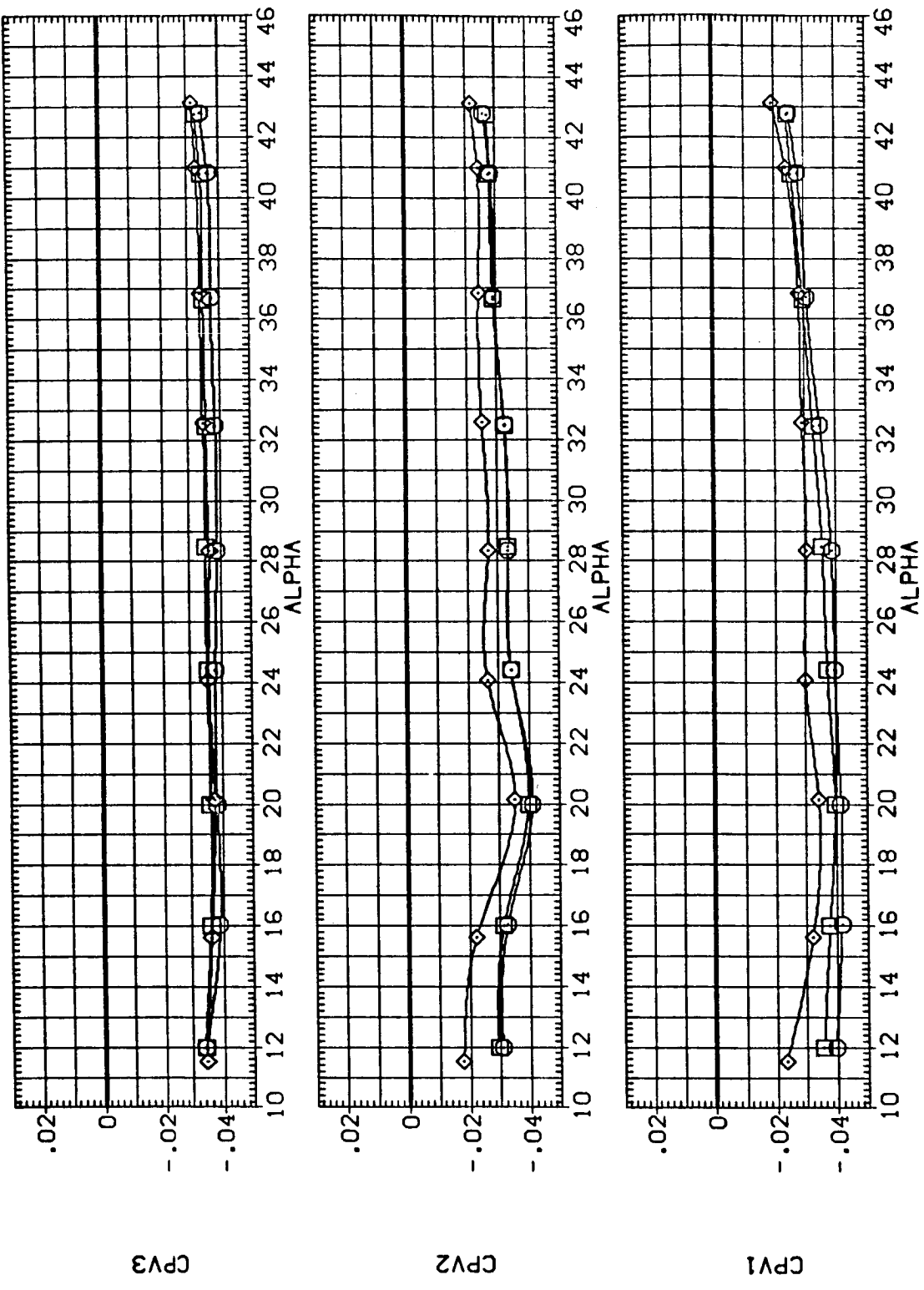


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AEG003) AMES 3.5-190 OA98 (011-M7+M14)
 (AEG011) AMES 3.5-190 OA98 (011-M7+M14-N24)
 (AEG019) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION SQ.FT.
 SREF 2690.0000
 LREF 474.8000 IN.
 BREF 936.8600 IN. X0
 YMRP 1076.7000 IN. Y0
 ZMRP .0000 IN. Z0
 SCALE .0150

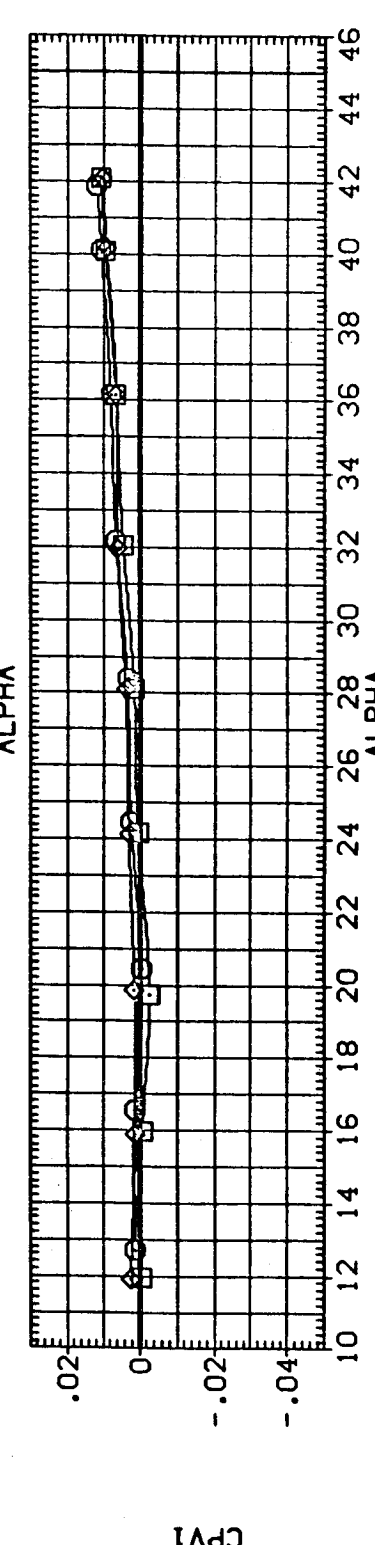
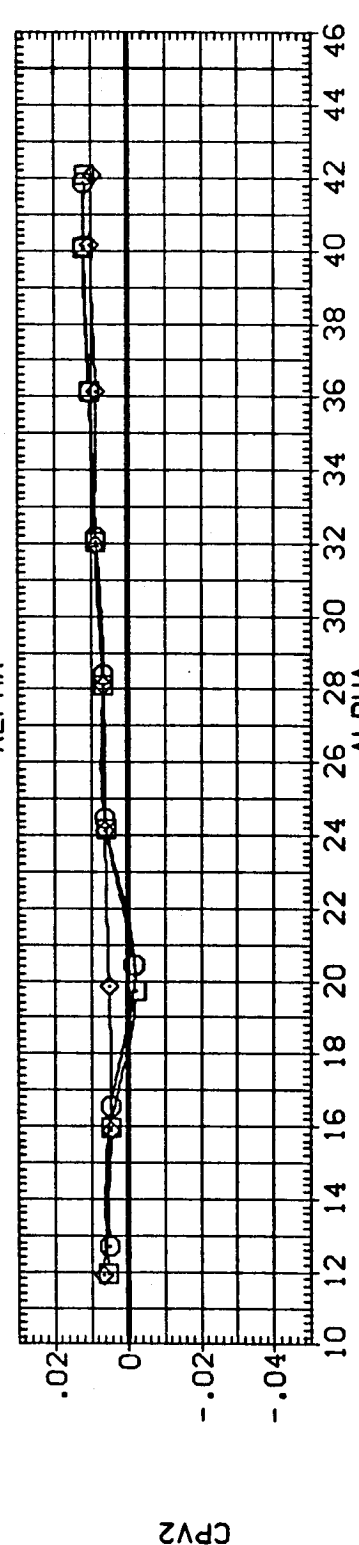
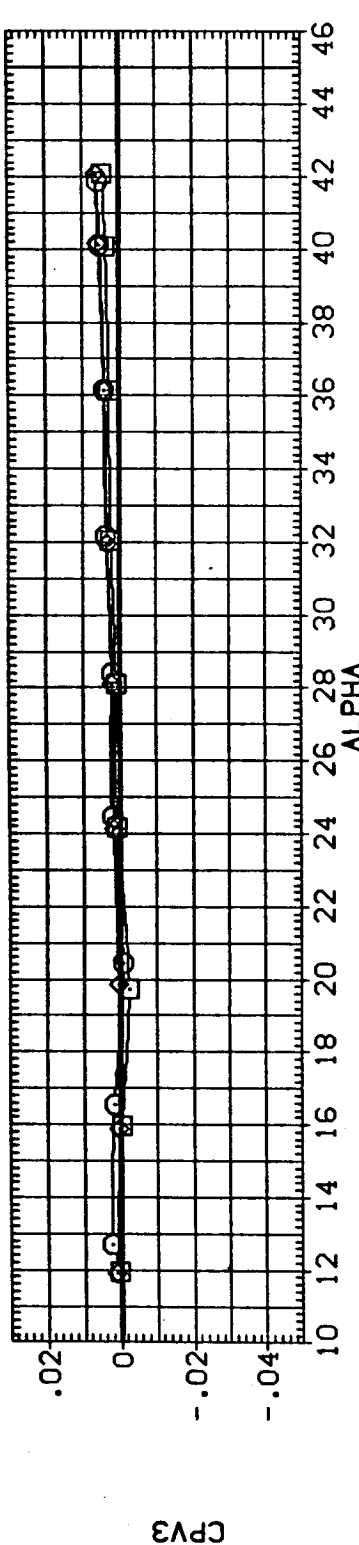


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

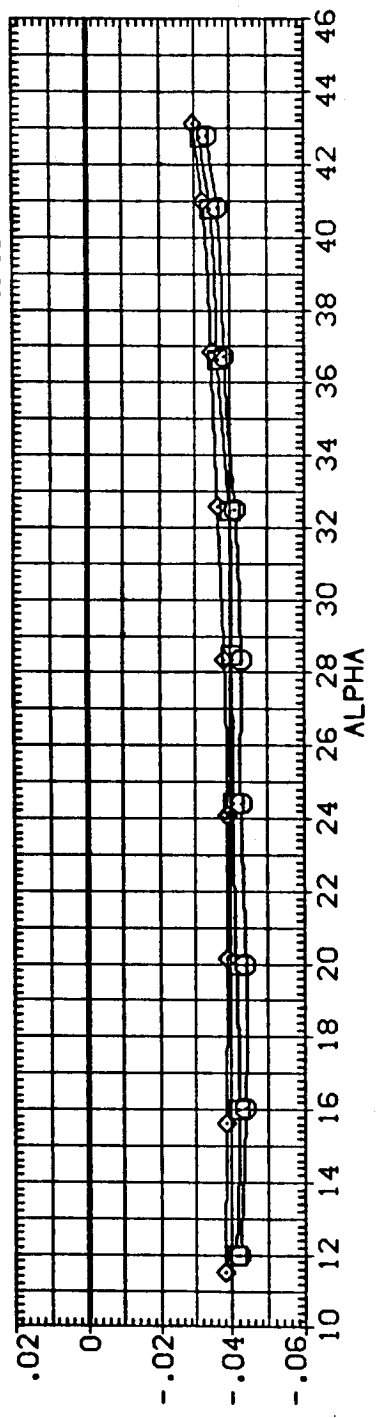
(B)MACH = 10.27

DATA SET SYMBOL (AEG003) (AEG011) (AEG019)

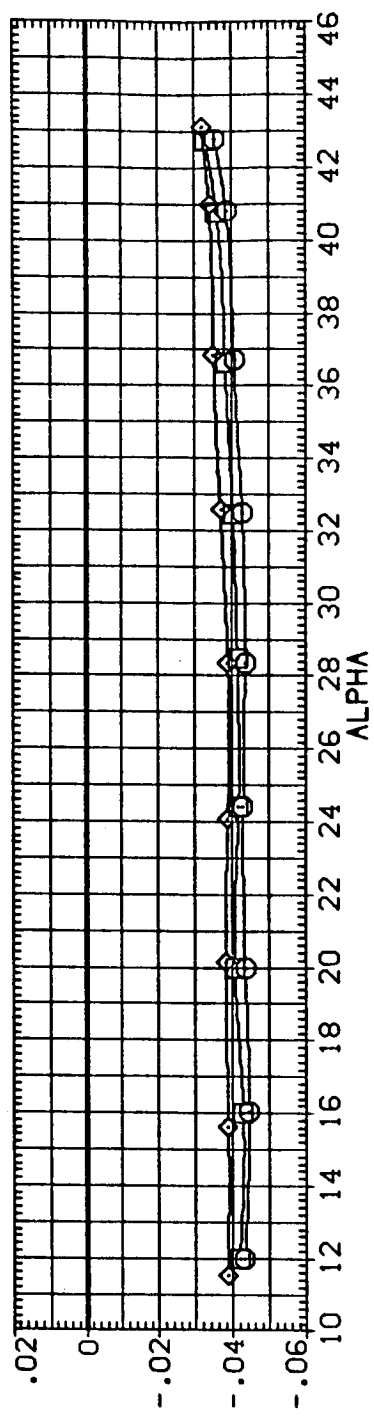
CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7+H14)
 AMES 3.5-190 CA98 (011-M7+H14-N24)
 AMES 3.5-190 CA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

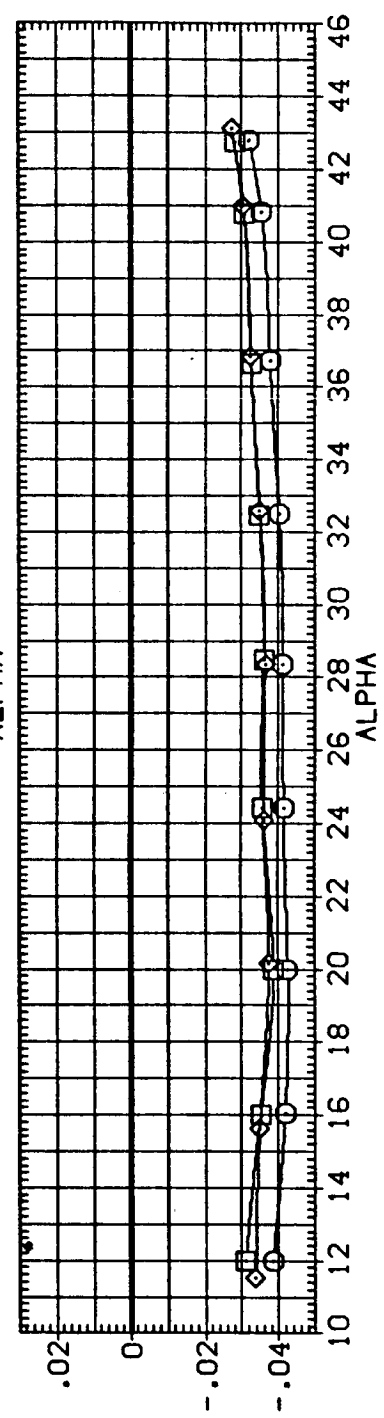
REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



CPB3



CPB2



CPB1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

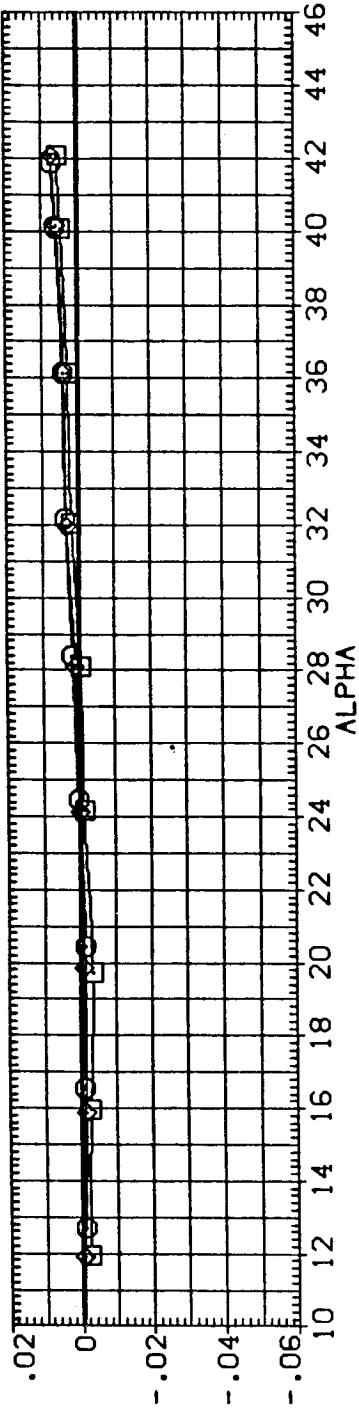
(A)MACH = 5.25

DATA SET SYMBOL (AEG003) (AEG011) (AEG019)

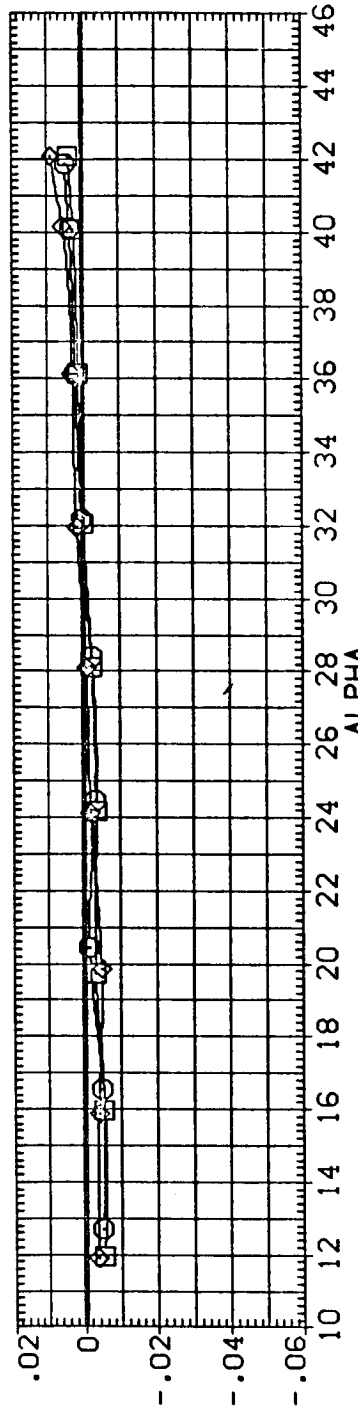
CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-N7+M14)
 AMES 3.5-190 0A98 (011-N7+M14-N24)
 AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

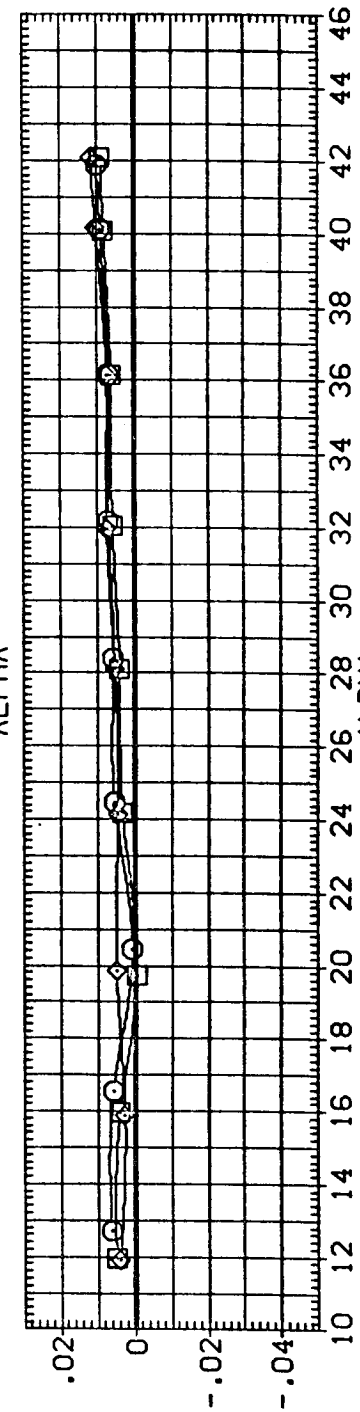
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



CPB3



CPB2



CPB1

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
 (B)MACH = 10.27

DATA SET SYMBOL (CE0004) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP .0000 IN. Z0
 SCALE 375.0150

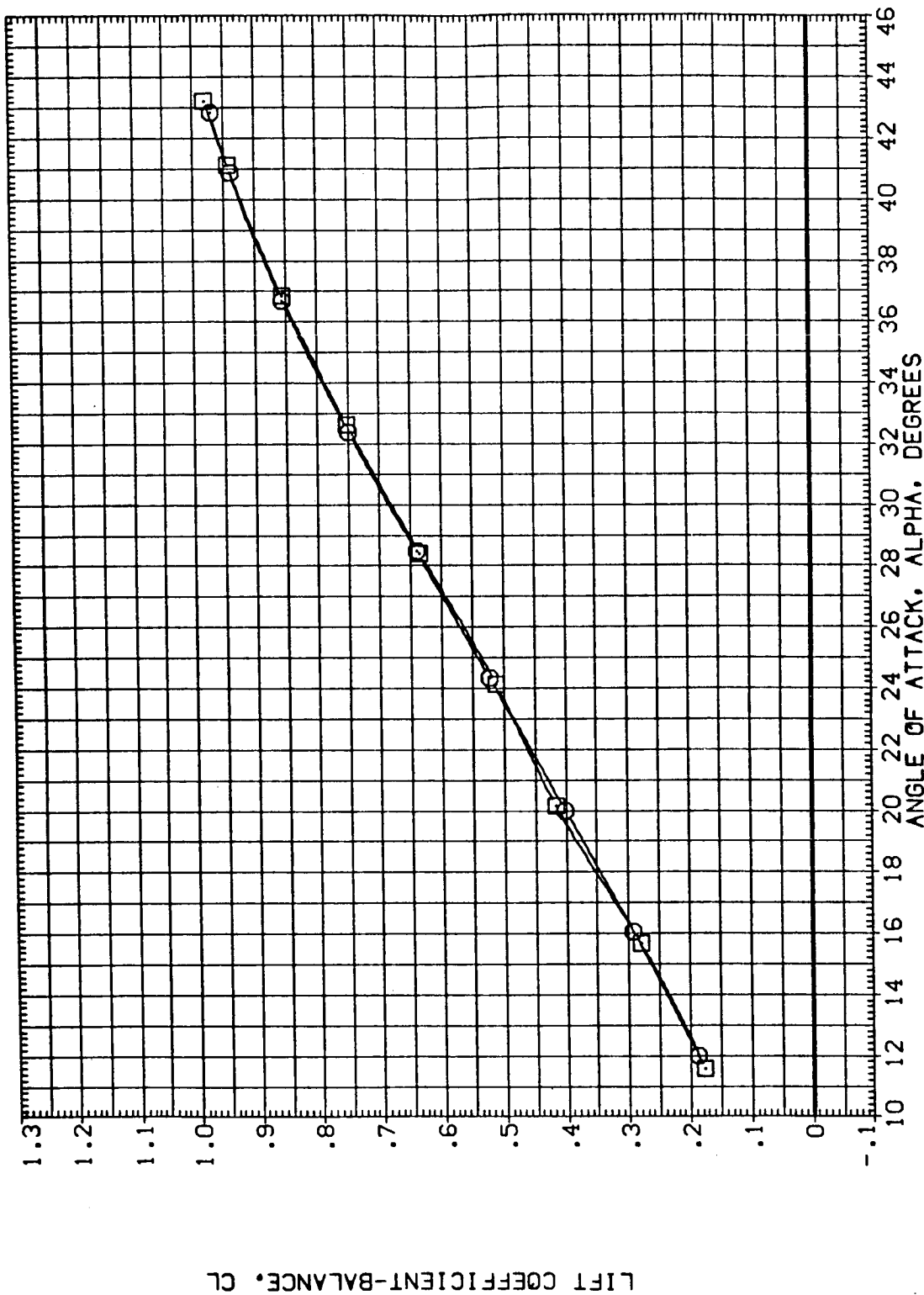


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0004) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDF LAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SQ. FT. 2690.0000
 SREF 474.8000
 LREF 936.6800
 BRFP 1076.7000
 XMRP .0000
 YMRP .0000
 ZMRP .0000
 SCALE .0150

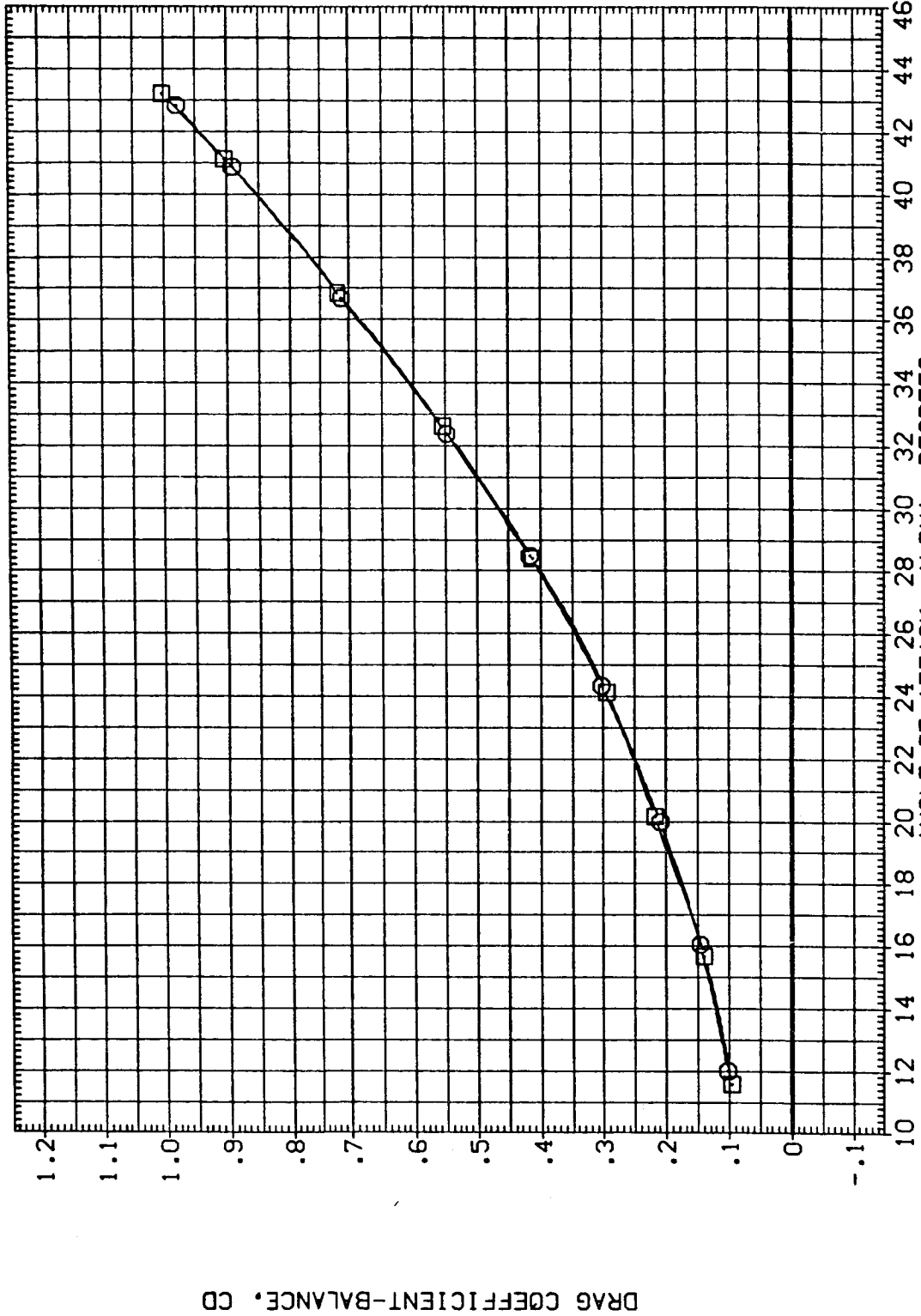


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0004) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

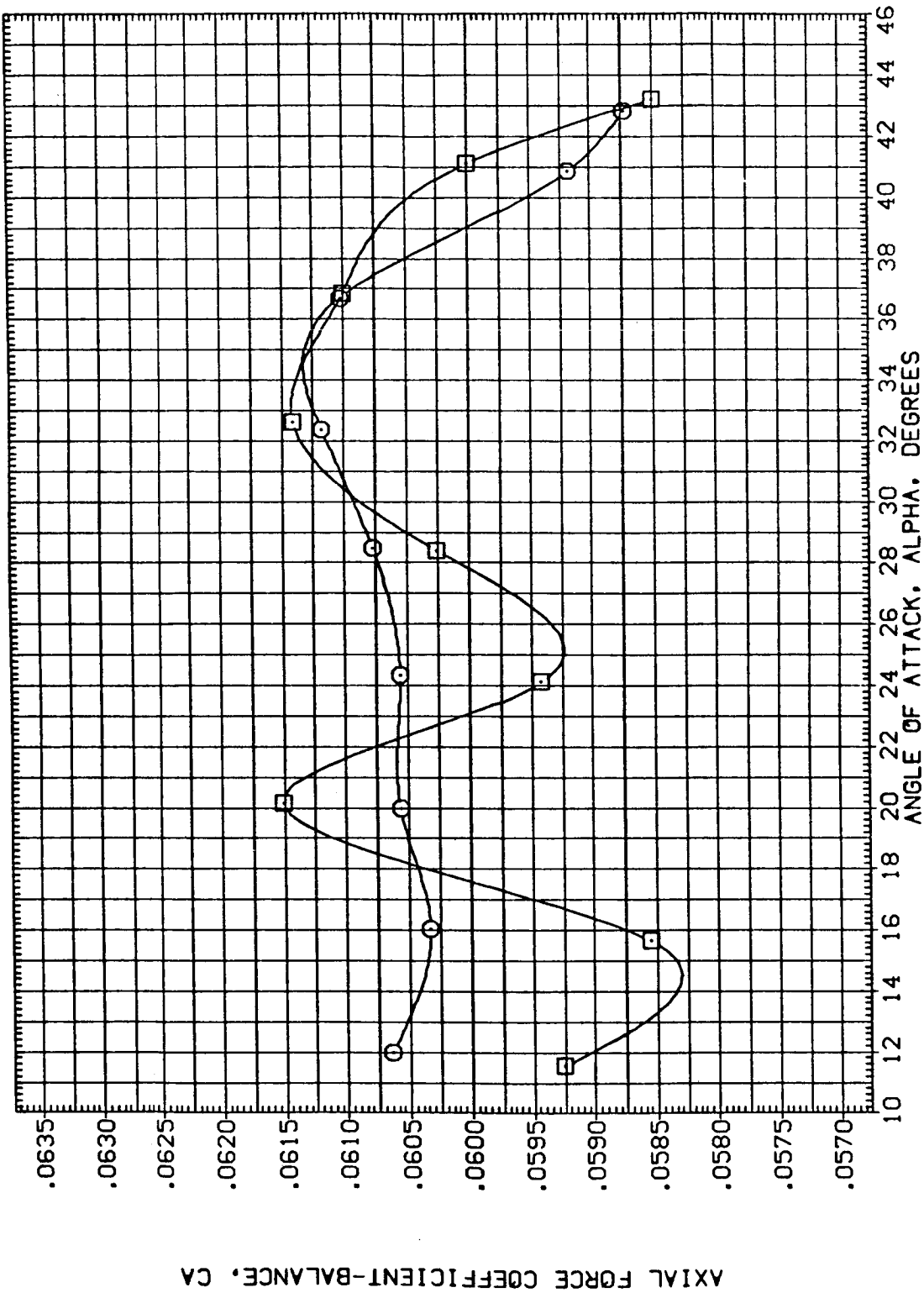


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0004) AMES 3.5-190 GAS8 (011-17-M14)
 (CE0020) AMES 3.5-190 GAS8 (011-17-M14-N24-DUMMY STING)

BETA ELEVON BOFLAP SPDBRK

.000 .000 -11.700 85.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

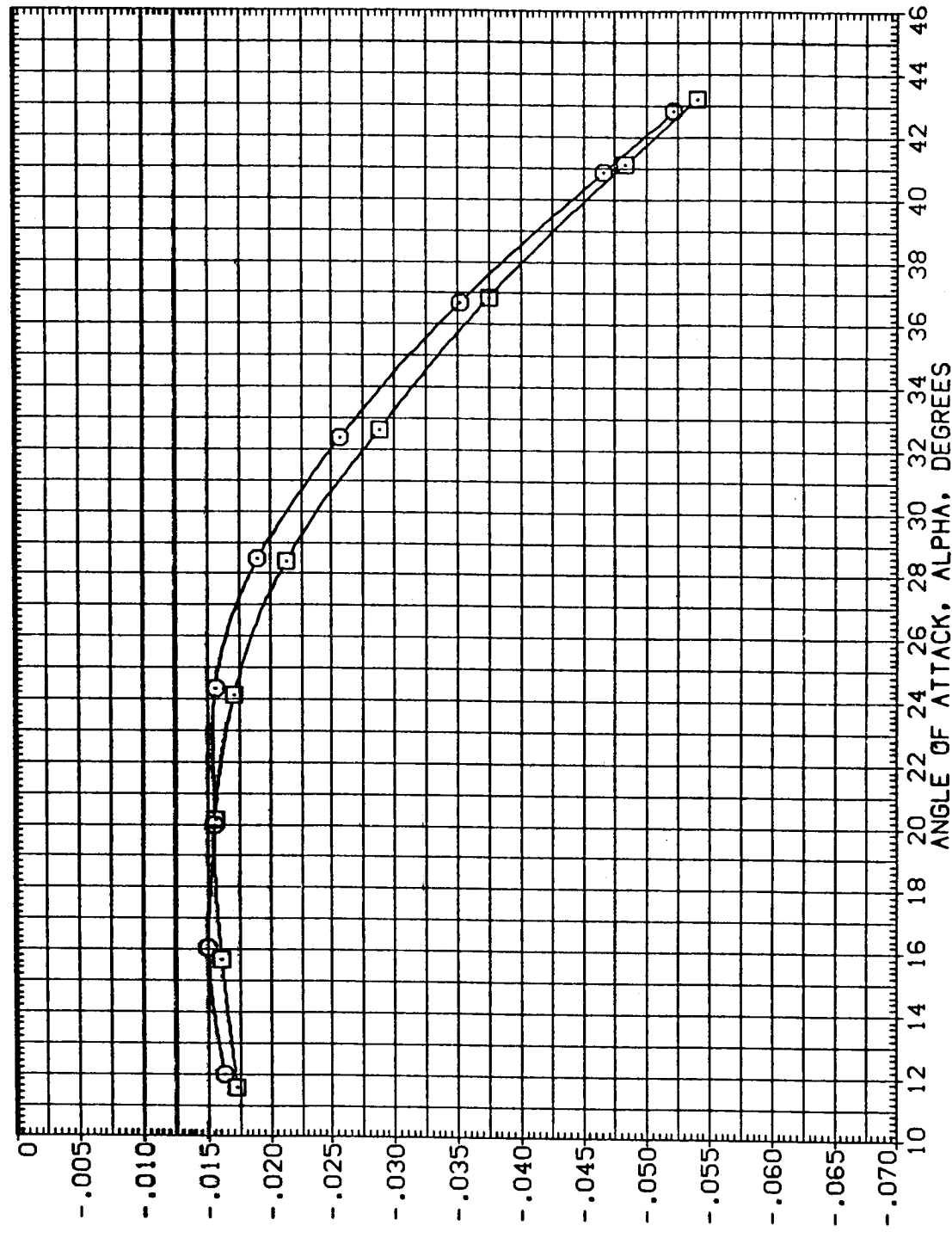


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0004) AMES 3.5-190 BA98 (011-M7+M14)
 (CE0020) AMES 3.5-190 BA98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 .000 .000 -11.700 85.000
 .000 .000 -11.700 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

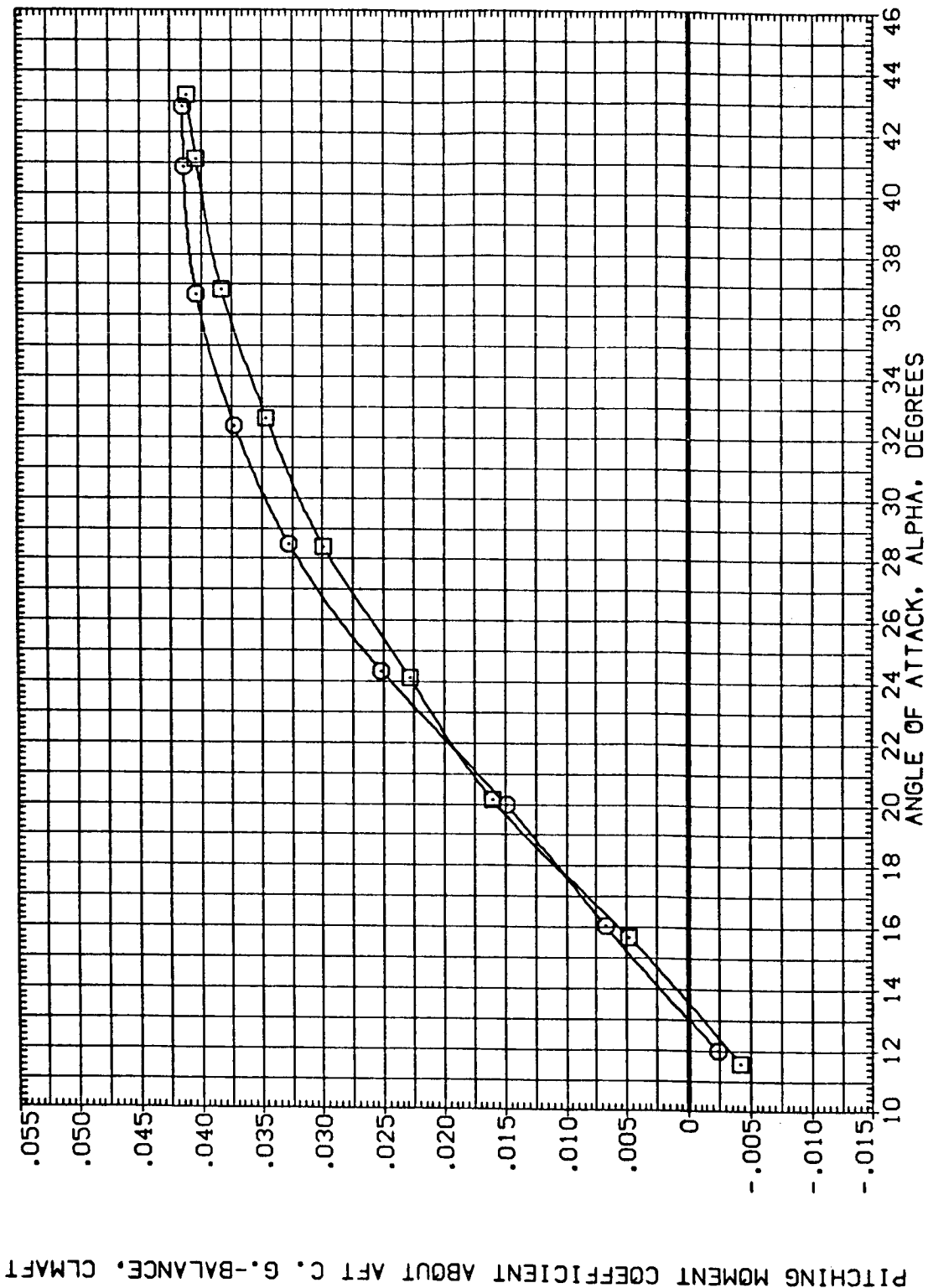


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CEG004) (CEG020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14+24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

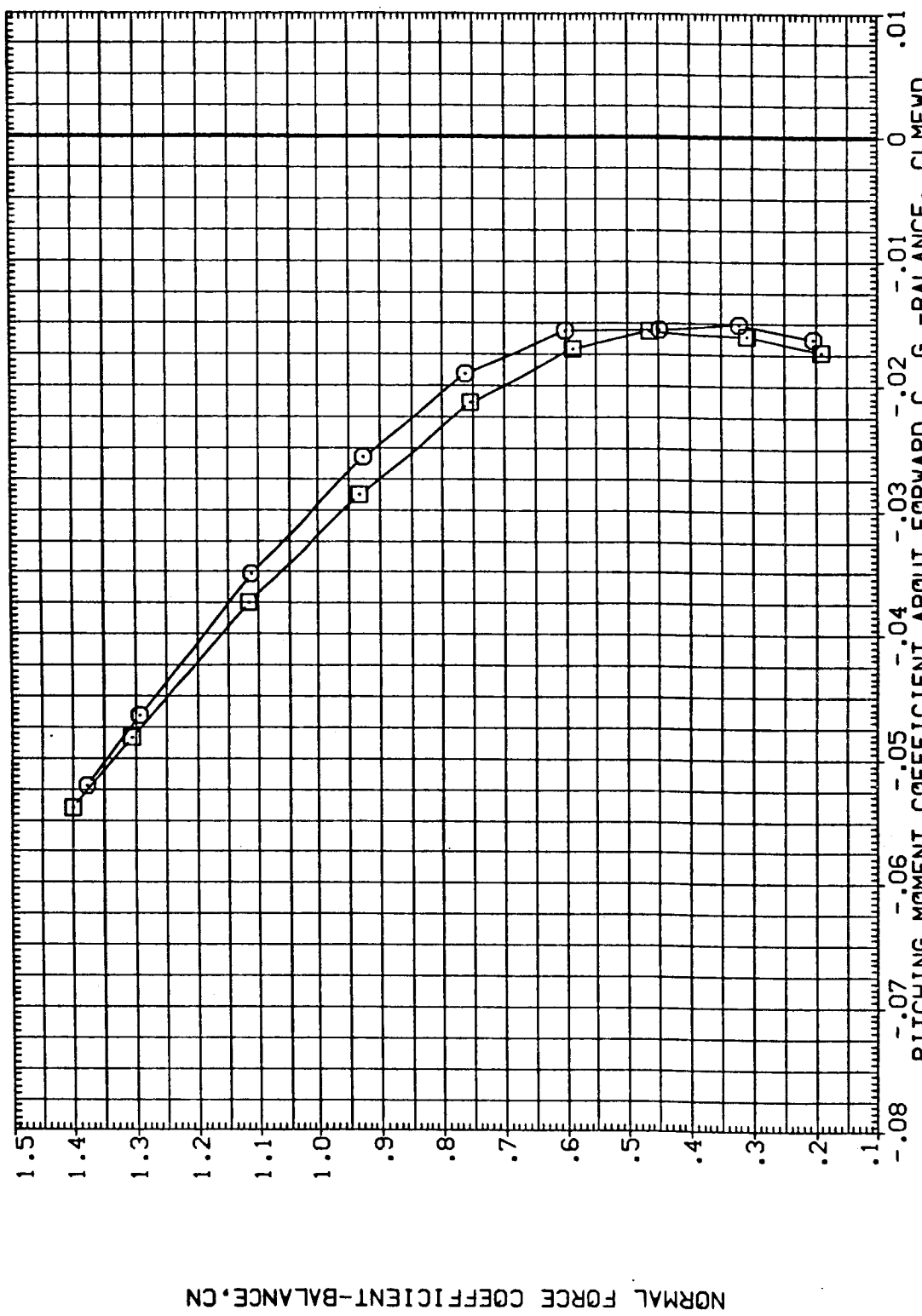


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL (CE0004) (CE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CAS8 (011-M7+M14)
 AMES 3.5-190 CAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPDRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

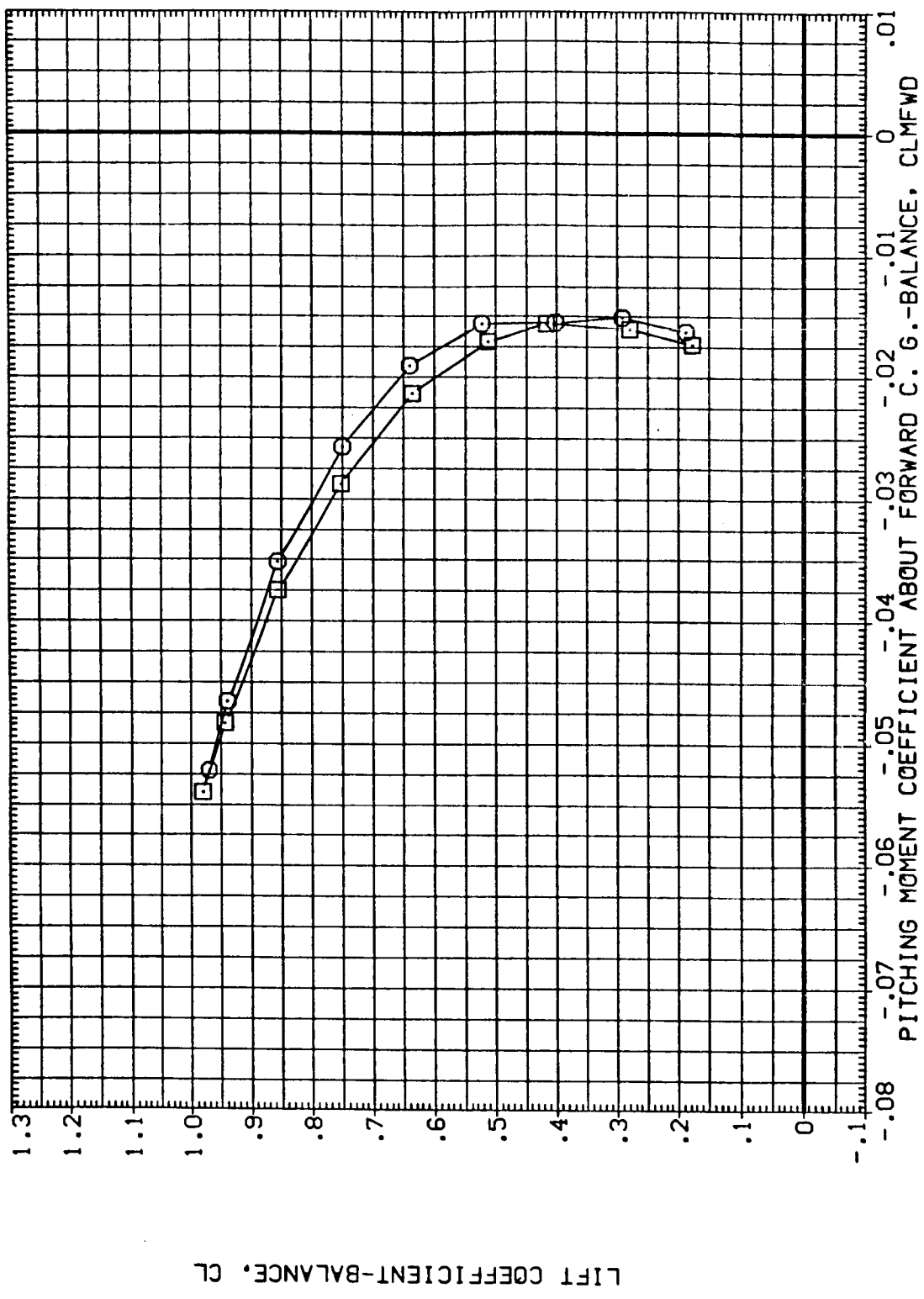


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0004) (CE0020)
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)
 BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 85.000 85.000
 REFERENCE INFORMATION SQ. FT.
 SREF 2690.0000 IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

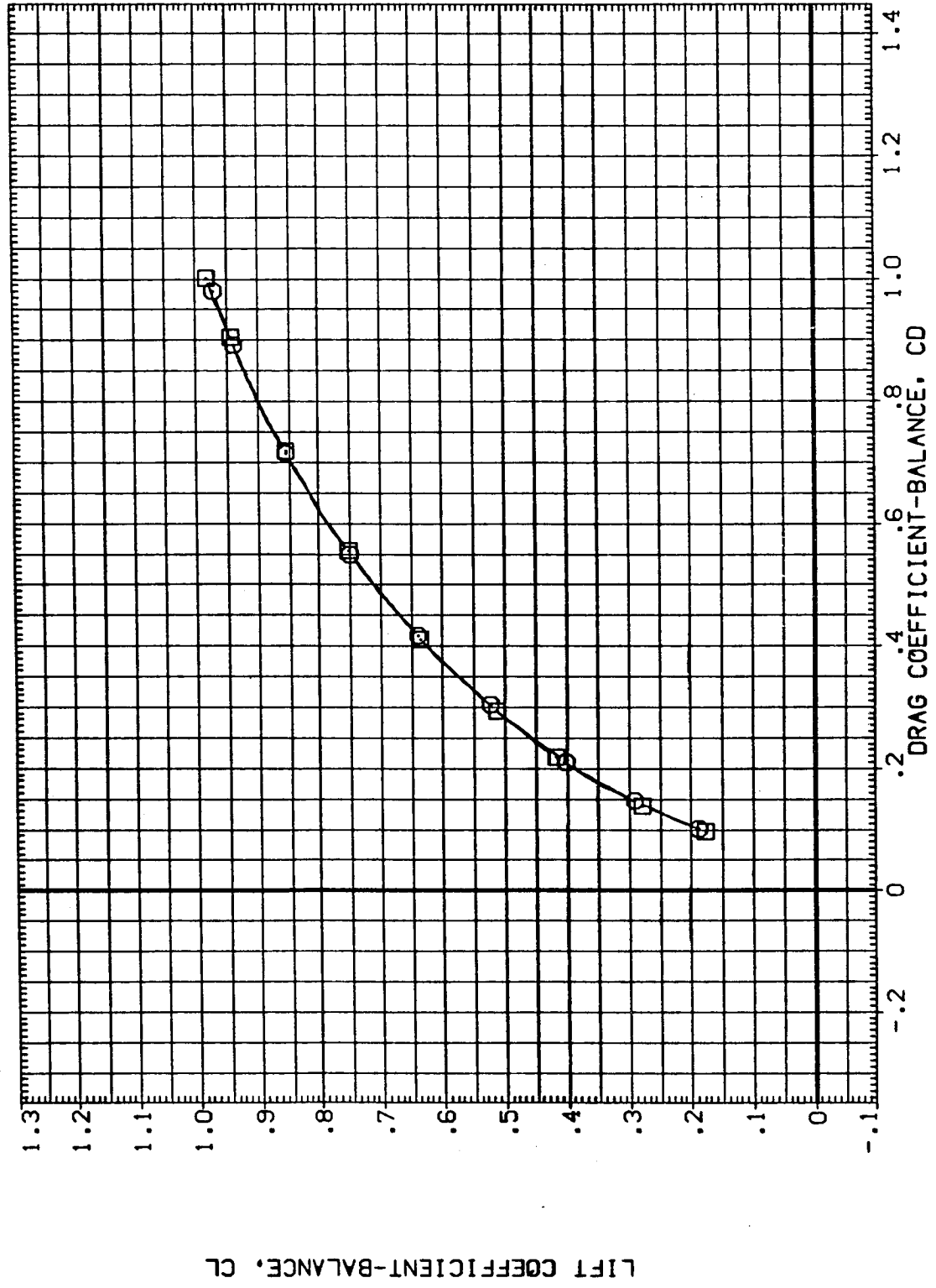


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020) □

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DIA98 (011-M7+M14)
 AMES 3.5-190 DIA98 (011-M7+M14-N24+DUMMY STING)

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.YD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

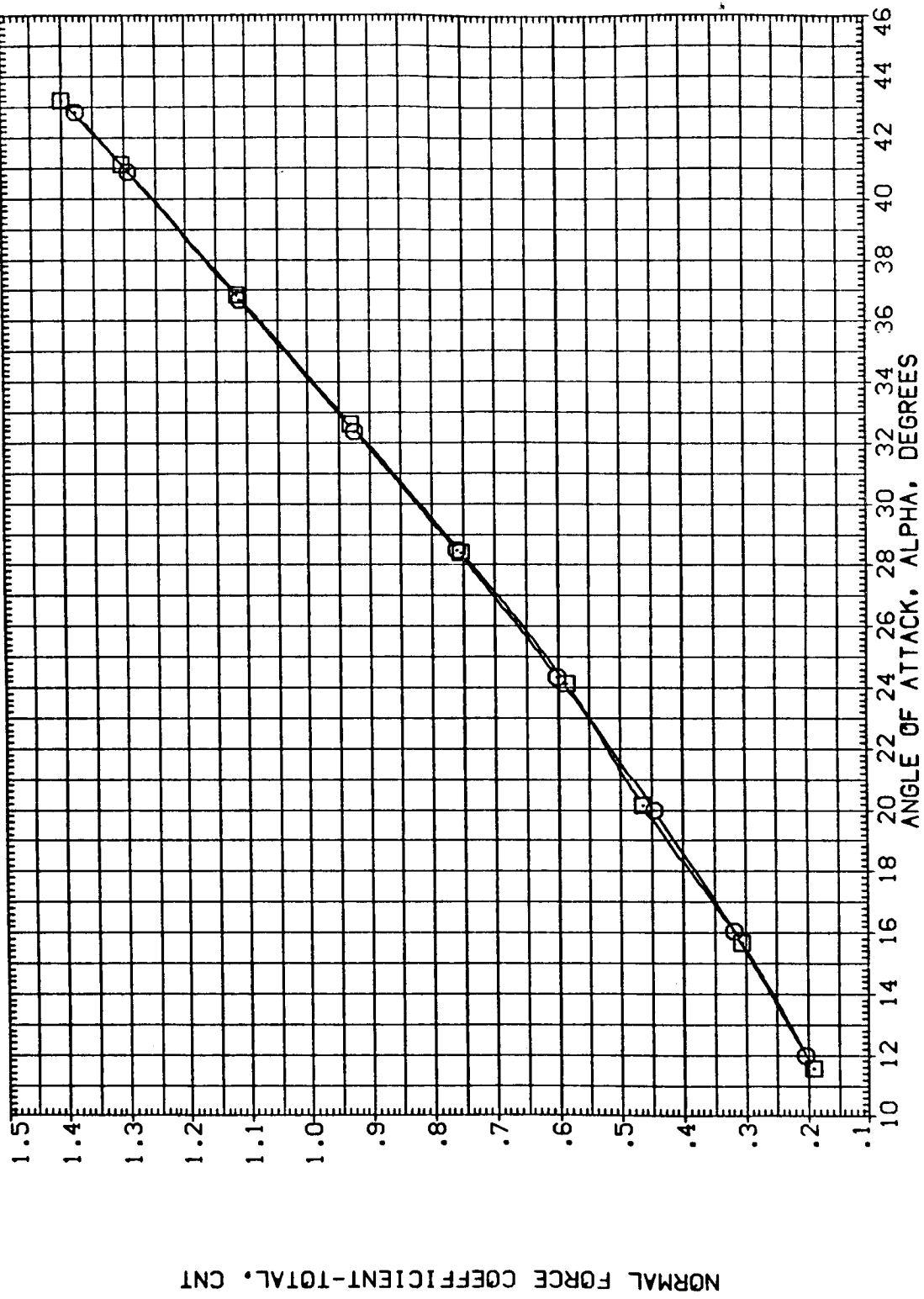


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0004) AMES 3.5-190 OAS8 (011-47+M14)
 (EE0020) AMES 3.5-190 OAS8 (011-47+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

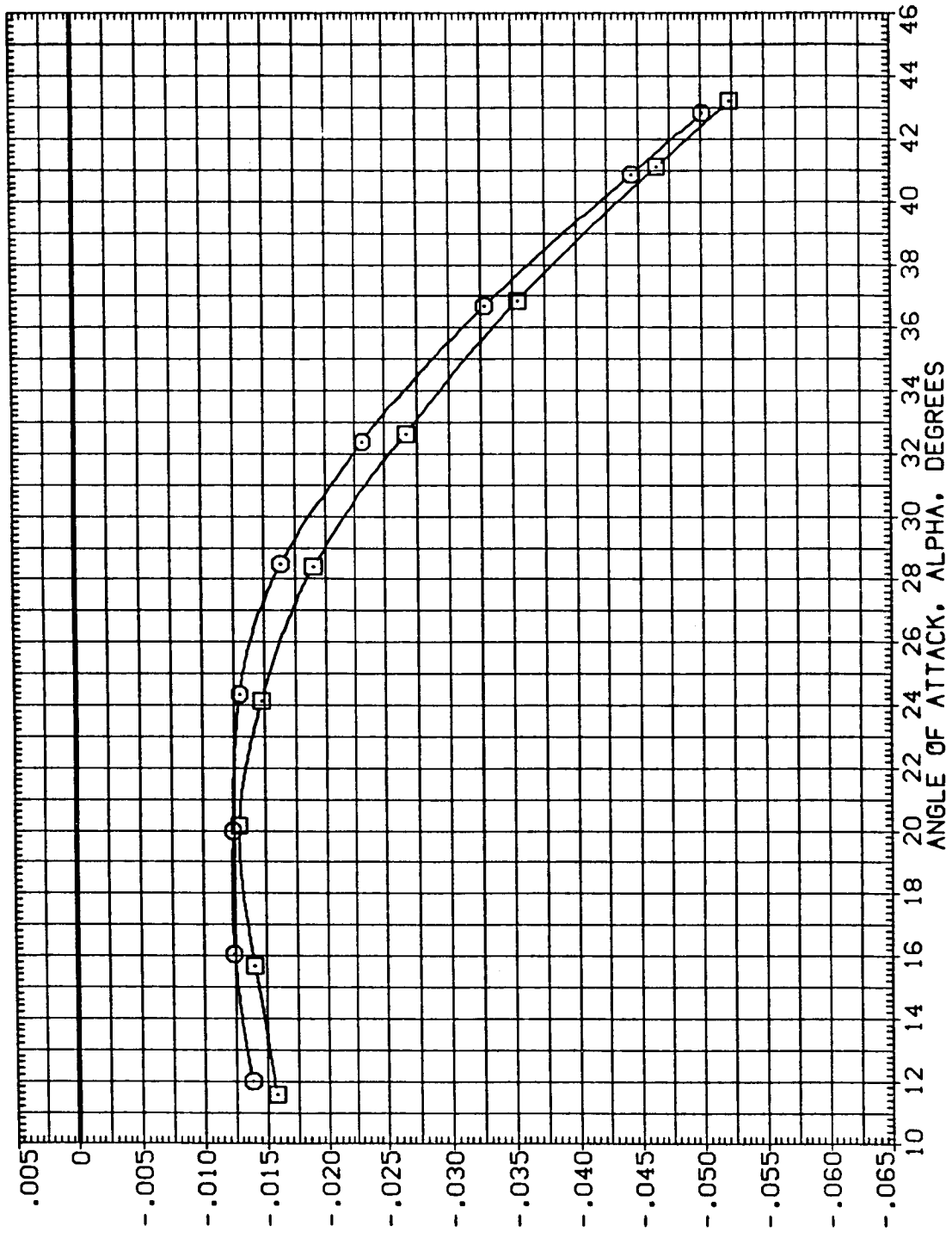


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-M7-M14)
 AMES 3.5-190 GAS8 (011-M7-M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

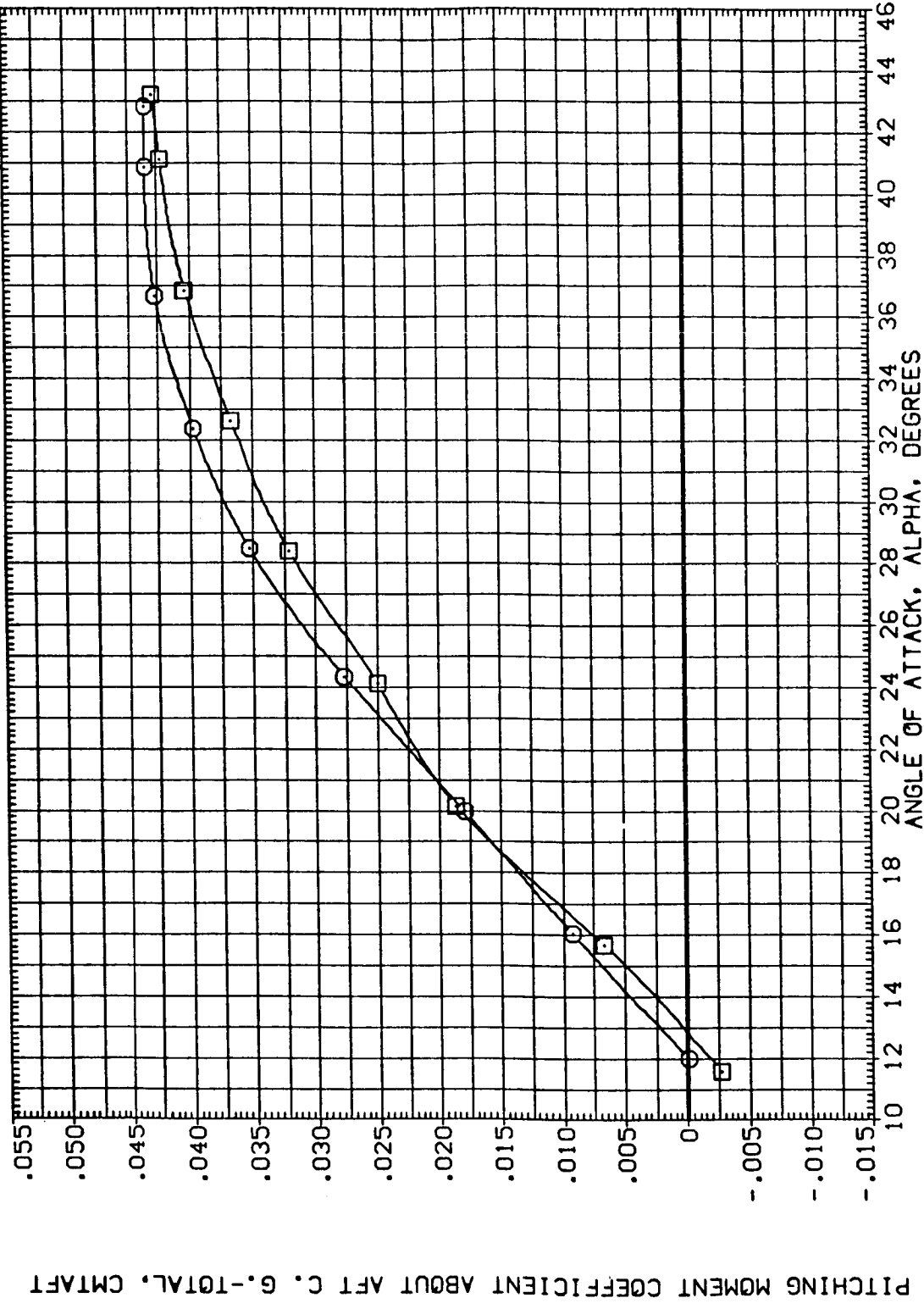


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION
(EE0004) AMES 3.5-190 0A98 (011-M7+M14)
(EE0020) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000
ELEVON .000
BOFLAP -11.700
SPOBRK 85.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150

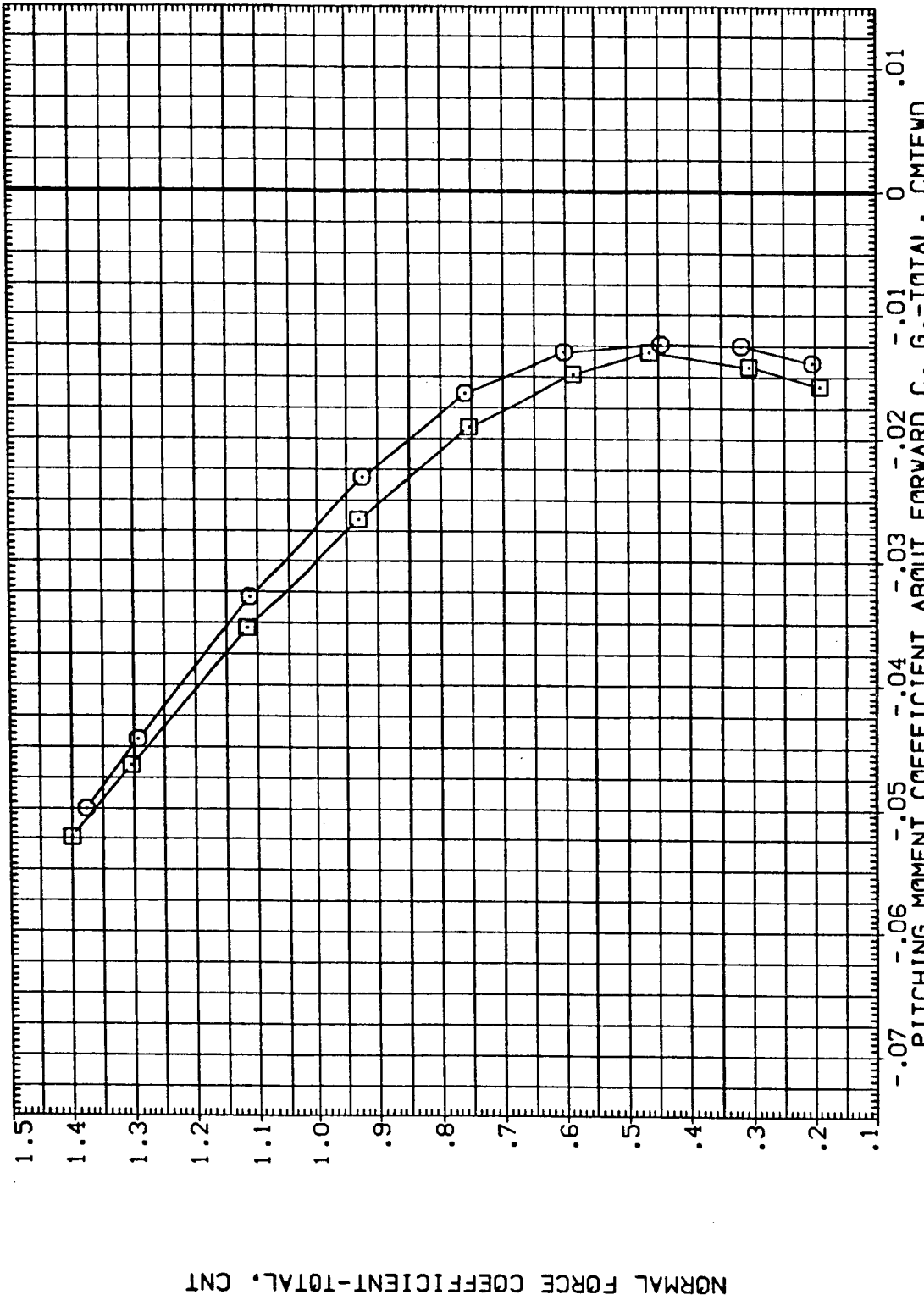
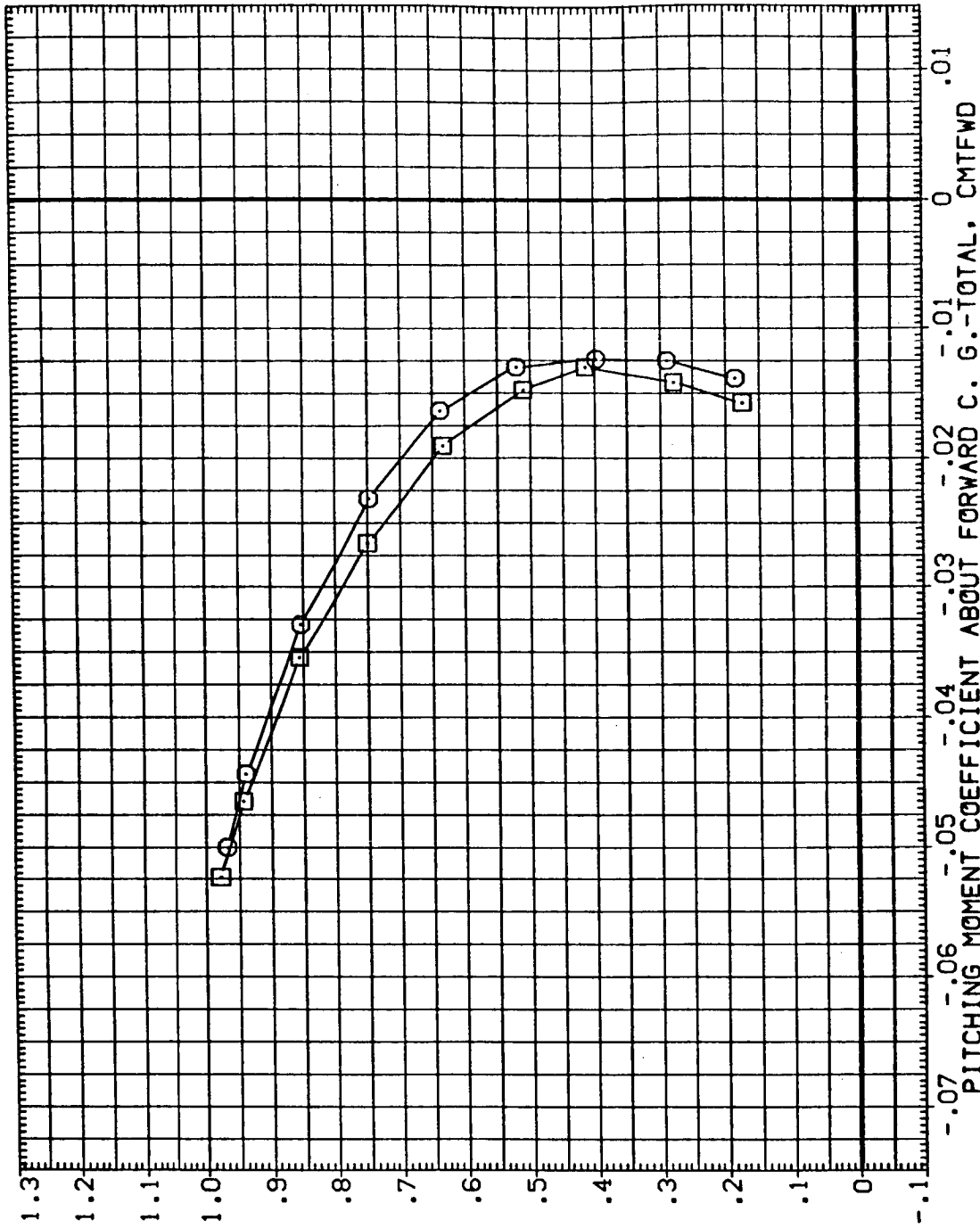


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)
 CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14+V2+DUMMY STING)
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

BETA .000
 ELEVON .000
 BDELAP -11.700
 SPOBRK 85.000
 SPOBRK 85.000



LIFT COEFFICIENT-TOTAL, CL1

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, C.MTFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E0004) AMES 3.5-190 DASH (011-M7+M14)
 (E0020) AMES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

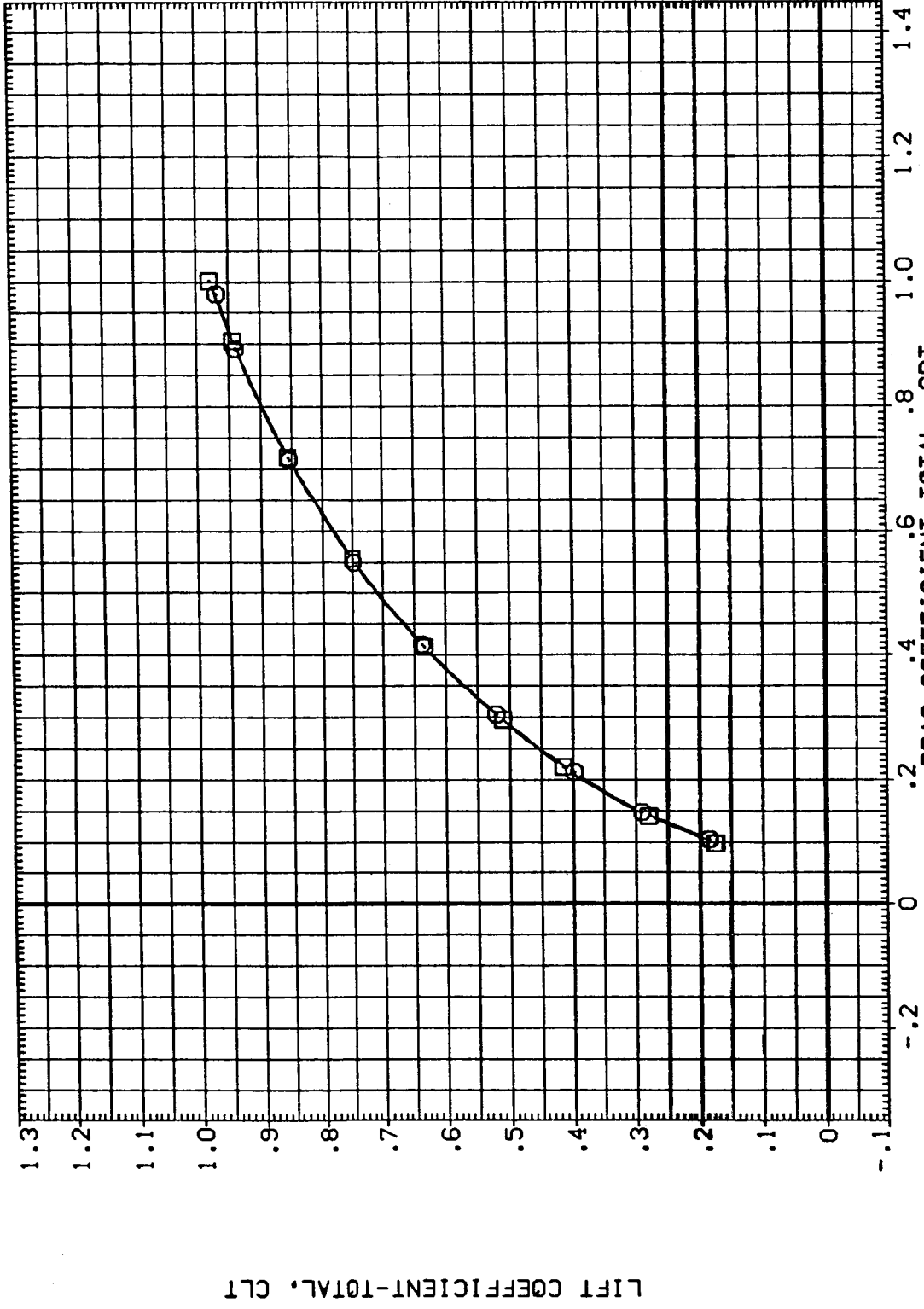


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+M14)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 596.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

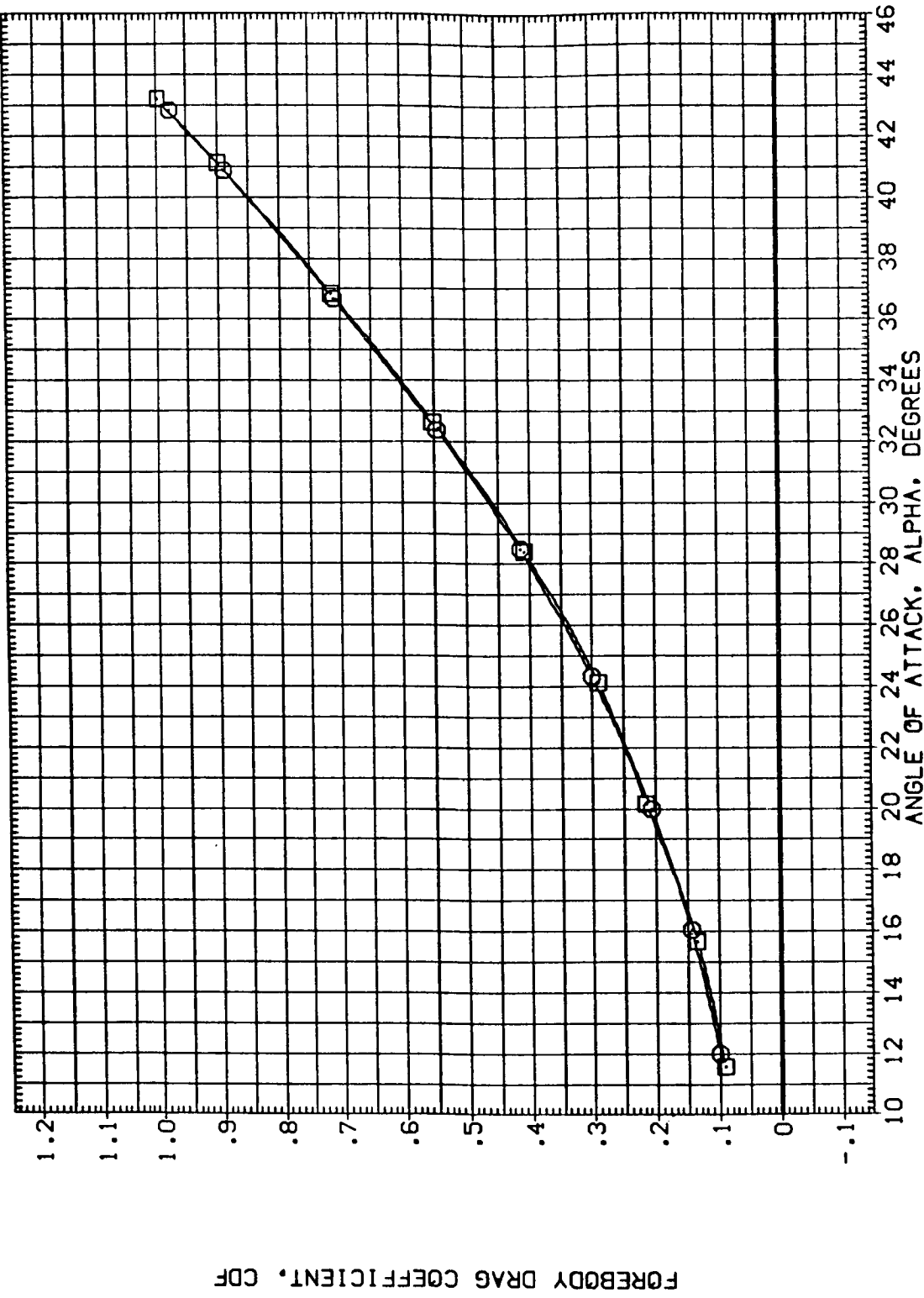


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)

CONFIGURATION DESCRIPTION AMES 3.5-190 OAS8 (011-M7+M14) AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVATION .000 .000

BDFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. XD YMRP .0000 IN. YD ZMRP 375.0000 IN. ZD SCALE .0150

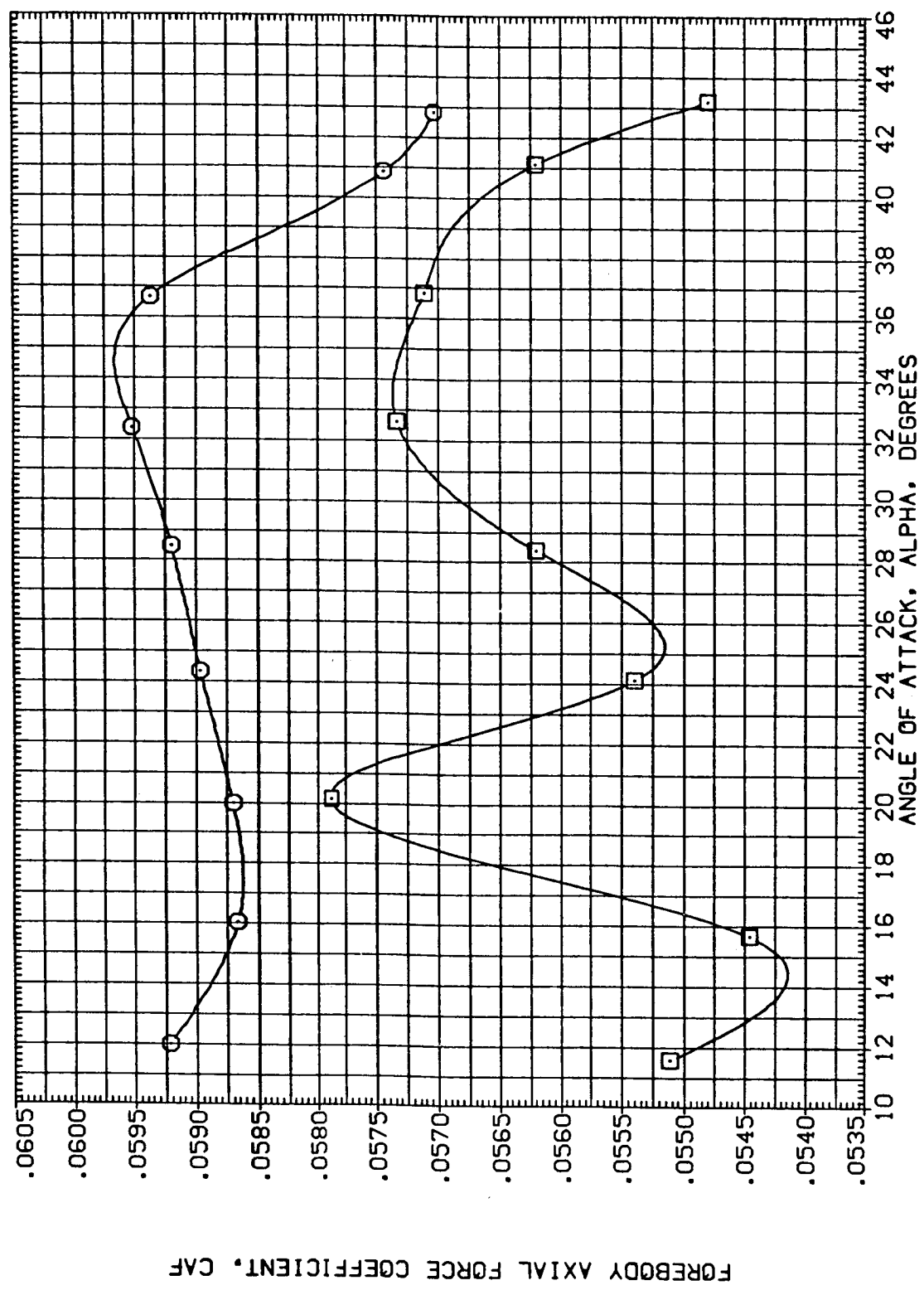


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7+H14)
 AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

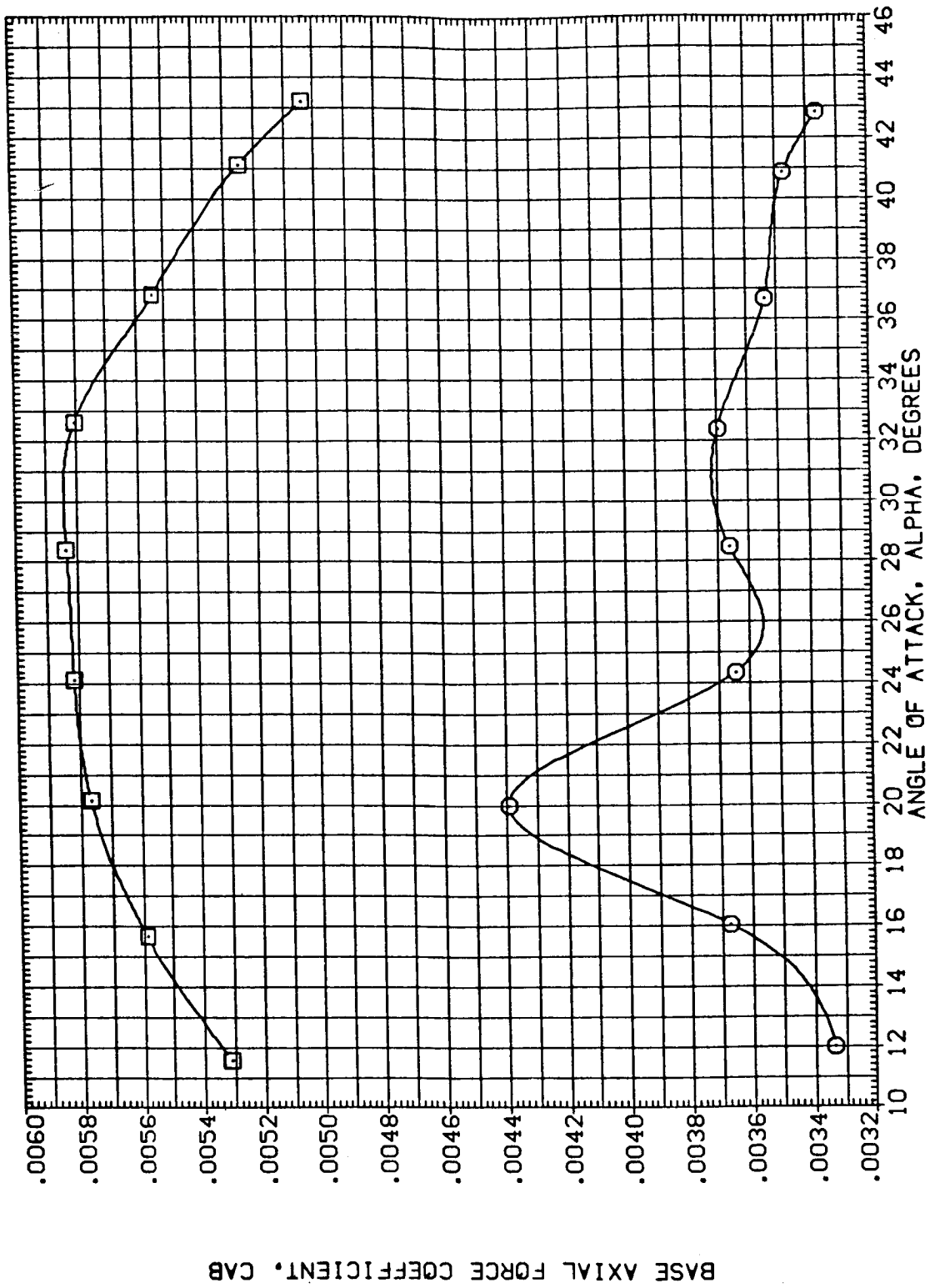


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BE004) (BE020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DASH (011-M7+M14)
 AMES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0150 IN.Z0
 SCALE

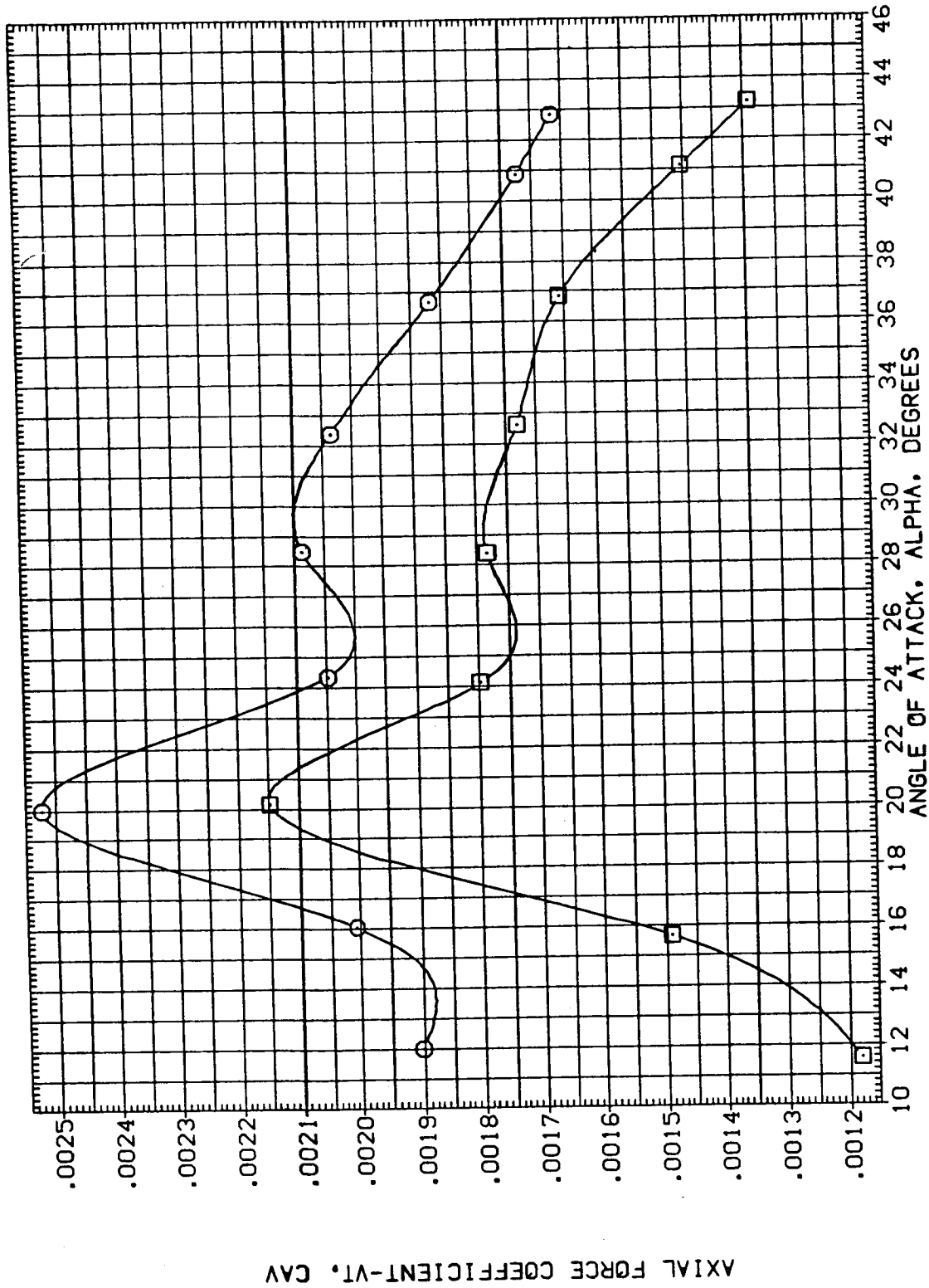


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BEG004) (BEG020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVATION .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

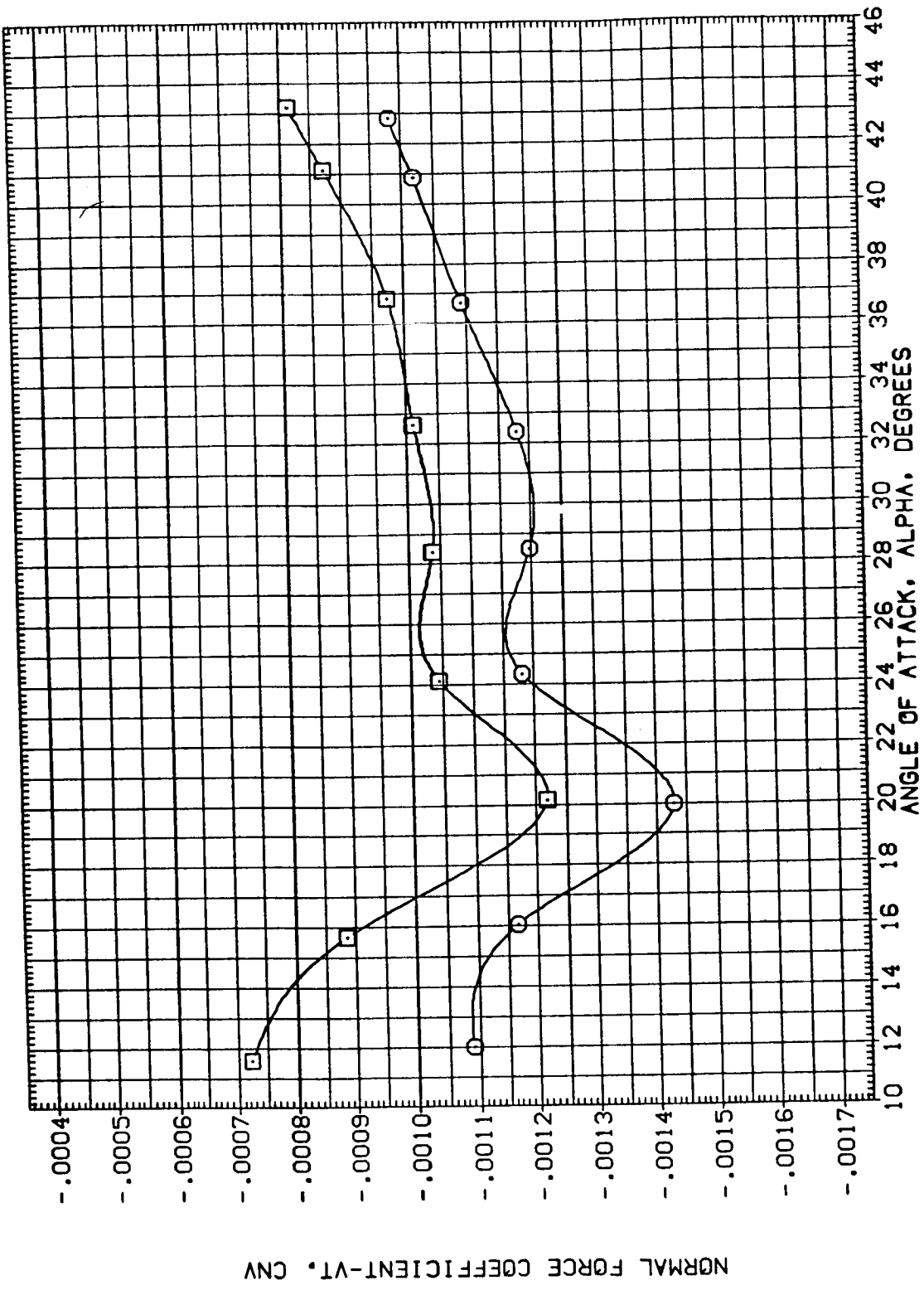


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 5.25

DATA SET SYMBOL (BE0004) (BE0020)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-M7+M14)
 APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

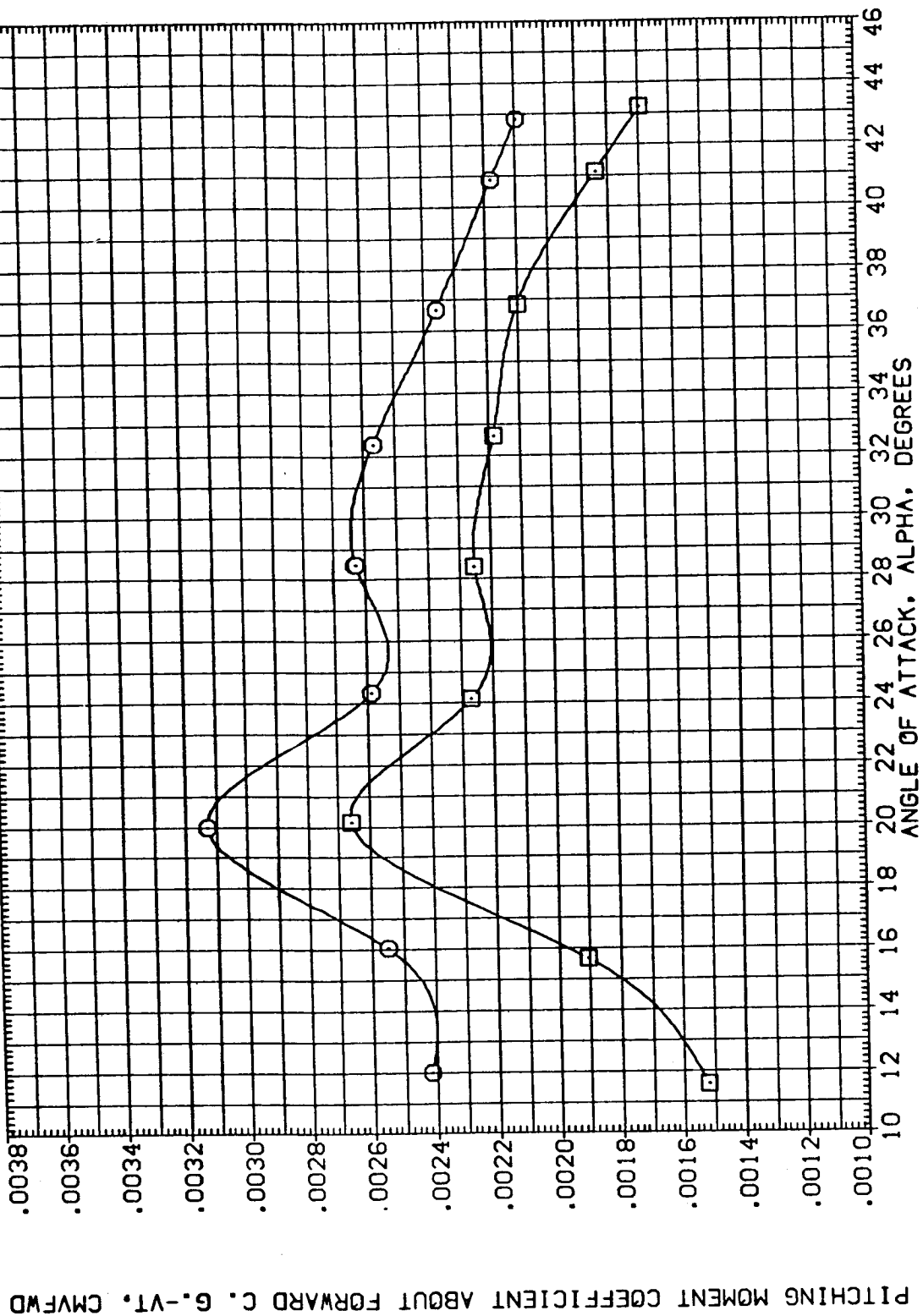


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BEG004) (BEG020)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GA98 (011-H7+H14)
 AVES 3.5-190 GA98 (011-H7+H14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

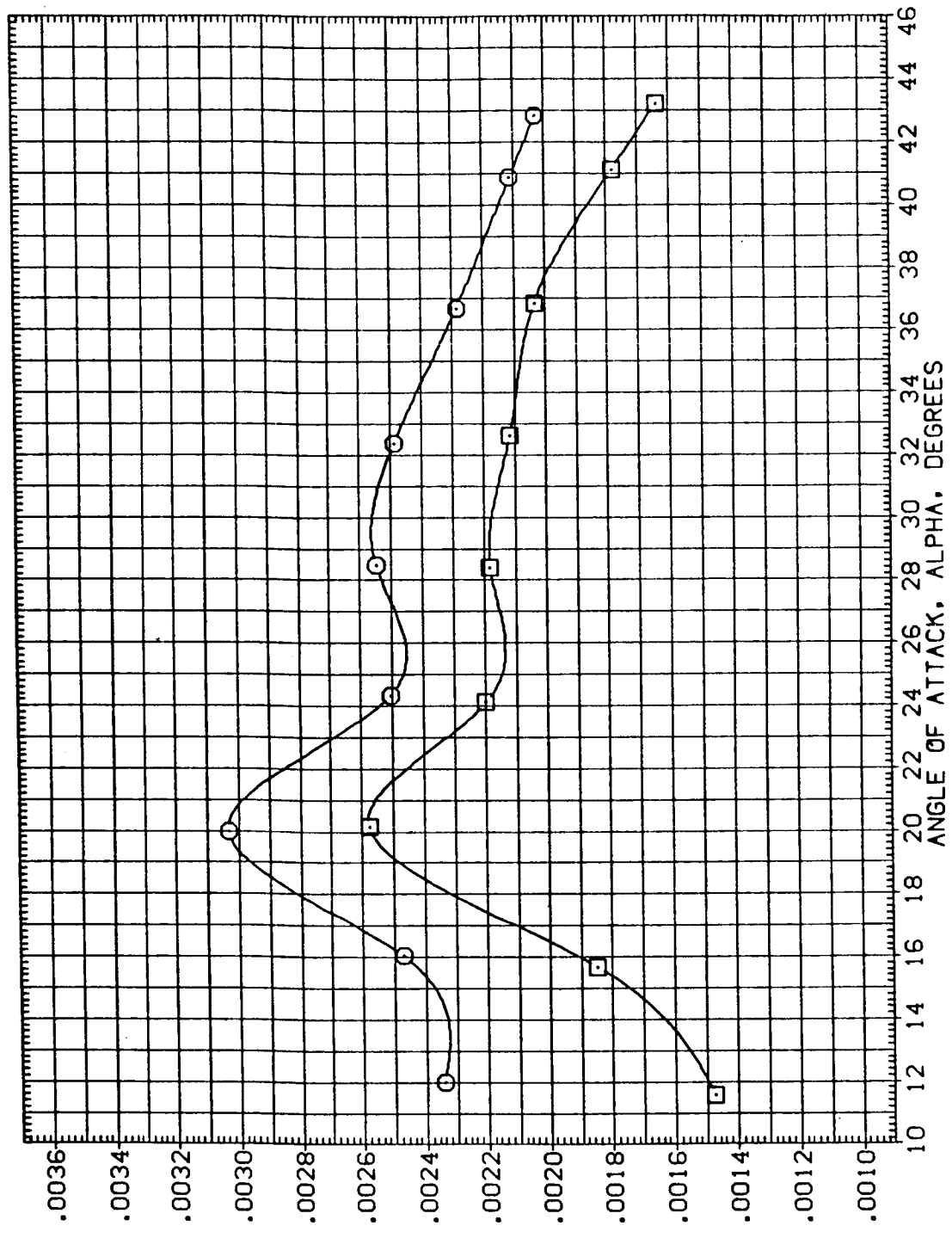


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 5.25



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0020)

SYMBOL
○

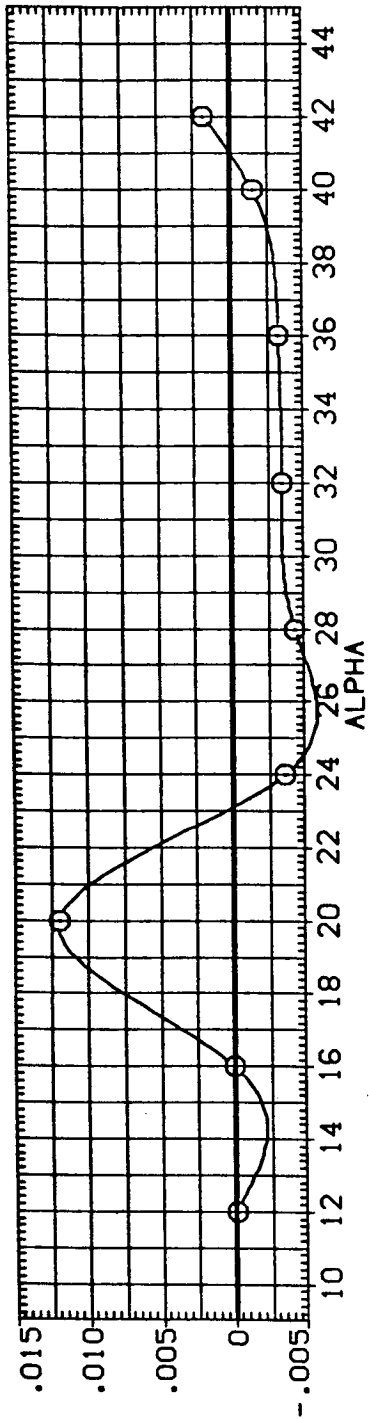
MACH
5.300

BETA
BDFLAP
RUDDER

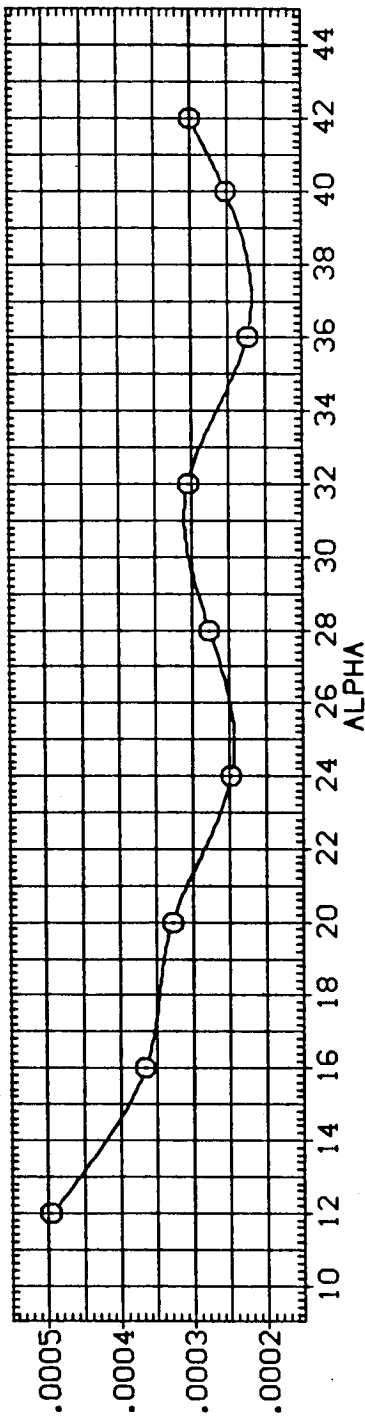
PARAMETRIC VALUES
.000 ELEVON
-11.700 SPDBRK
.000

.000
85.000

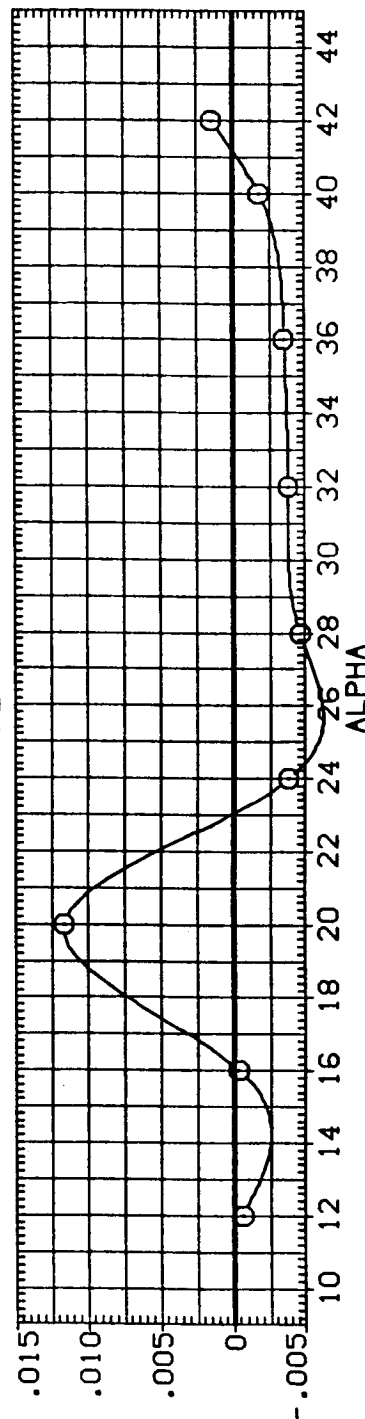
REFERENCE INFORMATION
SQ.FT.
2690.0000
LREF 474.8000
BREF 936.6800
XMRP 1076.7000
YMRP .0000
ZMRP 375.0000
SCALE .0150



DCLT



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL 0 MACH 5.300 BETA .000 ELEVON .000
 BOFLAP -11.700 SPOBRK 85.000
 RUDDER .000

PARAMETRIC VALUES

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

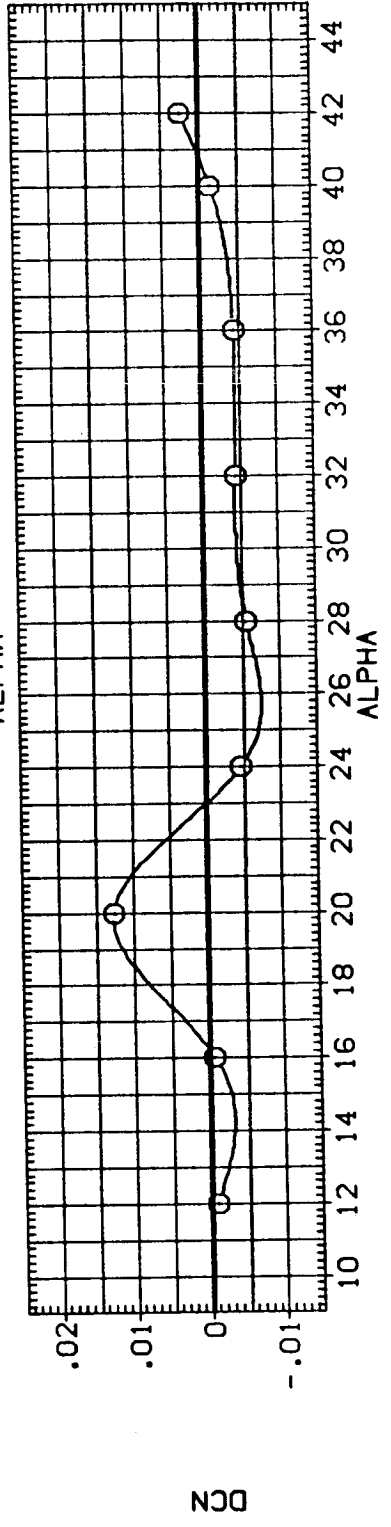
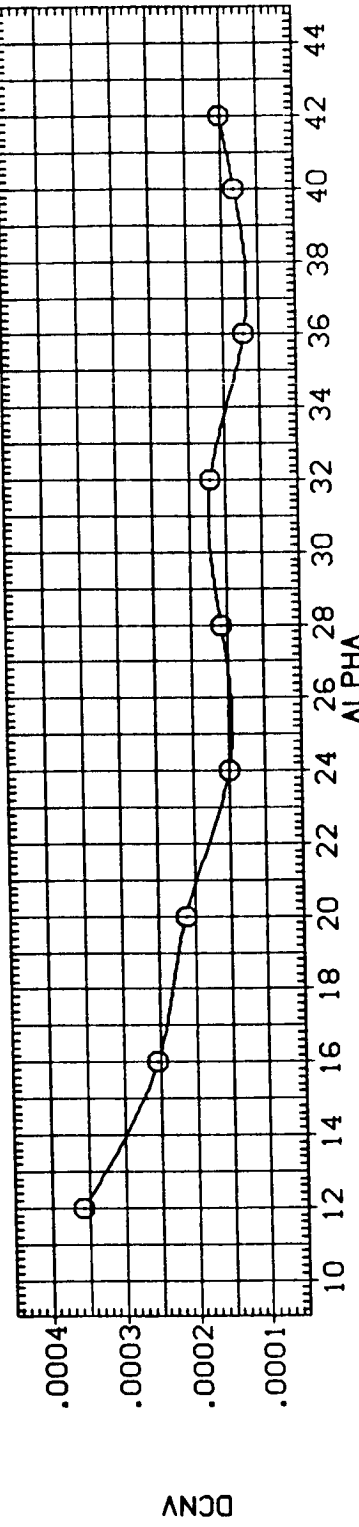
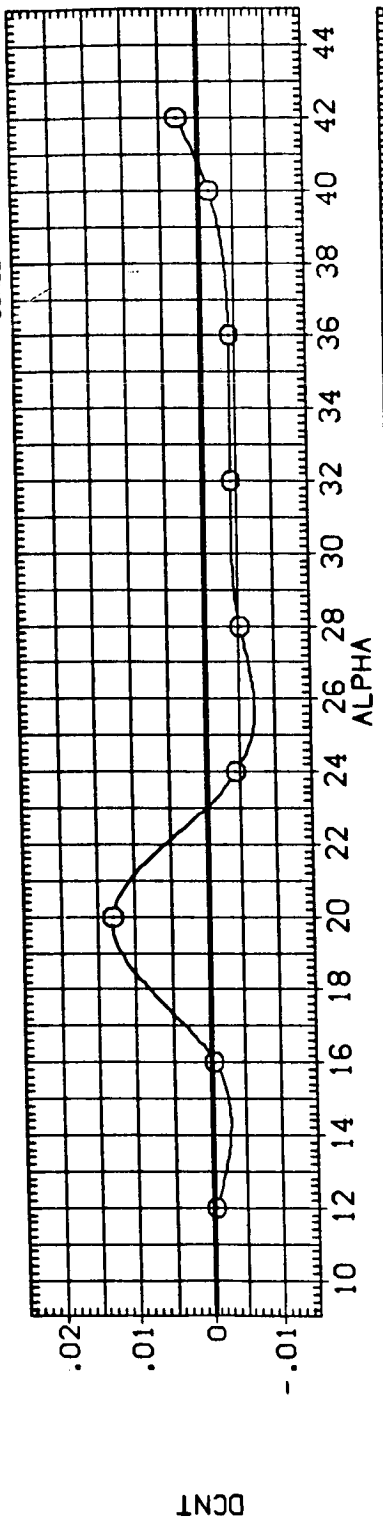


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0020)

SYMBOL O MACH 5.300

BETA .000 ELEVON .000

BDFLAP -11.700 SPOBRK 85.000

RUDDER .000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

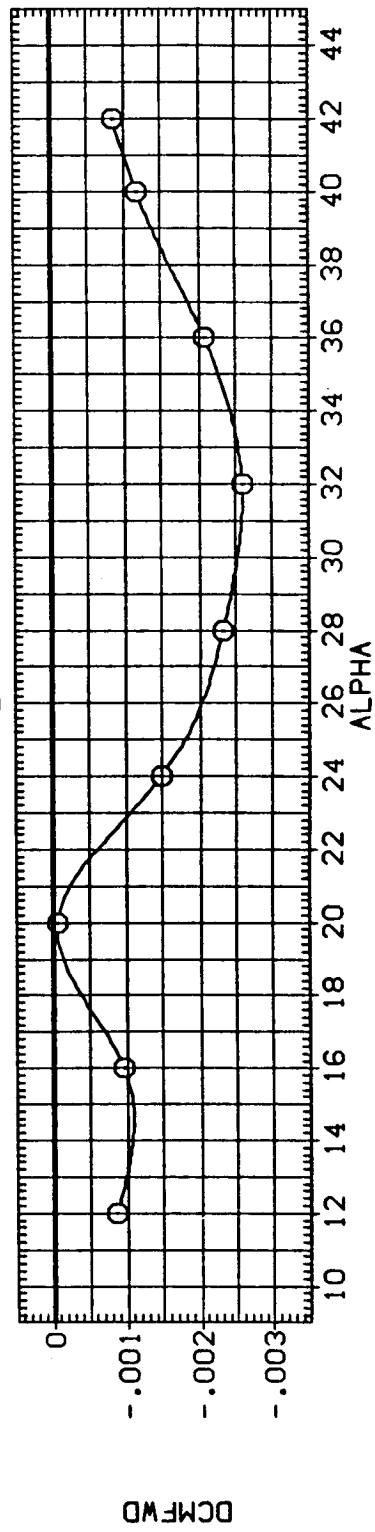
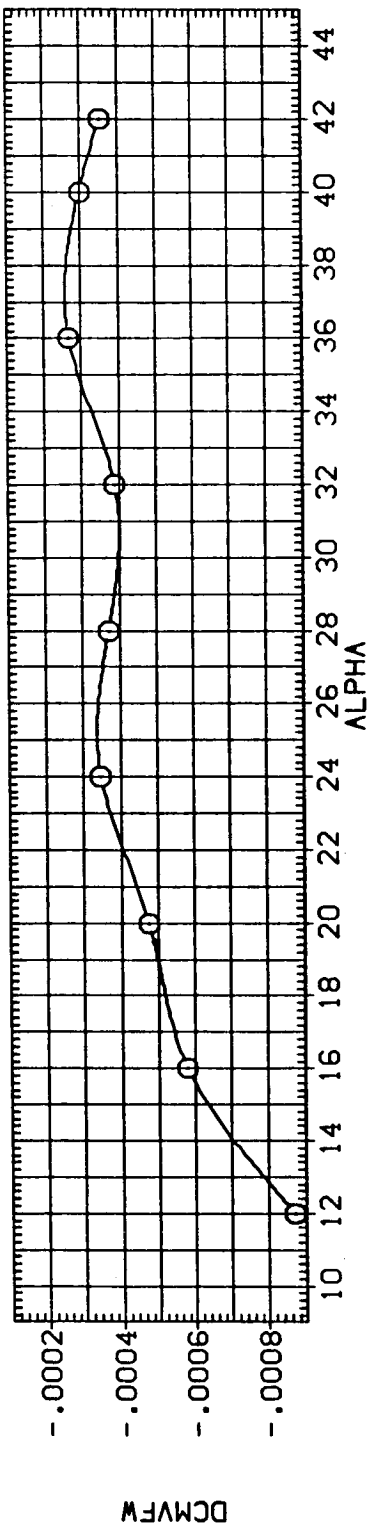
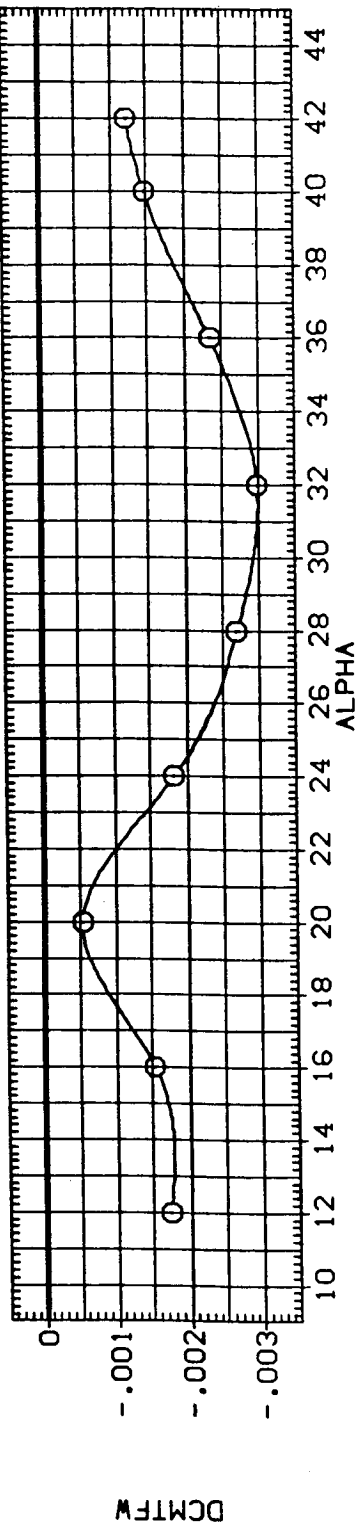


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL MACH BETA BOFLAP RUDDER
 O 5.300 .000 .000 .000

PARAMETRIC VALUES
 ELEVON SPOBRK .000 .000
 .000 .000 .000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.6000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP .0000 IN.Z0
 SCALE .0150

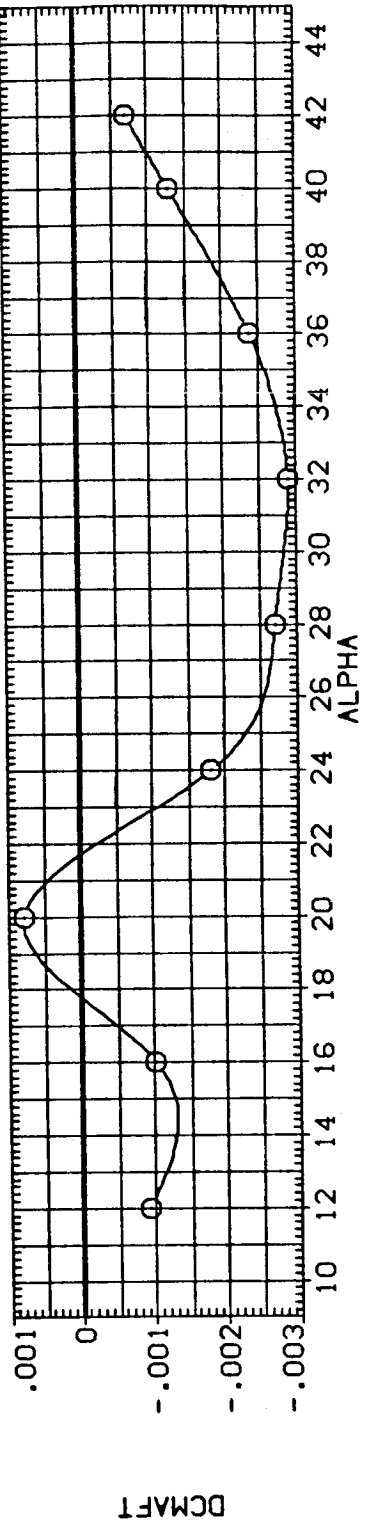
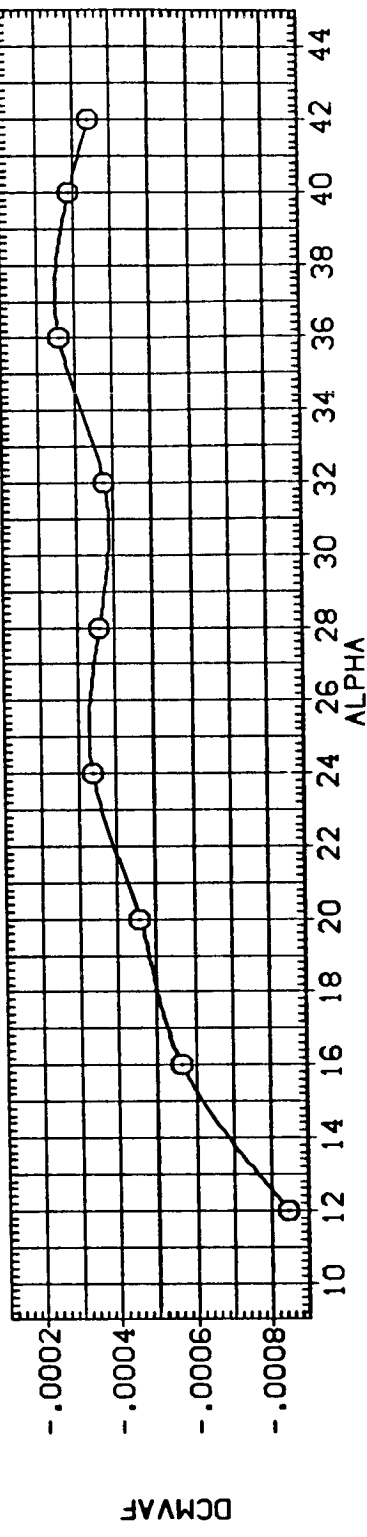
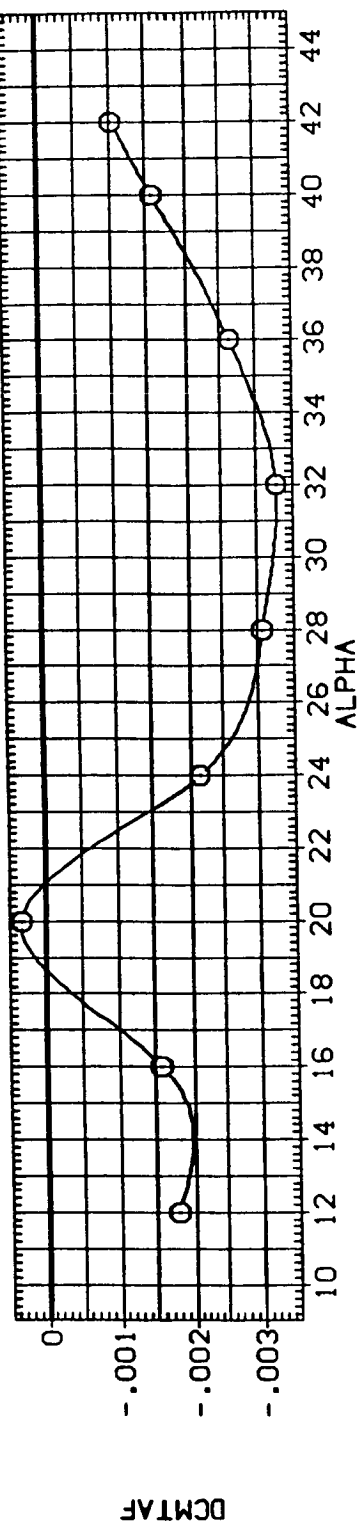


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ020)

SYMBOL
○

MACH
5.300

BETA
BOFLAP
RUDDER

PARAMETRIC VALUES
.000
-11.700
.000

ELEVON
SPDRK
65.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150

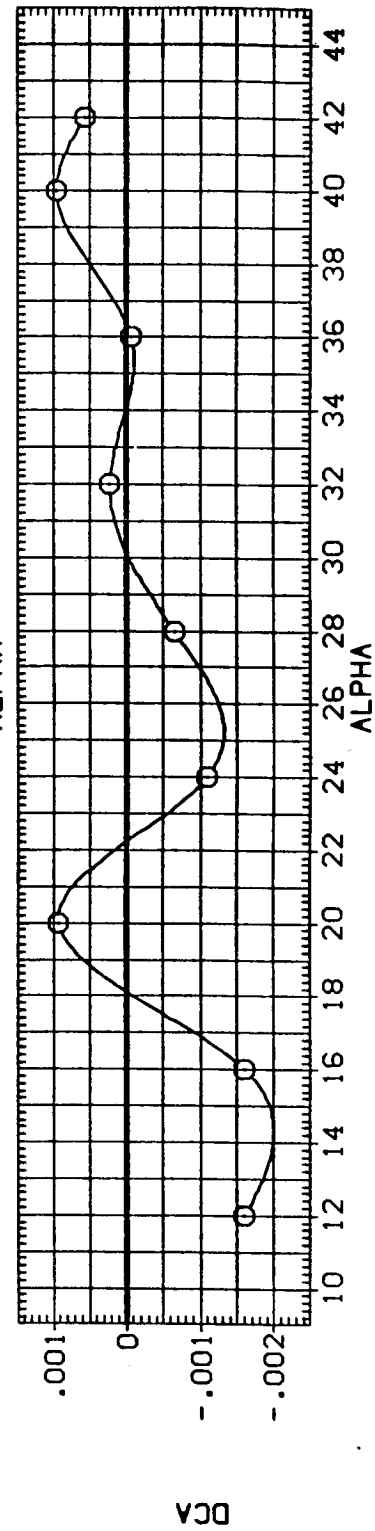
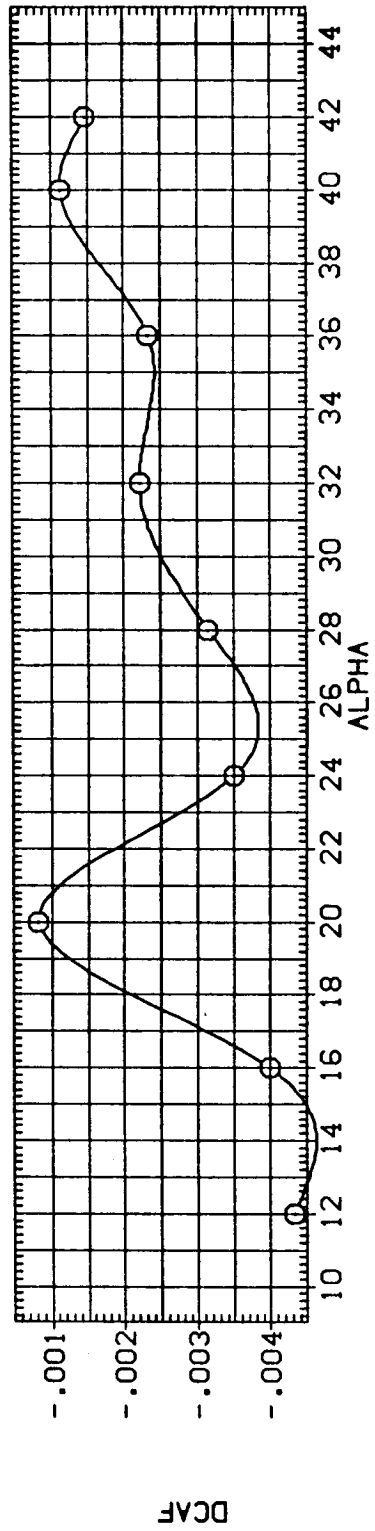
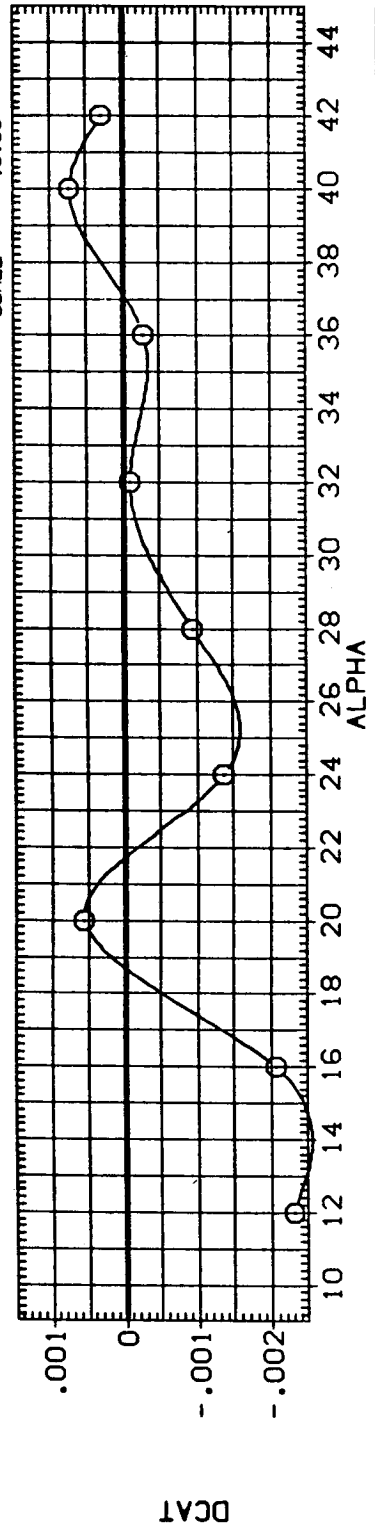


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL MACH BETA BOFLAP RUDDER
 O 5.300

PARAMETRIC VALUES
 .000 ELEVON .000
 -11.700 SPOBRK 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XG
 YMRP .0000 IN.YG
 ZMRP 375.0000 IN.ZG
 SCALE .0150

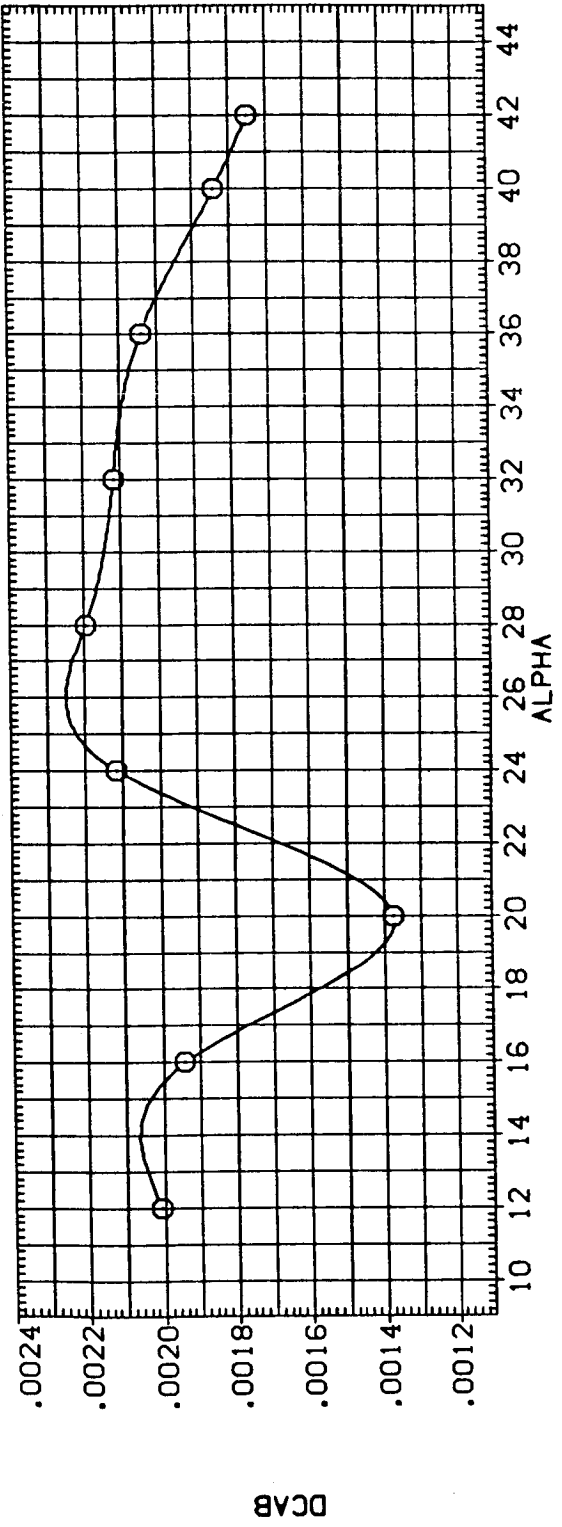
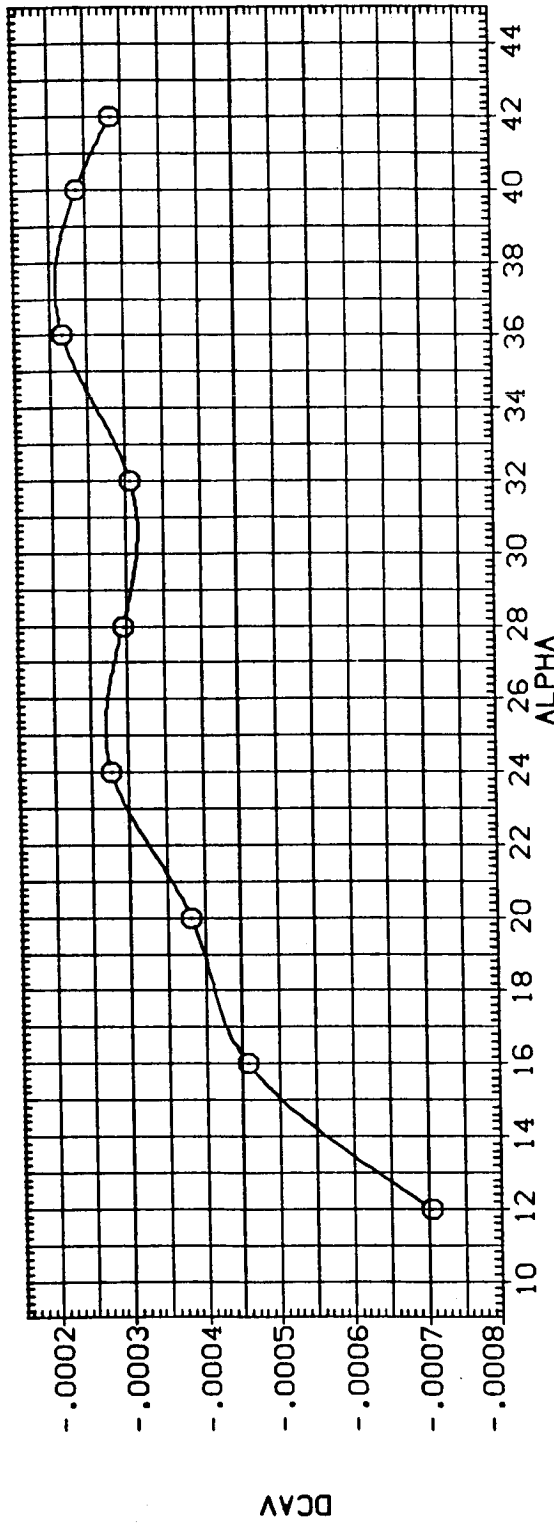


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ020)

SYMBOL	MACH	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	5.300	BOFLAP	.000 ELEVON	SREF 2690.0000 SQ.FT.
		RUDDER	-11.700 SPOBRK	LREF 474.8000 IN.
			.000	BREF 936.6800 IN.
			65.000	XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

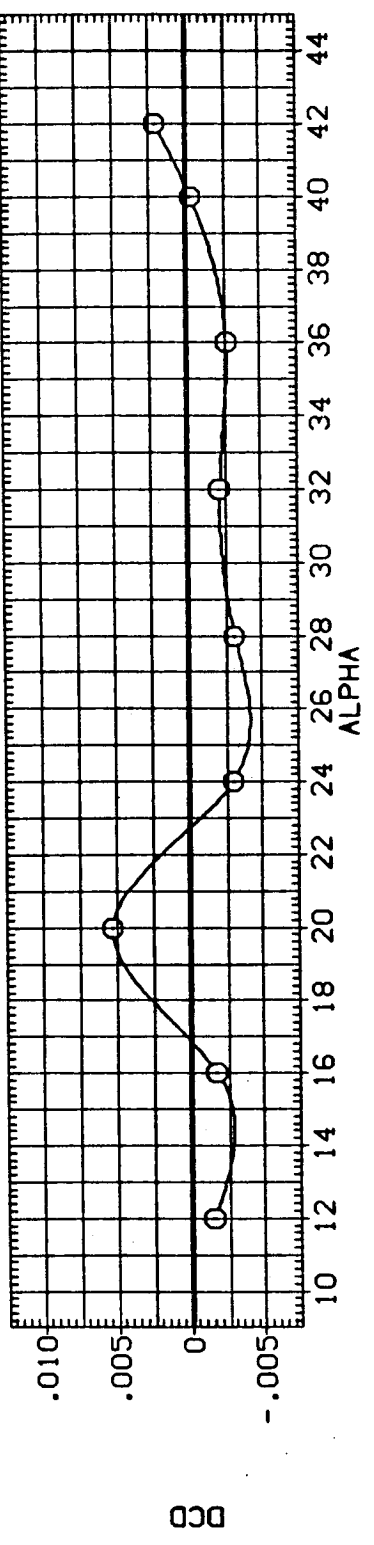
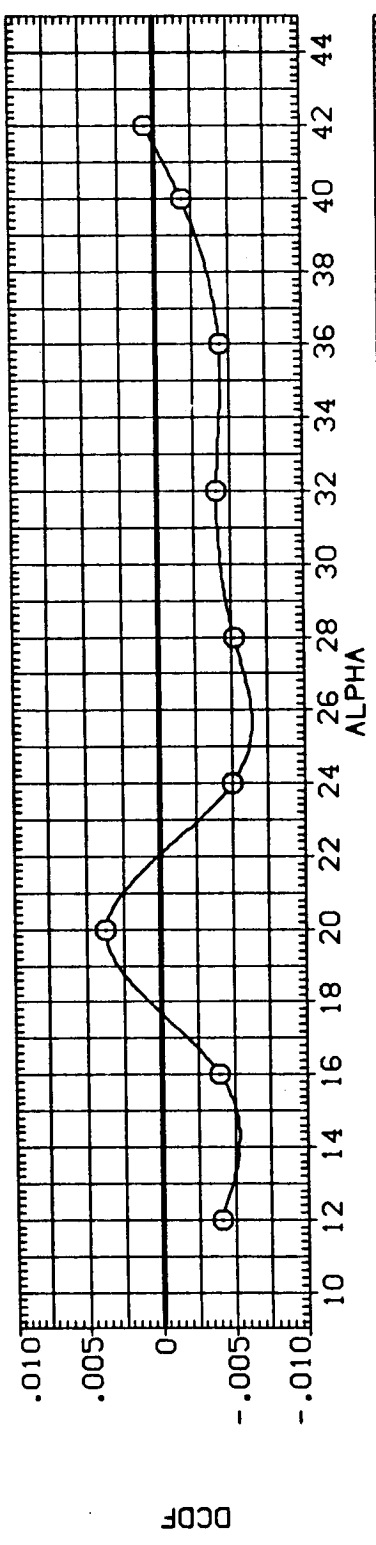
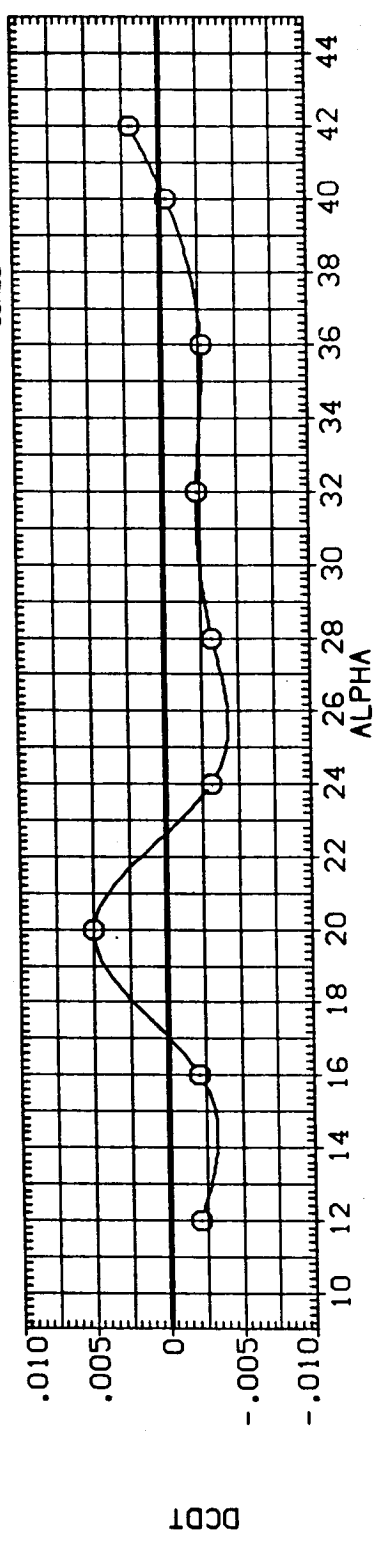


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0020)

SYMBOL ○

MACH 5.300

BETA BOFLAP RUDDER

PARAMETRIC VALUES
 .000 ELEVON .000
 -11.700 SPOBRK 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 536.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

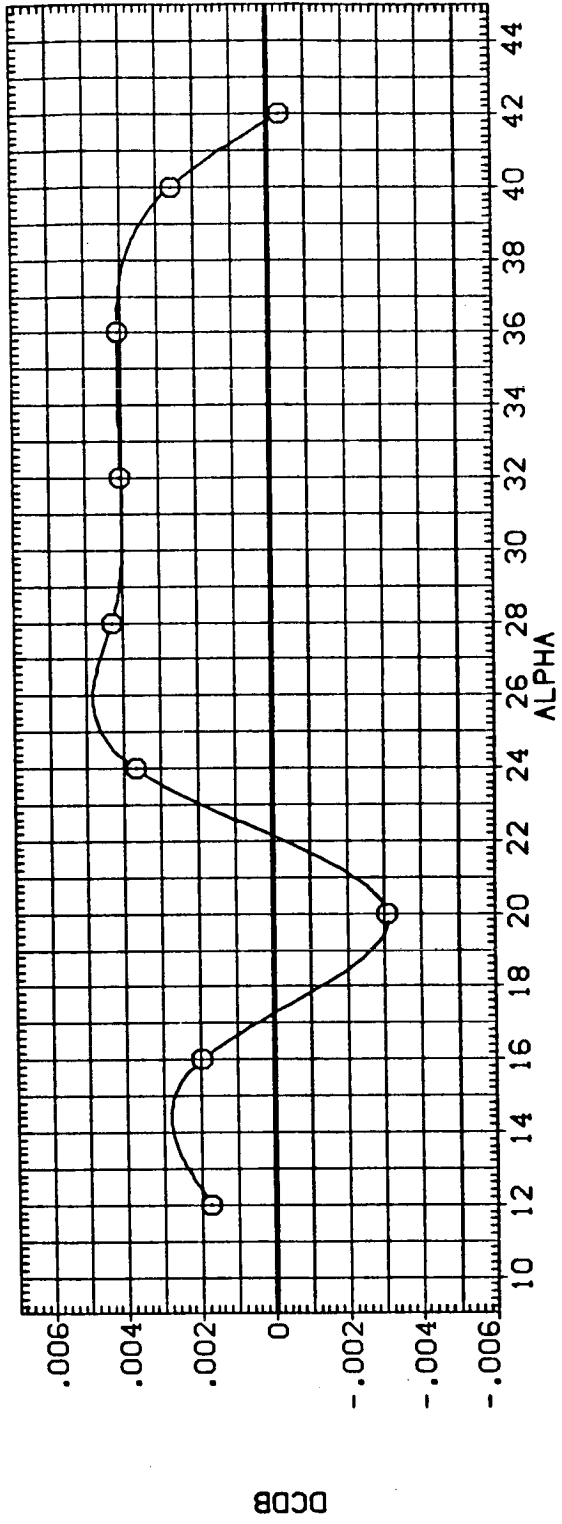
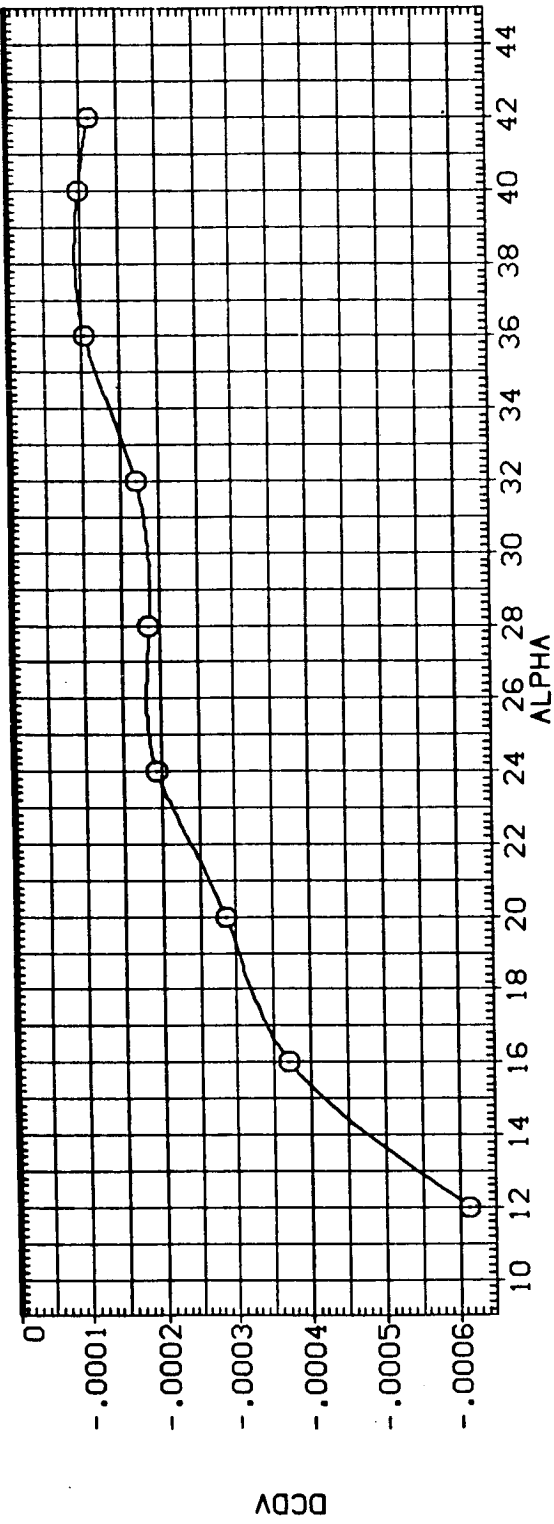


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL (AEG004) (AEG020)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-17-M14)
 AMES 3.5-190 OA98 (011-17-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 65.000 65.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

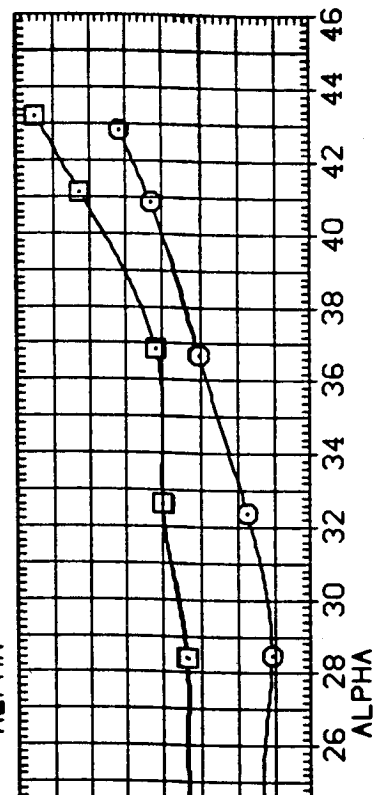
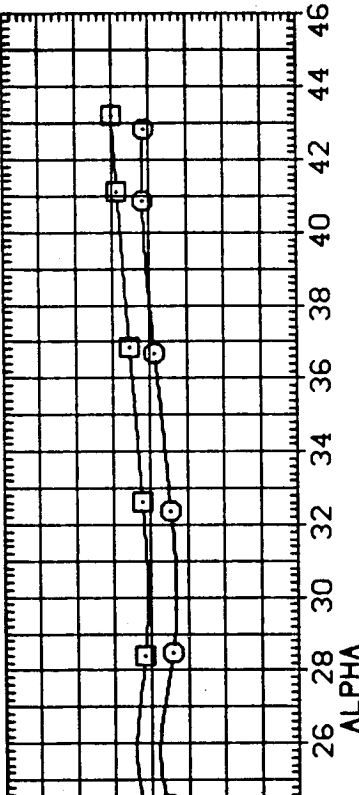
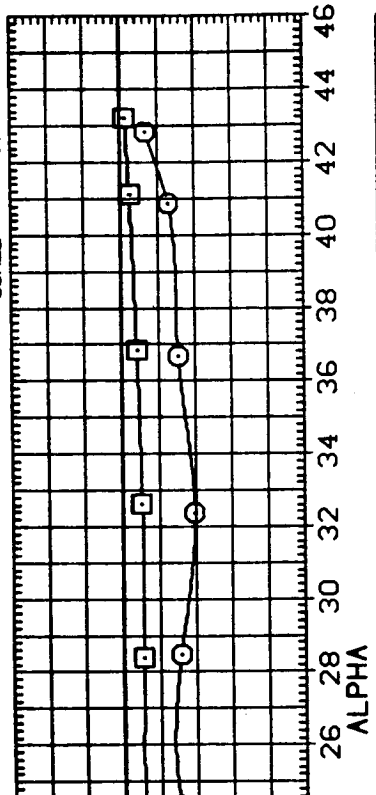


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (AE0004) (AE0020)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GAS8 (011-17-114)
 APES 3.5-190 GAS8 (011-17-114-N24-DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 85.000
 85.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

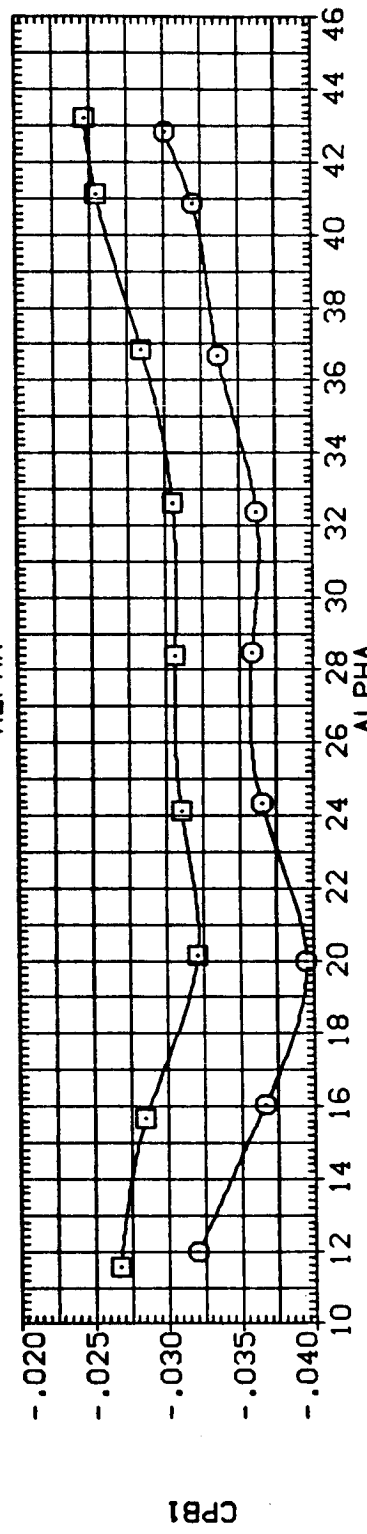
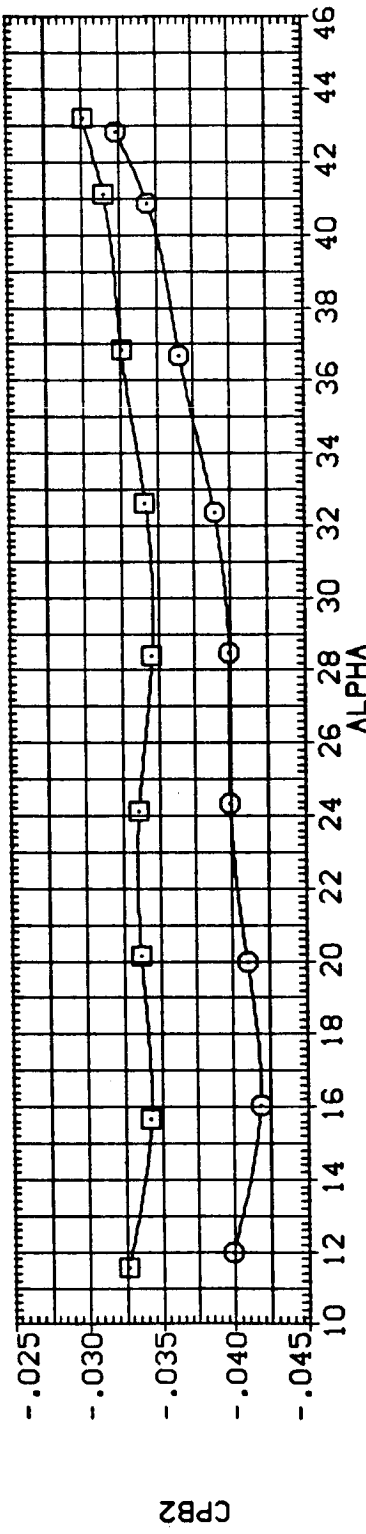
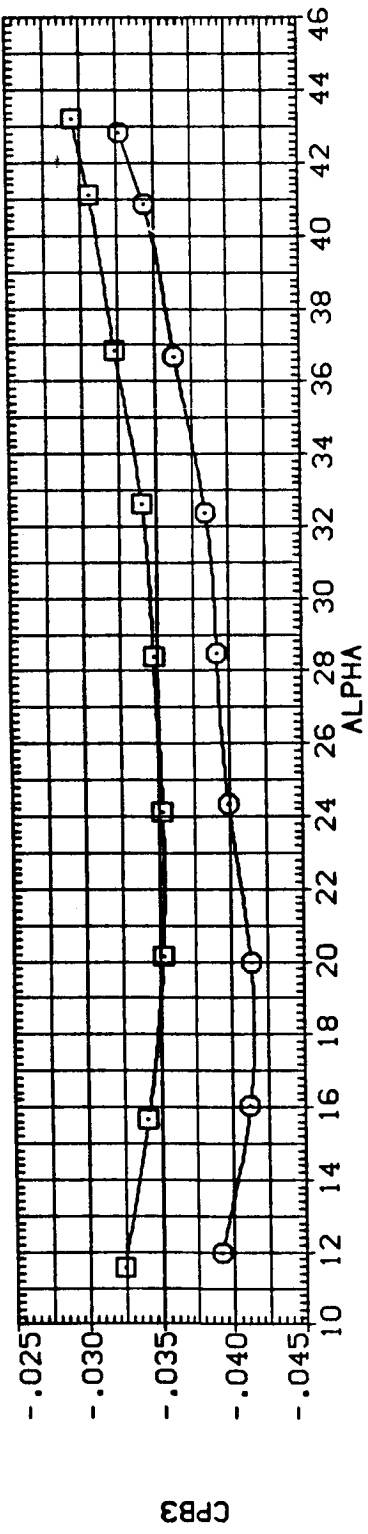


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GAS8 (011-17-114)
 AVES 3.5-190 GAS8 (011-17-114-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

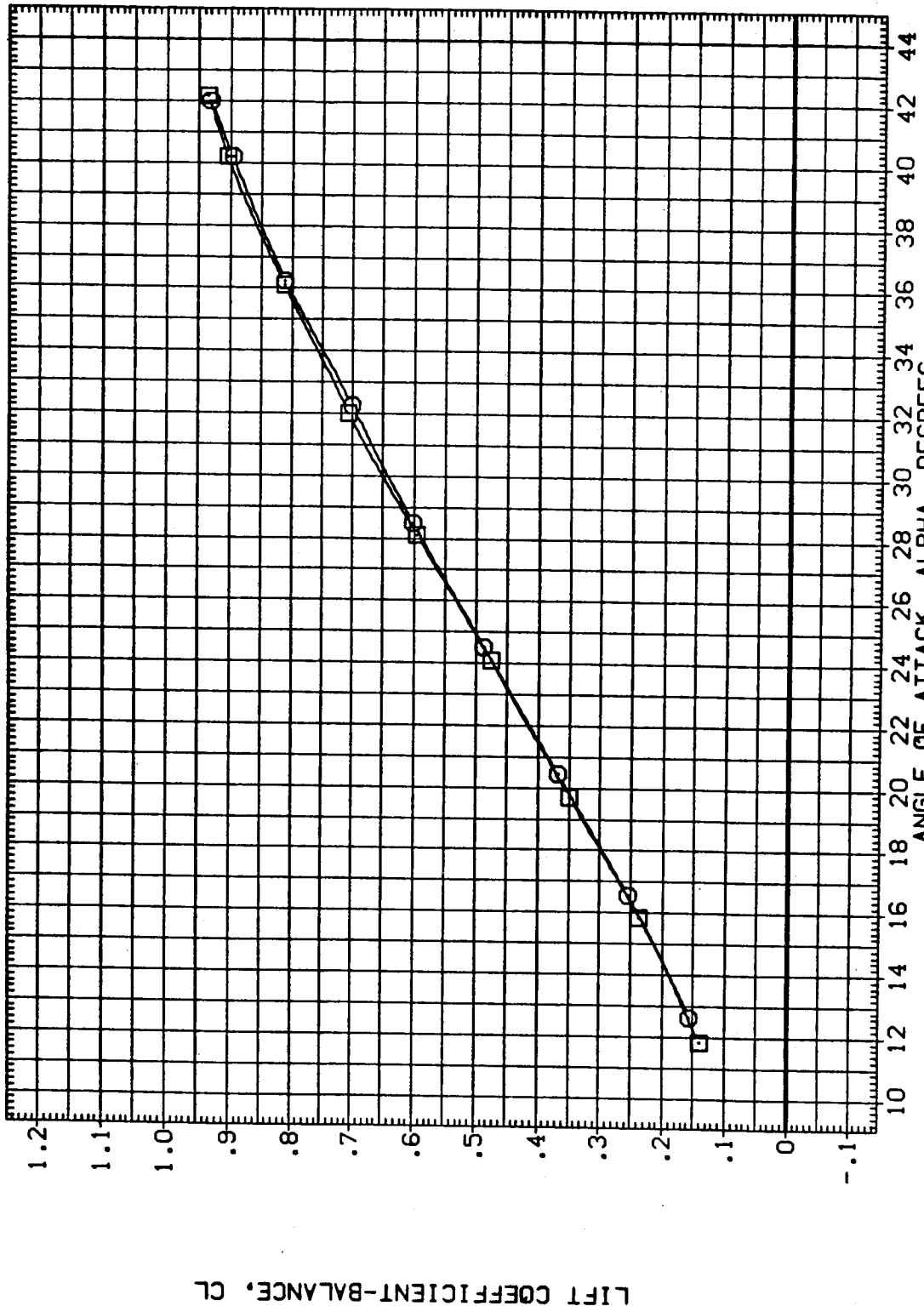


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021) \square

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+114)
 AMES 3.5-190 0A98 (011-17+114+24+DUMMY STING)

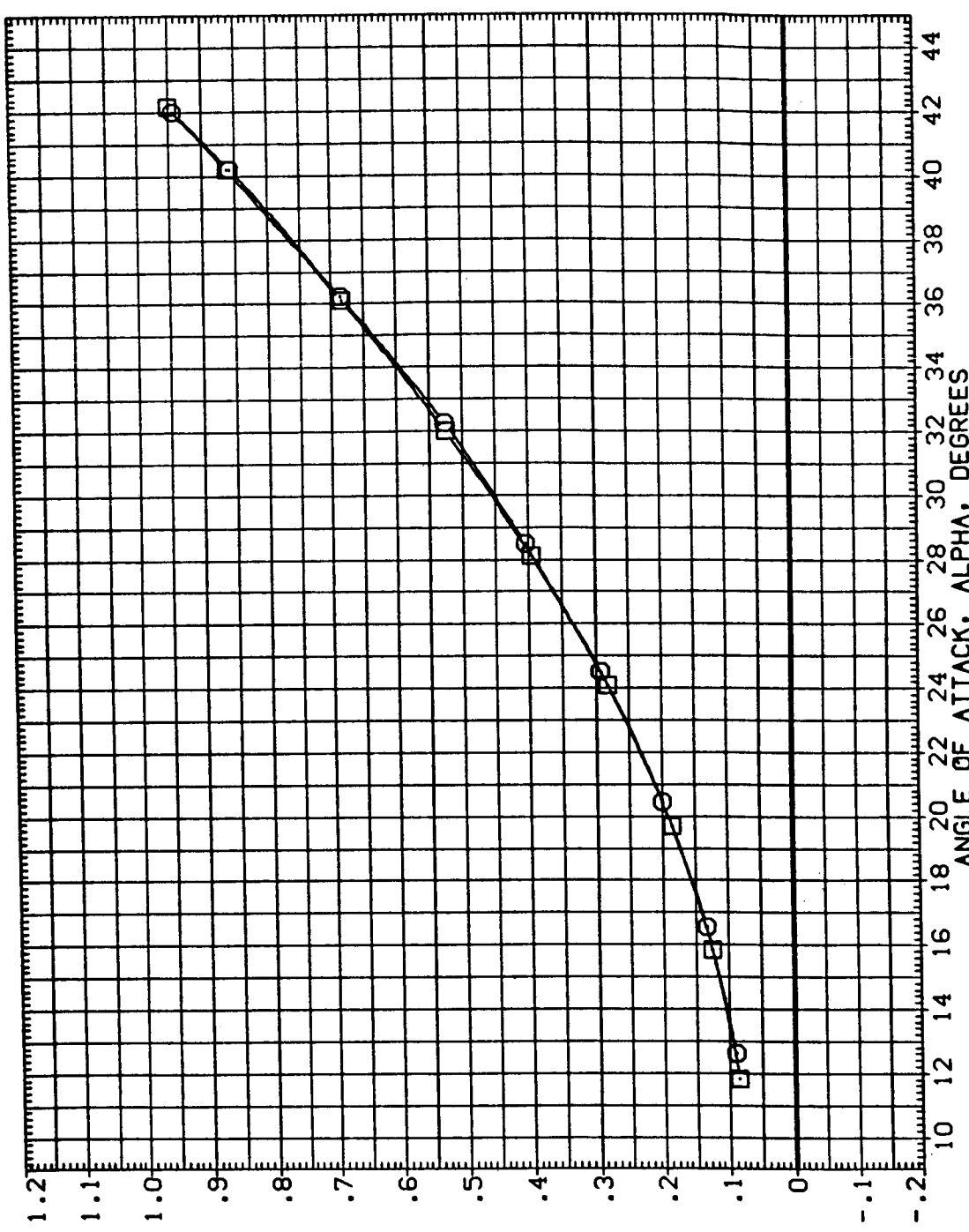
BETA .000
 .000

ELEVON .000
 .000

BOFLAP 16.300
 16.300

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 YMRP 1076.7000 IN. X0
 ZMRP .0000 IN. Y0
 SCALE 375.0000 IN. Z0
 .0150



DRAWN BY: [Name]

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL
(CE0005) □
(CE0021)

CONFIGURATION DESCRIPTION

AVES 3.5-190 CAS8 (011-M7-M14)
AVES 3.5-190 CAS8 (011-M7-M14-N24-DUMMY STING)

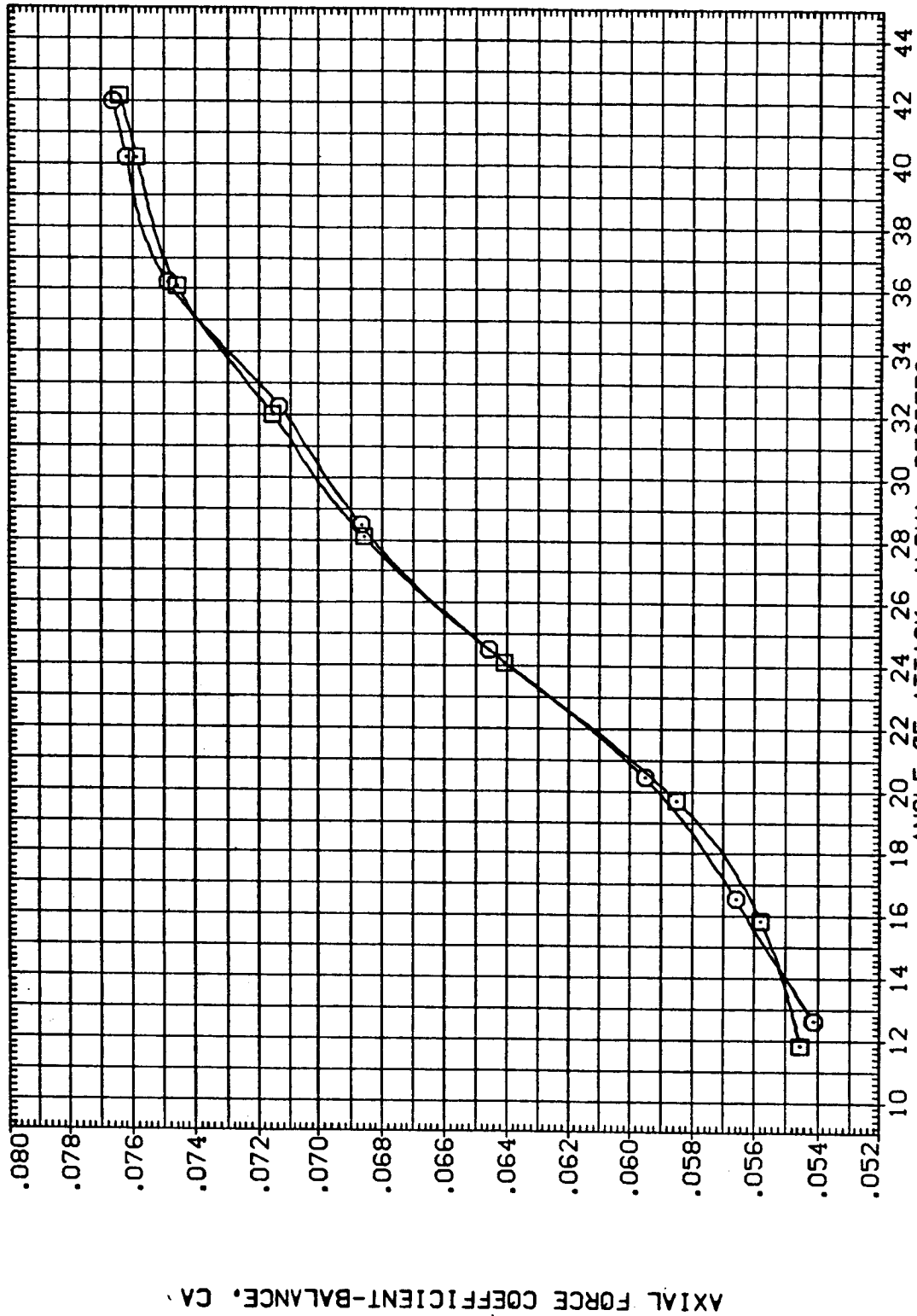
BETA .000
.000

ELEVON .000
.000

BOFLAP 16.300
16.300

SFOBRK 55.000
55.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X0
YMRP .0000 IN.Y0
ZMRP 375.0000 IN.Z0
SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AVES 3.5-180 QAS8 (011-17+M14)
 AVES 3.5-180 QAS8 (011-17+M14+24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

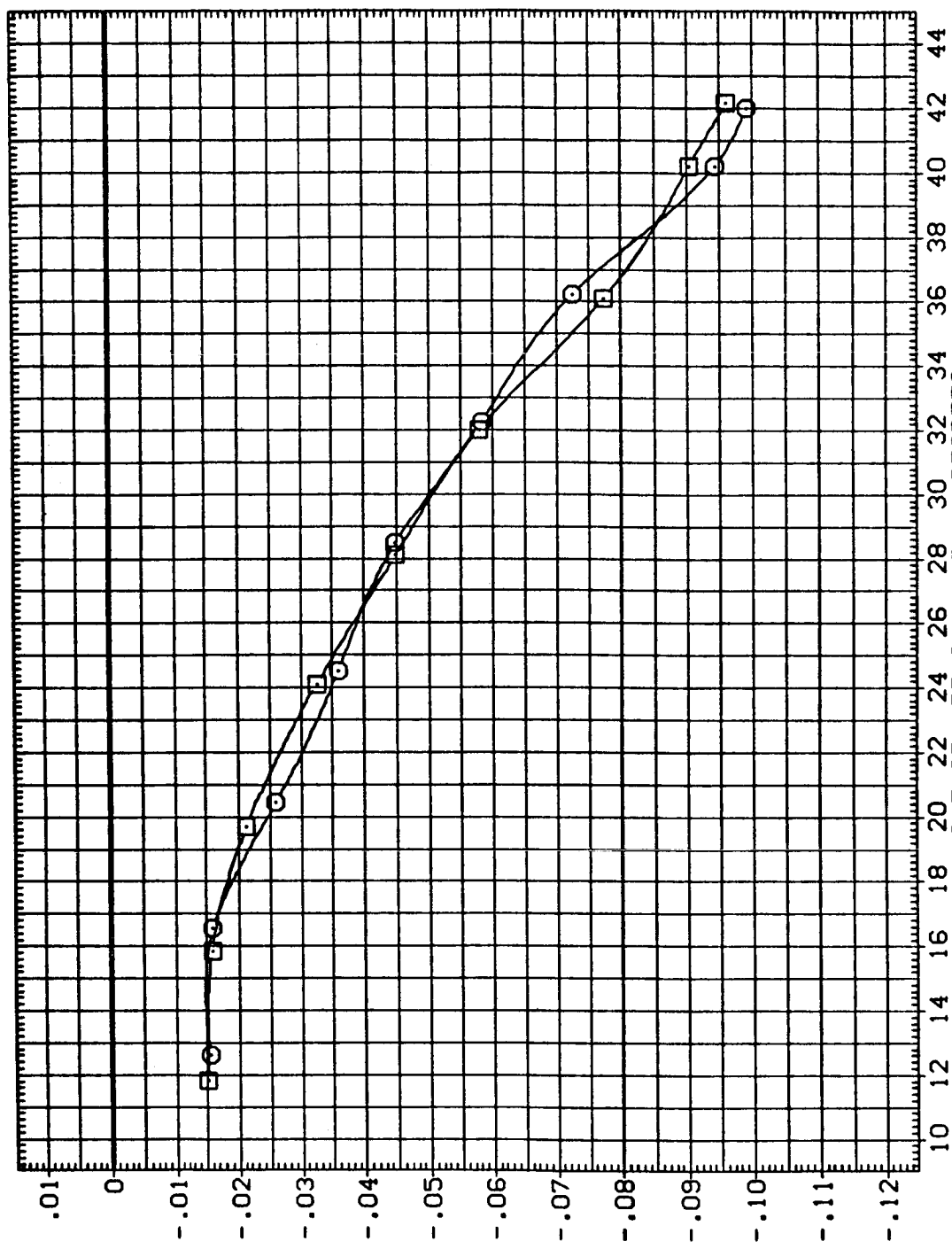


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

C-7

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 CA98 (011-17-114)
 AVES 3.5-190 CA98 (011-17-114)-N24-DUMMY STING

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

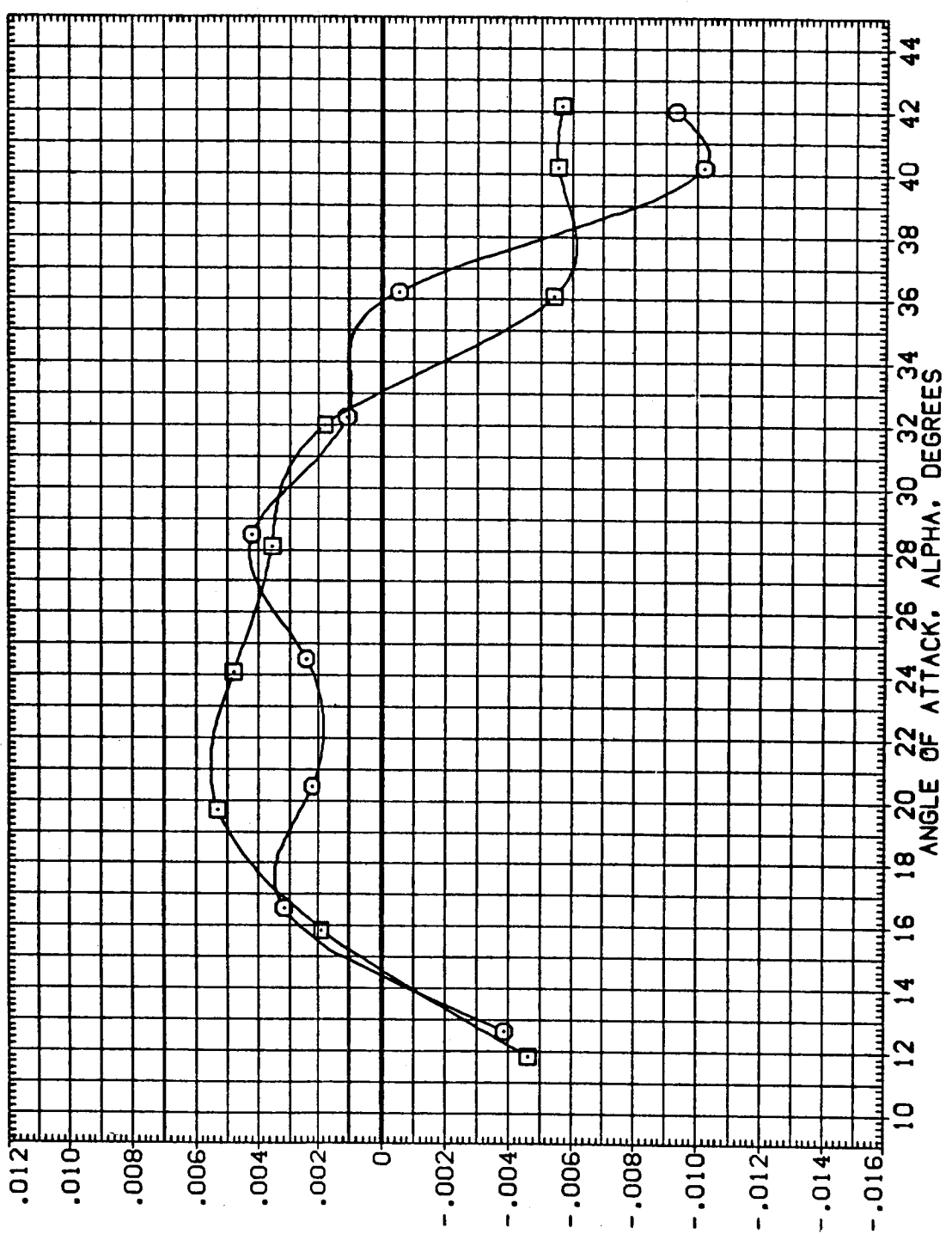


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

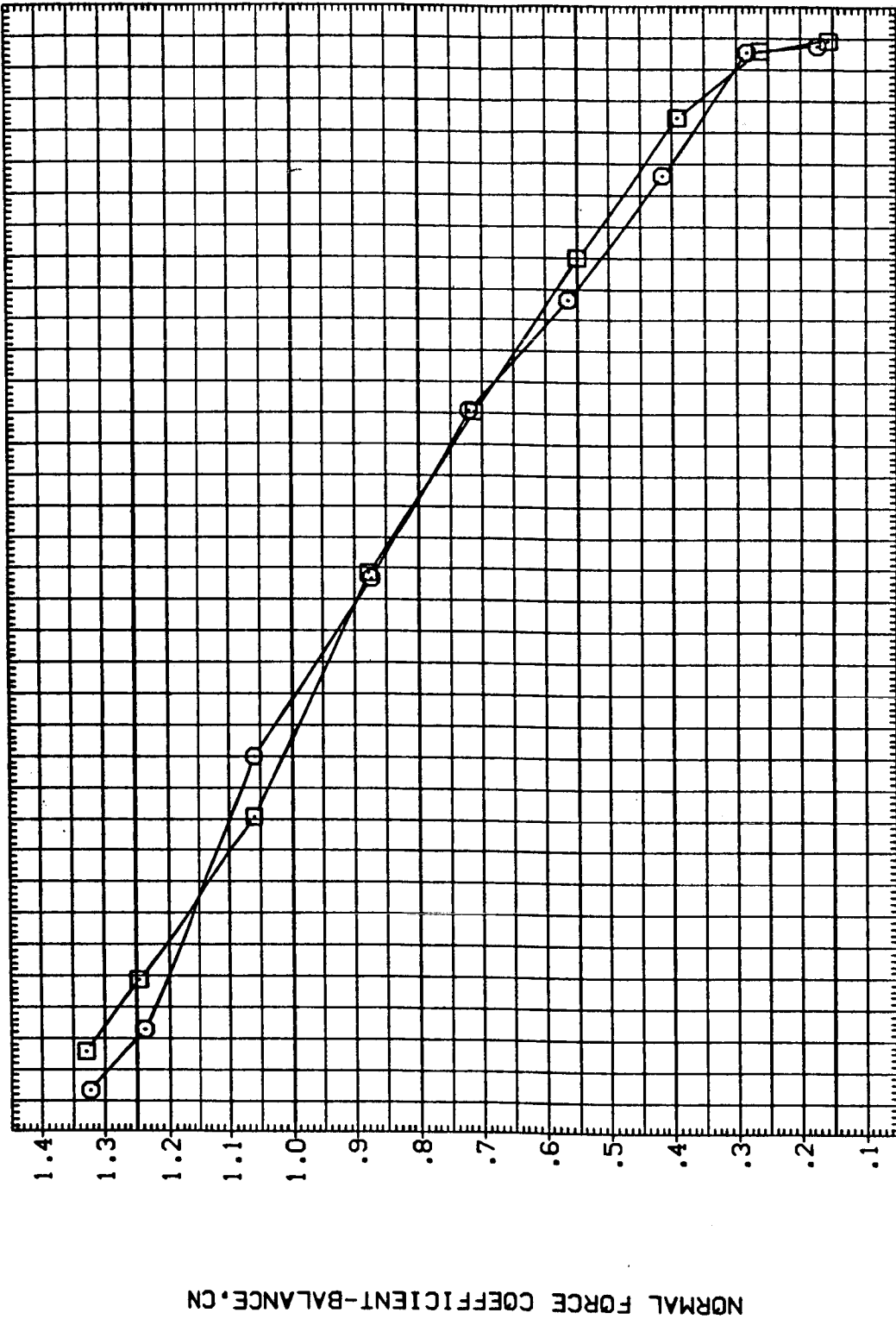
CAJ MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-17+114)
 AMES 3.5-190 OA98 (011-17+114-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP 16.300
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.6000 IN.
 BRREF 936.6600 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G. - BALANCE, CLMFW

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000
 ELEVATION .000
 BOFLAP 16.300
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

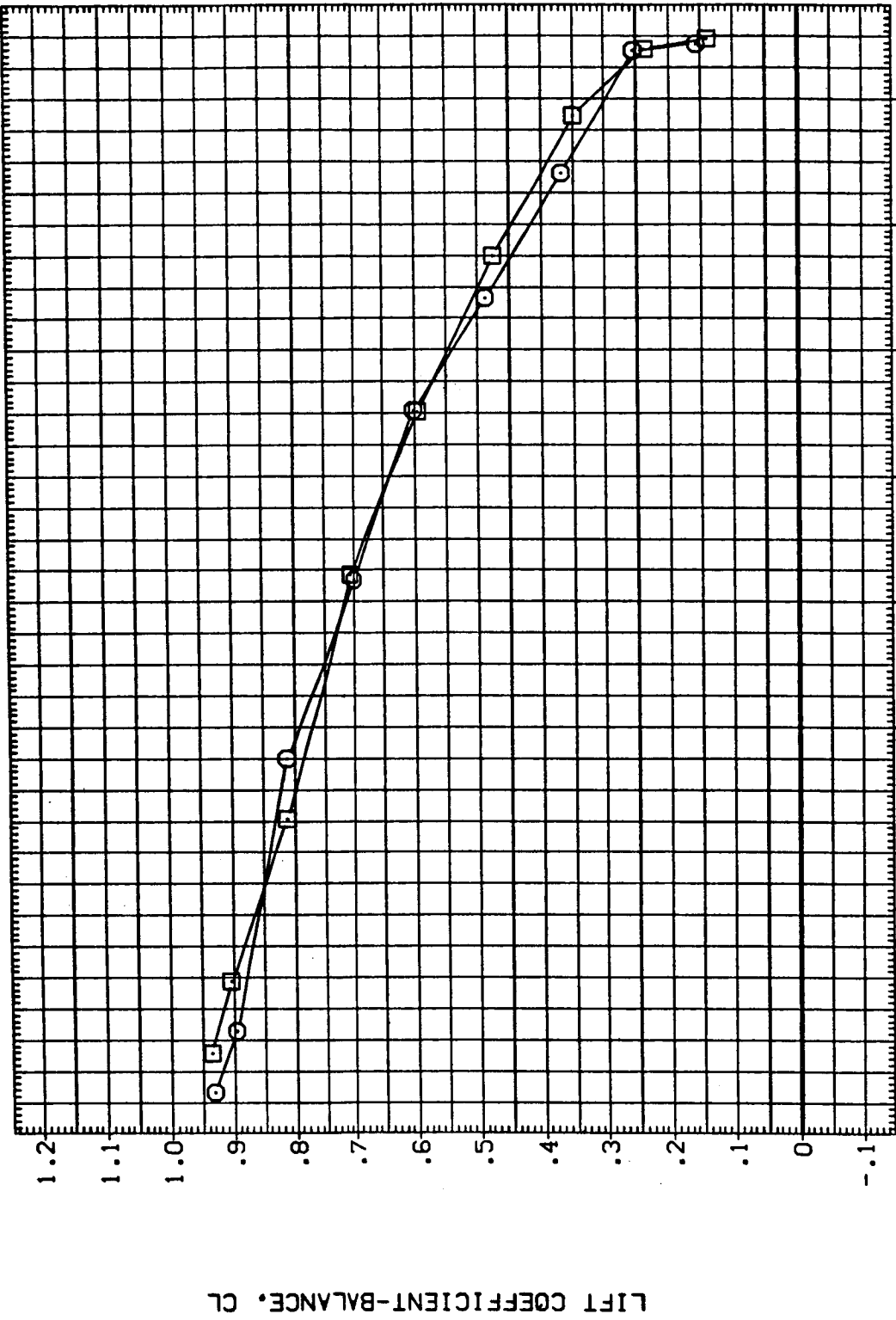


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 QAS8 (011-17+H14)
 AMES 3.5-190 QAS8 (011-17+H14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP 16.300
 16.300

SFOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

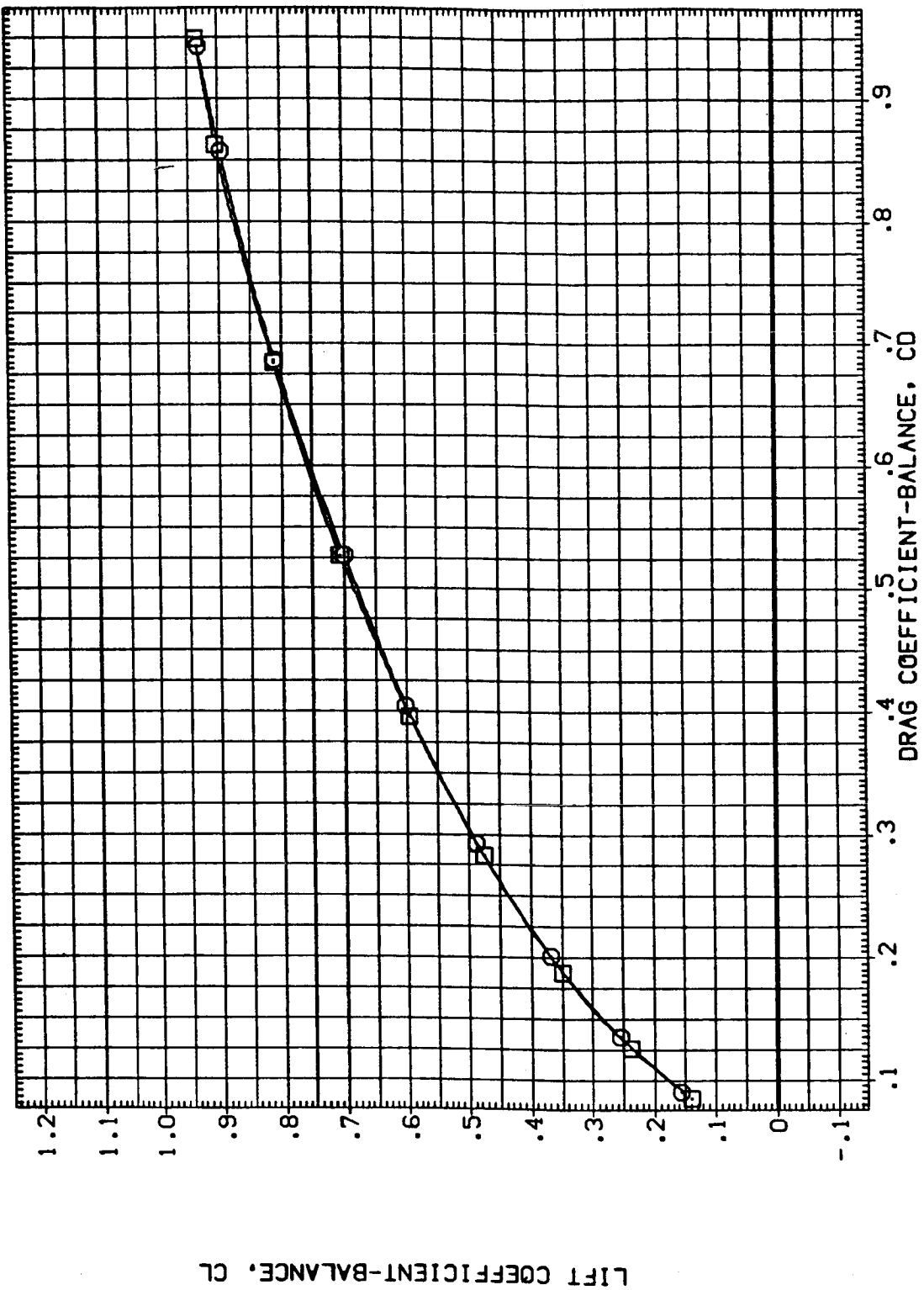


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

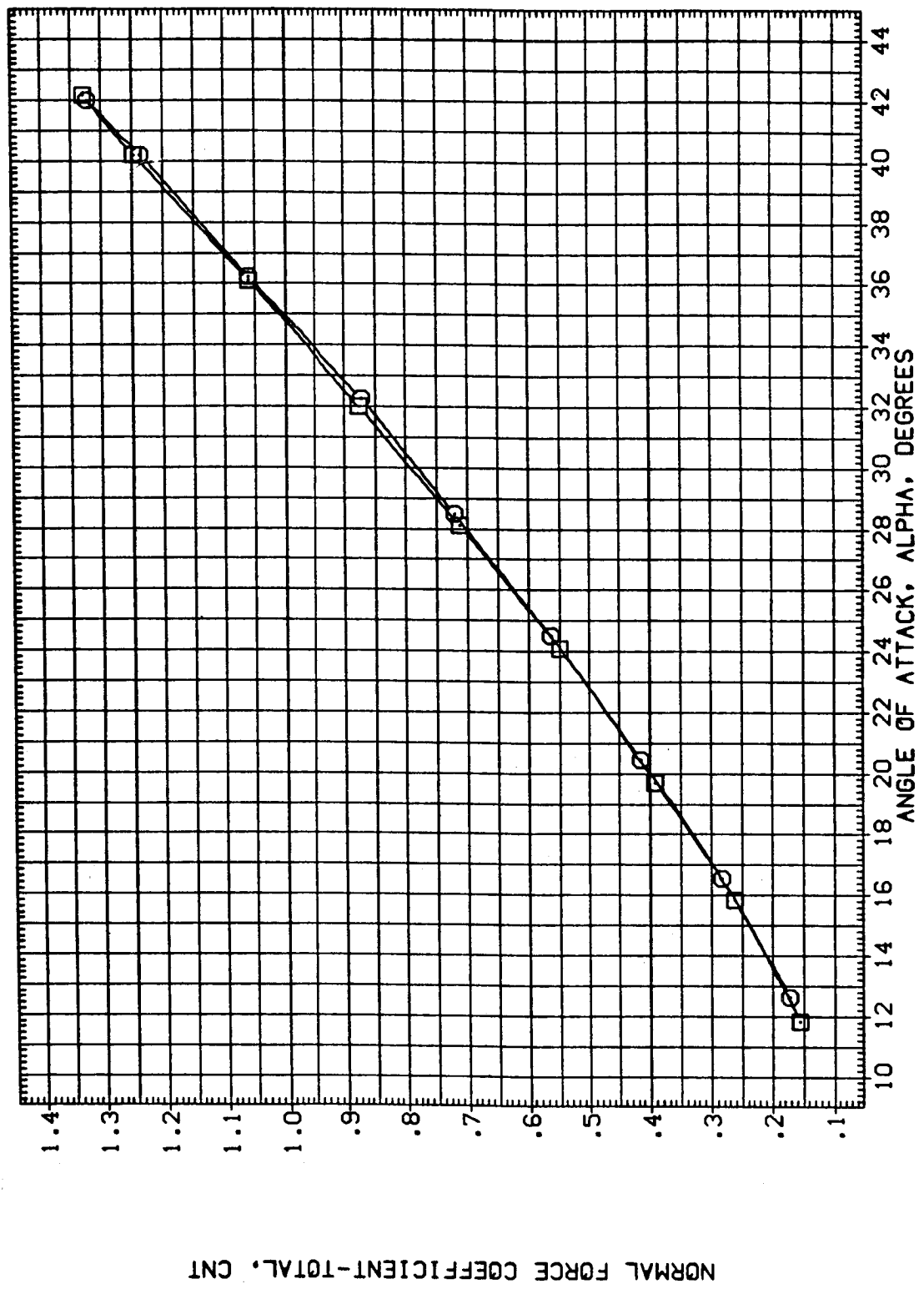
BETA .000
 .000

ELEVON .000
 .000

BOFLAP 16.300
 16.300

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.6000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-47+H14)
 AMES 3.5-190 0A98 (011-47+H14-AG4+DUPPY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

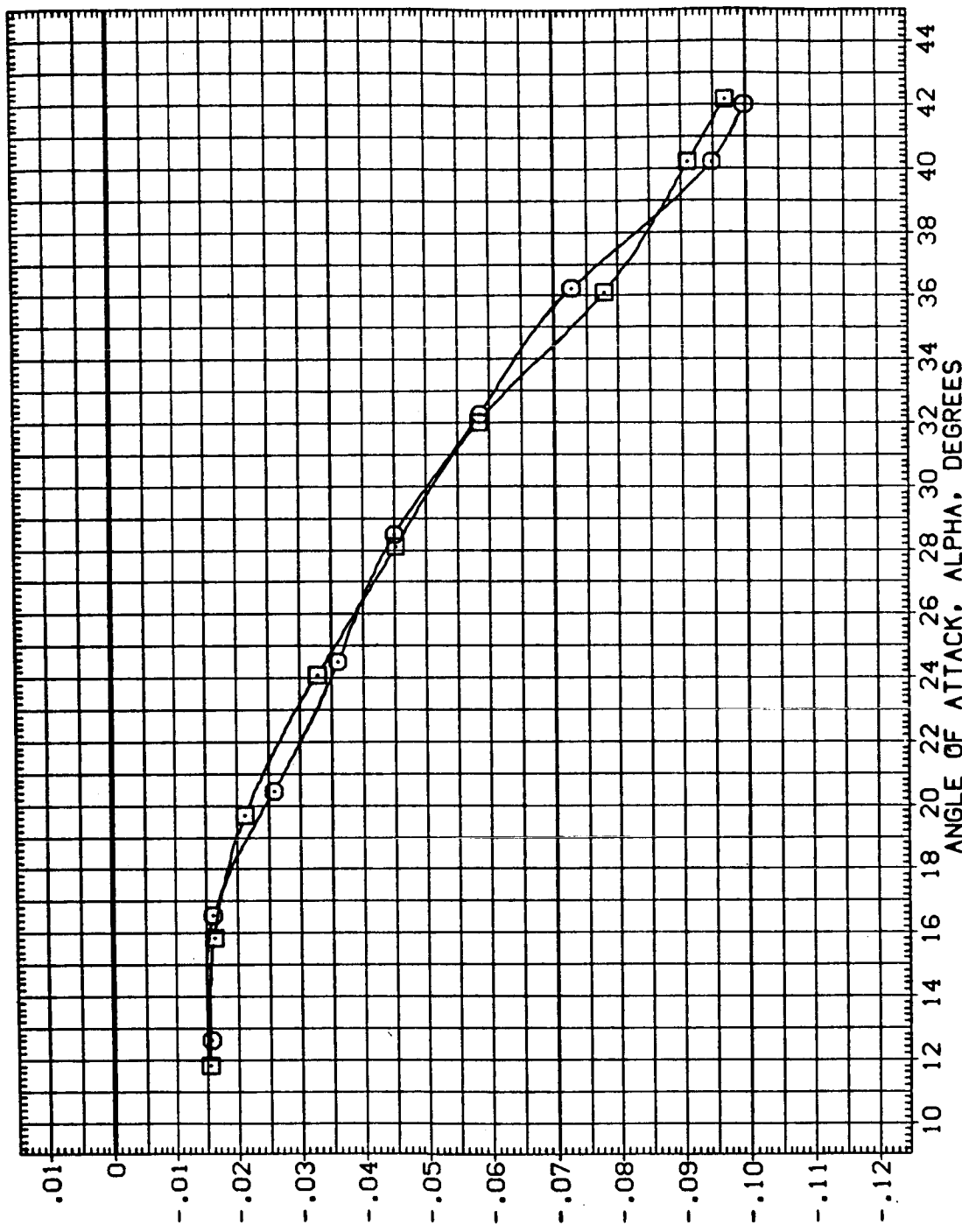


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-47+H14)
 AMES 3.5-190 0A98 (011-47+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

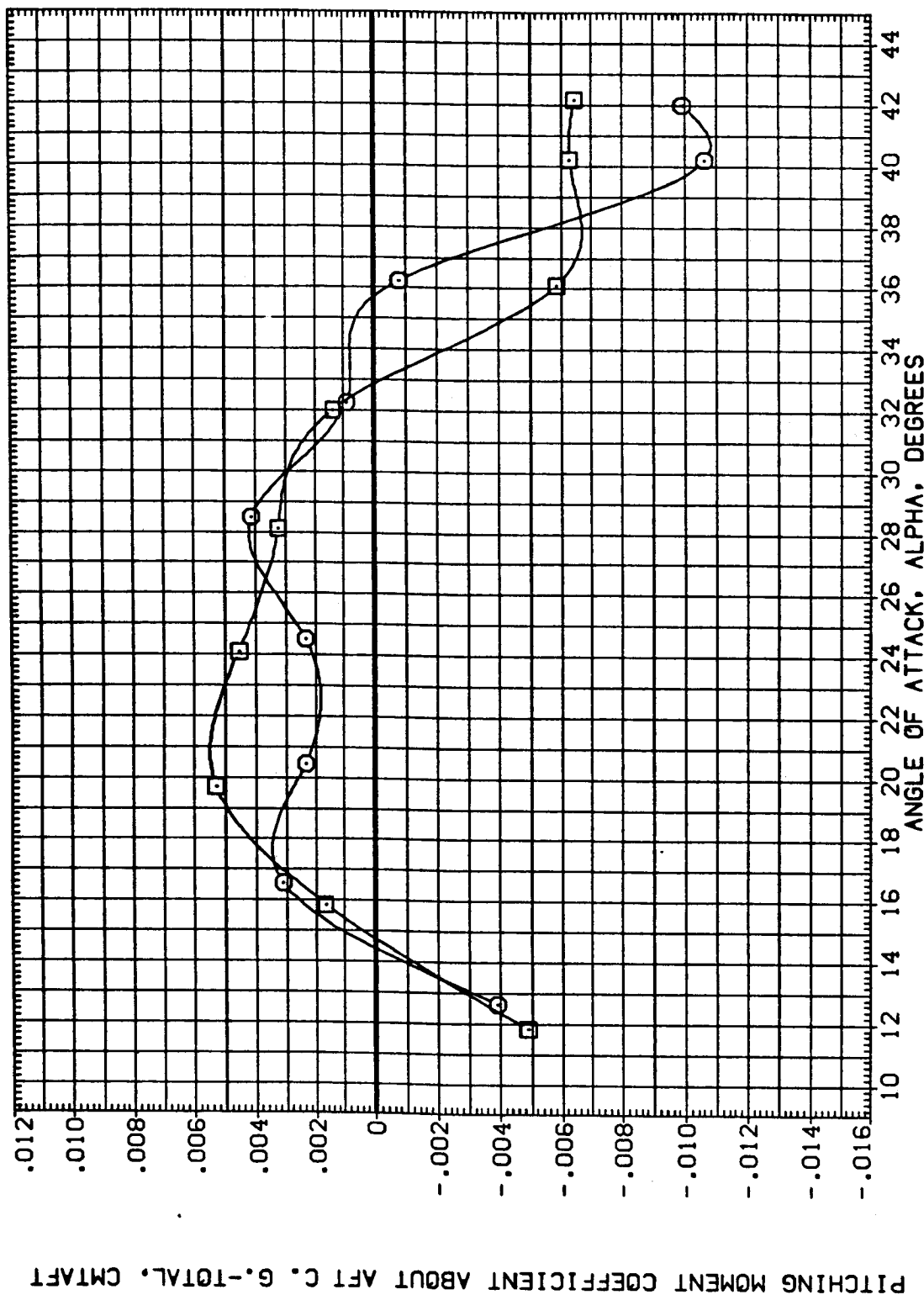


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7+M14)
 AMES 3.5-190 0A98 (011-M7+M14-N24+DJMMY STING)

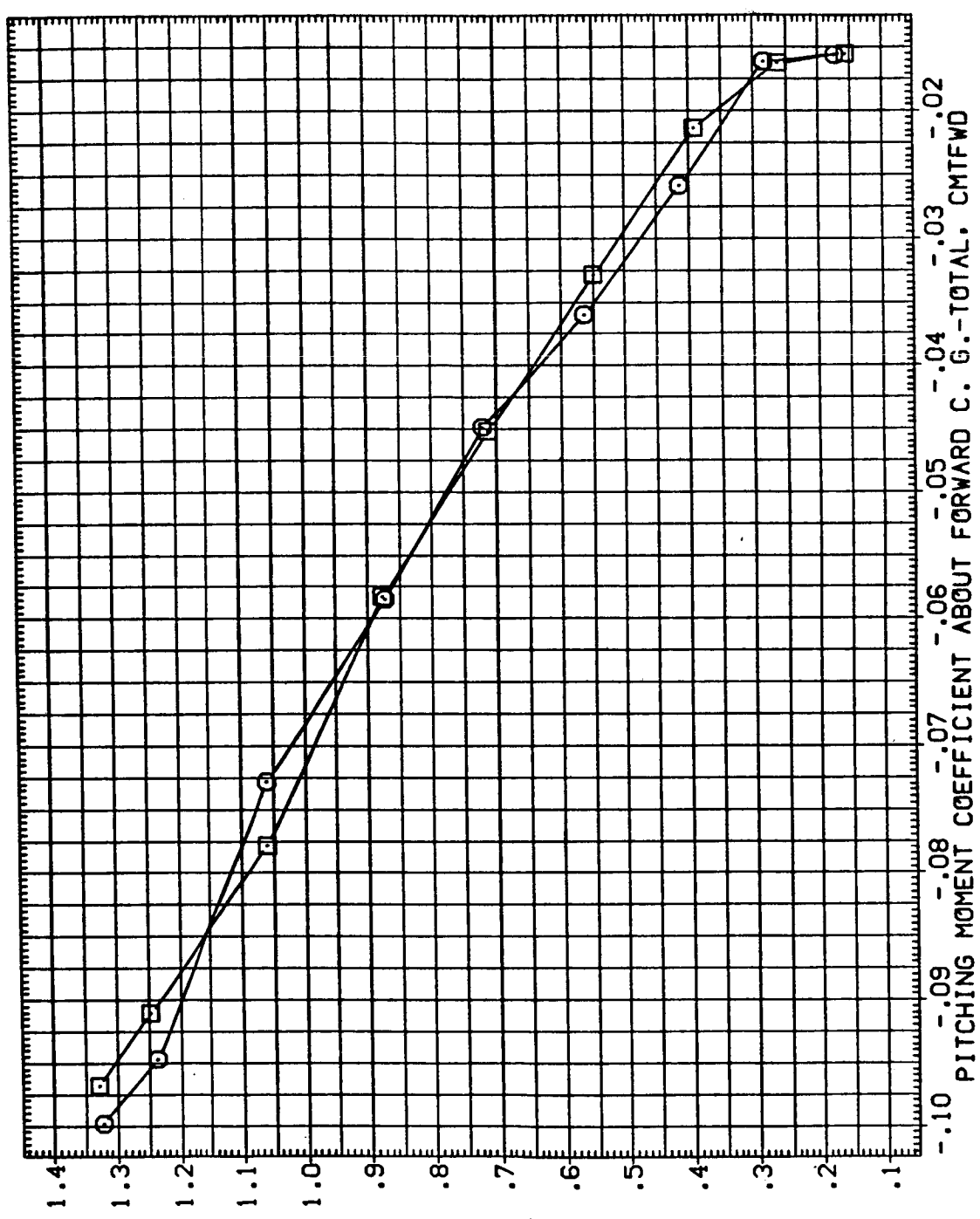
BETA .000
 .000

ELEVON .000
 .000

BDFLAP 16.300
 16.300

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021) \square

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-17-M14)
 AMES 3.5-190 OA98 (011-17-M14-N24-DUMMY STING)

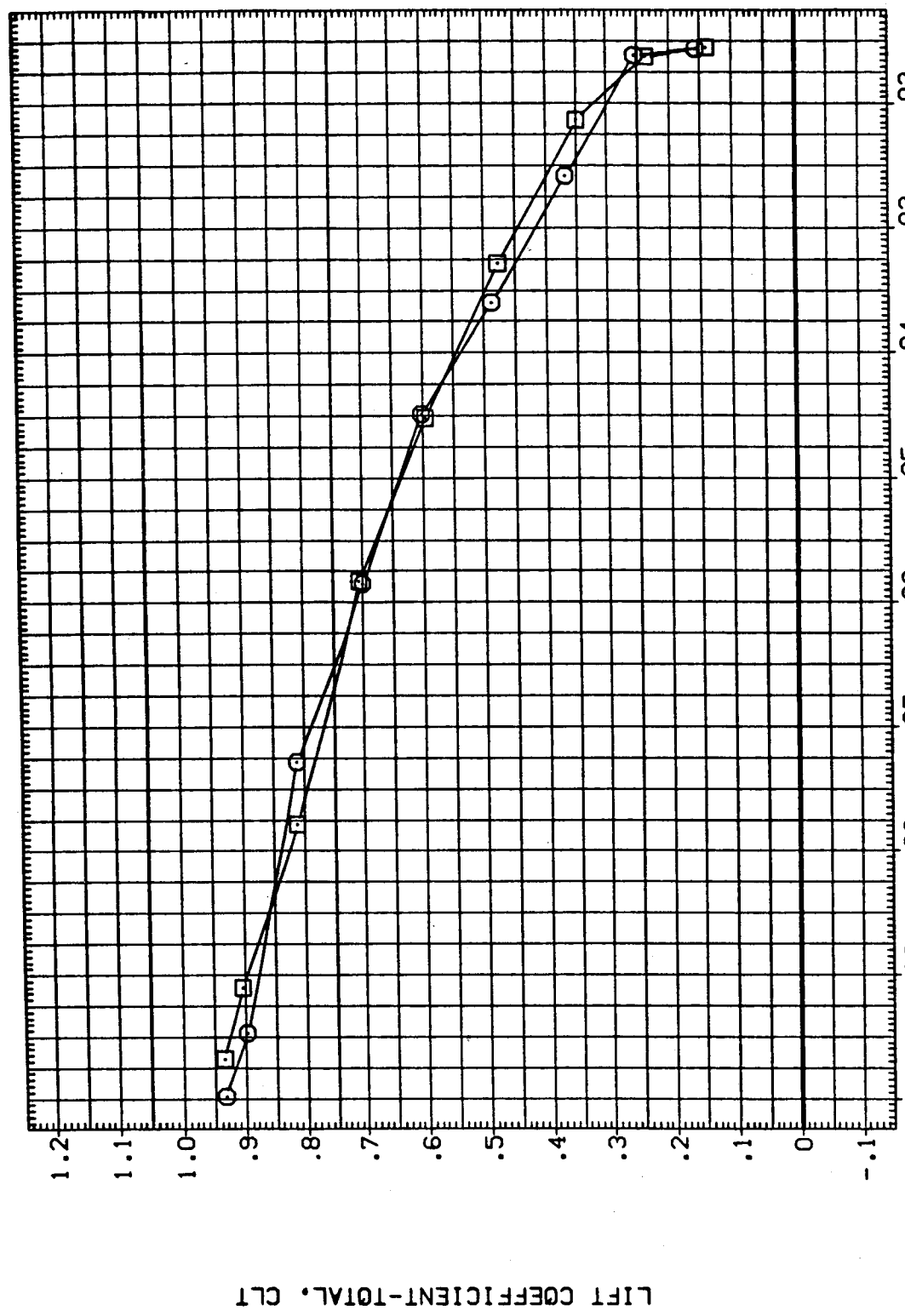
BETA .000
 .000

ELEVON .000
 .000

SOFLAP 16.300
 16.300

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-47+M14)
 AMES 3.5-190 OA98 (011-47+M14-N24+DUMMY STING)

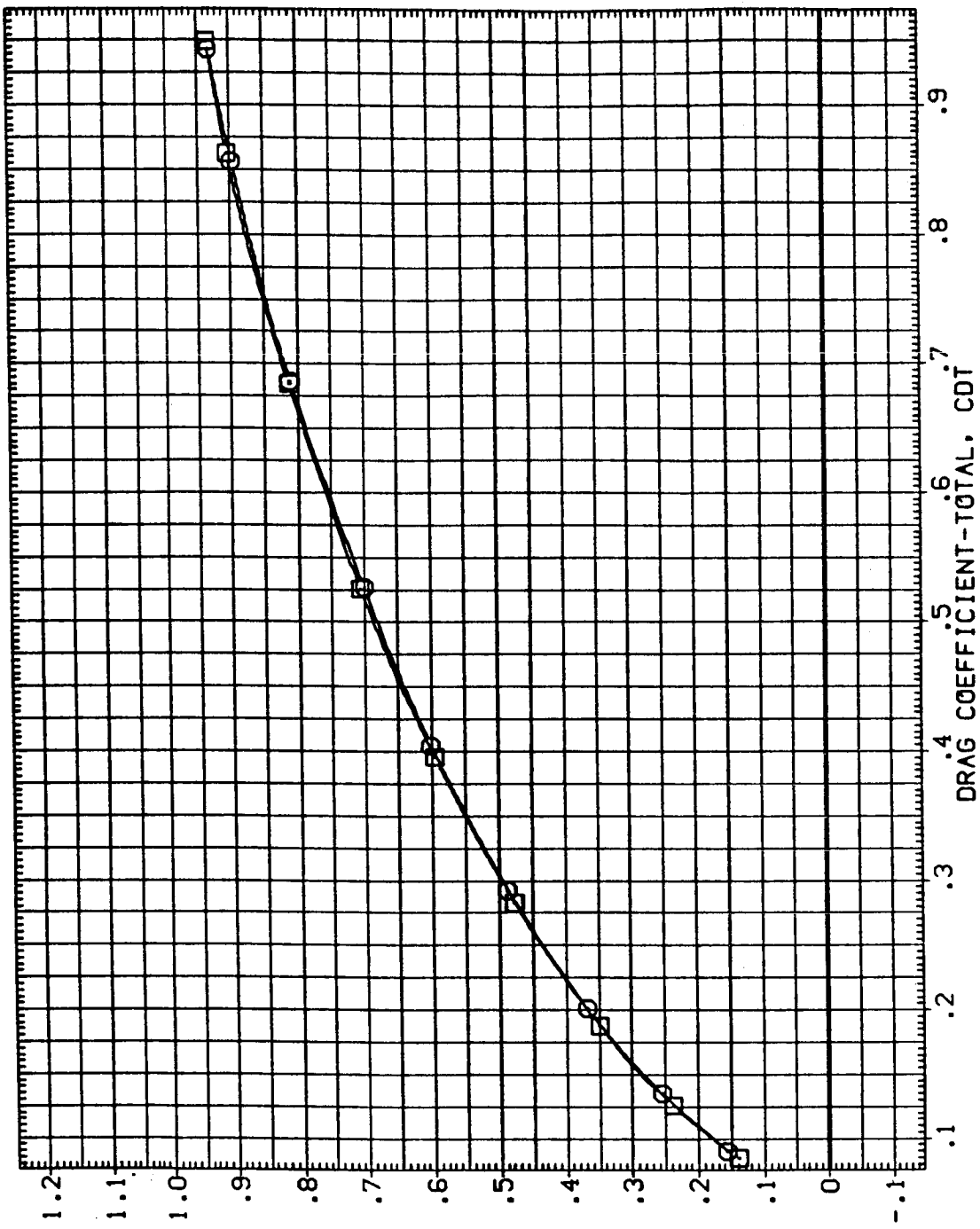
BETA .000
 .000

ELEVON .000
 .000

BOFLAP 16.300
 16.300

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-M7-M14)
 AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

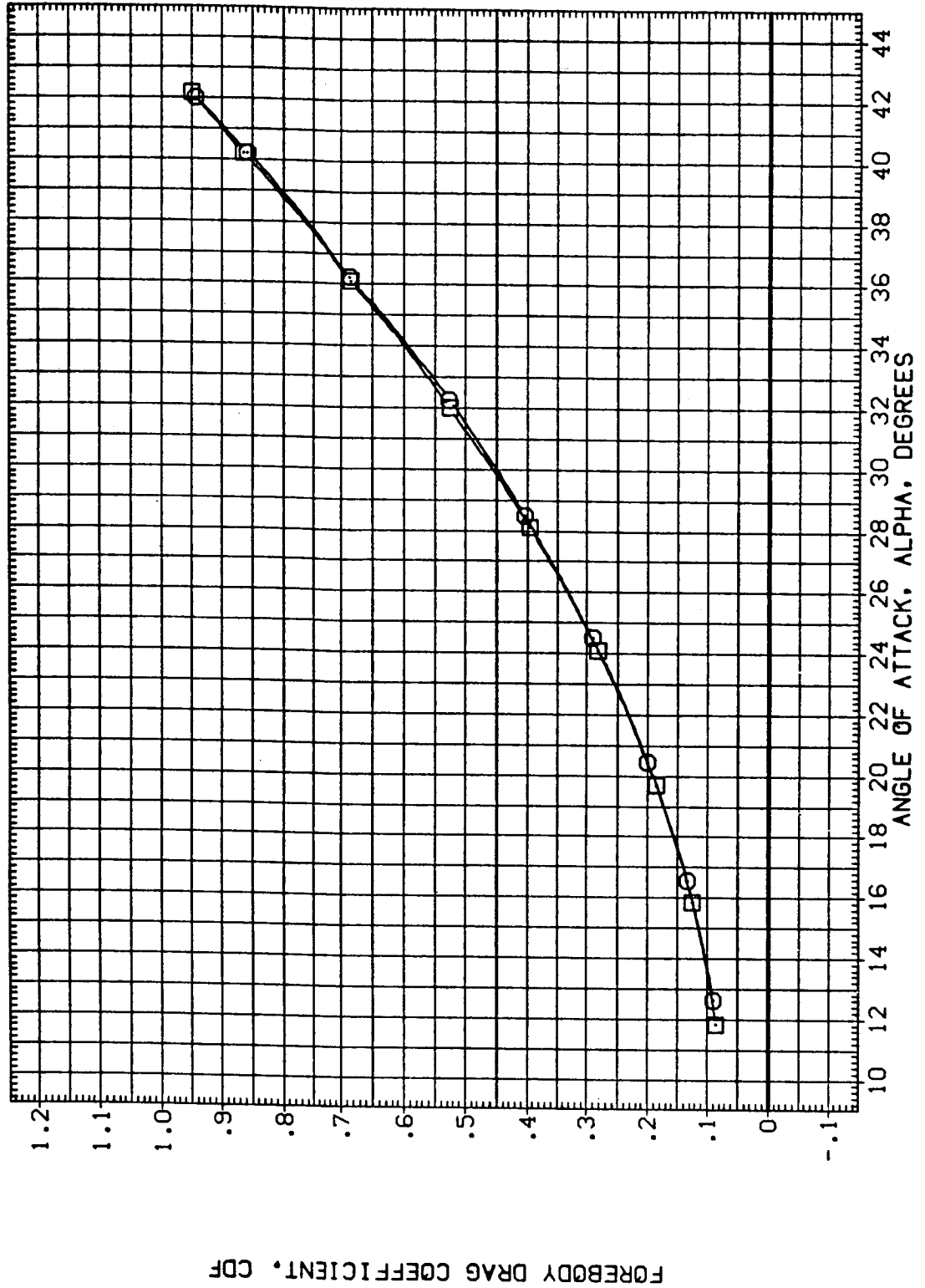



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)  CONFIGURATION DESCRIPTION AMES 3.5-190 BA98 (011-M7+M14) AMES 3.5-190 BA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SO.FT. 50. FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. X0 YMRP .0000 IN. Y0 ZMRP 375.0000 IN. Z0 SCALE .0150

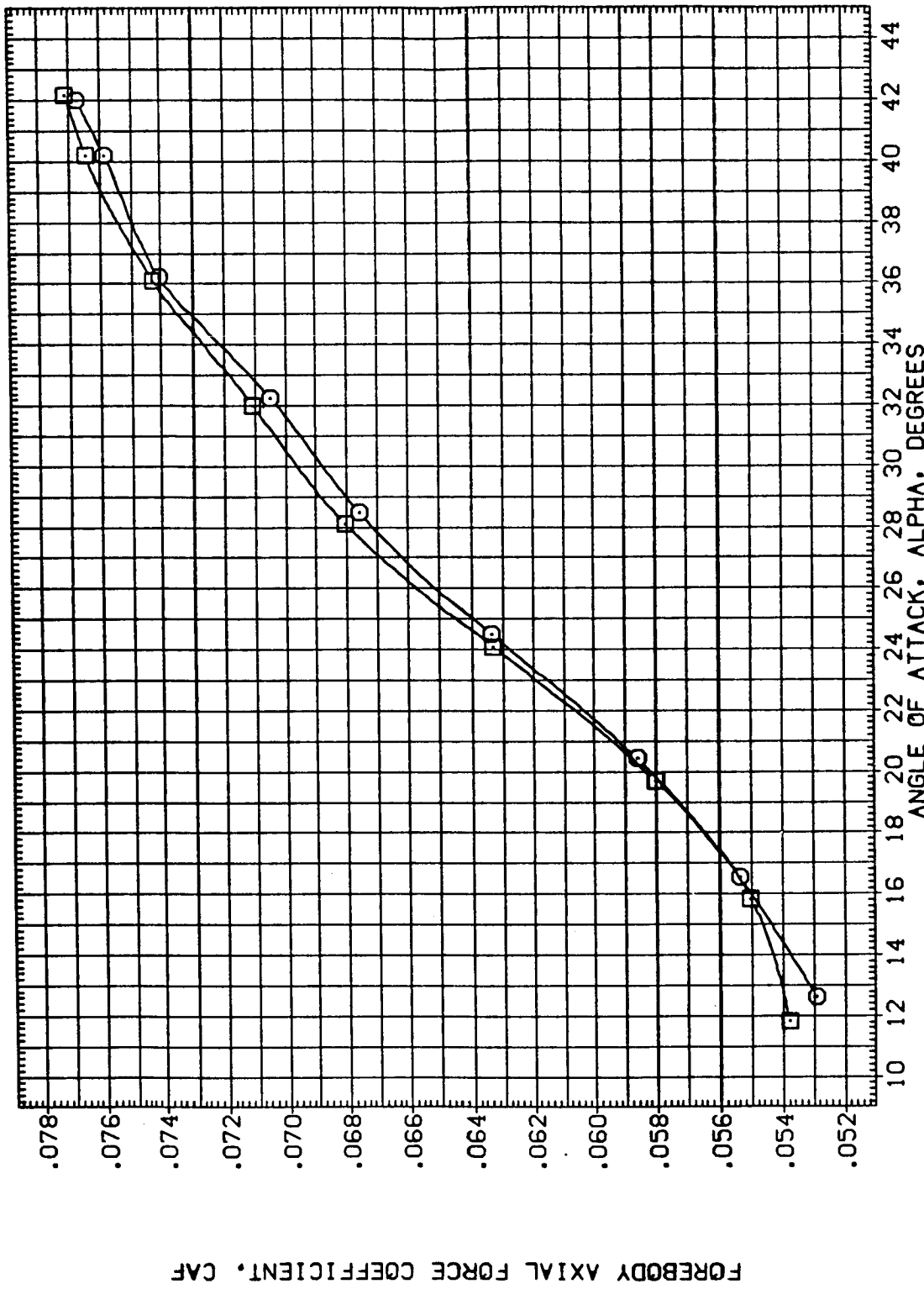


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27



DATA SET SYMBOL (EE0005) \square AMES 3.5-190 CA98 (011-M7-M14)
 (EE0021) \square AMES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X

YMRP .0000 IN.Y

ZMRP 375.0000 IN.Z

SCALE .0150

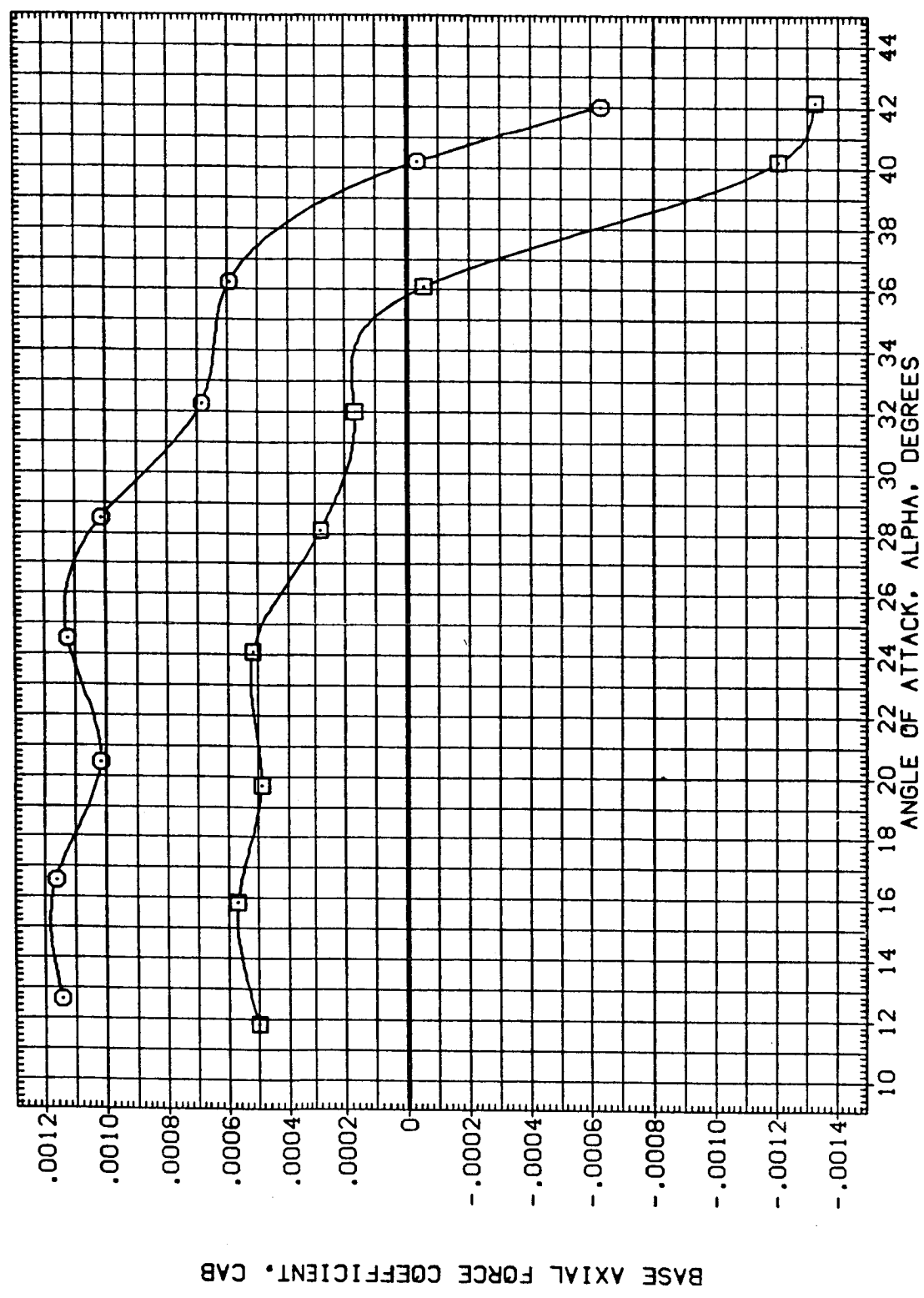


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL (BEG005) (BEG021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP 16.300 16.300

SFOBRK 55.000 55.000

REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN.X0 936.6800
 IN.Y0 1076.7000
 IN.Z0 .0000
 7MRP 375.0000
 SCALE .0150

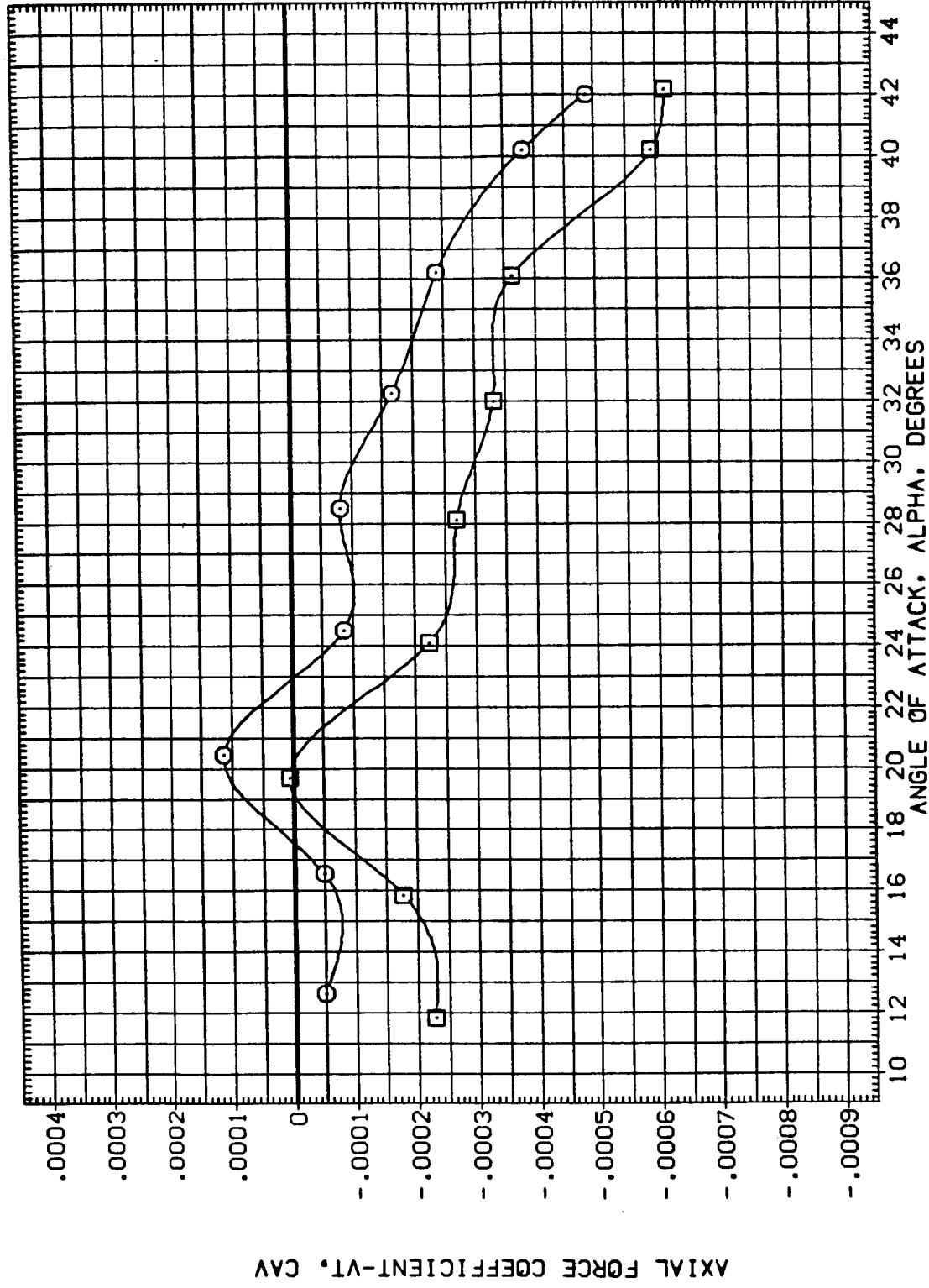


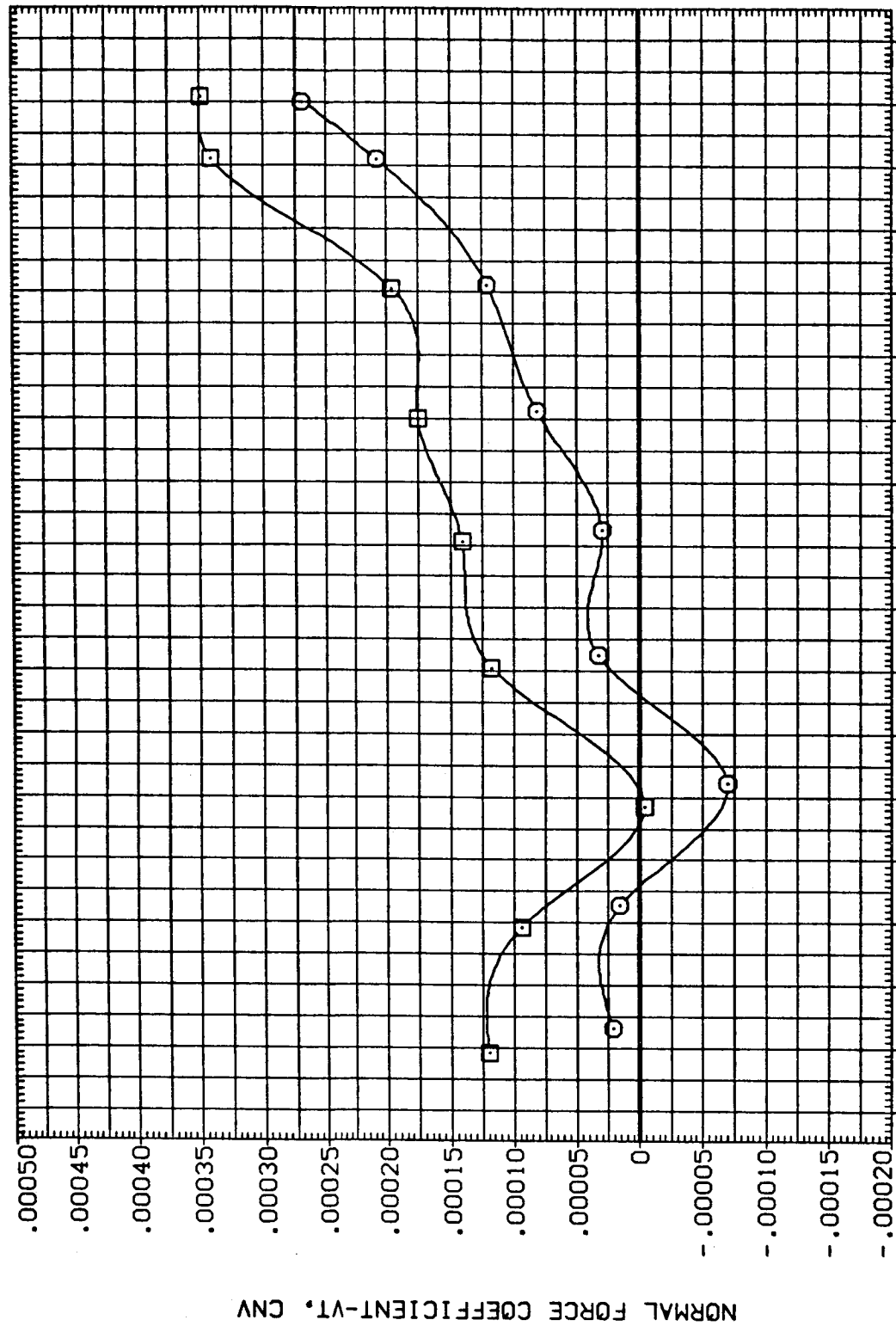
FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BEG005) (BEG021) \square CONFIGURATION DESCRIPTION AMES 3.5-190 GAS8 (011-M7-M14) AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000 ELEVON .000 .000 BOFLAP 16.300 16.300 SPOBRK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150



NORMAL FORCE COEFFICIENT-Vt, CNV

ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0005) (BE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000
 .000

ELEVON .000
 .000

BOFLAP 16.300
 16.300

SPDRBK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

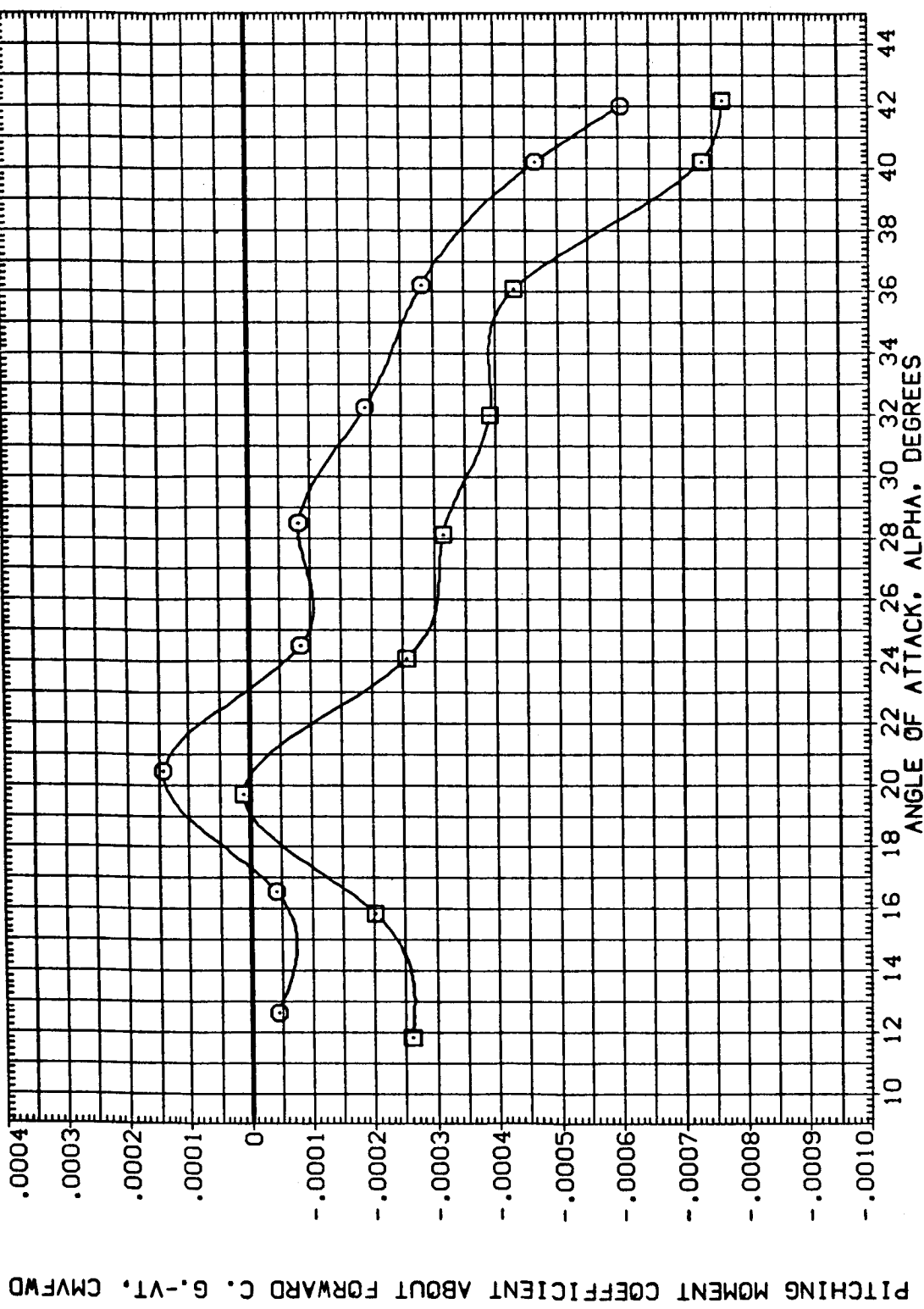


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0005) (BE0021)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DAS8 (011-17+M14)
 AMES 3.5-190 DAS8 (011-17+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN.X0
 ZMRP 375.0000 IN.Y0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

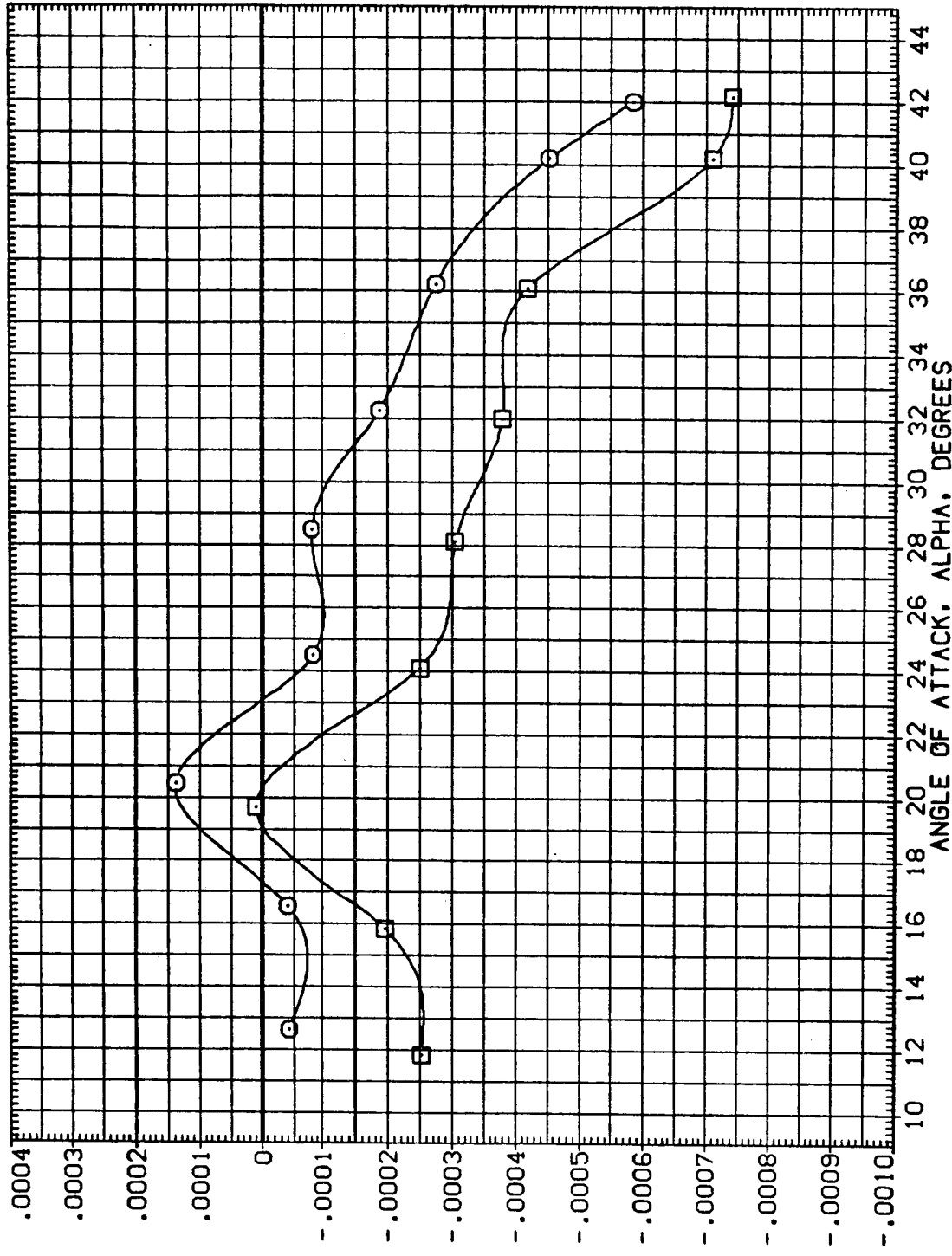
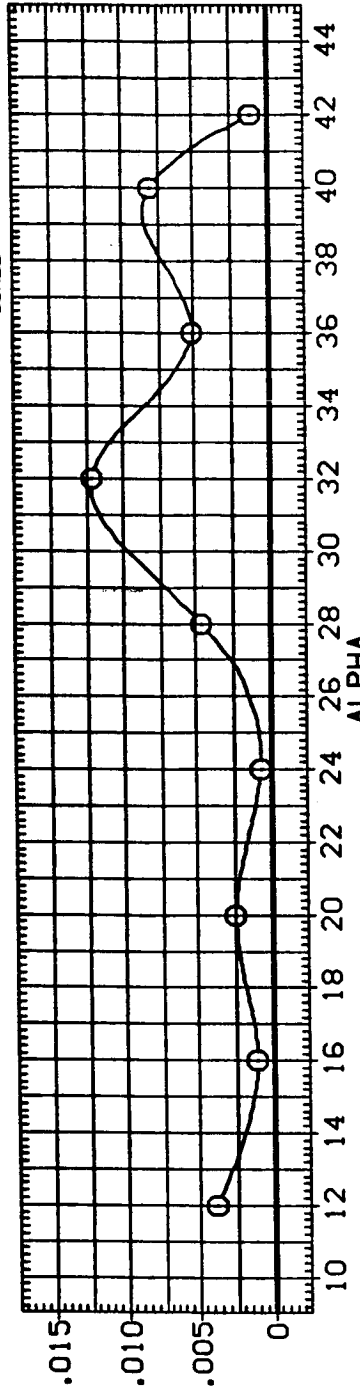


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

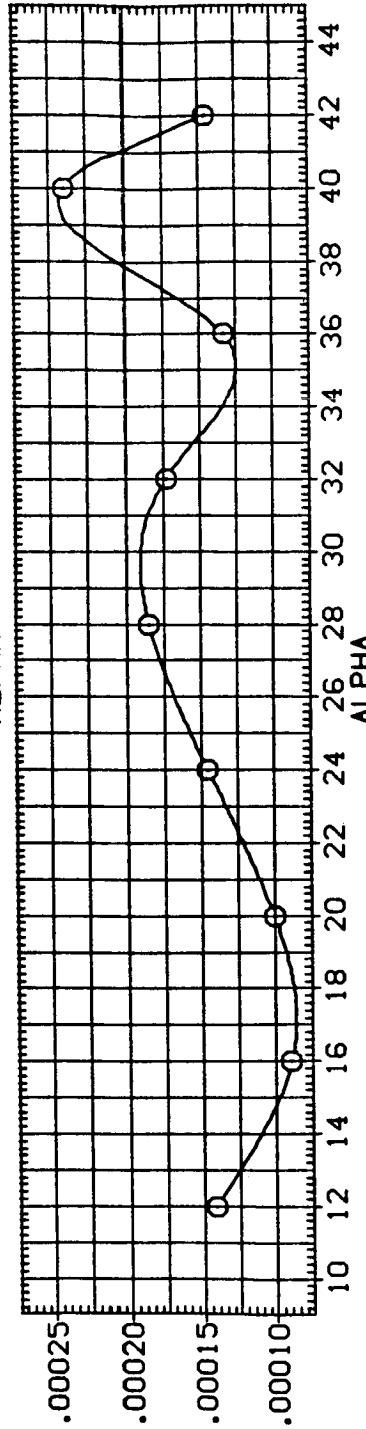
(A)MACH = 10.27

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0021)

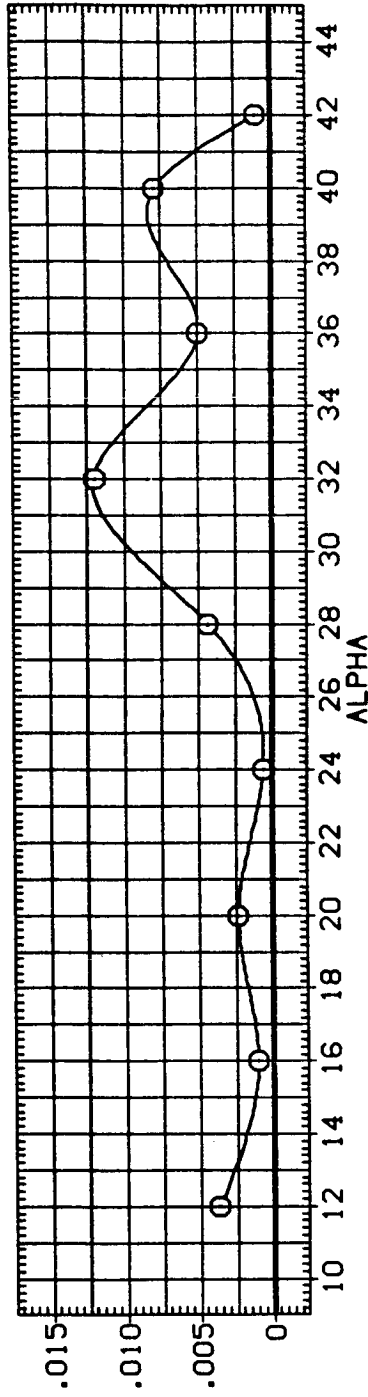
SYMBOL ○
 MACH 10.300
 BETA BOFLAP RUDDER
 PARAMETRIC VALUES
 .000 ELEVON .000
 16.300 SPOBRK 55.000
 .000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DCL1



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0021)

SYMBOL MACH 10.300
 O BETA .000
 80°FLAP 18.300
 RUDDER .000

PARAMETRIC VALUES
 ELEVON .000
 SPDRBK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

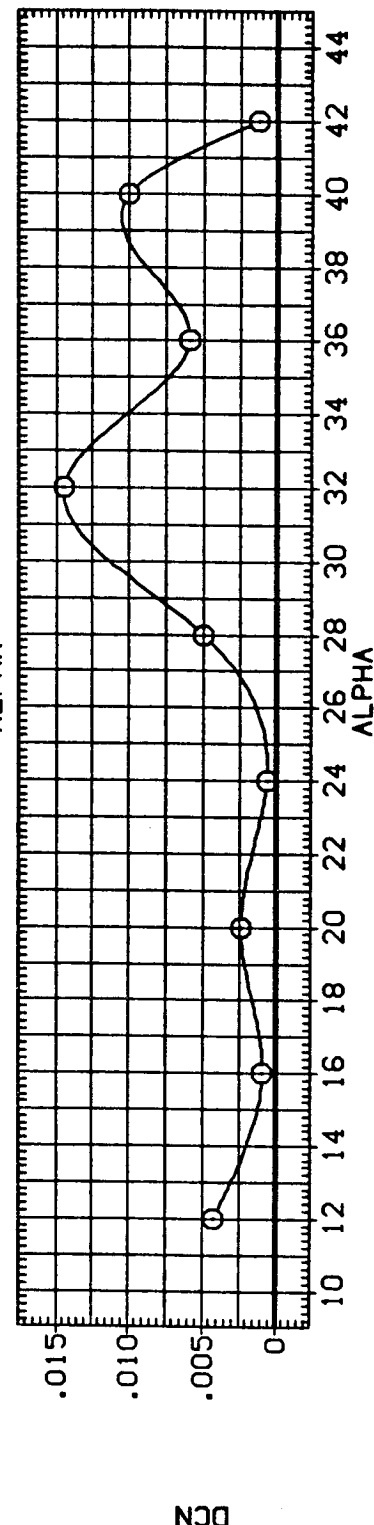
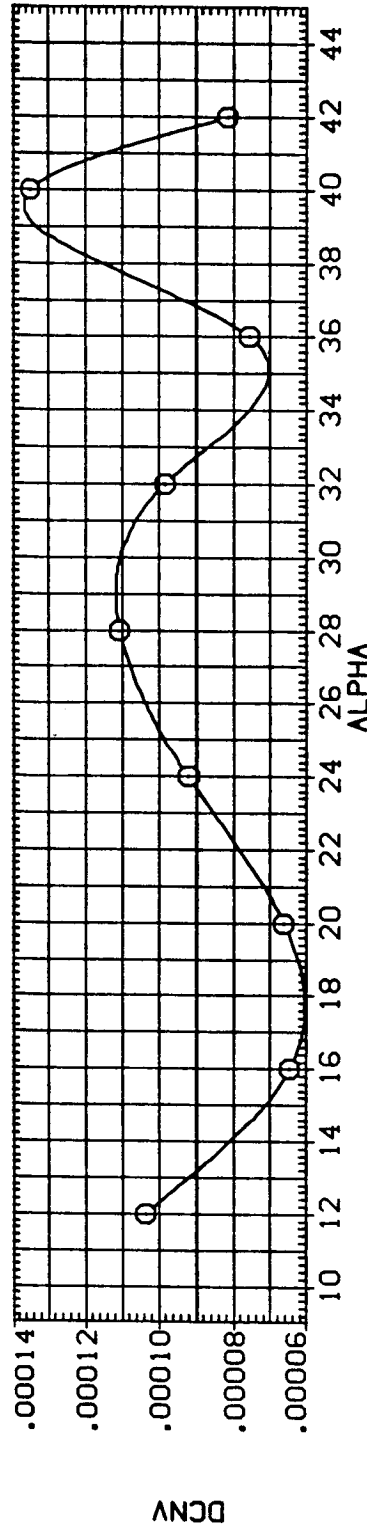
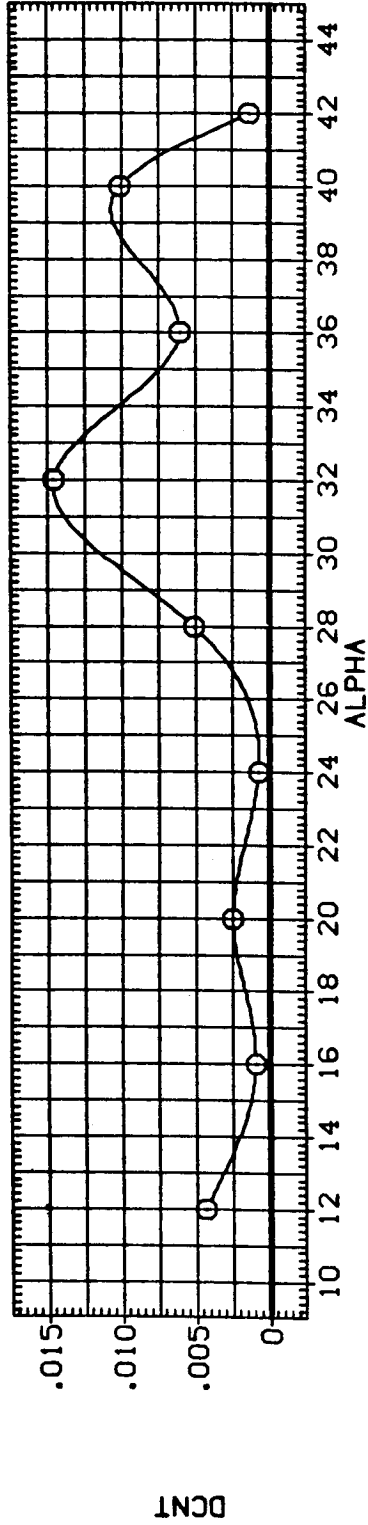


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ021)

PARAMETRIC VALUES
 BETA .000 ELEVON .000
 BOFLAP 16.300 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

SYMBOL
 ○

MACH
 10.300

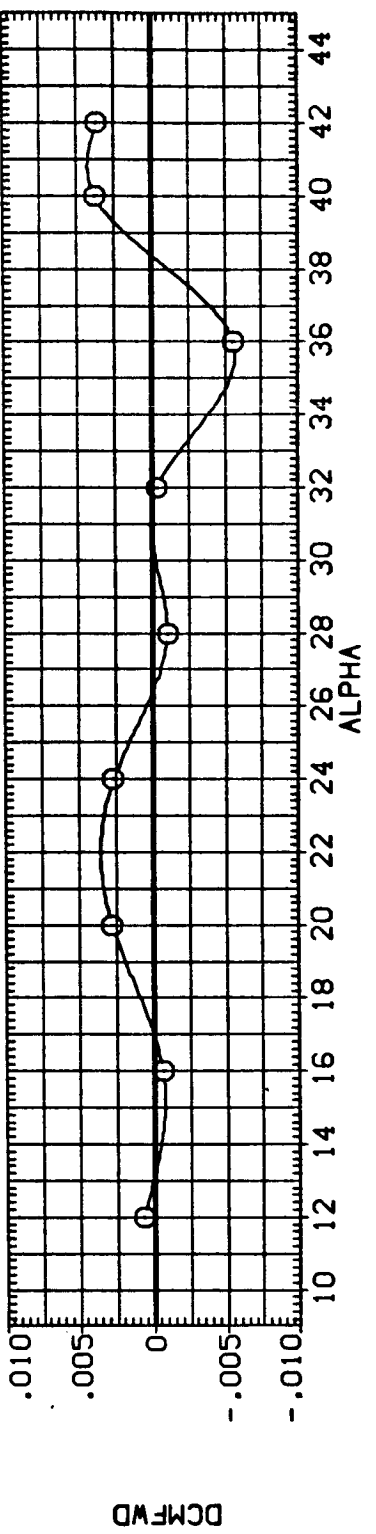
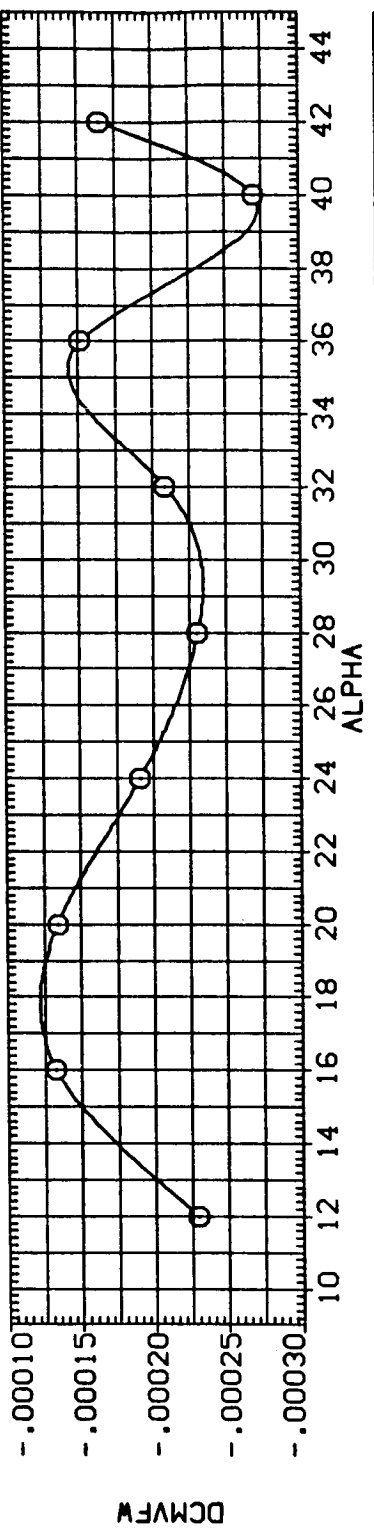
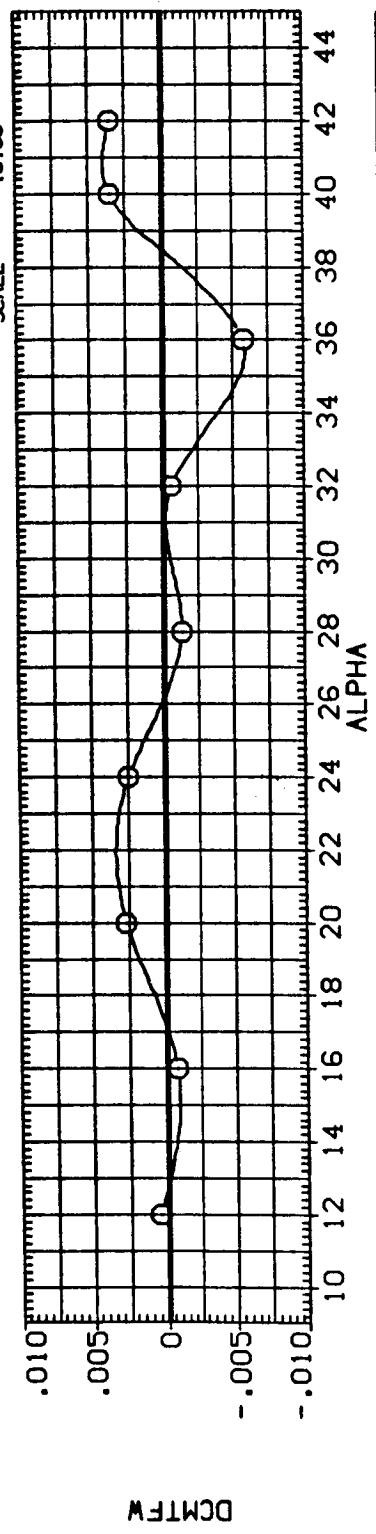


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0021)

SYMBOL	MACH	BETA	PARAMETRIC VALUES		REFERENCE INFORMATION	
○	10.300	.000	ELEVON	.000	SREF	2690.0000
		16.300	SPOBRK	55.000	LREF	474.8000
		.000	RUDDER		BREF	936.6800
					XMRP	1076.7000
					YMRP	.0000
					ZMRP	375.0000
					SCALE	.0150

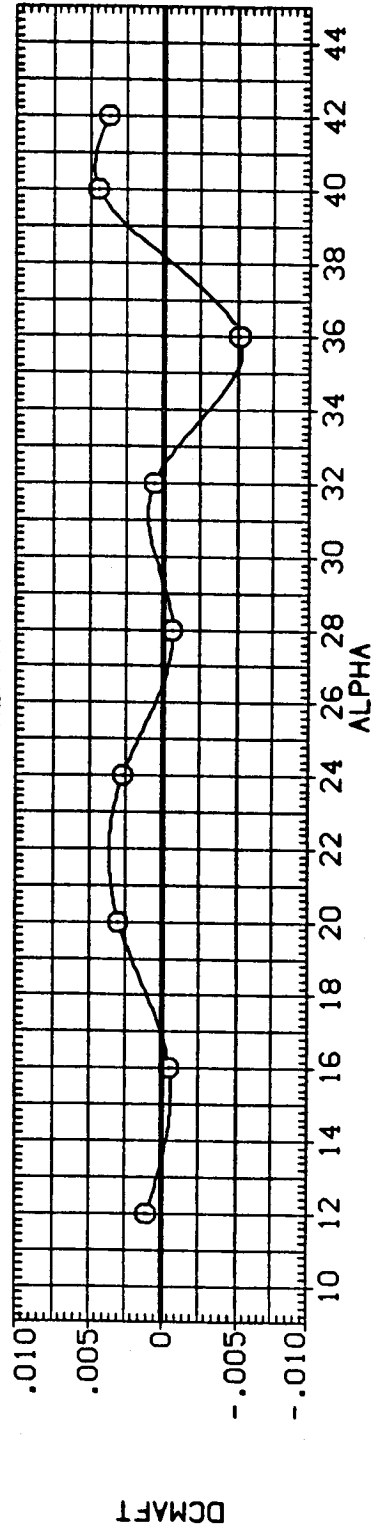
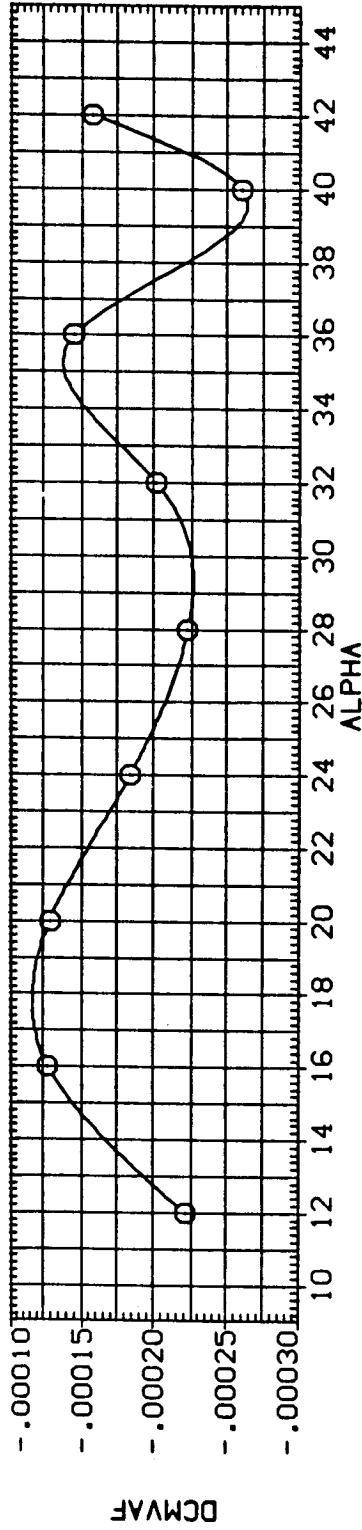
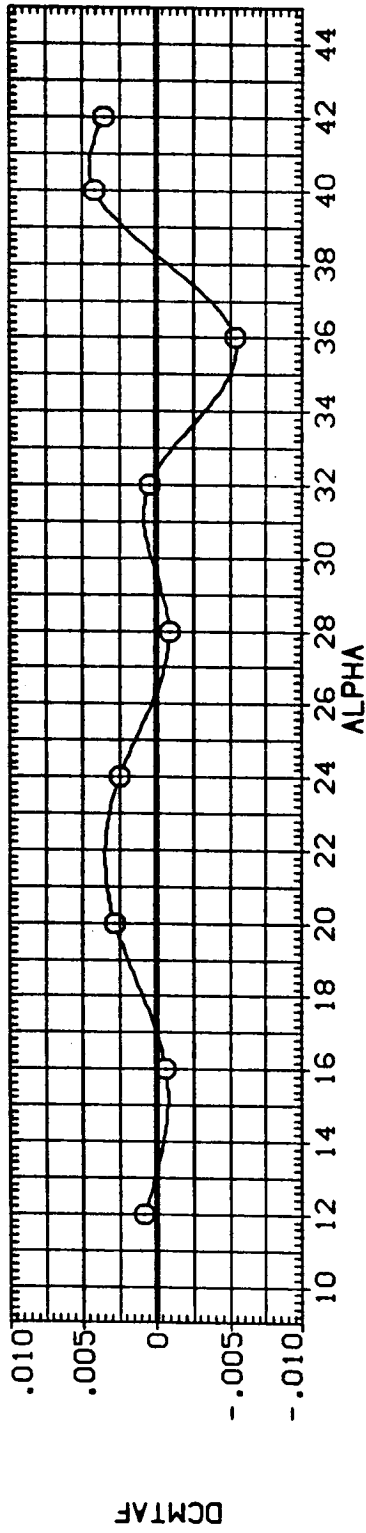


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ021)

SYMBOL MACH BETA BOFLAP RUDDER
 O 10.300 .000 16.300 .000

PARAMETRIC VALUES
 .000 ELEVON .000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.6000 IN.
 BREF 936.6800 IN.XB
 XMRP 1076.7000 IN.YB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

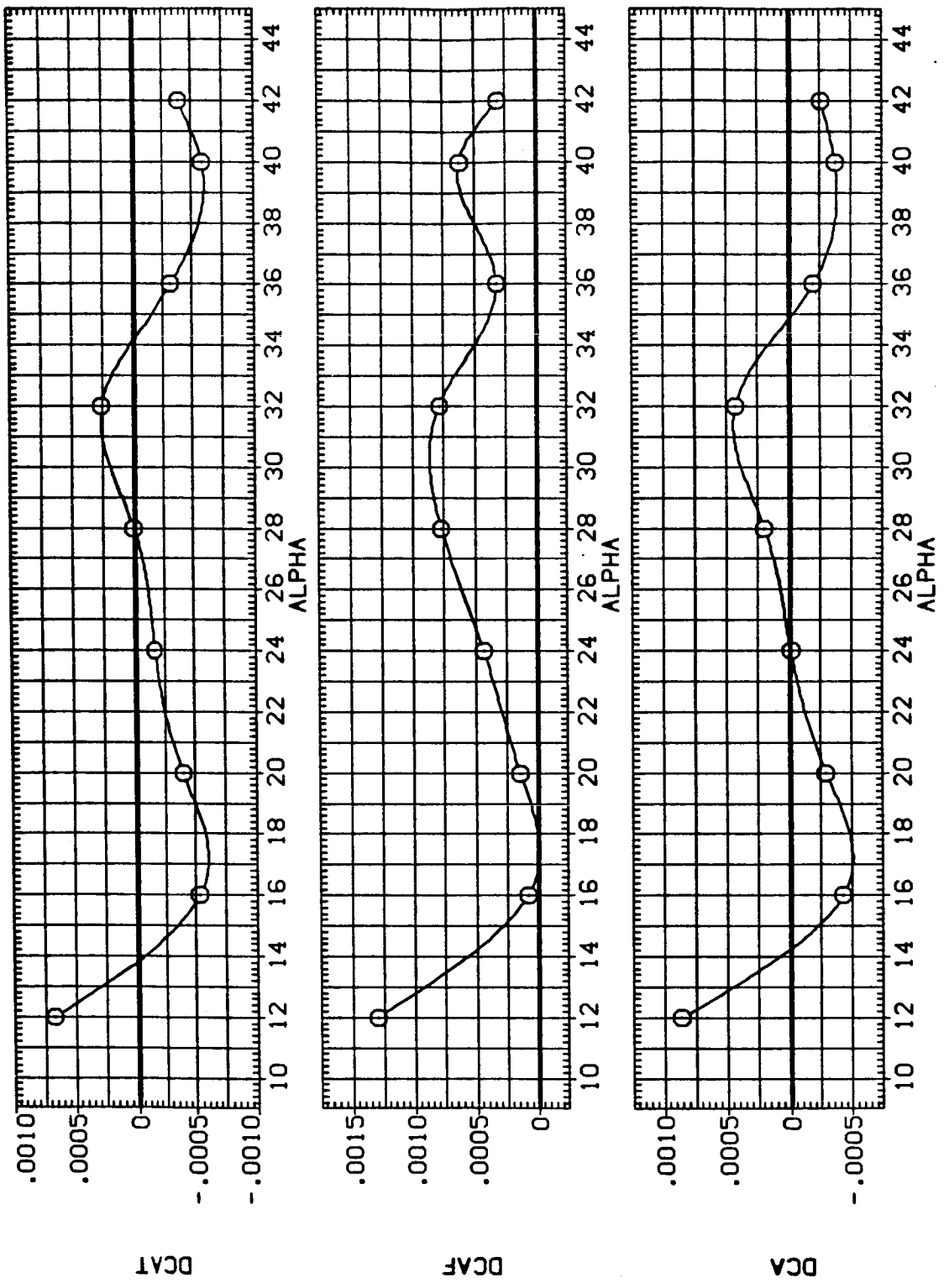


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ021)

SYMBOL MACH
O 10.300

BETA BOFLAP RUDDER
16.300 .000

PARAMETRIC VALUES
ELEVON .000
SPOBRK 55.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X9
YMRP .0000 IN.Y9
ZMRP 375.0000 IN.Z0
SCALE .0150

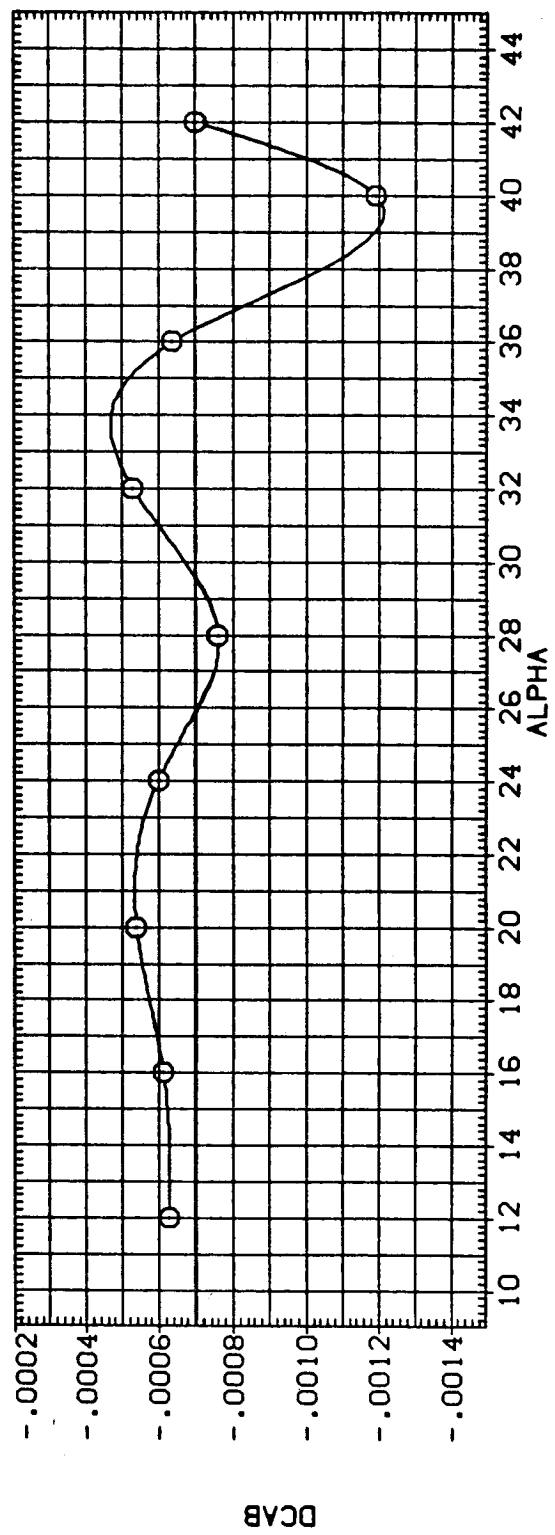
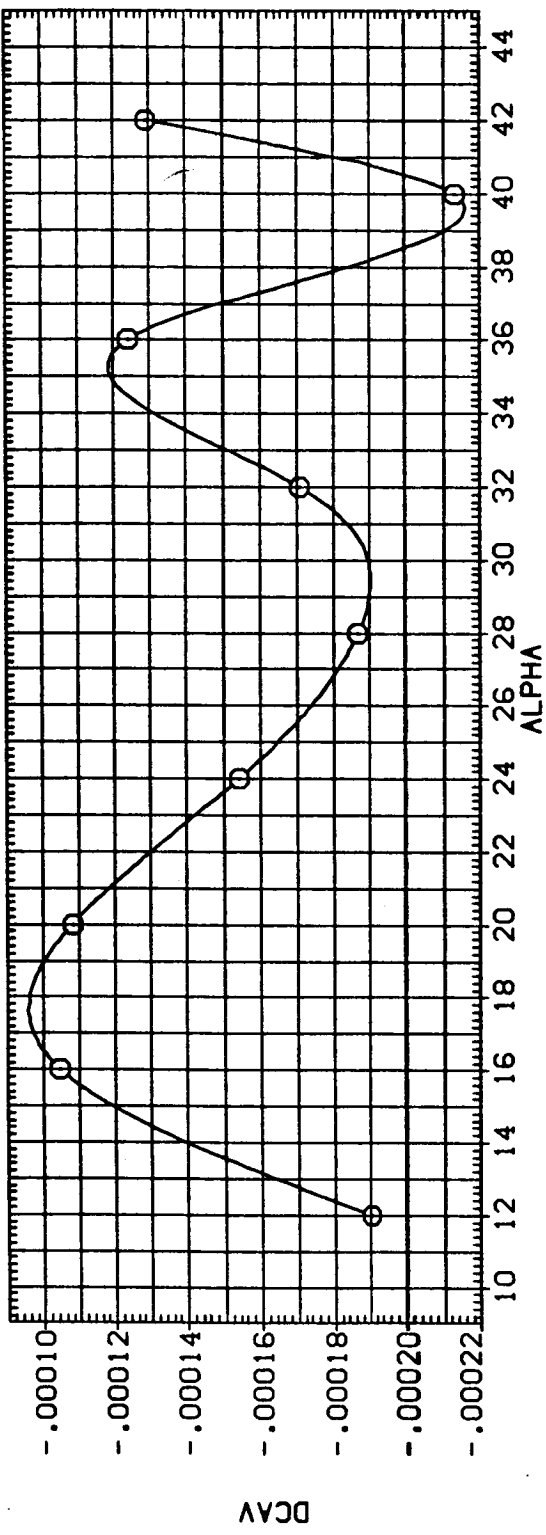


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEG021)

MACH 10.300
 BETA .000
 BOFLAP 16.300
 RUDDER .000
 ELEVON .000
 SPOBRK 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

SYMBOL O
 MACH 10.300
 BETA .000
 BOFLAP 16.300
 RUDDER .000
 ELEVON .000
 SPOBRK 55.000

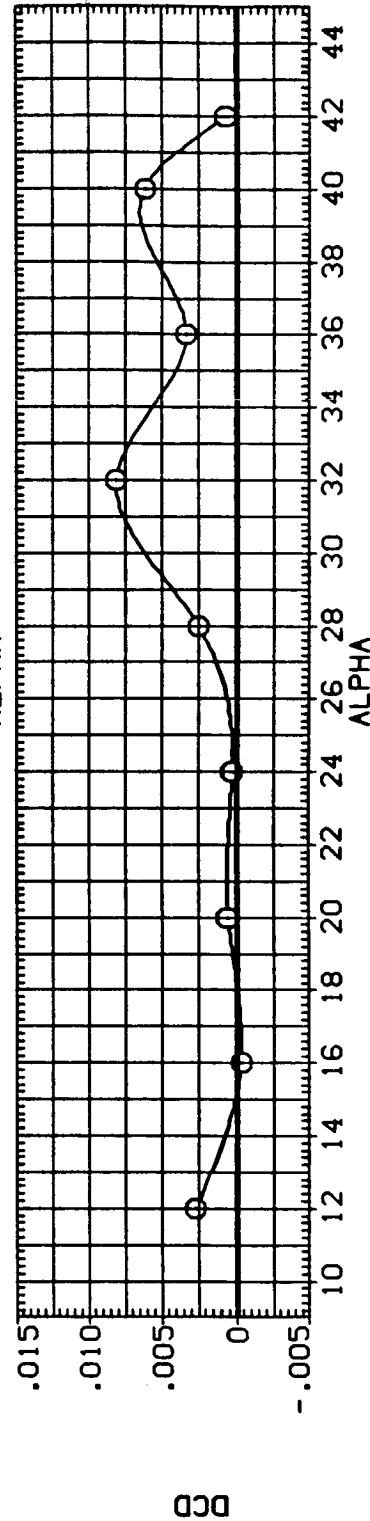
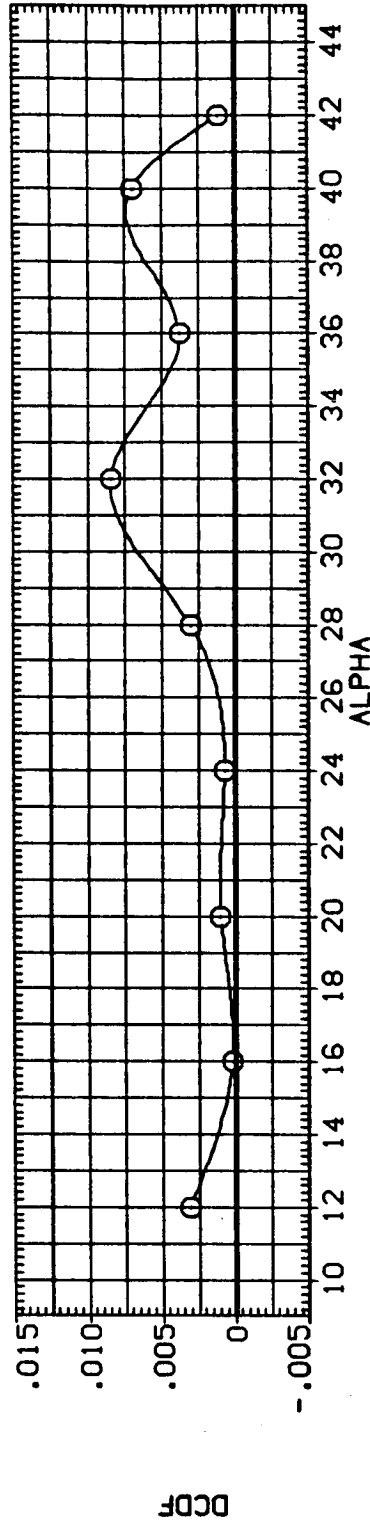
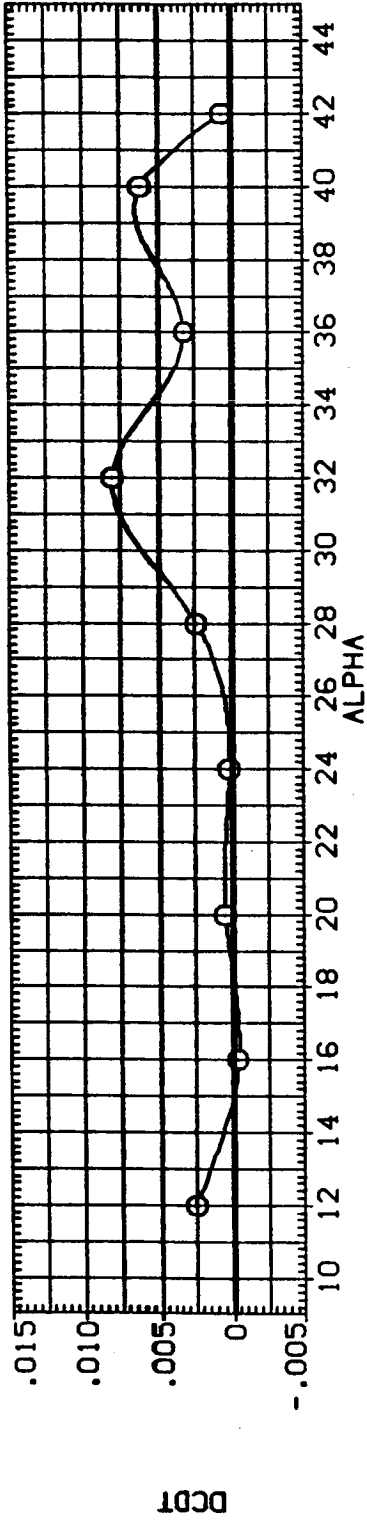


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ021)

SYMBOL	MACH	BETA	PARAMETRIC VALUES		REFERENCE INFORMATION	
○	10.300	BOFLAP	.000	ELEVON	2690.0000	59.FT.
		RUDDER	16.300	SPOBRK	474.8000	IN.
			.000		936.6800	IN.
					1076.7000	IN.X0
					YMRP	IN.Y0
					ZMRP	IN.Z0
					SCALE	.0150

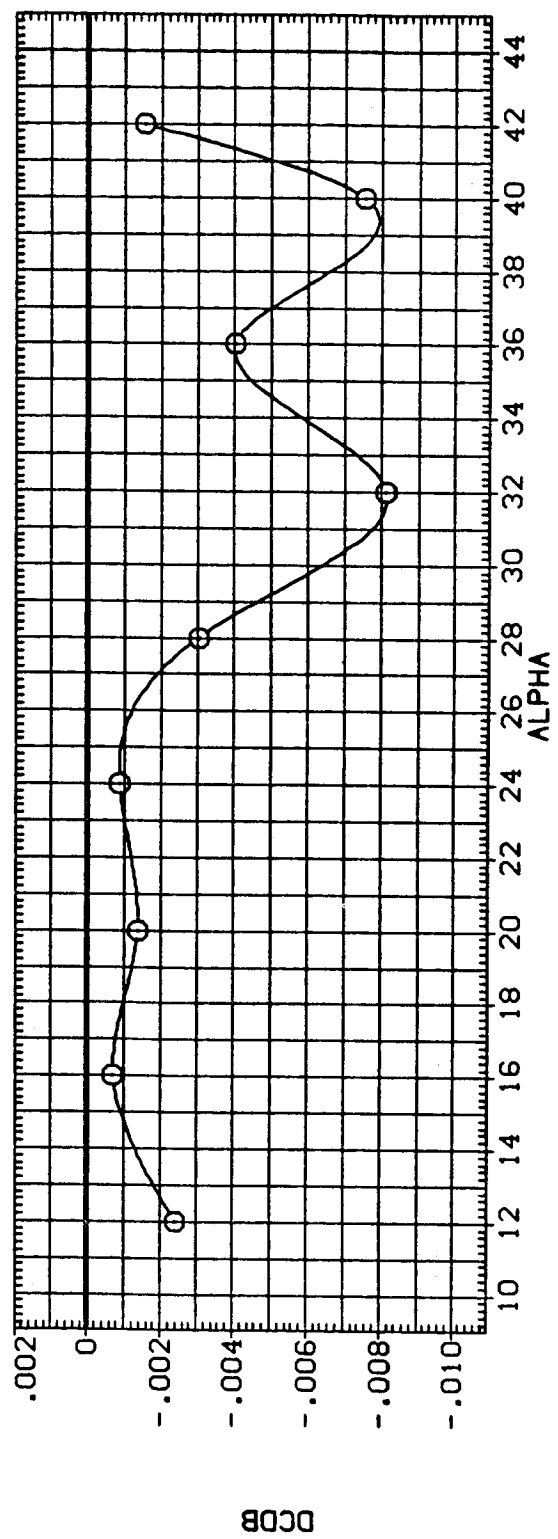
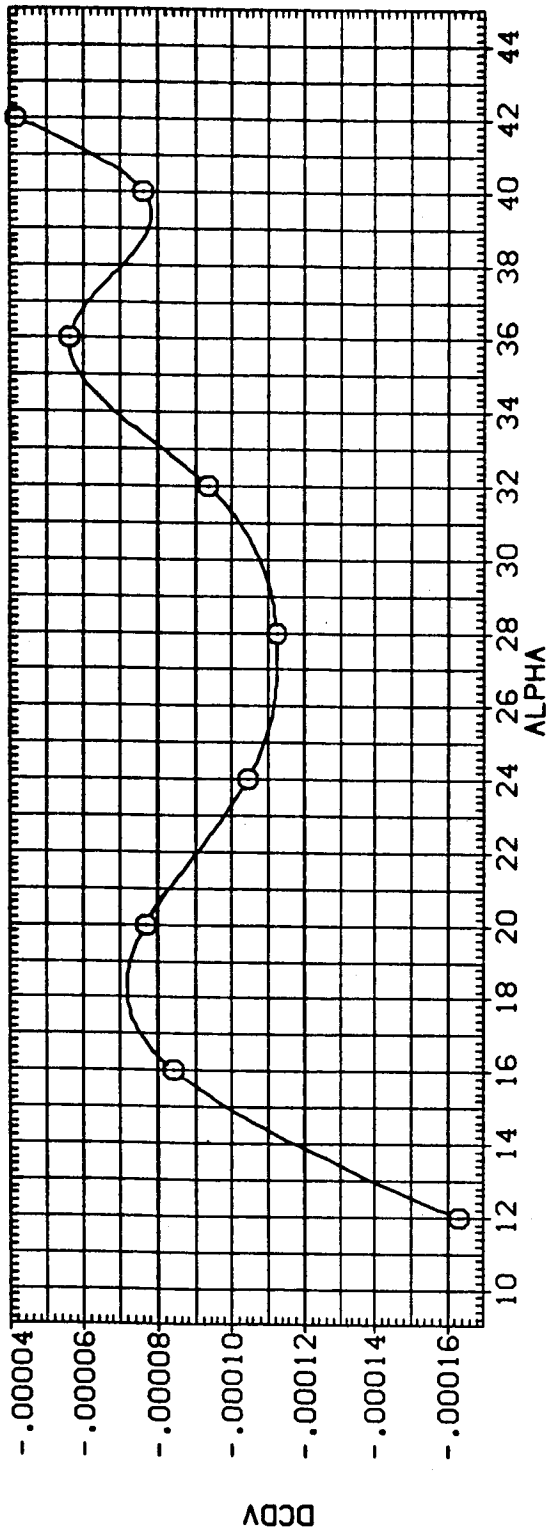


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL (AEG005) (AEG021)

CONFIGURATION DESCRIPTION AVES 3.5-190 0A98 (011-17+114) AVES 3.5-190 0A98 (011-17+114-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION SQ.FT. SREF 2690.0000 IN. LREF 474.8000 IN. BREF 936.6800 IN. XREF 1076.7000 IN. YREF .0000 IN. ZREF .0000 IN. ZD SCALE 375.0150

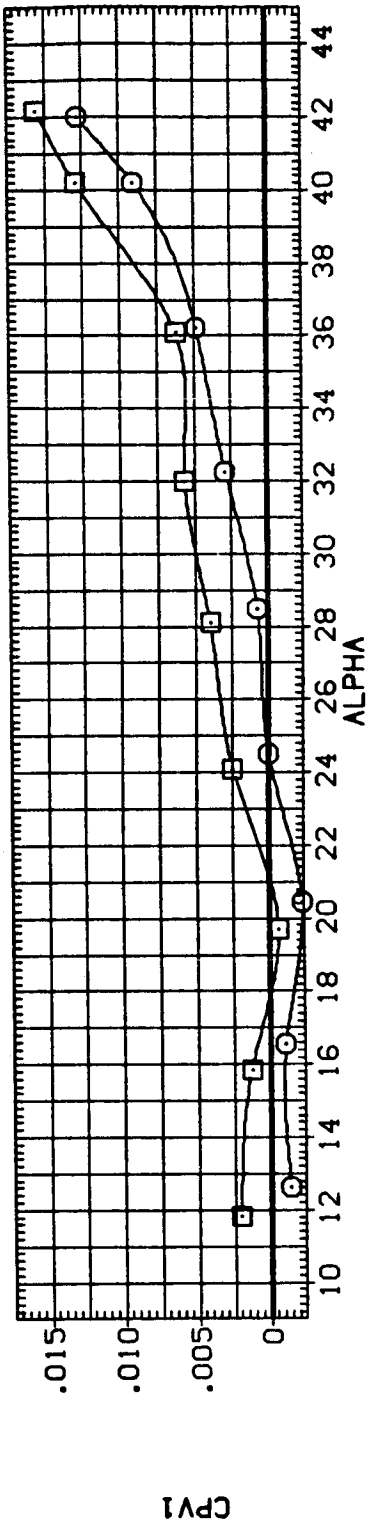
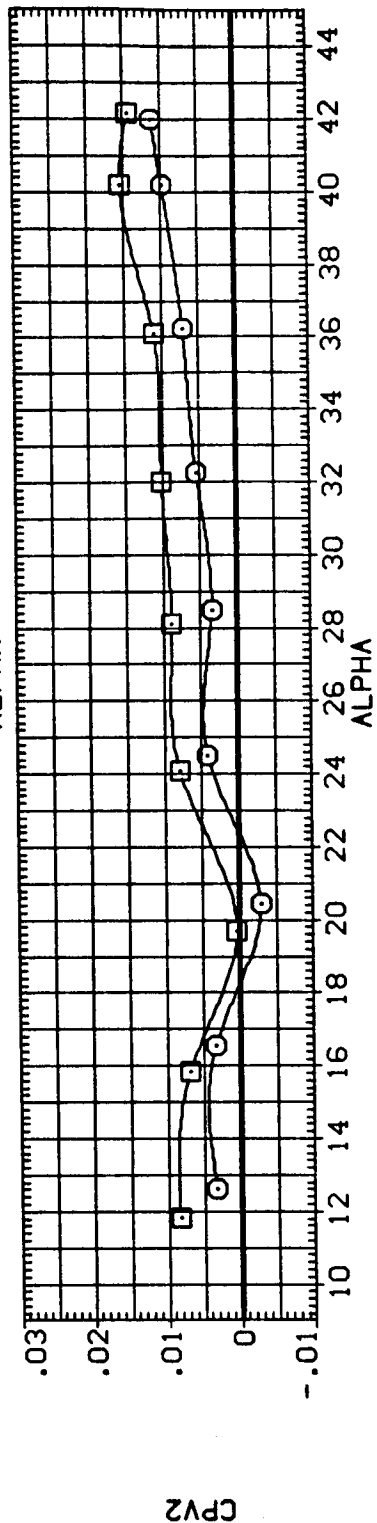
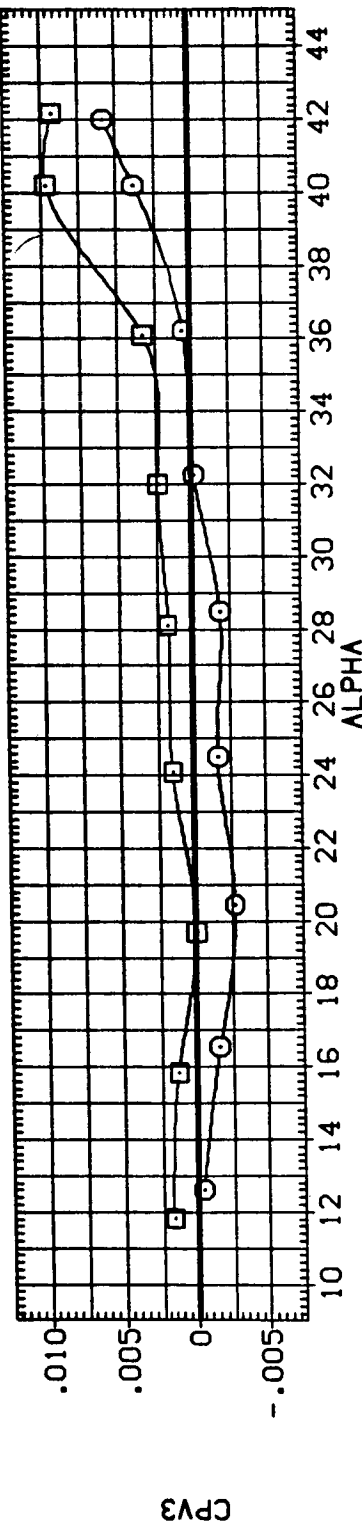


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27



DATA SET SYMBOL: (AEO005) (AEO021)

CONFIGURATION DESCRIPTION: AMES 3.5-190 OA98 (011-M7+M14) AMES 3.5-190 OA98 (011-M7+M14-N24+DJMMY STING)

BETA: .000 .000

ELEVON: .000 .000

EDFLAP: 16.300 16.300

SPOBRK: 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

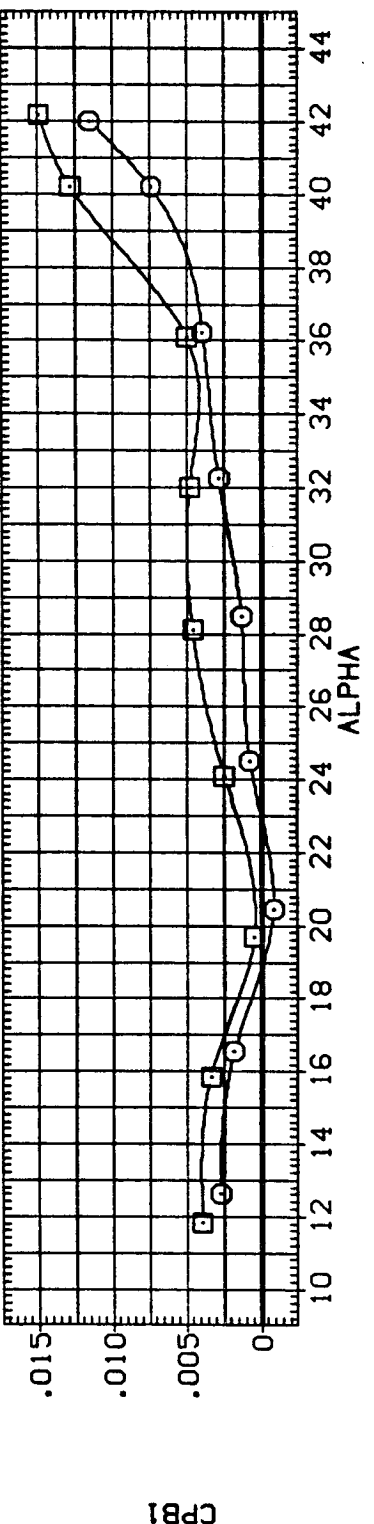
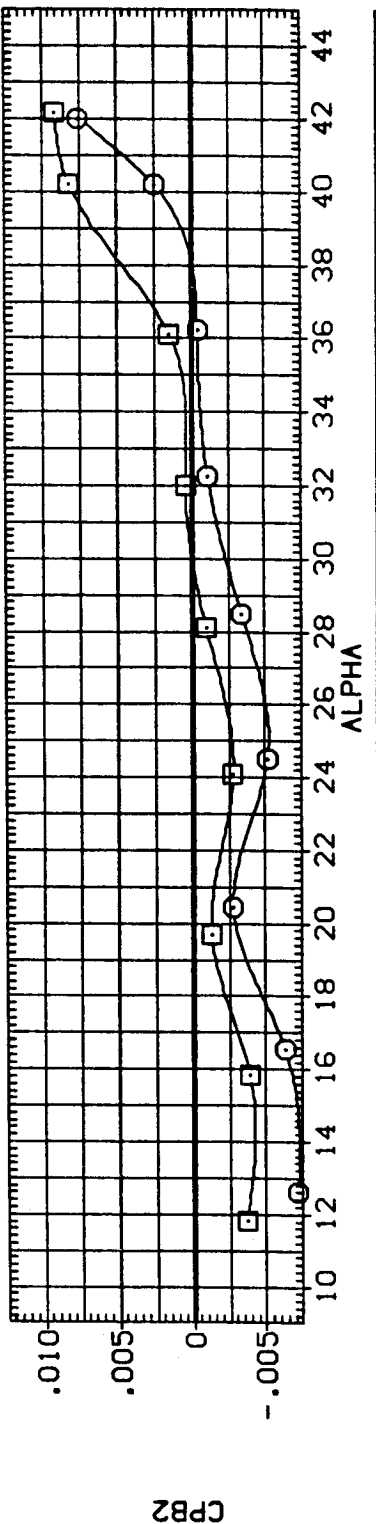
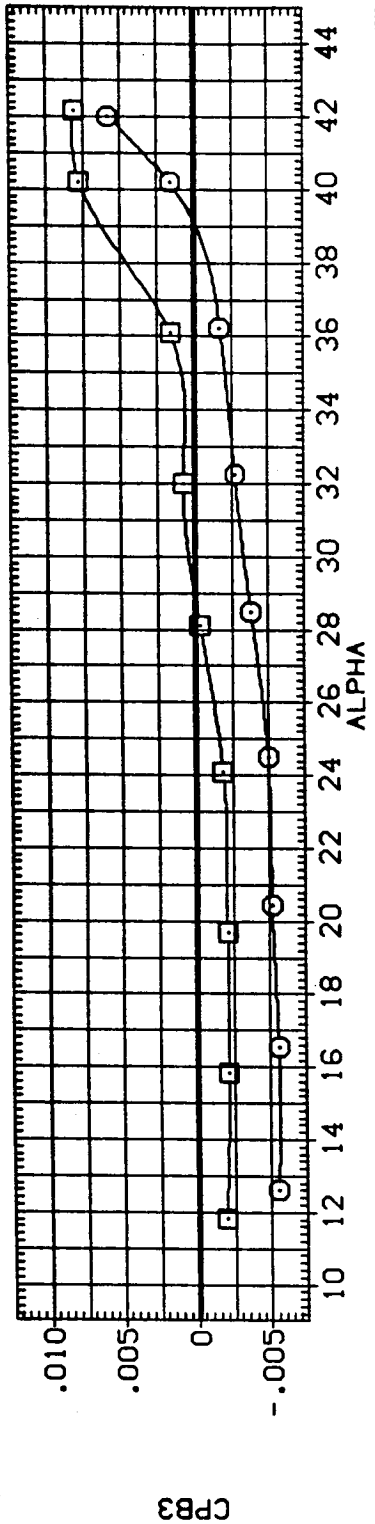


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0006) (CE0022)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-M7+M14)
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

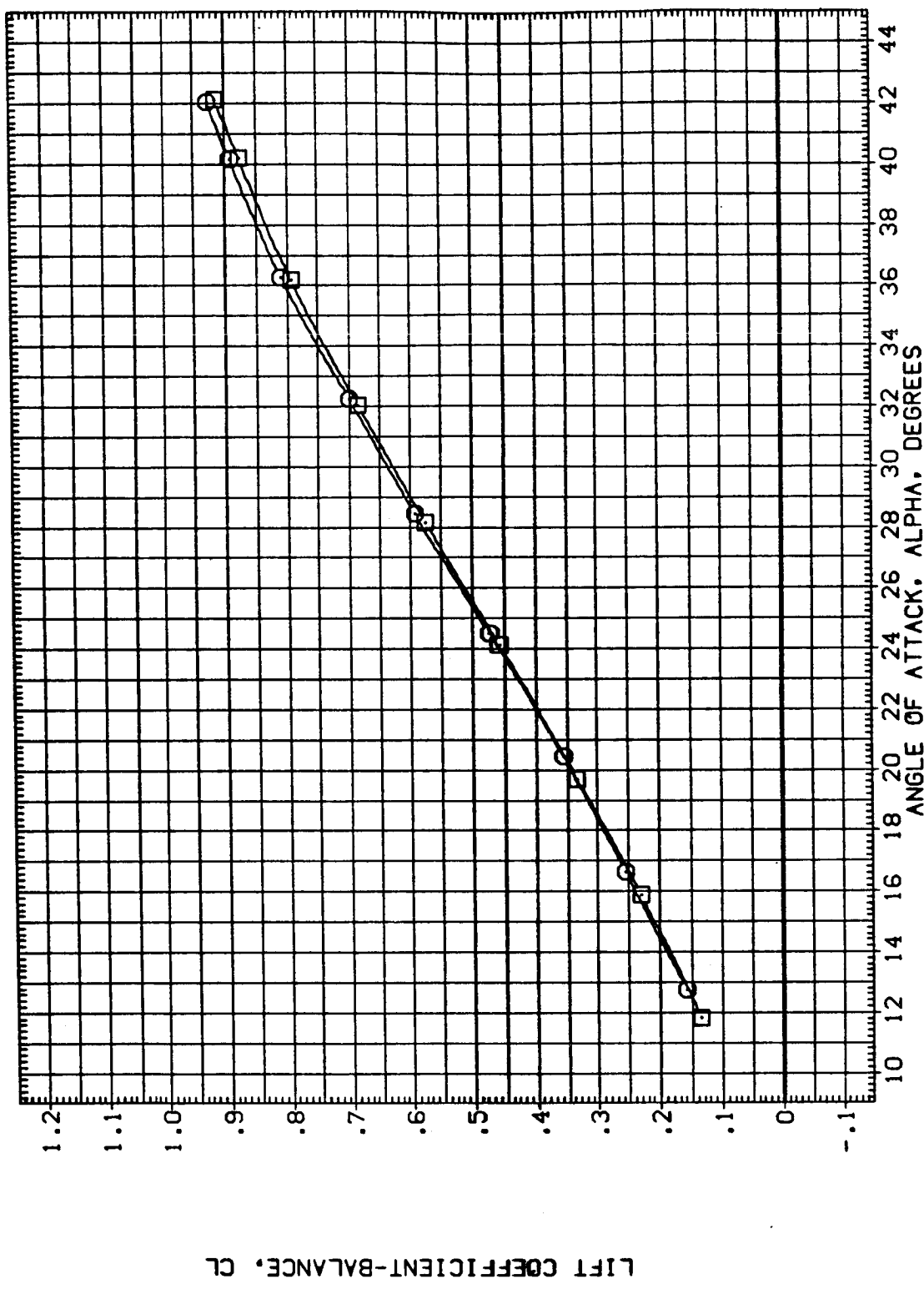
BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL (CEG006) (CEG022) CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-H7-H14) AMES 3.5-190 GA98 (011-H7-H14-N24-DUMMY STING) REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

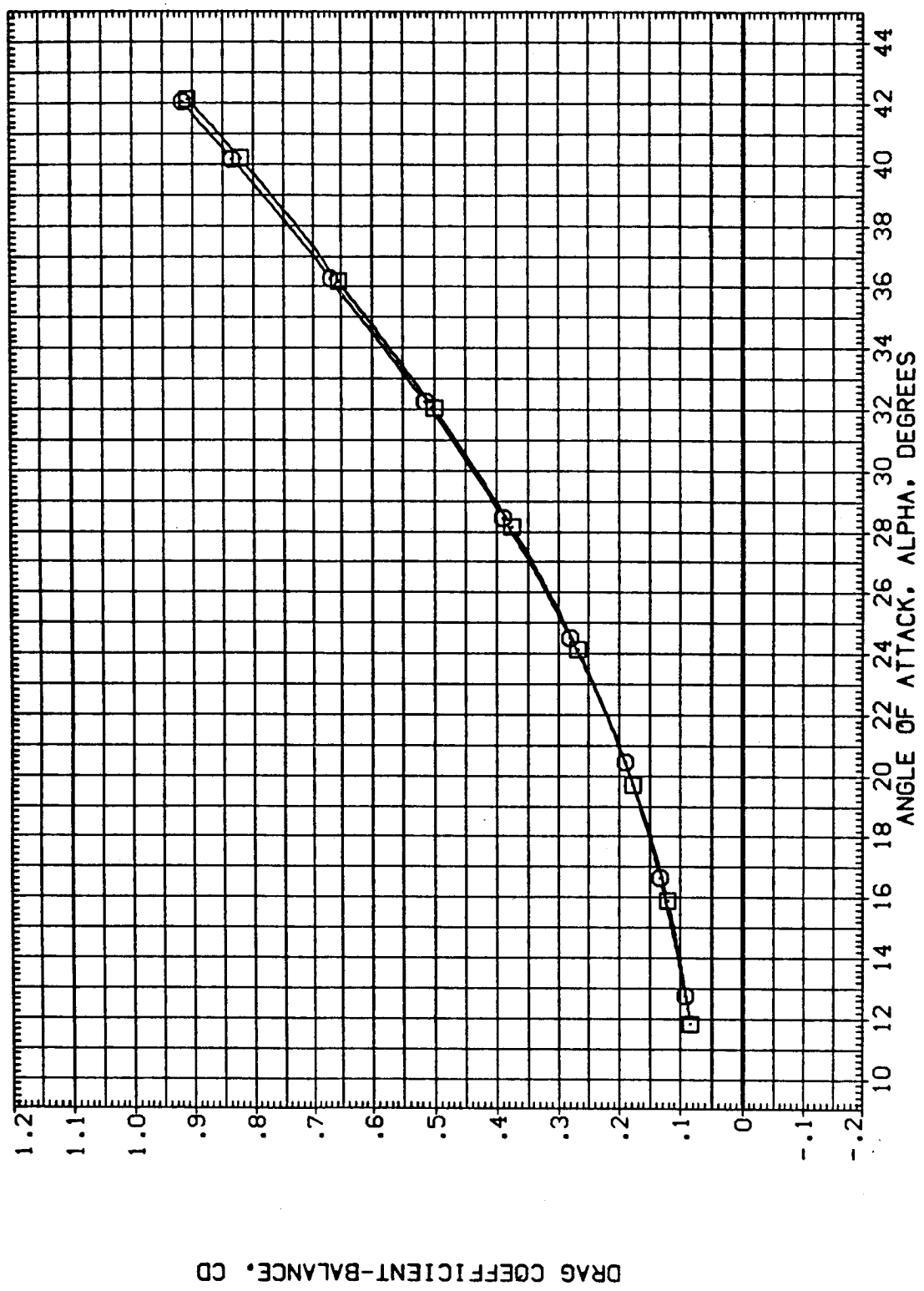


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

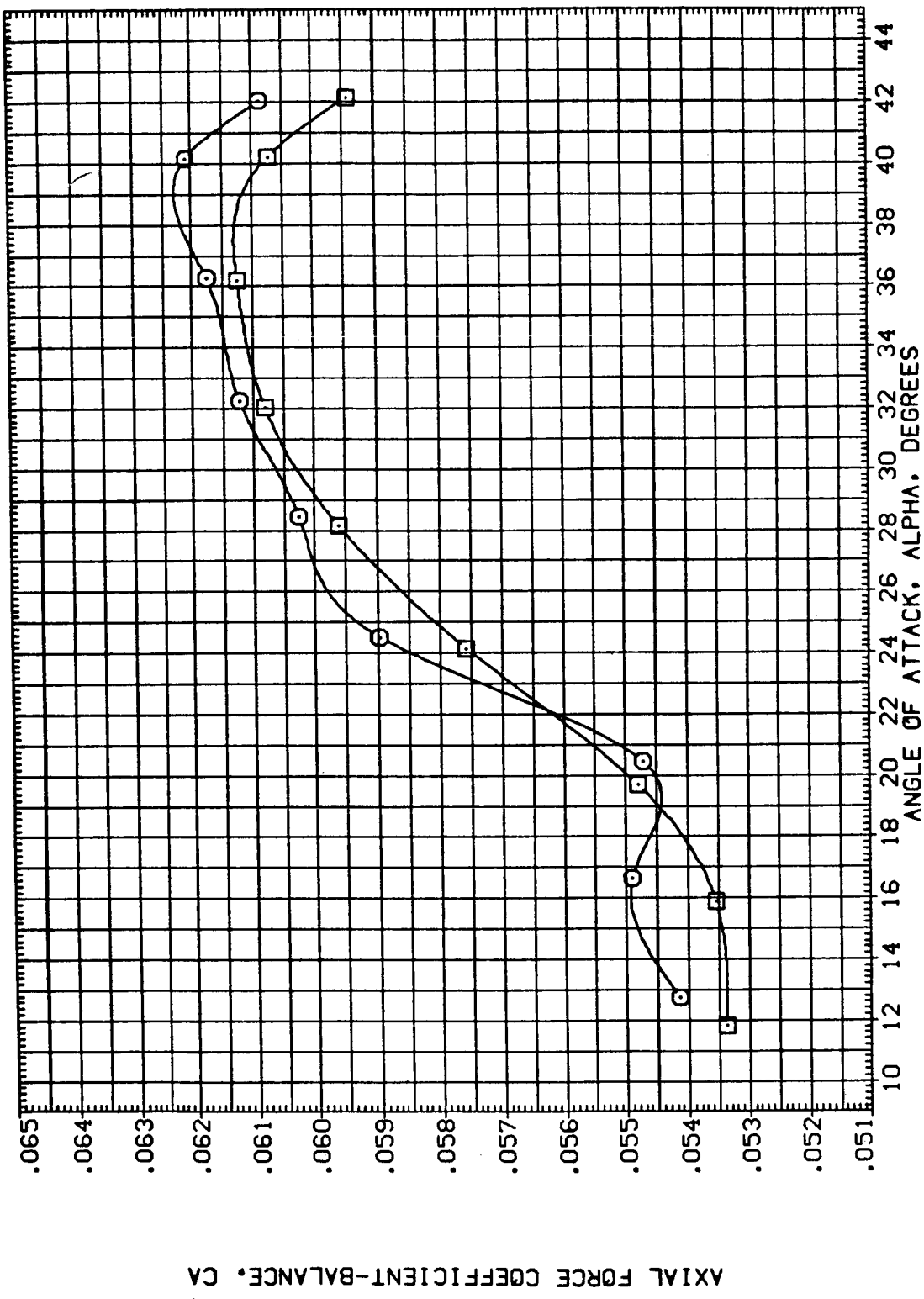
(A)MACH = 10.27

DATA SET SYMBOL (CE0006) (CE0022) \square

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+M14)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMY STING)

BETA .000
 ELEVON .000
 BOFLAP .000
 SPODBK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 536.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0006) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-47-M14)
 AMES 3.5-190 0A98 (011-47-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 956.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

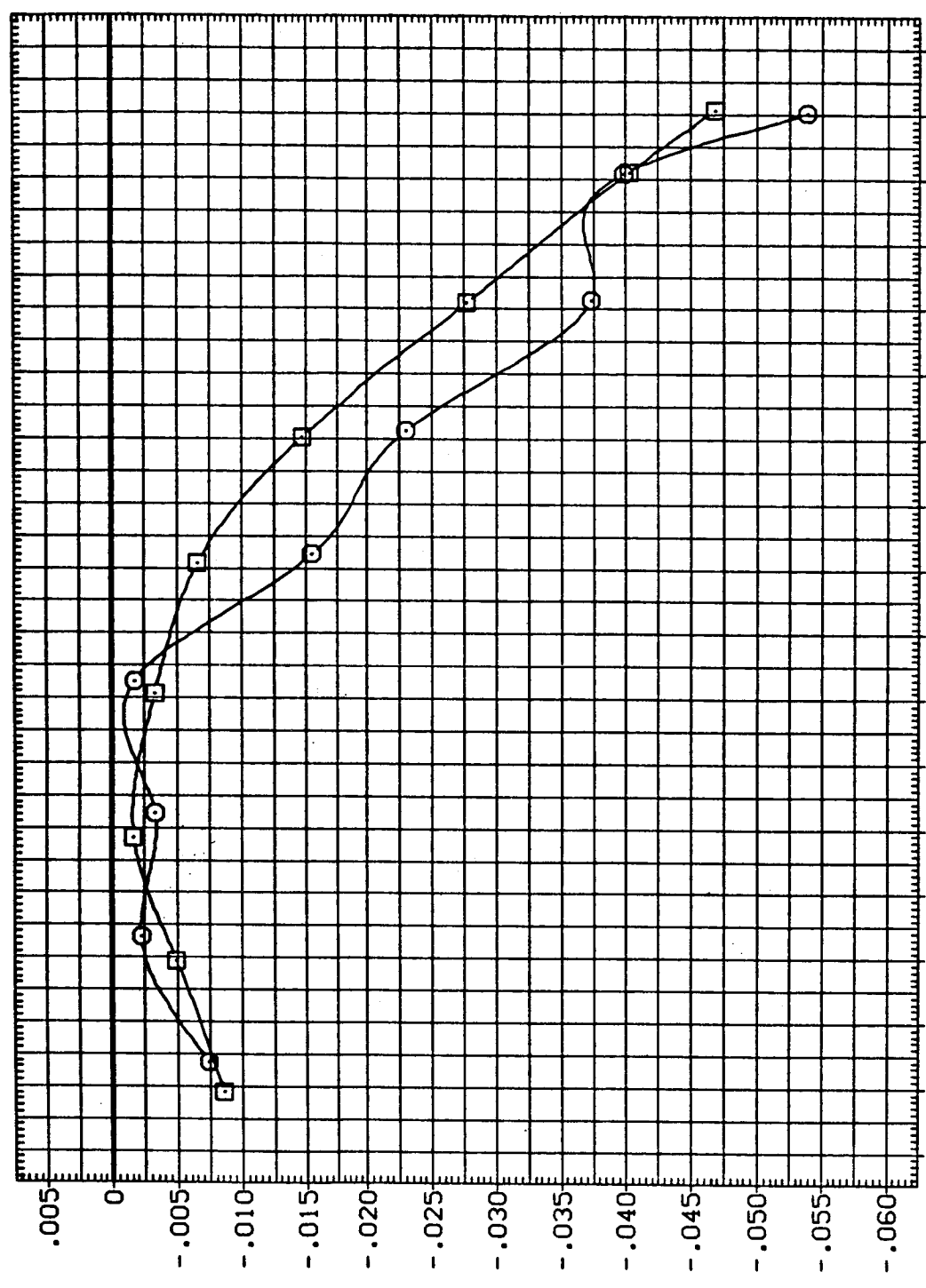


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0006) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-150 0A98 (011-117+114)
 AMES 3.5-150 0A98 (011-117+114-N24+DUMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMPT

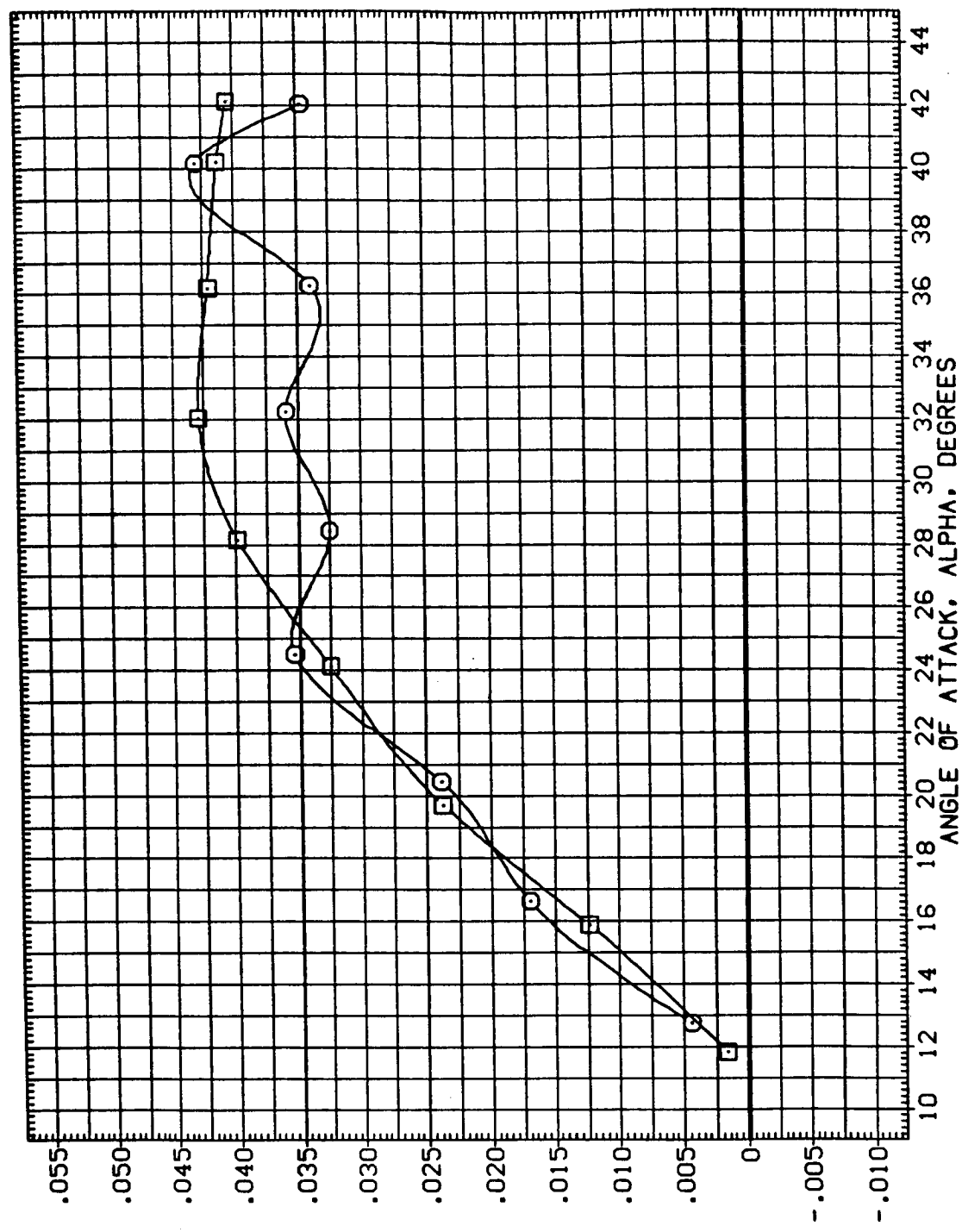


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 10.27



DATA SET SYMBOL (CE0006) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

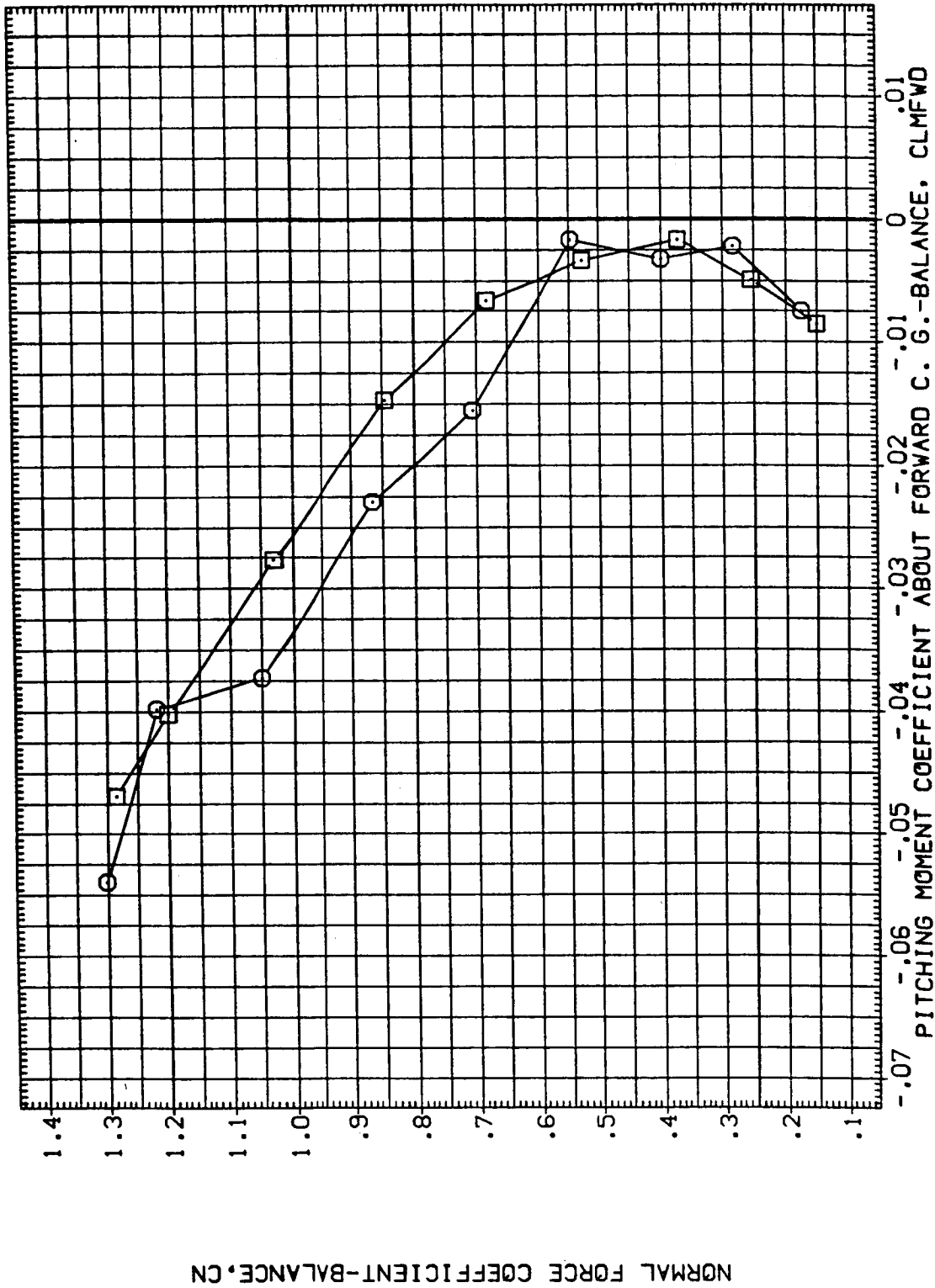


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0006) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-47-H14)
 AMES 3.5-190 DA98 (011-47-H14-N24-DUMMY STING)

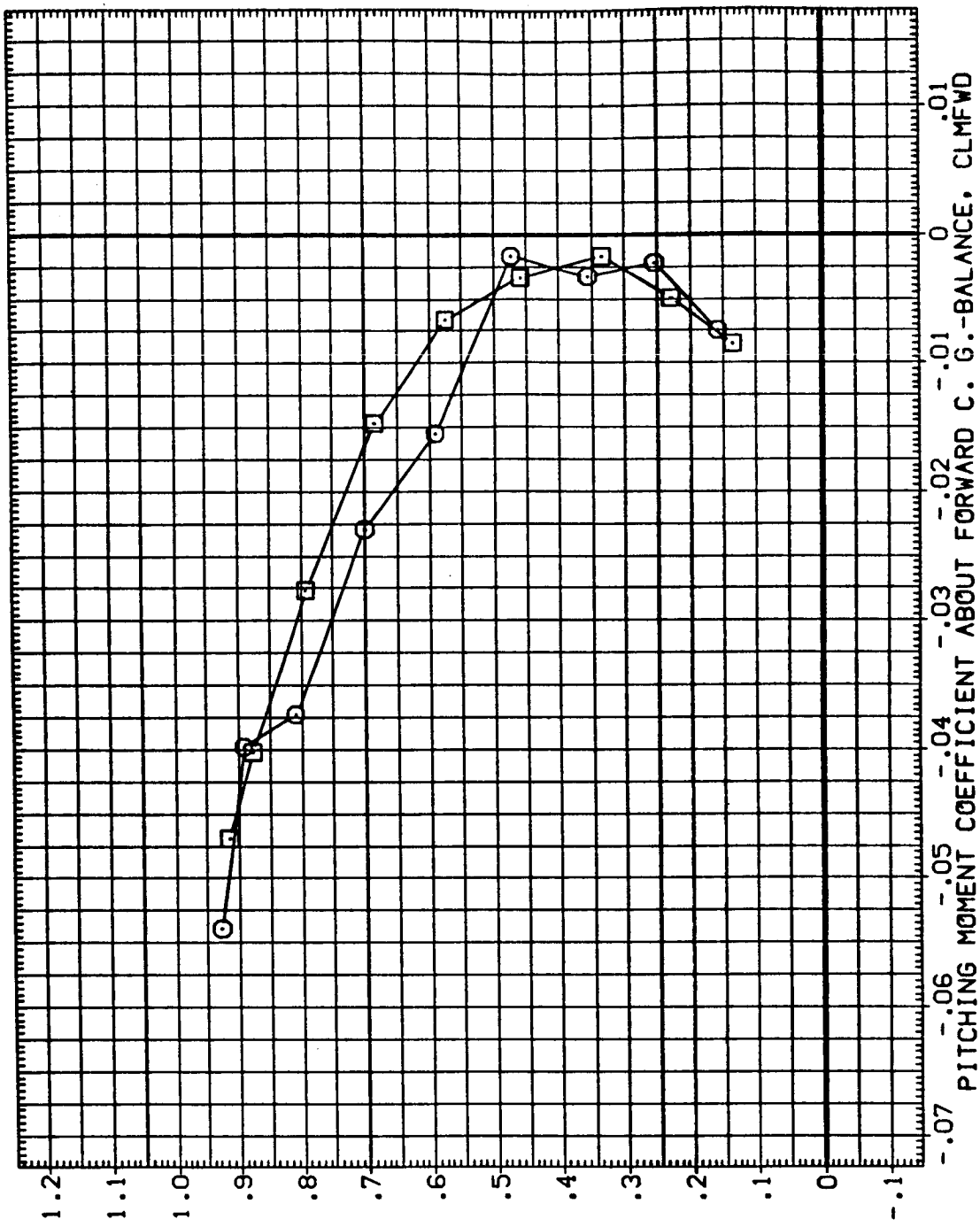
BETA .000 .000

ELEVON .000 .000

BDFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XPRP 1076.7000 IN.X0
 YPRP .0000 IN.Y0
 ZPRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-M7+M14)
 AMES 3.5-190 GAS8 (011-M7+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP .000
 SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

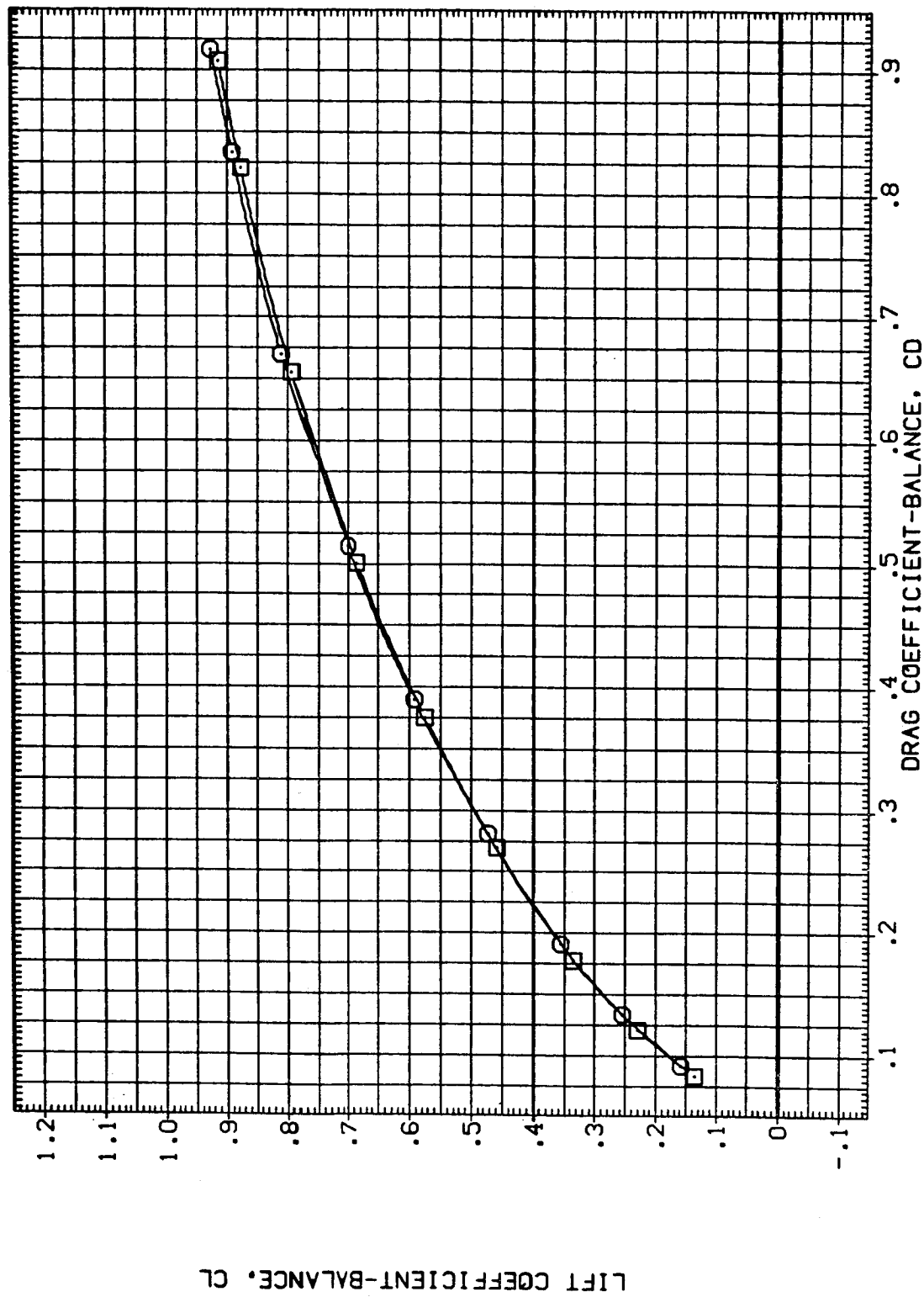


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EEQ006) (EEQ022) AMES 3.5-190 0A98 (011-M7-M14) AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SFOBRK 55.000 55.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6000	IN.
XMRP	1076.7000	IN.
YMRP	.0000	IN.
ZMRP	375.0000	IN.
SCALE	.0150	

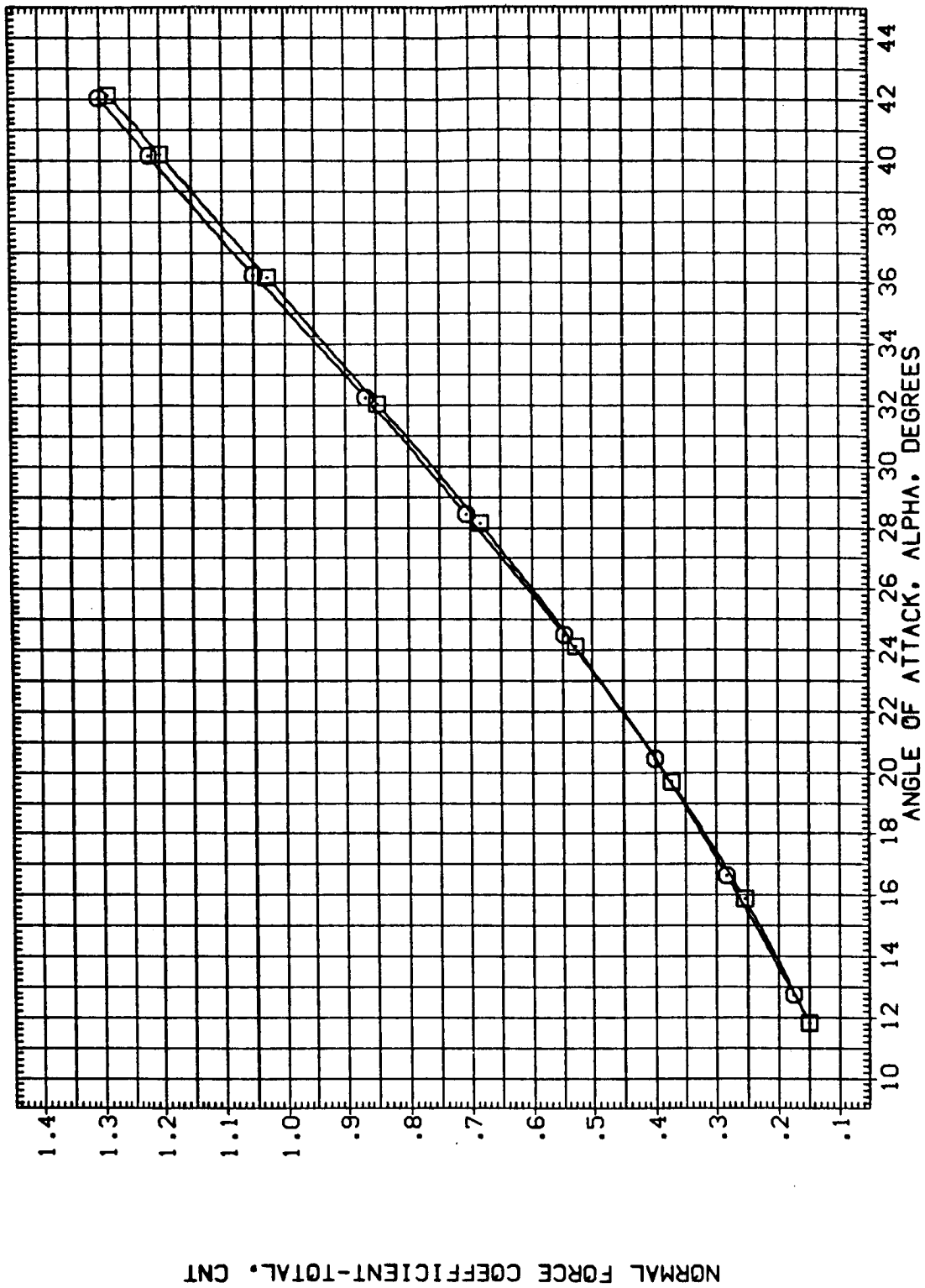


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL (EEG005) (EEG022)

CONFIGURATION DESCRIPTION APES 3.5-190 QAS8 (011-M7+H14) APES 3.5-190 QAS8 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK SS.000 SS.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.6000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. X0 YMRP .0000 IN. Y0 ZMRP 375.0000 IN. Z0 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

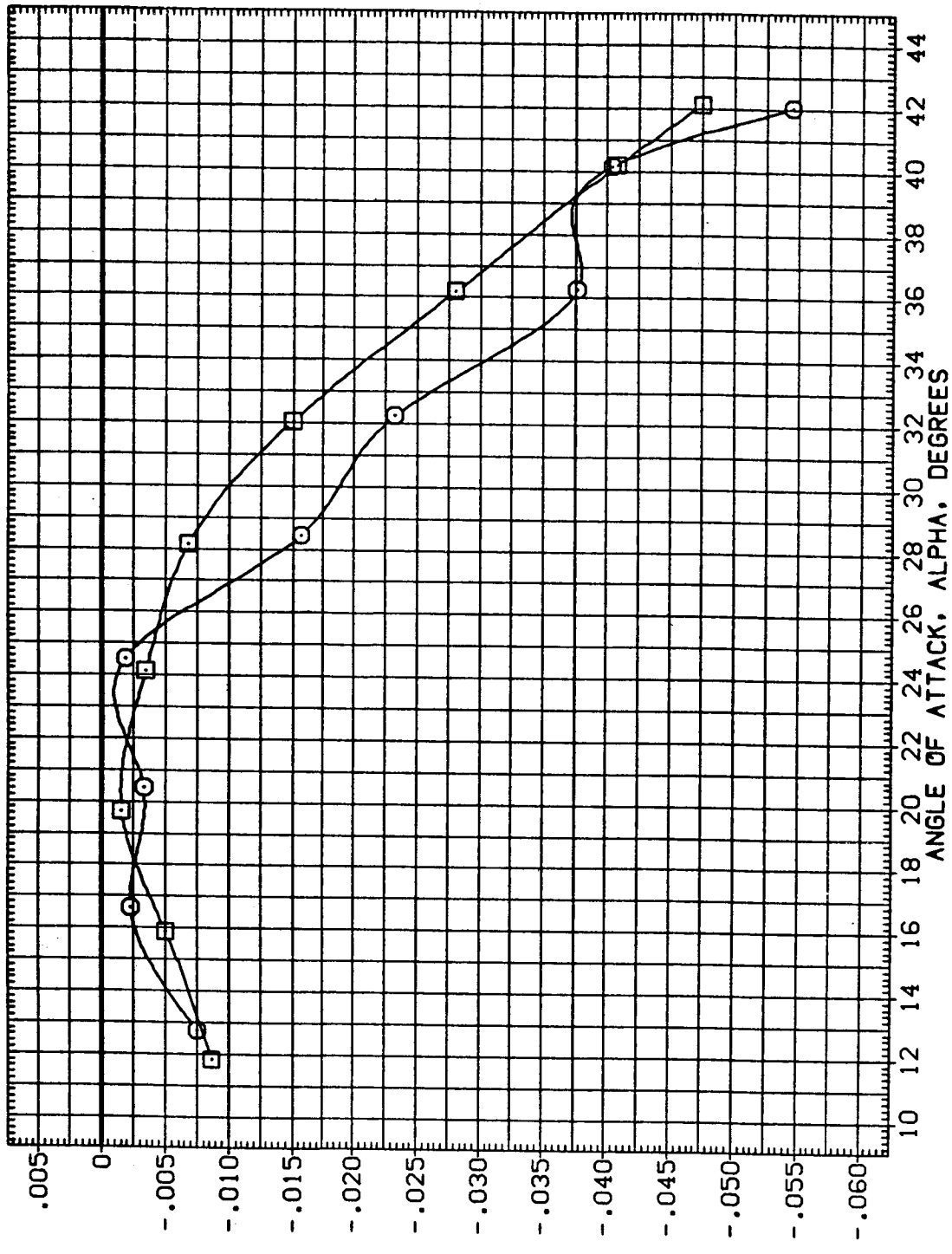


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0006) (EE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CAS8 (011-47-M14)
 AMES 3.5-190 CAS8 (011-47-M14-124-DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP .000 .000
 SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

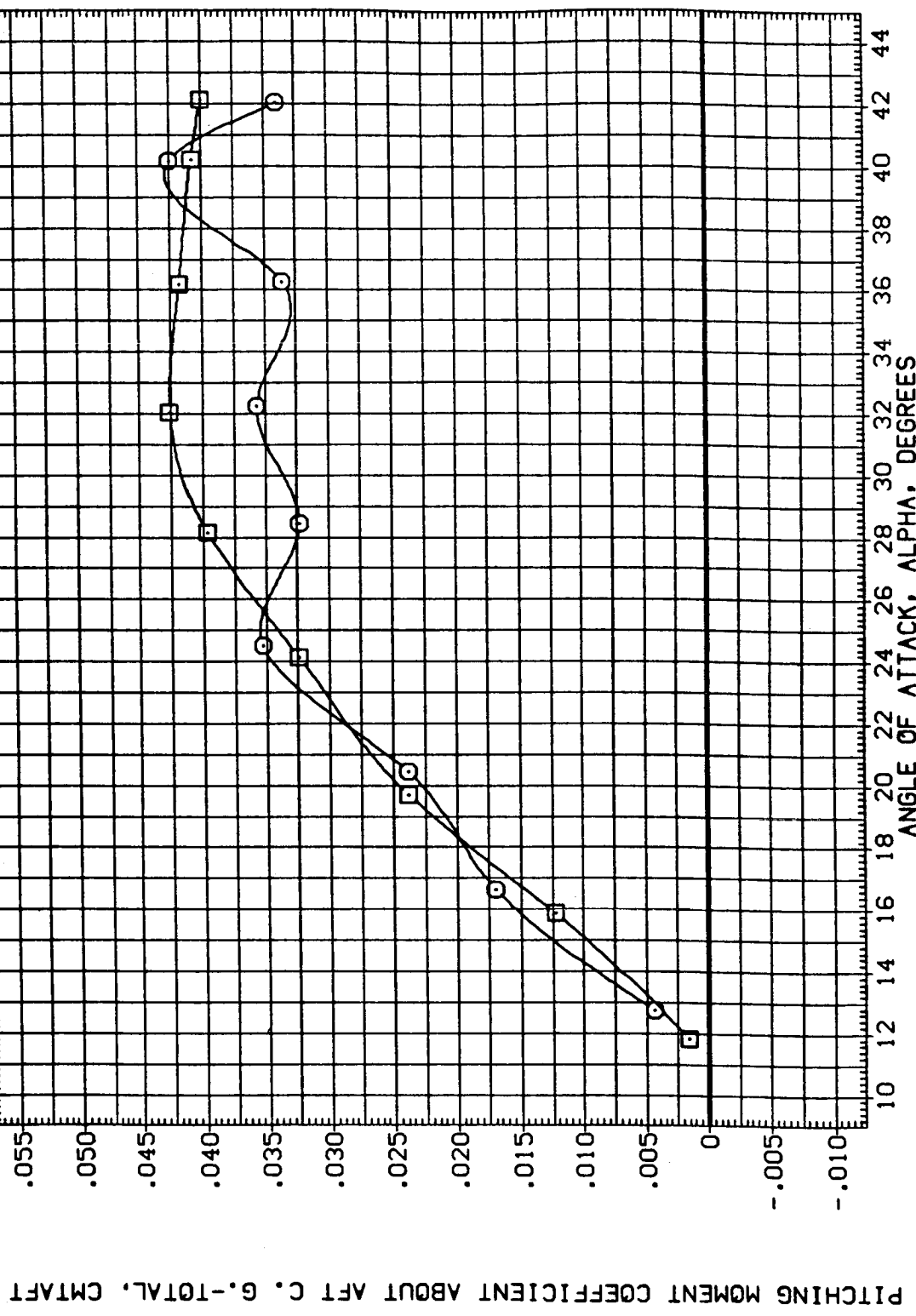


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EEO006) (EEO022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DASH (011-17+M14)
 AMES 3.5-190 DASH (011-17+M14-N24+DUMMY STING)

BETA .000
 ELEVON .000
 BOFLAP .000

SFOBRK S5.000
 S5.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

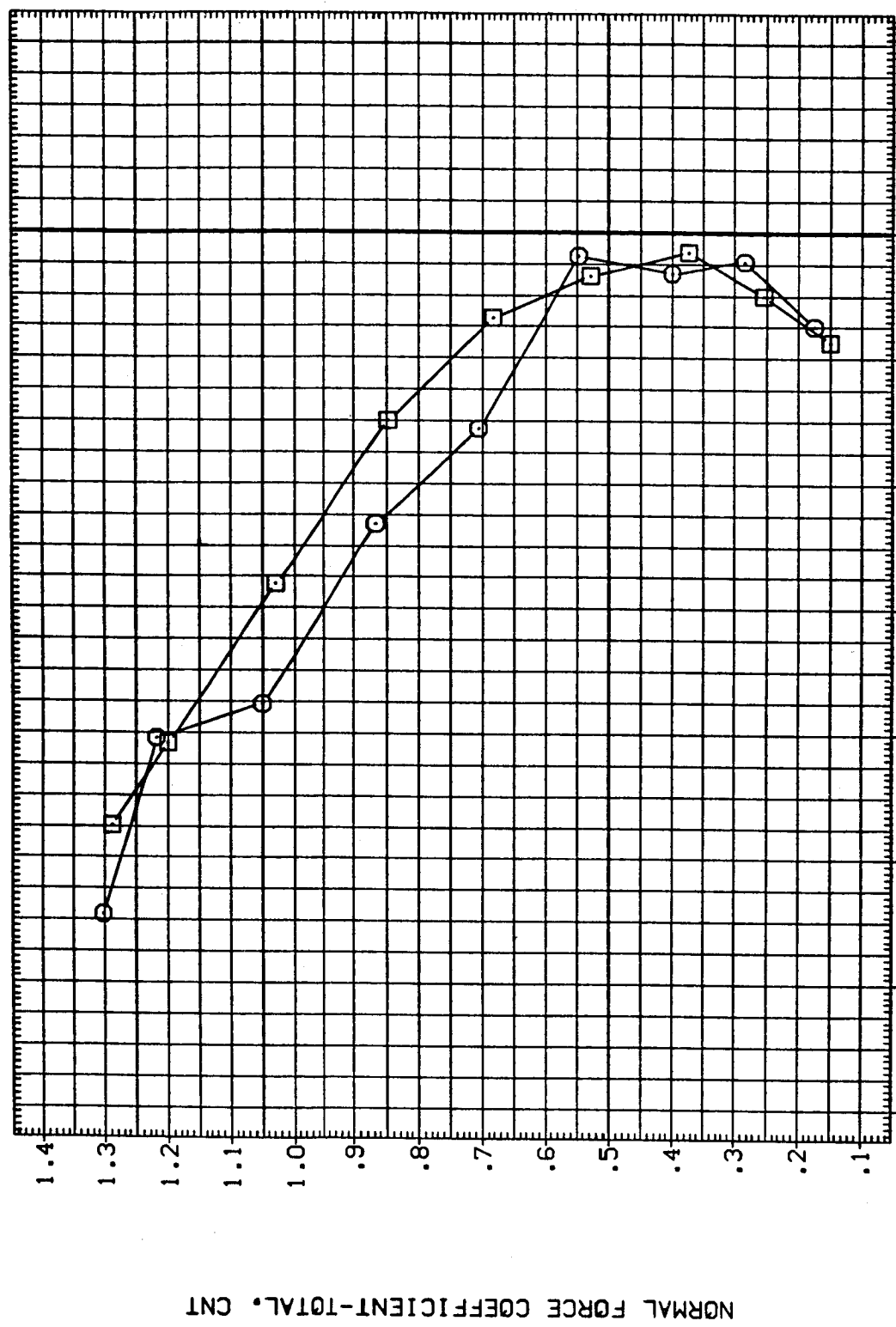


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (E0006) (E0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-17+114)
 AMES 3.5-190 GA98 (011-17+114-N24+DUMMY STING)

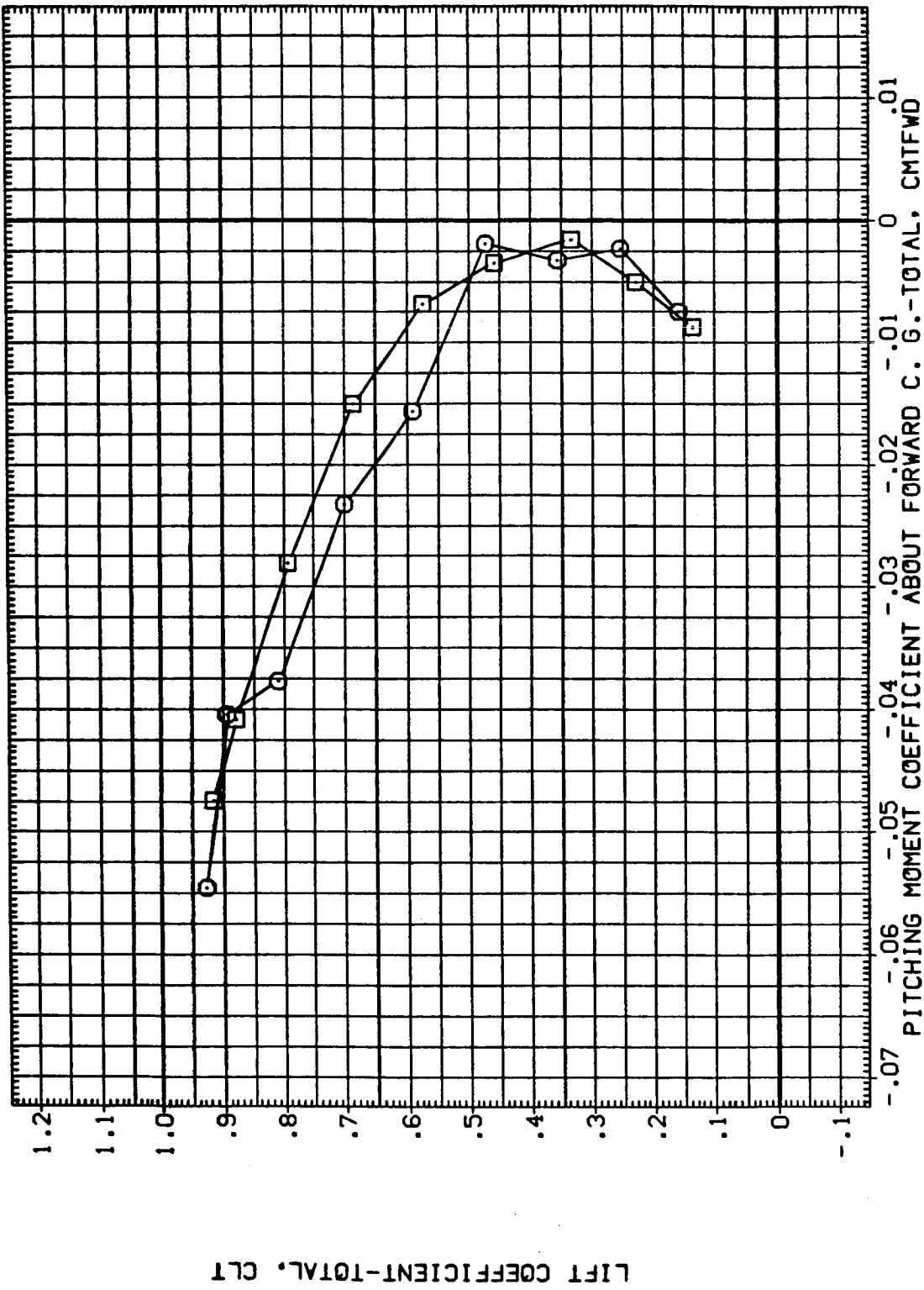
BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPDBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

(EE0006)	AMES 3.5-190 0/98 (011-M7+H14)	.000	.000	.000	55.000	SREF 2690.0000	50.FT.
(EE0022)	AMES 3.5-190 0/98 (011-M7+H14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000	IN.
						BREF 536.6800	IN.
						XMRP 1076.7000	IN. X0
						YMRP .0000	IN. Y0
						ZMRP .0000	IN. Z0
						SCALE .0150	

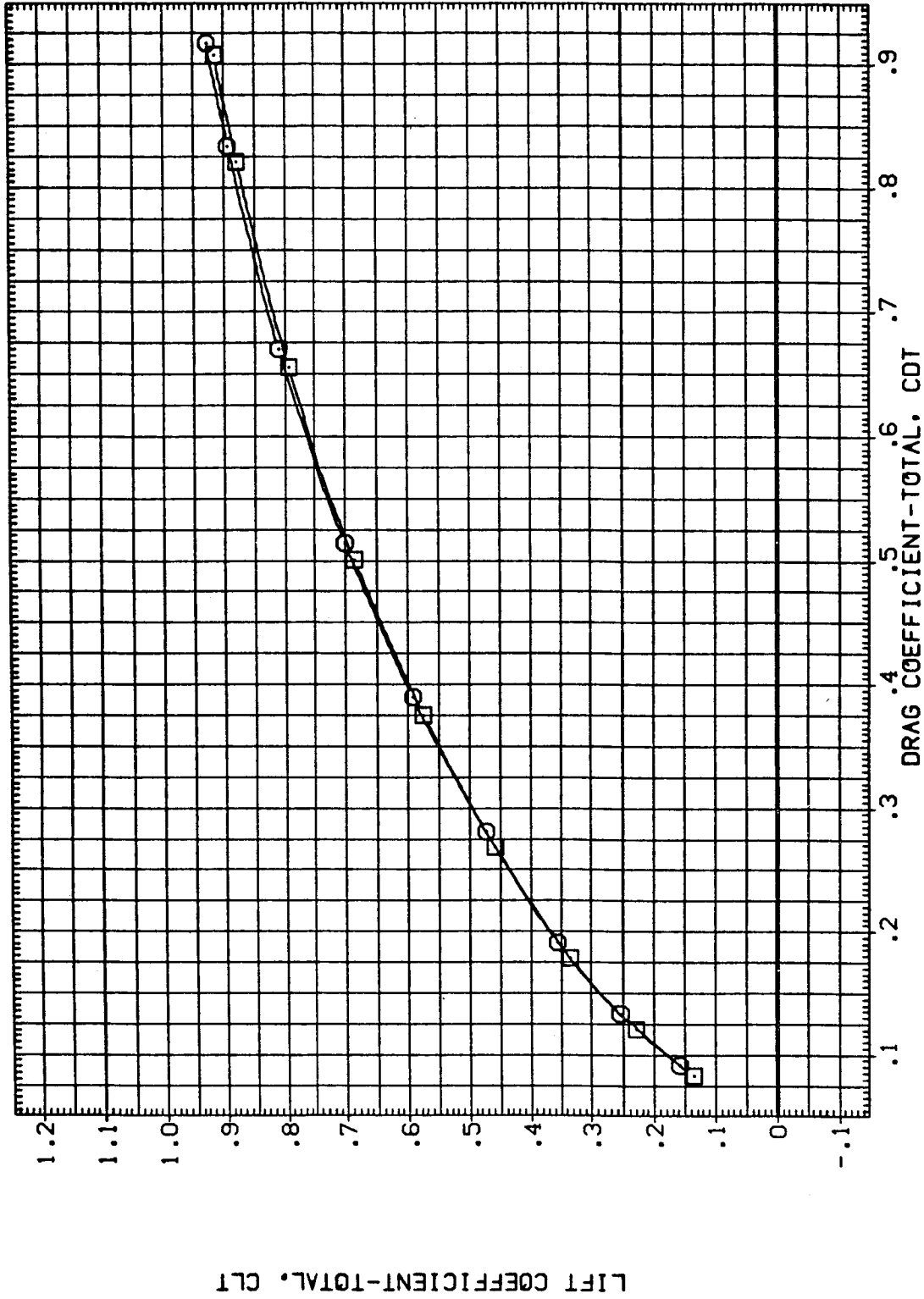


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0006) (EE0022)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-M7+H14)
 AMES 3.5-190 CA98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

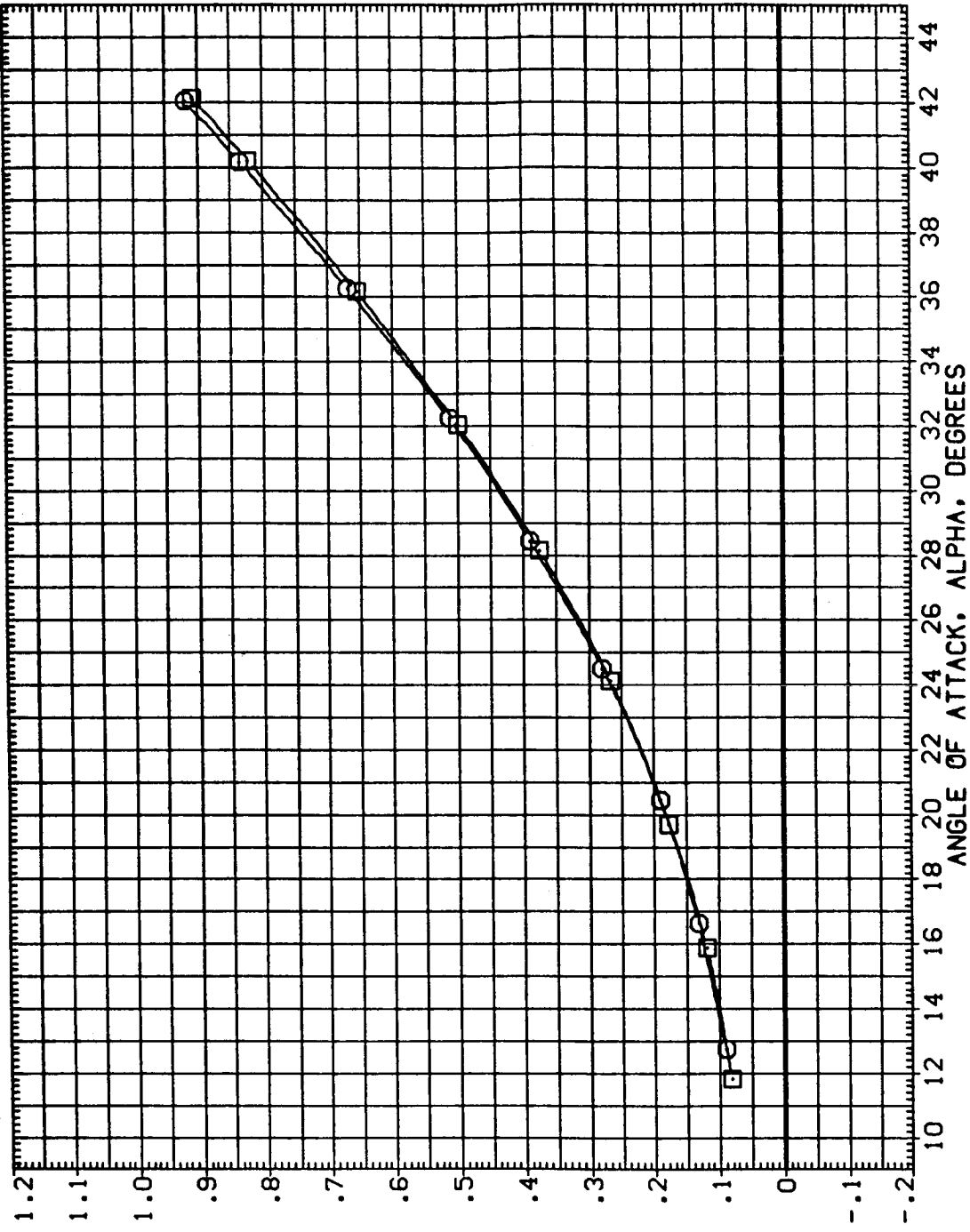
ELEVON .000 .000

BOFLAP .000 .000

SFOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



FOREBODY DRAG COEFFICIENT, CDF

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27



DATA SET SYMBOL (EE0006) (EE0022)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+M14)
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

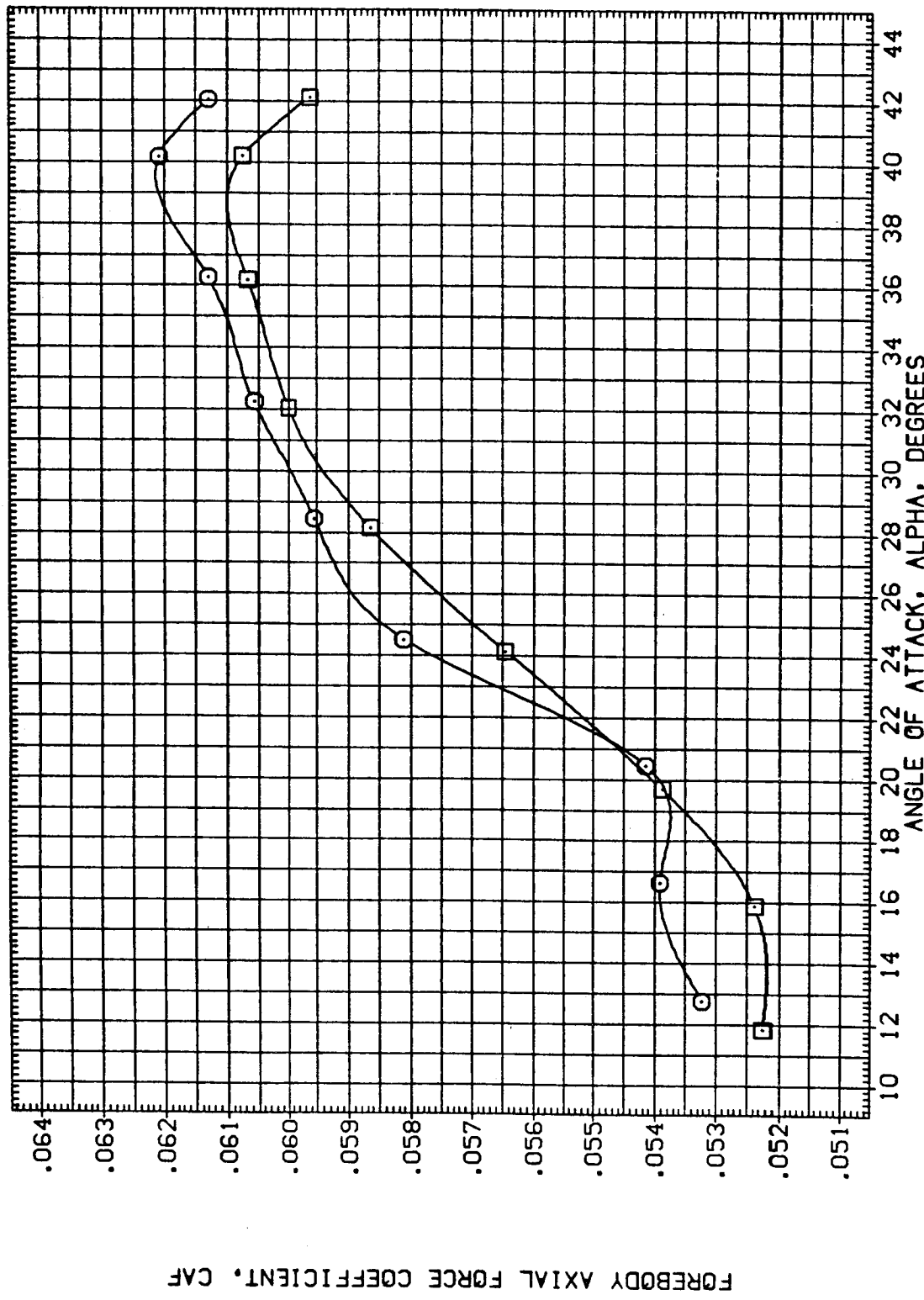
BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 YMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



FOREBODY AXIAL FORCE COEFFICIENT, CAF

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EEG006) (EEG022)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GA98 (011-47H14)
 AVES 3.5-190 GA98 (011-47H14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP .000 .000
 SPDBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 XMRP 936.6800 IN.
 YMRP 1076.7000 IN.
 ZMRP .0000 IN.
 IN.YO 375.0000 IN.
 IN.ZO .0150

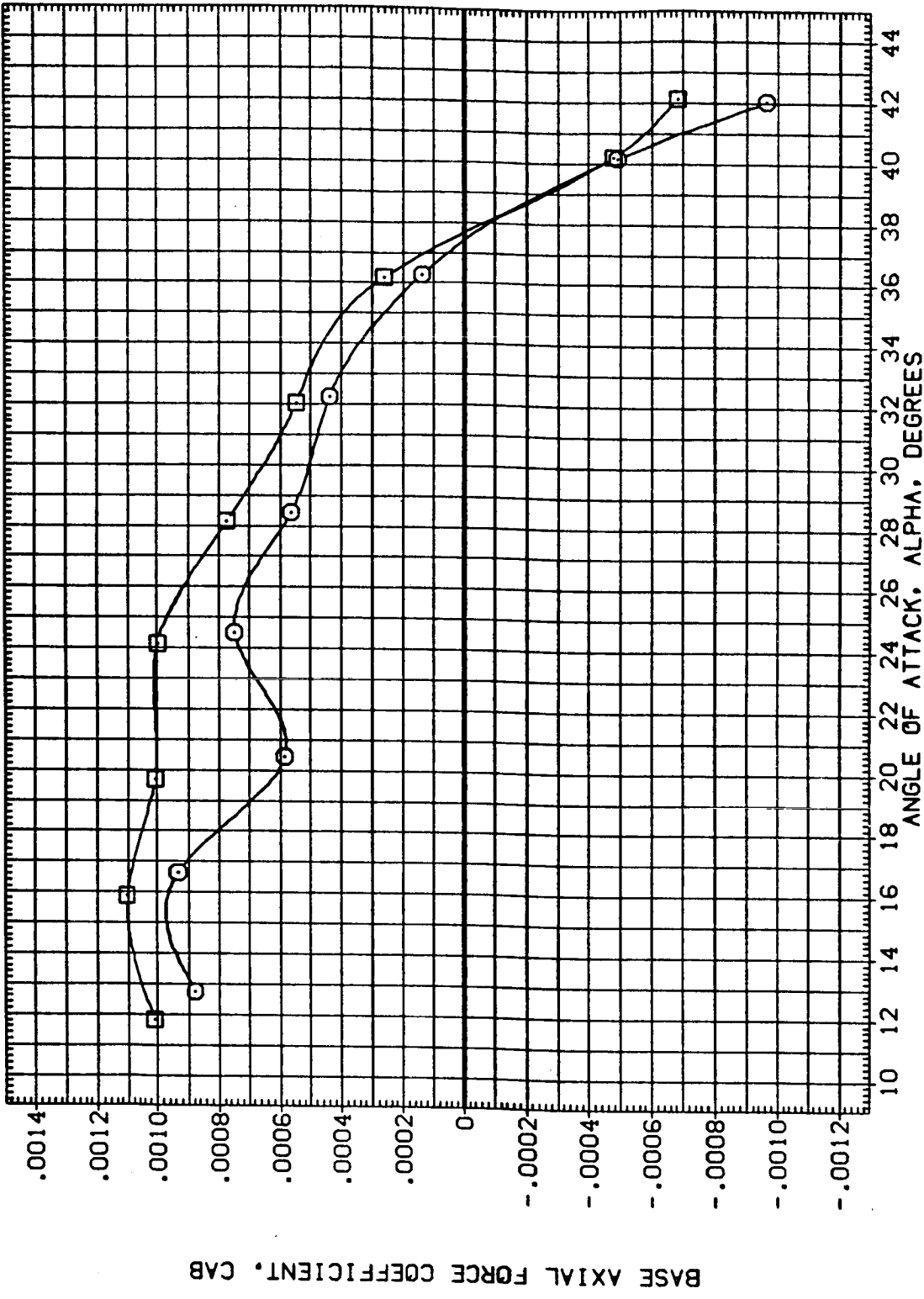


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL (BEG006) \square AMES 3.5-190 0A98 (011-M7-H14)

CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

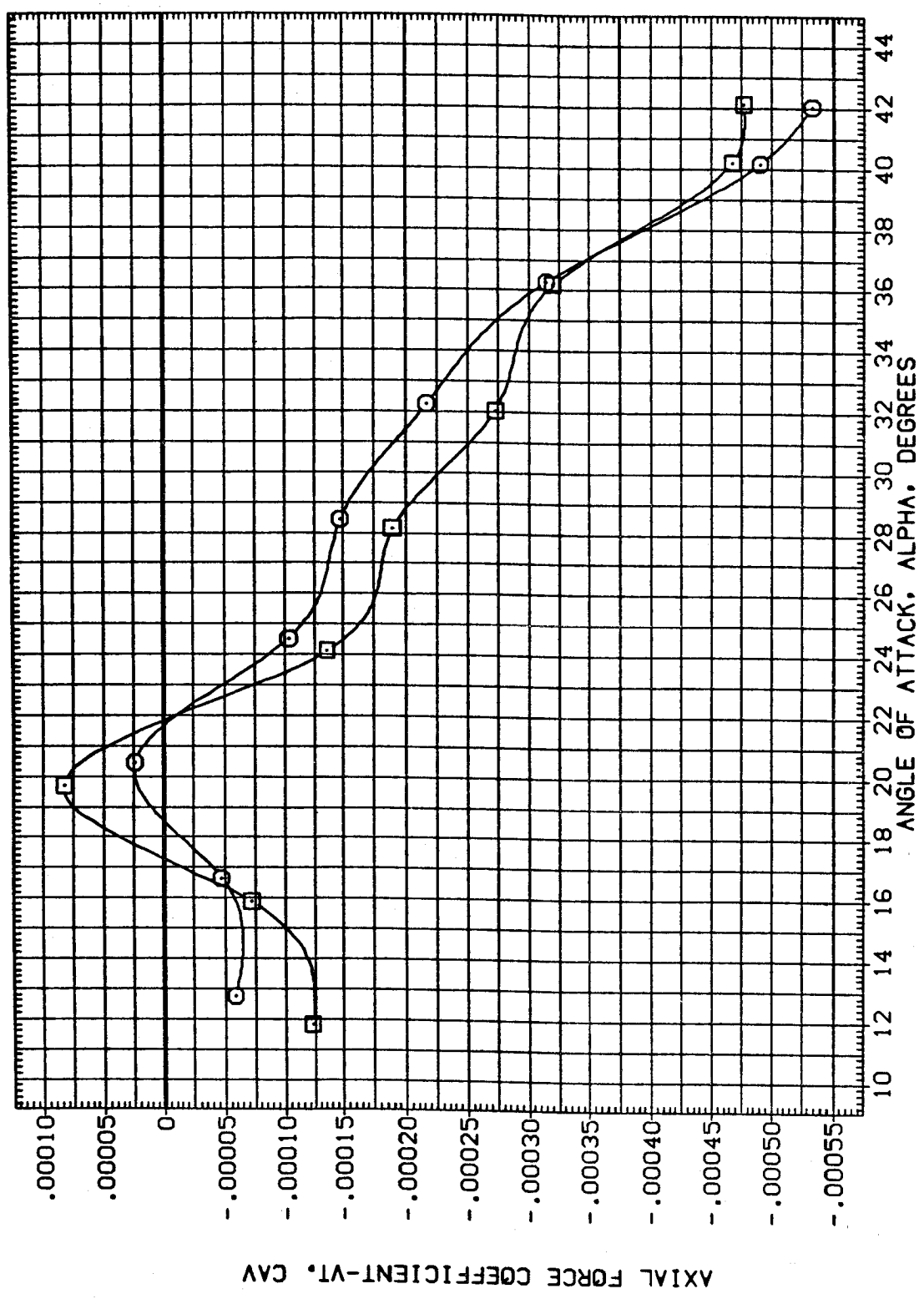



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL (BE0006) (BE0022)  CONFIGURATION DESCRIPTION
 AHES 3.5-190 QAS8 (011-M7-M14)
 AHES 3.5-190 QAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPOBRK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

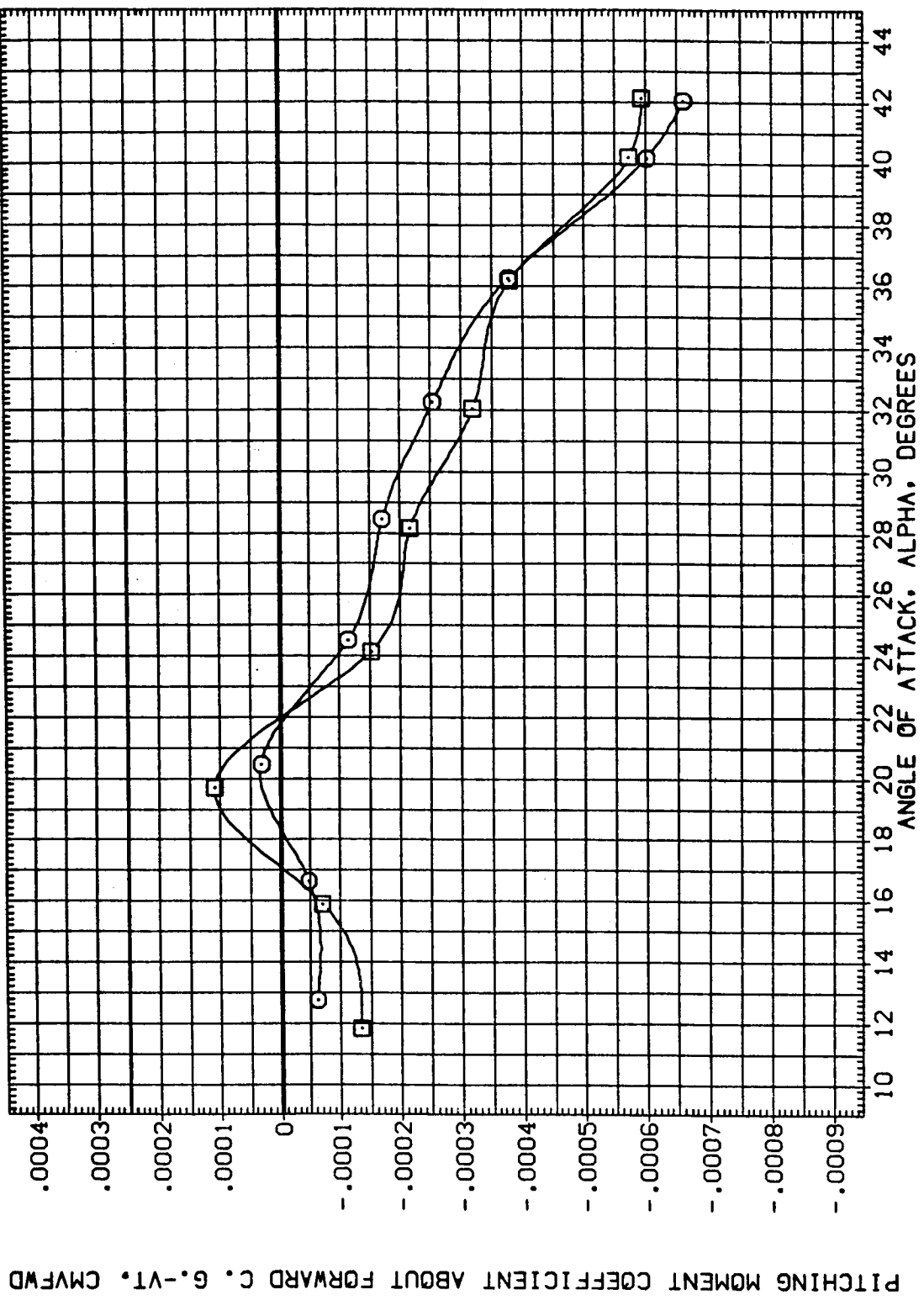


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0006) (BE0022) \square

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-17+M14)
 AMES 3.5-190 OA98 (011-17+M14-N24+DUMMY STING)

BETA .000 .000
 ELEVON .000 .000
 BOFLAP .000 .000
 SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

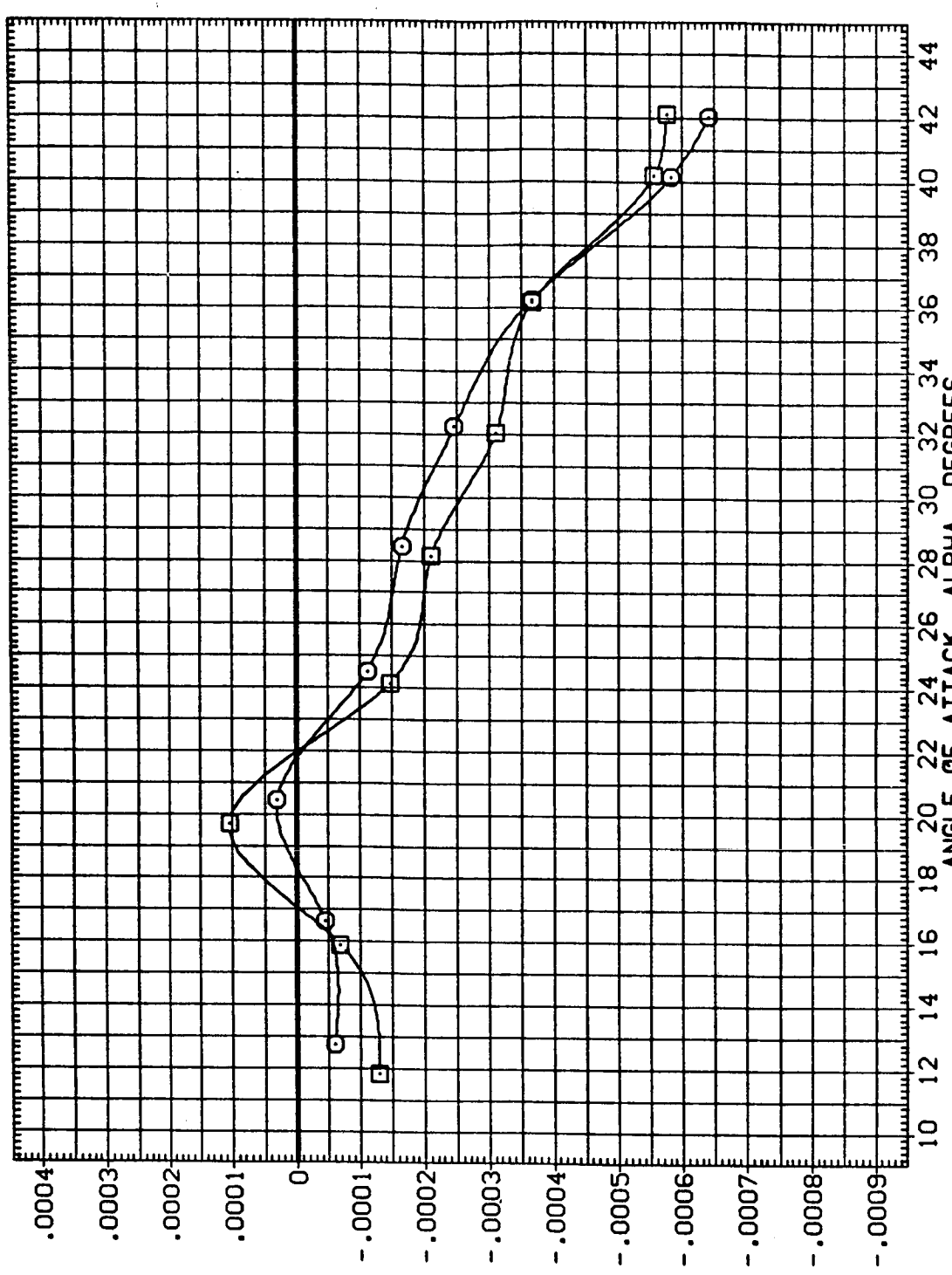


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.
 (A)MACH = 10.27

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0022)

SYMBOL O MACH 10.300
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PARAMETRIC VALUES
 BETA .000 ELEVON .000
 SDFLAP .000 SPOBRK 55.000
 RUDDER .000

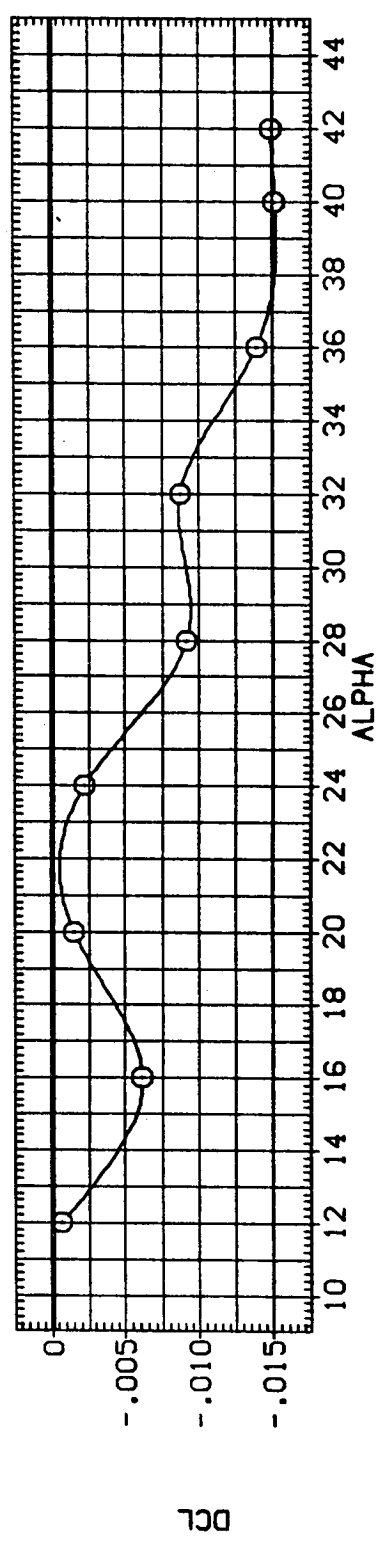
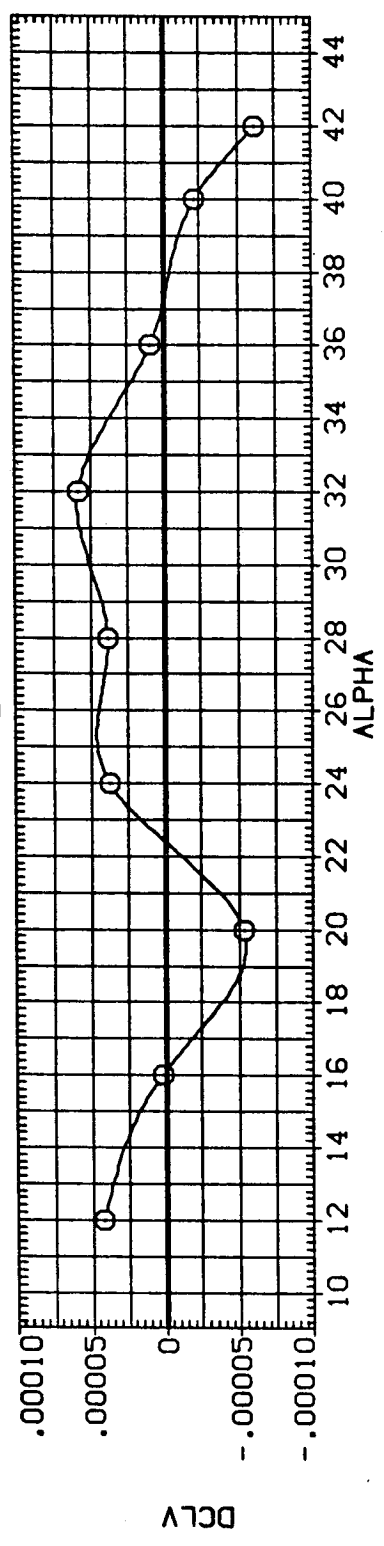
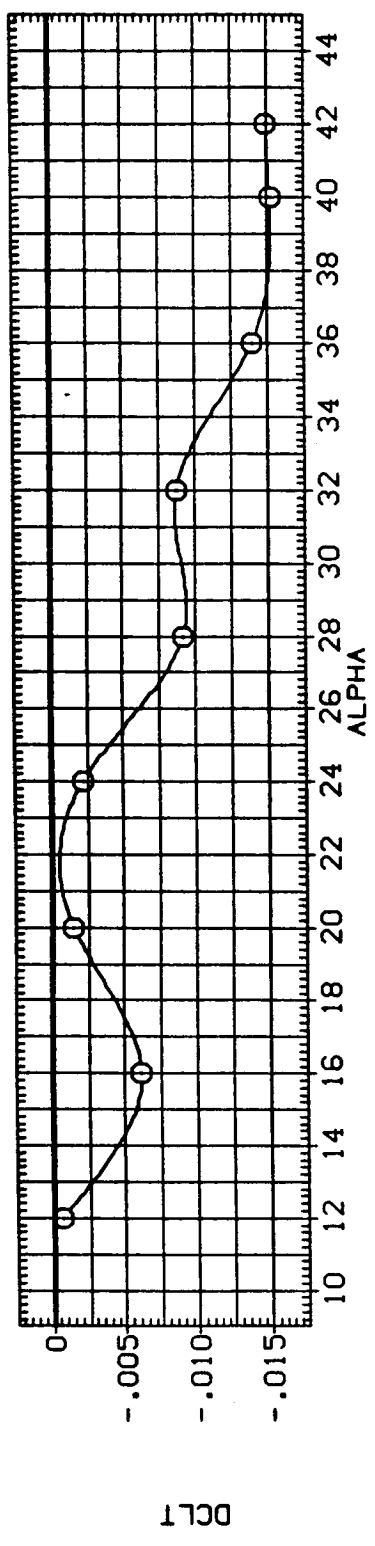


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL MACH 10.300
 O

PARAMETRIC VALUES
 BETA .000 ELEVON .000
 BOFLAP .000 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

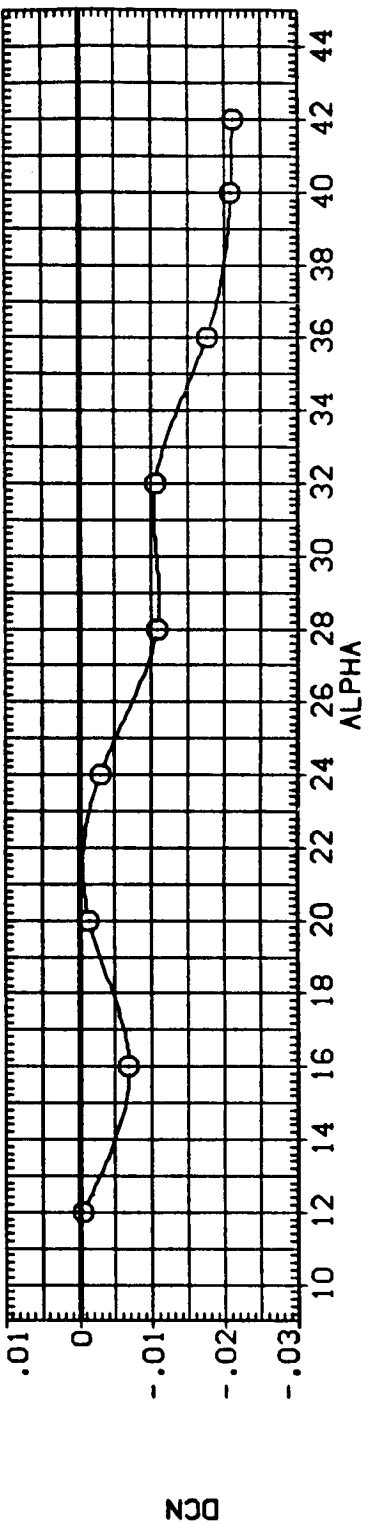
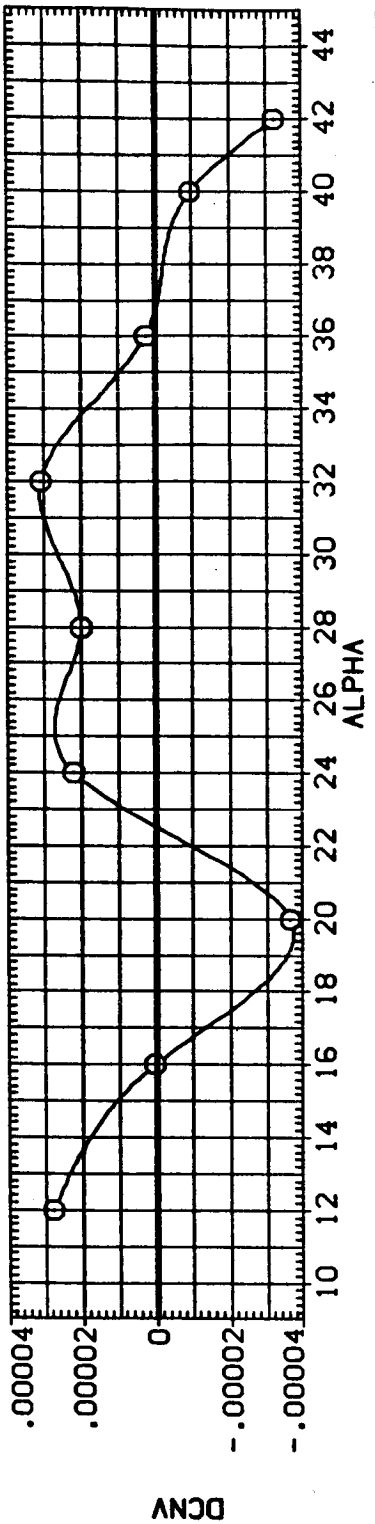
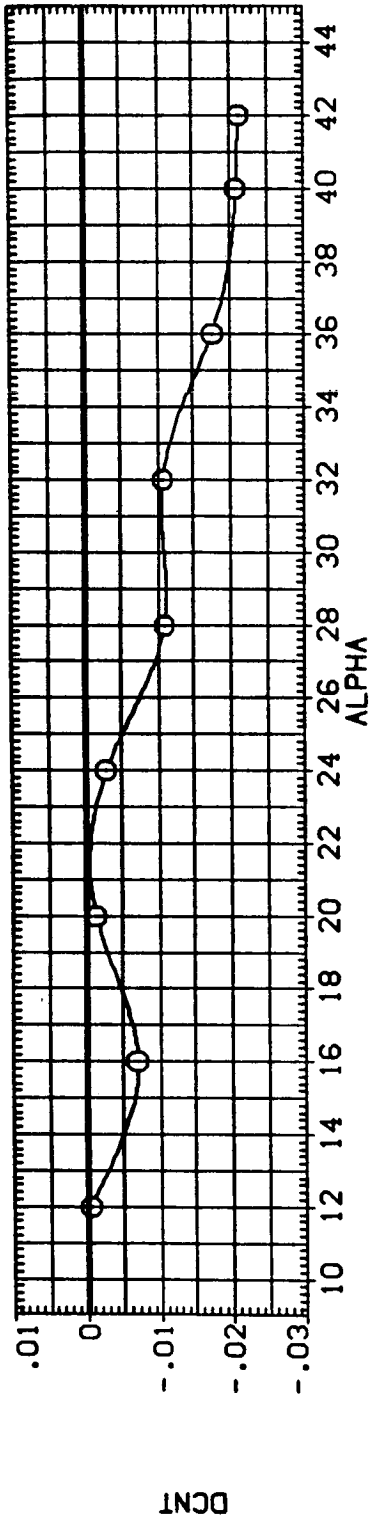


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL	MACH	BETA	PARAMETRIC VALUES	
○	10.300	BOFLAP	.000	ELEVON .000
		RUDDER	.000	SPDRK 55.000
			.000	

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8000 IN.
BREF	936.6800 IN.
XMRP	1076.7000 IN.X0
YMRP	.0000 IN.Y0
ZMRP	375.0000 IN.Z0
SCALE	.0150

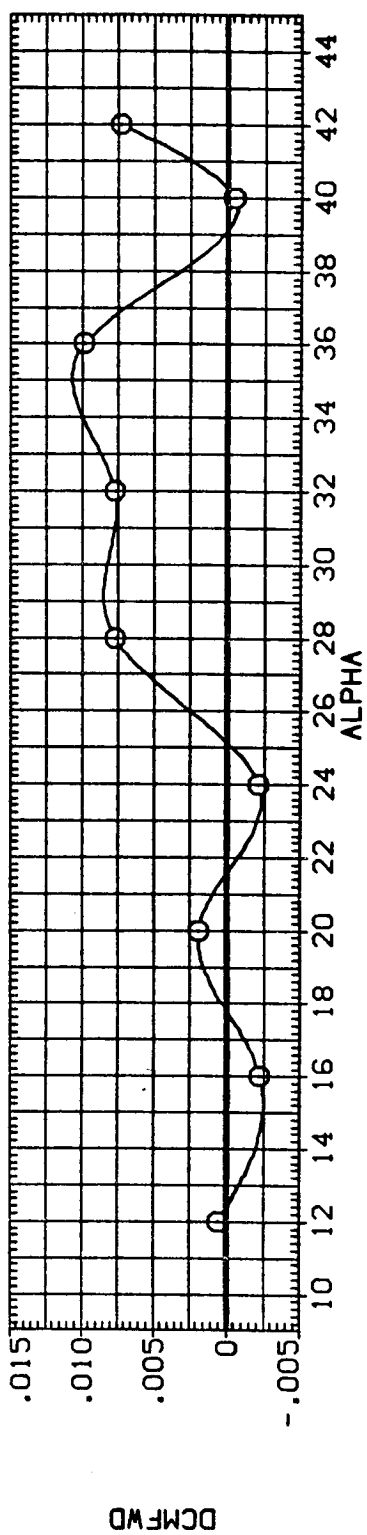
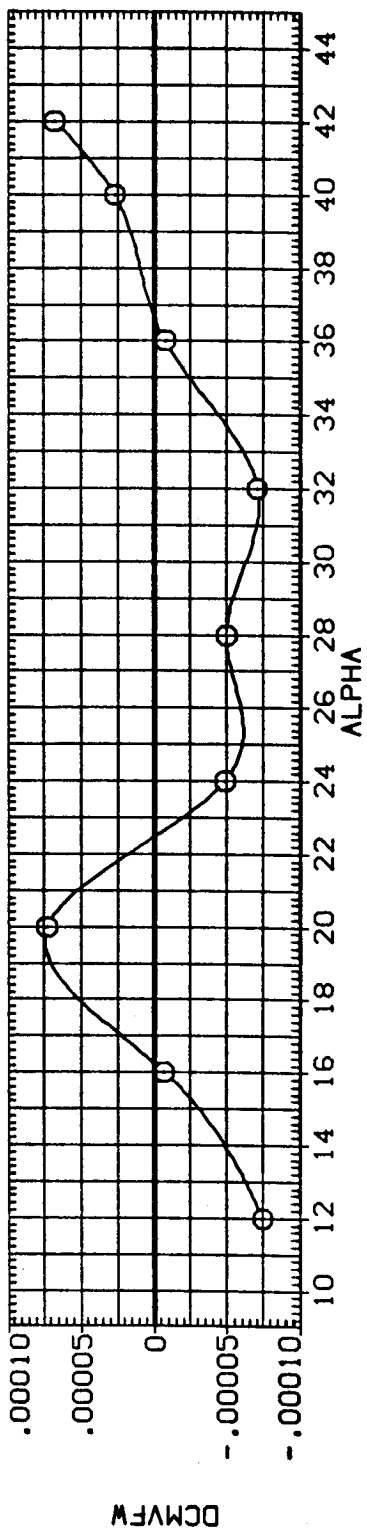
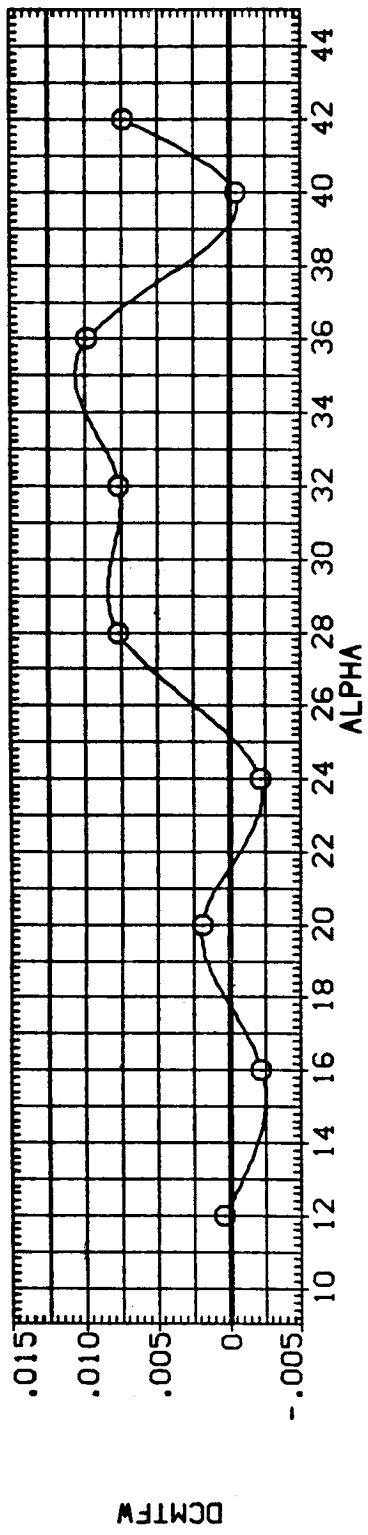


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL MACH 10.300
 O

PARAMETRIC VALUES
 BETA .000 ELEVON .000
 BOFLAP .000 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BREF 936.8800 IN.
 XPRP 1076.7000 IN.X0
 YPRP .0000 IN.Y0
 ZPRP 375.0000 IN.Z0
 SCALE .0150

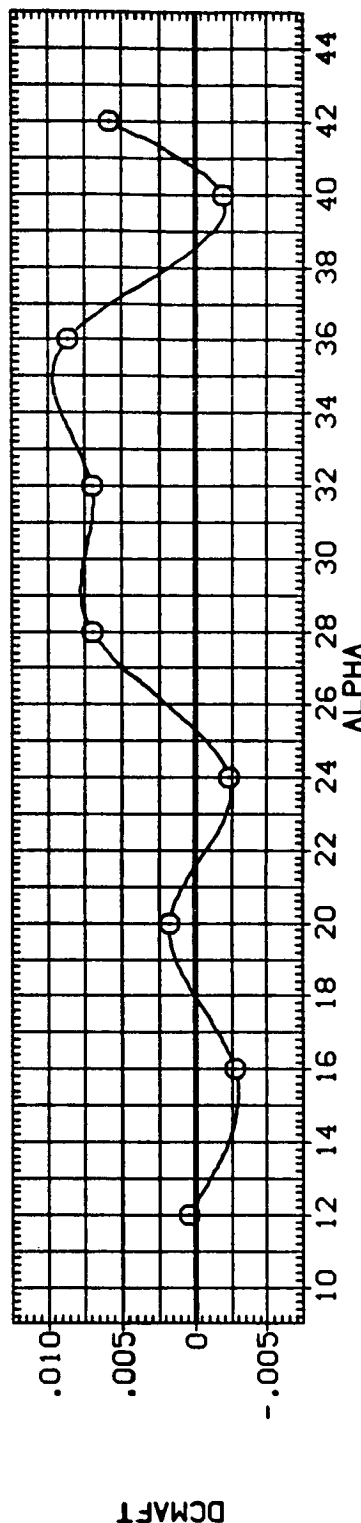
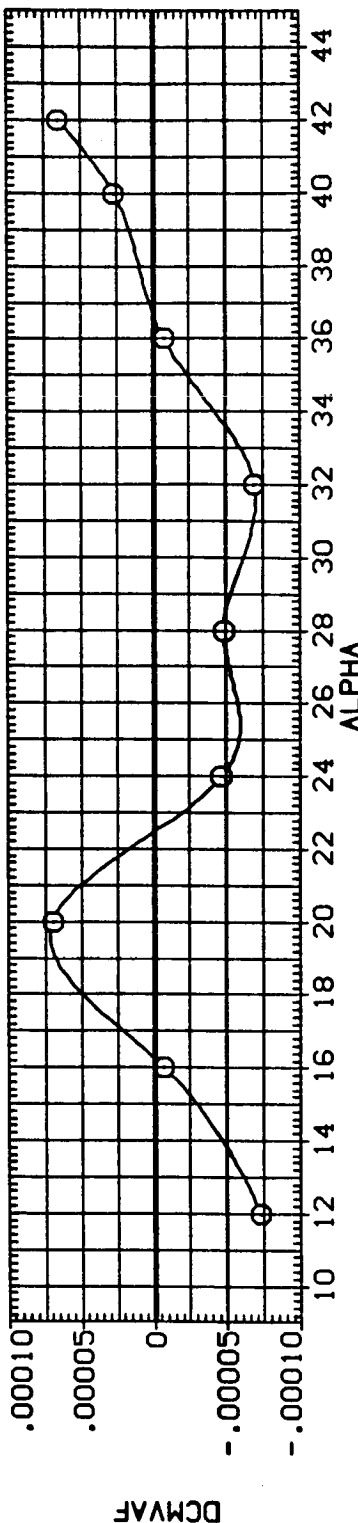
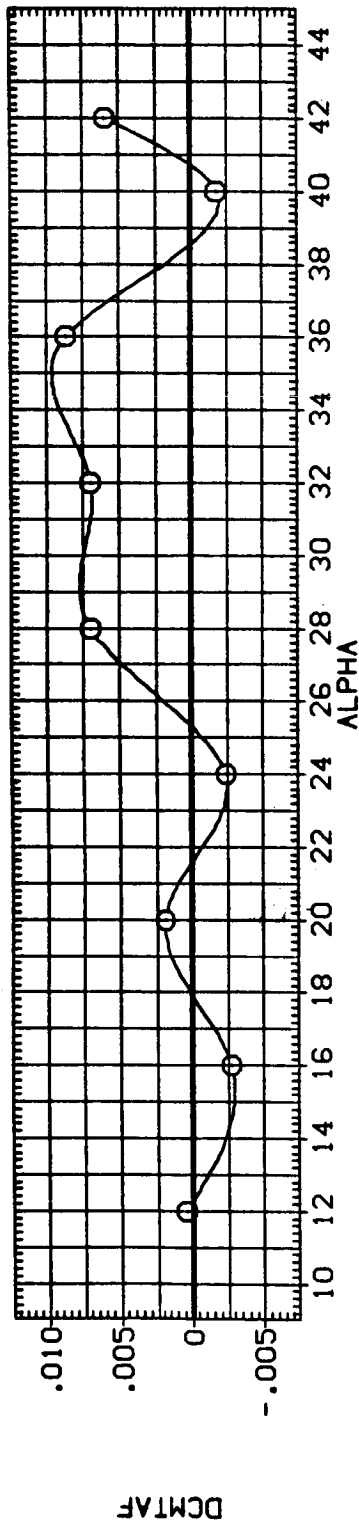


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ022)

SYMBOL MACH BETA BOFLAP RUDDER
 O 10.300 .000 .000 .000

PARAMETRIC VALUES
 ELEVON .000
 SPDRBK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

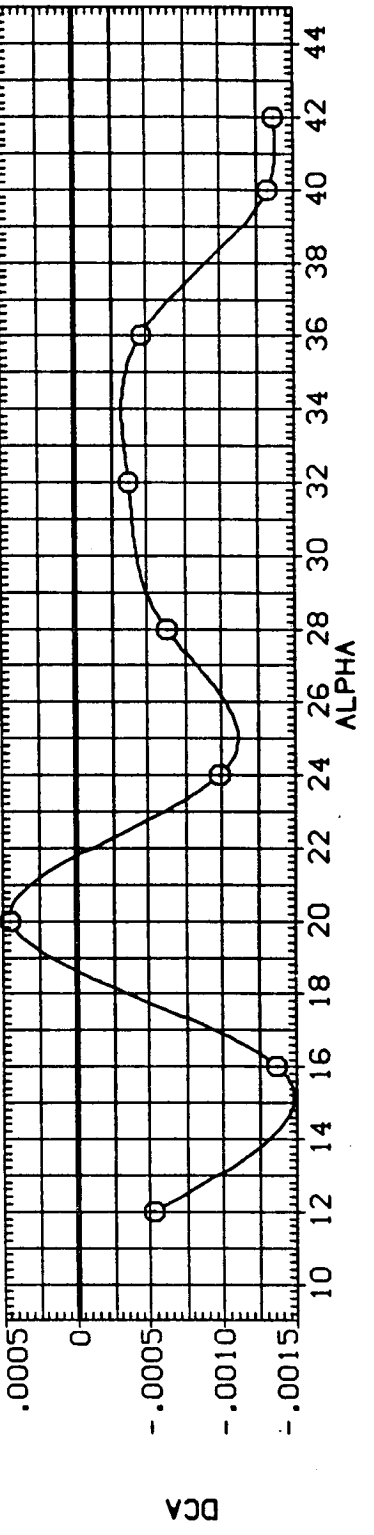
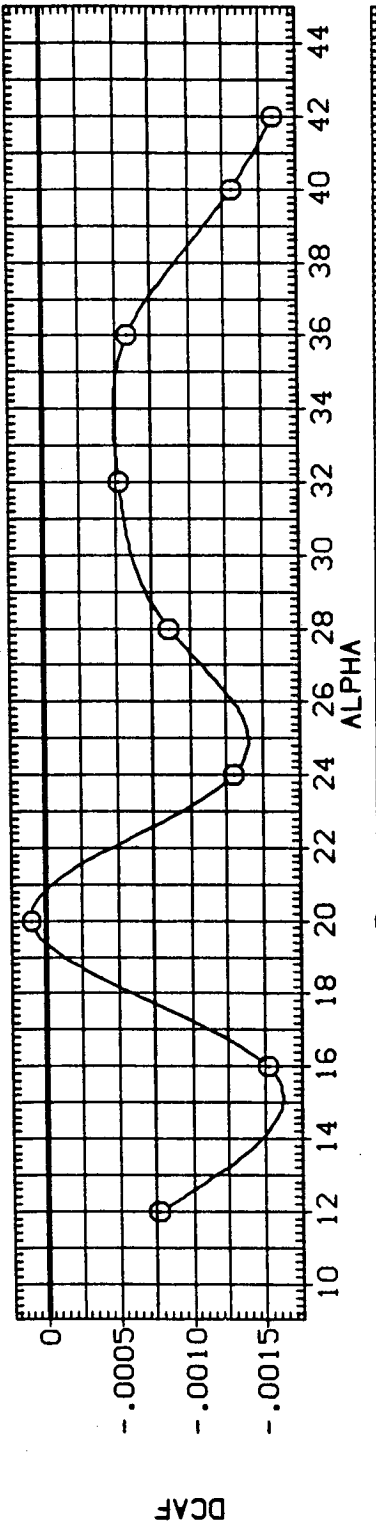
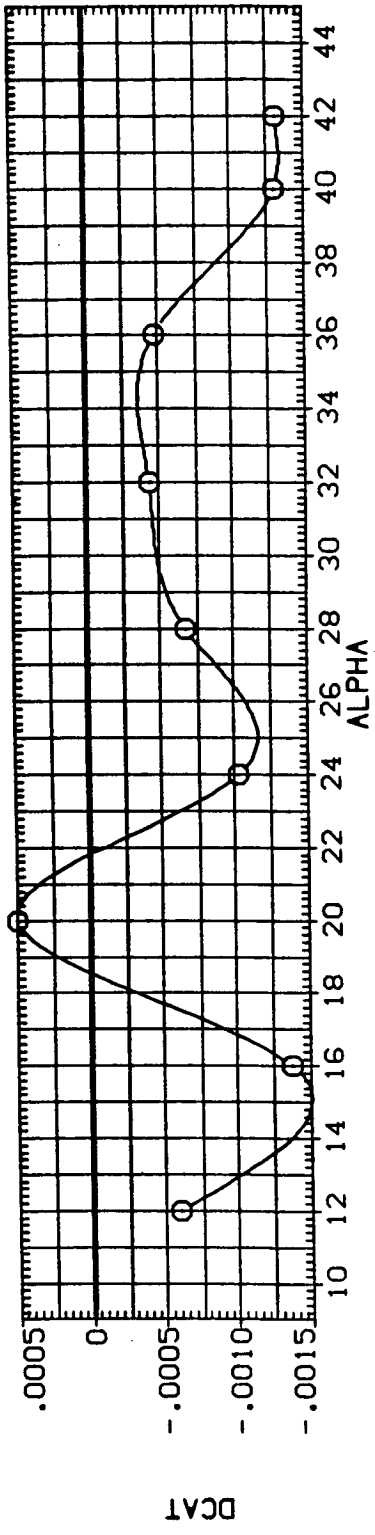


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ022)

SYMBOL	MACH	PARAMETRIC VALUES		REFERENCE INFORMATION	
○	10.300	BETA	ELEVON	SREF	SO.FT.
		EDFLAP	SPOBRK	LREF	IN.
		RUDDER		SREF	IN.
				XMRP	IN.XO
				YMRP	IN.YO
				ZMRP	IN.ZO
				SCALE	.0150

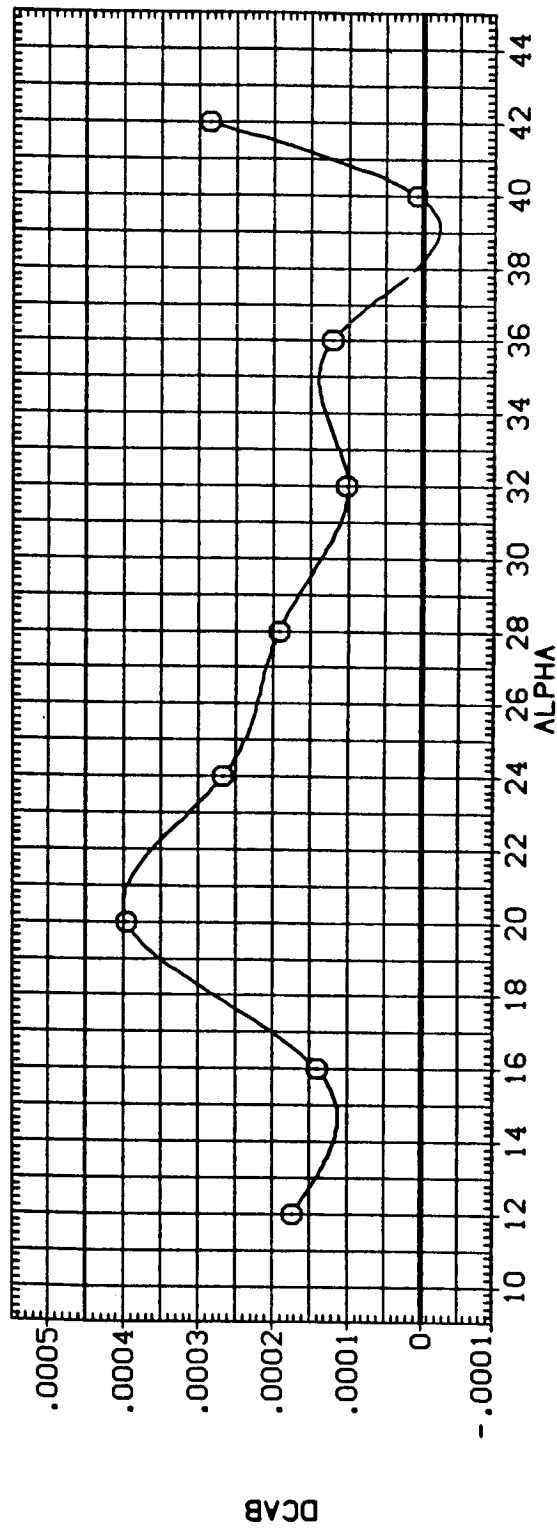
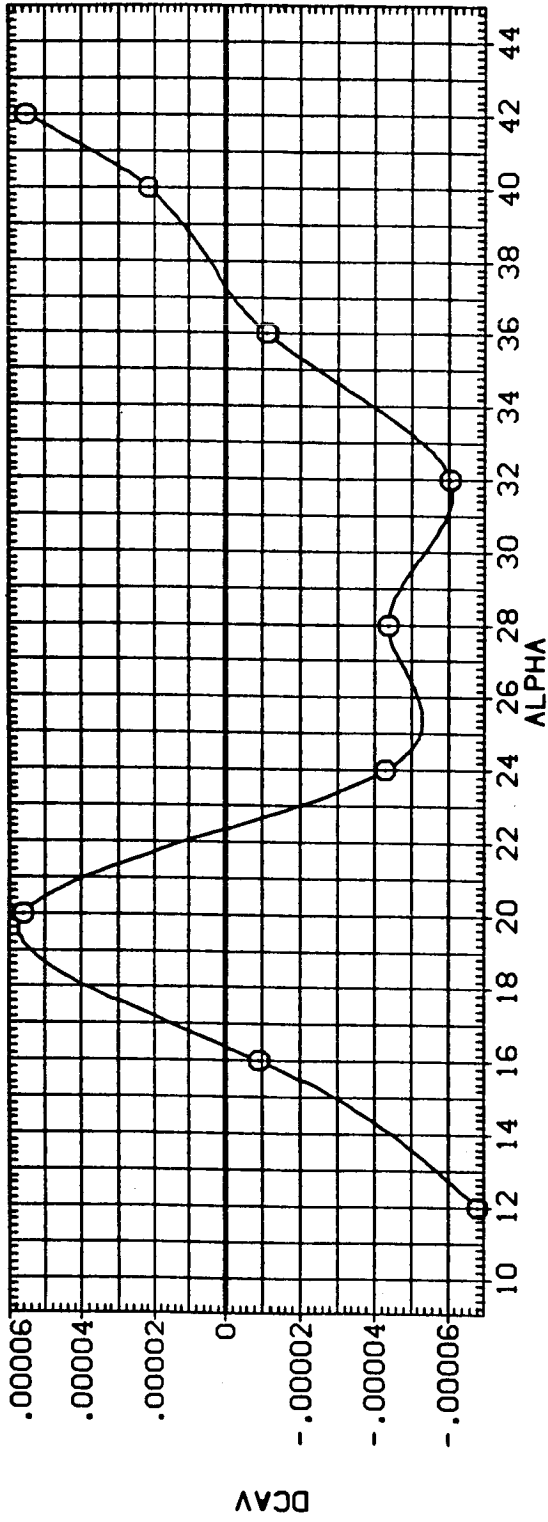


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ022)

SYMBOL ○ MACH 10.300
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X03
 YMRP .0000 IN.Y03
 ZMRP 375.0000 IN.Z03
 SCALE .0150

PARAMETRIC VALUES
 .000 ELEVON .000
 .000 SPOBRK 55.000
 BETA
 BOFLAP
 RUDDER

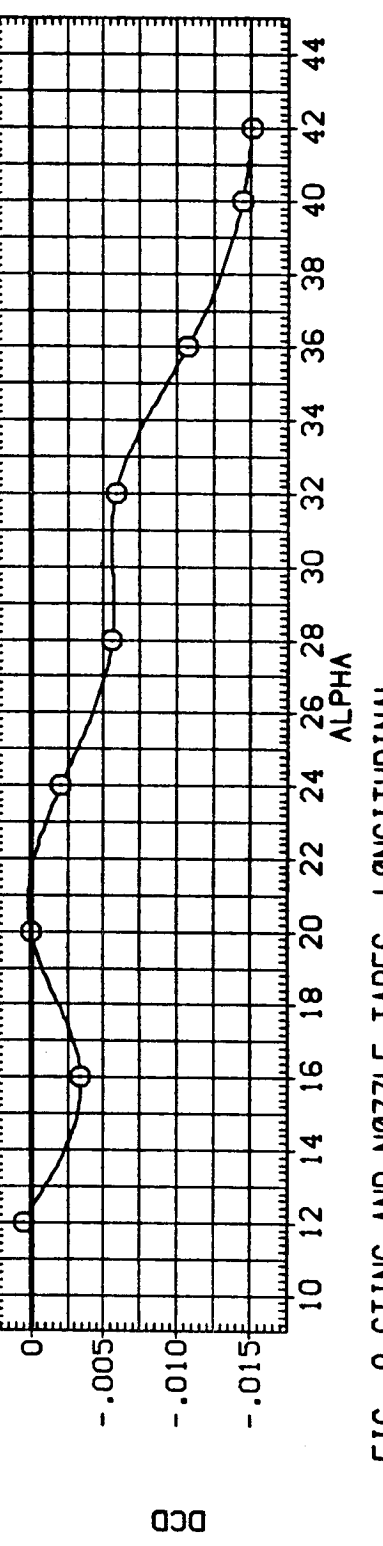
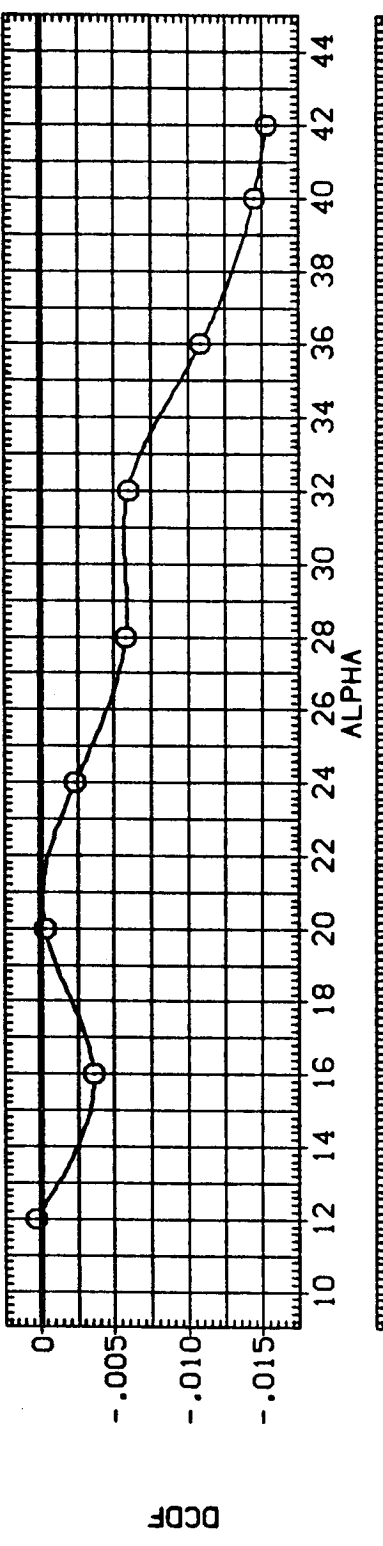
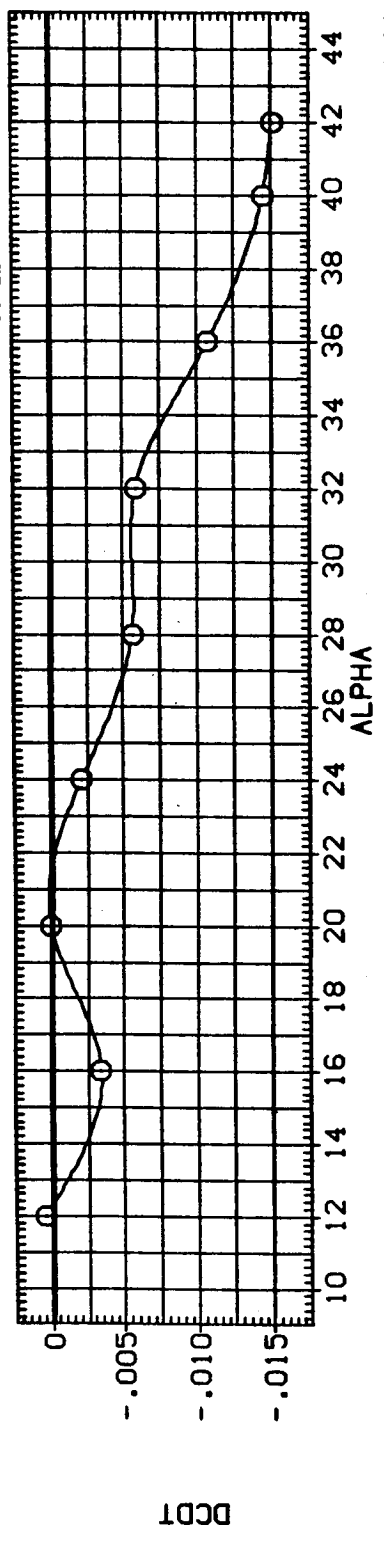


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ022)

SYMBOL MACH BETA BOFLAP RUDDER
 O 10.300 .000 .000 .000

PARAMETRIC VALUES
 ELEVON .000
 SPDRBK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

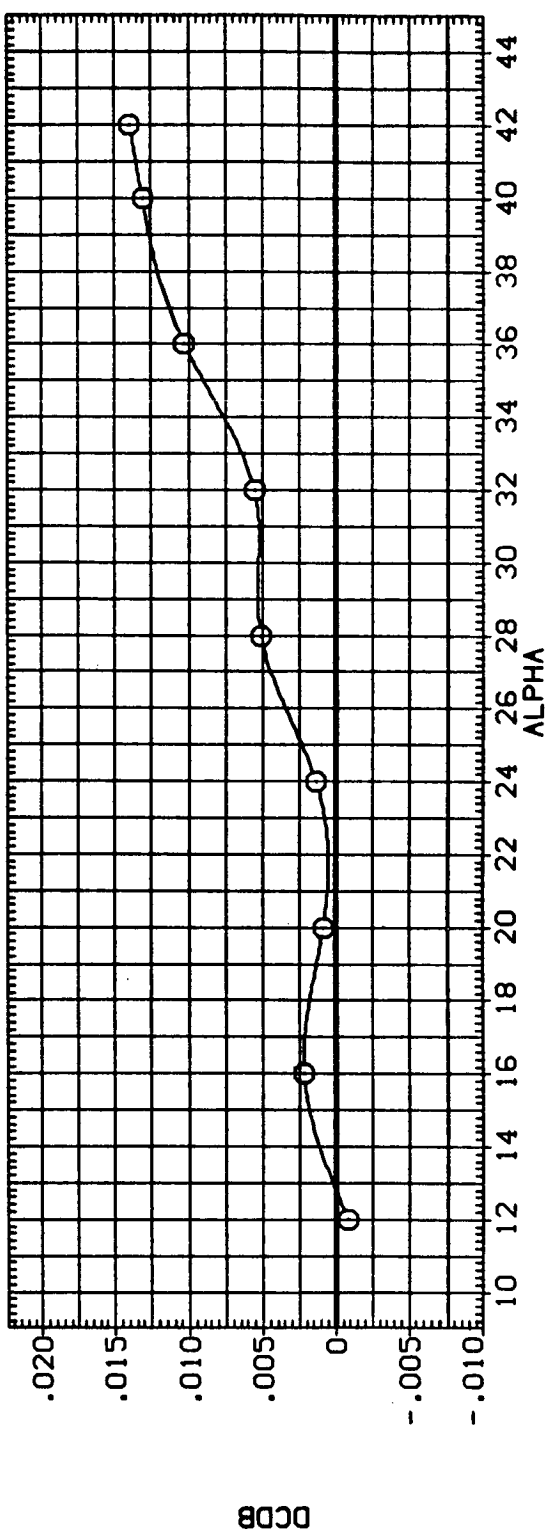
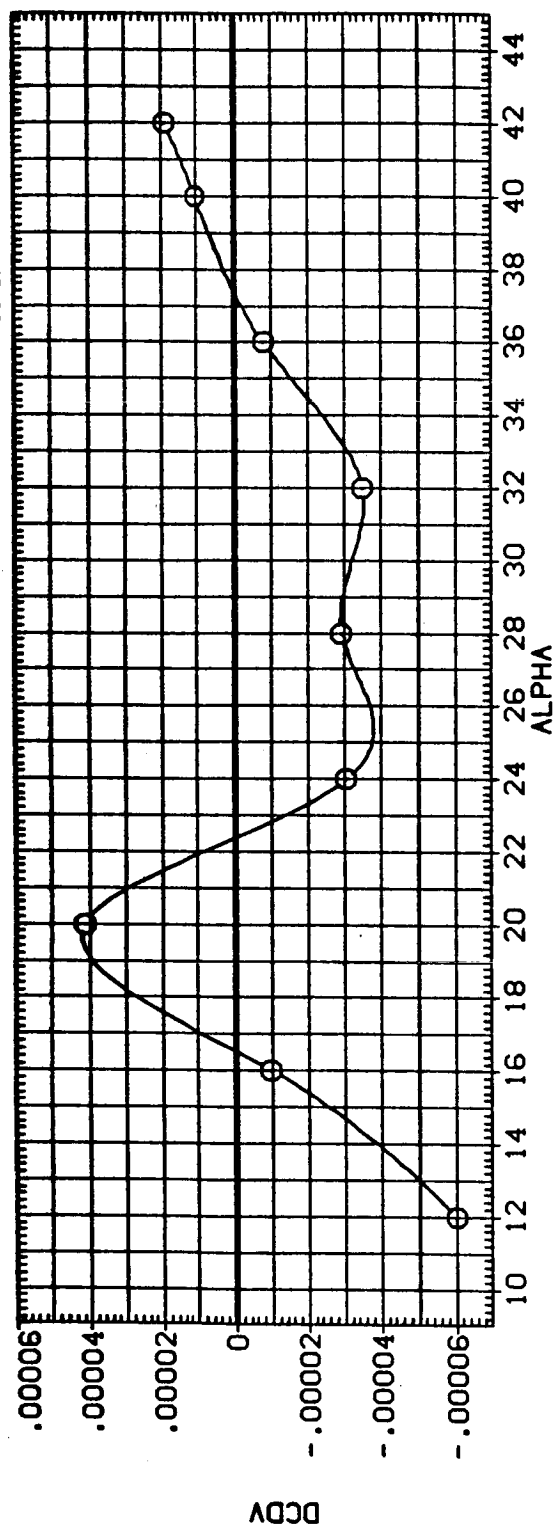


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL: \square CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7-M14)
 (AEG006) AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)
 (AEG022)

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
.000	.000	.000	55.000	SREF 2690.0000 SO.FT.
.000	.000	.000	55.000	LREF 474.8000 IN.
				BREF 936.6800 IN.
				XMRP 1076.7000 IN.XD
				YMRP .0000 IN.YD
				ZMRP .0000 IN.ZD
				SCALE .0150

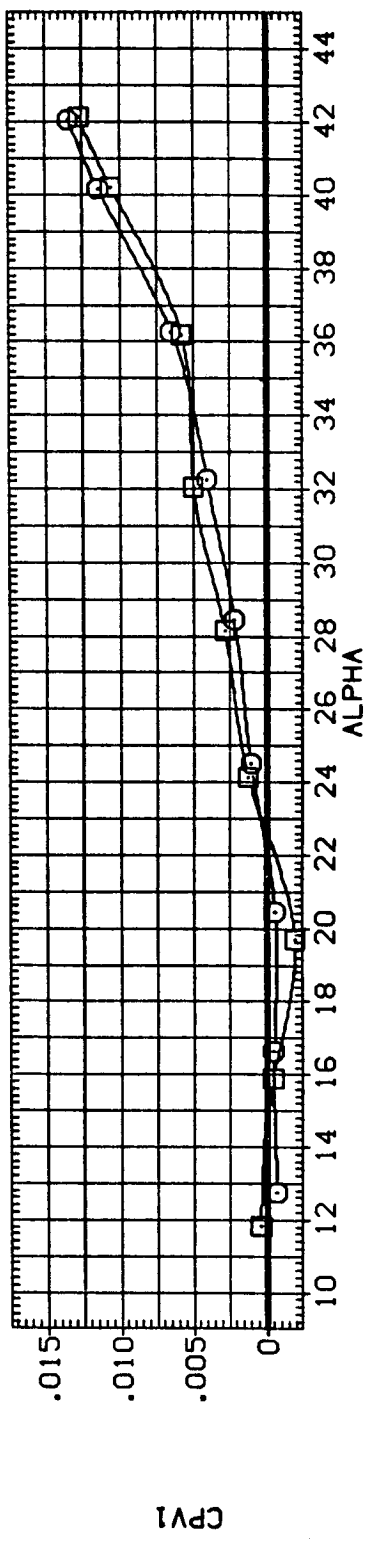
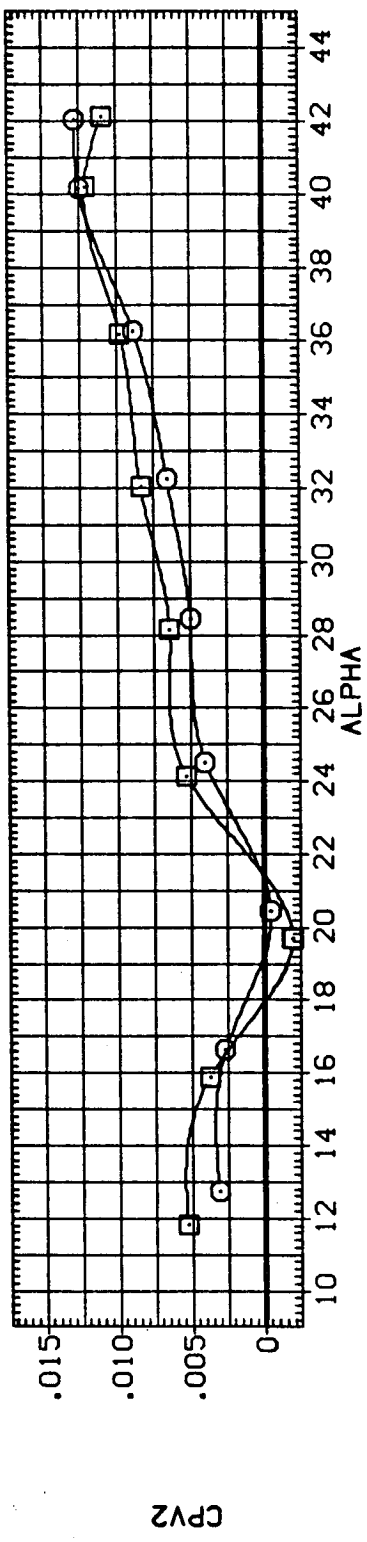
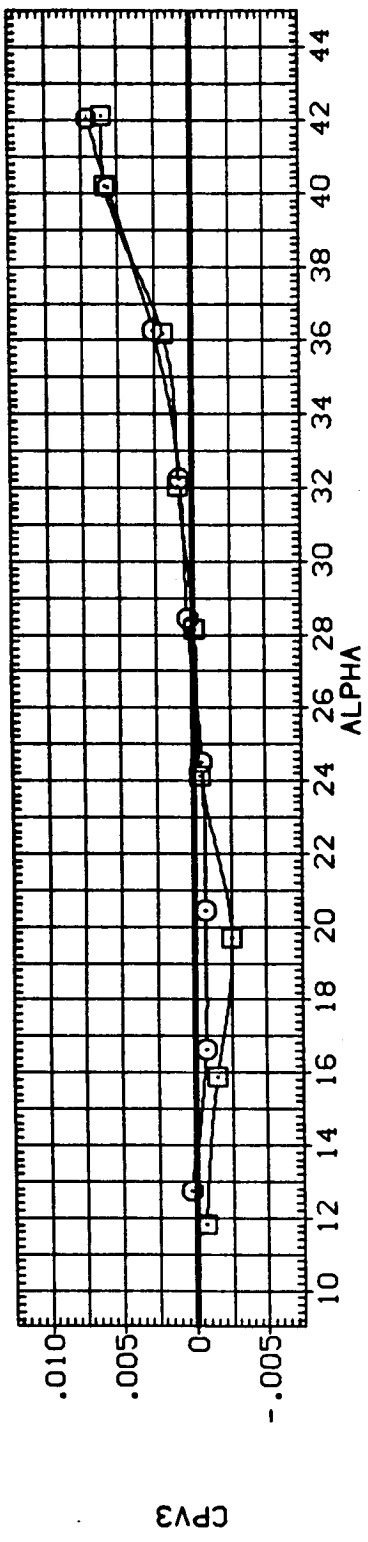



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 10.27

DATA SET SYMBOL (AEG006) (AEG022)  CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-47-M14) AMES 3.5-190 OA98 (011-47-M14-N24-DUMMY STING)

REFERENCE INFORMATION
 SREF 2690.0000 90.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

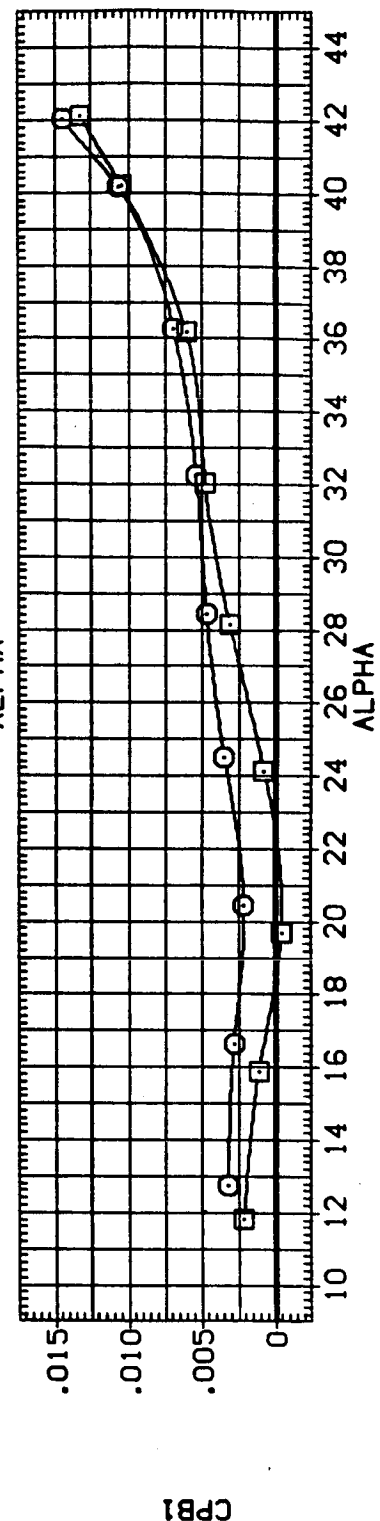
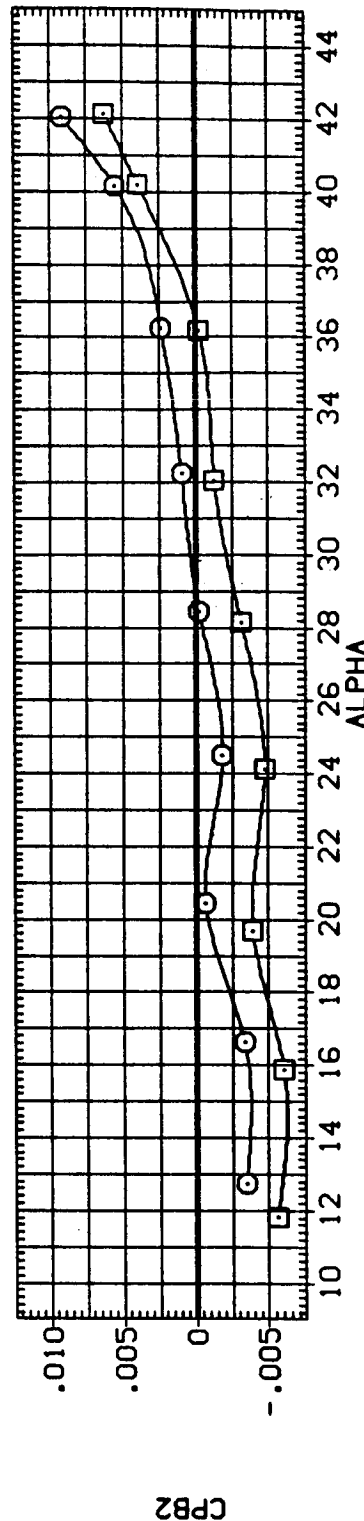
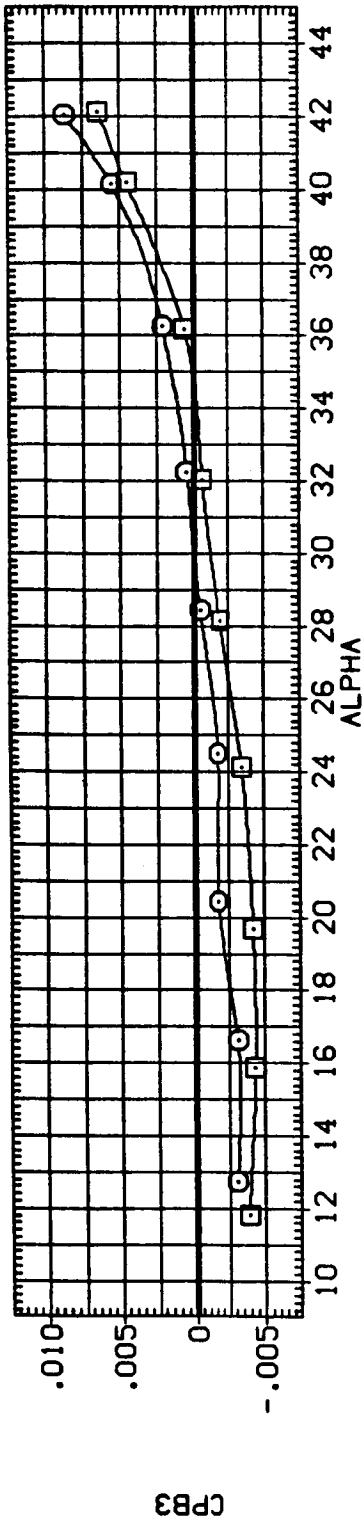


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL
 (CE0008)
 (CE0012)
 (CE0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 DA98 (011-M7+M14)
 AMES 3.5-190 DA98 (011-M7+M14-N24)
 AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA
 5.000
 5.000
 5.000

ELEVON
 -40.000
 -40.000
 -40.000

BDFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

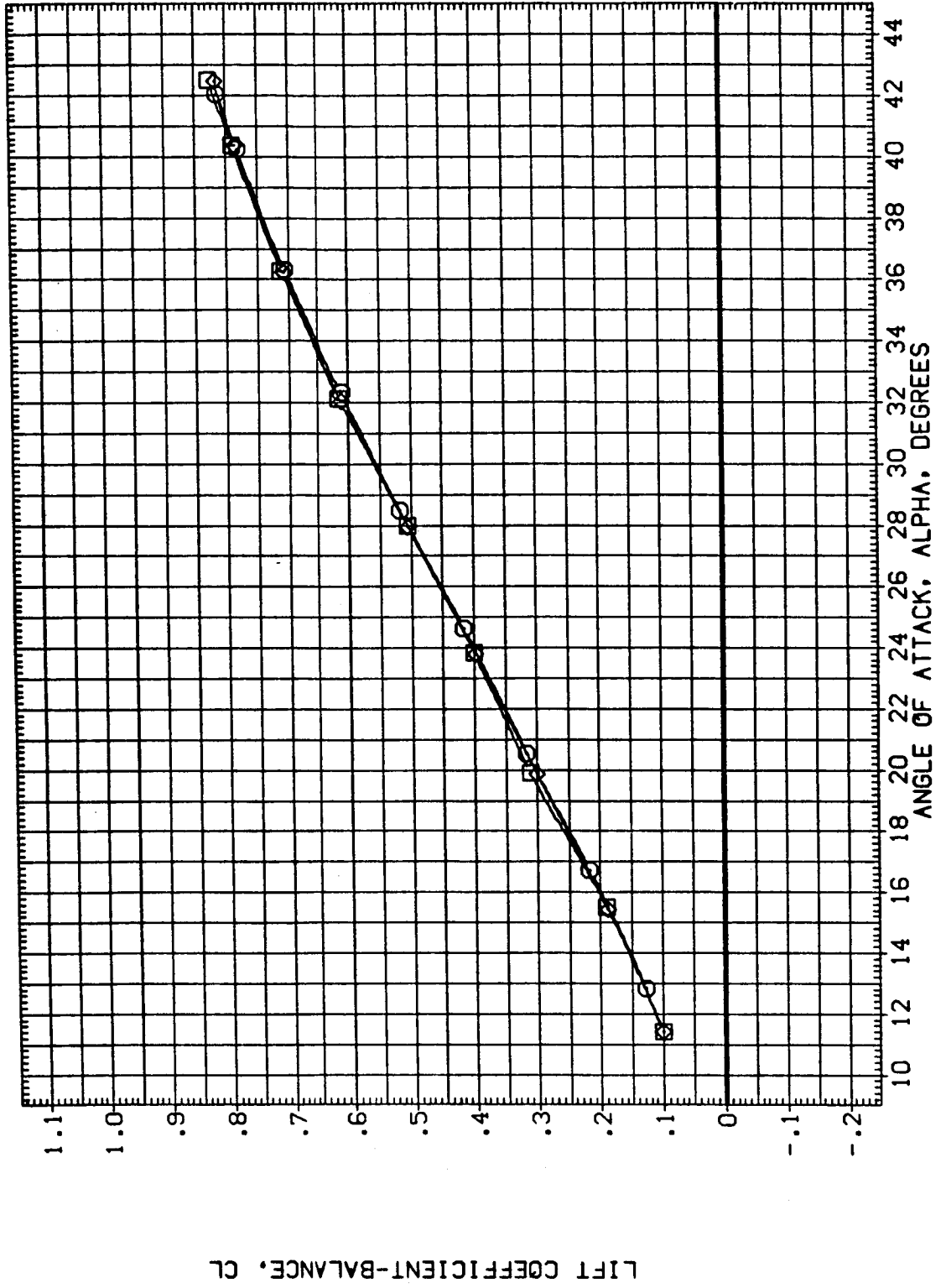


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0008) AMES 3.5-190 DASH (011-77+M14)

(CE0012) AMES 3.5-190 DASH (011-77+M14+M24)

(CE0024) AMES 3.5-190 DASH (011-77+M14+M24+DUMMY STING)

BETA 5.000
5.000
5.000

ELEVON -40.000
-40.000
-40.000

BOFLAP -11.700
-11.700
-11.700

SPOBRK 55.000
55.000
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

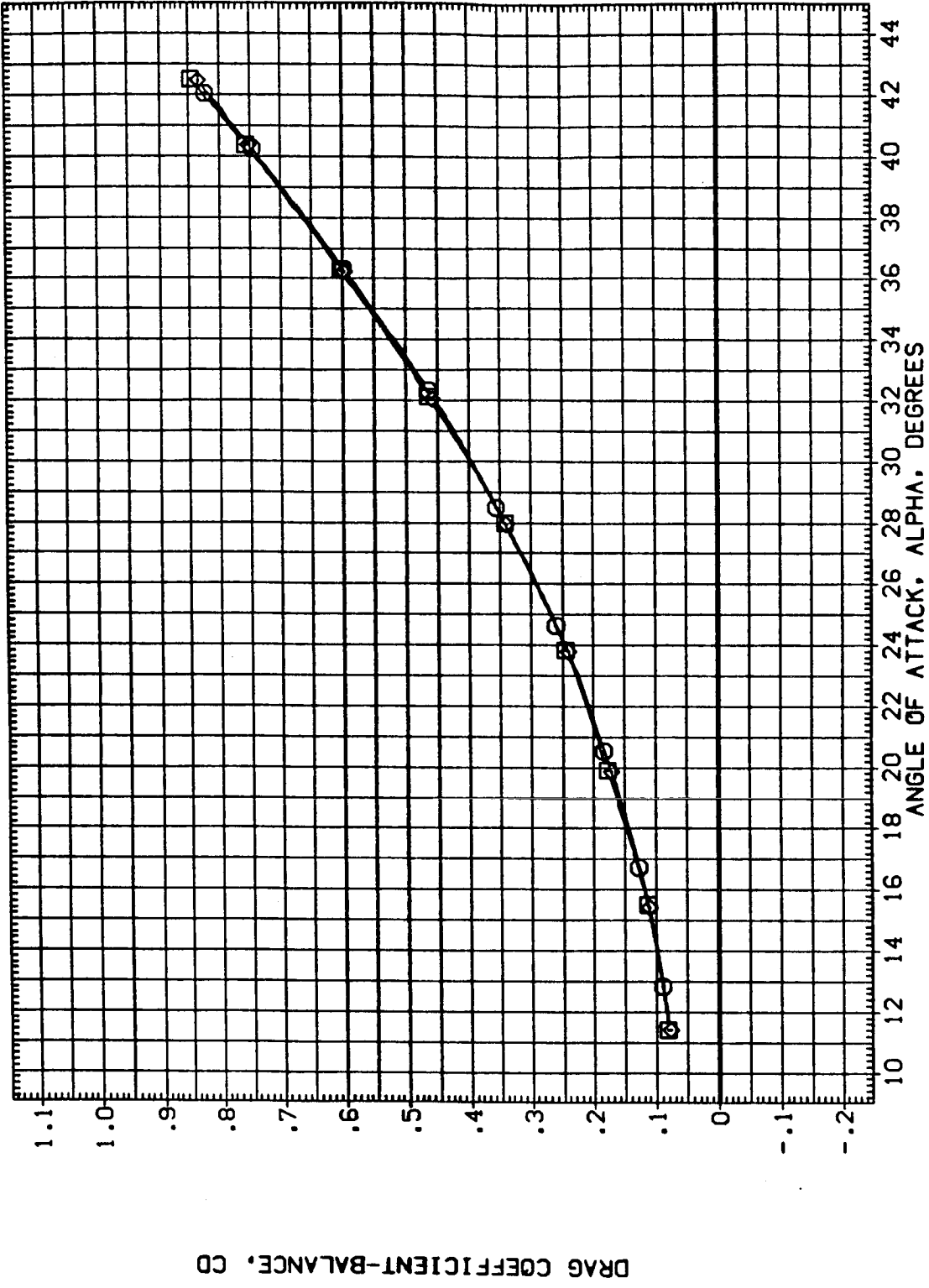


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(CE0008)	AMES 3.5-190 0A98 (011-M7+H14)	SREF 2690.0000	50.FT.
(CE0012)	AMES 3.5-190 0A98 (011-M7+H14-N24)	LREF 474.8000	IN.
(CE0024)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	BREF 936.6800	IN.
		XMRP 1076.7000	IN. X0
		YMRP .0000	IN. Y0
		ZMRP .0000	IN. Z0
		SCALE .0150	

BETA ELEVON BOFLAP SPOBRK

5.000	-40.000	-11.700	55.000
5.000	-40.000	-11.700	55.000
5.000	-40.000	-11.700	55.000

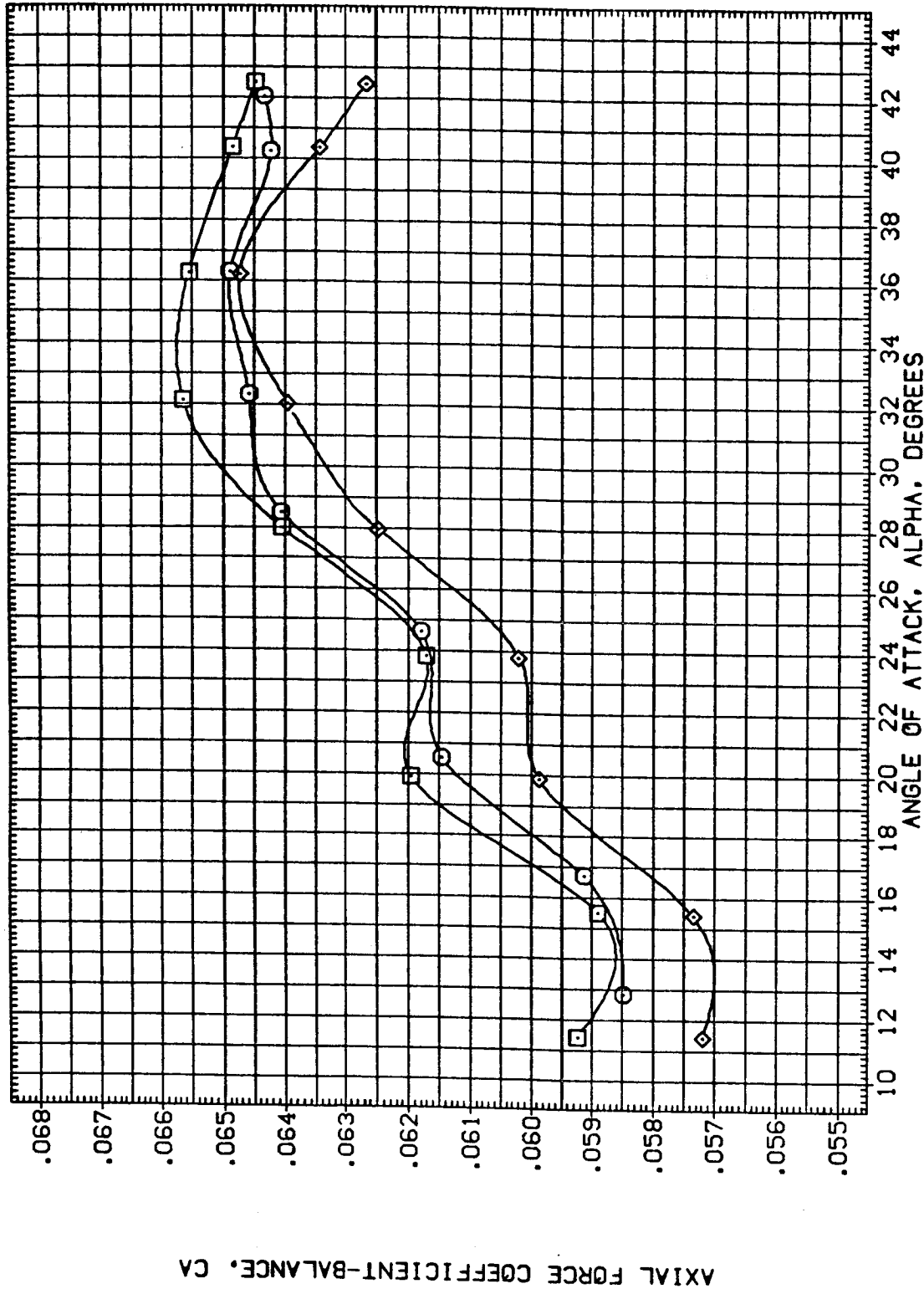


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE0008) AMES 3.5-150 0A98 (011-17+114)
 (CE0012) AMES 3.5-150 0A98 (011-17+114-124)
 (CE0024) AMES 3.5-150 0A98 (011-17+114-124+DUPPLY STING)

BETA ELEVON BDFLAP SPOBRK
 5.000 -40.000 -11.700 55.000
 5.000 -40.000 -11.700 55.000
 5.000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8000 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

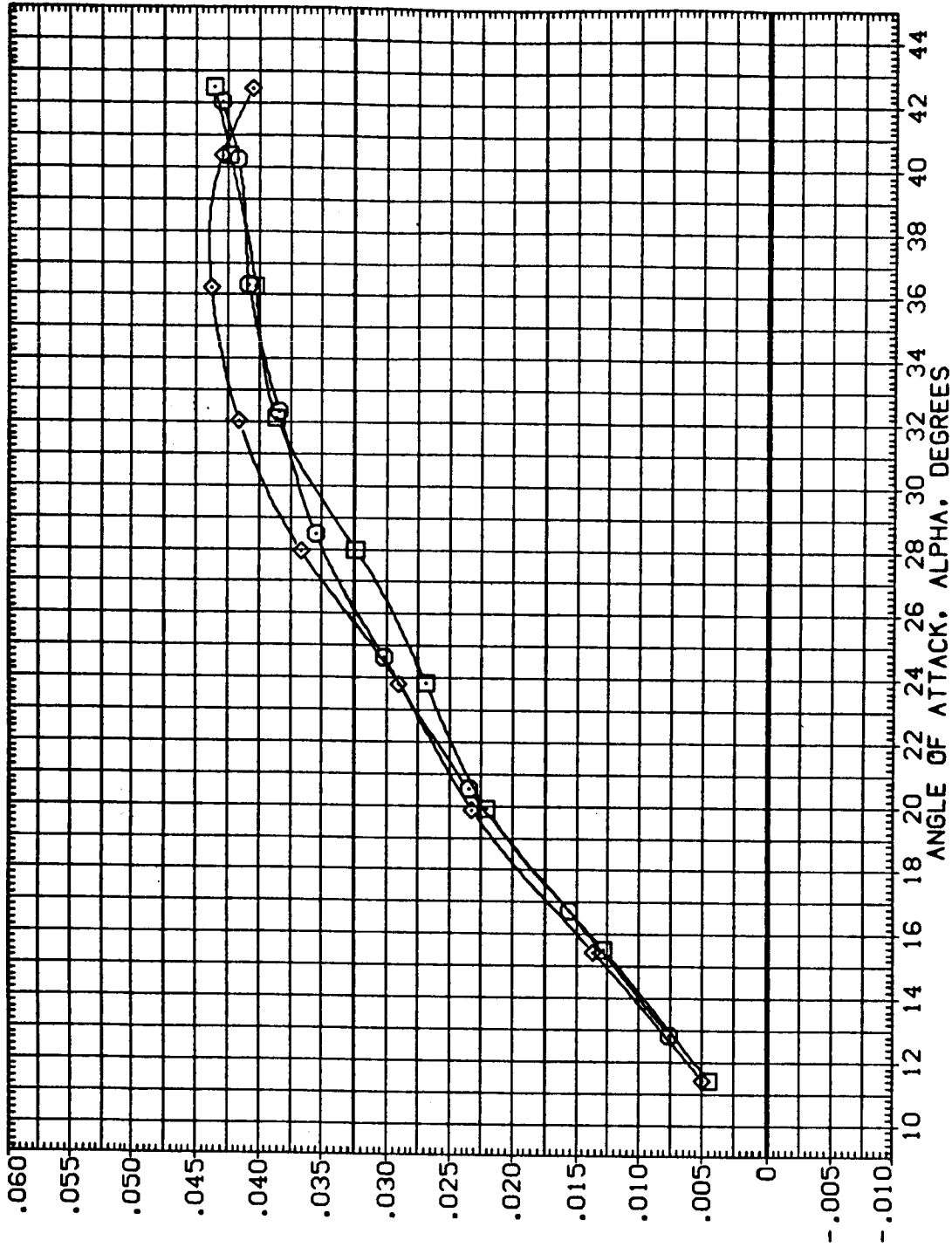


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(CE0008)	AMES 3.5-190 GA98 (011-M7+H14)	SREF 2690.0000	50.FT.
(CE0012)	AMES 3.5-190 GA98 (011-M7+H14-N24)	LREF 474.8000	IN.
(CE0024)	AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)	BREF 936.6800	IN.
		XMRP 1076.7000	IN. X0
		YMRP .0000	IN. Y0
		ZMRP 375.0000	IN. Z0
		SCALE	.0150

BETA ELEVON BOFLAP SPOBRK

5.000	-40.000	-11.700	55.000
5.000	-40.000	-11.700	55.000
5.000	-40.000	-11.700	55.000

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMFT

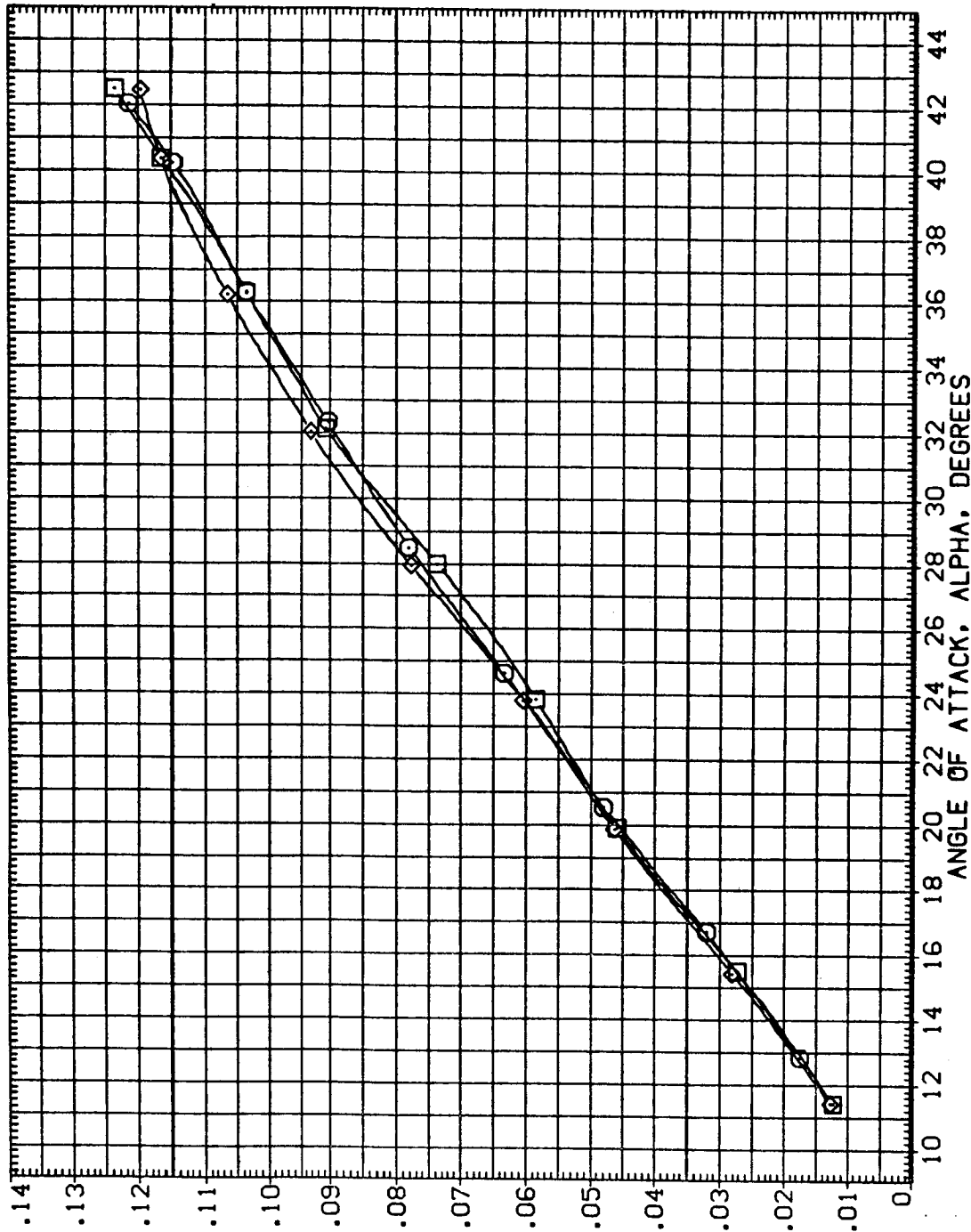


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0008) AVES 3.5-190 GAS8 (011-17-M14)

(CE0012) AVES 3.5-190 GAS8 (011-17-M14-N24)

(CE0024) AVES 3.5-190 GAS8 (011-17-M14-N24+DUMMY STING)

BETA ELEVON 8DFLAP SPOBRK

5.000 -40.000 -11.700 55.000

5.000 -40.000 -11.700 55.000

5.000 -40.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

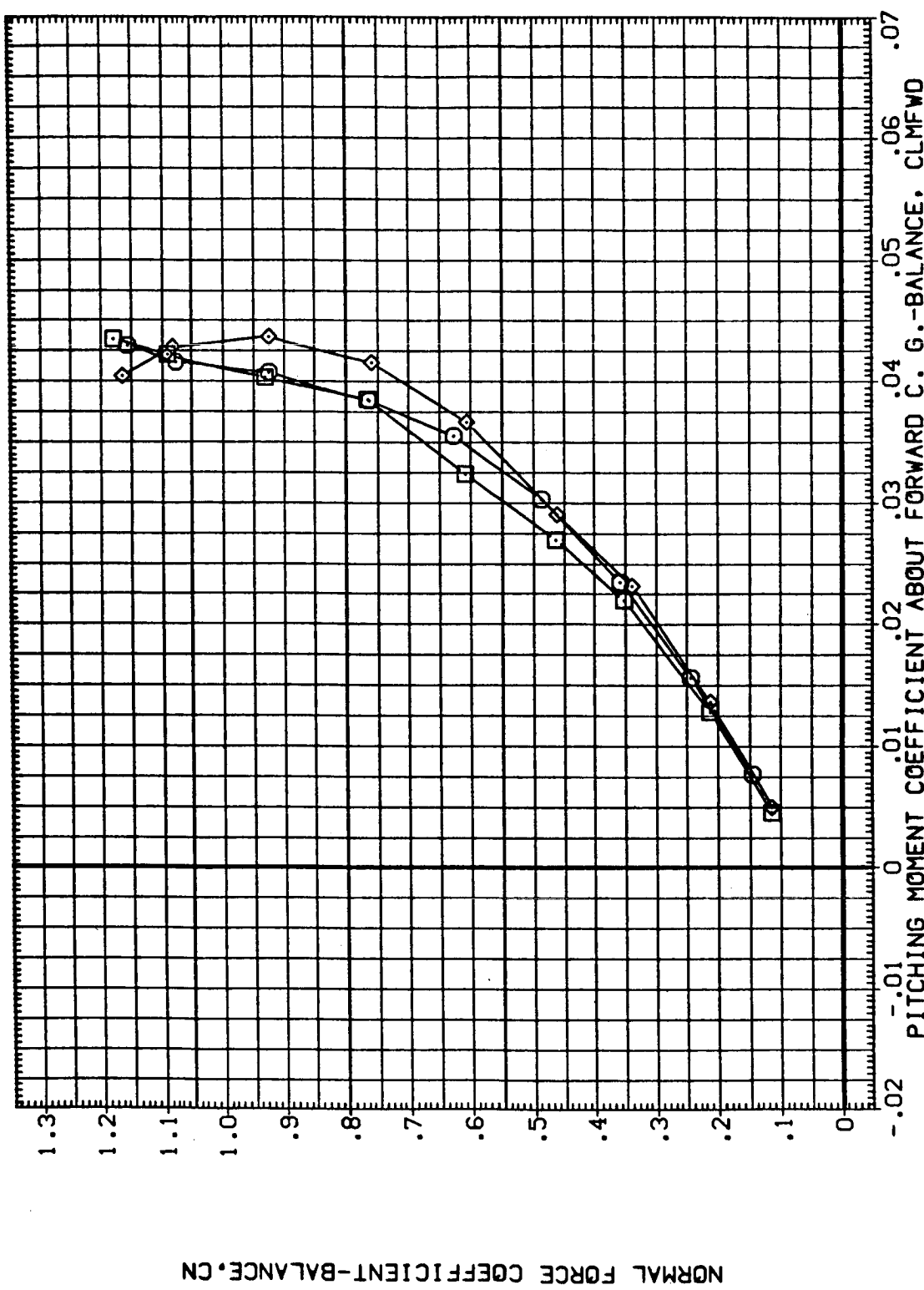
BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP .0000 IN.Z0

SCALE .0150

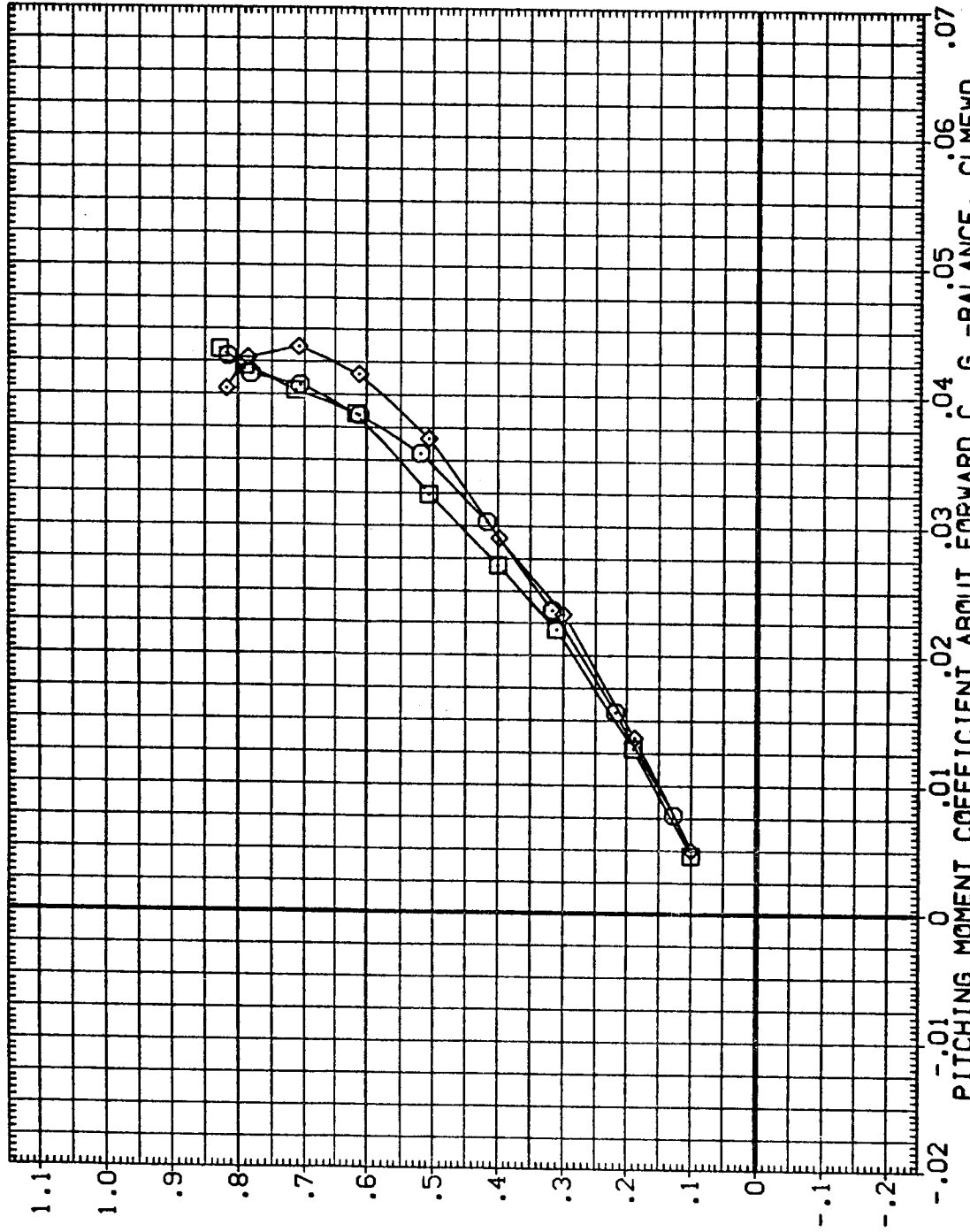


NORMAL FORCE COEFFICIENT-BALANCE, CN

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0008)	AMES 3.5-190 OA98 (011-M7+M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0012)	AMES 3.5-190 OA98 (011-M7+M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6900 IN.
						XTRP 1076.7000 IN.XB
						YTRP .0000 IN.YB
						ZTRP .0000 IN.ZB
						SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL (CE0008)
 (CE0012)
 (CE0024)

CONFIGURATION DESCRIPTION
 ANES 3.5-190 0A98 (011-M7+H14)
 ANES 3.5-190 0A98 (011-M7+H14-N24)
 ANES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA 5.000
 5.000
 5.000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8000 IN.
 BRFF 936.6800 IN.XB
 XMRP 1076.7000 IN.YB
 YMRP .0000 IN.ZB
 ZMRP 375.0000 IN.ZO
 SCALE .0150

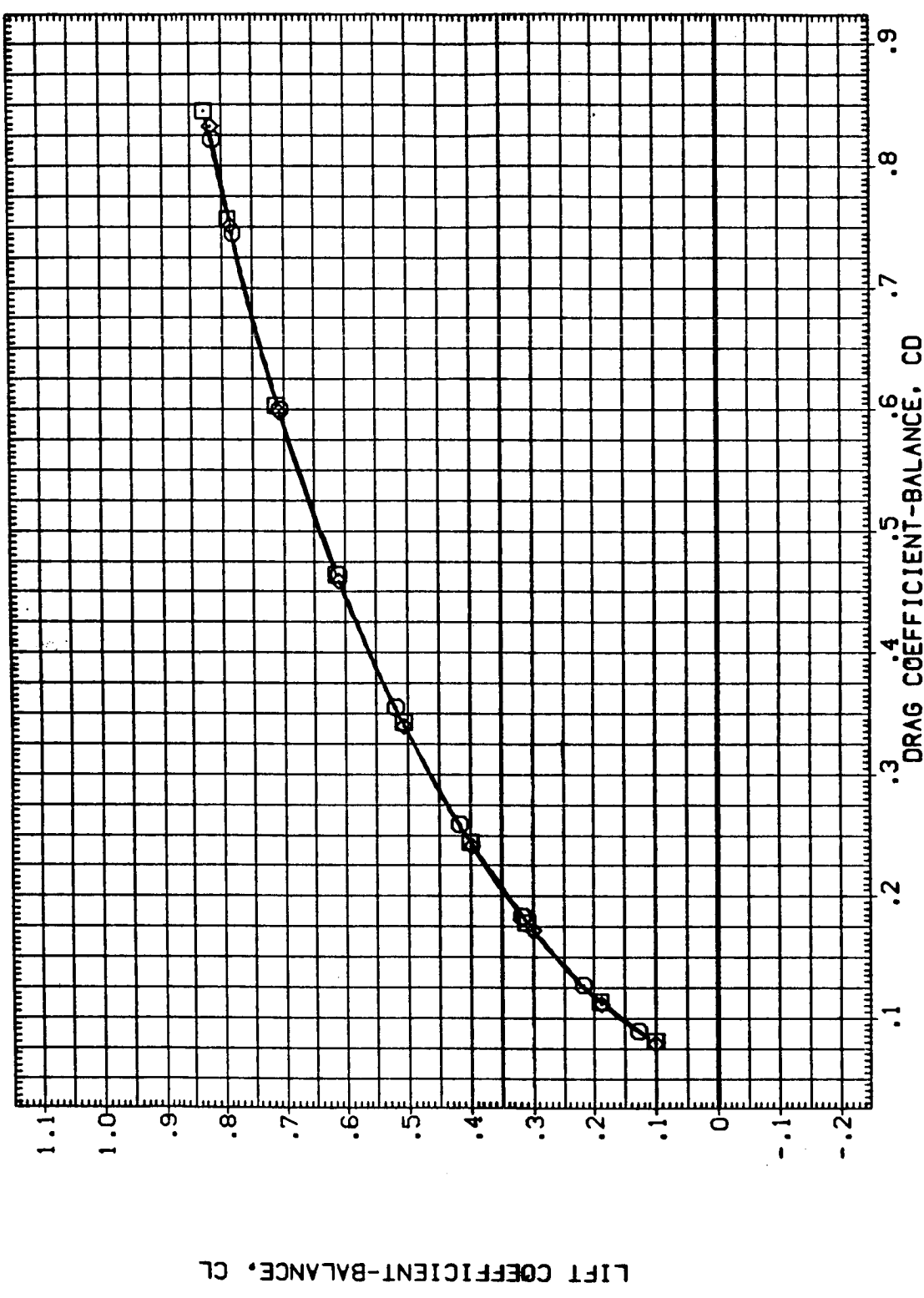
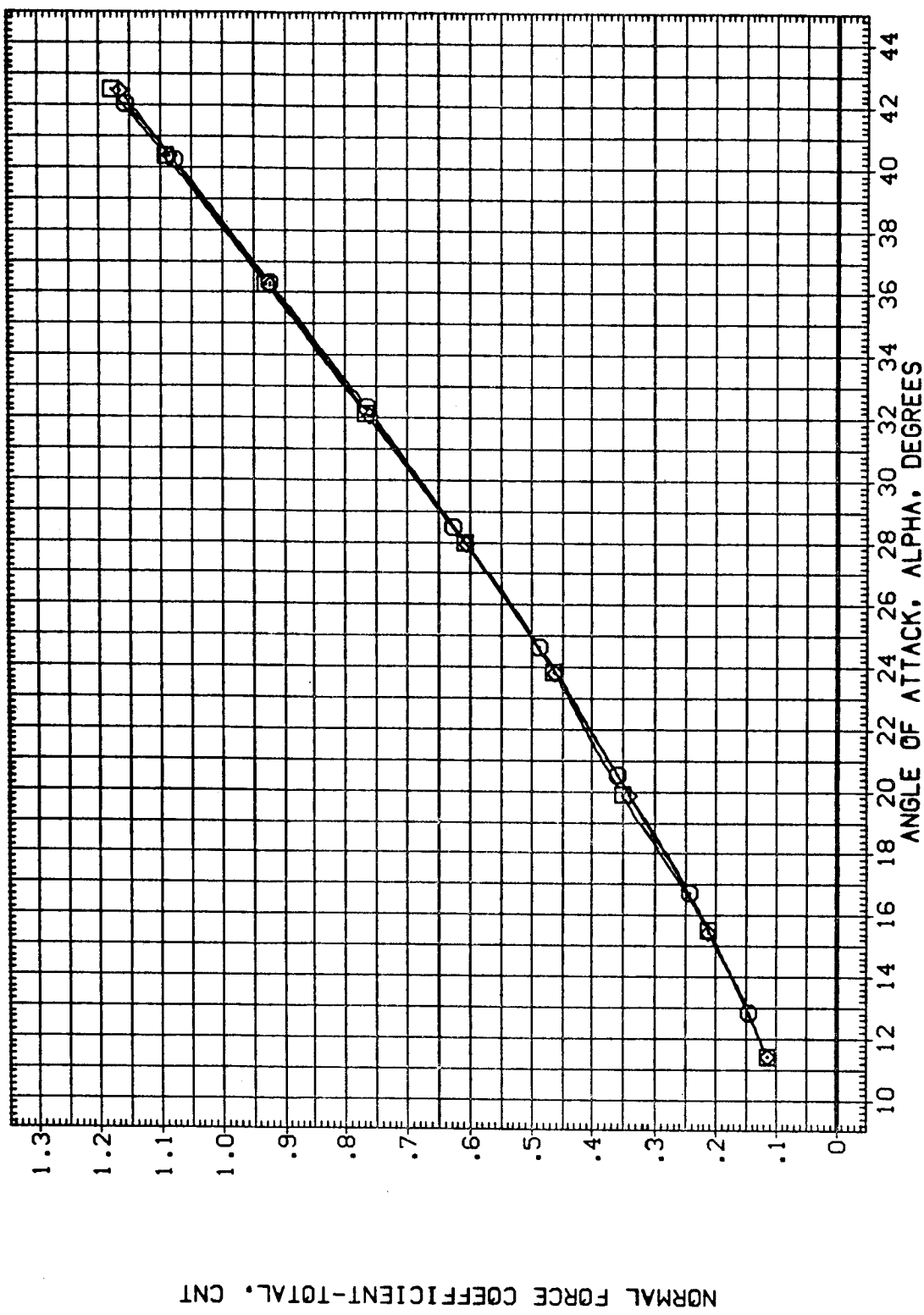


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0008)	AMES 3.5-190 0A98 (011-47+M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0012)	AMES 3.5-190 0A98 (011-47+M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AMES 3.5-190 0A98 (011-47+M14-N24+QJMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X8
						YMRP .0000 IN.Y8
						ZMRP 375.0000 IN.Z8
						SCALE .0150



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK REFERENCE INFORMATION

(EE0008) AVES 3.5-190 CA98 (011-M7-M14) 5.000 -40.000 -11.700 55.000 SREF 2690.0000 50.FT.

(EE0012) AVES 3.5-190 CA98 (011-M7-M14-N24) 5.000 -40.000 -11.700 55.000 LREF 474.8000 IN.

(EE0024) AVES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING) 5.000 -40.000 -11.700 55.000 BREF 936.6800 IN.

YMRP 1076.7000 IN. X0
ZMRP .0000 IN. Y0
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

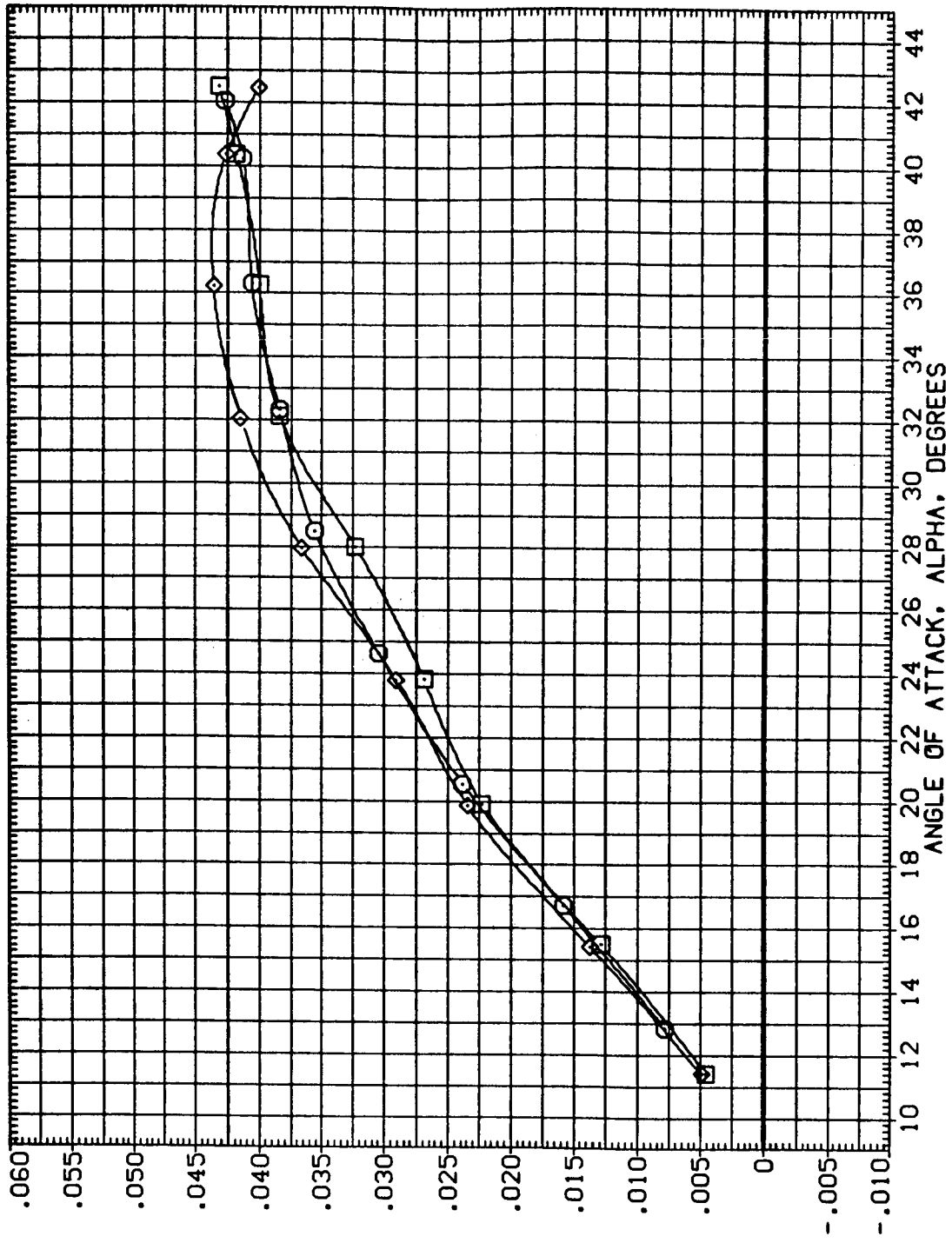


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (EE0008) AMES 3.5-190 GA98 (011-M7-M14)
 (EE0012) AMES 3.5-190 GA98 (011-M7-M14-N24)
 (EE0024) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA 5.000
 5.000
 5.000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPDBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

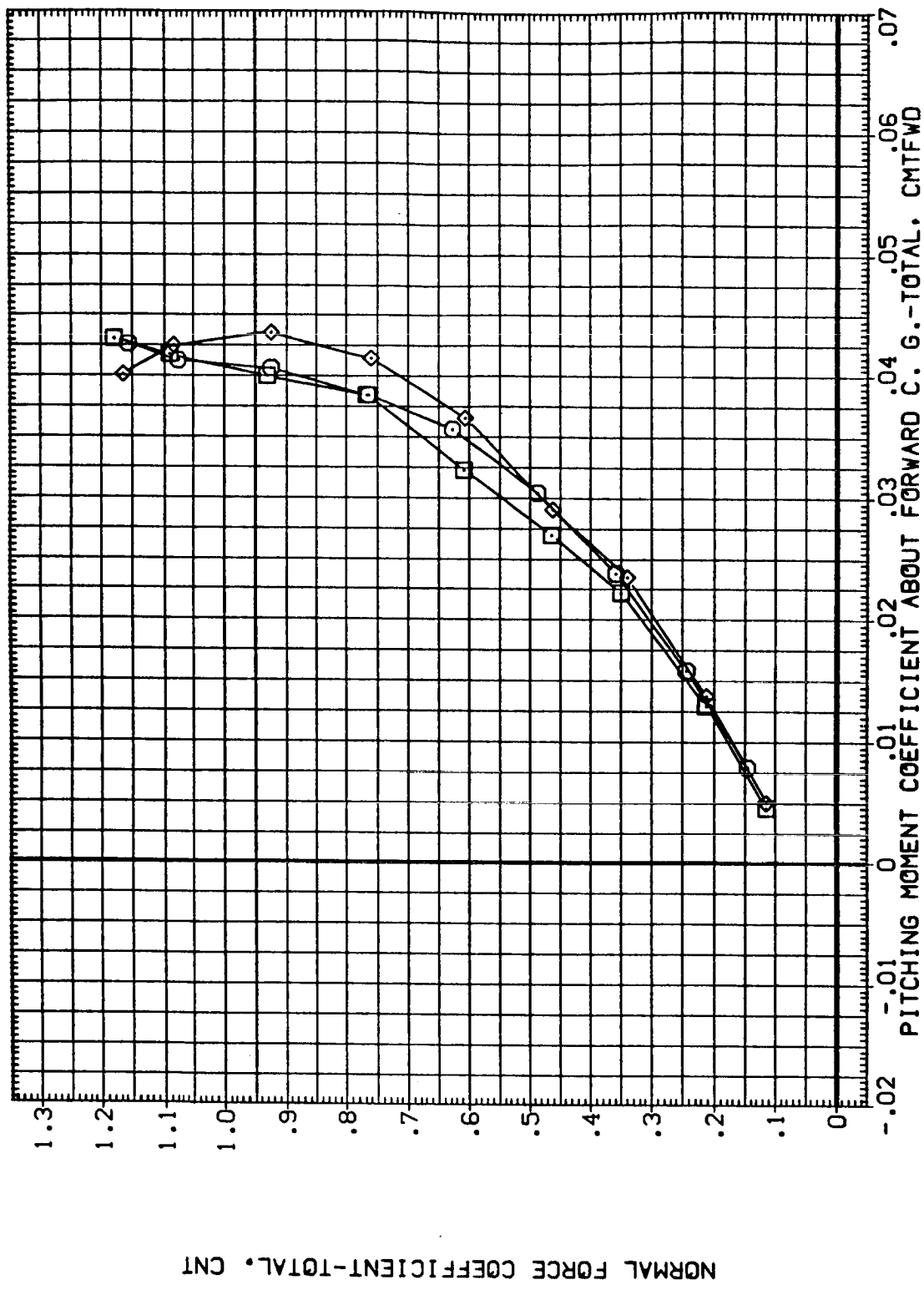


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

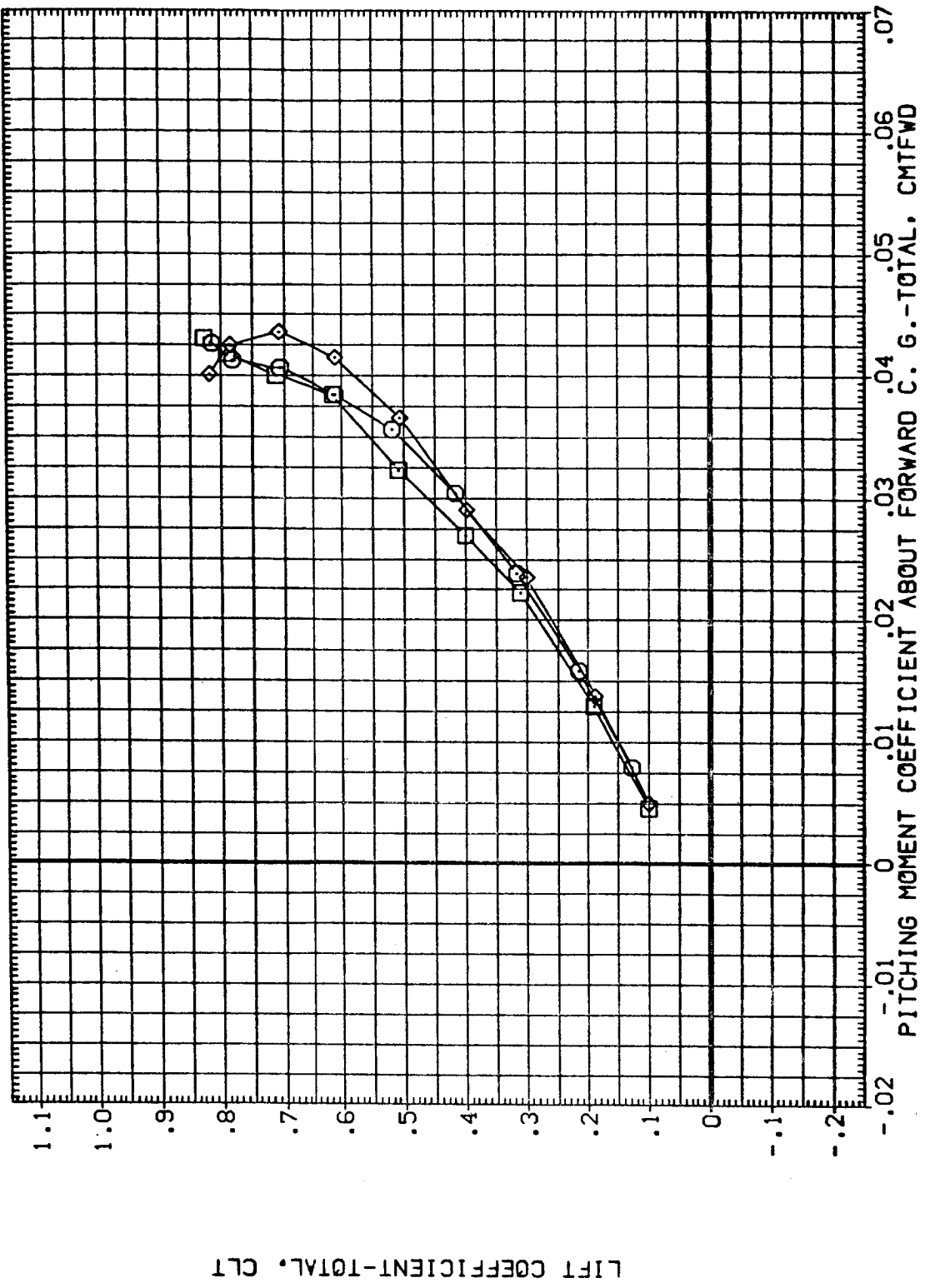
(EE0008) AMES 3.5-190 OA98 (011-M7+M14) SREF 2690.0000 50.FT.

(EE0012) AMES 3.5-190 OA98 (011-M7+M14-N24) LREF 474.8000 IN.

(EE0024) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) BREF 936.6800 IN.

BETA ELEVON BDFLAP SPOBRK YMRP ZMRP SCALE

5.000 -40.000 -11.700 55.000 375.0000 .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0008)
 (EE0012)
 (EE0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 D498 (011-17+H14)
 AMES 3.5-190 D498 (011-17+H14-N24)
 AMES 3.5-190 D498 (011-17+H14-N24+DUMMY STING)

BETA 5.000
 5.000
 5.000

ELEVON -40.000
 -40.000
 -40.000

BDFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 536.6800 IN.
 XPRP 1076.7000 IN.XD
 YPRP .0000 IN.YD
 ZPRP 375.0000 IN.ZD
 SCALE .0150

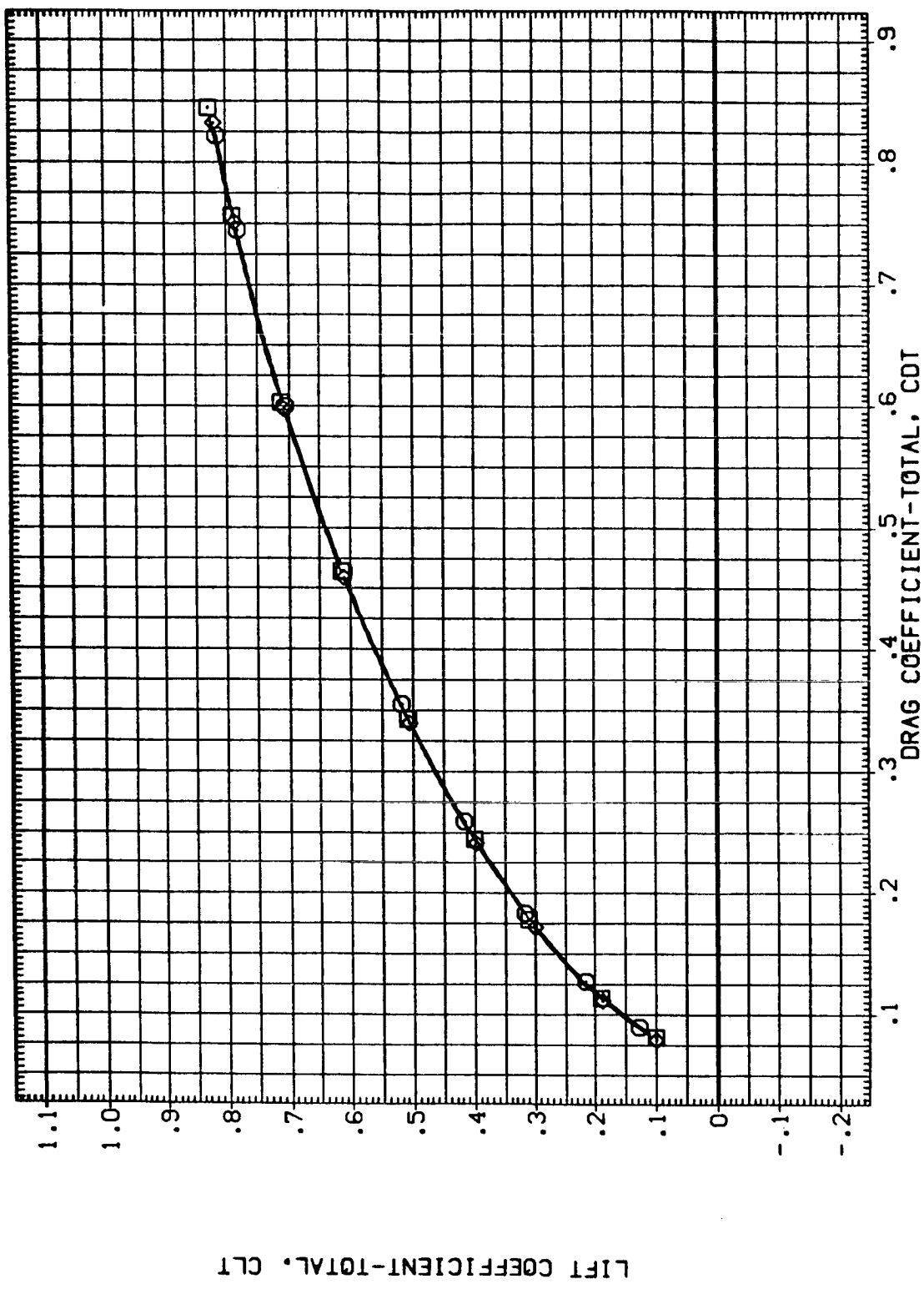
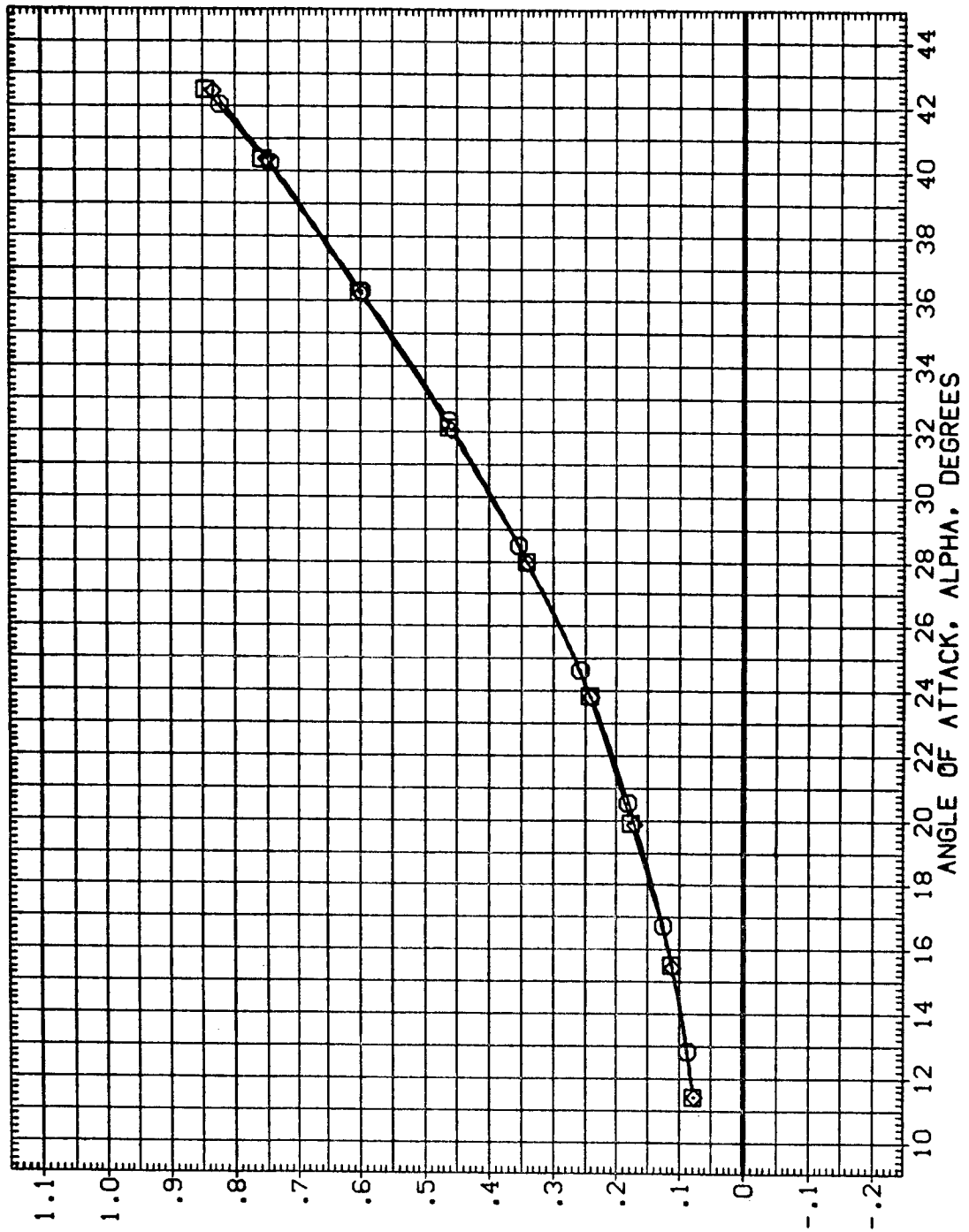


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EEO008)	AMES 3.5-190 OA98 (011-M7-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EEO012)	AMES 3.5-190 OA98 (011-M7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EEO024)	AMES 3.5-190 OA98 (011-M7-M14-N24+OLJMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



FOREBODY DRAG COEFFICIENT, CDF

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL
 (EE0008)
 (EE0012)
 (EE0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 CA98 (011-17-M14)
 AMES 3.5-190 CA98 (011-17-M14-N24)
 AMES 3.5-190 CA98 (011-17-M14-N24+JUNNY STING)

BETA
 5.000
 5.000
 5.000

ELEVON
 -40.000
 -40.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SQ.FT.
 SREF 2690.0000
 LREF 474.8000
 BRREF 536.6800
 XPRP 1076.7000
 YPRP .0000
 ZPRP 375.0000
 SCALE .0150

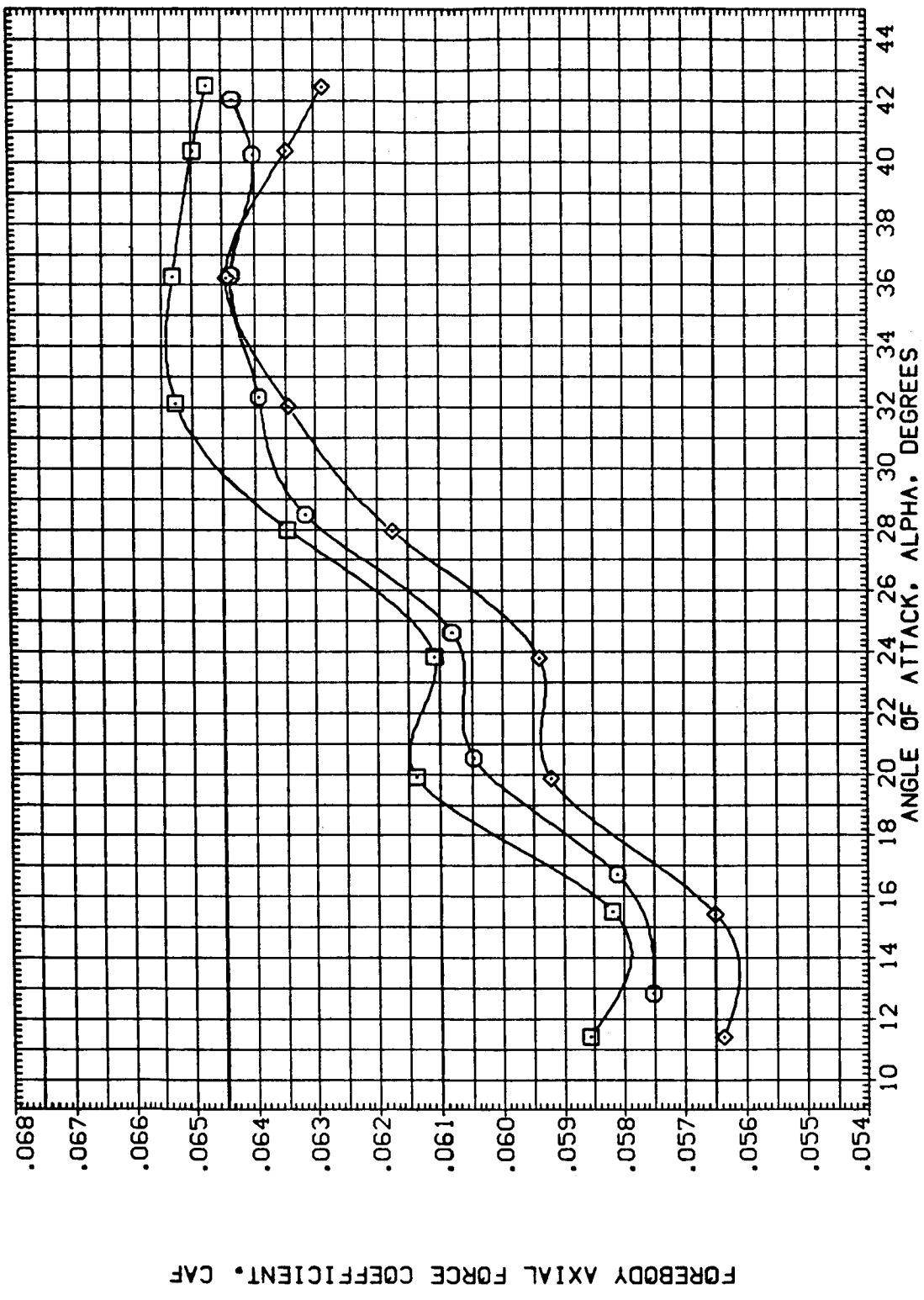


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL
 (EE0008)
 (EE0012)
 (EE0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA
 5.000
 5.000
 5.000

ELEVON
 -40.000
 -40.000
 -40.000

BOFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

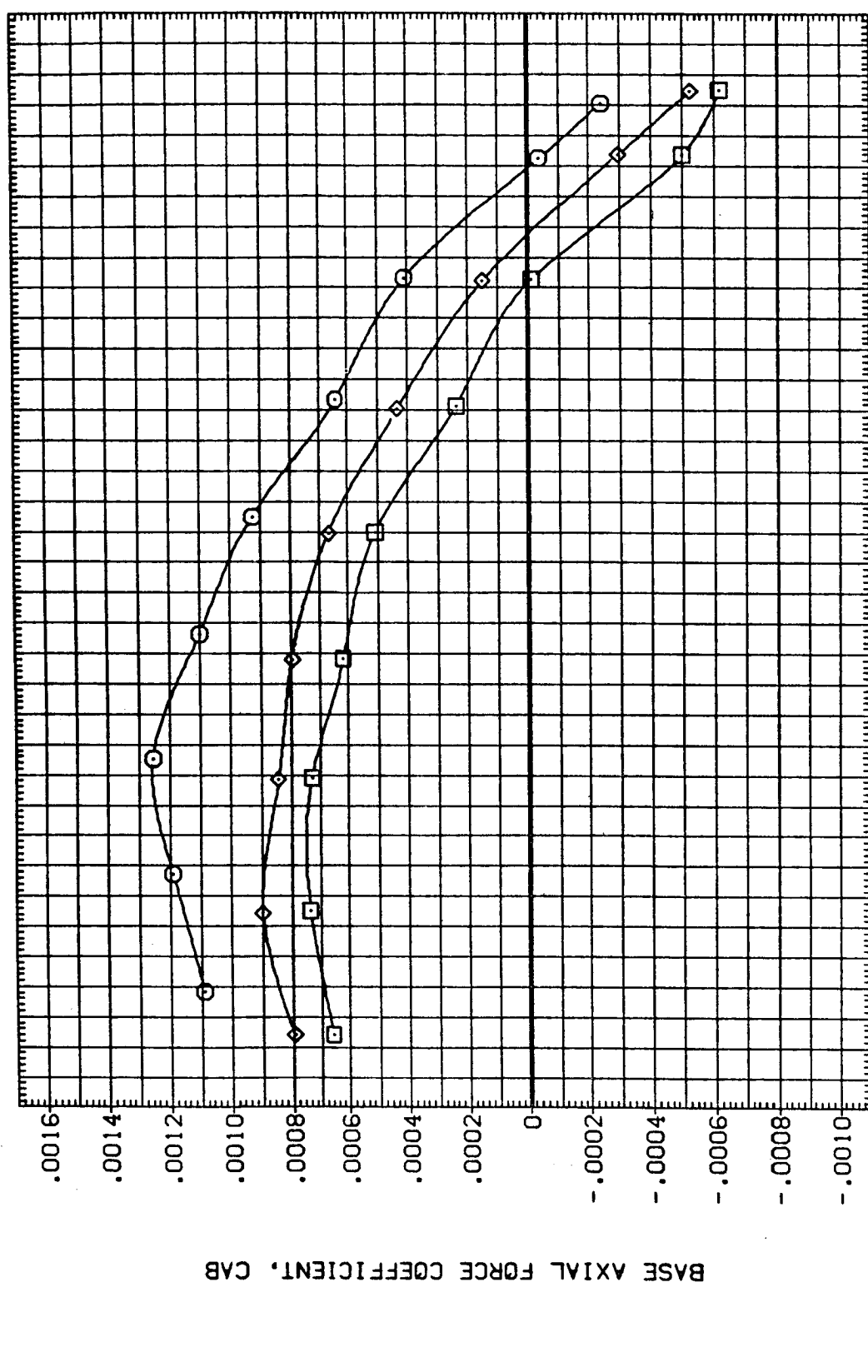


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJMACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0008) AMES 3.5-190 0A98 (011-47-HI-4)

(BE0012) AMES 3.5-190 0A98 (011-47-HI-4-N24)

(BE0024) AMES 3.5-190 0A98 (011-47-HI-4-N24-DUMMY STING)

BETA 5.000
 5.000
 5.000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

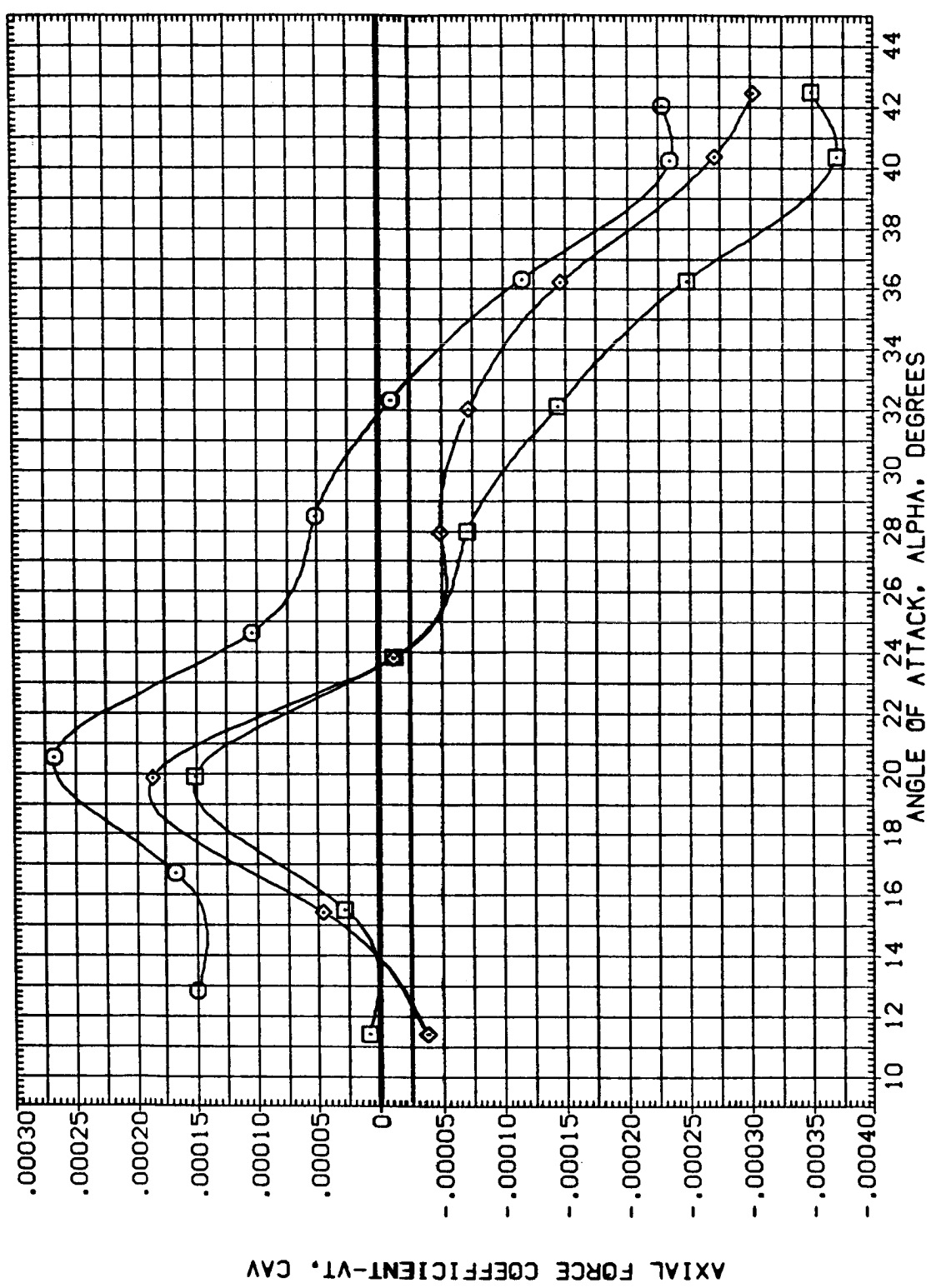


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0008) (BE0012) (BE0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA 5.000
 5.000
 5.000

ELEVON -40.000
 -40.000
 -40.000

BOFLAP -11.700
 -11.700
 -11.700

SPOBRK 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6000 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

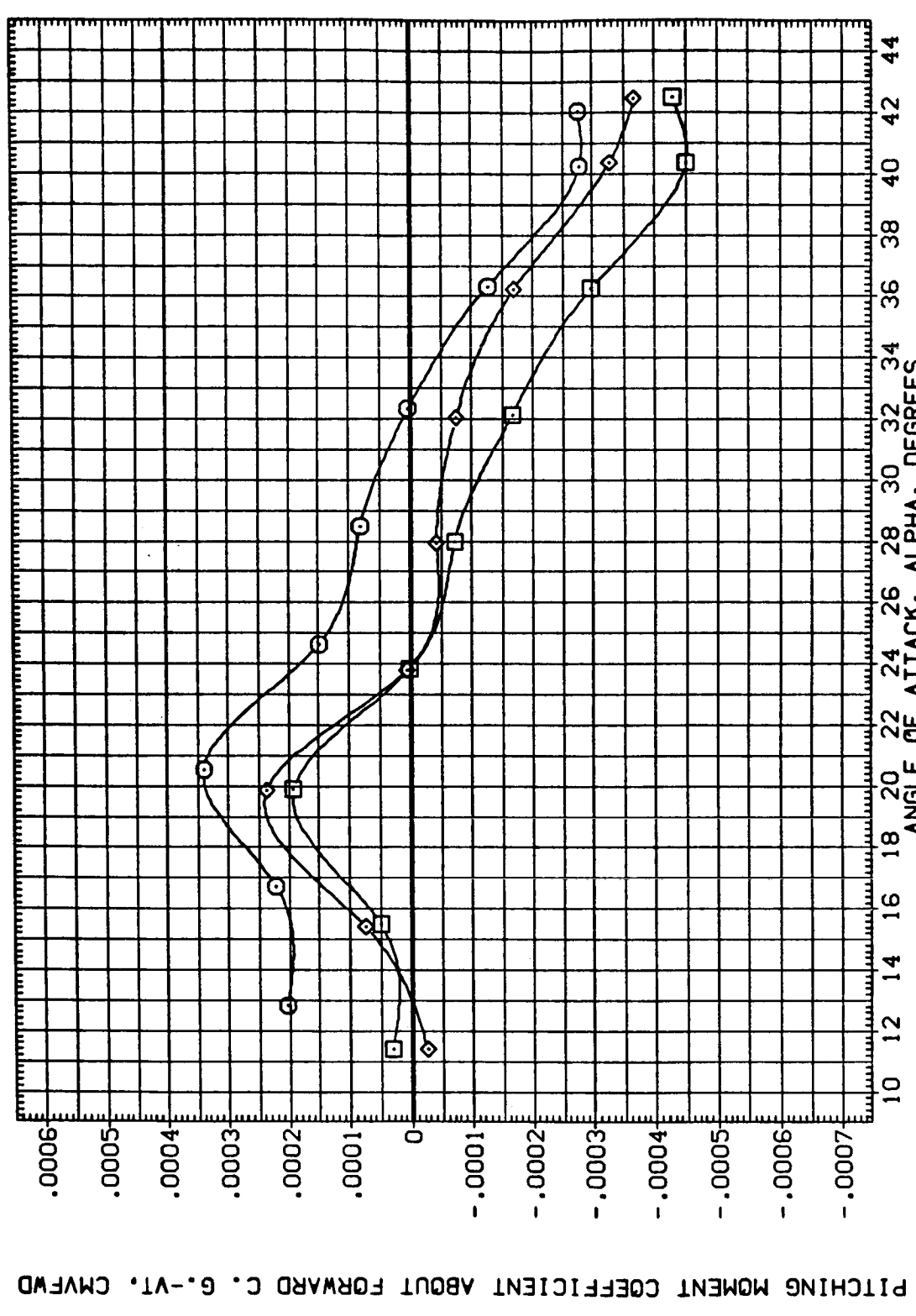


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL
 (BE008)
 (BE012)
 (BE024)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 OA98 (011-17+11.4)
 AVES 3.5-190 OA98 (011-17+11.4-N24)
 AVES 3.5-190 OA98 (011-17+11.4-N24+DUMMY STING)

BETA
 5.000
 5.000
 5.000

ELEVON
 -40.000
 -40.000
 -40.000

BDFLAP
 -11.700
 -11.700
 -11.700

SPOBRK
 55.000
 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

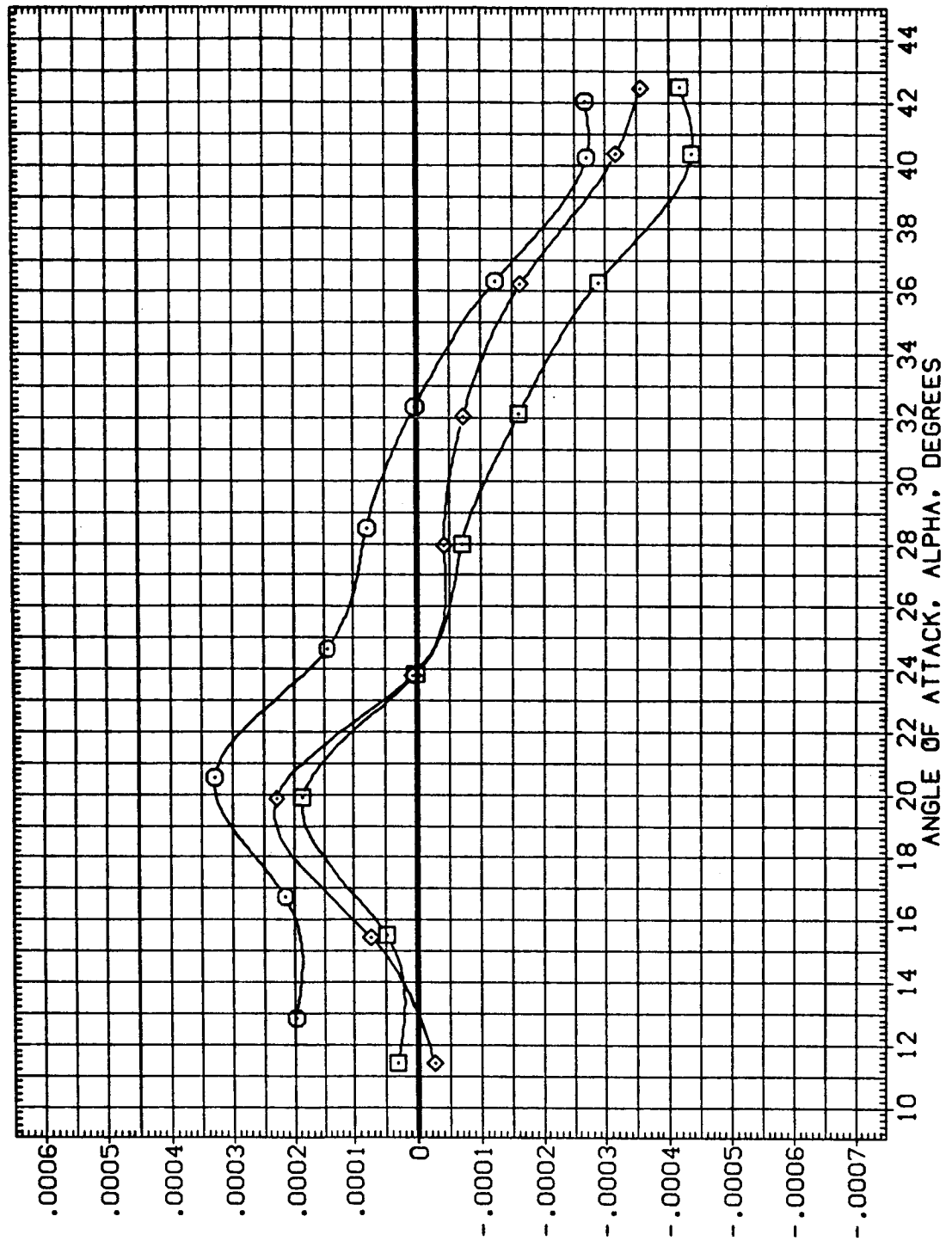


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (YEO012) (YEO024)

CONFIGURATION DESCRIPTION
 AMES 3.5-150 0A98 (011-17+114-N24)
 AMES 3.5-150 0A98 (011-17+114-N24+DUMMY STING)

BETA 5.000
 ELEVON -40.000
 BOFLAP -11.700

SPORBK 55.000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

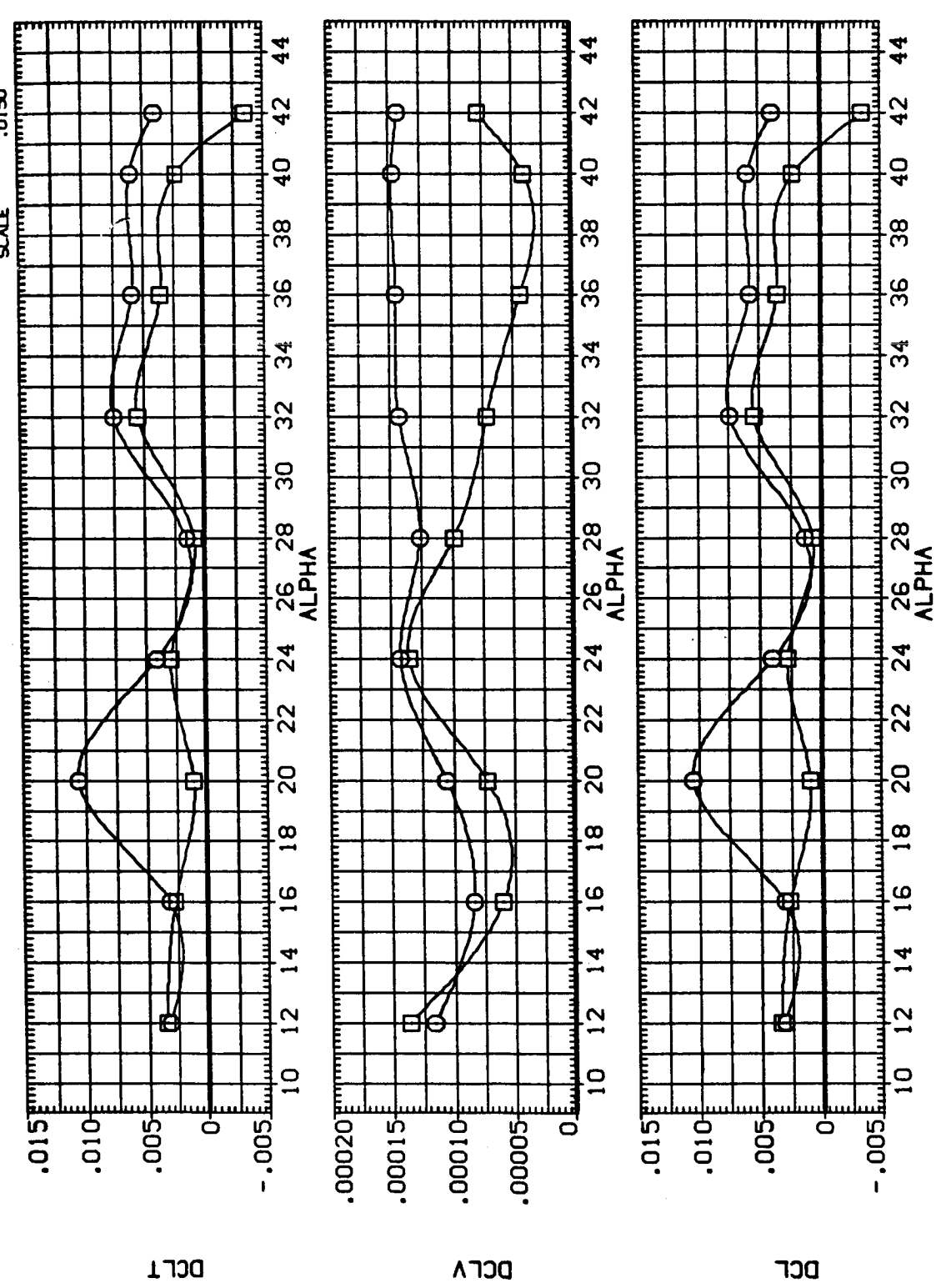


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.30

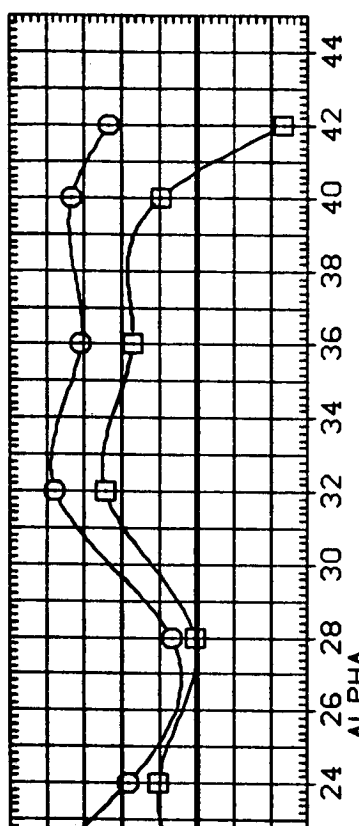


DATA SET SYMBOL (ZE0012) (ZE0024)

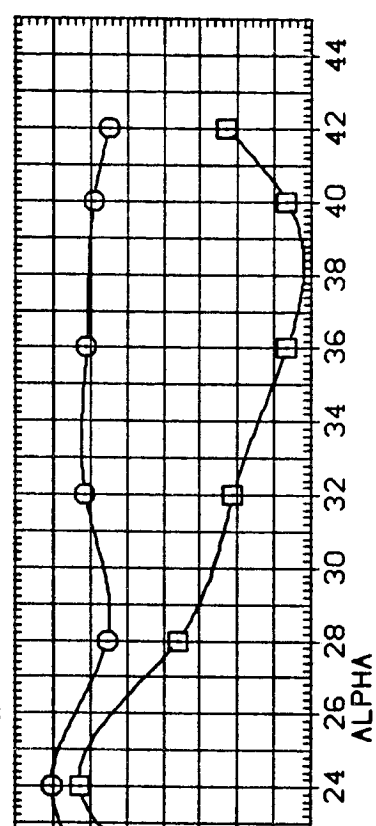
CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-H14-N24)
 AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

BETA 5.000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000
 SREF 2690.0000
 LREF 474.8000
 BREF 936.6800
 XMRP 1076.7000
 YMRP .0000
 ZMRP 375.0000
 SCALE .0150

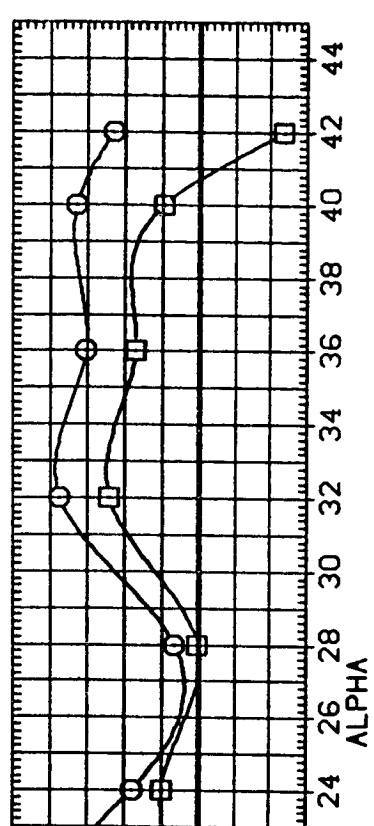
REFERENCE INFORMATION
 SQ.FT. 2690.0000
 IN. 474.8000
 IN. 936.6800
 IN. 1076.7000
 IN. 375.0000
 IN. 20 375.0000



DCNT



DCNV



DCN

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL (ZEG012) (ZEG024) □

CONFIGURATION DESCRIPTION
 AMES 3.5-150 GA98 (011-17-114-N24)
 AMES 3.5-150 GA98 (011-17-114-N24+DUMMY STING)

BETA 5.000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

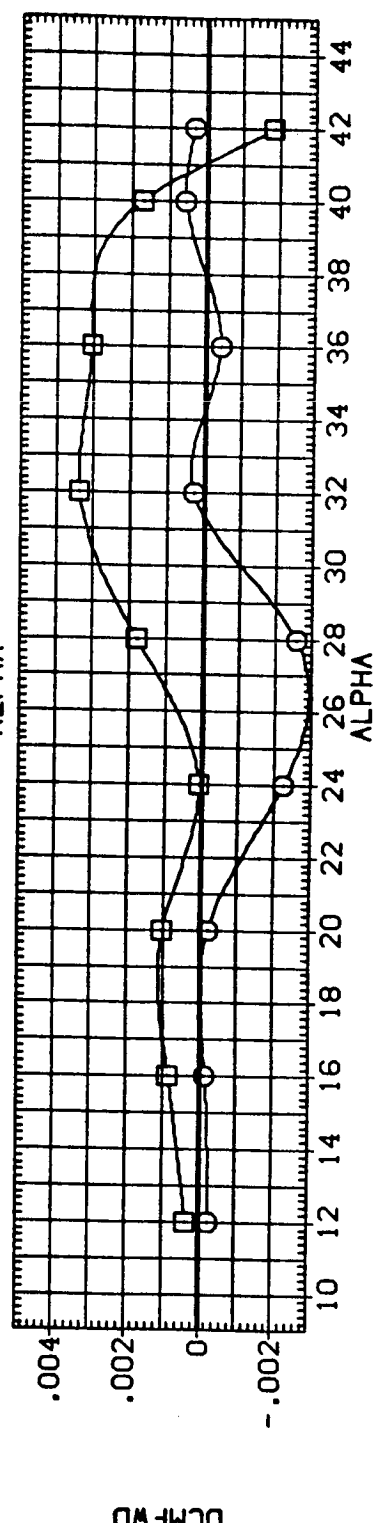
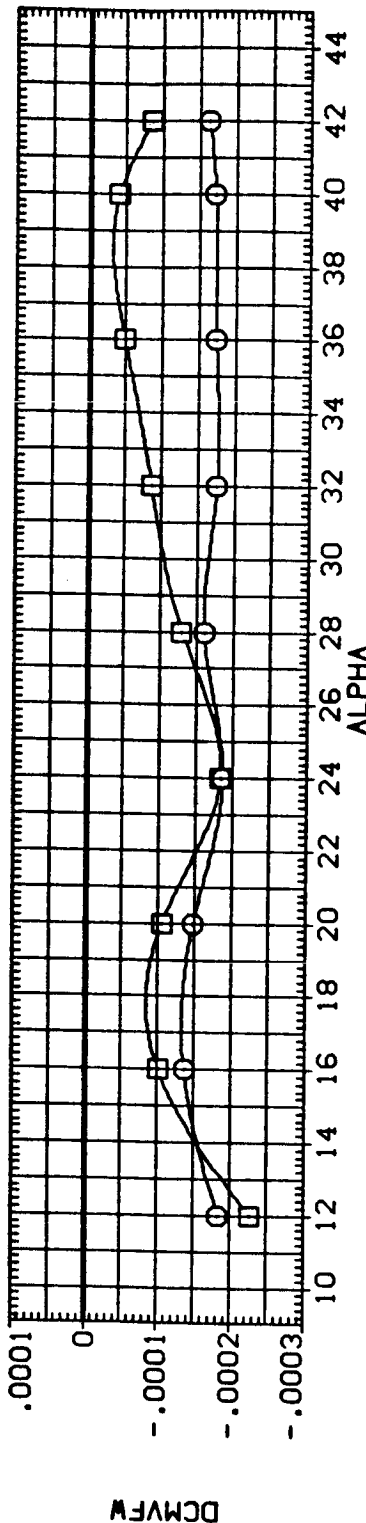
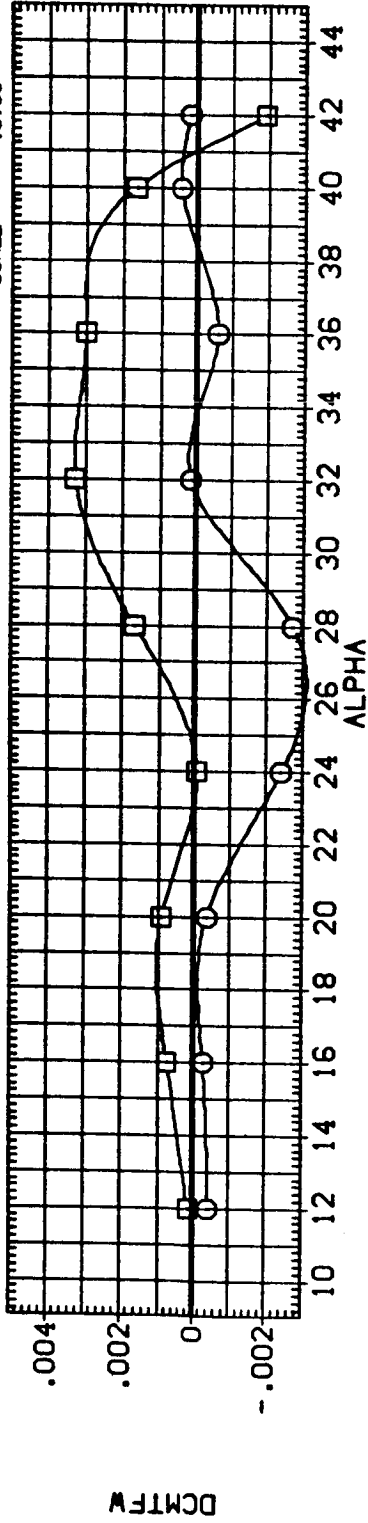


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30



DATA SET SYMBOL (ZE0012) (ZE0024) \square

CONFIGURATION DESCRIPTION
AMES 3.5-190 GA98 (011-M7-H14-N24)
AMES 3.5-190 GA98 (011-M7-H14-N24+DUMMY STING)

BETA 5.000
ELEVON -40.000
BOFLAP -11.700
SPOBRK 55.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.X3
YMRP 0.0000 IN.Y3
ZMRP 375.0000 IN.Z3
SCALE .0150

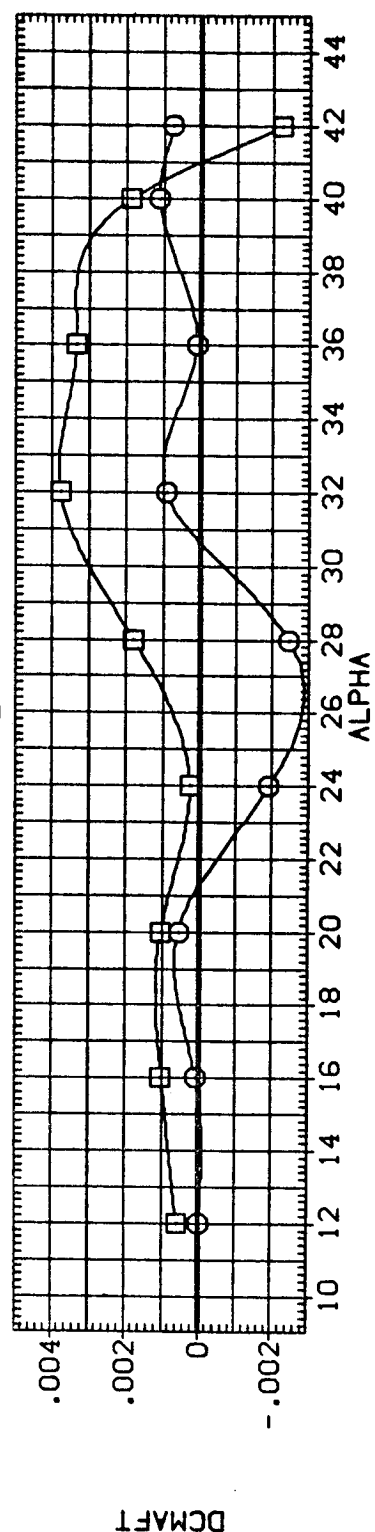
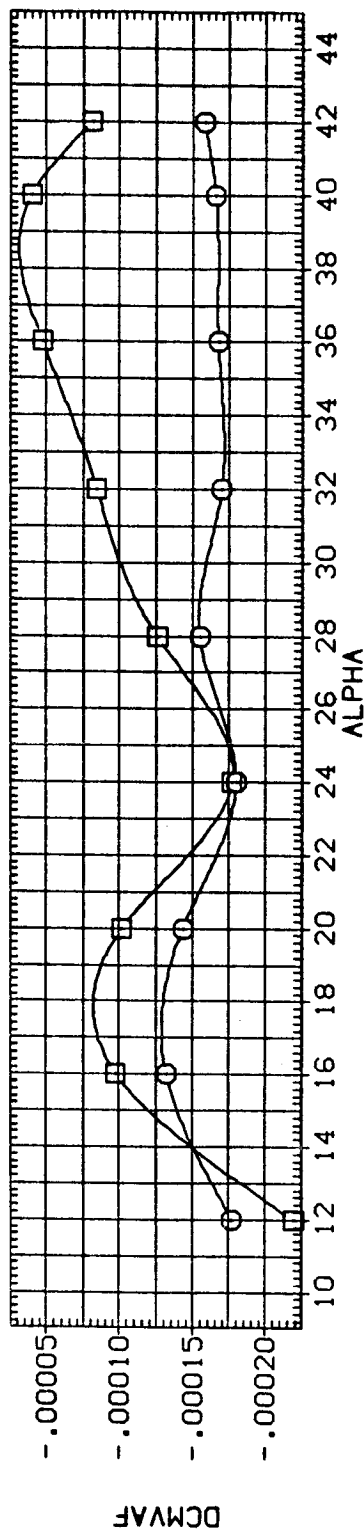
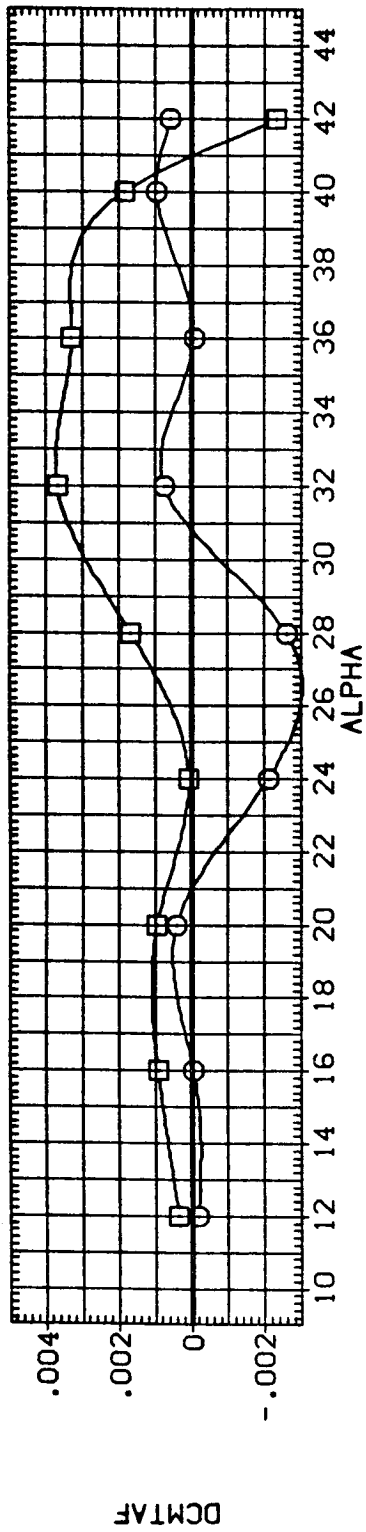


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL (1E0012) (1E0024) □

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GAS8 (011-47-H14-N24)
 AMES 3.5-190 GAS8 (011-47-H14-N24-DUMMY STING)

BETA 5.000 5.000

ELEVON -40.000 -40.000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 536.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

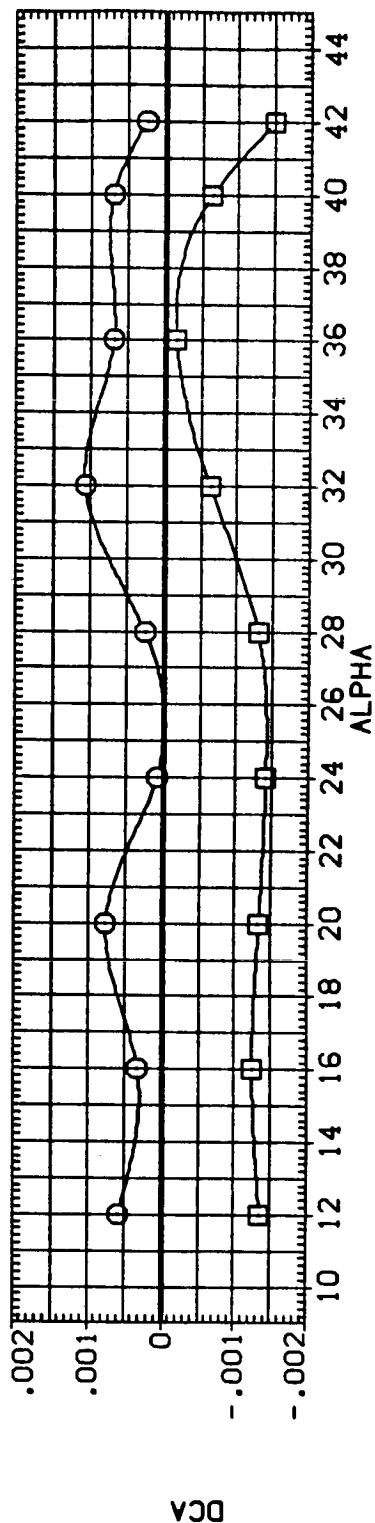
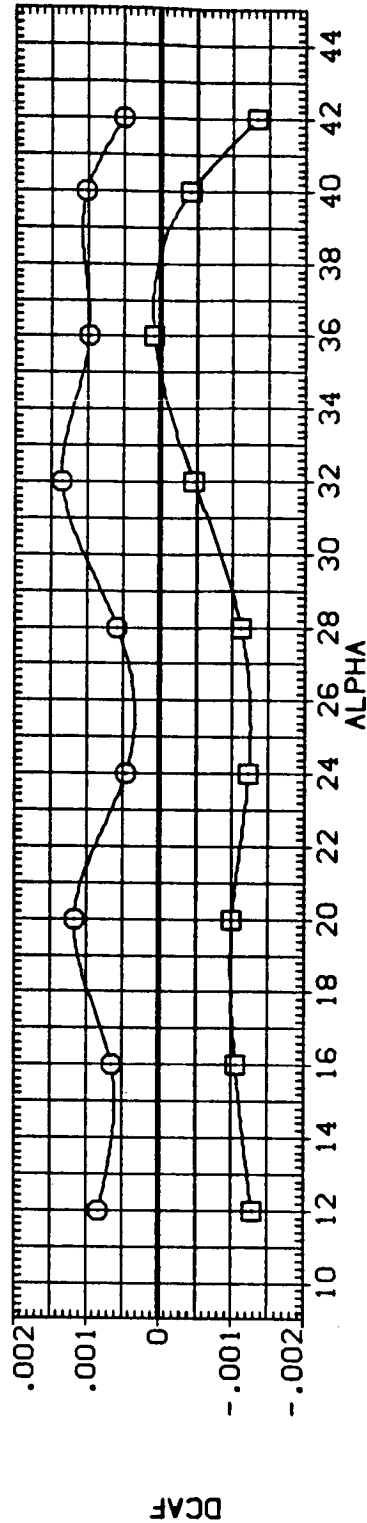
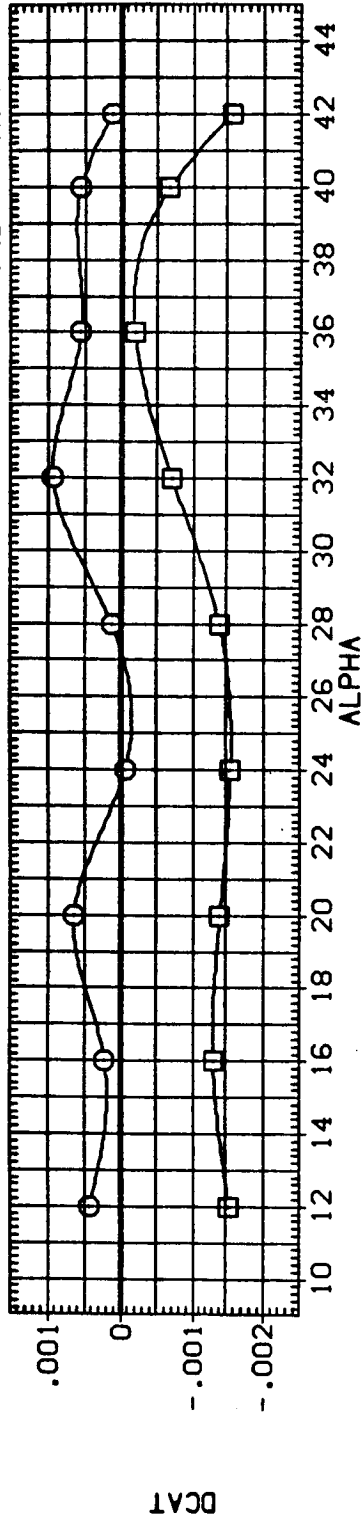


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 10.30

DATA SET SYMBOL (1E0012) (1E0024)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-M7+M14-N24)
 AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA 5.000 5.000

ELEVON -40.000 -40.000

80FLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6900 IN.
 XMRP 1076.7000 IN.XB
 YMRP .0000 IN.YB
 ZMRP 375.0000 IN.ZB
 SCALE .0150

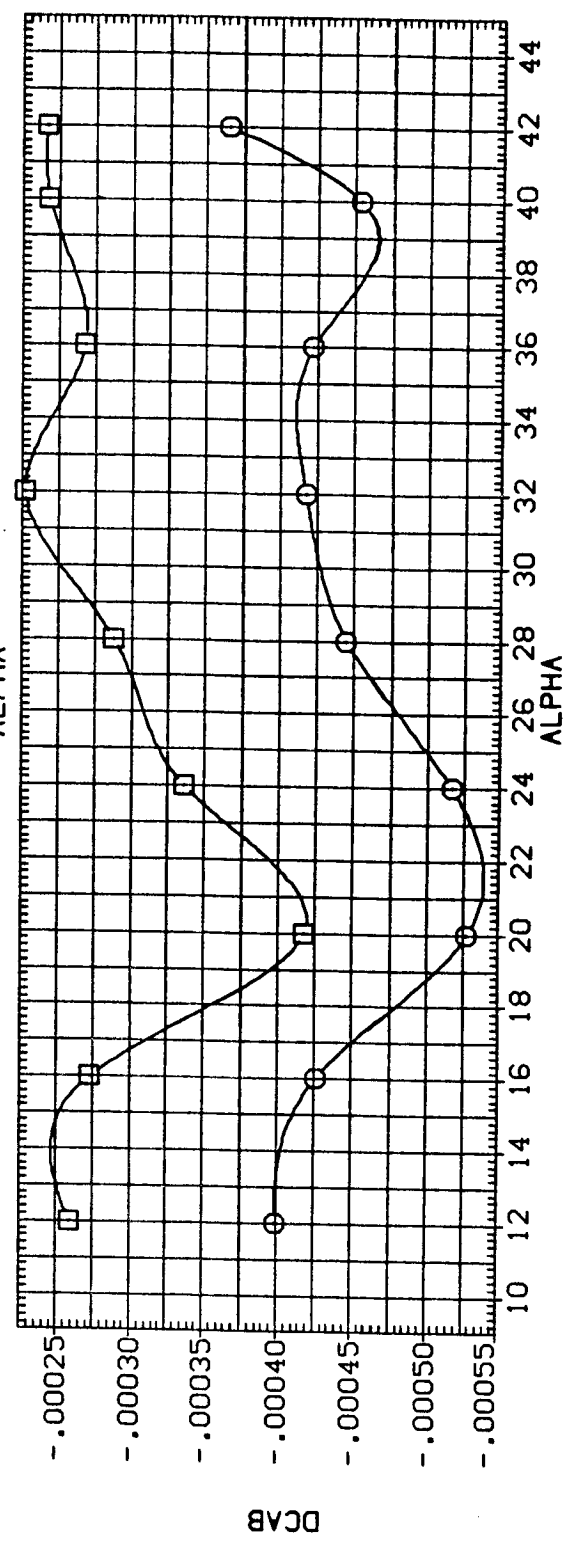
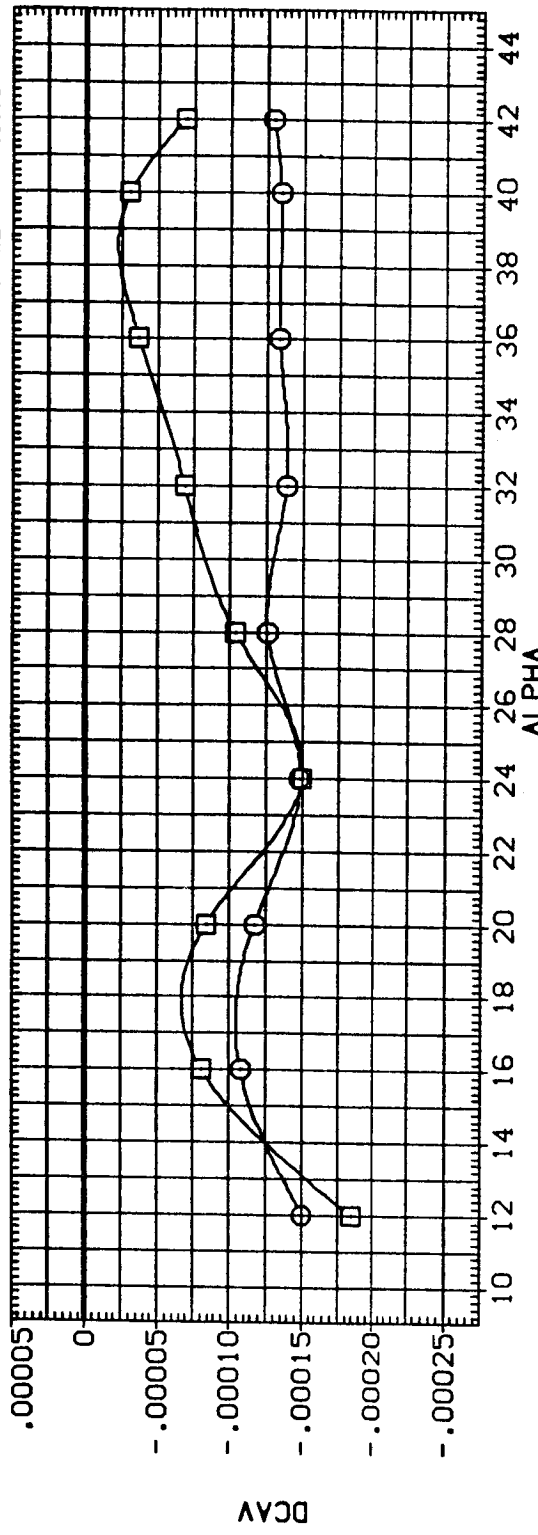


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (YEG012) AMES 3.5-190 0A98 (011-M7+H14-N24)
 (YEG024) AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK
 5.000 -40.000 -11.700 55.000
 5.000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 XREF 936.6800 IN.
 YREF 1076.7000 IN.
 ZREF 375.0000 IN.
 SCALE .0150

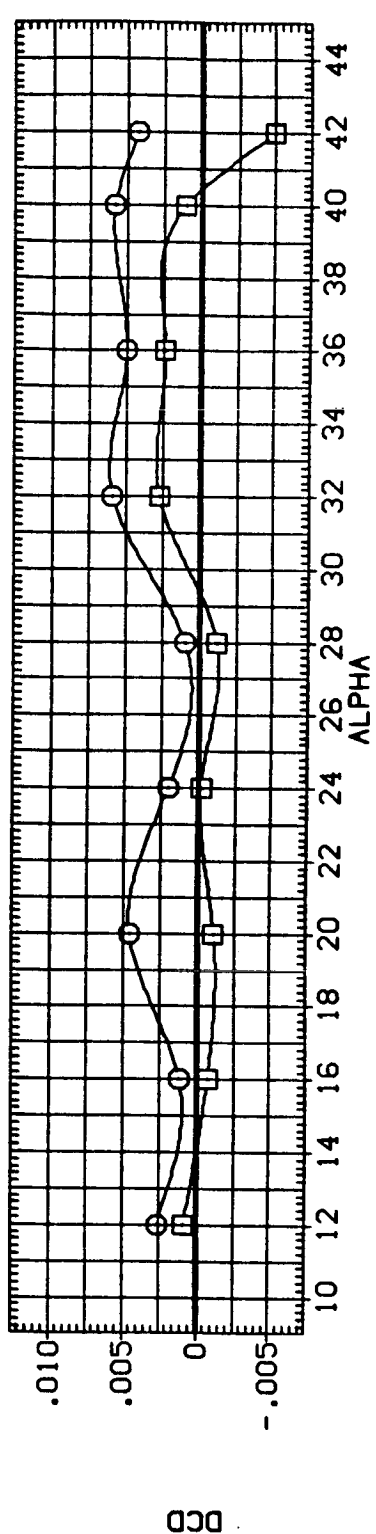
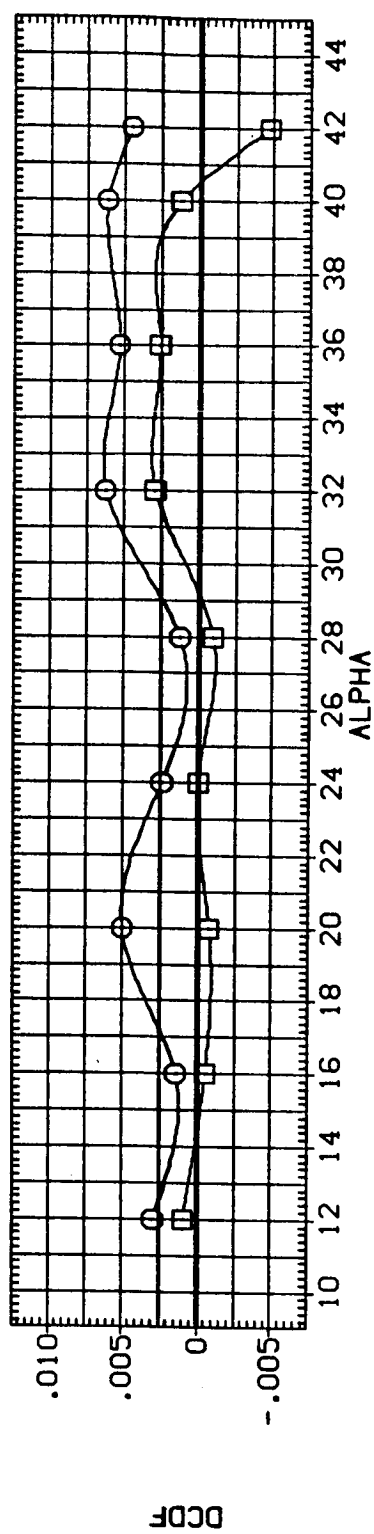
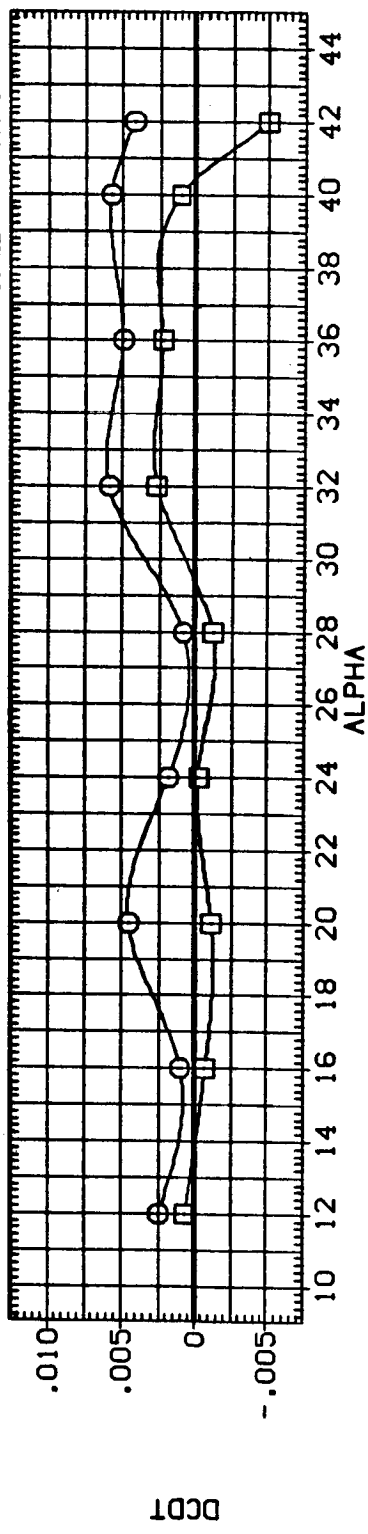



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL (YEO012) (YEO024)  CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-17+M14-N24) AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA 5.000 5.000 ELEVON -40.000 -40.000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

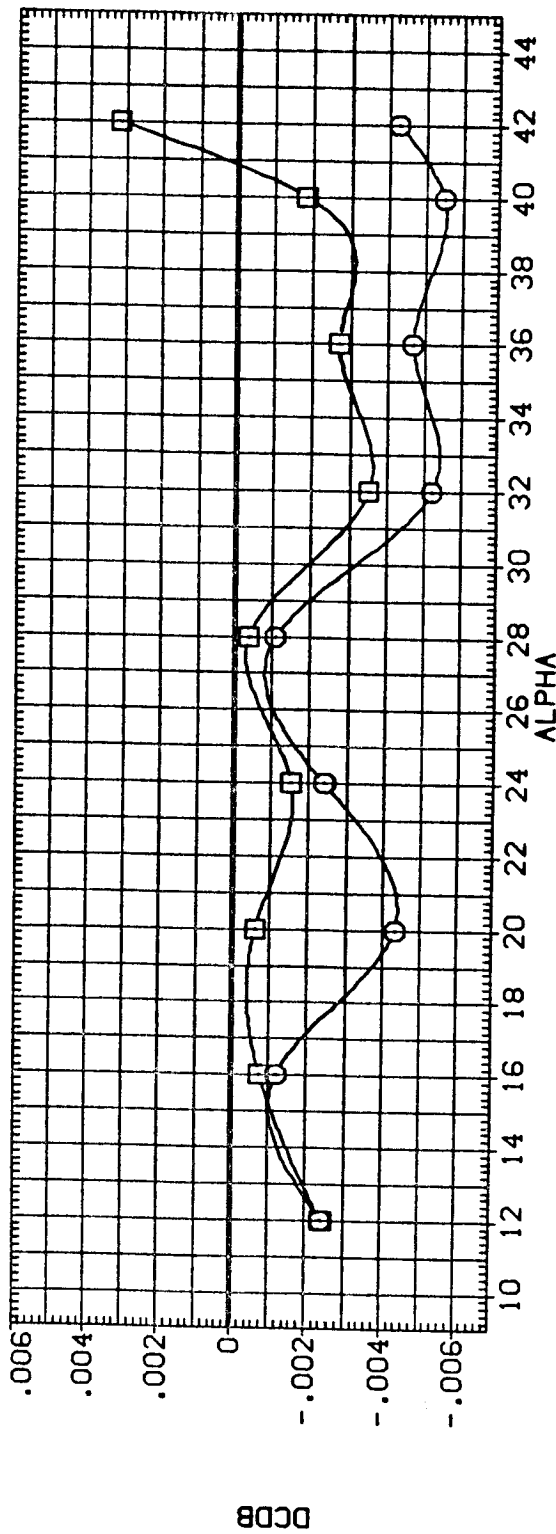
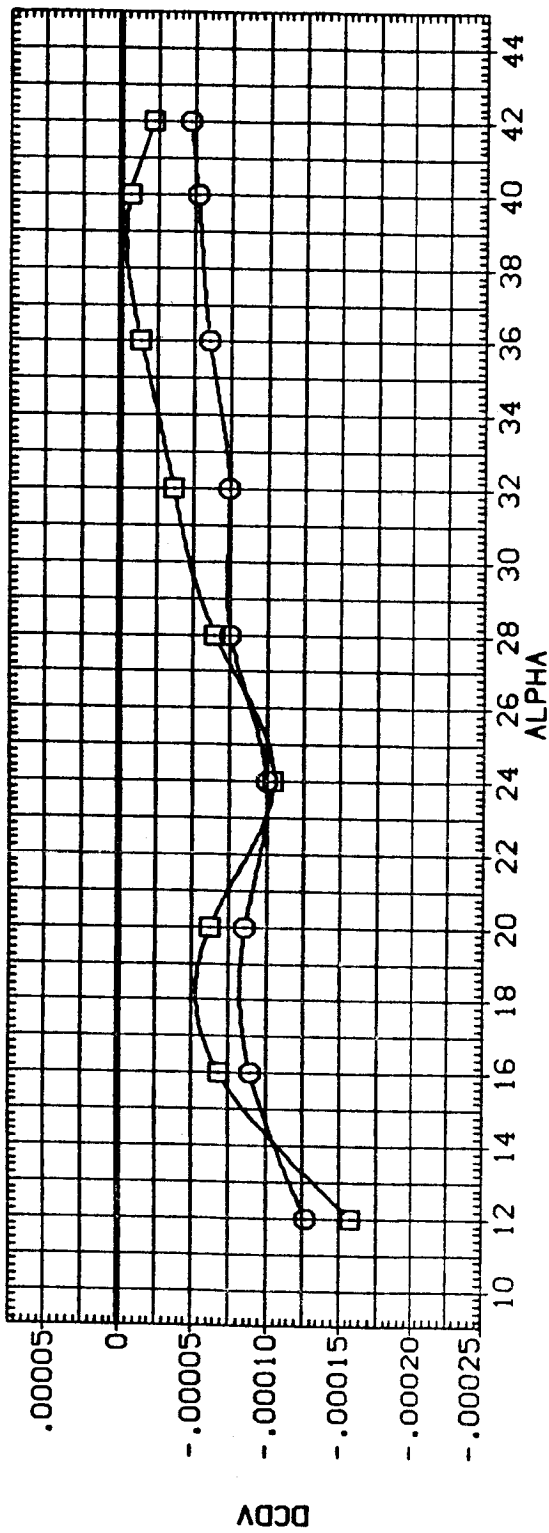


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL: (AEG008) (AEG012) (AEG024)

CONFIGURATION DESCRIPTION: AMES 3.5-150 GA98 (011-47-H14) AMES 3.5-150 GA98 (011-47-H14-N24) AMES 3.5-150 GA98 (011-47-H14-N24+DUMMY STING)

BETA: 5.000 5.000 5.000

ELEVON: -40.000 -40.000 -40.000

BOFLAP: -11.700 -11.700 -11.700

SPDRBK: 55.000 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. Y0 ZMRP 375.0000 IN. Y0 SCALE .0150

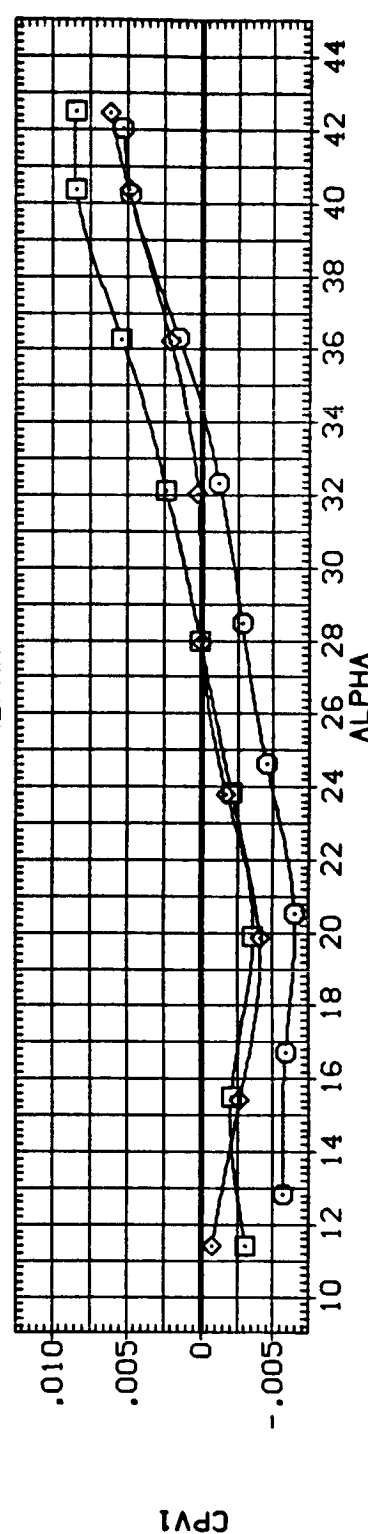
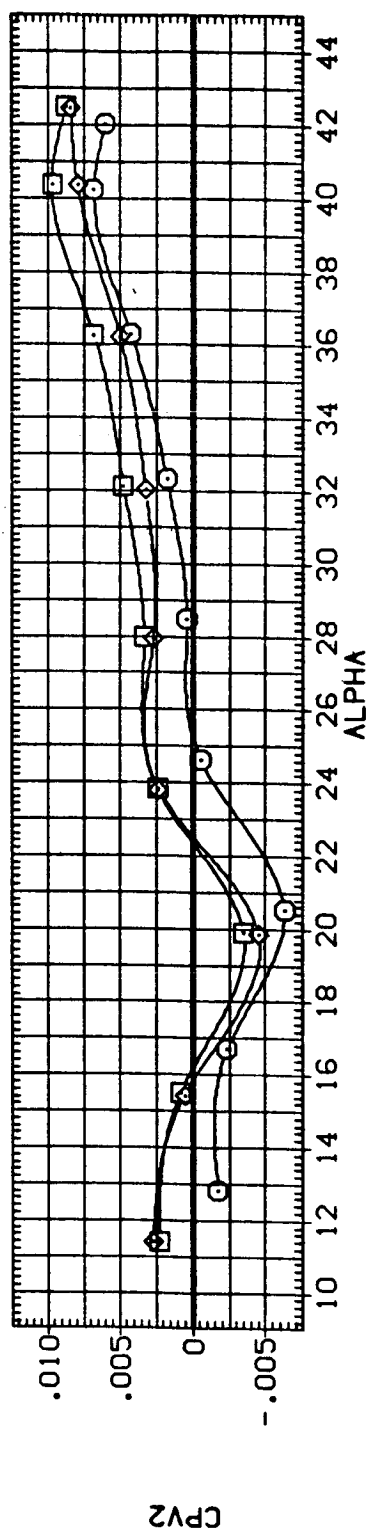
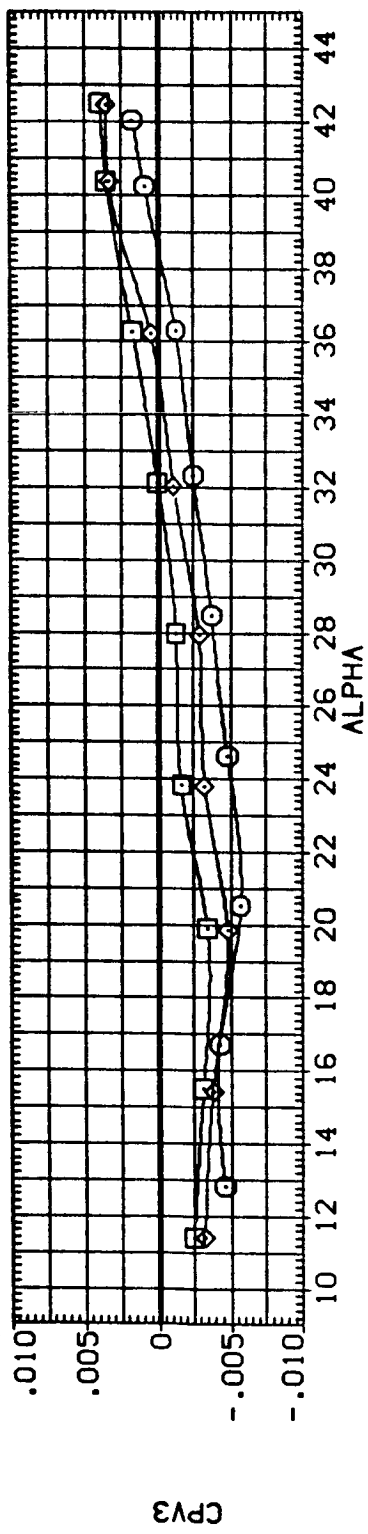


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AE0008) AMES 3.5-190 GA98 (011-M7-H14)

(AE0012) AMES 3.5-190 GA98 (011-M7-H14-N24)

(AE0024) AMES 3.5-190 GA98 (011-M7-H14-N24-DUMMY STING)

BETA 5.000
5.000
5.000

ELEVON -40.000
-40.000
-40.000

BOFLAP -11.700
-11.700
-11.700

SPOBRK 55.000
55.000
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

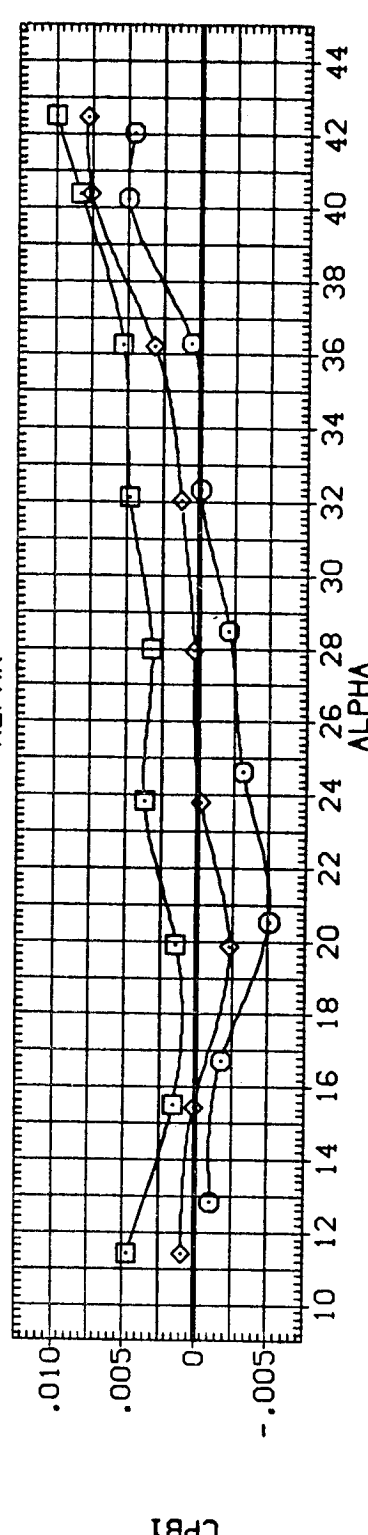
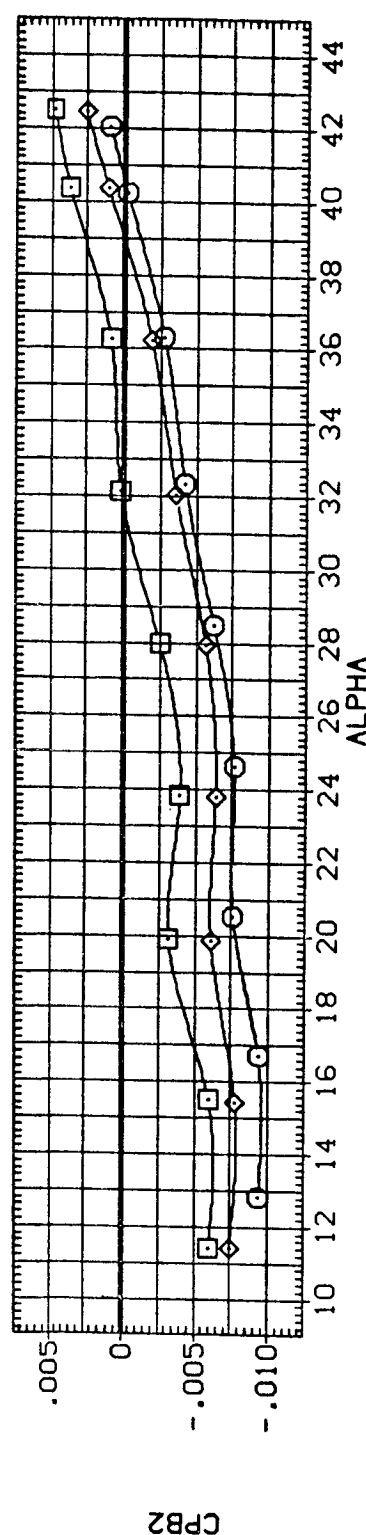
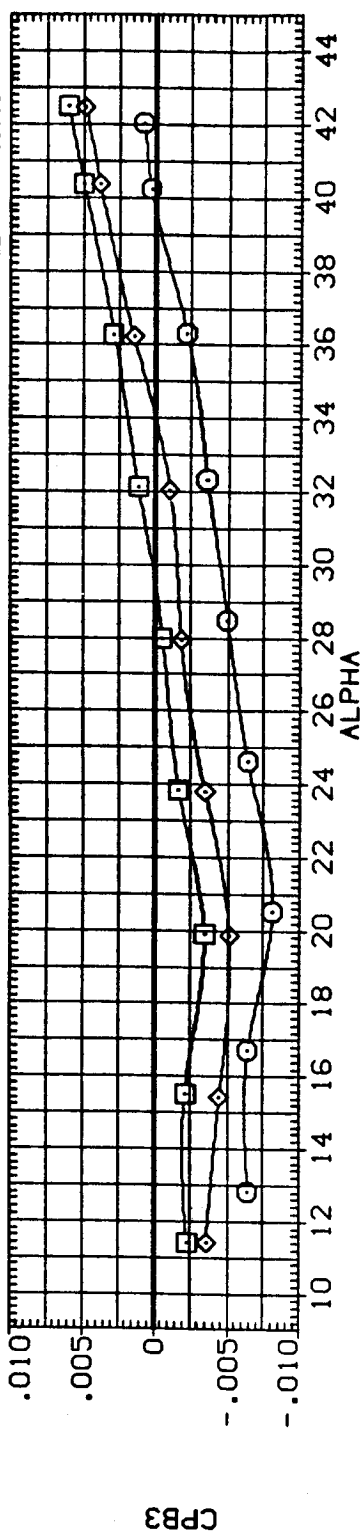


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0007) □
 CONFIGURATION DESCRIPTION AVES 3.5-190 0A98 (011-M7+M14)
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XTRP 1076.7000 IN.X0
 YTRP .0000 IN.Y0
 ZTRP 375.0000 IN.Z0
 SCALE .0150

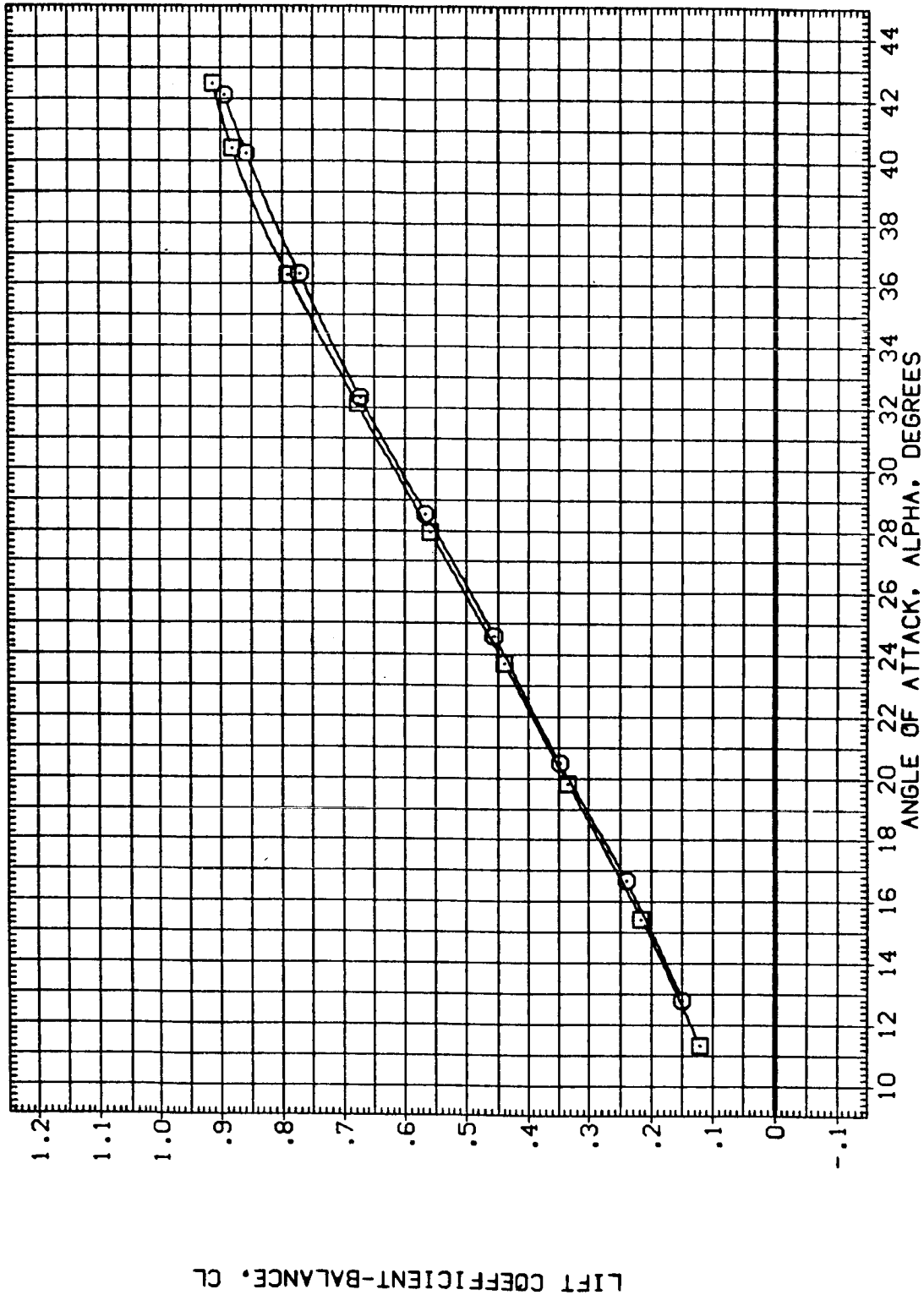


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BDFLAP SPOBRK REFERENCE INFORMATION

(CE0007)	AMES 3.5-190 DAS8 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0023)	AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XPRP 1076.7000 IN.XD
						YPRP .0000 IN.YD
						ZPRP .0000 IN.ZD
						SCALE .0150

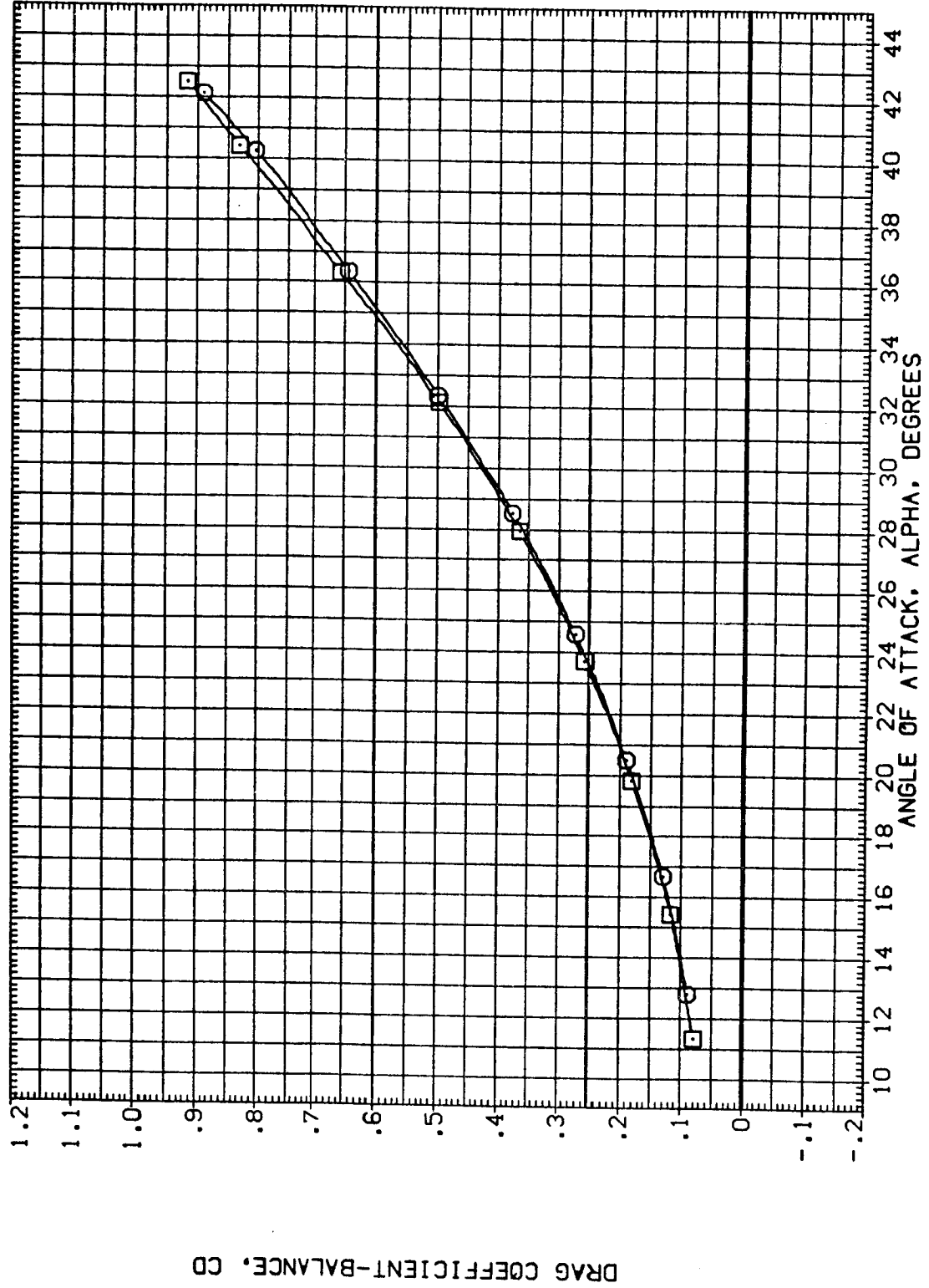


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0007) (CE0023)
 CONFIGURATION DESCRIPTION AMES 3.5-190 CAS8 (011-17+M14)
 AMES 3.5-190 CAS8 (011-17+M14-12+DUMMY STING)
 BETA 5.000 5.000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

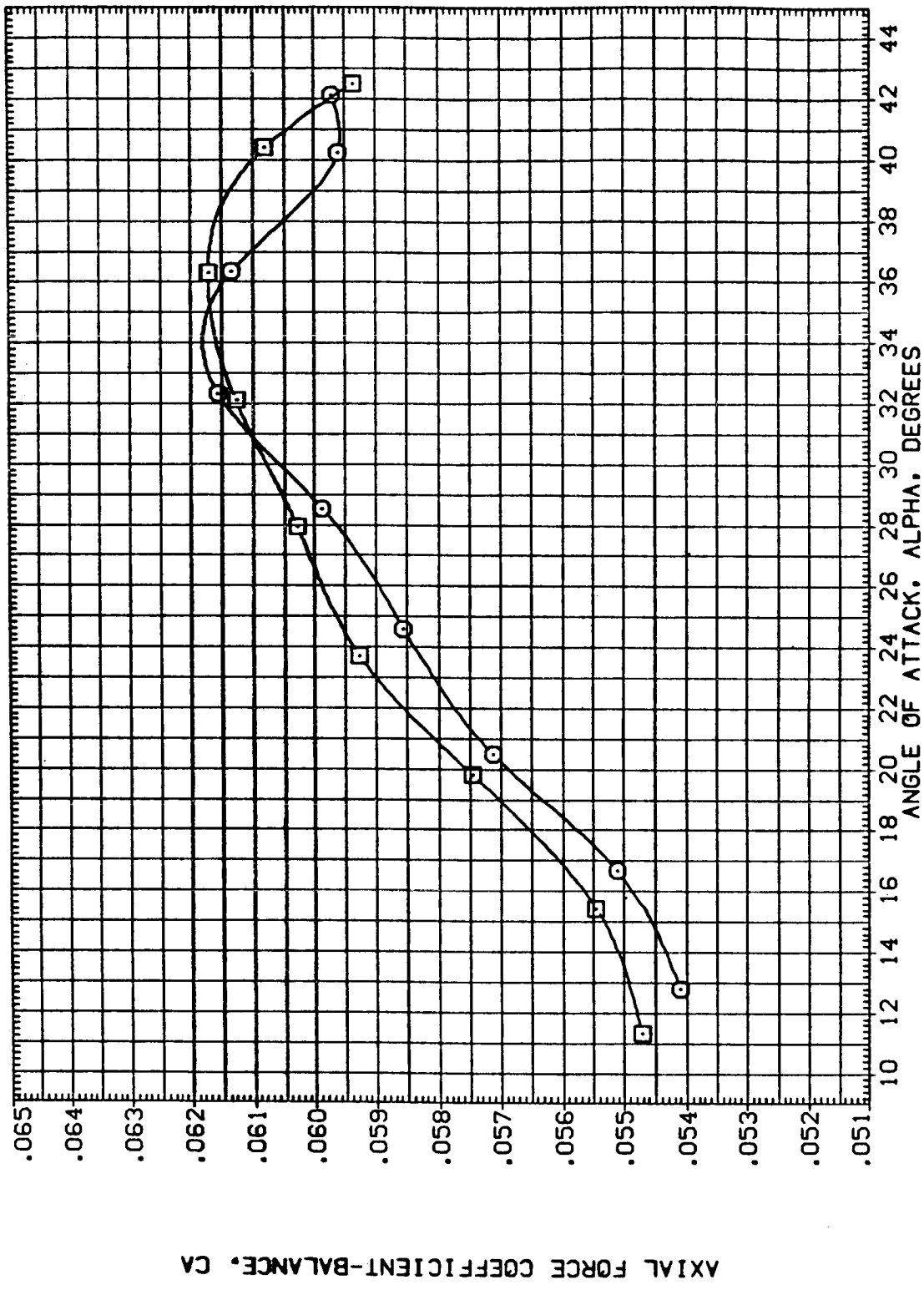


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL (CE0007) (CE0023) \square

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-17+M14)
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA 5.000
 5.000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.8600 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFDW

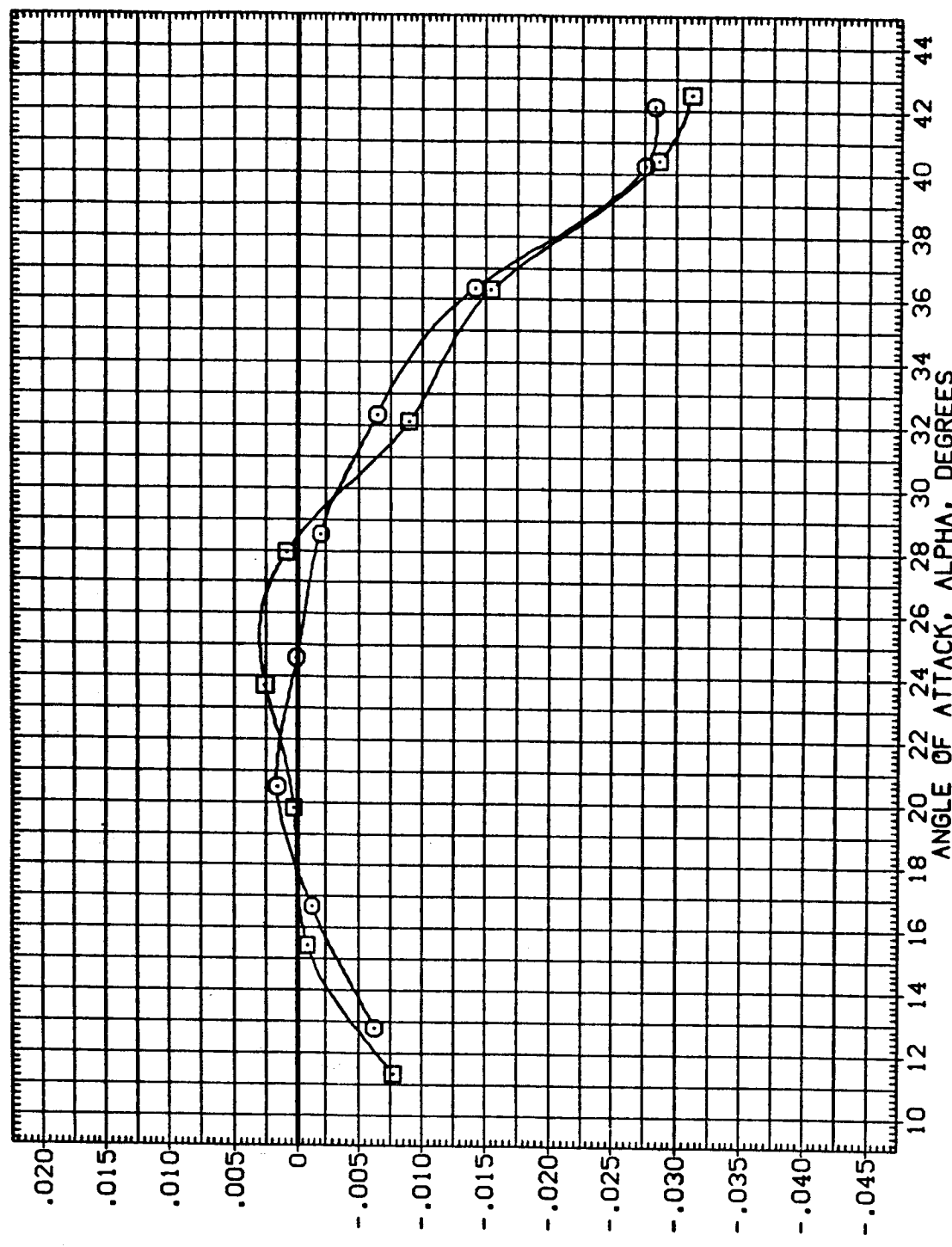


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0007) (CE0023)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 GA98 (011-17+114)
 AMES 3.5-190 GA98 (011-17+114-N24+DUMMY STING)

BETA 5.000
 5.000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

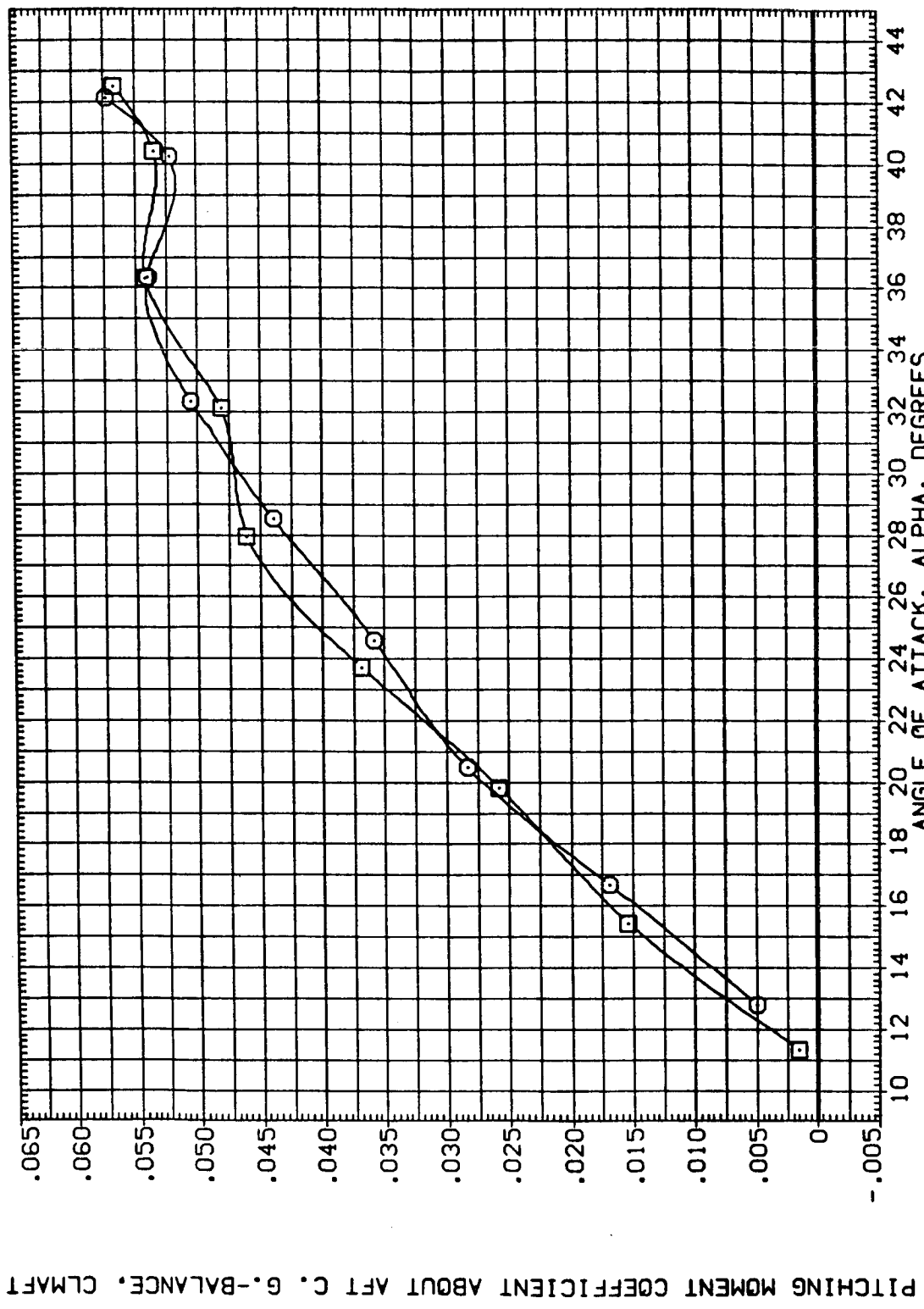


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0007) (CE0023) CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-M7-M14) AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA 5.000 5.000
 ELEVON .000 .000
 BOFLAP -11.700 -11.700
 SPOBRK 55.000 55.000
 REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 826.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0150

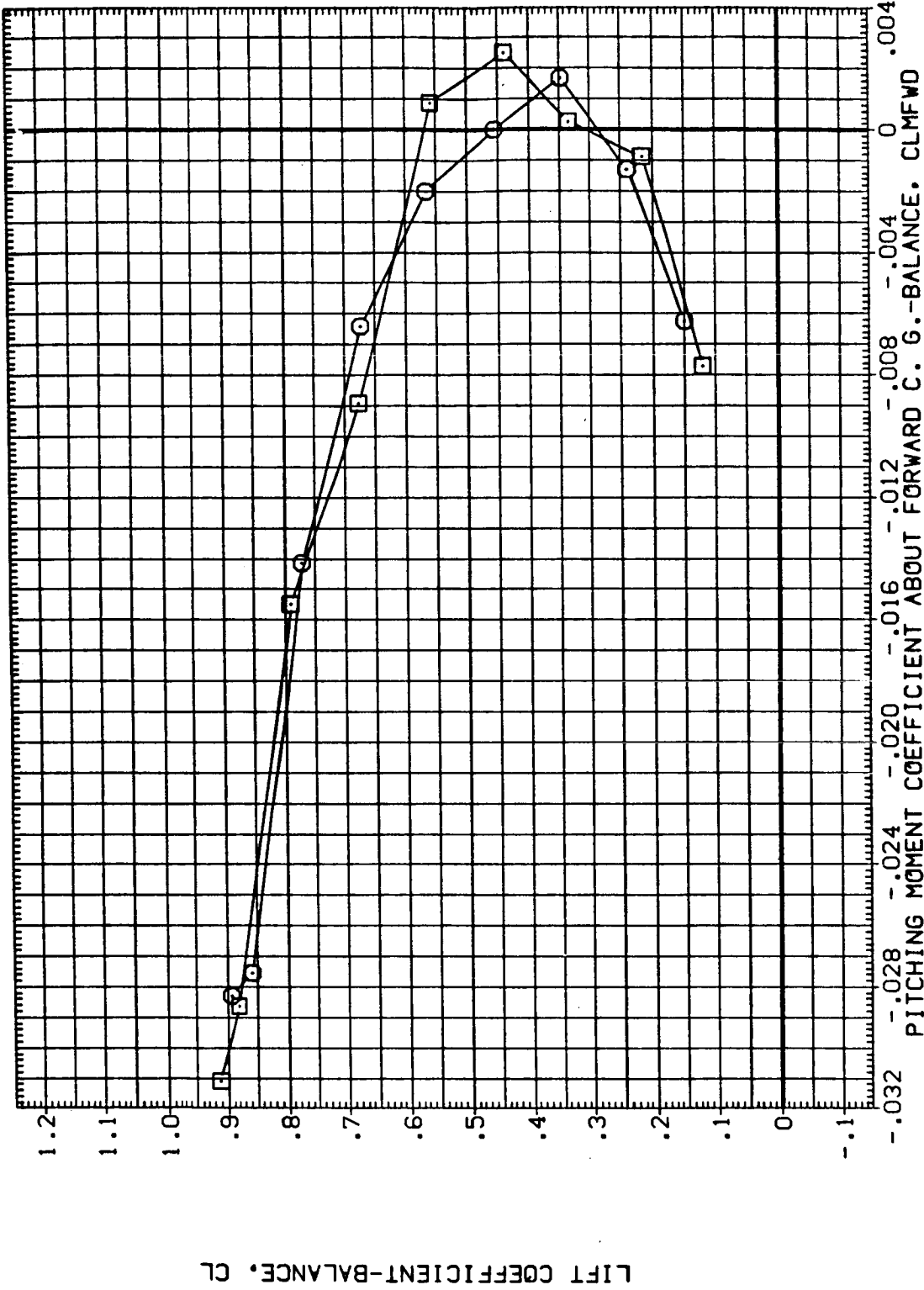


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0007) (CE0023)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

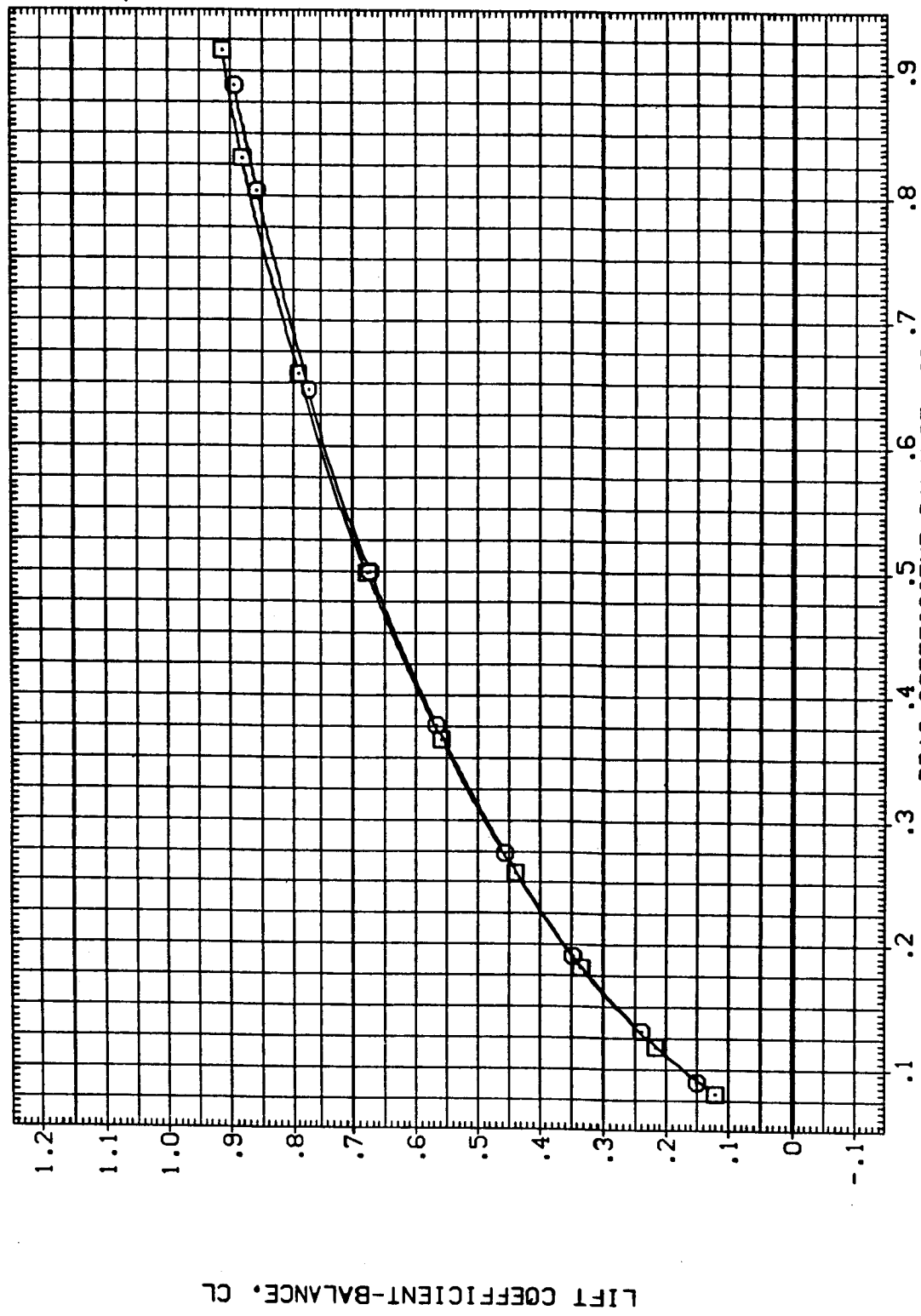


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

15

DATA SET SYMBOL: (EE0007) (EE0023)

CONFIGURATION DESCRIPTION:
 AMES 3.5-190 CASE (011-17+114)
 AMES 3.5-190 CASE (011-17+114-N24+DUMMY STING)

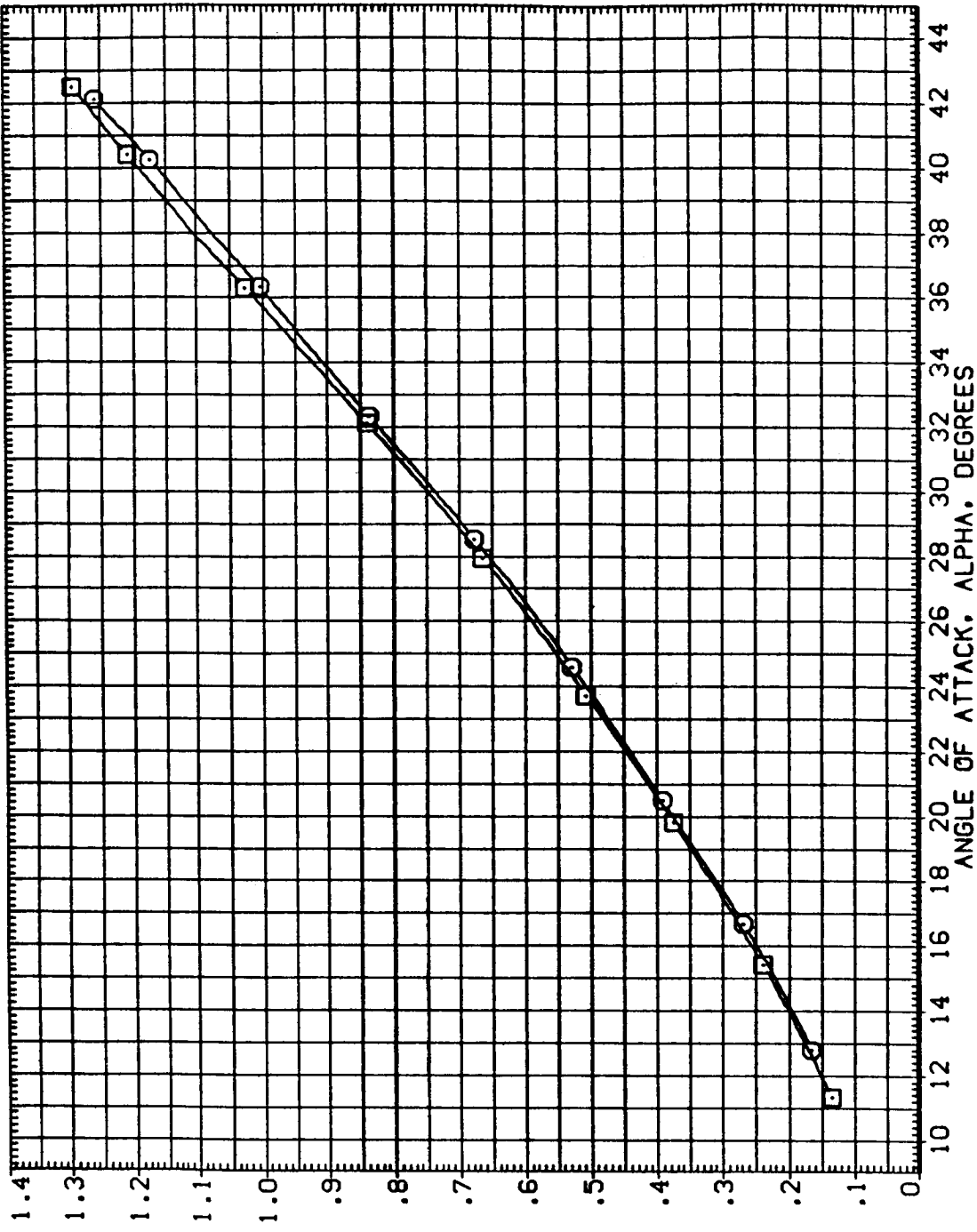
BETA: 5.000

ELEVON: .000

BDFLAP: -11.700

SPOBRK: 55.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SO.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 YMRP: 1076.7000 IN.X0
 ZMRP: .0000 IN.Y0
 SCALE: .0150 IN.Z0



NORMAL FORCE COEFFICIENT-TOTAL, CNT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL (EE0007) (EE0023)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-17+M14)
 AMES 3.5-190 OA98 (011-17+M14-N24+DUMMY STING)

BETA 5.000
 5.000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

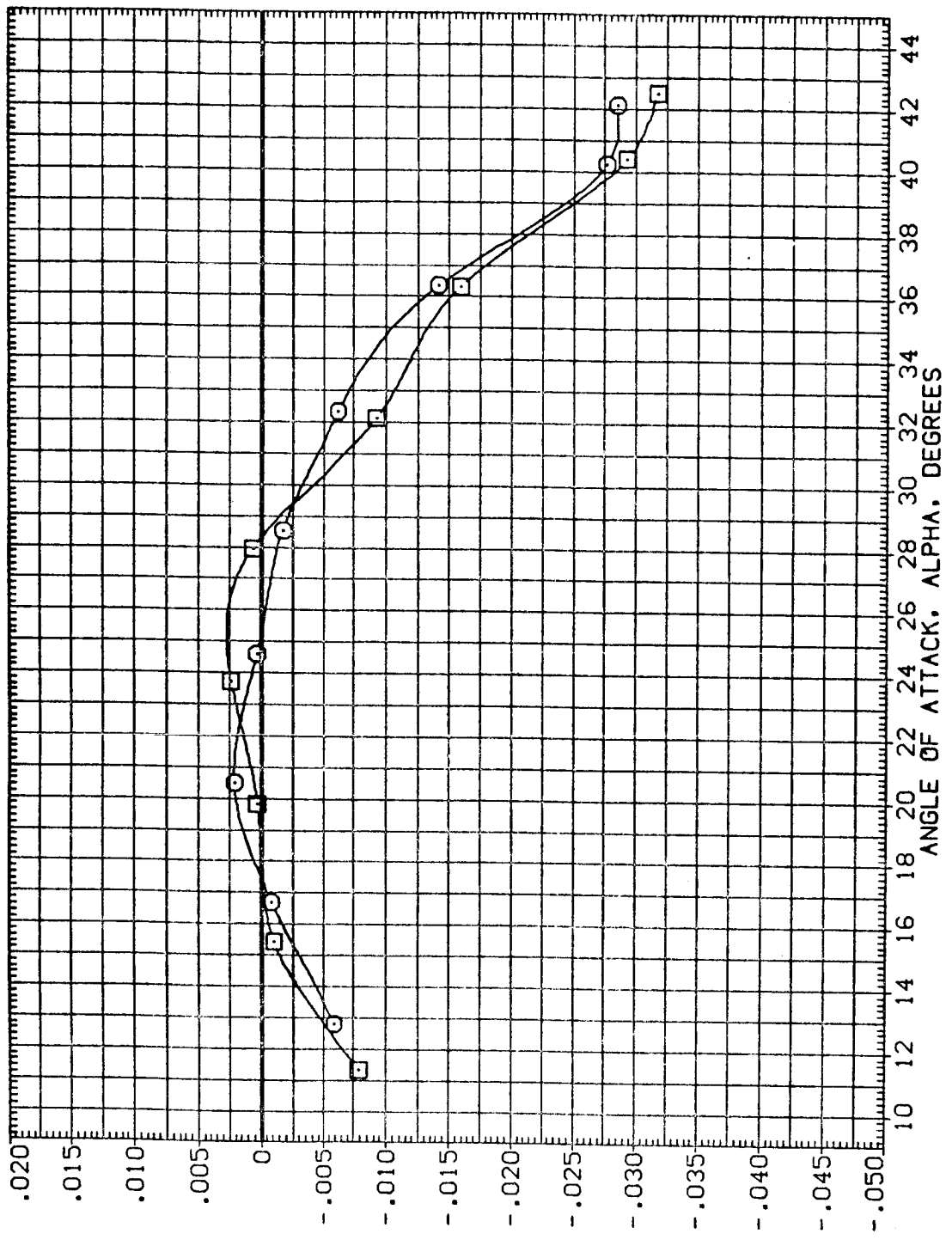


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0007) (EE0023)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 0A98 (011-M7-M14)
 AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA 5.000
 5.000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMFP 1076.7000 IN.X0
 YMFP .0000 IN.Y0
 ZMFP 375.0000 IN.Z0
 SCALE .0150

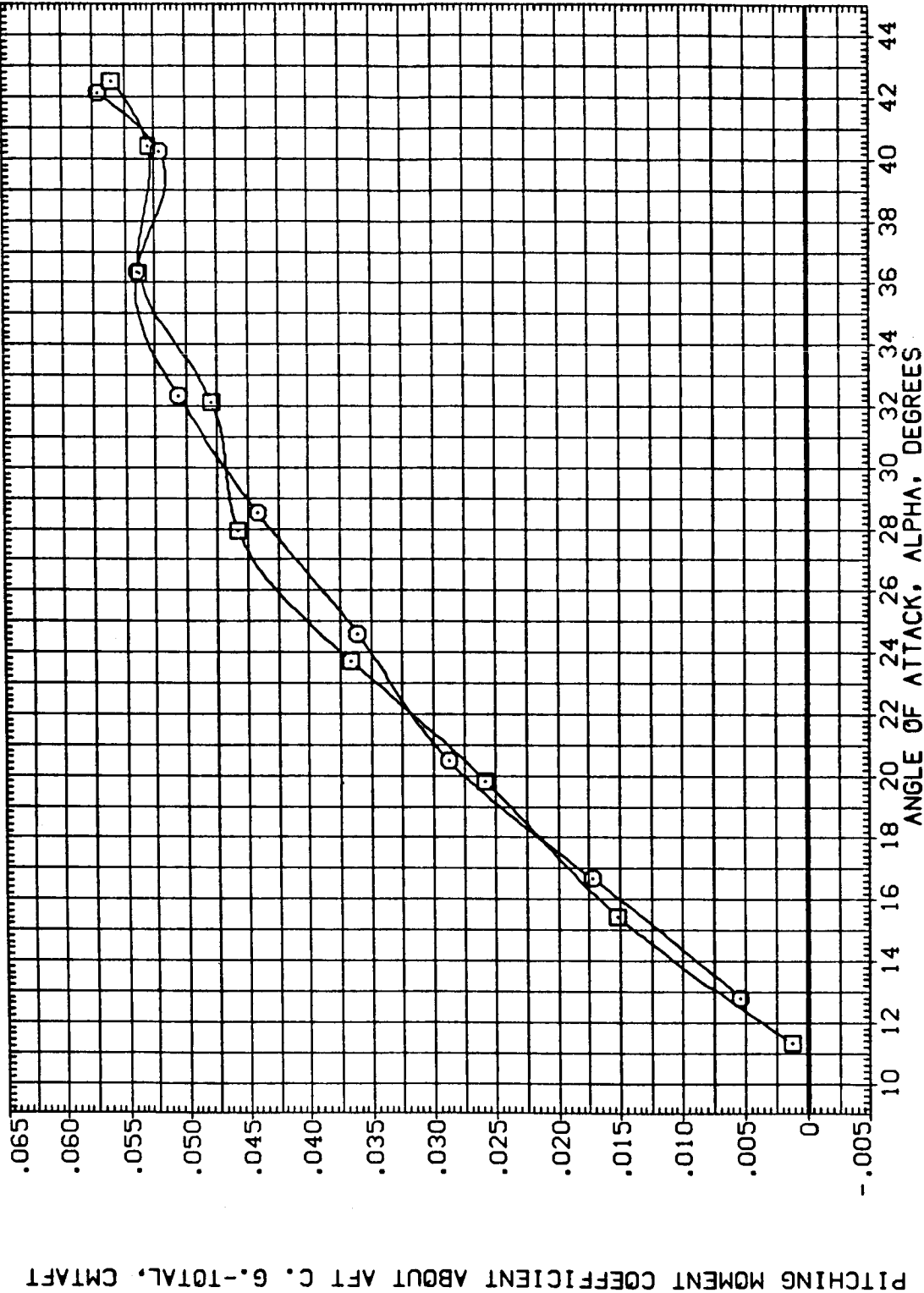


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

NORMAL FORCE COEFFICIENT-TOTAL, CN1

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEG007)	ANES 3.5-190 0A98 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EEG023)	ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

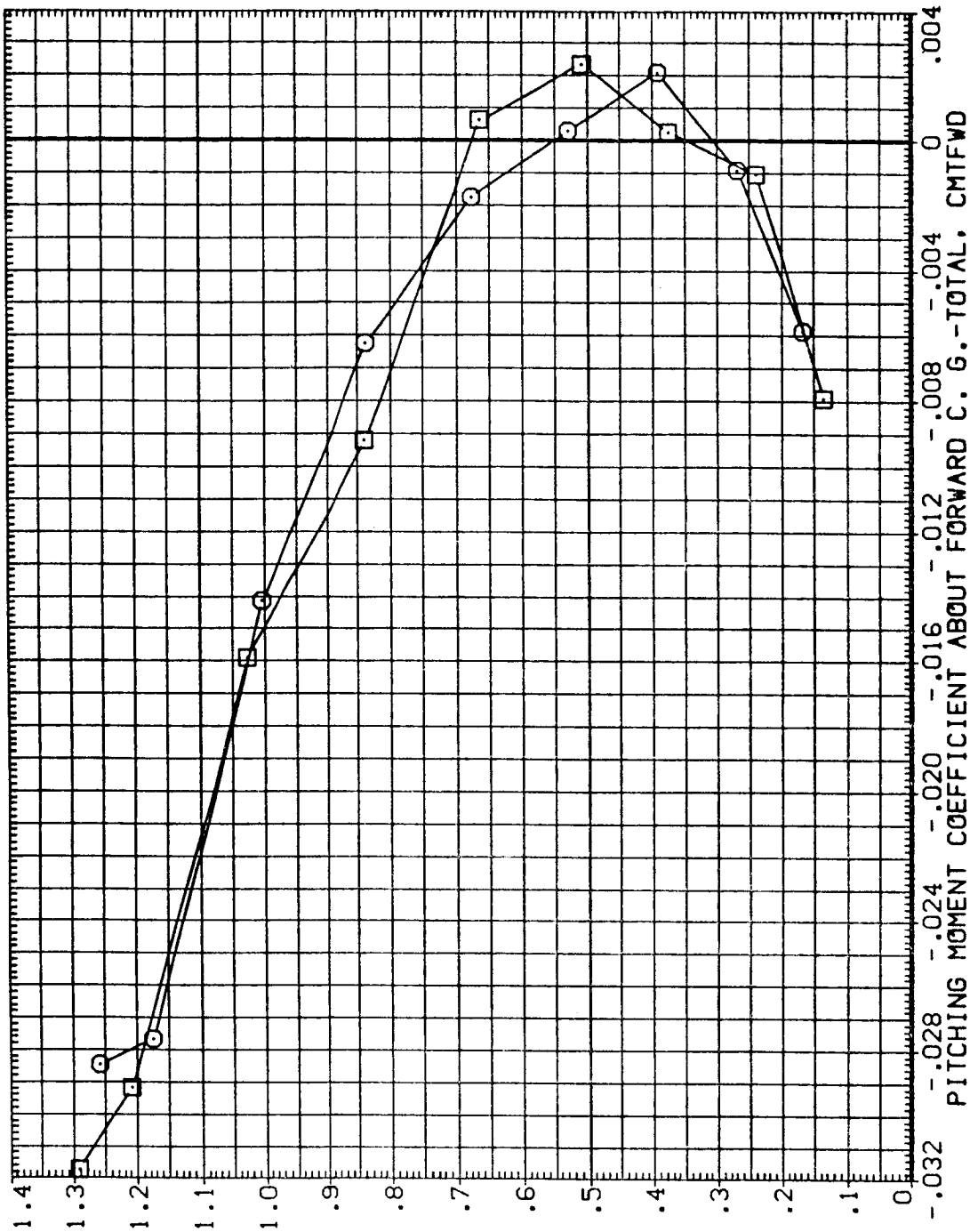


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0007) (EE0023)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 GAS8 (011-M7+M14)
 AVES 3.5-190 GAS8 (011-M7+M14-N24+DUMMY STING)

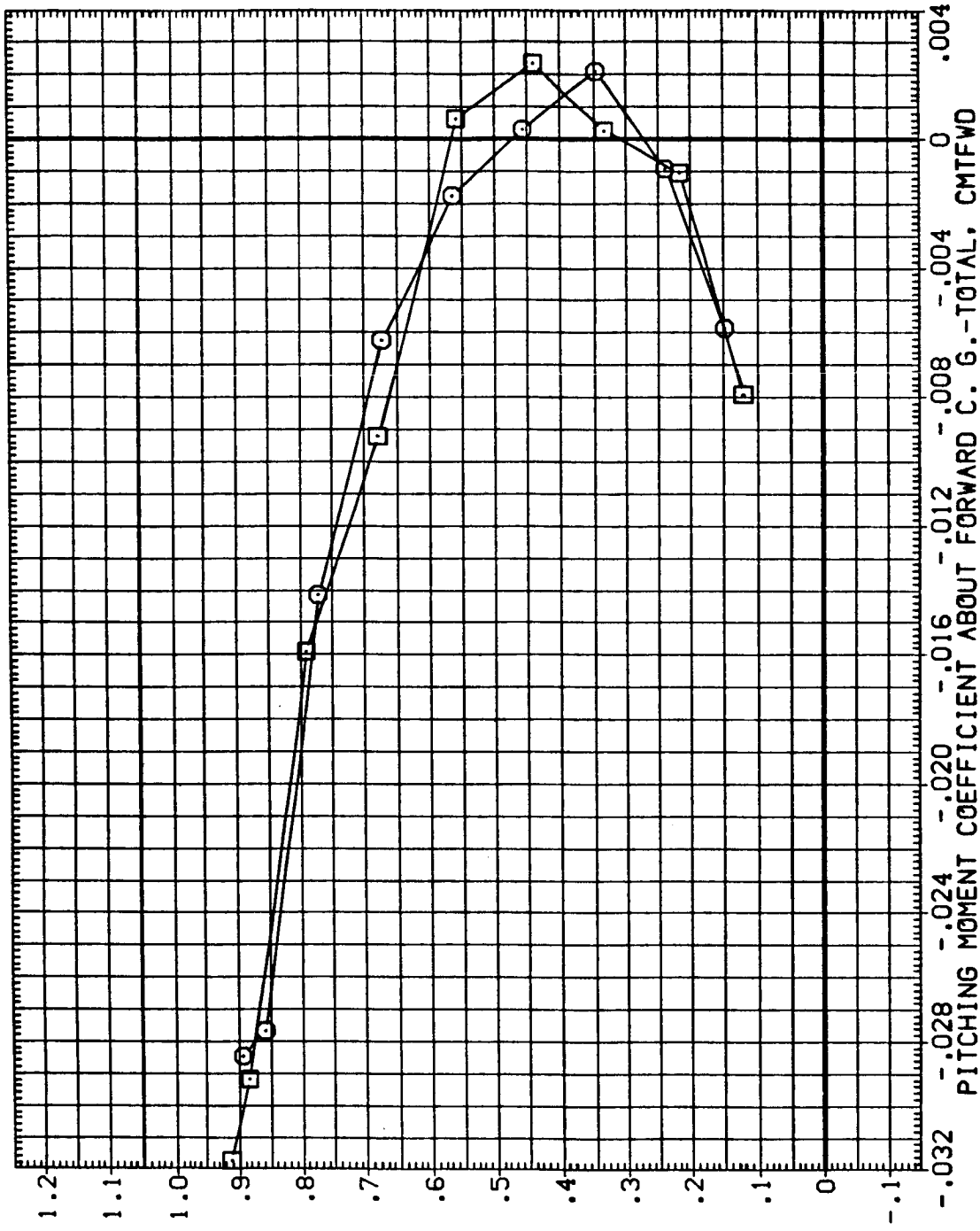
BETA 5.000
 5.000

ELEVON .000
 .000

BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0007)	AVES 3.5-190 DASH (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2650.0000 SQ.FT.
(EE0023)	AVES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 826.6800 IN.
						XMRP 1076.7000 IN.XD
						YMRP .0000 IN.YD
						ZMRP 375.0000 IN.ZD
						SCALE .0150

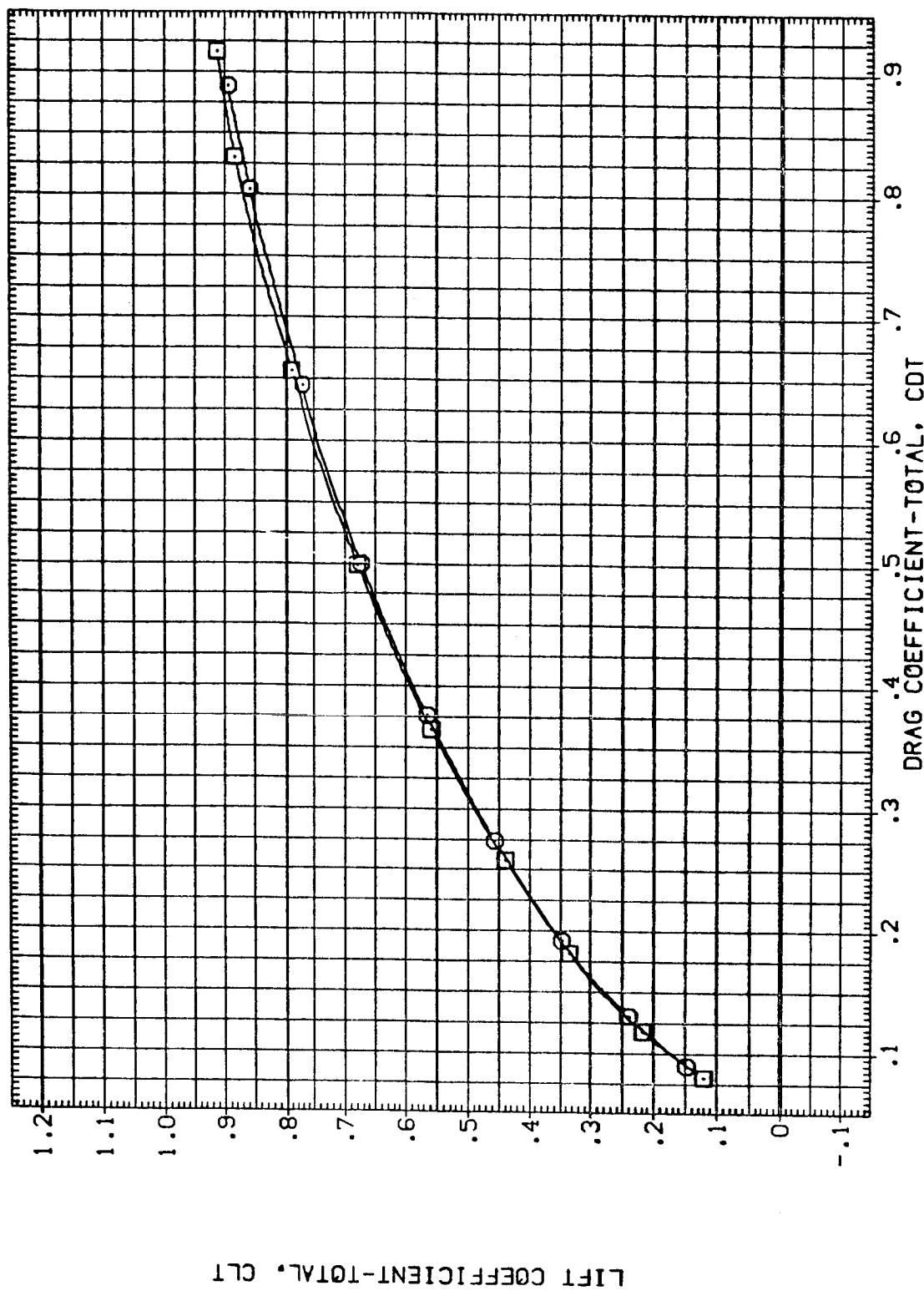


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL: \square CONFIGURATION DESCRIPTION: AMES 3.5-190 DASS (011-47+M14)
 AMES 3.5-190 DASS (011-47+M14-N24+DUMMY STING)

BETA: 5.000
 ELEVON: .000
 BOFLAP: -11.700
 SPOBRK: 95.000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8000 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.7000 IN.X0
 YMRP: .0000 IN.Y0
 ZMRP: 375.0000 IN.Z0
 SCALE: .0150

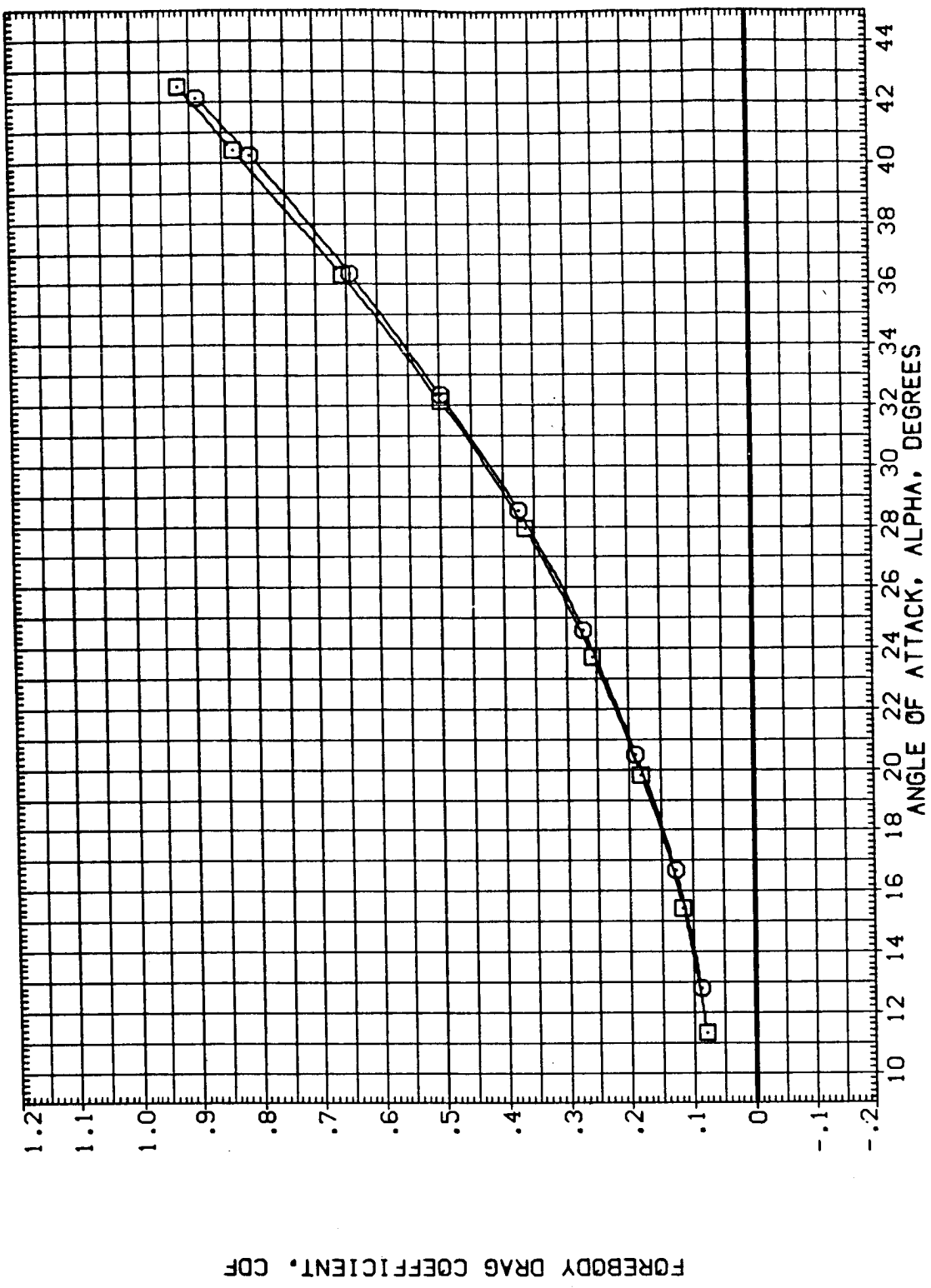



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0007) (EE0023)  CONFIGURATION DESCRIPTION AMES 3.5-190 DA98 (011-M7+M14) AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING) BETA 5.000 5.000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP 0.0000 IN. ZMRP 375.0000 IN. SCALE .0150

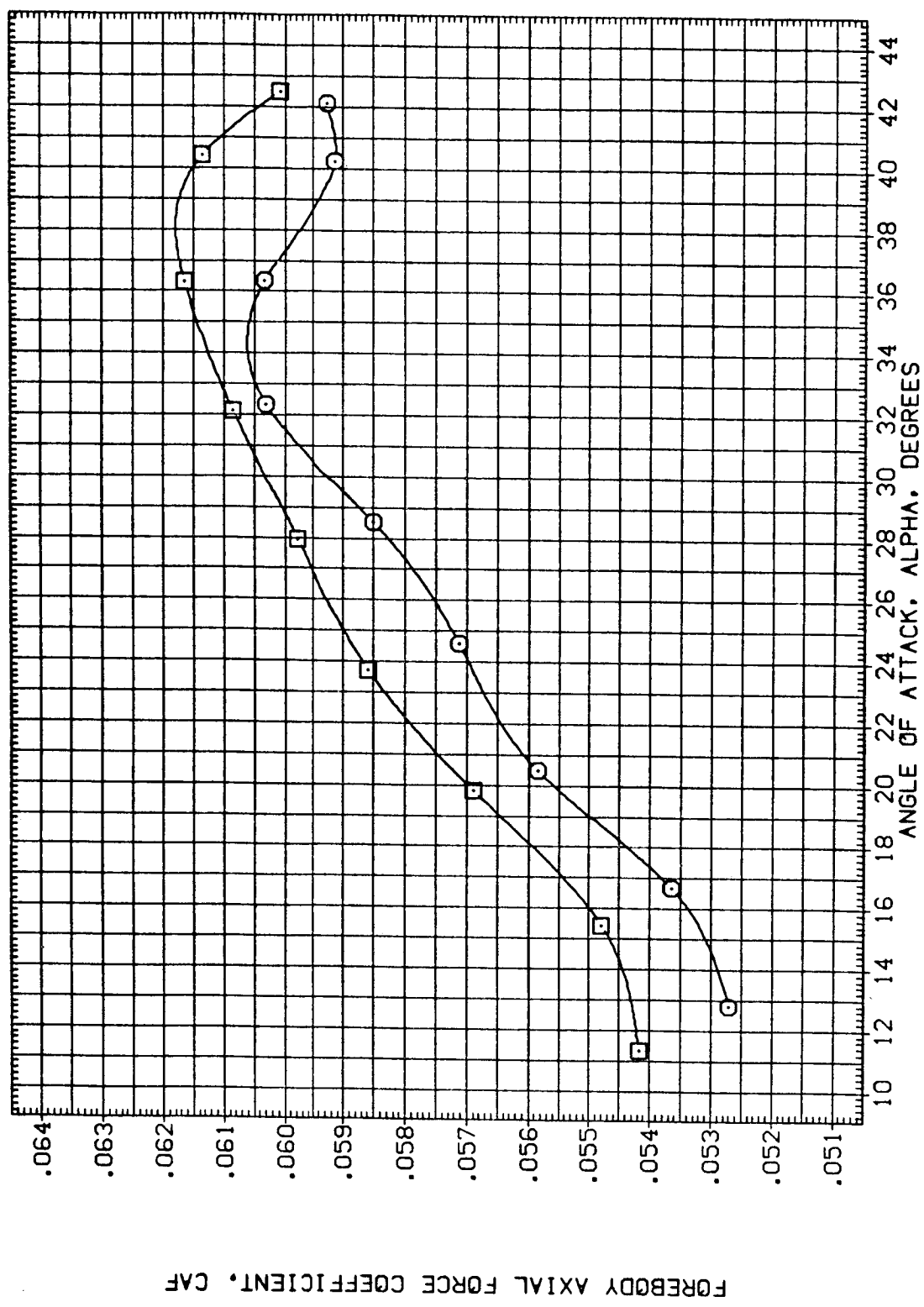


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0007) □
 CONFIGURATION DESCRIPTION AMES 3.5-190 OAS8 (011-M7+M14)
 AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)
 REFERENCE INFORMATION SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

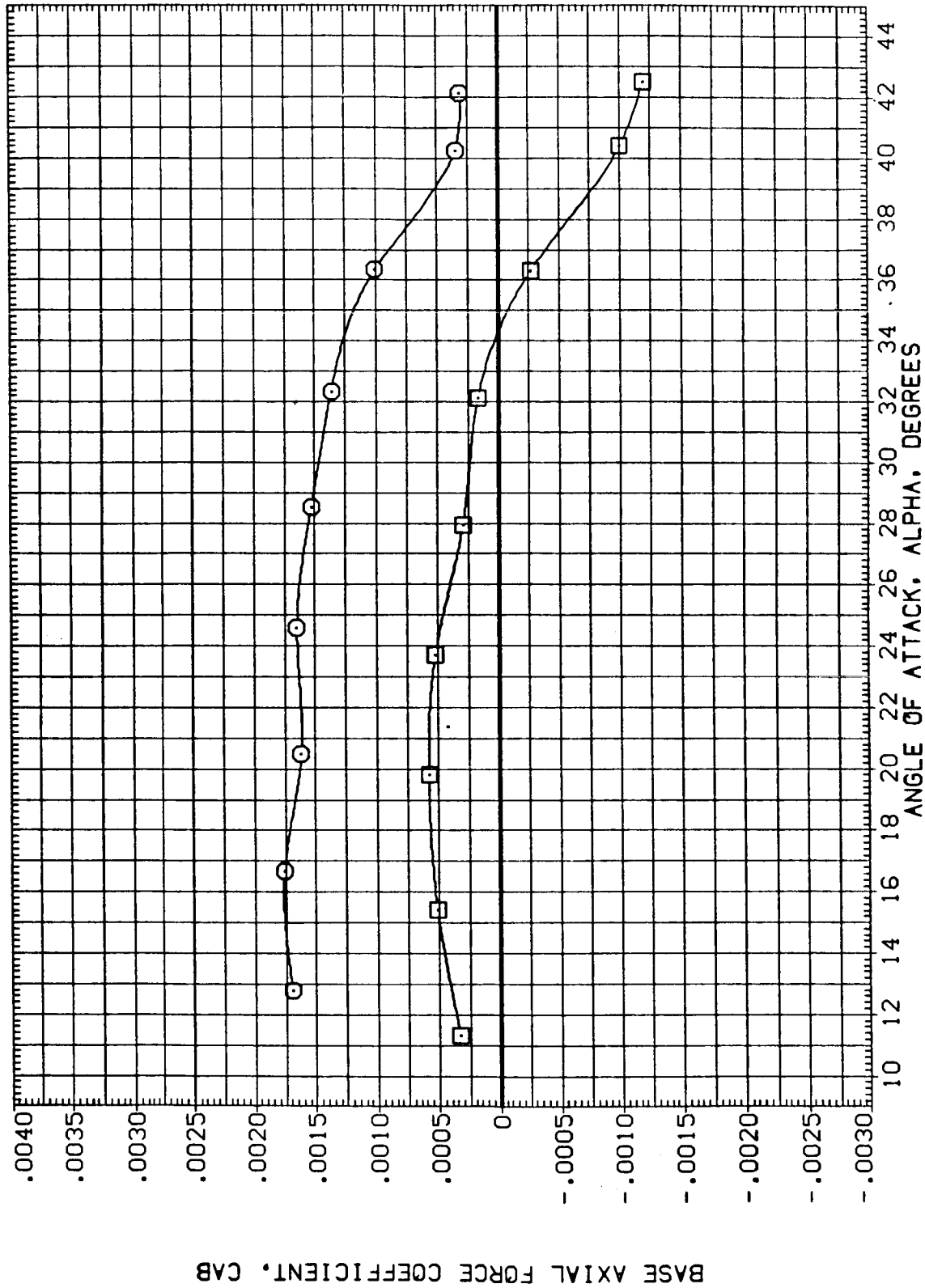


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEG007)	AMES 3.5-190 OASB (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG023)	AMES 3.5-190 OASB (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.Y0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

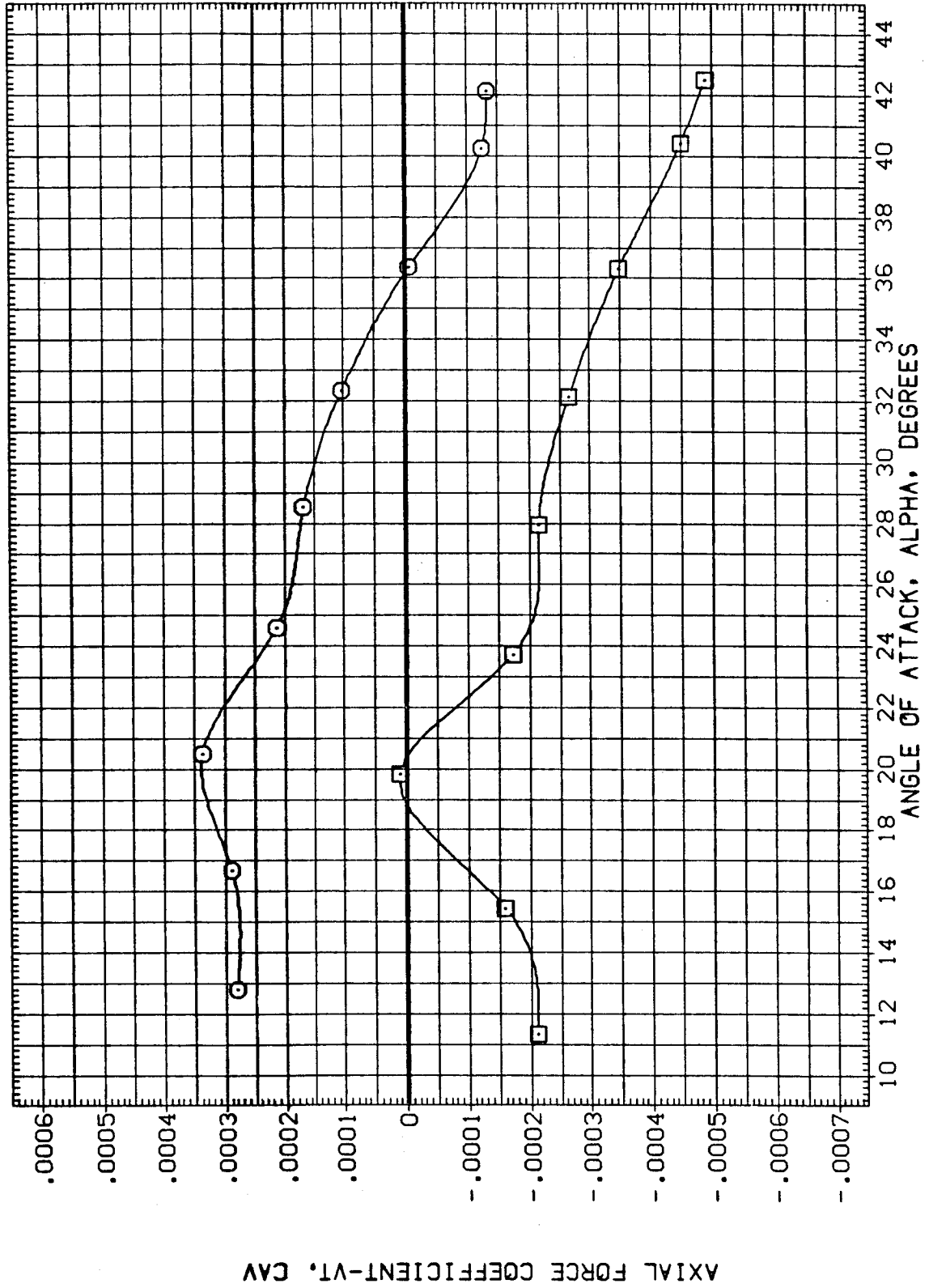


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BEG007) (BEG023) \square

CONFIGURATION DESCRIPTION
 AVES 3.5-190 CAS8 (011-47+M14)
 AVES 3.5-190 CAS8 (011-47+M14-N24+DUMMY STING)

BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ. FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 YMRP 1076.7000 IN. X0
 ZMRP .0000 IN. Y0
 SCALE 375.0000 IN. Z0
 .0150

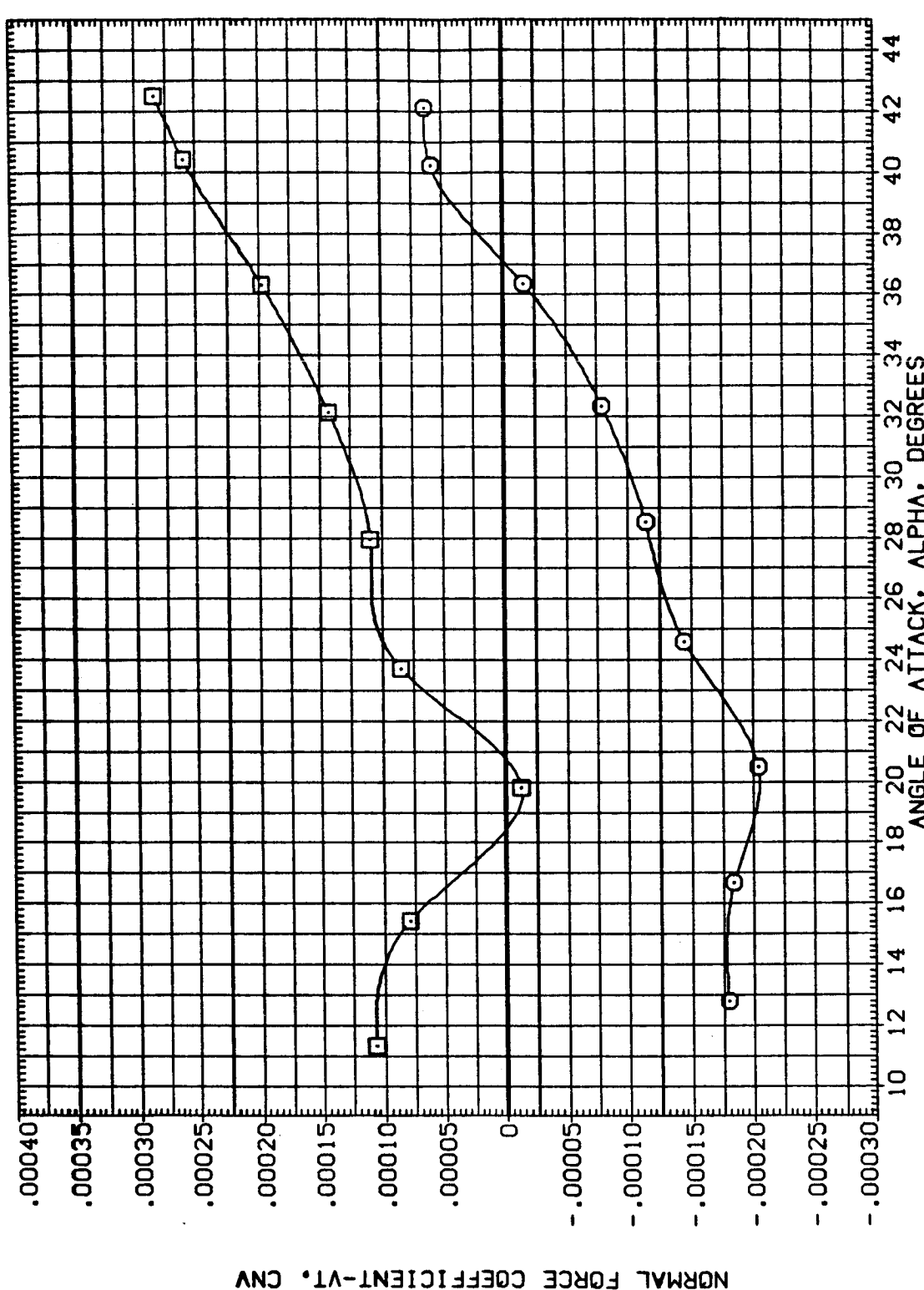


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BE0007) \square AVES 3.5-190 GA98 (011-M7-M14)
 (BE0023) \square AVES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)

BETA ELEVON BDFLAP SPOBRK

5.000 .000 -11.700 55.000
 5.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT. CMVFD

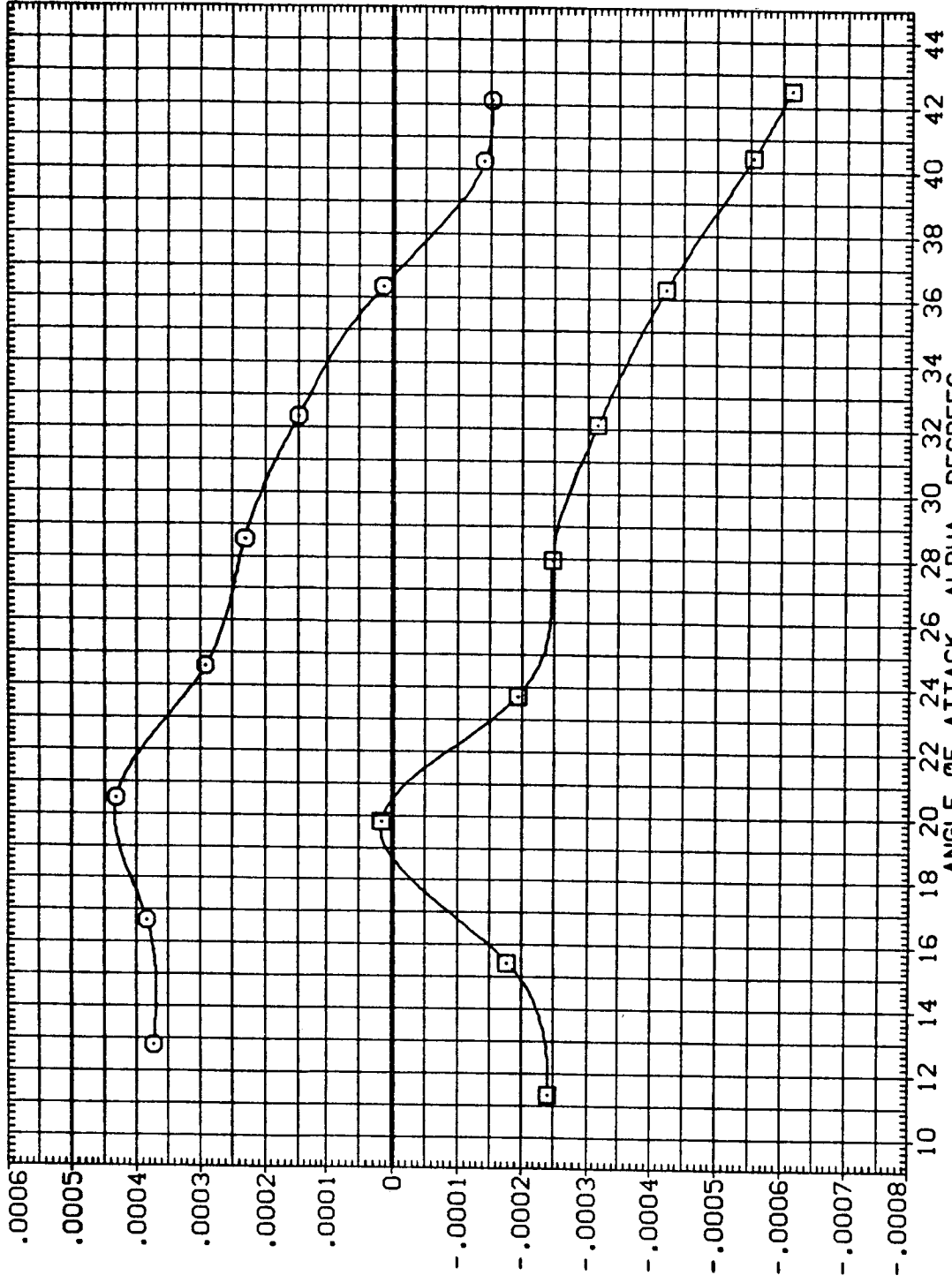


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0007) (BE0023)

CONFIGURATION DESCRIPTION
 AVES 3.5-190 0A98 (011-17+114)
 AVES 3.5-190 0A98 (011-17+114-N24+DUMMY STING)

BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRFP 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT. CMVAFT

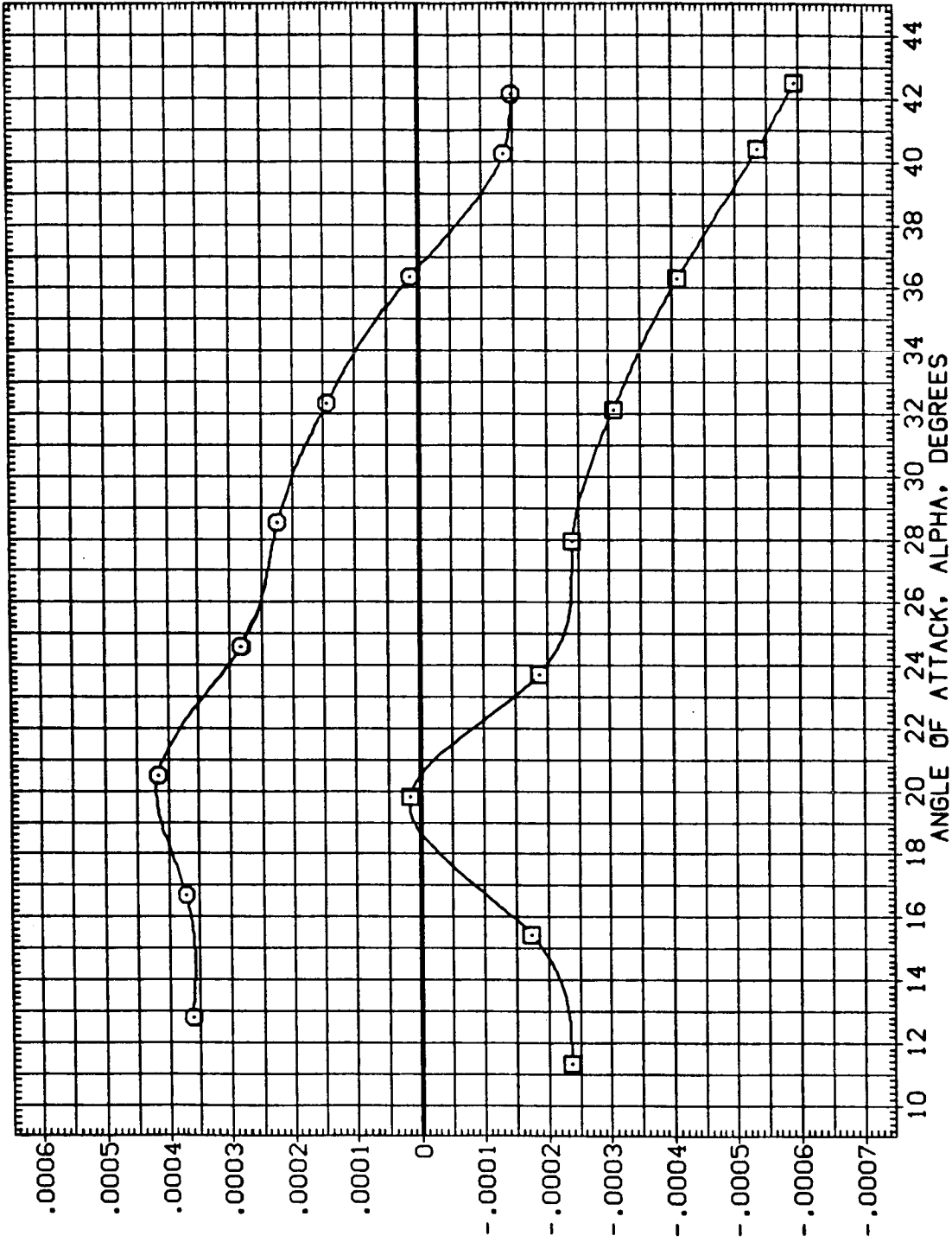


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJMACH = 10.27

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ023)

SYMBOL ○

MACH 10.300

BETA 5.000

BOFLAP -11.700

RUDDER .000

PARAMETRIC VALUES

ELEVON .000

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

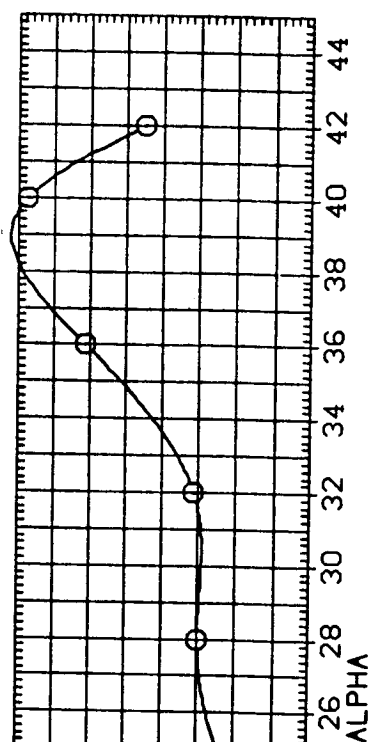
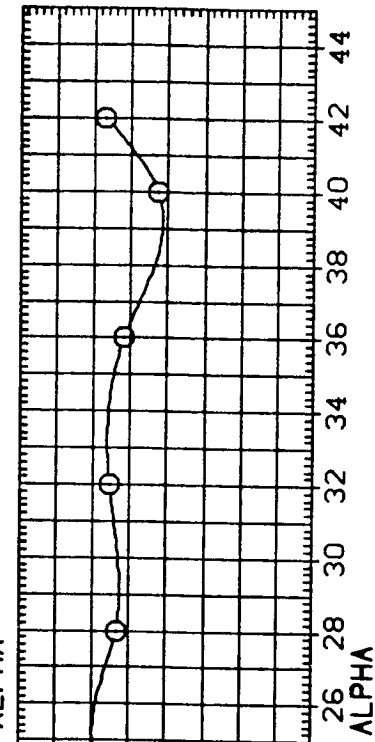
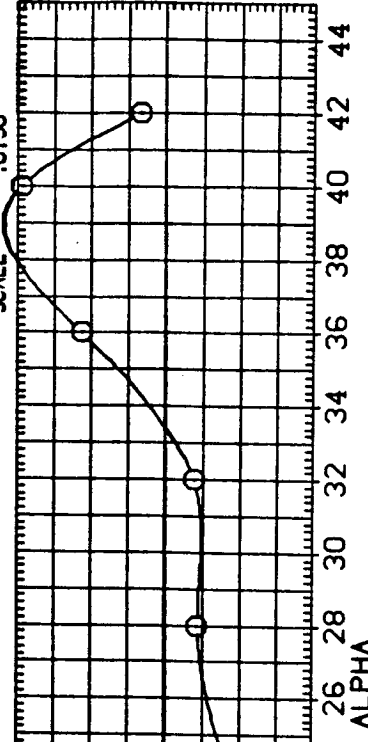


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0023)

PARAMETRIC VALUES		REFERENCE INFORMATION	
MACH	10.300	SREF	2690.0000
BETA	5.000	LREF	474.8000
BOFLAP	-11.700	BREF	936.6800
RUDDER	.000	XHRP	1076.7000
		YHRP	.0000
		ZHRP	375.0000
		SCALE	.0150
			SO.FT.
			IN.
			IN.
			IN.X0
			IN.Y0
			IN.Z0

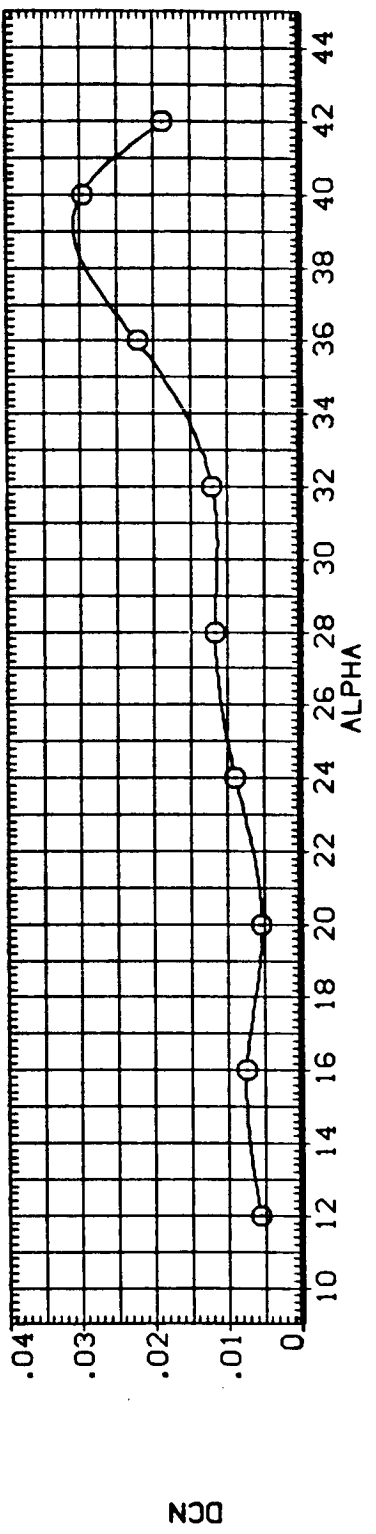
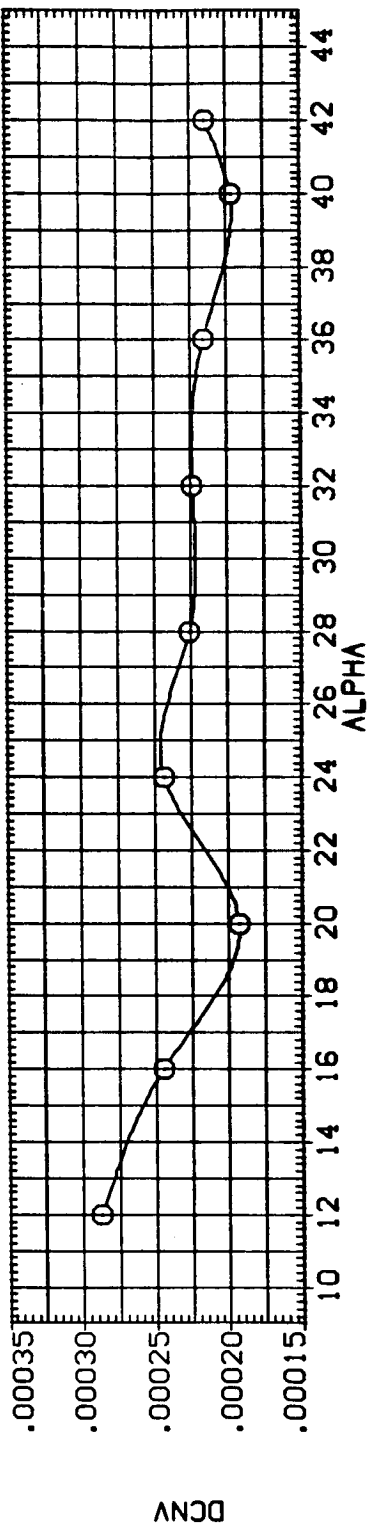
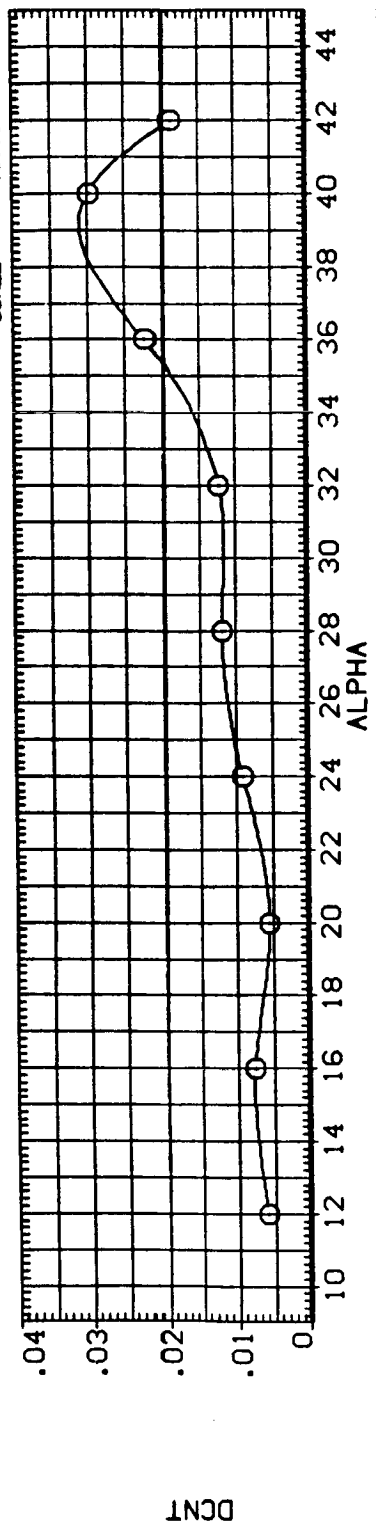


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0023)

SYMBOL MACH 10.300
 O

PARAMETRIC VALUES
 BETA 5.000 ELEVON .000
 BDFLAP -11.700 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

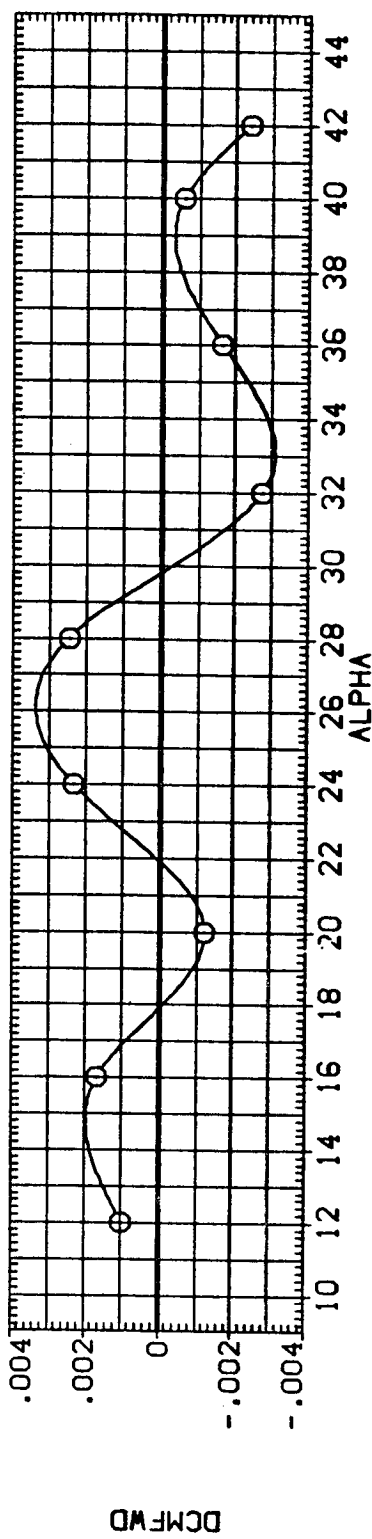
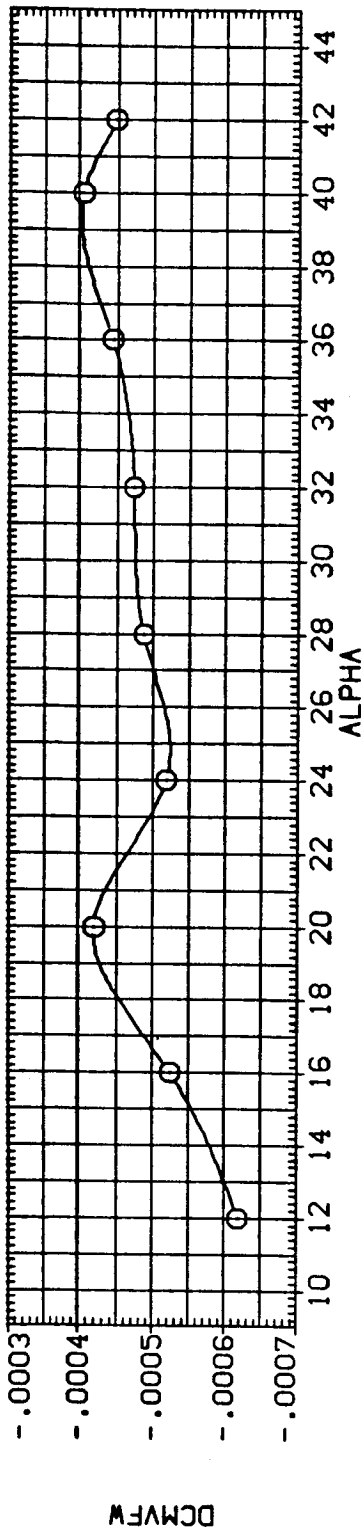
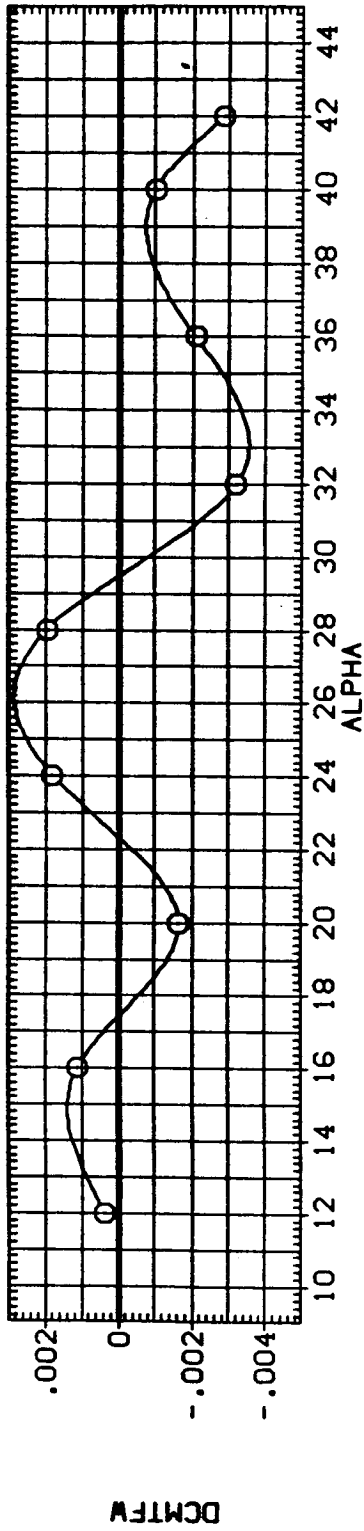


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0023)

SYMBOL MACH 10.300
 O

PARAMETRIC VALUES
 BETA 5.000 ELEVON .000
 BOFLAP -11.700 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.XD
 YMRP .0000 IN.YD
 ZMRP 375.0000 IN.ZD
 SCALE .0150

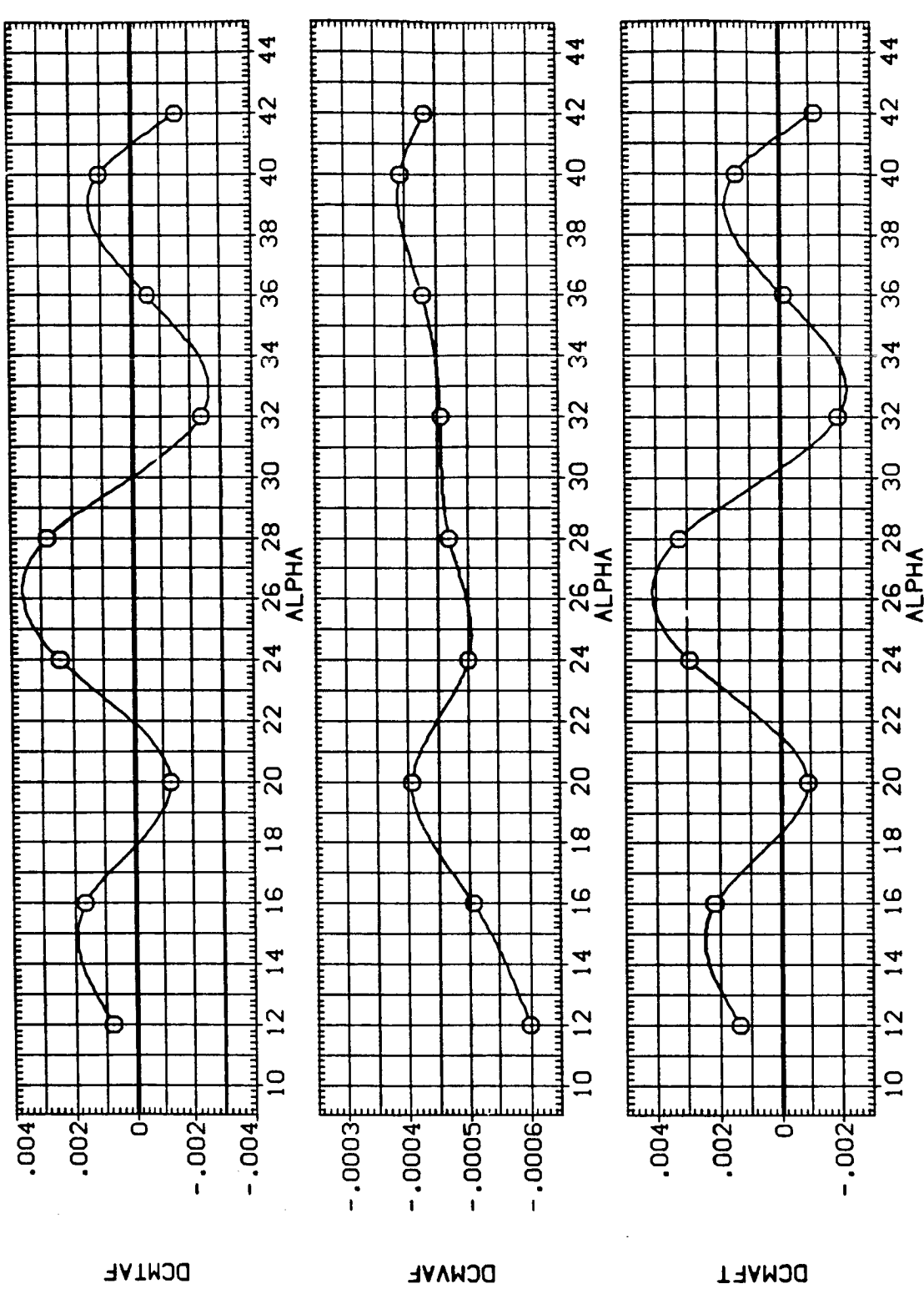


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ023)

SYMBOL	MACH	BETA	PARAMETRIC VALUES	
○	10.300	BOFLAP	5.000	ELEVON .000
		RUDDER	-11.700	SPOBRK 55.000
			.000	

REFERENCE INFORMATION	
SREF	2690.0000 SO.FT.
LREF	474.8000 IN.
BREF	936.6800 IN.
XMRP	1076.7000 IN.X0
YMRP	.0000 IN.Y0
ZMRP	375.0000 IN.Z0
SCALE	.0150

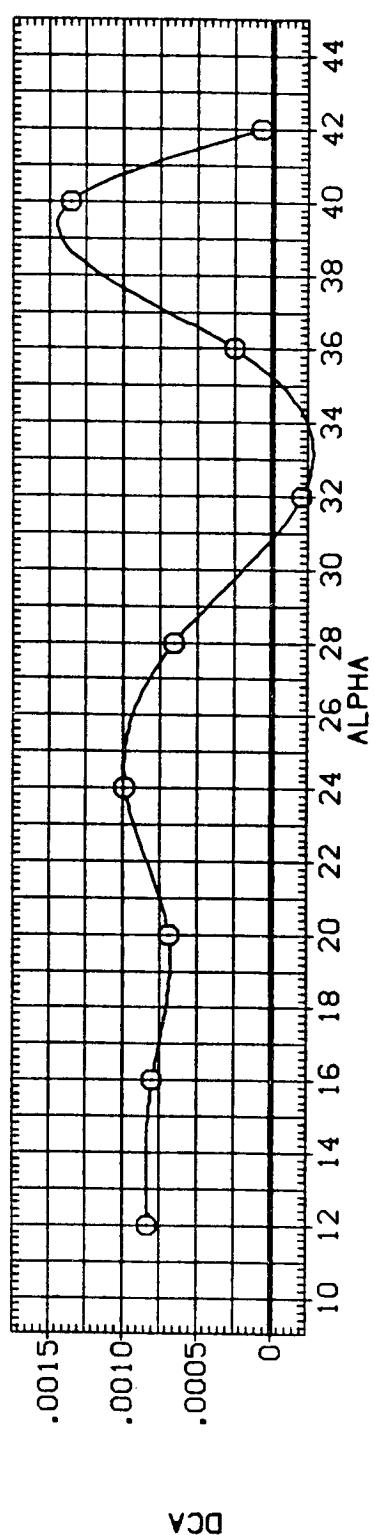
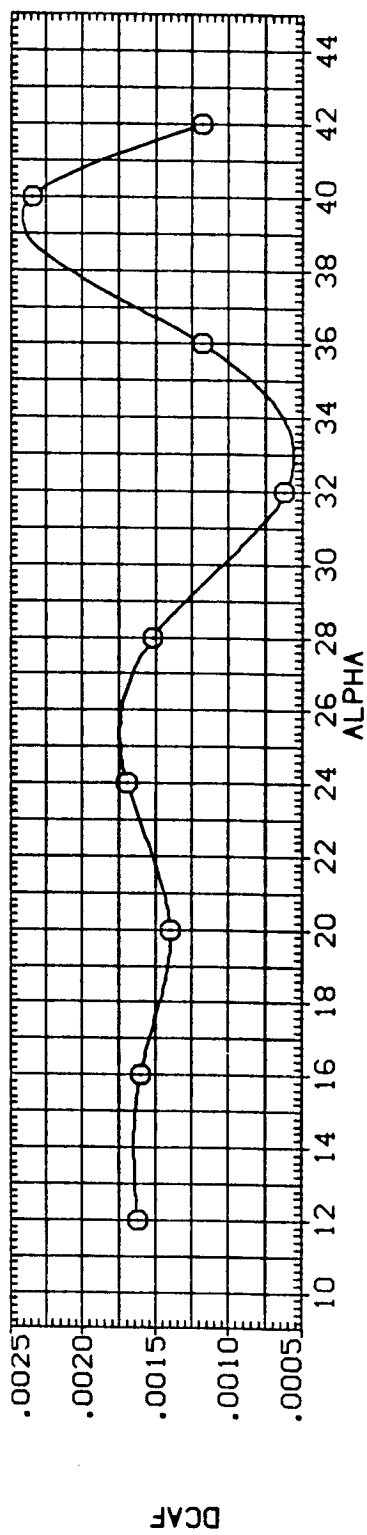
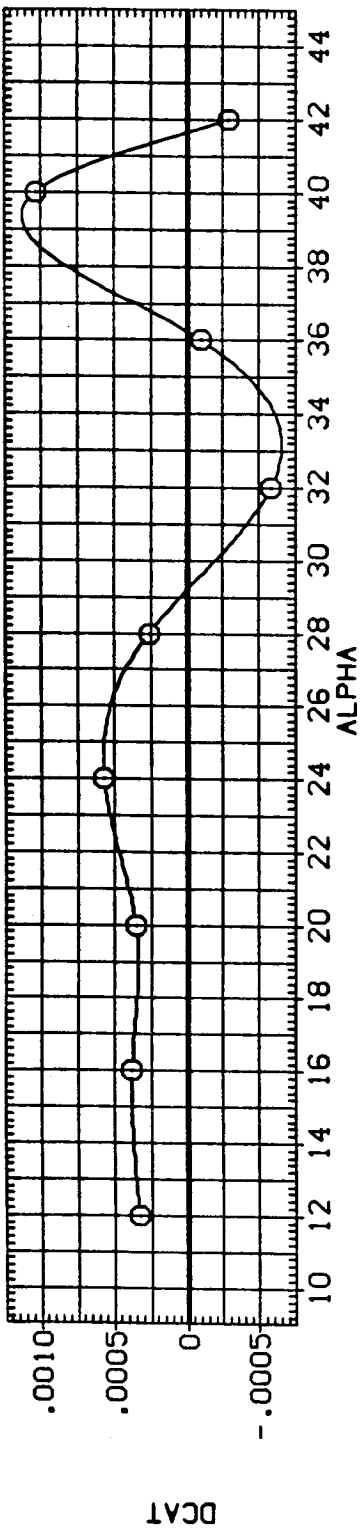


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ023)

SYMBOL MACH
 O 10.300

PARAMETRIC VALUES
 BETA 5.000 ELEVON .000
 BDFLAP -11.700 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XPRP 1076.7000 IN.X0
 YPRP .0000 IN.Y0
 ZPRP 375.0000 IN.Z0
 SCALE .0150

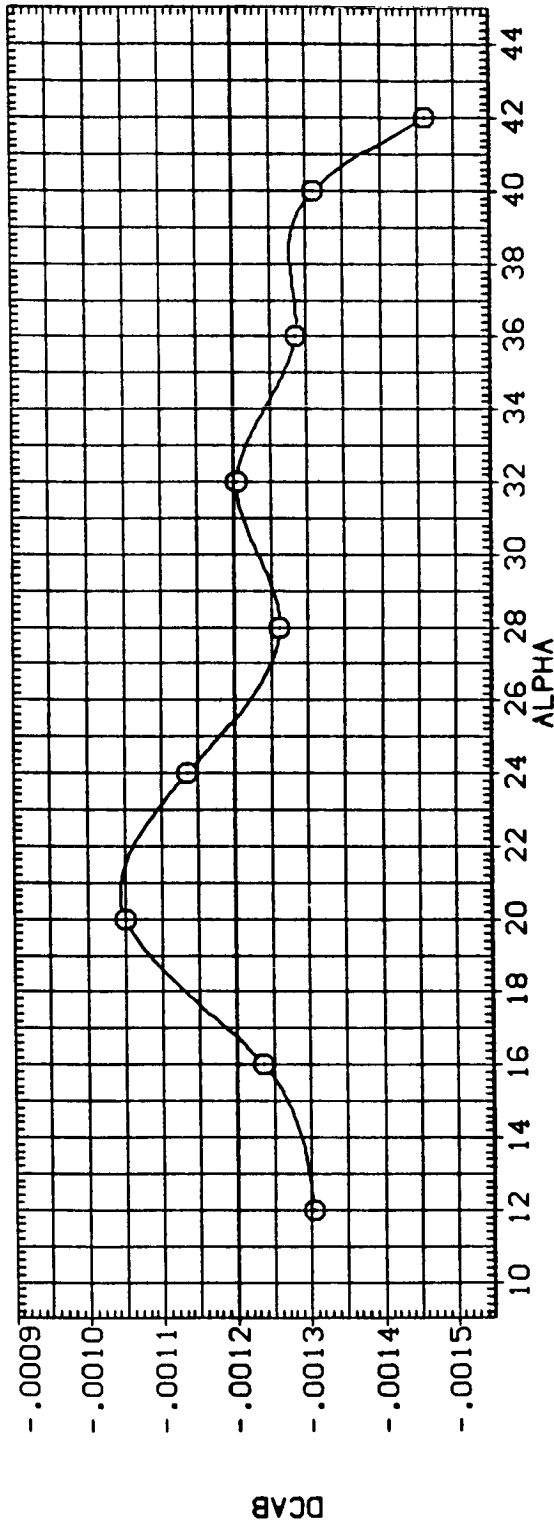
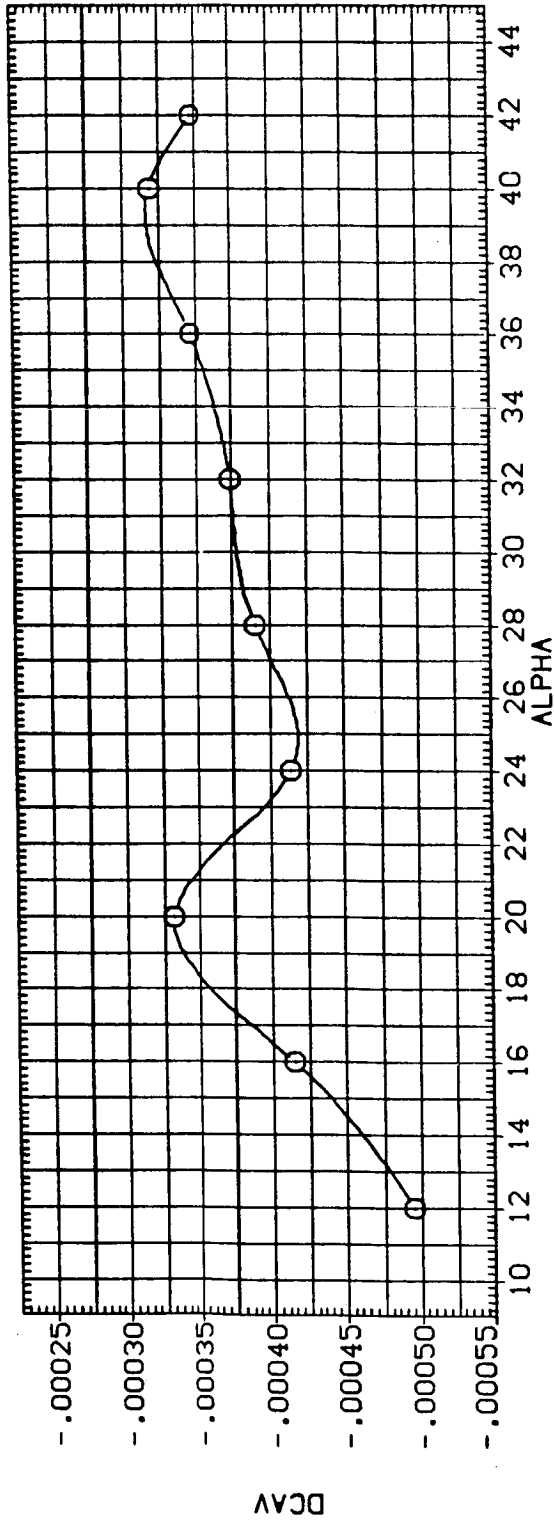
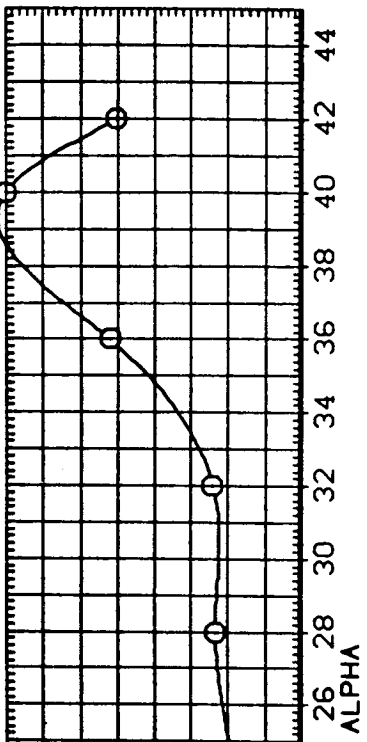


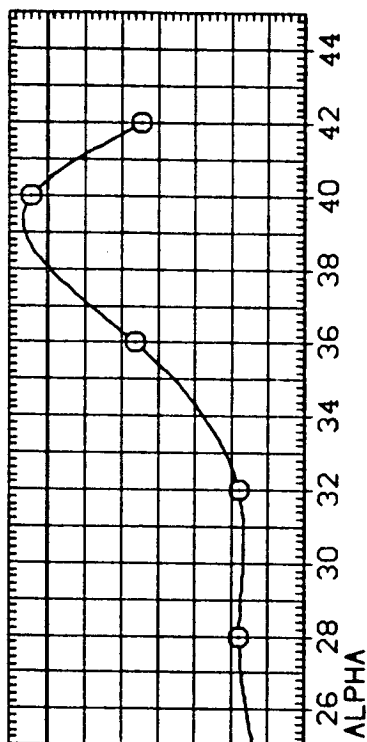
FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0023)

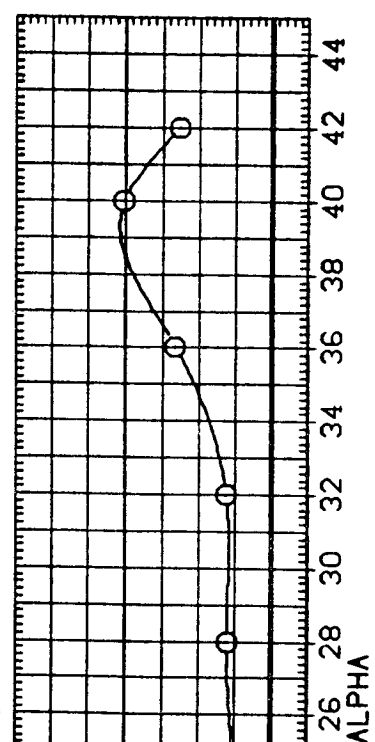
SYMBOL ○
 MACH 10.300
 BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000
 RUDDER .000
 REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



DCDT



DCCF



DCD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0023)

PARAMETRIC VALUES		REFERENCE INFORMATION	
MACH	10.300	SREF	2690.0000
BETA	5.000	LREF	474.8000
BOFLAP	-11.700	BREF	936.6800
RUDDER	.000	XMRP	1076.7000
		YMRP	.0000
		ZMRP	375.0000
		SCALE	.0150
			SO.FT.
			IN.
			IN.
			IN.
			IN.
			IN.

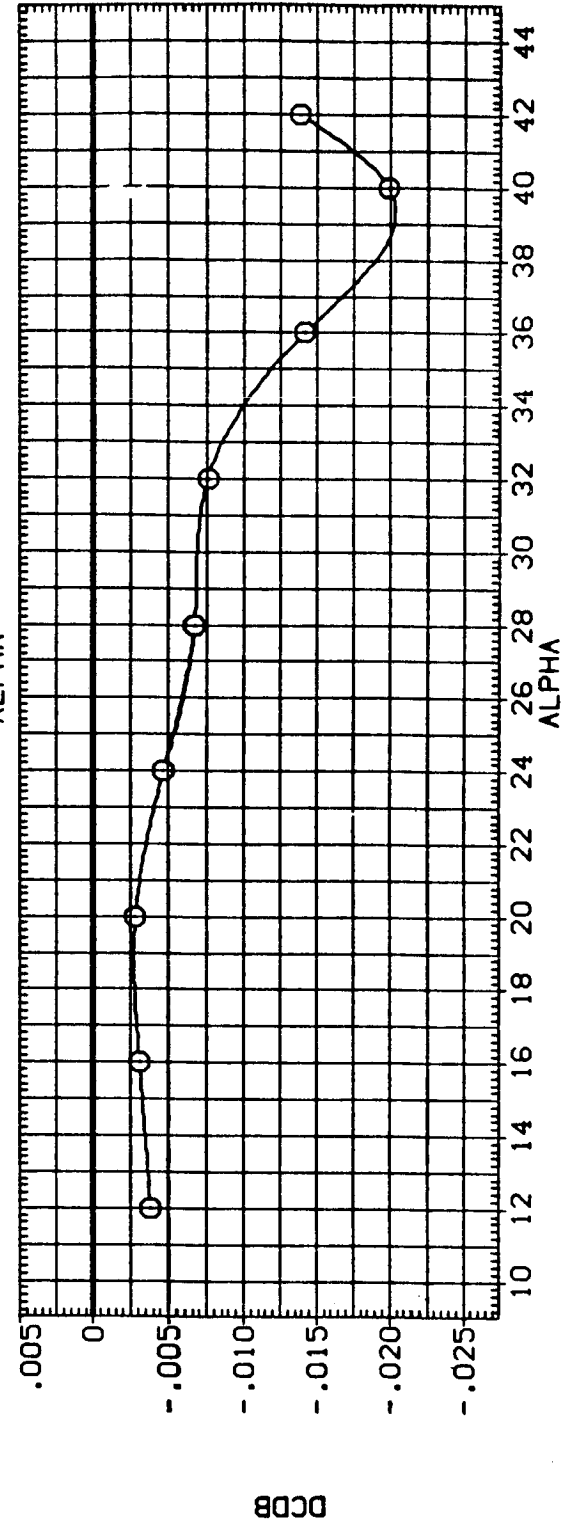
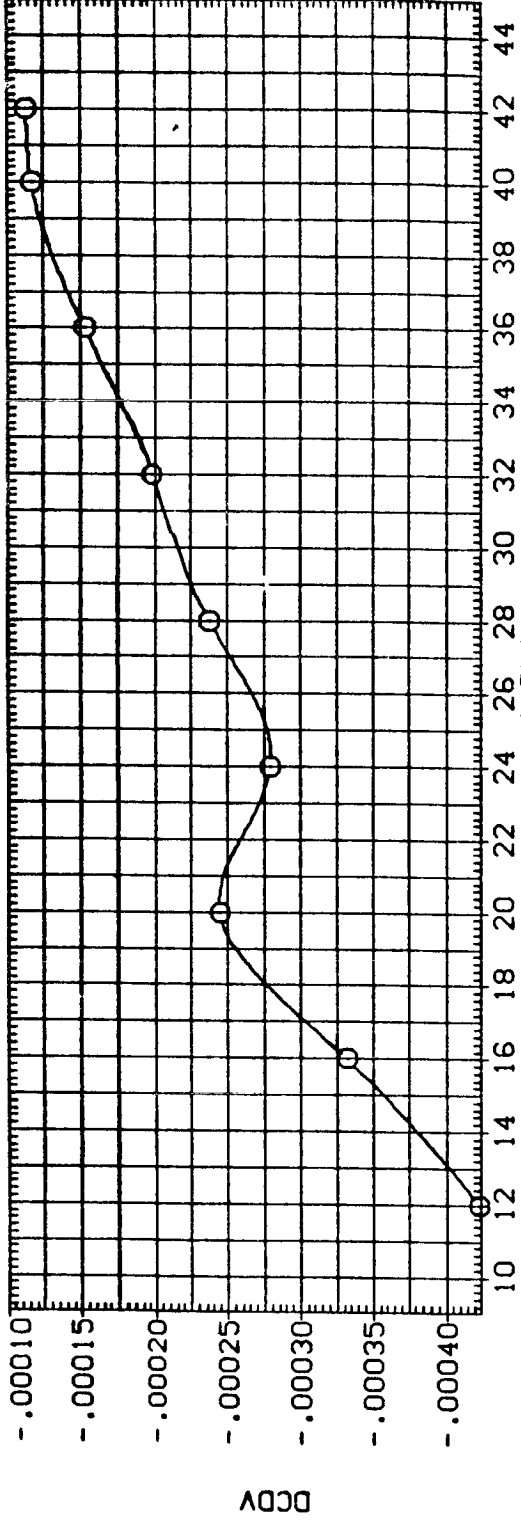


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



DATA SET SYMBOL (AEG007) (AEG023)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OA98 (011-M7+M14)
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA 5.000
 ELEVON .000
 BOFLAP -11.700
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT. IN.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150

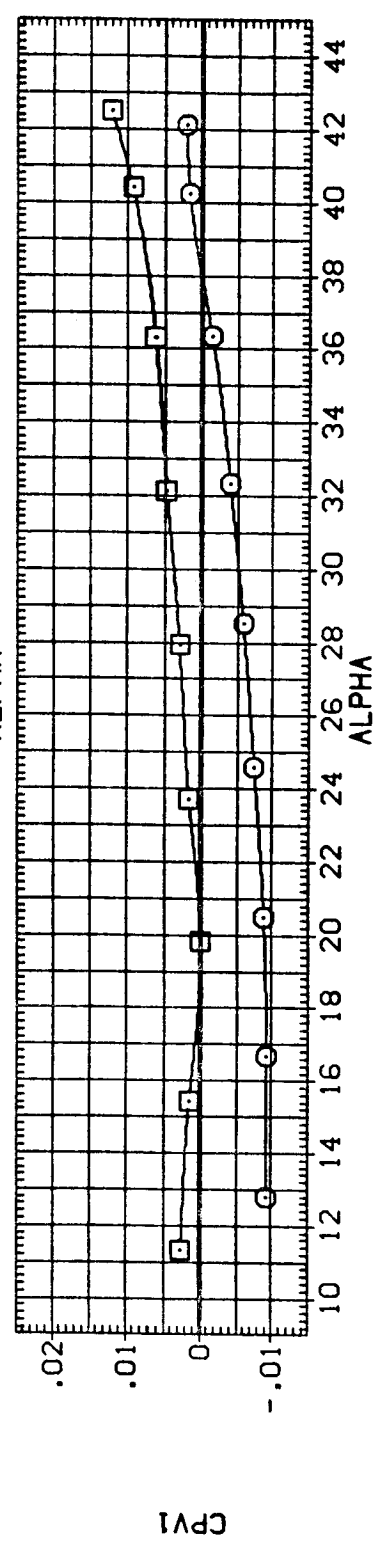
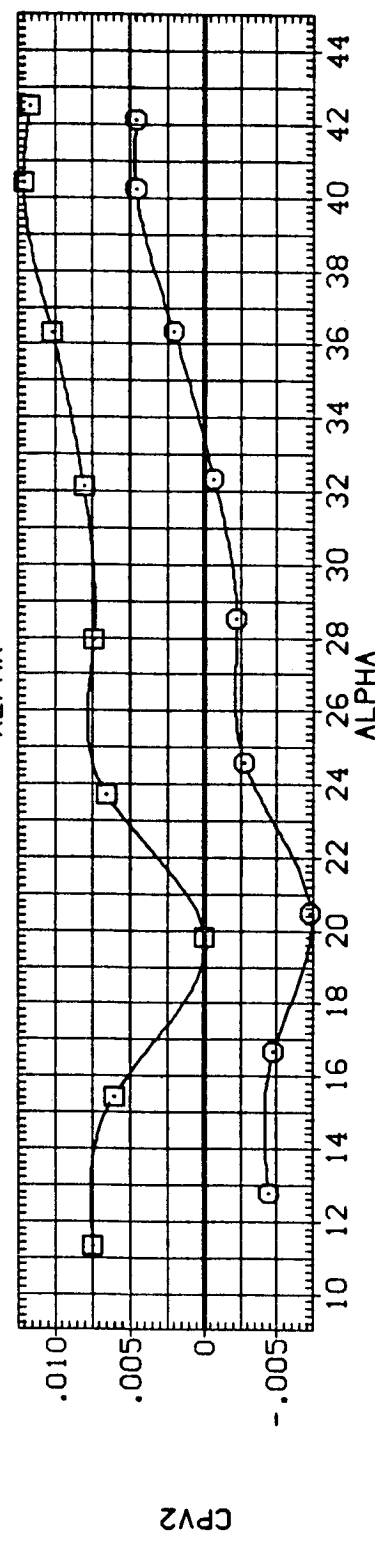
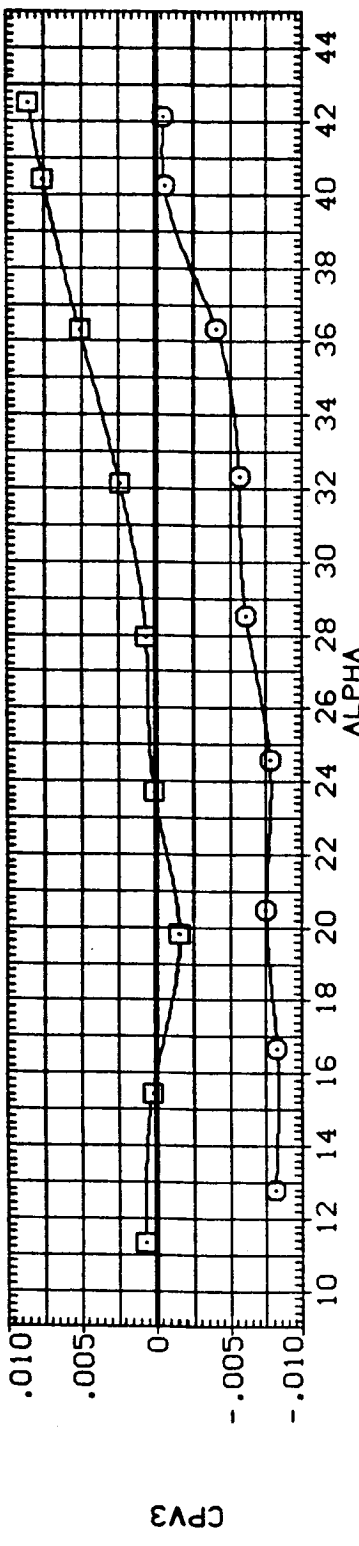


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AEG007) AMES 3.5-190 0A98 (011-M7+M14)
 (AEG023) AMES 3.5-190 0A98 (011-M7+M14-N24+DUPPY STING)

BETA ELEVON BOFLAP SPOBRK
 5.000 .000 -11.700 55.000
 5.000 .000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

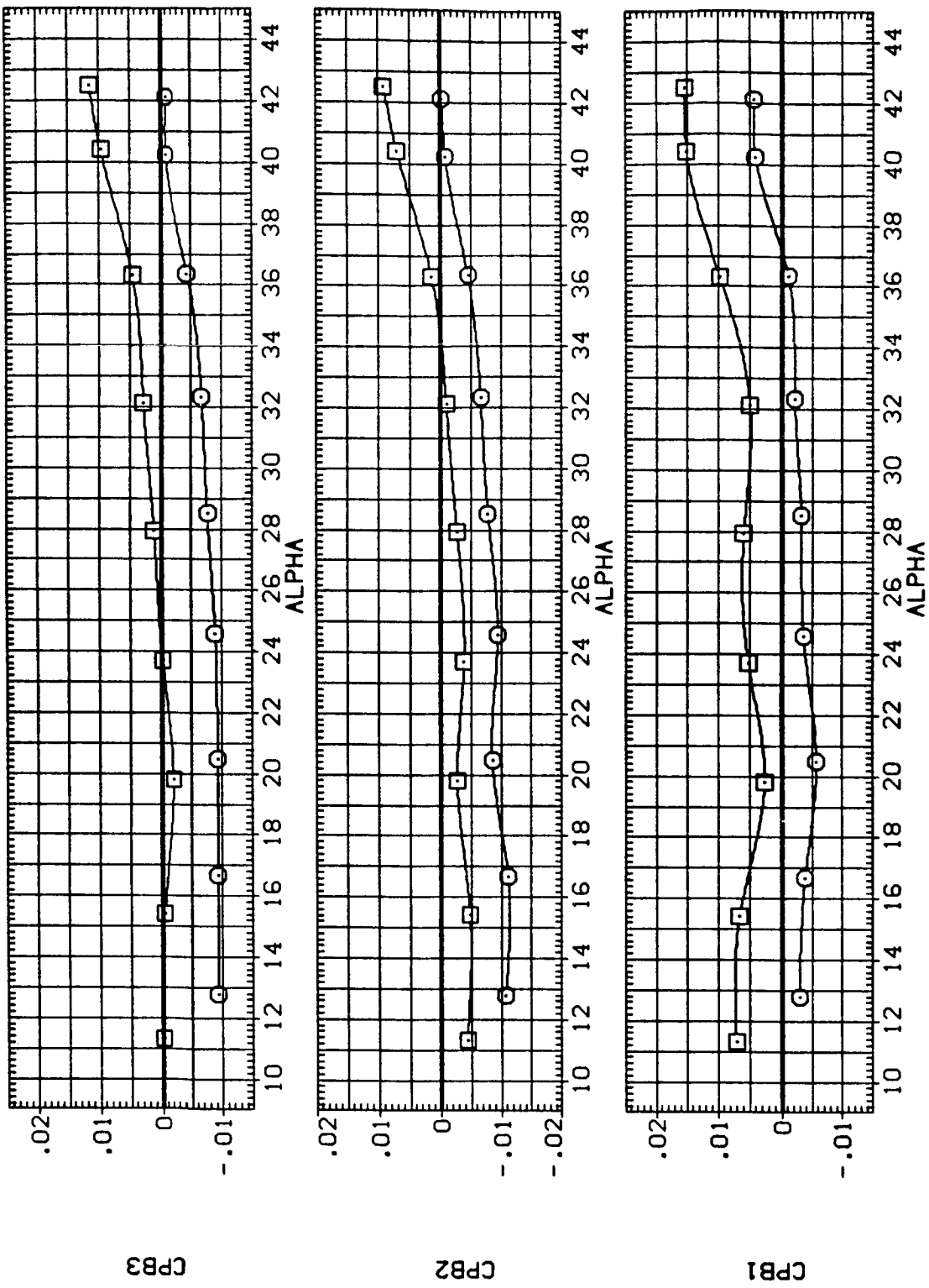


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (2E0007) (2E0001)

CONFIGURATION DESCRIPTION
 AMES 3.5-190 OAS8 (011-47+M14)
 AMES 3.5-190 OAS8 (011-47+M14)

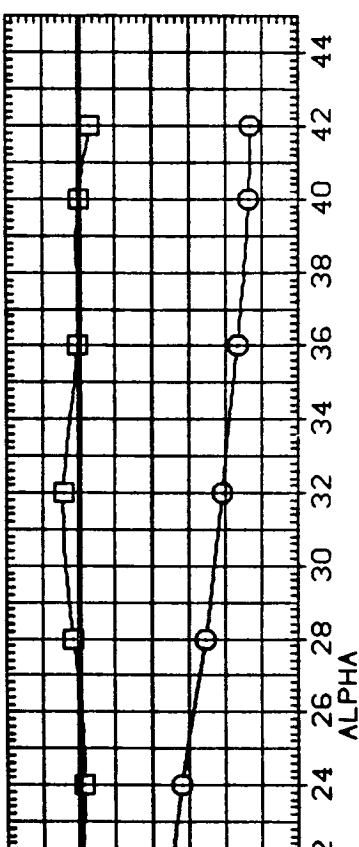
BETA 5.000
 .000

ELEVON .000
 .000

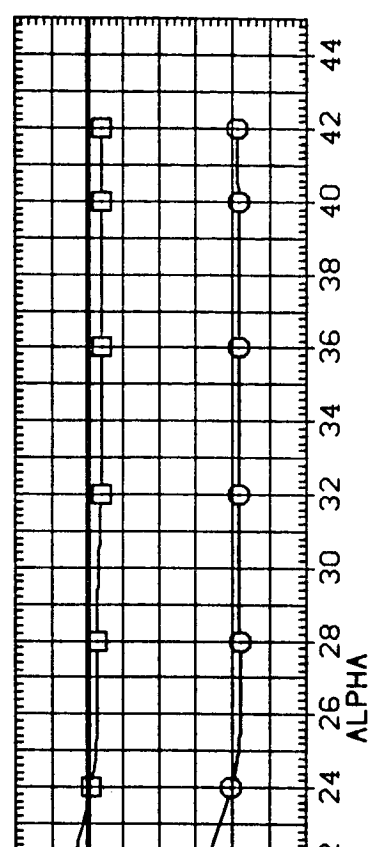
BOFLAP -11.700
 -11.700

SPOBRK 55.000
 55.000

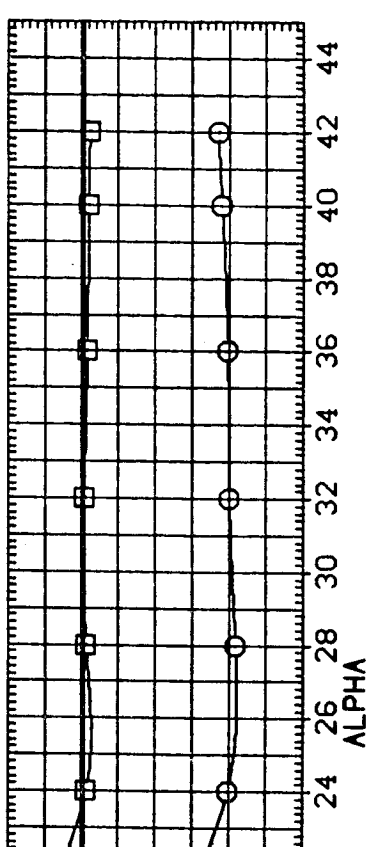
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0150



CBL



CYN



CY

FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

(3EQ007)

AMES 3.5-190 0A98 (011-M7+M14)

SYMBOL MACH DBETA BOFLAP RUDDER

0 10.300 5.000 -11.700 .000

PARAMETRIC VALUES ELEVON SPOBRK

.000 55.000

REFERENCE INFORMATION

SREF 2650.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XPRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

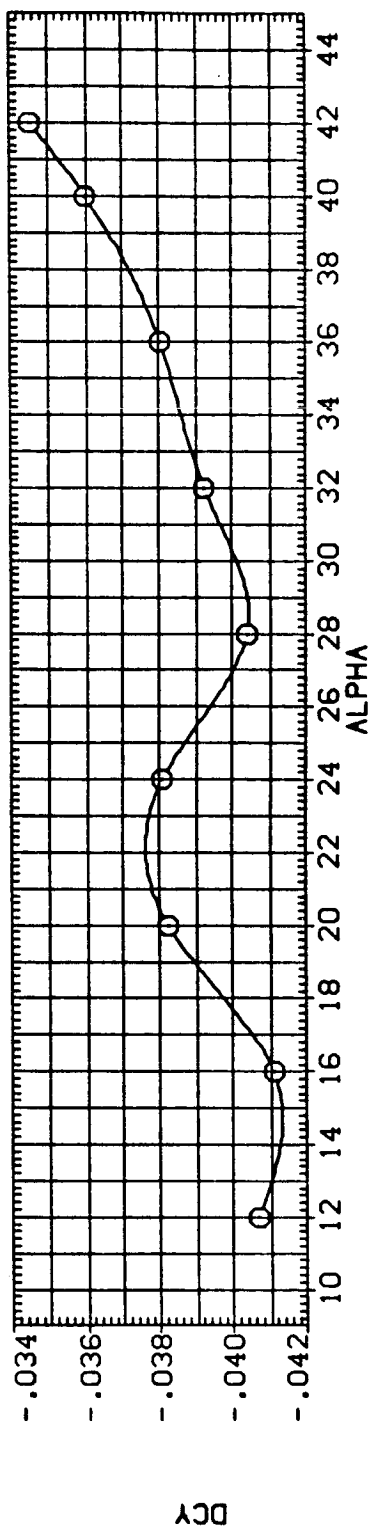
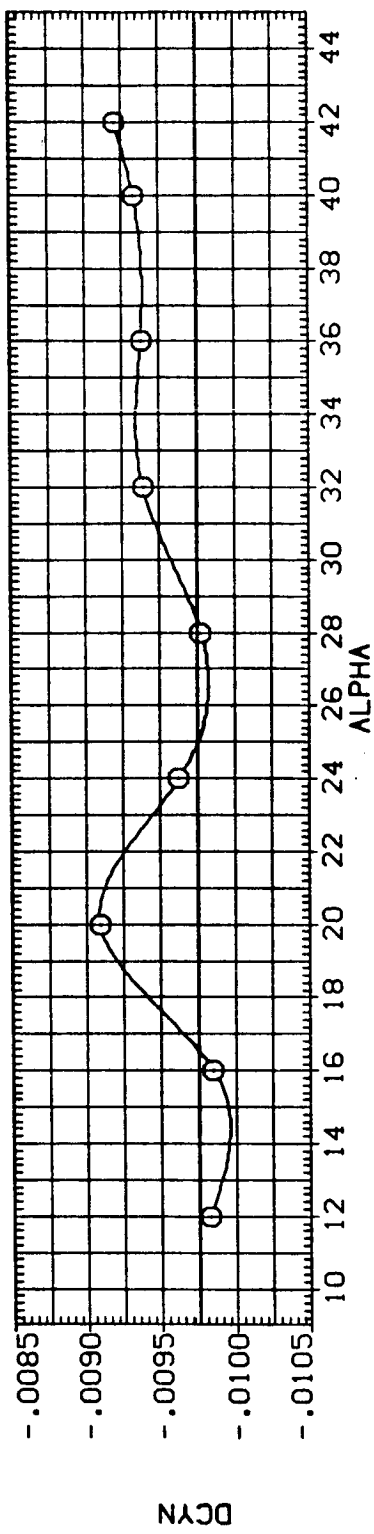
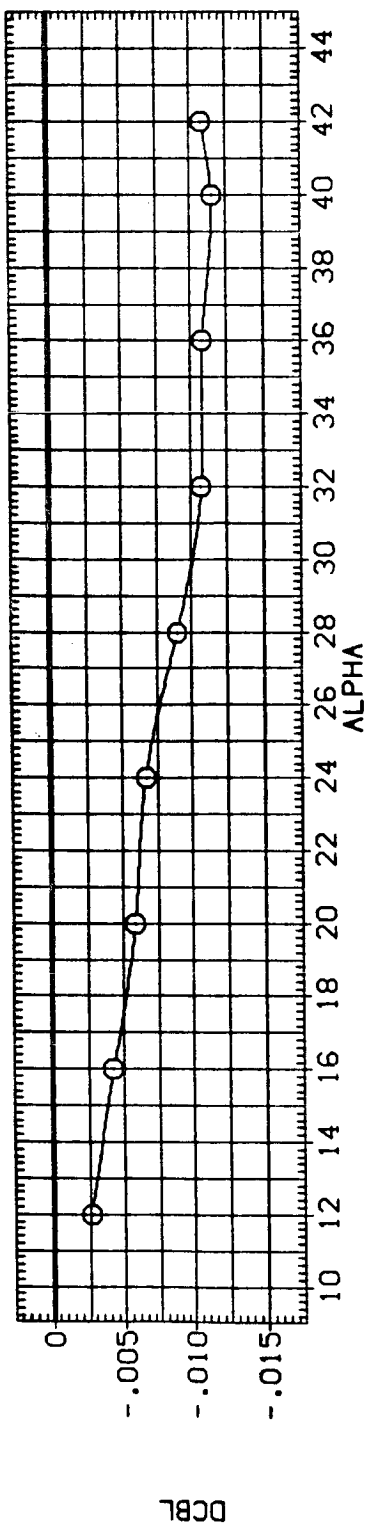


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (2E0008) AMES 3.5-190 0A98 (011-M7+M14)
 (2E0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK
 5.000 -40.000 -11.700 55.000
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

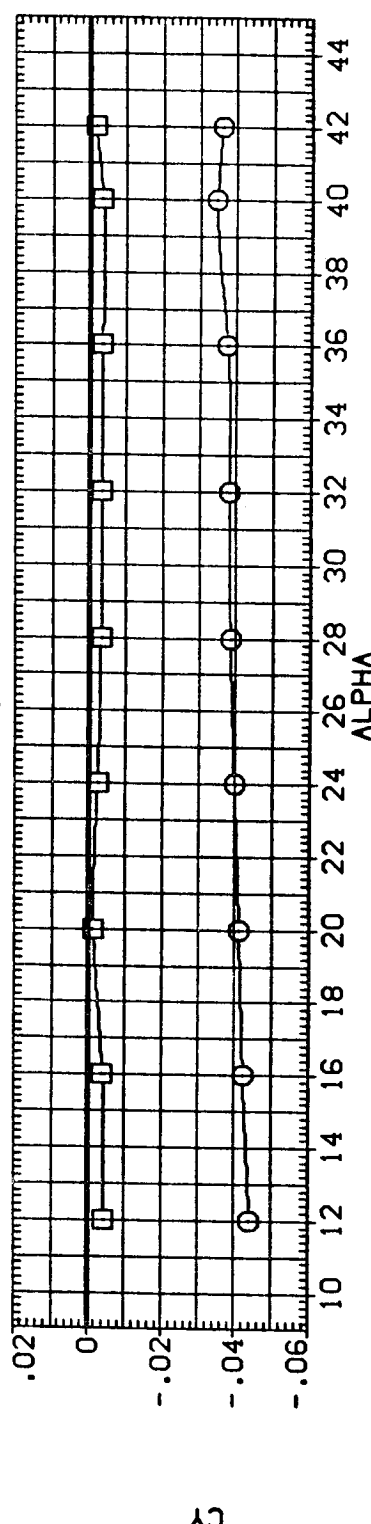
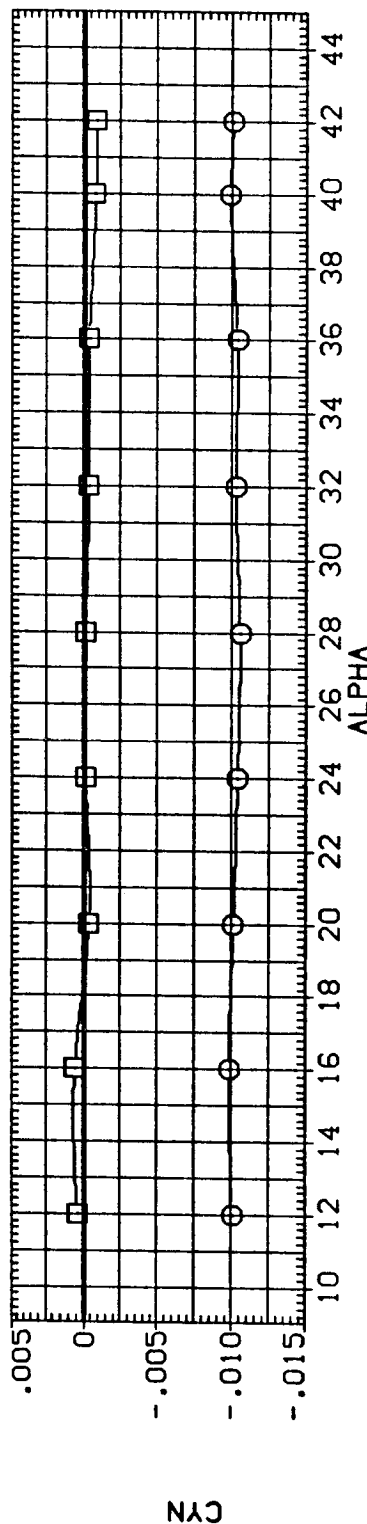
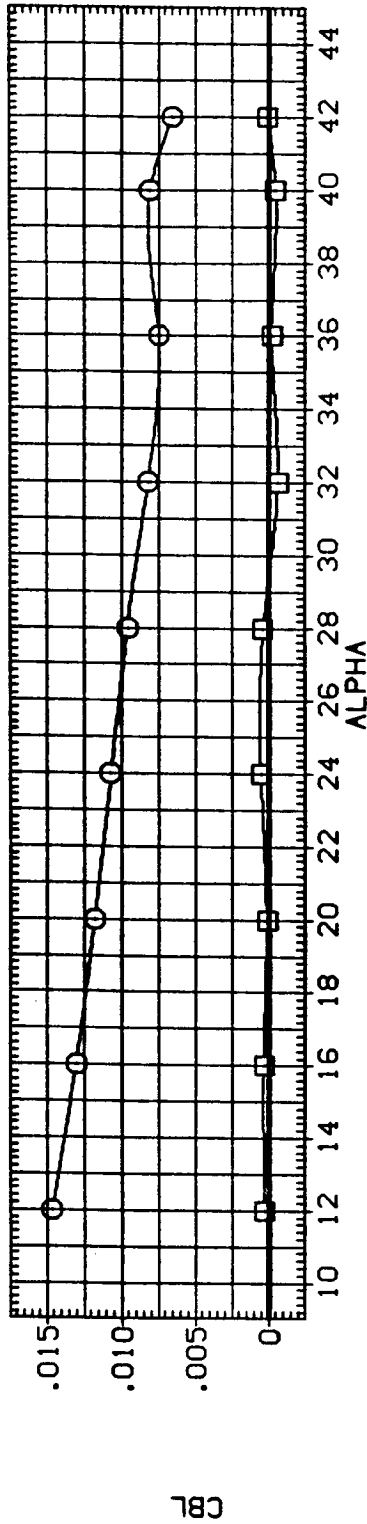


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

(3EQ008)

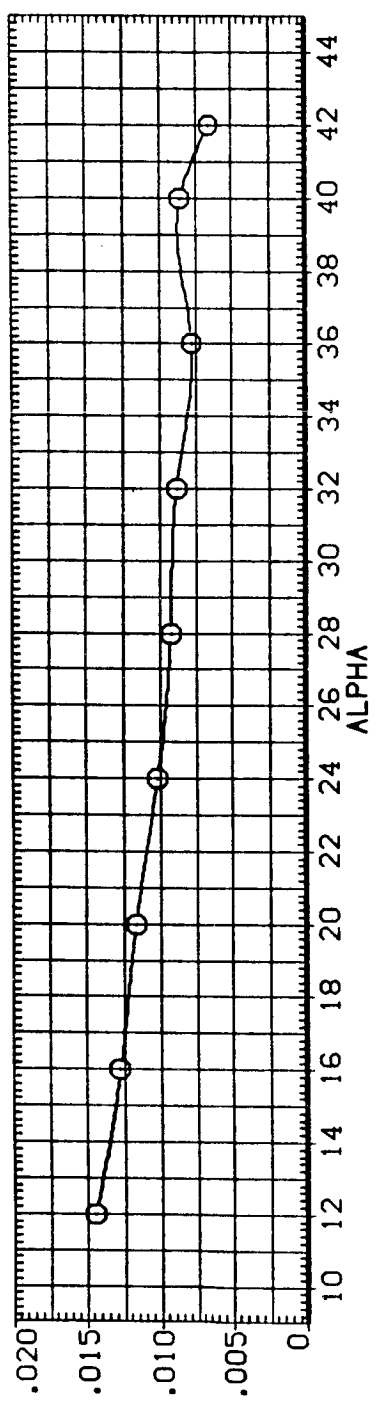
AMES 3.5-190 0A98 (011-M7+M14)

MACH 10.300
 DBETA 5.000
 BOFLAP -11.700
 RUDDER .000

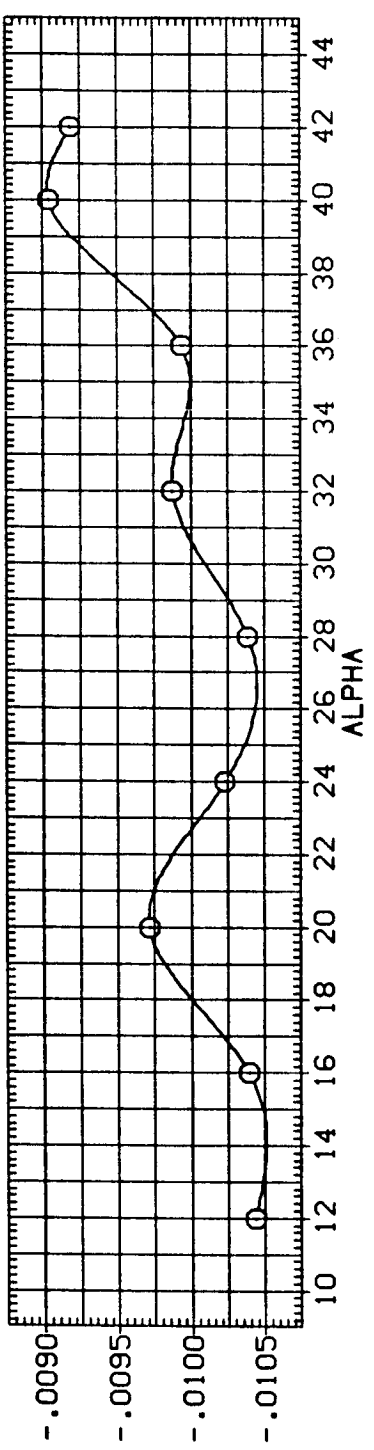
PARAMETRIC VALUES
 ELEVON -40.000
 SPOBRK 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

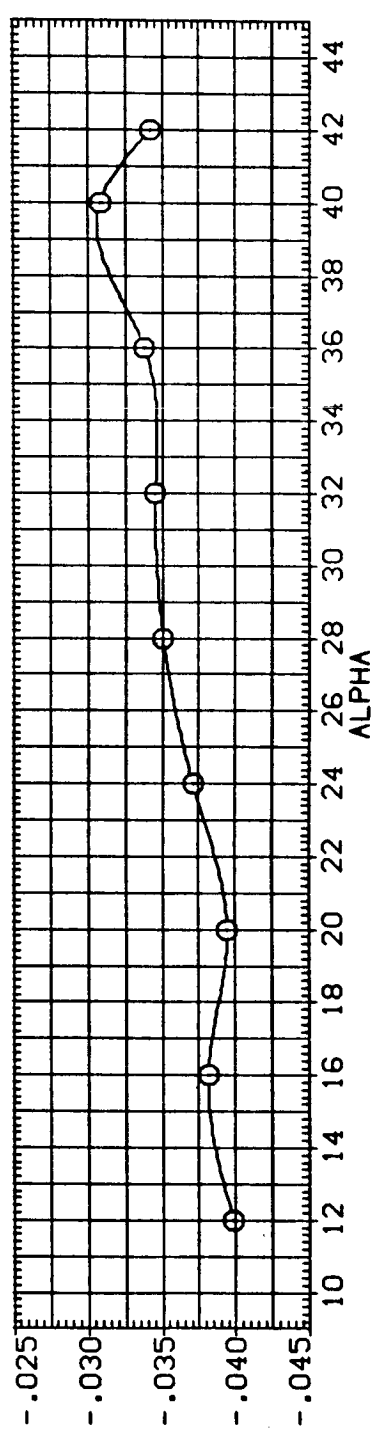
SYMBOL ○



DCBL



DCYN



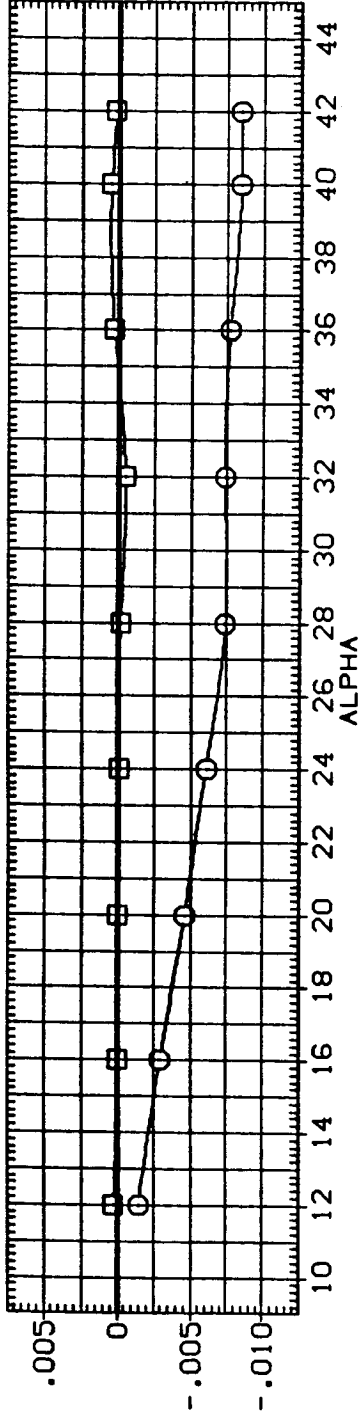
DCY

FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

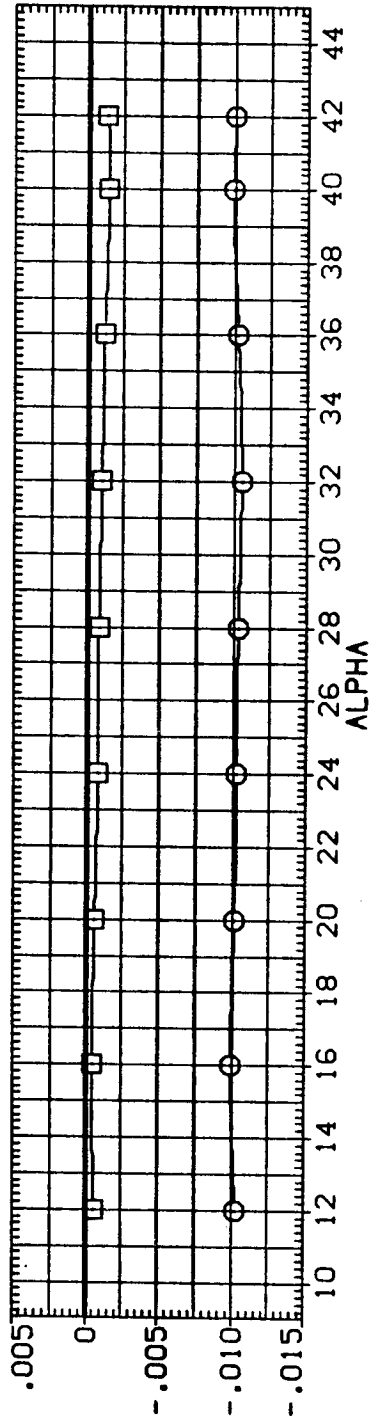
DATA SET SYMBOL (2E0012)
 (2E0011) AMES 3.5-190 0A98 (011-M7-H14-N24)
 AMES 3.5-190 0A98 (011-M7-H14-N24)

BETA 5.000
 .000 ELEVON -40.000
 -40.000 BOFLAP -11.700
 -11.700 SPOBRK 55.000
 55.000

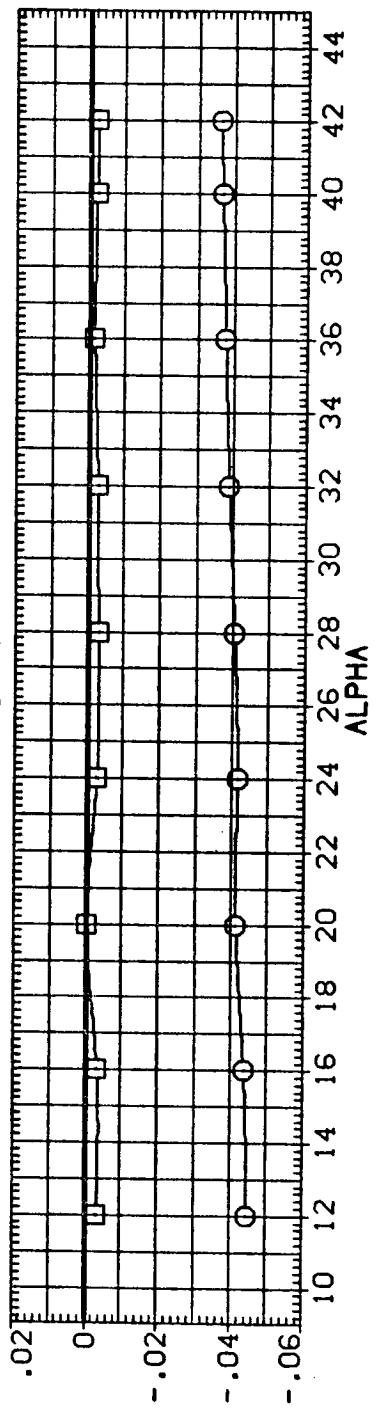
REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



CBL



CYN



CY

FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

(3E0012)

AMES 3.5-190 0A98 (011-M7+M14-N24)

SYMBOL MACH
 O 10.300

PARAMETRIC VALUES
 DBETA 5.000 ELEVON -40.000
 BOFLAP -11.700 SPOBRK 55.000
 RUDDER .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

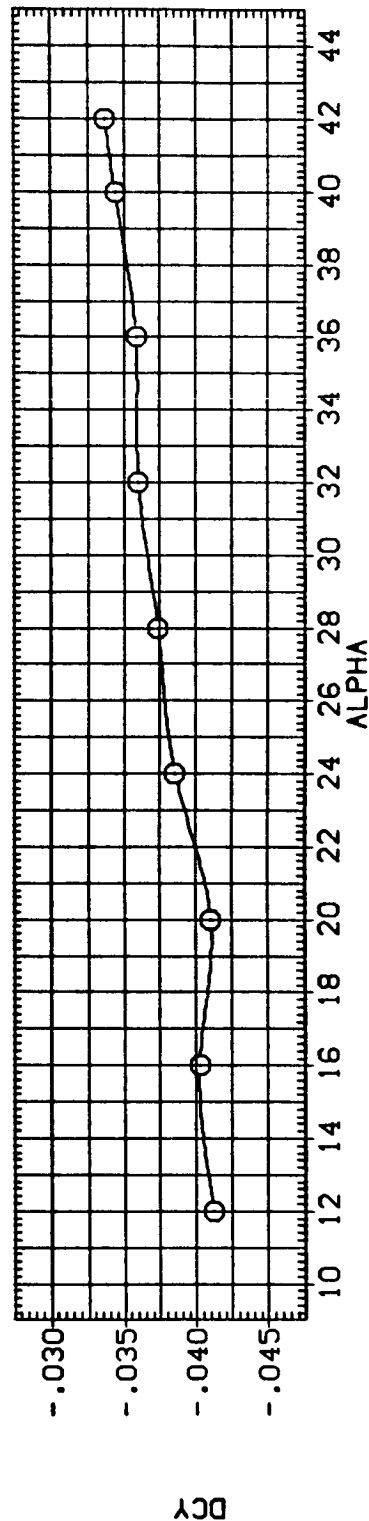
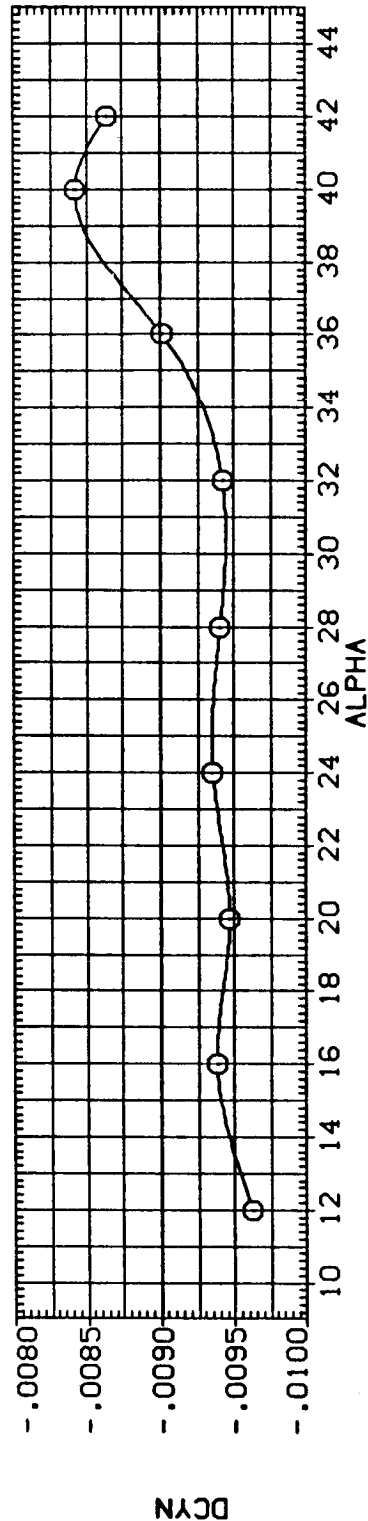
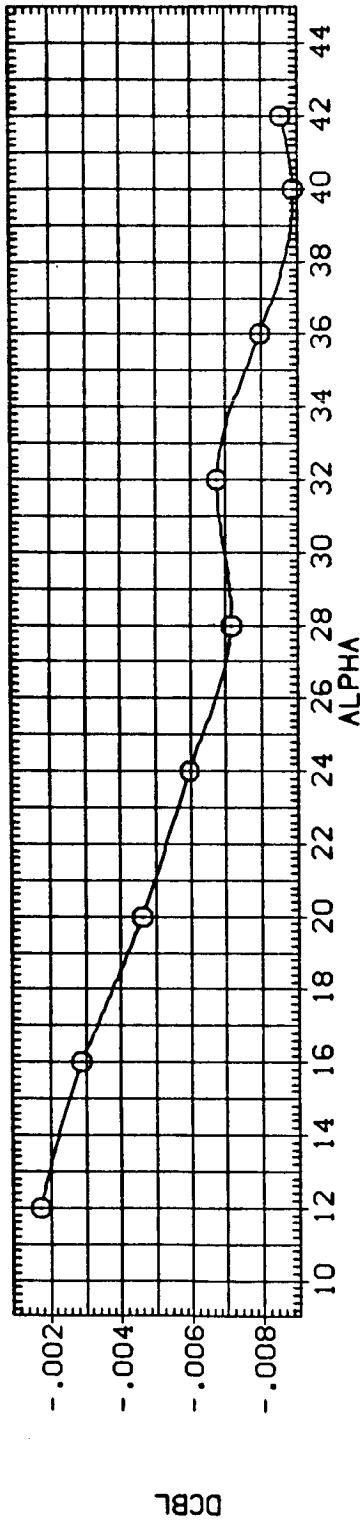
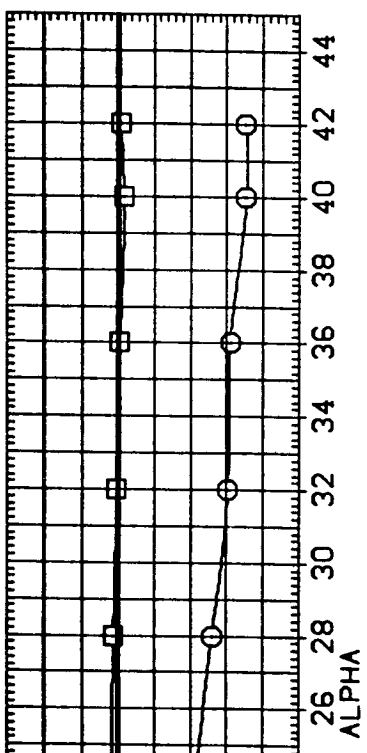


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

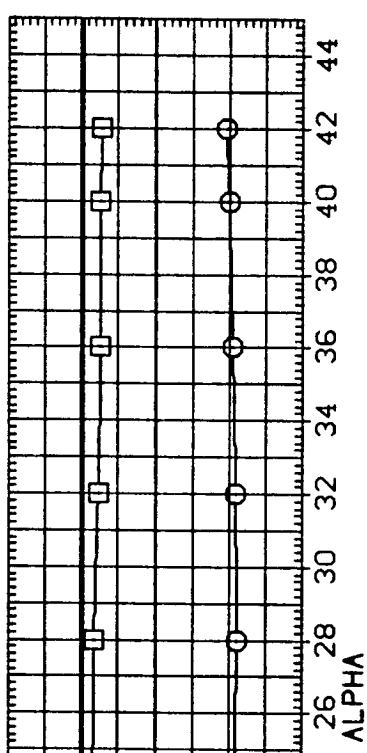
DATA SET SYMBOL (2E0024) (2E0019)

CONFIGURATION DESCRIPTION
 APES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)
 APES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

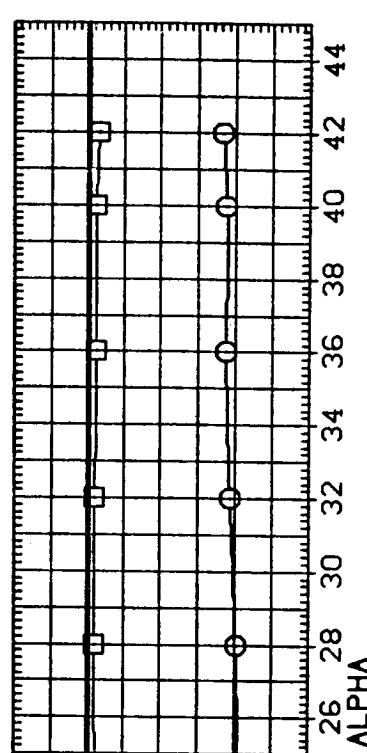
BETA 5.000
 ELEVON -40.000
 BOFLAP -11.700
 SPOBRK 55.000
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150



CBL



CYN



CY

FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL ○

MACH 10.300

DBETA 5.000

BOFLAP -11.700

RUDDER .000

PARAMETRIC VALUES

ELEVON -40.000

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

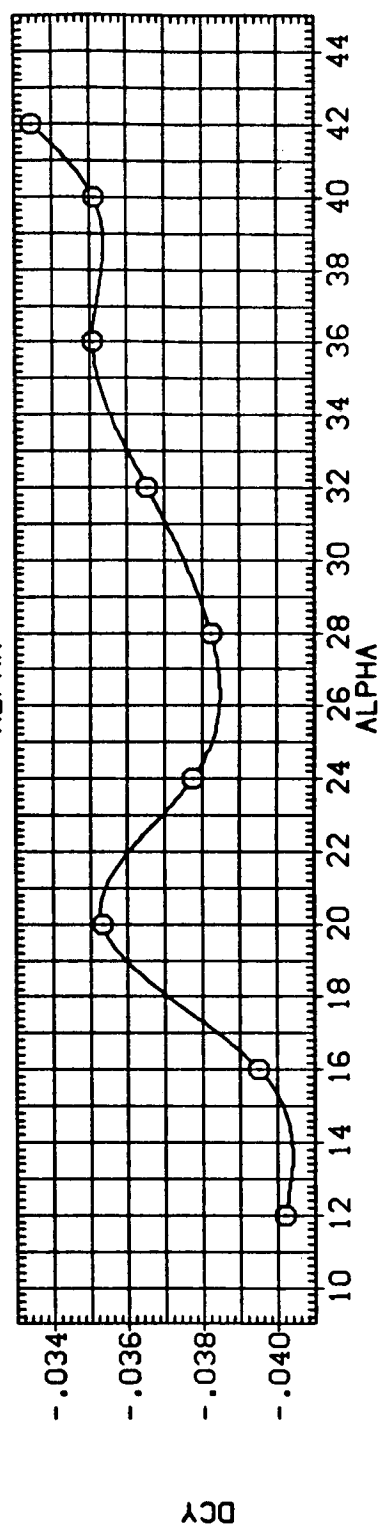
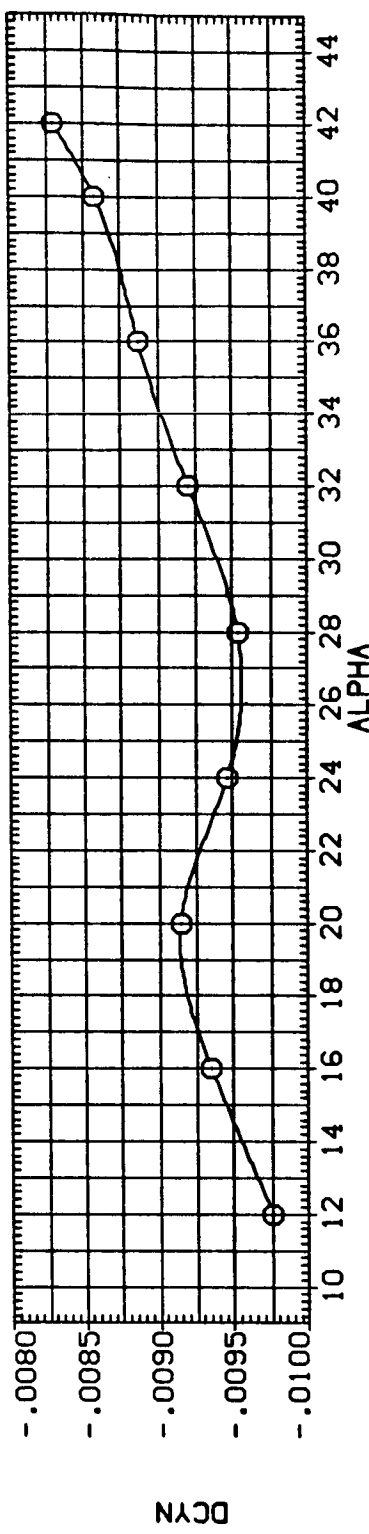
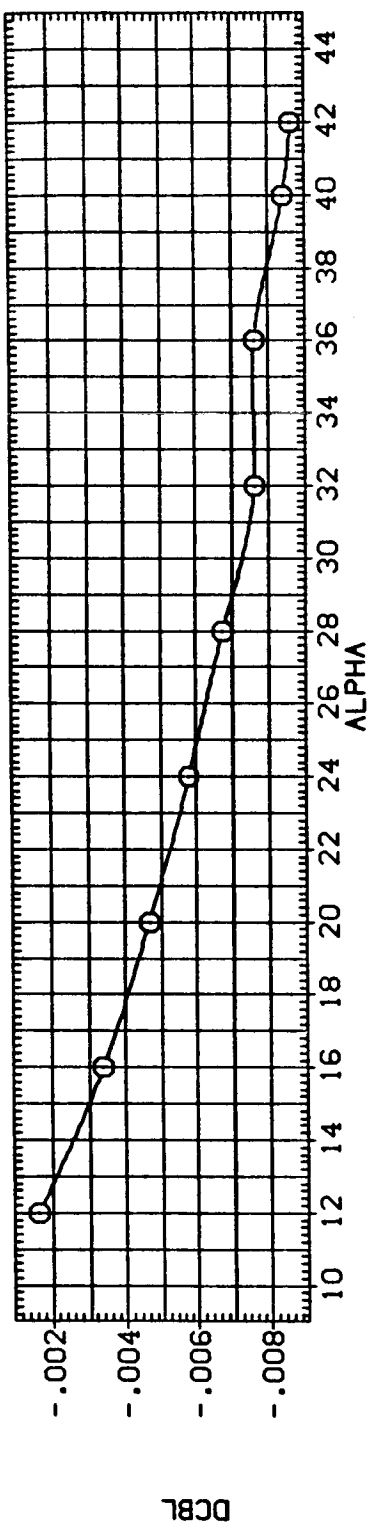


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(2E0023) \square AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)
 (2E0017) \circ AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDRBK

5.000 .000 -11.700 55.000
 .000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

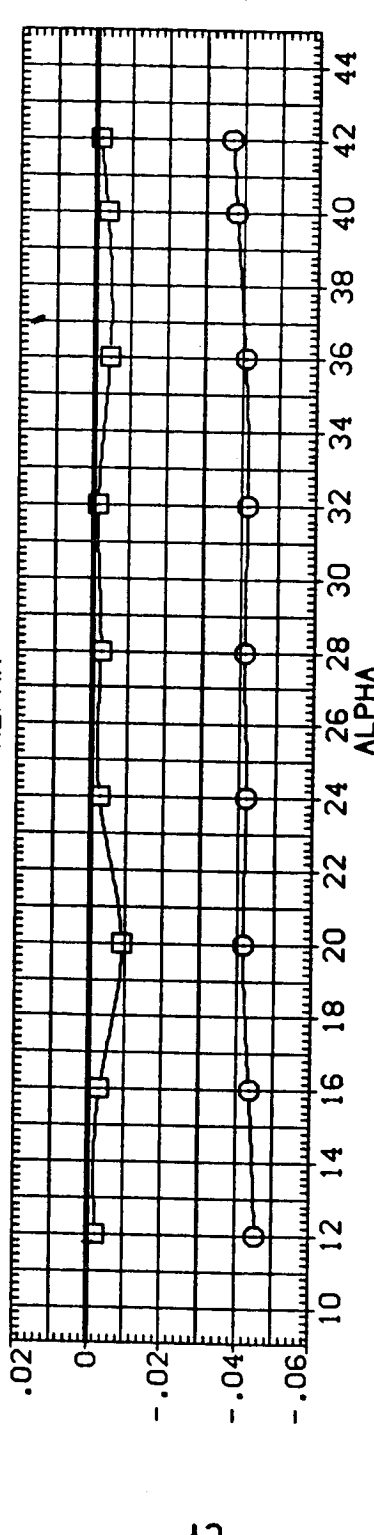
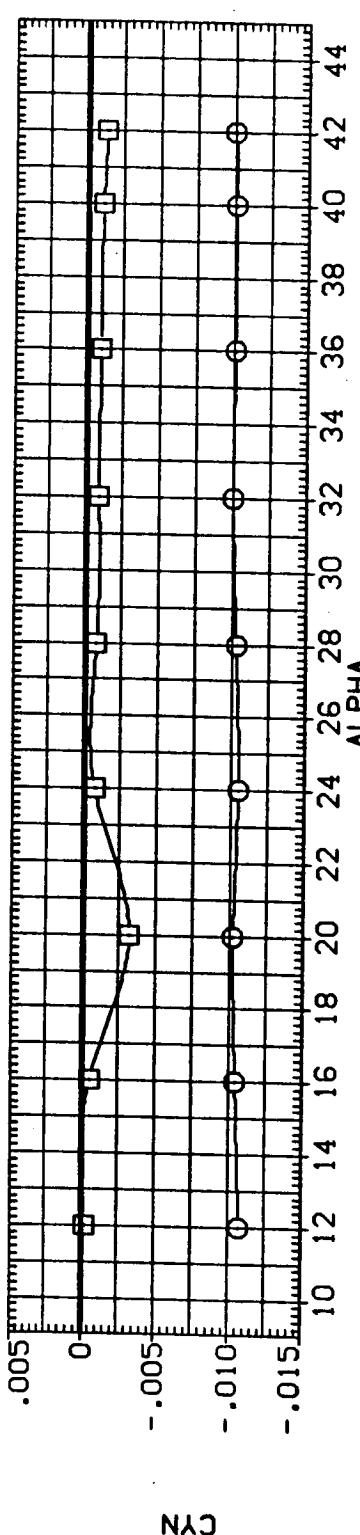
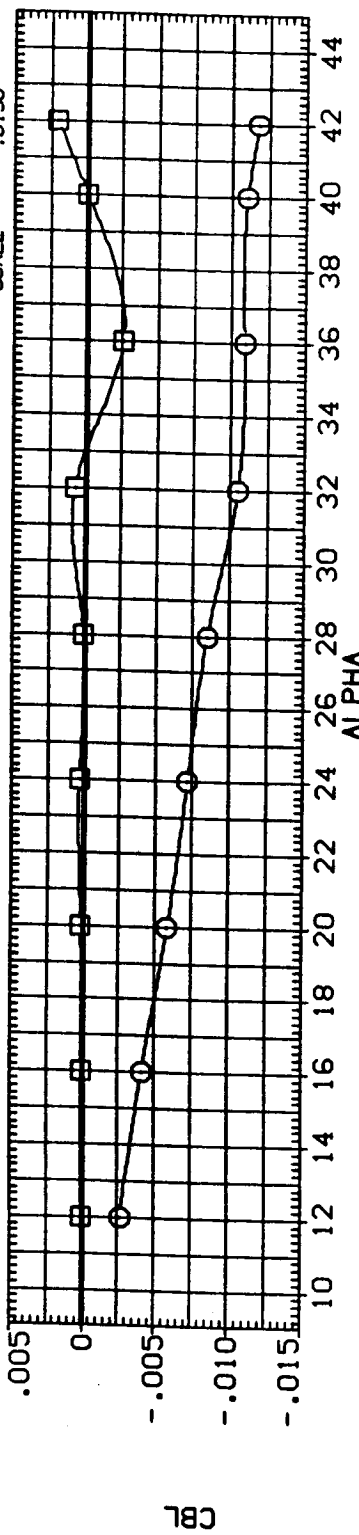


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL MACH DBETA BOFLAP RUDDER
 O 10.300 5.000 -11.700 .000

PARAMETRIC VALUES
 ELEVON SPOBRK
 .000 55.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.X0
 YMRP .0000 IN.Y0
 ZMRP 375.0000 IN.Z0
 SCALE .0150

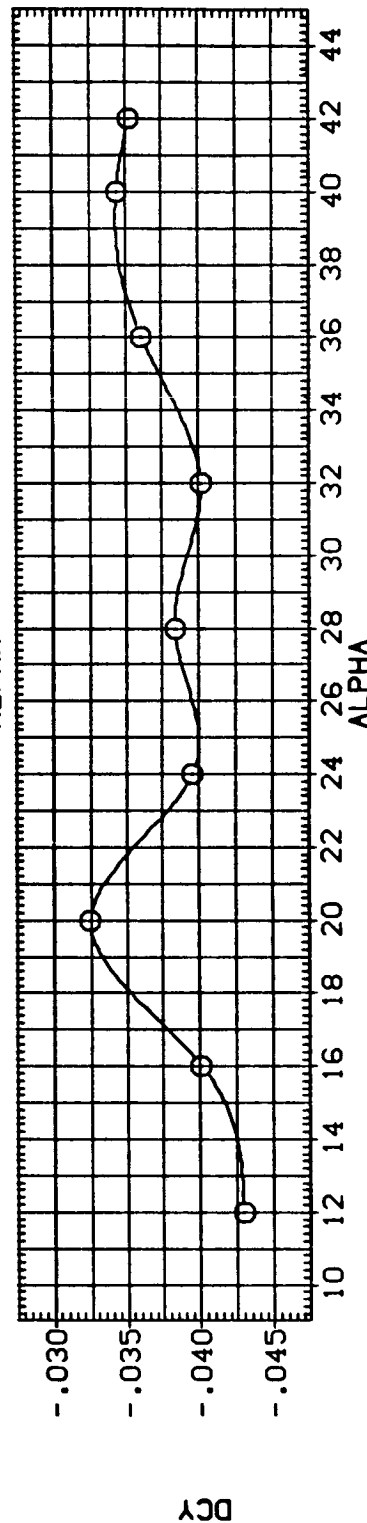
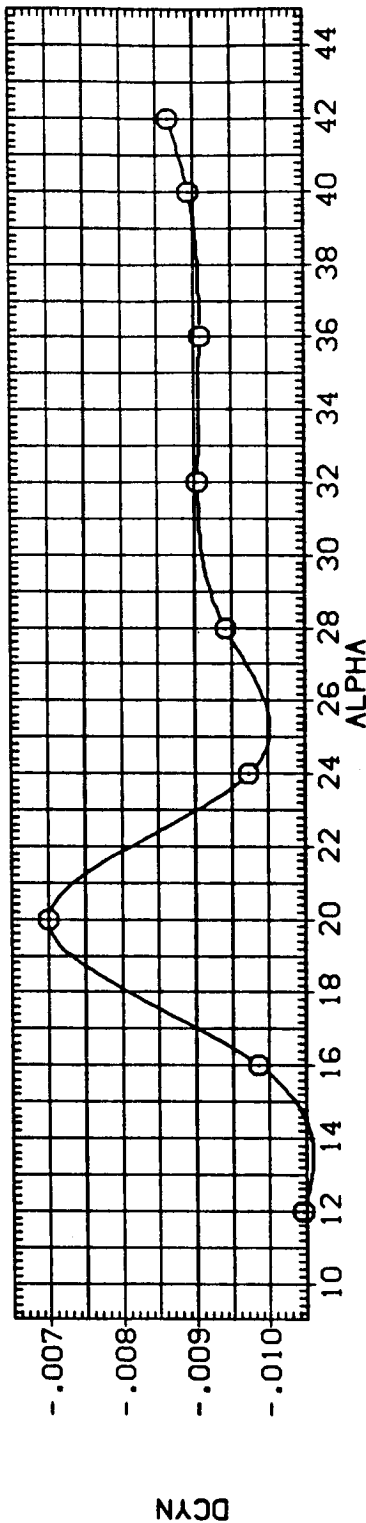
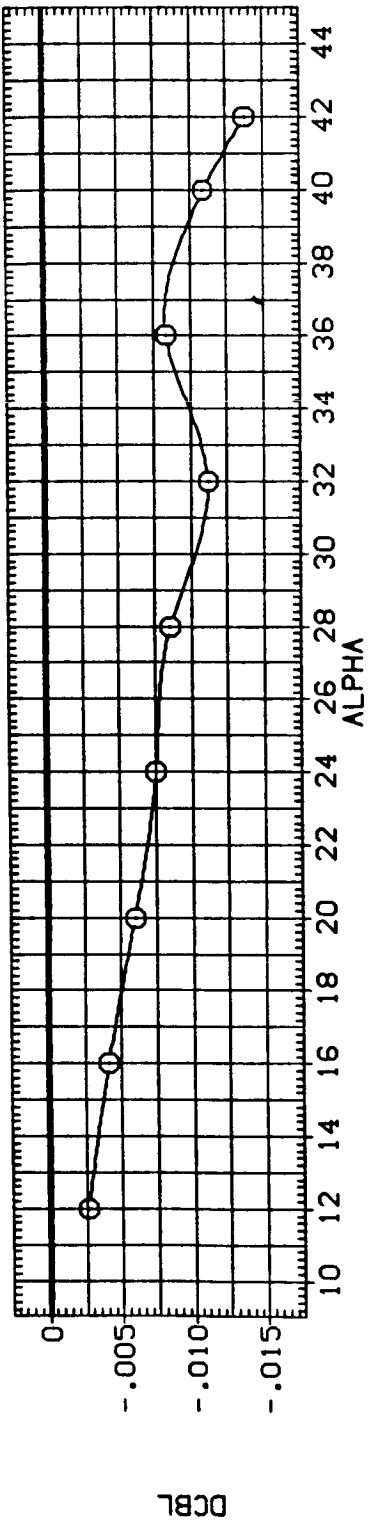


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

APPENDIX
TABULATED SOURCE DATA

Tabulations of plotted data are available on request from
Data Management Services



OASB TABULATED SOURCE DATA

AMES 3.5-190 OASB (011-M7-M14)

(REQ001) (03 AUG 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 1 / 0 RN/L = 1.71

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	12.012	.20428	-.00338	.05780	-.01859	-.00068	.00014	.18776	.09905
5.250	16.062	.31768	-.00332	.05728	-.01569	-.00080	.00013	.28943	.14293
5.250	20.112	.44480	-.00380	.05773	-.01574	-.00094	.00002	.39783	.20716
5.250	24.439	.59723	-.00424	.05902	-.01816	-.00118	.00008	.51930	.30082
5.250	28.446	.75218	-.00441	.06090	-.02214	-.00121	-.00015	.63236	.41183
5.250	32.500	.92109	-.00435	.06131	-.02832	-.00148	-.00018	.74390	.54661
5.250	36.706	1.09882	-.00432	.06023	-.03666	-.00170	-.00030	.84493	.70506
5.250	40.857	1.27903	-.00393	.05856	-.04811	-.00185	-.00026	.92908	.88100
5.250	42.803	1.36614	-.00400	.05655	-.05459	-.00196	-.00031	.96390	.96976

RUN NO. 25 / 0 RN/L = 1.50

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.731	.16560	-.00267	.05294	-.00736	-.00046	.00017	.14987	.08814
10.270	16.597	.26697	-.00228	.05333	-.00271	-.00034	.00016	.24254	.12793
10.270	20.395	.38004	-.00232	.05505	.00095	-.00049	.00021	.33704	.18404
10.270	24.562	.52612	-.00253	.05699	.00107	-.00056	-.00037	.45482	.27053
10.270	28.419	.67365	-.00076	.05876	-.00320	-.00063	.00046	.56450	.37228
10.270	32.271	.83147	-.00071	.05992	-.00511	-.00099	.00099	.67104	.49461
10.270	36.234	.98843	-.00150	.06023	-.01358	-.00098	.00005	.76974	.63874
10.270	40.188	1.17185	-.00189	.05941	-.02789	-.00101	-.00006	.85687	.80157
10.270	42.028	1.24349	-.00217	.05826	-.03068	-.00103	-.00083	.88468	.87579

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OASB TABULATED SOURCE DATA

(AEC001) (03 AUG 74)

AMES 3.5-190 OASB (011-M7+M14)

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 1/ 0 RN/L = 1.71

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	12.012	-.03419	-.04299	-.04171	-.04260	.01371	-.00352	-.03376	-.02780	-.03818
5.250	16.062	-.03681	-.04399	-.04286	-.04440	-.00634	-.00455	-.03711	-.02939	-.04050
5.250	20.112	-.03751	-.04375	-.04332	-.04497	-.02444	-.00554	-.03671	-.02965	-.03792
5.250	24.439	-.03649	-.04218	-.04191	-.04363	-.02878	-.00646	-.03653	-.03020	-.03671
5.250	28.446	-.03554	-.04169	-.04070	-.04324	-.02500	-.00775	-.03678	-.03078	-.03615
5.250	32.500	-.03555	-.04114	-.04041	-.04265	-.02194	-.00890	-.03688	-.03034	-.03427
5.250	36.706	-.03332	-.03819	-.03769	-.04003	-.02648	-.01046	-.03590	-.02842	-.03054
5.250	40.857	-.03181	-.03691	-.03657	-.03909	-.02991	-.01191	-.03665	-.02711	-.02754
5.250	42.803	-.03023	-.03534	-.03505	-.03767	-.03109	-.01319	-.03588	-.02806	-.02583

RUN NO. 25/ 0 RN/L = 1.50

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.731	-.00442	-.01185	-.01061	-.01280	-.00409	-.01731	-.00682	-.00328	-.00777
10.270	16.597	-.00531	-.01185	-.01067	-.01280	-.00692	-.01759	-.00783	-.00398	-.00771
10.270	20.395	-.00571	-.01111	-.01011	-.01272	-.00701	-.01756	-.00778	-.00299	-.00723
10.270	24.562	-.00493	-.01014	-.00921	-.01178	-.00513	-.01667	-.00727	-.00268	-.00646
10.270	28.419	-.00385	-.00844	-.00768	-.01024	-.00256	-.01590	-.00705	-.00230	-.00556
10.270	32.271	-.00228	-.00672	-.00711	-.01015	.00054	-.01463	-.00637	-.00047	-.00298
10.270	36.234	-.00257	-.00575	-.00592	-.00921	.00517	-.01322	-.00497	.00197	-.00069
10.270	40.188	.00106	-.00341	-.00344	-.00698	.00517	-.00927	-.00228	.00354	.00216
10.270	42.028	.00399	-.00068	-.00089	-.00493	-.00323	-.00697	-.00200	.00460	.00438

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0A98 TABULATED SOURCE DATA

(REQ002) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 938.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 2 / 0 RN/L = 1.78

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.900	.16926	-.00413	.05981	-.00771	-.00053	.00019	.17286	.09755
5.250	15.980	.30079	-.00421	.05893	-.00389	-.00077	.00018	.27294	.13946
5.250	19.998	.42479	-.00452	.05933	-.00089	-.00089	.00011	.37889	.20102
5.250	24.360	.57472	-.00532	.06052	.00137	-.00100	-.00007	.49859	.29219
5.250	28.449	.72711	-.00528	.06067	.00215	-.00115	-.00005	.61040	.39972
5.250	32.463	.88763	-.00551	.06008	.00040	-.00159	-.00002	.71685	.52724
5.250	36.657	1.06048	-.00530	.05811	-.00333	-.00176	-.00012	.81605	.67974
5.250	40.820	1.23314	-.00514	.05511	-.00965	-.00187	-.00018	.89716	.84780
5.250	42.771	1.31578	-.00516	.05314	-.01365	-.00187	-.00028	.92979	.93252

RUN NO. 24 / 0 RN/L = 1.57

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.705	.15710	-.00298	.05253	-.00165	-.00046	.00018	.14170	.08579
10.270	16.589	.25807	-.00281	.05358	.00691	-.00036	-.00001	.23204	.12503
10.270	20.372	.36740	-.00306	.05474	.01218	-.00044	-.00013	.32537	.17922
10.270	24.565	.50696	-.00249	.05644	.01648	-.00065	.00038	.43761	.26208
10.270	28.387	.65516	-.00143	.05849	.02029	-.00077	.00052	.54857	.36294
10.270	32.209	.79029	-.00195	.05764	.01649	-.00074	-.00045	.63795	.47000
10.270	36.184	.95620	-.00155	.05710	.01434	-.00101	.00041	.73807	.61061
10.270	40.080	1.12278	-.00284	.05586	.00803	-.00097	-.00146	.82312	.76565
10.270	41.914	1.20549	-.00279	.05468	.00546	-.00105	-.00108	.88055	.84597

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(AE0002) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7-M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000
 BDELAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 2/ 0 RN/L = 1.79

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.900	-.03585	-.04212	-.04069	-.04026	.01563	.01026	-.03210	-.02383	-.03581
5.250	15.980	-.03895	-.04360	-.04232	-.04239	-.00587	.00995	-.03585	-.02562	-.03832
5.250	19.998	-.03883	-.04291	-.04186	-.04258	-.02053	.00852	-.03403	-.02582	-.03637
5.250	24.360	-.03766	-.04012	-.03984	-.04091	-.02720	.00709	-.03435	-.02665	-.03420
5.250	28.449	-.03749	-.04002	-.03925	-.04071	-.02340	.00523	-.03504	-.02683	-.03404
5.250	32.463	-.03788	-.03985	-.03957	-.04091	-.02048	.00399	-.03571	-.02716	-.03341
5.250	36.657	-.03577	-.03772	-.03721	-.03901	-.02474	.00272	-.03519	-.02514	-.02893
5.250	40.820	-.03405	-.03534	-.03504	-.03736	-.02851	.00019	-.03473	-.02395	-.02582
5.250	42.771	-.03178	-.03298	-.03307	-.03561	-.02917	-.00083	-.03334	-.02510	-.02363

RUN NO. 24/ 0 RN/L = 1.57

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.705	.00268	-.00623	-.00319	-.00398	.00787	-.00499	.00086	.00342	-.00082
10.270	16.588	.00307	-.00508	-.00325	-.00415	.00291	-.00576	.00001	.00335	-.00064
10.270	20.372	.00229	-.00594	-.00313	-.00423	.00275	-.00576	-.00037	.00336	-.00085
10.270	24.565	.00211	-.00462	-.00205	-.00371	.00447	-.00537	-.00003	.00437	-.00041
10.270	28.387	.00250	-.00416	-.00126	-.00303	.00567	-.00499	.00003	.00500	.00104
10.270	32.209	.00289	-.00153	-.00001	-.00174	.01133	-.00332	.00103	.00582	.00320
10.270	36.184	.00417	-.00044	.00135	-.00131	.01665	-.00204	.00233	.00915	.00633
10.270	40.080	.00573	.00127	.00305	.00083	.01870	.00051	.00401	.01115	.00932
10.270	41.914	.00680	.00275	.00474	.00082	.01046	.00191	.00428	.01176	.01119

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REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BDELAP = -11.700 SPDPRK = 55.000
 RUDDER = .000

RUN NO. 3/ 0 RN/L = 1.85

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.988	.16942	-.00392	.07106	.00660	-.00052	.00043	.15097	.10470
5.250	16.045	.28285	-.00398	.06719	.01008	-.00069	.00039	.25327	.14275
5.250	20.005	.40335	-.00425	.06552	.01390	-.00086	.00021	.35659	.19955
5.250	24.423	.54944	-.00445	.06513	.01923	-.00111	.00022	.47335	.28649
5.250	28.345	.69239	-.00453	.06592	.02327	-.00134	.00017	.57808	.38675
5.250	32.501	.85133	-.00490	.06814	.02521	-.00166	.00022	.68139	.51490
5.250	36.708	1.01717	-.00539	.06623	.02760	-.00200	.00024	.77586	.66110
5.250	40.846	1.18152	-.00511	.06366	.02807	-.00199	.00016	.85215	.82090
5.250	42.815	1.25930	-.00535	.06319	.02761	-.00210	.00009	.88083	.90221

RUN NO. 23/ 0 RN/L = 1.47

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.701	.14433	-.00430	.05747	.00793	.00047	.00024	.12816	.08780
10.270	16.537	.24333	-.00386	.05689	.01574	.00048	.00028	.21707	.12380
10.270	20.372	.35461	-.00534	.05799	.02258	.00032	-.00022	.31224	.17781
10.270	24.464	.49074	-.00278	.06022	.03042	-.00009	.00053	.42174	.25804
10.270	28.407	.63011	-.00336	.06249	.03416	-.00018	.00023	.52451	.35473
10.270	32.181	.77107	-.00345	.06413	.03723	-.00038	-.00065	.61845	.46494
10.270	36.155	.93051	-.00367	.06551	.04353	-.00040	-.00025	.71266	.60187
10.270	40.102	1.08928	-.00357	.06579	.04335	-.00084	-.00049	.79082	.75198
10.270	41.882	1.15969	-.00195	.06474	.04087	-.00088	-.00001	.82019	.82241

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(AEQ003) (03 AUG 74)

AMES 3.5-190 OASB (011-M7-M14)

PARAMETRIC DATA

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO BETA = .000 ELEVON = -40.000
 LREF = 474.8000 IN. YMRP = .0000 IN.YO BOFLAP = -11.700 SPDBRK = 55.000
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO RUDDER = .000
 SCALE = .0150

RUN NO. 23/ 0 RV/L = 1.85

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.988	-.03843	-.04327	-.04206	-.04253	.01505	.00749	-.03410	-.03056	-.03967
5.250	16.045	-.04177	-.04450	-.04356	-.04419	-.00543	.00658	-.03867	-.03230	-.04132
5.250	20.005	-.04189	-.04419	-.04367	-.04429	-.02288	.00576	-.03735	-.03284	-.03979
5.250	24.423	-.04133	-.04291	-.04251	-.04302	-.02713	.00518	-.03778	-.03379	-.03947
5.250	28.345	-.04121	-.04343	-.04256	-.04355	-.02406	.00434	-.03857	-.03333	-.03840
5.250	32.501	-.04022	-.04269	-.04110	-.04229	-.02122	.00349	-.03829	-.03227	-.03482
5.250	36.708	-.03766	-.04042	-.03821	-.03946	-.02607	.00242	-.03728	-.02905	-.03057
5.250	40.846	-.03520	-.03834	-.03628	-.03711	-.03029	.00105	-.03651	-.02826	-.02764
5.250	42.815	-.03204	-.03520	-.03334	-.03429	-.03015	.00040	-.03423	-.02616	-.02466

RUN NO. 23/ 0 RV/L = 1.47

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.701	.00624	-.00484	-.00088	.00149	.01007	-.00121	.00213	.00474	.00094
10.270	16.537	.00567	-.00494	-.00120	.00090	.00606	-.00235	.00153	.00439	.00103
10.270	20.372	.00509	-.00460	-.00086	.00074	.00496	-.00234	.00125	.00471	.00103
10.270	24.464	.00526	-.00318	.00037	.00174	.00655	-.00121	.00201	.00612	.00256
10.270	28.407	.00555	-.00227	.00167	.00311	.00861	-.00121	.00201	.00643	.00330
10.270	32.181	.00674	.00020	.00344	.00501	.01240	-.00056	.00343	.00852	.00638
10.270	36.155	.00674	.00169	.00413	.00502	.01696	-.00124	.00405	.01035	.00785
10.270	40.102	.00691	.00325	.00563	.00571	.01971	.00278	.00506	.01180	.01057
10.270	41.882	.00975	.00453	.00693	.00576	.01297	.00646	.00570	.01175	.01171

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OASB TABULATED SOURCE DATA

(REQ004) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 4/ 0 RN/L = 1.57

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.987	.20411	-.00403	.06064	-.01626	-.00064	.00012	.18706	.10171
5.250	16.034	.32047	-.00369	.06033	-.01501	-.00079	.00006	.29134	.14650
5.250	20.033	.44844	-.00396	.06035	-.01461	-.00094	.00006	.40064	.21032
5.250	24.358	.60182	-.00472	.06056	-.01561	-.00101	.00004	.52327	.30338
5.250	28.462	.78158	-.00466	.06077	-.01901	-.00127	.00004	.64057	.41638
5.250	32.381	.92678	-.00471	.06118	-.02572	-.00150	.00004	.74990	.54801
5.250	36.694	1.11269	-.00446	.06103	-.03519	-.00161	-.00001	.85573	.71381
5.250	40.857	1.29394	-.00443	.05918	-.04657	-.00175	-.00001	.93995	.89122
5.250	42.821	1.37799	-.00425	.05873	-.05218	-.00181	.00002	.97081	.97970

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = -11.700 SPDBRK = 85.000
 RUDDER = .000

AMES 3.5-190 OASB (011-M7+M14)

(AE0004) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 4/ 0 RN/L = 1.57

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	CPB14	CPB15	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22	CPB23	CPB24	CPB25	CPB26	CPB27	CPB28	CPB29	CPB30	CPB31	CPB32	CPB33	CPB34	CPB35	CPB36	CPB37	CPB38	CPB39	CPB40	CPB41	CPB42	CPB43	CPB44	CPB45	CPB46	CPB47	CPB48	CPB49	CPB50	CPB51	CPB52	CPB53	CPB54	CPB55	CPB56	CPB57	CPB58	CPB59	CPB60	CPB61	CPB62	CPB63	CPB64	CPB65	CPB66	CPB67	CPB68	CPB69	CPB70	CPB71	CPB72	CPB73	CPB74	CPB75	CPB76	CPB77	CPB78	CPB79	CPB80	CPB81	CPB82	CPB83	CPB84	CPB85	CPB86	CPB87	CPB88	CPB89	CPB90	CPB91	CPB92	CPB93	CPB94	CPB95	CPB96	CPB97	CPB98	CPB99	CPB100	CPB101	CPB102	CPB103	CPB104	CPB105	CPB106	CPB107	CPB108	CPB109	CPB110	CPB111	CPB112	CPB113	CPB114	CPB115	CPB116	CPB117	CPB118	CPB119	CPB120	CPB121	CPB122	CPB123	CPB124	CPB125	CPB126	CPB127	CPB128	CPB129	CPB130	CPB131	CPB132	CPB133	CPB134	CPB135	CPB136	CPB137	CPB138	CPB139	CPB140	CPB141	CPB142	CPB143	CPB144	CPB145	CPB146	CPB147	CPB148	CPB149	CPB150	CPB151	CPB152	CPB153	CPB154	CPB155	CPB156	CPB157	CPB158	CPB159	CPB160	CPB161	CPB162	CPB163	CPB164	CPB165	CPB166	CPB167	CPB168	CPB169	CPB170	CPB171	CPB172	CPB173	CPB174	CPB175	CPB176	CPB177	CPB178	CPB179	CPB180	CPB181	CPB182	CPB183	CPB184	CPB185	CPB186	CPB187	CPB188	CPB189	CPB190	CPB191	CPB192	CPB193	CPB194	CPB195	CPB196	CPB197	CPB198	CPB199	CPB200	CPB201	CPB202	CPB203	CPB204	CPB205	CPB206	CPB207	CPB208	CPB209	CPB210	CPB211	CPB212	CPB213	CPB214	CPB215	CPB216	CPB217	CPB218	CPB219	CPB220	CPB221	CPB222	CPB223	CPB224	CPB225	CPB226	CPB227	CPB228	CPB229	CPB230	CPB231	CPB232	CPB233	CPB234	CPB235	CPB236	CPB237	CPB238	CPB239	CPB240	CPB241	CPB242	CPB243	CPB244	CPB245	CPB246	CPB247	CPB248	CPB249	CPB250	CPB251	CPB252	CPB253	CPB254	CPB255	CPB256	CPB257	CPB258	CPB259	CPB260	CPB261	CPB262	CPB263	CPB264	CPB265	CPB266	CPB267	CPB268	CPB269	CPB270	CPB271	CPB272	CPB273	CPB274	CPB275	CPB276	CPB277	CPB278	CPB279	CPB280	CPB281	CPB282	CPB283	CPB284	CPB285	CPB286	CPB287	CPB288	CPB289	CPB290	CPB291	CPB292	CPB293	CPB294	CPB295	CPB296	CPB297	CPB298	CPB299	CPB300	CPB301	CPB302	CPB303	CPB304	CPB305	CPB306	CPB307	CPB308	CPB309	CPB310	CPB311	CPB312	CPB313	CPB314	CPB315	CPB316	CPB317	CPB318	CPB319	CPB320	CPB321	CPB322	CPB323	CPB324	CPB325	CPB326	CPB327	CPB328	CPB329	CPB330	CPB331	CPB332	CPB333	CPB334	CPB335	CPB336	CPB337	CPB338	CPB339	CPB340	CPB341	CPB342	CPB343	CPB344	CPB345	CPB346	CPB347	CPB348	CPB349	CPB350	CPB351	CPB352	CPB353	CPB354	CPB355	CPB356	CPB357	CPB358	CPB359	CPB360	CPB361	CPB362	CPB363	CPB364	CPB365	CPB366	CPB367	CPB368	CPB369	CPB370	CPB371	CPB372	CPB373	CPB374	CPB375	CPB376	CPB377	CPB378	CPB379	CPB380	CPB381	CPB382	CPB383	CPB384	CPB385	CPB386	CPB387	CPB388	CPB389	CPB390	CPB391	CPB392	CPB393	CPB394	CPB395	CPB396	CPB397	CPB398	CPB399	CPB400	CPB401	CPB402	CPB403	CPB404	CPB405	CPB406	CPB407	CPB408	CPB409	CPB410	CPB411	CPB412	CPB413	CPB414	CPB415	CPB416	CPB417	CPB418	CPB419	CPB420	CPB421	CPB422	CPB423	CPB424	CPB425	CPB426	CPB427	CPB428	CPB429	CPB430	CPB431	CPB432	CPB433	CPB434	CPB435	CPB436	CPB437	CPB438	CPB439	CPB440	CPB441	CPB442	CPB443	CPB444	CPB445	CPB446	CPB447	CPB448	CPB449	CPB450	CPB451	CPB452	CPB453	CPB454	CPB455	CPB456	CPB457	CPB458	CPB459	CPB460	CPB461	CPB462	CPB463	CPB464	CPB465	CPB466	CPB467	CPB468	CPB469	CPB470	CPB471	CPB472	CPB473	CPB474	CPB475	CPB476	CPB477	CPB478	CPB479	CPB480	CPB481	CPB482	CPB483	CPB484	CPB485	CPB486	CPB487	CPB488	CPB489	CPB490	CPB491	CPB492	CPB493	CPB494	CPB495	CPB496	CPB497	CPB498	CPB499	CPB500	CPB501	CPB502	CPB503	CPB504	CPB505	CPB506	CPB507	CPB508	CPB509	CPB510	CPB511	CPB512	CPB513	CPB514	CPB515	CPB516	CPB517	CPB518	CPB519	CPB520	CPB521	CPB522	CPB523	CPB524	CPB525	CPB526	CPB527	CPB528	CPB529	CPB530	CPB531	CPB532	CPB533	CPB534	CPB535	CPB536	CPB537	CPB538	CPB539	CPB540	CPB541	CPB542	CPB543	CPB544	CPB545	CPB546	CPB547	CPB548	CPB549	CPB550	CPB551	CPB552	CPB553	CPB554	CPB555	CPB556	CPB557	CPB558	CPB559	CPB560	CPB561	CPB562	CPB563	CPB564	CPB565	CPB566	CPB567	CPB568	CPB569	CPB570	CPB571	CPB572	CPB573	CPB574	CPB575	CPB576	CPB577	CPB578	CPB579	CPB580	CPB581	CPB582	CPB583	CPB584	CPB585	CPB586	CPB587	CPB588	CPB589	CPB590	CPB591	CPB592	CPB593	CPB594	CPB595	CPB596	CPB597	CPB598	CPB599	CPB600	CPB601	CPB602	CPB603	CPB604	CPB605	CPB606	CPB607	CPB608	CPB609	CPB610	CPB611	CPB612	CPB613	CPB614	CPB615	CPB616	CPB617	CPB618	CPB619	CPB620	CPB621	CPB622	CPB623	CPB624	CPB625	CPB626	CPB627	CPB628	CPB629	CPB630	CPB631	CPB632	CPB633	CPB634	CPB635	CPB636	CPB637	CPB638	CPB639	CPB640	CPB641	CPB642	CPB643	CPB644	CPB645	CPB646	CPB647	CPB648	CPB649	CPB650	CPB651	CPB652	CPB653	CPB654	CPB655	CPB656	CPB657	CPB658	CPB659	CPB660	CPB661	CPB662	CPB663	CPB664	CPB665	CPB666	CPB667	CPB668	CPB669	CPB670	CPB671	CPB672	CPB673	CPB674	CPB675	CPB676	CPB677	CPB678	CPB679	CPB680	CPB681	CPB682	CPB683	CPB684	CPB685	CPB686	CPB687	CPB688	CPB689	CPB690	CPB691	CPB692	CPB693	CPB694	CPB695	CPB696	CPB697	CPB698	CPB699	CPB700	CPB701	CPB702	CPB703	CPB704	CPB705	CPB706	CPB707	CPB708	CPB709	CPB710	CPB711	CPB712	CPB713	CPB714	CPB715	CPB716	CPB717	CPB718	CPB719	CPB720	CPB721	CPB722	CPB723	CPB724	CPB725	CPB726	CPB727	CPB728	CPB729	CPB730	CPB731	CPB732	CPB733	CPB734	CPB735	CPB736	CPB737	CPB738	CPB739	CPB740	CPB741	CPB742	CPB743	CPB744	CPB745	CPB746	CPB747	CPB748	CPB749	CPB750	CPB751	CPB752	CPB753	CPB754	CPB755	CPB756	CPB757	CPB758	CPB759	CPB760	CPB761	CPB762	CPB763	CPB764	CPB765	CPB766	CPB767	CPB768	CPB769	CPB770	CPB771	CPB772	CPB773	CPB774	CPB775	CPB776	CPB777	CPB778	CPB779	CPB780	CPB781	CPB782	CPB783	CPB784	CPB785	CPB786	CPB787	CPB788	CPB789	CPB790	CPB791	CPB792	CPB793	CPB794	CPB795	CPB796	CPB797	CPB798	CPB799	CPB800	CPB801	CPB802	CPB803	CPB804	CPB805	CPB806	CPB807	CPB808	CPB809	CPB810	CPB811	CPB812	CPB813	CPB814	CPB815	CPB816	CPB817	CPB818	CPB819	CPB820	CPB821	CPB822	CPB823	CPB824	CPB825	CPB826	CPB827	CPB828	CPB829	CPB830	CPB831	CPB832	CPB833	CPB834	CPB835	CPB836	CPB837	CPB838	CPB839	CPB840	CPB841	CPB842	CPB843	CPB844	CPB845	CPB846	CPB847	CPB848	CPB849	CPB850	CPB851	CPB852	CPB853	CPB854	CPB855	CPB856	CPB857	CPB858	CPB859	CPB860	CPB861	CPB862	CPB863	CPB864	CPB865	CPB866	CPB867	CPB868	CPB869	CPB870	CPB871	CPB872	CPB873	CPB874	CPB875	CPB876	CPB877	CPB878	CPB879	CPB880	CPB881	CPB882	CPB883	CPB884	CPB885	CPB886	CPB887	CPB888	CPB889	CPB890	CPB891	CPB892	CPB893	CPB894	CPB895	CPB896	CPB897	CPB898	CPB899	CPB900	CPB901	CPB902	CPB903	CPB904	CPB905	CPB906	CPB907	CPB908	CPB909	CPB910	CPB911	CPB912	CPB913	CPB914	CPB915	CPB916	CPB917	CPB918	CPB919	CPB920	CPB921	CPB922	CPB923	CPB924	CPB925	CPB926	CPB927	CPB928	CPB929	CPB930	CPB931	CPB932	CPB933	CPB934	CPB935	CPB936	CPB937	CPB938	CPB939	CPB940	CPB941	CPB942	CPB943	CPB944	CPB945	CPB946	CPB947	CPB948	CPB949
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(REQ005) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = 16.300 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 27/ 0 RN/L = 1.56

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.634	.17204	-.00373	.05411	-.01956	-.00021	-.00017	.15604	.09043
10.270	16.538	.28273	-.00328	.05660	-.01608	-.00009	-.00055	.25492	.13474
10.270	20.374	.40955	-.00280	.05979	-.02529	-.00021	-.00048	.36311	.19864
10.270	24.494	.56383	-.00336	.06456	-.03588	-.00035	-.00039	.46632	.29252
10.270	28.468	.72128	-.00244	.06870	-.04481	-.00056	-.00007	.60131	.40421
10.270	32.254	.87426	-.00245	.07134	-.05832	-.00066	-.00138	.70128	.52691
10.270	36.238	1.05989	-.00332	.07489	-.07253	-.00080	-.00136	.81059	.68695
10.270	40.194	1.23741	-.00232	.07662	-.09425	-.00090	-.00086	.89602	.85681
10.270	42.025	1.32342	-.00177	.07663	-.09823	-.00105	-.00034	.93181	.94289

AMES 3.5-190 0A98 (011-M7+M14)

(AEQ005) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = 16.300 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 27/ 0 RN/L = 1.56

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.634	.00287	-.00716	-.00549	-.00724	.00272	-.01103	-.00044	.00325	-.00141
10.270	16.538	.00181	-.00629	-.00554	-.00750	-.00233	-.01141	-.00166	.00326	-.00113
10.270	20.374	.00133	-.00629	-.00531	-.00766	-.00232	-.01179	-.00176	.00333	-.00092
10.270	24.494	.00076	-.00513	-.00490	-.00706	-.00197	-.01153	-.00170	.00403	-.00007
10.270	28.468	.00133	-.00341	-.00383	-.00604	-.00139	-.01166	-.00193	.00333	.00068
10.270	32.254	.00279	-.00111	-.00274	-.00510	.00628	-.00849	-.00025	.00533	.00282
10.270	36.238	.00386	-.00042	-.00177	-.00451	.01033	-.00824	.00042	.00702	.00483
10.270	40.194	.00737	.00247	.00155	-.00168	.00943	-.00255	.00377	.00973	.00900
10.270	42.025	.01155	.00784	.00683	.00250	.00377	-.00012	.00578	.01123	.01280

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0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-M7+H14)

(REQ006) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = .000
 BDFLAP = .000 SPDBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 28/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.730	.17452	-.00304	.05418	-.00745	-.00046	-.00003	.15830	.09129
10.270	16.632	.28317	-.00260	.05490	-.00224	-.00059	-.00010	.25561	.13365
10.270	20.433	.40183	-.00277	.05661	-.00036	-.00072	-.00001	.35679	.19333
10.270	24.530	.54691	-.00151	.05898	-.00175	-.00078	-.00033	.47307	.26072
10.270	28.432	.70659	-.00128	.06025	-.01550	-.00079	-.00003	.59267	.36940
10.270	32.234	.86672	-.00237	.06122	-.02298	-.00109	-.00015	.70049	.51407
10.270	36.267	1.04921	-.00277	.06175	-.03732	-.00125	-.00005	.80942	.67045
10.270	40.165	1.21920	-.00286	.06209	-.03980	-.00122	-.00038	.89167	.83381
10.270	42.028	1.30286	-.00326	.06086	-.05388	-.00156	-.00011	.92704	.91747

AMES 3.5-190 0A98 (011-M7+H14)

(AEQ006) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = .000
 BDFLAP = .000 SPDBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 28/ 0 RN/L = 1.54

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.730	.00319	-.00346	-.00308	-.00682	.00387	-.00956	.00029	.00311	-.00073
10.270	16.632	.00280	-.00334	-.00313	-.00725	.00054	-.01019	-.00076	.00262	-.00051
10.270	20.433	.00212	-.00306	-.00297	-.00857	.00037	-.00969	-.00088	.00311	-.00045
10.270	24.530	.00347	-.00187	-.00173	-.00615	.00275	-.00905	-.00061	.00397	.00099
10.270	28.432	.00464	-.00028	-.00043	-.00401	.00540	-.00880	.00028	.00497	.00211
10.270	32.234	.00533	.00093	.00042	-.00401	.00788	-.00778	.00074	.00654	.00398
10.270	36.267	.00690	.00229	.00208	-.00272	.01268	-.00498	.00253	.00880	.00648
10.270	40.165	.01071	.00548	.00550	.00112	.01302	-.00027	.00560	.01249	.01140
10.270	42.028	.01442	.00907	.00861	.00369	.00508	.00241	.00700	.01274	.01334

ORIGINAL PAGE IS
OF POOR QUALITY

(REQ007) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 29/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.605	.16560	-.04355	.05412	-.00624	-.01031	-.00281	.14948	.08947
10.270	16.678	.26810	-.04296	.05512	-.00130	-.01007	-.00438	.24100	.12974
10.270	20.447	.36350	-.04266	.05710	.00205	-.01044	-.00541	.33940	.18747
10.270	24.602	.52764	-.04106	.05856	.00001	-.01032	-.00716	.45536	.27291
10.270	28.532	.67648	-.04109	.05987	-.00201	-.01033	-.00877	.56572	.37572
10.270	32.338	.83725	-.03982	.06156	-.00640	-.01037	-.00979	.67447	.49986
10.270	36.339	1.00423	-.03941	.06134	-.01415	-.01035	-.01083	.77258	.64448
10.270	40.253	1.17424	-.03770	.05961	-.02755	-.01032	-.01154	.85767	.80424
10.270	42.135	1.25943	-.03661	.05971	-.02830	-.01022	-.01165	.89389	.88921

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

AMES 3.5-190 0A98 (011-M7+M14)

(REQ007) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 29/ 0 RN/L = 1.59

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.605	-.00295	-.01078	-.00918	-.01274	-.00534	-.01240	-.00808	-.00445	-.00917
10.270	16.678	-.00392	-.01112	-.00935	-.01299	-.00414	-.01278	-.00819	-.00476	-.00924
10.270	20.447	-.00422	-.01067	-.00935	-.01274	-.00441	-.01380	-.00819	-.00427	-.00917
10.270	24.602	-.00364	-.00948	-.00890	-.01240	-.00287	-.01240	-.00775	-.00277	-.00745
10.270	28.532	-.00325	-.00789	-.00772	-.01129	.00011	-.01240	-.00508	-.00228	-.00586
10.270	32.338	-.00218	-.00669	-.00687	-.01018	.00267	-.01139	-.00563	-.00072	-.00406
10.270	36.339	-.00110	-.00459	-.00456	-.00839	.00805	-.00846	-.00401	-.00203	-.00156
10.270	40.253	.00397	-.00095	-.00096	-.00447	.00763	-.00369	-.00066	.00453	.00155
10.270	42.135	.00427	-.00038	-.00096	-.00447	-.00030	-.00202	-.00060	.00454	.00204

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

ORIGINAL PAGE IS OF POOR QUALITY

0A98 TABULATED SOURCE DATA

(REQ009) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14-N24)

REFERENCE DATA

SREF = 2680.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

RUN NO. 5/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.987	.20474	-.00397	.06042	-.01644	-.00067	.00012	.18773	.10162
5.250	16.075	.32231	-.00383	.05990	-.01520	-.00076	.00009	.29312	.14680
5.250	20.058	.44932	-.00387	.05997	-.01478	-.00084	.00014	.40149	.21043
5.250	24.400	.60331	-.00451	.06019	-.01585	-.00094	.00011	.52456	.30404
5.250	28.467	.76212	-.00499	.06029	-.01935	-.00117	.00011	.64123	.41628
5.250	32.509	.93171	-.00519	.06051	-.02610	-.00144	.00018	.75319	.55176
5.250	36.635	1.11028	-.00497	.06051	-.03525	-.00142	.00016	.85484	.71108
5.250	40.832	1.29229	-.00520	.05881	-.04658	-.00163	.00020	.93933	.88945
5.250	42.762	1.37632	-.00551	.05701	-.05289	-.00188	-.00003	.97175	.97632

RUN NO. 20/ 0 RN/L = 1.56

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.870	.15223	-.00452	.05405	-.00726	-.00053	.00014	.13785	.08421
10.270	15.881	.25622	-.00406	.05431	-.00185	-.00071	.00001	.23158	.12234
10.270	19.866	.37631	-.00329	.05627	.00169	-.00070	-.00020	.33479	.18080
10.270	24.142	.52714	-.00246	.05890	.00210	-.00076	-.00009	.45694	.26935
10.270	28.145	.68946	-.00281	.06088	-.00232	-.00104	-.00014	.57922	.37890
10.270	32.039	.84872	-.00265	.06117	-.00751	-.00104	-.00040	.68700	.50210
10.270	36.168	1.02405	-.00375	.06142	-.01935	-.00116	-.00087	.79045	.65394
10.270	40.240	1.20233	-.00334	.06086	-.02675	-.00133	-.00094	.87848	.82315
10.270	42.152	1.28792	-.00227	.05977	-.03086	-.00152	-.00015	.91471	.90863

ORIGINAL PAGE IS
 OF POOR QUALITY

OASB TABULATED SOURCE DATA

(AEQ009) (03 AUG 74)

AMES 3.5-190 OASB (011-M7+M14-N24)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.987	-.03236	-.04093	-.03863	-.03704	.02006	-.03693	-.03162	-.02861	-.03525
5.250	16.075	-.03625	-.04211	-.04054	-.03979	.00076	-.03955	-.03576	-.03030	-.03672
5.250	20.058	-.03696	-.04197	-.04074	-.04026	-.01647	-.04079	-.03458	-.03061	-.03420
5.250	24.400	-.03576	-.03956	-.03864	-.03853	-.02272	-.03971	-.03414	-.03199	-.03495
5.250	28.467	-.03575	-.03962	-.03806	-.03788	-.02074	-.03985	-.03336	-.03201	-.03466
5.250	32.509	-.03502	-.03890	-.03744	-.03753	-.01663	-.03978	-.03494	-.03089	-.03199
5.250	36.635	-.03383	-.03625	-.03553	-.03571	-.02079	-.03788	-.03436	-.02768	-.02805
5.250	40.832	-.03242	-.03480	-.03439	-.03422	-.02490	-.03664	-.03474	-.02572	-.02557
5.250	42.762	-.03072	-.03286	-.03293	-.03259	-.02582	-.03474	-.03399	-.02590	-.02353

RUN NO. 5/ 0 RN/L = 1.54

RUN NO. 20/ 0 RN/L = 1.56

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.870	.00281	-.00576	-.00342	-.00540	.00357	-.00842	-.00129	.00351	-.00143
10.270	15.881	.00242	-.00593	-.00381	-.00600	.00152	-.00919	-.00168	.00314	-.00149
10.270	19.866	.00124	-.00491	-.00348	-.00592	.00023	-.00957	-.00163	.00356	-.00143
10.270	24.142	.00193	-.00423	-.00252	-.00498	.00151	-.00893	-.00113	.00431	-.00032
10.270	28.145	.00339	-.00236	-.00134	-.00336	.00552	-.00792	-.00074	.00519	.00092
10.270	32.039	.00426	-.00015	.00012	-.00208	.00842	-.00728	.00048	.00693	.00320
10.270	36.168	.00564	.00100	.00126	-.00105	.01382	-.00511	.00127	.00876	.00543
10.270	40.240	.00936	.00384	.00453	.00151	.01476	.00023	.00434	.01126	.00979
10.270	42.152	.01318	.00766	.00781	.00485	.00530	.00202	.00558	.01202	.01244

ORIGINAL PAGE IS
OF POOR QUALITY

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000
 BDFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

RUN NO. 6/ 0 RN/L = 1.61

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.943	.18248	-.00469	.06058	-.00792	-.00074	.00013	.17578	.09910
5.250	16.021	.30511	-.00440	.05968	-.00388	-.00082	.00010	.27679	.14157
5.250	19.990	.42722	-.00470	.05934	-.00026	-.00059	.00009	.38119	.20182
5.250	24.398	.57754	-.00557	.05894	.00358	-.00116	.00001	.50161	.29224
5.250	28.465	.73006	-.00536	.05858	.00454	-.00140	.00003	.61388	.39946
5.250	32.464	.89109	-.00550	.05769	.00278	-.00178	.00013	.72087	.52699
5.250	36.667	1.06838	-.00558	.05774	-.00280	-.00188	.00002	.82249	.68432
5.250	40.811	1.24178	-.00581	.05485	-.00932	-.00213	-.00019	.90415	.85294
5.250	42.814	1.32633	-.00621	.05148	-.01345	-.00250	-.00033	.93796	.93917

RUN NO. 21/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.885	.14348	-.00271	.05358	-.00262	-.00046	.00015	.12937	.08198
10.270	15.916	.24565	-.00308	.05392	.00658	-.00064	.00001	.22144	.11922
10.270	19.859	.36089	-.00182	.05552	.01282	-.00052	.00041	.32057	.17482
10.270	24.129	.50476	-.00227	.05714	.01796	-.00064	.00021	.43731	.25849
10.270	28.150	.65133	-.00221	.05827	.01917	-.00092	.00026	.54679	.35867
10.270	32.028	.80925	-.00235	.05969	.02082	-.00102	-.00006	.65441	.47978
10.270	36.194	.98062	-.00183	.05876	.01495	-.00116	.00088	.75669	.62650
10.270	40.237	1.15978	-.00218	.05688	.00673	-.00112	.00005	.84860	.79258
10.270	42.162	1.23085	-.00231	.05583	.00846	-.00122	.00042	.87489	.86757

ORIGINAL PAGE IS OF POOR QUALITY

0A98 TABULATED SOURCE DATA

(AEQ010) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14-M24)

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000
BDFLAP = -11.700 SPDBRK = 55.000
RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
LREF = 474.8000 IN. YMRP = .0000 IN.YO
BREF = 836.6800 IN. ZMRP = 375.0000 IN.ZO
SCALE = .0150

RUN NO. 6/ 0 RN/L = 1.61

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.943	-.03446	-.04368	-.04199	-.03987	.01691	-.04431	-.03418	-.03184	-.03798
5.250	16.021	-.03778	-.04445	-.04343	-.04178	-.00219	-.04590	-.03759	-.03391	-.04003
5.250	19.990	-.03882	-.04481	-.04388	-.04217	-.01925	-.04676	-.03693	-.03353	-.03728
5.250	24.398	-.03787	-.04227	-.04159	-.04124	-.02636	-.04532	-.03688	-.03488	-.03722
5.250	28.465	-.03860	-.04282	-.04133	-.04114	-.02459	-.04524	-.03646	-.03498	-.03693
5.250	32.464	-.03917	-.04234	-.04163	-.04110	-.02031	-.04532	-.03842	-.03413	-.03603
5.250	36.667	-.03602	-.03963	-.03859	-.03844	-.02440	-.04234	-.03682	-.03010	-.02980
5.250	40.811	-.03411	-.03669	-.03675	-.03677	-.02903	-.04010	-.03579	-.02528	-.02496
5.250	42.814	-.03211	-.03481	-.03528	-.03521	-.02906	-.03765	-.03434	-.02172	-.02205

RUN NO. 21/ 0 RN/L = 1.59

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.885	-.00516	-.01155	-.01029	-.01235	-.00131	-.01474	-.00779	-.00468	-.00851
10.270	15.916	-.00603	-.01172	-.01057	-.01294	-.00463	-.01537	-.00818	-.00487	-.00851
10.270	19.859	-.00584	-.01110	-.01012	-.01243	-.00523	-.01537	-.00807	-.00456	-.00837
10.270	24.129	-.00545	-.01042	-.00928	-.01167	-.00378	-.01436	-.00768	-.00394	-.00720
10.270	28.150	-.00428	-.00928	-.00815	-.01022	-.00079	-.01385	-.00706	-.00300	-.00637
10.270	32.028	-.00340	-.00752	-.00697	-.00928	.00201	-.01296	-.00640	-.00169	-.00423
10.270	36.194	-.00194	-.00605	-.00556	-.00818	.00687	-.01055	-.00545	.00099	-.00049
10.270	40.237	.00040	-.00486	-.00427	-.00681	.00653	-.00877	-.00478	.00261	.00186
10.270	42.162	.00089	-.00372	-.00353	-.00684	-.00257	-.00788	-.00467	.00224	.00311

ORIGINAL PAGE IS
OF POOR QUALITY

(RECO011) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14-NE4)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 7/ 0 RN/L = 1.61

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	18.000	.16975	-.00348	.07122	.00678	-.00045	.00033	.15024	.10477
5.250	18.010	.00003	-.00408	.00754	.01042	-.00047	.00035	.25244	.14274
5.250	20.000	.40950	-.00418	.06582	.01468	-.00075	.00015	.35924	.20131
5.250	24.423	.55171	-.00428	.06539	.01994	-.00088	.00016	.47531	.28765
5.250	28.487	.69915	-.00467	.06637	.02412	-.00113	.00009	.58285	.39180
5.250	32.451	.85198	-.00474	.06757	.02699	-.00132	.00018	.68269	.51417
5.250	36.654	1.01617	-.00496	.06604	.02946	-.00160	.00012	.77581	.65960
5.250	40.792	1.18253	-.00502	.06462	.02857	-.00190	.00014	.85307	.82148
5.250	42.736	1.26243	-.00543	.06275	.02763	-.00199	-.00015	.88466	.90280

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BDFLAP = -11.700 SPDRK = 55.000
 RUDDER = .000

RUN NO. 22/ 0 RN/L = 1.46

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.958	.13075	-.00320	.06099	.00638	-.00057	.00024	.11528	.08676
10.270	15.964	.23209	-.00331	.05941	.01318	-.00048	-.00009	.20680	.12095
10.270	19.699	.34487	-.00257	.06026	.02095	-.00047	.00004	.30377	.17404
10.270	24.168	.48931	-.00297	.06186	.02852	-.00081	-.00013	.42109	.25677
10.270	28.098	.62470	-.00301	.06517	.03375	-.00084	-.00025	.52038	.35170
10.270	32.036	.77998	-.00269	.06653	.04026	-.00102	-.00057	.62591	.47014
10.270	36.138	.94173	-.00162	.06537	.04138	-.00116	.00028	.72200	.60816
10.270	40.091	1.10142	-.00211	.06701	.04536	-.00142	.00045	.79947	.76057
10.270	42.091	1.18414	-.00224	.06579	.04183	-.00133	.00011	.83463	.84256

ORIGINAL PAGE IS
OF POOR QUALITY



0A98 TABULATED SOURCE DATA

(AE0011) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO BETA = .000 ELEVON = -40.000
 LREF = 474.8000 IN. YMRP = .0000 IN.YO BDFLAP = -11.700 SPDRK = 55.000
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO RUDDER = .000
 SCALE = .0150

PARAMETRIC DATA

RUN NO. 7/ 0 RN/L = 1.61

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	12.008	-.03108	-.04187	-.04108	-.03953	.01744	-.04423	-.03384	-.02923	-.03538
5.250	16.019	-.03503	-.04279	-.04196	-.04012	-.00423	-.04503	-.03602	-.03115	-.03749
5.250	20.068	-.03615	-.04315	-.04221	-.04164	-.02058	-.04597	-.03557	-.03283	-.03642
5.250	24.423	-.03547	-.04161	-.04056	-.04041	-.02545	-.04459	-.03553	-.03398	-.03697
5.250	28.487	-.03587	-.04132	-.04038	-.04096	-.02259	-.04488	-.03519	-.03327	-.03539
5.250	32.451	-.03492	-.04015	-.03960	-.03998	-.01953	-.04409	-.03549	-.03209	-.03255
5.250	36.654	-.03250	-.03799	-.03640	-.03742	-.02376	-.04119	-.03497	-.02896	-.02929
5.250	40.792	-.03063	-.03580	-.03440	-.03534	-.02854	-.03817	-.03433	-.02789	-.02573
5.250	42.736	-.02797	-.03284	-.03149	-.03229	-.02812	-.03450	-.03261	-.02727	-.02418

RUN NO. 22/ 0 RN/L = 1.48

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.958	.00492	-.00533	-.00227	-.00116	.00797	-.00457	.00004	.00520	-.00055
10.270	15.864	.00390	-.00535	-.00274	-.00187	.00424	-.00536	-.00043	.00448	-.00085
10.270	19.899	.00360	-.00512	-.00235	-.00213	.00346	-.00562	-.00077	.00447	-.00107
10.270	24.168	.00310	-.00353	-.00128	-.00102	.00482	-.00485	.00056	.00559	.00039
10.270	28.098	.00388	-.00245	-.00055	-.00025	.00679	-.00447	.00079	.00640	.00143
10.270	32.036	.00567	-.00032	.00180	.00191	.01118	-.00305	.00215	.00838	.00437
10.270	36.138	.00607	-.00099	.00271	.00234	.01718	-.00203	.00260	.01039	.00640
10.270	40.091	.00792	.00213	.00441	.00302	.02008	-.00012	.00349	.01195	.00938
10.270	42.091	.00886	.00359	.00541	.00426	.01131	.00273	.00426	.01144	.01069

ORIGINAL PAGE IS
OF POOR QUALITY

AMES 3.5-190 0A98 (011-M7+M14-N24)

(REC0012) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 31/ 0 RN/L = 1.45

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.423	.11504	-.04446	.05923	.00452	-.01026	-.00126	.10103	.08084
10.270	15.512	.21354	-.04377	.05890	.01266	-.00987	-.00280	.19001	.11386
10.270	19.621	.33489	-.04294	.05988	.02034	-.00975	-.00448	.29474	.16989
10.270	23.831	.46413	-.04141	.06171	.02690	-.01015	-.00598	.39962	.24398
10.270	27.984	.60873	-.04036	.06404	.03238	-.01024	-.00739	.50750	.34218
10.270	32.135	.76759	-.03865	.06564	.03859	-.01043	-.00732	.61507	.46388
10.270	36.284	.92993	-.03738	.06554	.04029	-.01013	-.00773	.71082	.60316
10.270	40.382	1.09125	-.03638	.06484	.04226	-.00984	-.00843	.78924	.75640
10.270	42.500	1.17982	-.03579	.06448	.04351	-.01002	-.00838	.82630	.84461

AMES 3.5-190 0A98 (011-M7+M14-N24)

(AEC0012) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 31/ 0 RN/L = 1.45

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
10.270	11.423	.00469	-.00602	-.00233	-.00485	.00056	-.00608	-.00253	.00228	-.00309
10.270	15.512	.01156	-.00595	-.00220	-.00561	.00221	-.00607	-.00320	.00078	-.00211
10.270	19.621	.00342	-.00504	-.00232	-.00570	.00229	-.00633	-.00298	.00085	-.00294
10.270	23.831	.00361	-.00395	-.00175	-.00527	.00453	-.00607	-.00169	.00235	-.00211
10.270	27.984	.00313	-.00252	-.00061	-.00406	.00738	-.00594	-.00129	.00330	.00006
10.270	32.135	.00472	.00013	.00111	-.00268	.01232	-.00452	.00002	.00470	.00230
10.270	36.284	.00522	.00083	.00282	-.00087	.01976	-.00221	.00171	.00679	.00531
10.270	40.382	.00827	.00358	.00492	.00172	.02045	-.00124	.00346	.00968	.00839
10.270	42.500	.00996	.00474	.00602	.00198	.01011	.00204	.00332	.00869	.00840

ORIGINAL PAGE IS
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AMES 3.5-190 0A98 (011-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150
 BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 13/ 0 RN/L = 1.75

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.953	.20395	-.00386	.05889	-.01719	-.00073	.00017	.18733	.09986
5.250	16.078	.32141	-.00383	.05830	-.01640	-.00081	.00017	.29269	.14503
5.250	20.039	.44843	-.00415	.05940	-.01683	-.00071	.00006	.40093	.20946
5.250	24.436	.60330	-.00466	.06056	-.01793	-.00086	.00007	.52420	.30471
5.250	28.497	.76042	-.00484	.06157	-.02142	-.00100	.00010	.63891	.41692
5.250	32.492	.92786	-.00455	.06180	-.02765	-.00132	.00017	.74943	.55055
5.250	36.734	1.10870	-.00477	.05966	-.03657	-.00149	.00009	.85285	.71093
5.250	40.867	1.29047	-.00508	.05816	-.04851	-.00165	.00000	.93783	.88836
5.250	42.856	1.36054	-.00514	.05662	-.05504	-.00180	-.00010	.97352	.96048

RUN NO. 14/ 0 RN/L = 1.44

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.962	.13983	-.00453	.05358	-.00225	-.00047	.00005	.12569	.08140
10.270	15.913	.24499	-.00395	.05398	.00312	-.00049	-.00003	.22080	.11908
10.270	19.856	.36545	-.00406	.05587	.00613	-.00046	.00013	.32474	.17667
10.270	24.169	.51627	-.00434	.05820	.00676	-.00065	.00015	.44719	.26447
10.270	28.098	.67245	-.00430	.06035	.00408	-.00072	-.00020	.56478	.36995
10.270	31.974	.83110	-.00356	.06145	-.00156	-.00084	.00024	.67247	.49223
10.270	36.105	1.00681	-.00387	.06158	-.01115	-.00078	-.00050	.77715	.64304
10.270	40.229	1.19475	-.00387	.06102	-.02259	-.00103	.00019	.87275	.81821
10.270	42.142	1.28052	-.00433	.06031	-.02926	-.00105	-.00088	.90902	.90392

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(AE0013) (03 AUG 74)

AMES 3.5-190 0A98 (011-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO BETA = .000 ELEVON = .000
 LREF = 474.8000 IN. YMRP = .0000 IN.YO BOFLAP = -111.700 SPDBRK = 55.000
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO RUDDER = .000
 SCALE = .0150

PARAMETRIC DATA

RUN NO. 13/ 0 RN/L = 1.75

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.953	-.03108	-.03954	-.03833	-.03748	.01646	-.04036	-.02700	-.02205	-.02590
5.250	16.078	-.03264	-.03970	-.03688	-.03875	-.00831	-.04158	-.02688	-.02666	-.03143
5.250	20.039	-.03408	-.03963	-.03957	-.04040	-.02219	-.04266	-.03578	-.02905	-.03304
5.250	24.436	-.03461	-.03682	-.03929	-.03989	-.02835	-.04315	-.03533	-.03104	-.03209
5.250	28.487	-.03332	-.03782	-.03766	-.03875	-.02687	-.04217	-.03360	-.02986	-.02923
5.250	32.482	-.03304	-.03794	-.03800	-.03820	-.02353	-.04257	-.03504	-.02993	-.02864
5.250	36.734	-.03214	-.03675	-.03701	-.03845	-.02667	-.04094	-.03445	-.02838	-.02792
5.250	40.867	-.03165	-.03600	-.03688	-.03818	-.02841	-.03918	-.03485	-.02786	-.02699
5.250	42.856	-.03011	-.03448	-.03519	-.03723	-.02950	-.03634	-.03374	-.02865	-.02470

RUN NO. 14/ 0 RN/L = 1.44

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.962	.00602	-.00335	-.00179	-.00177	.00163	-.00208	.00147	.00788	.00289
10.270	15.913	.00446	-.00368	-.00269	-.00271	-.00293	-.00285	.00036	.00657	.00234
10.270	19.856	.00475	-.00368	-.00281	-.00280	-.00370	-.00336	.00058	.00645	.00227
10.270	24.169	.00454	-.00260	-.00185	-.00212	-.00294	-.00363	.00124	.00700	.00261
10.270	28.098	.00504	-.00082	-.00042	-.00117	-.00113	-.00311	.00170	.00795	.00380
10.270	31.974	.00663	.00091	.00175	.00090	.00293	-.00182	.00385	.01061	.00667
10.270	36.105	.00731	.00176	.00272	.00124	.00705	-.00144	.00452	.01135	.00680
10.270	40.229	.01105	.00532	.00636	.00477	.01274	.00319	.00779	.01394	.01072
10.270	42.142	.01436	.00855	.00912	.00749	.01115	.00701	.01012	.01308	.01235

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0A98 TABULATED SOURCE DATA

(REQ014) (03 AUG 74)

AMES 3.5-190 0A98 (011-NEW+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = -10.000
 BOFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 11/ 0 RN/L = 1.79

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.984	.19499	-.00384	.05895	-.00882	-.00046	.00017	.17850	.09815
5.250	16.055	.30748	-.00380	.05838	-.00583	-.00068	.00018	.27934	.14114
5.250	20.070	.43228	-.00414	.05915	-.00275	-.00076	.00011	.36572	.20390
5.250	28.412	.72833	-.00502	.06082	.00171	-.00102	.00010	.61176	.39986
5.250	32.510	.89346	-.00464	.05969	.00056	-.00128	.00012	.72138	.53052
5.250	36.671	1.06565	-.00474	.05665	-.00349	-.00185	.00008	.82090	.68186
5.250	40.812	1.24039	-.00511	.05393	-.00928	-.00182	-.00012	.90355	.85150
5.250	42.787	1.32588	-.00503	.05202	-.01377	-.00182	-.00022	.93754	.93898

AMES 3.5-190 0A98 (011-NEW+DUMMY STING)

(REQ014) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = -10.000
 BOFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 11/ 0 RN/L = 1.79

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.984	-.03104	-.03909	-.03830	-.03689	.01652	-.03968	-.02674	-.02204	-.02590
5.250	16.055	-.03242	-.03950	-.03912	-.03820	-.00684	-.04067	-.02773	-.02612	-.03070
5.250	20.070	-.03398	-.03999	-.03973	-.03981	-.02235	-.04226	-.03582	-.02903	-.03264
5.250	28.412	-.03281	-.03720	-.03729	-.03864	-.02662	-.04038	-.03342	-.02902	-.02876
5.250	32.510	-.03324	-.03700	-.03735	-.03873	-.02345	-.04190	-.03447	-.03023	-.02907
5.250	36.671	-.03108	-.03556	-.03558	-.03745	-.02655	-.04009	-.03322	-.02778	-.02807
5.250	40.812	-.03007	-.03544	-.03520	-.03728	-.02841	-.03841	-.03262	-.02814	-.02629
5.250	42.787	-.02785	-.03349	-.03324	-.03591	-.02810	-.03537	-.03090	-.02668	-.02282

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AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(REQ015) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 10/ 0 RN/L = 2.07

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.975	.16938	-.00344	.06952	.00570	-.00037	.00049	.15127	.10314
5.250	16.024	.28188	-.00403	.06953	.00863	-.00056	.00047	.25284	.14079
5.250	20.051	.40423	-.00412	.06446	.01202	-.00077	.00037	.35763	.19914
5.250	24.406	.54914	-.00437	.06527	.01738	-.00098	.00027	.47310	.28634
5.250	28.455	.69460	-.00436	.06595	.02227	-.00116	.00028	.57926	.38894
5.250	32.476	.84815	-.00418	.06597	.02575	-.00145	.00030	.68010	.51106
5.250	36.657	1.01209	-.00426	.06495	.02785	-.00167	.00035	.77314	.65635
5.250	40.811	1.17798	-.00453	.06270	.02825	-.00182	.00027	.85060	.81734
5.250	42.758	1.25440	-.00487	.06150	.02778	-.00191	.00020	.87927	.89677

AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(REQ015) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 10/ 0 RN/L = 2.07

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	CPB14	CPB15	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22	CPB23	CPB24	CPB25	CPB26	CPB27	CPB28	CPB29	CPB30	CPB31	CPB32	CPB33	CPB34	CPB35	CPB36	CPB37	CPB38	CPB39	CPB40	CPB41	CPB42	CPB43	CPB44	CPB45	CPB46	CPB47	CPB48	CPB49	CPB50	CPB51	CPB52	CPB53	CPB54	CPB55	CPB56	CPB57	CPB58	CPB59	CPB60	CPB61	CPB62	CPB63	CPB64	CPB65	CPB66	CPB67	CPB68	CPB69	CPB70	CPB71	CPB72	CPB73	CPB74	CPB75	CPB76	CPB77	CPB78	CPB79	CPB80	CPB81	CPB82	CPB83	CPB84	CPB85	CPB86	CPB87	CPB88	CPB89	CPB90	CPB91	CPB92	CPB93	CPB94	CPB95	CPB96	CPB97	CPB98	CPB99	CPB100	CPB101	CPB102	CPB103	CPB104	CPB105	CPB106	CPB107	CPB108	CPB109	CPB110	CPB111	CPB112	CPB113	CPB114	CPB115	CPB116	CPB117	CPB118	CPB119	CPB120	CPB121	CPB122	CPB123	CPB124	CPB125	CPB126	CPB127	CPB128	CPB129	CPB130	CPB131	CPB132	CPB133	CPB134	CPB135	CPB136	CPB137	CPB138	CPB139	CPB140	CPB141	CPB142	CPB143	CPB144	CPB145	CPB146	CPB147	CPB148	CPB149	CPB150	CPB151	CPB152	CPB153	CPB154	CPB155	CPB156	CPB157	CPB158	CPB159	CPB160	CPB161	CPB162	CPB163	CPB164	CPB165	CPB166	CPB167	CPB168	CPB169	CPB170	CPB171	CPB172	CPB173	CPB174	CPB175	CPB176	CPB177	CPB178	CPB179	CPB180	CPB181	CPB182	CPB183	CPB184	CPB185	CPB186	CPB187	CPB188	CPB189	CPB190	CPB191	CPB192	CPB193	CPB194	CPB195	CPB196	CPB197	CPB198	CPB199	CPB200	CPB201	CPB202	CPB203	CPB204	CPB205	CPB206	CPB207	CPB208	CPB209	CPB210	CPB211	CPB212	CPB213	CPB214	CPB215	CPB216	CPB217	CPB218	CPB219	CPB220	CPB221	CPB222	CPB223	CPB224	CPB225	CPB226	CPB227	CPB228	CPB229	CPB230	CPB231	CPB232	CPB233	CPB234	CPB235	CPB236	CPB237	CPB238	CPB239	CPB240	CPB241	CPB242	CPB243	CPB244	CPB245	CPB246	CPB247	CPB248	CPB249	CPB250	CPB251	CPB252	CPB253	CPB254	CPB255	CPB256	CPB257	CPB258	CPB259	CPB260	CPB261	CPB262	CPB263	CPB264	CPB265	CPB266	CPB267	CPB268	CPB269	CPB270	CPB271	CPB272	CPB273	CPB274	CPB275	CPB276	CPB277	CPB278	CPB279	CPB280	CPB281	CPB282	CPB283	CPB284	CPB285	CPB286	CPB287	CPB288	CPB289	CPB290	CPB291	CPB292	CPB293	CPB294	CPB295	CPB296	CPB297	CPB298	CPB299	CPB300	CPB301	CPB302	CPB303	CPB304	CPB305	CPB306	CPB307	CPB308	CPB309	CPB310	CPB311	CPB312	CPB313	CPB314	CPB315	CPB316	CPB317	CPB318	CPB319	CPB320	CPB321	CPB322	CPB323	CPB324	CPB325	CPB326	CPB327	CPB328	CPB329	CPB330	CPB331	CPB332	CPB333	CPB334	CPB335	CPB336	CPB337	CPB338	CPB339	CPB340	CPB341	CPB342	CPB343	CPB344	CPB345	CPB346	CPB347	CPB348	CPB349	CPB350	CPB351	CPB352	CPB353	CPB354	CPB355	CPB356	CPB357	CPB358	CPB359	CPB360	CPB361	CPB362	CPB363	CPB364	CPB365	CPB366	CPB367	CPB368	CPB369	CPB370	CPB371	CPB372	CPB373	CPB374	CPB375	CPB376	CPB377	CPB378	CPB379	CPB380	CPB381	CPB382	CPB383	CPB384	CPB385	CPB386	CPB387	CPB388	CPB389	CPB390	CPB391	CPB392	CPB393	CPB394	CPB395	CPB396	CPB397	CPB398	CPB399	CPB400	CPB401	CPB402	CPB403	CPB404	CPB405	CPB406	CPB407	CPB408	CPB409	CPB410	CPB411	CPB412	CPB413	CPB414	CPB415	CPB416	CPB417	CPB418	CPB419	CPB420	CPB421	CPB422	CPB423	CPB424	CPB425	CPB426	CPB427	CPB428	CPB429	CPB430	CPB431	CPB432	CPB433	CPB434	CPB435	CPB436	CPB437	CPB438	CPB439	CPB440	CPB441	CPB442	CPB443	CPB444	CPB445	CPB446	CPB447	CPB448	CPB449	CPB450	CPB451	CPB452	CPB453	CPB454	CPB455	CPB456	CPB457	CPB458	CPB459	CPB460	CPB461	CPB462	CPB463	CPB464	CPB465	CPB466	CPB467	CPB468	CPB469	CPB470	CPB471	CPB472	CPB473	CPB474	CPB475	CPB476	CPB477	CPB478	CPB479	CPB480	CPB481	CPB482	CPB483	CPB484	CPB485	CPB486	CPB487	CPB488	CPB489	CPB490	CPB491	CPB492	CPB493	CPB494	CPB495	CPB496	CPB497	CPB498	CPB499	CPB500	CPB501	CPB502	CPB503	CPB504	CPB505	CPB506	CPB507	CPB508	CPB509	CPB510	CPB511	CPB512	CPB513	CPB514	CPB515	CPB516	CPB517	CPB518	CPB519	CPB520	CPB521	CPB522	CPB523	CPB524	CPB525	CPB526	CPB527	CPB528	CPB529	CPB530	CPB531	CPB532	CPB533	CPB534	CPB535	CPB536	CPB537	CPB538	CPB539	CPB540	CPB541	CPB542	CPB543	CPB544	CPB545	CPB546	CPB547	CPB548	CPB549	CPB550	CPB551	CPB552	CPB553	CPB554	CPB555	CPB556	CPB557	CPB558	CPB559	CPB560	CPB561	CPB562	CPB563	CPB564	CPB565	CPB566	CPB567	CPB568	CPB569	CPB570	CPB571	CPB572	CPB573	CPB574	CPB575	CPB576	CPB577	CPB578	CPB579	CPB580	CPB581	CPB582	CPB583	CPB584	CPB585	CPB586	CPB587	CPB588	CPB589	CPB590	CPB591	CPB592	CPB593	CPB594	CPB595	CPB596	CPB597	CPB598	CPB599	CPB600	CPB601	CPB602	CPB603	CPB604	CPB605	CPB606	CPB607	CPB608	CPB609	CPB610	CPB611	CPB612	CPB613	CPB614	CPB615	CPB616	CPB617	CPB618	CPB619	CPB620	CPB621	CPB622	CPB623	CPB624	CPB625	CPB626	CPB627	CPB628	CPB629	CPB630	CPB631	CPB632	CPB633	CPB634	CPB635	CPB636	CPB637	CPB638	CPB639	CPB640	CPB641	CPB642	CPB643	CPB644	CPB645	CPB646	CPB647	CPB648	CPB649	CPB650	CPB651	CPB652	CPB653	CPB654	CPB655	CPB656	CPB657	CPB658	CPB659	CPB660	CPB661	CPB662	CPB663	CPB664	CPB665	CPB666	CPB667	CPB668	CPB669	CPB670	CPB671	CPB672	CPB673	CPB674	CPB675	CPB676	CPB677	CPB678	CPB679	CPB680	CPB681	CPB682	CPB683	CPB684	CPB685	CPB686	CPB687	CPB688	CPB689	CPB690	CPB691	CPB692	CPB693	CPB694	CPB695	CPB696	CPB697	CPB698	CPB699	CPB700	CPB701	CPB702	CPB703	CPB704	CPB705	CPB706	CPB707	CPB708	CPB709	CPB710	CPB711	CPB712	CPB713	CPB714	CPB715	CPB716	CPB717	CPB718	CPB719	CPB720	CPB721	CPB722	CPB723	CPB724	CPB725	CPB726	CPB727	CPB728	CPB729	CPB730	CPB731	CPB732	CPB733	CPB734	CPB735	CPB736	CPB737	CPB738	CPB739	CPB740	CPB741	CPB742	CPB743	CPB744	CPB745	CPB746	CPB747	CPB748	CPB749	CPB750	CPB751	CPB752	CPB753	CPB754	CPB755	CPB756	CPB757	CPB758	CPB759	CPB760	CPB761	CPB762	CPB763	CPB764	CPB765	CPB766	CPB767	CPB768	CPB769	CPB770	CPB771	CPB772	CPB773	CPB774	CPB775	CPB776	CPB777	CPB778	CPB779	CPB780	CPB781	CPB782	CPB783	CPB784	CPB785	CPB786	CPB787	CPB788	CPB789	CPB790	CPB791	CPB792	CPB793	CPB794	CPB795	CPB796	CPB797	CPB798	CPB799	CPB800	CPB801	CPB802	CPB803	CPB804	CPB805	CPB806	CPB807	CPB808	CPB809	CPB810	CPB811	CPB812	CPB813	CPB814	CPB815	CPB816	CPB817	CPB818	CPB819	CPB820	CPB821	CPB822	CPB823	CPB824	CPB825	CPB826	CPB827	CPB828	CPB829	CPB830	CPB831	CPB832	CPB833	CPB834	CPB835	CPB836	CPB837	CPB838	CPB839	CPB840	CPB841	CPB842	CPB843	CPB844	CPB845	CPB846	CPB847	CPB848	CPB849	CPB850	CPB851	CPB852	CPB853	CPB854	CPB855	CPB856	CPB857	CPB858	CPB859	CPB860	CPB861	CPB862	CPB863	CPB864	CPB865	CPB866	CPB867	CPB868	CPB869	CPB870	CPB871	CPB872	CPB873	CPB874	CPB875	CPB876	CPB877	CPB878	CPB879	CPB880	CPB881	CPB882	CPB883	CPB884	CPB885	CPB886	CPB887	CPB888	CPB889	CPB890	CPB891	CPB892	CPB893	CPB894	CPB895	CPB896	CPB897	CPB898	CPB899	CPB900	CPB901	CPB902	CPB903	CPB904	CPB905	CPB906	CPB907	CPB908	CPB909	CPB910	CPB911	CPB912	CPB913	CPB914	CPB915	CPB916	CPB917	CPB918	CPB919	CPB920	CPB921	CPB922	CPB923	CPB924	CPB925	CPB926	CPB927	CPB928	CPB929	CPB930	CPB931	CPB932	CPB933	CPB934	CPB935	CPB936	CPB937	CPB938	CPB939	CPB940	CPB941	CPB
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OA98 TABULATED SOURCE DATA

(REQ017) (03 AUG 74)

AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

RUN NO. 34/ 0 RN/L = 1.93

MACH	ALPHA	CN	CY	CA	CLM	CYN	CSL	CL	CD
5.250	11.609	.19581	-.00291	.05976	-.01635	-.00062	.00015	.17978	.09794
5.250	15.712	.31165	-.00283	.05924	-.01564	-.00071	.00025	.28396	.14143
5.250	20.095	.45196	-.00408	.05989	-.01619	-.00080	.00022	.40387	.21153
5.250	24.164	.59451	-.00478	.06076	-.01754	-.00077	.00001	.51754	.29880
5.250	28.418	.76422	-.00491	.06347	-.02269	-.00113	.00012	.64193	.41951
5.250	32.594	.93882	-.00427	.06295	-.02805	-.00108	.00012	.75705	.55876
5.250	36.964	1.13022	-.00457	.06308	-.03491	-.00148	.00007	.86513	.73002
5.250	41.083	1.31059	-.00517	.06169	-.04014	-.00164	.00051	.94732	.90776
5.250	43.241	1.41065	-.00556	.06116	-.04555	-.00191	.00043	.98573	1.01094

RUN NO. 17/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CSL	CL	CD
10.270	11.860	.14747	-.00240	.05265	-.00800	-.00029	.00004	.13350	.08184
10.270	15.880	.25261	-.00311	.05366	-.00183	-.00045	.00002	.22829	.12073
10.270	19.862	.37113	-.00234	.05525	.00066	-.00049	.00007	.33028	.17805
10.270	24.114	.51834	-.00240	.05738	.00224	-.00068	.00028	.44966	.26414
10.270	28.112	.67216	-.00254	.05900	-.00090	-.00083	.00003	.56507	.36875
10.270	32.023	.83059	-.00154	.06028	-.00600	-.00092	.00071	.67223	.49154
10.270	36.138	1.00404	-.00437	.05996	-.01840	-.00098	-.00259	.77552	.64051
10.270	40.188	1.19659	-.00319	.06092	-.02282	-.00112	.00013	.87506	.81839
10.270	42.102	1.25867	-.00128	.05562	-.04906	-.00135	.00209	.89510	.88381

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0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING) (AEG017) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 50.FT. XMRP = 1076.7000 IN.XO
LREF = 474.8000 IN. YMRP = .0000 IN.YO
BREF = 936.8900 IN. ZMRP = 375.0000 IN.ZO
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
BOFLAP = -11.700 SPOBRK = 55.000
RUDDER = .000

RUN NO. 34/ 0 RN/L = 1.93

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
5.250	11.608	-.02862	-.03213	-.03158	-.03041	.02361	-.03868	-.02584	-.01375	-.02201
5.250	15.712	-.02871	-.03369	-.03333	-.03243	.00182	-.03861	-.02752	-.01982	-.02723
5.250	20.095	-.03105	-.03403	-.03513	-.03487	-.01773	-.04093	-.02950	-.02339	-.03079
5.250	24.164	-.03138	-.03373	-.03497	-.03462	-.02355	-.04086	-.03070	-.02431	-.02913
5.250	28.416	-.03072	-.03373	-.03378	-.03390	-.02107	-.03955	-.03172	-.02435	-.02692
5.250	32.584	-.03053	-.03404	-.03332	-.03467	-.01770	-.03954	-.03176	-.02412	-.02671
5.250	36.964	-.02708	-.03230	-.03121	-.03335	-.02450	-.03723	-.03123	-.02227	-.02360
5.250	41.083	-.02615	-.03218	-.03090	-.03347	-.02634	-.03585	-.03146	-.02165	-.02079
5.250	43.241	-.02550	-.03083	-.02977	-.03273	-.02521	-.03400	-.03083	-.01953	-.01738

RUN NO. 17/ 0 RN/L = 1.59

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
10.270	11.860	.00379	-.00416	-.00142	-.00302	.00282	-.00663	.00072	.00750	.00189
10.270	15.880	.00222	-.00450	-.00222	-.00405	-.00010	-.00727	.00016	.00595	.00078
10.270	19.862	.00163	-.00404	-.00222	-.00397	-.00062	-.00727	.00016	.00587	.00057
10.270	24.114	.00222	-.00307	-.00148	-.00328	.00033	-.00688	.00066	.00655	.00182
10.270	28.112	.00436	-.00137	-.00002	-.00158	.00383	-.00536	.00149	.00779	.00375
10.270	32.023	.00534	.00064	.00151	-.00106	.00905	-.00421	.00211	.00929	.00577
10.270	36.136	.00654	.00164	.00280	-.00030	.01548	-.00222	.00378	.01081	.00679
10.270	40.188	.01057	.00570	.00672	.00398	.01536	.00291	.00686	.01323	.01131
10.270	42.102	.01424	.00528	.00992	.00644	.00758	.00607	.00950	.01345	.01474

ORIGINAL PAGE IS
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0A98 TABULATED SOURCE DATA
AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
LREF = 474.8000 IN. YMRP = .0000 IN.YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
SCALE = .0150

RUN NO. 36/ 0 RN/L = 1.71

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.500	.18092	-.00325	.05974	-.00933	-.00078	.00030	.16537	.09481
5.250	15.635	.29347	-.00285	.05877	-.00409	-.00085	.00037	.26677	.13569
5.250	20.000	.42606	-.00342	.05886	-.00070	-.00095	.00019	.38024	.20103
5.250	24.116	.56532	-.00427	.05943	.00149	-.00101	.00005	.49170	.28523
5.250	28.388	.72832	-.00391	.06055	.00184	-.00125	.00016	.61019	.39899
5.250	32.615	.89569	-.00406	.05993	.00030	-.00164	.00007	.72215	.53325
5.250	36.859	1.07298	-.00429	.05771	-.00361	-.00184	.00002	.82388	.68981
5.250	41.053	1.25114	-.00443	.05392	-.01051	-.00190	-.00010	.90807	.86235
5.250	43.229	1.34549	-.00444	.05266	-.01482	-.00195	-.00012	.94428	.95992

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000
BOFLAP = -11.700 SPOBRK = 55.000
RUDDER = .000

RUN NO. 15/ 0 RN/L = 1.26

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.883	.14100	-.00263	.05393	-.00248	-.00048	.00019	.12688	.08181
10.270	15.958	.24375	-.00285	.05393	.00536	-.00034	-.00023	.21953	.11887
10.270	19.855	.35695	-.00241	.05537	.01213	-.00043	.00020	.31693	.17332
10.270	24.112	.50266	-.00288	.05723	.01568	-.00073	.00042	.43542	.25759
10.270	28.112	.64872	-.00270	.05842	.01950	-.00078	.00026	.54466	.35721
10.270	32.038	.80660	-.00246	.05952	.02125	-.00103	.00030	.65217	.47834
10.270	36.120	.97416	-.00191	.05839	.01342	-.00101	.00036	.75249	.62141
10.270	40.186	1.14572	-.00280	.05722	.01366	-.00118	.00087	.83836	.78301
10.270	42.135	1.23306	-.00278	.05547	.00659	-.00106	.00030	.87718	.86838

ORIGINAL PAGE IS
OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-H7+H14-NE4+DUMMY STING)

(AEQ018) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

BETA = .000 ELEVON = -10.000
 BOFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

PARAMETRIC DATA

RUN NO. 36/ 0 RN/L = 1.71

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.500	-.03278	-.03830	-.03793	-.03738	.01682	-.04294	-.03467	-.01875	-.02541
5.250	15.635	-.03467	-.03865	-.03689	-.03699	-.00149	-.04396	-.03630	-.02374	-.03297
5.250	20.000	-.03607	-.03967	-.04041	-.04046	-.02157	-.04578	-.03694	-.02625	-.03432
5.250	24.116	-.03540	-.03917	-.03934	-.04007	-.02735	-.04476	-.03620	-.02731	-.03336
5.250	28.388	-.03516	-.03770	-.03846	-.03913	-.02445	-.04395	-.03603	-.02718	-.03168
5.250	32.615	-.03454	-.03770	-.03711	-.03898	-.02221	-.04395	-.03504	-.02639	-.03101
5.250	36.859	-.03233	-.03554	-.03548	-.03787	-.02594	-.04206	-.03445	-.02513	-.03063
5.250	41.053	-.02971	-.03479	-.03361	-.03767	-.02930	-.03959	-.03435	-.02602	-.02742
5.250	43.229	-.02792	-.03366	-.03157	-.03731	-.02875	-.03734	-.03314	-.02575	-.02253

RUN NO. 15/ 0 RN/L = 1.28

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.883	.00269	-.00411	-.00408	-.00465	.00269	-.00552	-.00217	.00376	.00029
10.270	15.958	.00161	-.00463	-.00487	-.00533	-.00143	-.00616	-.00285	.00162	-.00054
10.270	19.855	.00121	-.00463	-.00465	-.00551	-.00239	-.00643	-.00297	.00155	-.00118
10.270	24.112	.00141	-.00342	-.00368	-.00456	-.00126	-.00504	-.00139	.00307	.00071
10.270	28.112	.00298	-.00211	-.00244	-.00354	.00036	-.00502	-.00094	.00406	.00203
10.270	32.038	.00437	-.00032	-.00043	-.00181	.00382	-.00347	.00020	.00660	.00448
10.270	36.120	.00427	.00065	.00093	-.00155	.00830	-.00218	.00166	.00666	.00421
10.270	40.186	.00683	.00232	.00293	-.00034	.01123	.00026	.00324	.00818	.00658
10.270	42.135	.00966	.00529	.00592	.00031	.00923	.00435	.00570	.01023	.00956

ORIGINAL PAGE IS
 OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING) (REC0019) (03 AUG 74)

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BOFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.X0
 LREF = 474.8000 IN. YMRP = .0000 IN.Y0
 BREF = 936.8600 IN. ZMRP = 375.0000 IN.Z0
 SCALE = .0150

RUN NO. 37/ 0 RN/L = 1.70

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.528	.15706	-.00293	.07099	.00613	-.00057	.00045	.13971	.10095
5.250	15.633	.26996	-.00339	.06698	.00937	-.00078	.00059	.24193	.13725
5.250	20.023	.40327	-.00350	.06519	.01414	-.00100	.00041	.35658	.19933
5.250	24.068	.53804	-.00364	.06532	.01836	-.00118	.00050	.46463	.27907
5.250	28.369	.69441	-.00394	.06718	.02168	-.00127	.00046	.57909	.38906
5.250	32.601	.85661	-.00432	.06588	.02608	-.00162	.00044	.68615	.51703
5.250	36.840	1.02434	-.00433	.06442	.02798	-.00192	.00045	.78116	.66573
5.250	41.005	1.19498	-.00454	.06423	.02694	-.00214	.00049	.85965	.83253
5.250	43.150	1.28154	-.00502	.06215	.02679	-.00222	.00034	.89246	.92181

RUN NO. 16/ 0 RN/L = 1.64

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.892	.12954	-.00433	.05790	.00551	-.00033	.00007	.11483	.08335
10.270	15.884	.23171	-.00307	.05696	.01324	-.00054	.00020	.20728	.11820
10.270	19.844	.34537	-.00300	.05789	.02025	-.00072	.00019	.30521	.17170
10.270	24.137	.48706	-.00244	.06017	.02783	-.00083	.00038	.41987	.25407
10.270	28.093	.62501	-.00188	.06231	.03350	-.00091	.00024	.52204	.34829
10.270	31.987	.77378	-.00197	.06437	.03888	-.00117	.00003	.62235	.46428
10.270	36.137	.93878	-.00237	.06534	.03984	-.00129	-.00015	.71963	.60840
10.270	40.185	1.10074	-.00241	.06497	.03948	-.00133	-.00044	.79928	.75961
10.270	42.086	1.18554	-.00314	.06445	.03976	-.00142	-.00021	.83648	.84258

ORIGINAL PAGE IS
 OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

(AEQ019) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 836.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000
 BDFLAP = -11.700 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 37/ 0 RN/L = 1.70

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.528	-.03372	-.03883	-.03824	-.03703	.01810	-.04254	-.03430	-.01785	-.02315
5.250	15.633	-.03487	-.03867	-.03850	-.03783	-.00119	-.04376	-.03599	-.02230	-.03189
5.250	20.023	-.03671	-.03881	-.03986	-.03969	-.02110	-.04551	-.03632	-.02584	-.03226
5.250	24.068	-.03609	-.03867	-.03908	-.03895	-.02645	-.04434	-.03583	-.02636	-.02983
5.250	28.369	-.03626	-.03867	-.03821	-.03890	-.02445	-.04419	-.03628	-.02690	-.03039
5.250	32.601	-.03493	-.03673	-.03629	-.03788	-.02232	-.04245	-.03466	-.02509	-.02897
5.250	36.840	-.03238	-.03491	-.03461	-.03688	-.02503	-.04129	-.03408	-.02424	-.02803
5.250	41.005	-.03029	-.03380	-.03225	-.03549	-.02957	-.03779	-.03290	-.02425	-.02385
5.250	43.150	-.02730	-.03173	-.02938	-.03392	-.02880	-.03463	-.03147	-.02186	-.01950

RUN NO. 18/ 0 RN/L = 1.64

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.892	.00382	-.00365	-.00057	-.00324	.00589	-.00603	.00098	.00656	.00232
10.270	15.884	.00257	-.00381	-.00159	-.00440	.00388	-.00722	.00013	.00440	.00100
10.270	19.844	.00311	-.00389	-.00168	-.00434	.00349	-.00711	-.00013	.00441	.00068
10.270	24.137	.00428	-.00197	-.00011	-.00290	.00629	-.00571	.00130	.00595	.00281
10.270	28.093	.00514	-.00094	.00090	-.00187	.00834	-.00507	.00169	.00657	.00371
10.270	31.967	.00718	.00145	.00316	-.00042	.01441	-.00291	.00314	.00869	.00592
10.270	36.137	.00718	.00253	.00384	.00052	.01964	-.00188	.00386	.00857	.00627
10.270	40.165	.01003	.00505	.00571	.00198	.01974	.00029	.00544	.01002	.00906
10.270	42.096	.01145	.00863	.00705	.00218	.00592	.00211	.00620	.00943	.01014

ORIGINAL PAGE IS
OF POOR QUALITY

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 35/ 0 RV/L = 1.76

HACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.554	.19208	-.00295	.05925	-.01728	-.00066	.00014	.17832	.09852
5.250	15.663	.30738	-.00297	.05856	-.01608	-.00088	.00015	.28015	.13937
5.250	20.046	.44597	-.00331	.05883	-.01560	-.00093	.00010	.39879	.20814
5.250	24.122	.58803	-.00321	.05942	-.01708	-.00037	.00005	.51240	.29455
5.250	28.403	.75412	-.00333	.06026	-.02129	-.00109	.00002	.63467	.41172
5.250	32.637	.93326	-.00312	.06141	-.02879	-.00122	-.00004	.75278	.55504
5.250	36.869	1.11614	-.00403	.06100	-.03750	-.00158	-.00014	.85632	.71847
5.250	41.120	1.30560	-.00445	.06000	-.04830	-.00171	-.00032	.94410	.90381
5.250	43.219	1.40047	-.00459	.05850	-.05403	-.00171	-.00050	.98052	1.00165

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 85.000
 RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 35/ 0 RV/L = 1.76

HACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	CPB14	CPB15	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22	CPB23	CPB24	CPB25	CPB26	CPB27	CPB28	CPB29	CPB30	CPB31	CPB32	CPB33	CPB34	CPB35	CPB36	CPB37	CPB38	CPB39	CPB40	CPB41	CPB42	CPB43	CPB44	CPB45	CPB46	CPB47	CPB48	CPB49	CPB50	CPB51	CPB52	CPB53	CPB54	CPB55	CPB56	CPB57	CPB58	CPB59	CPB60	CPB61	CPB62	CPB63	CPB64	CPB65	CPB66	CPB67	CPB68	CPB69	CPB70	CPB71	CPB72	CPB73	CPB74	CPB75	CPB76	CPB77	CPB78	CPB79	CPB80	CPB81	CPB82	CPB83	CPB84	CPB85	CPB86	CPB87	CPB88	CPB89	CPB90	CPB91	CPB92	CPB93	CPB94	CPB95	CPB96	CPB97	CPB98	CPB99	CPB100
5.250	11.554	-.02673	-.03265	-.03231	-.03058	.02140	-.03658	-.02810	-.01486	-.01989																																																																																											
5.250	15.663	-.02853	-.03428	-.03406	-.03308	.00135	-.03998	-.02946	-.01870	-.02592																																																																																											
5.250	20.046	-.03078	-.03432	-.03522	-.03538	-.01748	-.04216	-.03118	-.02315	-.02837																																																																																											
5.250	24.122	-.03107	-.03362	-.03517	-.03498	-.02368	-.04215	-.03138	-.02423	-.02941																																																																																											
5.250	28.403	-.03070	-.03458	-.03470	-.03497	-.02172	-.04215	-.03134	-.02411	-.02908																																																																																											
5.250	32.637	-.03056	-.03417	-.03400	-.03495	-.01933	-.04215	-.03124	-.02388	-.02754																																																																																											
5.250	36.869	-.02850	-.03261	-.03223	-.03422	-.02250	-.03996	-.03096	-.02218	-.02711																																																																																											
5.250	41.120	-.02547	-.03149	-.03055	-.03273	-.02634	-.03779	-.03054	-.02061	-.02184																																																																																											
5.250	43.219	-.02470	-.03013	-.02938	-.03202	-.02634	-.03587	-.03031	-.01981	-.01882																																																																																											

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BDFLAP = -11.700 SPOBRK = 85.000
 RUDDER = .000

ORIGINAL PAGE IS OF POOR QUALITY

0A98 TABULATED SOURCE DATA

(REQ021) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = 16.300 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 18/ 0 RN/L = 1.42

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.842	.15516	-.00265	.05452	-.01520	-.00030	.00020	.14067	.08520
10.270	15.859	.26283	-.00300	.05578	-.01598	-.00045	.00005	.23758	.12548
10.270	19.846	.39144	-.00276	.05946	-.02153	-.00035	-.00002	.34801	.18882
10.270	24.111	.54983	-.00286	.06407	-.03257	-.00062	-.00005	.47569	.28308
10.270	28.109	.71229	-.00301	.06861	-.04485	-.00065	-.00050	.59595	.39612
10.270	32.011	.87812	-.00271	.07156	-.05790	-.00090	-.00047	.70666	.52616
10.270	36.099	1.05926	-.00208	.07459	-.07738	-.00102	.00020	.81193	.68436
10.270	40.194	1.24699	-.00177	.07586	-.09029	-.00114	.00019	.90356	.86273
10.270	42.157	1.32996	-.00261	.07642	-.09603	-.00118	-.00104	.93462	.94927

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(AE0021) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = 16.300 SPOBRK = 55.000
 RUDDER = .000

RUN NO. 18/ 0 RN/L = 1.42

MACH	ALPHA	CP81	CP82	CP83	CP84	CP85	CP86	CP87	CP88	CP89	CP90	CP91
10.270	11.842	.00398	-.00372	-.00190	-.00342	.00441	-.00530	.00167	.00832	.00200	.00123	.00053
10.270	15.859	.00329	-.00390	-.00218	-.00394	.00149	-.00581	.00121	.00675	.00711	.00788	.00395
10.270	19.846	.00299	-.00373	-.00230	-.00378	.00054	-.00594	.00098	.00711	.00788	.00876	.00568
10.270	24.111	.00242	-.00281	-.00184	-.00317	.00158	-.00581	.00144	.00711	.00788	.00876	.00568
10.270	28.109	.00457	-.00098	-.00036	-.00188	.00518	-.00468	.00167	.00876	.00876	.00960	.01289
10.270	32.011	.00476	-.00038	-.00071	-.00154	.00878	-.00402	.00239	.01013	.01101	.01101	.01289
10.270	36.099	.00486	.00147	.00156	-.00034	.01461	-.00172	.00329	.01532	.01532	.01532	.01552
10.270	40.194	.01278	.00814	.00772	.00633	.01562	.00645	.00960	.01532	.01532	.01532	.01552
10.270	42.157	.01483	.00910	.00811	.00615	.00619	.00734	.00920	.01437	.01437	.01437	.01552

ORIGINAL PAGE IS OF POOR QUALITY

(RE0022) (03 AUG 74)

AMES 3.5-190 0A98 (011-H7+H14-N24+DUPPY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 19/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.642	.15015	-.00325	.05339	-.00853	-.00053	.00002	.13600	.08306
10.270	15.873	.25461	-.00334	.05355	-.00494	-.00051	-.00021	.23026	.12115
10.270	19.871	.37718	-.00273	.05553	-.00152	-.00060	-.00010	.33585	.18043
10.270	24.140	.52862	-.00269	.05758	-.00333	-.00078	-.00012	.45884	.26873
10.270	28.138	.68352	-.00261	.05961	-.00660	-.00086	-.00073	.57463	.37492
10.270	32.028	.84721	-.00220	.06081	-.01470	-.00095	-.00031	.68601	.50086
10.270	36.178	1.02739	-.00326	.06125	-.02769	-.00097	-.00058	.79315	.65590
10.270	40.207	1.20025	-.00331	.06073	-.04023	-.00113	-.00052	.87744	.82121
10.270	42.137	1.28670	-.00243	.05942	-.04687	-.00120	-.00030	.91428	.90732

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = .000 SPOBRK = 55.000
 RUDDER = .000

AMES 3.5-190 0A98 (011-H7+H14-N24+DUPPY STING)

(AE0022) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YMRP = .0000 IN.YO
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 19/ 0 RN/L = 1.54

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.642	.00209	-.00559	-.00386	-.00611	.00042	-.01045	-.00068	.00530	.00034
10.270	15.873	.00111	-.00599	-.00437	-.00670	-.00239	-.01108	-.00151	.00375	-.00042
10.270	19.871	.00073	-.00582	-.00419	-.00687	-.00281	-.01121	-.00134	.00425	-.00062
10.270	24.140	.00073	-.00473	-.00345	-.00567	-.00102	-.01070	-.00050	.00526	.00119
10.270	28.138	.00308	-.00318	-.00192	-.00448	.00230	-.00955	-.00016	.00638	.00278
10.270	32.028	.00474	-.00134	-.00061	-.00353	.00588	-.00815	.00084	.00833	.00493
10.270	36.178	.00601	-.00031	.00059	-.00268	.01210	-.00495	.00195	.00970	.00576
10.270	40.207	.01050	.00368	.00446	.00099	.01168	.00090	.00576	.01208	.01055
10.270	42.137	.01313	.00617	.00638	.00167	.00119	.00140	.00598	.01088	.01269

PARAMETRIC DATA

BETA = .000 ELEVON = .000
 BOFLAP = .000 SPOBRK = 55.000
 RUDDER = .000

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0A88 TABULATED SOURCE DATA

AMES 3.5-190 0A88 (011-M7+H14-N24+DUMMY STING)

(REQ023) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
 BDFLAP = -11.700 SPD8RK = 55.000
 RUDDER = .000

RUN NO. 33/ 0 RN/L = 1.50

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.339	.13521	-.04549	.05472	-.00769	-.01076	-.00238	.12181	.08023
10.270	15.444	.23993	-.04374	.05546	-.00088	-.01043	-.00387	.21650	.11736
10.270	19.816	.36939	-.04306	.05736	.00298	-.01045	-.00538	.32807	.17918
10.270	23.731	.50646	-.04206	.05928	.00252	-.01045	-.00708	.43978	.25809
10.270	27.959	.66486	-.04087	.06029	.00089	-.01022	-.00847	.59000	.36496
10.270	32.111	.83968	-.04165	.06127	-.00890	-.00996	-.01049	.67865	.49823
10.270	36.302	1.02583	-.04024	.06171	-.01547	-.01005	-.01084	.79018	.65706
10.270	40.402	1.20927	-.03753	.06080	-.02864	-.01002	-.01111	.88148	.83008
10.270	42.529	1.29199	-.03636	.05936	-.03110	-.00999	-.01200	.91198	.91708

AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

(AEQ023) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = .000
 BDFLAP = -11.700 SPD8RK = 55.000
 RUDDER = .000

RUN NO. 33/ 0 RN/L = 1.50

MACH	ALPHA	CP81	CP82	CP83	CP84	CP85	CP86	CP87	CP88	CP89	CP90
10.270	11.339	.00708	-.00438	-.00030	-.00093	.00065	-.00487	.00064	.00742	.00256	.00256
10.270	15.444	.00649	-.00488	-.00048	-.00194	.00170	-.00696	.00018	.00600	.00137	.00137
10.270	19.816	.00613	-.00497	-.00115	-.00206	.00182	-.00737	-.00009	.00594	.00125	.00125
10.270	23.731	.00516	-.00392	-.00025	-.00203	.00389	-.00727	.00007	.00653	.00153	.00153
10.270	27.959	.00595	-.00279	.00111	-.00126	.00811	-.00498	.00057	.00734	.00291	.00291
10.270	32.111	.00486	-.00109	.00278	.00043	.01071	-.00499	.00235	.00801	.00463	.00463
10.270	36.302	.00964	.00130	.00448	.00148	.01705	-.00118	.00508	.01014	.00615	.00615
10.270	40.402	.01503	.00690	.00958	.00557	.01846	.00266	.00751	.01205	.00916	.00916
10.270	42.529	.01528	.00898	.01131	.00603	.01980	.00409	.00849	.01159	.01204	.01204

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(REC024) (03 AUG 74)

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 32/ 0 RN/L = 1.88

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.387	.11337	-.04456	.05719	.00497	-.01012	-.00131	.09984	.07845
10.270	15.439	.21176	-.04307	.05734	.01367	-.00993	-.00299	.18885	.11165
10.270	19.812	.33462	-.04140	.05690	.02247	-.01009	-.00405	.29485	.16883
10.270	23.816	.46134	-.04014	.06020	.02908	-.01027	-.00535	.39775	.24138
10.270	27.951	.60594	-.04008	.06248	.03665	-.01043	-.00648	.50597	.33920
10.270	32.065	.76150	-.03846	.06396	.04158	-.01037	-.00728	.61138	.45846
10.270	36.211	.92376	-.03741	.06473	.04373	-.01015	-.00776	.70709	.59795
10.270	40.373	1.08421	-.03738	.06344	.04288	-.00987	-.00890	.78491	.75064
10.270	42.462	1.16497	-.03623	.06265	.04046	-.00966	-.00879	.81714	.83268

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000
 BOFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

(REC024) (03 AUG 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO
 LREF = 474.8000 IN. YHRP = .0000 IN.YO
 BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO
 SCALE = .0150

RUN NO. 32/ 0 RN/L = 1.88

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.387	.00007	-.00742	-.00358	-.00473	.00033	-.00606	-.00329	-.00269	-.00077
10.270	15.439	.00009	-.00777	-.00446	-.00534	.00175	-.00682	-.00386	.00051	-.00270
10.270	19.812	-.00032	-.00778	-.00481	-.00568	.00181	-.00733	-.00414	.00012	-.00278
10.270	23.816	-.00023	-.00637	-.00347	-.00468	.00392	-.00846	-.00332	.00234	-.00176
10.270	27.951	.00026	-.00564	-.00191	-.00332	.00613	-.00608	-.00293	.00265	-.00005
10.270	32.065	.00123	-.00361	-.00113	-.00256	.01155	-.00406	-.00111	.00321	.00023
10.270	36.211	.00306	-.00193	.00144	-.00079	.01648	-.00243	.00049	.00494	.00201
10.270	40.373	.00750	.00100	.00378	.00175	.01842	.00009	.00331	.00791	.00489
10.270	42.462	.00780	.00247	.00478	.00175	.01335	.00287	.00348	.00835	.00613

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000
 BOFLAP = -11.700 SPDBRK = 55.000
 RUDDER = .000

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