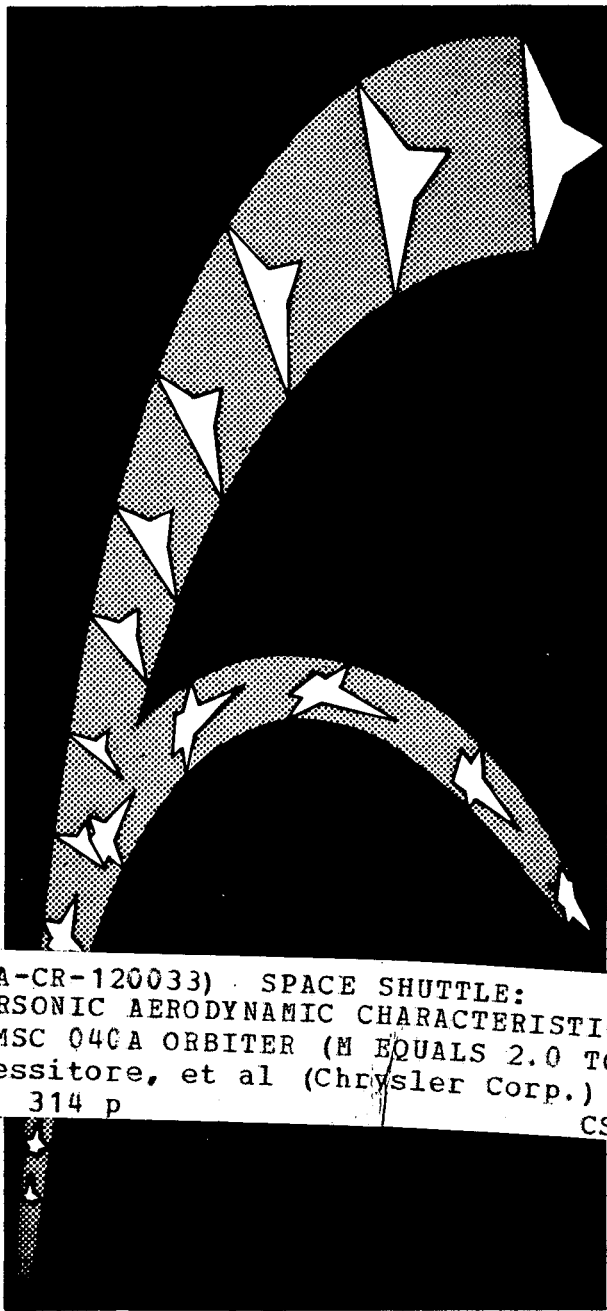


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MAY 1972



—SPACE SHUTTLE—

**SUPERSONIC AERODYNAMIC
CHARACTERISTICS OF THE
MSC 040A ORBITER
(M=2.0 to 4.0)**

by

F. Tessitore, GAC

M. Quan, GAC

R. Romere, NASA-MSC

R. Moore, NASA-MSC

R. Weaver, JPL

(NASA-CR-120033) SPACE SHUTTLE:
SUPERSONIC AERODYNAMIC CHARACTERISTICS OF
THE MSC 040A ORBITER (M EQUALS 2.0 TO 4.0).
F. Tessitore, et al (Chrysler Corp.) May
1972 314 p

N72-25858

Unclas
29963

CSCL 22B G3/31

**20-INCH SUPERSONIC
WIND TUNNEL**

**Jet Propulsion
Laboratory**

SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
MARSHALL SPACE FLIGHT CENTER

This document should
be referenced NASA
CR-120,033

NASA Series Number: S-0055

DMS-DR-1221
CR-120,033
May, 1972

SADSAC/SPACE SHUTTLE

WIND TUNNEL TEST DATA REPORT

CONFIGURATION: MSC 040 A

TEST PURPOSE: To Determine Basic Aerodynamic Force and Moment Data
in the Supersonic Flight Regime.

TEST FACILITY: Jet Propulsion Laboratory's 20" Supersonic Wind Tunnel

TESTING AGENCY: MSC-Grumman Aerospace Corp.

TEST NO. & DATE: JPL WT 20-681 (NASA S-0055) Nov. 29, 1971 to Dec. 10, 1971

PROJECT ENGINEER(S): R. Romere, R. Moore - MSC
F. Tessitore, M. Quan - Grumman
R. Weaver - J.P.L.

DATA MANAGEMENT SERVICES

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Robert L. Crawford

RELEASE APPROVAL: *J. T. Kelly*
FOR W. D. Kemp, Supervisor
Aero Thermo Data Group

CONTRACT NAS 8-4016

AMENDMENT 158

DRL 297 - 84a

This report has been prepared by Chrysler Corporation Space Division under a Data Management Contract to the NASA. Chrysler assumes no responsibility for the data presented herein other than its display characteristics.

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SUPERSONIC AERODYNAMIC CHARACTERISTICS OF THE

MSC O4OA ORBITER (M = 2.0 TO 4.0)

By

F. Tessitore, M. Quan, R. Weaver, R. Romere & R. Moore

A B S T R A C T

A wind tunnel test of the Manned spacecraft Center space shuttle orbiter configuration O4OA was run in the Jet Propulsion Laboratory's 20 Inch Supersonic Wind Tunnel. Basic aerodynamic data for this vehicle were determined at Mach 2.0, 2.4, 3.0 and 4.0.

The model was fabricated in the Grumman Aerospace Corporation Model Shop. Vehicle configuration and overall test direction was provided by the Manned Spacecraft Center in Houston, Texas.

The test occurred over the period from November 29, 1971 to December 10, 1971 with approximately 80 hours of tunnel occupancy. This test has been designated NASA Test S-0055. The facility designation was JPL WT 20-681.

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TABLE OF CONTENTS

	Page Number
Summary	2
Nomenclature	3
Configurations Investigated	6
Test Facility	7
Data Reduction	8
Tables:	
I. Test Conditions	9
II. Dataset Collation Sheets	10
III. Dimensional Data	17
IV. Index of Model Figures	27
V. Index of Data Figures	28
Figures:	
Model	33
Data	41

S U M M A R Y

A .0075 scale model of the Manned Spacecraft Center O40A space shuttle orbiter was tested in the Jet Propulsion Laboratory at $M = 2.0, 2.4, 3.0$ and 4.0 in the 20-inch Supersonic Wind Tunnel.

The basic vehicle configuration was investigated. The effects of a component build-up and of various control deflections were obtained. The elevons were deflected symmetrically and asymmetrically to determine elevator and aileron effectiveness. The rudder was tested both flared and unflared and the effects of deflections were determined. A body flap was also tested when the wing was shifted to a position further aft. The effects of the canopy, dorsal boom cover, wing and tail ACPS pods were also determined. An alternate nose, wing, and vertical tail were also tested.

The model was tested over an angle of attack range of 0° to 30° at 0° and 5° of sideslip. A plot is presented in Figure 3 of beta versus alpha to show variations in beta through the pitch sweep due to sting deflections. Characteristics in sideslip were determined by varying sideslip angle from -4° to 10° with angle of attack set at $0^\circ, 10^\circ, 20^\circ$ or 30° .

The test was run without transition grit on the model.

NOMENCLATURE
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2 , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , slugs/ft ³
<u>Reference & C.G. Definitions</u>		
A_b		base area; m^2 , ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
$\frac{l}{c}$ _{REF}	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2 , ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

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

NOMENCLATURE (Continued)

Body-Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{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; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

ADDITIONS TO SADSAC NOMENCLATURE
FOR
JPL WT 20-681

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
δ_e	ELEVON	elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_{eL}	LELEVN	left elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_{eR}	RELEVN	right elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_R	RUDDER	rudder, surface deflection angle, positive deflection, trailing edge to the left; degrees
δ_{RF}	RUDFLR	rudder flare, split rudder deflection angle, left split rudder trailing edge left and right split rudder trailing edge right, $\delta_{rf} = (\delta_{rL} + \delta_{rR})/2$, positive deflection; degrees
δ_{BF}	BODFLP	body flap, surface deflection angle, positive deflection, trailing edge down; degrees

CONFIGURATIONS INVESTIGATED

The basic configuration tested was the Manned Spacecraft Center 040A orbiter. Components tested were as follows:

- B₁ -Orbiter body including basic nose
- B₂ -Alternate drooped nose
- W₁ -Basic wing-Superscripts indicate left and right elevon deflections, respectively. T.E. down is positive. Subscript "A" indicates the wing moved aft 60 inches full scale.
- W₂ -Alternate wing
- V₁ -Basic vertical tail - A single superscript indicates full span unflared rudder deflection. Two superscripts indicate the left and right panel deflections, respectively, of a flared rudder. In both cases, T.E. left is positive.
- V₂ -Alternate vertical tail
- M₁ -OMS pods - Orbiter Maneuvering System engines
- P₁ -ACPS pods on both the wings and vertical tail. A "w" subscript means ACPS pods are only on the wings. A "v" subscript means only the ACPS pod on the tail is on.
- D₁ -Dorsal boom cover
- C₁ -Basic canopy
- F₁ -Body flap. It is on only in the aft wing position.
Superscript is deflection with T.E. up negative.

TEST FACILITY

The 20 inch supersonic wind tunnel at the Jet Propulsion Laboratory in Pasadena, California, is of the continuous-flow, variable density type. The Mach number range can be varied from 1.3 to 5.0 with corresponding earth pressure-altitude simulation from 15,000 to 180,000 feet.

The geometric test section is nominally 20 inches high by 18 inches wide. A model can be pitched or rolled remotely with sector travel limited to 40° . Side-slip data can be obtained using the pitch-roll capability. Types of tests which can be run in this tunnel include internal strain gage balance, free flight, pressure (up to 120 ports), temperature (up to 150 thermocouples) and various types of flow visualization (including Schlieren) tests.

Data reduction is off-line with on-line monitoring of the raw data. Final coefficient data as well as plots can be obtained normally within several days.

DATA REDUCTION

The J.P.L. SGB6-3 1.00 inch TASK six component balance was used to measure model forces and moments. These data were reduced along and about a set of body axes originating at the moment reference center at F.S. 1067.9, W.L. 400, and B.L. 0. Pertinent parameters used in the data reduction are given below:

$$S_{\text{ref}} = 25.556 \text{ in.}^2$$

$$b_{\text{ref}} = 6.615 \text{ in.}$$

$$\bar{c}_{\text{ref}} = 4.572 \text{ in.}$$

$$\text{Base Area} = 2.4089 \text{ in.}^2$$

Model base pressures were measured by four pressure taps routed along the sting (non-metric) and recorded on individual external transducers. Approximate locations of the pressure taps are shown in Figure 2. An axial force coefficient adjustment using these base pressures was computed as follows:

$$C_{A_{\text{base}}} = - \left[C_{P_1} (A/4) + C_{P_2} (A/4) + C_{P_3} (A/4) + C_{P_4} (A/4) \right] / S_{\text{ref}}$$

Where $C_{P_{1,2,3,4}}$ are the pressure coefficients corresponding to the four base pressure taps and A is the model base area.

TABLE I.

TEST CONDITIONS
TEST JPL WT 20-681

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
RUNS 2 - 7			
2.01	.358 x 10 ⁶ / in.	6.30	92
REST OF RUNS			
2.01	.303	5.83	92
2.42	.326	5.23	90
3.03	.326	4.32	85
3.98	.313	3.03	100

BALANCE UTILIZED: JPL SGB6-3

CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF 200 lbs.	± 0.25%	_____
SF 100 lbs.	"	_____
AF 30 lbs.	"	_____
PM 300 in-lbs.	"	_____
YM 125 in-lbs.	"	_____
RM 20 in-lbs.	"	_____

COMMENTS:

TABLE II.
 TEST JPL WT 20-681 DATA SET COLLATION SHEET
 .0075 SCALE MODEL OF THE MSC 040A SPACE SHUTTLE
 ORBITER IN THE J.P.L. 20" SUPERSONIC WIND TUNNEL

SHEET 1 OF 7

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES					NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	δ _{cl}	δ _{el}	δ _e	δ _{sc}	δ _{sc}		2.0	2.4	3.0	4.0							
RGB 011	B, W, V, M, P, D, C ₁	A	0	0	0	0	0	0	4											
012		A	5							2	46	90	108							
013		0	B							3	47	91	109							
014		10	B							4	48	92	110							
015		20	B							5	49	93	111							
016		30	B	Y	Y	Y	Y	Y		6	50	94	112							
021	B, W, V, M, P, D, C ₁	A	0	-40	-40	0	0	0	7	51	95	113								
022		A	5						8	61	75	122								
023		0	B						9	62	76	123								
024		10	B						10	63	77	124								
025		20	B						11	64	78	125								
026		30	B	Y	Y	Y	Y	Y	12	65	79	126								
031	B, W, V, M, P, D, C ₁	A	0	-20	-40	0	0	0	13	66	80	127								
041	B, W, V, M, P, D, C ₁	A	0	-20	-20	0	0	0	14	60	81	128								
042		A	5						15	54	82	116								
043		0	B						16	55	83	117								
044		10	B						17	56	84	118								
045		20	B						18	57	85	119								
046		30	B	Y	Y	Y	Y	Y	19	58	86	120								

COEFFICIENTS: CLM, CY, CYN, CBL, CAB, CA
 a or B
 SCHEDULES
 $\alpha A = 0^\circ \rightarrow 30^\circ$ by 2°
 $\beta B = \pm 4^\circ, \pm 3^\circ, \pm 2^\circ, \pm 1^\circ, 0^\circ, 6^\circ, 8^\circ, 10^\circ$
 IDPVAR(1) IDPVAR(2) IDV

TABLE II. (CONTINUED)

TEST JPL WT20-681 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	Del	Ser	Dr	Str		2.0	2.4	3.0	4.0							
RGB051	$B, W_1^{0.20} V_1^0 M, P, D, C_1$	A	0	0	-20	0	0	4	21	52	88	114							
052		A	5	↓	↓	↓	↓	1	22	53	89	115							
061	$B, W_1^{.50-.30} V_1^0 M, P, D, C_1$	A	0	-30	-30	0	0		23	67	74	129							
071	$B, W_1^{-.8-.7-.6} V_1^0 M, P, D, C_1$	A	0	-10	-10	0	0		24	68	73	130							
081	$B, W_1^{.10-.10} V_1^0 M, P, D, C_1$	A	0	+10	-10	0	0		25	69	72	131							
091	$B, W_1^{.75+.70} V_1^0 M, P, D, C_1$	A	0	+10	+10	0	0	↓	26	70	71	132							
101	$B, W_1^{0.0} V_1^{\pm 45} M, P, D, C_1$	A	0	0	0	±45	0	3	28		414	416							
102		A	5					3	29		415	417							
103		D	B					1	30										
104		D	B					1	31										
105		D	B					1	32										
106		D	B	↓	↓	↓	↓	1	33										
111	$B, W_1^{0.0} V_1^{\pm 30} M, P, D, C_1$	A	0	0	0	±30	0	4	34	40	96	102							
112		A	5						35	41	97	103							
113		D	B						36	42	98	104							
114		D	B						37	43	99	105							
115		D	B						38	44	100	106							
116		D	B	↓	↓	↓	↓	↓	39	45	101	107							

COEFFICIENTS: _____ IDBVAR(1) IDBVAR(2) INDV

a or B
 SCHEDULES

TABLE II. (CONTINUED)

TEST JPL WT20-681 DATA SET COLLATION SHEET

SHEET 3 OF 7

- PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)					
		a	B	Scr	Seq	δr	δsc		2.0	2.4	3.0	4.0		
RGB121	B, W ₁ ^{40°-40°} V ₁ ^{30°} M, P, D, C ₁	A	O	-40	-40	±30	O	3	314	320	133			
122		A	5						315	321	134			
123		O	B						316	322	135			
124		O	B						317	323	136			
125		O	B						318	324	137			
126		O	B						319	325	138			
131	B, W ₁ ^{0°} V ₁ ^{40°-30°} M, P, D, C ₁	A	O	O	O	±40 ±20	O		312	326	139			
132		A	5	↓			↓		313	327	140			
141	B, W ₁ ^{0°} V ₁ ^{10°} M, P, D, C ₁	A	O	O	O	+10	O		310	328	141			
142		A	5	↓			↓		311	329	142			
151	B, W ₁ ^{0°} V ₁ ^{0°} M, P, C ₁	O	B	O	O	O	O		306	331	143			
152		O	B						307	332	144			
153		O	B						308	333	145			
154		O	B						309	334	146			
161	B, W ₁ ^{0°} V ₁ ^{30°} M, P, N, D, C ₁	A	O	O	O	±30	O		299	335	147			
162		A	5						300	336	148			
163		O	B						301	337	149			
164		O	B						302	338	150			
165		O	B						303	339	151			
166		O	B						304	340	152			

COEFFICIENTS:
 a or B _____
 SCHEDULES _____
 IDPVAR (1) IDPVAR (2) INDV

TEST JPL WT20-681 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	ScL	ScR	Sc	ScF		2.0	2.4	3.0	4.0							
RGB 111	$B_1 W_1^{90} V_1^{130} M_1 D_1 C_1$	A	O	O	O	±30	O	3	293	341	153								
172		A	5						294	342	154								
173		O	B						295	343	155								
174		10	B						296	344	156								
175		20	B						297	345	157								
176		30	B	Y	Y	Y	Y		298	346	158								
181	$B_2 W_2^{90} V_1^{90} M_1 P_1 D_1 C_1$	A	O	O	O	O	O		287	347	159								
182		A	5						288	348	160								
183		O	B						289	349	161								
184		10	B						290	350	162								
185		20	B						291	351	163								
186		30	B	Y	Y	Y	Y		292	352	164								
191	$B_2 W_2^{90} V_2^{90} M_1 P_1 D_1 C_1$	A	O	O	O	O	O		281	353	165								
192		A	5						282	354	166								
193		O	B						283	355	167								
194		10	B						284	356	168								
195		20	B						285	357	169								
196		30	B	Y	Y	Y	Y		286	358	170								

COEFFICIENTS:

IDPVAR (1) | IDPVAR (2) | NDV

a or B SCHEDULES

TABLE II. (CONTINUED)

TEST JPL WT 20-681 DATA SET COLLATION SHEET

SHEET 5 OF 7

7

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		a	B	Sec	Sec	Sec	Sec		2.0	2.4	3.0	4.0								
RGB 201	$B_2 W_2^{90^\circ} V_2^\circ M_1 P_1 D_1 C_1$	A	O	-40	-40	O	O	3												
202		A	5						275	359	171									
203		O	B						276	360	172									
204		10	B						277	361	173									
205		20	B						278	362	174									
206		30	B	Y	Y	Y	Y		279	363	175									
211	$B_2 W_1^{90^\circ} V_1^\circ M_1 P_1 D_1 C_1$	A	O	O	O	O	O		280	364	176									
212		A	5						269	365	177									
213		O	B						270	366	178									
214		10	B						271	367	179									
215		20	B						272	368	180									
216		30	B	Y	Y	Y	Y		273	369	181									
221	$B_1 W_1^{90^\circ} V_1^\circ M_1 P_1$	A	O	O	O	O	O		274	370	182									
222		A	5						261	373	183									
223		O	B						262	374	184									
224		10	B						263	375	185									
225		20	B						264	376	186									
226		30	B	Y	Y	Y	Y		265	377	187									
231	$B_1 W_1^{90^\circ} V_1^{130^\circ} M_1 P_1$	A	O	O	O	$\neq 30$	O		266	378	188									
232		A	5						267	371	189									
									268	372	190									

COEFFICIENTS:

a or B
 SCHEDULES

IDPVAR(1) | IDPVAR(2) | NDV

TABLE II. (CONTINUED)

TEST JPL WT 20-681 DATA SET COLLATION SHEET

SHEET 6 OF 7

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	ScL	ScE	ScF	ScG		2.0	2.4	3.0	4.0							
RGB 241	B ₁ W _{1a} ⁰⁰ M ₁ P ₁ D ₁ C ₁ F ₁	A	0	0	0	0	0	3											
242		A	5						255	379	191								
243		0	B						256	380	192								
244		10	B						257	381	193								
245		20	B						258	382	194								
246		30	B	Y	Y	Y	Y	Y	259	383	195								
251	B ₁ W _{1a} ⁰⁰ V ₁ ⁰⁰ M ₁ P ₁ D ₁ C ₁ F ₁	A	0	0	0	0	0		260	384	196								
252		A	5						249	385	197								
253		0	B						250	386	198								
254		10	B						251	387	199								
255		20	B						252	388	200								
256		30	B	Y	Y	Y	Y	Y	253	389	201								
261	B ₁ W _{1a} ⁰⁰ V ₁ ⁰⁰ M ₁ P ₁ D ₁ C ₁ F ₁	A	0	-40	-40	0	0		254	390	202								
262		A	5						243	391	203								
263		0	B						244	392	204								
264		10	B						245	393	205								
265		20	B						246	394	206								
266		30	B	Y	Y	Y	Y	Y	247	395	207								
271	B ₁ W _{1a} ⁰⁰ V ₁ ⁰⁰ M ₁ P ₁ D ₁ C ₁ F ₁	A	0	0	0	0	+10		248	396	208								
281	B ₁ W _{1a} ⁰⁰ V ₁ ⁰⁰ M ₁ P ₁ D ₁ C ₁ F ₁	A	0	0	0	0	-15	Y	242	397	209								
1	7	13	19	25	31	37	43	49	55	61	67	75	76						

COEFFICIENTS: _____ IDPVAR(1) | IDPVAR(2) | NDV

a or B SCHEDULES _____

TABLE III. DIMENSIONAL DATA

MODEL COMPONENT: BODY - B₁

GENERAL DESCRIPTION: _____

DRAWING NUMBER: MSC 040A 9/24/71, 518 MOD 1401, 1405

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> INCHES	<u>MODEL SCALE</u>
Length	<u>1,315.0</u>	<u>9.862</u>
Max. Width	<u>204.0</u>	<u>1.530</u>
Max. Depth	<u>238.0</u>	<u>1.785</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u>44,086.551</u>	<u>2.480</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base (PROJECTED)	<u>42824.5</u>	<u>2.409</u>

TABLE III. (CONTINUED)

MODEL COMPONENT: WING-W1

GENERAL DESCRIPTION: _____

DRAWING NUMBER: MSC 040A 9/24/71, 518 MOD 1403

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
	<u>INCHES</u>	
<u>TOTAL DATA</u>		
Area		
Planform	454,363.012	25.558
Wetted		
Span (equivalent)	882.0	6.615
Aspect Ratio	1.71212	1.712
Rate of Taper		
Taper Ratio	0.14860	.1486
Dihedral Angle, degrees	7°	7°
Incidence Angle, degrees	1.5°	1.5°
Aerodynamic Twist, degrees	0°	0°
Toe-In Angle		
Cant Angle		
Sweep-Back Angles, degrees		
Leading Edge	60°	60°
Trailing Edge	0°	0°
0.25 Element Line, 0.5 Element Line	52.42°, 40.9°	52.42°, 40.9°
Chords:		
Root (Wing Sta. 0.0)	897.0	6.727
Tip, (equivalent)	133.3	.9997
MAC	609.5	4.571
Fus. Sta. of .25 MAC	857.928	6.434
W.P. of .25 MAC		
B.L. of .25 MAC	166.0	1.245
Airfoil Section		
Root	NACA 0008-64	NACA 0008-64
Tip	NACA 0008-64	NACA 0008-64
<u>EXPOSED DATA</u>		
Area	289,440.743	16.281
Span, (equivalent)	678.0	5.085
Aspect Ratio	1.58818	1.588
Taper Ratio	0.18501	.1850
Chords		
Root	720.50	5.404
Tip	133.3	.9997
MAC	494.201	3.706
Fus. Sta. of .25 MAC	1,144.335	8.582
W.P. of .25 MAC		
B.L. of .25 MAC	232.640	1.745

TABLE III. (CONTINUED)

MODEL COMPONENT: W1 - Elevon

GENERAL DESCRIPTION: _____

NOTE: The following dimensions are representative of each of
the two elevons.

DRAWING NUMBER: MSC 040A 9/24/71, 518 MOD 1403

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> <u>INCHES</u>	<u>MODEL SCALE</u>
Area	<u>32,784.0</u>	<u>1.844</u>
Span (equivalent)	<u>278.0</u>	<u>2.085</u>
Inb'd equivalent chord	<u>118.0</u>	<u>.8850</u>
Outb'd equivalent chord	<u>118.0</u>	<u>.8850</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.166</u>	<u>.166</u>
At Outb'd equiv. chord	<u>.516</u>	<u>.516</u>
Sweep Back Angles, degrees		
Leading Edge	<u> </u>	<u> </u>
Tailing Edge	<u>0°</u>	<u>0°</u>
Hingeline	<u>0°</u>	<u>0°</u>
Area Moment (Normal to hinge line)	<u> </u>	<u> </u>

TABLE III. (CONTINUED)

MODEL COMPONENT: WING - W₂

GENERAL DESCRIPTION: _____

DRAWING NUMBER: SKB 200 023, 024, 518 MOD 1404

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>	<u>INCHES</u>	
Area		
Planform	416,342.53	23.419
Wetted		
Span (equivalent)	955.45	7.166
Aspect Ratio	2.1926	2.1926
Rate of Taper		
Taper Ratio	0.210	0.210
Dihedral Angle, degrees	7°	7°
Incidence Angle, degrees	1.5°	1.5°
Aerodynamic Twist, degrees	0°	0°
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	50	50°
Trailing Edge	0	0°
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	720.0	5.400
Tip, (equivalent)	151.511	1.136
MAC	497.559	3.732
Fus. Sta. of .25 MAC	1,142.167	8.566
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section	186.925	1.402
Root	NACA 0008-64	NACA 0008-64
Tip	NACA 0008-64	NACA 0008-64
<u>EXPOSED DATA</u>		
Area	281,851.93	15.854
Span, (equivalent)	751.450	5.636
Aspect Ratio	2.00	2.00
Taper Ratio	0.253	0.253
Chords		
Root	598.644	4.490
Tip	151.511	1.136
MAC	419.495	3.146
Fus. Sta. of .25 MAC	1,200.54	9.005
W.P. of .25 MAC		
B.L. of .25 MAC	252.537	1.894

TABLE III. (CONTINUED)

MODEL COMPONENT: W2-ELEVON

GENERAL DESCRIPTION: _____

NOTE: The following dimensions are representative of each of the
two elevons.

DRAWING NUMBER: SKB 200 024, 518 MOD 1404

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> <u>INCHES</u>	<u>MODEL SCALE</u>
Area	<u>37,052.0</u>	<u>2.084</u>
Span (equivalent)	<u>314.0</u>	<u>2.355</u>
Inb'd equivalent chord	<u>118.0</u>	<u>.885</u>
Outb'd equivalent chord	<u>118.0</u>	<u>.885</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.20</u>	<u>.20</u>
At Outb'd equiv. chord	<u>.574</u>	<u>.574</u>
Sweep Back Angles, degrees		
Leading Edge	<u> </u>	<u> </u>
Trailing Edge	<u>0°</u>	<u>0°</u>
Hingeline	<u>0°</u>	<u>0°</u>
Area Moment (Normal to hinge line)	<u> </u>	<u> </u>

TABLE III. (CONTINUED)

MODEL COMPONENT: VERTICAL TAIL - VI

GENERAL DESCRIPTION: CENTERLINE STABILIZER

DRAWING NUMBER: MSC 040A 9/24/71, 518 MOD 1407

<u>TOTAL DATA</u>	<u>FULL-SCALE INCHES</u>	<u>MODEL SCALE</u>
Area		
Planform		
Wetted		
Span (equivalent)		
Aspect Ratio		
Rate of Taper		
Taper Ratio		
Dihedral Angle, degrees		
Incidence Angle, degrees		
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	45°	45°
Trailing Edge	15°	15°
0.25 Element Line, 0.5 Element line	39.23°, 32.35°	39.23°, 32.35°
Chords:		
Root (Wing Sta. 0.0)		
Tip, (equivalent)		
MAC, inches		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	NACA 0012-64	NACA 0012-64
Tip	NACA 0012-64	NACA 0012-64
<u>EXPOSED DATA</u>		
Area	51,030.051	2.870
Span, (equivalent)	270.0	2.025
Aspect Ratio	1.42857	1.429
Taper Ratio	0.31250	.3125
Chords		
Root	288.0	2.160
Tip	90.0	.6750
MAC	206.285	1.547
Fus. Sta. of .25 MAC	1,428.0	10.710
W.P. of .25 MAC	111.426	.8357

TABLE III. (CONTINUED)

MODEL COMPONENT: VL - RUDDER

GENERAL DESCRIPTION: _____

DRAWING NUMBER: MSC 040A 9/24/71, 518 MOD 1407

<u>DIMENSIONS:</u>	<u>FULL-SCALE INCHES</u>	<u>MODEL SCALE</u>
Area	<u>19,300.4</u>	<u>1.086</u>
Span (equivalent)	<u>244.0</u>	<u>1.830</u>
Inb'd equivalent chord	<u>114.9</u>	<u>.8617</u>
Outb'd equivalent chord	<u>43.3</u>	<u>.3247</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
At Outb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
Sweep Back Angles, degrees		
Leading Edge		
Tailing Edge	<u>15°</u>	<u>15°</u>
Hingeline	<u>33°</u>	<u>33°</u>
Area Moment (Normal to hinge line)		

TABLE III. (CONTINUED)

MODEL COMPONENT: VERTICAL TAIL - V2

GENERAL DESCRIPTION: CENTERLINE STABILIZER

DRAWING NUMBER: 518 MOD 1402

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area		
Planform		
Wetted		
Span (equivalent)		
Aspect Ratio		
Rate of Taper		
Taper Ratio		
Dihedral Angle, degrees		
Incidence Angle, degrees		
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	45°	45°
Trailing Edge		
0.25 Element Line, 0.5 Element line		
Chords:		
Root (Wing Sta. 0.0)		
Tip, (equivalent)		
MAC, inches		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	NACA 0012-64	NACA 0012-64
Tip	NACA 0012-64	NACA 0012-64
<u>EXPOSED DATA</u>		
Area	69,837.3	3,928
Span, (equivalent)	369.17	2.769
Aspect Ratio	1.95	1.95
Taper Ratio	0.3137	.3137
Chords		
Root	288.0	2.160
Tip	90.35	.6776
MAC	206.38	1.548
Fus. Sta. of .25 MAC	1,469.04	11.018
W.P. of .25 MAC	652.44	4.893
B.L. of .25 MAC	0.0	0.0

TABLE III. (CONTINUED)

MODEL COMPONENT: V2 - RUDDER

GENERAL DESCRIPTION: _____

DRAWING NUMBER: 518 MOD 1402

DIMENSIONS:

	<u>FULL-SCALE</u> INCHES	<u>MODEL SCALE</u>
Area	<u>28,610.68</u>	<u>1.609</u>
Span (equivalent)	<u>345.0</u>	<u>2.587</u>
Inb'd equivalent chord	<u>115.0</u>	<u>.8625</u>
Outb'd equivalent chord	<u>40</u>	<u>.3000</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
At Outb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
Sweep Back Angles, degrees		
Leading Edge	<u> </u>	<u> </u>
Trailing Edge	<u>25°</u>	<u>25°</u>
Hingeline	<u>35°</u>	<u>35°</u>
Area Moment (Normal to hinge line)	<u> </u>	<u> </u>

TABLE III. (CONTINUED)

MODEL COMPONENT: BODY FLAP - F1

GENERAL DESCRIPTION: _____

DRAWING NUMBER: SKG 200 032, 518 MOD 1410

DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>INCHES</u> <u>24072.0</u>	<u>1.354</u>
Span (equivalent)	<u>204.0</u>	<u>1.530</u>
Inb'd equivalent chord	<u>118.0</u>	<u>.8850</u>
Outb'd equivalent chord	<u>118.0</u>	<u>.8850</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u> </u>	<u> </u>
At Outb'd equiv. chord	<u> </u>	<u> </u>
Sweep Back Angles, degrees		
Leading Edge	<u>0°</u>	<u>0°</u>
Tailing Edge	<u>0°</u>	<u>0°</u>
Hingeline	<u>0°</u>	<u>0°</u>
Area Moment (Normal to hinge line)	<u> </u>	<u> </u>

TABLE IV.
INDEX OF MODEL FIGURES

FIGURE		PAGE NUMBER
1	Axis System	34
2	Base Pressure Tap Locations	35
3	Variation of Sideslip Angle with Angle of Attack	36
4	Installation Photograph of 0.0075 Scale MSC 040A Orbiter	37
5	Photograph of Model Being Simultaneously Pitched and Rolled to Obtain Sideslip Data	38
6	MSC 040A Orbiter	39
7	OMS Pods	40
8	Cargo Boom Cover	40

TABLE V. INDEX OF DATA FIGURES

TITLE	PLOTTED		CONDITIONS VARYING	PAGES
	COEFFICIENTS SCHEME *			
Figure 1. Longitudinal Control Effectiveness	A		δ_e	1-16
Figure 2. Effect of Flared Rudder, Beta = 0, 5 Degrees	B		δ_{RF}	17-20
Figure 3. Effect of Flared Rudder, in Pitch	A		δ_{RF}	21-36
Figure 4. Effect of Flared Rudder, In Yaw, Alpha = 0 Degrees	C		δ_{RF}	37-40
Figure 5. Effect of Flared Rudder, In Yaw, Alpha = 10 Degrees	C		δ_{RF}	41-44
Figure 6. Effect of Flared Rudder, Alpha = 20 Degrees	C		δ_{RF}	45-48
Figure 7. Effect of Flared Rudder, Alpha = 30 Degrees	C		δ_{RF}	49-52
Figure 8. Effect of Elevons in Yaw, Alpha = 0 Degrees	C		δ_e	53-56
Figure 9. Effect of Elevons in Yaw, Alpha = 10 Degrees	C		δ_e	57-60
Figure 10. Effect of Elevons in Yaw, Alpha = 20 Degrees	C		δ_e	61-64
Figure 11. Effect of Elevons in Yaw, Alpha = 30 Degrees	C		δ_e	65-68
Figure 12. Aileron Effectiveness	B, A		δ_a	69-88
Figure 13. Effect of Elevon, Beta = 0,5 Degrees	B		δ_e, β	89-92

*See page 32 for Plotted Coefficients Schedule.

TABLE V. INDEX OF DATA FIGURES
(CONTINUED)

TITLE	PLOTTED COEFFICIENTS SCHEDULE *	CONDITIONS VARYING	PAGES
Figure 14. Effect of Flare on Elevon, Beta = 0 Degrees	A	δ_e , δ_{RF}	93-108
Figure 15. Effect of Elevon on Flare, Beta = 5 Degrees	B	δ_e , δ_{RF}	109-112
Figure 16. Effect of Elevon on Flare, In Yaw, Alpha = 0 Degrees	C	δ_e	113-116
Figure 17. Effect of Elevon on Flare, In Yaw, Alpha = 10 Degrees	C	δ_e	117-120
Figure 18. Effect of Elevon on Flare, In Yaw, Alpha = 20 Degrees	C	δ_e	121-124
Figure 19. Effect of Elevon on Flare, In Yaw Alpha = 30 Degrees	C	δ_e	125-128
Figure 20. Rudder Effectiveness, Beta = 0, 5 Degrees	B	δ_{RF} , β	129-131
Figure 21. Effect of Cl and Dl in Yaw, Alpha = 0 Degrees	C	Configuration	132-135
Figure 22. Effect of Cl and Dl in Yaw, Alpha = 10 Degrees	C	Configuration	136-139
Figure 23. Effect of Cl and Dl in Yaw Alpha = 20 Degrees	C	Configuration	140-143
Figure 24. Effect of Cl and Dl in Yaw, Alpha = 30 Degrees	C	Configuration	144-147
Figure 25. Effect of Cl and Dl, Beta = 0, 5 Degrees	B	β , Configuration	148-151

* See page 32 for Plotted Coefficients Schedule.

TABLE V. INDEX OF DATA FIGURES
(CONTINUED)

TITLE	PIOTTED COEFFICIENTS SCHEDULE *	CONDITIONS VARYING	PAGES
Figure 26. Longitudinal Control Effectiveness, W1A	A	δ_e	152-163
Figure 27. Effect of ELEvon, W1A, Beta = 0, 5 Deg.	B	β, δ_e	164-166
Figure 28. Effect of ELEvon, In Yaw, W1A, Alpha = 0 Degrees	C	δ_e	167-169
Figure 29. Effect of ELEvon, In Yaw, W1A Alpha = 10 Degrees	C	δ_e	170-172
Figure 30. Effect of ELEvon, In Yaw, W1A, Alpha = 20 Degrees	C	δ_e	173-175
Figure 31. Effect of ELEvon, In Yaw, W1A, Alpha = 30 Degrees	C	δ_e	176-178
Figure 32. Effect of B2, W2, V2, and ELEvon	A	δ_e , Configuration	179-194
Figure 33. Effect of B2 and W2, Beta = 0, 5 Deg.	B	β , Configuration	195-198
Figure 34. Effect of W2, V2 and ELEvon, Beta = 0, 5 Degrees	B	δ_e, β , Configuration	199-201
Figure 35. Effect of B2, W2, V2 and ELEvon, In Yaw, Alpha = 0 Degrees	C	δ_e , Configuration	202-205
Figure 36. Effect of B2, W2, V2 and ELEvon, In Yaw, Alpha = 10 Degrees	C	δ_e , Configuration	206-209
Figure 37. Effect of B2, W2, V2 and ELEvon, In Yaw, Alpha = 20 Degrees	C	δ_e , Configuration	210-213
Figure 38. Effect of B2, W2, V2 and ELEvon, In Yaw, Alpha = 30 Degrees	C	δ_e , Configuration	214-217
Figure 39. Effect of ACPs Pods	A	Configuration	218-233

* See page 32 for Plotted Coefficients Schedule.

TABLE V. INDEX OF DATA FIGURES
(CONTINUED)

TITLE	PIOTTED COEFFICIENTS SCHEDULE *	CONDITIONS VARYING	PAGES
Figure 40. Effect of Tail and ACPs Pods, Beta = 0, 5 Degrees	B	θ_{RF} , β , Configuration	234-236
Figure 41. Effect of Tail and ACPs Pods, Alpha = 0 Degrees	C	θ_{RF} , Configuration	237-240
Figure 42. Effect of Tail and ACPs Pods, Alpha = 10 Degrees	C	θ_{RF} , Configuration	241-244
Figure 43. Effect of Tail and ACPs Pods, Alpha = 20 Degrees	C	θ_{RF} , Configuration	245-248
Figure 44. Effect of Tail and ACPs Pods, Alpha = 30 Degrees	C	θ_{RF} , Configuration	249-252
Figure 45. Effect of C1 and D1 on Flared Rudder	A	Configuration	253-268
Figure 46. Effect of C1 and D1 on Flared Rudder, Beta = 0, 5 Degrees	B	β , Configuration	269-272
Figure 47. Effect of Body Flap	A	Configuration, θ_{BF}	273-284
Figure 48. Effect of Nose, C1 and D1 on Body	A	Configuration	285-296
Figure 49. Effect of Nose, C1 and D1 on Body, Beta = 0, 5 Degrees	B	β , Configuration	297-299
Figure 50. Effect of Nose on Body, Alpha = 0 Degrees	C	Configuration	300-302
Figure 51. Effect of Nose on Body, Alpha = 10 Degrees	C	Configuration	303-305
Figure 52. Effect of Nose on Body, Alpha = 20 Degrees	C	Configuration	306-308

* See page 32 for Plotted Coefficients Schedule.

TABLE V. INDEX OF DATA FIGURES
(CONCLUDED)

TITLE	PIOTTED COEFFICIENTS SCHEDULE *	CONDITIONS VARYING	PAGES
Figure 53. Effect of Nose on Body, Alpha = 30 Degrees	C	Configuration	309-311

* PLOTTED COEFFICIENTS SCHEDULE:

- (A) CN vs. CIM & CN, CA, CIM vs. ALPHA
- (B) CY, CYN, CBL vs. ALPHA
- (C) CY, CYN, CBL vs. BETA

MODEL FIGURES

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

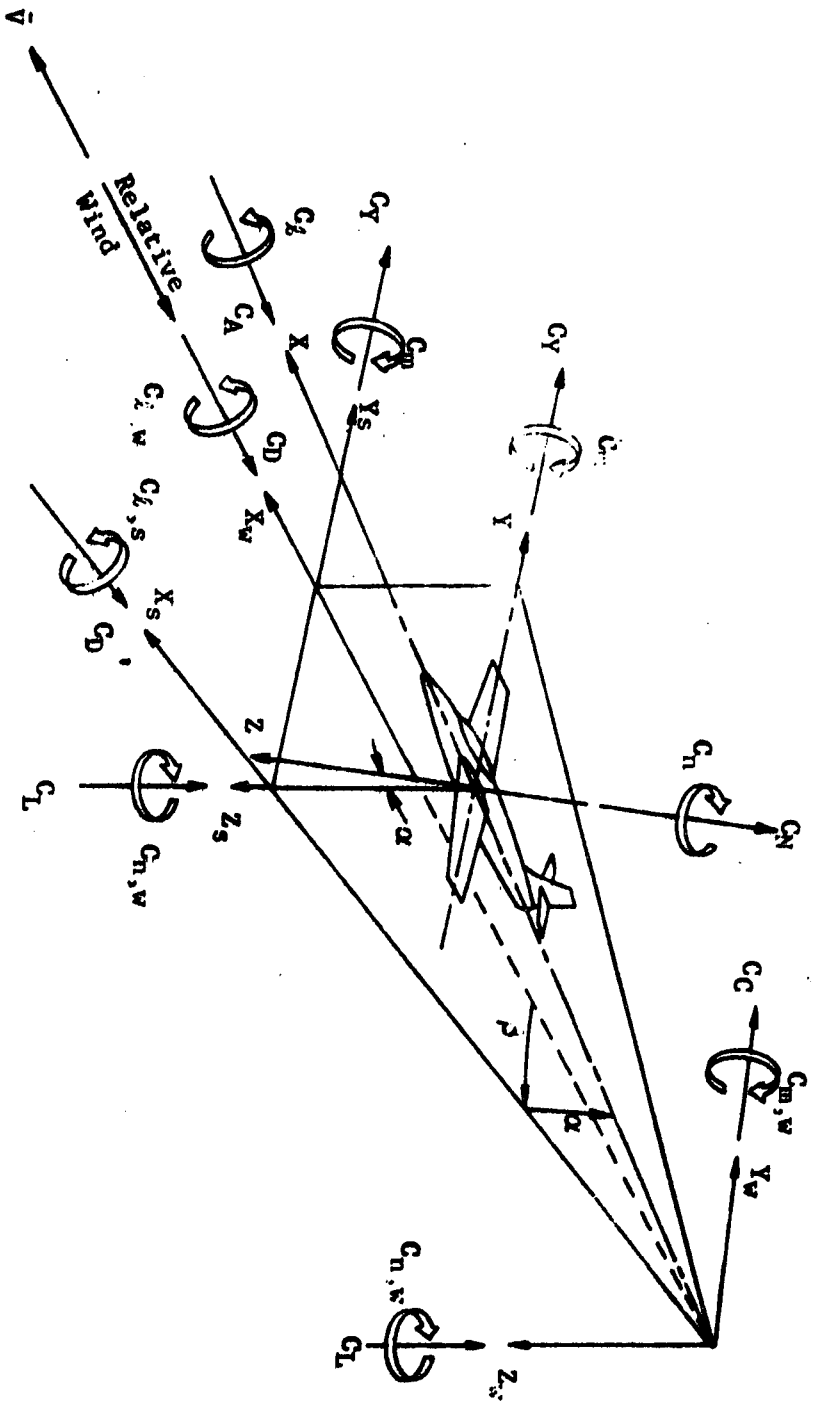


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

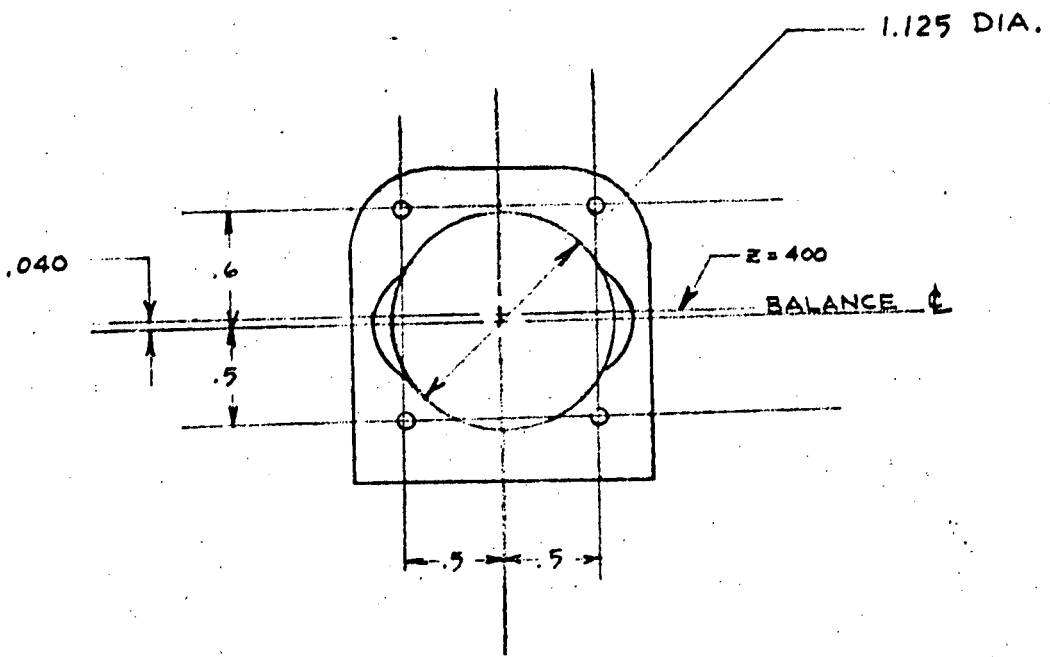
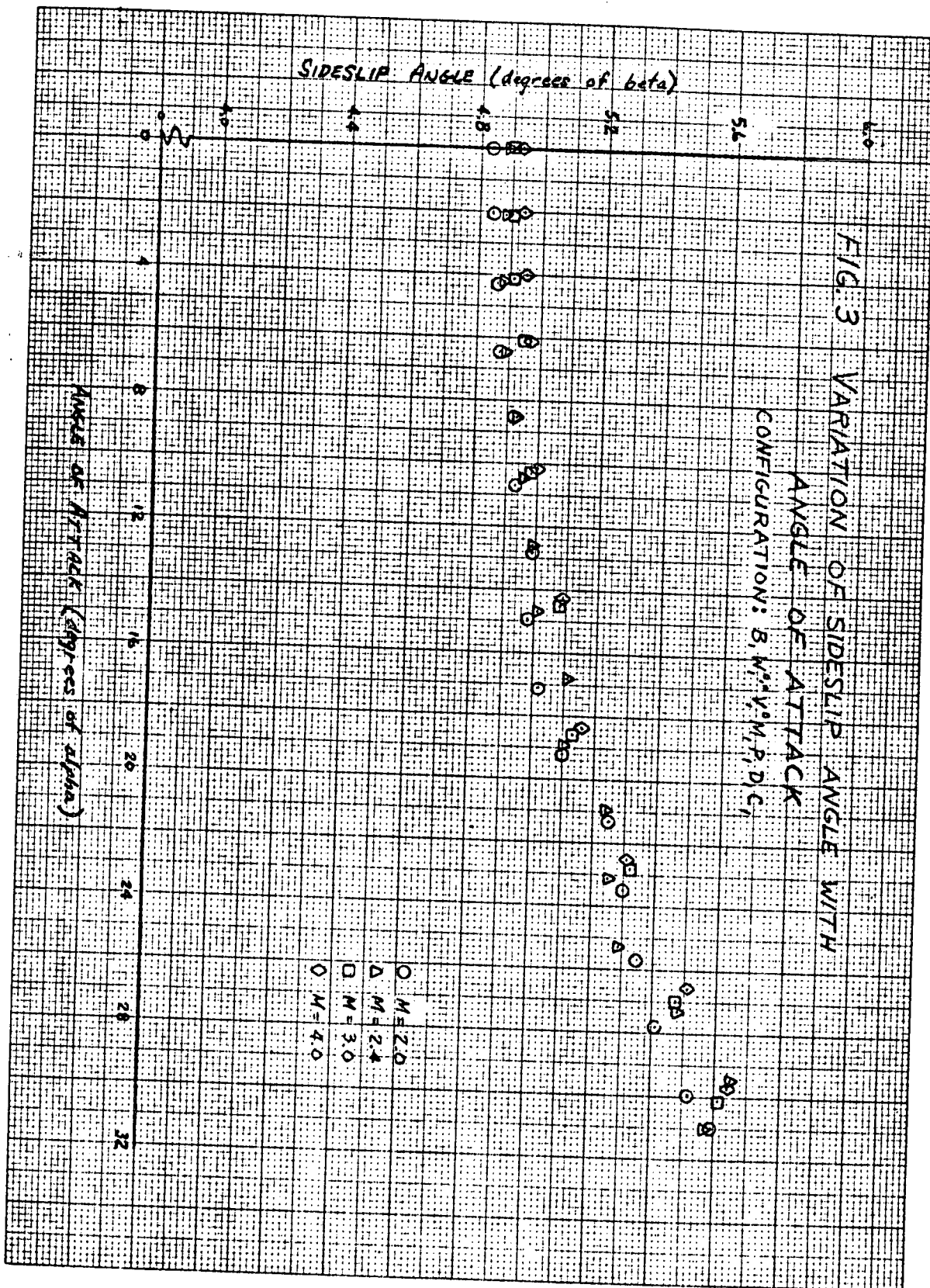


FIGURE 2. BASE PRESSURE TAP LOCATIONS



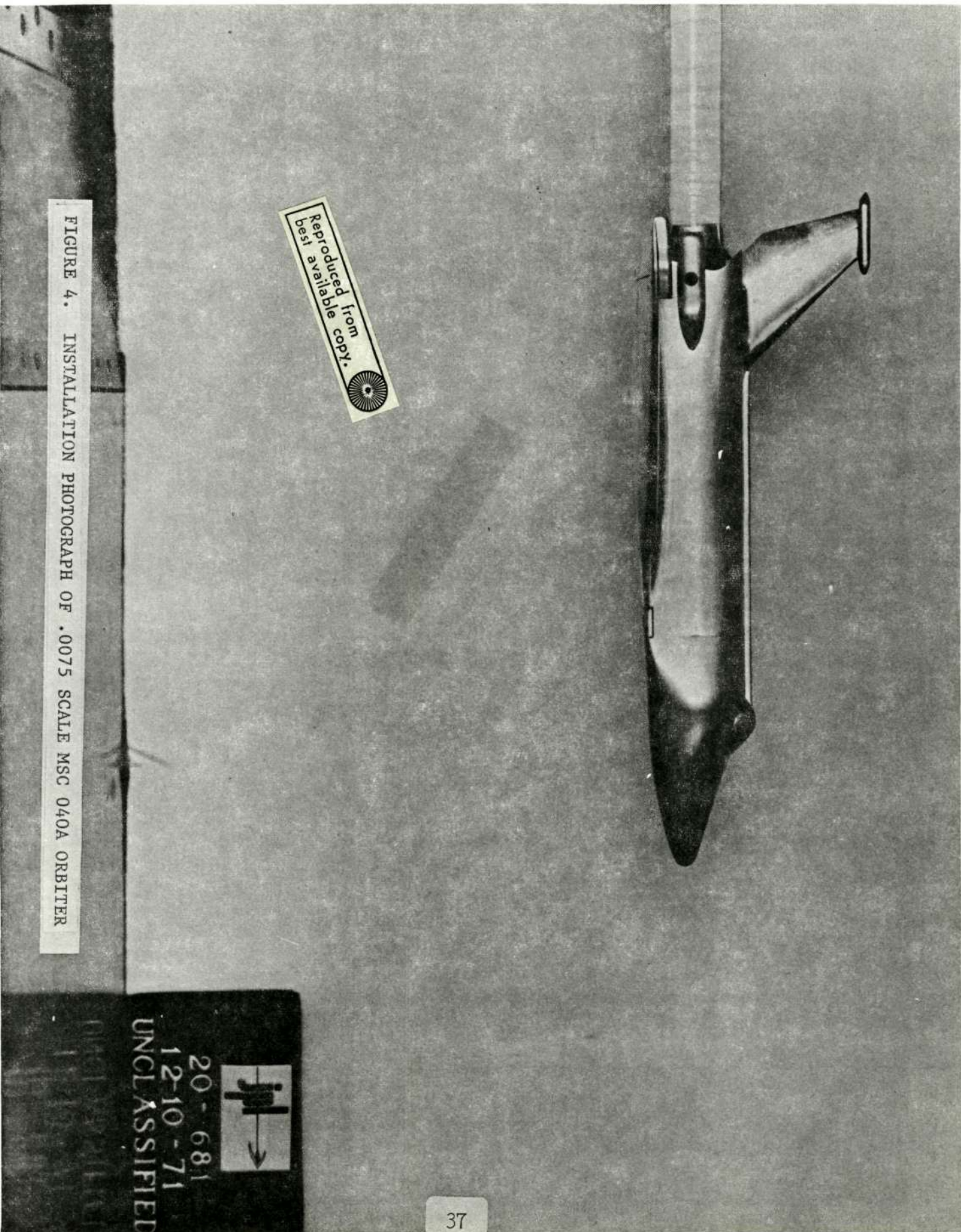


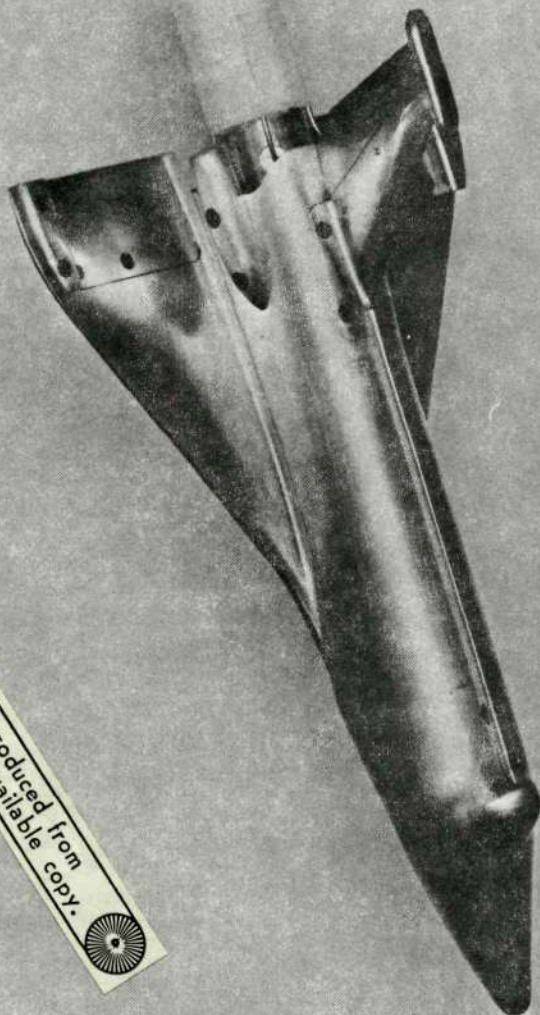
FIGURE 4. INSTALLATION PHOTOGRAPH OF .0075 SCALE MSC 040A ORBITER

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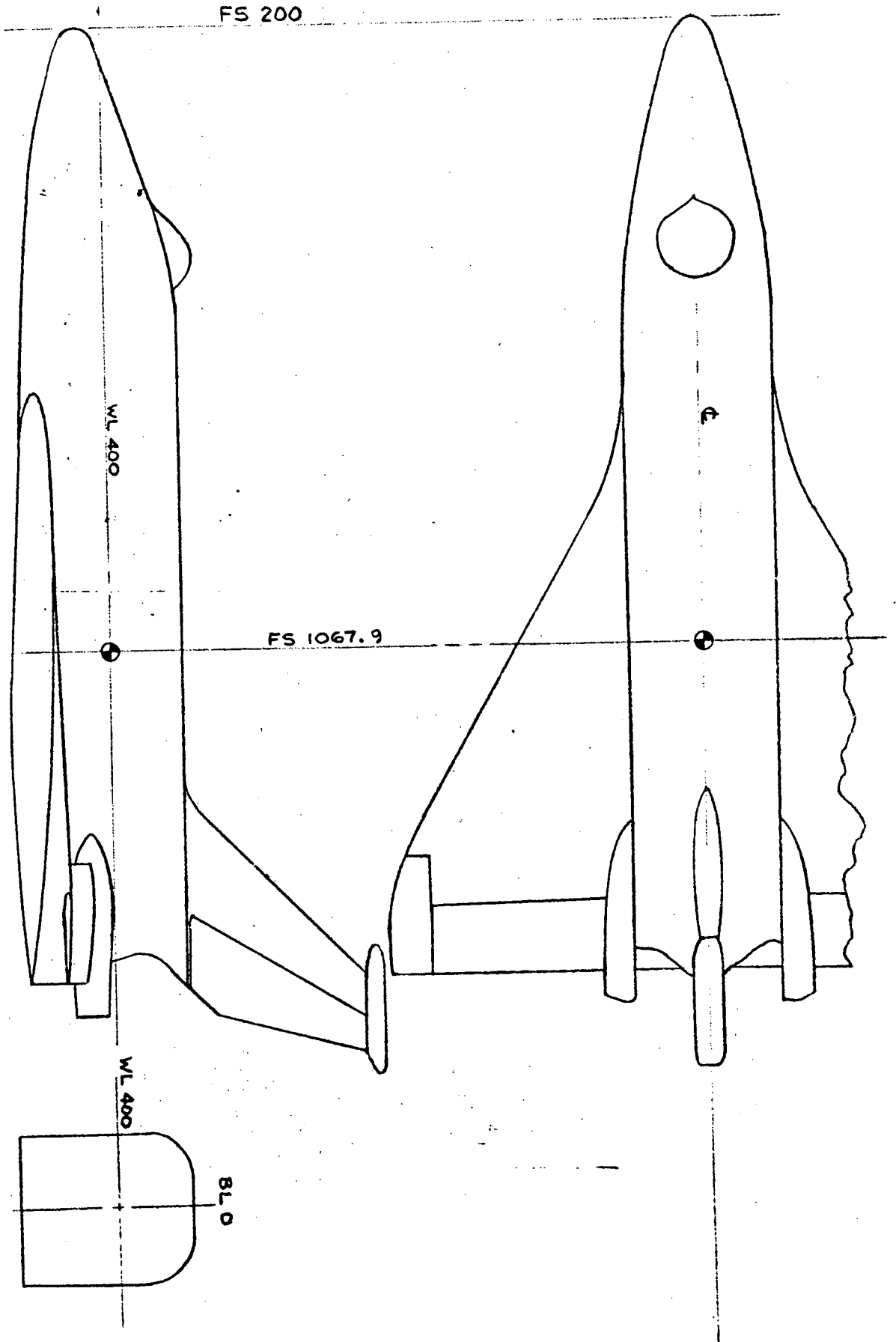
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FIGURE 5. MODEL BEING SIMULTANEOUSLY PITCHED AND ROLLED TO OBTAIN SIDESLIP DATA



20 - 681
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FIGURE 6. MSC 040A



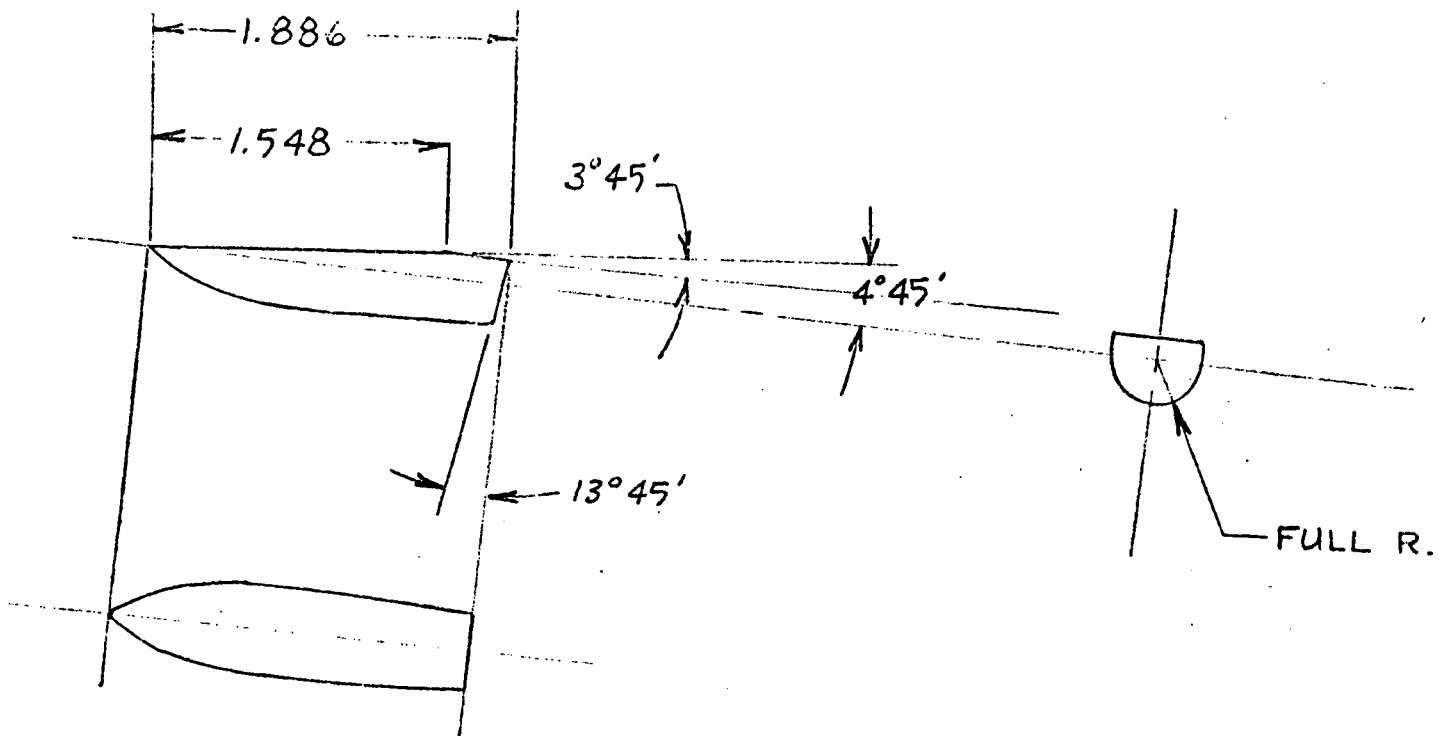


FIGURE 7. OMS PODS

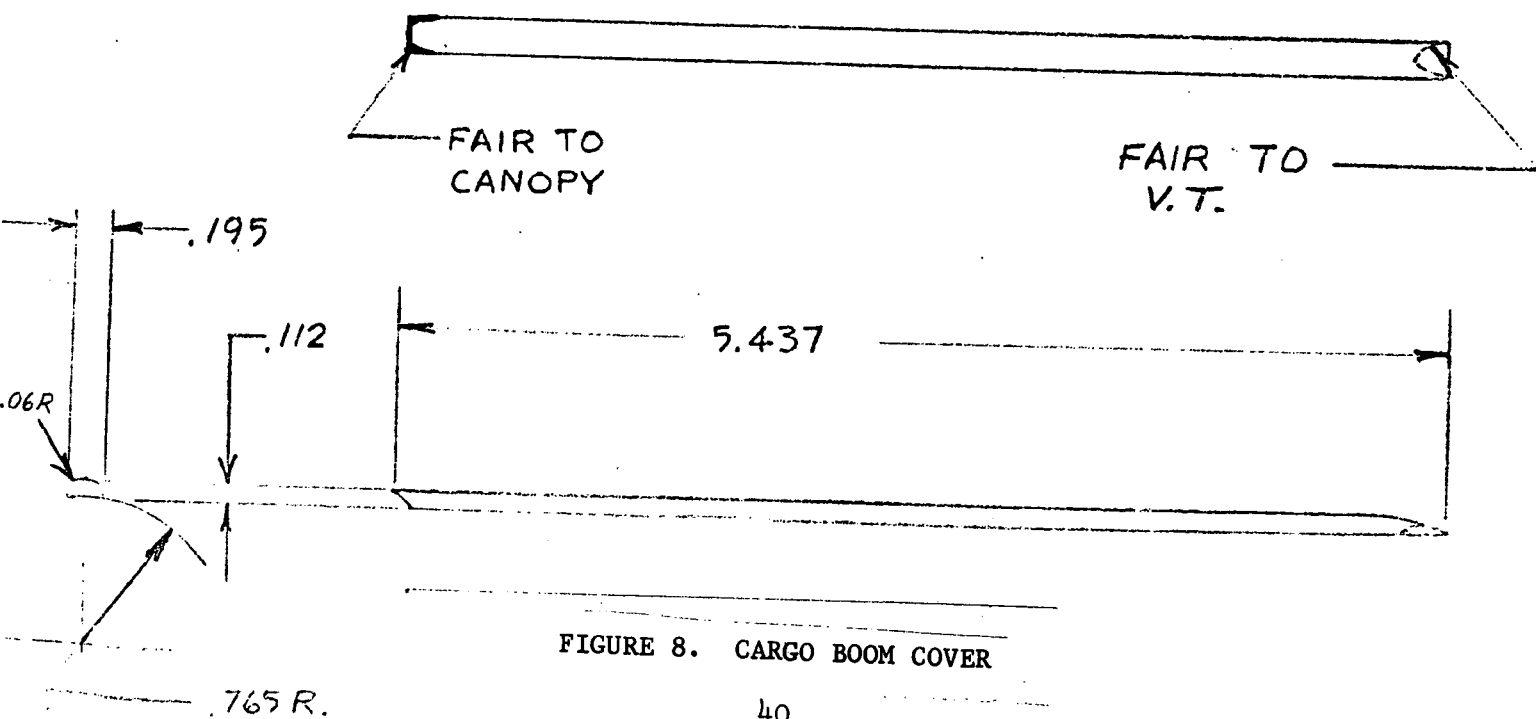
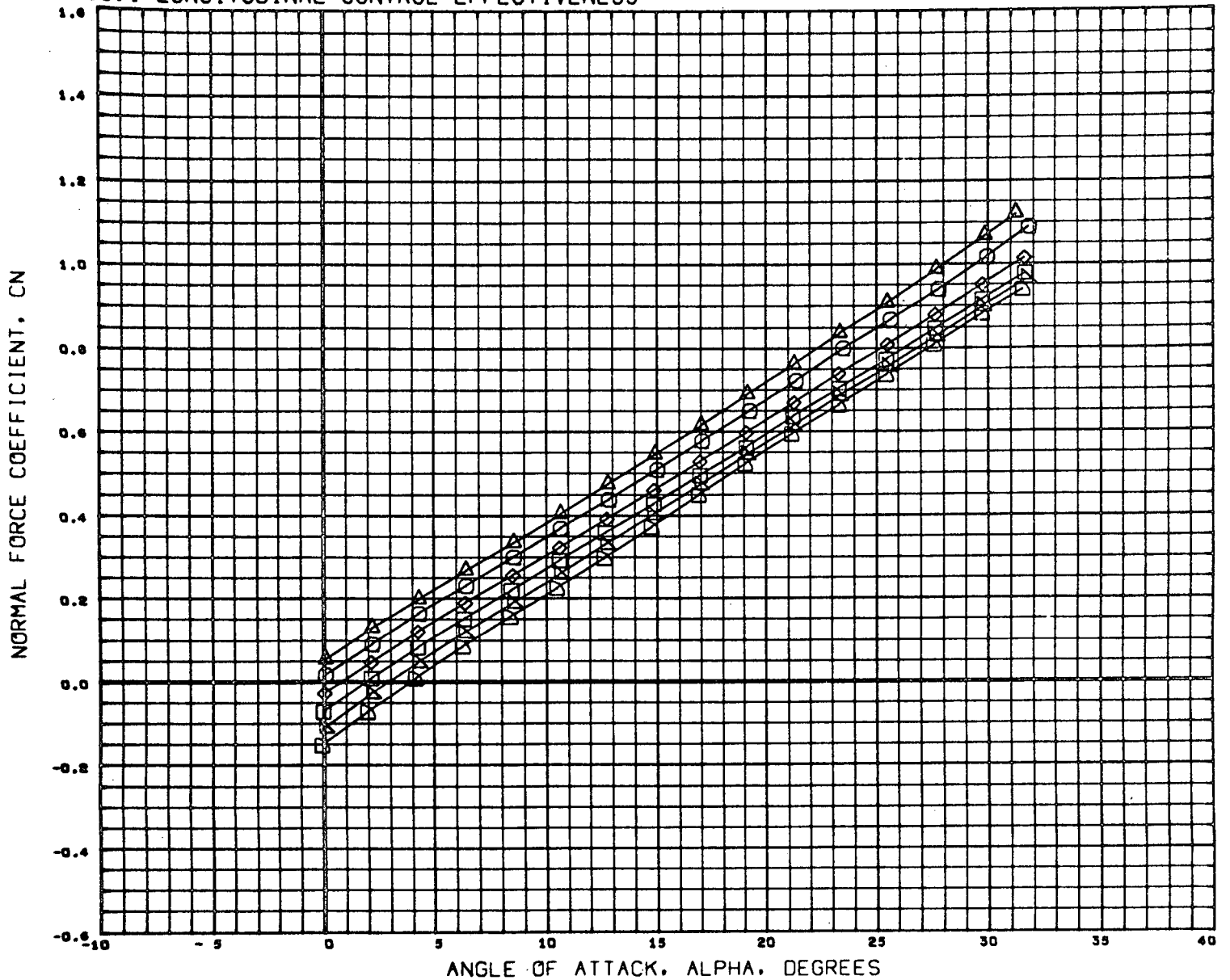


FIGURE 8. CARGO BOOM COVER

D A T A F I G U R E S

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

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

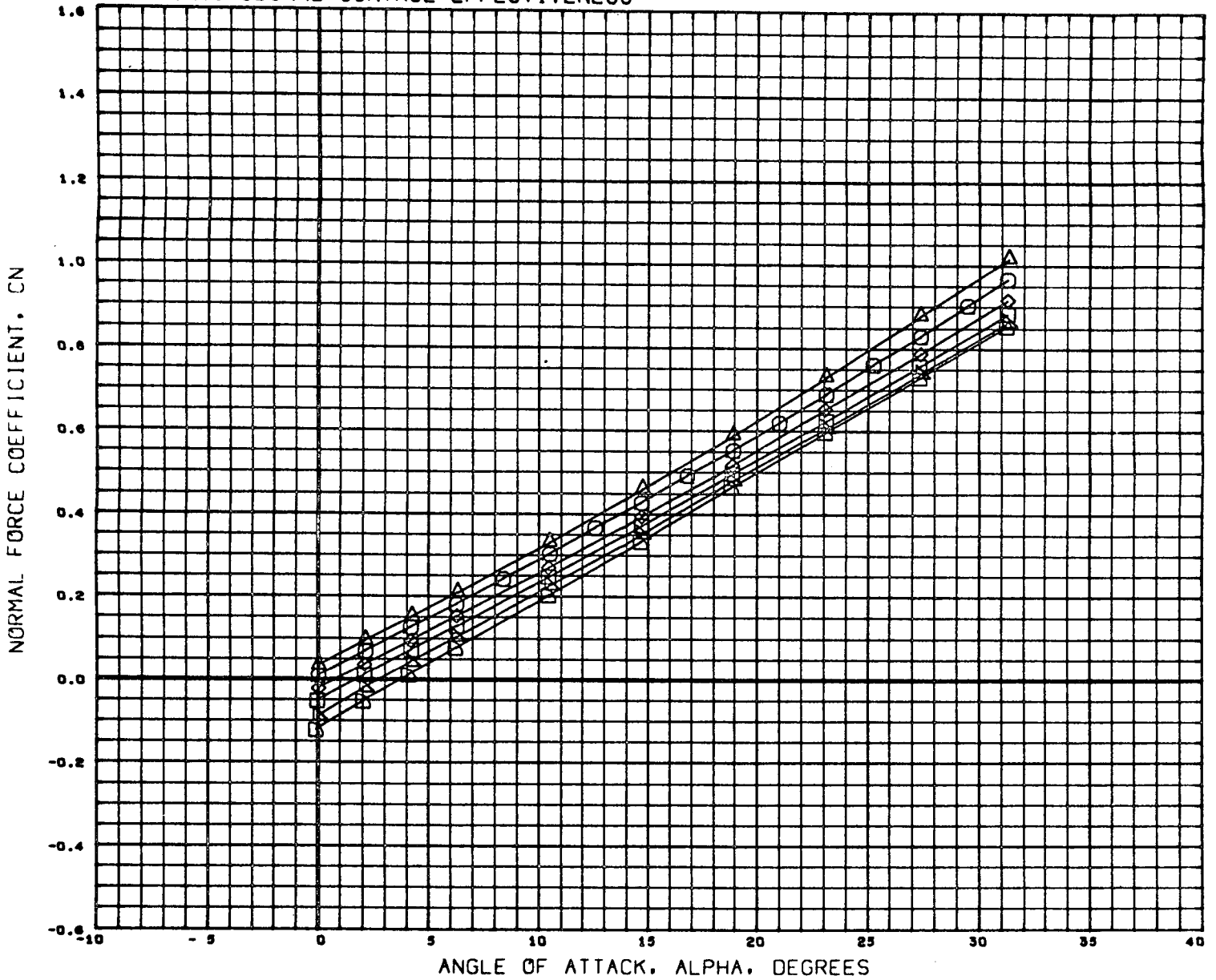


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(X68011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RC8091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.9720 IN.
(RC8071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RC8041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RC8061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(X68021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.01

PAGE 1

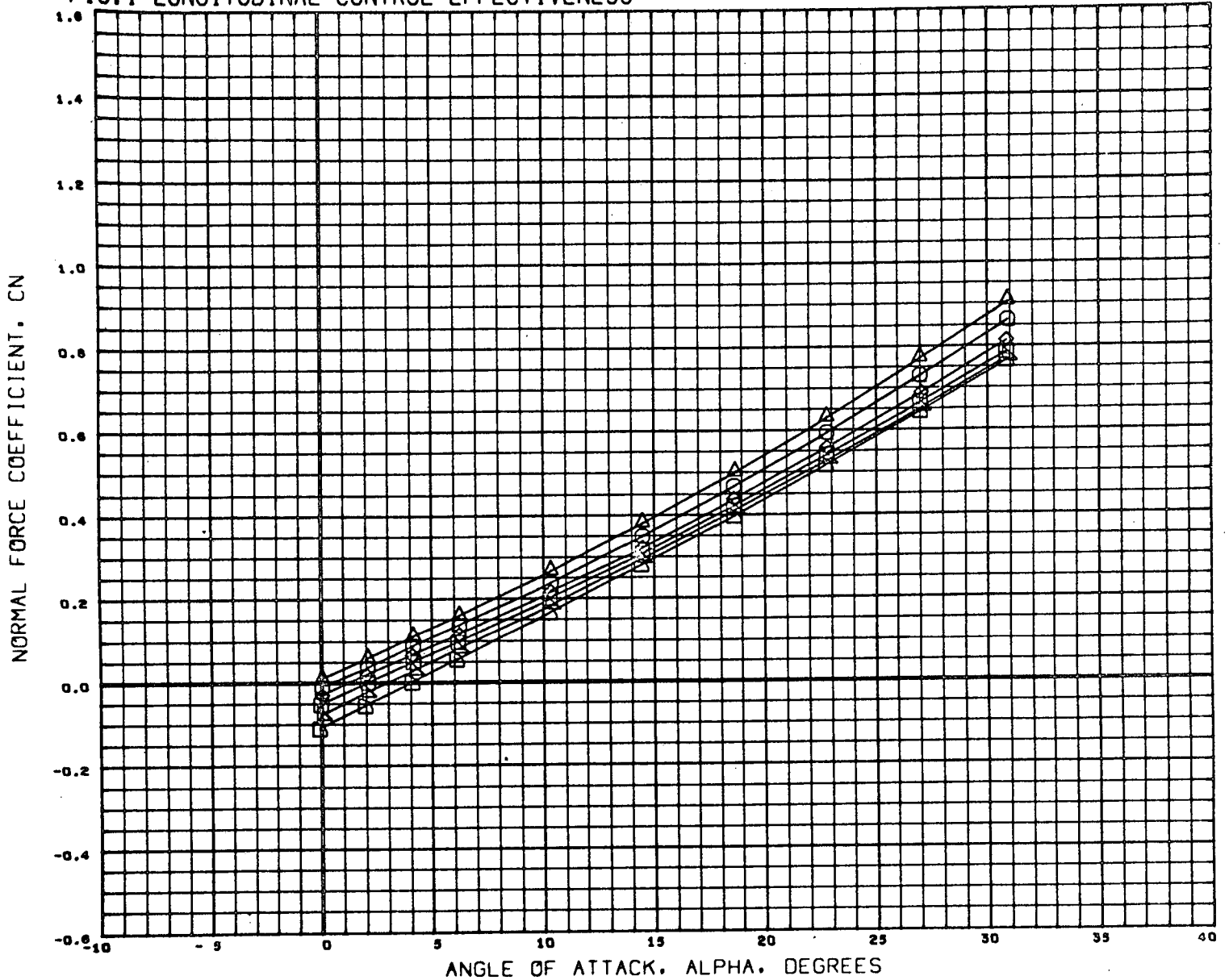
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	PUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 23.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

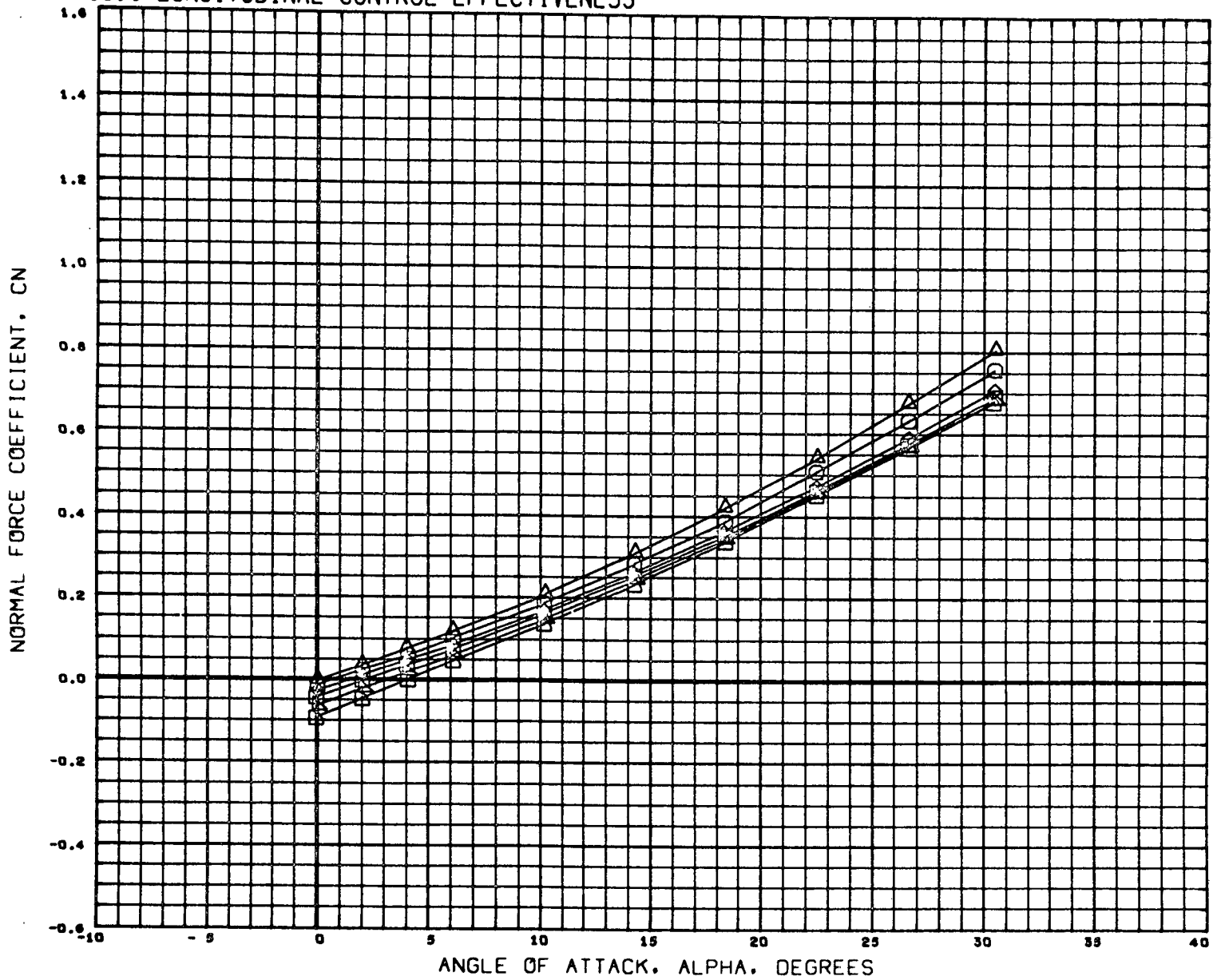
MACH 2.42

FIG. 1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RG8071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6130 IN.
(RG8041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RG8061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XG8021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

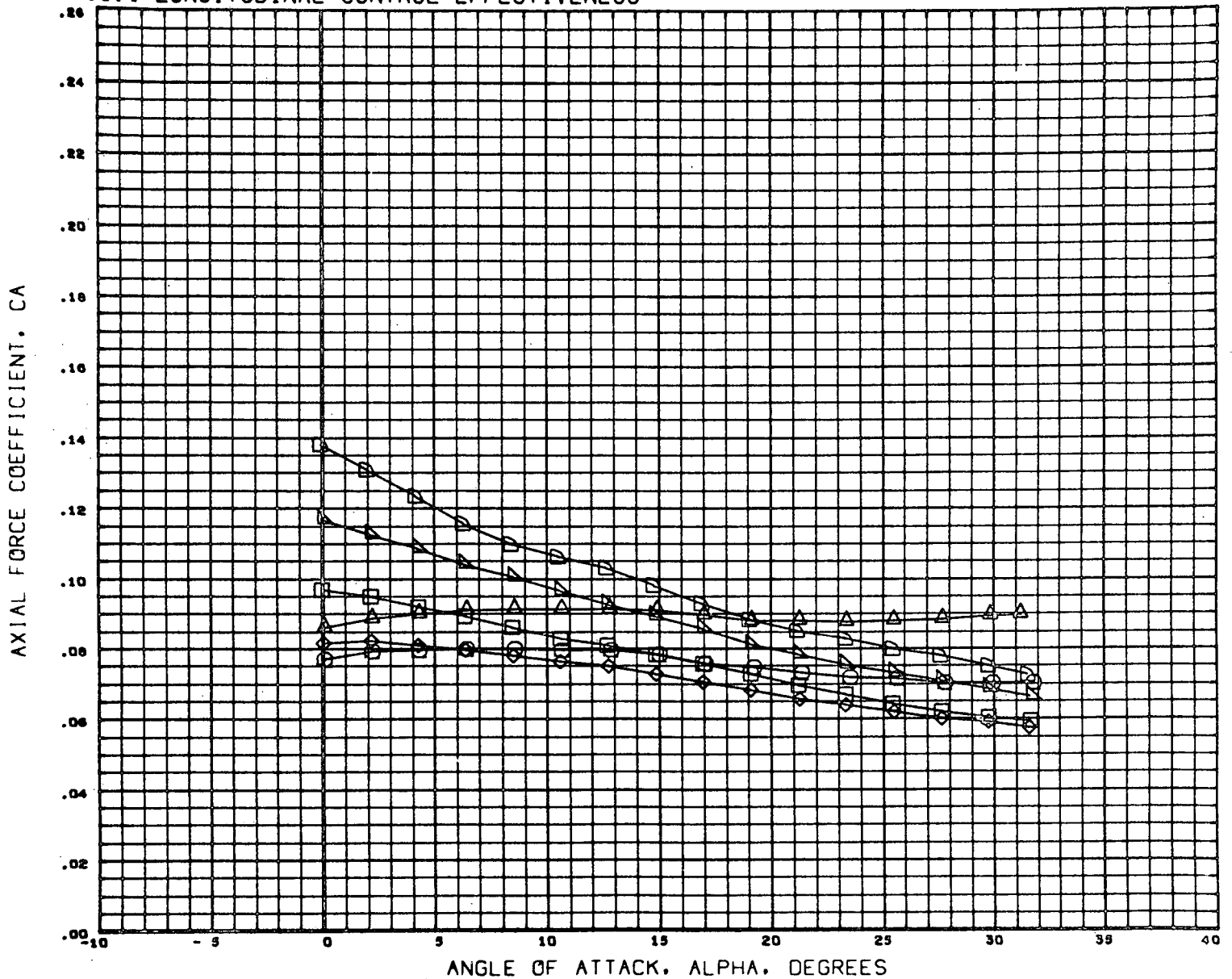
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XG011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(R6091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF	4.5720 IN.
(R6071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF	6.6150 IN.
(R6041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP	1067.9040 IN.
(R6061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP	0.0000 IN.
(XG021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.98

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

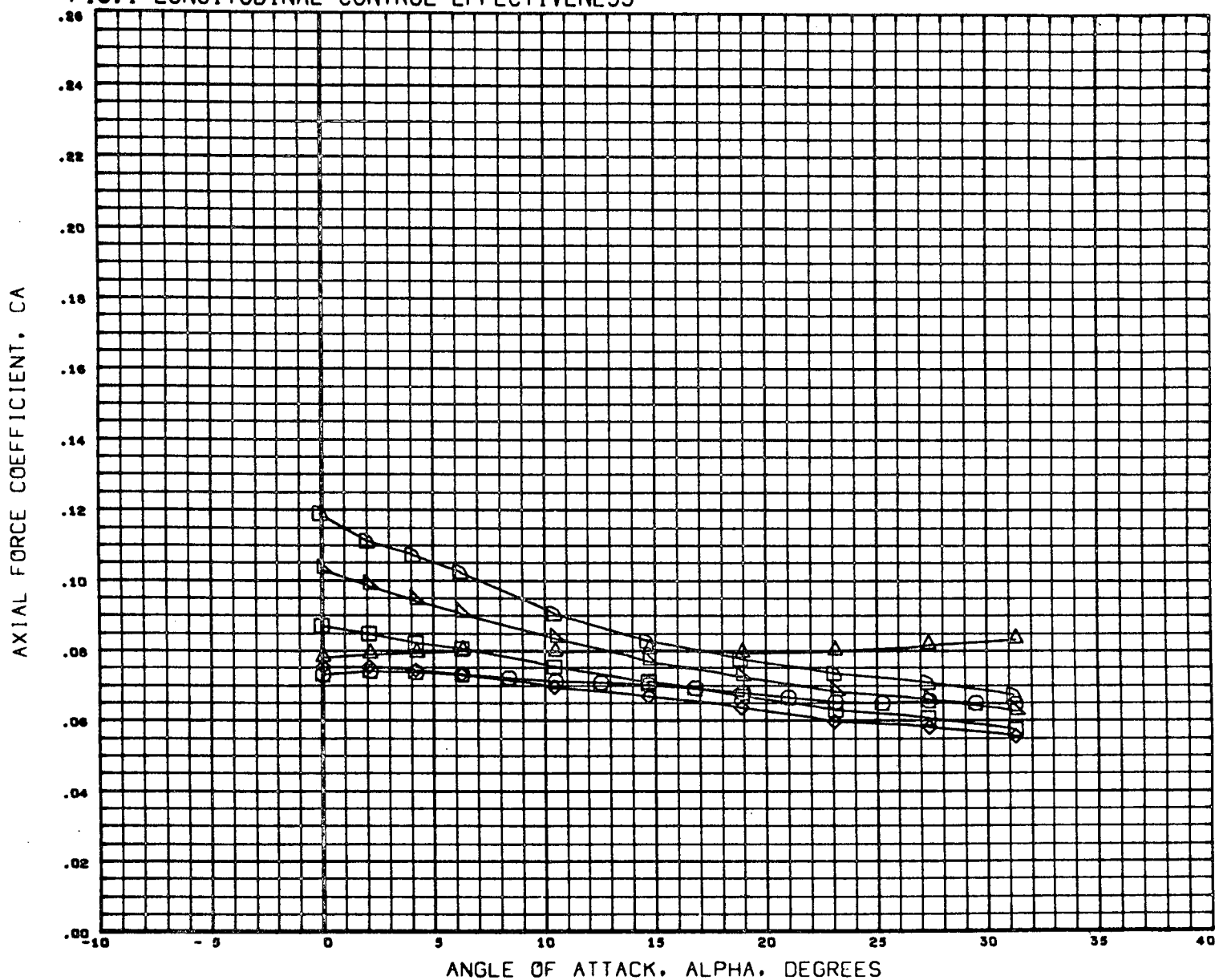


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RG8091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF	4.9720 IN.
(RG8071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF	6.8150 IN.
(RG8041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP	1067.9040 IN.
(RG8061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP	0.0000 IN.
(XG8021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 2.01

PAGE 5

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

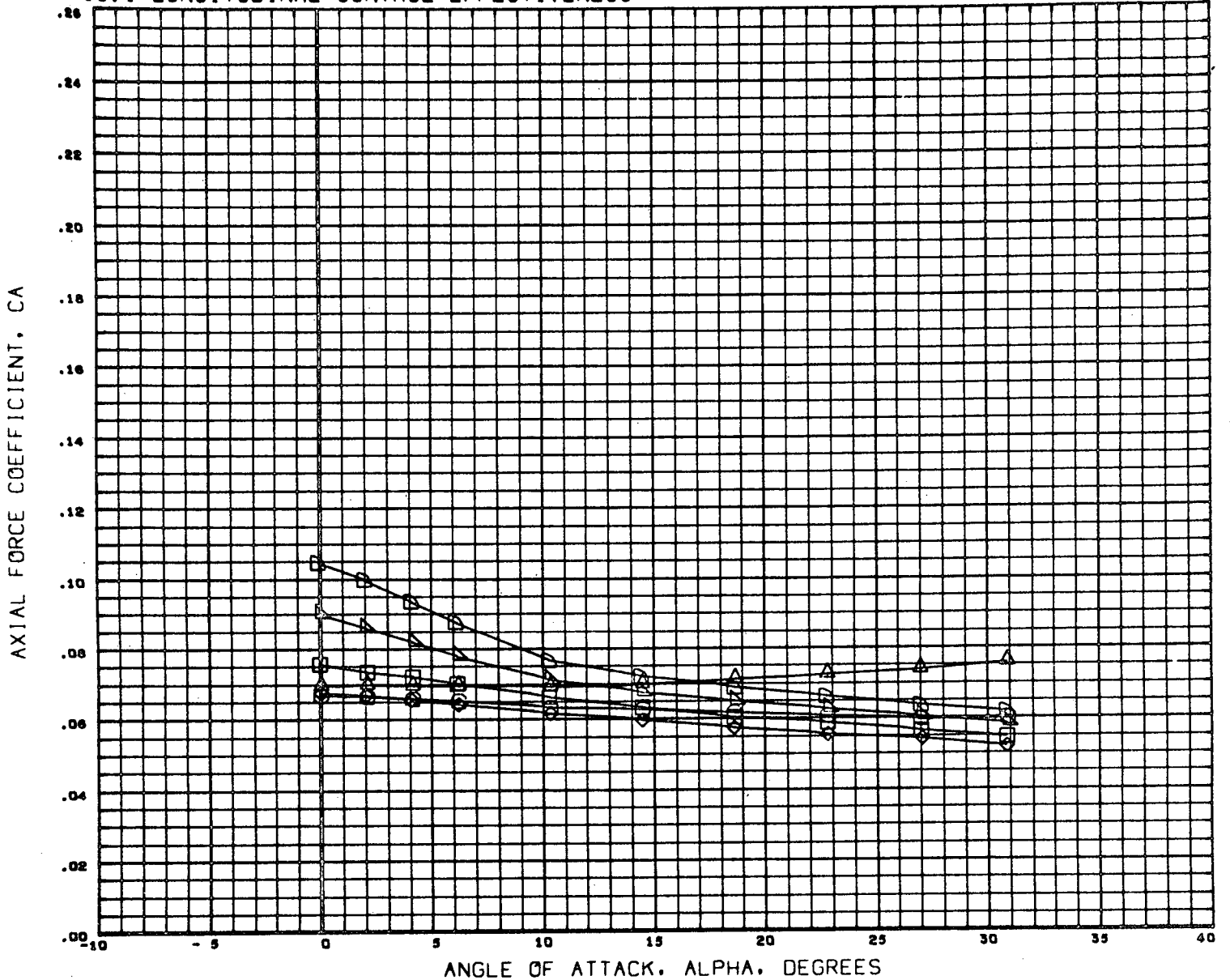


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.3040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

PAGE 6

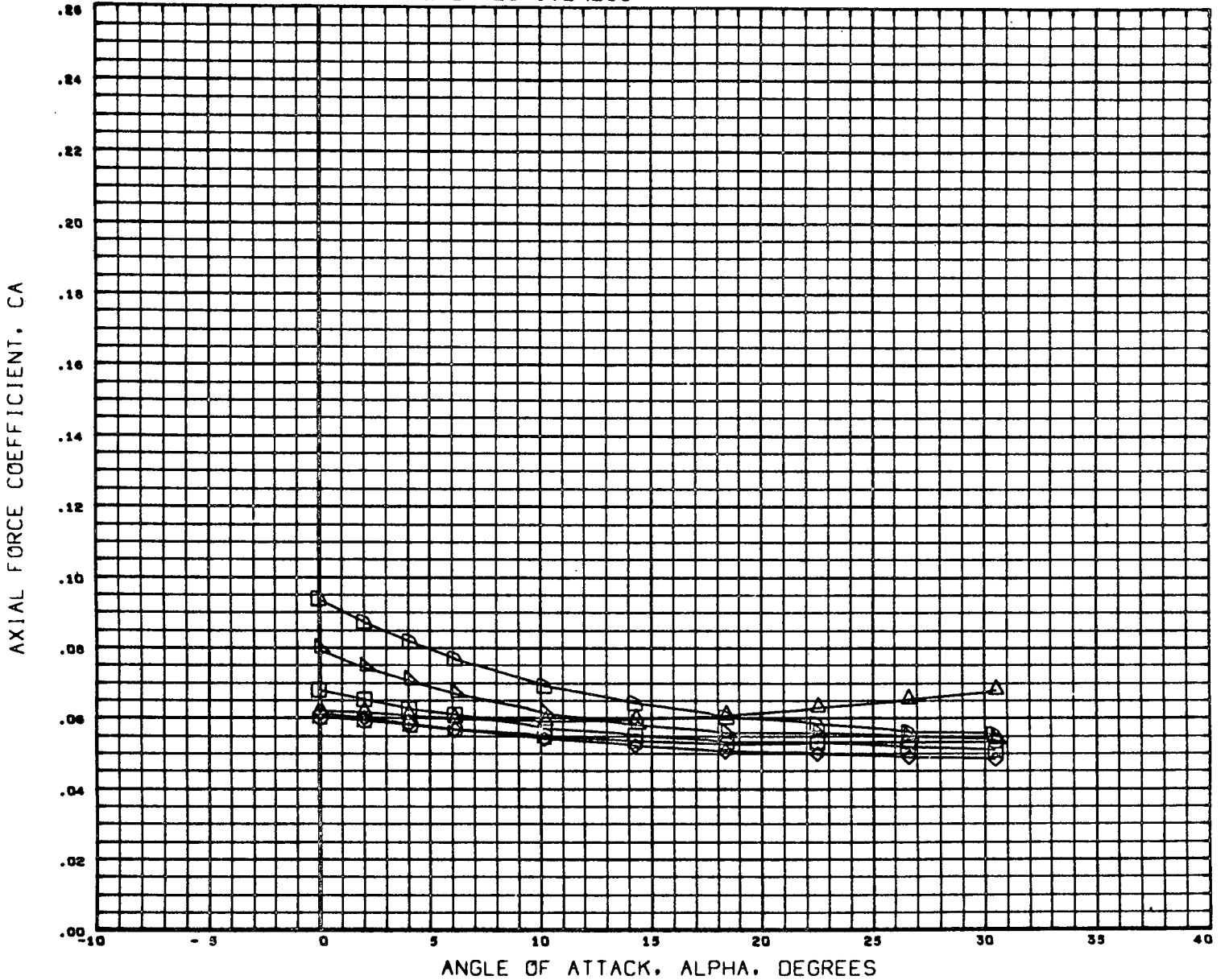
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5580 SQ IN.
(R88091)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(R88071)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(R88041)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(R88081)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XG8021)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

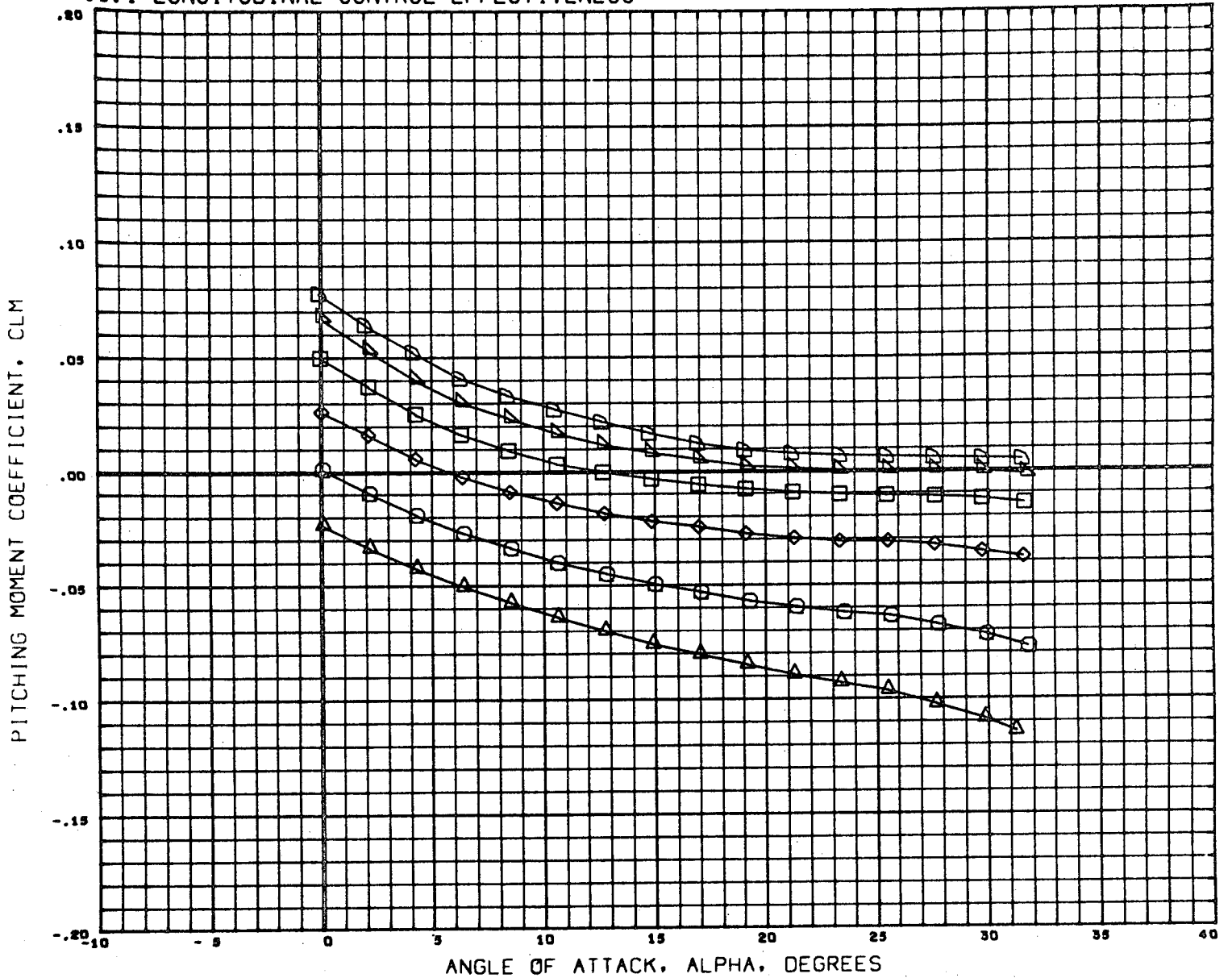
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RGB071)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0079

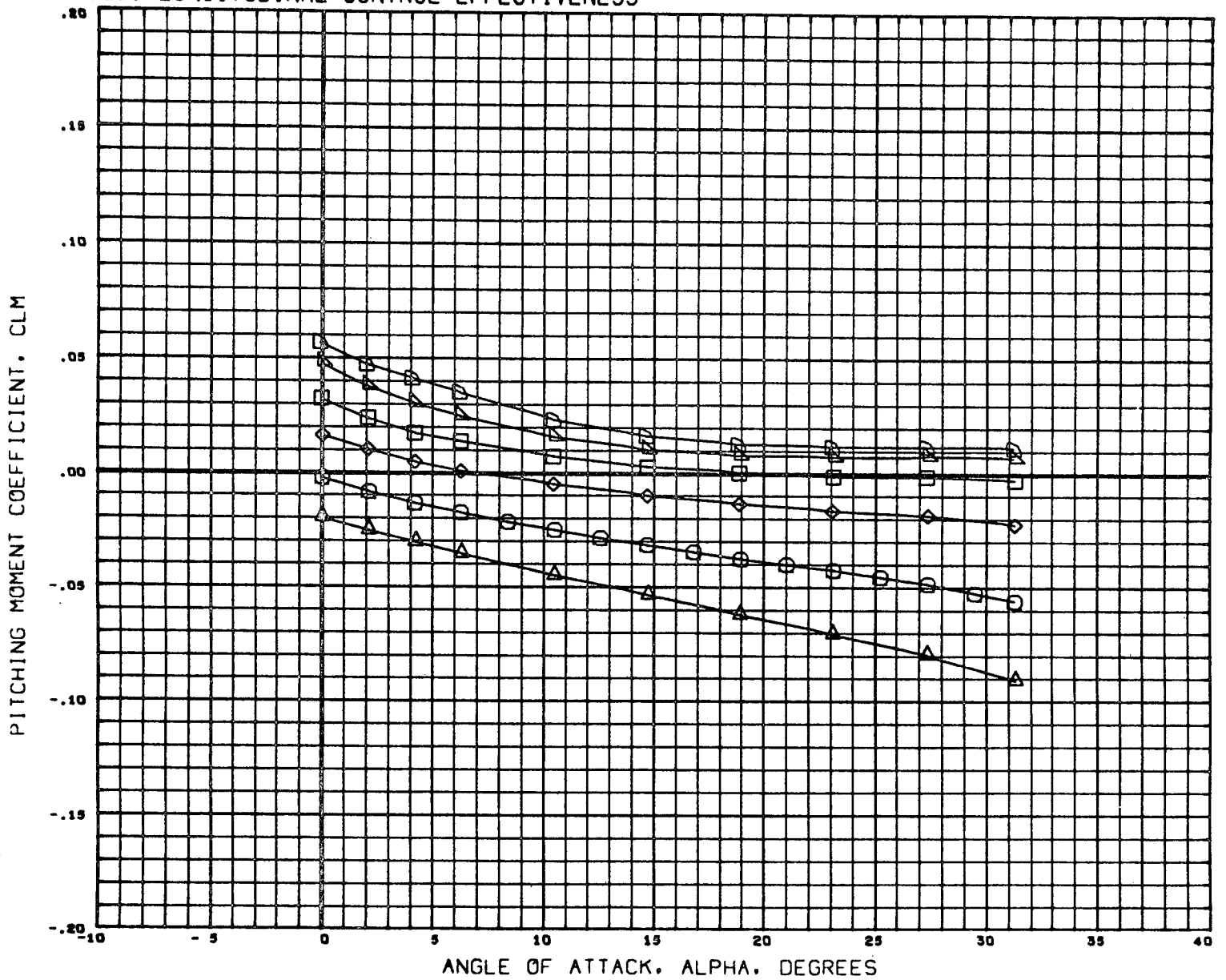
MACH

2.01

PAGE

9

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

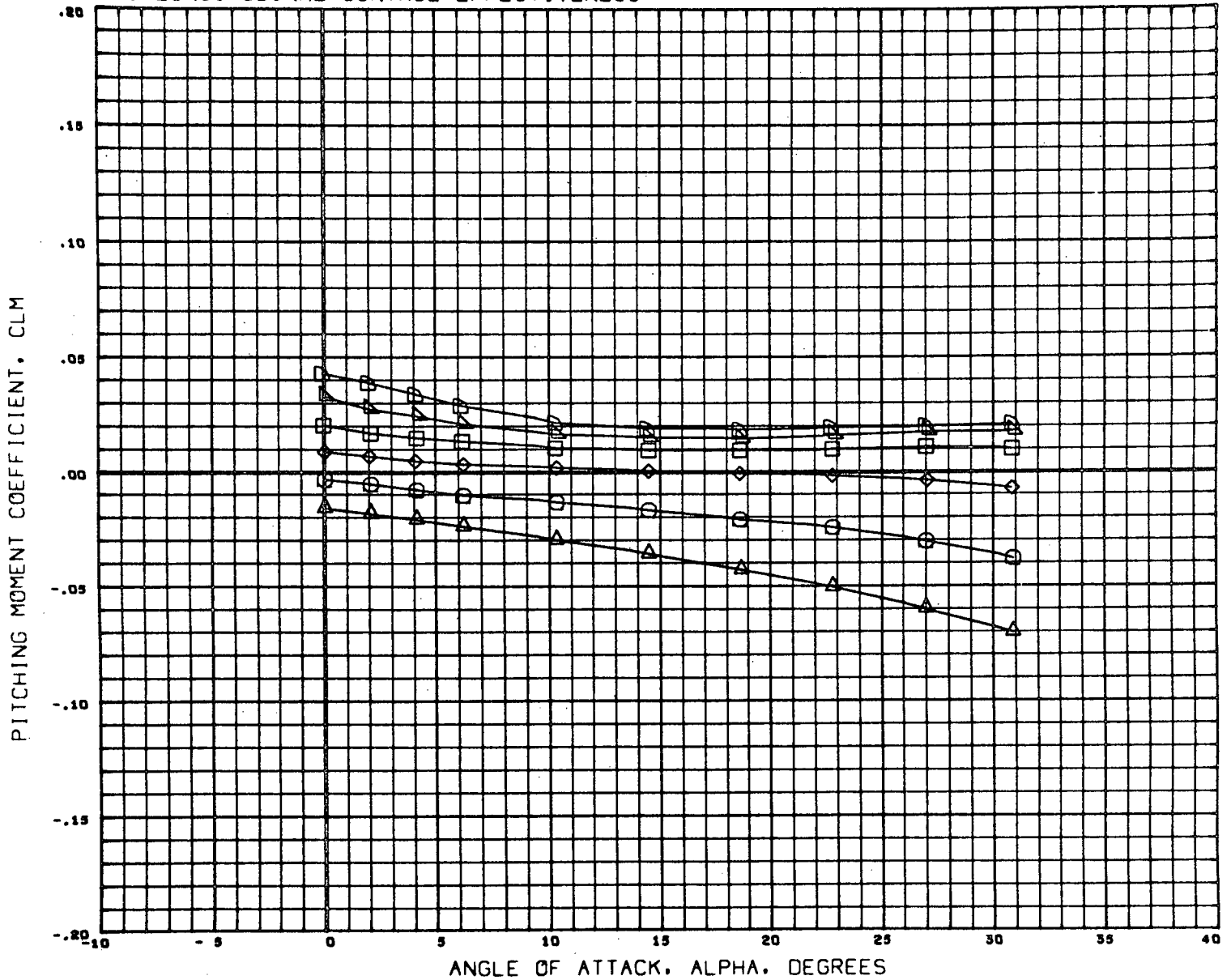


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.3720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

PAGE 10

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

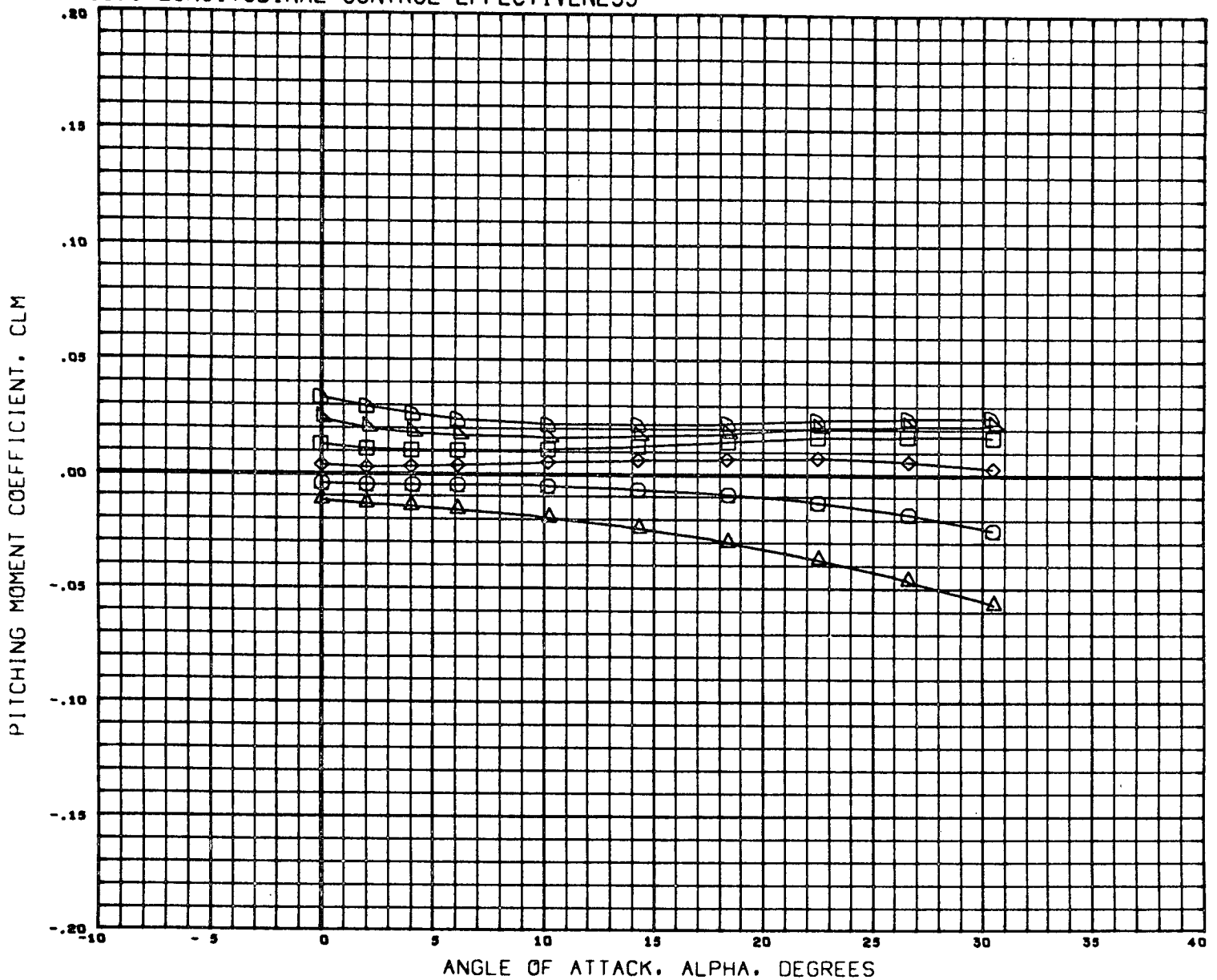


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.9580 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.3720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	YMRP 1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

PAGE 11

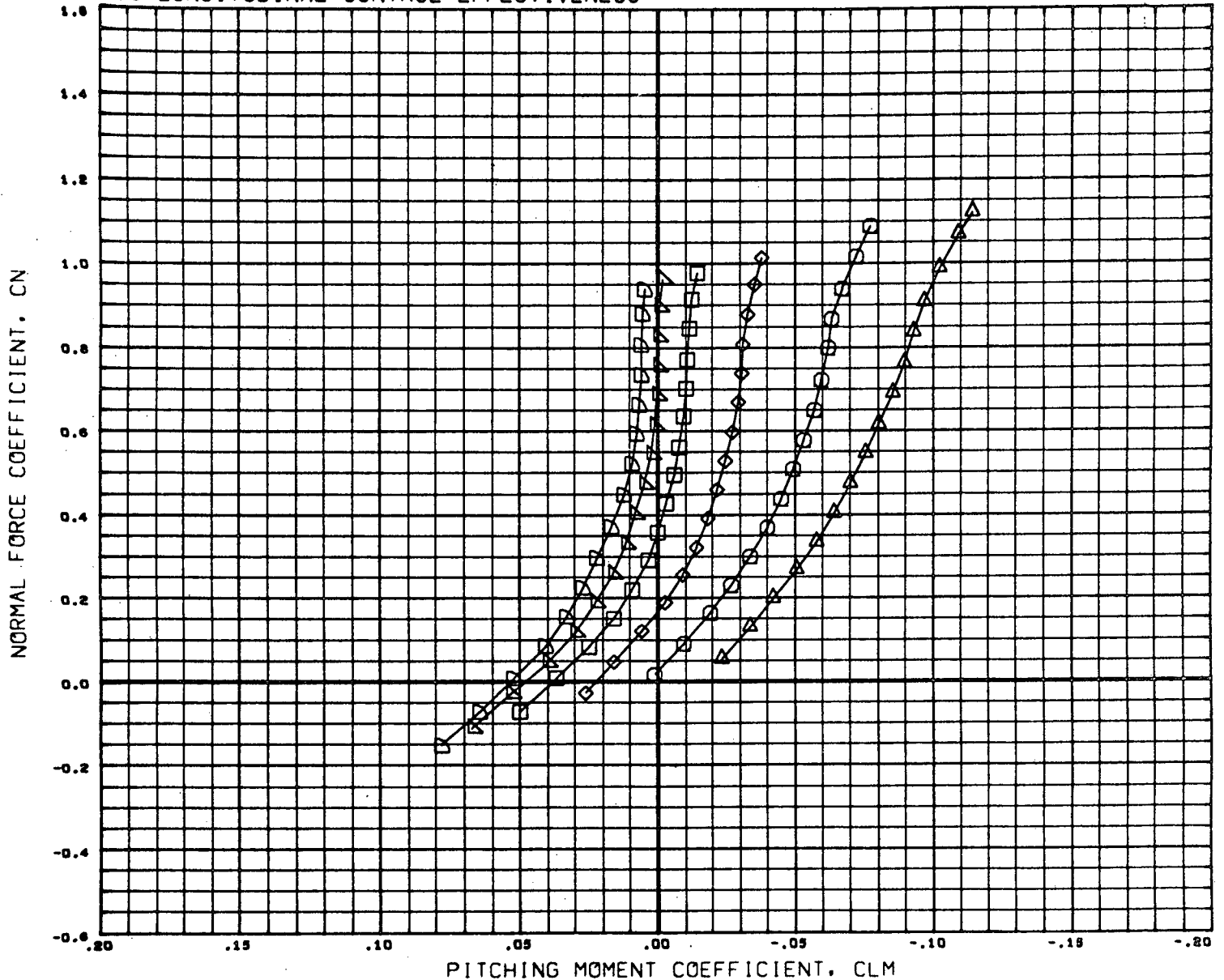
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8091)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RG8071)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RG8041)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RG8061)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XG8021)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

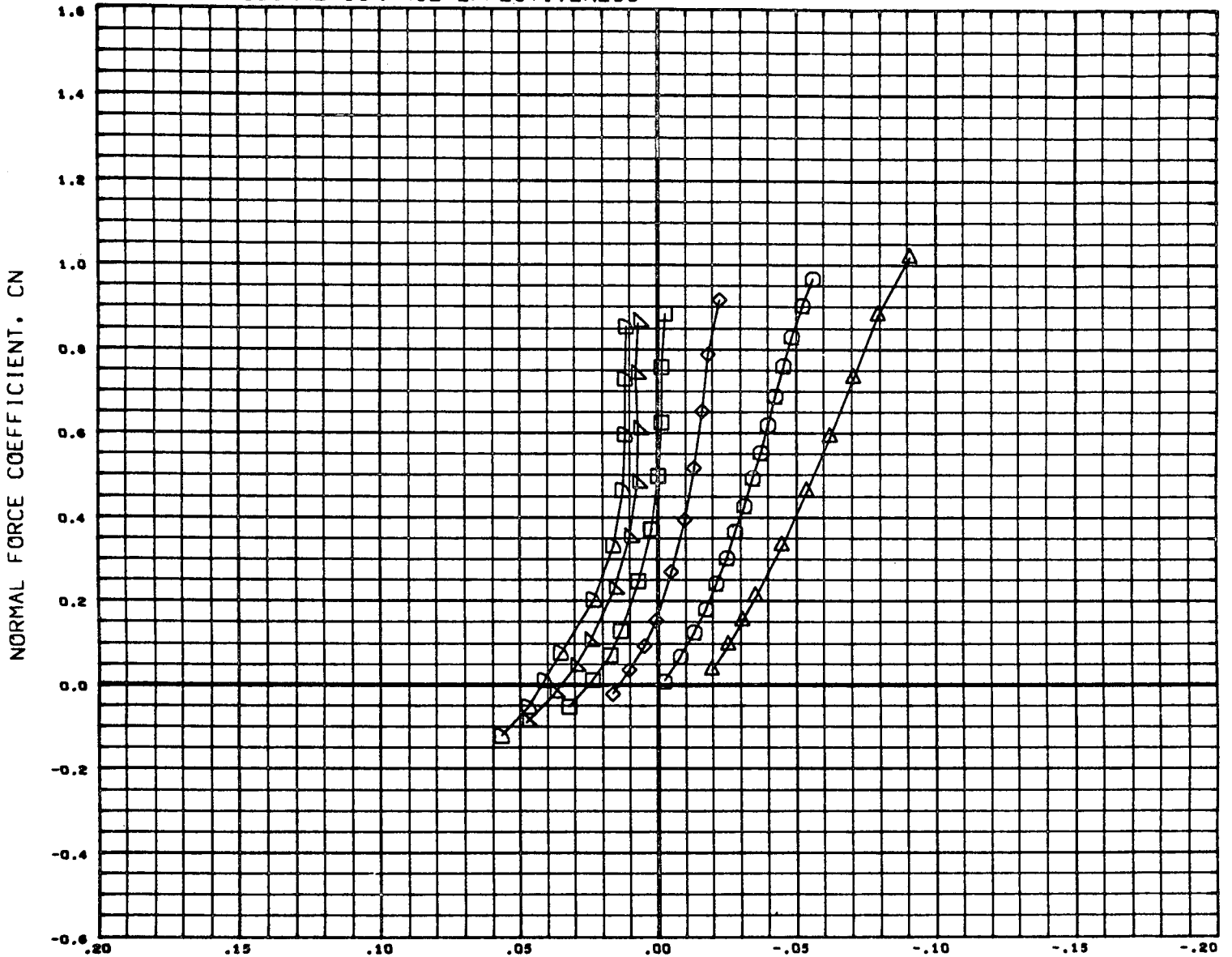
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION		
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560	30 IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF	4.5720	IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF	6.6130	IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP	1067.9040	IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP	0.0000	IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP	400.0004	IN.
					SCALE	0.0075	

MACH 2.01

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS

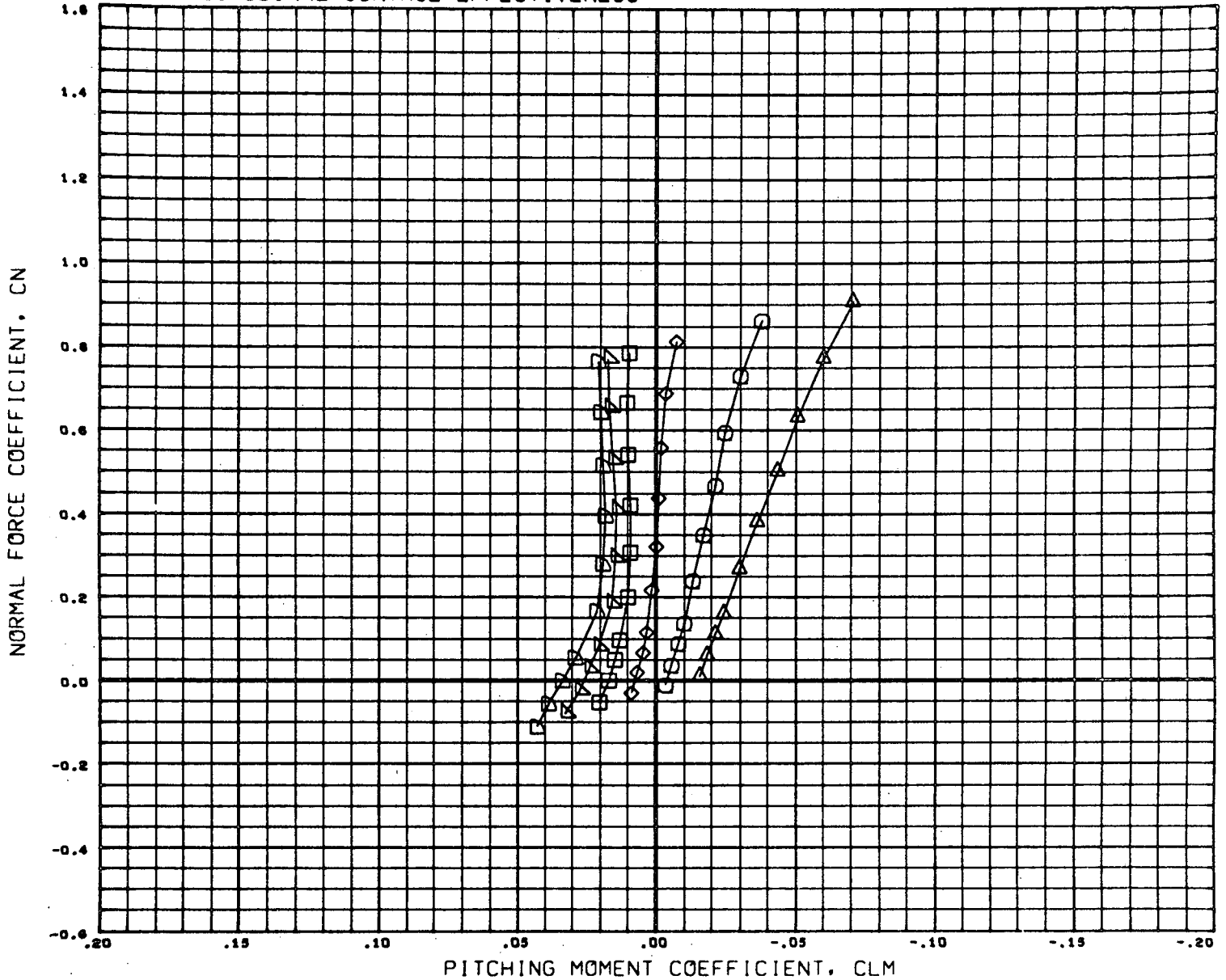


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RG8071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RG8041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RG8061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XG8021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

PAGE 14

FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



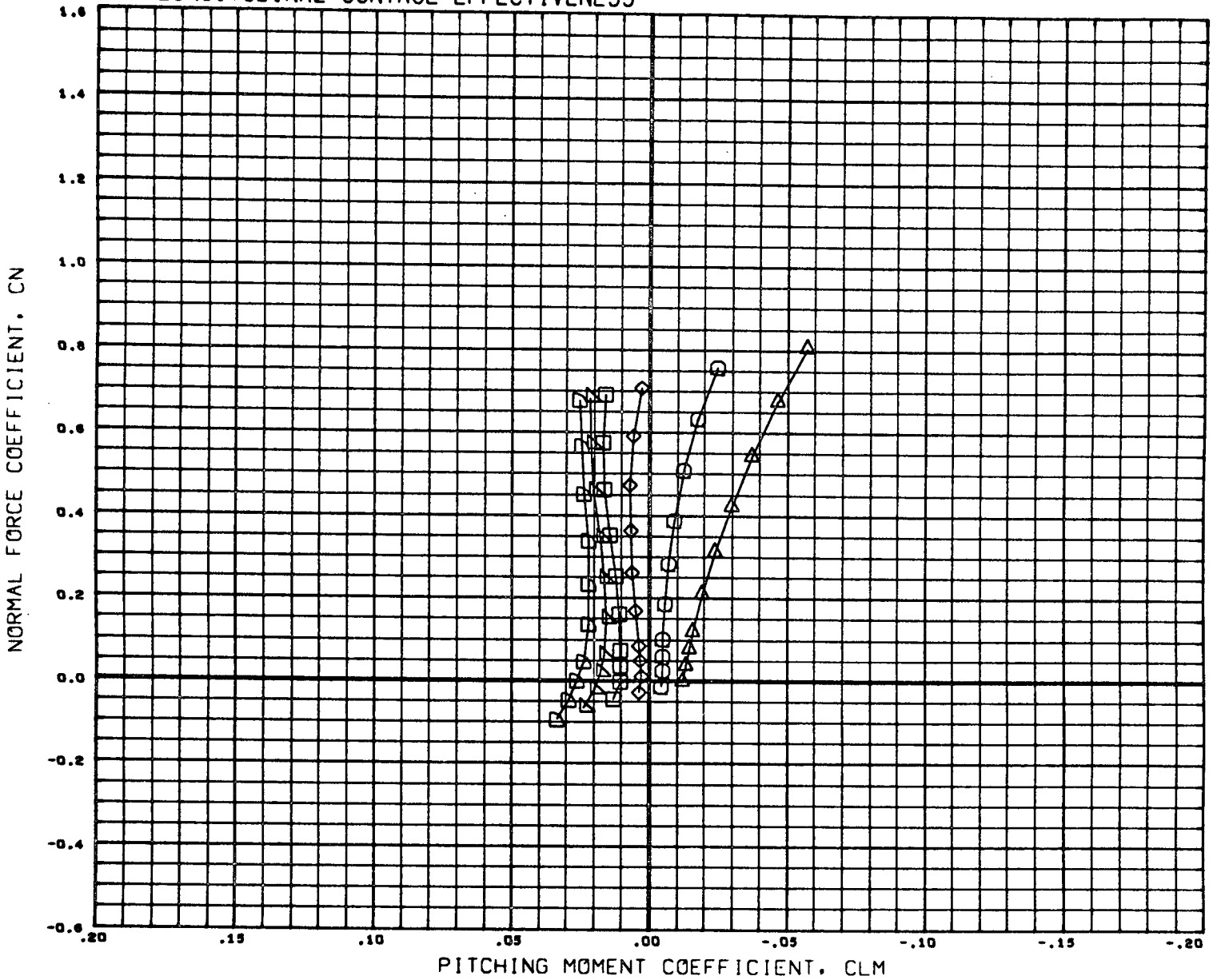
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF	4.5720 IN.
(RGB071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF	6.6150 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP	1067.9040 IN.
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP	0.0000 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP	400.0004 IN.
					SCALE	0.0079

MACH 3.03

PAGE 15

0.2

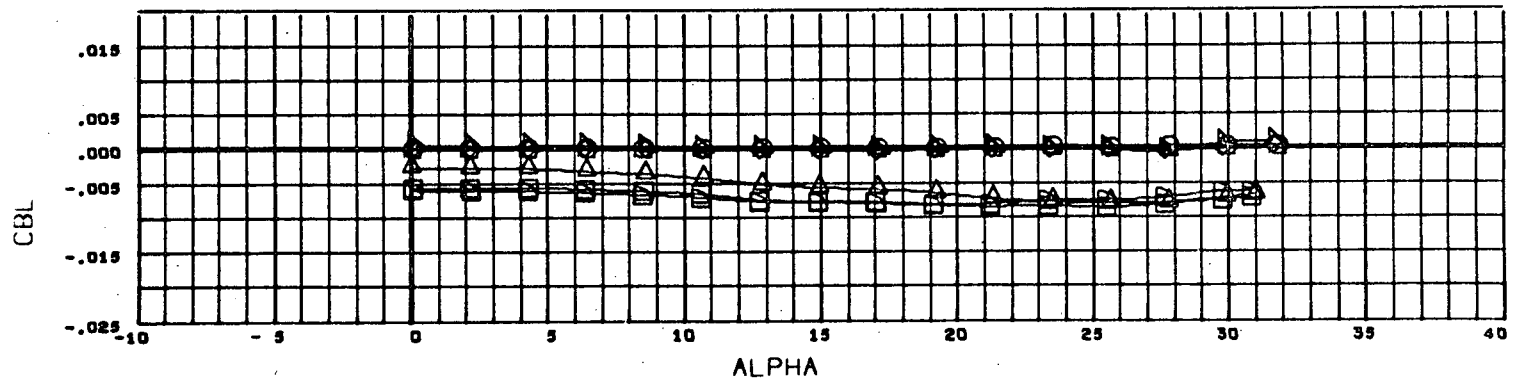
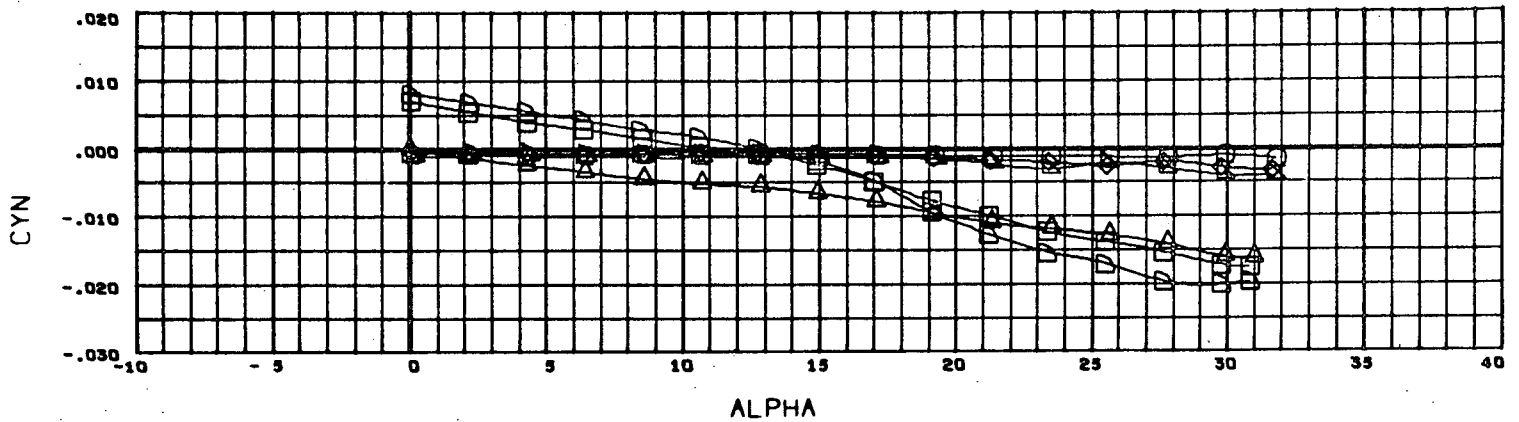
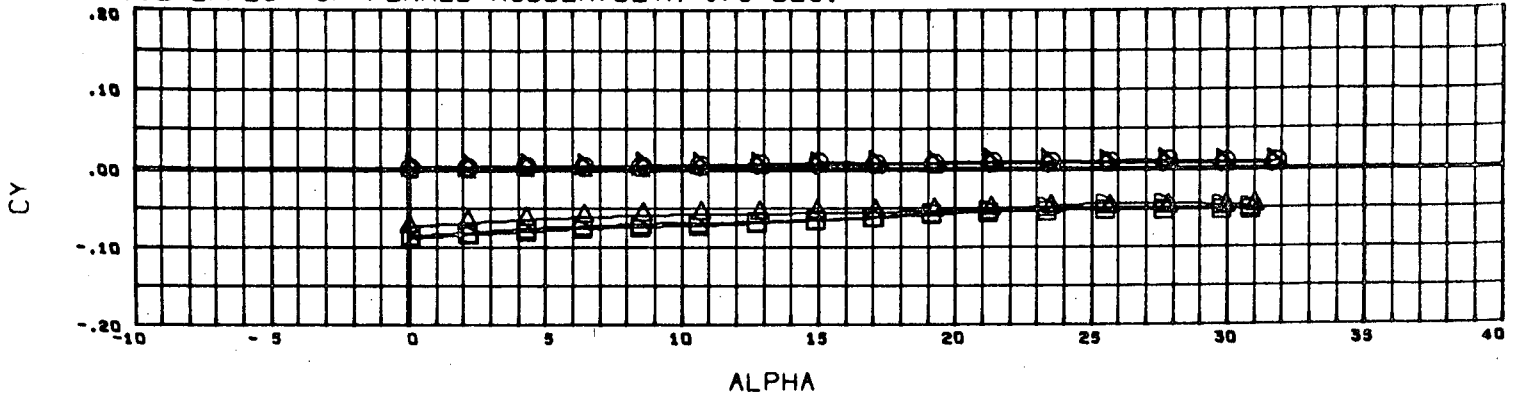
FIG.1 LONGITUDINAL CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	10.000	0.000	LREF 4.5720 IN.
(RG8071)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-10.000	-10.000	0.000	BREF 6.6150 IN.
(RG8041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(RG8061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-30.000	-30.000	0.000	YMRP 0.0000 IN.
(XG8021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
					SCALE 0.0075

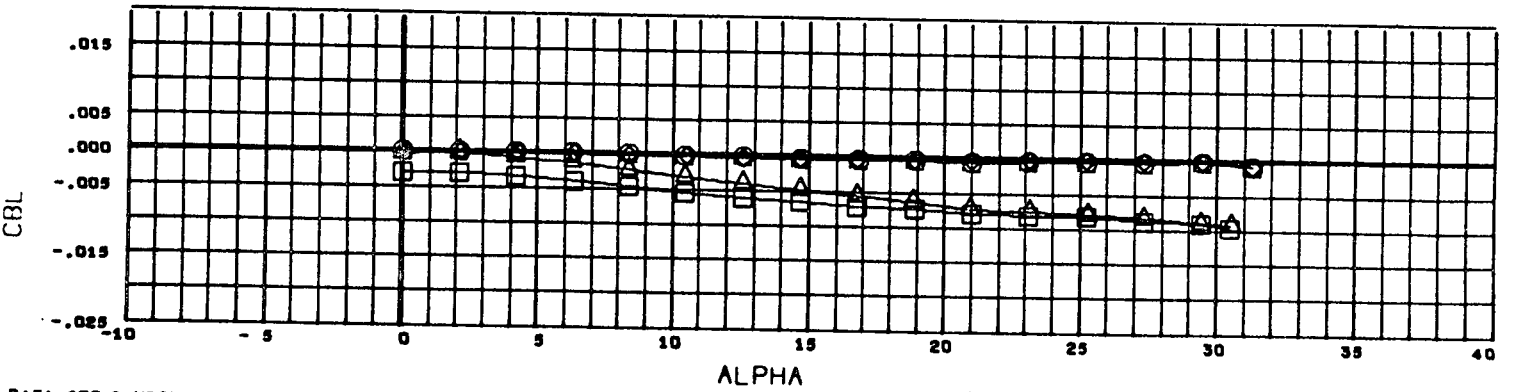
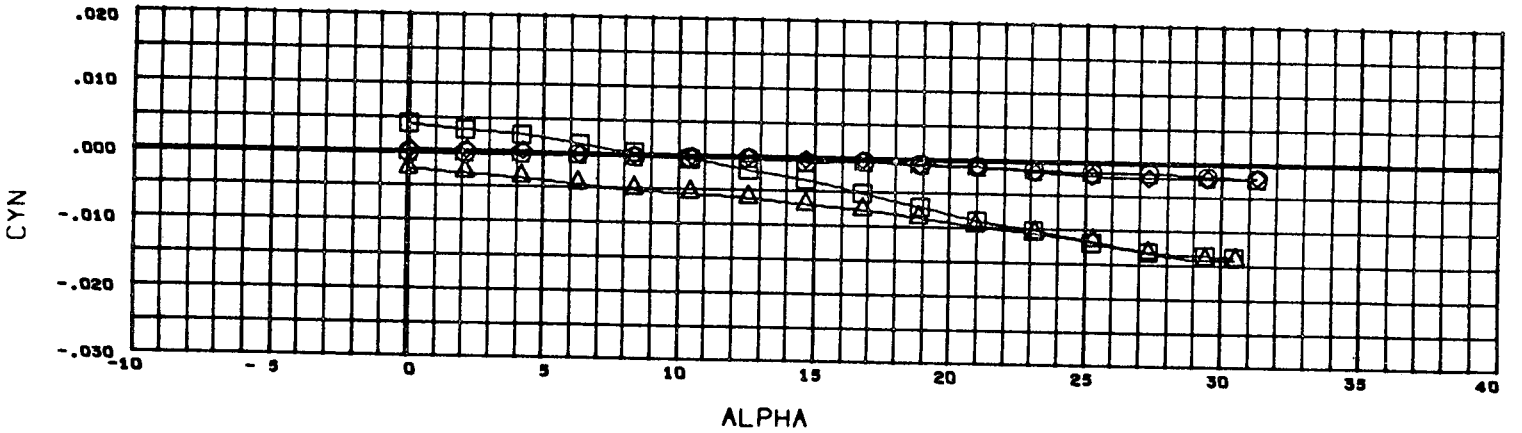
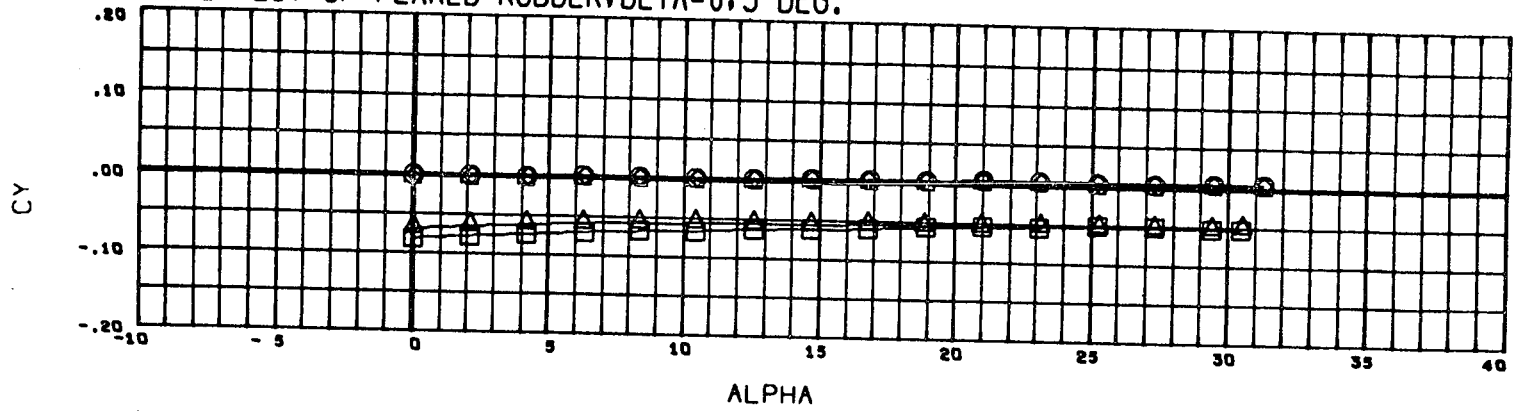
MACH 3.98

FIG.2 EFFECT OF FLARED RUDDER, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB112)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB101)	JPL WT 20-681 MSC 040A 81W1V1(45,-45)M1P1D1C1	0.000	45.000	0.000	0.000	YMRP 0.0000 IN.
(XGB102)	JPL WT 20-681 MSC 040A 81W1V1(45,-45)M1P1D1C1	5.000	45.000	0.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

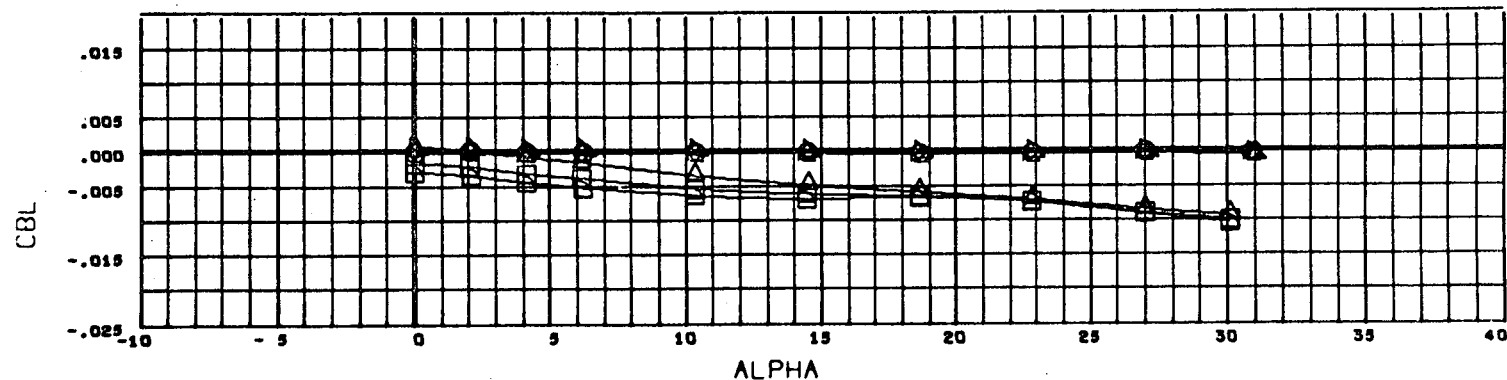
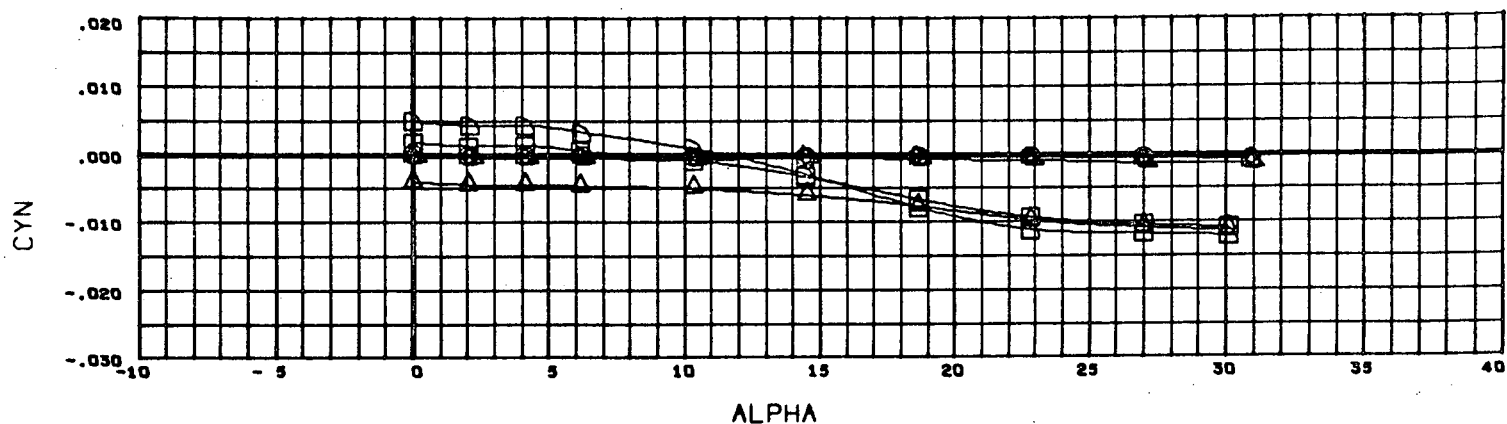
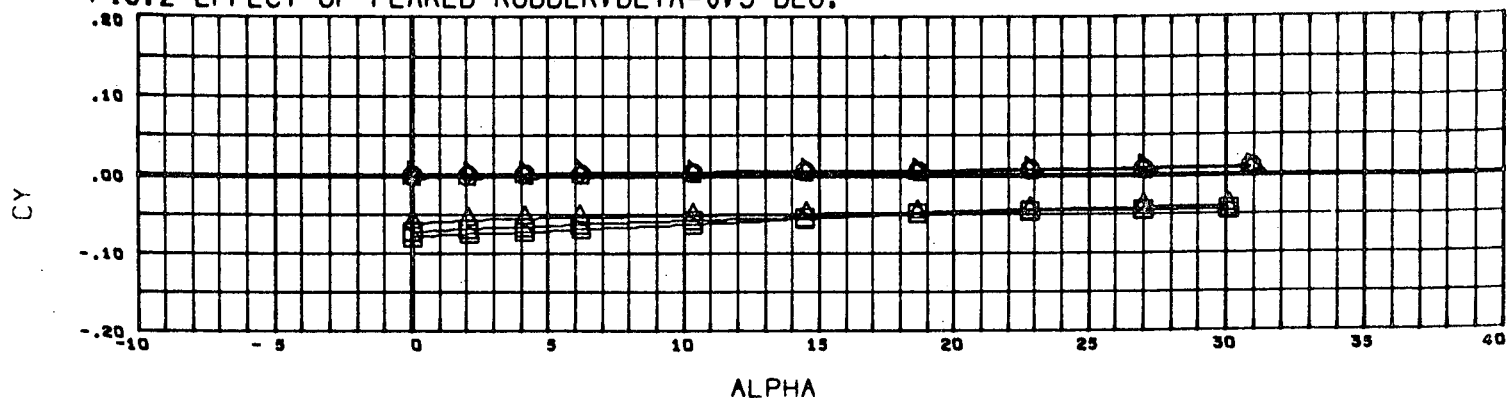
FIG.2 EFFECT OF FLARED RUDDER, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB112)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB101)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	45.000	0.000	0.000	YMRP 0.0000 IN.
(XGB102)	DATA NOT AVAILABLE FOR ALL CONDITIONS	5.000	45.000	0.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

MACH 2.42

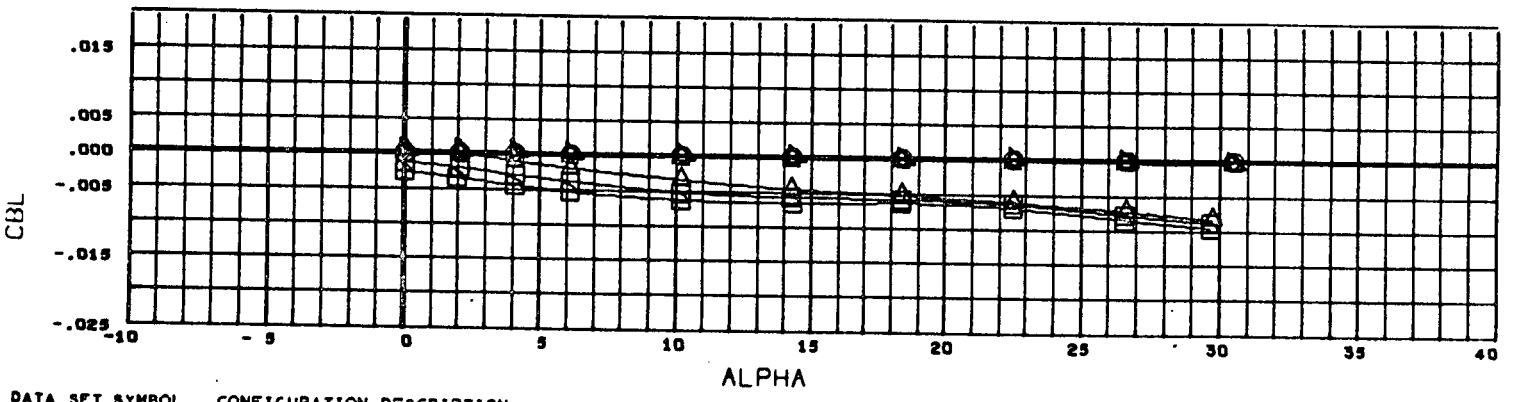
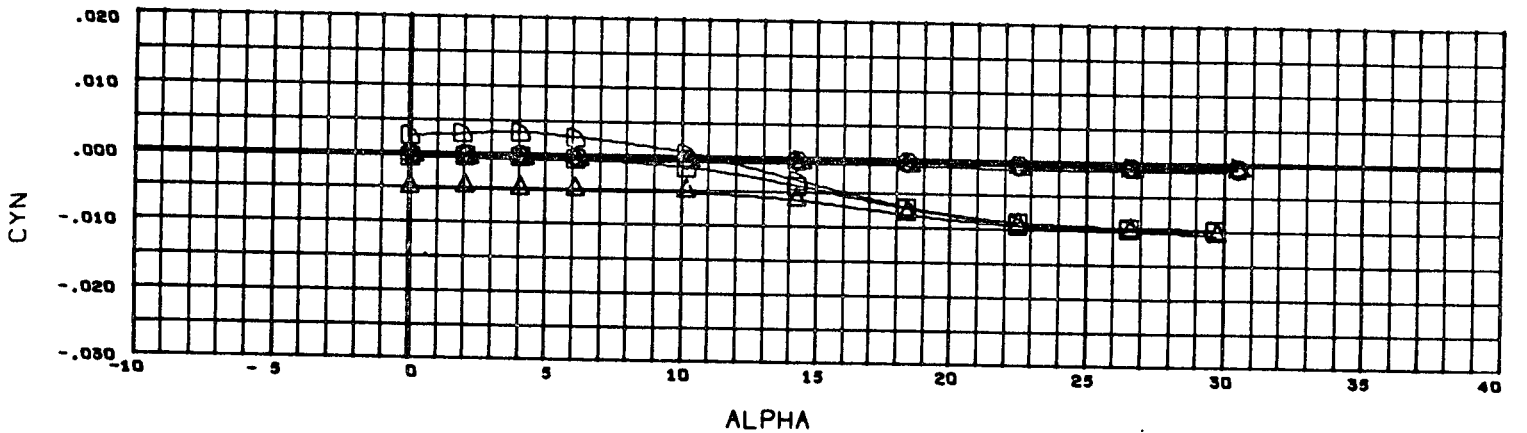
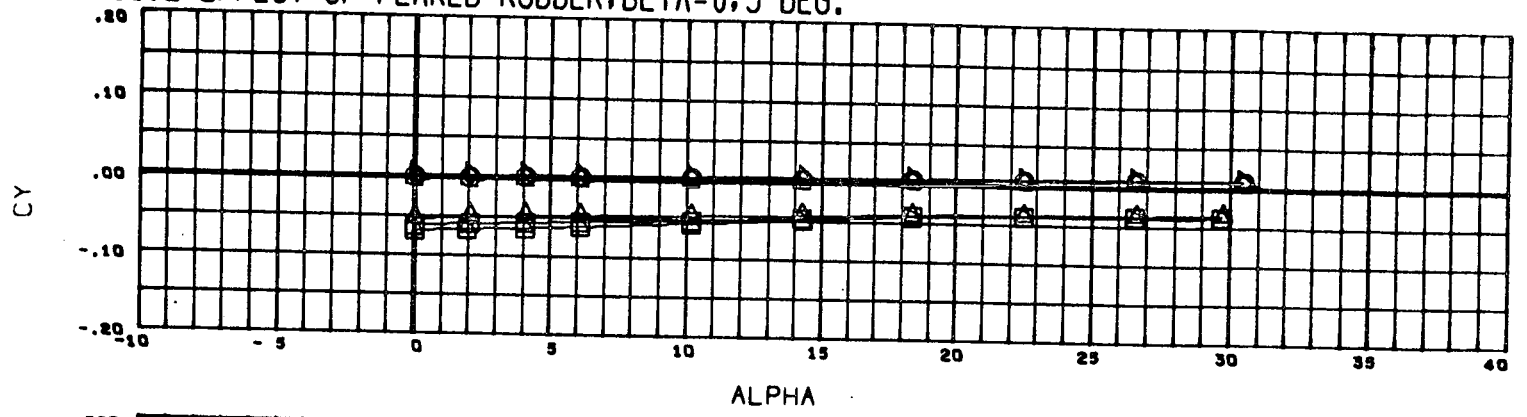
FIG.2 EFFECT OF FLARED RUDDER, BETA=0,5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	0.000	45.000	0.000	0.000	YMRP 0.0000 IN.
(XGB102)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	5.000	45.000	0.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.03

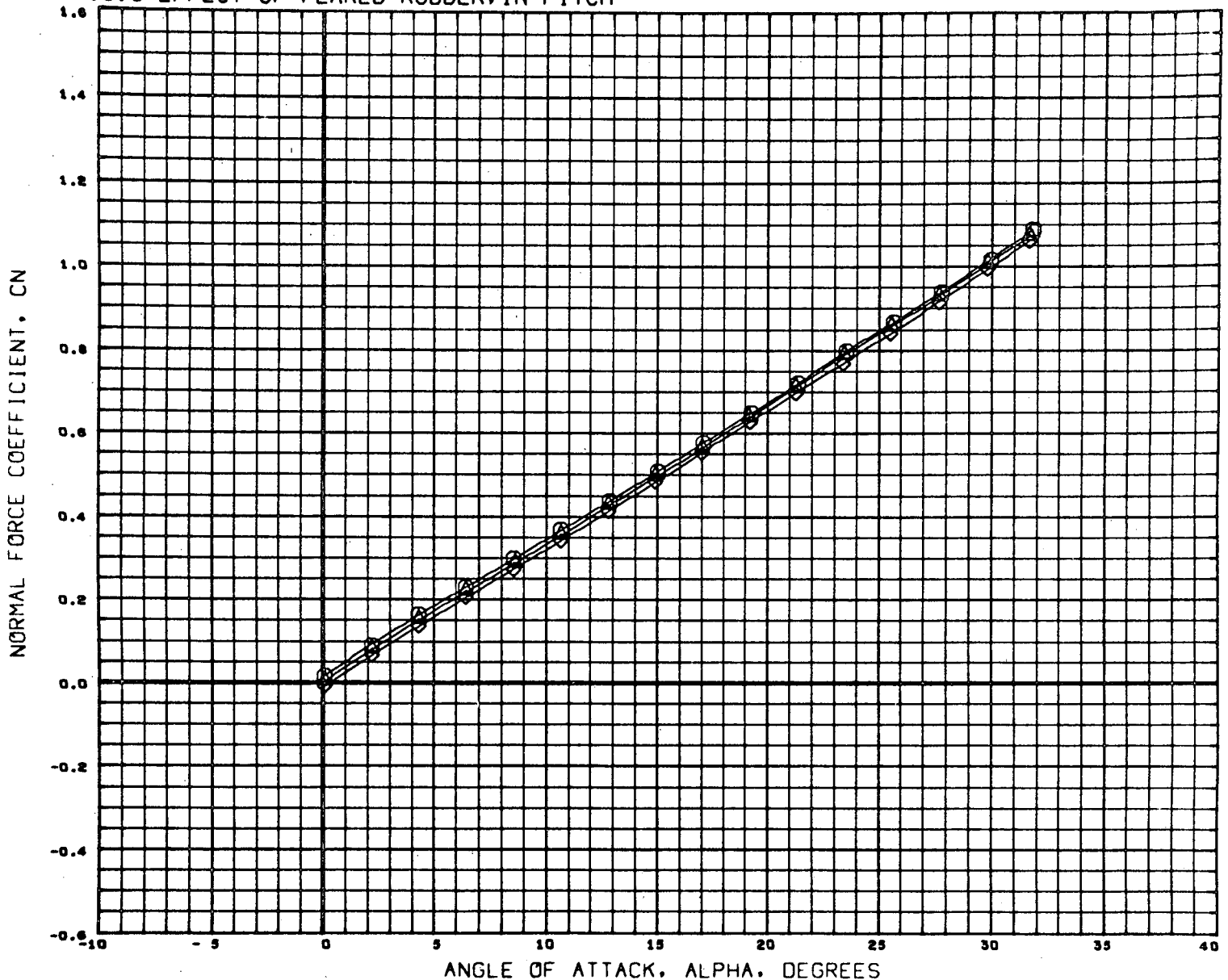
FIG.2 EFFECT OF FLARED RUDDER, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRF 1067.9040 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	0.000	45.000	0.000	0.000	YMRF 0.0000 IN.
(XGB102)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	5.000	45.000	0.000	0.000	ZMRF 400.0004 IN. SCALE 0.0075

MACH 3.98

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH

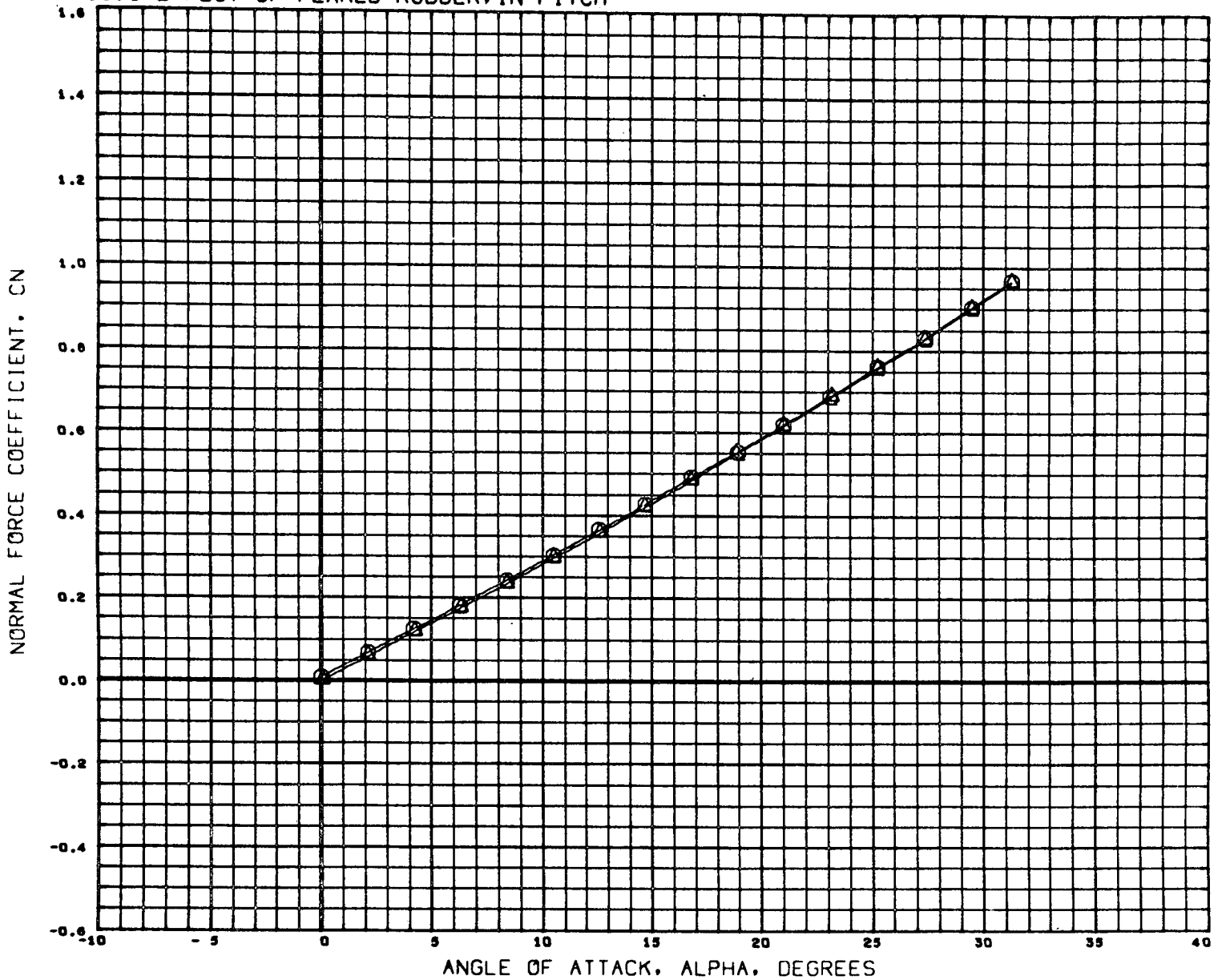


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A 81W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

PAGE 21

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH

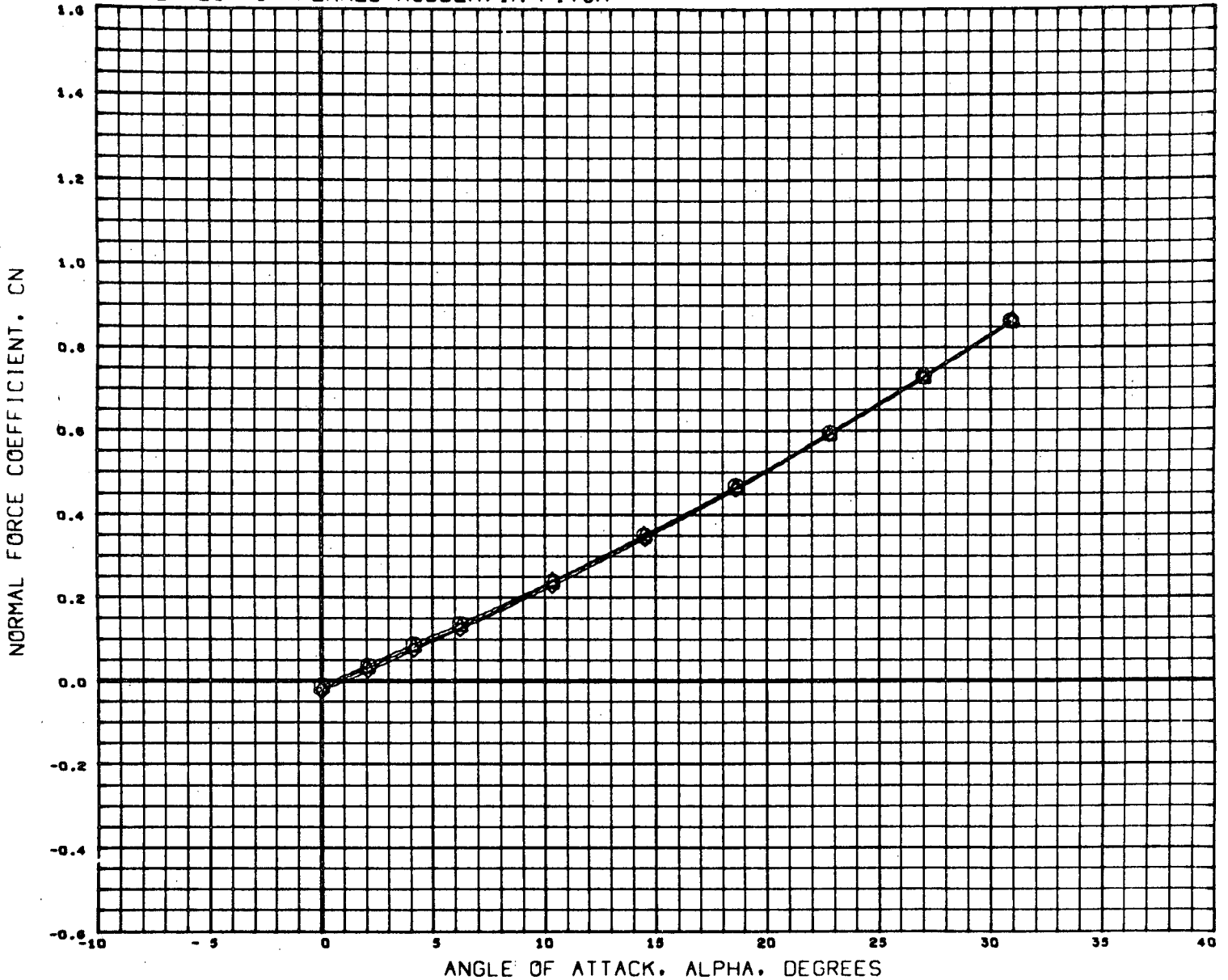


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 29.5560 90 IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN. XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 2.42

PAGE 22

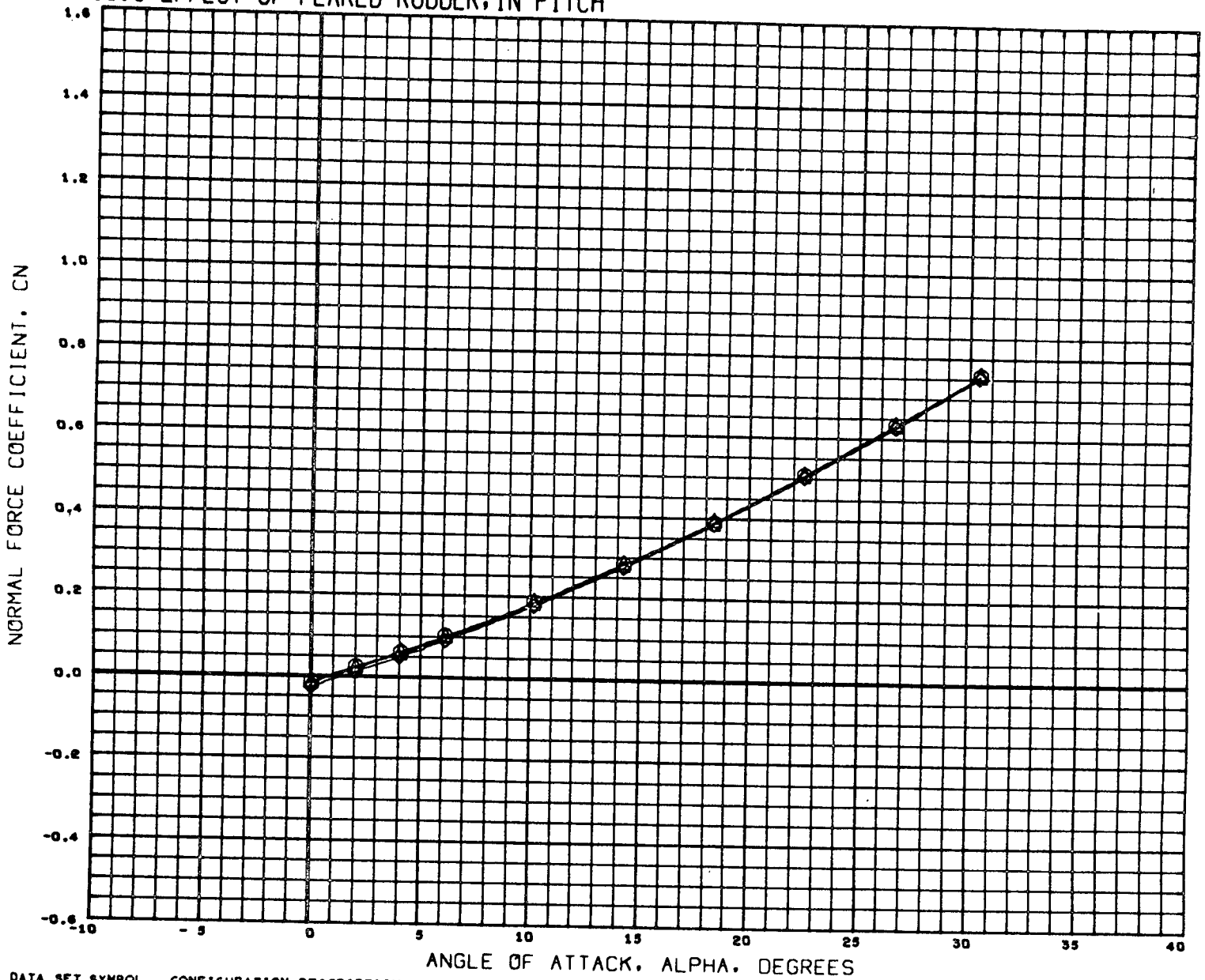
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 30 IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0073

MACH 3.03

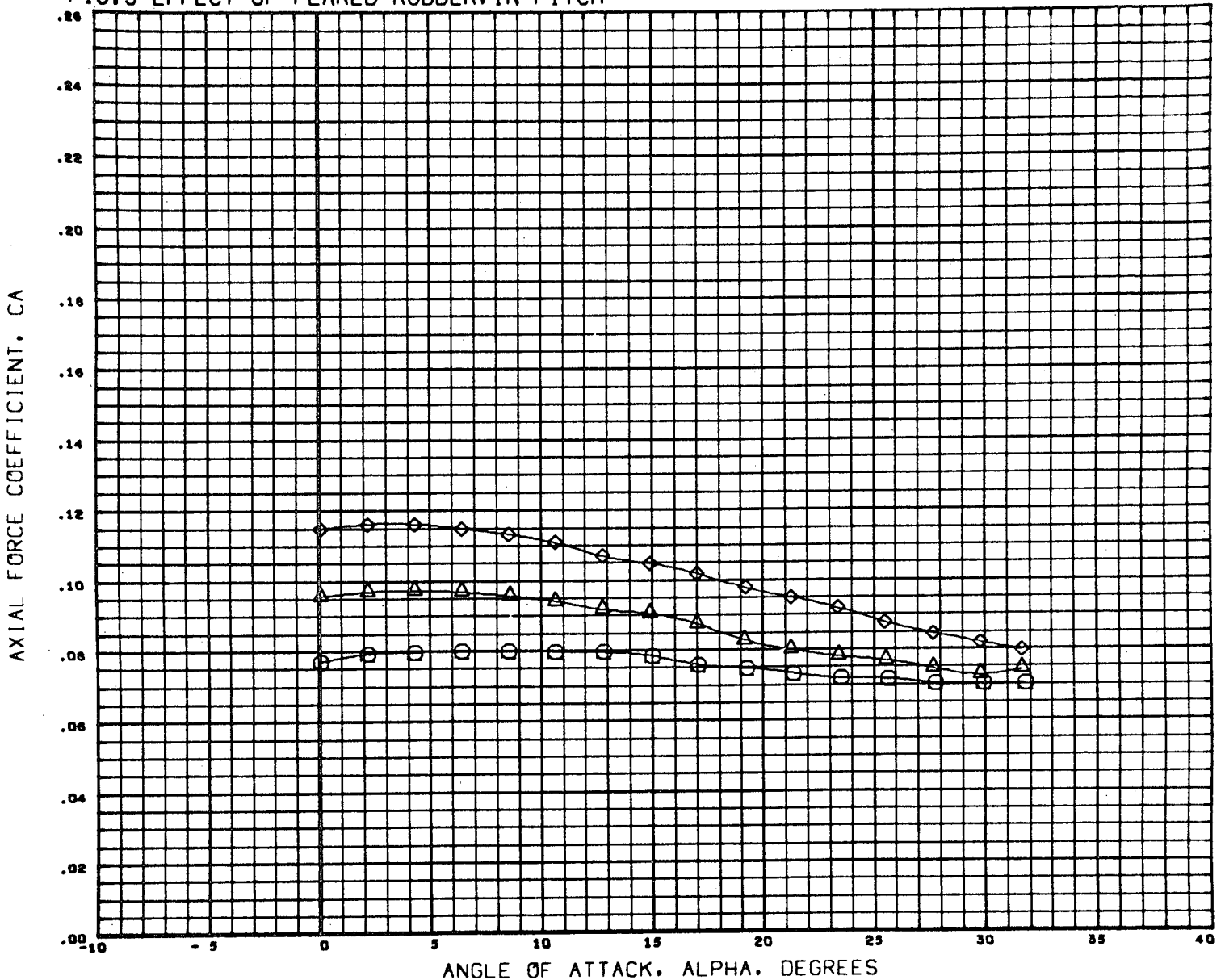
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

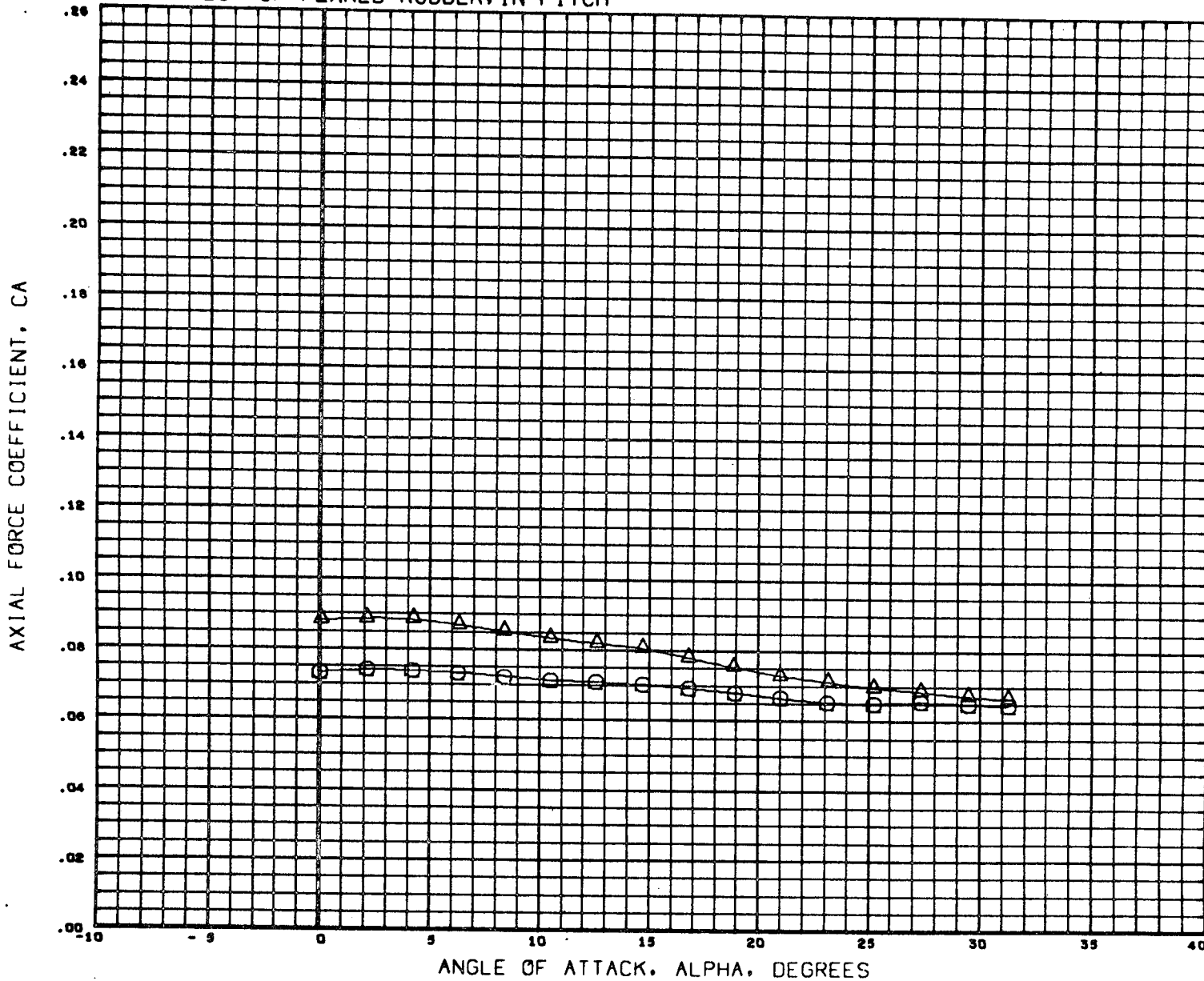
MACH 3.98

FIG. 3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

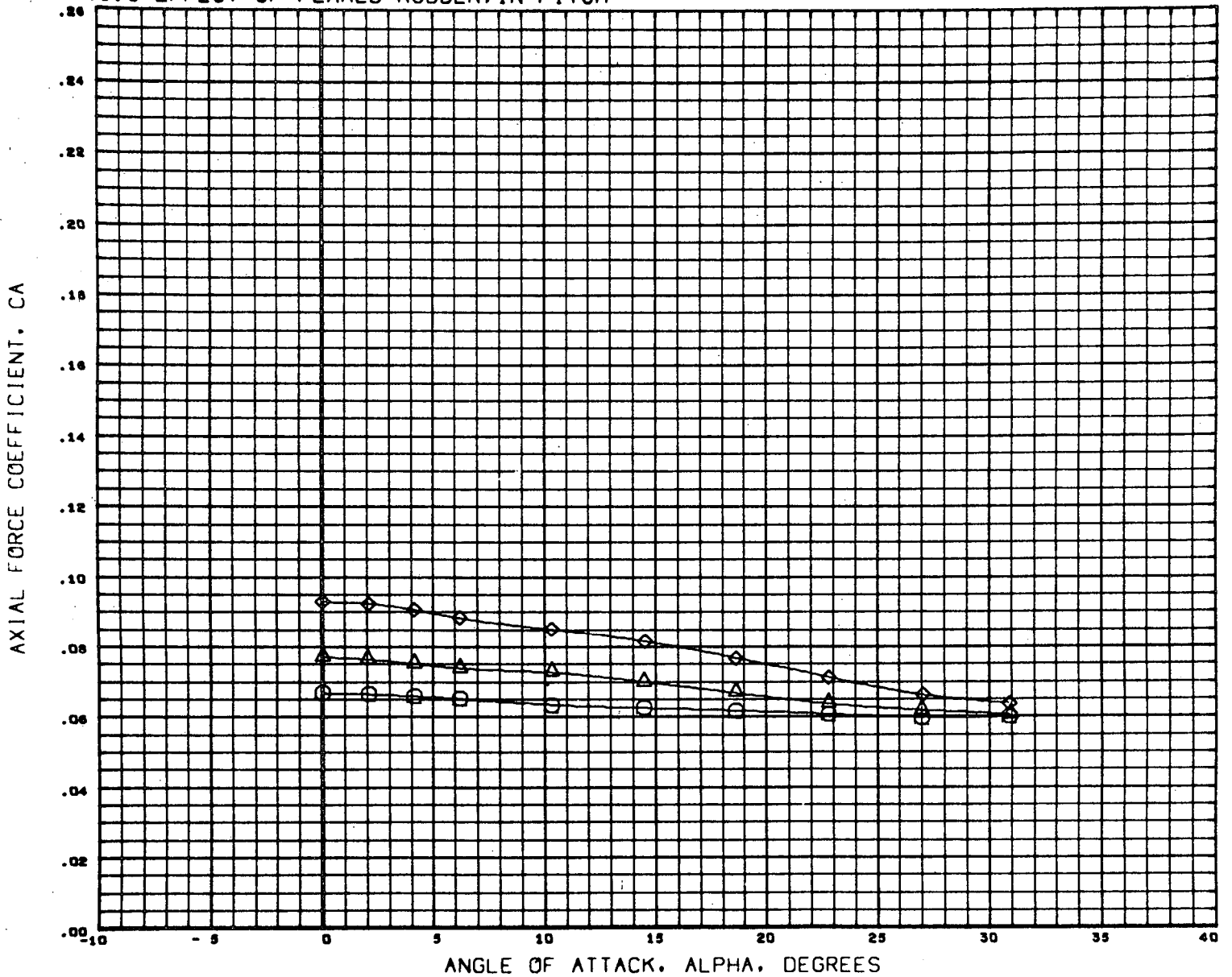
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB101)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0073

MACH 2.42

FIG. 3 EFFECT OF FLARED RUDDER, IN PITCH

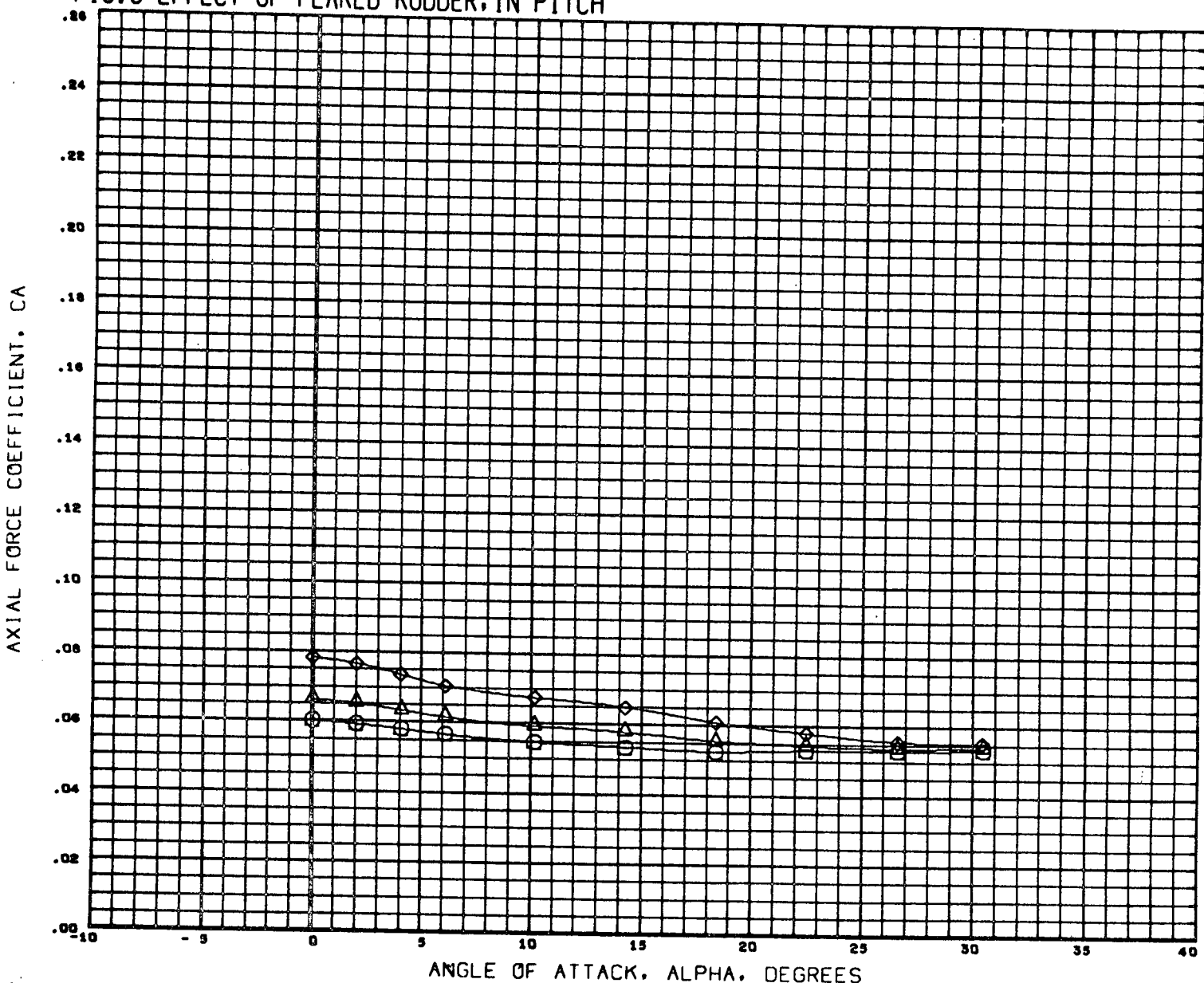


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN. XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.03

PAGE 27

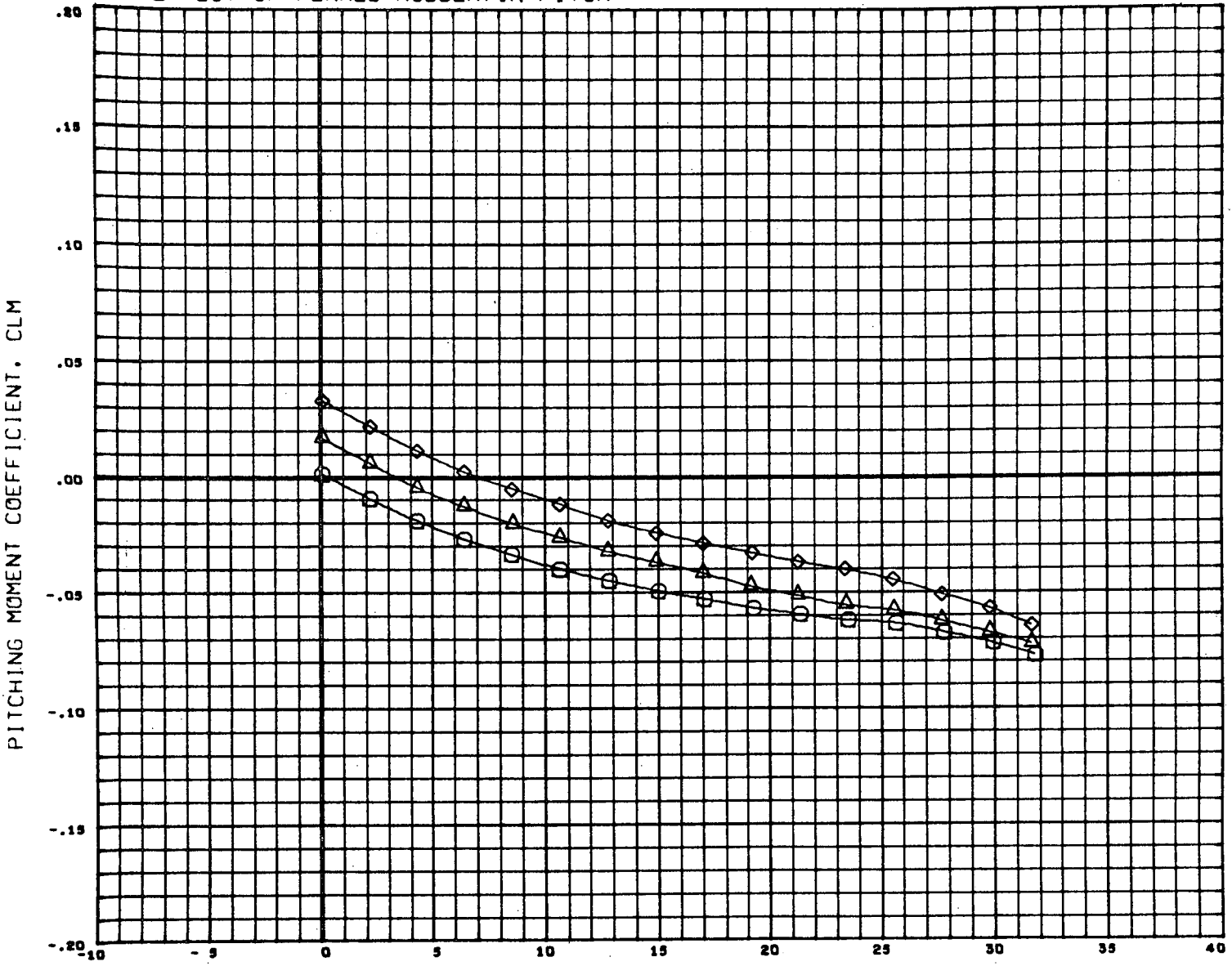
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 50 IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

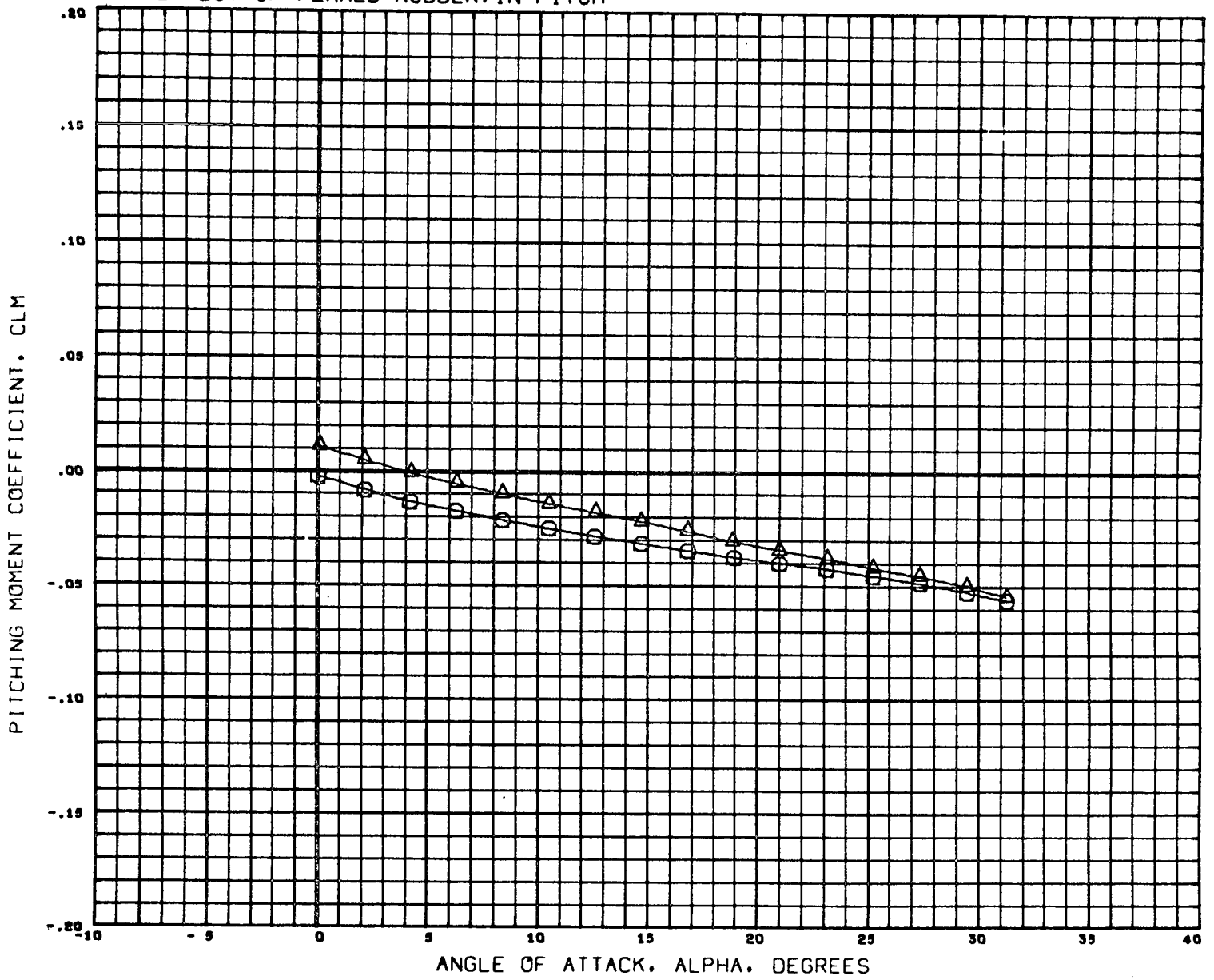
MACH 3.98

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH

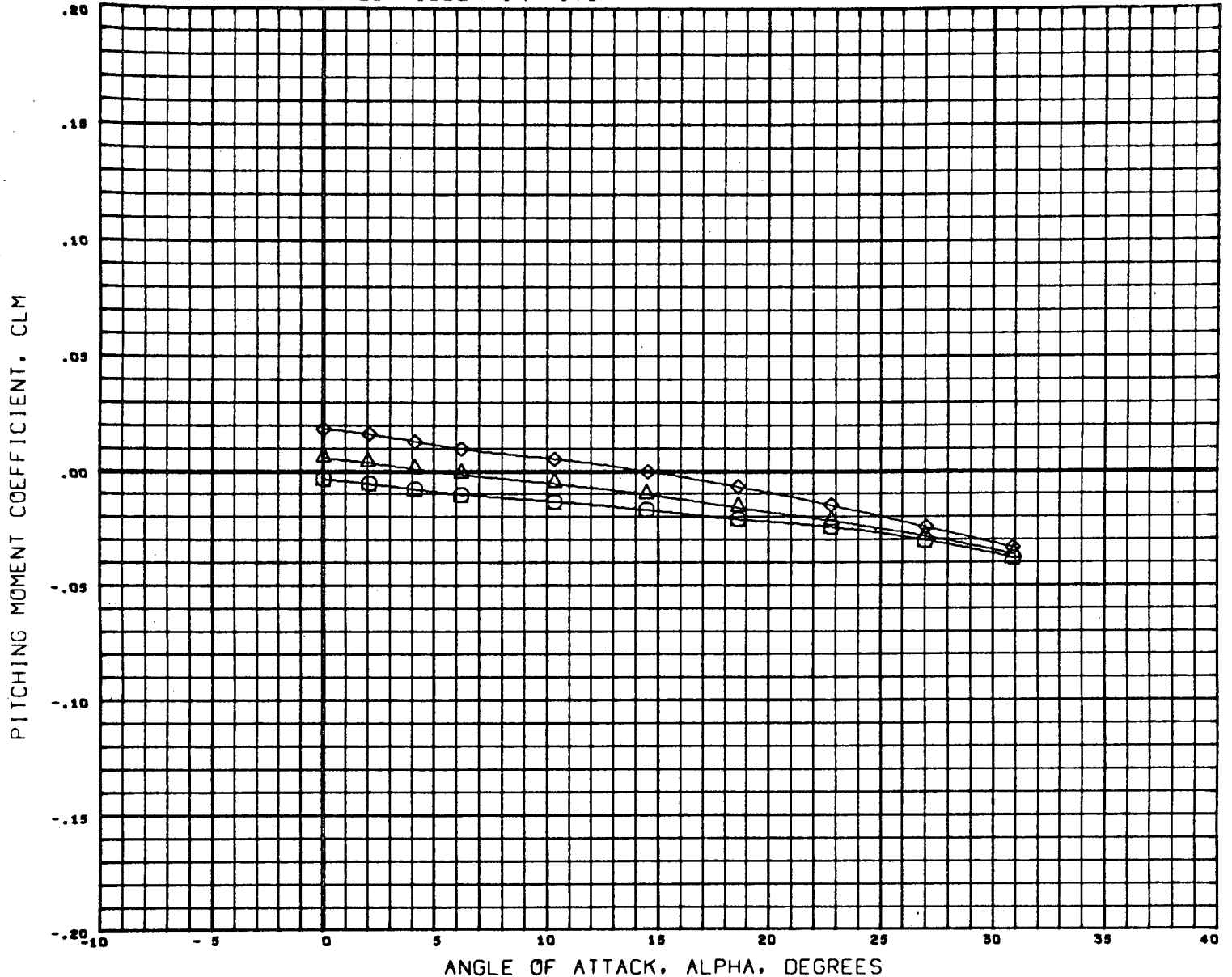


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XG8101)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

PAGE 30

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



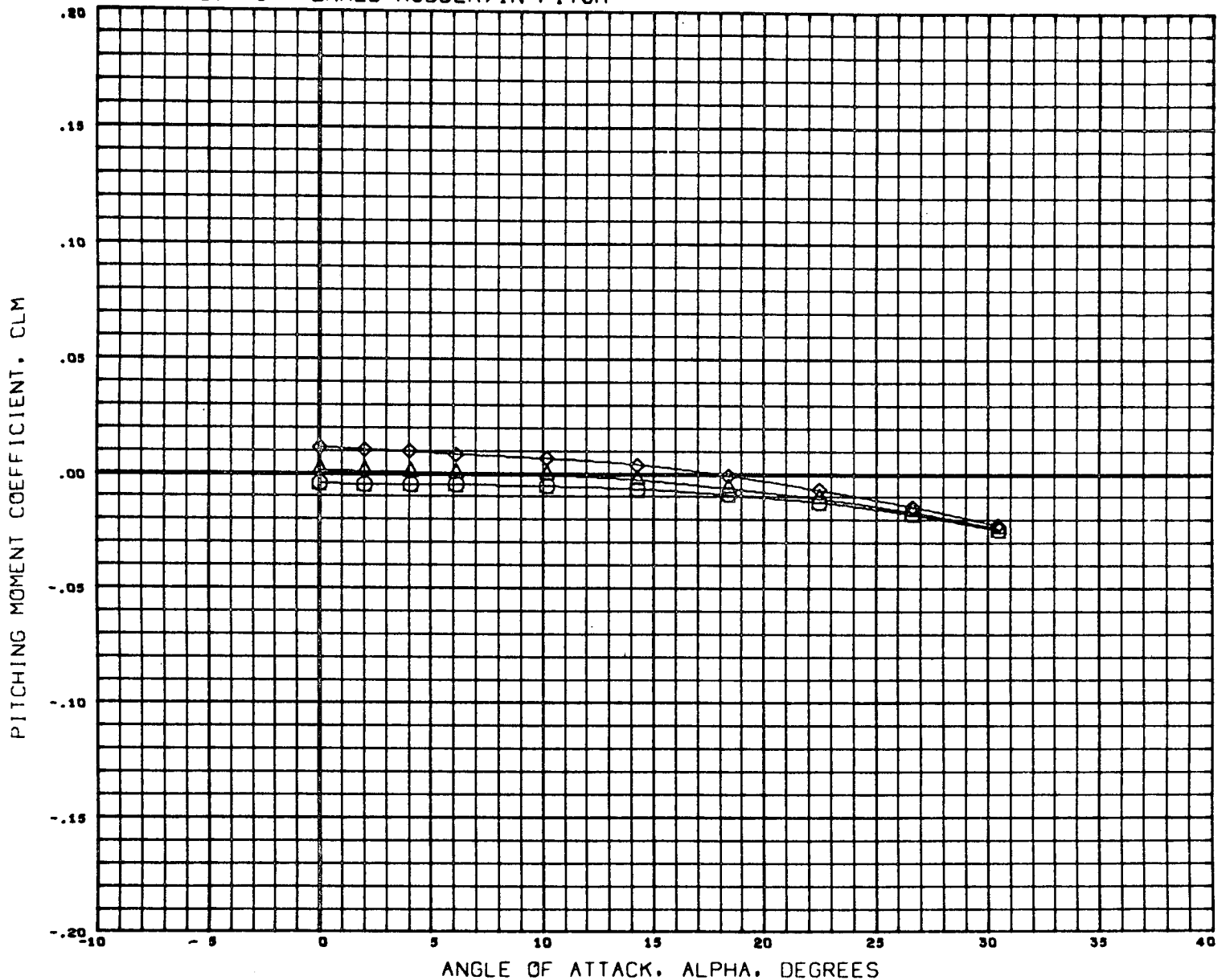
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH

3.03

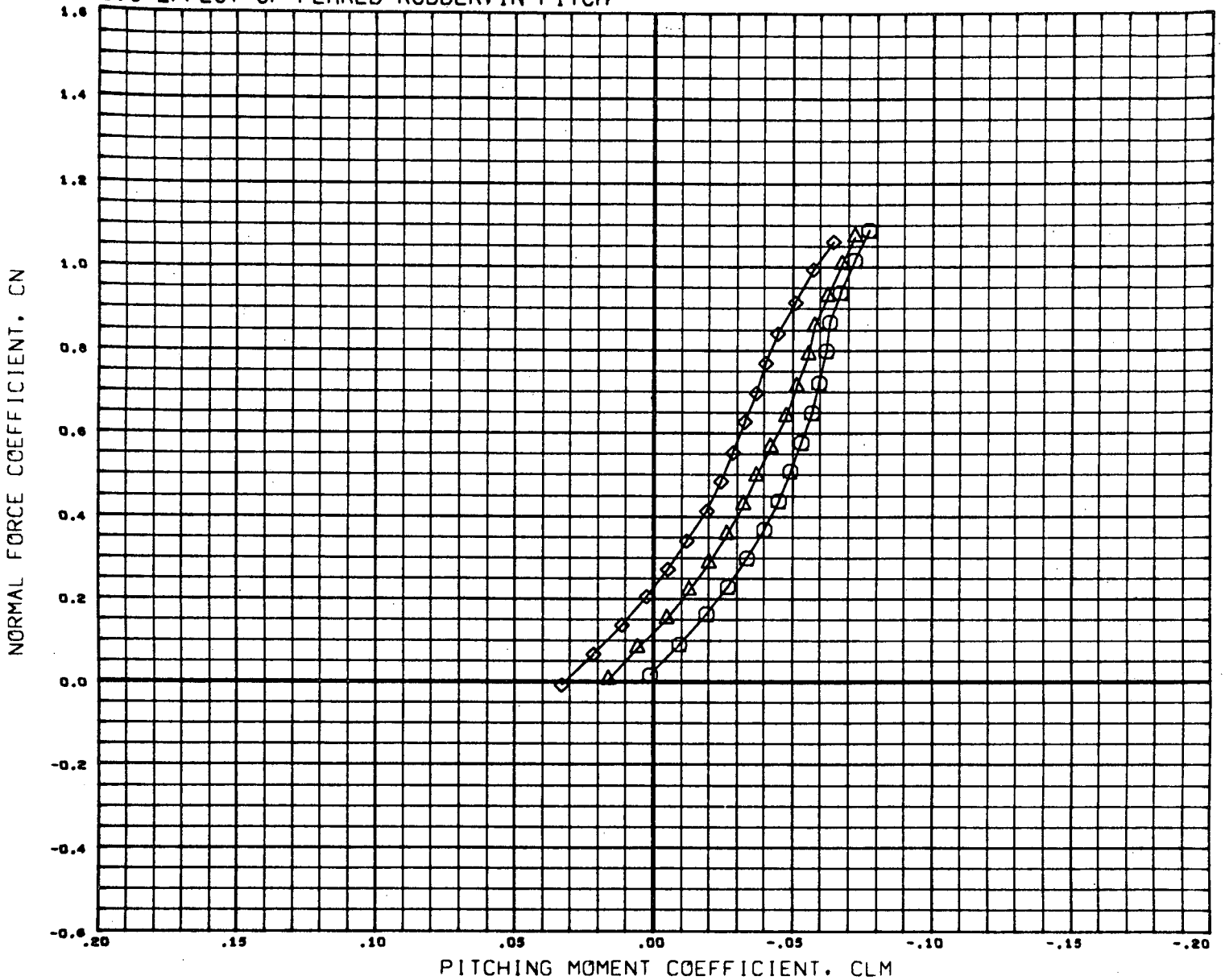
PAGE 31

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

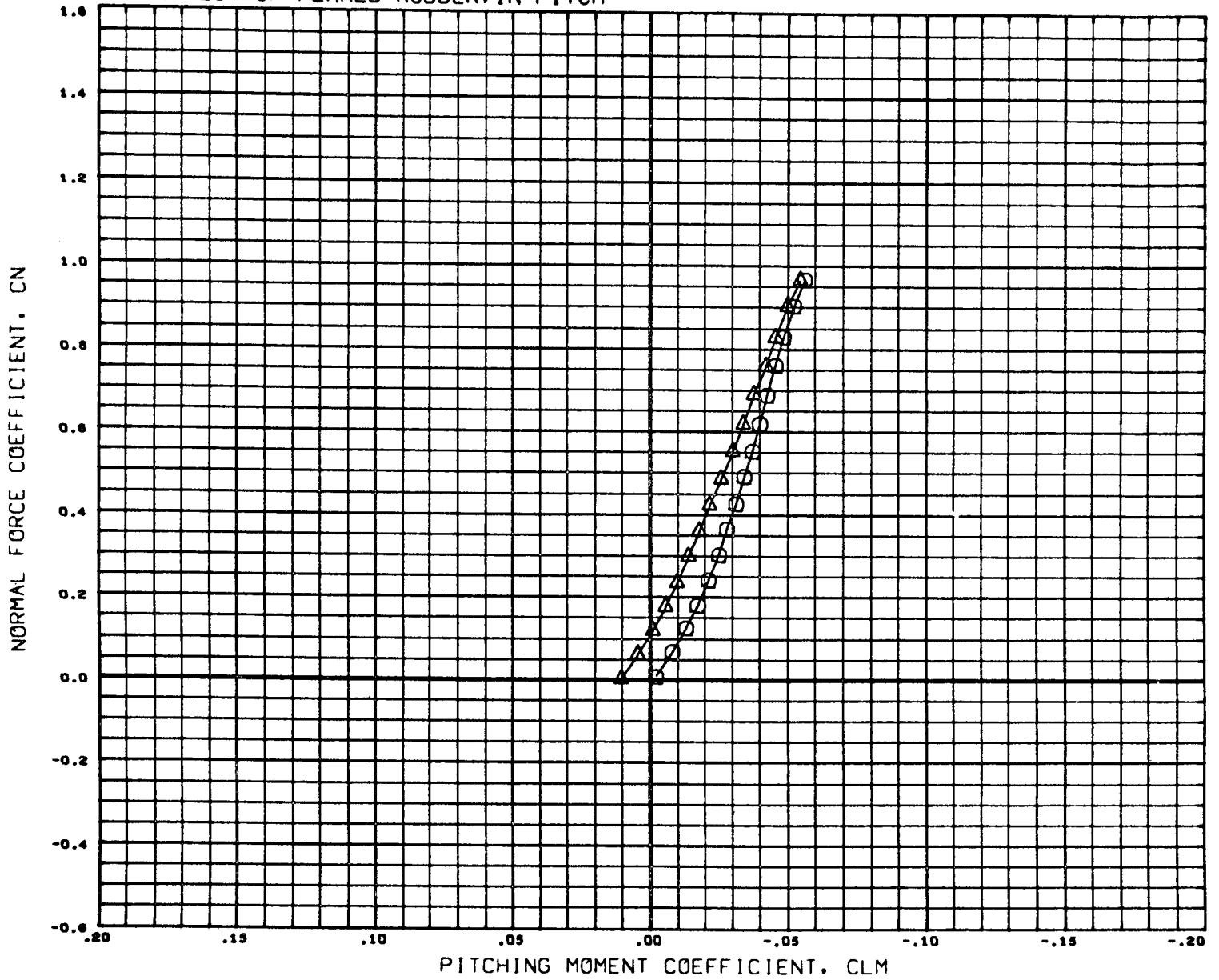
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB101)	JPL WT 20-881 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

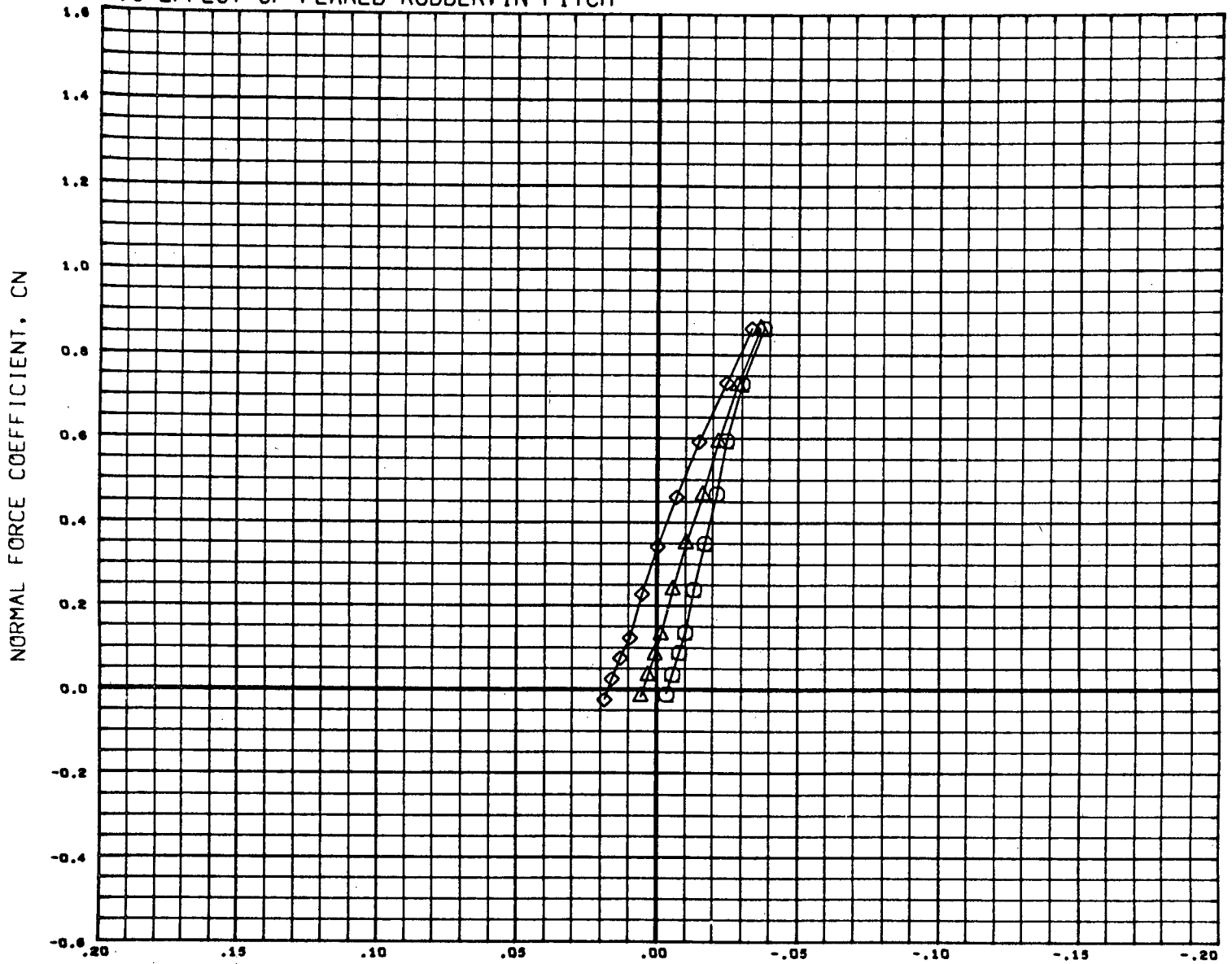
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB101)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

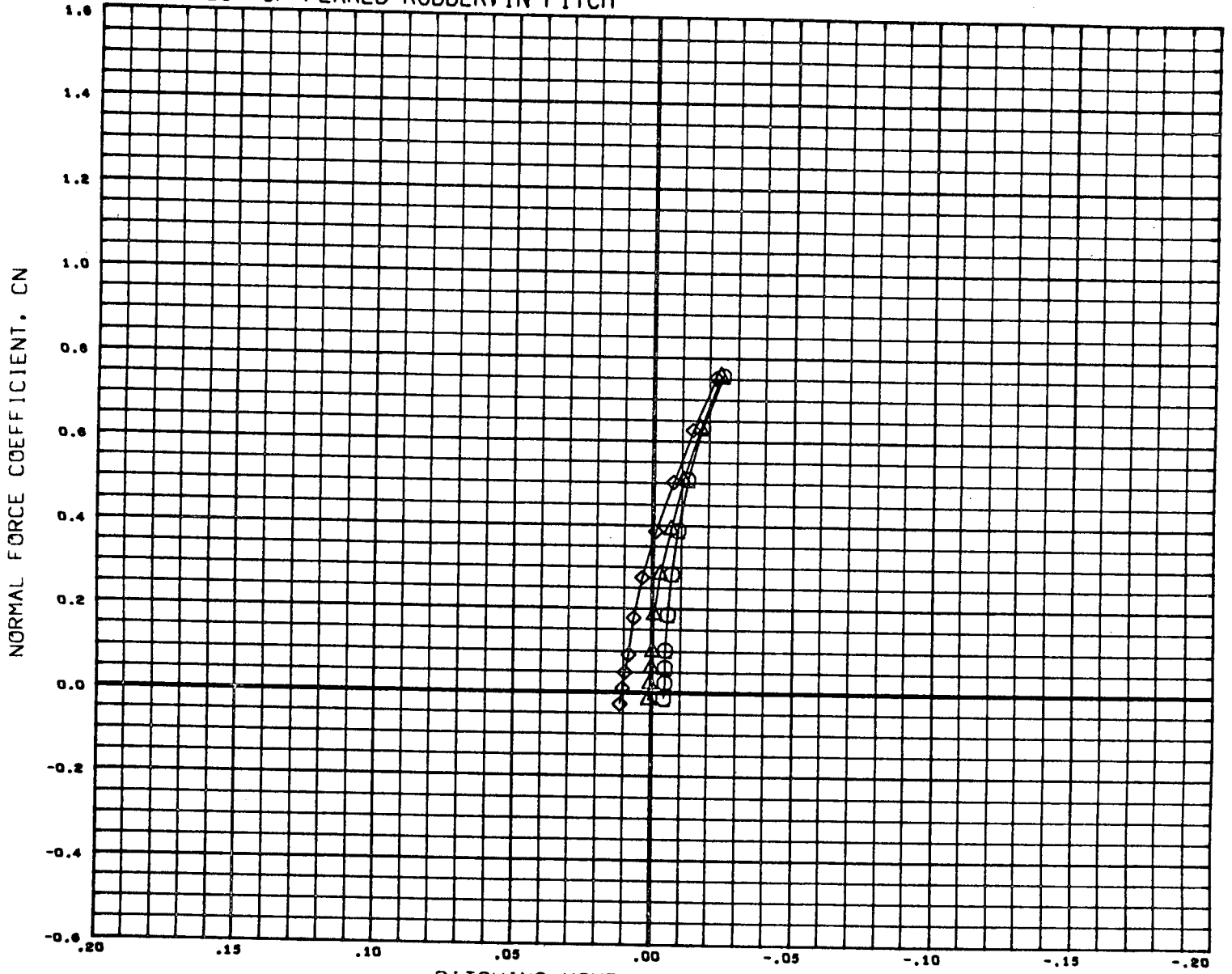
MACH 2.42

FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.3720 IN.
(XGE101)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN. XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

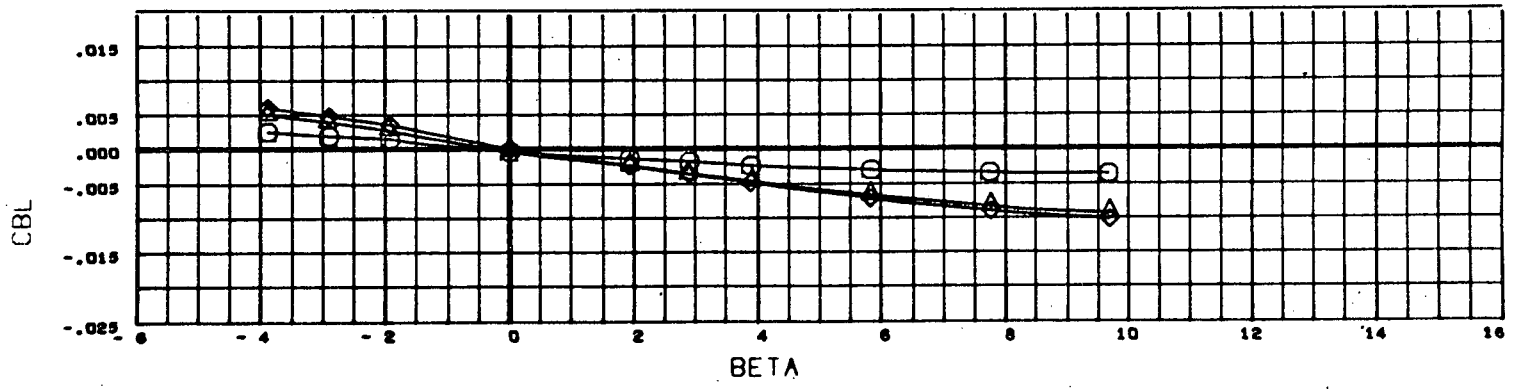
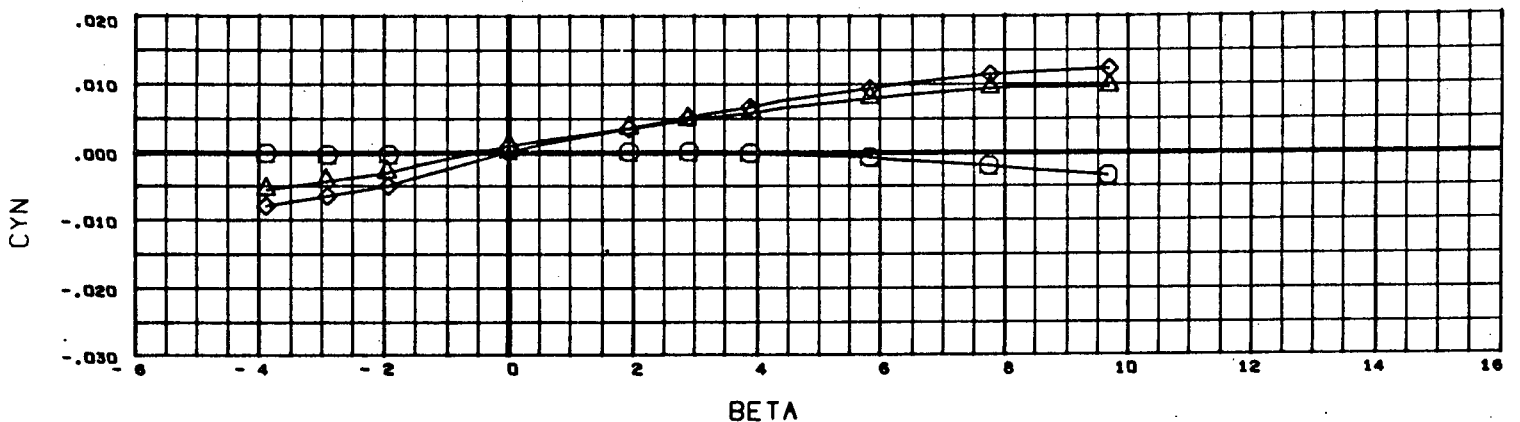
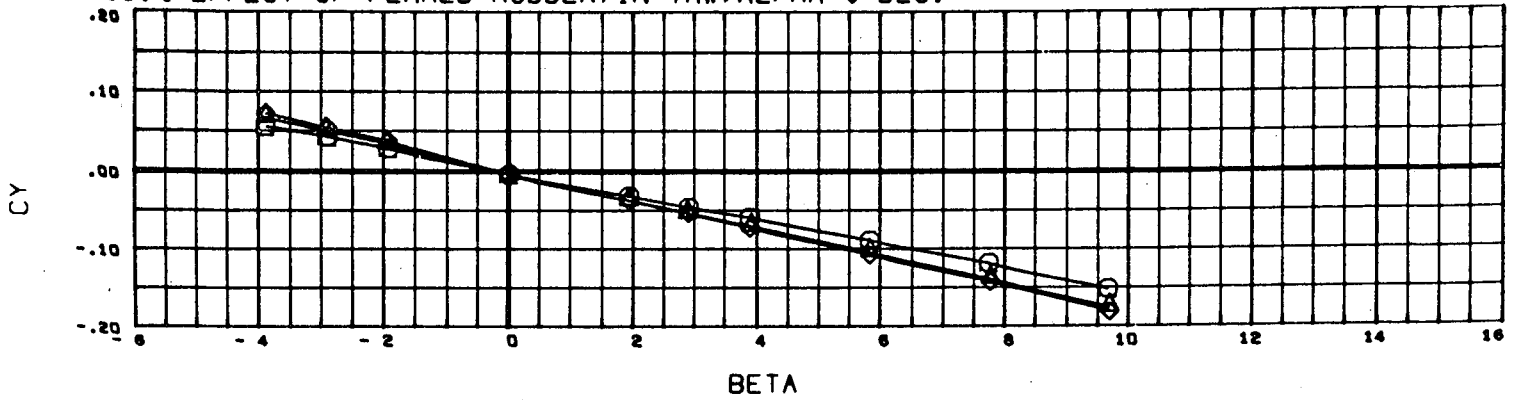
FIG.3 EFFECT OF FLARED RUDDER, IN PITCH



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-661 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.3720 IN.
(XGB101)	JPL WT 20-661 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

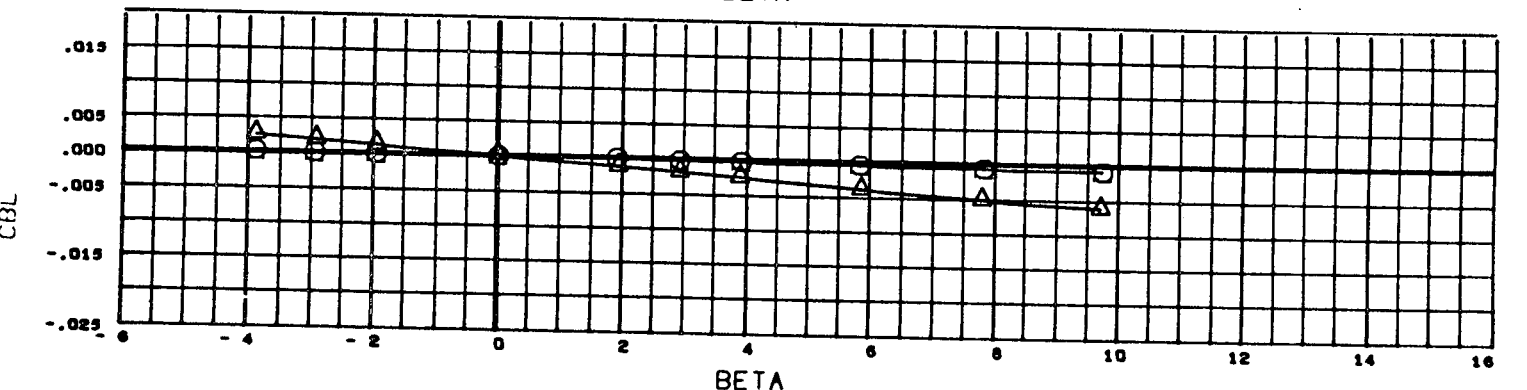
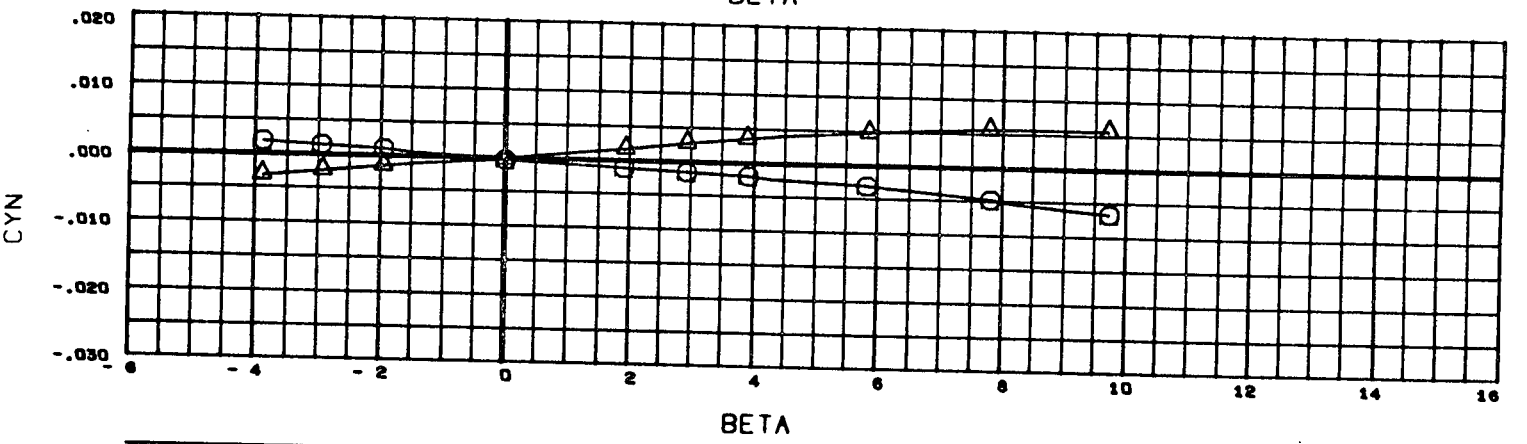
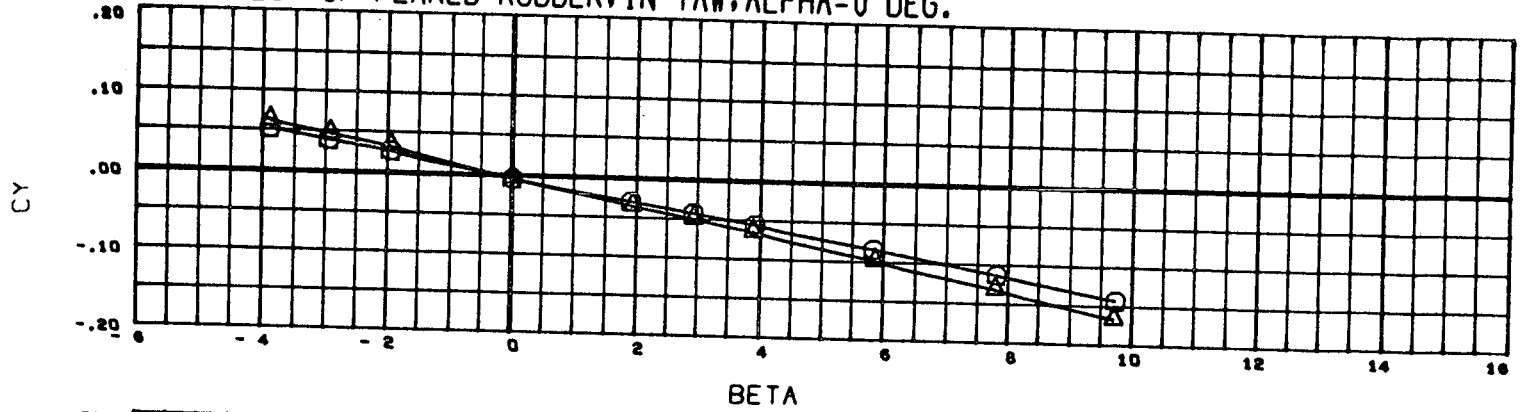
MACH 3.98

FIG.4 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB113)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB103)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN. XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0079

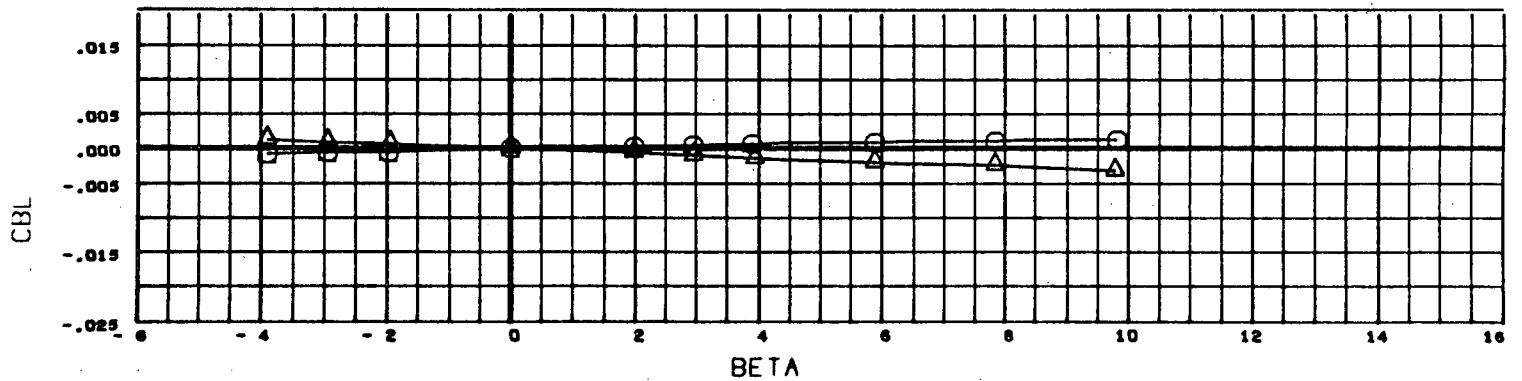
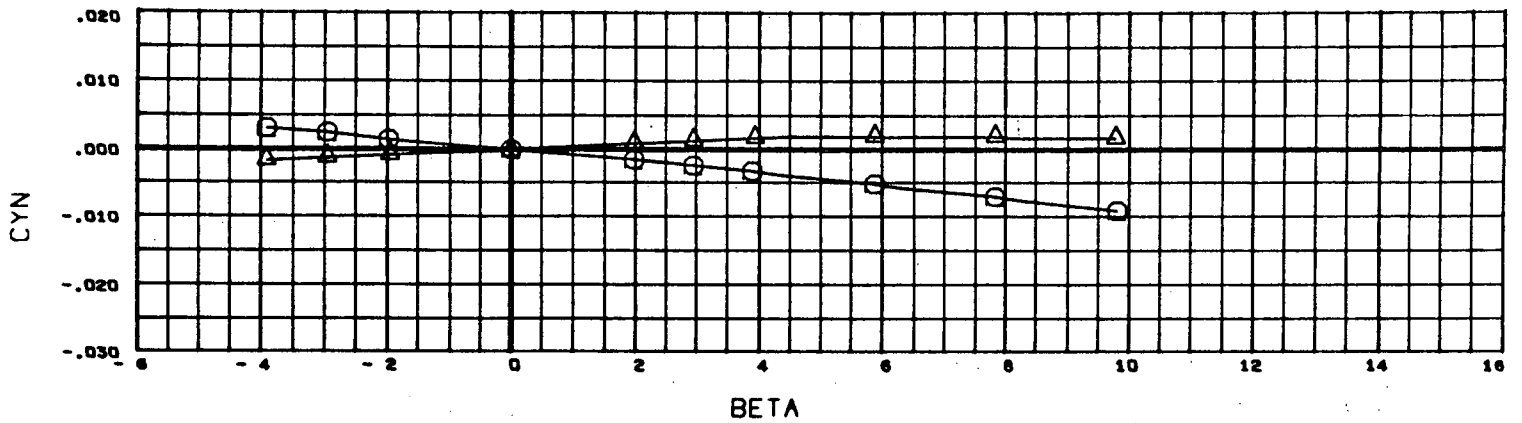
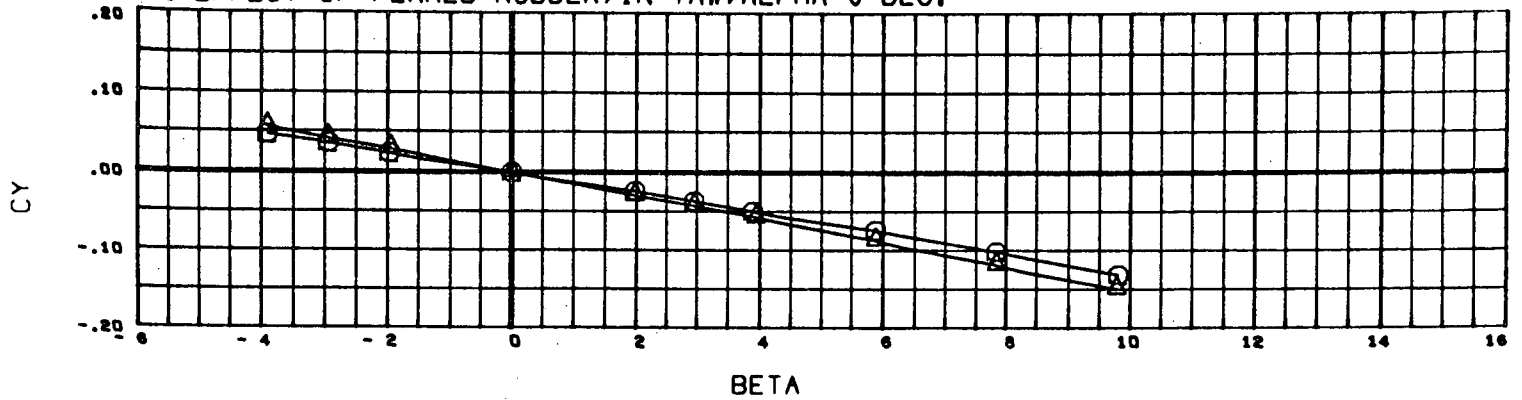
FIG. 4 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB013)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5580 SQ IN.
(XGB113)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB103)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0073

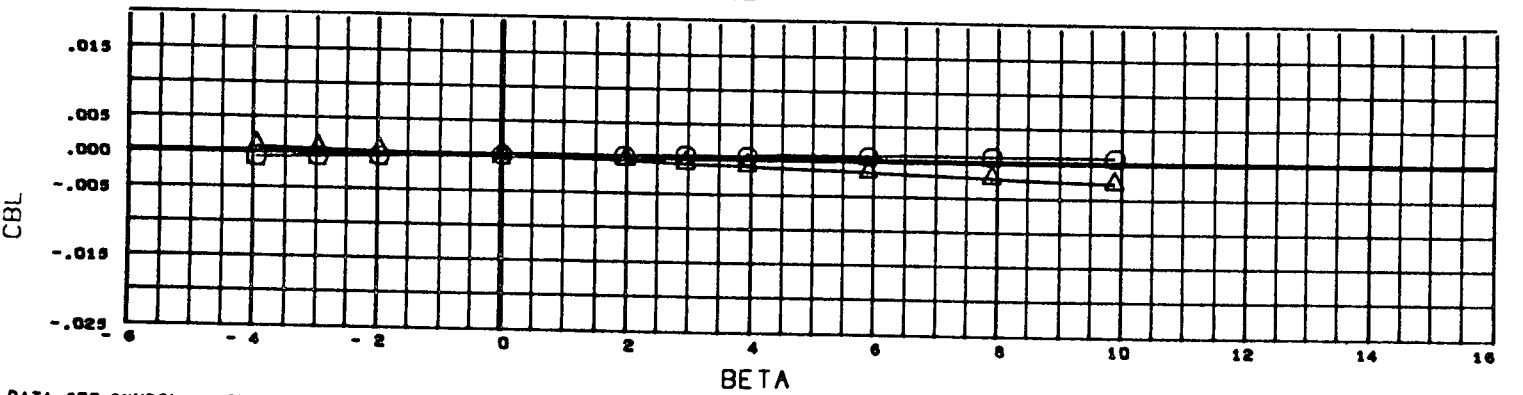
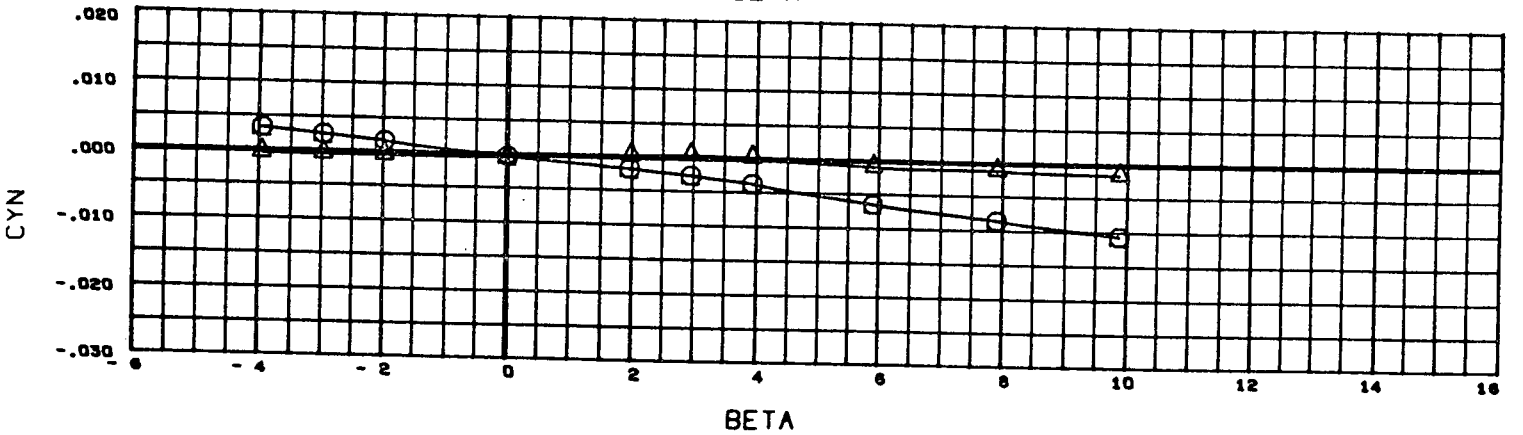
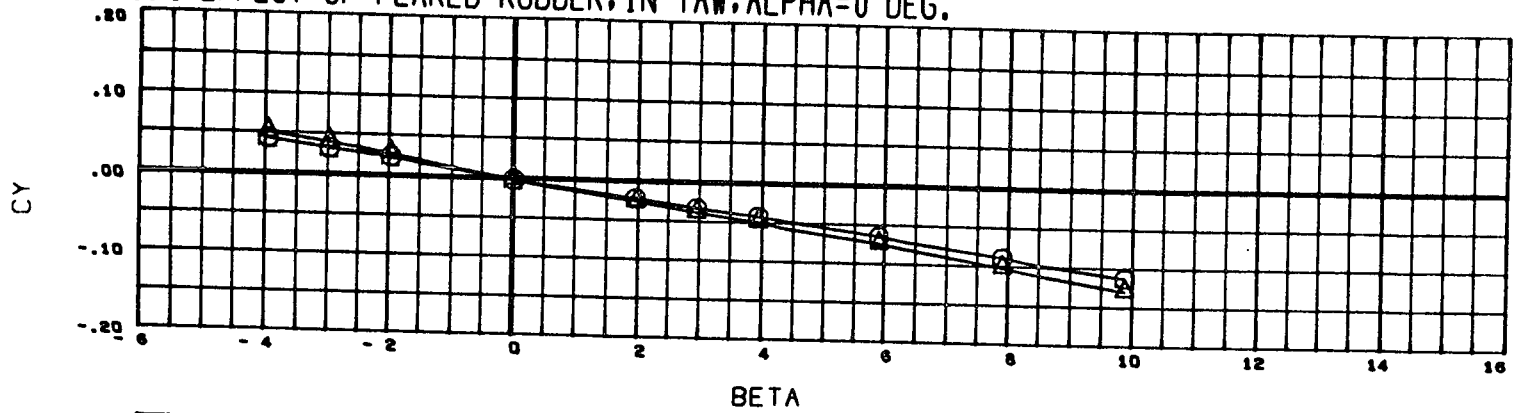
MACH 2.42

FIG.4 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB013)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.9560 SQ IN.
(XGB113)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB103)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

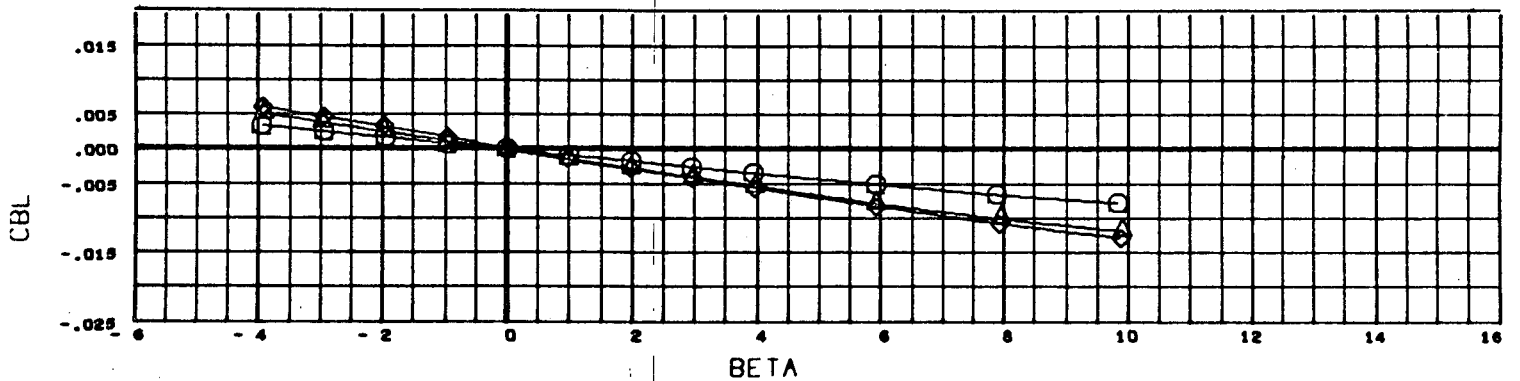
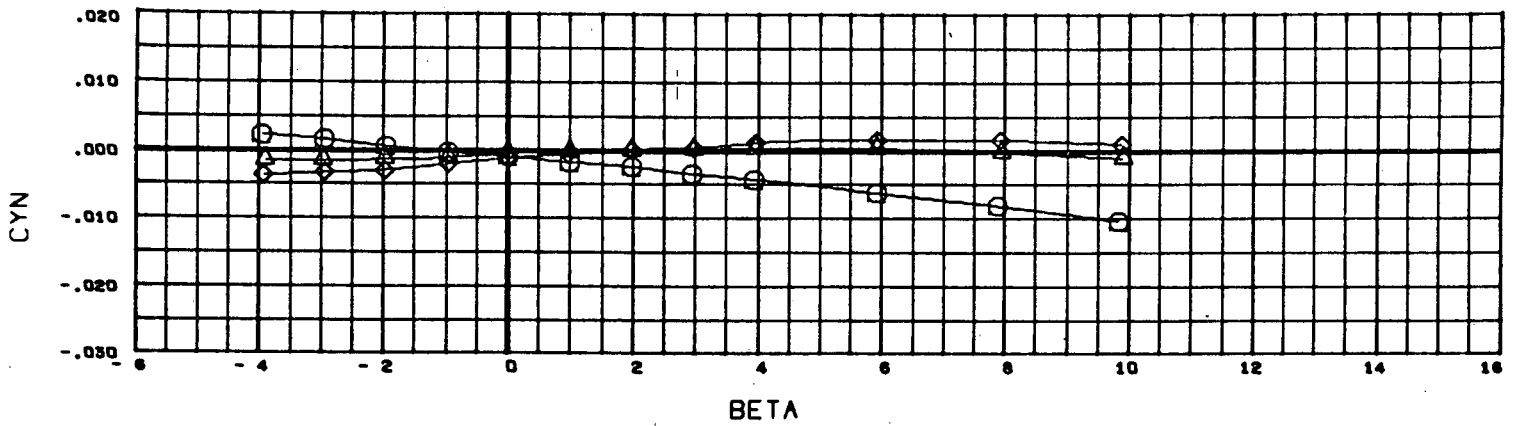
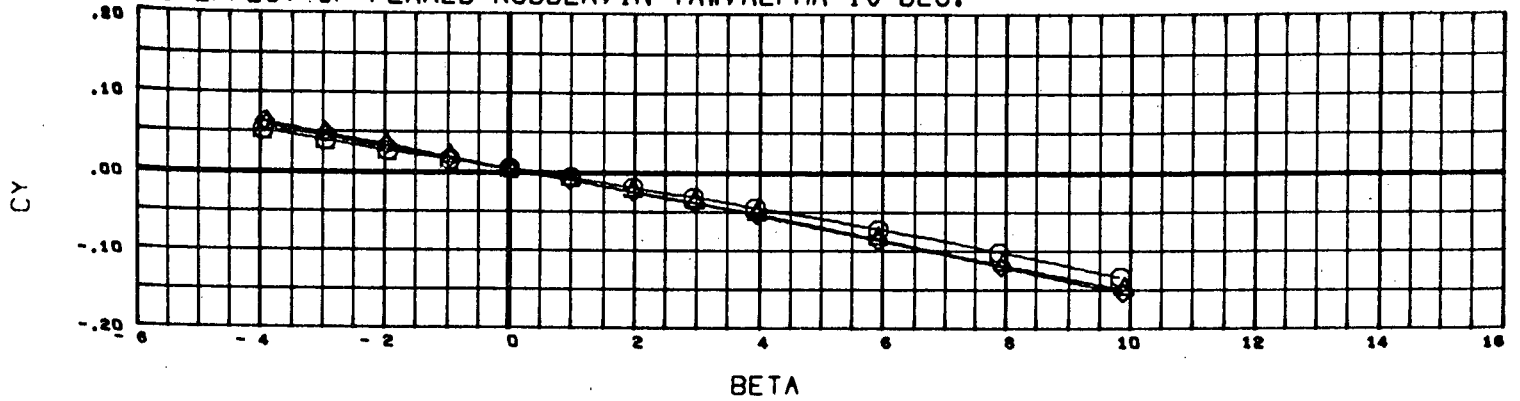
FIG. 4 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 80 IN.
(XGB113)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB103)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

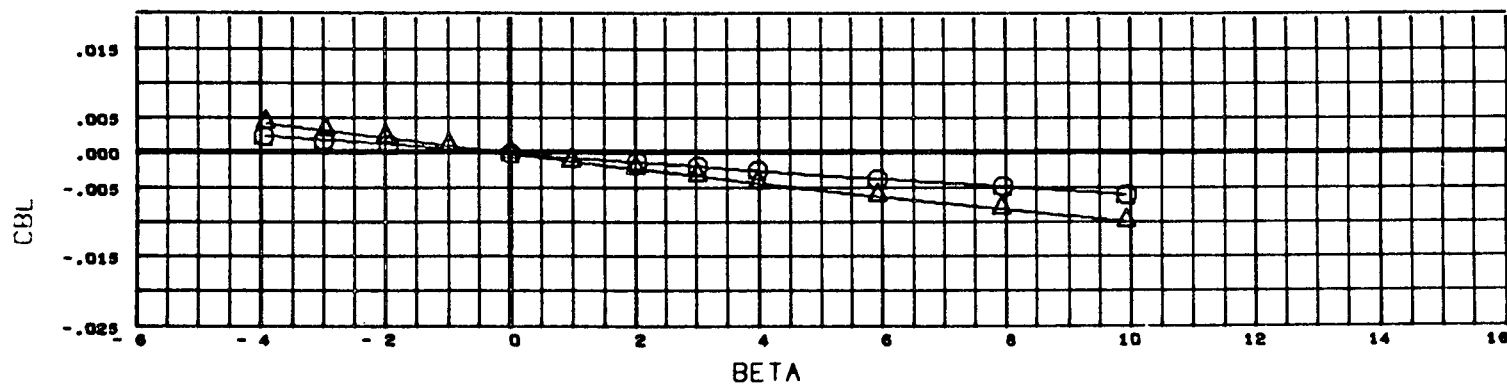
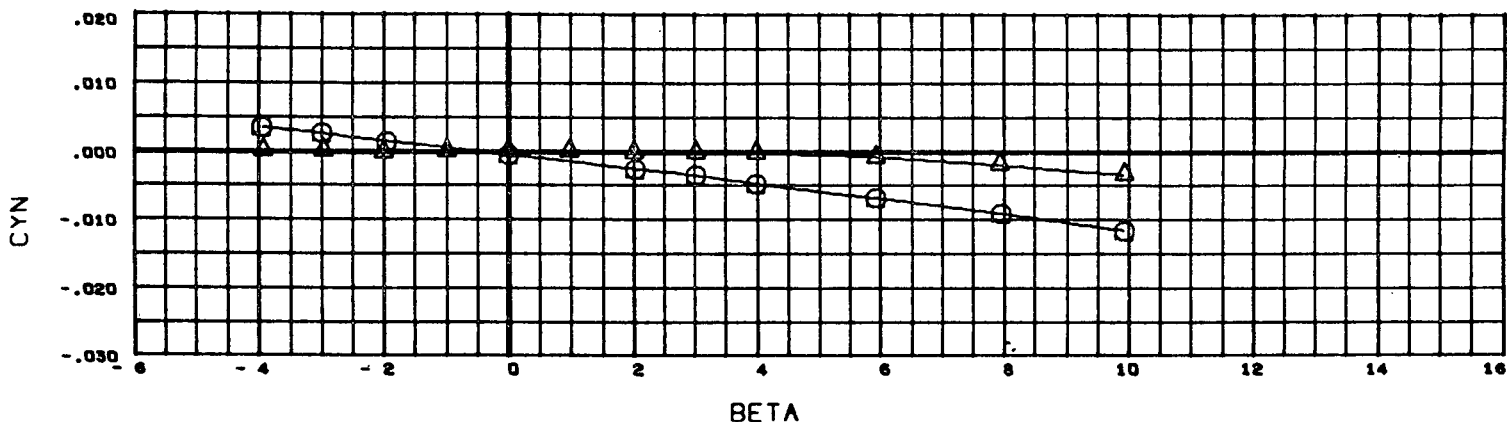
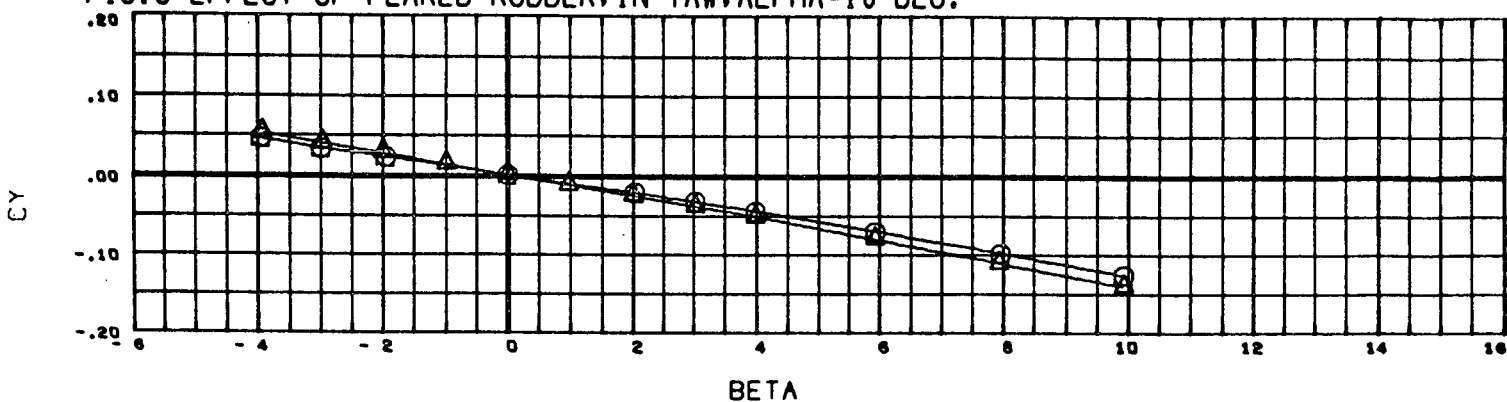
MACH 3.98

FIG.5 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=10 DEG.



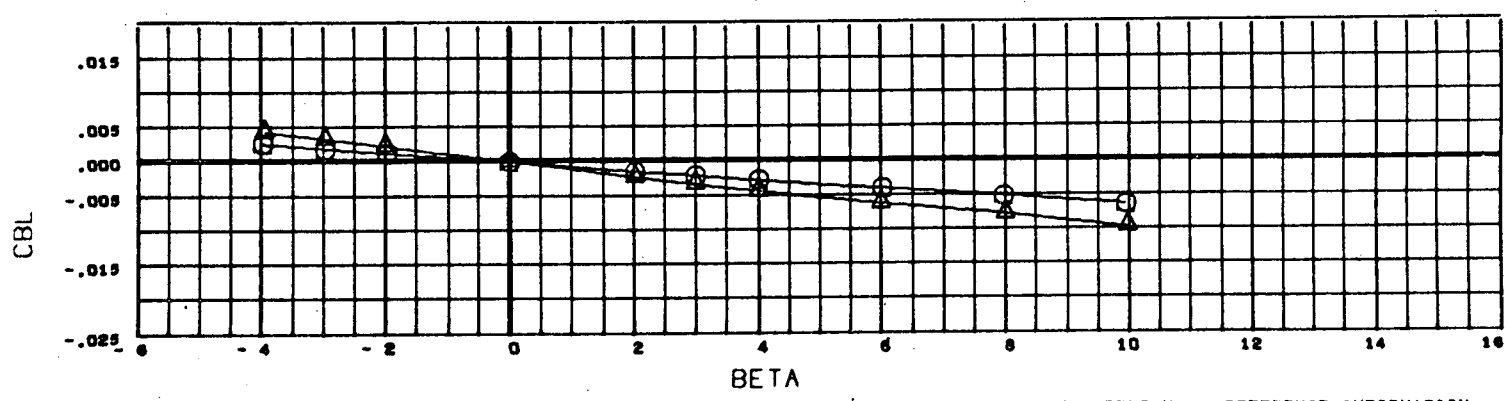
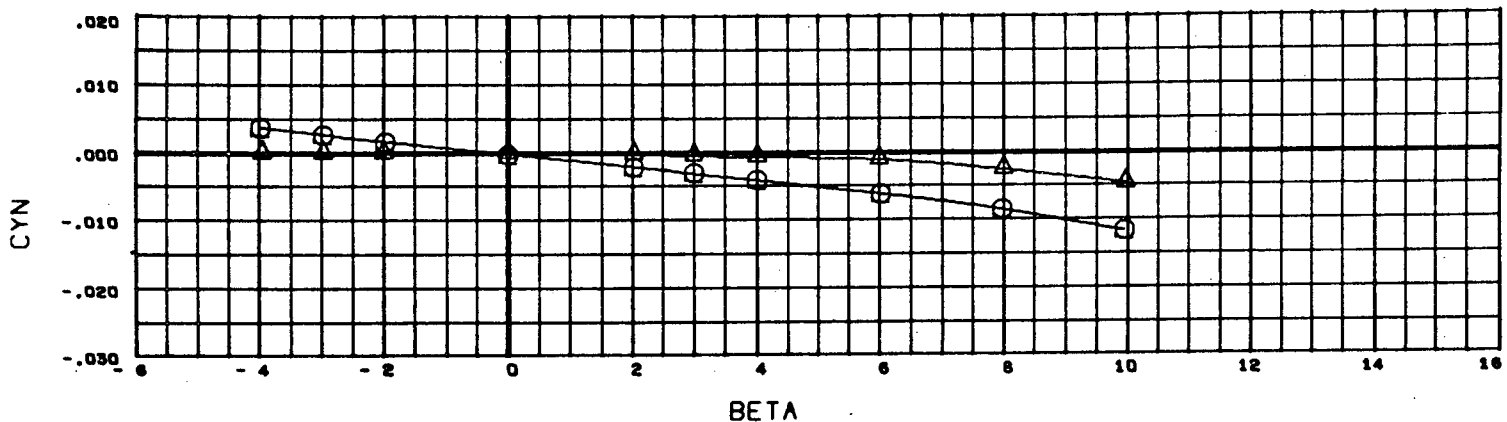
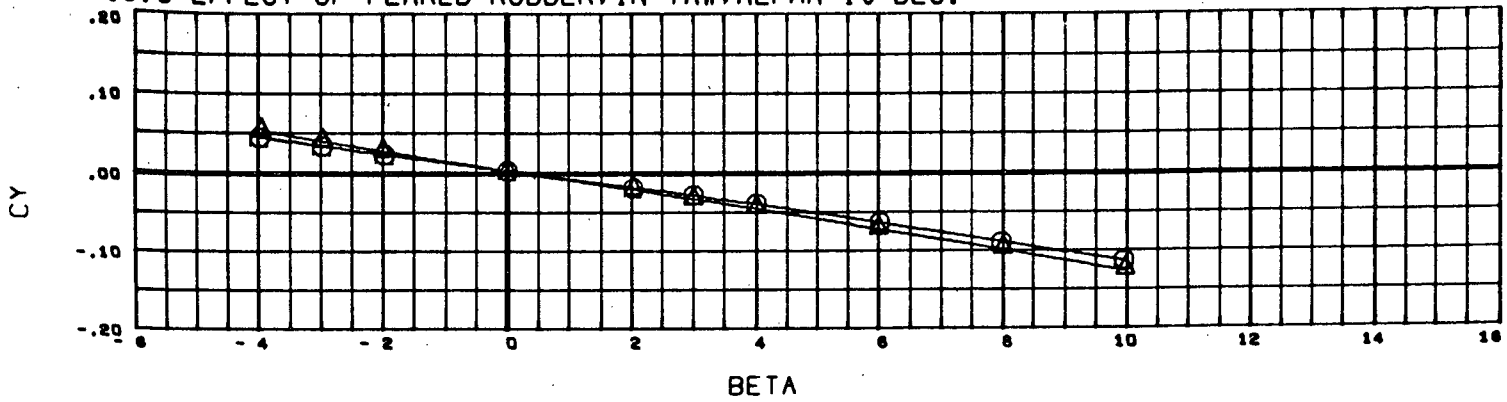
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB014)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB114)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB104)	JPL WT 20-881 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.5 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=10 DEG.



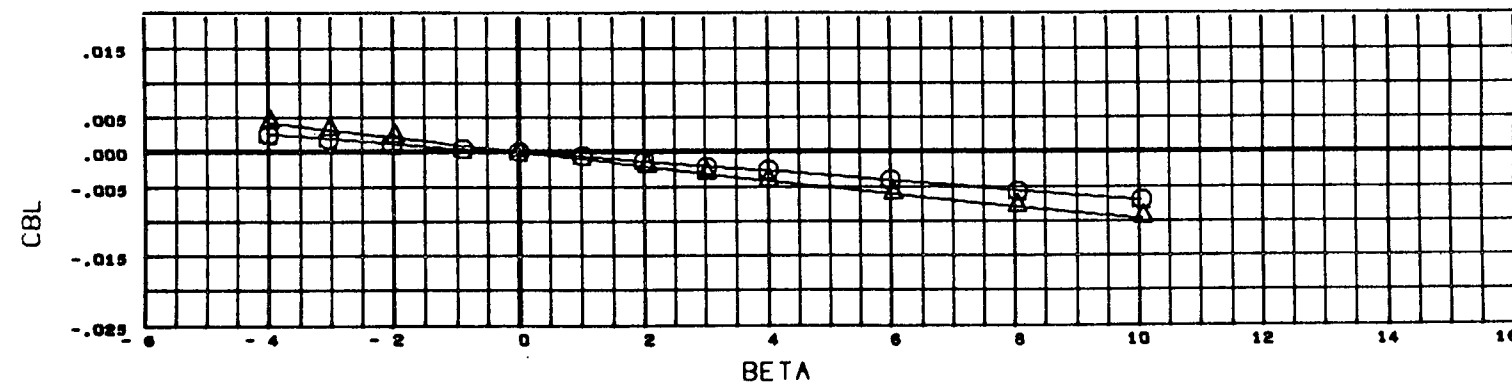
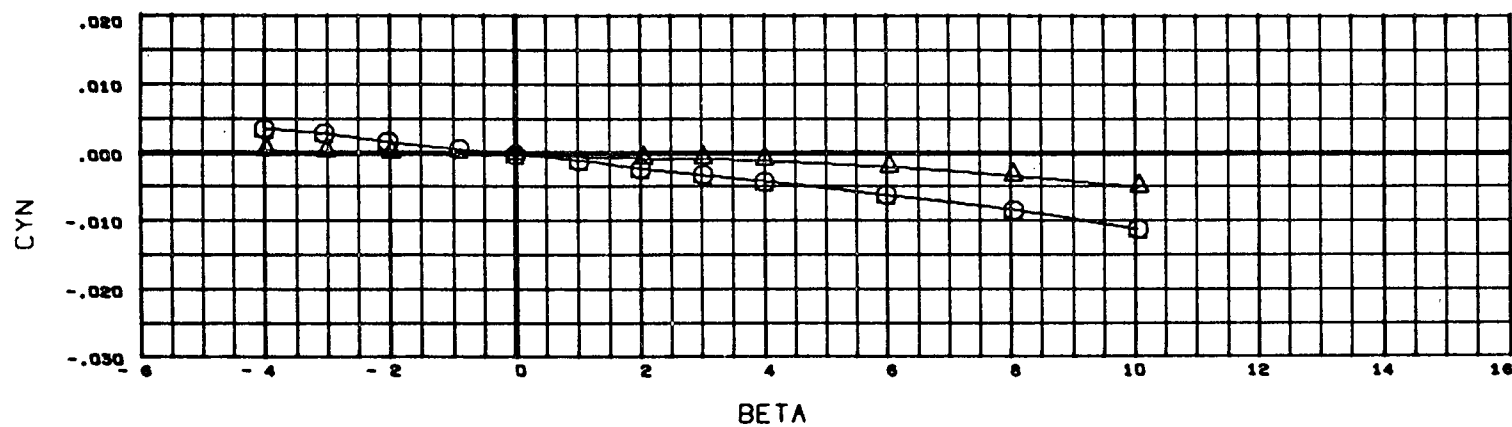
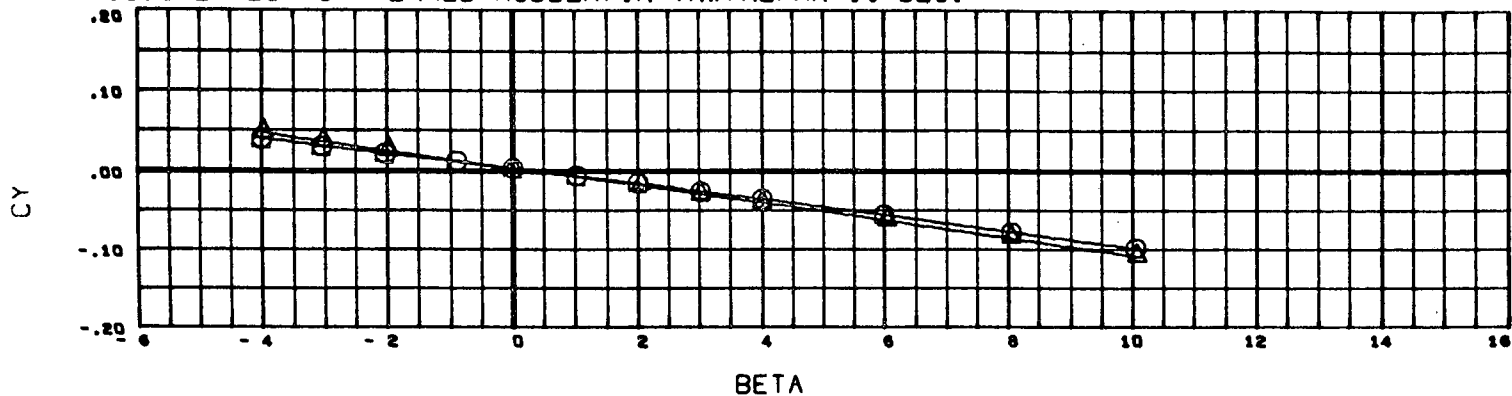
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB114)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB104)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.5 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=10 DEG.



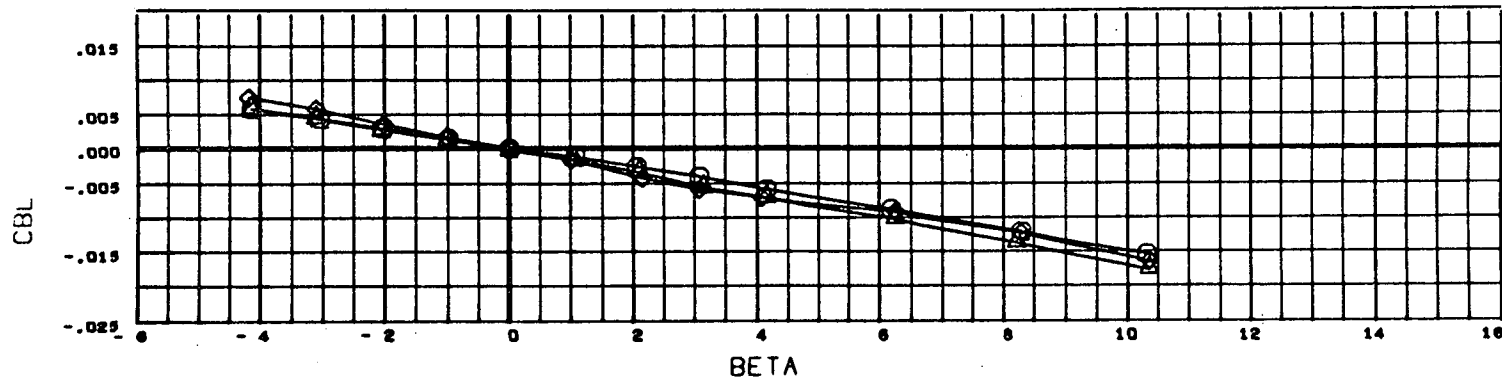
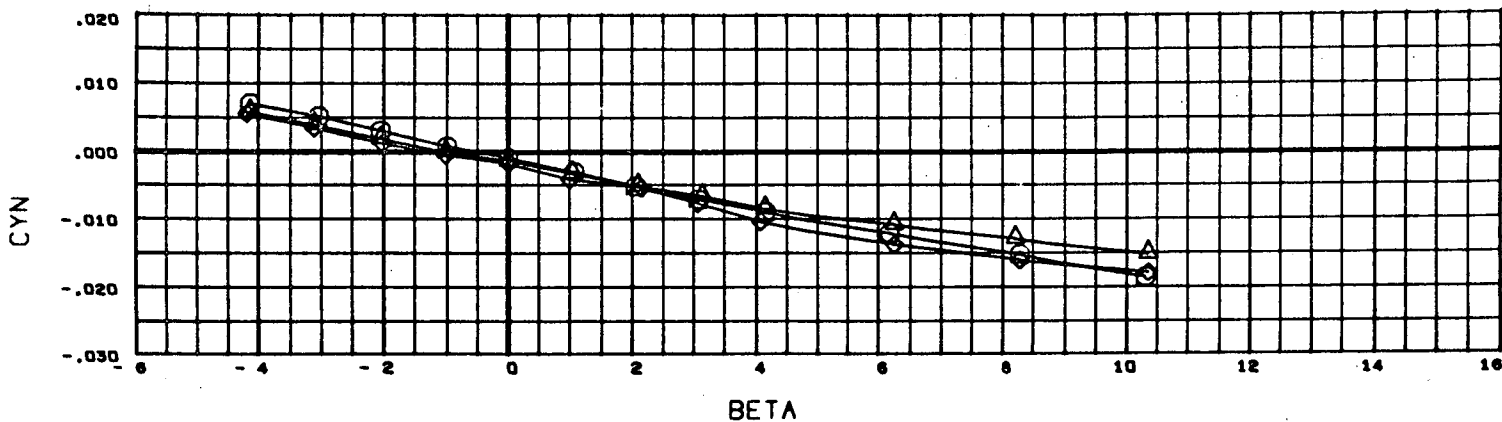
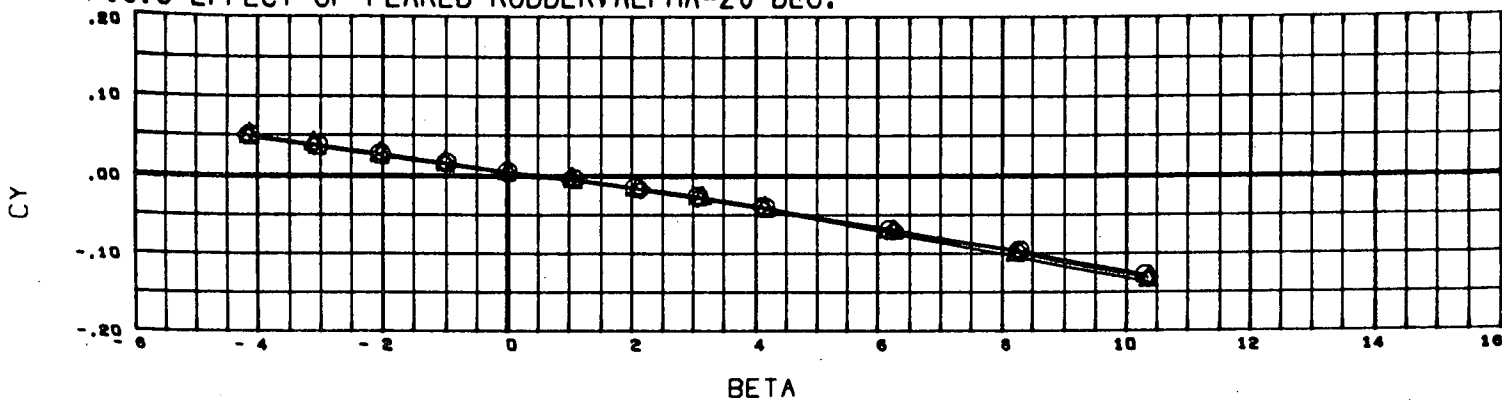
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB014)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB114)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.3720 IN.
(XGB104)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.5 EFFECT OF FLARED RUDDER, IN YAW, ALPHA=10 DEG.



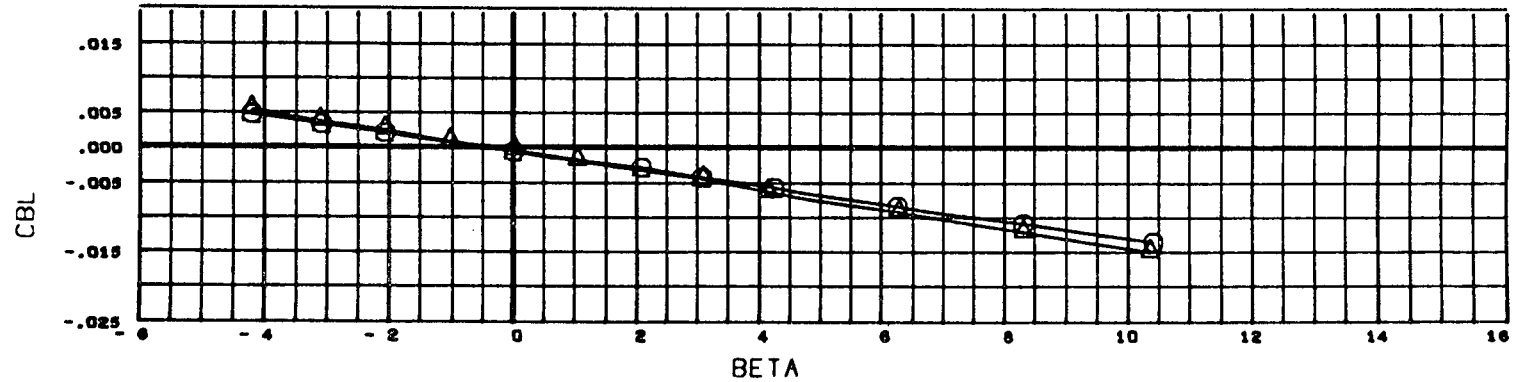
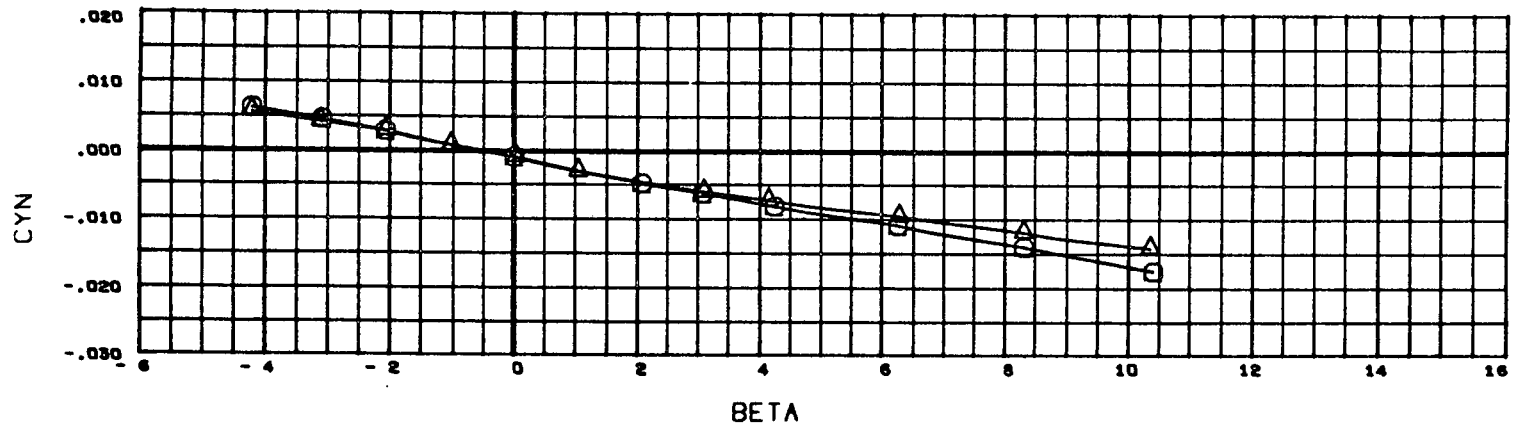
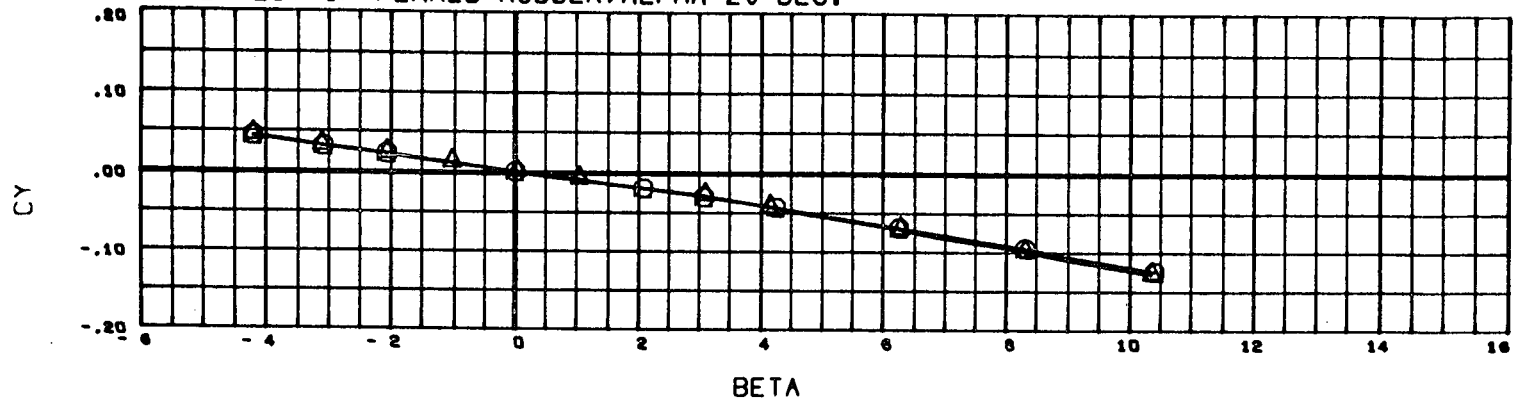
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB014)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB114)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB104)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG. 6 EFFECT OF FLARED RUDDER, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB105)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.6 EFFECT OF FLARED RUDDER, ALPHA=20 DEG.

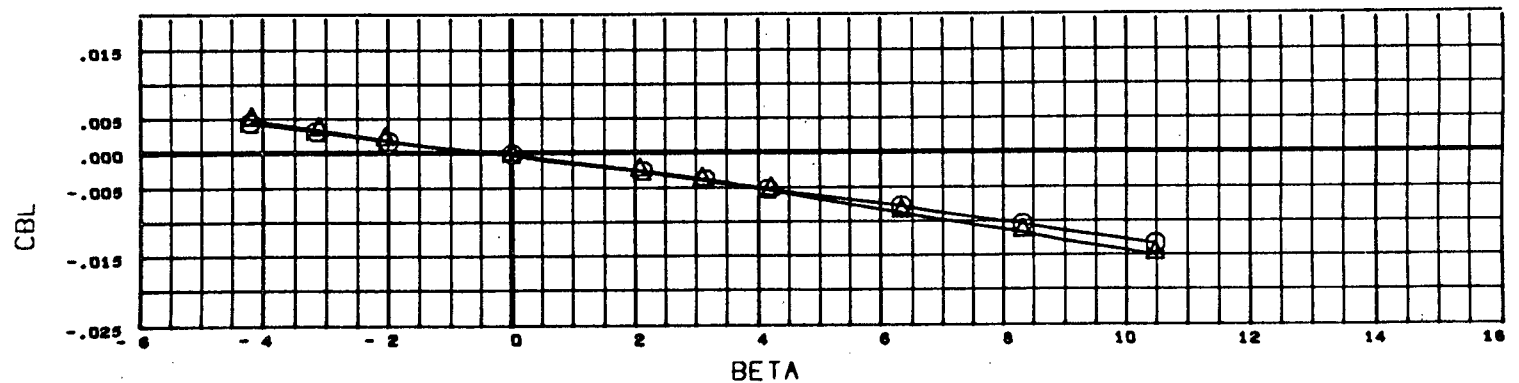
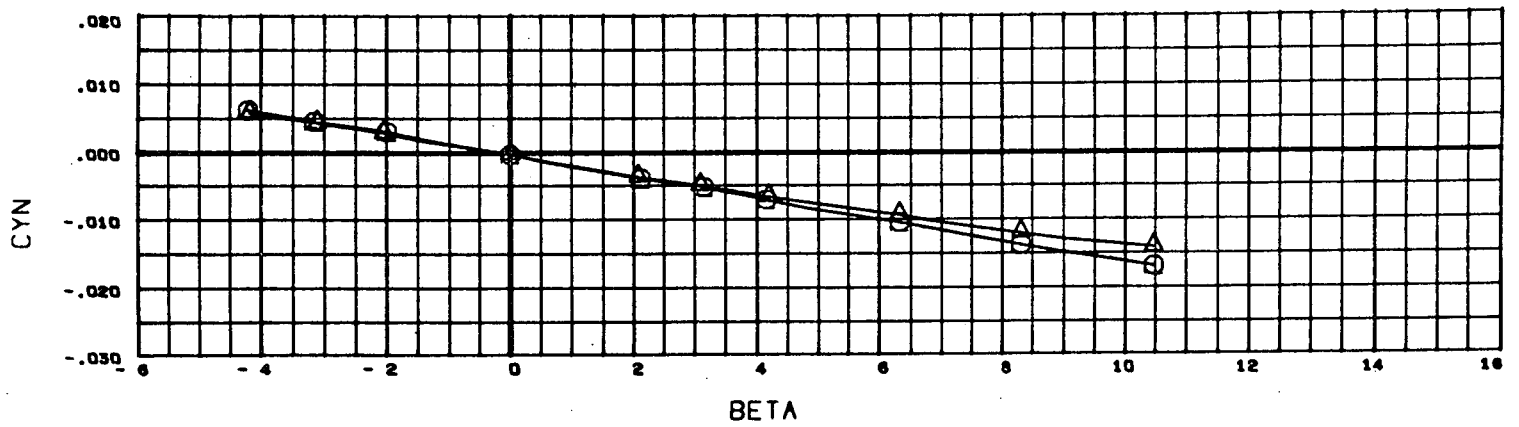
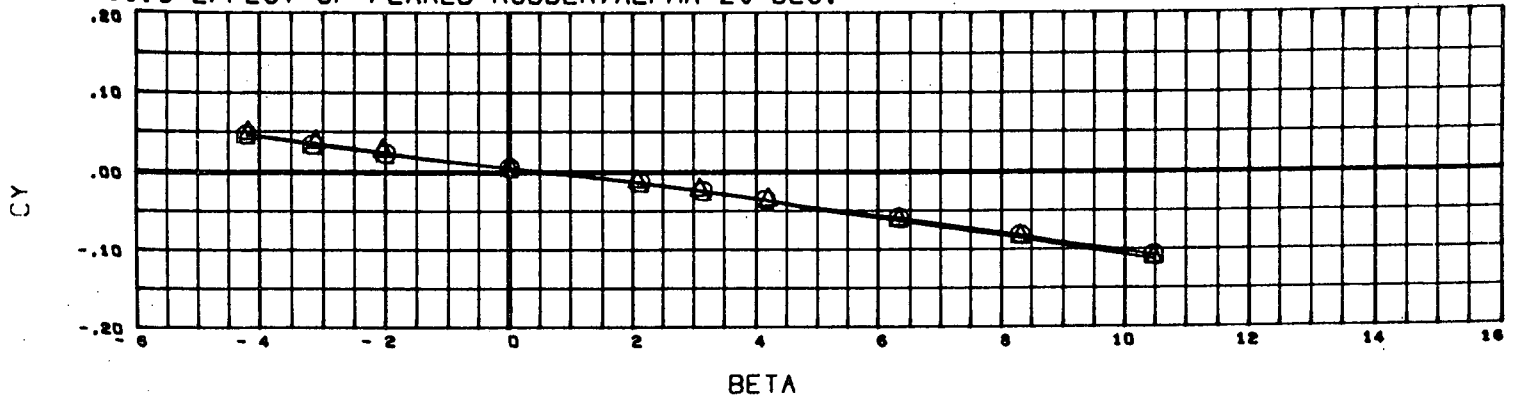


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB015)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5360 SQ IN.
(XGB115)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB105)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

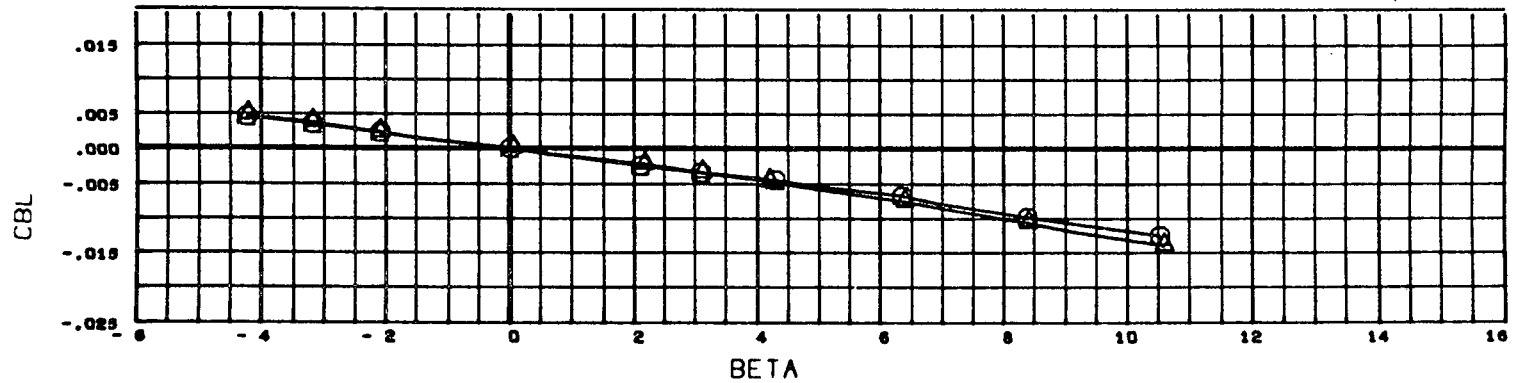
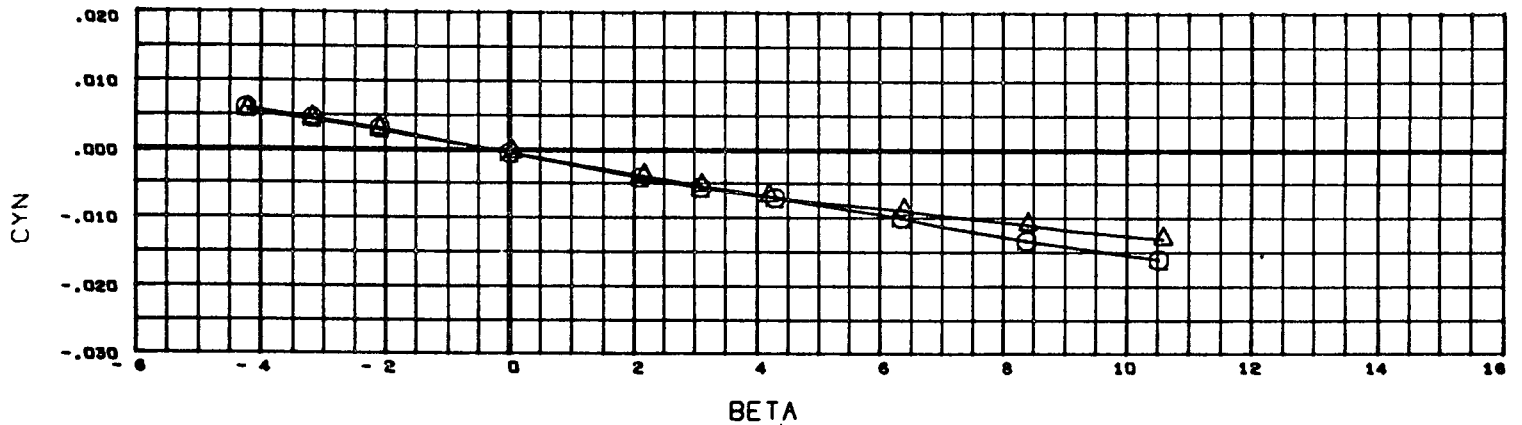
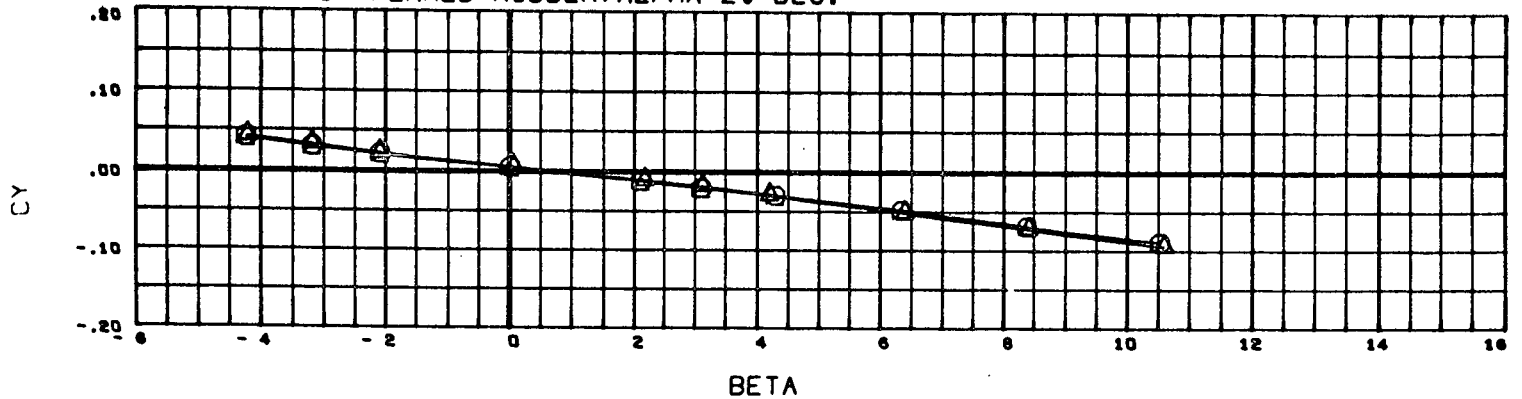
PAGE 46

FIG.6 EFFECT OF FLARED RUDDER, ALPHA=20 DEG.



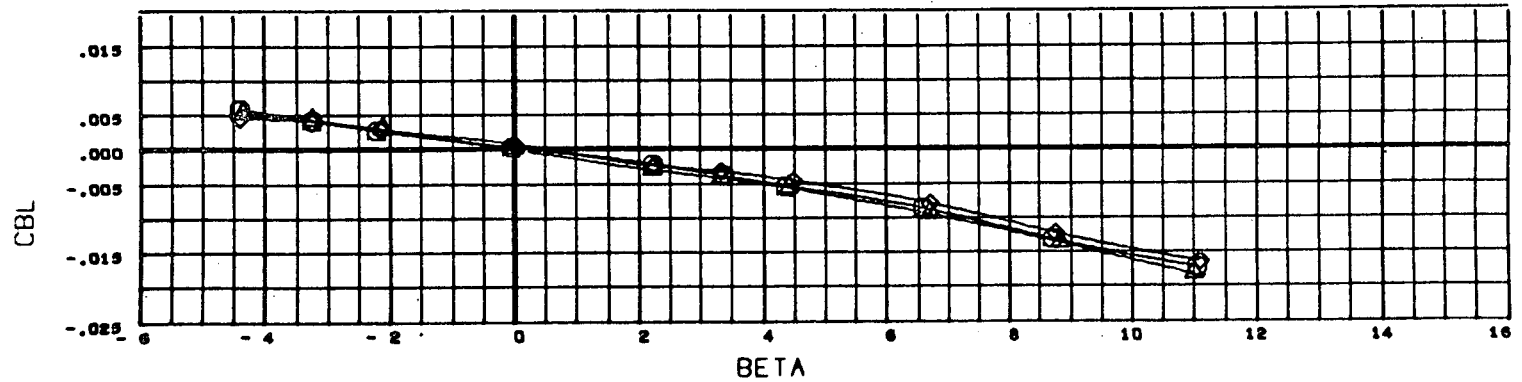
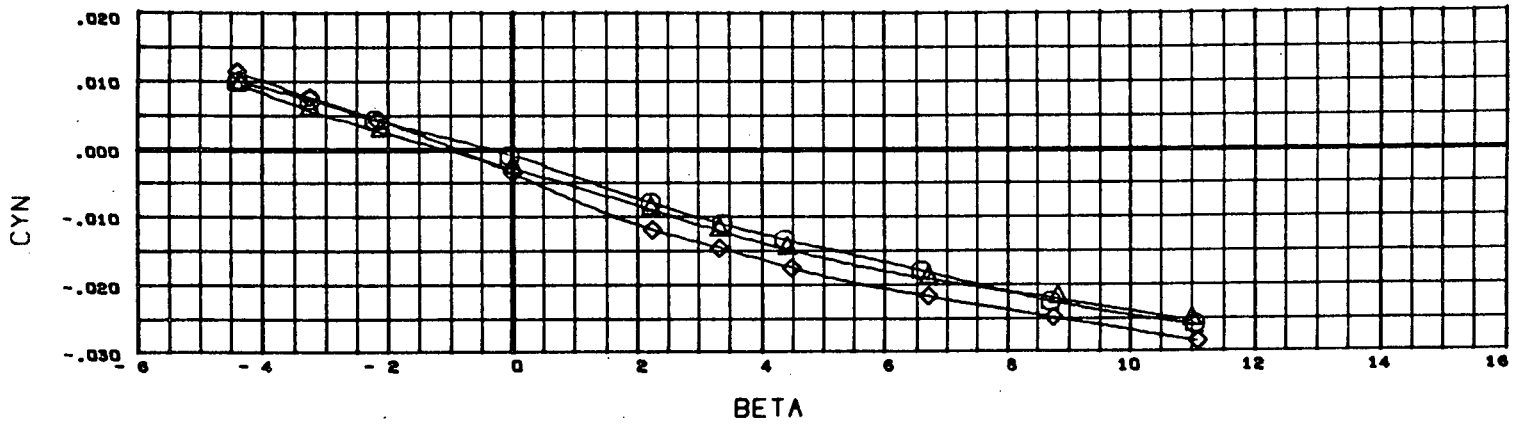
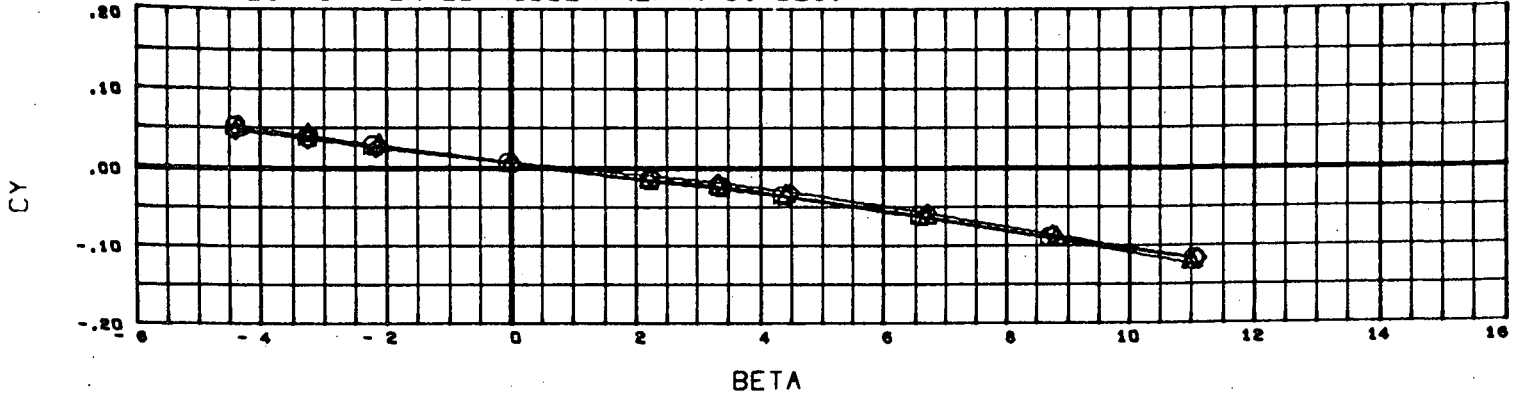
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB105)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.6 EFFECT OF FLARED RUDDER, ALPHA=20 DEG.



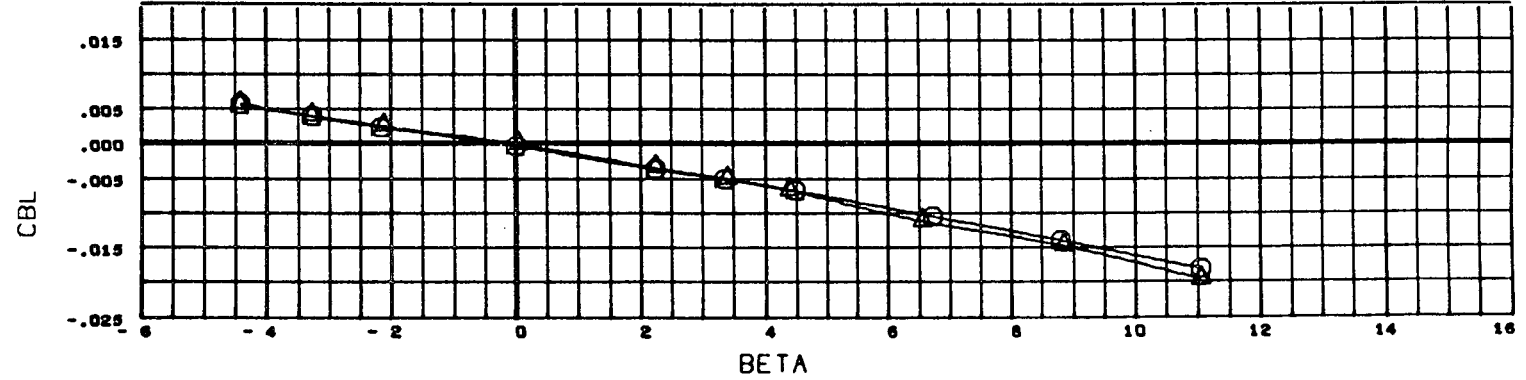
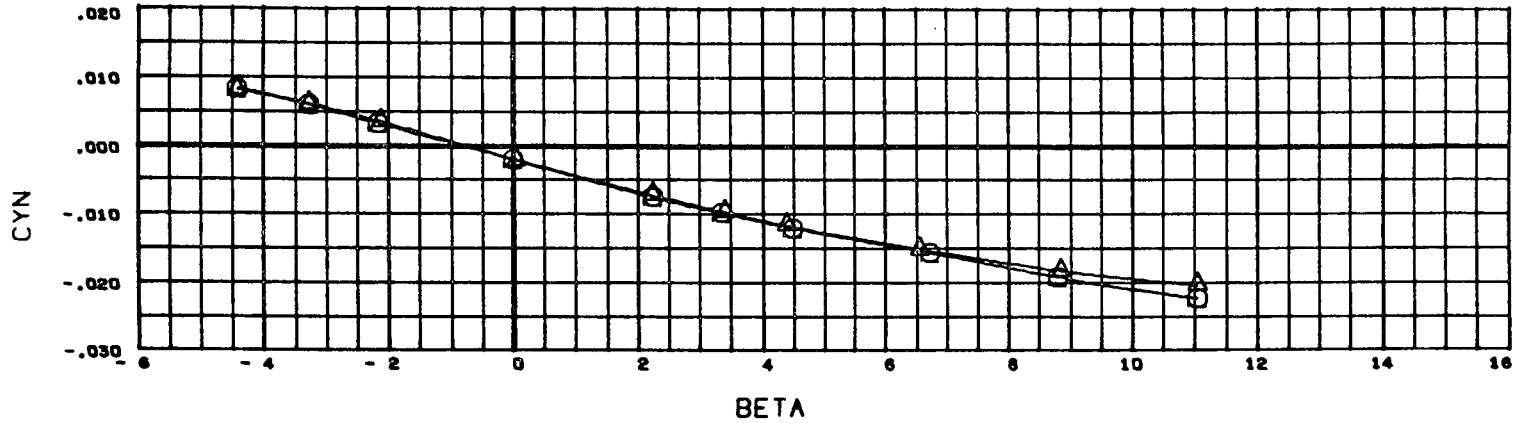
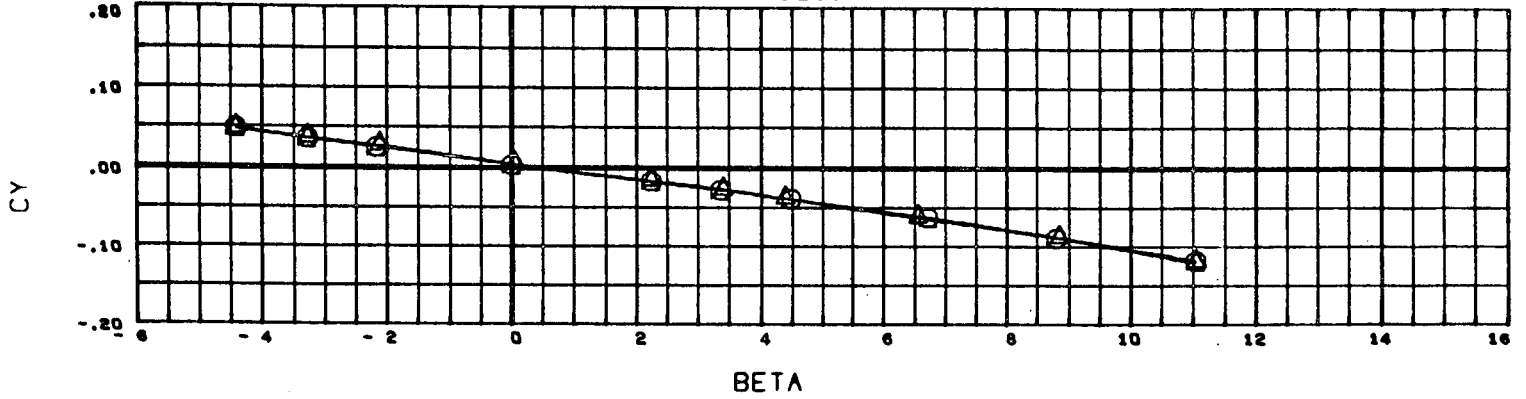
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.3560 SQ IN.
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB105)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG. 7 EFFECT OF FLARED RUDDER, ALPHA=30 DEG.



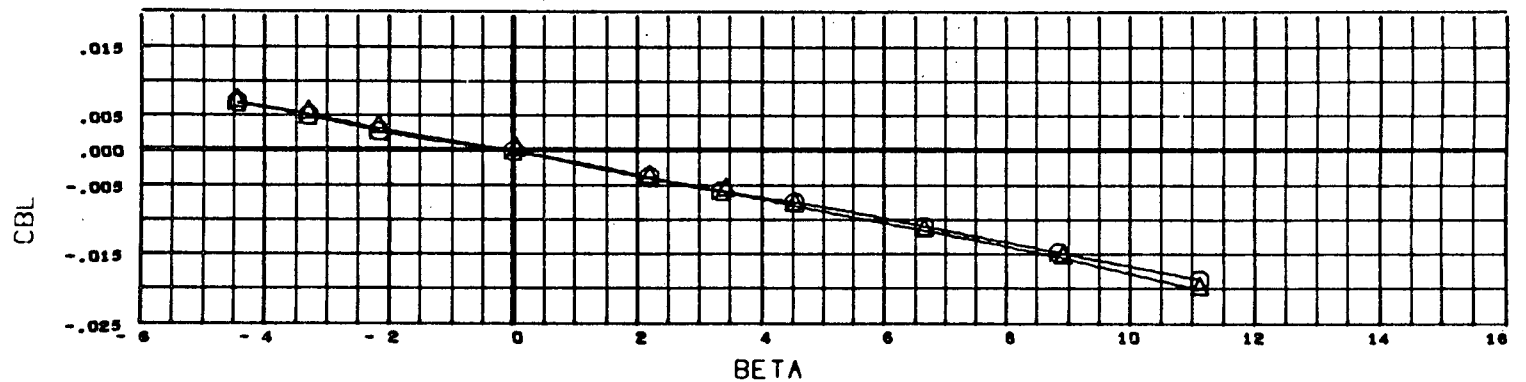
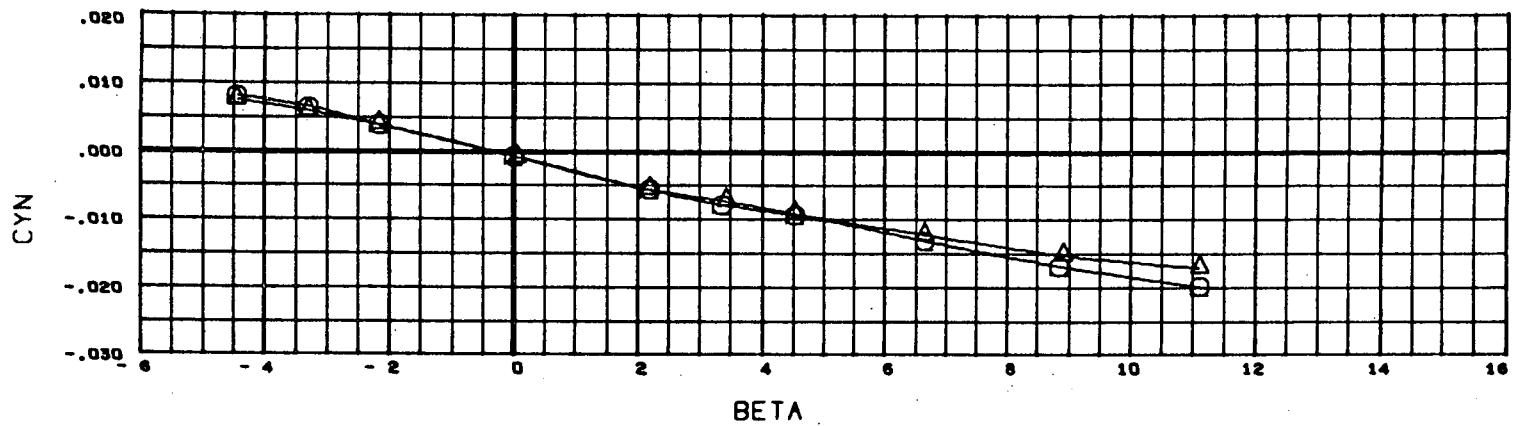
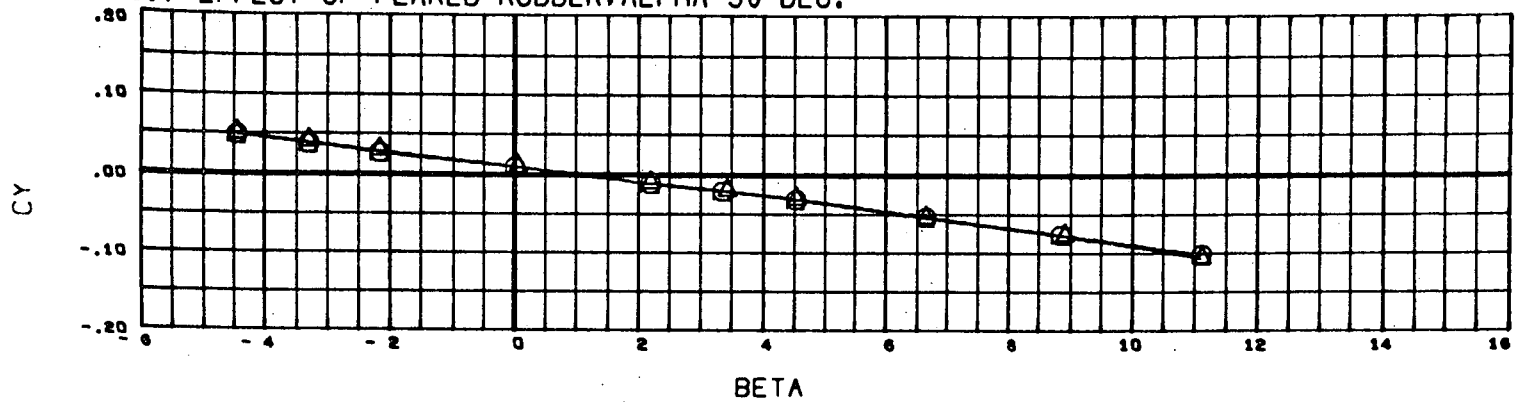
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDPLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB116)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB106)	JPL WT 20-681 MSC 040A B1W1V1(45,-45)M1P1D1C1	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.7 EFFECT OF FLARED RUDDER, ALPHA=30 DEG.



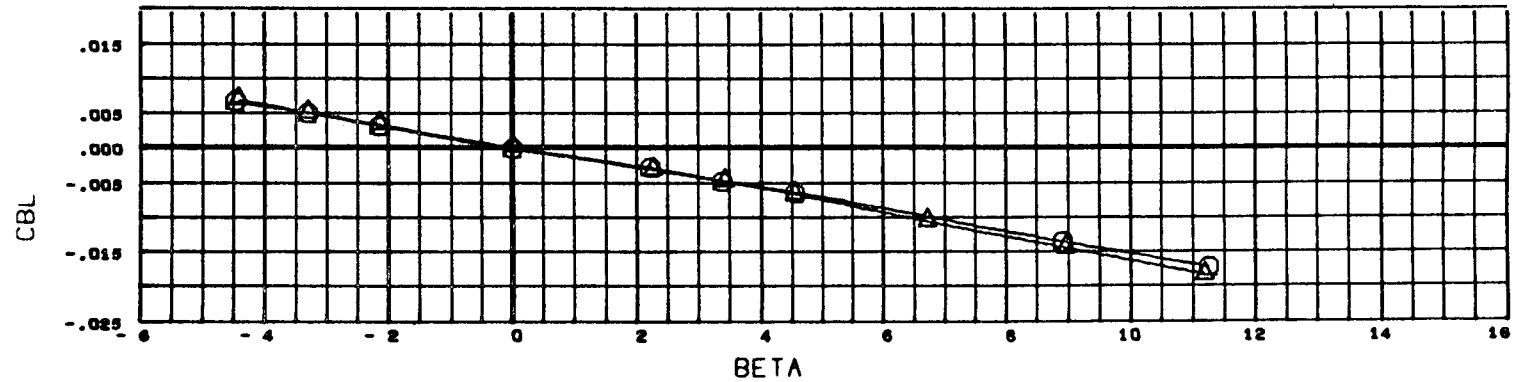
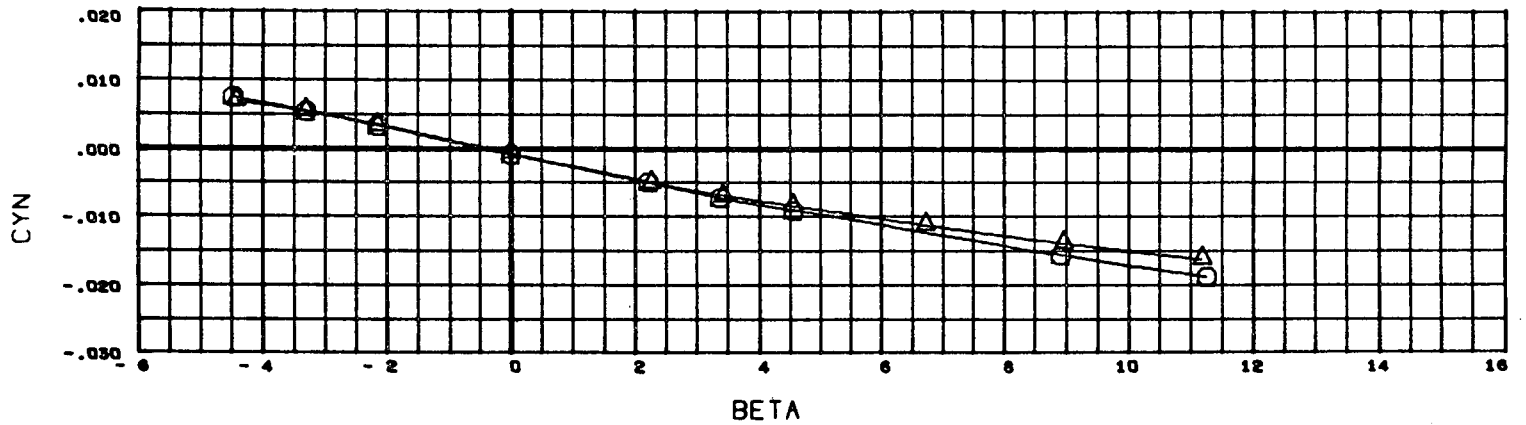
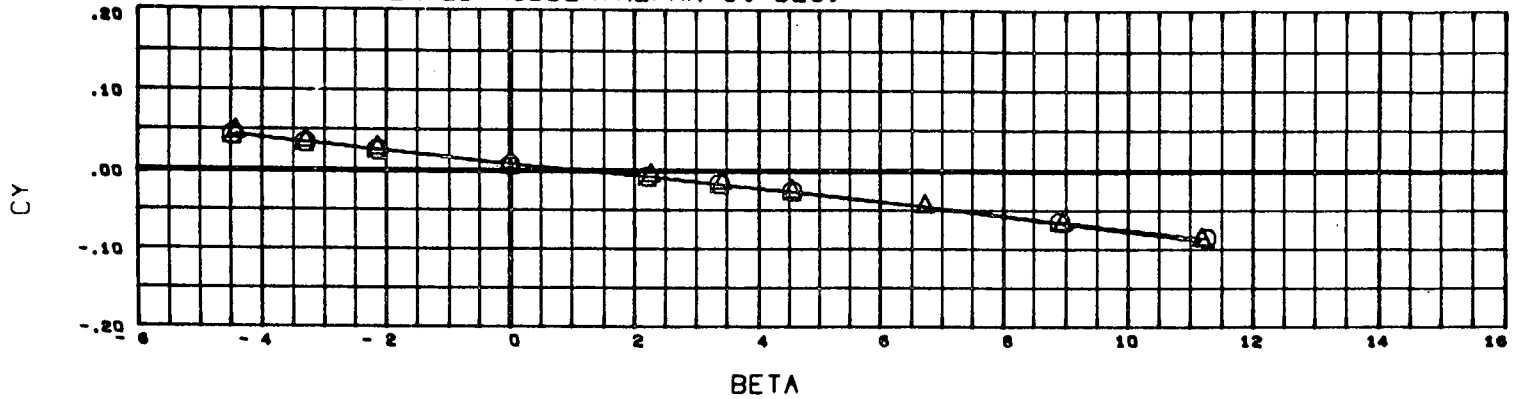
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB016)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB116)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB106)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.7 EFFECT OF FLARED RUDDER, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB016)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB116)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB106)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.7 EFFECT OF FLARED RUDDER, ALPHA=30 DEG.

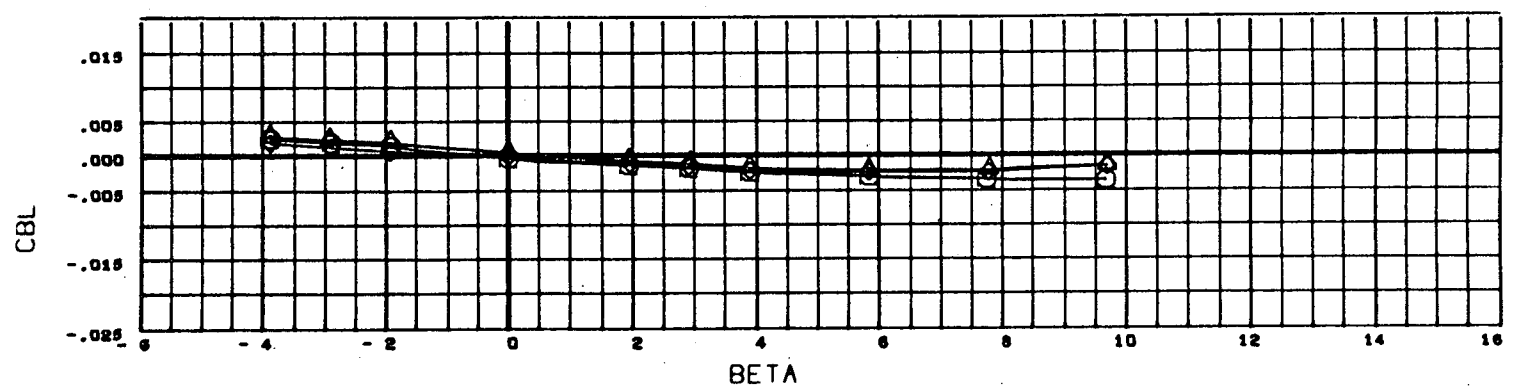
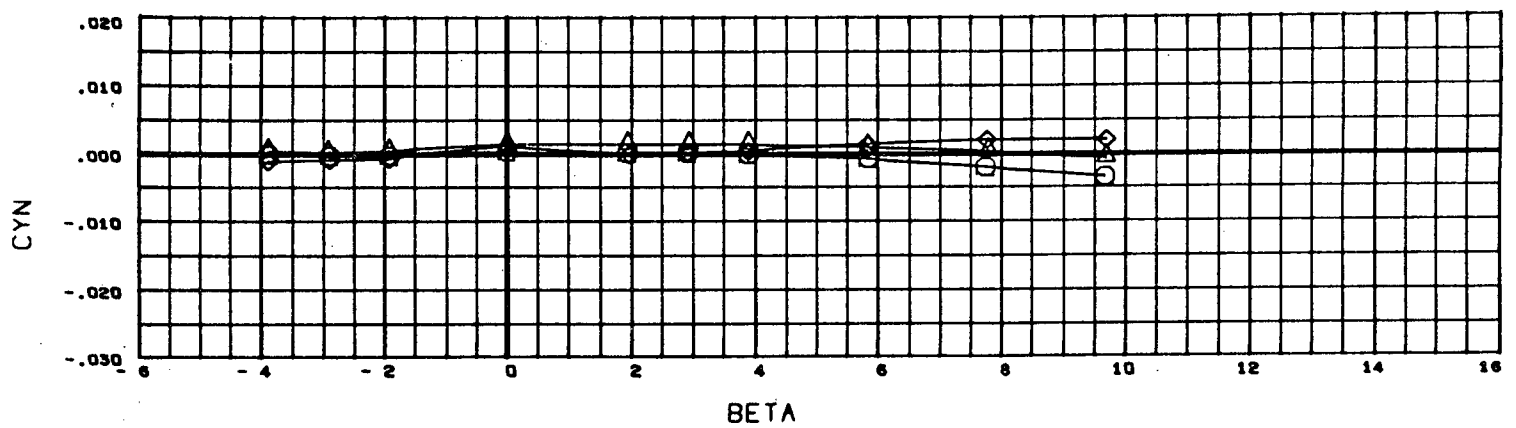
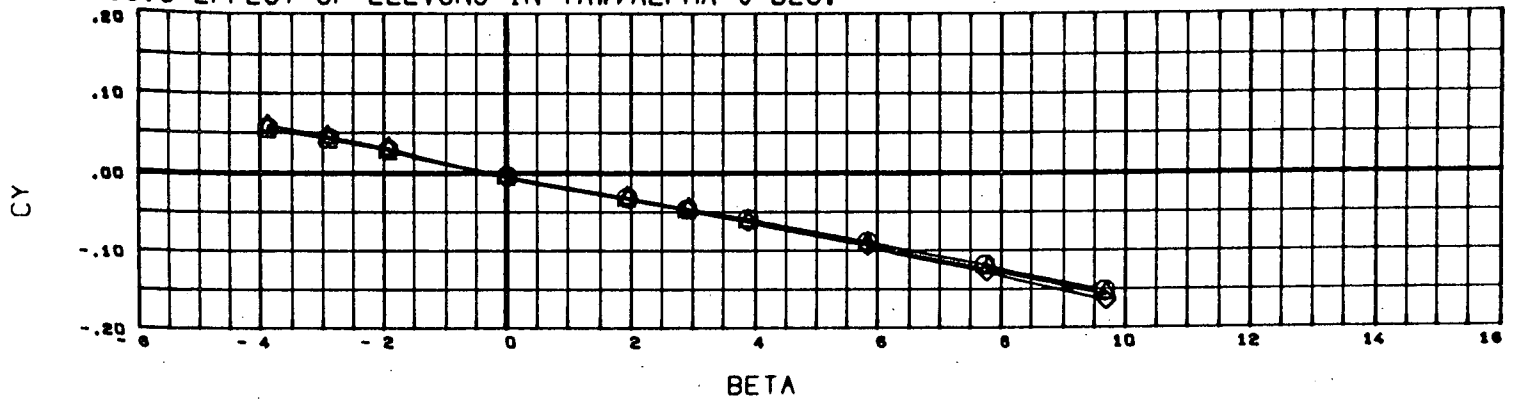


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB016)	JPL WT 20-881 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB116)	JPL WT 20-881 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB106)	DATA NOT AVAILABLE FOR ALL CONDITIONS	45.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.98

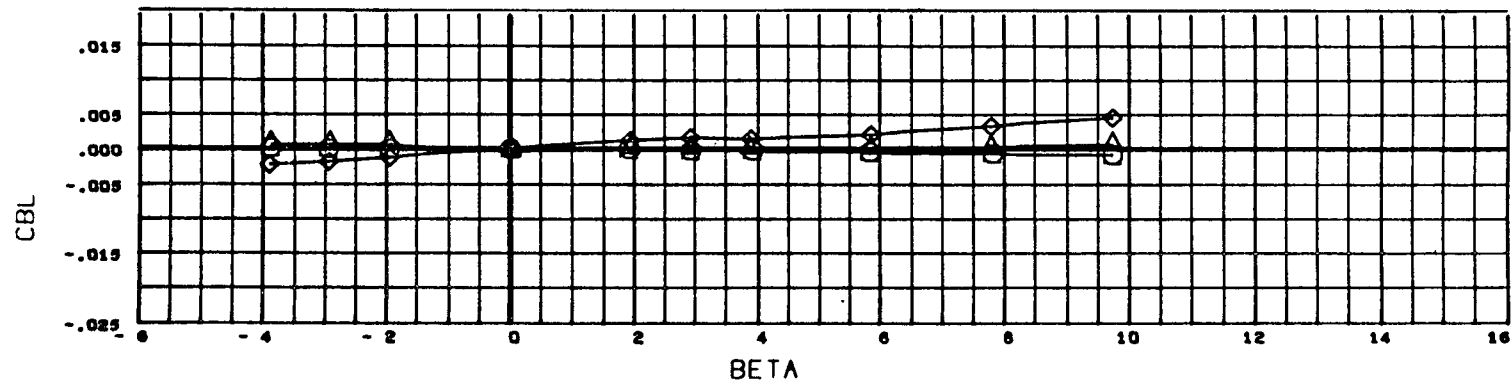
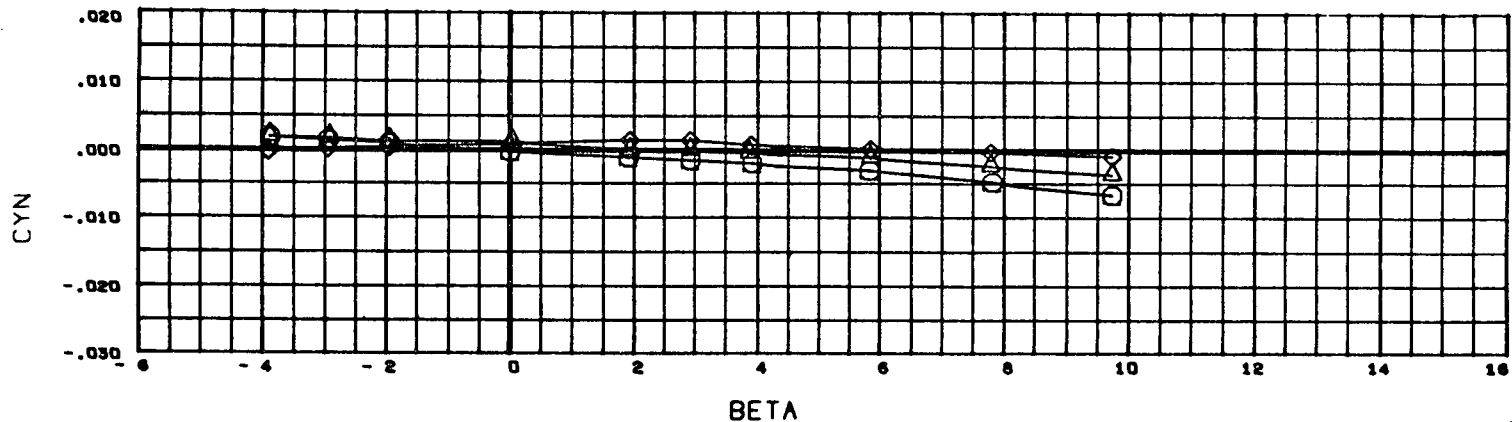
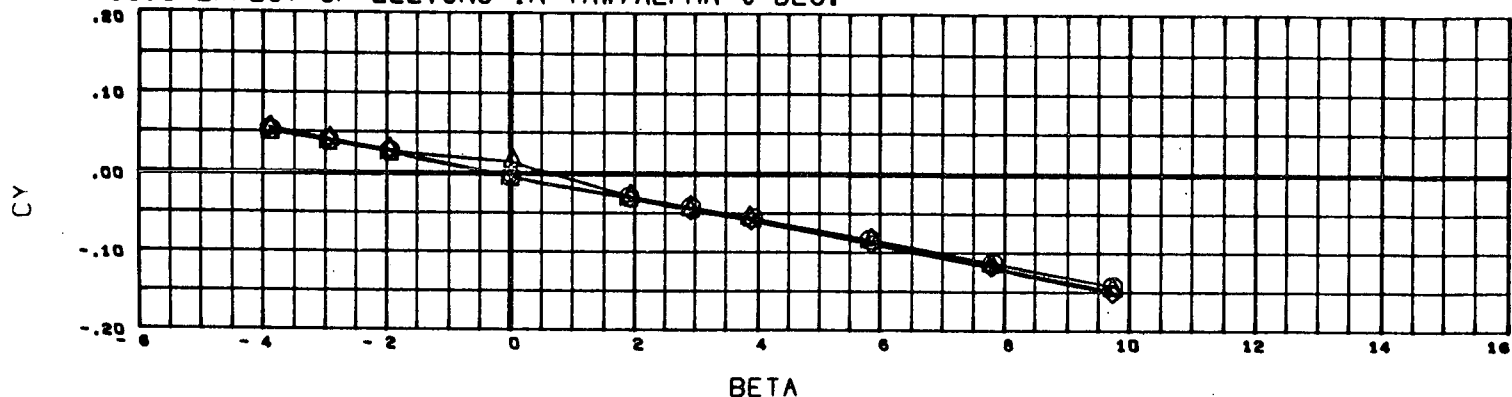
PAGE 52

FIG.8 EFFECT OF ELEVONS IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB043)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RGB023)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

FIG.8 EFFECT OF ELEVONS IN YAW, ALPHA=0 DEG.

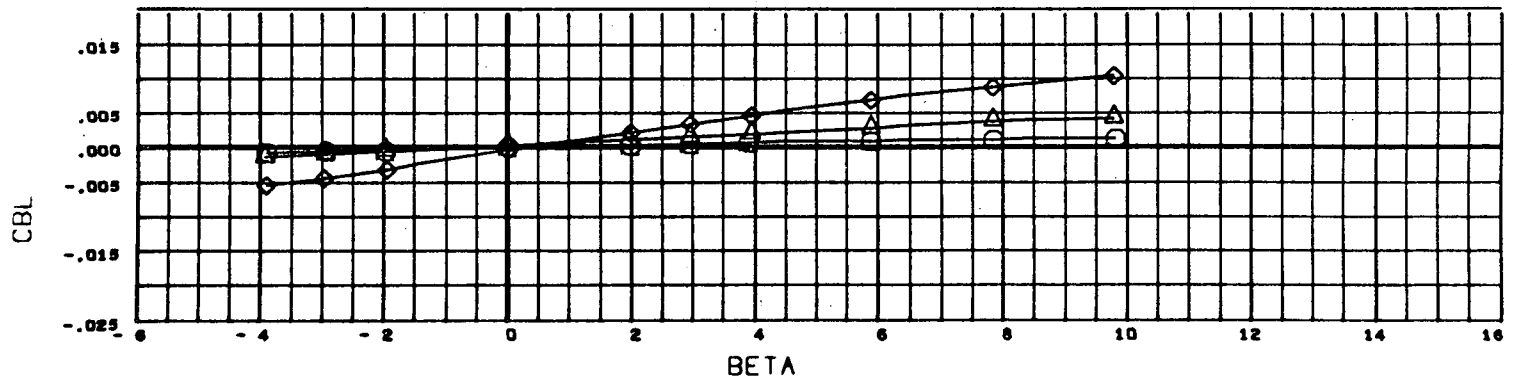
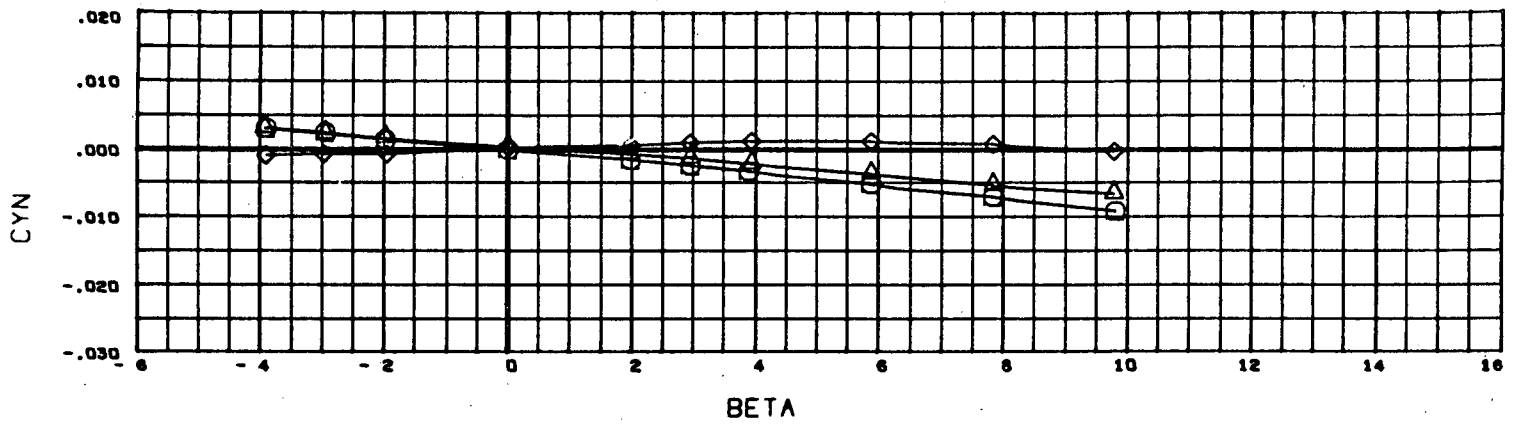
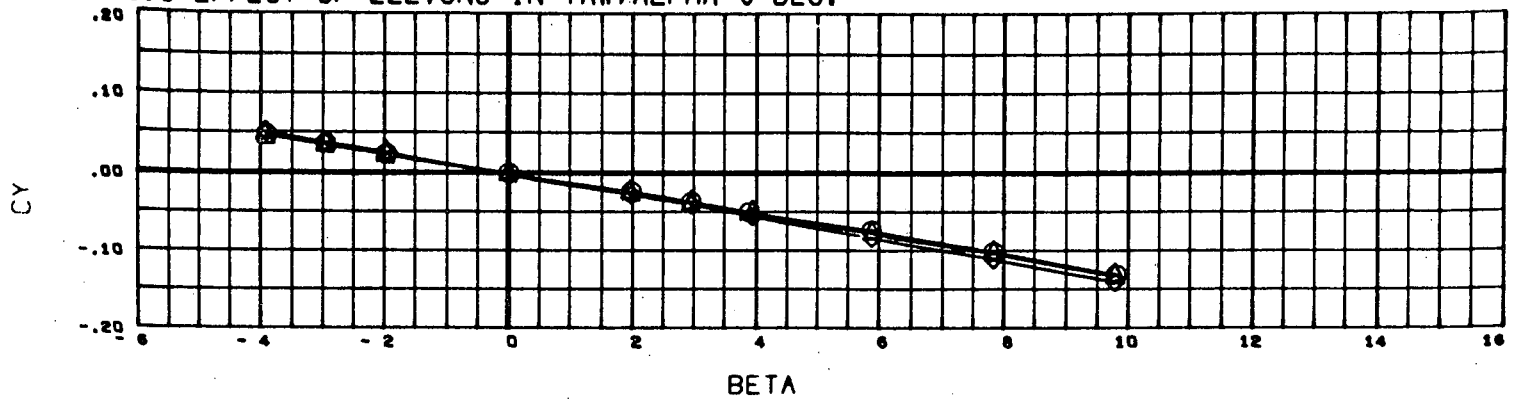


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB043)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RGB023)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

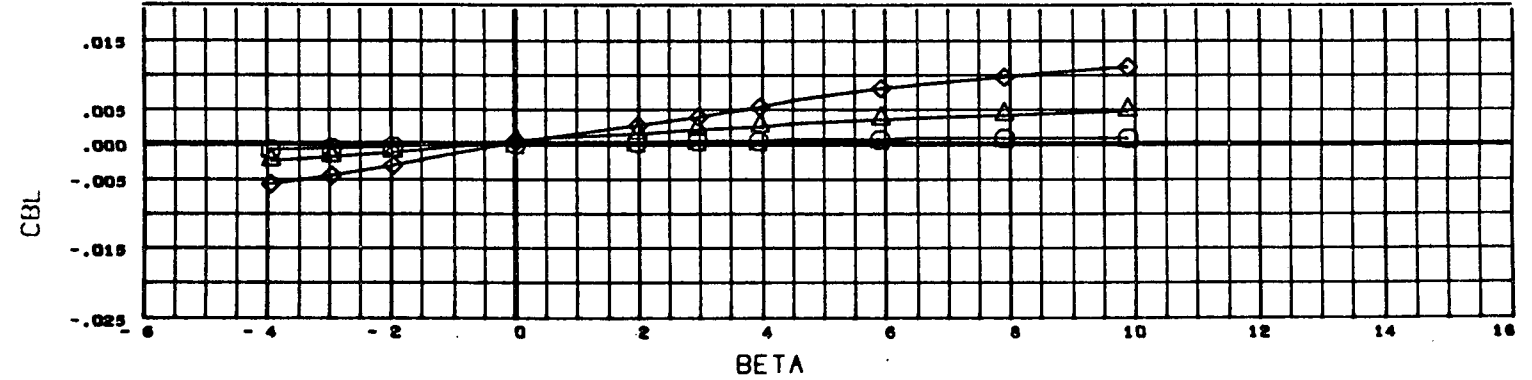
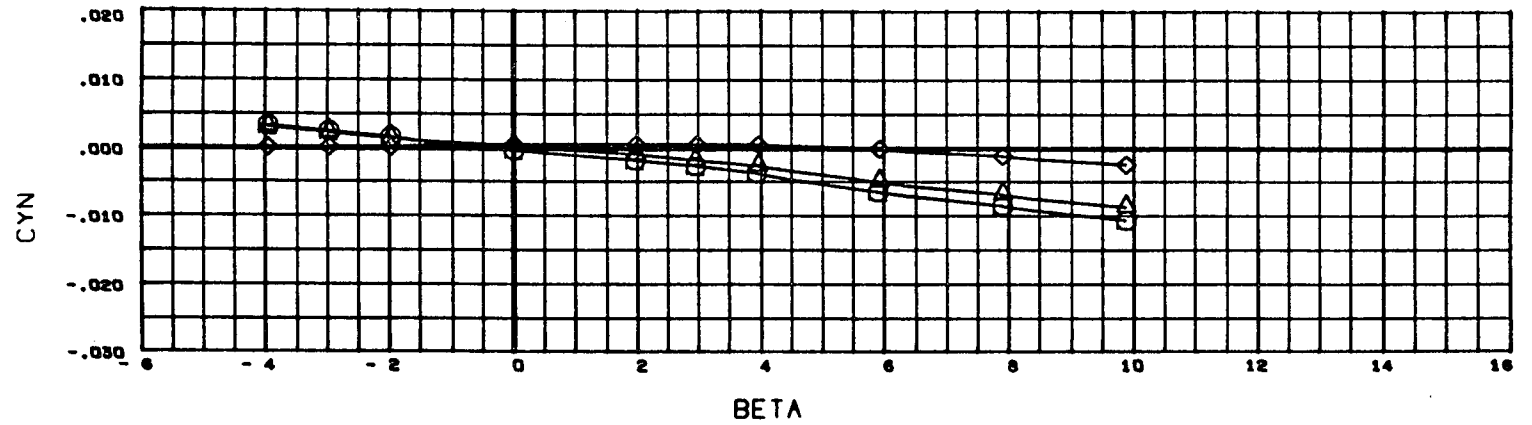
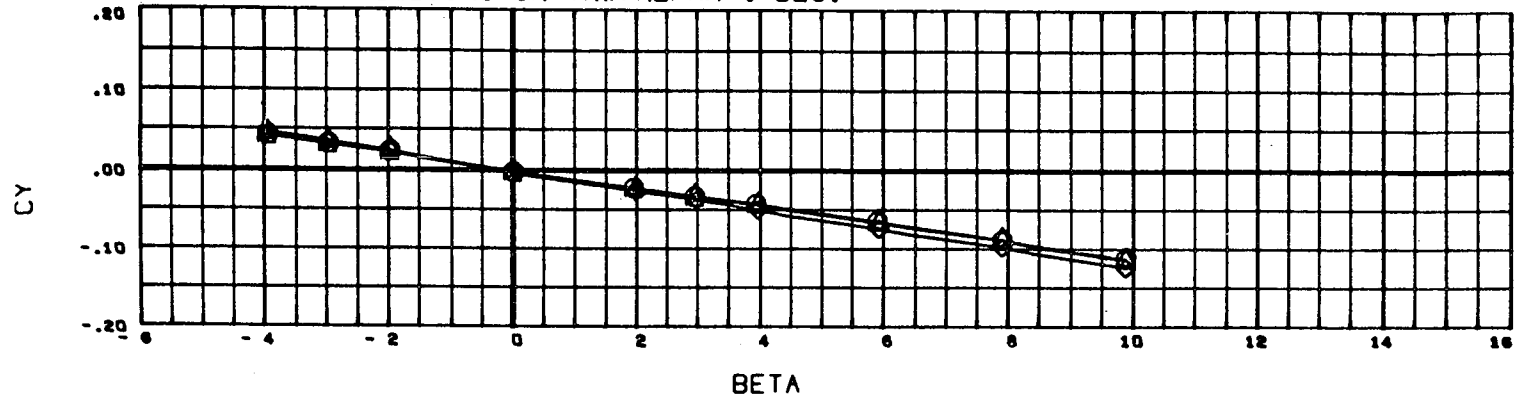
PAGE 54

FIG.8 EFFECT OF ELEVONS IN YAW, ALPHA=0 DEG.



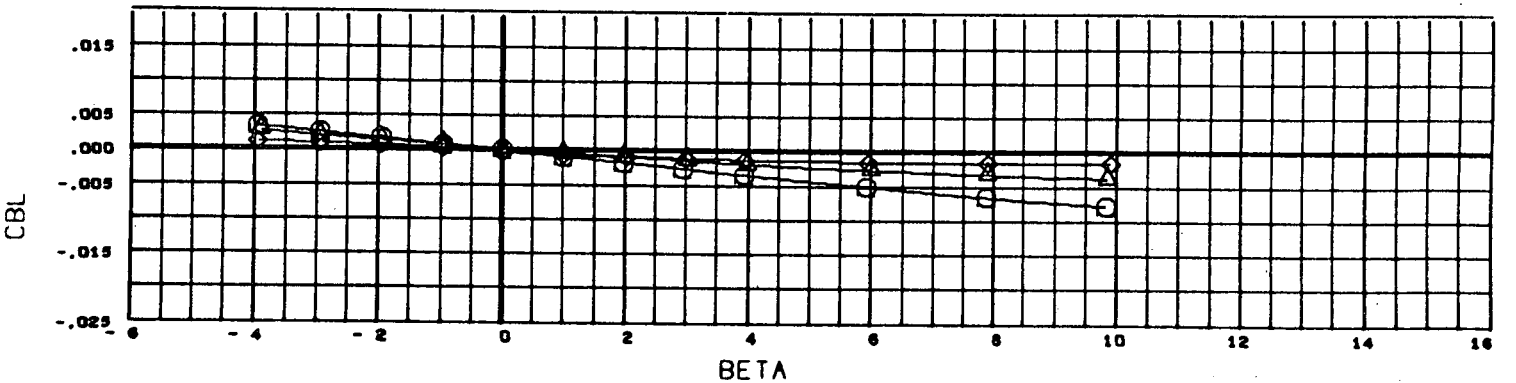
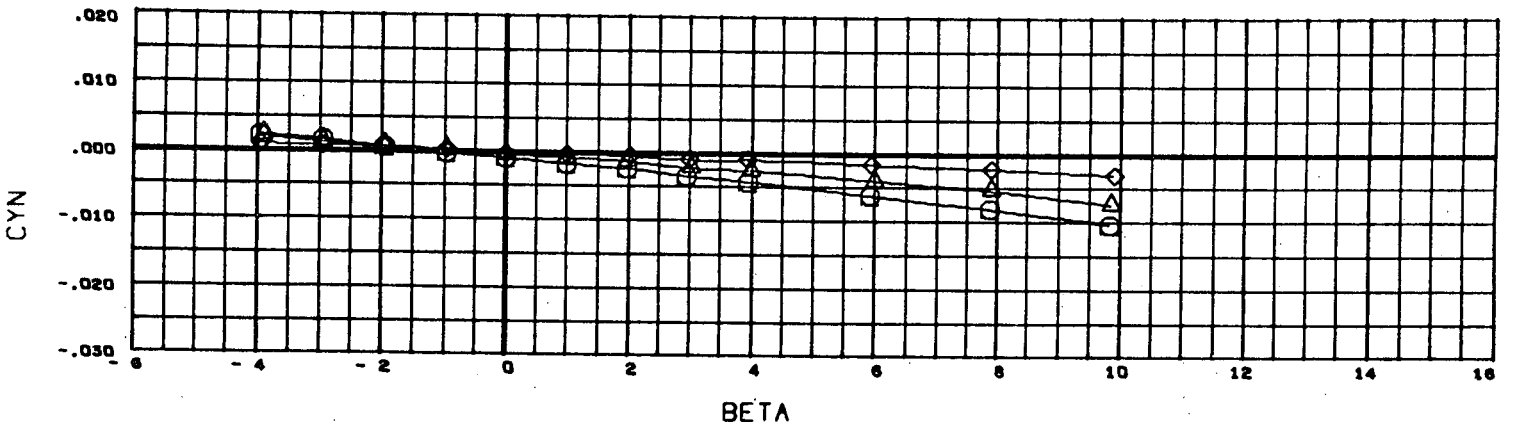
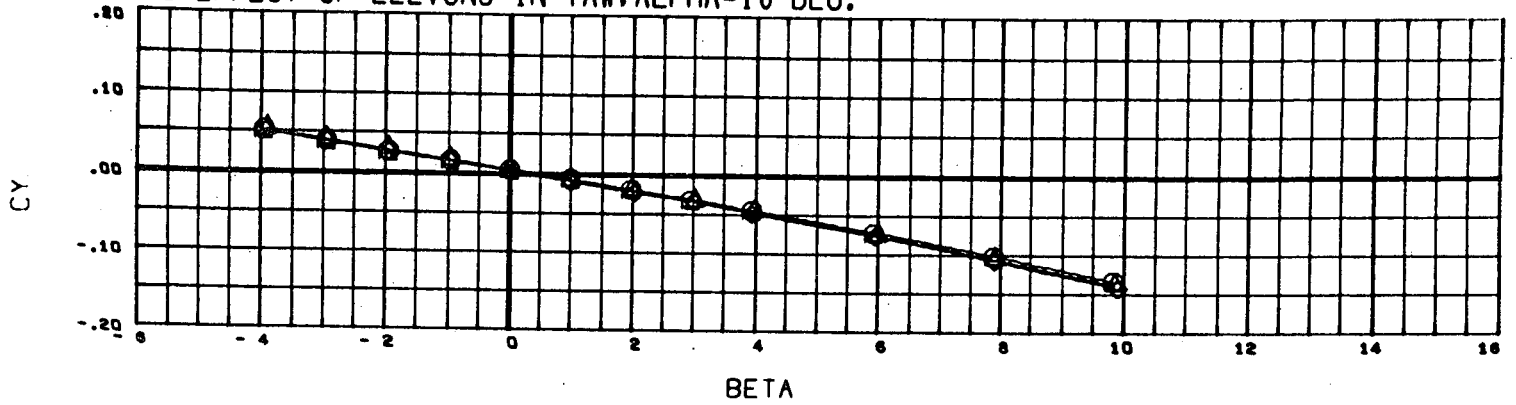
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB043)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RGB023)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

FIG.8 EFFECT OF ELEVONS IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(X68013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 30 IN.
(R68043)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(R68023)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0073

FIG.9 EFFECT OF ELEVONS IN YAW, ALPHA=10 DEG.



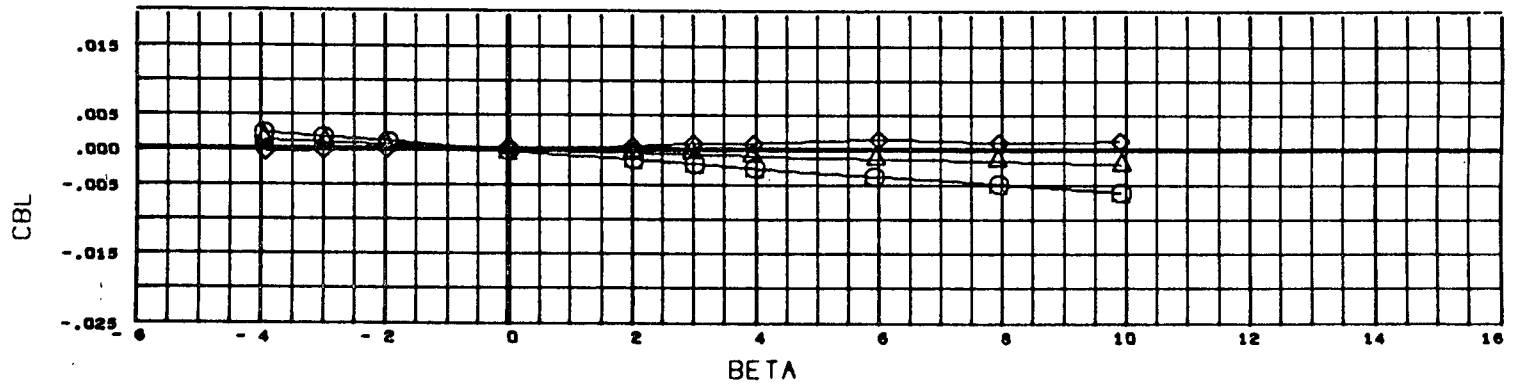
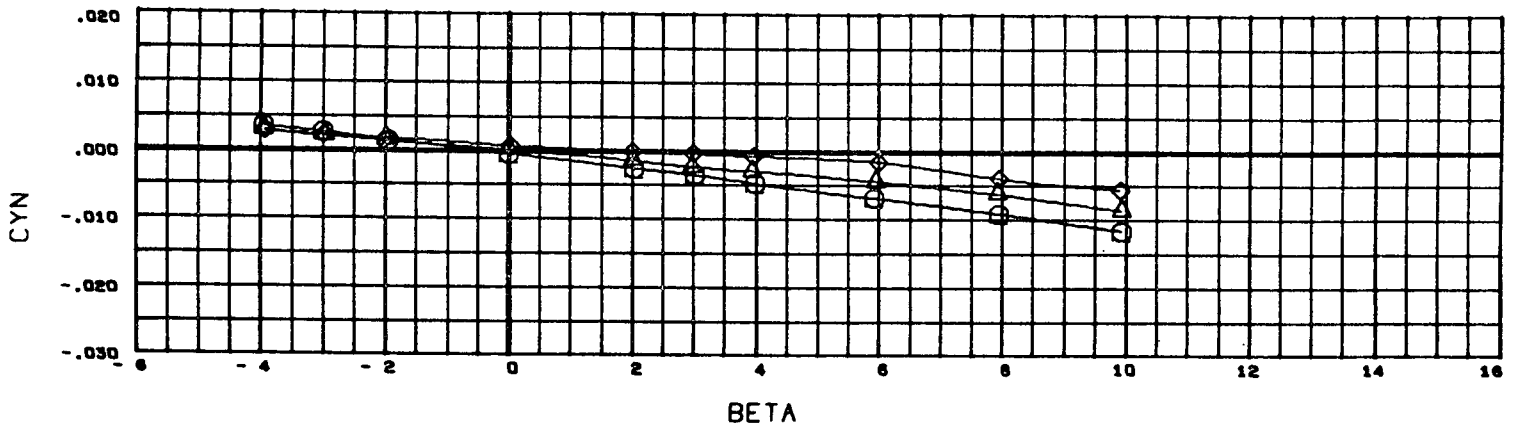
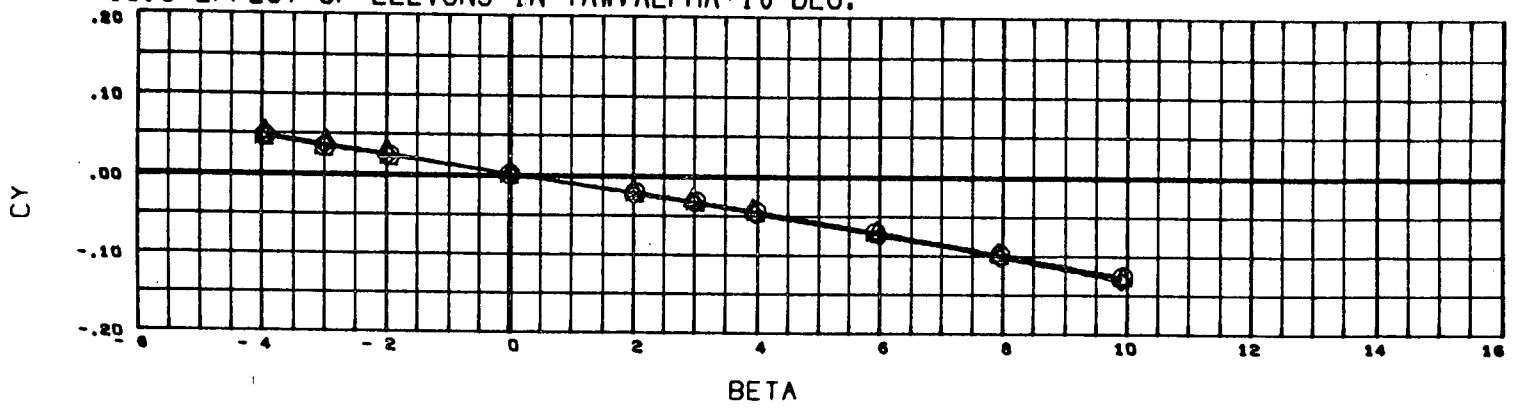
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB044)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB024)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
-20.000	-20.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	sq IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

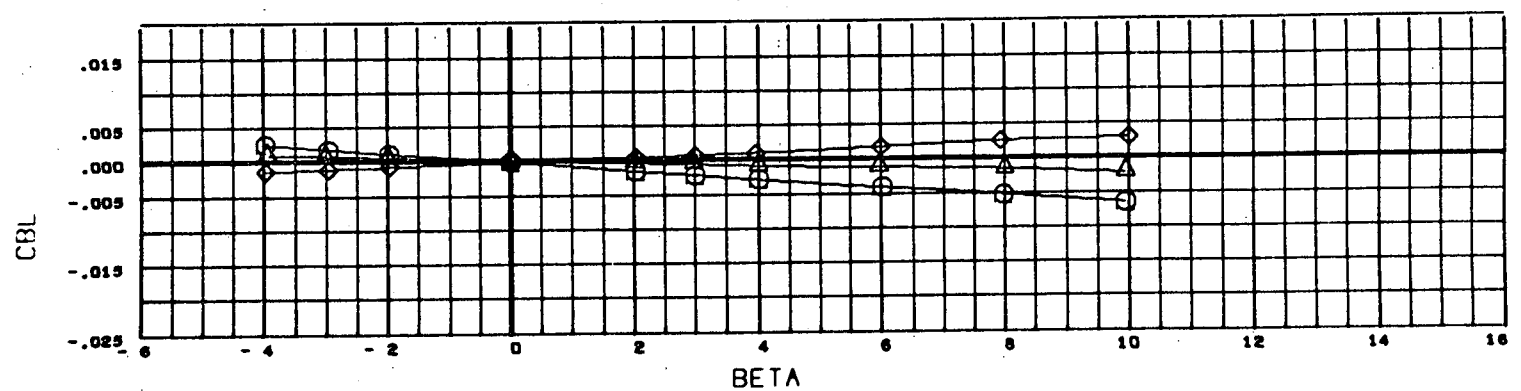
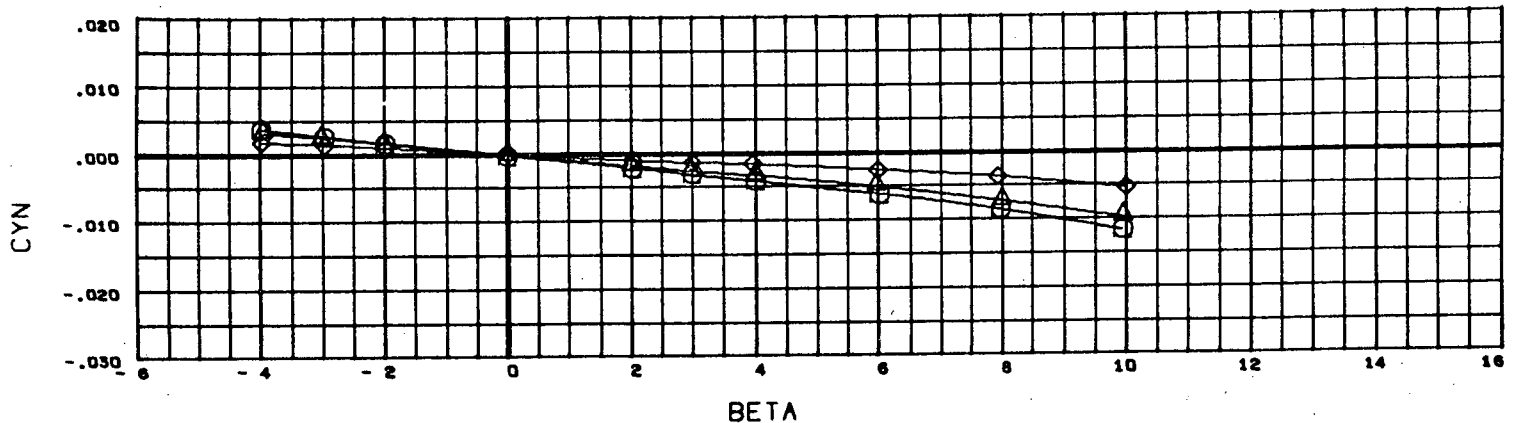
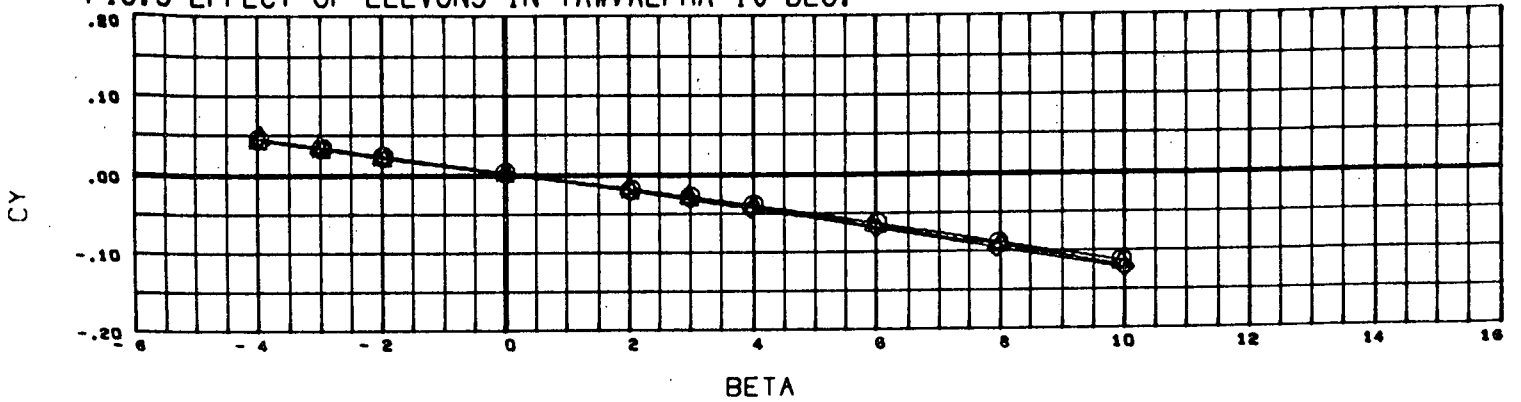
FIG.9 EFFECT OF ELEVONS IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB044)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RGB024)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

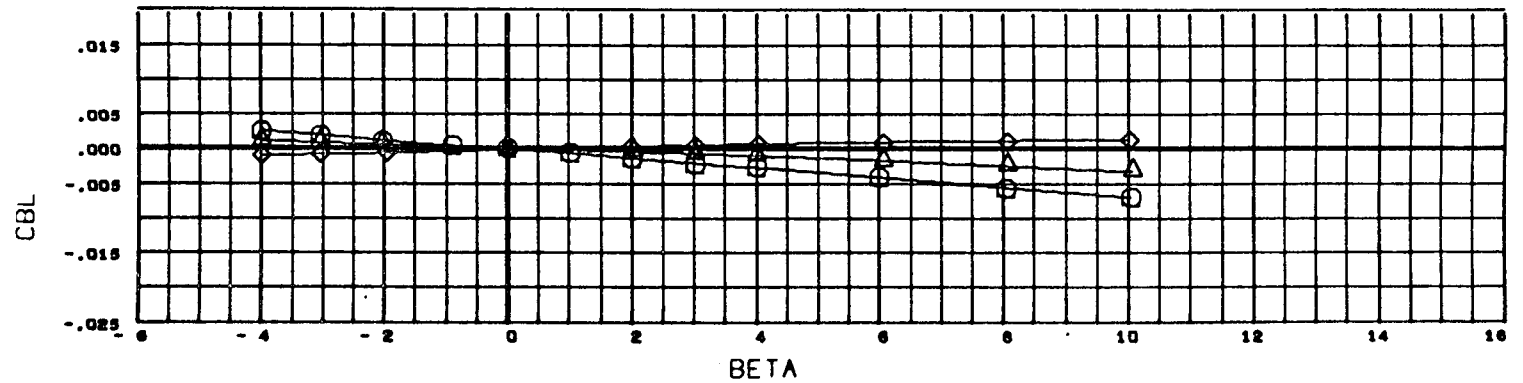
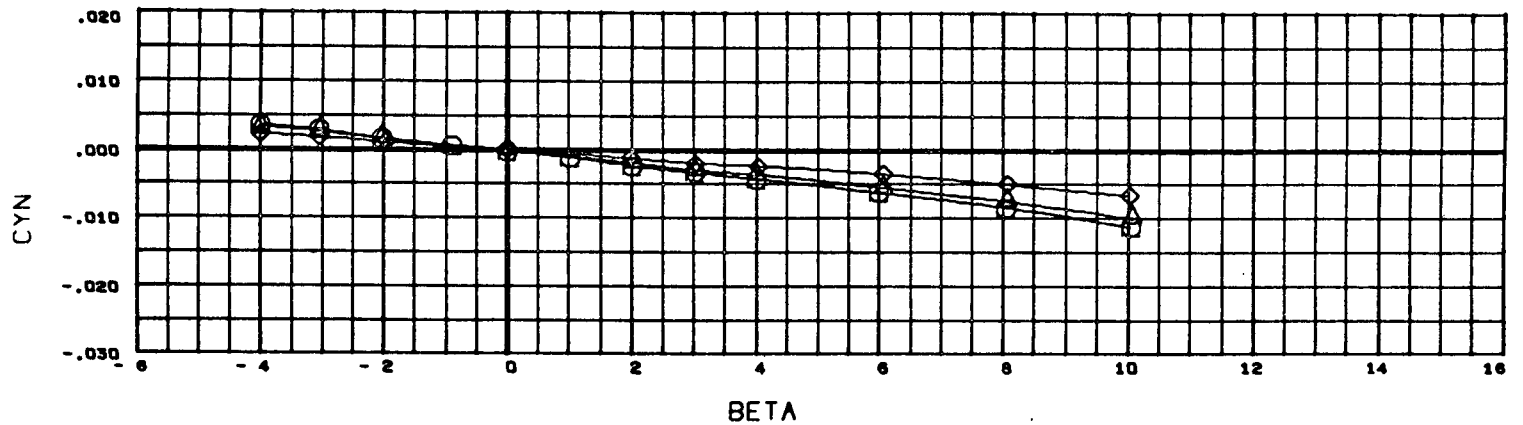
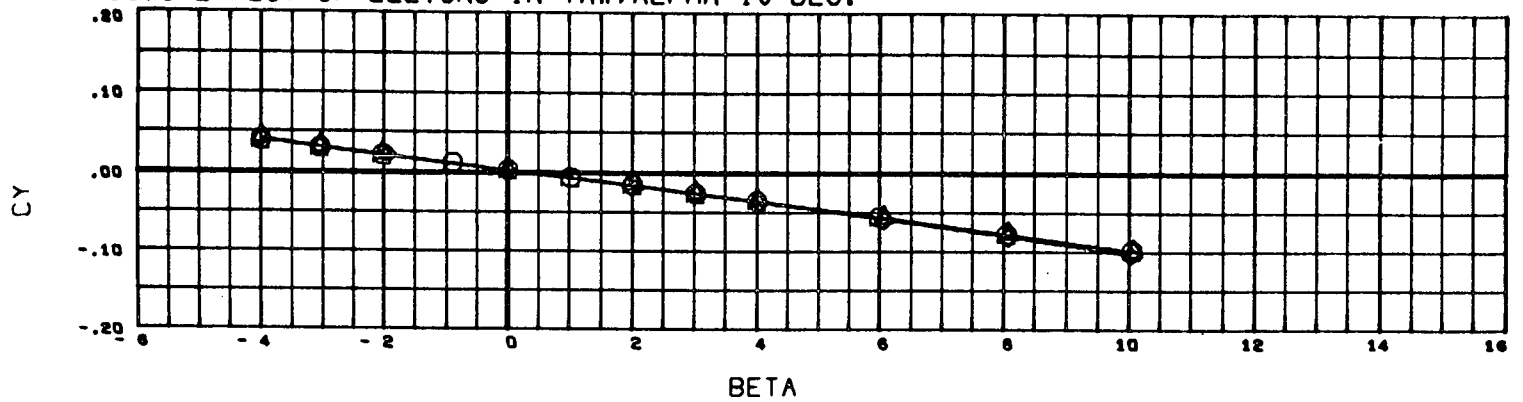
FIG.9 EFFECT OF ELEVONS IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB014)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5580 SQ IN.
(RGB044)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF	4.5720 IN.
(RGB024)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

FIG.9 EFFECT OF ELEVONS IN YAW, ALPHA=10 DEG.

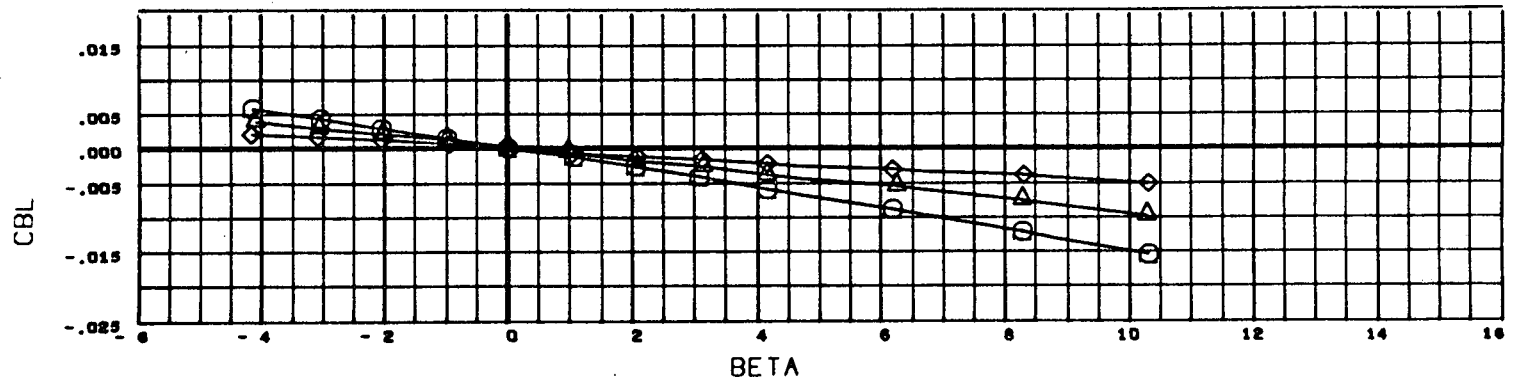
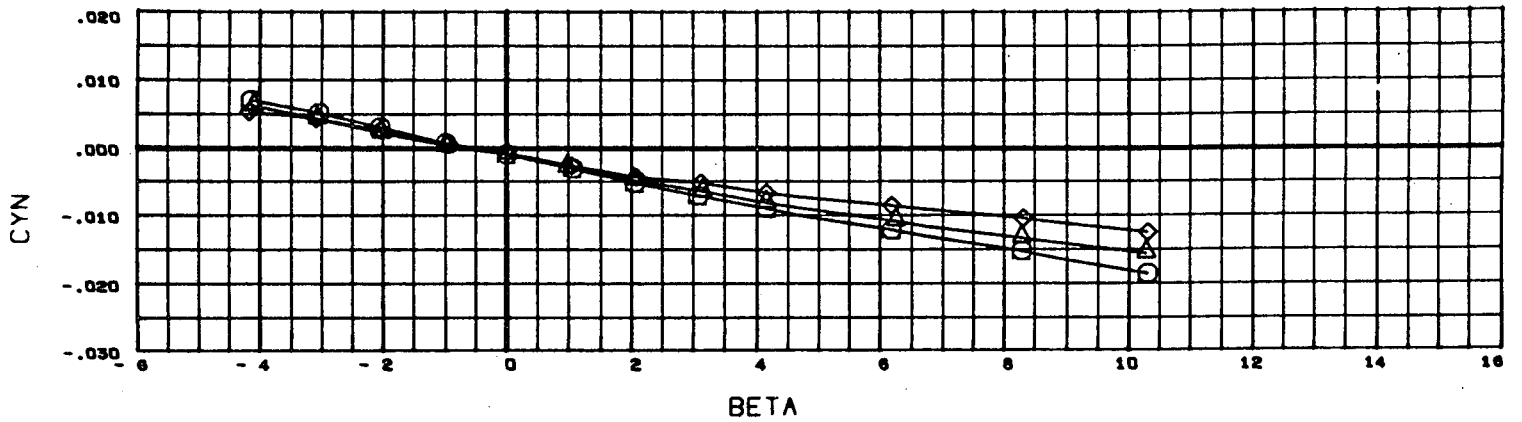
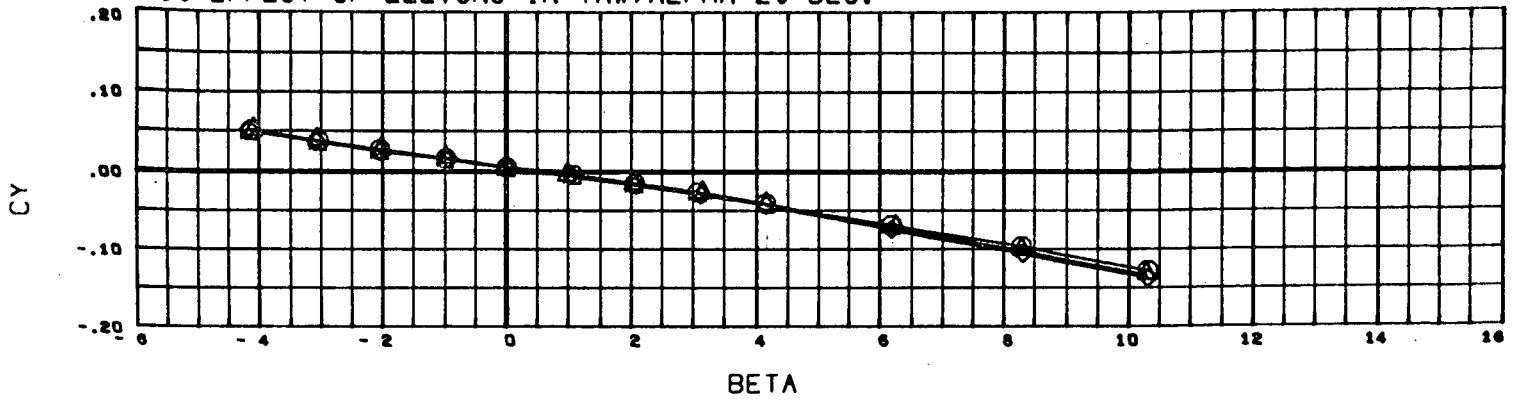


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8014)	JPL WT 20-661 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8044)	JPL WT 20-661 MSC 040A 81W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RG8024)	JPL WT 20-661 MSC 040A 81W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

PAGE 60

FIG.10 EFFECT OF ELEVONS IN YAW, ALPHA=20 DEG.

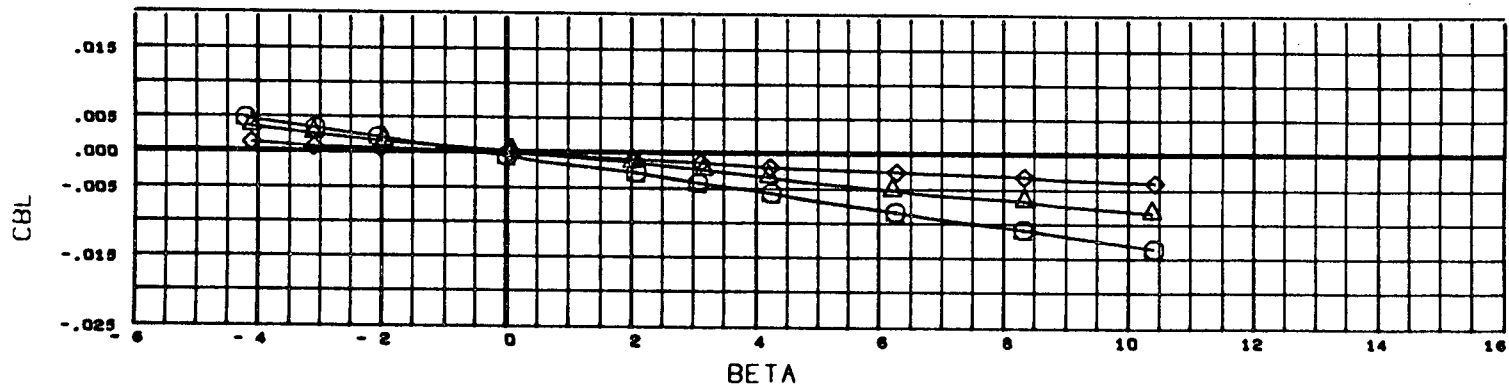
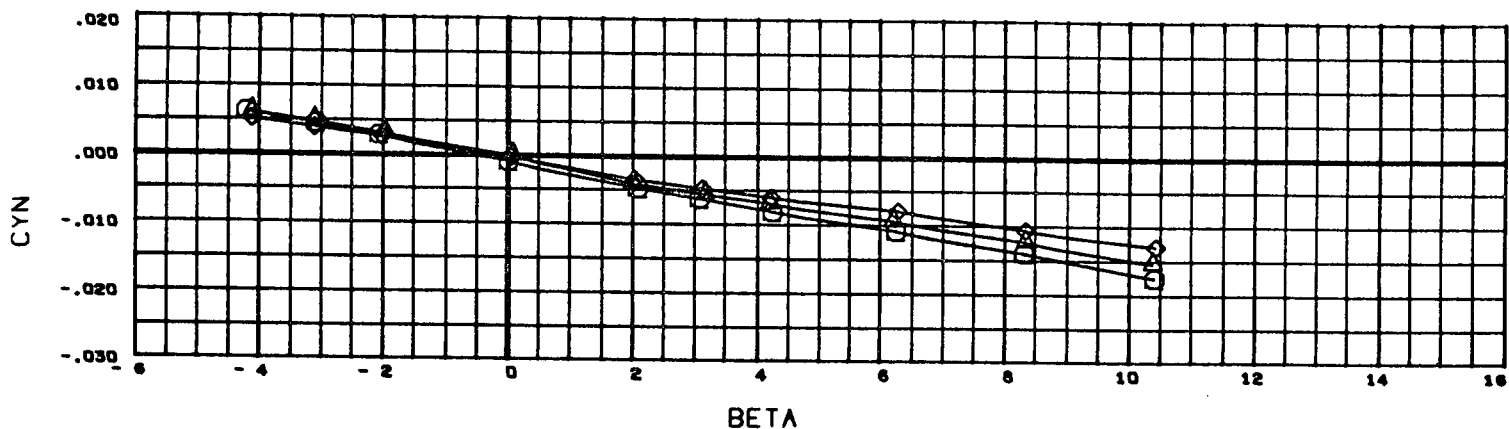
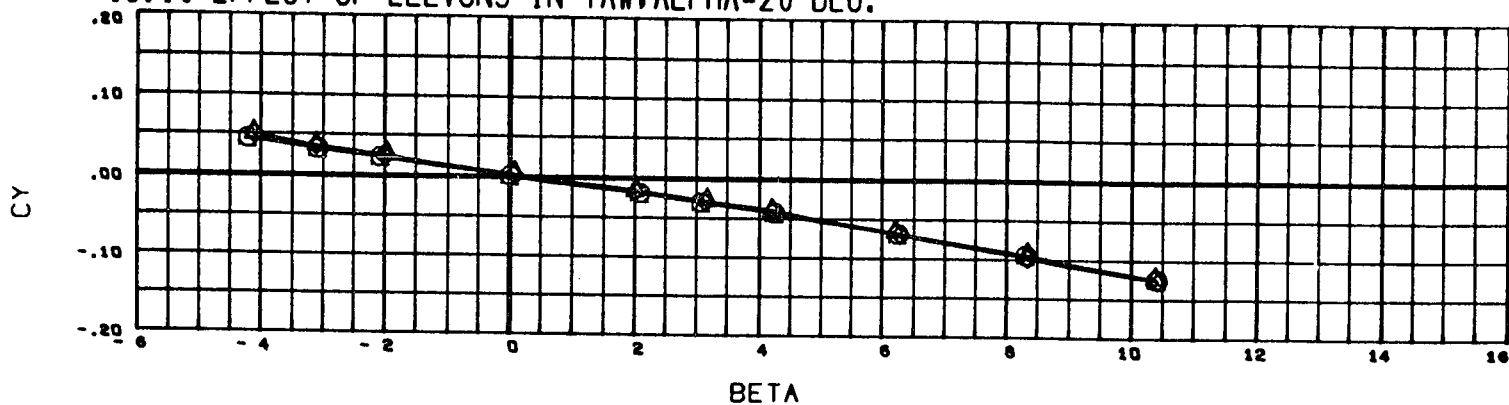


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B045)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B025)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
-20.000	-20.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

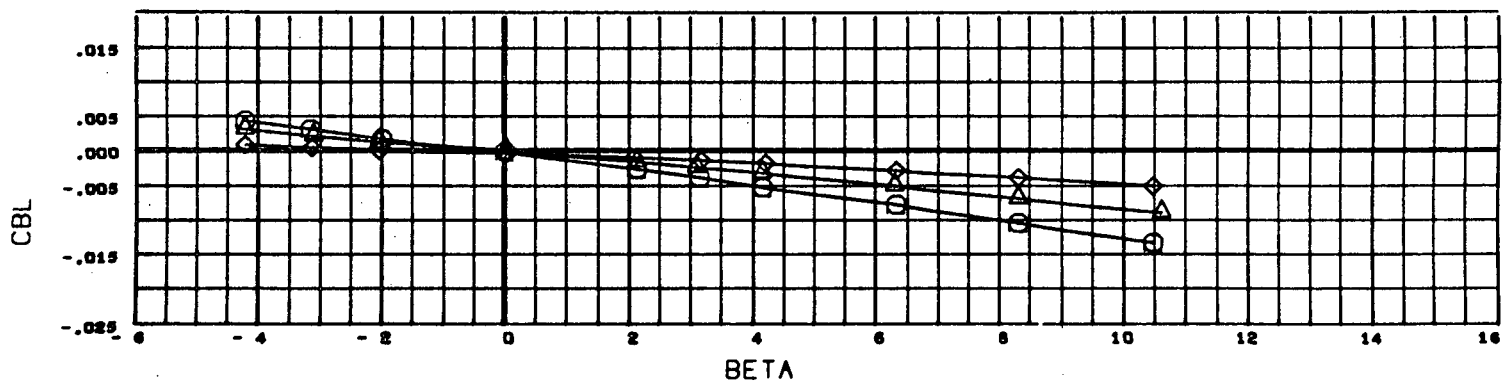
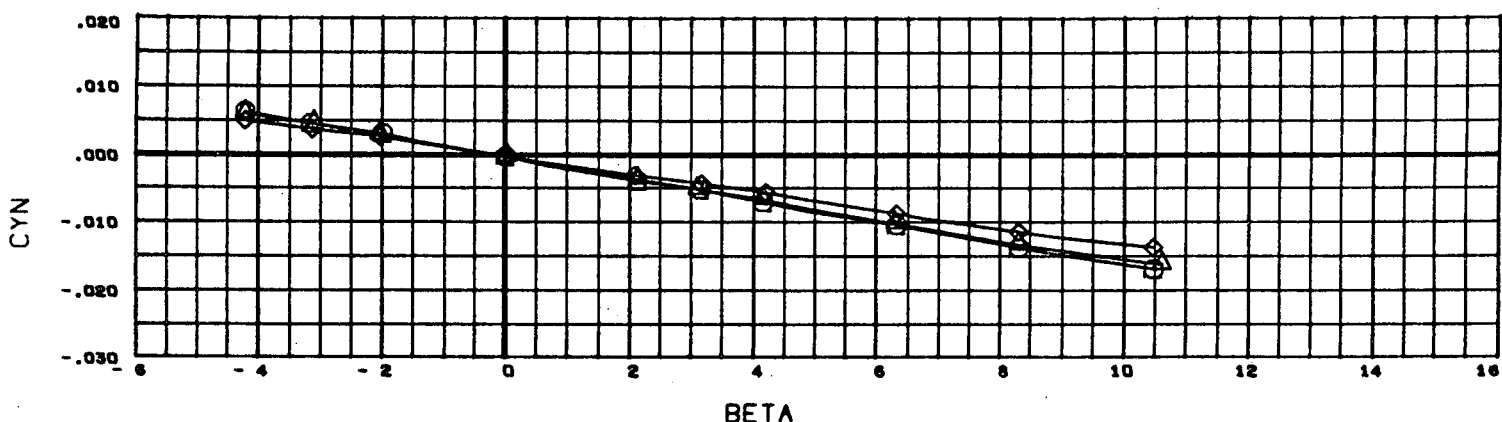
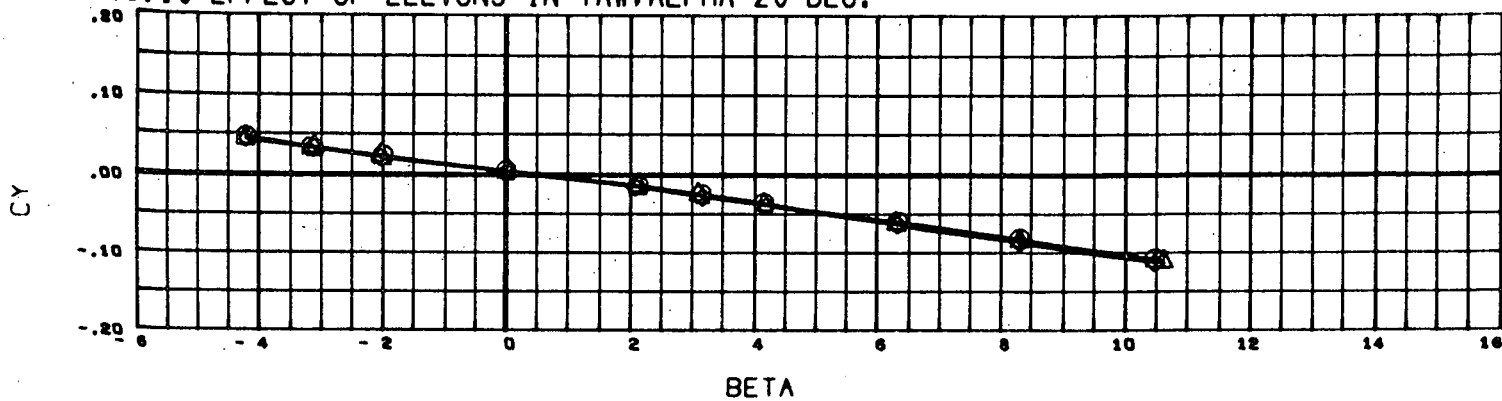
FIG.10 EFFECT OF ELEVONS IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8045)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RG8025)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 8.8150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

FIG.10 EFFECT OF ELEVONS IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB019)	JPL WT 20-881 MSC 040A BIW1V1M1P1D1C1
(RGB045)	JPL WT 20-881 MSC 040A BIW1V1M1P1D1C1
(RGB025)	JPL WT 20-881 MSC 040A BIW1V1M1P1D1C1

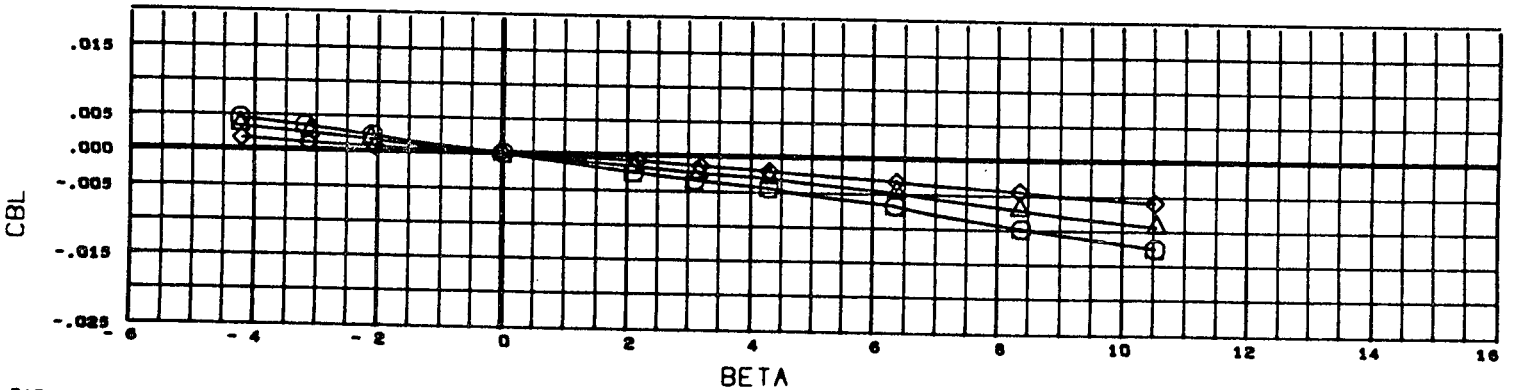
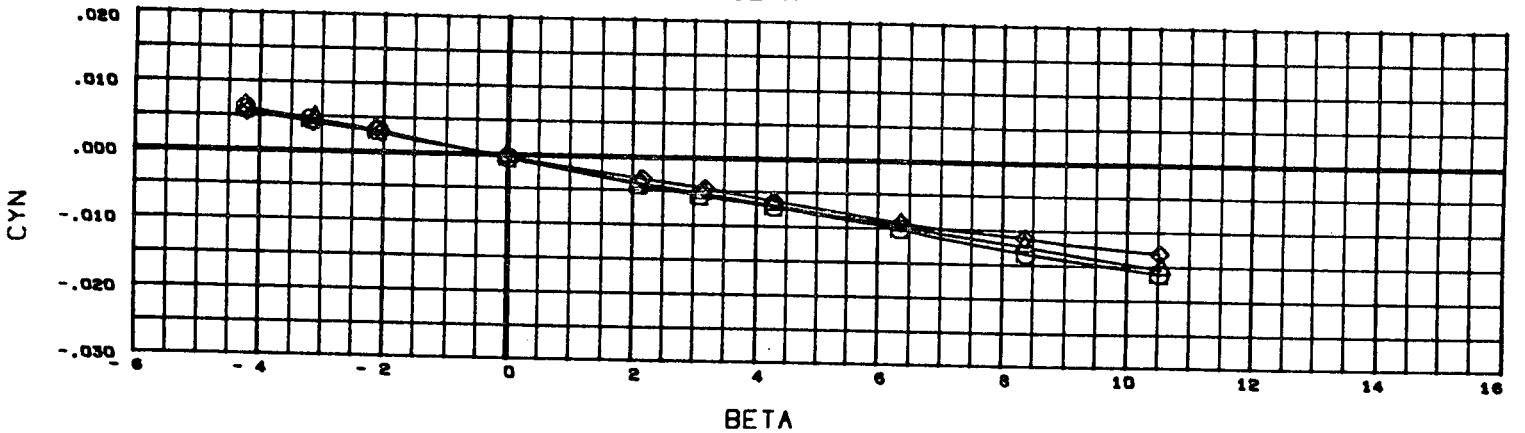
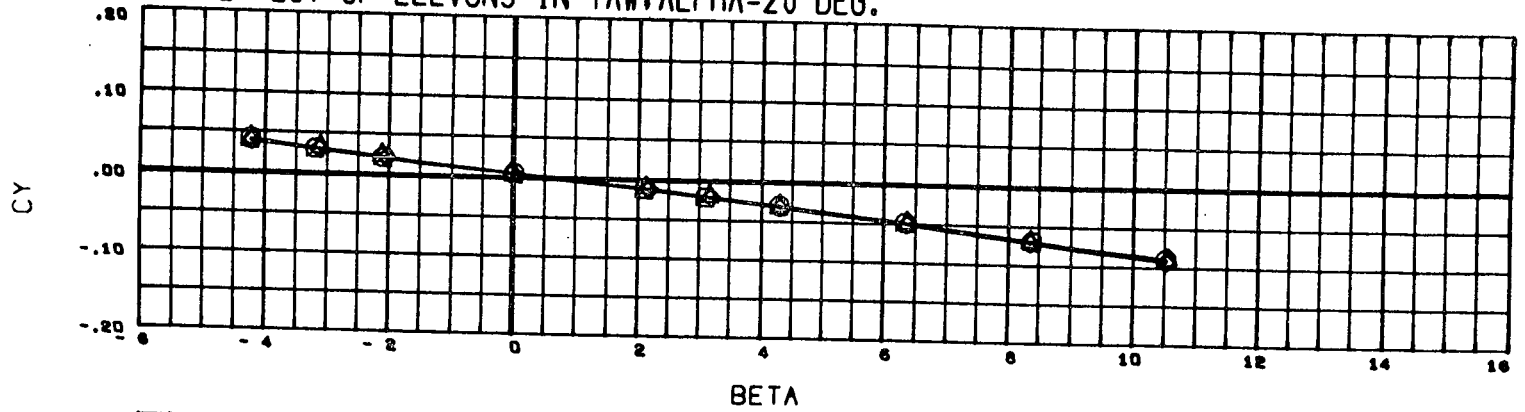
LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
-20.000	-20.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	94 IN.
LREF	4.3720	IN.
BREF	6.6150	IN.
XHRP	1067.9040	IN.
YHRP	0.0000	IN.
ZHRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

PAGE 63

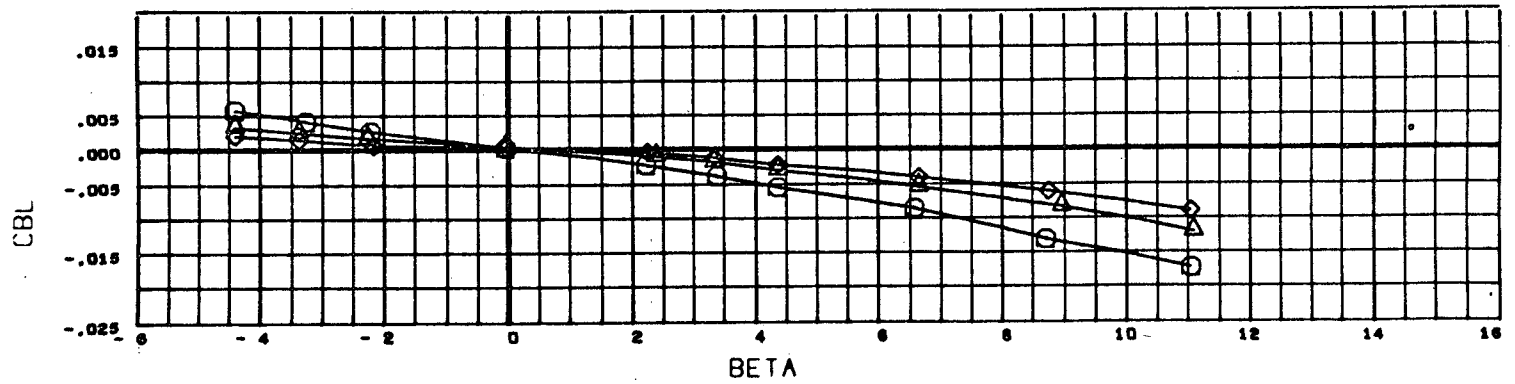
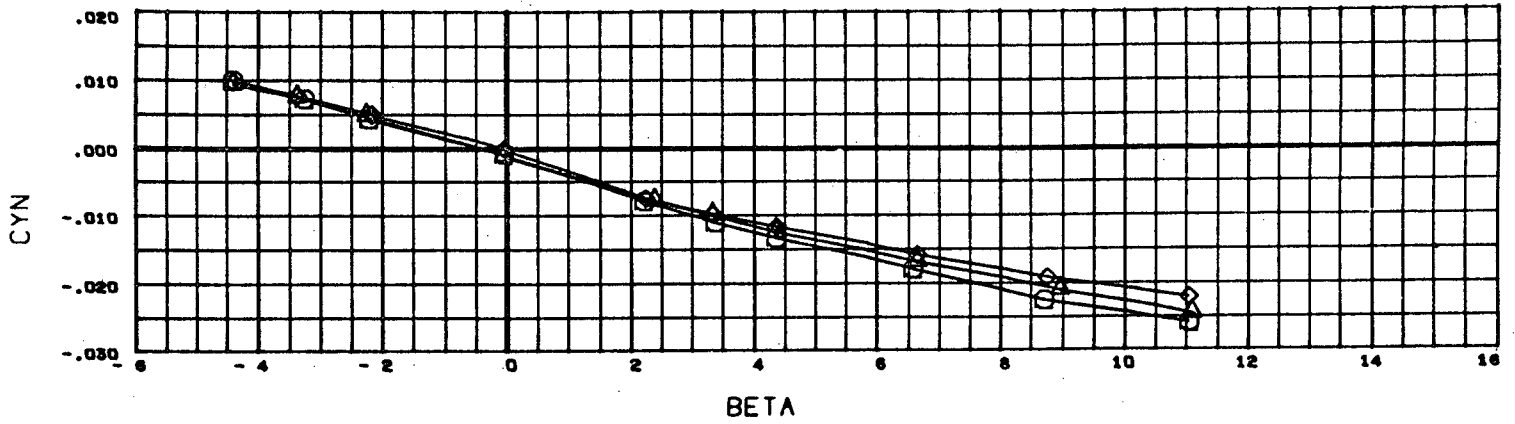
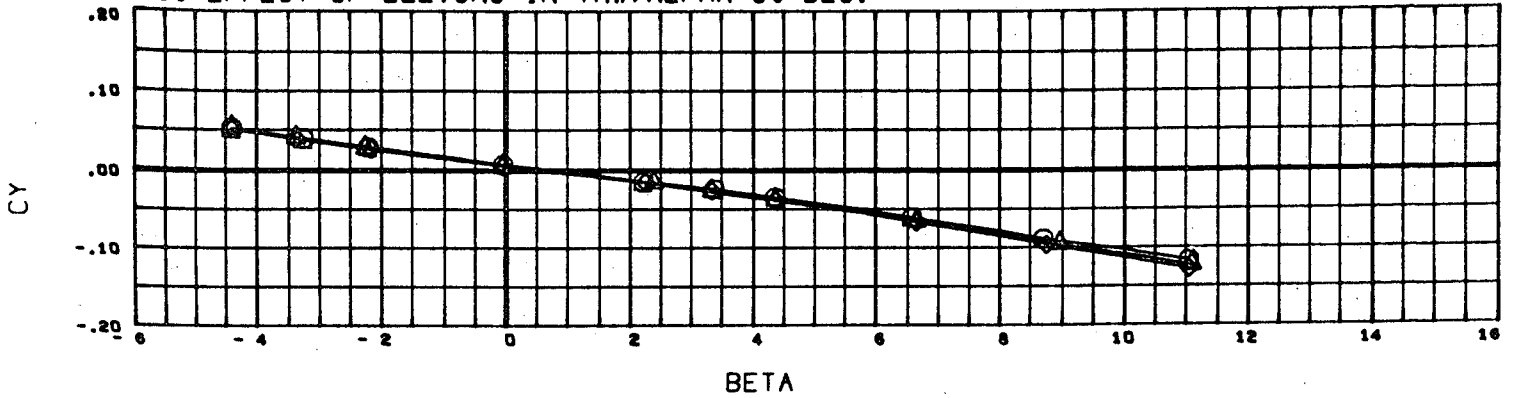
FIG.10 EFFECT OF ELEVONS IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8019)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RG8049)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(RG8025)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 11 EFFECT OF ELEVONS IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB046)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB026)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

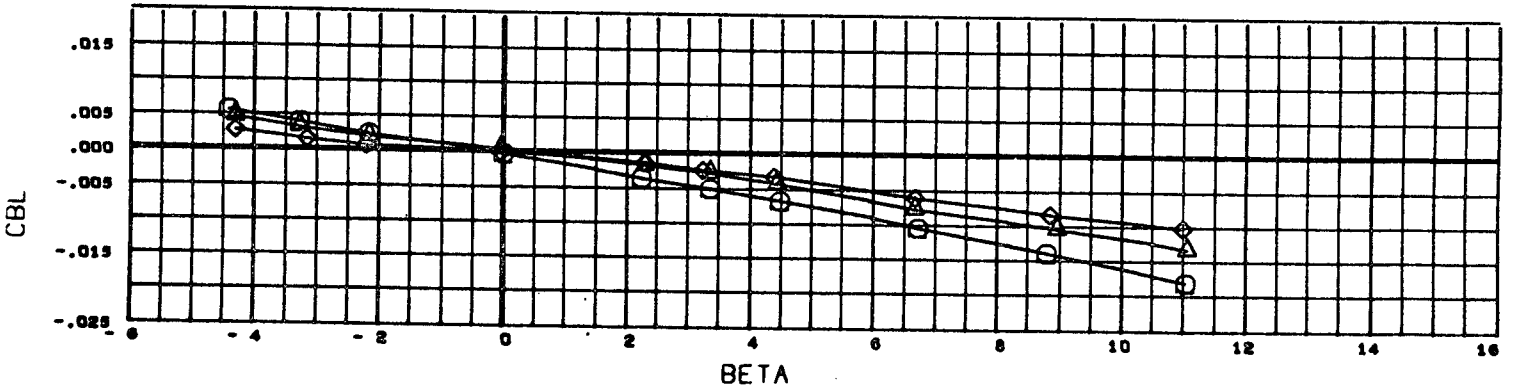
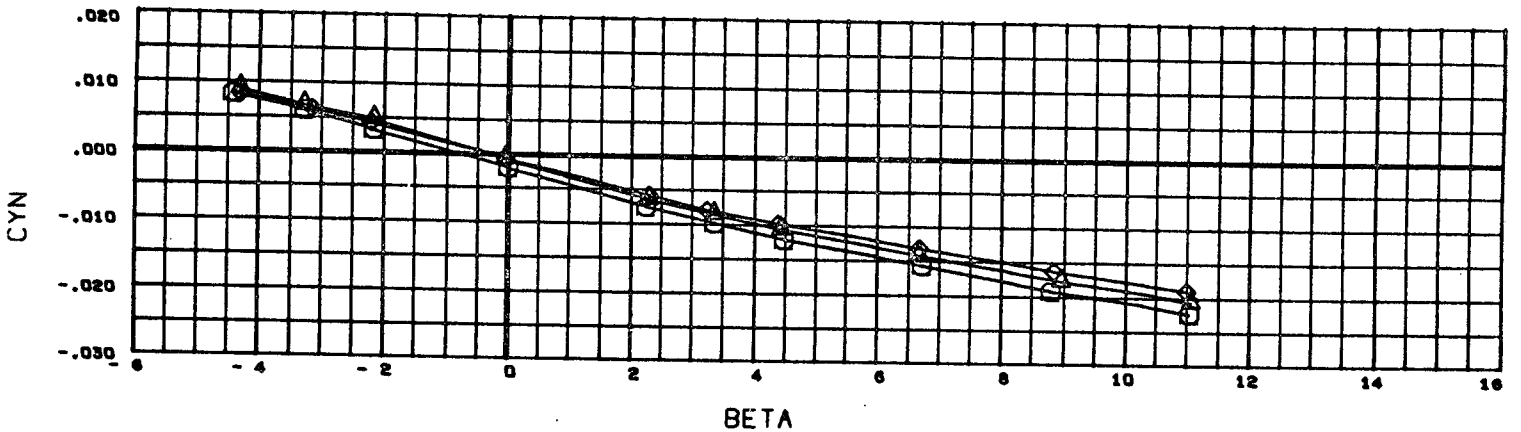
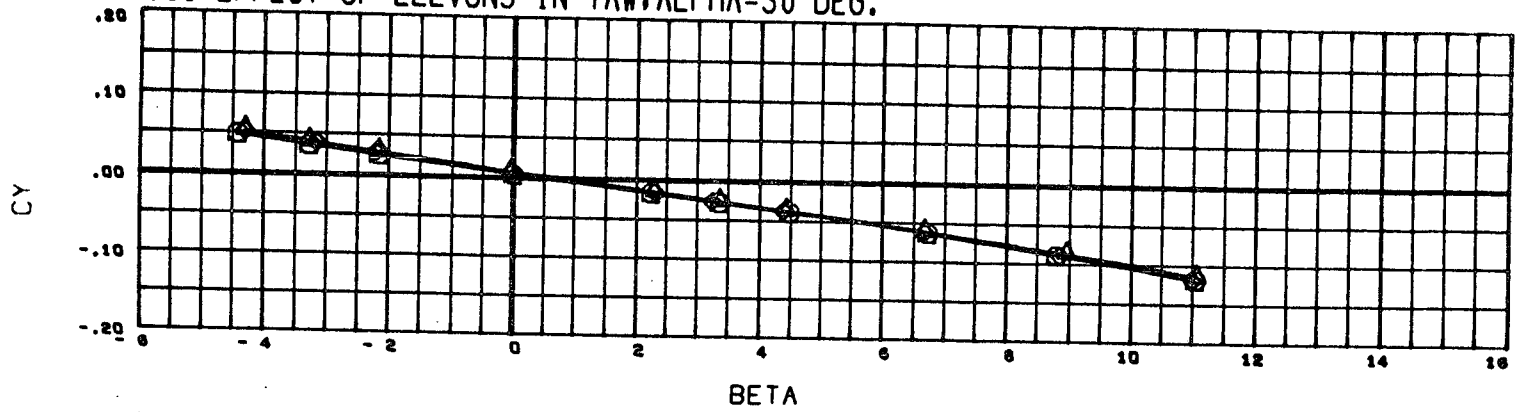
LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
-20.000	-20.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.8150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
\$SCALE	0.0075	

MACH 2.01

PAGE 65

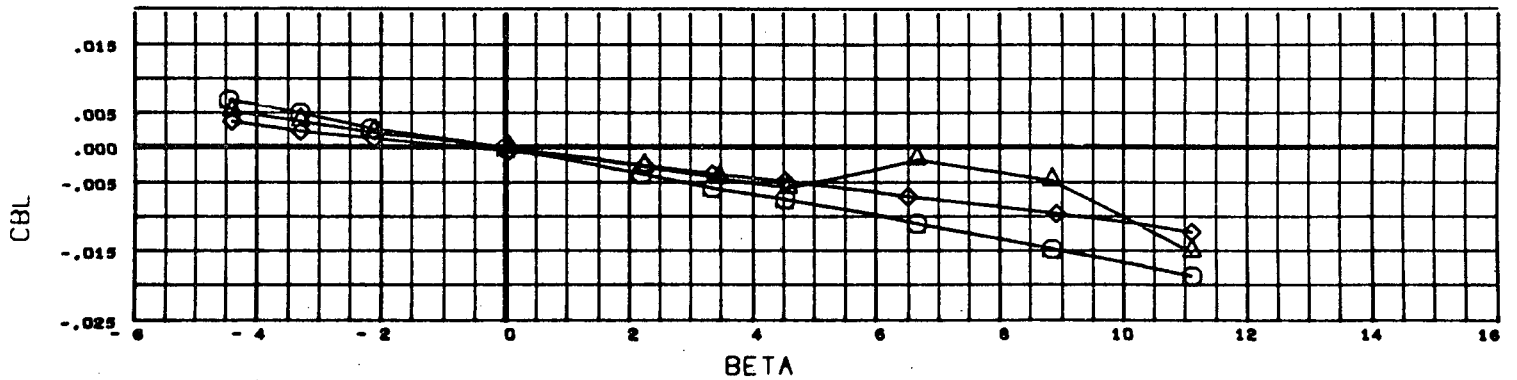
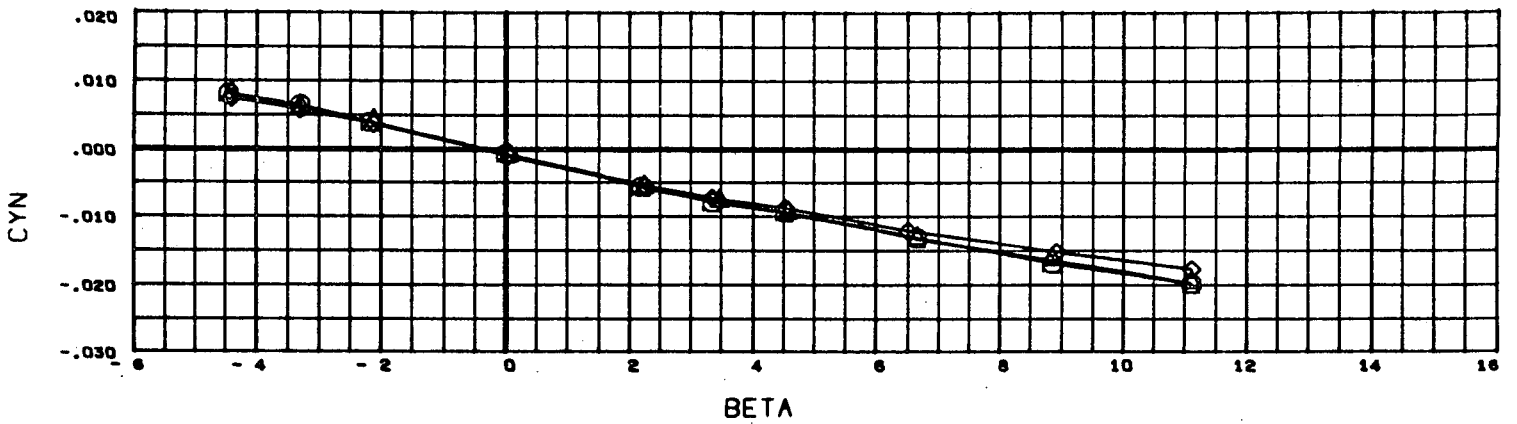
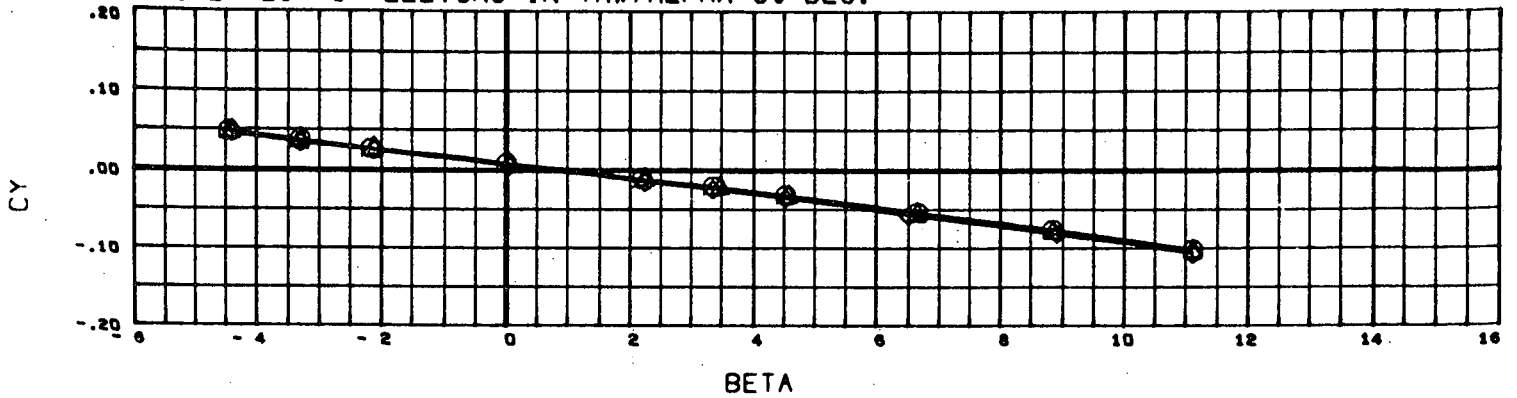
FIG.11 EFFECT OF ELEVONS IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(X68016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68046)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.3720 IN.
(R68026)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0073

MACH 2.42

FIG.11 EFFECT OF ELEVONS IN YAW, ALPHA=30 DEG.

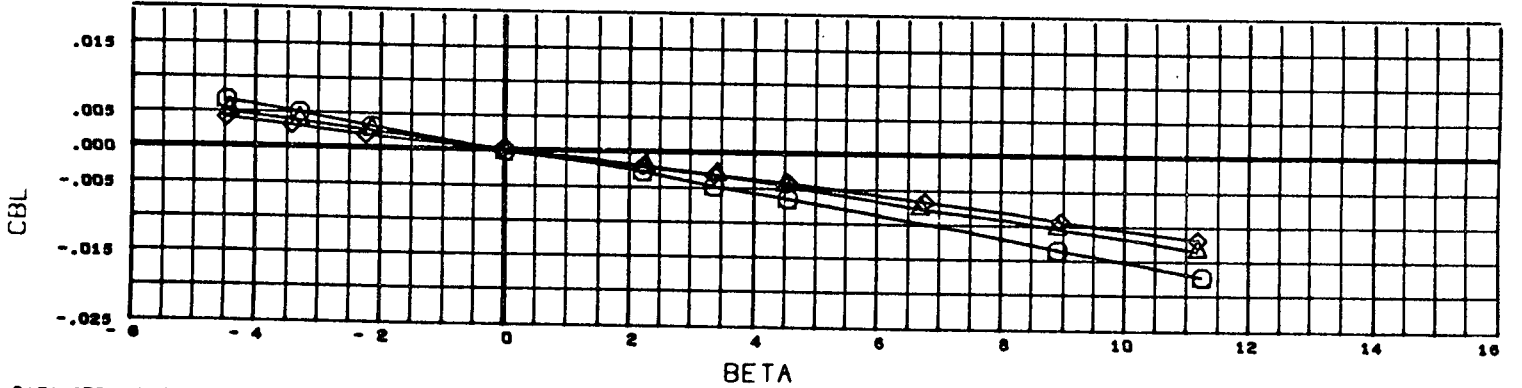
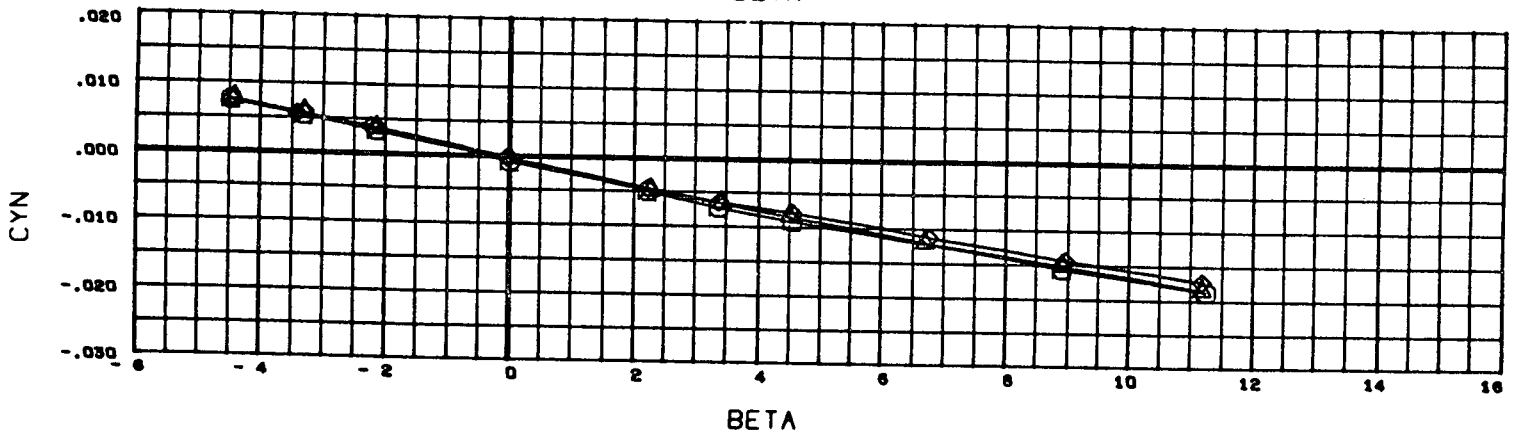
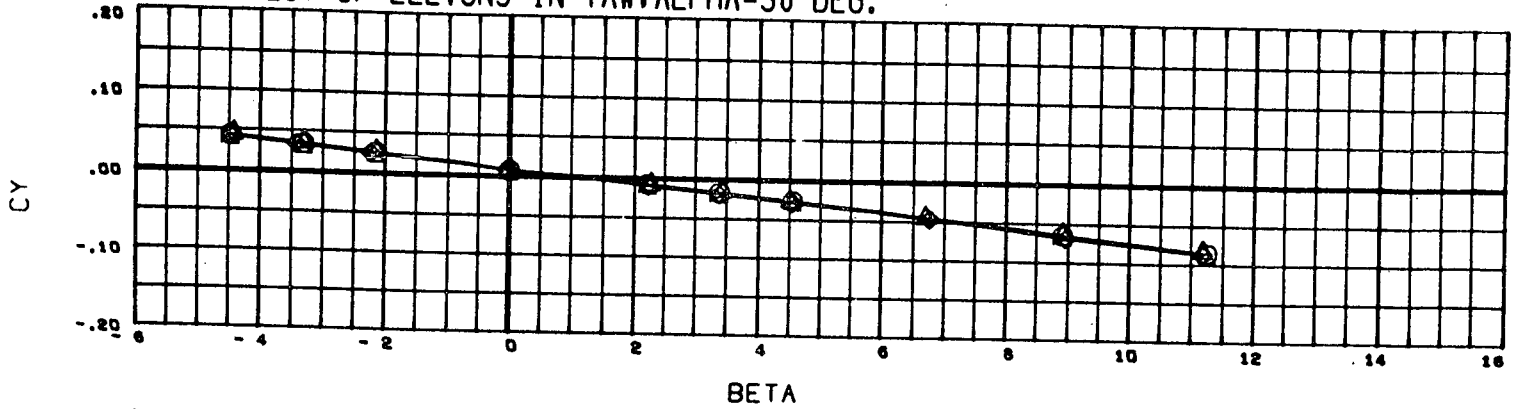


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(X68016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 sq IN.
(R68046)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(R68026)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

PAGE 67

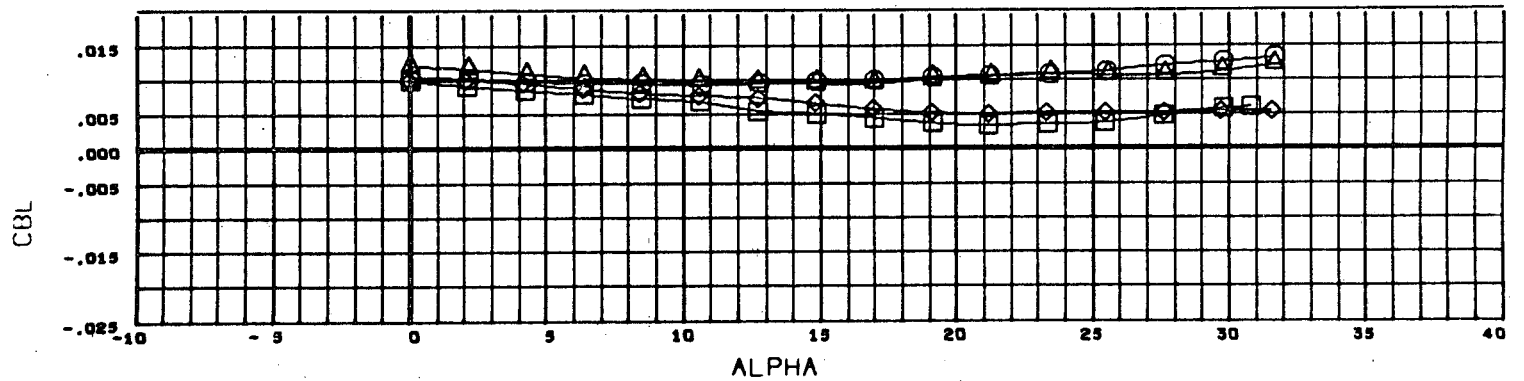
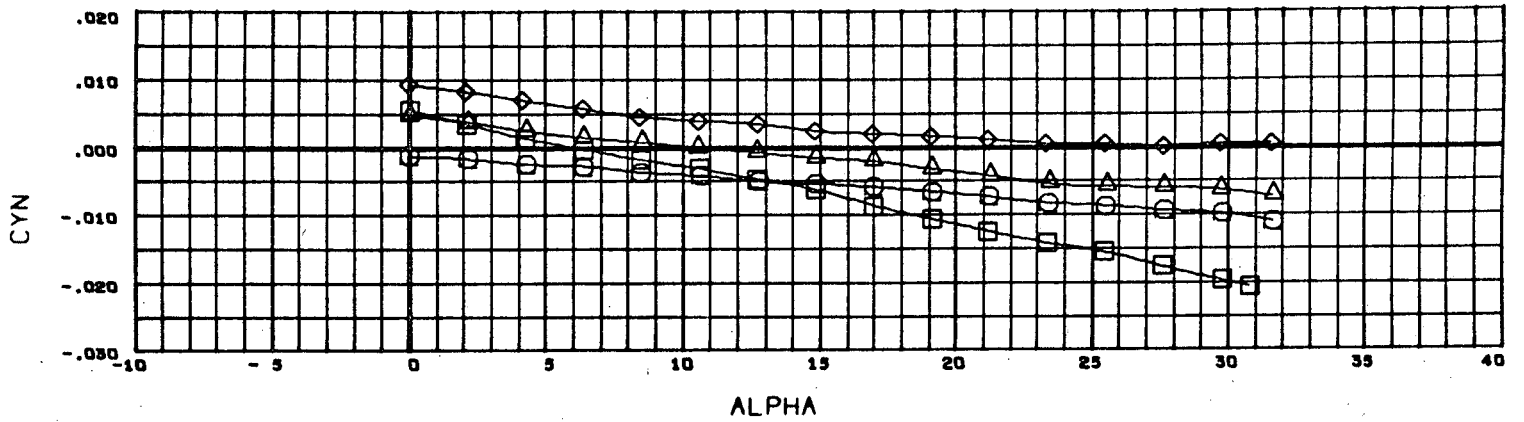
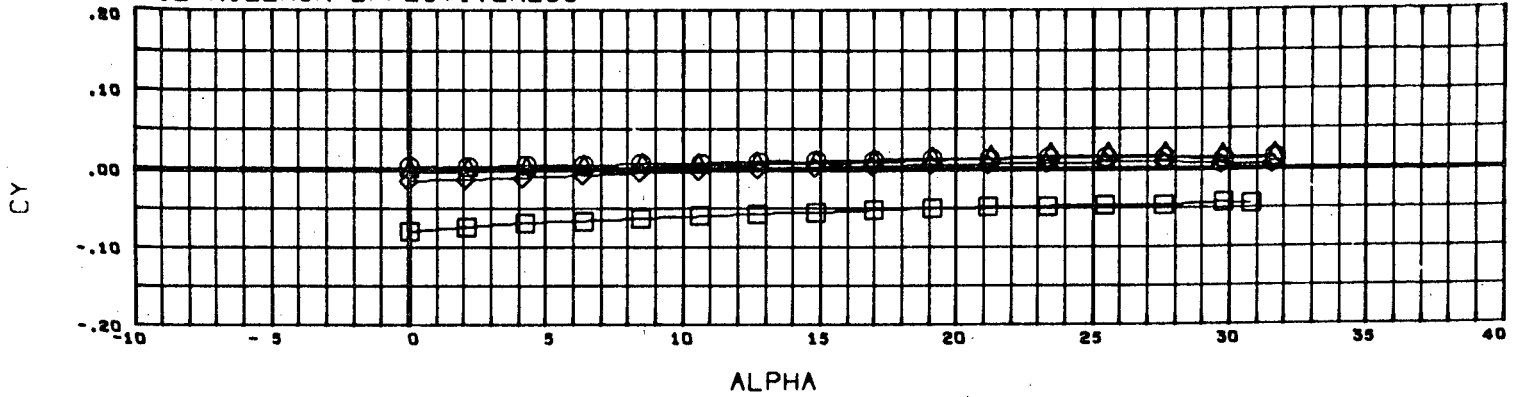
FIG.11 EFFECT OF ELEVONS IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R6B046)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-20.000	0.000	LREF 4.5720 IN.
(R6B026)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-40.000	-40.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 12 AILERON EFFECTIVENESS



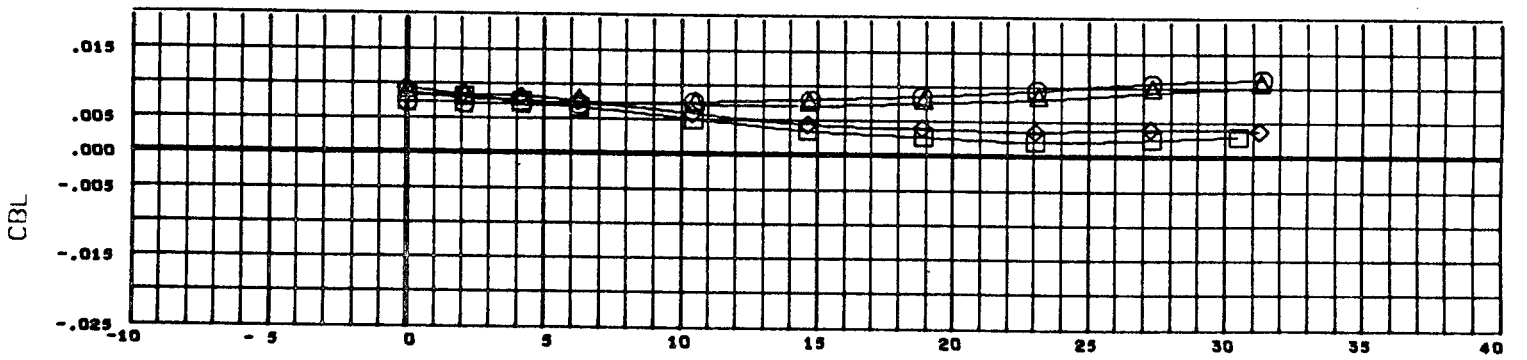
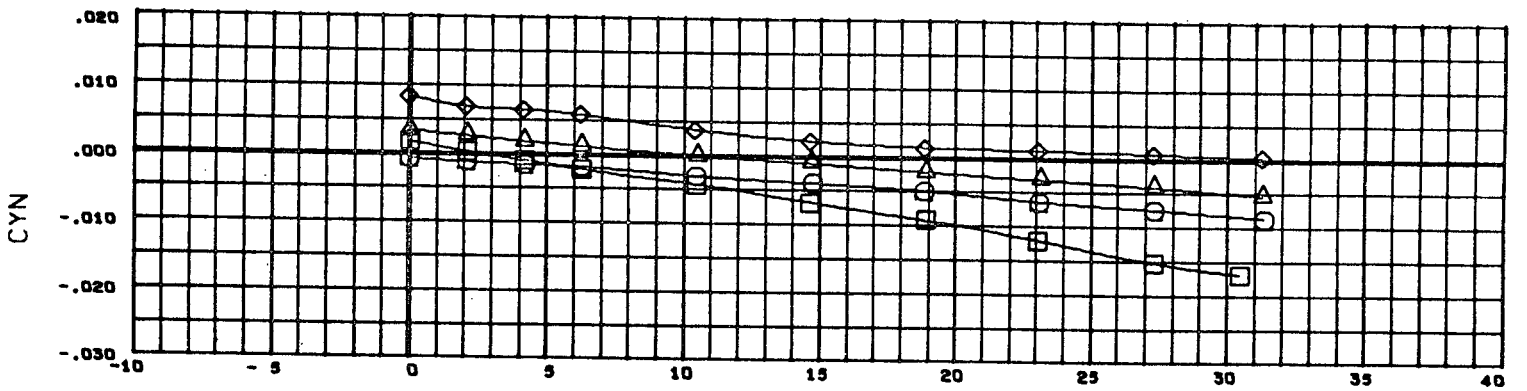
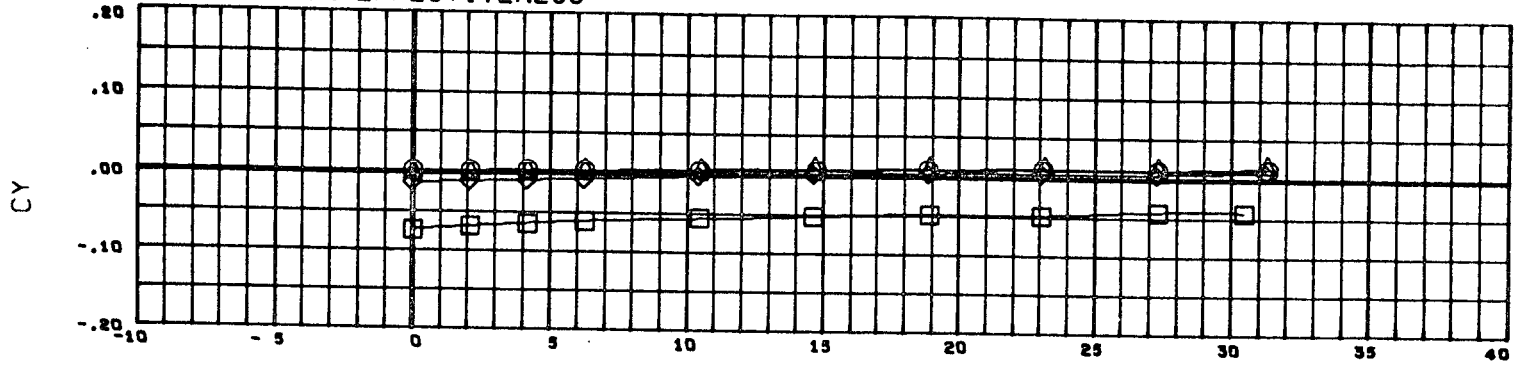
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

LELVN	RELVN	RUDDER
10.000	-10.000	0.000
0.000	-20.000	0.000
-20.000	-40.000	0.000
0.000	-20.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH 2.01

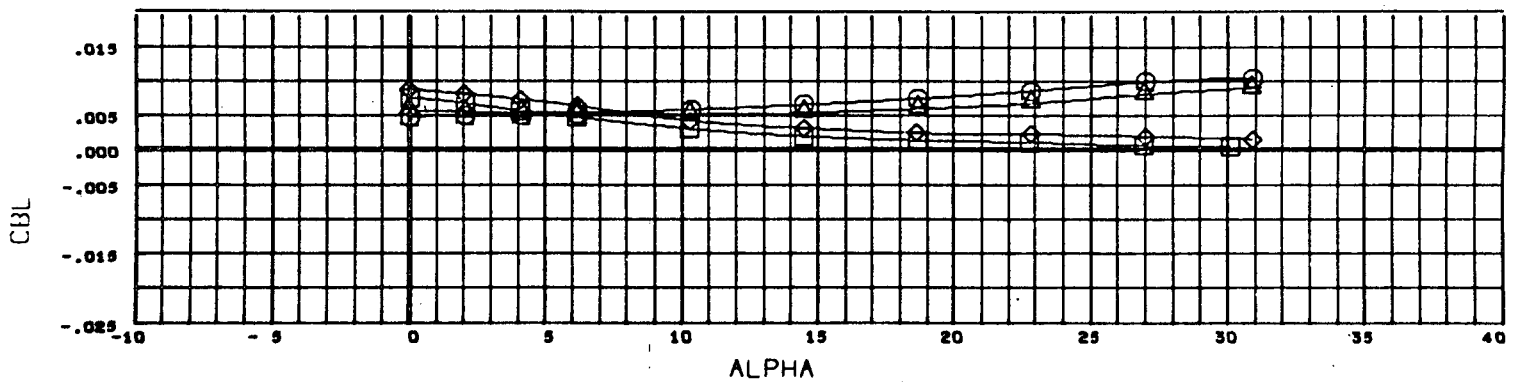
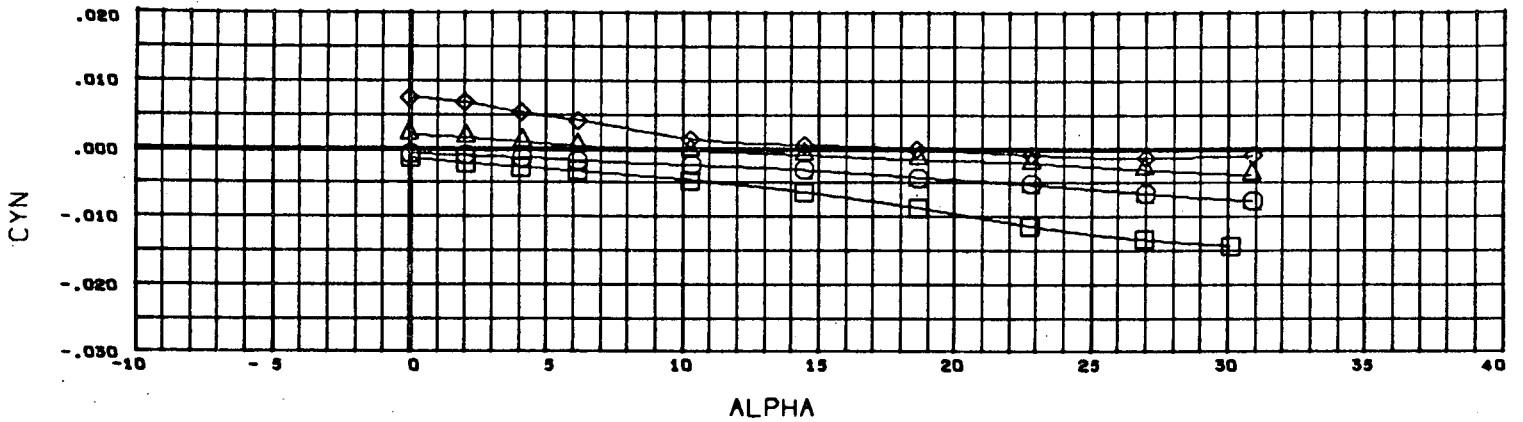
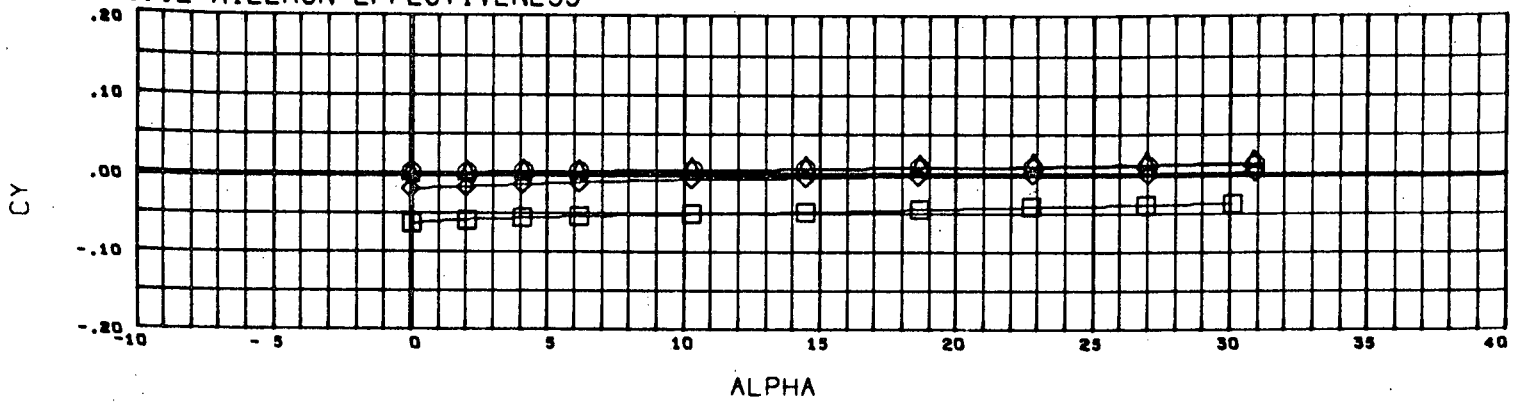
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R68081)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R68051)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R68031)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R68052)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

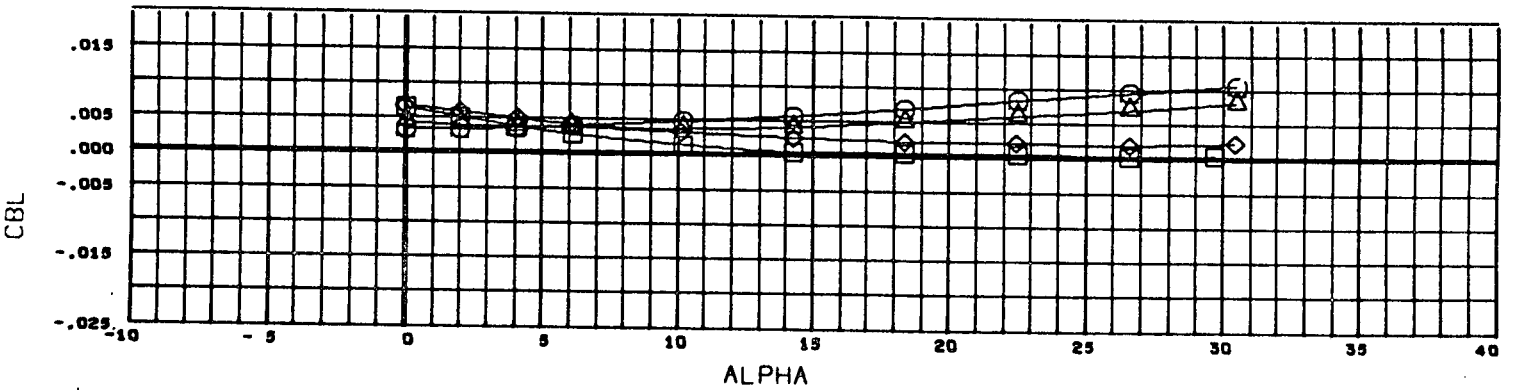
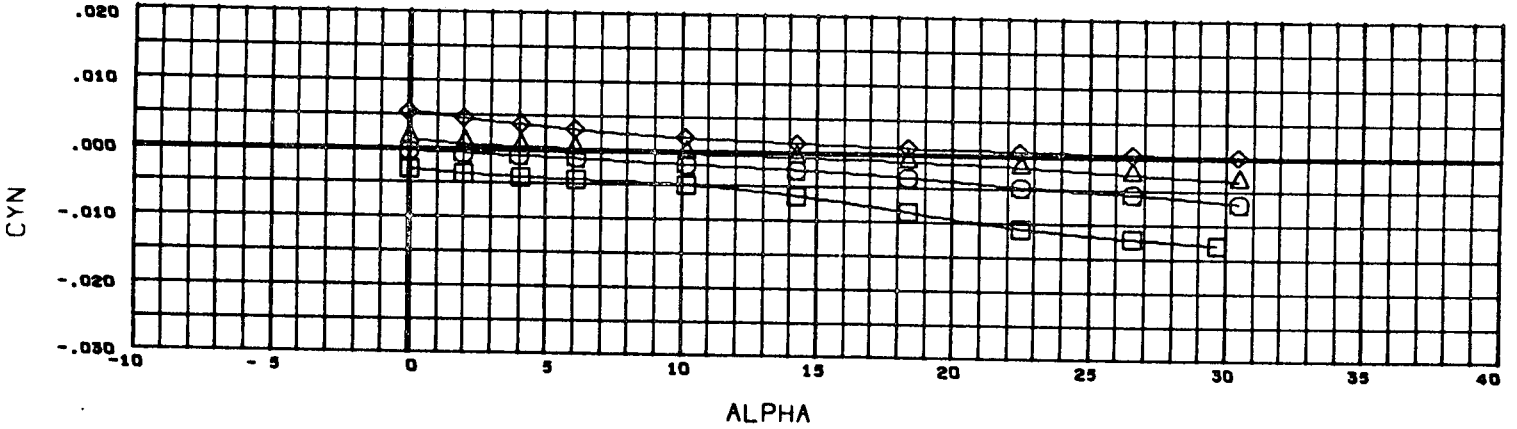
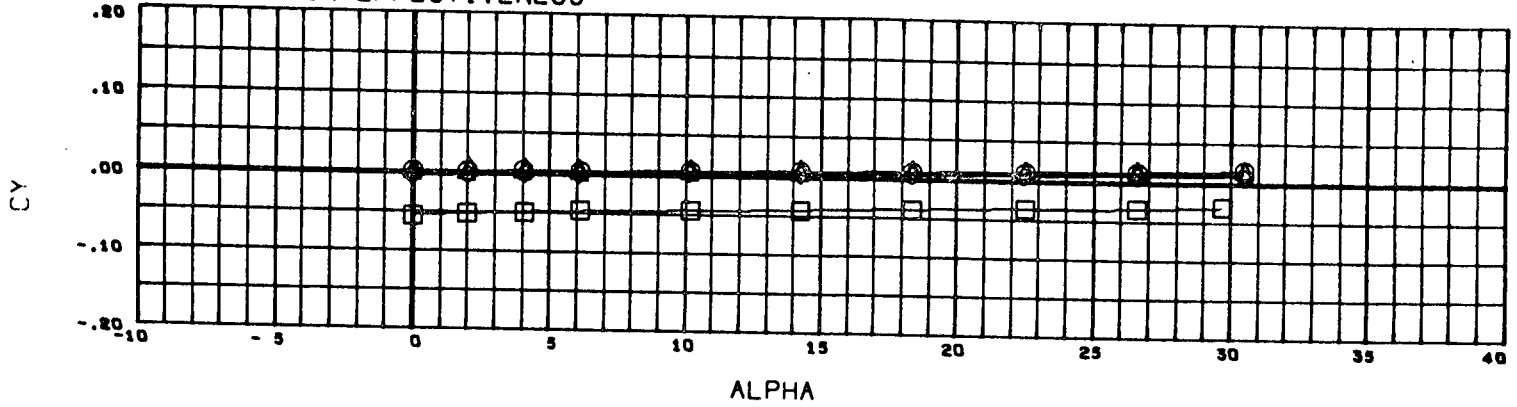
MACH 2.42

FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B061)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B051)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B031)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B052)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

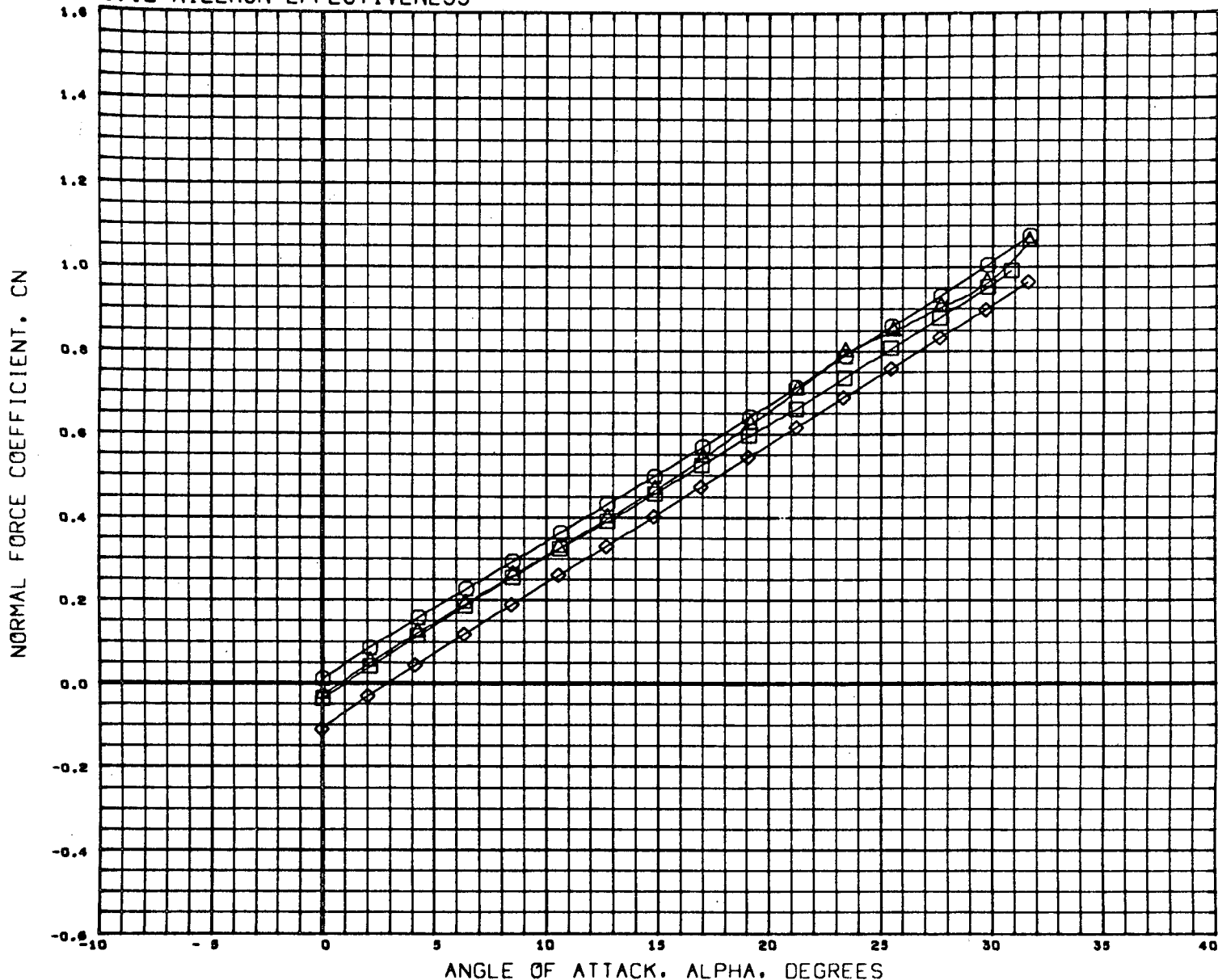
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF	25.5560 SQ IN.
(RGB051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF	4.5720 IN.
(RGB031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF	6.6150 IN.
(RGB052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.98

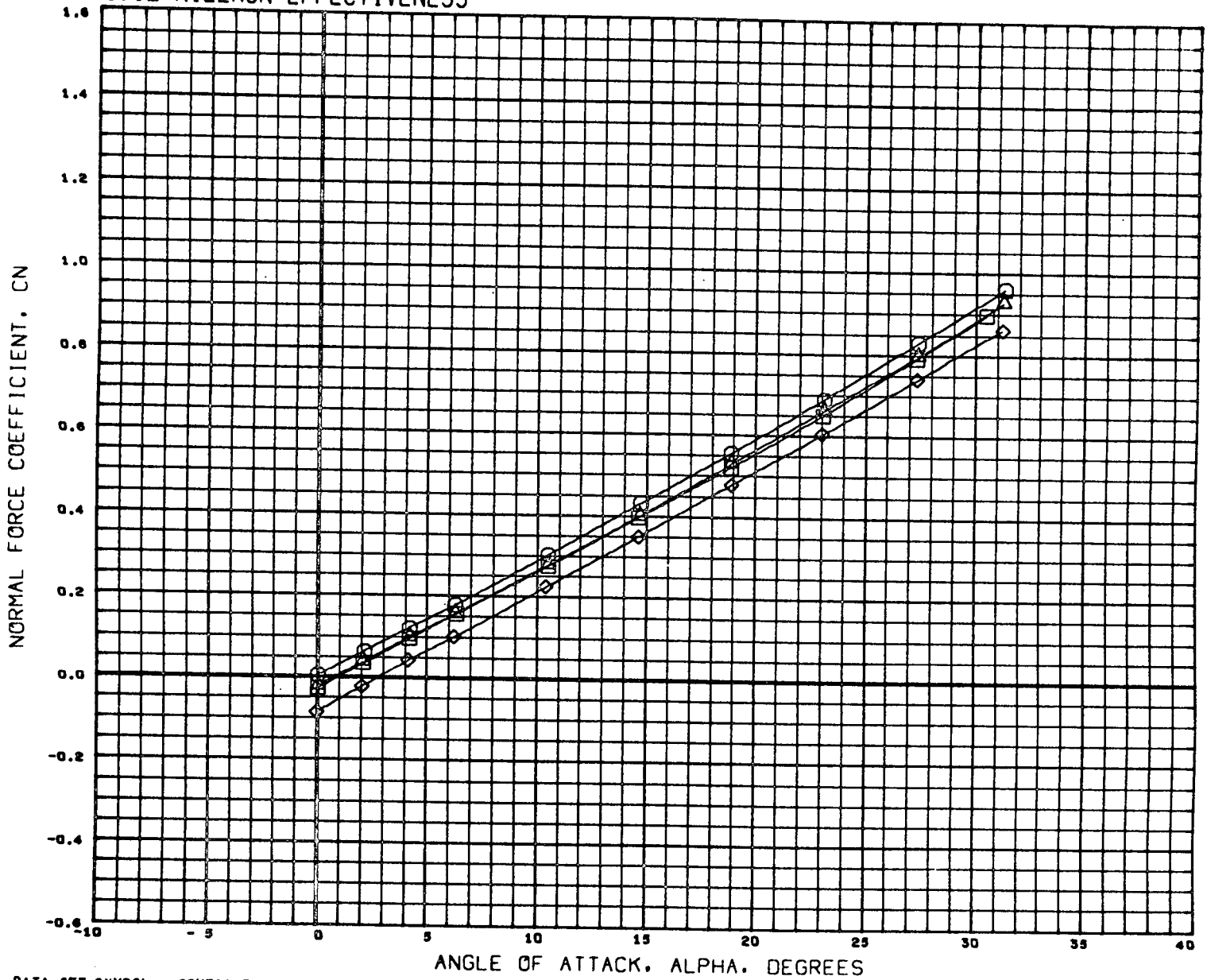
FIG.12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB081)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5580 SQ IN.
(RGB091)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(RGB031)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(RGB052)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.01

FIG.12 AILERON EFFECTIVENESS

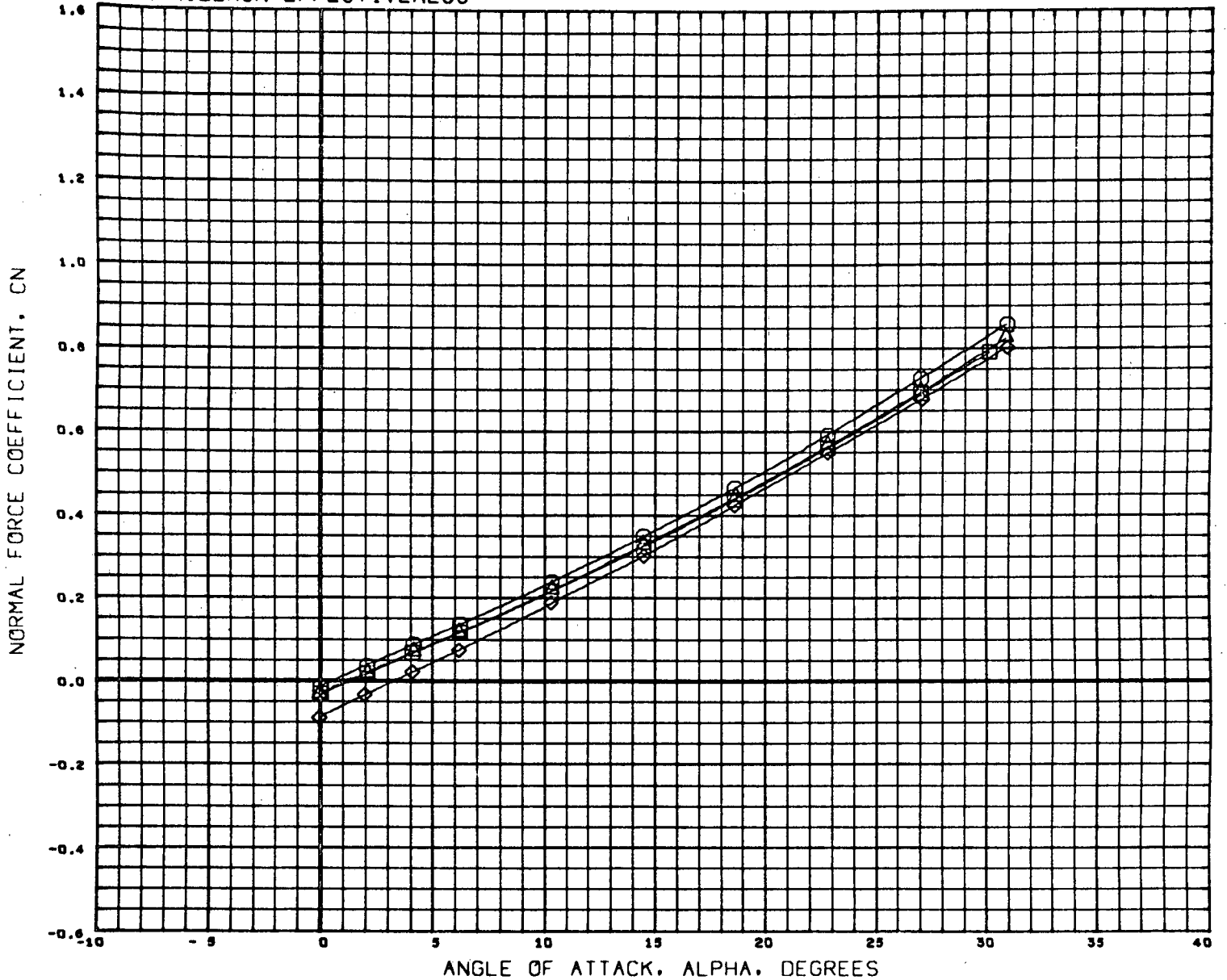


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(RCB081)	○	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000
(RCB091)	△	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000
(RCB031)	◇	JPL WT 20-001 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000
(RCB052)	□	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 sq IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH 2.42

FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R68052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R68031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R68032)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

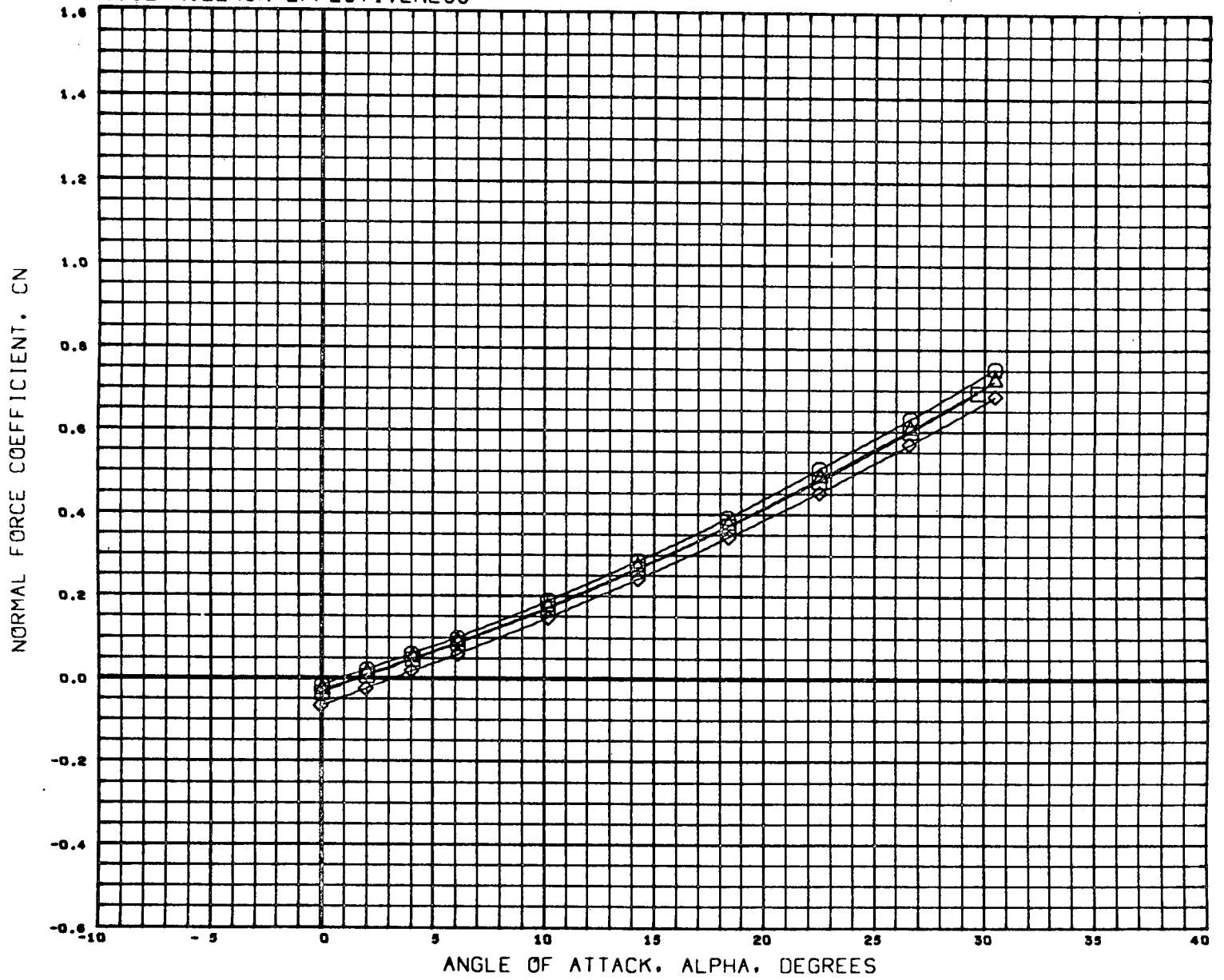
LELEVN	RELEVN	RUDDER
10.000	-10.000	0.000
0.000	-20.000	0.000
-20.000	-40.000	0.000
0.000	-20.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

PAGE 75

FIG. 12 AILERON EFFECTIVENESS

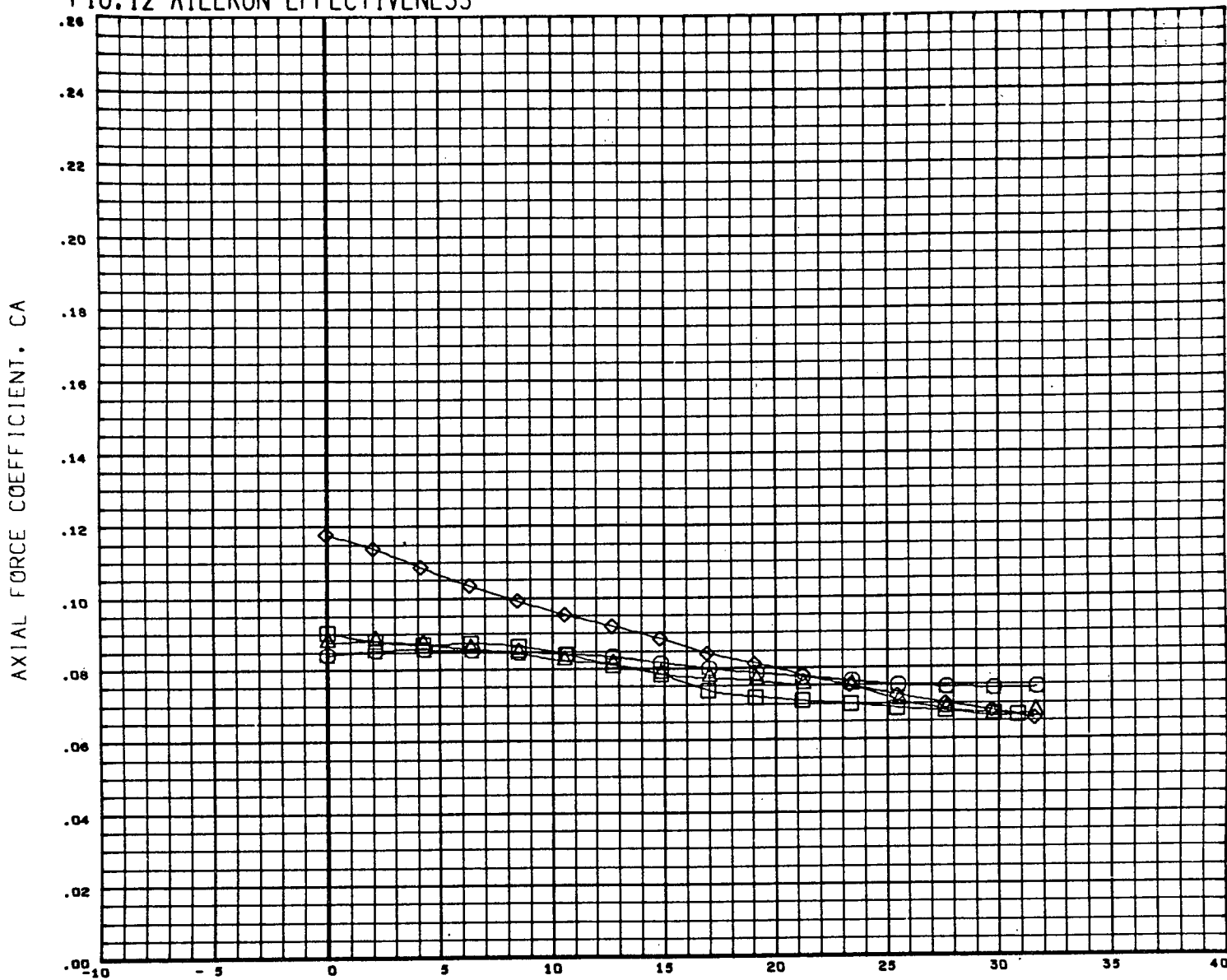


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	.RELEVN	RUDDER	REFERENCE INFORMATION
(R6B081)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B051)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B052)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

PAGE 76

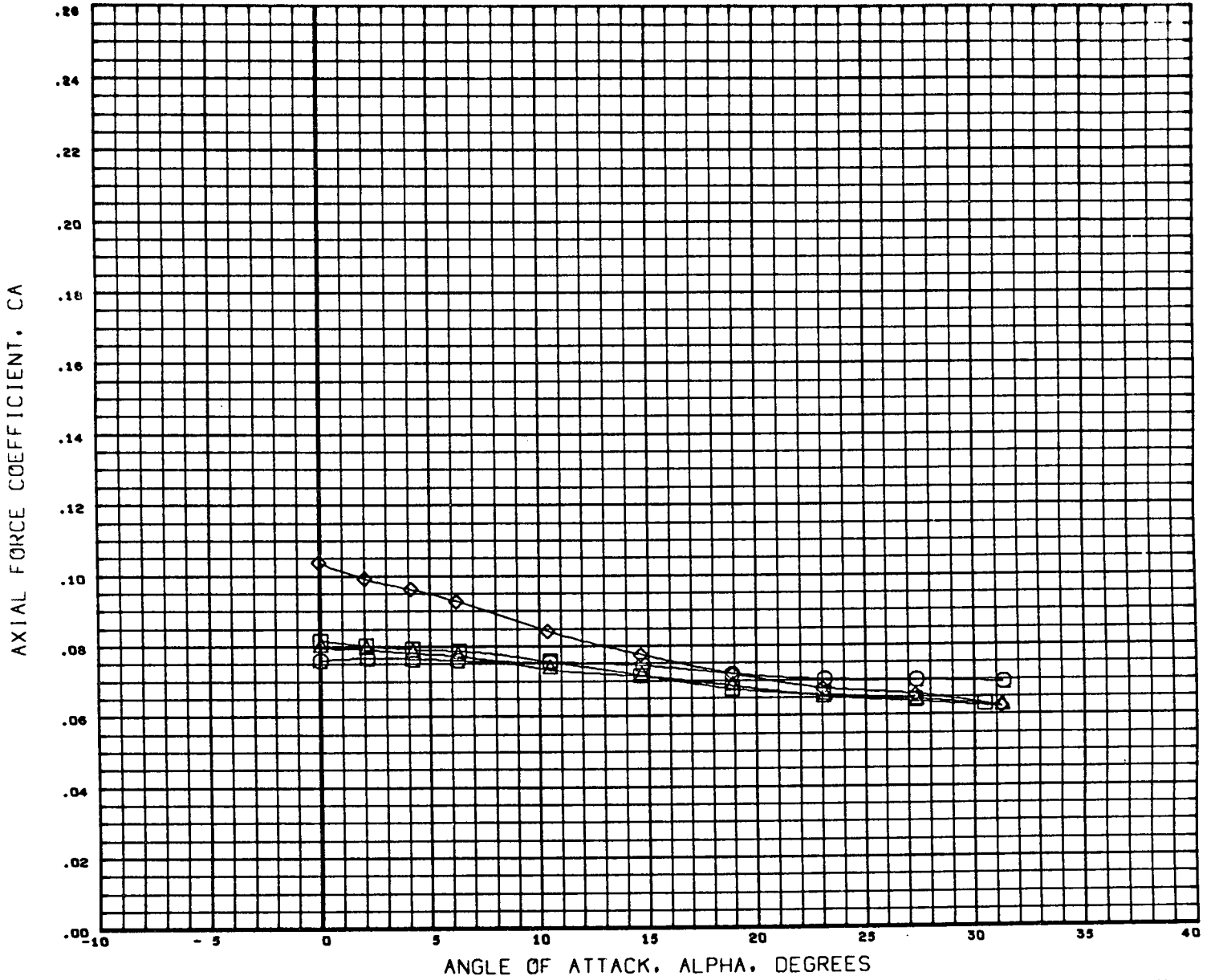
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF	25.5560 SQ IN.
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF	4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF	6.6150 IN.
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 2.01

FIG. 12 AILERON EFFECTIVENESS

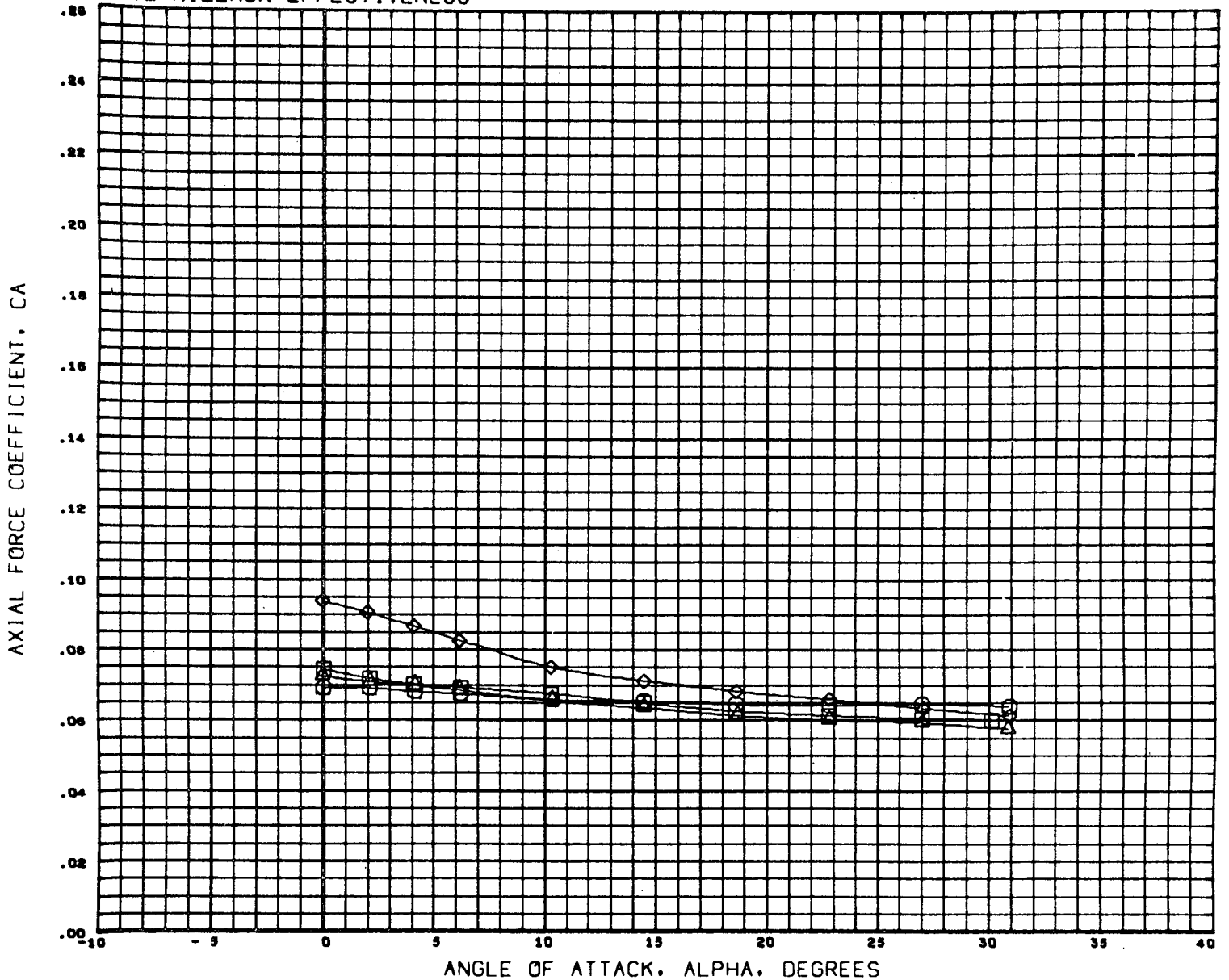


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG. 12 AILERON EFFECTIVENESS

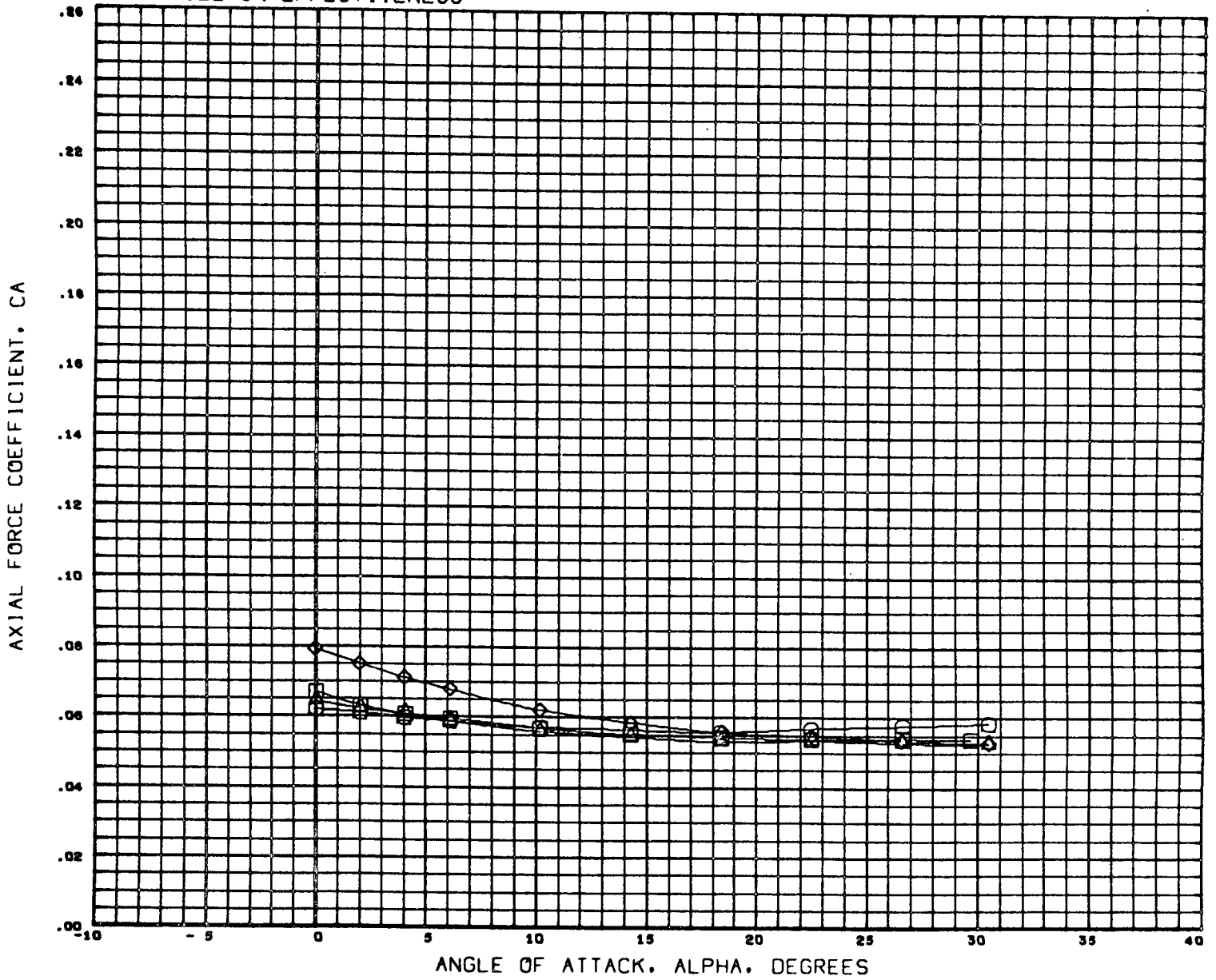


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB061)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF	25.5560 SQ IN.
(RGB051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF	4.5720 IN.
(RGB031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF	6.6150 IN.
(RGB052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

PAGE 79

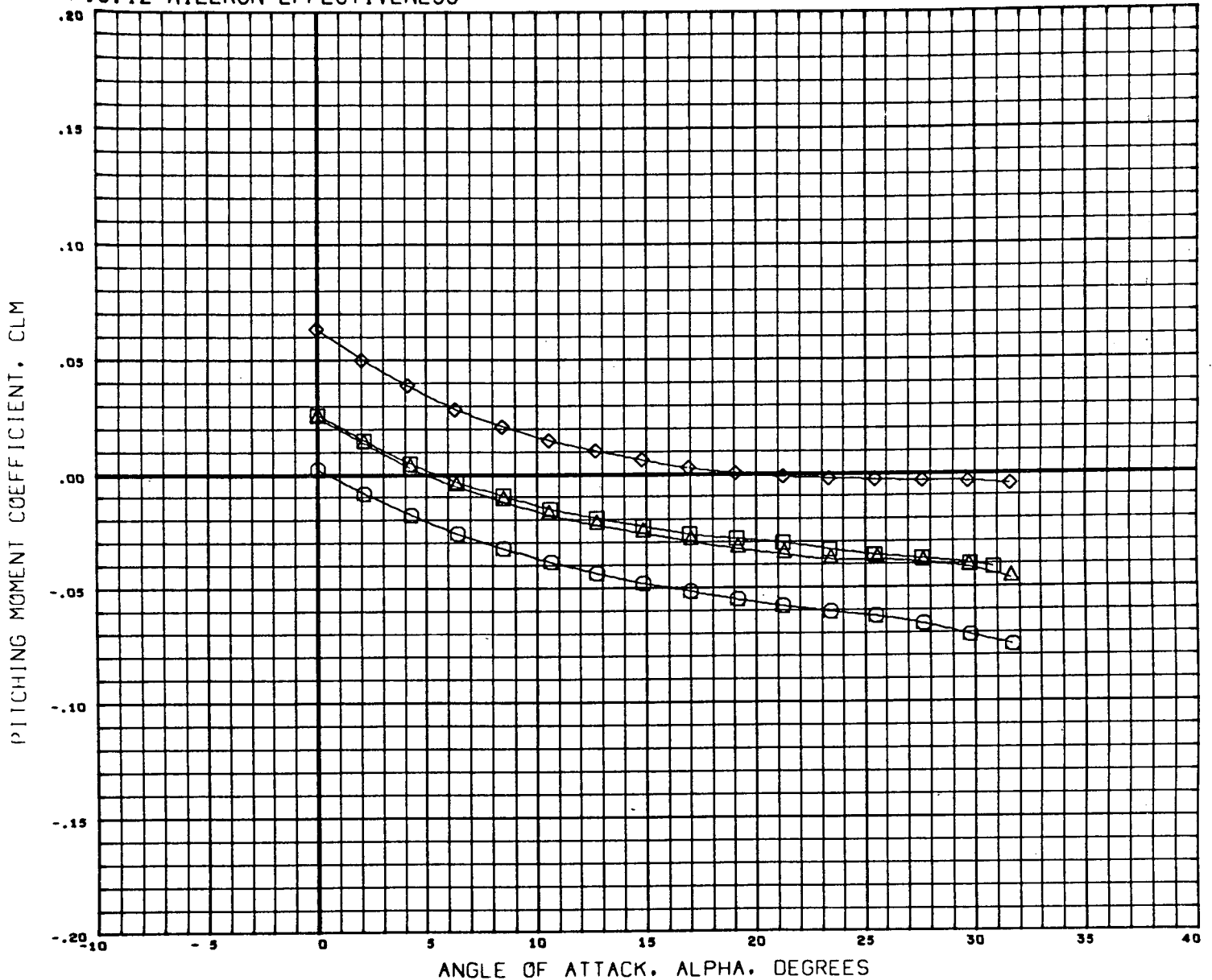
FIG.12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B001)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B001)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B001)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B002)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

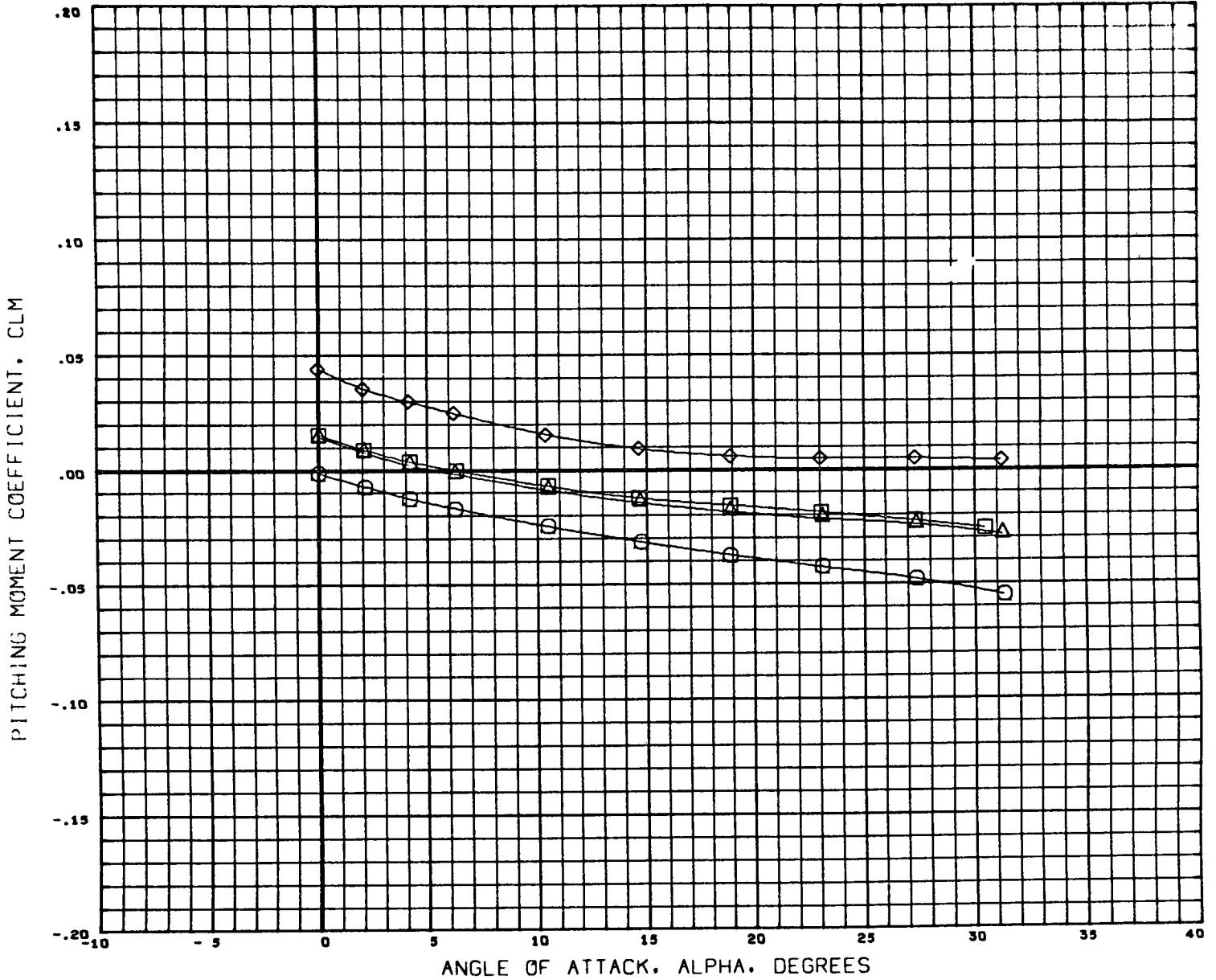
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF	25.5560 SQ IN.
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF	4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF	6.6150 IN.
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 2.01

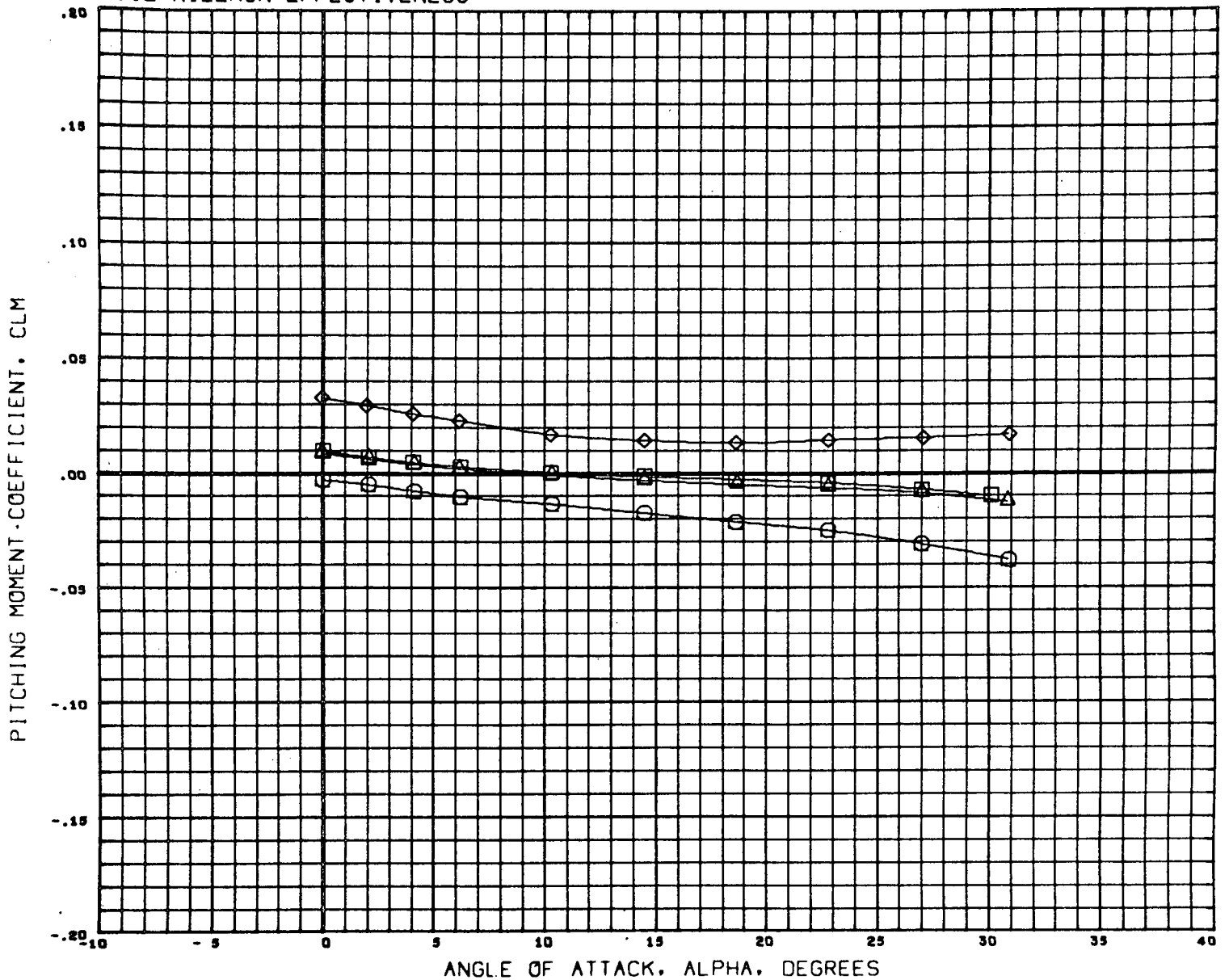
FIG.12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0079

MACH 2.42

FIG.12 AILERON EFFECTIVENESS



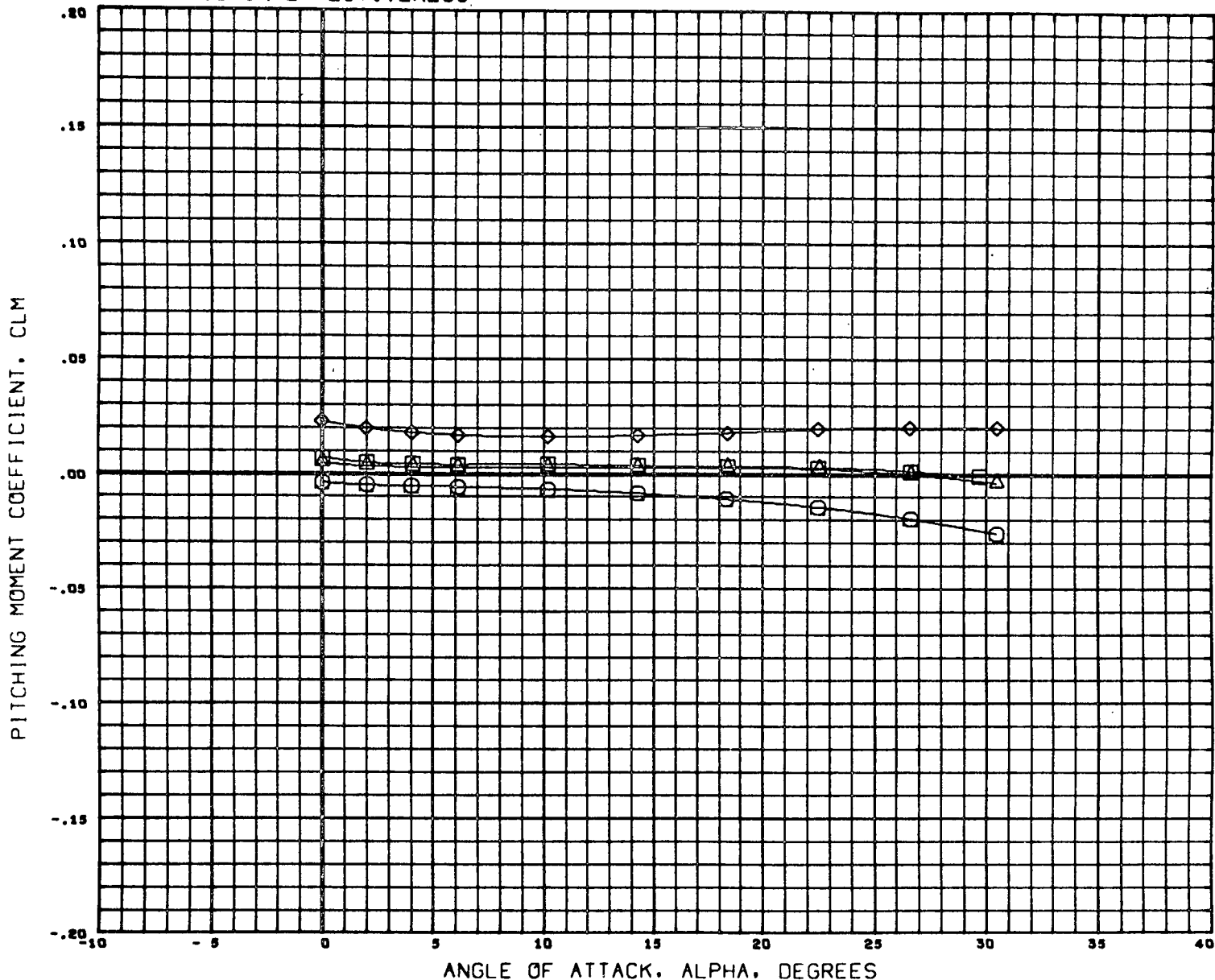
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R8001)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R8051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R8031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R8052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

LELEVN	RELEVN	RUDDER
10.000	-10.000	0.000
0.000	-20.000	0.000
-20.000	-40.000	0.000
0.000	-20.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XM RP	1067.9040	IN.
YM RP	0.0000	IN.
ZM RP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

FIG. 12 AILERON EFFECTIVENESS

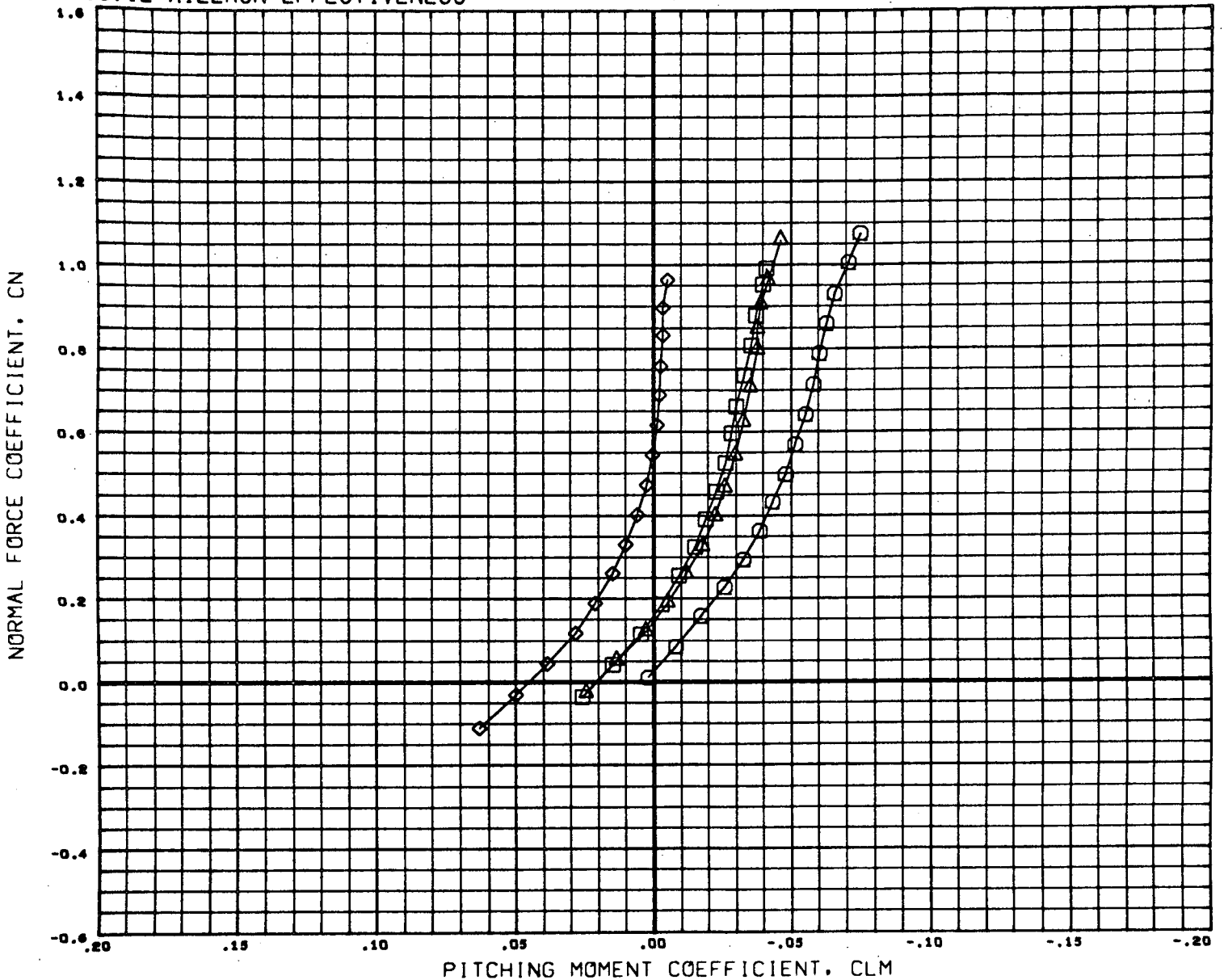


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

PAGE 84

FIG.12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B051)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R6B052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1

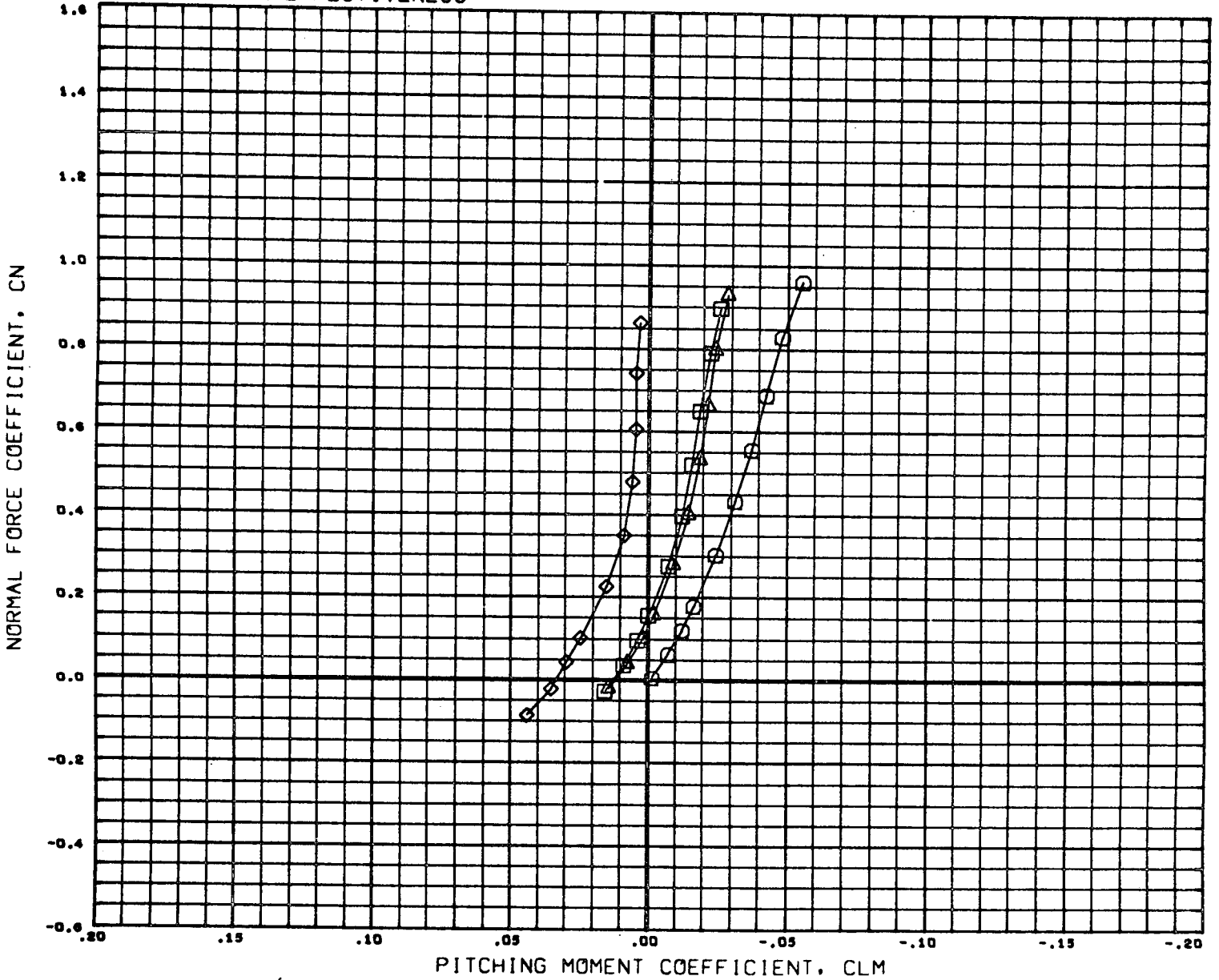
LELEVN	RELEVN	RUDDER
10.000	-10.000	0.000
0.000	-20.000	0.000
-20.000	-40.000	0.000
0.000	-20.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

PAGE 85

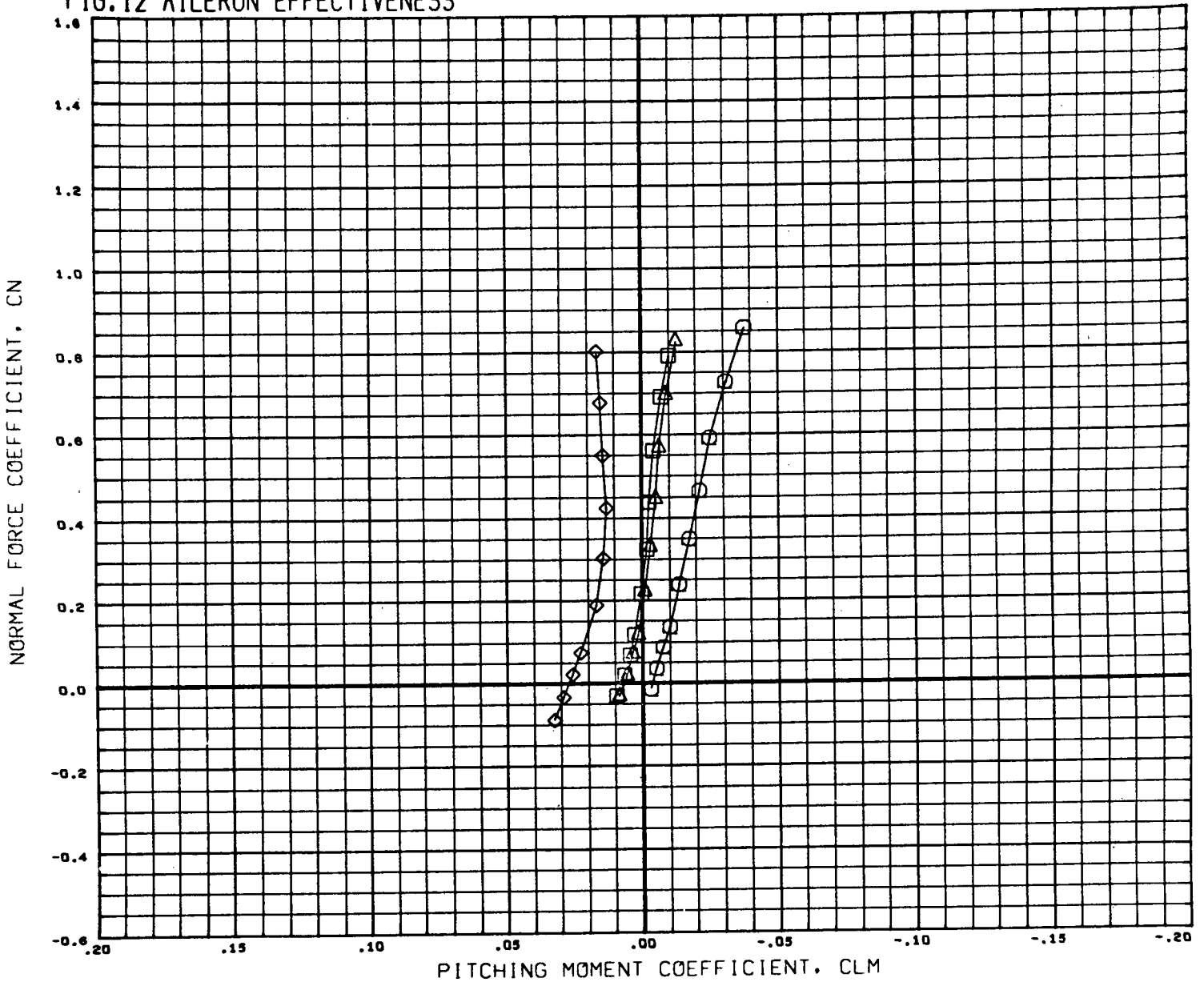
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB081)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(RGB051)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(RGB031)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(RGB052)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

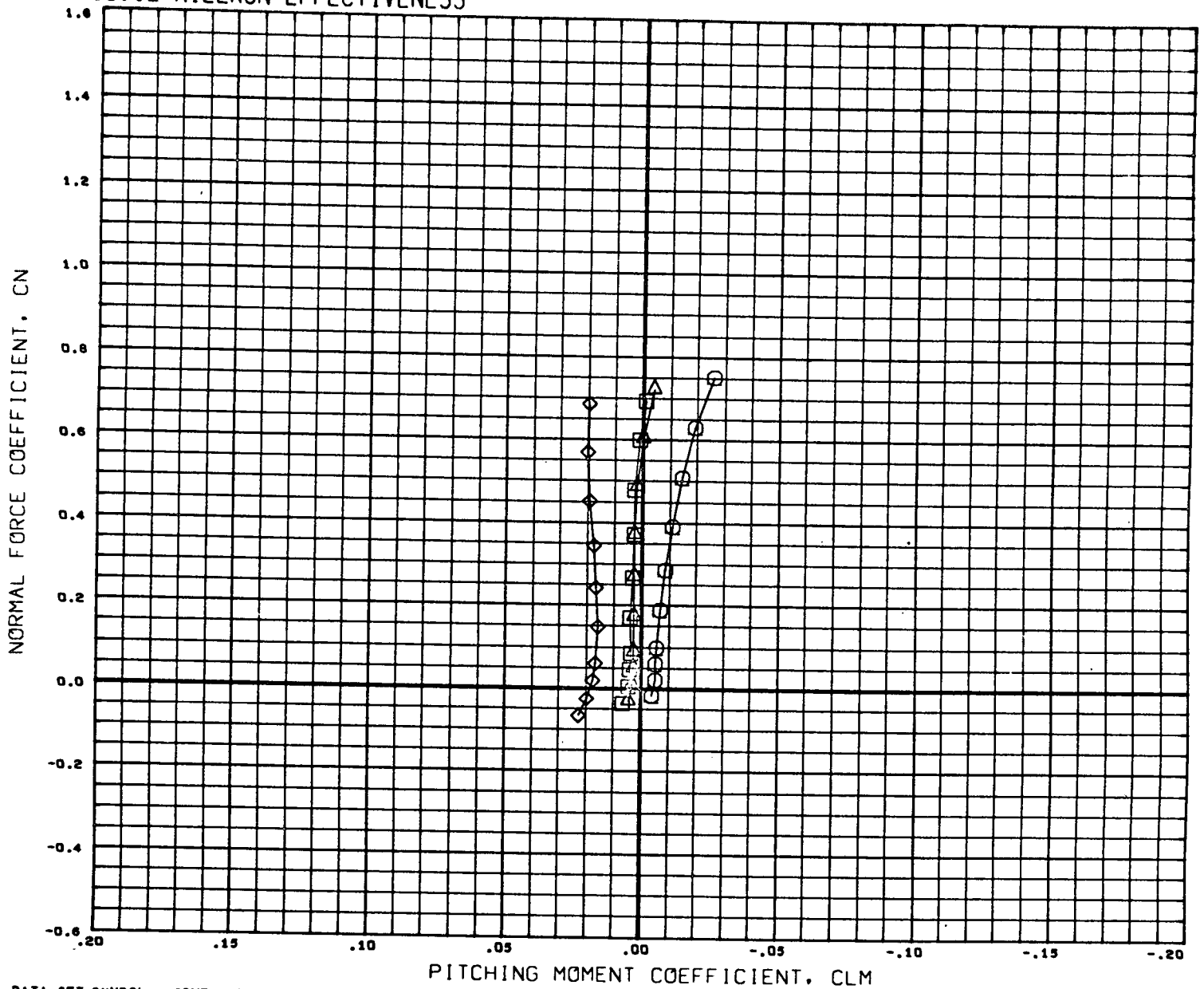
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB081)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	10.000	-10.000	0.000	SREF	25.5560 SQ IN.
(RGB091)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	LREF	4.5720 IN.
(RGB031)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF	6.6150 IN.
(RGB052)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

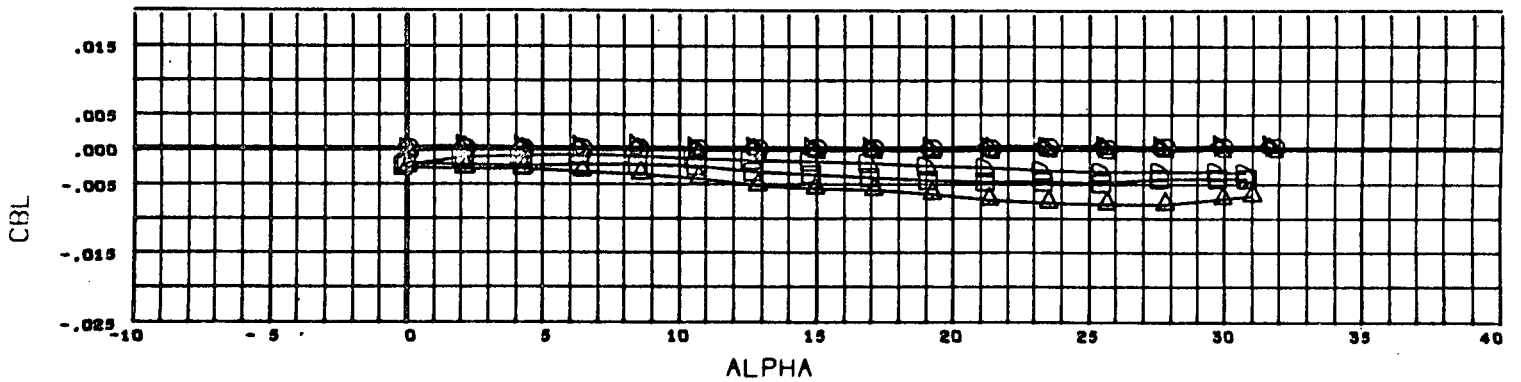
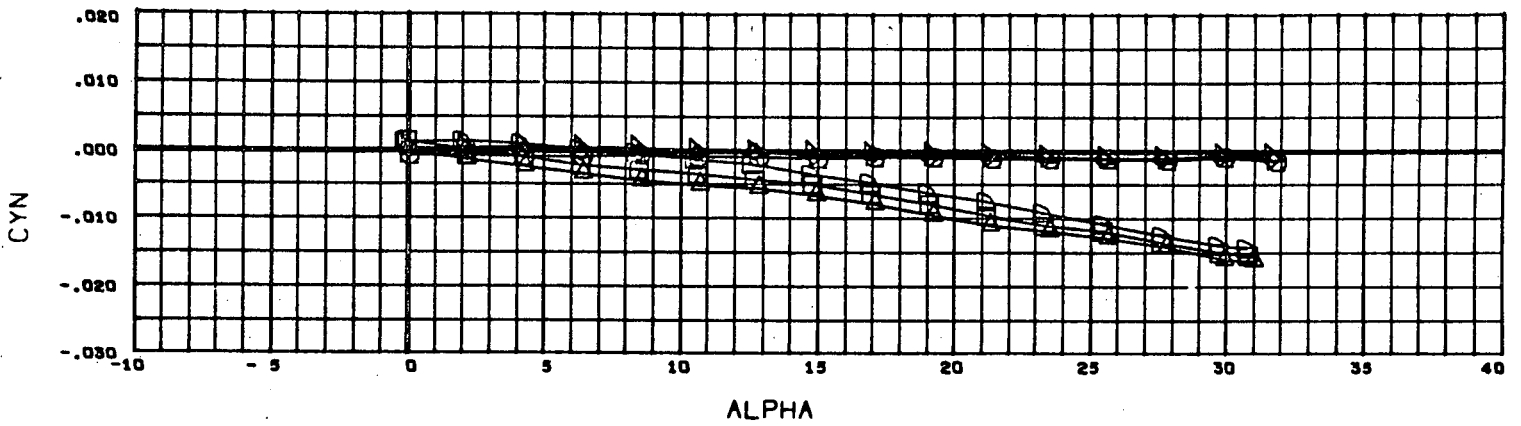
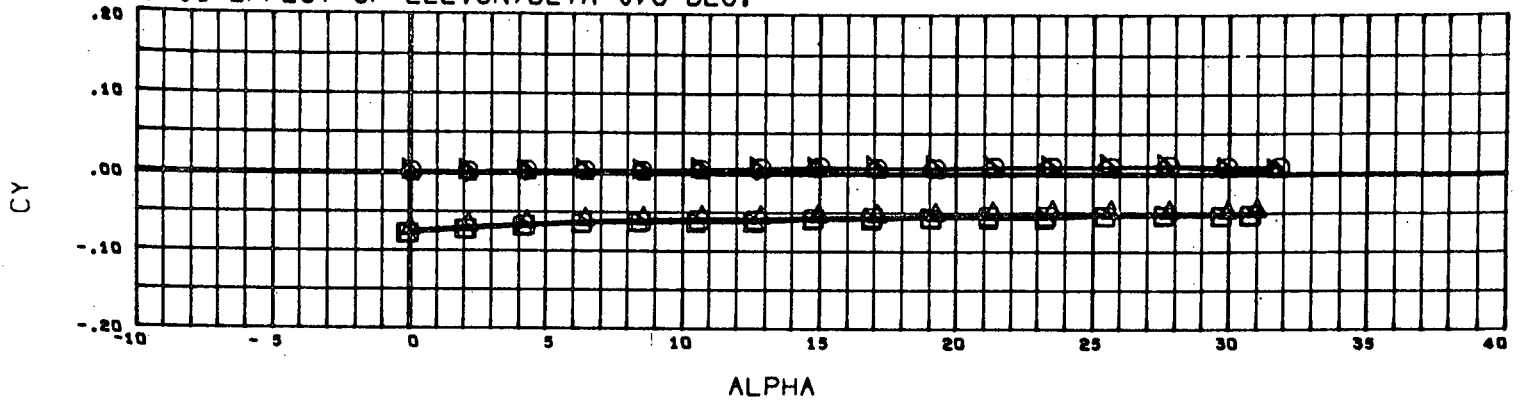
FIG. 12 AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B081)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	10.000	-10.000	0.000	SREF 25.5560 SQ IN.
(R6B051)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	LREF 4.5720 IN.
(R6B031)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	-20.000	-40.000	0.000	BREF 6.6150 IN.
(R6B092)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	-20.000	0.000	XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 13 EFFECT OF ELEVON, BETA=0.5 DEG.

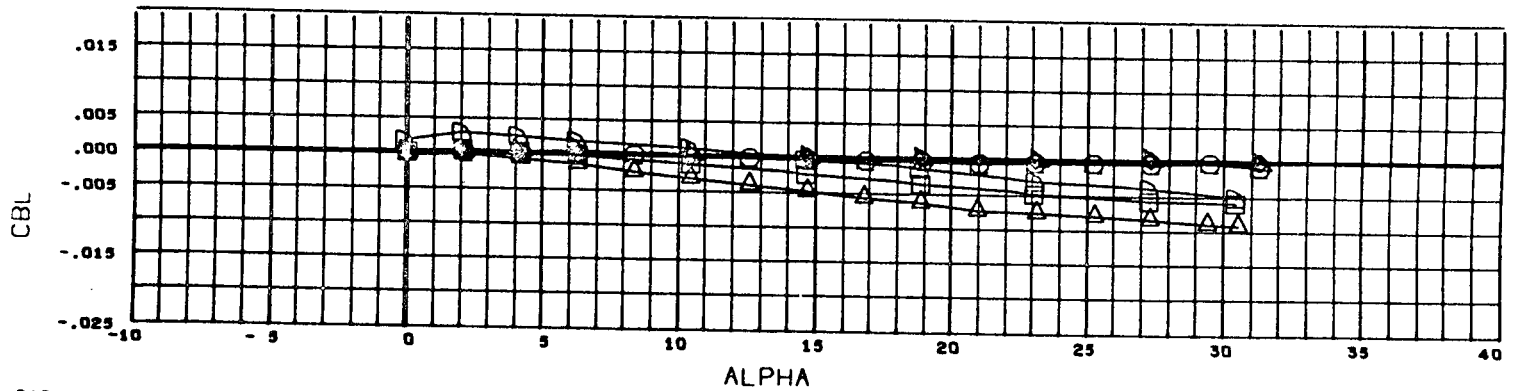
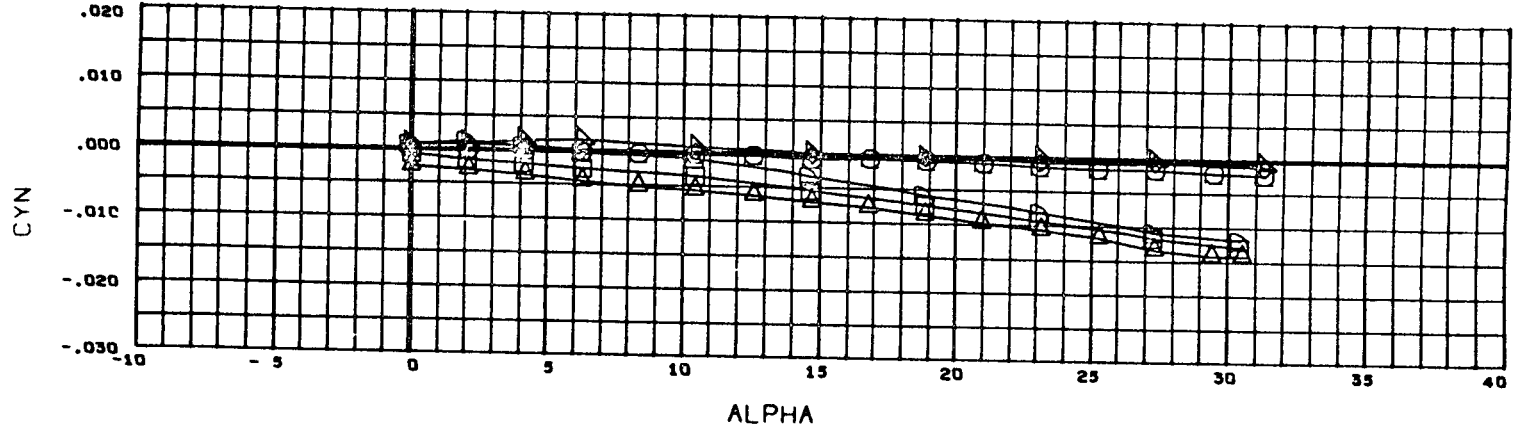
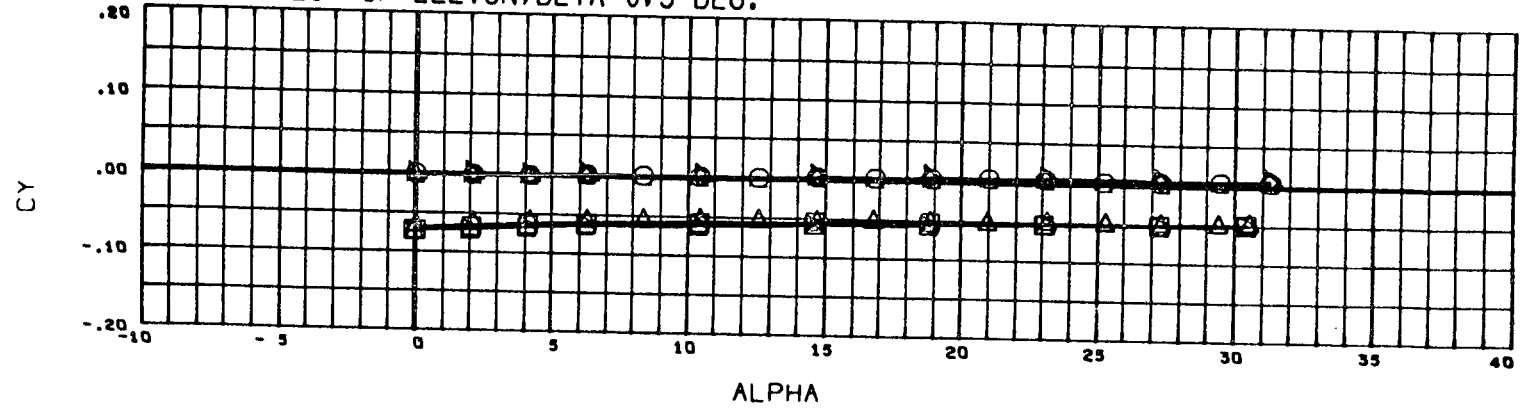


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	-20.000	0.000	BREF 6.6150 IN.
(RGB042)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-20.000	-20.000	0.000	YMRP 1067.9040 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-40.000	-40.000	0.000	ZMRP 0.0000 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

PAGE 89

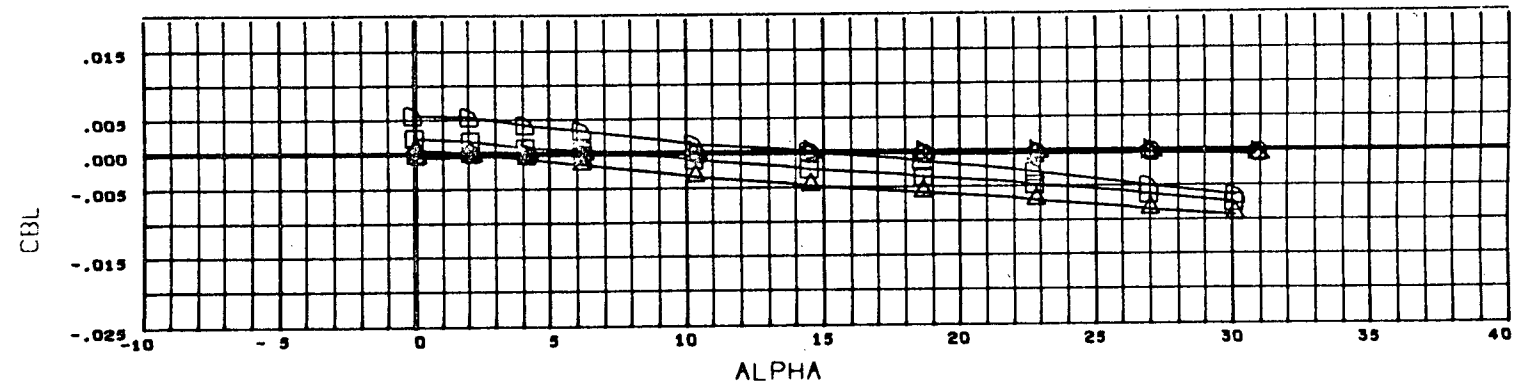
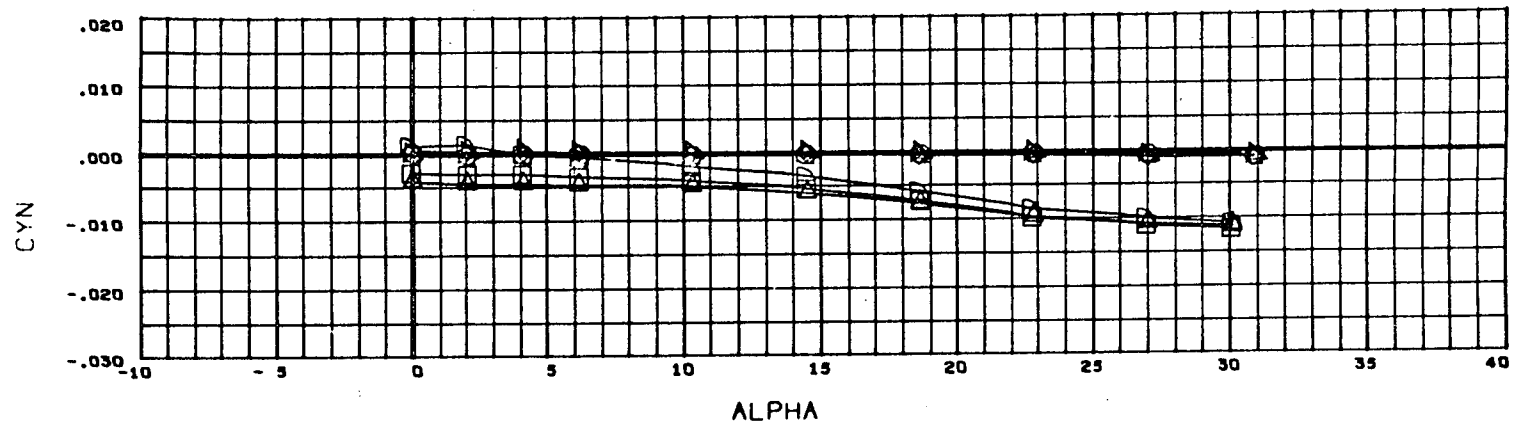
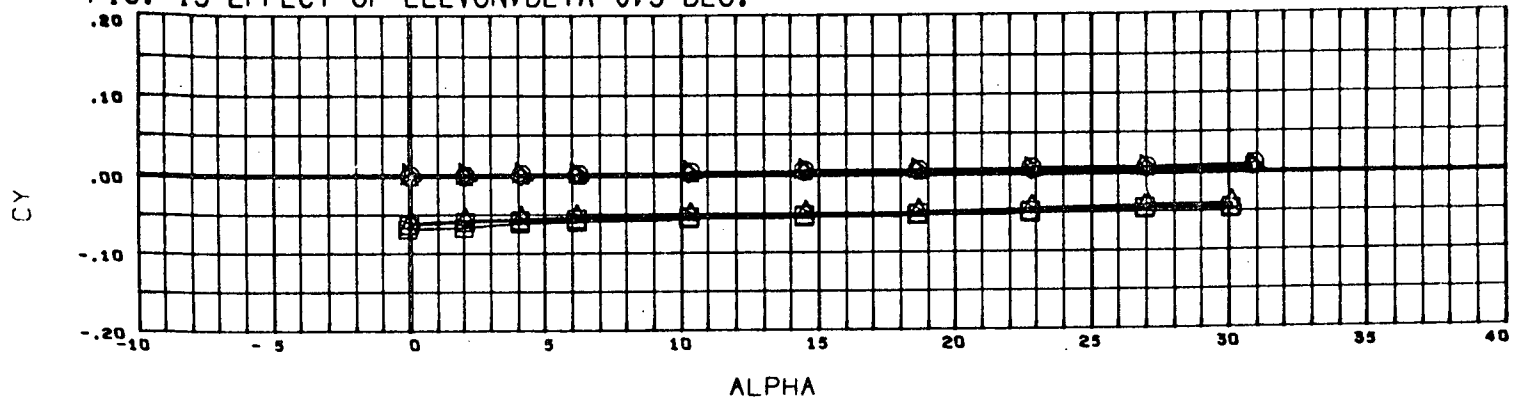
FIG. 13 EFFECT OF ELEVON, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	-20.000	0.000	BREF 6.6150 IN.
(RGB042)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

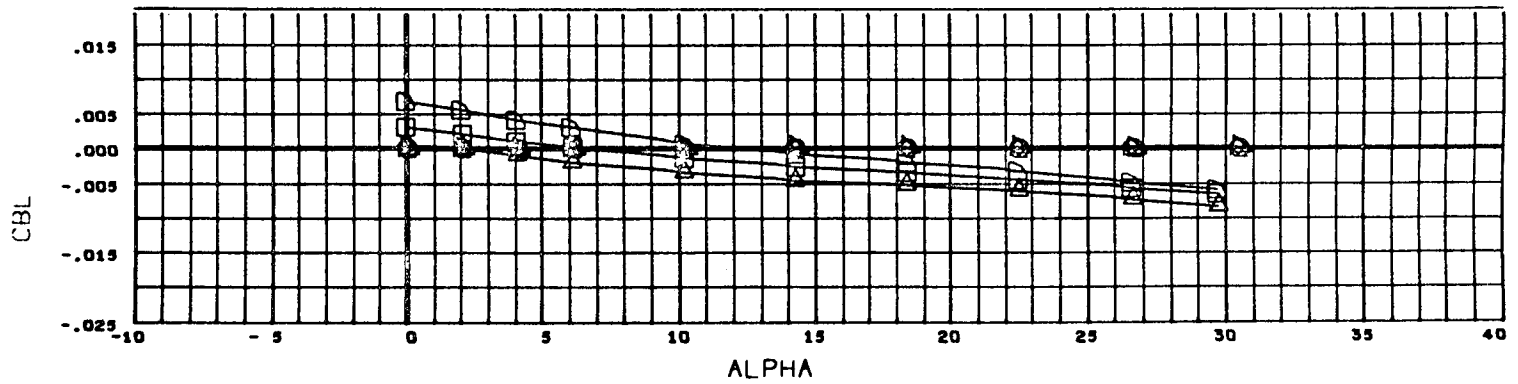
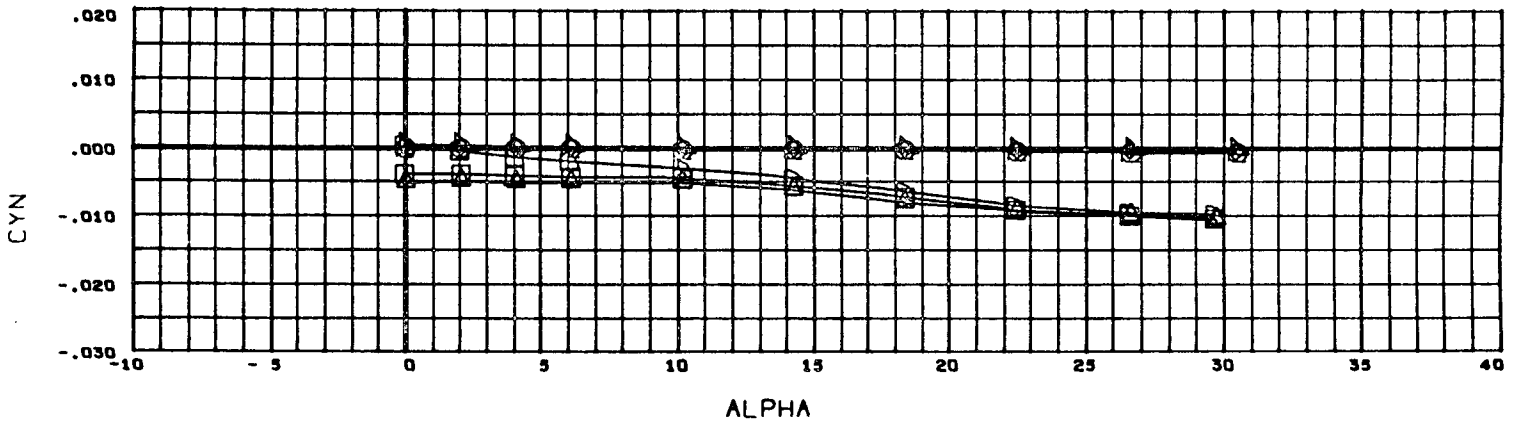
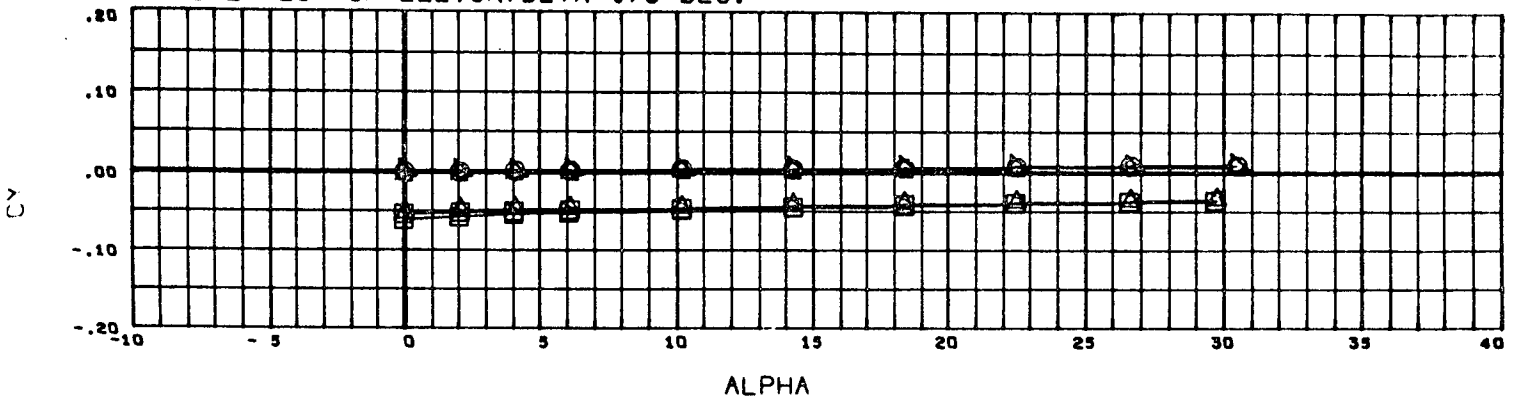
MACH 2.42

FIG. 13 EFFECT OF ELEVON, BETA=0.5 DEG.



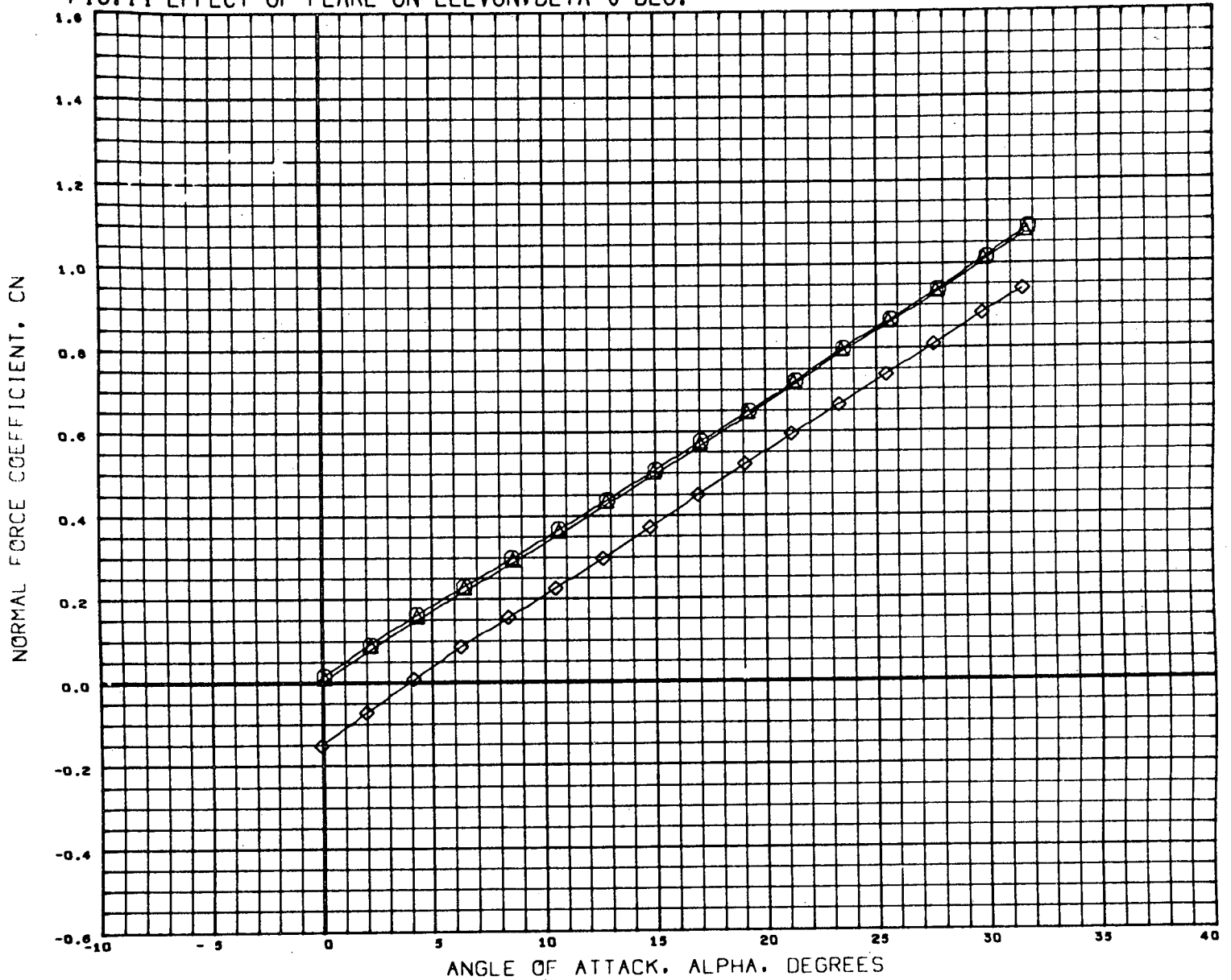
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	-20.000	0.000	BREF 6.6150 IN.
(RGB042)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

FIG. 13 EFFECT OF ELEVN, BETA=0.5 DEG.



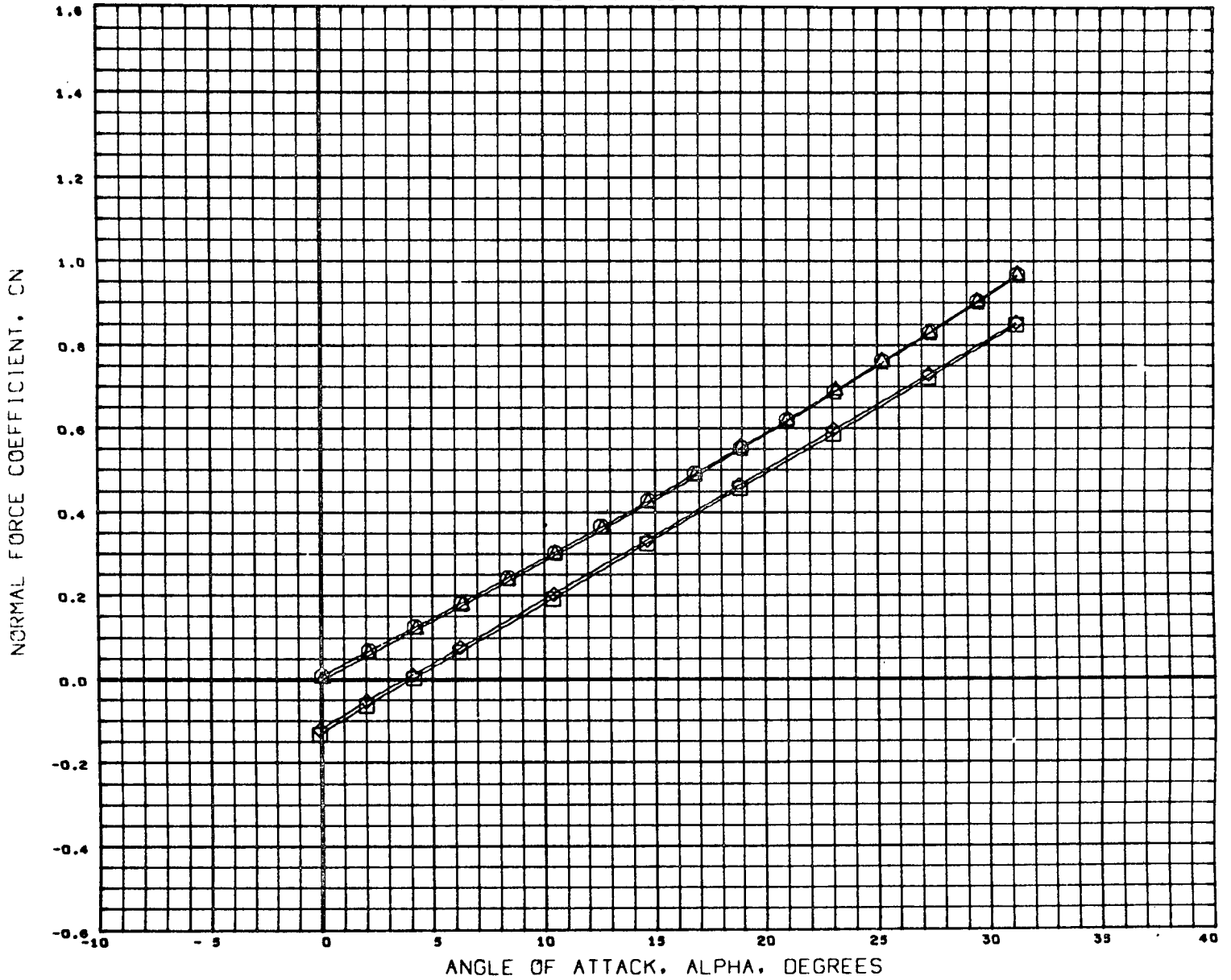
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB041)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-20.000	-20.000	0.000	BREF 6.6150 IN.
(RGB042)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-20.000	-20.000	0.000	XMRP 1067.9040 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB121)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.

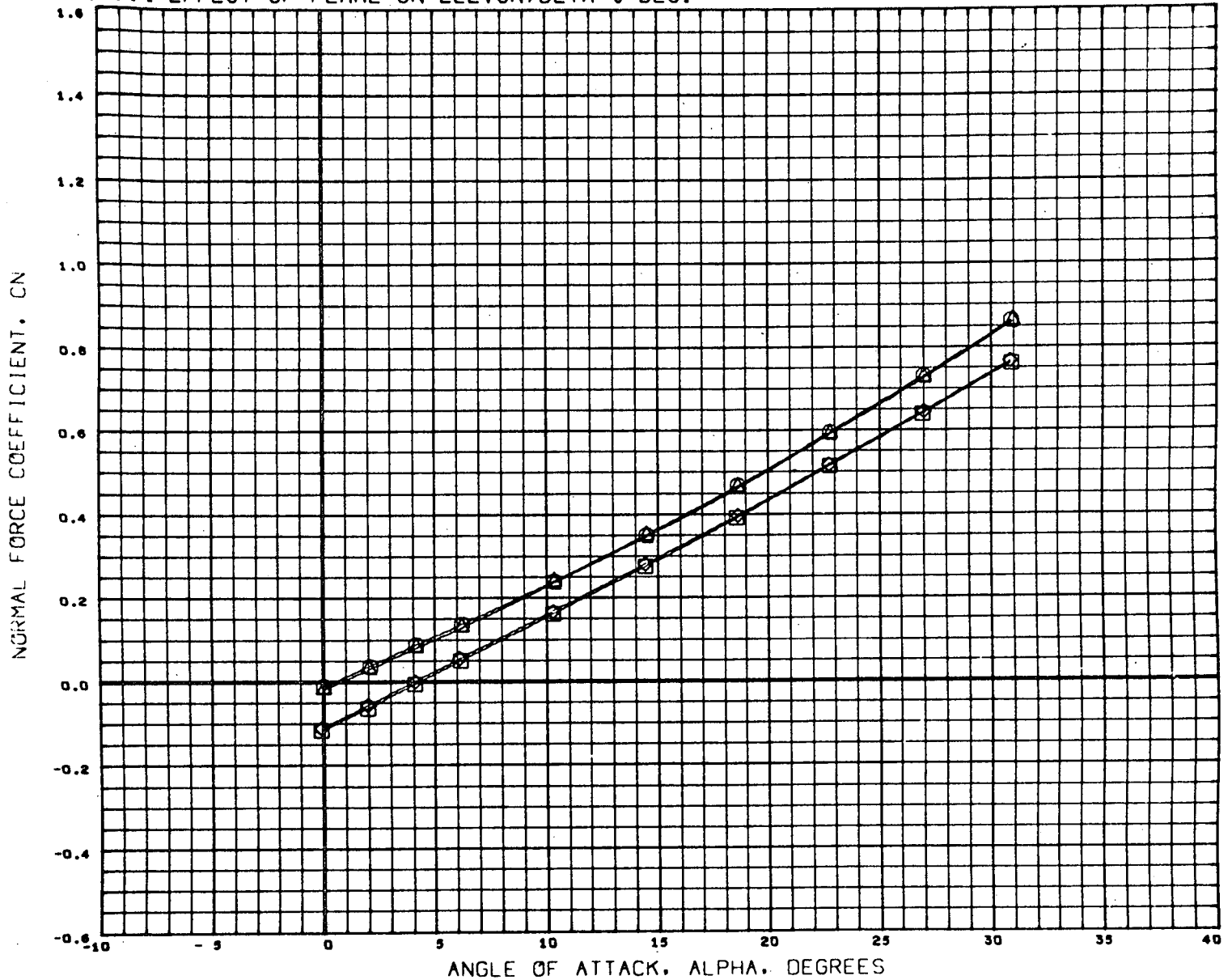


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

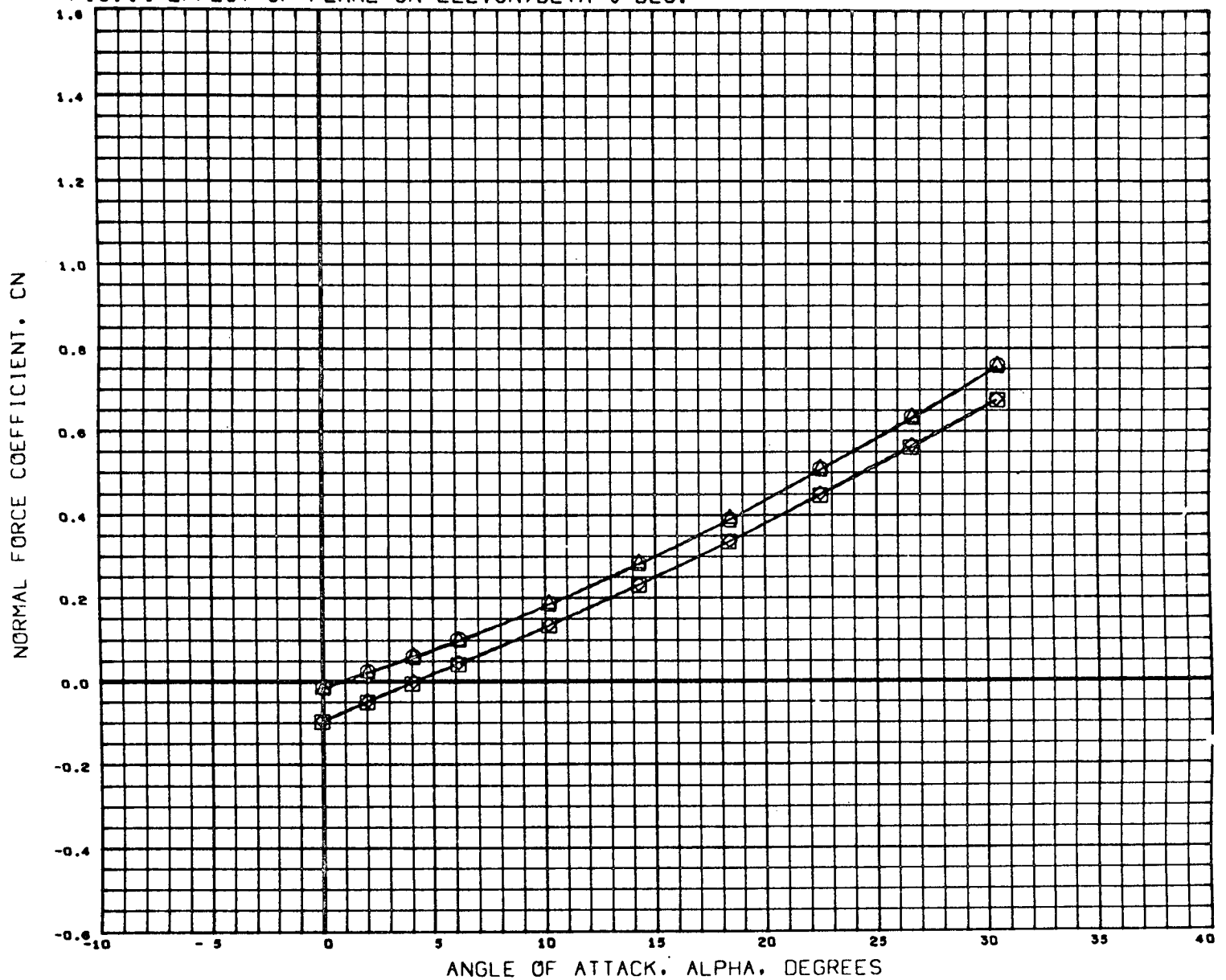
PAGE 94

FIG. 14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



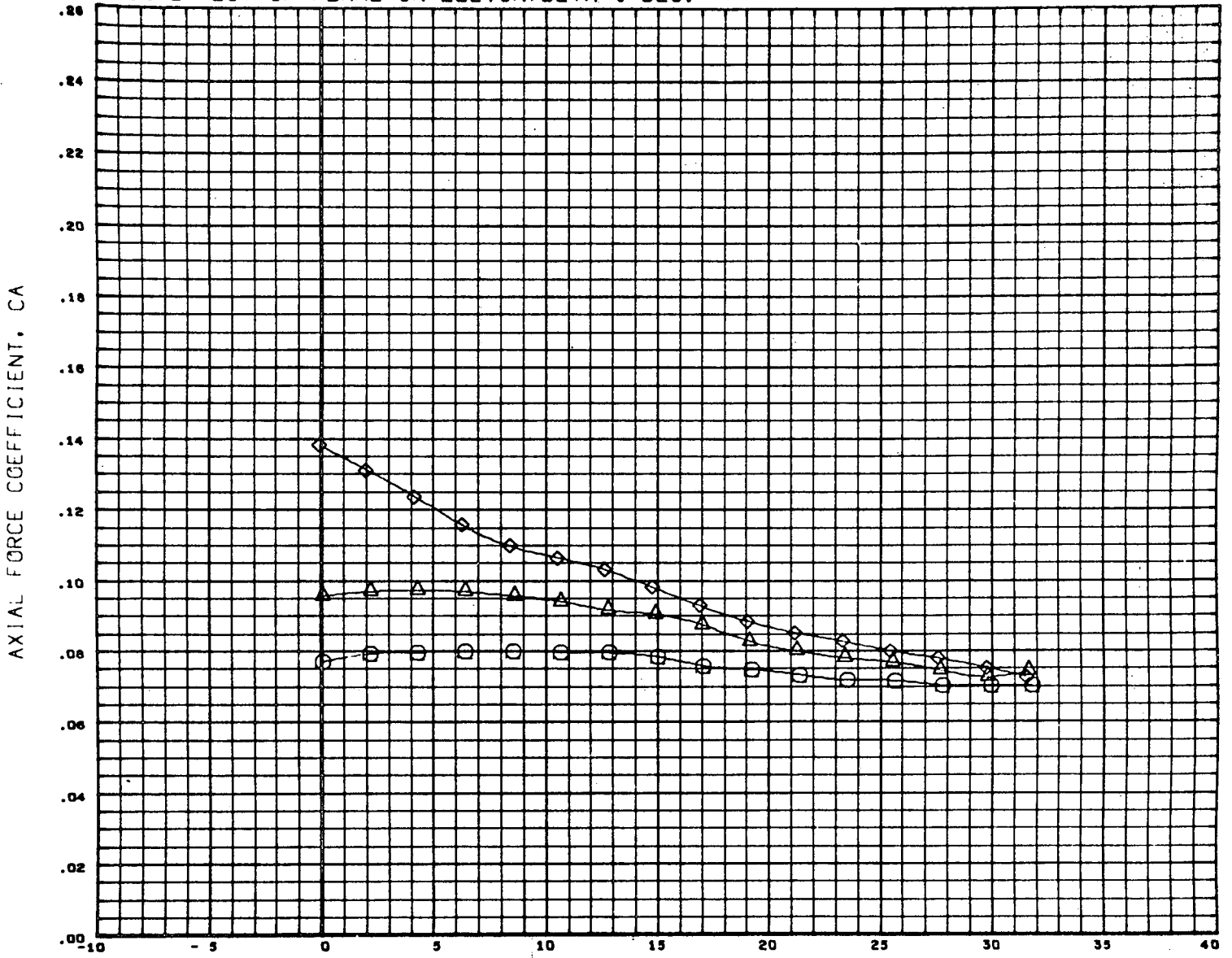
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XM RP 1067.9040 IN.
						YM RP 0.0000 IN.
						ZM RP 400.0004 IN.
						SCALE 0.0075

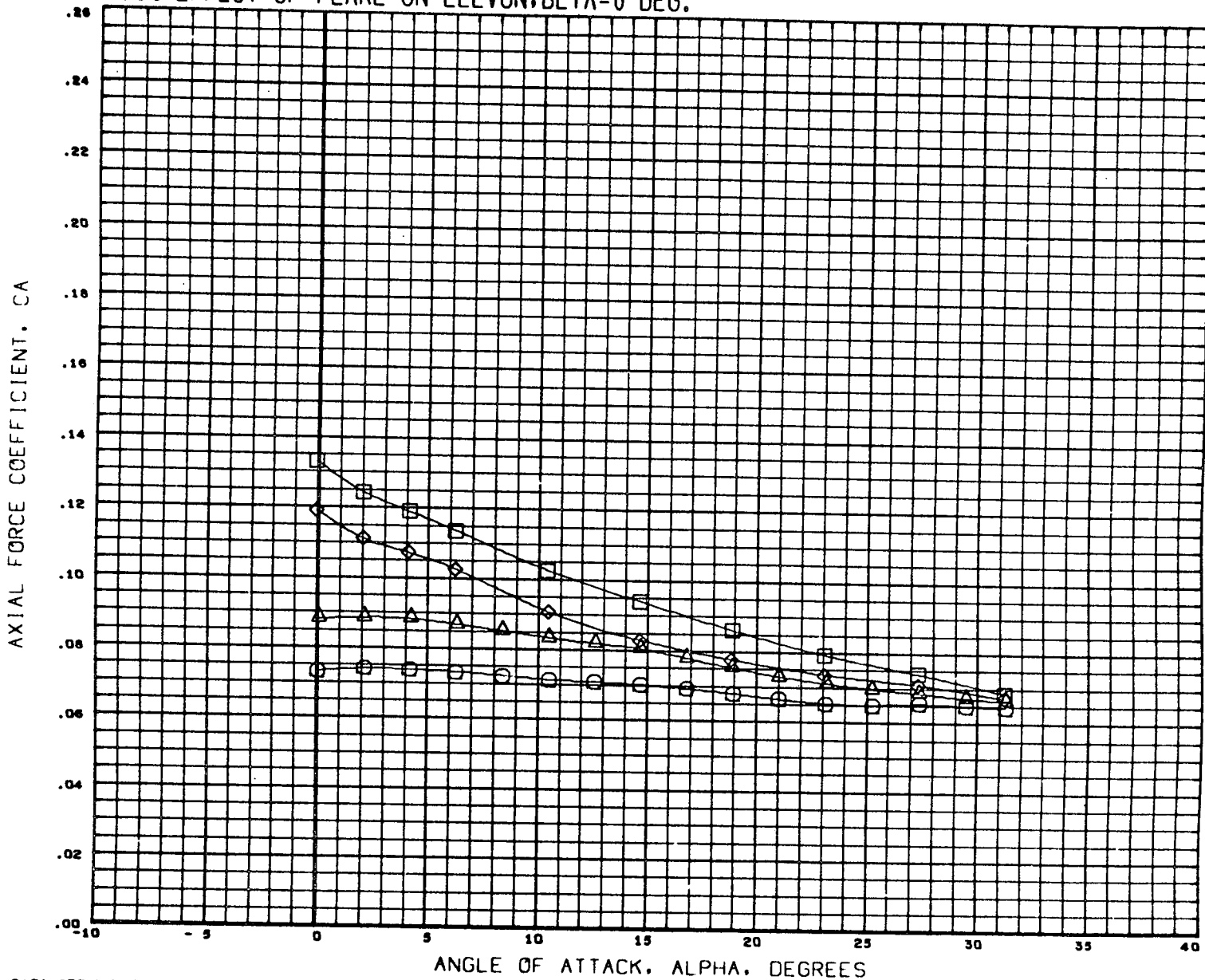
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 2.01

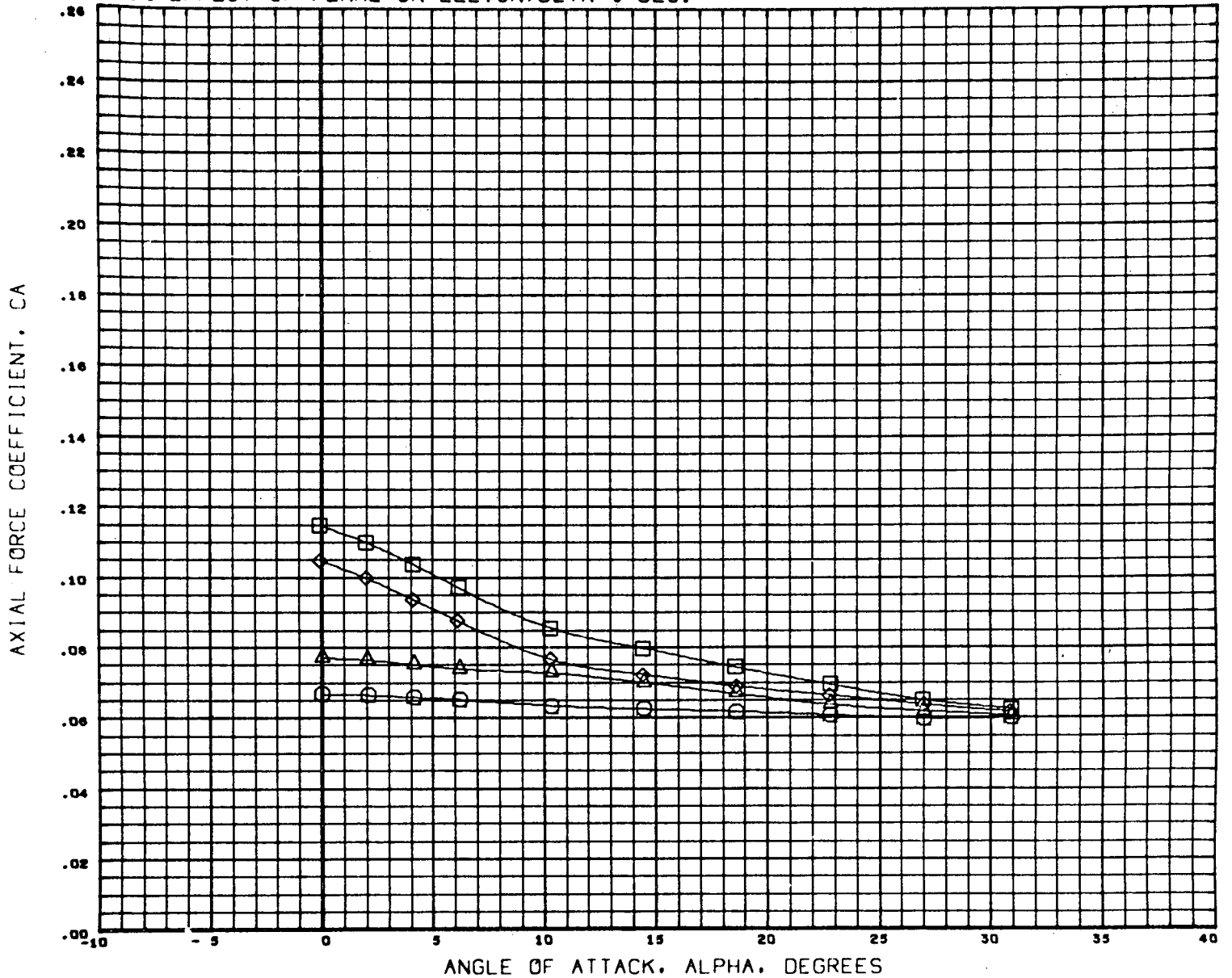
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

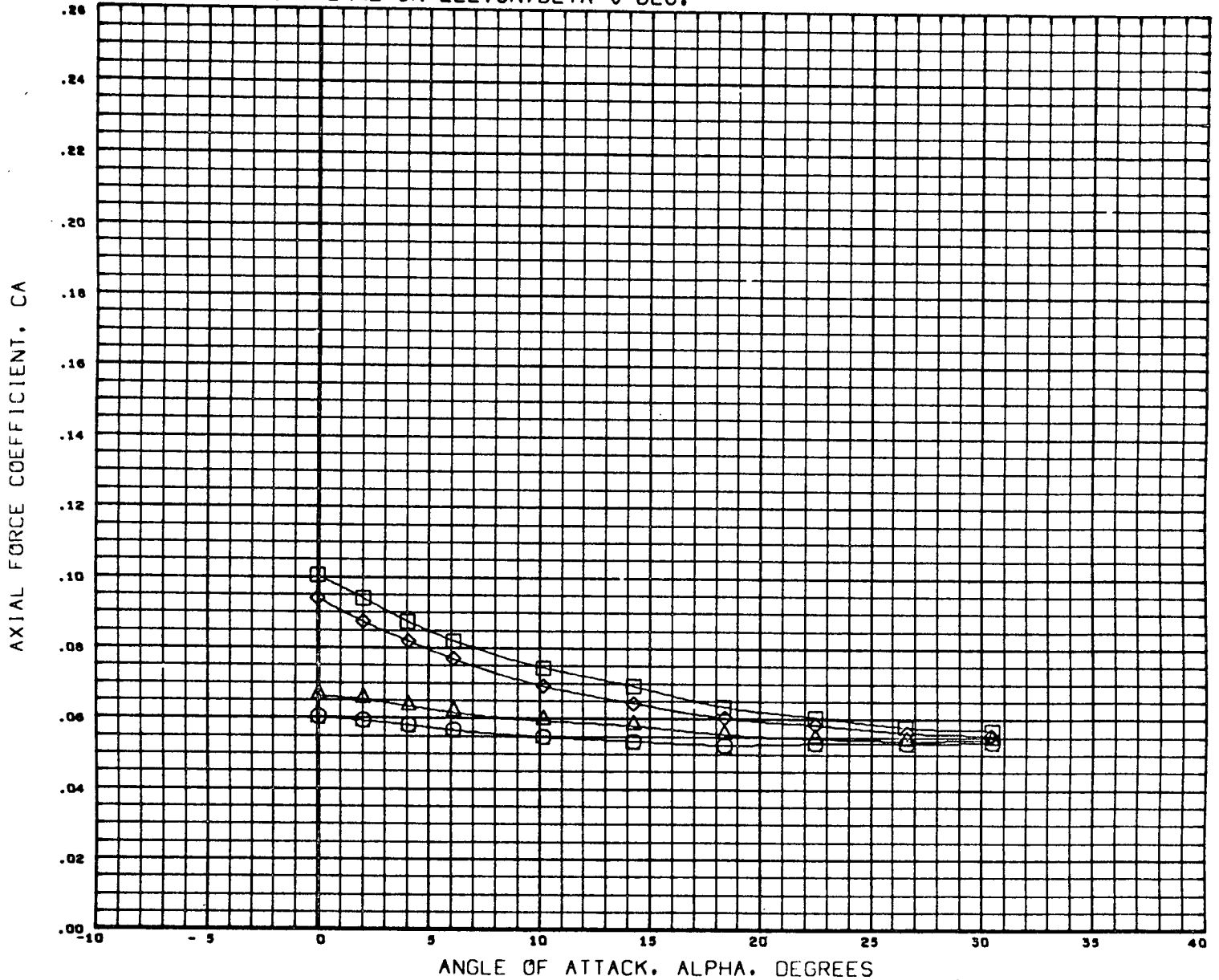
MACH 2.42

FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.

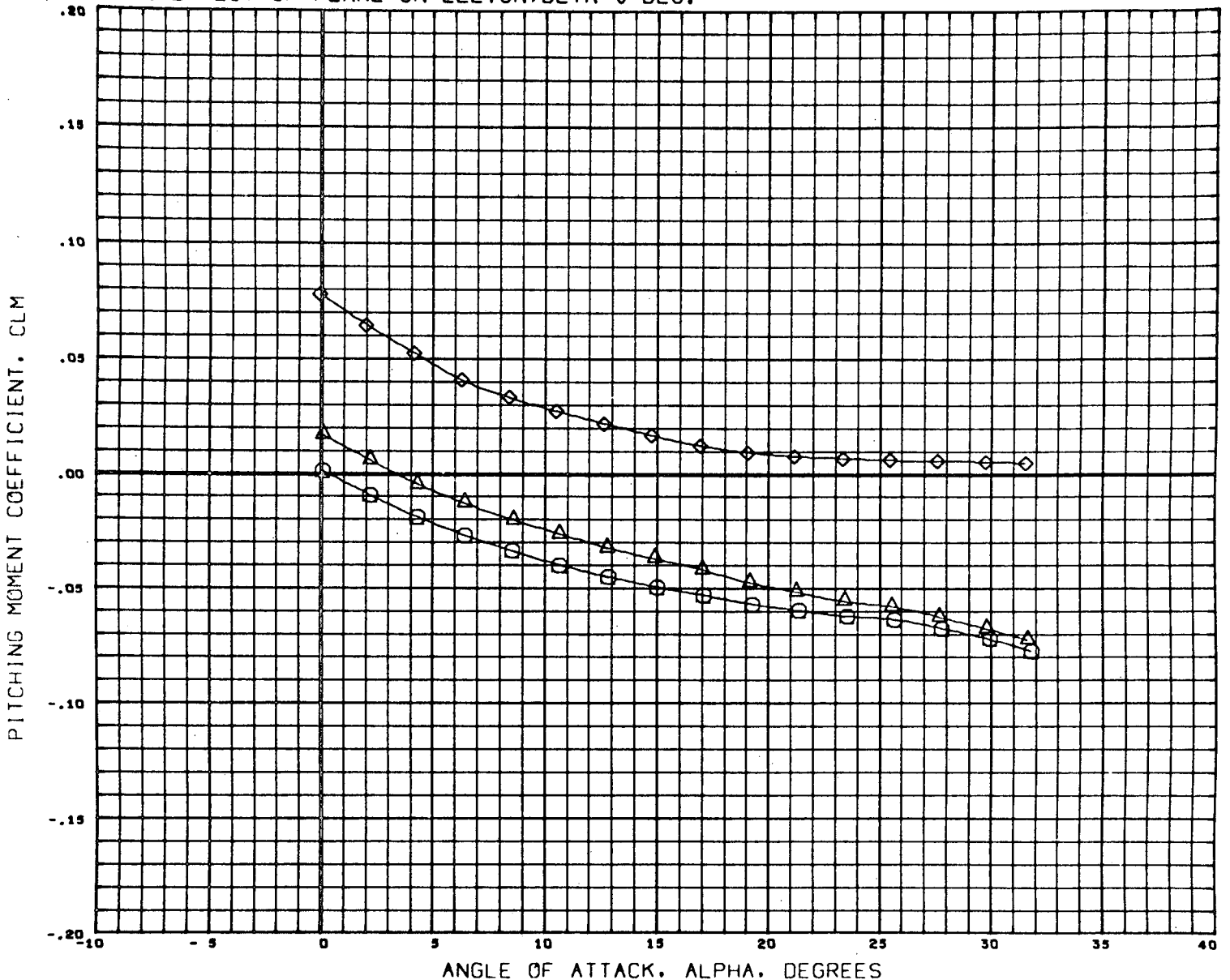


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RÜDDEr	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

PAGE 100

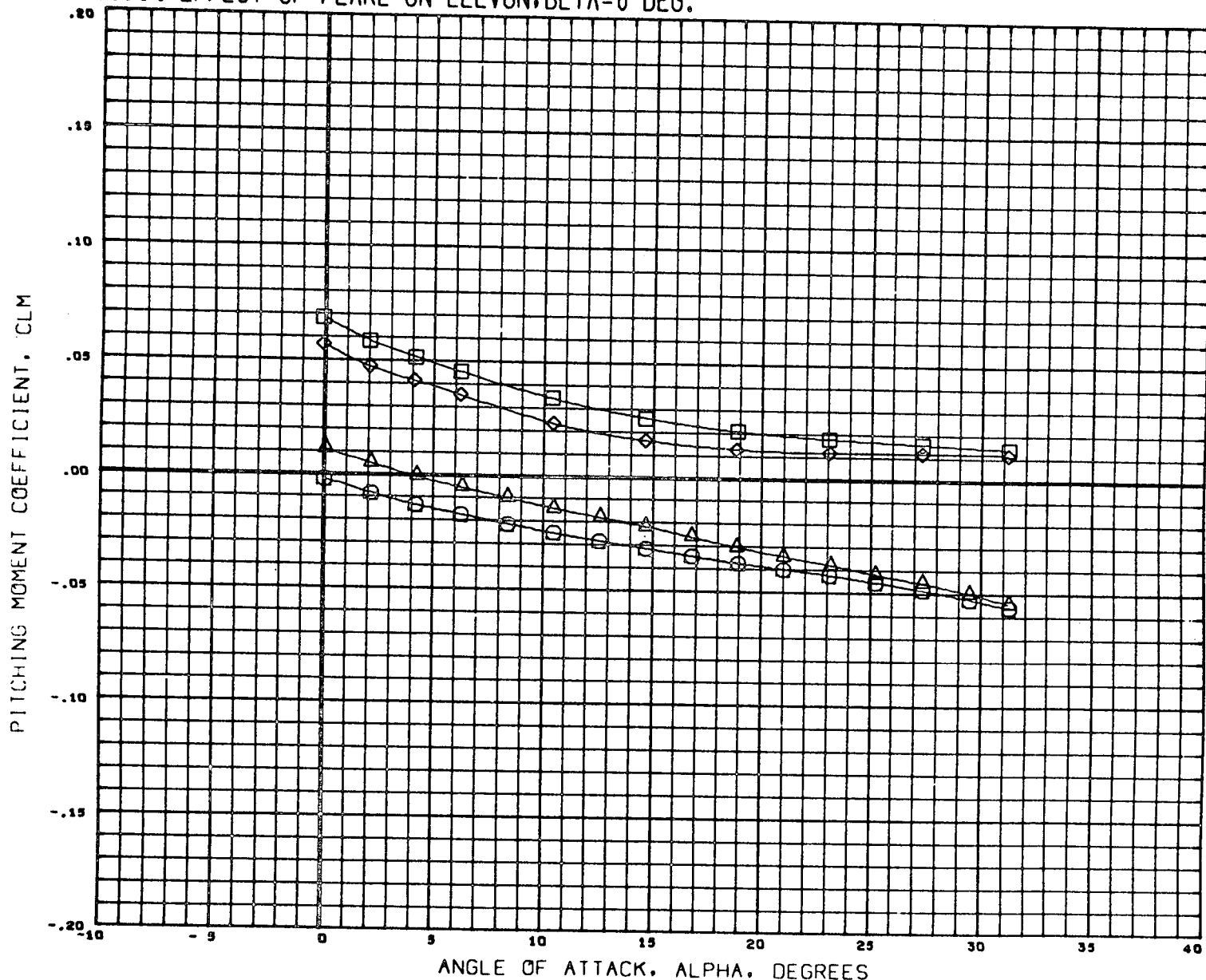
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XG8011)	JPL WT 20-881 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8111)	JPL WT 20-881 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XG8021)	JPL WT 20-881 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XG8121)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 2.01

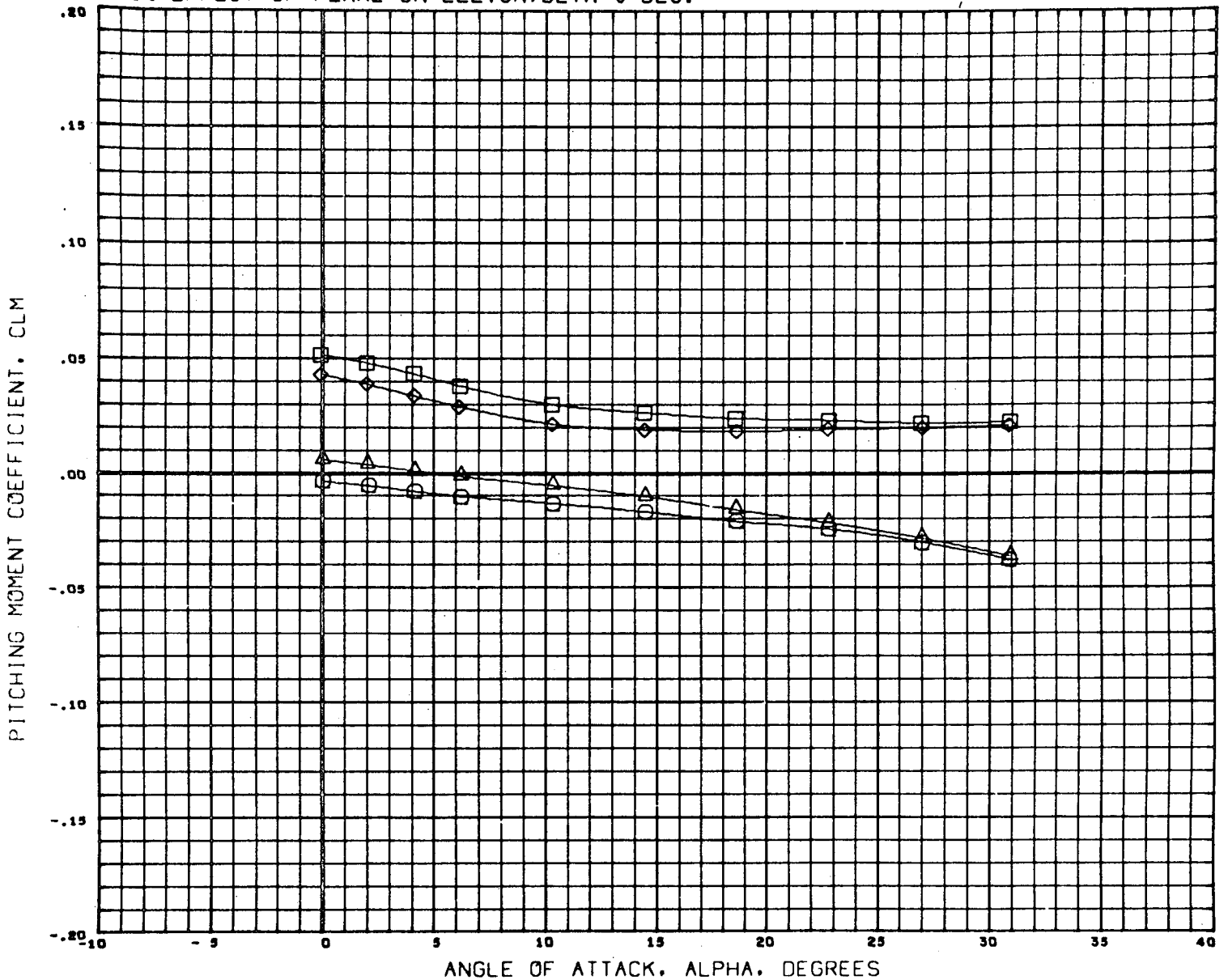
FIG. 14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 29.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

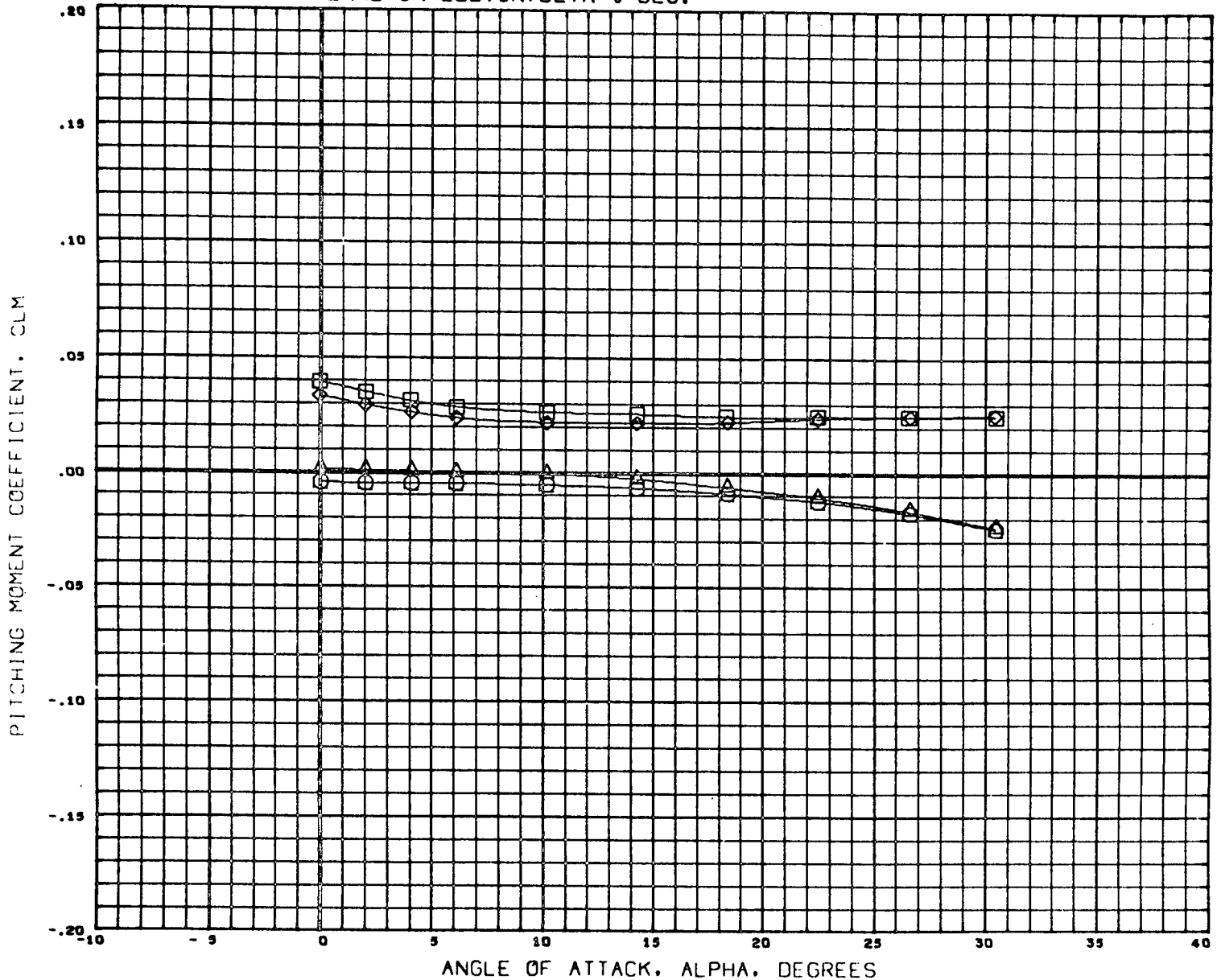
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0000 IN. SCALE 0.0075

MACH 3.03

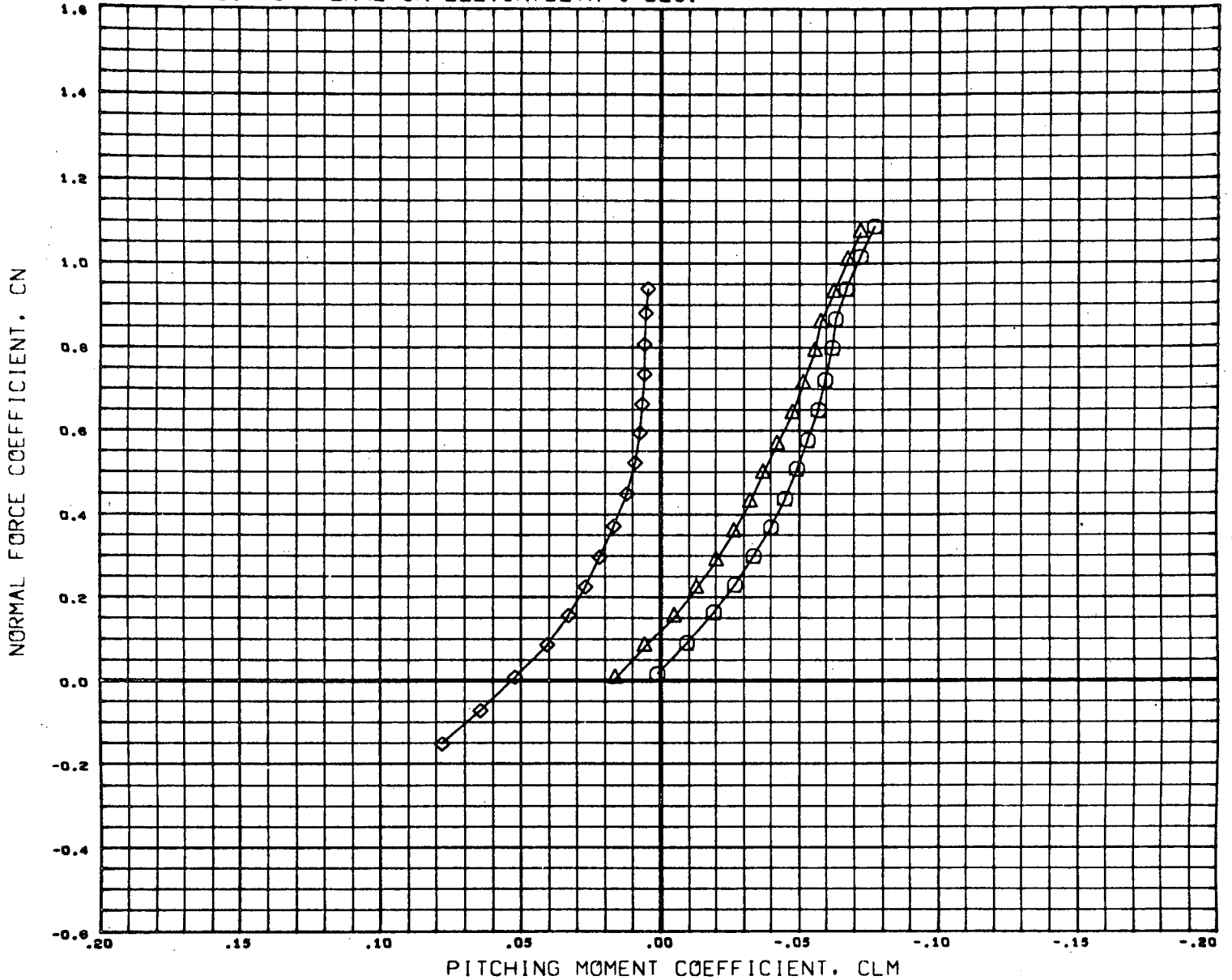
FIG. 14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XG8021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	θREF 6.6150 IN.
(XG8121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)::1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

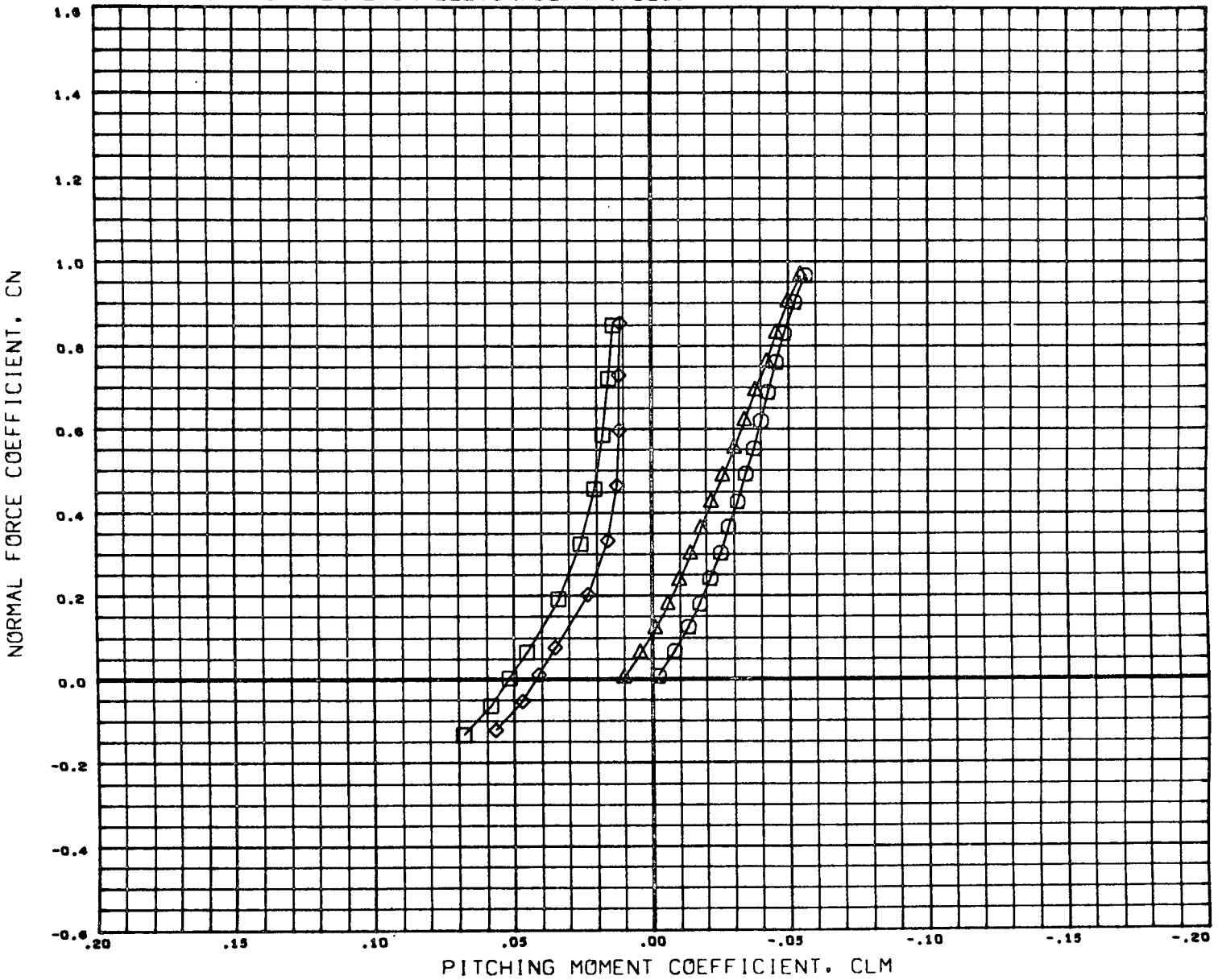
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

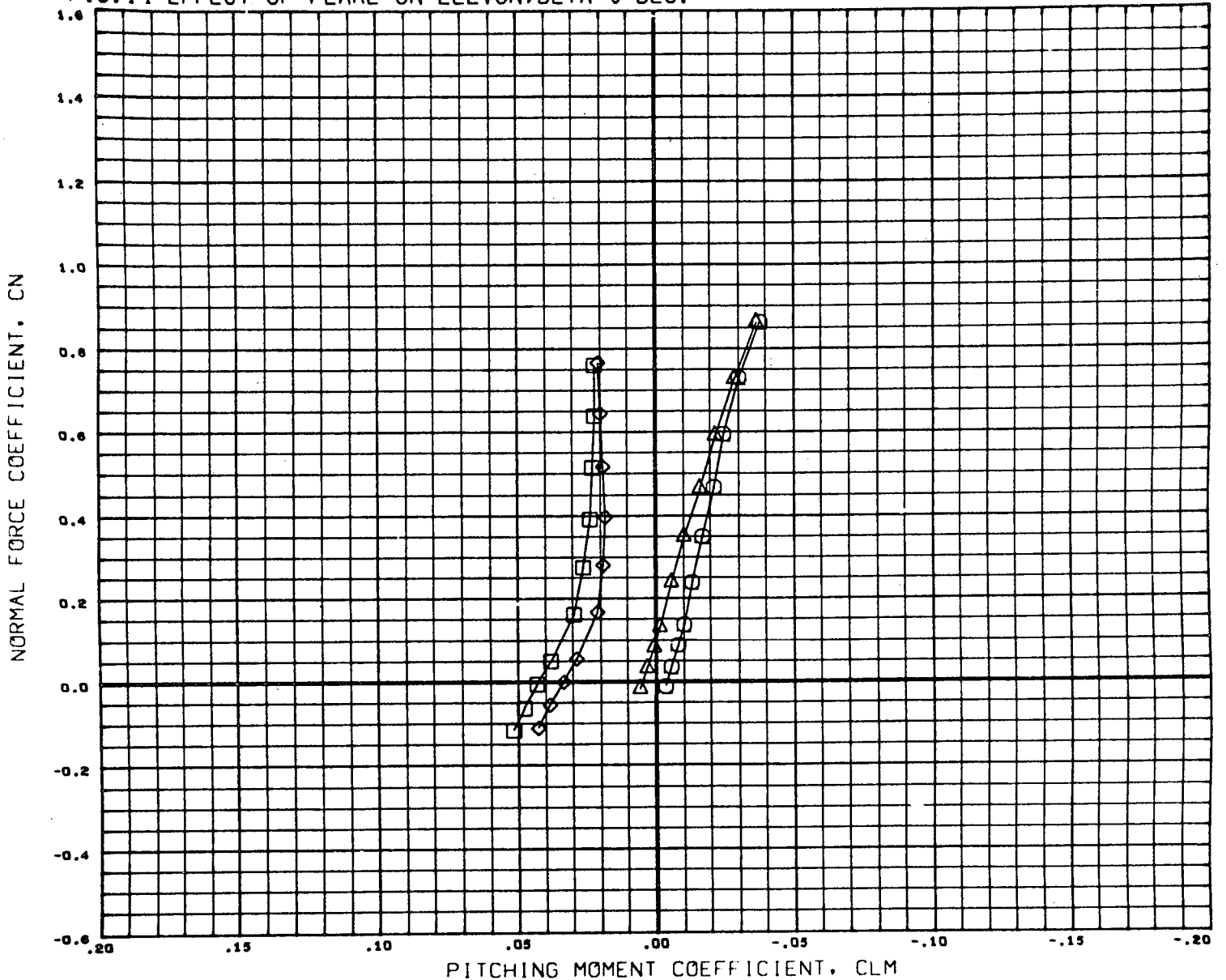
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5360 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	YMRP	1067.9040 IN.
						ZMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

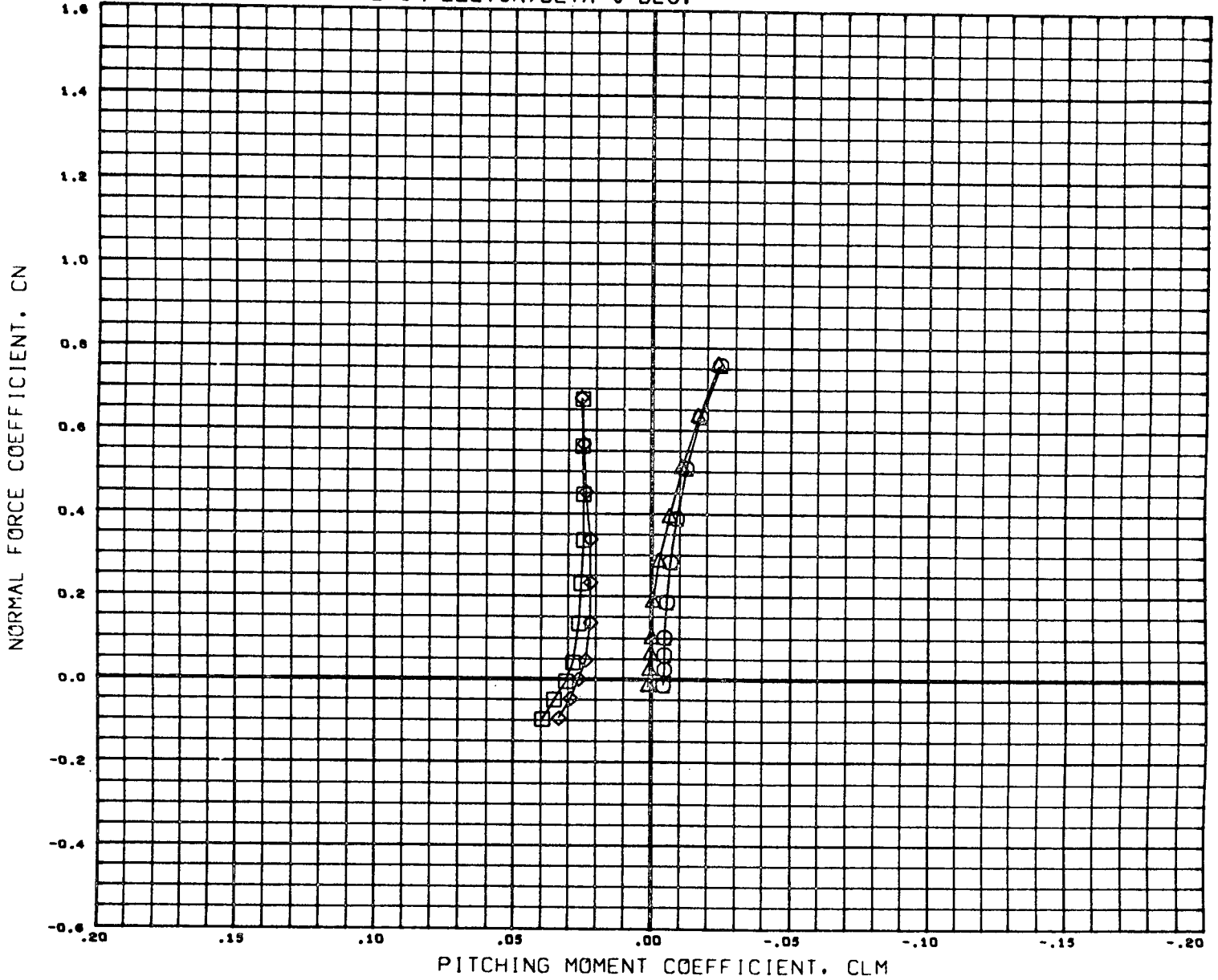
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

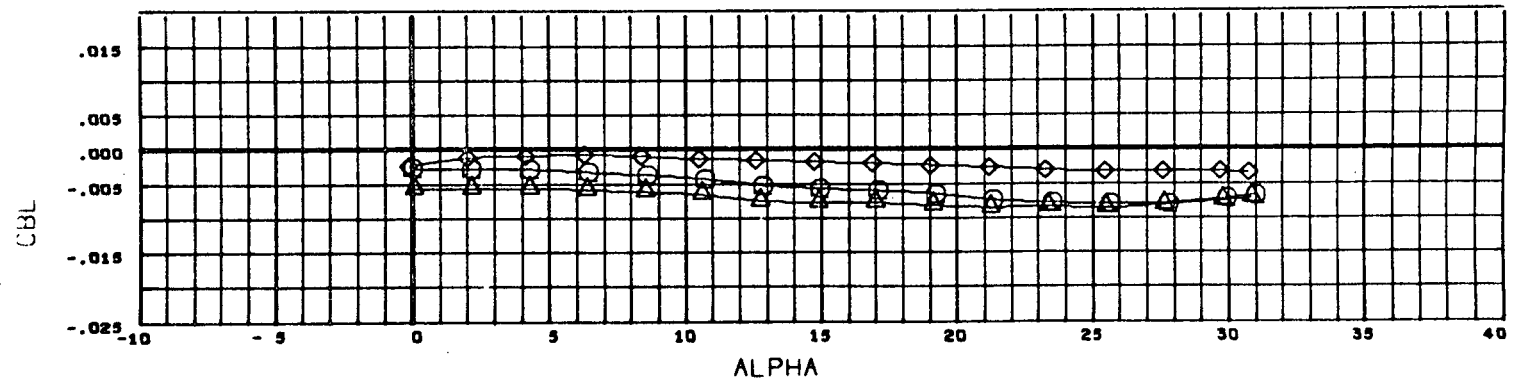
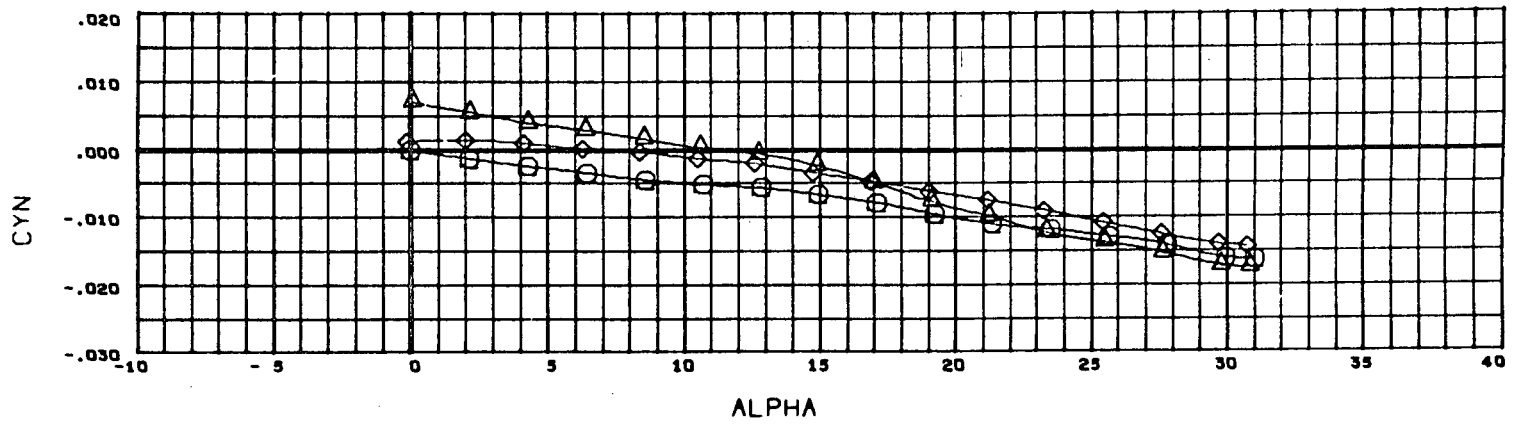
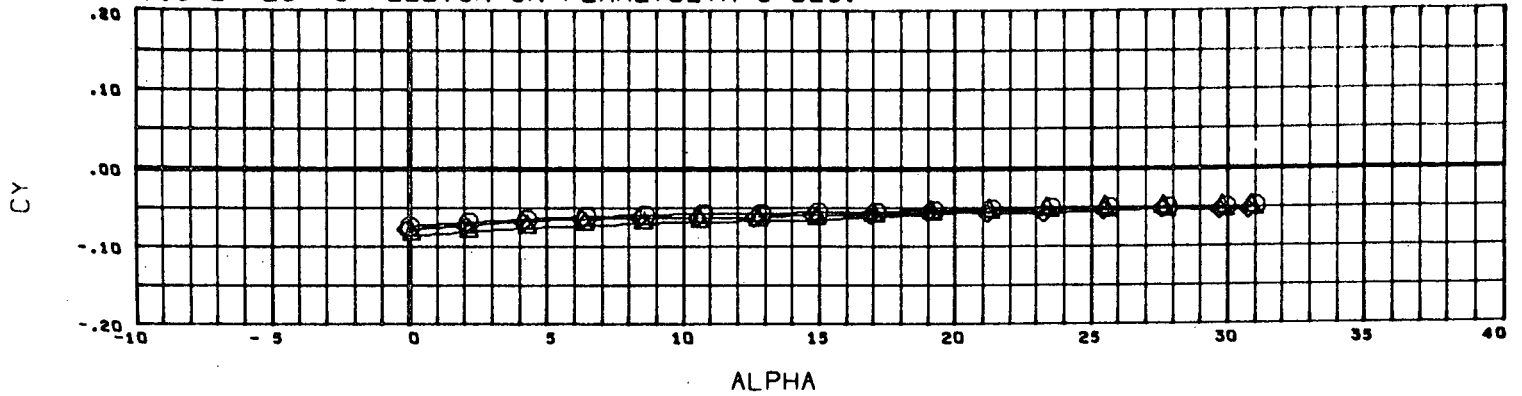
FIG.14 EFFECT OF FLARE ON ELEVON, BETA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5960 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB021)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB121)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

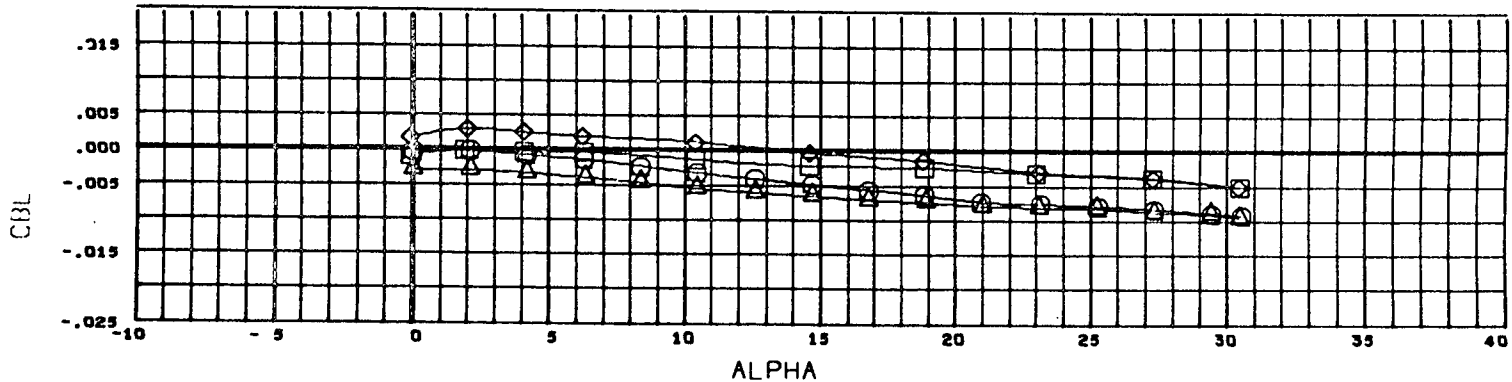
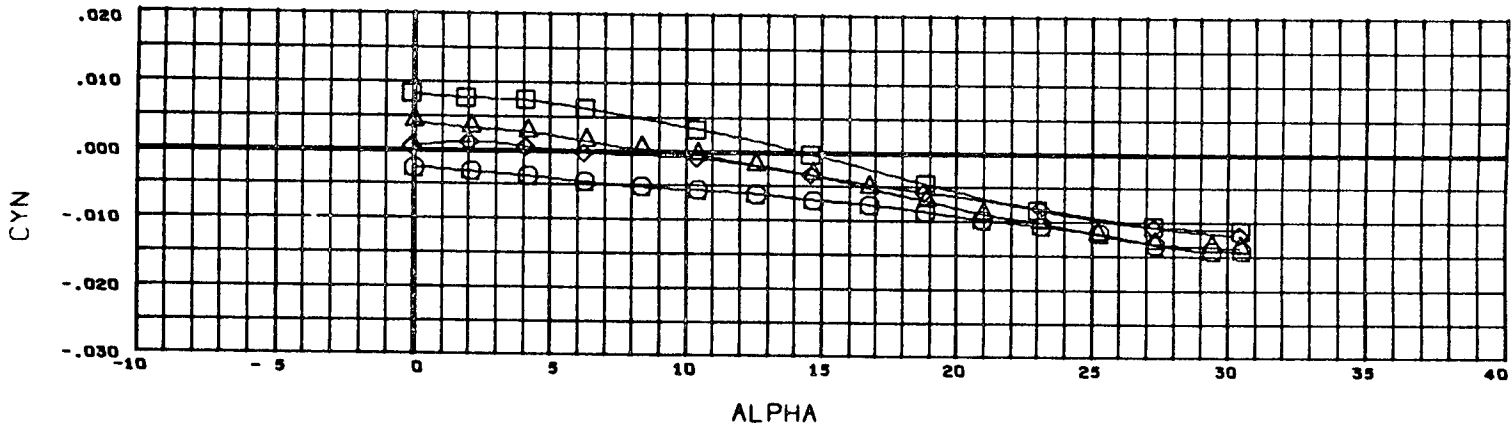
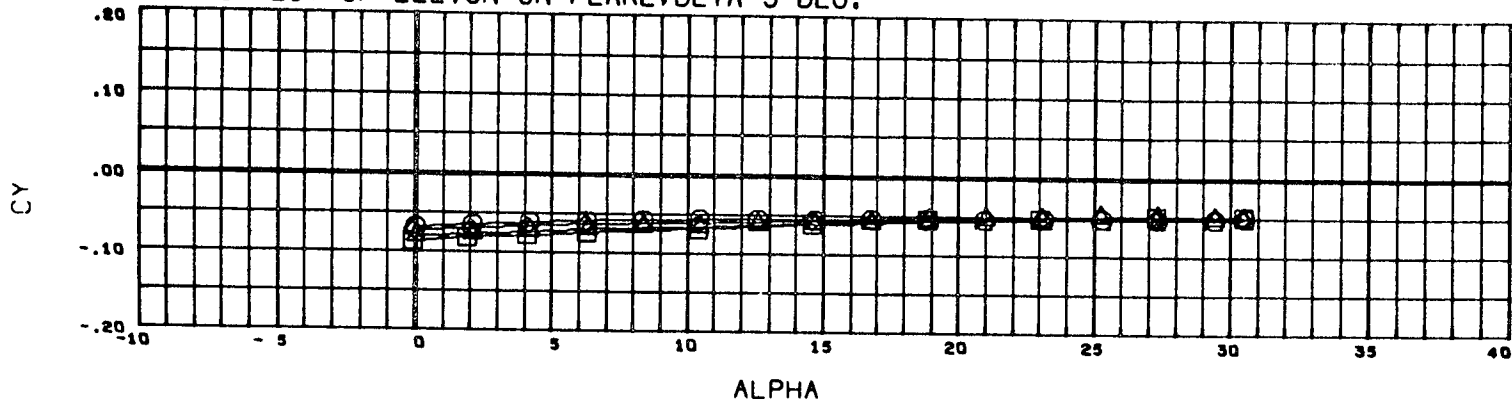
MACH 3.98

FIG.15 EFFECT OF ELEVN ON FLARE,BETA=5 DEG.



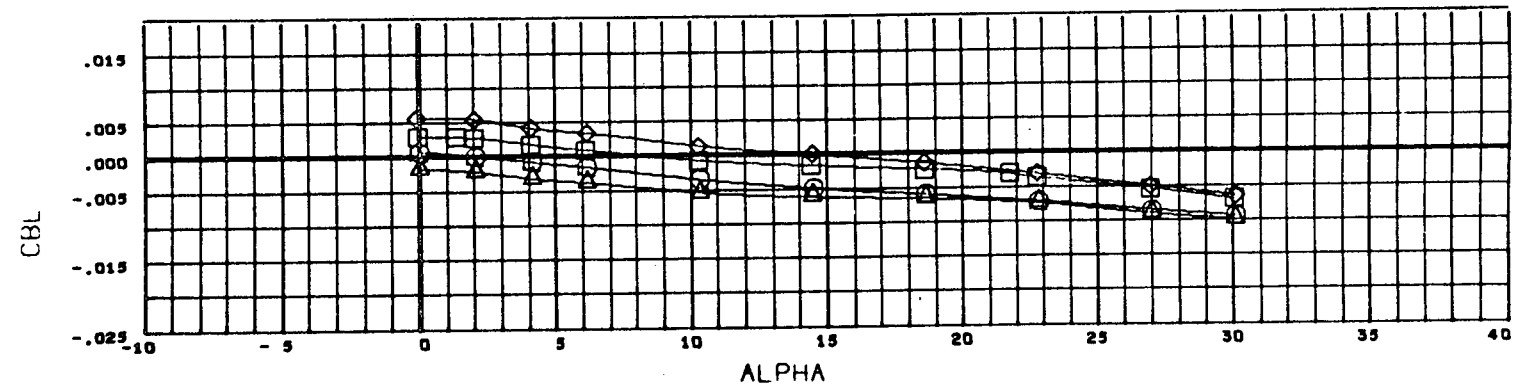
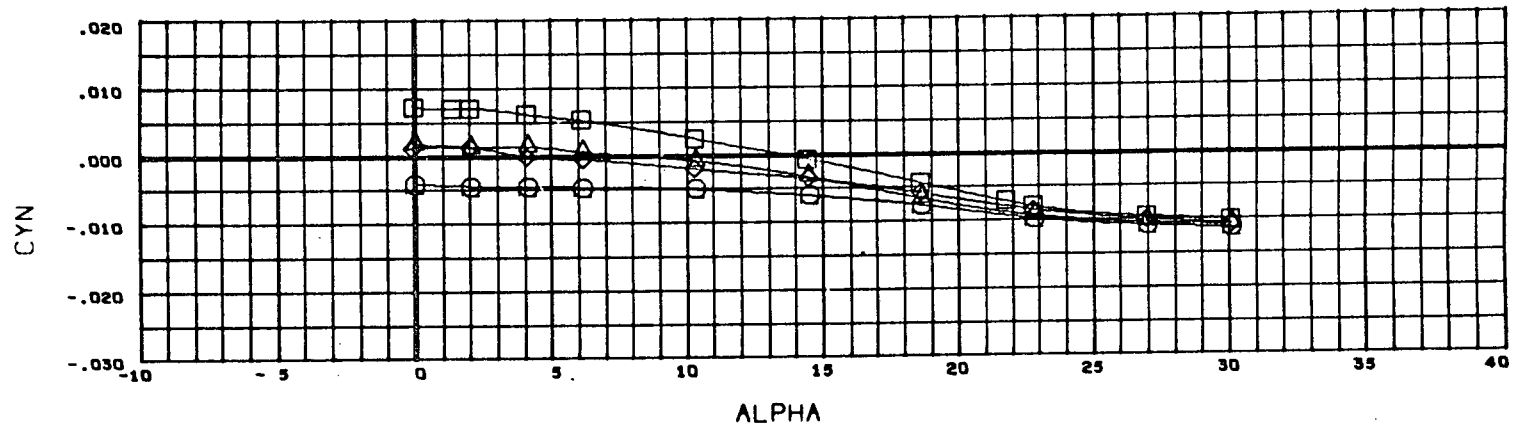
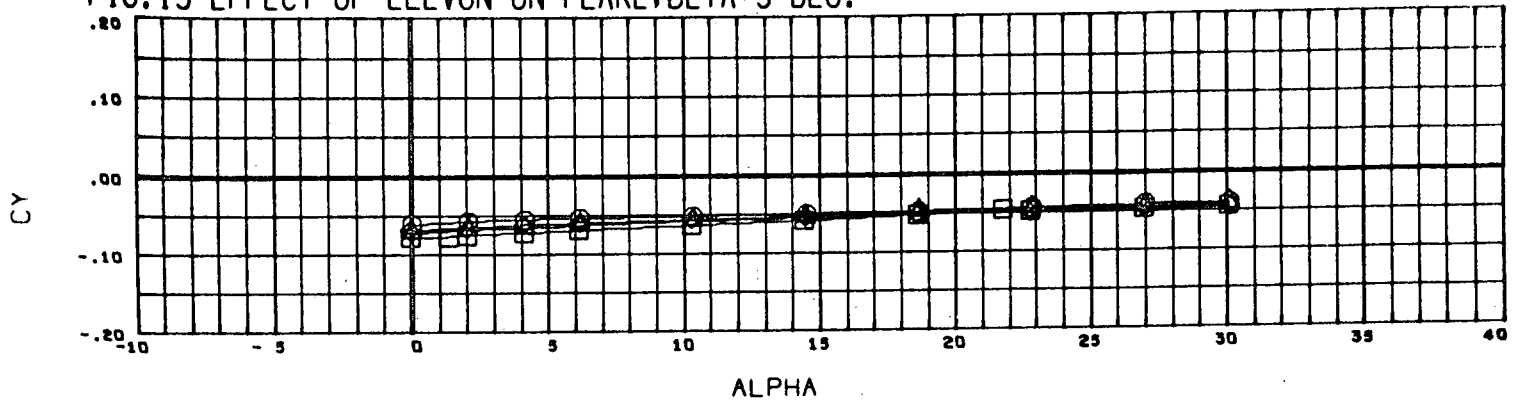
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELVN	RELVN	REFERENCE INFORMATION	
(XGB012)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 30 IN.
(XGB112)	JPL WT 20-661 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB022)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB122)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0073

FIG. 15 EFFECT OF ELEVN ON FLARE, BETA=5 DEG.



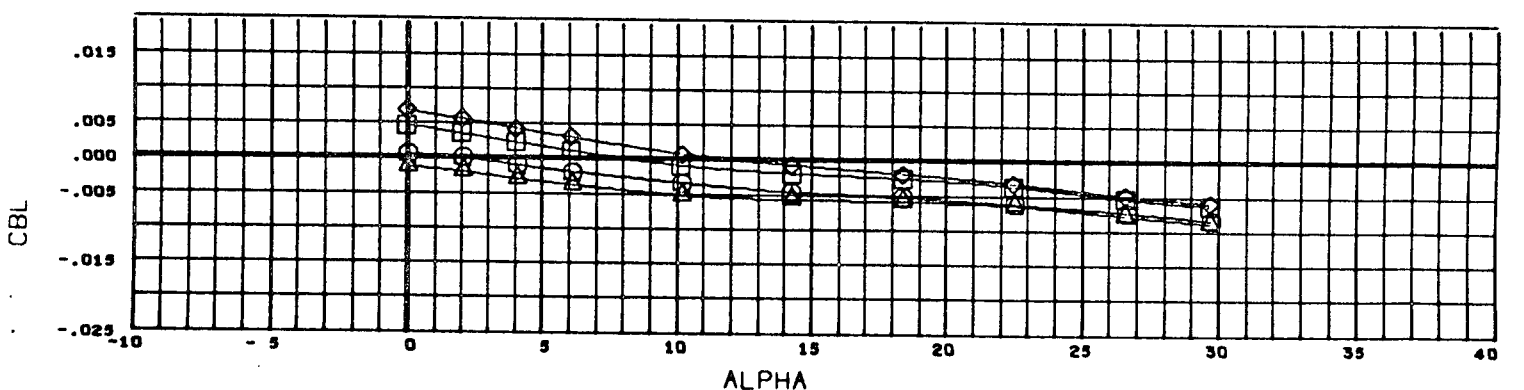
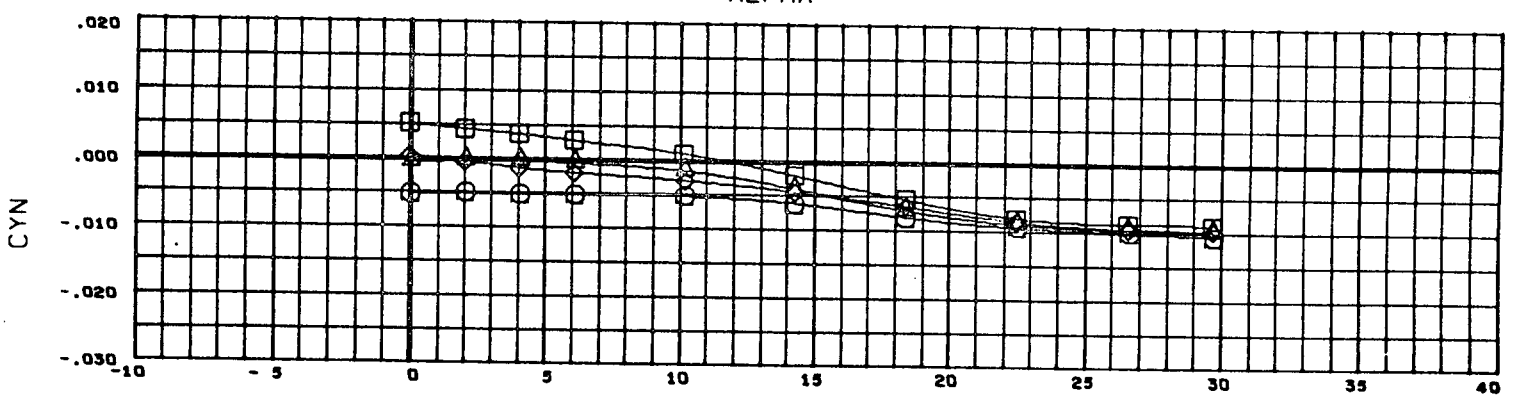
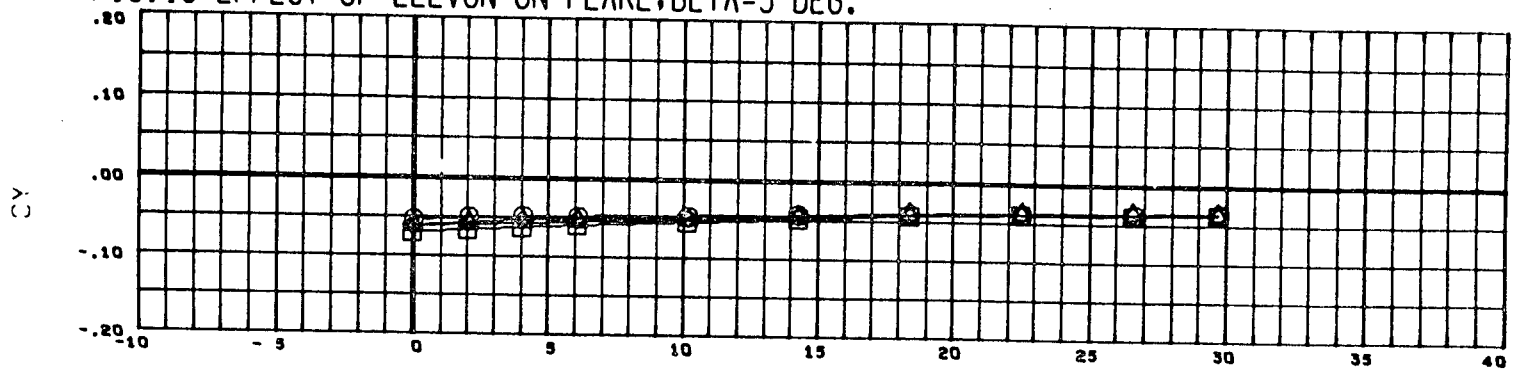
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XCB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XCB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XCB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XCB122)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG. 15 EFFECT OF ELEVON ON FLARE, BETA=5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.9720 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF	6.6150 IN.
(XGB122)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

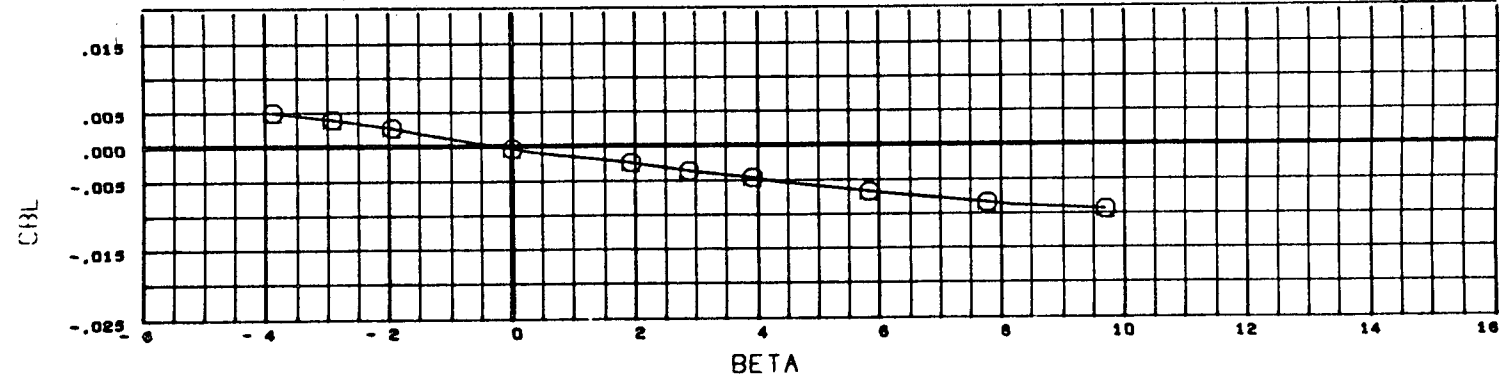
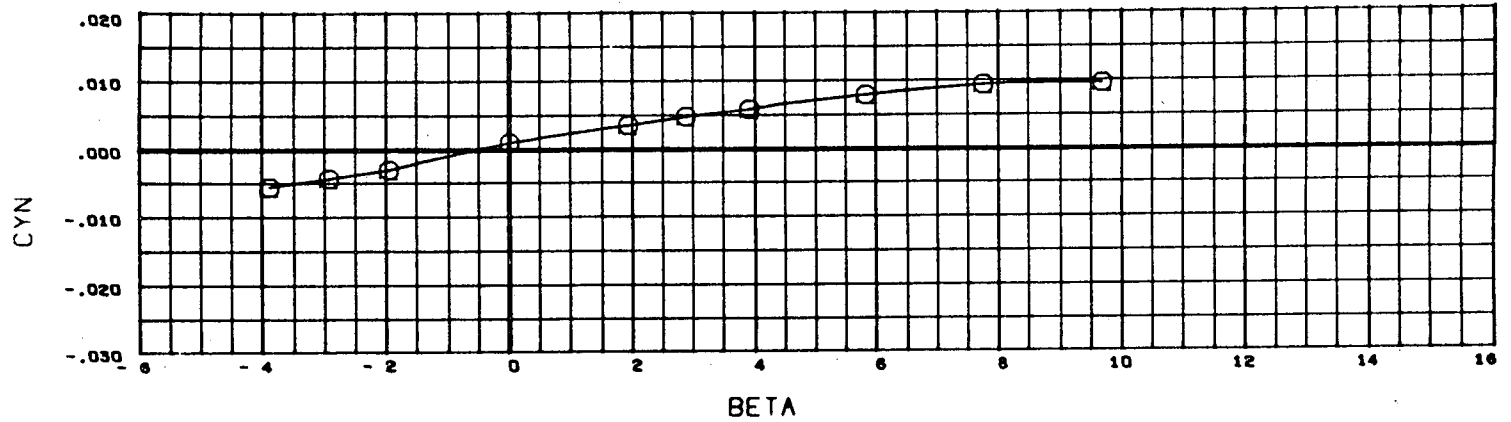
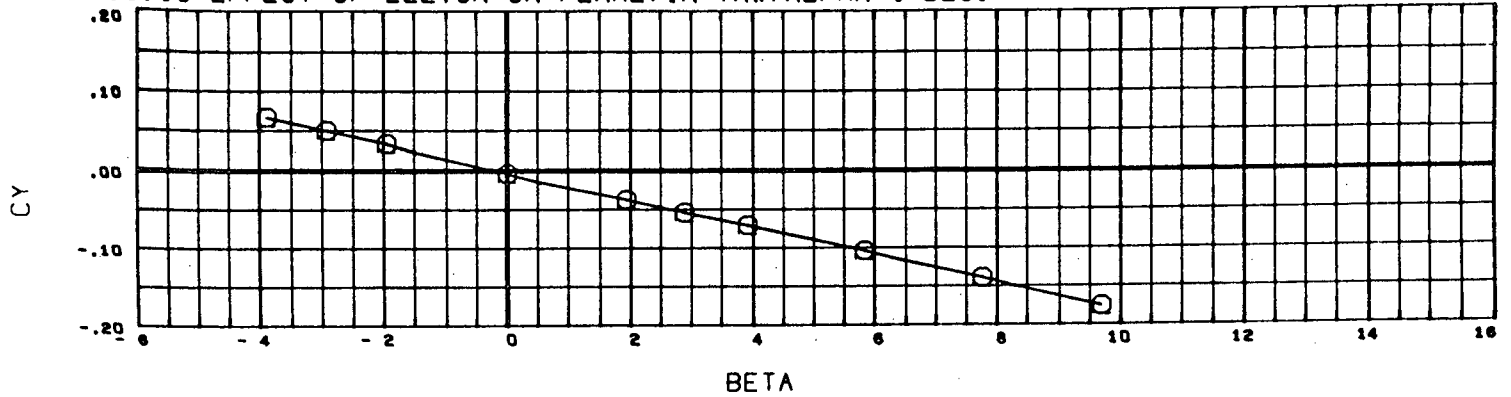
FIG. 15 EFFECT OF ELEVON ON FLARE, BETA=5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB022)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	-40.000	-40.000	BREF 6.6150 IN.
(XGB122)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

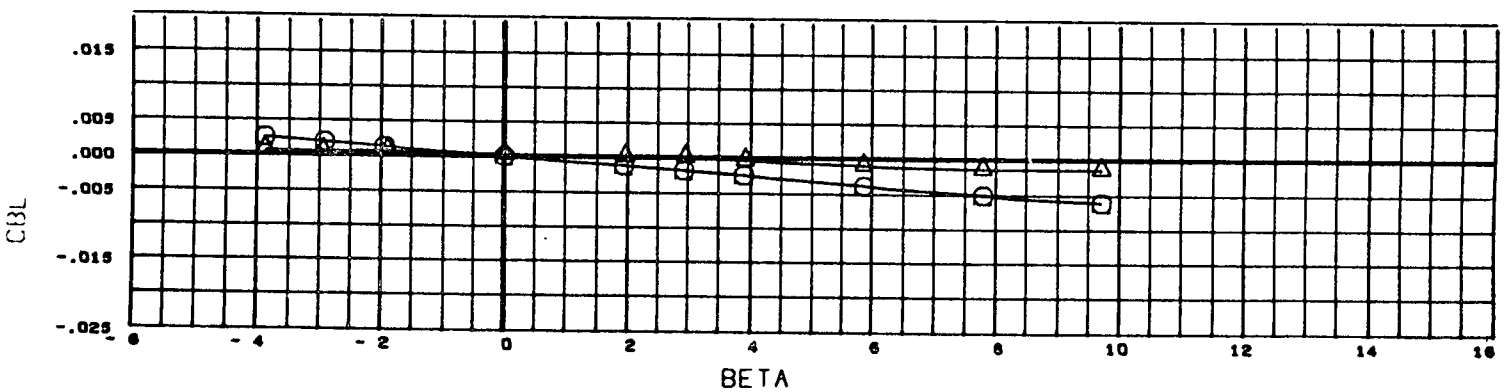
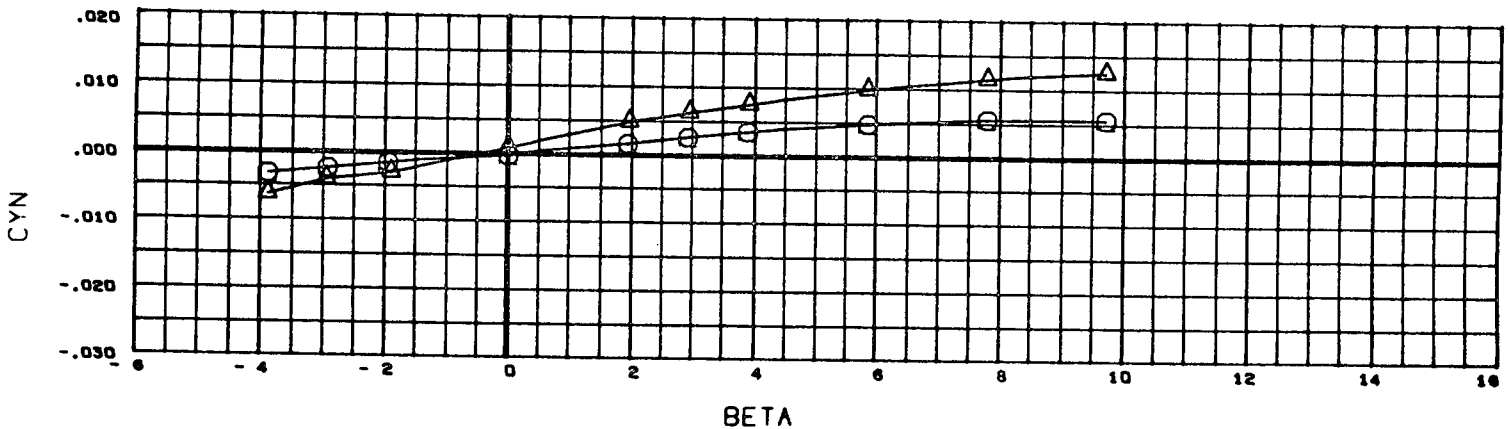
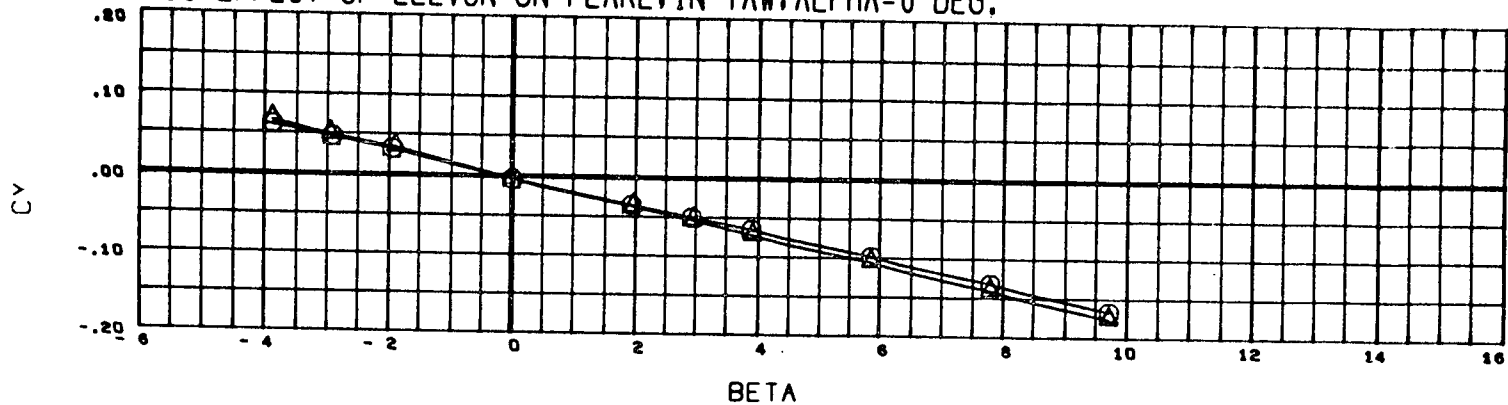
FIG. 16 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB113)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB123)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

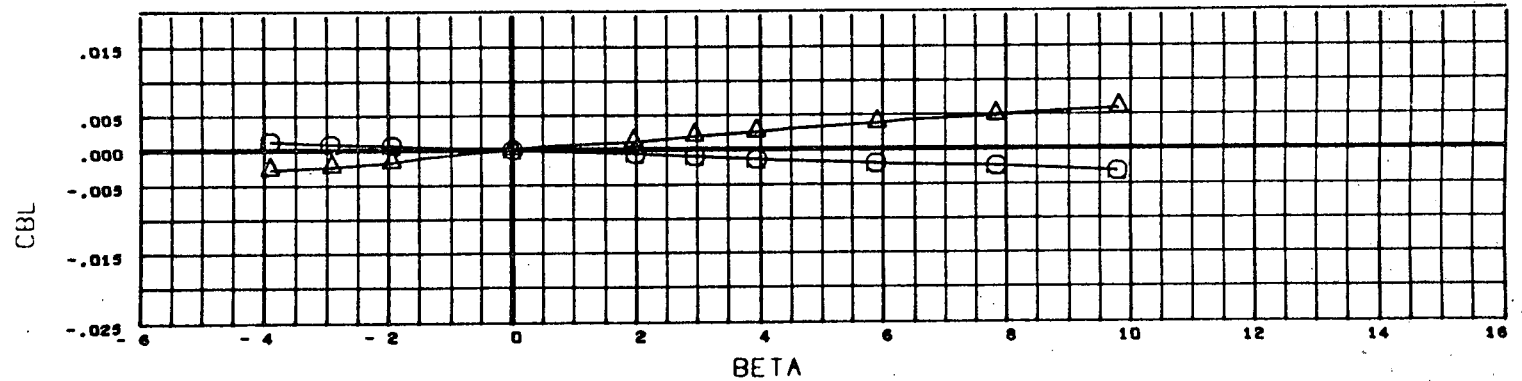
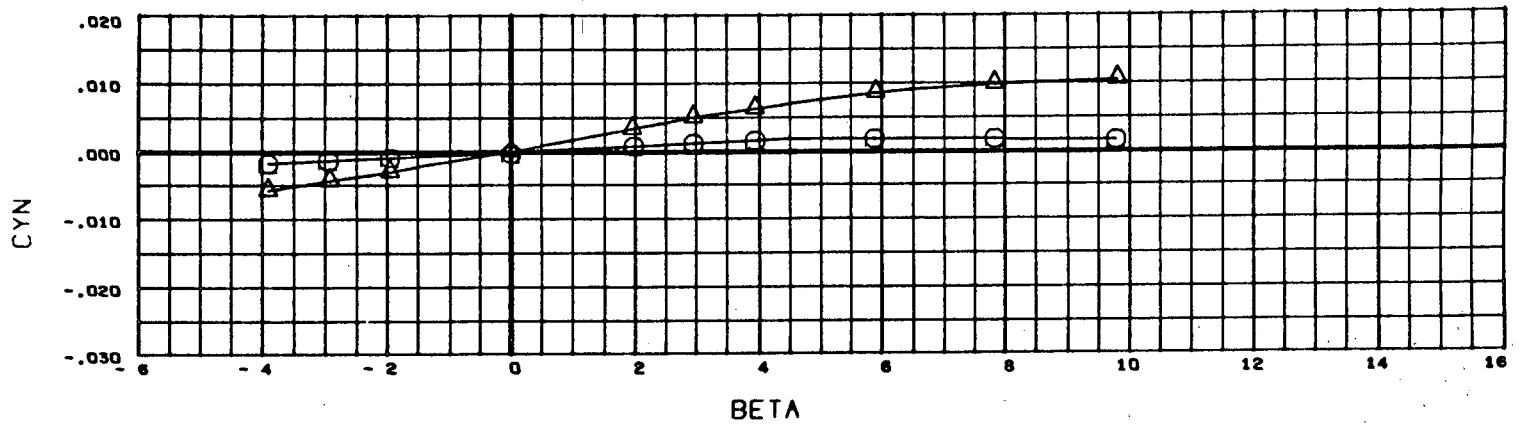
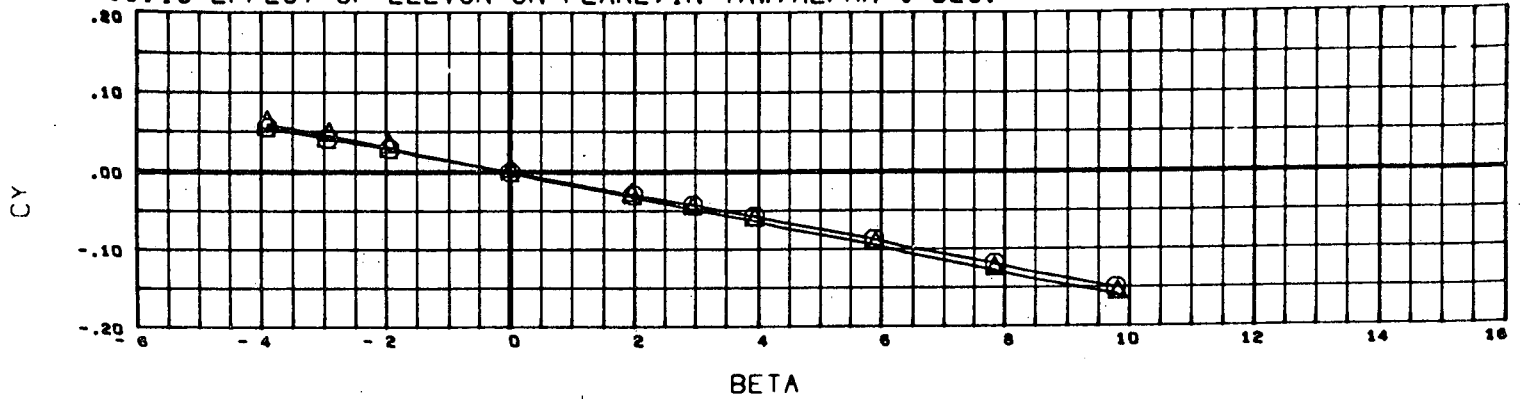
FIG.16 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB113)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB123)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

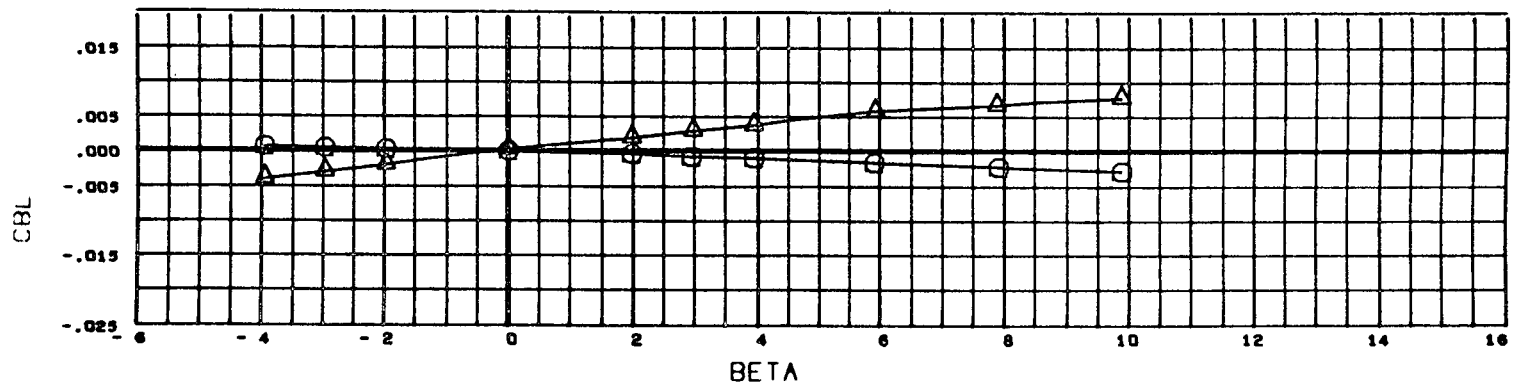
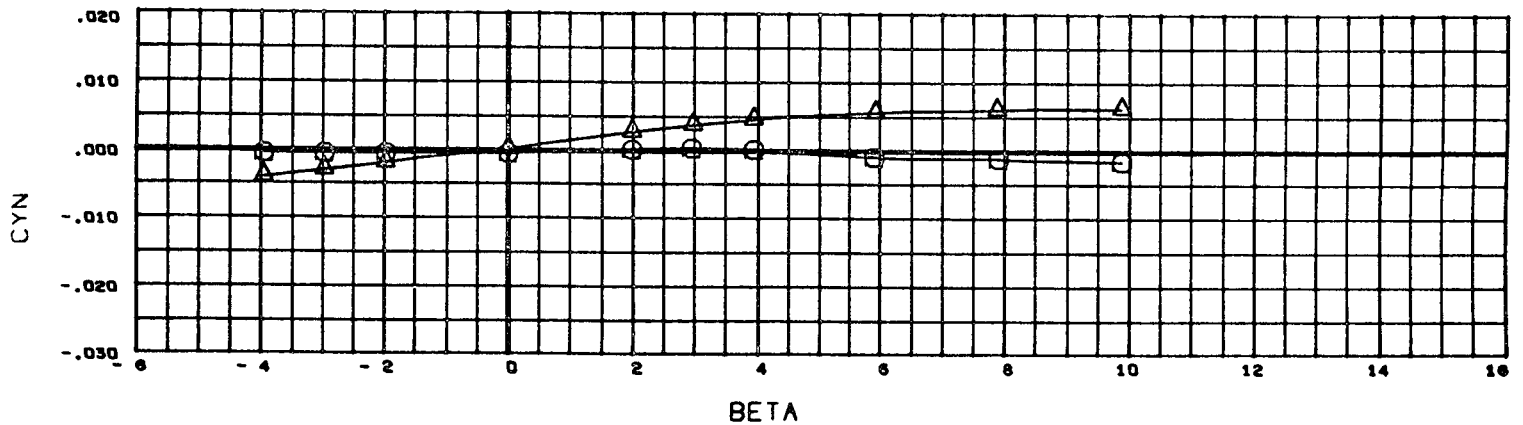
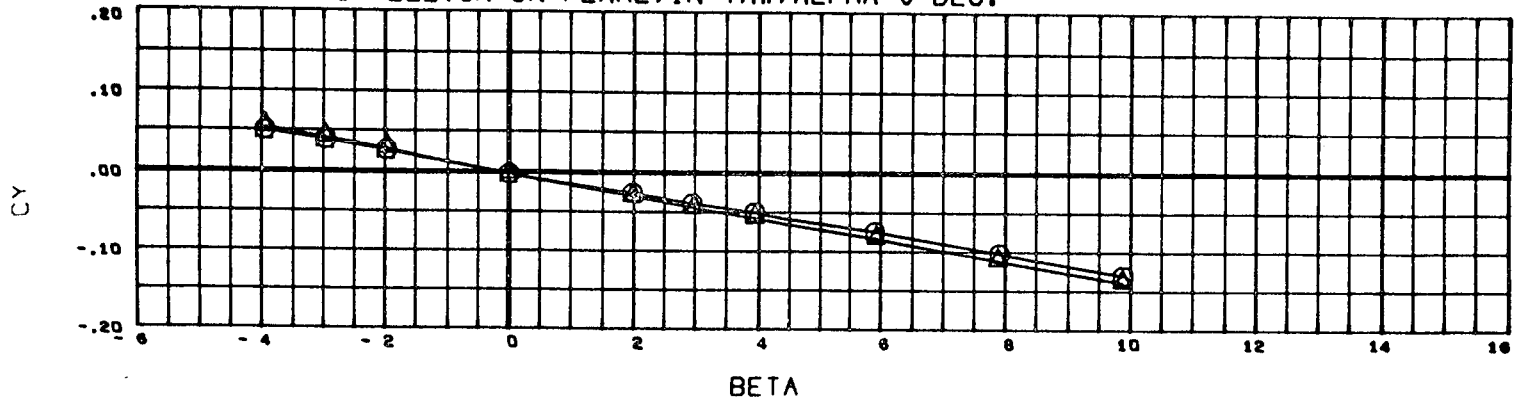
MACH 2.42

FIG. 16 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB113)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB123)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG.16 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=0 DEG.

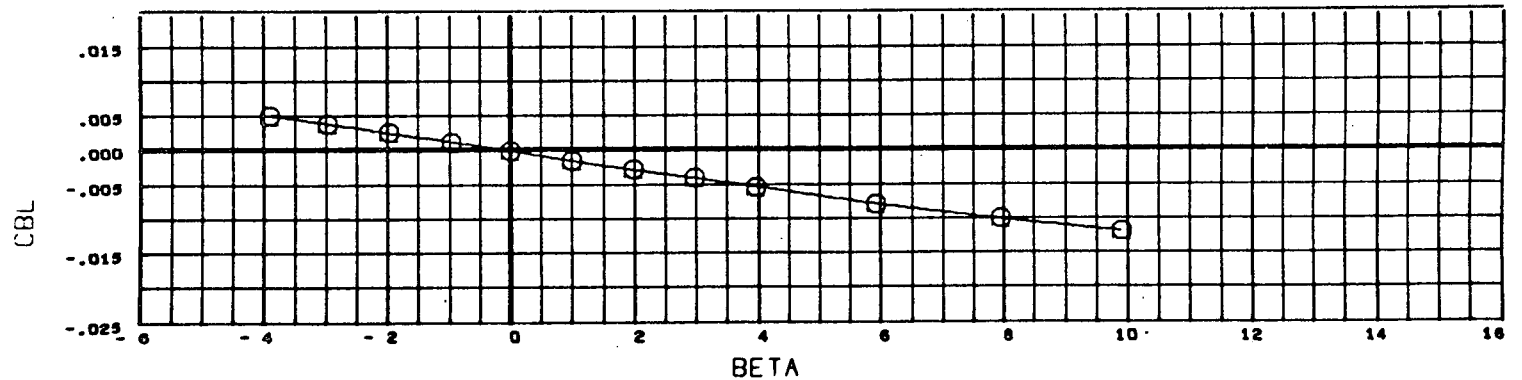
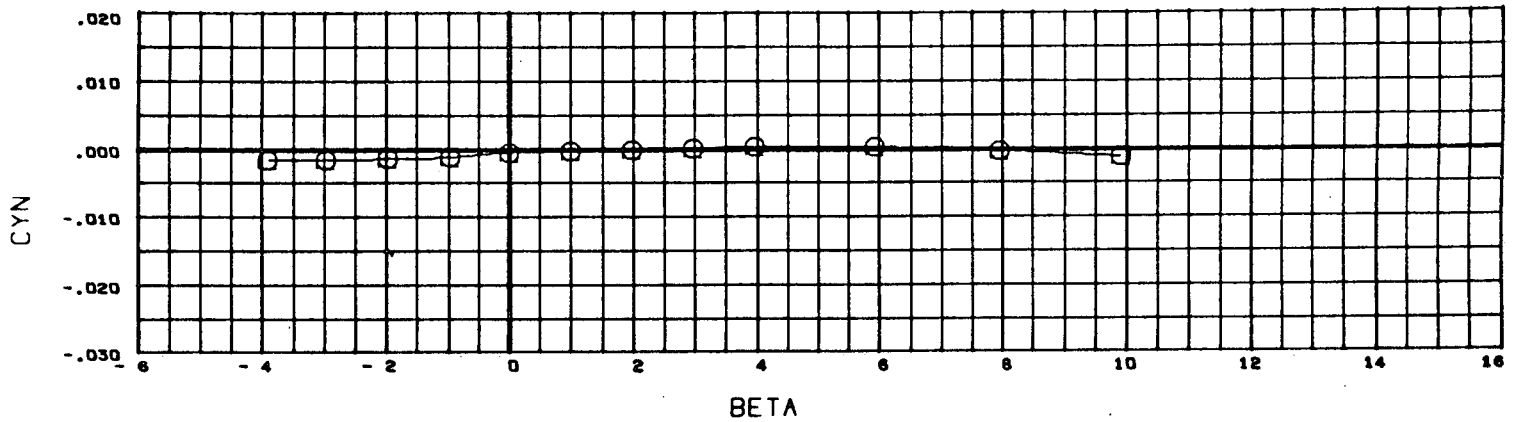
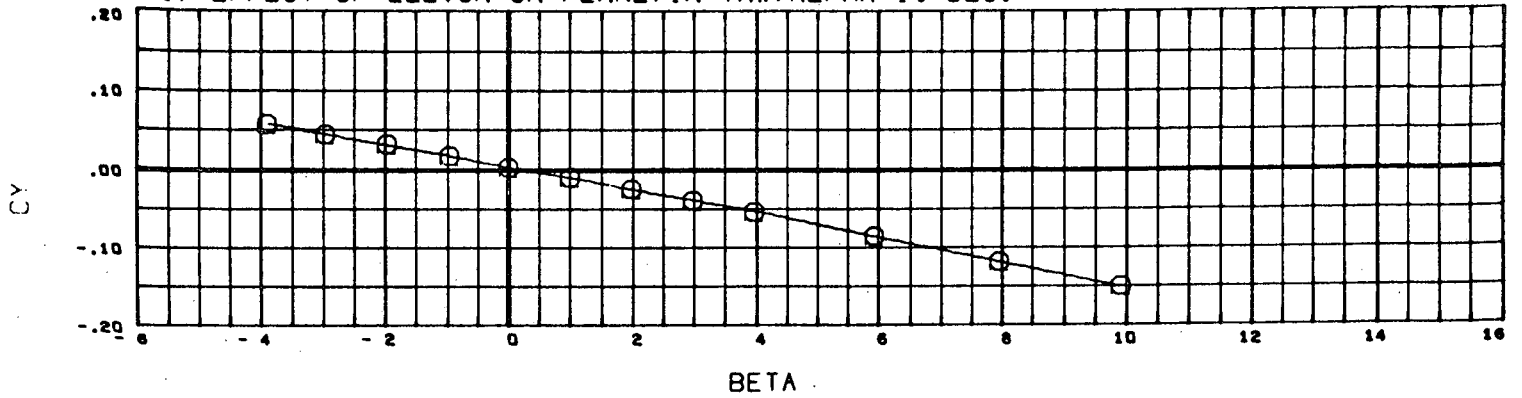


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB113)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB123)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

PAGE 116

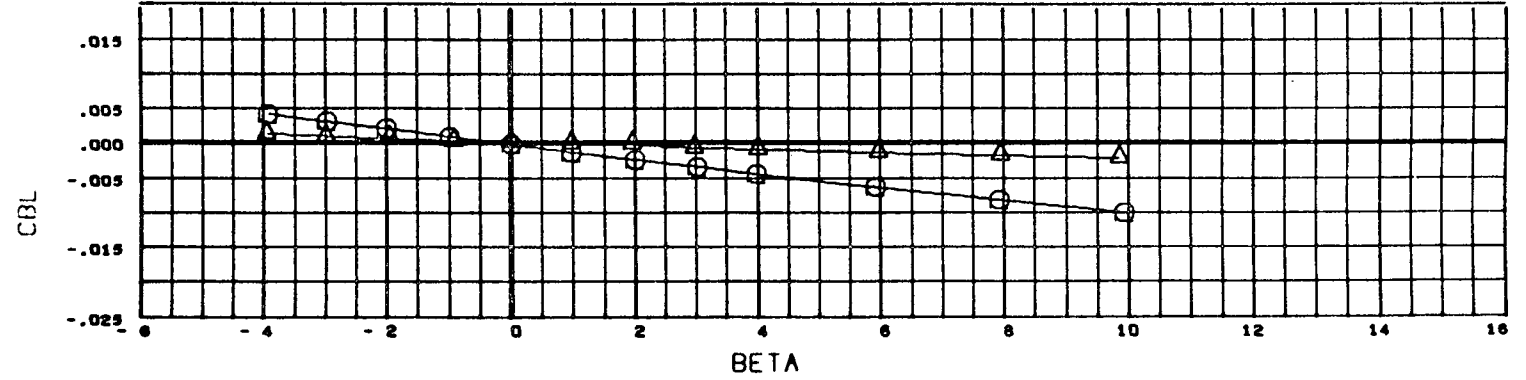
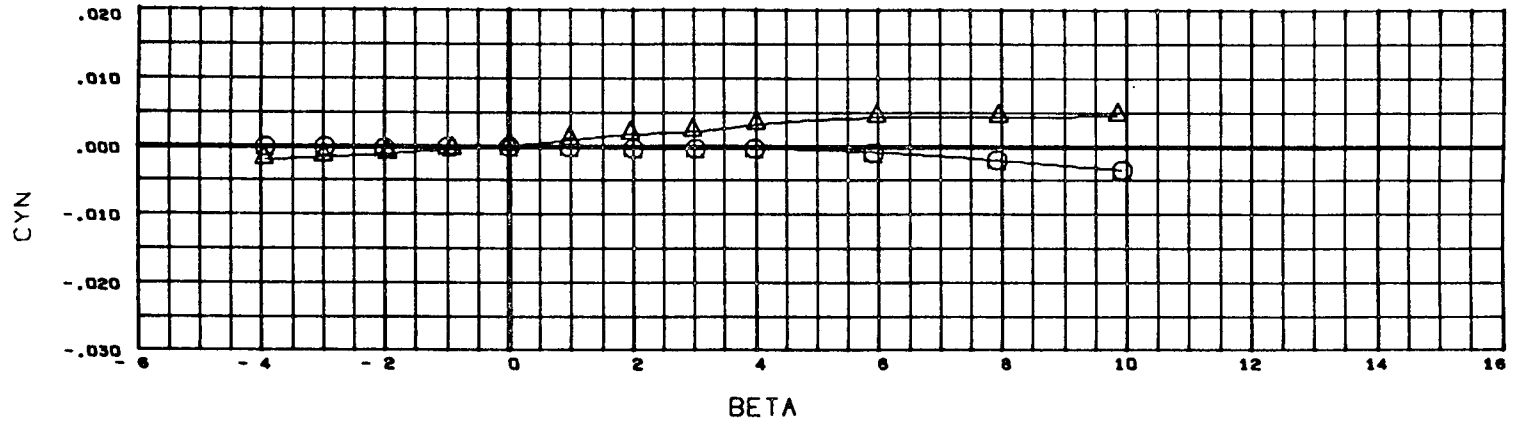
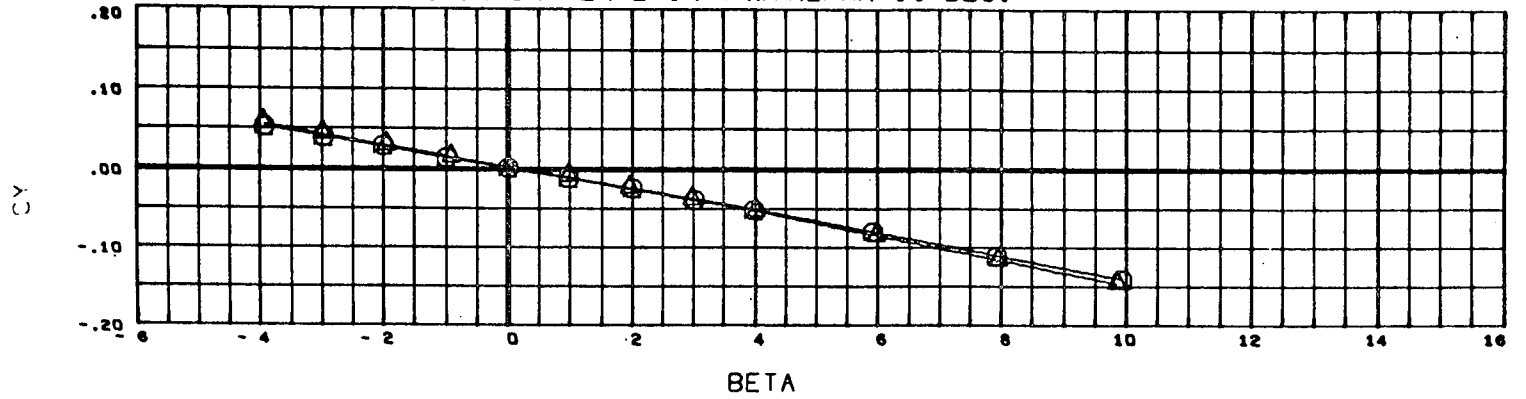
FIG.17 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB114)	JPL WT 20-881 HSC 040A BIW1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB124)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0079

MACH 2.01

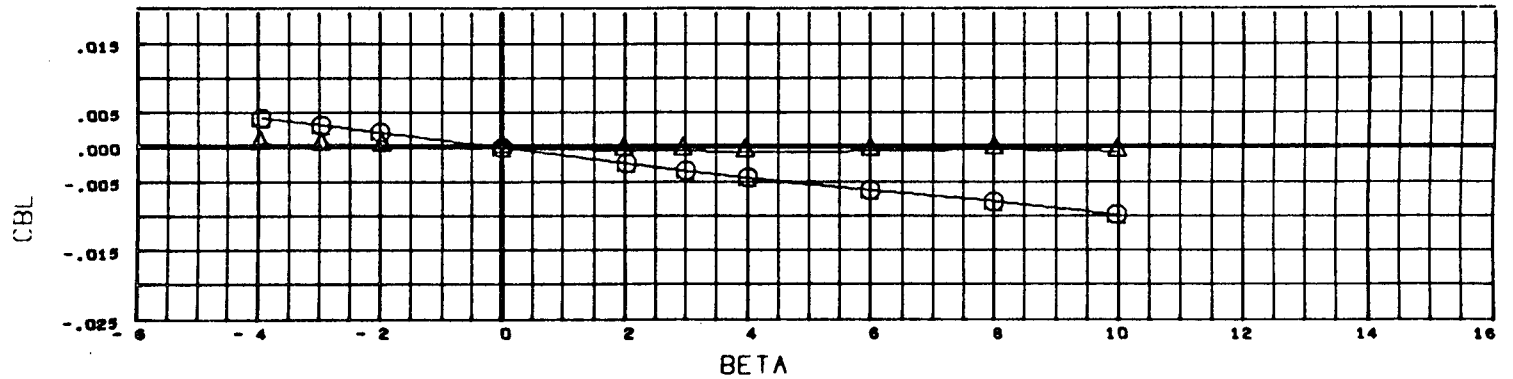
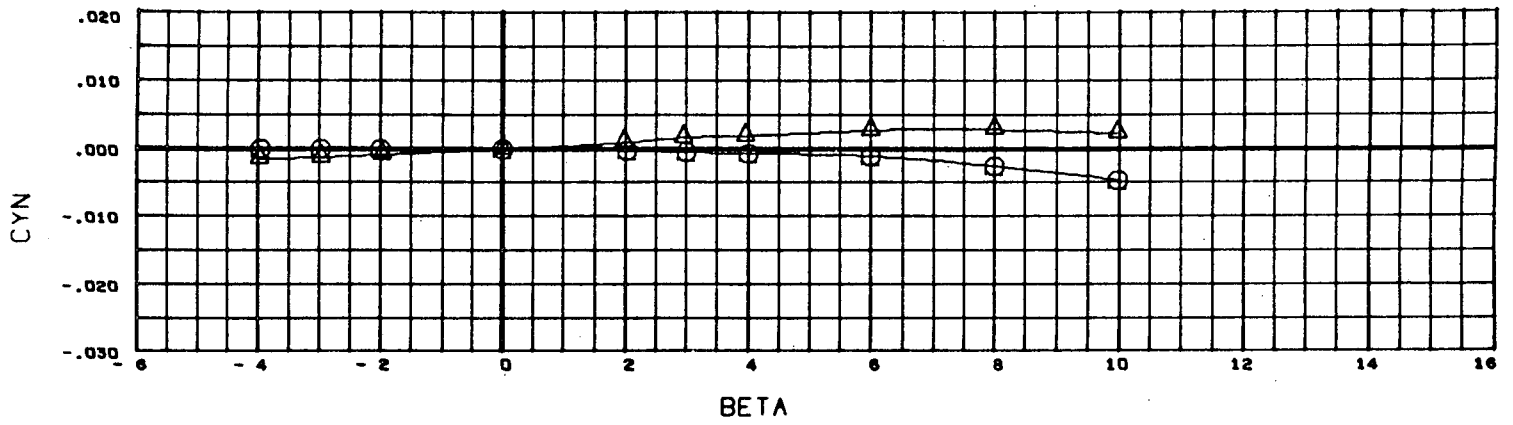
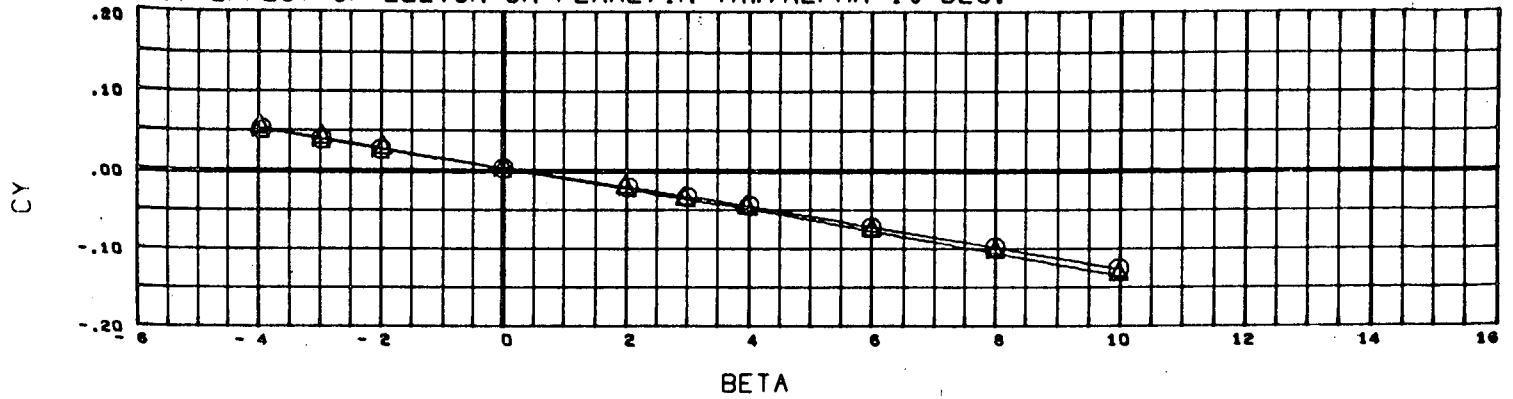
FIG.17 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB114)	JPL WT 20-881 MSC 040A 81W1V1 (30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB124)	JPL WT 20-881 MSC 040A 81W1V1 (30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

FIG.17 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=10 DEG.

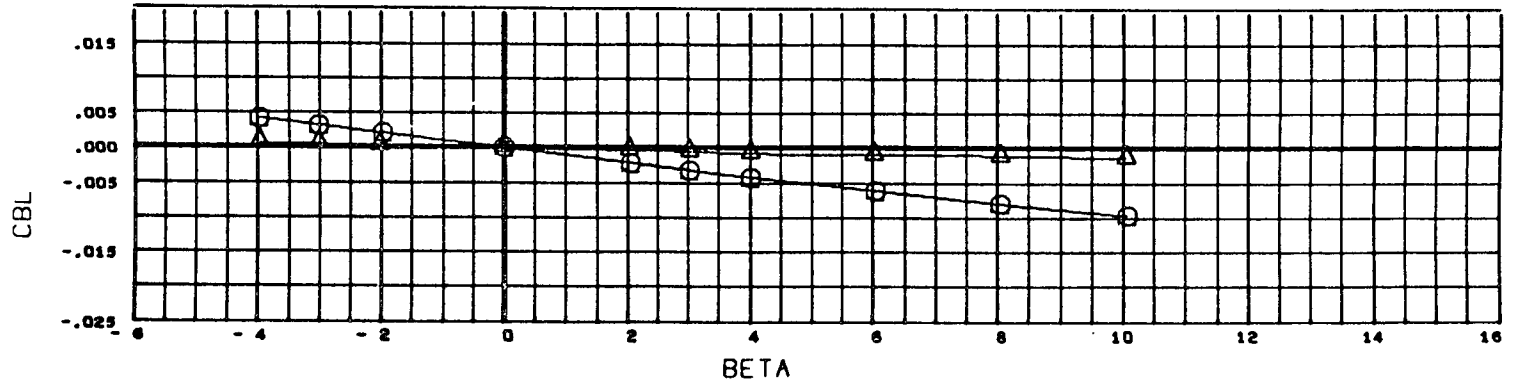
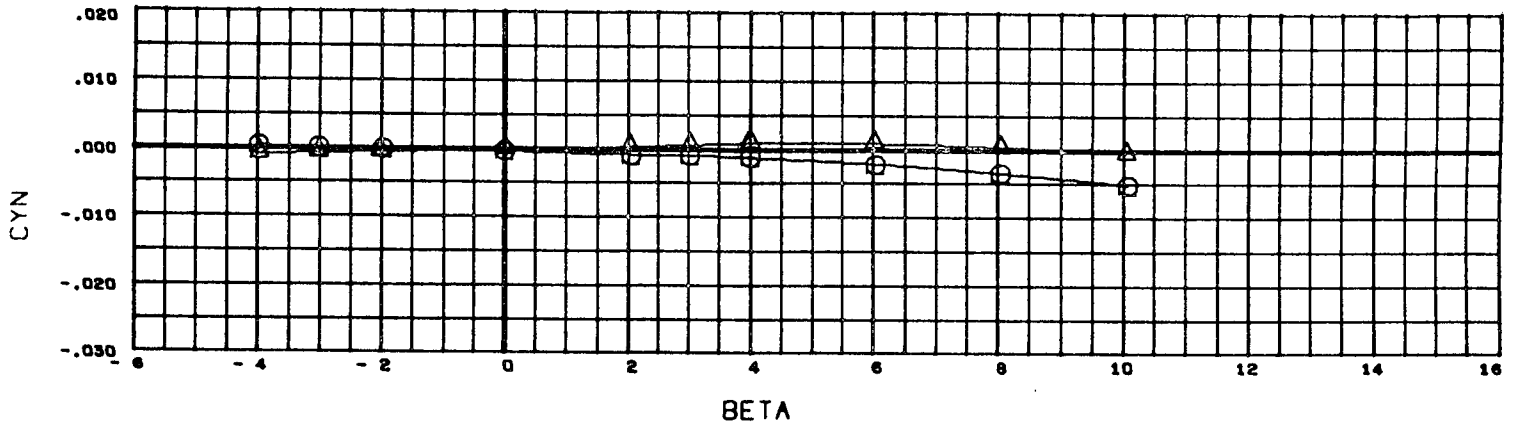
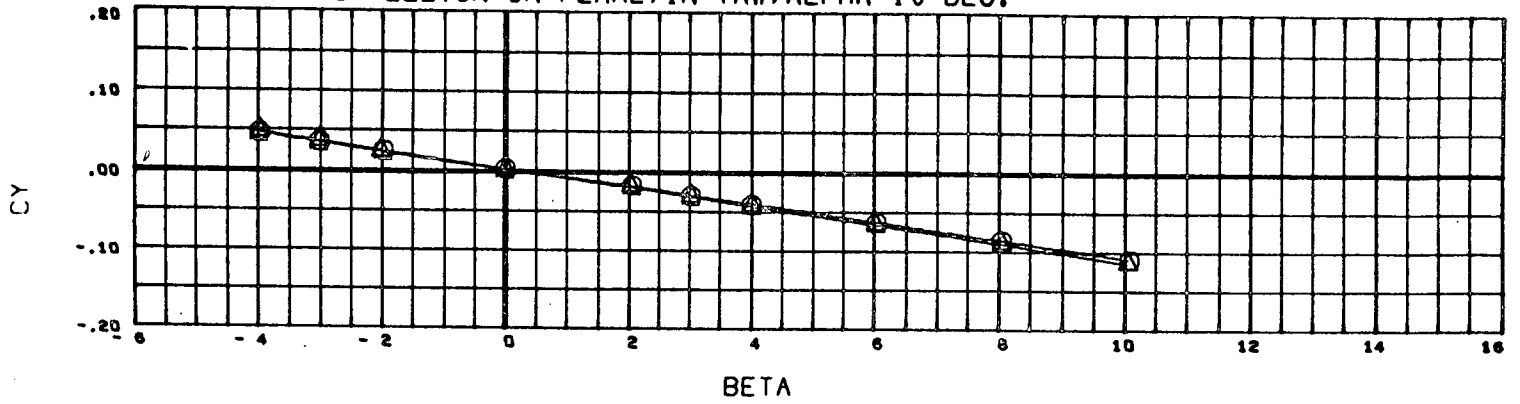


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB114)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB124)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF	4.3720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

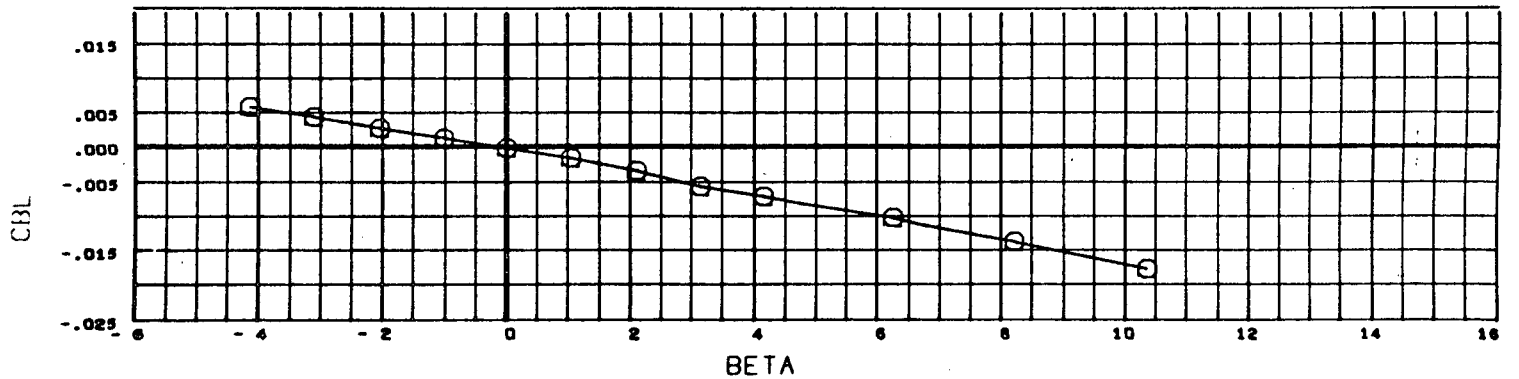
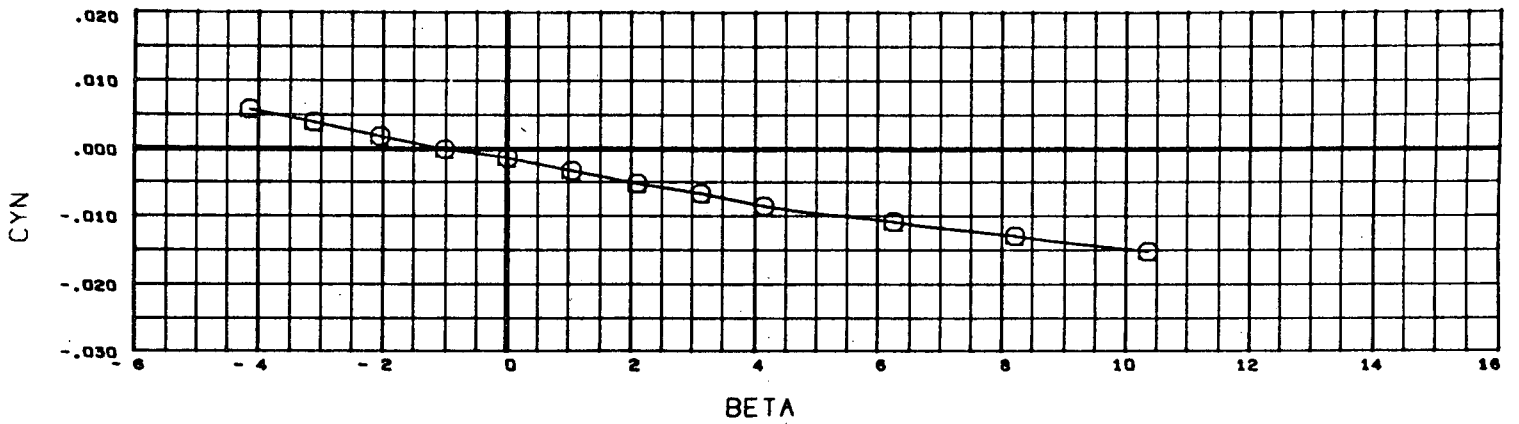
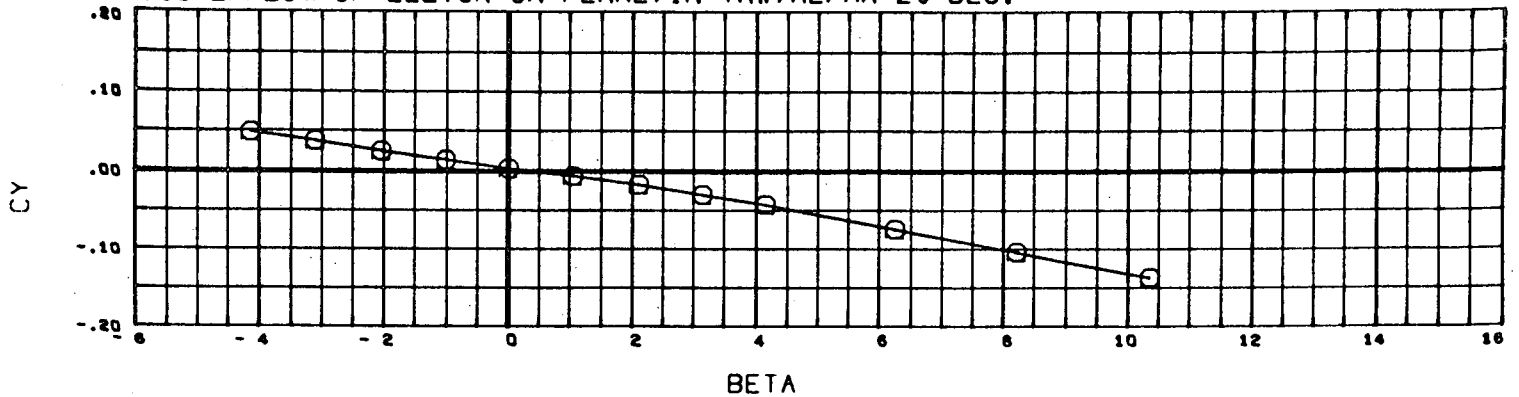
PAGE 119

FIG.17 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=10 DEG.



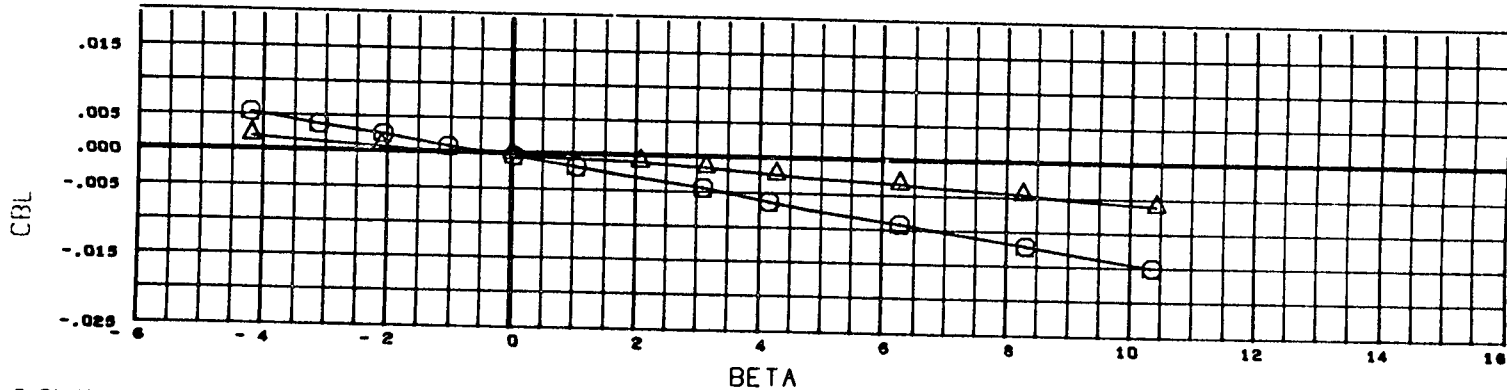
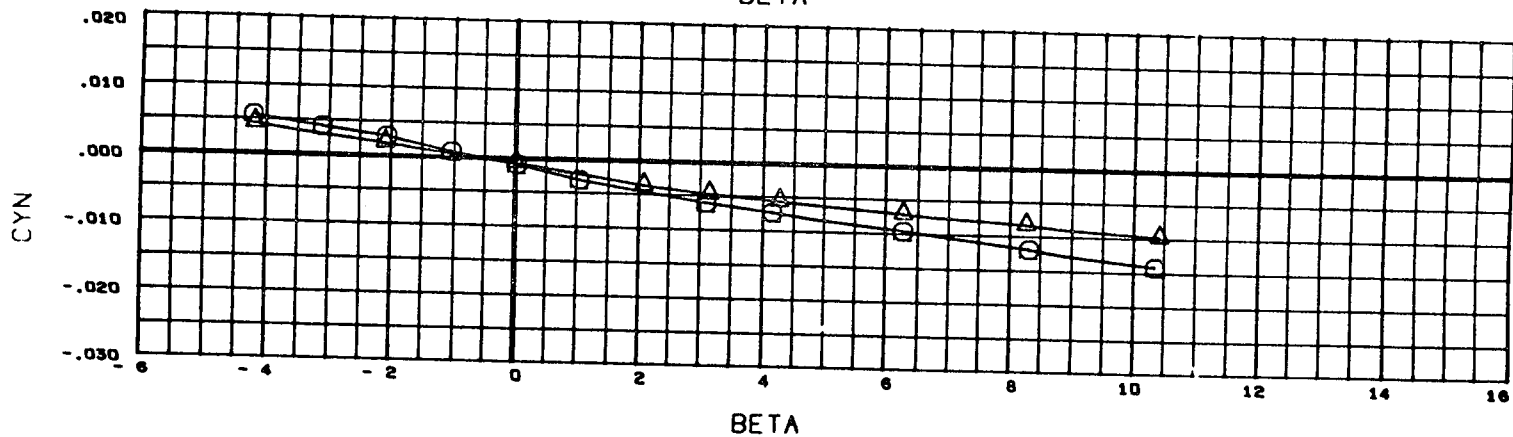
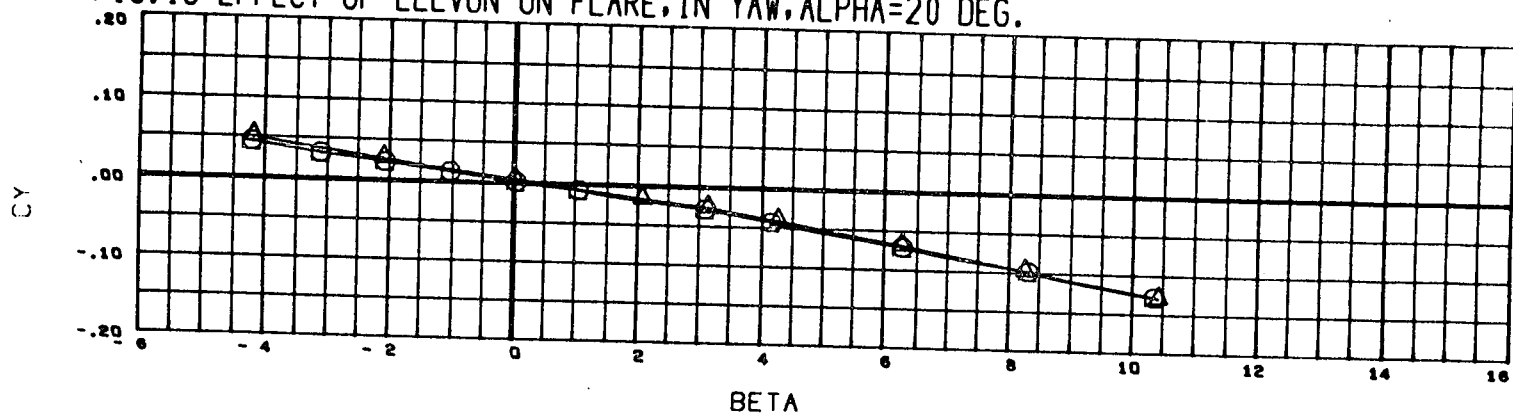
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB114)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB124)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 18 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELVN	RELVN	REFERENCE INFORMATION
(XGB115)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB125)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

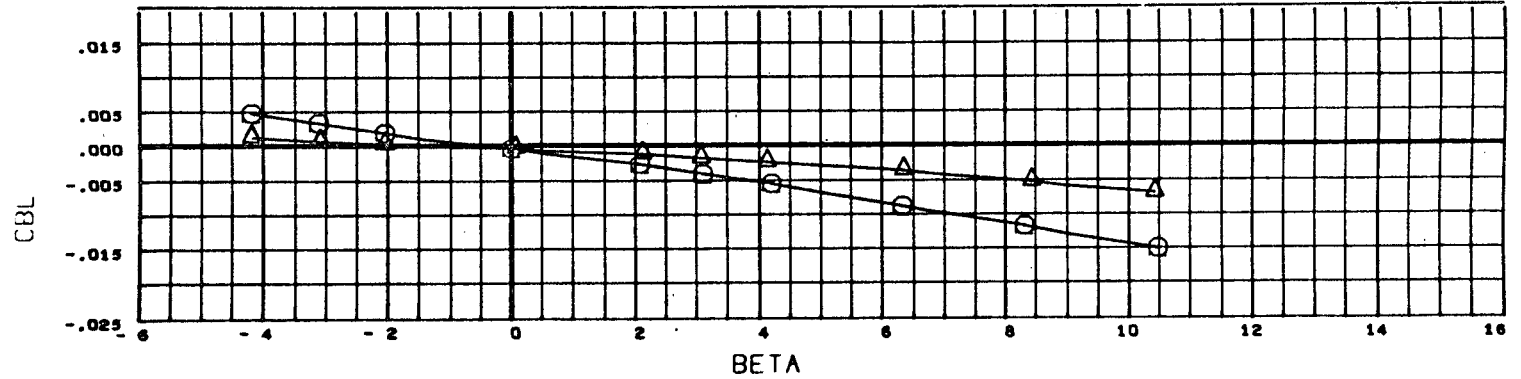
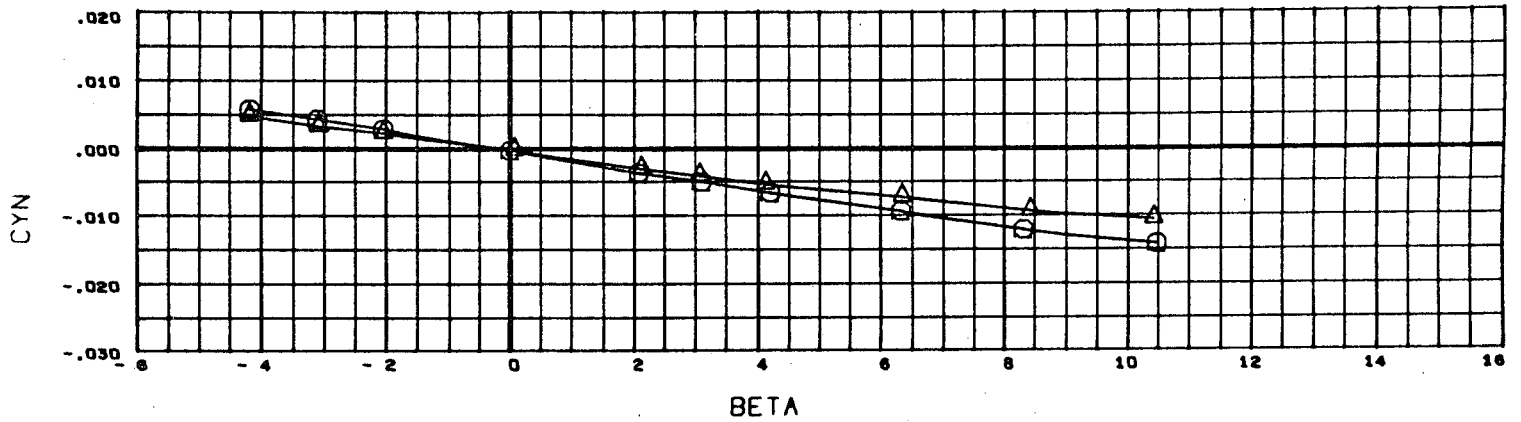
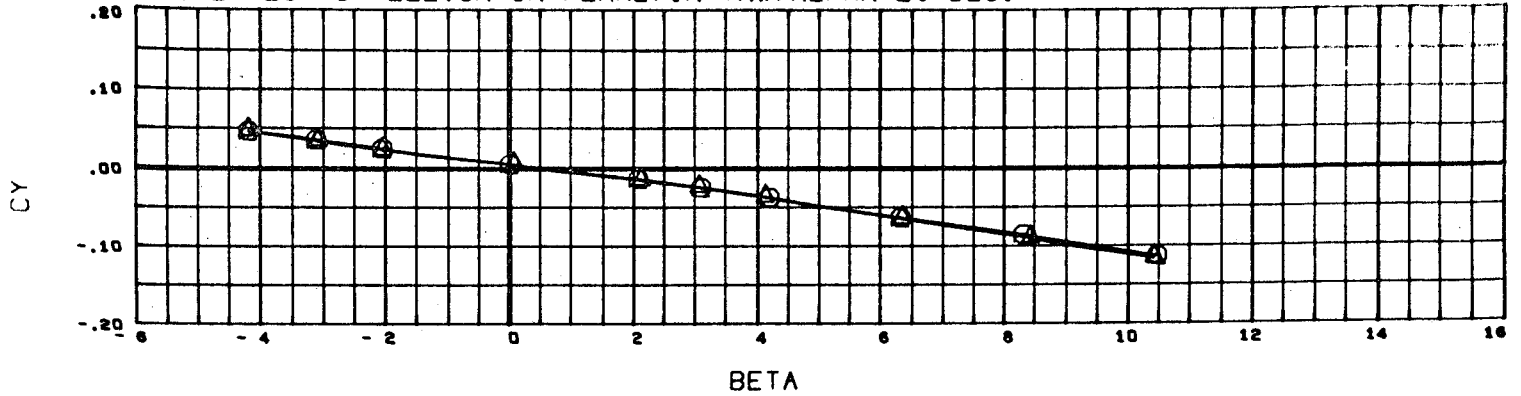
FIG.18 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 30 IN.
(XGB125)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

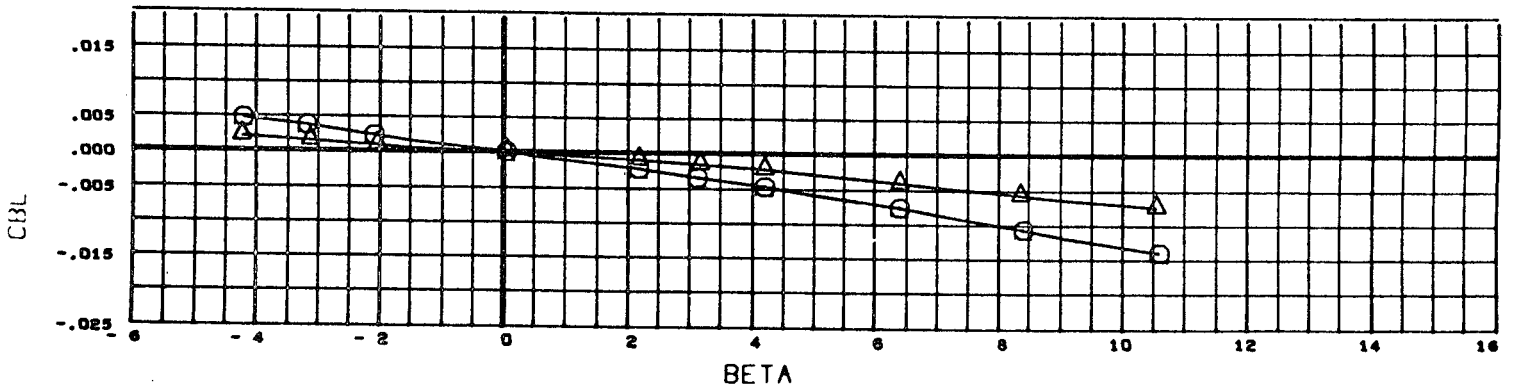
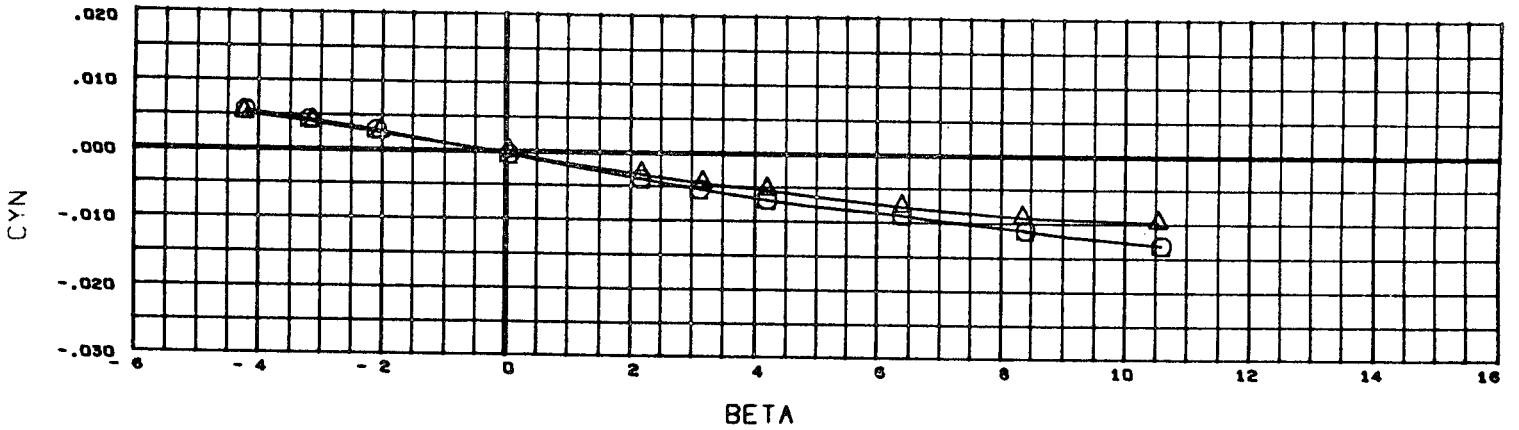
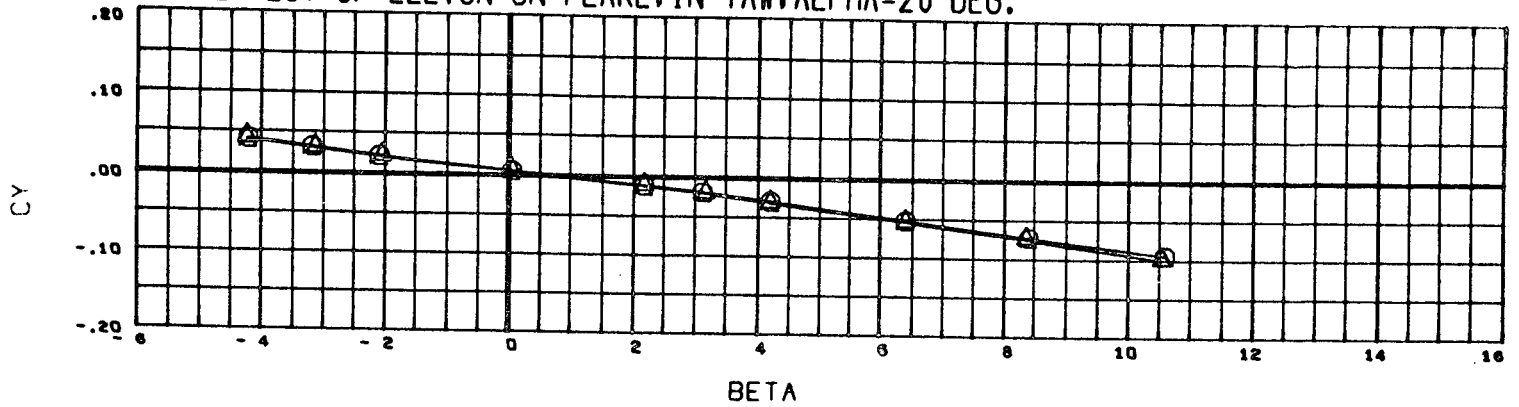
FIG. 18 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN. LREF 4.5720 IN. BREF 6.6150 IN.
(XGB125)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRF 1067.9040 IN. YMRF 0.0000 IN. ZMRF 400.0004 IN. SCALE 0.0075

MACH 3.03

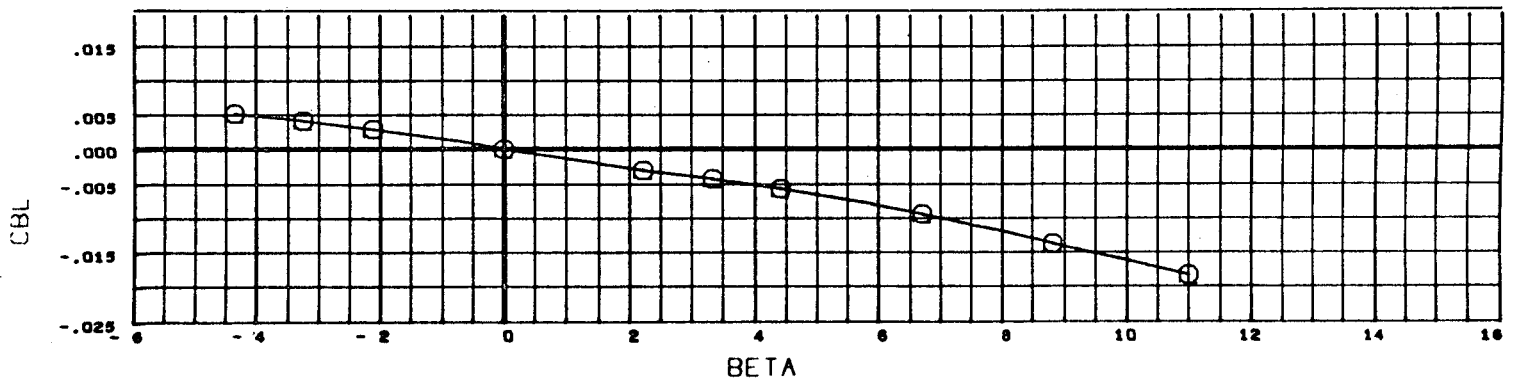
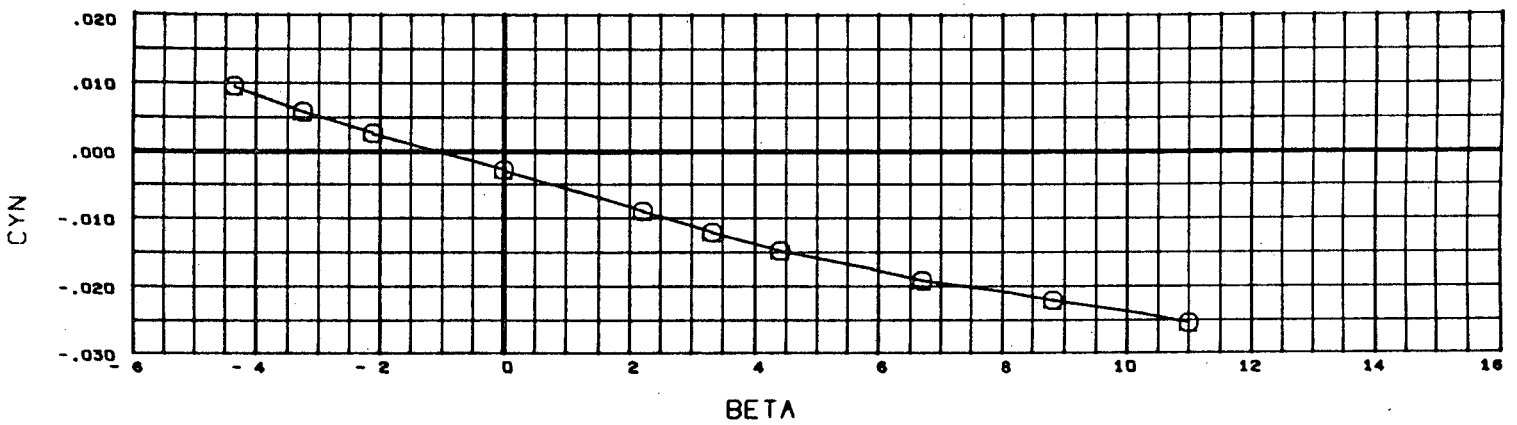
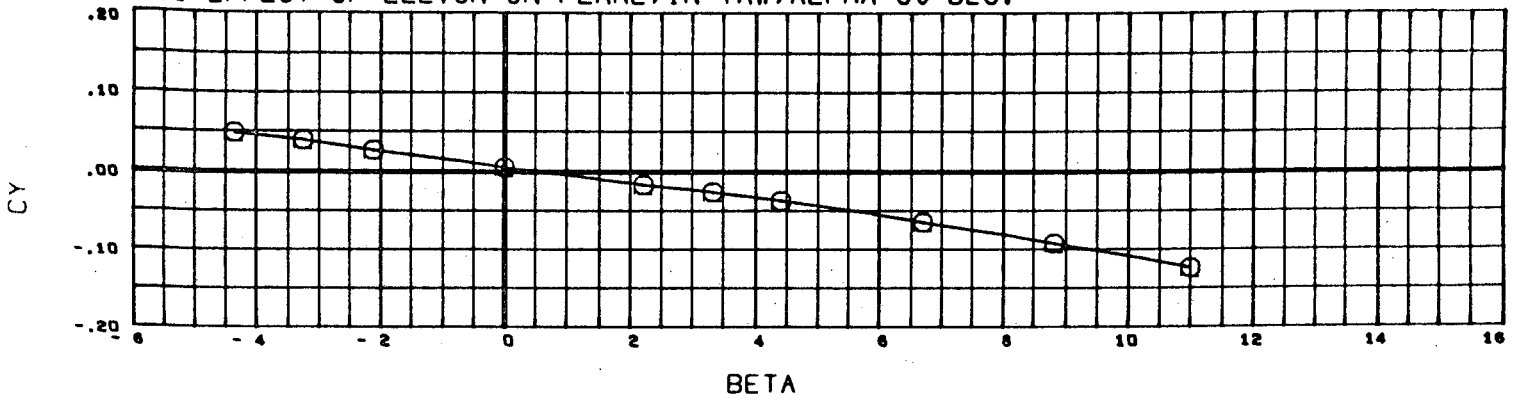
FIG.18 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB115)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB125)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

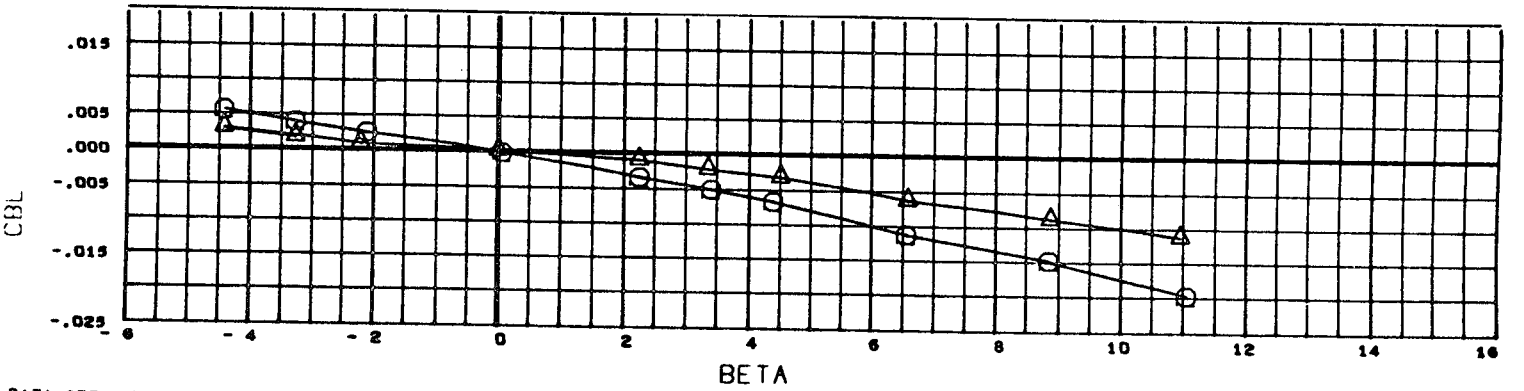
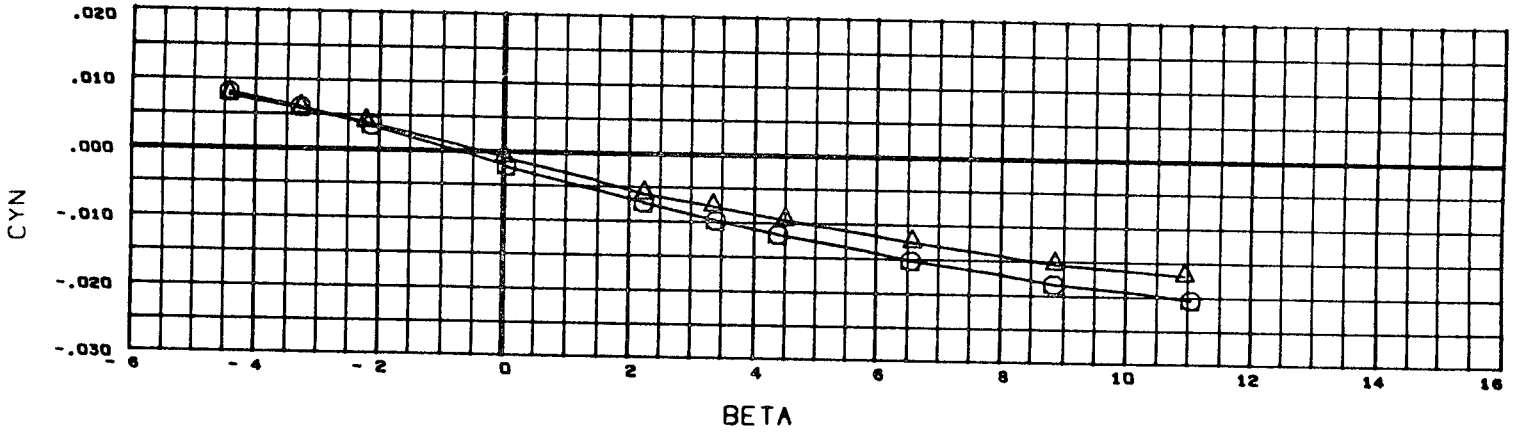
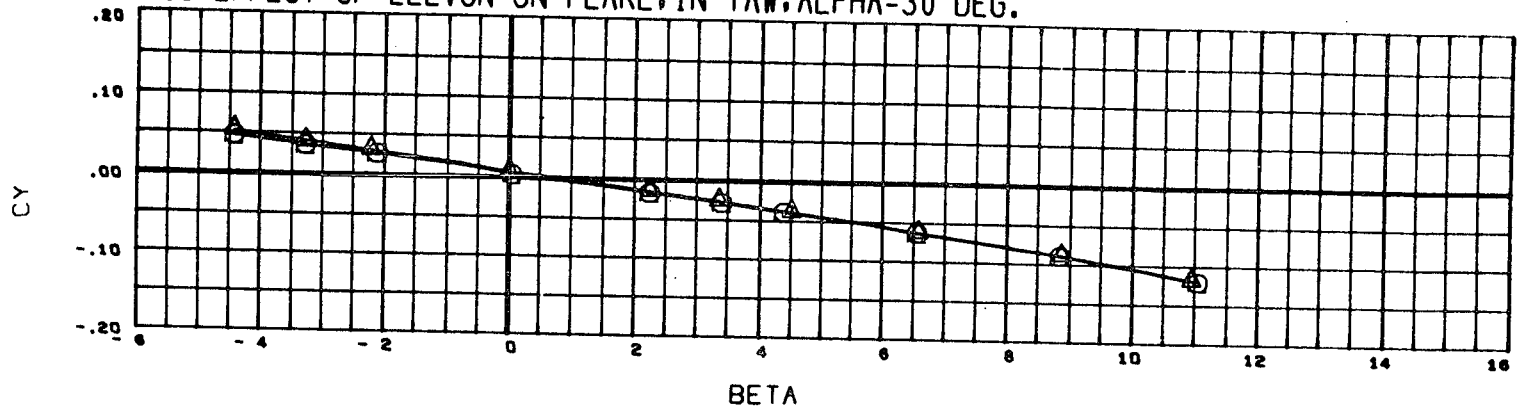
MACH 3.98

FIG. 19 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(X68116)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(X68126)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

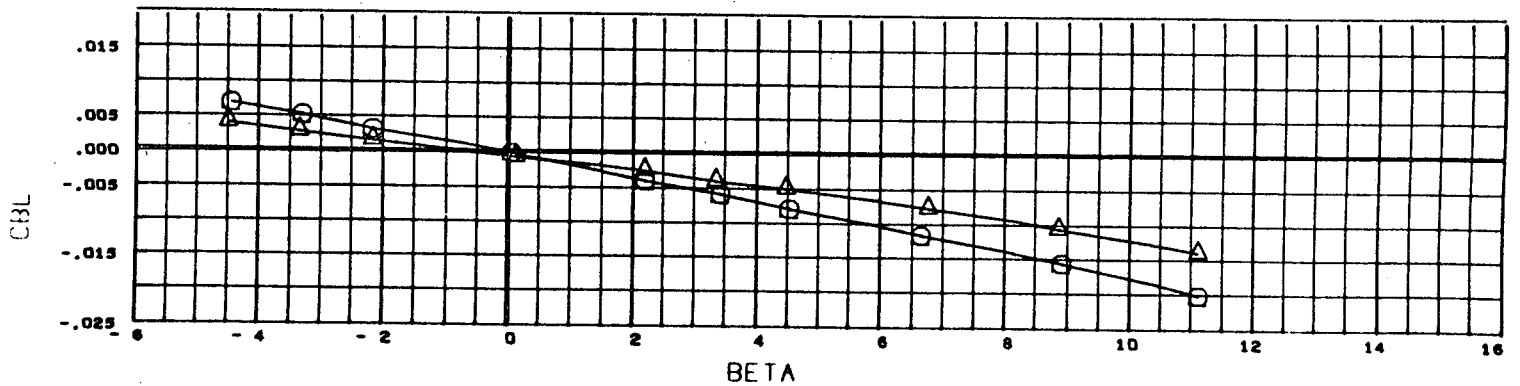
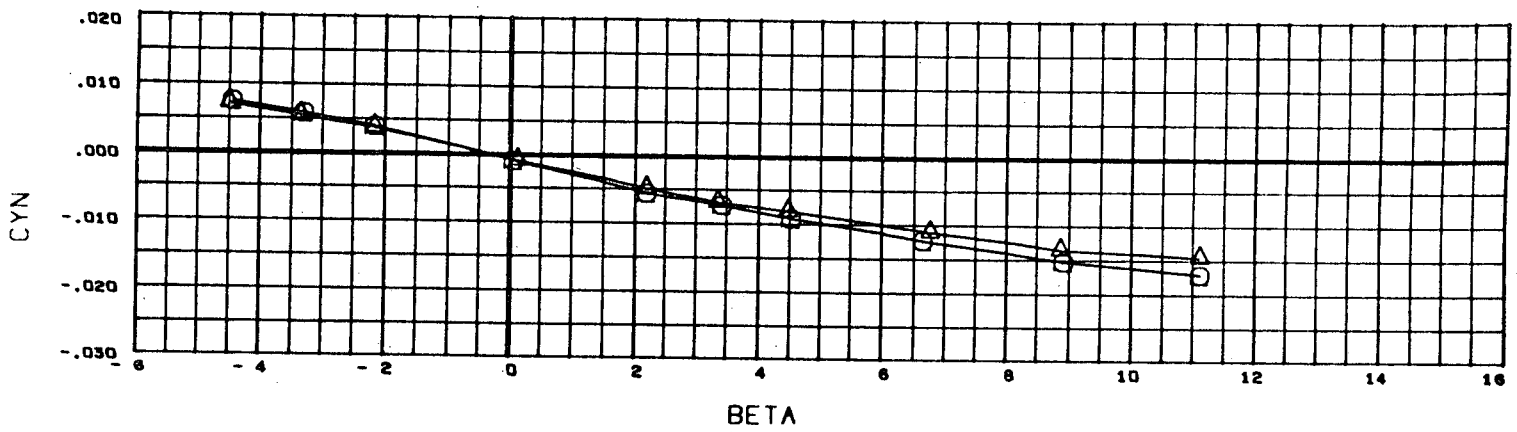
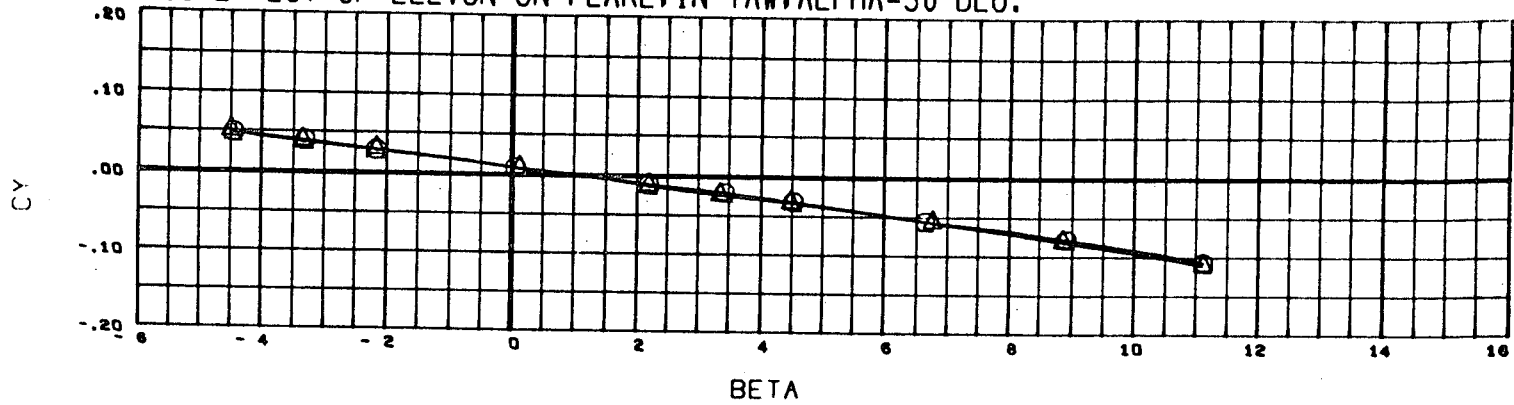
FIG. 19 EFFECT OF ELEVN ON FLARE, IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB116)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB126)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

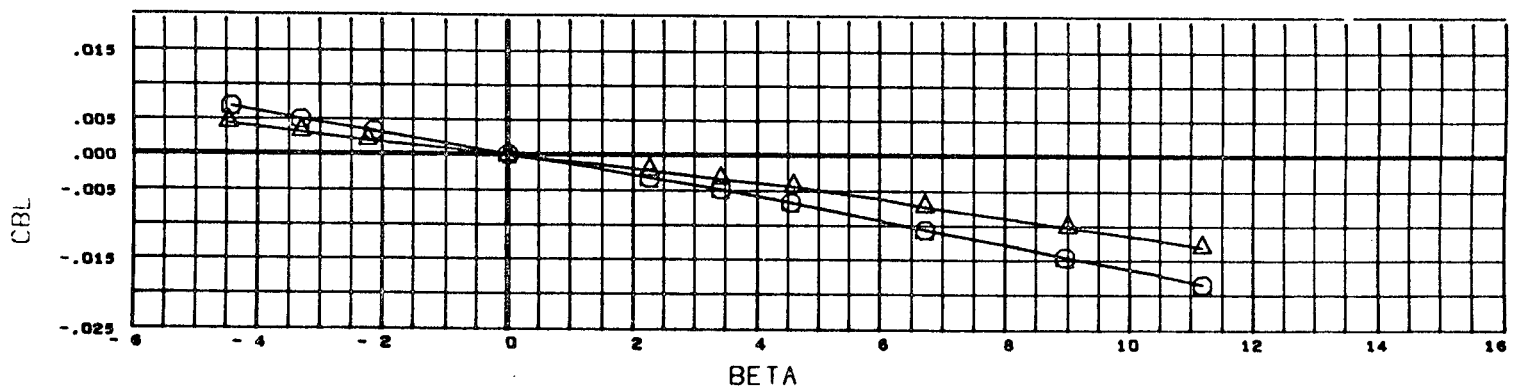
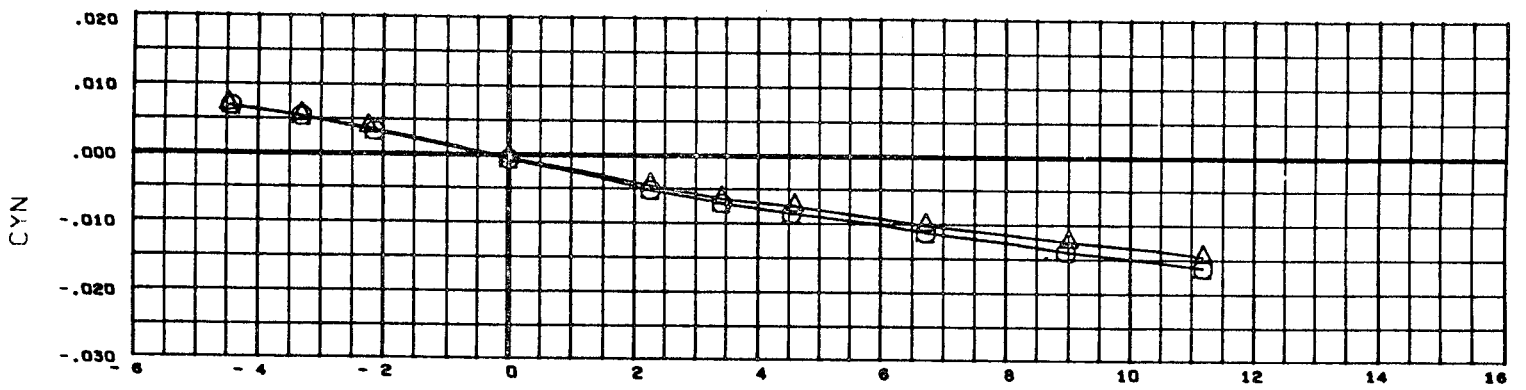
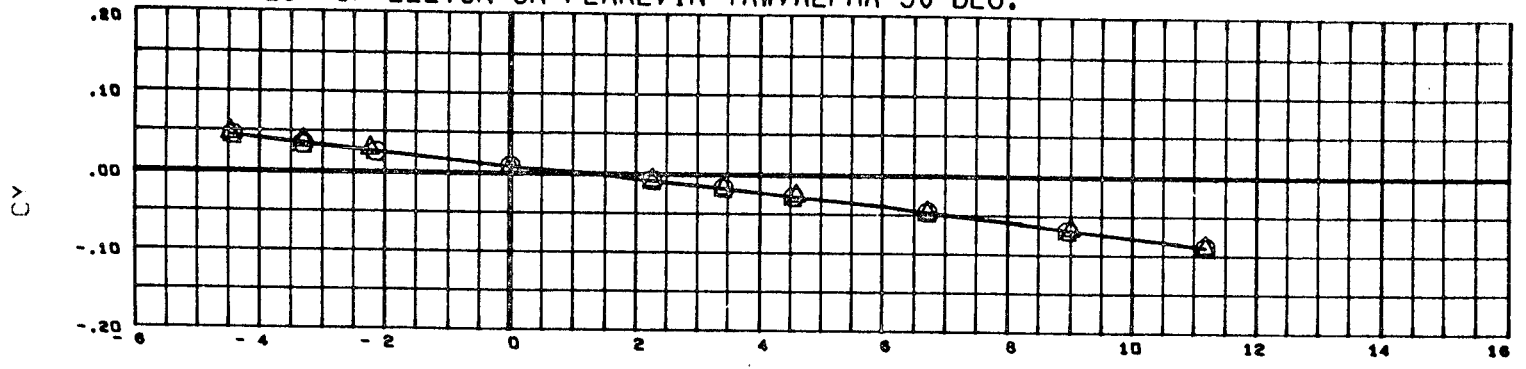
FIG. 19 EFFECT OF ELEVON ON FLARE, IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB116)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB126)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

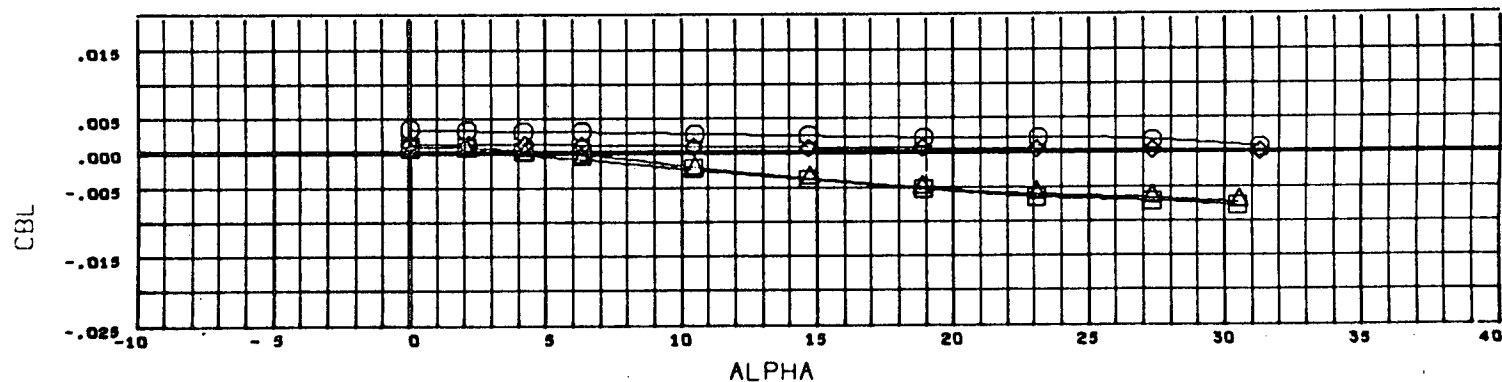
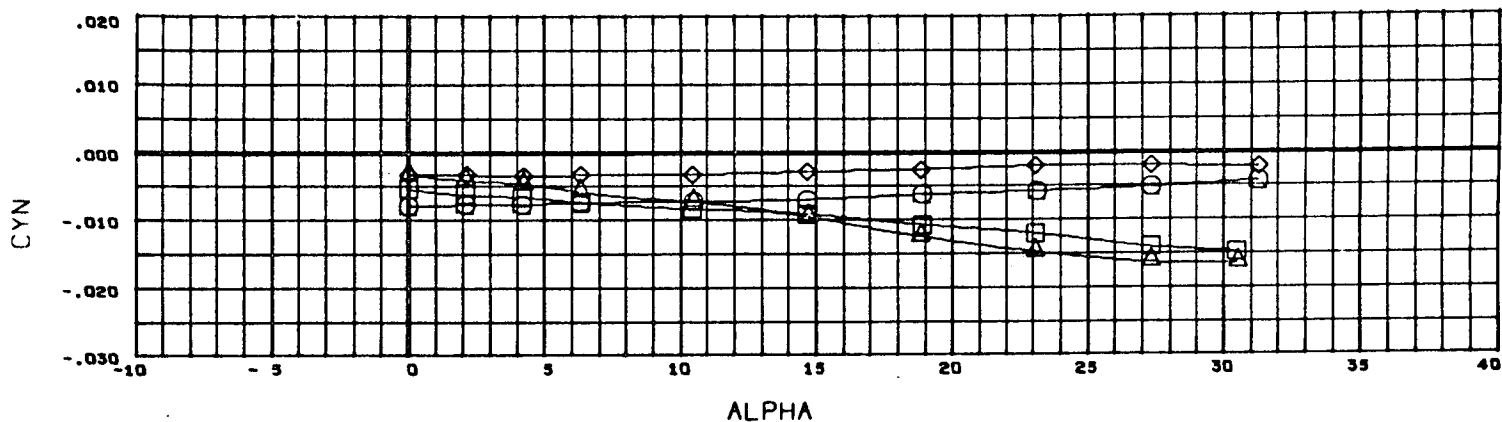
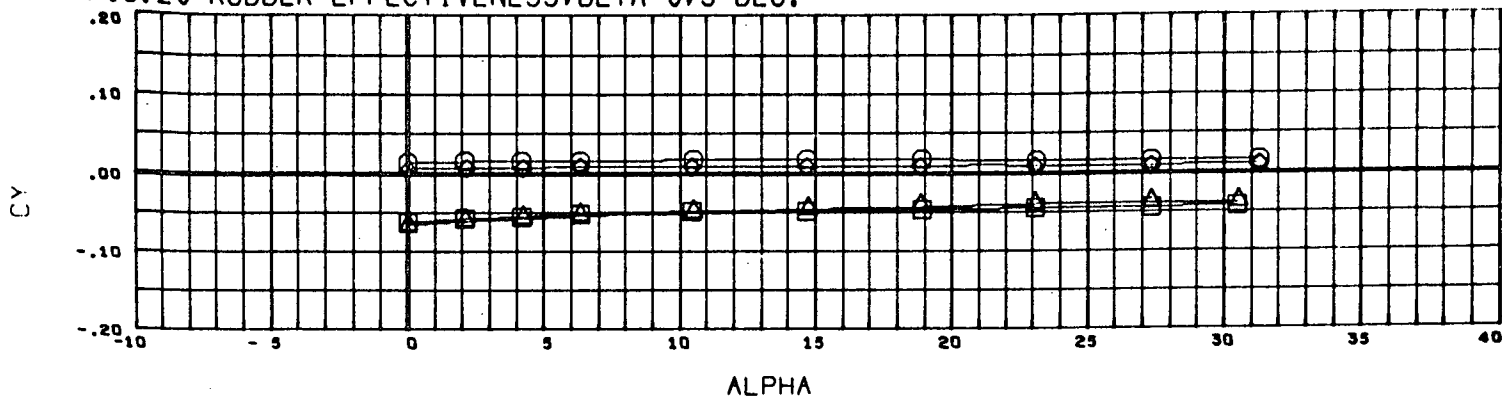
FIG. 19 EFFECT OF ELEVEN ON FLARE, IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB116)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN. LREF 4.5720 IN. BREF 6.6150 IN.
(XGB126)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	-40.000	-40.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

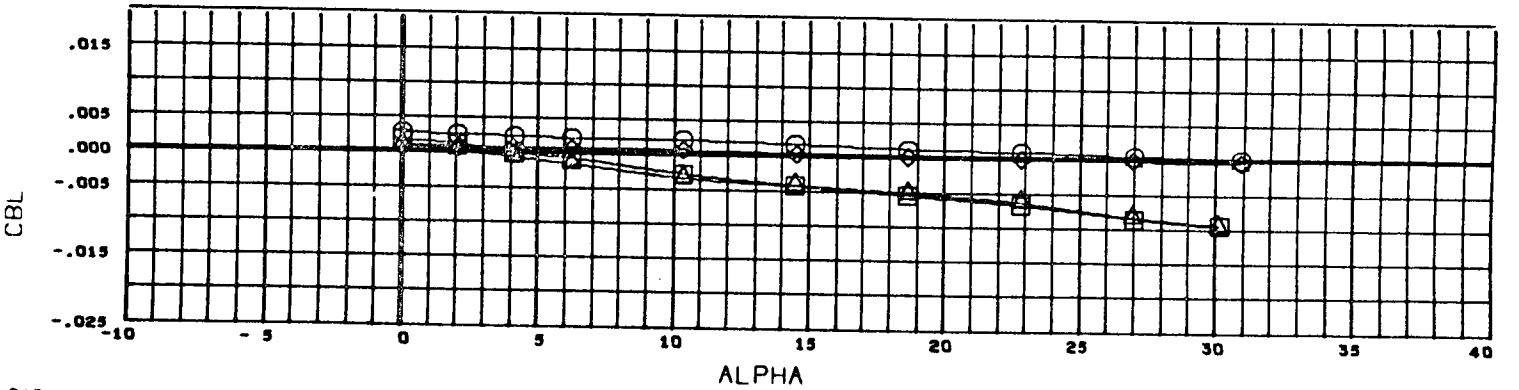
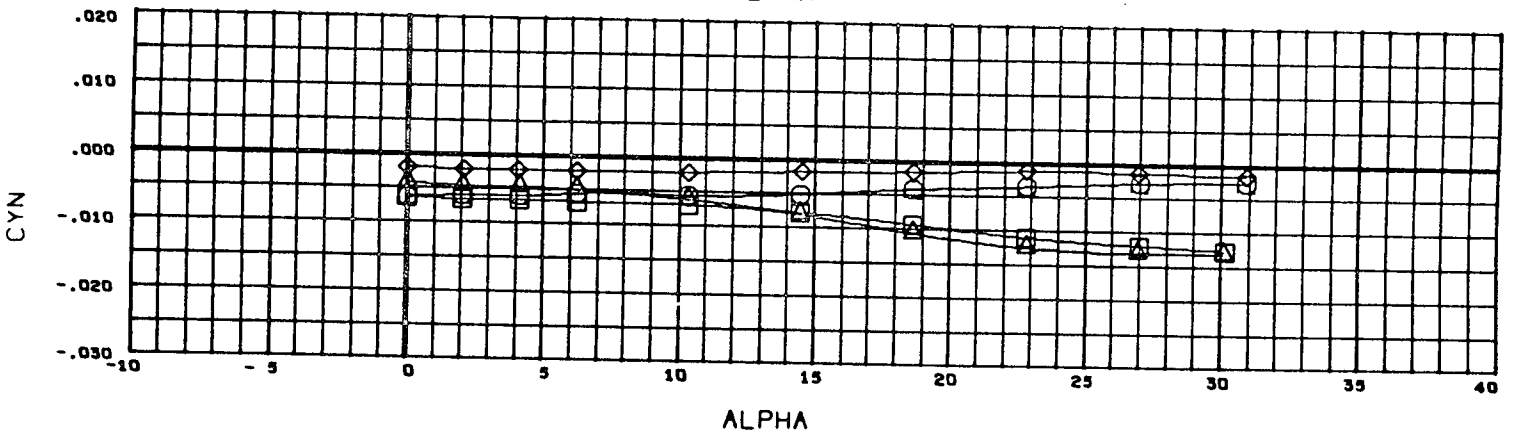
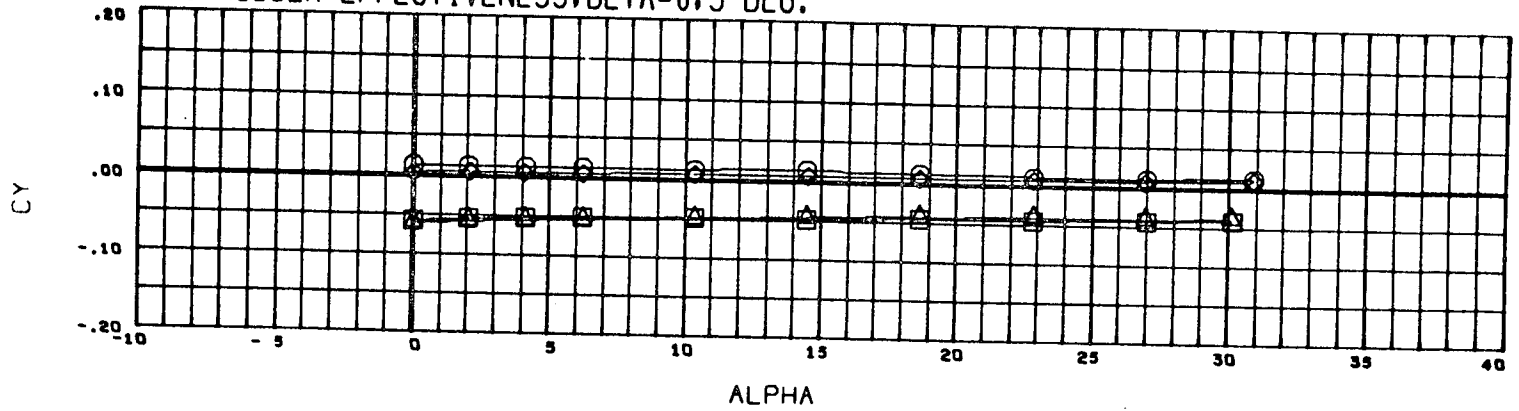
MACH 3.98

FIG.20 RUDDER EFFECTIVENESS, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB131)	JPL WT 20-681 MSC 040A B1W1V1(40,-20)M1P1D1C1	0.000	30.000	10.000	0.000	SREF 25.5560 SQ IN.
(XGB132)	JPL WT 20-681 MSC 040A B1W1V1(40,-20)M1P1D1C1	5.000	30.000	10.000	0.000	LREF 4.5720 IN.
(XGB141)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	10.000	0.000	BREF 6.6150 IN.
(XGB142)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	10.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

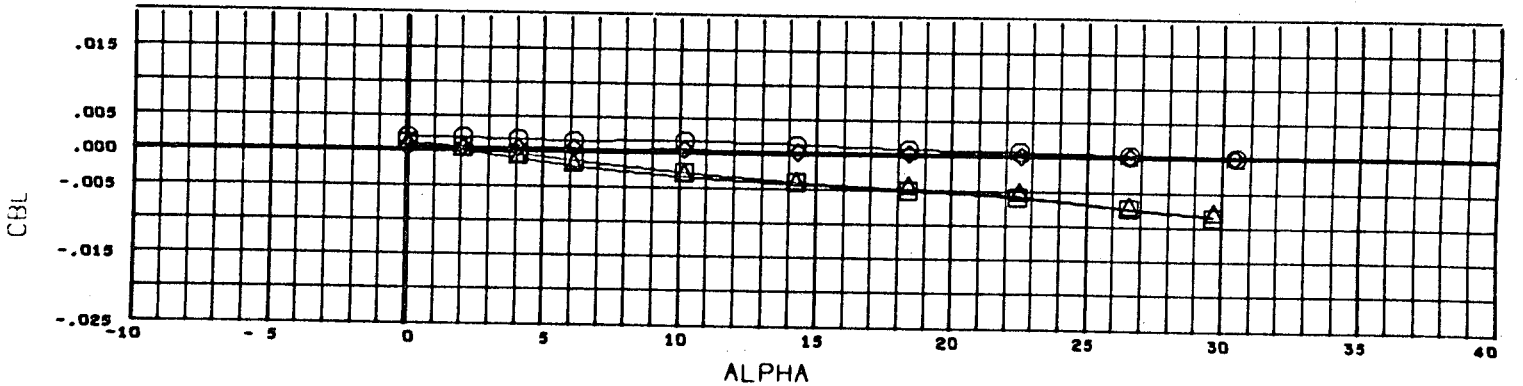
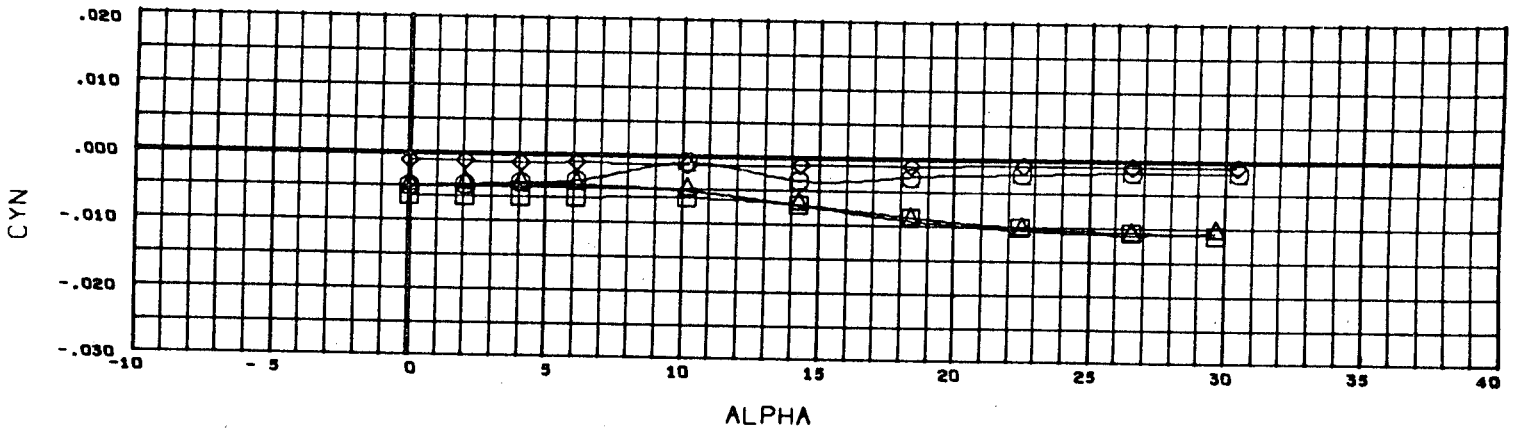
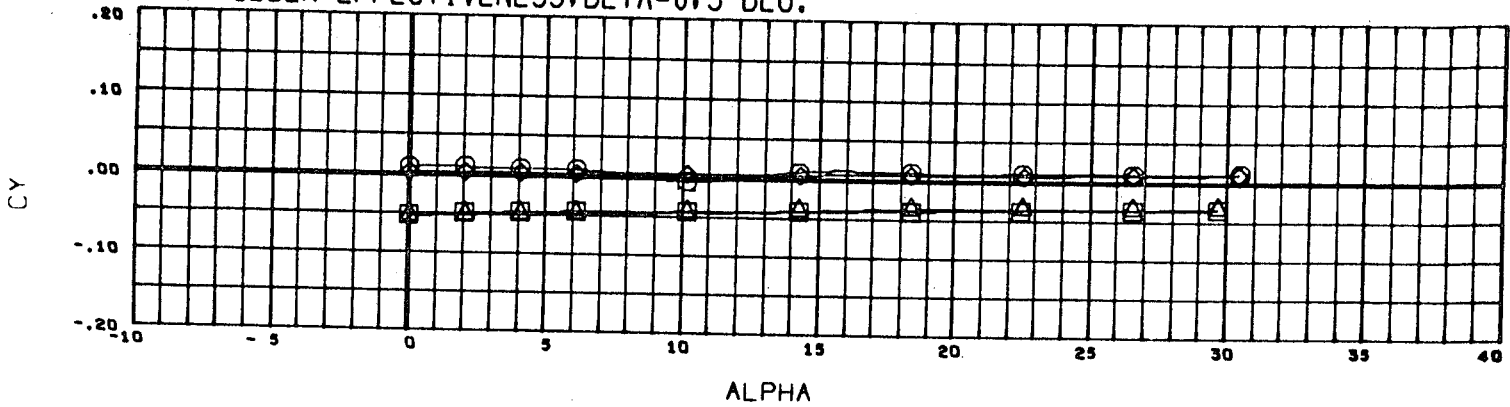
FIG.20 RUDDER EFFECTIVENESS, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB131)	JPL WT 20-681 MSC 040A B1W1V1 (40,-20)M1P1D1C1	0.000	30.000	10.000	0.000	SREF 25.5960 SQ IN.
(XGB132)	JPL WT 20-681 MSC 040A B1W1V1 (40,-20)M1P1D1C1	5.000	30.000	10.000	0.000	LREF 4.5720 IN.
(XGB141)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	10.000	0.000	BREF 6.6150 IN.
(XGB142)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	10.000	0.000	XM RP 1067.9040 IN. YM RP 0.0000 IN. ZM RP 400.0004 IN. SCALE 0.0075

MACH 3.03

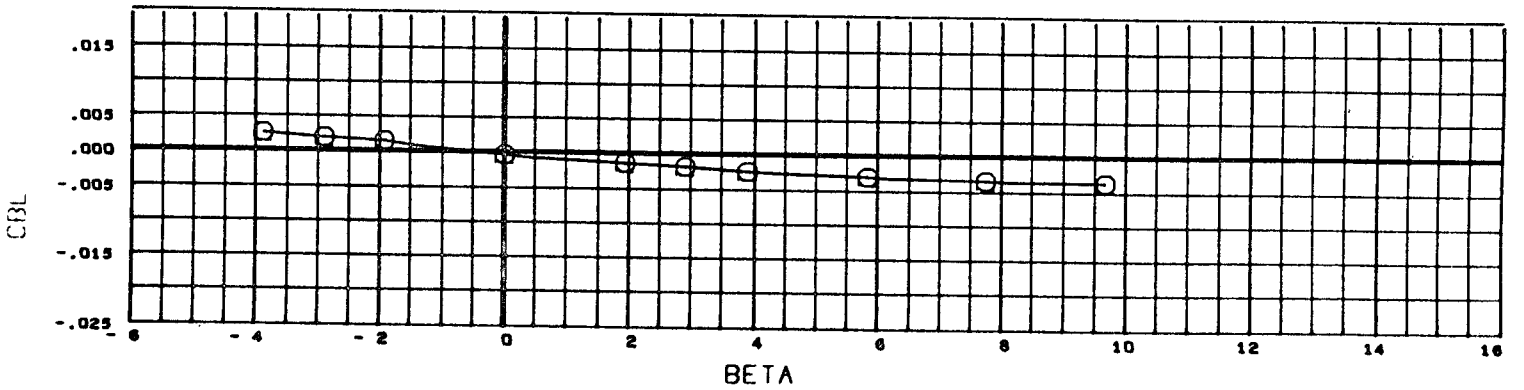
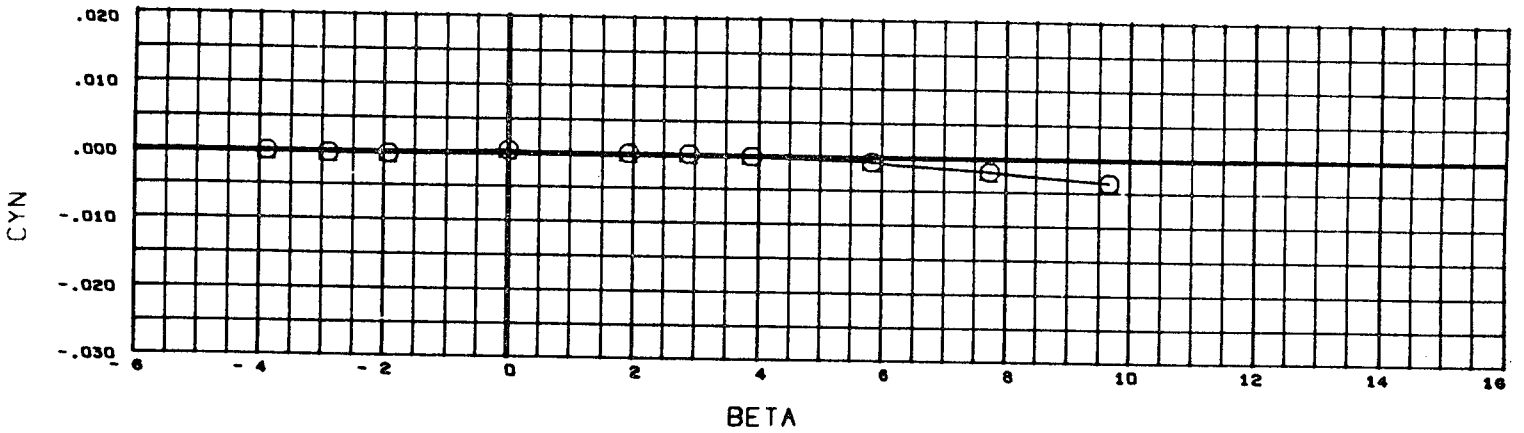
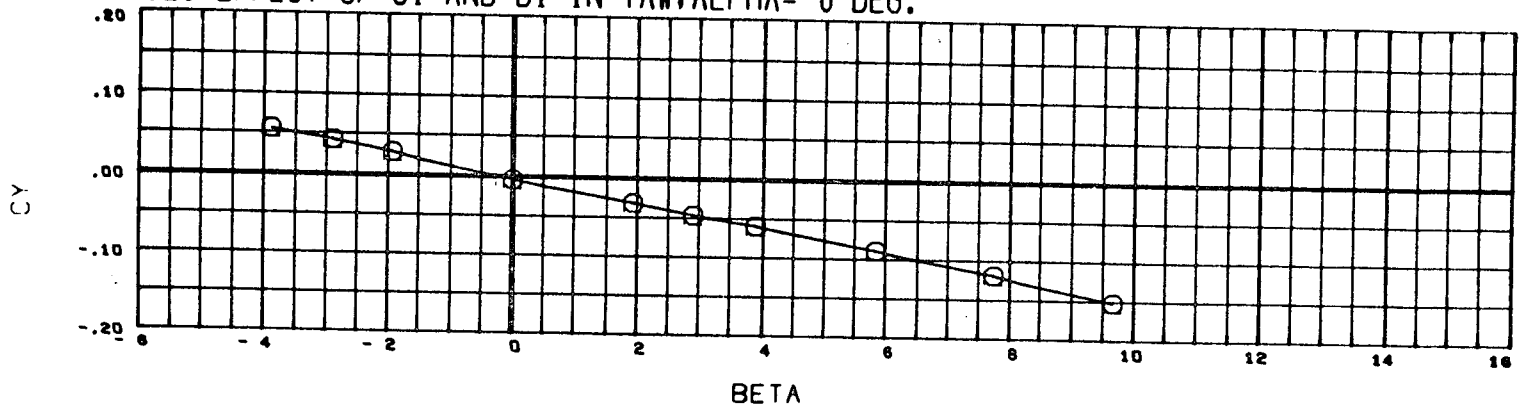
FIG.20 RUDDER EFFECTIVENESS, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB131)	JPL WT 20-681 MSC 040A B1W1V1(40,-20)M1P1D1C1	0.000	30.000	10.000	0.000	SREF 25.5560 SQ IN.
(XGB132)	JPL WT 20-681 MSC 040A B1W1V1(40,-20)M1P1D1C1	5.000	30.000	10.000	0.000	LREF 4.5720 IN.
(XGB141)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	10.000	0.000	BREF 6.6150 IN.
(XGB142)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	10.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

FIG.21 EFFECT OF C1 AND D1 IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XG8013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RC8151)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RC8223)	DATA NOT AVAILABLE FOR ALL CONDITIONS

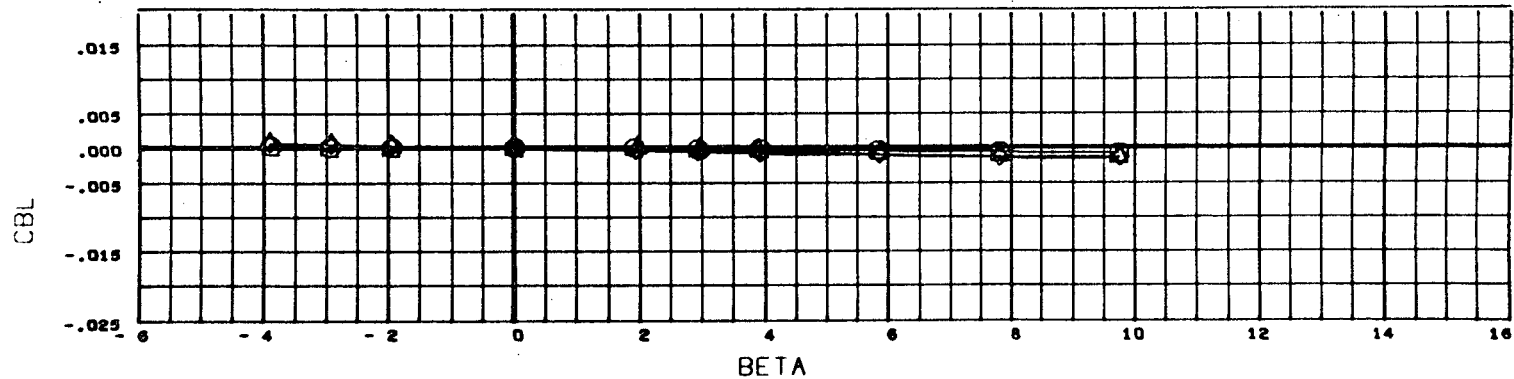
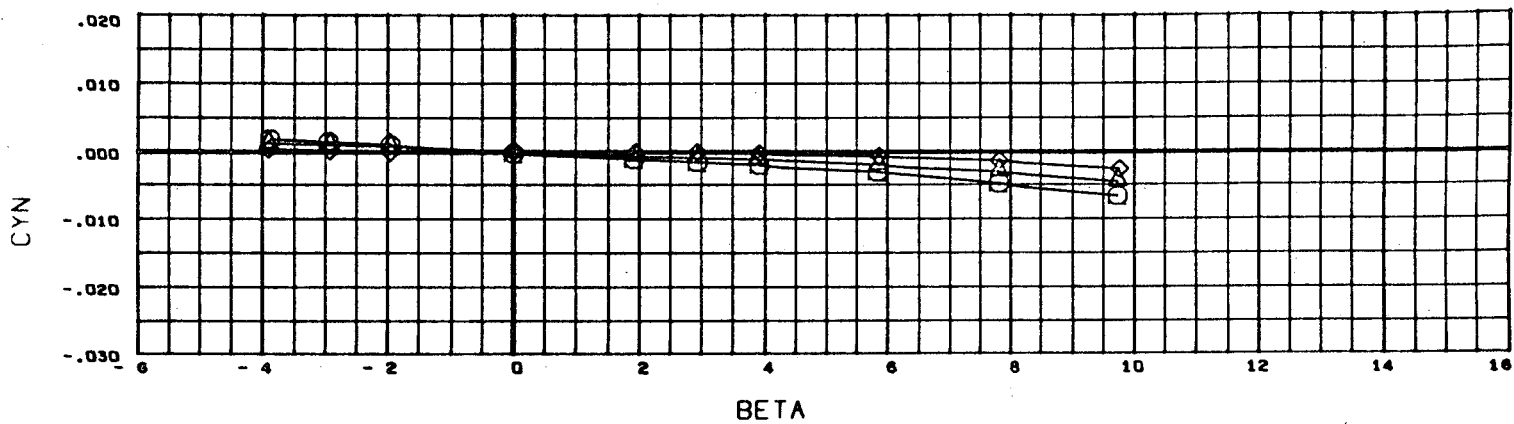
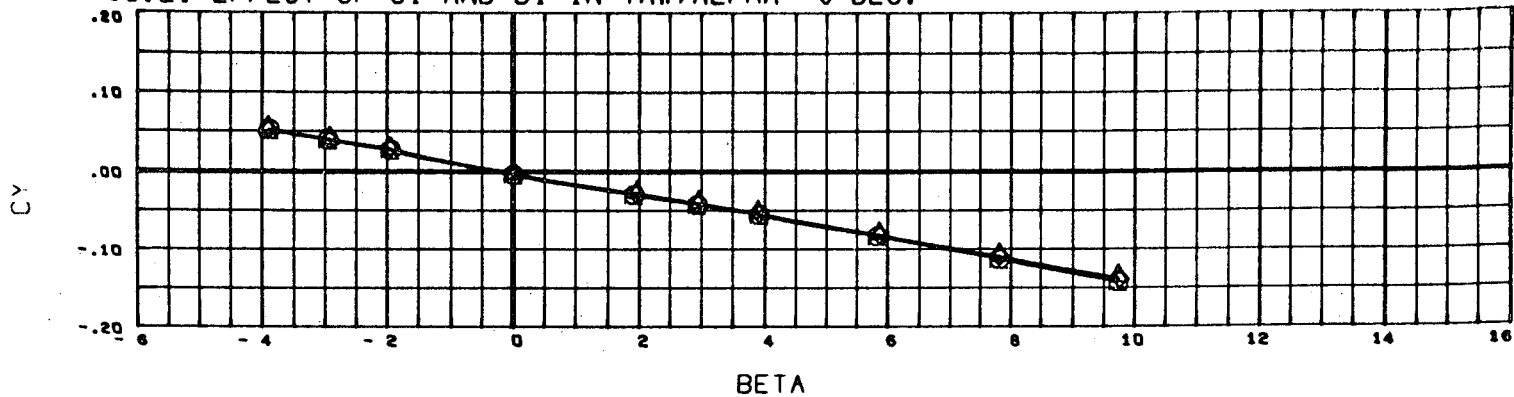
LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

PAGE 132

FIG.21 EFFECT OF C1 AND D1 IN YAW, ALPHA= 0 DEG.

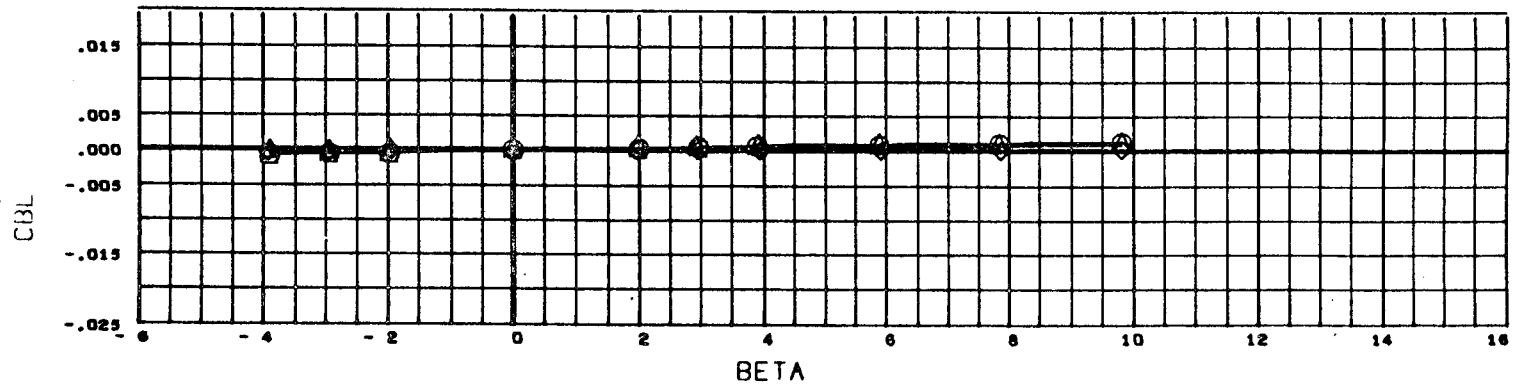
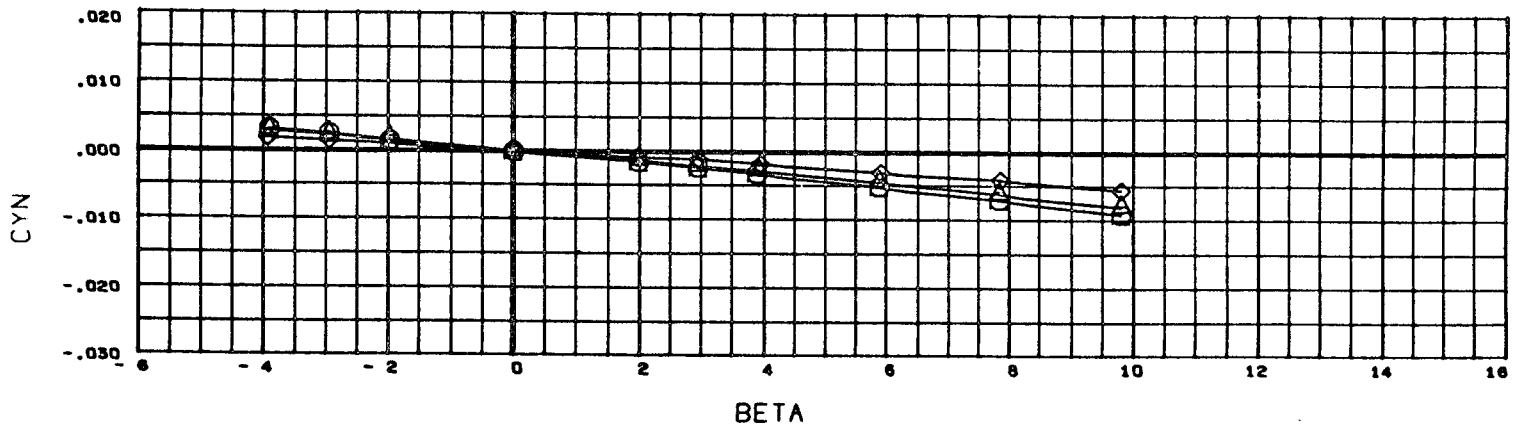
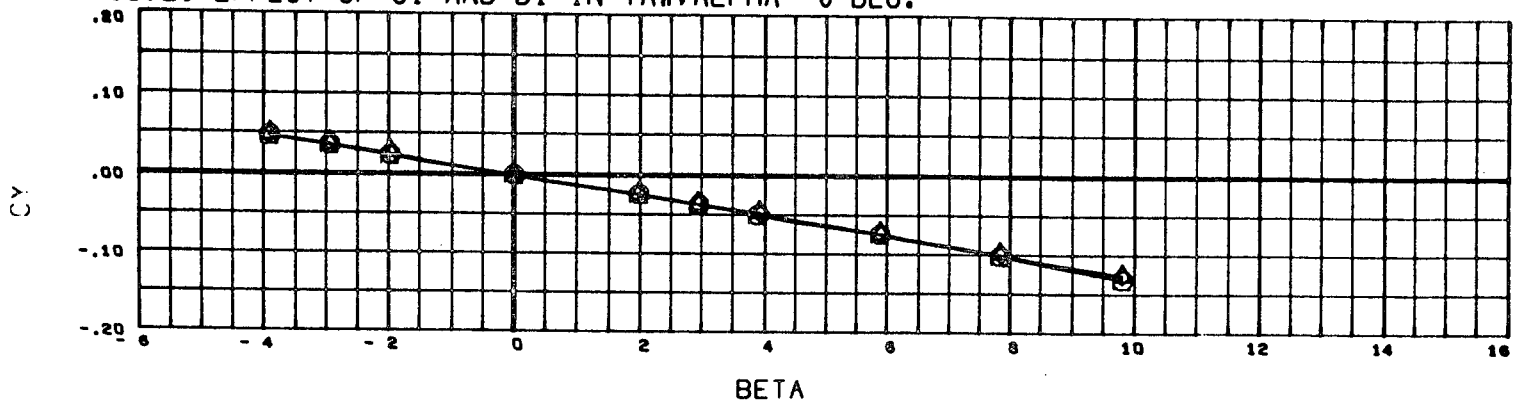


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XG8013)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RG8191)	JPL WT 20-881 MSC 040A B1W1V1M1P1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RG8223)	JPL WT 20-881 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 2.42

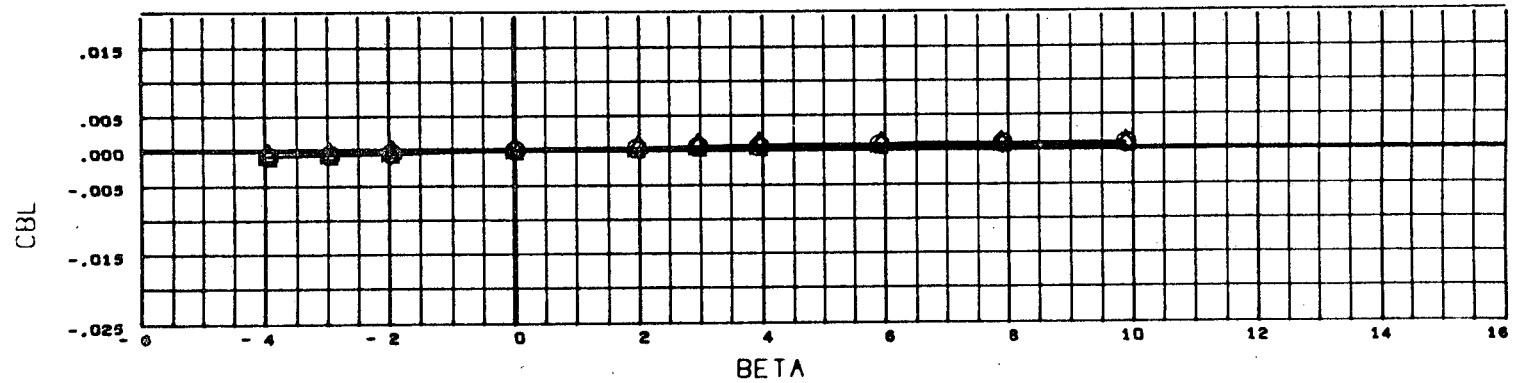
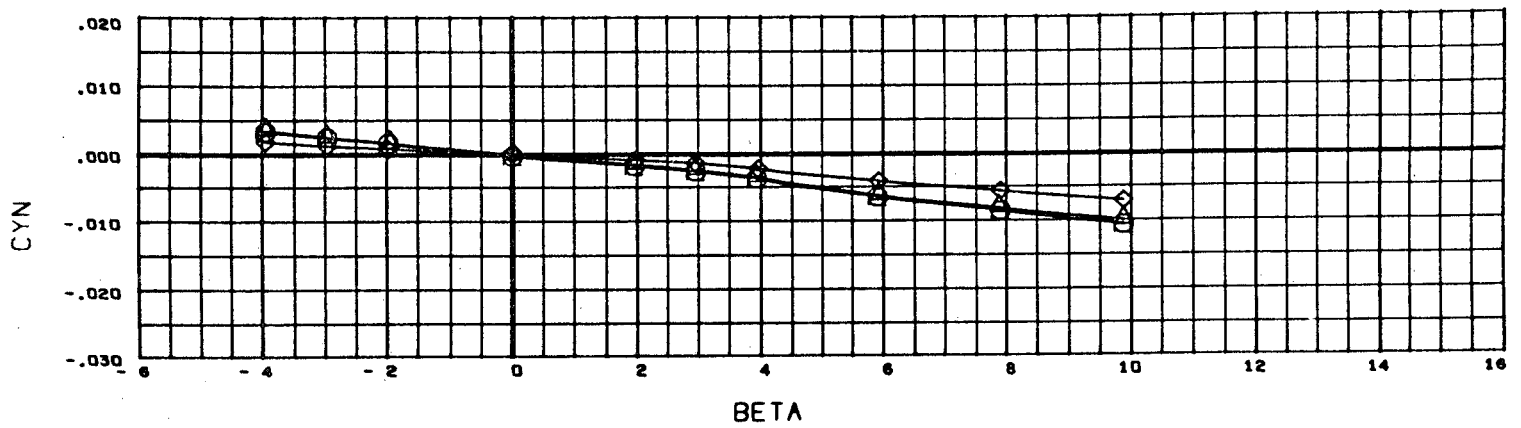
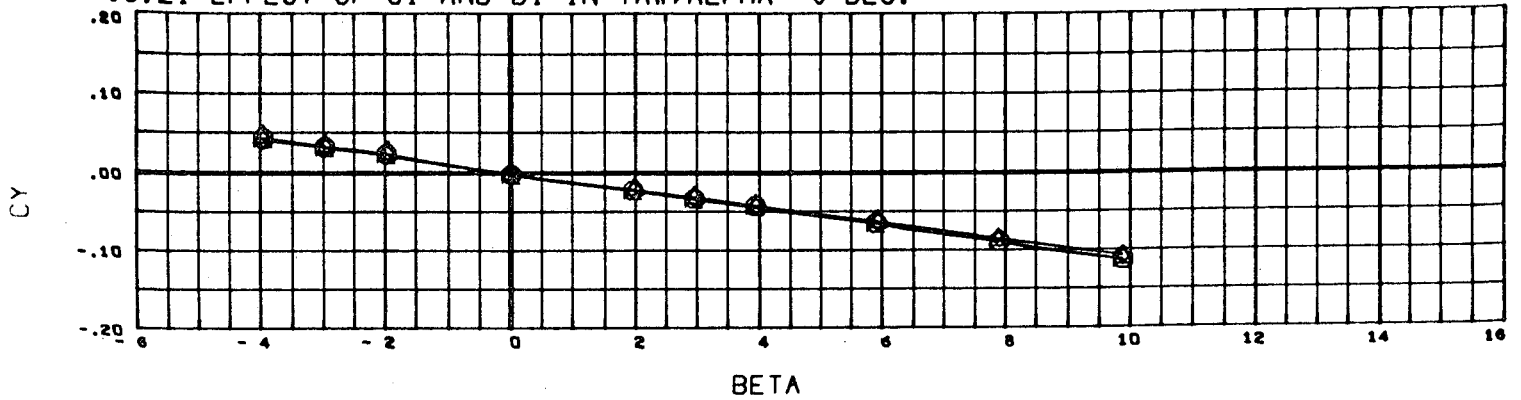
c.d

FIG.21 EFFECT OF C1 AND D1 IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB151)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB223)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

FIG. 21 EFFECT OF C1 AND D1 IN YAW, ALPHA= 0 DEG.

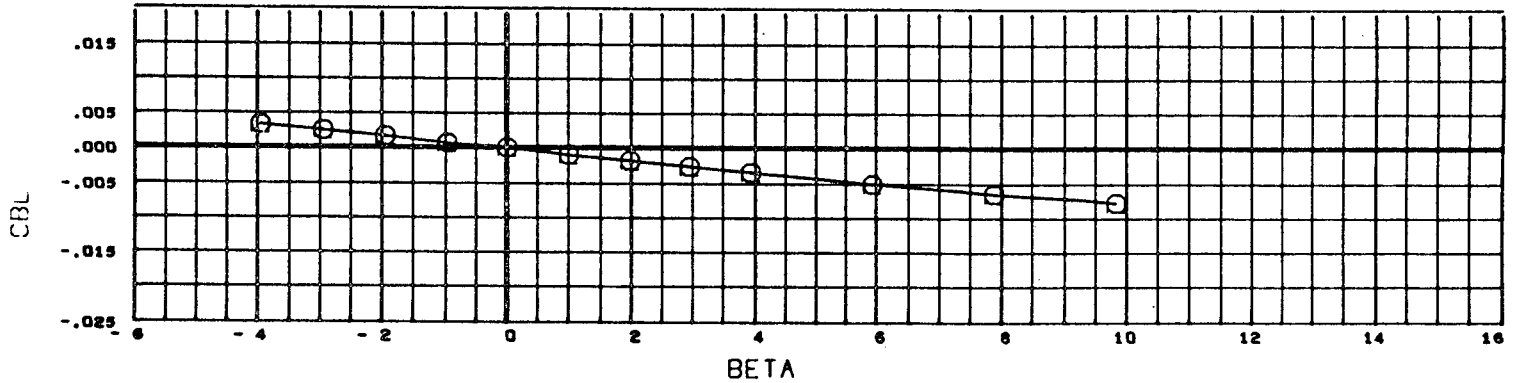
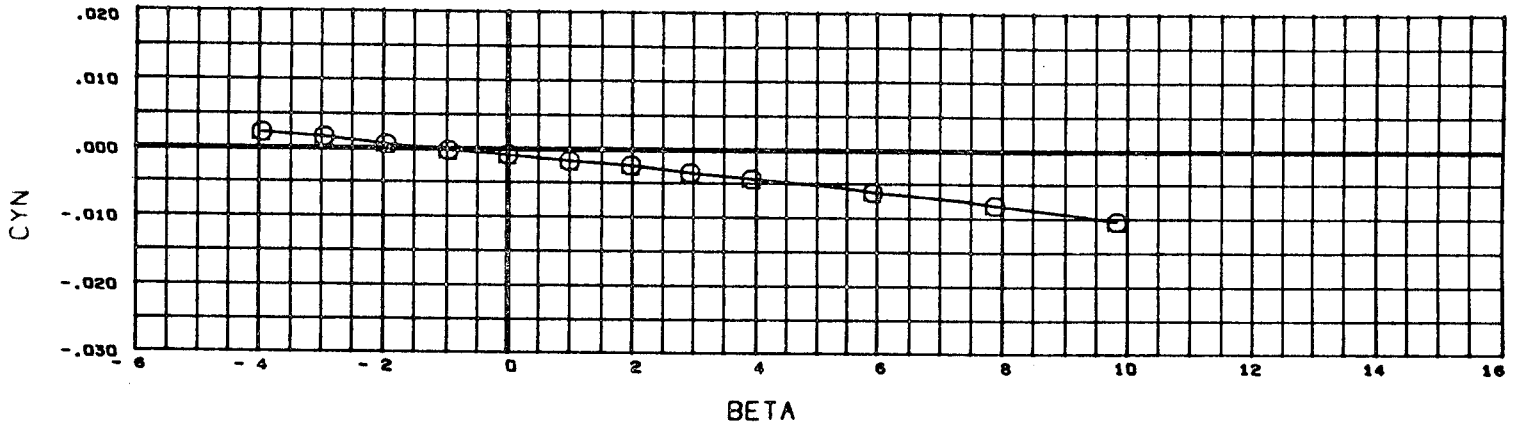
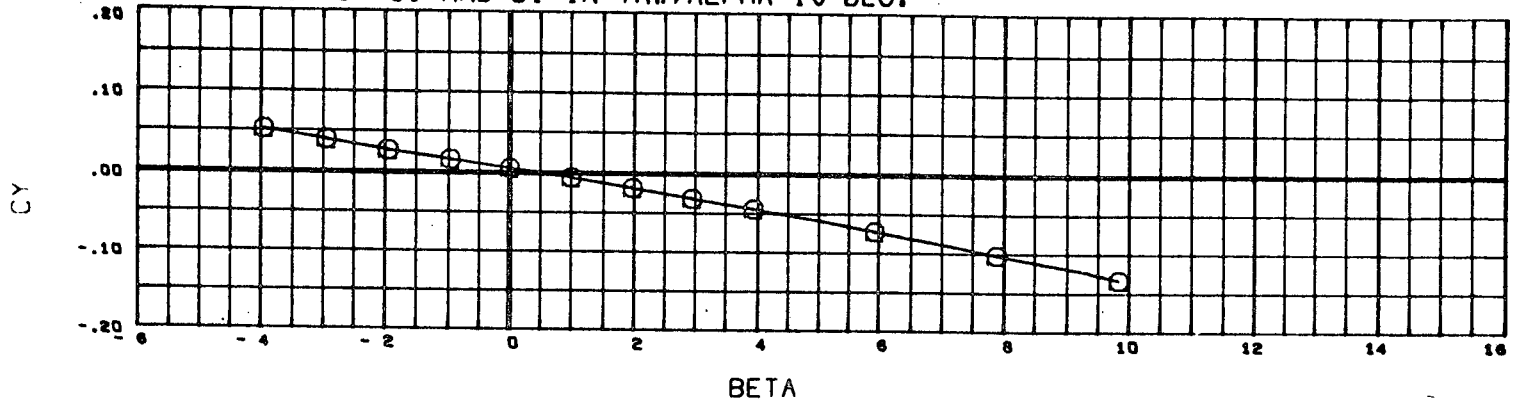


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB151)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(RGB223)	JPL WT 20-681 MSC 040A B1W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

FIG.22 EFFECT OF C1 AND D1 IN YAW, ALPHA=10 DEG.

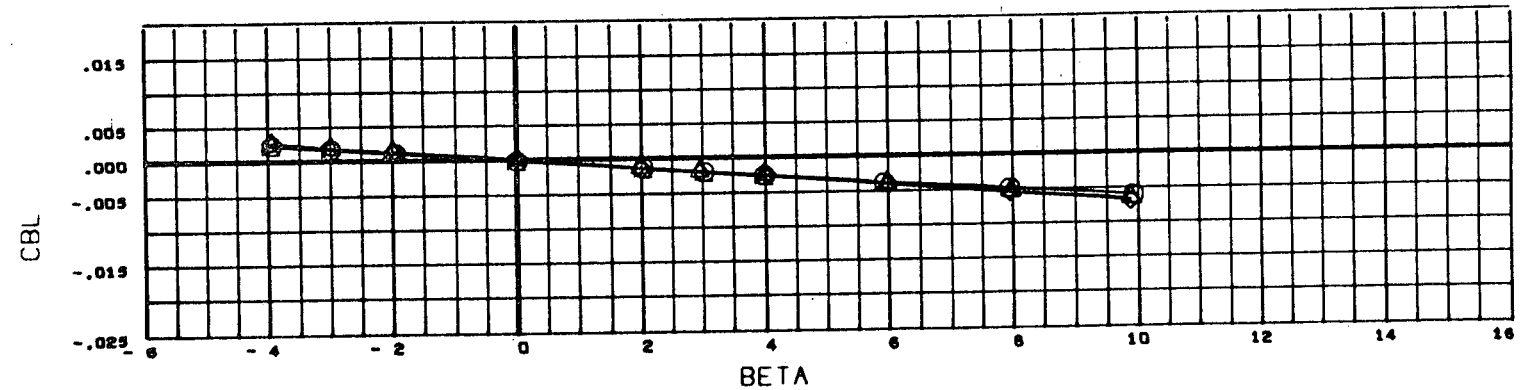
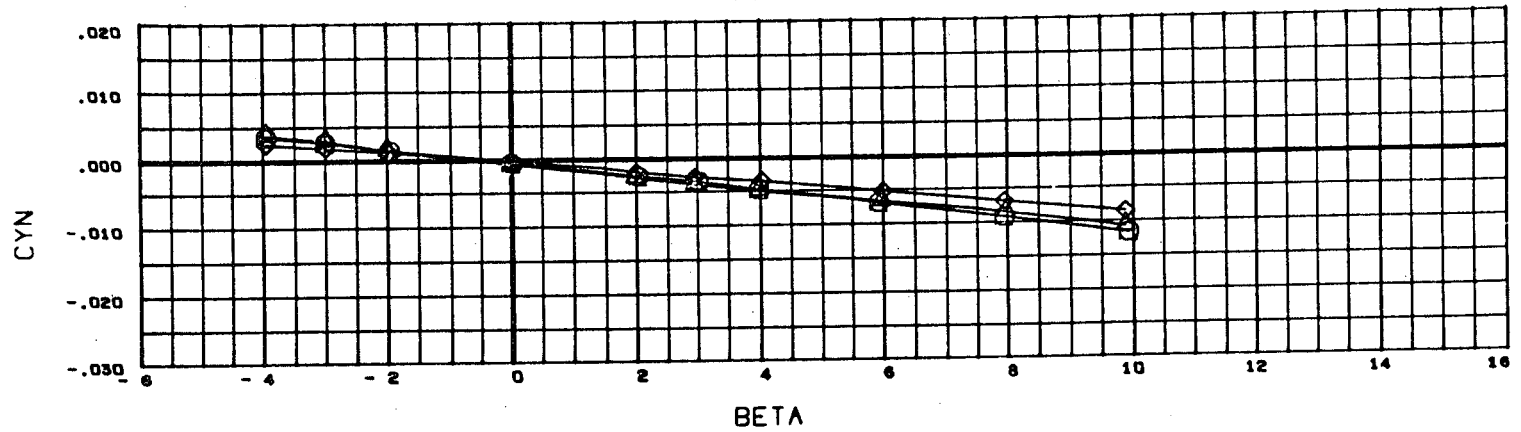
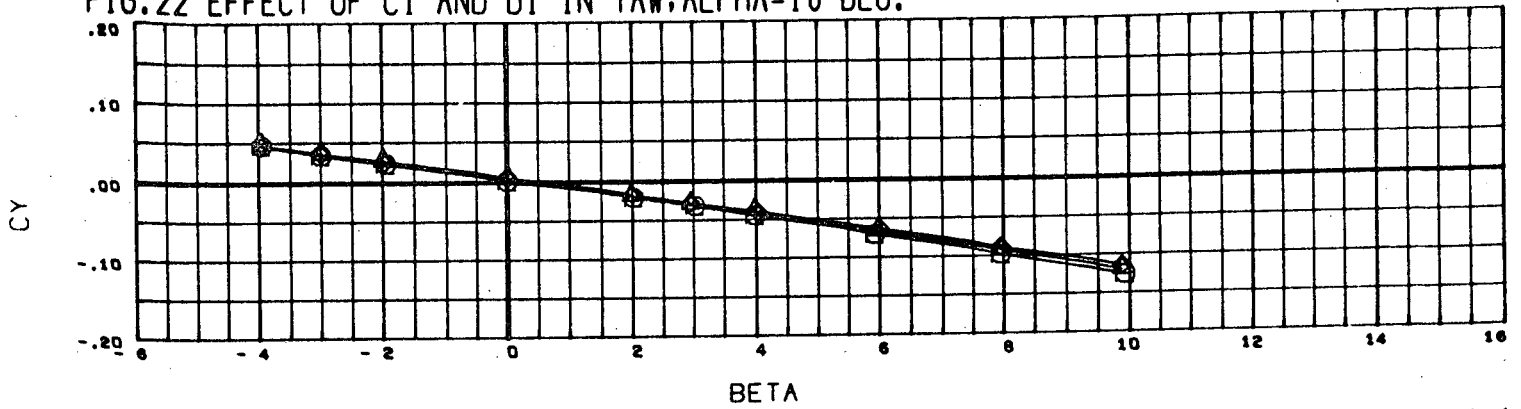


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB014)	JPL WT 20-881 MSC 040A 81W1V1M1P1D1C1
(RGE132)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGE224)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

FIG. 22 EFFECT OF C1 AND D1 IN YAW, ALPHA=10 DEG.



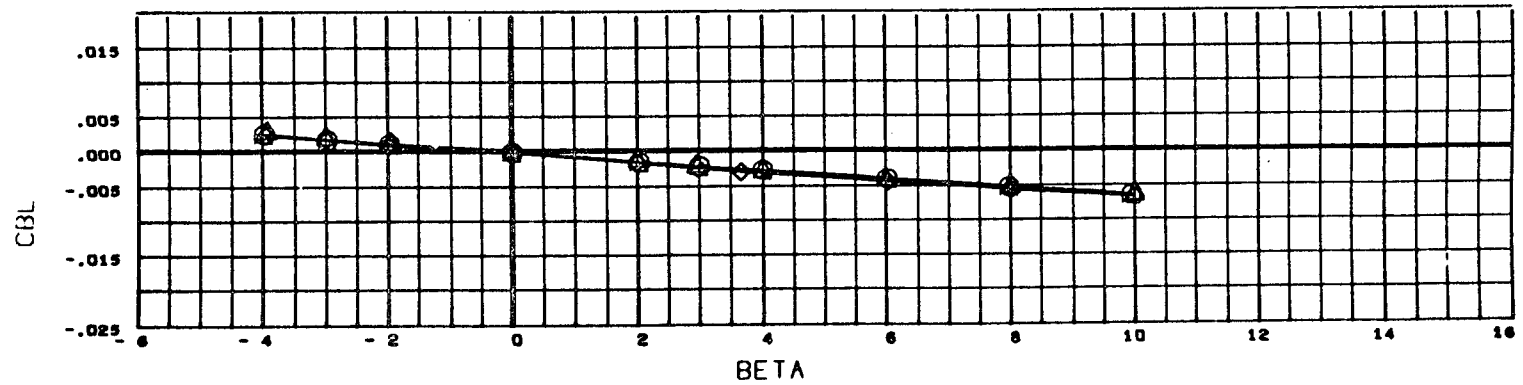
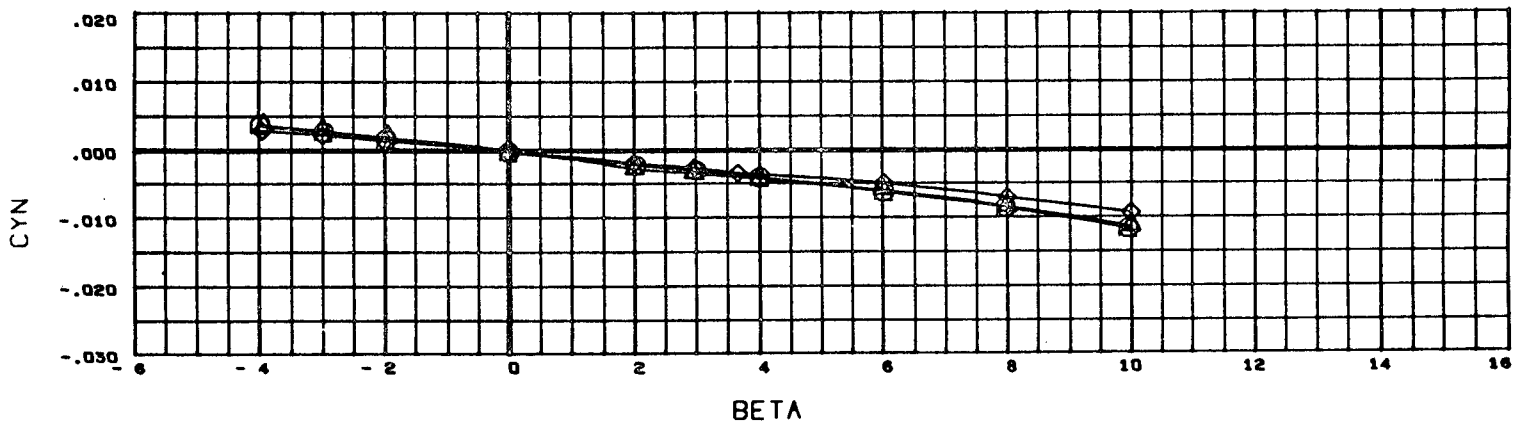
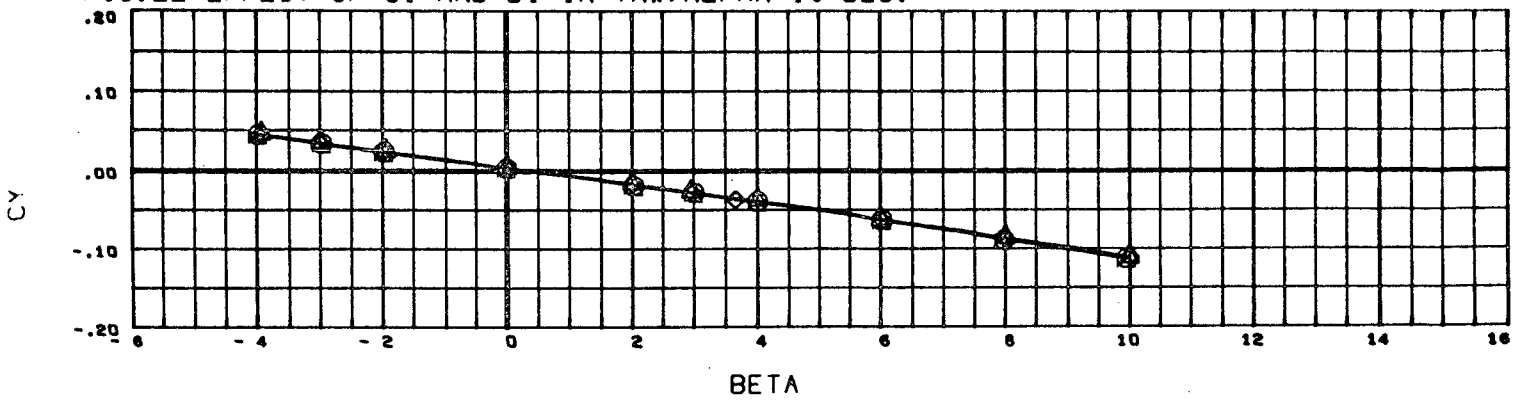
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB152)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(RGB224)	JPL WT 20-681 MSC 040A B1W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG.22 EFFECT OF C1 AND D1 IN YAW, ALPHA=10 DEG.

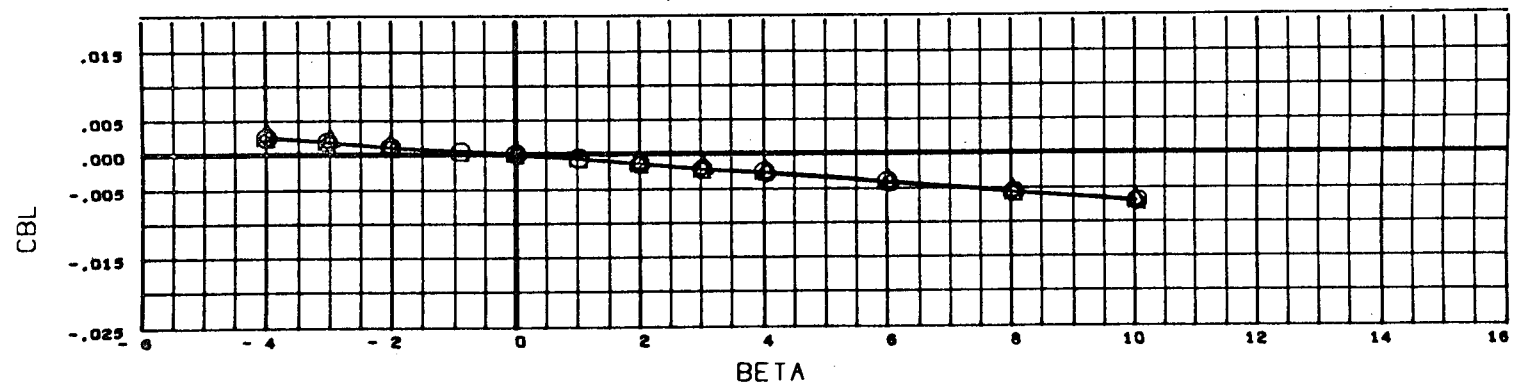
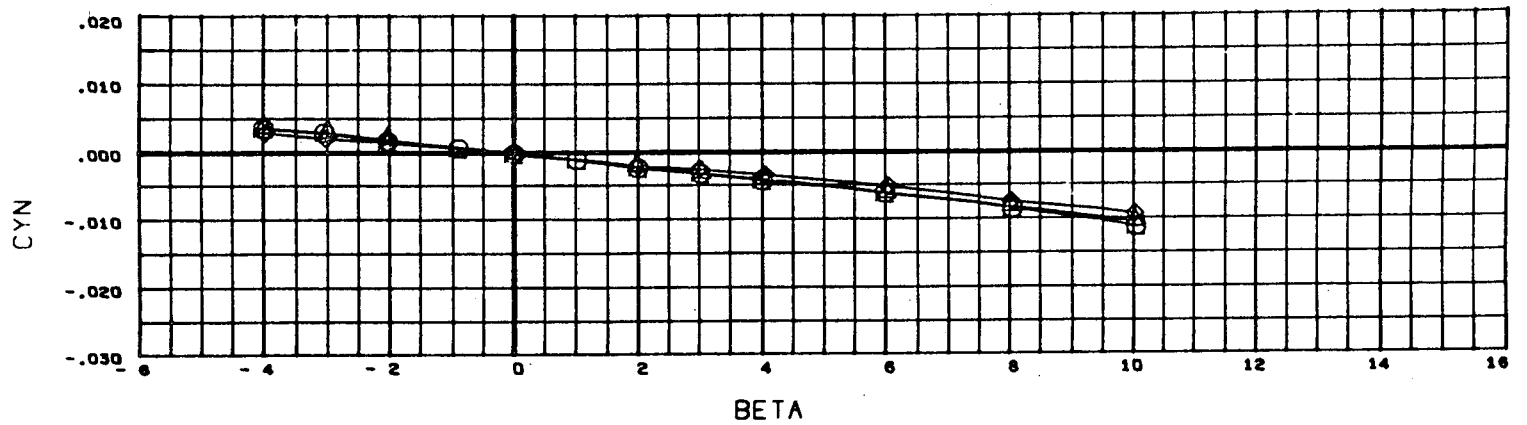
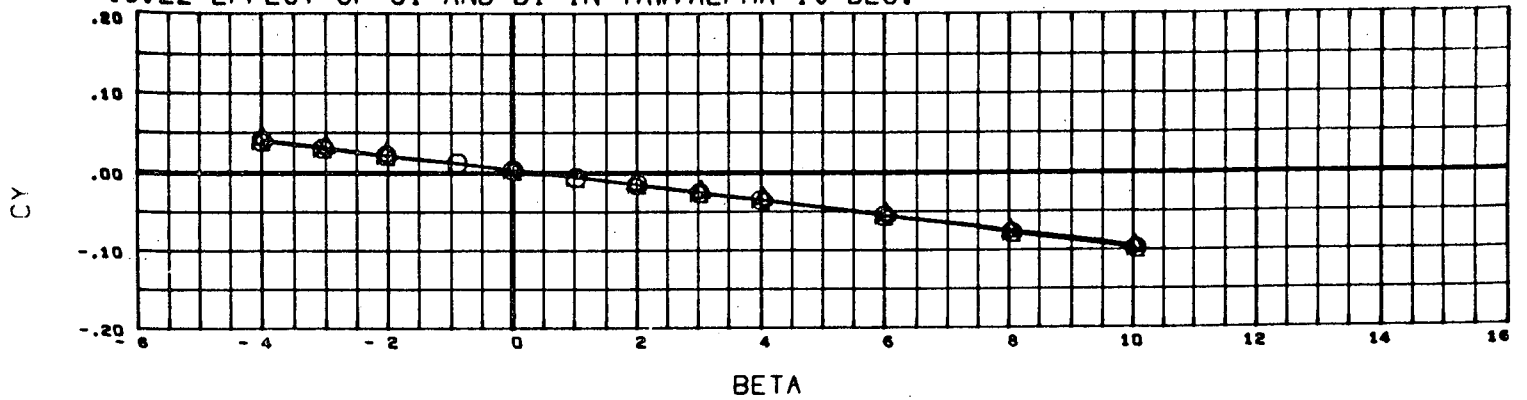


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB014)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1
(RGB152)	JPL WT 20-681 MSC 040A 81W1V1M1P1C1
(RGB224)	JPL WT 20-681 MSC 040A 81W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XM RP	1067.9040 IN.
YM RP	0.0000 IN.
ZM RP	400.0004 IN.
SCALE	0.0075

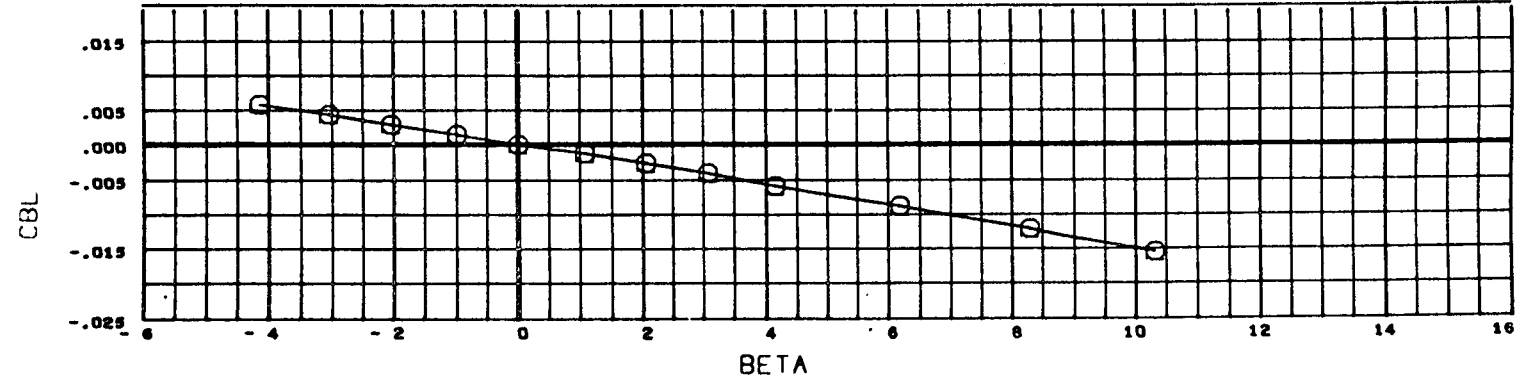
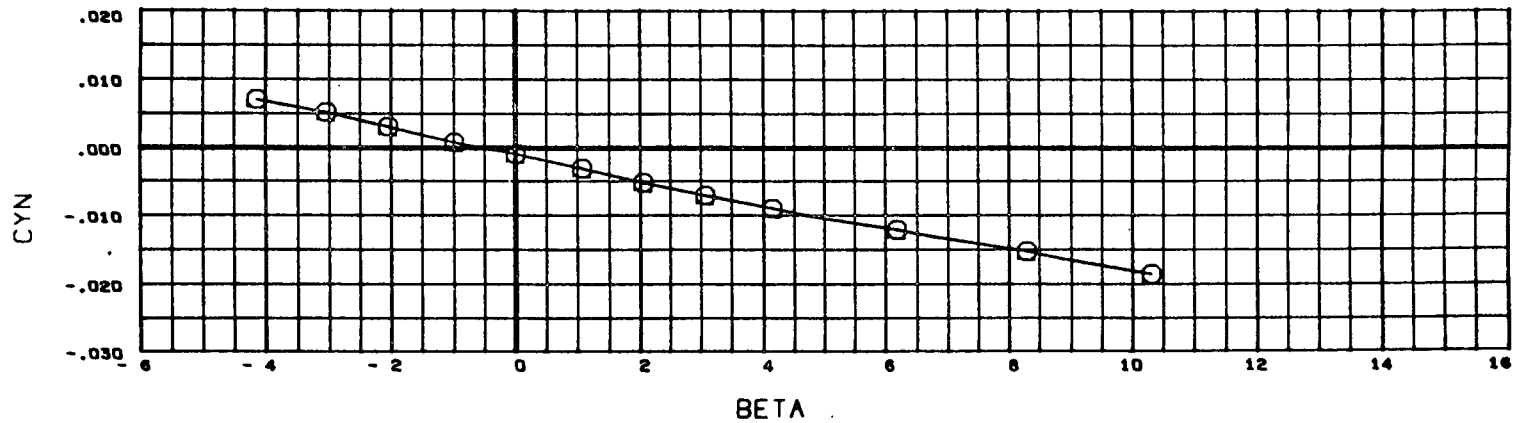
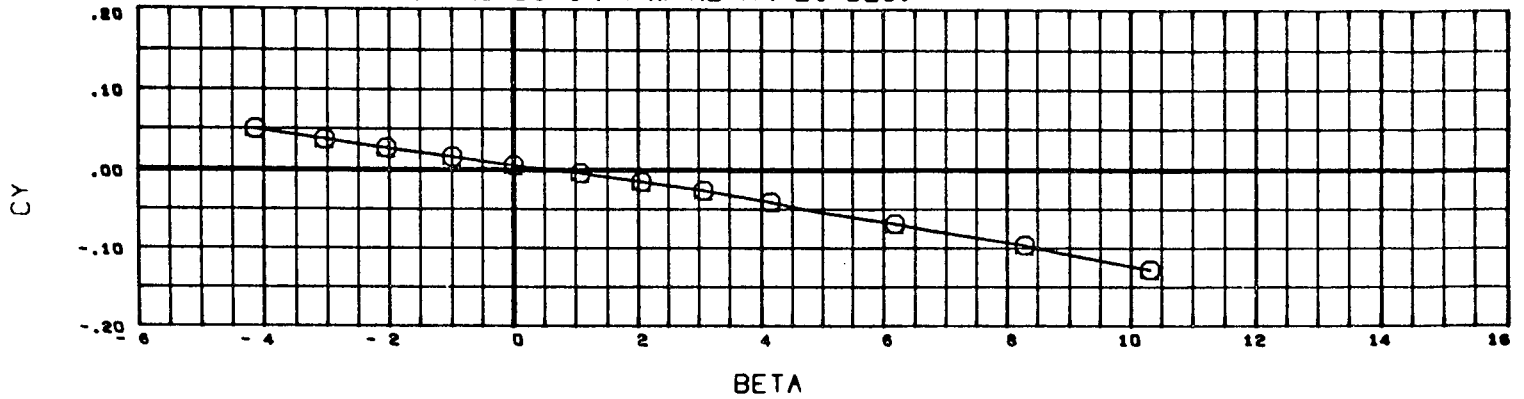
FIG. 22 EFFECT OF C1 AND D1 IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB132)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB224)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG.23 EFFECT OF C1 AND D1 IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB015)	JPL WT 20-881 MSC 040A B1W1V1M1P1D1C1
(R6B153)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(R6B225)	DATA NOT AVAILABLE FOR ALL CONDITIONS

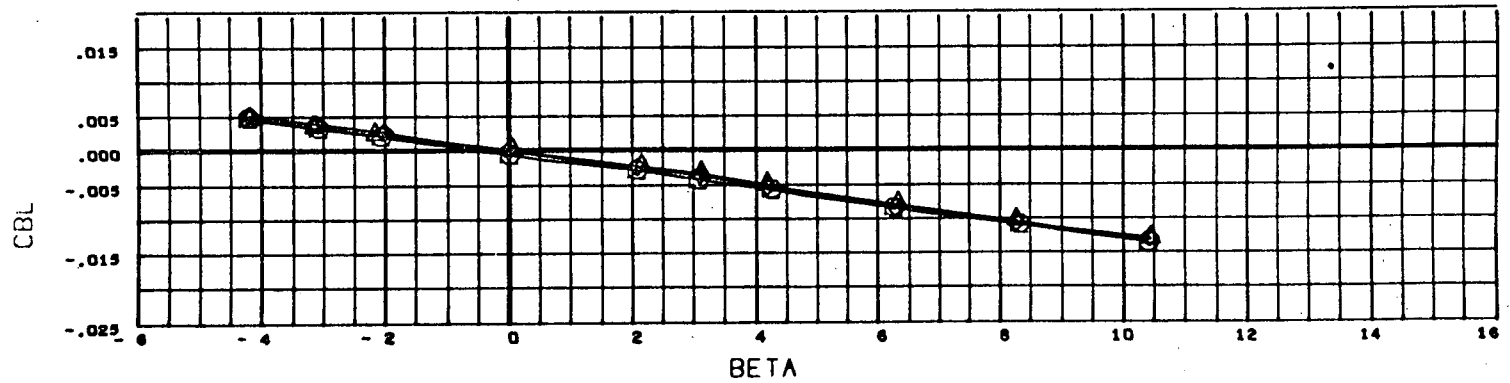
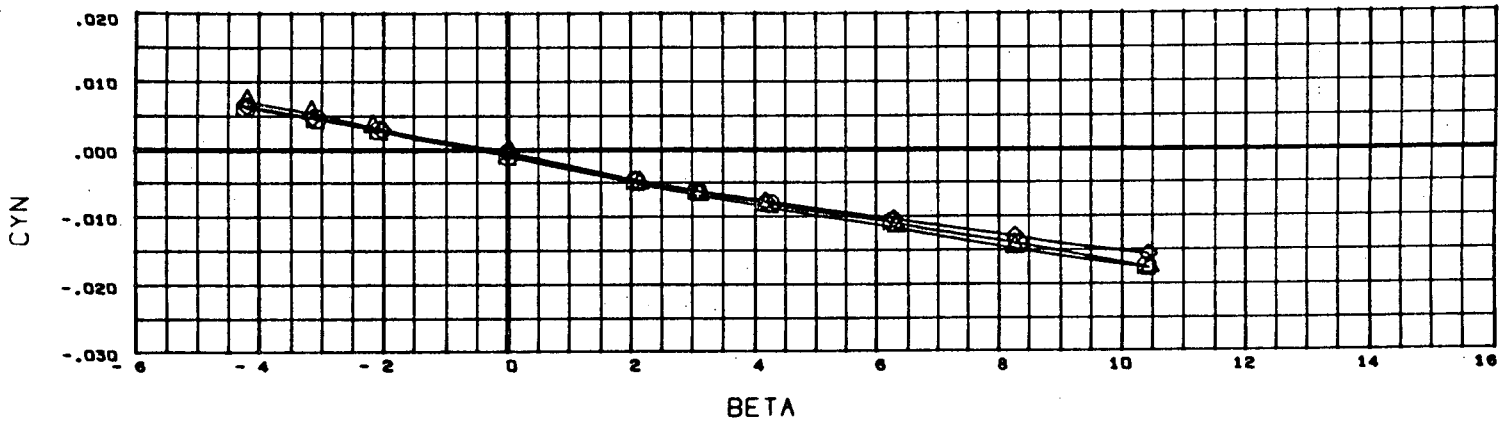
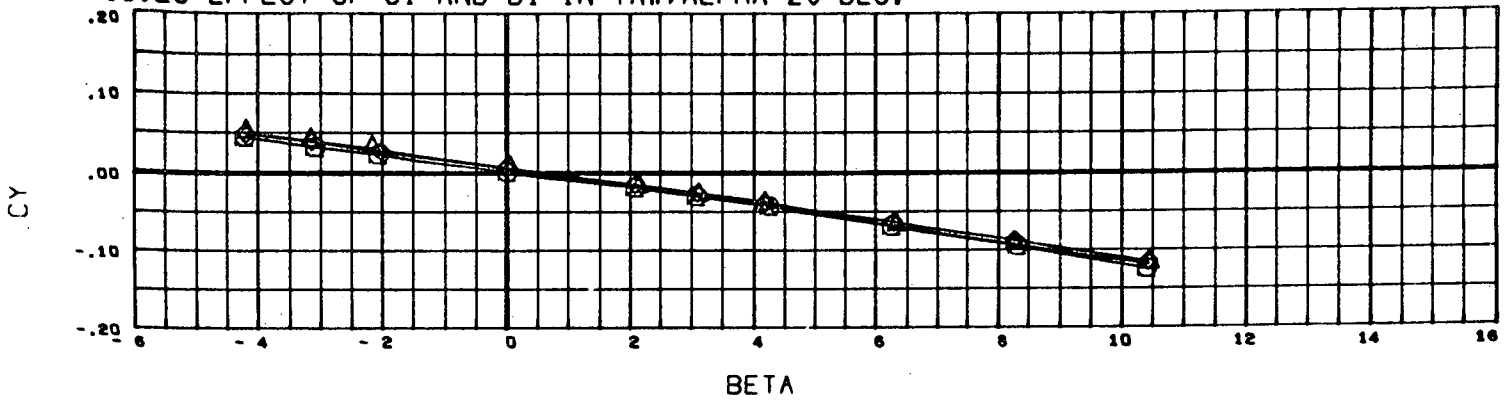
LELVN	RELVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH

2.01

FIG.23 EFFECT OF C1 AND D1 IN YAW, ALPHA=20 DEG.



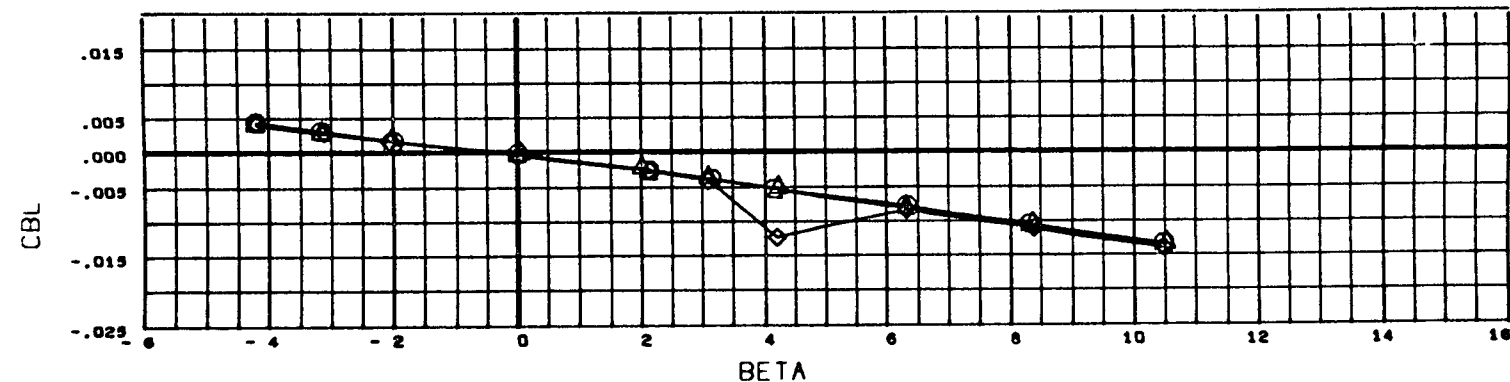
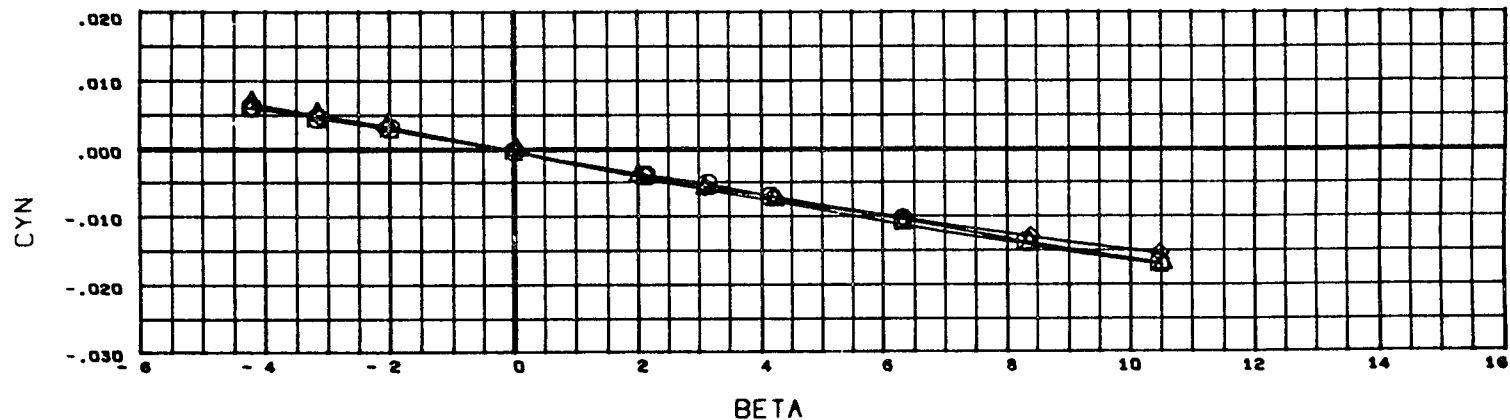
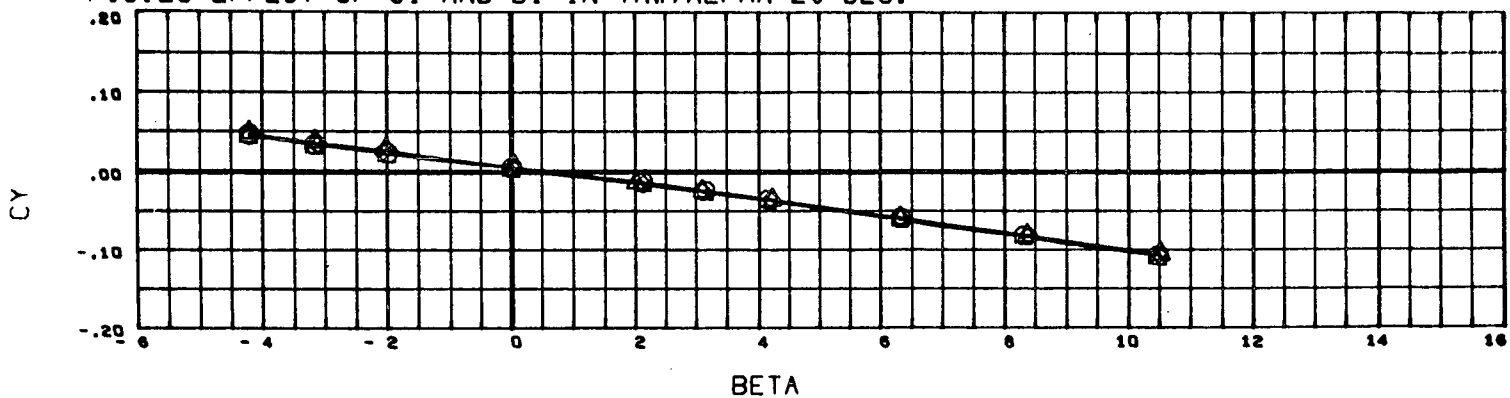
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(R68193)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(R68225)	JPL WT 20-681 MSC 040A B1W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG.23 EFFECT OF C1 AND D1 IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB153)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(RGB225)	JPL WT 20-681 MSC 040A B1W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

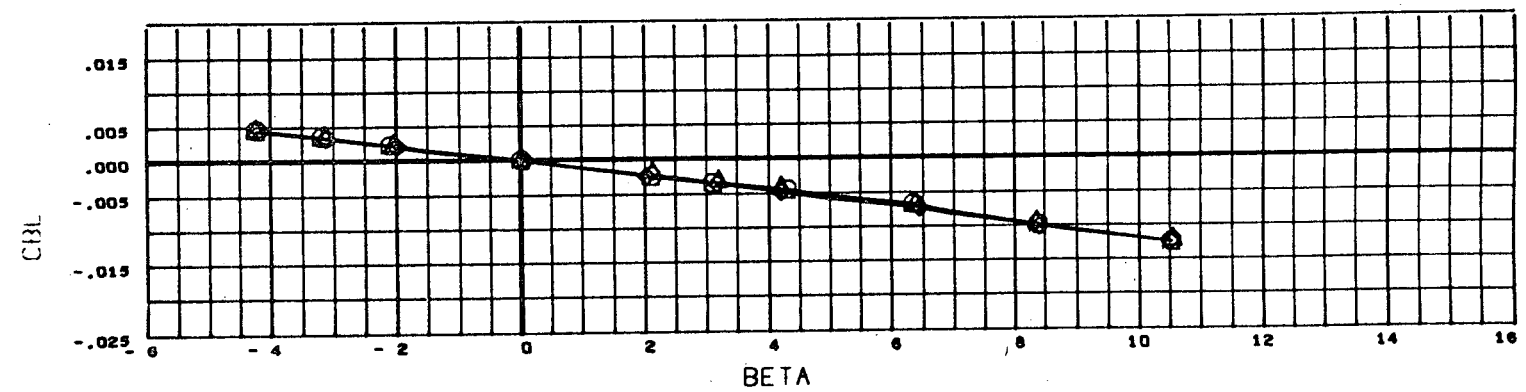
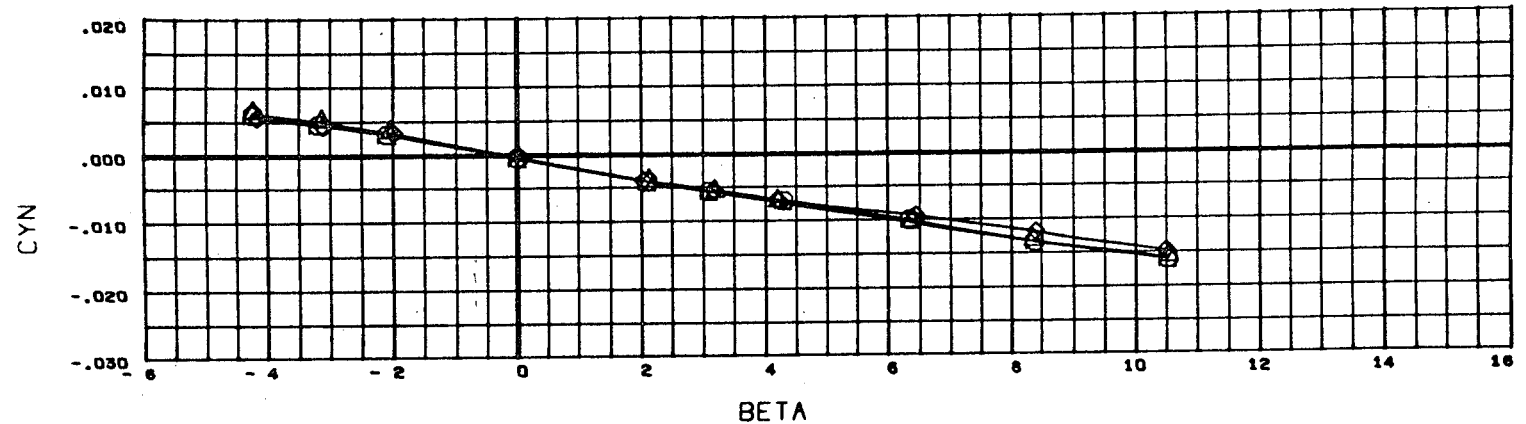
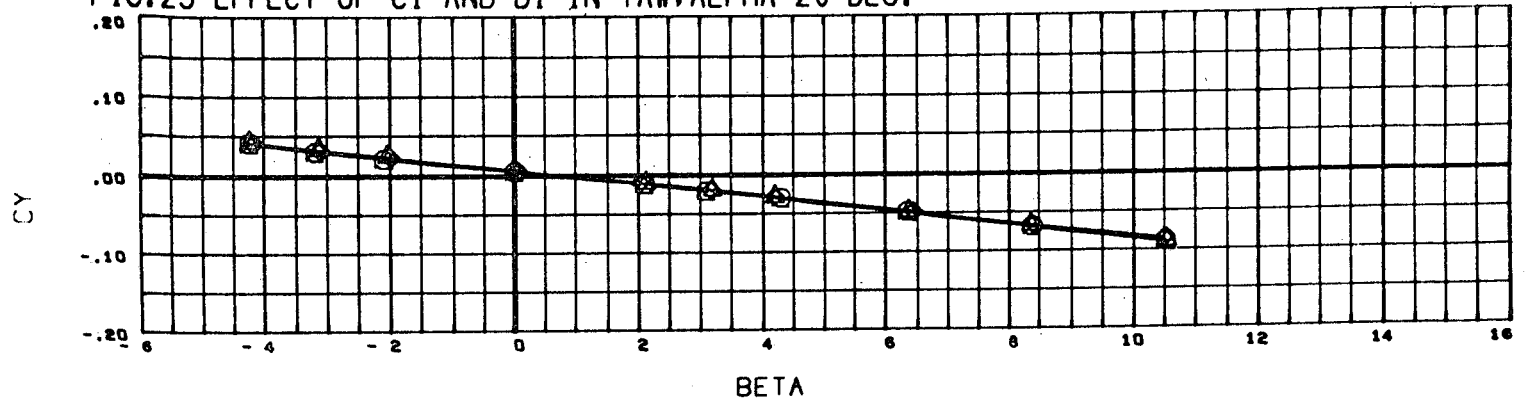
REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH

3.03

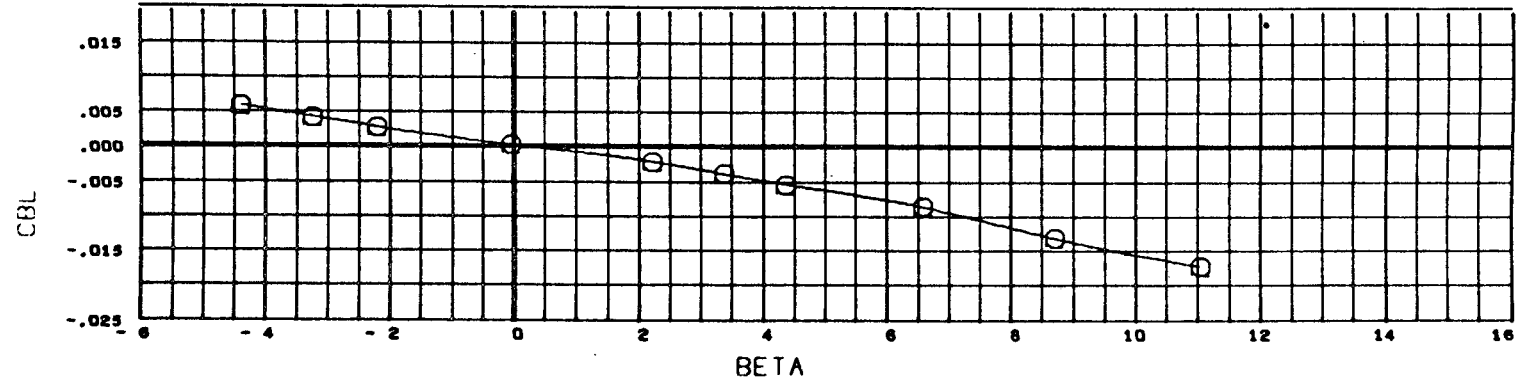
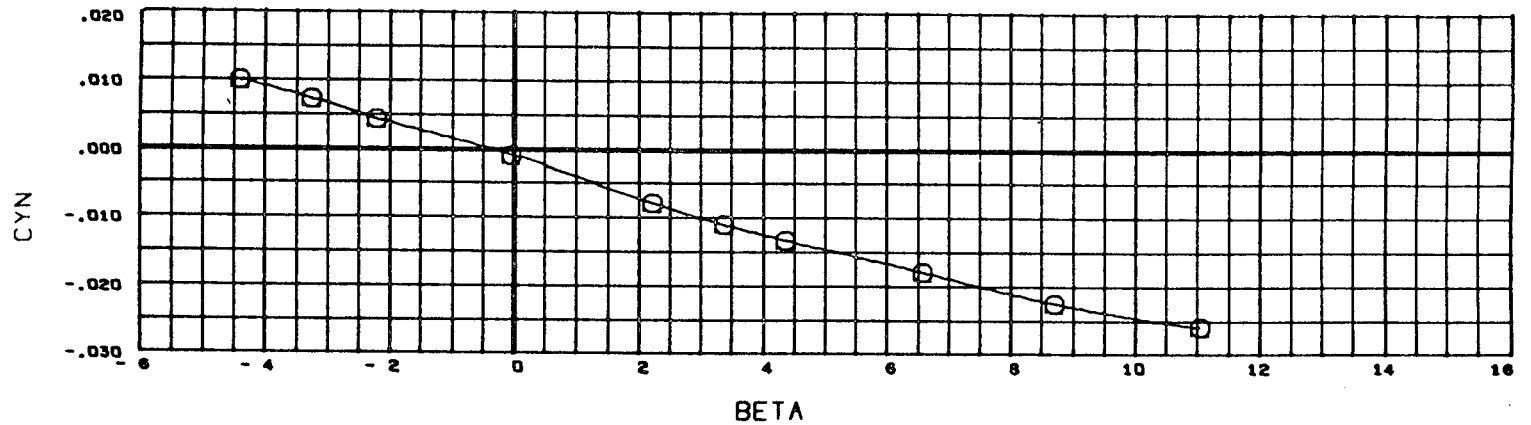
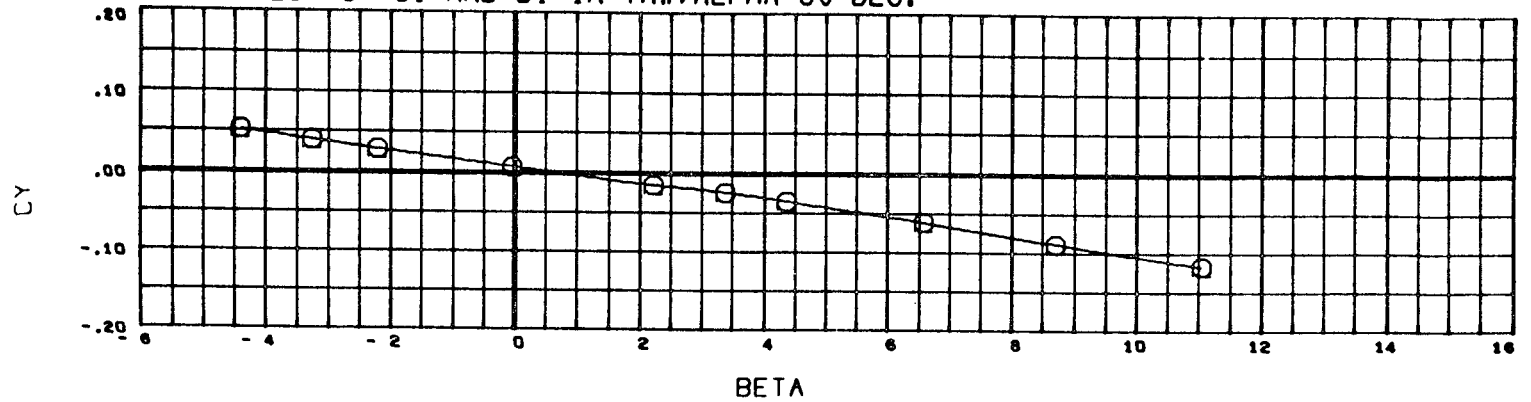
PAGE 142

FIG.23 EFFECT OF C1 AND D1 IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB153)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB225)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

FIG.24 EFFECT OF C1 AND D1 IN YAW, ALPHA=30 DEG.

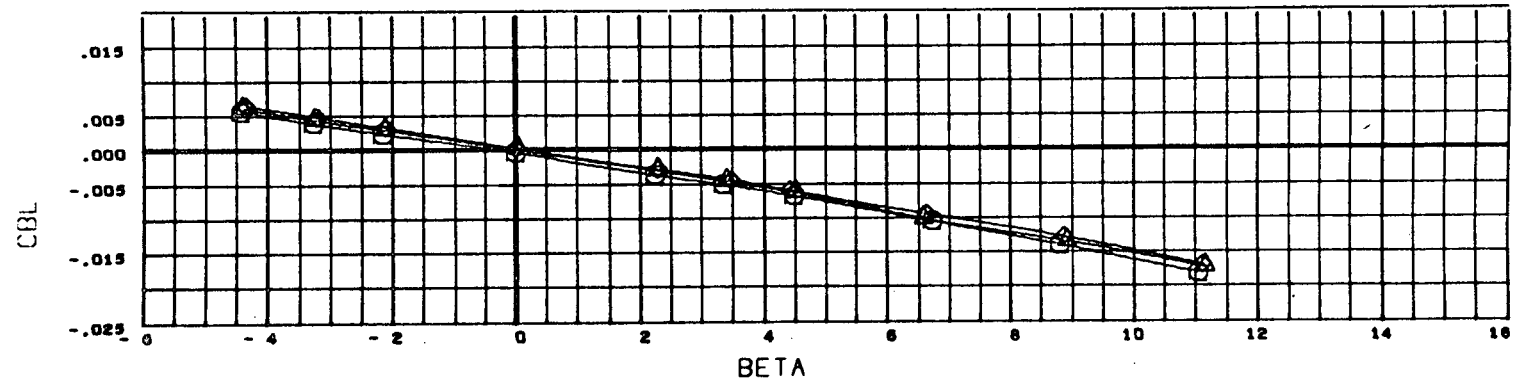
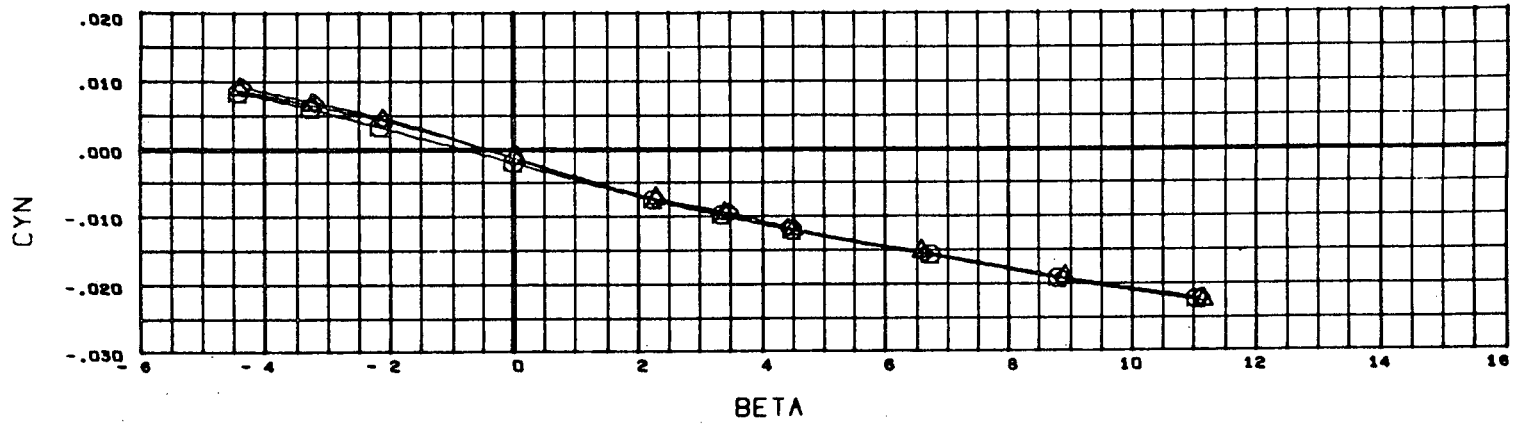
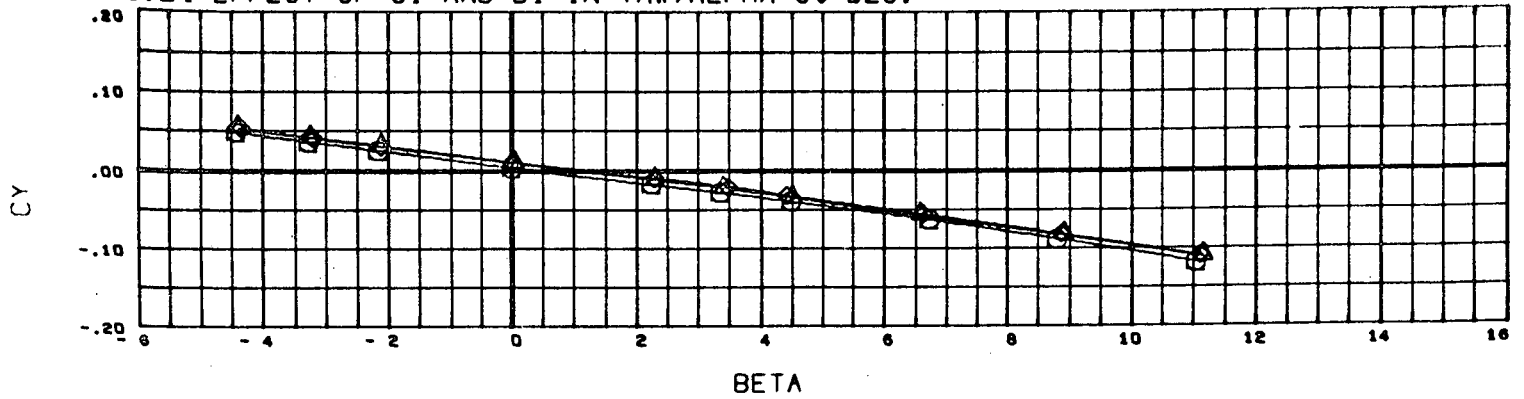


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB154)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB226)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XM RP	1067.9040	IN.
YM RP	0.0000	IN.
ZM RP	400.0004	IN.
SCALE	0.0075	

FIG.24 EFFECT OF C1 AND D1 IN YAW, ALPHA=30 DEG.

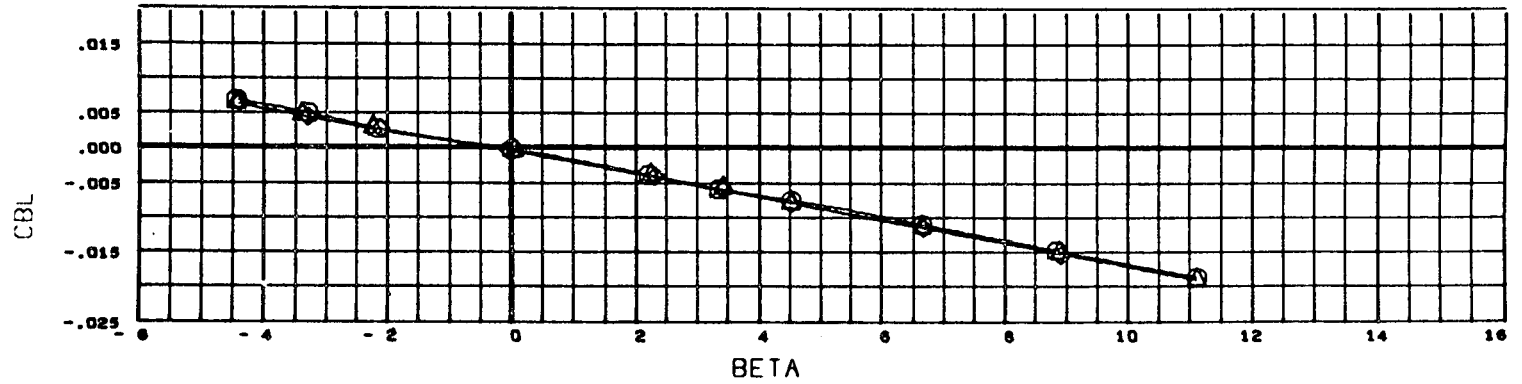
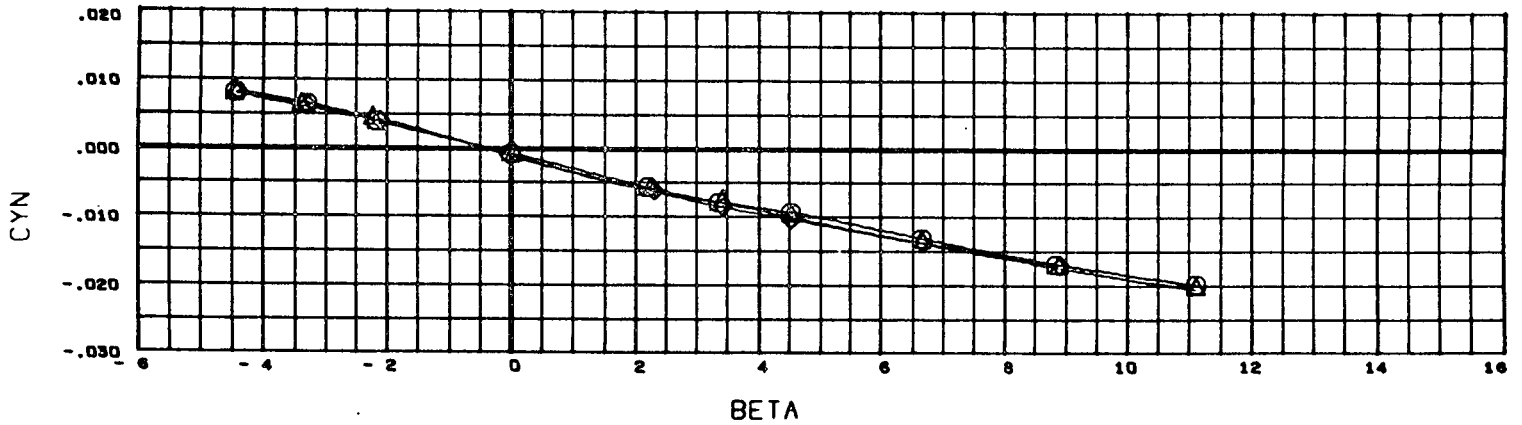
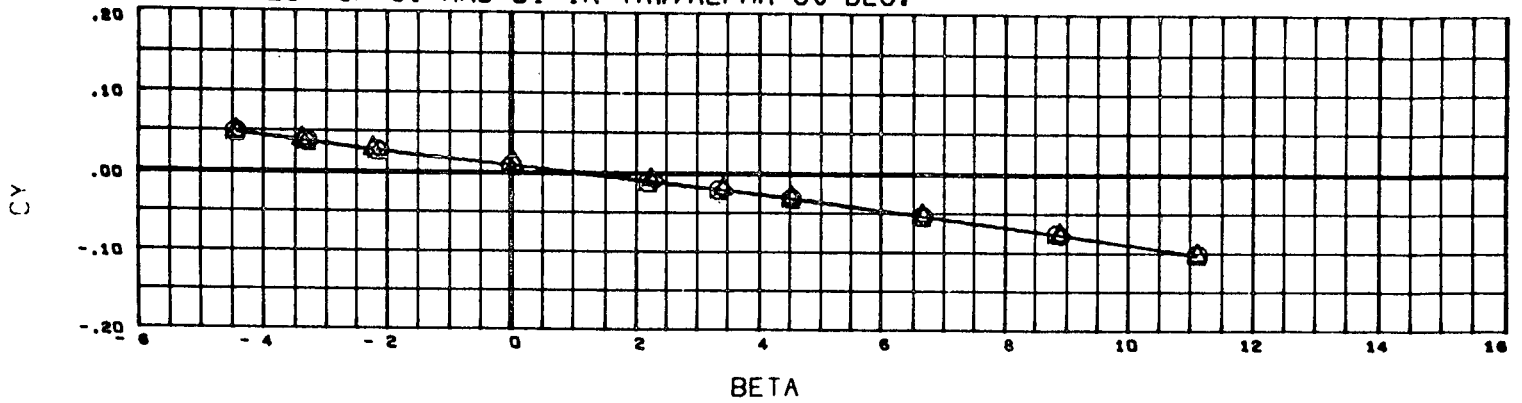


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB154)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(RGB226)	JPL WT 20-681 MSC 040A B1W1V1M1P1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

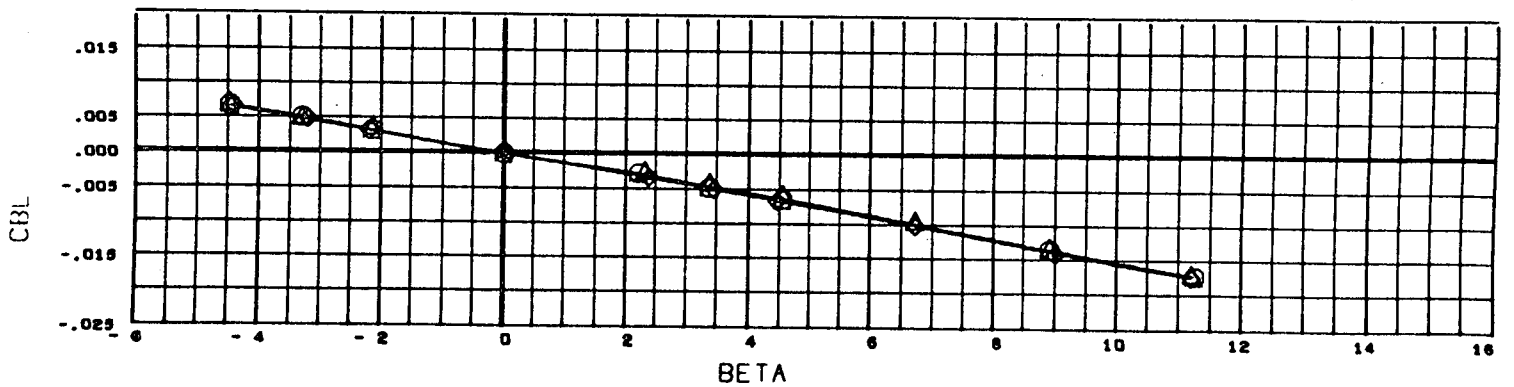
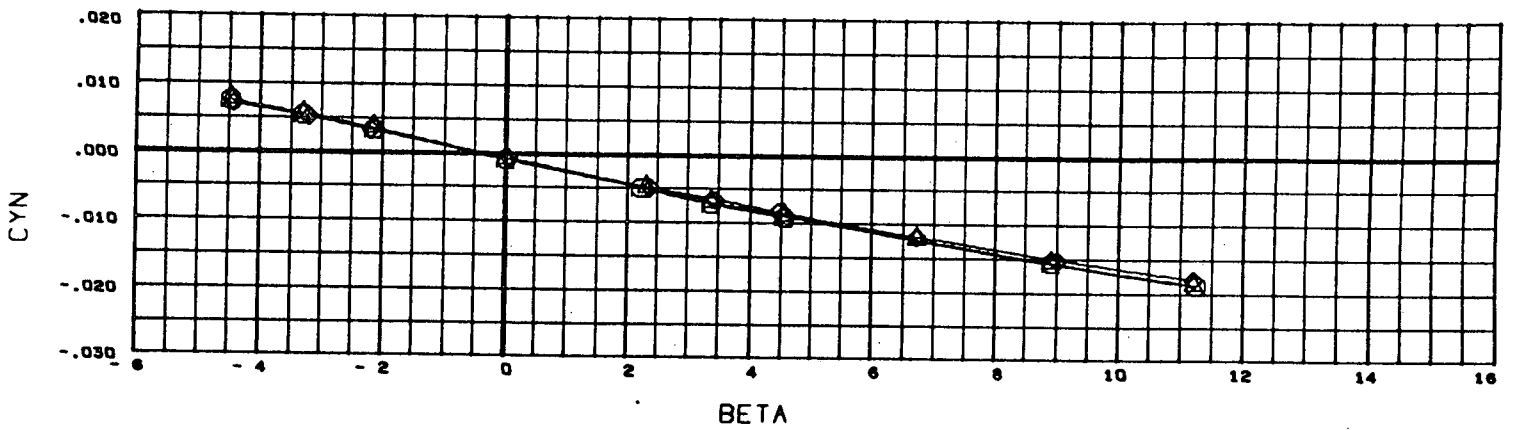
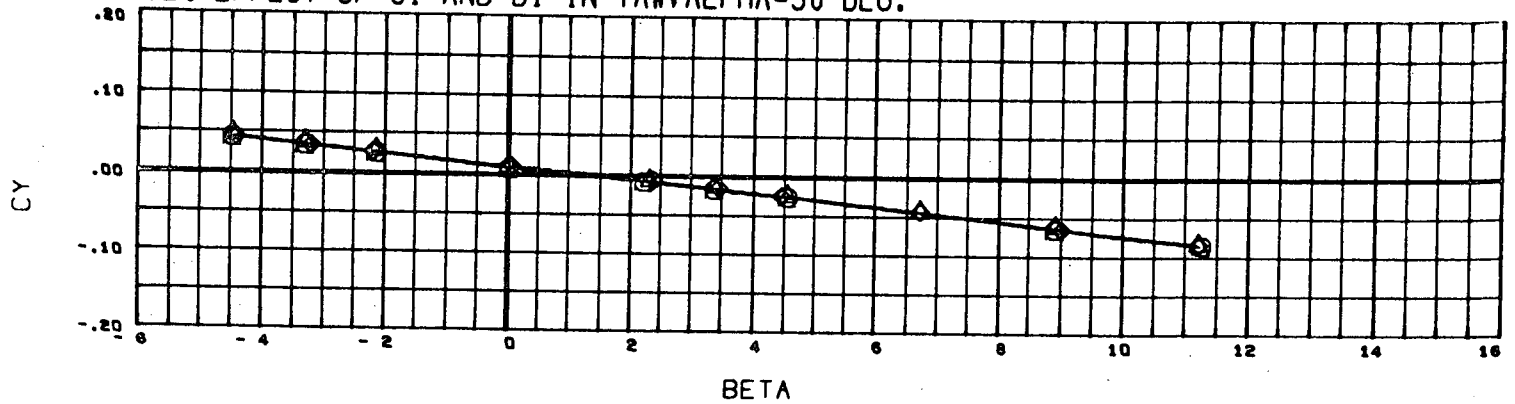
FIG.24 EFFECT OF C1 AND D1 IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB134)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB226)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	BREF	6.6130 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

FIG. 24 EFFECT OF C1 AND D1 IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB154)	JPL WT 20-681 MSC 040A B1W1V1M1P1C1
(RGB226)	JPL WT 20-681 MSC 040A B1W1V1M1P1

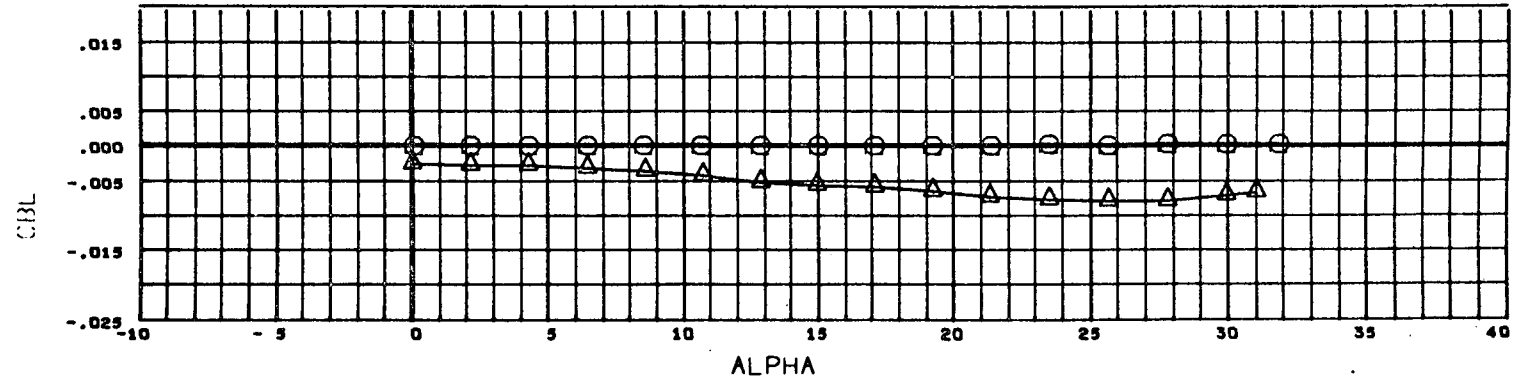
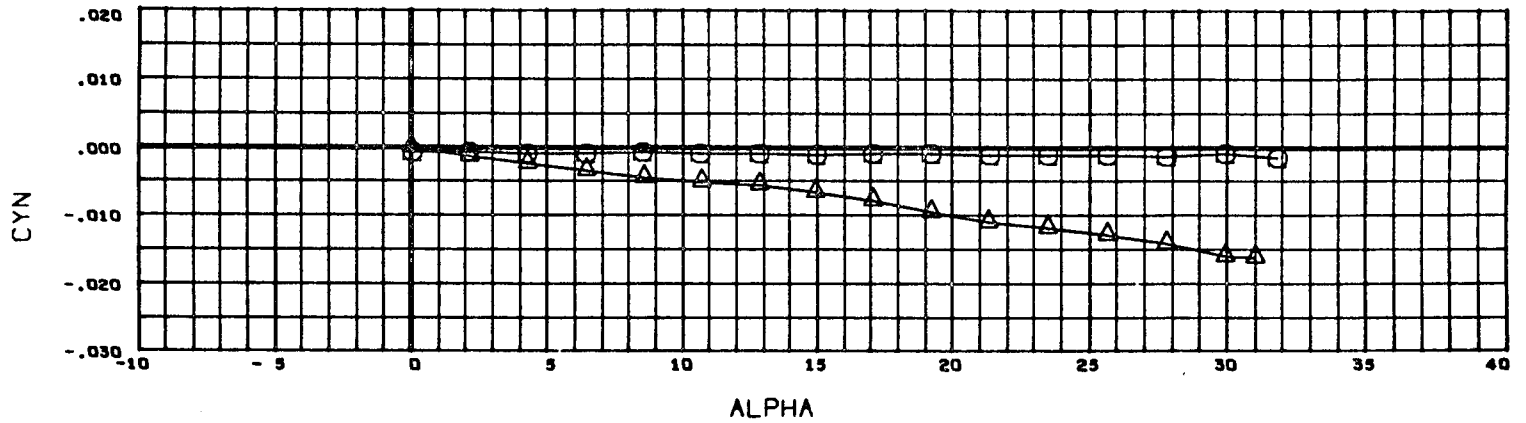
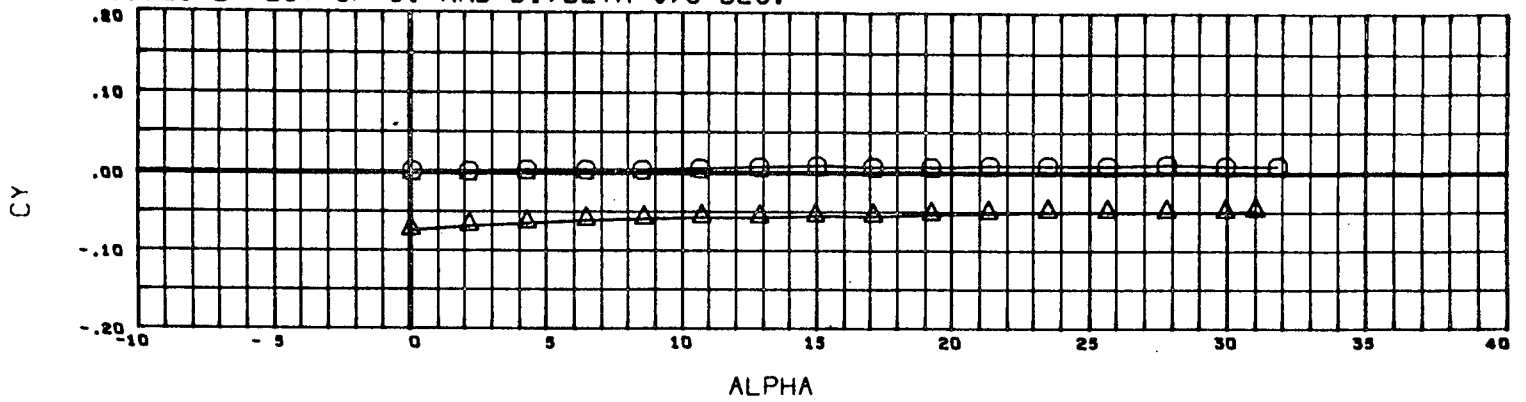
LELVN	RELVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH 3.98

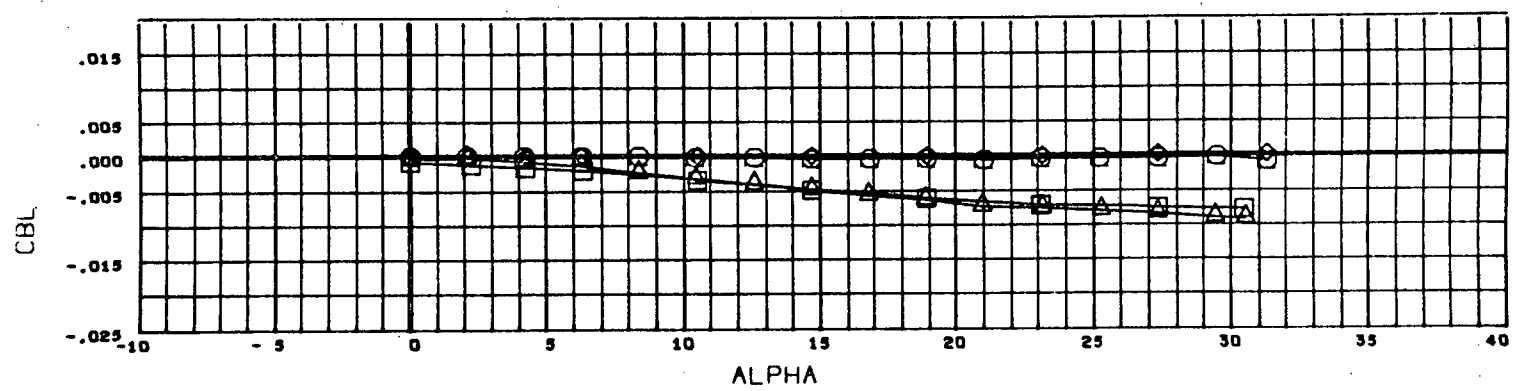
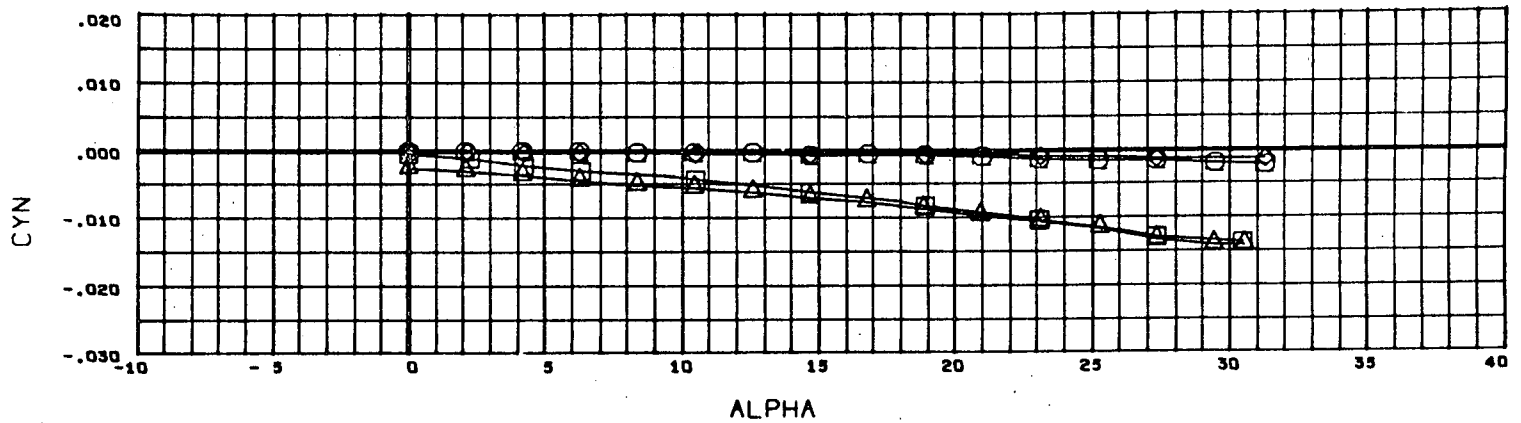
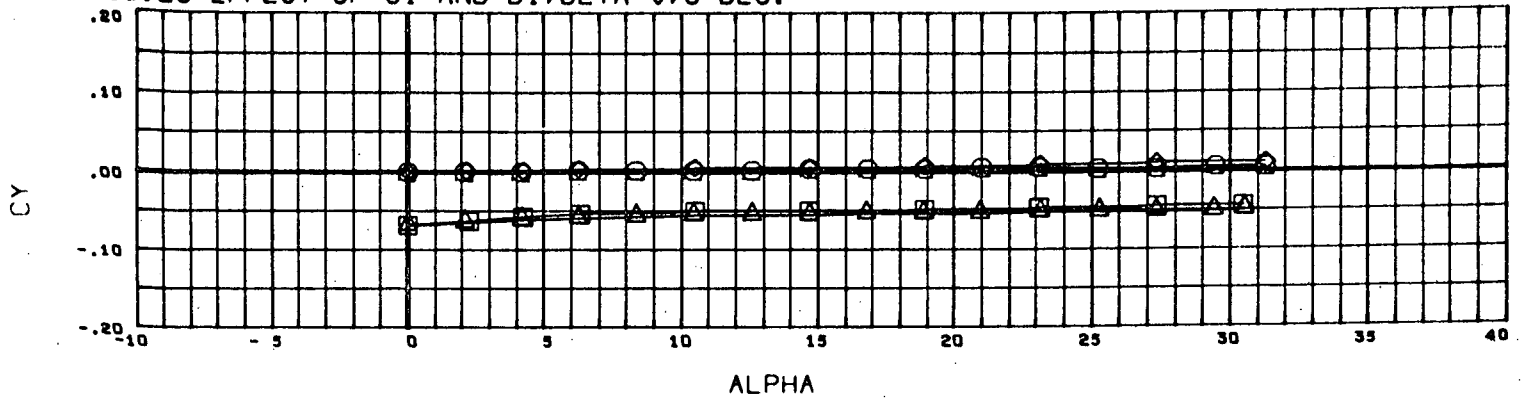
PAGE 147

FIG.25 EFFECT OF C1 AND D1, BETA=0.5 DEG.



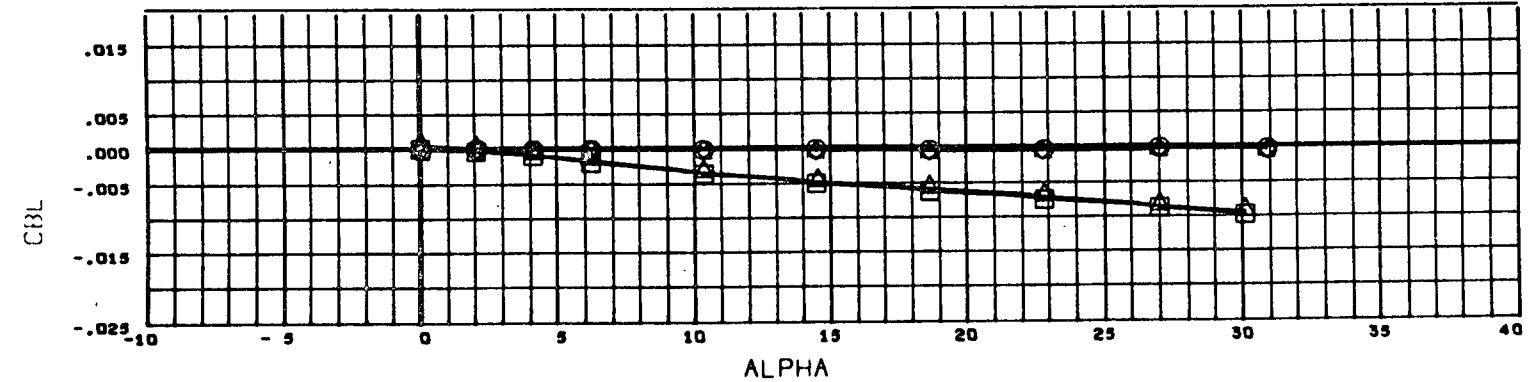
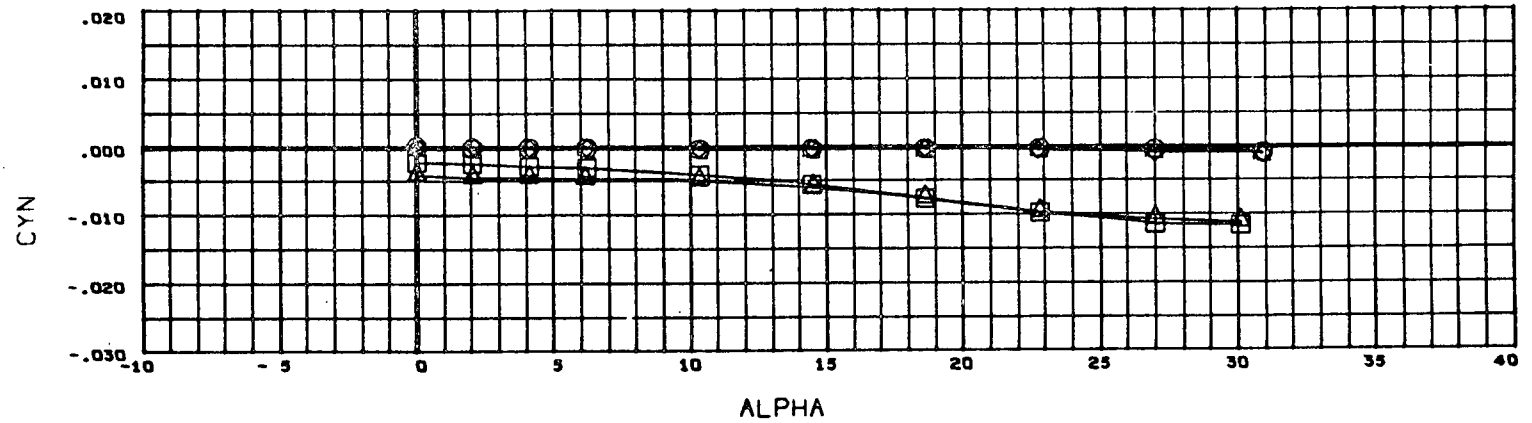
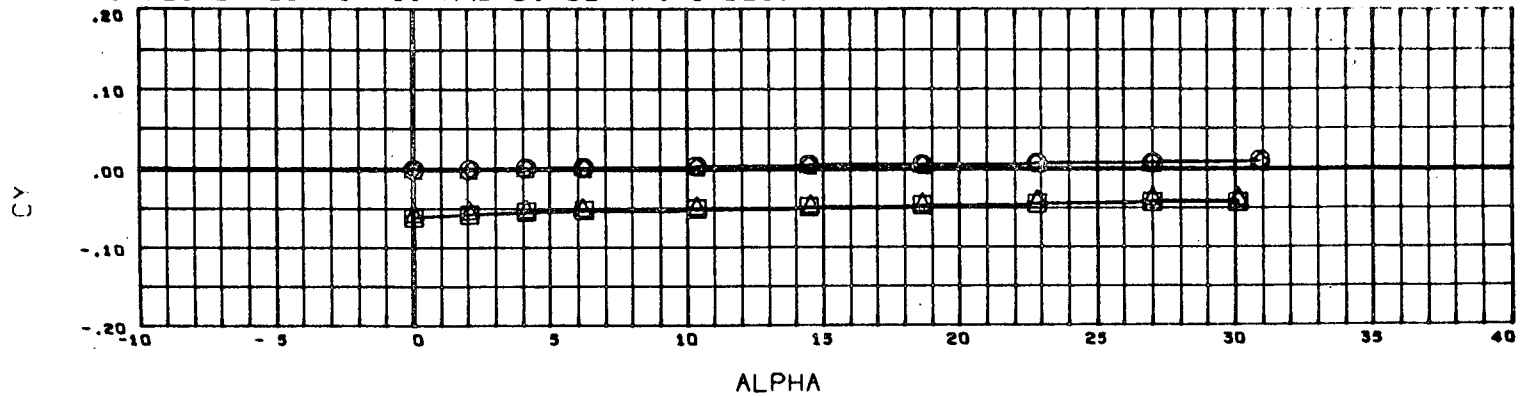
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELVN	RELVN	RUDDER	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB221)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB222)	DATA NOT AVAILABLE FOR ALL CONDITIONS	5.000	0.000	0.000	0.000	XM RP	1067.9040 IN.
						YM RP	0.0000 IN.
						ZM RP	400.0004 IN.
						SCALE	0.0075

FIG.25 EFFECT OF C1 AND D1, BETA=0.5 DEG.



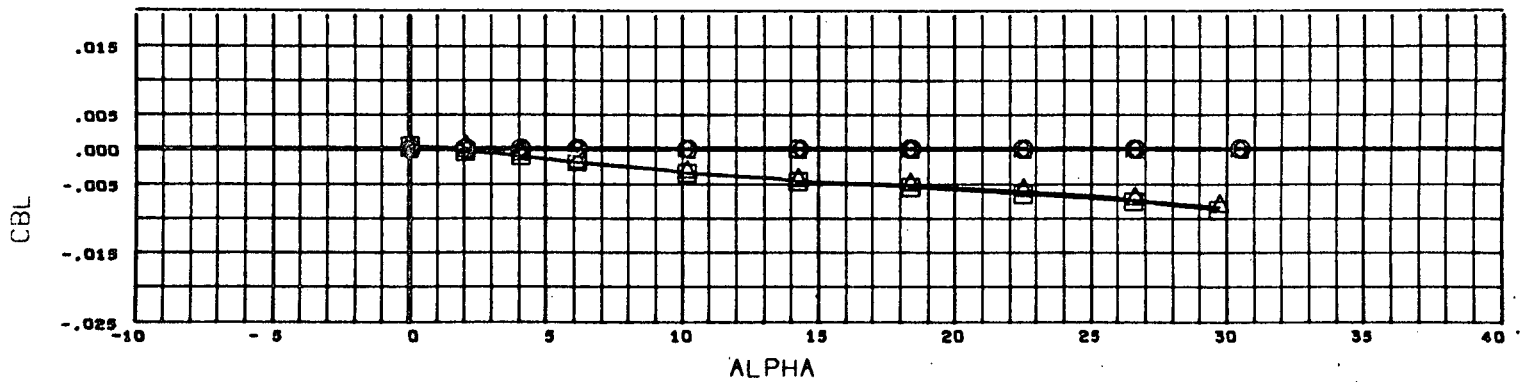
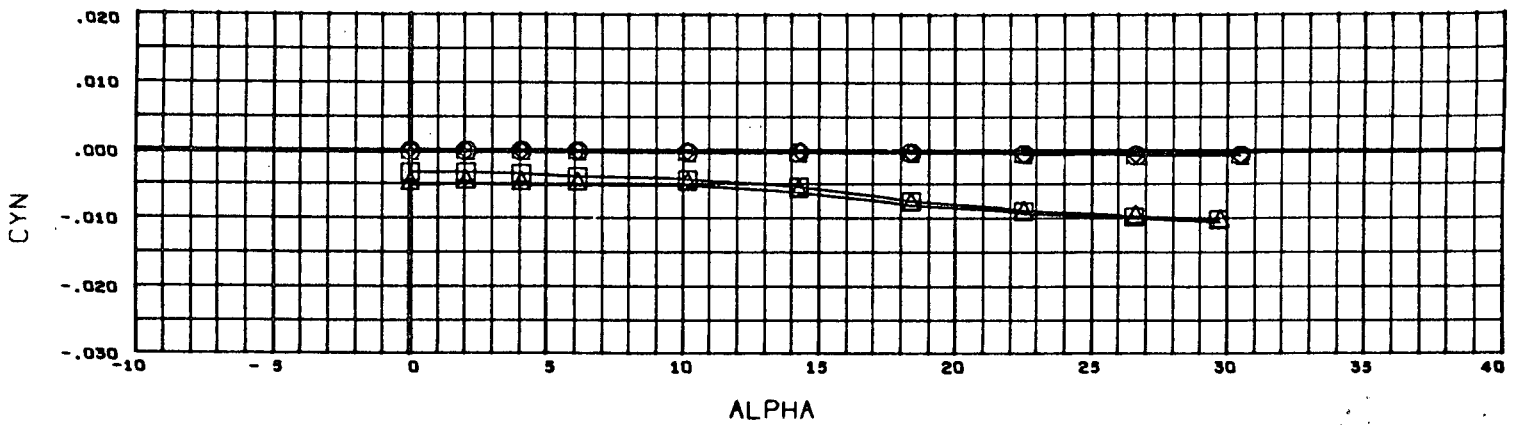
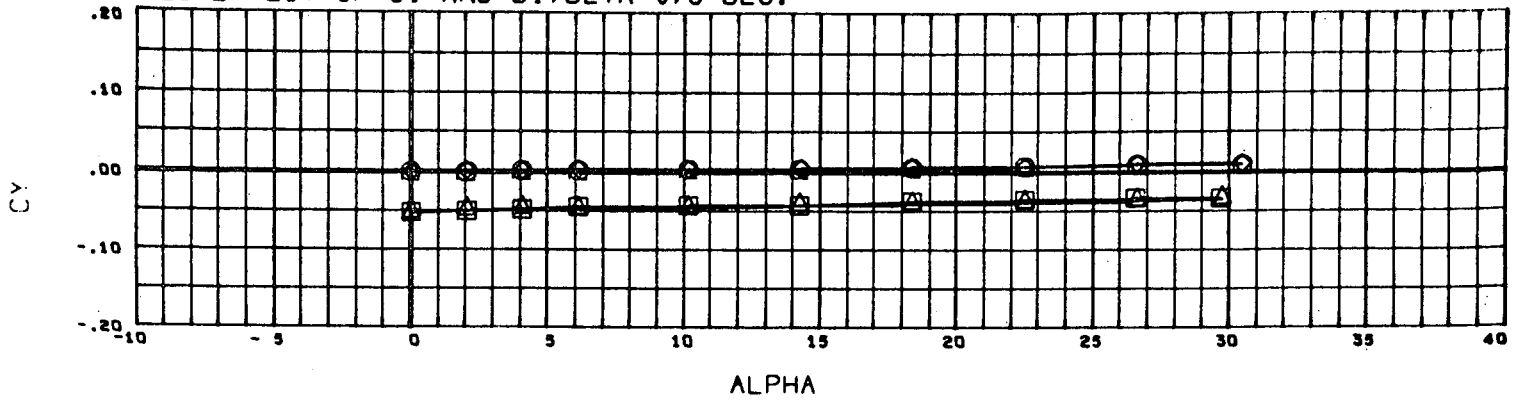
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB221)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB222)	JPL WT 20-681 MSC 040A B1W1V1M1P1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.25 EFFECT OF C1 AND D1, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(R68221)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	0.000	BREF 6.6190 IN.
(R68222)	JPL WT 20-681 MSC 040A B1W1V1M1P1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 25 EFFECT OF C1 AND D1, BETA=0.5 DEG.

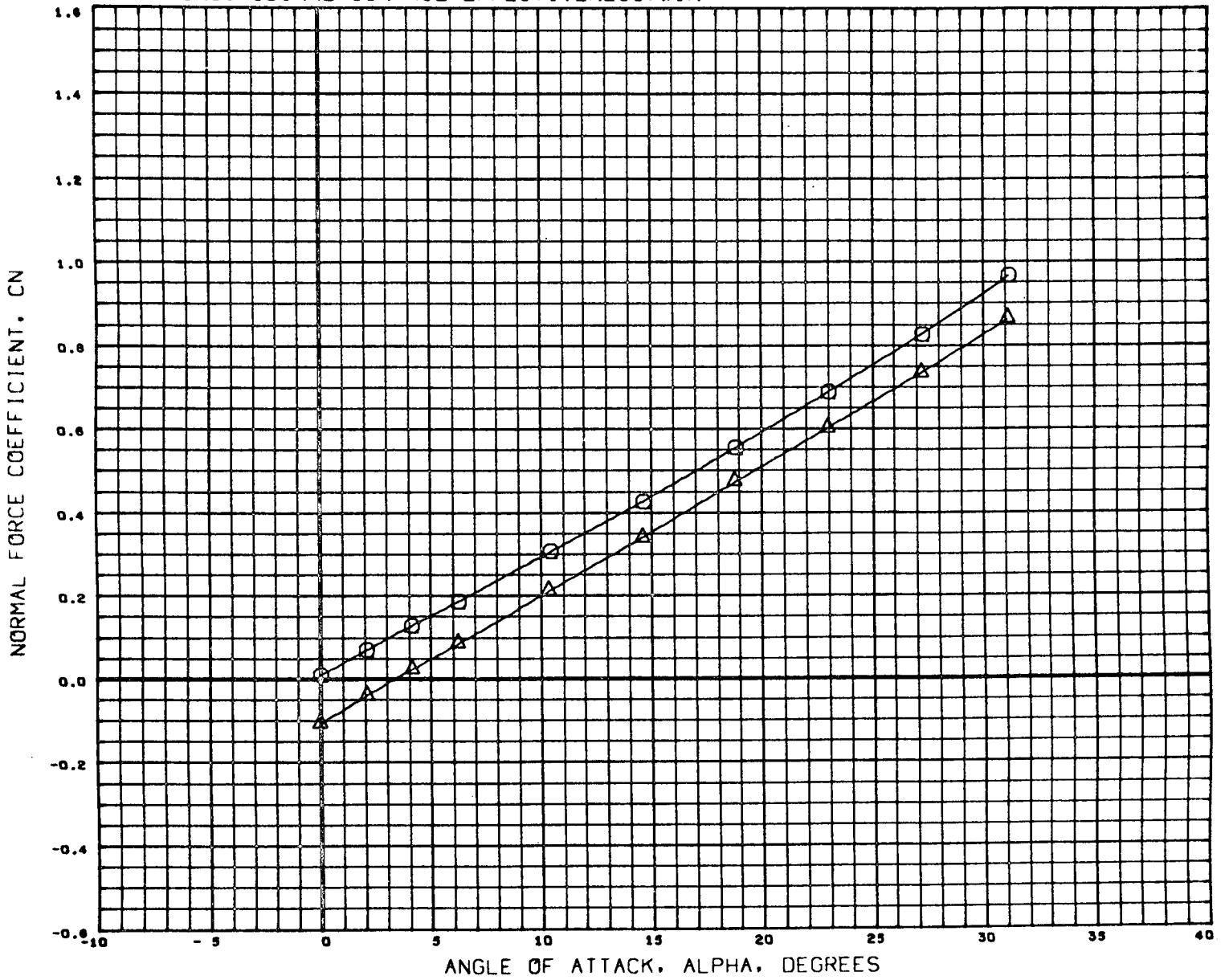


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RG8221)	JPL WT 20-681 MSC 040A B1W1V1M1P1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RG8222)	JPL WT 20-681 MSC 040A B1W1V1M1P1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

PAGE 151

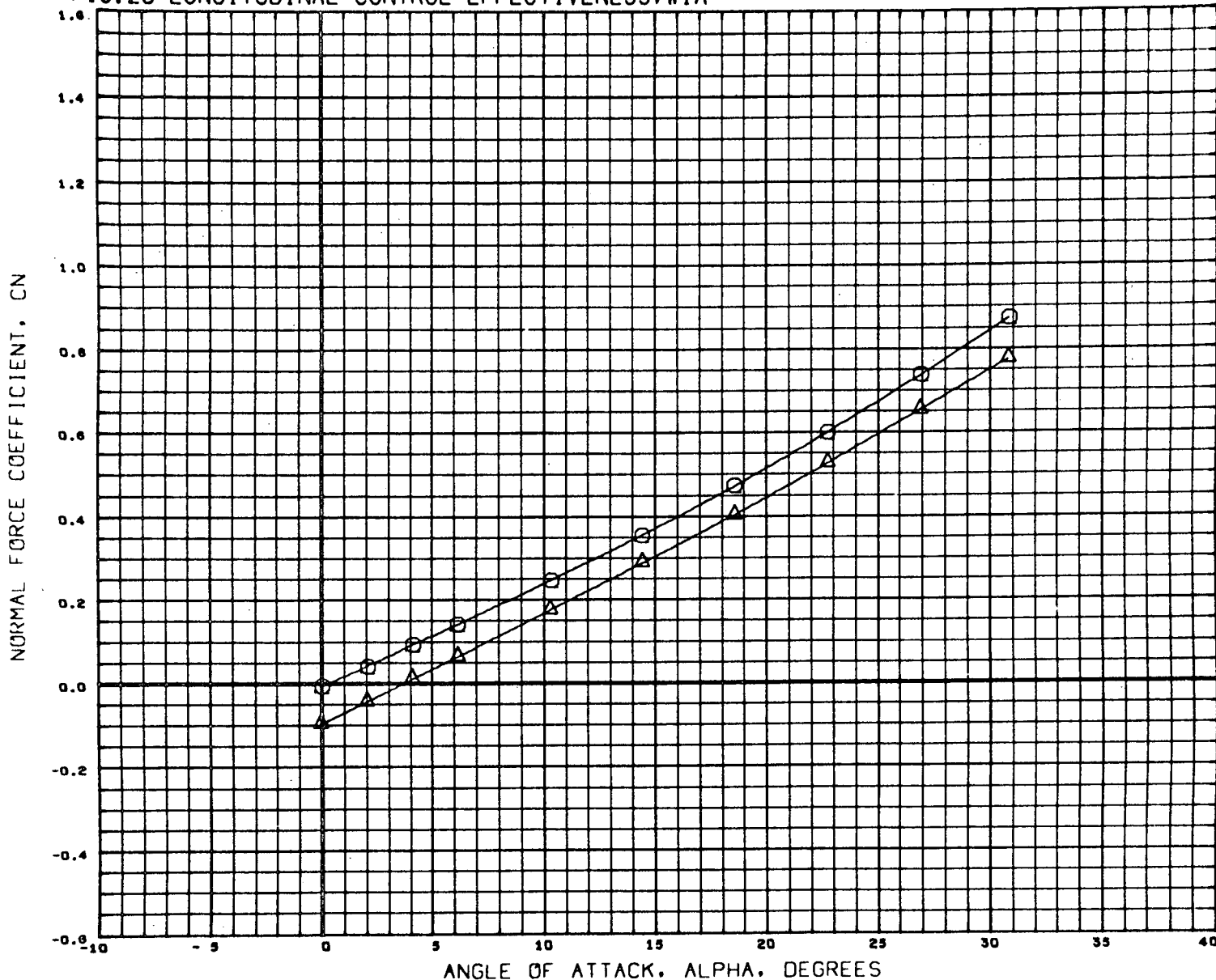
FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, WIA



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION		
(RGB231)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF	25.5560	50 IN.
(RGB261)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF	4.5720	IN.
					BREF	6.6150	IN.
					XMRP	1067.9040	IN.
					YMRP	0.0000	IN.
					ZMRP	400.0004	IN.
					SCALE	0.0073	

MACH 2.42

FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A

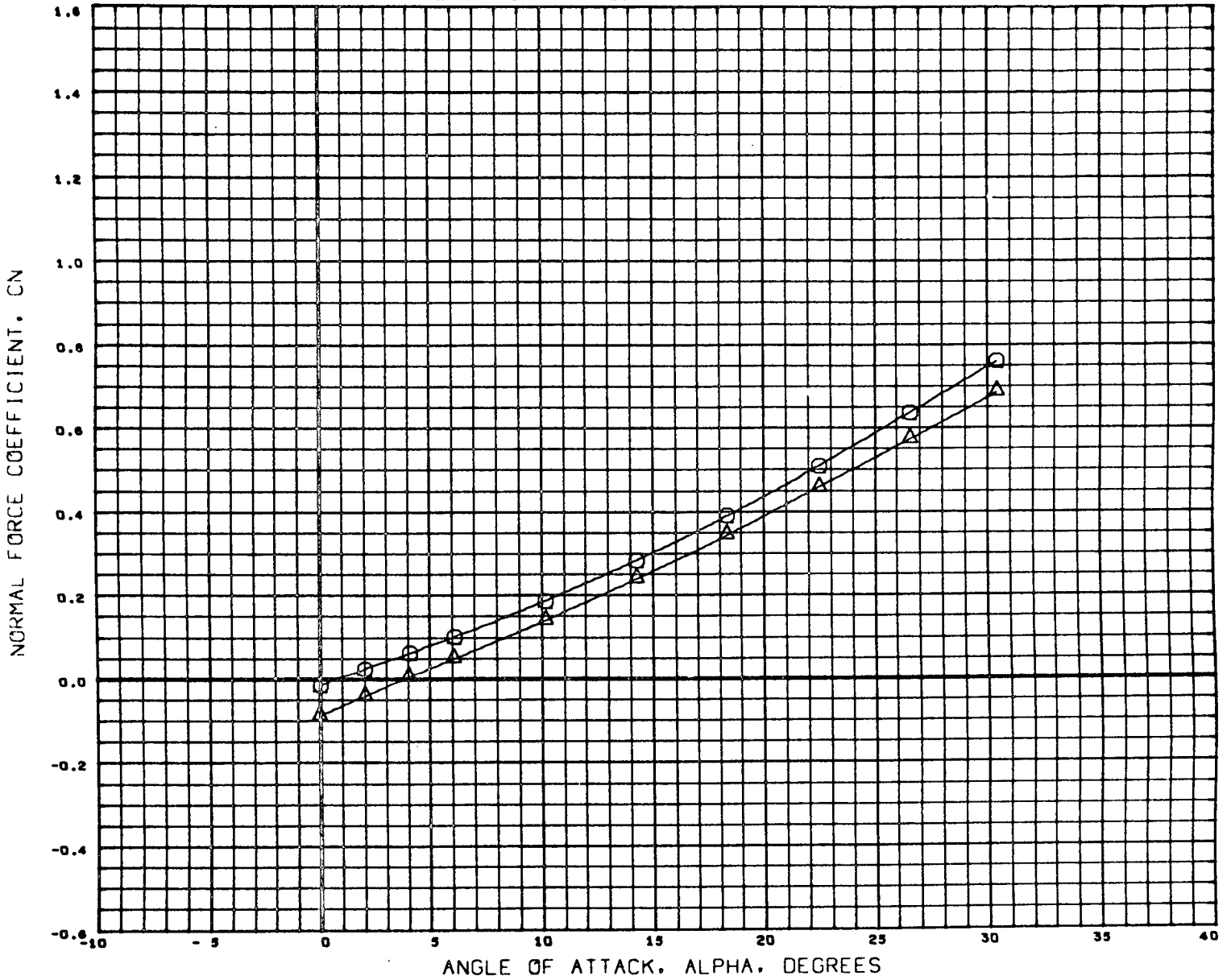


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(RGB251) ○	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(RGB261) △	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5860	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A



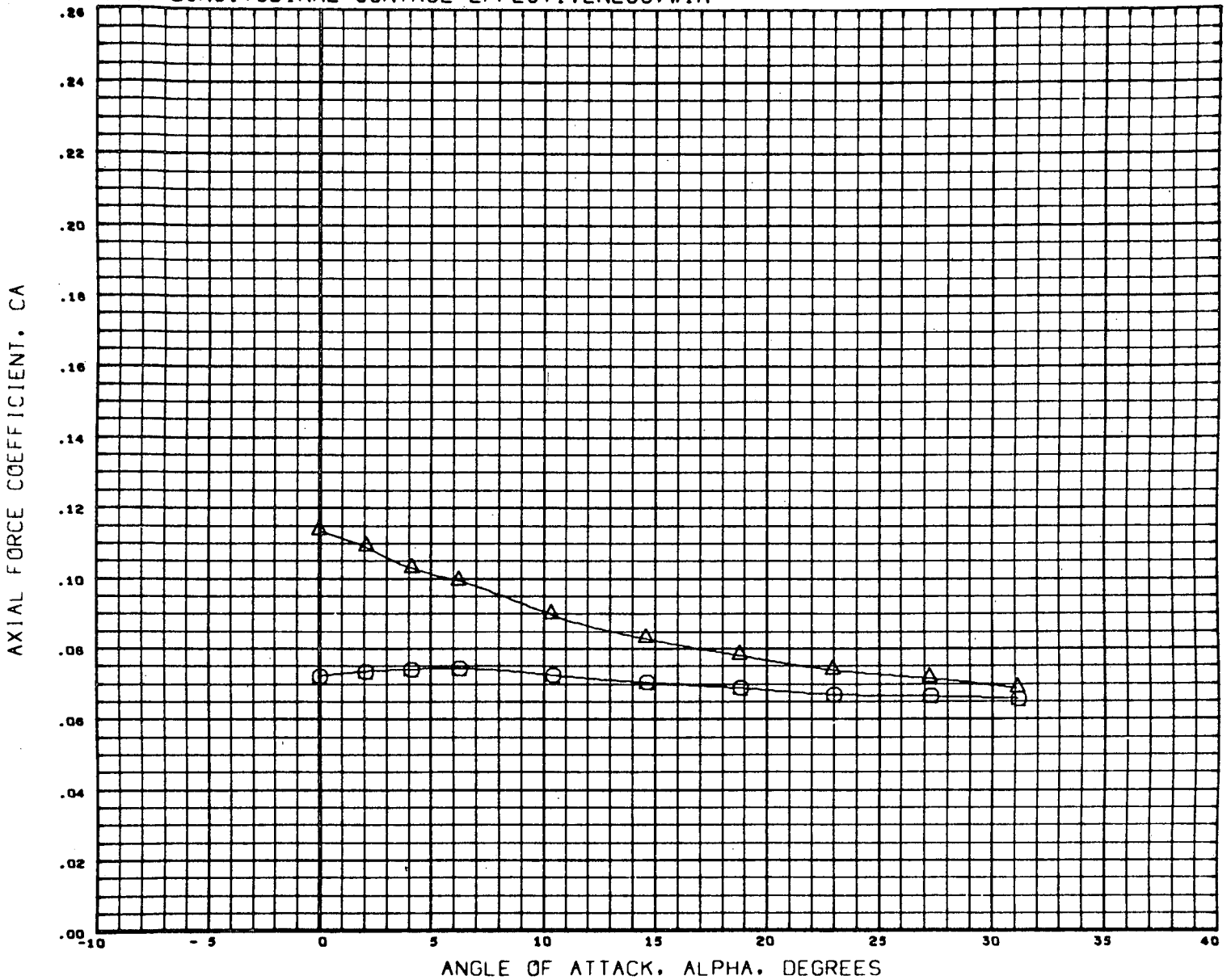
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

PAGE 154

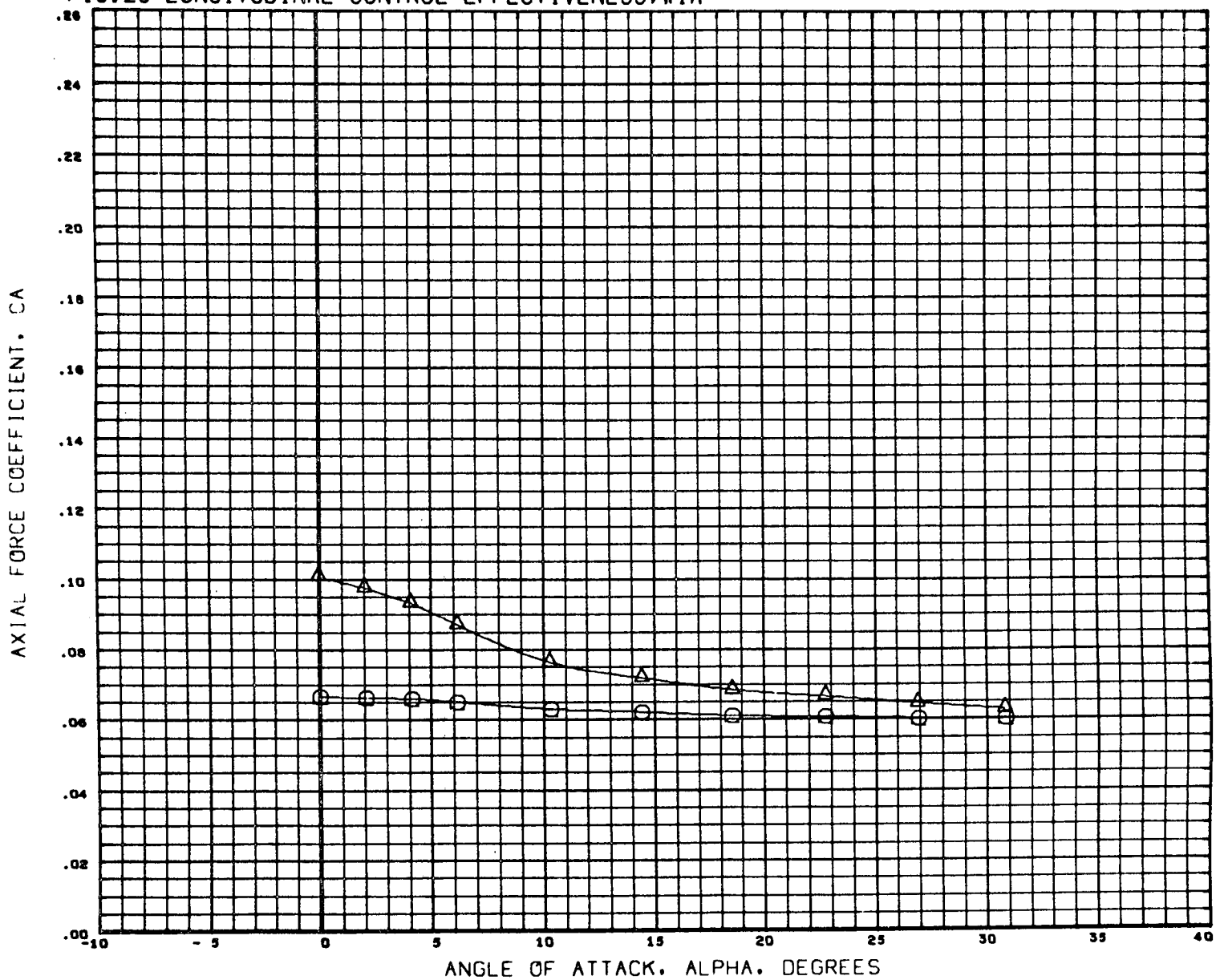
FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, WIA



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R68251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A



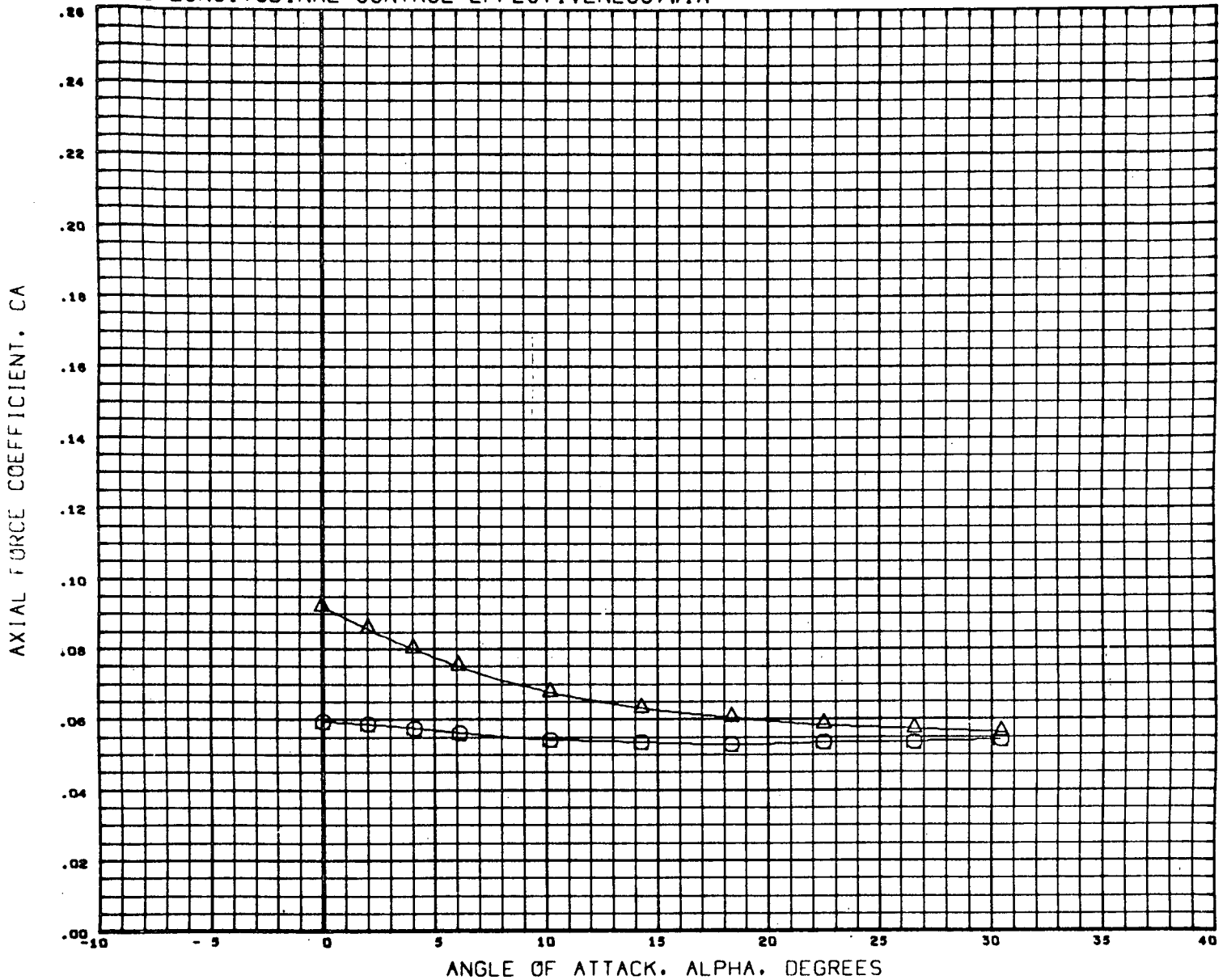
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER
(R6B251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(R6B261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	sq IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0073	

MACH 3.03

PAGE 156

FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B251) ○	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1
(R6B261) △	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1

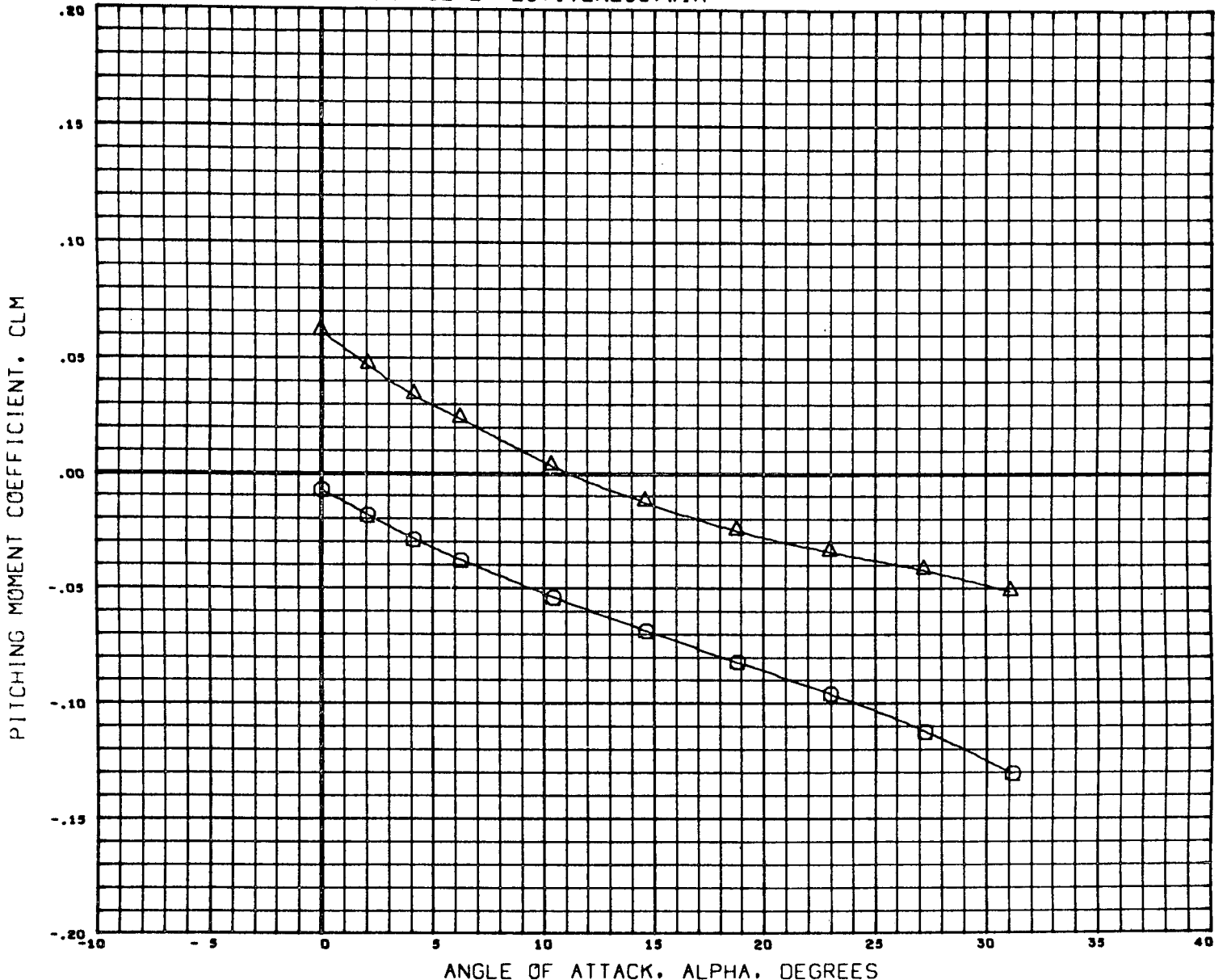
LELEVN	RELEVN	RÜDDER
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

PAGE 157

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A

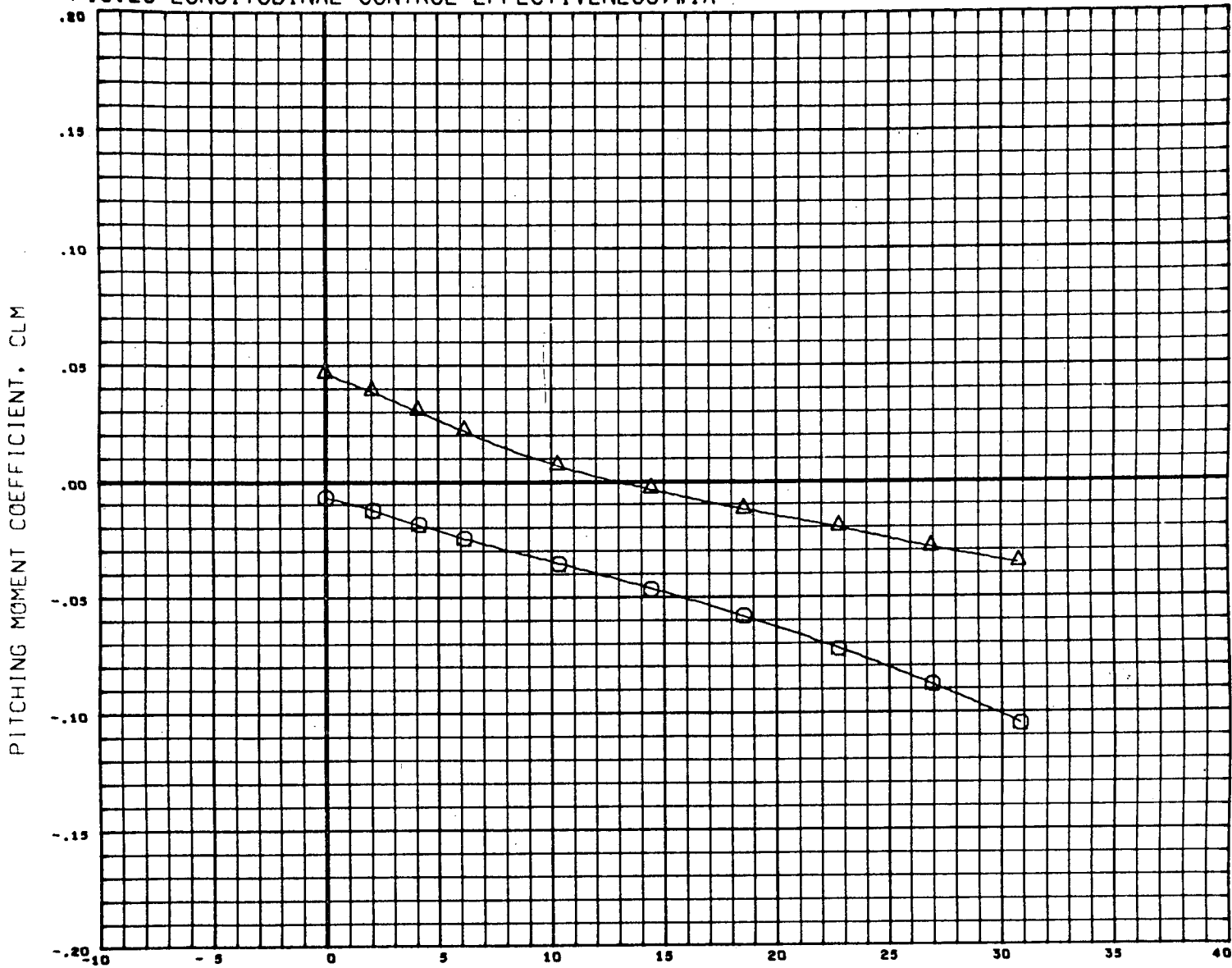


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	sq IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A



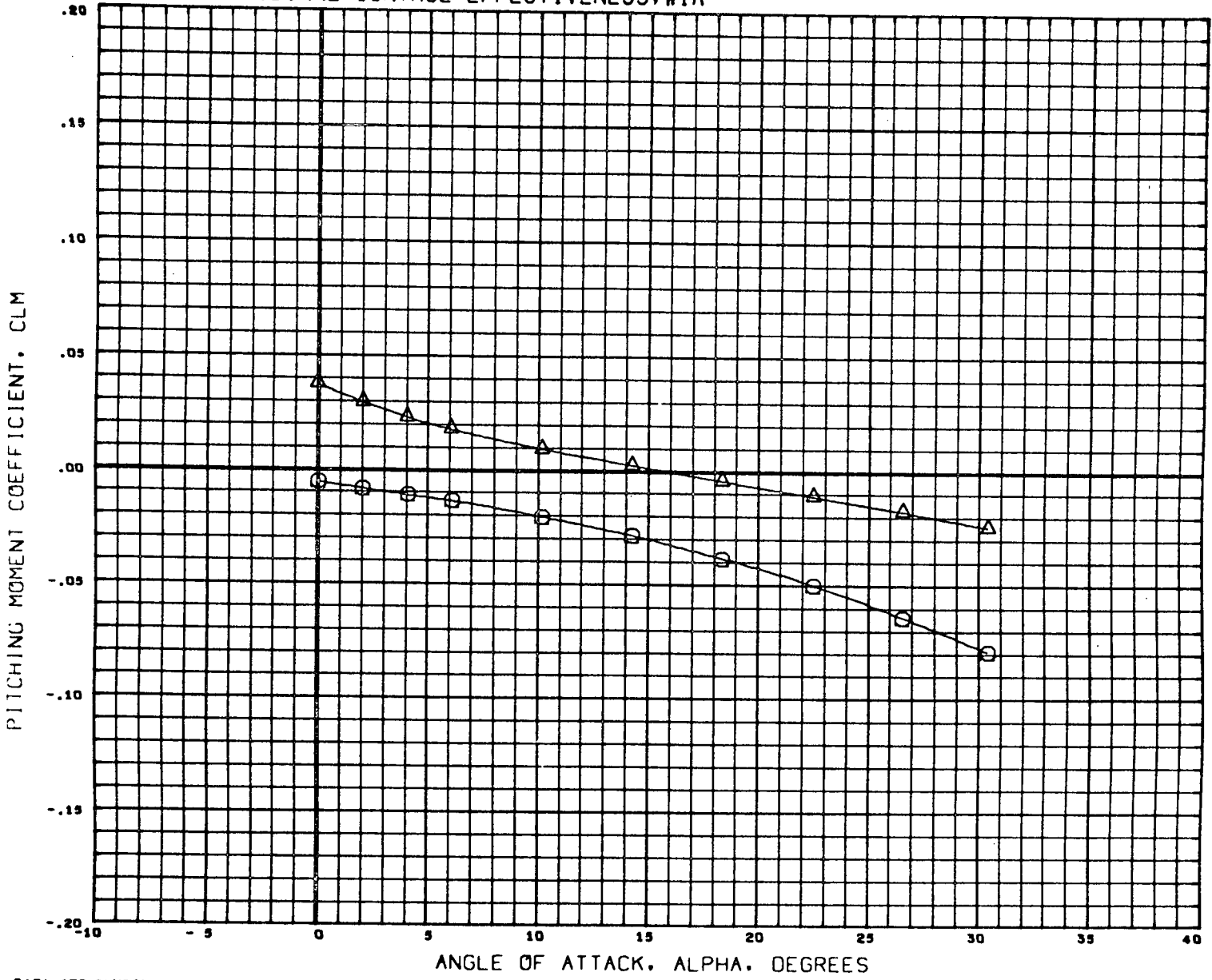
ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF	4.5720 IN.
					BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

PAGE 159

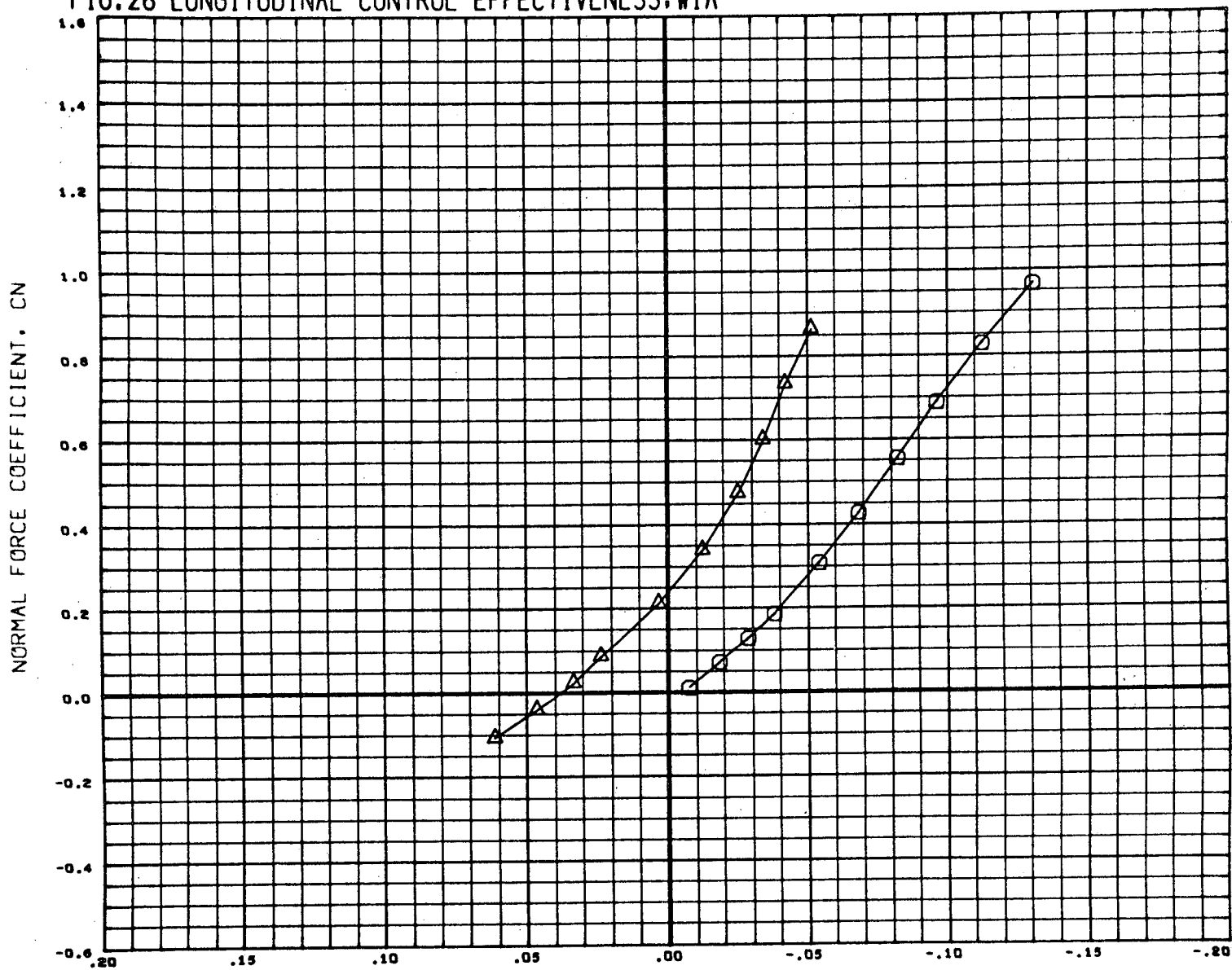
FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, WIA



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R68251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A

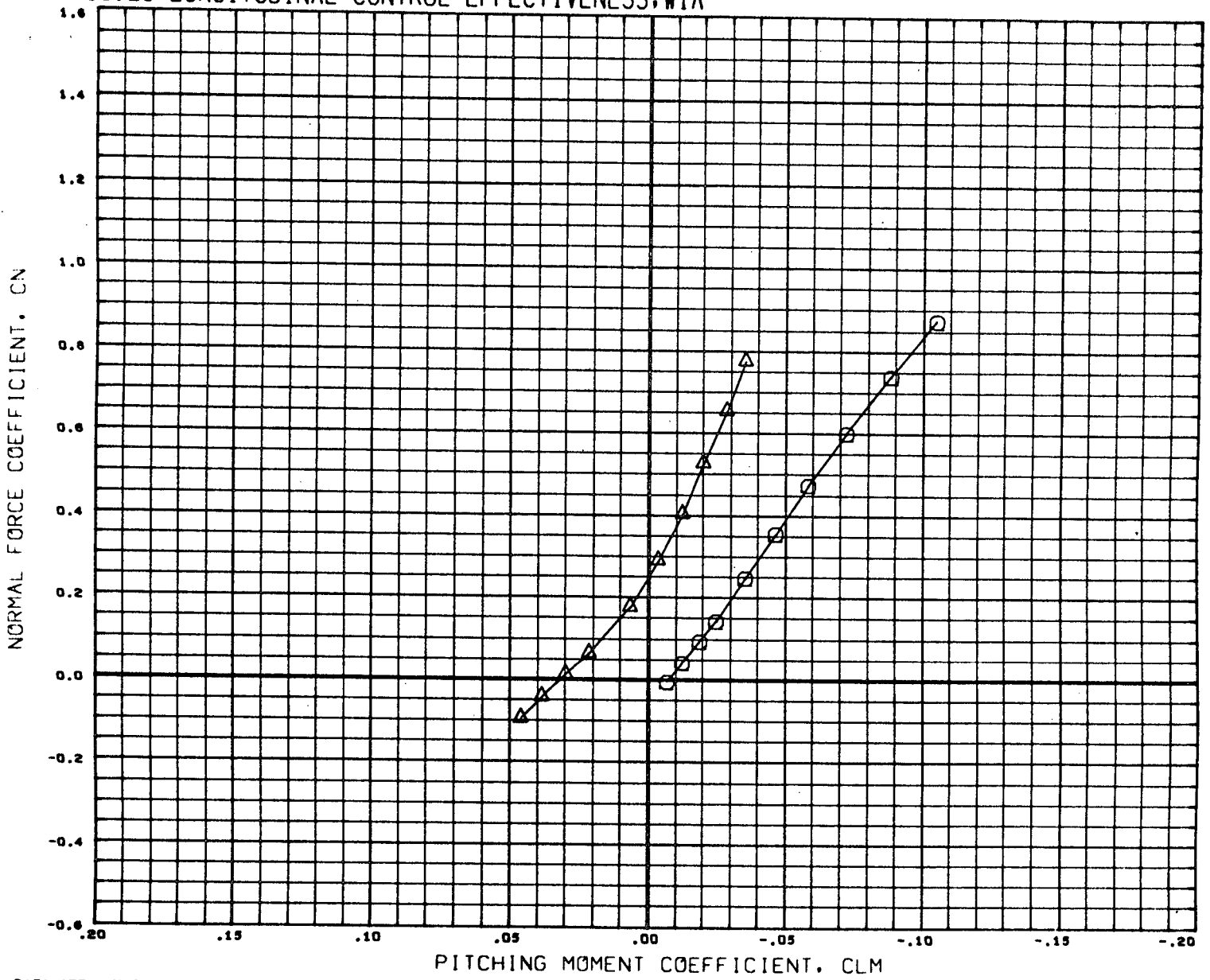


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(R6B251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(R6B261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG. 26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A



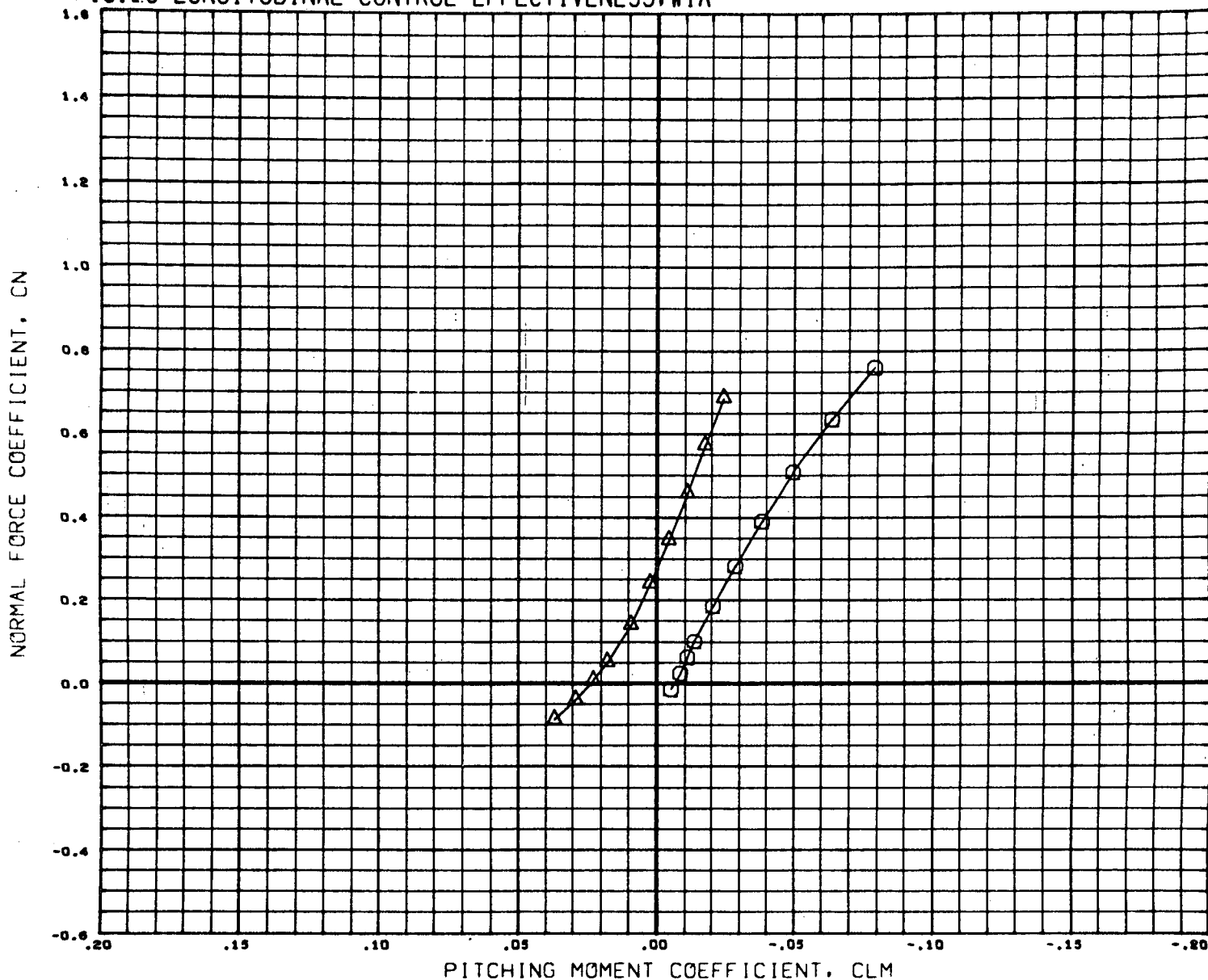
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RCB251) JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1
 (RCB261) JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1

LELEVN RELEVN RUDDER
 0.000 0.000 0.000
 -40.000 -40.000 0.000

REFERENCE INFORMATION
 SREF 25.5560 SQ IN.
 LREF 4.5720 IN.
 BREF 6.6150 IN.
 XMRF 1067.9040 IN.
 YMRF 0.0000 IN.
 ZMRF 400.0004 IN.
 SCALE 0.0075

MACH 3.03

FIG.26 LONGITUDINAL CONTROL EFFECTIVENESS, W1A

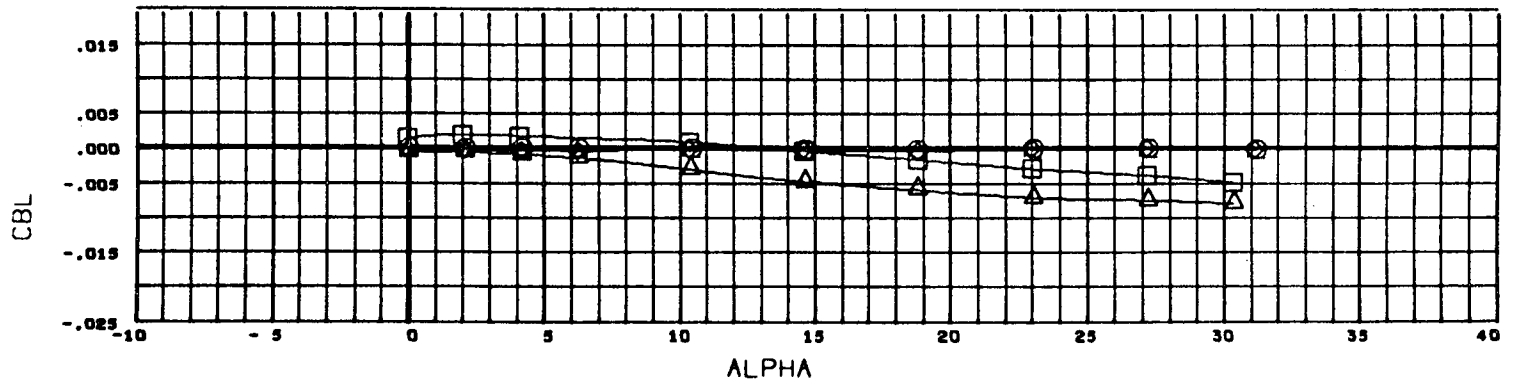
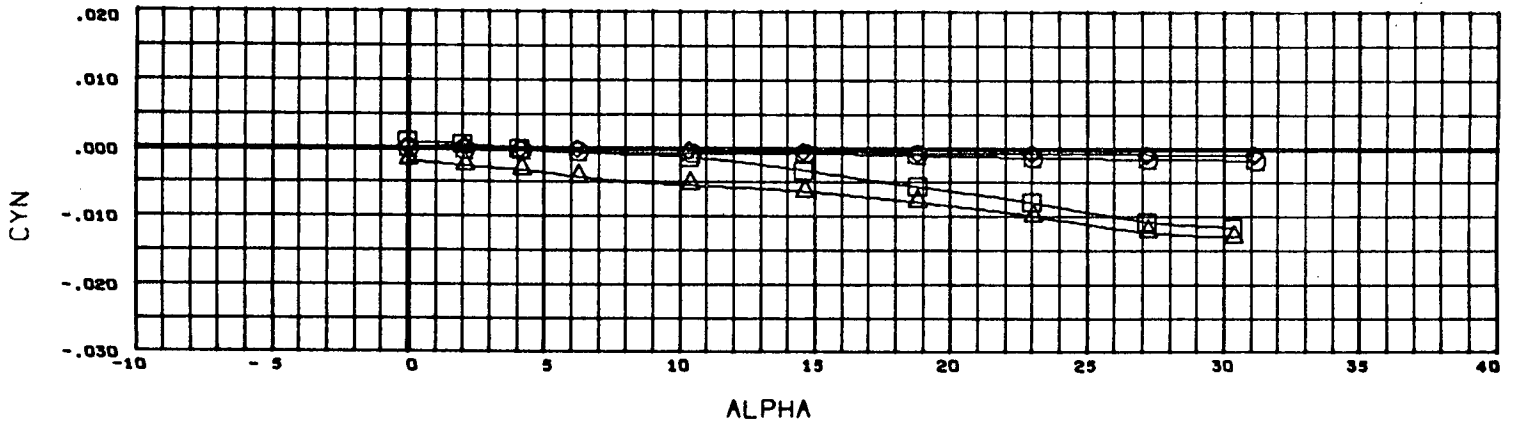
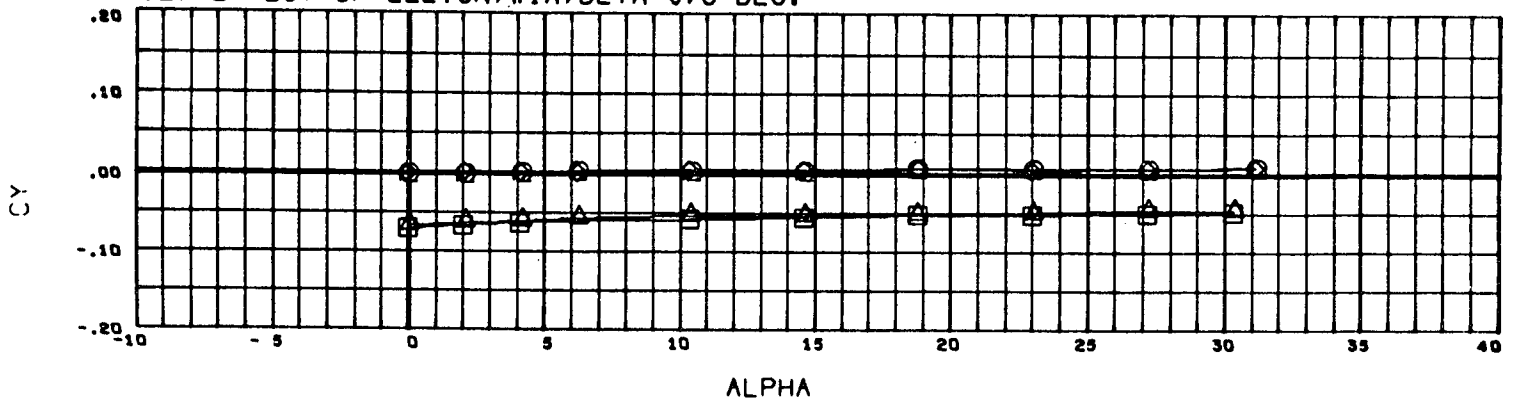


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF	25.3560 SQ IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF	4.3720 IN.
					BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.98

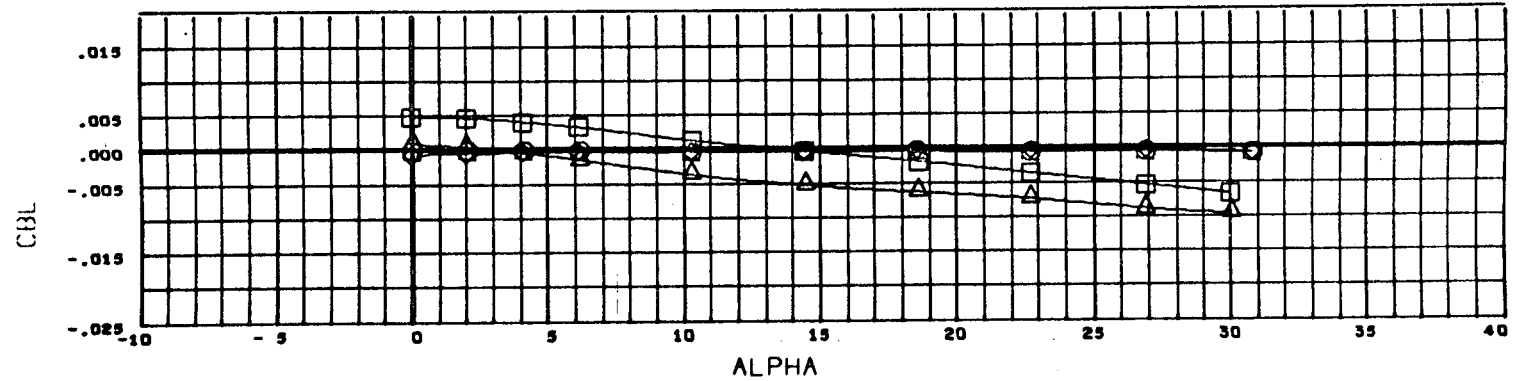
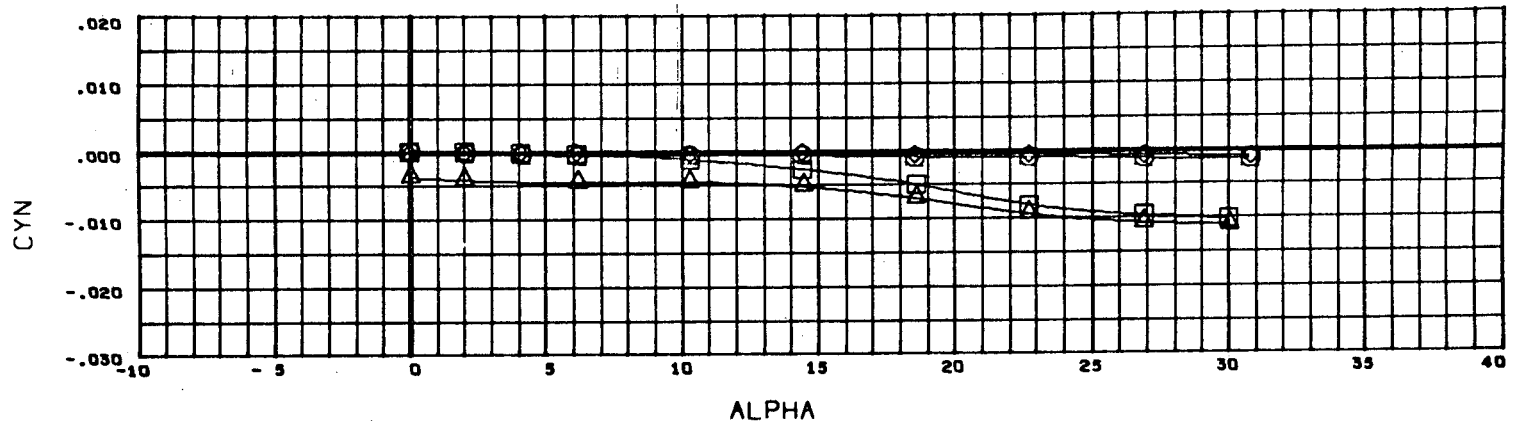
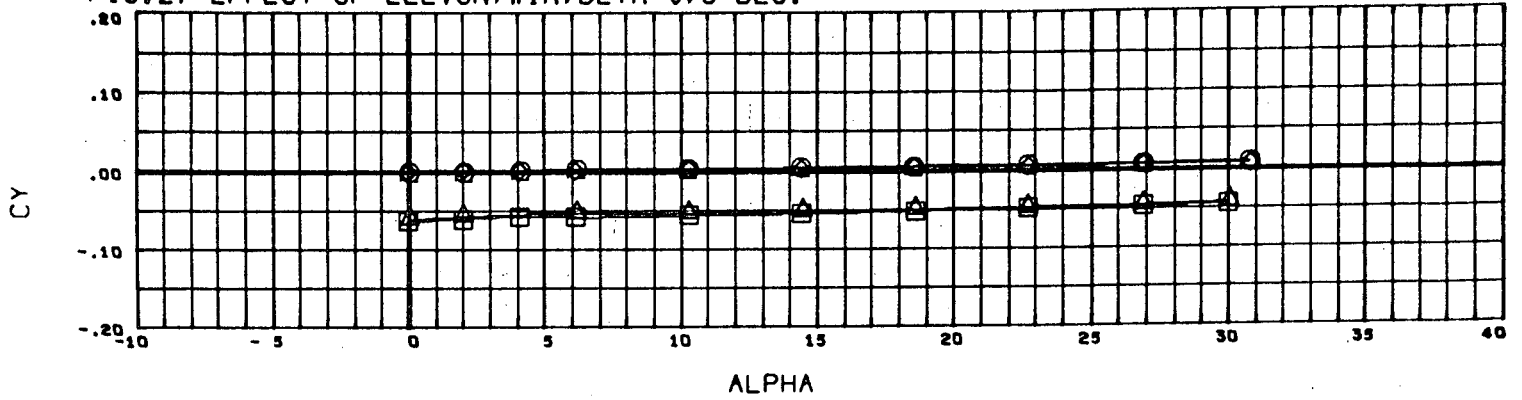
PAGE 163

FIG.27 EFFECT OF ELEVON, W1A, BETA=0.5 DEG.



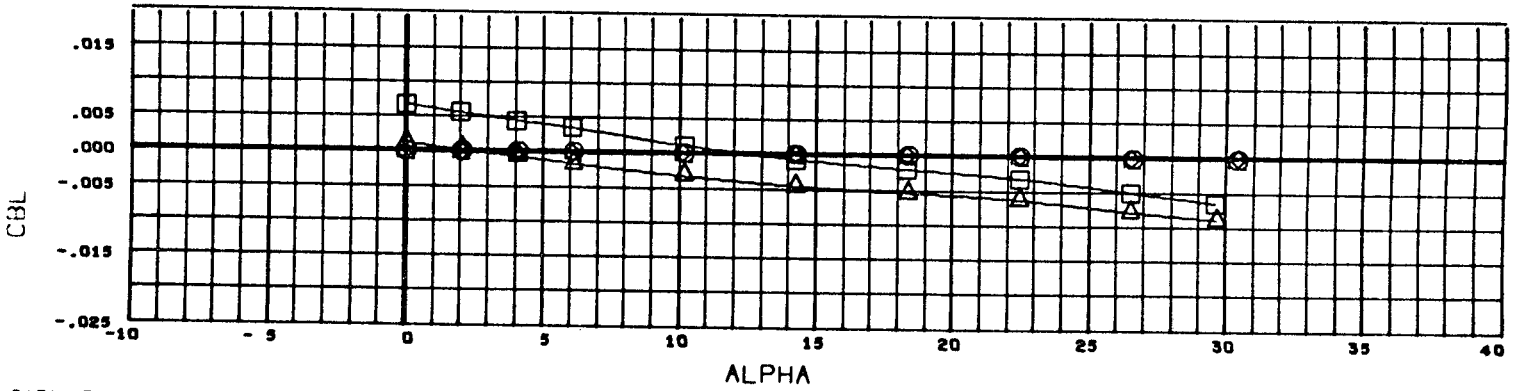
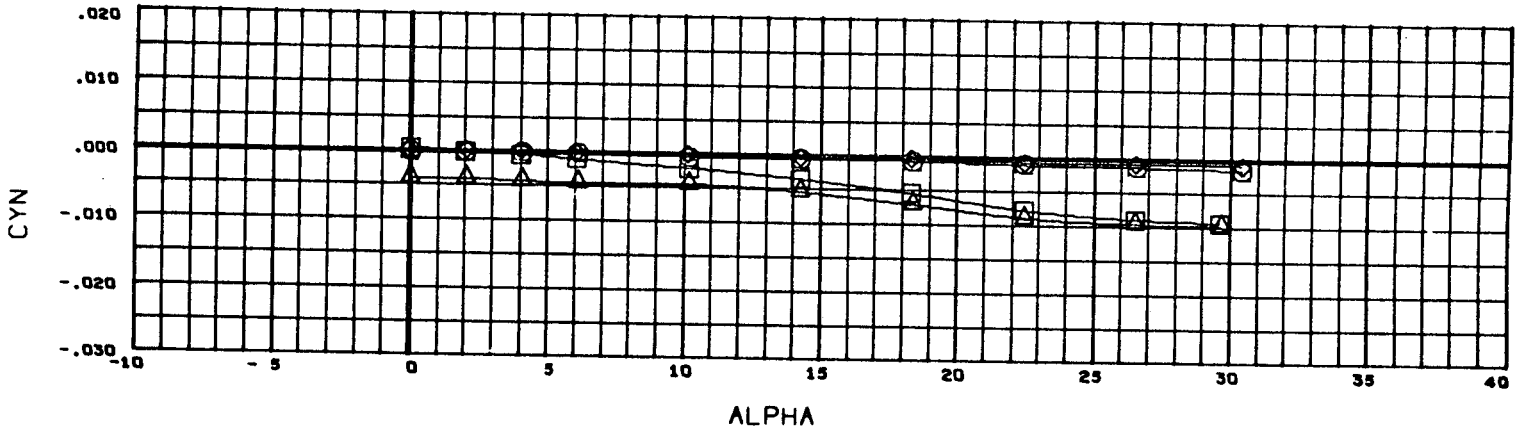
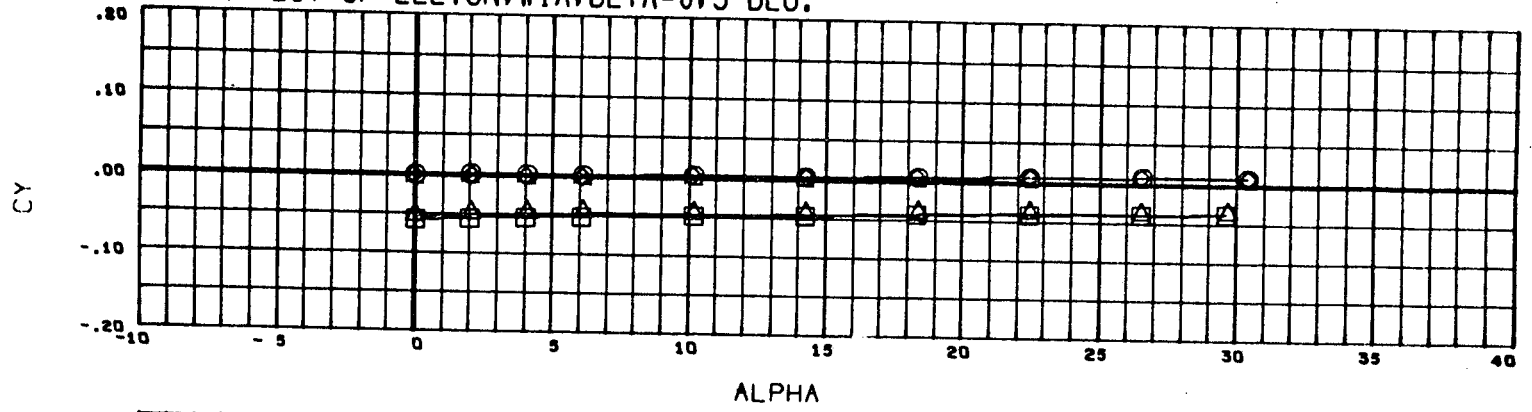
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB252)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	-40.000	-40.000	0.000	BREF 6.6150 IN.
(RGB262)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	-40.000	-40.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 27 EFFECT OF ELEVN, W1A, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB252)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	-40.000	-40.000	0.000	BREF 6.6150 IN.
(RGB262)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	-40.000	-40.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

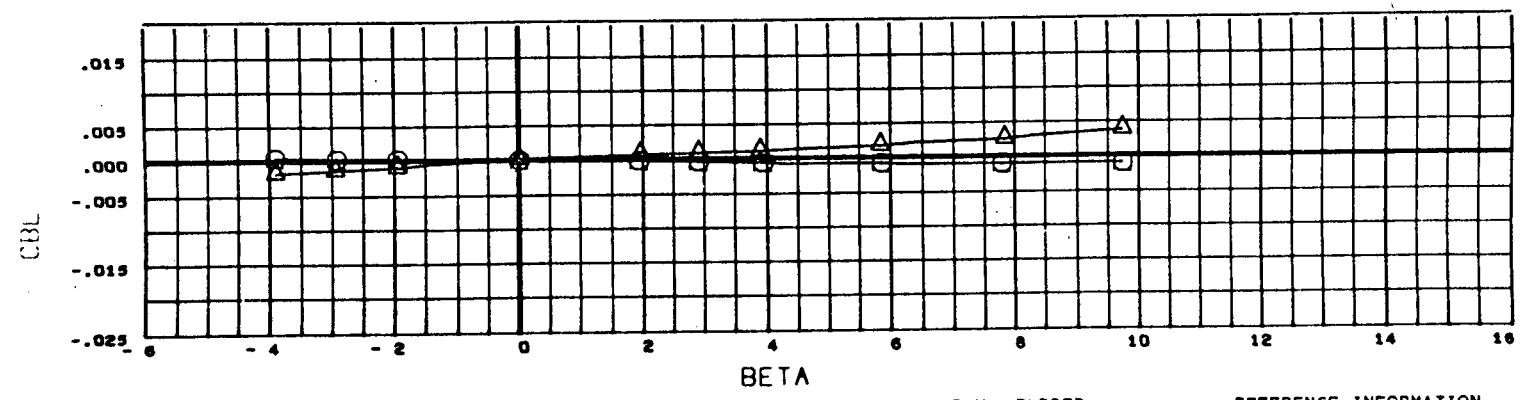
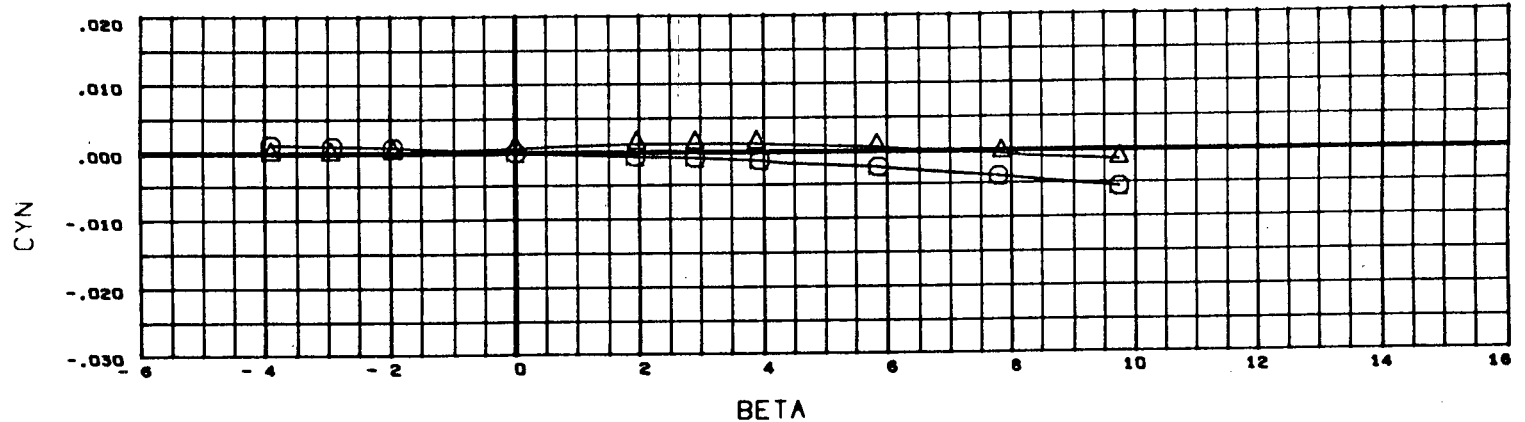
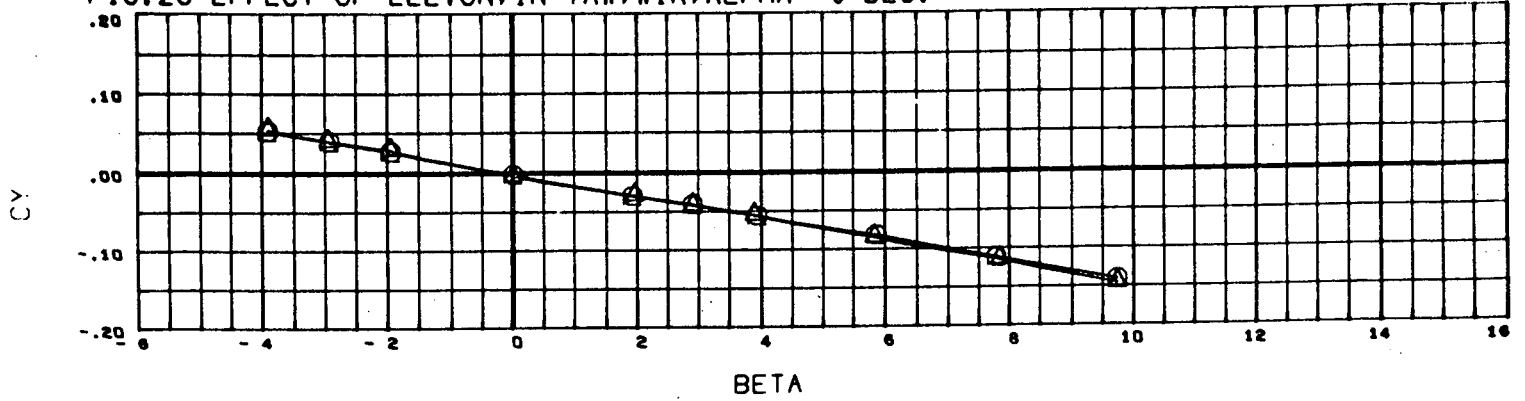
FIG. 27 EFFECT OF ELEVON, W1A, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB252)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	-40.000	-40.000	0.000	BREF 6.6150 IN.
(RGB262)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	5.000	-40.000	-40.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0073

MACH 3.98

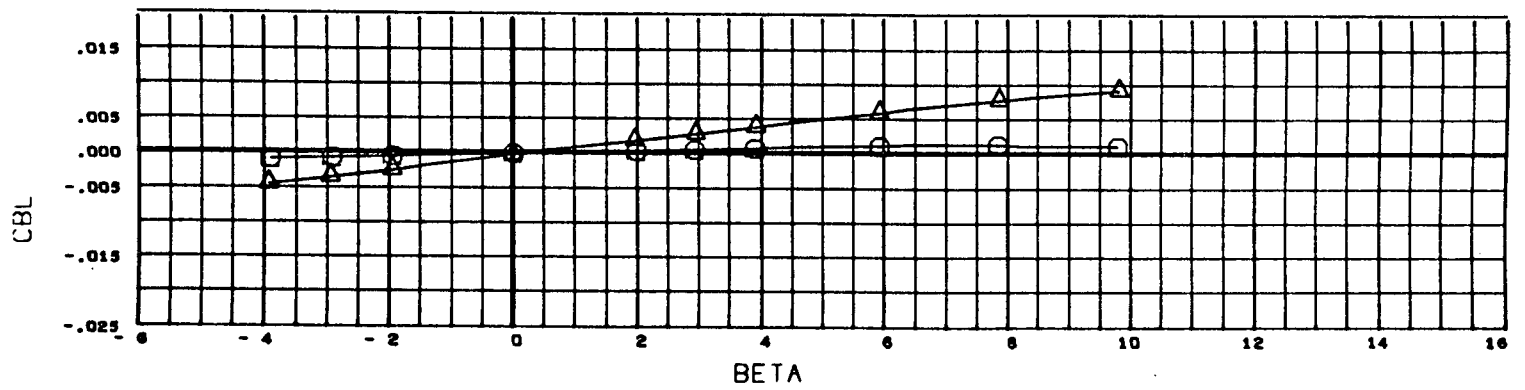
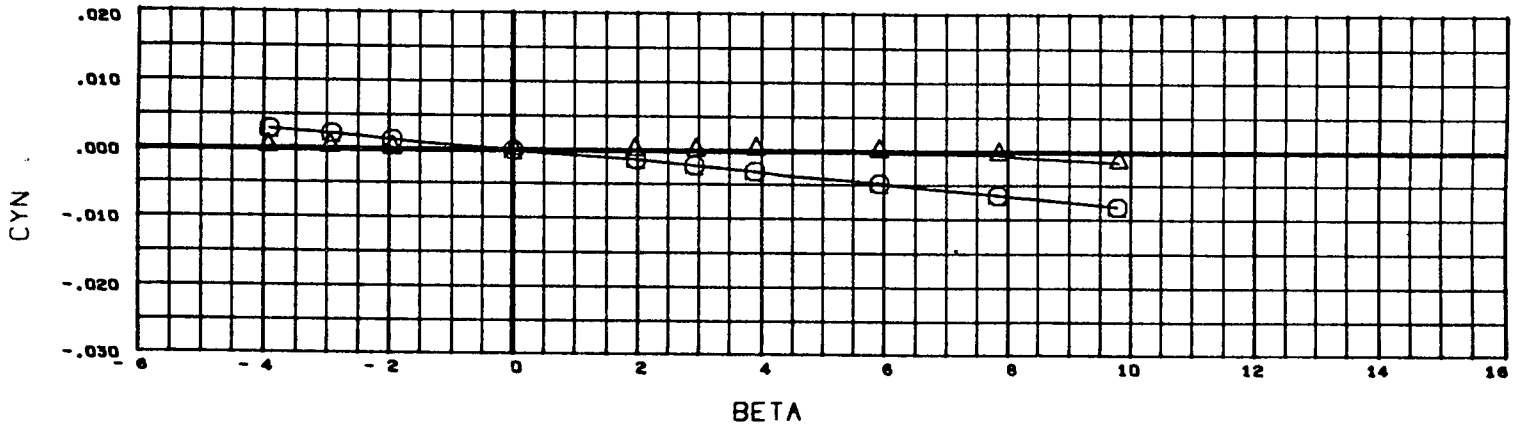
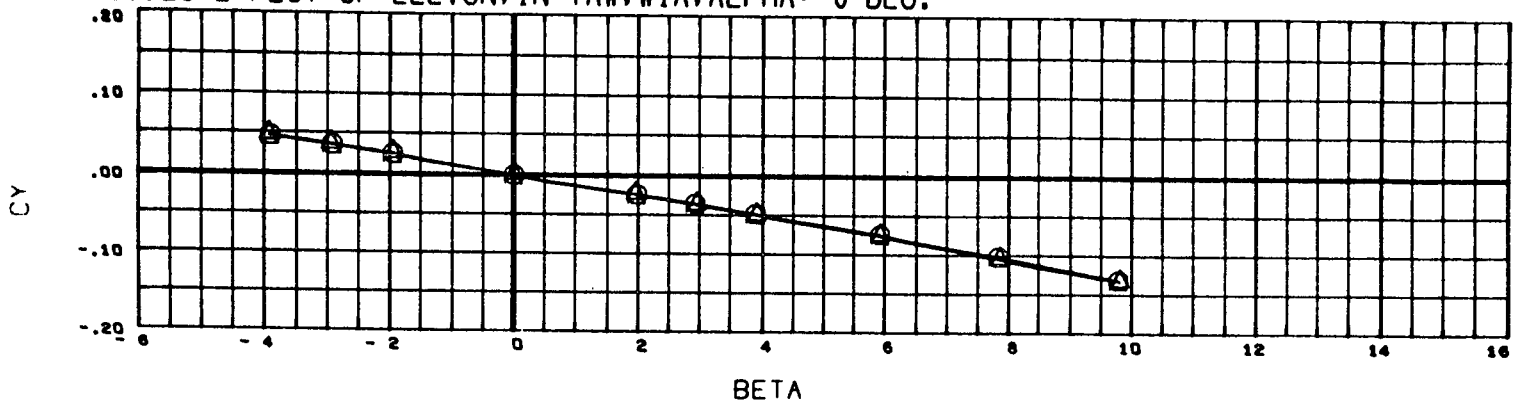
FIG. 28 EFFECT OF ELEVON, IN YAW, W1A, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R68253)	JPL WT 20-881 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68263)	JPL WT 20-881 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

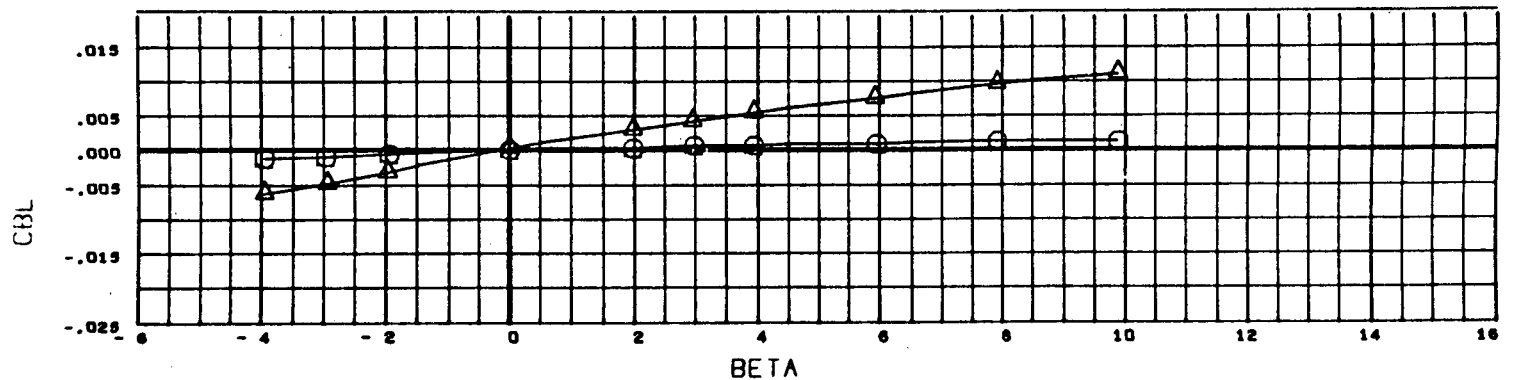
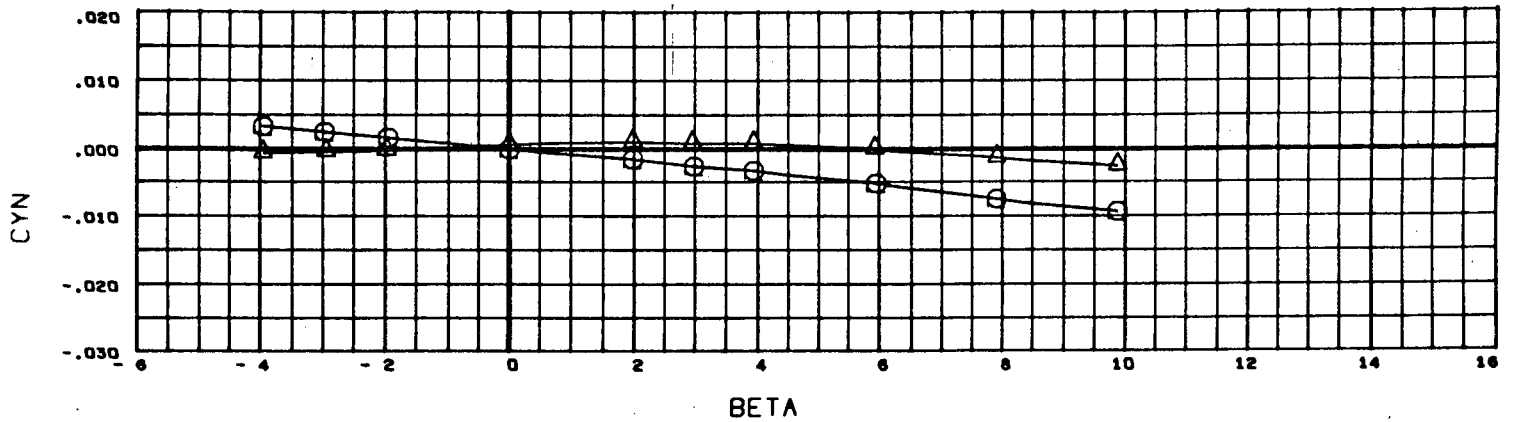
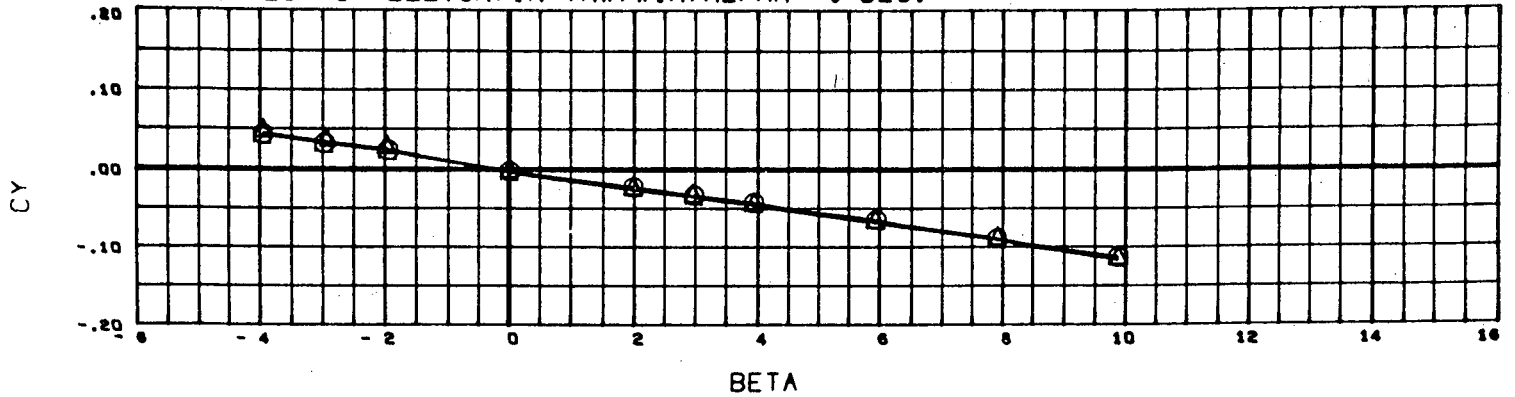
FIG.28 EFFECT OF ELEVN, IN YAW, W1A, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(R6253)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(R6263)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

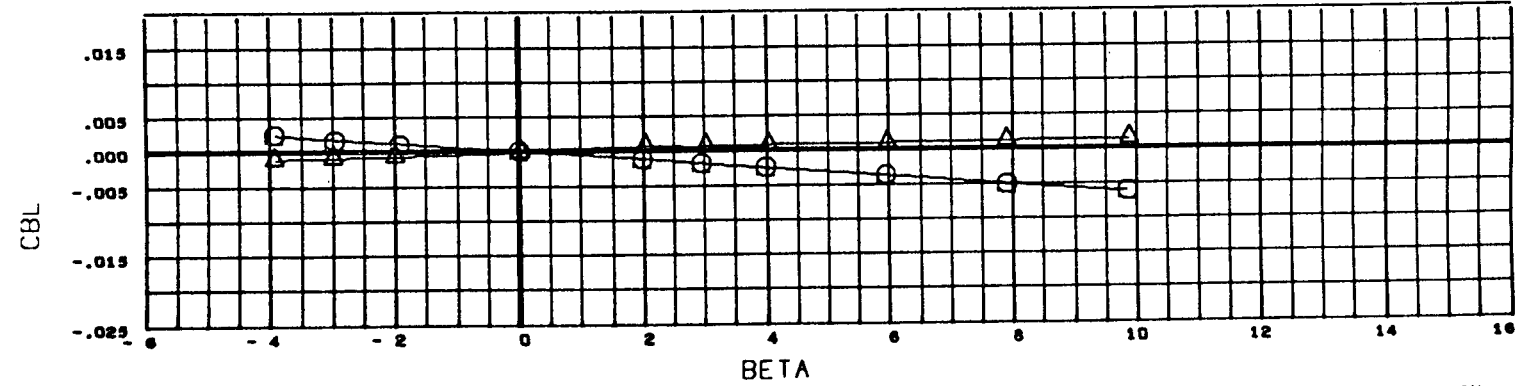
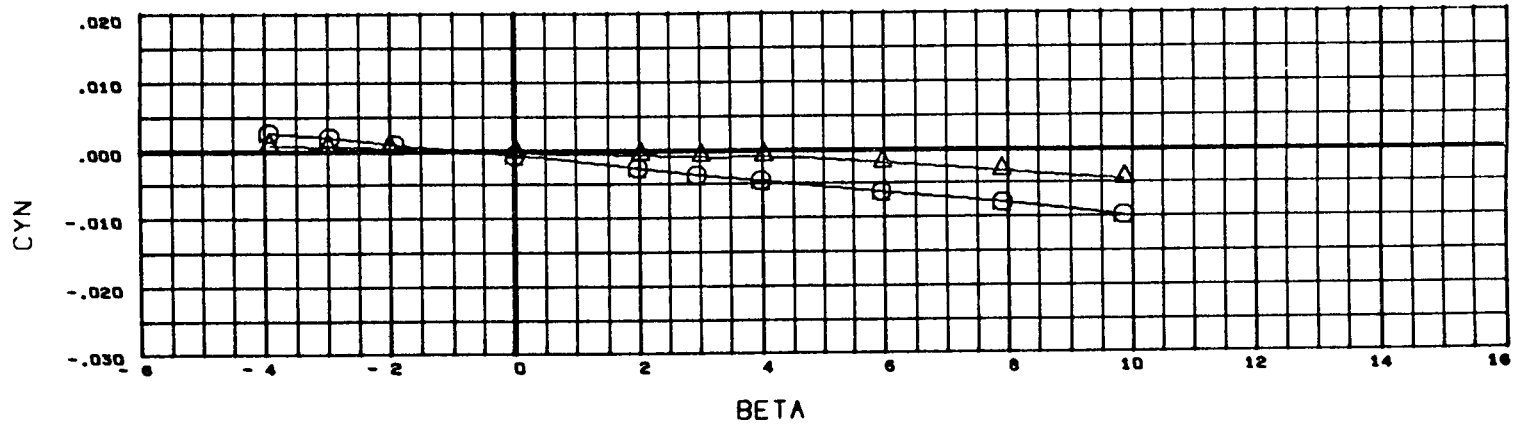
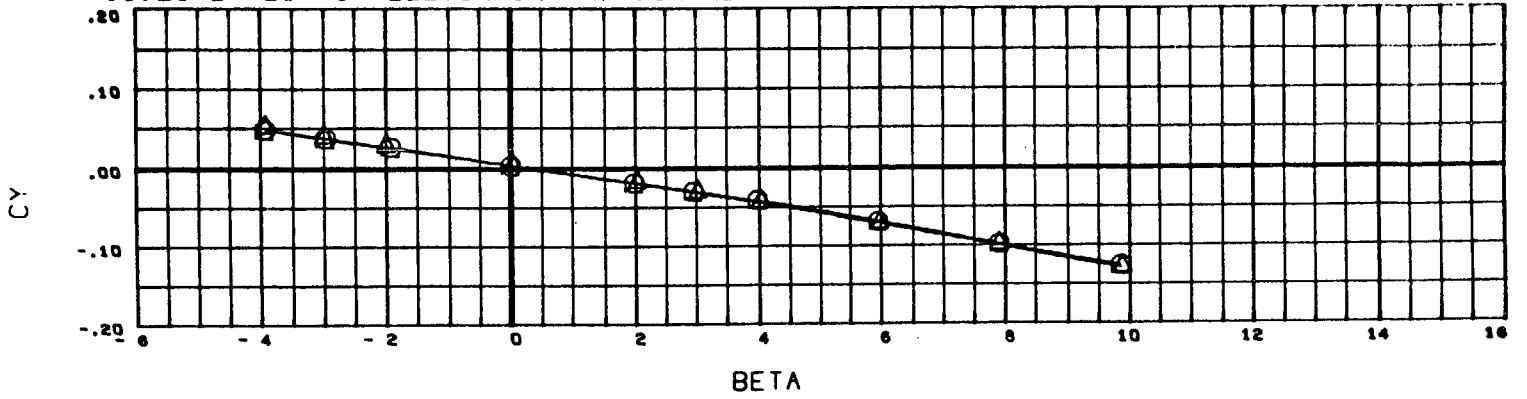
FIG. 28 EFFECT OF ELEVON, IN YAW, W1A, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(RGB253)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(RGB263)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

FIG. 29 EFFECT OF ELEVON, IN YAW, WIA, ALPHA=10 DEG.



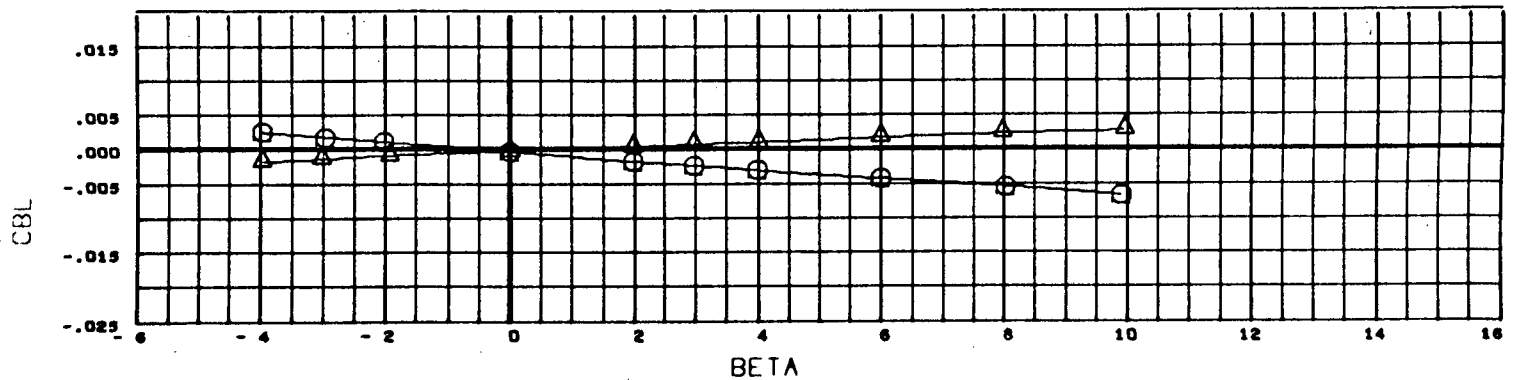
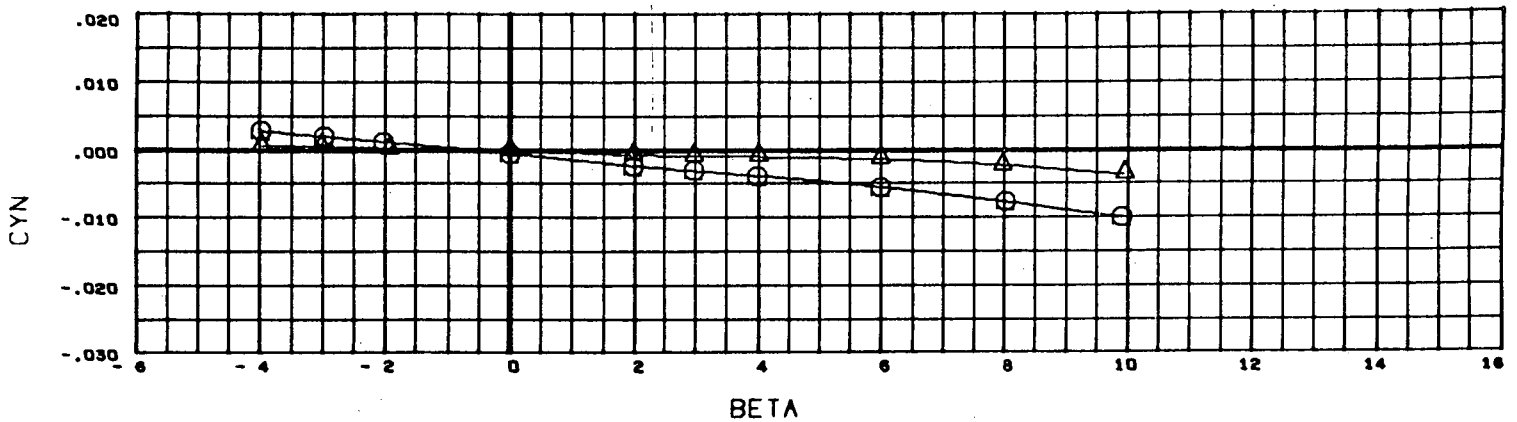
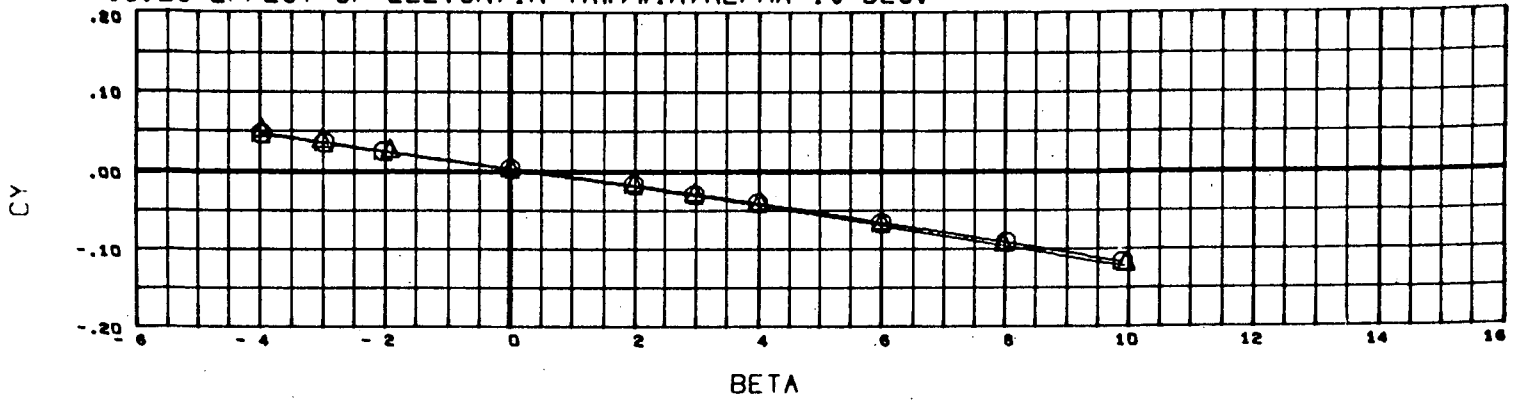
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER
(RGB254)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000
(RGB264)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

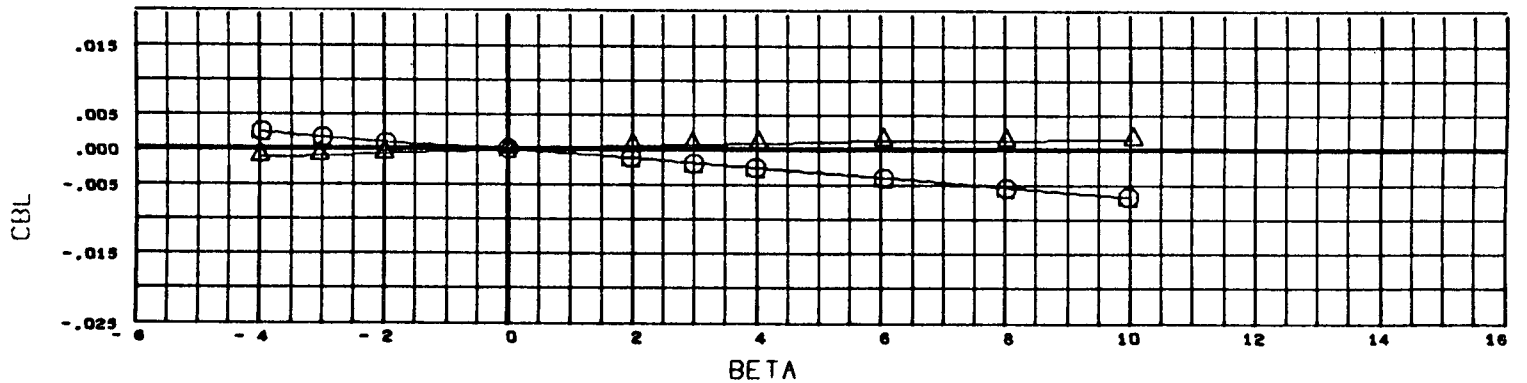
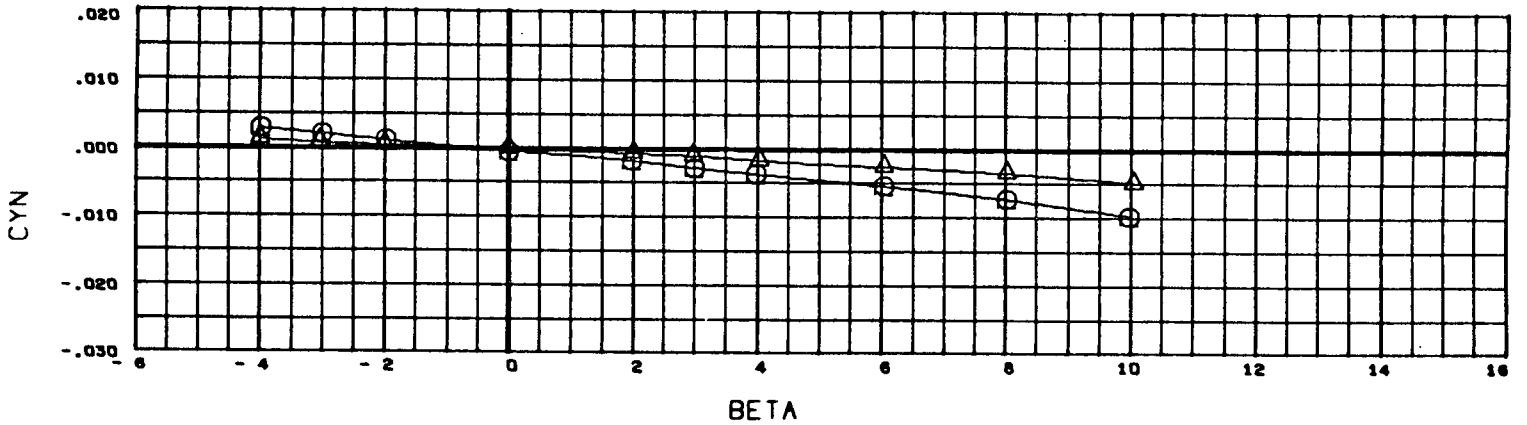
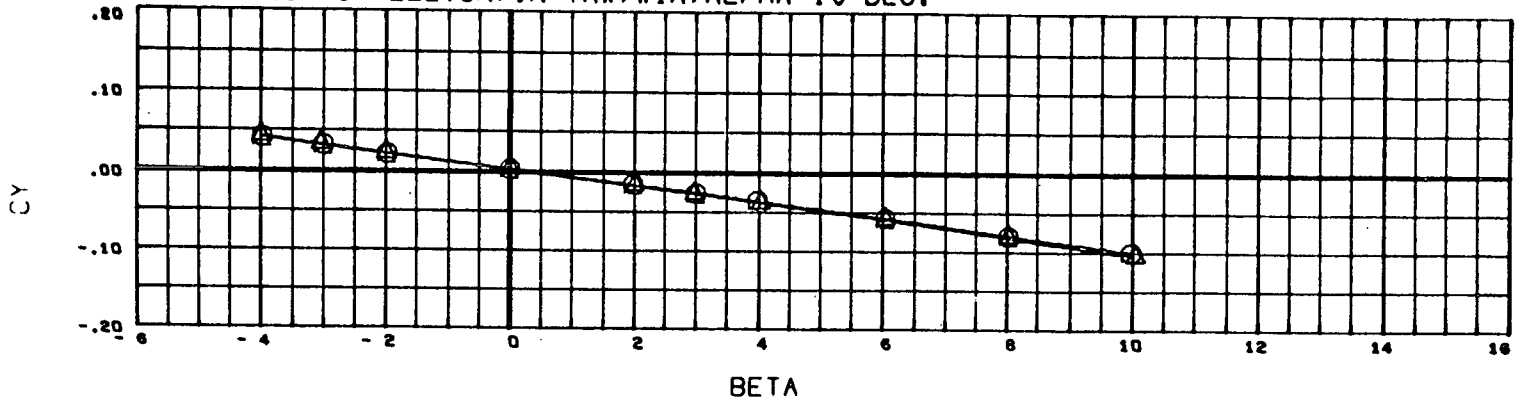
PAGE 170

FIG.29 EFFECT OF ELEVON, IN YAW, WIA, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB254)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB264)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF	4.5720 IN.
					BREF	6.6150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

FIG. 29 EFFECT OF ELEVN, IN YAW, W1A, ALPHA=10 DEG.

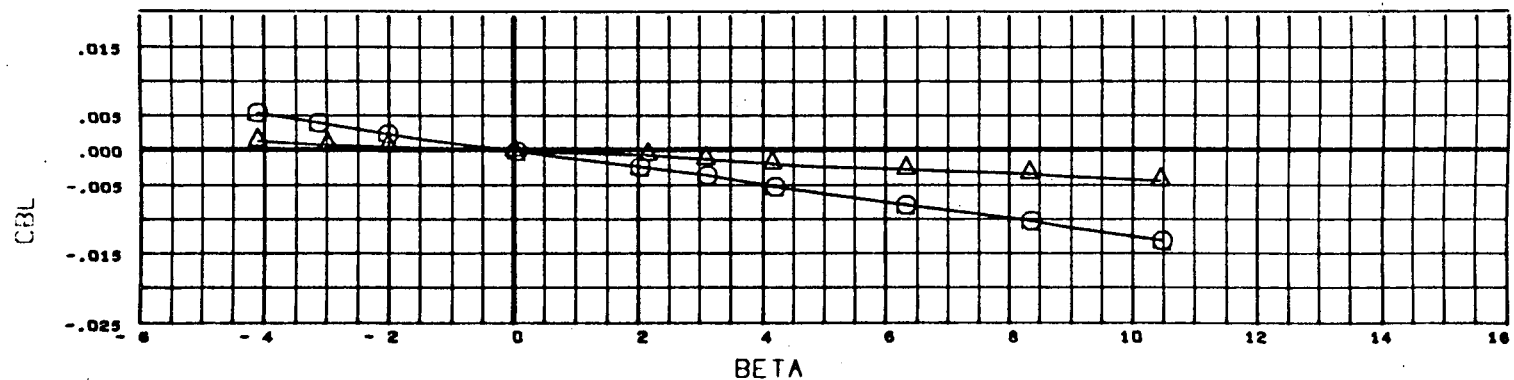
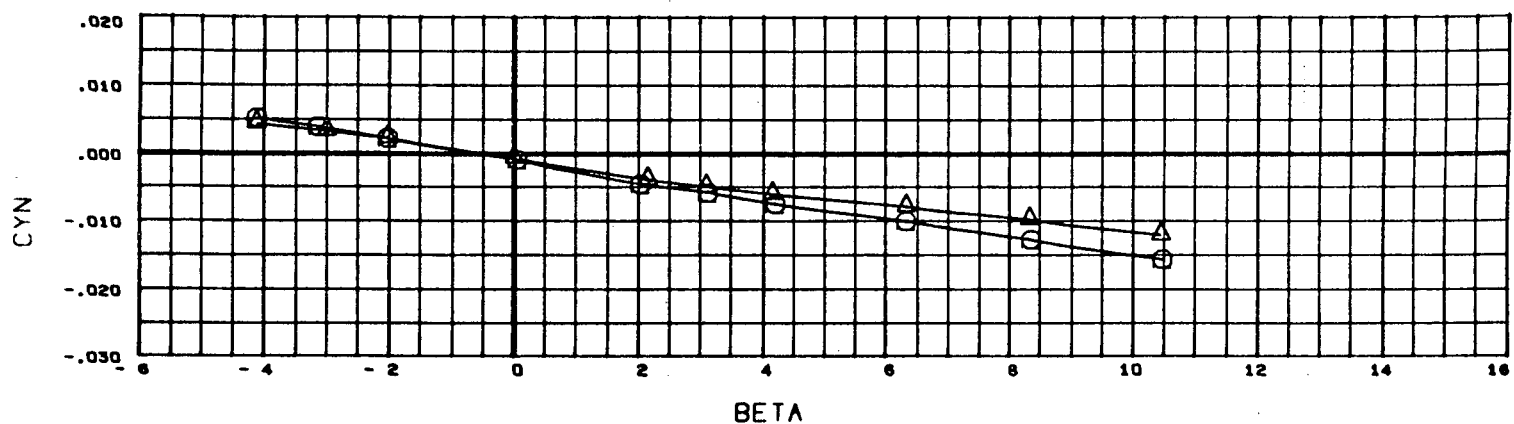
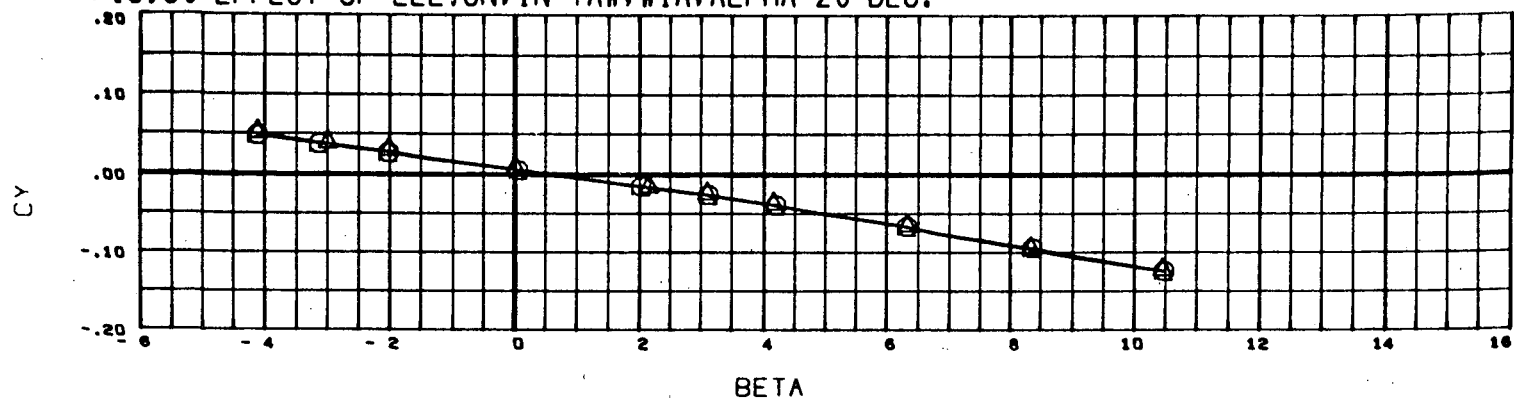


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB254)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB264)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF	4.5720 IN.
					BREF	6.8150 IN.
					XMRP	1067.9040 IN.
					YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.98

PAGE 172

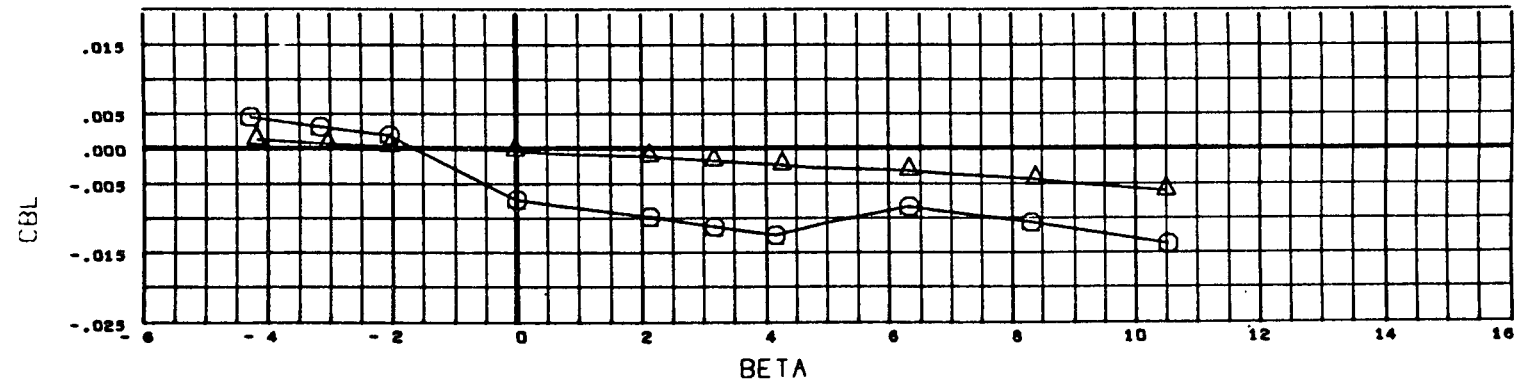
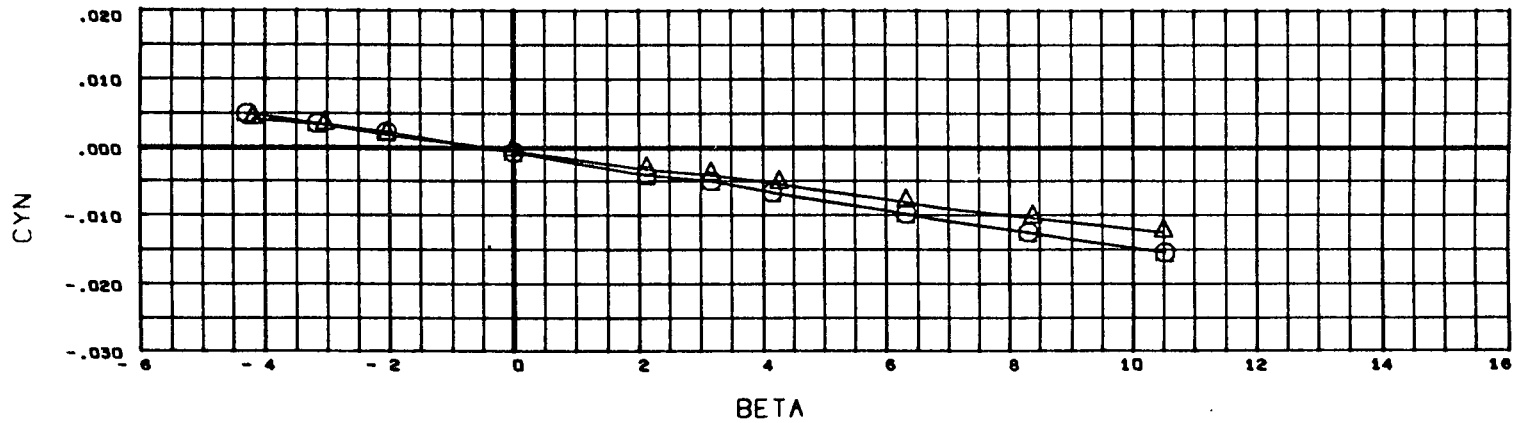
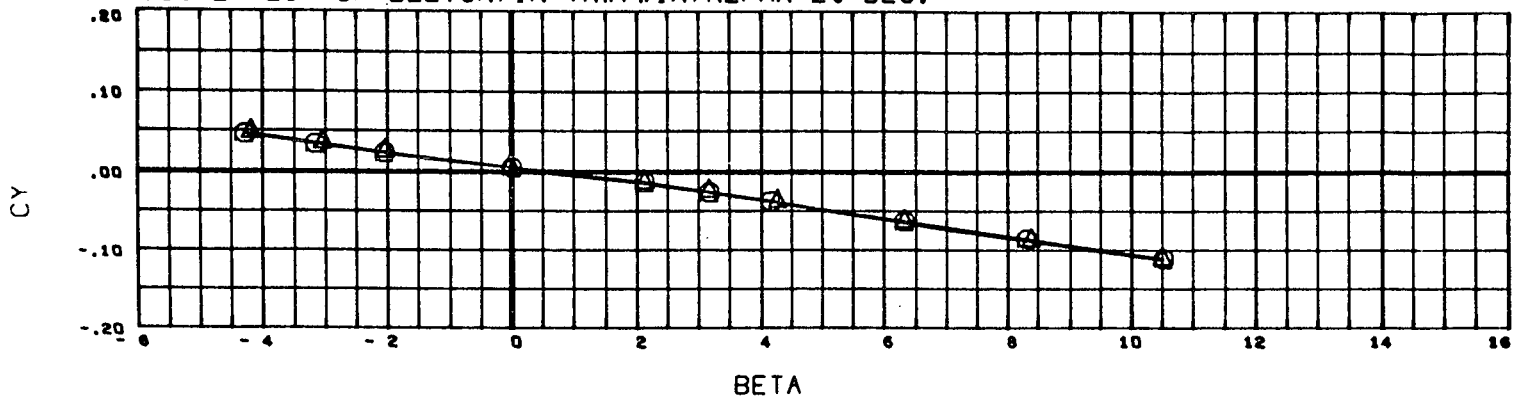
FIG. 30 EFFECT OF ELEVN. IN YAW, W1A, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R0255)	JPL WT 20-881 MSC 040A B1W(1A)VIM1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R0265)	JPL WT 20-881 MSC 040A B1W(1A)VIM1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

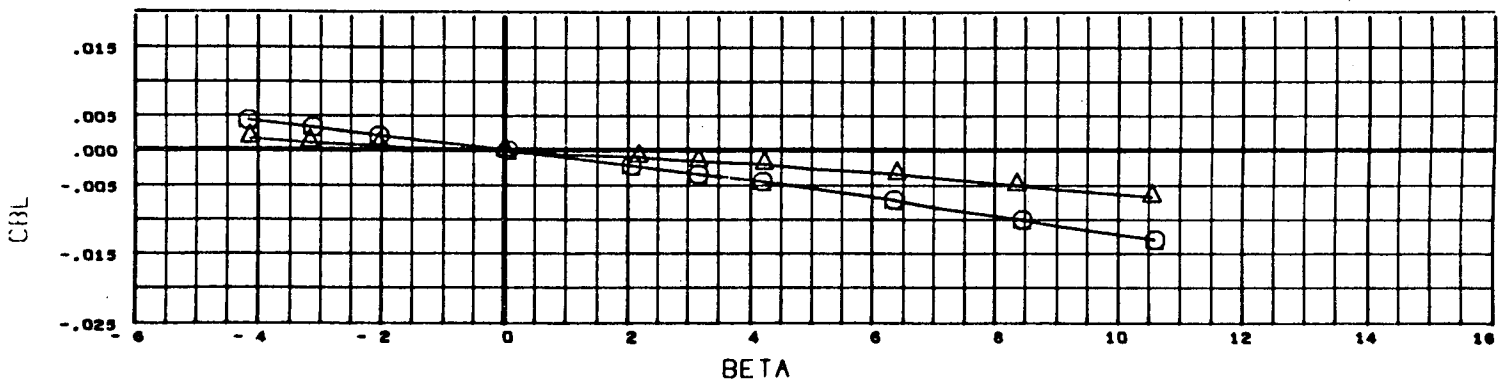
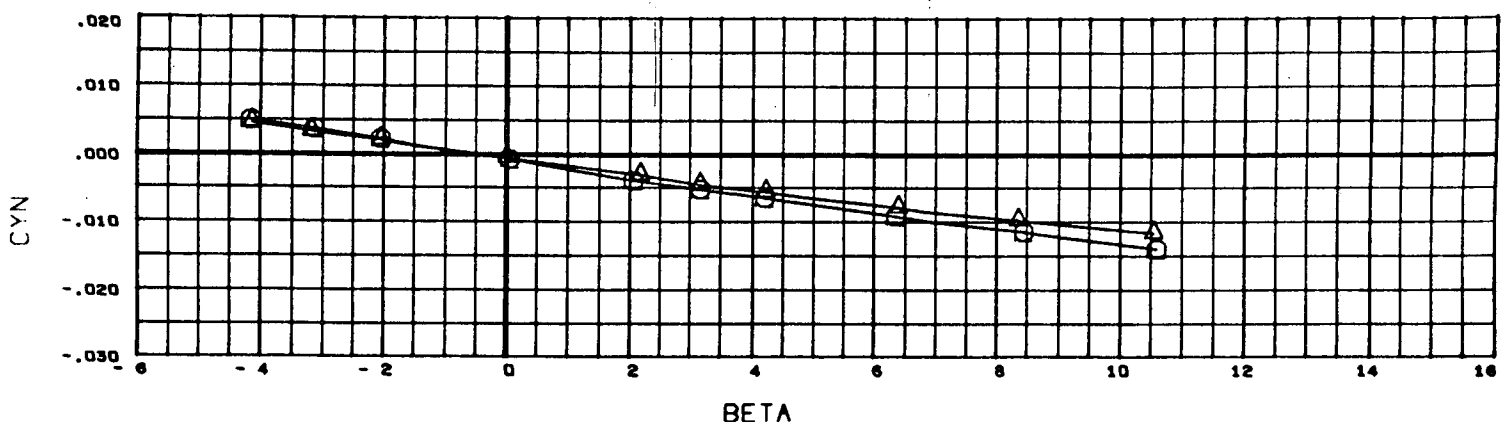
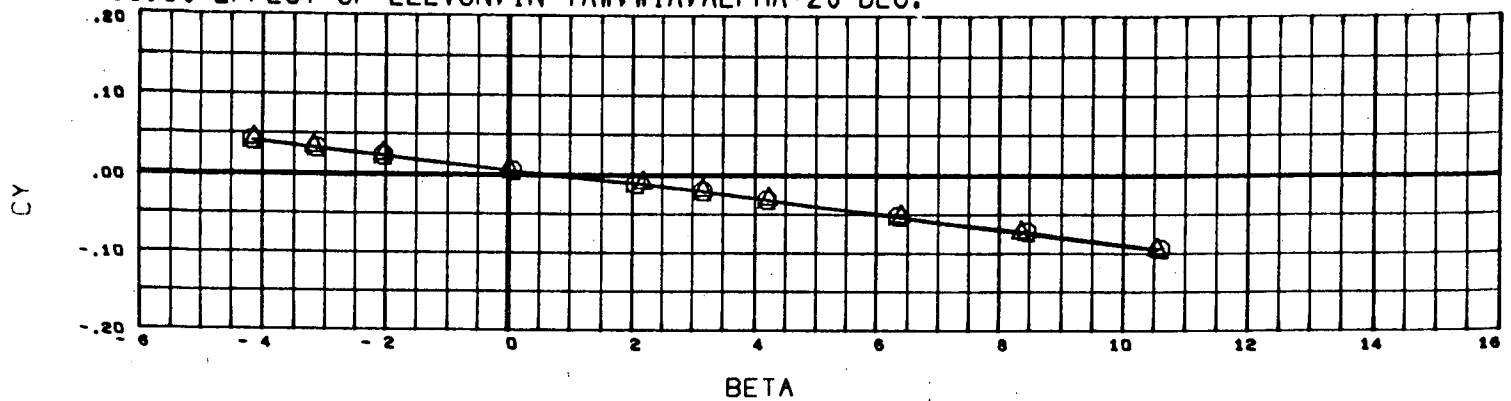
FIG. 30 EFFECT OF ELEVON, IN YAW, W1A, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB255) \circ	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB265) Δ	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

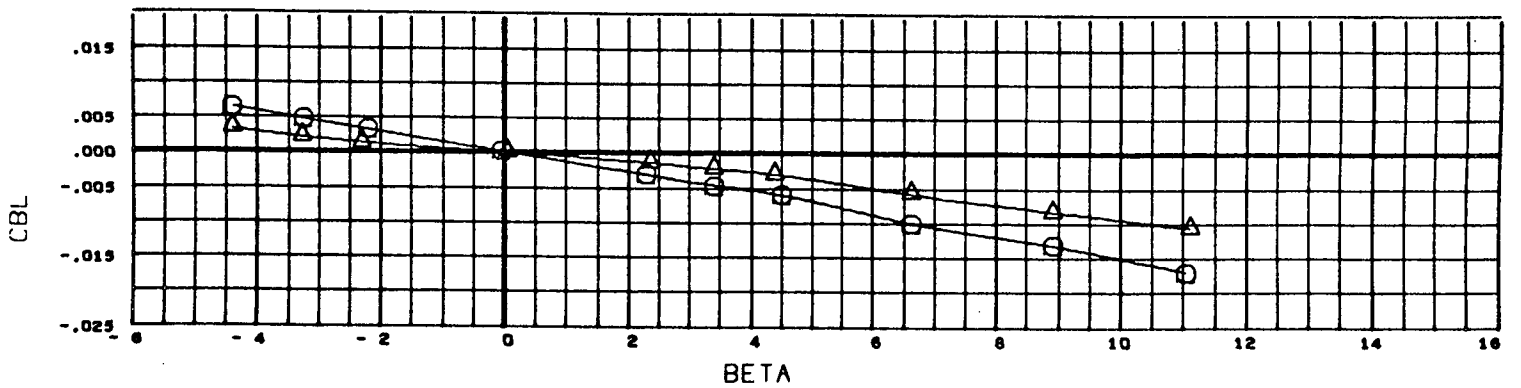
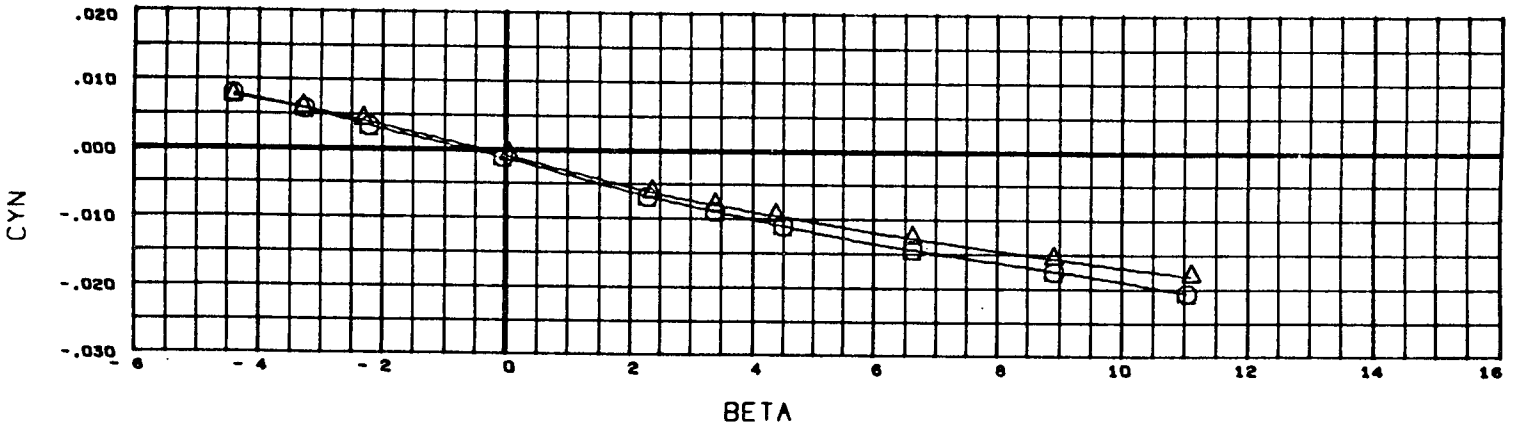
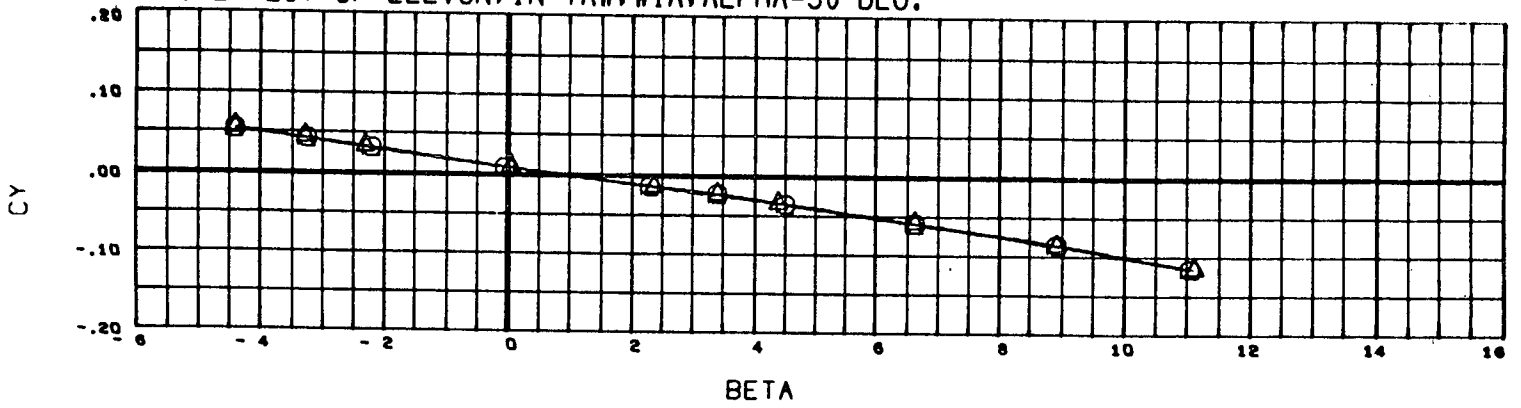
FIG.30 EFFECT OF ELEVON, IN YAW, W1A, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R68255)	⊙ JPL WT 20-681 MSC 040A B1W(1A)V1H1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68265)	△ JPL WT 20-681 MSC 040A B1W(1A)V1H1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN./
					SCALE 0.0075

MACH 3.98

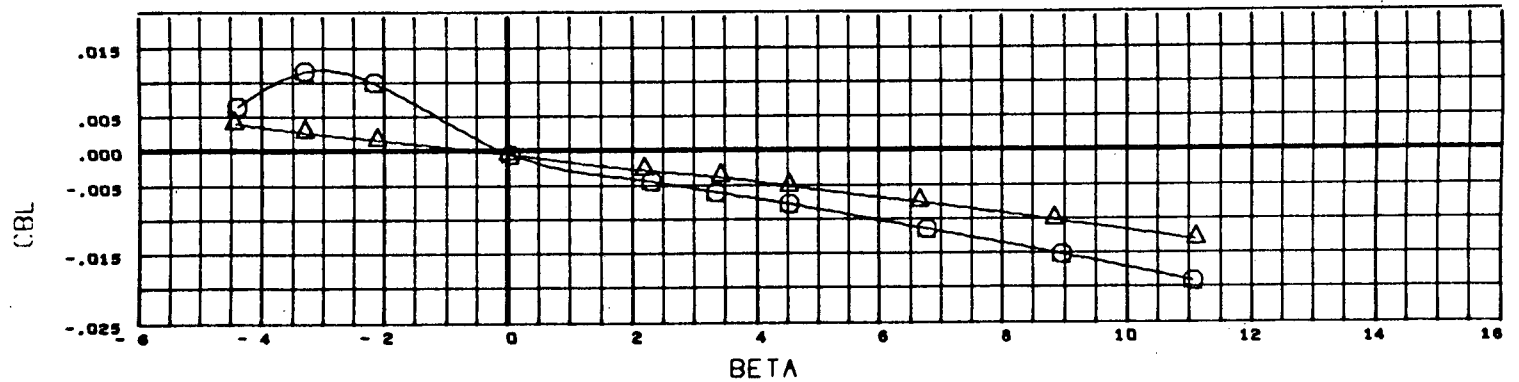
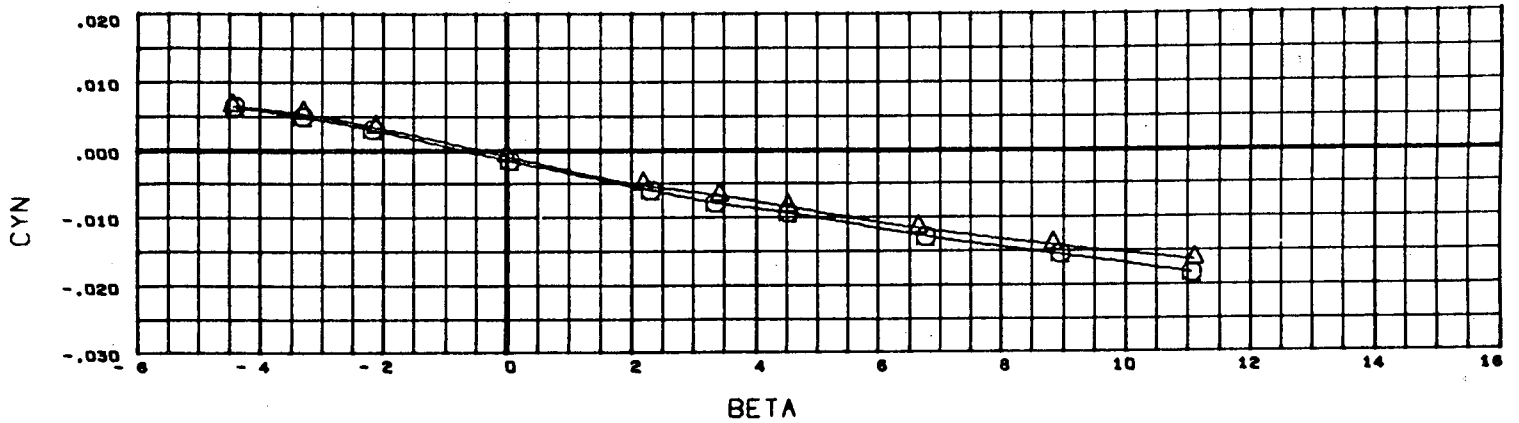
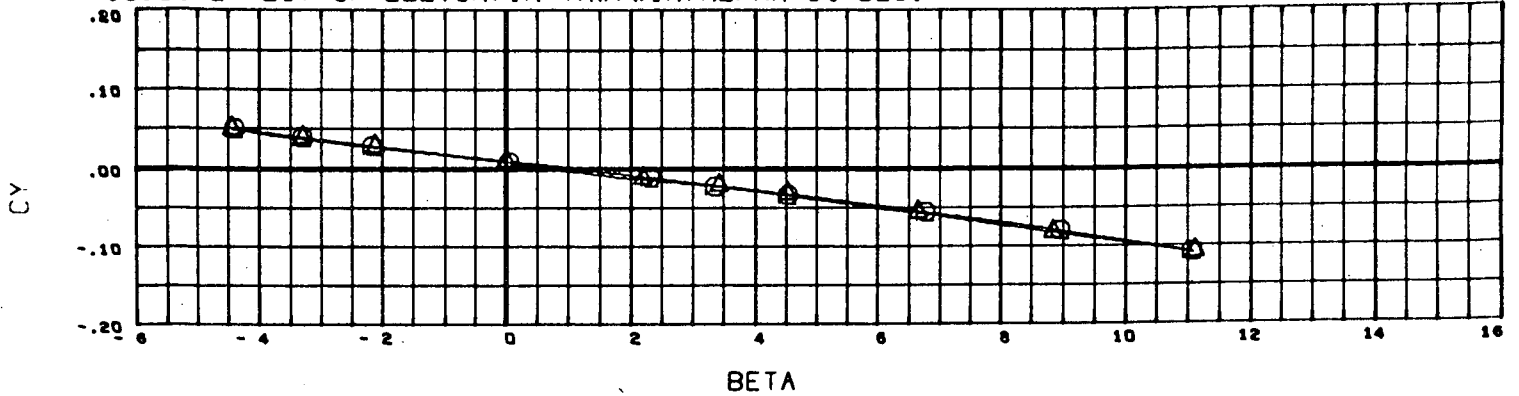
FIG. 31 EFFECT OF ELEVON, IN YAW, W1A, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB256)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB266)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

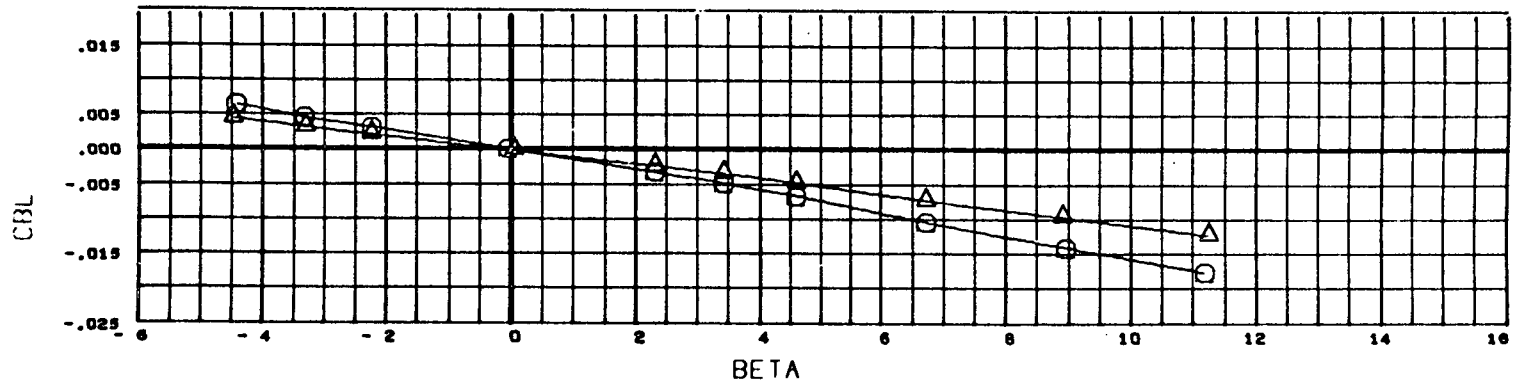
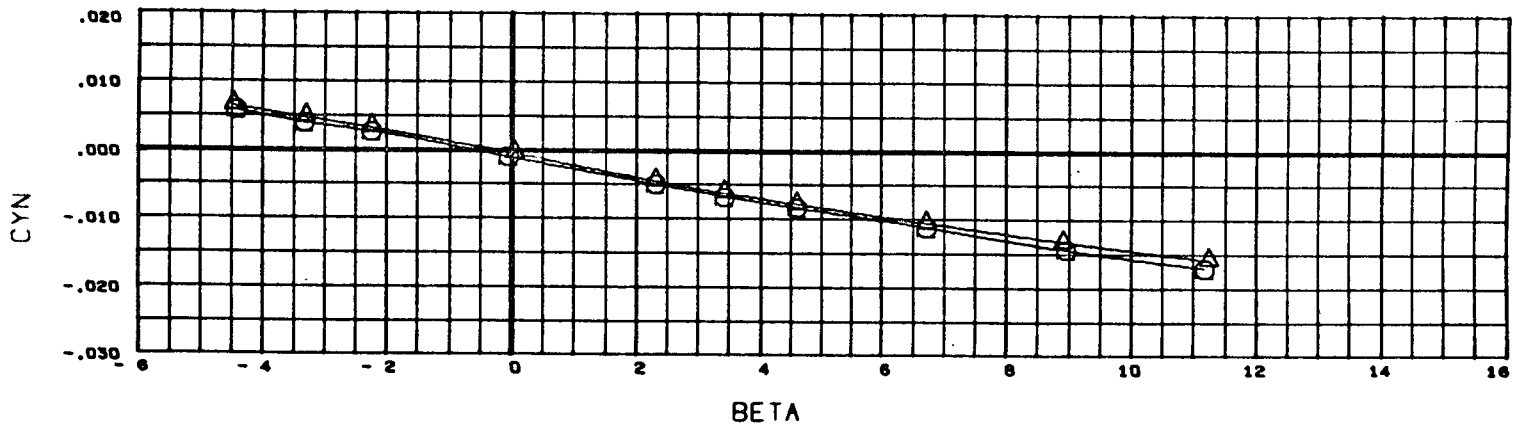
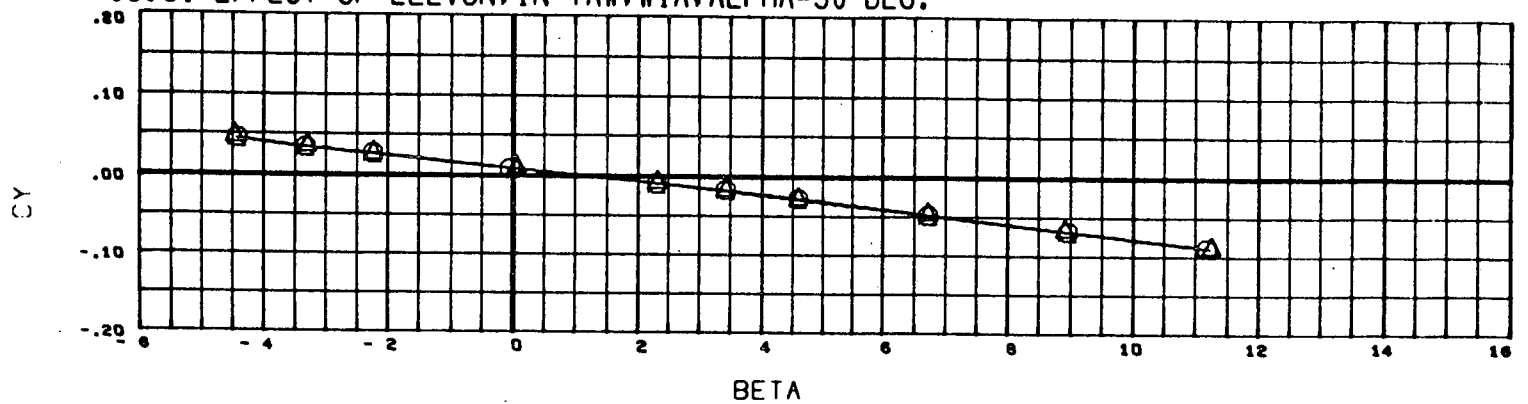
MACH 2.42

FIG. 31 EFFECT OF ELEVON, IN YAW, W1A, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB236)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5360 SQ IN.
(RGB266)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

FIG. 31 EFFECT OF ELEVON, IN YAW, W1A, ALPHA=30 DEG.

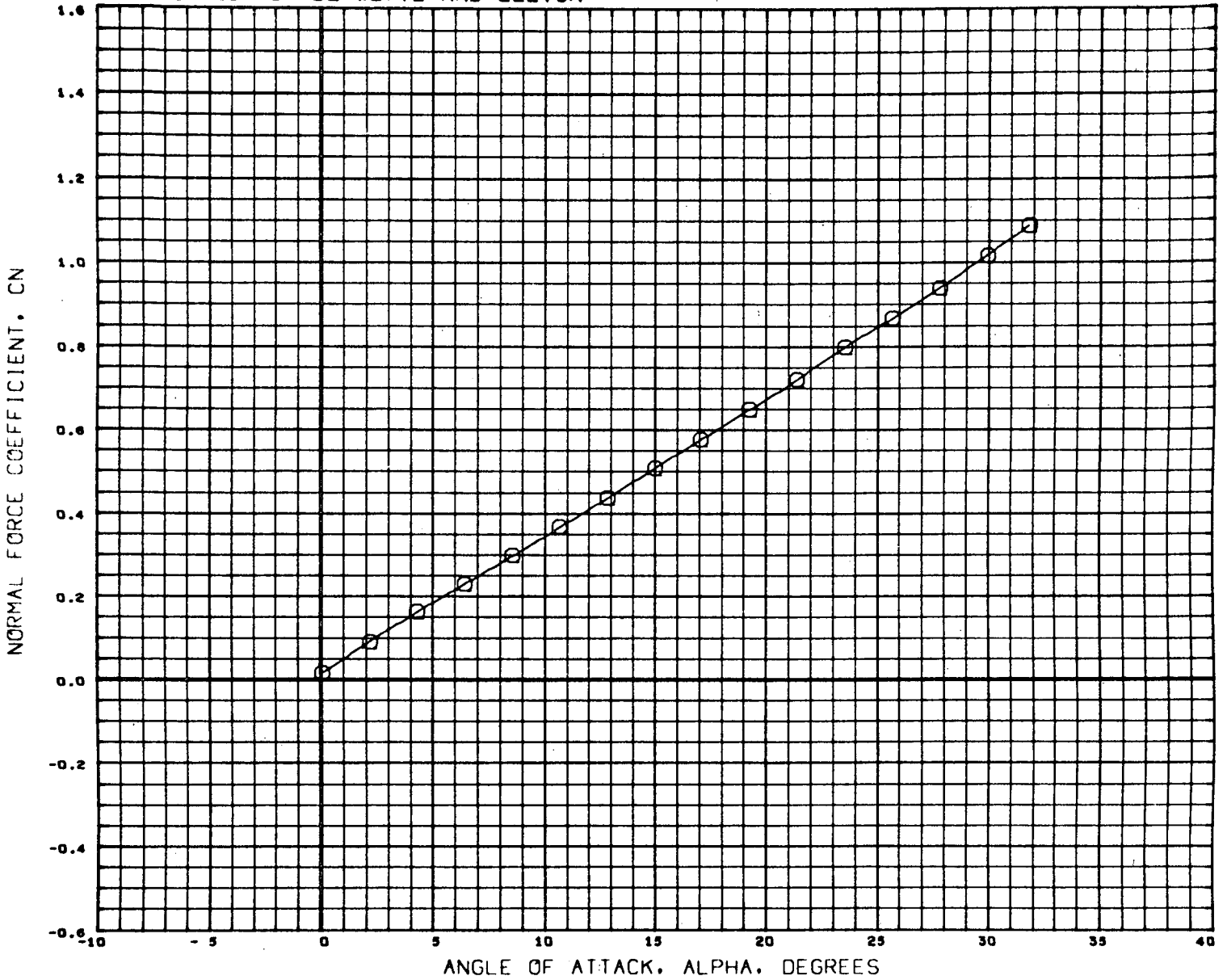


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB256)	JPL WT 20-681 MSC 040A 81W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB266)	JPL WT 20-691 MSC 040A 81W(1A)V1M1P1D1C1F1	-40.000	-40.000	0.000	LREF 4.5720 IN.
					BREF 6.6150 IN.
					XMRP 1067.9040 IN.
					YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

PAGE 178

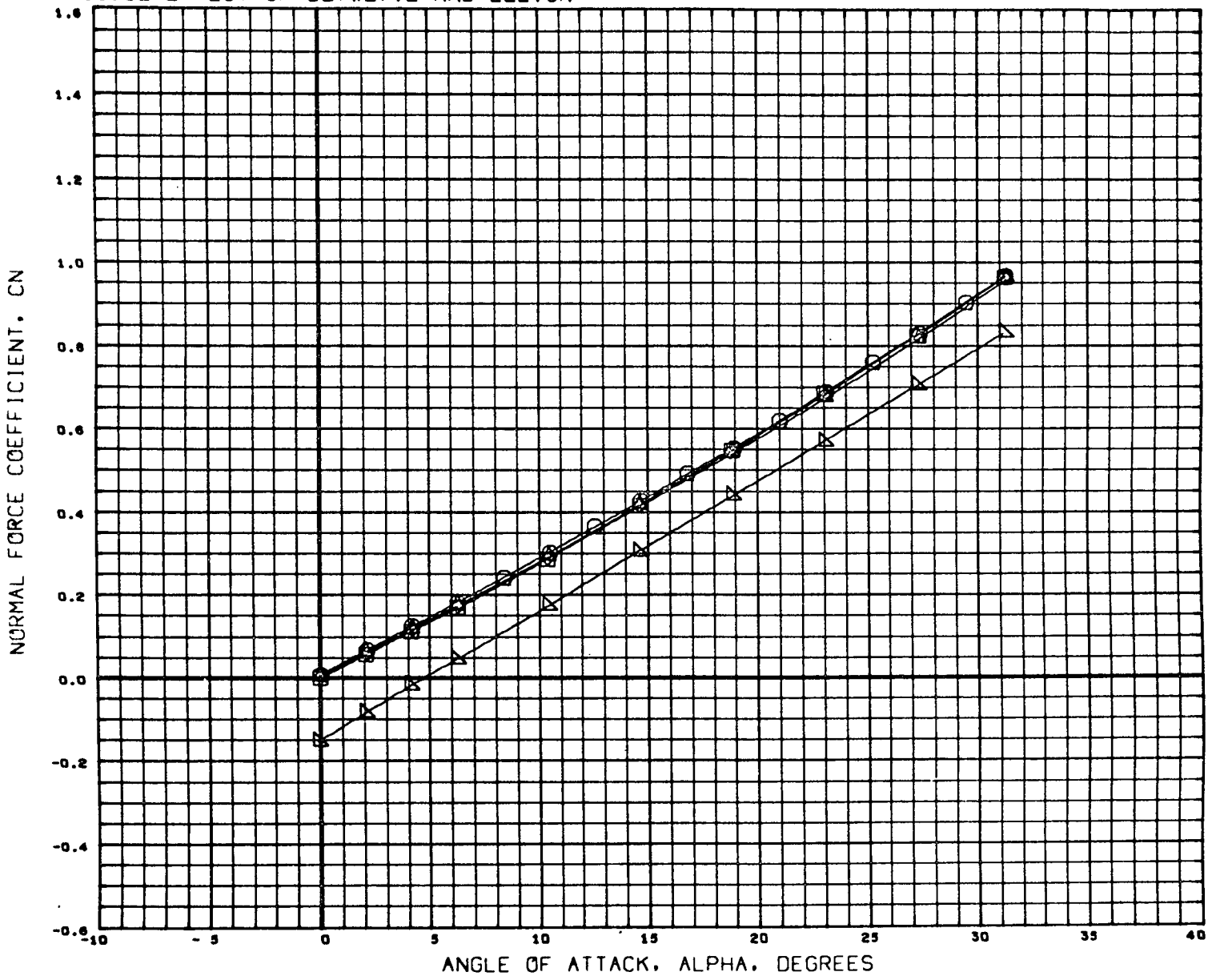
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-691 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGE211)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	LREF 4.3720 IN.
(RGE151)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BREF 6.6150 IN.
(RGE191)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGE201)	DATA NOT AVAILABLE FOR ALL CONDITIONS	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.01

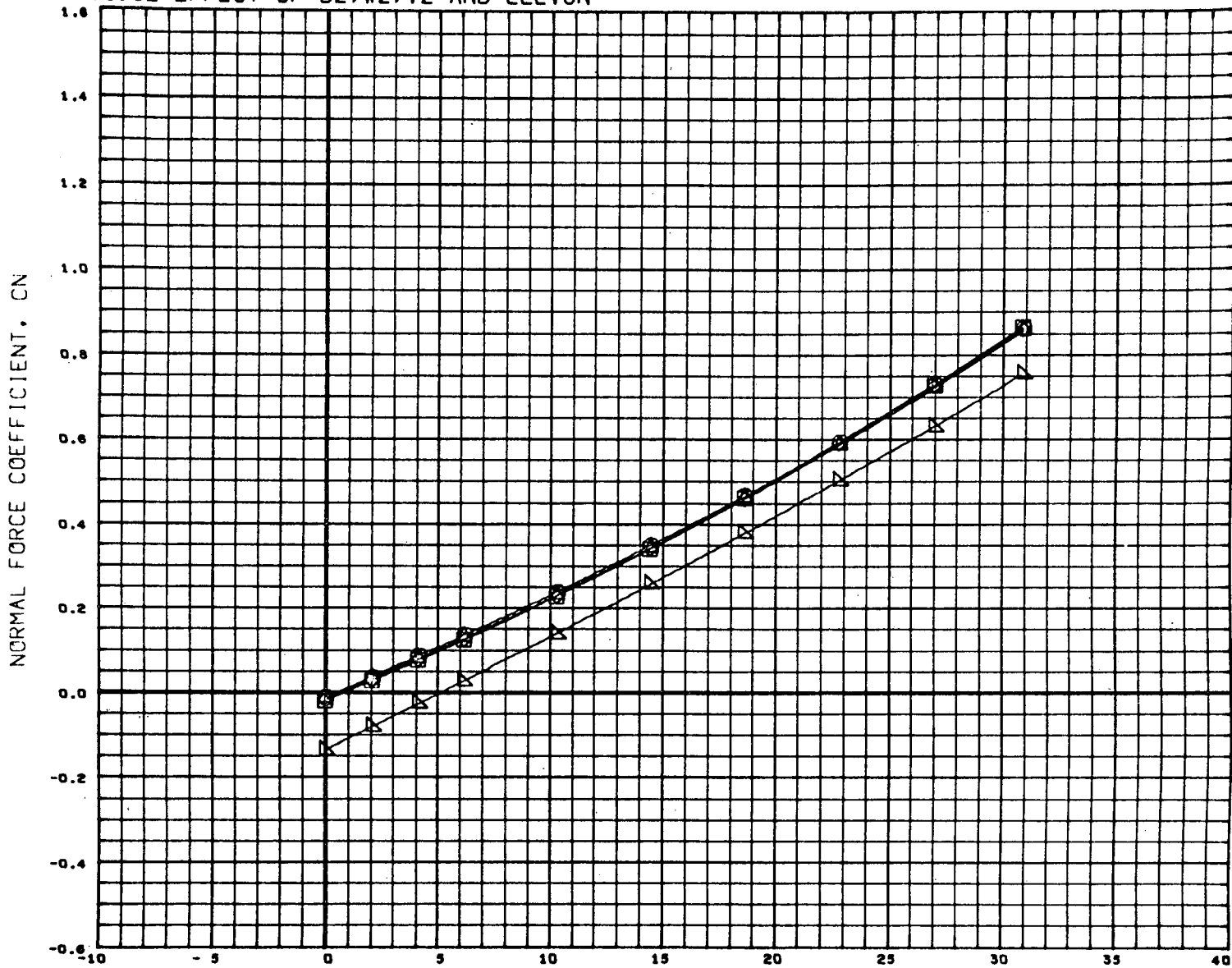
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON

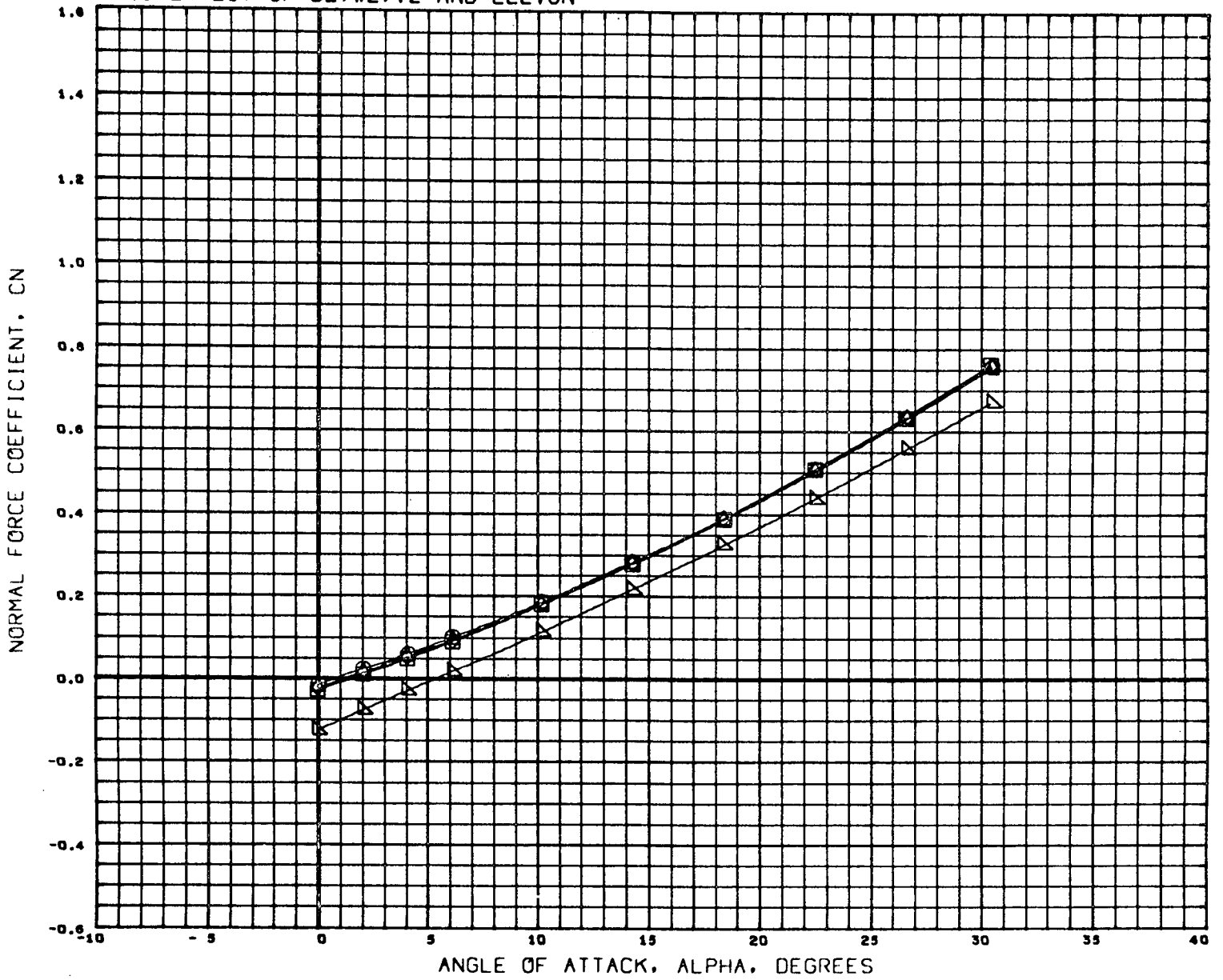


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(X68011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R68211)	JPL WT 20-681 MSC 040A 82W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(R68181)	JPL WT 20-681 MSC 040A 82W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(R68191)	JPL WT 20-681 MSC 040A 82W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(X68201)	JPL WT 20-681 MSC 040A 82W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

PAGE 181

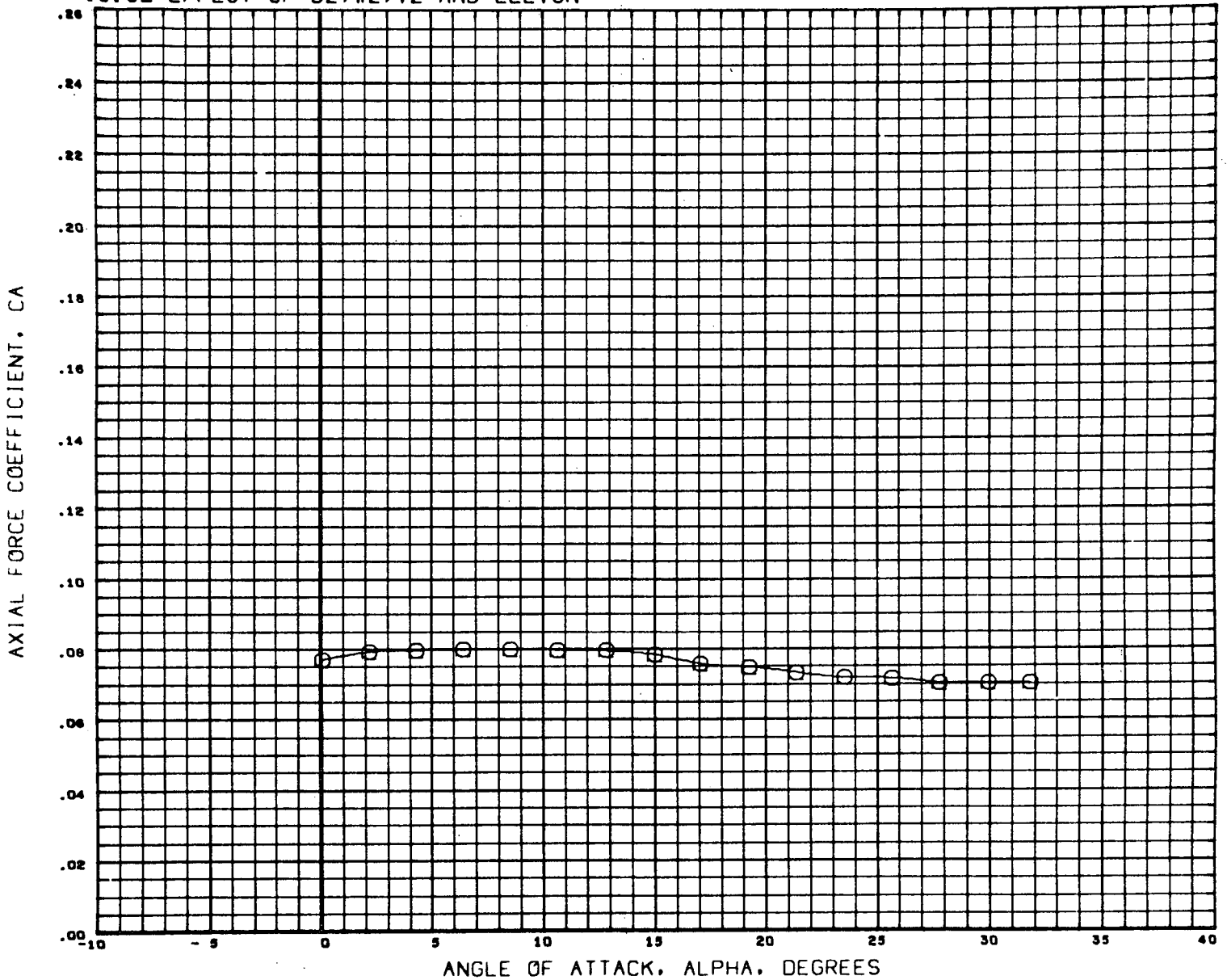
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVN



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP	1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.98

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



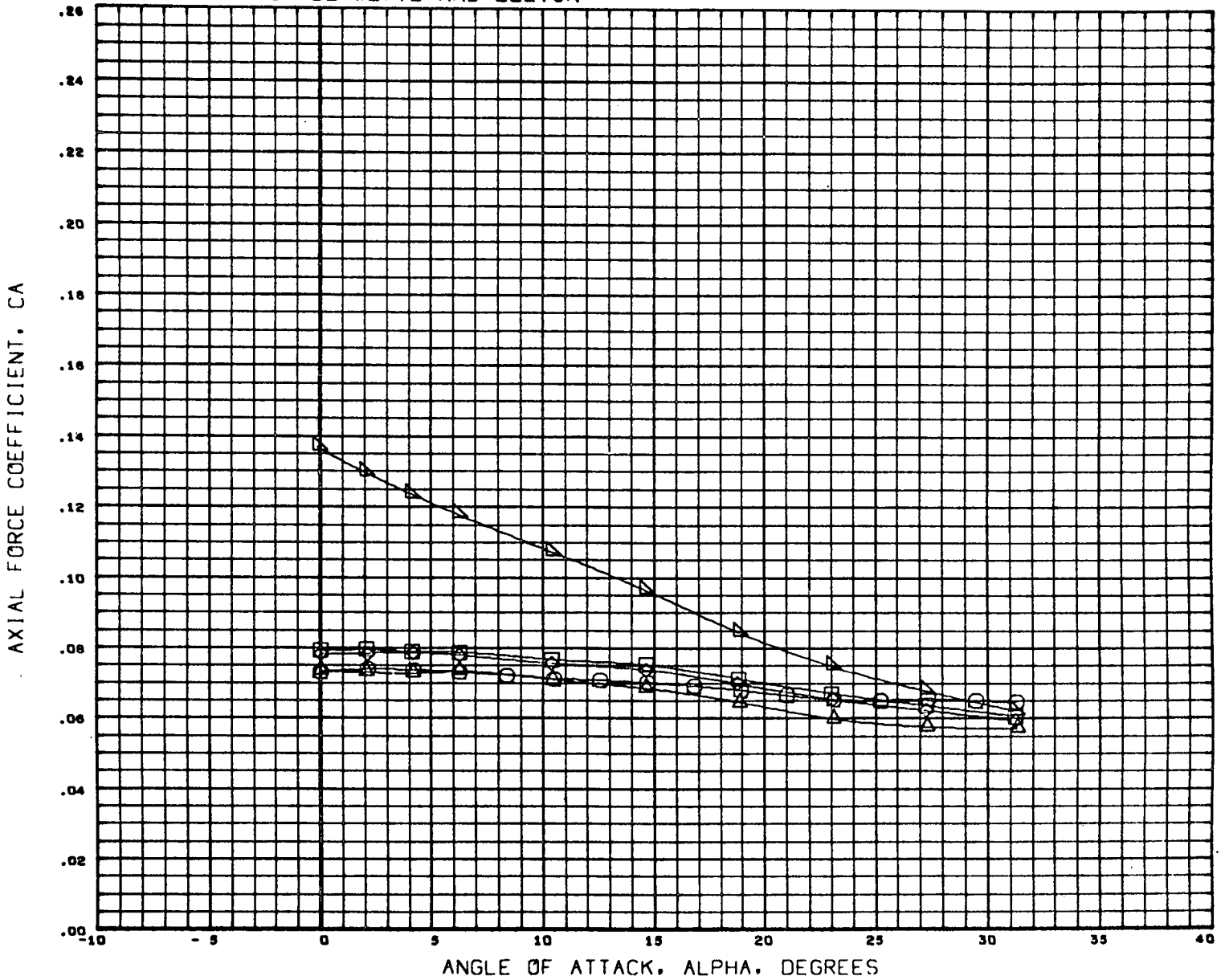
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB011)	JPL WT 20-881 MSC 040A 81W1V1M1P1D1C1
(RGB211)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB181)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB191)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB201)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
YMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

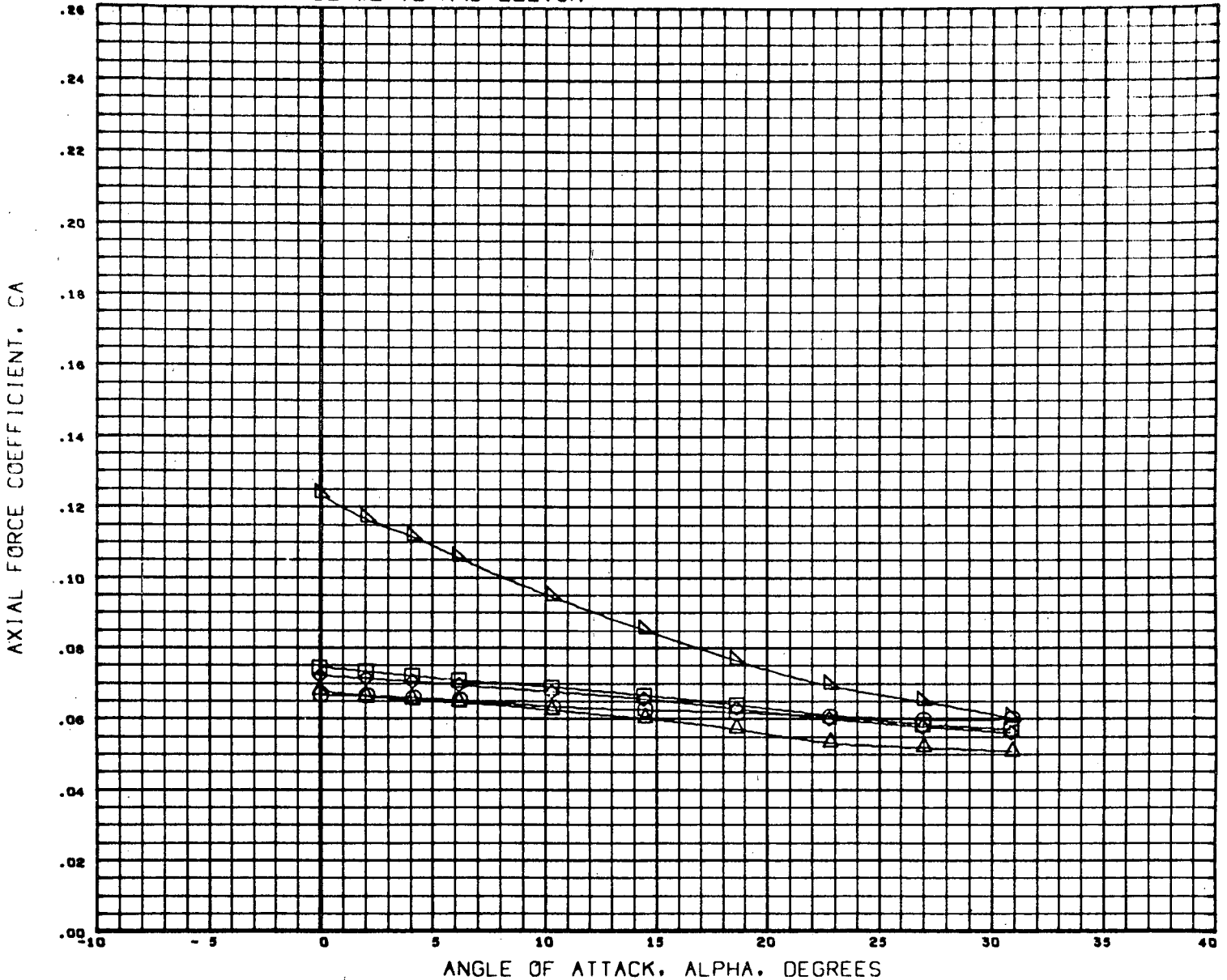
FIG.32 EFFECT OF B2,W2,V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XM RP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YM RP 0.0000 IN.
					ZM RP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON

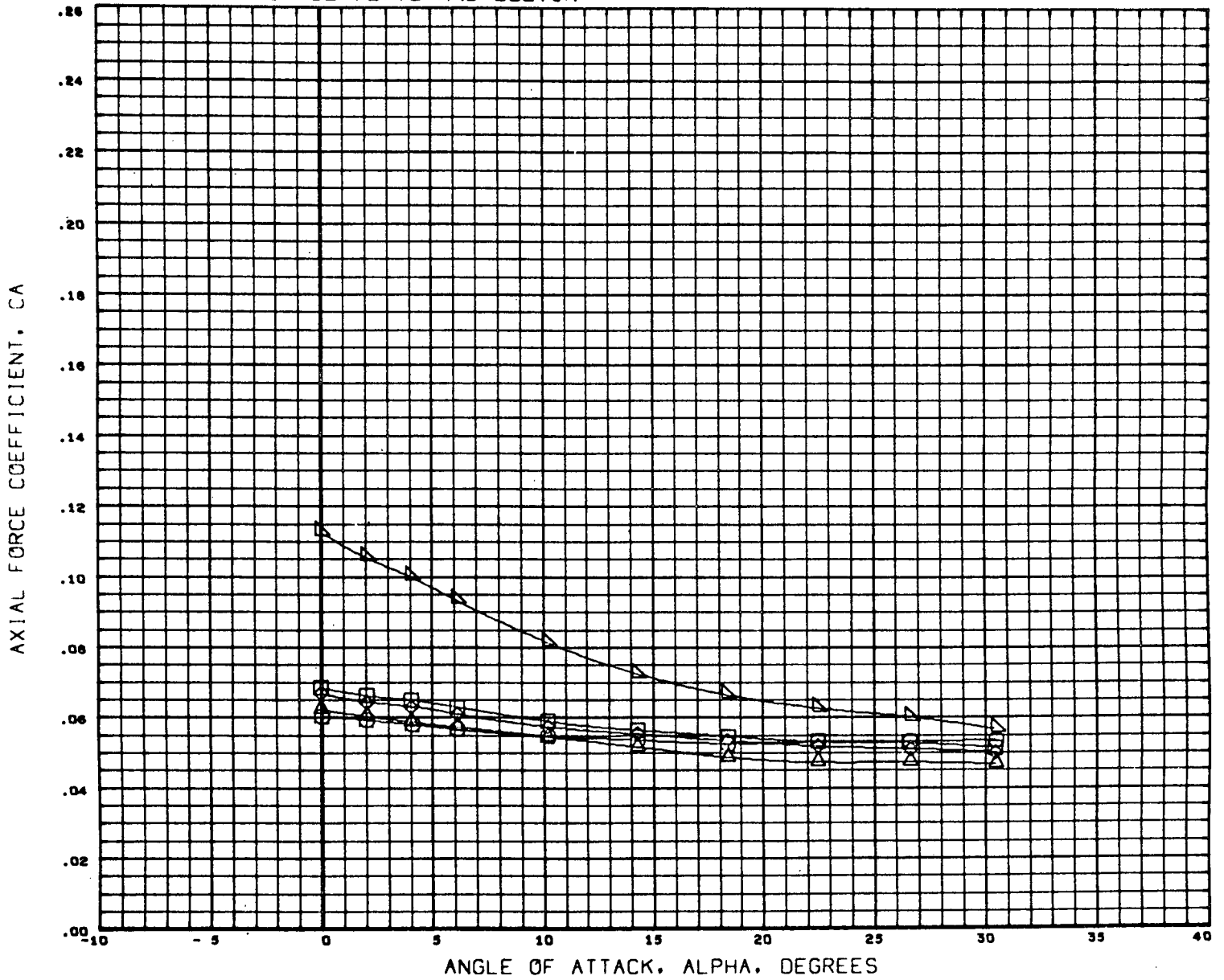


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB011)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 80 IN.
(RGB211)	JPL WT 20-661 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB181)	JPL WT 20-661 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB191)	JPL WT 20-661 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP	1067.9040 IN.
(XGB201)	JPL WT 20-661 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

MACH 3.03

PAGE 185

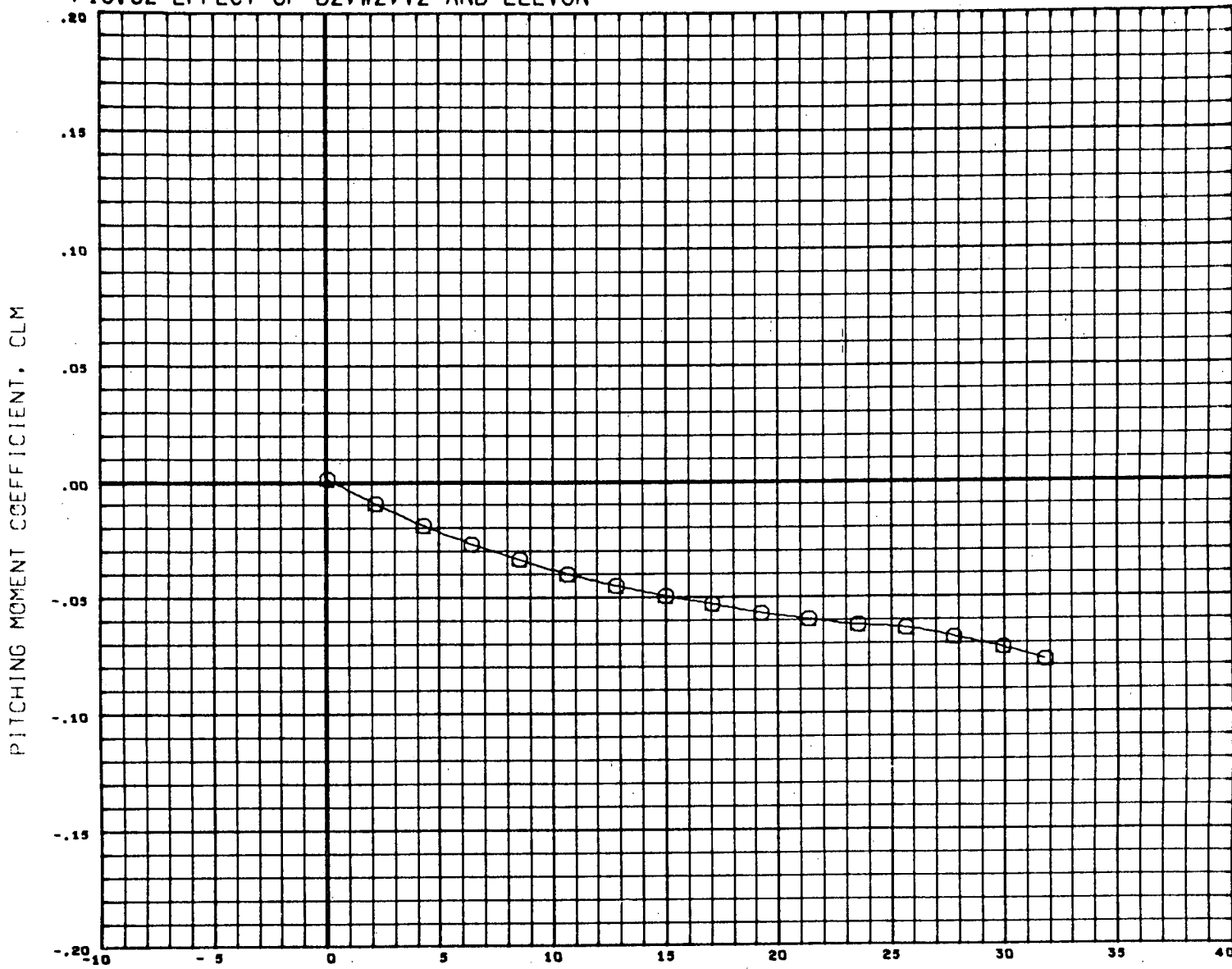
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XCB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RCB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RCB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RCB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XCB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



ANGLE OF ATTACK, ALPHA, DEGREES

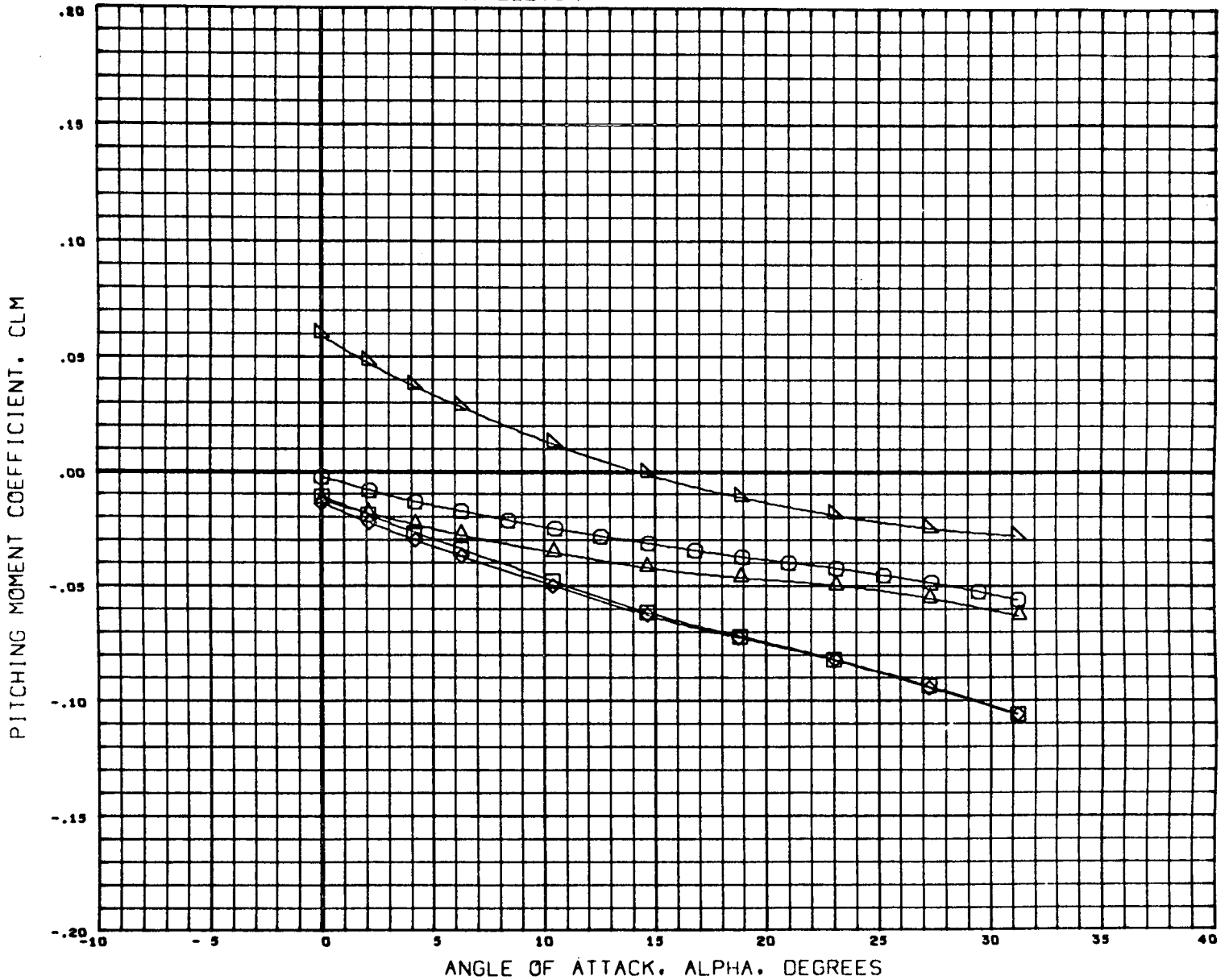
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XCB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RCB211)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RCB181)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RCB191)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XCB201)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

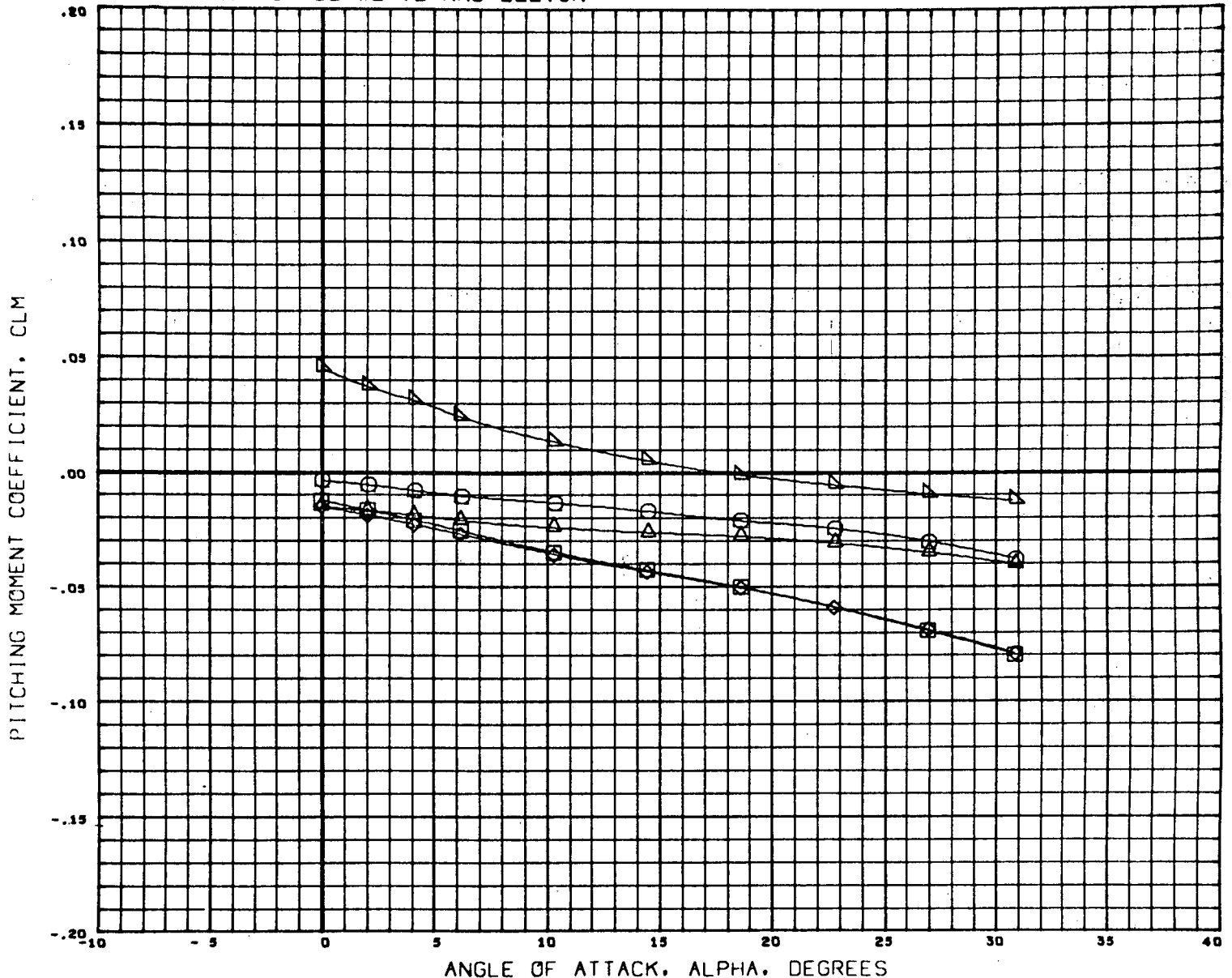
FIG.32 EFFECT OF B2,W2,V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 80 IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

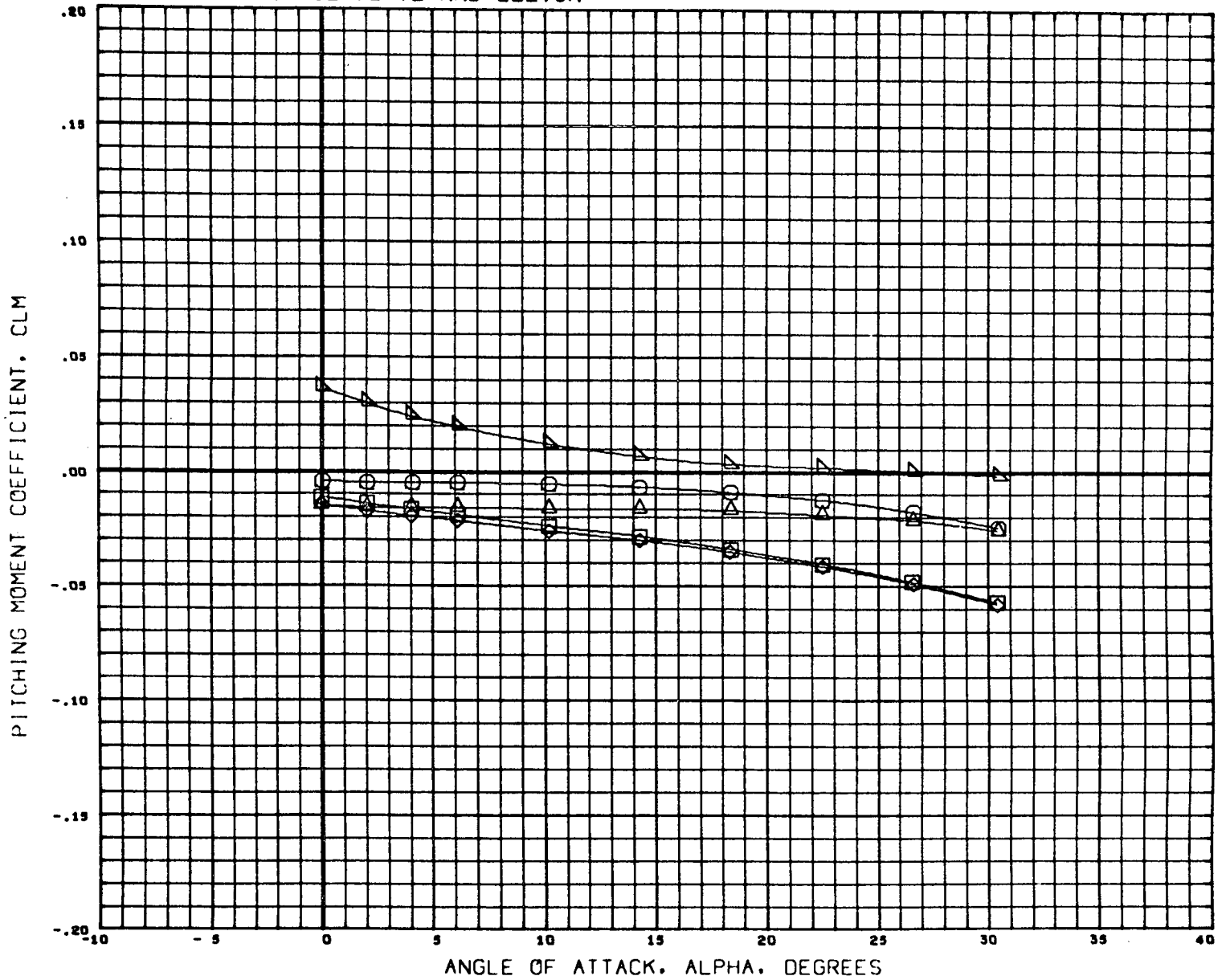
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 90 IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB161)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

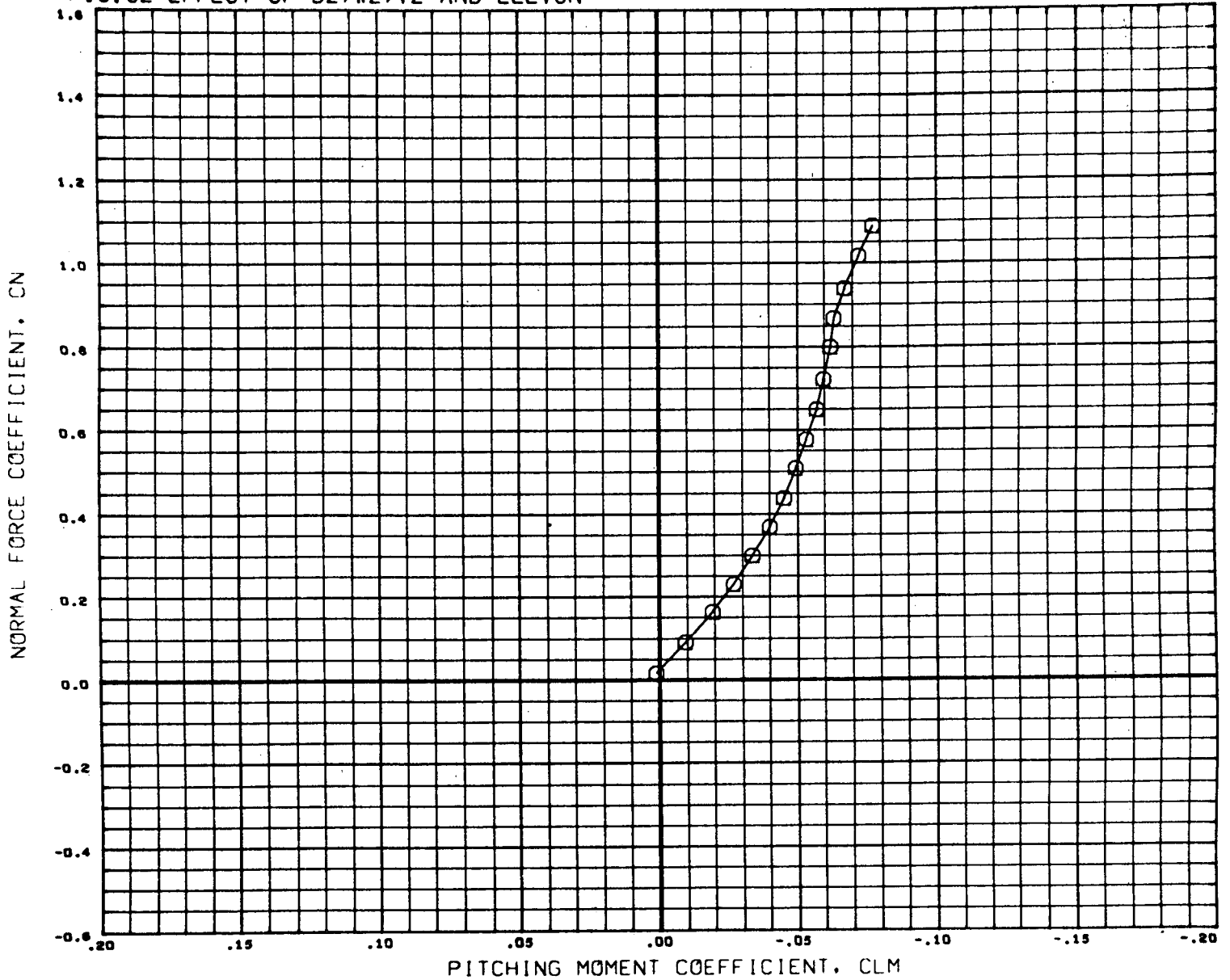
FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 90 IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB161)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON



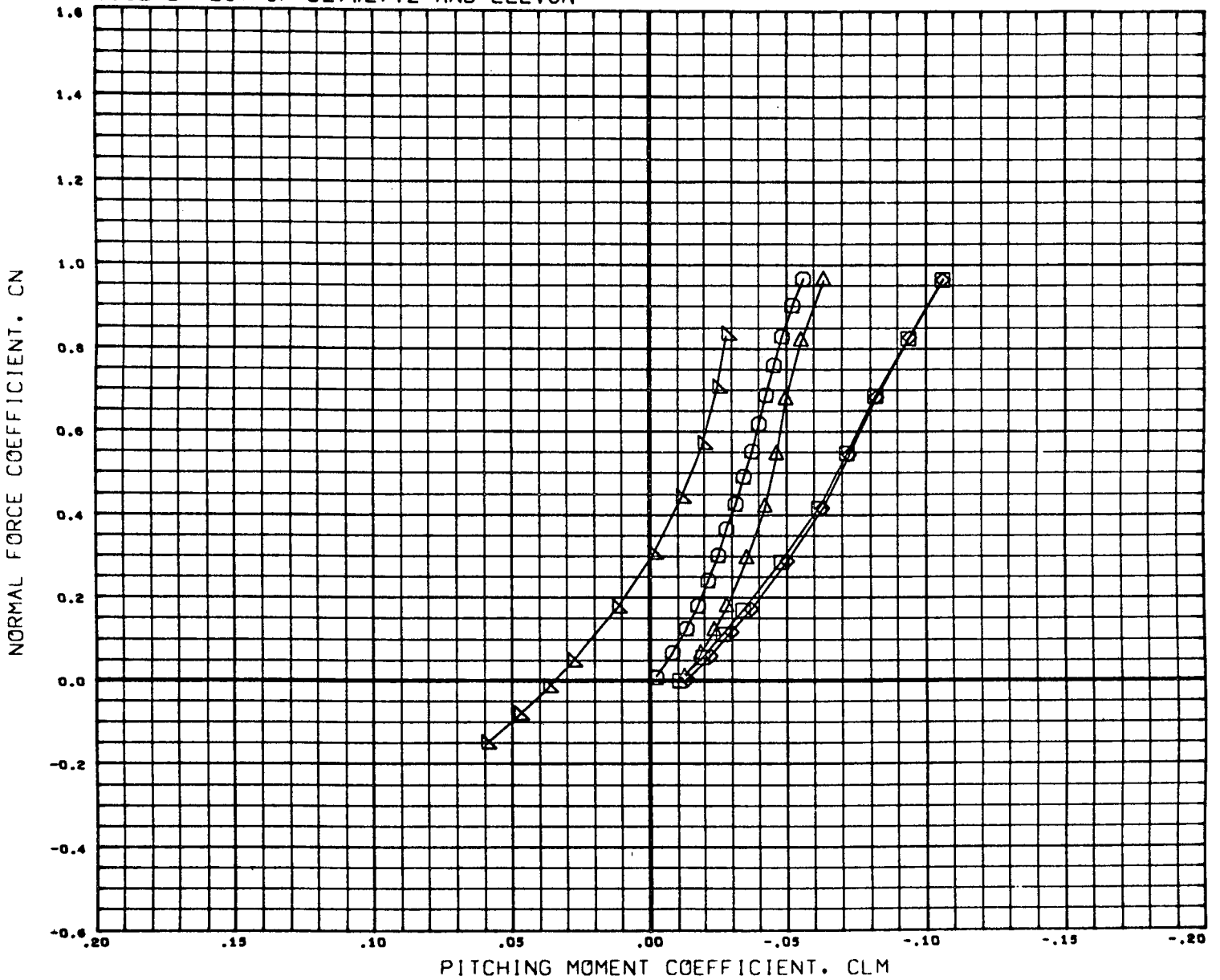
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB211)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB161)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB191)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB201)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	1N.
BREF	6.6150	1N.
XMRF	1067.9040	1N.
YMRF	0.0000	1N.
ZMRF	400.0004	1N.
SCALE	0.0075	

MACH 2.01

FIG.32 EFFECT OF B2,W2,V2 AND ELEVON

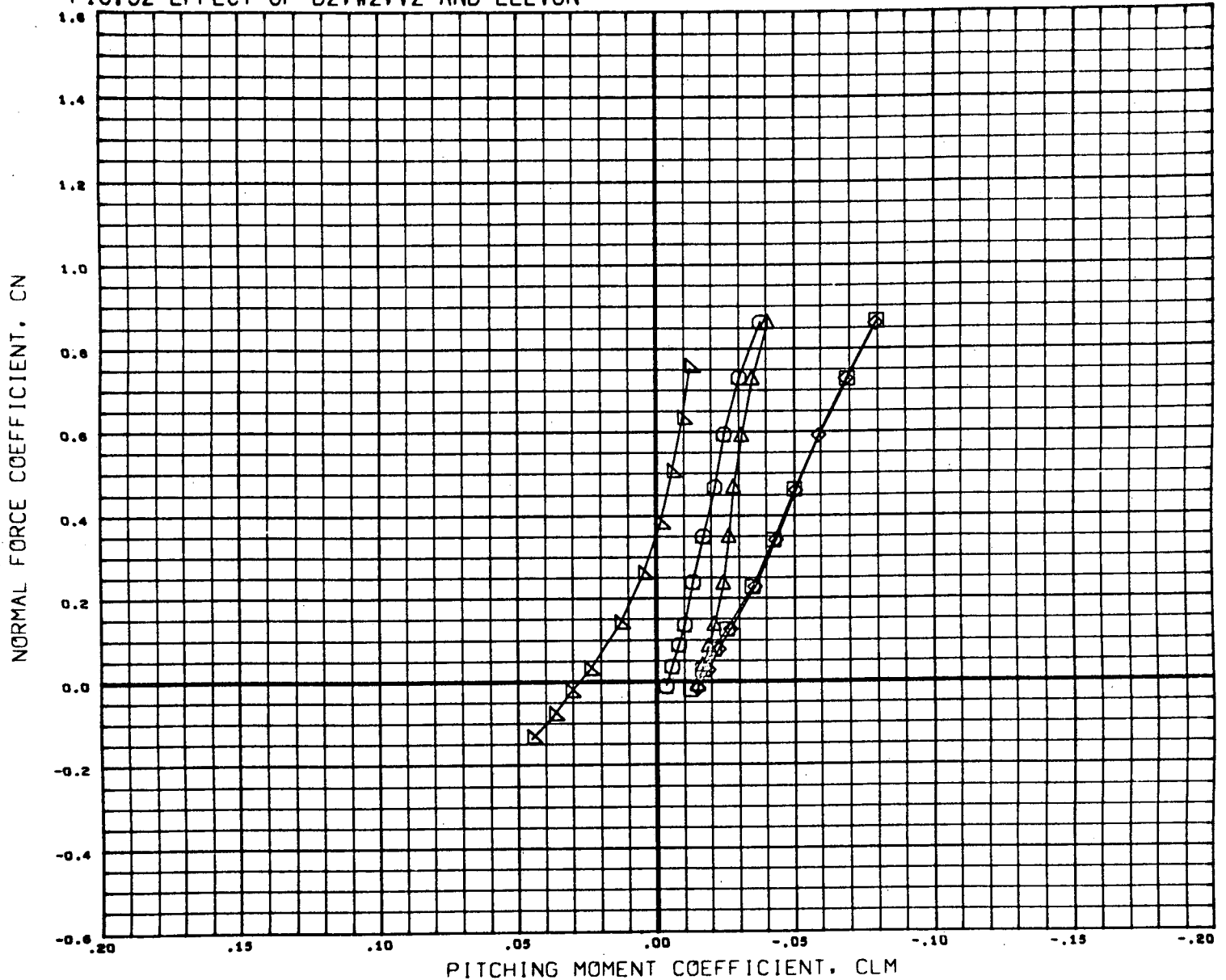


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(XGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

0.5

FIG. 32 EFFECT OF B2, W2, V2 AND ELEVON

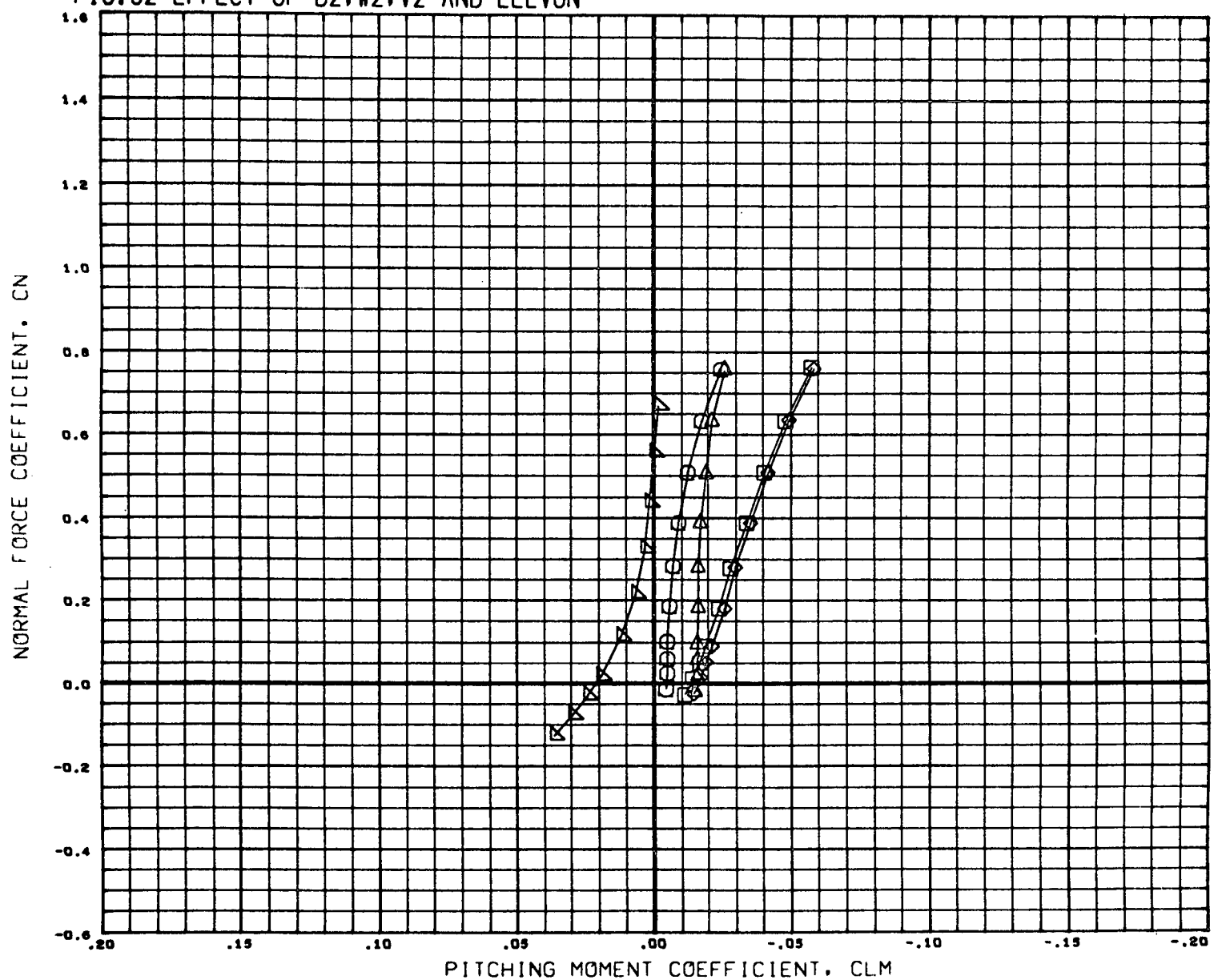


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	30 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1087.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

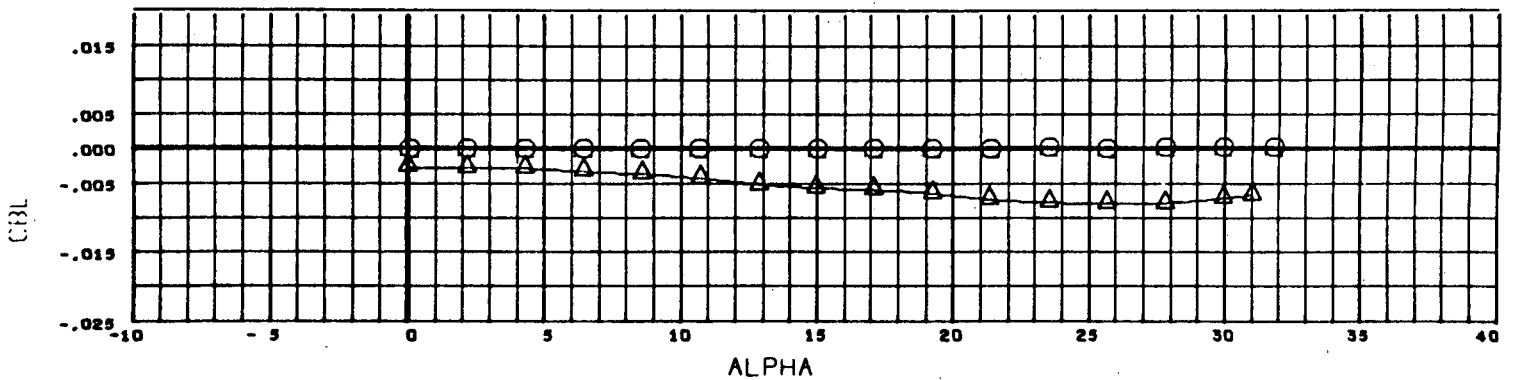
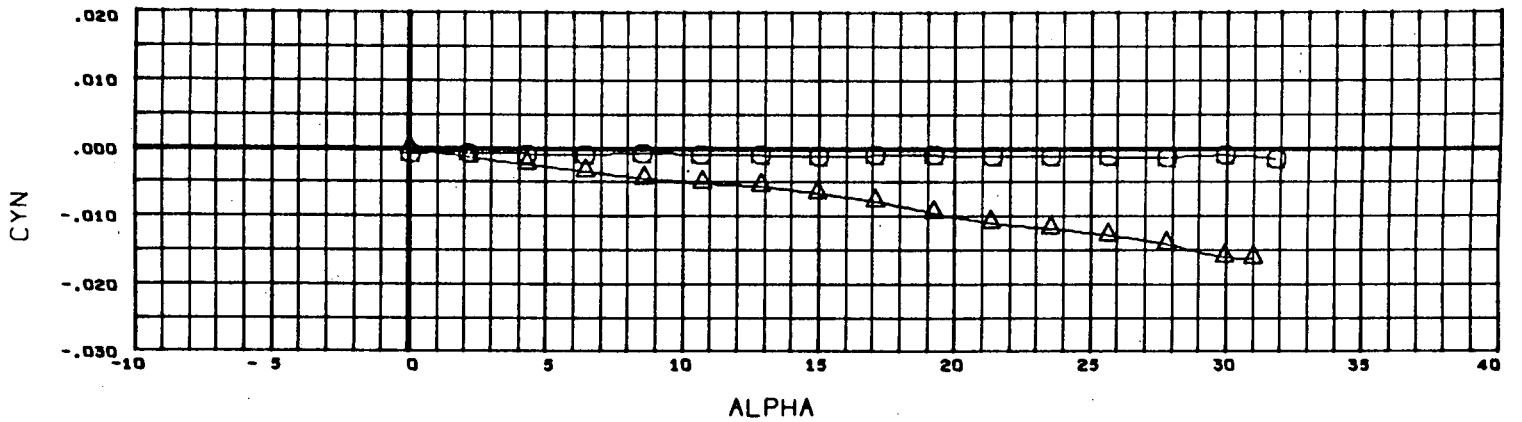
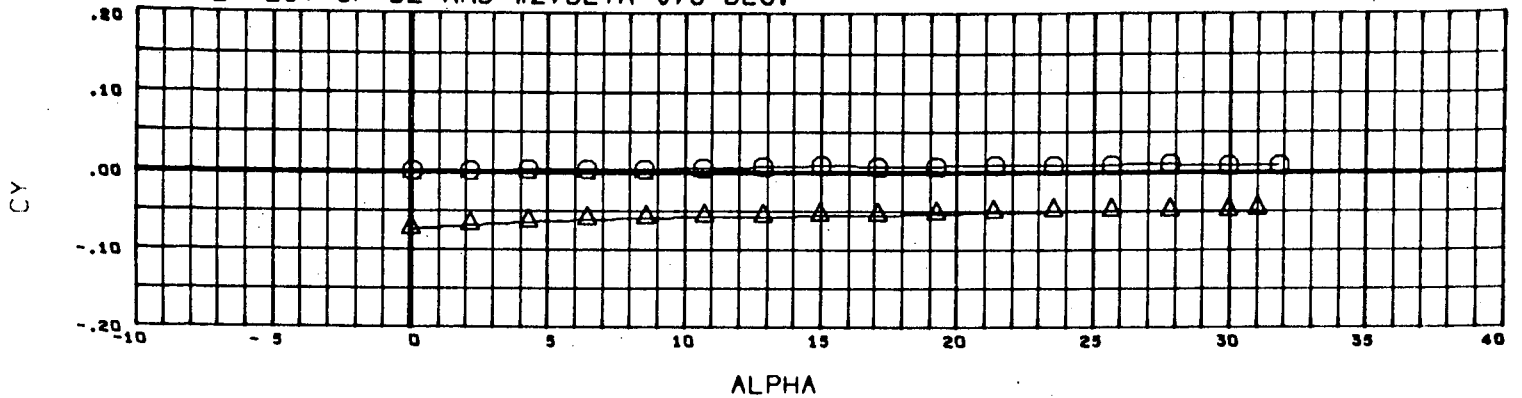
FIG.32 EFFECT OF B2,W2,V2 AND ELEVN



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB211)	JPL WT 20-681 MSC 040A 82W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB181)	JPL WT 20-681 MSC 040A 82W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(XGB191)	JPL WT 20-681 MSC 040A 82W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A 82W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

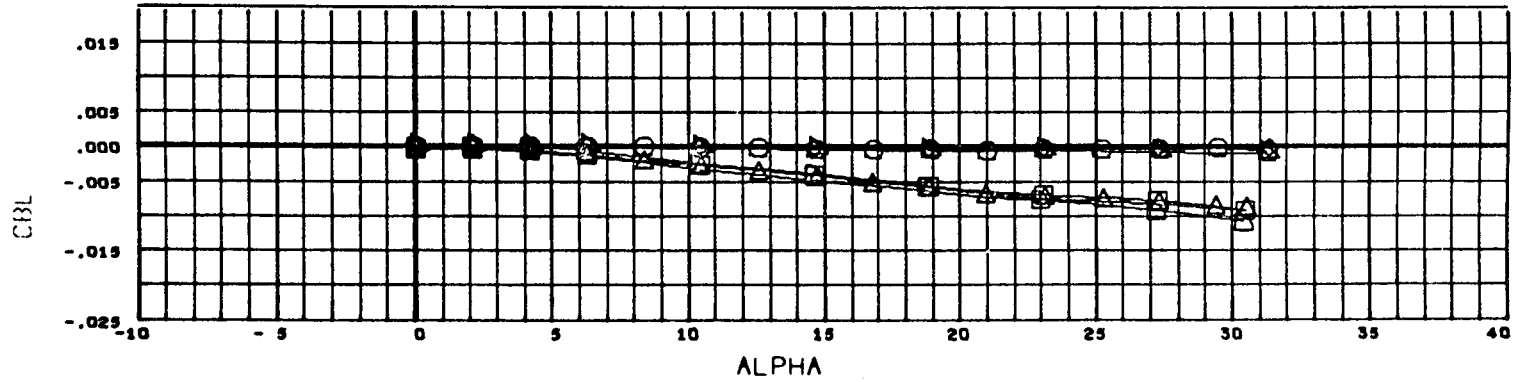
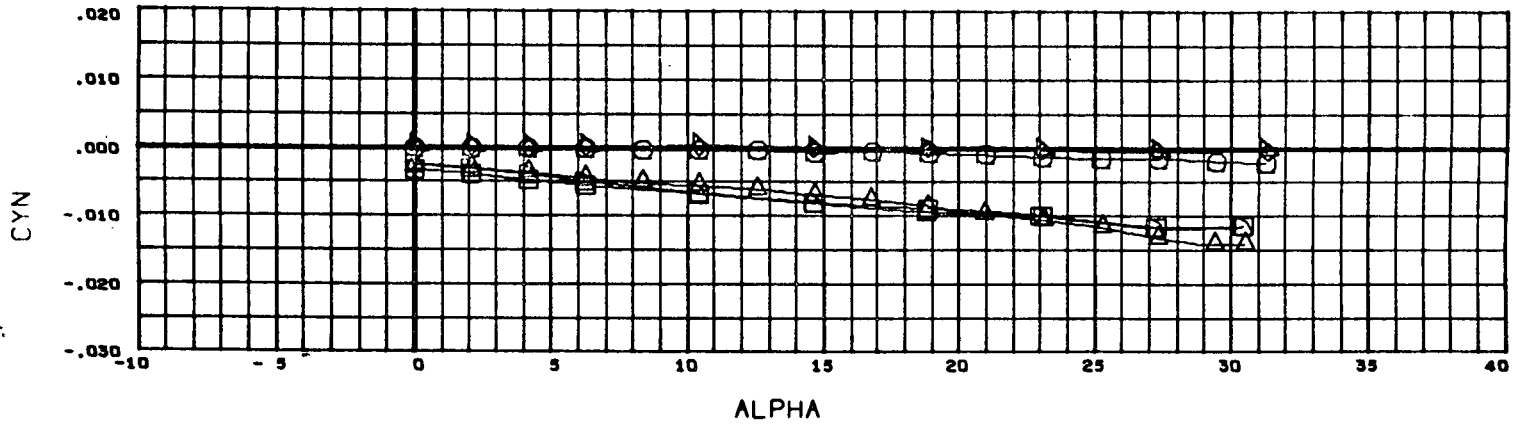
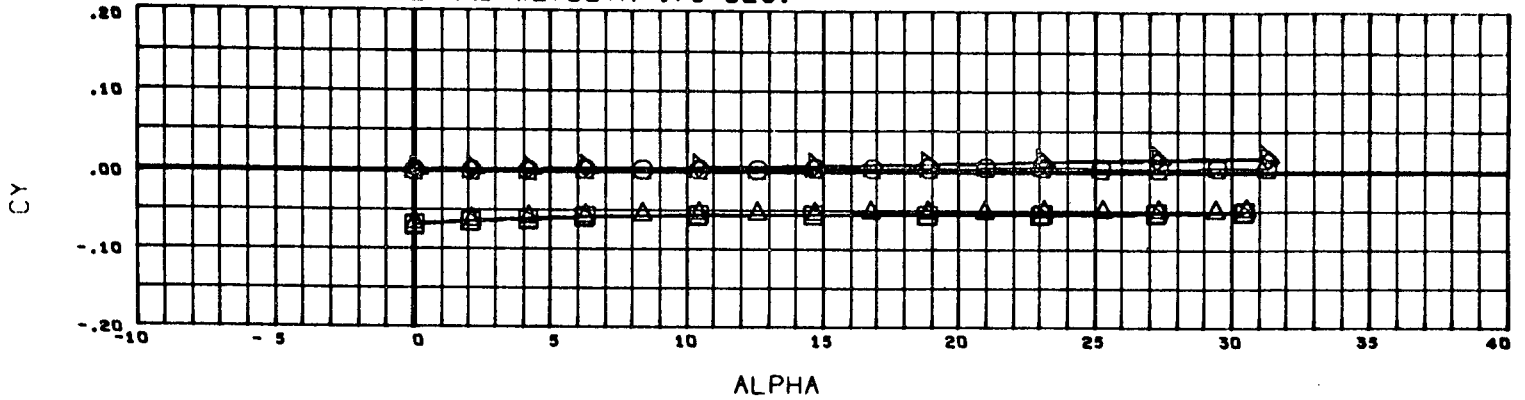
MACH 3.98

FIG. 33 EFFECT OF B2 AND W2, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8012)	JPL WT 20-681 MSC 040A 81W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(R6B211)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(R6B212)	DATA NOT AVAILABLE FOR ALL CONDITIONS	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(R6B181)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
(R6B182)	DATA NOT AVAILABLE FOR ALL CONDITIONS	5.000	0.000	0.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

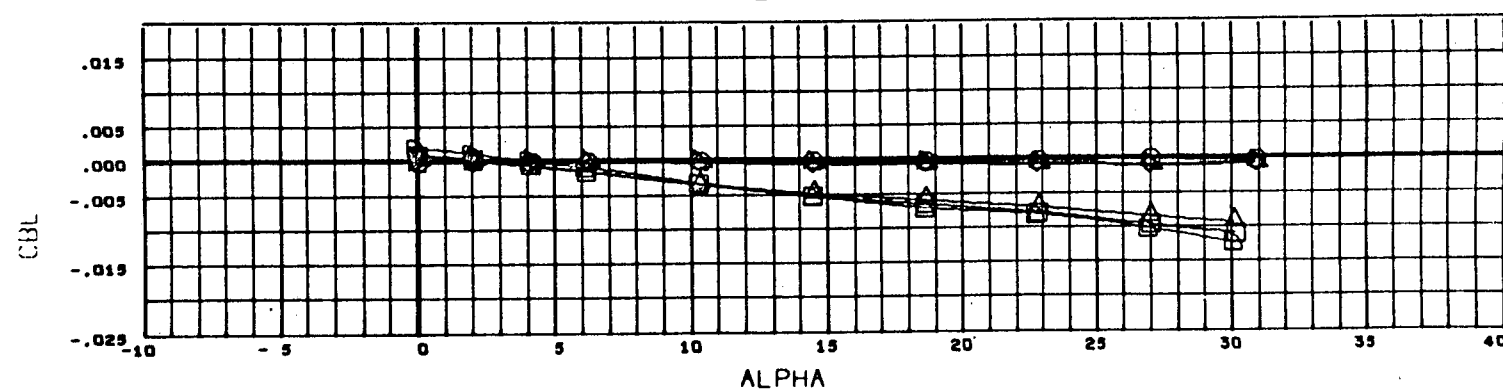
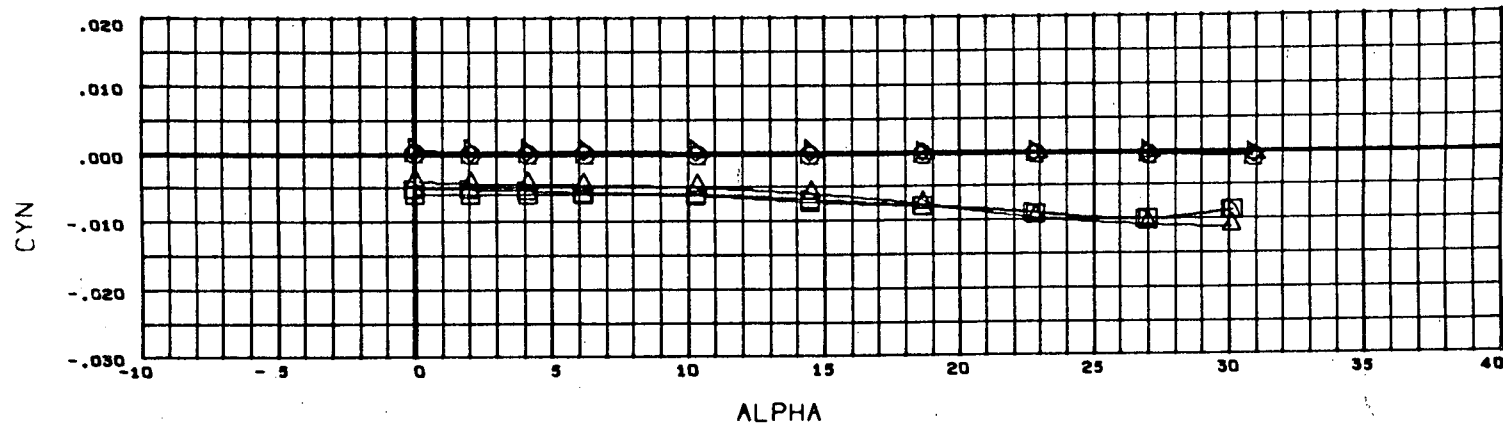
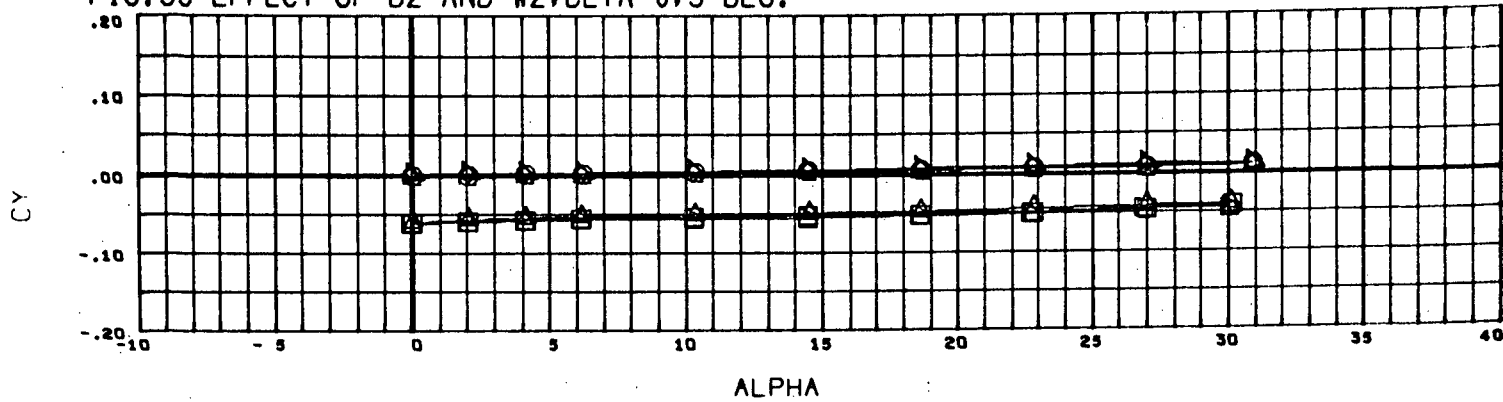
FIG.33 EFFECT OF B2 AND W2, BETA=0,5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB212)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	5.000	0.000	0.000	0.000	XM RP 1067.9040 IN.
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	YM RP 0.0000 IN.
(RGB182)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	ZM RP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

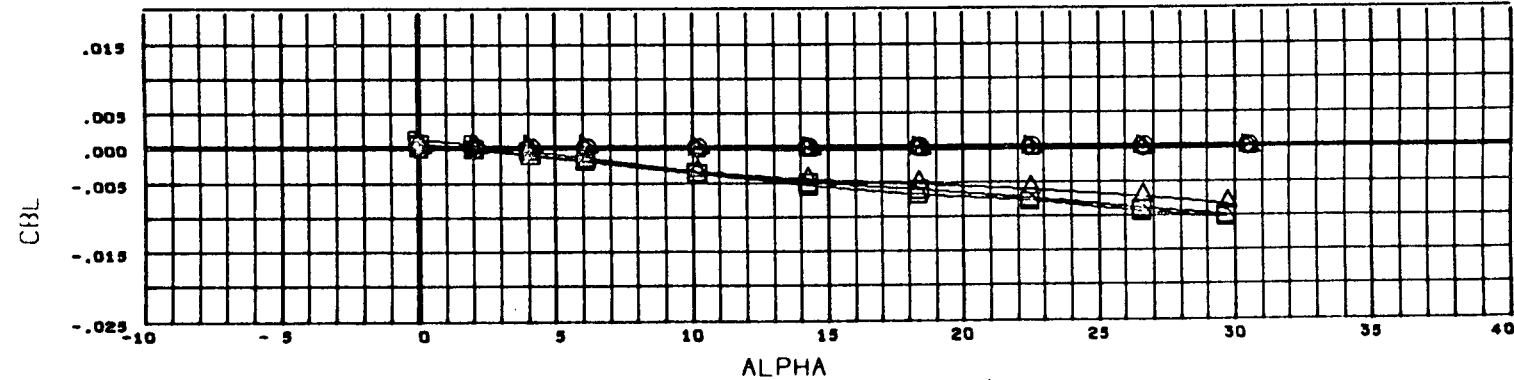
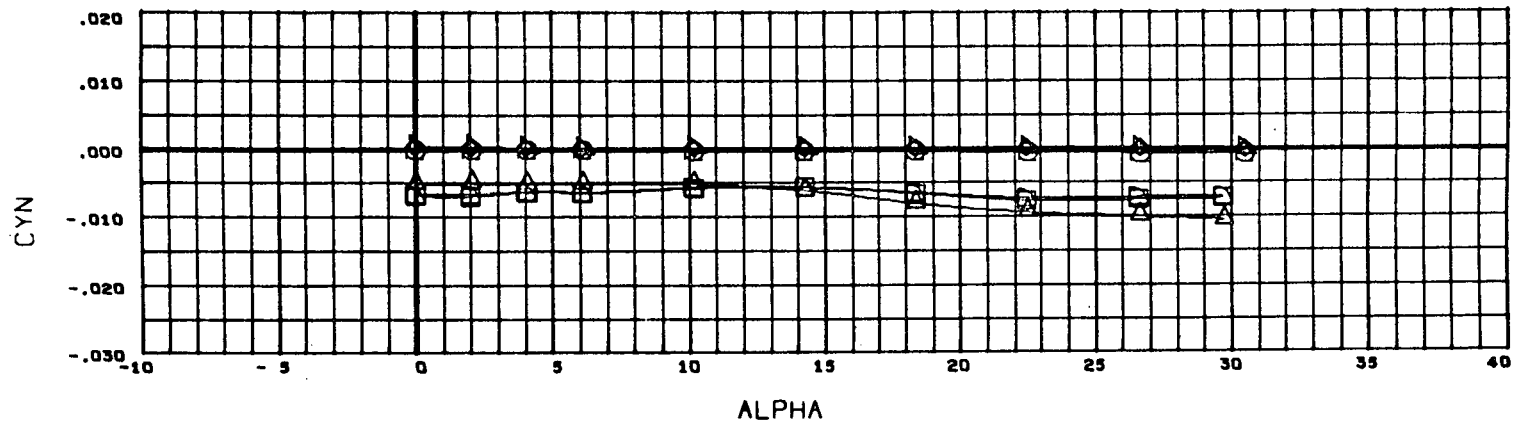
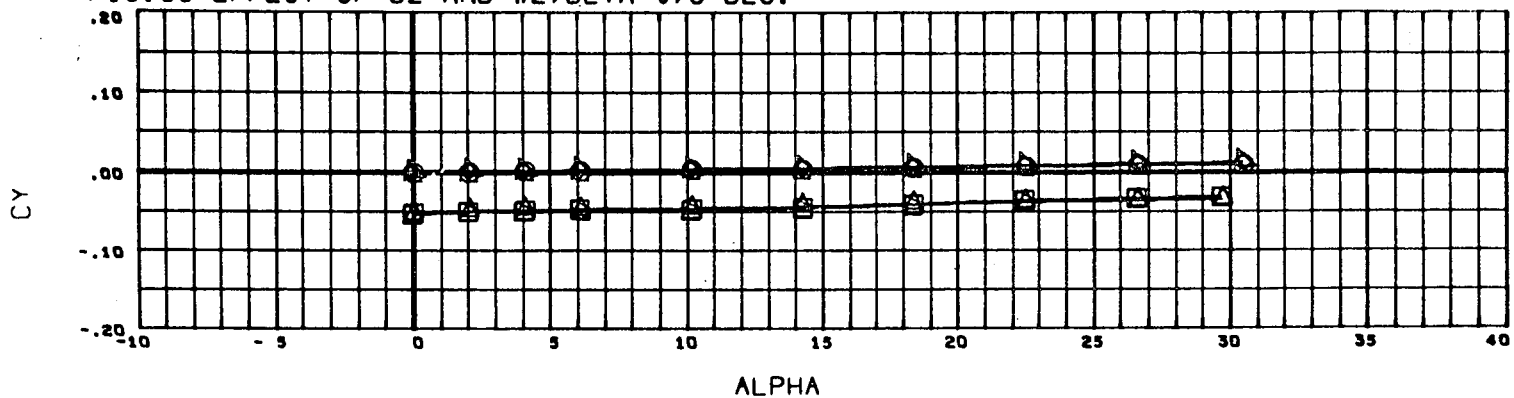
FIG.33 EFFECT OF B2 AND W2, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.9560 SQ IN.
(XGB012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB212)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB161)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
(RGB162)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

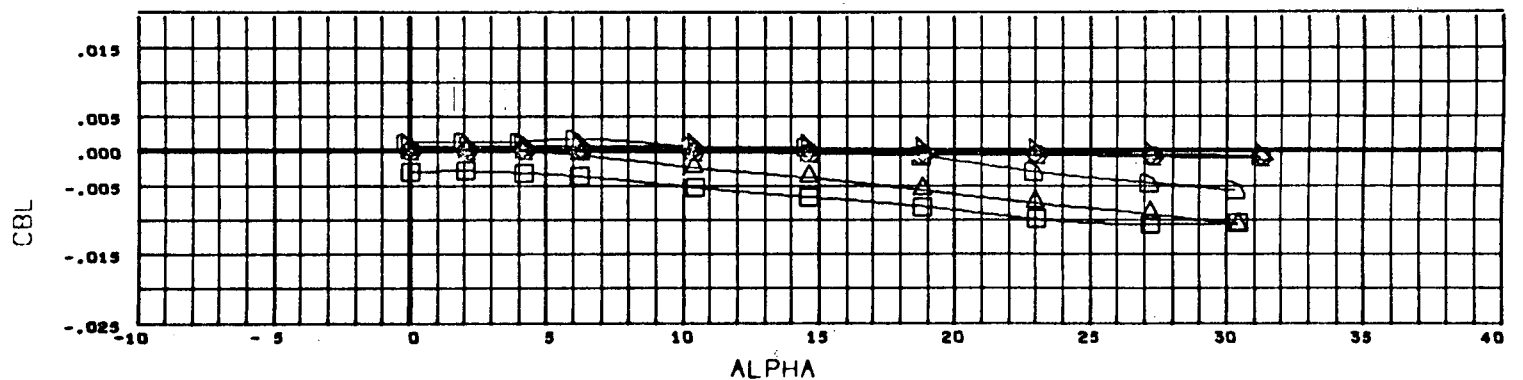
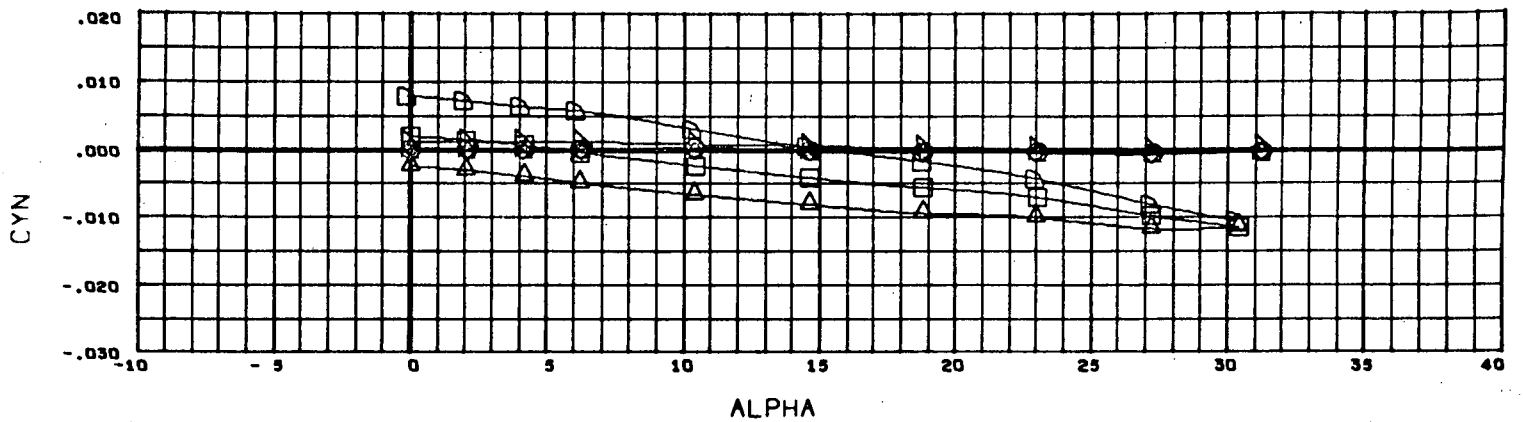
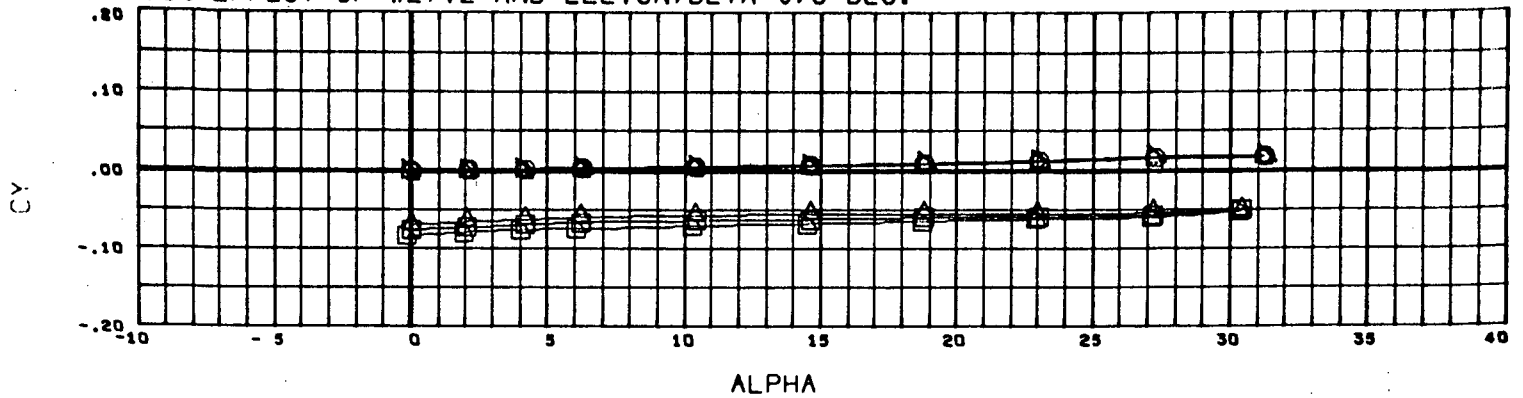
MACH 3.03

FIG. 33 EFFECT OF B2 AND W2, BETA=0,5 DEG.



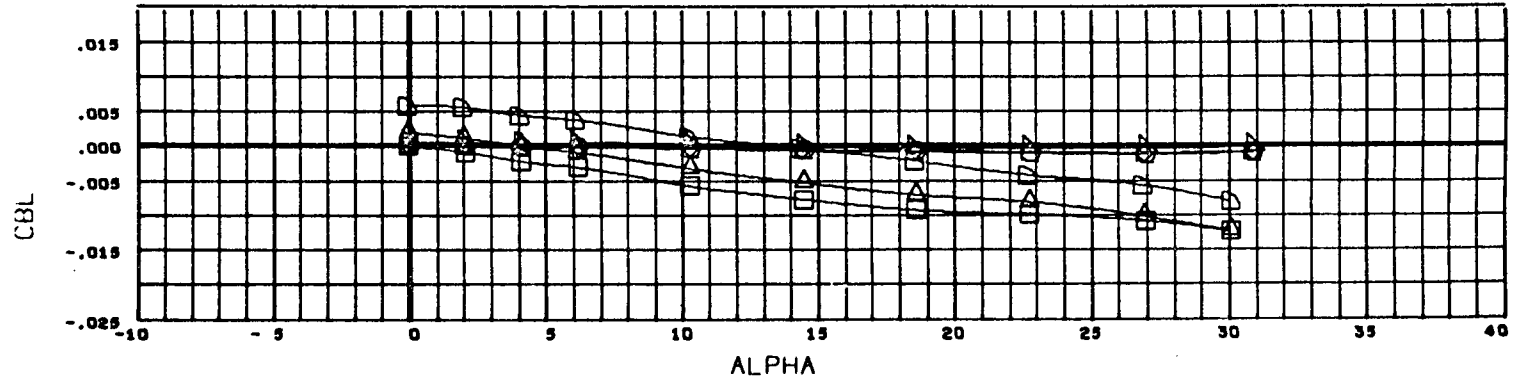
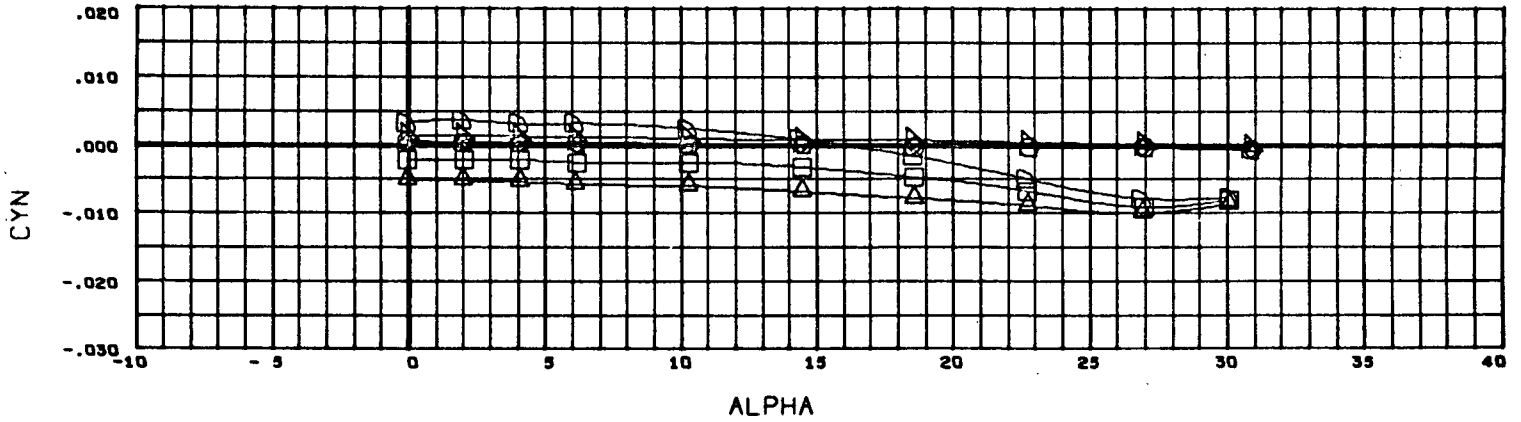
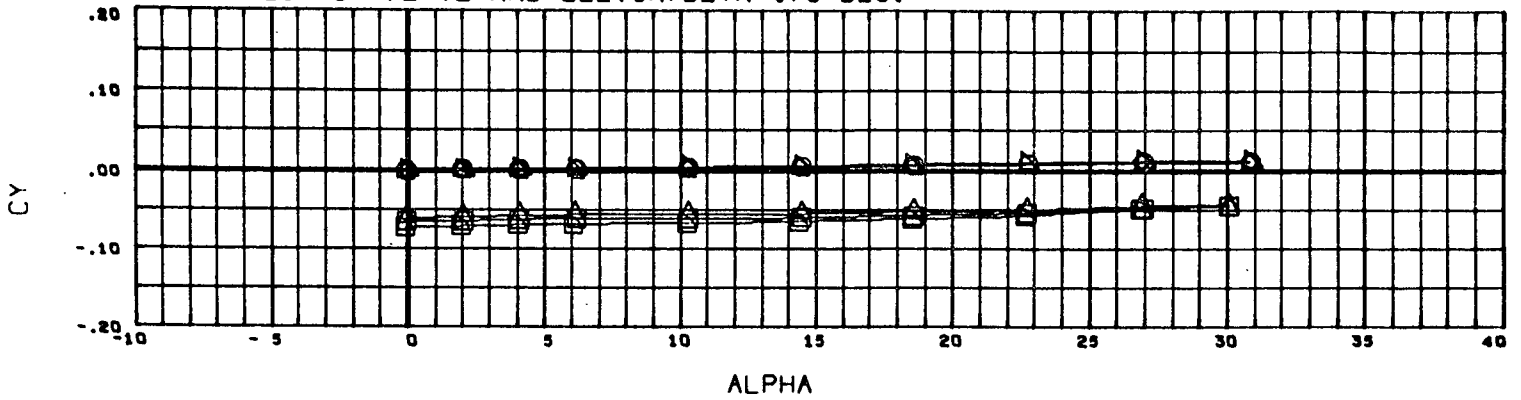
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XG8011)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8012)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(R6B211)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(R6B212)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(R6B181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
(R6B182)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 34 EFFECT OF W2, V2 AND ELEVN, BETA=0.5 DEG.



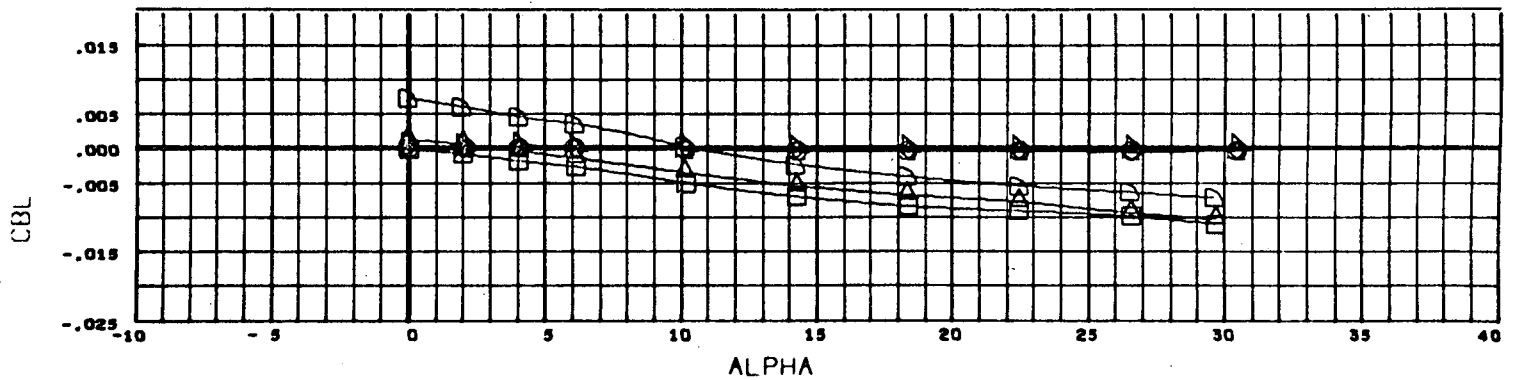
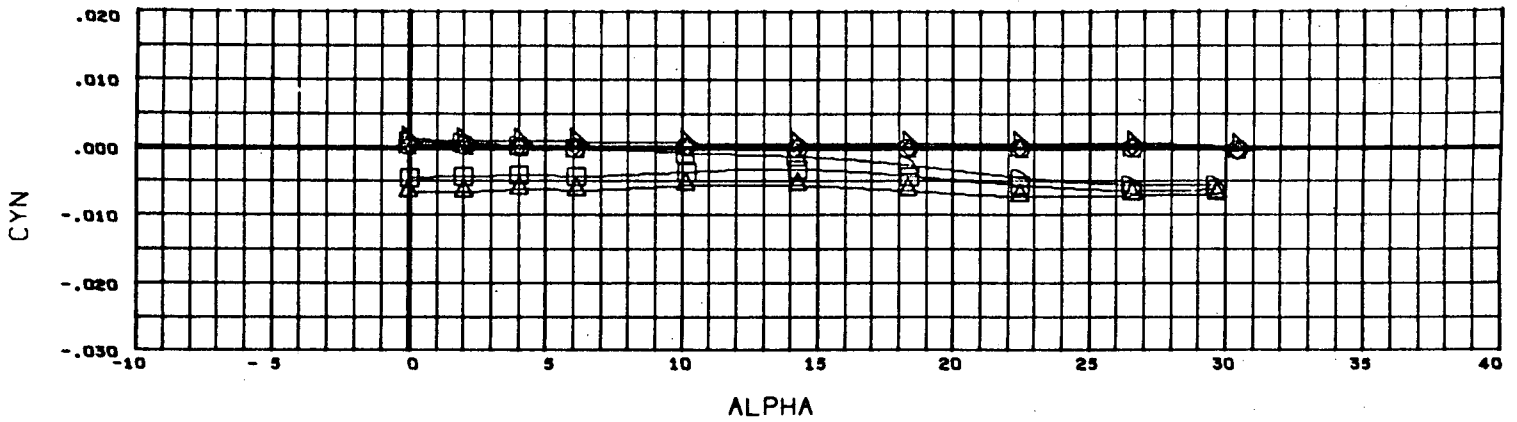
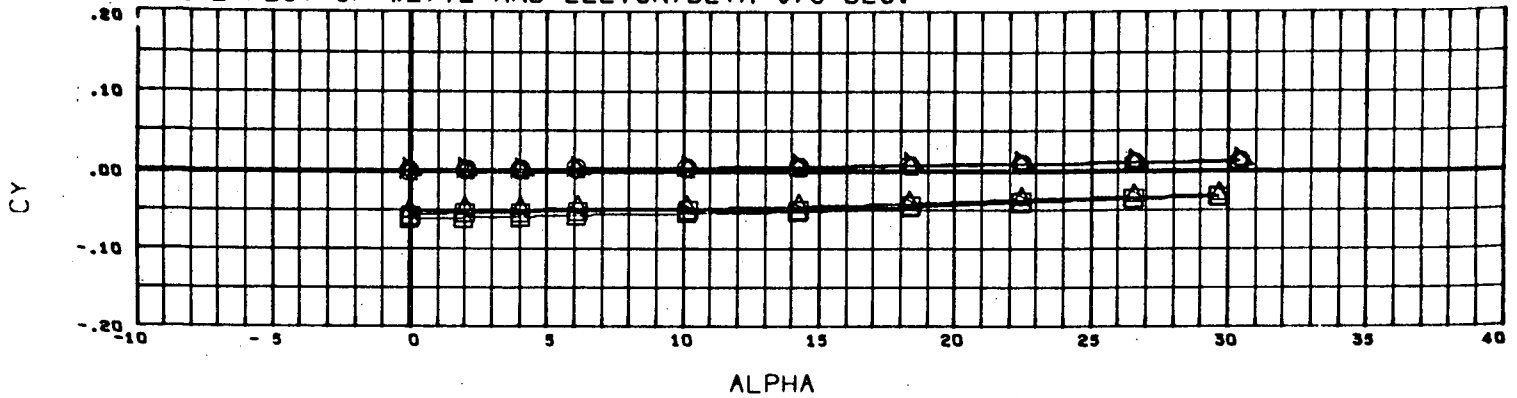
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB182)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB192)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(RGB202)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 34 EFFECT OF W2, V2 AND ELEVON, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELVN	RELVN	RÜDDE	REFERENCE INFORMATION
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB182)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB192)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(XGB202)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

FIG. 34 EFFECT OF W2,V2 AND ELEVON, BETA=0.5 DEG.

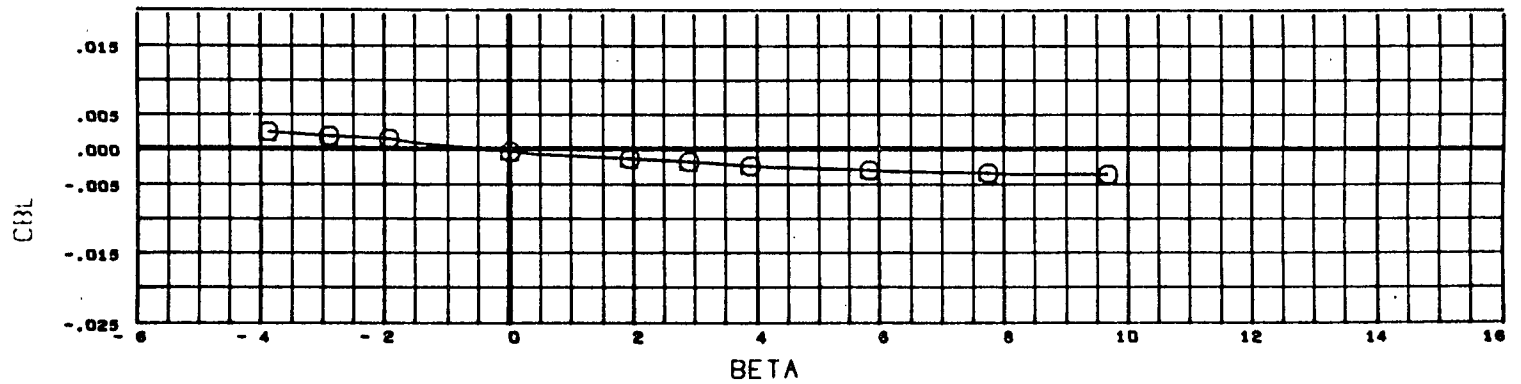
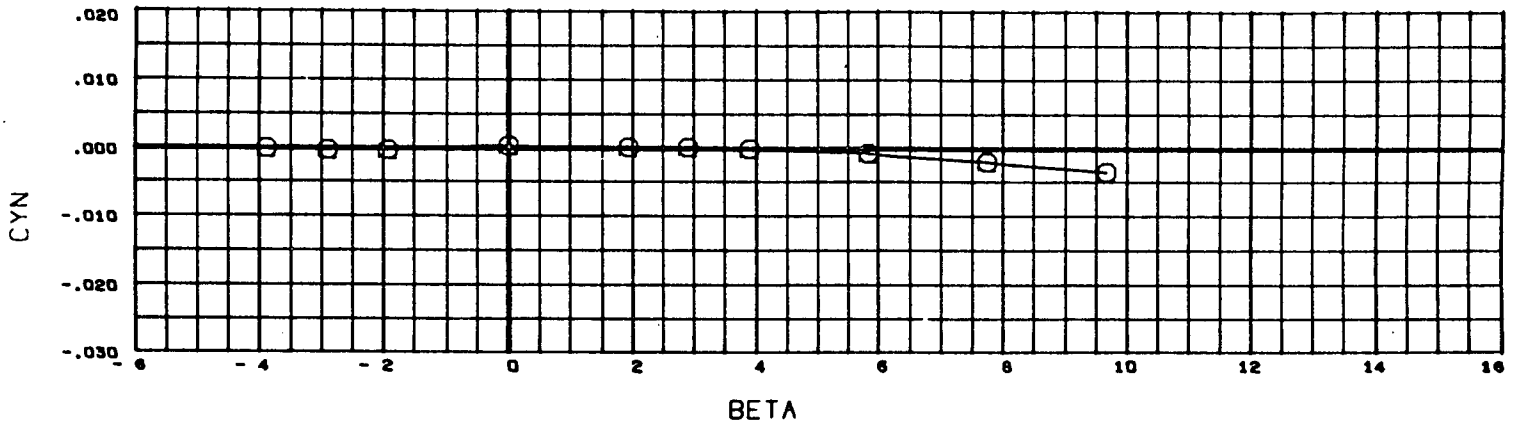
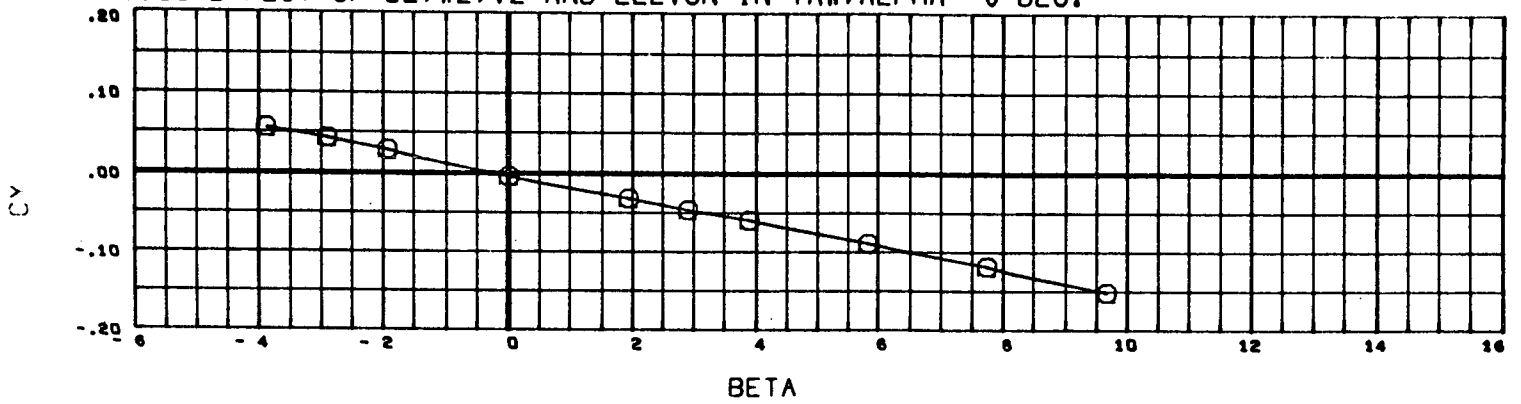


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(RGB181)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB182)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	5.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB191)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB192)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB201)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	-40.000	-40.000	0.000	YMRP 0.0000 IN.
(RGB202)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	5.000	-40.000	-40.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

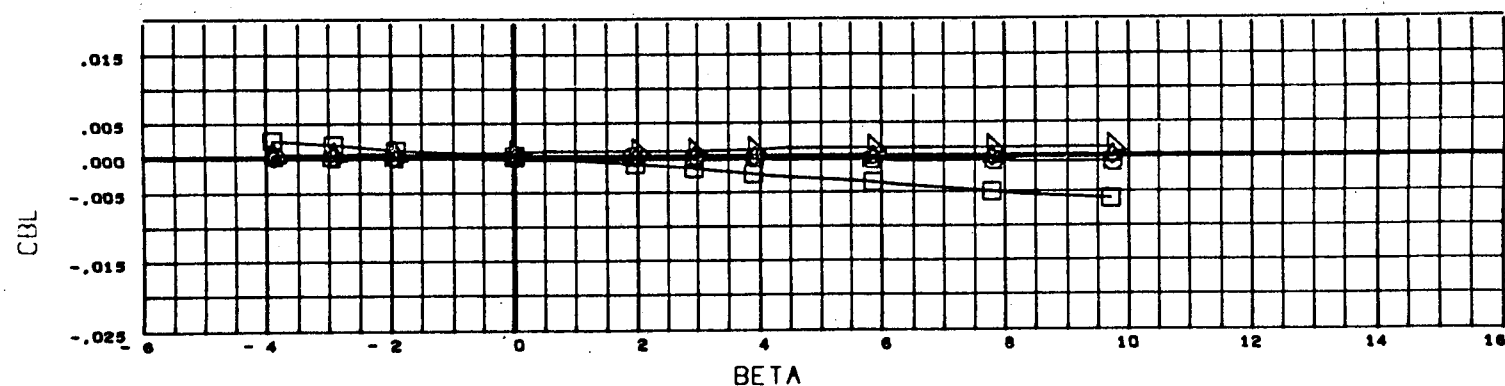
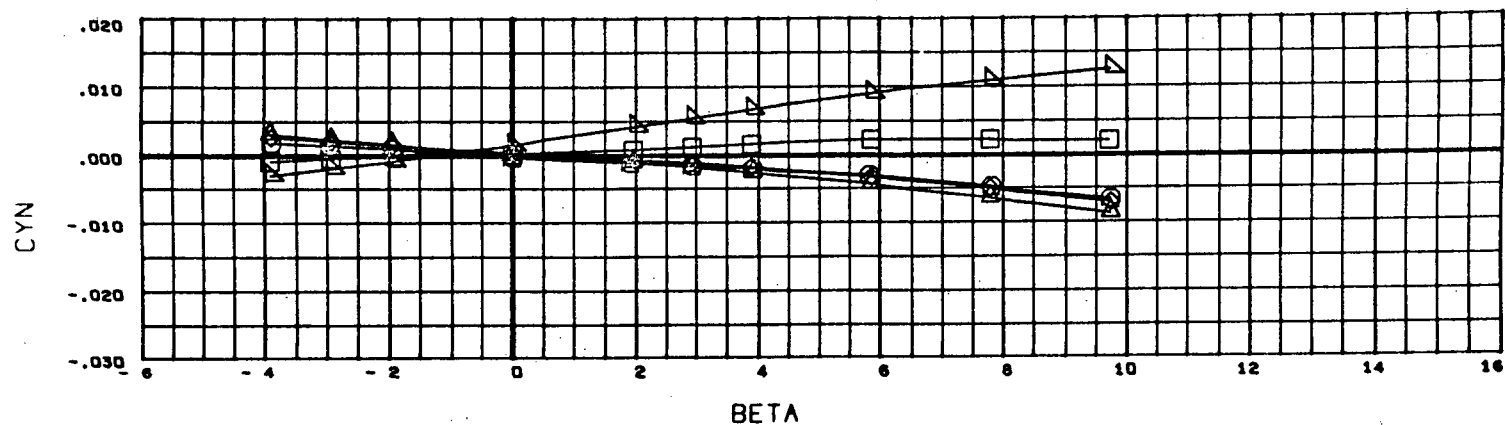
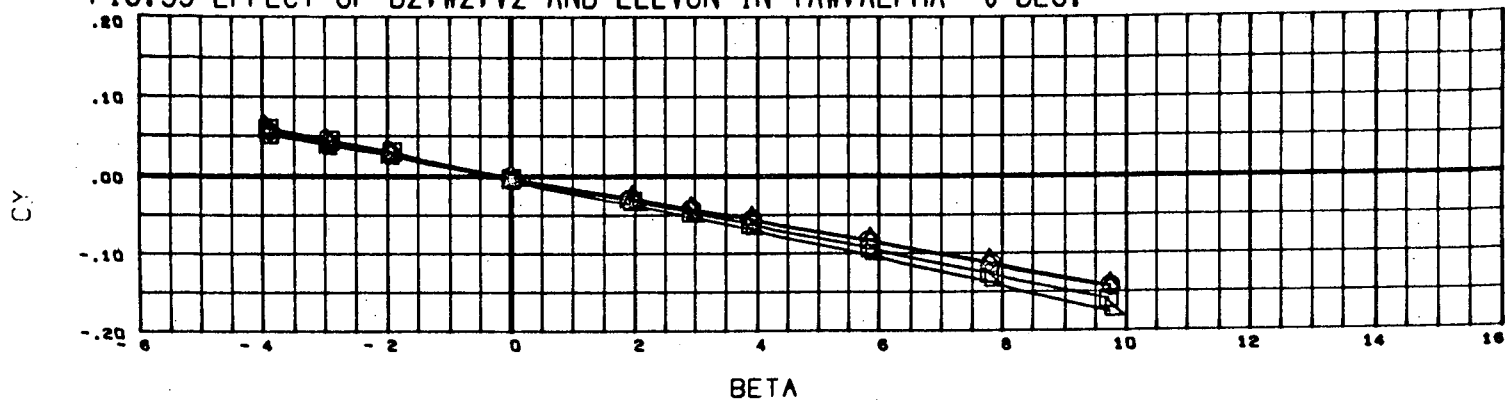
PAGE 201

FIG.35 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB213)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB183)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB193)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	XMRP	1067.9040 IN.
(RGB203)	DATA NOT AVAILABLE FOR ALL CONDITIONS	-40.000	-40.000	0.000	YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

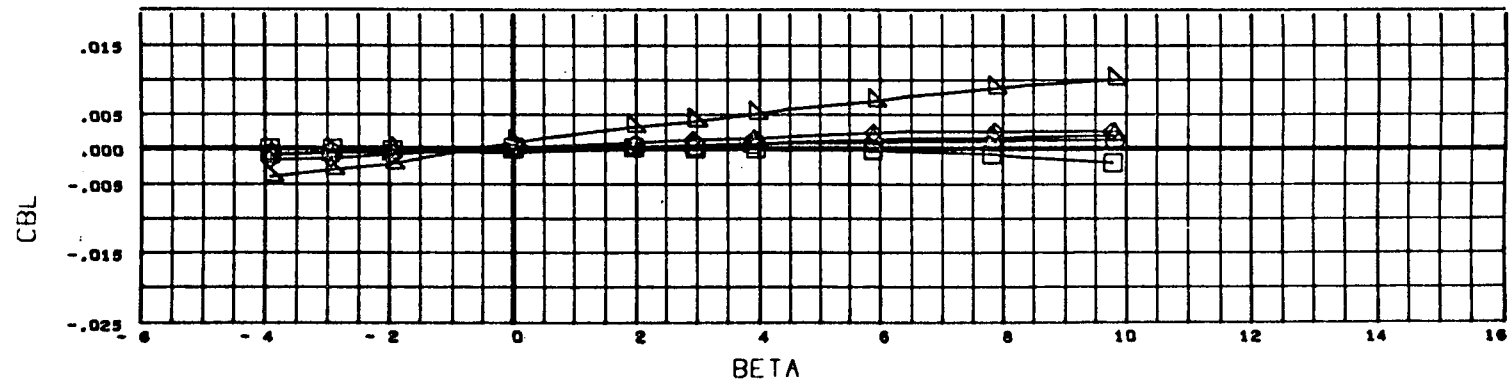
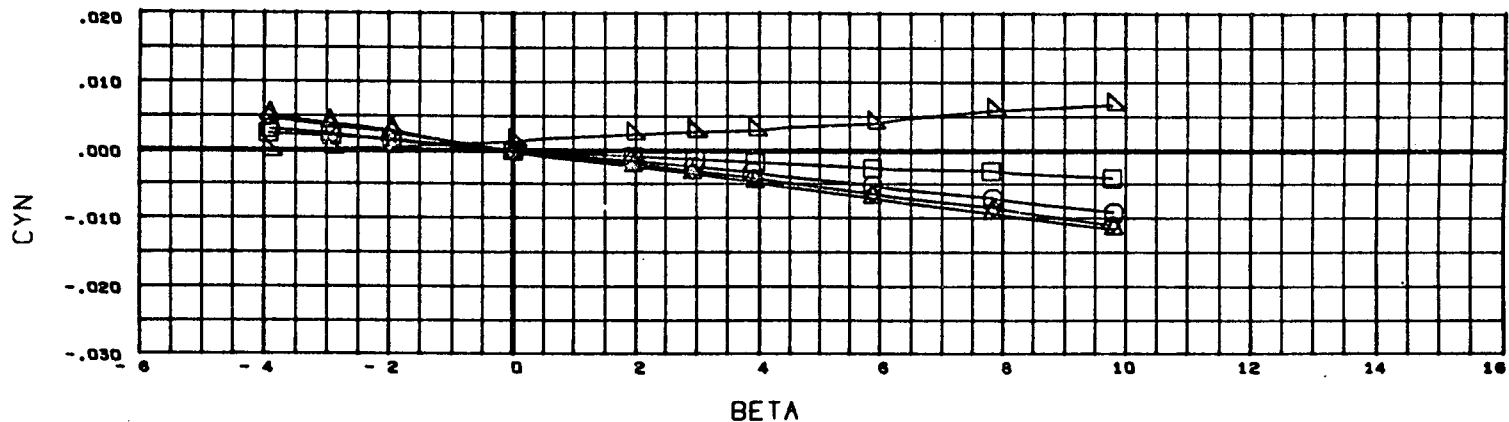
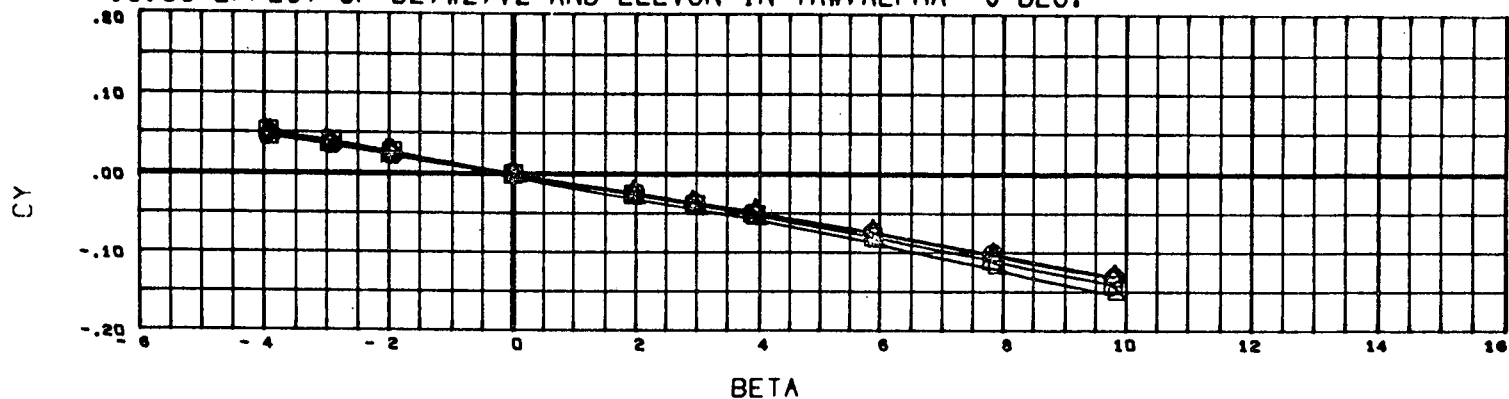
FIG.35 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB213)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB163)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB193)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB203)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

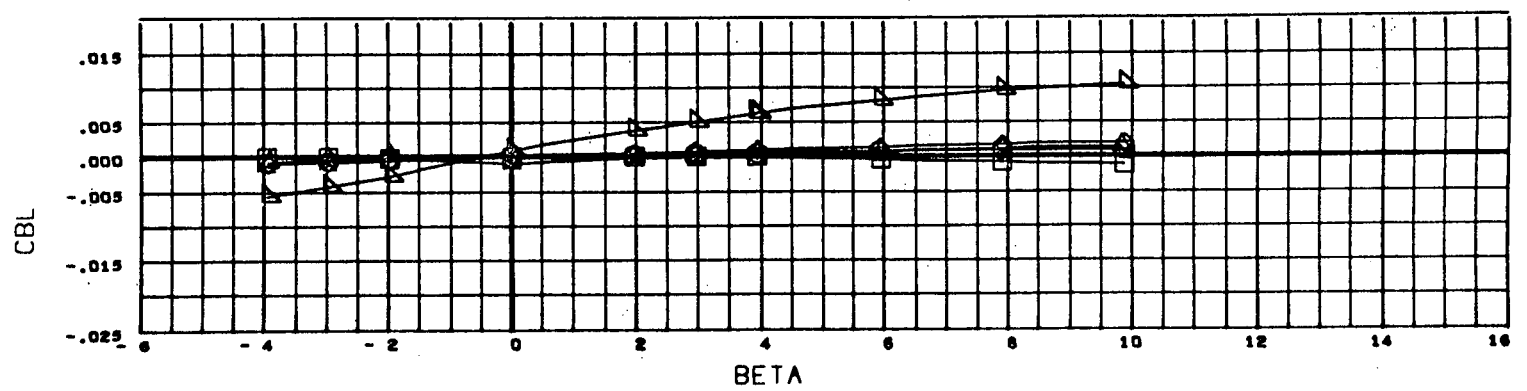
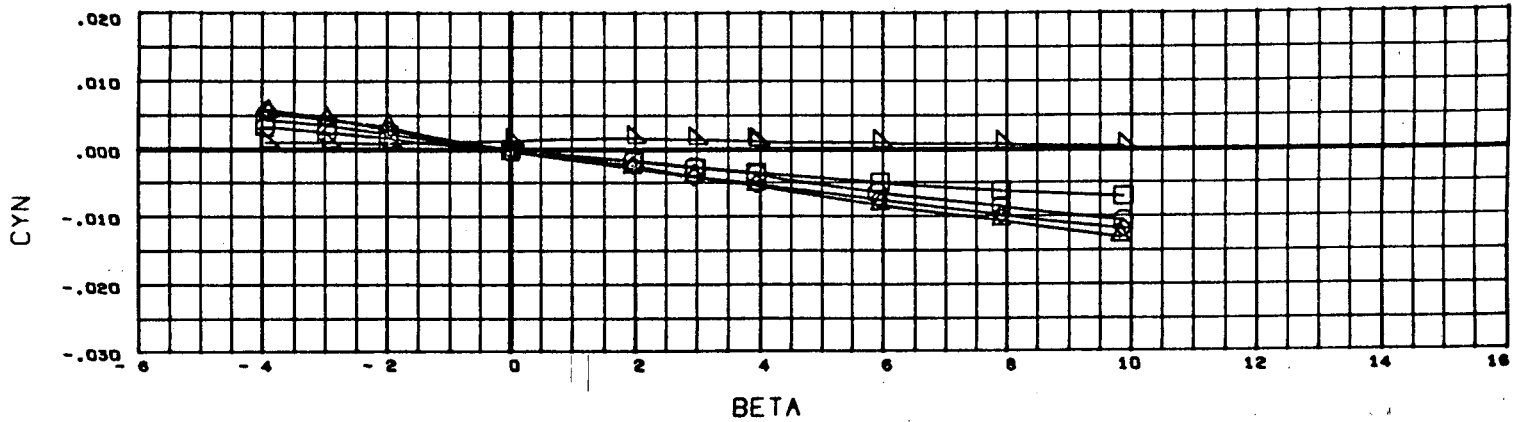
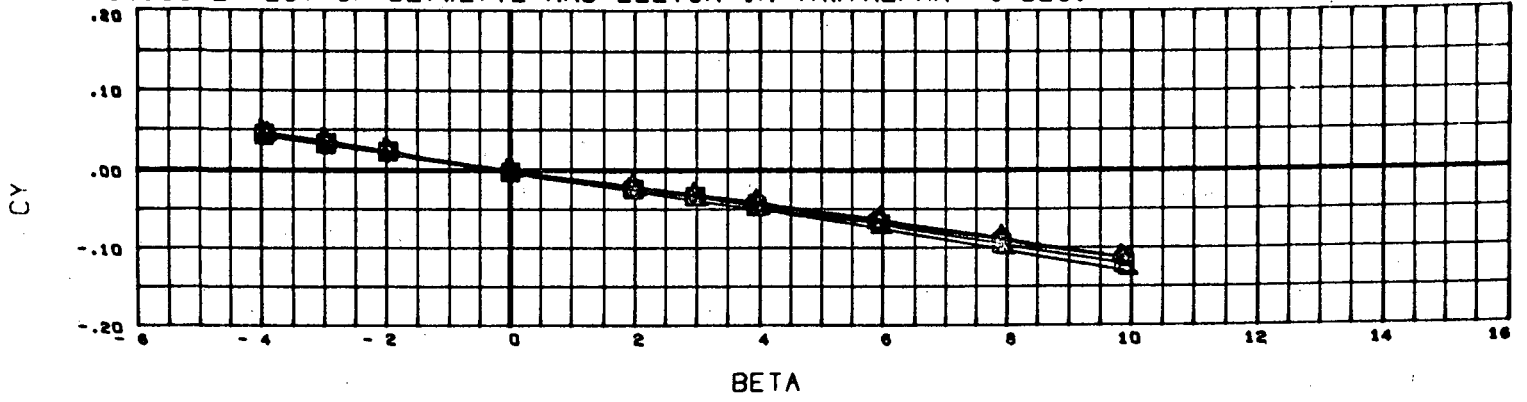
FIG.35 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A 01W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB213)	JPL WT 20-681 MSC 040A 02W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB183)	JPL WT 20-681 MSC 040A 02W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB193)	JPL WT 20-681 MSC 040A 02W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB203)	JPL WT 20-681 MSC 040A 02W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

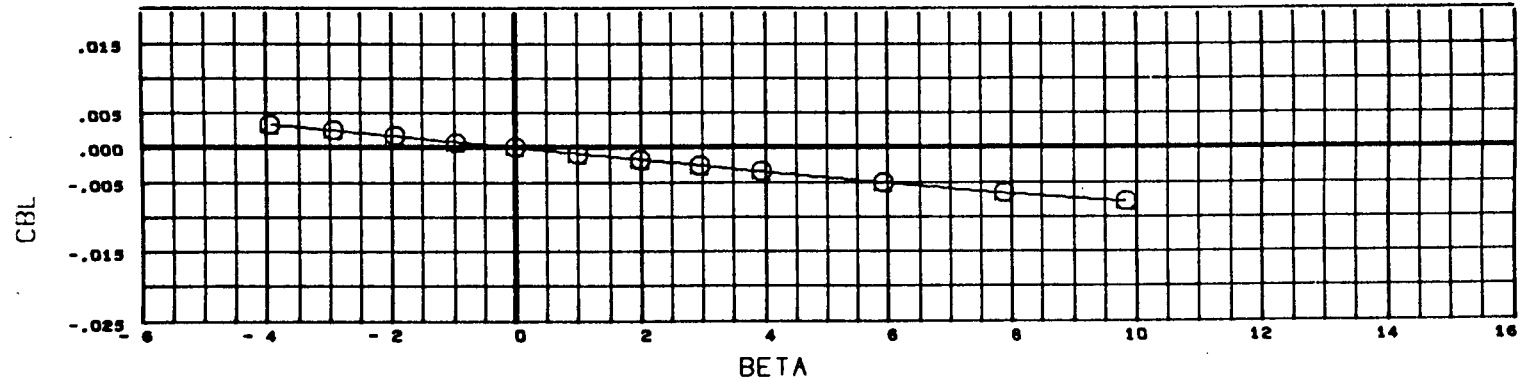
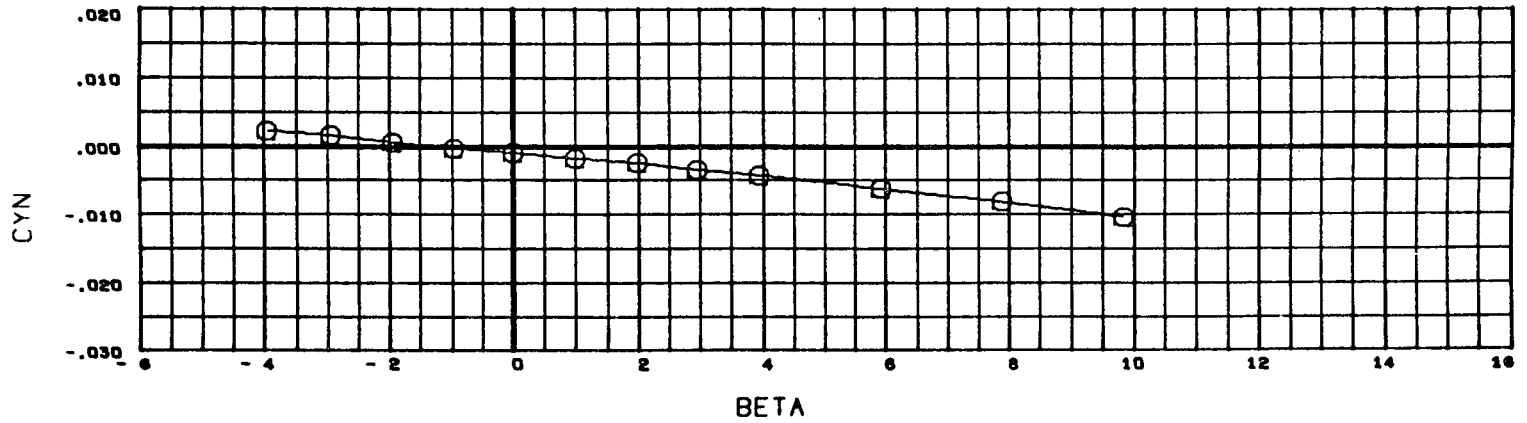
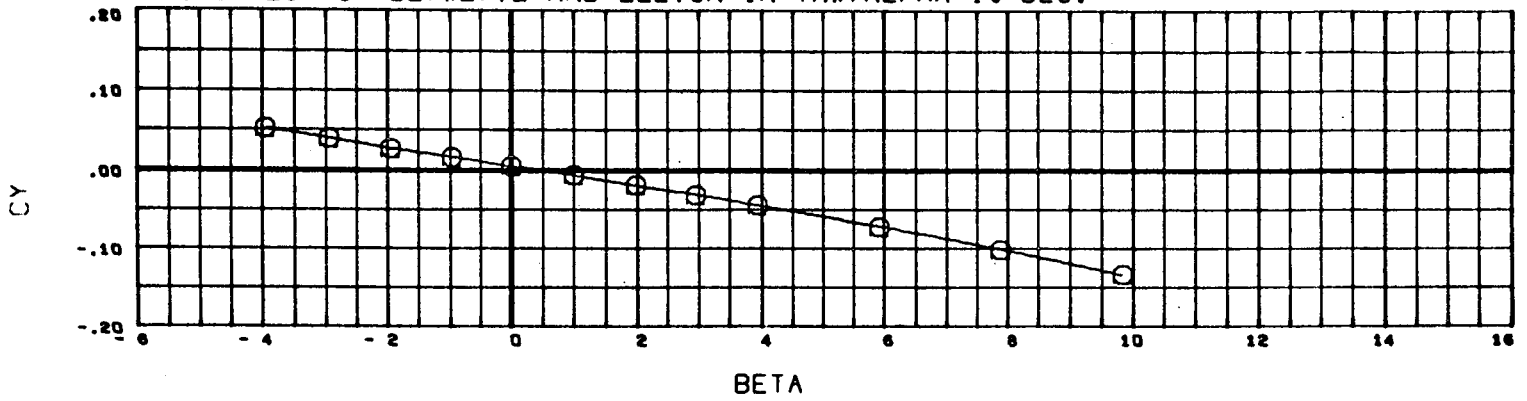
FIG. 35 EFFECT OF B2, W2, V2 AND ELEVON IN YAW, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 80 IN.
(RGB213)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB163)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	GREF 6.6150 IN.
(RGB193)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB203)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG.36 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA=10 DEG.

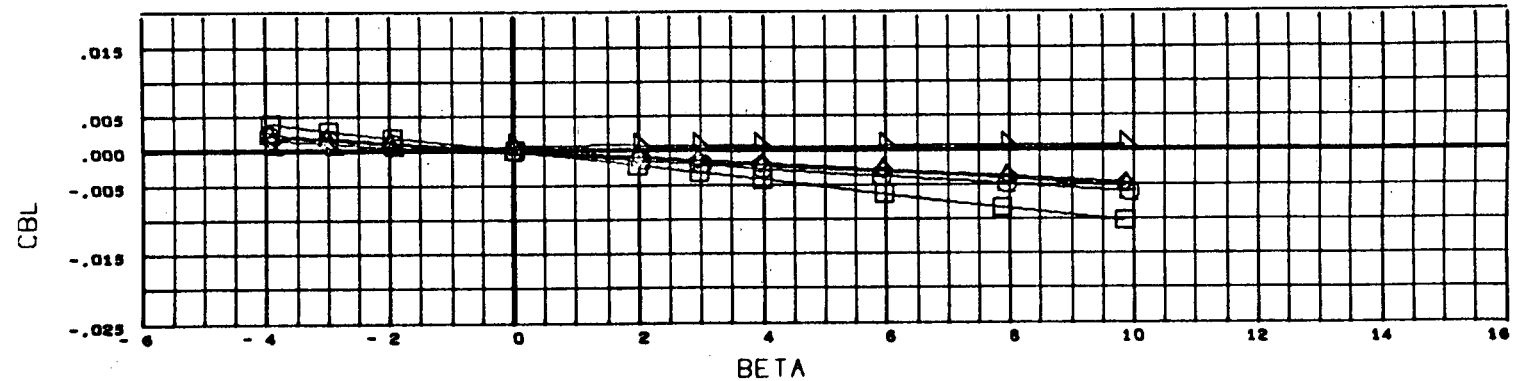
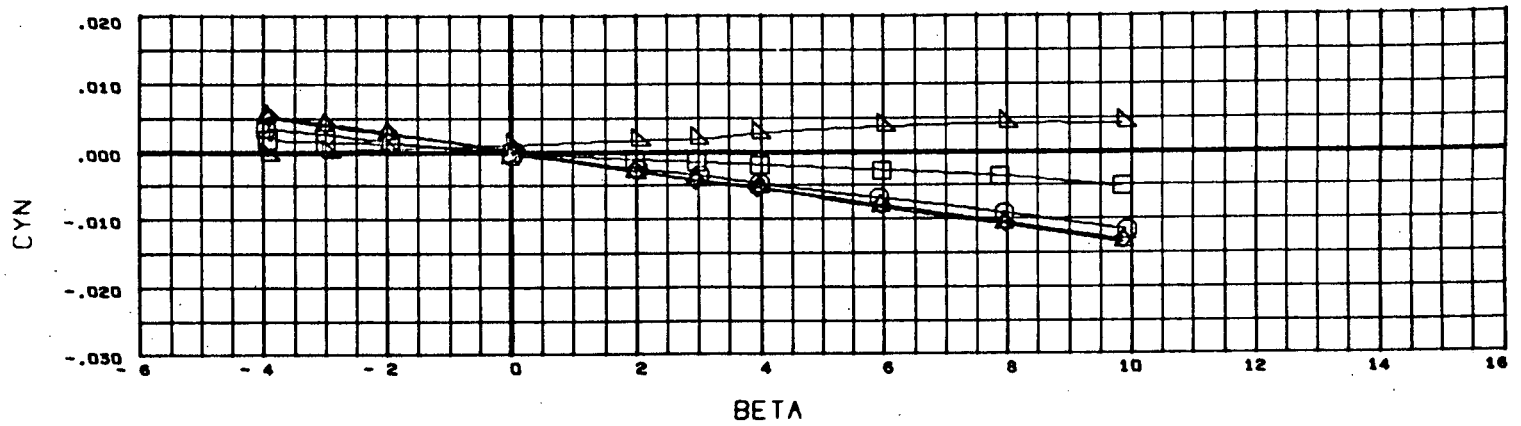
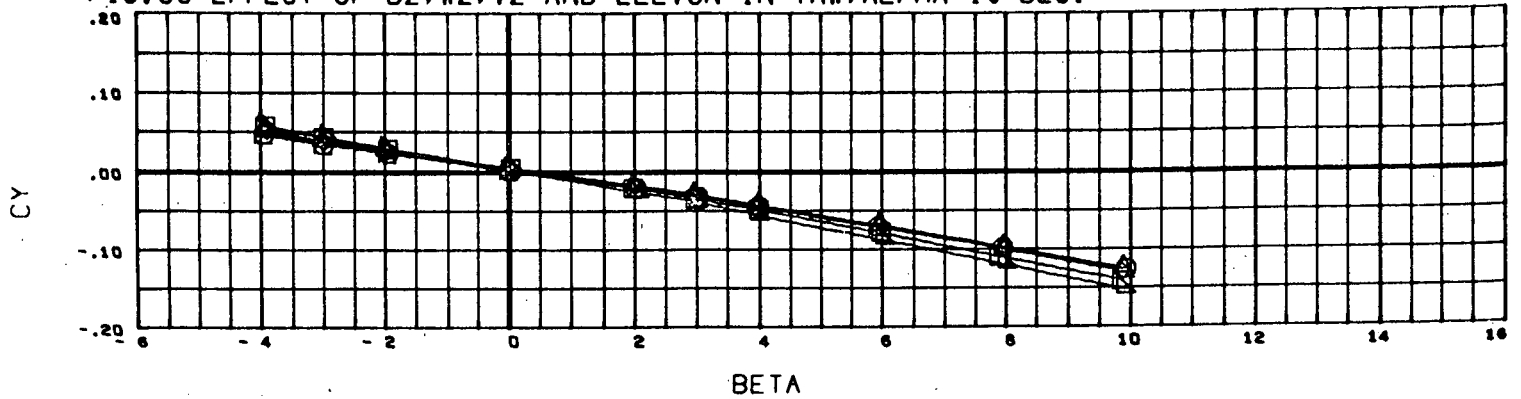


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB214)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB194)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB194)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB204)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

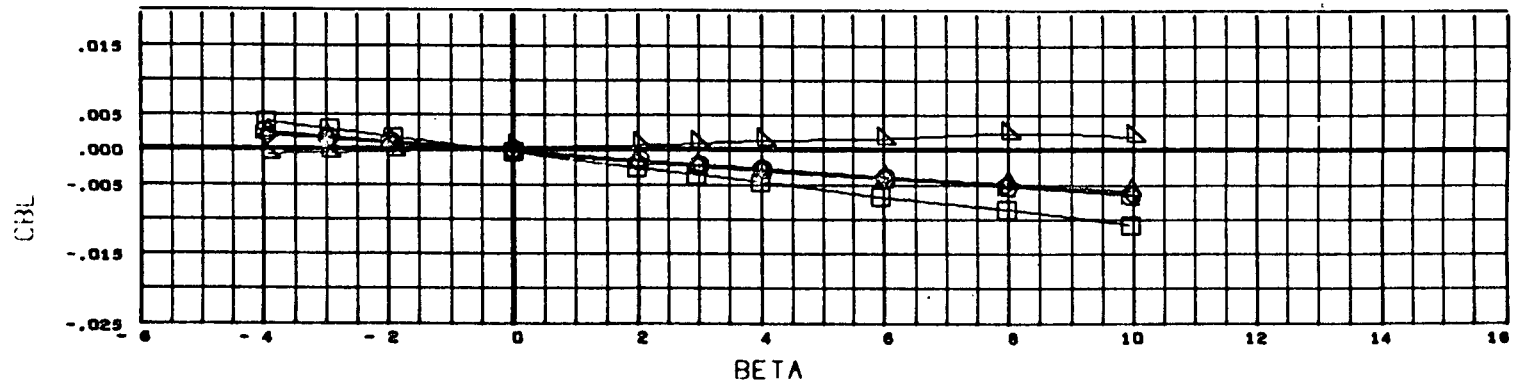
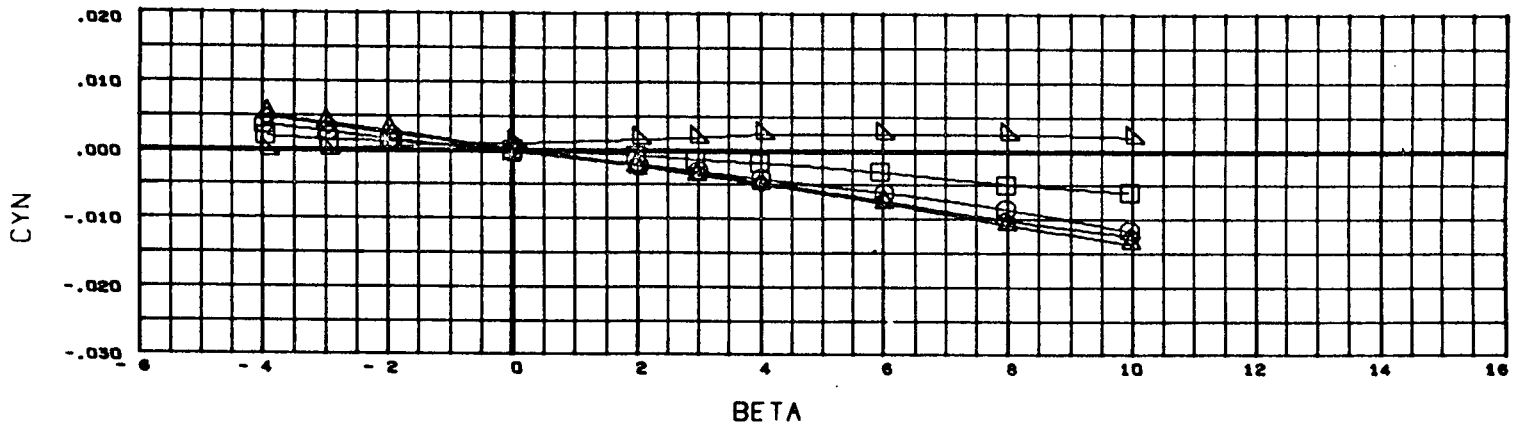
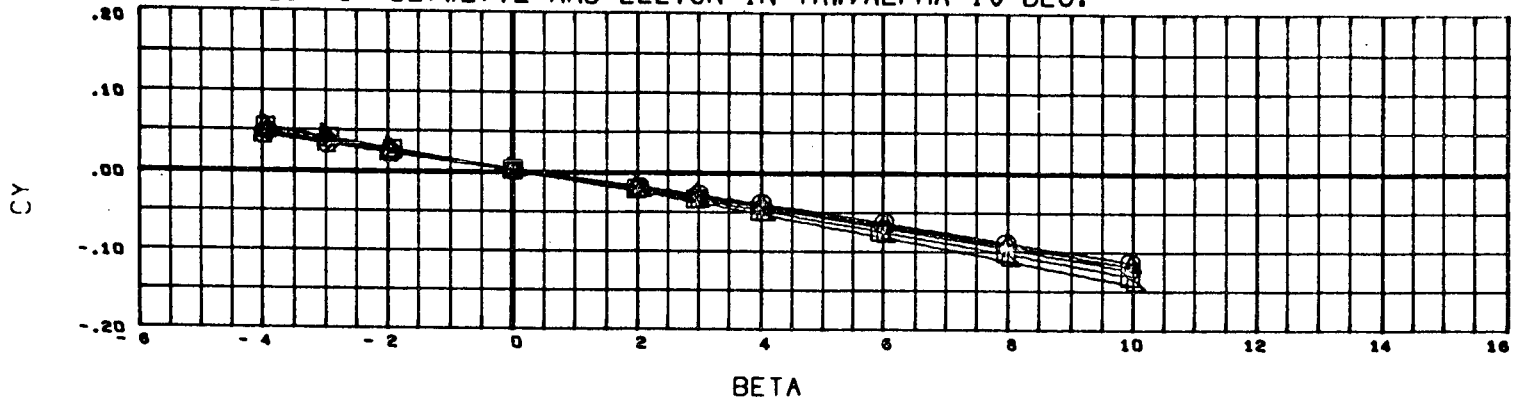
FIG. 36 EFFECT OF B2, W2, V2 AND ELEVON IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB214)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB184)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB194)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB204)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

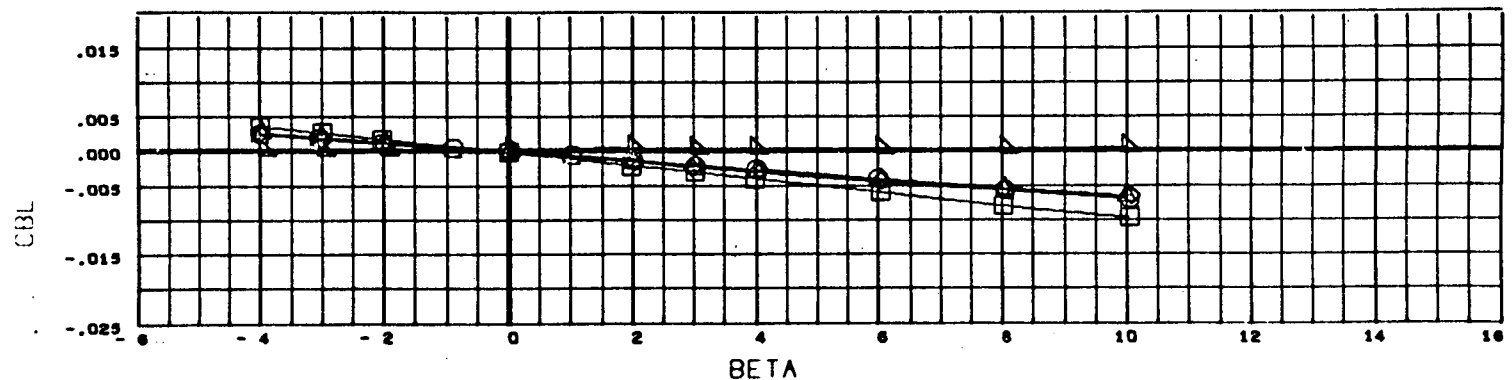
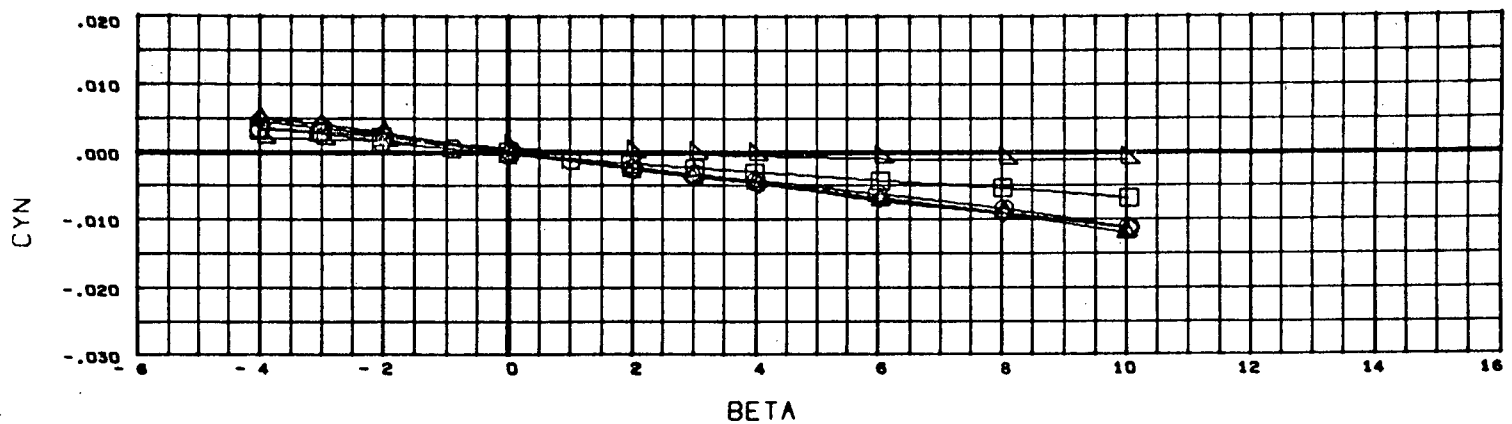
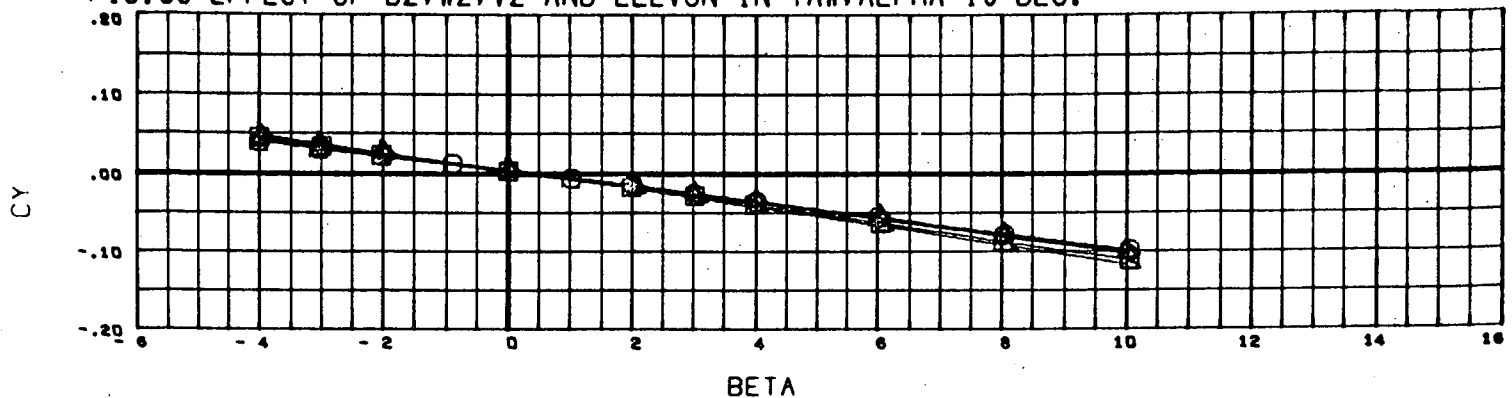
MACH 2.42

FIG.36 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA=10 DEG.



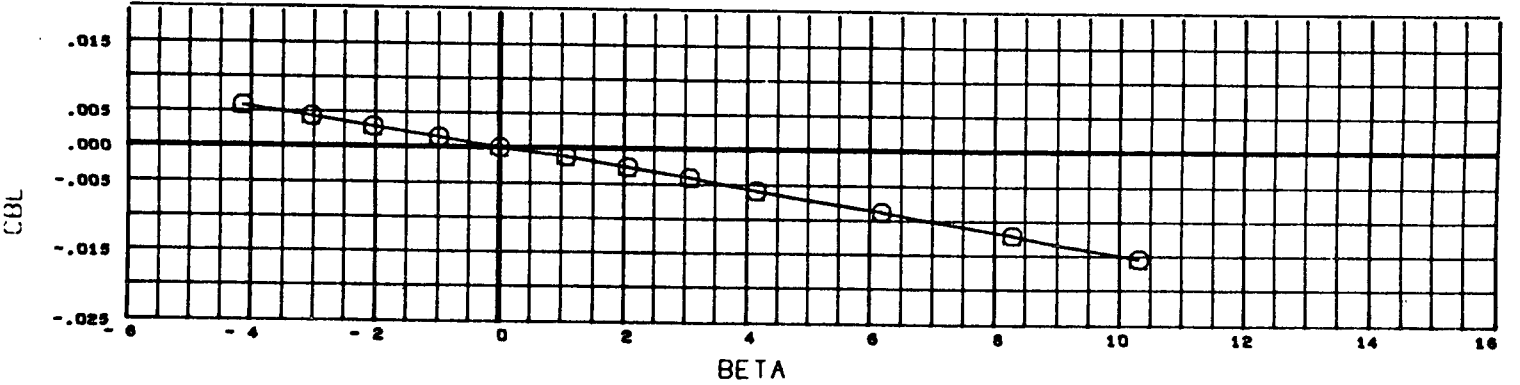
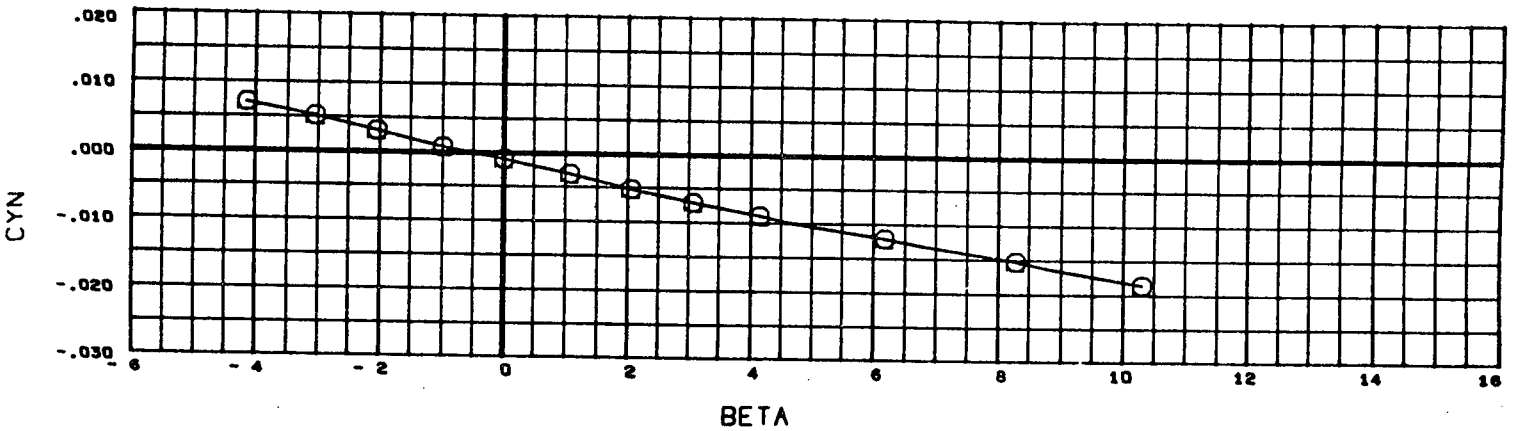
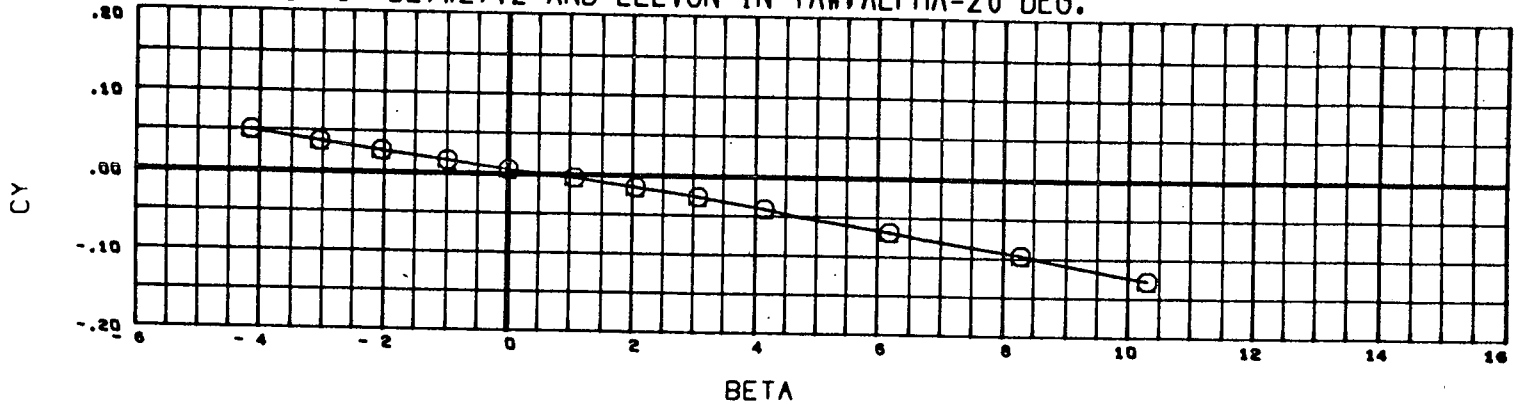
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 90 IN.
(RGB214)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB194)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB194)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB204)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0073

FIG. 36 EFFECT OF B2, W2, V2 AND ELEVON IN YAW, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(RGB214)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB184)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB194)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP	1067.9040 IN.
(RGB204)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP	0.0000 IN.
					ZMRP	400.0004 IN.
					SCALE	0.0075

FIG.37 EFFECT OF B2,W2,V2 AND ELEVN IN YAW, ALPHA=20 DEG.



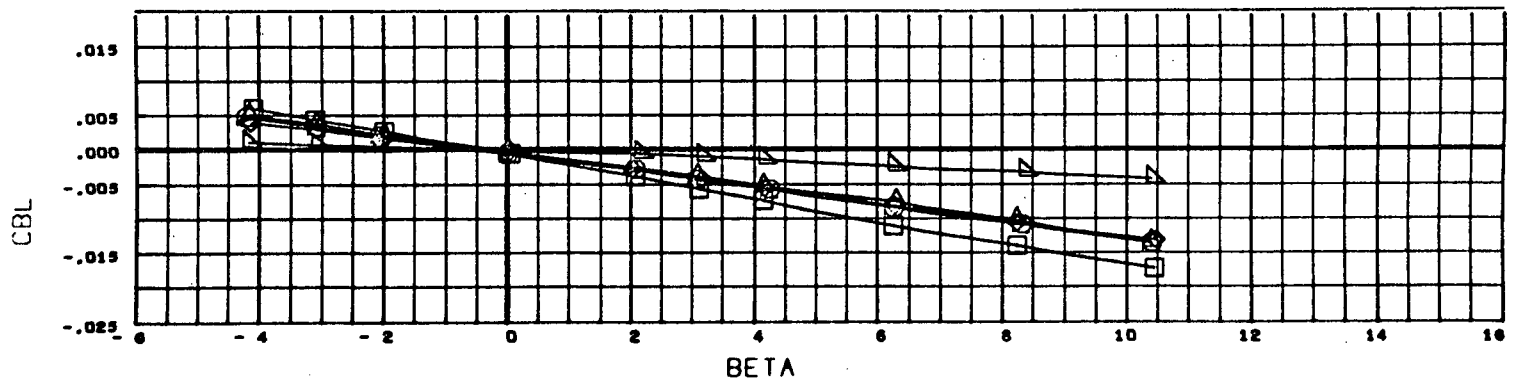
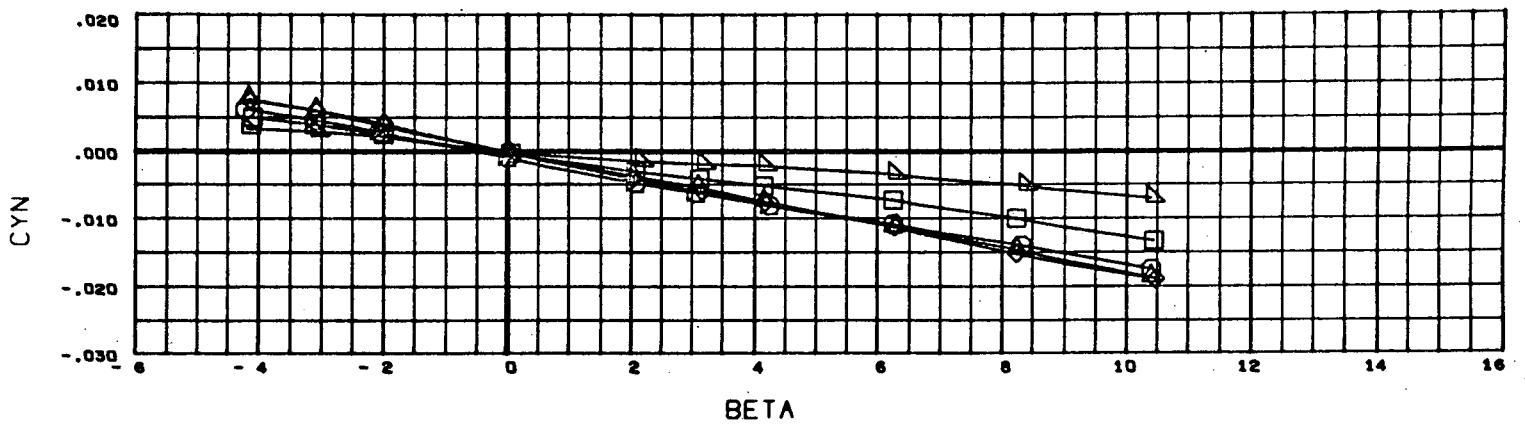
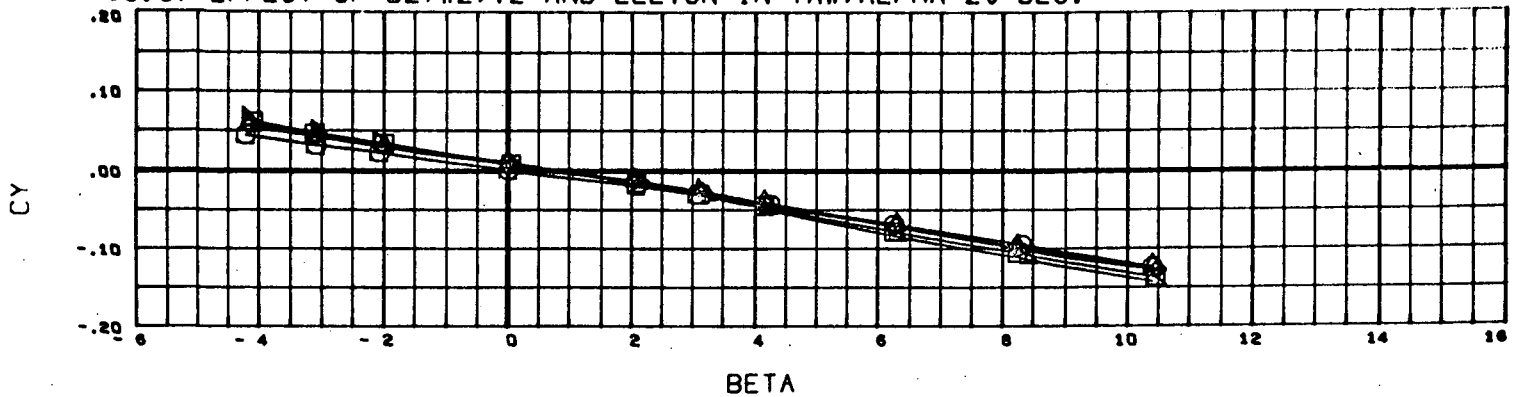
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB215)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB185)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB195)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB205)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

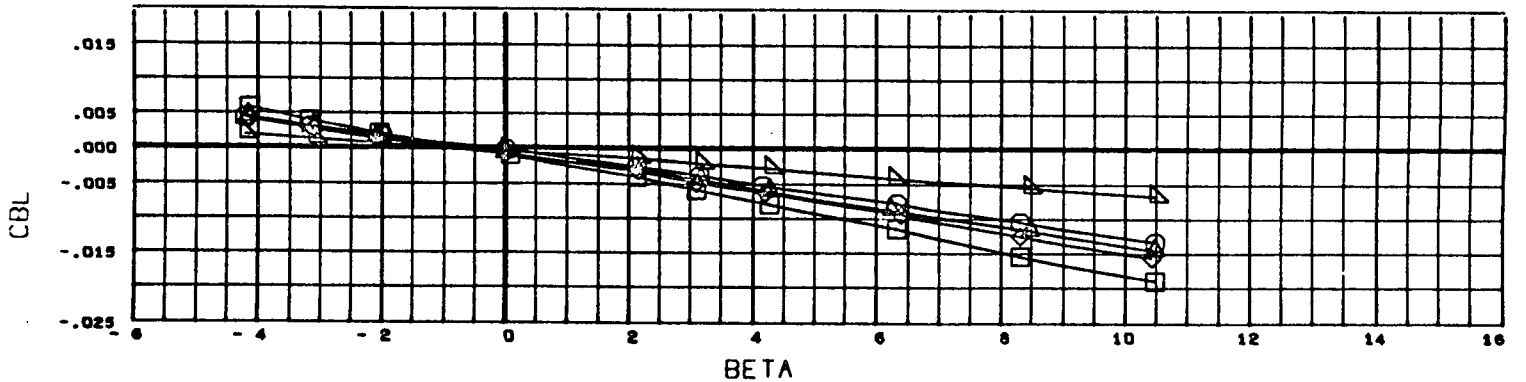
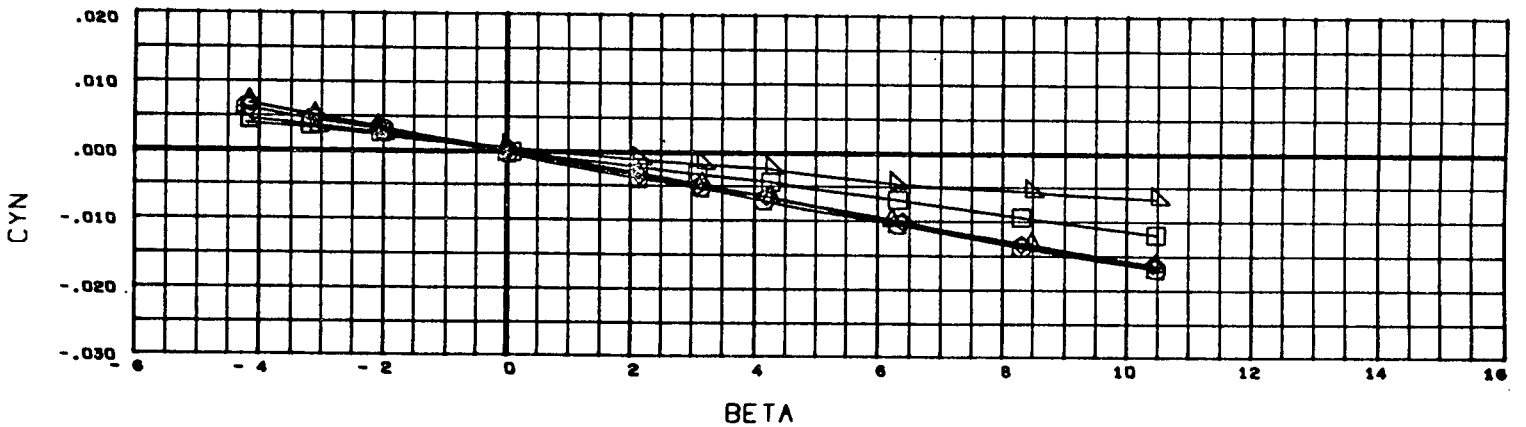
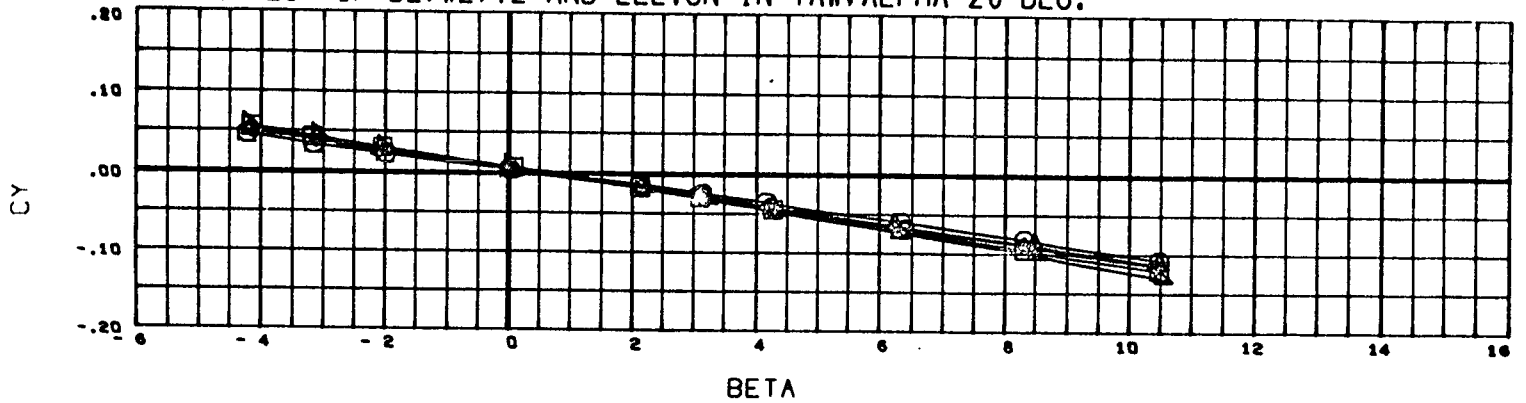
FIG. 37 EFFECT OF B2, W2, V2 AND ELEVN IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 30 IN.
(RGB215)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB185)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB195)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB205)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

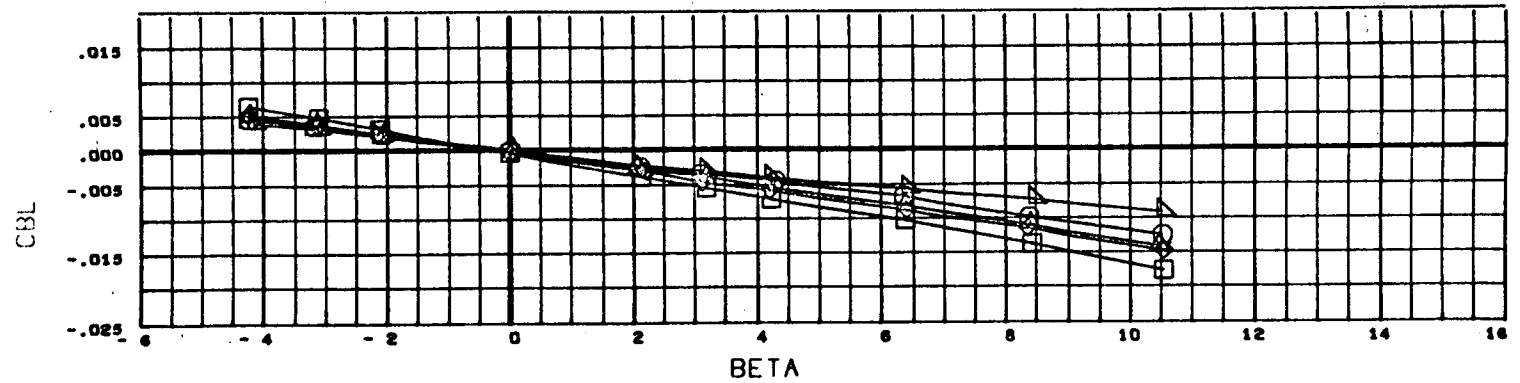
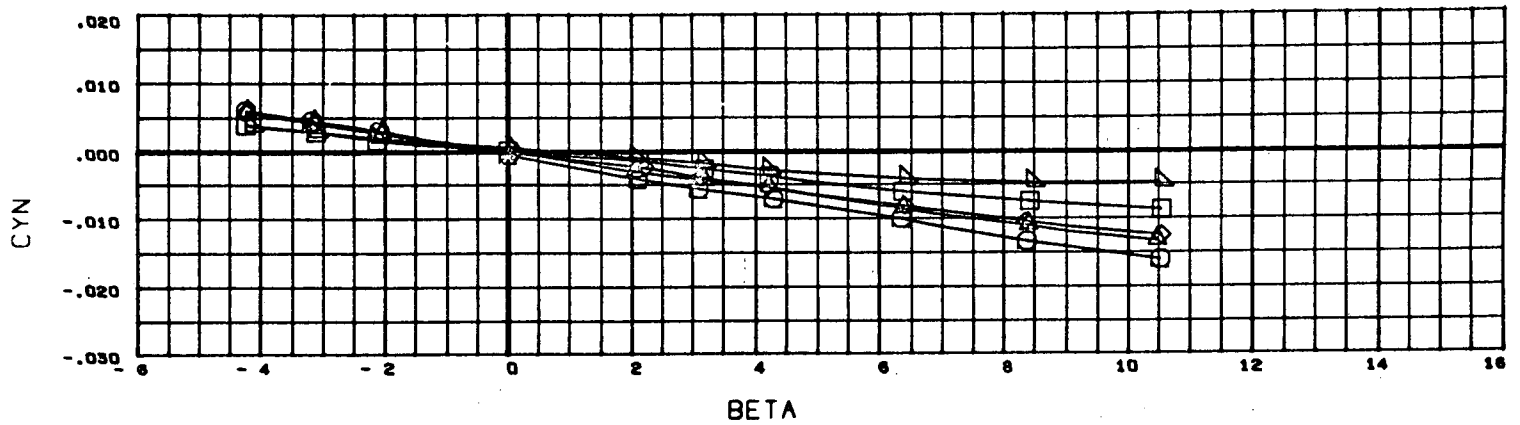
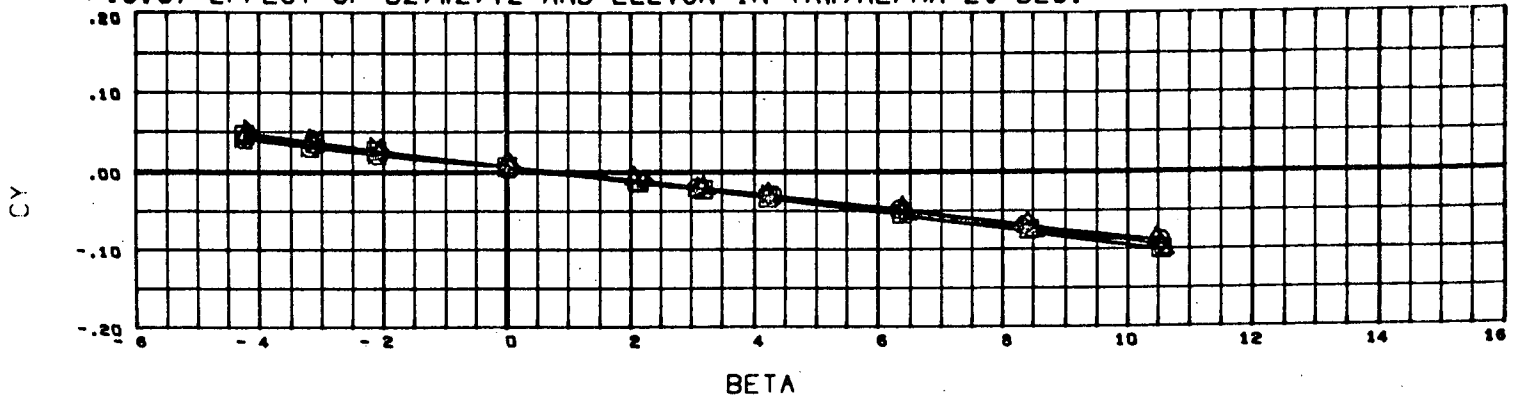
FIG. 37 EFFECT OF B2, W2, V2 AND ELEVON IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGE215)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGE185)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGE195)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGE205)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.03

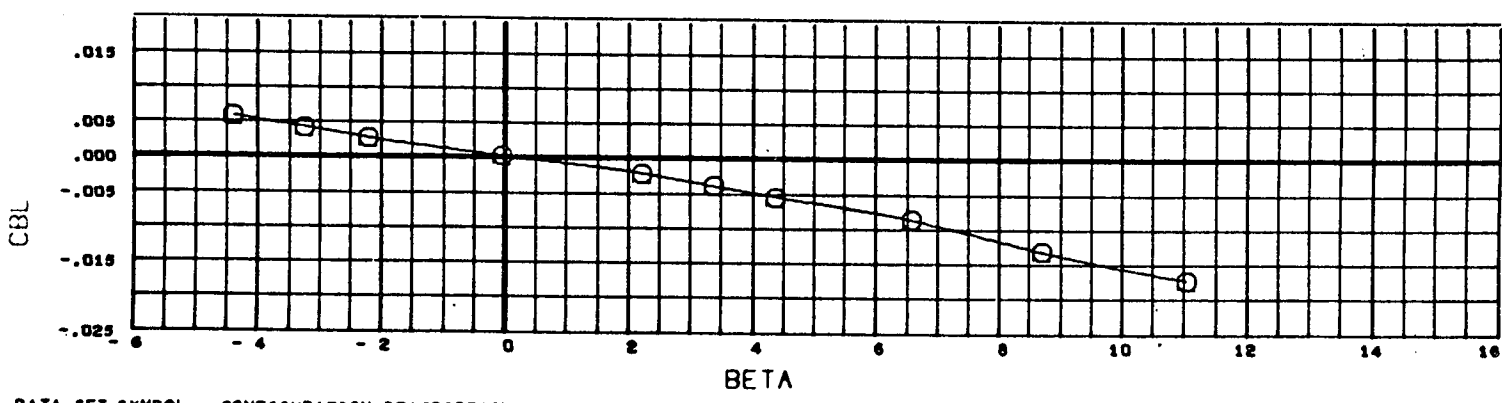
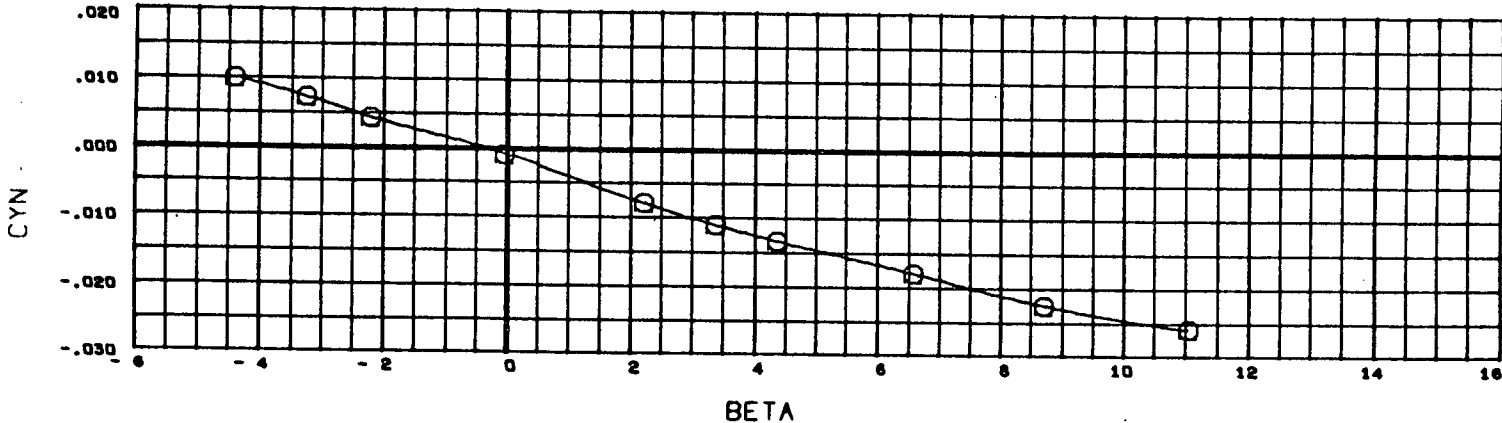
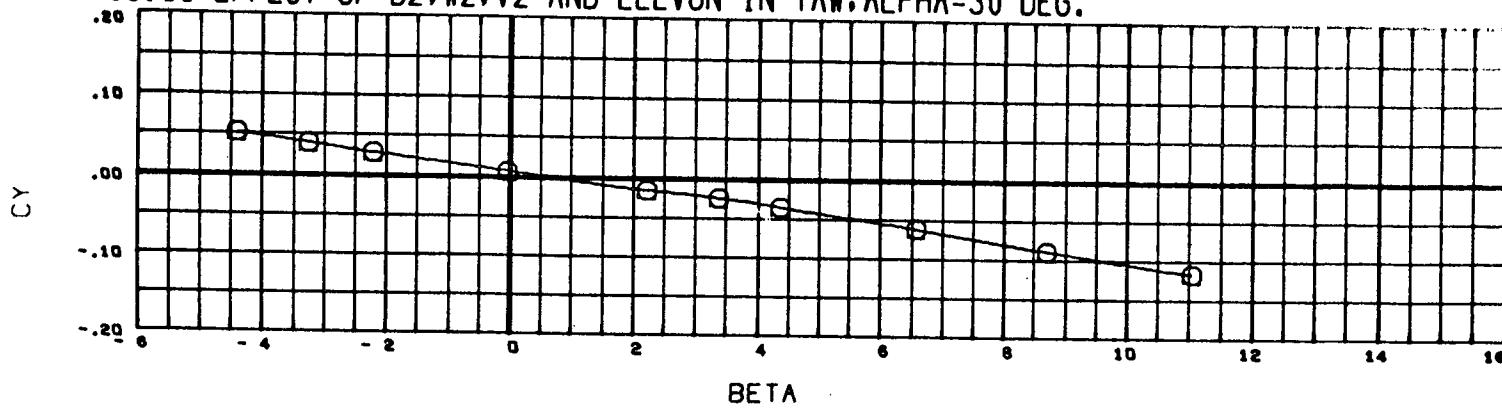
FIG.37 EFFECT OF B2,W2,V2 AND ELEVN IN YAW, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB215)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB185)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB195)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB205)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 3.98

FIG. 38 EFFECT OF B2, W2, V2 AND ELEVN IN YAW. ALPHA=30 DEG.



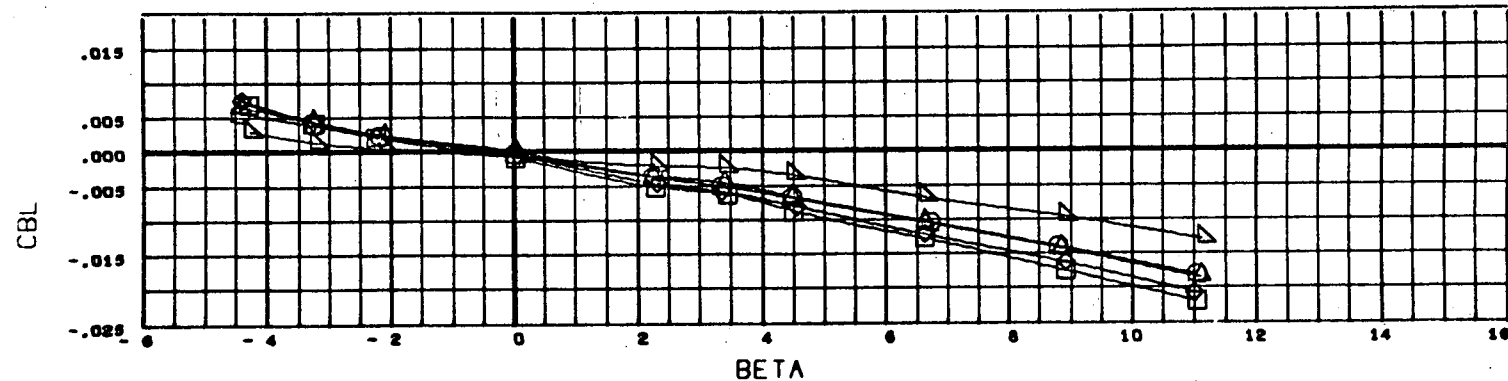
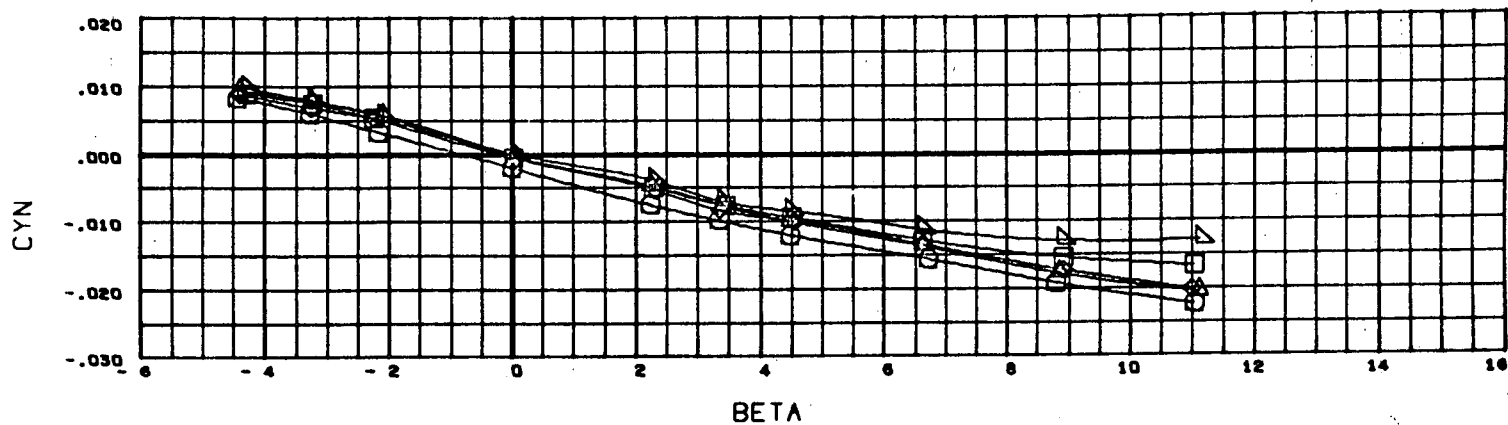
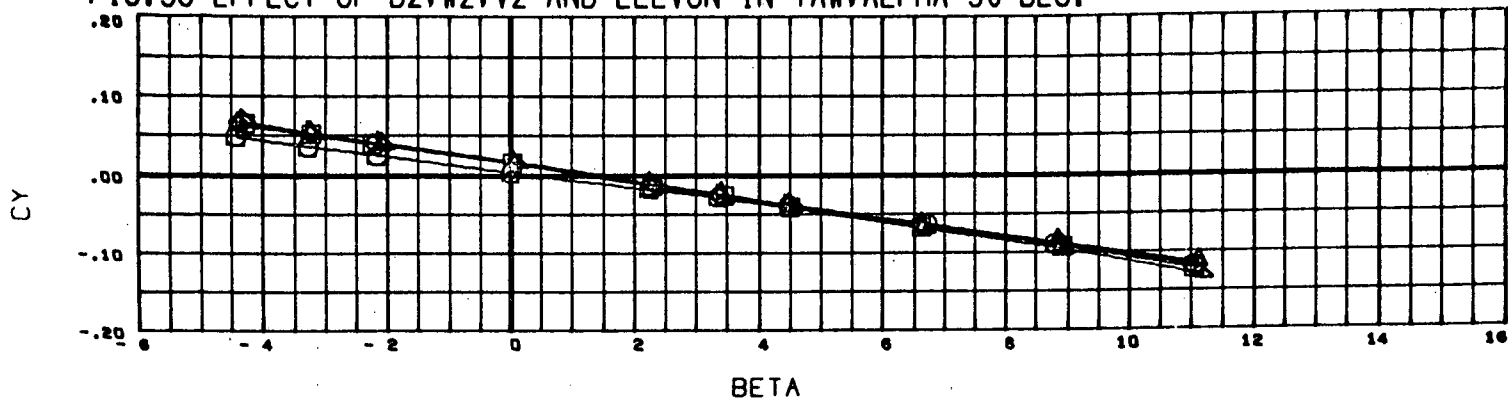
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-691 MSC 040A B1W1V1M1P1D1C1
(RGB216)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB166)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB196)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(RGB206)	DATA NOT AVAILABLE FOR ALL CONDITIONS

LELVN	RELVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.01

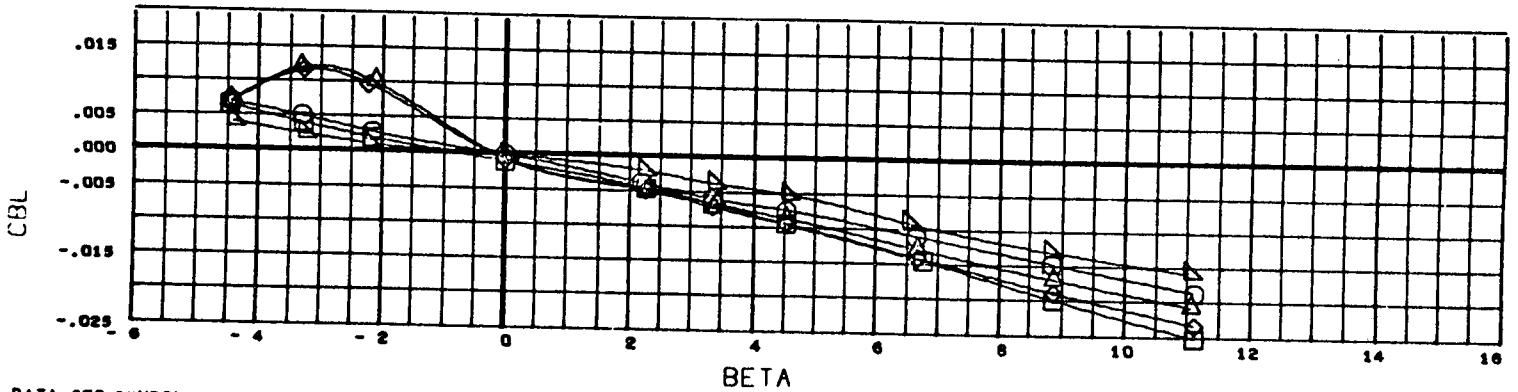
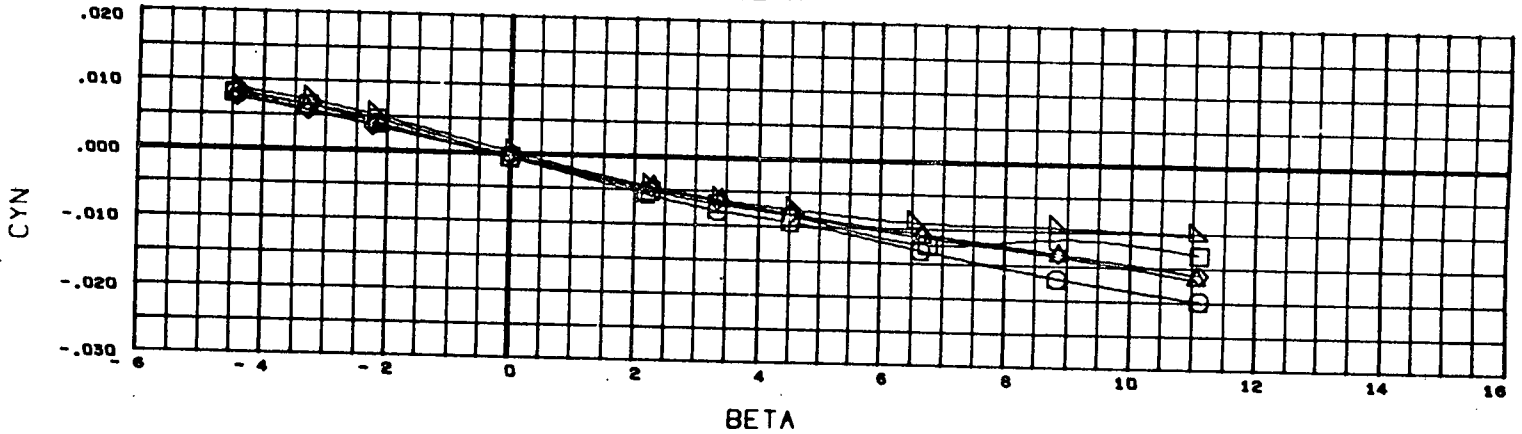
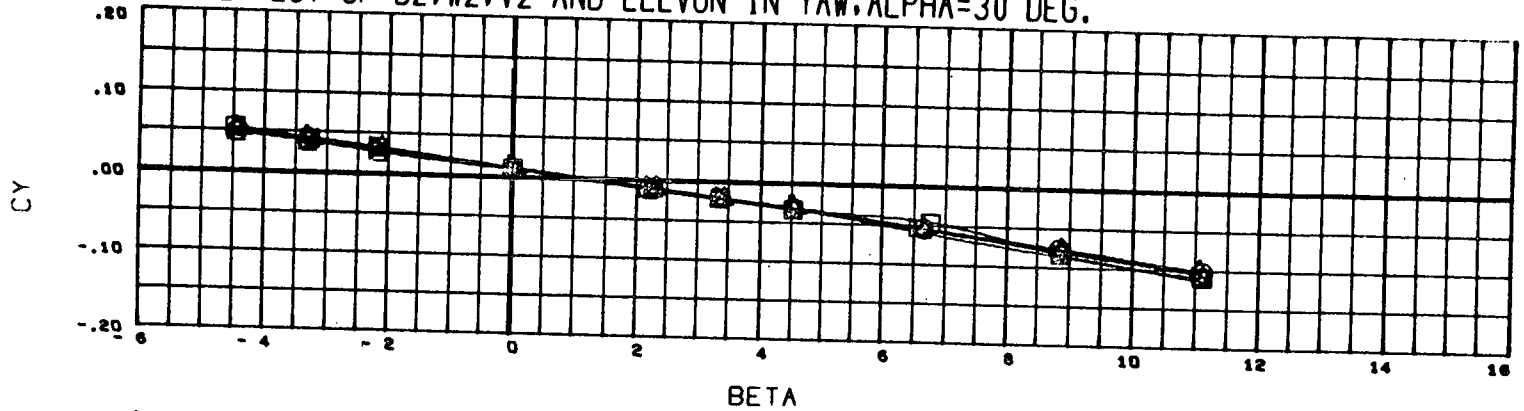
FIG.38 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB016)	JPL WT 20-661 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB216)	JPL WT 20-661 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB186)	JPL WT 20-661 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB196)	JPL WT 20-661 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB206)	JPL WT 20-661 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

MACH 2.42

FIG.38 EFFECT OF B2,W2,V2 AND ELEVON IN YAW, ALPHA=30 DEG.



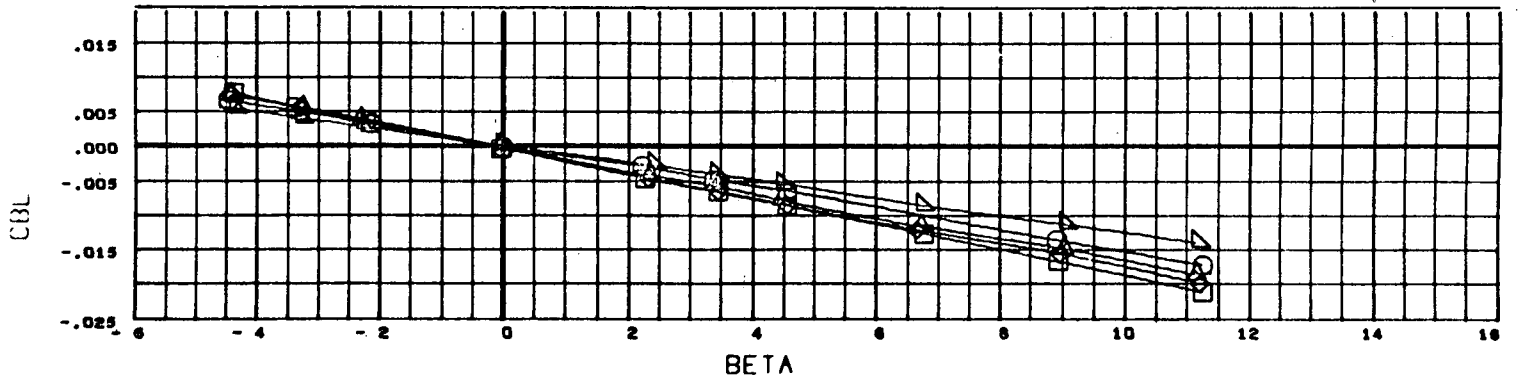
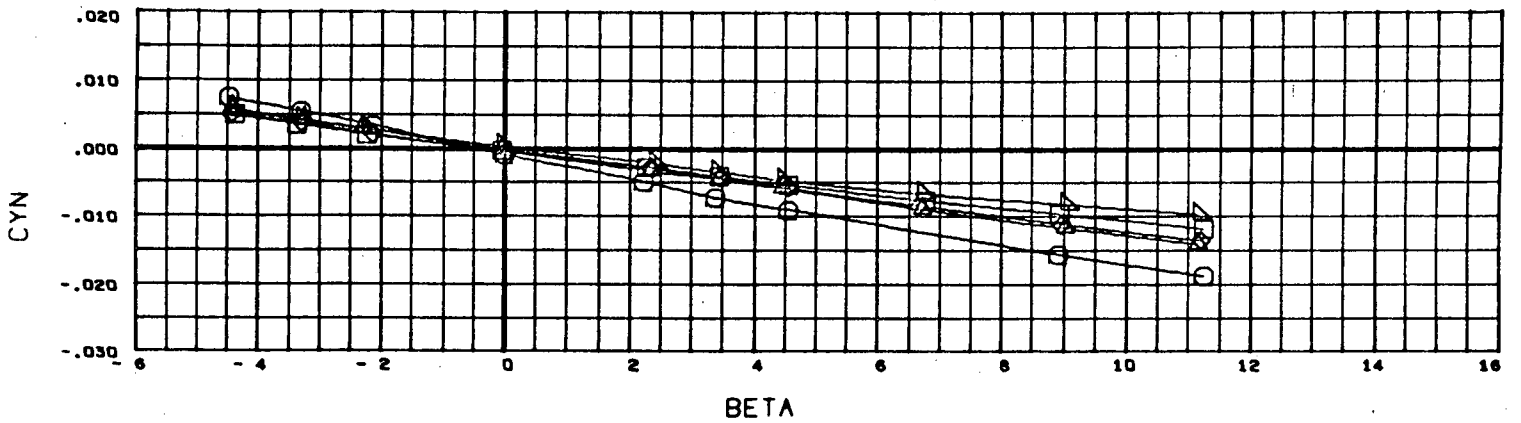
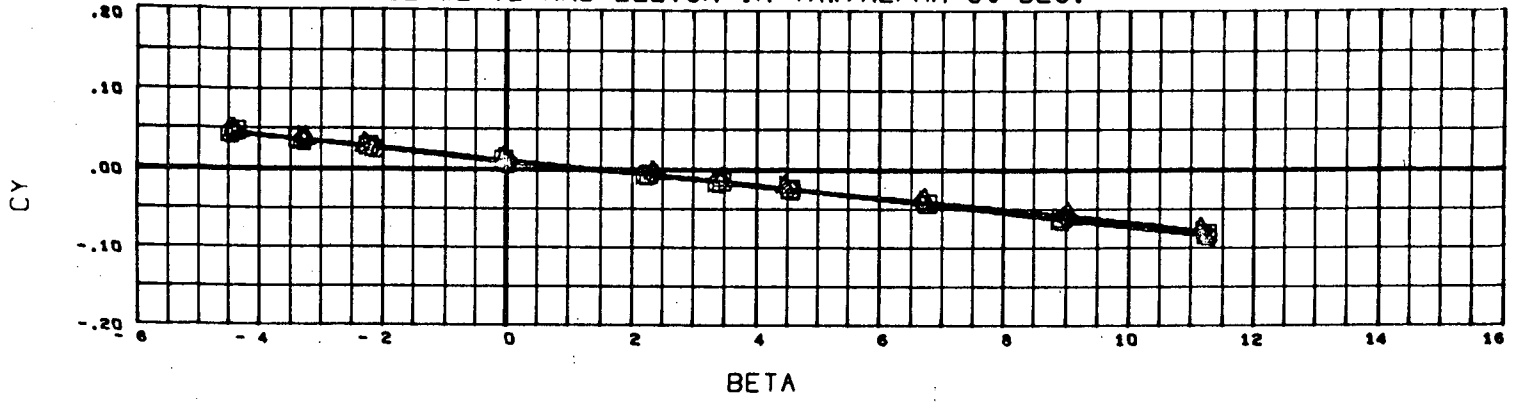
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(RGB216)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1
(RGB186)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1
(RGB196)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1
(RGB206)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1

LELEVN	RELEVN	RUDDER
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000
-40.000	-40.000	0.000

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
YMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

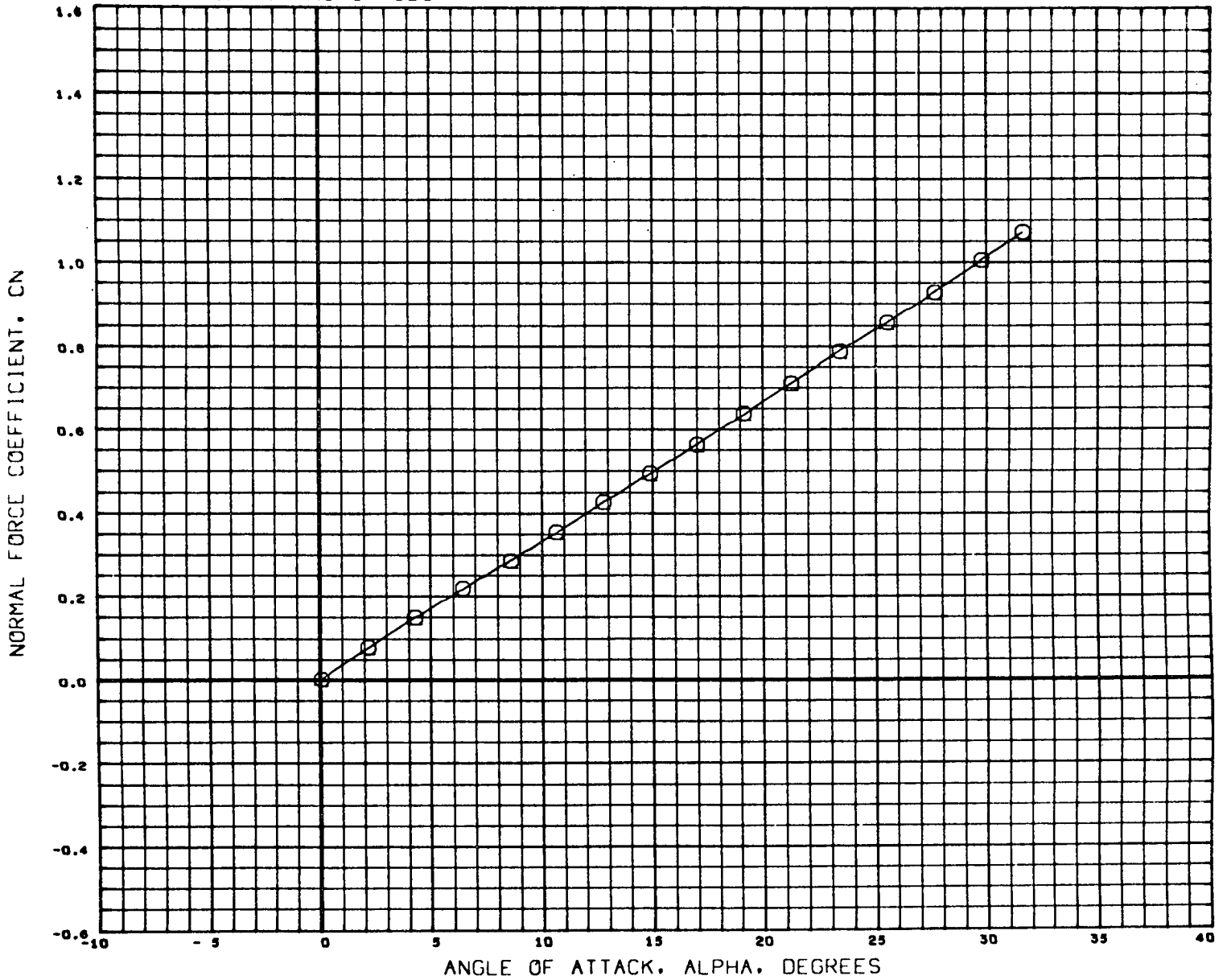
MACH 3.03

FIG.38 EFFECT OF B2,W2,V2 AND ELEVN IN YAW, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB216)	JPL WT 20-681 MSC 040A B2W1V1M1P1D1C1	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB186)	JPL WT 20-681 MSC 040A B2W2V1M1P1D1C1	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB196)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	0.000	0.000	0.000	XMRP 1067.9040 IN.
(RGB206)	JPL WT 20-681 MSC 040A B2W2V2M1P1D1C1	-40.000	-40.000	0.000	YMRP 0.0000 IN.
					ZMRP 400.0004 IN.
					SCALE 0.0075

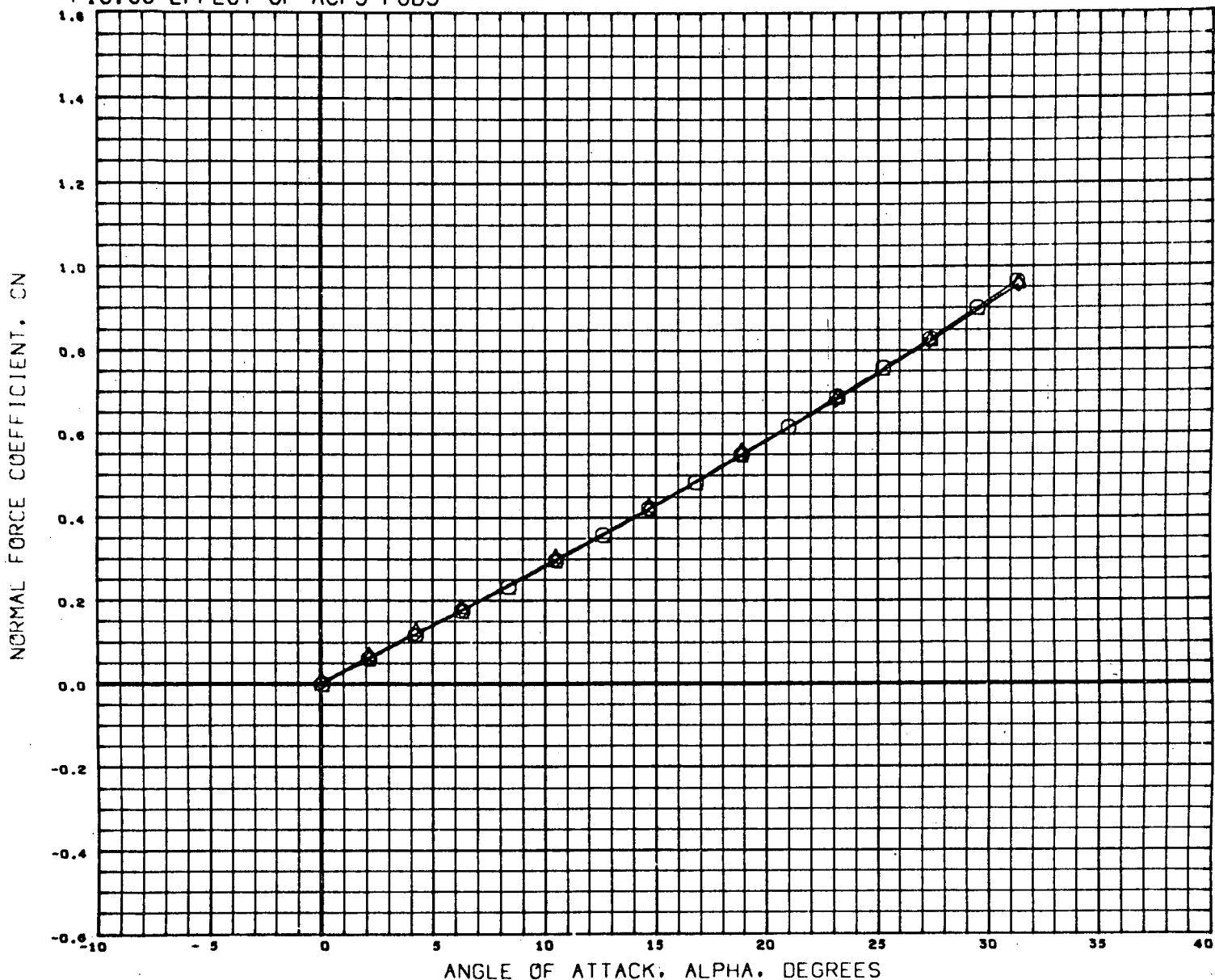
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

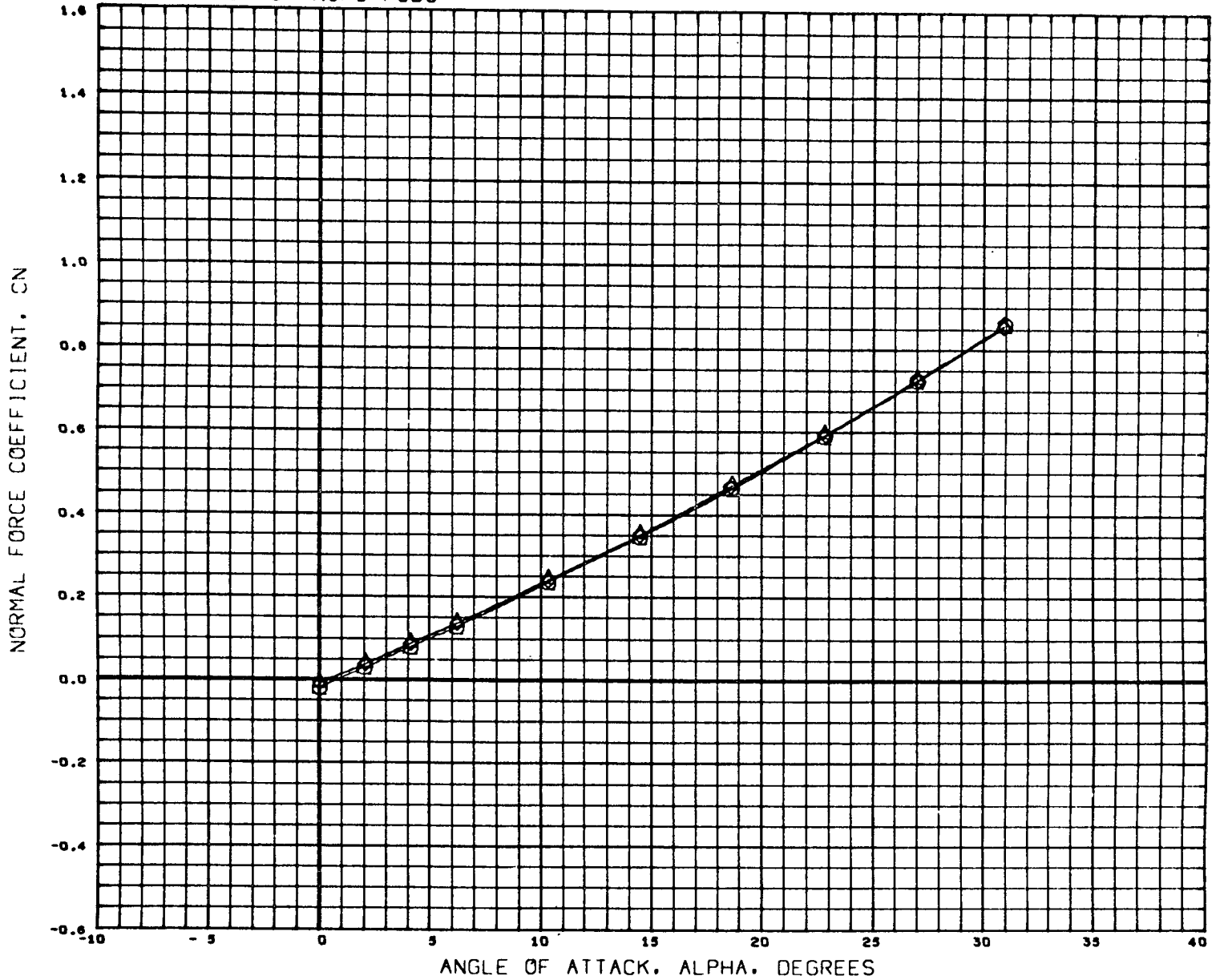
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XG8111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XG8171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

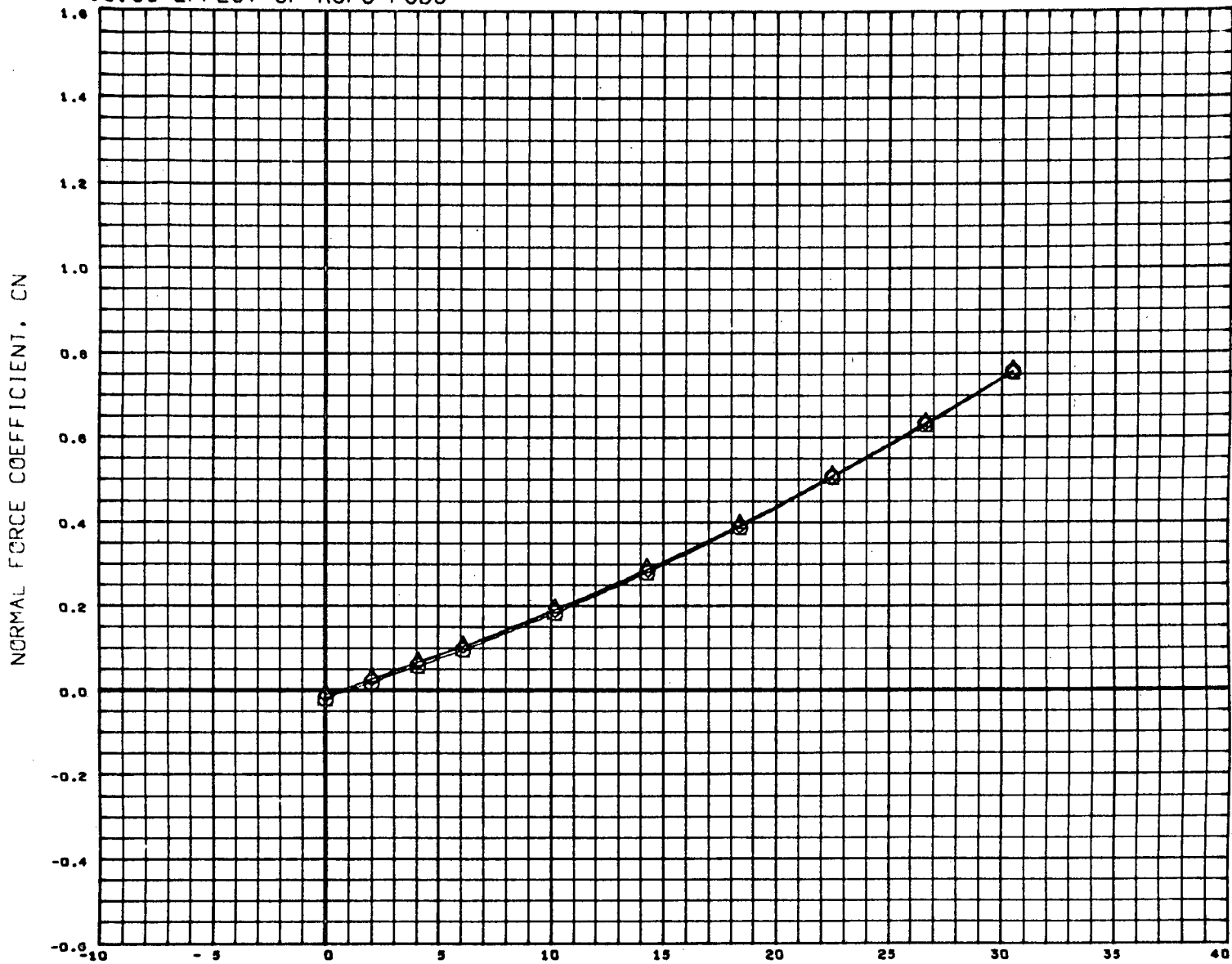
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH: 3.03

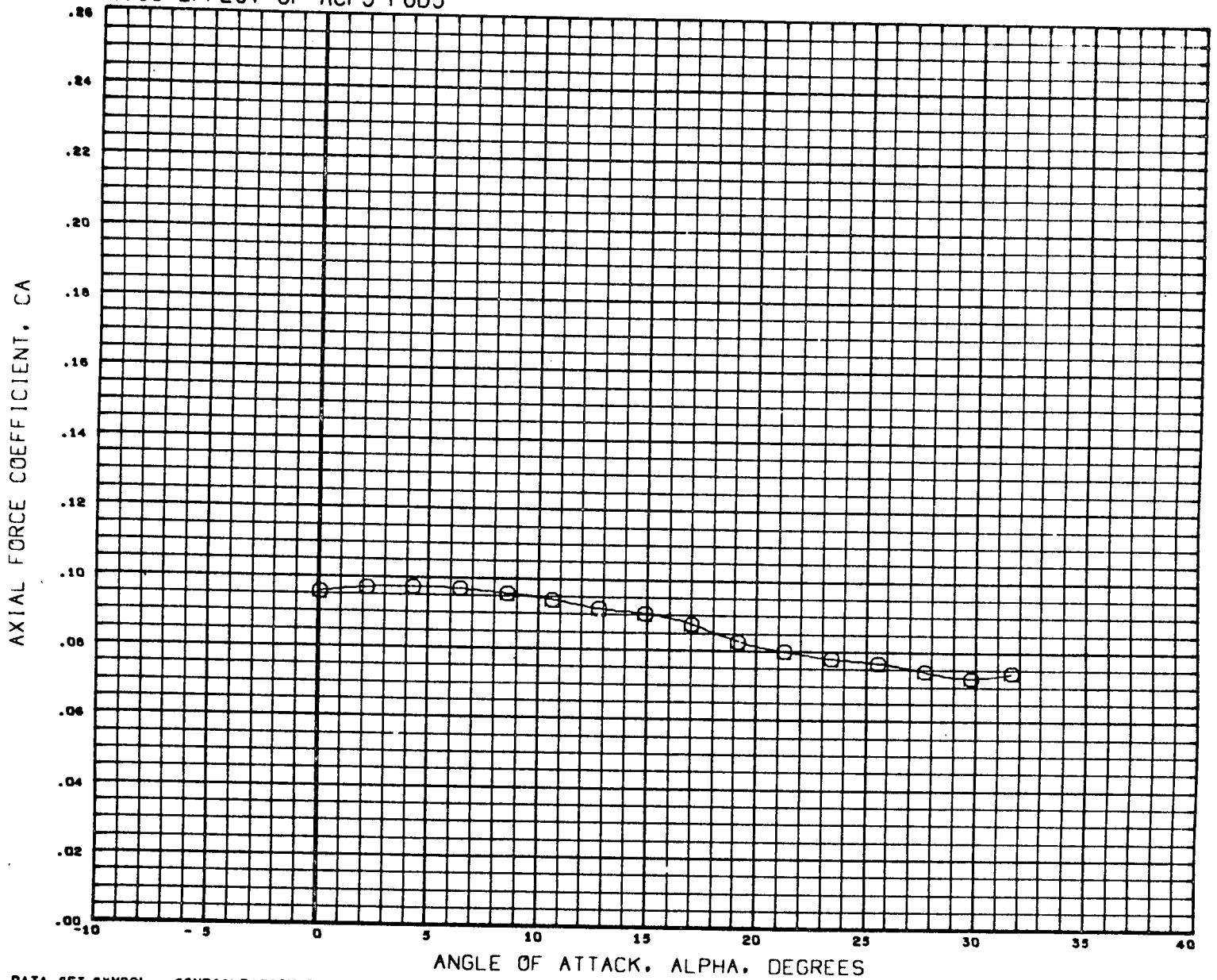
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB111)	JPL WT 20-881 MSC 040A B1W1V1 (30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB161)	JPL WT 20-881 MSC 040A B1W1V1 (30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB171)	JPL WT 20-881 MSC 040A B1W1V1 (30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

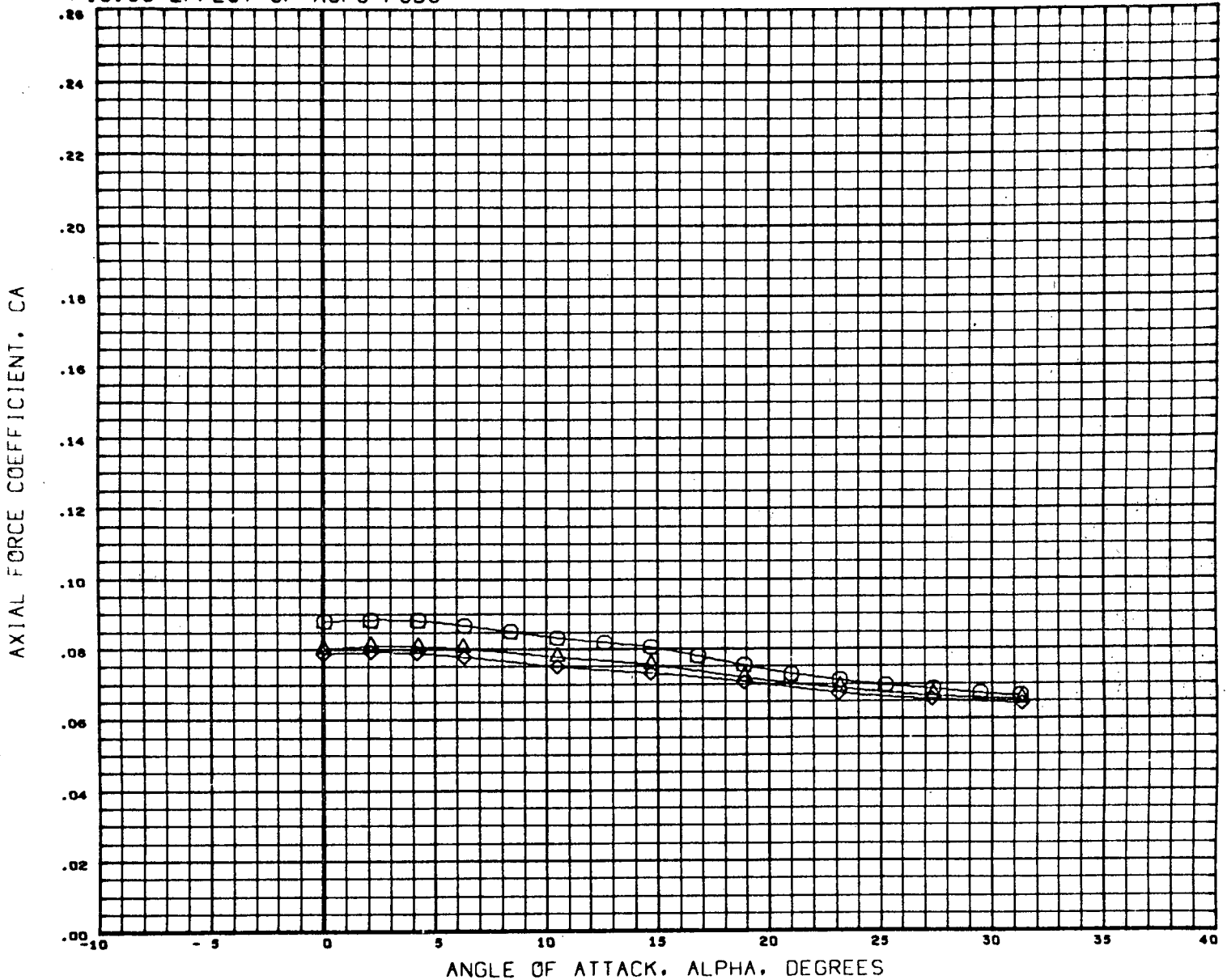
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB111)	JPL WT 20-681 MSC 040A BIW1V1 (30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5580 SQ IN.
(XGB161)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB171)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1087.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

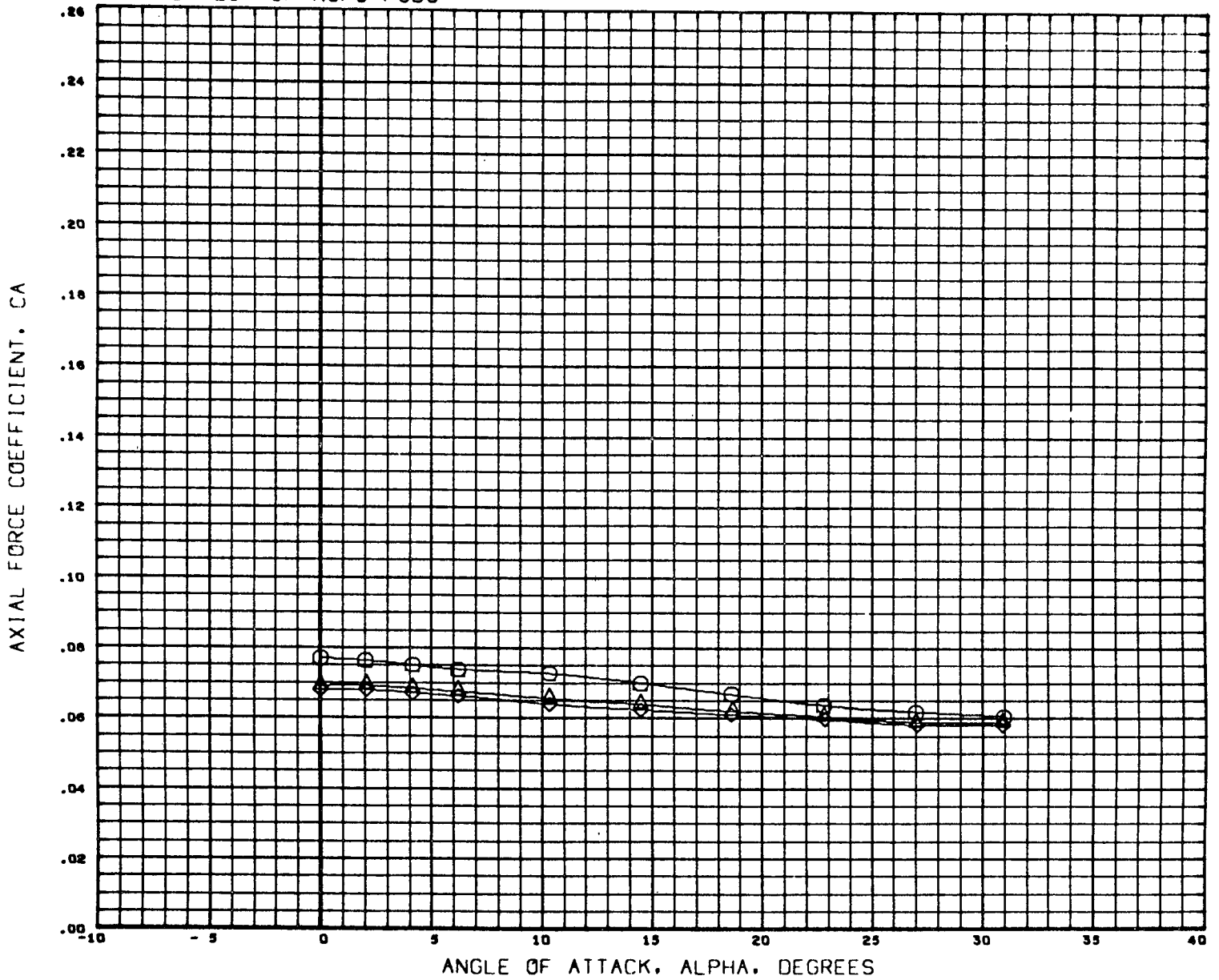
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

FIG.39 EFFECT OF ACPS PODS



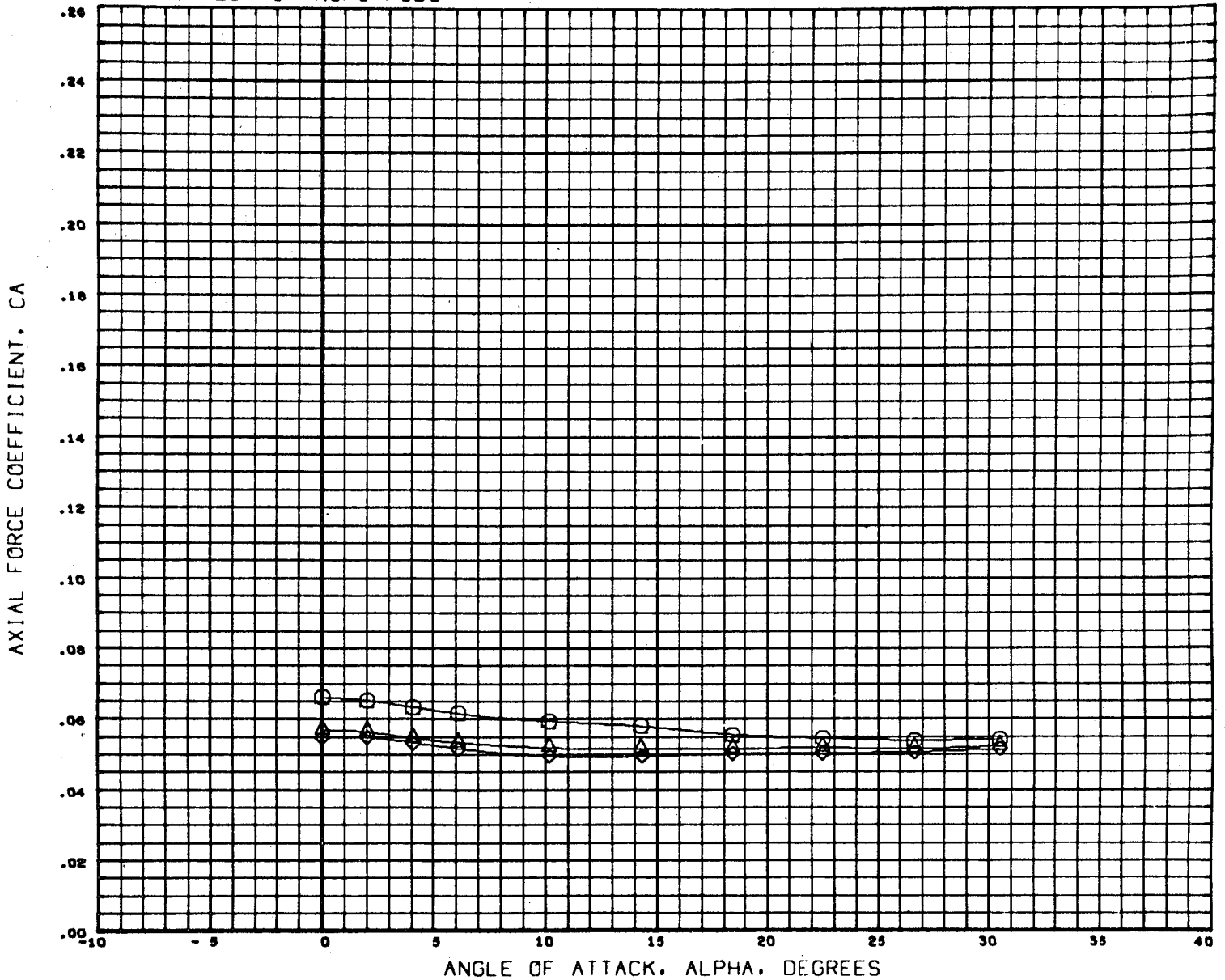
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH

3.03

PAGE 224

FIG.39 EFFECT OF ACPS PODS

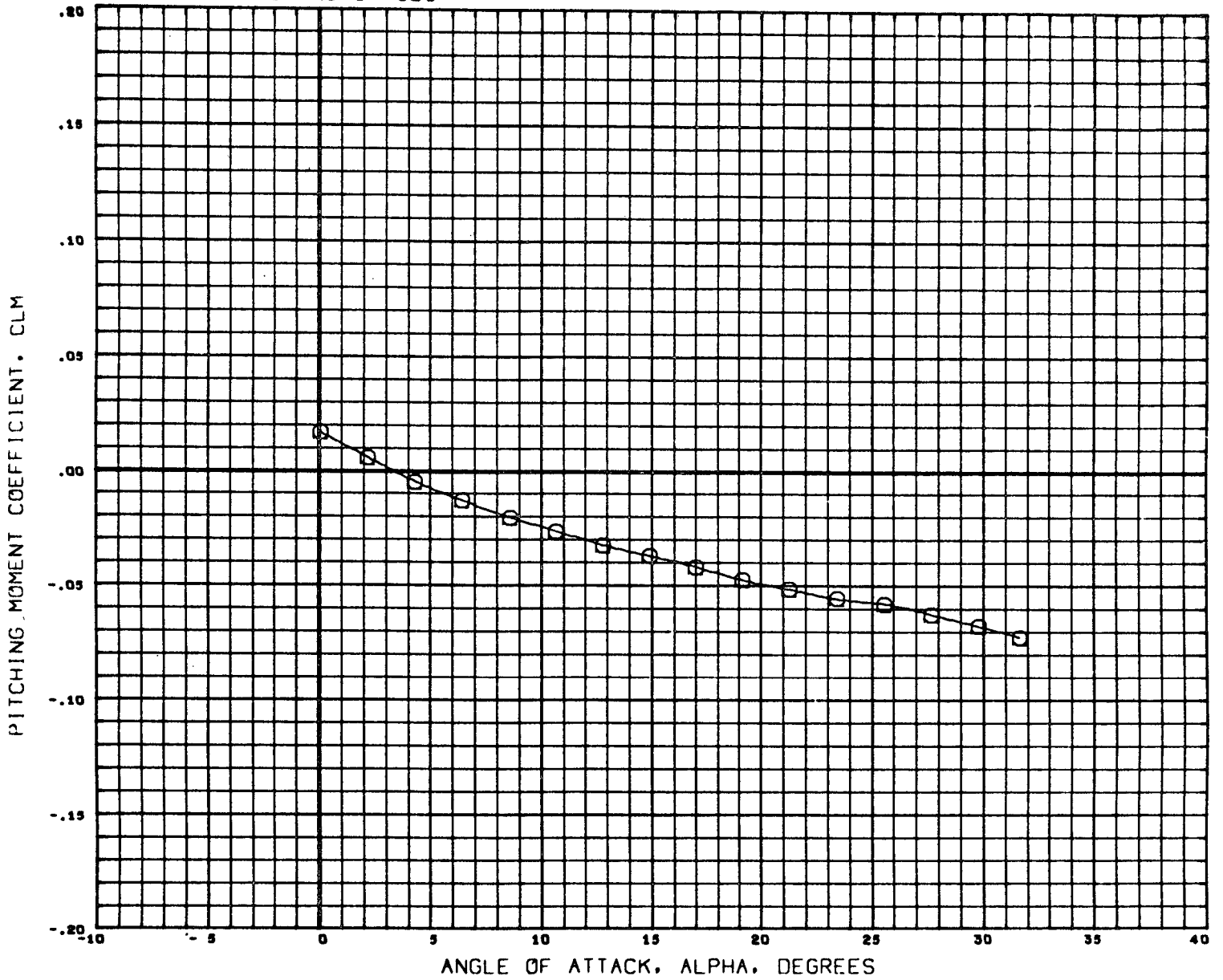


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB111)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB161)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB171)	JPL WT 20-881 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

PAGE 225

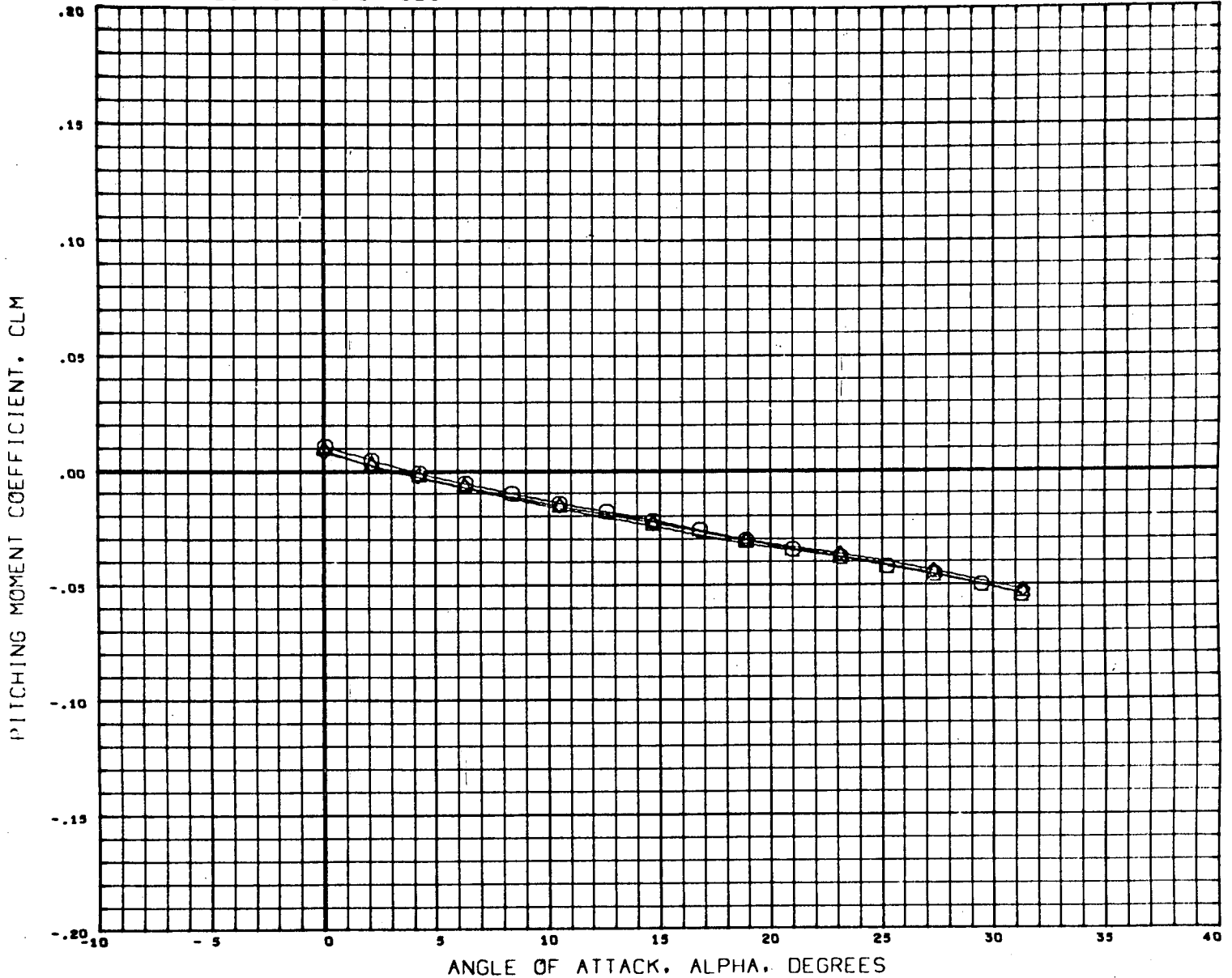
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 80 IN.
(XGB161)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

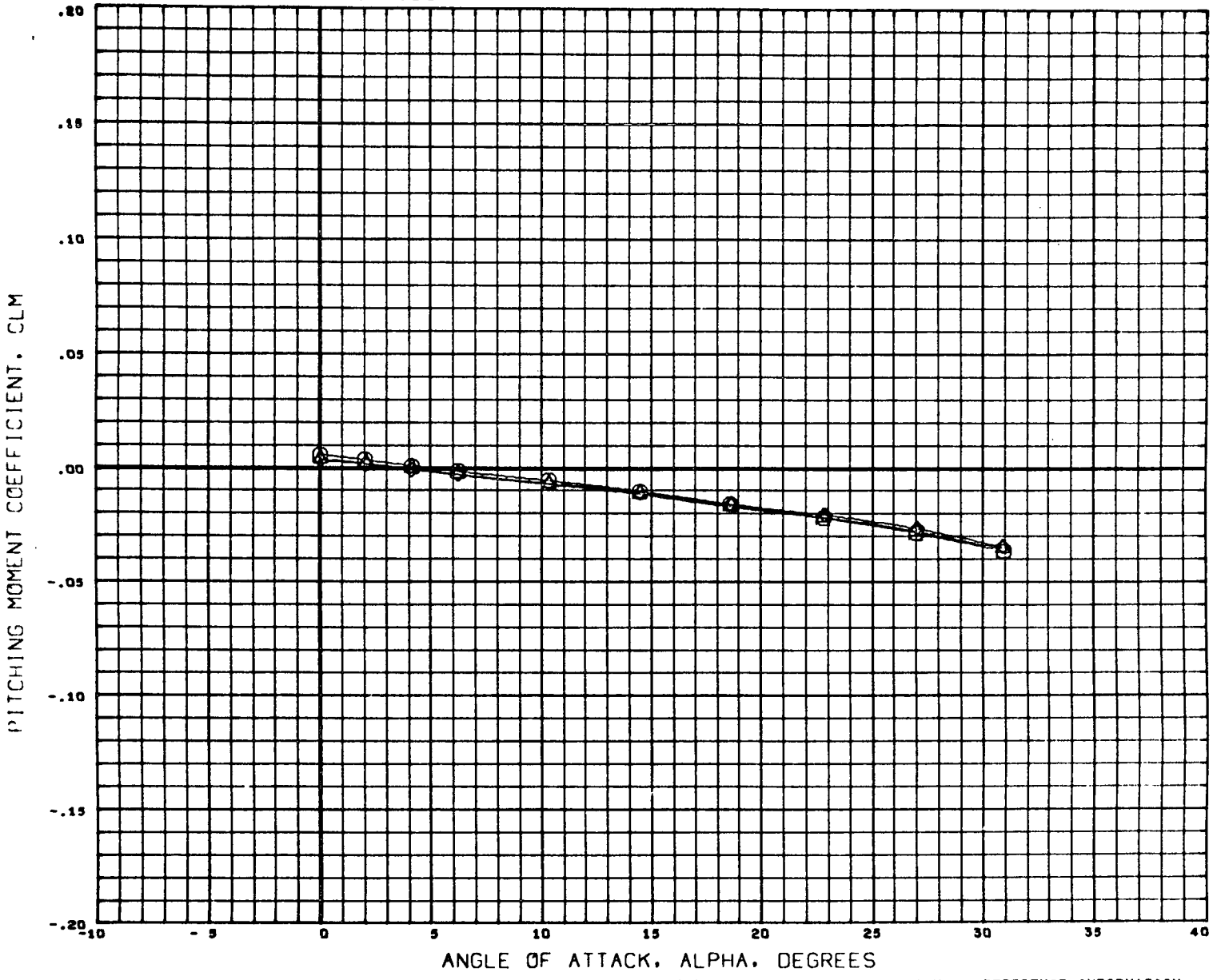
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

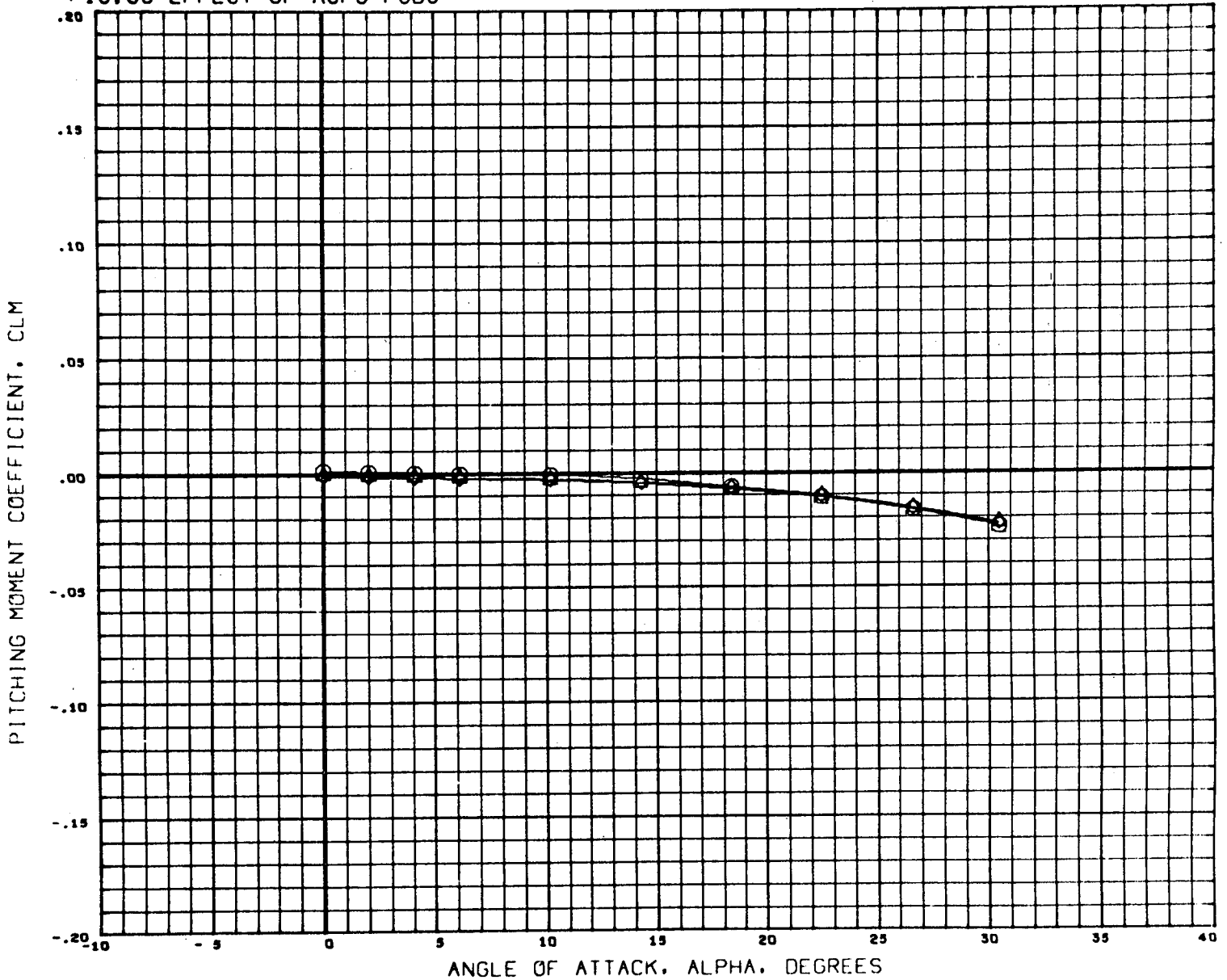
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

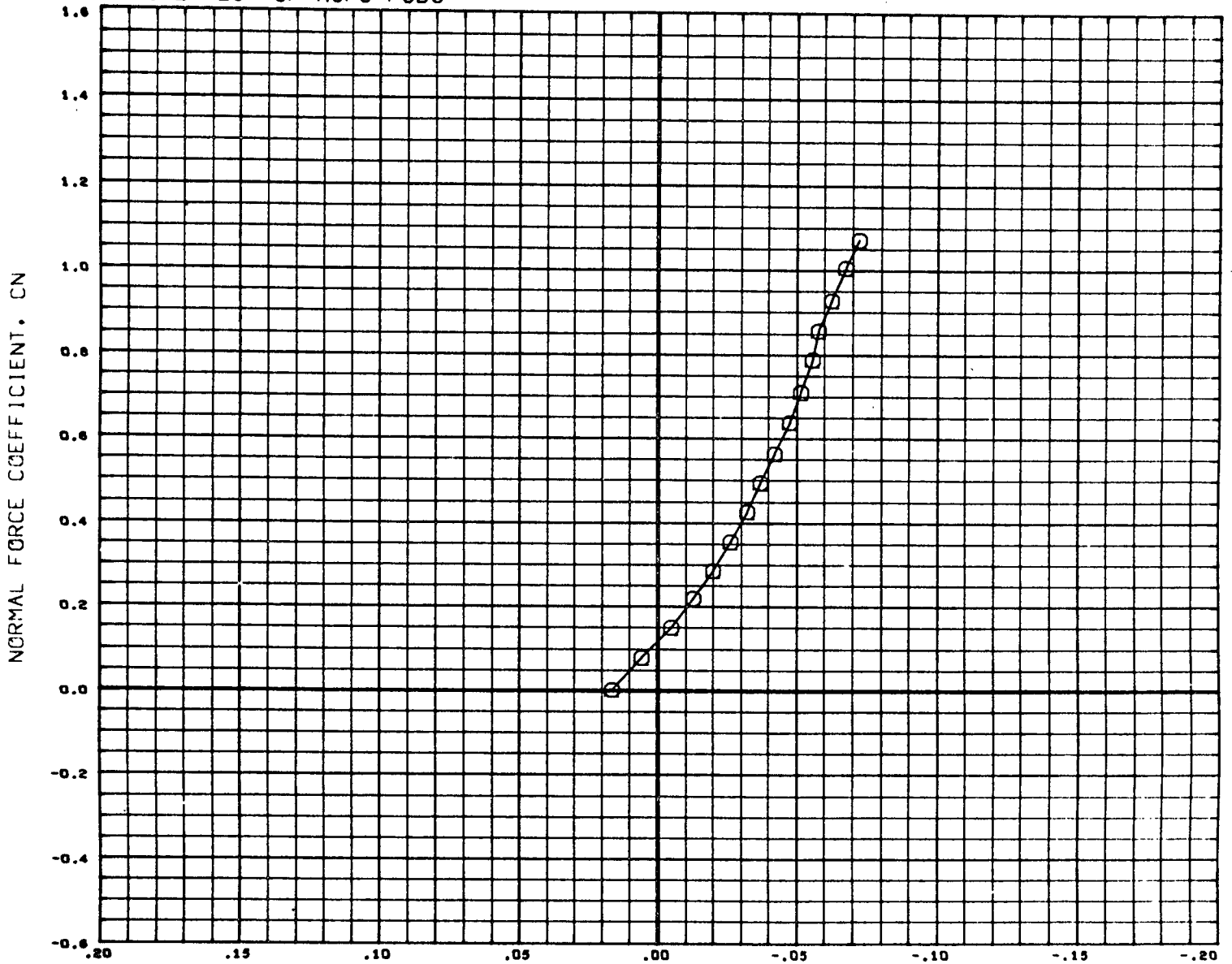
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.98

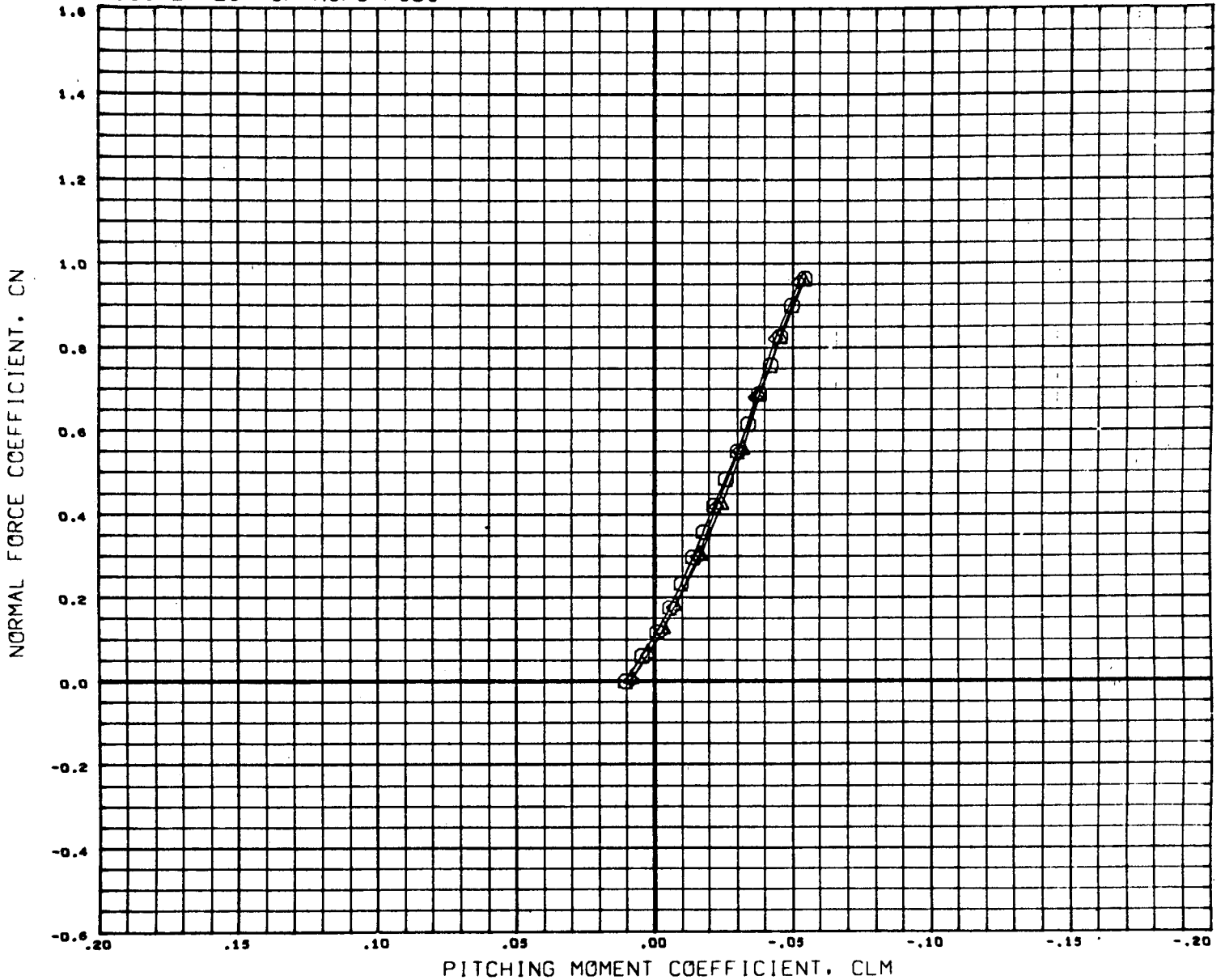
FIG.39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

FIG.39 EFFECT OF ACPS PODS

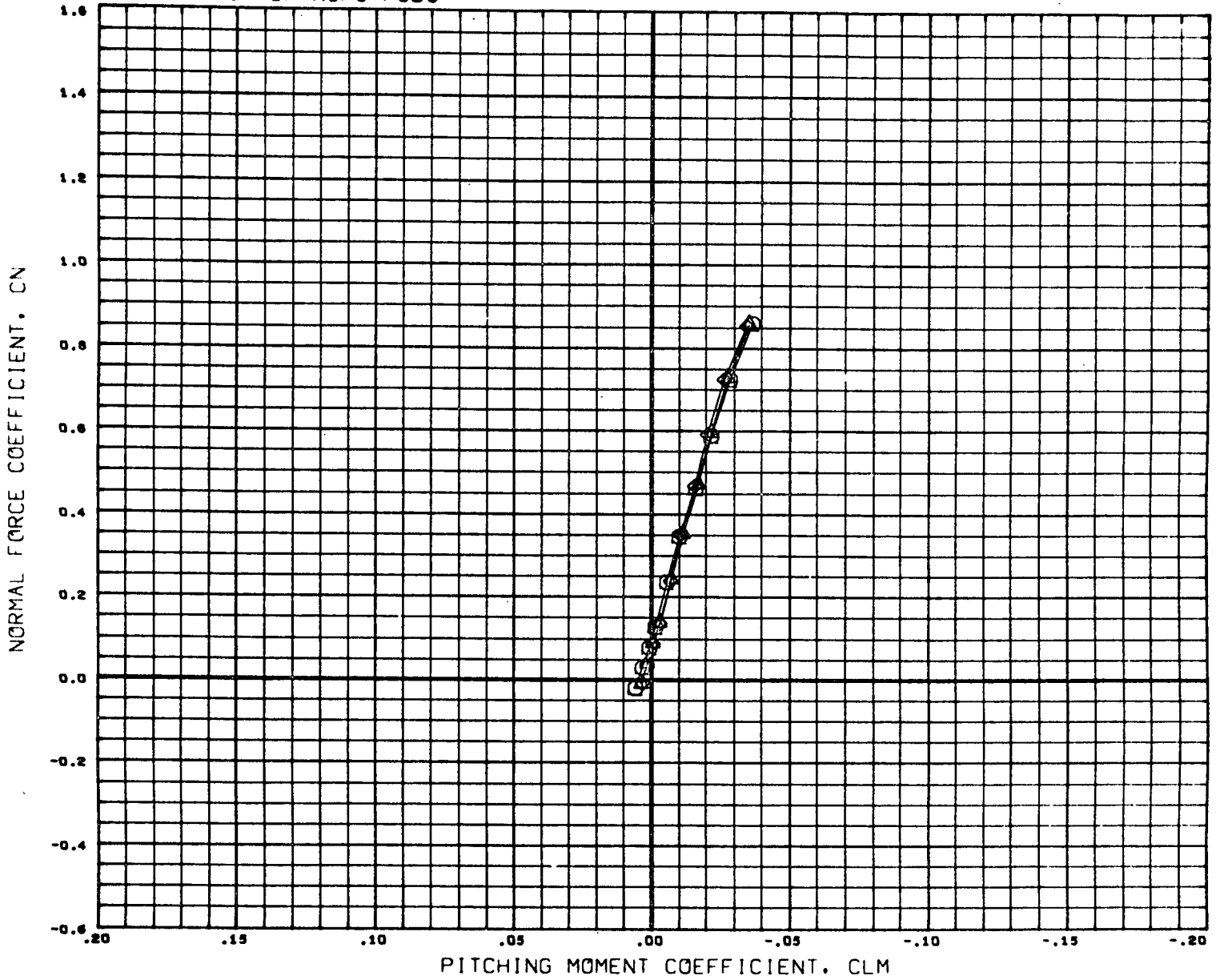


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XCB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XCB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XCB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

PAGE 231

FIG.39 EFFECT OF ACPS PODS

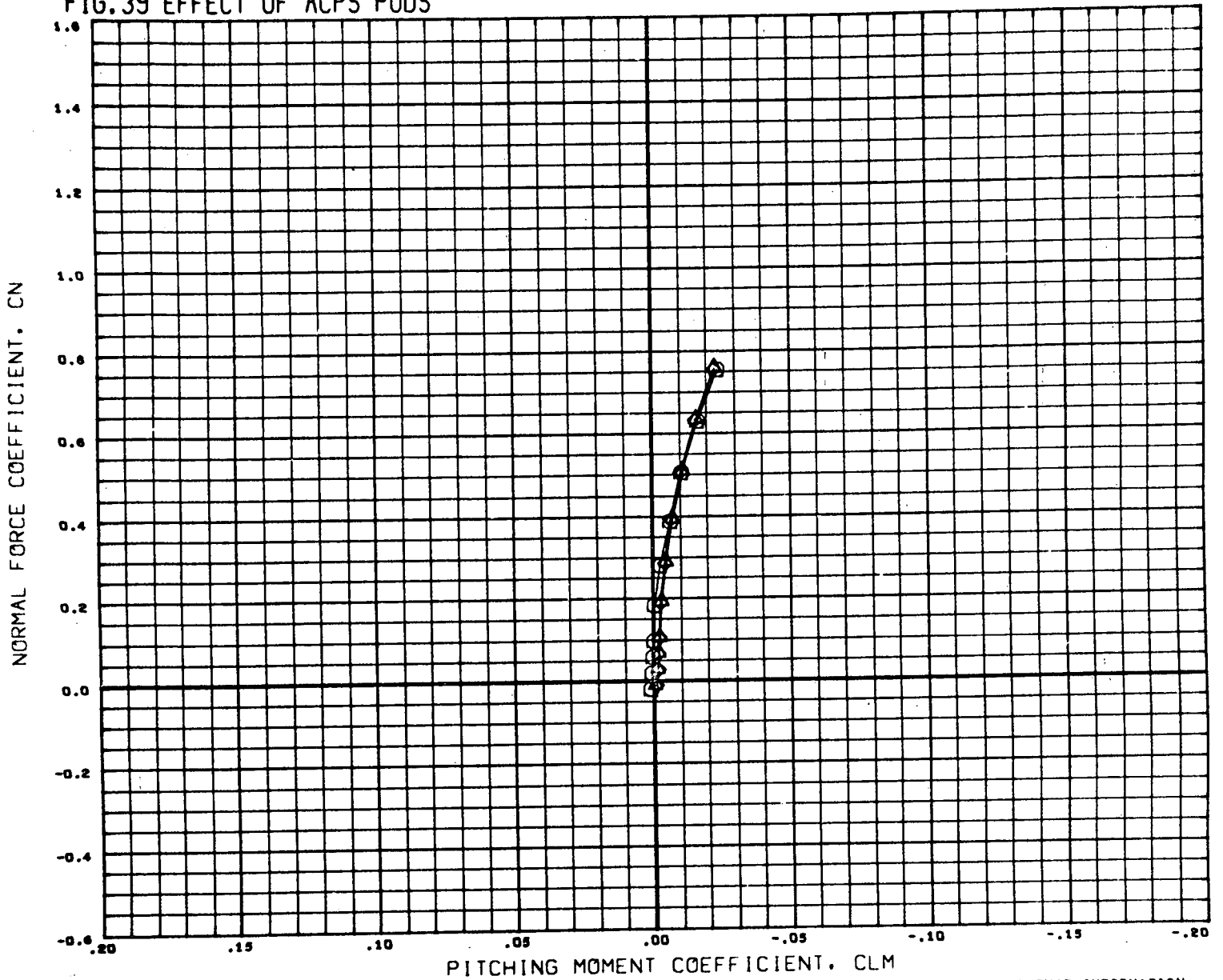


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XM RP	1067.9040 IN.
						YM RP	0.0000 IN.
						ZM RP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

PAGE 232

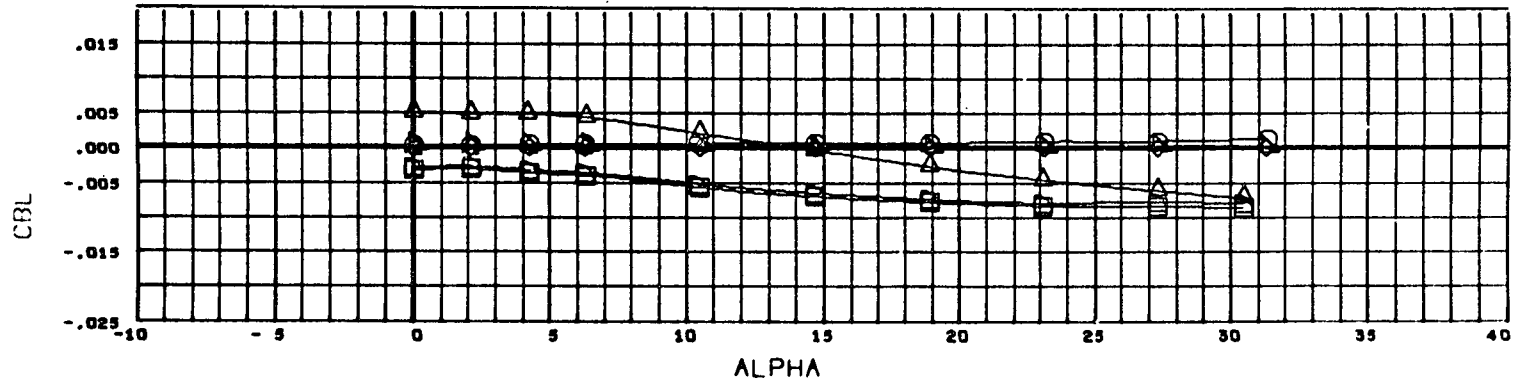
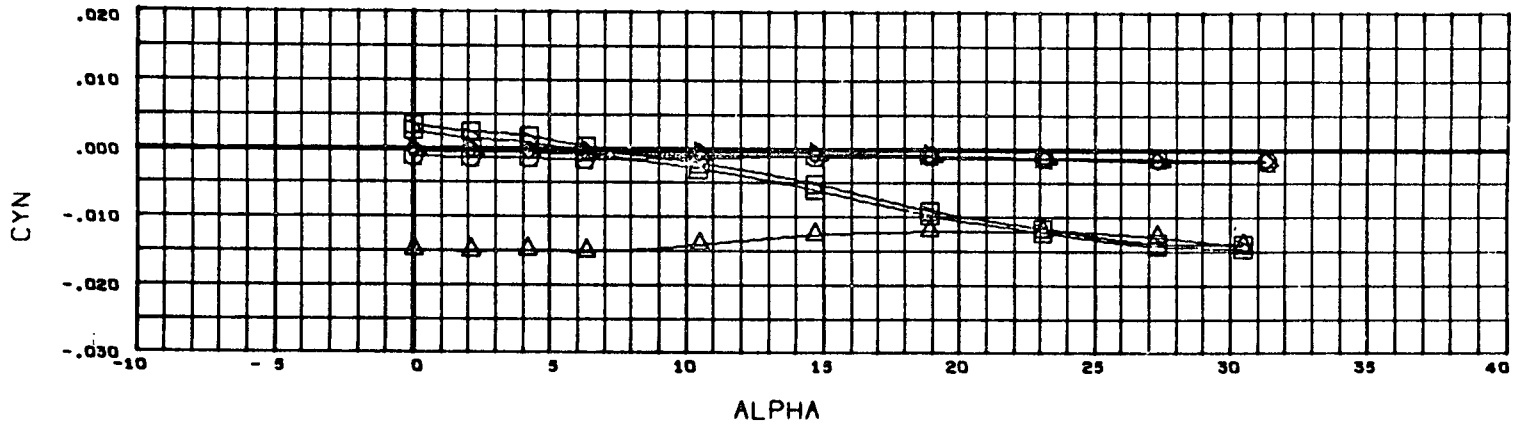
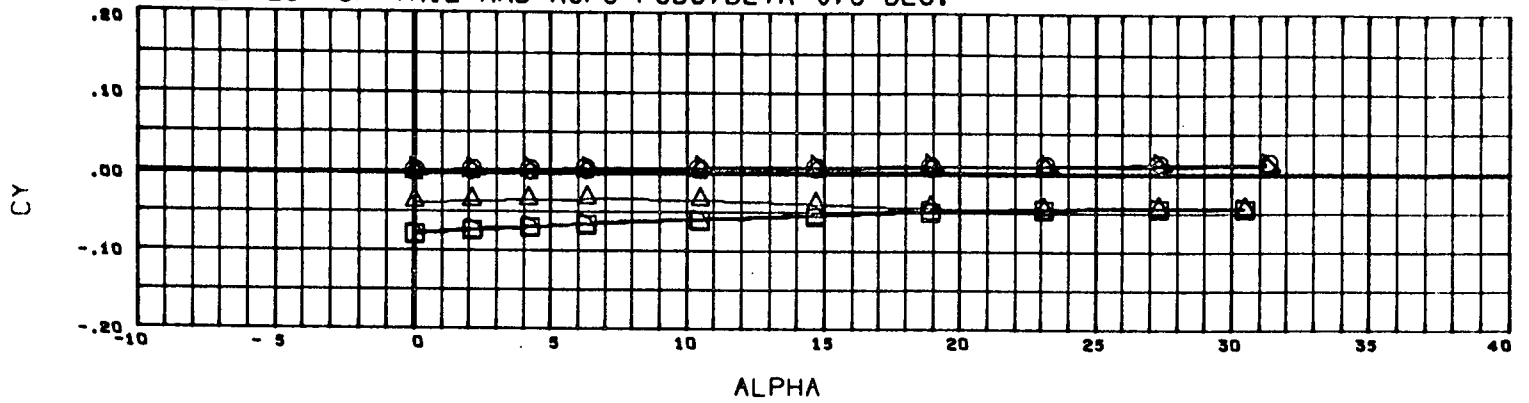
FIG. 39 EFFECT OF ACPS PODS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB161)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB171)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0030 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

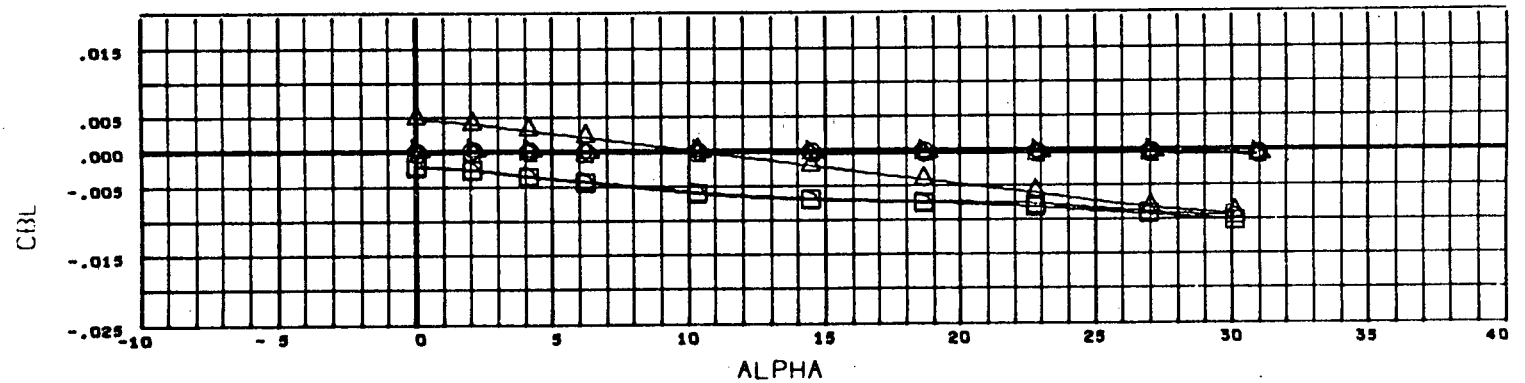
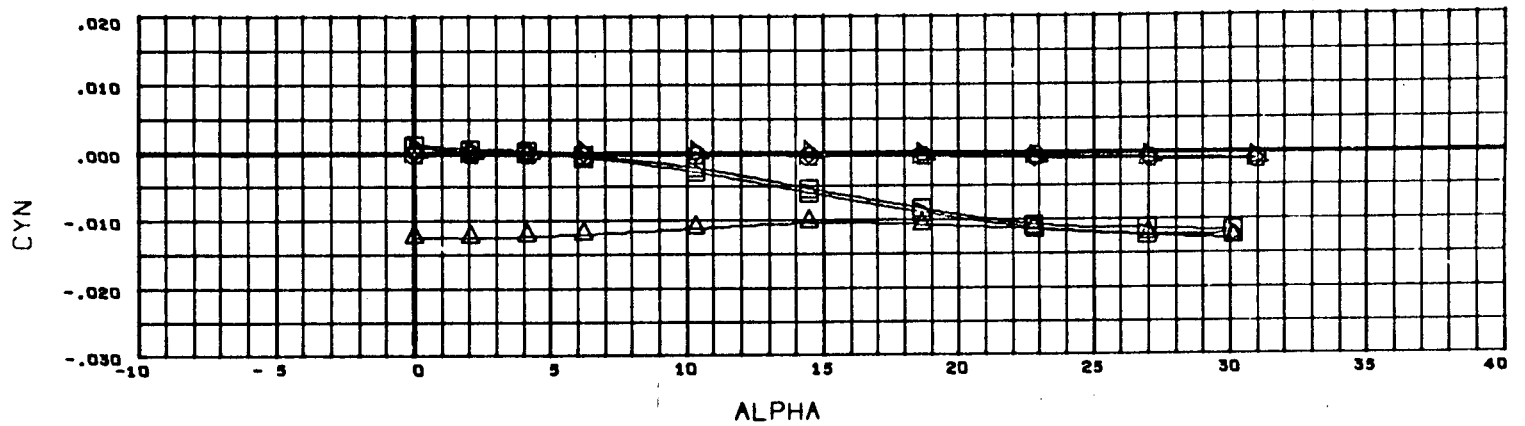
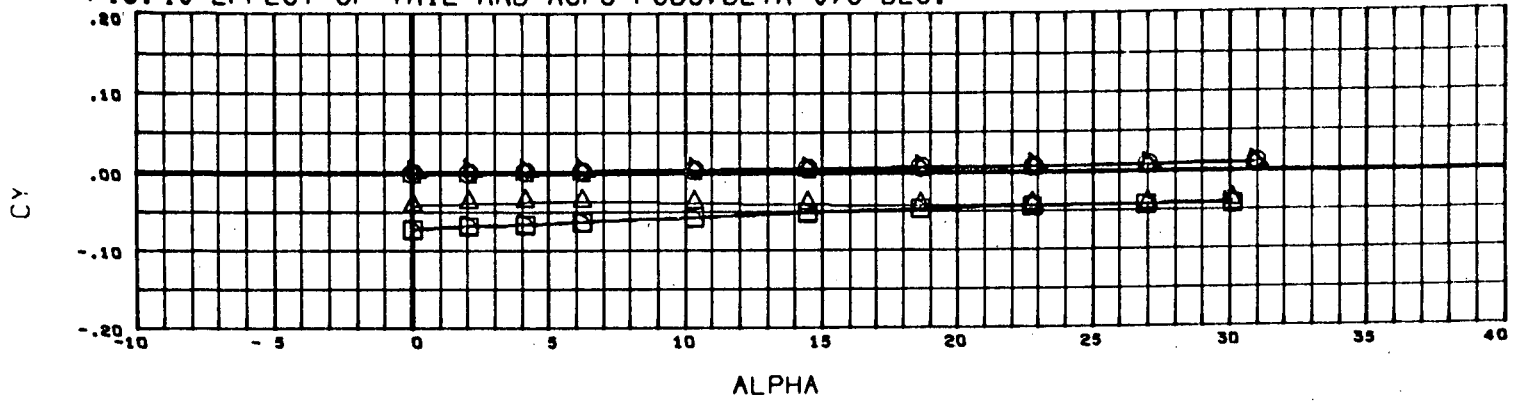
MACH 3.98

FIG.40 EFFECT OF TAIL AND ACPS PODS, BETA=0.5 DEG.



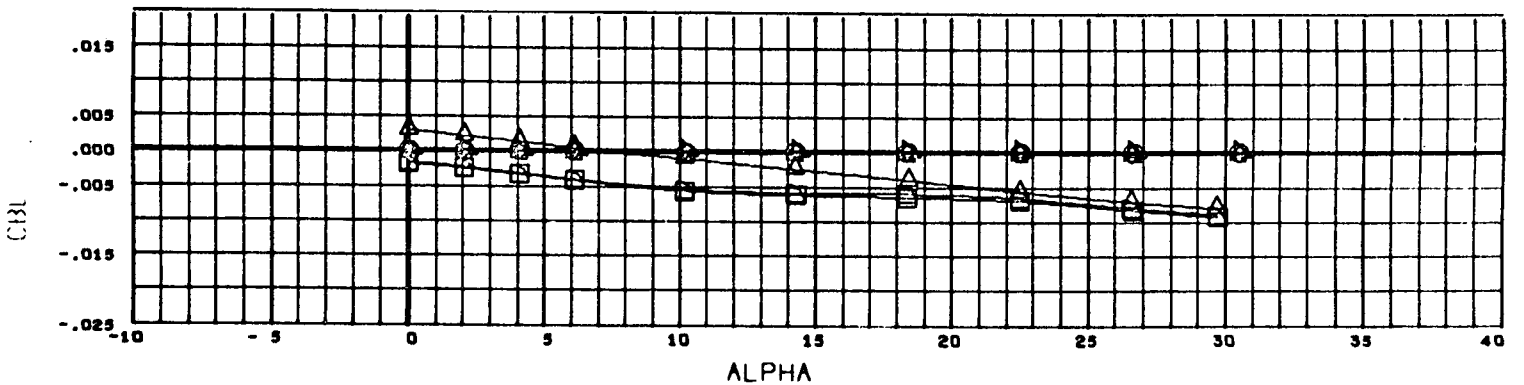
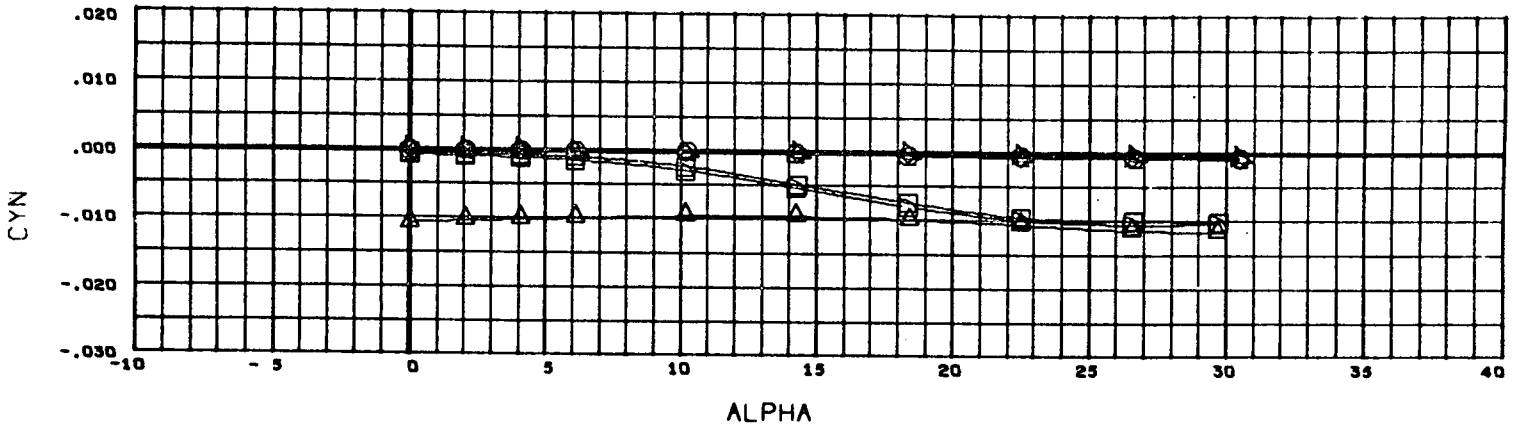
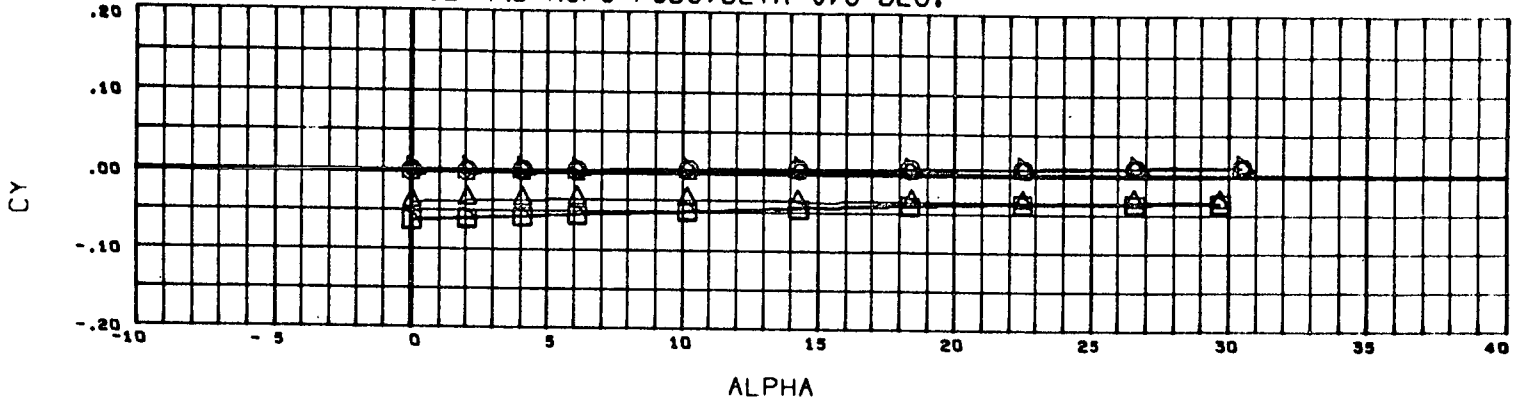
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB241)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000			0.000	SREF 25.5560 SQ IN.
(XGB242)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	5.000			0.000	LREF 4.5720 IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB162)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	5.000	30.000	0.000	0.000	XHRP 1067.9040 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	0.000	30.000	0.000	0.000	YHRP 0.0000 IN.
(XGB172)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	5.000	30.000	0.000	0.000	ZHRP 400.0004 IN. SCALE 0.0075

FIG. 40 EFFECT OF TAIL AND ACPS PODS, BETA=0.5 DEG.



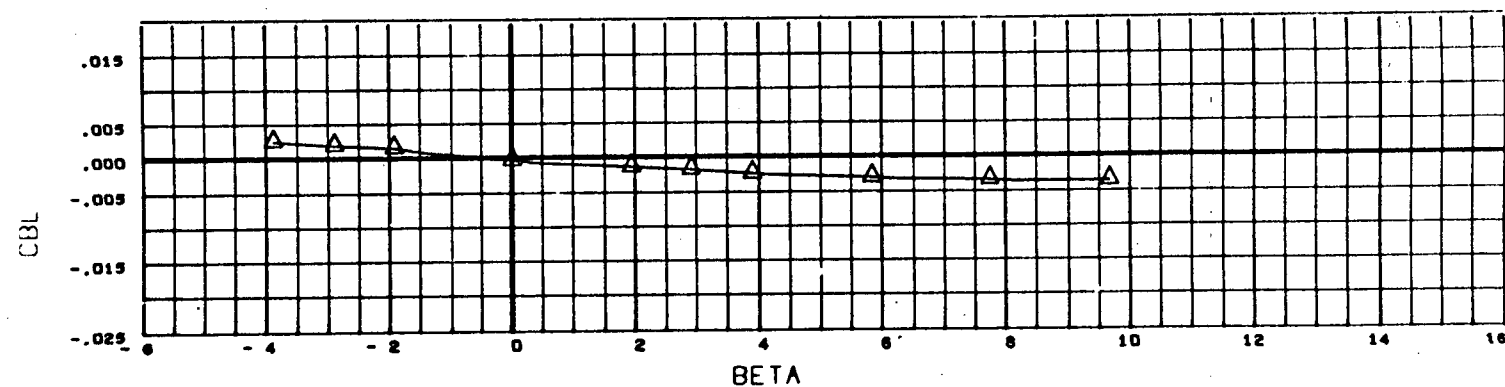
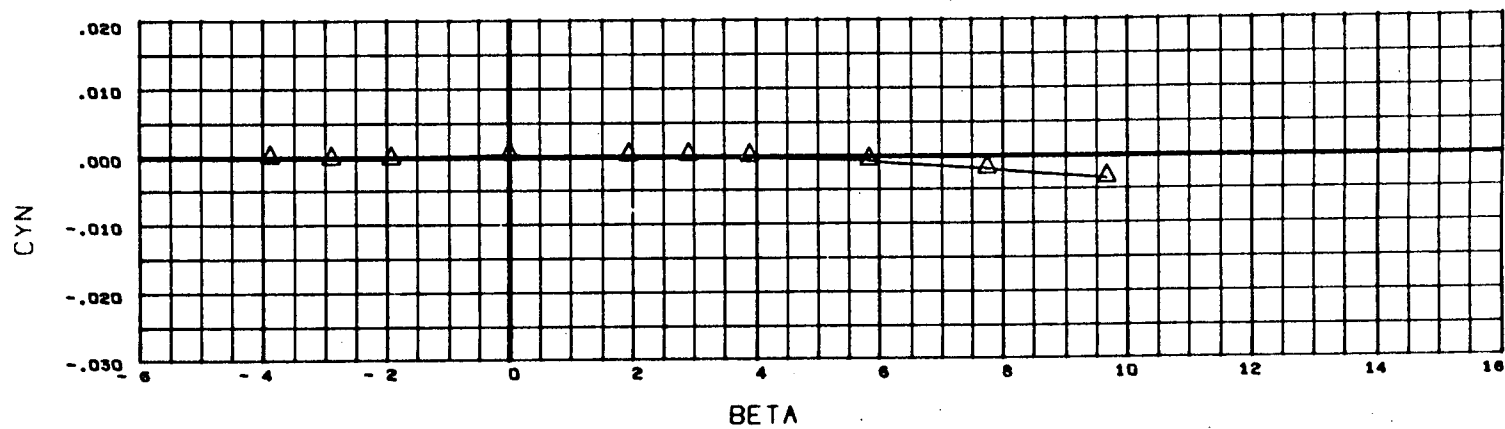
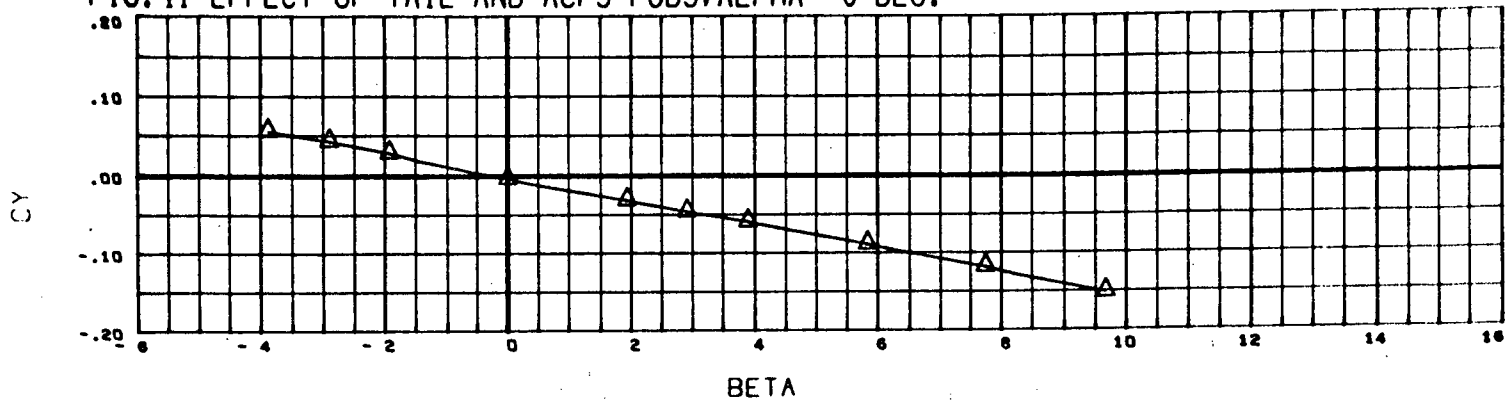
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB241)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000			0.000	SREF 25.5560 SQ IN.
(XGB242)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	5.000			0.000	LREF 4.5720 IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB162)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	0.000	30.000	0.000	0.000	YMRP 0.0000 IN.
(XGB172)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	5.000	30.000	0.000	0.000	ZMRP 400.0004 IN. SCALE 0.0075

FIG.40 EFFECT OF TAIL AND ACPS PODS, BETA=0,5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB241)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000			0.000	SREF 25.5560 SQ IN.
(XGB242)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	5.000			0.000	LREF 4.3720 IN.
(XGB161)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB162)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN.
(XGB171)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	0.000	30.000	0.000	0.000	YMRP 0.0000 IN.
(XGB172)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	5.000	30.000	0.000	0.000	ZMRP 400.0004 IN.
						SCALE 0.0075

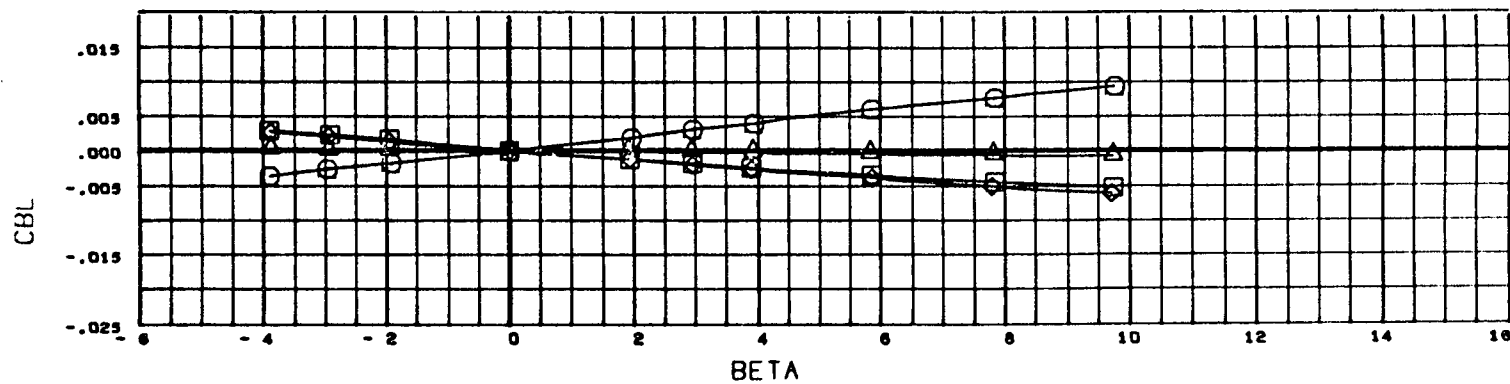
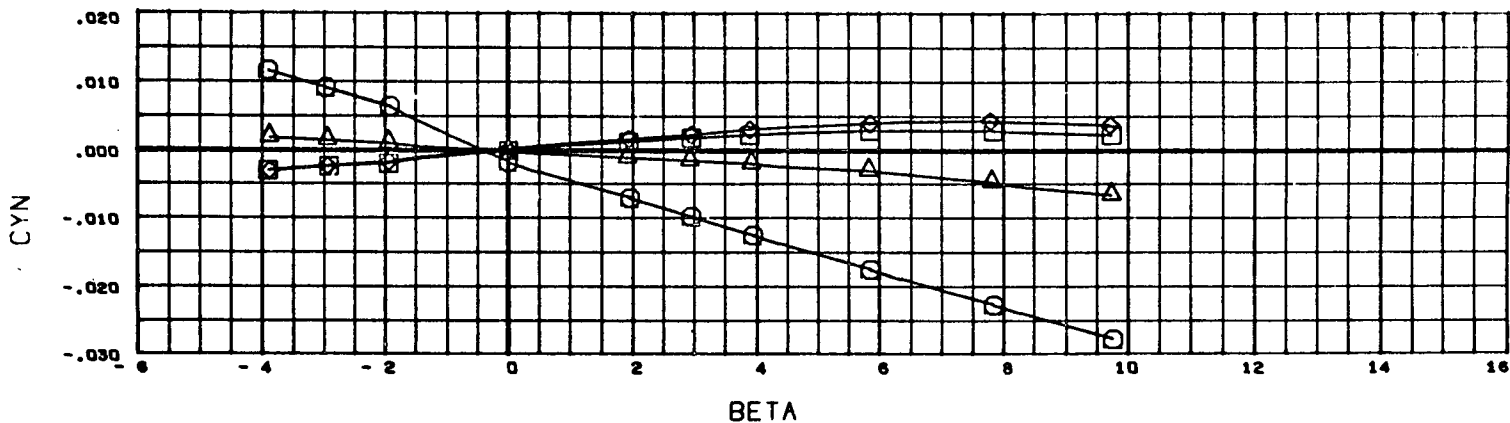
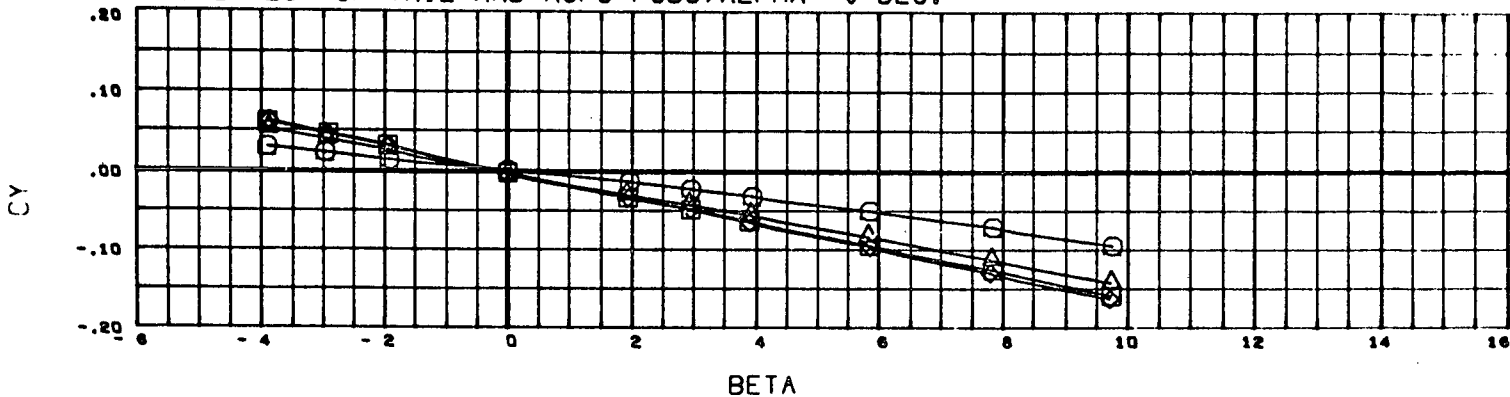
FIG. 41 EFFECT OF TAIL AND ACPS PODS, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB243)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(XGB163)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB173)	DATA NOT AVAILABLE FOR ALL CONDITIONS

RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
30.000	0.000	0.000	0.000	LREF	4.5720 IN.
30.000	0.000	0.000	0.000	BREF	6.6150 IN.
				XMRP	1067.9040 IN.
				YMRP	0.0000 IN.
				ZMRP	400.0004 IN.
				SCALE	0.0075

FIG. 41 EFFECT OF TAIL AND ACPS PODS, ALPHA= 0 DEG.

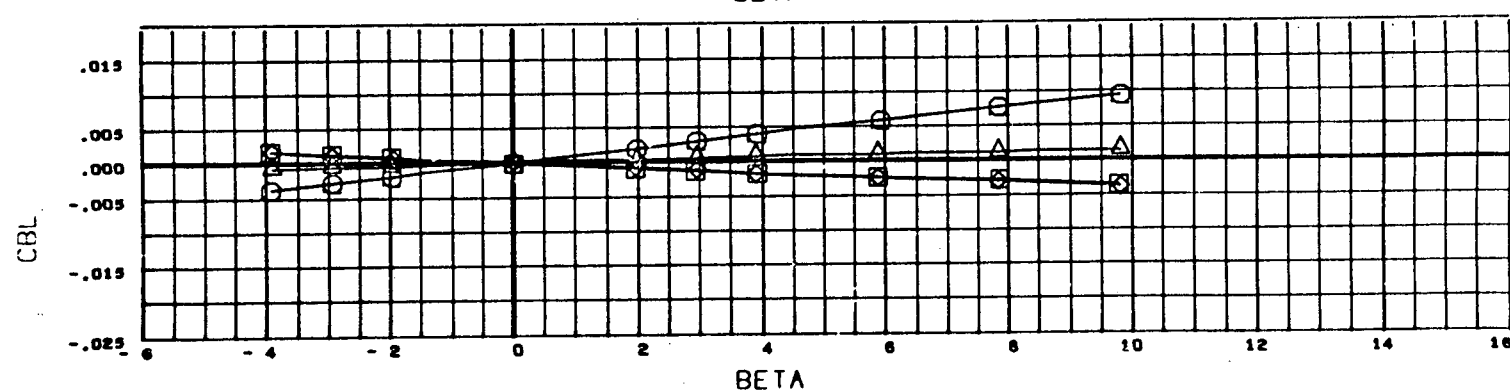
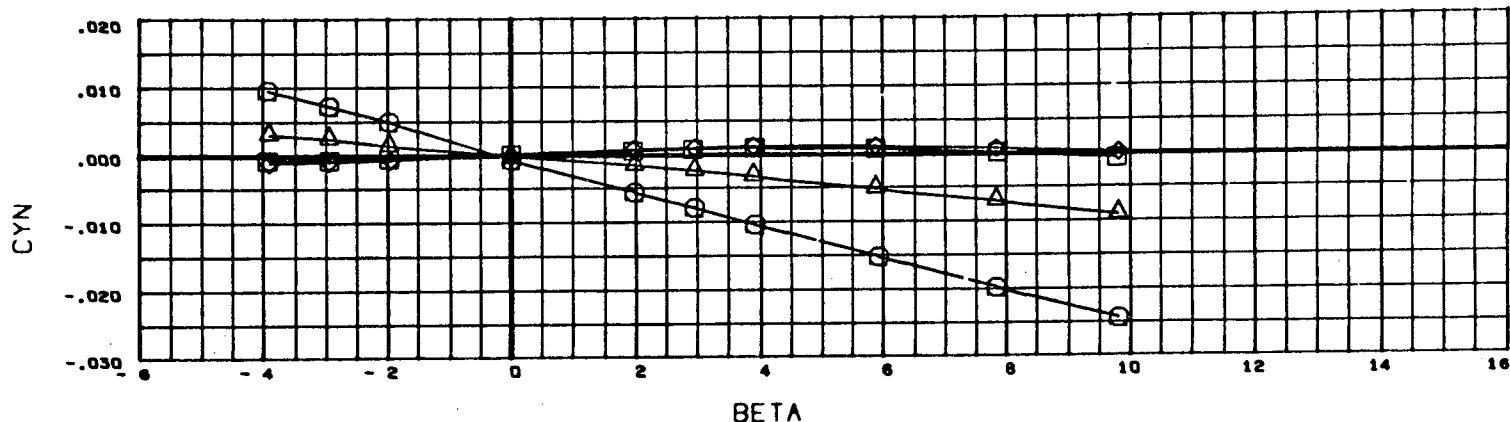
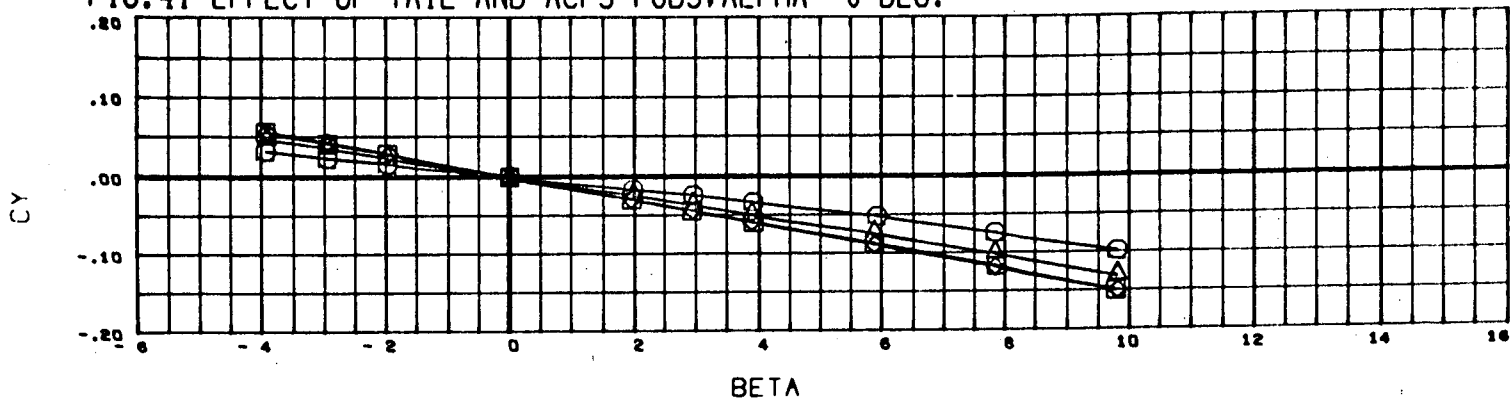


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION		
(RGB243)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF	25.5560	SQ IN.
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF	4.5720	IN.
(XGB163)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF	6.6150	IN.
(XGB173)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP	1067.9040	IN.
						YMRP	0.0000	IN.
						ZMRP	400.0004	IN.
						SCALE	0.0075	

MACH 2.42

PAGE 238

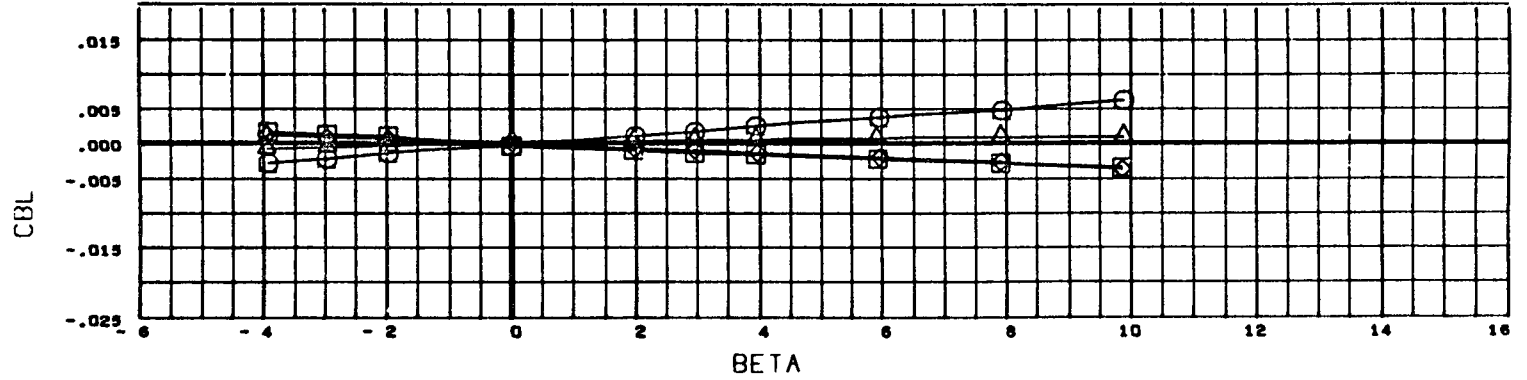
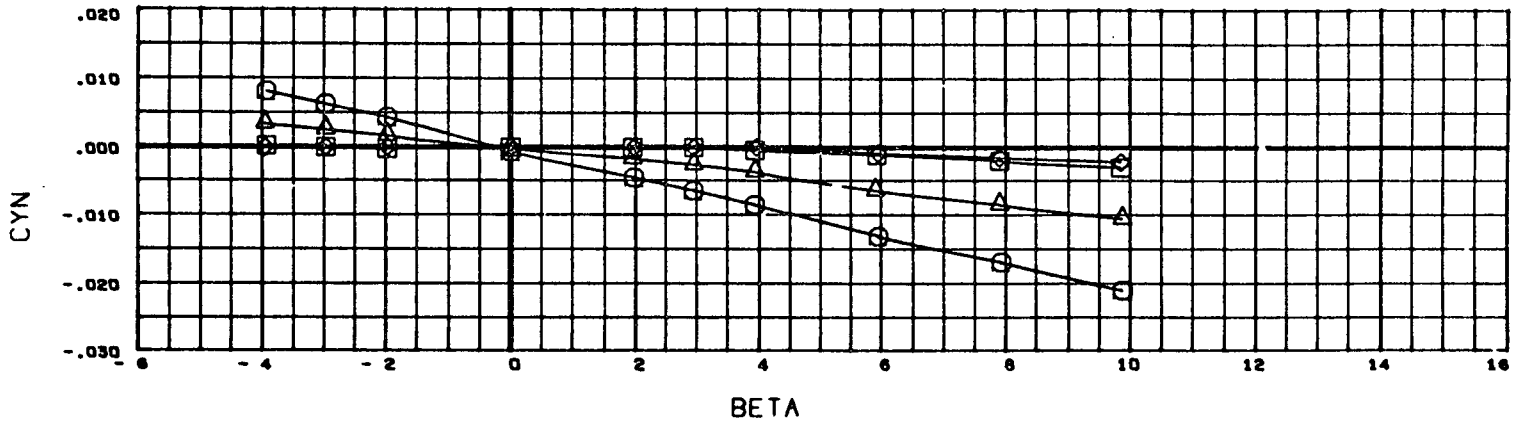
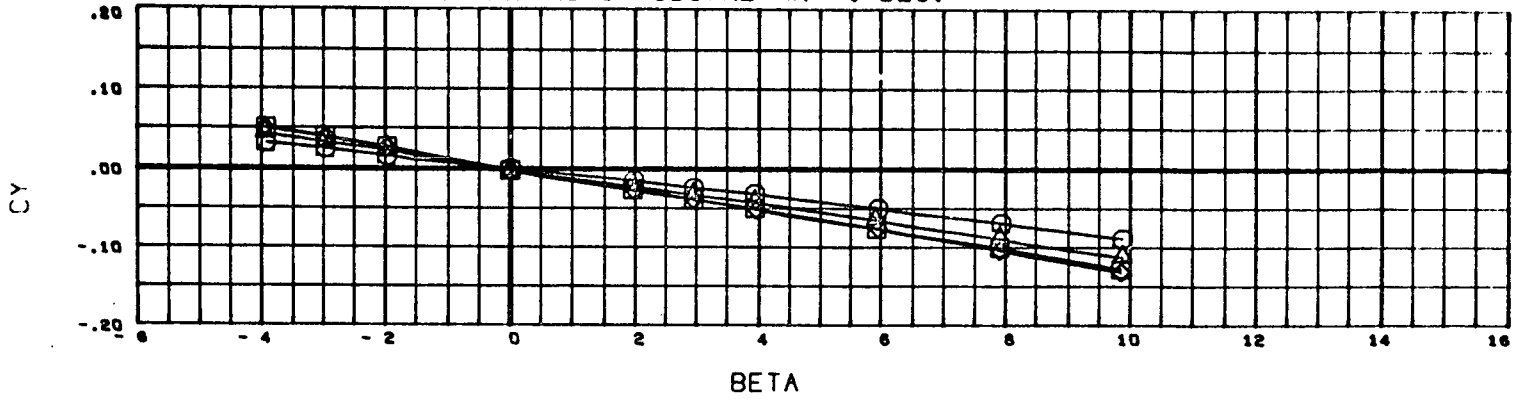
FIG. 41 EFFECT OF TAIL AND ACPS PODS, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(RGB243)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF 25.5560 SQ IN.
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB163)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(XGB173)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.03

FIG.41 EFFECT OF TAIL AND ACPS PODS, ALPHA= 0 DEG.

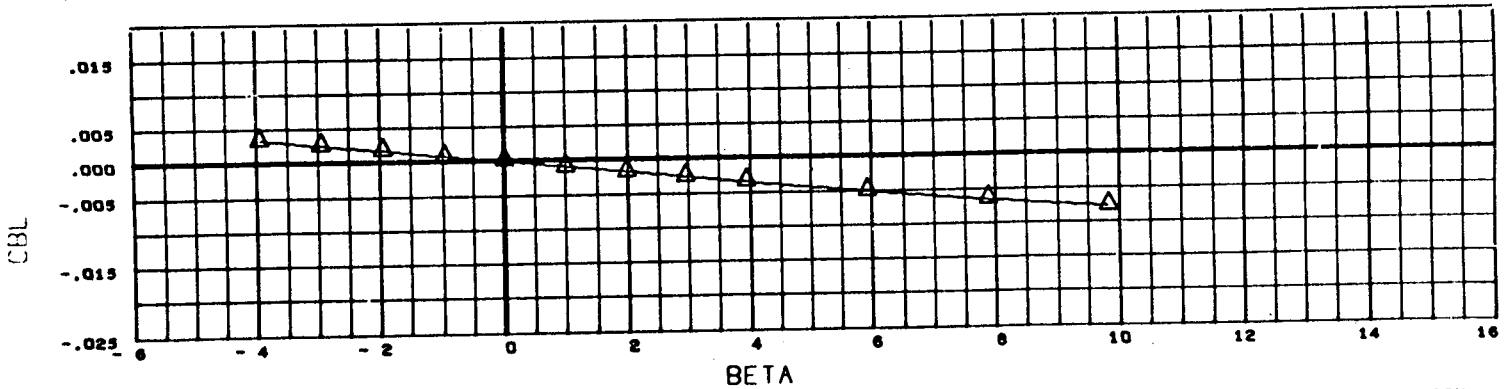
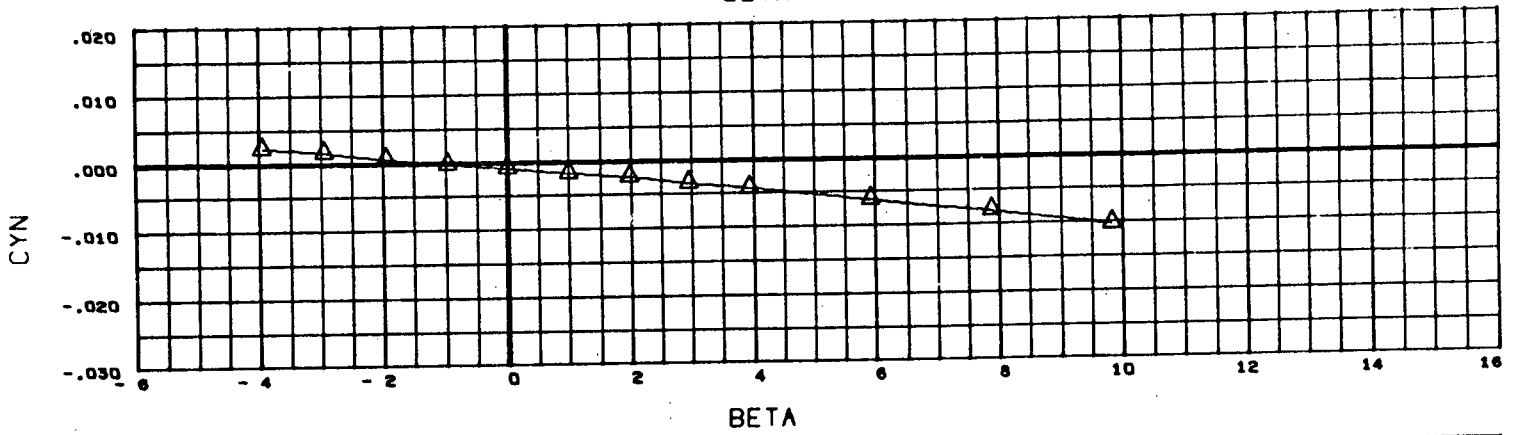
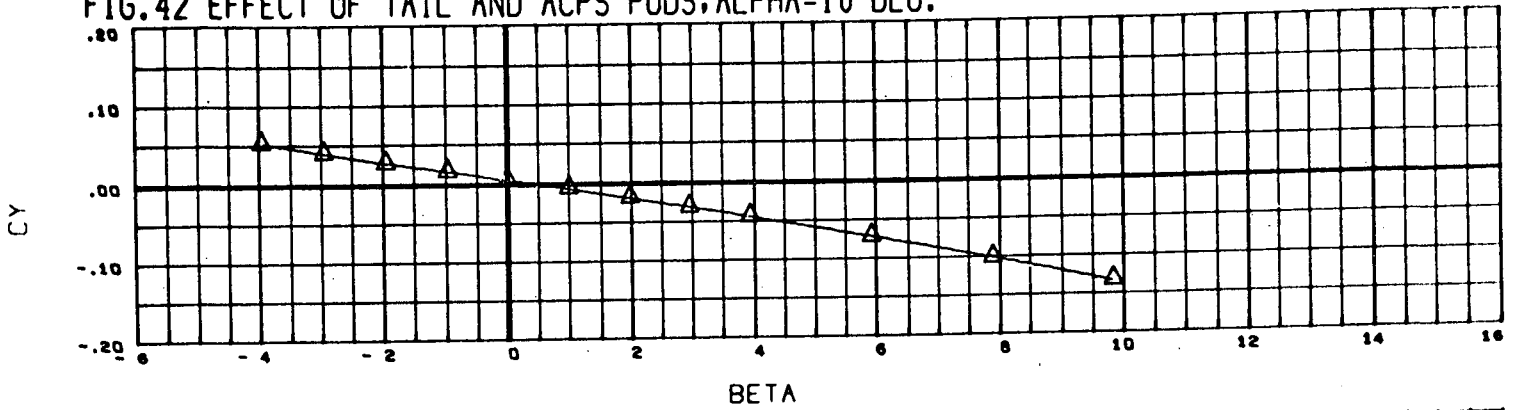


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(RQB243)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF 25.5560 SQ IN.
(XGB013)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB163)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(XGB173)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

PAGE 240

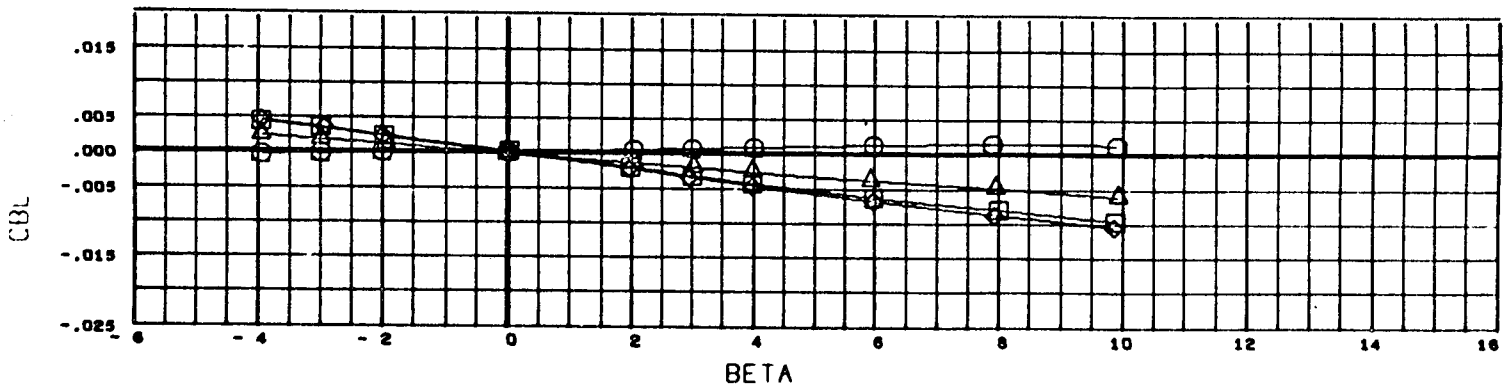
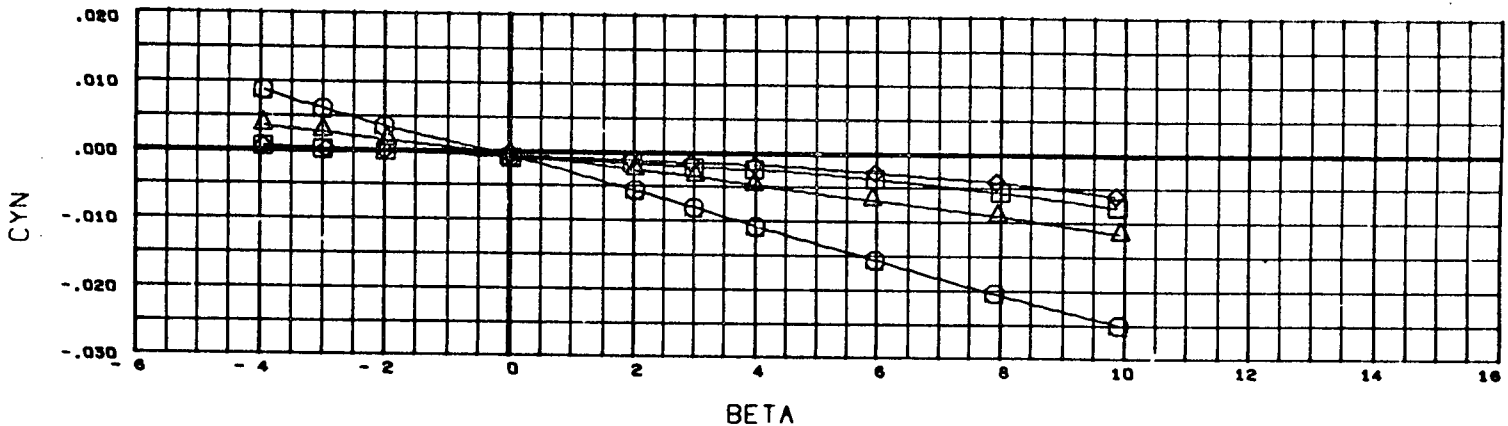
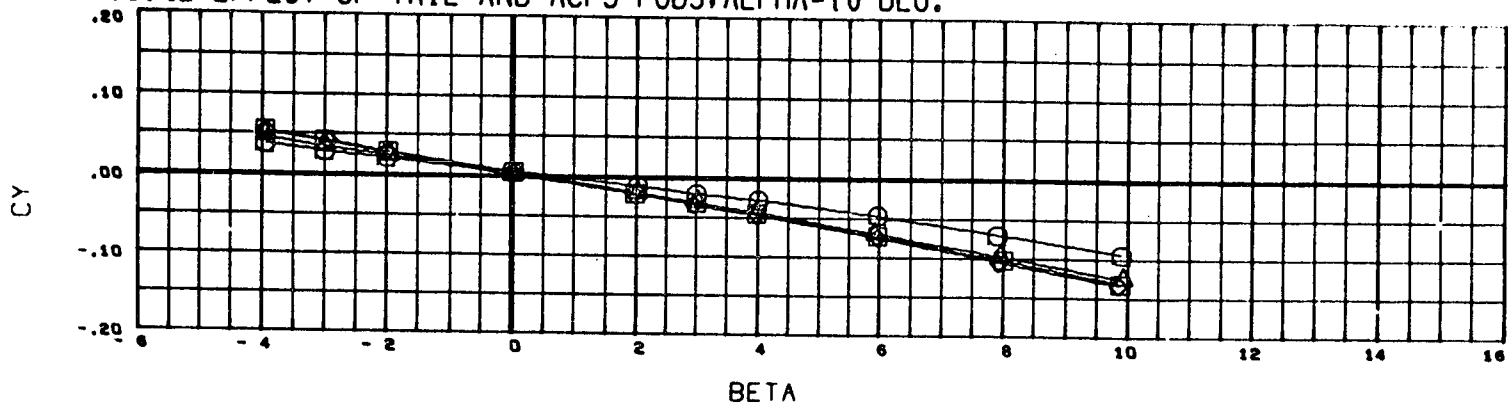
FIG.42 EFFECT OF TAIL AND ACPS PODS, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(RGB244)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB164)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
(XGB174)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

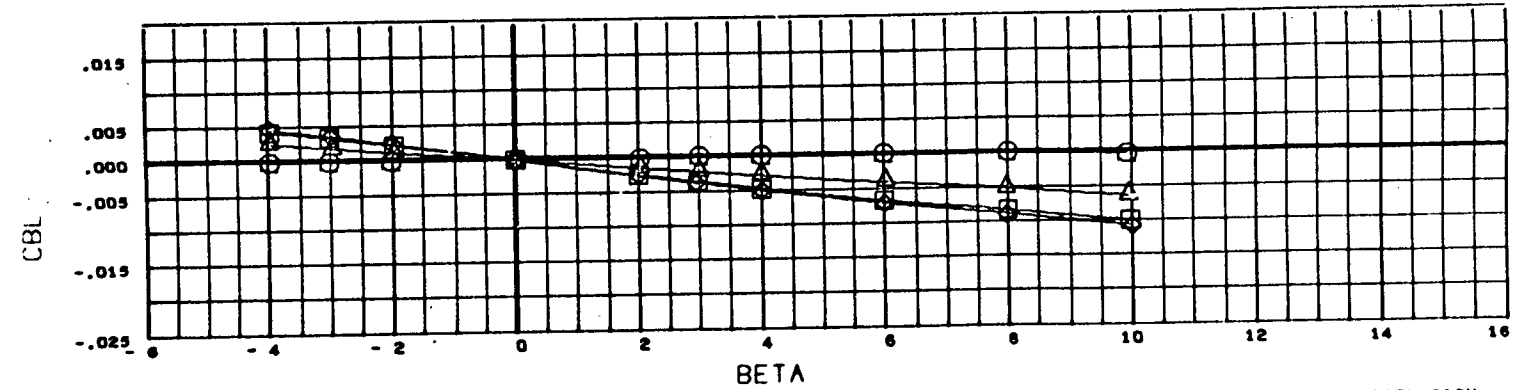
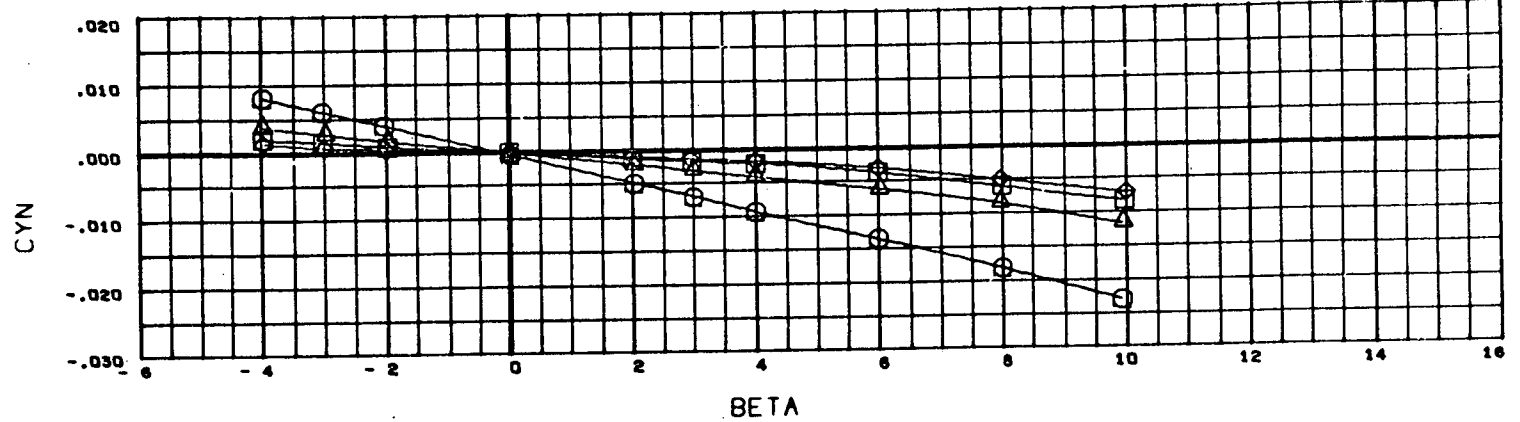
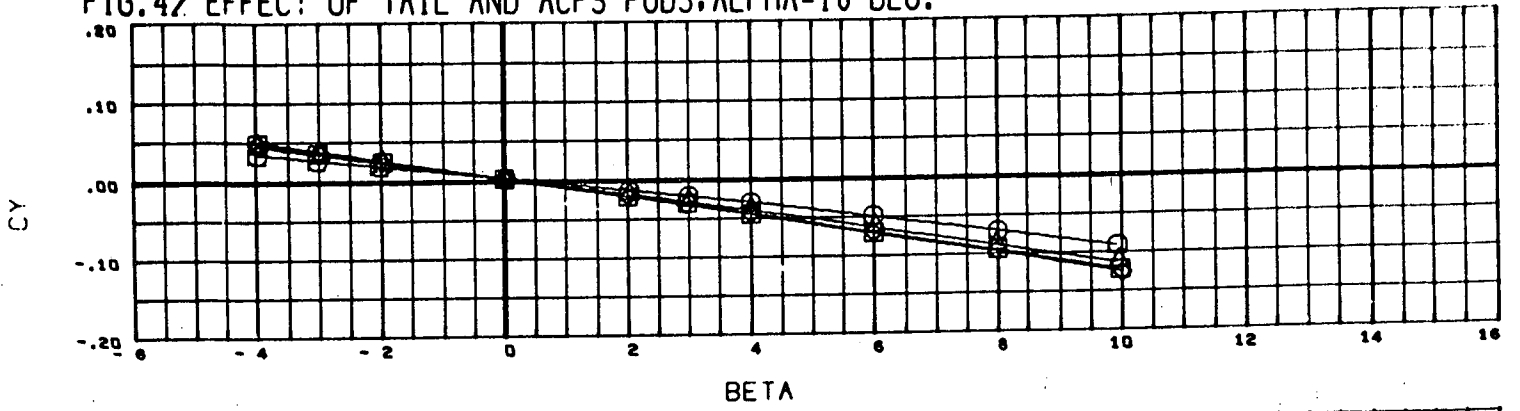
FIG.42 EFFECT OF TAIL AND ACPS PODS, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB244)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB164)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
(XGB174)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

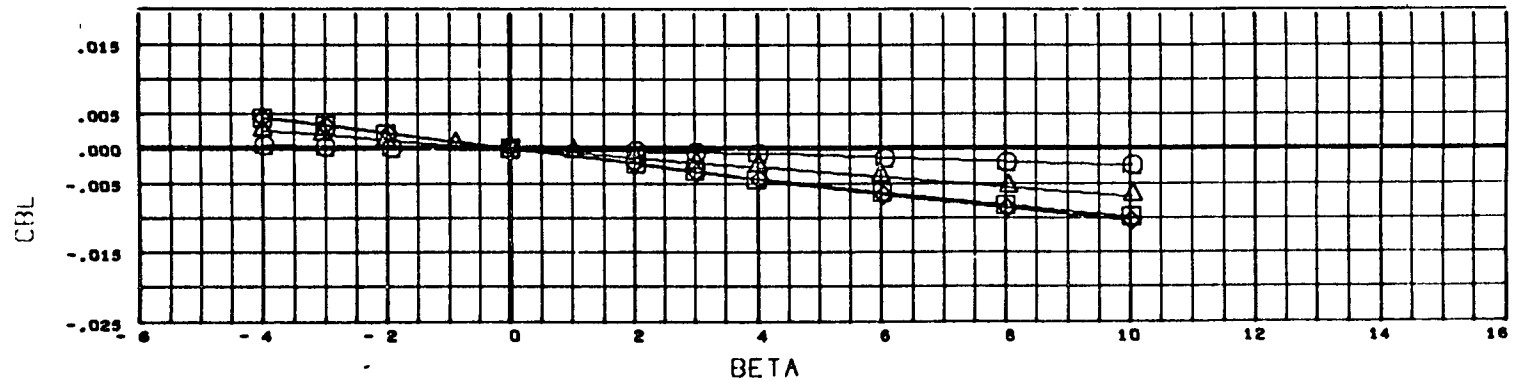
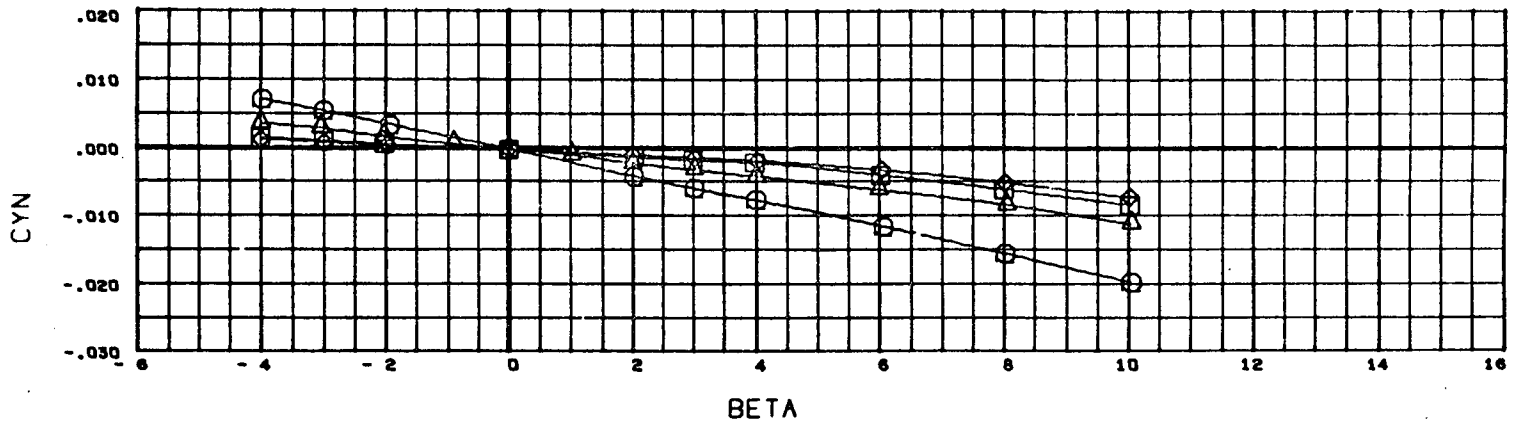
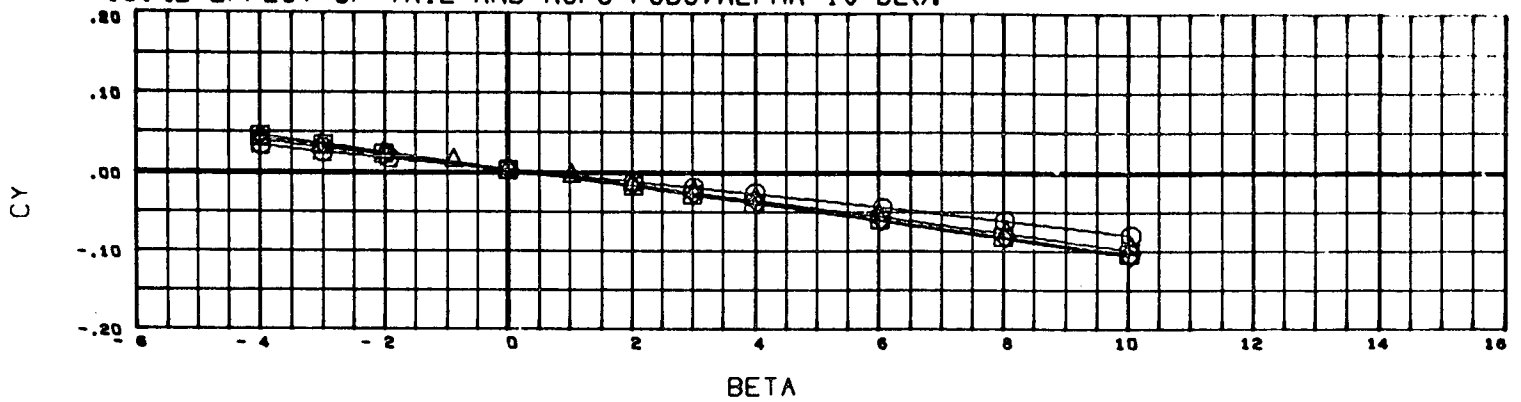
FIG. 42 EFFECT OF TAIL AND ACPS PODS, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(R6B244)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	SREF	25.9560 SQ IN.
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB164)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
(XGB174)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

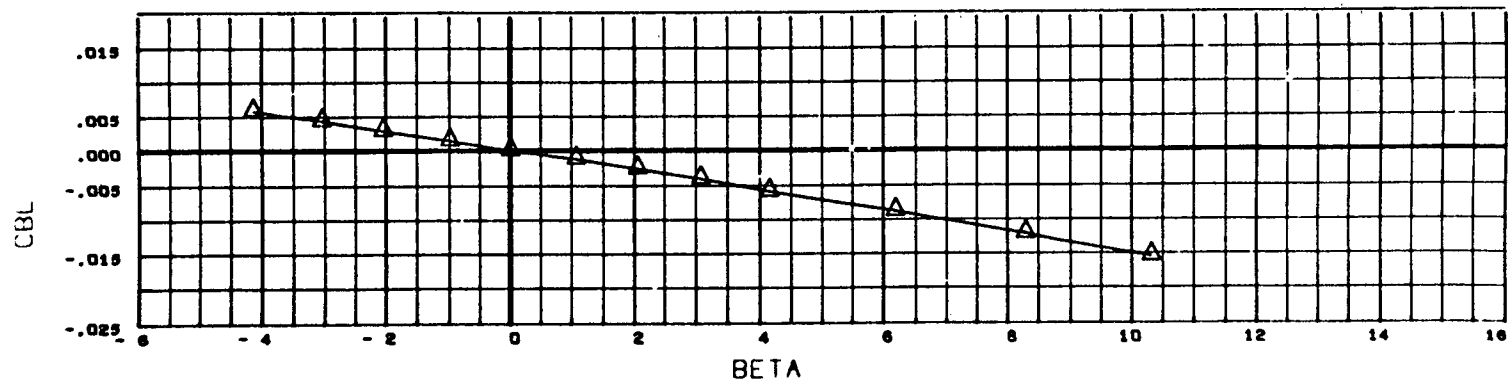
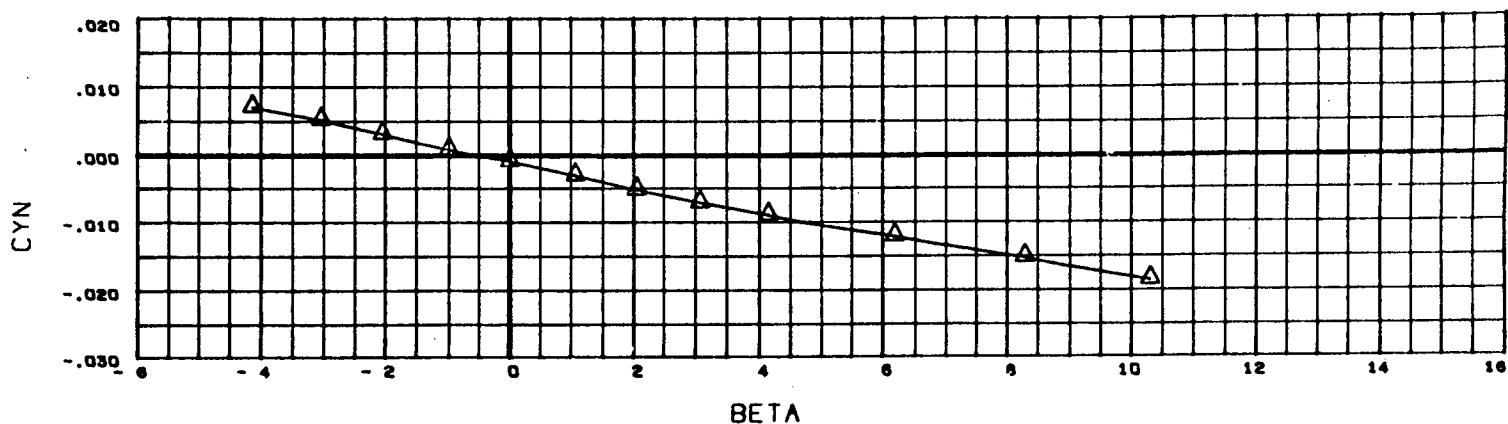
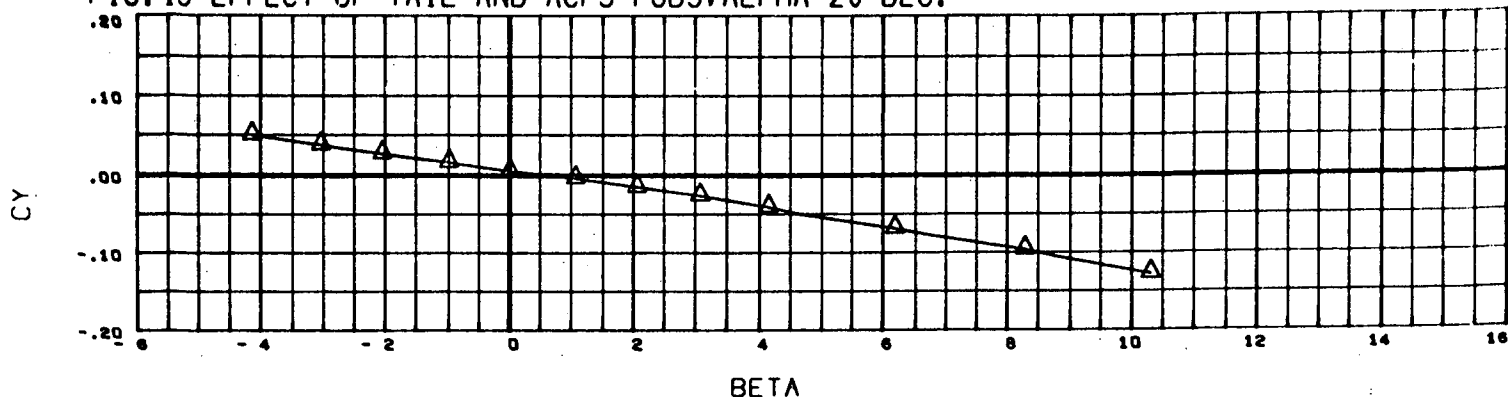
FIG.42 EFFECT OF TAIL AND ACPS PODS, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(R6B244)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF 25.5560 SQ IN.
(XGB014)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(XGB164)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(XGB174)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

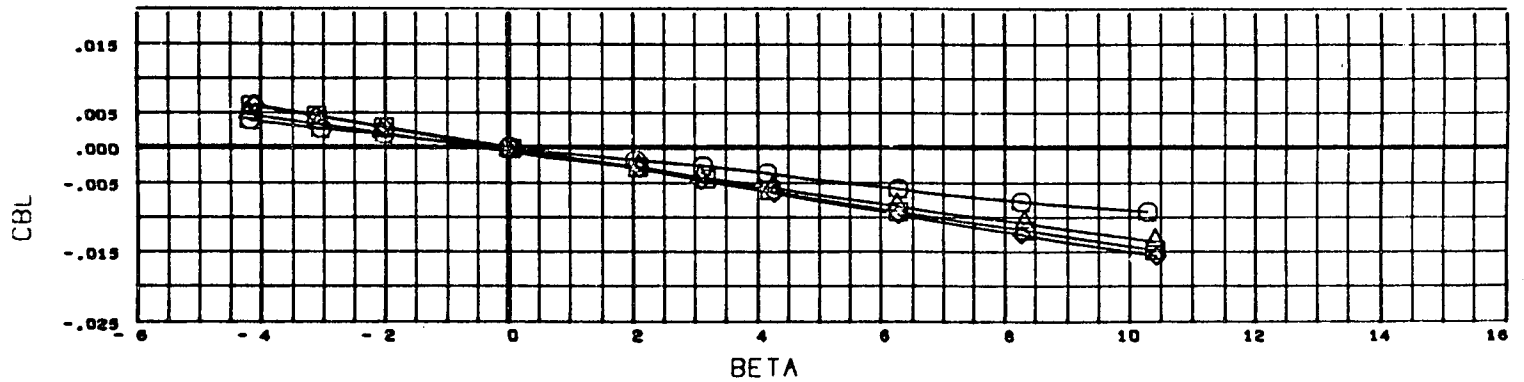
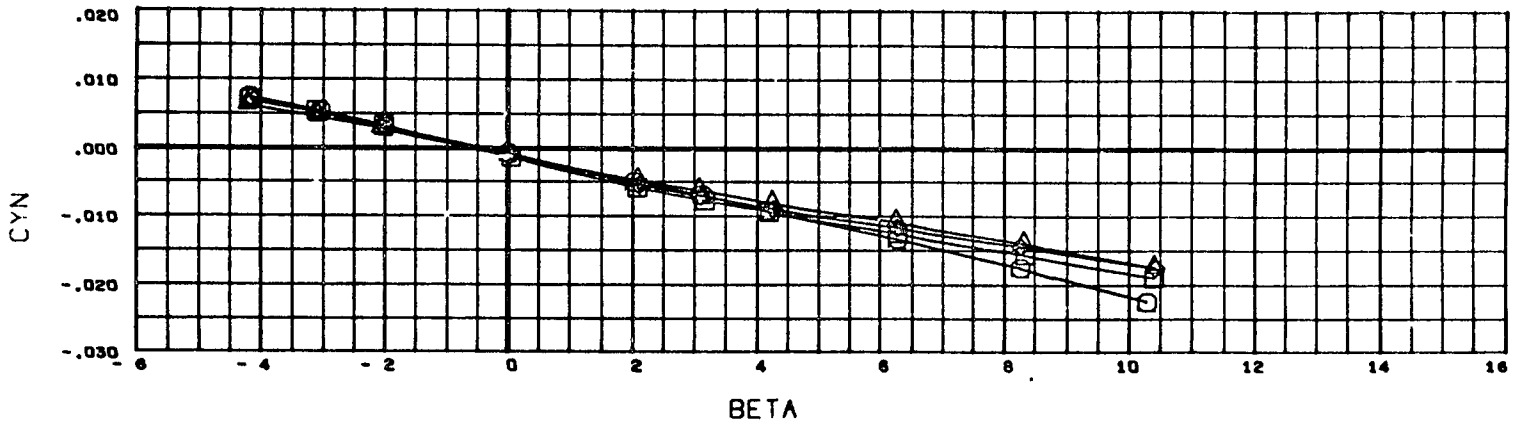
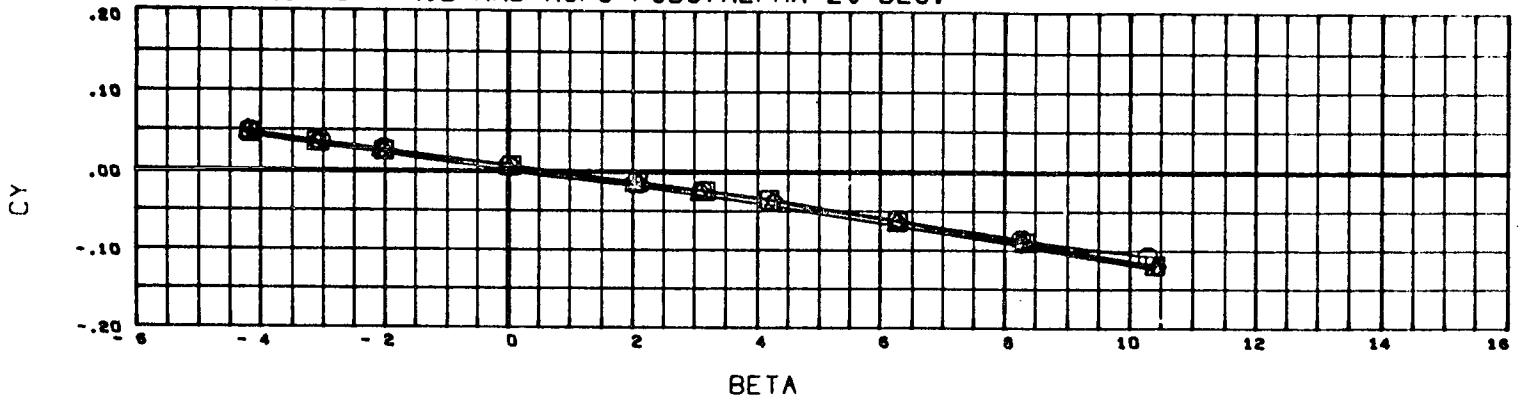
MACH 3.98

FIG.43 EFFECT OF TAIL AND ACPS PODS, ALPHA=20 DEG.



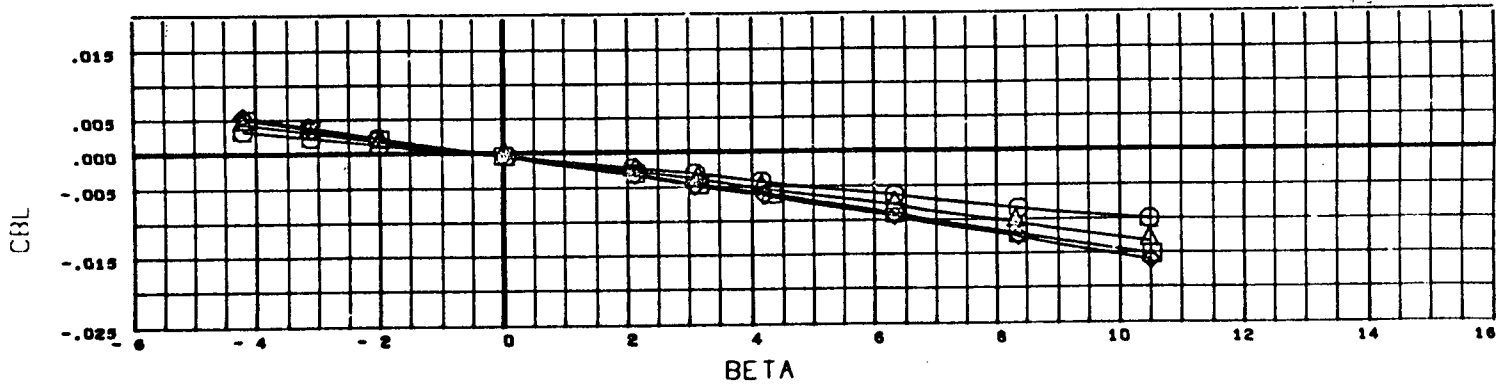
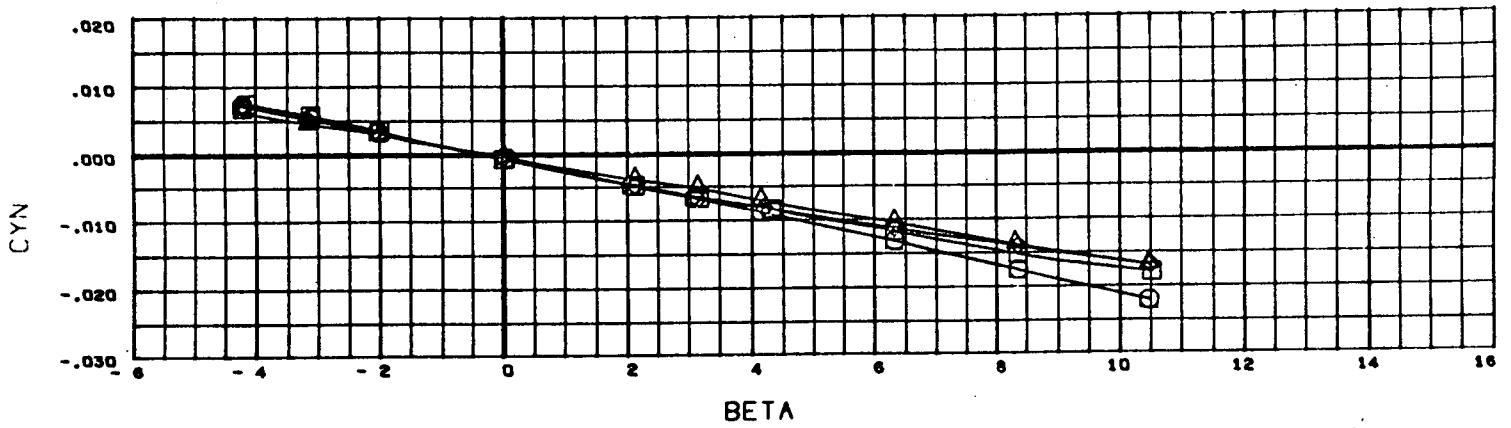
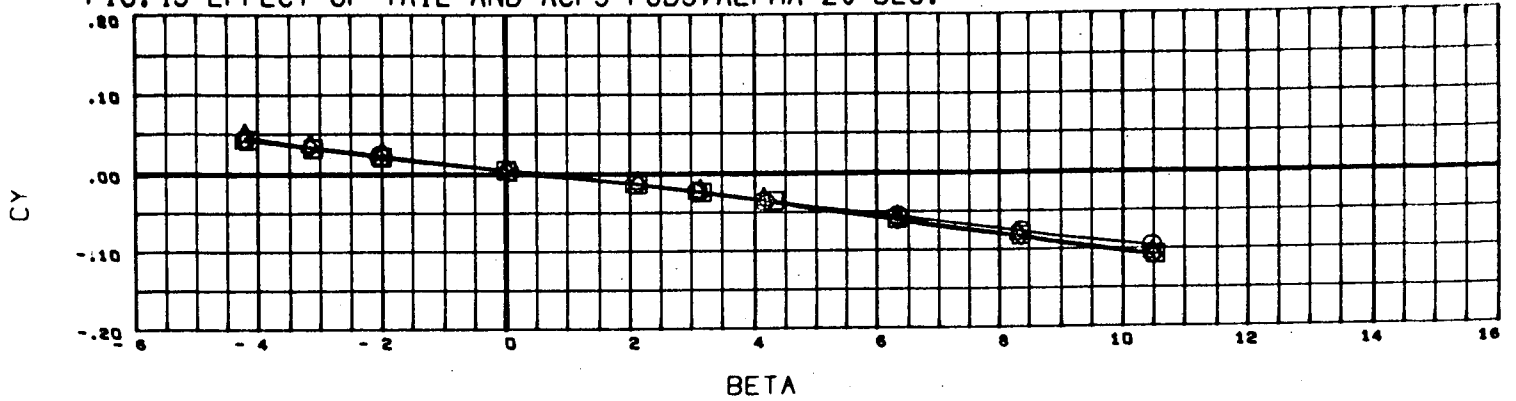
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(RGR245)	DATA NOT AVAILABLE FOR ALL CONDITIONS			0.000	0.000	SREF	25.5560 90 IN.
(XGB015)	JPL WT 20-681 MSC 040A BIWIVIMIP1D1C1	0.000	0.000	0.000	0.000	LREF	4.3720 IN.
(XGB165)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	BREF	6.8150 IN.
(XGB175)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG.43 EFFECT OF TAIL AND ACPS PODS, ALPHA=20 DEG.



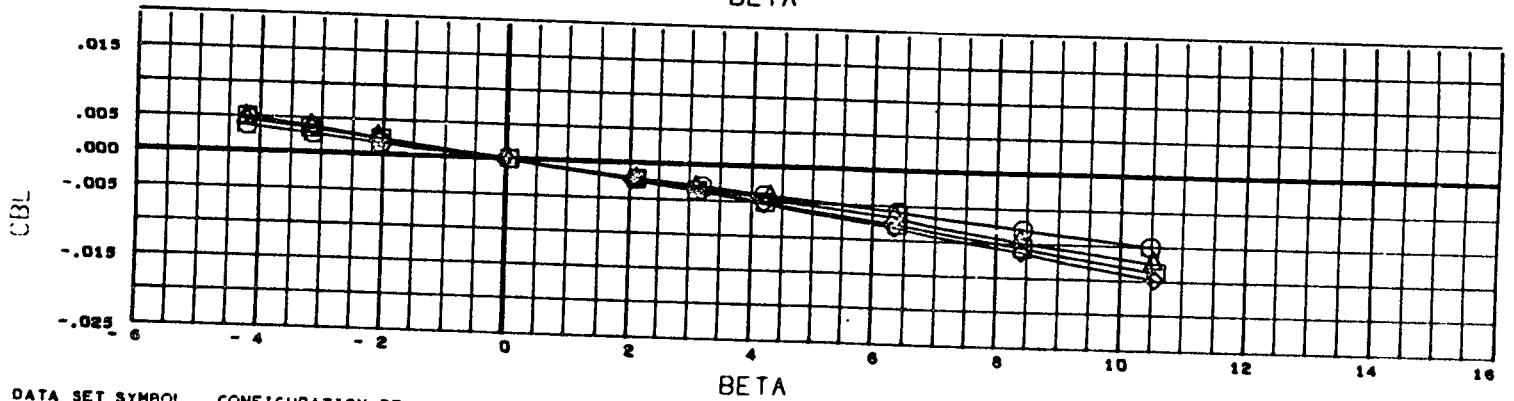
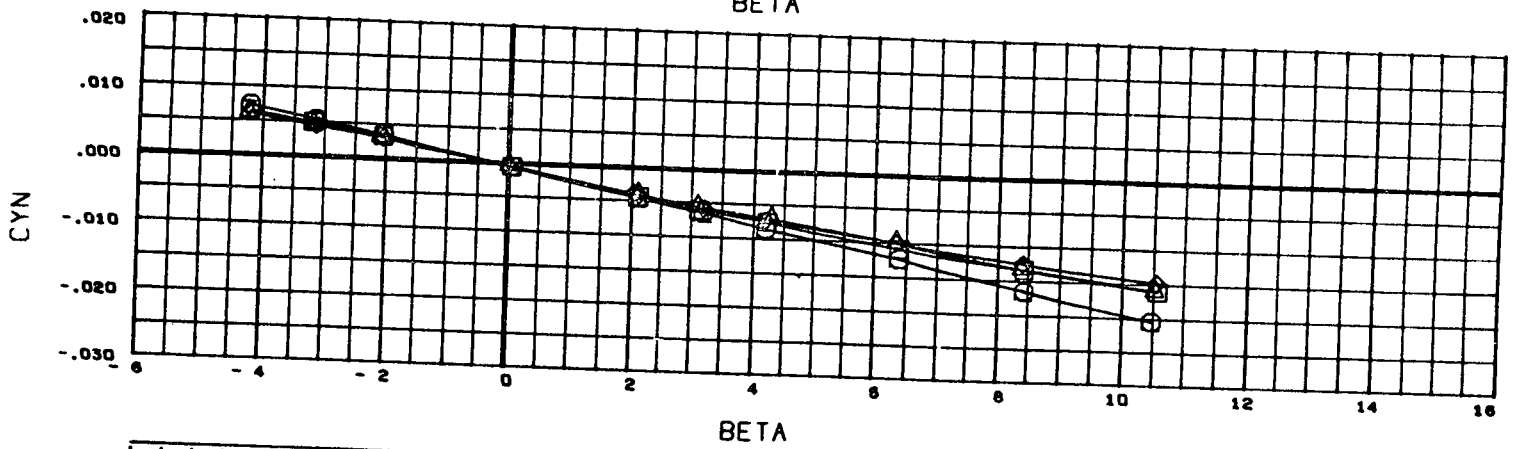
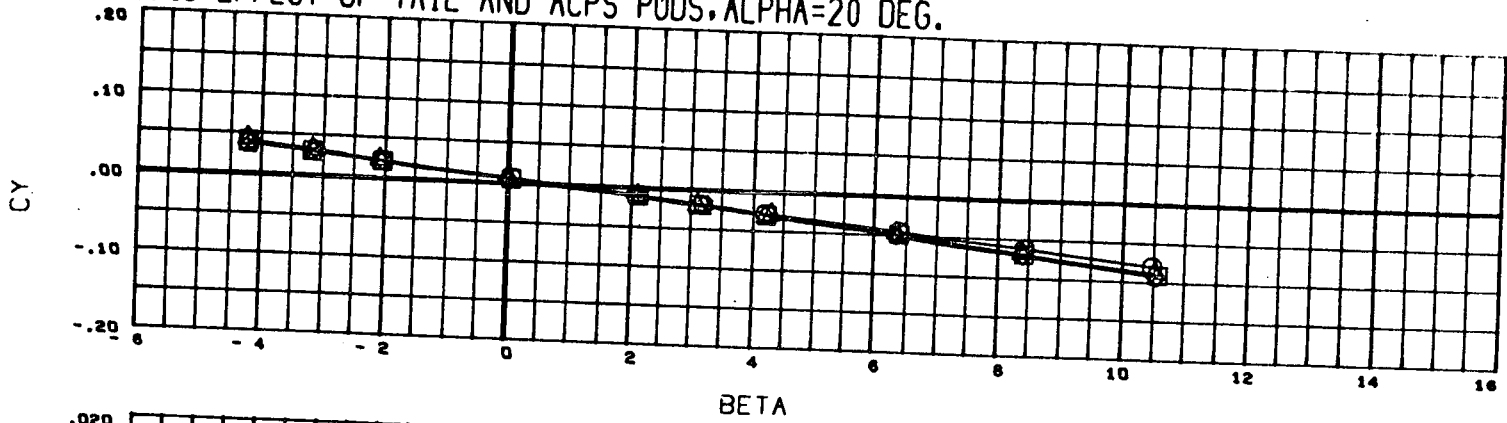
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(R68245)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF 25.5560 SQ IN.
(X68015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(X68165)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(X68175)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

FIG.43 EFFECT OF TAIL AND ACPS PODS, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB245)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	\$REF	25.5560 SQ IN.
(XGB015)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF	4.5720 IN.
(XGB165)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF	6.6150 IN.
(XGB175)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

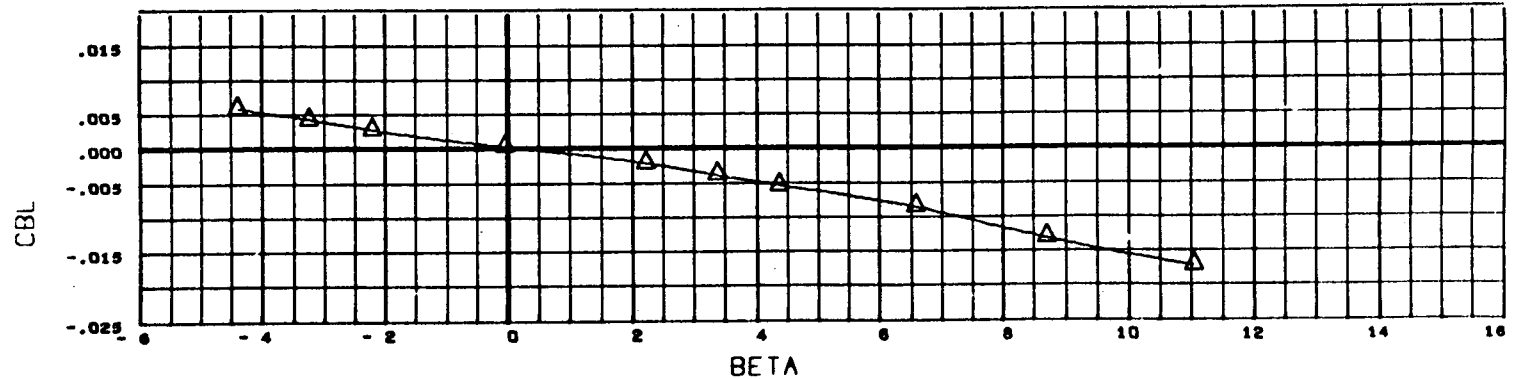
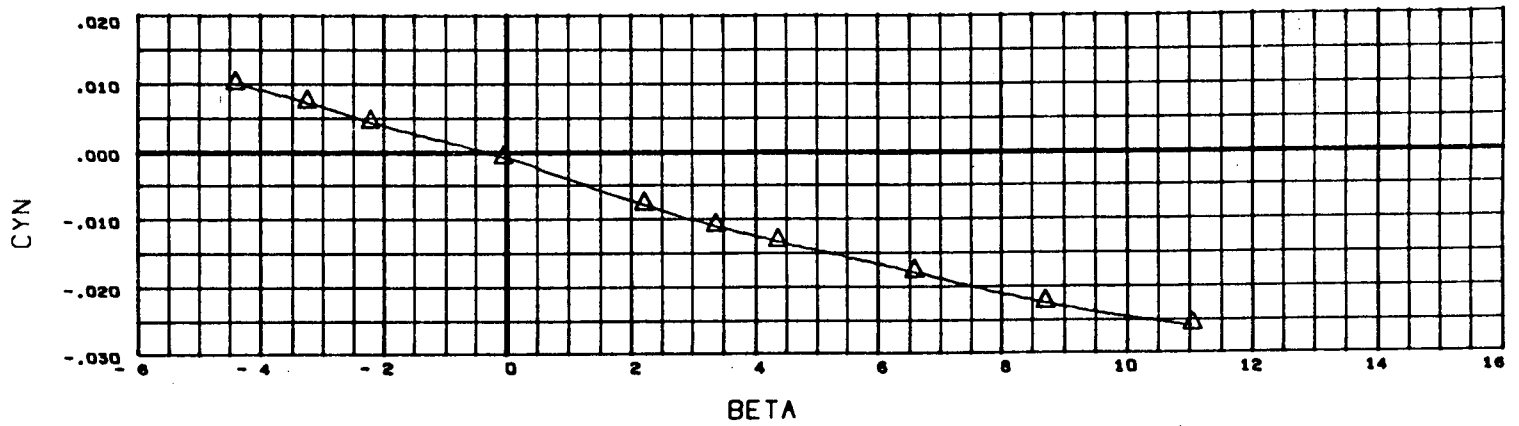
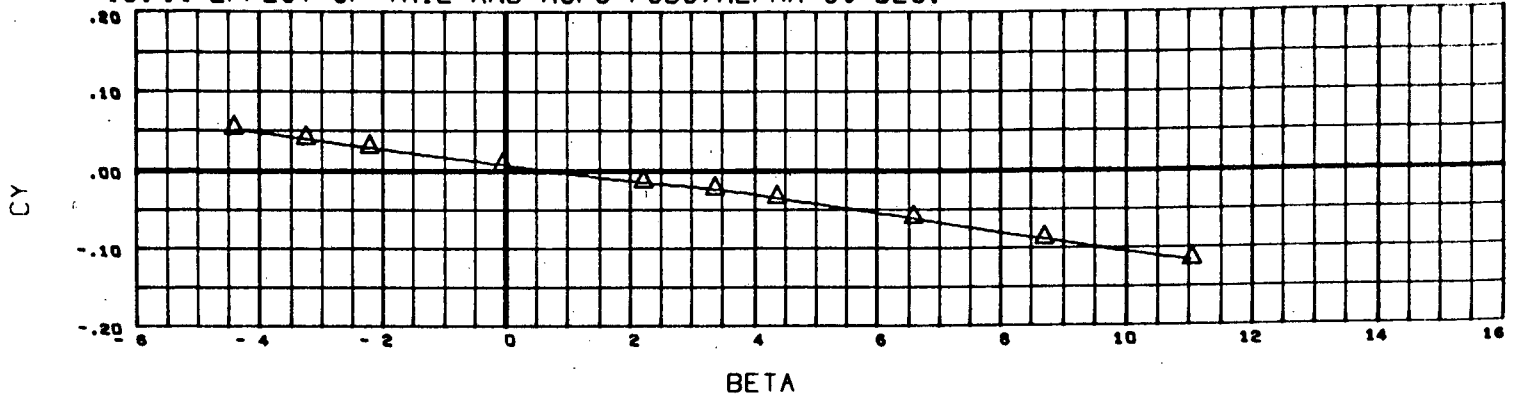
FIG.43 EFFECT OF TAIL AND ACPS PODS, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(R68245)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(X68019)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(X68169)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(X68175)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

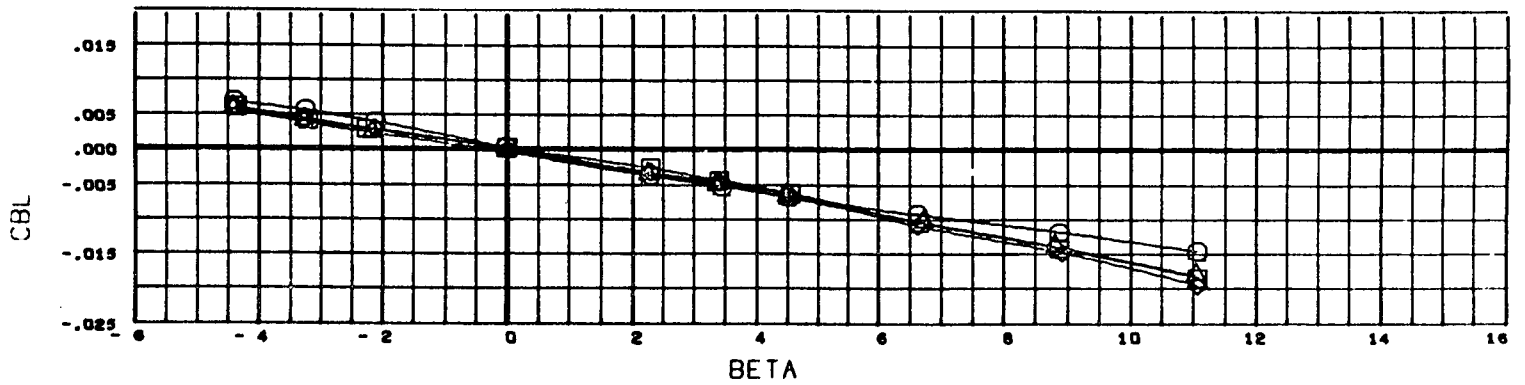
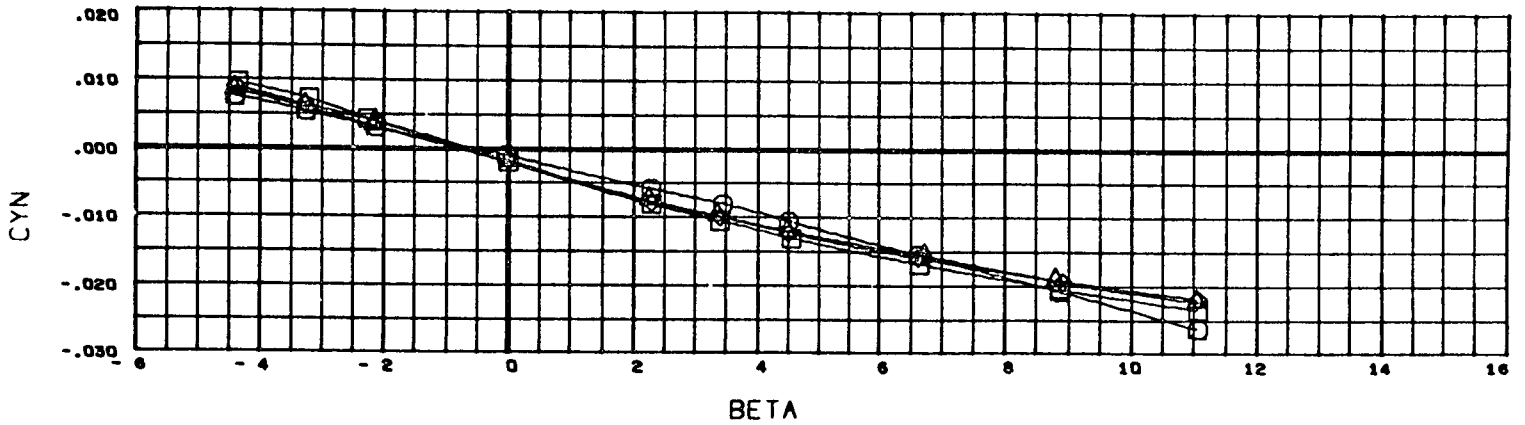
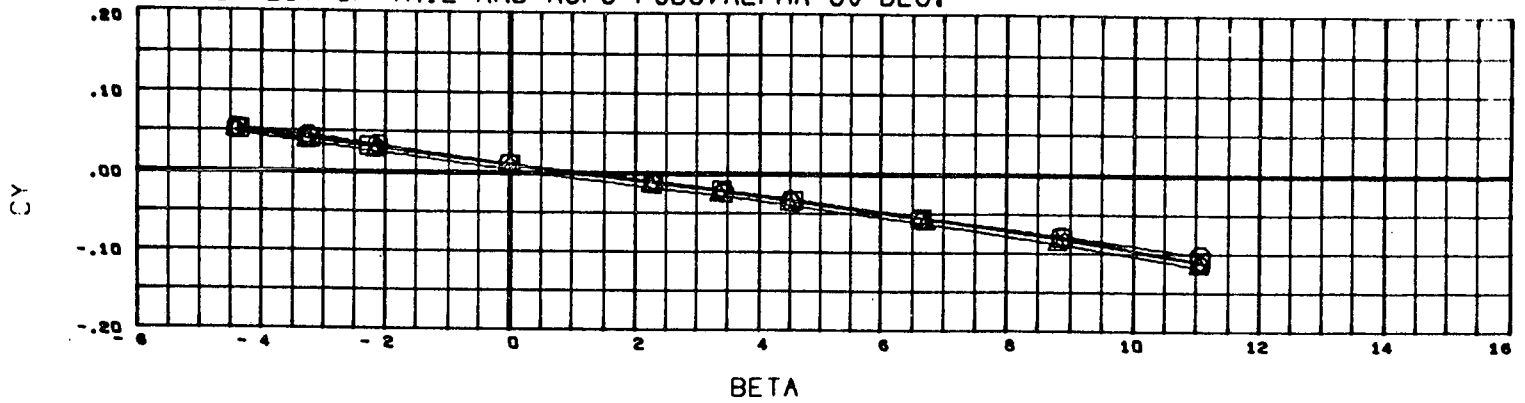
FIG.44 EFFECT OF TAIL AND ACPS PODS, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB246)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1
(XGB166)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(XGB176)	DATA NOT AVAILABLE FOR ALL CONDITIONS

RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
30.000	0.000	0.000	0.000	LREF 4.5720 IN.
30.000	0.000	0.000	0.000	BREF 6.6150 IN.
				XMRP 1067.9040 IN.
				YMRP 0.0000 IN.
				ZMRP 400.0004 IN.
				SCALE 0.0075

FIG. 44 EFFECT OF TAIL AND ACPS PODS, ALPHA=30 DEG.

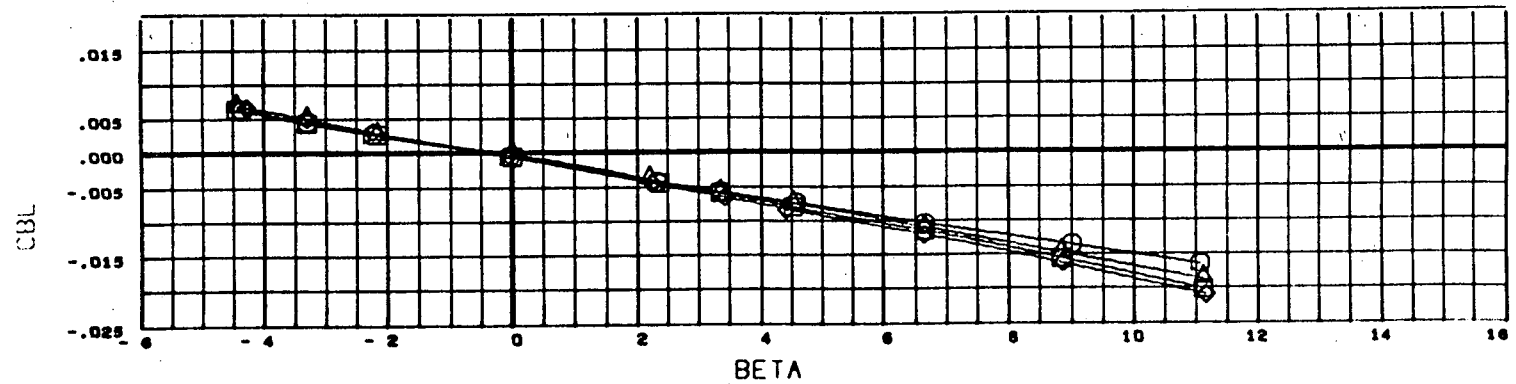
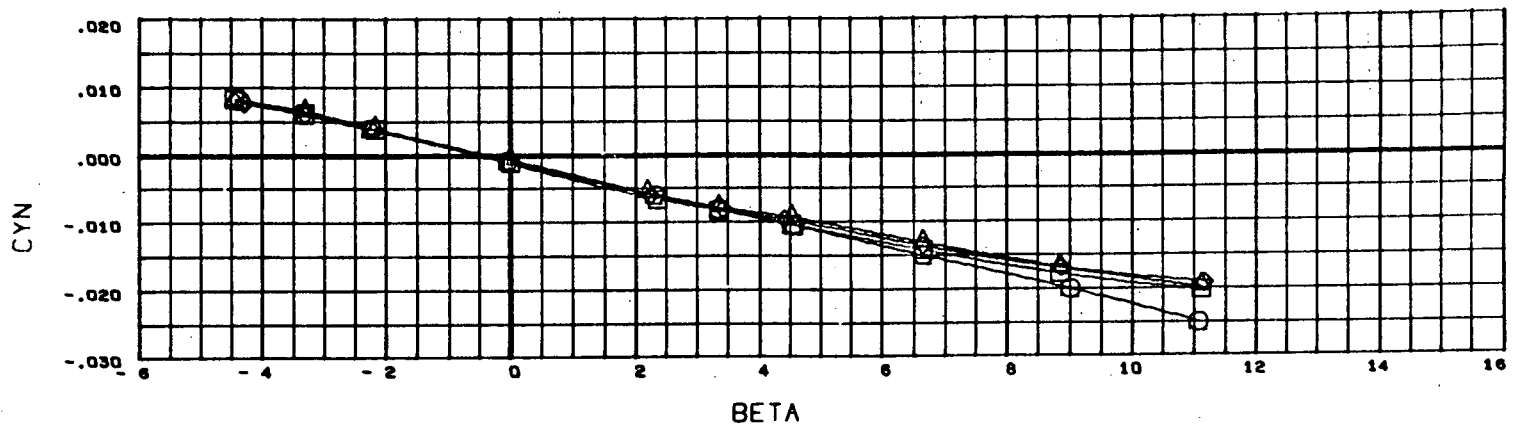
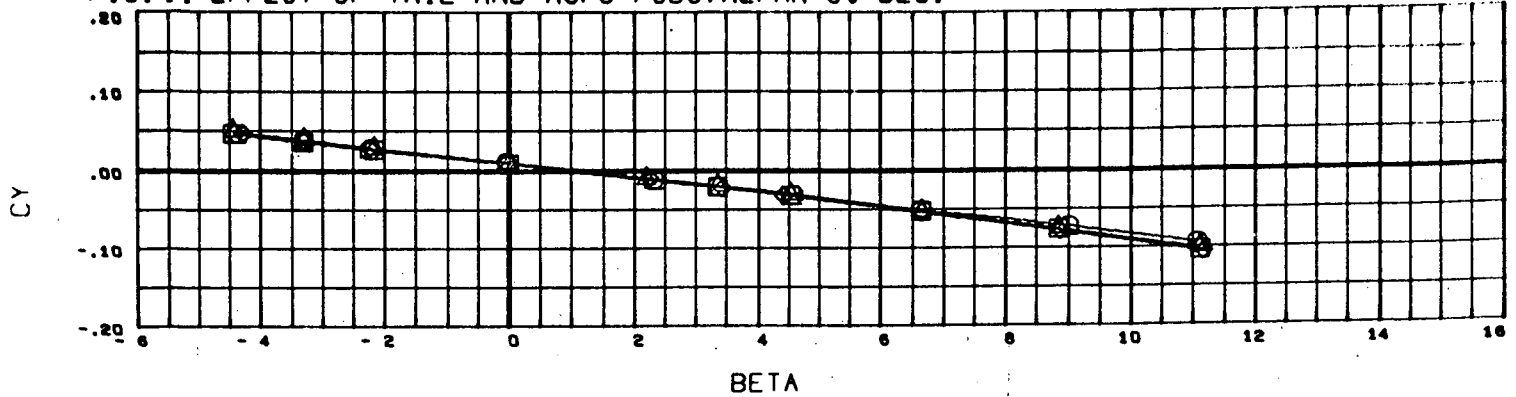


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION		
(RGB246)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1			0.000	0.000	SREF	25.5560	30 IN.
(XGB016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF	4.5720	IN.
(XGB166)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF	6.6150	IN.
(XGB176)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP	1067.9040	IN.
						YMRP	0.0000	IN.
						ZMRP	400.0004	IN.
						SCALE	0.0075	

MACH 2.42

PAGE 250

FIG. 44 EFFECT OF TAIL AND ACPS PODS, ALPHA=30 DEG.

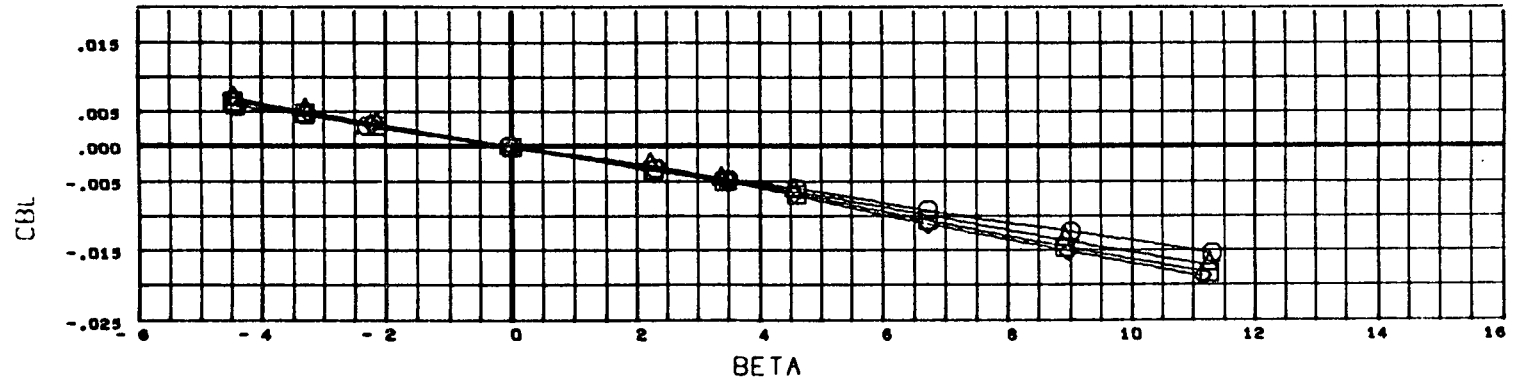
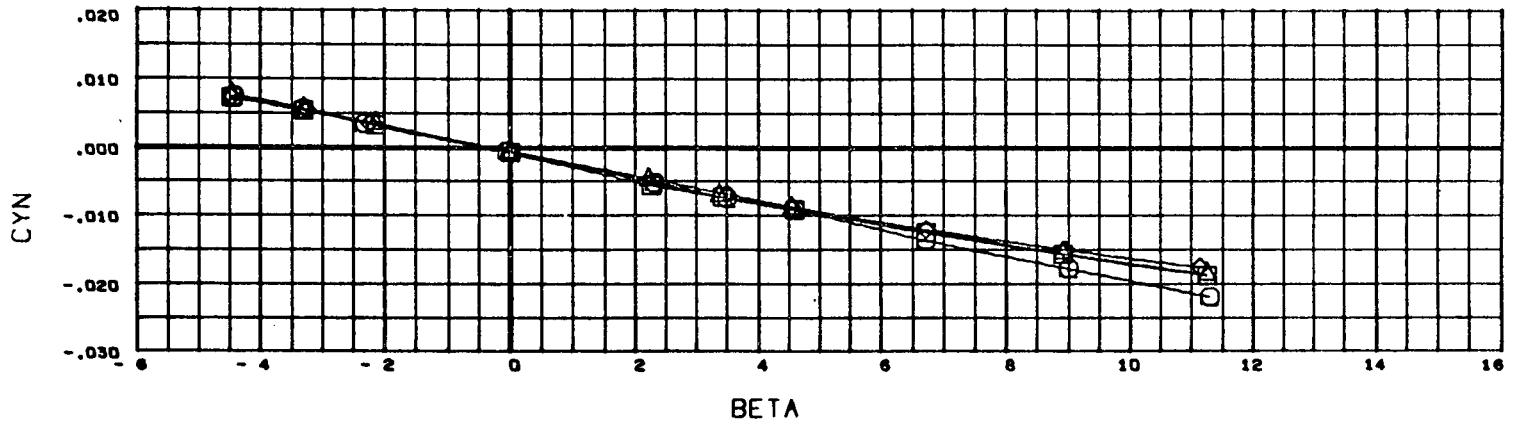
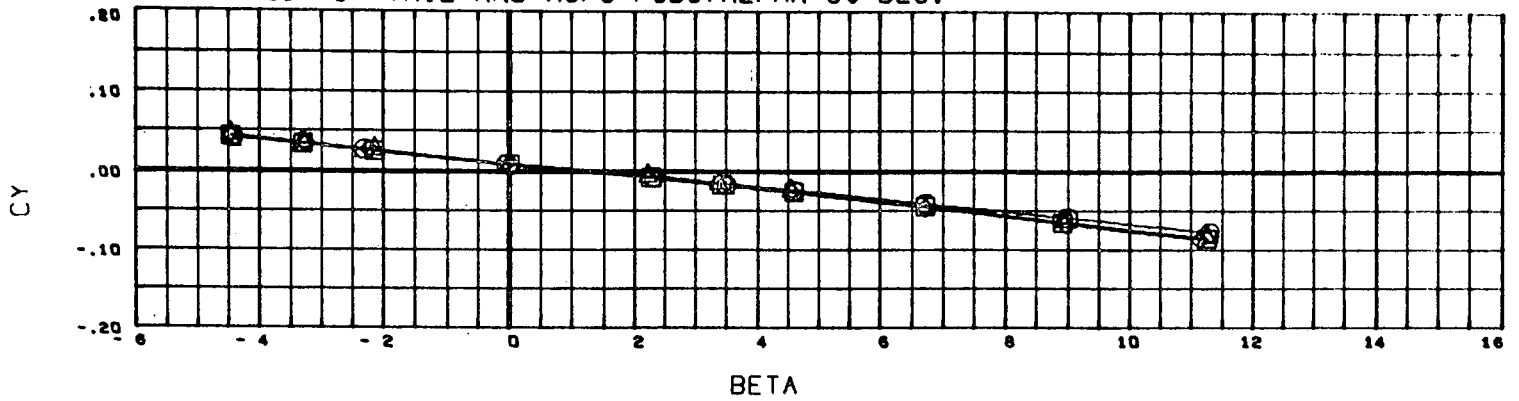


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(R6B246)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 30 IN.
(X6B016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
(X6B166)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(X6B176)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

C.6

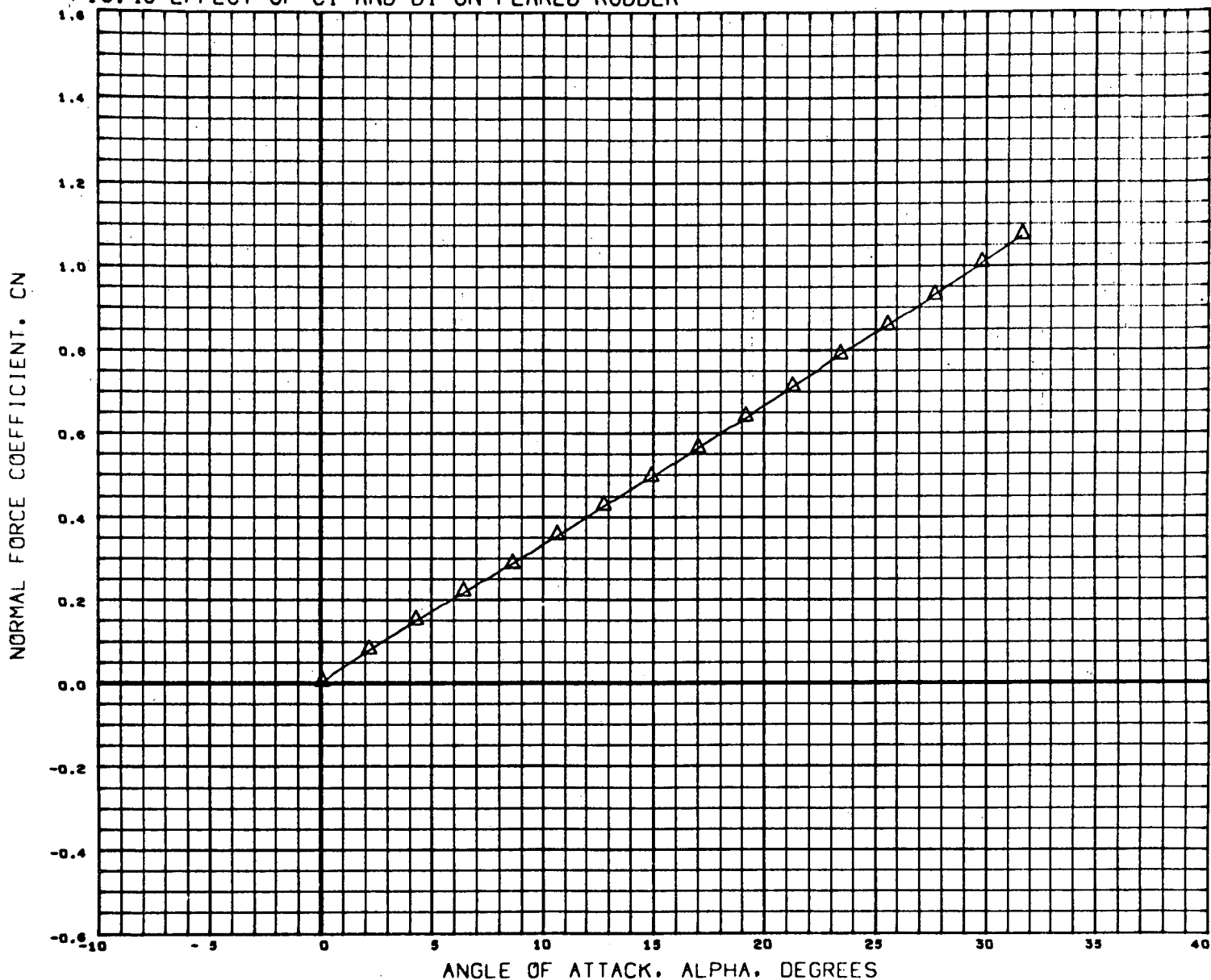
FIG.44 EFFECT OF TAIL AND ACPS PODS, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELVN	RELVN	REFERENCE INFORMATION
(R8246)	JPL WT 20-681 MSC 040A B1W1M1P(1W)D1C1	0.000	0.000	0.000	0.000	SREF 25.5360 SQ IN.
(X82016)	JPL WT 20-681 MSC 040A B1W1V1M1P1D1C1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(X8166)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P(1V)D1C1	30.000	0.000	0.000	0.000	BREF 6.6150 IN.
(X8176)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1D1C1	30.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

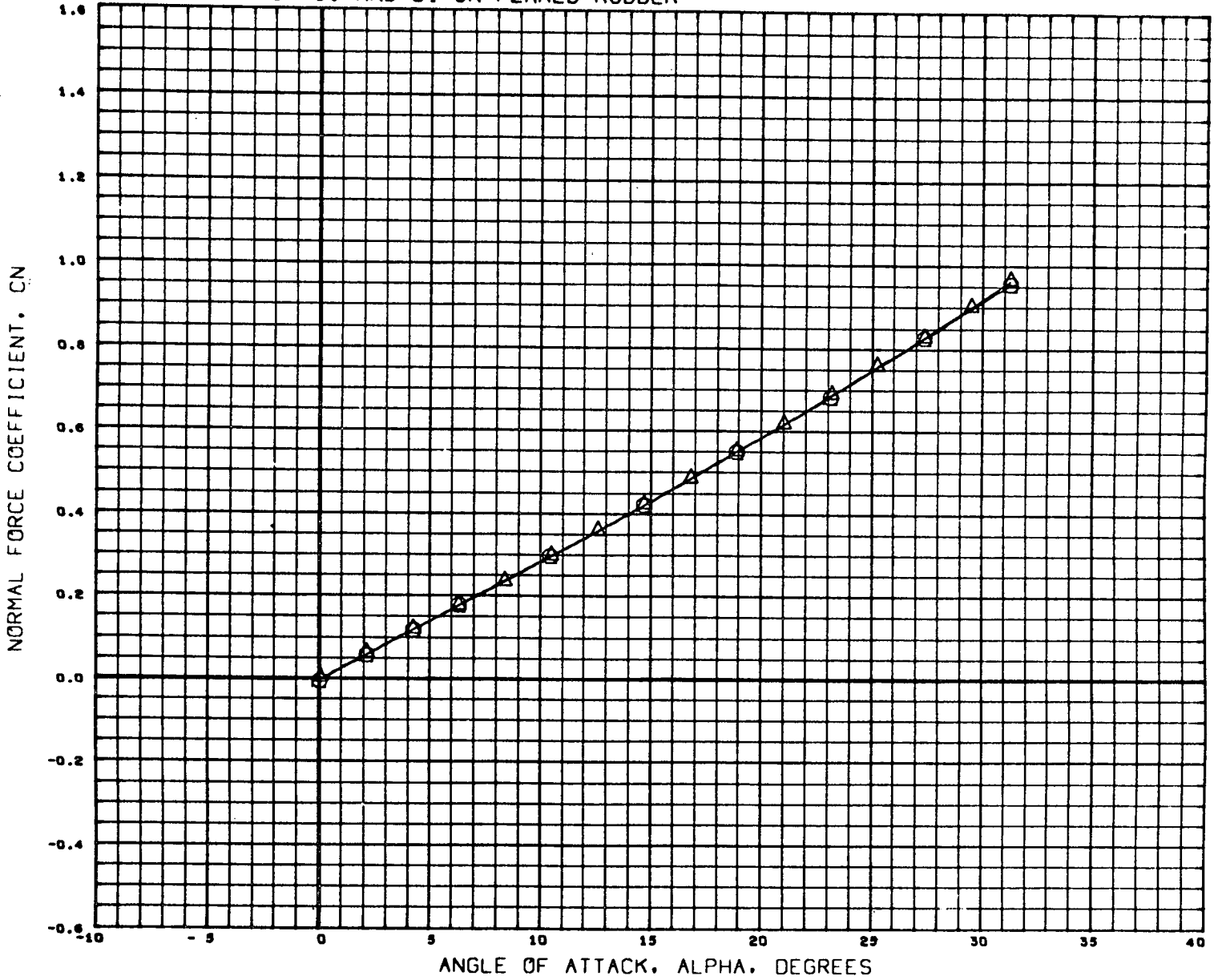
MACH 3.98

FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB231)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-661 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER

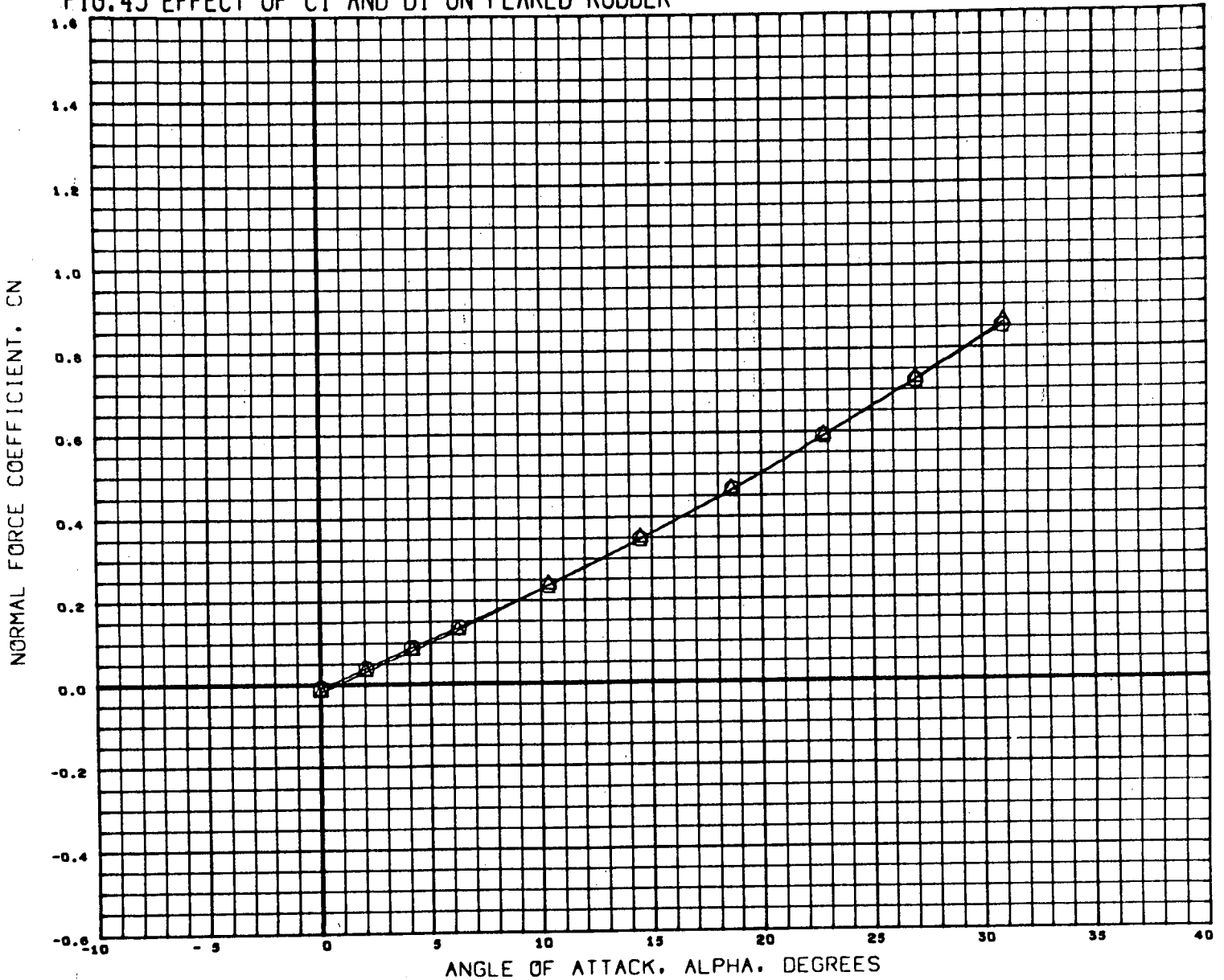


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6130 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

PAGE 254

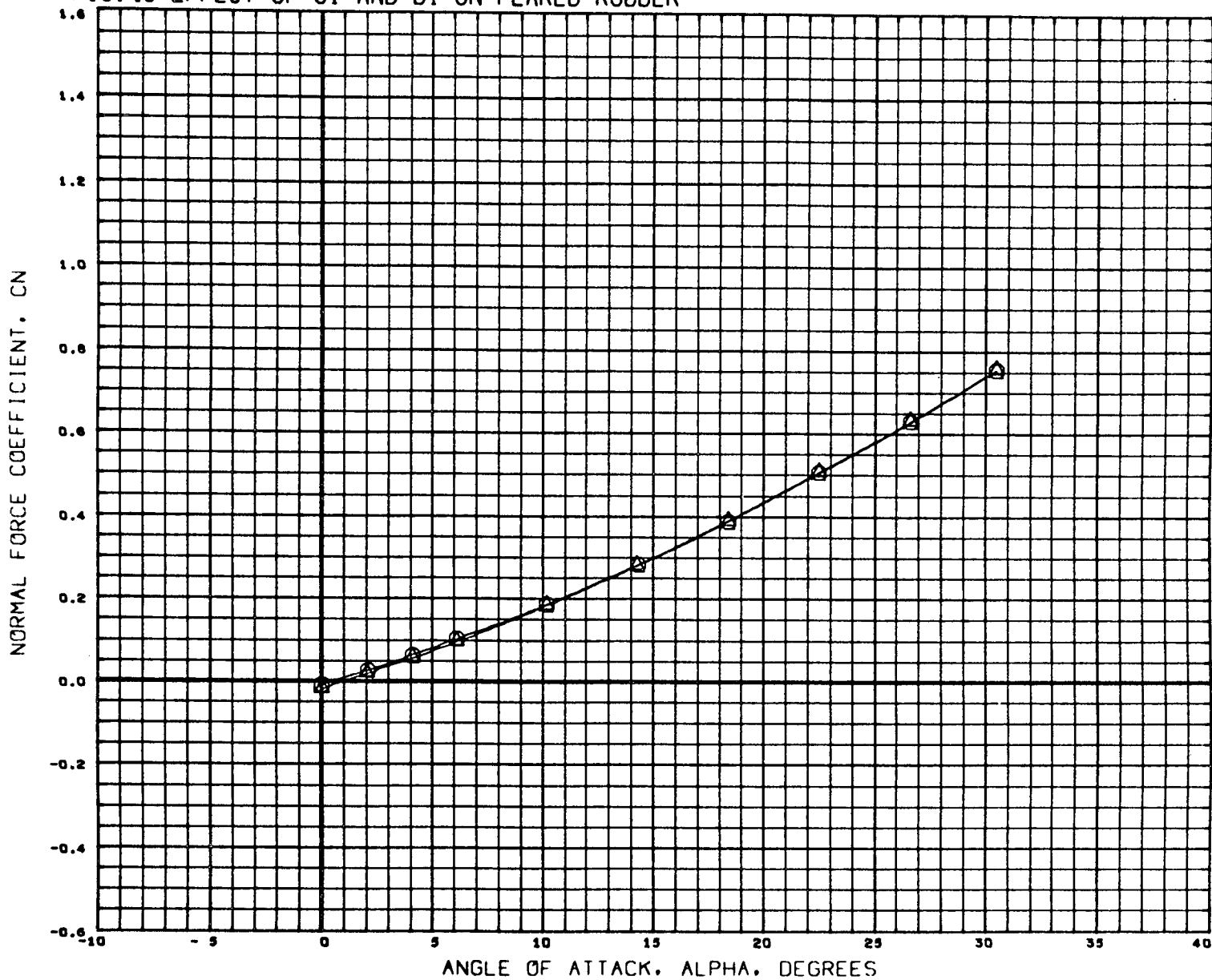
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

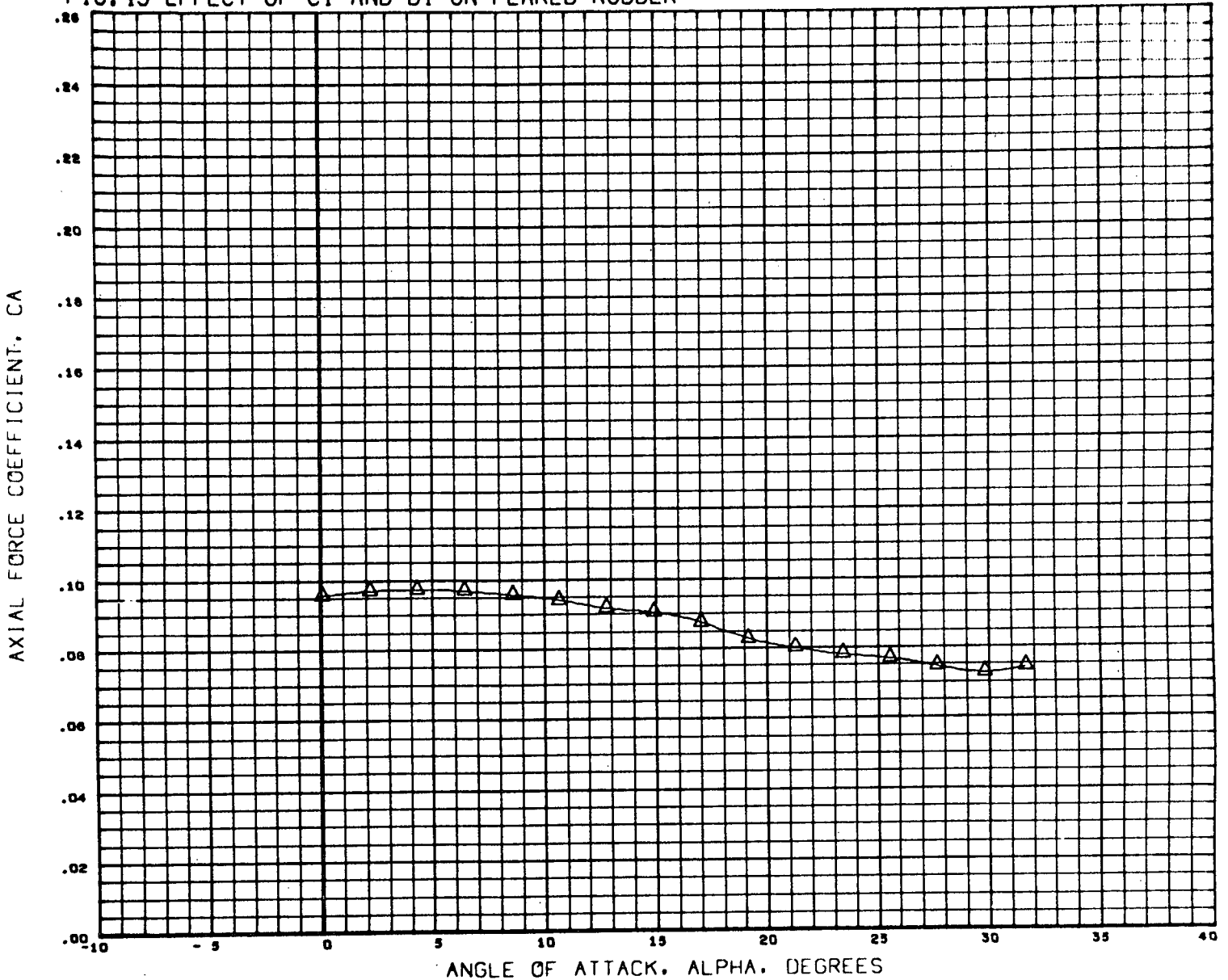
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P101C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

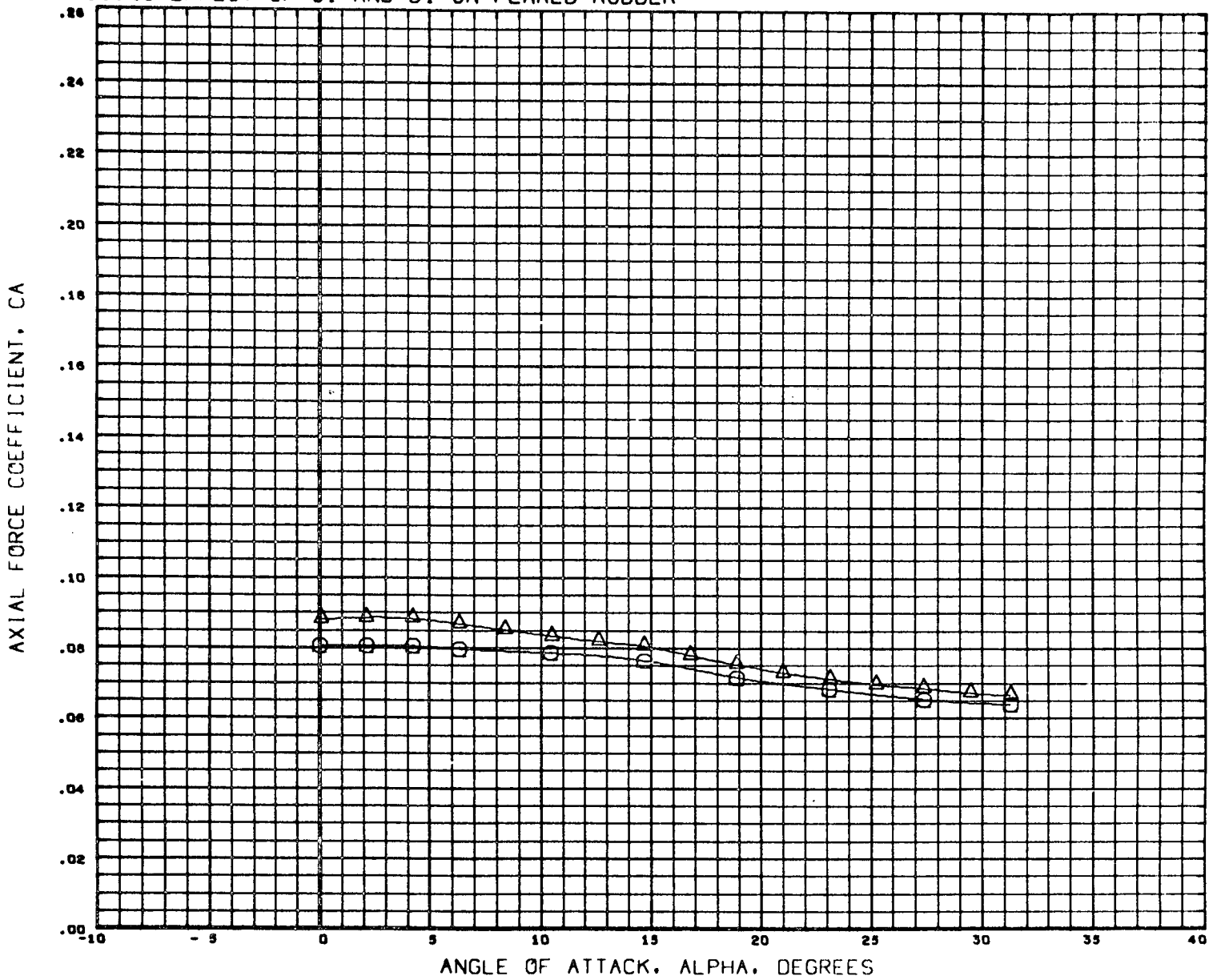
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.01

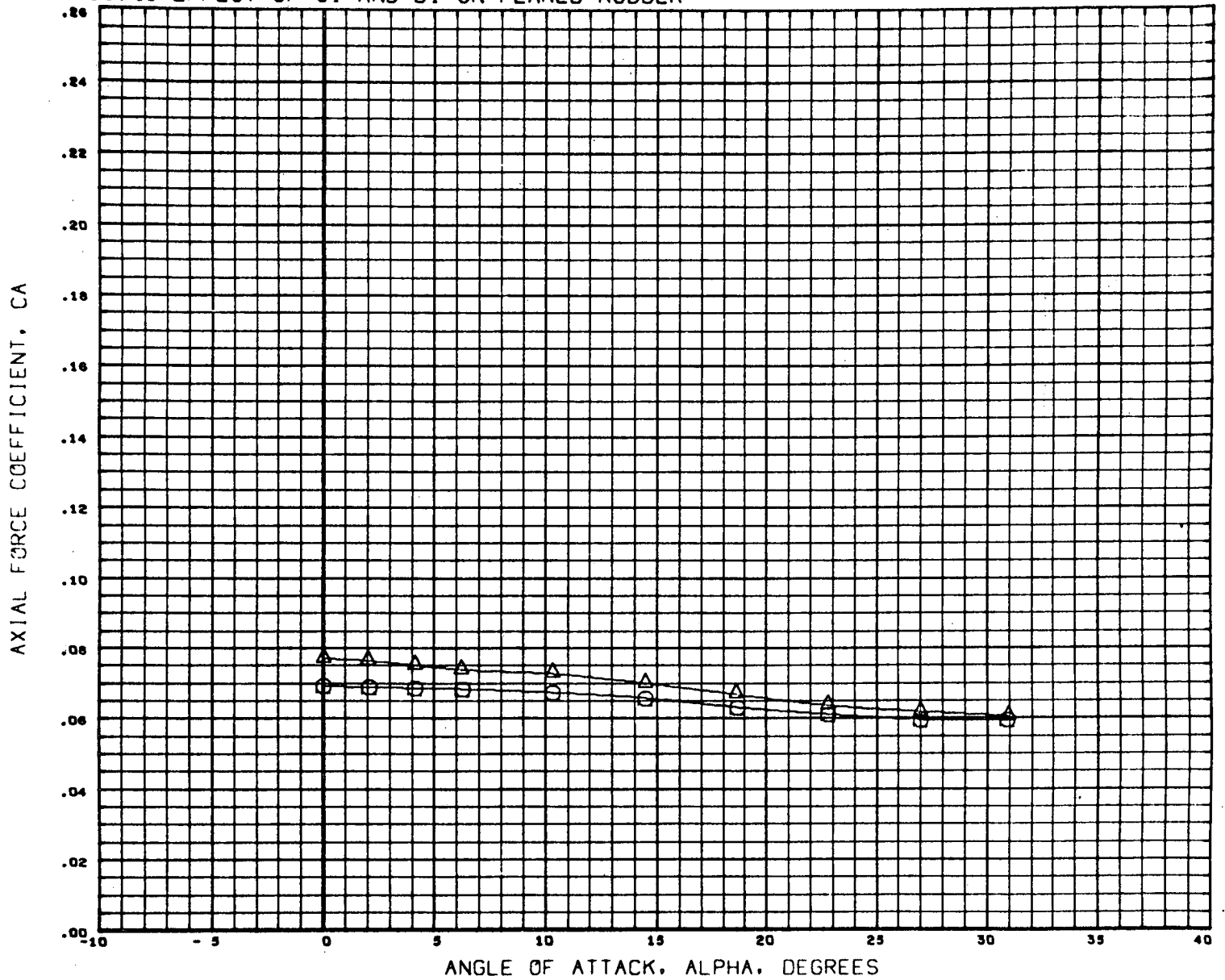
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XG8231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XG8111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

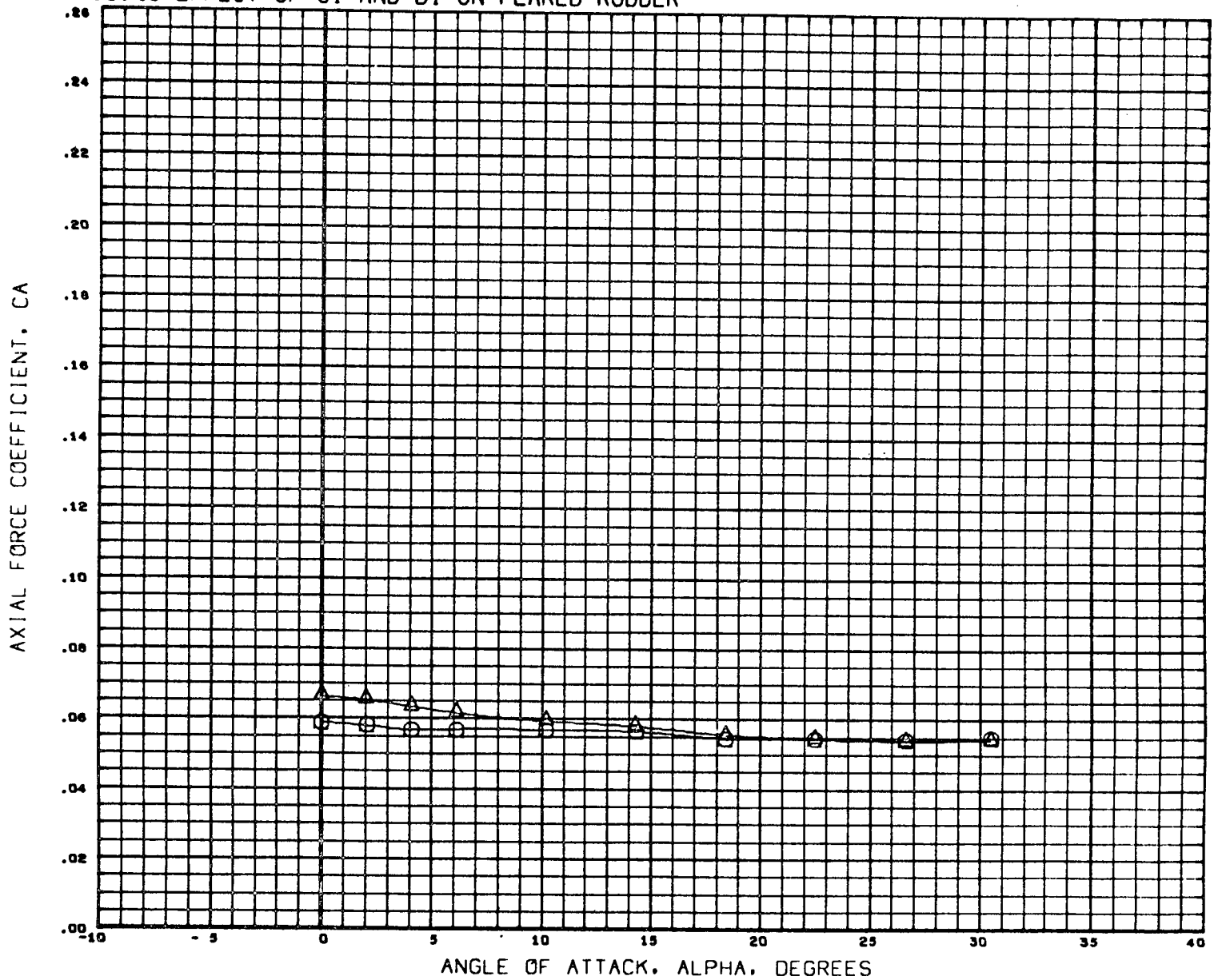
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER

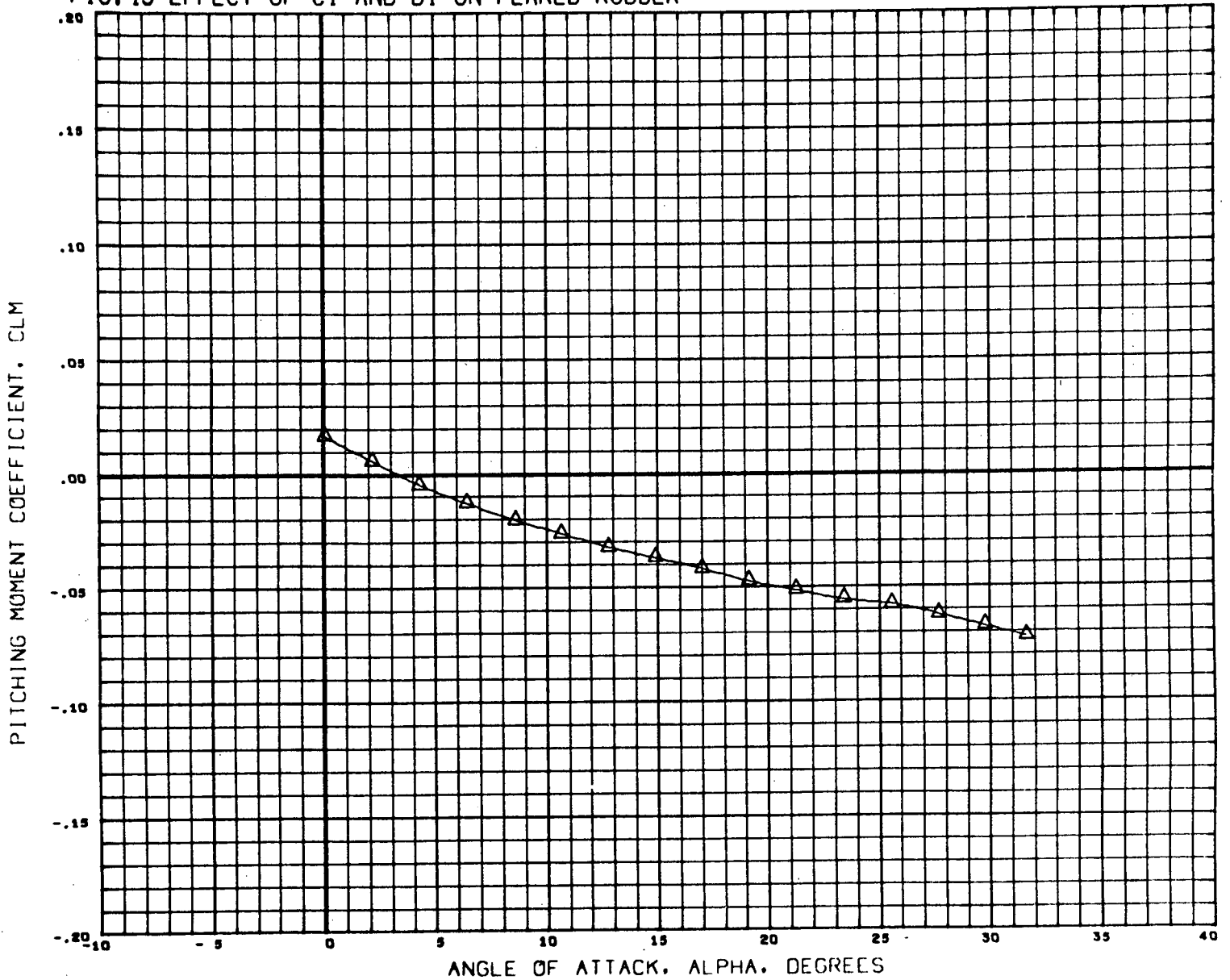


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.98

PAGE 260

FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER

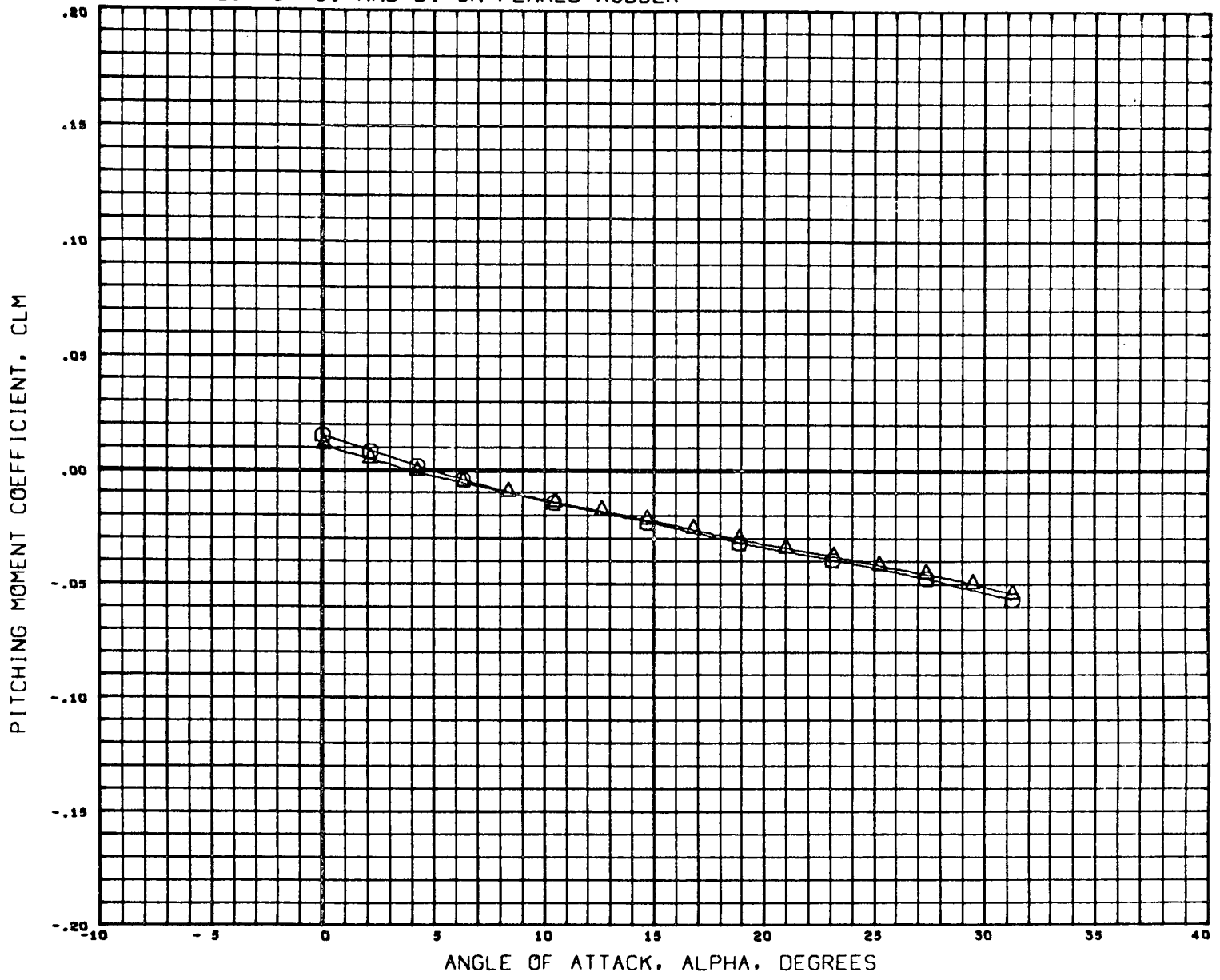


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB231)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	SREF	29.5560 SQ IN.
(XGB111)	JPL WT 20-661 HSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1087.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.01

PAGE 261

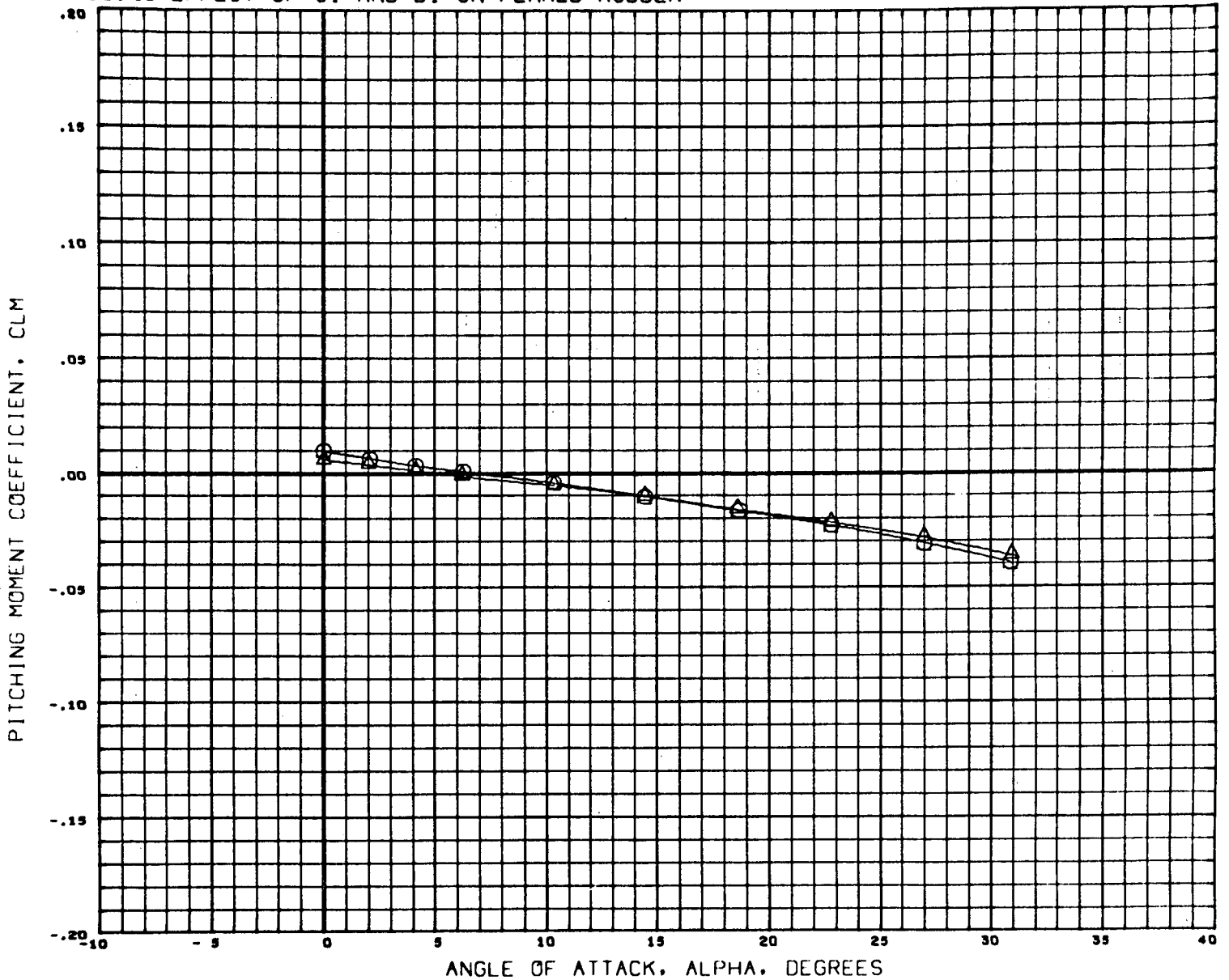
FIG. 45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(X68231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(X68111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

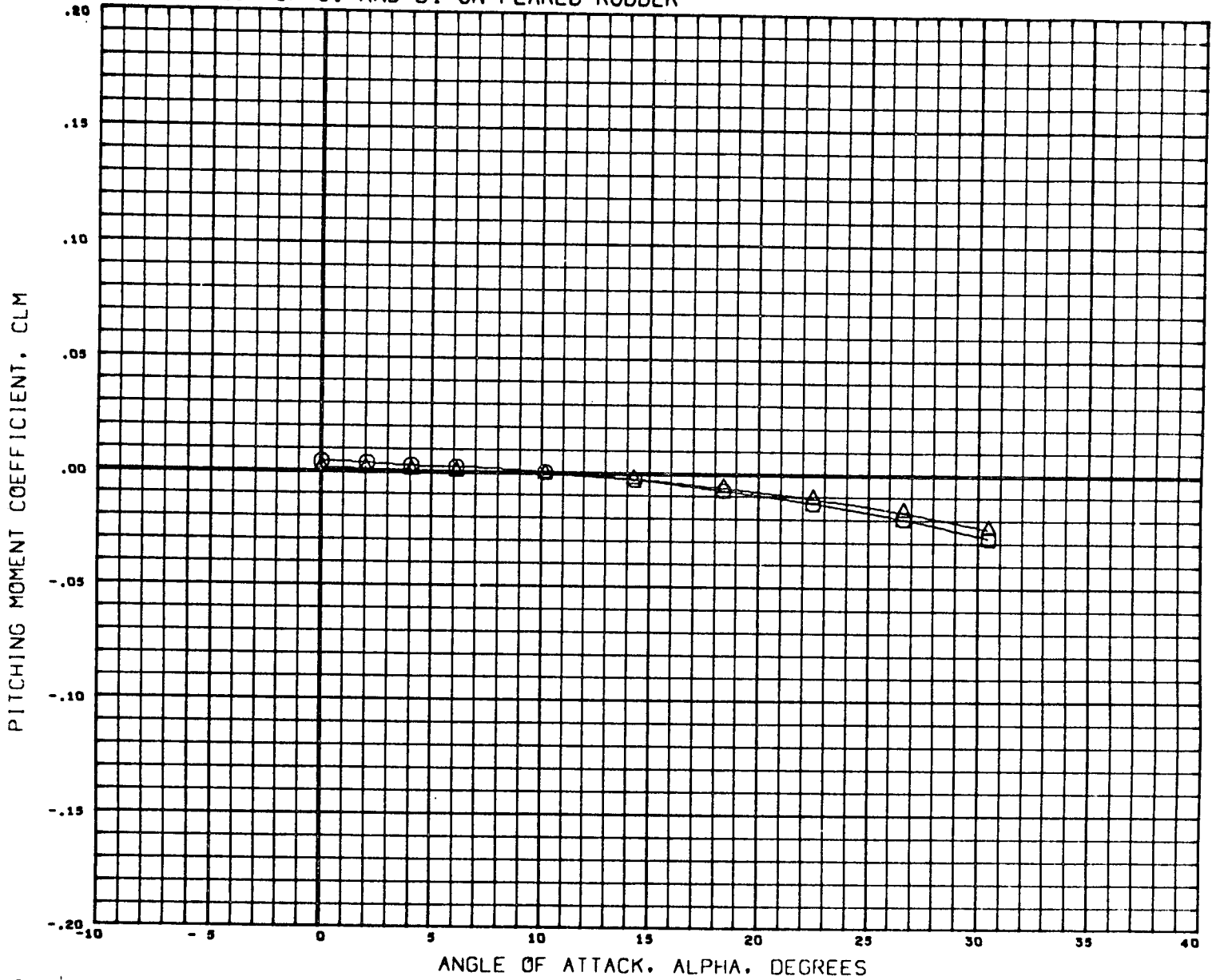
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUOFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XGB231)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

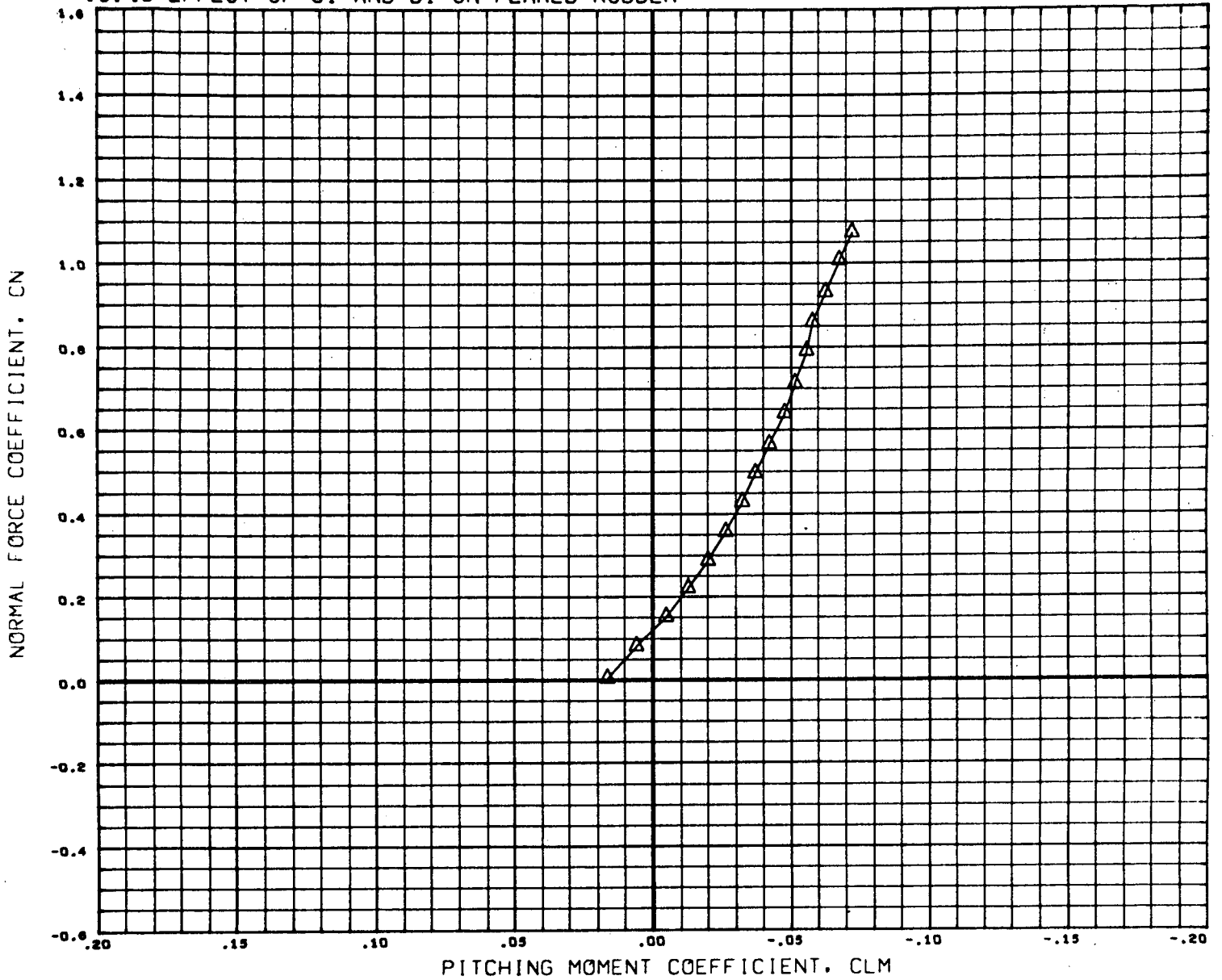
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XCB231)	JPL WT 20-881 MSC 040A 81W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XCB111)	JPL WT 20-881 MSC 040A 81W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.98

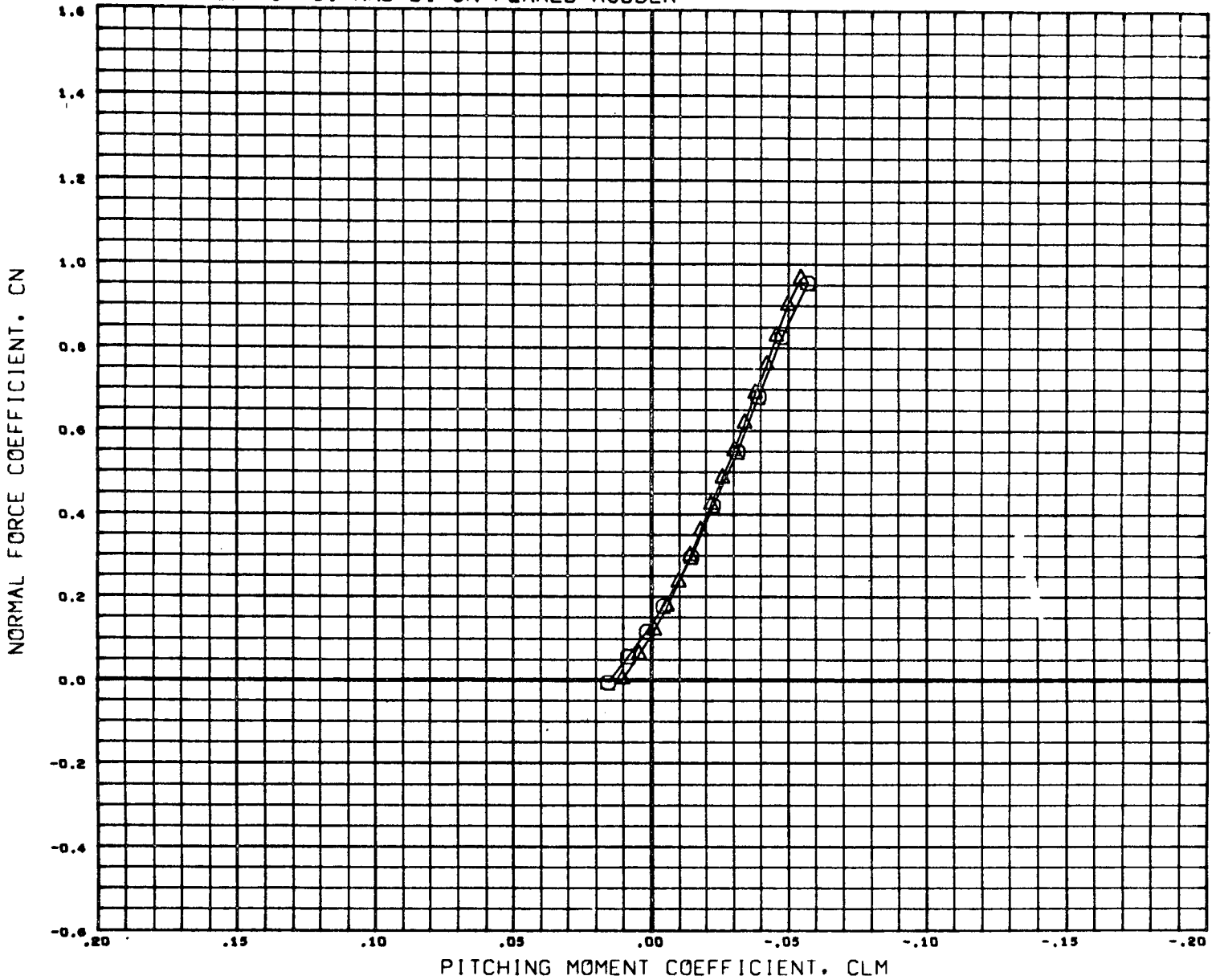
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0073

MACH 2.01

FIG. 45 EFFECT OF C1 AND D1 ON FLARED RUDDER

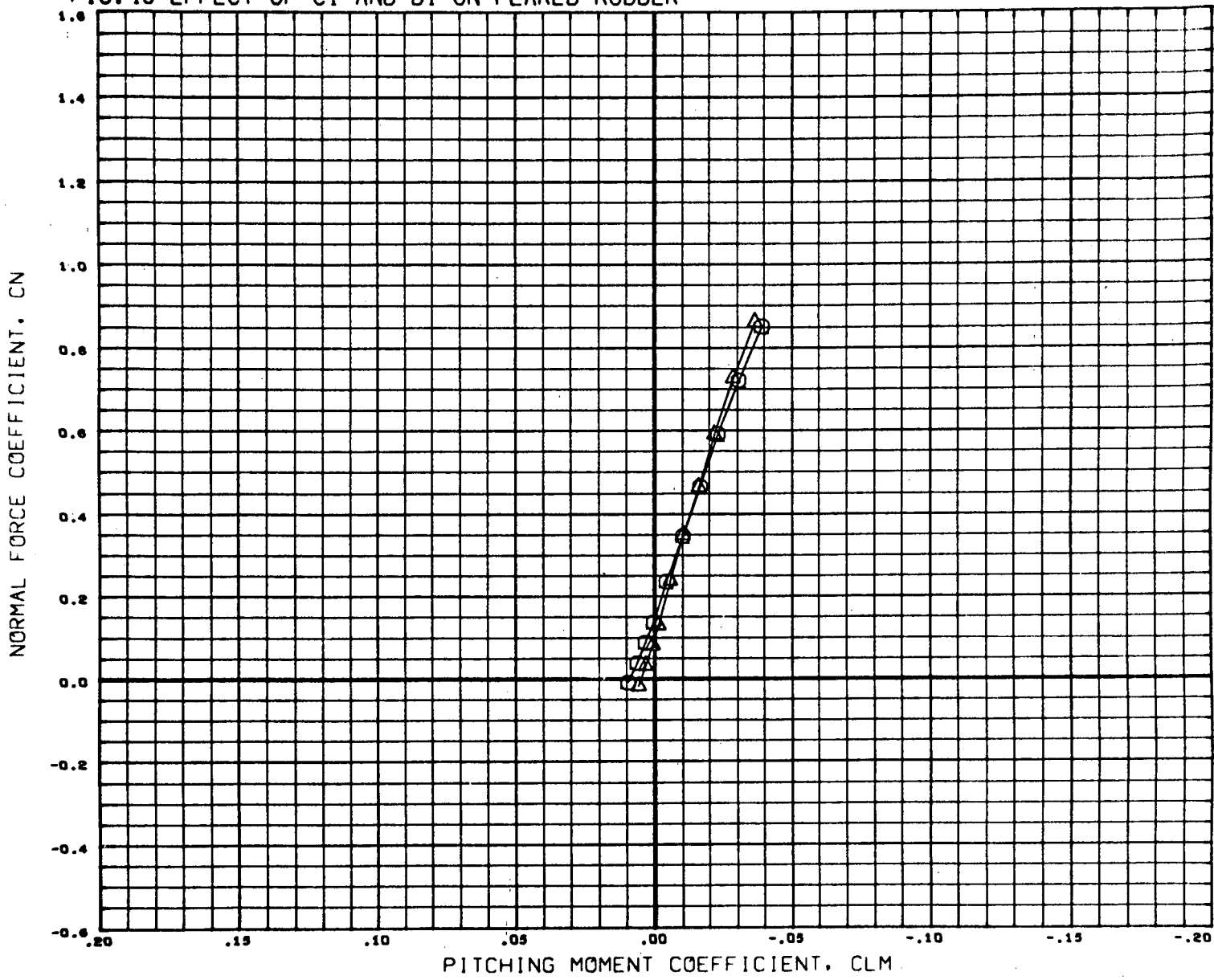


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6130 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

PAGE 266

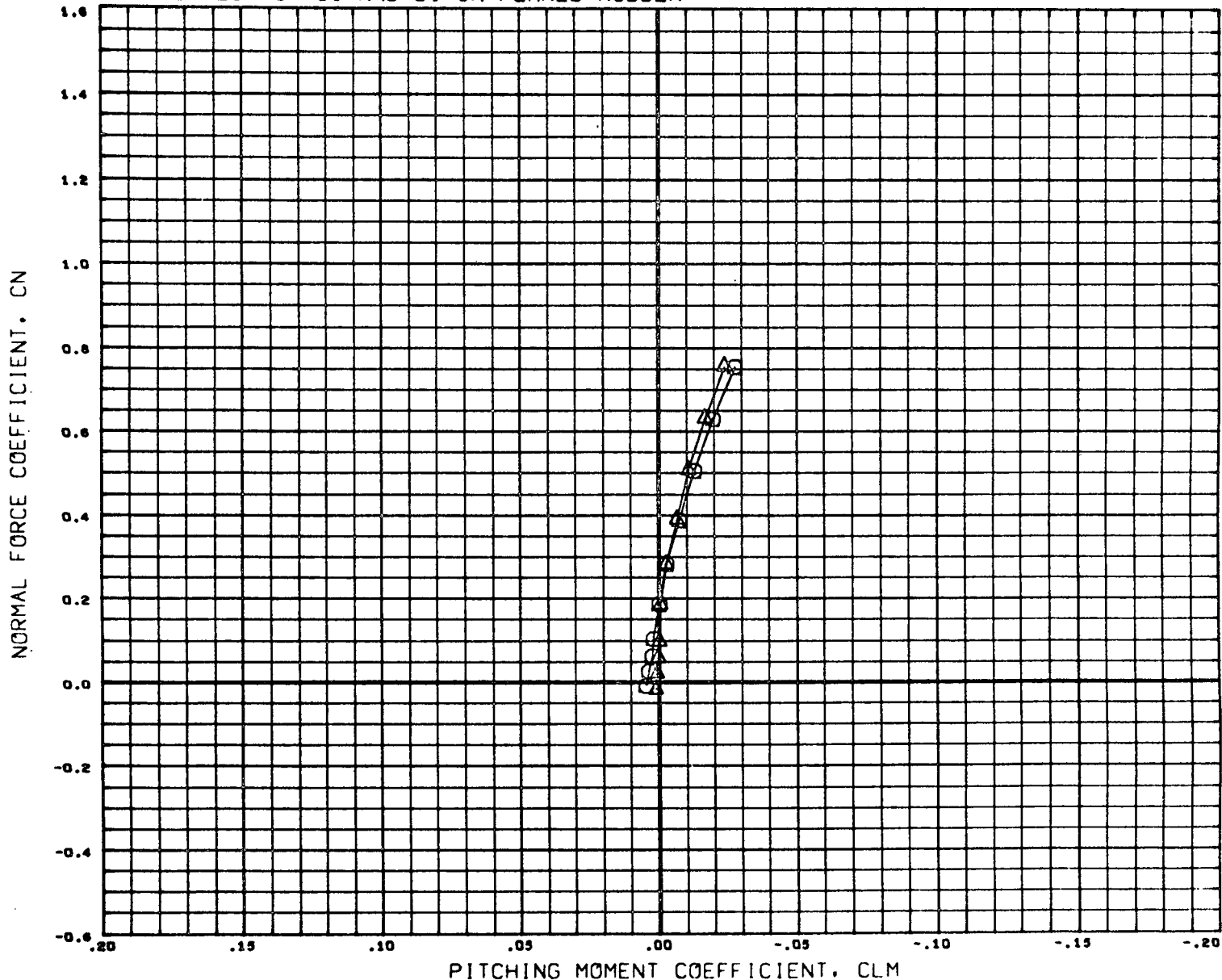
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION	
(XG8231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF	25.5560 SQ IN.
(XG8111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF	4.5720 IN.
						BREF	6.6150 IN.
						XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 3.03

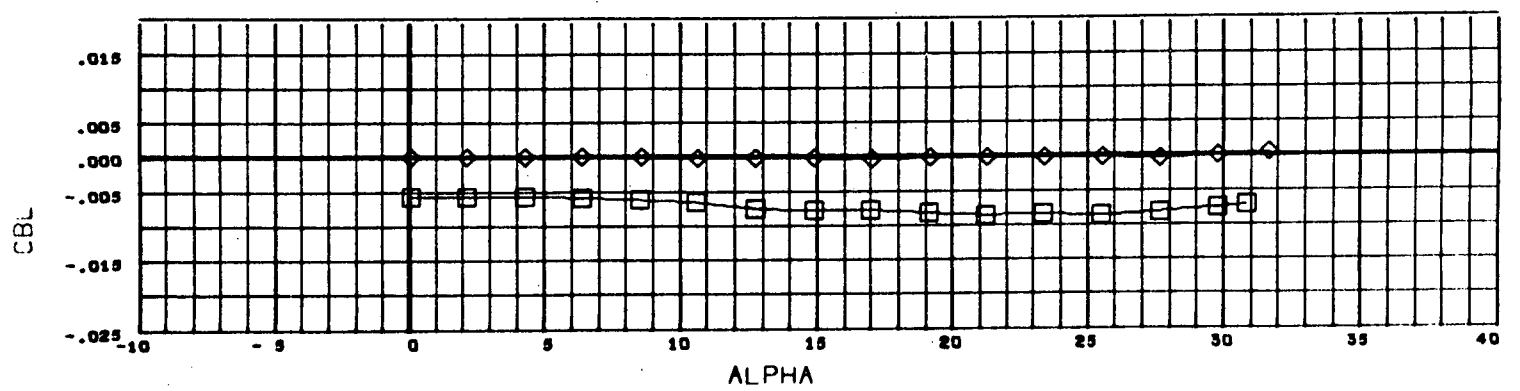
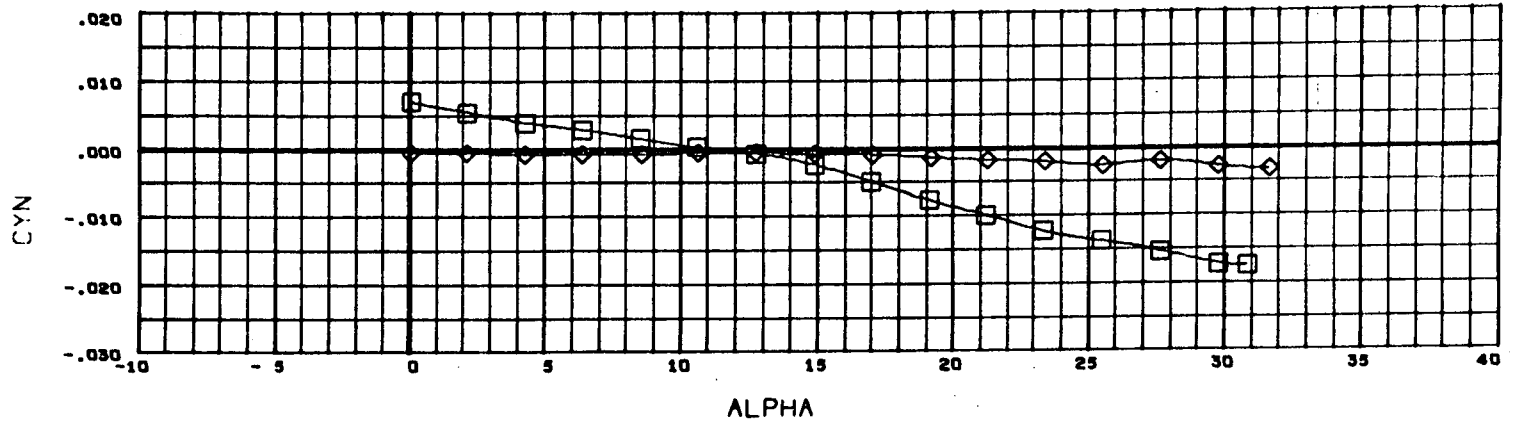
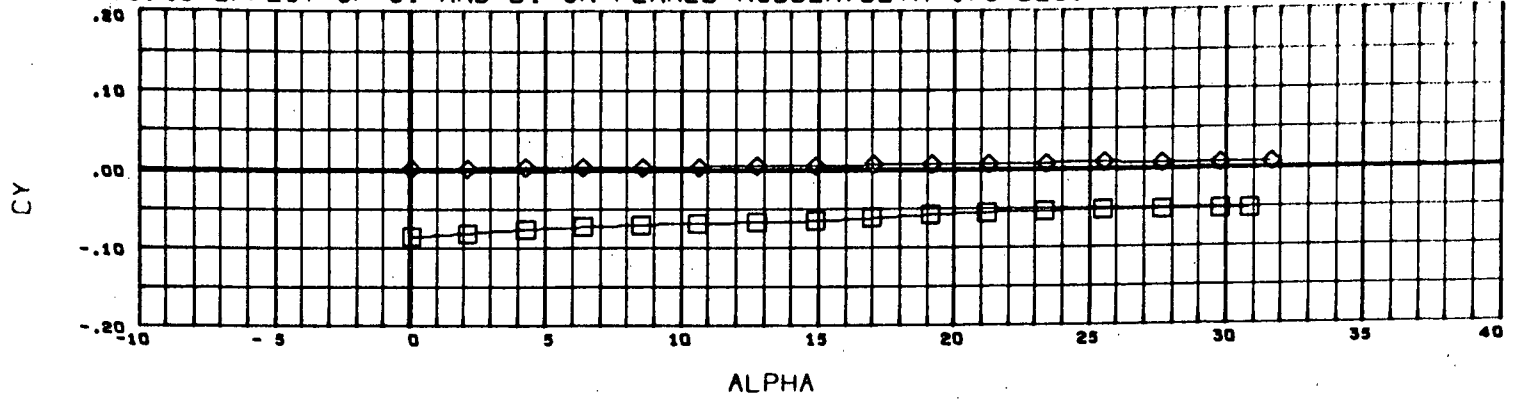
FIG.45 EFFECT OF C1 AND D1 ON FLARED RUDDER



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDFLR	RUDDER	LELEVN	RELEVN	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1	30.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	30.000	0.000	0.000	0.000	LREF 4.5720 IN.
						BREF 6.6150 IN.
						XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

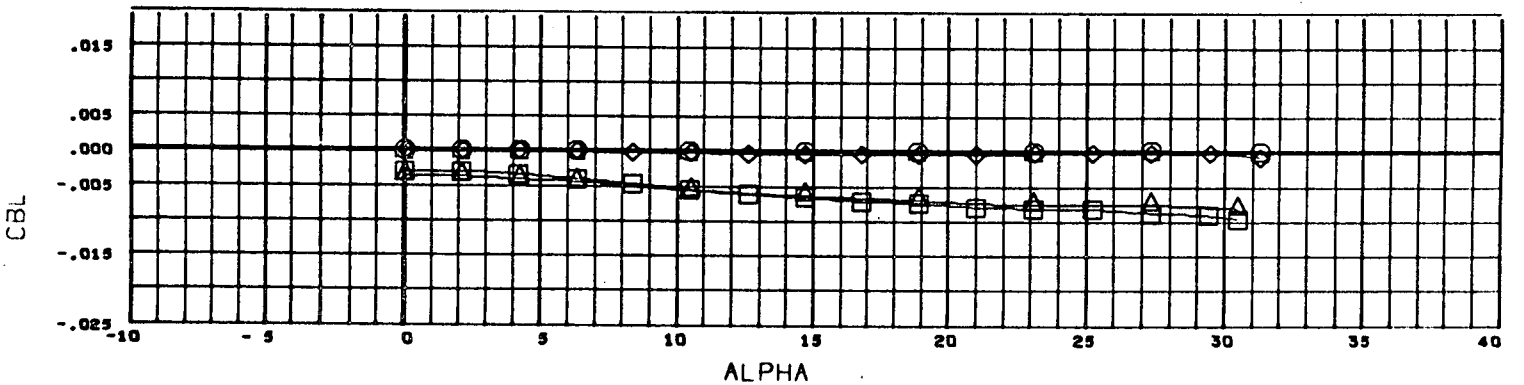
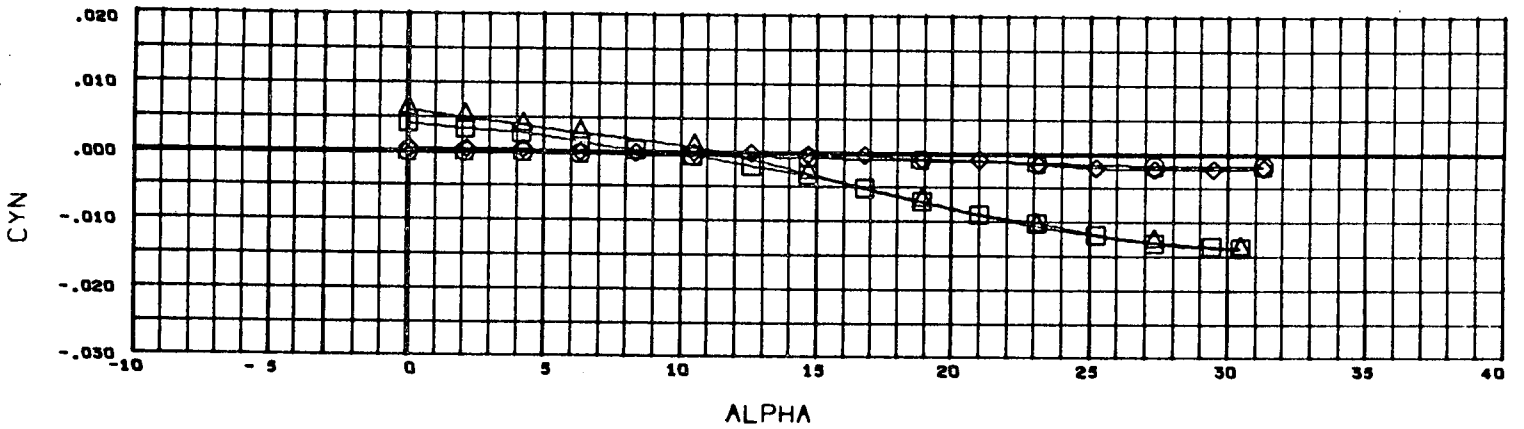
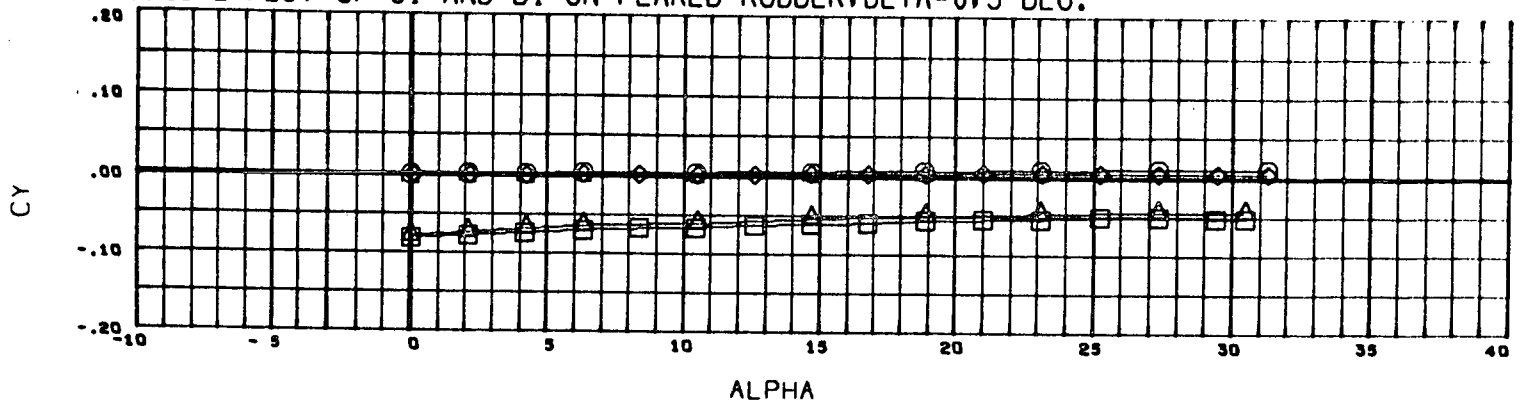
MACH 3.98

FIG.46 EFFECT OF C1 AND D1 ON FLARED RUDDER, BETA=0,5 DEG.



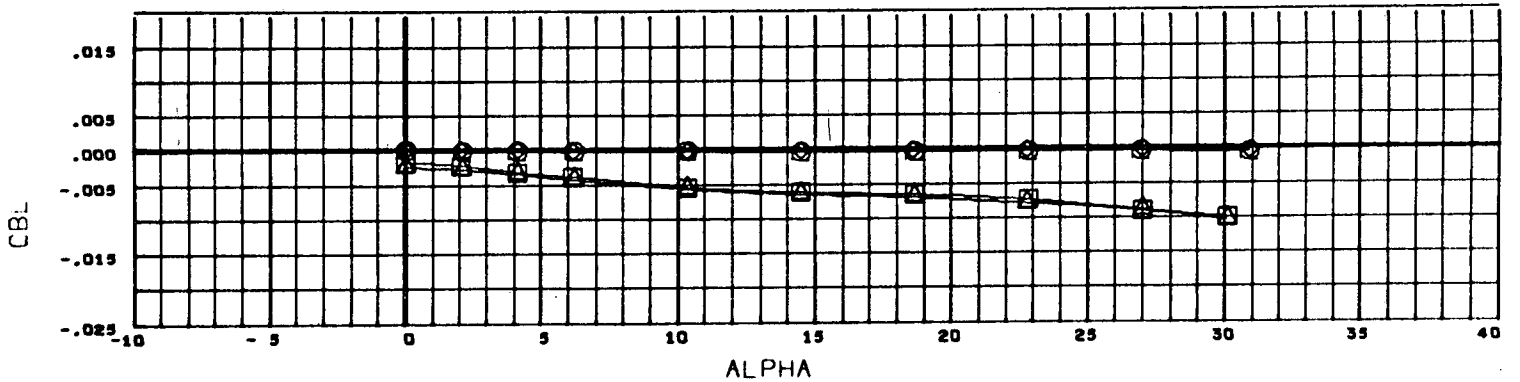
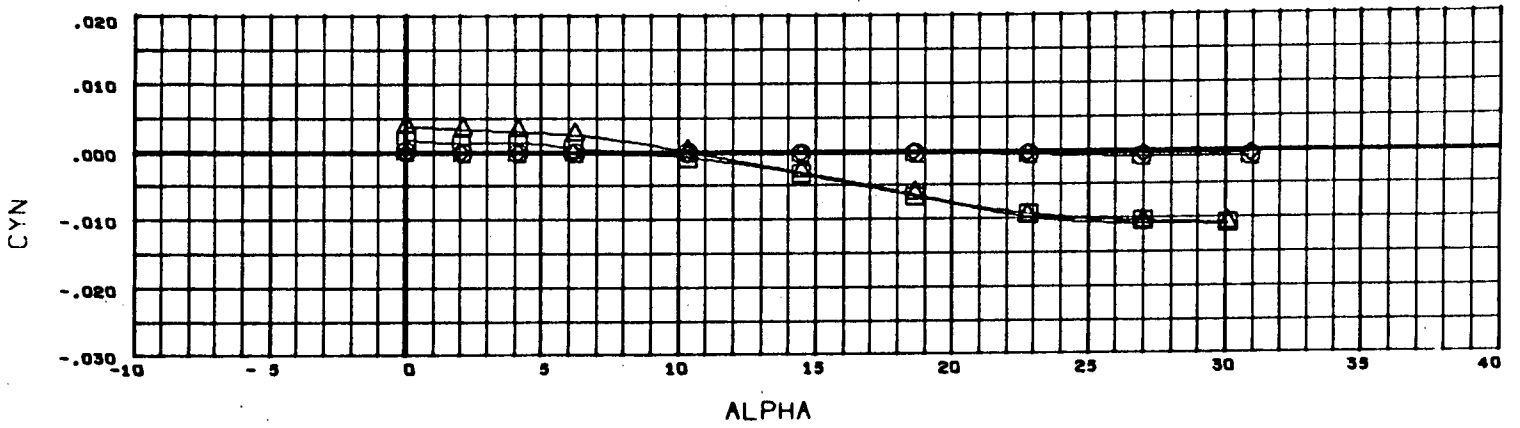
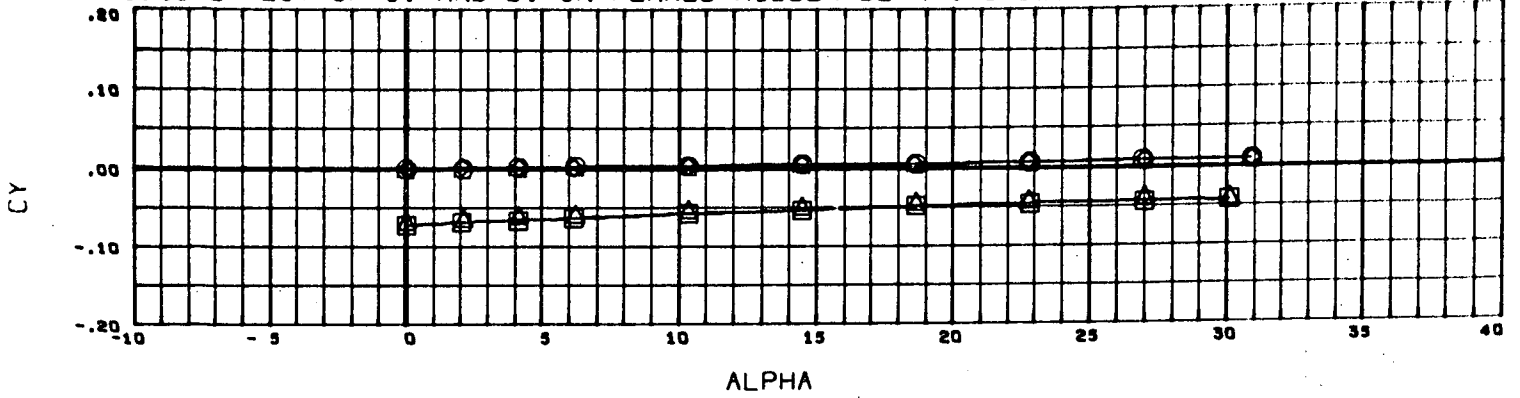
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XCB231)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	30.000	0.000	0.000	SREF 25.5560 SQ IN.
(YCB232)	DATA NOT AVAILABLE FOR ALL CONDITIONS	5.000	30.000	0.000	0.000	LREF 4.5720 IN.
(XCB111)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XCB112)	JPL WT 20-681 MSC 040A B1W1V1(30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XM RP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.46 EFFECT OF C1 AND D1 ON FLARED RUDDER, BETA=0.5 DEG.



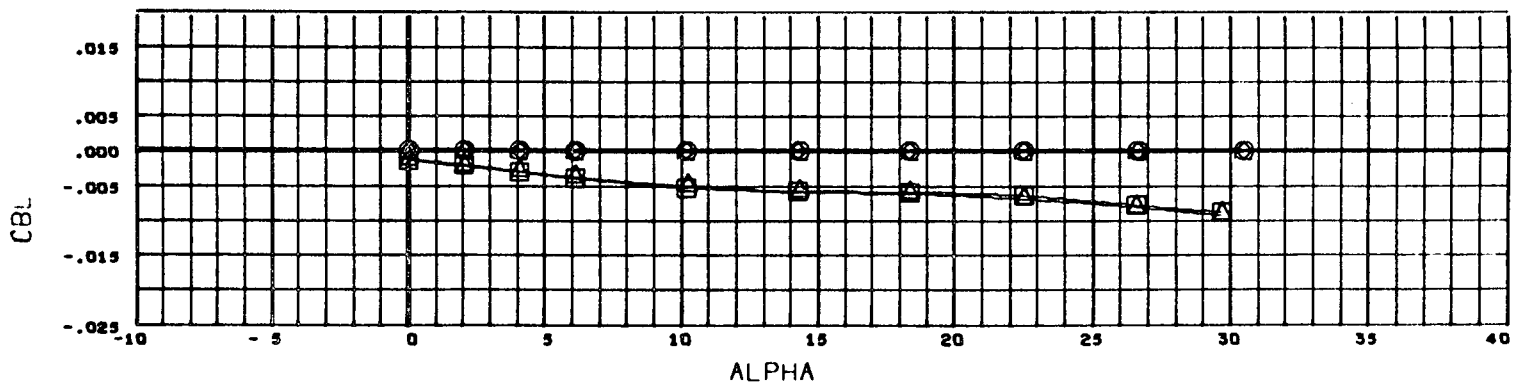
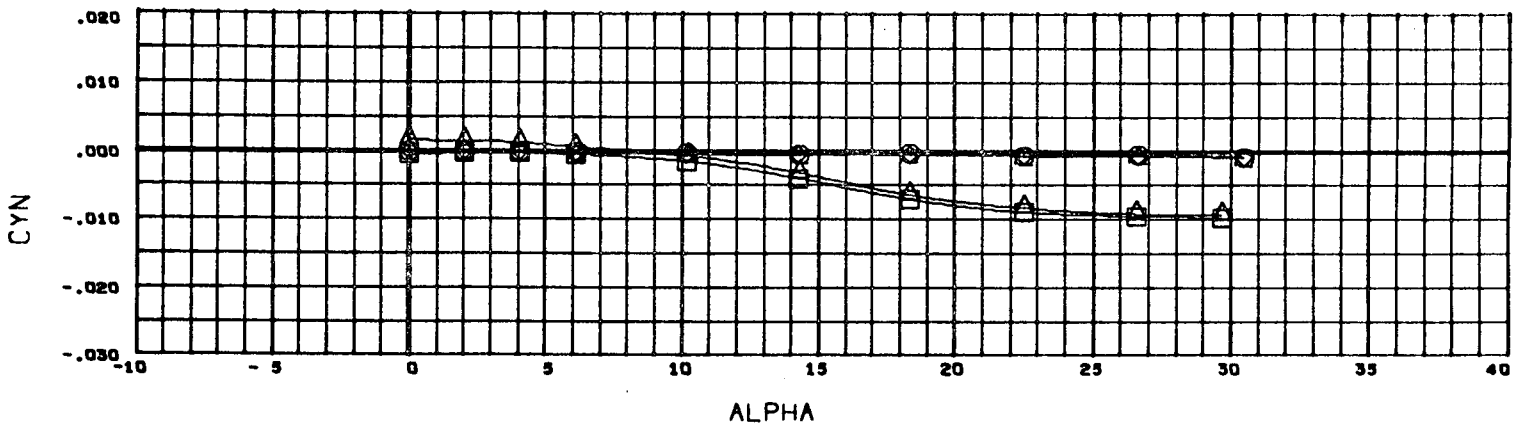
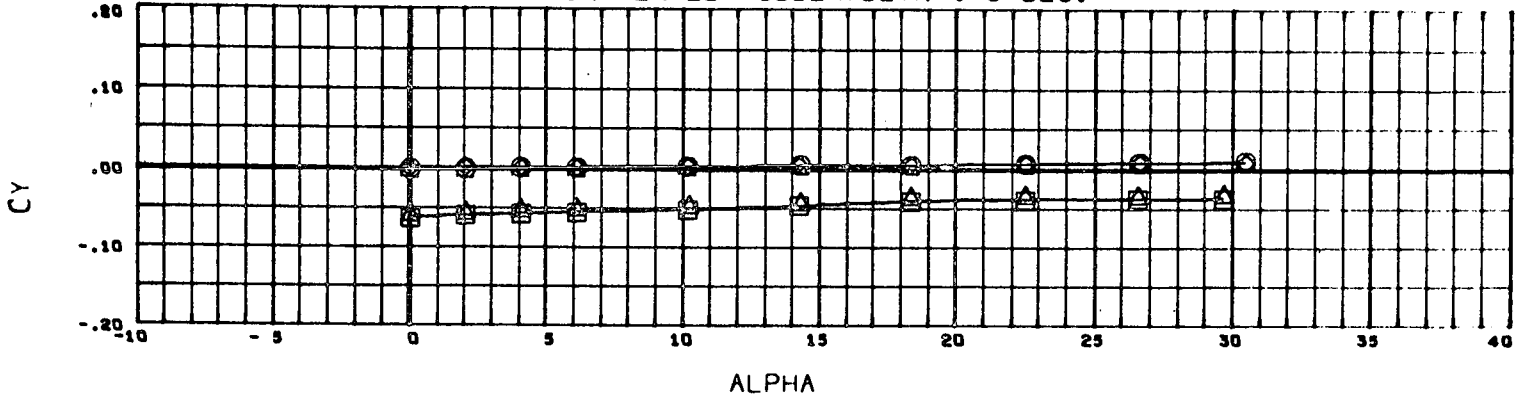
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XCB231)	JPL WT 20-691 MSC 040A 81W1V1 (30,-30)M1P1	0.000	30.000	0.000	0.000	SREF 25.5560 30 IN.
(YCB232)	JPL WT 20-691 MSC 040A 81W1V1 (30,-30)M1P1	5.000	30.000	0.000	0.000	LREF 4.5720 IN.
(XCB111)	JPL WT 20-691 MSC 040A 81W1V1 (30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XCB112)	JPL WT 20-691 MSC 040A 81W1V1 (30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.46 EFFECT OF C1 AND D1 ON FLARED RUDDER, BETA=0.5 DEG.



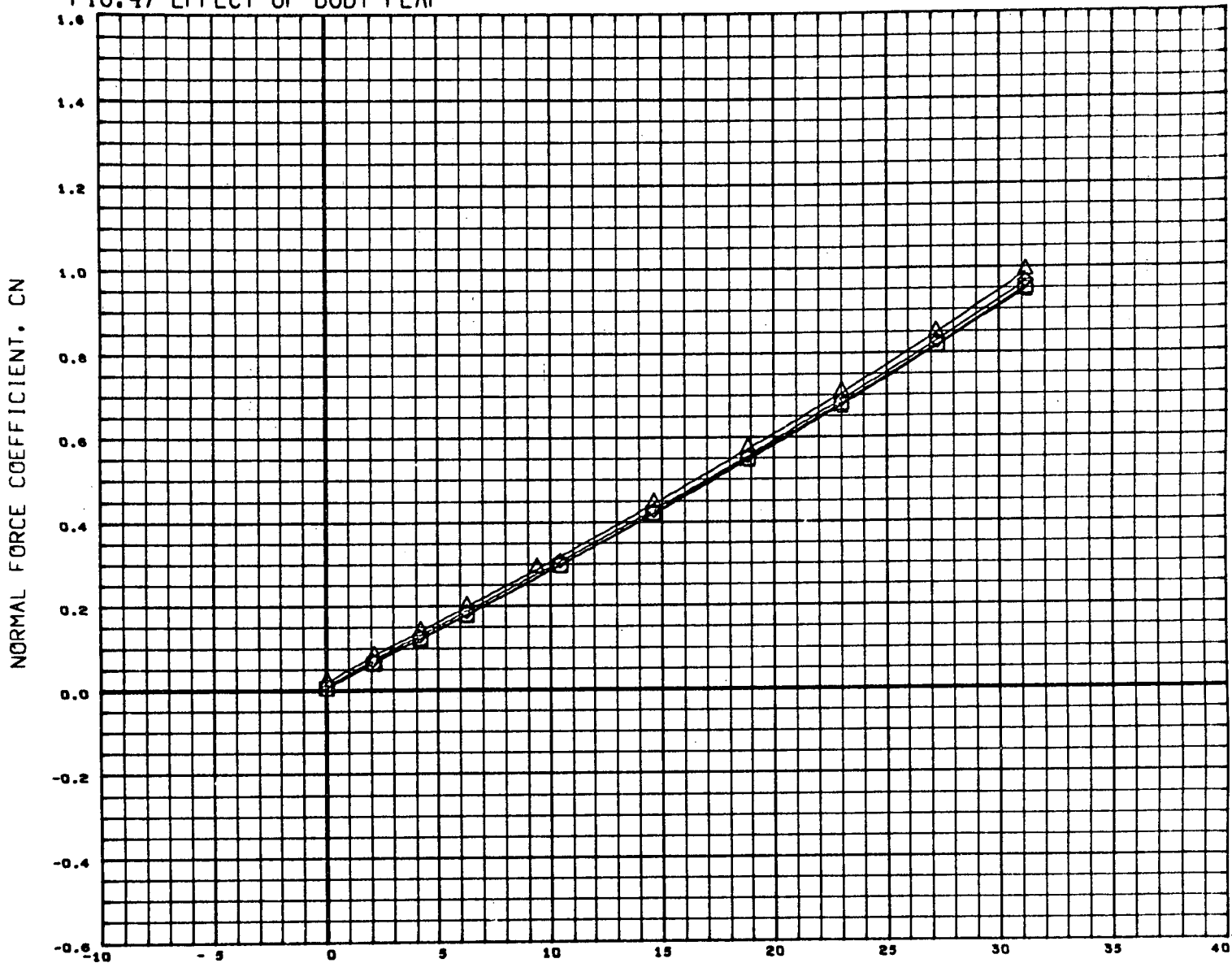
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XG231)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1	0.000	30.000	0.000	0.000	SREF 25.5560 SQ IN.
(YG232)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1	5.000	30.000	0.000	0.000	LREF 4.5720 IN.
(XG2111)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XG2112)	JPL WT 20-681 MSC 040A B1W1V1 (30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

FIG.46 EFFECT OF C1 AND D1 ON FLARED RUDDER, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	RUDFLR	RUDDER	ELEVTR	REFERENCE INFORMATION
(XGB231)	JPL WT 20-681 MSC 040A 81W1V1 (30,-30)M1P1	0.000	30.000	0.000	0.000	SREF 25.5560 SQ IN.
(XGB232)	JPL WT 20-681 MSC 040A 81W1V1 (30,-30)M1P1	5.000	30.000	0.000	0.000	LREF 4.5720 IN.
(XGB111)	JPL WT 20-681 MSC 040A 81W1V1 (30,-30)M1P1D1C1	0.000	30.000	0.000	0.000	BREF 6.6150 IN.
(XGB112)	JPL WT 20-681 MSC 040A 81W1V1 (30,-30)M1P1D1C1	5.000	30.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

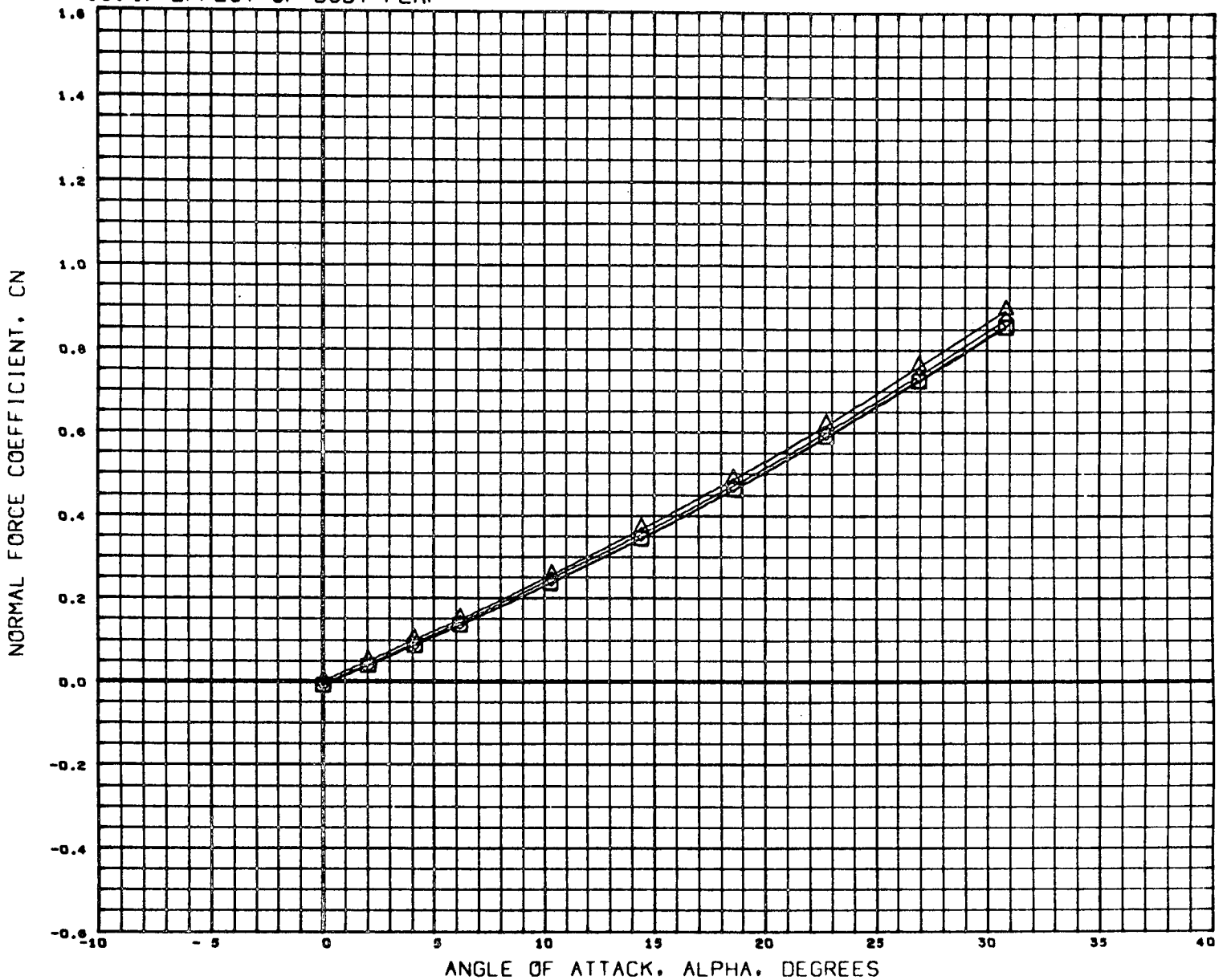
FIG. 47 EFFECT OF BODY FLAP



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

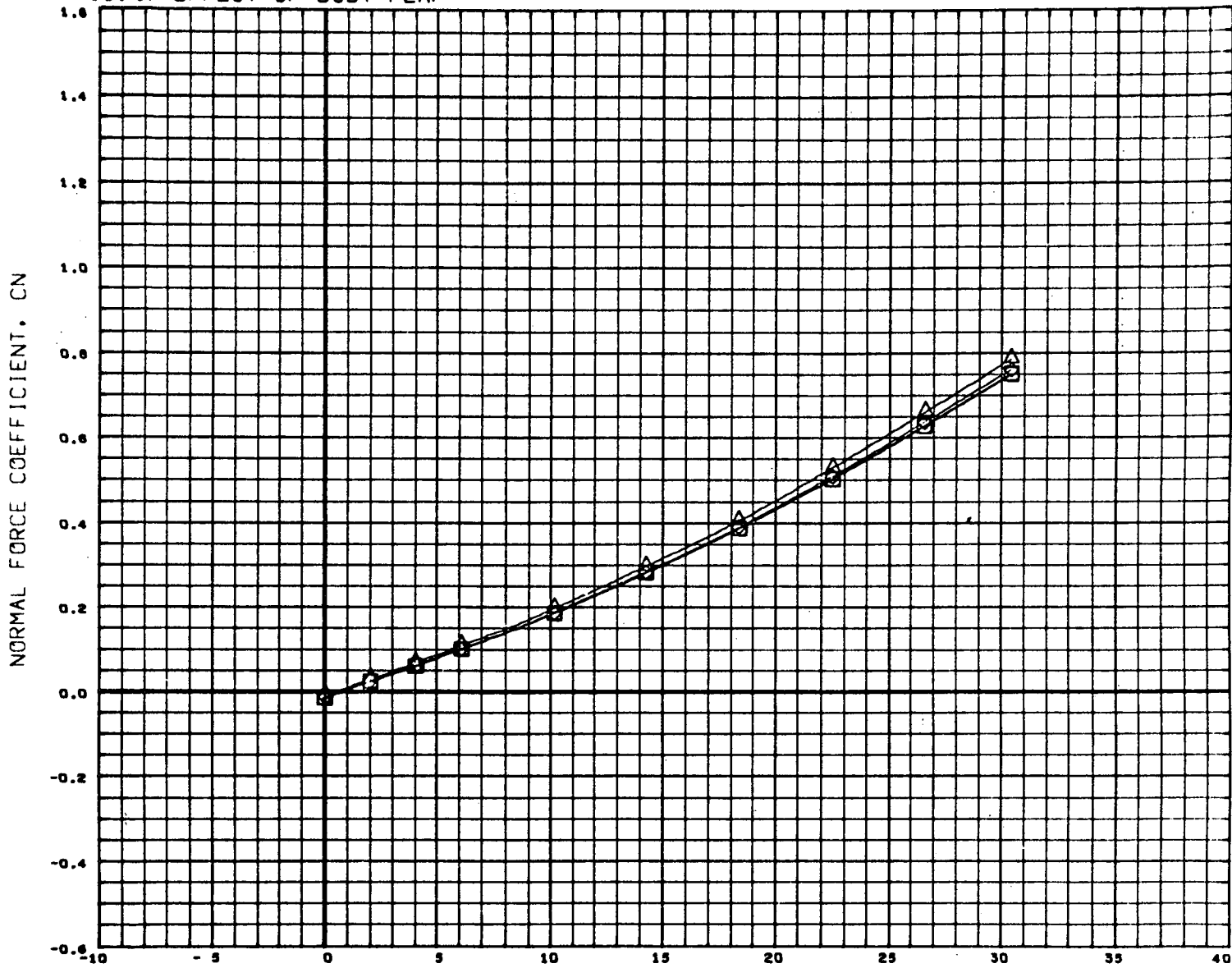
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0073

MACH 3.03

FIG. 47 EFFECT OF BODY FLAP

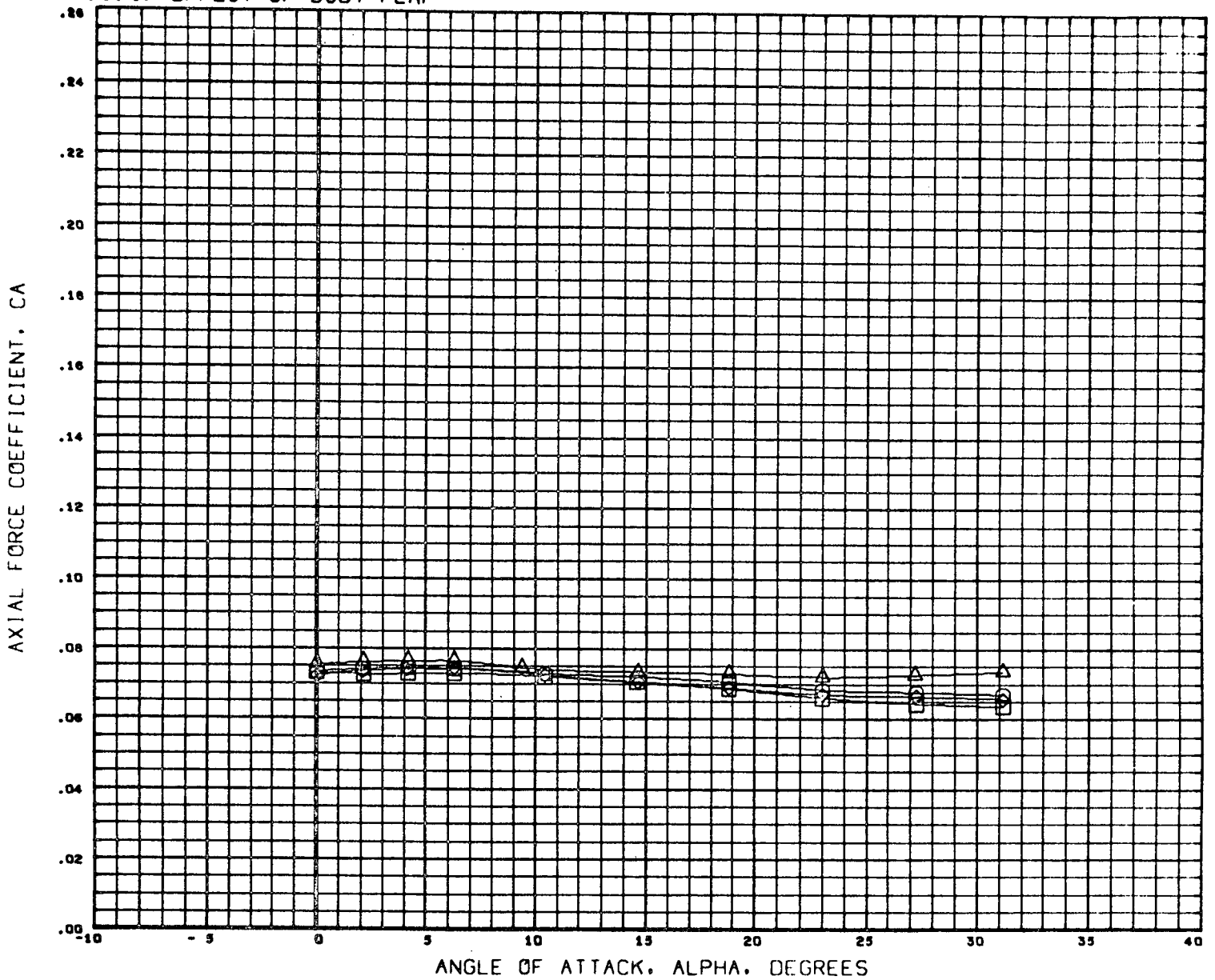


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1		0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

PAGE 275

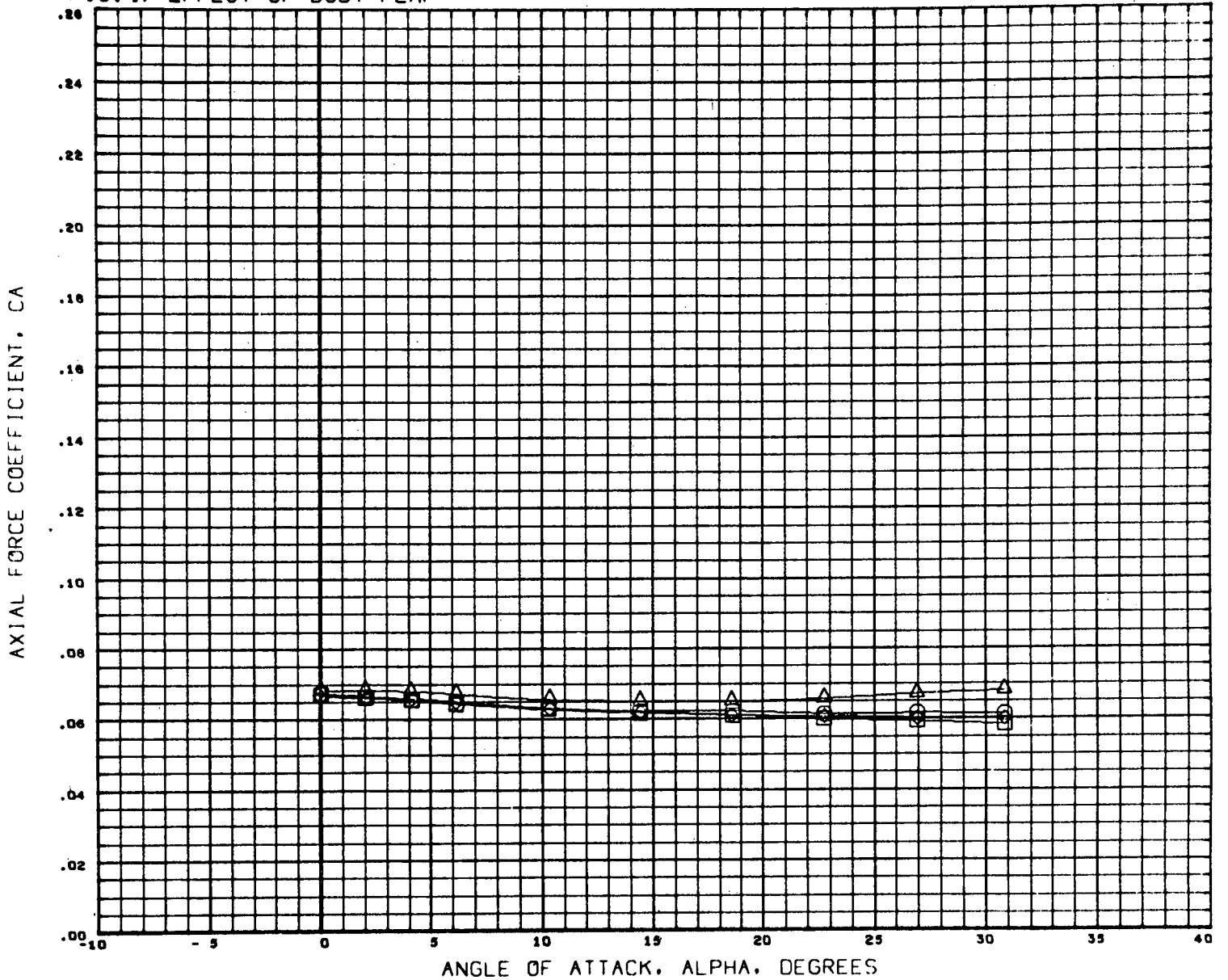
FIG. 47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(R6291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R6271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(R6251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(R6261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 2.42

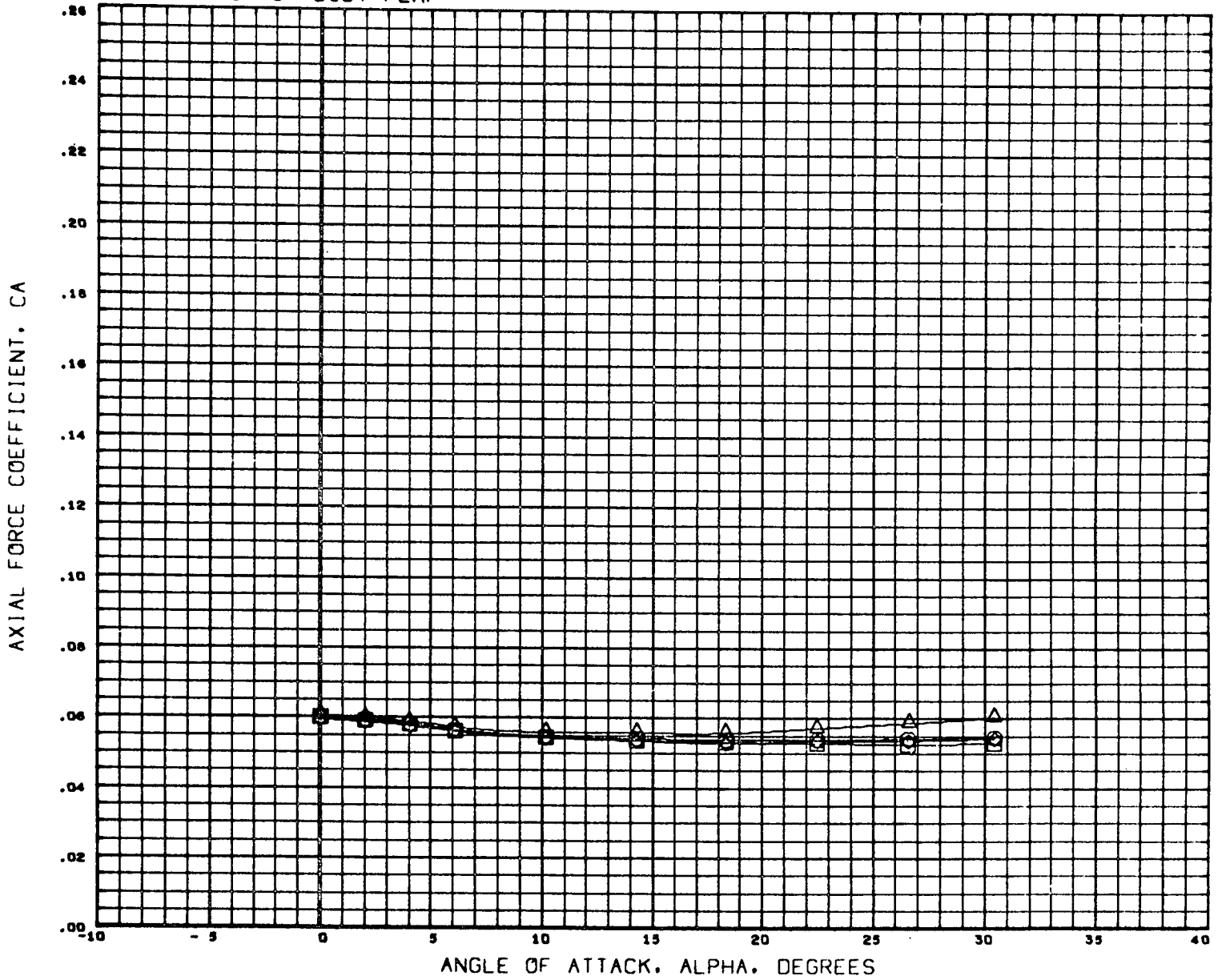
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BOOFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	10.000	0.000	0.000	0.000	SREF 25.5560 50 IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

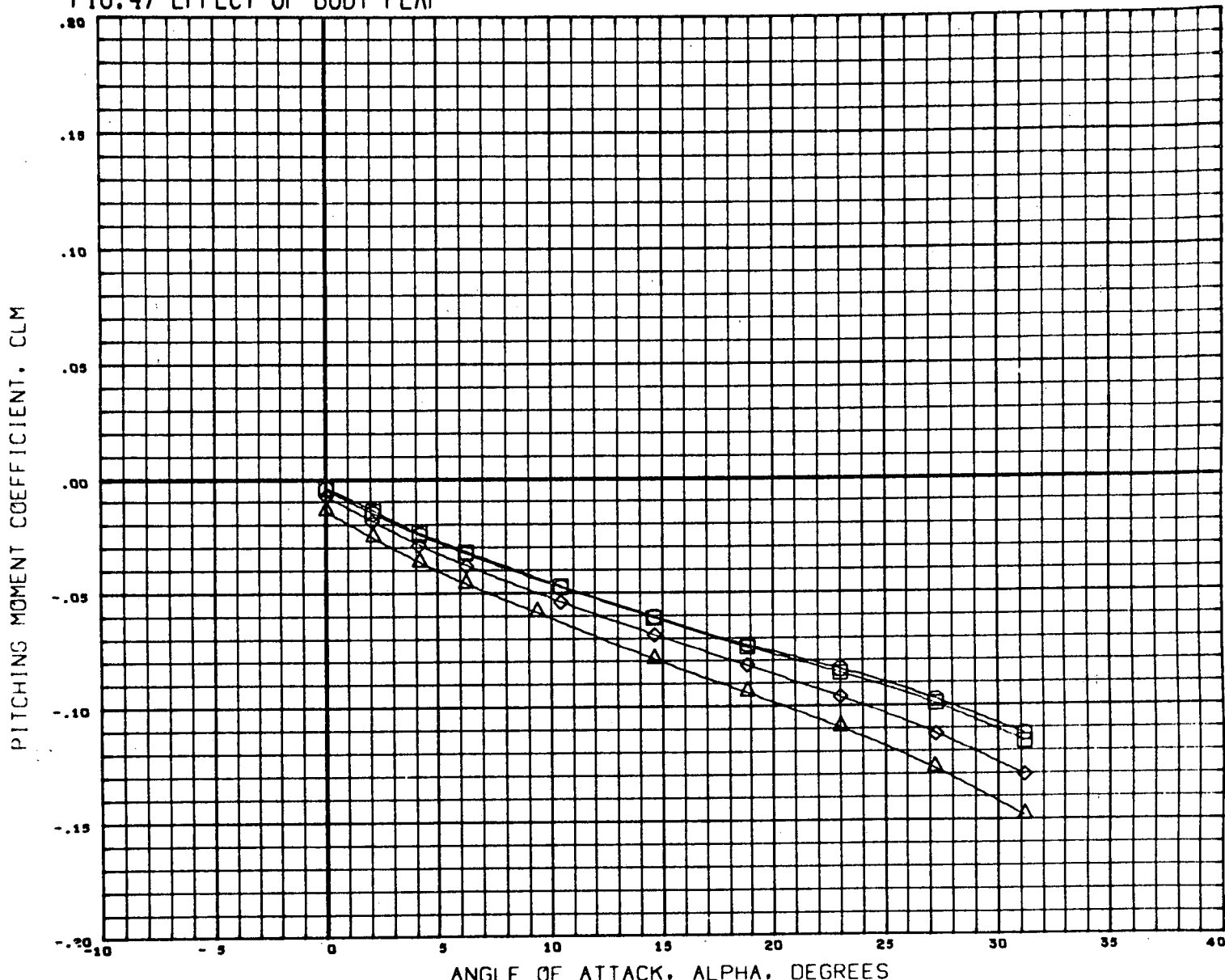
MACH 3.03

FIG. 47 EFFECT OF BODY FLAP



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BOOFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(R6B291)	○	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1		0.000	0.000	0.000	SREF 25.5560 SQ IN.
(R6B271)	△	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(R6B251)	◇	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(R6B261)	□	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

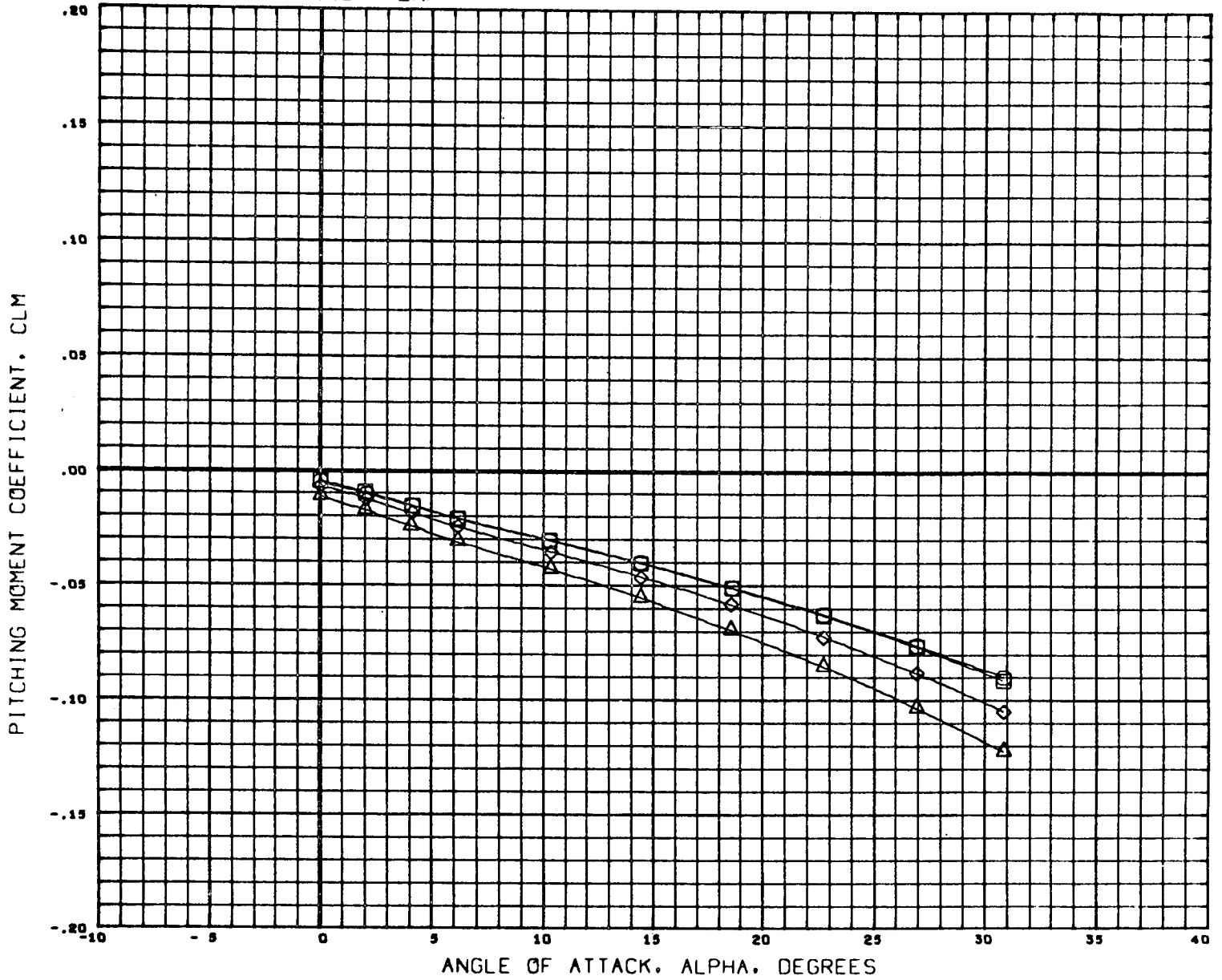
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELVN	RELVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XM RP 1067.9040 IN.
						YM RP 0.0000 IN.
						ZM RP 400.0004 IN.
						SCALE 0.0075

MACH 2.42

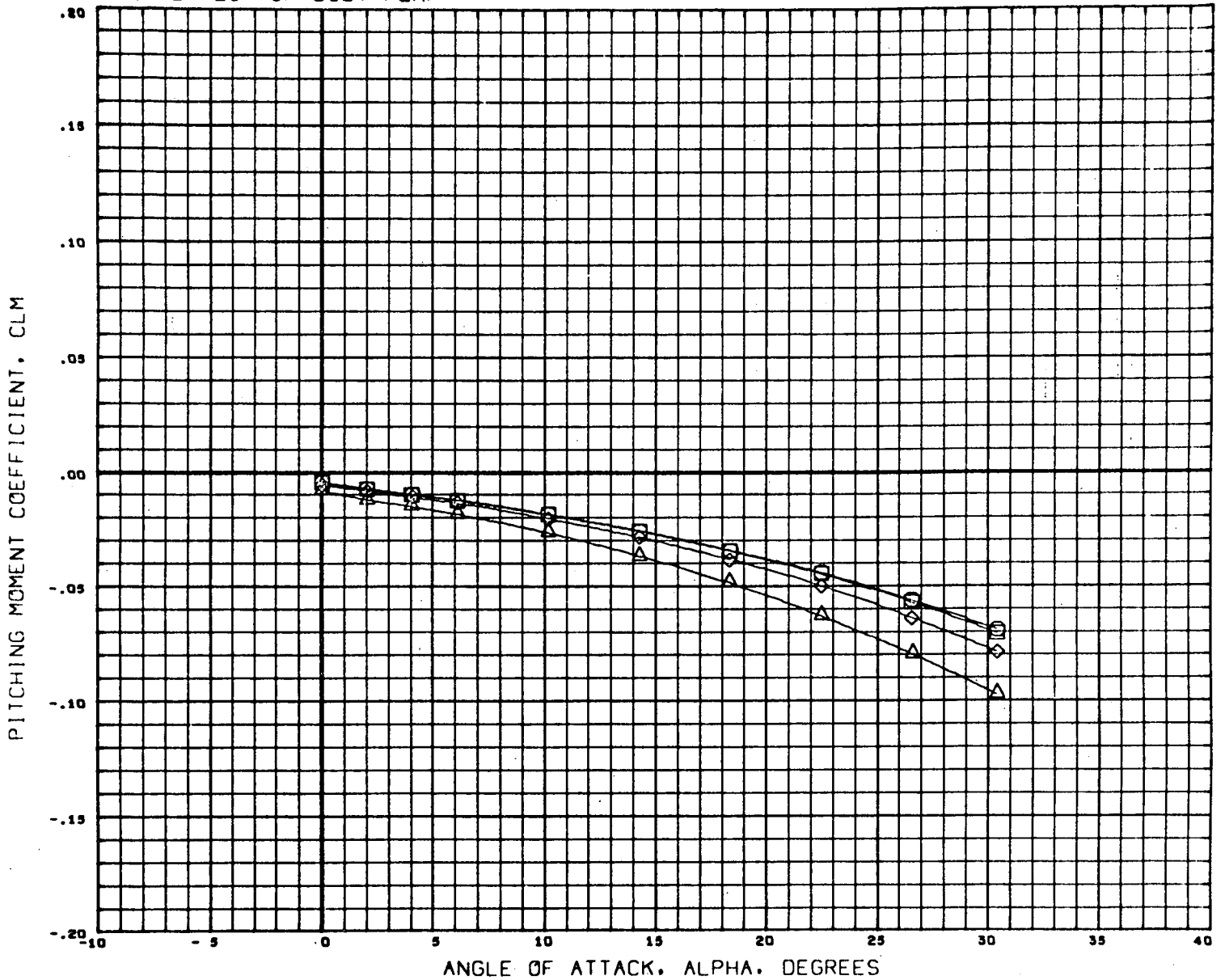
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0075

MACH 3.03

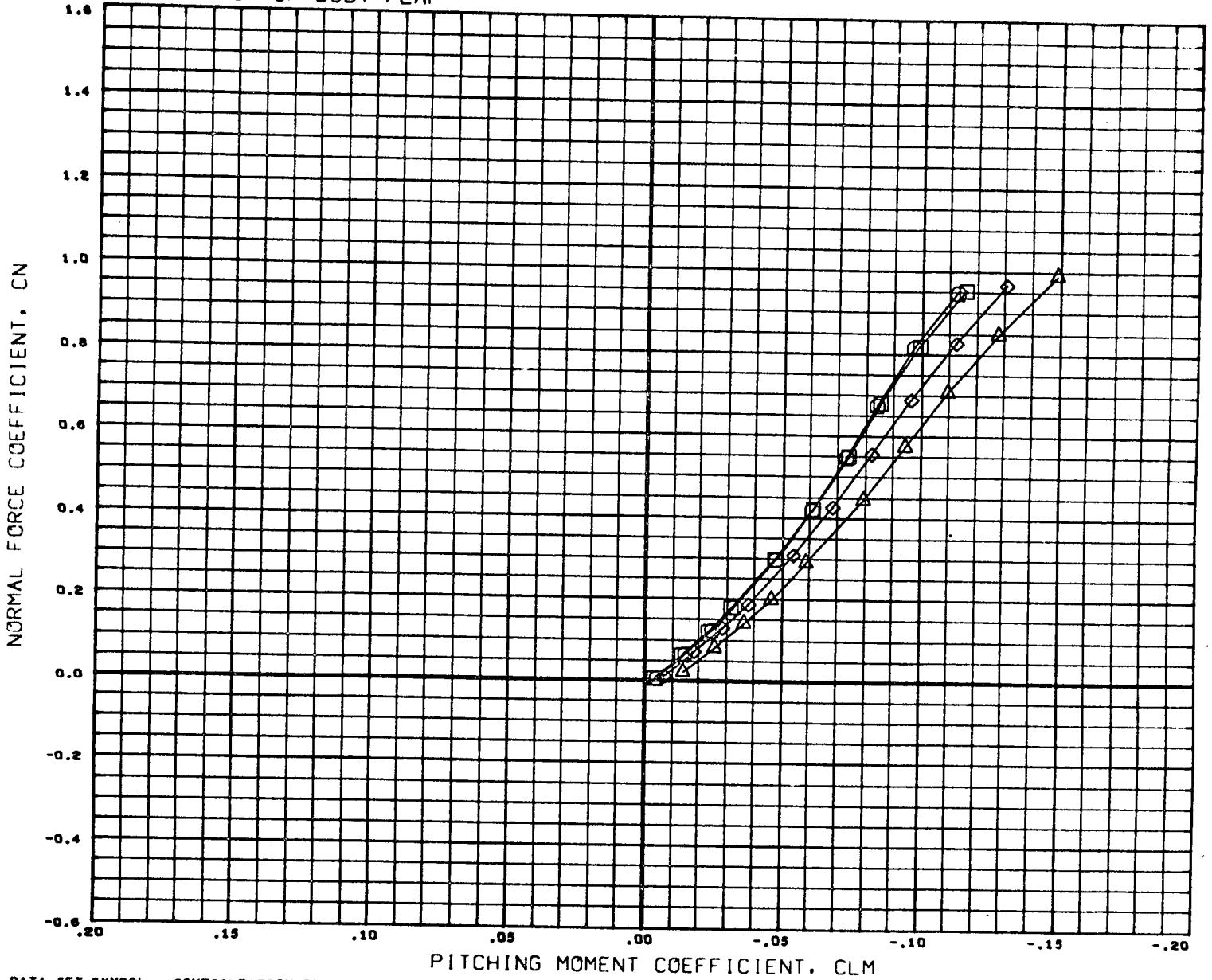
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-681 MSC 040A B1W(1A)VIM1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

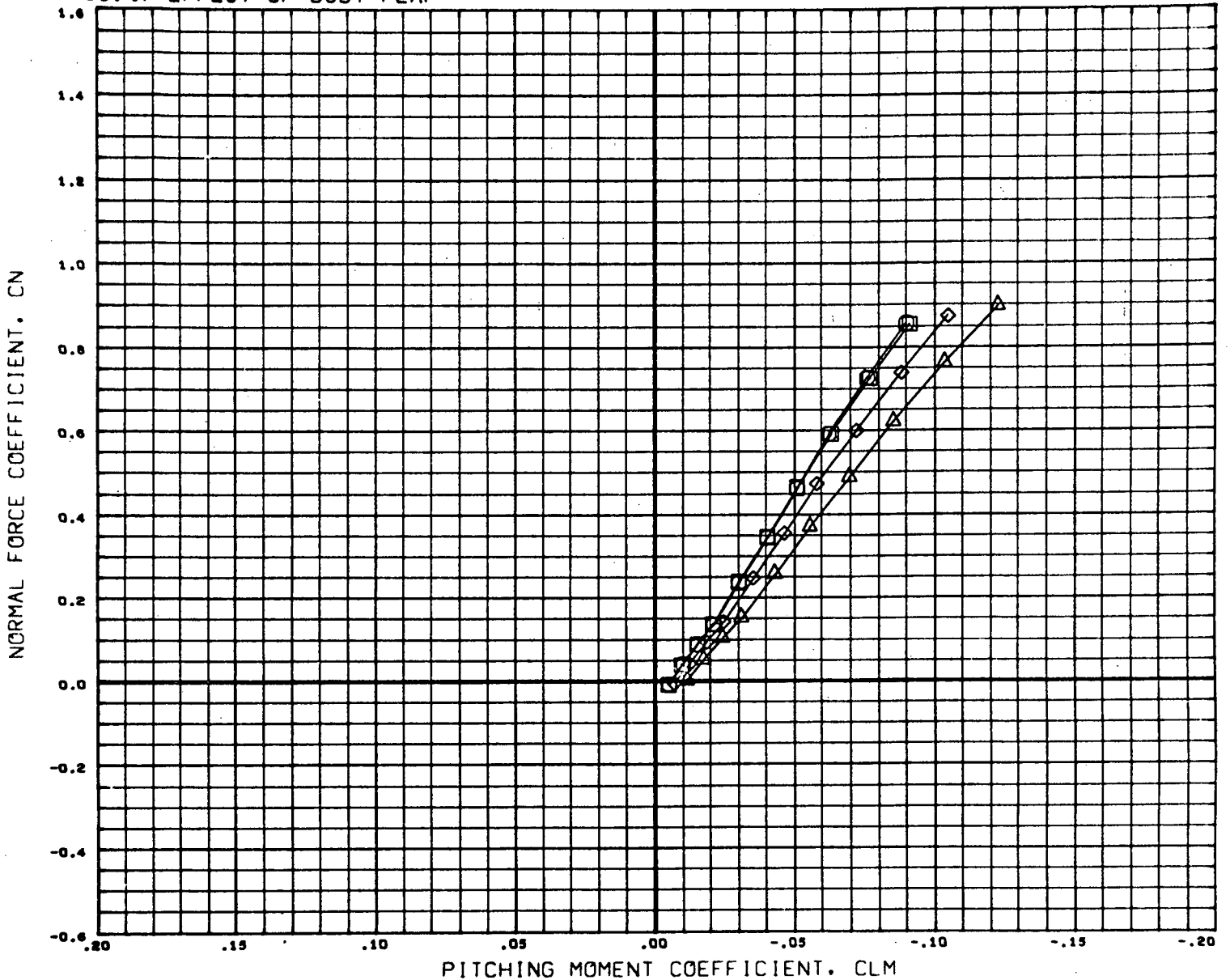
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BODFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION	
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1		0.000	0.000	0.000	SREF	25.5560 50 IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF	4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF	6.6150 IN.
(RGB261)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP	1067.9040 IN.
						YMRP	0.0000 IN.
						ZMRP	400.0004 IN.
						SCALE	0.0075

MACH 2.42

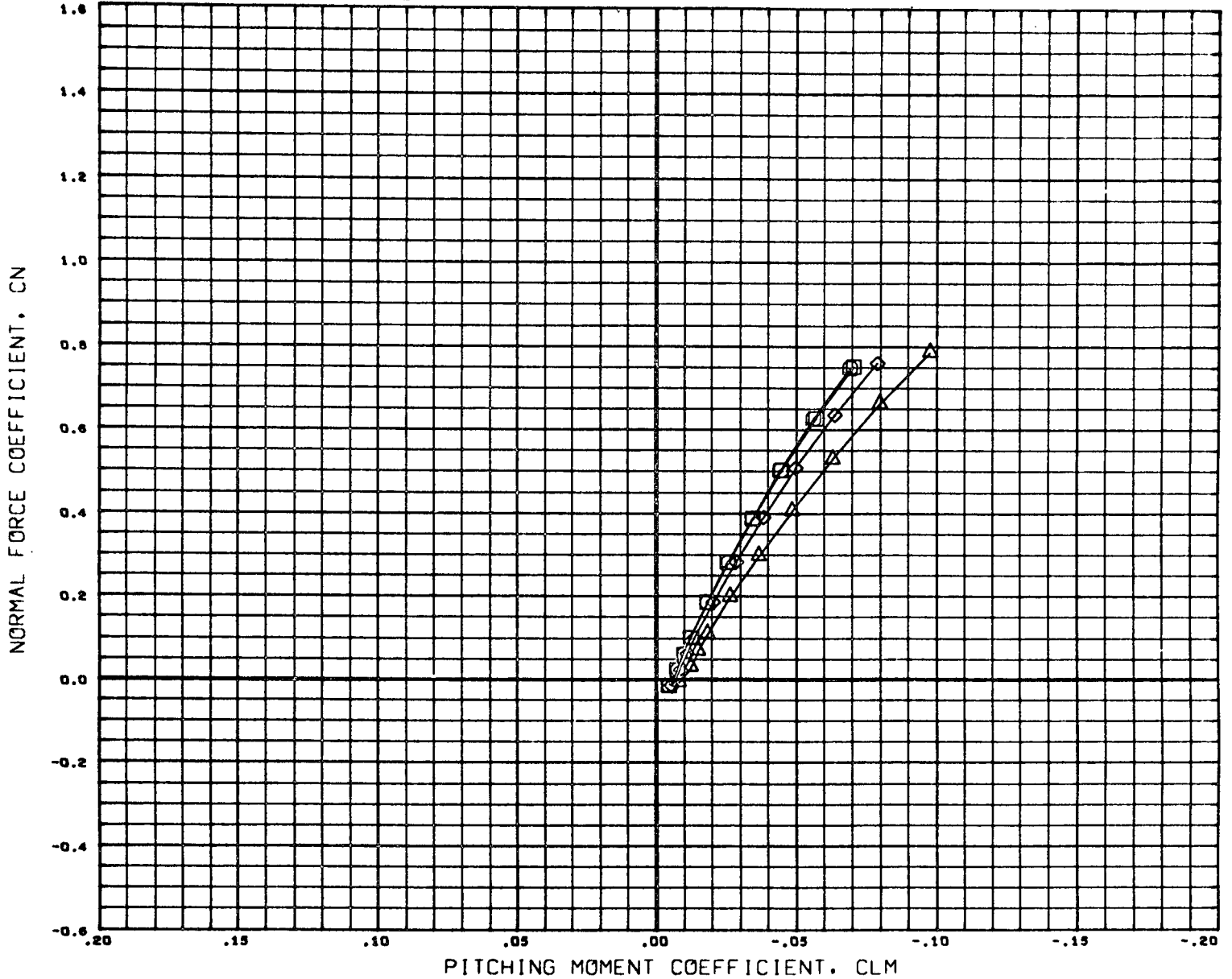
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BOOFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1		0.000	0.000	0.000	SREF 25.5560 30 IN.
(RGB271)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB291)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB281)	JPL WT 20-661 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN.
						YMRP 0.0000 IN.
						ZMRP 400.0004 IN.
						SCALE 0.0073

MACH 3.03

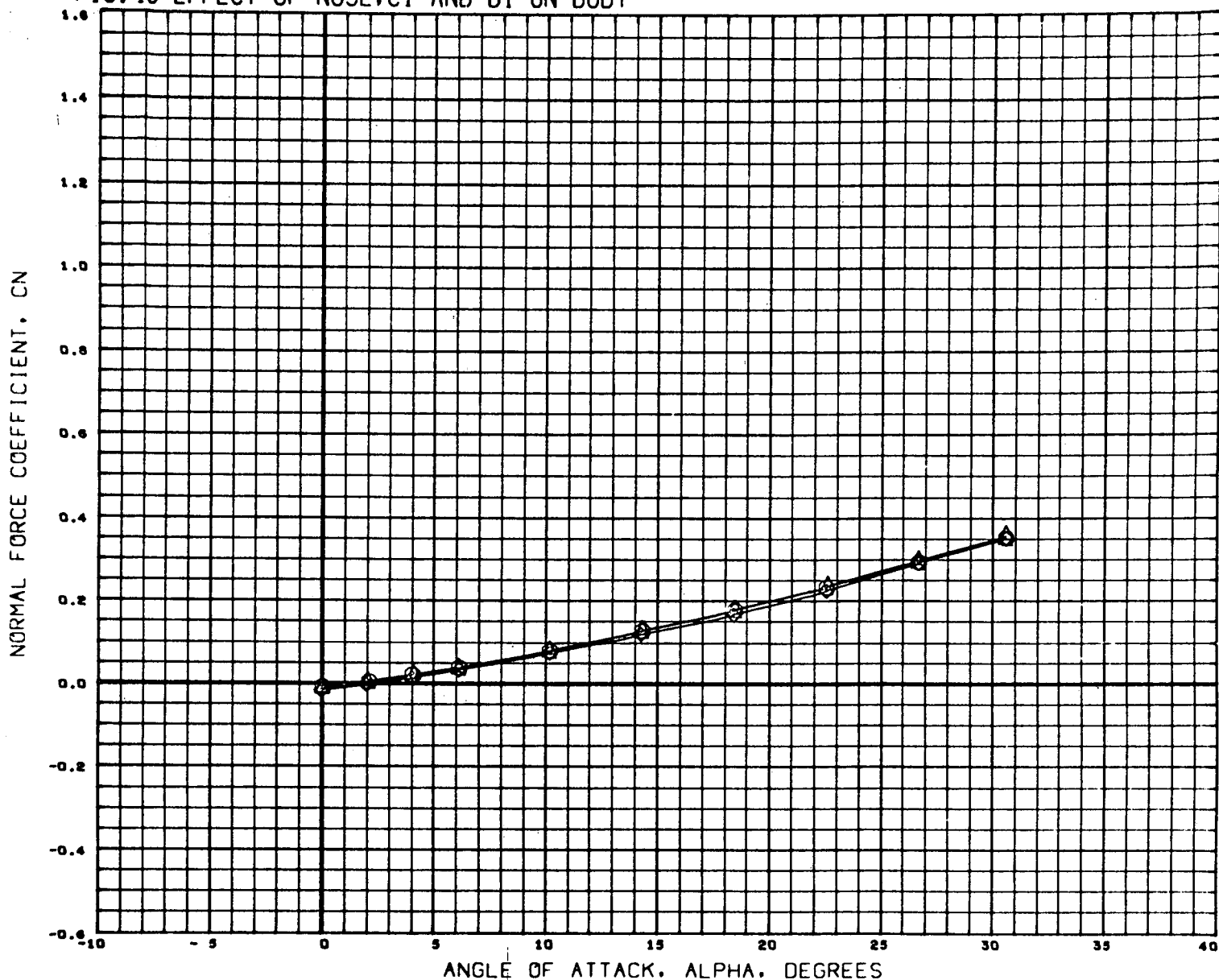
FIG.47 EFFECT OF BODY FLAP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BOOFLP	LELEVN	RELEVN	RUDDER	REFERENCE INFORMATION
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1	0.000	0.000	0.000	0.000	SREF 25.5560 SQ IN.
(RGB271)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	10.000	0.000	0.000	0.000	LREF 4.5720 IN.
(RGB251)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	0.000	0.000	0.000	0.000	BREF 6.6150 IN.
(RGB291)	JPL WT 20-681 MSC 040A B1W(1A)V1M1P1D1C1F1	-15.000	0.000	0.000	0.000	XMRP 1067.9040 IN. YMRP 0.0000 IN. ZMRP 400.0004 IN. SCALE 0.0075

MACH 3.98

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY



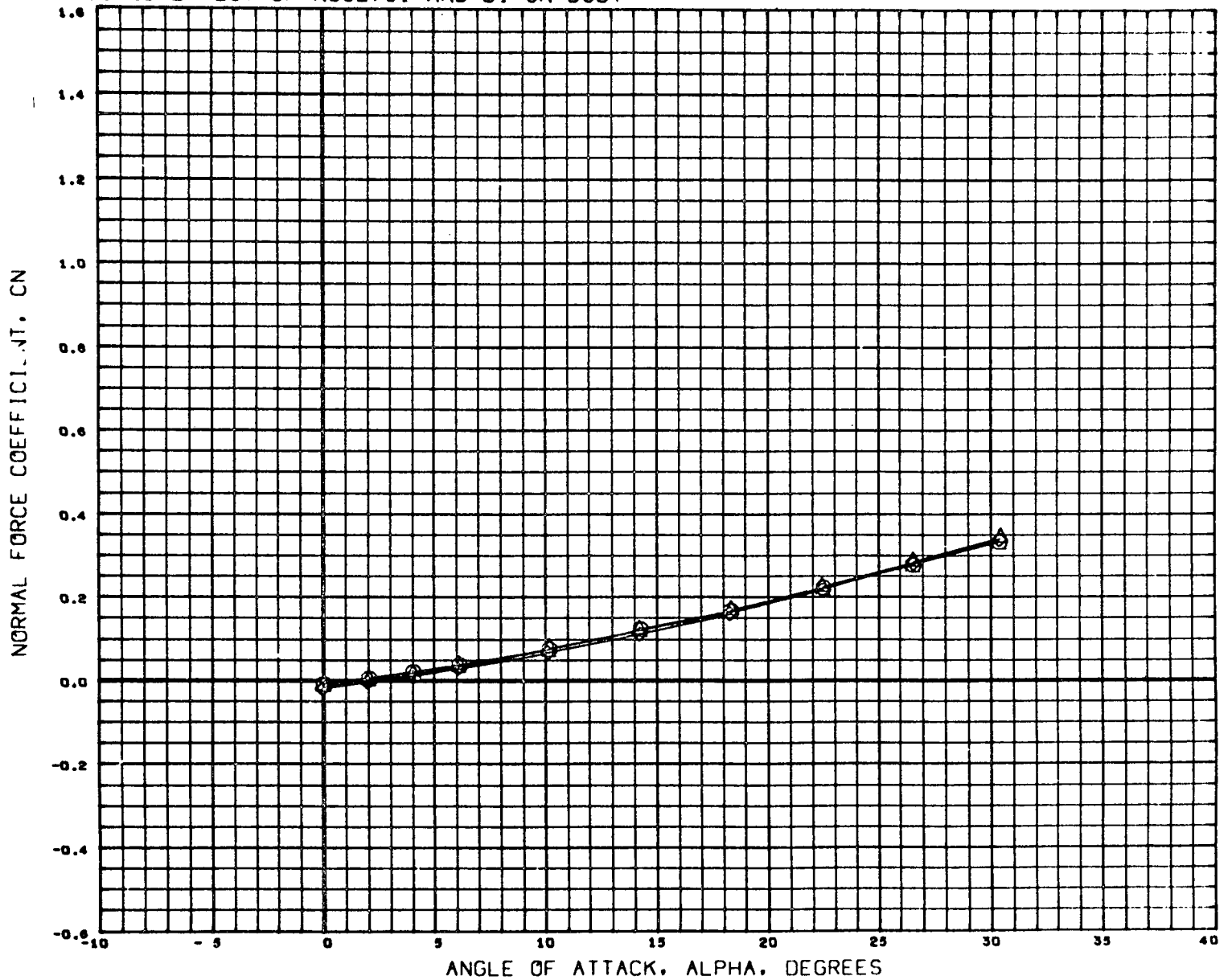
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RG8321)	JPL WT 20-681 MSC 040A B1M1
(RG8301)	JPL WT 20-681 MSC 040A B1M1D1C1
(RG8311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION	
SREF	25.5560 SQ IN.
LREF	4.5720 IN.
BREF	6.6150 IN.
XMRP	1067.9040 IN.
YMRP	0.0000 IN.
ZMRP	400.0004 IN.
SCALE	0.0075

MACH 2.42

PAGE 285

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY

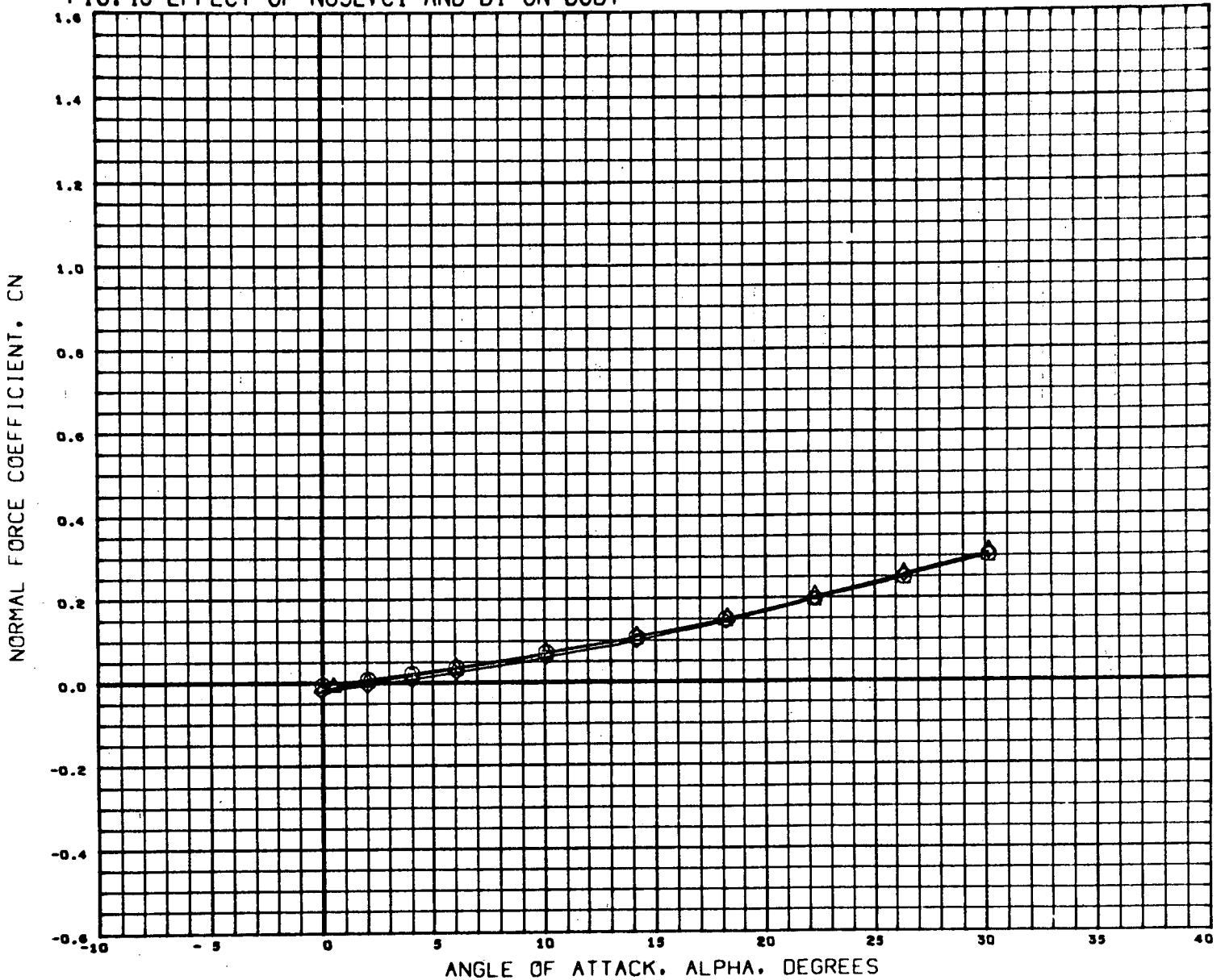


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68321)	JPL WT 20-661 MSC 040A B1M1
(R68301)	JPL WT 20-661 MSC 040A B1M1D1C1
(R68311)	JPL WT 20-661 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

FIG.48 EFFECT OF NOSE,C1 AND D1 ON BODY

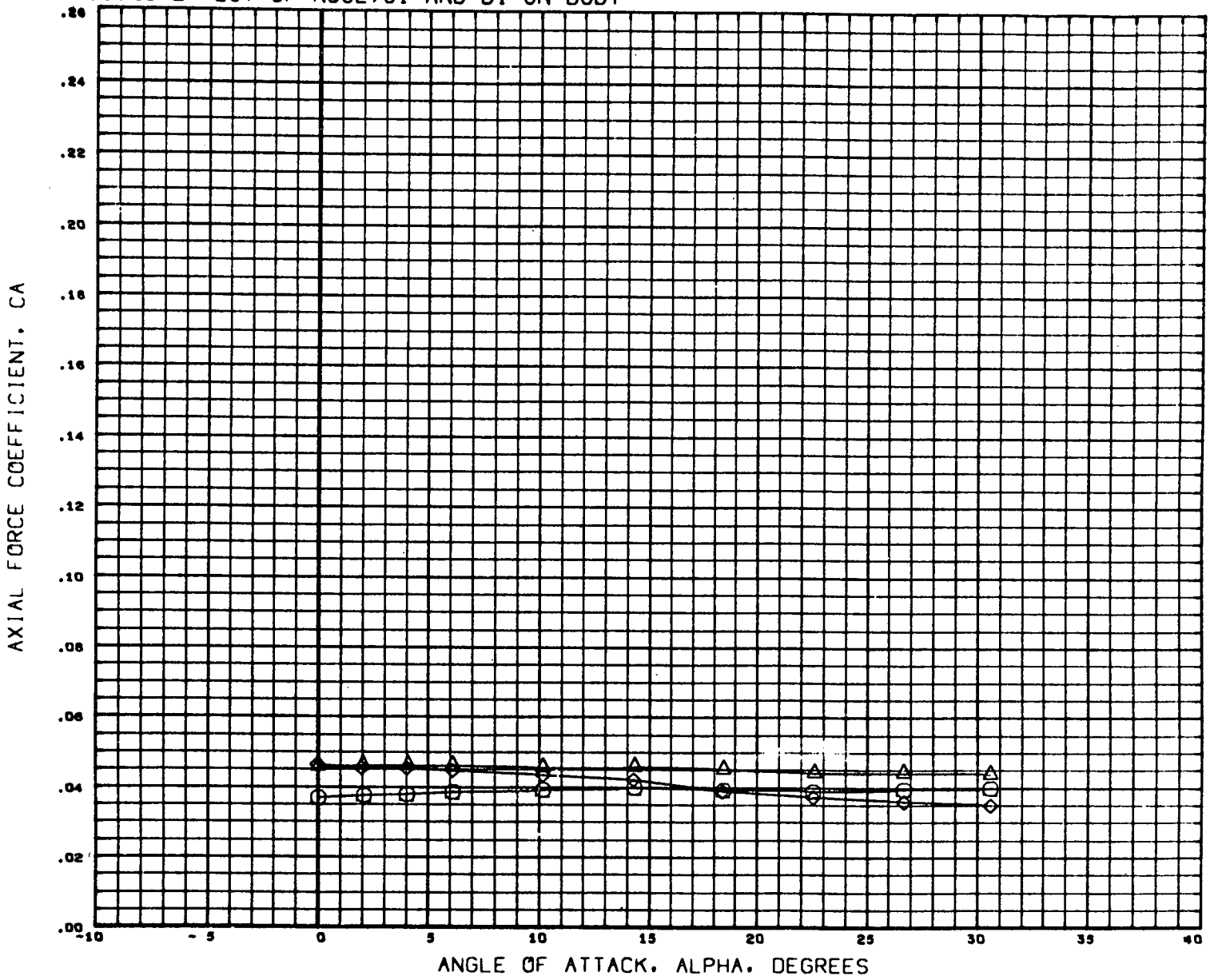


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB321)	JPL WT 20-661 MSC 040A B1M1
(RGB301)	JPL WT 20-661 MSC 040A B1M1D1C1
(RGB311)	JPL WT 20-661 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.3720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY



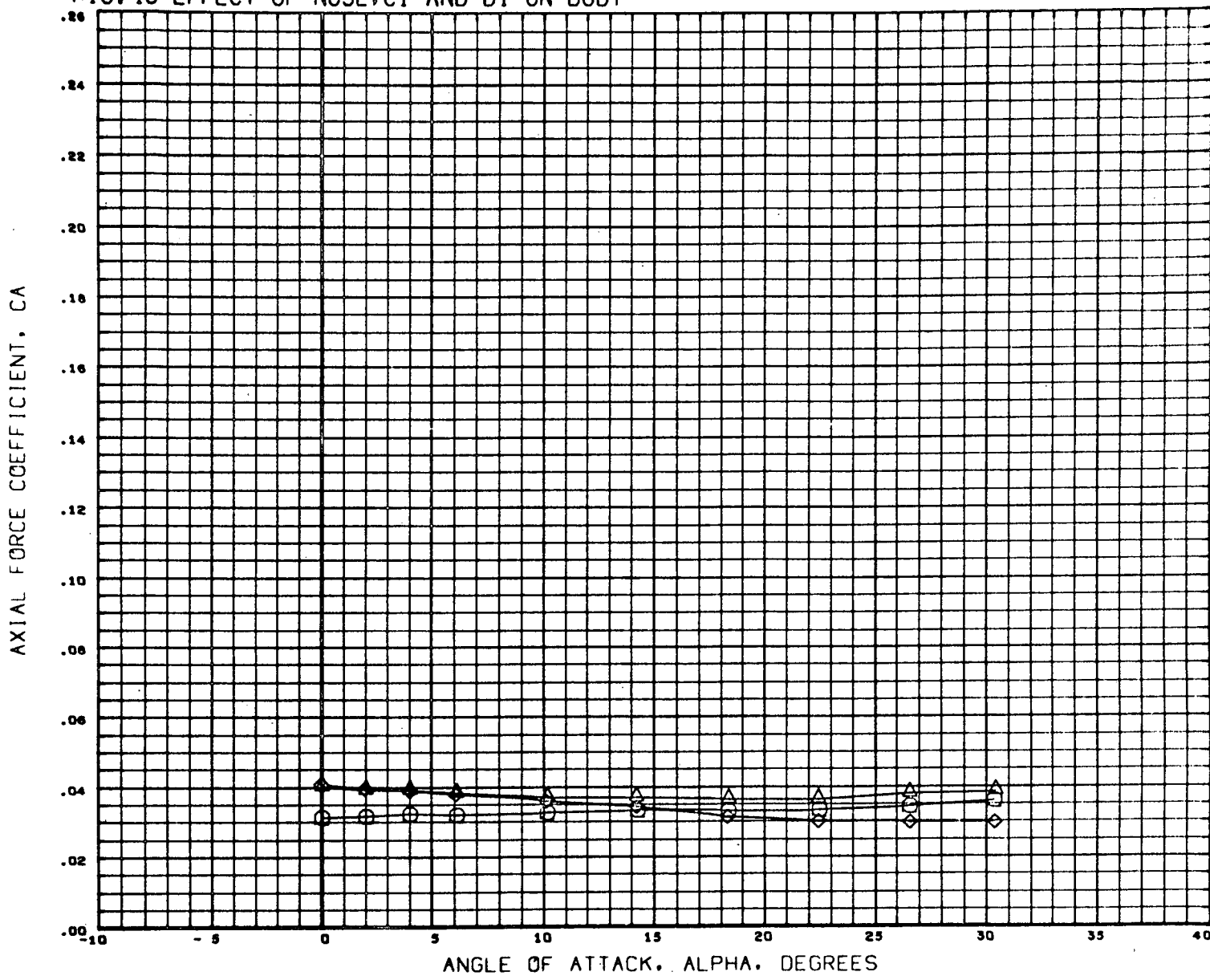
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B321)	JPL WT 20-681 MSC 040A B1M1
(R6B301)	JPL WT 20-681 MSC 040A B1M1D1C1
(R6B311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	sq IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

PAGE 288

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY

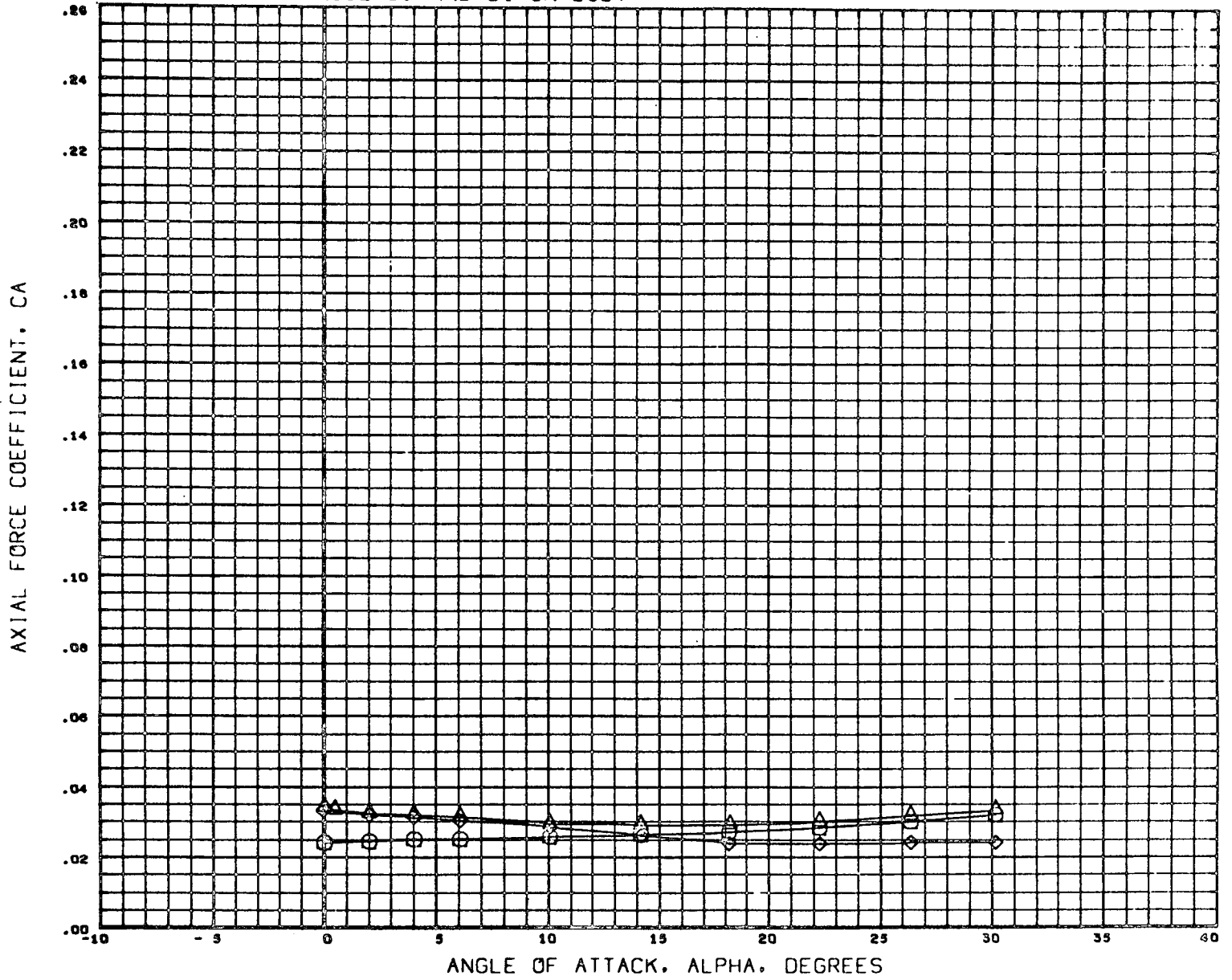


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68321)	JPL WT 20-681 MSC 040A B1M1
(R68301)	JPL WT 20-681 MSC 040A B1M1D1C1
(R68311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY



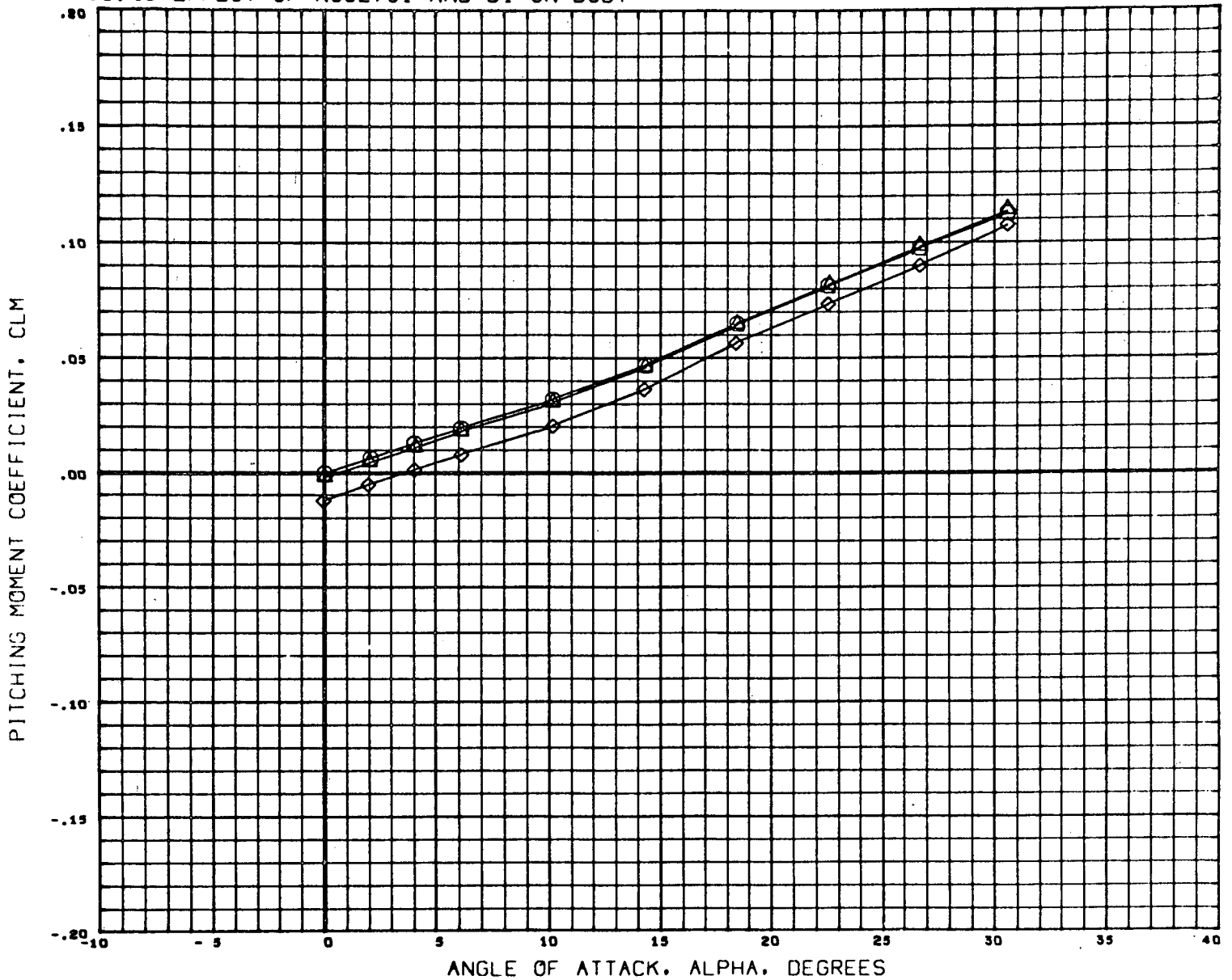
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68321)	JPL WT 20-681 MSC 040A B1M1
(R68301)	JPL WT 20-681 MSC 040A B1M1D1C1
(R68311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

PAGE 290

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY

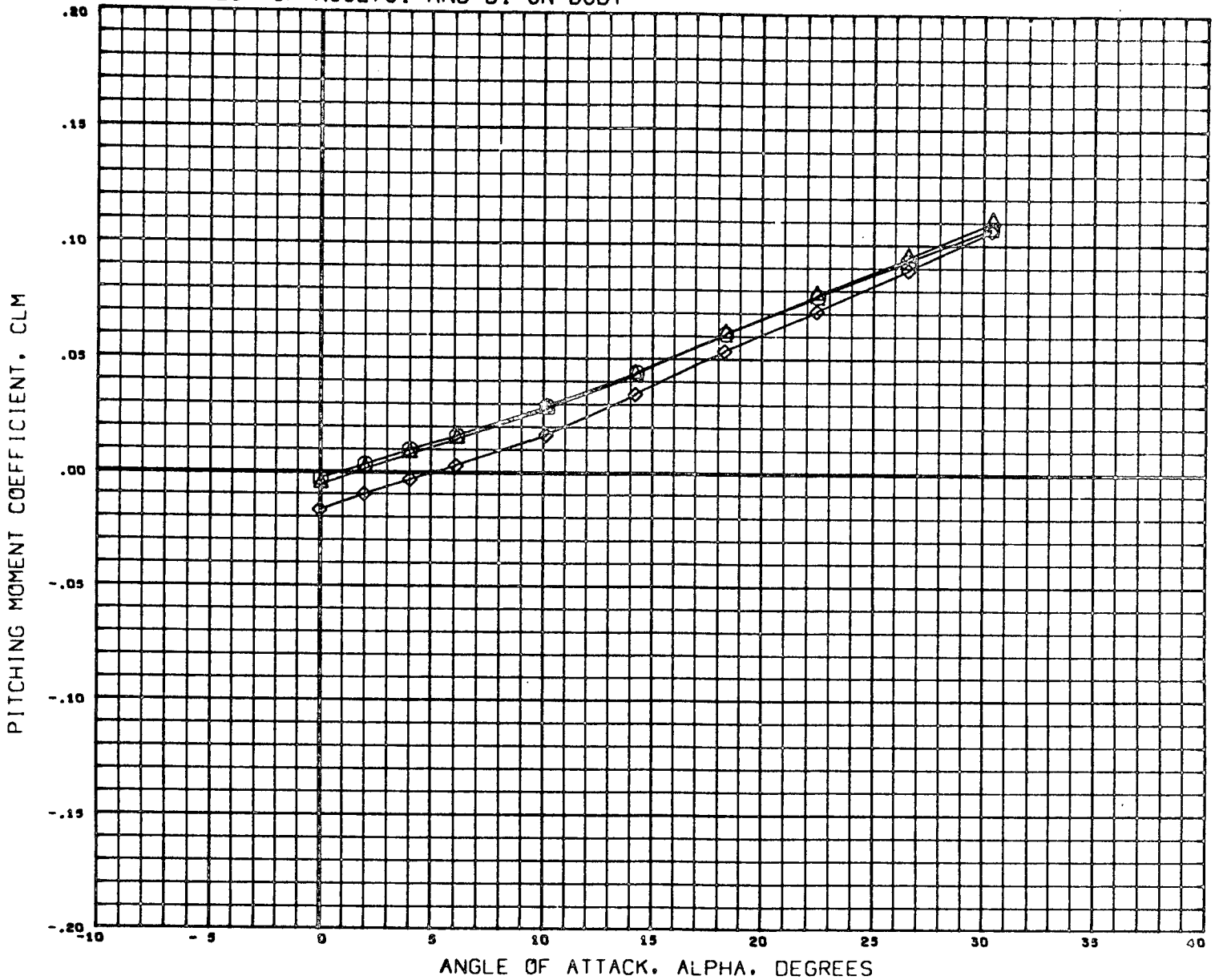


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB321) ○	JPL WT 20-681 MSC 040A B1M1
(RGB301) △	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB311) ◇	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRF	1067.9040	IN.
YMRF	0.0000	IN.
ZMRF	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG.48 EFFECT OF NOSE,C1 AND D1 ON BODY

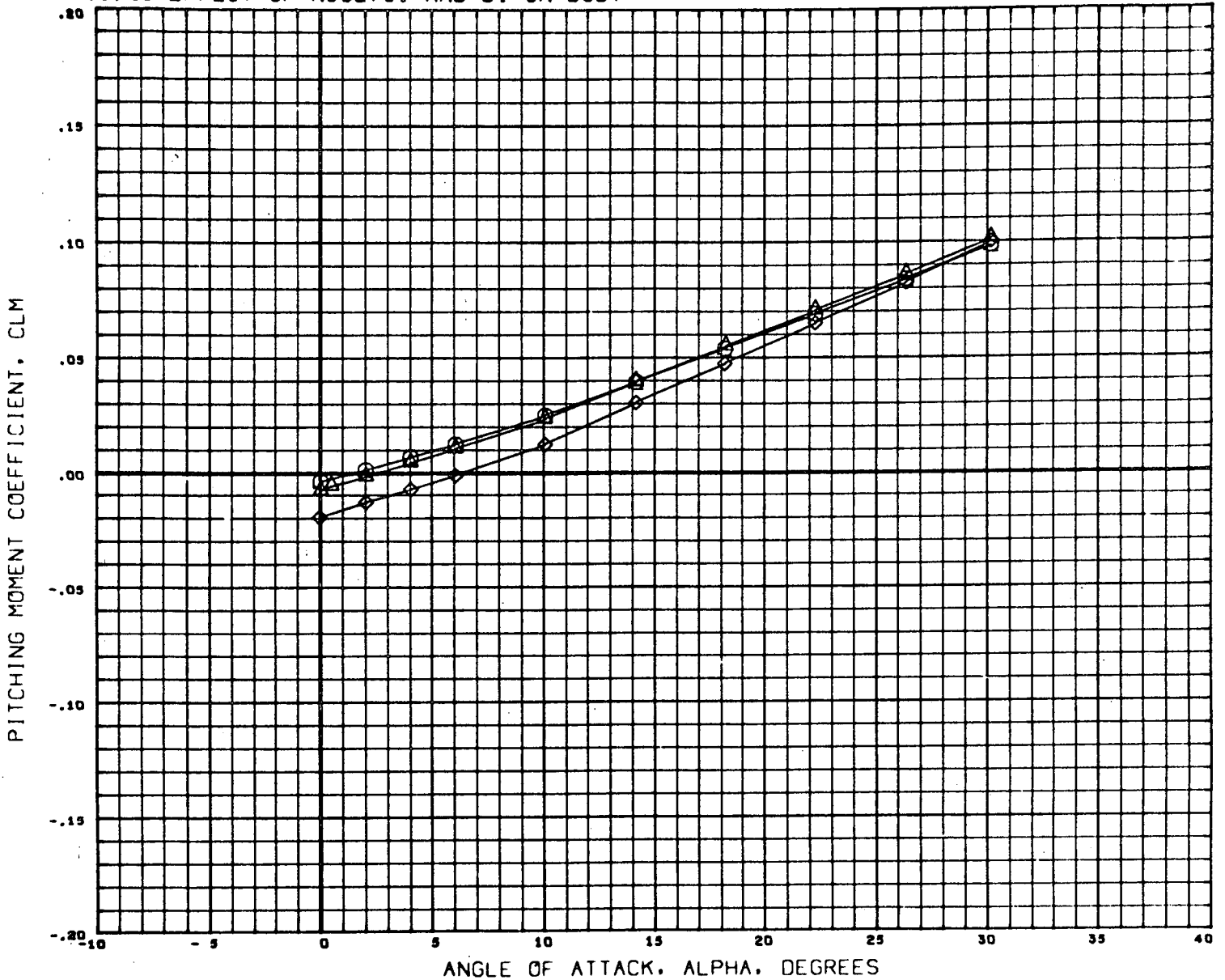


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB321) ○	JPL WT 20-681 MSC 040A B1M1
(RGB301) △	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB311) ◇	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY

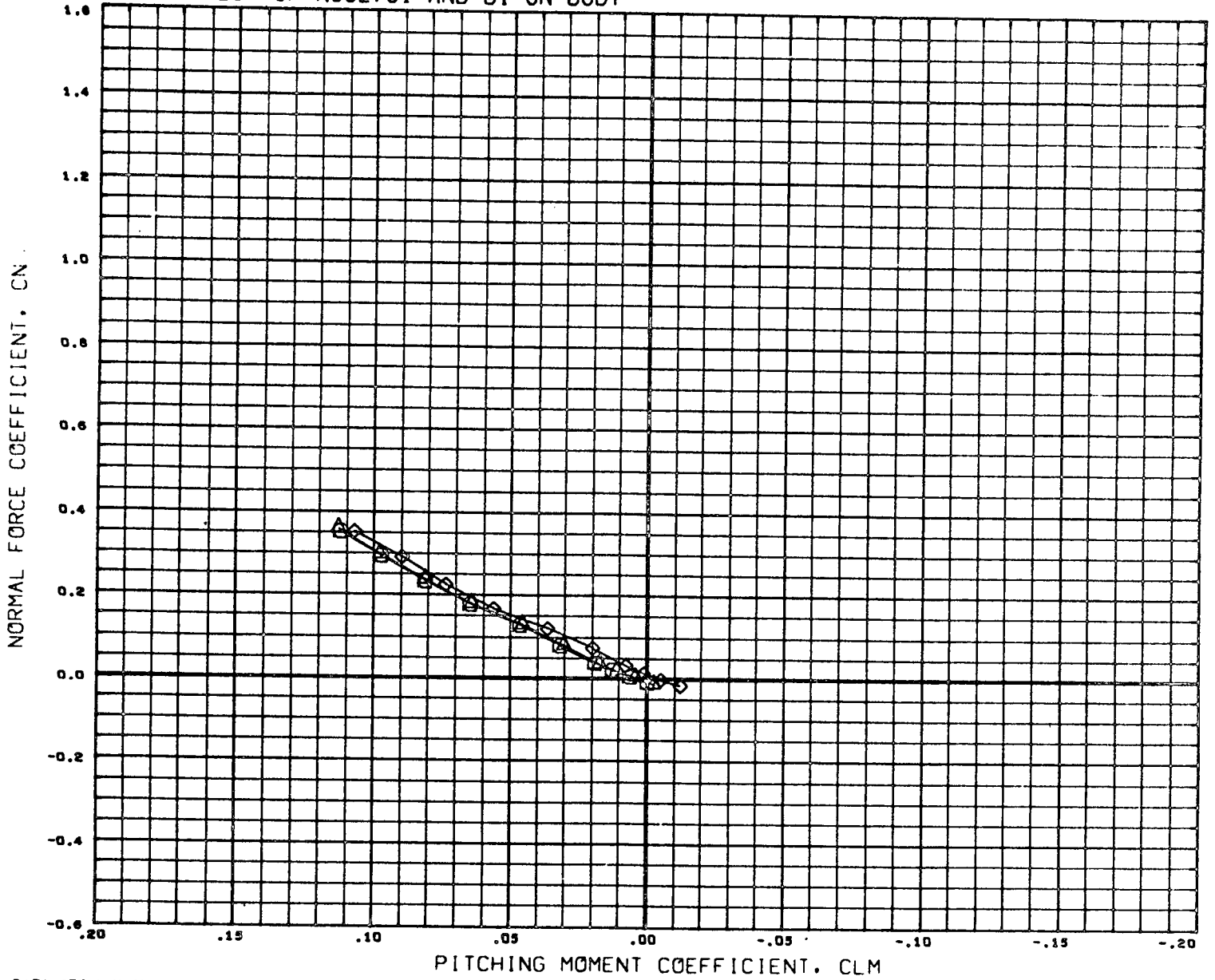


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB321)	JPL WT 20-681 MSC 040A B1M1
(RGB301)	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	30 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

FIG.48 EFFECT OF NOSE,C1 AND D1 ON BODY

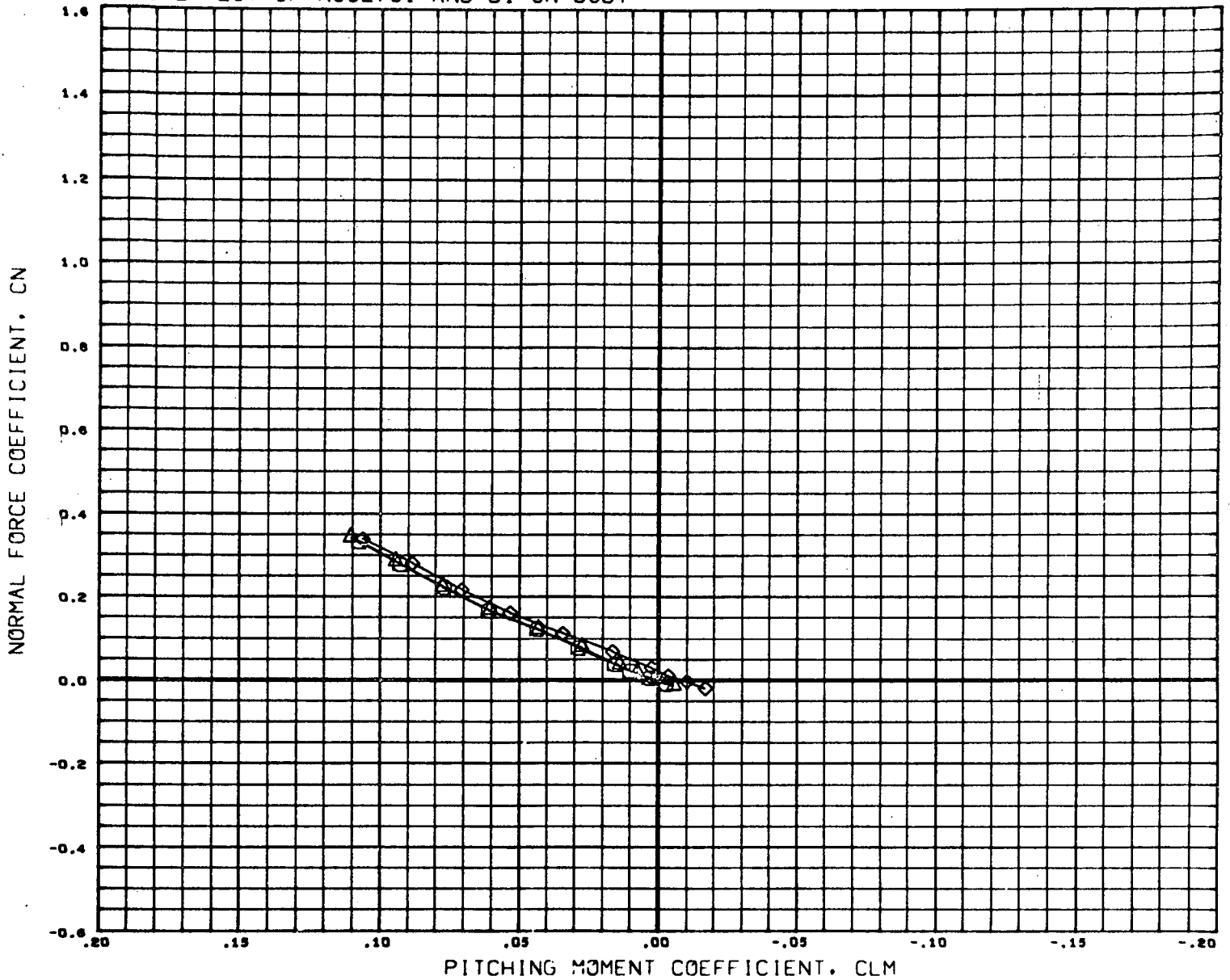


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB321)	JPL WT 20-681 MSC 040A B1M1
(RGB301)	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1087.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

FIG. 48 EFFECT OF NOSE, C1 AND D1 ON BODY



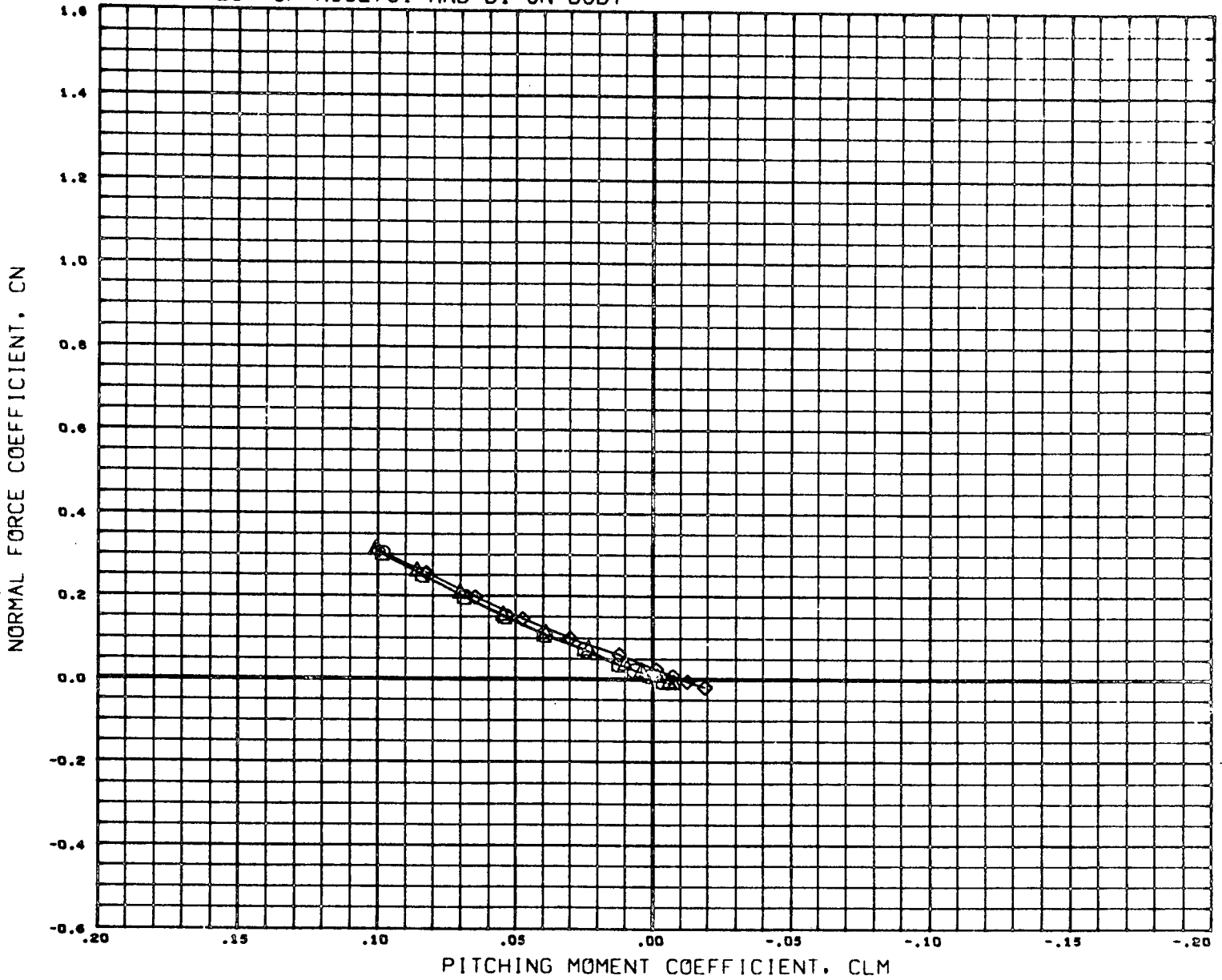
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68321)	JPL WT 20-601 MSC 040A B1M1
(R68301)	JPL WT 20-601 MSC 040A B1M1D1C1
(R68311)	JPL WT 20-601 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

PAGE 295

FIG.48 EFFECT OF NOSE, C1 AND D1 ON BODY



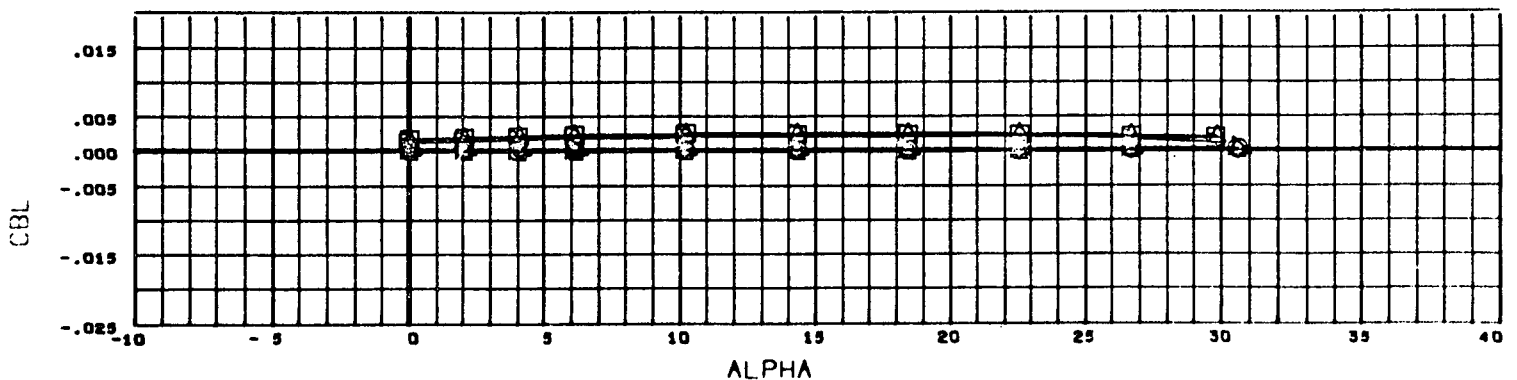
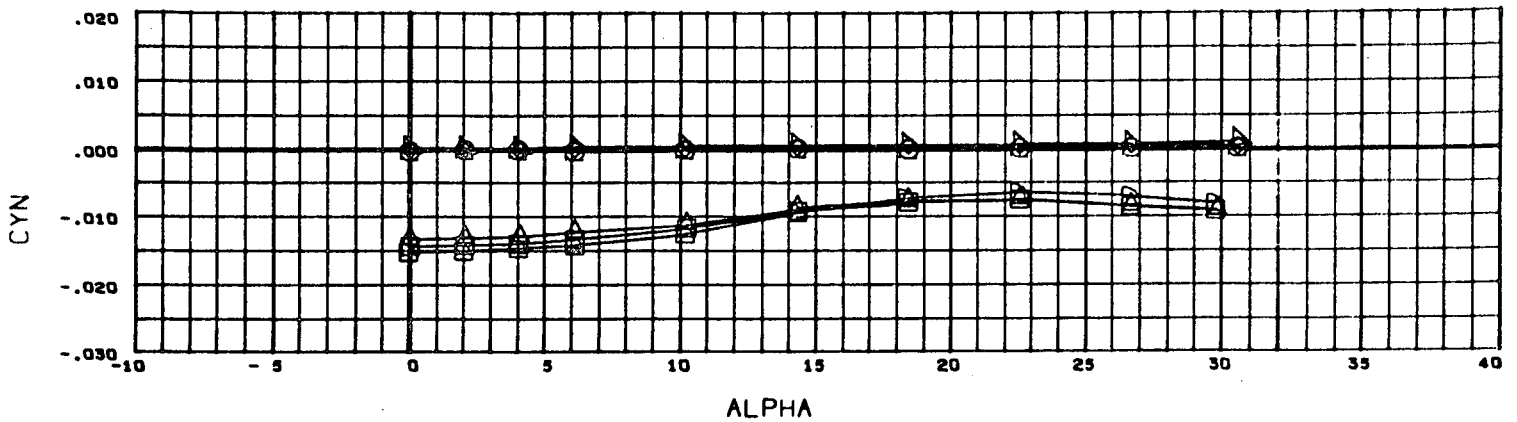
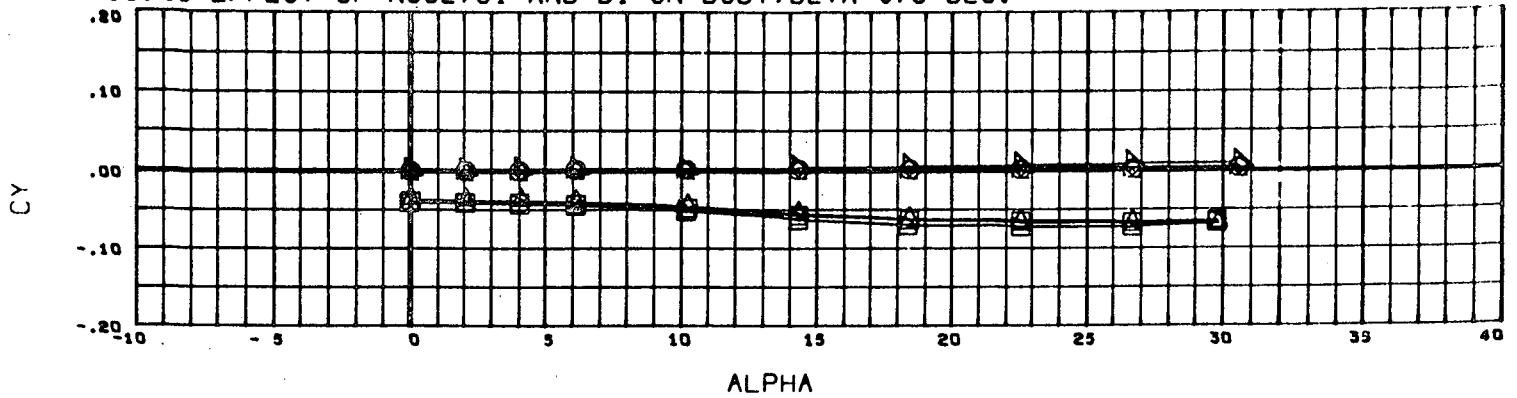
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68321)	JPL WT 20-681 MSC 040A B1M1
(R68301)	JPL WT 20-681 MSC 040A B1M1D1C1
(R68311)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	29.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0073	

MACH 3.98

PAGE 296

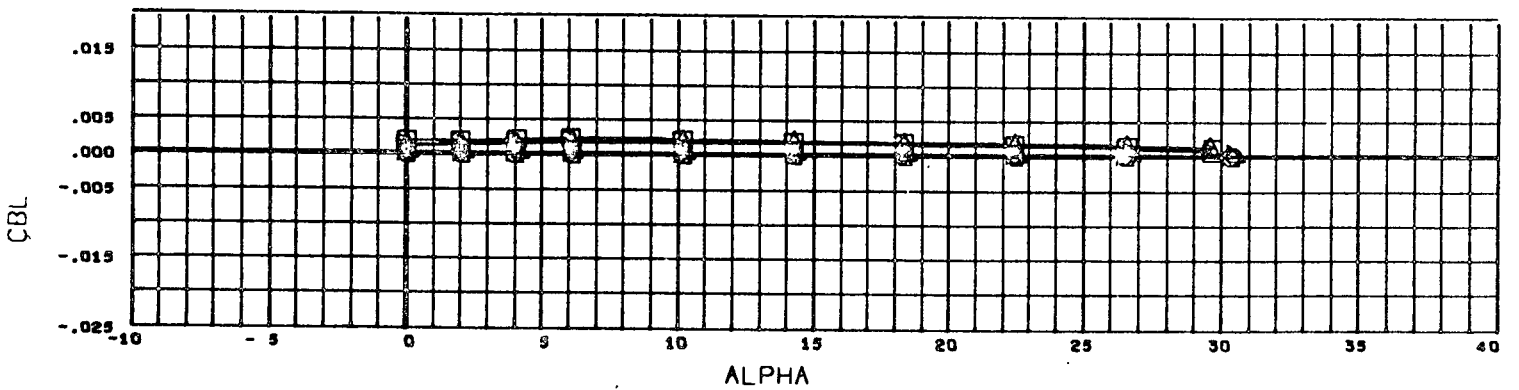
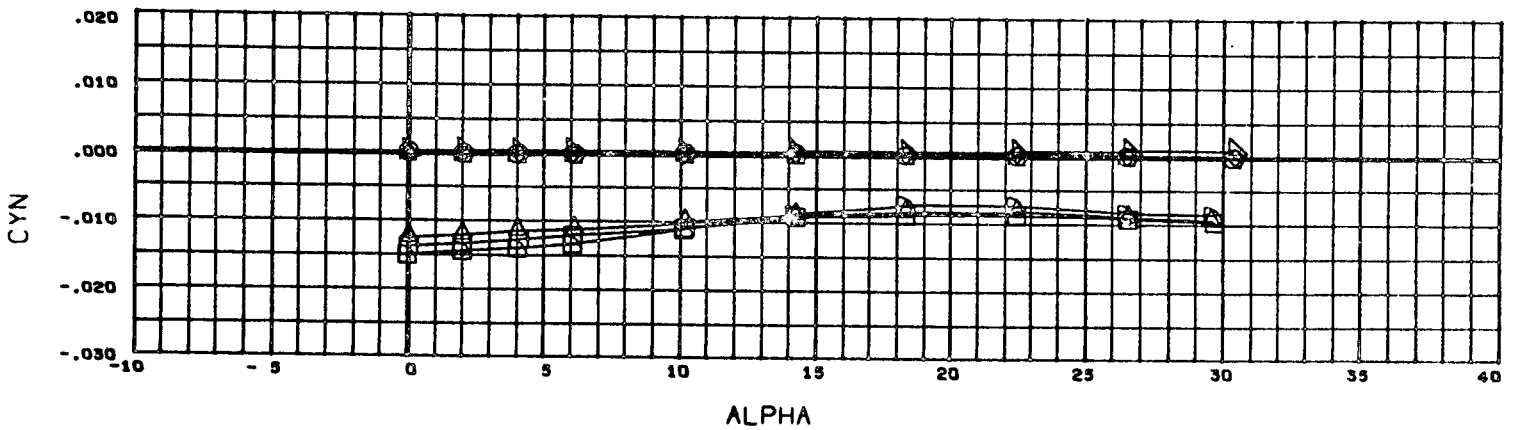
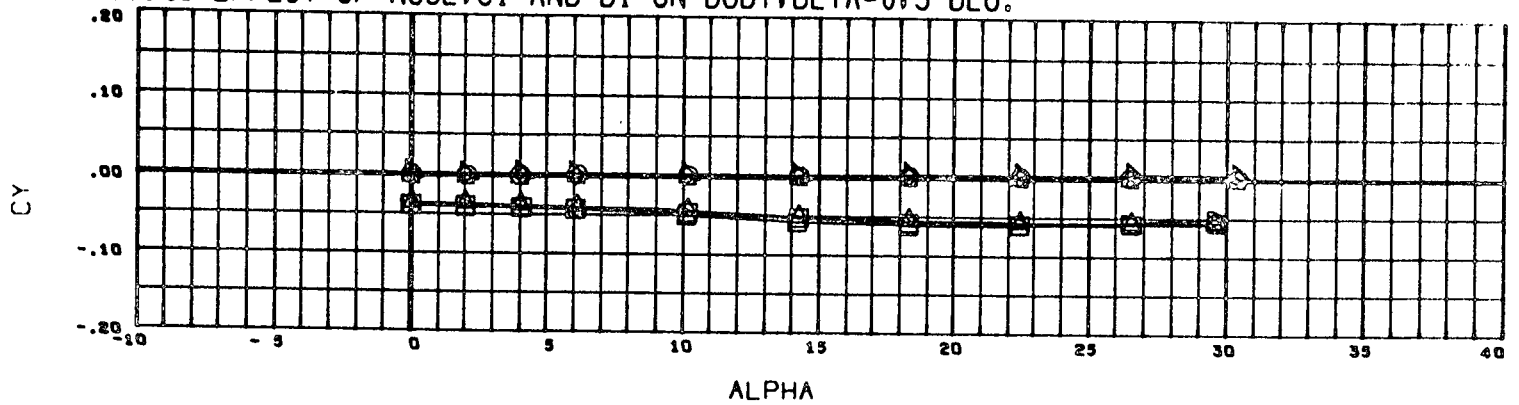
FIG. 49 EFFECT OF NOSE, C1 AND D1 ON BODY, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	REFERENCE INFORMATION
(R6B321)	JPL WT 20-681 MSC 040A B1M1	0.000	SREF 25.3560 SQ IN.
(R6B322)	JPL WT 20-681 MSC 040A B1M1	5.000	LREF 4.3720 IN.
(R6B301)	JPL WT 20-681 MSC 040A B1M1D1C1	0.000	BREF 6.6150 IN.
(R6B302)	JPL WT 20-681 MSC 040A B1M1D1C1	5.000	XMRP 1067.9040 IN.
(R6B311)	JPL WT 20-681 MSC 040A B2M1D1C1	0.000	YMRP 0.0000 IN.
(R6B312)	JPL WT 20-681 MSC 040A B2M1D1C1	5.000	ZMRP 400.0004 IN.
			SCALE 0.0075

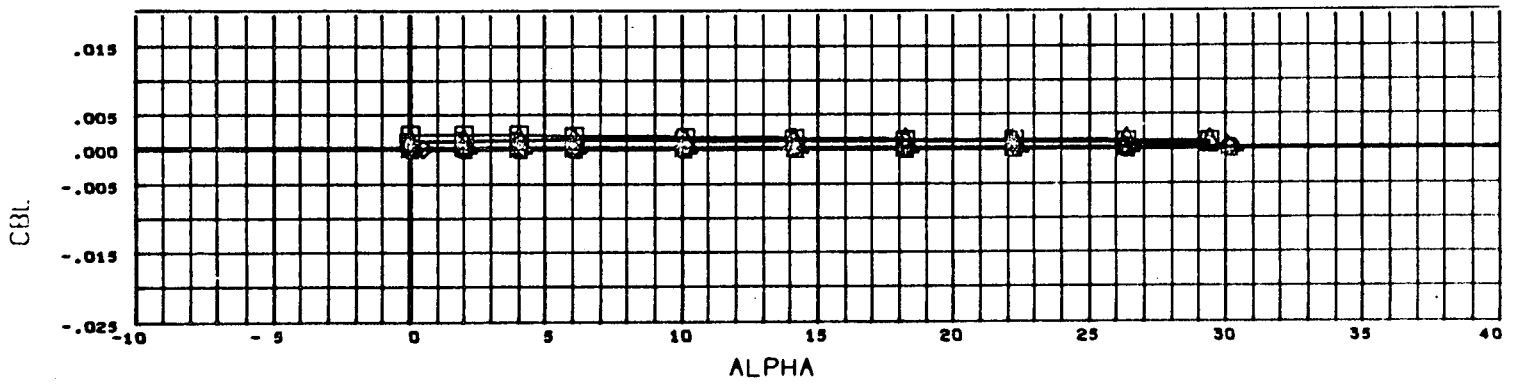
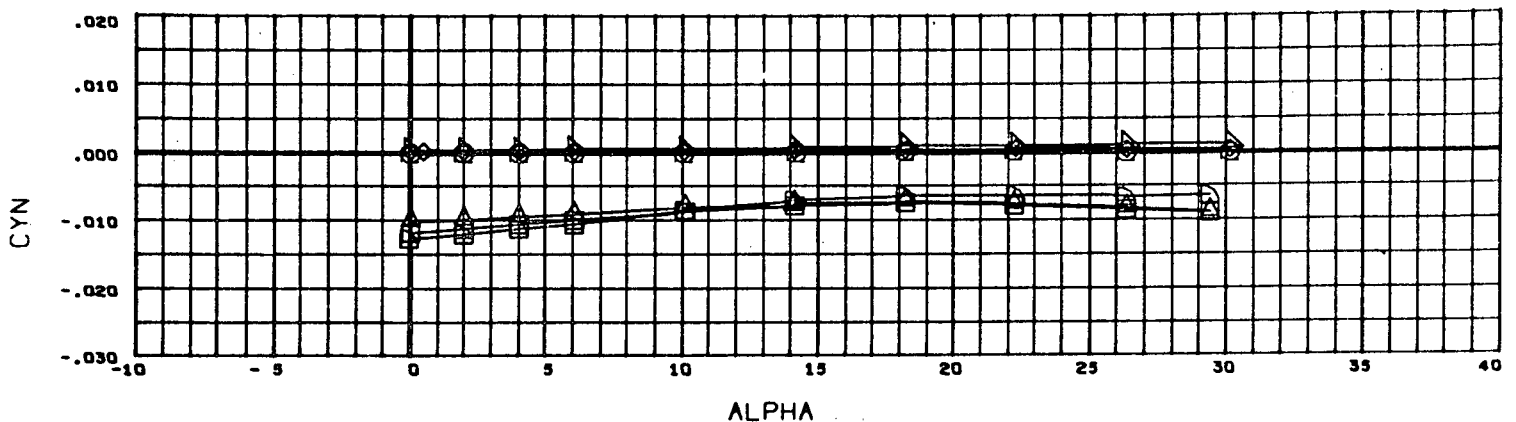
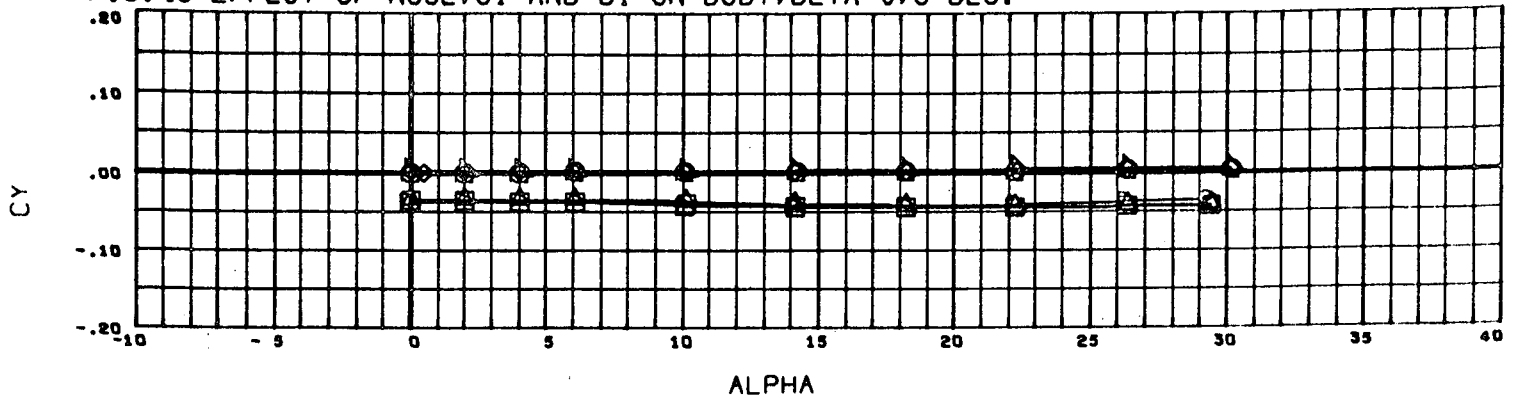
MACH 2.42

FIG.49 EFFECT OF NOSE, C1 AND D1 ON BODY, BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	REFERENCE INFORMATION
(RGB321)	JPL WT 20-681 MSC 040A B1M1	0.000	SREF 25.5560 SQ IN.
(RGB322)	JPL WT 20-681 MSC 040A B1M1	5.000	LREF 4.5720 IN.
(RGB301)	JPL WT 20-681 MSC 040A B1M1D1C1	0.000	BREF 6.6150 IN.
(RGB302)	JPL WT 20-681 MSC 040A B1M1D1C1	5.000	XMRP 1067.9040 IN.
(RGB311)	JPL WT 20-681 MSC 040A B2M1D1C1	0.000	YMRP 0.0000 IN.
(RGB312)	JPL WT 20-681 MSC 040A B2M1D1C1	5.000	ZMRP 400.0004 IN.
			SCALE 0.0075

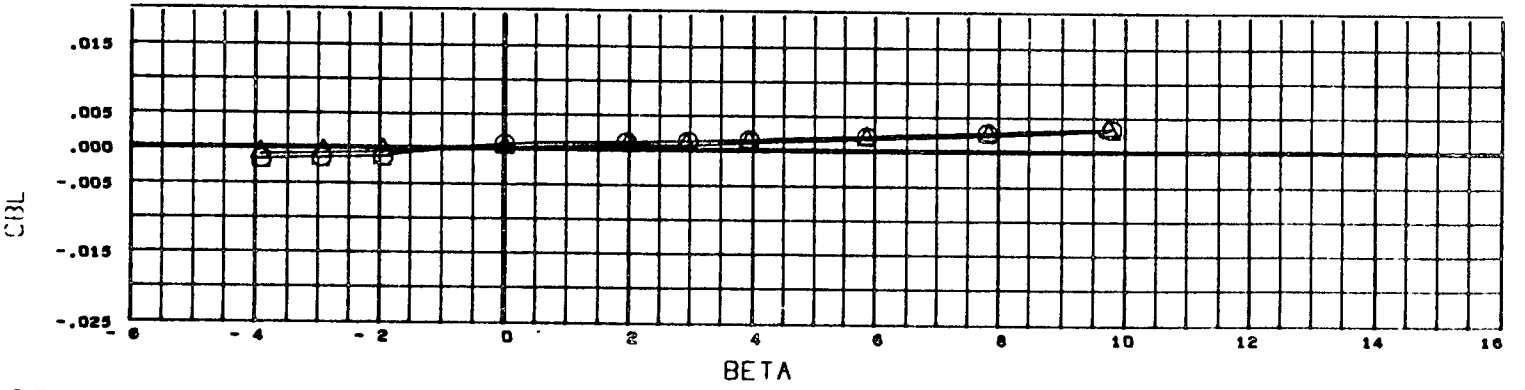
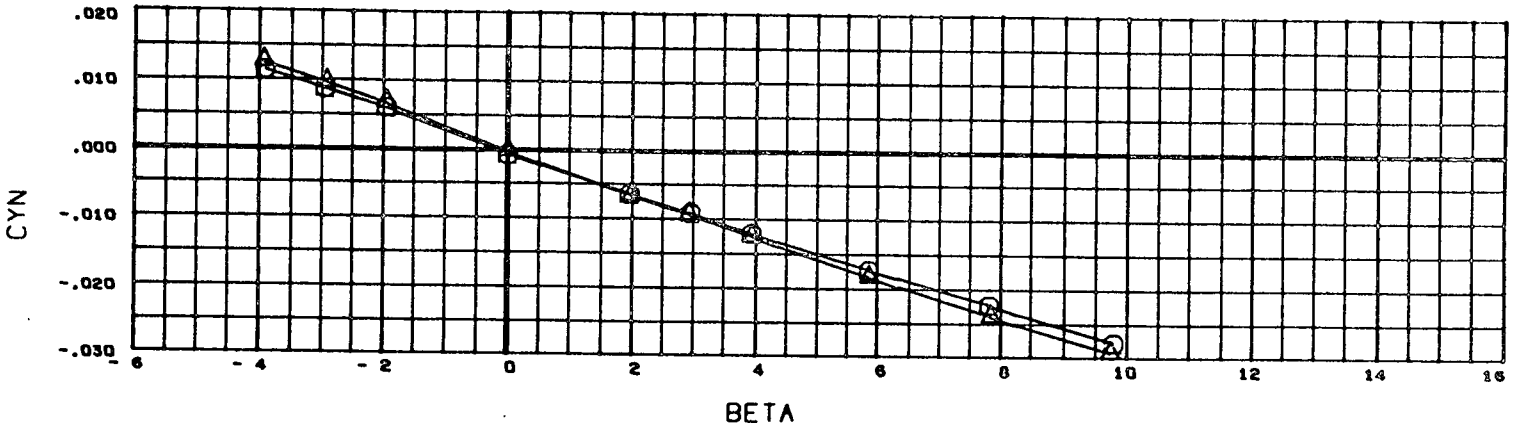
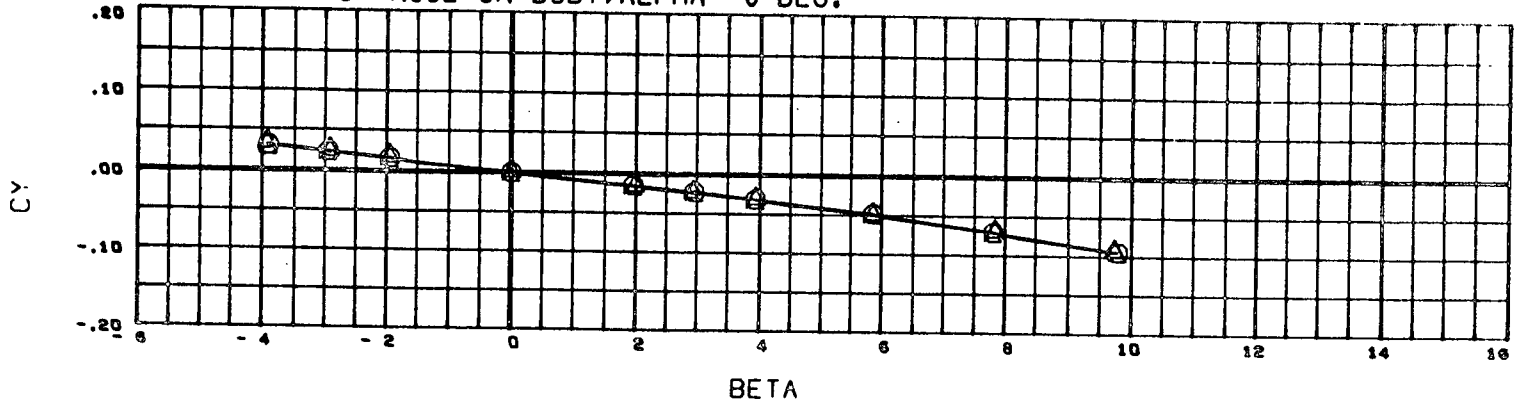
FIG.49 EFFECT OF NOSE,C1 AND D1 ON BODY,BETA=0.5 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	REFERENCE INFORMATION
(R68321)	JPL WT 20-681 MSC 040A B1M1	0.000	SREF 25.5560 SQ IN.
(R68322)	JPL WT 20-681 MSC 040A B1M1	5.000	LREF 4.5720 IN.
(R68301)	JPL WT 20-681 MSC 040A B1M1D1C1	0.000	BREF 6.6150 IN.
(R68302)	JPL WT 20-681 MSC 040A B1M1D1C1	5.000	XMRP 1067.9040 IN.
(R68311)	JPL WT 20-681 MSC 040A B2M1D1C1	0.000	YMRP 0.0000 IN.
(R68312)	JPL WT 20-681 MSC 040A B2M1D1C1	5.000	ZMRP 400.0004 IN.
			SCALE 0.0075

MACH 3.98

FIG.50 EFFECT OF NOSE ON BODY, ALPHA= 0 DEG.



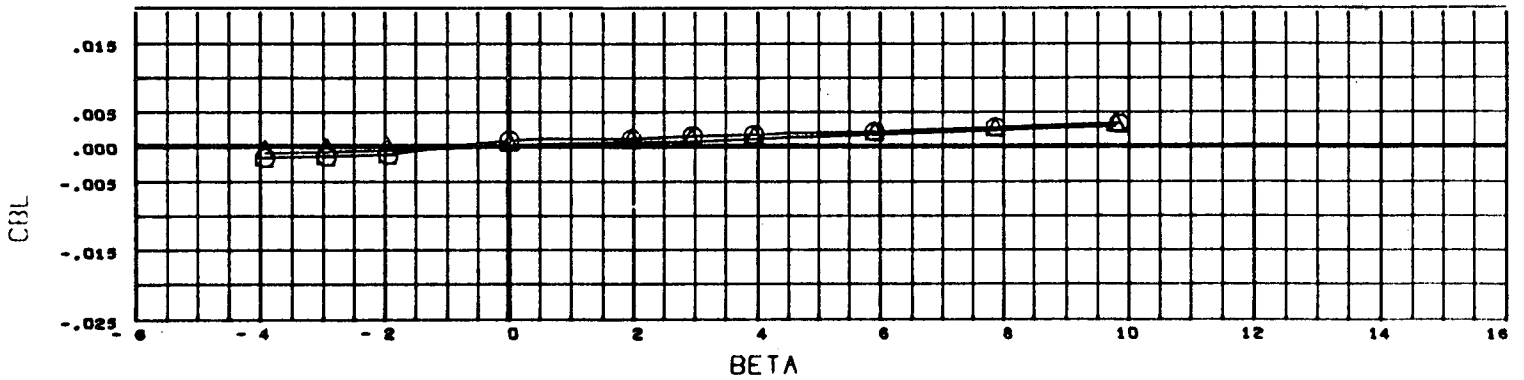
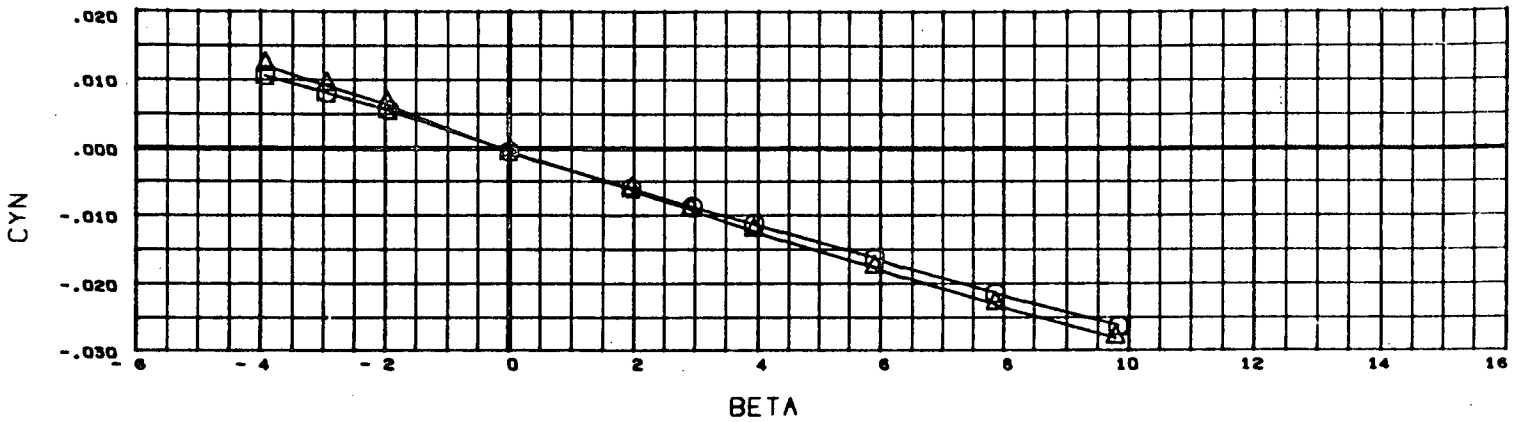
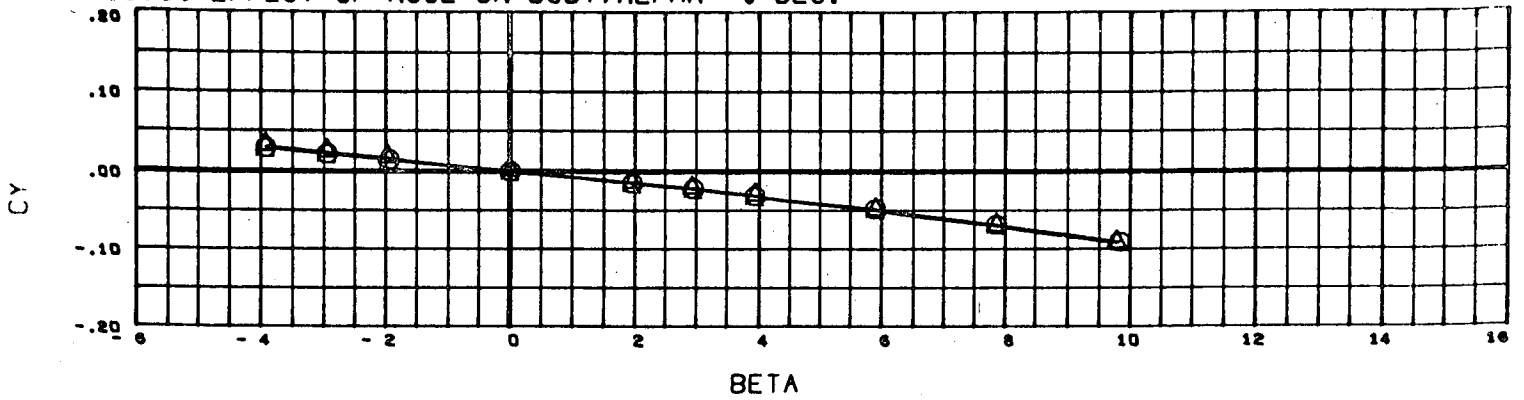
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGB303) JPL WY 20-681 MSC 040A B1M1D1C1
 (RGB313) JPL WY 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION
 SREF 25.9560 SQ IN.
 LREF 4.5720 IN.
 BREF 6.6150 IN.
 XMRP 1067.9040 IN.
 YMRP 0.0000 IN.
 ZMRP 400.0004 IN.
 SCALE 0.0075

MACH 2.42

PAGE 300

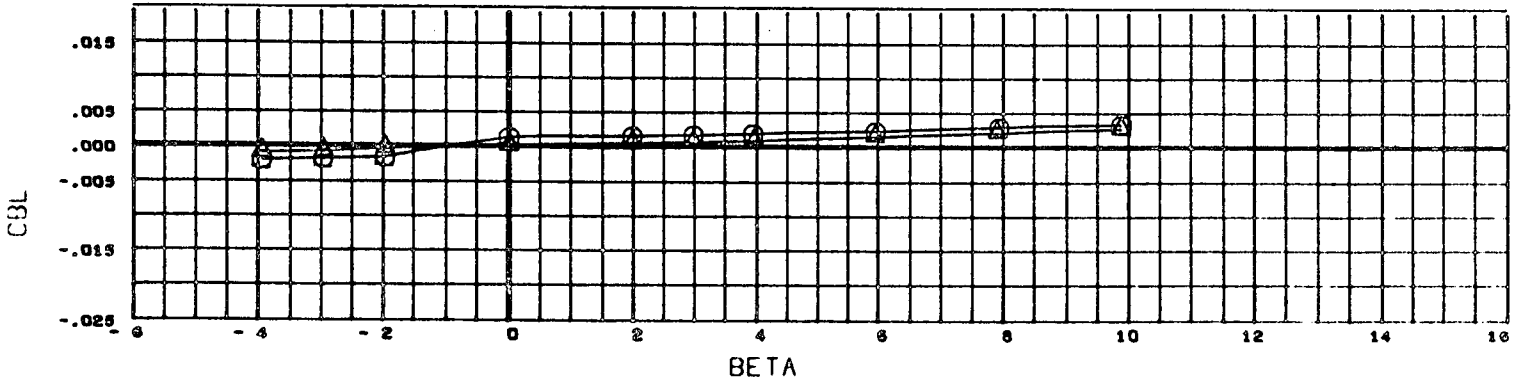
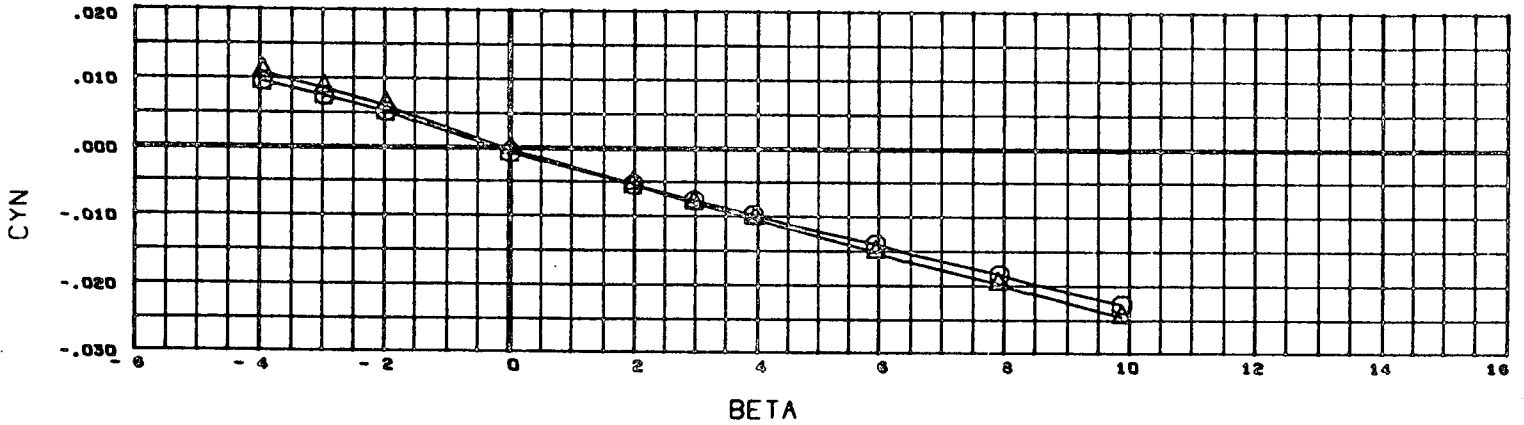
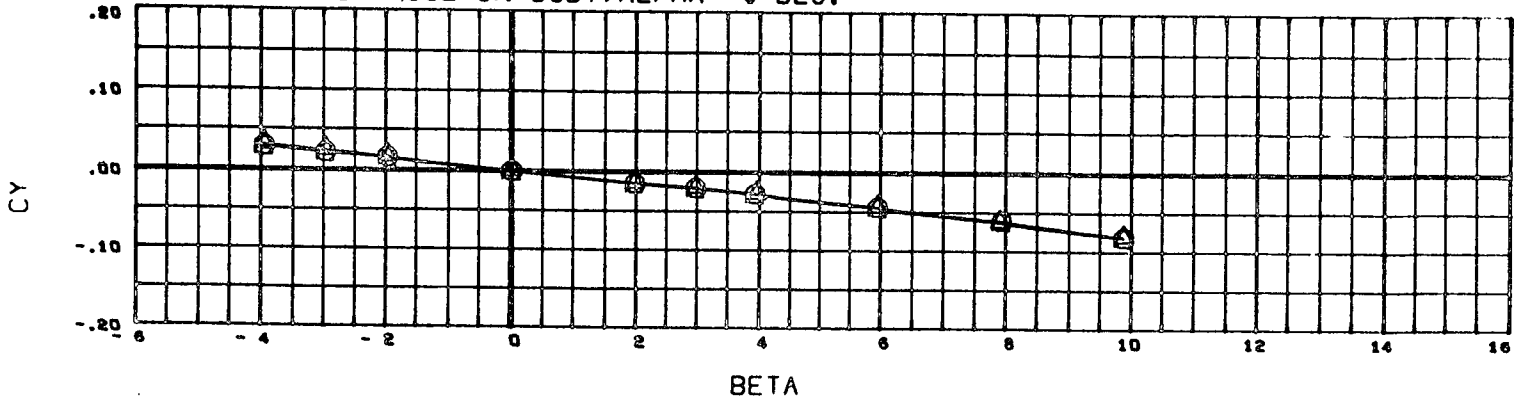
FIG.50 EFFECT OF NOSE ON BODY, ALPHA= 0 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68303) ○	JPL WT 20-681 MSC 040A B1M1D1C1
(R68313) △	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

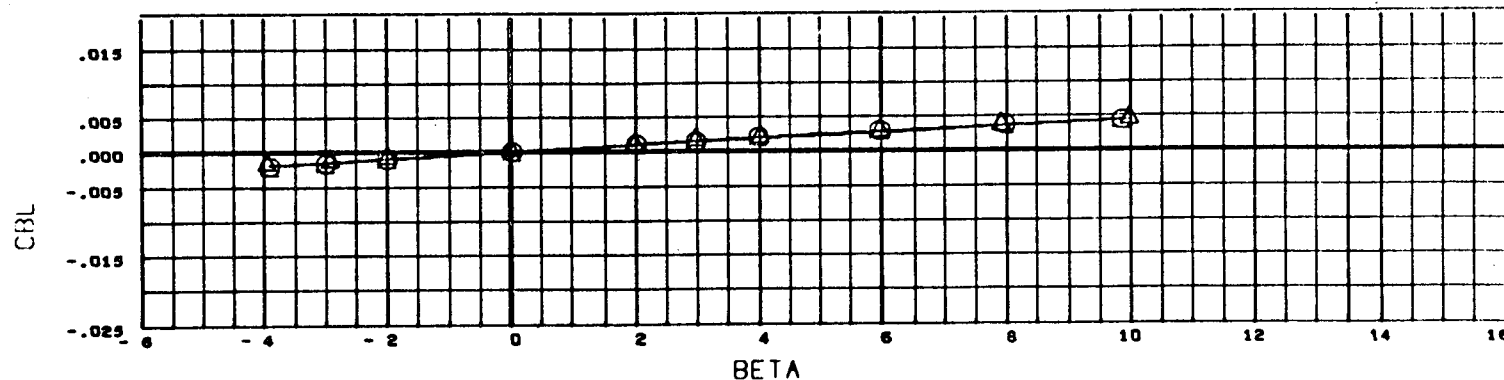
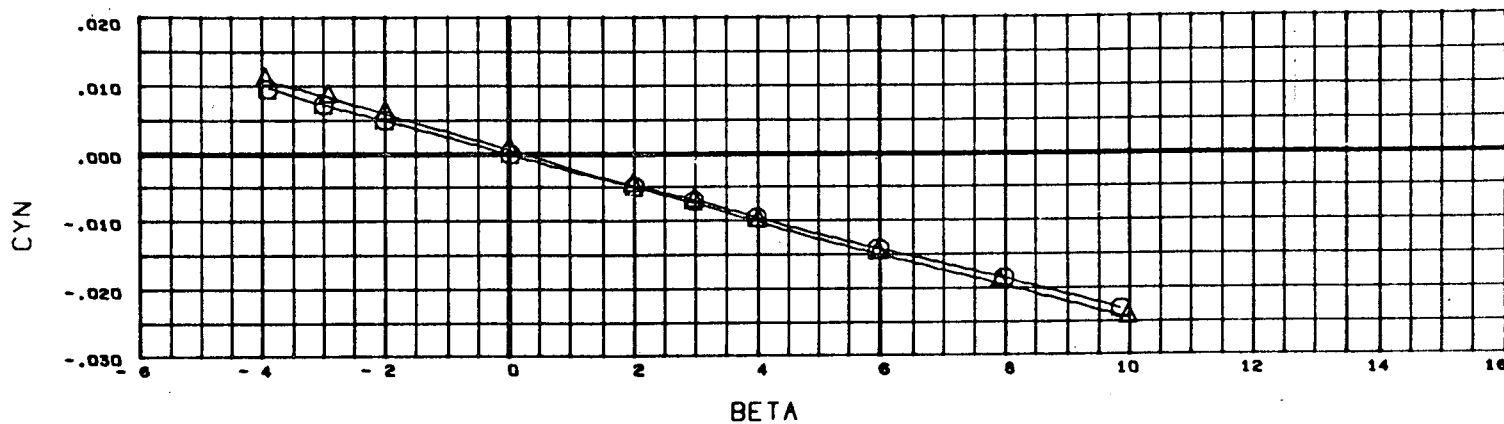
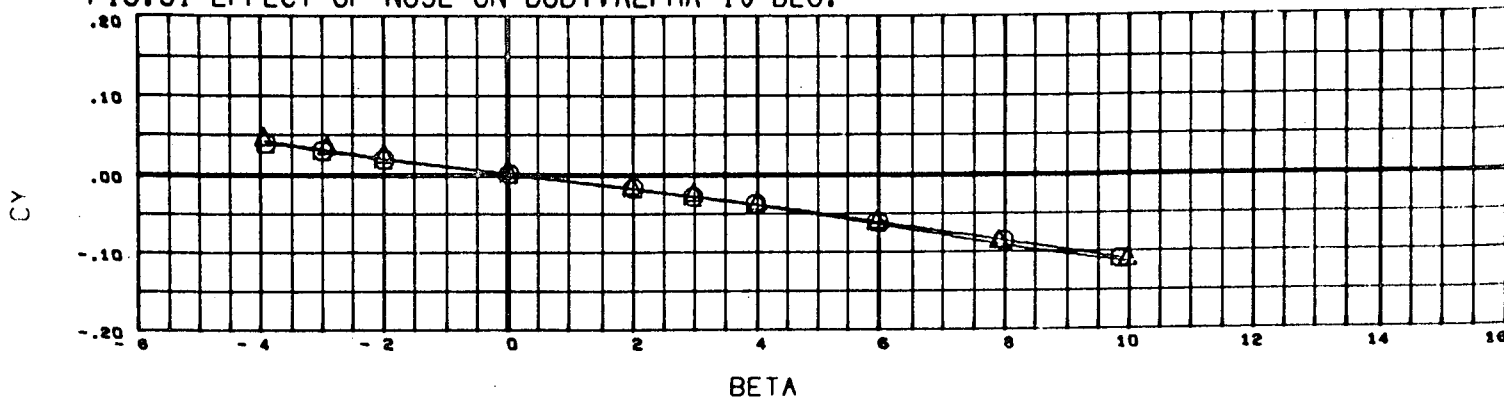
FIG.50 EFFECT OF NOSE ON BODY, ALPHA= 0 DEG.



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R6B303) JPL WT 20-661 MSC 040A 21M1D1C1
 (R6B313) JPL WT 20-661 MSC 040A 22M1D1C1

REFERENCE INFORMATION
 SREF 25.9560 SQ IN.
 LREF 4.9720 IN.
 BREF 6.6150 IN.
 XMRP 1067.9040 IN.
 YMRP 0.0000 IN.
 ZMRP 400.0004 IN.
 SCALE 0.0075

FIG.51 EFFECT OF NOSE ON BODY, ALPHA=10 DEG.

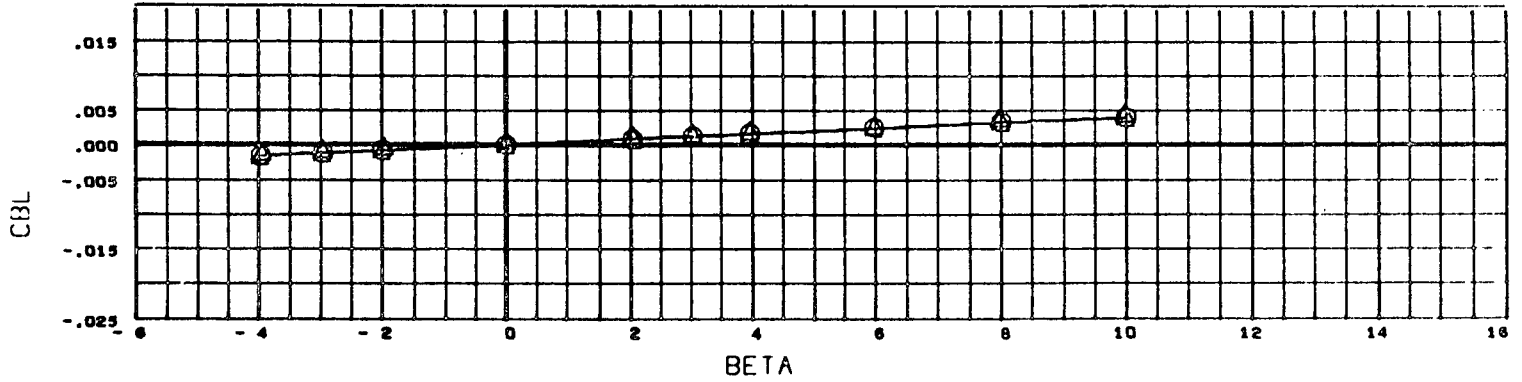
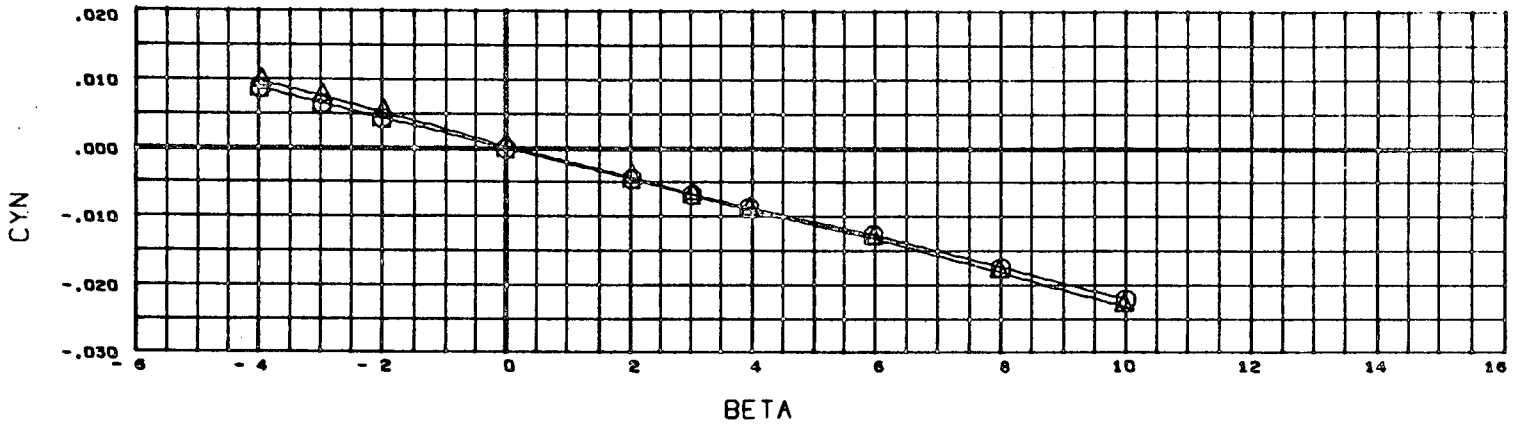
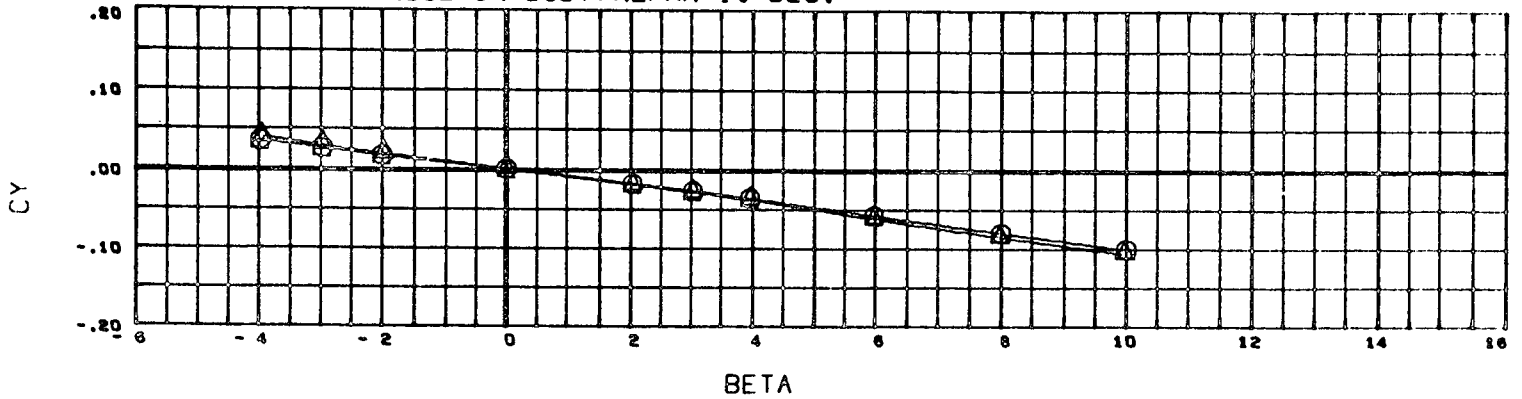


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB304) \square	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB314) \triangle	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

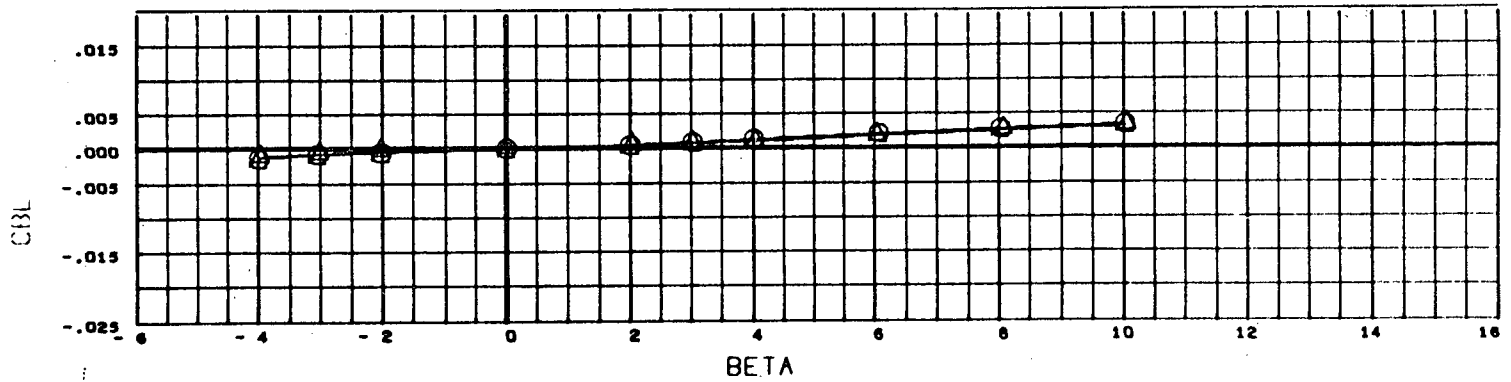
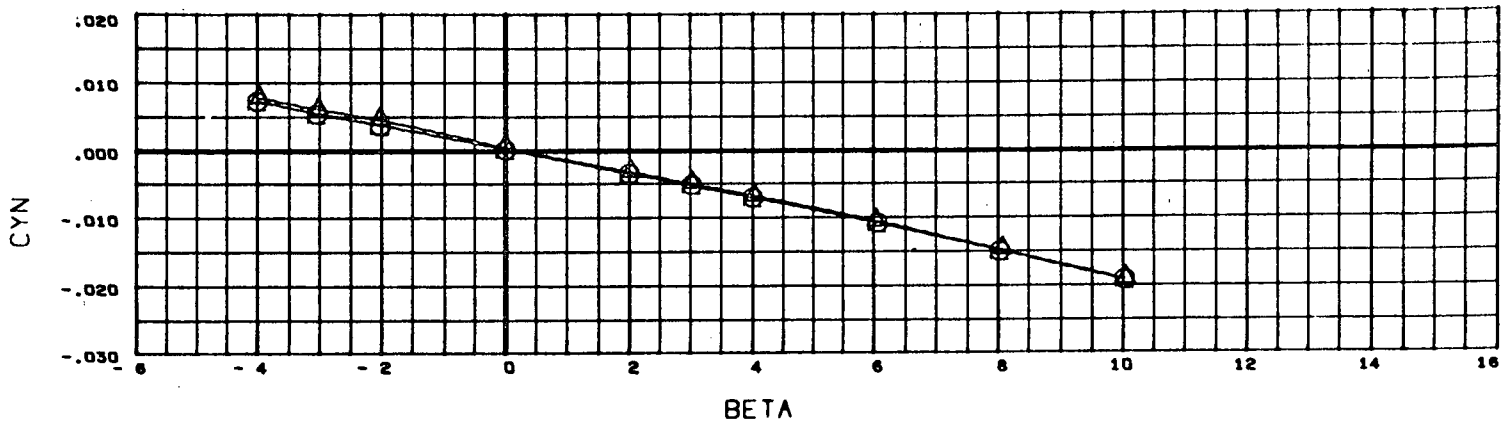
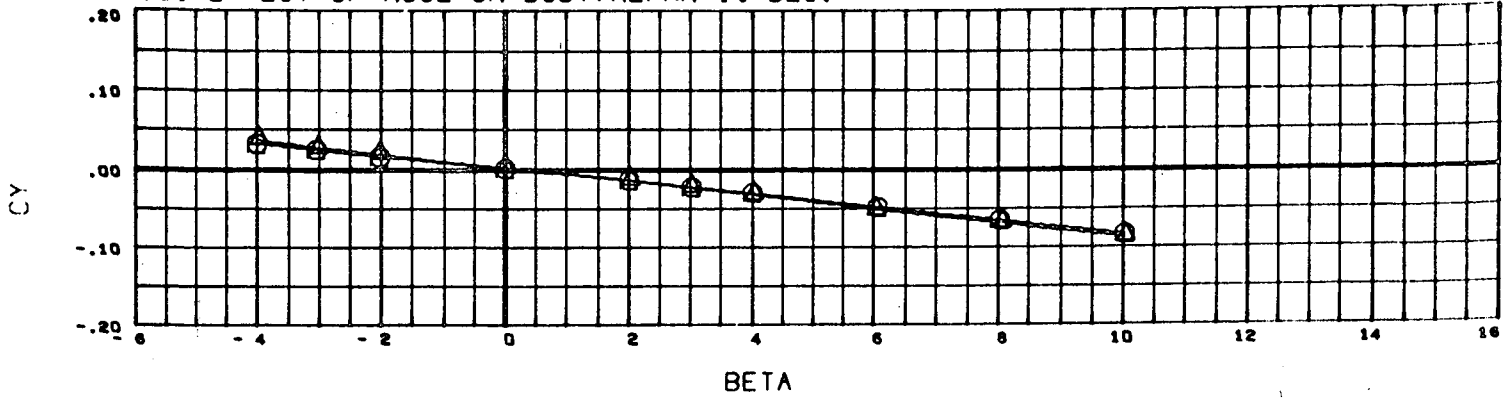
FIG.51 EFFECT OF NOSE ON BODY, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB304)	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB314)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

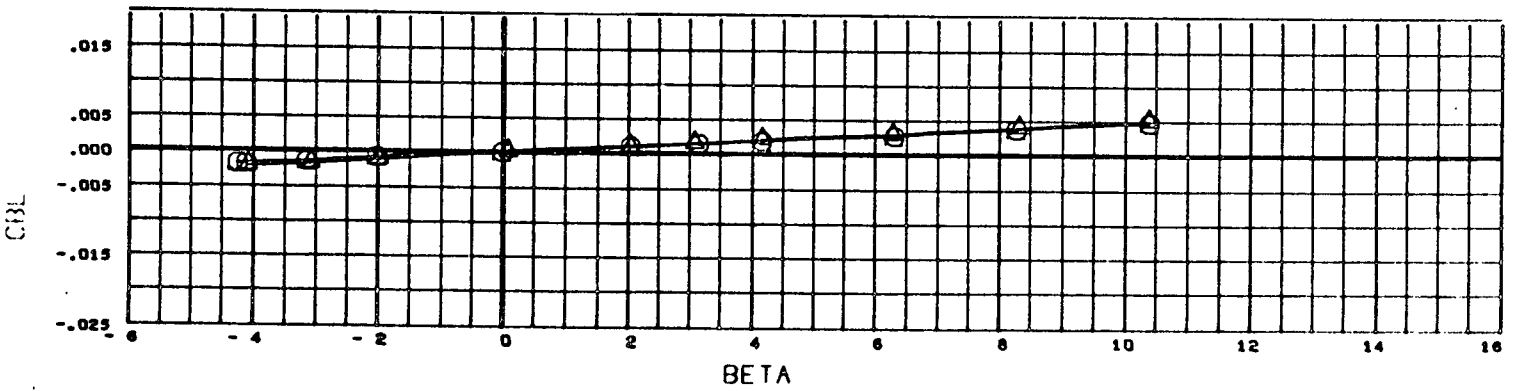
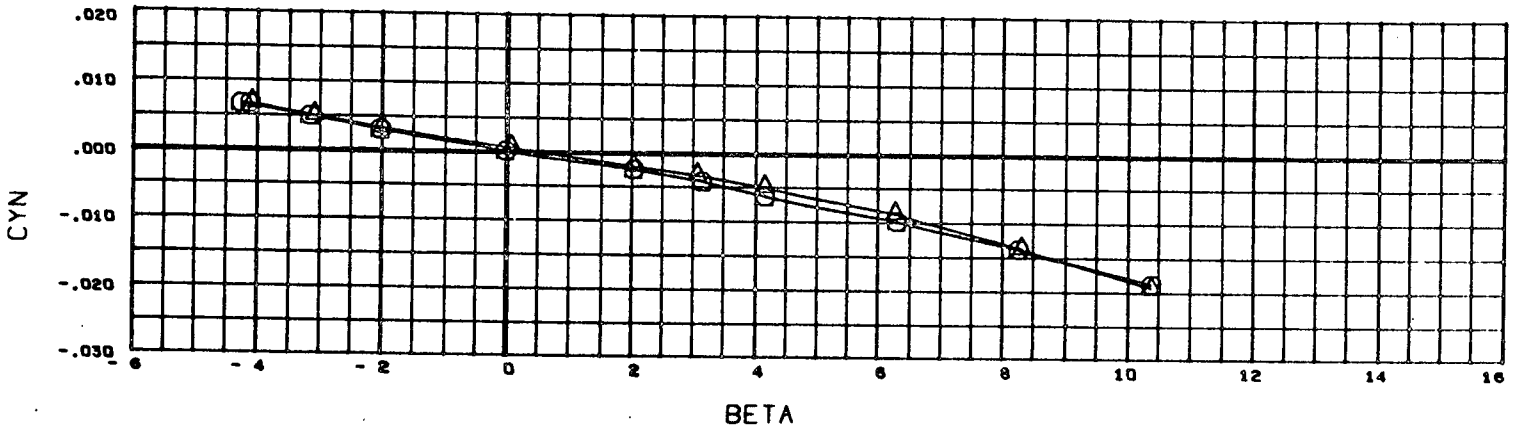
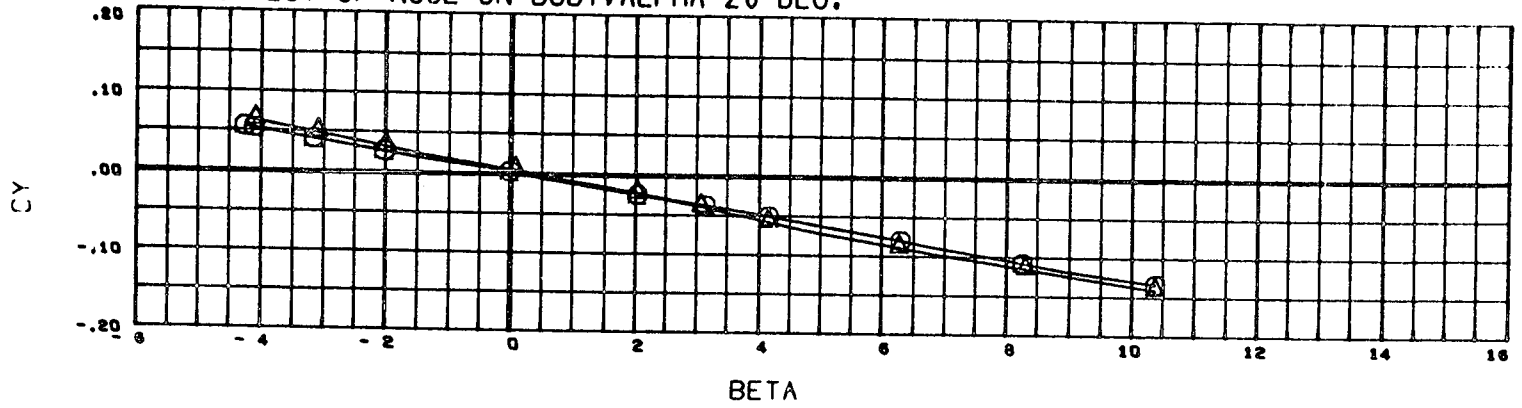
FIG. 51 EFFECT OF NOSE ON BODY, ALPHA=10 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B304)	JPL WT 20-681 MSC 040A B1M1D1C1
(R6B314)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.3720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

FIG.52 EFFECT OF NOSE ON BODY, ALPHA=20 DEG.



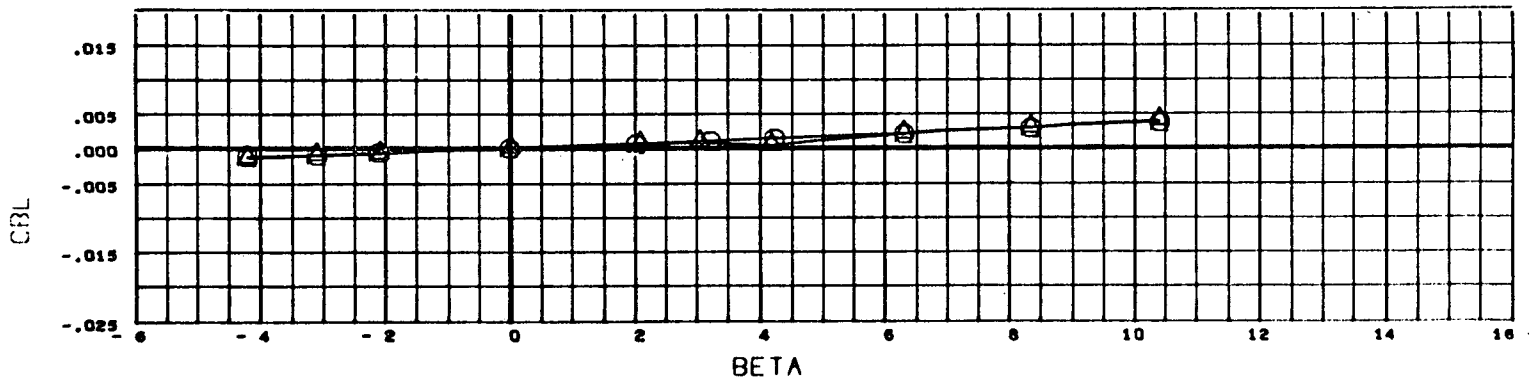
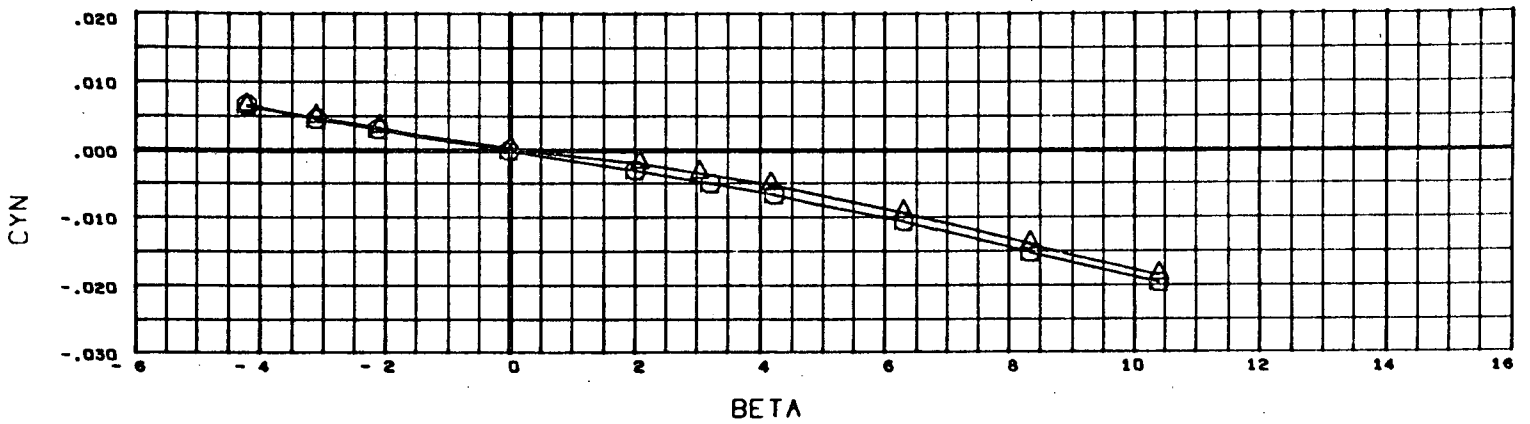
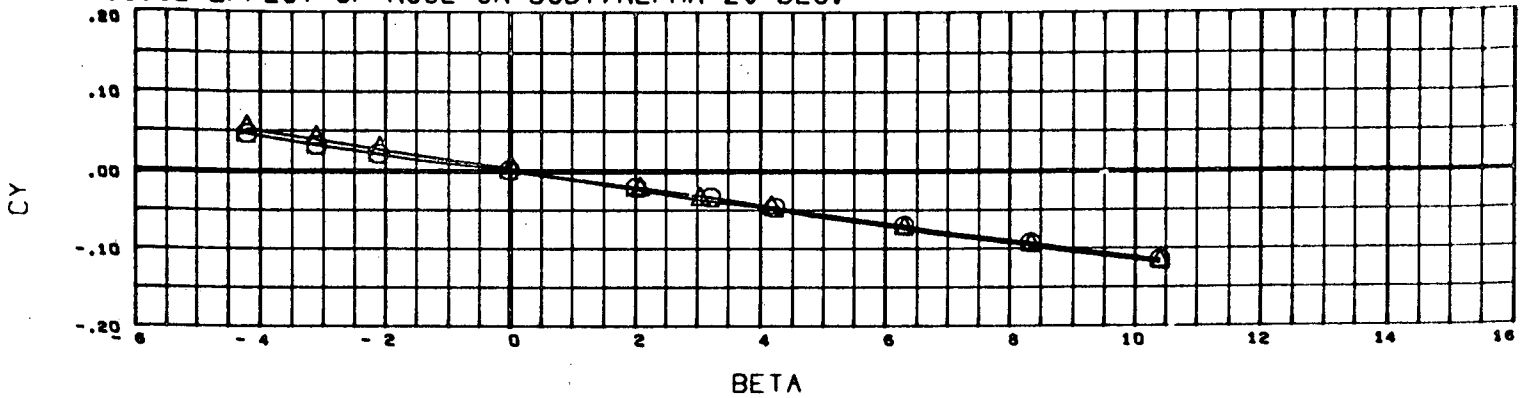
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RCB305)	JPL WT 20-681 MSC 040A B1M1D1C1
(RCB315)	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 2.42

PAGE 306

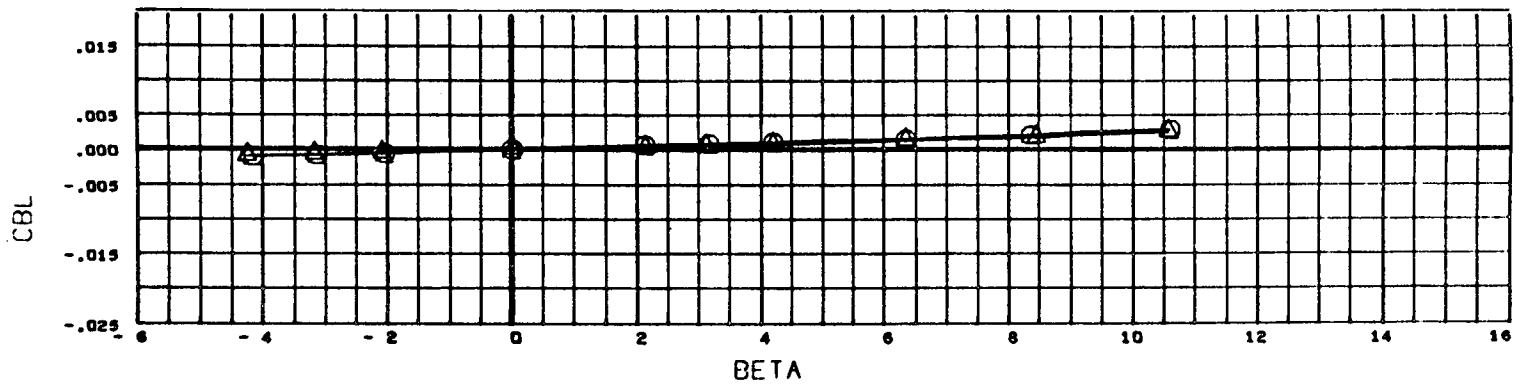
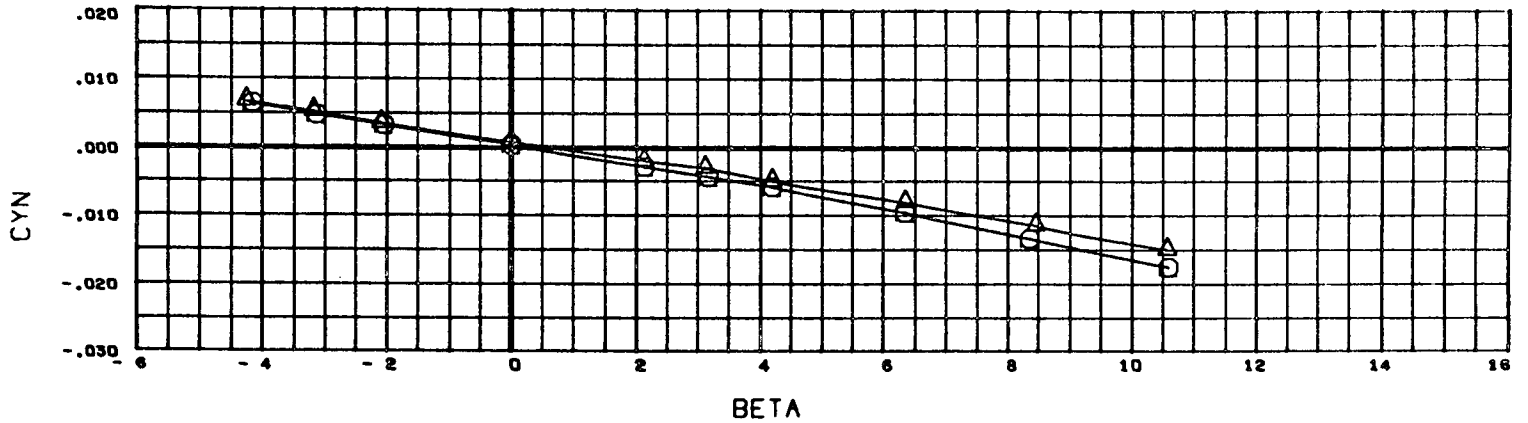
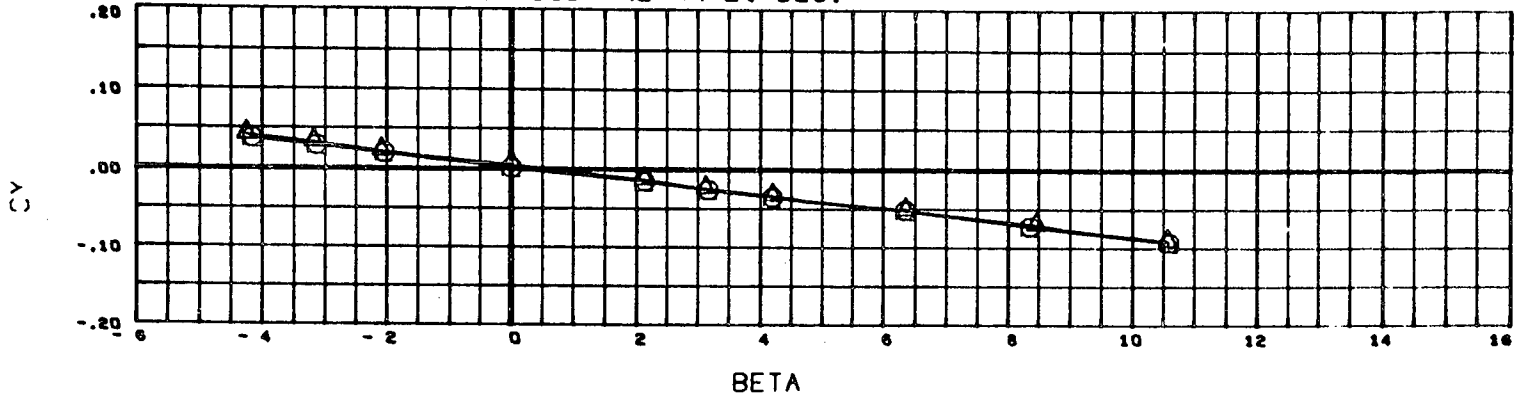
FIG.52 EFFECT OF NOSE ON BODY, ALPHA=20 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R68305) ○	JPL WT 20-681 MSC 040A 81M1D1C1
(R68315) △	JPL WT 20-681 MSC 040A 82M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	30 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

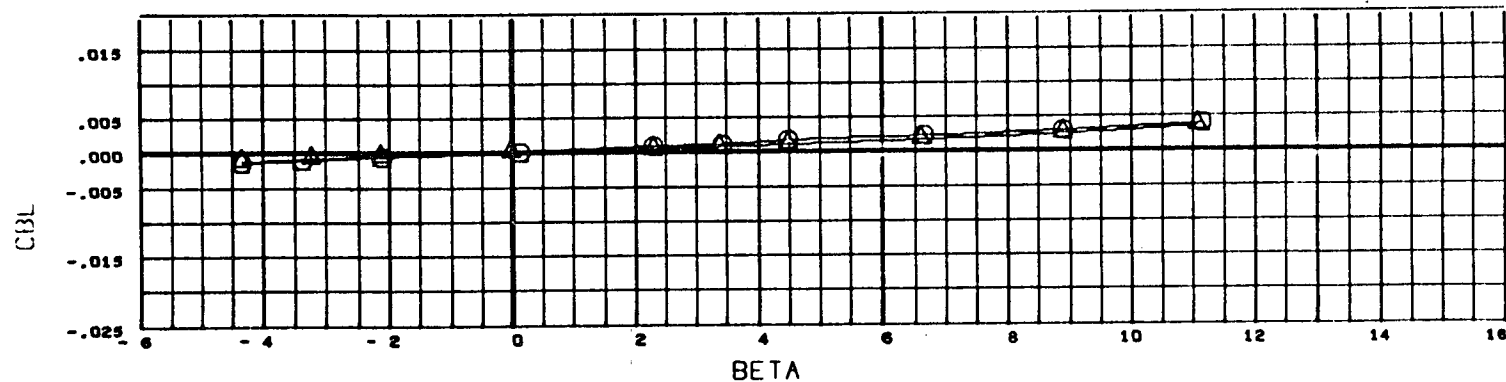
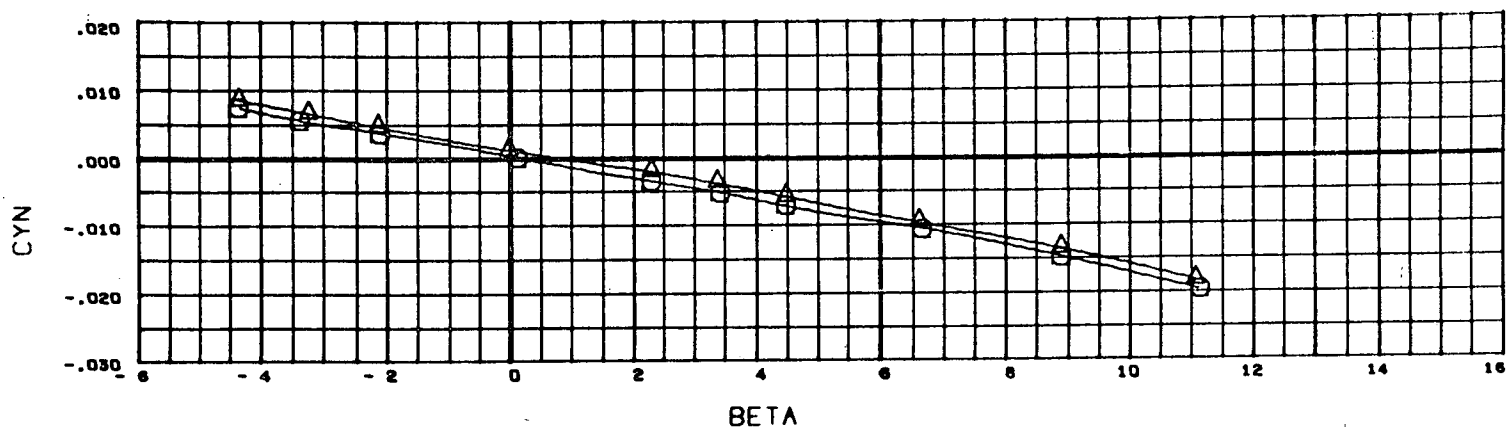
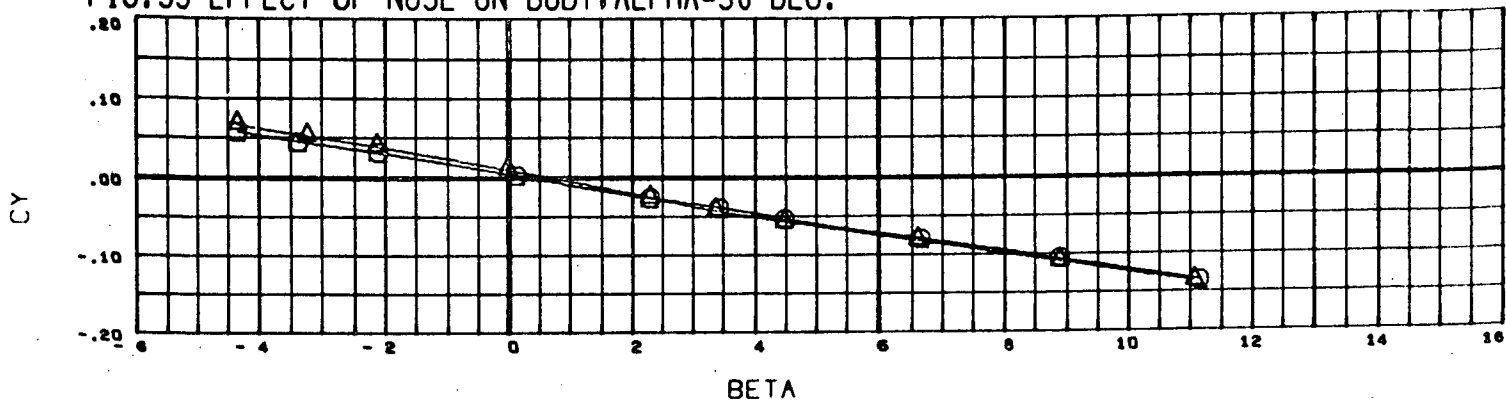
FIG.52 EFFECT OF NOSE ON BODY, ALPHA=20 DEG.



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGB305) \circ JPL WT 20-681 MSC 040A B1M1D1C1
 (RGB315) Δ JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION
 SREF 25.5560 SQ IN.
 LREF 4.5720 IN.
 BREF 6.6150 IN.
 XMRP 1067.9040 IN.
 YMRP 0.0000 IN.
 ZMRP 400.0004 IN.
 SCALE 0.0075

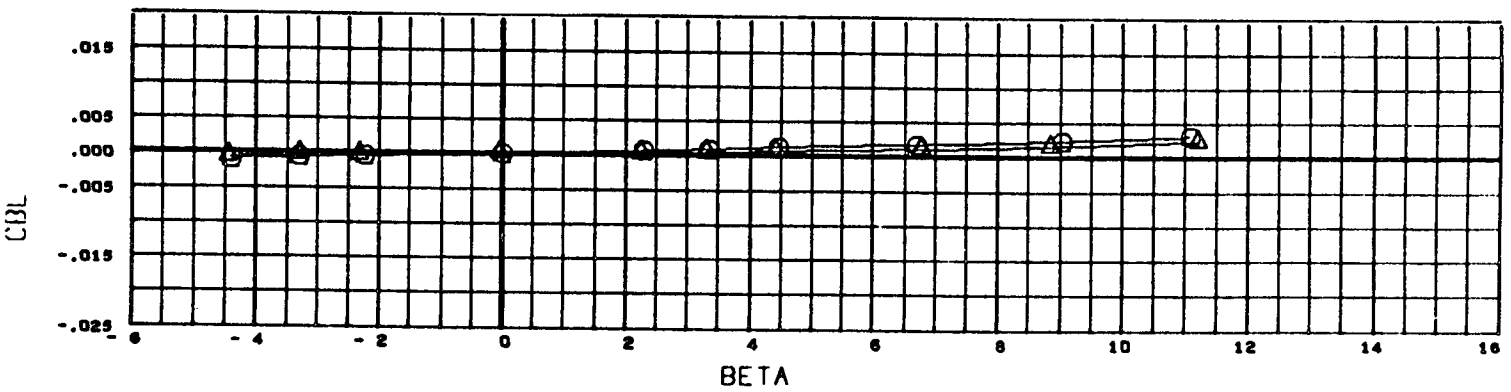
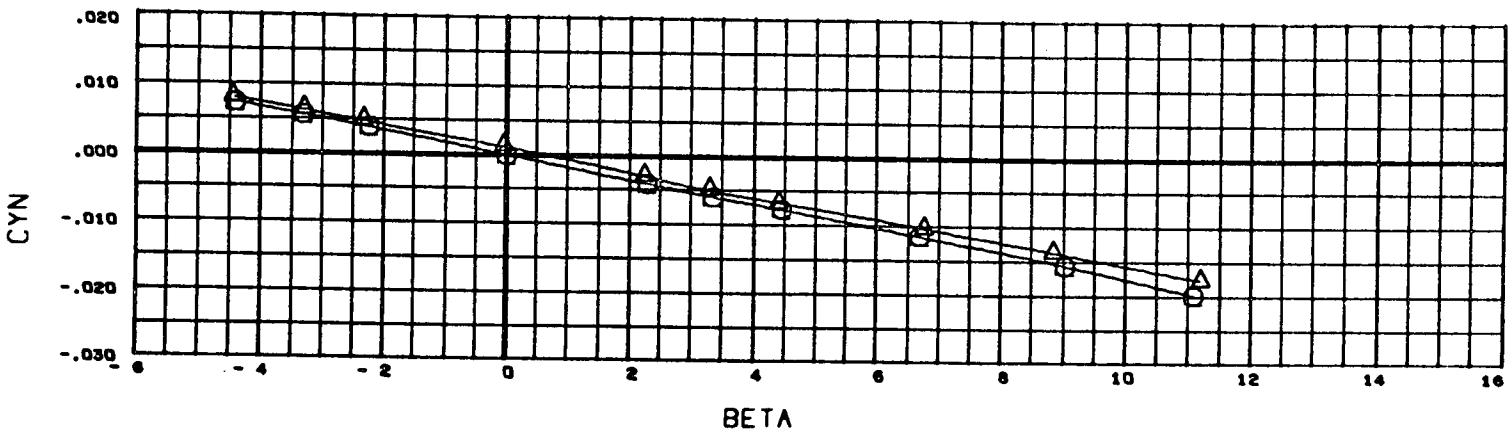
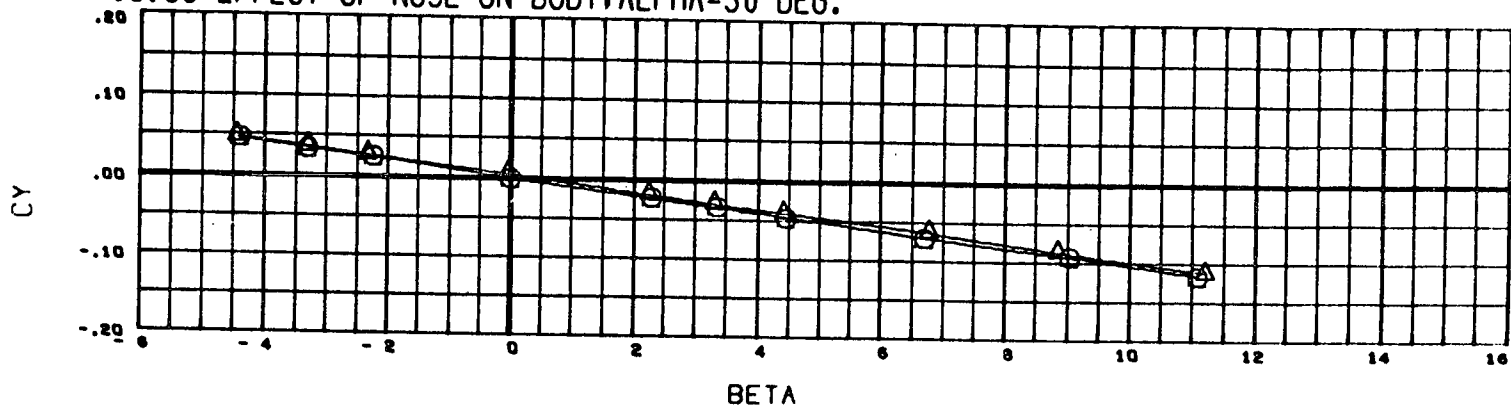
FIG.53 EFFECT OF NOSE ON BODY, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB306) ○	JPL WT 20-691 MSC 040A B1M1D1C1
(RGB316) △	JPL WT 20-691 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	50 IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

FIG.53 EFFECT OF NOSE ON BODY, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGB306)	JPL WT 20-681 MSC 040A B1M1D1C1
(RGB316)	JPL WT 20-681 MSC 040A B2M1D1C1

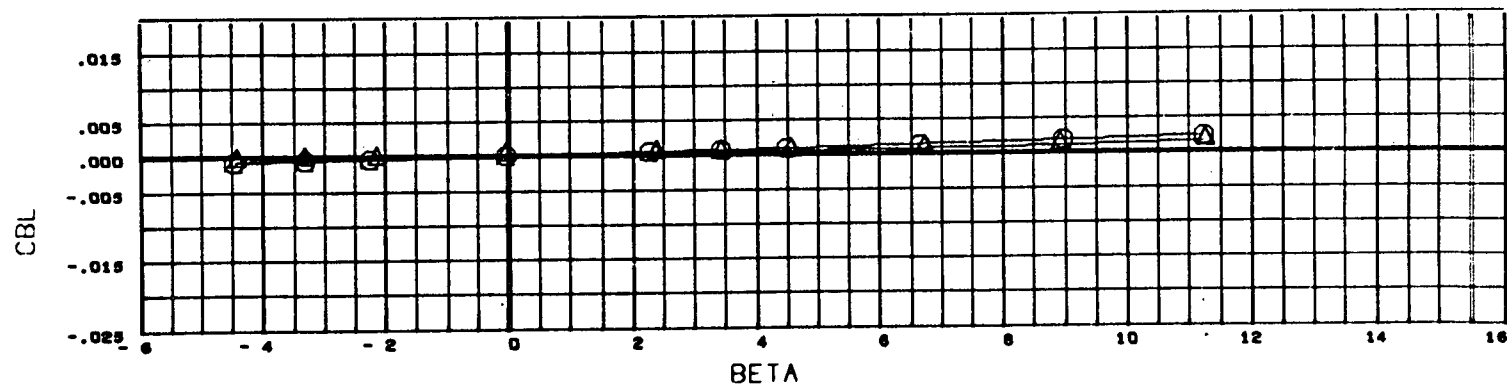
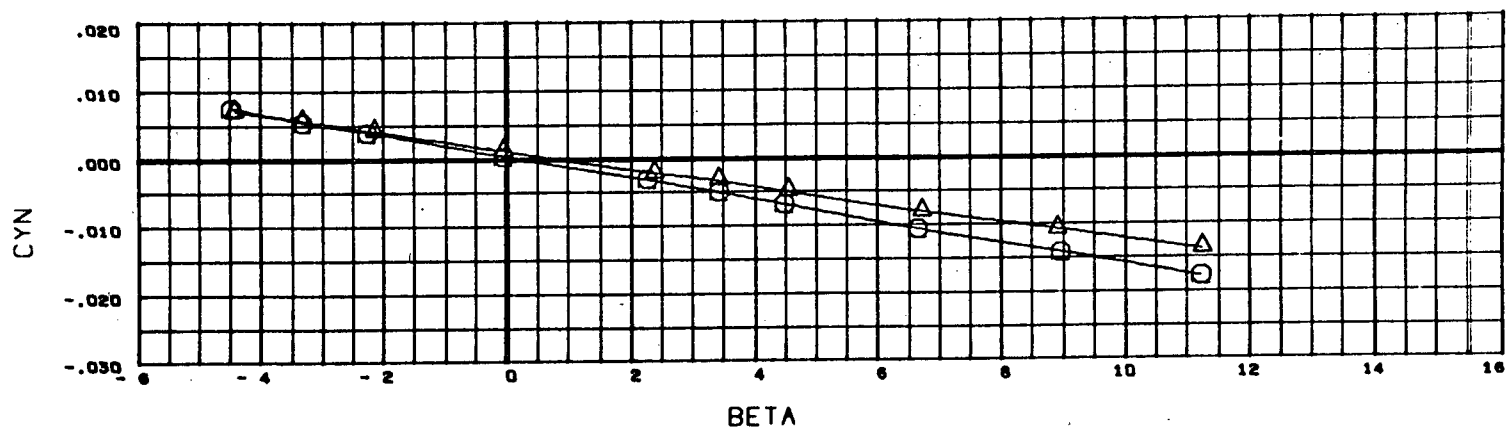
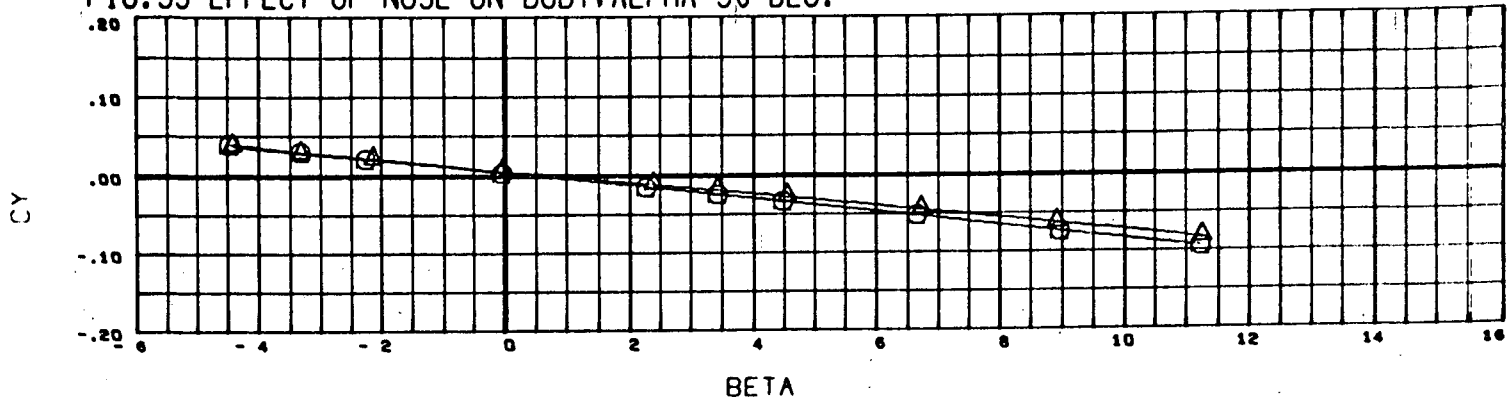
REFERENCE INFORMATION		
SREF	25.5560	90 IN.
LREF	4.3720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.03

PAGE 310

C.7

FIG. 53 EFFECT OF NOSE ON BODY, ALPHA=30 DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6B306) ○	JPL WT 20-681 MSC 040A B1M1D1C1
(R6B316) △	JPL WT 20-681 MSC 040A B2M1D1C1

REFERENCE INFORMATION		
SREF	25.5560	SQ IN.
LREF	4.5720	IN.
BREF	6.6150	IN.
XMRP	1067.9040	IN.
YMRP	0.0000	IN.
ZMRP	400.0004	IN.
SCALE	0.0075	

MACH 3.98

PAGE 311