

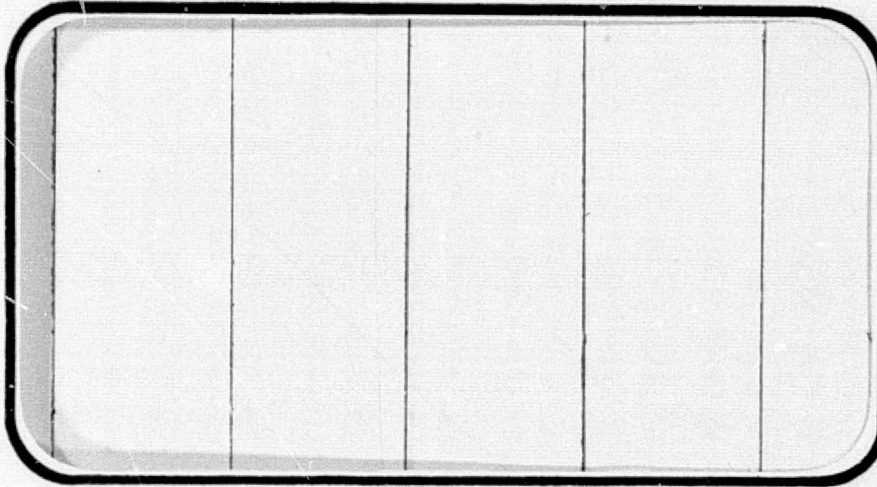
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



(NASA-CR-147630) RESULTS OF A CARRIER AIRCRAFT (MODEL AX13191-4) VERIFICATION TEST IN THE BOEING TRANSONIC WIND TUNNEL USING A 0.03-SCALE 747 CAM/ORBITER MODEL 45-0 (CA6), VOLUME 1 (Chrysler Corp.) 624 p

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANAGEMENT services



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NASA CR-147,630

VOLUME 1 OF 2

RESULTS OF A CARRIER AIRCRAFT (MODEL AX13191-4)
VERIFICATION TEST IN THE BOEING TRANSONIC WIND TUNNEL
USING A 0.03-SCALE 747 CAM/ORBITER MODEL 45-0
(CA6)

by

747 Aerodynamics, 747 Flight Controls
and Wind Tunnel Test Group
Boeing Aerospace Company

Prepared under NASA Contract Number NAS9-13247

by

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Chrysler Corporation Space Division
New Orleans, La. 70189

for

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

WIND TUNNEL TEST SPECIFICS:

Test Number: BTWT 1472
NASA Series Number: CA6
Model Number: AX13191-4 (Carrier), 45-0 (Orbiter)
Test Dates: May 20 through June 6, 1975
Occupancy Hours: 265

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RESULTS OF A CARRIER AIRCRAFT (MODEL AX13191-4)
VERIFICATION TEST IN THE BOEING TRANSONIC WIND TUNNEL
USING A 0.03-SCALE 747 CAM/ORBITER MODEL 45-0
(CA6)

by

747 Aerodynamics, 747 Flight Controls
and Wind Tunnel Test Group
Boeing Aerospace Company

ABSTRACT

Tested in the 8- x 12-foot Transonic Wind Tunnel was a 0.03-scale model of the 747 CAM/Orbiter. Force and moment data were obtained on each vehicle both mated and separated. The investigation included the effects of orbiter incidence, orbiter tail cone, orbiter strut fairings, elevon, and body flap settings. Analysis of the data indicated the 747 is suitable as a carrier of the Orbiter in both the ALT launch and ferry mode. The effect of configuration changes on drag and stability was determined.

TABLE OF CONTENTS

	Page
ABSTRACT	111
INDEX OF MODEL FIGURES	2
INDEX OF DATA FIGURES	3
INTRODUCTION	12
NOMENCLATURE	14
CONFIGURATIONS INVESTIGATED	20
TEST FACILITY DESCRIPTION	22
DATA REDUCTION	23
RESULTS AND DISCUSSION	27
REFERENCES	28
TABLES	
I TEST CONDITIONS	29
II DATASET RUN NUMBER COLLATION SUMMARY	30
III MODEL DIMENSIONAL DATA	45
MODEL FIGURES	67
DATA FIGURES--VOLUME 1	81
APPENDIX	
TABULATED SOURCE DATA--VOLUME 2	81

INDEX OF MODEL FIGURES

Figure	Title	Page
1.	Axis Systems	67
2.	Model Sketches	
	a. Orbiter Configuration Model 45-0	68
	b. Orbiter Trip Strip Definition	69
	c. 747-100 Configuration Model AX13191-4	70
	d. Trip Strip Definition AX13191-4	71
	e. Orbiter/Carrier Model	72
	f. Orbiter/Carrier Model Nomenclature	73
	g. Forward Support Configurations	74
	h. Aft Support Configurations	75
3.	Model Photographs	
	a. 747 CAM Alone Front View	76
	b. 747 CAM Alone Aft View	76
	c. Orbiter Alone Front View	77
	d. Orbiter Alone Aft View	77
	e. Orbiter Base Details	78
	f. Mated Configuration Front View	78
	g. Mated Configuration Aft View	79
	h. Mated Configuration (Tail Cone On) Aft View	79
	i. Mated Configuration (Tail Cone On) Front View	80

INDEX OF DATA FIGURES

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITION VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
4	ORBITER ALONE CHARACTERISTICS, ELEVON 0	MACH	A	1-3
5	ORBITER ALONE CHARACTERISTICS, ELEVON 5	MACH	A	4-6
6	EFFECT OF ELEVON GAP, ORBITER ALONE	CONFIG.	A	7-9
7	LATERAL-DIRECTIONAL CHARACTERISTICS, ORBITER ALONE, ELEVON 5	MACH	B	10-12
8	ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES	PHI	A	13-24
9	ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES	PHI	A	25-36
10	MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES	PHI	A	37-48
11	MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES	PHI	A	49-60
12	EFFECT OF ORBITER HEIGHT IN TUNNEL	WNGHGT	A	61-72
13	STABILIZER EFFECTIVENESS, BASIC 747 ALONE	STAB	C	73-84
14	ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 5	ELEVATORS	C	85-87
15	ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0	ELEVATORS	C	88-96
16	LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE	BETA	C	97-102
17	RUDDER EFFECTIVENESS, BASIC 747 ALONE	RUDDER	C	103-108

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITION VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
18	747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES	PHI	C	109-120
19	EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION, BETA 0	CONFIG.	C	121-123
20	ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT FAIRED	CONFIG.	C	124-126
21	ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT FAIRED	CONFIG.	C	127-129
22	ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103-1)	CONFIG.	C	130-132
23	ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23 FAIRING	CONFIG.	C	133-135
24	ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.2)	CONFIG.	C	136-138
25	EFFECT OF SEALING GAP BETWEEN FWD. BATHTUB FAIRING AND ORB., LAUNCH CFGN	CONFIG.	C	139-141
26	EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIG., BETA 4	CONFIG.	C	142-144
27	LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.	BETA	C	145-150
28	MACH NUMBER EFFECTS, LAUNCH CONFIGURATION	MACH	C	151-153
29	RUDDER EFFECTIVENESS, LAUNCH CONFIG.	RUDDER	C	154-159
30	ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION	ELEVATOR	C	160-165

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITION VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
31	STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 0 STAB		C	166-168
32	STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5 STAB		C	169-177
33	EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIG.	BETA	C	178-183
34	TAILCONE EFFECTS, LAUNCH CONFIGURATION	CONFIG.	C	184-192
35	ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER 5	IORB	C	193-195
36	ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION	ELEVON	C	196-207
37	STABILIZER EFFECTIVENESS ON LAUNCH CONFIGURATION	STAB	C	208-210
38	LATERAL-DIRECTIONAL STABILITY OF LAUNCH CONFIGURATION	BETA	C	211-213
39	RUDDER EFFECTIVENESS ON LAUNCH CONFIGURATION	RUDDER	C	214-216
40	EFFECT OF SIDESLIP, ALL VERTICAL TAILS OFF, LAUNCH CONFIGURATION	BETA	C	217-219
41	ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER -1	IORB	C	220-222
42	ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0	CONFIG.	C	223-228
43	ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4	CONFIG.	C	229-234

INDEX OF DATA FIGURES (CONTINUED)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITION VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
44	EFFECT OF SIDE STRUT FAIRINGS ON LAUNCH CONFIG., CA23 AFT STRUT	CONFIG.	C	235-237
45	COMPARISON OF CANDIDATE FAIRING CONFIGURATIONS, LAUNCH CONFIGURATION	CONFIG.	C	238-240
46	EFFECT OF TRIP STRIPS ON SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION	CONFIG.	C	241-243
47	STABILIZER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF	STAB.	C	244-246
48	LATERAL-DIRECTIONAL STABILITY, STRUT FAIRINGS OFF, TC OFF	BETA	C	247-249
49	RUDDER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF	RUDDER	C	250-252
50	LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.	BETA	C	253-258
51	ALL VERTICAL TAILS OFF, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.	BETA	C	259-261
52	LATERAL DIRECTIONAL STABILITY, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.	BETA	C	262-264
53	STABILIZER EFFECTIVENESS, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.	STAB	C	265-267
54	LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., MIN AFT AND GAITER FWD.	BETA	C	268-270
55	STABILIZER EFFECTIVENESS, LAUNCH CONFIG., MIN AFT AND GAITER FWD.	STAB.	C	271-273

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITION VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
56	ELEVATOR EFFECTIVENESS, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.	ELEVATOR	C	274-276
57	EFFECT OF T.C. FAIRING ON LONGITUDINAL STABILITY, ALT LAUNCH	CONFIG, STAB	C	277-279
58	STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON 0	STAB	C	280-282
59	STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5	STAB	C	283-294
60	STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP 0	STAB	C	295-297
61	STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP -11.7	STAB	C	298-300
62	ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6	ELEVATOR	C	301-309
63	LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6	BETA	C	310-315
64	RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6	RUDDER	C	316-327
65	LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB	BETA	C	328-333
66	ORBITER ELEVON EFFECTS, FERRY, IORB 4.25	ELEVON	C	334-336
67	LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5	BETA	C	337-342
68	LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0	BETA	C	343-348

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITIONS VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
69	RUDDER EFFECTIVENESS, FERRY, IORB 4.25	RUDDER	C	349-354
70	ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25	ELEVATOR	C	355-360
71	STABILIZER EFFECTIVENESS, FERRY, IORB 4.25	STAB	C	361-369
72	ALL VERTICAL TAILS OFF, FERRY, IORB 4.25	BETA	C	370-375
73	HORIZONTAL TAIL OFF, FERRY, IORB 4.25	MACH	C	376-378
74	STABILIZER EFFECTIVENESS, FERRY, IORB 3.0	STAB	C	379-381
75	LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 3.0	BETA	C	382-384
76	RUDDER EFFECTIVENESS, FERRY, IORB 3.0	RUDDER	C	385-387
77	STABILIZER EFFECTIVENESS, FERRY, UNFAIRED STRUTS, IORB 4.25	STAB	C	388-390
78	LATERAL-DIRECTIONAL STABILITY, FERRY, UNFAIRED STRUTS, IORB 4.25	BETA	C	391-393
79	ALL VERTICAL TAILS OFF, FERRY, UNFAIRED STRUTS, IORB 4.25	BETA	C	394-396
80	TAILCONE EFFECTS, FERRY, UNFAIRED STRUTS, IORB 4.25	CONFIG.	C	397-399
81	HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8	CONFIG.	C	400-405

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITIONS VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
82	HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8	CONFIG	C	406-411
83	HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25	CONFIG.	C	412-417
84	HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25	CONFIG.	C	418-423
85	747 CAM AND BASIC 747, HORIZONTAL TAIL OFF	CONFIG.	C	424-429
86	EFFECT OF FORWARD STRUT HEIGHT, 747 CAM	CONFIG.	C	430-432
87	STABILIZER EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD	STAB	C	433-435
88	LATERAL-DIRECTIONAL STABILITY, 747 CAM, CA23 AFT- ROUND FWD	BETA	C	436-438
89	MACH NUMBER EFFECTS, SPEED BRAKES DOWN, 747 CAM, CA23 AFT-ROUND FWD	MACH	C	439-441
90	ELEVATOR EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD	ELEVATOR	C	442-444
91	RUDDER EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD	RUDDER	C	445-447
92	MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT-ROUND FWD	MACH	C	448-450
93	EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN	CONFIG.	C	451-462

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITIONS VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
94	MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD	MACH	C	463-465
95	LATERAL-DIRECTIONAL STABILITY, 747 CAM, MIN AFT AND GAITER FWD	BETA	C	466-468
96	EFFECT OF SPEED BRAKES, 747 CAM, MIN AFT AND GAITER FWD	SPOILER	C	469-471
97	MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.	MACH	C	472-474
10 98	MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT, FAIRED FWD	MACH	C	475-477
99	MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, CAM STRUTS OFF	MACH	C	478-480
100	REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747		C	481-492
101	CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE	STAB	C	493-504
102	CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = 0	STAB	C	505-513
103	CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1	STAB	C	514-522
104	CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, TAILCONE OFF	STAB	C	523-525

INDEX OF DATA FIGURES (Continued)

<u>FIGURE</u>	<u>TITLE</u>	<u>CONDITIONS VARYING</u>	<u>SCHEDULE OF COEFFICIENTS PLOTTED</u>	<u>PAGES</u>
105	CA-23 AND CA-6 COMPARISON, BASIC 747 CONFIGURATION, SPOILER = -1	-	C	526-528
106	CA-23 AND CA-6 COMPARISON, LAUNCH CONFIGURATION, SPOILER = 5	-	C	529-531
107	CA-23, CA-5, CA-6 COMPARISON, BASIC 747 CONFIGURATION	STAB	C	532-534
108	CA-23, CA-5, CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1	STAB	C	535-537
109	CA-23, CA-5, CA-6 COMPARISON, LAUNCH CONFIGURATION	STAB	C	538-540

SCHEDULES:

- A) CL vs ALPHAO; CL vs CD; ALPHAO, CL vs CLM; CLN, CY, CSL vs ALPHAO
- B) CLN, CSL, CY vs BETAQ
- C) CL vs ALPHAW; CL vs CD; ALPHAW, CL vs CLM; CLN, CY, CSL vs ALPHAW

INTRODUCTION

Previous 747/Orbiter mated configuration testing (CA5) was accomplished in the Boeing Transonic Wind Tunnel in September 1974 to obtain high speed data for the ferry and launch configurations. At that time, the baseline configuration included orbiter tailcone TC₅ for both ferry and launch configurations. Subsequent to that test, the following changes were made to the baseline configuration:

- 1) Tailcone TC₅ replaced by TC₄ for ferry
- 2) Tailcone off for launch
- 3) Flaps up, gear up launch configuration

Therefore, one of the primary objectives of the CA6 configuration refinement test was to determine the impact of the tailcone configuration changes on drag, directional stability, and rudder power. The other test configuration changes were directed toward reducing drag for the ferry and launch climb configurations.

As a result of some of the conclusions reached following the CA23 separation test conducted at Ames Research Center (ARC) in March and April 1975, considerable interest was shown in obtaining sufficient data from the CA6 to verify those conclusions. Therefore, additional mated data were obtained as well as Orbiter alone and 747/CAM alone data.

Test objectives are summarized as follows:

- 1) Verify the suitability of the 747/CAM for ferry with TC₄ on and for air launch with TC₄ on or off.

INTRODUCTION (Concluded)

- 2) Determine the effects of the configuration changes:
 - various support strut fairings
 - Orbiter incidence
 - Orbiter elevon on ferry and launch climb performance and stability characteristics
 - Orbiter body flap setting on launch climb performance
- 3) Measure Orbiter alone data to enable NASA/RI to calculate proximity effects.
- 4) Obtain comparative data with the CA23 test
- 5) Conduct selected flow visualization studies

Test CA6 was conducted in the Boeing 8- x 12-ft. Transonic Wind Tunnel (BTWT) May 20 to June 6, 1975. Occupancy time was 265 hours, including loads testing. Loads tests were made to obtain horizontal tail-off force and pitching moment data to be used together with the CA9 high speed pressure test data. Total number of data runs was 423. Test designation is BTWT 1472.

All of the test objectives were accomplished.

Volume 1 contains data figures and Volume 2 contains the appendix of tabulated source data.

NOMENCLATURE
General

<u>SYMBOL</u>	<u>PLOT 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

Reference & C.G. Definitions

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

SUBSCRIPTS

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

NOMENCLATURE
(Continued)

Stability-Axis System

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$, CAM
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$, CAM
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$, CAM
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{MAC}}$, CAM
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$, CAM
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$, CAM
C_{L0}	CL	lift coefficient; $\frac{\text{lift}}{qS}$, ORB
C_{D0}	CD	drag coefficient; $\frac{\text{drag}}{qS}$, ORB
C_{Y0}	CY	side-force coefficient; $\frac{\text{side-force}}{qS}$, ORB
C_{m0}	CLM	pitching-moment coefficient; $\frac{\text{pitching-moment}}{qS MAC}$, ORB
C_{n0}	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$, ORB
C_{l0}	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$, ORB

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NOMENCLATURE
(Continued)

Body-Axis System

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
C _N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$, CAM
C _A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$, CAM
C _Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$, CAM
C _m	CIM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{MAC}}$, CAM
C _n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$, CAM
C _l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$, CAM
C _{N0}	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$, ORB
C _{A0}	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$, ORB
C _{Y0}	CY	side-force coefficient; $\frac{\text{side force}}{qS}$, ORB
C _{m0}	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS MAC}$, ORB
C _{n0}	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$, ORB
C _{l0}	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$, ORB

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NOMENCLATURE (Continued)
Additions to Standard List

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
BSTA		carrier fuselage station, in.
BWL		carrier water line, in.
-	CDFFC	skin friction drag increment of Carrier
-	CDFFO	skin friction drag increment of Orbiter
FS		fuselage station, in.
i_{ORB}	IORB	Orbiter incidence angle, deg.
MS		model station, in.
$P_{t_{\infty}}$	PT-PSF	freestream total pressure - psf
P_{∞}	PS-PSF	freestream static pressure - psf
q_{∞}	Q(PSF)	freestream dynamic pressure - psf
s_{i-j}	Si-j	spoiler nos. i through j deflection angle, deg.
T_{∞}	TB11	freestream temperature - °R
WL		waterline, in.
WP		water plane, in.
Xc	XC	carrier longitudinal station, in.
Xo	XO	Orbiter longitudinal station, in.
Yc	YC	carrier lateral station, in.
Yo	YO	Orbiter lateral station, in.
Zc	ZC	carrier vertical station, in.
Zo	ZO	Orbiter vertical station, in.
α_c	ALPHAC	carrier fuselage angle of attack, deg.

NOMENCLATURE (Continued)
Additions to Standard List

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
α_o	ALPHAO	Orbiter angle of attack, $= i_{ORB} - 2^0 + \alpha_{WDP} - \Delta i_{ORB}$, deg.
α_{WDP}	ALPHAW	Carrier wing angle of attack, $\alpha_{WDP} = \alpha_c + 2^0$, deg.
β_c	BETAC	carrier sideslip angle, deg.
β_o	BETAO	Orbiter sideslip angle, deg.
Δi_{ORB}	DIORB	change in Orbiter incidence due to support strut and balance deflections, deg.
$\Delta \alpha_o$	DALFAO	wall interference correction to orbiter angle of attack
$\Delta \alpha_c$	DALFAC	wall interference correction to carrier angle of attack
Δp_1	DPC1	} differential pressure in balance cavity area (local static pressure - freestream static pressure)- psf
Δp_2	DPC2	
Δp_3	DPC3	
Δp_4	DPC4	
δe_{IB}	ELV-IB	carrier inboard elevator deflection, deg.
δe_{OB}	ELV-OB	carrier outboard elevator deflection, deg.
δe	ELEVON	Orbiter elevon deflection angle, deg.
δ_{BF}	BDFLAP	Orbiter body flap deflection angle, deg.
δ_{RL}	RUD-L	carrier lower rudder panel deflection angle, deg.
δ_{RU}	RUD-U	carrier upper rudder panel deflection angle, deg.

NOMENCLATURE (Concluded)
 Additions to Standard List

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
δ_R	RUDDER	Orbiter rudder deflection angle, deg.
δ_{SB}	SPDBRK	Orbiter speedbrake deflection angle, deg.
δ_{WDP}	STAB	carrier horizontal stabilizer deflection angle, with respect to wing, deg.
ϕ_{ORB}	PHIO	orbiter roll angle, deg.
	CAM	carrier aircraft modification
	FWD ST	forward strut angle
	WNGHGT	wing height, vertical distance from tunnel floor, inches

CONFIGURATIONS INVESTIGATED

Tested were Orbiter alone, 747 Carrier alone, and mated 747/Orbiter installations. The .03-scale models represented the baseline configuration.

747/Orbiter

In the mated configuration, the 747/CAM model was attached to a blade and offset sting (WTC 506) in the lower rear fuselage. Installation is shown in figure 3a and 3b. The Orbiter model was mounted to the 747 carrier through a 3-point strut support system. The support struts were tested unfaired and faired using various combinations of the strut fairings (figures 2g and 2h).

Forces on the two models were recorded independently on separate internal balances. The carrier balance (6226) measured total carrier plus Orbiter forces and moments and the Orbiter balance (660G) measured Orbiter forces and moments.

Orbiter

The .03 scale Orbiter model 45-0 was tested alone, mounted on the MC 1-1200 straight sting. Orbiter forces and moments were measured by the same balance as in the mated configuration. Pitch data were obtained with elevon deflections of 0° and $+5^\circ$. Yaw data at $\alpha_0 = 0^\circ$ were obtained by rolling the model 90° and pitching through the required angle of attack range.

747 Carrier Aircraft

The .03 scale 747 model AX13191-4 was mounted on the WTC 506 swept

CONFIGURATIONS INVESTIGATED (Concluded)

strut sting, the same as in the mated configuration. The 6226 balance was used to measure 747 forces and moments.

The carrier was tested alone in the basic 747 configuration and in the 747 CAM configuration, with the 200 ft.² horizontal tail tip fins and orbiter support structure.

Test Variables

Carrier wing angle of attack = -4° to 12°

Orbiter angle of attack = 0 to 16°

Yaw angle = -10° , -6° , -4° , -2° , 0° , $+4^{\circ}$

Carrier Configuration Variables

Orbiter support structure and fairings

Stabilizer FRL = -1° , 0° , 1° , 2° , 5°

Rudder (upr/lwr) = 0/0, 3/3, 10/10, 0/10, 10/0

Inflight speed brakes 0/0/0 and 0/45/20

Elevator (inbd/outbd) = 0/0, 10/10, -10/-10

Horizontal tail off and on

Horizontal tail tip fins and vertical tail off and on

Model upright and inverted

Orbiter Configuration Variables

Nominal Orbiter incidence = 3° , 4.25° , 6° , 8°

Tail cone off, tail cone on (TC4)

Elevons 0° , $+5^{\circ}$, -10°

Body flap 0° , -11.7°

Elevon gaps open and sealed (one run)

Model upright and inverted

TEST FACILITY DESCRIPTION

The Boeing Transonic Wind Tunnel (BTWT) is a continuous flow, closed circuit, single return, atmospheric facility with the following characteristics:

Test Section Flow Parameters		Test Section Dimensions	
Freestream Condition	Range	Description	Value
Mach number	0 thru 1.15	Cross-section (minus corner fillets), ft.	8 x 12
Dynamic pressure, psia	0 thru 6.3		
Static pressure, psia	15 to 5.4	Length, ft.	14.5
Stagnation pressure	atmospheric	Area, ft ²	88
Maximum unit Reynolds number, per foot	4×10^6		
Maximum total temperature, °F	160		

The test section can be operated with either solid or slotted walls. The slotted wall configuration consists of 16 slots which can vary wall porosity from 3.5% to 11%.

Test data acquisition, recording, computations, and display are done by an XDS-9300 computer and Astro data sub-system.

DATA REDUCTION

Wall Corrections

Data were corrected for wall effects using the standard BTWT lift interference factor for 11% slotted walls, $\delta_0 = -.11$ in the equation:

$$\Delta\alpha_{\text{wall}} = 57.3 \delta_0 \frac{S_{\text{ref}}}{\text{Tunnel Area}} C_L$$

For the 747 alone or the Orbiter alone, the correction is straight forward. For the mated 747/Orbiter, $\Delta\alpha_{\text{wall}}$ was based on total C_L of the 747 + Orbiter as measured by the 747 balance, and this value of $\Delta\alpha_{\text{wall}}$ was used for the Orbiter balance data as well as the 747 balance data.

Drag correction for the mated configuration using the $\Delta\alpha_{\text{wall}}$ as determined above along with the appropriate C_L of either the 747 balance or the Orbiter balance is:

$$\text{Orbiter balance: } \Delta C_D = (\Delta\alpha_{\text{wall}})(C_{L(\text{orb})})$$

$$= \left[57.3 \delta_0 \frac{S_{\text{ref}}}{\text{Tunnel Area}} C_{L(747+\text{orb})} \right] \left[C_{L(\text{orb})} \right]$$

$$\text{747 balance: } \Delta C_D = \left[57.3 \delta_0 \frac{S_{\text{ref}}}{\text{Tunnel Area}} C_{L(747+\text{orb})} \right] \left[C_{L(747+\text{orb})} \right]$$

Upflow

The model was flown upright and inverted at each Mach number for the following configurations: Orbiter alone, with the wing at 48 inches and 57 inches above the tunnel floor, and 747 alone, with the wing at 49 inches above the tunnel floor. The upflow correction thus obtained at zero lift was applied to 747 balance data or Orbiter balance data at all

DATA REDUCTION (Continued)

angles of attack. The upflow derived with the Orbiter at 57 inches was applied to the Orbiter balance data in the mated configuration.

Blockage

Standard practice at BTWT is not to apply blockage corrections to the data for a slotted test section because they are considered small. For the 747 alone configuration, the correction to dynamic pressure, q , is less than .3% over the range of Mach number tested in CA6. This correction is directly proportional to volume of the model. Since the volume of the 747 plus Orbiter is 1/3 more than that of the 747 alone, q correction for the mated configuration is less than .4%.

Reynolds Number Correction

A Reynolds number correction was applied to all model drag data. This correction is necessary as a consequence of total temperature variation of the tunnel flow. The correction is applied to each model component (wing, horizontal tail, nacelle, etc.) by estimating the skin friction coefficient for each and correcting to a nominal Reynolds number per foot if the test RN is more than ± 25000 from the nominal.

The model wetted areas and reference lengths used to correct to the nominal Reynolds number are as follows:

<u>Model</u>	<u>Component</u>	<u>Ref. Length</u>	<u>Wetted Area</u>
747	Body	6.75 ft.	12.71 ft ²
747	Flap track fairings	.65	.84
747	Horizontal tail	.617	2.175
747	Nacelles (internal)	.248	1.7
747	Nacelles (external)	.2875	1.245

DATA REDUCTION (Continued)

<u>Model</u>	<u>Component</u>	<u>Ref. Length</u>	<u>Wetted Area</u>
747	Nacelle struts	.638 ft.	.650 ft ²
747	Vertical tail	.6940	1.53
747	Wing	.9058	8.28
Orbiter	Body (TC on)	4.155	7.2252
Orbiter	Body (TC off)	3.225	5.5692
Orbiter	Vertical tail	.4995	.6941
Orbiter	Wing	1.1868	3.5775

Mounting Strut Tare Corrections

Data in this report were corrected for 747 model support system interference only where noted. These effects were evaluated for the 747 alone configuration in previous BTWT tests. The tares were extrapolated for the $M = .3$ case.

All carrier aerodynamic forces and moments measured were reduced to coefficient form in the body and stability axis systems using the following carrier reference dimensions:

<u>Symbol</u>	<u>Description</u>	<u>Model Scale</u>	<u>Full Scale</u>
S	747 wing area, ft ²	4.95	5500
b	747 wing span, in.	70.44	2348
\bar{c}	747 wing mean aerodynamic chord, in.	9.834	327.8
XMRP	747 longitudinal moment reference point, in. X_C	40.196	1339.91
YMRP	747 lateral moment reference point, in. Y_C	0.0	0.0
ZMRP	747 vertical moment reference point, in. Z_C	5.7225	190.75

DATA REDUCTION (Concluded)

Orbiter aerodynamic forces and moments measured by the Orbiter internal balance were also reduced to coefficient form in body and stability axis systems using Orbiter reference dimensions as listed below:

SREF	=	2690	ft ²
LREF	=	474.8	in.
BREF	=	936.67	in.
XMRP	=	1109.0	in. X0
YMRP	=	0.0	in. Y0
ZMRP	=	375.0	in. Z0

RESULTS AND DISCUSSION

For launch climb, the TC4 fairing was found to give a considerably greater drag saving than the TC5 fairing tested in CA5.

<u>Test</u>	<u>ΔC_D</u>	<u>Tailcone</u>
CA6	.0152	TC4
CA5	.0110	TC5

The TC4 tailcone fairing consistently performs better than TC5; a similar improvement was observed for the ferry configuration. Both orbiter strut fairings and an up (-5°) orbiter elevon reduce the climb drag for near-ceiling conditions ($C_L = .75$), the model scale increments being $\Delta C_D = -43$ counts and -15 counts, respectively.

For the typical ferry cruise condition at $C_L = 0.6$, the faired orbiter support struts reduce the wind tunnel drag coefficient by 41 counts. Other fairing configurations gave up to 62 drag counts reduction. However, these gains were made with high fineness ratio (long chord) forward strut fairings, which caused further deterioration in directional stability below the minimum guideline level. Ferry drag was reduced by decreasing the Orbiter incidence to 3° (from 4.25°). The 15 count (approximate) reduction in wind tunnel drag was partly a result of the reduced forward support strut length. A five-degree up orbiter elevon angle was tested but gave no improvement in ferry drag.

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"Model Assembly" (TE 1007), Boeing Dwg. 65-69716.

"Wing," W44.1, Boeing Dwg. No. 65-89585.

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"Boeing Model 747-200B Aerodynamic Summary," Boeing Dwg. No. 65B00097.

TABLE I.

TEST : CA6		DATE : Post-Test	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.3	1.88×10^6	0.87	90
0.4	2.36×10^6	1.50	97
0.5	2.75×10^6	2.17	104
0.6	3.06×10^6	2.90	112
0.7	3.33×10^6	3.64	114
BALANCE UTILIZED: <u>Boeing 6226 (747), Boeing 660G (Orbiter)</u>			
	CAPACITY:		COEFFICIENT
	660G	6226	TOLERANCE:
NF	<u>1335</u>	<u>4750 lbs</u>	<u>± 0.1%</u>
SF	<u>1780</u>	<u>2380 lbs</u>	<u>± 0.1%</u>
AF	<u>133</u>	<u>360 lbs</u>	<u>± 0.1%</u>
PM	<u>2015</u>	<u>21000 in-lbs</u>	<u>± 0.1%</u>
RM	<u>2015</u>	<u>8300 in-lbs</u>	<u>± 0.1%</u>
YM	<u>4265</u>	<u>8300 in-lbs</u>	<u>± 0.1%</u>
COMMENTS:			

TABLE II

TEST: **CAG** DATA SET/RUN NUMBER COLLATION SUMMARY DATE: **Post-Test**

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DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER						MACH NUMBERS				
		α	β	S_{c1}	S_{c2}	β	ϕ	α	β	S_c	S_r	S_{BF}	ϕ	0.3	0.4	0.5	0.6	0.7
RGPOOL	ORB + $F_a N_{20}^{24.1}$							∇	0	0	0	0	0	9		8	7	6
02								∇		5				14		13	12	11
03								∇						18		17	16	15
04								0	15				90	23		22	21	20
05								∇	0				180	28		27	26	25
06								∇						32		31	30	29
07								∇						39		36	38	37
08								∇						43		42	41	40
09								∇					0	48		47	46	45
10								∇						52		51	50	49
11								∇								54		
12	$K_1 + H_{18.1} V_{9.1}$	∇	2.3	0	0	0	0							65		64	63	62
13			4.0											70		69	68	67
14			4.9											75		74	73	72
15					10											78		
16					-10											80		
17			5.06		-10									84		83	82	
18			5.03		-10									88		87	86	

TEST RUN NUMBERS

30

1 7 13 19 25 31 37 43 49 55 61 67 73 76

COEFFICIENTS $\nabla \alpha_0 = 0 \text{ to } 17^\circ$ $\nabla \alpha_0 = -16 \text{ to } 18^\circ$
 $K_1 = 0.27.0 N_{20}^{24.1} M_{20}^{24.1} T_{19} W_{9.1} + TS^2$ $\nabla \alpha_0 = 16 \text{ to } 15^\circ$

OR SCHEDULES

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TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACH NUMBERS				
		α	β	δR	$\delta \theta$	β	ϕ	δSP	δORB	$\delta \rho$	δr	δBF	0.3	0.4	0.5	0.6	0.7
RGPO 19	$K_1 + H_{15.1} V_{9.1}$	∇	0.03	0	10	0	0						92			91	90
20		∇		0									97		96	95	94
21		∇											102		101	100	99
22		∇					180						107		106	105	104
23		∇				-4	0						111			110	
24						+2							115			114	
25						4							118			117	
26						6							120			119	
27						10							123			122	
28				3		0							126			125	
29				10									131			130	
30				9/10									133			132	
31				10/0									135			134	
* 32	$K_2 + H_{15.1} V_{9.1}$		0.96	0									140		139	138	137
33	<small>STICKS NOT SEALED</small>	∇	0.96										145		144	143	142
34	<small>K₂ + H_{15.1} V_{9.1} AT 103.1 + ORB FEAT</small>	∇	0.96			+4		0.4/10	6	5	0	0				154	
35	<small>AT 110</small>															156	
36	<small>AT 103.1 105</small>															158	

TEST RUN NUMBERS

31

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

OR SCHEDULES
 $\nabla \alpha = -1.7 \text{ to } 1.0^\circ$
 COEFFICIENTS
 $\nabla \alpha = -4 \text{ to } 12^\circ$
 IDVAR (11) IC: AR (21) ICV

K₂ = same as K₁ except dip strips removed from inside nacelle primary

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACHNUMBERS				
		α	β	δ_r	δ_e	β	θ	δ_{sp}	LORB	δ_e	δ_r	δ_{BF}	0.3	0.4	0.5	0.6	0.7
RGPO37	K ₂ PHS & IV.15-12 AT 108.1 1 ORB F ₆ AT 108.1	4.5	0	0	0	0	0	6	5	0	0					160	
38	AT 108.1															162	
39	AT 108.2															163	
40																165	
41	AT 108.1															166	
42	AT 108.1															169	
43																170	
44	AT 108.1															174	
45	AT 108.1															177	
46																179	
47	AT 108.1															181	
48	AT 108.1															183	
49	AT 108.1															185	
50	AT 108.1															187	
51																189	
52																	191
53	AT 108.1															195	194
54																198	197

TEST RUN NUMBERS

32

COEFFICIENTS

$\Delta d_c = -4$ to 12

IDVAR (1) IC, AN (2) ICV

OR SCHEDULES

$\Delta d_c = -2$ to 2
 $\Delta d_c = -15$ to 18

TABLE II (Continued)

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33

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACH NUMBERS				
		α	β	γ	δ	ϵ	ζ	η	θ	ι	κ	λ	0.3	0.4	0.5	0.6	0.7
RGPO 55	R2+HIS.6V.1S-24 + 2ER	4.57	0	0	6	0	0	6	5	0	0				201	200	
RGPO 57	R2+HIS.6V.1S-24 + 2ER	4.8	0	0	-4	0	0	6	5	0	0				206	205	
58		3.9			-4								OIL FLOW	207			
59		4.5			0							212		211	210	209	
60		3.5											OIL FLOW	213			
61		4.5	3											216	215		
62			10											218	217		
63			10											220	219		
64			10											222	221		
65		4.2	0	10										225	224		
66		5		10										228	227		
67		4.4		0									232	231	230		
68		2.13											237	236	235		
69		1.5												239			
70	R2+HIS.6V.1S-24 + 2ER	4.7												243	242		
71					-4									246	245		
72					4									249	248		

TEST RUN NUMBERS

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

COEFFICIENTS

IDVAR (1) IDVAR (2) IDV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER				MACH NUMBERS					
		α	δ	$\delta R\%$	$\delta e\%$	θ	ϕ	δSP	L_{ORB}	δe	δr	δBF	0.3	0.4	0.5	0.6	0.7
RGPO 73	K ₂ + HIS. 6. S ₁ -12 AT 103.1 + ORB. FAN 3	9	4.77	-	0	10	0	745/20	6	5	0	0				251	
74	K ₂ + HIS. 6. S ₁ -12 AT 103.1 + ORB. FAN 3	6	-	0	-	0				5						254	253
75			↓		-					0						255	
76	K ₂ + HIS. 6. IV. 1. S ₁ -12 AT 103.1 + ORB. FAN 3		0		0											257	
77			2.21													259	
78			4.93													261	
79			-1.01							↓		↓				263	
80	K ₂ + HIS. 6. IV. 1. S ₁ -12 AT 103.1 + ORB. FAN 3		-1.01							5		-				265	
81			4.94													267	
82			3.79											OIL FLOW		268	
83	K ₂ + HIS. 6. IV. 1. S ₁ -12 AT 103.1 + ORB. FAN 3	6														270	
84	K ₂ + HIS. 6. IV. 1. S ₁ -12 AT 103.1 + ORB. FAN 3															272	
85			0													274	
86			1.98													276	
87		9	4.25			-4										278	
88						+4										280	
89						2										282	
90						6										284	

TEST RUN NUMBERS

34

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

COEFFICIENTS IDVAR (1) IDVAR (2) IDV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :					
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACH NUMBERS					
		α	β	δ	ϵ	ζ	η	θ	$\delta\theta$	LORR	$\delta\epsilon$	$\delta\zeta$	$\delta\eta$	0.3	0.4	0.5	0.6	0.7
RGPO91	K ₂ H _{15.6.1} V _{9.1} S ₁₋₁₂ AT ^{103.1} +ORB TCA	4.85	0	0	10	0	0	0	0	6	5	0	-				286	
092			3		0												288	
093			10														290	
094	K ₂ H _{15.1} V _{9.1} S ₁₋₁₂ AT ^{103.1} +ORB TCA	4.79	-														294	
095					-4												296	
096					4												298	
097					-10												299	
098	K ₂ V _{9.1} S ₁₋₁₂ AT ^{103.1} +ORB TCA		0	-	0												301	
099	K ₂ H _{15.6.1} V _{9.1} S ₁₋₁₂ AT ^{103.1} +ORB TCA	2.15		0								0					303	
100			-2														305	
101		4.77															307	
102					-4												309	
103					2												311	
104					4												313	
105					6												315	
106					10												317	
107			10		0												319	
108	N ₁₅ AT ^{103.1} +ORB TCA		0		0												322	321

TEST RUN NUMBERS

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35

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

COEFFICIENTS

IDVAR (11) IC, AR (2) 'NEW

OR S SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER					ORBITER					MACH NUMBERS				
		α	β	γ	δ	ϵ	ζ	η	θ	ι	κ	0.3	0.4	0.5	0.6	0.7
RGPI09	K2HISLW S-12 AT 15-43 + CORE FB N 24	4.77	0	0	0	0	15/20	6	5	0	0				325	324
10						10									327	
11						6									330	329
12	+ CORE FB N 24					2									333	332
13						-4									336	335
14						4									339	338
15	AT 15-43					4									342	341
16		4.75				0									345	344
17	RT 15-43							8.11							347	
18						10									349	
19						-10									351	
20		2.06				0									355	
21		-0.9													357	
22		1.85				-4									359	
23						2									361	
24						4									363	
25						6									365	
26						10									367	

TEST RUN NUMBERS

36

1 7 13 19 25 31 37 43 49 55 61 67 73 76

COEFFICIENTS IDVAR (1) IDVAR (2) IDV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :					
DATA SET IDENTIFIER	CONFIGURATION	CARRIER					ORBITER					MACH NUMBERS					
		α	β	δr	$\delta \theta$	θ	$\delta \phi$	L_{ORB}	δe	δr	$\delta \theta$	0.3	0.4	0.5	0.6	0.7	
RGP127	K ₂ HIS ₁ ... S ₁₋₁₂ AT ^{102.1} 1221 + ORB FRANK	9	4.85	-	0	10	0	94%	8.11	5	0	0				369	
28						4										371	
29						-4										373	
30						0										375	
31	V ₁ V ₁₅ V ₁₂ AT ^{102.1} 1221 + ORB FRANK			0												377	
32	K ₂ HIS ₁ V ₁₅ V ₁₂ AT ^{102.1} 1221 + ORB FRANK		4.96			0			4.21							380	381
33			-9.6													383	
34			2.07						6.03							385	
35			2.07													386	
36			4.98													389	
37						2										391	
38						4										393	
39						6										396	
40			9.97			0		%/0		-10						398	
41										-5						400	
42										0						402	
43			2.04							0						404	
44										-5						406	

TEST RUN NUMBERS

37

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

COEFFICIENTS

IDVAR (11) ICLEAR (21) ICV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACH NUMBERS				
		α	β	$\delta\alpha\%$	$\delta\beta\%$	β	θ	$\delta\alpha\%$	L_{ORR}	$\delta\alpha$	$\delta\beta$	$\delta\beta\%$	0.3	0.4	0.5	0.6	0.7
RGP145	K ₂ H ₁₅ G ₁ V ₉ 1 St-12 AT ¹¹² III.1 + ORR FR N ₃₃	2.09	0	0	0	0	0	6.03	-10	0	0				408		
46		2.09									-11.7				410		
47	K ₂ H ₁₅ G ₁ V ₉ 1 AT ¹¹² III.1 ORR FR N ₃₃	.15									-11.7				413		
48						↓					0	418	417	416	415		
49						-4						421			420		
50						2						424			423		
51						4						427			426		
52		↓				6						430			429		
53		.11	↓			10						433			432		
54		.16	3			0						436			435		
55			10	↓								439			438		
56		↓	0	90% 10%								443			442	441	
57		.14										447			446	445	
58		1.95		0								452		451	450	449	
59	↓	1.99	↓									457		456	455	454	
60	K ₂ H ₁₅ G ₁ V ₉ 1 AT ¹¹² III.1 + ORR FR N ₃₃	.01	-			↓						460			459		
61						-4						463			462		
62	↓	↓	↓	↓	↓	4	↓	↓	↓	↓	↓	466			465		

TEST RUN NUMBERS

38

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

COEFFICIENTS

IDVAR (11) IC: AR (21) ICV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :						
DATA SET IDENTIFIER	CONFIGURATION	CARRIER					ORBITER					MACH NUMBERS						
		α	β	SRM	Se%	Q	os	SSP	LORB	Sc	SF	SBF	0.3	0.4	0.5	0.6	0.7	
RGPI 63	K ₂ HIS.1 V ₁ ORR FAN 1 AT 112.1	0	0	.01	-	0	10	0	0	6.03	-5	0	0	470			469	
64	K ₂ V ₁ ORR FAN 1 AT 112.1	0	0	-	0	0				-5			475		474	472	473	
65		0	0	-	0					0						477		
66	K ₂ HIS.1 V ₁ TORR TC4 AT 112.1	0	0	.06	0	2			4.25				481			480		
67						4							484			483		
68	K ₂ HIS.6 IV ₁ TORR TC4 AT 112.1					0							488	487		486		
69						0				-5			492	491		490		
70		0	0			0										493		
71		0	0			2							496			495		
72						2				0			499			498		
73						4							502			501		
74						6							505			504		
75						10							508			507		
76						-4							511			510		
77						3							514			513		
78						10							517			516		
79						10%							520			519		
80						10%							523			522		

TEST RUN NUMBERS

1	7	13	19	25	31	37	43	49	55	61	67	73	76
COEFFICIENTS													
IDVAR (1) IDVAR (2) IDVAR													
<input type="checkbox"/> OR <input type="checkbox"/> SCHEDULES													

ORIGINAL PAGE IS OF POOR QUALITY

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER						ORBITER					MACH NUMBERS				
		α	β	$\delta R^2/L$	$\delta e^2/a$	β	ϕ	δSP	δORB	δe	δr	δBF	0.3	0.4	0.5	0.6	0.7
RGPB1	K ₂ HIS.6. V _{9.1} + ORATC ₄ AT III.2	5	-06	0	9.93/906	0	0	0	4.25	0	0	-	526			525	
82			-10										528			527	
83			✓		-7.52/-101								531			530	
84			-101		0								535	534		533	
85			1.97										539	538		537	
86	K ₂ HIS.1 + ORATC ₄ AT III.1		-12	-		↑							542			541	
87						-4							545			544	
88						4							548			547	
89						10							551			550	
90	K ₂ V _{9.1} + ORATC ₄ AT III.2		-	0	-	0							555	554		553	
91	K ₂ HIS.6. V _{9.1} + ORATC ₄ AT III.1		7.04		0				3.15					TAPE ON MODEL BAD ORBITER CLM		557	
92																558	
93						2										561	
94						4										563	
95						10										565	
96						6										567	
97						-4										569	
98					10	0										572	

TEST RUN NUMBERS

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

COEFFICIENTS

10VAR (11) 10VAR (21) 10VAR (31)

OR β
SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER							ORBITER				MACH NUMBERS				
		α	β	δ_{SP}	δ_{OR}	β	δ	δ_{SP}	L_{ORB}	δ_c	δ_r	δ_{RF}	0.3	0.4	0.5	0.6	0.7
RGPI99	K ₂ V _{9.1} + ORB TC ₄ AT ₁₁₂ III.1	6	-	0	-	0	0	0	3.15	0	0	-				577	
200	AT ₁₀₅ III.1								4.25							579	
201	K ₂ H15.6 / V _{9.1} + ORB TC ₄			1.96		0										582	
202				-1.01												584	
203				-0.9												586	
204		9				-4										588	
205		3.9				-4							Oil Flow			589	
206		9				4										591	
207						2										593	
208						10										595	
209						6										597	
210	K ₂ H _{15.1} + ORB TC ₄					10										599	
211						4										601	
212						-4										603	
213						0										605	
214	K ₂ H15.6 / V _{9.1} + ORB FC N ₂	6		-0.2		0						0				607	
215	K ₂ V _{9.1} + ORB FC N ₂													610		609	
216								0.45/20						613		612	

TEST RUN NUMBERS

1	7	13	19	25	31	37	43	49	55	61	67	73	76		
COEFFICIENTS													IDVAR (1)	IDVAR (2)	IDV
<input type="checkbox"/> OR <input type="checkbox"/> SCHEDULES															

ORIGINAL PAGE IS OF POOR QUALITY

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER					ORBITER					MACH NUMBERS				
		α	β	SR ₁	SR ₂	Q	SSP	LORE	δ_c	δ_r	δ_{BF}	0.3	0.4	0.5	0.6	0.7
RGP217	K ₂ V _{9.1} AT ^{103.1} ₁₀₅	9	-	0	-	0	9/15/70	8.07	0	0	0		616			615
18		10					0				0		619			618
19	K ₂ V _{9.1} + ORC	11					0				-		622			621
20		12					0/14/70						625			624
21		13					0/14/70	4.23					629			628
22		14					0	4.23					632			631
23	K ₂ V _{9.1}	15						-	-	-			635			634
24	K ₂ V _{9.1} AT ^{103.2} ₁₀₅	16					4.25						638			637
25	K ₂ H _{15.6} /V _{9.1} AT ^{103.3} ₁₀₅	17		507		0	4.25	0/14/70							640	
26		18					6								642	
27		19					4								645	
28		20					2								647	
29		21					4								649	
30		22					6								651	
31		23					10								653	
32	K ₂ H _{15.6} /V _{9.1} AT ^{103.3} ₁₀₅	24				0	0					658	657	656	655	
33	K ₂ H _{15.6} /V _{9.1} AT ^{103.3} ₁₀₅	25		507			9/14/70								660	
34		26		507			9/14/70								662	

TEST RUN NUMBERS

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

COEFFICIENTS

IDVAR (1) IDVAR (2) IDCV

OR SCHEDULES

TABLE II (Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY											DATE :				
DATA SET IDENTIFIER	CONFIGURATION	CARRIER							ORBITER				MACH NUMBERS				
		α	β	δ_{P1}	δ_{P2}	β	δ_{P3}	δ_{SP}	L_{ORB}	δ_e	δ_r	δ_{BF}	0.3	0.4	0.5	0.6	0.7
RGP235	K ₂ H ₁₆ .6.1 V _{9.1} S ₁₁₋₁₂ AT ¹⁰³³ _{III.1}	6	5.0	10	0	0	6	0/14/20	-	-	-	-				664	
36			4.0	0				0/14/20								666	
37	K ₂ H ₁₆ .6.1 V _{9.1} AT ¹⁰³³ _{III.1}		5.0					0					671	670	669	668	
38								0					676	675	674	673	
39	K ₂ H ₁₆ .6.1 V _{9.1} S ₁₁₋₁₂	7						0/14/20								678	
40						2										680	
41						4										682	
42						10										684	
43			5.9			0										686	
44	K ₂ H ₁₆ .6.1 V _{9.1}	6	5.9					0					691	690	689	688	
45			5.0										696	695	694	693	
46	K ₂ H ₁₆ .6.1 V _{9.1}												701	700	699	698	
47	K ₂ H ₁₆ .6.1 V _{9.1}												706	705	704	703	
48	K ₂ H ₁₆ .6.1 V _{9.1} AT ¹¹¹² _{III.1}		1.93					0	3.15	0	0					575	

TEST RUN NUMBERS

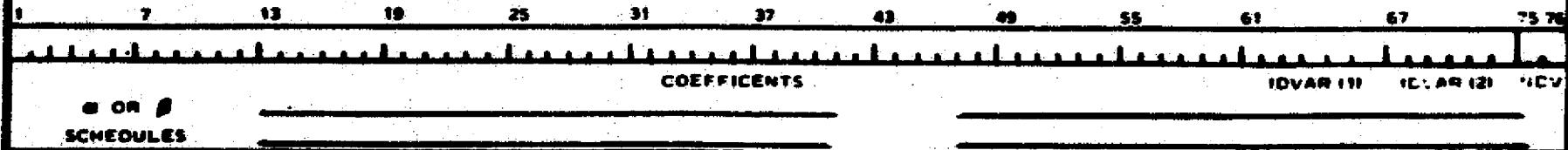


TABLE II. (Concluded)

Coefficient Schedules

	R & B	data are 747 data.
	A & C	data are Orbiter data.
	R data	BETA, PHI, ALPHAC, IORD, CL, CD, CLM, CY, CLN, CSL
	B data	DPC1, DPC2, DPC3, DPC4, PT-PSF, PS-PSF, Q(PSF), TB11, CDFFC
Orbiter Alone	- A data	BETA0, PHIO, IORB, CL, CD, CLM, CY, CLN, CSL
	C data	DALFA0, IORD, CDFF0
Orbiter with Carrier	- {	A data ALPHA0, BETA0, PHIO, IORD, CL, CD, CLM, CY, CLN, CSL
	- {	C data DALFAC, ALPHAC, ALPHAO, DALFA0, IORD, CDFF0

TABLE III. - MODEL DIMENSIONAL DATA

a. Carrier Model

MODEL COMPONENT: B_{27.8}

GENERAL DESCRIPTION: BODY, 747 Project with A.P.V. exit.

MODEL SCALE: 0.03

DRAWING NUMBER: 65-69716

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length, in.	<u>2702</u>	<u>81.06</u>
Max. Width, in.	<u>255</u>	<u>7.65</u>
Max. Depth	_____	_____
Fineness Ratio		
Area		
Max. Cross-Sectional	_____	_____
Planform	_____	_____
Wetted, ft ²	<u>424</u>	<u>.3816</u>
Base	_____	_____

TABLE IIIa. - Continued.

MODEL COMPONENT: Horizontal Tail - H15.1

GENERAL DESCRIPTION: Swept Horizontal Tail With
Planform Radius Fillet at L.E. - Body Intersection.

MODEL SCALE= 0.03

DRAWING NUMBER: 65-66630, 69-49180, 1007-477

<u>DIMENSIONS:</u>	<u>Full Scale</u>	<u>Model Scale</u>
<u>EXPOSED DATA (one side)</u>		
Area- ft ²	<u>736</u>	<u>0.6625</u>
Span- in.	<u>436.5</u>	<u>13.095</u>
Aspect Ratio	<u> </u>	<u> </u>
Taper Ratio	<u> </u>	<u> </u>
Dihedral Angle-deg.	<u>7</u>	<u>7</u>
Incidence Angle-deg.	<u> </u>	<u> </u>
Sweep Back Angle-deg. L. E.	<u>43.08</u>	<u>43.08</u>
Chords-in.		
Root	<u>388</u>	<u>11.64</u>
Tip	<u>97</u>	<u>2.91</u>
MAC	<u> </u>	<u> </u>
Apex Location-in.	<u> </u>	<u> </u>
X ₀	<u> </u>	<u> </u>
Y ₀	<u> </u>	<u> </u>
Z ₀	<u> </u>	<u> </u>
.25 MAC Location-in.		
X _C Station	<u>2564</u>	<u>76.920</u>
Y ₀	<u> </u>	<u> </u>
Z ₀	<u> </u>	<u> </u>

TABLE IIIa. - Continued.

MODEL COMPONENT: Horizontal Tail H15.6.1

GENERAL DESCRIPTION: Horizontal tail with vertical fins

on each tip at body B.L. 12.82

MODEL SCALE: 0.03

DRAWING NUMBER: 1319-60

<u>DIMENSIONS:</u>	<u>Full Scale</u>	<u>Model Scale</u>
<u>Exposed Data (one side)</u>		
Area - ft ²	<u>200</u>	<u>0.18</u>
Span - in.	<u>251.44</u>	<u>7.543</u>
Aspect Ratio	<u>2.19</u>	<u>2.19</u>
Taper Ratio	<u>1.00</u>	<u>1.00</u>
Dihedral Angle-deg.	<u>0</u>	<u>0</u>
Incidence Angle-deg.	<u>-</u>	<u>-</u>
Sweep Back Angle-deg.	<u>0</u>	<u>0</u>
Chords - in.	<u>114.54</u>	<u>3.43</u>

TABLE IIIa. - Continued.

MODEL DIMENSIONAL DATA

MODEL COMPONENT: M₂₅

GENERAL DESCRIPTION: Inboard 747, J_{T9D} Nacelle

strut

Model Scale: 0.03

DRAWING NUMBER _____

DIMENSIONS :	FULL SCALE	MODEL SCALE
Wing B.L. of nacelle ξ , in.	<u>470.0</u>	<u>14.100</u>
Cont angle, deg. inboard	<u>2</u>	<u>2</u>

TABLE IIIa. - Continued.

MODEL COMPONENT: M_{26.8}

GENERAL DESCRIPTION: Outboard 747, & J₁T9D Nacelle

Strut

Model Scale: 0.03

DRAWING NUMBER 937-590

<u>DIMENSIONS</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Wing, B.L. of nacelle & in.	834.0	25.02
Cant angle, Deg. inboard (toe in at LE Int.)	2	2

TABLE IIIa. (Continued)

MODEL COMPONENT: N₅₇
 GENERAL DESCRIPTION Inboard Fan Cowl and Primary
747 Nacelle, flow thru type - JT9D Blow-In Doors
 Model Scale: 0.03
 DRAWING NUMBER 5.0 1007-96, 97

<u>DIMENSIONS</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
<u>LENGTH:</u>		
Cowl	<u>104.0</u>	<u>3.120</u>
Nac. Assy	<u>219.17</u>	<u>6.575</u>
<u>OUTSIDE DIAMETER:</u>		
Cowl	<u>101.67</u>	<u>3.05</u>
Engine	<u>68.67</u>	<u>2.06</u>
<u>INSIDE DIAMETER (T.E.)</u>		
Cowl	<u>91.67</u>	<u>2.75</u>
Engine	<u>53.33</u>	<u>1.60</u>
<u>LOCATION, WING LE, W.B.L.</u>	<u>470.0</u>	<u>14.10</u>

TABLE IIIa. (Continued)

MODEL COMPONENT: N₅₈

GENERAL DESCRIPTION: Outboard fan cowl and primary

747 nacelle, flow thru type - JT9D Blow-In Doors

Model Scale: 0.03

DRAWING NUMBER 5.0. 1.007-96, -97

<u>DIMENSIONS</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
<u>LENGTH:</u>		
Cowl	<u>104.0</u>	<u>3.120</u>
Nac. Assy.	<u>219.17</u>	<u>6.573</u>
<u>OUTSIDE DIAMETER</u>		
Cowl	<u>101.67</u>	<u>3.05</u>
Engine	<u>68.67</u>	<u>2.06</u>
<u>INSIDE DIAMETER (T.E.)</u>		
Cowl	<u>91.67</u>	<u>2.75</u>
Engine	<u>53.33</u>	<u>1.60</u>
<u>LOCATION, WING, LE, WBL</u>	<u>834.0</u>	<u>25.02</u>

TABLE IIIa. - Continued.

MODEL COMPONENT: SPOILERS - S₁₋₁₂

GENERAL DESCRIPTION: Multi-panel flight spoilers. Four outboard and two inboard spoilers per side. Subscript denotes spoiler panel S₁ is the most outboard L.H. panel and S₁₂ is most outboard R.H. panel.

747 MODEL SCALE: 0.030 MODEL: 1065

DRAWING NO.: 65-71450, S. O. 1065-51, -59, -81, -173

DIMENSIONS: (one panel)	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Outboard S ₁₋₄ and S ₉₋₁₂ (Ft ²)	<u>21.48</u>	<u>0.0193</u>
Span (equivalent), in.	<u>6.25</u>	<u>0.1875</u>
Chord, in.	<u>3.44</u>	<u>0.1032</u>
Inboard S ₅₋₆ and S ₇₋₈ (Ft ²)	<u>35.31</u>	<u>0.0318</u>
Span (equivalent), in.	<u>7.50</u>	<u>0.225</u>
Chord, in.	<u>4.71</u>	<u>0.1413</u>

TABLE IIIa. (Continued)

MODEL COMPONENT: T₁₉
 GENERAL DESCRIPTION: Flap track fairings, 4 on each side
 MODEL SCALE: 0.03
 DRAWING NUMBER 5.0. 1007-403

<u>DIMENSIONS</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
WBL of Track No. 1, in.	235.3	7.06
WBL of Track No. 2, in.	353.	10.59
WBL of Track No. 3, in.	652.	17.56
WBL of Track No. 4, in.	743.6	22.31
Distance from wing trailing edge to track trailing edge, in.	50.	1.5
<u>LENGTH:</u>		
Track No. 1	276.66	8.30
Track No. 2	255.0	7.65
Track No. 3	206.66	6.20
Track No. 4	193.33	5.80
<u>MAX. WIDTH:</u>		
Track No. 1	30.0	.90
Track No. 2	30.0	.90
Track No. 3	28.33	.85
Track No. 4	28.33	.85
<u>DEPTH BELOW WING:</u>		
Track No. 1	37.33	1.12
Track No. 2	36.66	1.10
Track No. 3	28.33	.85
Track No. 4	28.33	.85

TABLE IIIa. - Continued.

MODEL COMPONENT: V_{9.1}

GENERAL DESCRIPTION: Swept Vertical Tail

Model Scale: 0.03

DRAWING NUMBER: 65-6.9716; 1007-26, -610; 937-319

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
TOTAL DATA		
Area (Theo)- Ft ²	<u>830</u>	<u>.7470</u>
Planform	<u> </u>	<u> </u>
Span (Theo) - In.	<u>386.5</u>	<u>11.595</u>
Aspect Ratio	<u> </u>	<u> </u>
Rate of Taper	<u> </u>	<u> </u>
Taper Ratio	<u> </u>	<u> </u>
Sweep-Back Angles, Degrees	<u> </u>	<u> </u>
Leading Edge	<u>50.12</u>	<u>50.12</u>
Trailing Edge	<u> </u>	<u> </u>
0.25 Element Line	<u> </u>	<u> </u>
Chords:	<u> </u>	<u> </u>
Root (Theo) WP-in.	<u>461.67</u>	<u>13.85</u>
Tip (Theo) WP-in.	<u>157</u>	<u>4.71</u>
MAC	<u> </u>	<u> </u>
Fus. Sta. of .25 MAC	<u>2529.6</u>	<u>75.888</u>
W. P. of .25 MAC	<u> </u>	<u> </u>
B.L. of .25 MAC	<u> </u>	<u> </u>
Airfoil Section	<u> </u>	<u> </u>
Leading Wedge Angle-Deg.	<u> </u>	<u> </u>
Trailing Wedge Angle-Deg.	<u> </u>	<u> </u>
Leading Edge Radius	<u> </u>	<u> </u>
Void Area	<u> </u>	<u> </u>
Blanketed Area	<u> </u>	<u> </u>

TABLE IIIa. - Concluded.

MODEL COMPONENT: WING - W_{44.1}

GENERAL DESCRIPTION: Swept 747 Wing

MODEL SCALE: 0.03

DWG. NO.: 65-89585

<u>DIMENSIONS:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
TOTAL		
Area (Theo.) Ft ²	5500	4.95
Planform	2348	70.44
Span (Theo. In.)	6.96	6.96
Aspect Ratio		
Rate of Taper		
Taper Ratio	7	7
Dihedral Angle, degrees		
Incidence Angle, degrees		
Aerodynamic Twist, degrees		
Swept Back Angles, degrees		
Leading Edge		
Trailing Edge		
0.25 Element Line		
Chords:		
Root (Theo) B.P.O.O.		
Tip, (Theo) B.P.		
MAC	327.8	9.834
Fus. Sta. of .25 MAC	1339.91	40.197
W. P. of .25 MAC	190.75	5.7225
B. L. of .25 MAC		

TABLE III. MODEL DIMENSIONAL DATA
b. Orbiter

MODEL COMPONENT : BODY - B24

GENERAL DESCRIPTION : Configuration 140A 'B orbiter fuselage

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

MODEL SCALE: 0.030

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

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (CML: Fwd Sta. $X_0=235$) In.	<u>1293.3</u>	<u>38.799</u>
Length (IML: Fwd Sta. $X_0=238$) In.	<u>1290.3</u>	<u>38.709</u>
Max Width ($\odot X_0 = 1528.3$) In.	<u>264.00</u>	<u>7.920</u>
Max Depth ($\odot X_0 = 1464$) In.	<u>250.00</u>	<u>7.500</u>
Fineness Ratio	<u>0.264</u>	<u>0.264</u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>340.88</u>	<u>0.3068</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

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TABLE IIIb. (Continued)

MODEL COMPONENT : CANOPY - C₉

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

MODEL SCALE: 0.030 MODEL DWG: SS-A00147, Release 12

DRAWING NUMBER : VL70-000143A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length ($X_0 = 434.643$ to 578), In.	<u>143.357</u>	<u>4.301</u>
Max Width (@ $X_0 = 513.127$), In.	<u>152.412</u>	<u>4.572</u>
Max Depth (@ $X_0 = 485.0$), In.	<u>25.00</u>	<u>0.750</u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE IIIb. (Continued)

MODEL COMPONENT: SLOTTED ELEVON (6 -INCH GAP) - E₁₃

GENERAL DESCRIPTION: Configuration 140A 'B Orbiter elevon.

NOTE: E₁₃ is a slotted version of E₂₆. Data are for one side.

MODEL SCALE: 0.030

DRAWING NUMBER: VL70-000200 -006089, -006092

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>210.0</u>	<u>0.189</u>
Span (equivalent) . In.	<u>349.2</u>	<u>10.476</u>
Inb'd equivalent chord . In.	<u>118.004</u>	<u>3.540</u>
Outb'd equivalent chord . In.	<u>55.192</u>	<u>1.656</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>- 10.056</u>	<u>- 10.056</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
(Product of area and \bar{c})		
Area Moment (Mean Aerodynamic Chord) . Ft ³	<u>1587.25</u>	<u>0.043</u>
Mean Aerodynamic Chord, In.	<u>90.7</u>	<u>2.721</u>

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TABLE IIIb. (Concluded)

MODEL COMPONENT : BODY FLAP - F_B

GENERAL DESCRIPTION : Configuration 140A/B orbiter body flap

Hingeline located at X₀ = 1528.3. Z₀ = 284.3

MODEL SCALE: 0.030 MODEL DWG: SS-A00147, Release 12

DRAWING NUMBER: VL70-000140A, -000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X ₀ =1520 to X ₀ =1613) In.	<u>93.00</u>	<u>2.79</u>
Max Width (In.)	<u>262.0</u>	<u>7.86</u>
Max Depth (@ X ₀ = 1520) In.	<u>23.00</u>	<u>0.69</u>
Fineness Ratio	<u> </u>	<u> </u>
Area - Ft. ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u>150.525</u>	<u>0.135</u>
Wetted	<u> </u>	<u> </u>
Base	<u>41.847</u>	<u>0.038</u>

TABLE IIIb. (Continued)

MODEL COMPONENT : OMS POD - M16

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

MODEL SCALE: 0.030

DRAWING NUMBER : VL70-008401, -008410

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta. $X_0 = 1310.5$). In.	<u>258.50</u>	<u>7.755</u>
Max Width (@ $X_0 = 1511$). In.	<u>136.8</u>	<u>4.104</u>
Max Depth (@ $X = 1511$). In.	<u>74.70</u>	<u>2.241</u>
Fineness Ratio	<u>2.484</u>	<u>2.484</u>
Area - Ft ²		
Max. Cross-Sectional	<u>58.864</u>	<u>0.053</u>
Planform		
Wetted		
Base		

TABLE IIIb. (Continued)

MODEL COMPONENT: MP3 NOZZLES - N₂₄

GENERAL DESCRIPTION: Configuration 140A/B Orbiter MPS Nozzles

MODEL SCALE: 0.030

MODEL DWG: SS-A00147. Release 12

DRAWING NUMBER: VI.70-005030A, -000140A

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length - In.		
Gimbal Point to Exit Plane	<u>157.0</u>	<u>4.71</u>
Throat to Exit Plane	<u>99.2</u>	<u>2.976</u>
Diameter - In.		
Exit	<u>91.000</u>	<u>2.73</u>
Throat	<u> </u>	<u> </u>
Inlet	<u> </u>	<u> </u>
Area - ft ²		
Exit	<u>45.166</u>	<u>0.0407</u>
Throat	<u> </u>	<u> </u>
Gimbal Point (Station) - In.		
Upper Nozzle		
X	<u>1445.00</u>	<u>43.35</u>
Y	<u>0.0</u>	<u>0.0</u>
Z	<u>443.00</u>	<u>13.29</u>
Lower Nozzles		
X	<u>1468.170</u>	<u>44.045</u>
Y	<u>+ 53.000 +</u>	<u>1.59</u>
Z	<u>342.640</u>	<u>10.279</u>
Null Position - Deg.		
Upper Nozzle		
Pitch	<u>16</u>	<u>16</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch	<u>10</u>	<u>10</u>
Yaw	<u>3.5</u>	<u>3.5</u>

TABLE IIIb. (Continued)

MODEL COMPONENT: OMS NOZZLES - N28

GENERAL DESCRIPTION: Configuration 1A0A 'B' Orbiter OMS Nozzles

MODEL SCALE: 0.030

DRAWING NUMBER: VL70-0001A0A (Location), SS-400106, Release 5 (Contour)

DIMENSIONS: FULL SCALE MODEL SCALE

MACH NO.

Length - In.

Gimbal Point to Exit Plane

Throat to Exit Plane

Diameter - In.

Exit

Throat

Inlet

Area - ft²

Max. Cross-Sectional (1 nozzle)

Throat

Gimbal Point (Station) - In.

Left

Nozzle

X₀

Y₀

Z₀

1518.0

-88.0

492.0

45.54

- 2.64

14.76

Right

Nozzles

X₀

Y₀

Z₀

1518.0

88.0

492.0

45.54

2.64

14.76

Null Position - Deg.

Left

Nozzle

Pitch

Yaw

15°49'

12°17'

15°49'

12°17'

Right

Nozzle

Pitch

Yaw

15°49'

12°17'

15°49'

12°17'

TABLE IIIb. (Continued)

MODEL COMPONENT: RUDDER - R₅

GENERAL DESCRIPTION: Configuration 140C orbiter rudder (identical to
Configuration 140A '3 rudder)

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000146B. -000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>100.15</u>	<u>0.090</u>
Span (equivalent). In.	<u>201.00</u>	<u>6.030</u>
Inb'd equivalent chord. In.	<u>91.585</u>	<u>2.748</u>
Outb'd equivalent chord, In.	<u>50.833</u>	<u>1.525</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.83</u>	<u>34.83</u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
(Product of larea & \bar{r})		
Area Moment () Ft. ³	<u>610.92</u>	<u>0.165</u>
Mean Aerodynamic Chord, In.	<u>73.2</u>	<u>2.196</u>

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TABLE IIIb. (Continued)

MODEL COMPONENT: TAIL CONE - TC₁

GENERAL DESCRIPTION: Fairing mounted on orbiter fuselage base

MODEL SCALE: 0.030

DRAWING NUMBER: Boeing Drawing 1319

REF: R.I. Dwg. BCDV7C-830

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length - in.	435.0	13.05
Max Width - in.	303.33	9.10
Max Height - in.	265.00	7.95
Finesness Ratio		
Area - FT ²		
Projected Frontal Area		
Max Cross-Sectional	468.0	.4212
Planform		
Wetted		
Base		

TABLE IIIb. (Continued)

MODEL COMPONENT: VERTICAL - V_g

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

MODEL SCALE: 0.070

DRAWING NUMBER: VI70-000140C -000144B

DIMENSIONS:

FULL SCALE

MODEL SCALE

TOTAL DATA

Area (Theo) - Ft ²		
Planform	<u>413.243</u>	<u>0.372</u>
Span (Theo) - In.	<u>315.72</u>	<u>9.472</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep-Back Angles, Degrees.		
Leading Edge	<u>45.00</u>	<u>45.00</u>
Trailing Edge	<u>26.25</u>	<u>26.25</u>
0.25 Element Line	<u>41.13</u>	<u>41.13</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>8.055</u>
Tip (Theo) WP	<u>108.47</u>	<u>3.254</u>
MAC	<u>199.81</u>	<u>5.994</u>
Fus. Sta. of .25 MAC	<u>1463.35</u>	<u>43.901</u>
W.P. of .25 MAC	<u>635.52</u>	<u>19.076</u>
B.L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle - Deg.	<u>10.00</u>	<u>10.00</u>
Trailing Wedge Angle - Deg.	<u>14.92</u>	<u>14.92</u>
Leading Edge Radius	<u>2.00</u>	<u>0.000</u>
Void Area	<u>13.17</u>	<u>0.0019</u>
Blanketed Area	<u>0.0</u>	<u>0.0</u>

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TABLE IIIb. (Concluded)

MODEL COMPONENT: WING-W 116

GENERAL DESCRIPTION: Configuration 4

NOTE: Identical to W114, except airfoil thickness. Dihedral angle is along trailing edge of wing.

MODEL SCALE: 0.030

TEST NO.

DWG. NO. VL70-000140A, -000200

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo.) Ft²

Planform

Span (Theo) In.

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Sweep Back Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Theo) B.P.O.O.

Tip, (Theo) B.P.

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

EXPOSED DATA

Area (Theo) Ft²

Span, (Theo) In. BP108

Aspect Ratio

Taper Ratio

Chords

Root BP108

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

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section (Rockwell Mod NASA)
XXXX-64

Root $\frac{b}{2} =$

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

Data for (1) of (2) Sides

Leading Edge Cuff

Planform Area Ft²

Leading Edge Intersects Fus M. L. @ Sta

Leading Edge Intersects Wing @ Sta

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2690.00

2.421

936.68

28.10

2.265

2.265

1.177

1.177

0.200

0.200

3.500

3.500

0.500

0.500

3.000

3.000

45.000

45.000

- 10.056

- 10.056

35.209

35.209

689.24

20.477

137.85

4.136

474.81

14.244

1136.83

34.105

290.58

8.717

182.13

5.464

1751.50

1.576

720.68

21.620

2.059

2.059

0.245

0.245

562.09

16.863

137.85

4.136

392.83

11.785

1185.98

35.579

294.30

8.829

251.77

7.553

0.113

0.113

0.120

0.120

113.18

0.102

500.00

15.00

1024.00

30.72

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

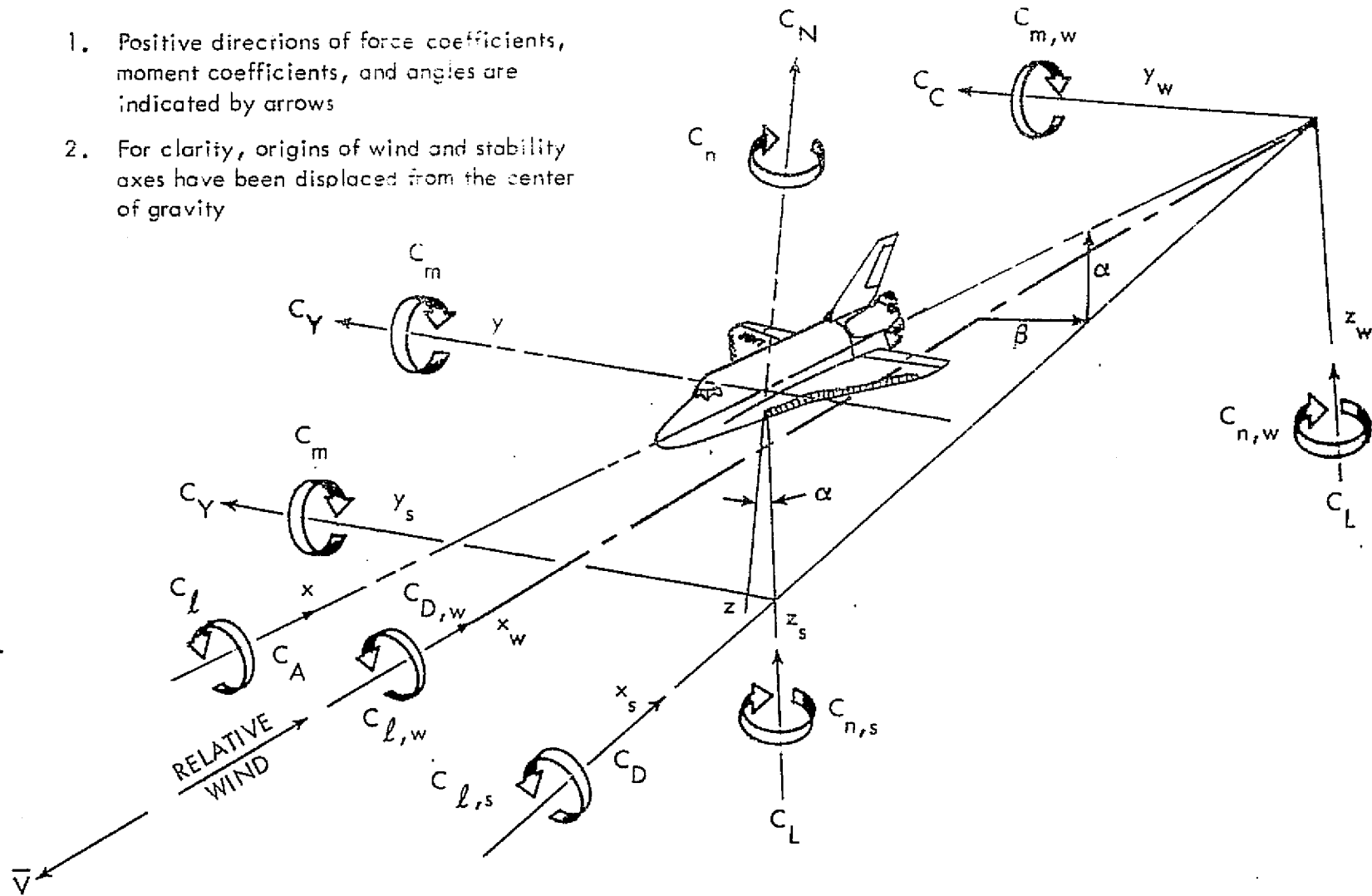
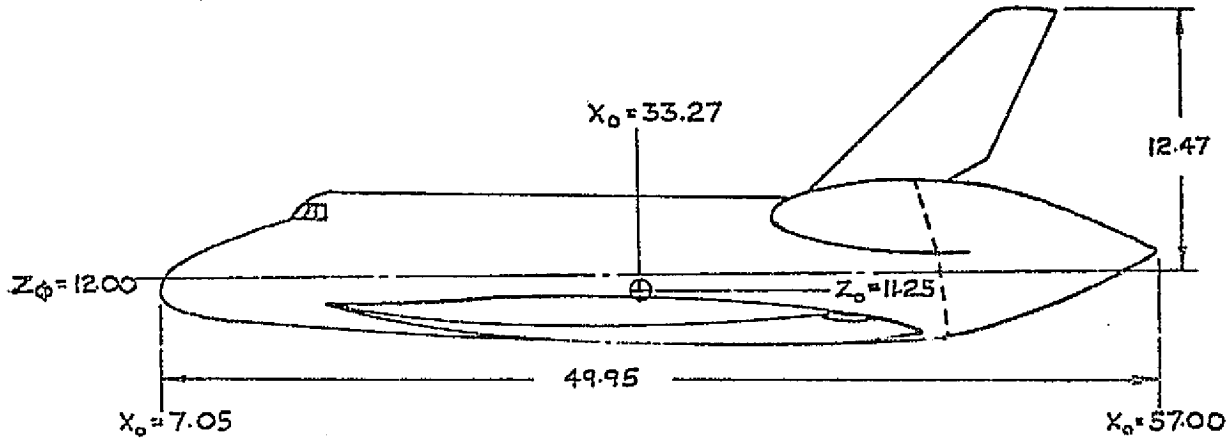
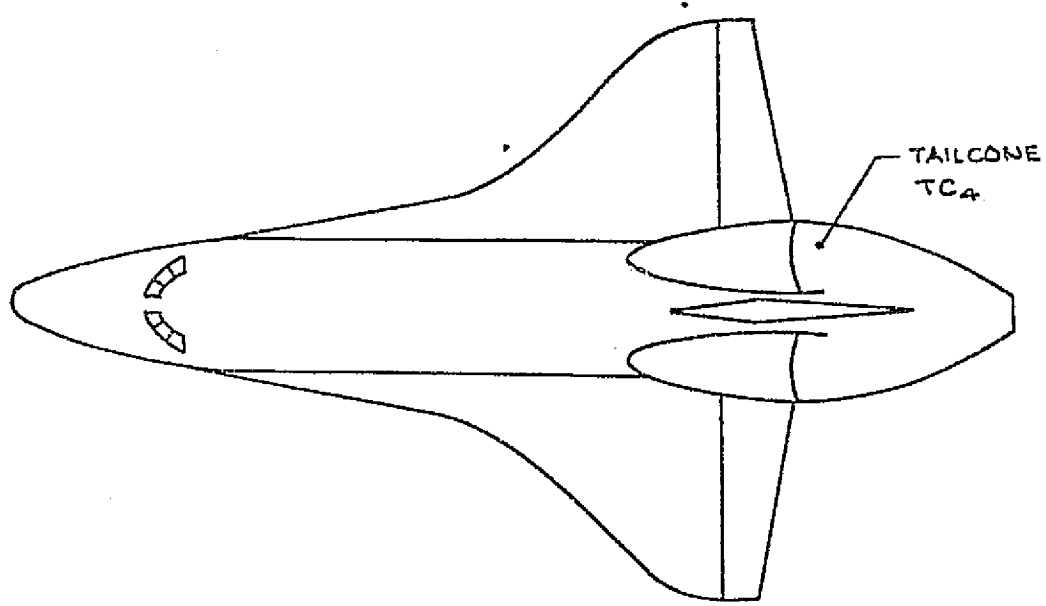
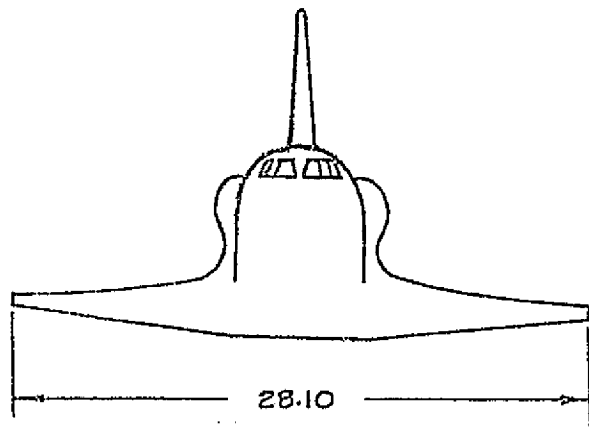


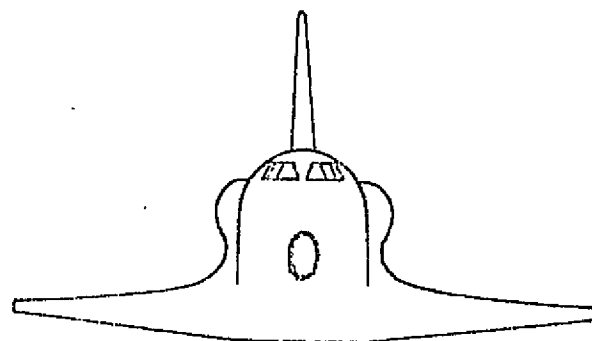
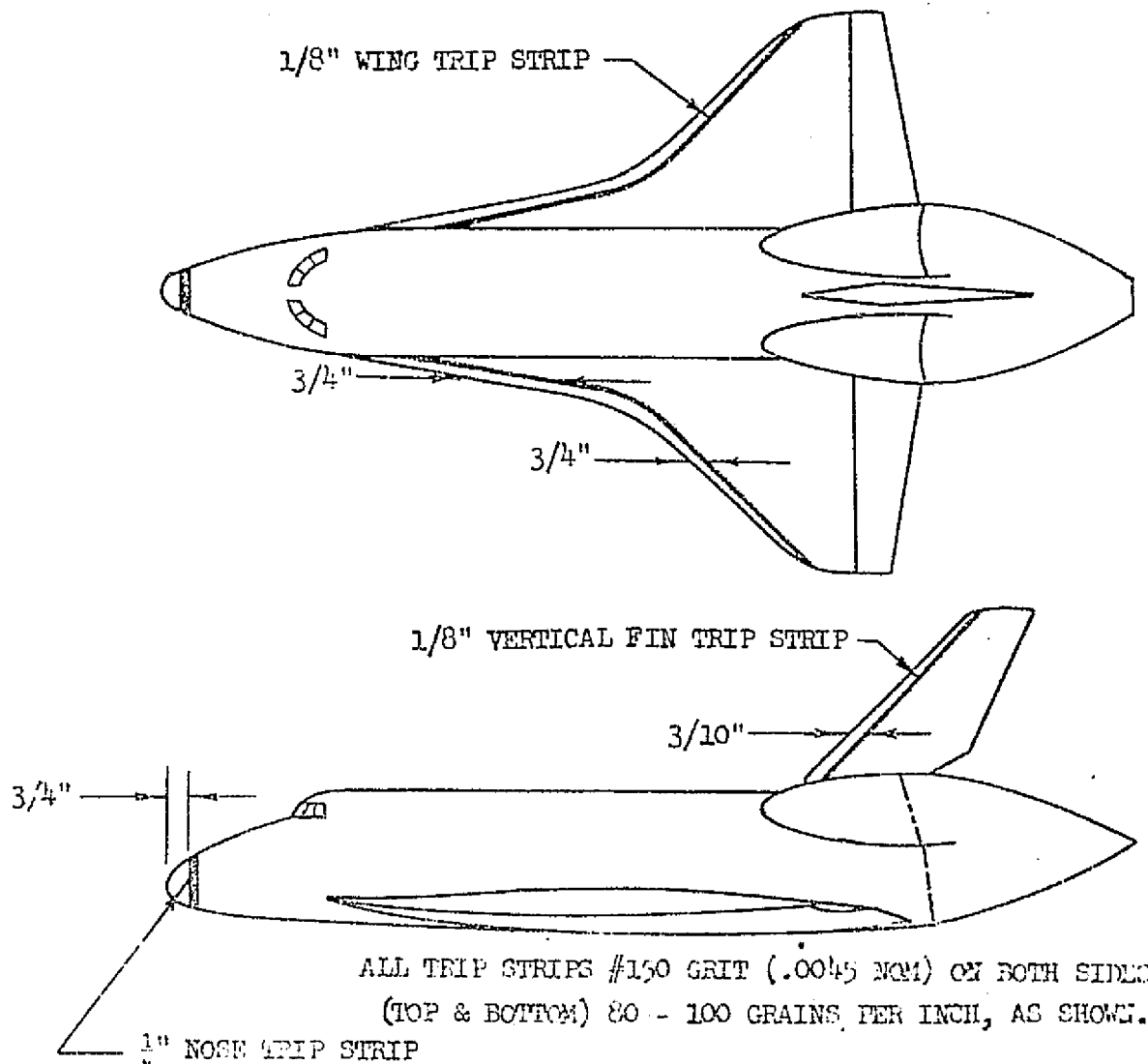
Figure 1. Axis Systems



All Dimensions
in Inches

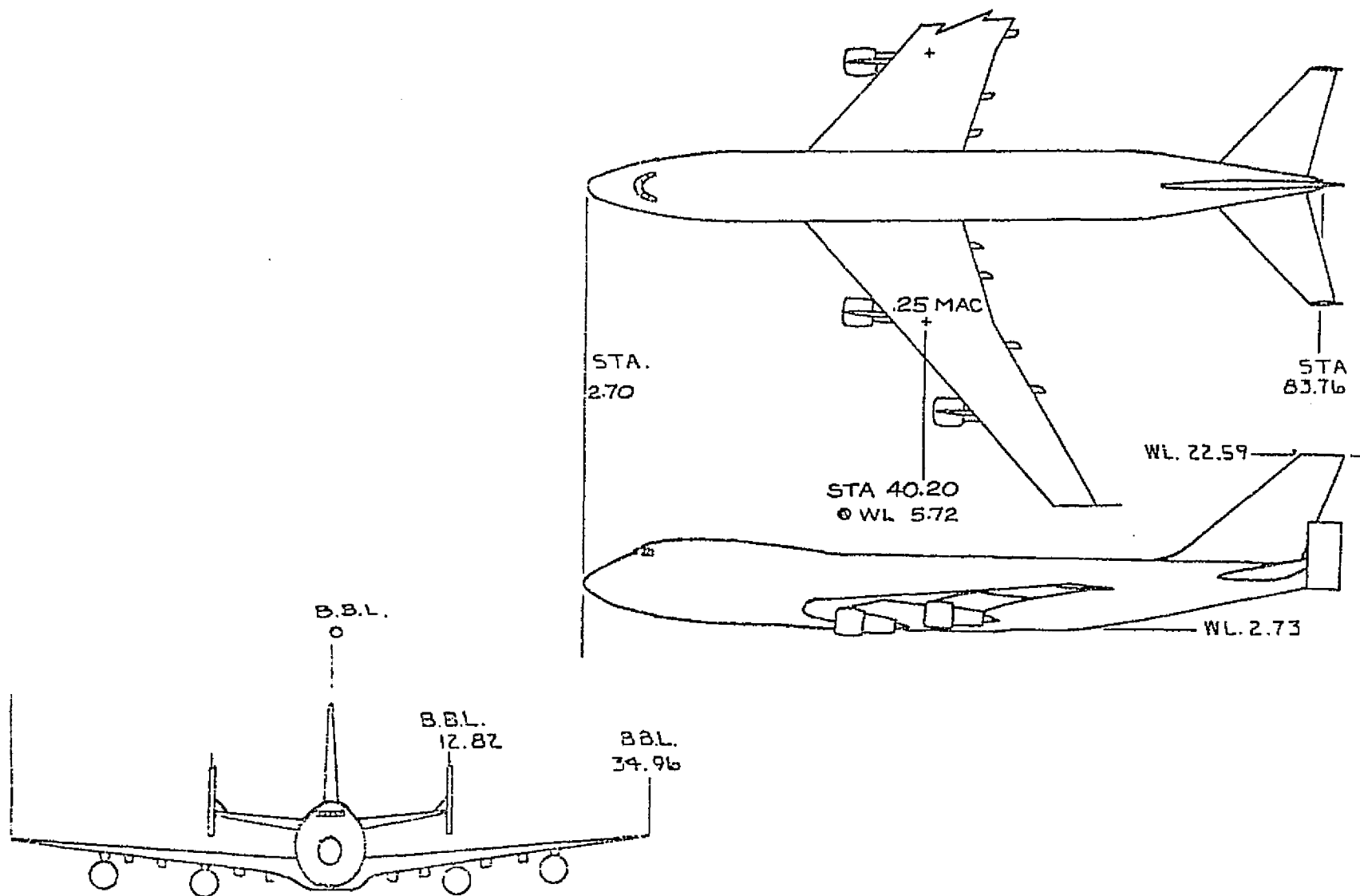


a. Orbiter Configuration Model 45-0
Figure 2. Model Sketches



b. Orbiter Trip Strip Definition
Figure 2. Continued

70



c. 747-100 Configuration Model #AX13191-4
Figure 2. Continued

747 Carrier Boundary Layer Trips

WING

Wing upper and lower surface: 10% local chord, 120 grit 80 to 100 grains/inch, 0.1 inch wide.

EMPENNAGE (All surfaces, top and bottom)

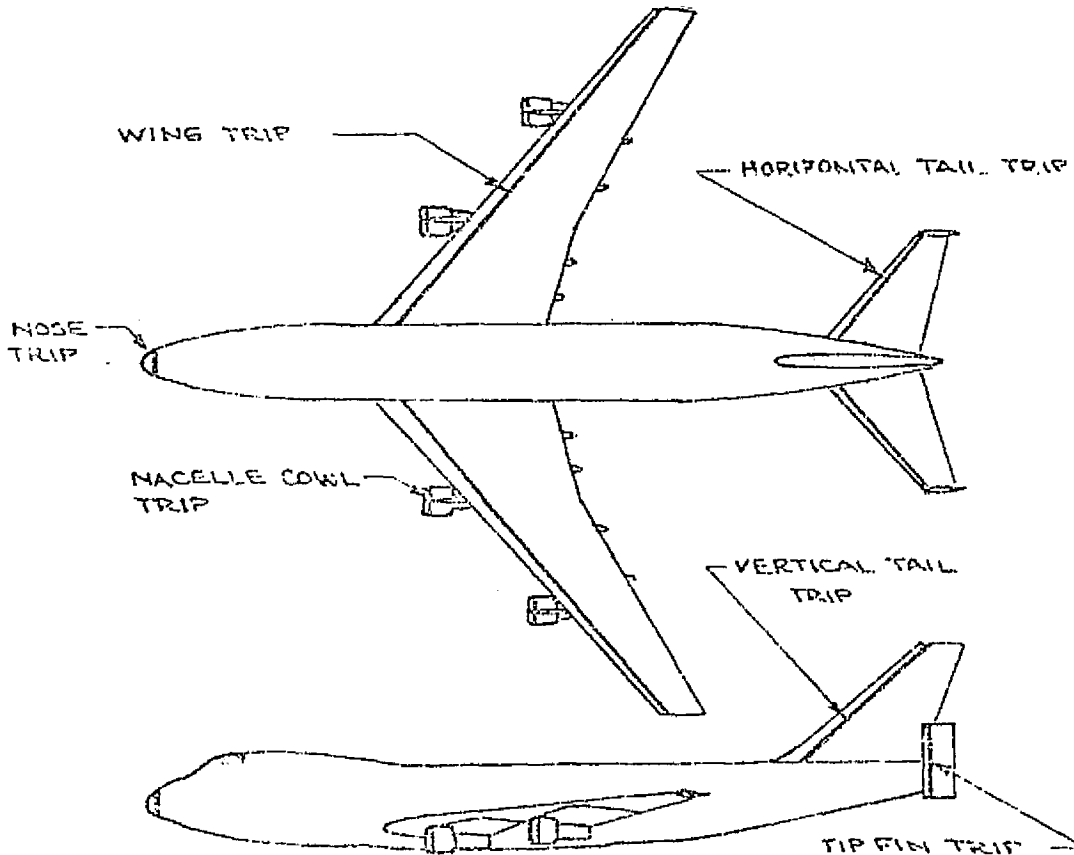
10% local chord 0.1 inch wide, 120 grit, 80 to 100 grains/inch.

BODY NOSE

0.75 inch back from L.E. 100 grit 0.1 inch wide, 80-100 grains/inch.

NACELLE

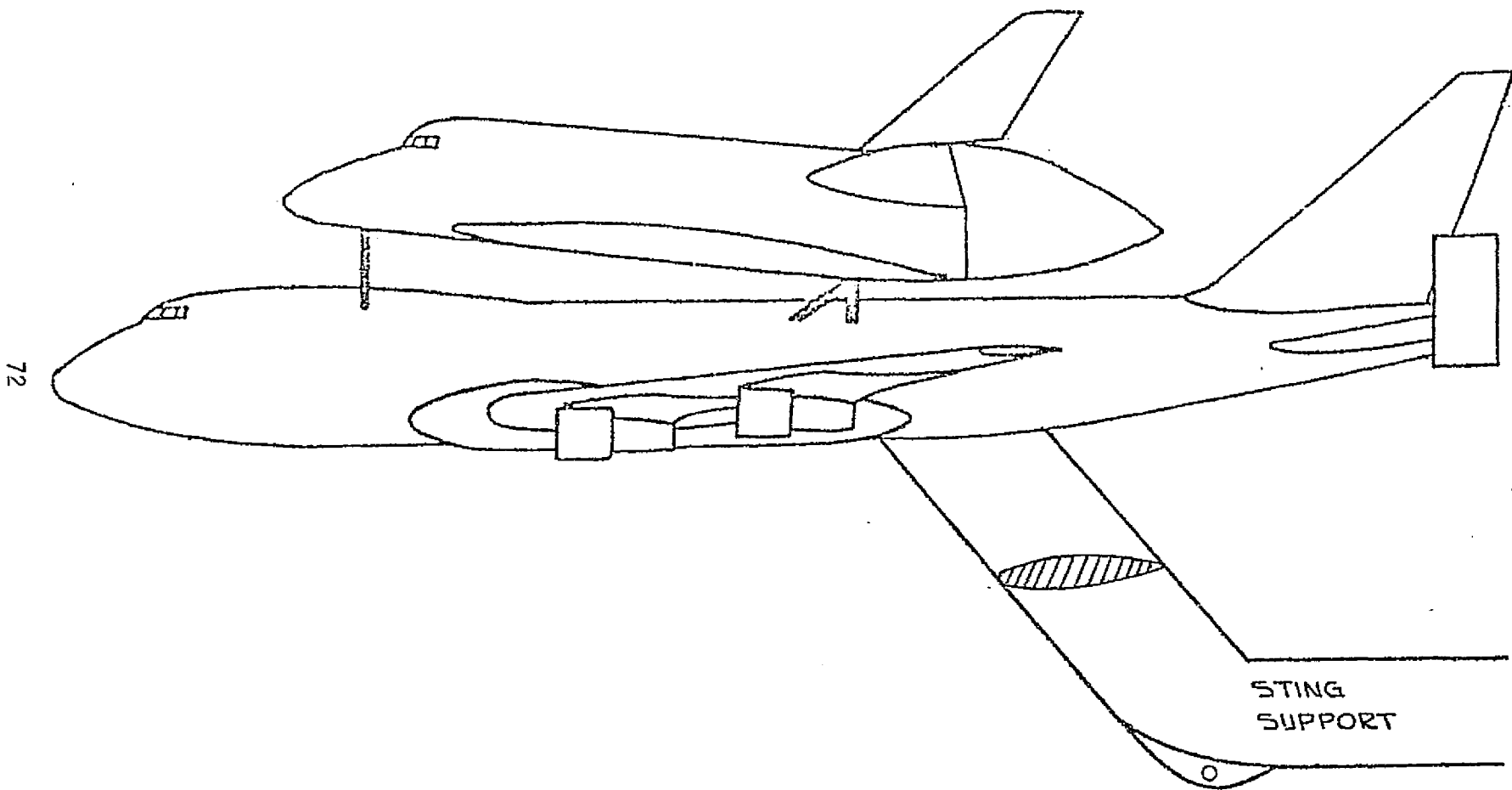
Fan cowl .4 inch from L.E. (inside and outside), 100 grit, 80-100 grains/inch, 0.10 inch wide. Primary, at the fan cowl exit plane, (outside surface only), 100 grit, 80-100 grains/inch, .10 inch wide.



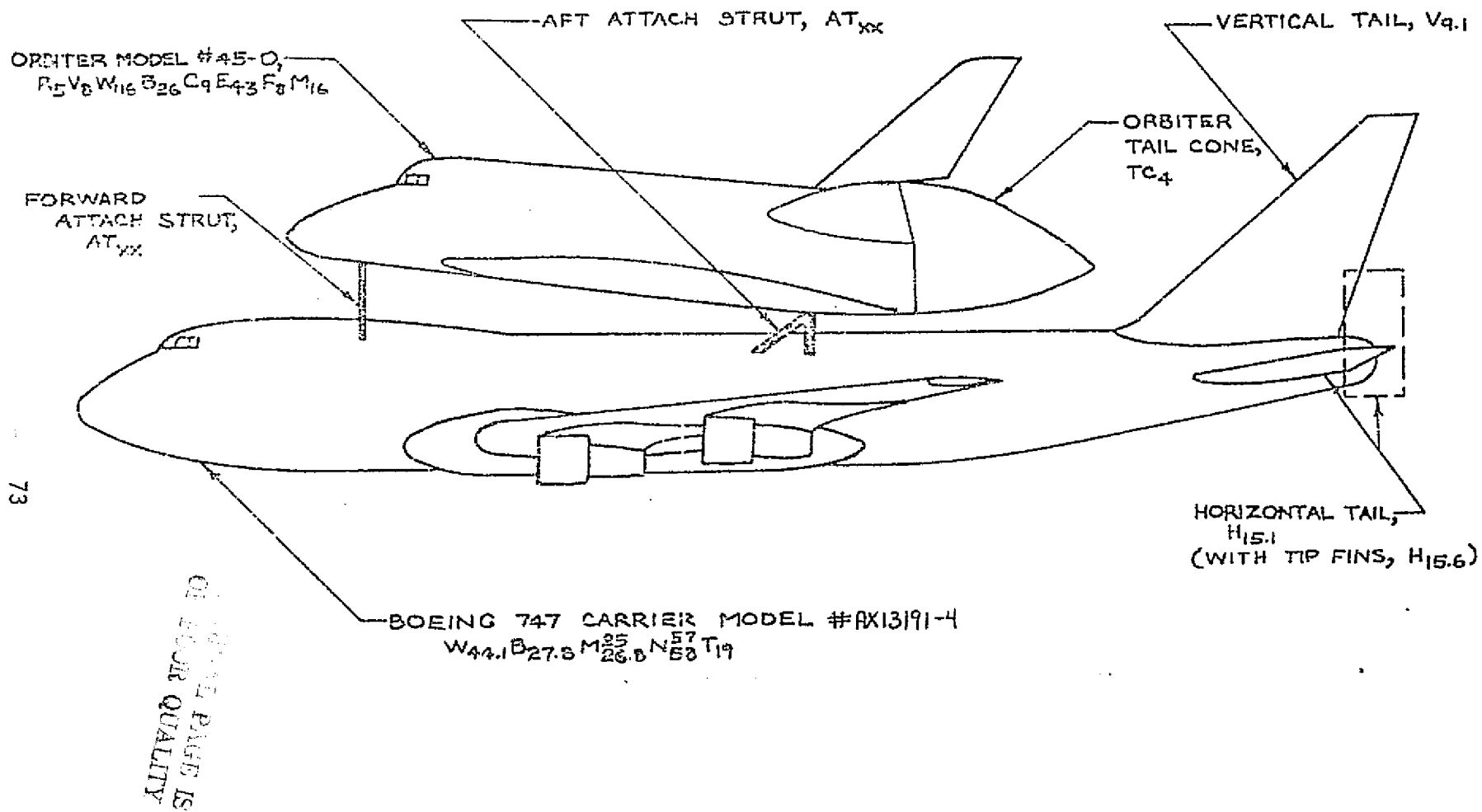
d. Trip Strip Definition AX13191-4

Figure 2. Continued

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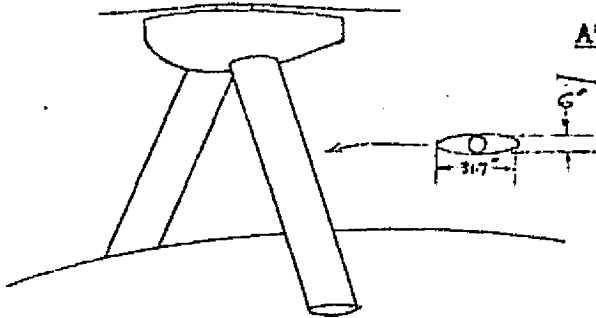


e. Orbiter/Carrier Model
Figure 2. Continued

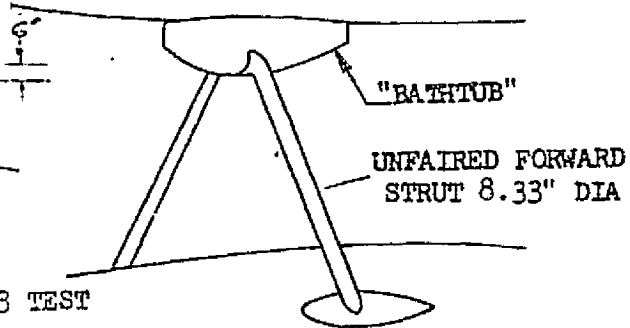


f. Orbiter/Carrier Model Nomenclature
Figure 2. Continued

AT 93.1 MEDIUM CHORD FWD FAIRING



AT 103 UNFAIRED FWD STRUT



NOTE: AT 93 WAS SIMILAR CONFIG ON CA23 TEST

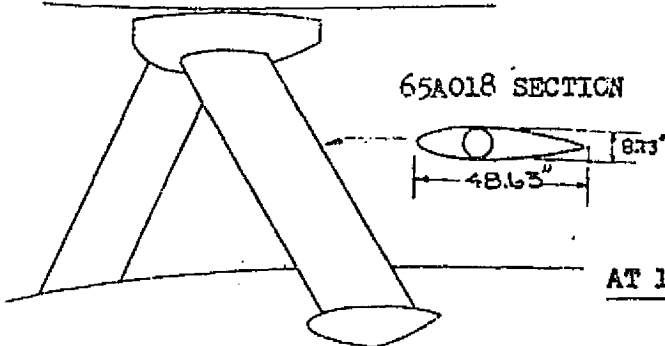
MODIFICATIONS

AT 103.1 UPPER END FAIRING REMOVED

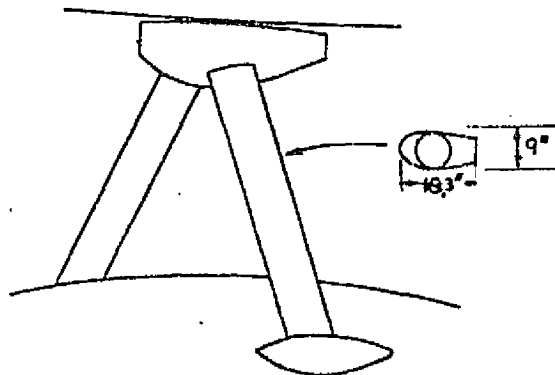
AT 103.2 TUBE SUPPORTS FLAT SIDED
4.67" WIDE

AT 103.3 ORBITER OFF, UPPER END FAIRING
OFF, SPACER NORMALLY INSIDE
ORBITER REMOVED

AT 108 LONG CHORD FWD FAIRING

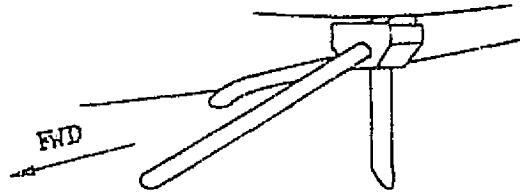


AT 112 SHORT TRUNCATED FWD FAIRING



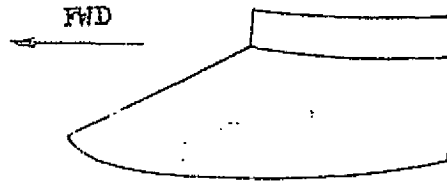
g. Forward Support Configurations
Figure 2. Continued

AT 105 UNFAIRED AFT SUPPORT STRUTS



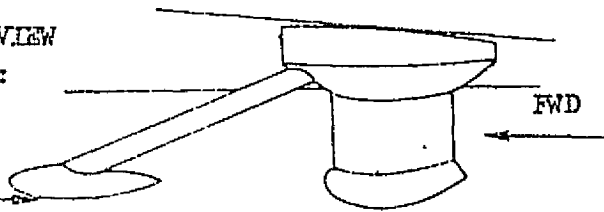
FRONT QUARTER VIEW

AT 110 FULLY PAIRED AFT SUPPORT



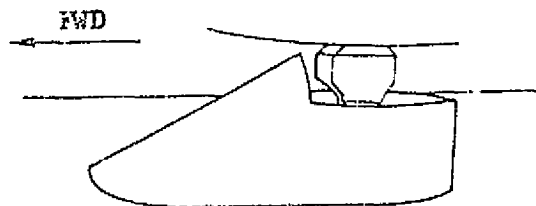
AT 111 MINIMUM AFT FAIRING

REAR QUARTER VIEW
MODIFICATIONS:
AT 111.1
LOWER FORWARD
STRUT REMOVED



SIDE VIEW

AT 95 (CONFIG. PREVIOUSLY TESTED IN CA23 AS 95.11, 12)

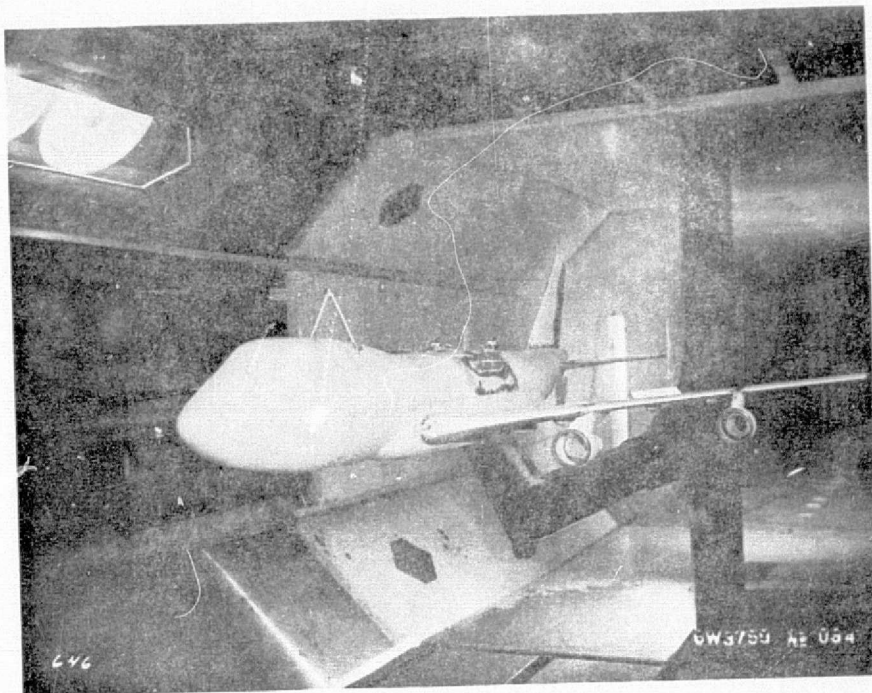


SIDE STRUTS ARE SAME AS AT 111.1

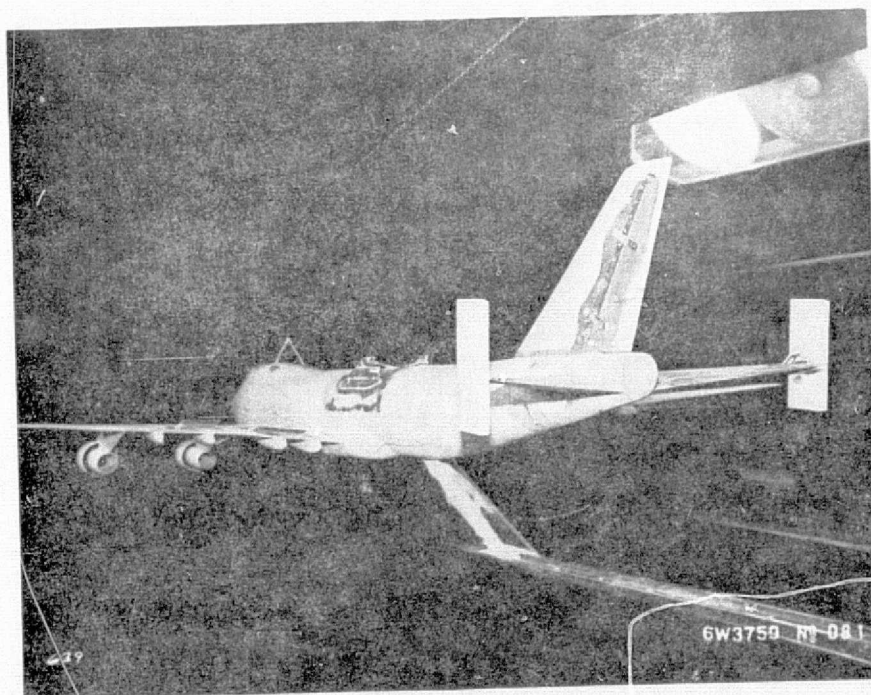
h. Aft Support Configurations

Figure 2. Concluded

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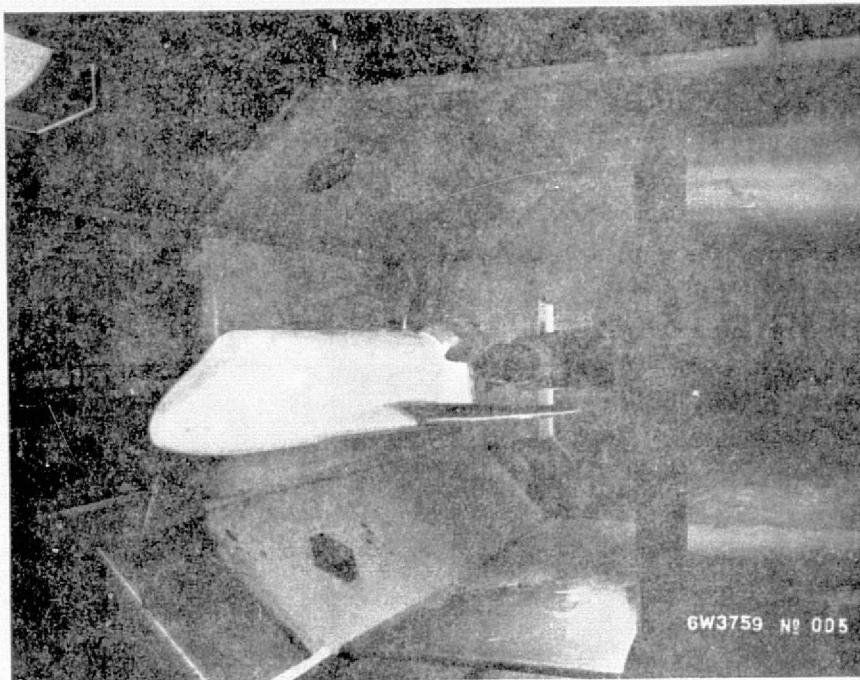
a. 747 CAM Alone Front View



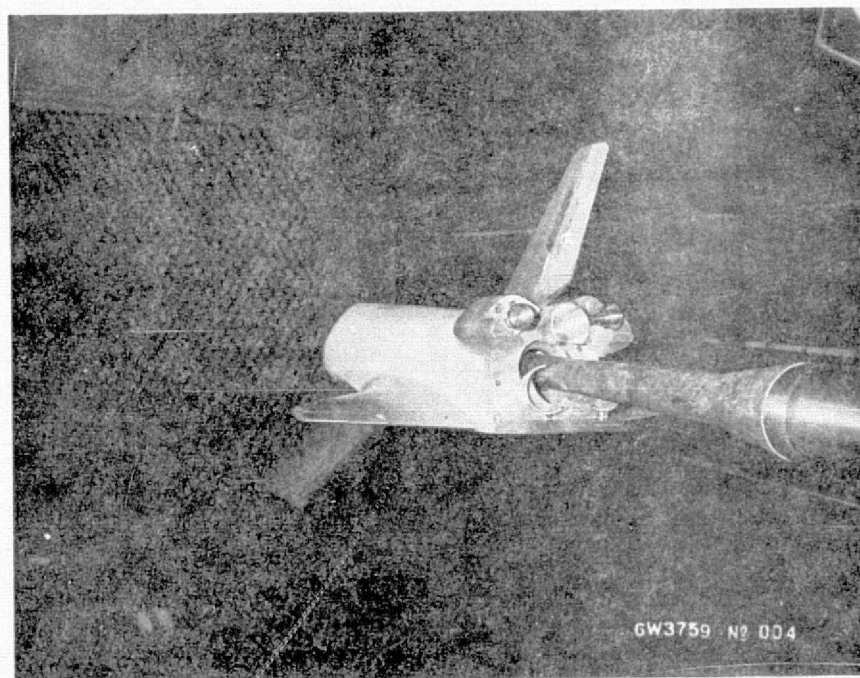
b. 747 CAM Alone Aft View

Figure 3. Model Photographs

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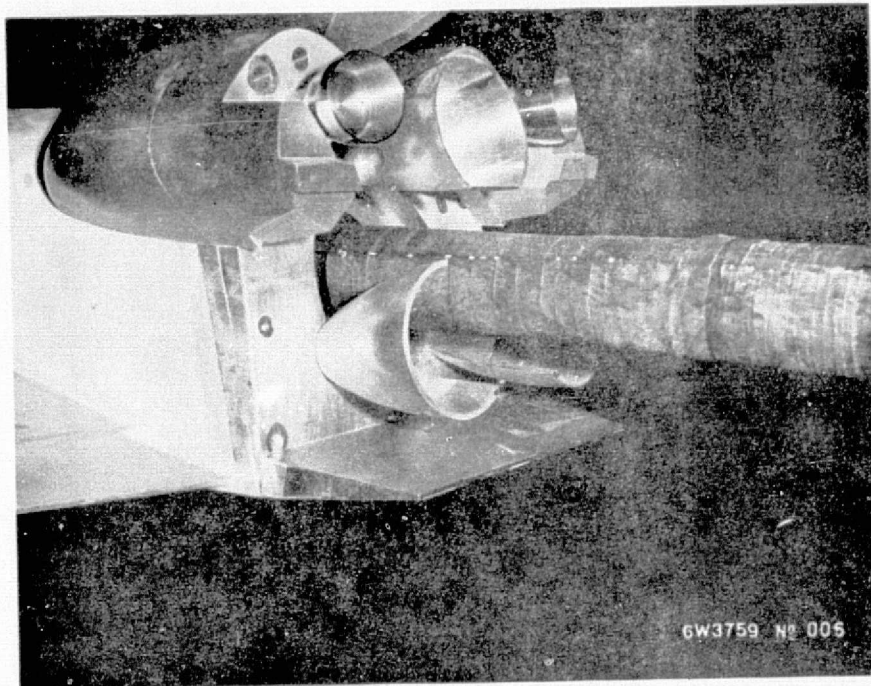
c. Orbiter Alone Front View



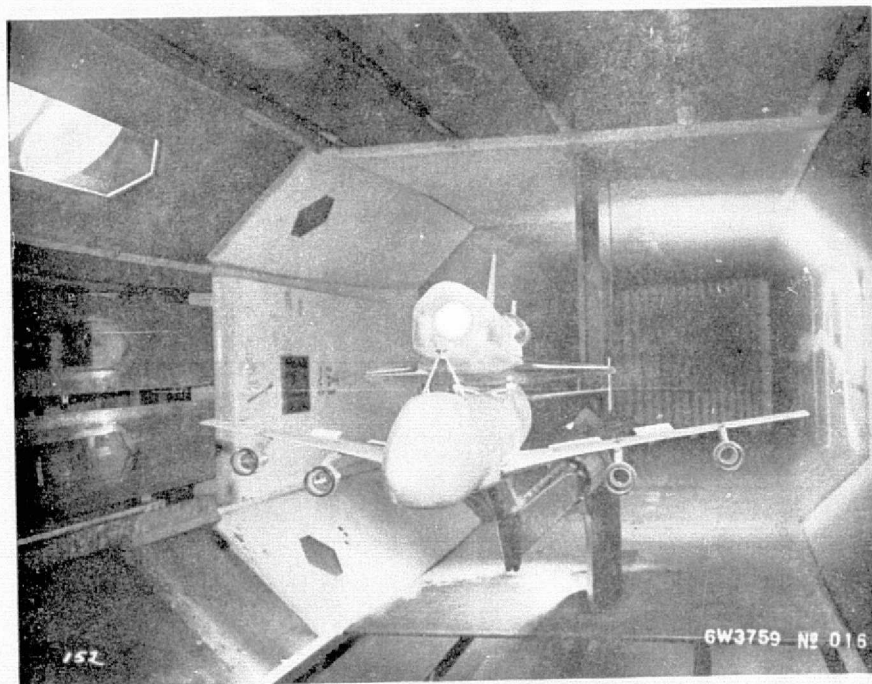
d. Orbiter Alone Aft View

Figure 3. Continued.

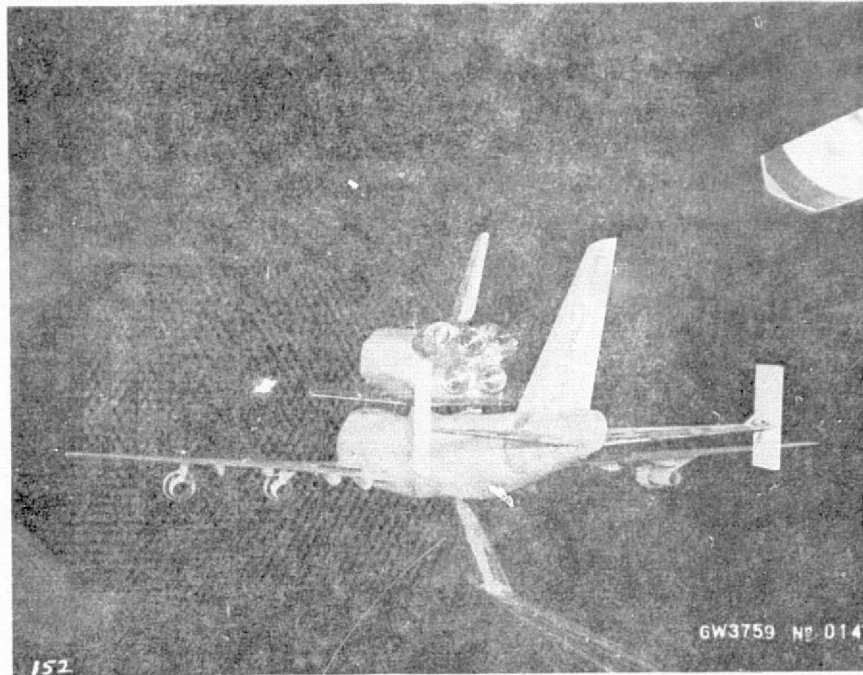
ORIGINAL PAGE IS
OF POOR QUALITY



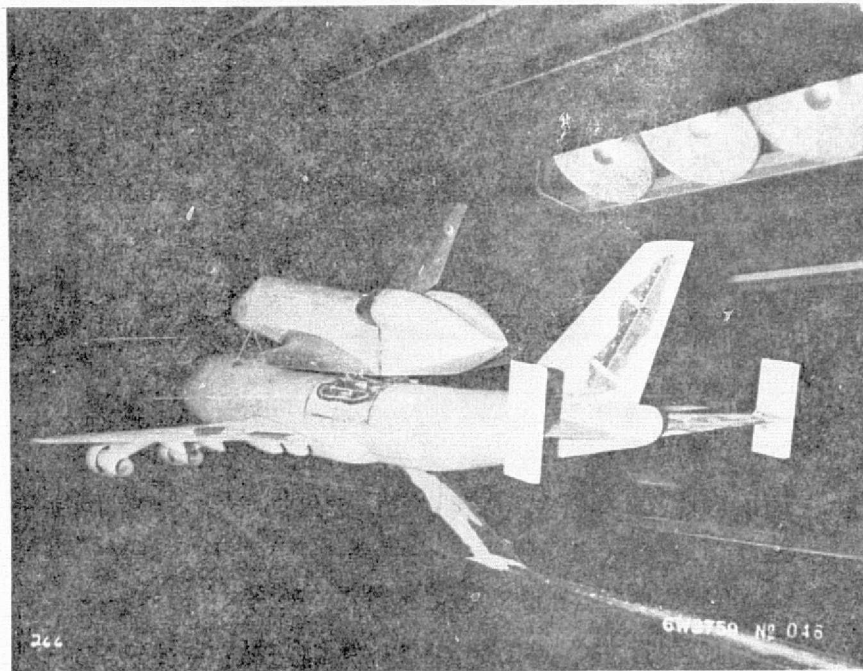
e. Orbiter Base Details



f. Mated Configuration Front View
Figure 3. Continued.



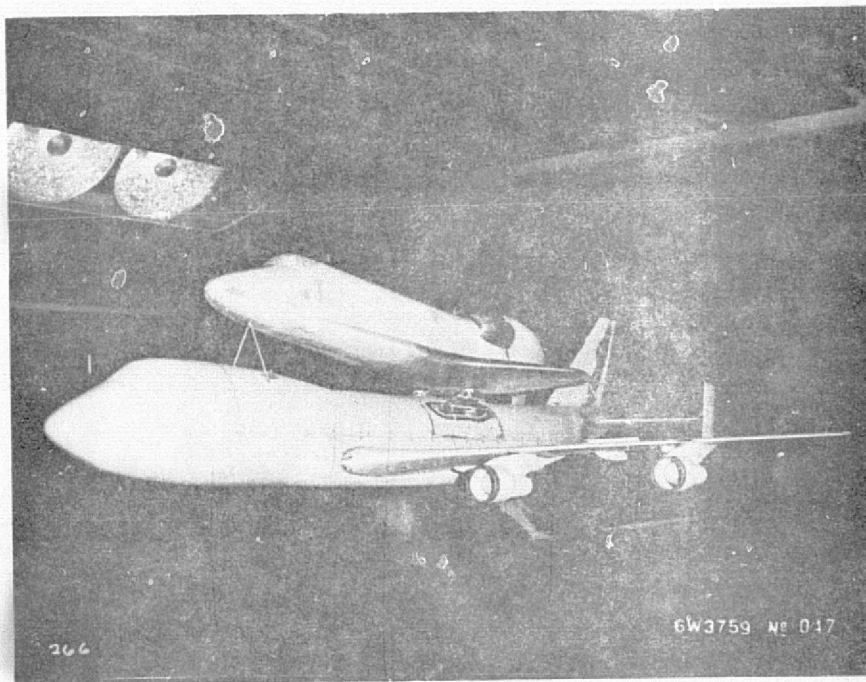
g. Mated Configuration Aft View



h. Mated Configuration (Tail Cone On) Aft View

Figure 3. Continued.

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OF POOR QUALITY



i. Mated Configuration (Tail Cone On) Front View

Figure 3. Concluded.

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OF POOR QUALITY

DATA FIGURES

CA6

ORBF8N24/28 (AGP001)

SYMBOL
 ○
 □
 ◇
 △

MACH	PARAMETRIC VALUES			
.301	BETA	.000	ELEVON	.000
.501	RUDDER	.000	BDFLAP	.000
.600	PHI	.000	WNGHGT	48.000
.700				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

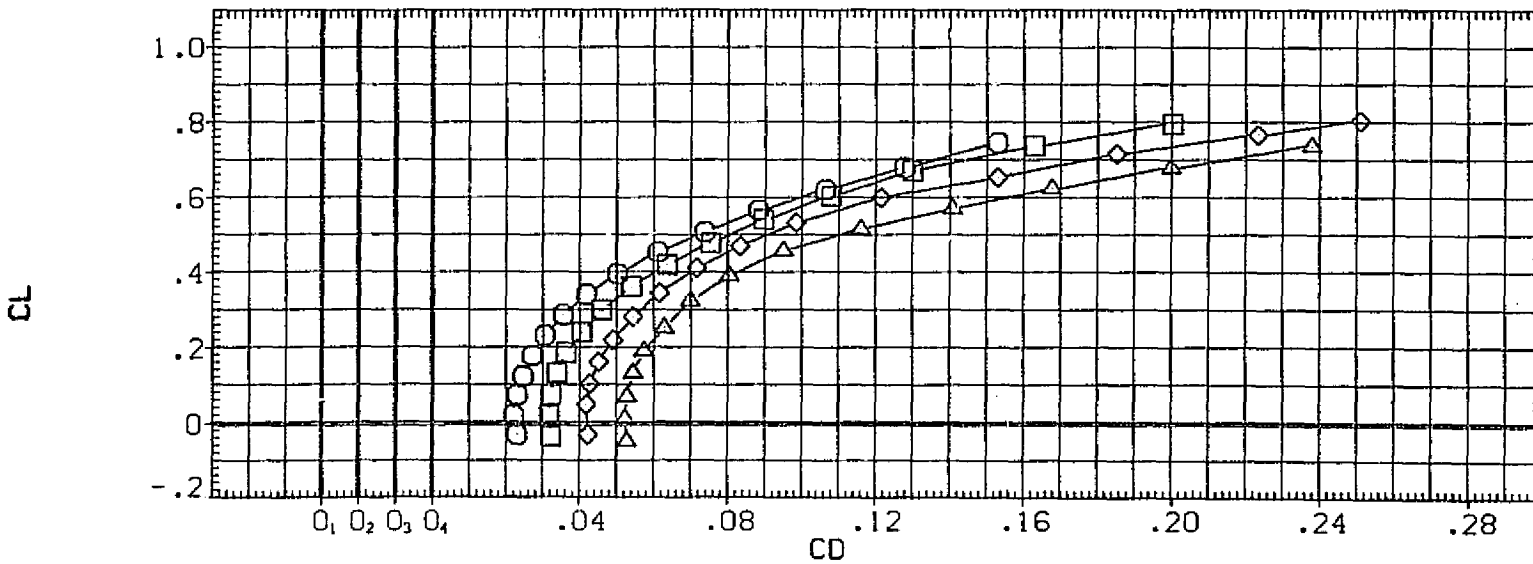
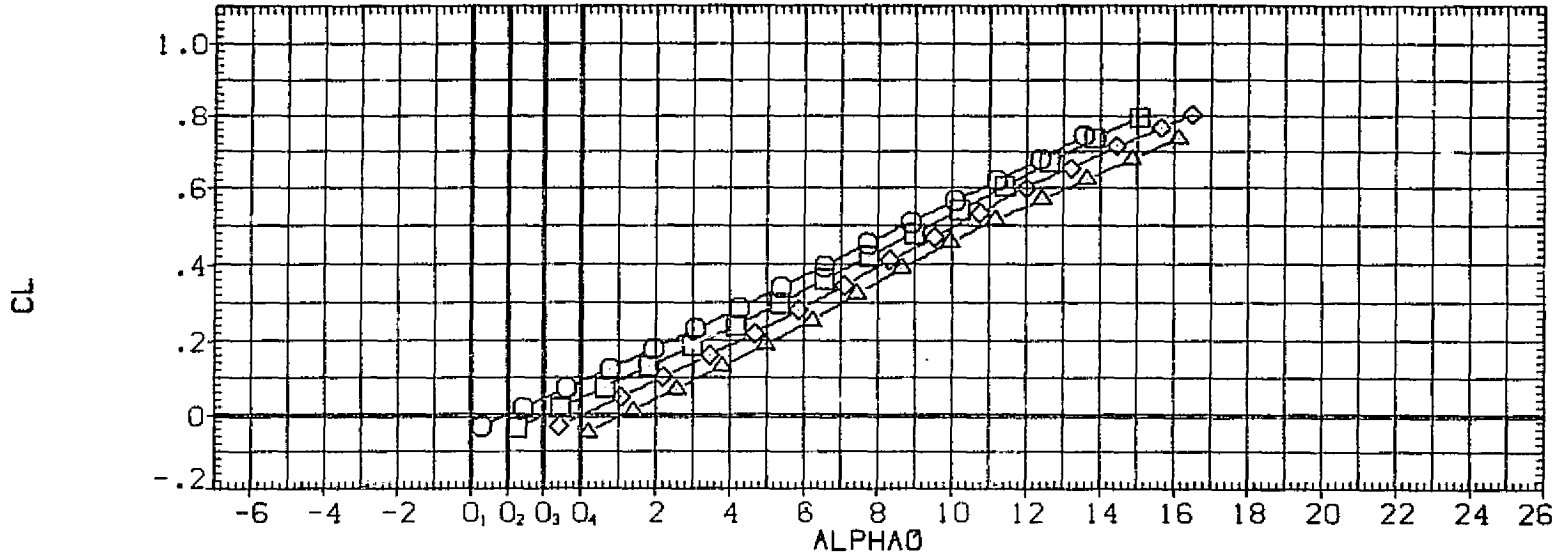


FIG. 4 ORBITER ALONE CHARACTERISTICS, ELEVON 0

SYMBOL	MACH	PARAMETRIC VALUES			
○	.301	BETA	.000	ELEVON	.000
□	.501	RUDDER	.000	BDCLAP	.000
◇	.600	PHI	.000	WNGHGT	48.000
△	.700				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

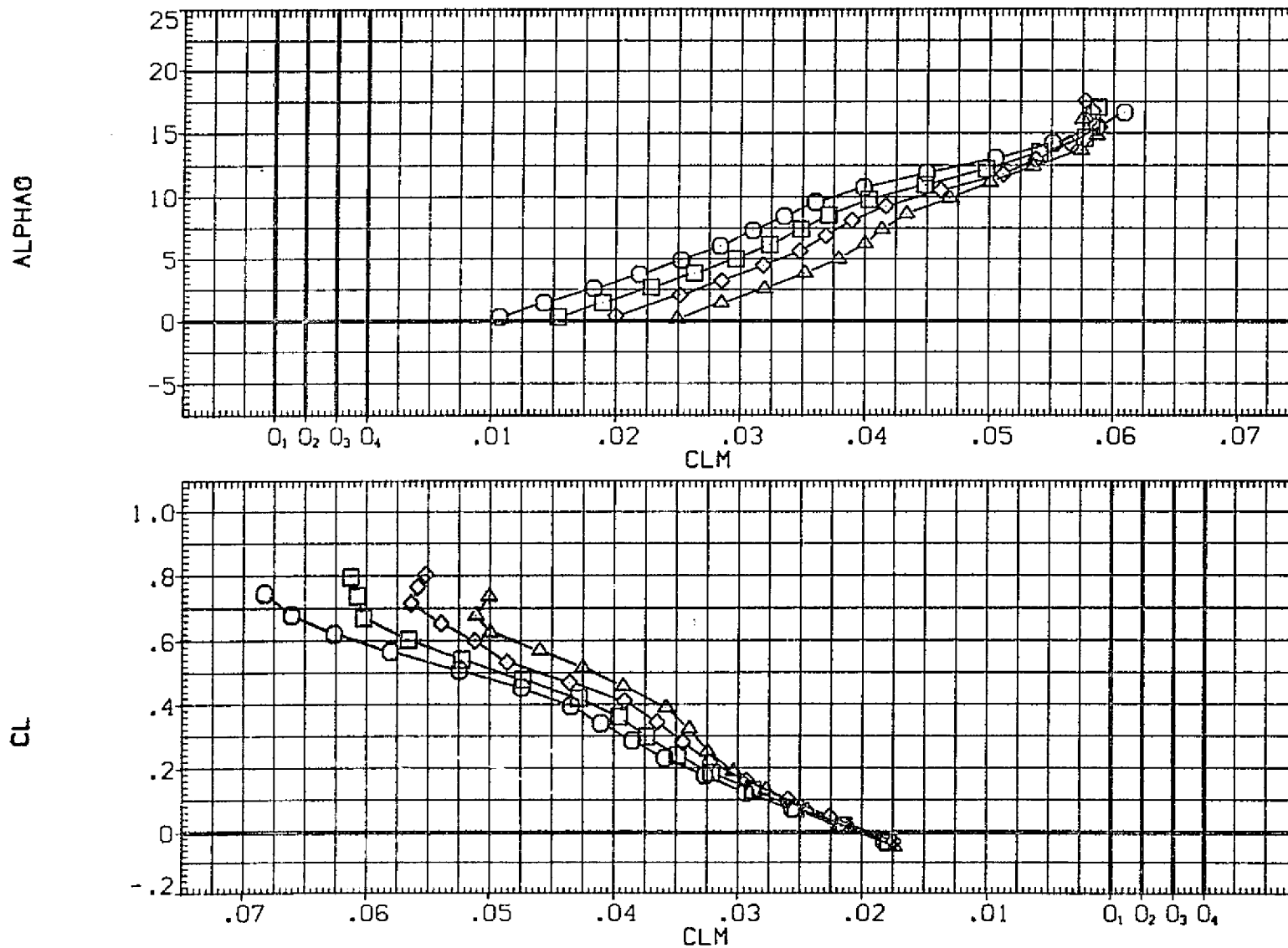


FIG. 4 ORBITER ALONE CHARACTERISTICS, ELEVON 0

CA6

ORBF8N24/28 (AGP001)

SYMBOL
 ○
 □
 ◇
 △

MACH	PARAMETRIC VALUES			
.301	BETA	.000	ELEVON	.000
.501	RUDDER	.000	BDFLAP	.000
.600	PHI	.000	WNGHGT	48.000
.700				

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

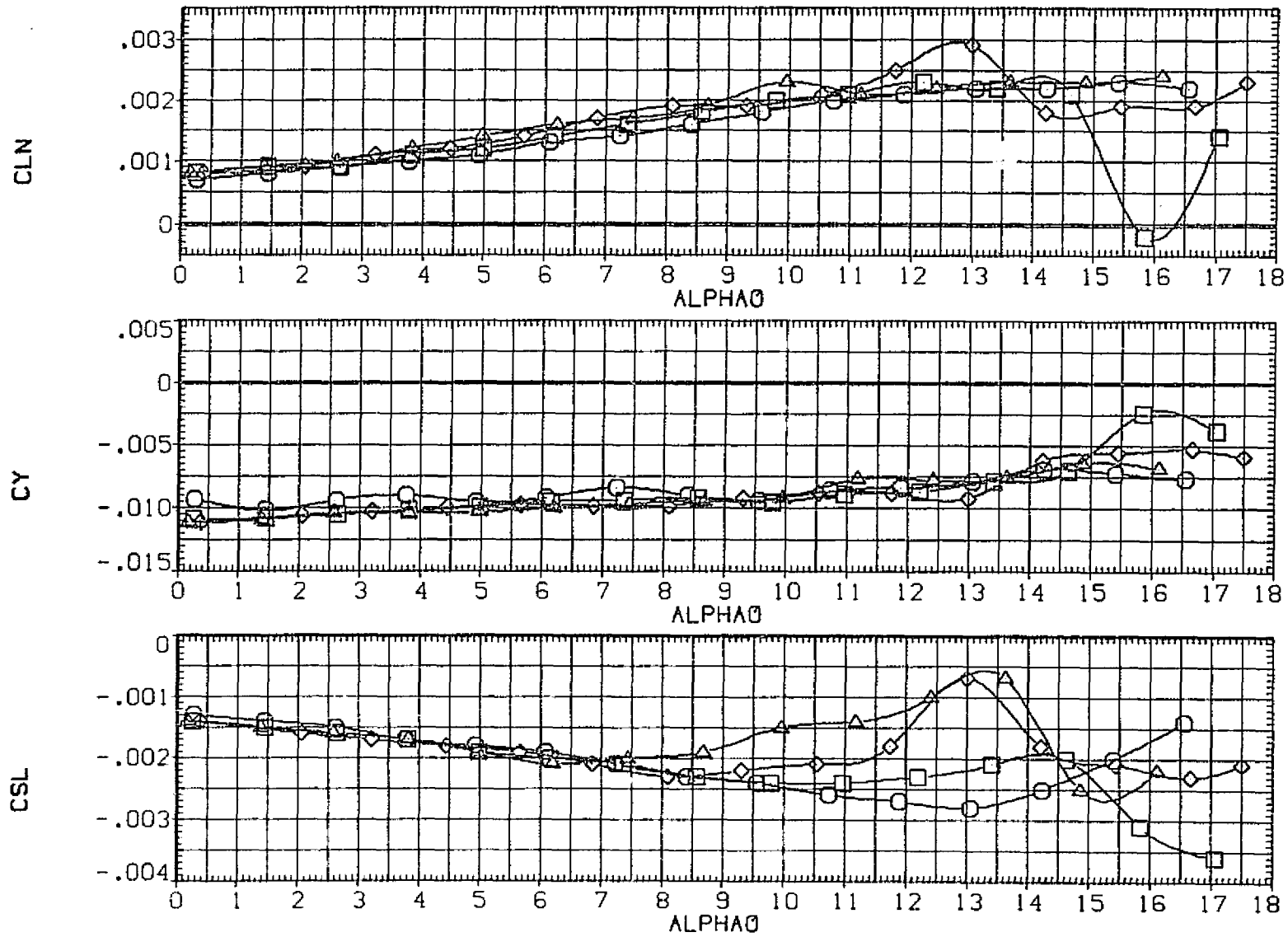


FIG. 4 ORBITER ALONE CHARACTERISTICS, ELEVON 0

SYMBOL
 ○
 □
 ◇
 △

MACH	BETA	PARAMETRIC VALUES	ELEVON	
.299		.000	5.000	
.500	RUDDER	.000	BDFLAP	.000
.601	PHI	.000	WNGHGT	48.000
.701				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

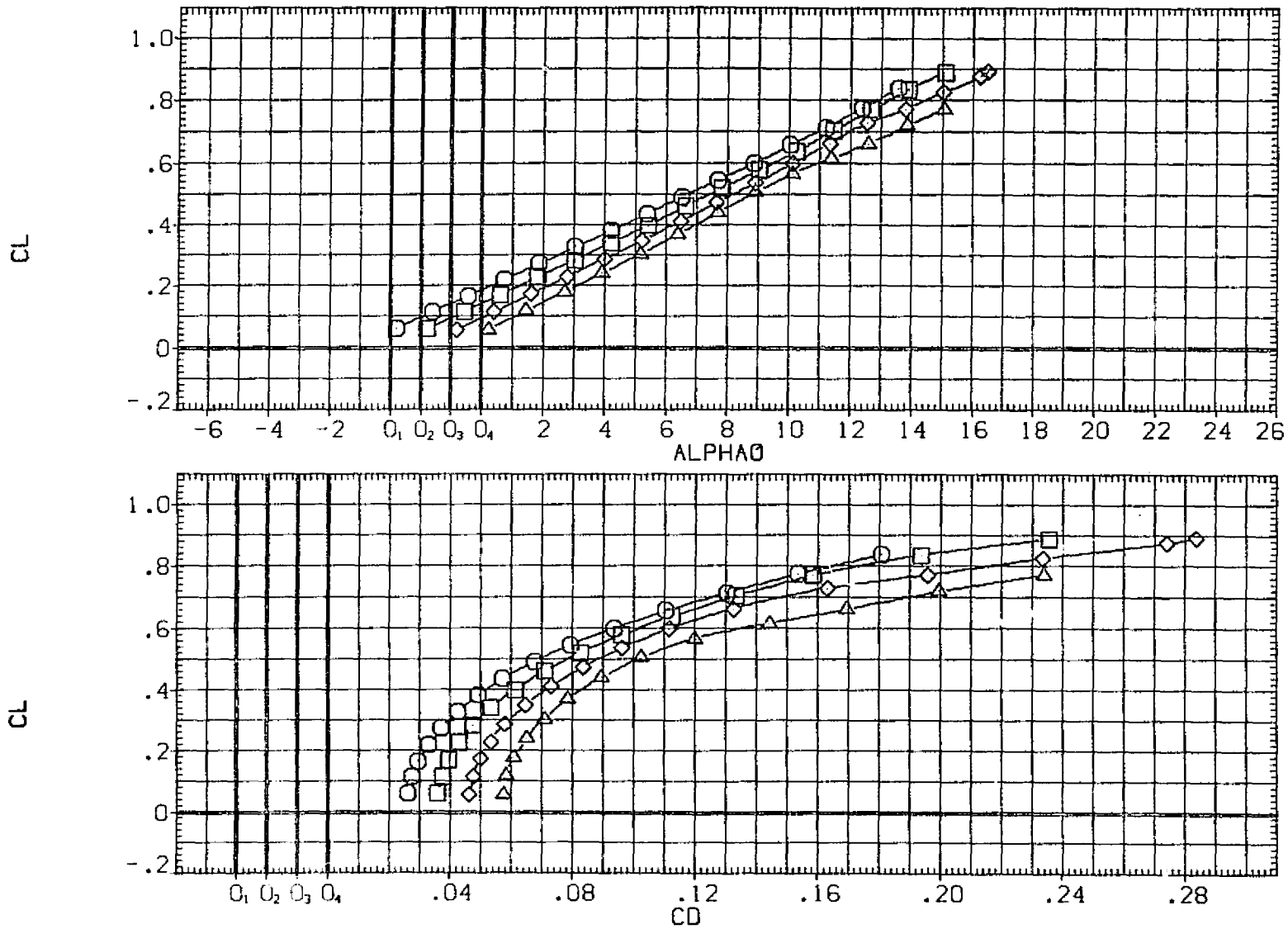


FIG. 5 ORBITER ALONE CHARACTERISTICS, ELEVON 5

CAS

ORBF8N24/28 (AGP002)

SYMBOL
 ○
 □
 ◇
 △

MACH	PARAMETRIC VALUES			
.299	BETA	.000	ELEVON	5.000
.500	RUDDER	.000	BDFLAP	.000
.601	PHI	.000	WNGHGT	48.000
.701				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0300	

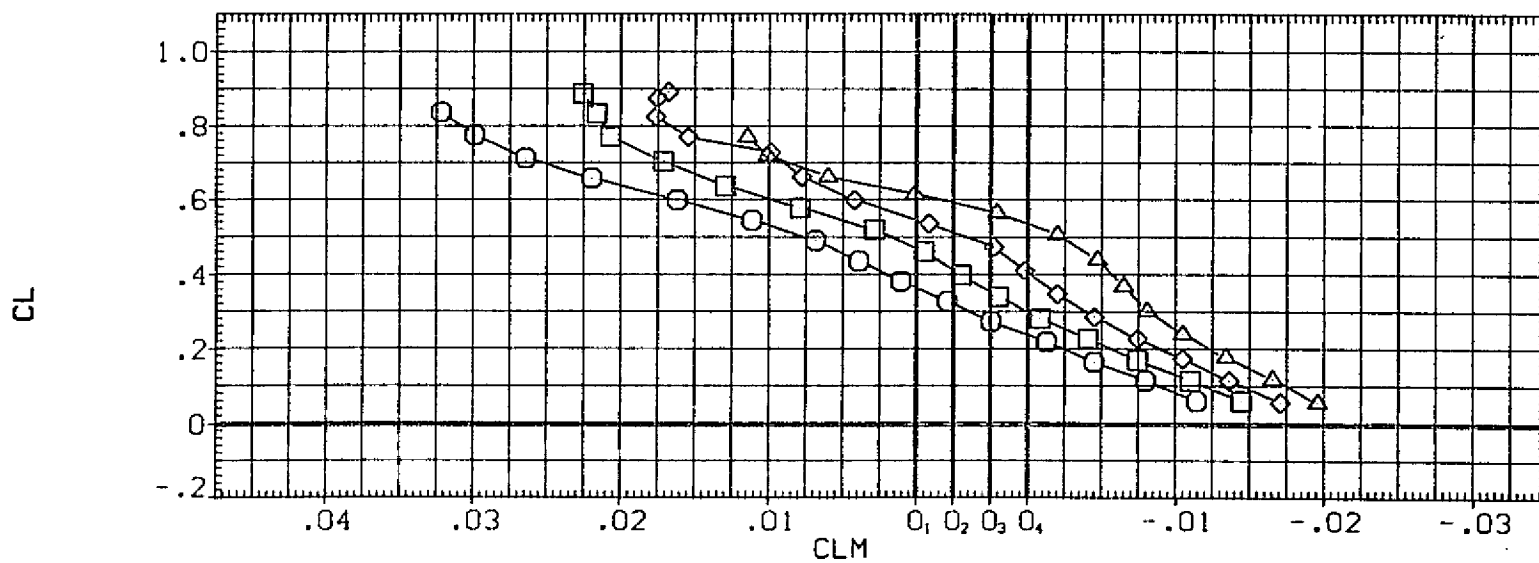
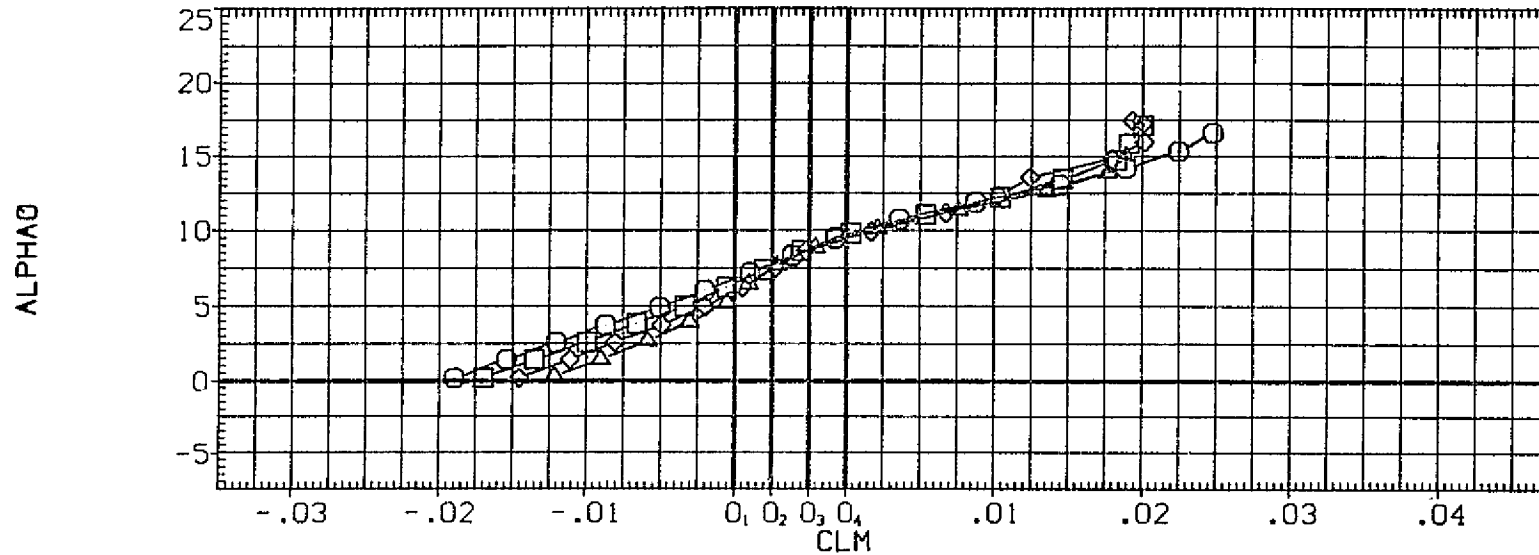


FIG. 5 ORBITER ALONE CHARACTERISTICS, ELEVON 5

SYMBOL	MACH	BETA	PARAMETRIC VALUES		
○	.299		.000	ELEVON	5.000
□	.500	RUDDER	.000	BOFLAP	.000
◇	.601	PHI	.000	WNGHGT	48.000
△	.701				

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

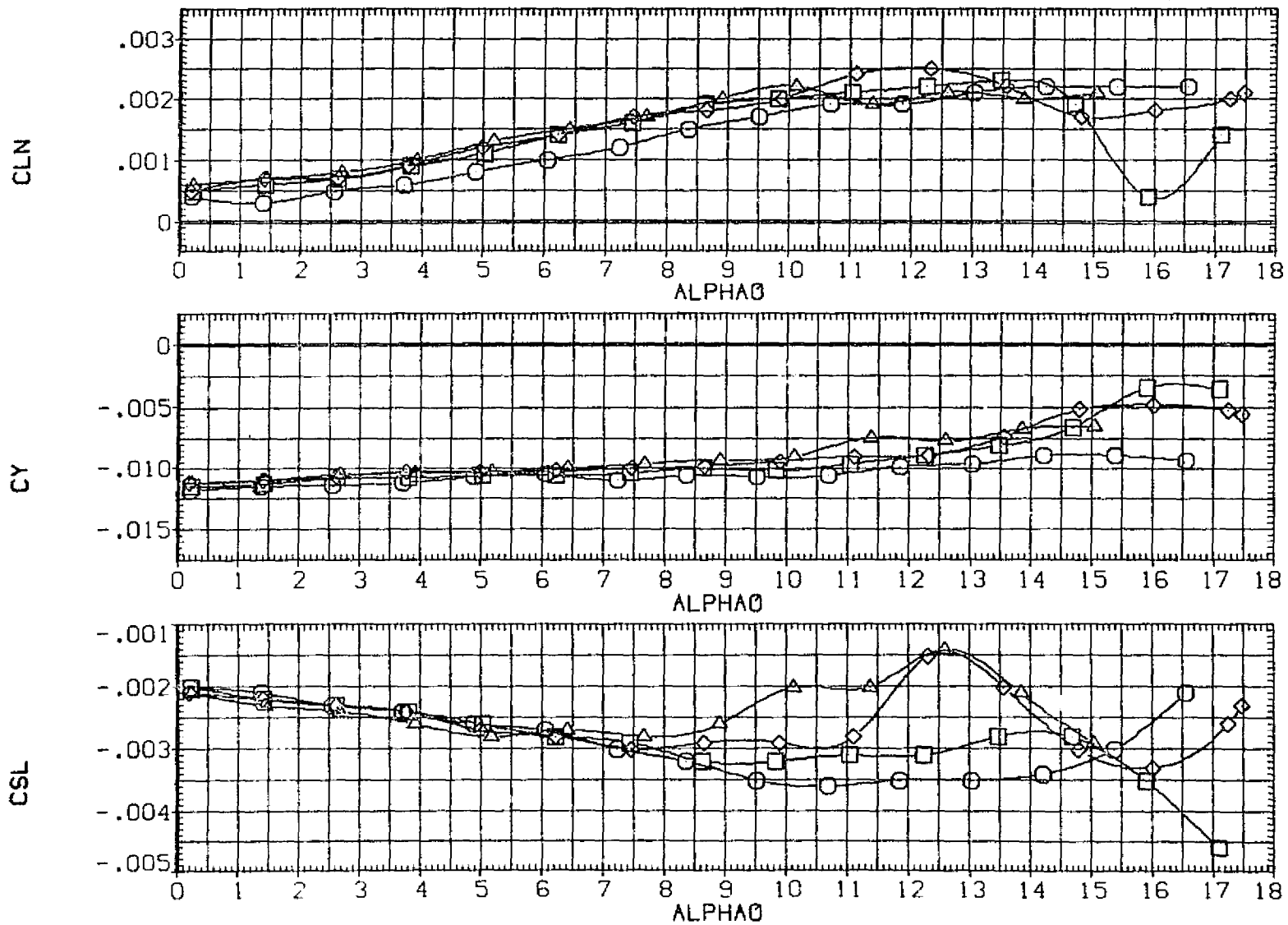


FIG. 5 ORBITER ALONE CHARACTERISTICS, ELEVON 5

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
(AGP010)	CA6	ORBF8N24/28	.000	.000	5.000	57.000	SREF 2690.0000 SQ.FT.
(BGP011)	CA6	(ELEVON GAP SEALED) ORBF8N24/28	.000	.000	5.000	57.000	LREF 474.8000 IN.
							BREF 936.6700 IN.
							XMRP 1109.0000 IN. X0
							YMRP .0000 IN. Y0
							ZMRP 375.0000 IN. Z0
							SCALE .0300

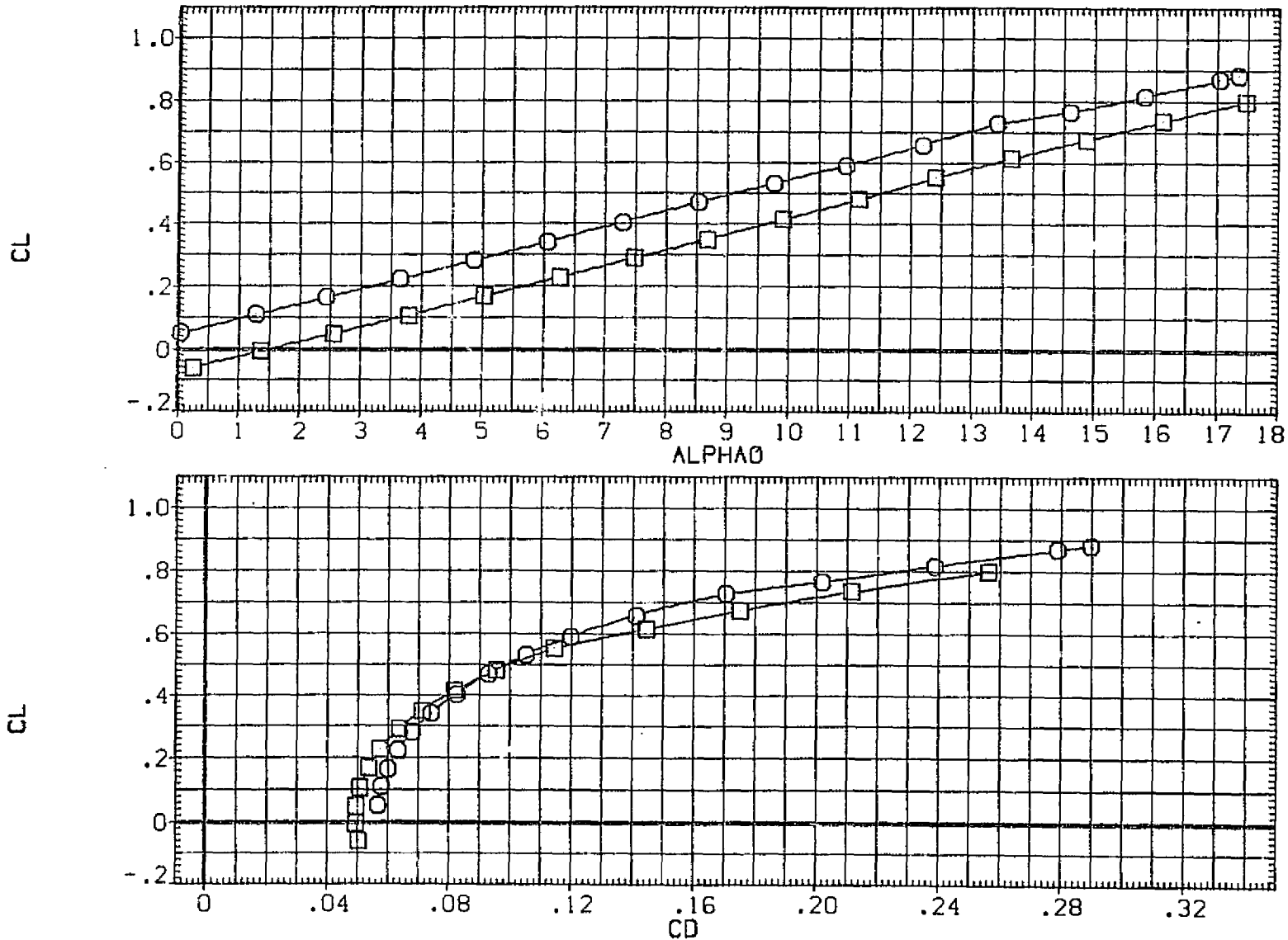


FIG. 6 EFFECT OF ELEVON GAP, ORBITER ALONE

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
(ASPG10)	CA6	ORBF8N24/28	.000	.000	5.000	57.000	SREF 2690.0000 SQ. FT.
(BGPD11)	CA6	(ELEVON GAP SEALED) ORBF8N24/28	.000	.000	5.000	57.000	LREF 474.8000 IN.
							BREF 936.6700 IN.
							XMRP 1109.0000 IN. X0
							YMRP .0000 IN. Y0
							ZMRP 375.0000 IN. Z0
							SCALE .0300

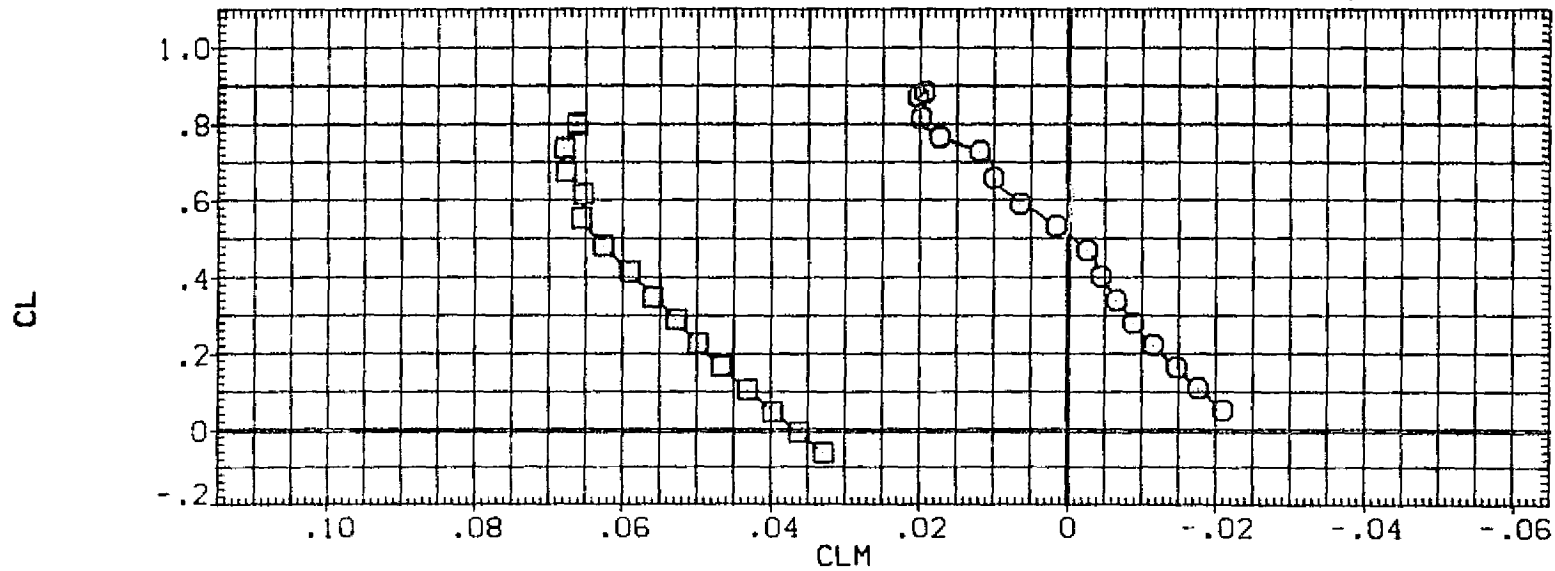
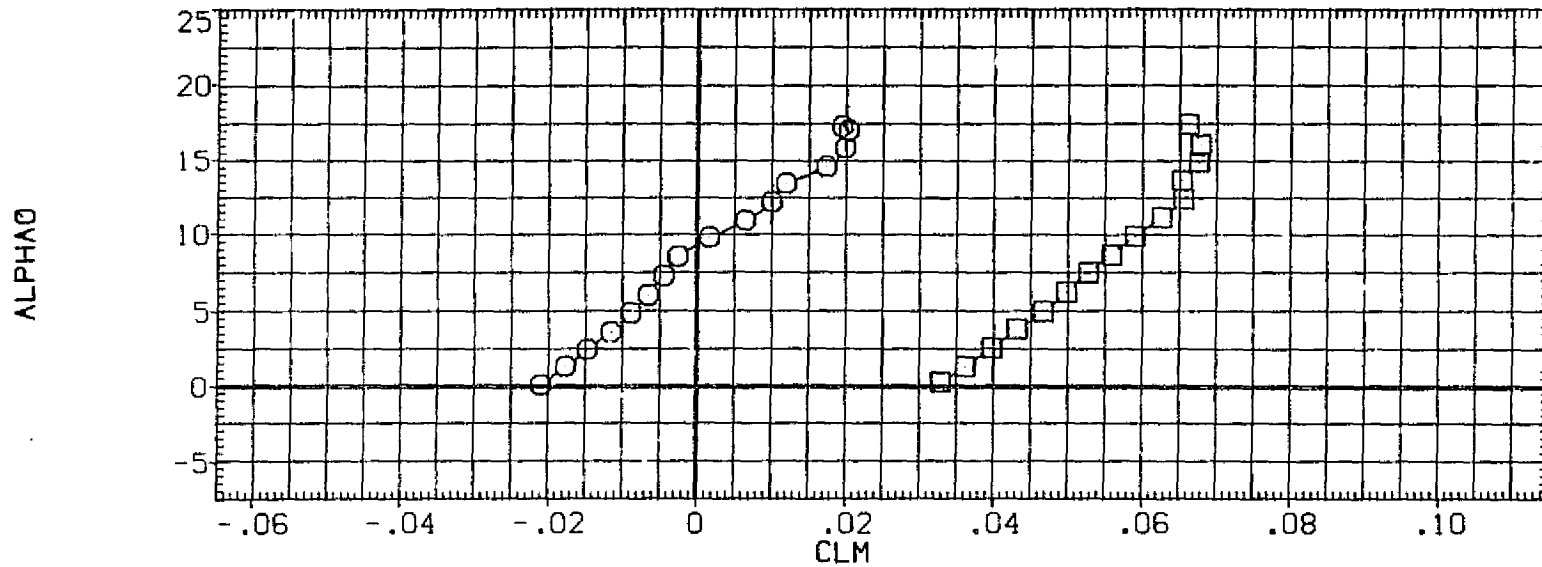


FIG. 6 EFFECT OF ELEVON GAP, ORBITER ALONE

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
(AGP010)	CA6	ORBF8N24/28	.000	.000	5.000	57.000	SREF 2690.0000 SQ.FT.
(BGP011)	CA6	(ELEVON GAP SEALED) ORBF8N24/28	.000	.000	5.000	57.000	LREF 474.8000 IN.
							BREF 936.6700 IN.
							XMRP 1109.0000 IN. X0
							YMRP .0000 IN. Y0
							ZMRP 375.0000 IN. Z0
							SCALE .0300

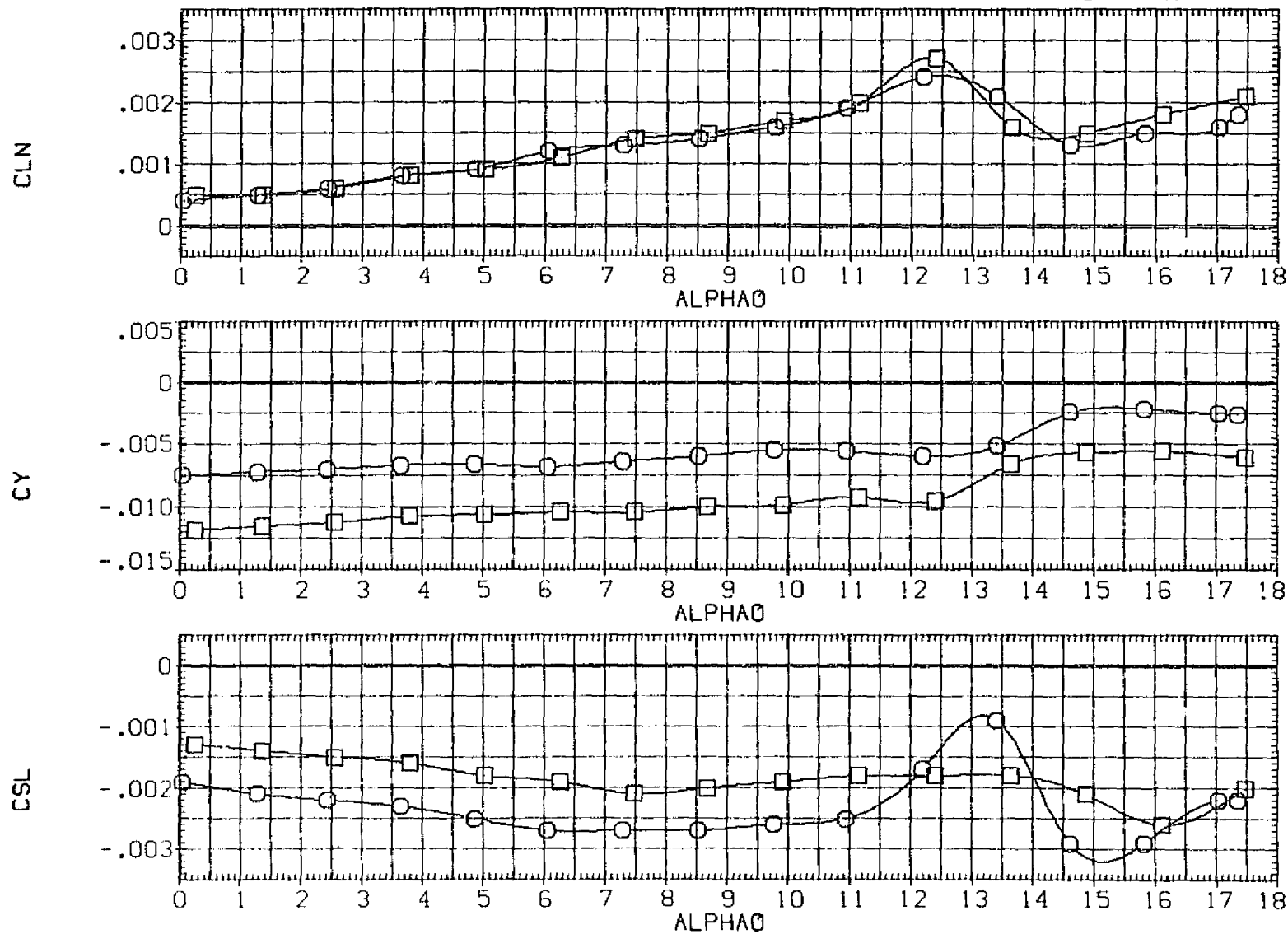


FIG. 6 EFFECT OF ELEVON GAP, ORBITER ALONE

(A)MACH = .60

SYMBOL	MACH	PARAMETRIC VALUES			
		ALPHA	ELEVON	BDFLAP	
○	.300	.000	5.000		
□	.501	RUDDER	.000	.000	
◇	.600	PHI	90.000		
△	.700				

REFERENCE INFORMATION		
SREF	2690.0000	50. FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

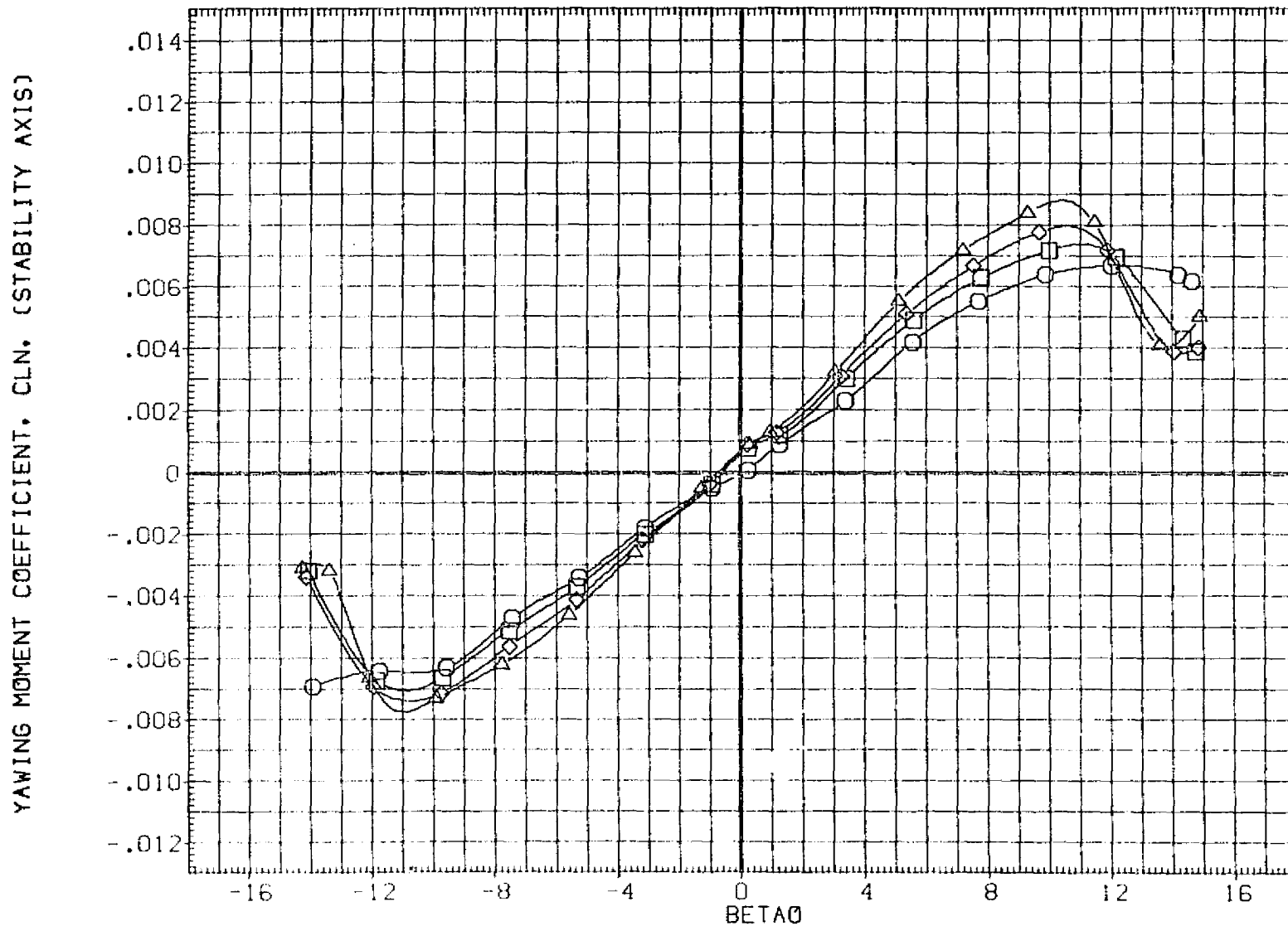


FIG. 7 LATERAL-DIRECTIONAL CHARACTERISTICS, ORBITER ALONE, ELEVON 5

CA6

ORBF8N24/28 (AGP004)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.300	ALPHA	.000	ELEVON	5.000
□	.501	RUDDER	.000	BDFLAP	.000
◇	.600	PHI	90.000		
△	.700				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0300	

ROLLING MOMENT COEFFICIENT, CSL, (STABILITY AXIS)

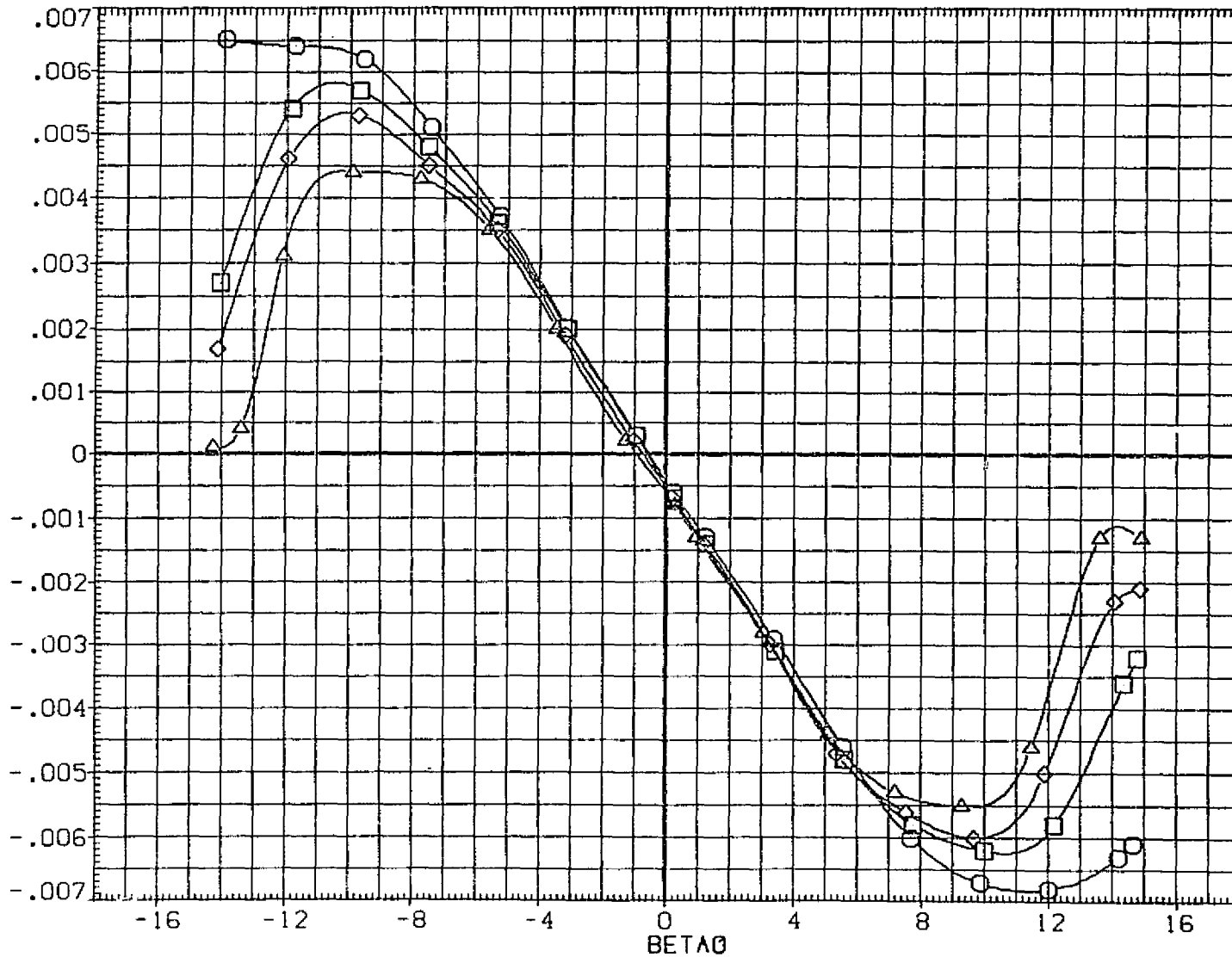


FIG. 7 LATERAL-DIRECTIONAL CHARACTERISTICS, ORBITER ALONE, ELEVON 5

SYMBOL	MACH	PARAMETRIC VALUES
○	.300	ALPHA .000 ELEVON 5.000
□	.501	RUDDER .000 BDFLAP .000
◇	.600	PHI 90.000
△	.700	

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

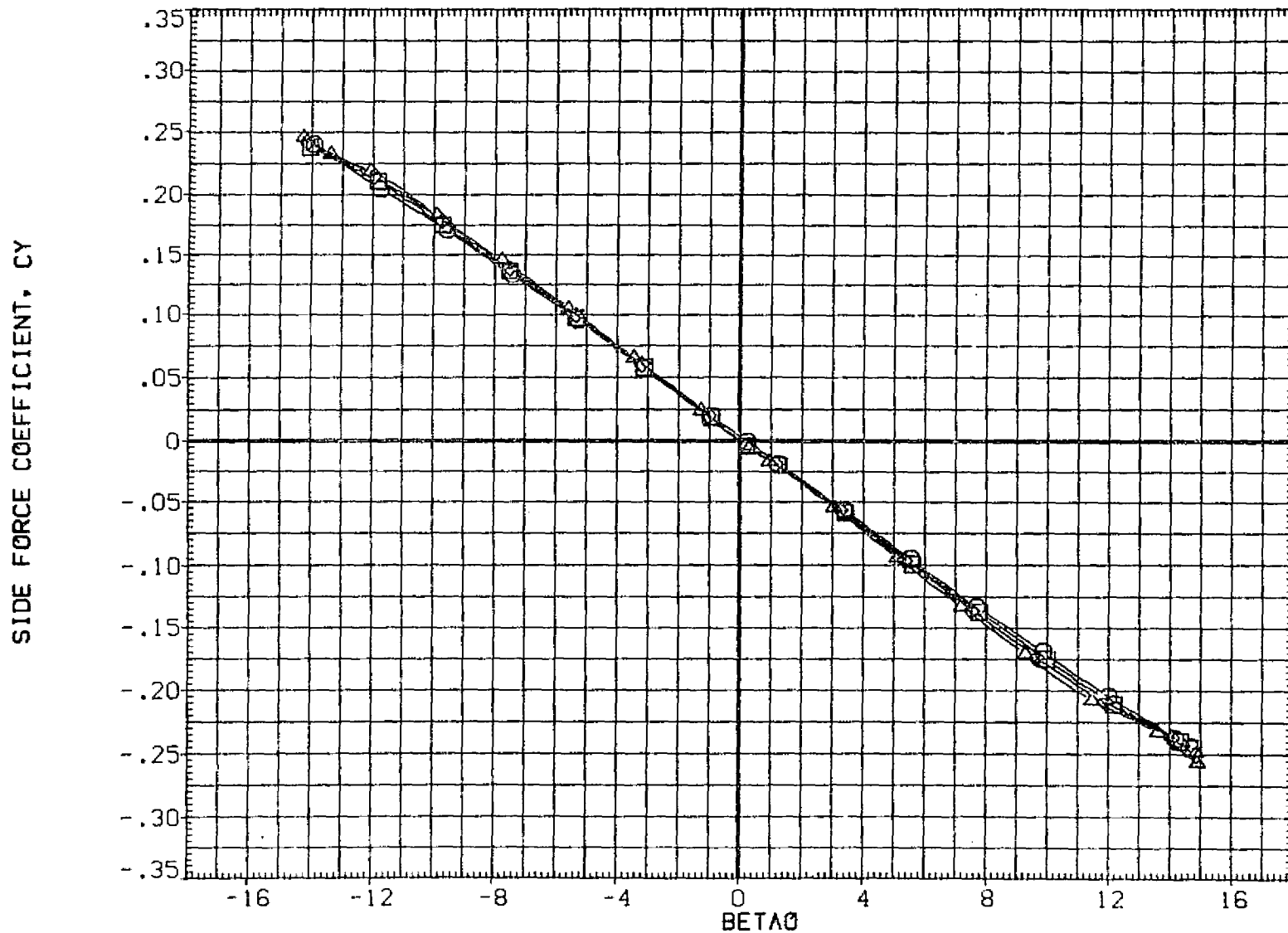




FIG. 7 LATERAL-DIRECTIONAL CHARACTERISTICS, ORBITER ALONE, ELEVON 5

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003)  CAS
 (AGP006)  CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

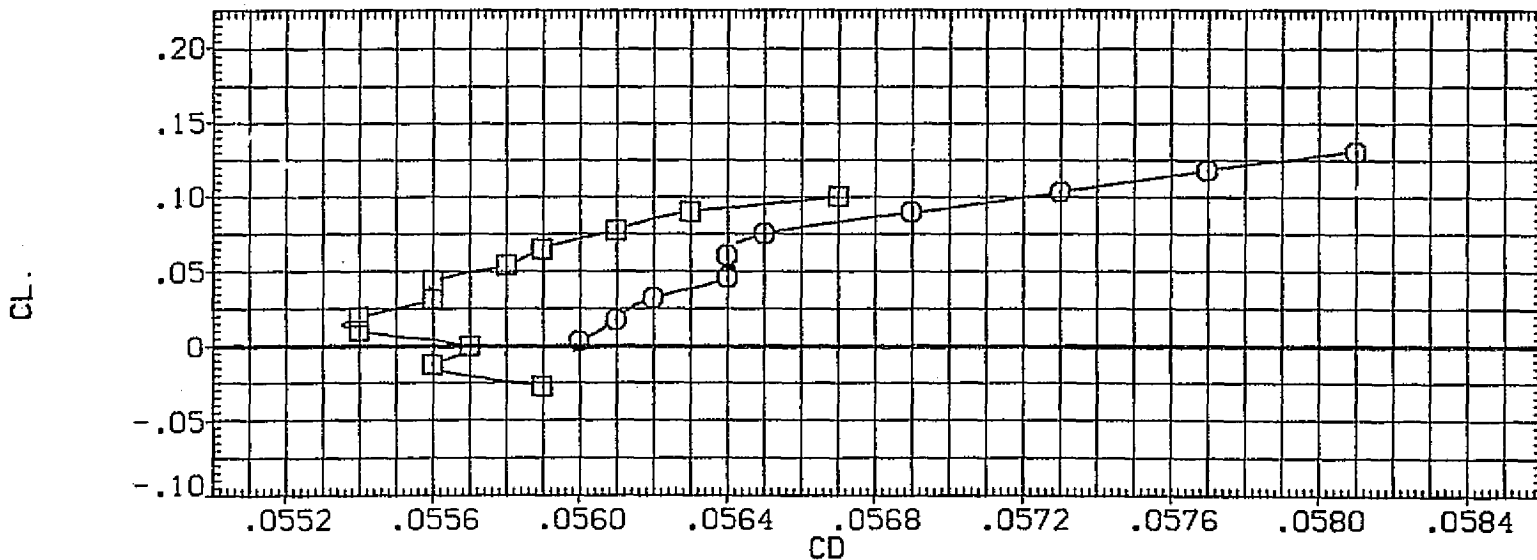
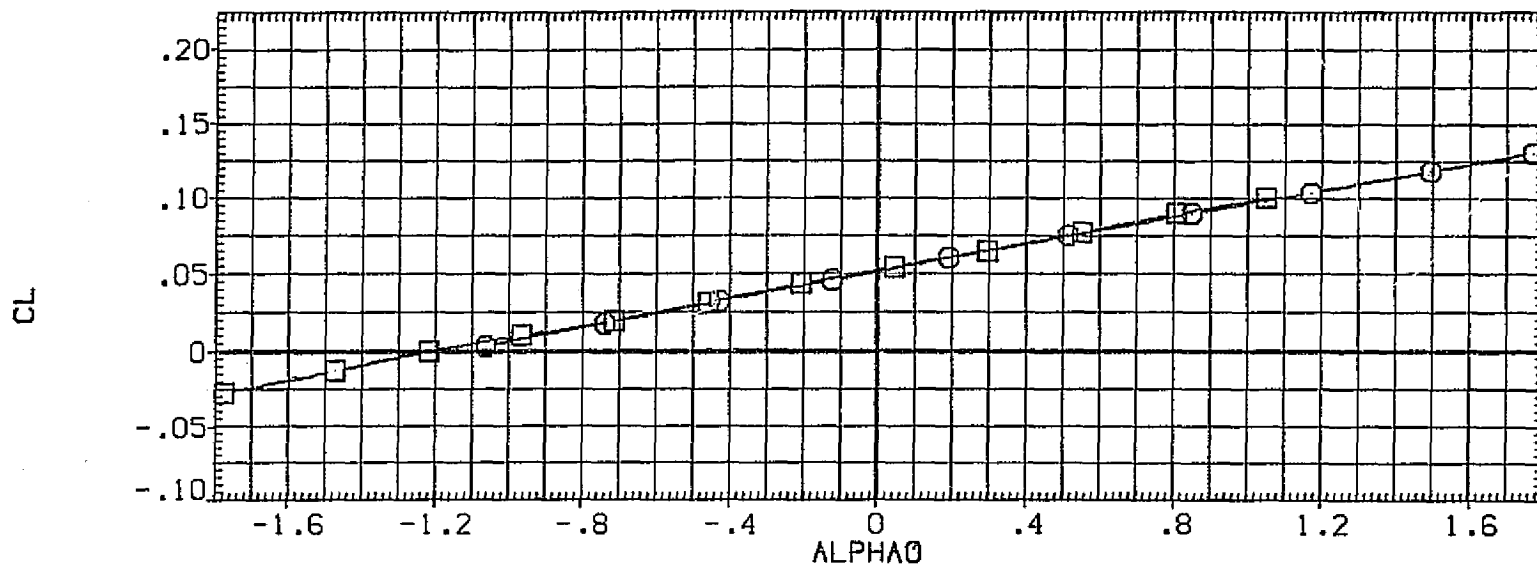


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003) ○ CA6
 (AGP006) □ CA6

BETA PHI ELEVGN WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 190.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

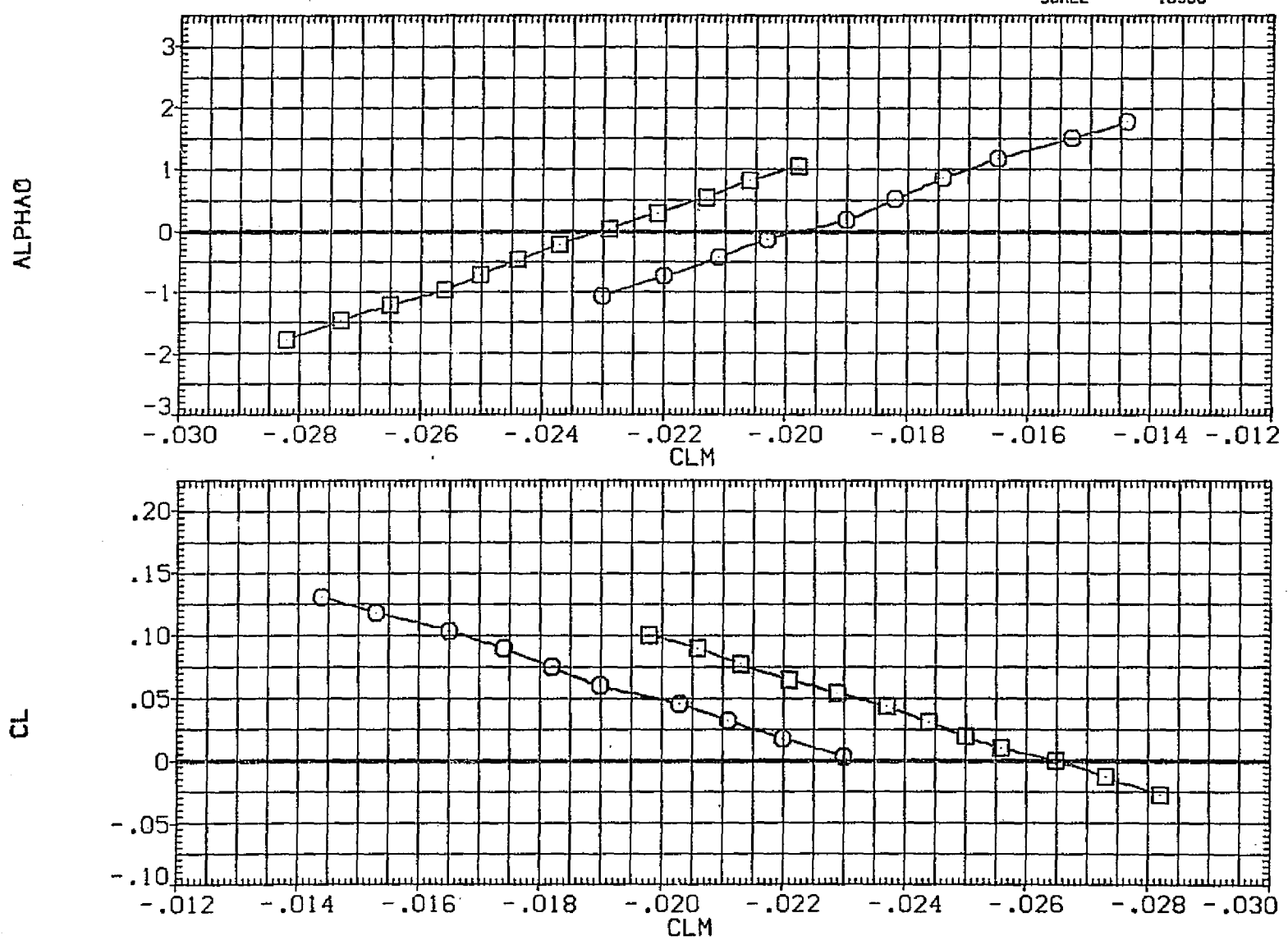


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES
 (A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003) ○ CA6
 (AGP006) □ CA6

ORBF8N24/28	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION
ORBF8N24/28	.000	.000	5.000	48.000	SREF 2690.0000 50.FT.
ORBF8N24/28	.000	180.000	5.000	48.000	LREF 474.8000 IN.
					BREF 936.6700 IN.
					XMRP 1109.0000 IN. X0
					YMRP .0000 IN. Y0
					ZMRP 375.0000 IN. Z0
					SCALE .0300

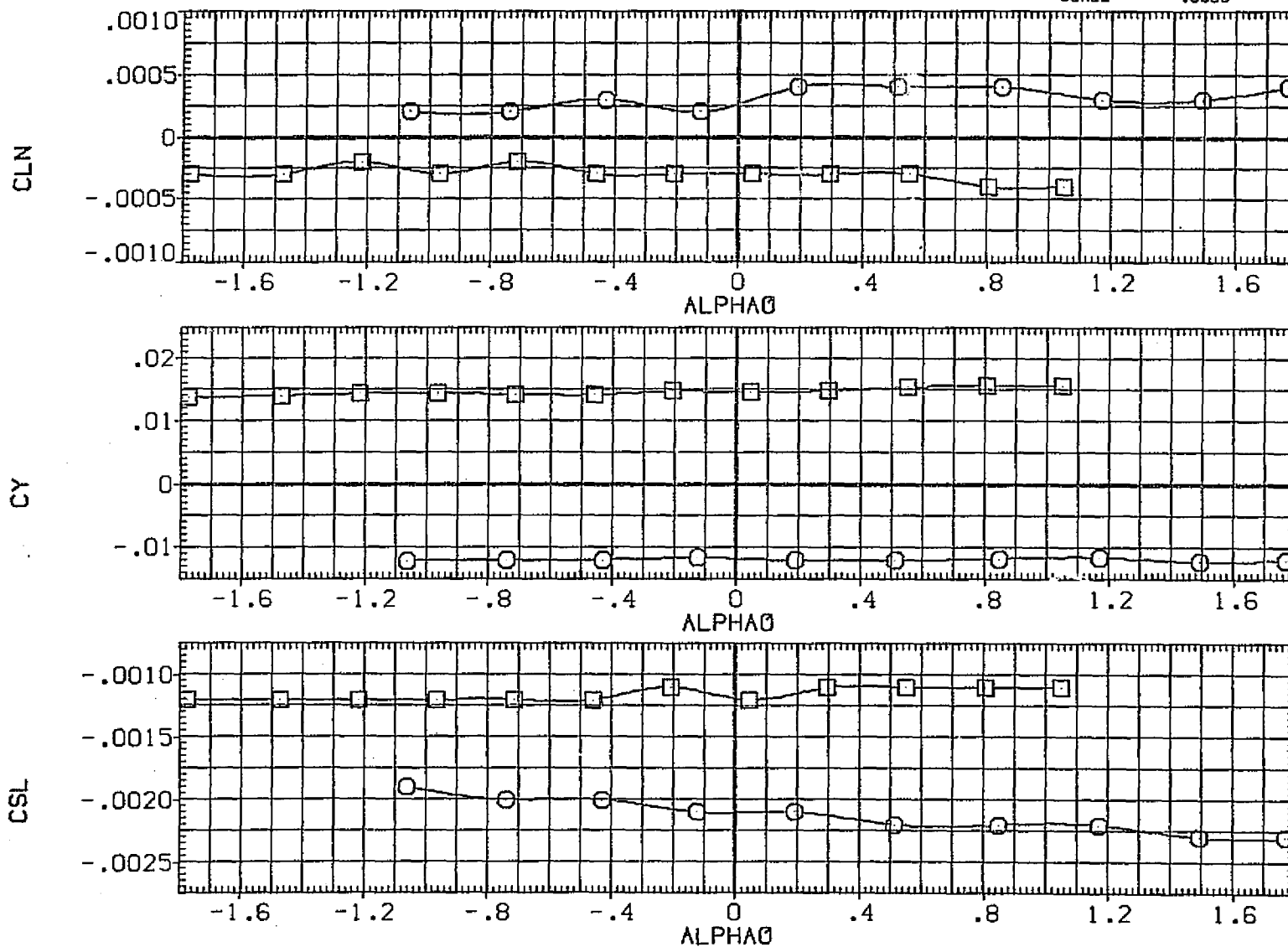


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES
 (A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP003) □ CA6
 (AGP006) ○ CA6

ORBF8N24/28
 ORBF8N24/28

BETA	PHI	ELEVON	UNGHGT
.000	.000	5.000	48.000
.000	180.000	5.000	48.000

REFERENCE INFORMATION		
SREF	2690.0000	SO.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

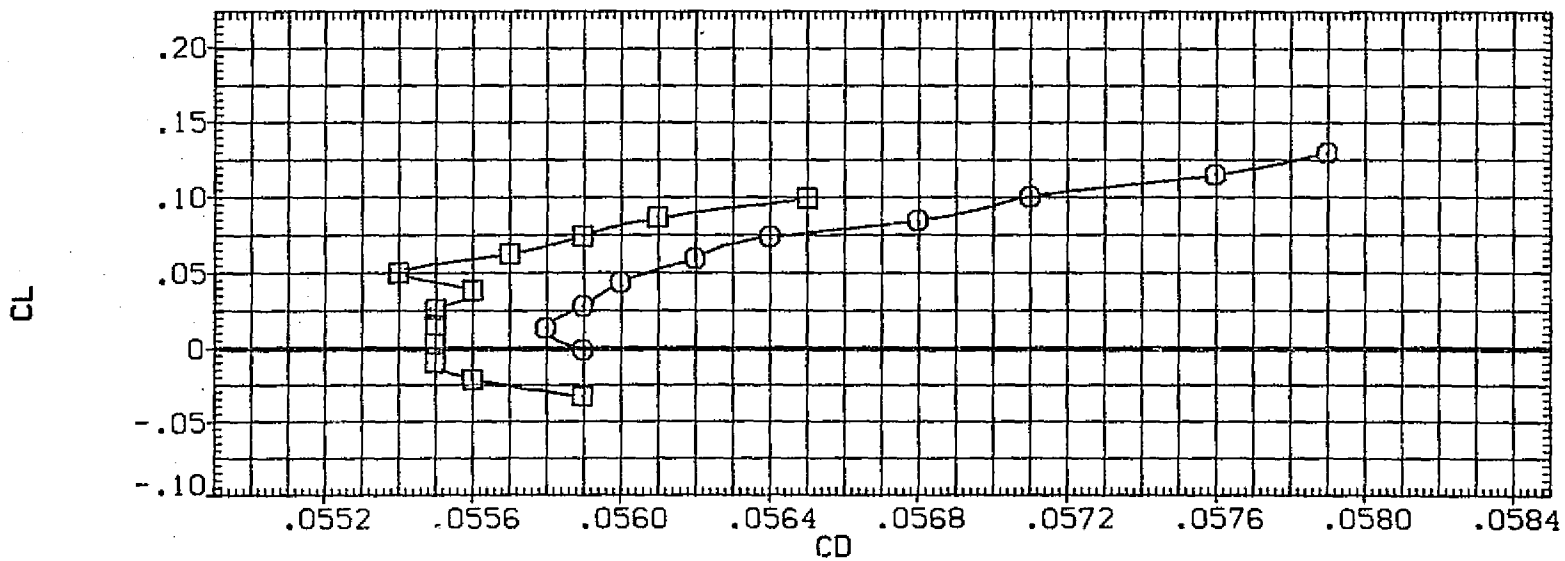
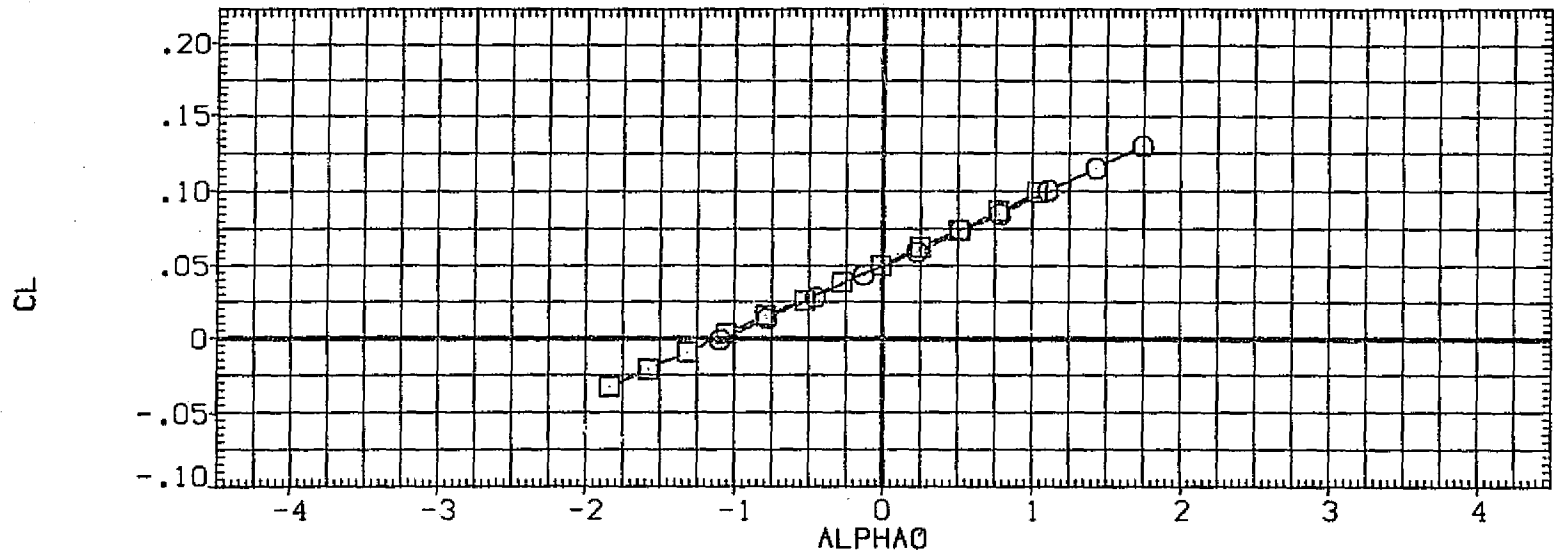




FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003)  CA6
 (AGP006)  CA6

ORBF8N24/28 BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

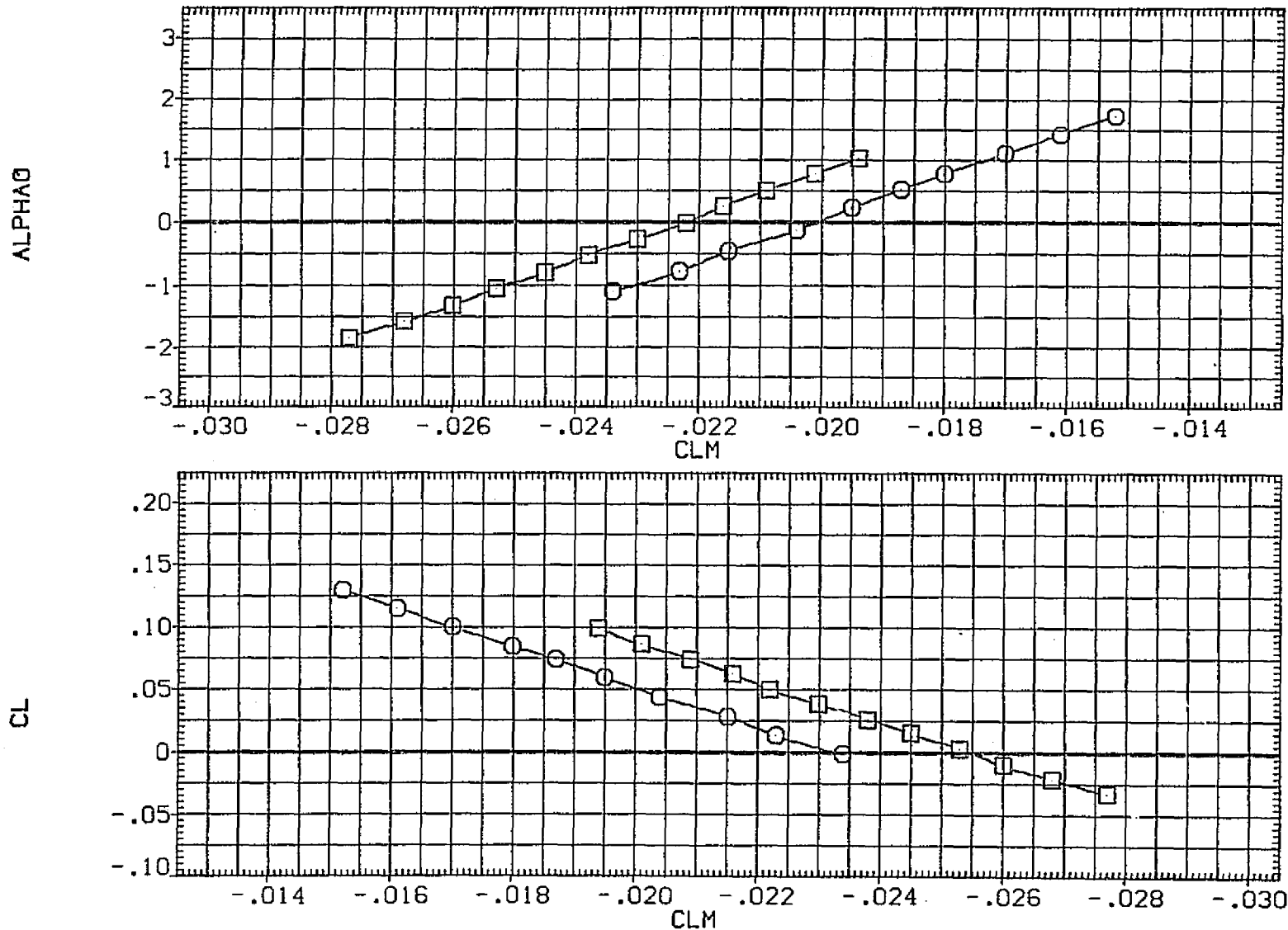


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	ELEVON	WINGHT	REFERENCE INFORMATION	
(AGP003)	CAS	ORBF8N24/28	.000	.000	5.000	48.000	SREF 2690.0000 SQ.FT.
(AGP006)	CAS	ORBF8N24/28	.000	180.000	5.000	48.000	LREF 474.8000 IN.
							BREF 936.6700 IN.
							XMRP 1109.0000 IN. X0
							YMRP .0000 IN. Y0
							ZMRP 375.0000 IN. Z0
							SCALE .0300

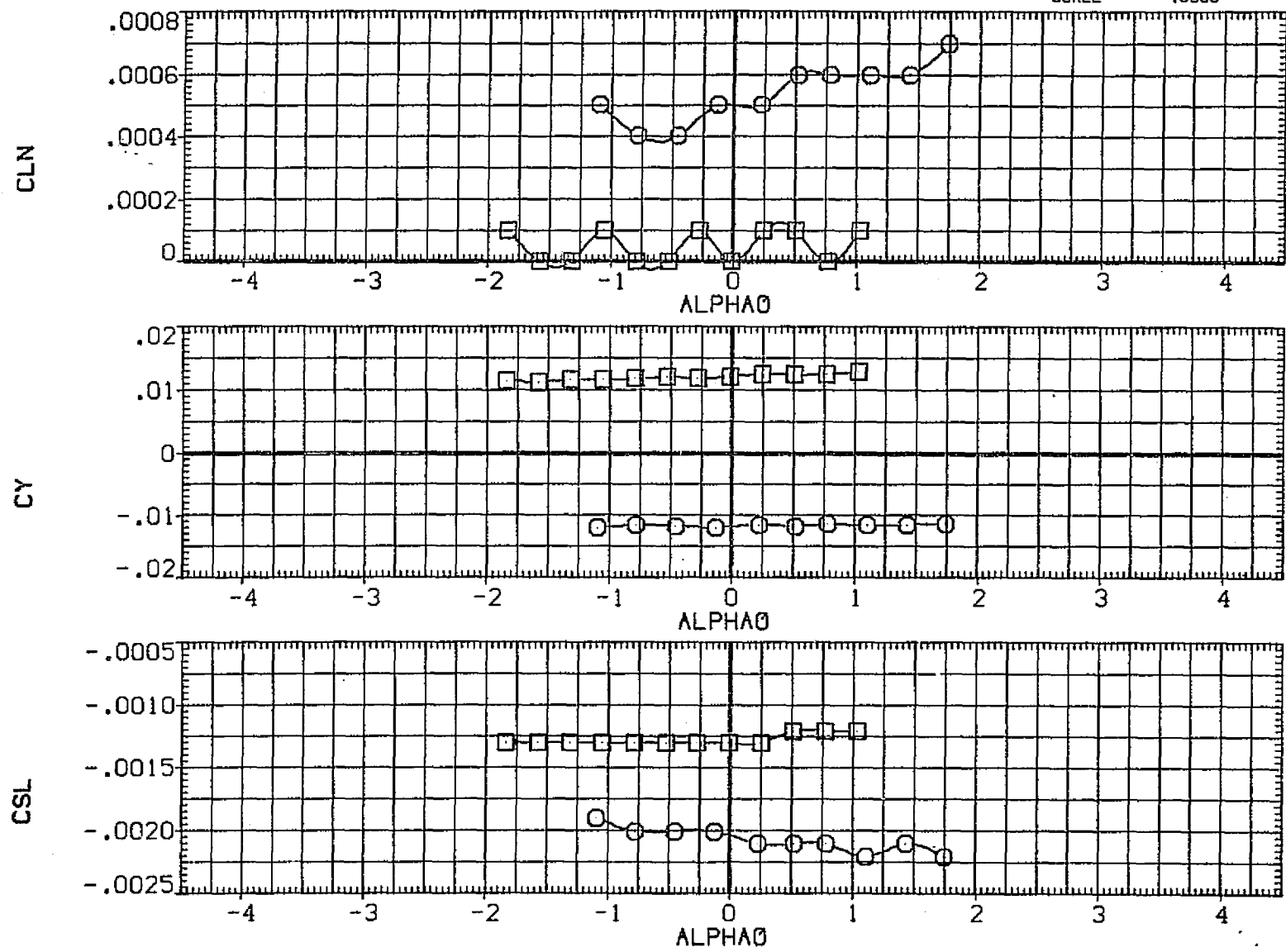


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP003) □ CAS
 (AGP006) □ CAS

BETA PHI ELEVON WNGHGT
 0RBF8N24/28 .000 .000 5.000 48.000
 0RBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

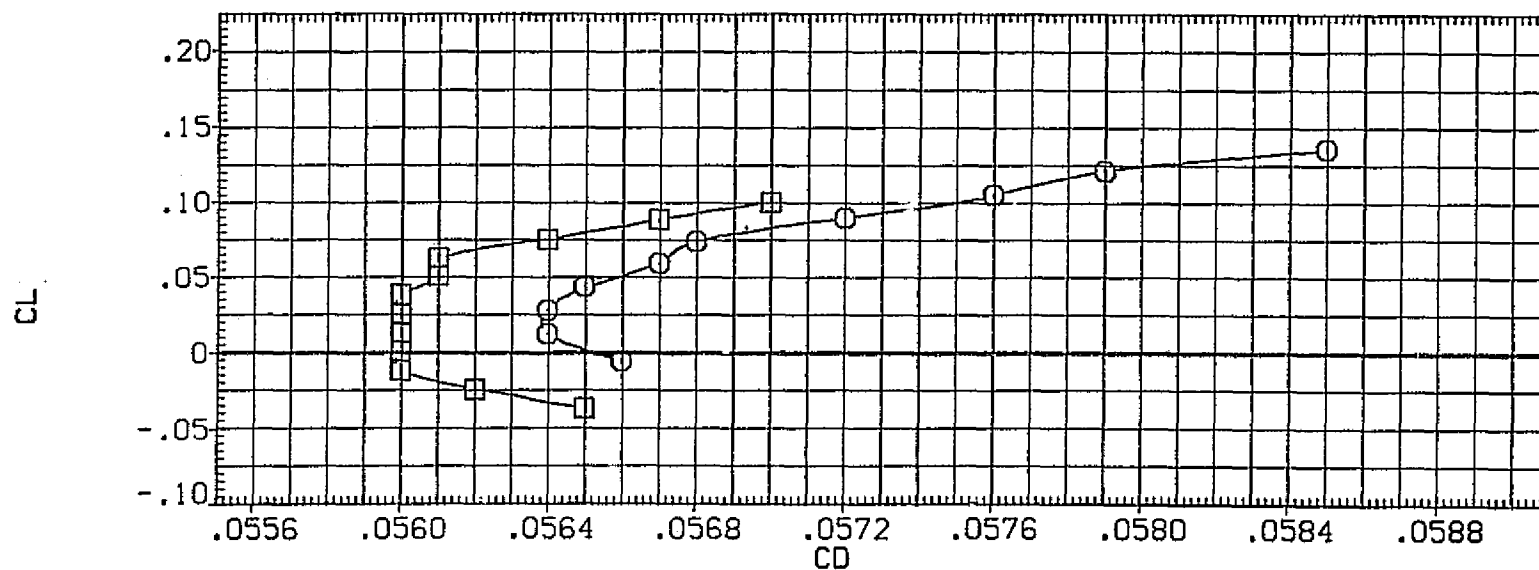
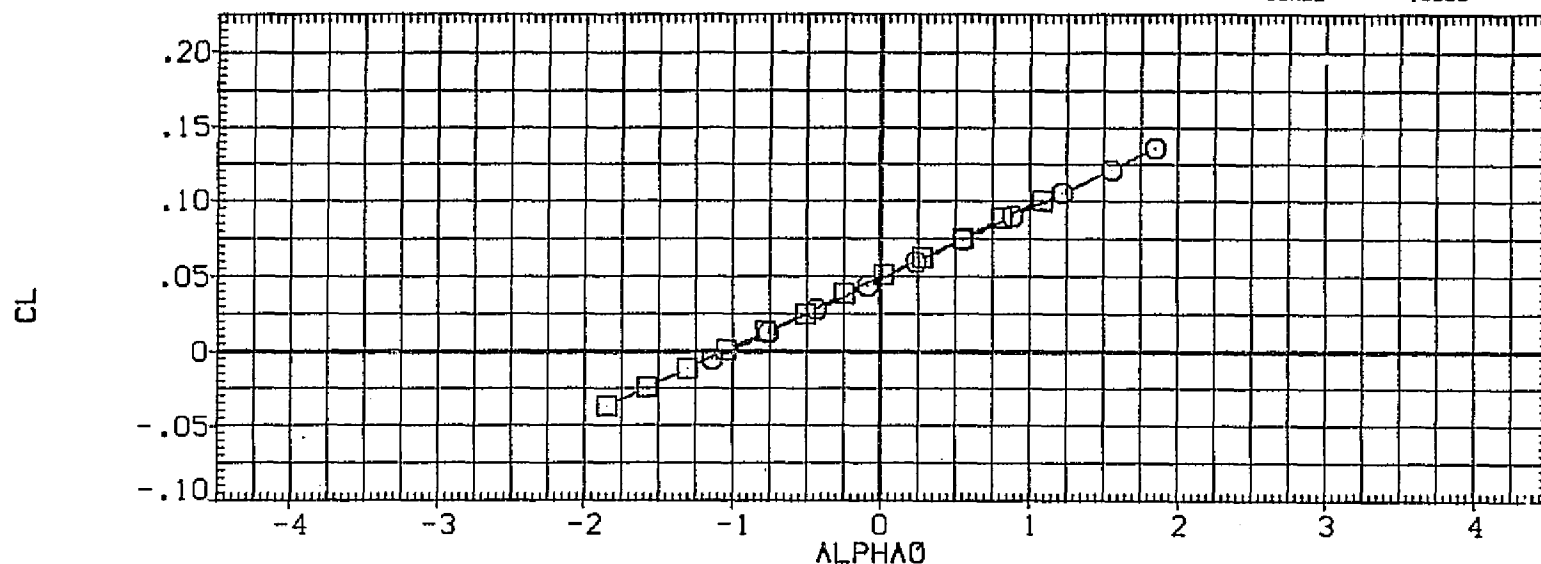


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003) □ CA6
 (AGP006) ○ CA6

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

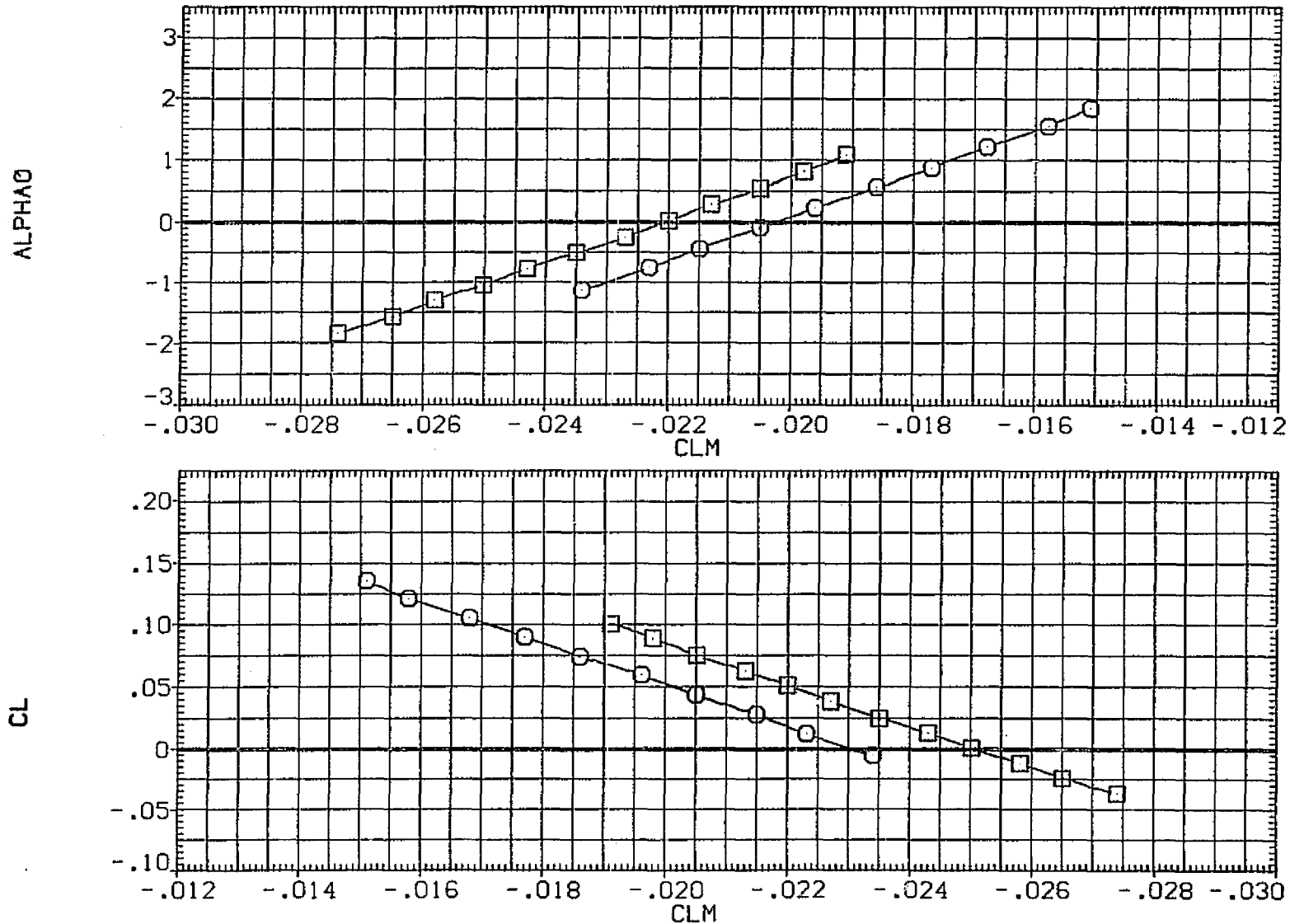




FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003)  CA6
 (AGP006)  CA6

BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 48.000
 ORBFBN24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

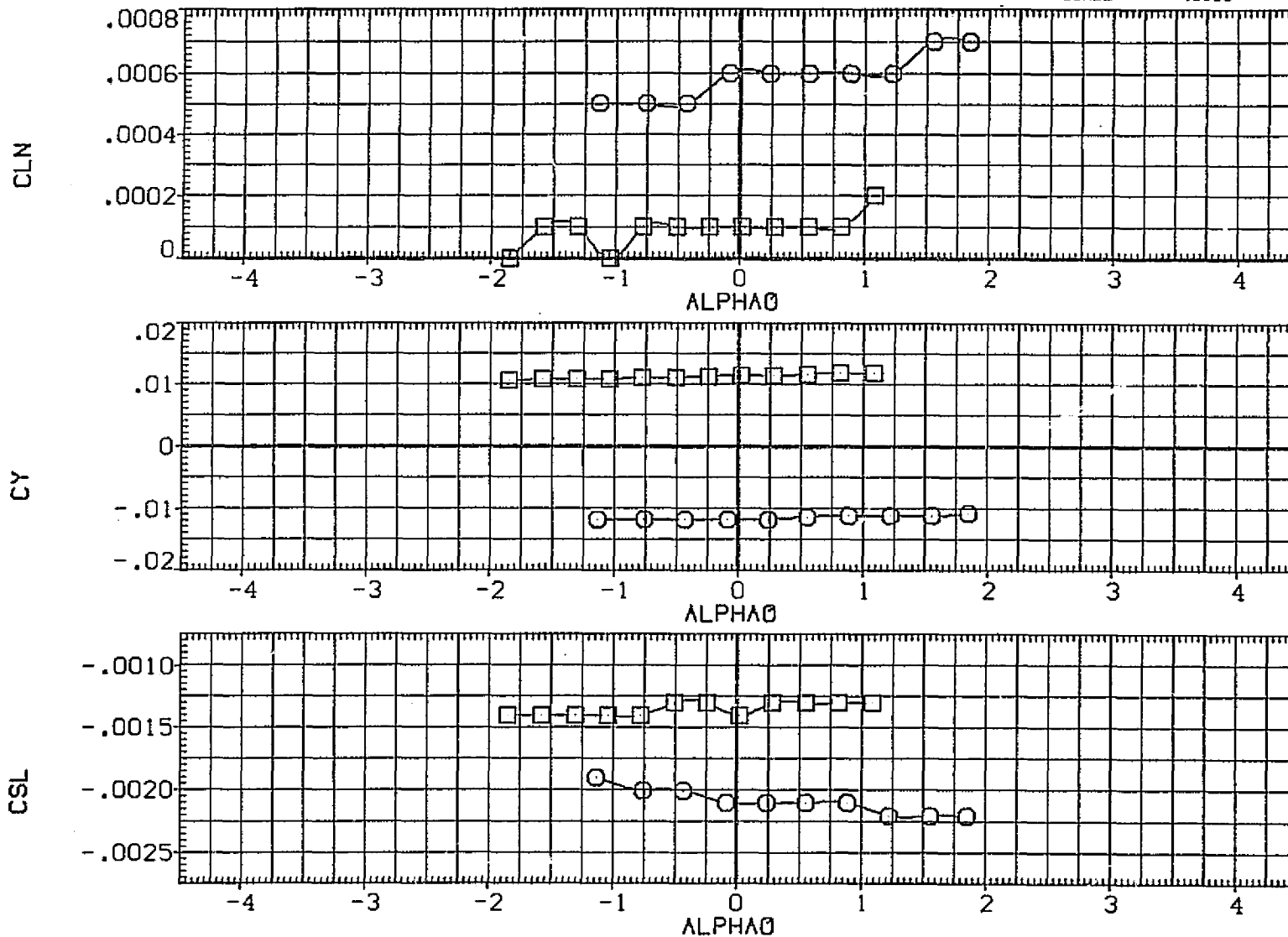




FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP003)  CA6
 (AGP006)  CA6

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

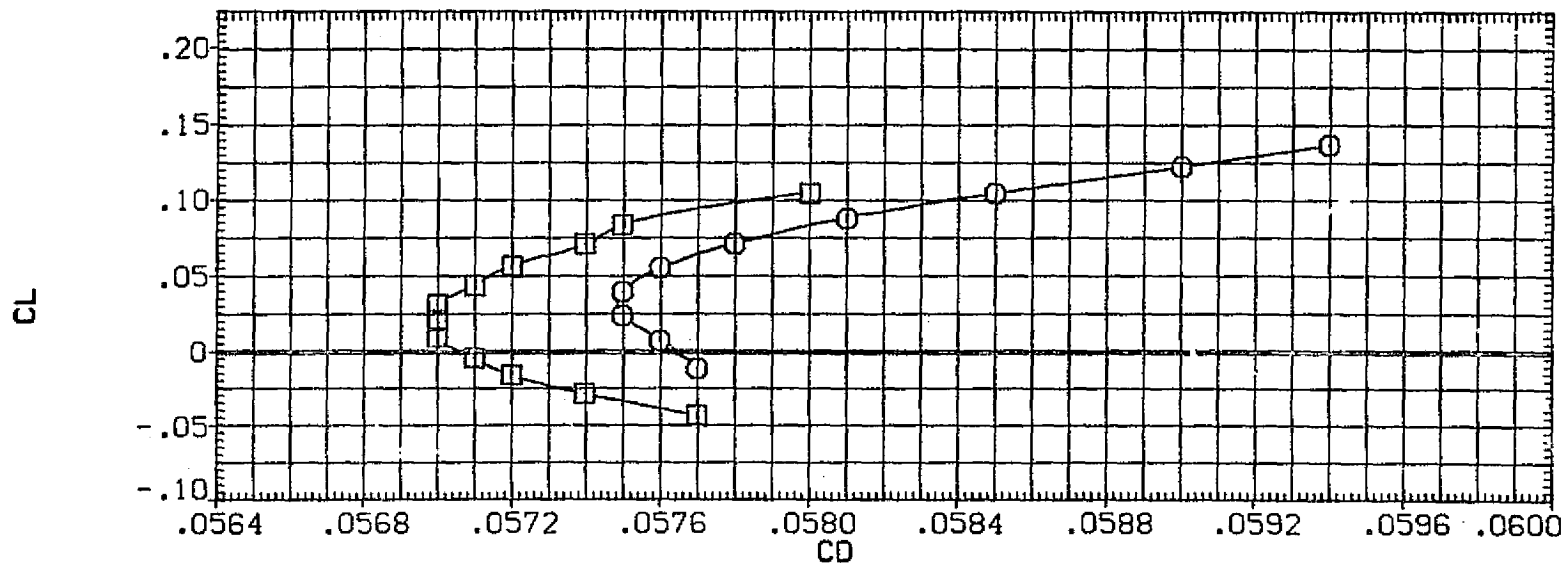
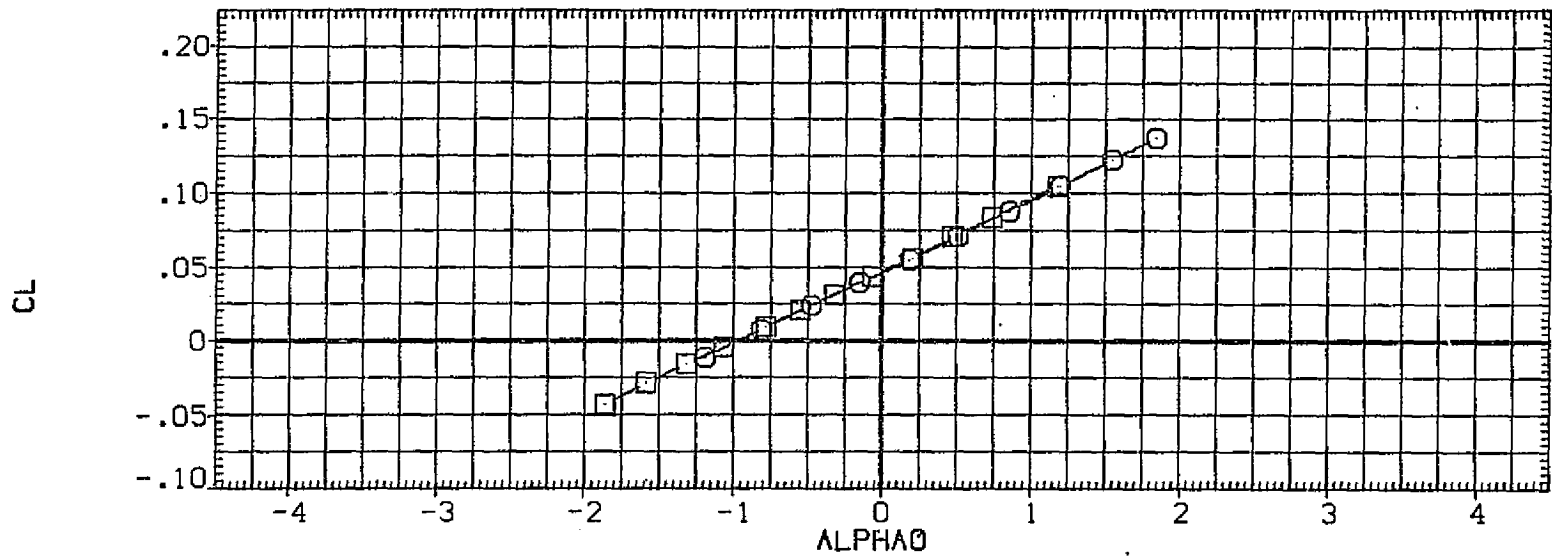


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP003) \square CAG
 (AGP006) \circ CAG

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

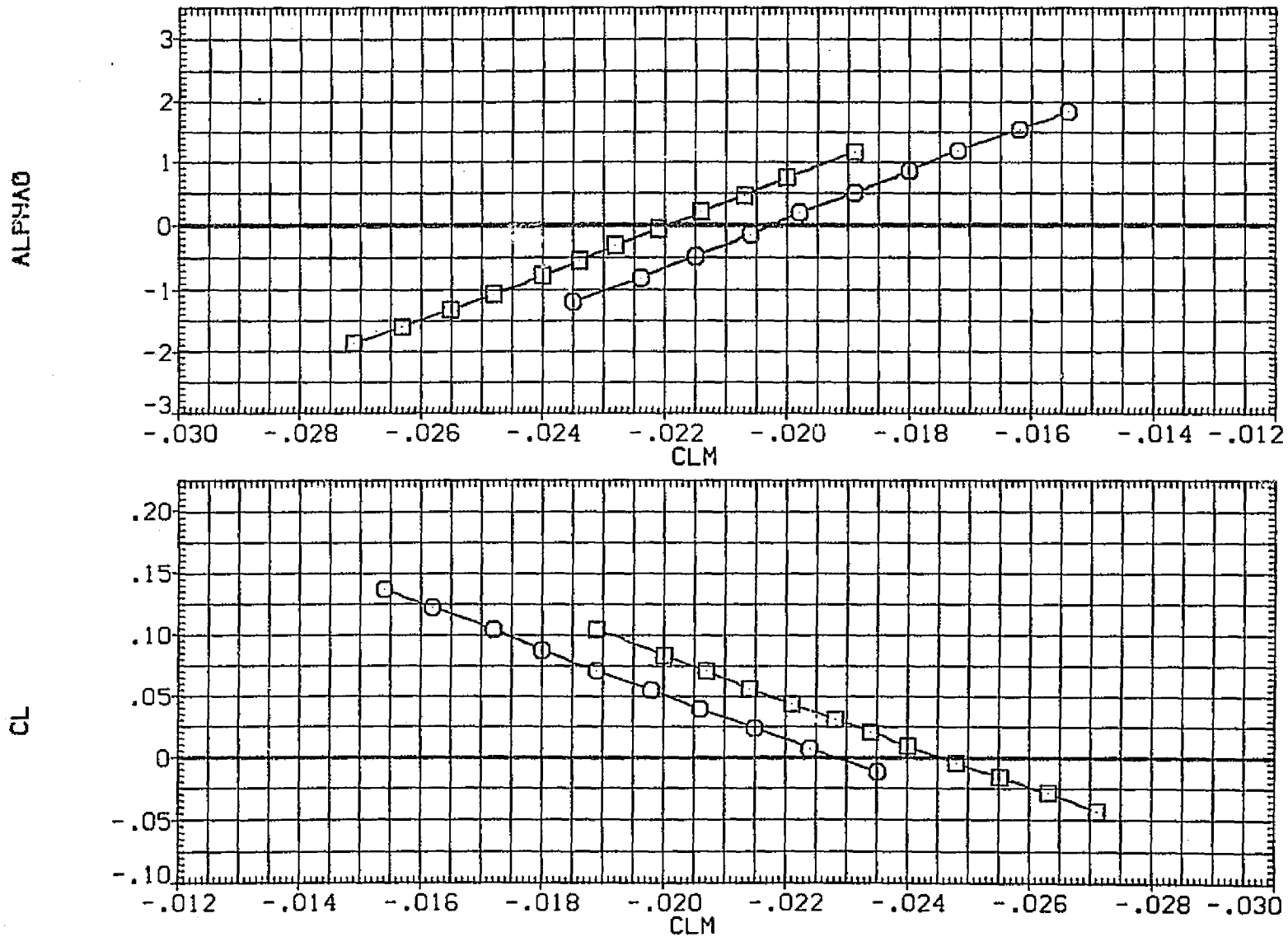


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP003) □ CAG
 (AGP006) □ CAG

BETA PHI ELEVON WINGHT
 ORBFN24/28 .000 .000 5.000 48.000
 ORBFN24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

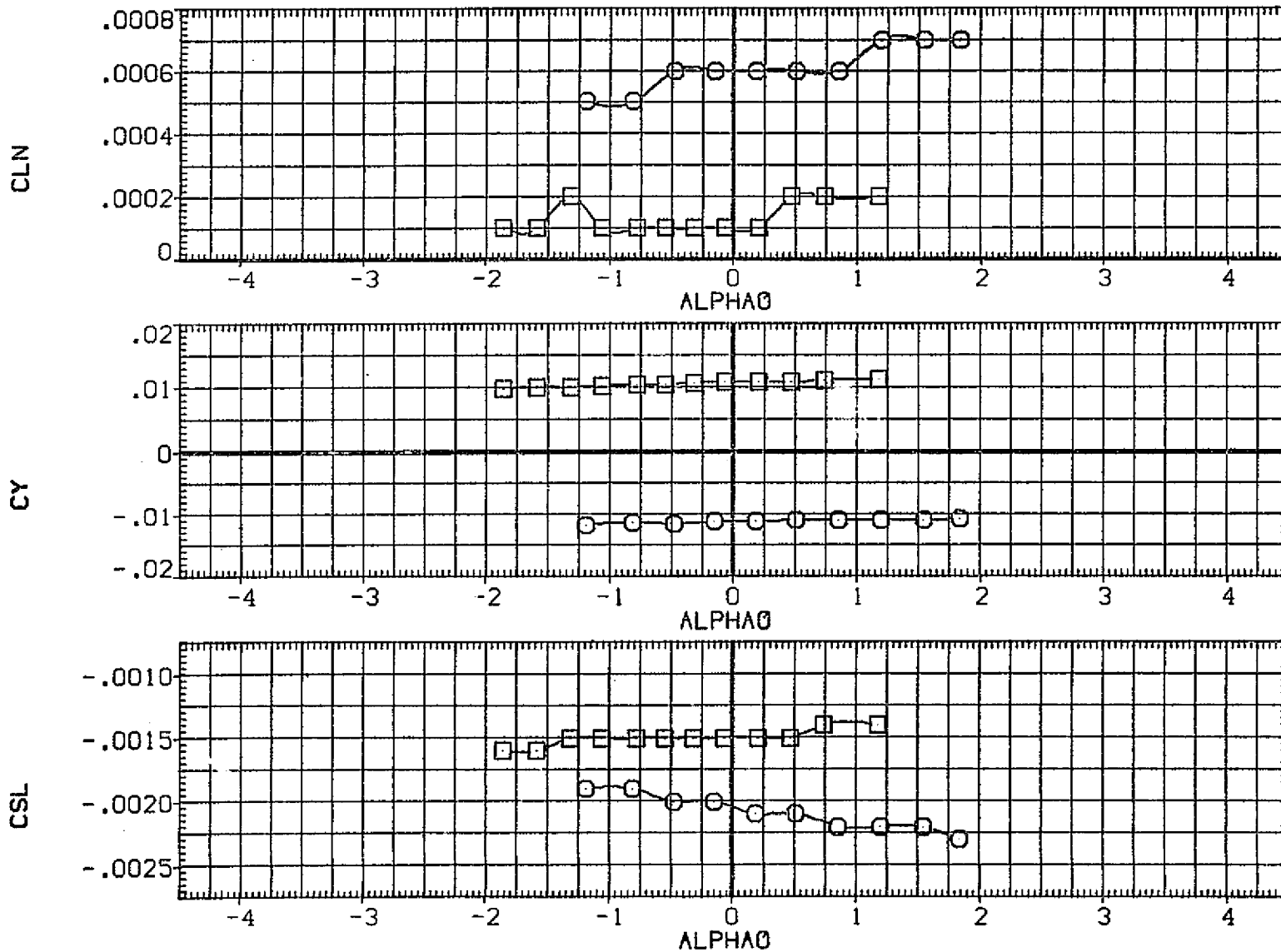


FIG. 8 ORBITER ALONE, UPFLOW CORRECTION, WING AT 48 INCHES
 (O)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) ○ CAB
 (AGP007) □ CAB

ORBFBN24/28 BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 57.000
 ORBFBN24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

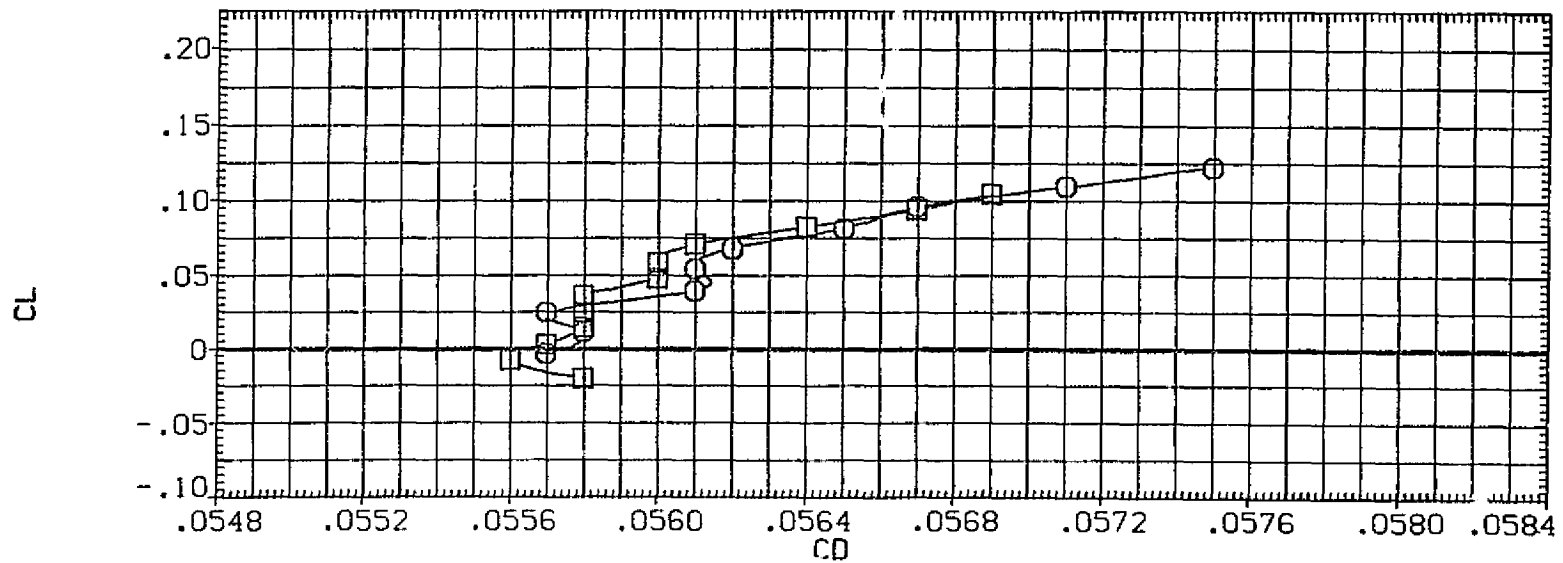
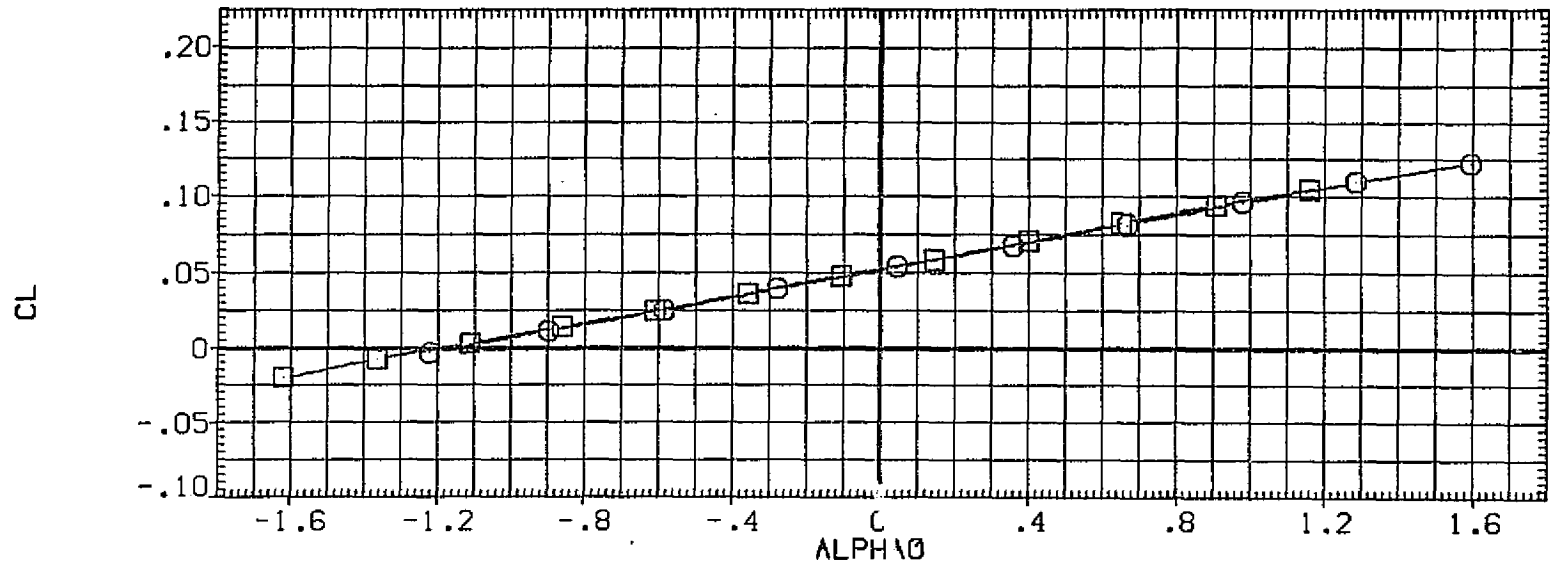


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) ○ CA6
 (AGP007) □ CA6

ORBFBN24/28 BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 ØREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

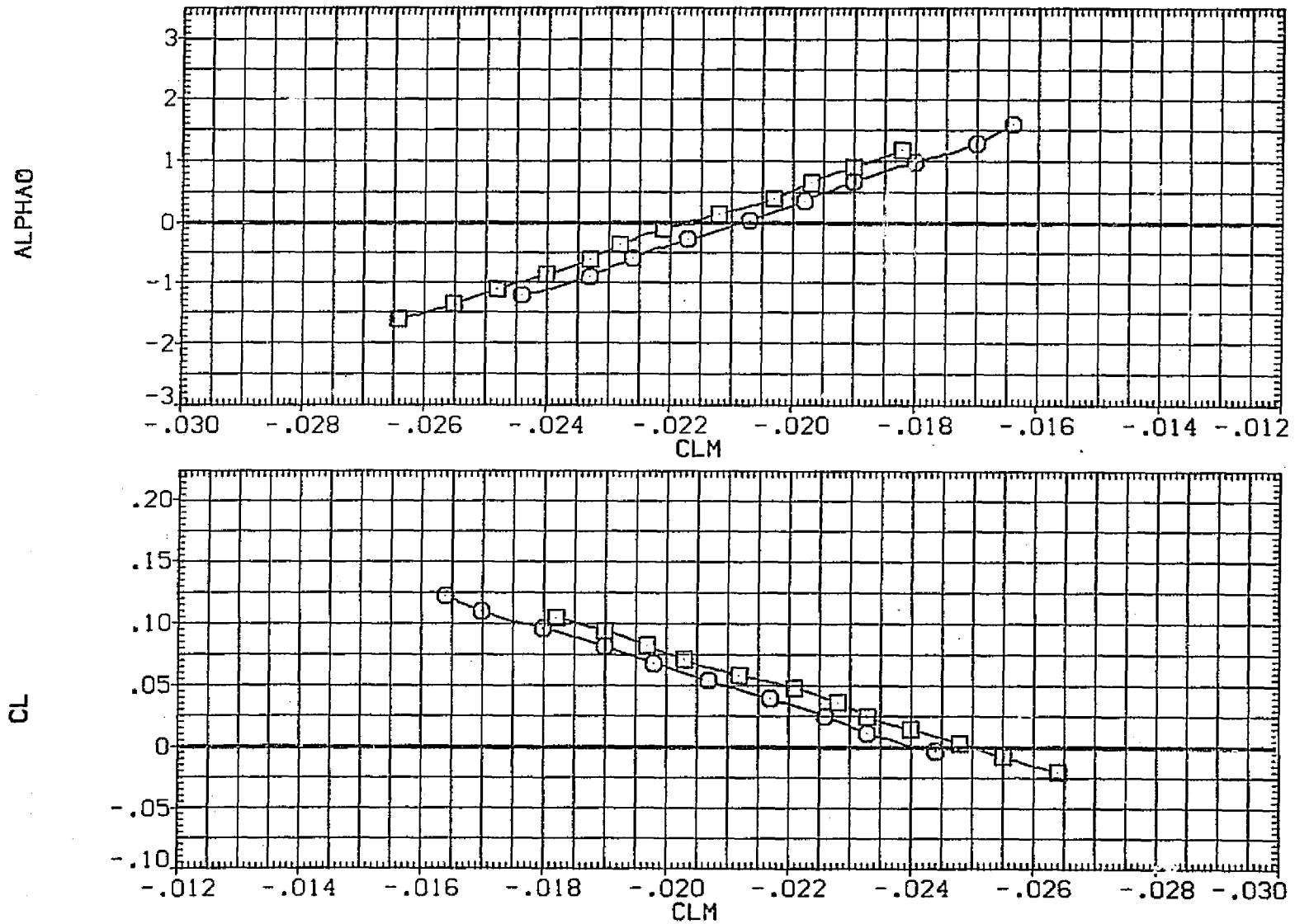


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES
 (A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009) □ CAS
 (AGP007) □ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. XO
 YMRP .0000 IN. YO
 ZMRP 375.0000 IN. ZO
 SCALE .0300

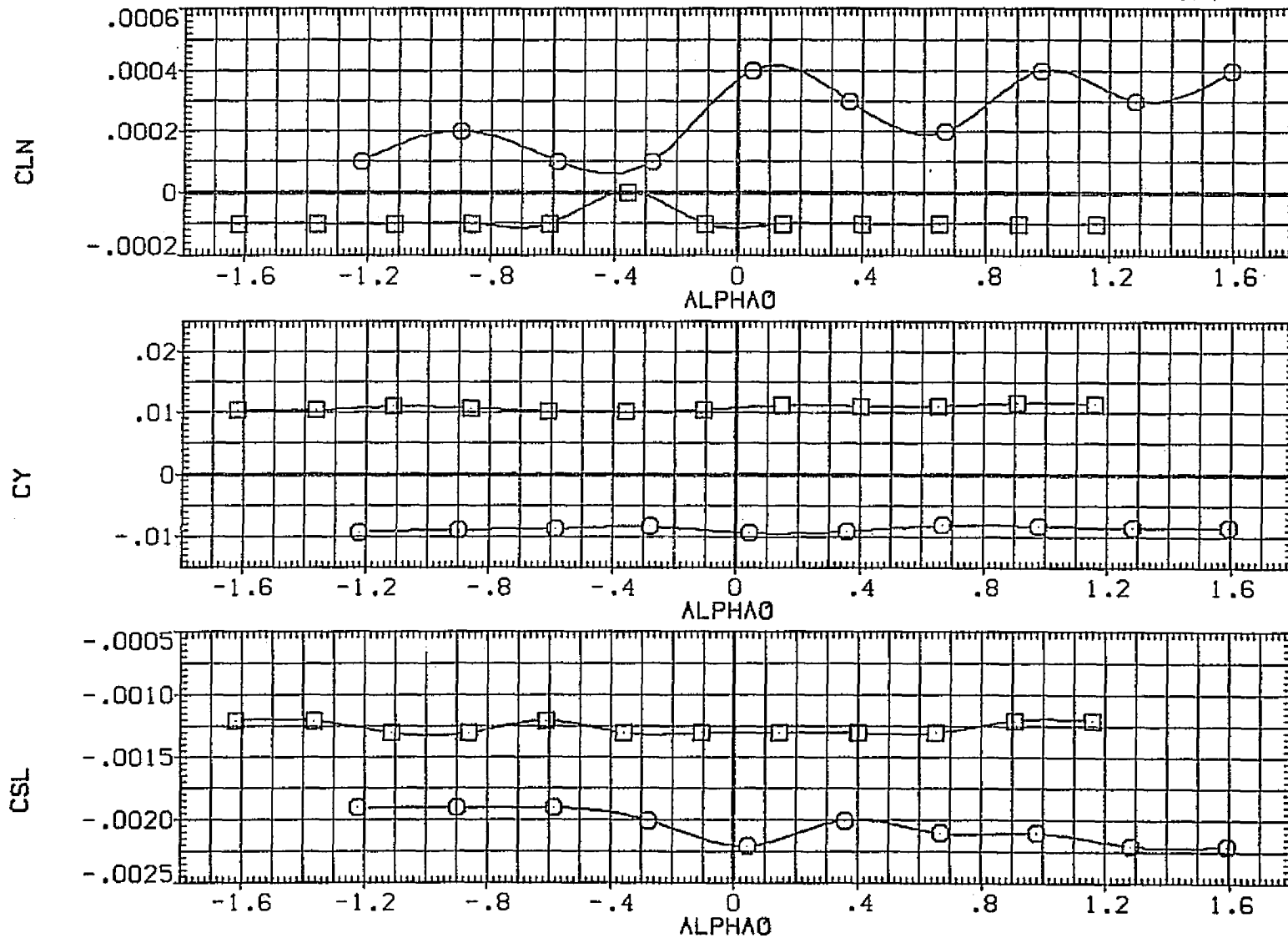


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009) ○ CAS
(AGP007) □ CAS

ORBF8N24/28
ORBF8N24/28

BETA PHI ELEVON WINGHT
.000 .000 5.000 57.000
.000 180.000 5.000 57.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6700 IN.
XMRP 1109.0000 IN. X0
YMRP .0000 IN. Y0
ZMRP 375.0000 IN. Z0
SCALE .0300

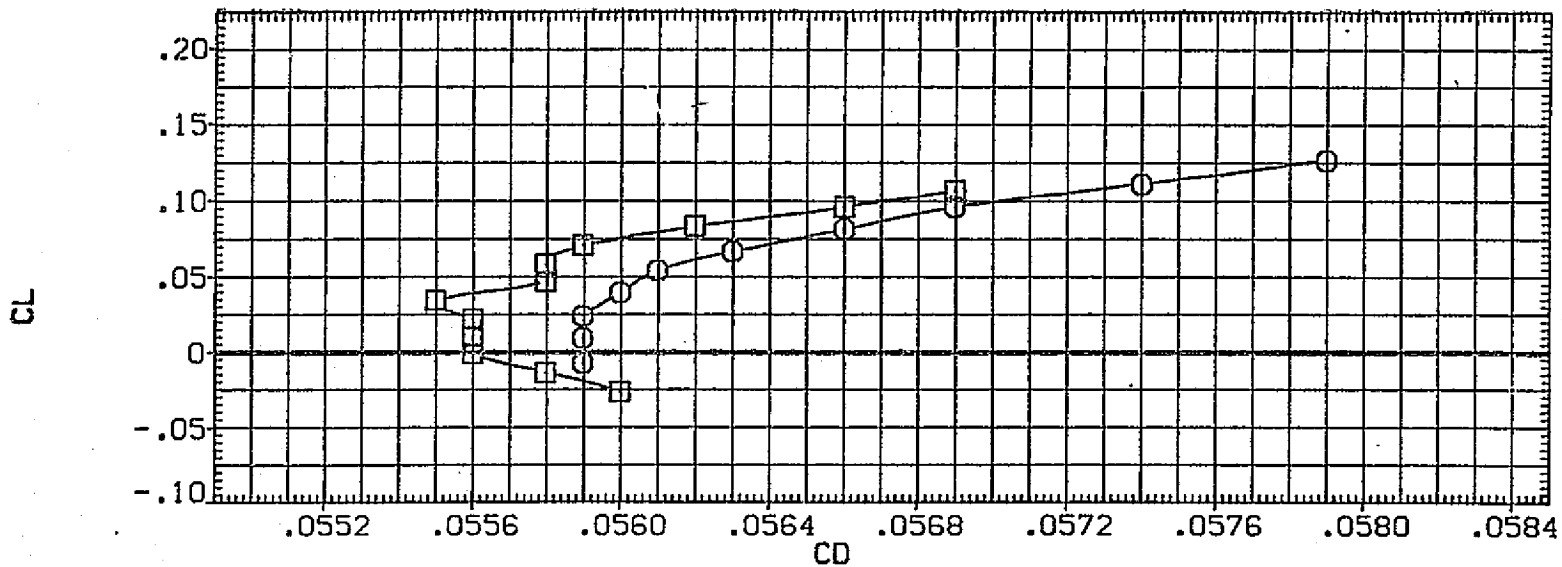
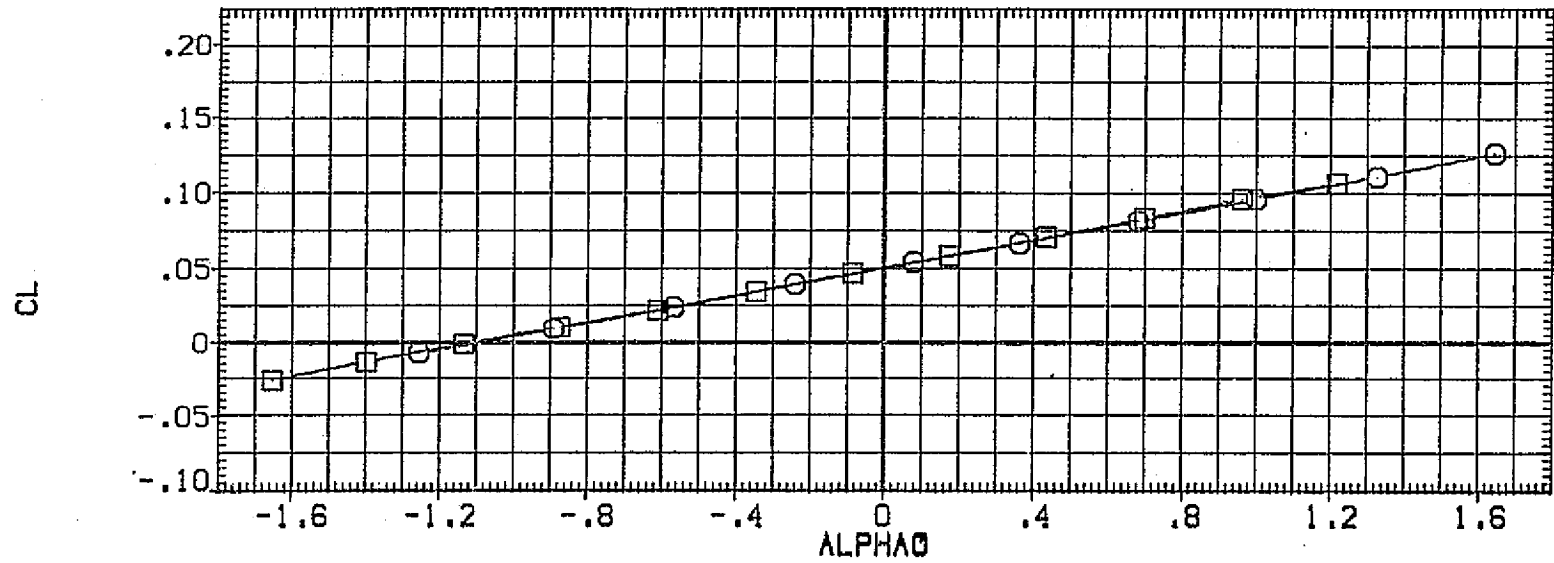


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009) □ CAG
 (AGP007) □ CAG

BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 57.000
 ORBFBN24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

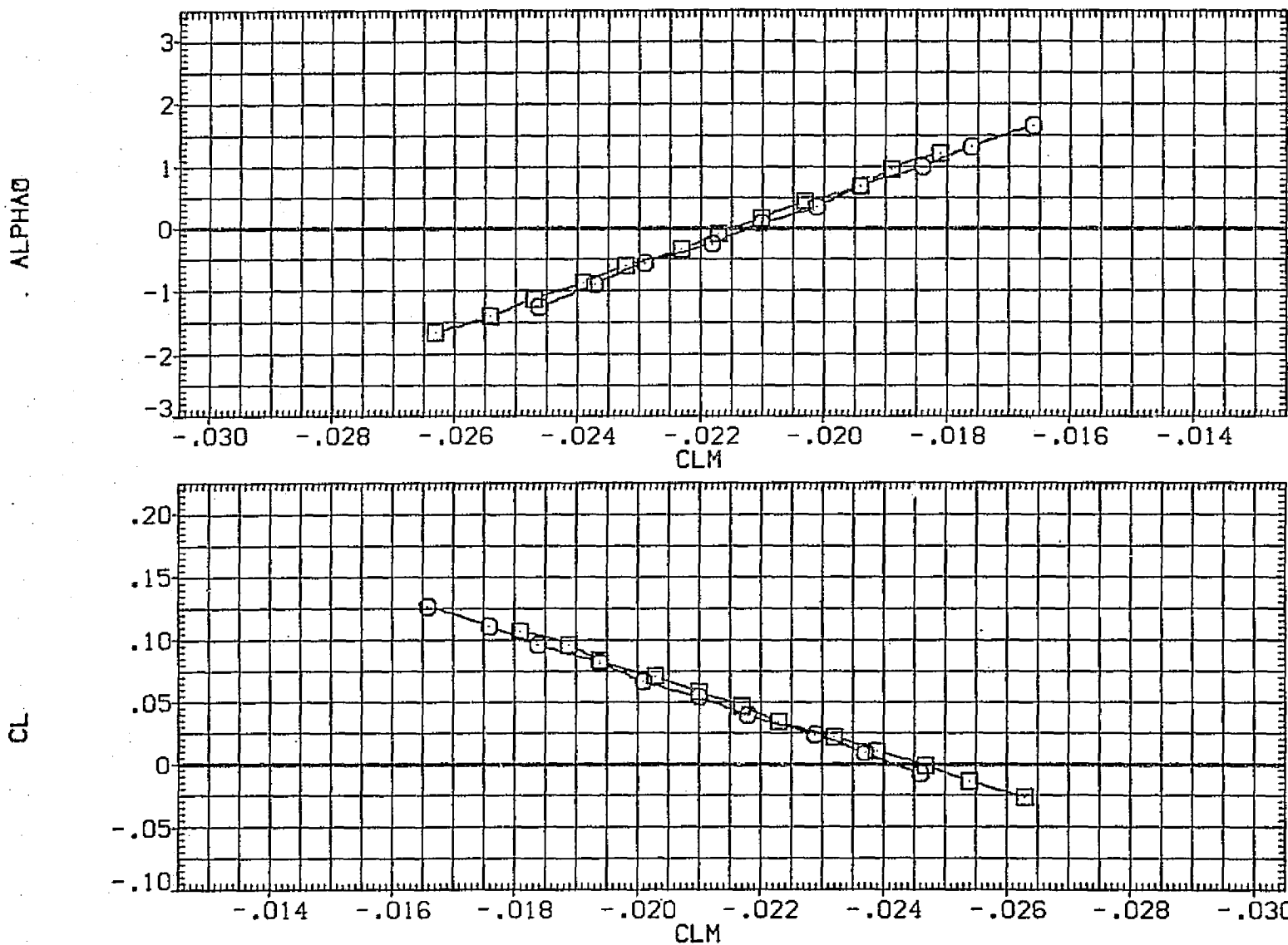


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) □ CA6
 (AGP007) ○ CA6

BETA PHI ELEVON WINGHT
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

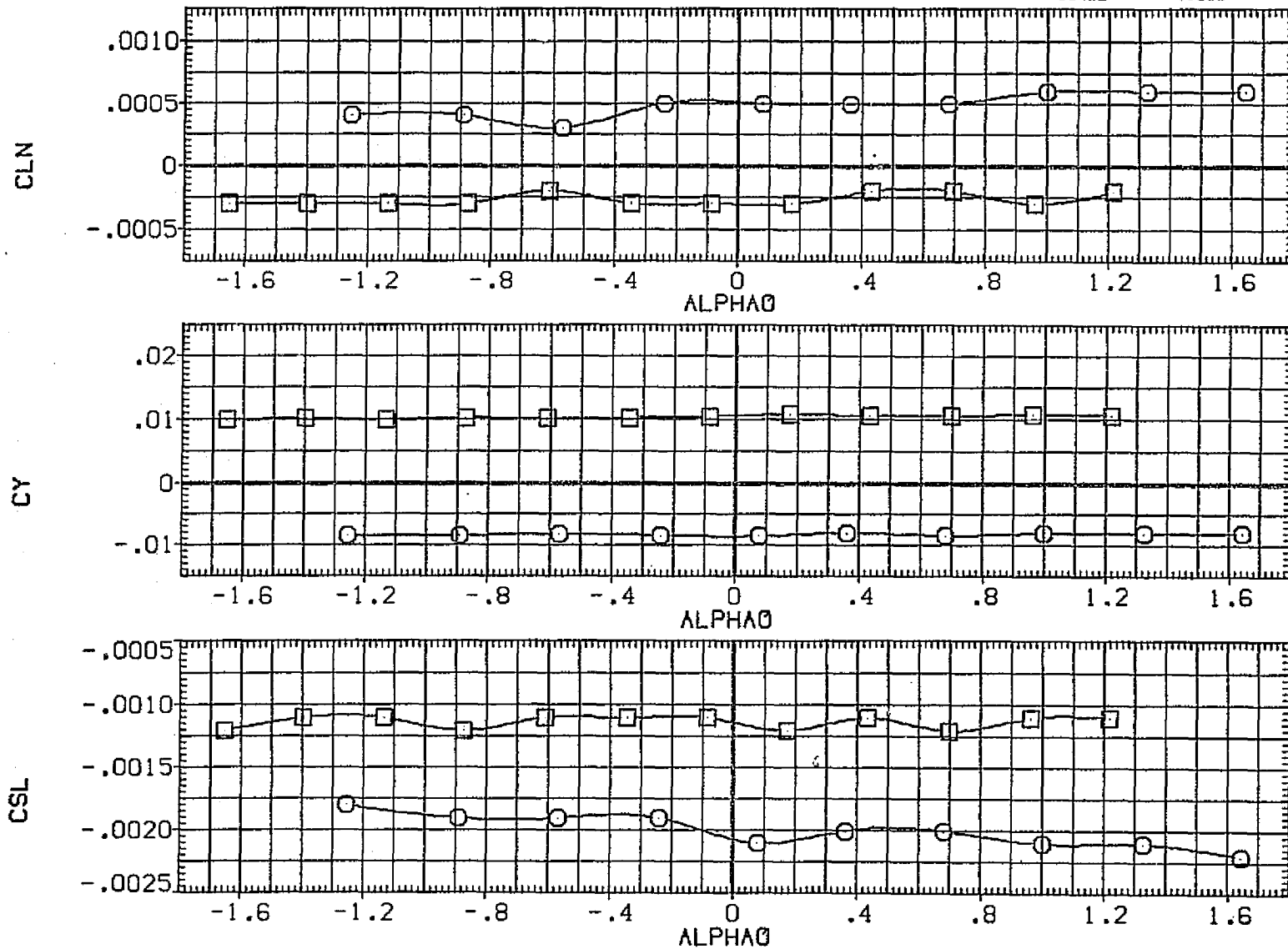


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES
 (B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009) □ CAS
 (AGP007) □ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

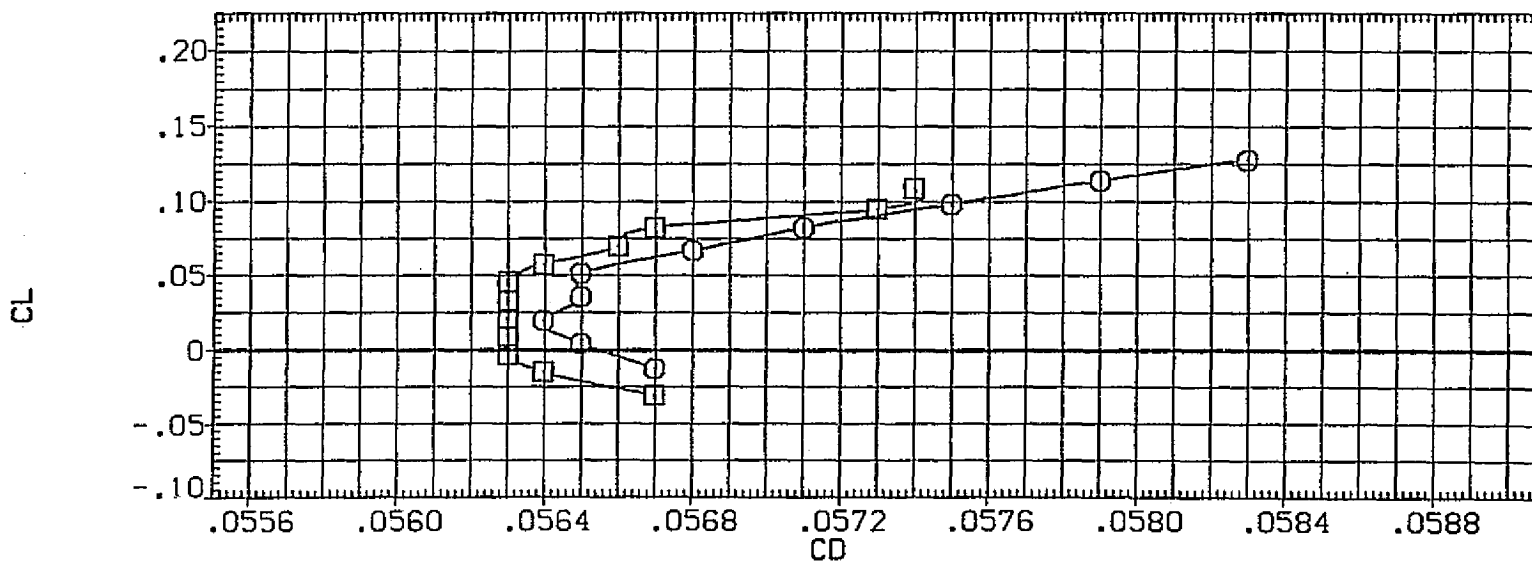
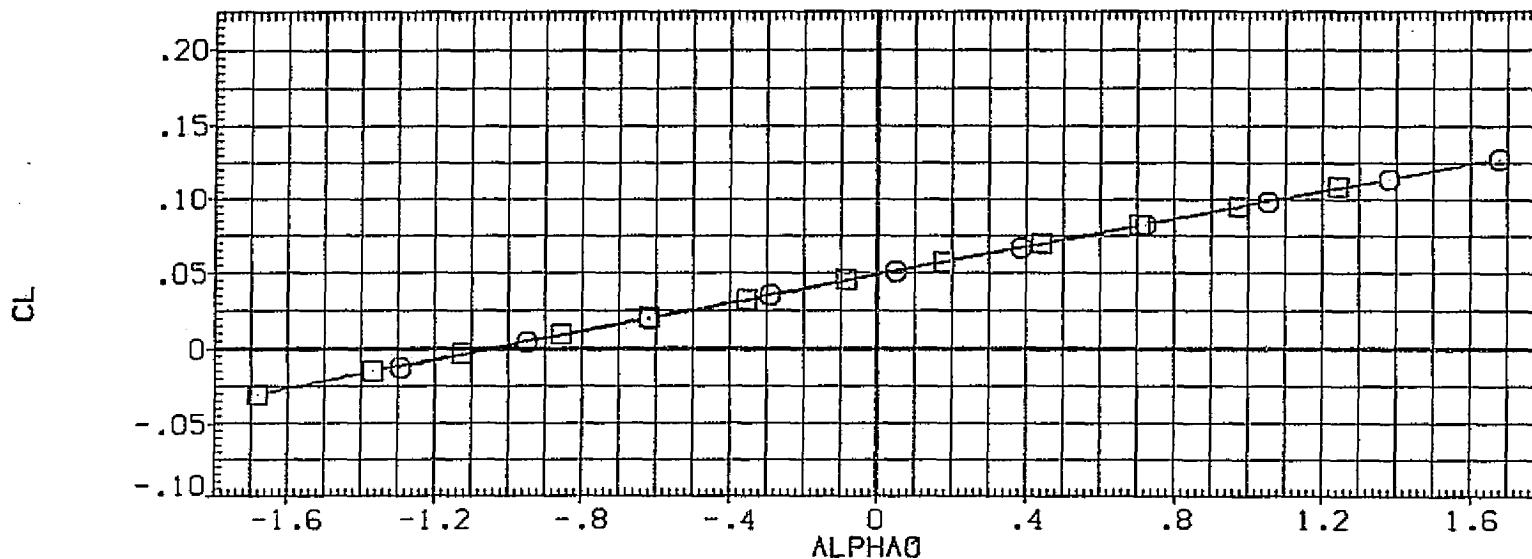


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) ○ CA6
 (ASP007) □ CA6

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

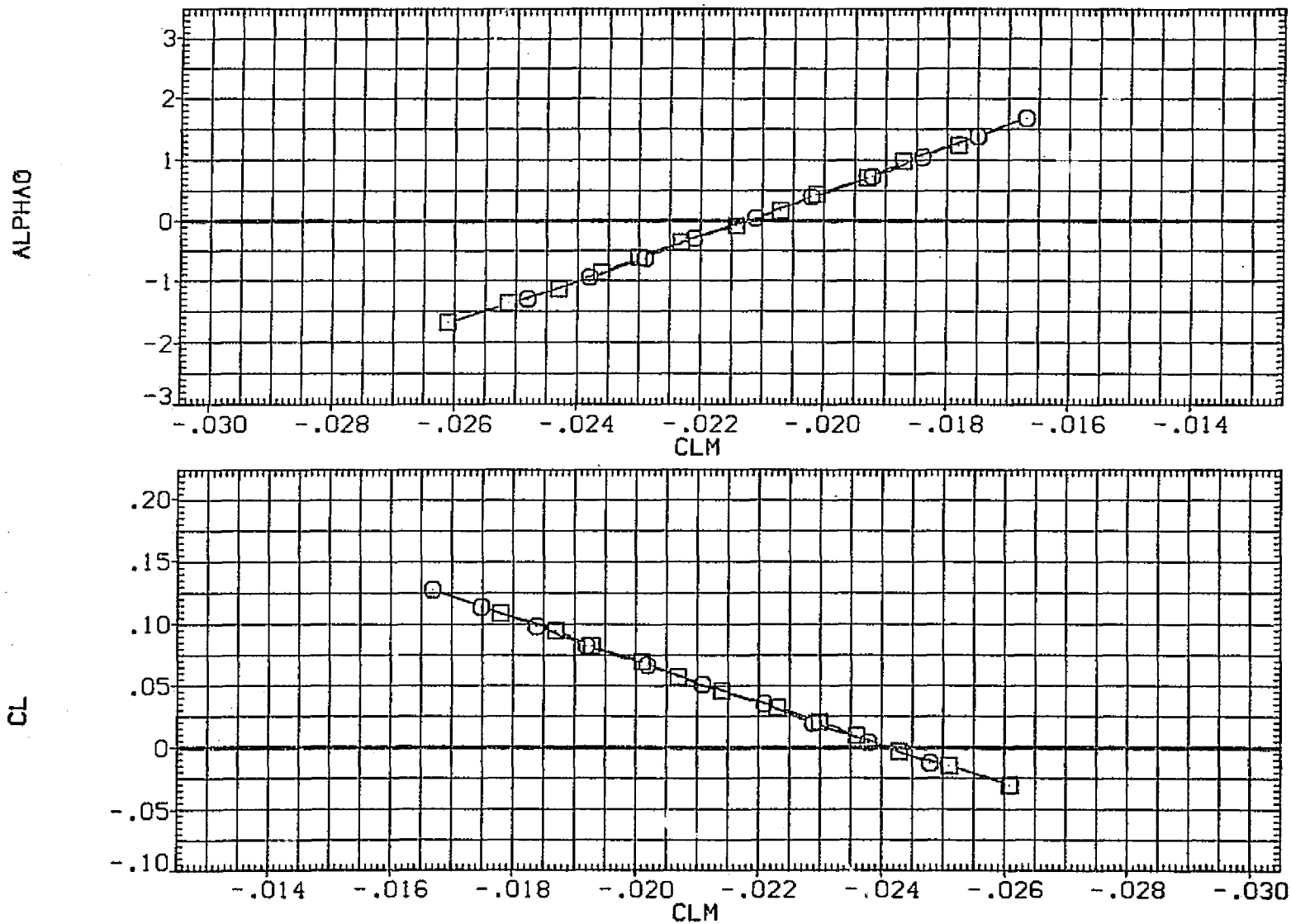


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) □ CAS
 (AGP007) ○ CAS

	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
ORBF8N24/28	.000	.000	5.000	57.000	SREF	2690.0000 SQ.FT.
ORBF8N24/28	.000	180.000	5.000	57.000	LREF	474.8000 IN.
					BREF	936.6700 IN.
					XMRP	1109.0000 IN. X0
					YMRP	.0000 IN. Y0
					ZMRP	375.0000 IN. Z0
					SCALE	.0300

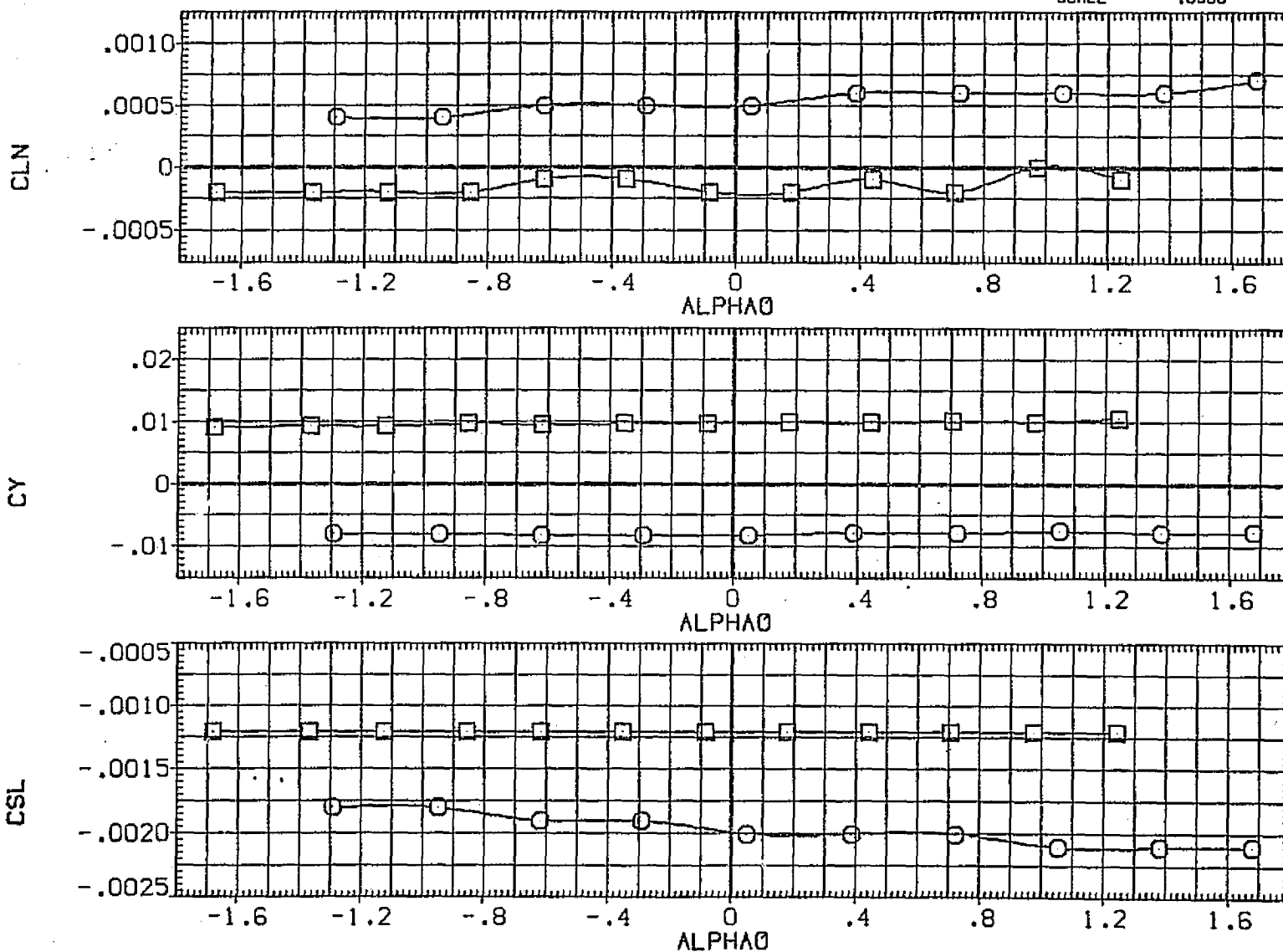


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009) □ CAS
(AGP007) ○ CAS

ORBF8N24/28
ORBF8N24/28

BETA	PHI	ELEVON	WINGHT
.000	.000	5.000	57.000
.000	180.000	5.000	57.000

REFERENCE INFORMATION		
SREF	2690.0000	SG.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0300	

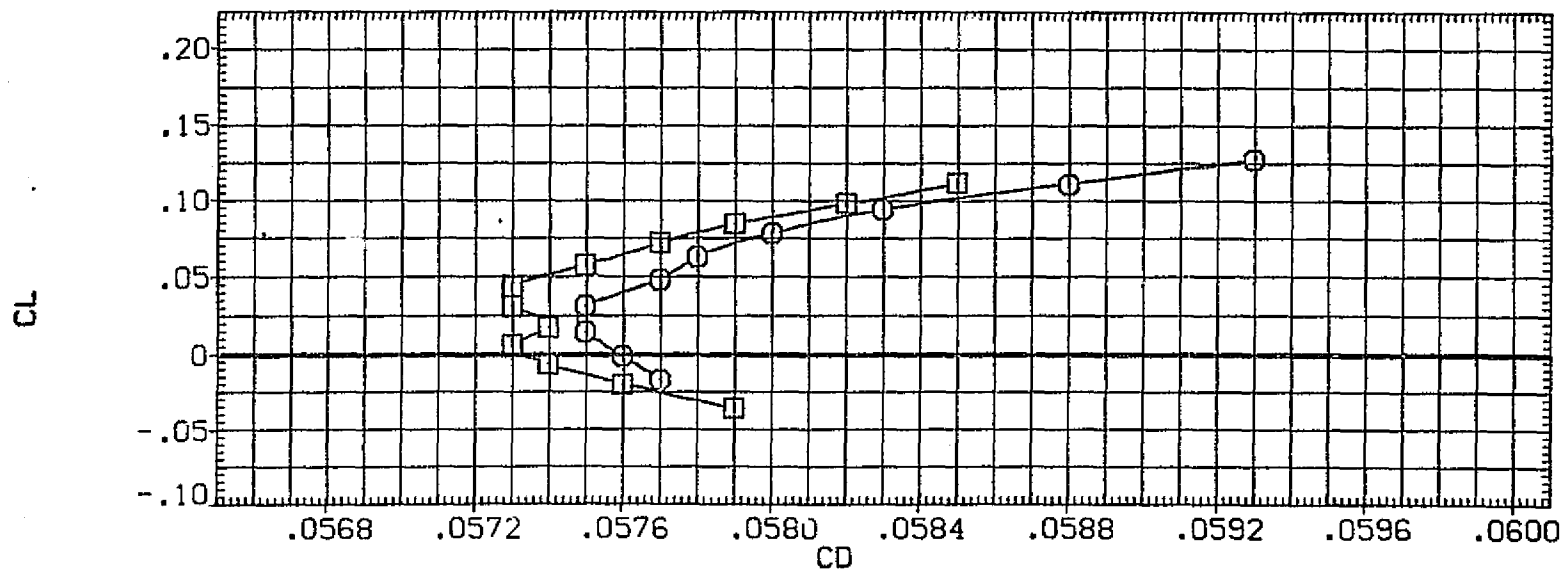
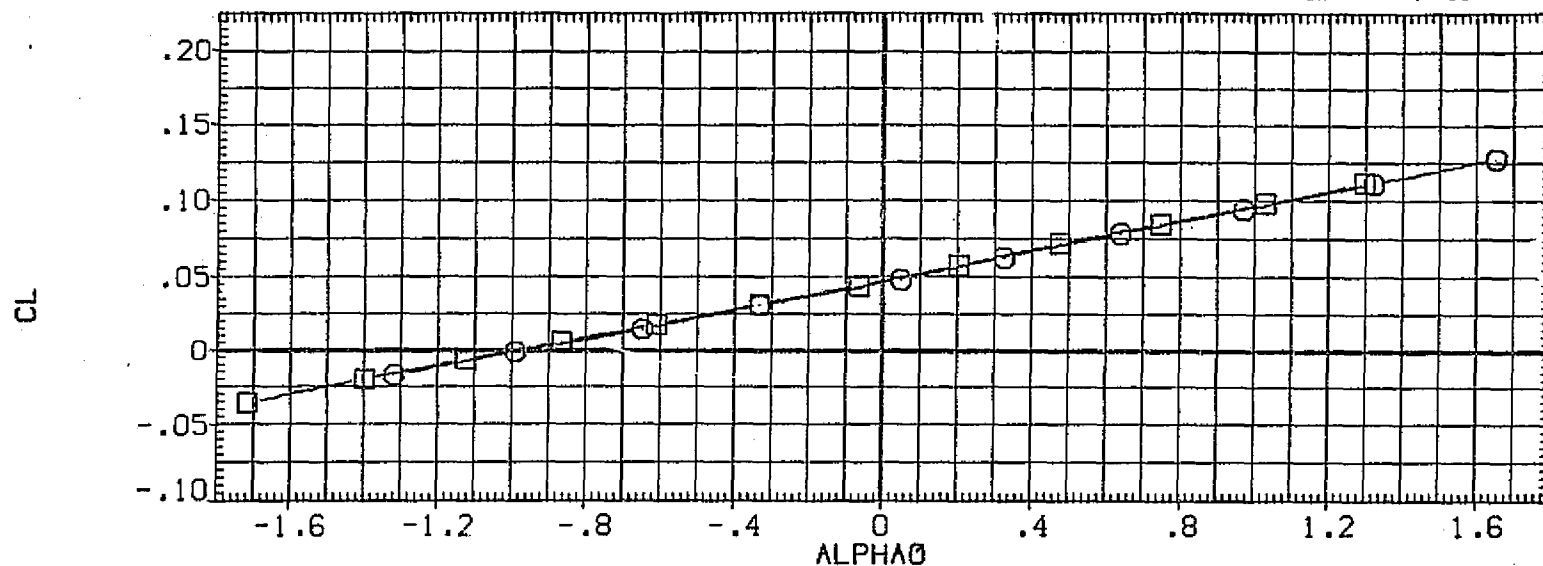




FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP009)  CAS
 (AGP007)  CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

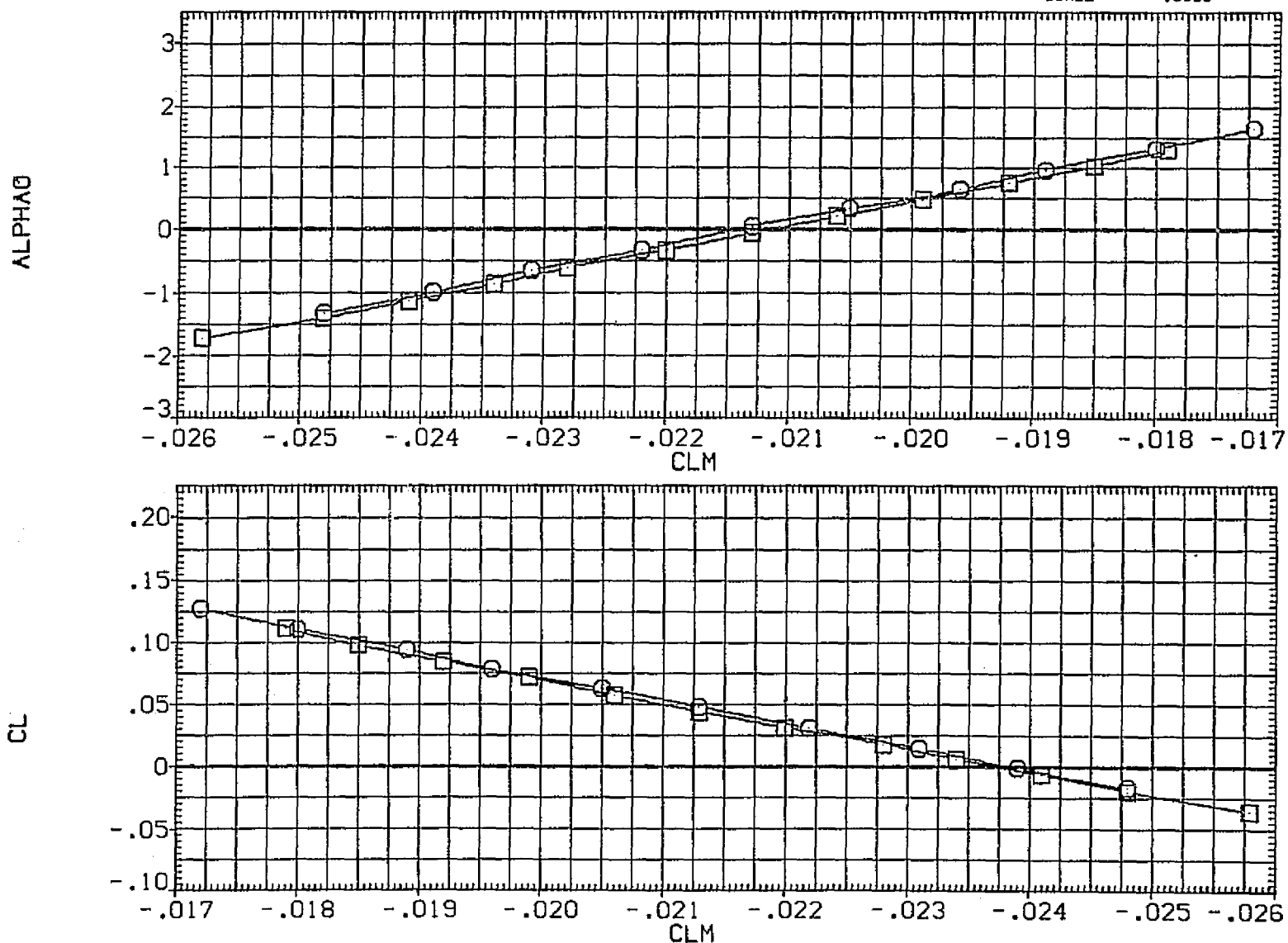


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP009) □ CA6
 (AGP007) ○ CA6

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

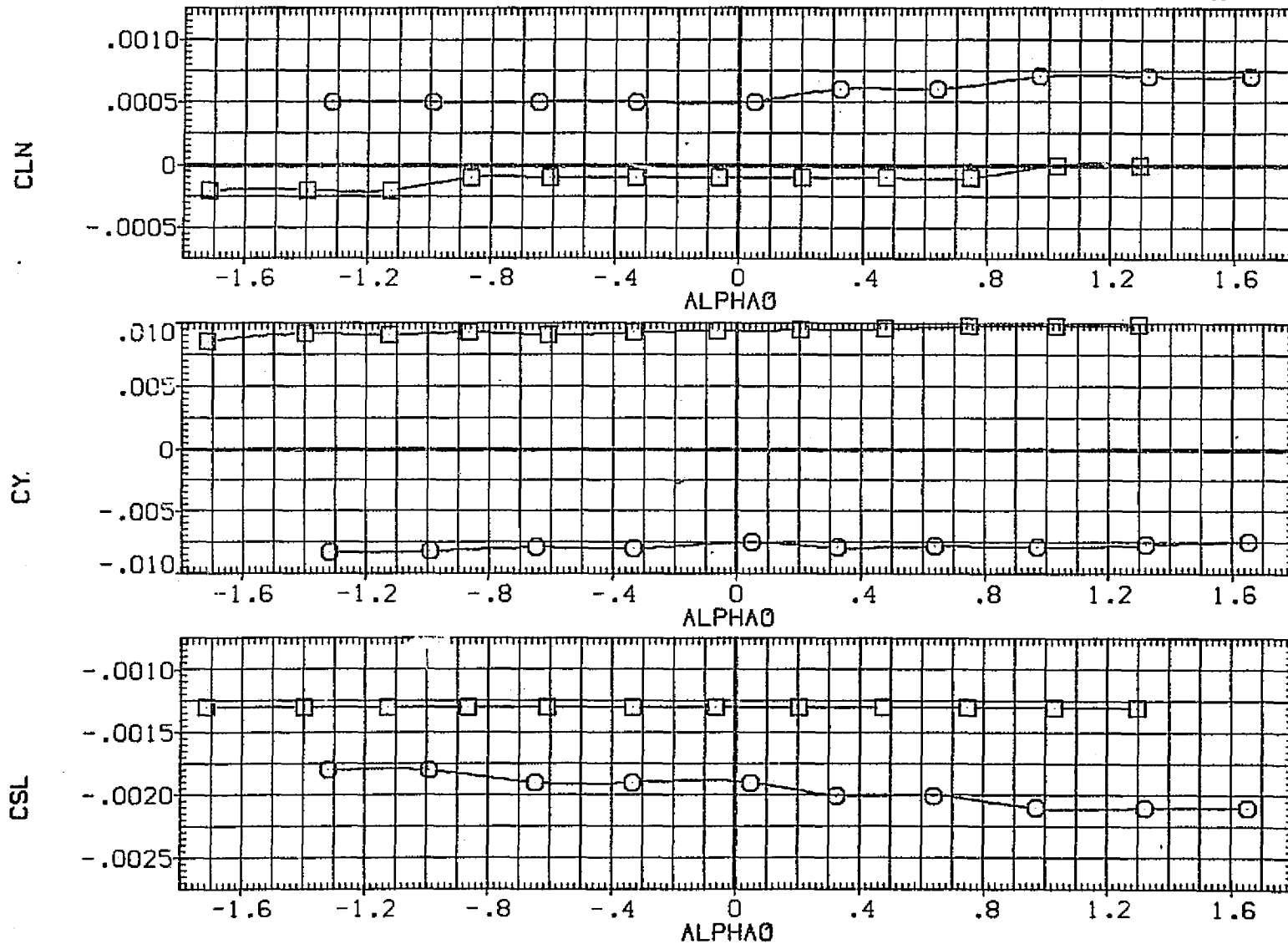


FIG. 9 ORBITER ALONE, UPFLOW CORRECTION, WING AT 57 INCHES
 (D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) □ CA6
 (AGP005) ○ CA6

ORBF0N24/28
 ORBF0N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1103.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

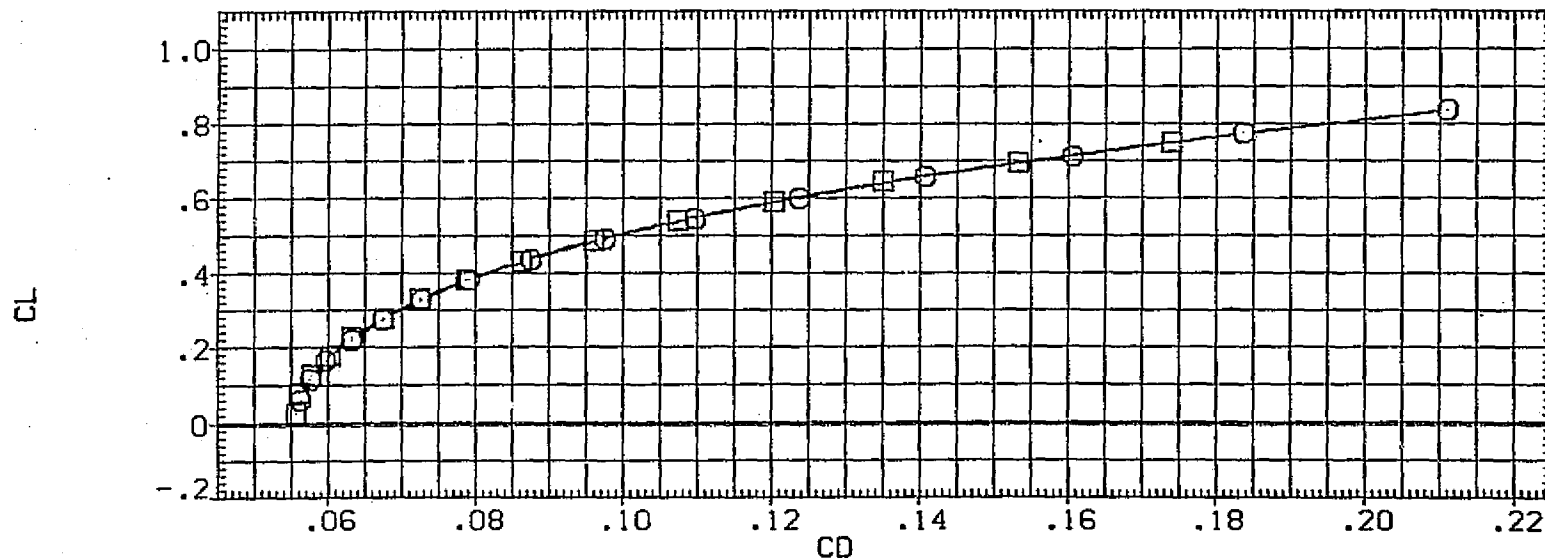
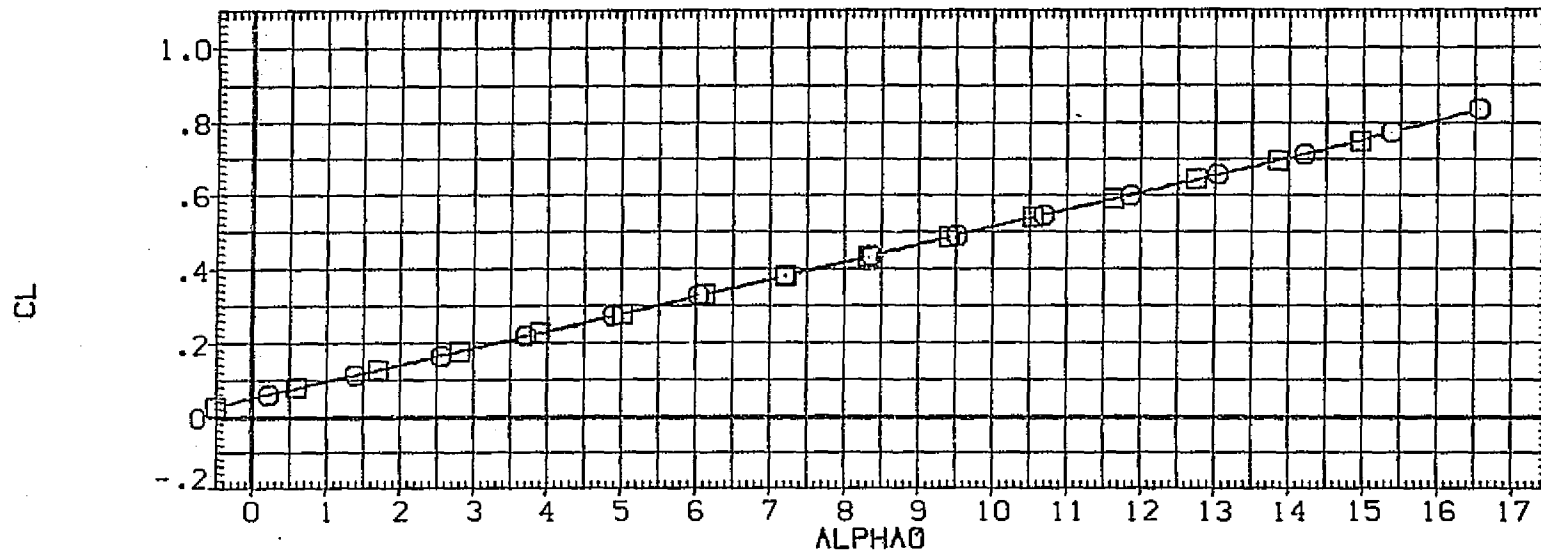


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(A) MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) ○ CA6
 (AGP005) □ CA6

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

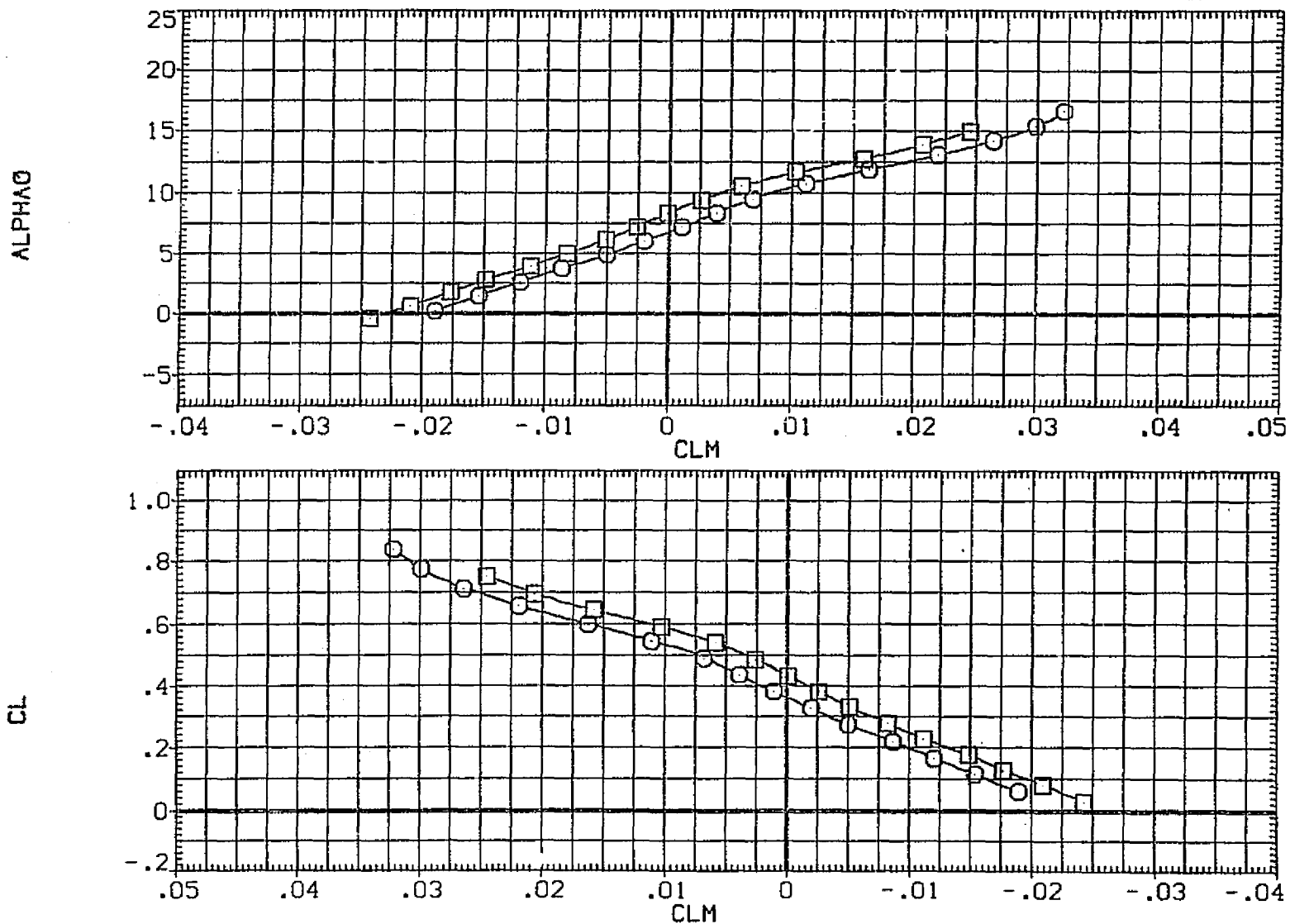


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) ○ CAS
 (AGP005) □ CAS

	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
ORBF8N24/28	.000	.000	5.000	48.000	SREF	2690.0000 SQ.FT.
ORBF8N24/28	.000	180.000	5.000	48.000	LREF	474.8000 IN.
					BREF	936.6700 IN.
					XMRP	1109.0000 IN. X0
					YMRP	.0000 IN. Y0
					ZMRP	375.0000 IN. Z0
					SCALE	.0300

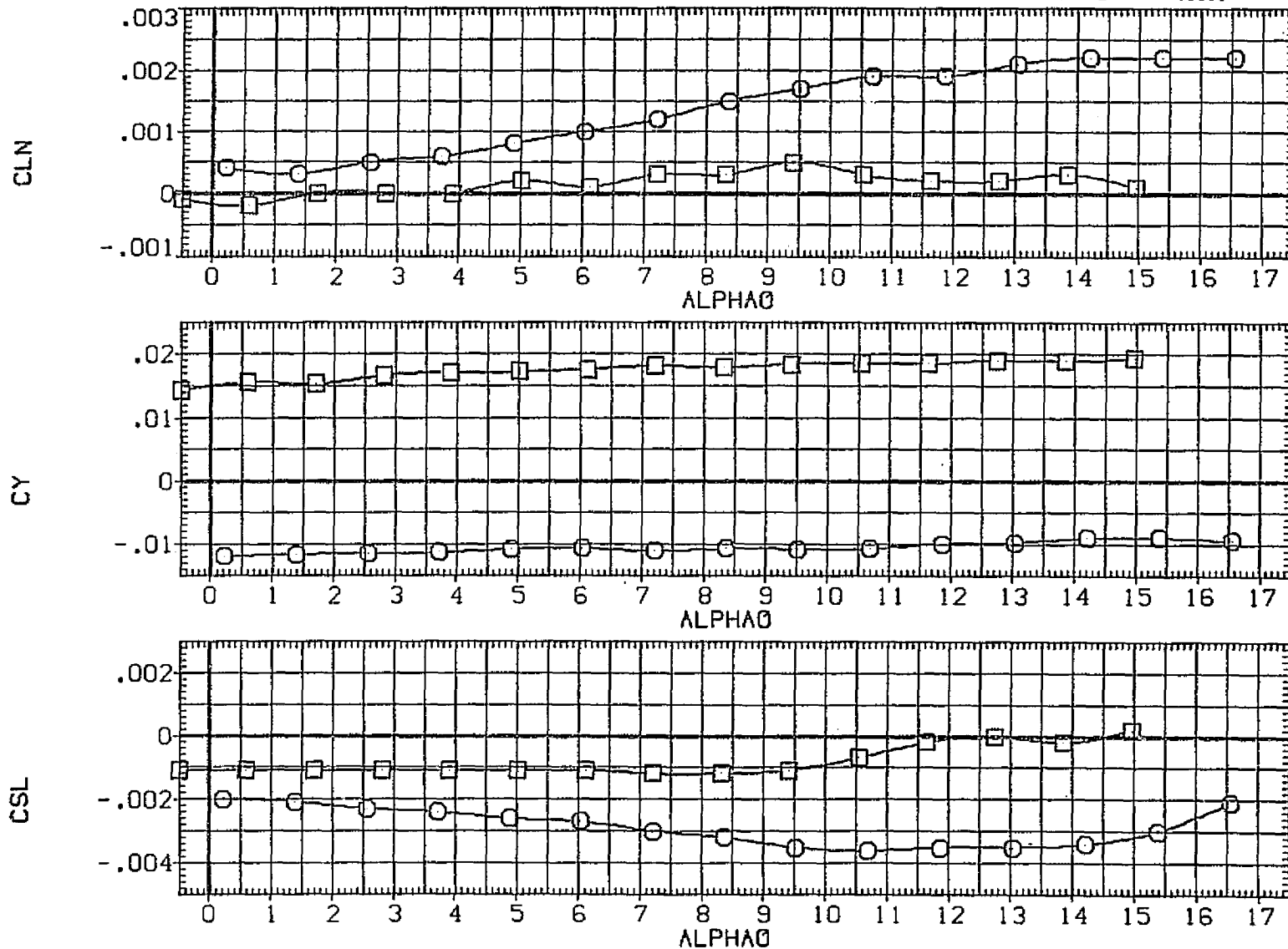




FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(A)MACH = .30

(AGP002)  CA6
 (AGP005)  CA6

ORBF8N24/28 BETA PHI ELEVON WNGHGT
 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

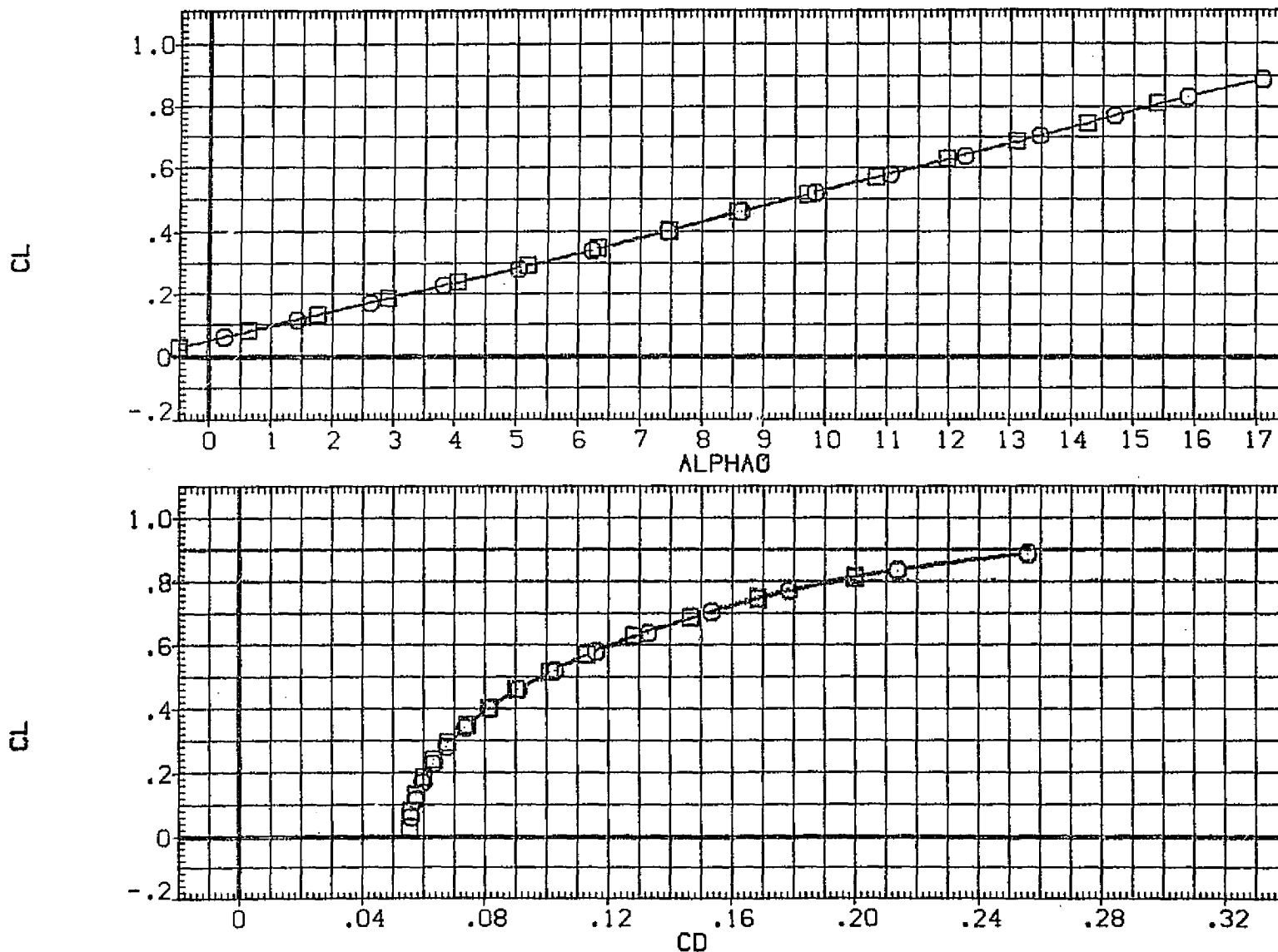


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) □ CAB
 (AGP005) ○ CAB

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

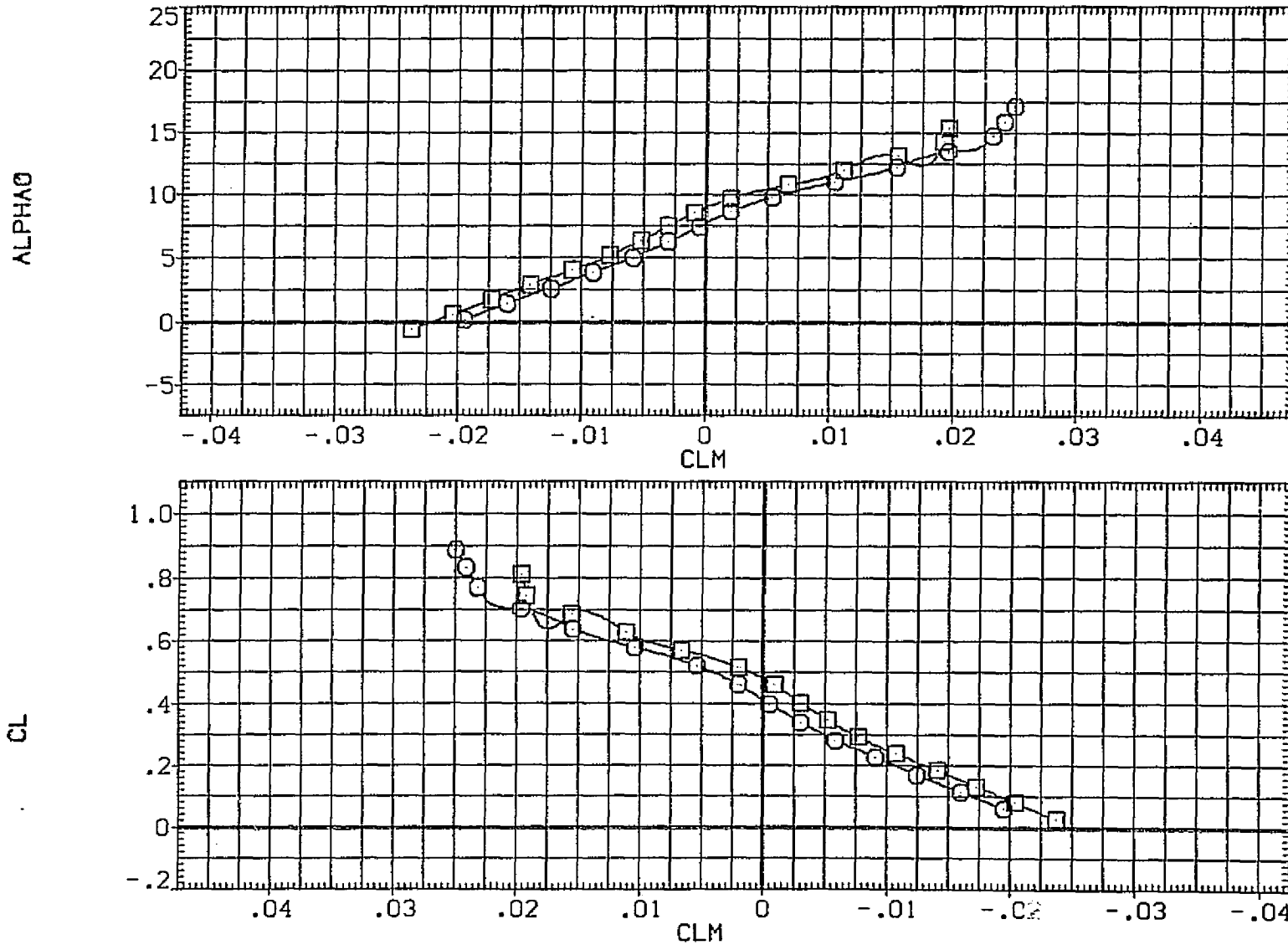


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP002) CA6
(AGP005) CA6

ORBF8N24/28
ORBF8N24/28

BETA PHI ELEVON WNGHGT
.000 .000 5.000 48.000
.000 180.000 5.000 48.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8000 IN.
BREF 936.6700 IN.
XMRP 1109.0000 IN. XO
YMRP .0000 IN. YO
ZMRP 375.0000 IN. ZO
SCALE .0300

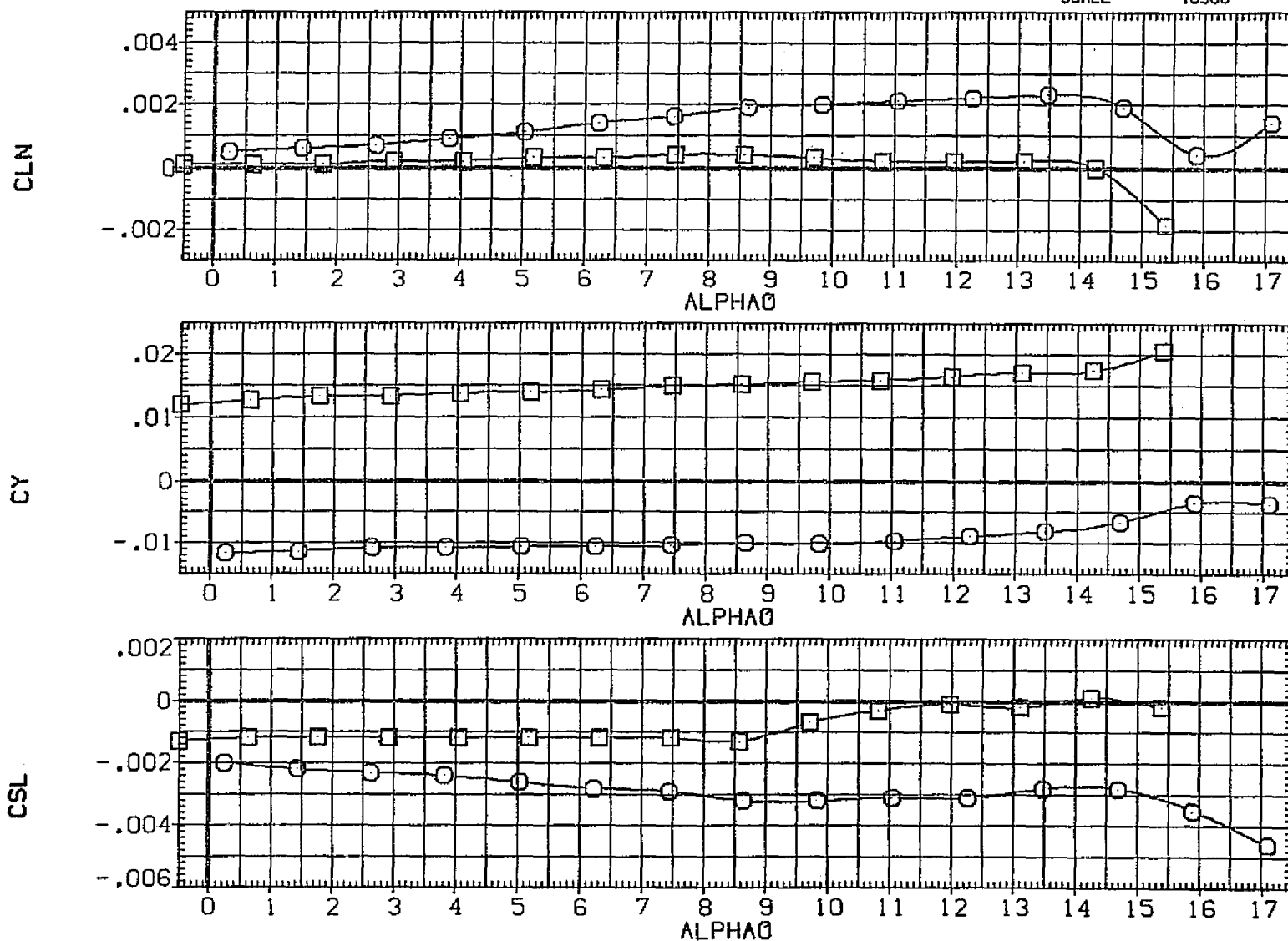


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP002) ○ CAG
 (AGP005) □ CAG

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

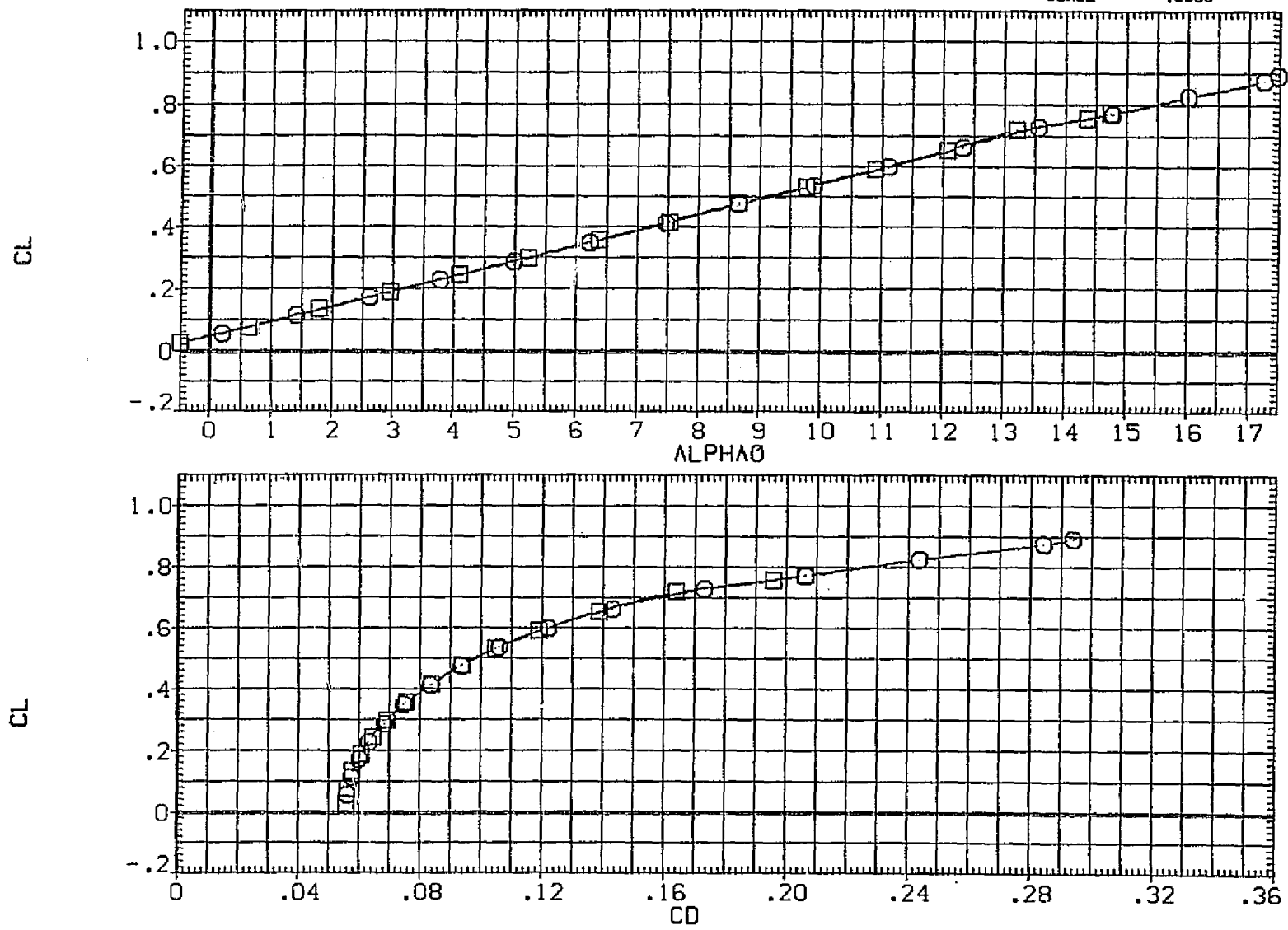


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP002) □ CAS
 (AGP005) ○ CAS

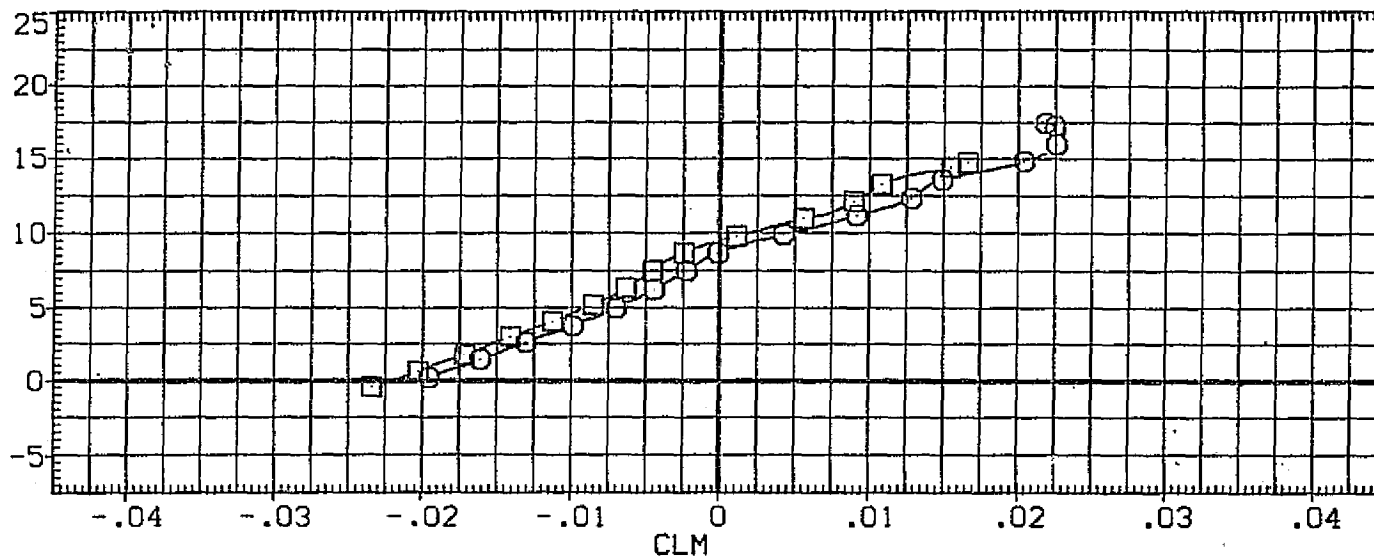
ORBF8N24/28
 ORBF8N24/28

BETA	PHI	ELEVON	WINGHT
.000	.000	5.000	48.000
.000	180.000	5.000	48.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

ALPHA



CL

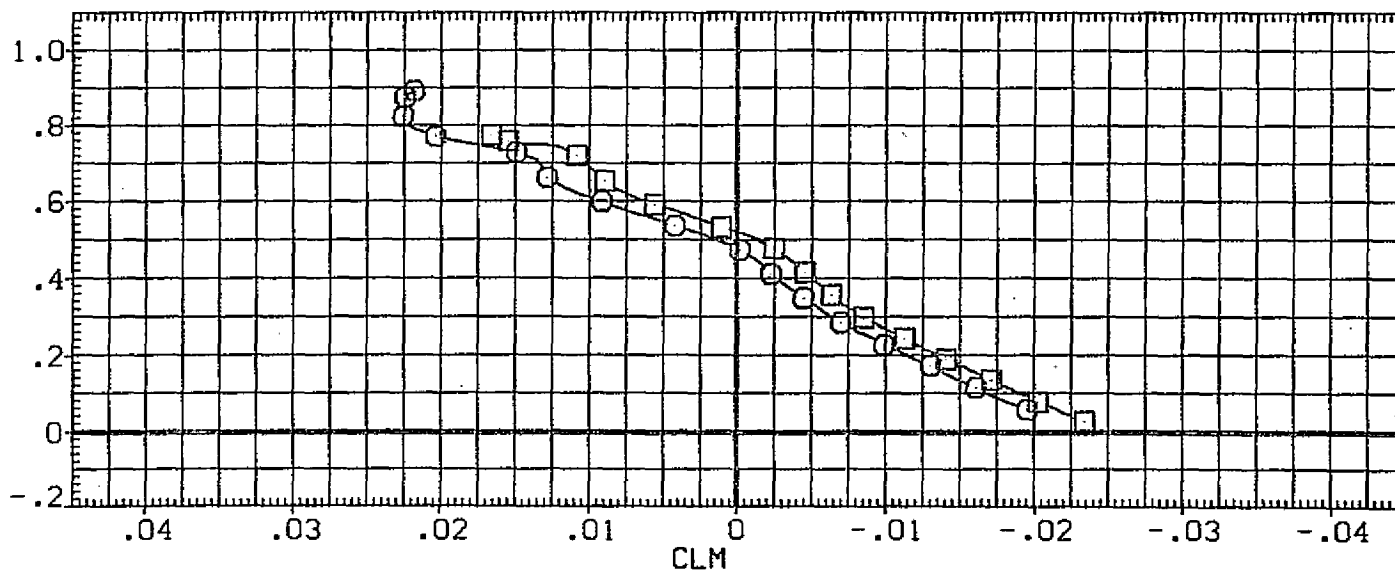




FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(C)MACH = .60

PAGE 44

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP002)  CAS
 (AGP005)  CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

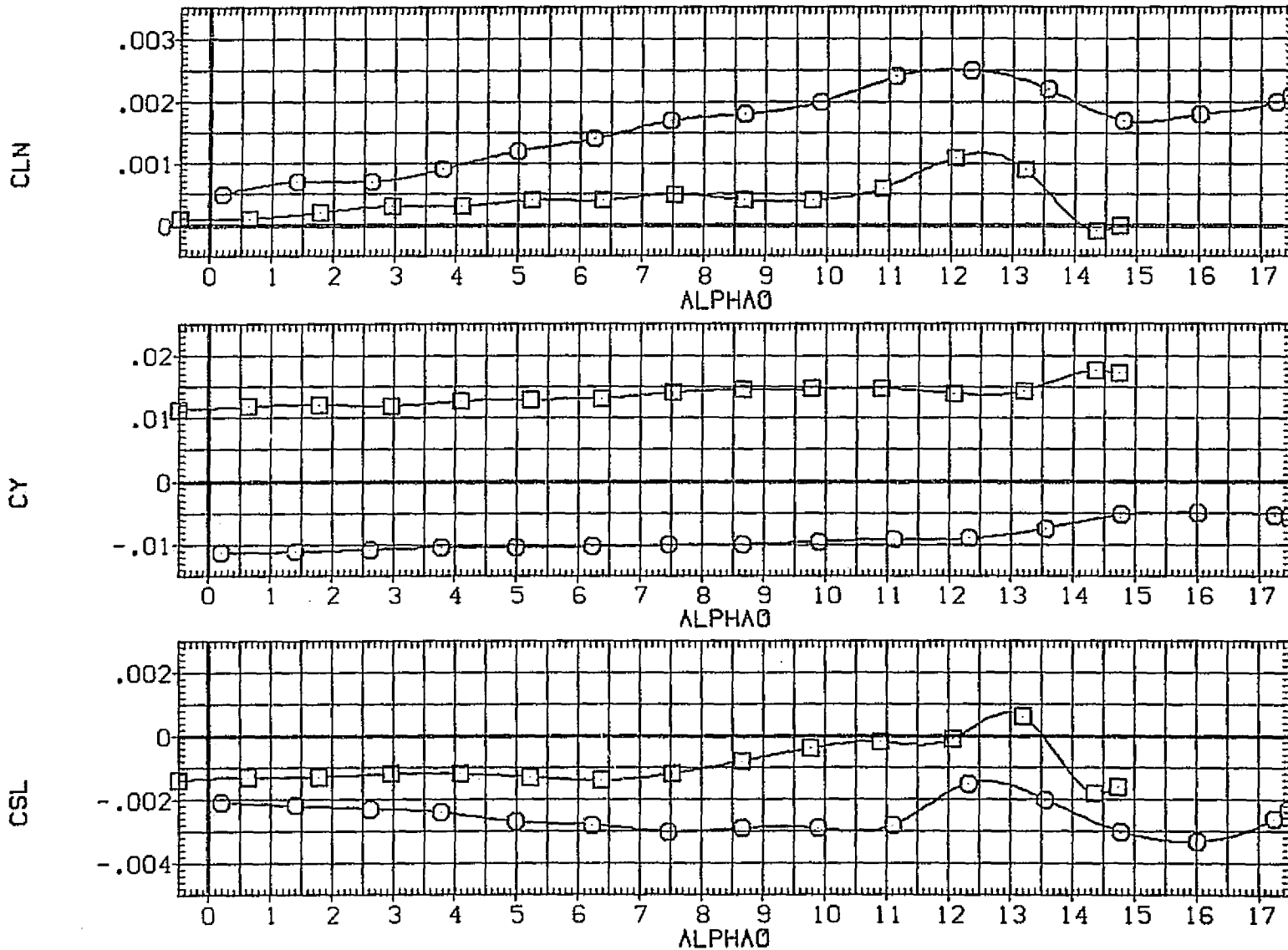




FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002)  CA6
 (AGP005)  CA6

BETA PHI ELEVON WINGHT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

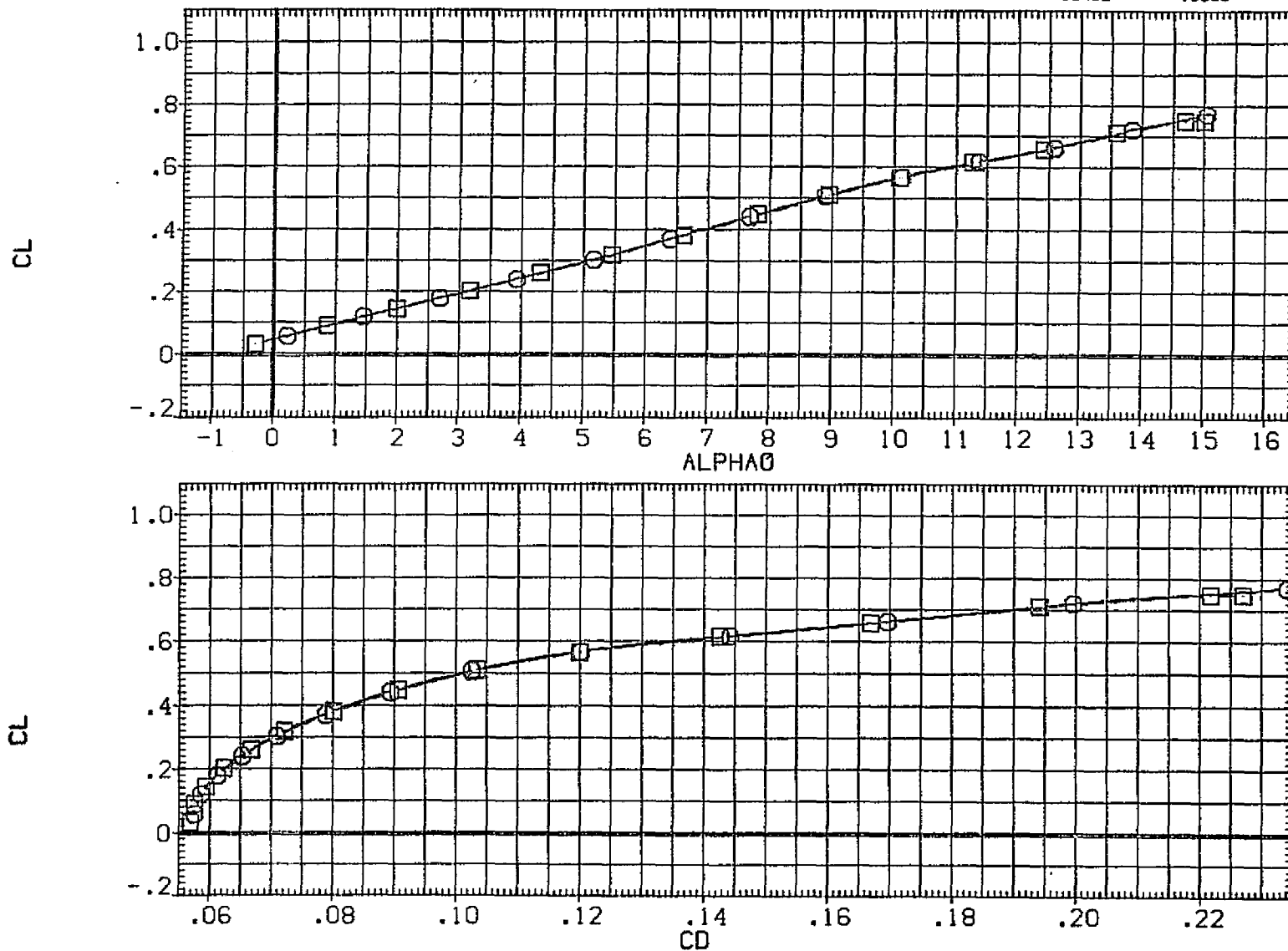


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(CD)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) □ CAS
 (AGP005) ○ CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMHP 1109.0000 IN. X0
 YMHP .0000 IN. Y0
 ZMHP 375.0000 IN. Z0
 SCALE .0300

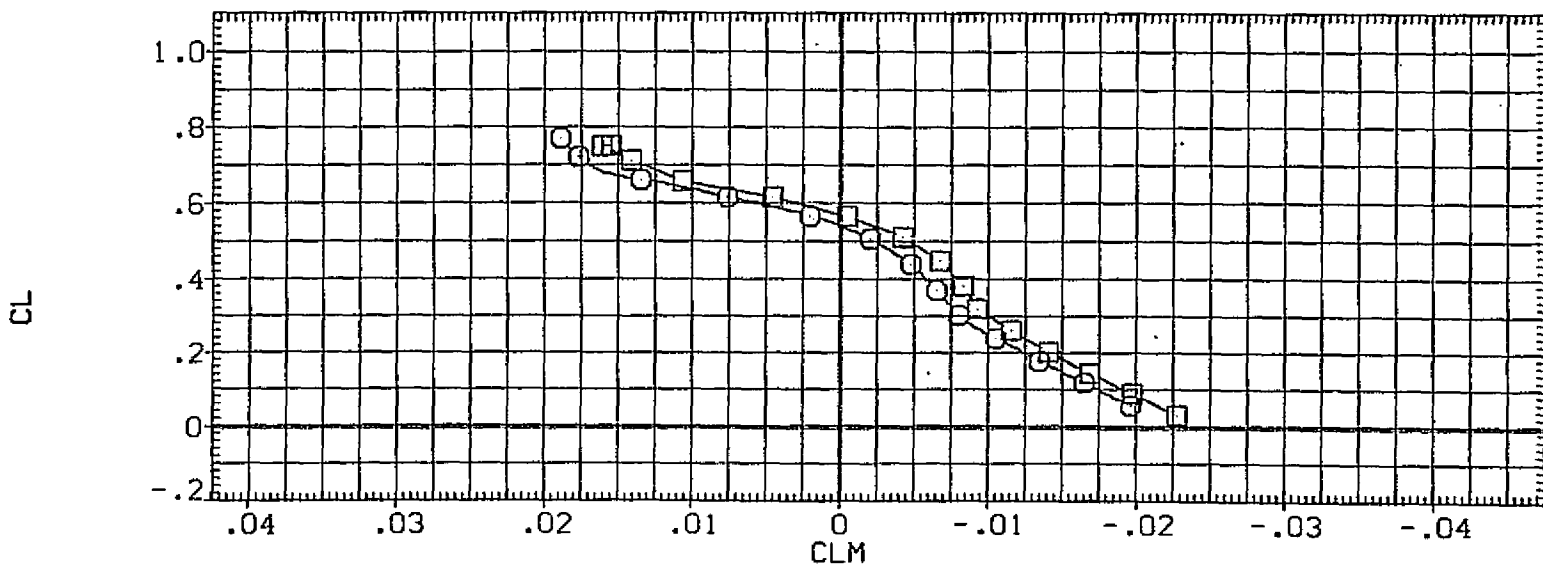
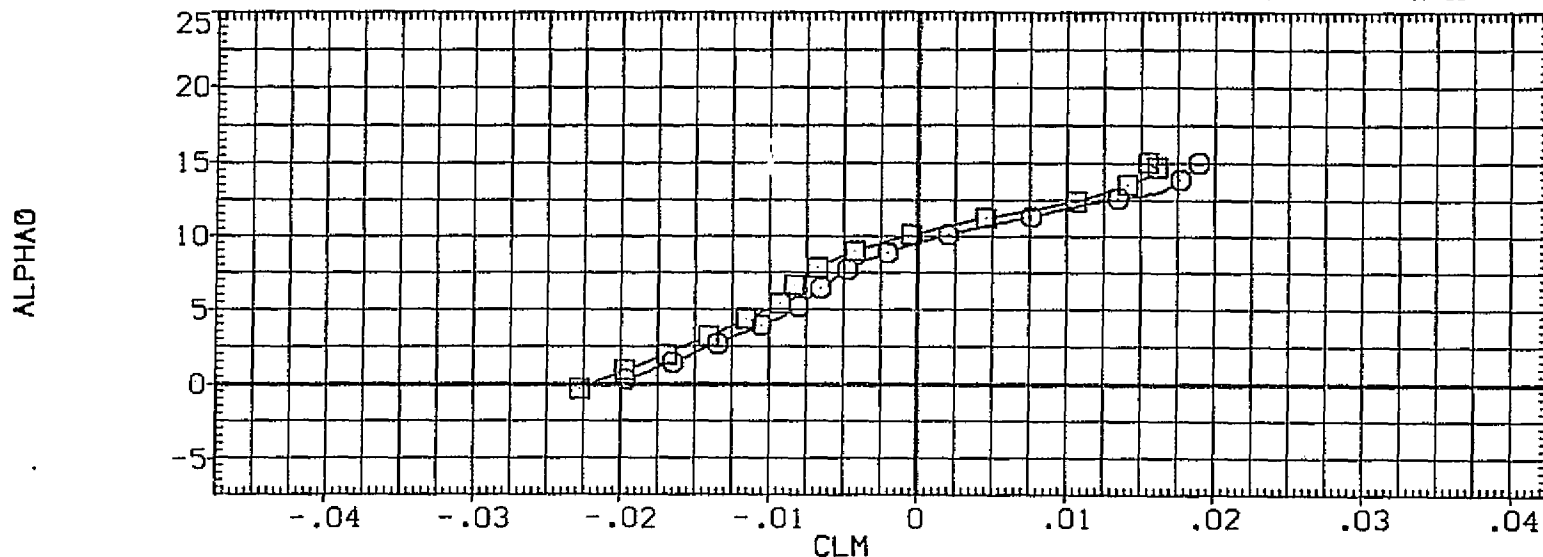


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP002) □ CA6
 (AGP005) ○ CA6

BETA PHI ELEVON WINGHT
 ORBF8N24/28 .000 .000 5.000 48.000
 ORBF8N24/28 .000 180.000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

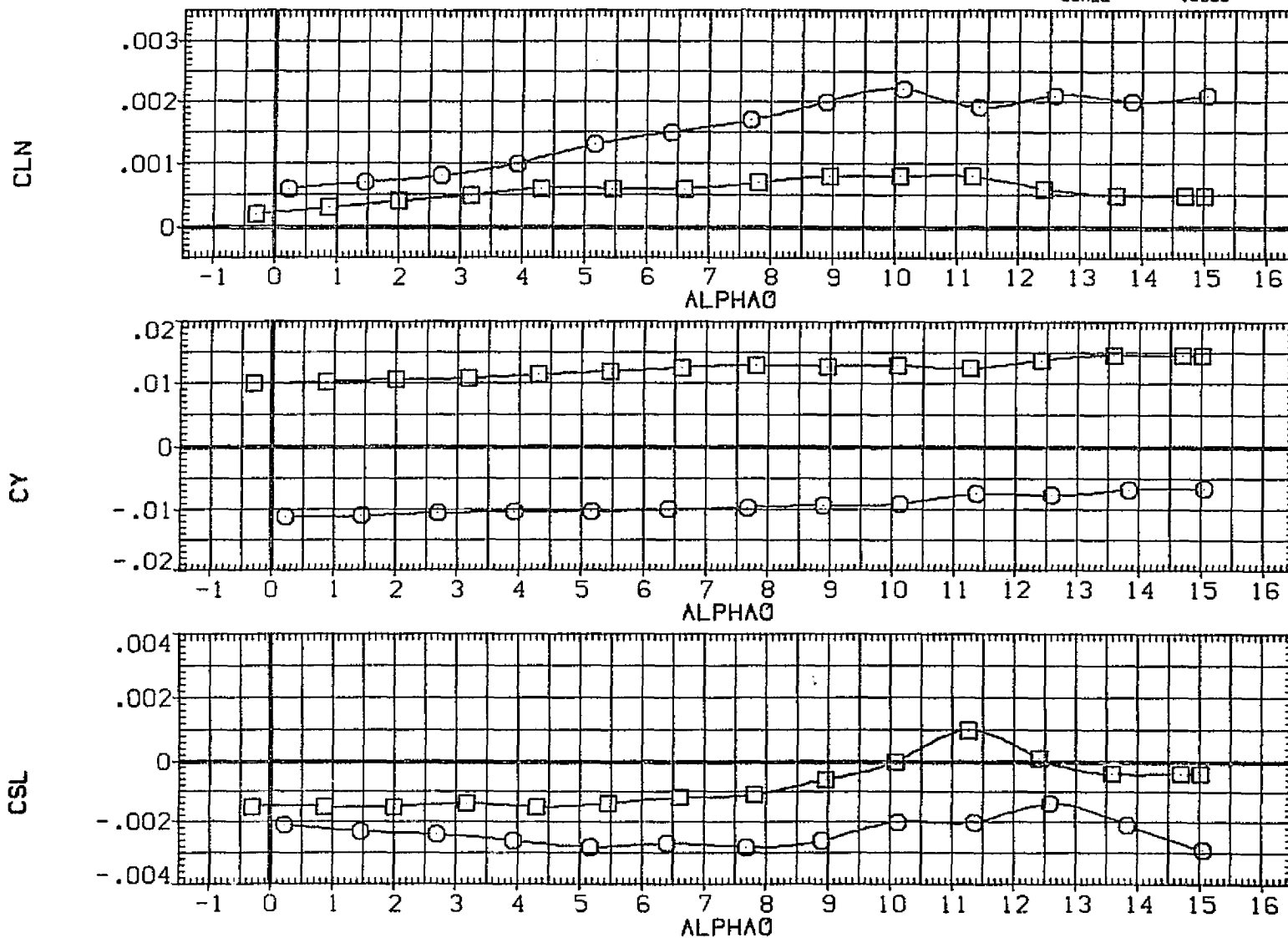


FIG. 10 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 48 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010) □ CAS
 (AGP008) ○ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WINGHT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

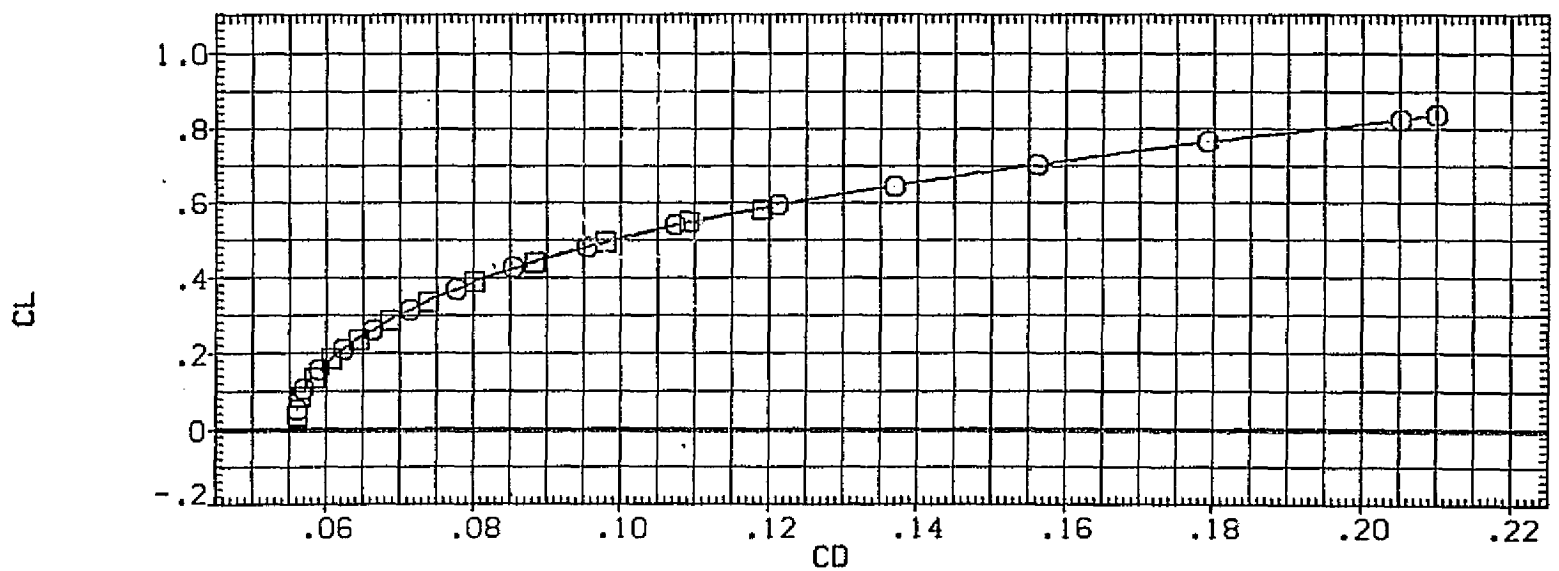
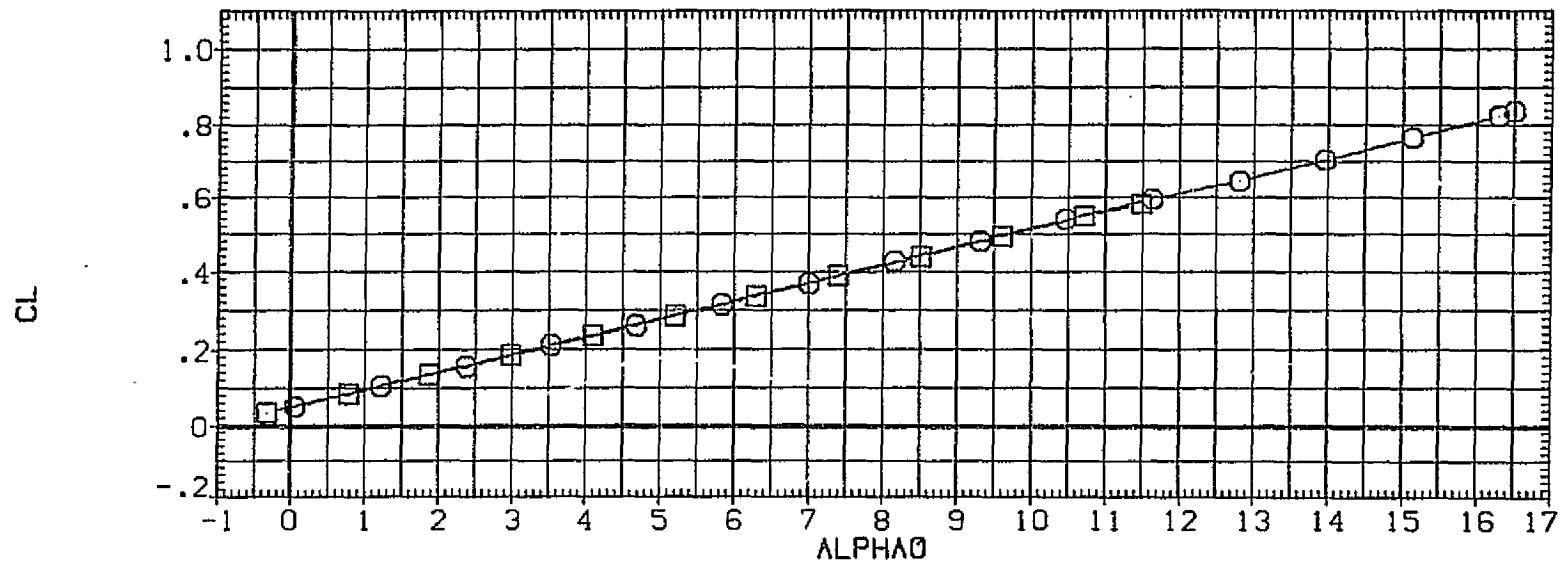


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CAS
 (AGP008) □ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

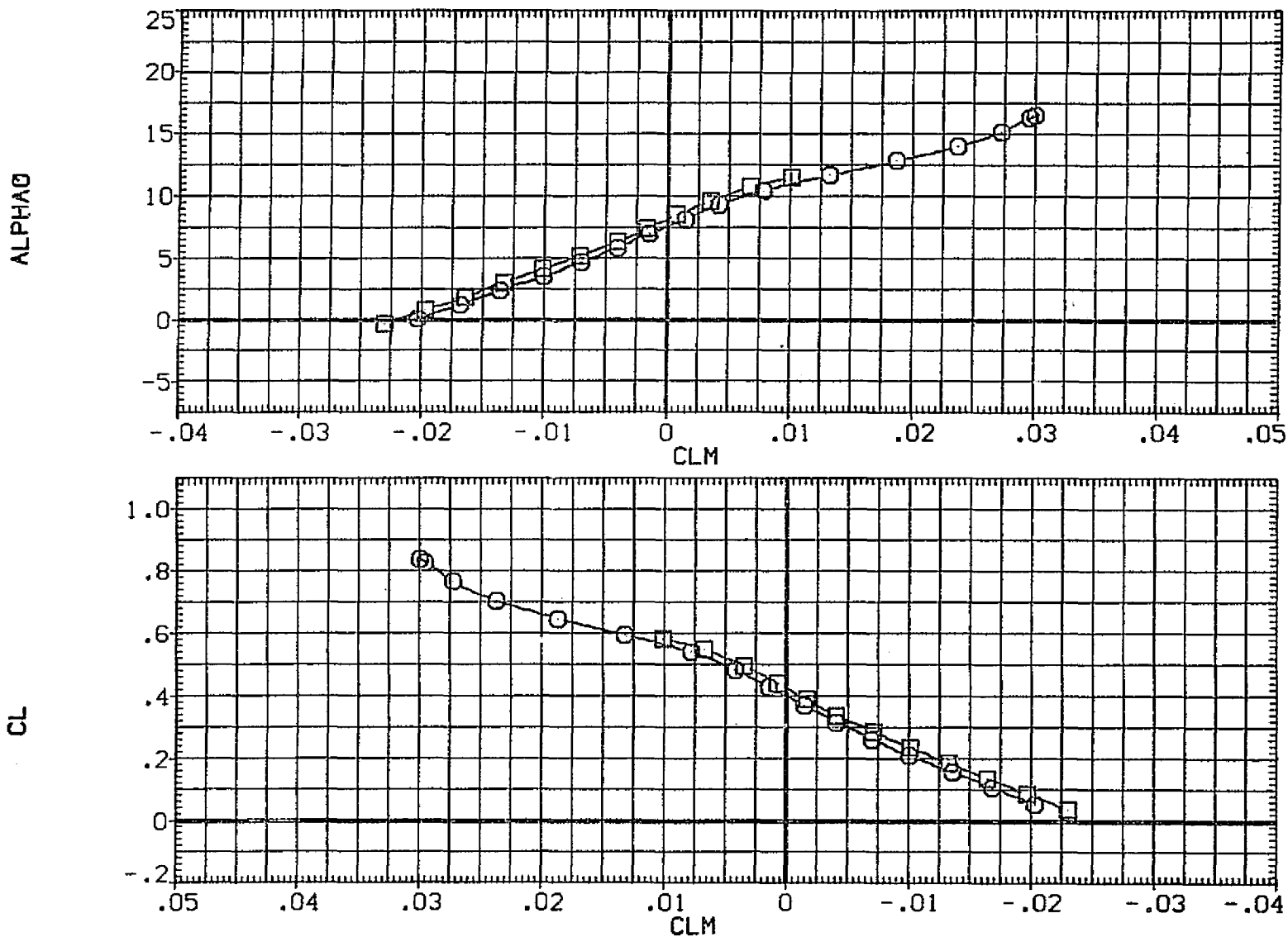


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CAS
 (AGP008) □ CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

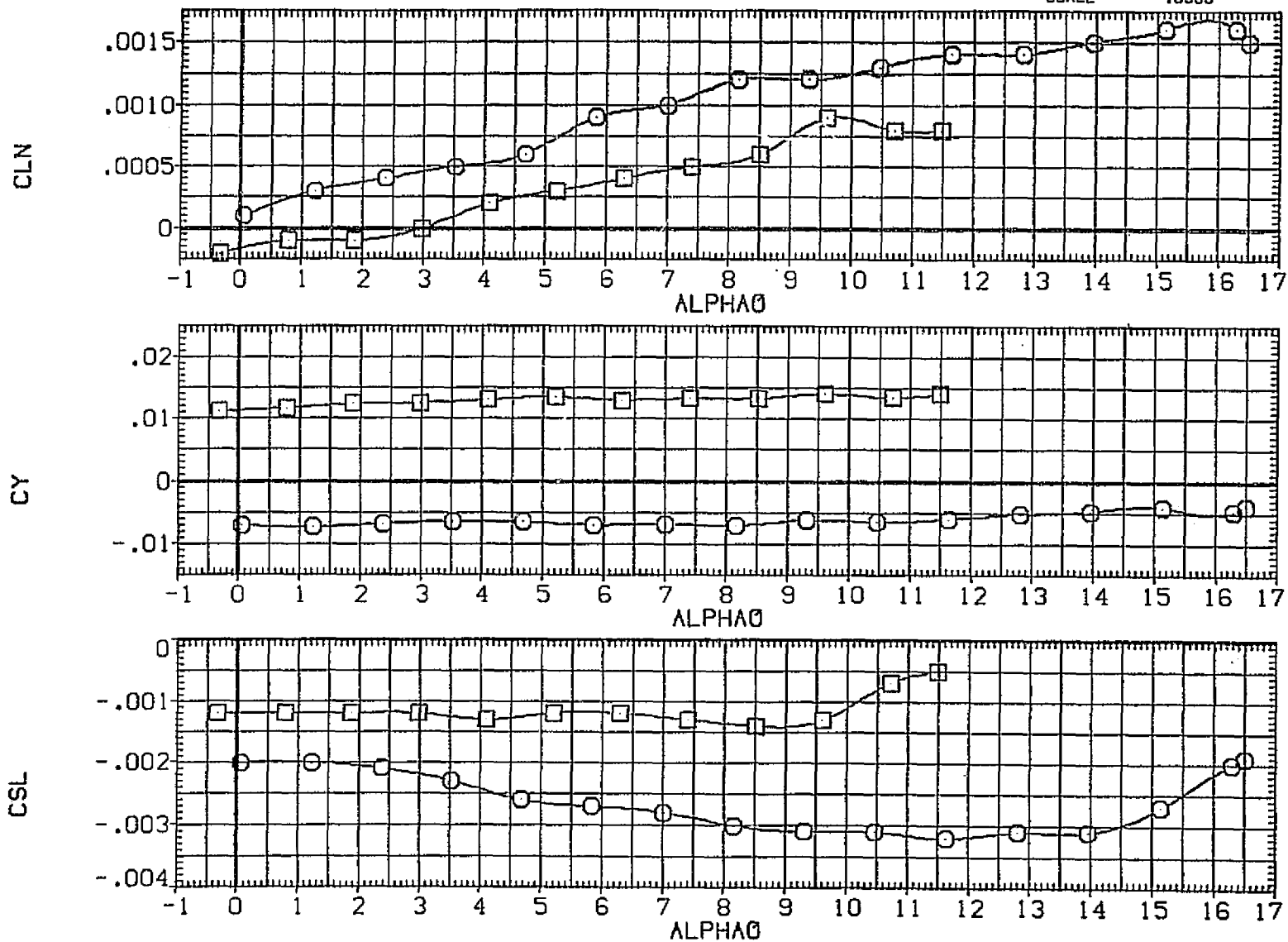


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CAS
 (AGP008) □ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

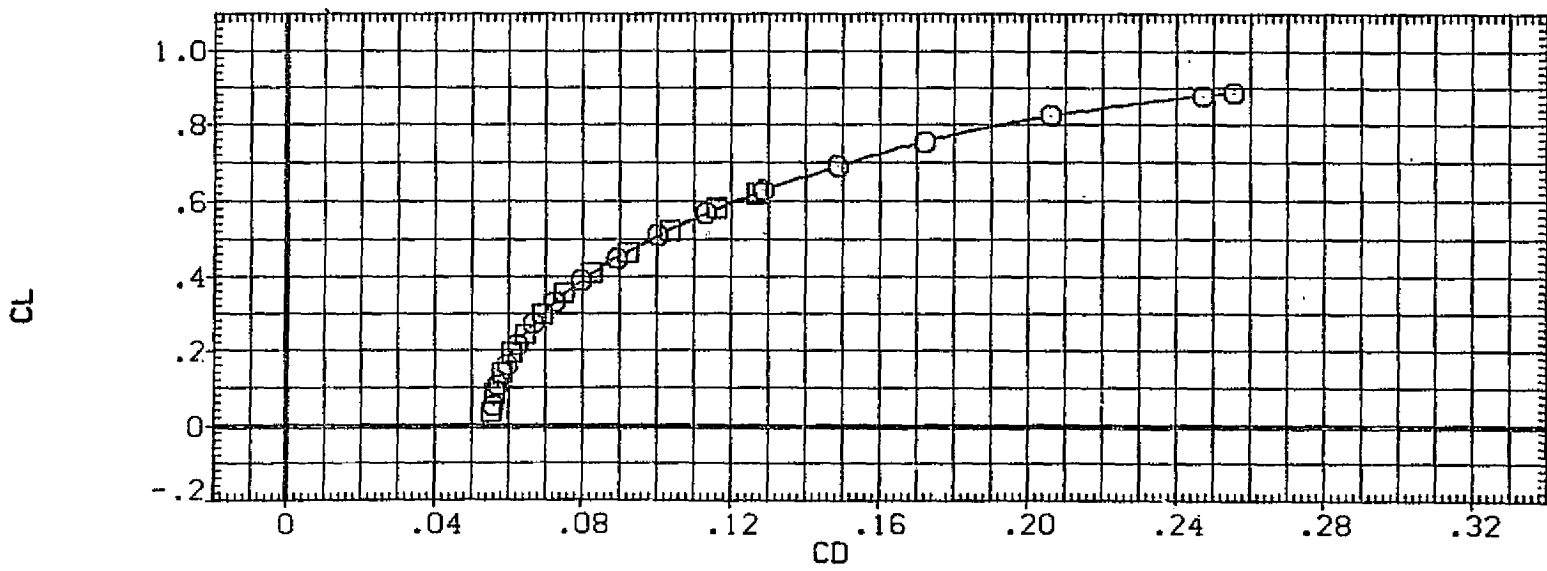
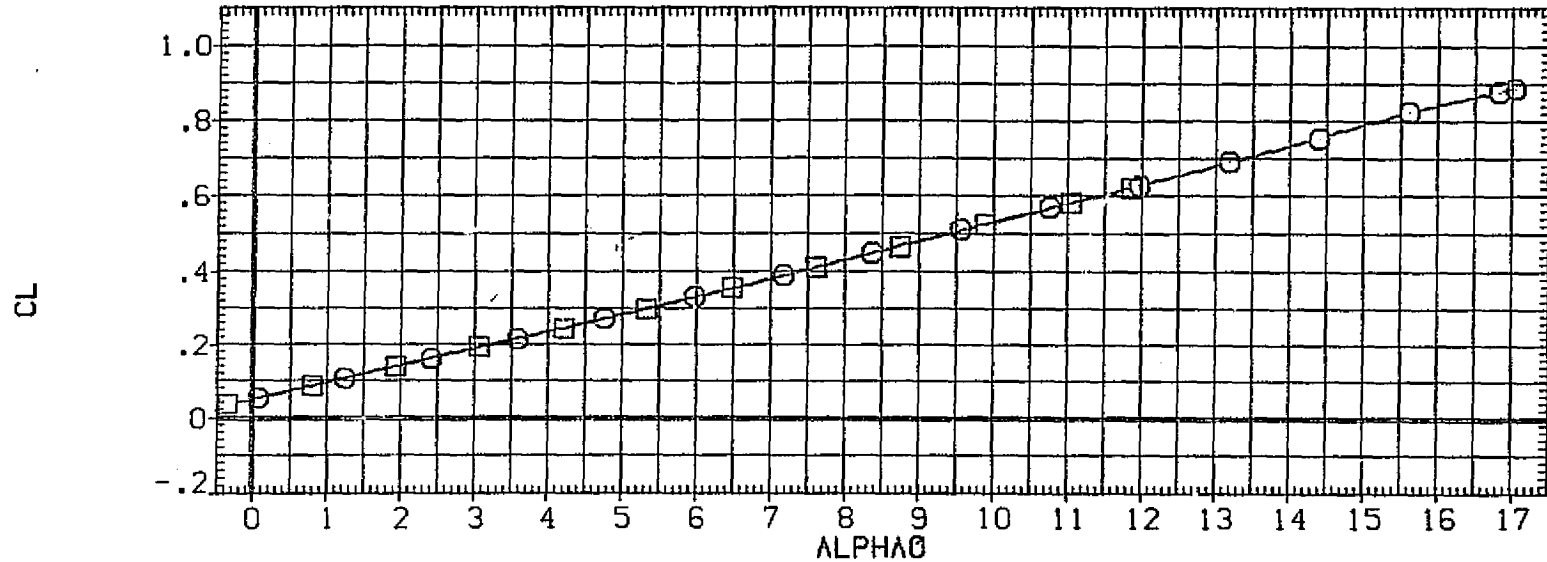


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CAS
 (AGP008) ○ CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

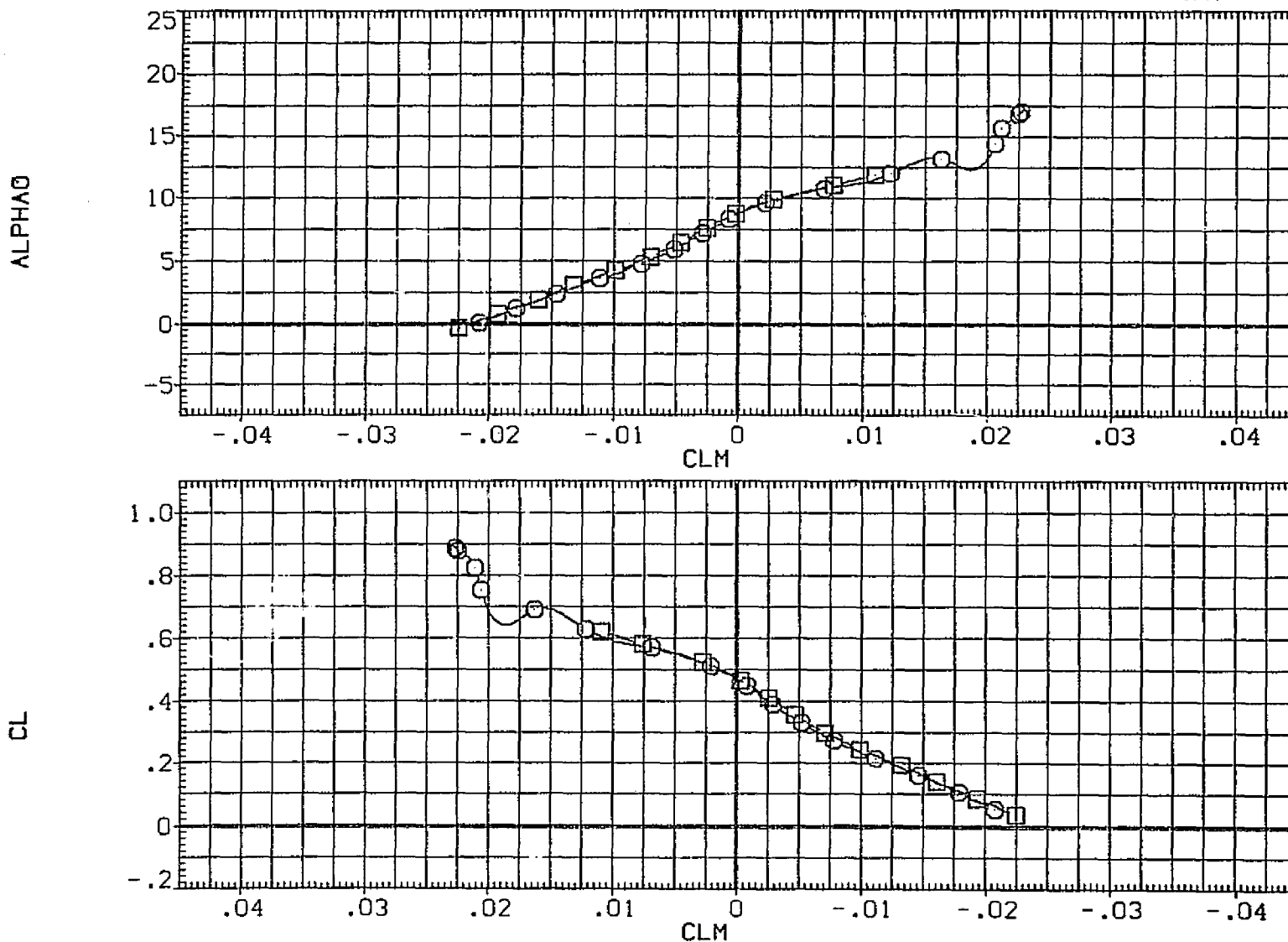




FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010)  CA6
 (AGP008)  CA6

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

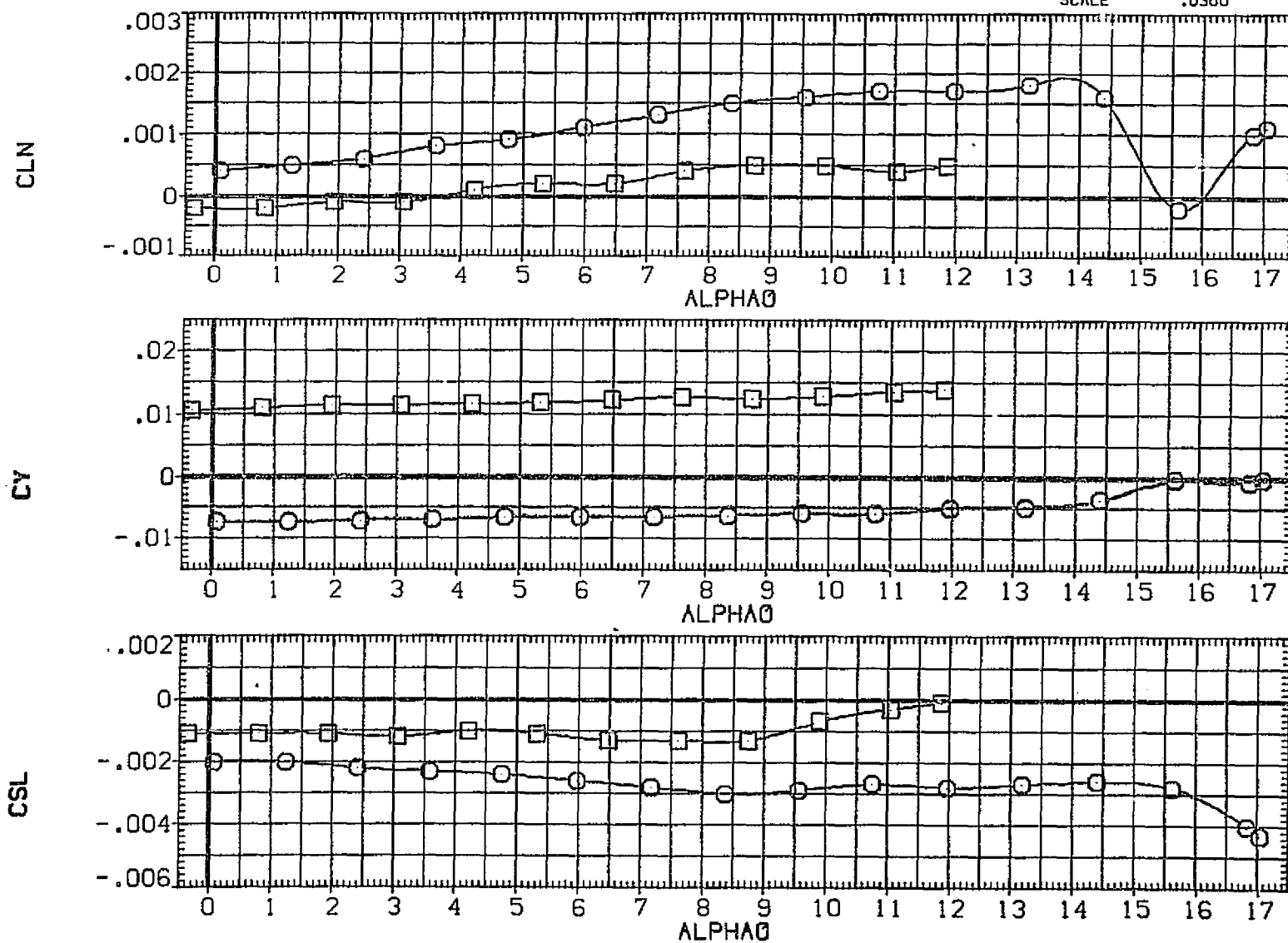




FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGPD10)  CA6
 (AGPD08)  CA6

	BETA	PHI	ELEVON	WNGHGT
ORBFBN24/28	.000	.000	5.000	57.000
ORBFBN24/28	.000	180.000	5.000	57.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

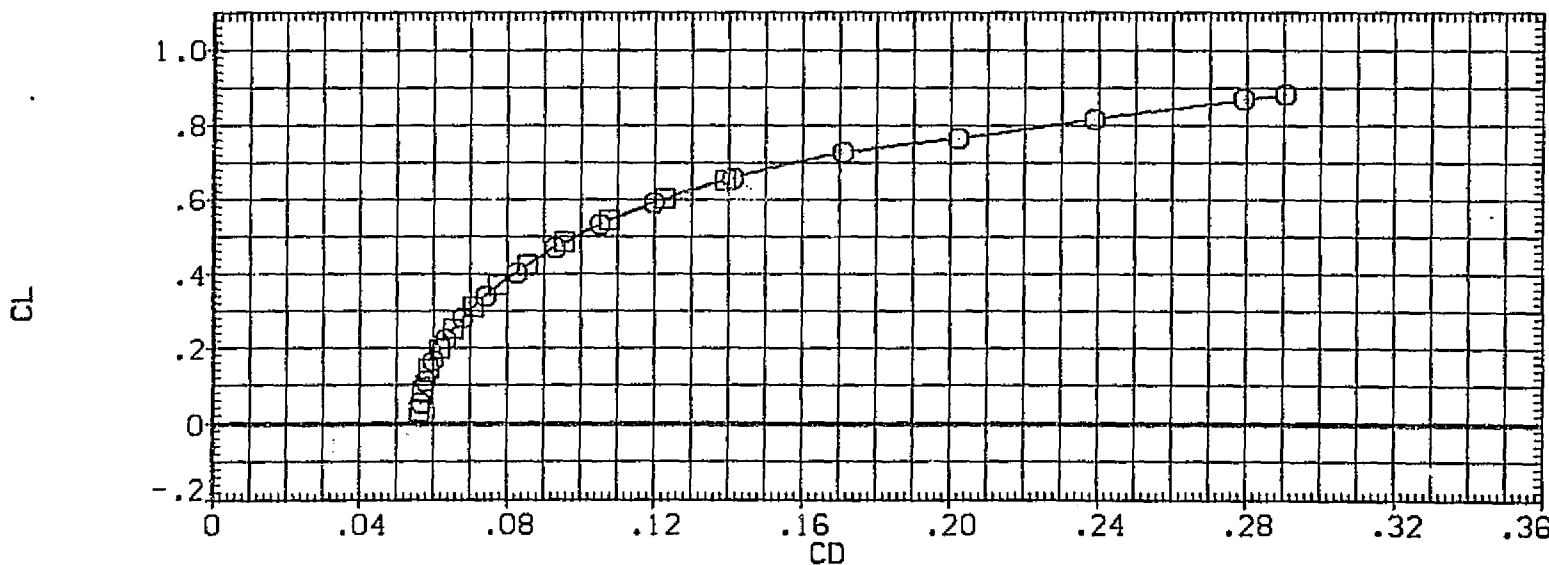
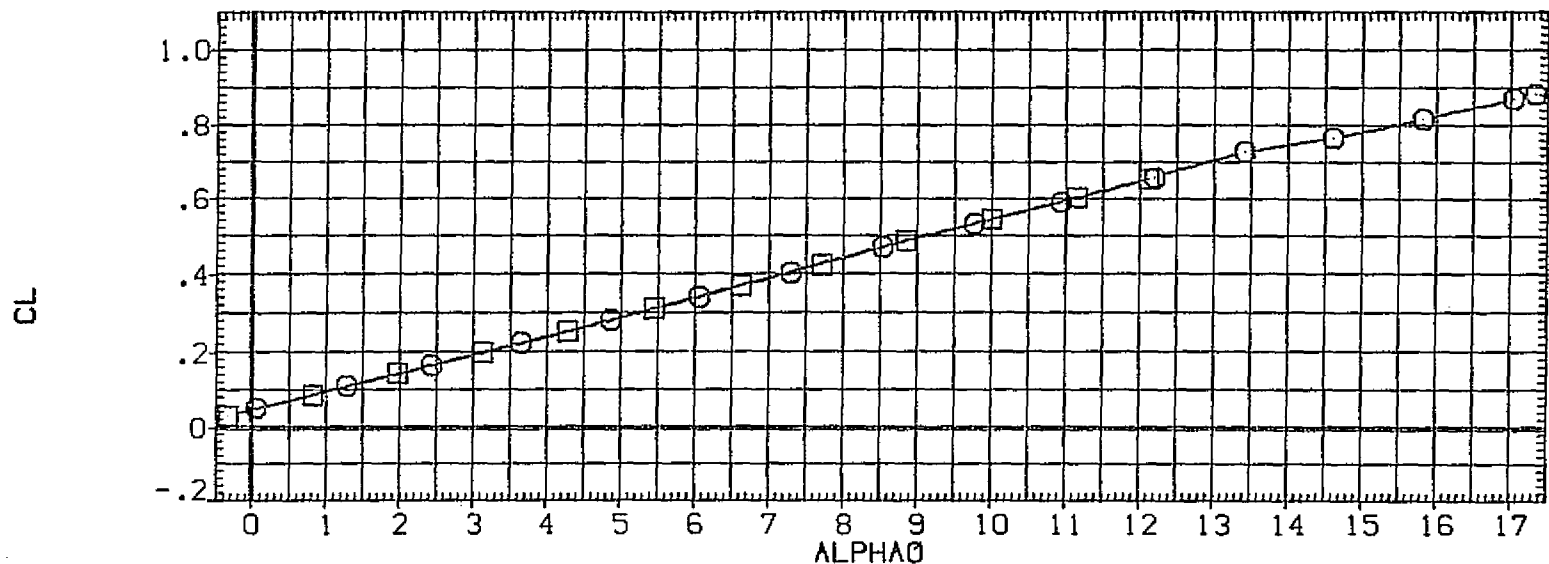


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(C)MACH = .60

PAGE 55

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CA6
 (AGP008) □ CA6

BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 57.000
 ORBFBN24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

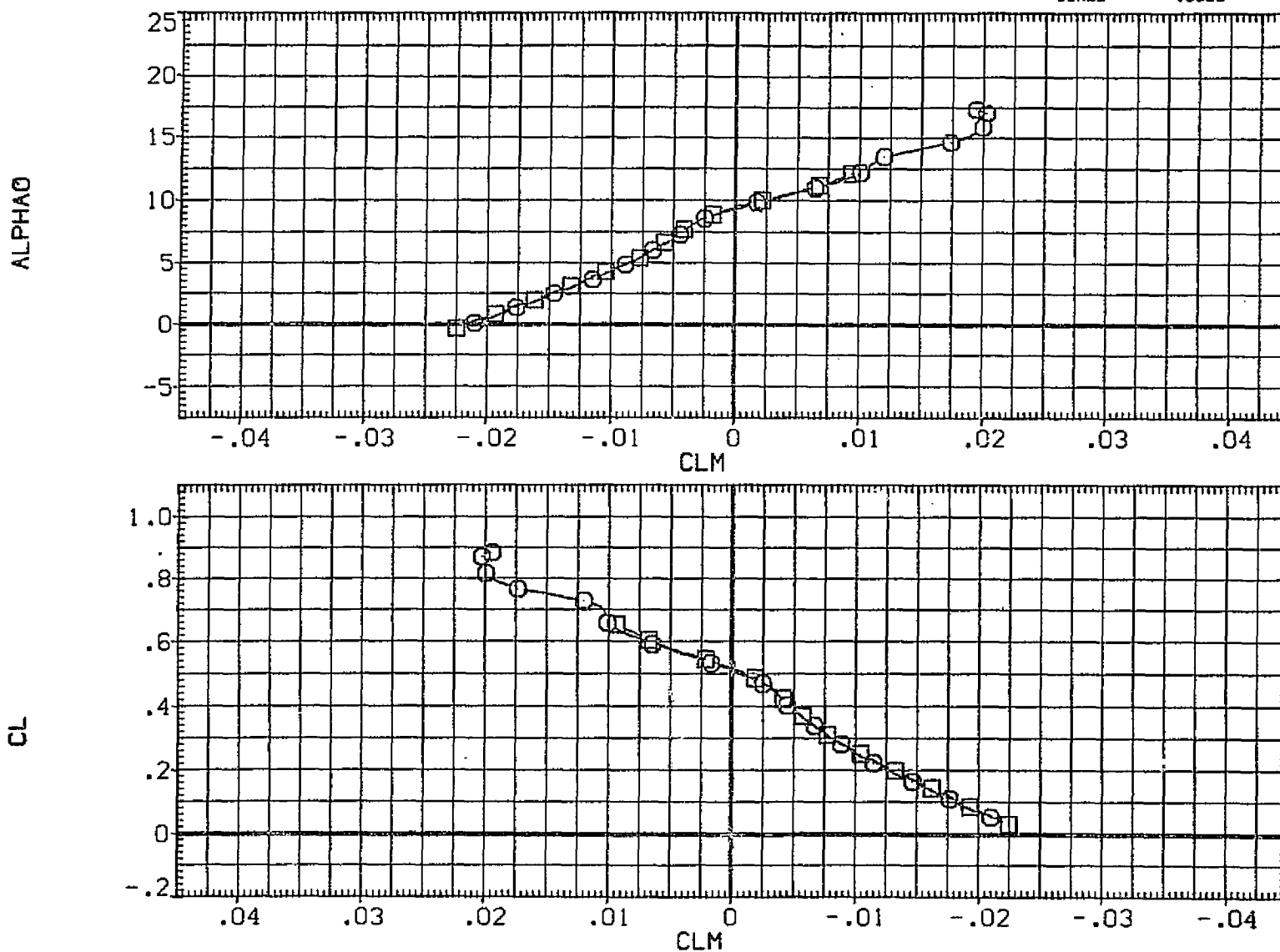


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CAG
 (AGP008) □ CAG

BETA	PHI	ELEVON	WINGHT	REFERENCE INFORMATION	
.000	.000	5.000	57.000	SREF	2690.0000 50.FT.
.000	180.000	5.000	57.000	LREF	474.8000 IN.
				BREF	936.6700 IN.
				XMRP	1109.0000 IN. X0
				YMRP	.0000 IN. Y0
				ZMRP	375.0000 IN. Z0
				SCALE	.0300

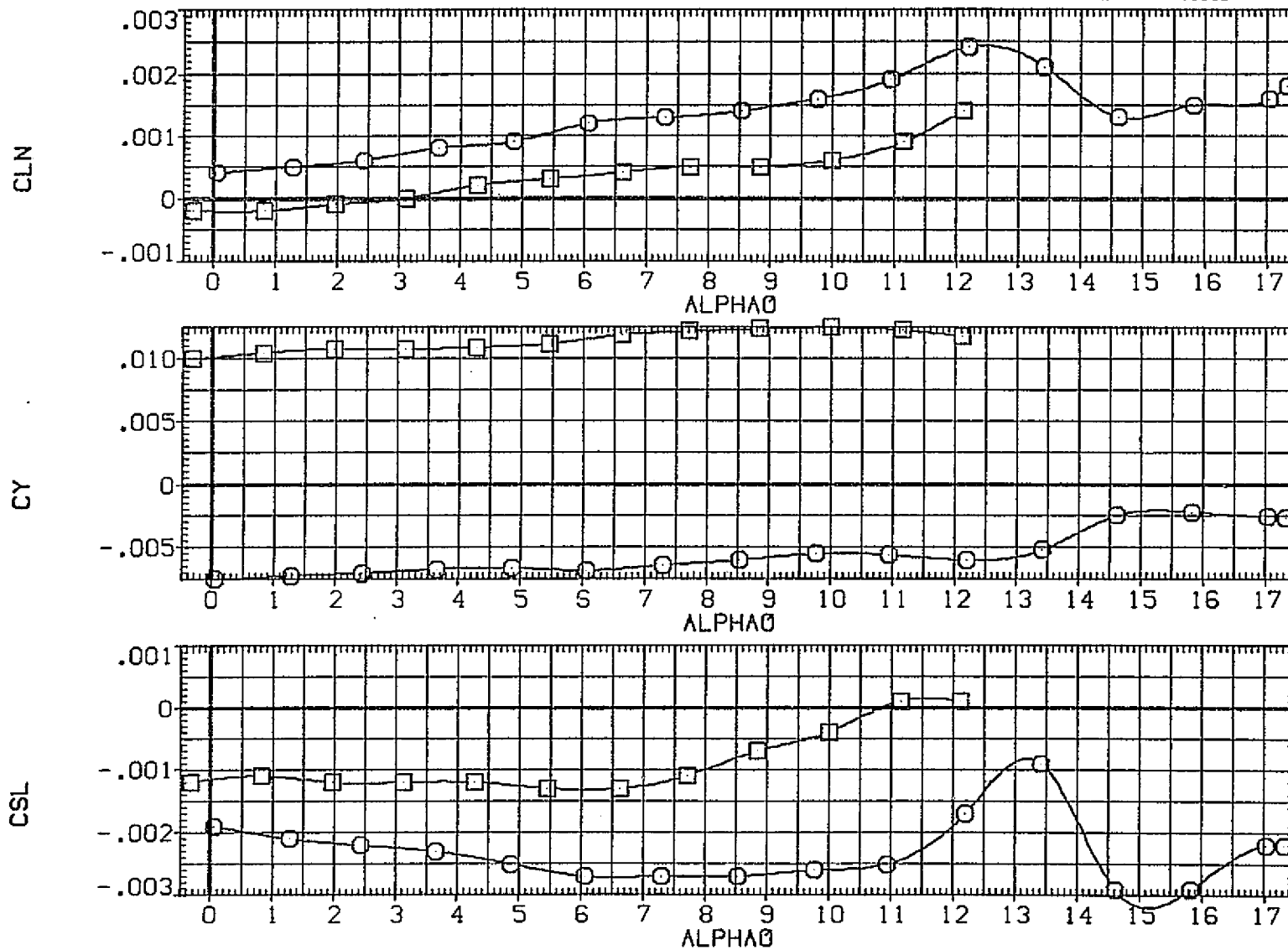


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CAB
 (AGP008) □ CAB

ORBF8N24/28 BETA PHI ELEVON HNGHST
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

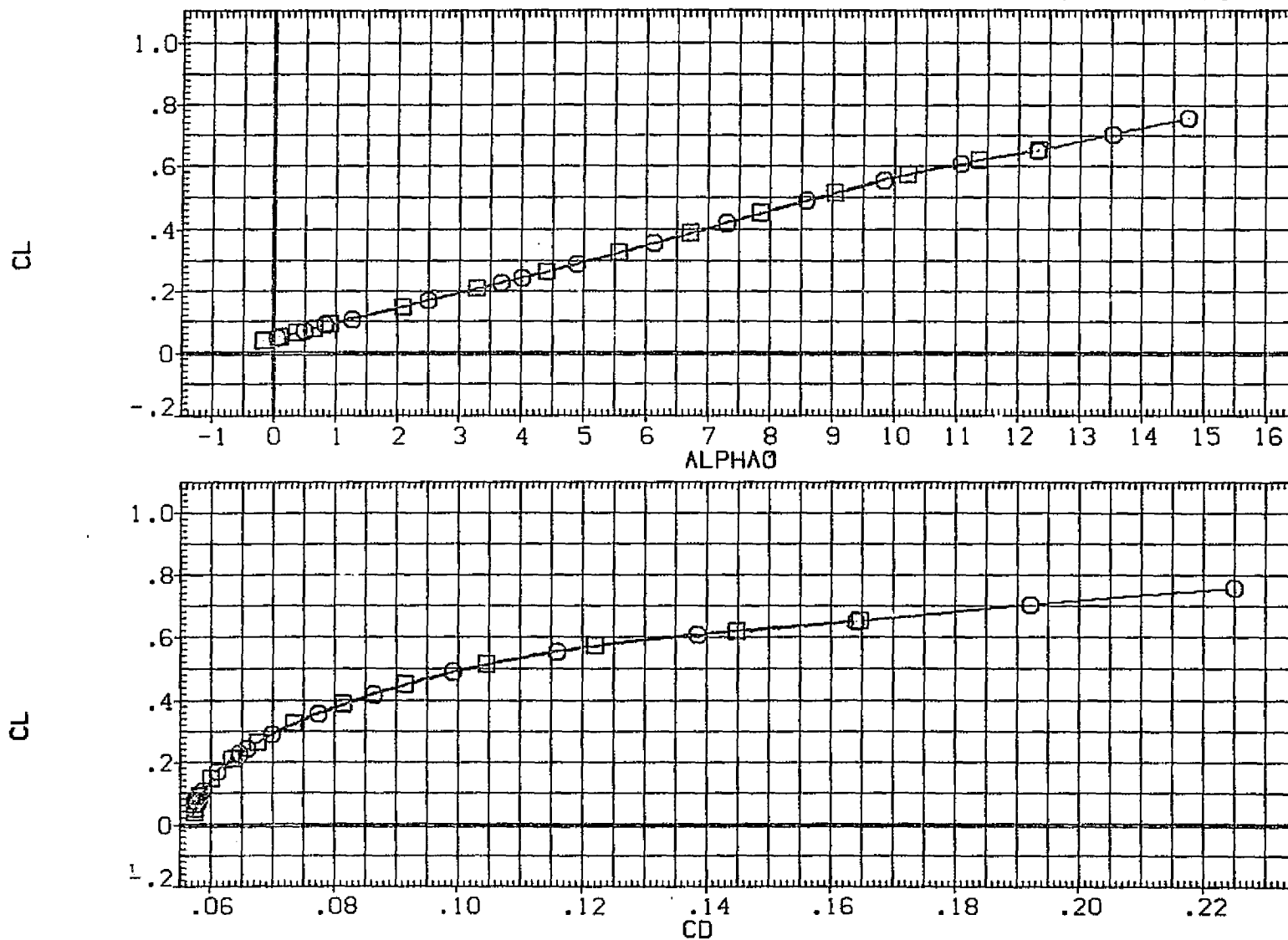




FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010)  CAS
 (AGP008)  CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

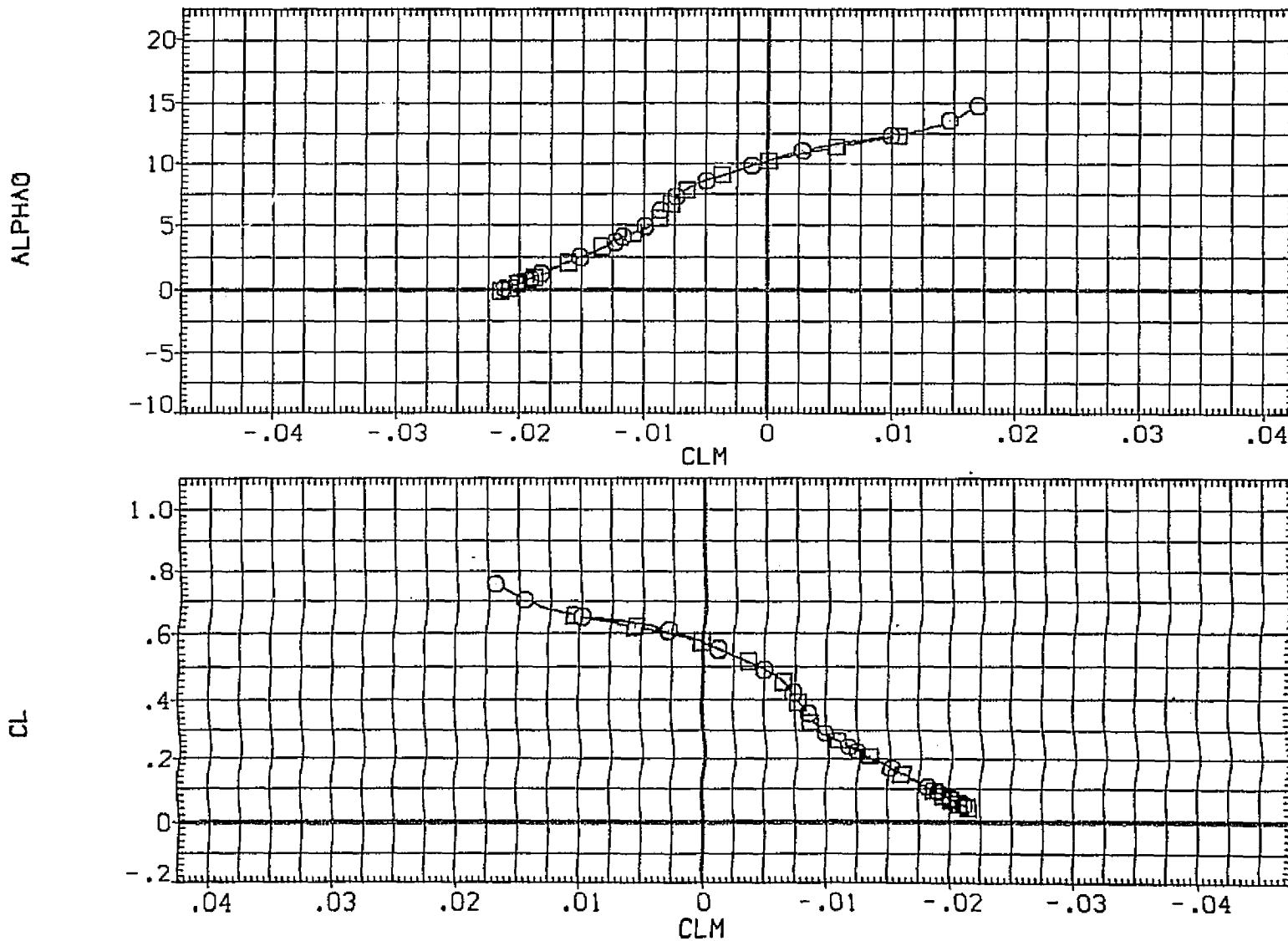




FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010)  CA6
 (AGP008)  CA6

ORBF0N24/28
 ORBF0N24/28

BETA PHI ELEVON WNGHBT
 .000 .000 5.000 57.000
 .000 180.000 5.000 57.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

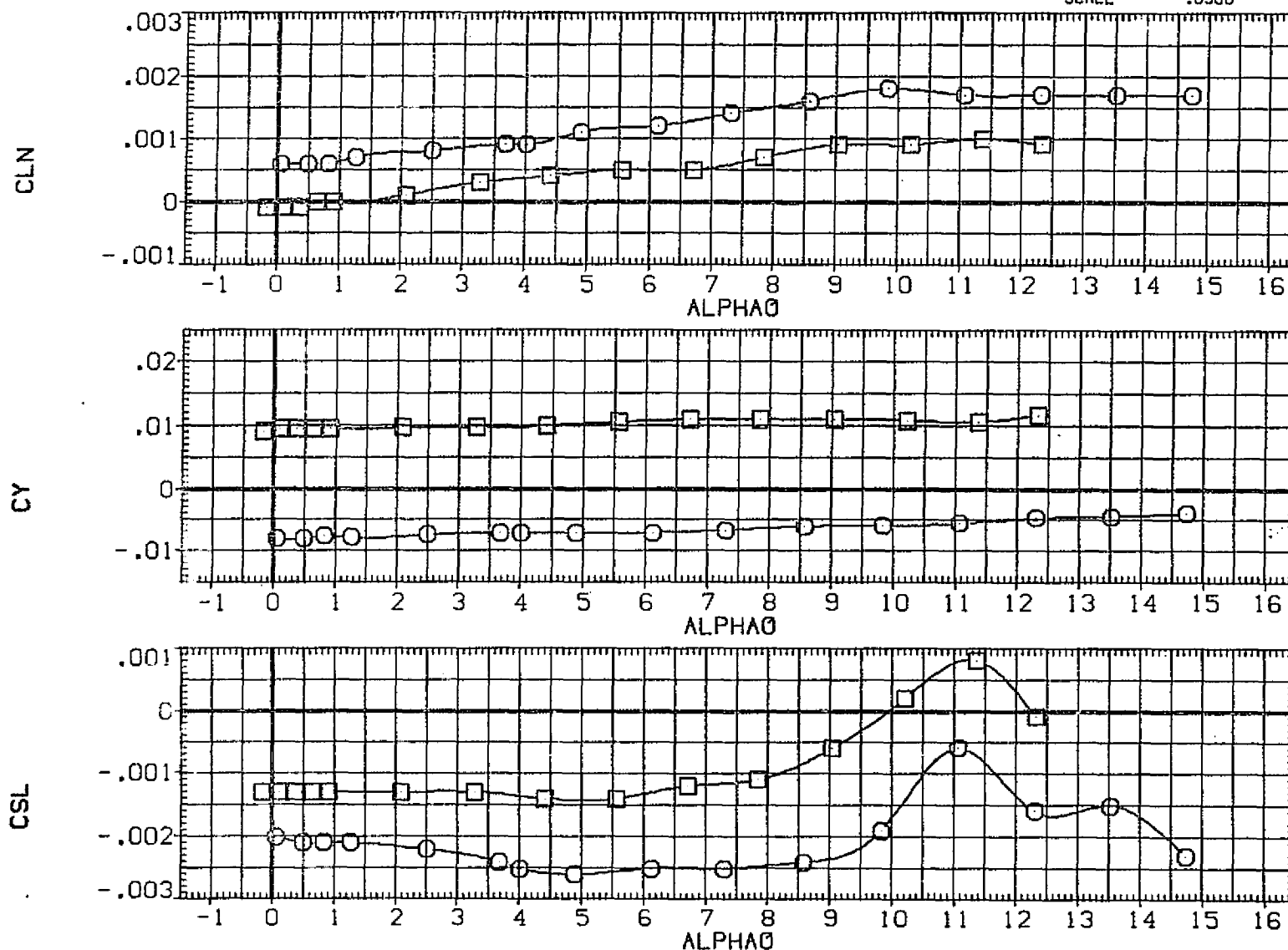


FIG. 11 MODEL UPRIGHT AND INVERTED, ORBITER ALONE, WING AT 57 INCHES

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CA6
 (AGP002) □ CA6

BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
ORBF8N24/28	.000	.000	5.000	57.000	SREF 2690.0000 50.FT.
ORBF8N24/28	.000	.000	5.000	48.000	LREF 474.8000 IN.
					BREF 936.6700 IN.
					XMRP 1109.0000 IN. X0
					YMRP .0000 IN. Y0
					ZMRP 375.0000 IN. Z0
					SCALE .0300

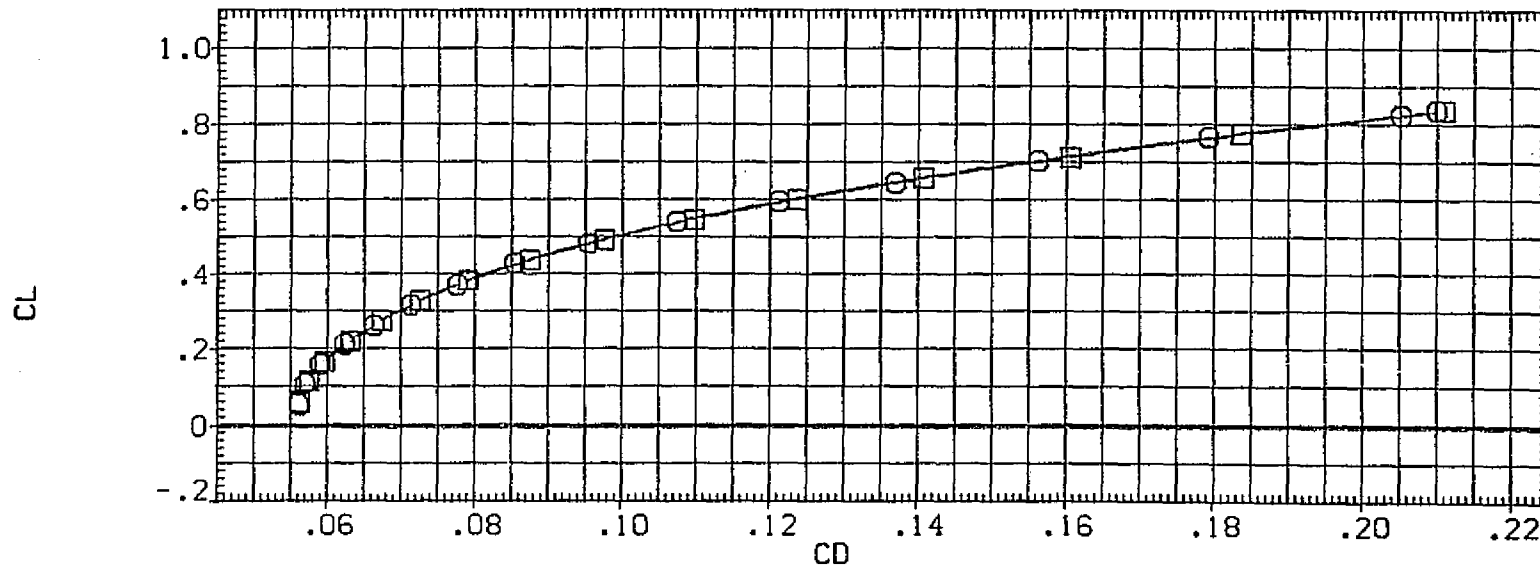
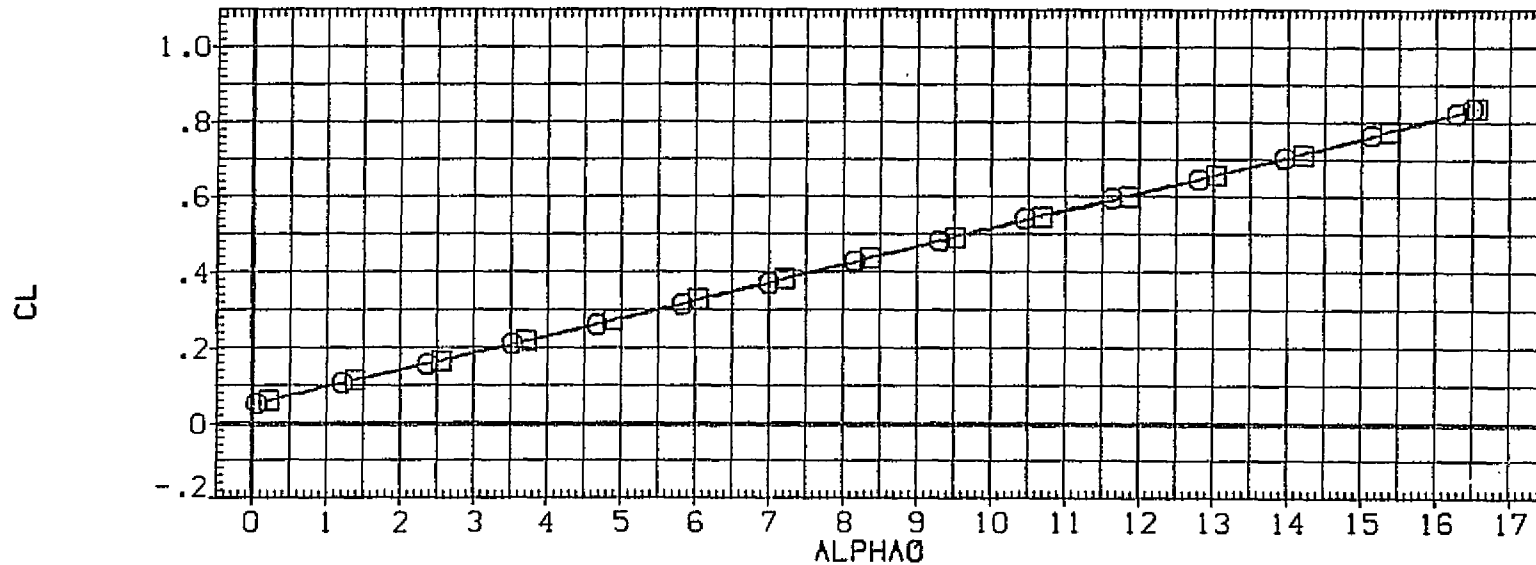


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(A) MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) ○ CAG
 (AGP002) □ CAG

ORBF0N24/28 BETA PHI ELEV0N WNGHGT
 ORBF0N24/28 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

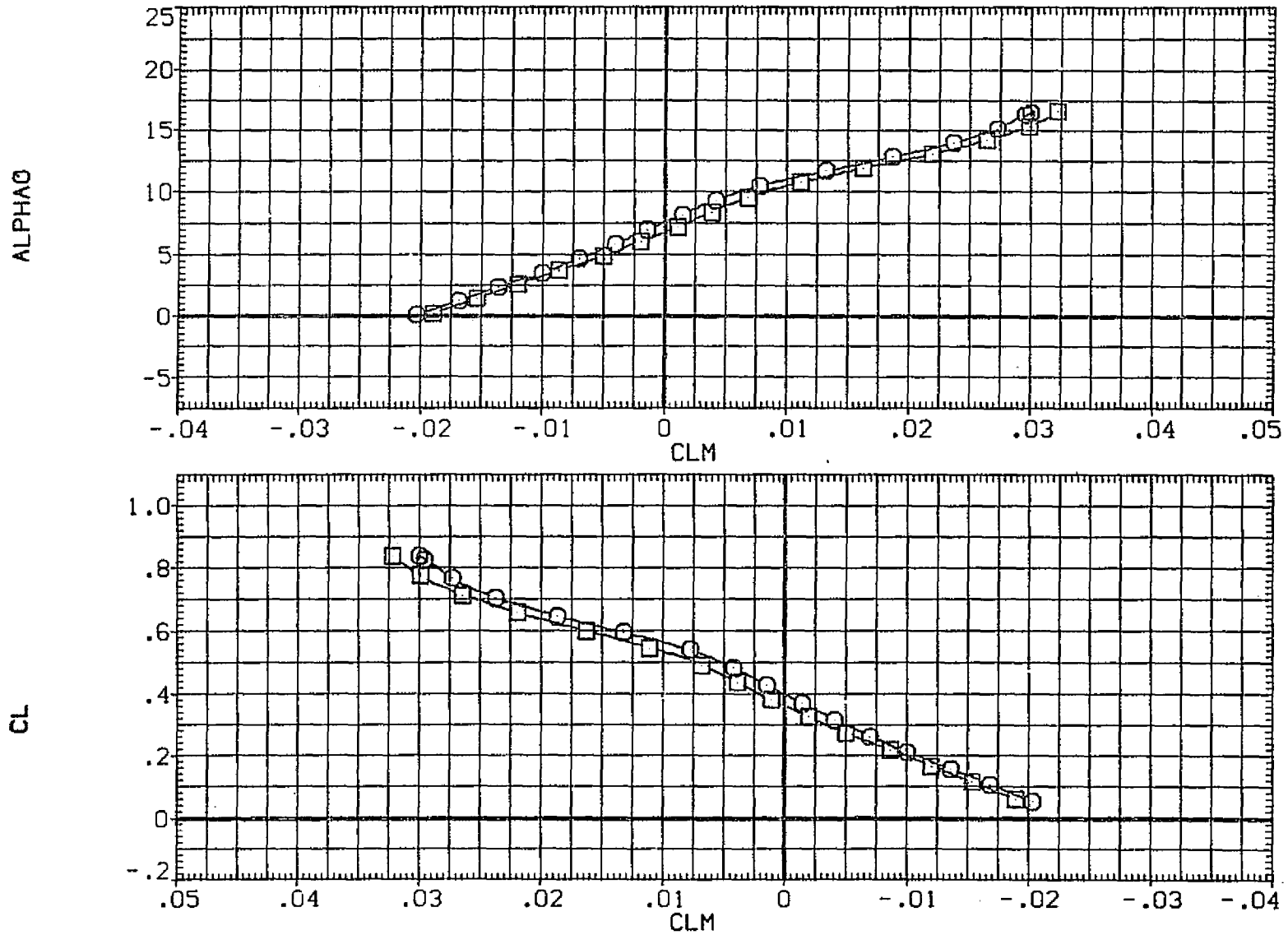


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010) ○ CA6
 (AGP002) □ CA6

ORBF8N24/28
 ORBF8N24/28

BETA .000 .000
 PHI .000 .000
 ELEVON 5.000 5.000
 WNGHGT 57.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

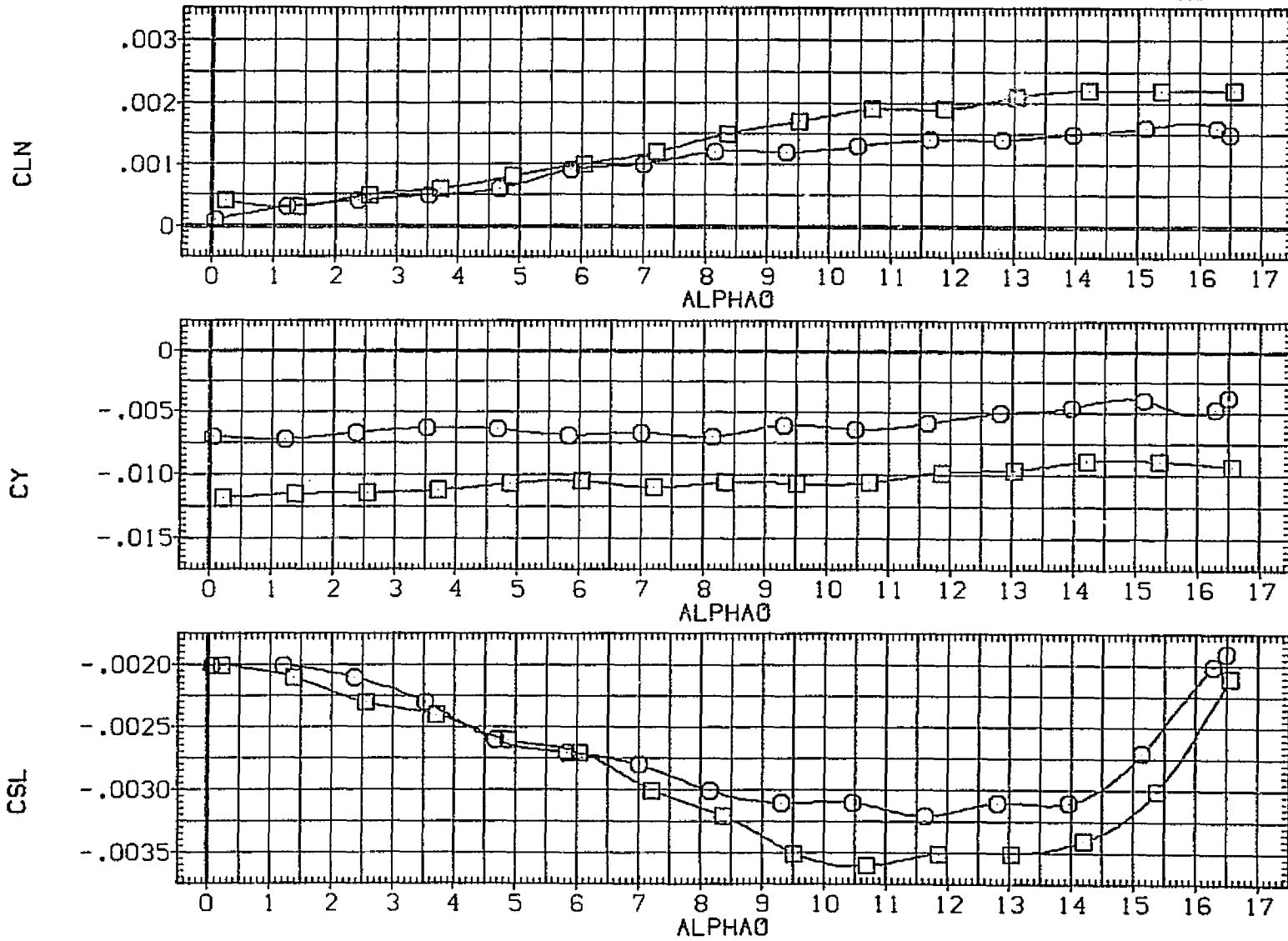


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CA6
 (AGP002) □ CA6

ORBFBN24/28 BETA PHI ELEVON WNGHGT
 ORBFBN24/28 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

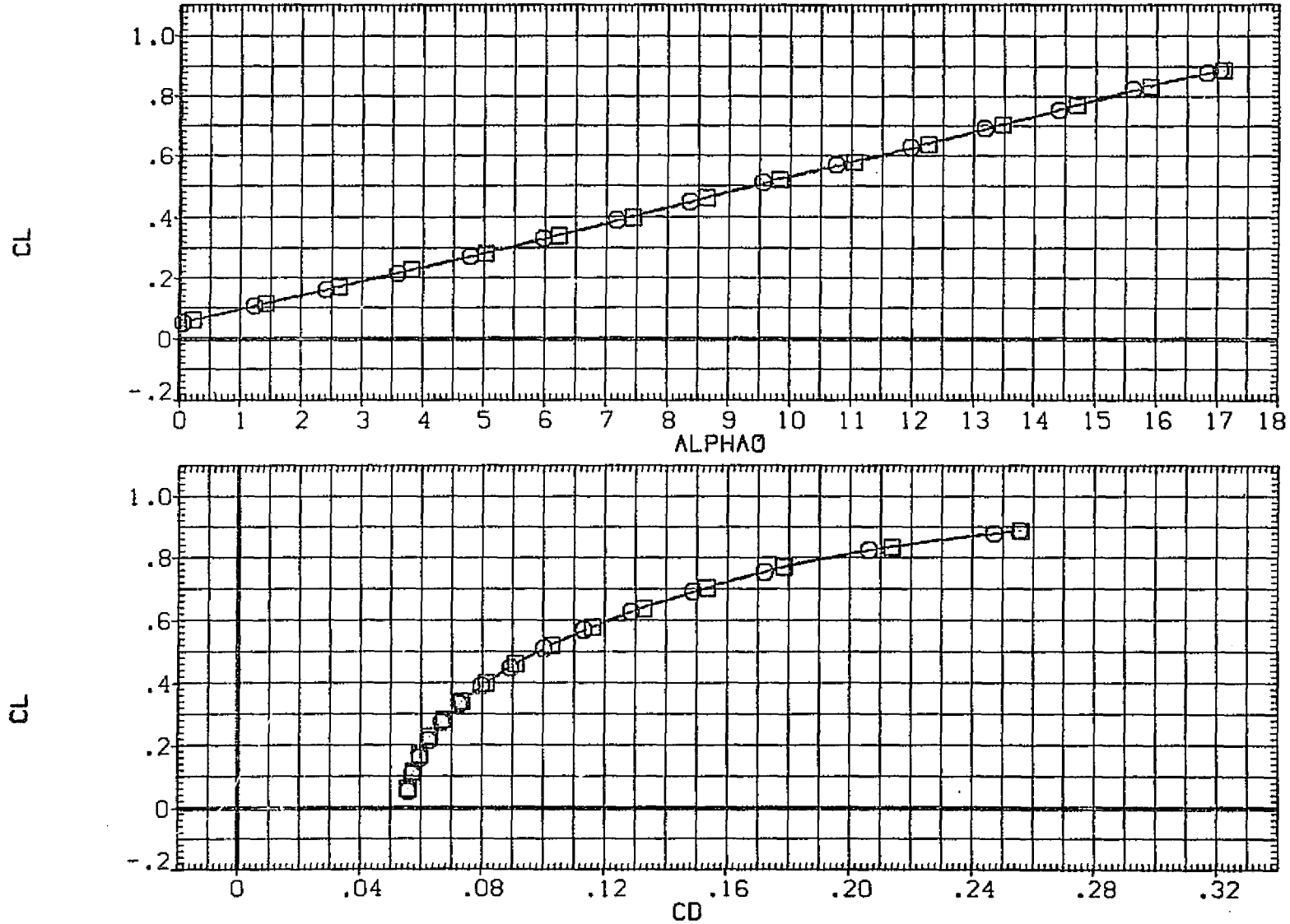


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	PHI	ELEVON	WNGHGT	REFERENCE INFORMATION	
(AGP010)	○ CAG	ORBF8N24/28	.000	.000	5.000	57.000	SREF 2690.0000 SQ.FT.
(AGP002)	□ CAG	ORBF8N24/28	.000	.000	5.000	48.000	LREF 474.8000 IN.
							BREF 936.6700 IN.
							XMRP 1109.0000 IN. X0
							YMRP .0000 IN. Y0
							ZMRP 375.0000 IN. Z0
							SCALE .0300

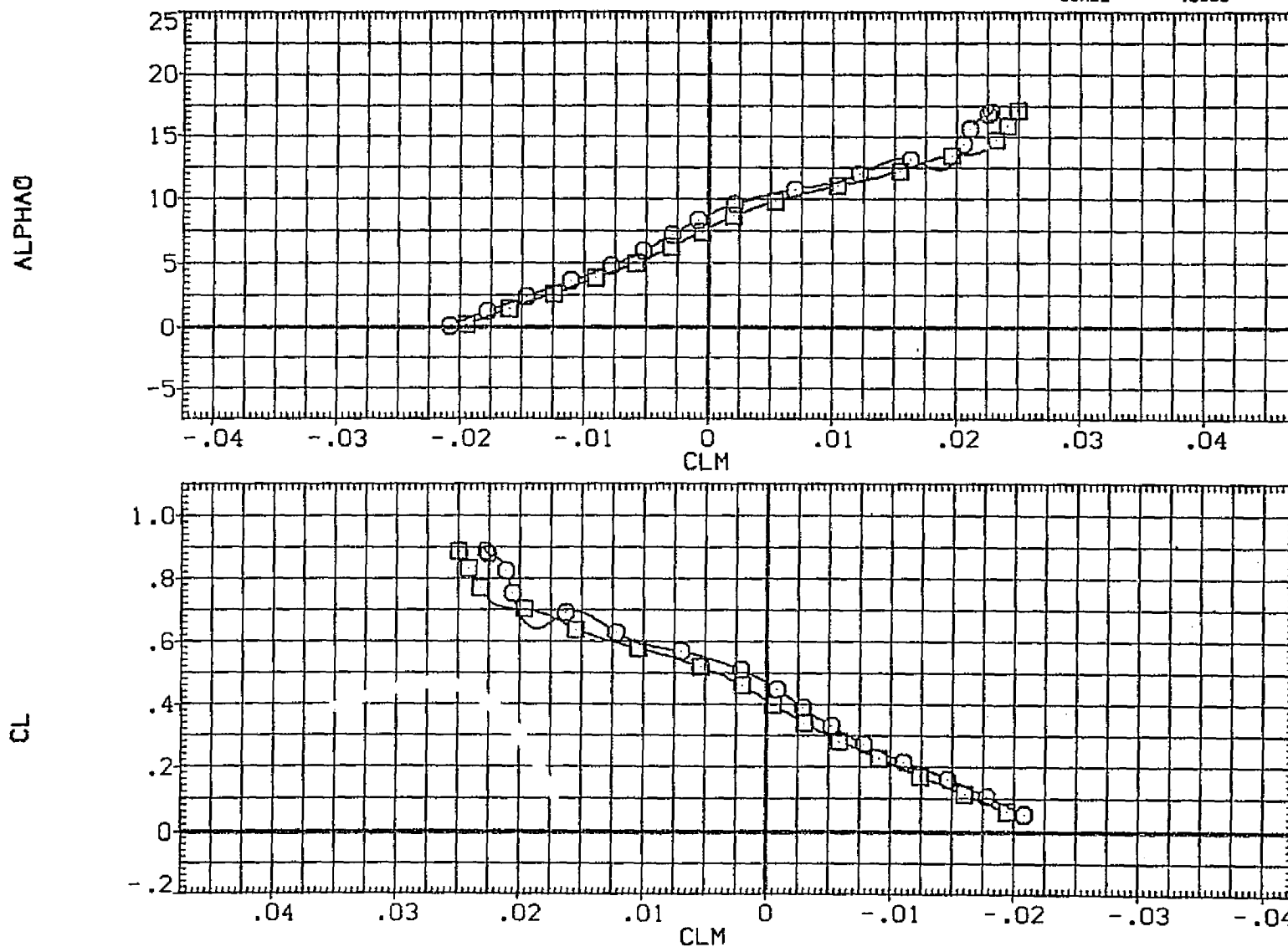


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010) □ CAS
 (AGP002) ○ CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

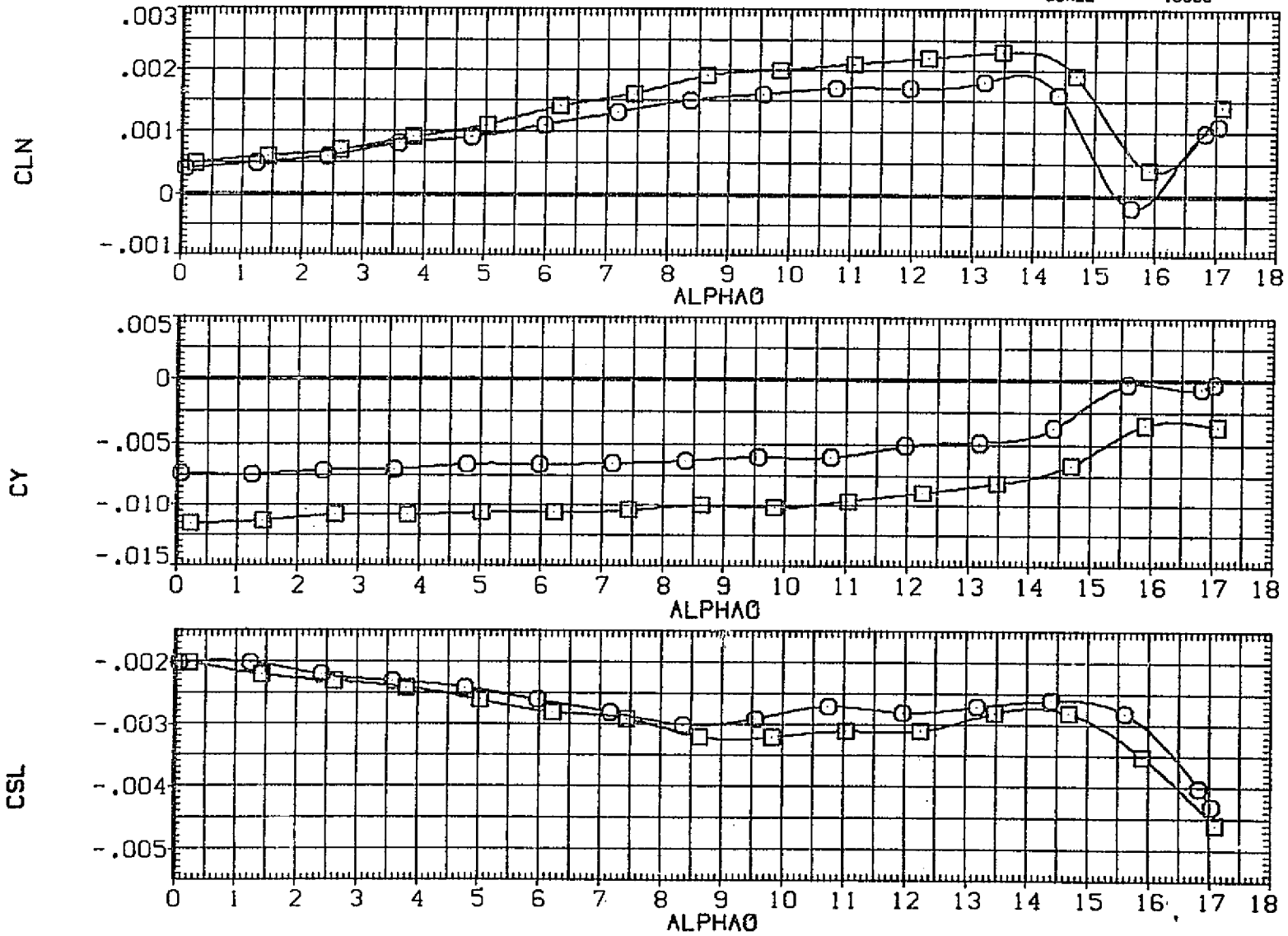


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CAS
 (AGP002) □ CAS

BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 ORBF8N24/28 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XHRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

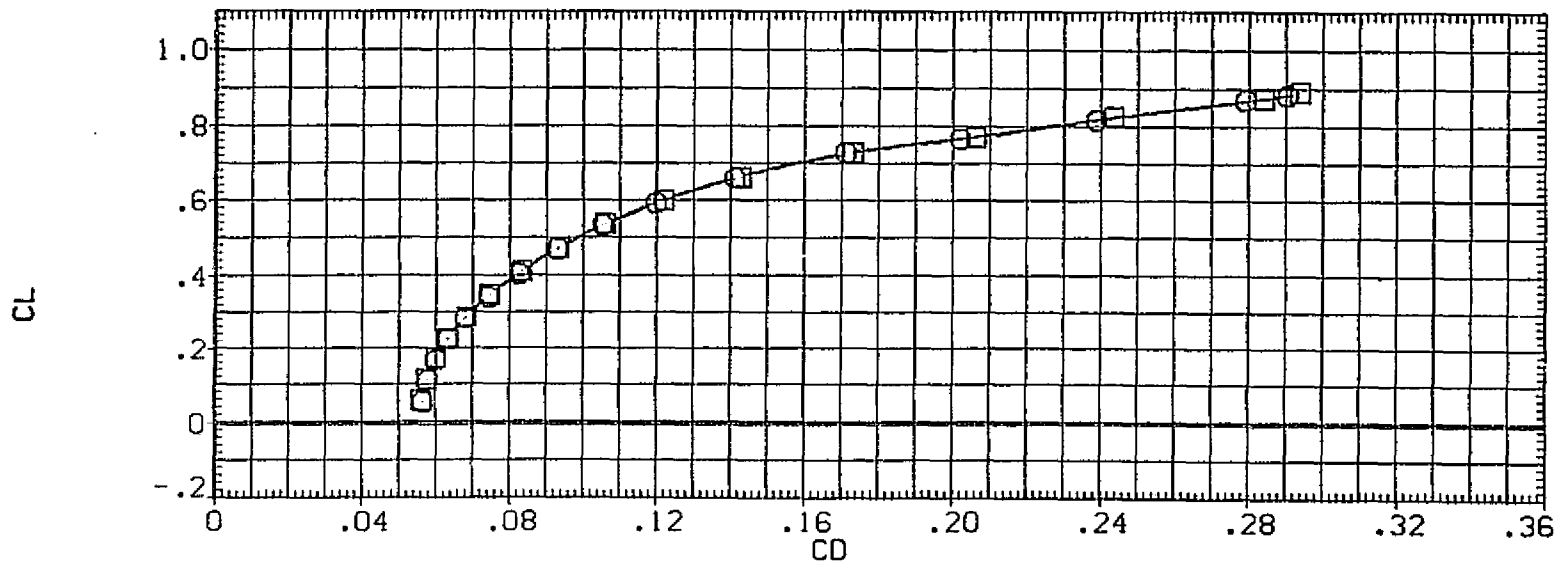
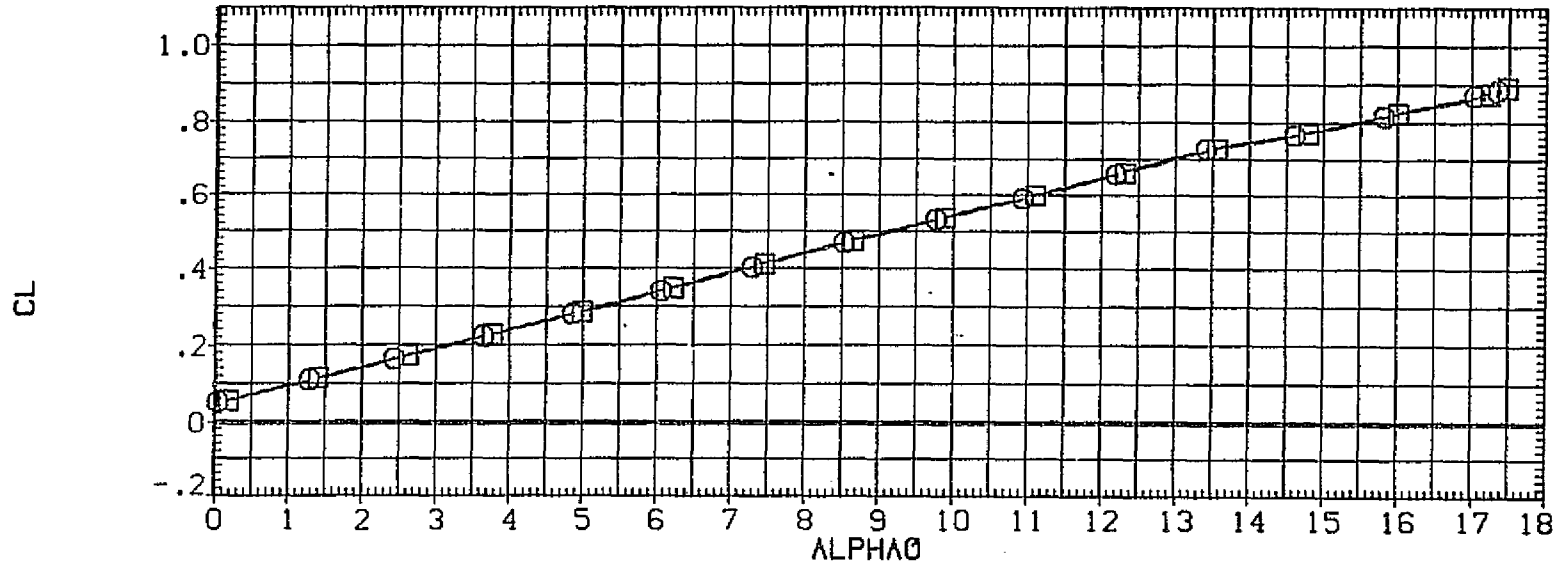


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010) □ CAG
 (AGP002) □ CAG

ORBF8N24/28 BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BRP 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

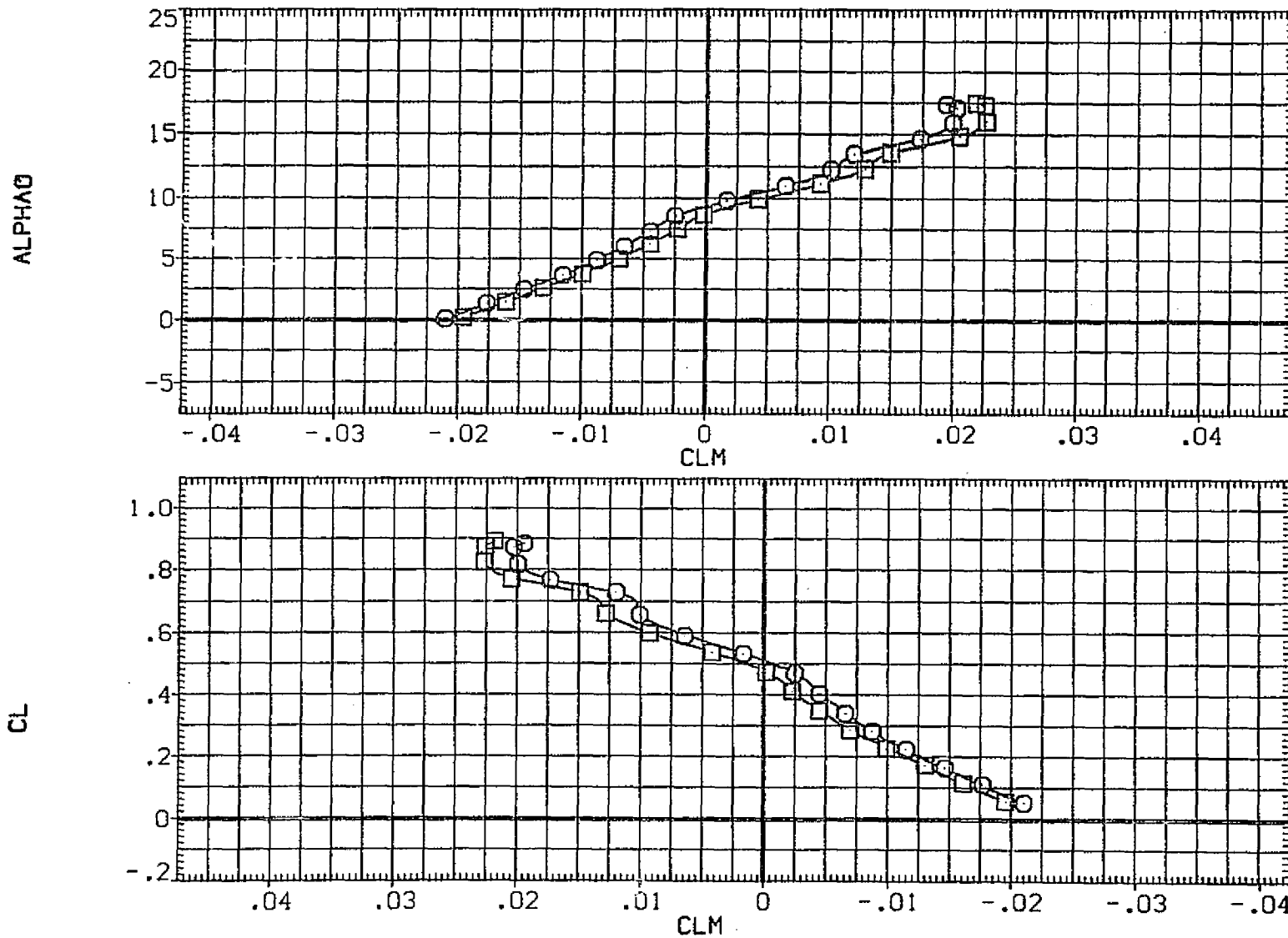


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGPO10) ○ CAG
 (AGPO02) □ CAG

ORBF8N24/28 BETA PHI ELEVON WNGHGT
 ORBF8N24/28 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

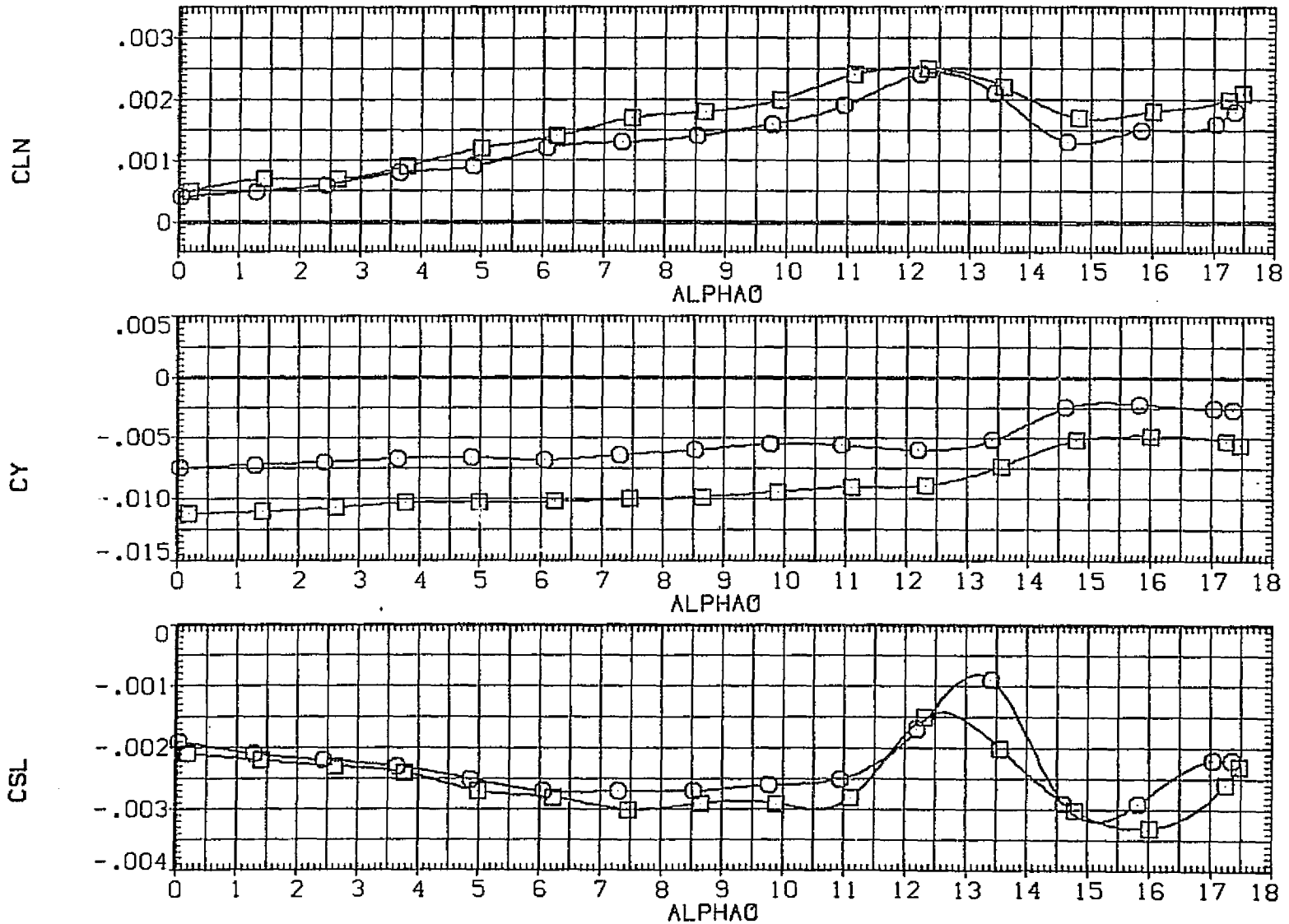




FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGP010)  CAS
 (AGP002)  CAS

ORBF8N24/28
 ORBF8N24/28

BETA	PHI	ELEVBN	WNGHGT
.000	.000	5.000	57.000
.000	.000	5.000	48.000

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	474.8000	IN.
BREF	936.6700	IN.
XMRP	1109.0000	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0300	

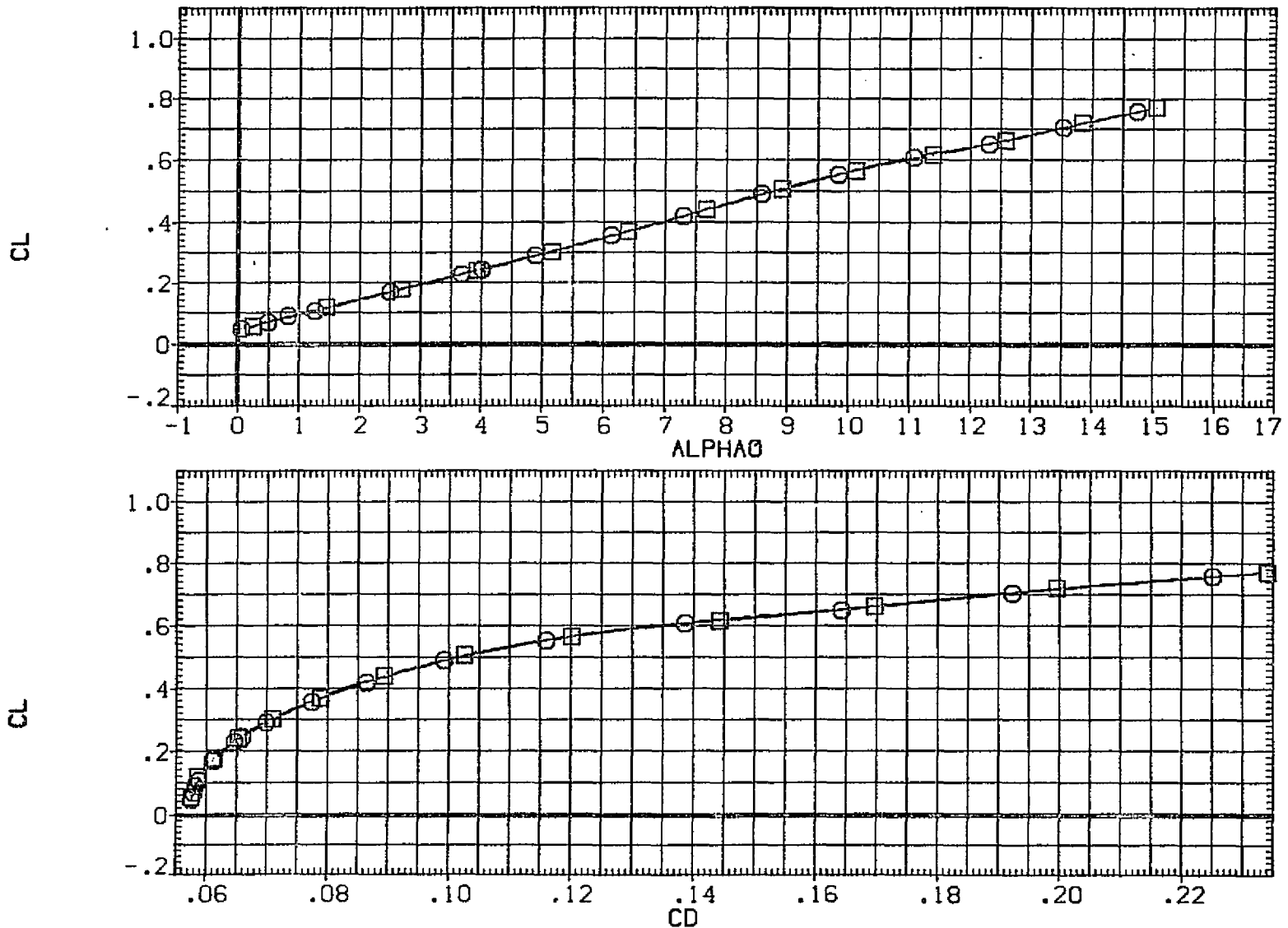


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(CD)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010) □ CAS
 (AGP002) ○ CAS

BETA PHI ELEVON VNGHST
 0RBF8N24/28 .000 .000 5.000 57.000
 0RBF8N24/28 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

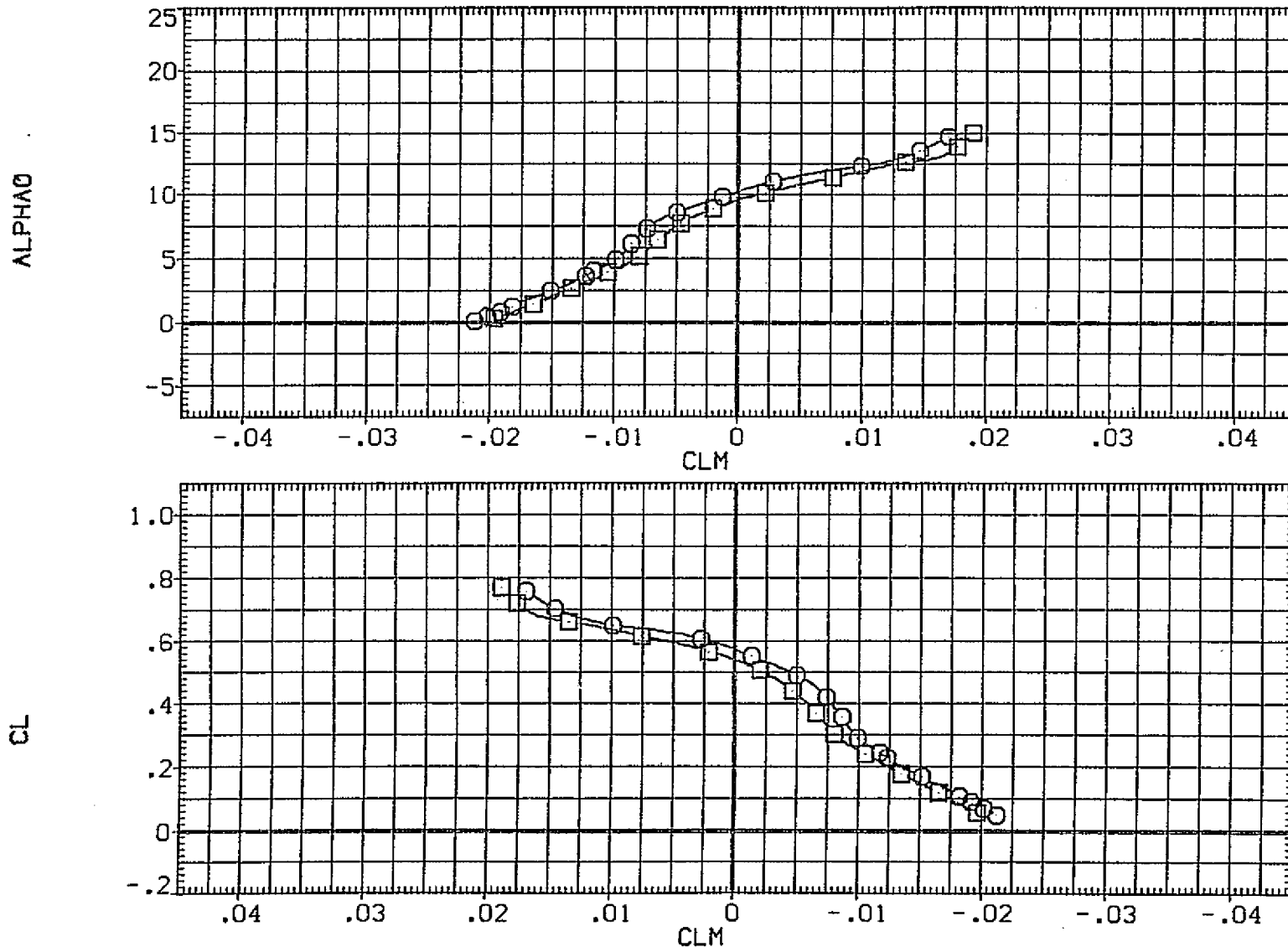




FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL
 (D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGP010)  CAS
 (AGP002)  CAS

ORBF8N24/28
 ORBF8N24/28

BETA PHI ELEVON WNGHGT
 .000 .000 5.000 57.000
 .000 .000 5.000 48.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8000 IN.
 BREF 936.6700 IN.
 XMRP 1109.0000 IN. X0
 YMRP .0000 IN. Y0
 ZMRP 375.0000 IN. Z0
 SCALE .0300

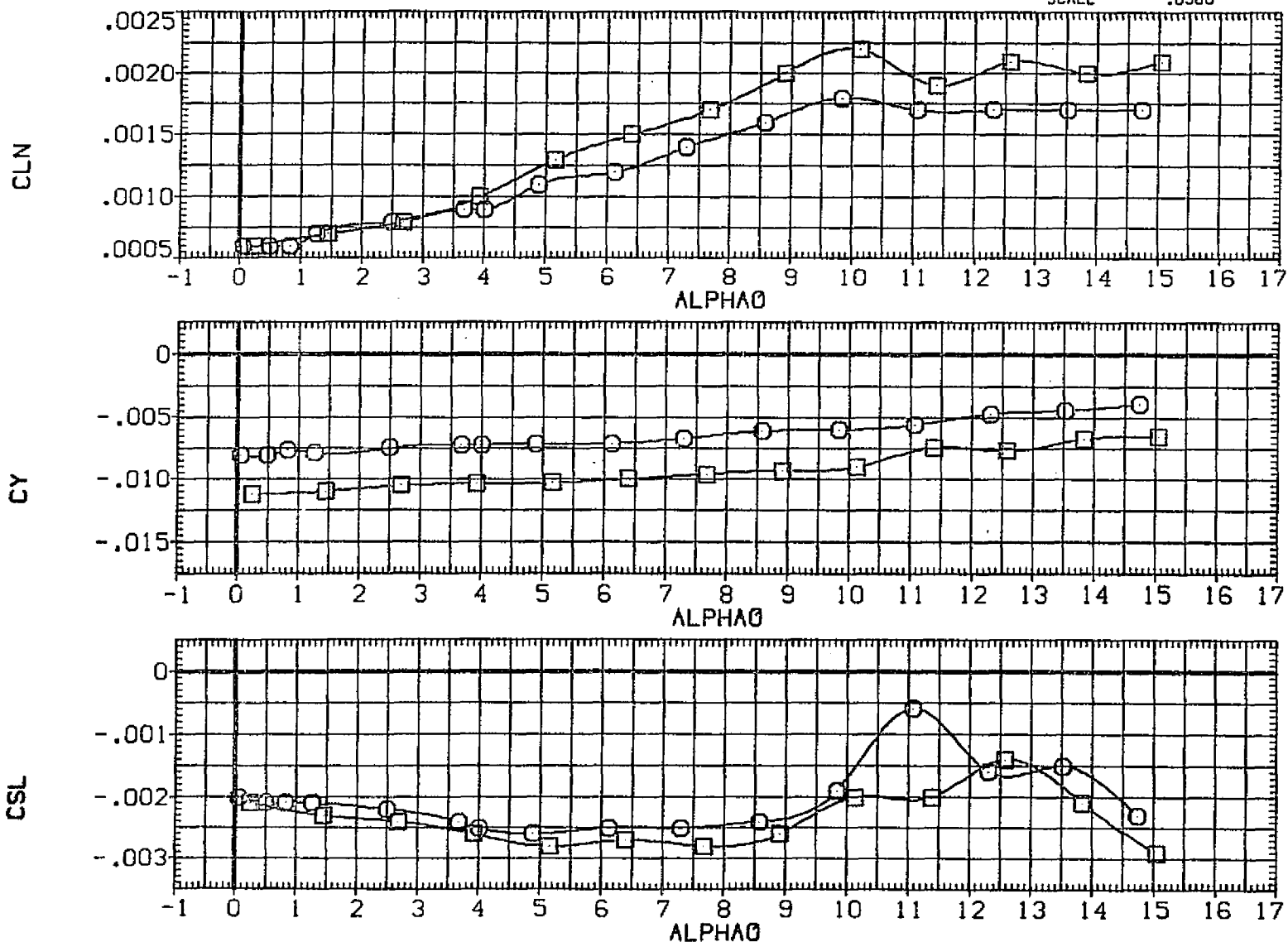


FIG. 12 EFFECT OF ORBITER HEIGHT IN TUNNEL

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	□ CAS K1H15.1 V9.1
(RGPO20)	○ CAS K1H15.1 V9.1
(RGPO12)	◇ CAS K1H15.1 V9.1
(RGPO14)	△ CAS K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

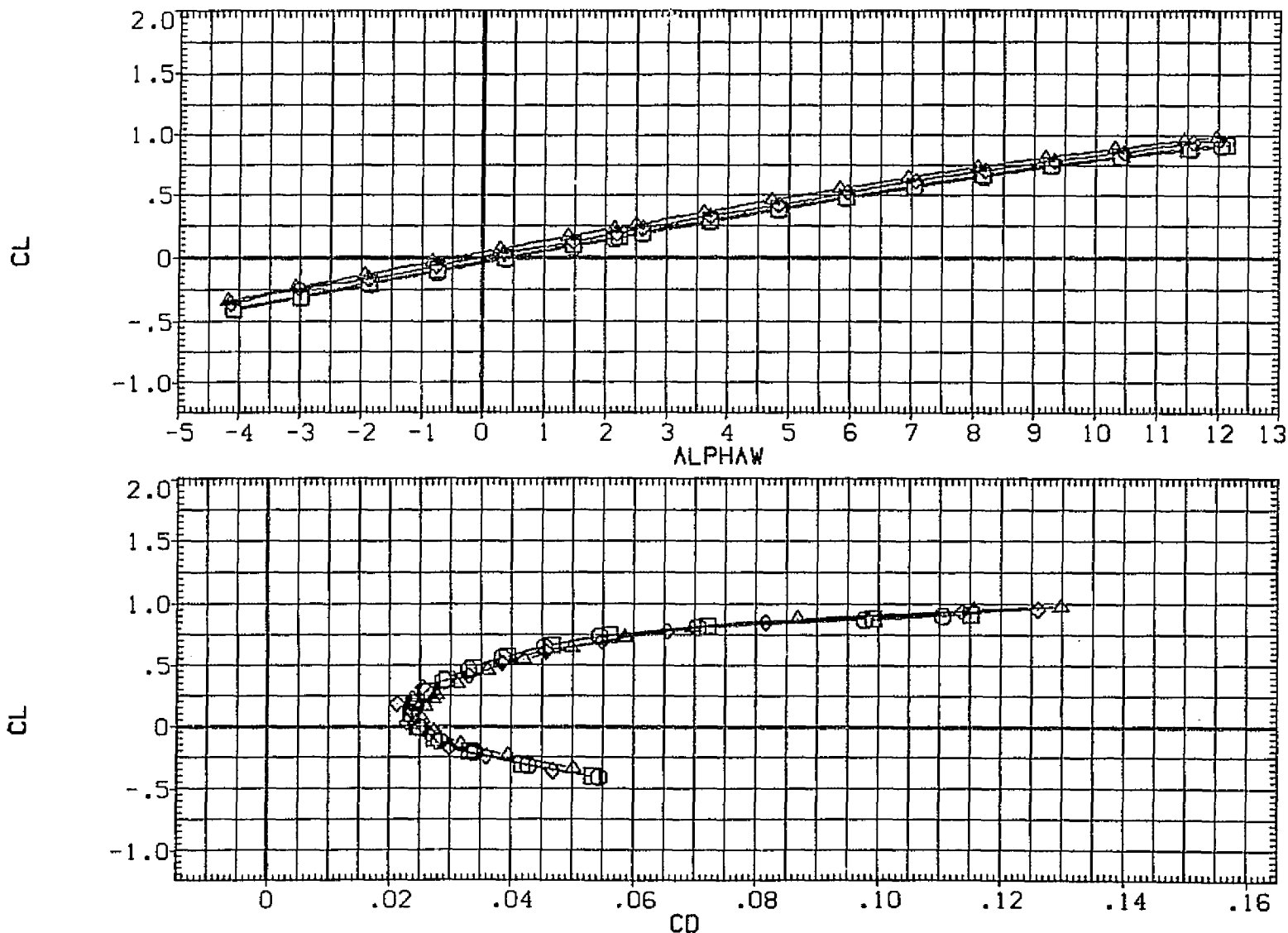


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(A) MACH = .30

DATA SET SYMBL	CONFIGURATION DESCRIPTION
(RGPO13)	○ CAG K1H15.1 V9.1
(RGPO20)	□ CAG K1H15.1 V9.1
(RGPO12)	◇ CAG K1H15.1 V9.1
(RGPO14)	△ CAG K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

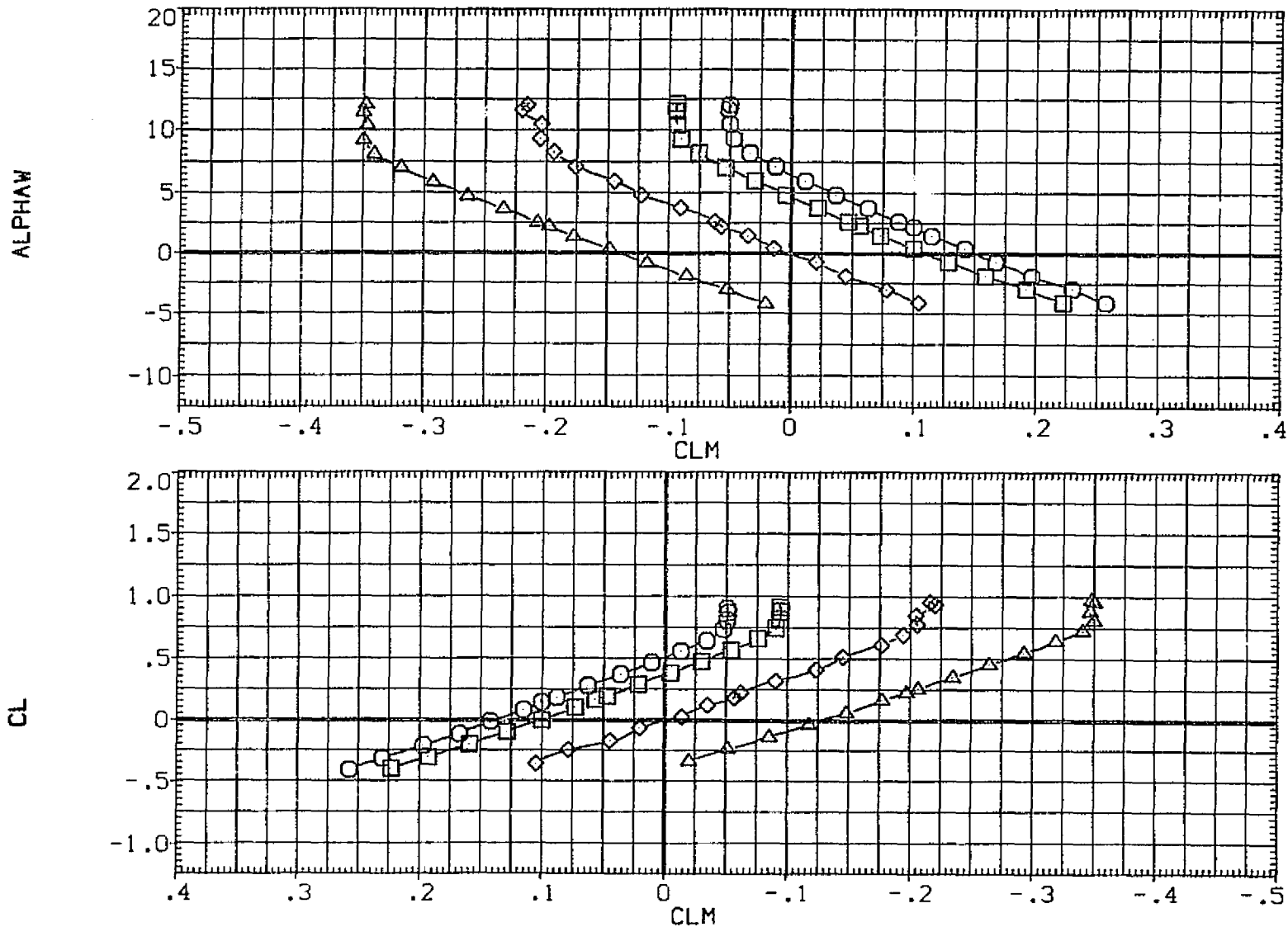


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	CA6 K1H15.1 V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(RGPO12)	CA6 K1H15.1 V9.1
(RGPO14)	CA6 K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

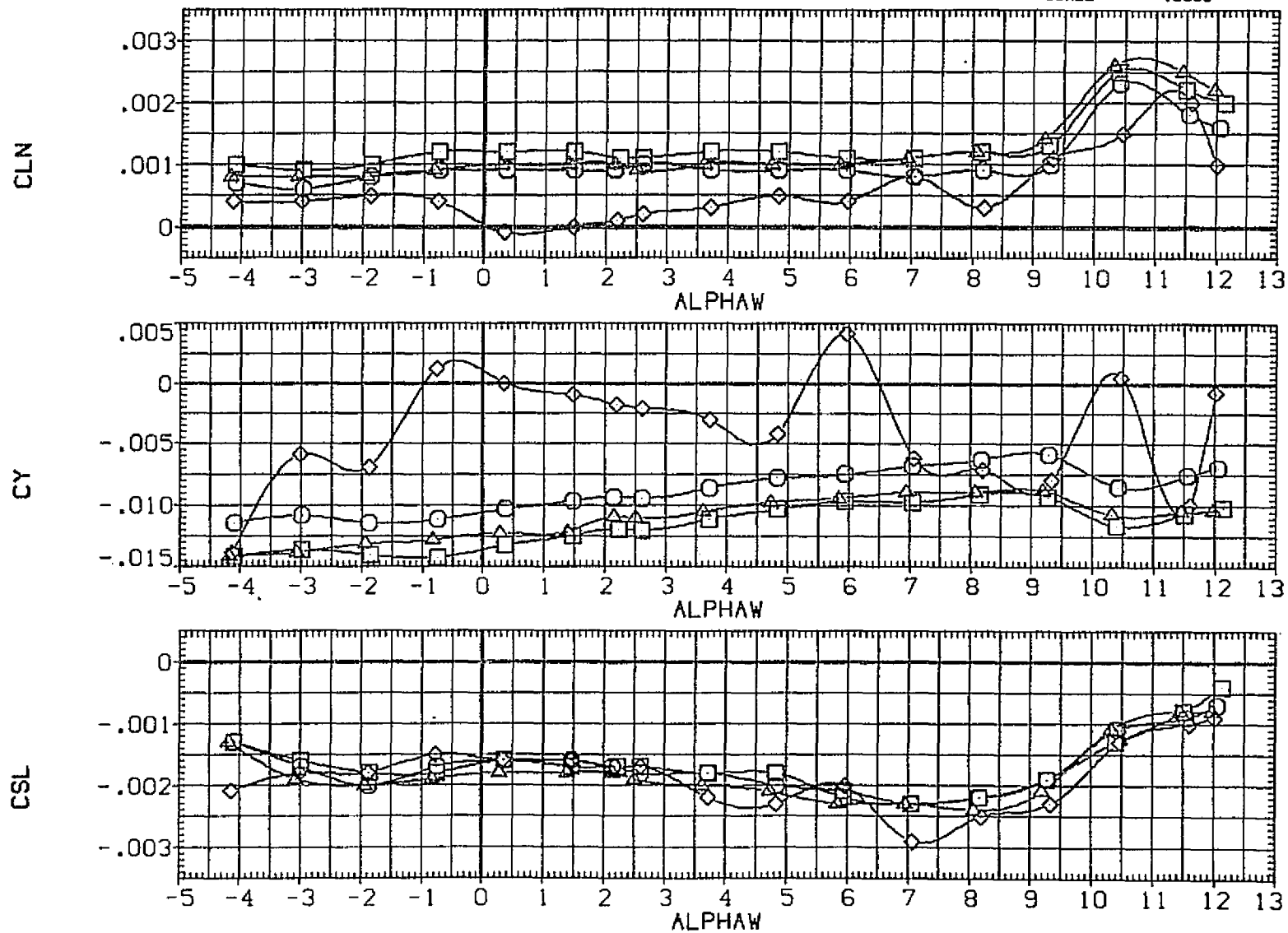


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	□ CA6 KIH15.1 V9.1
(RGPO20)	◇ CA6 KIH15.1 V9.1
(RGPO12)	○ CA6 KIH15.1 V9.1
(RGPO14)	△ CA6 KIH15.1 V9.1

STAB	ELV-18	ELV-08
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

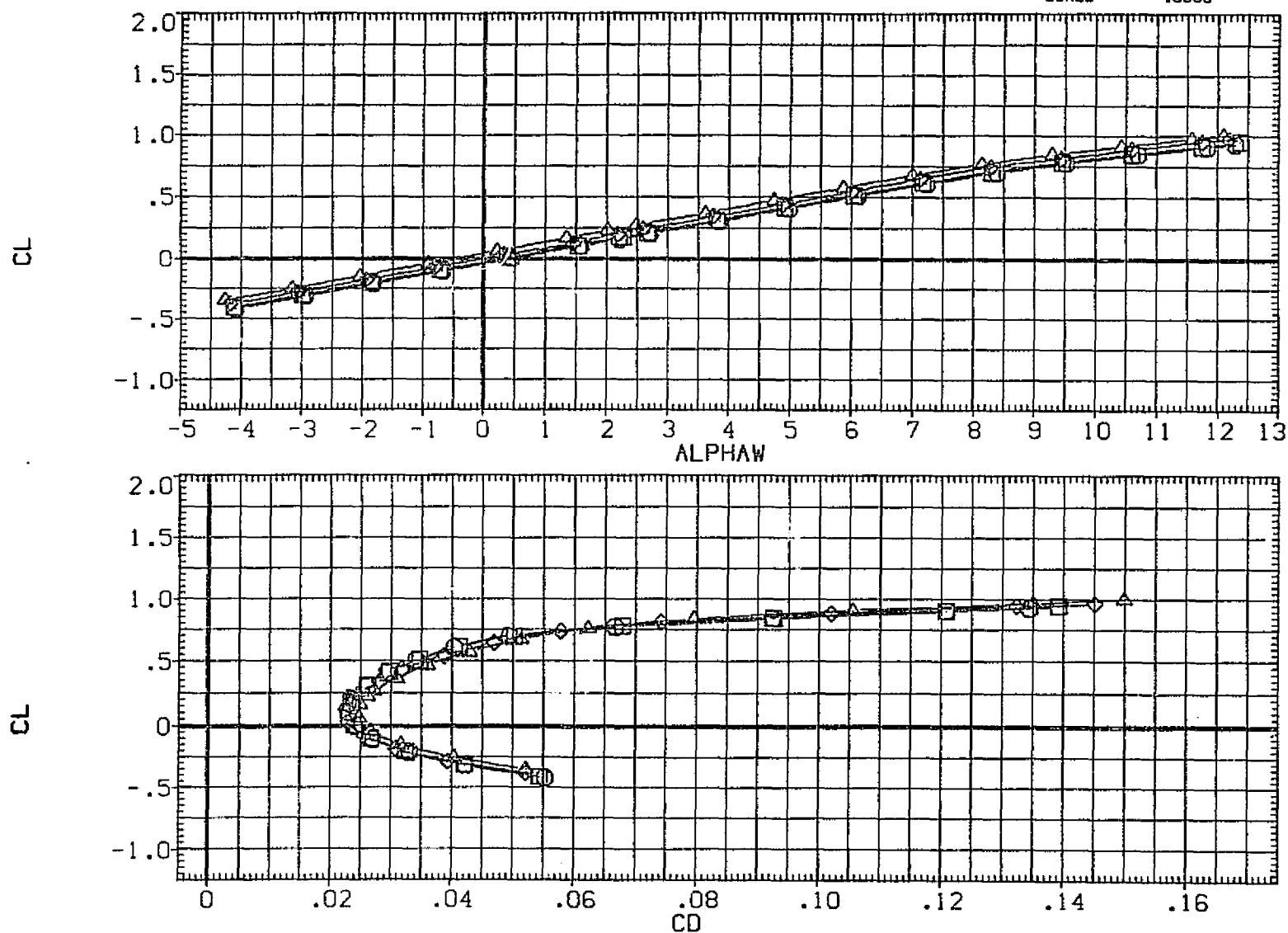


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP013)	CA6 KIH15.1 V9.1
(RGP020)	CA6 KIH15.1 V9.1
(RGP012)	CA6 KIH15.1 V9.1
(RGP014)	CA6 KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

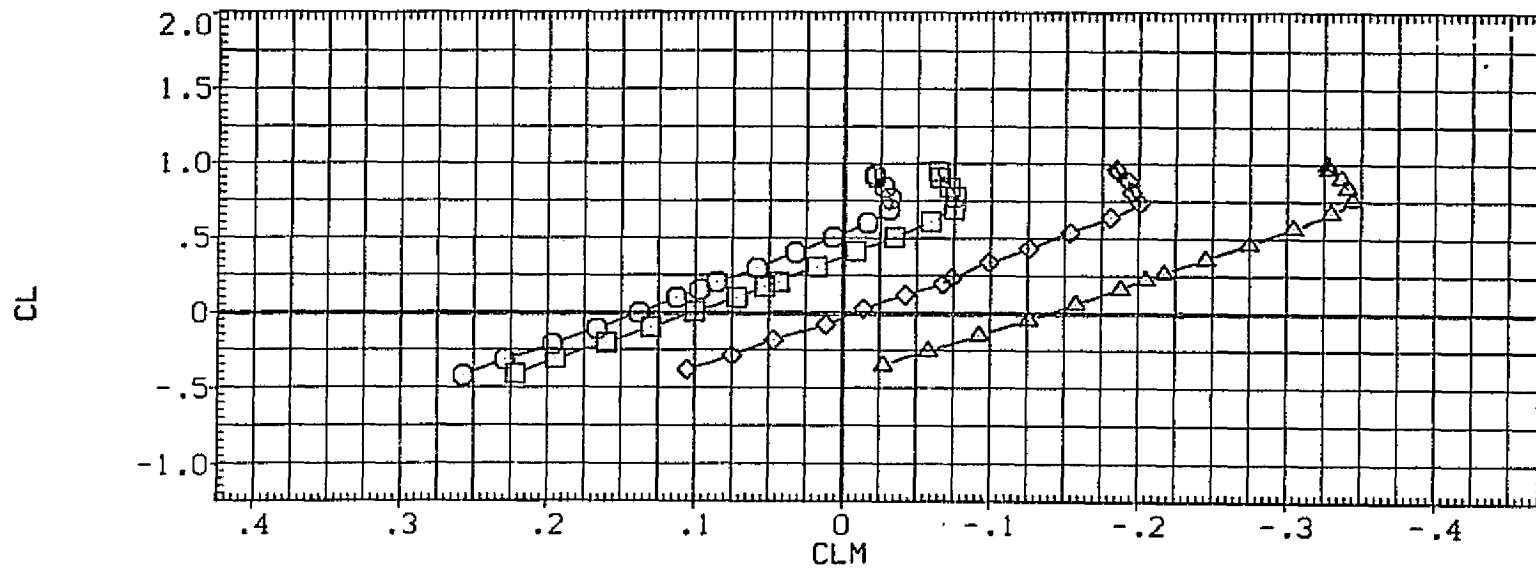
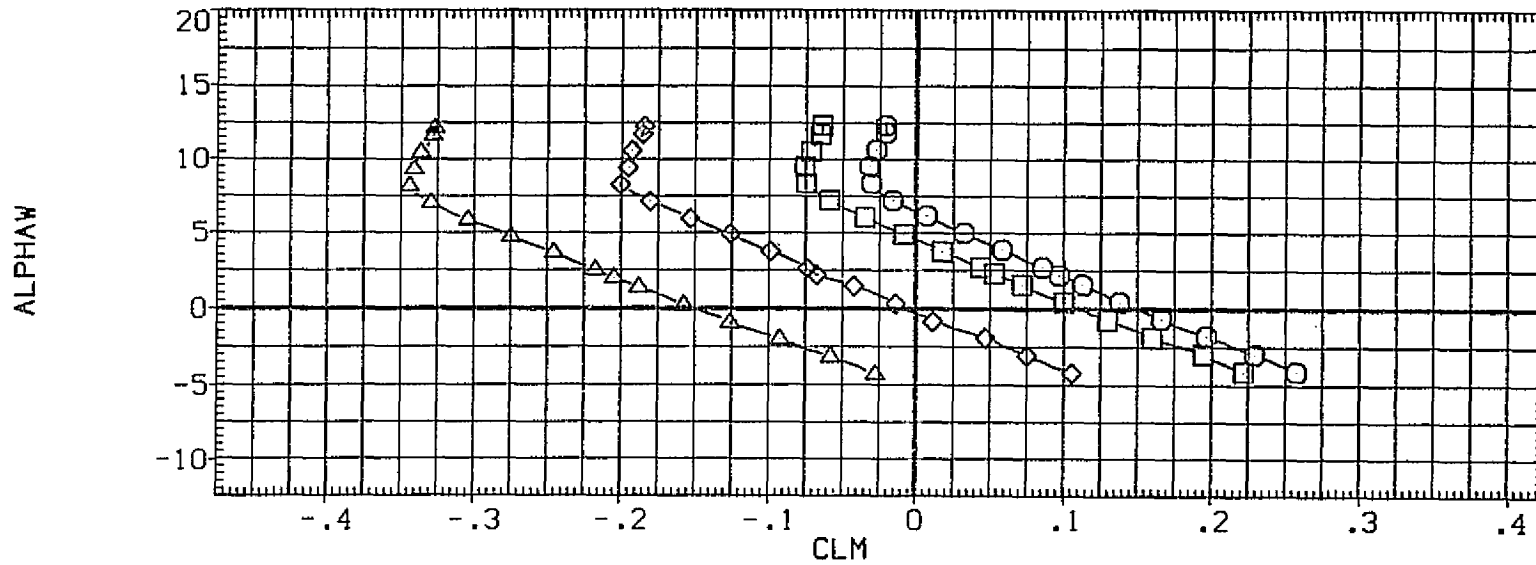


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	CA6 K1H15.1 V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(RGPO12)	CA6 K1H15.1 V9.1
(RGPO14)	CA6 K1H15.1 V9.1

STAB	ELV-1B	ELV-OB
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

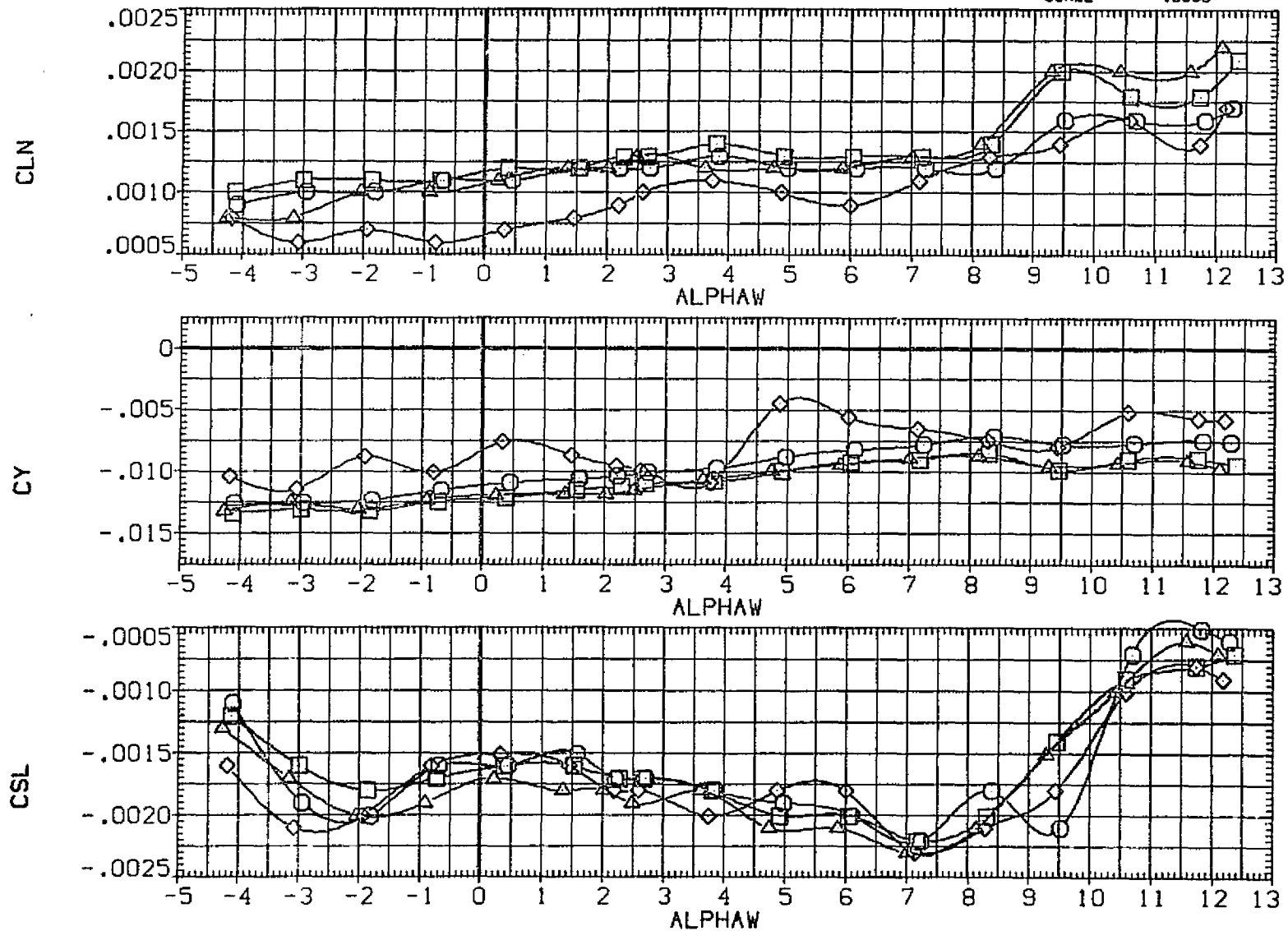


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	CA6 KIH15.1 V9.1
(RGPO20)	CA6 KIH15.1 V9.1
(RGPO12)	CA6 KIH15.1 V9.1
(RGPO14)	CA6 KIH15.1 V9.1

STAB	ELV-18	ELV-08
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

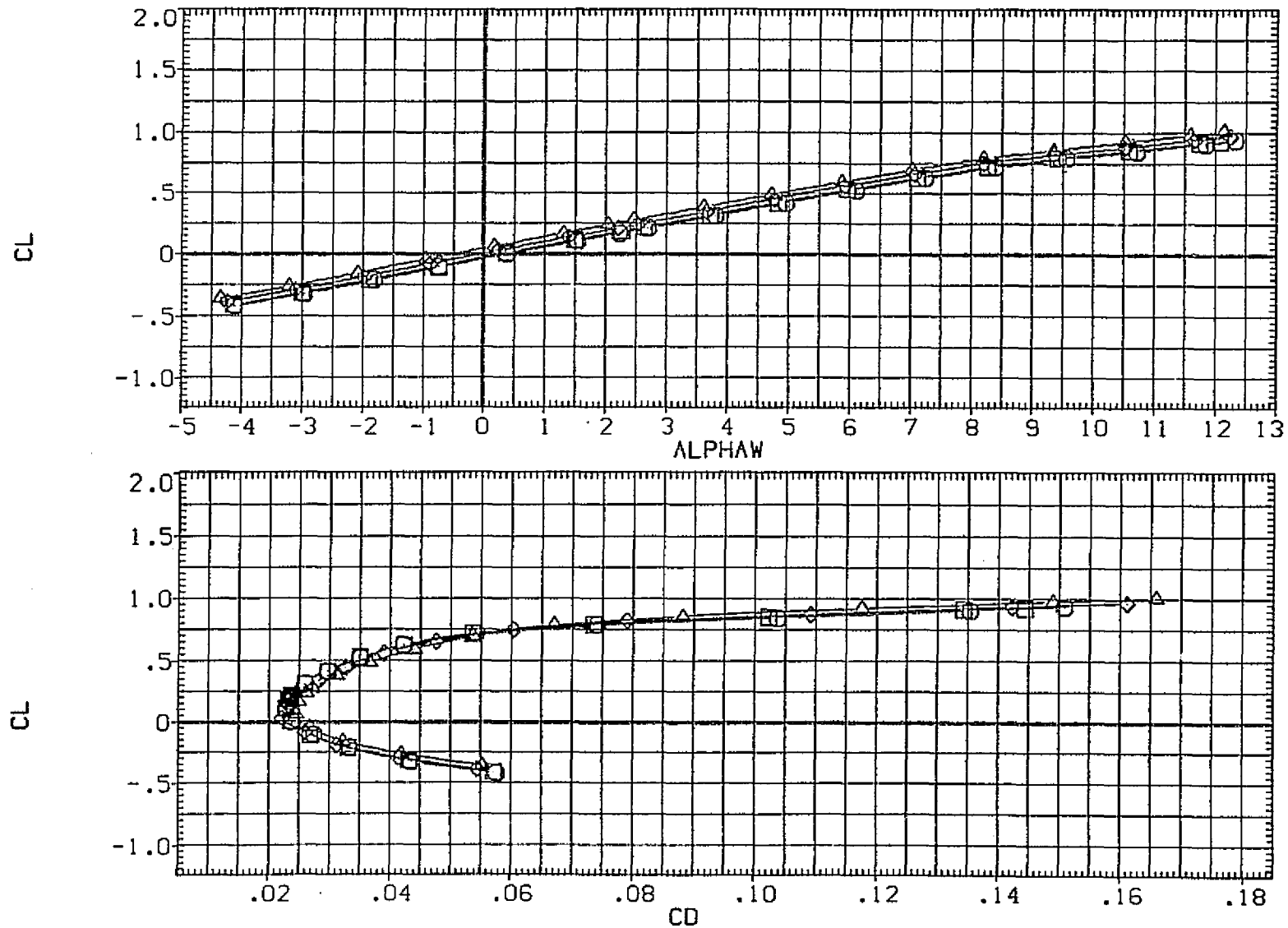


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE
 (C)MACH = .60

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(RGPO13)	○	CAG	K1H15.1 V9.1
(RGPO20)	□	CAG	K1H15.1 V9.1
(RGPO12)	◇	CAG	K1H15.1 V9.1
(RGPO14)	△	CAG	K1H15.1 V9.1

STAB	ELV-18	ELV-09
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

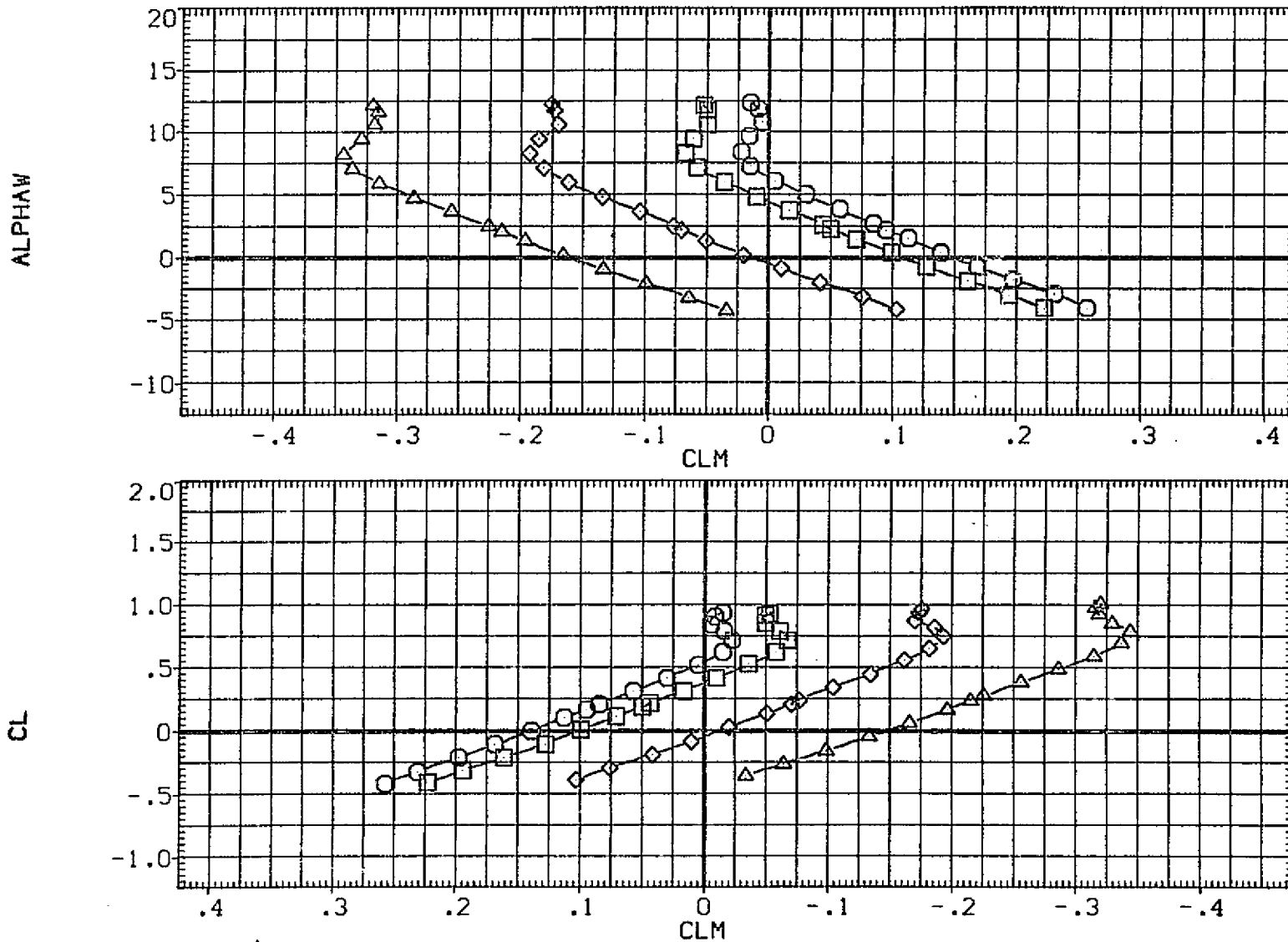


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO3)	CA6 K1H15.1 V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(RGPO12)	CA6 K1H15.1 V9.1
(RGPO14)	CA6 K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XMRP	1339.9000 IN. XC
YMRP	.0000 IN. YC
ZMRP	190.7700 IN. ZC
SCALE	.0300

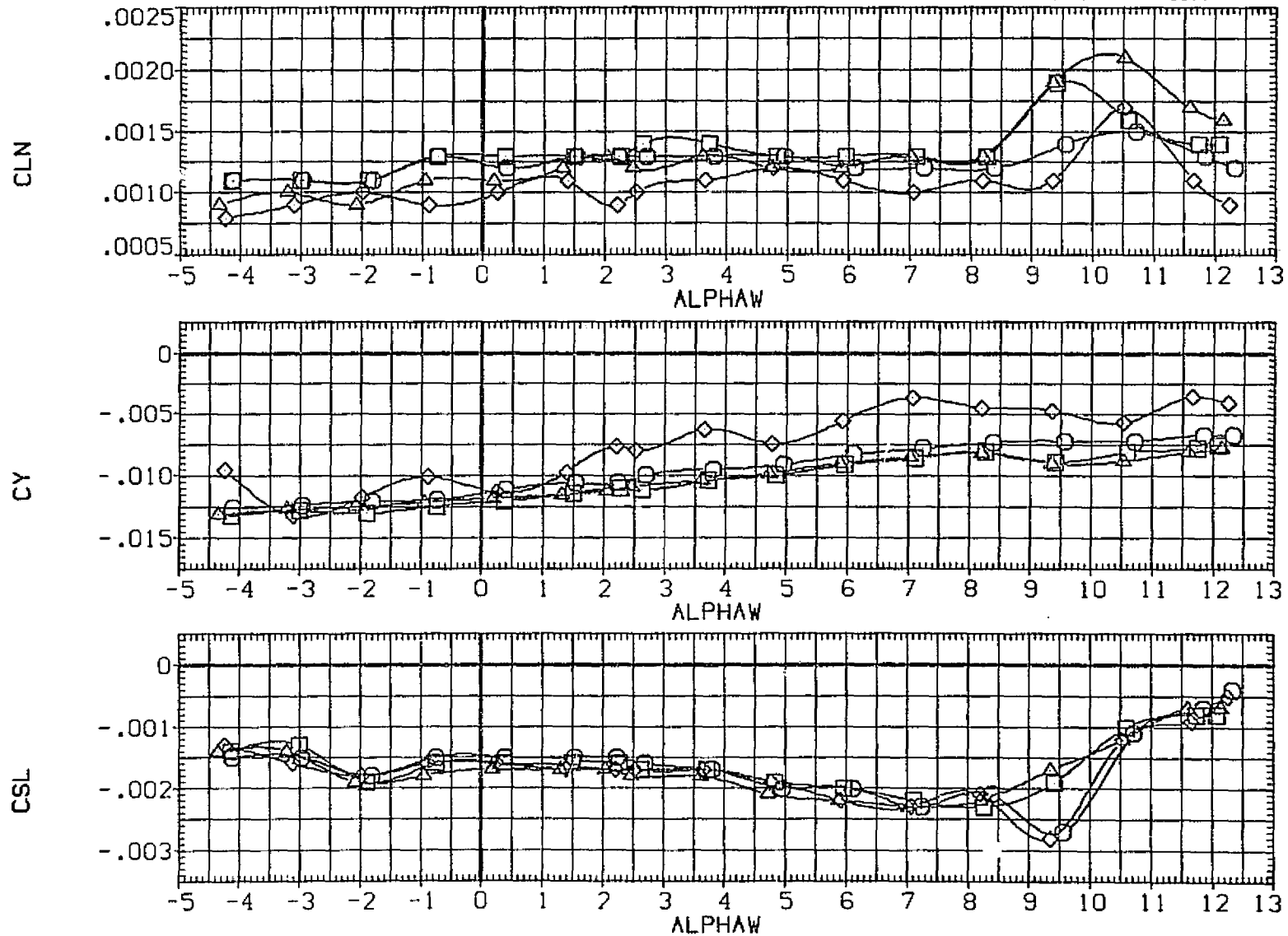


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	□ CAS K1H15.1 V9.1
(RGPO20)	○ CAS K1H15.1 V9.1
(RGPO12)	◇ CAS K1H15.1 V9.1
(RGPO14)	△ CAS K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

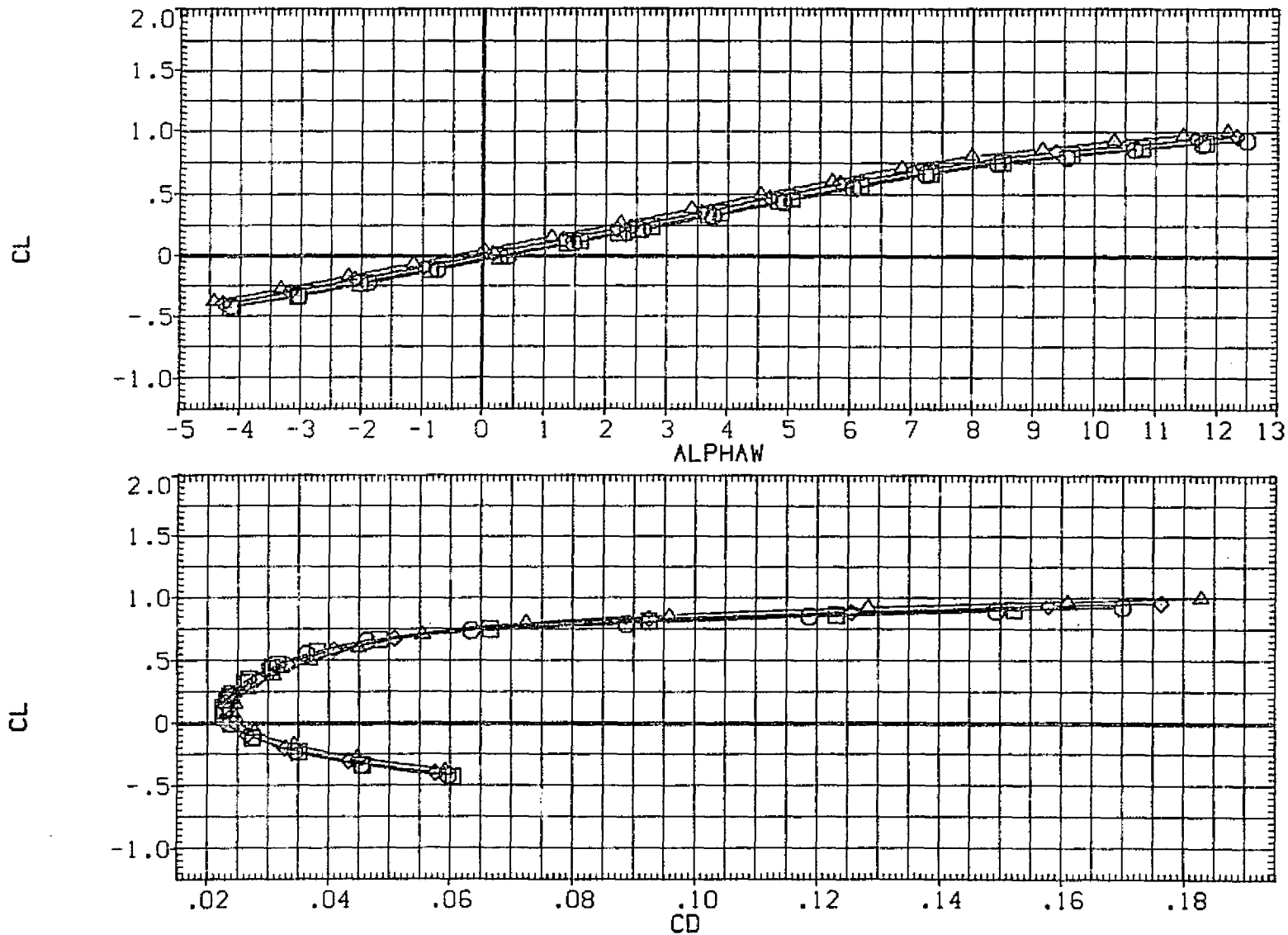


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	CA6 K1H15.1 V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(RGPO12)	CA6 K1H15.1 V9.1
(RGPO14)	CA6 K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9300	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

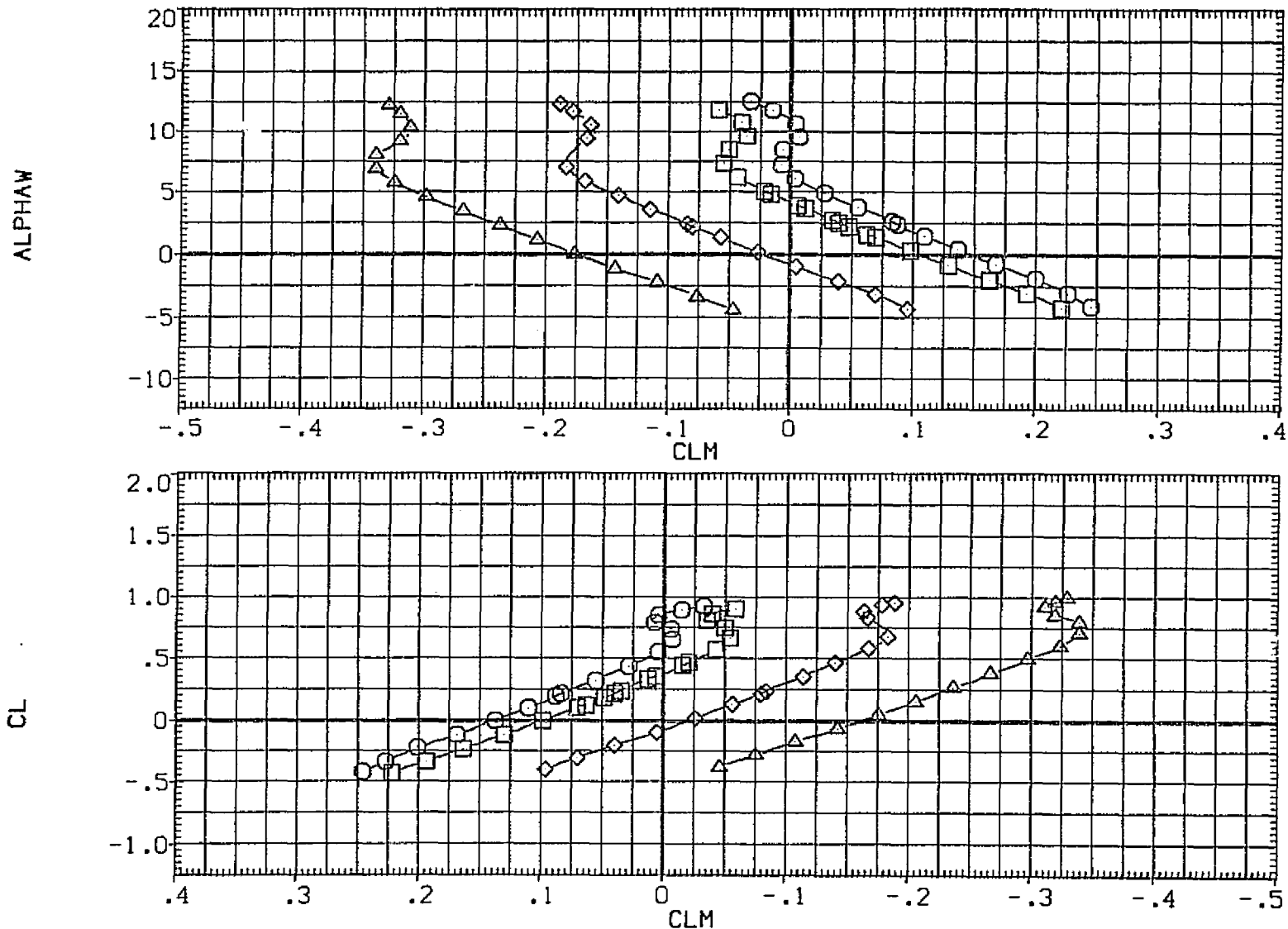


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO13)	CAG K1H15.1 V9.1
(RGPO20)	CAG K1H15.1 V9.1
(RGPO12)	CAG K1H15.1 V9.1
(RGPO14)	CAG K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-1.000	.000	.000
-.030	.000	.000
2.130	.000	.000
4.940	.000	.000

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XMRP	1339.9000 IN. XC
YMRP	.0000 IN. YC
ZMRP	190.7700 IN. ZC
SCALE	.0300

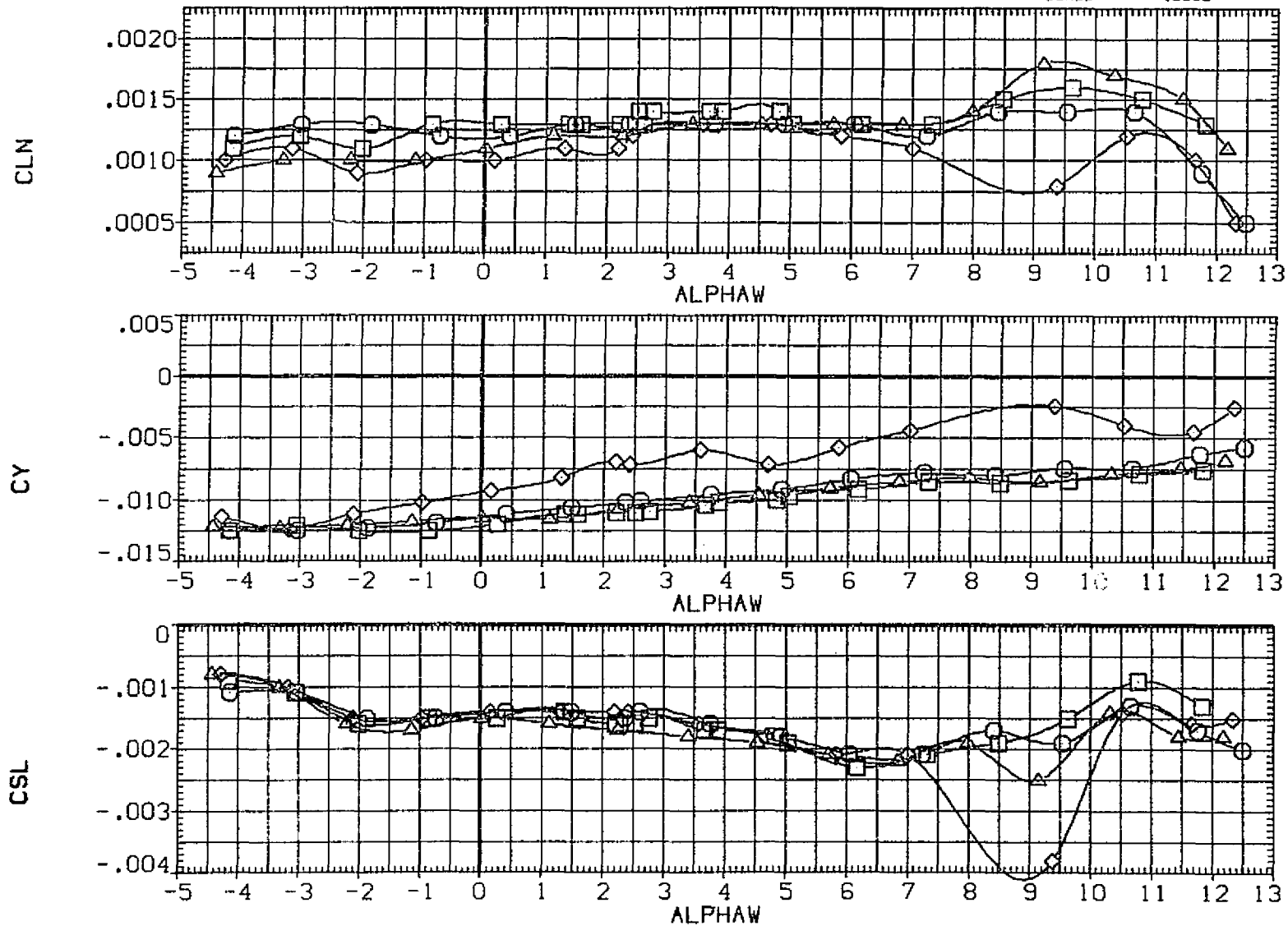


FIG. 13 STABILIZER EFFECTIVENESS, BASIC 747 ALONE

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGD16)	CA6 KIH15.1 V9.1
(RGD14)	CA6 KIH15.1 V9.1
(RGD15)	CA6 KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
4.940	-10.000	-10.000
4.940	.000	.000
4.940	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ. FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

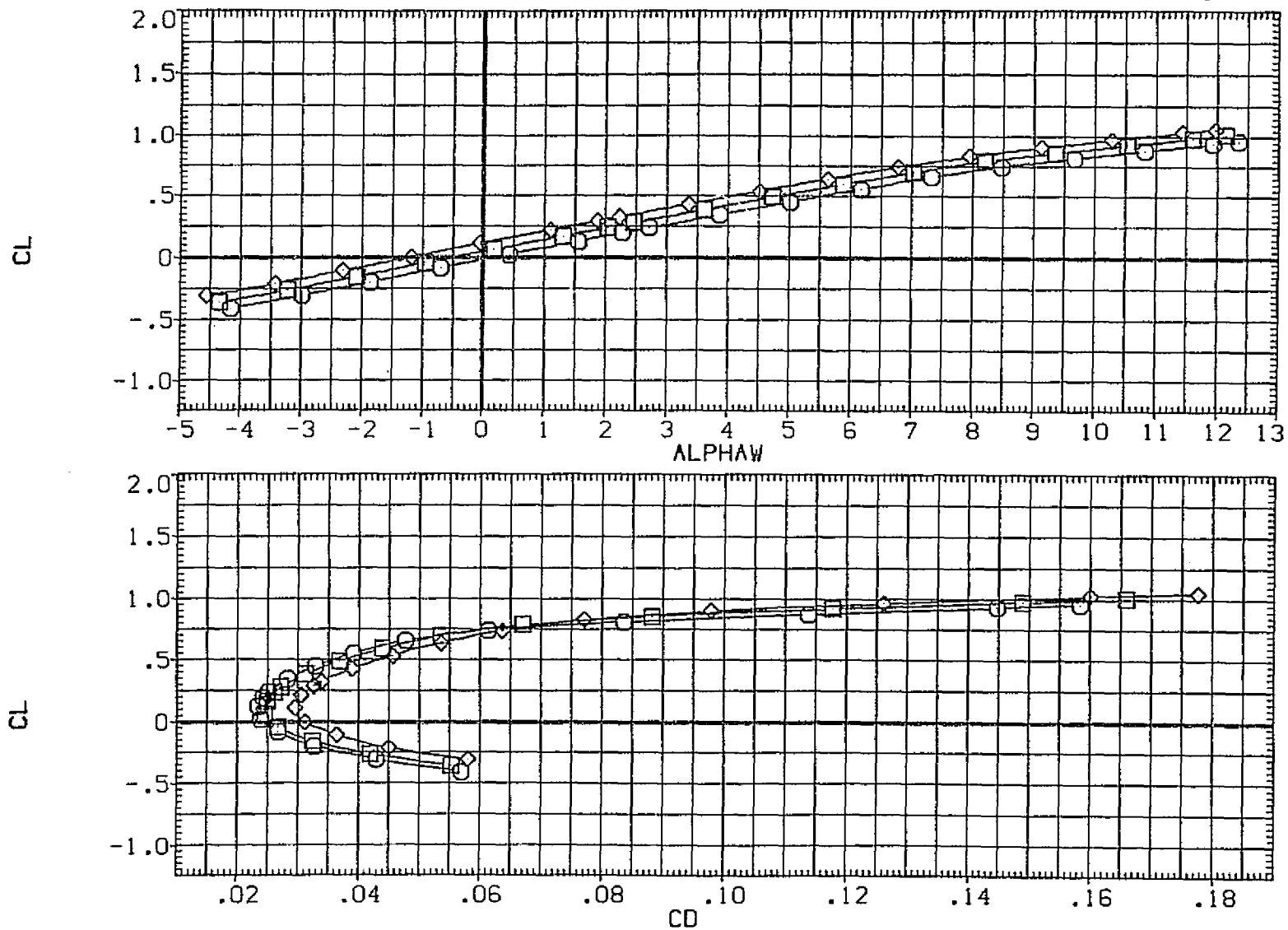


FIG. 14 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 5

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPD16)	□ CA6 KIH15.1 V9.1
(RGPD14)	○ CA6 KIH15.1 V9.1
(RGPD15)	◇ CA6 KIH15.1 V9.1

STAB	ELV-18	ELV-08
4.940	-10.000	-10.000
4.940	.000	.000
4.940	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

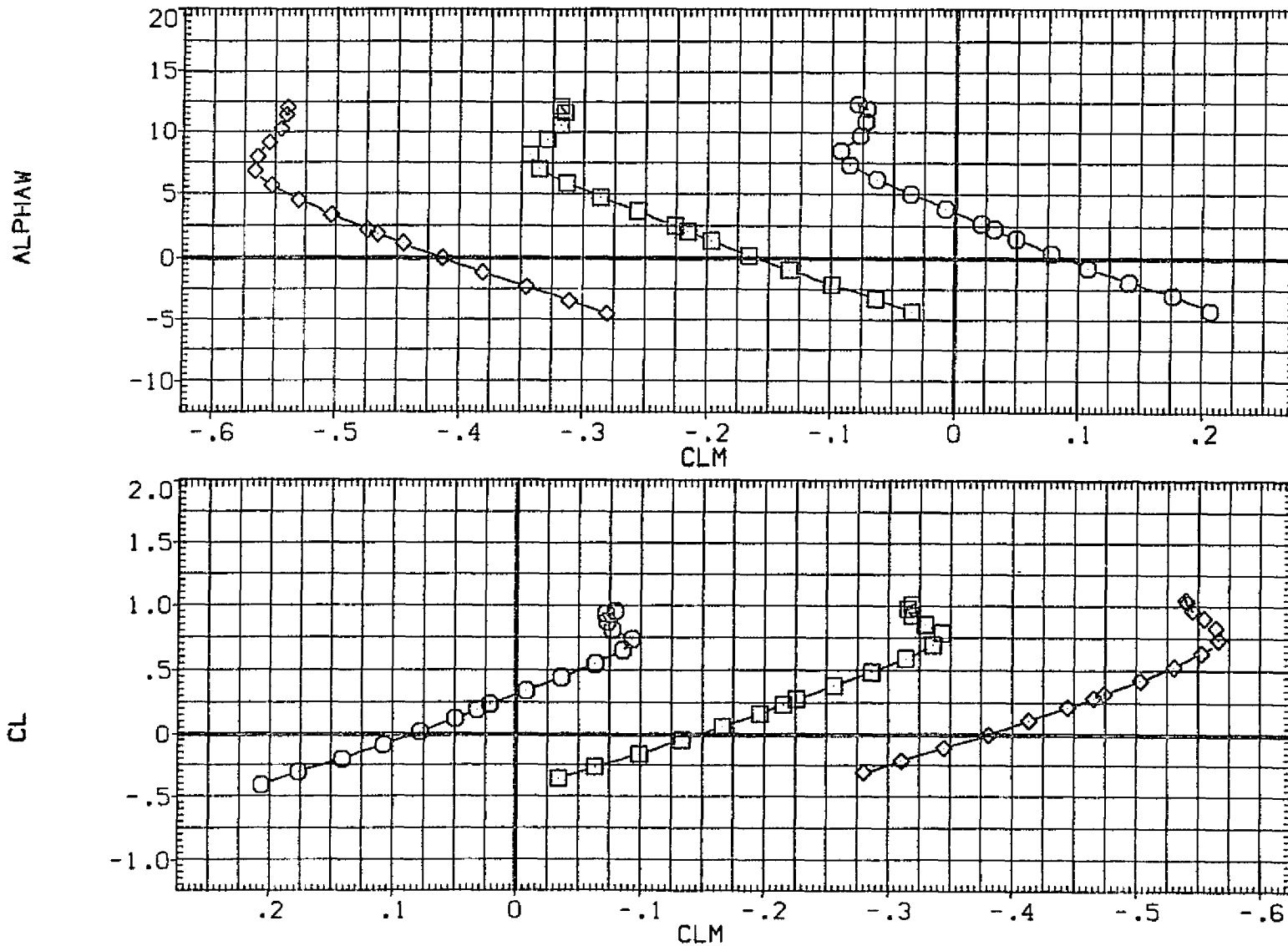


FIG. 14 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPD16)	○ CAB K1H15.1 V9.1
(RGPD14)	□ CAB K1H15.1 V9.1
(RGPD15)	◇ CAB K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
4.940	-10.000	-10.000
4.940	.000	.000
4.940	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

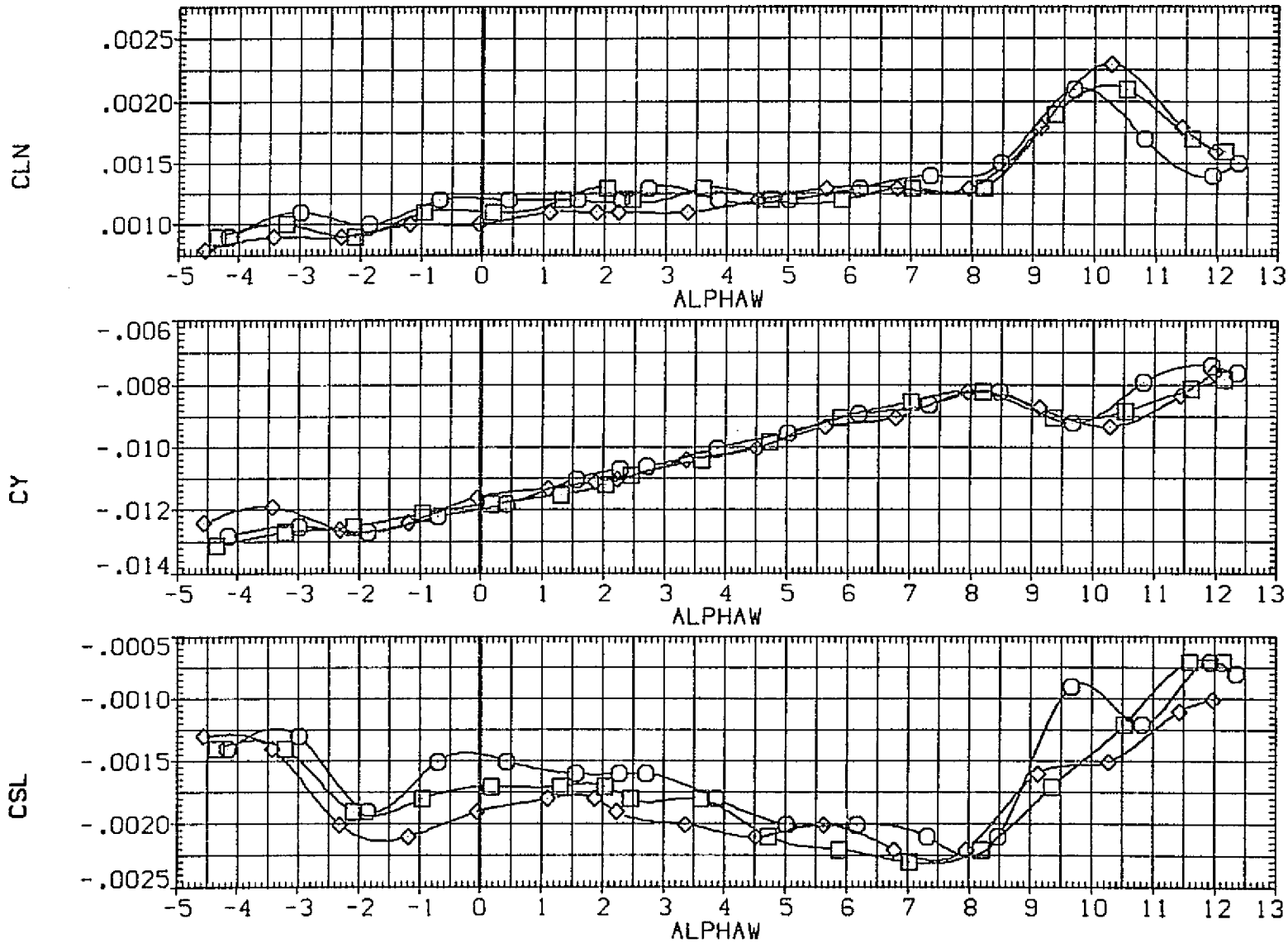


FIG. 14 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO18)	○ CAG KIH15.1 V9.1
(RGPO20)	□ CAG KIH15.1 V9.1
(RGPO19)	◇ CAG KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

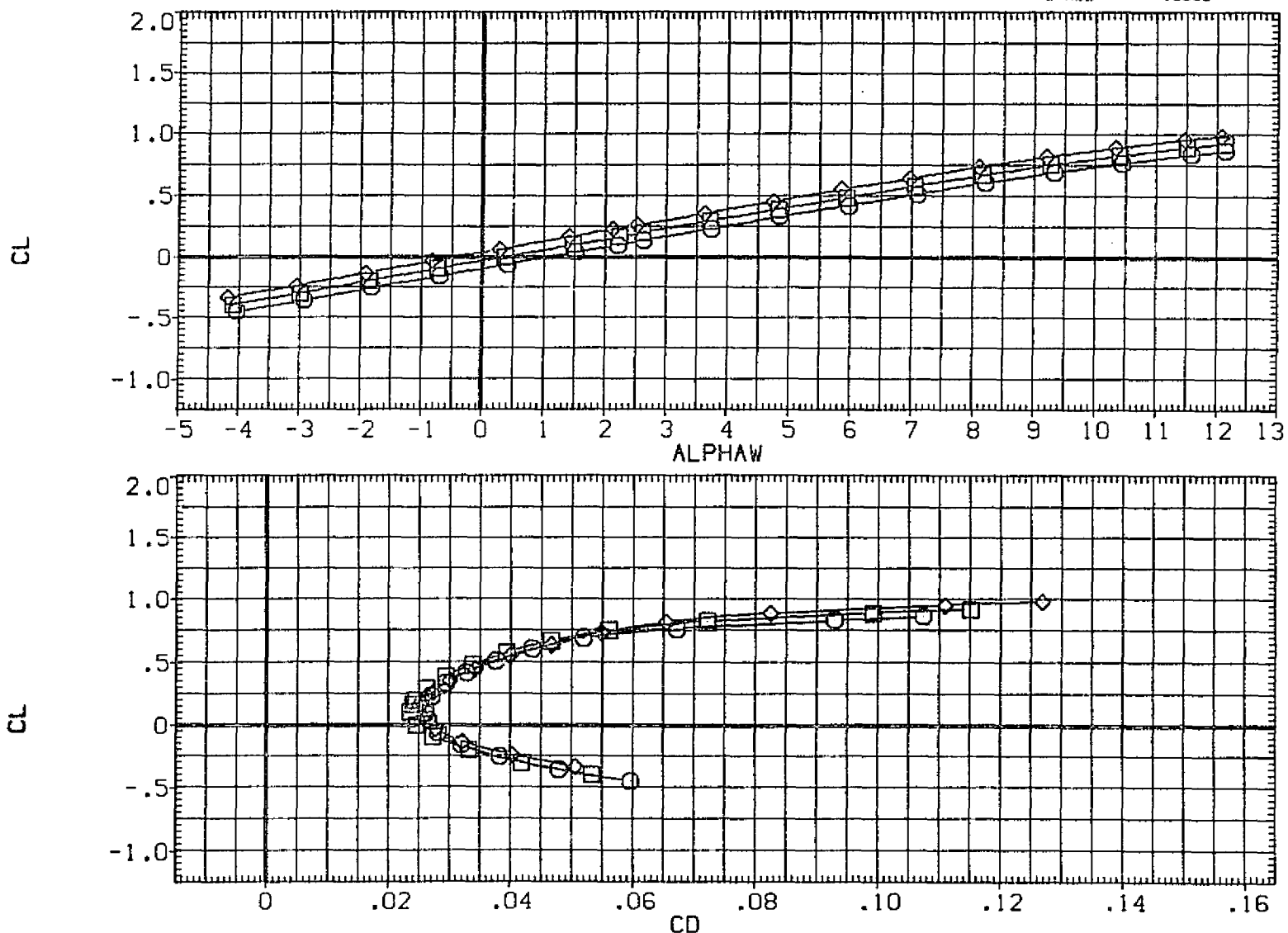


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO19)	○ CAS KIH15.1 V9.1
(RGPO20)	□ CAS KIH15.1 V9.1
(RGPO19)	◇ CAS KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

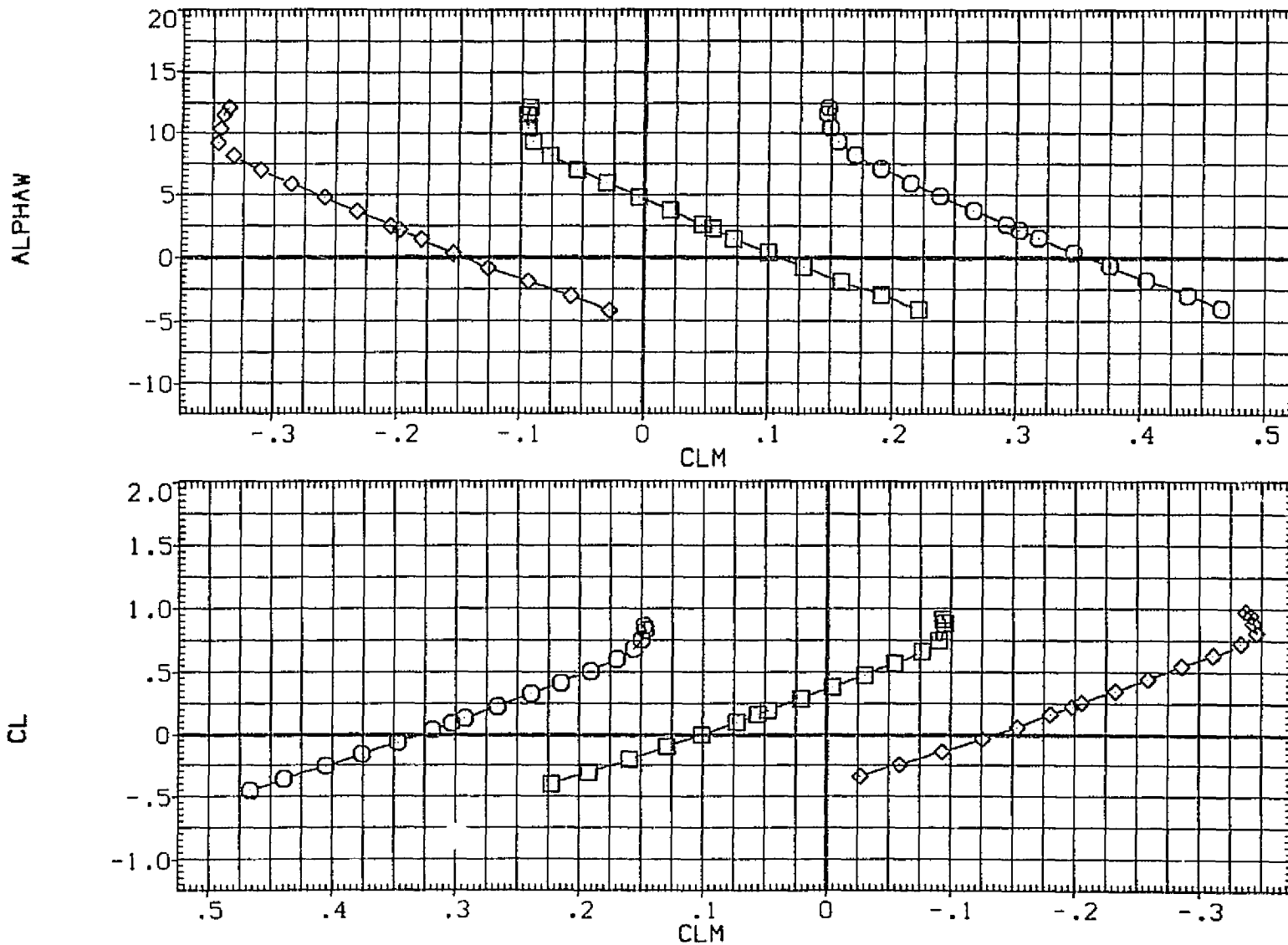


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6P018)	CA6 KIHIS.1 V9.1
(R6P020)	CA6 KIHIS.1 V9.1
(R6P019)	CA6 KIHIS.1 V9.1

STAB	ELV-IB	ELV-CB
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XMRP	1339.9000 IN. XC
YMRP	.0000 IN. YC
ZMRP	190.7700 IN. ZC
SCALE	.0300

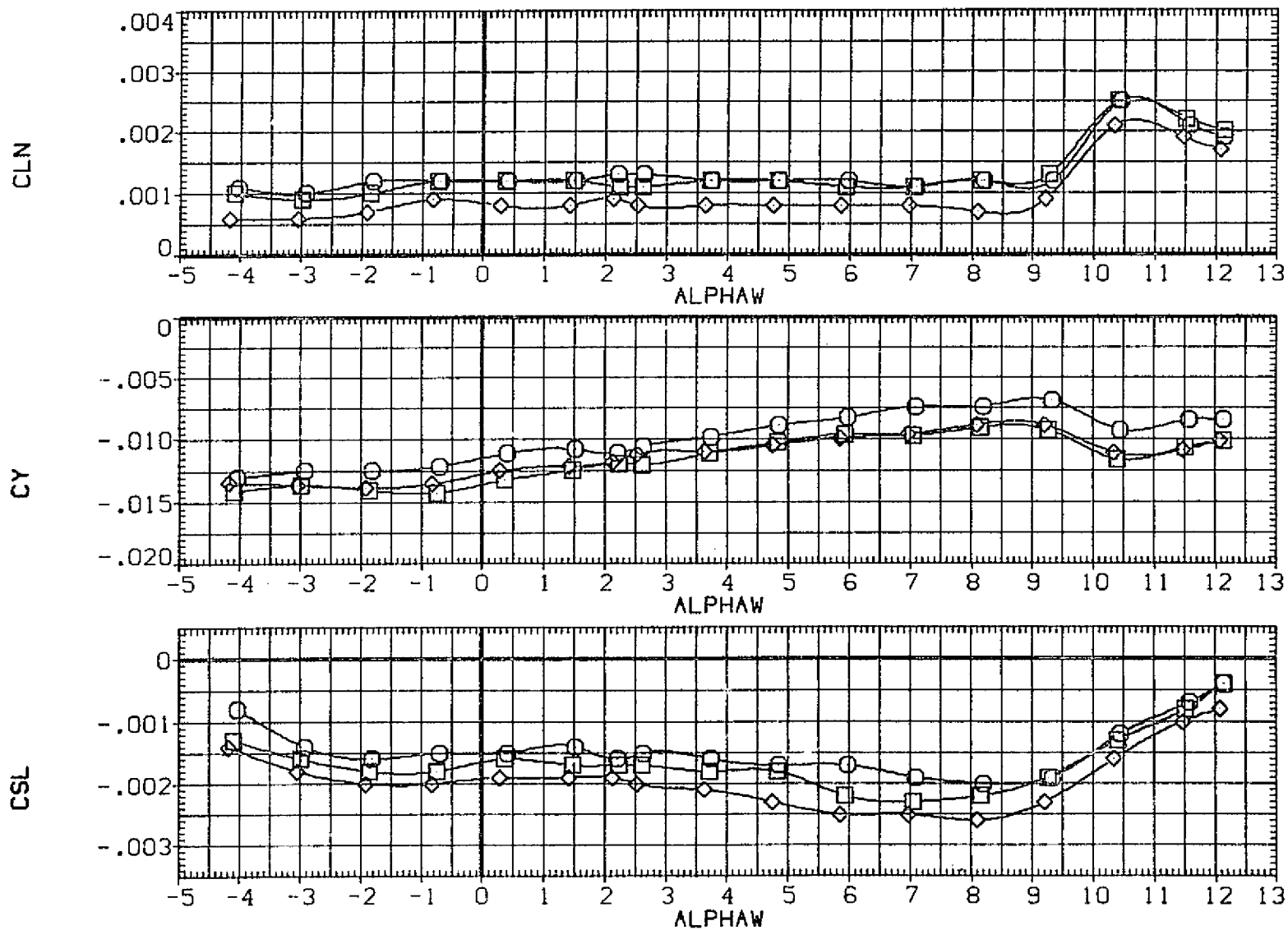


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPD18)	CA6 KIH15.1 V9.1
(RGPD20)	CA6 KIH15.1 V9.1
(RGPD19)	CA6 KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XMRP	1339.9000 IN. XC
YMRP	.0000 IN. YC
ZMRP	190.7700 IN. ZC
SCALE	.0300

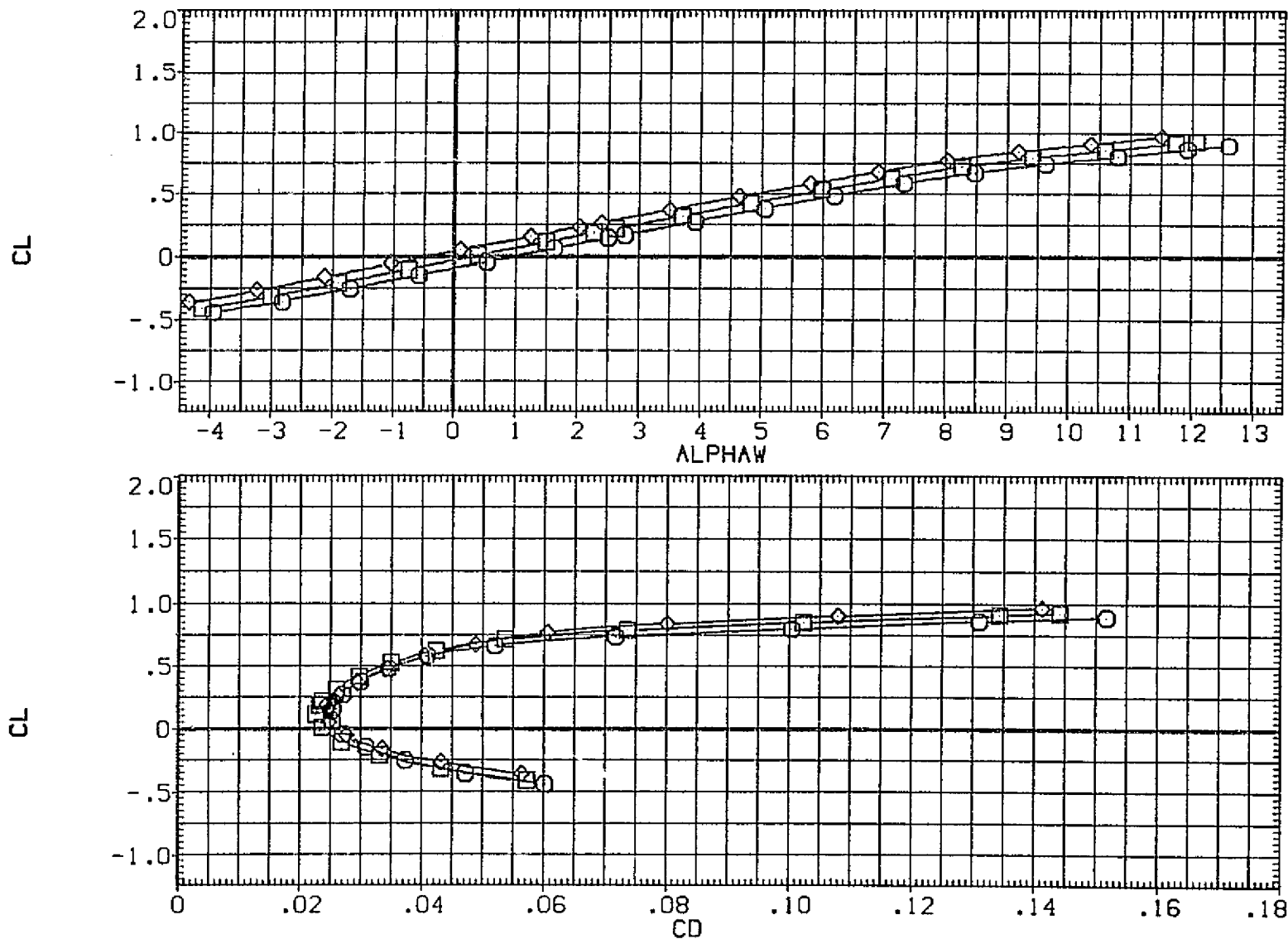


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO18)	CA6 K1H15.1 V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(RGPO19)	CA6 K1H15.1 V9.1

STAB	ELV-IB	ELV-OB
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

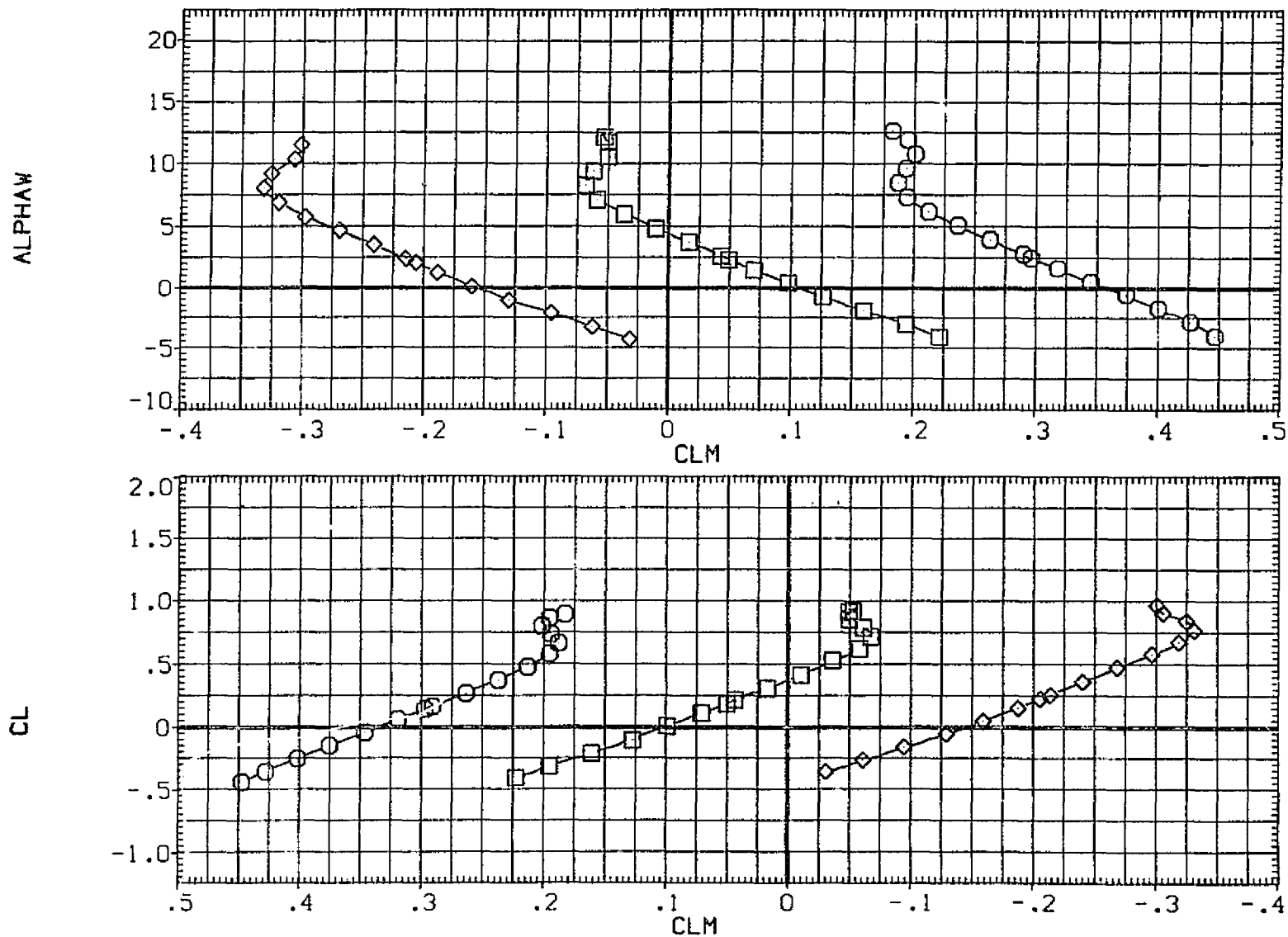


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP018)	○ CA6 KIH15.1 V9.1
(RGP020)	□ CA6 KIH15.1 V9.1
(RGP019)	◇ CA6 KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	3348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

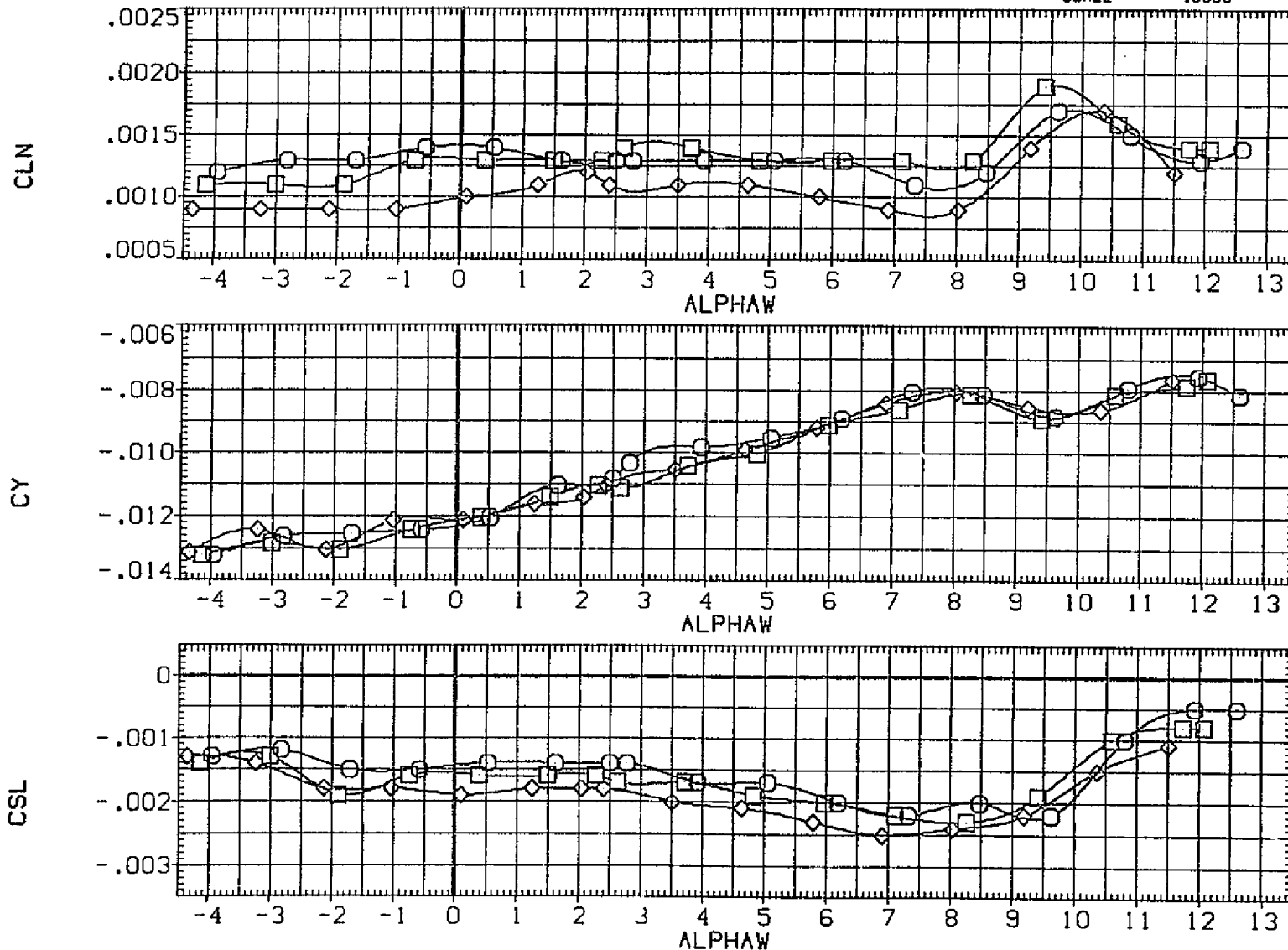


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPD18)	CA6 K1H15.1 V9.1
(RGPD20)	CA6 K1H15.1 V9.1
(RGPD19)	CA6 K1H15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

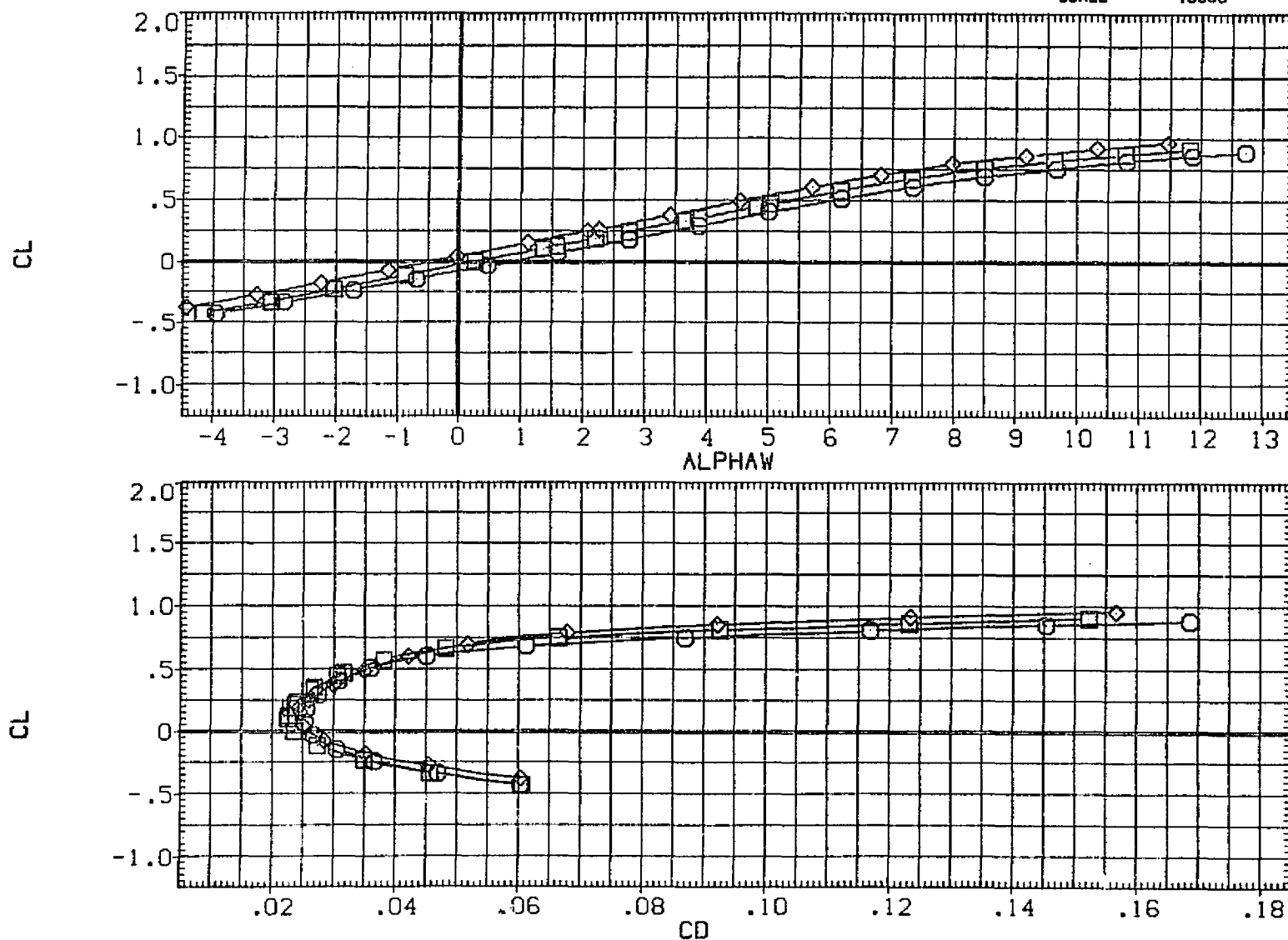


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0
 (C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP018)	CA6 KIH15.1 V9.1
(RGP020)	CA6 KIH15.1 V9.1
(RGP019)	CA6 KIH15.1 V9.1

STAB	ELV-1B	ELV-0B
-.030	-10.000	-10.000
-.030	.000	.000
-.030	10.000	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.3000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

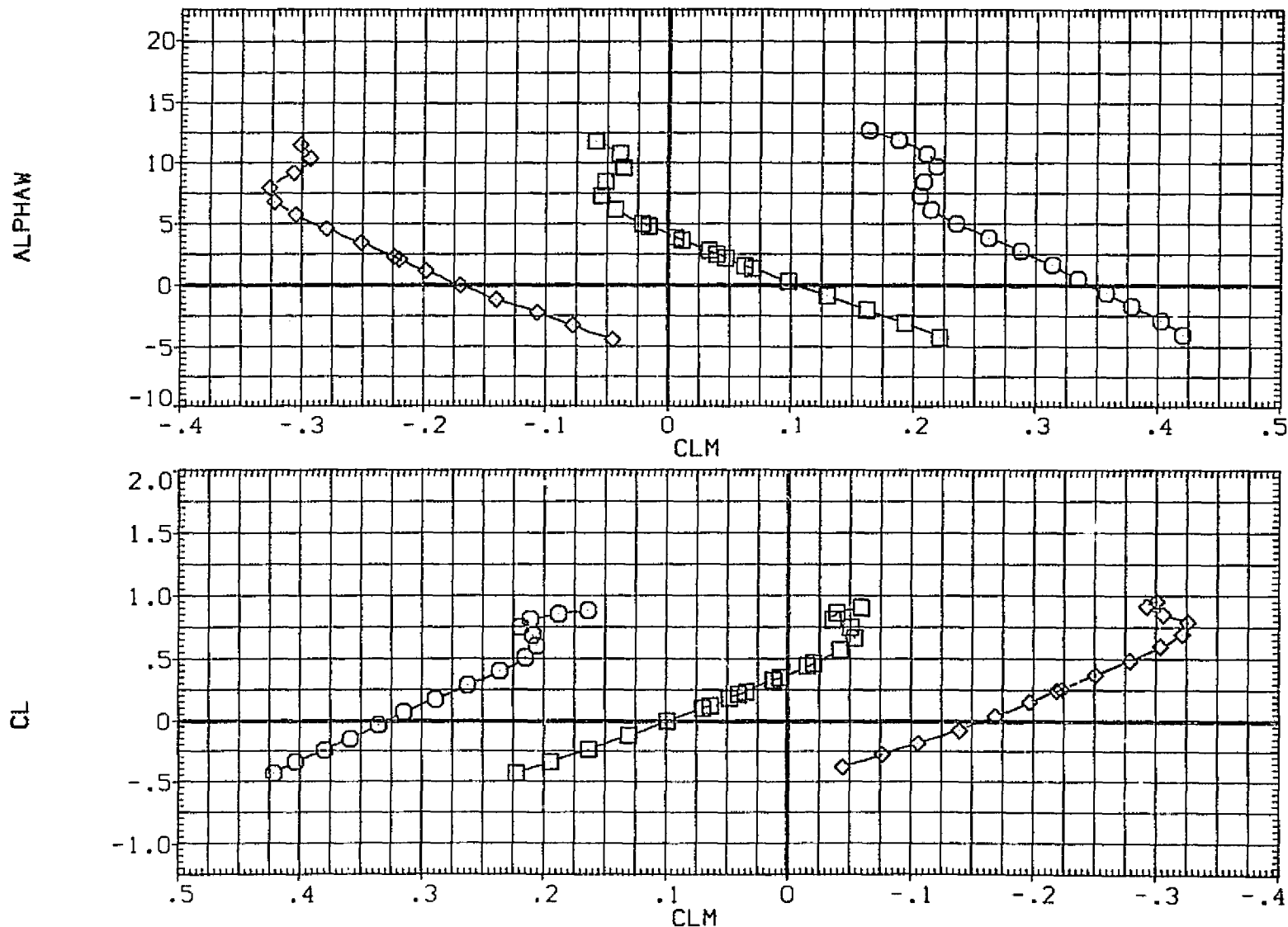


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

(C)MACH = .70

DATA SET SYMBOL (RSP018) (RSP020) (RSP019)

○ CAB K1H15.1 V9.1
 □ CAB K1H15.1 V9.1
 ◇ CAB K1H15.1 V9.1

CONFIGURATION DESCRIPTION

STAB ELV-18 ELV-DB
 -0.030 -10.000 -10.000
 -0.030 .000 .000
 -0.030 10.000 10.000

REFERENCE INFORMATION

SREF 5500.0000 IN. SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

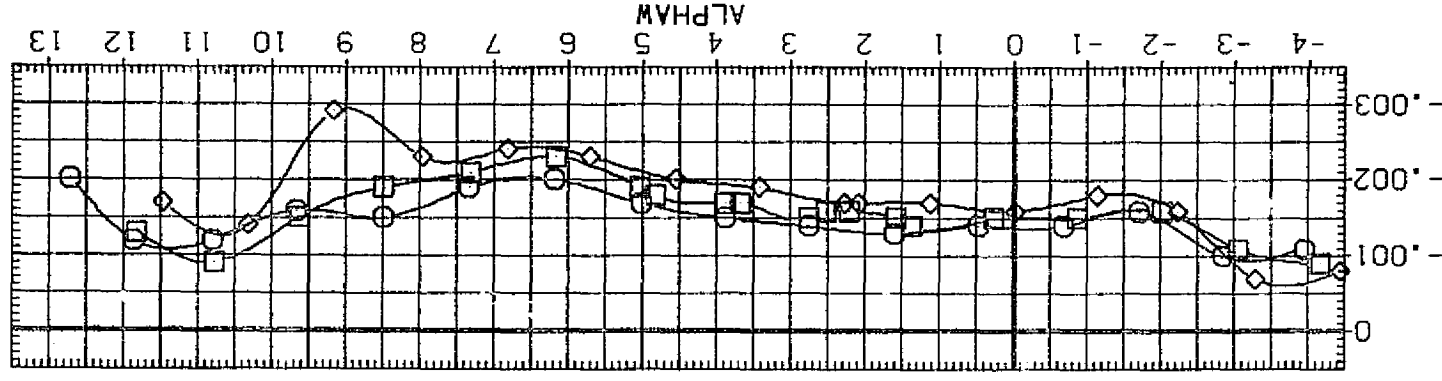
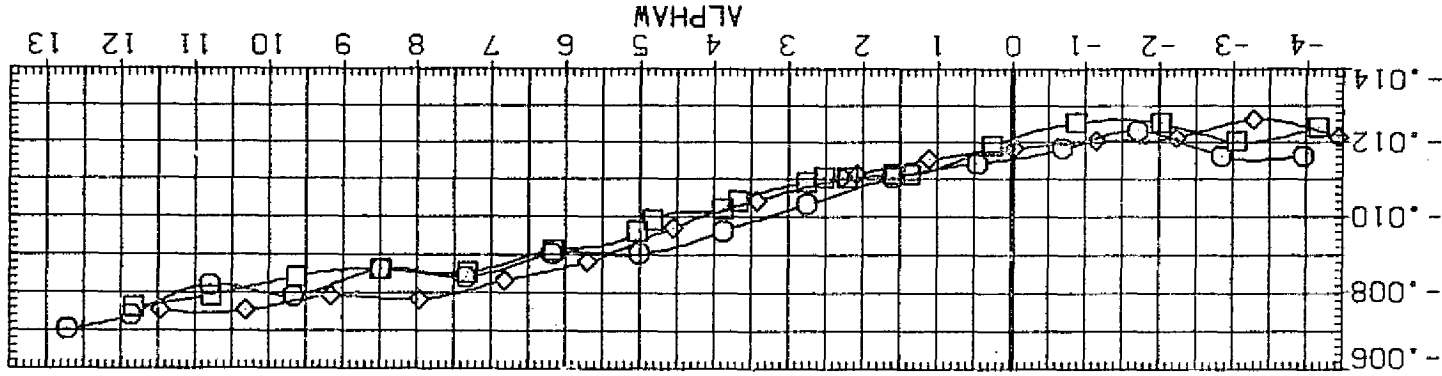
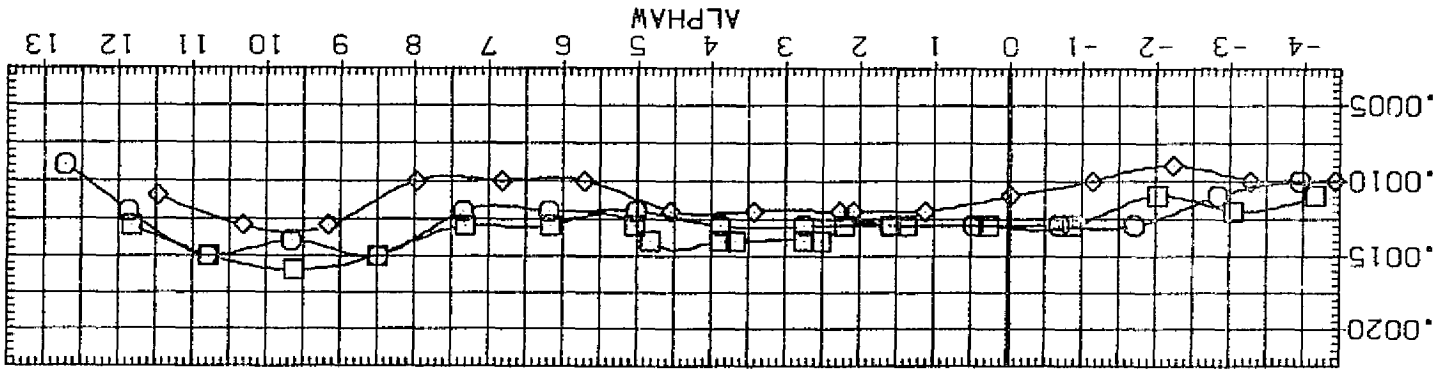


FIG. 15 ELEVATOR EFFECTIVENESS, BASIC 747 ALONE, STABILIZER 0

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGPO23)	CAS K1H15.1 V9.1	-4.000	-.030	.000	.000	SREF	5500.0000	SQ.FT.
(RGPO24)	CAS K1H15.1 V9.1	2.000	-.030	.000	.000	LREF	327.8000	IN.
(RGPO20)	CAS K1H15.1 V9.1	.000	-.030	.000	.000	BREF	2348.0000	IN.
(RGPO25)	CAS K1H15.1 V9.1	4.000	-.030	.000	.000	XMRP	1339.9000	IN. XC
(RGPO26)	CAS K1H15.1 V9.1	6.000	-.030	.000	.000	YMRP	.0000	IN. YC
(RGPO27)	CAS K1H15.1 V9.1	10.000	-.030	.000	.000	ZMRP	190.7700	IN. ZC
						SCALE	.0300	

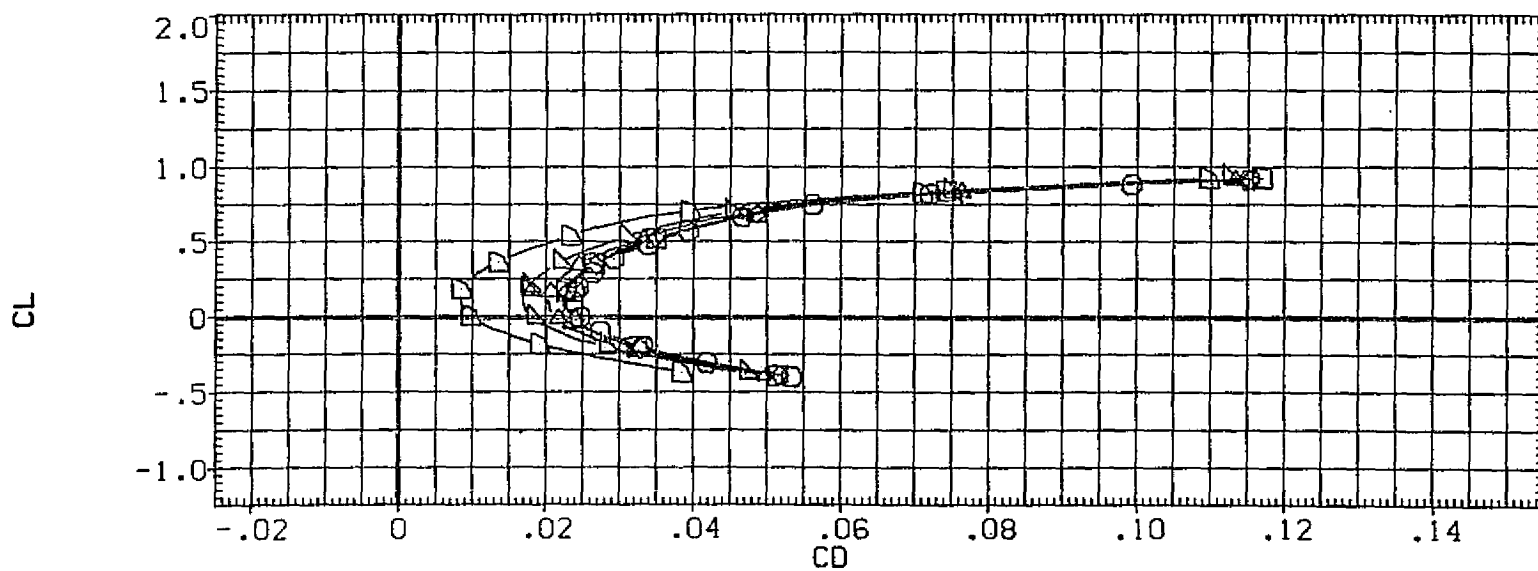
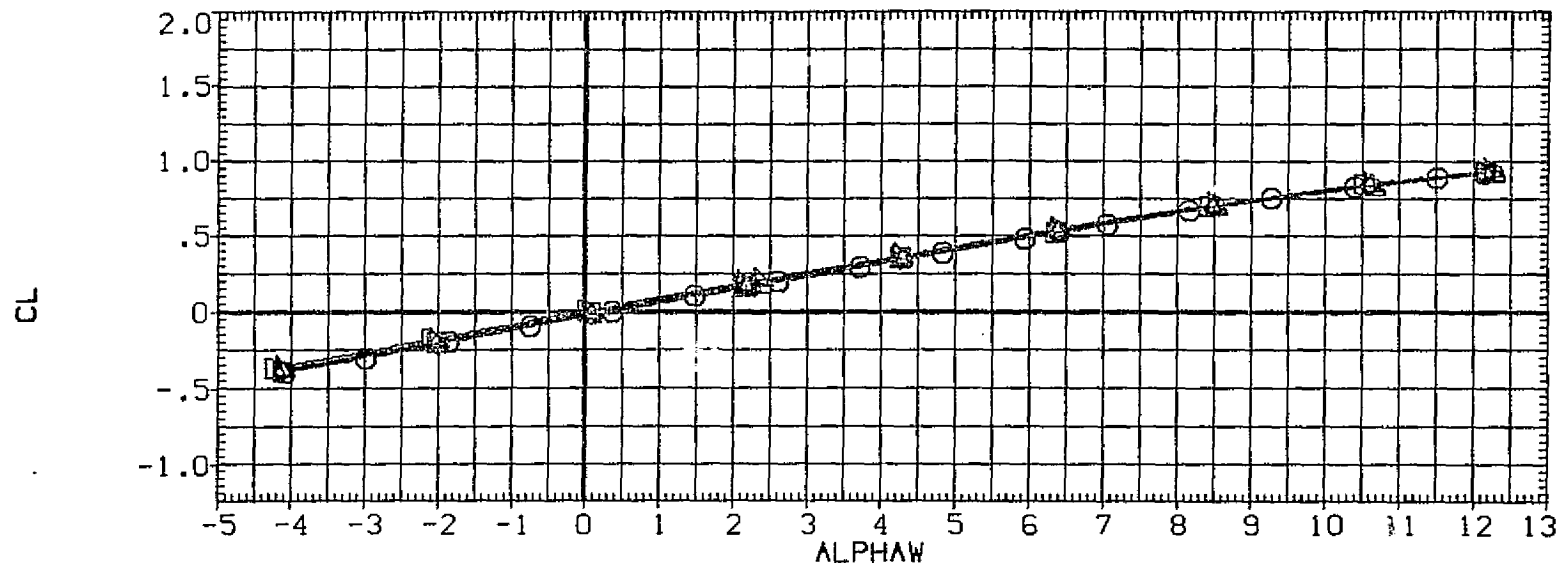


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-18	ELV-03	REFERENCE INFORMATION
(RGPO23)	CA6 KIH15.1 V9.1	-4.000	-.030	.000	.000	SREF 5500.0000 SQ.FT.
(RJPO24)	CA6 KIH15.1 V9.1	2.000	-.030	.000	.000	LREF 327.8000 IN.
(RGPO20)	CA6 KIH15.1 V9.1	.000	-.030	.000	.000	BREF 2348.0000 IN.
(RGPO25)	CA6 KIH15.1 V9.1	4.000	-.030	.000	.000	XMRP 1339.9000 IN. XC
(RGPO26)	CA6 KIH15.1 V9.1	6.000	-.030	.000	.000	YMRP .0000 IN. YC
(RGPO27)	CA6 KIH15.1 V9.1	10.000	-.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

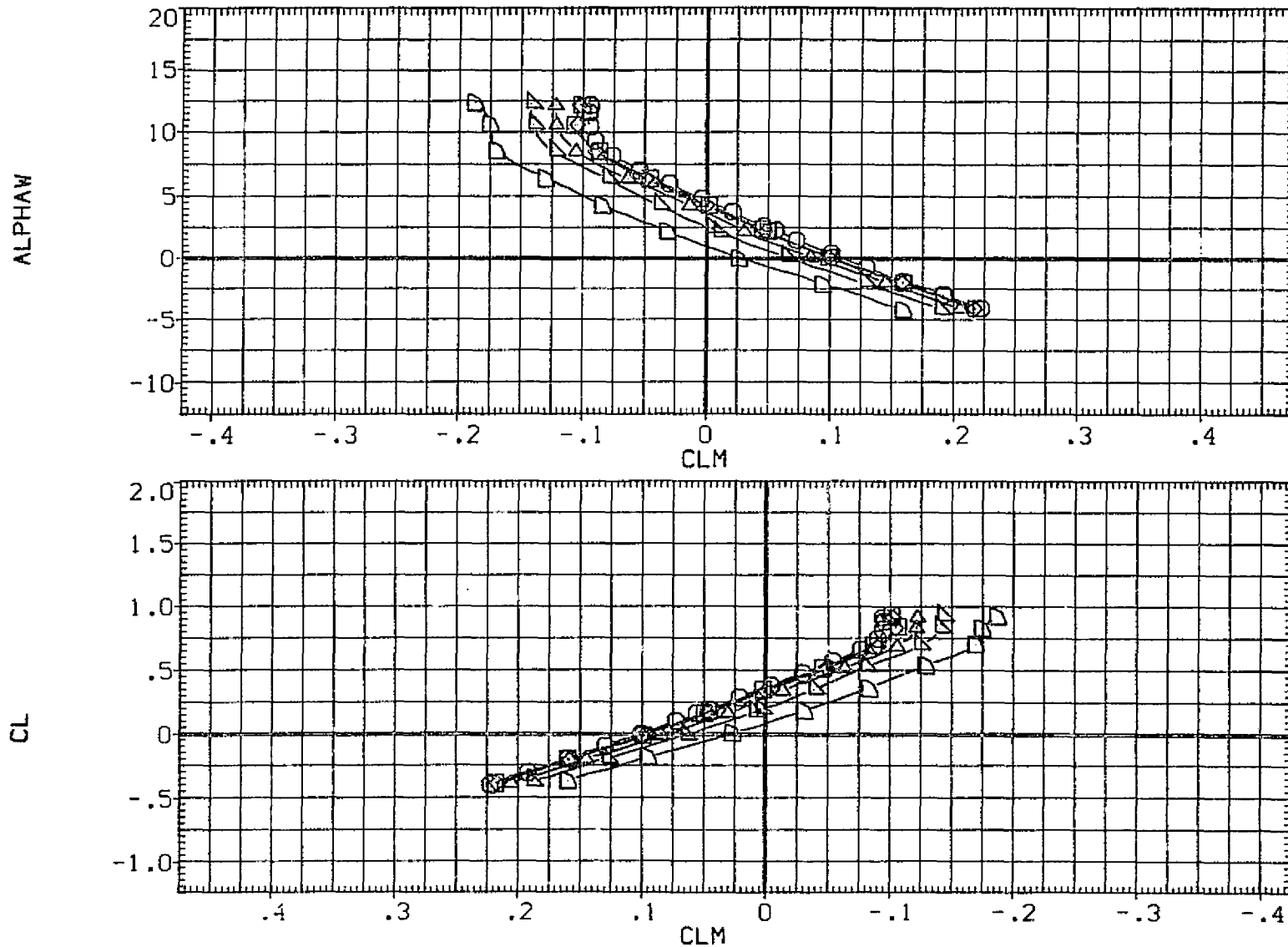


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP023)	CAG K1H15.1 V9.1	-4.000	-.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP024)	CAG K1H15.1 V9.1	2.000	-.030	.000	.000	LREF 327.8000 IN.
(RGP020)	CAG K1H15.1 V9.1	.000	-.030	.000	.000	BREF 2348.0000 IN.
(RGP025)	CAG K1H15.1 V9.1	4.000	-.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP026)	CAG K1H15.1 V9.1	6.000	-.030	.000	.000	YMRP .0000 IN. YC
(RGP027)	CAG K1H15.1 V9.1	10.000	-.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

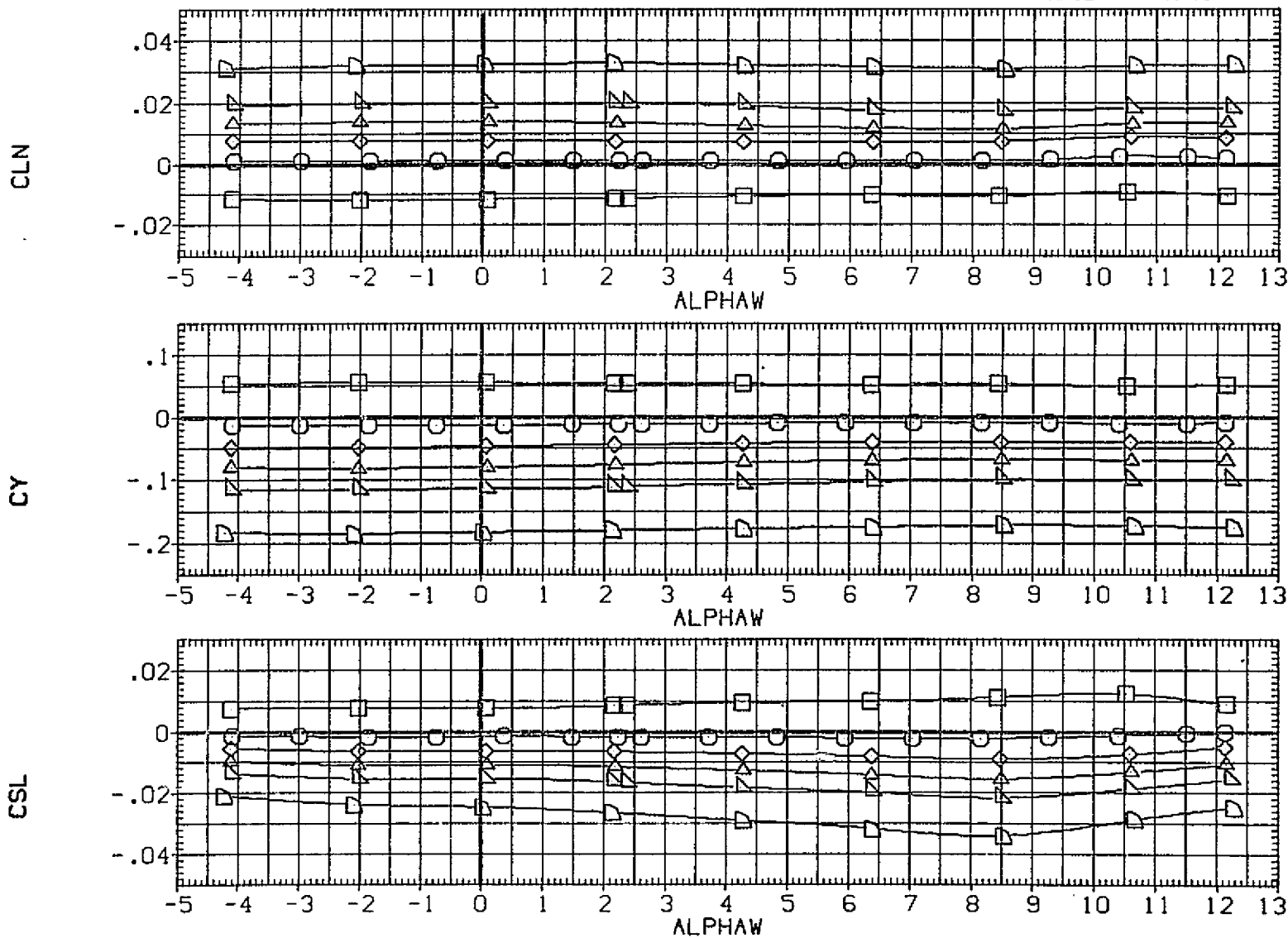


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(R3P023)	CA6 KIH15.1 V9.1	-4.000	-.030	.000	.000	SREF 5500.0000 SQ.FT.
(R6P024)	CA6 KIH15.1 V9.1	2.000	-.030	.000	.000	LREF 327.8000 IN.
(R6P020)	CA6 KIH15.1 V9.1	.000	-.030	.000	.000	BREF 2348.0000 IN.
(R6P025)	CA6 KIH15.1 V9.1	4.000	-.030	.000	.000	XMRP 1339.9000 IN. XC
(R6P026)	CA6 KIH15.1 V9.1	6.000	-.030	.000	.000	YMRP .0000 IN. YC
(R6P027)	CA6 KIH15.1 V9.1	10.000	-.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

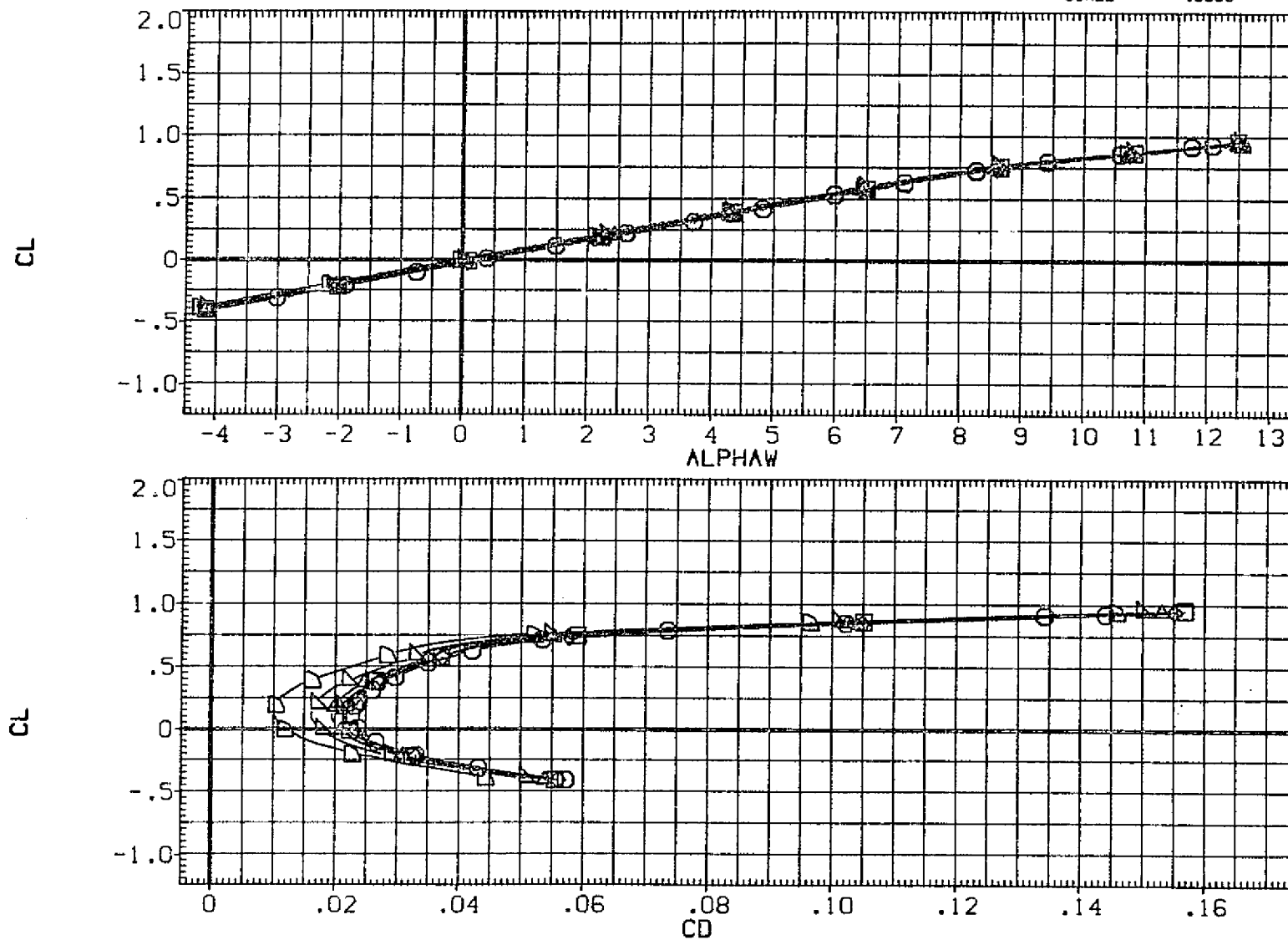


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGPO23)	CAG KIH15.1 V9.1	-4.000	-.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGPO24)	CAG KIH15.1 V9.1	2.000	-.030	.000	.000	LREF 327.8000 IN.
(RGPO20)	CAG KIH15.1 V9.1	.000	-.030	.000	.000	BREF 2348.0000 IN.
(RGPO25)	CAG KIH15.1 V9.1	4.000	-.030	.000	.000	XHRP 1339.9000 IN. XC
(RGPO26)	CAG KIH15.1 V9.1	6.000	-.030	.000	.000	YHRP .0000 IN. YC
(RGPO27)	CAG KIH15.1 V9.1	10.000	-.030	.000	.000	ZHRP 190.7700 IN. ZC
						SCALE .0300

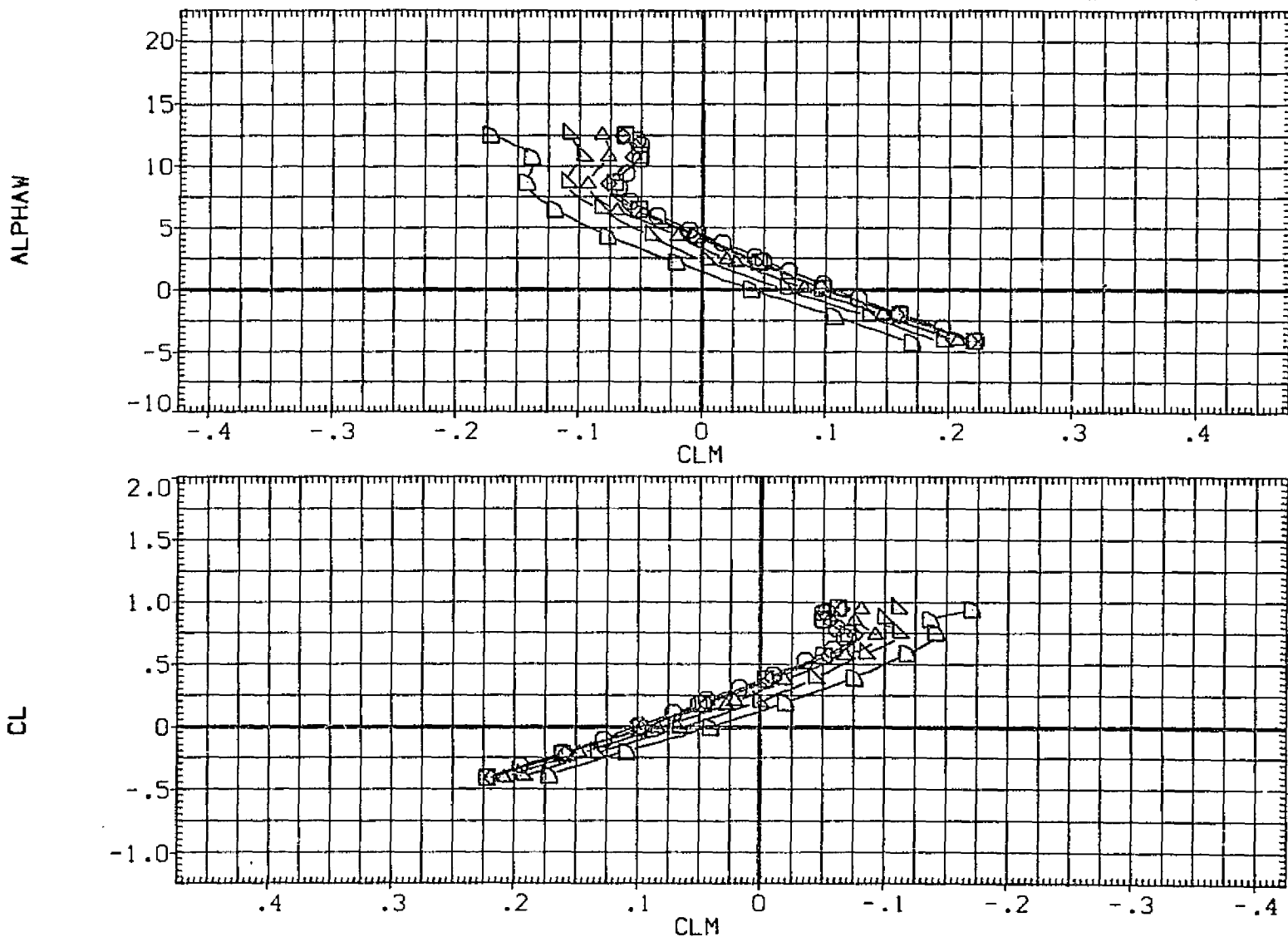


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R7P023)	□ CA6 KIH15.1 V9.1
(RGPO24)	○ CA6 KIH15.1 V9.1
(RGPO20)	△ CA6 KIH15.1 V9.1
(RGPO25)	◇ CA6 KIH15.1 V9.1
(RGPO26)	▽ CA6 KIH15.1 V9.1
(RGPO27)	◁ CA6 KIH15.1 V9.1

BETA	STAB	ELV-18	ELV-05	REFERENCE INFORMATION	
-4.000	-.030	.000	.000	SREF	5500.0000 SQ.FT.
2.000	-.030	.000	.000	LREF	327.8000 IN.
.000	-.030	.000	.000	BREF	2348.0000 IN.
4.000	-.030	.000	.000	XMRP	1339.9000 IN. XC
6.000	-.030	.000	.000	YMRP	.0000 IN. YC
10.000	-.030	.000	.000	ZMRP	190.7700 IN. ZC
				SCALE	.0300

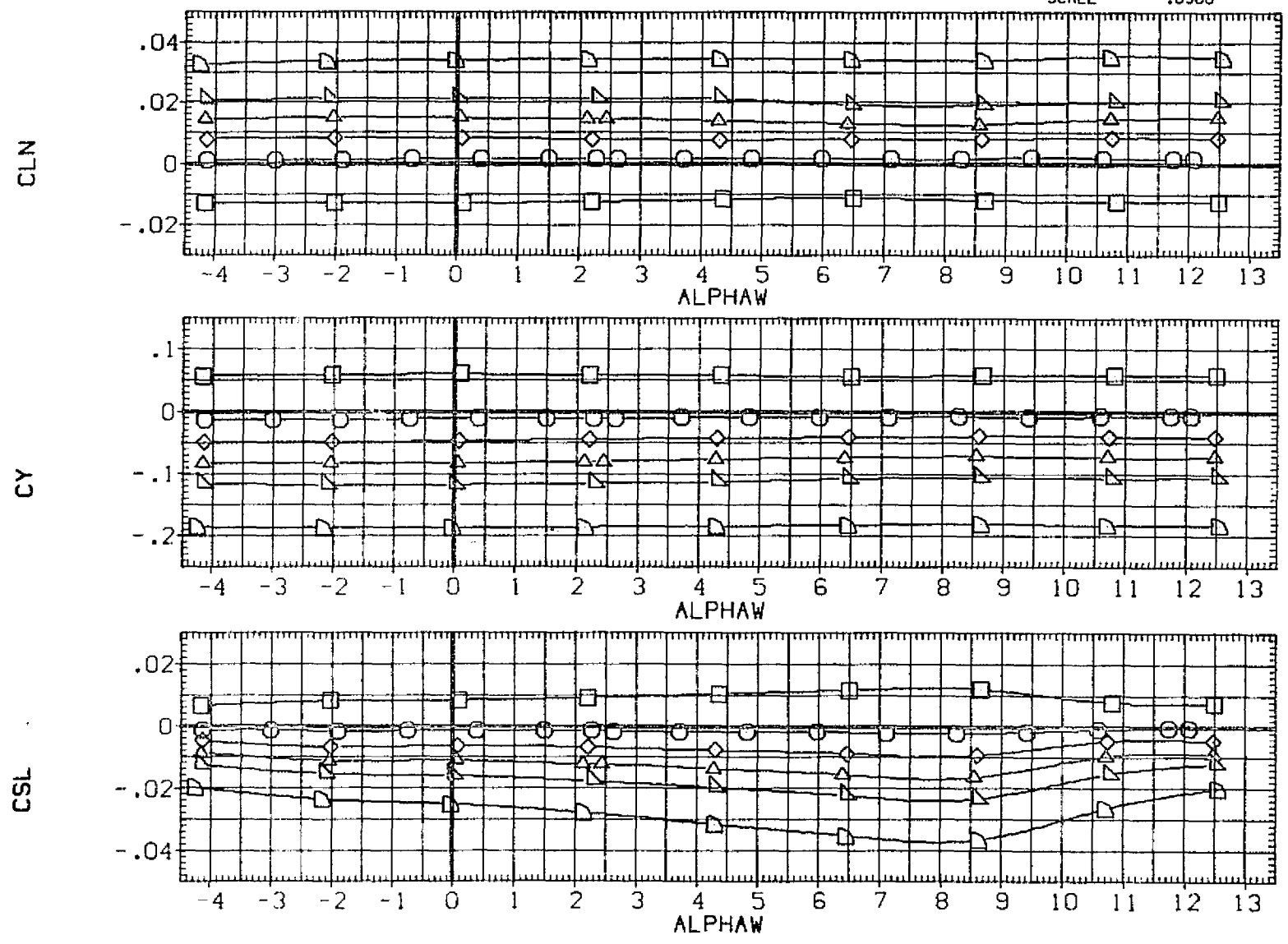


FIG. 16 LATERAL-DIRECTIONAL STABILITY, BASIC 747 ALONE
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP020)	CA6 KIH15.1 V9.1
(RGP028)	CA6 KIH15.1 V9.1
(RGP029)	CA6 KIH15.1 V9.1
(RGP030)	CA6 KIH15.1 V9.1
(RGP031)	CA6 KIH15.1 V9.1

RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION		
.000	.000	-.030	.000	SREF	5500.0000	SQ.FT.
3.000	3.000	-.030	.000	LREF	327.8000	IN.
10.000	10.000	-.030	.000	BREF	2348.0000	IN.
.000	10.000	-.030	.000	XMRP	1339.9000	IN. XC
10.000	.000	-.030	.000	YMRP	.0000	IN. YC
				ZMRP	190.7700	IN. ZC
				SCALE	.0300	

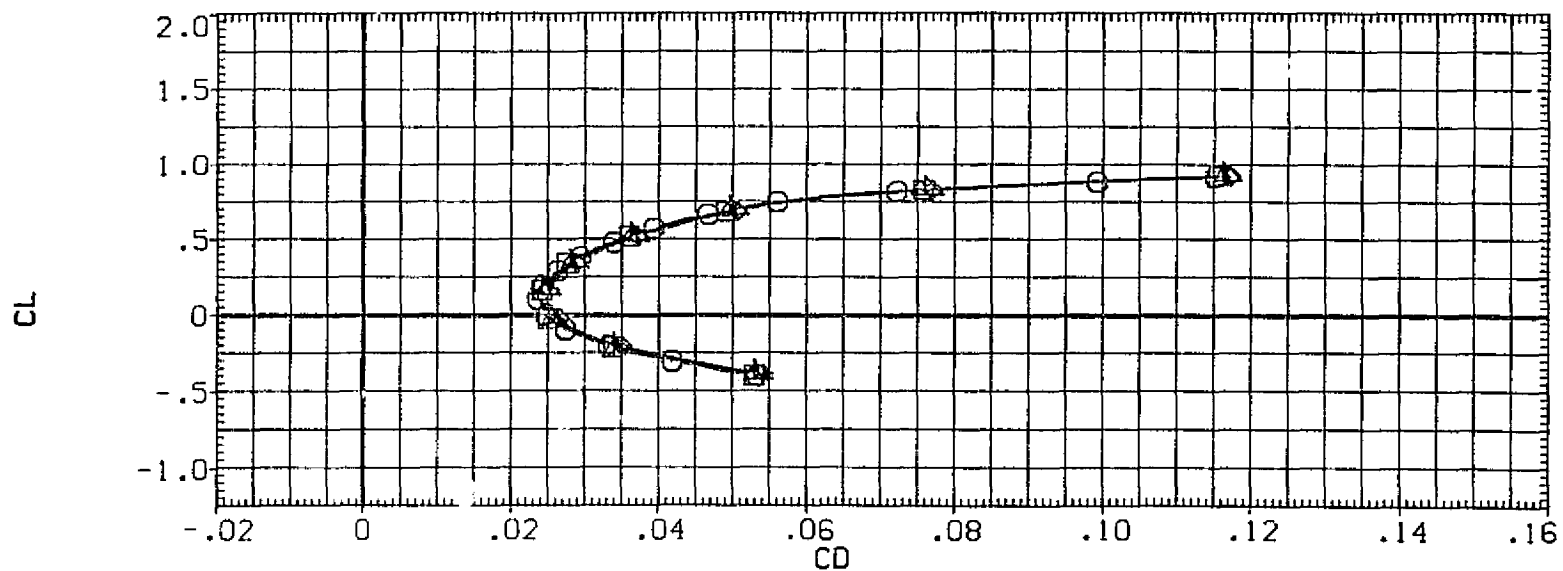
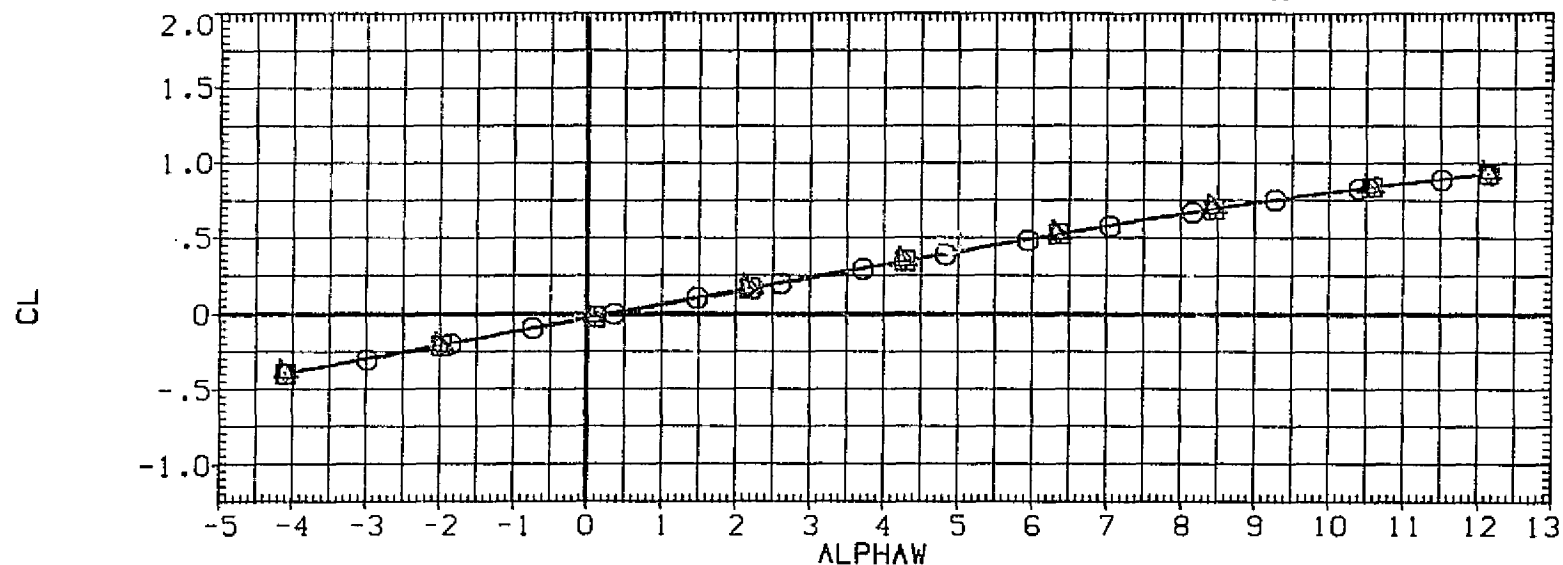


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
(RGPO20)	CAS K1H15.1 V9.1	.000	.000	-.030	.000	SREF 5500.0000 SQ.FT.
(RGPO28)	CAS K1H15.1 V9.1	3.000	3.000	-.030	.000	LREF 327.8000 IN.
(RGPO29)	CAS K1H15.1 V9.1	10.000	10.000	-.030	.000	BREF 2348.0000 IN.
(RGPO30)	CAS K1H15.1 V9.1	.000	10.000	-.030	.000	XMRP 1339.9000 IN. XC
(RGPO31)	CAS K1H15.1 V9.1	10.000	.000	-.030	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

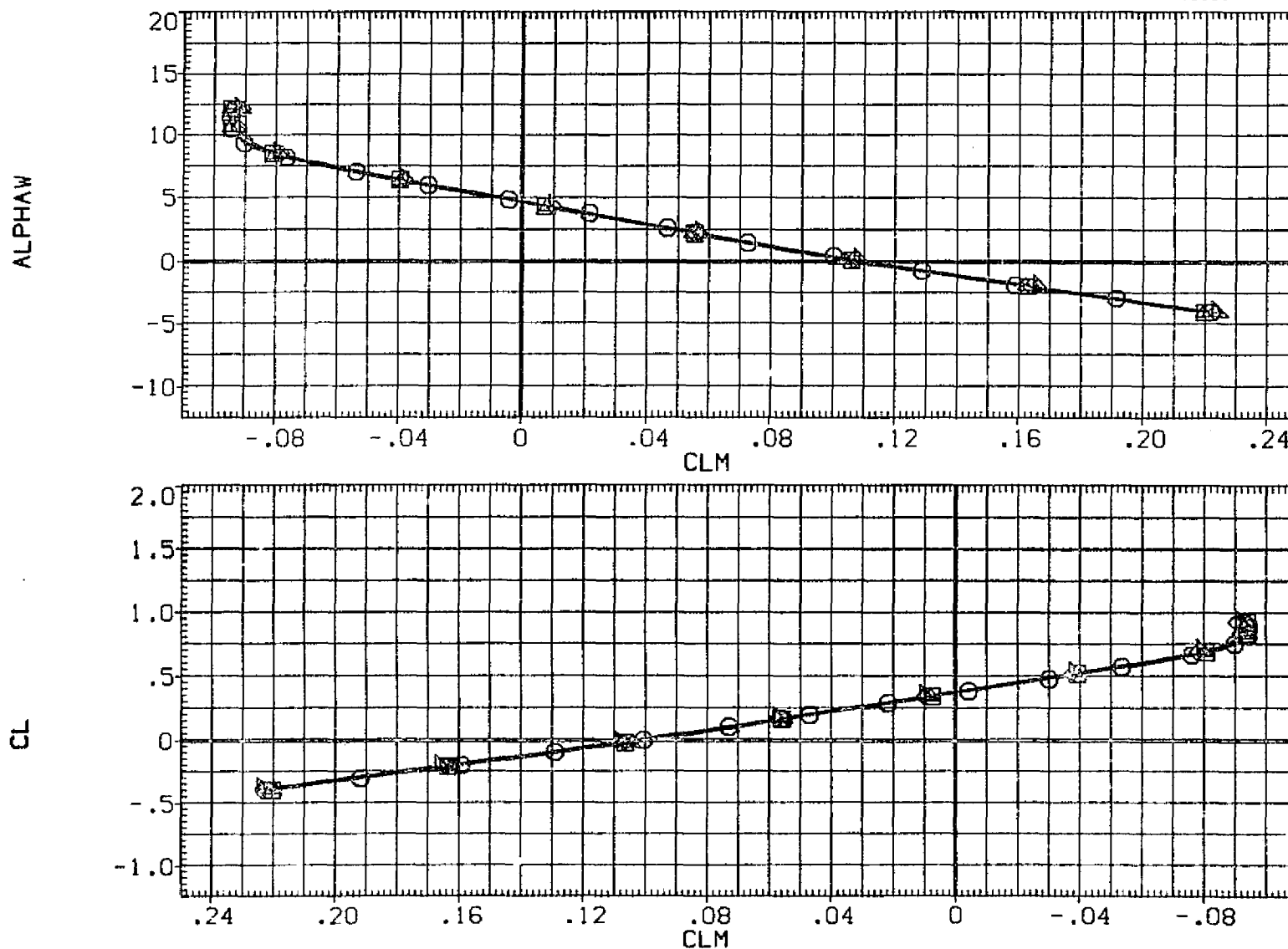


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP020)	CAB K1H15.1 V9.1
(RGP028)	CAB K1H15.1 V9.1
(RGP029)	CAB K1H15.1 V9.1
(RGP030)	CAB K1H15.1 V9.1
(RGP031)	CAB K1H15.1 V9.1

RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
.000	.000	-.030	.000	SREF 5500.0000 SQ.FT.
3.000	3.000	-.030	.000	LREF 327.8000 IN.
10.000	10.000	-.030	.000	BREF 2348.0000 IN.
.000	10.000	-.030	.000	XMRP 1339.9000 IN. XC
10.000	.000	-.030	.000	YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

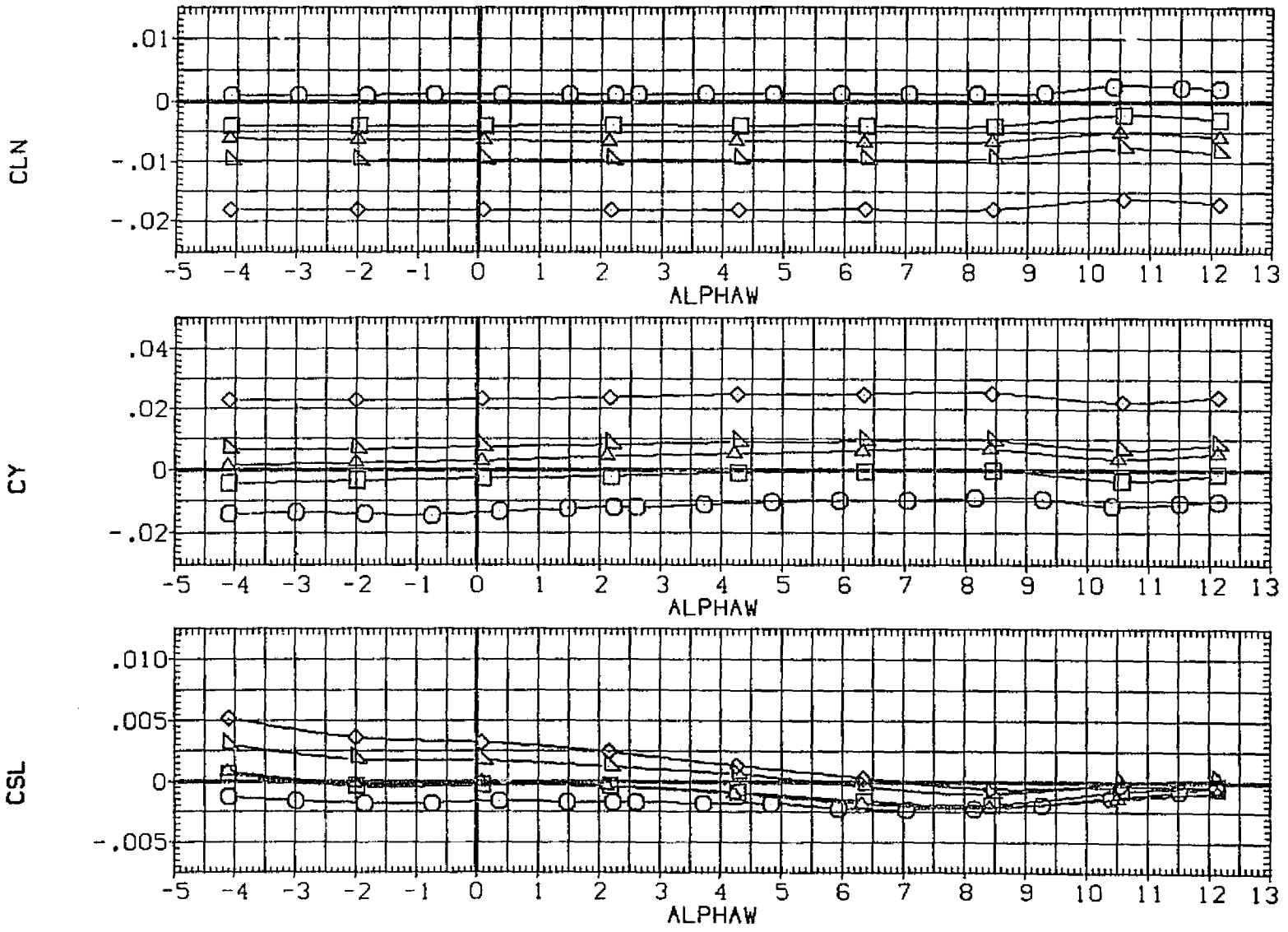


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE
 (A) MACH = .30

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(RGPO20)	□	CA6	K1H15.1 V9.1
(RGPO28)	□	CA6	K1H15.1 V9.1
(RGPO29)	◇	CA6	K1H15.1 V9.1
(RGPO30)	◇	CA6	K1H15.1 V9.1
(RGPO31)	△	CA6	K1H15.1 V9.1

RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION		
.000	.000	-.030	.000	SREF	5500.0000	SQ.FT.
3.000	3.000	-.030	.000	LREF	327.8000	IN.
10.000	10.000	-.030	.000	BREF	2348.0000	IN.
.000	10.000	-.030	.000	XMRP	1339.9000	IN. XC
10.000	.000	-.030	.000	YMRP	.0000	IN. YC
				ZMRP	190.7700	IN. ZC
				SCALE	.0300	

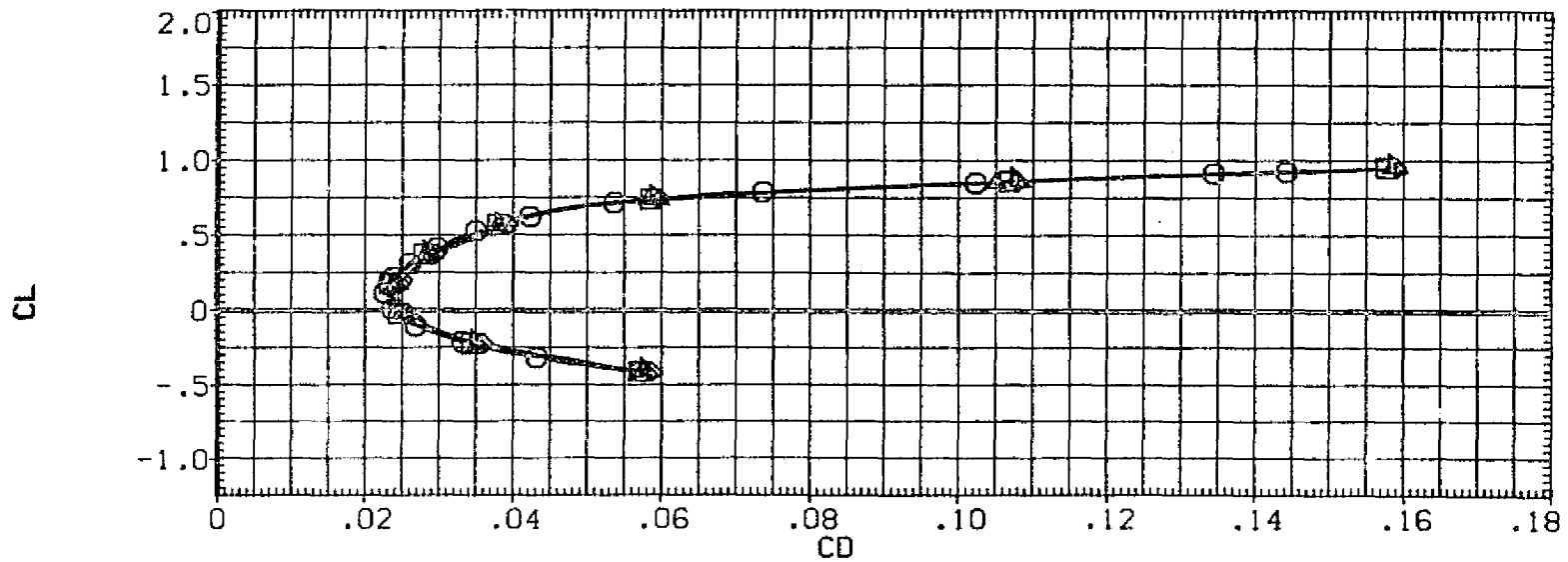
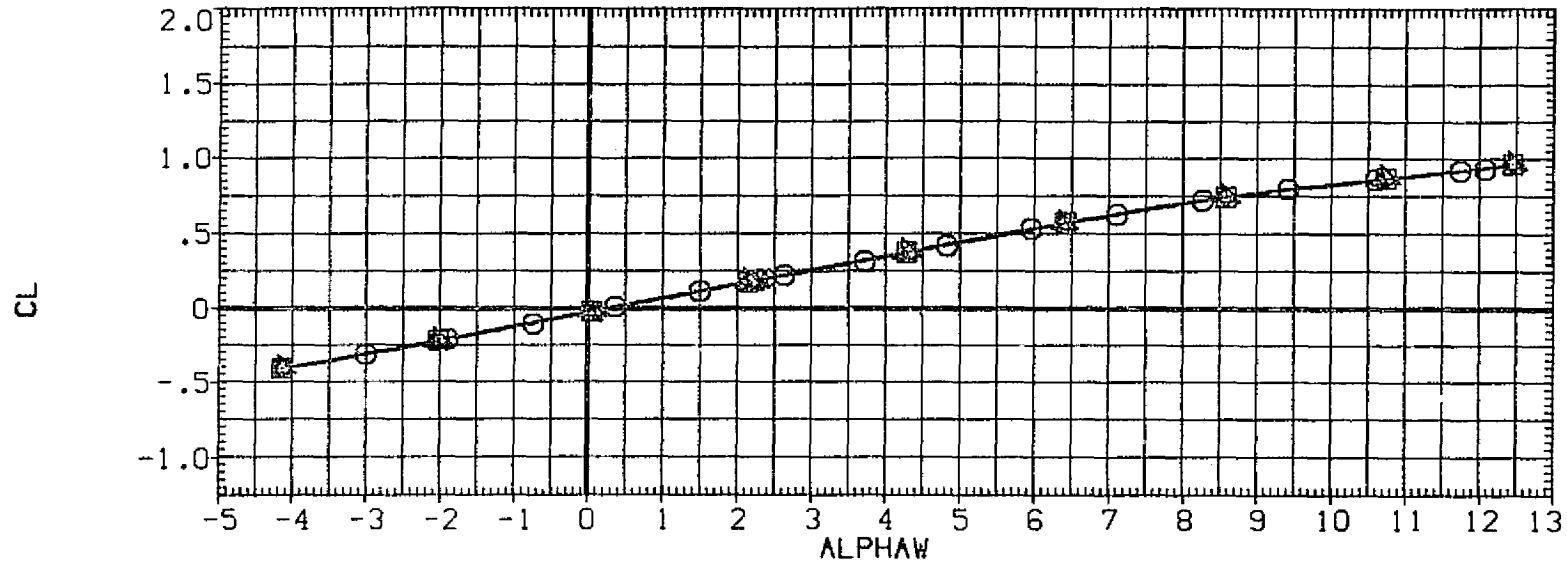


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
(RGPO20)	CA6 K1H15.1 V9.1	.000	.000	-.030	.000	SREF 5500.0000 SQ.FT.
(RGPO28)	CA6 K1H15.1 V9.1	3.000	3.000	-.030	.000	LREF 327.8000 IN.
(RGPO29)	CA6 K1H15.1 V9.1	10.000	10.000	-.030	.000	BREF 2348.0000 IN.
(RGPO30)	CA6 K1H15.1 V9.1	.000	10.000	-.030	.000	XMRP 1339.9000 IN. XC
(RGPO31)	CA6 K1H15.1 V9.1	10.000	.000	-.030	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

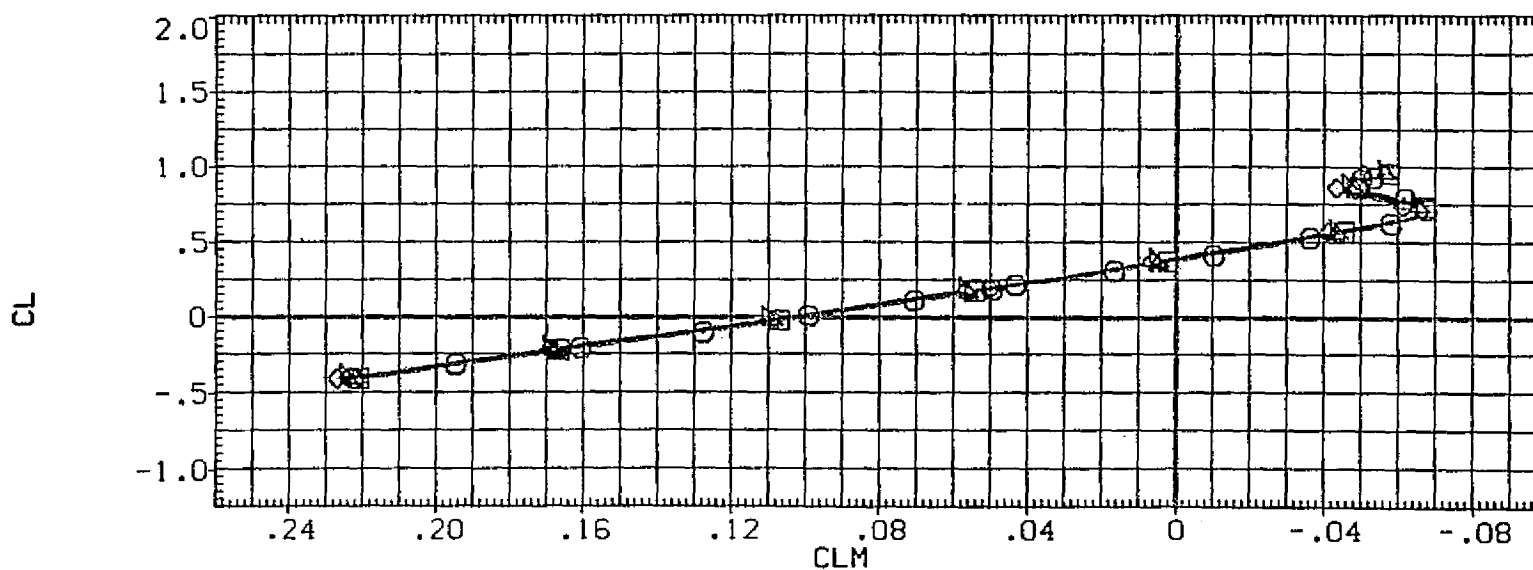
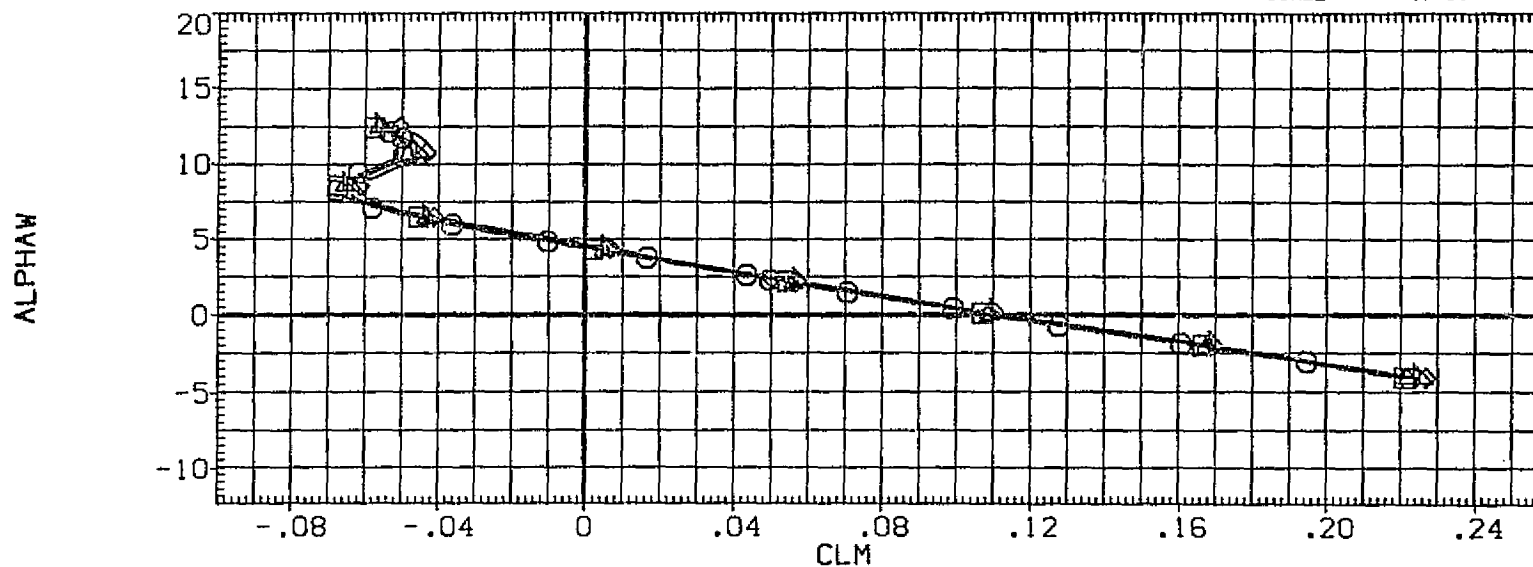


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE
(B)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGPD20) \square CAS KIH15.1 V9.1
 (RGPD28) \square CAS KIH15.1 V9.1
 (RGPD29) \square CAS KIH15.1 V9.1
 (RGPD30) \square CAS KIH15.1 V9.1
 (RGPD31) \square CAS KIH15.1 V9.1

RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION		
.000	.000	-.030	.000	SREF	5500.0000	50.FT.
3.000	3.000	-.030	.000	LREF	327.8000	IN.
10.000	10.000	-.030	.000	BREF	2348.0000	IN.
.000	10.000	-.030	.000	XMRP	1339.9000	IN. XC
10.000	.000	-.030	.000	YMRP	.0000	IN. YC
				ZMRP	190.7700	IN. ZC
				SCALE	.0300	

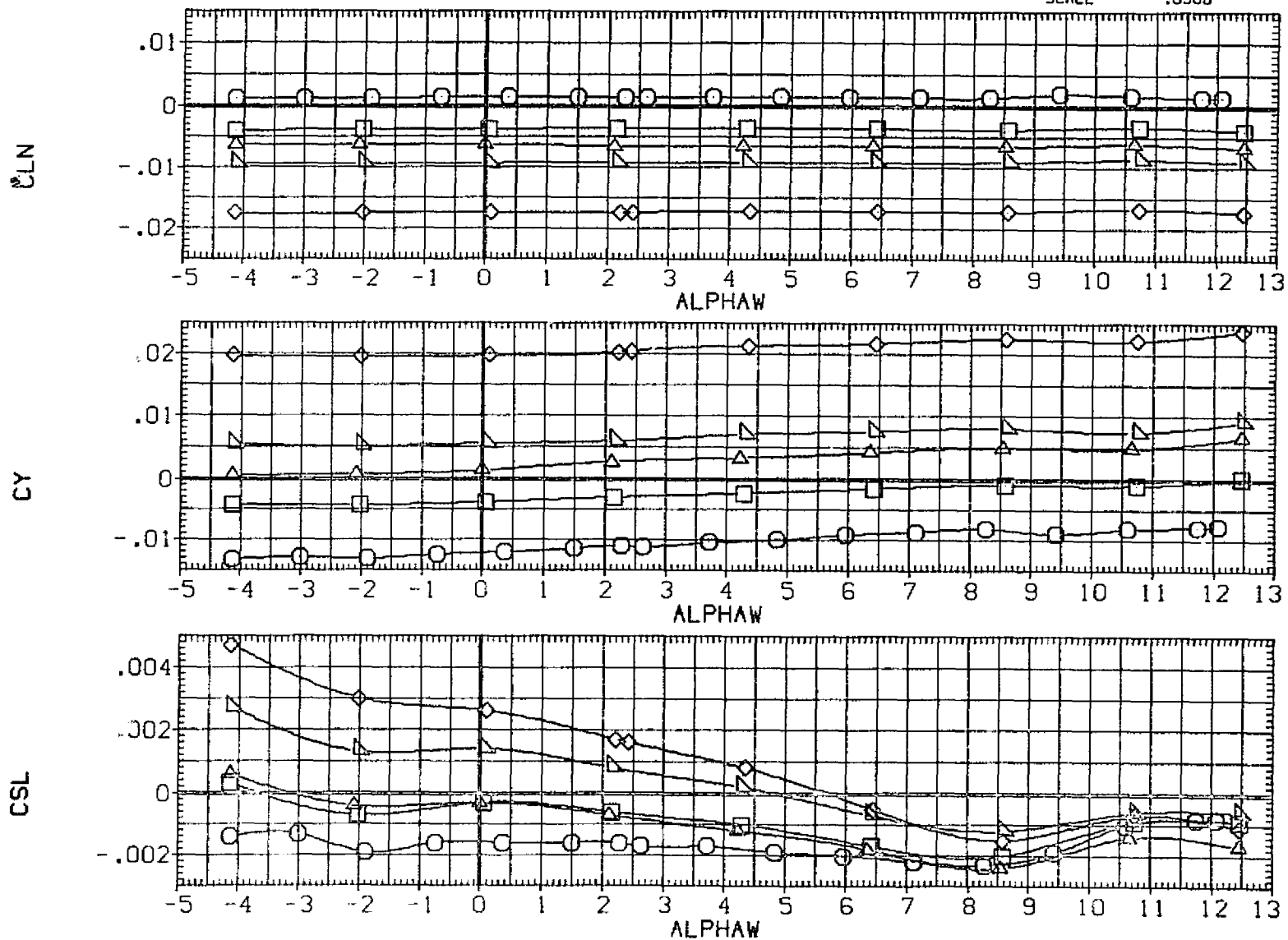


FIG. 17 RUDDER EFFECTIVENESS, BASIC 747 ALONE

(B)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CA6 KIH15.1 V9.1
 (RGPO22) □ CA6 KIH15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

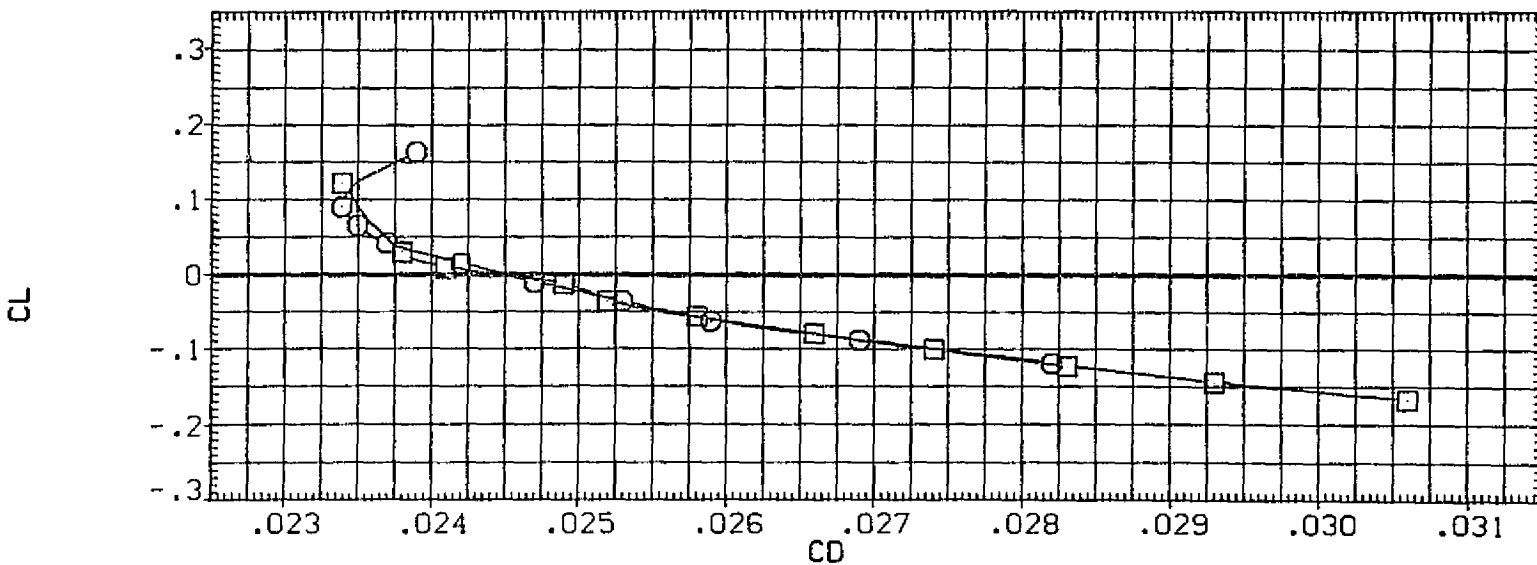
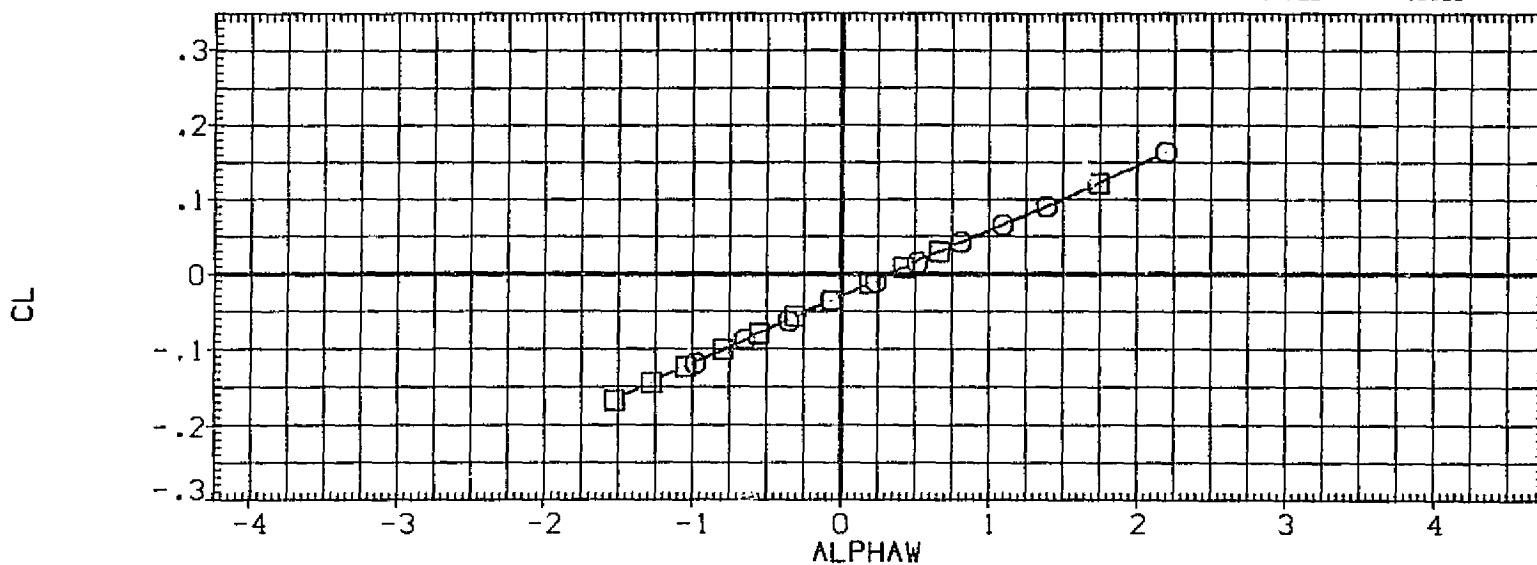


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CA6 KIHIS.1 V9.1
 (RGPO22) □ CA6 KIHIS.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XHRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

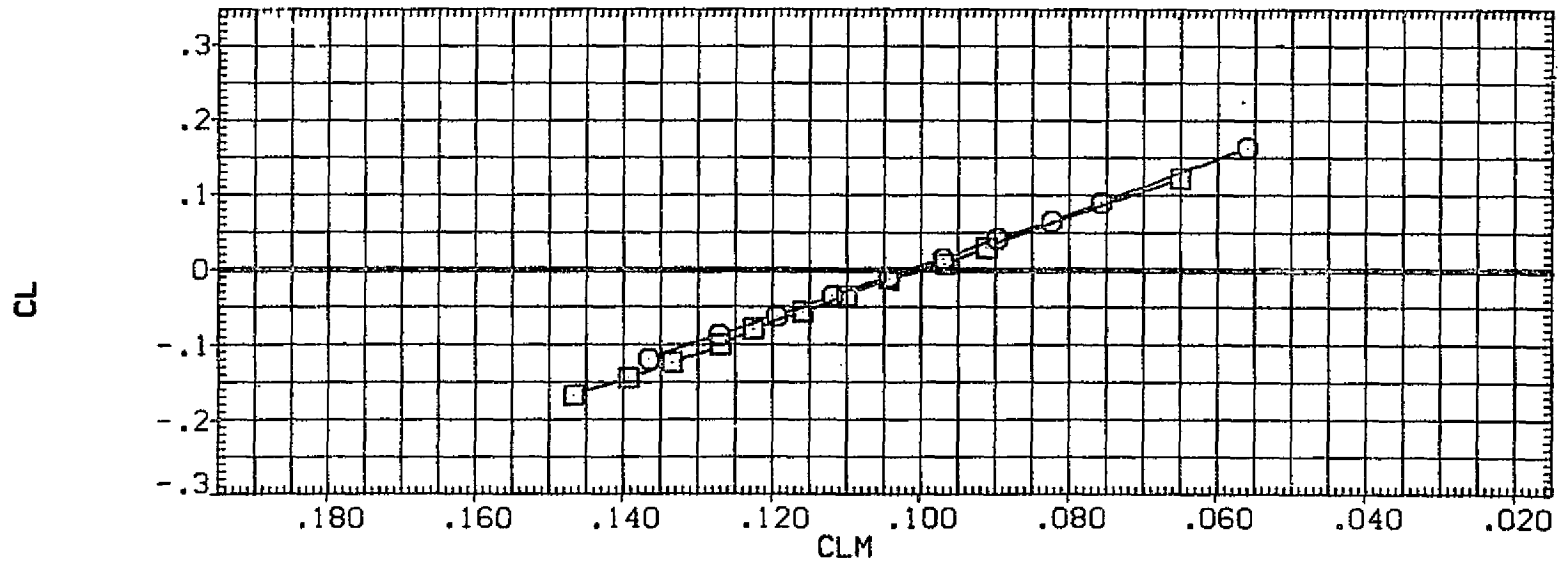
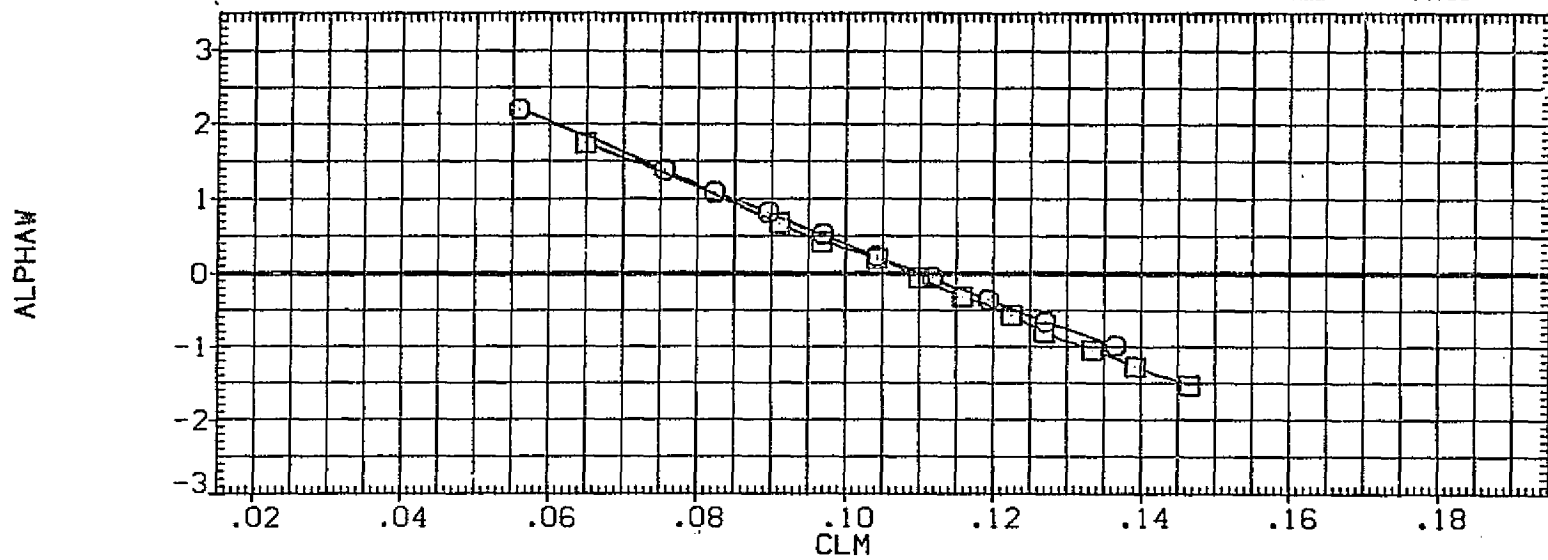


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CA6 KIH15.1 V9.1
 (RGPO22) ○ CA6 KIH15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

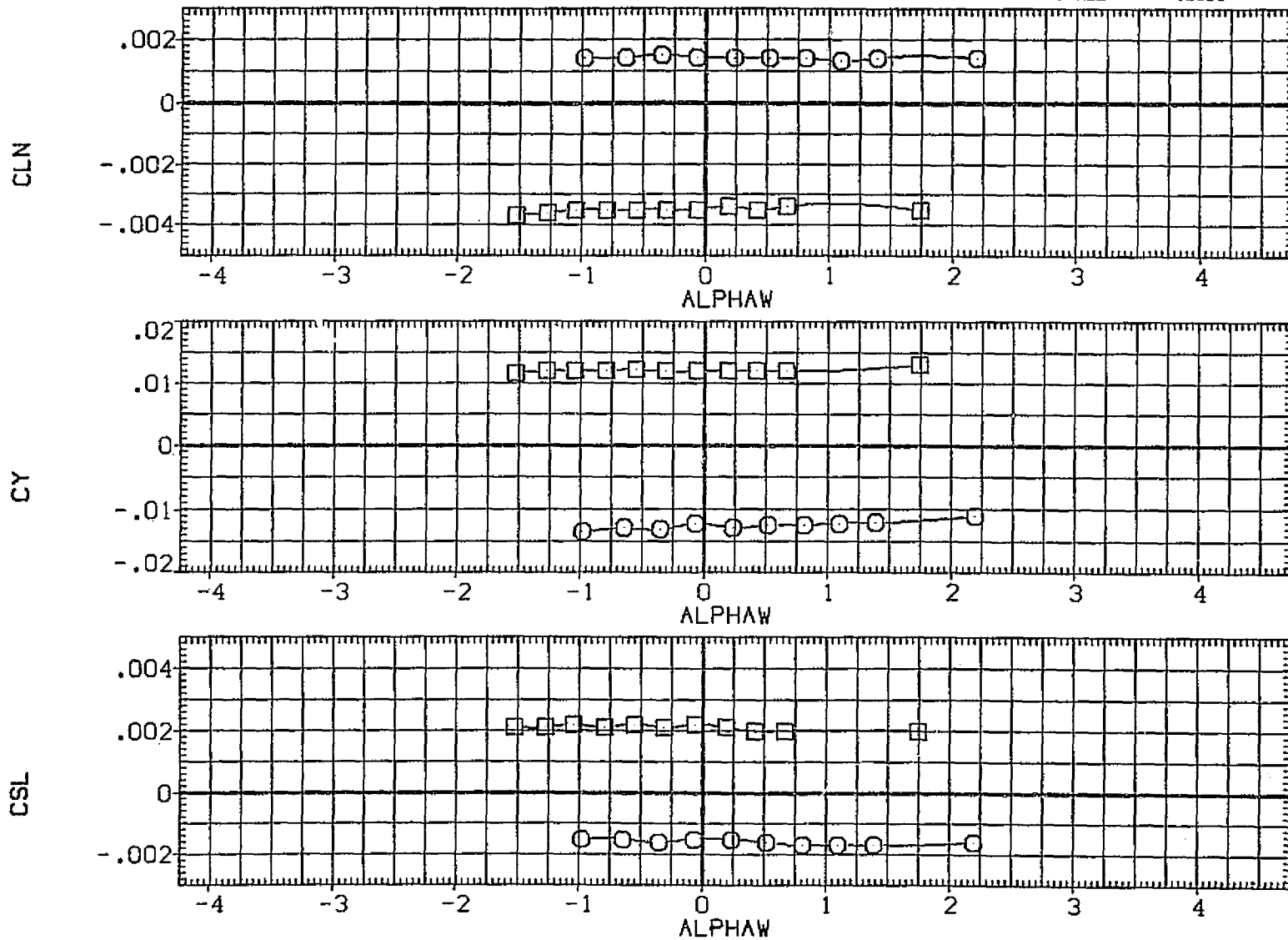


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CA6 K1H15.1 V9.1
 (RGPO22) □ CA6 K1H15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

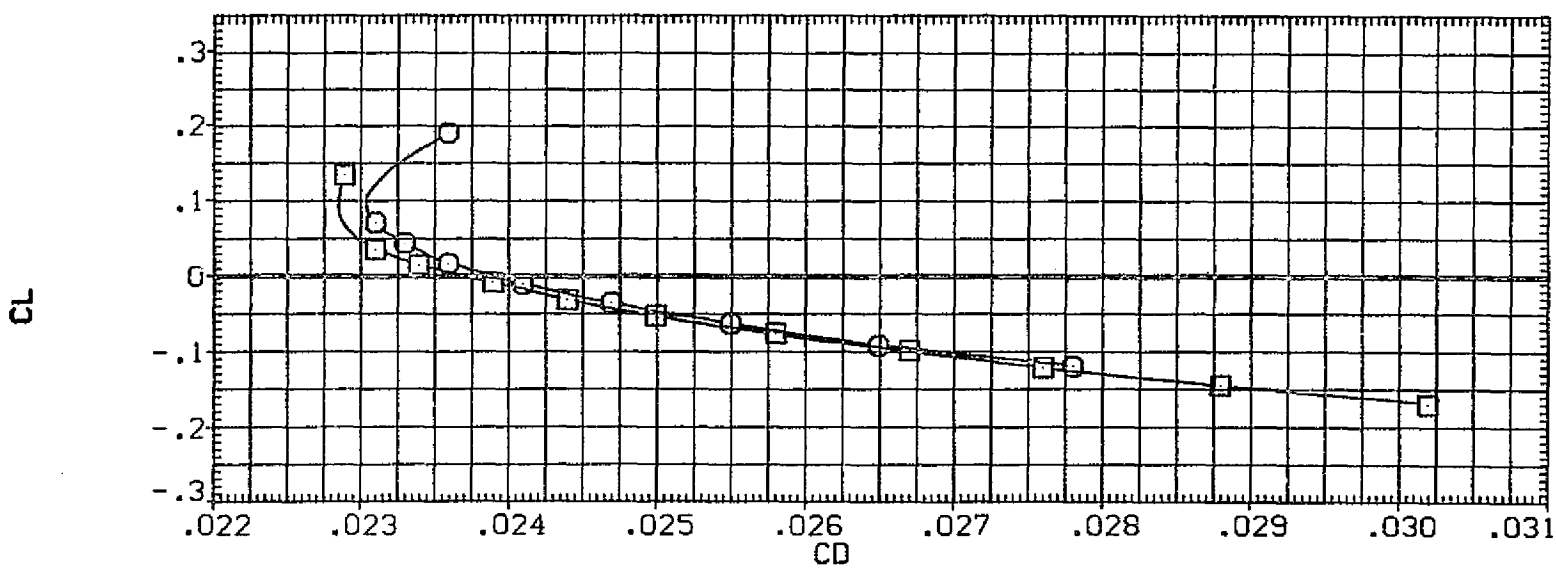
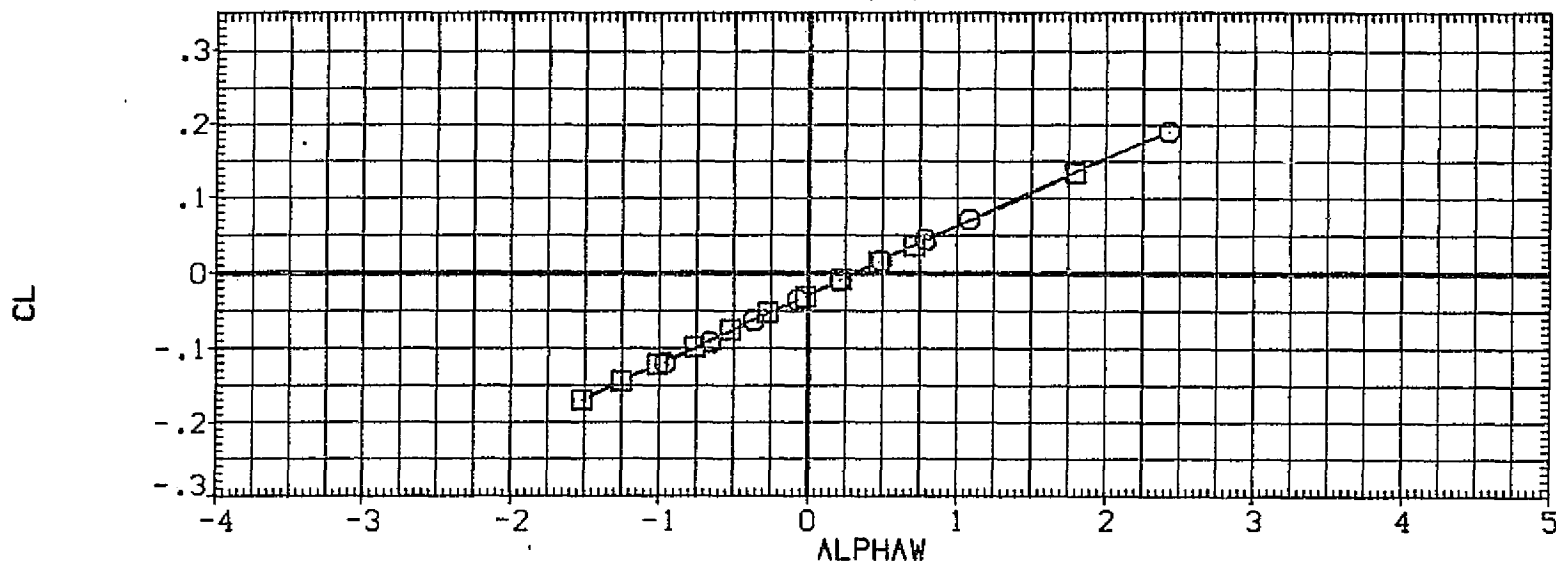


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CAS KIHIS.1 V9.1
 (RGPO22) □ CAS KIHIS.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

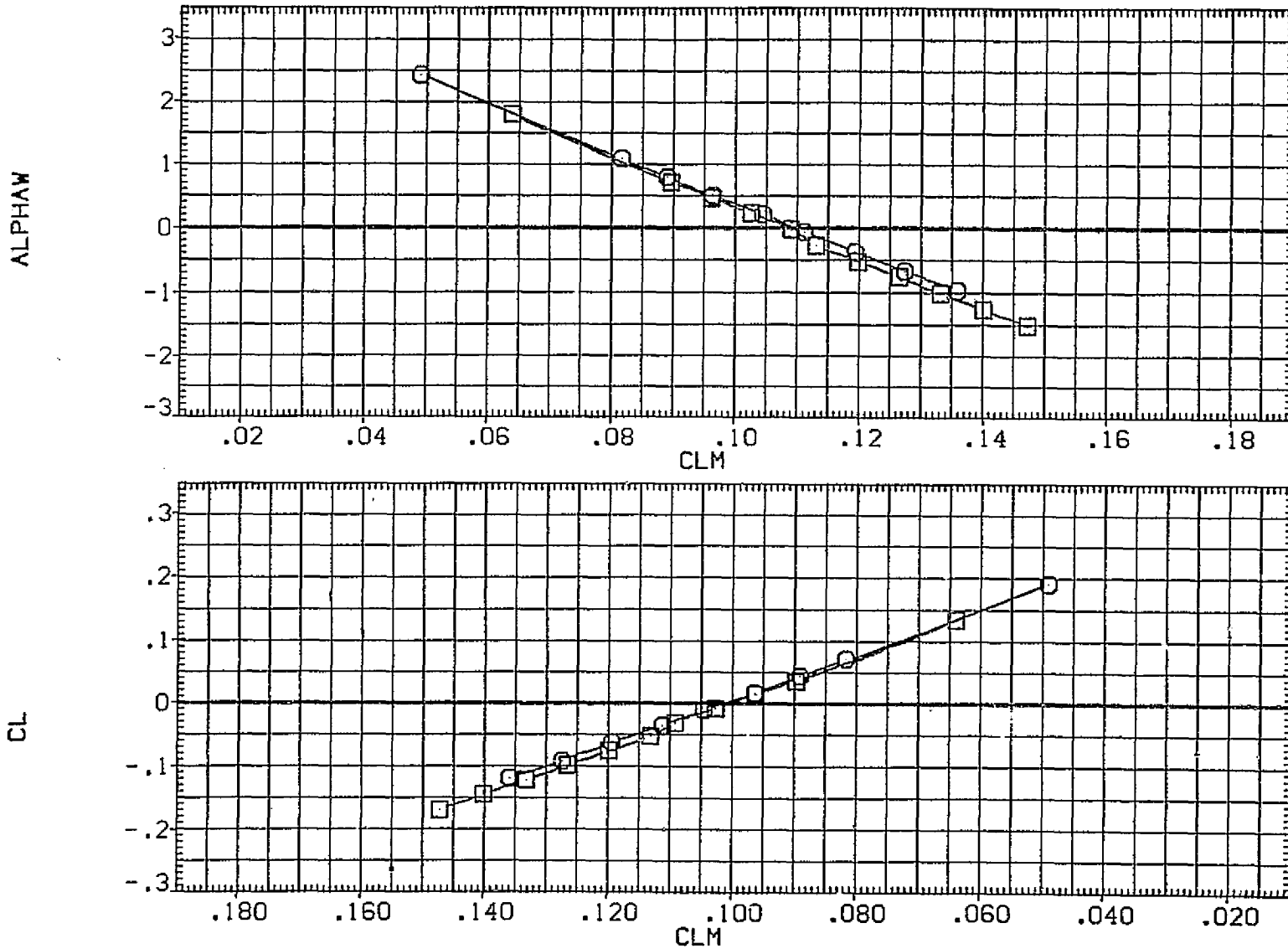


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES

(B)MACH = .50

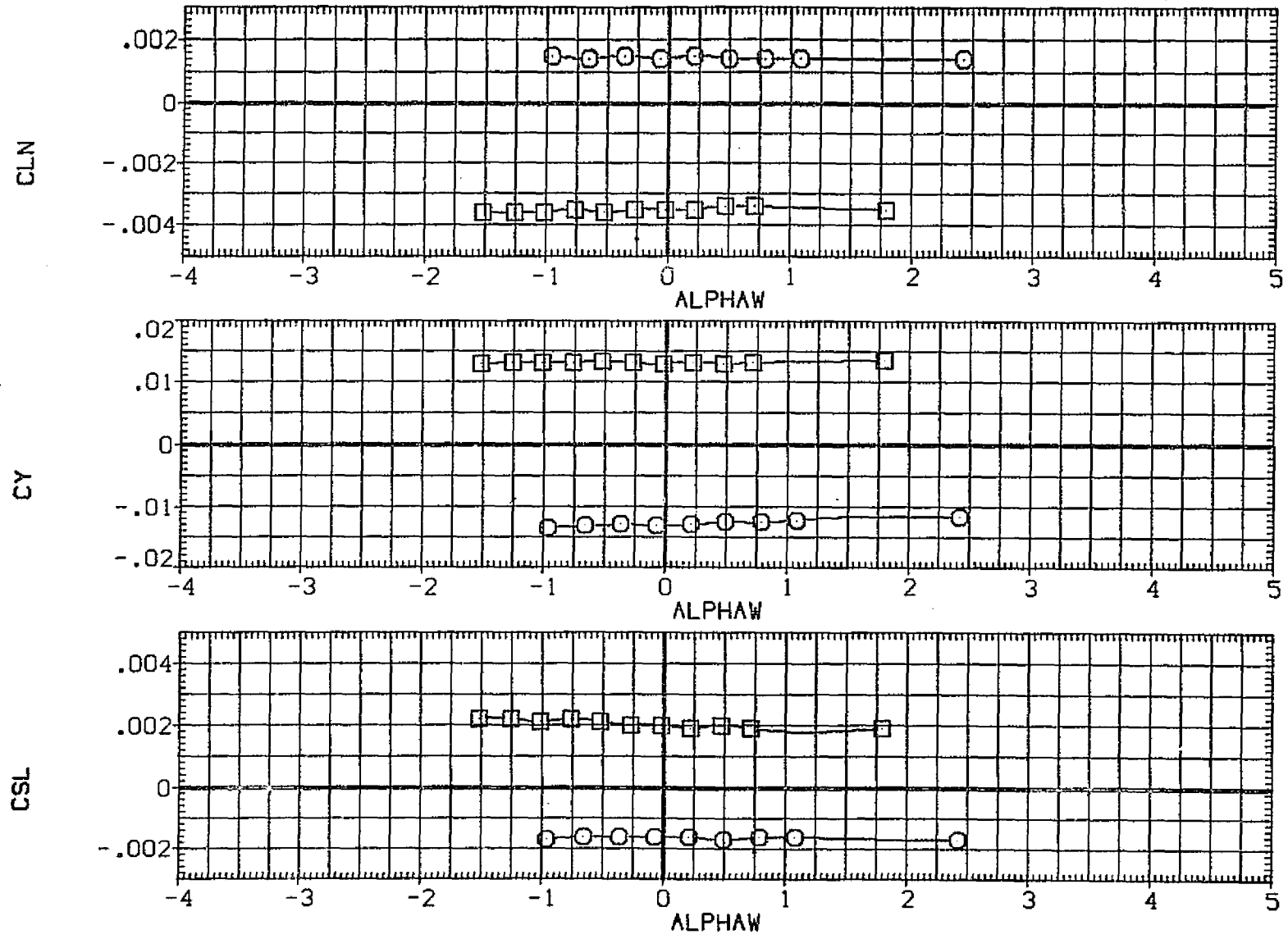


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP021)	CA6 KIH15.1 V9.1
(RGP022)	CA6 KIH15.1 V9.1

PHI	BETA
.000	.000
180.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XHRP	1339.9000	IN. XC
YHRP	.0000	IN. YC
ZHRP	190.7700	IN. ZC
SCALE	.0300	

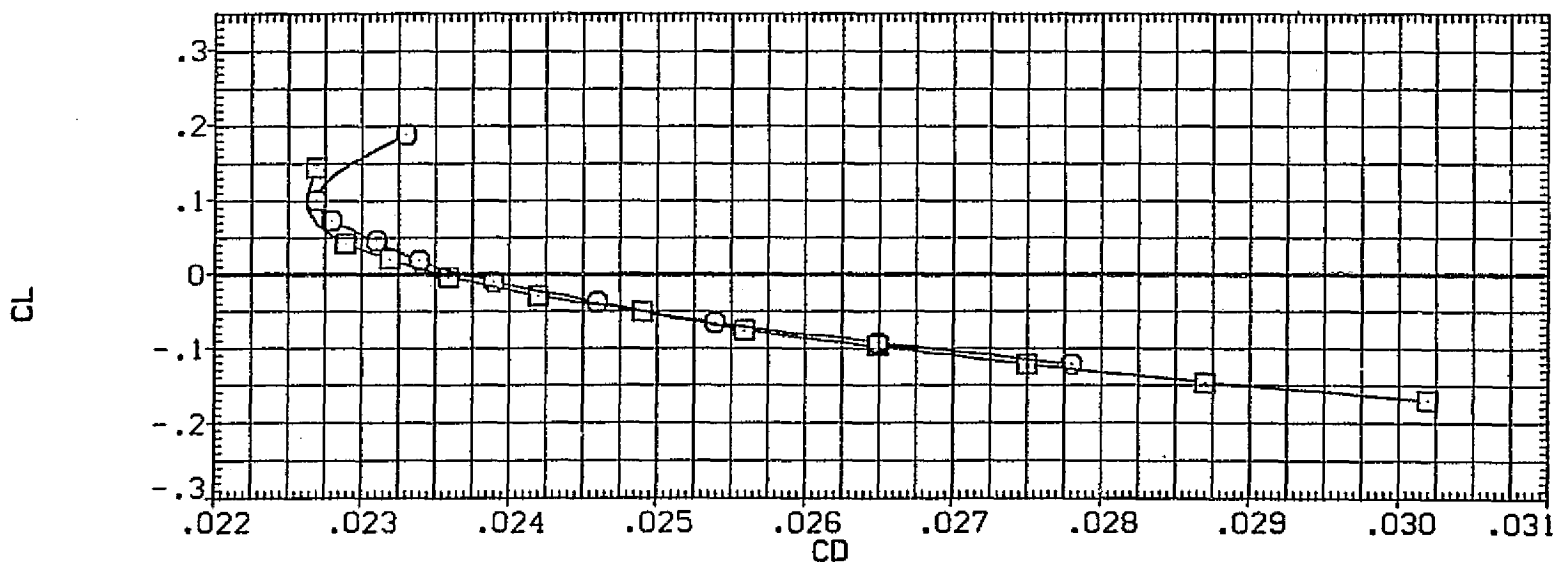
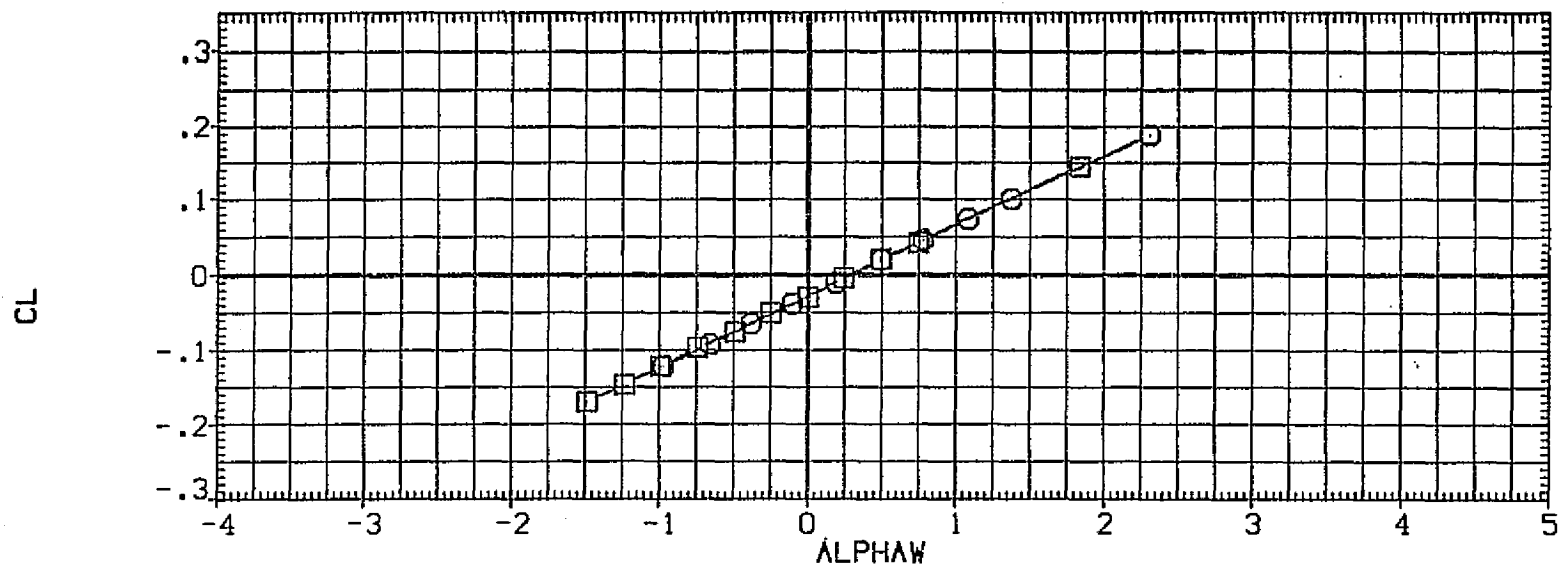


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) ○ CA6 K1H15.1 V9.1
 (RGPO22) □ CA6 K1H15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

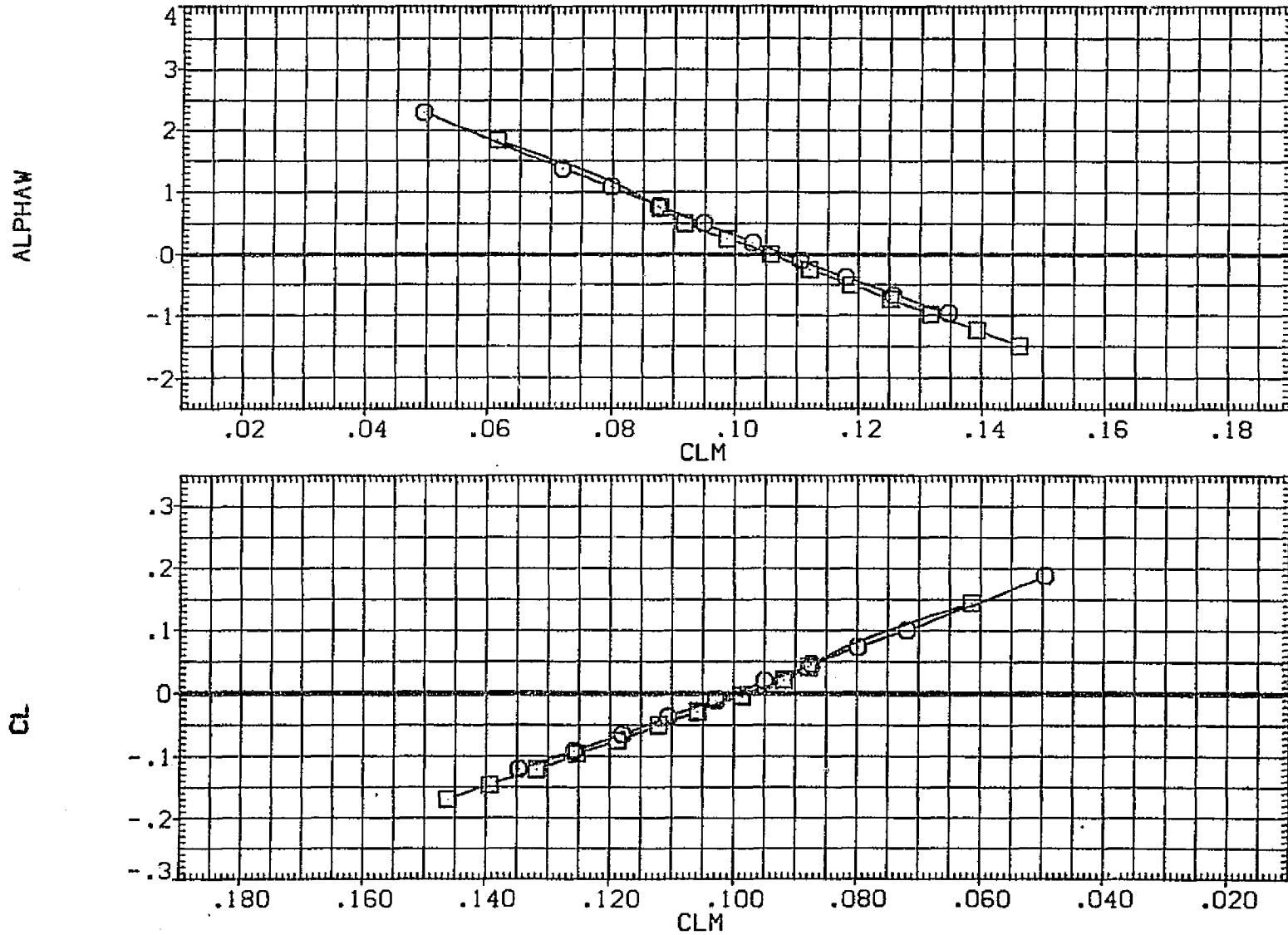


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) ○ CAS KIH15.1 V9.1
 (RGPO22) □ CAS KIH15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

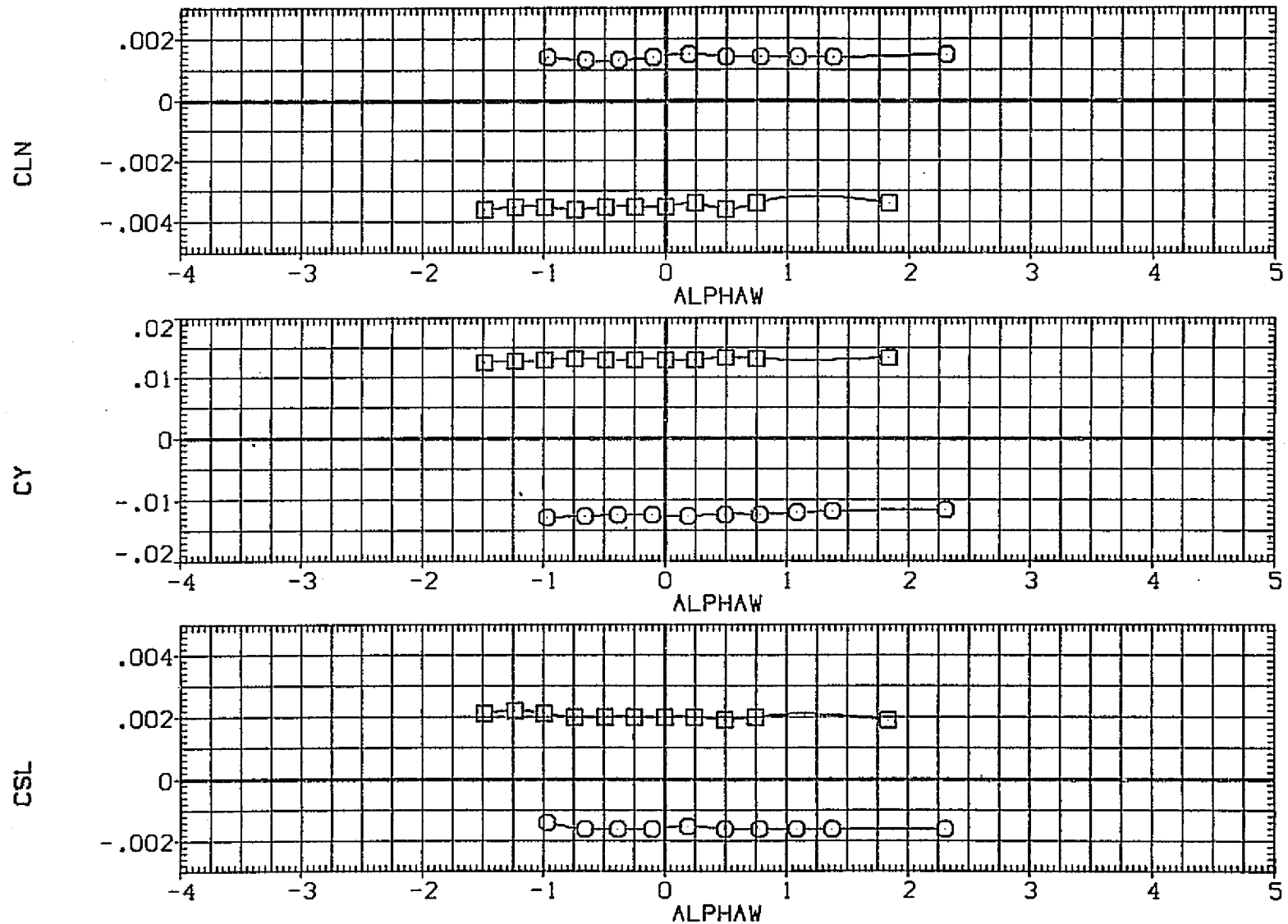


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CAG KIH15.1 V9.1
 (RGPO22) □ CAG KIH15.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

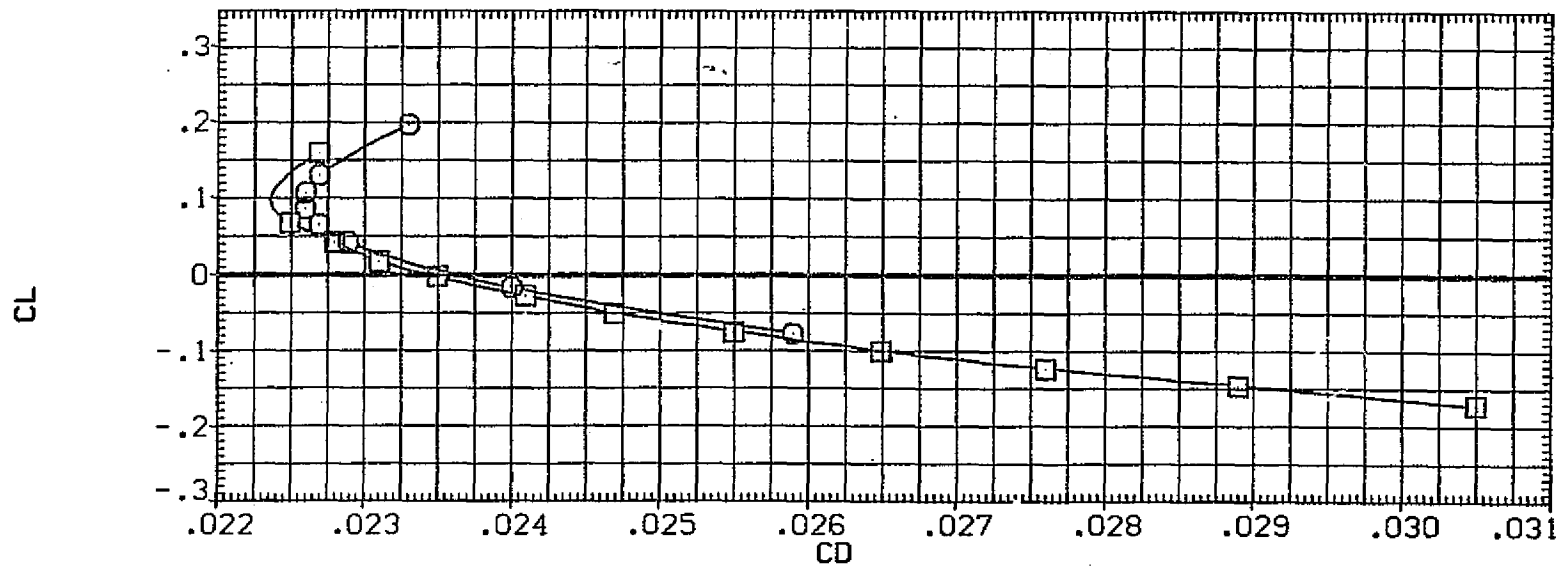
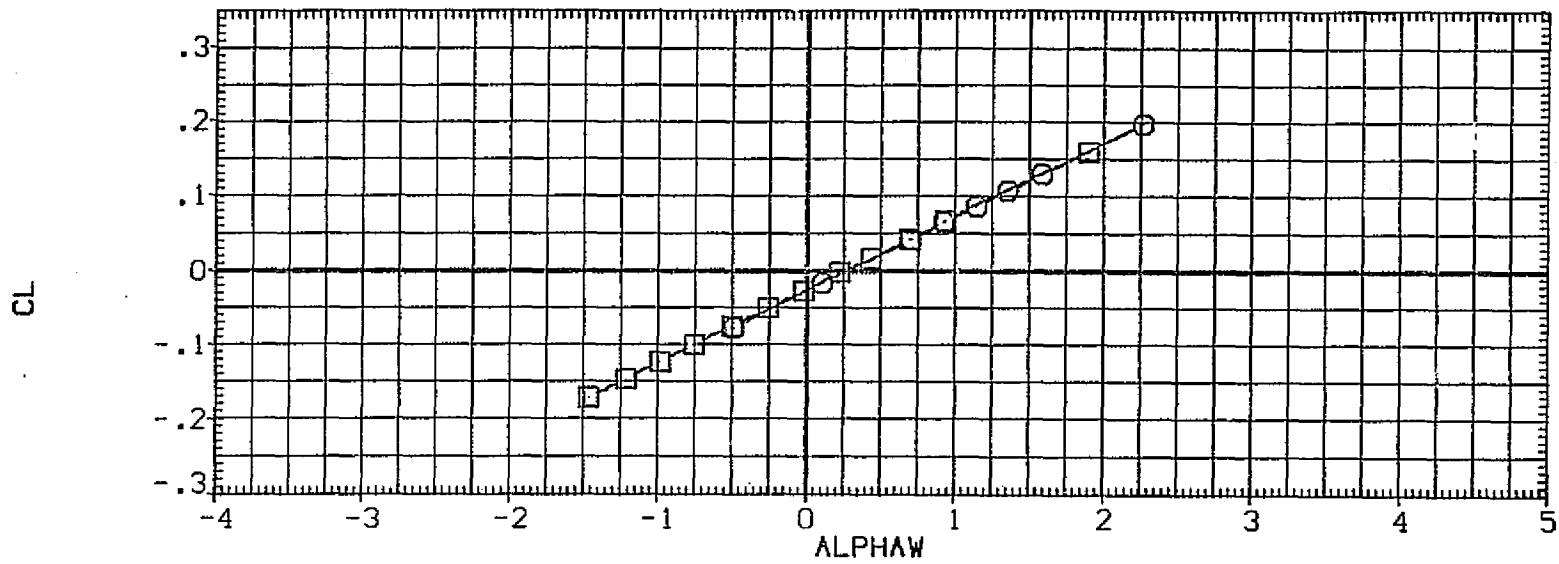


FIG. 18 747' ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (CD)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO21)	□ CA6 KIH15.1 V9.1
(RGPO22)	○ CA6 KIH15.1 V9.1

PHI	BETA
.000	.000
180.060	.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

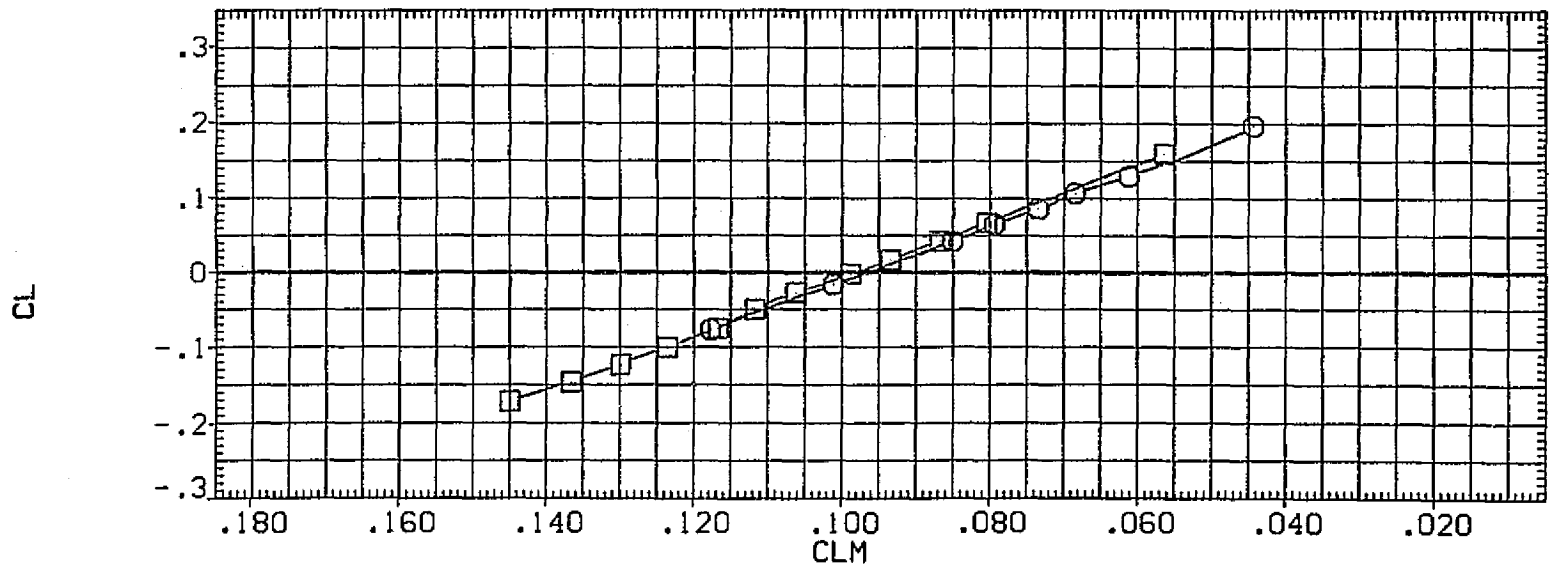
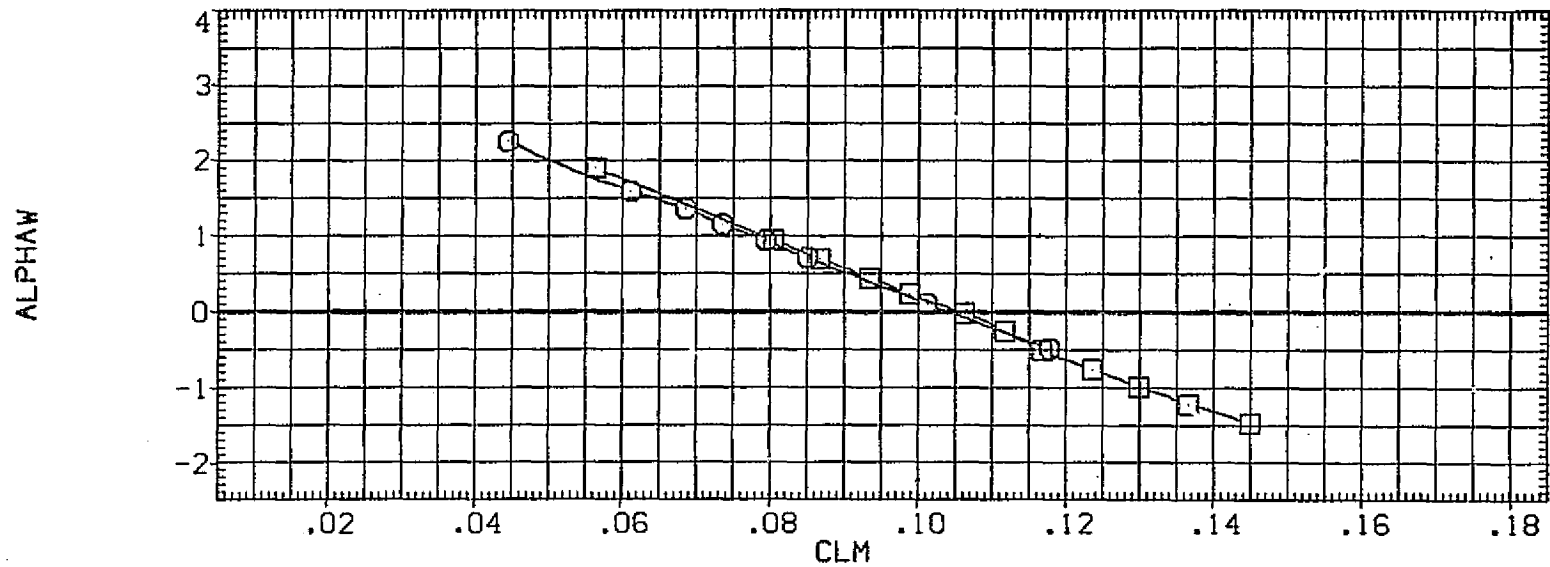


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGPO21) □ CA6 KIHIS.1 V9.1
 (RGPO22) ○ CA6 KIHIS.1 V9.1

PHI BETA
 .000 .000
 180.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

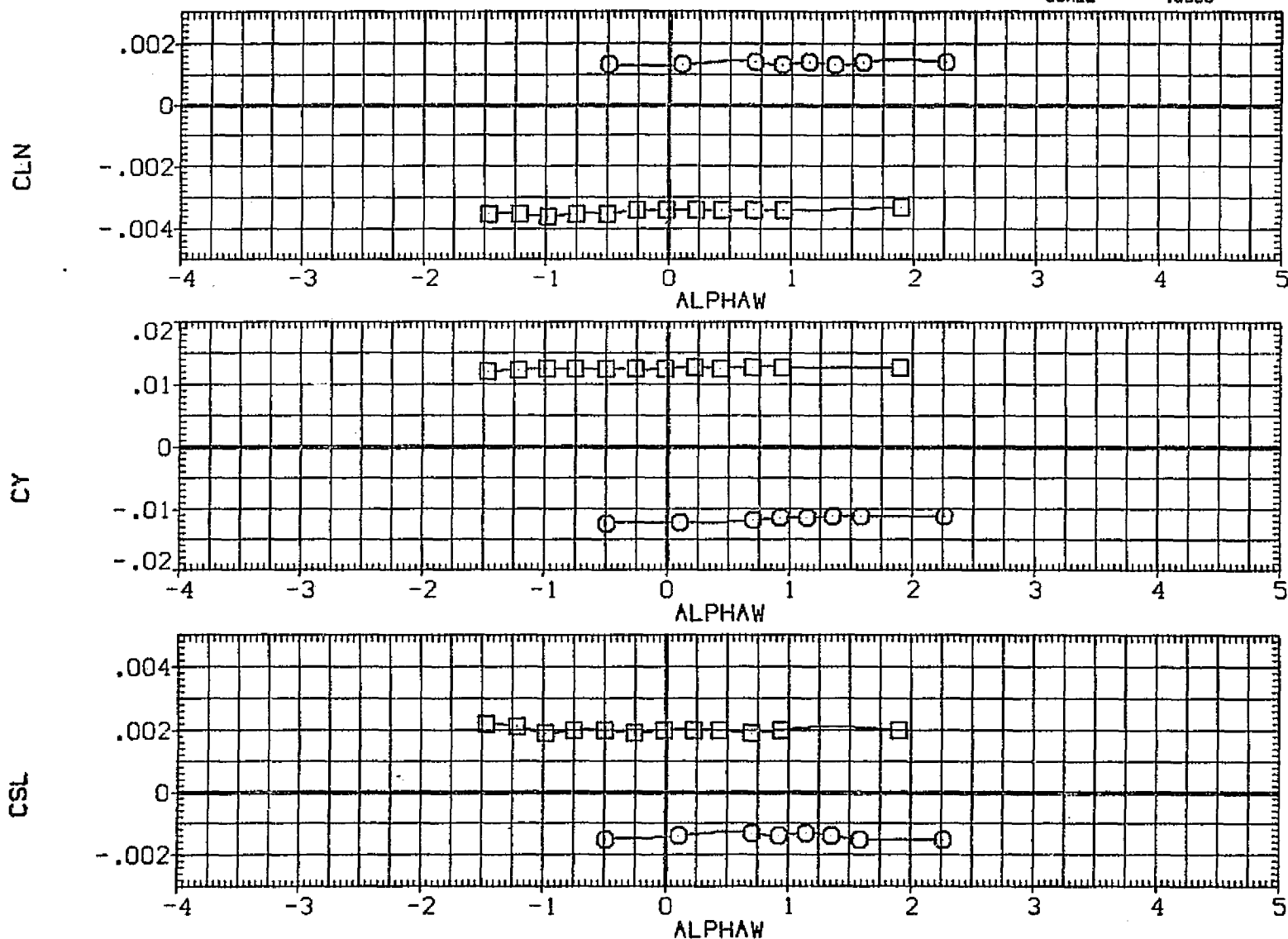


FIG. 18 747 ALONE UPFLOW CORRECTION, WING AT 49 INCHES
 (D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO37)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO40)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBFBN24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGPO46)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBFBN24/28	4.890	.000	6.000	BREF 2348.0000 IN.
(RGPO51)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.10RBFBN24/28	4.890	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

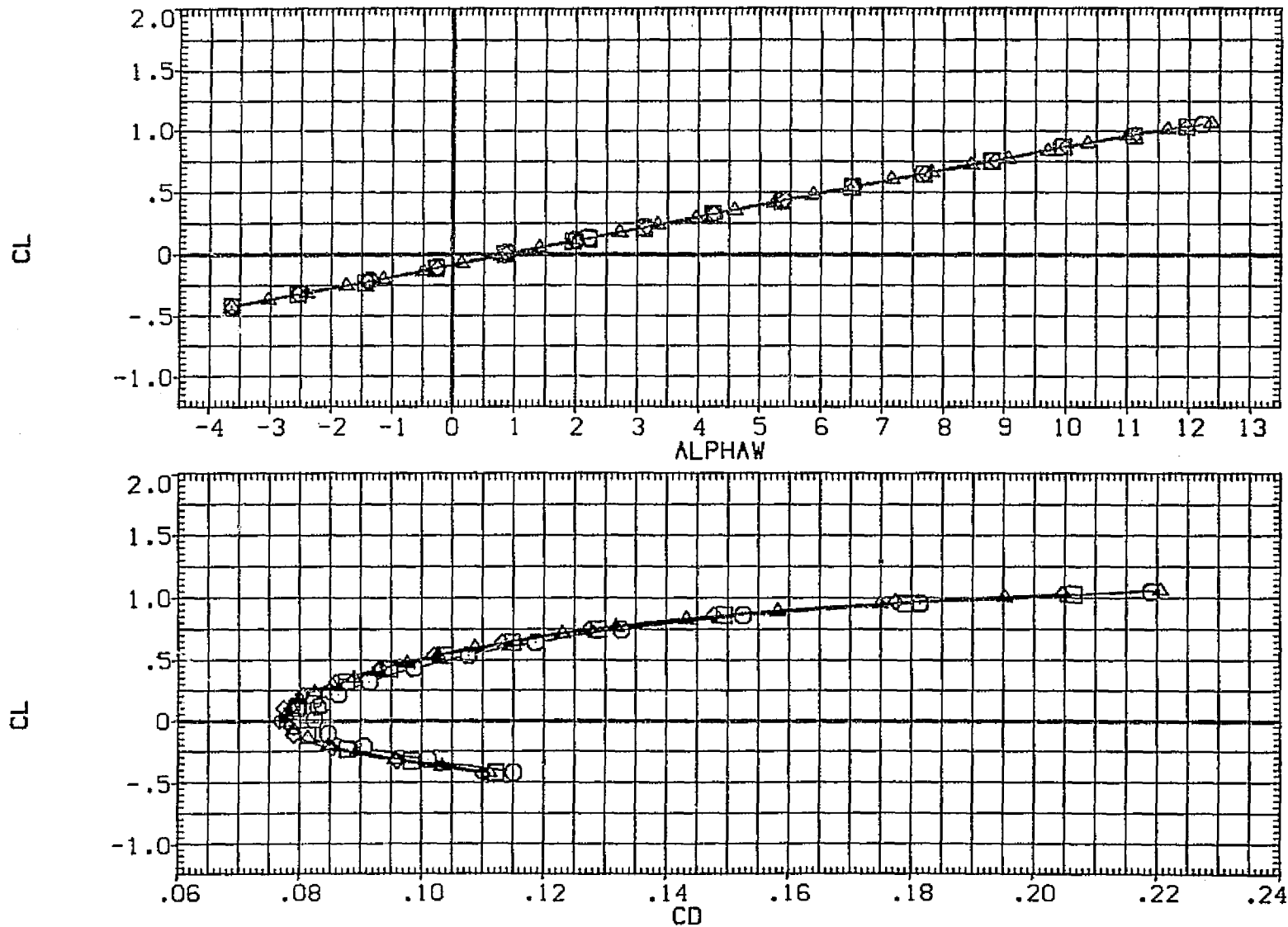


FIG. 19 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION, BETA 0

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP037)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP040)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP046)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBF8N24/28	4.890	.000	6.000	BREF 2348.0000 IN.
(RGP051)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.10RBF8N24/28	4.890	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

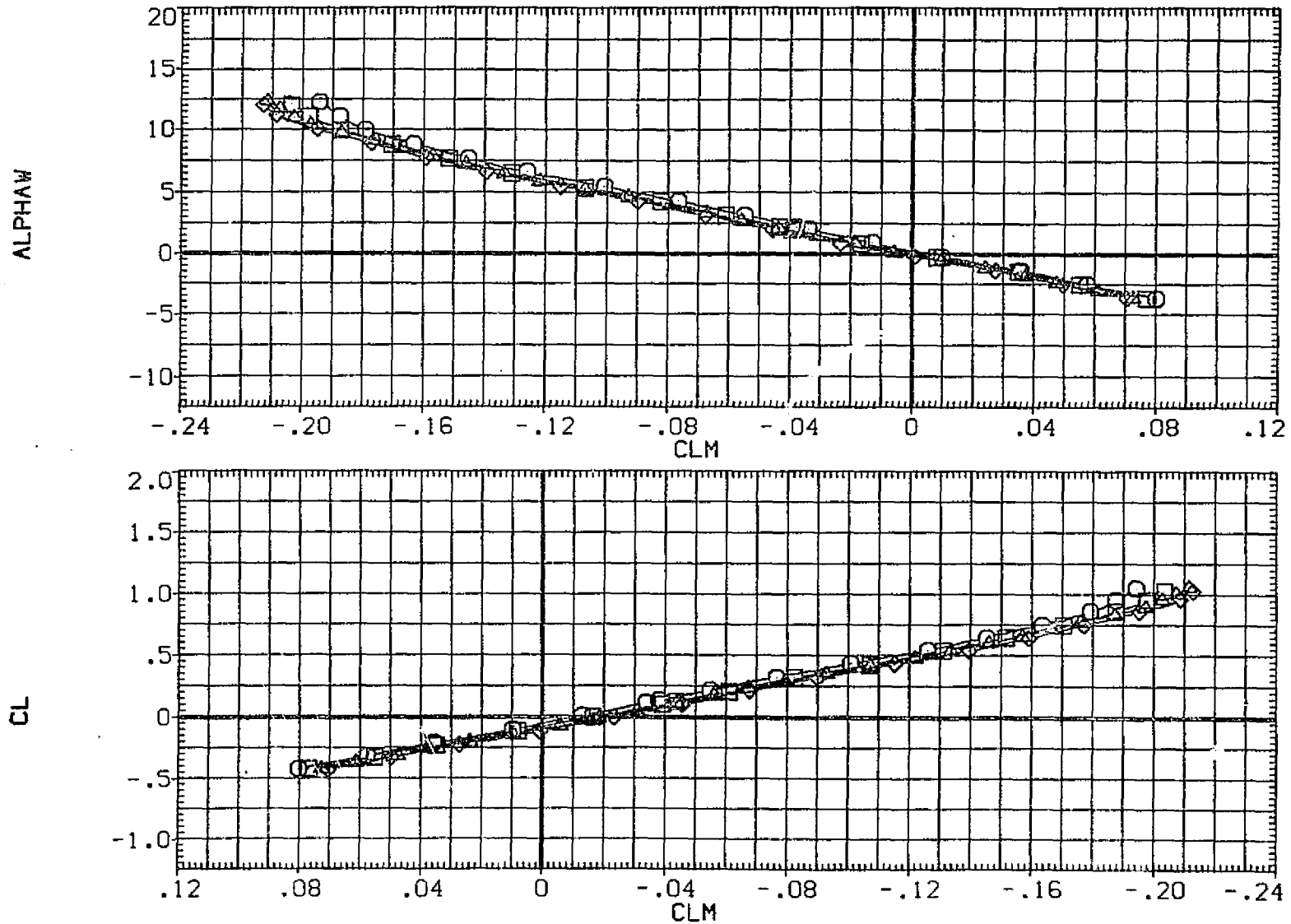


FIG. 19 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION, BETA 0
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO37)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 0RBFBN24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO40)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBFBN24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGPO46)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 0RBFBN24/28	4.890	.000	6.000	BREF 2348.0000 IN.
(RGPO51)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.10RBFBN24/28	4.890	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

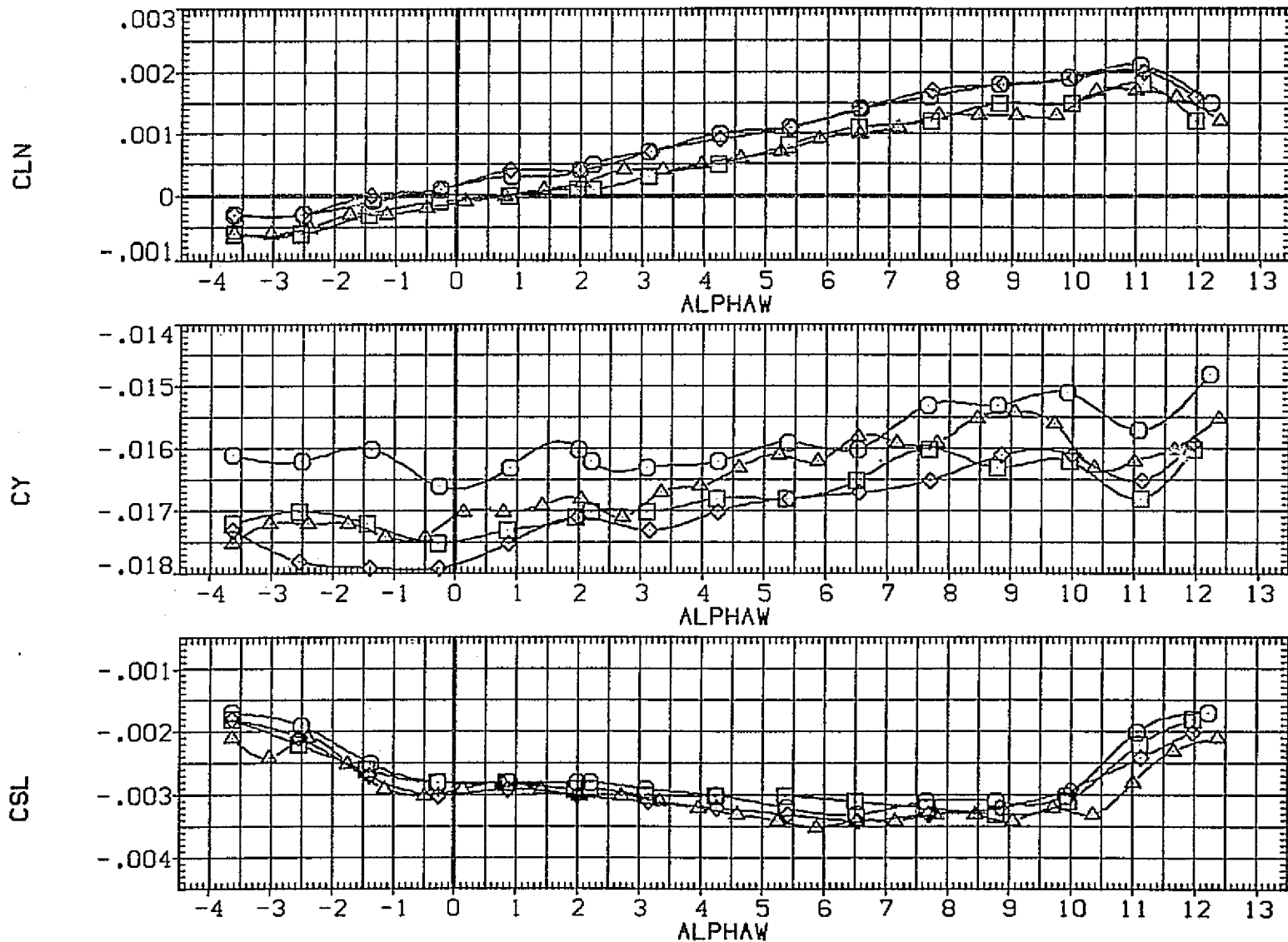


FIG. 19 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION, BETA 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP034)	CA6 K2H15.6.1V9.1SI-12 AT103 /110 ORBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP035)	CA6 K2H15.6.1V9.1SI-12 AT103 /110 ORBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP047)	CA6 K2H15.6.1V9.1SI-12 AT 93.1/110 ORBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP045)	CA6 K2H15.6.1V9.1SI-12 AT108 /110 ORBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

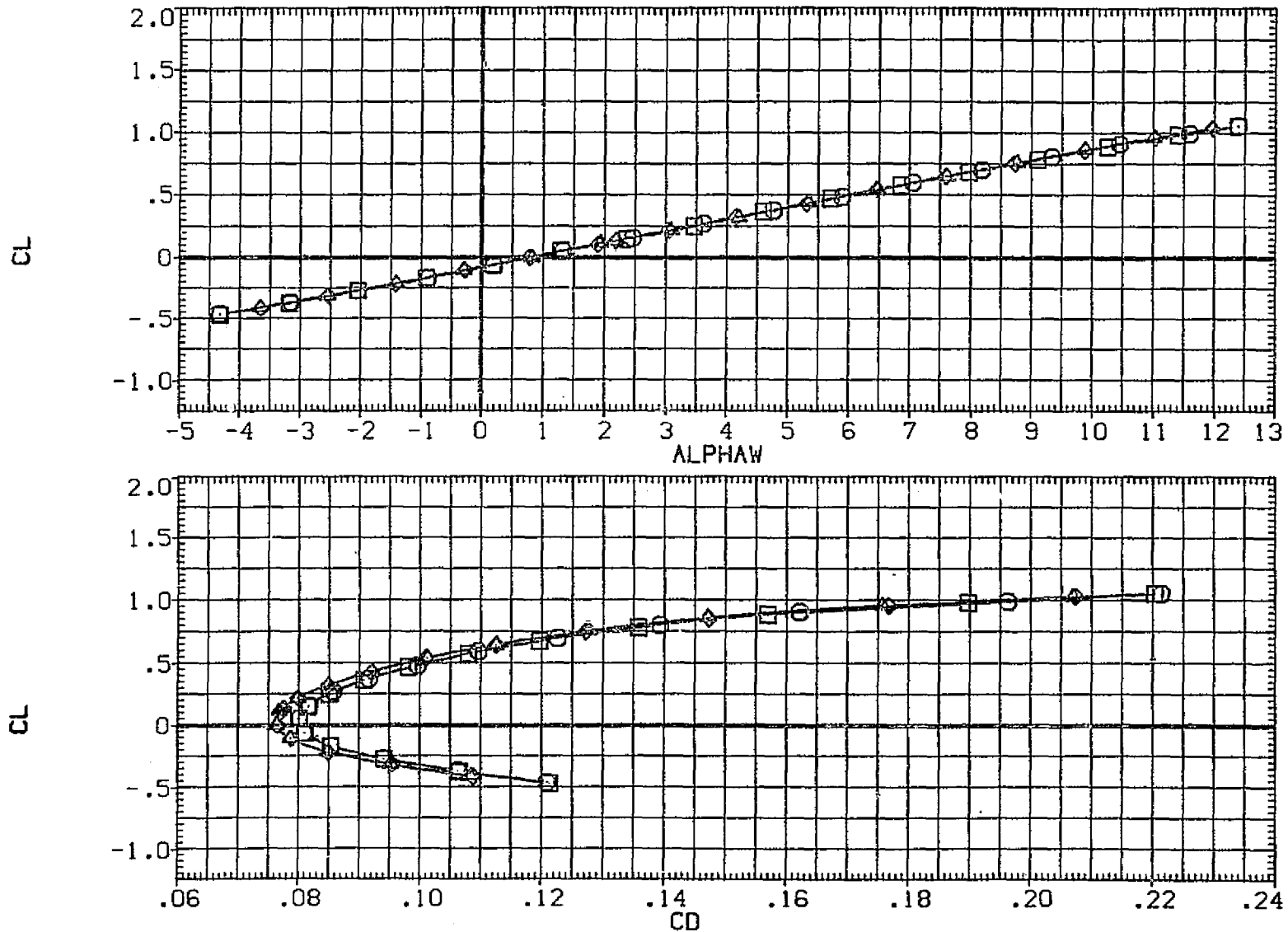


FIG. 20 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT FAIRED
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGPO34)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/110 ORBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO35)	□ CA6 K2H15.6.1V9.1S1-12 AT103 /110 ORBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGPO47)	◇ CA6 K2H15.6.1V9.1S1-12 AT 93.1/110 ORBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGPO45)	△ CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

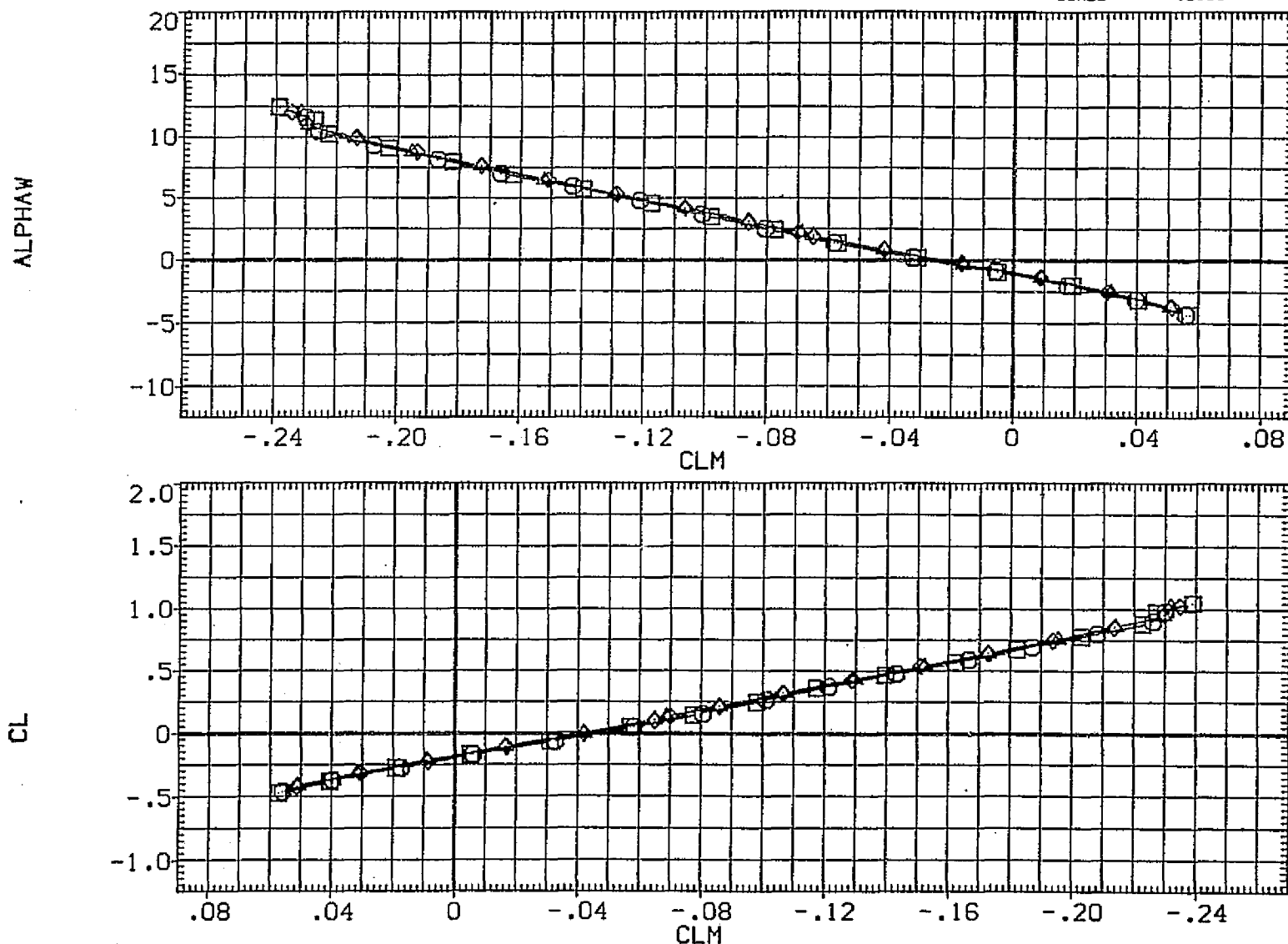


FIG. 20 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT FAIRED

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP034)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/110 0RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP035)	◇ CA6 K2H15.6.1V9.1S1-12 AT103 /110 0RBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP047)	◇ CA6 K2H15.6.1V9.1S1-12 AT 93.1/110 0RBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP045)	△ CA6 K2H15.6.1V9.1S1-12 AT108 /110 0RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

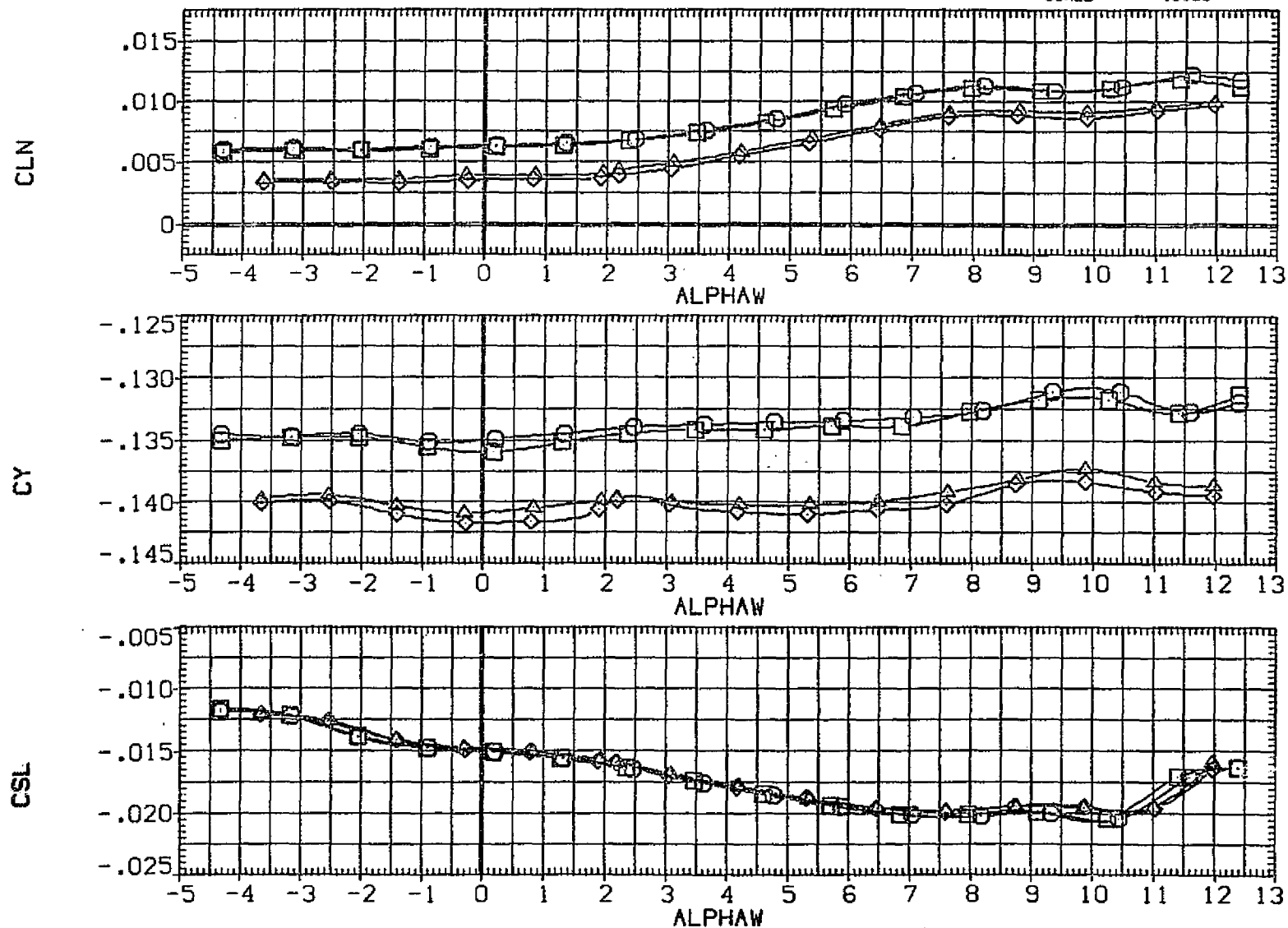


FIG. 20 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT FAIRED

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP043)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP045)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 0RBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP048)	CA6 K2H15.6.1V9.1S1-12 AT108 /111 0RBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP049)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.10RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

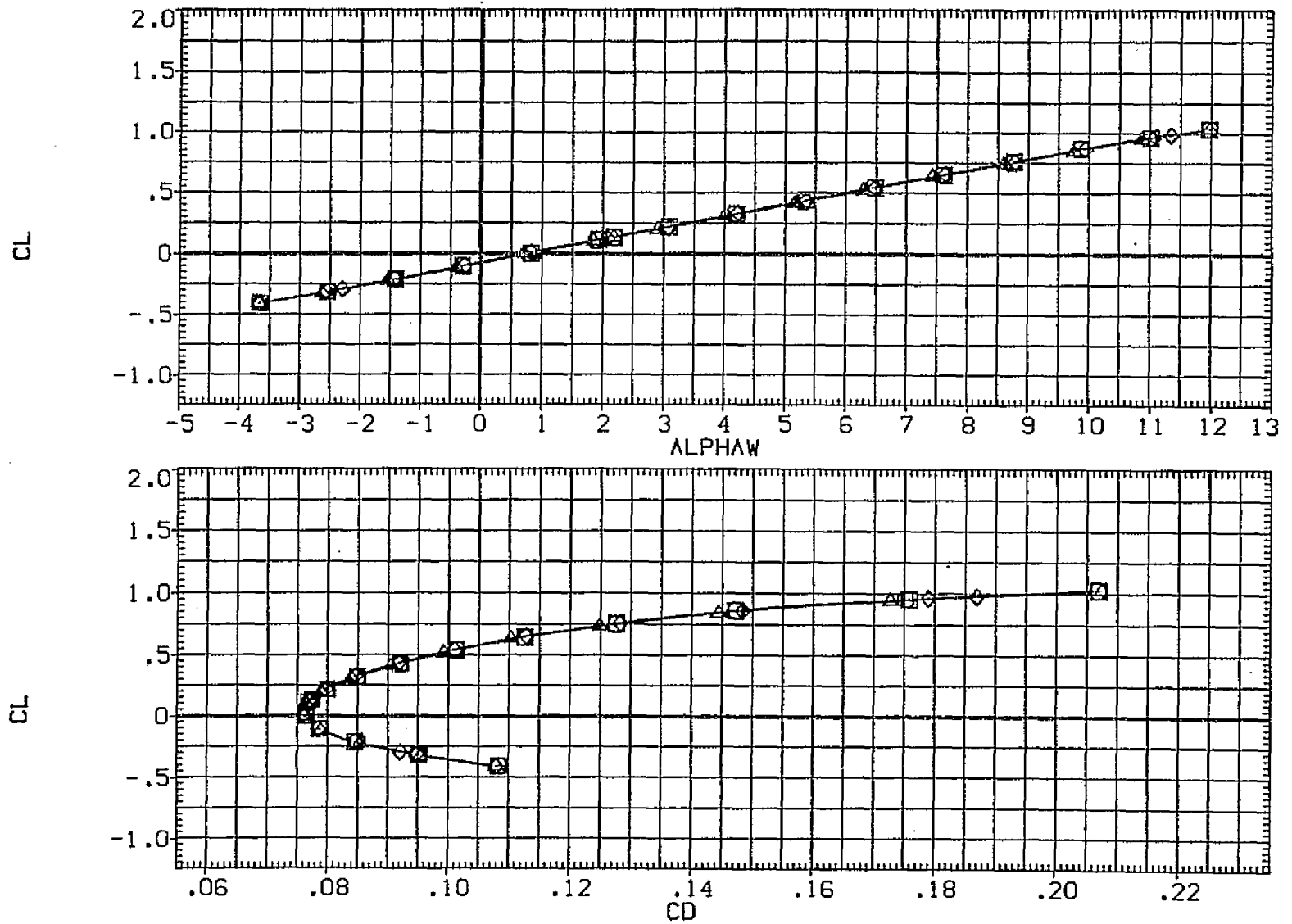


FIG. 21 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT FAIRED

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION	
(RGP043)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000 50.FT.
(RGP045)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBF8N24/28	4.890	4.000	6.000	LREF	327.8000 IN.
(RGP048)	CA6 K2H15.6.1V9.1S1-12 AT108 /111 ORBF8N24/28	4.890	4.000	6.000	BREF	2348.0000 IN.
(RGP049)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.10RBF8N24/28	4.890	4.000	6.000	XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

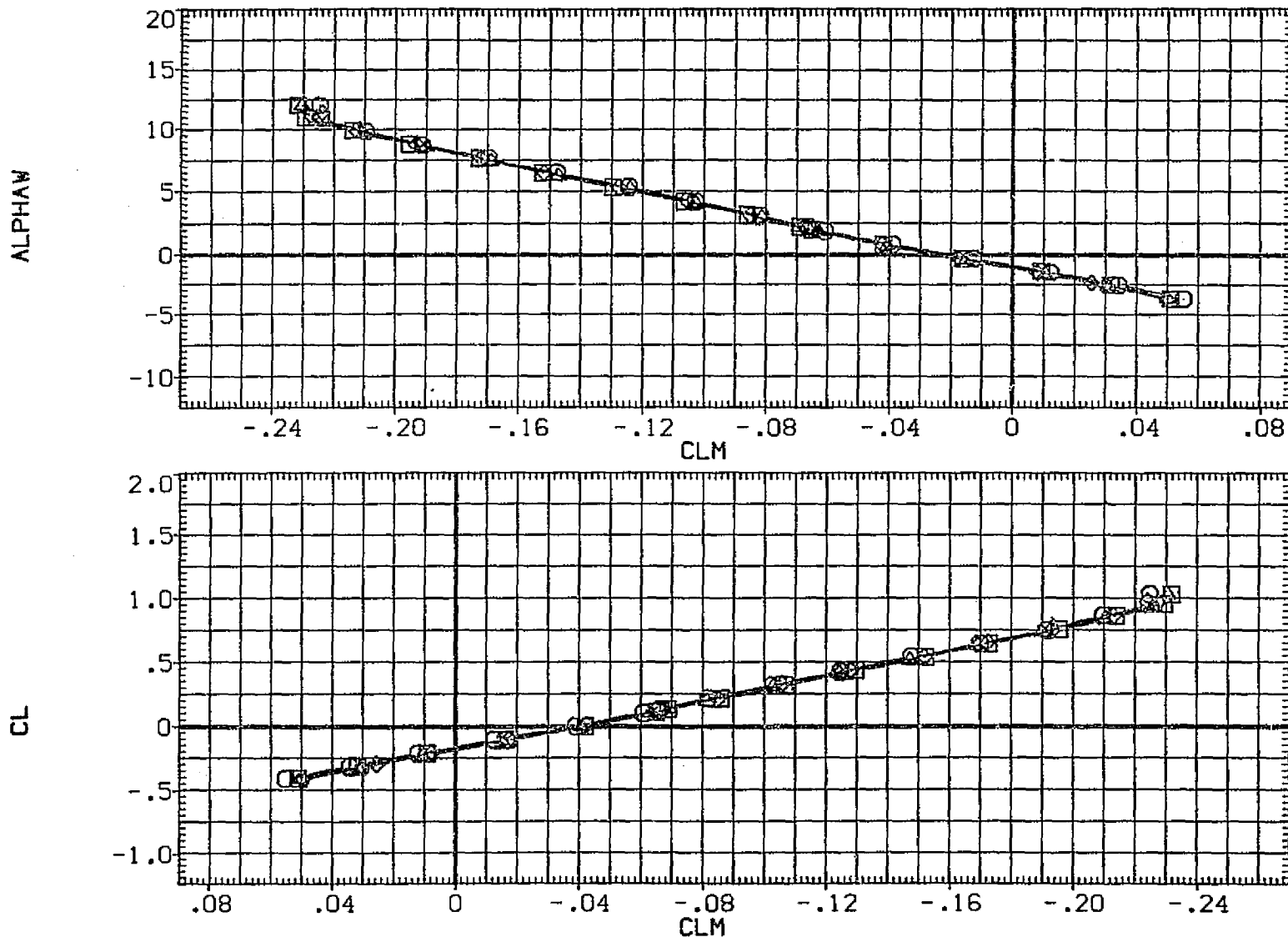


FIG. 21 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT FAIRED
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGPO43)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBFBN24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO45)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBFBN24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGPO48)	CA6 K2H15.6.1V9.1S1-12 AT108 /111 ORBFBN24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGPO49)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.10RBFBN24/28	4.890	4.000	6.000	XMRP 1338.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

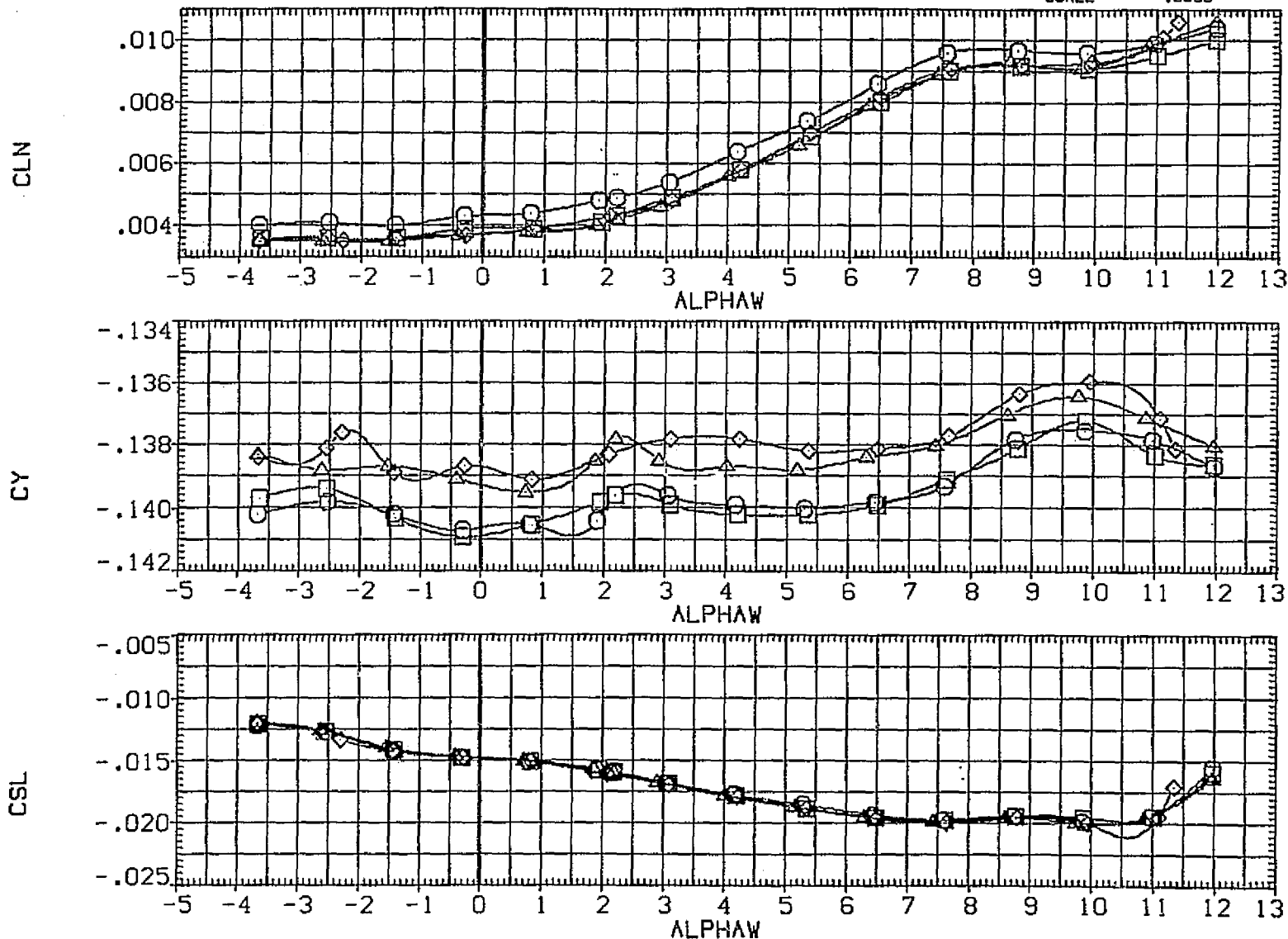


FIG. 21 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT FAIRED

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION
(RGP034) □	CA6 K2H15.6.1V9.1S1-12 AT103.1/110 ORBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(RGP036) □	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP038) ⊗	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.20RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

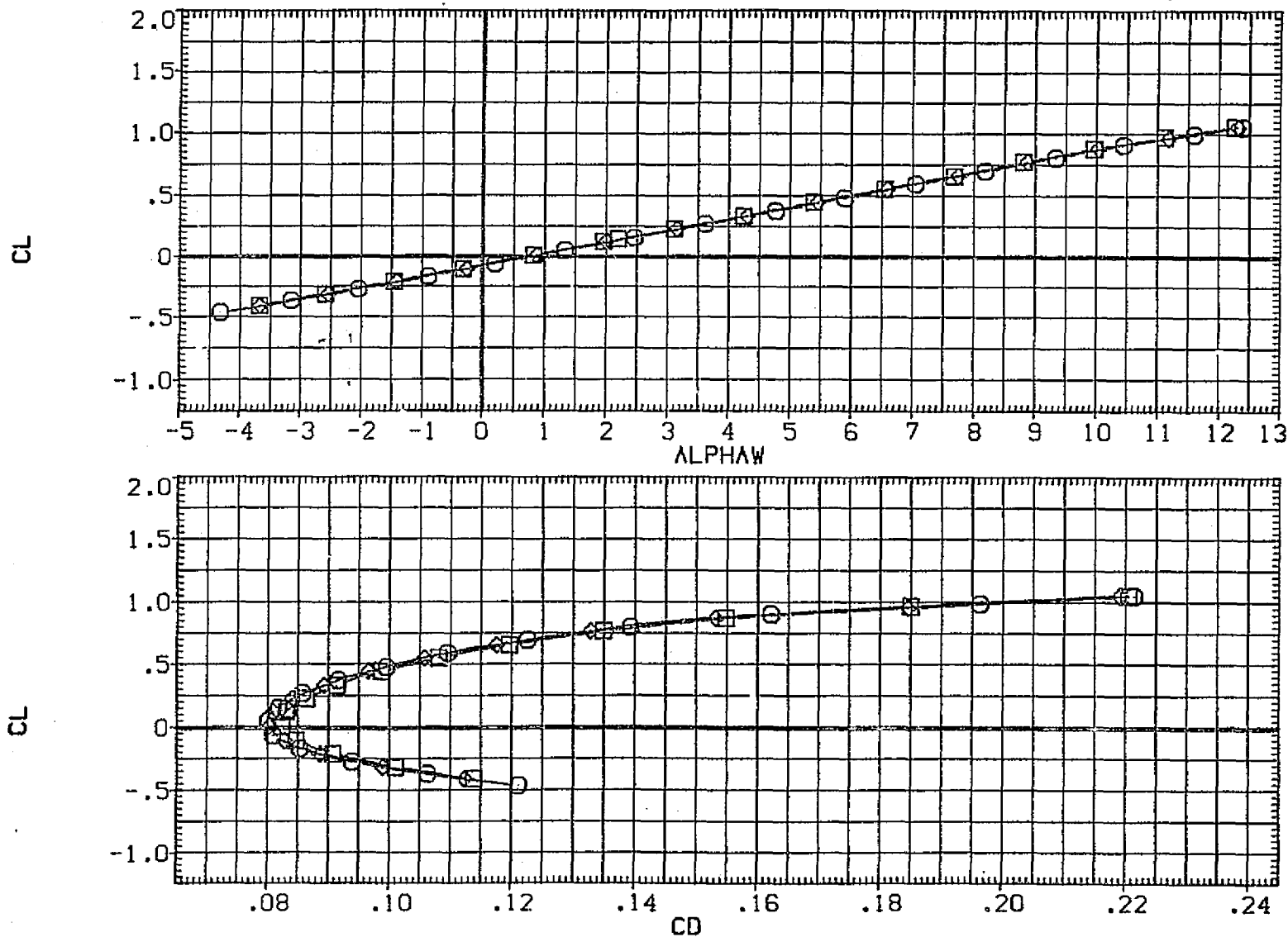


FIG. 22 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.1)

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGPO34)	□ CAS K2H15.6.1V9.1S1-12 AT103.1/110 ORBFBN24/28	4.890	4.000	6.000	SREF	5500.0000	50.FT.
(RGPO36)	○ CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	4.890	4.000	6.000	LREF	327.8000	IN.
(RGPO38)	◇ CAS K2H15.6.1V9.1S1-12 AT103.1/95-.20RBFBN24/28	4.890	4.000	6.000	BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

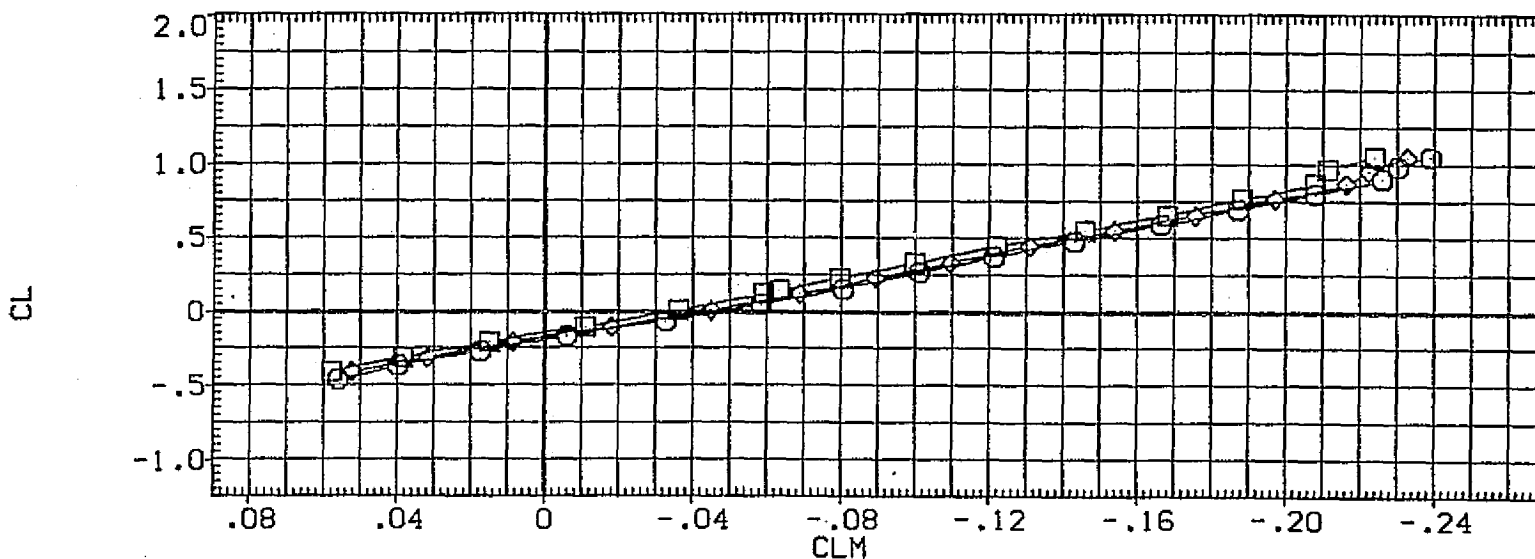
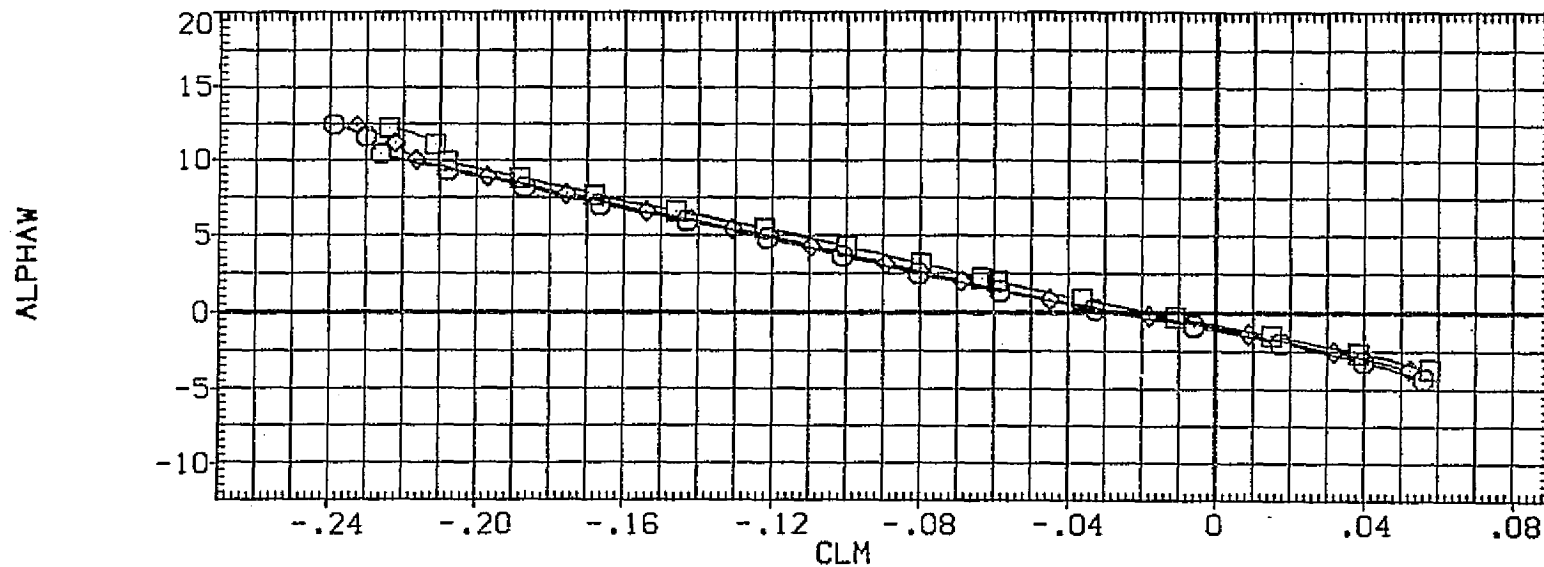


FIG. 22 ORB, AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.1)
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGPD34)	□ CAS K2H15.6.1V9.1S1-12 AT103.1/110 ORBF8N24/28	4.890	4.000	6.000	SREF	5500.0000	50.FT.
(RGPD36)	○ CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	4.000	6.000	LREF	327.8000	IN.
(RGPD38)	◇ CAS K2H15.6.1V9.1S1-12 AT103.1/95-.2ORBF8N24/28	4.890	4.000	6.000	BREF	2348.0000	IN.
					XHRP	1339.9000	IN. XC
					YHRP	.0000	IN. YC
					ZHRP	190.7700	IN. ZC
					SCALE	.0300	

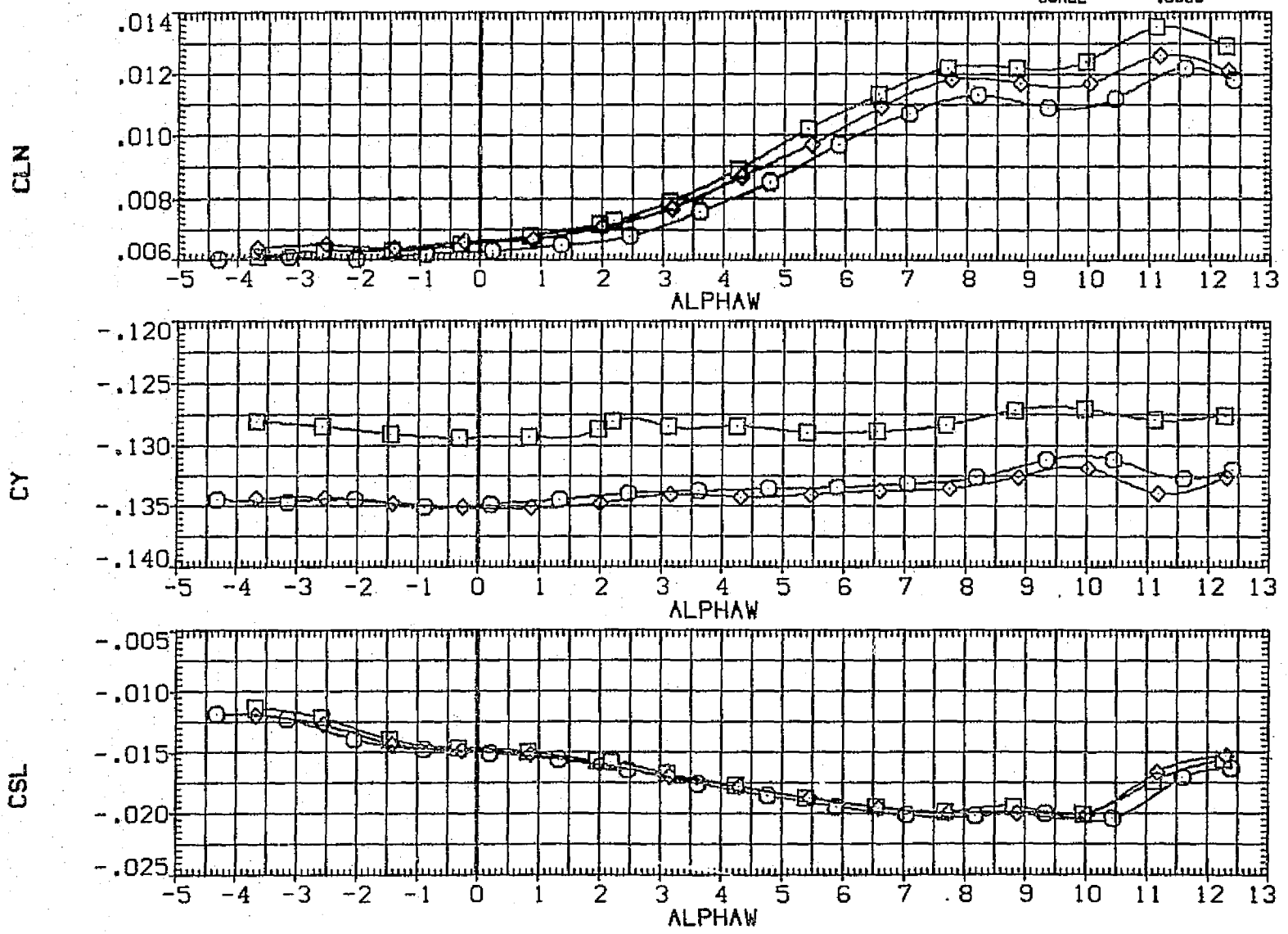


FIG. 22 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.1)
 (A)MACH = .60 PAGE 132

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO38)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.20RBFBN24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO39)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBFBN24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGPO41)	CA6 K2H15.6.1V9.1S1-12 AT 93.1/95-.20RBFBN24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGPO43)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBFBN24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

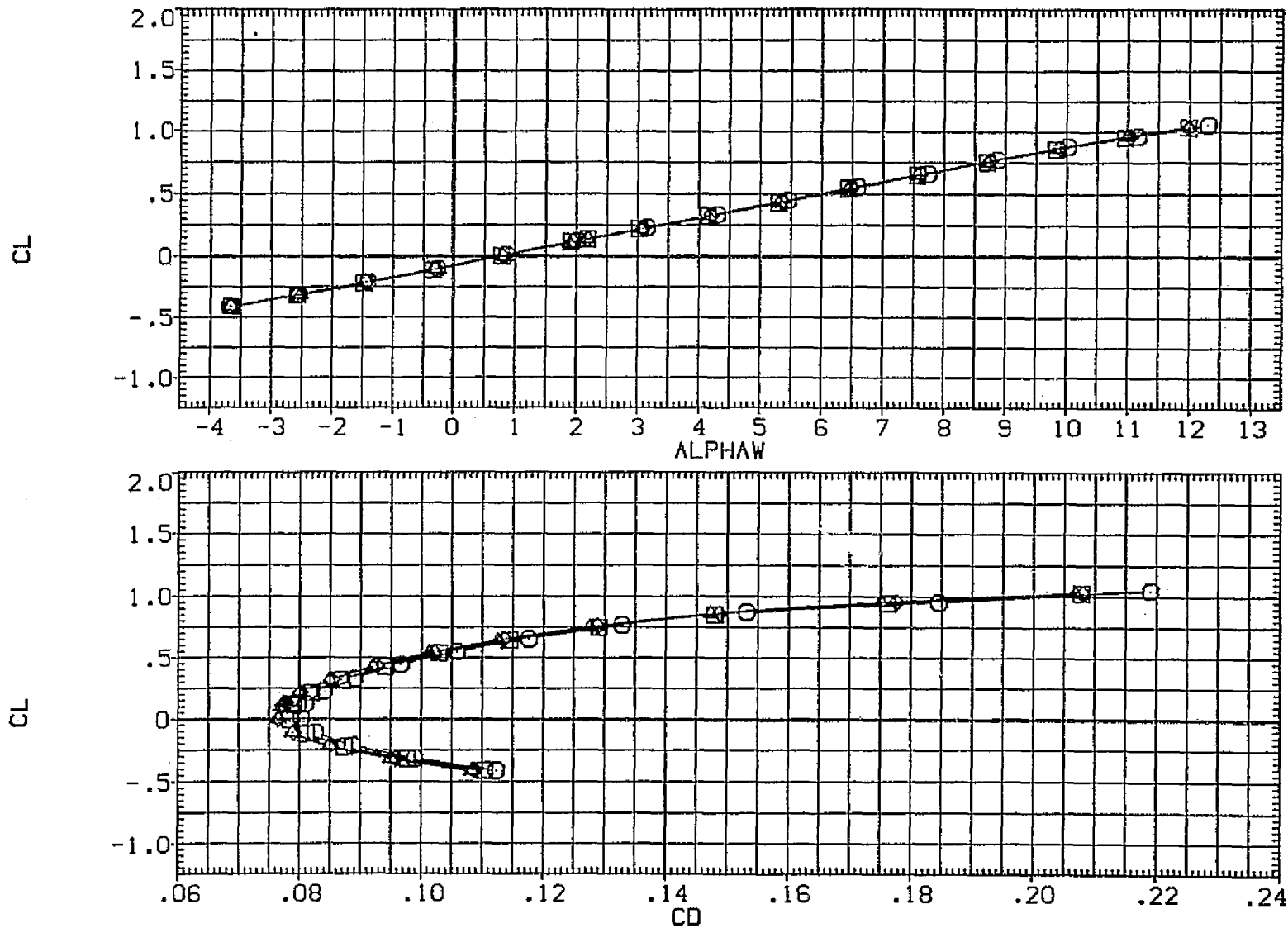


FIG. 23 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23 FAIRING

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION			
(RGPO38)	□	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.20RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000	50.FT.
(RGPO39)	○	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28	4.890	4.000	6.000	LREF	327.8000	IN.
(RGPO41)	×	CA6 K2H15.6.1V9.1S1-12 AT 93.1/95-.20RBF8N24/28	4.890	4.000	6.000	BREF	2348.0000	IN.
(RGPO43)	△	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBF8N24/28	4.890	4.000	6.000	XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

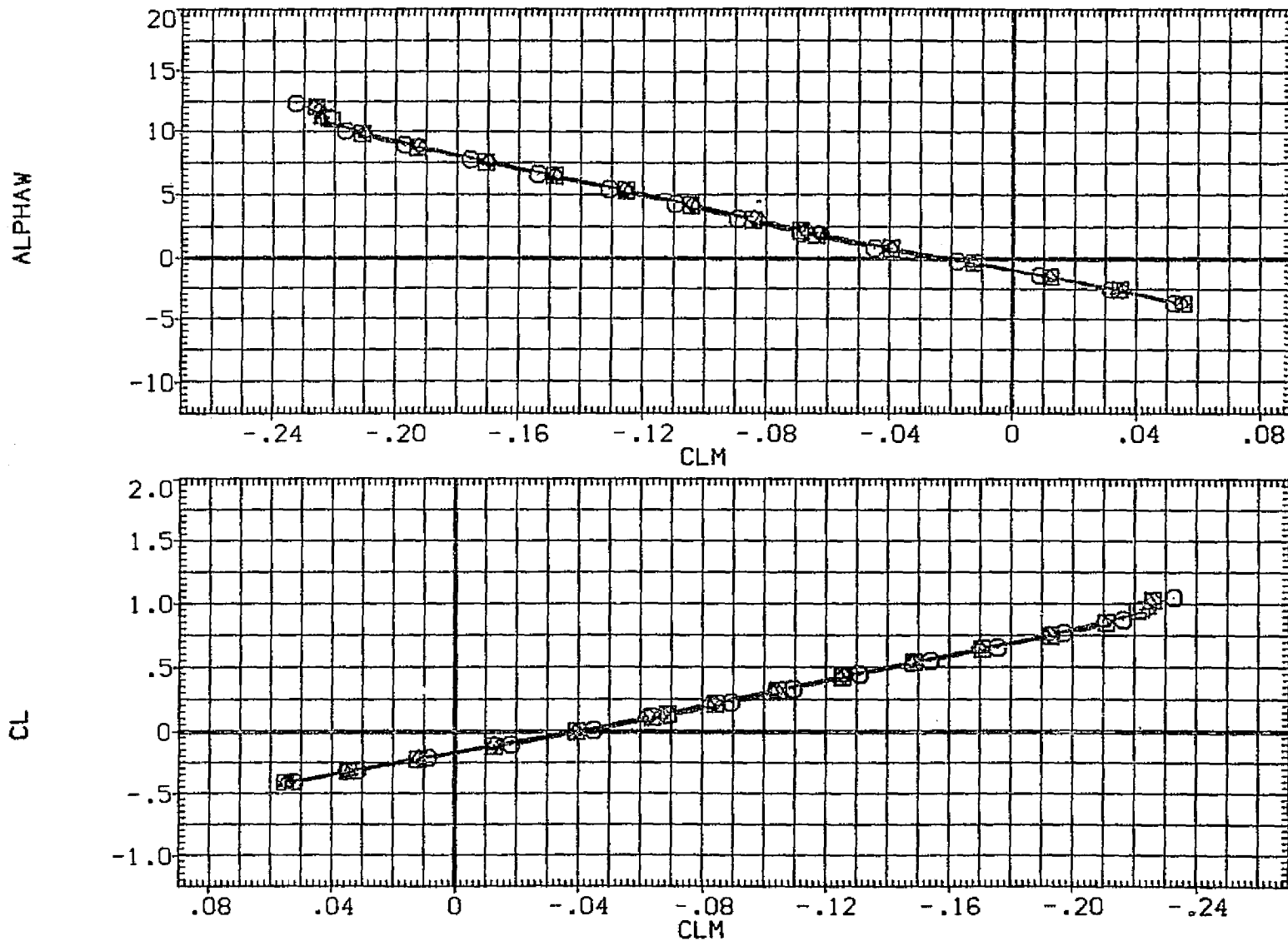


FIG. 23 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23 FAIRING

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP038)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.20RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP039)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP041)	CA6 K2H15.6.1V9.1S1-12 AT 93.1/95-.20RBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP043)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

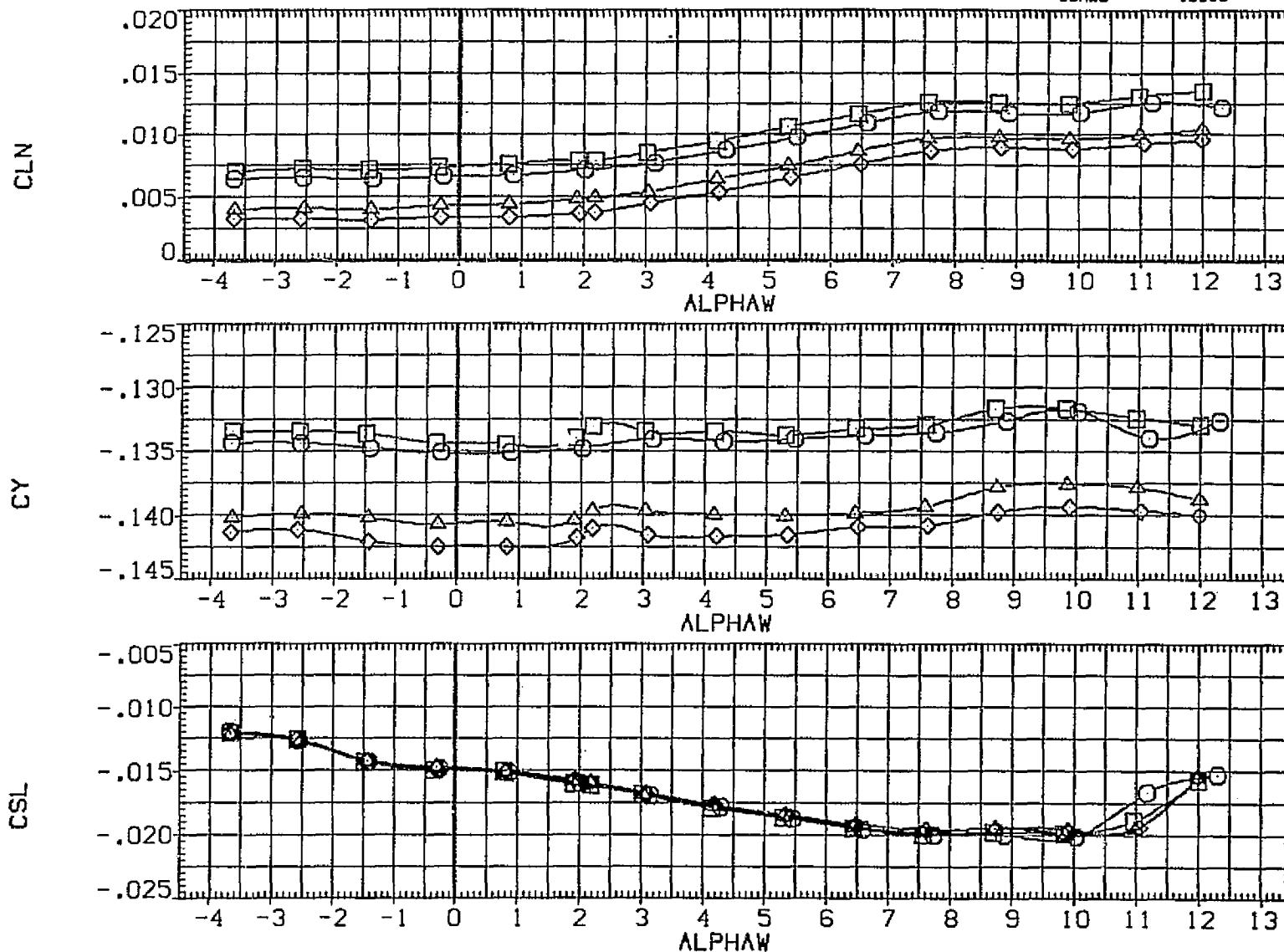


FIG. 23 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23 FAIRING

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGPO39)
(RGPO50)



CAS K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28
CAS K2H15.6.1V9.1S1-12 AT103.2/111.10RBF8N24/28

STAB BETA IORB
4.890 4.000 6.000
4.890 4.000 6.000

REFERENCE INFORMATION
SREF 5500.0000 SQ.FT.
LREF 327.8000 IN.
BREF 2348.0000 IN.
XMRP 1339.9000 IN. XC
YMRP .0000 IN. YC
ZMRP 190.7700 IN. ZC
SCALE .0300

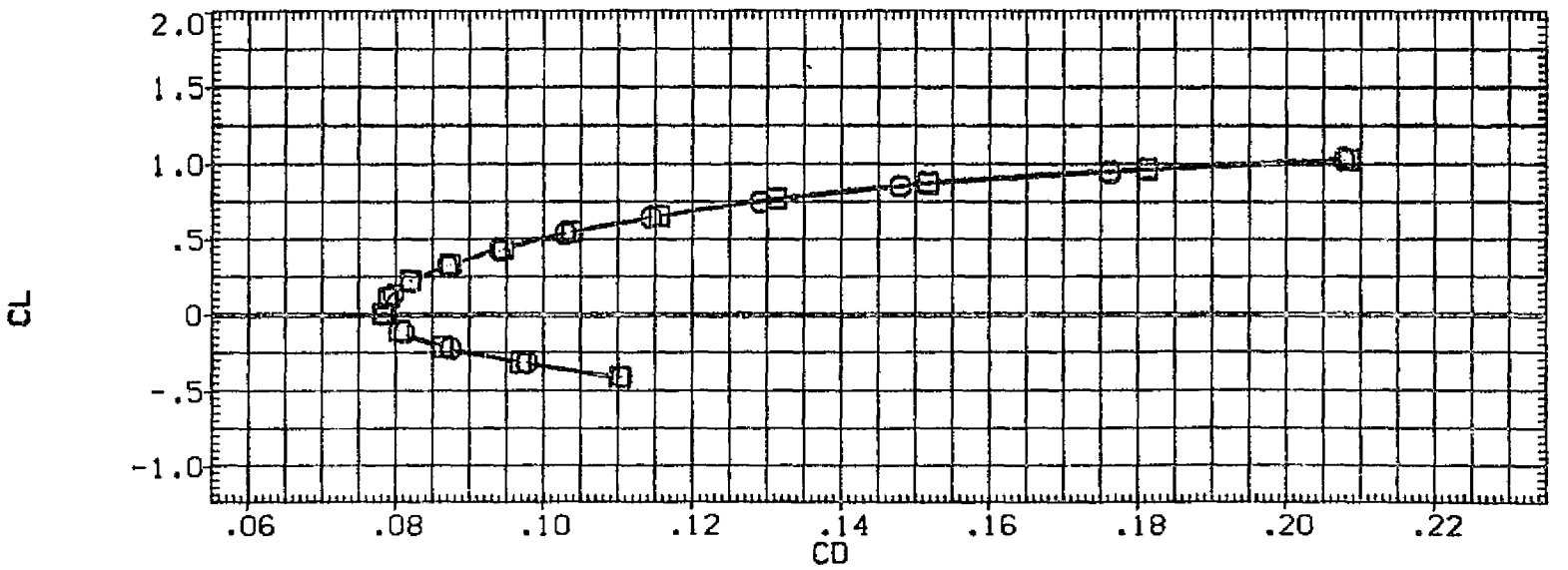
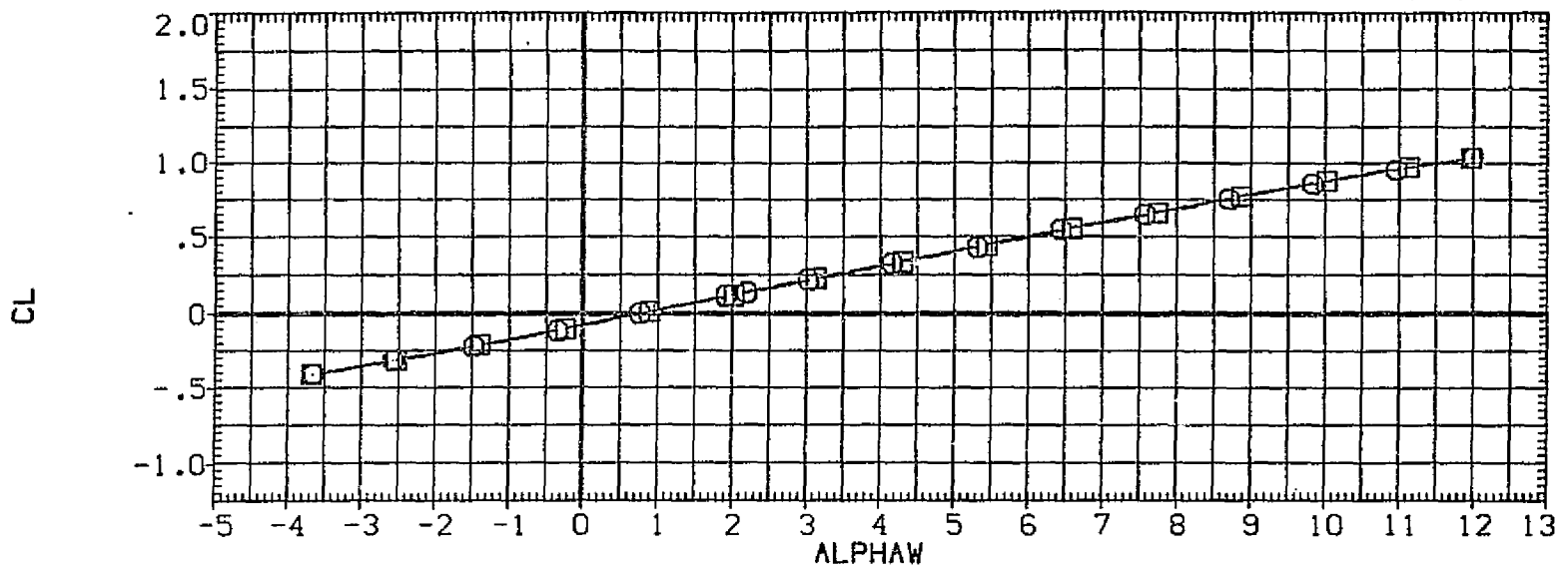


FIG. 24 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.2)
(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGPO39)	CAS K2H15.6.119.151-12 AT103.2/95-.20RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000 SQ.FT.
(RGPO50)	CAS K2H15.6.119.151-12 AT103.2/111.10RBF8N24/28	4.890	4.000	6.000	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

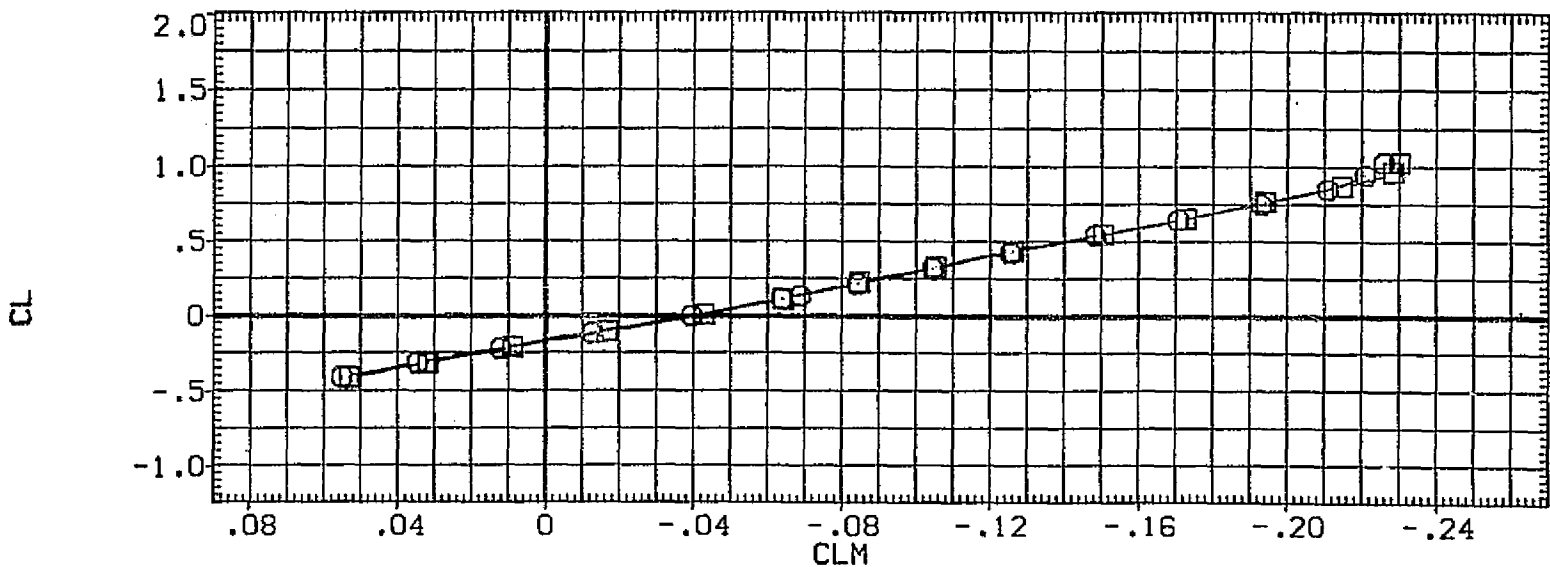
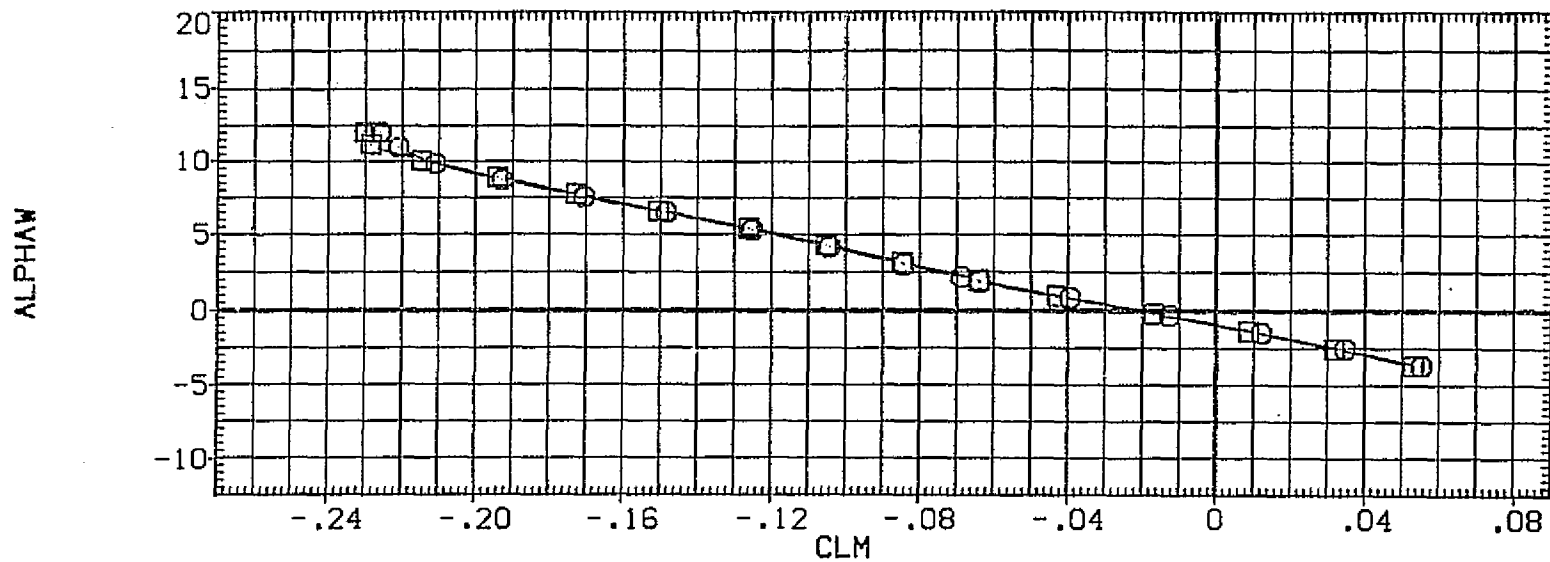


FIG. 24 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.2)

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(R6P039)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000 SO.FT.
(R6P050)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.10RBF8N24/28	4.890	4.000	6.000	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

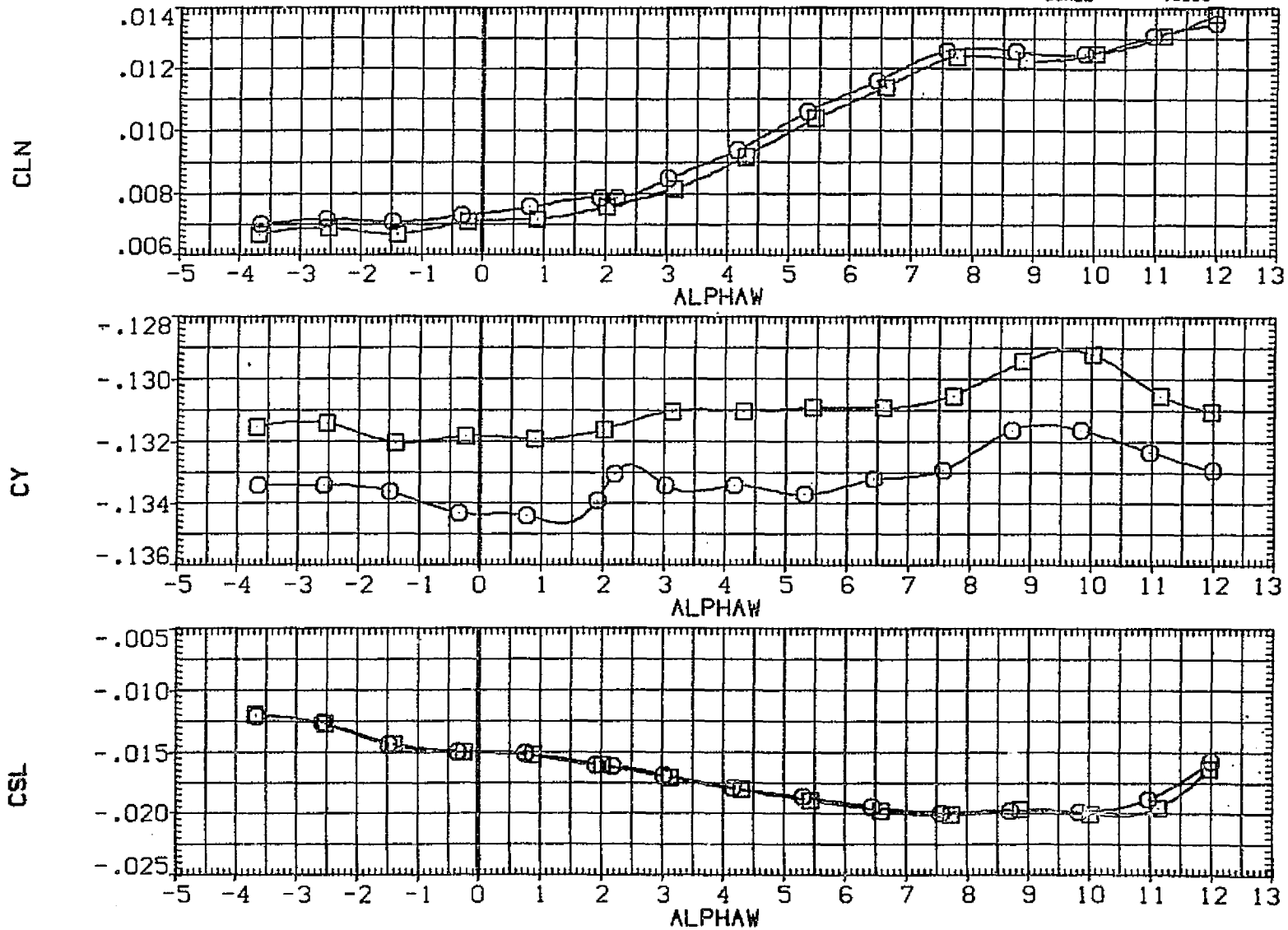


FIG. 24 ORB. AFT STRUT TRADES, LAUNCH CONFIG., FWD. STRUT UNFAIRED (AT103.2)

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGPO43) □ CAG K2H15.6.1V9.1S1-12 AT108 /95-.20RBF8N24/28
 (RGPO44) □ CAG K2H15.6.1V9.1S1-12 AT108.1/95-.20RBF8N24/28

STAB BETA IORB
 4.890 4.000 6.000
 4.890 4.000 6.000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

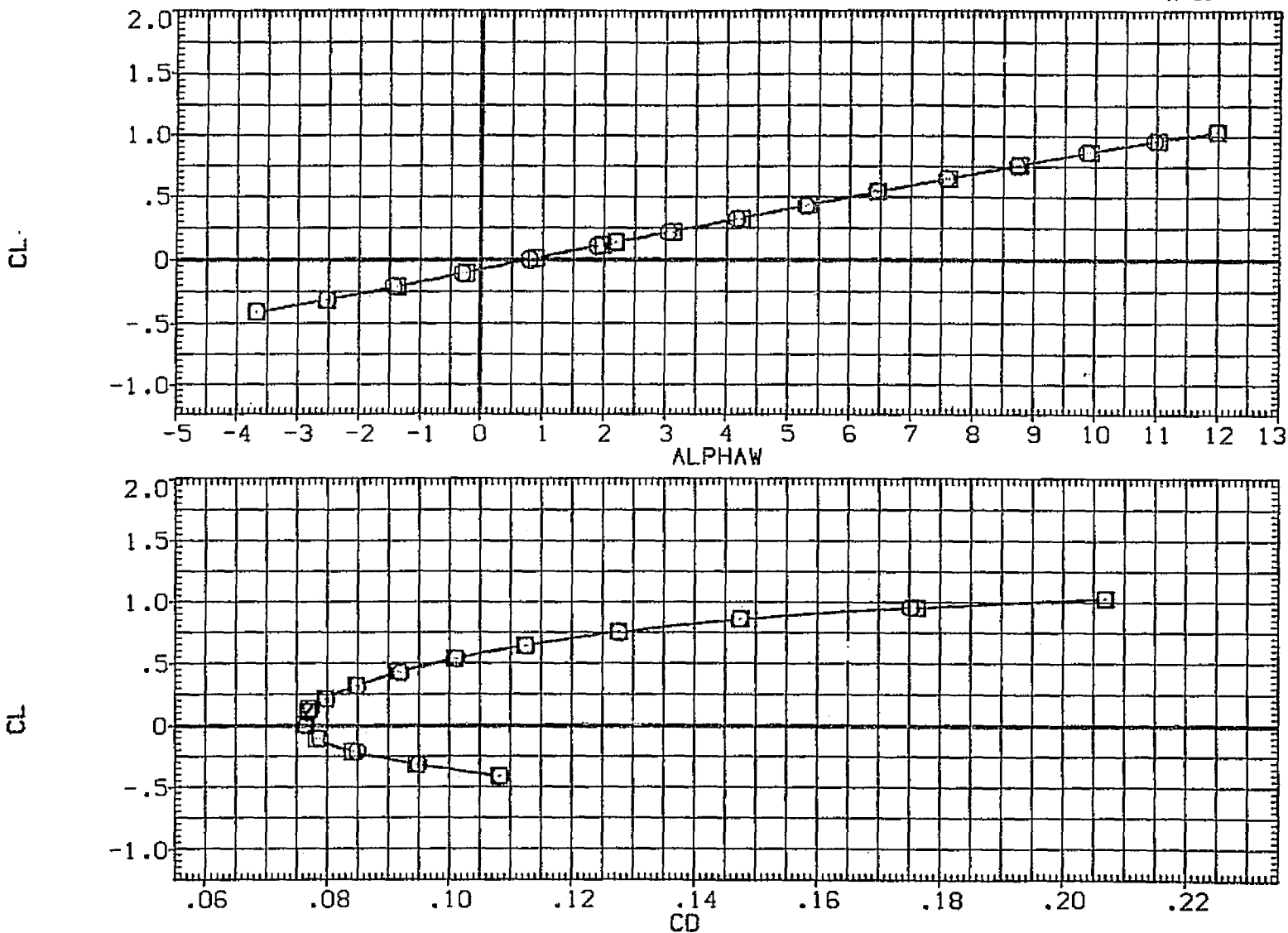


FIG. 25 EFFECT OF SEALING GAP BETWEEN FWD. BATHTUB FAIRING AND ORB., LAUNCH CFGN

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP043)	CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBF0N24/28	4.890	4.000	6.000	SREF	5500.0000 SQ.FT.
(RGP044)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.20RBF0N24/28	4.890	4.000	6.000	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

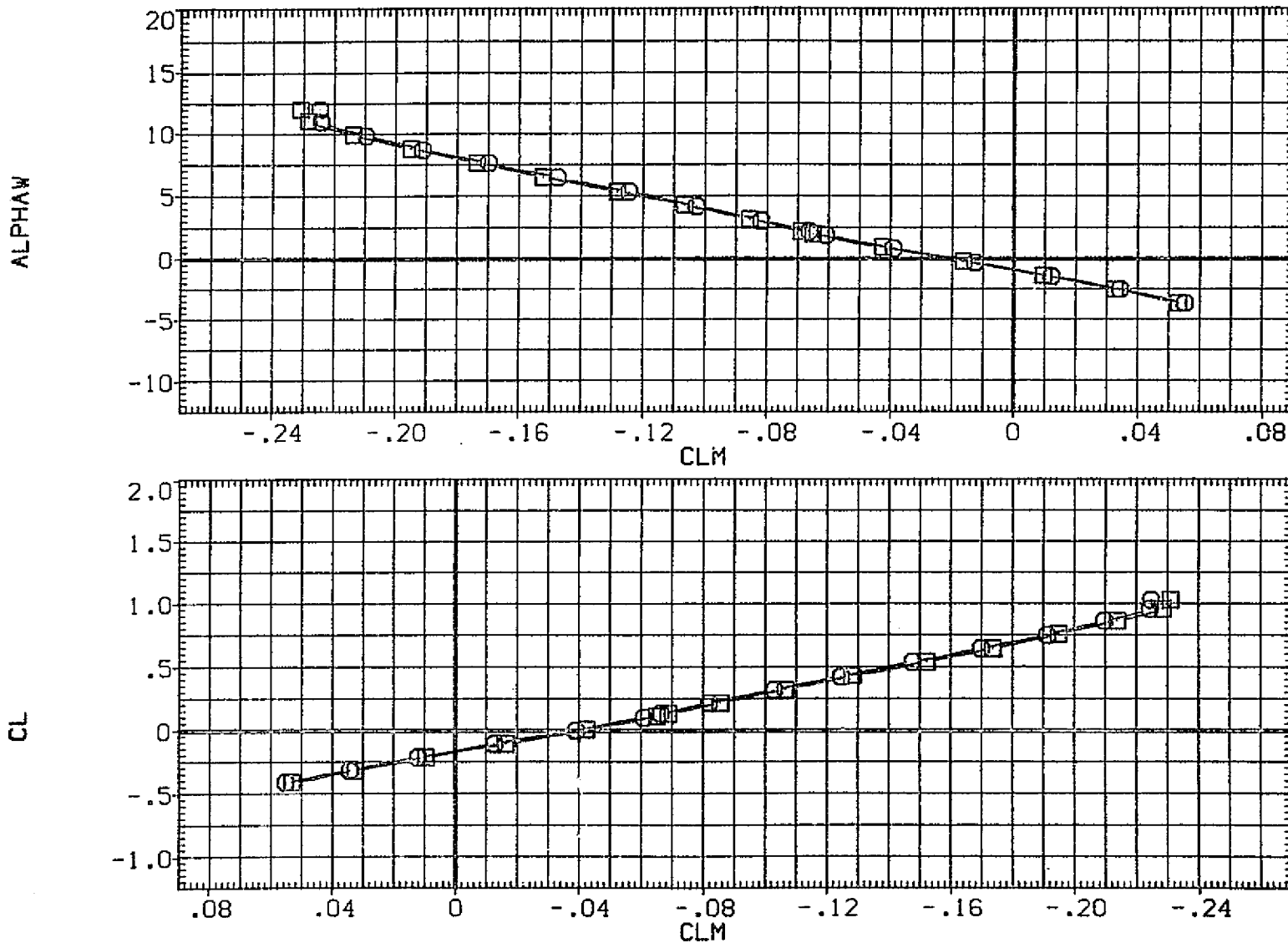


FIG. 25 EFFECT OF SEALING GAP BETWEEN FWD. BATHTUB FAIRING AND ORB., LAUNCH CFGN
 (A) MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGPD43) CA6 K2H15.6.1V9.1S1-12 AT108 /95-.20RBFBN24/28
 (RGPD44) CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.20RBFBN24/28

STAB BETA IORB
 4.890 4.000 6.000
 4.890 4.000 6.000

REFERENCE INFORMATION

SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

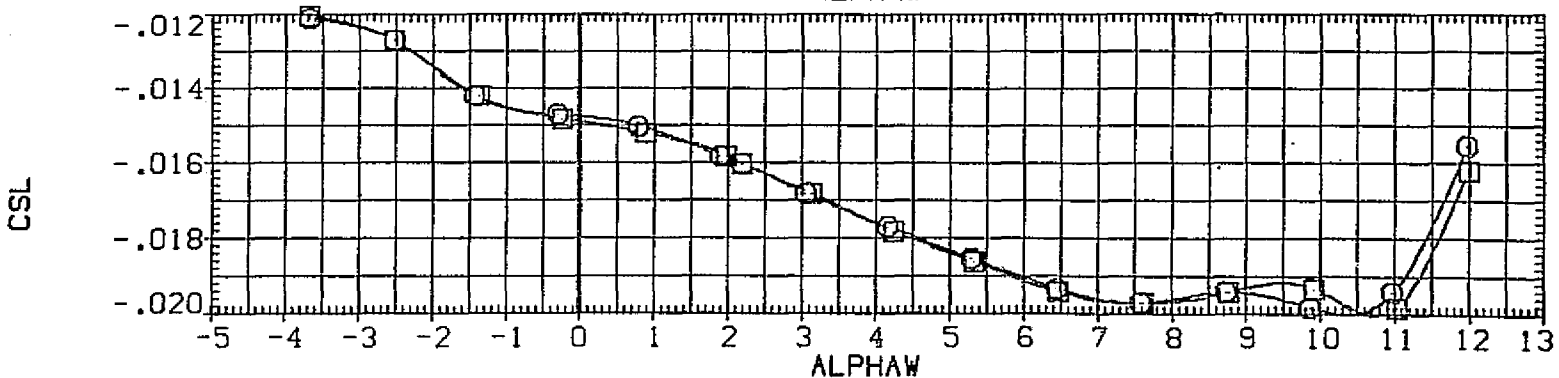
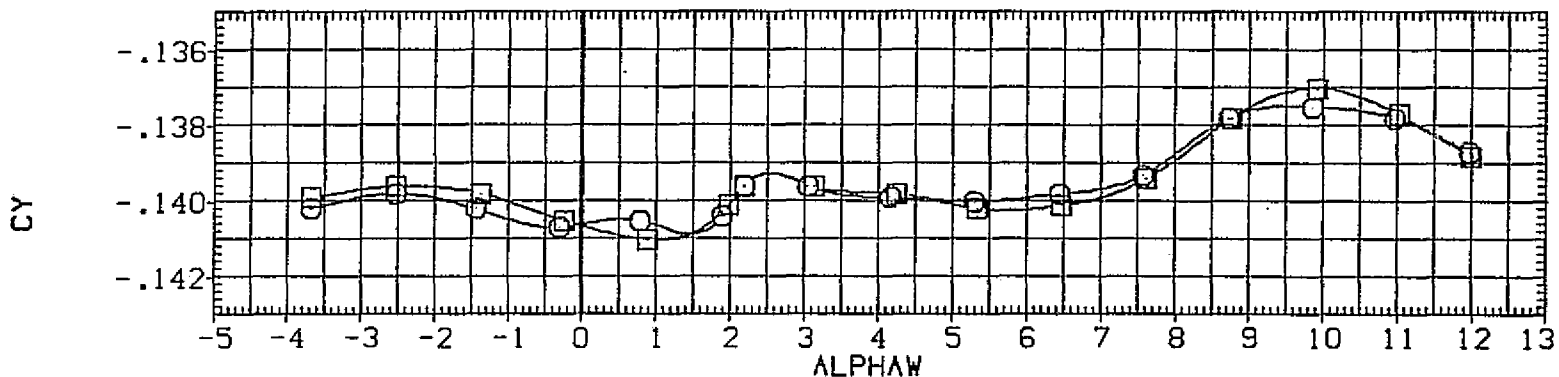
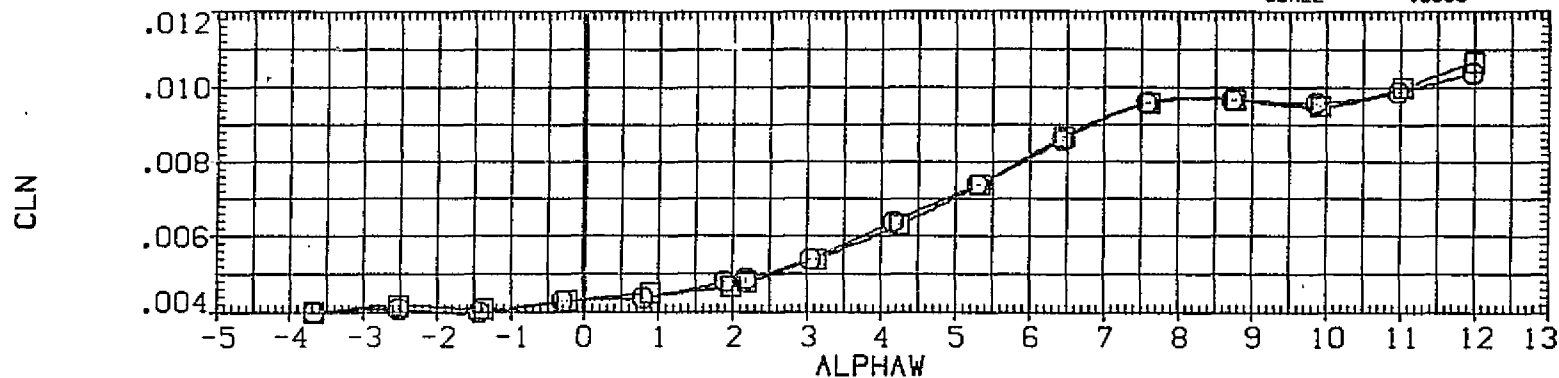


FIG. 25 EFFECT OF SEALING GAP BETWEEN FWD. BATHTUB FAIRING AND ORB., LAUNCH CFGN

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP036)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP039)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.2ORBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP045)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP050)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.1ORBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

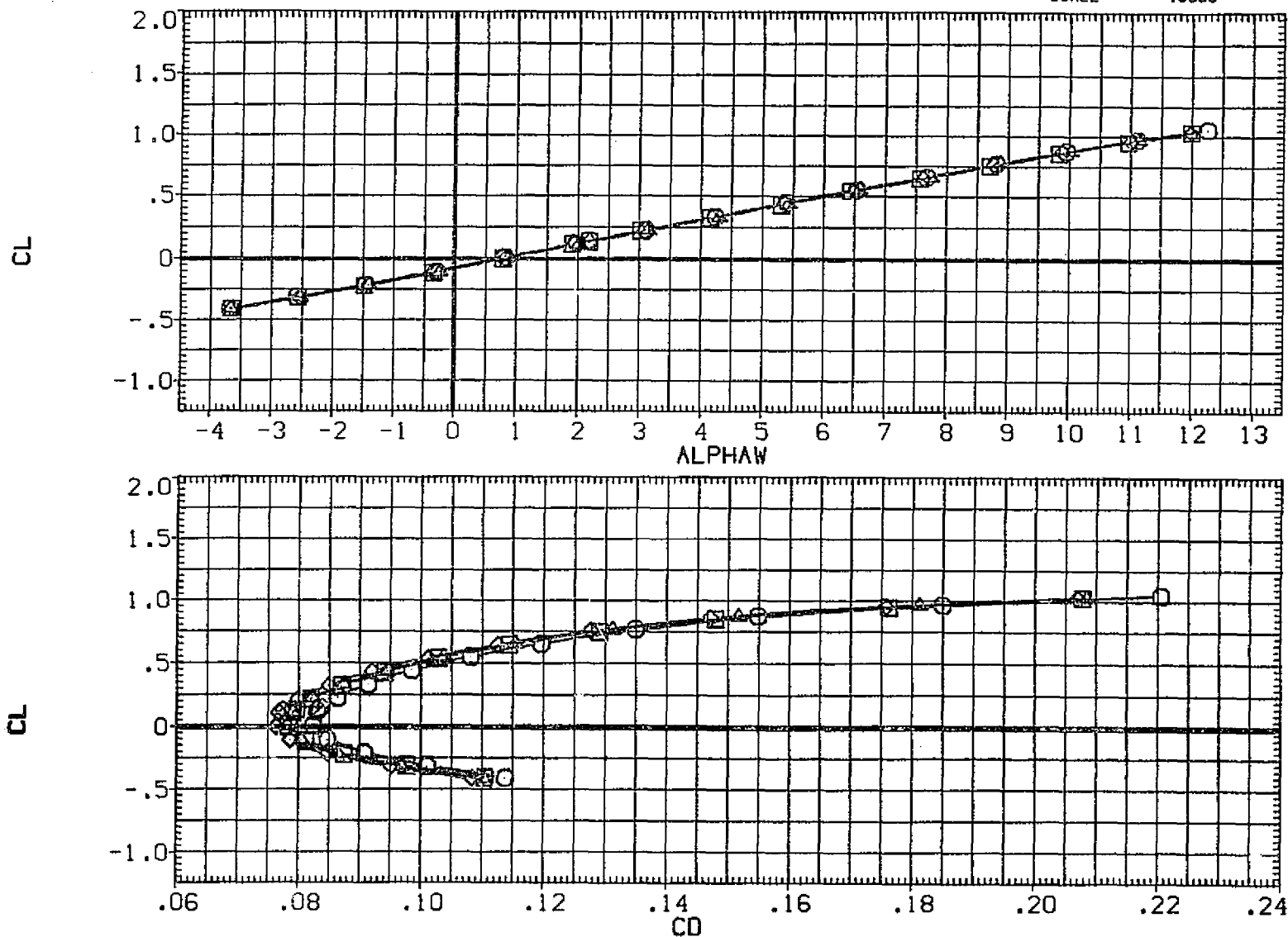


FIG. 26 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIG., BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP036)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 0RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP039)	◇ CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.20RBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGP045)	○ CA6 K2H15.6.1V9.1S1-12 AT108 /110 0RBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGP050)	△ CA6 K2H15.6.1V9.1S1-12 AT103.2/111.10RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

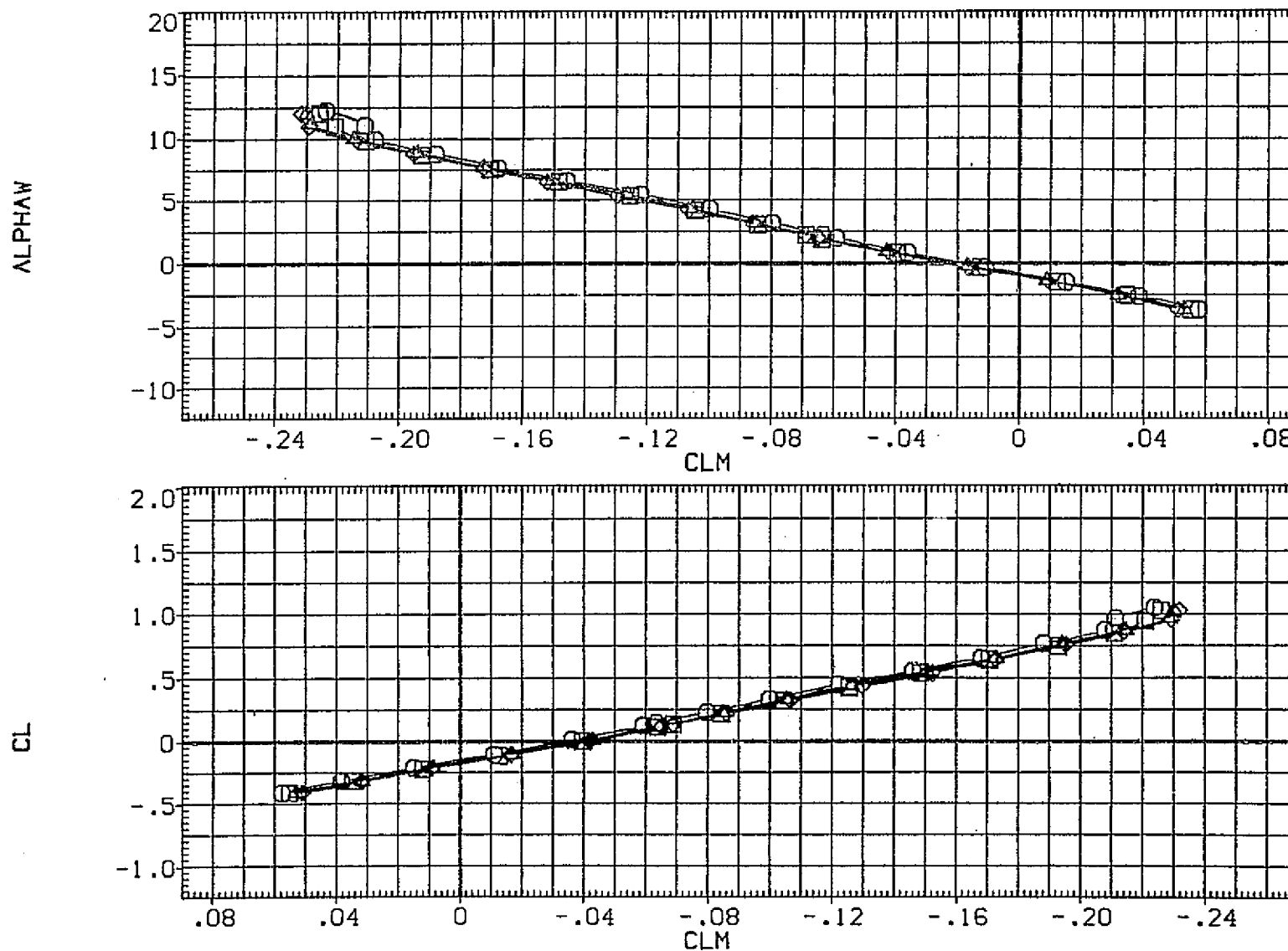


FIG. 26 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIG., BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGPO36)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO39)	CA6 K2H15.6.1V9.1S1-12 AT103.2/95-.2ORBF8N24/28	4.890	4.000	6.000	LREF 327.8000 IN.
(RGPO45)	CA6 K2H15.6.1V9.1S1-12 AT108 /110 ORBF8N24/28	4.890	4.000	6.000	BREF 2348.0000 IN.
(RGPO50)	CA6 K2H15.6.1V9.1S1-12 AT103.2/111.1ORBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

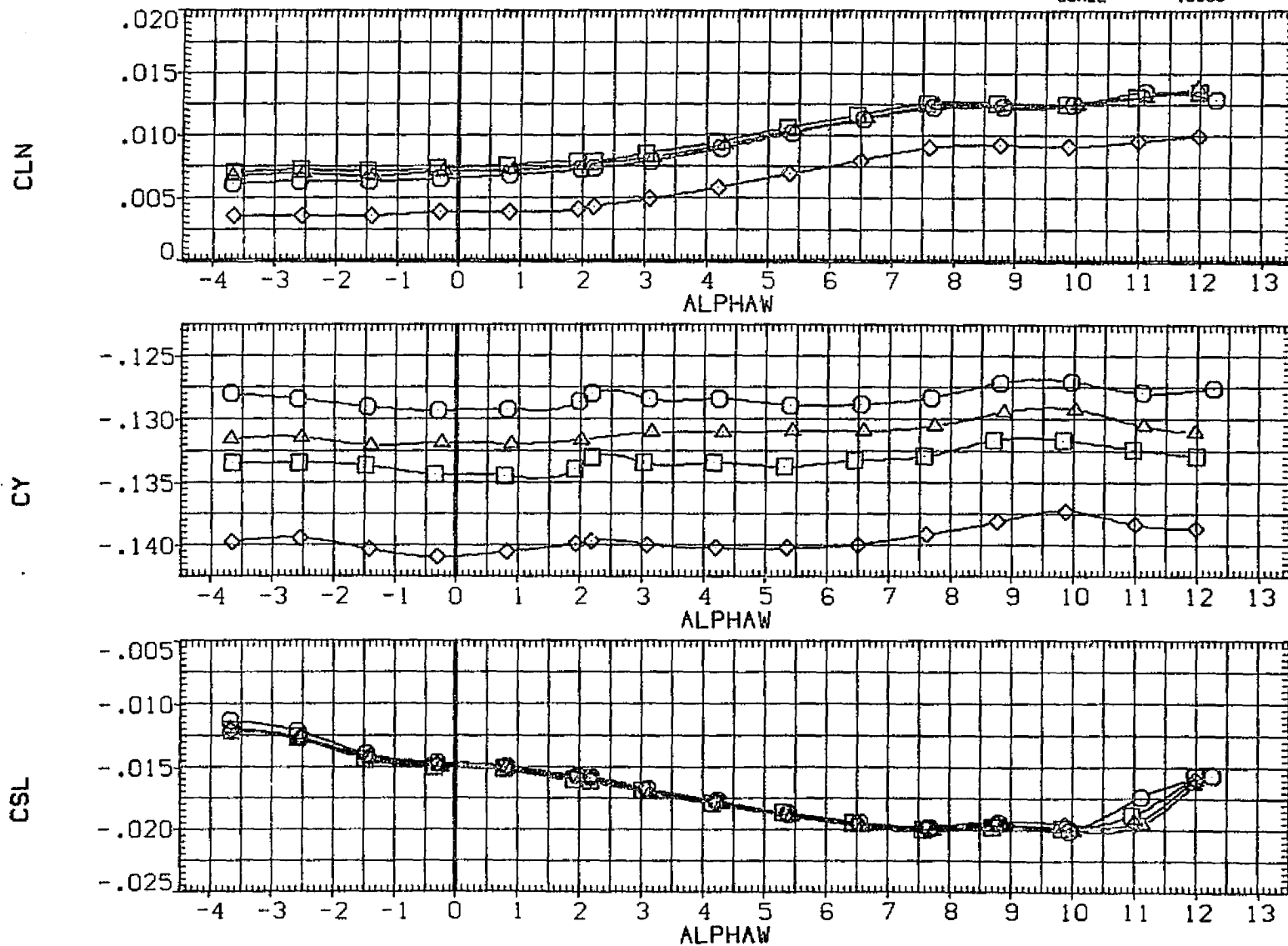


FIG. 26 EFFECT OF ORB. SUPPORT STRUT FAIRINGS, LAUNCH CONFIG., BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	10RB	REFERENCE INFORMATION
(RGP057)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP053)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF 2348.0000 IN.
(RGP054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP055)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

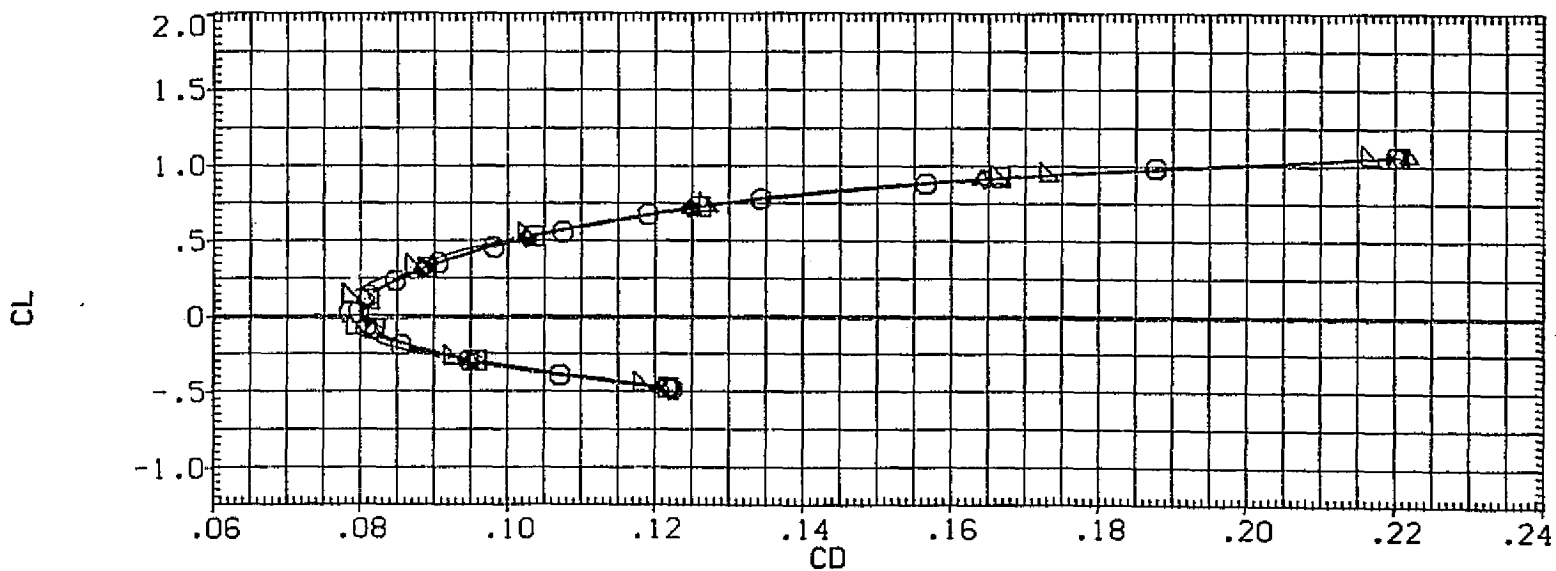
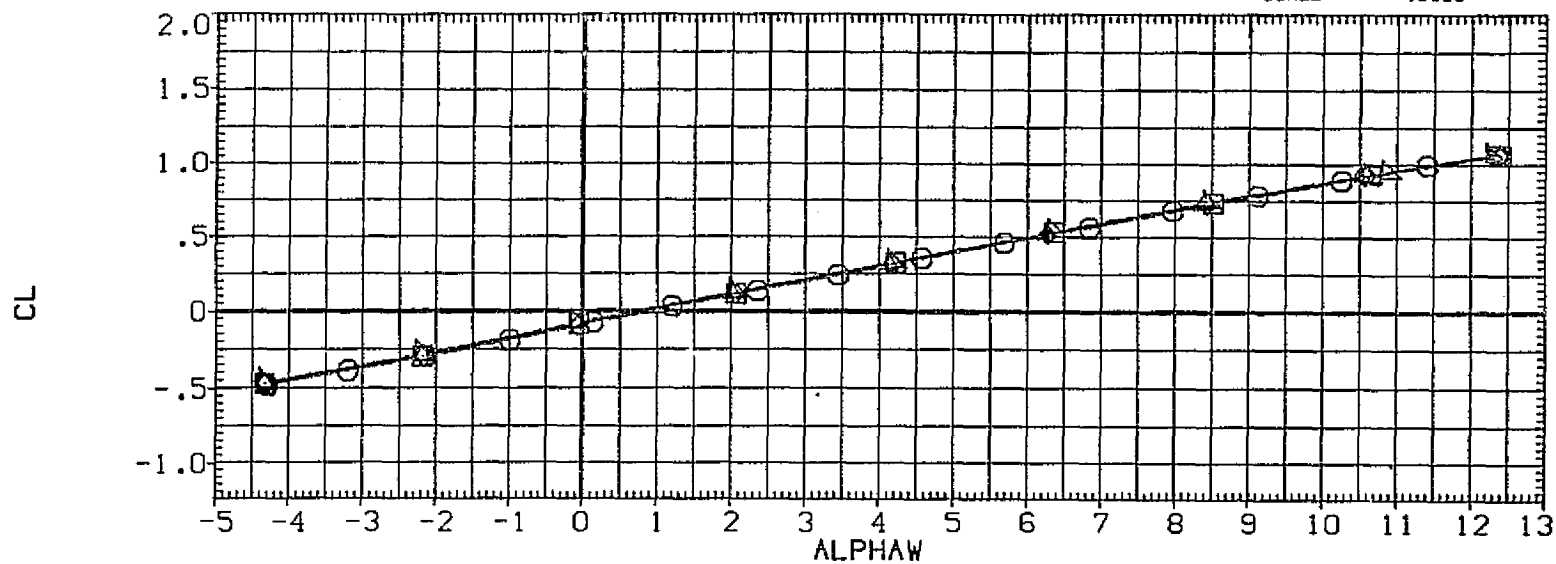


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP057)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP053)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF 2348.0000 IN.
(RGP054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XHRP 1339.9000 IN. XC
(RGP055)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YHRP .0000 IN. YC
					ZHRP 190.7700 IN. ZC
					SCALE .0300

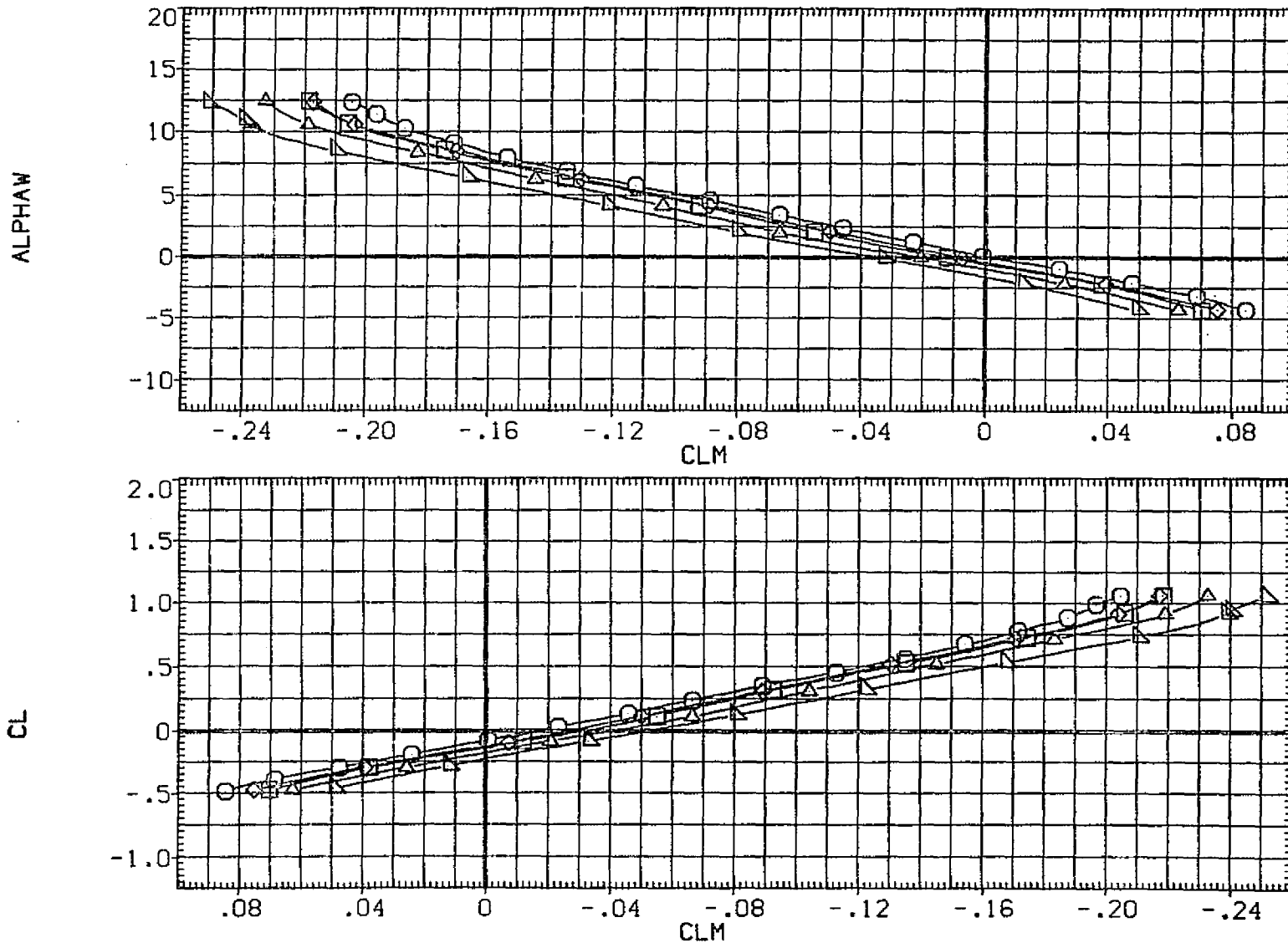


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO57)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO58)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGPO53)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF 2348.0000 IN.
(RGPO54)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
(RGPO55)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

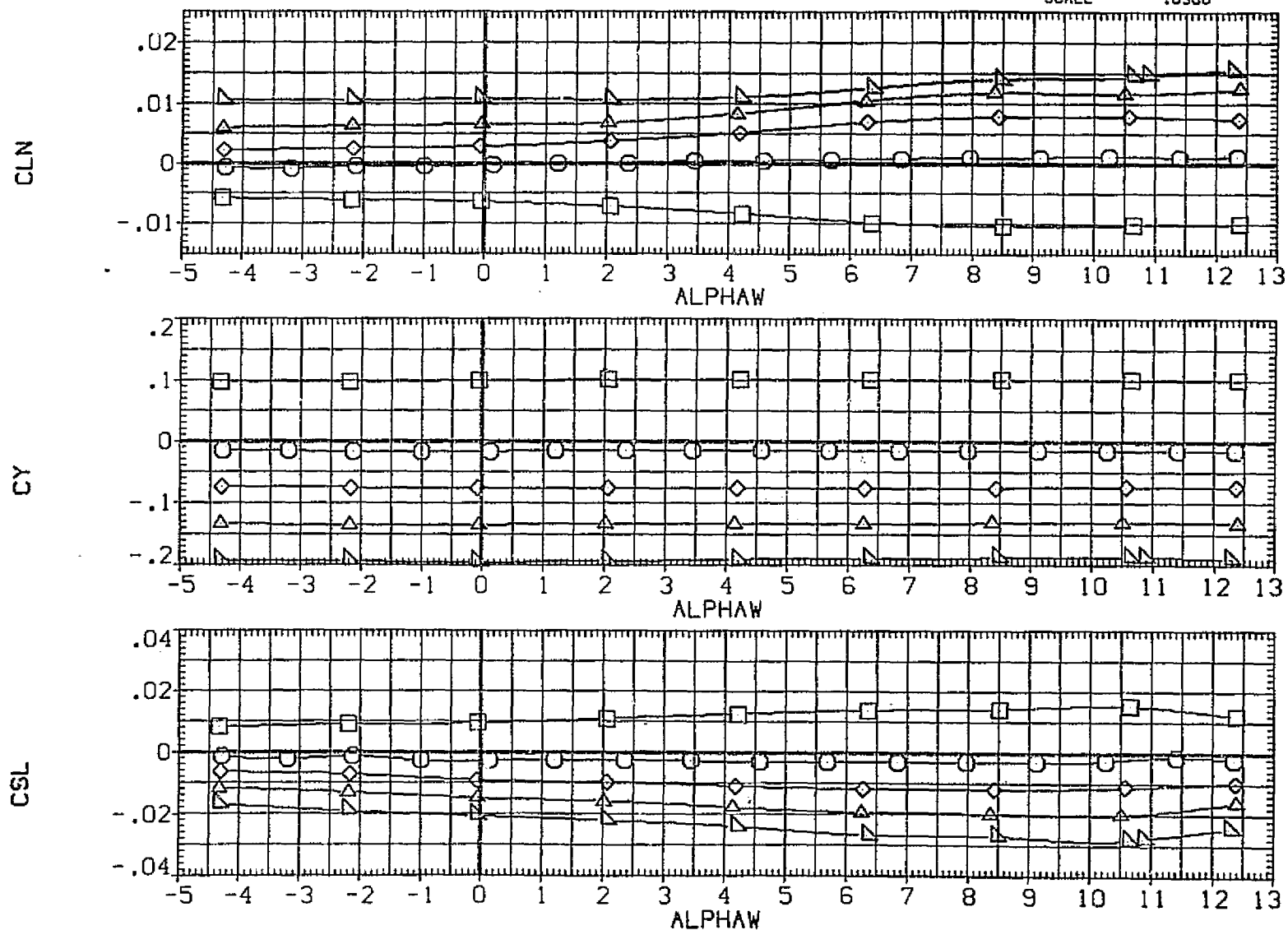


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGPO57)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.990	-4.000	6.000	SREF	5500.0000	50.FT.
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	LREF	327.8000	IN.
(RGPO53)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF	2348.0000	IN.
(RGPO54)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XMRP	1339.9000	IN. XC
(RGPO55)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

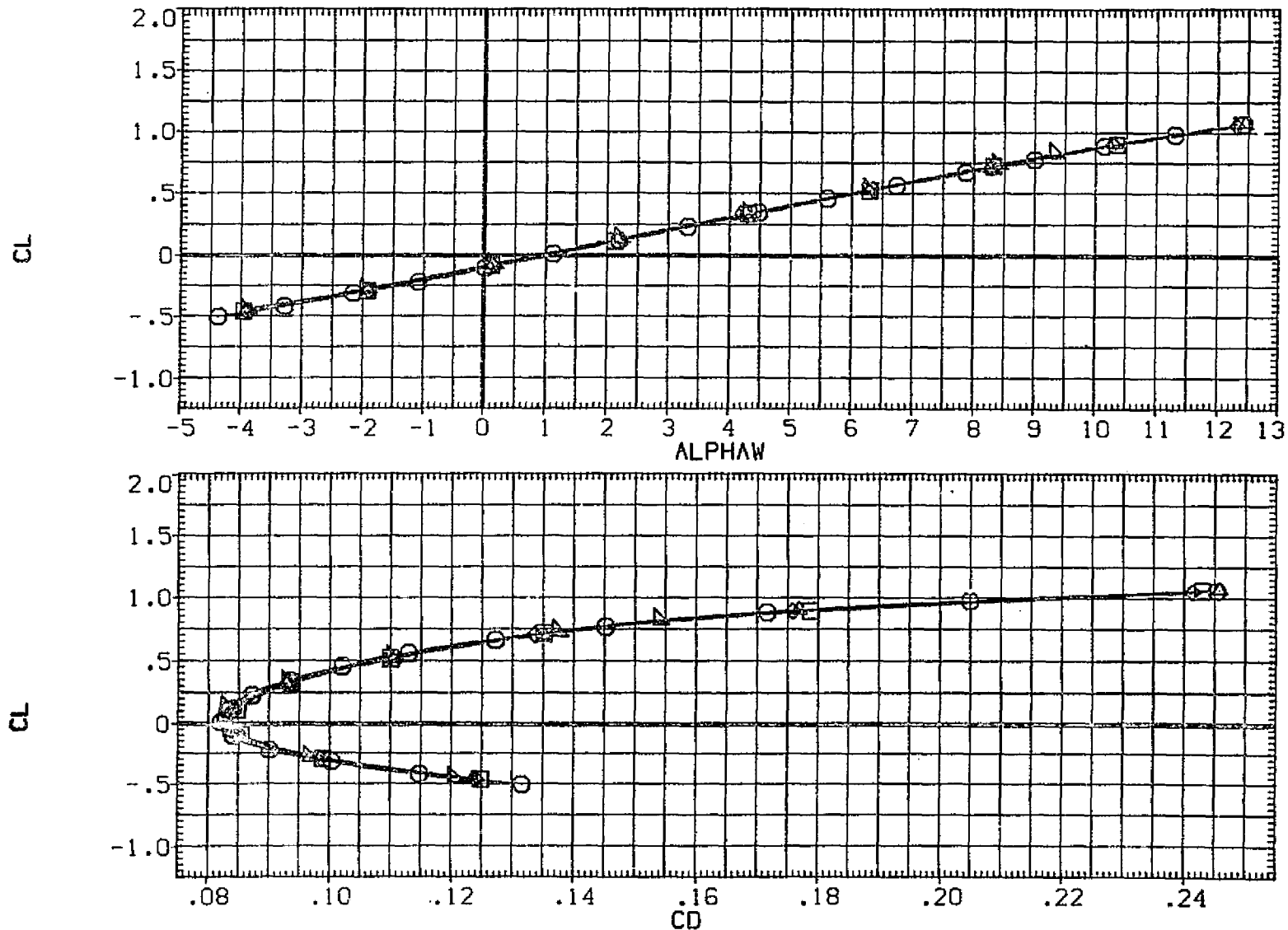


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RG057)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RG059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RG053)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF 2348.0000 IN.
(RG054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
(RG055)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

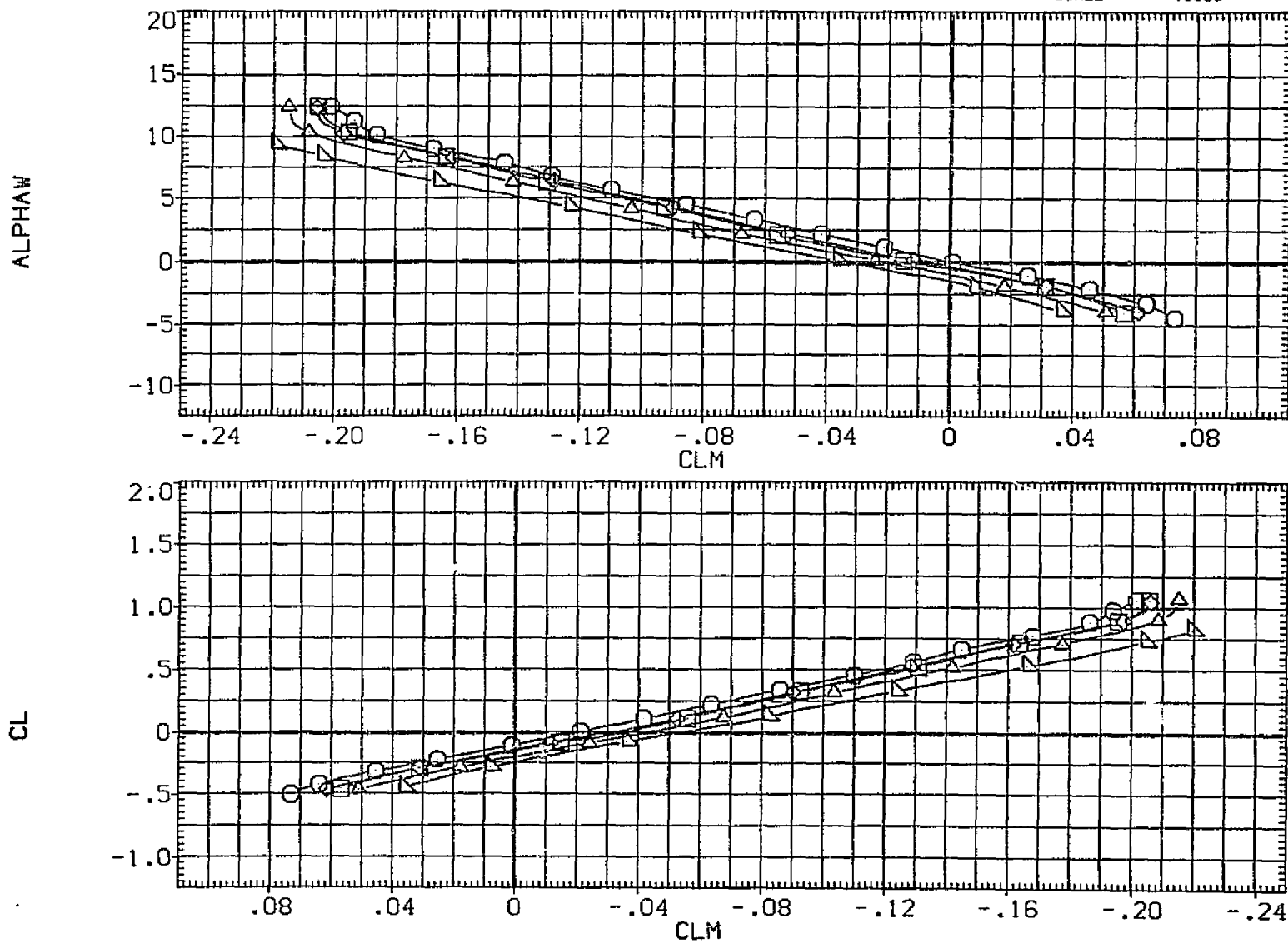


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP057)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP053)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	2.000	6.000	BREF 2348.0000 IN.
(RGP054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP055)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

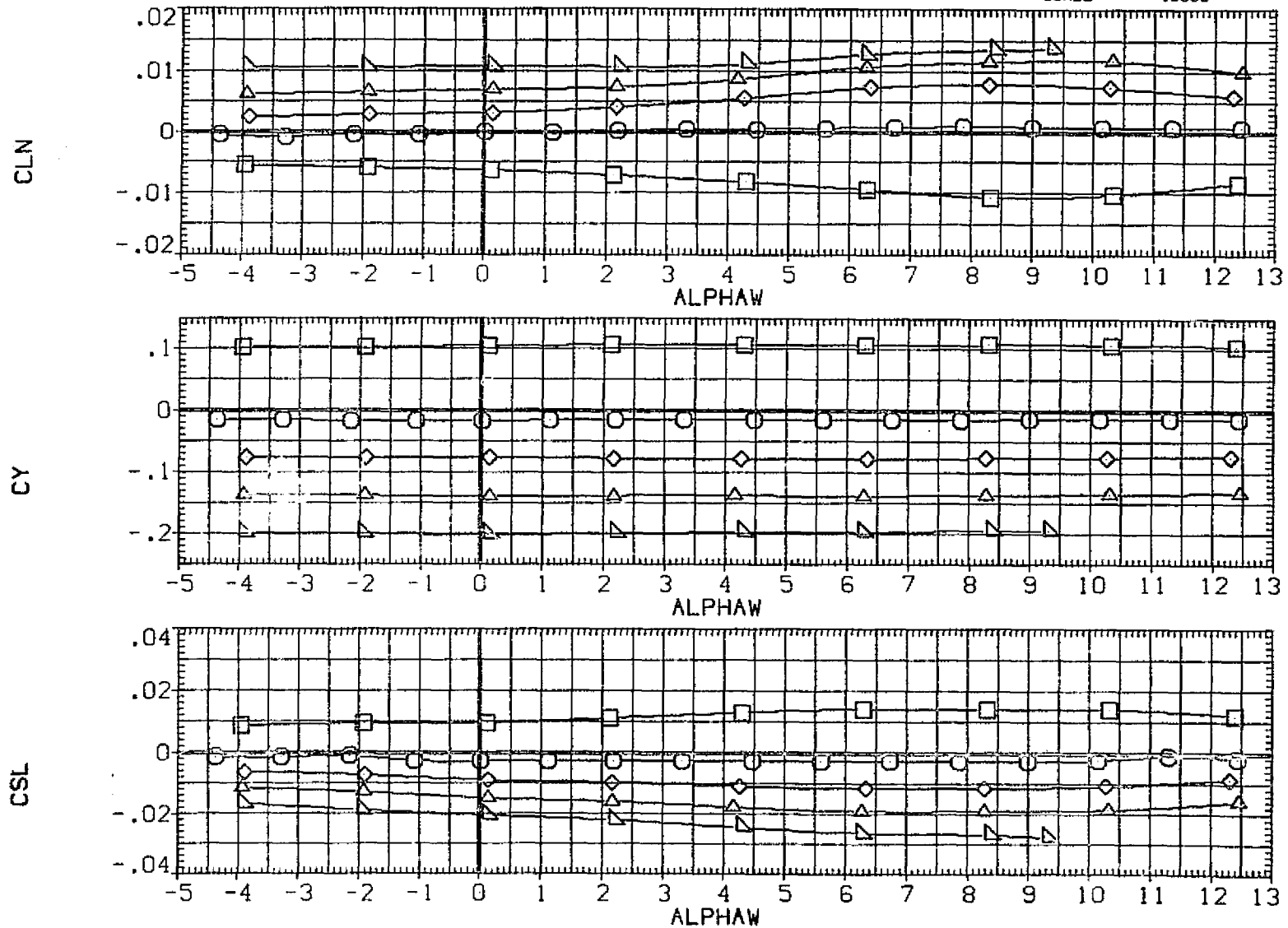


FIG. 27 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG.

(B)MACH = .70

CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30BF8N24/28 (RGP059)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	.299	STAB	4.890	RUD-U	.000	SREF	5500.0000	50.FT.
□	.500	RUD-L	.000	ELV-18	.000	LREF	327.8000	IN.
◇	.600	ELV-08	.000	BETA	.000	BREF	2348.0000	IN.
△	.700	SPDILR	2.000	ELEVON	5.000	XMRP	1339.9000	IN. XC
		BDFLAP	.000	10RB	6.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

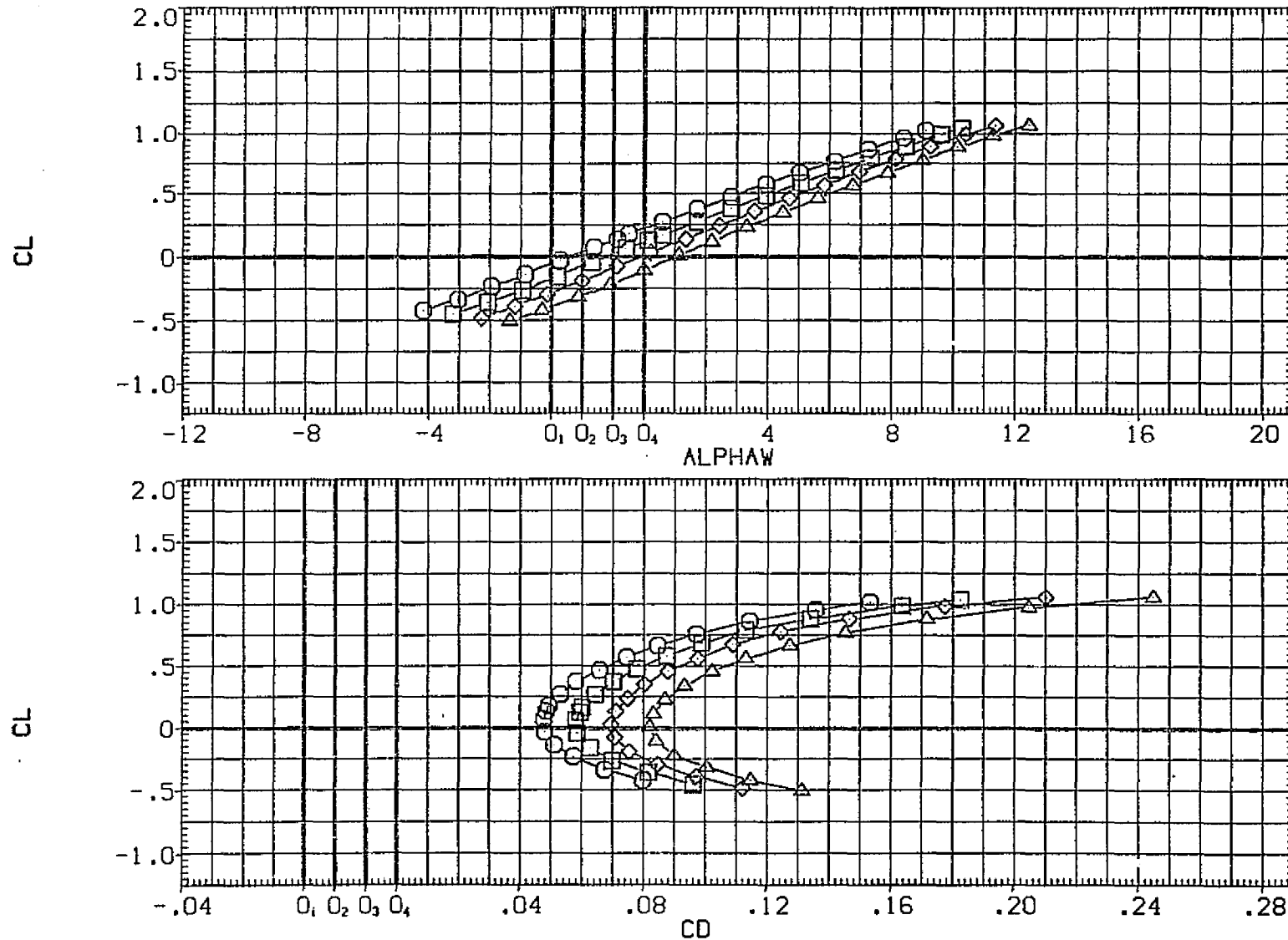


FIG. 28 MACH NUMBER EFFECTS, LAUNCH CONFIGURATION

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	.299	STAB	4.890	RUD-U	.000	SREF	5500.0000	SQ.FT.
□	.500	RUD-L	.000	ELV-18	.000	LREF	327.8000	IN.
◇	.600	ELV-08	.000	BETA	.000	BREF	2348.0000	IN.
△	.700	SPOILER	2.000	ELEVON	5.000	XMRP	1339.9000	IN. XC
		BDFLAP	.000	IORB	6.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

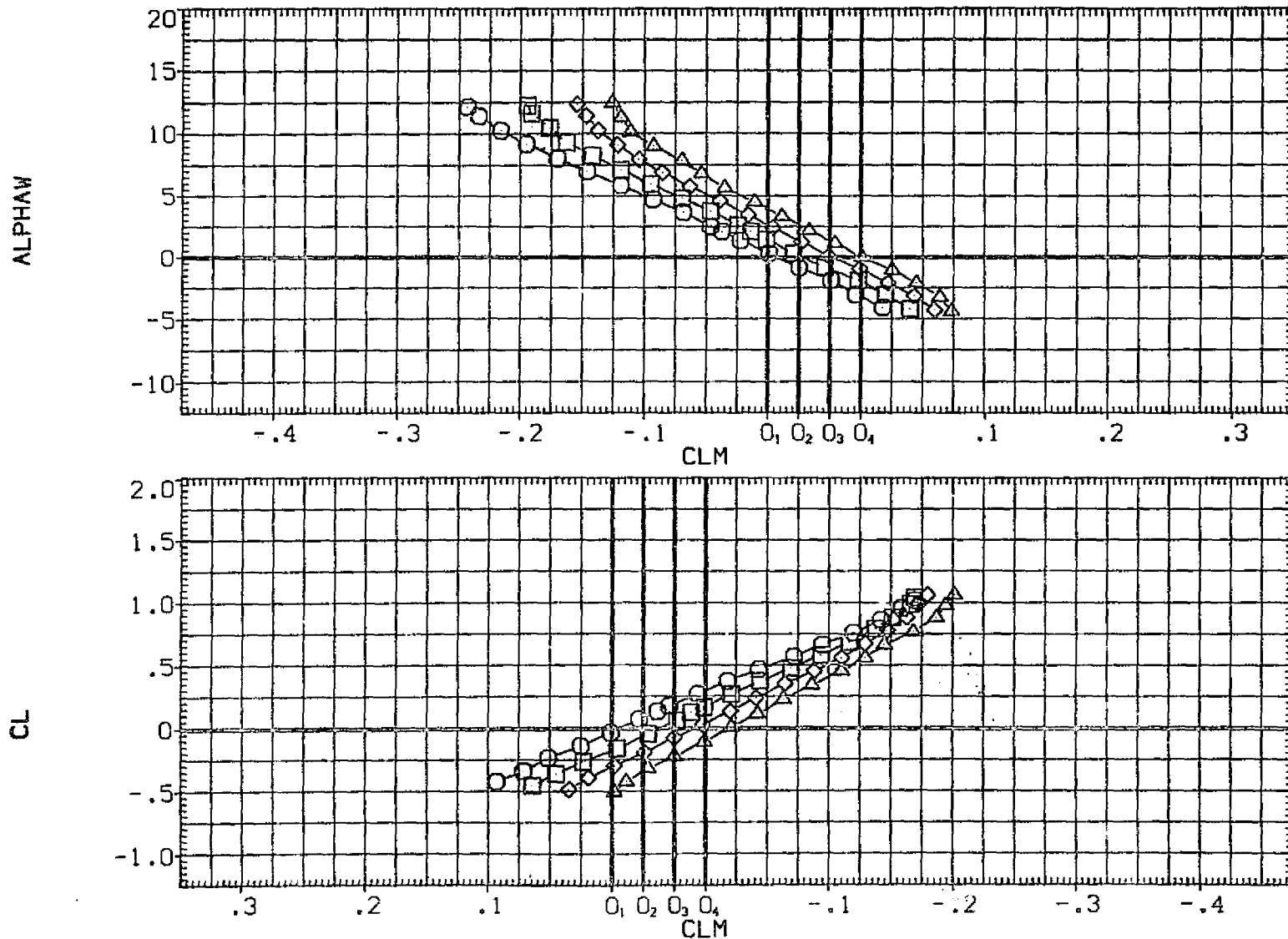


FIG. 28 MACH NUMBER EFFECTS, LAUNCH CONFIGURATION

CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28 (RGP059)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.299	STAB 4.890 RUD-U .000	SREF 5500.0000 SG.FT.
□	.500	RUD-L .000 ELV-IB .000	LREF 327.8000 IN.
◇	.600	ELV-OB .000 BETA .000	BREF 2348.0000 IN.
△	.700	SPOILR 2.000 ELEVON 5.000	XHRP 1339.9000 IN. XC
		BDFLAP .000 TORB 6.000	YHRP .0000 IN. YC
			ZHRP 190.7700 IN. ZC
			SCALE .0300

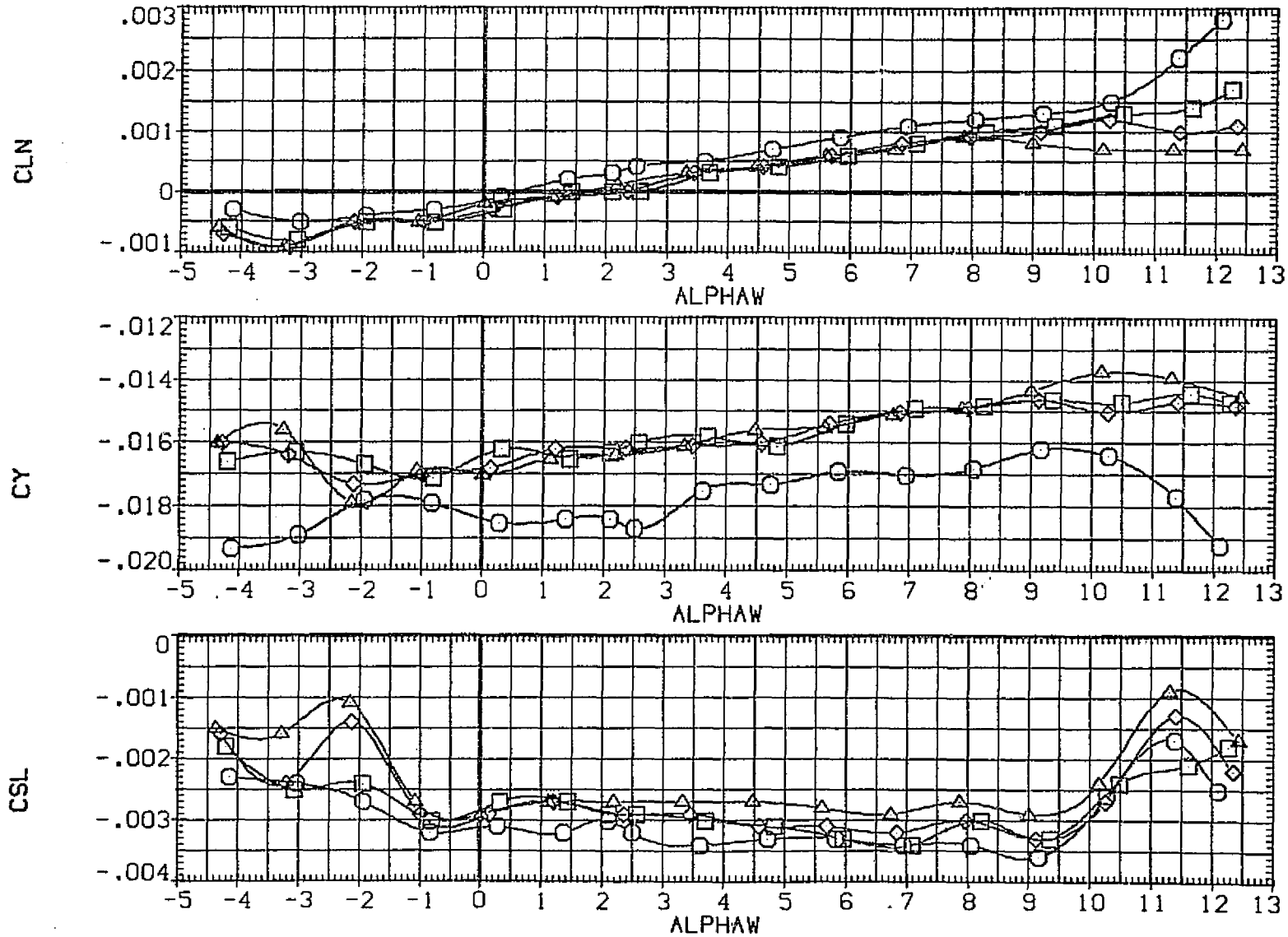


FIG. 28 MACH NUMBER EFFECTS, LAUNCH CONFIGURATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGPO59)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGPO61)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGPO62)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF 2348.0000 IN.
(RGPO63)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XMRP 1339.9000 IN. XC
(RGPO64)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

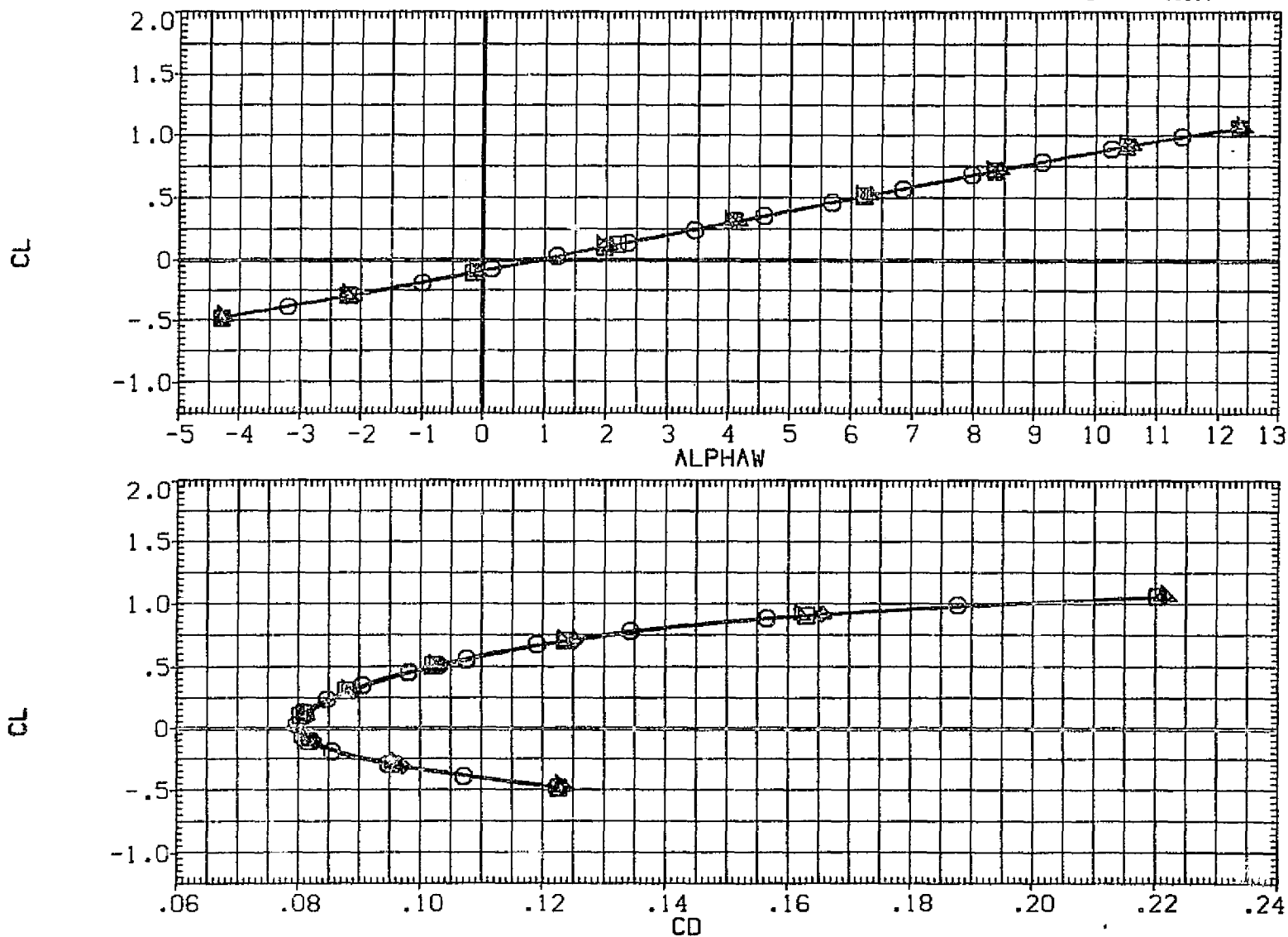


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.

(A)MACH = .60

PAGE 154

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGPO61)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGPO62)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF 2348.0000 IN.
(RGPO63)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XMRP 1339.9000 IN. XC
(RGPO64)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

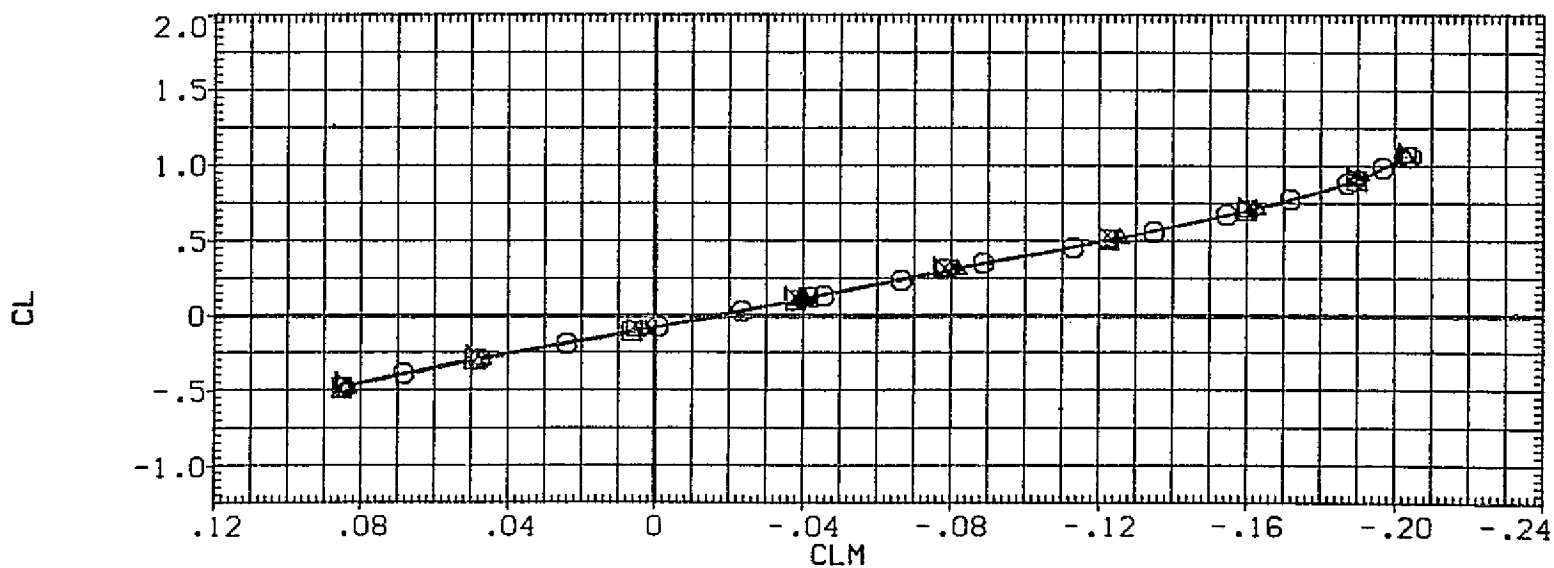
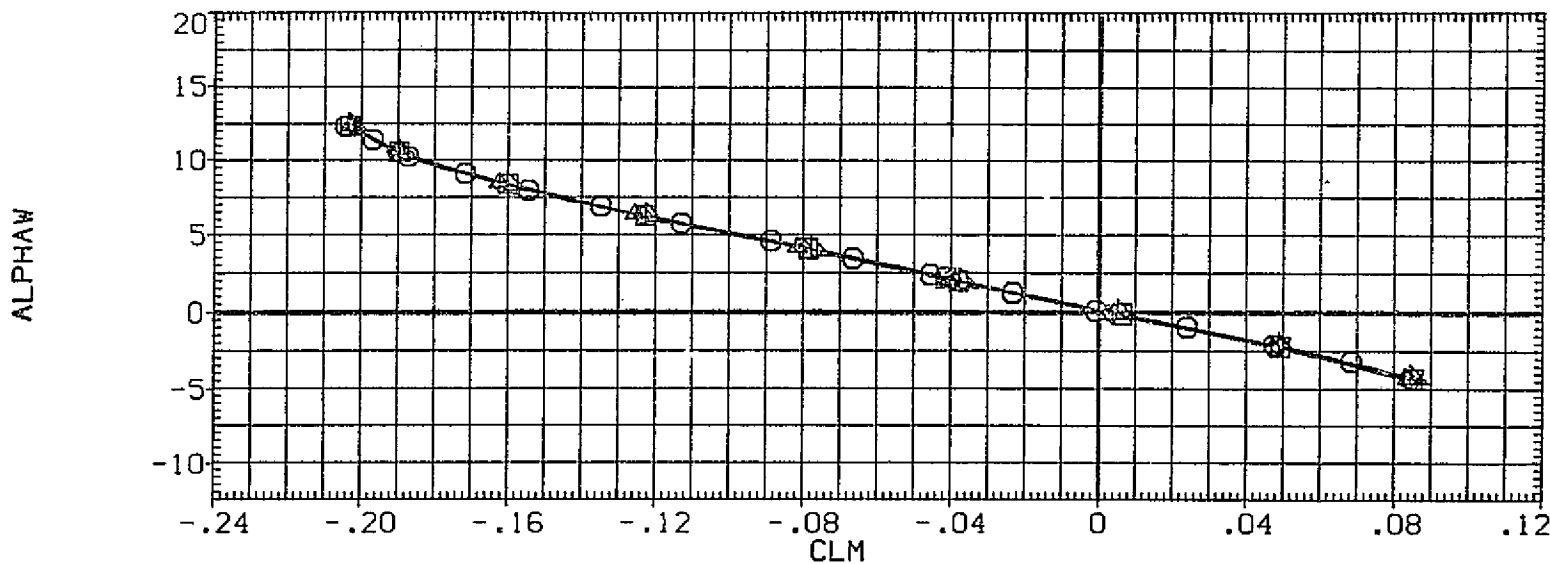


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-GB	REFERENCE INFORMATION	
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
(RGPO61)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000 IN.
(RGPO62)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000 IN.
(RGPO63)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XHRP	1339.9000 IN. XC
(RGPO64)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YHRP	.0000 IN. YC
						ZHRP	190.7700 IN. ZC
						SCALE	.0300

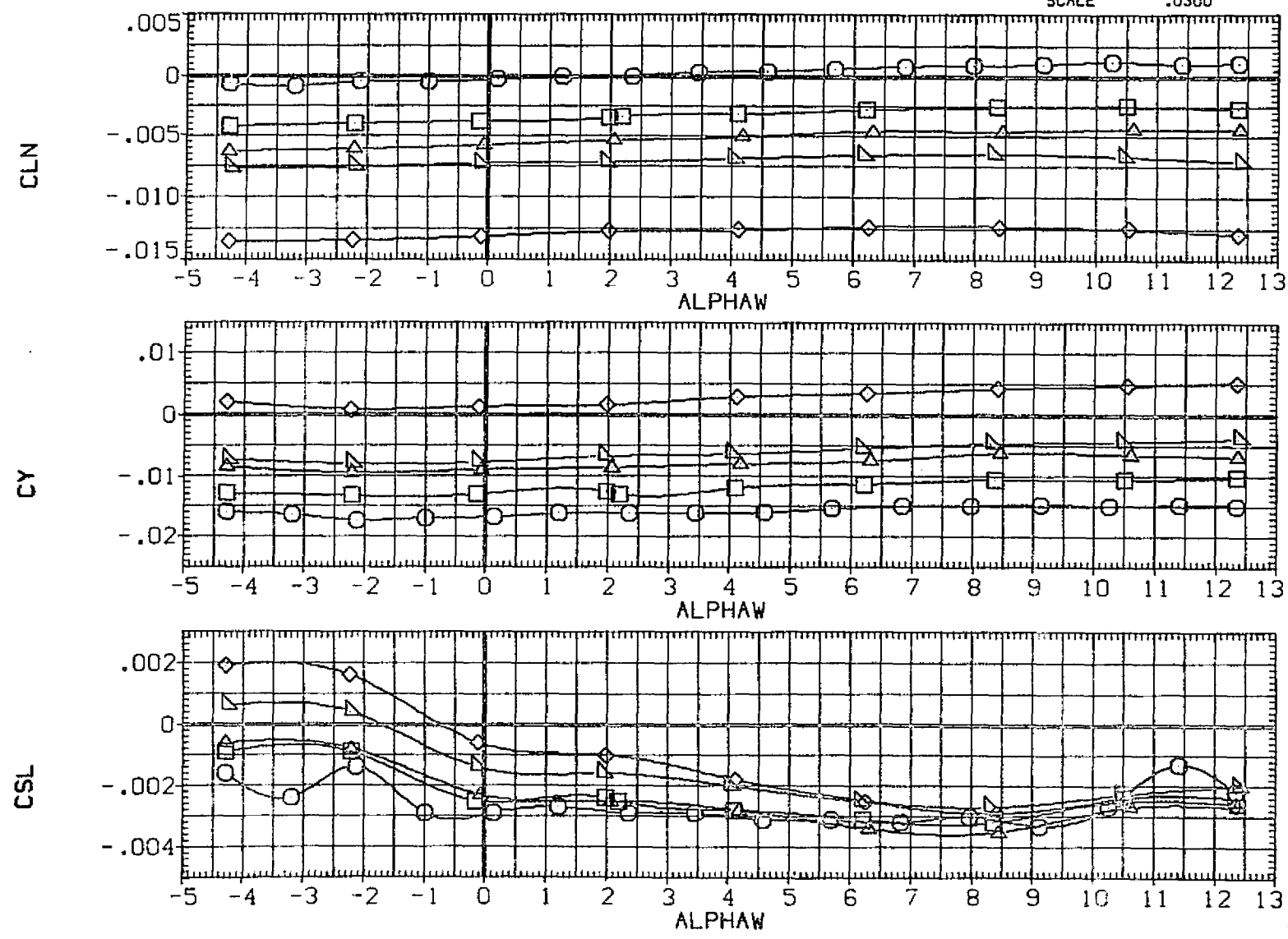


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION		
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000	50.FT.
(RGPO61)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGPO62)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGPO63)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGPO64)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

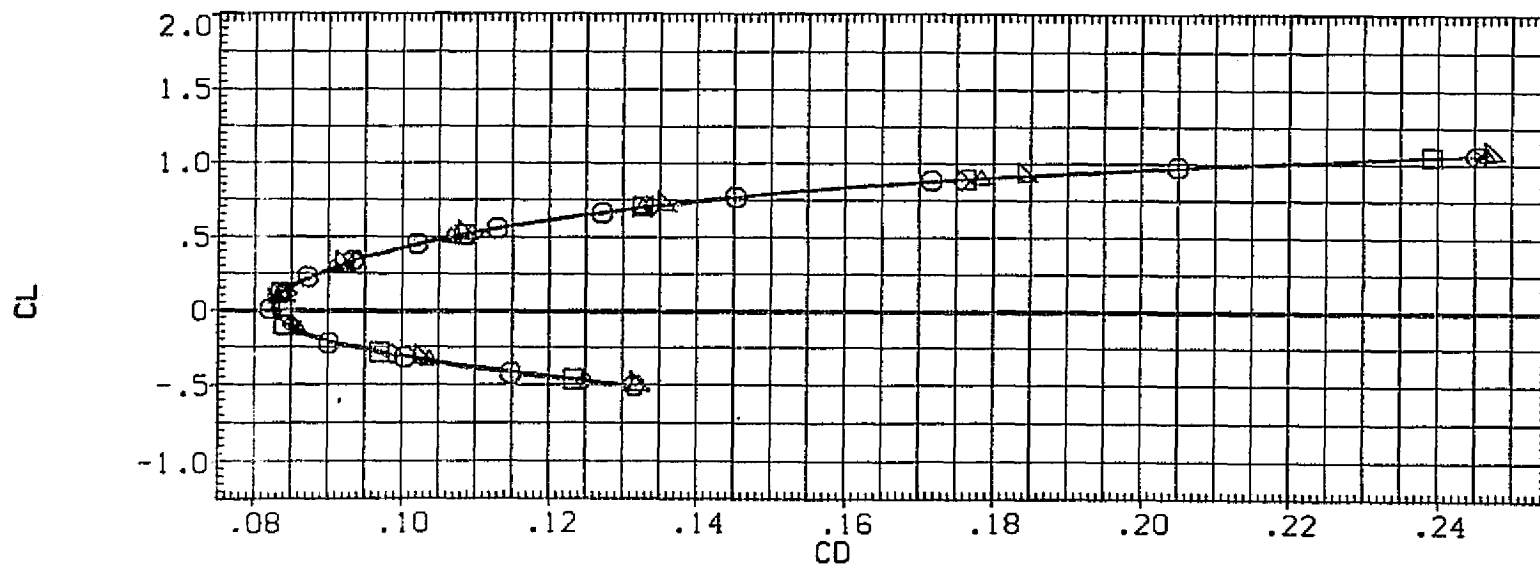
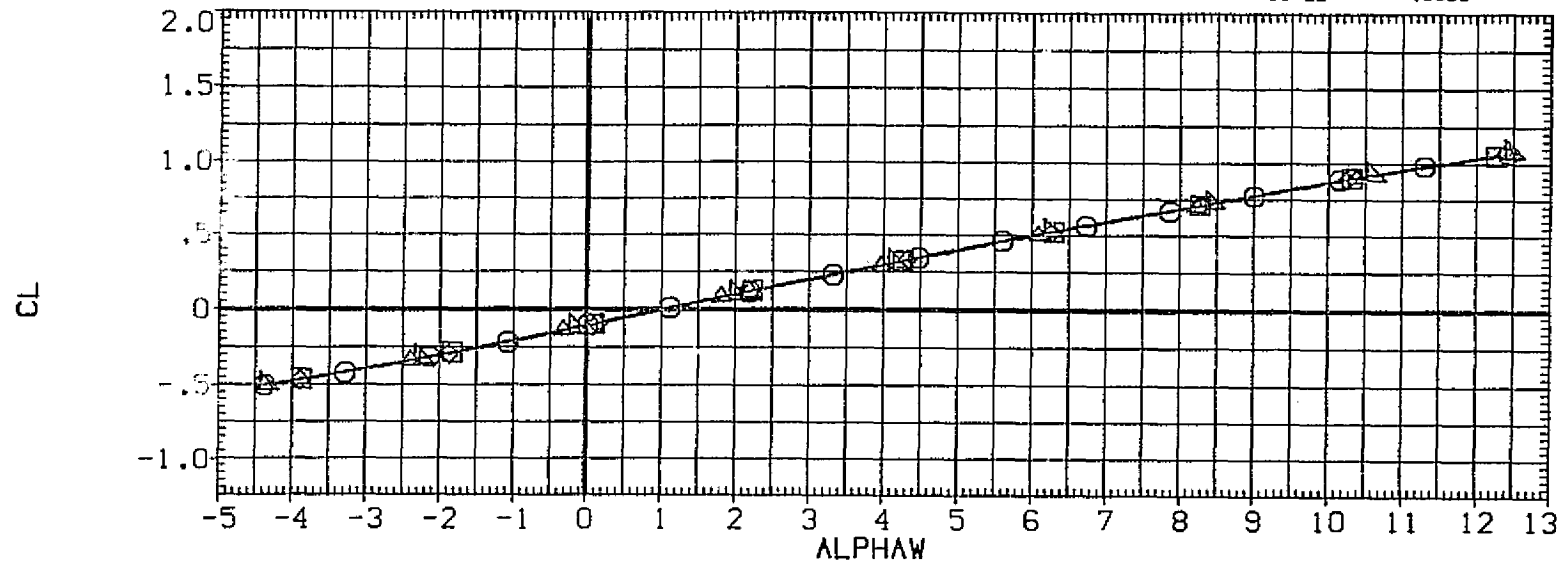


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000	SO.FT.
(RGPO61)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGPO62)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGPO63)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGPO64)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

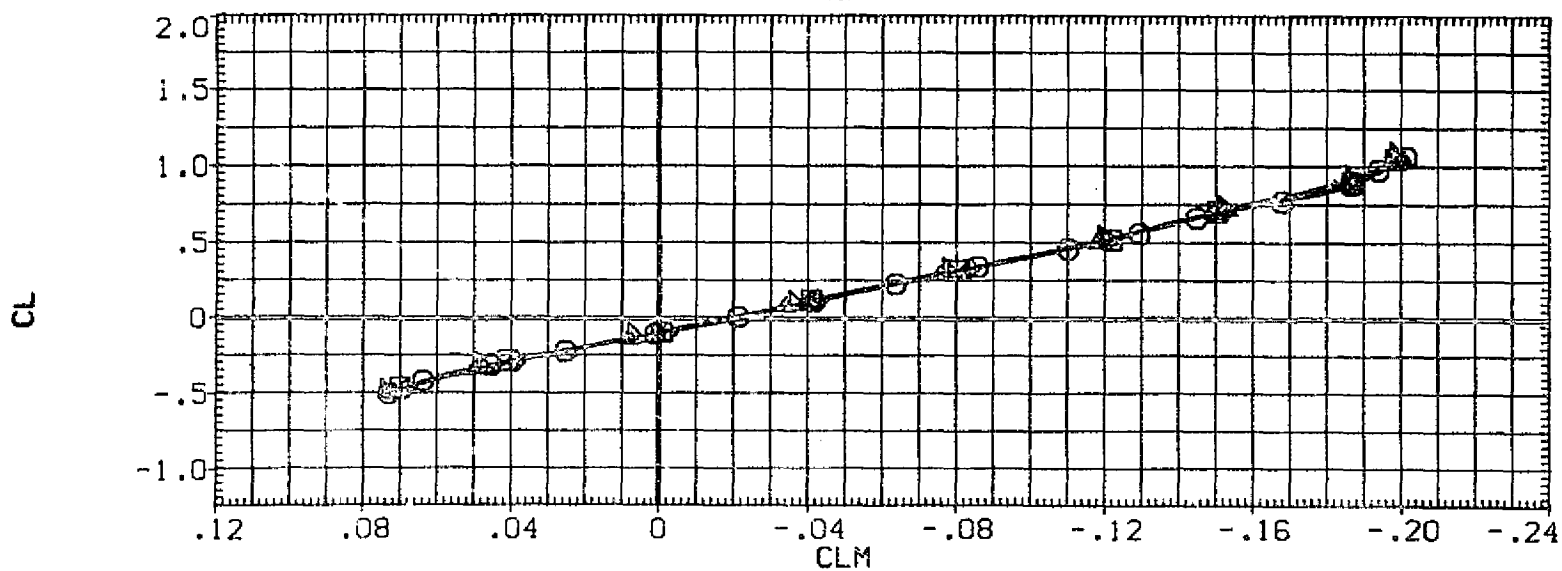
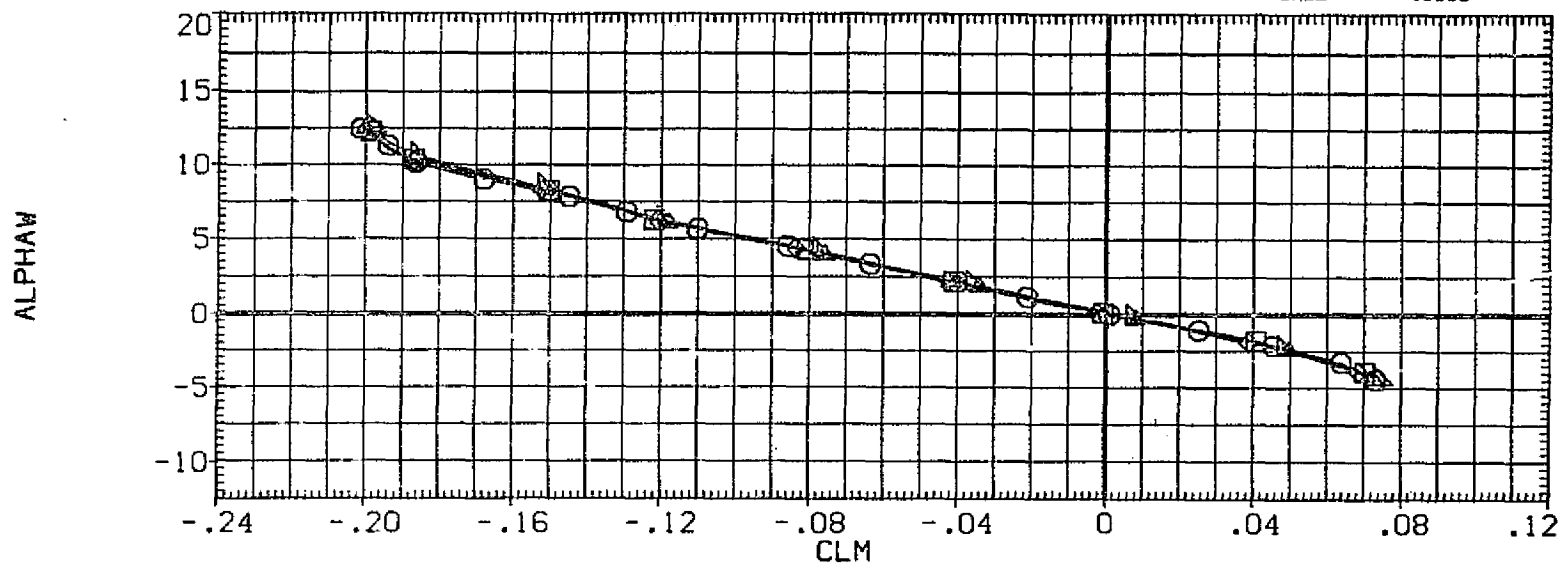


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-GB	REFERENCE INFORMATION		
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000	SQ.FT.
(RGPO61)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGPO62)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGPO63)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGPO64)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

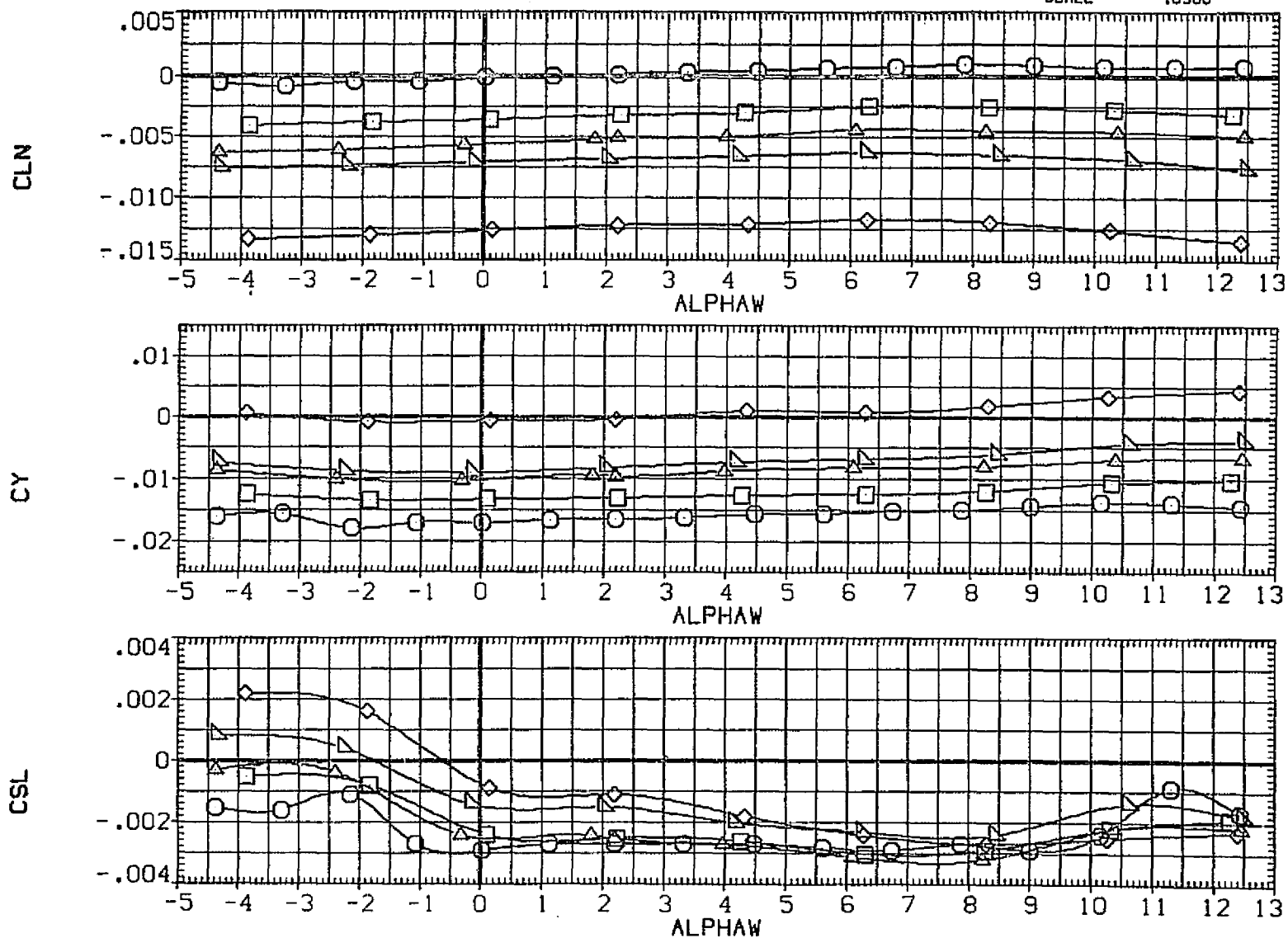


FIG. 29 RUDDER EFFECTIVENESS, LAUNCH CONFIG.

(B) IACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IGRB	ELV-10	ELV-00	REFERENCE INFORMATION
(RGP066)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.790	6.000	-10.683	-9.934	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	.000	.000	LREF 327.8000 IN.
(RGP065)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.840	6.000	9.484	10.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

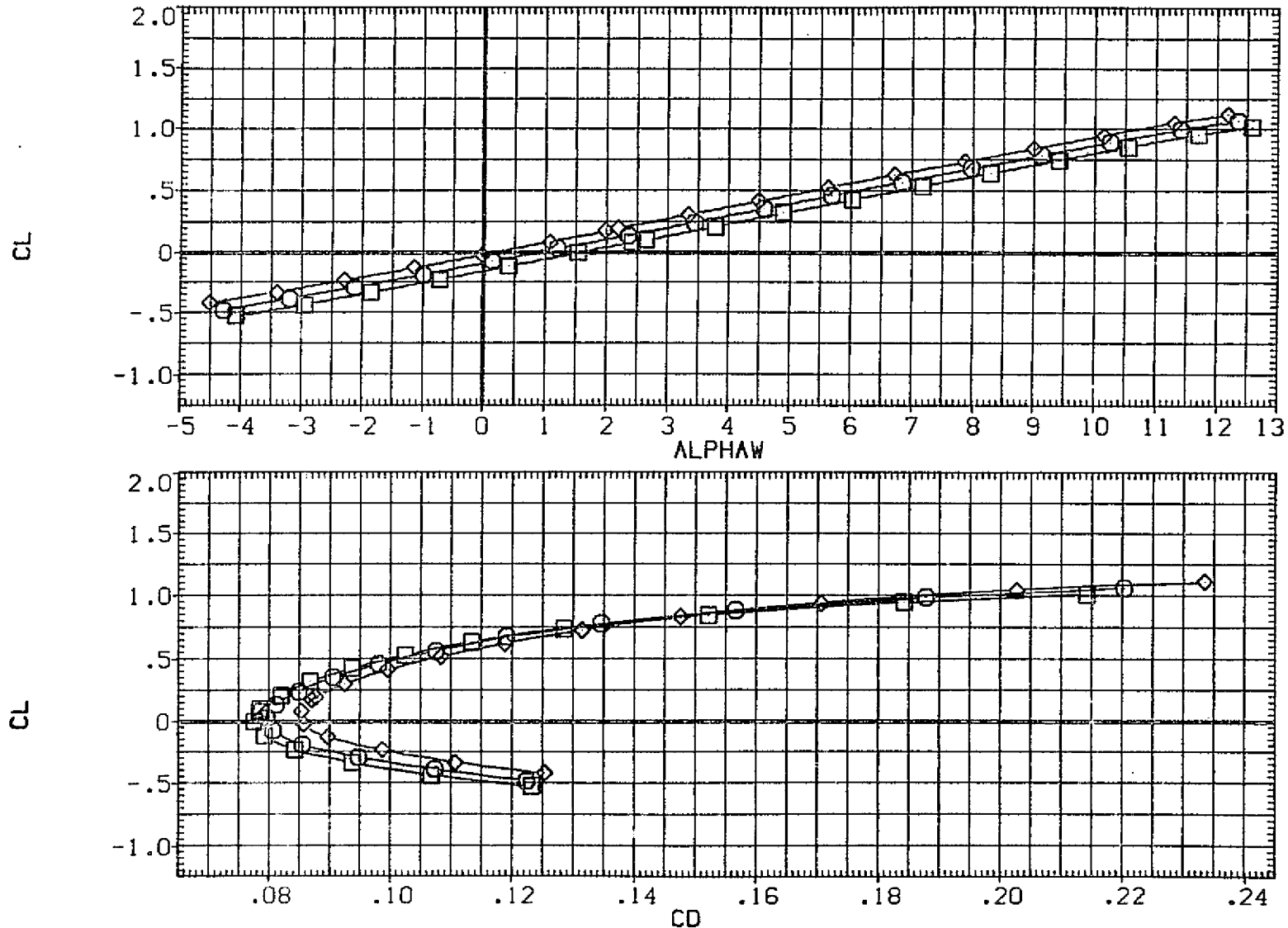


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION		
(RGP066)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	4.790	6.000	-10.683	-9.934	SREF	5500.0000	50.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	4.890	6.000	.000	.000	LREF	327.8000	IN.
(RGP065)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	4.840	6.000	9.484	10.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

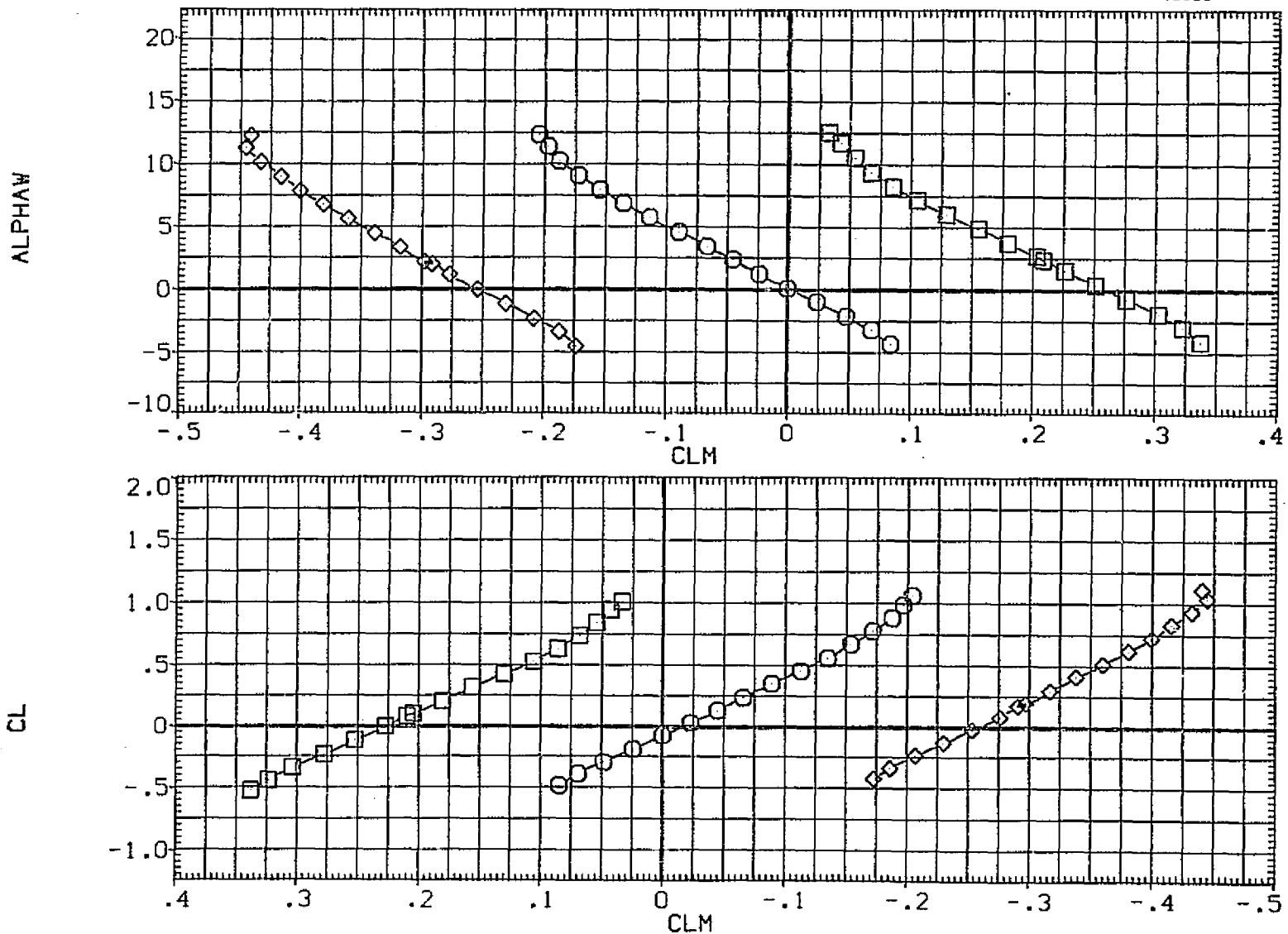


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IGRB	ELV-1B	ELV-CB	REFERENCE INFORMATION		
(RGP066)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	4.790	6.000	-10.683	-9.934	SREF	5500.0000	50.FT.
(RGP059)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	.000	.000	LREF	327.8000	IN.
(RGP065)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	4.840	6.000	9.484	10.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

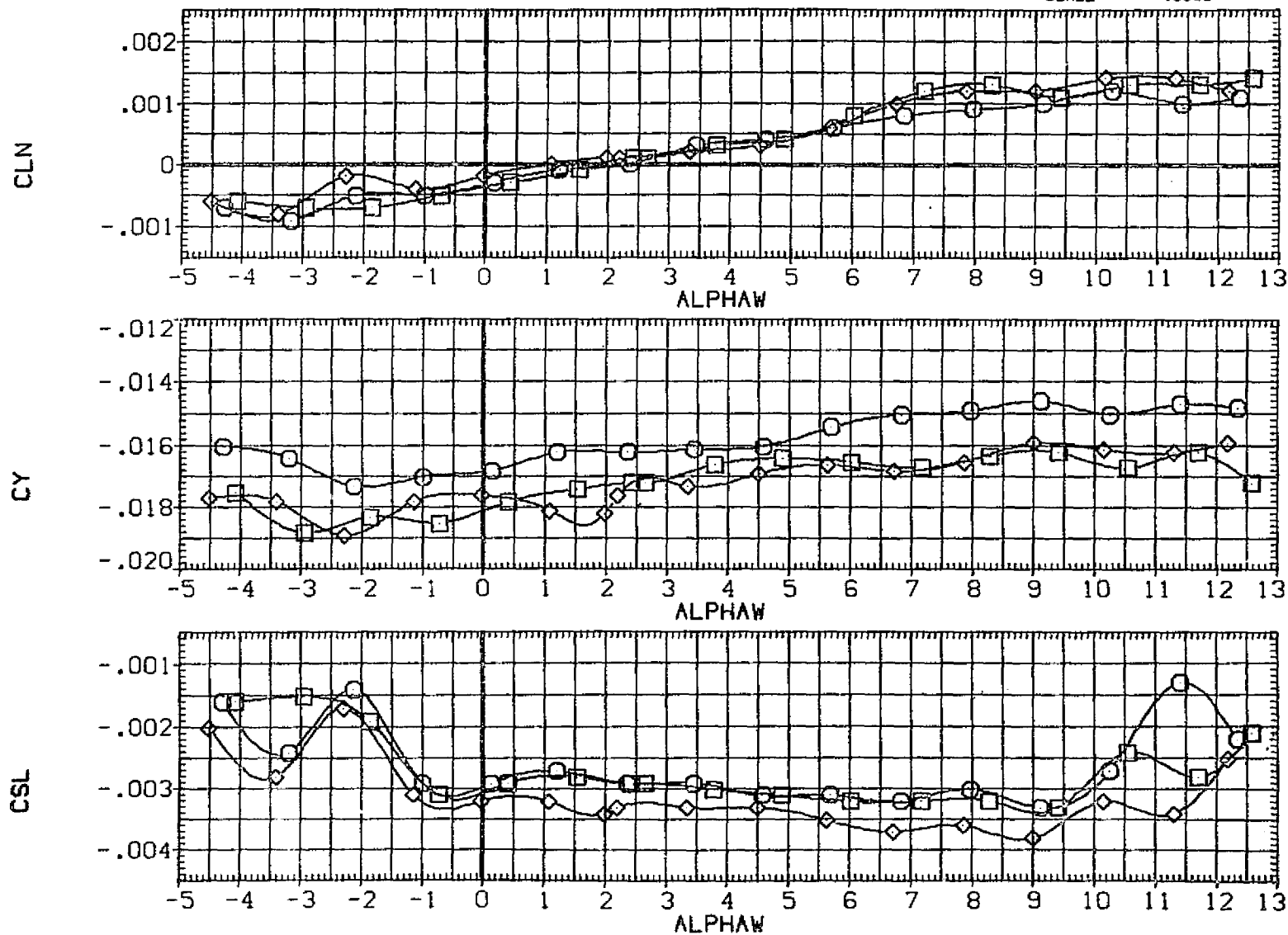


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	10RB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP066)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.790	6.000	-10.683	-9.934	SREF	5500.0000	SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	.000	.000	LREF	327.8000	IN.
(RGP065)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.840	6.000	9.484	10.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

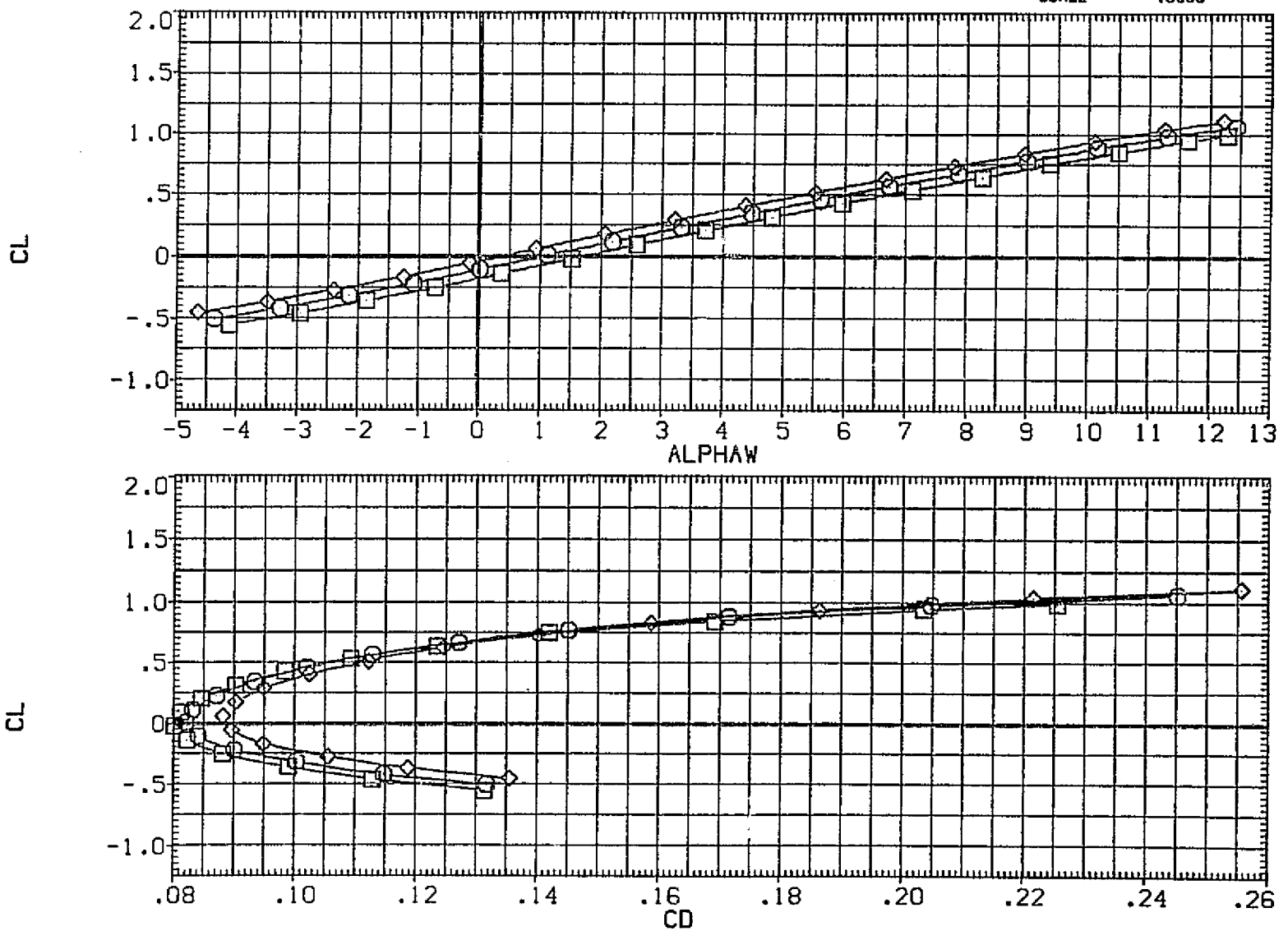


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IGRB	ELV-IB	ELV-OB	REFERENCE INFORMATION	
(RG066)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.3DRBF8N24/28	4.790	6.000	-10.683	-9.934	SREF	5500.0000 SO.FT.
(RG059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.3DRBF8N24/28	4.890	6.000	.000	.000	LREF	327.8000 IN.
(RG065)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.3DRBF8N24/28	4.840	6.000	9.484	10.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

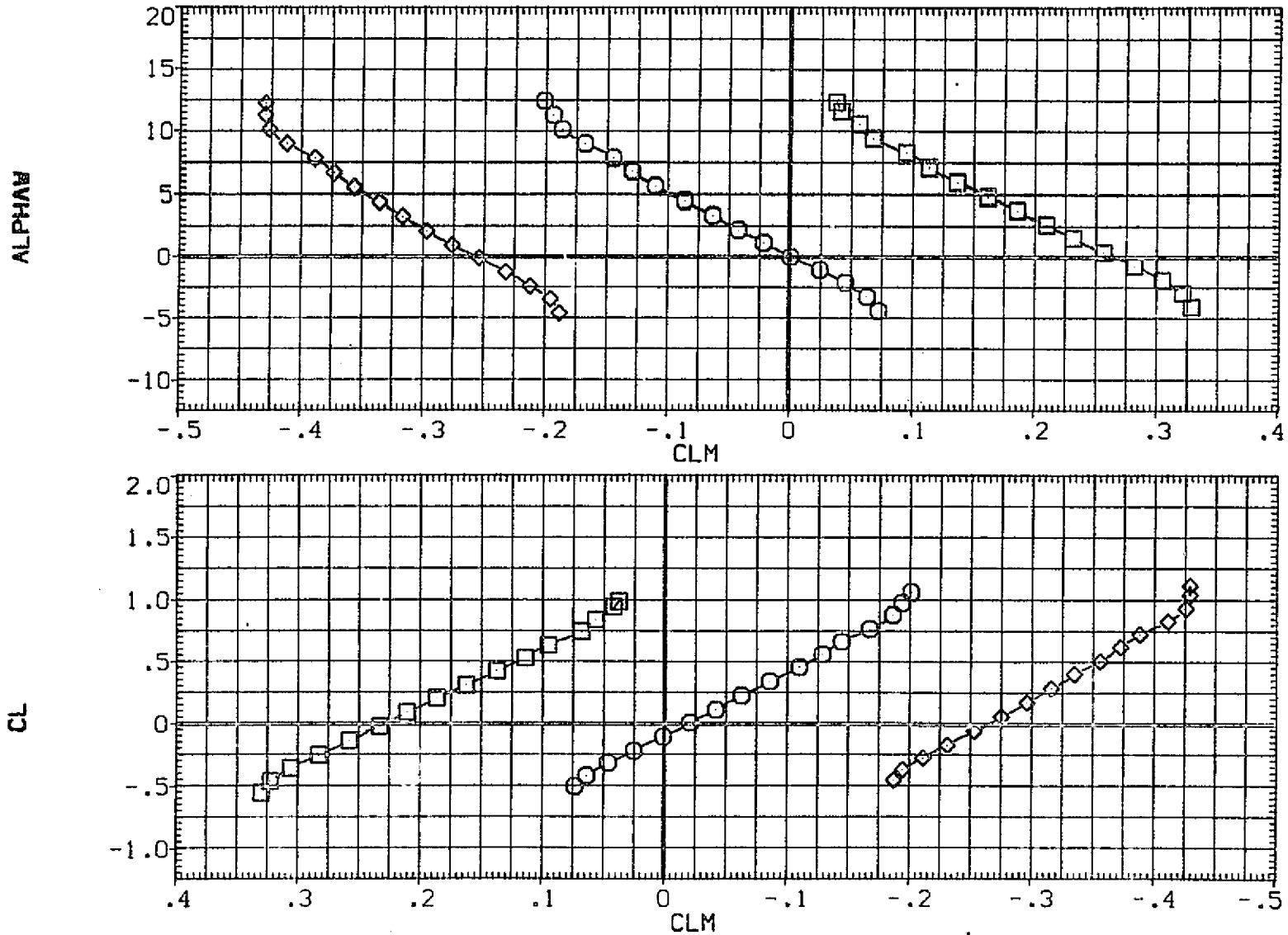


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION		
(RG066)	□ CA6 K2H:5.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.790	6.000	-10.683	-9.934	SREF	5500.0000	50.FT.
(RG059)	○ CA6 K2H:5.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	.000	.000	LREF	327.8000	IN.
(RG065)	◇ CA6 K2H:5.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.840	6.000	9.484	10.000	BREF	2348.0000	IN.
						XM RP	1339.9000	IN. XC
						YM RP	.0000	IN. YC
						ZM RP	190.7700	IN. ZC
						SCALE	.0300	

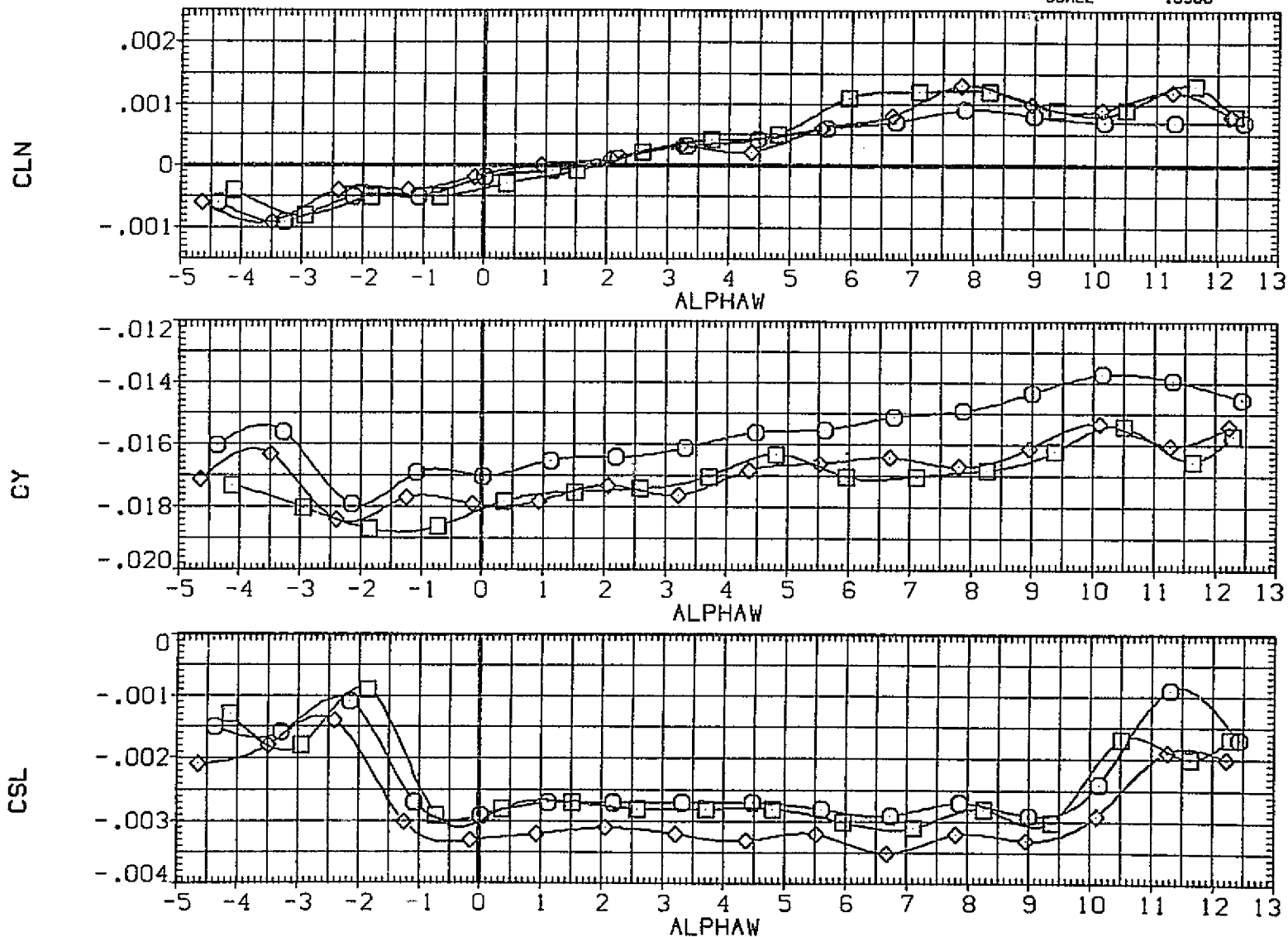


FIG. 30 ELEVATOR EFFECTIVENESS, LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP074)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF 5500.0000 SO.FT.
(RGP076)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	.000	6.000	LREF 327.8000 IN.
(RGP079)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGP077)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.210	.000	6.000	XMRP 1339.9000 IN. XC
(RGP078)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.830	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

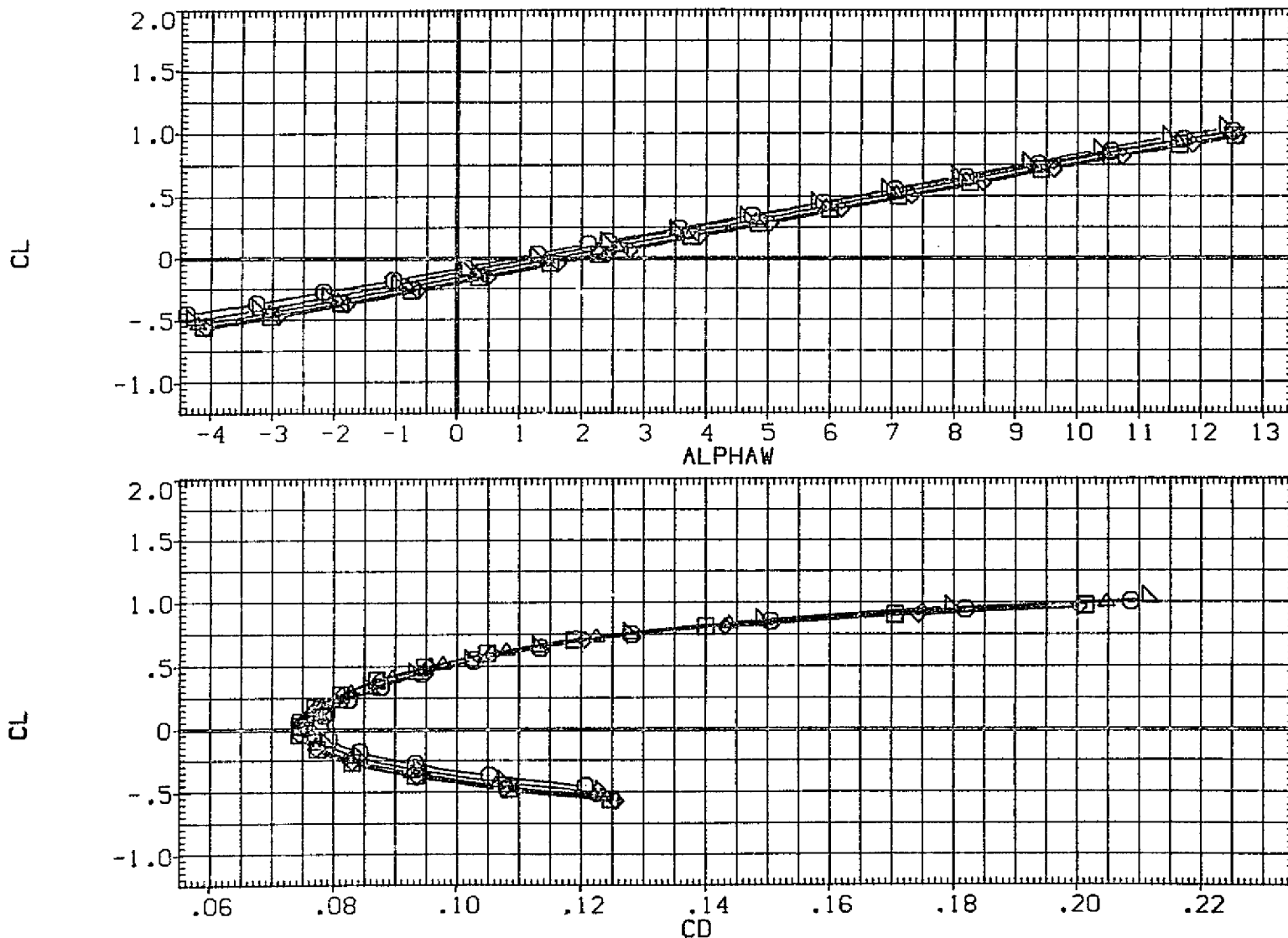


FIG. 31 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 0
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP074)	CA6 K2 V9.1SI-12 AT103.1/95-.30RBFBN24/28		.000	6.000	SREF 5500.0000 SQ.FT.
(RGP076)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBFBN24/28	.000	.000	6.000	LREF 327.8000 IN.
(RGP079)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBFBN24/28	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGP077)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBFBN24/28	2.210	.000	6.000	XM RP 1339.9000 IN. XC
(RGP078)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBFBN24/28	4.830	.000	6.000	YM RP .0000 IN. YC
					ZM RP 190.7700 IN. ZC
					SCALE .0300

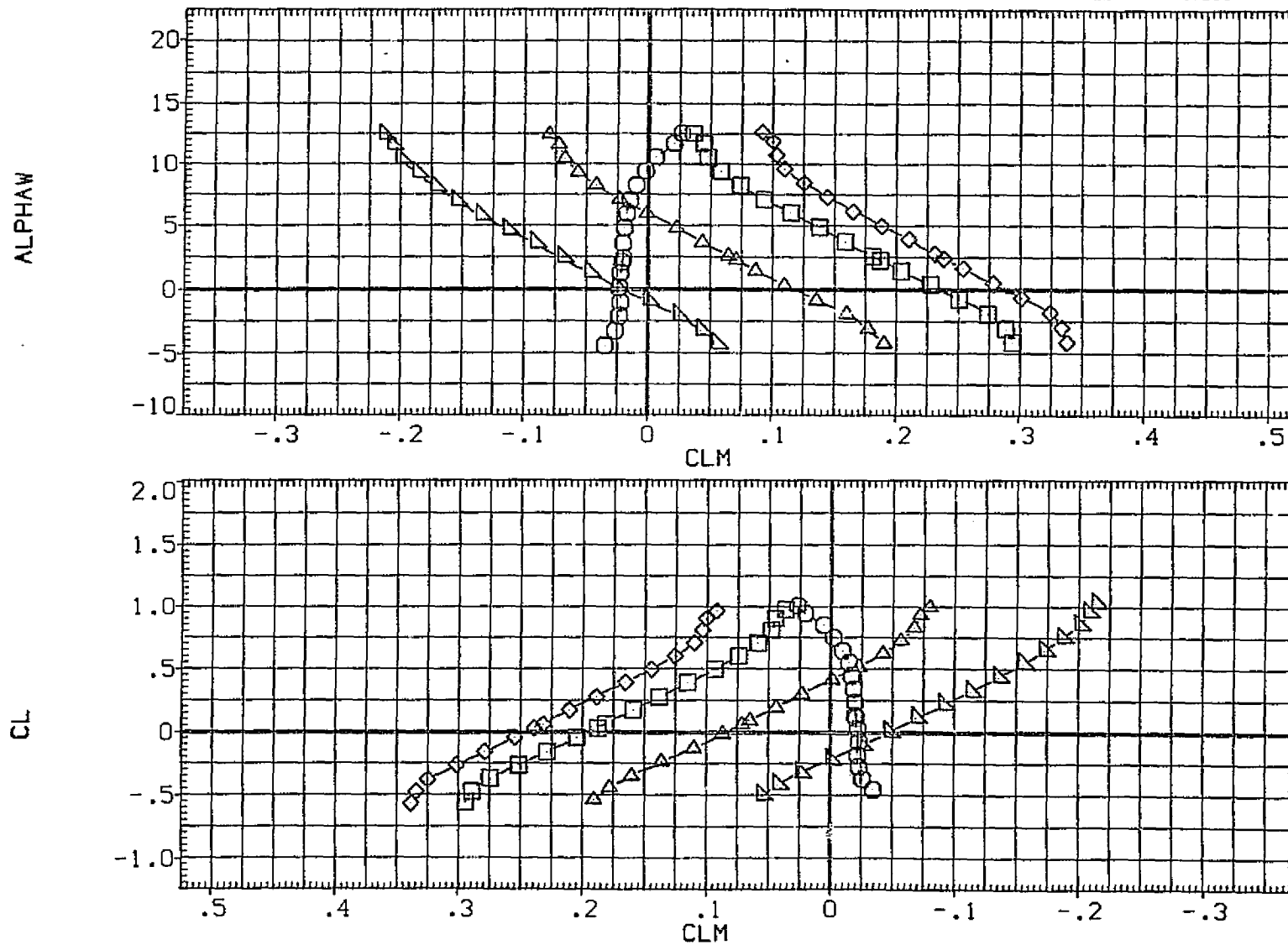


FIG. 31 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 0

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION		
(RGP074)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF	5500.0000	SQ.FT.
(RGP076)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	LREF	327.8000	IN.
(RGP079)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	BREF	2348.0000	IN.
(RGP077)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.210	.000	6.000	XMRP	1339.9000	IN. XC
(RGP078)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.830	.000	6.000	YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

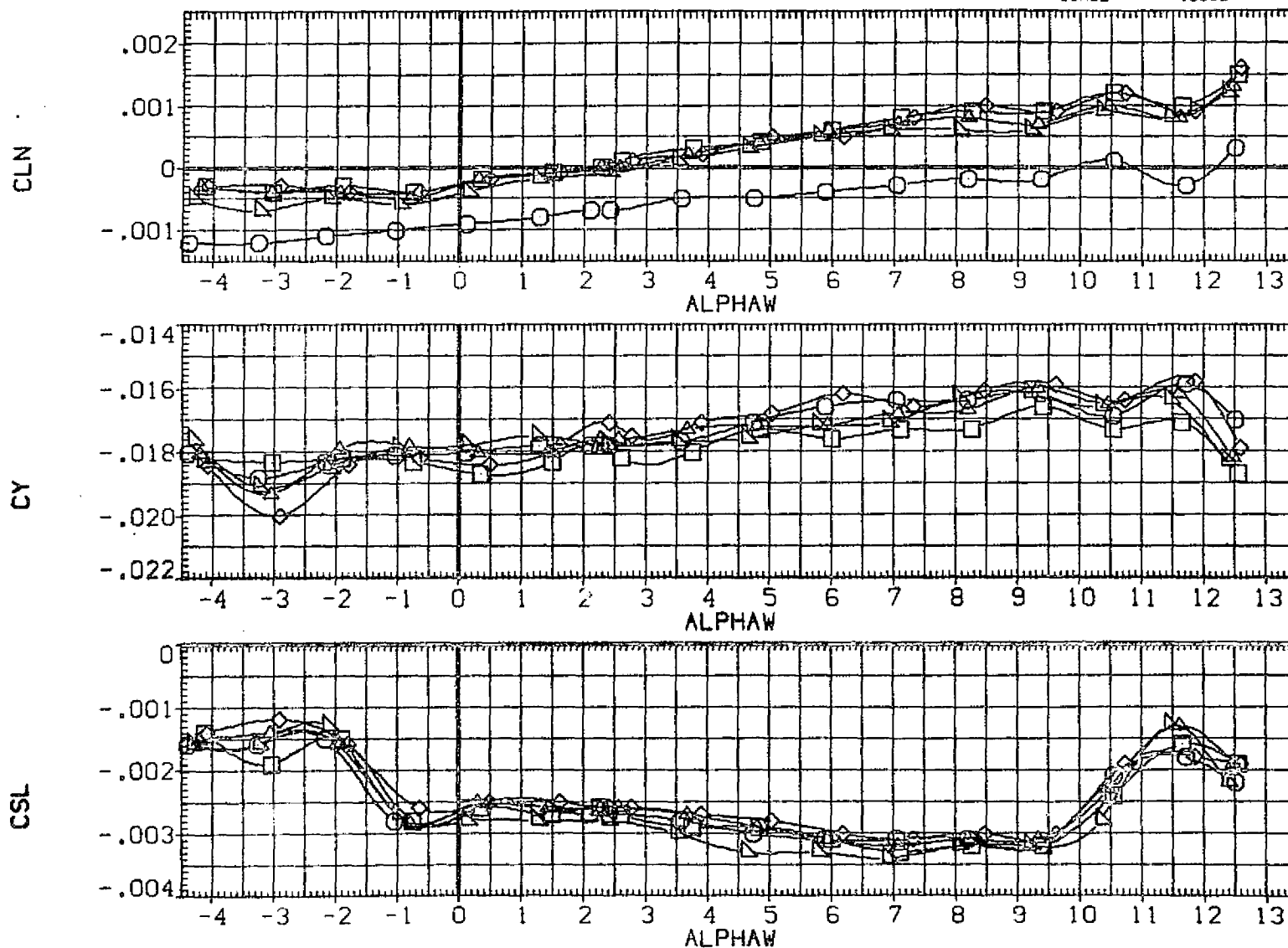


FIG. 31 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 0

(A)MACH = .60

PAGE 168

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO74)	DATA NOT AVAILABLE				SREF 5500.0000 SQ.FT.
(RGPO67)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGPO69)	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGPO68)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

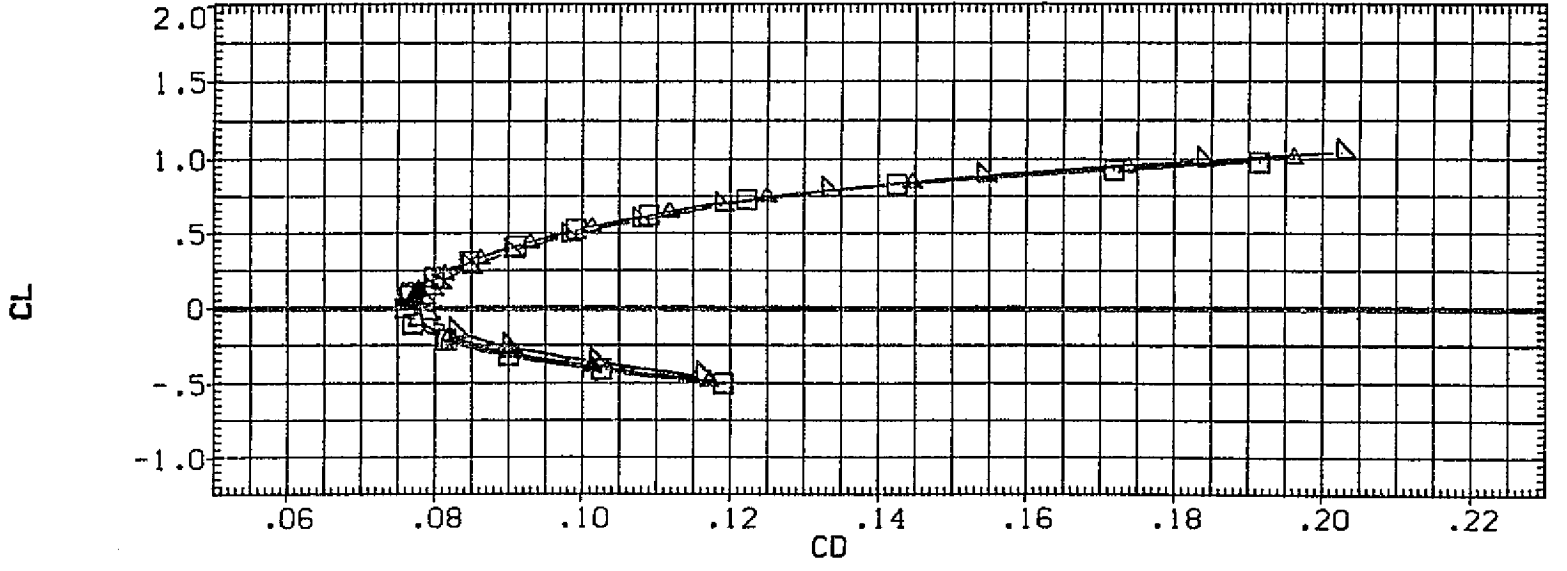
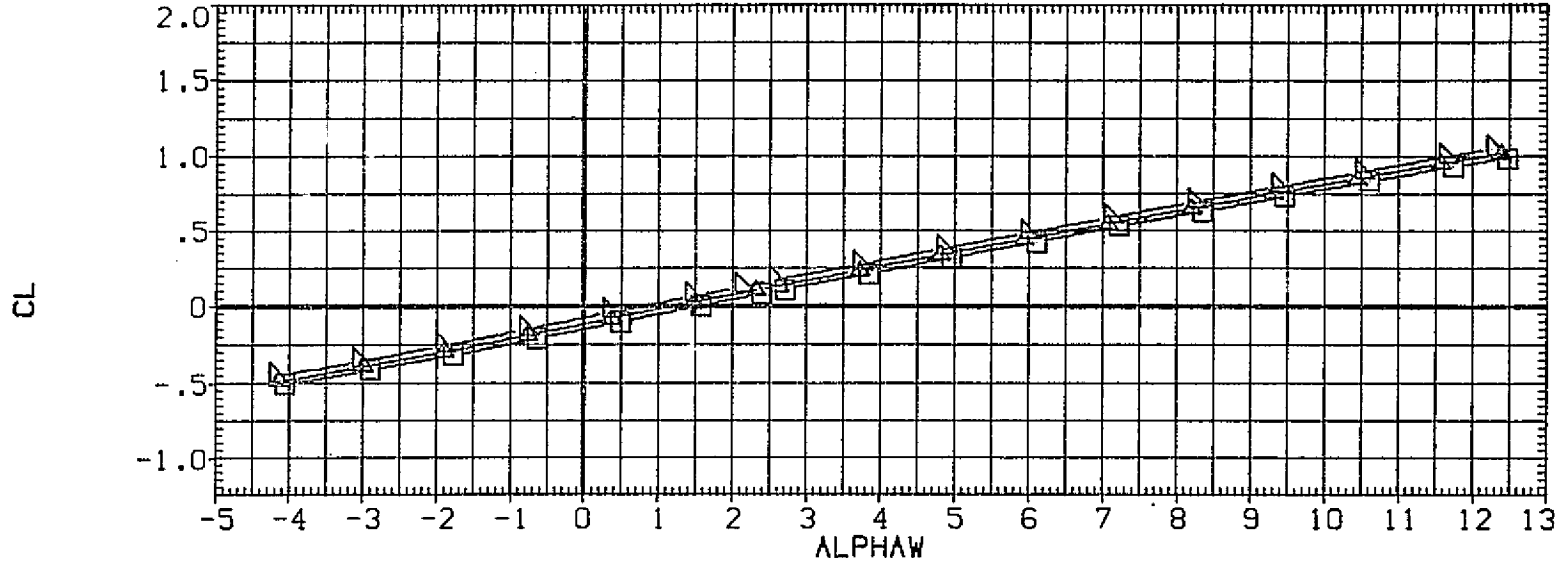


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5
 (A) MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO74)	DATA NOT AVAILABLE				SREF 5500.0000 SQ.FT.
(RGPO67)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGPO69)	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGPO68)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
(RGPO59)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

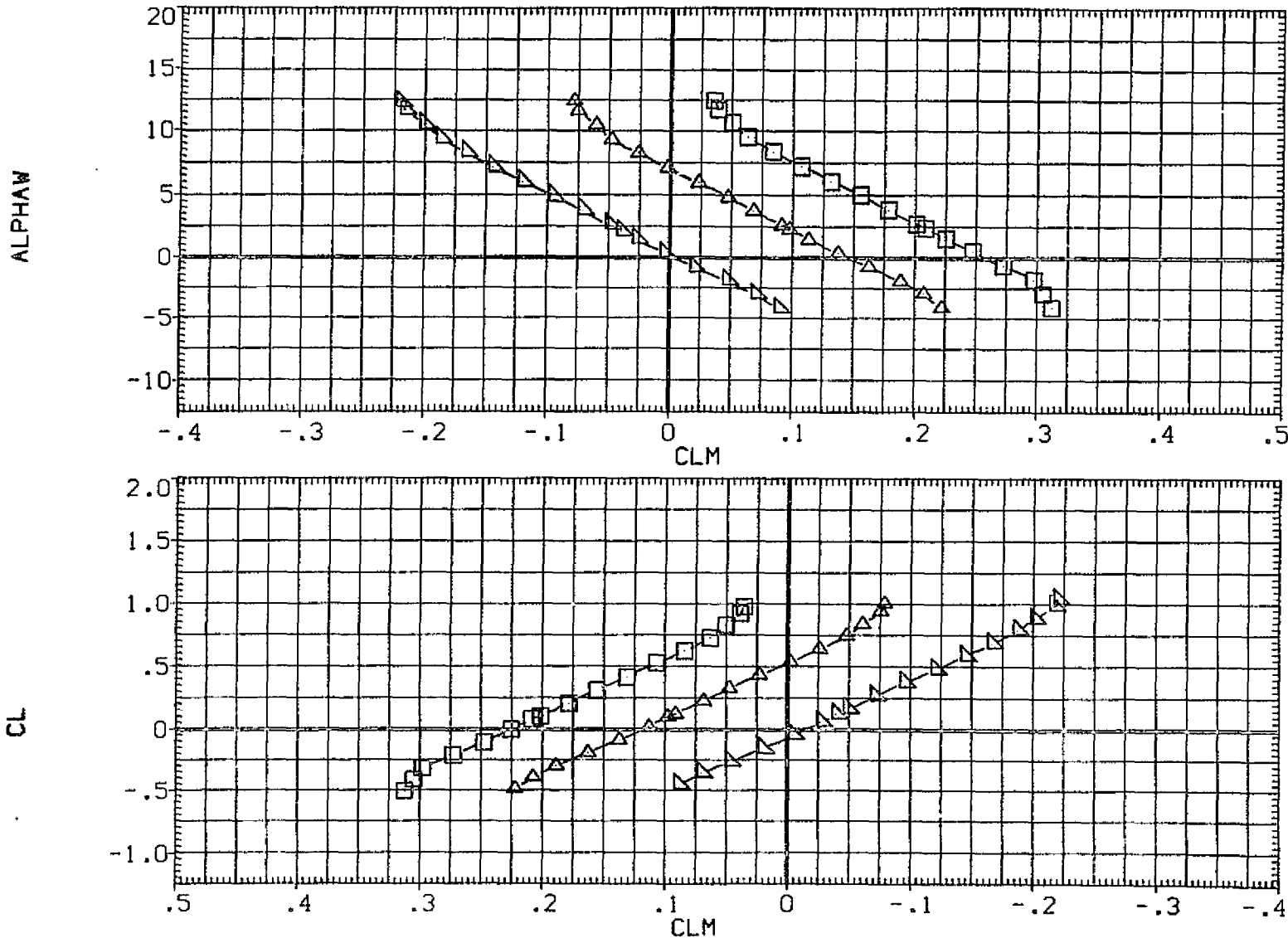


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(A)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO74)	DATA NOT AVAILABLE				SREF 5500.0000 SQ.FT.
(RGPO67)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGPO69)	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGPO68)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. YC
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

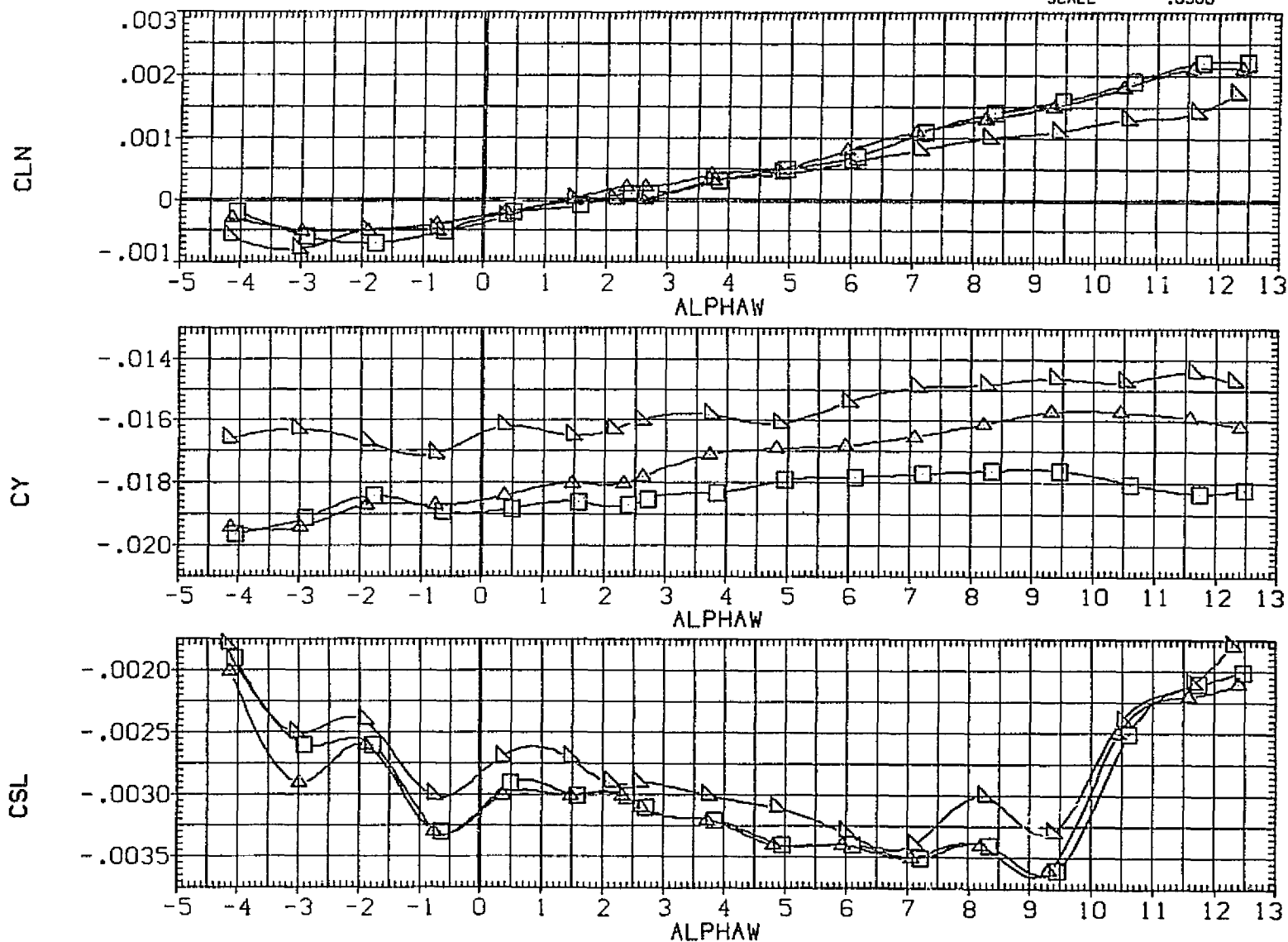


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(A)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION		
(RGPD74)	LA6 K2 V9.1SI-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF	5500.0000	SQ.FT.
(RGPD67)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF	327.8000	IN.
(RGPD69)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	BREF	2348.0000	IN.
(RGPD68)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XHRP	1339.9000	IN. XC
(RGPD59)	CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

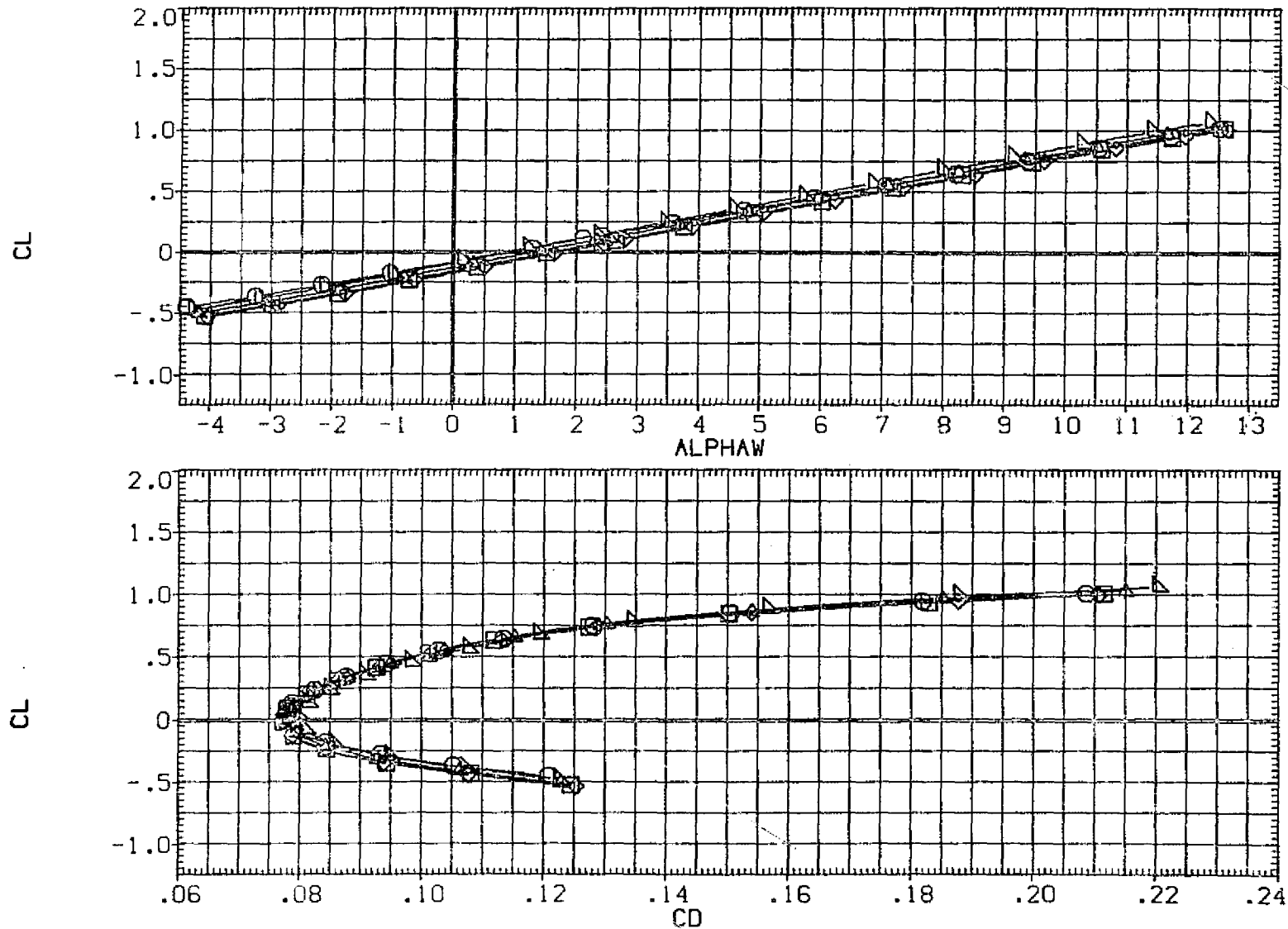


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO74)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBFBN24/28				SREF 5500.0000 SO.FT.
(RGPO67)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGPO69)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGPO68)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	2.130	.000	6.000	XMRF 1339.9000 IN. XC
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

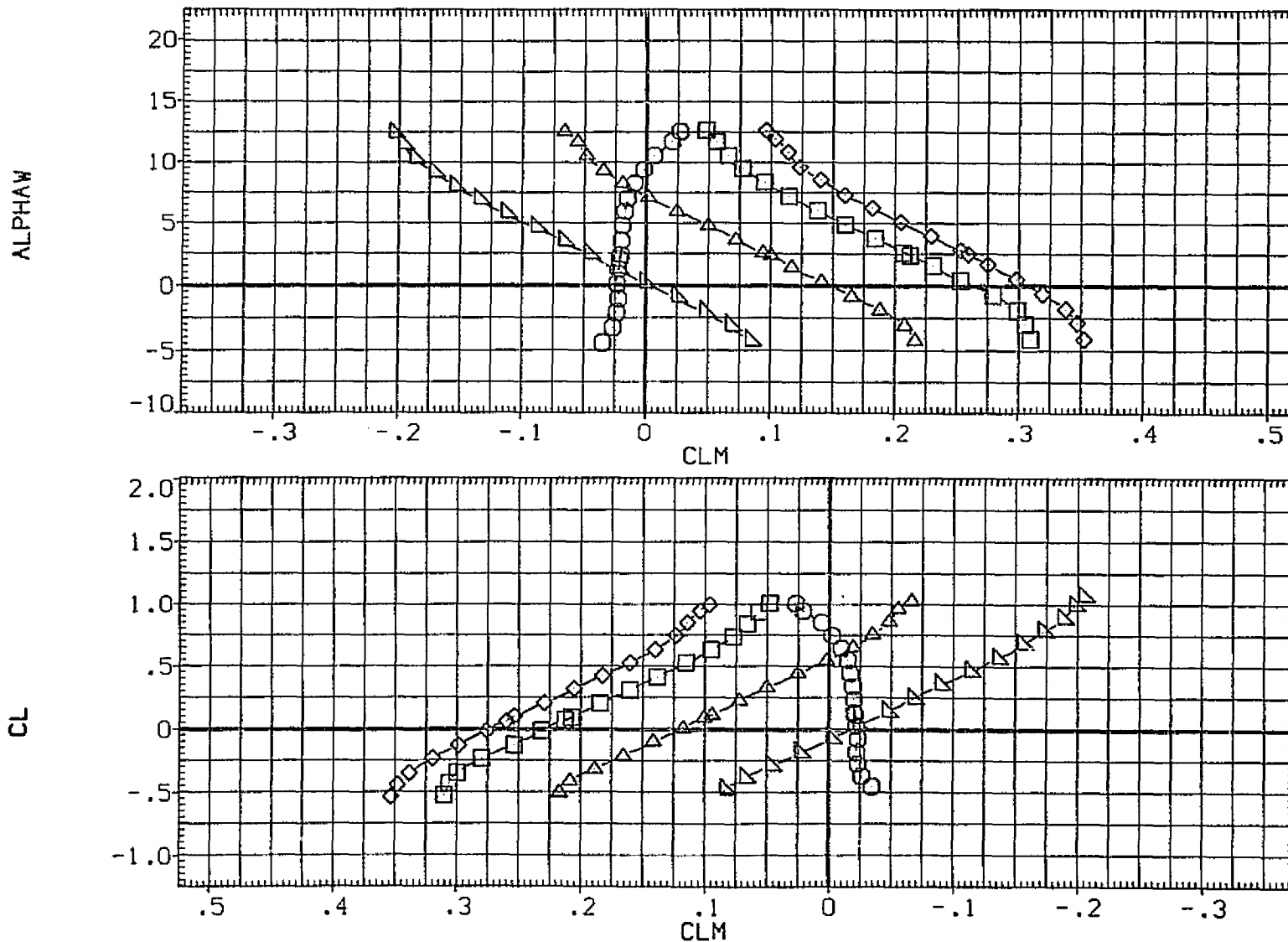


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP074)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF 5500.0000 SQ.FT.
(RGP067)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGP069)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGP068)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
(RGP059)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

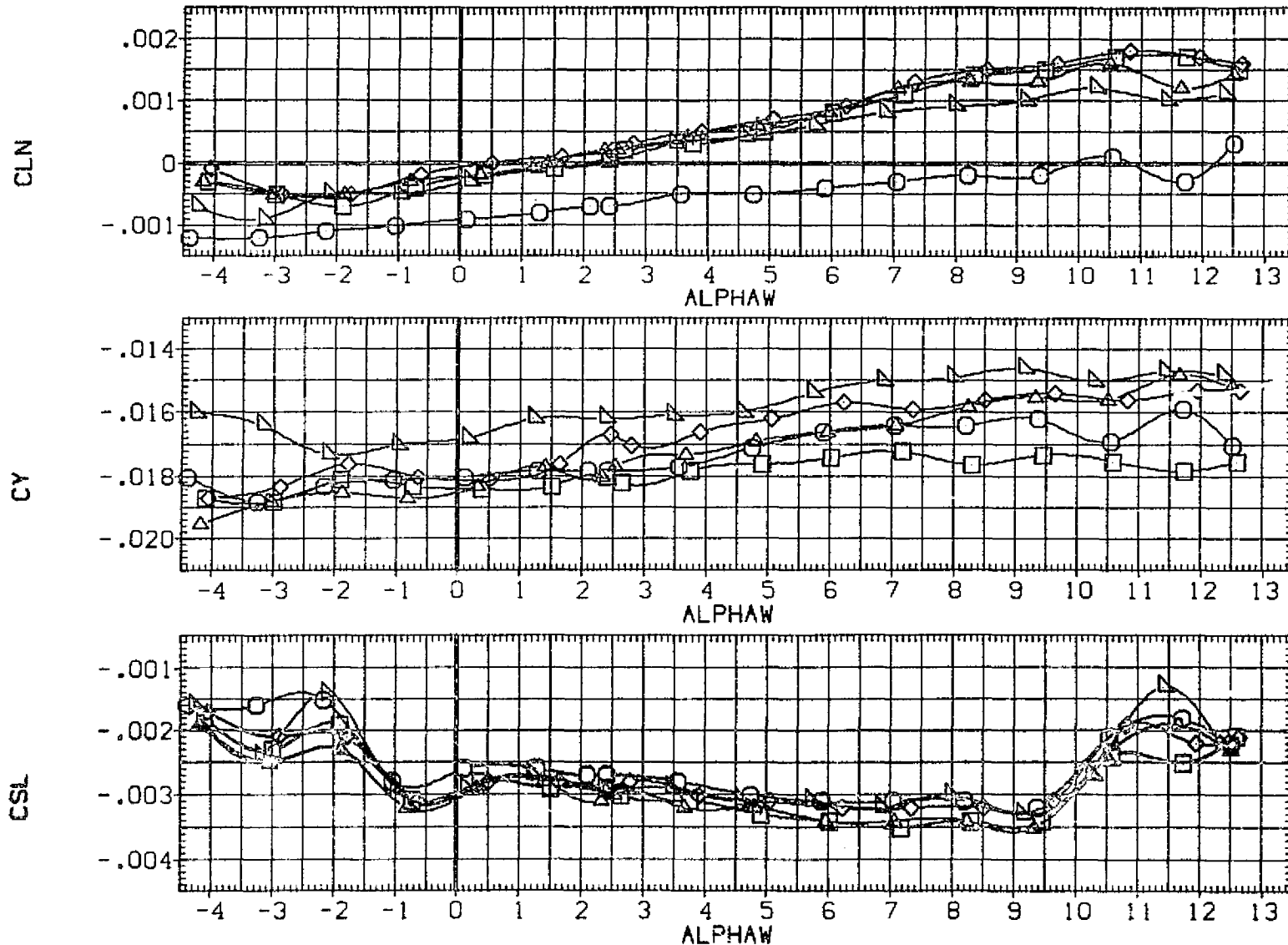


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO74)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO67)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGPO69)	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGPO68)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.690	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

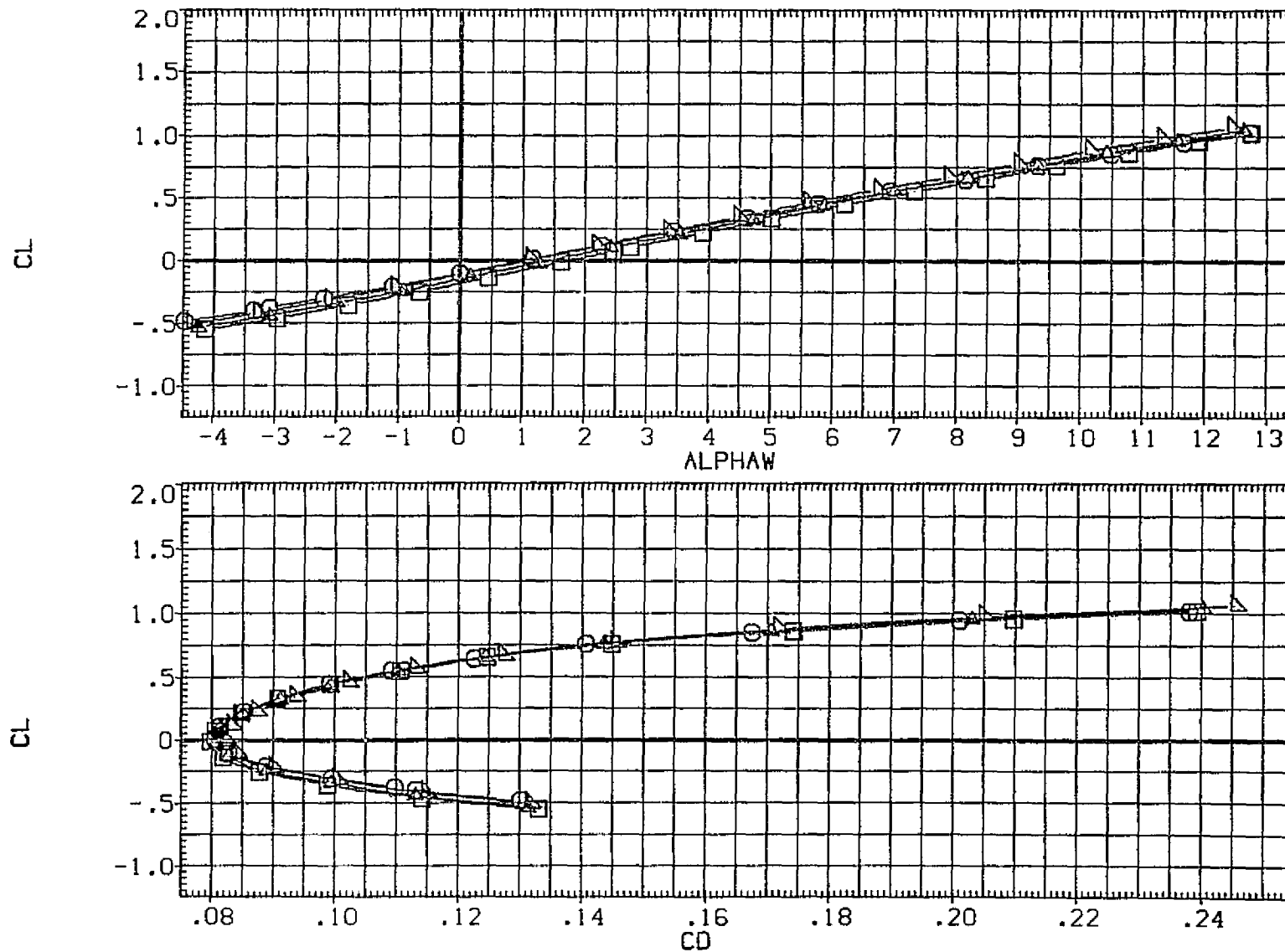


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5
 (C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
{RGPO74}	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF 5500.0000 SQ.FT.
{RGPO67}	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
{RGPO69}	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
{RGPO68}	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
{RGPO59}	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

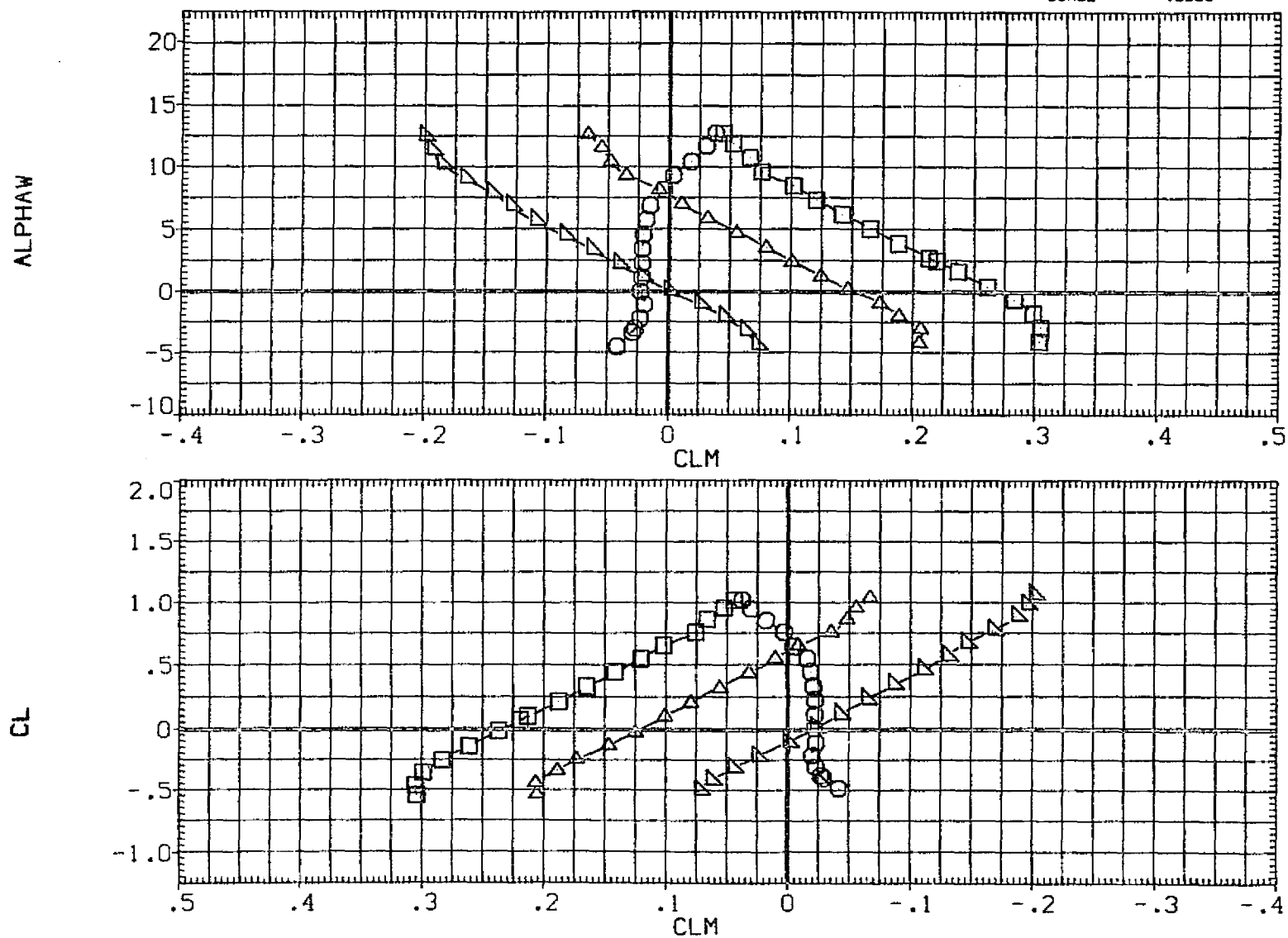


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5
 (C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP074)	CAG K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	6.000	SREF 5500.0000 SQ.FT.
(RGP067)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	.000	6.000	LREF 327.8000 IN.
(RGP069)	DATA NOT AVAILABLE	-1.010	.000	6.000	BREF 2348.0000 IN.
(RGP068)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	2.130	.000	6.000	XMRP 1339.9000 IN. XC
(RGP059)	CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/29	4.890	.000	6.000	YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

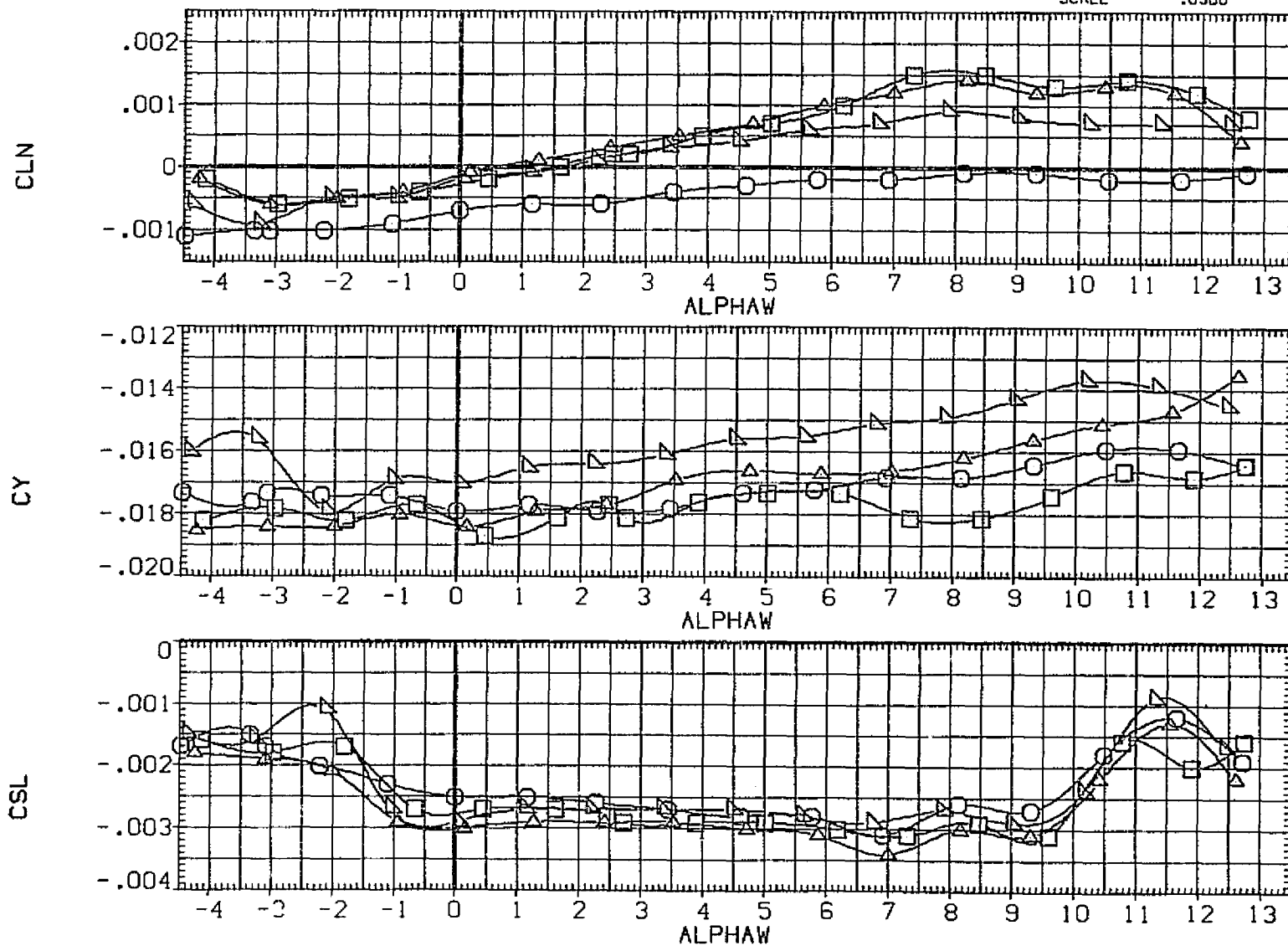


FIG. 32 STABILIZER EFFECTIVENESS, LAUNCH CONFIGURATION, ELEVON = 5

(C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	IGRB	REFERENCE INFORMATION
(RGP071)	□ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	-4.000	4.770	6.000	SREF 5500.0000 SQ.FT.
(RGP070)	○ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	◇ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	△ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	10.000	6.000	XMRP 1339.9000 IN. XC	
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

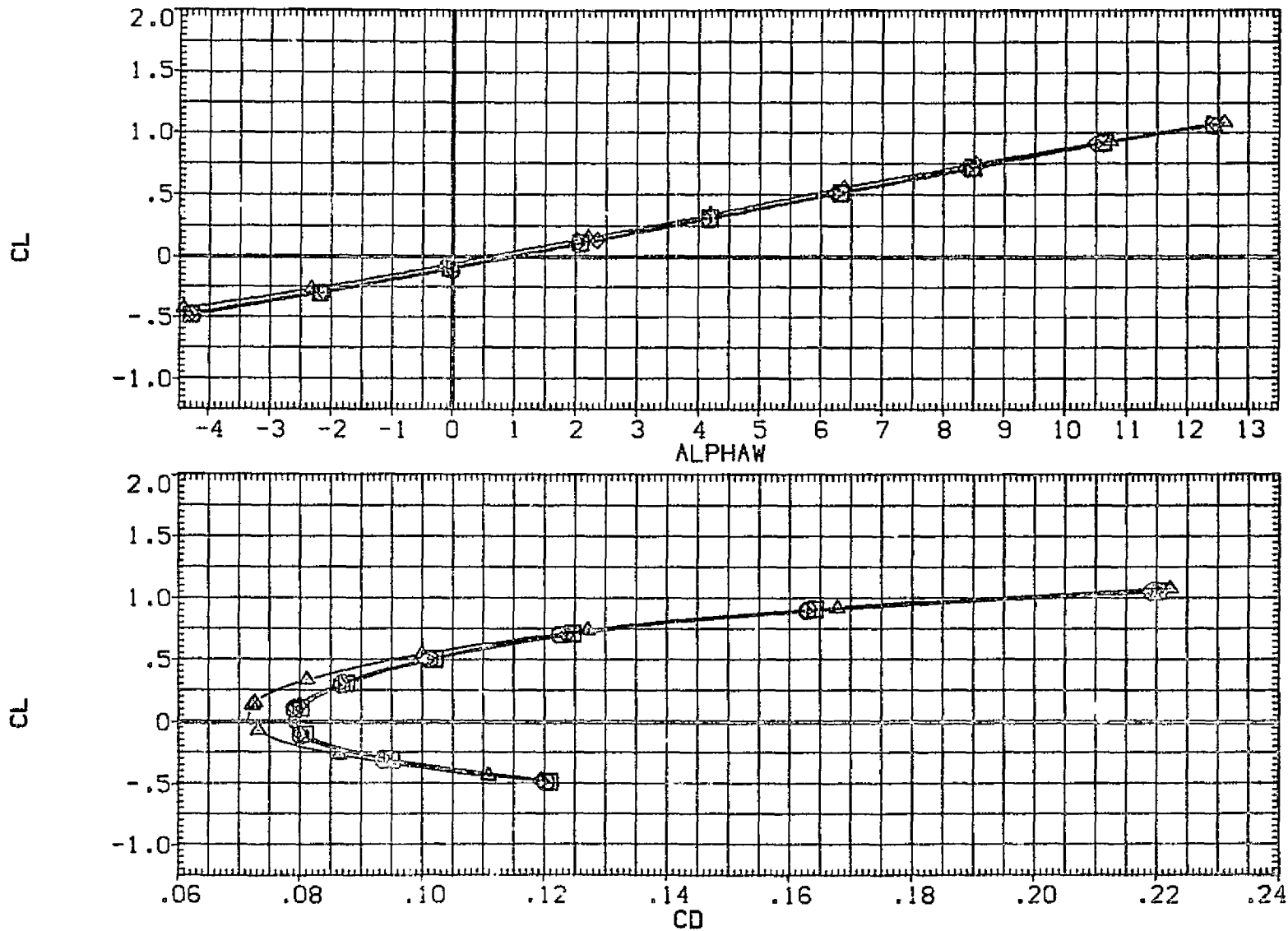


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	!ORB	REFERENCE INFORMATION
(RGP071)	□ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF0N24/28	-4.000	4.770	6.000	SREF 5500.0000 SQ.FT.
(RGP070)	○ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF0N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	◇ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF0N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	△ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF0N24/28	10.000	6.000	XMRP 1339.9000 IN. XC	
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

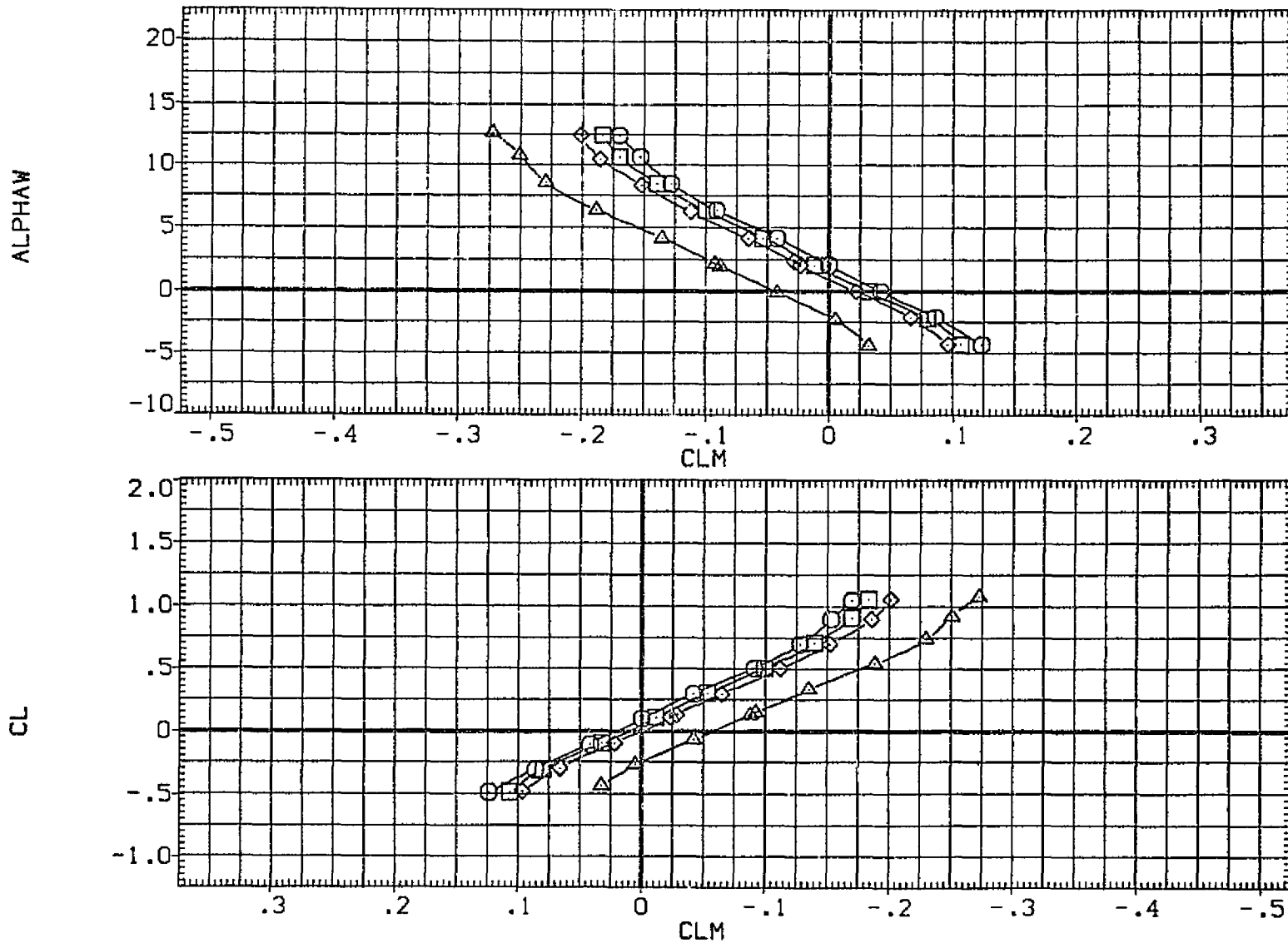


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	IORB	REFERENCE INFORMATION
(RGP071)	CAS K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	-4.000	4.770	6.000	SREF 5500.0000 SQ.FT.
(RGP070)	CAS K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	CAS K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	CAS K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	10.000	4.770	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

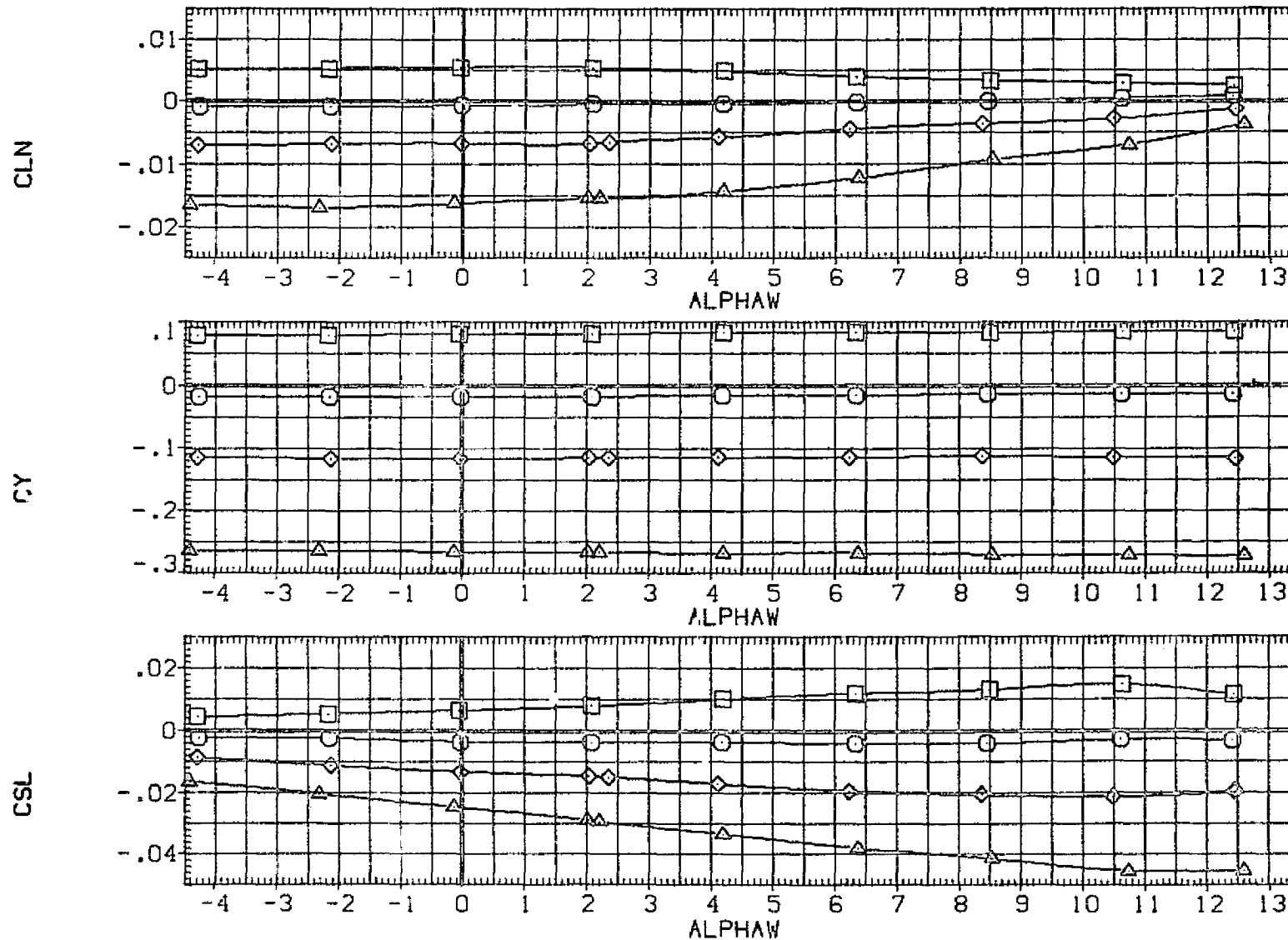


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	IORB	REFERENCE INFORMATION
(RGP071)	□ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	-4.000	4.770	6.000	SREF 5500.0000 50.FT.
(RGP070)	○ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	△ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	◇ DATA NOT AVAILABLE	10.000	4.770	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

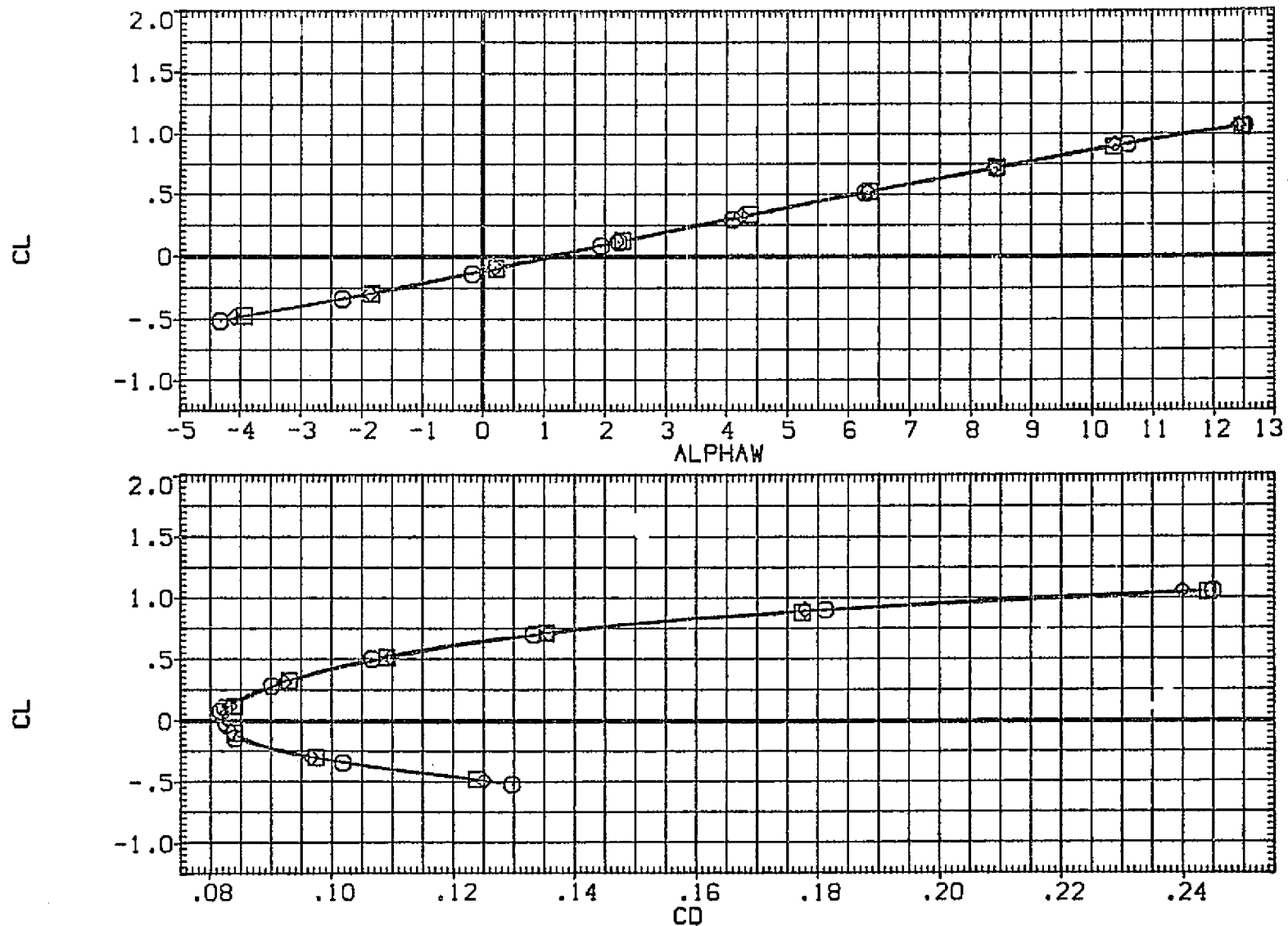


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	IORB	REFERENCE INFORMATION
(RGP071)	□ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	-4.000	4.770	6.000	SREF 5500.0000 SQ.FT.
(RGP070)	○ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	◇ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	△ DATA NOT AVAILABLE	10.000	4.770	6.000	YMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

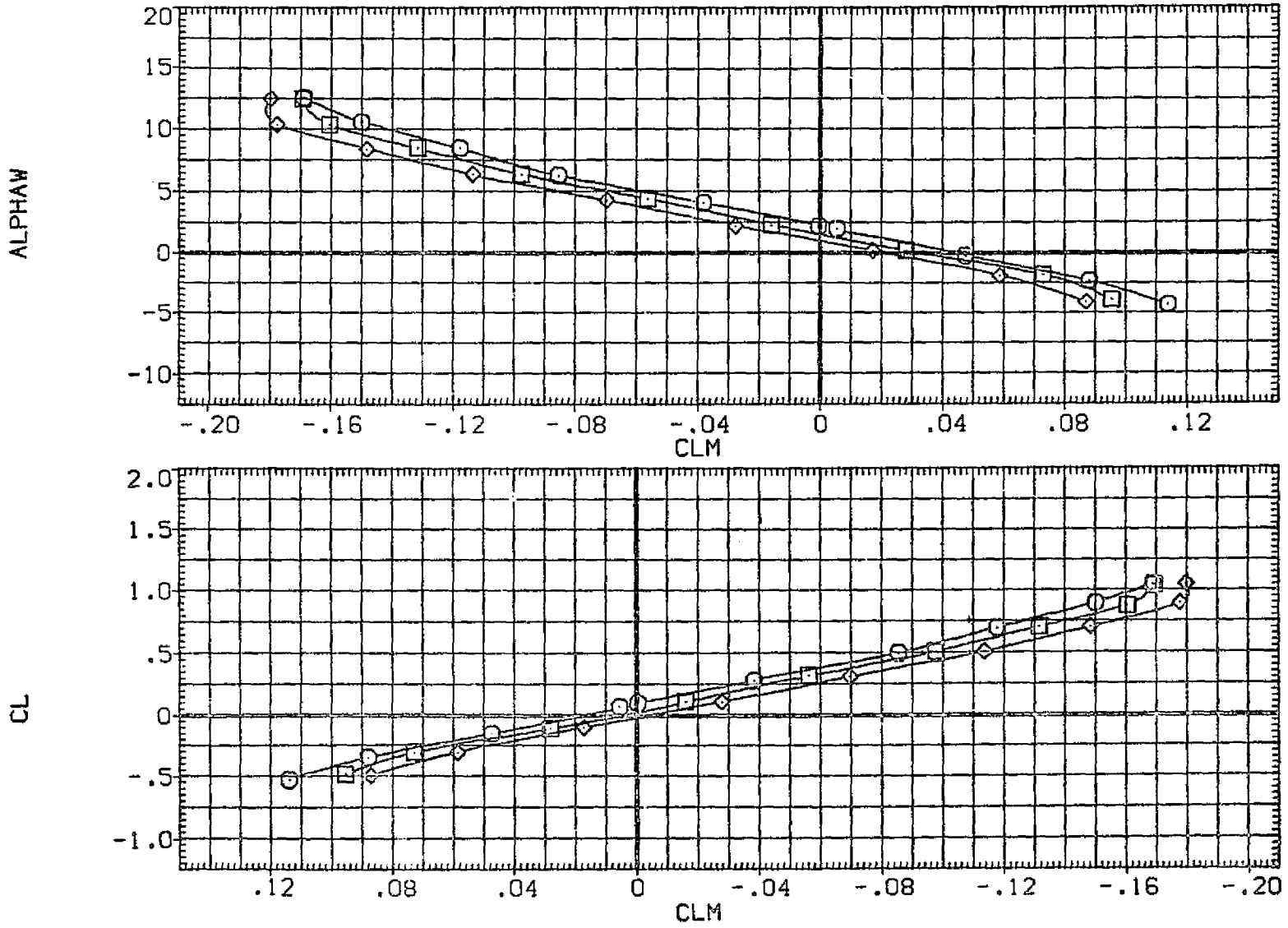


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	IORB	REFERENCE INFORMATION
(RGP071)	□ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	-4.000	4.770	6.000	SREF 5500.0000 SQ.FT.
(RGP070)	○ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	.000	4.770	6.000	LREF 327.8000 IN.
(RGP072)	◇ CAG K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.000	4.770	6.000	BREF 2348.0000 IN.
(RGP073)	△ DATA NOT AVAILABLE	10.000	4.770	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

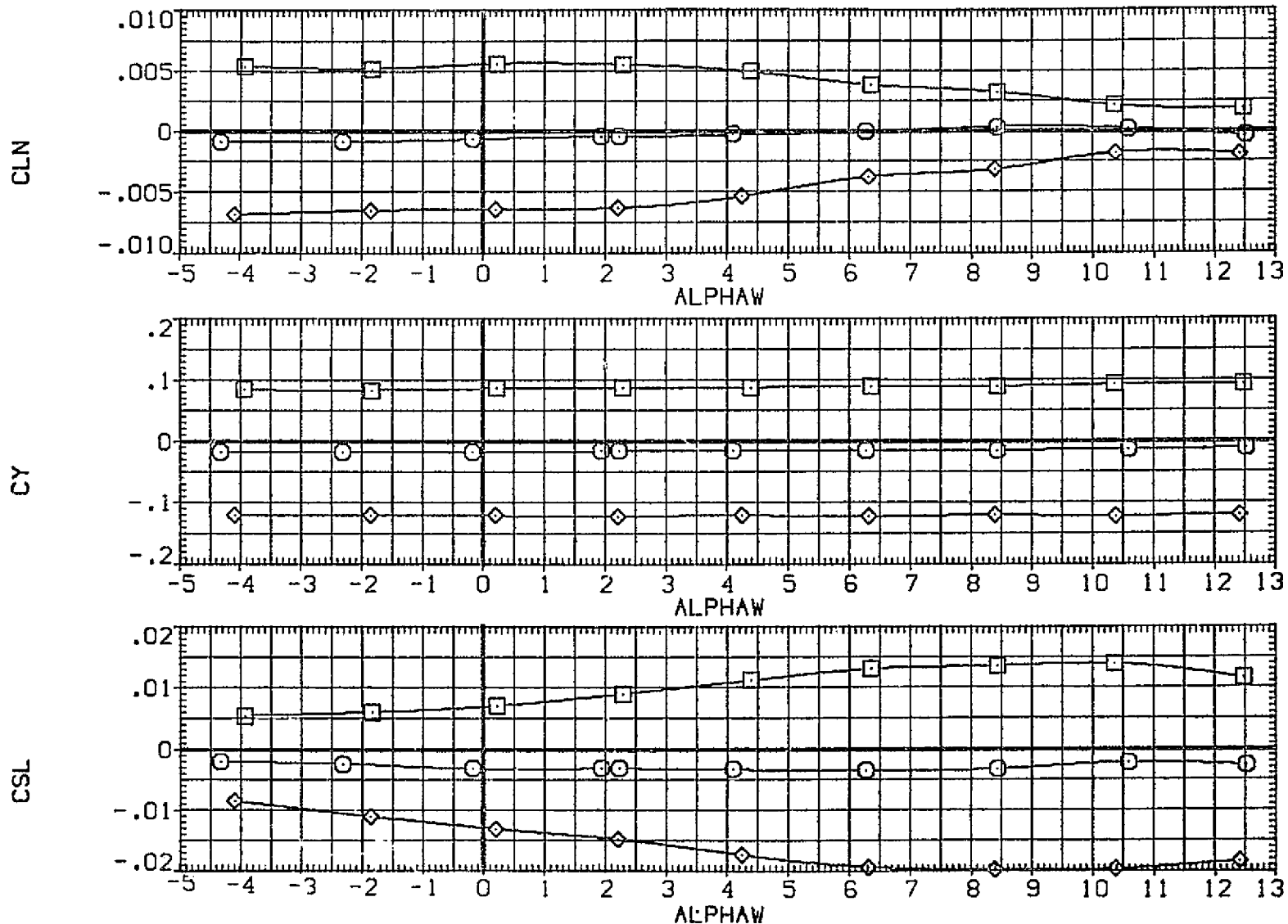


FIG. 33 EFFECT OF ALL VERTICAL TAILS OFF ON LAUNCH CONFIGURATION

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION
(RGP101)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORBF0N24/28	4.770	.000	5500.0000 SQ.FT.
(RGP084)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORB TC4	4.840	.000	327.8000 IN.
					2348.0000 IN.
					1339.9000 IN. XC
					.0000 IN. YC
					190.7700 IN. ZC
					SCALE .0300

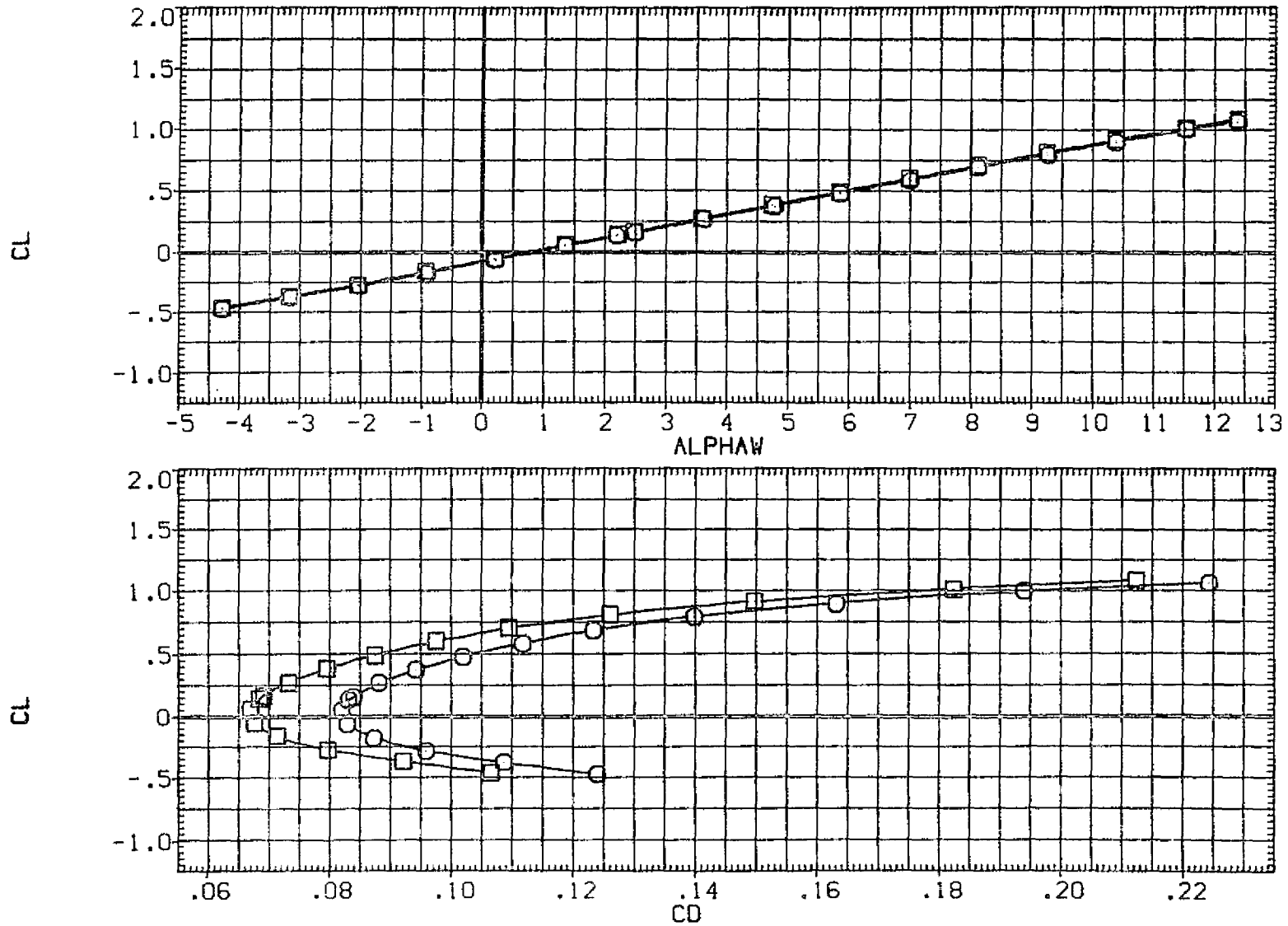


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION
(RGP101)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	4.770	.000	6.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300
(RGP084)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.840	.000	6.000	

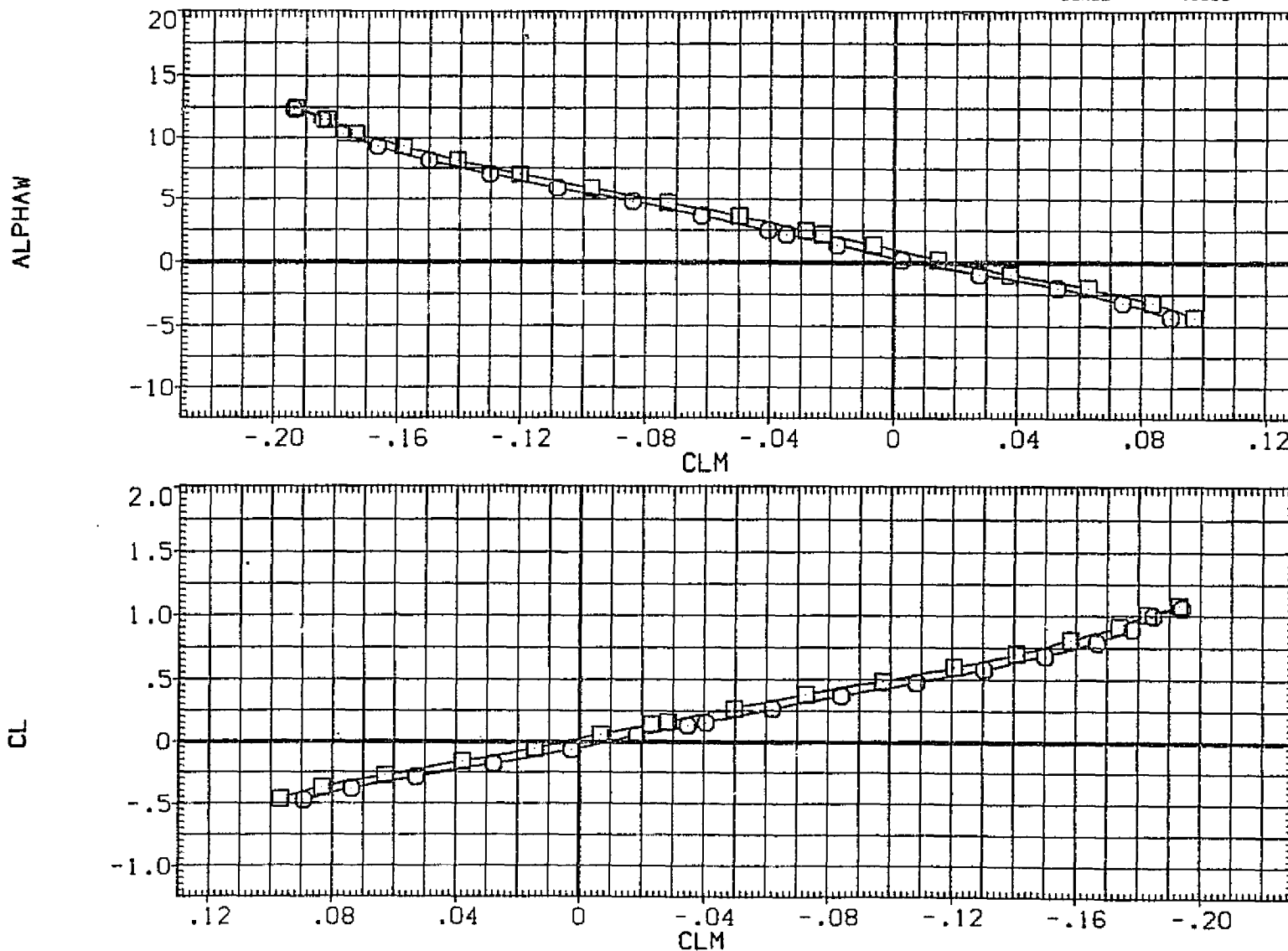


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP101)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORBFBN24/28	4.770	.000	6.000
(RGP084)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORB TC4	4.840	.000	6.000
					SREF 5500.0000 SQ.FT.
					LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

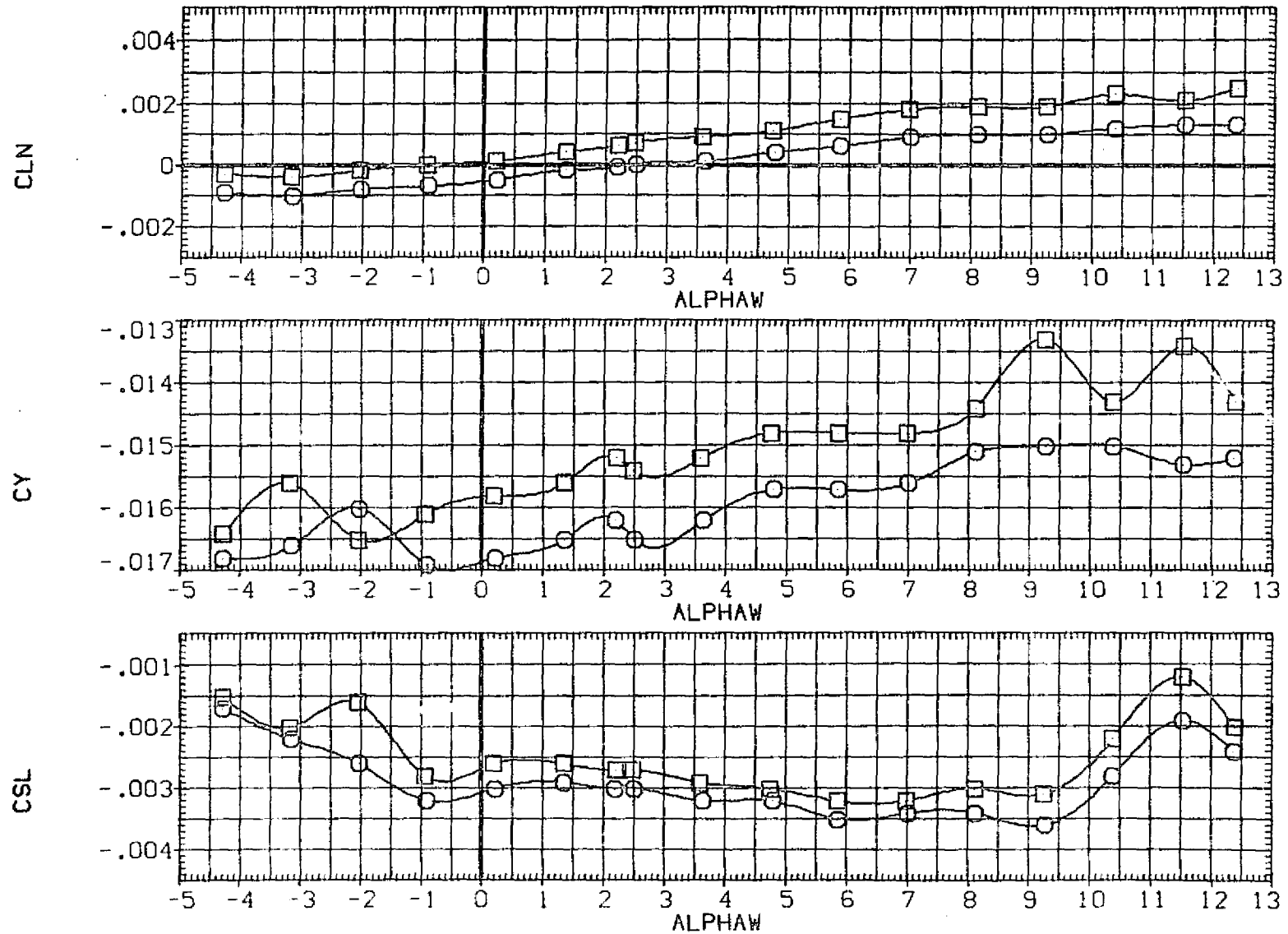


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP100)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	-.020	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP185)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	1.970	.000	4.250	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

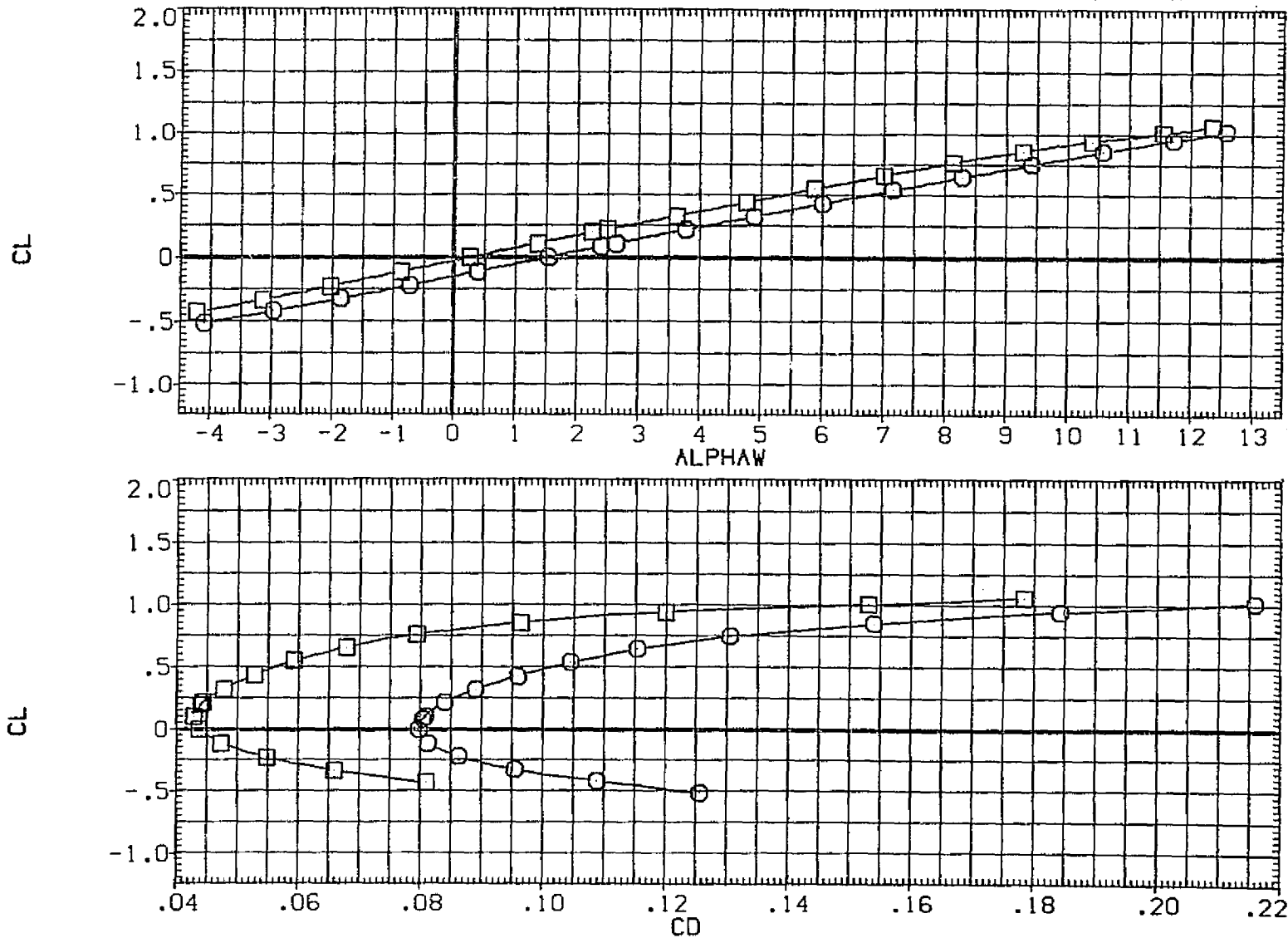


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP100) □ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRBF6N24/28
 (RGP185) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA 10RB
 -.020 .000 6.000
 1.970 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

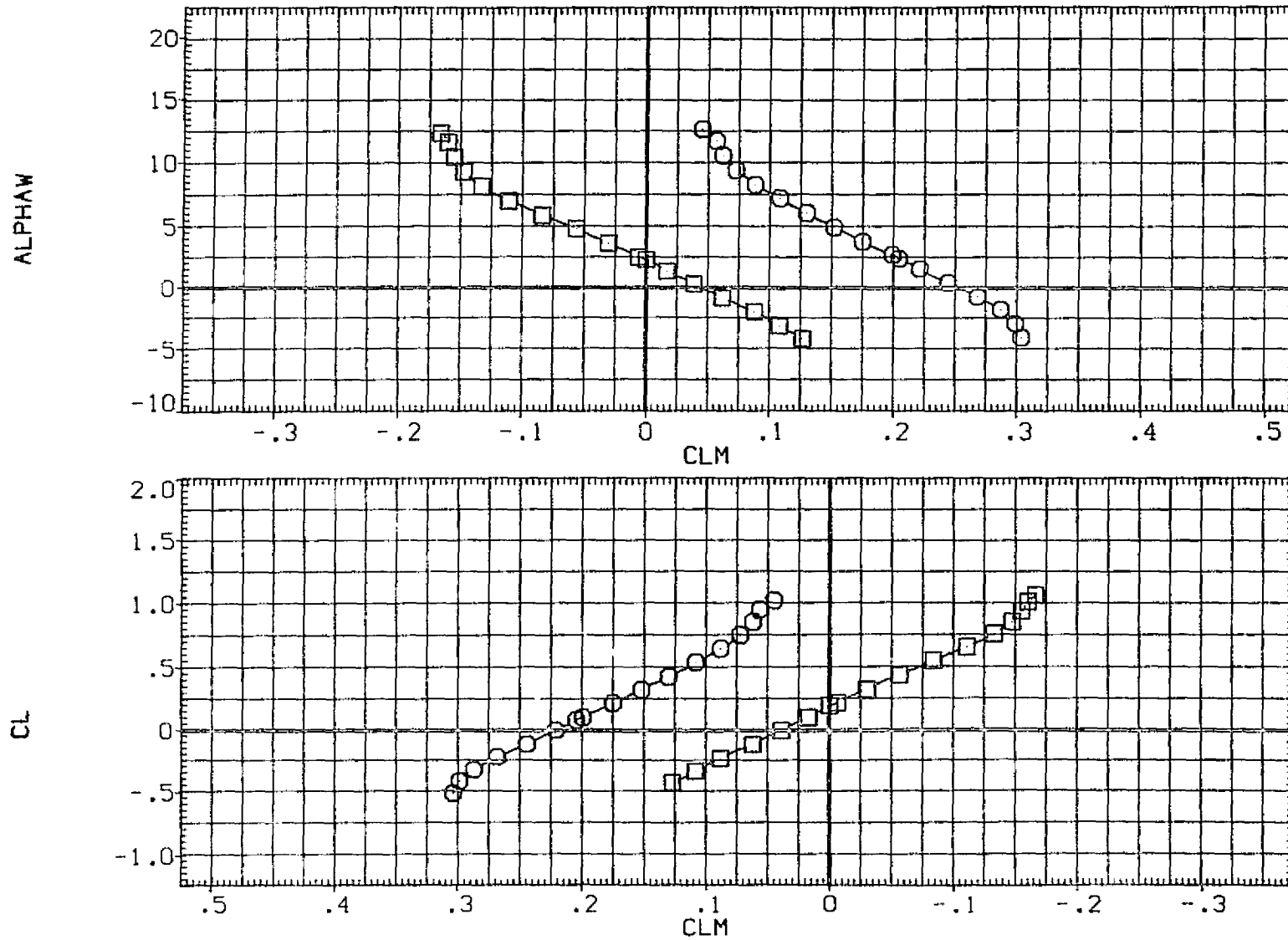


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP100) ○ CAG K2H15.6.1V9.1S1-12 AT103.1/105 DRBFBN24/28
 (RGP105) □ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -.020 .000 6.000
 1.970 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 50.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XHRP 1339.9000 IN. XC
 YHRP .0000 IN. YC
 ZHRP 190.7700 IN. ZC
 SCALE .0300

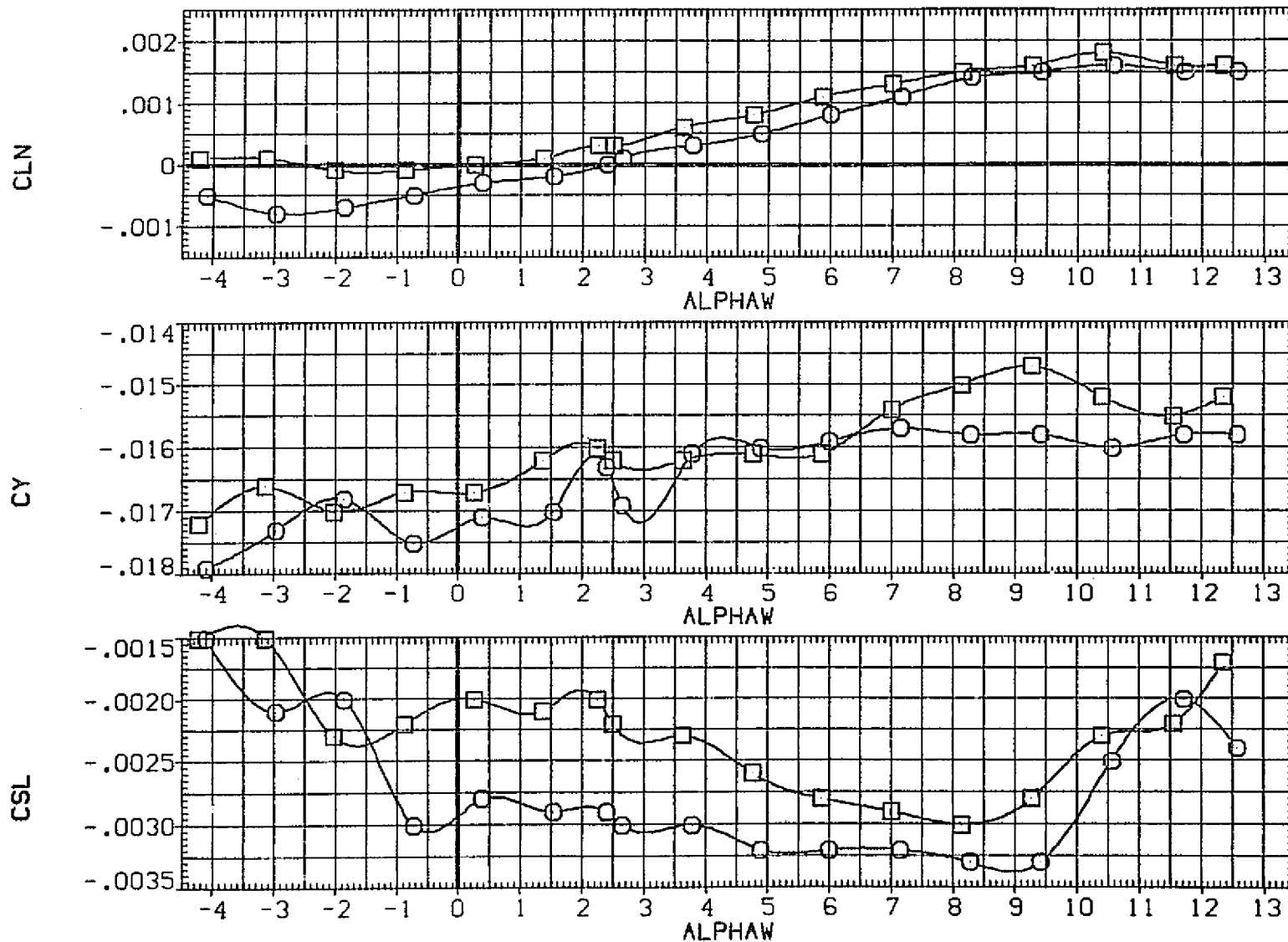


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP099)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105	ORBF8N24/28	2.150	.000	6.000
(RGP086)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105	ORB TC4	1.980	.000	6.000
					SREF 5500.0000 SQ.FT.
					LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

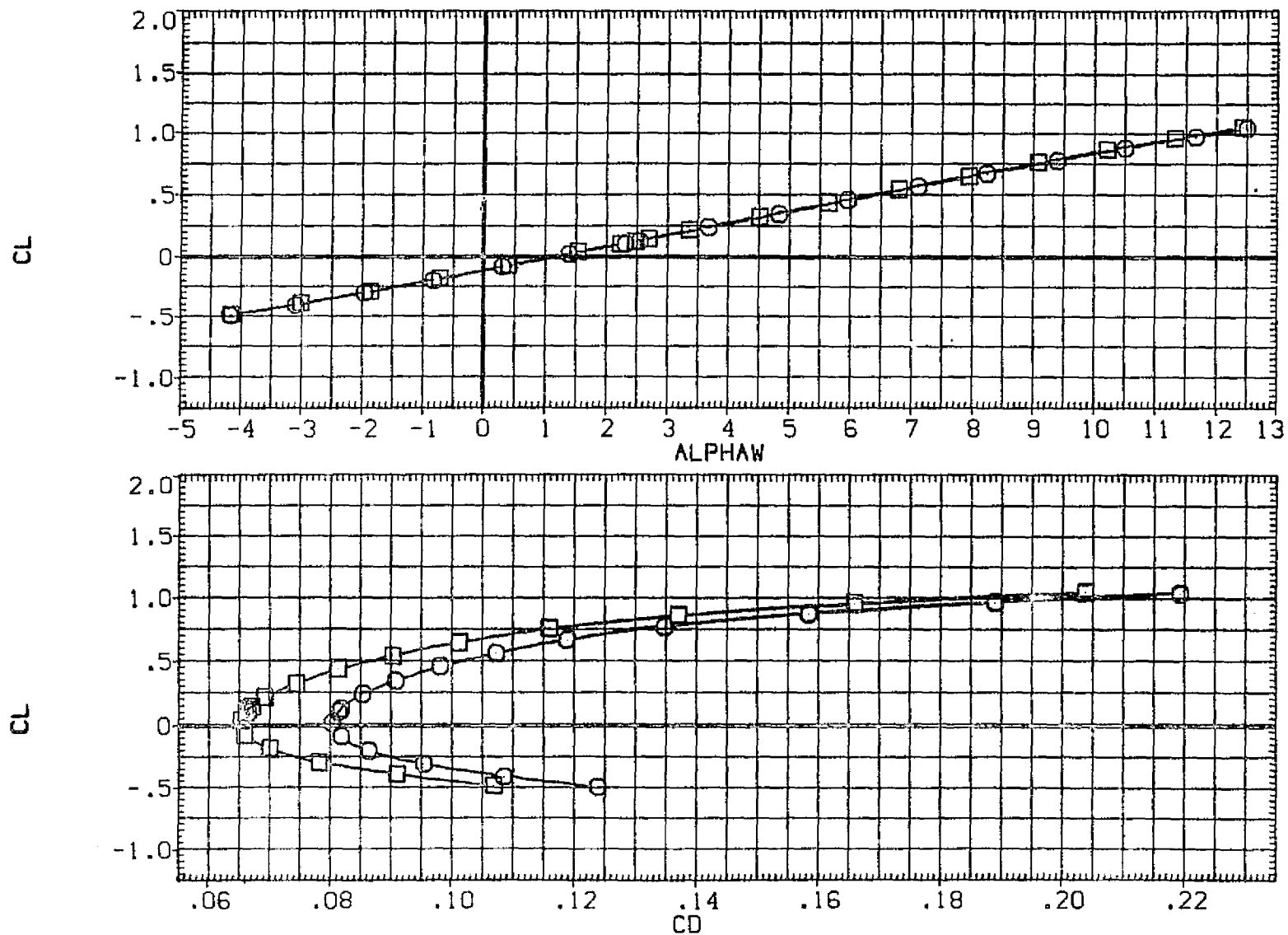


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP099)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	2.150	.000	6.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC
(RGP086)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	1.980	.000	6.000	SCALE .0300

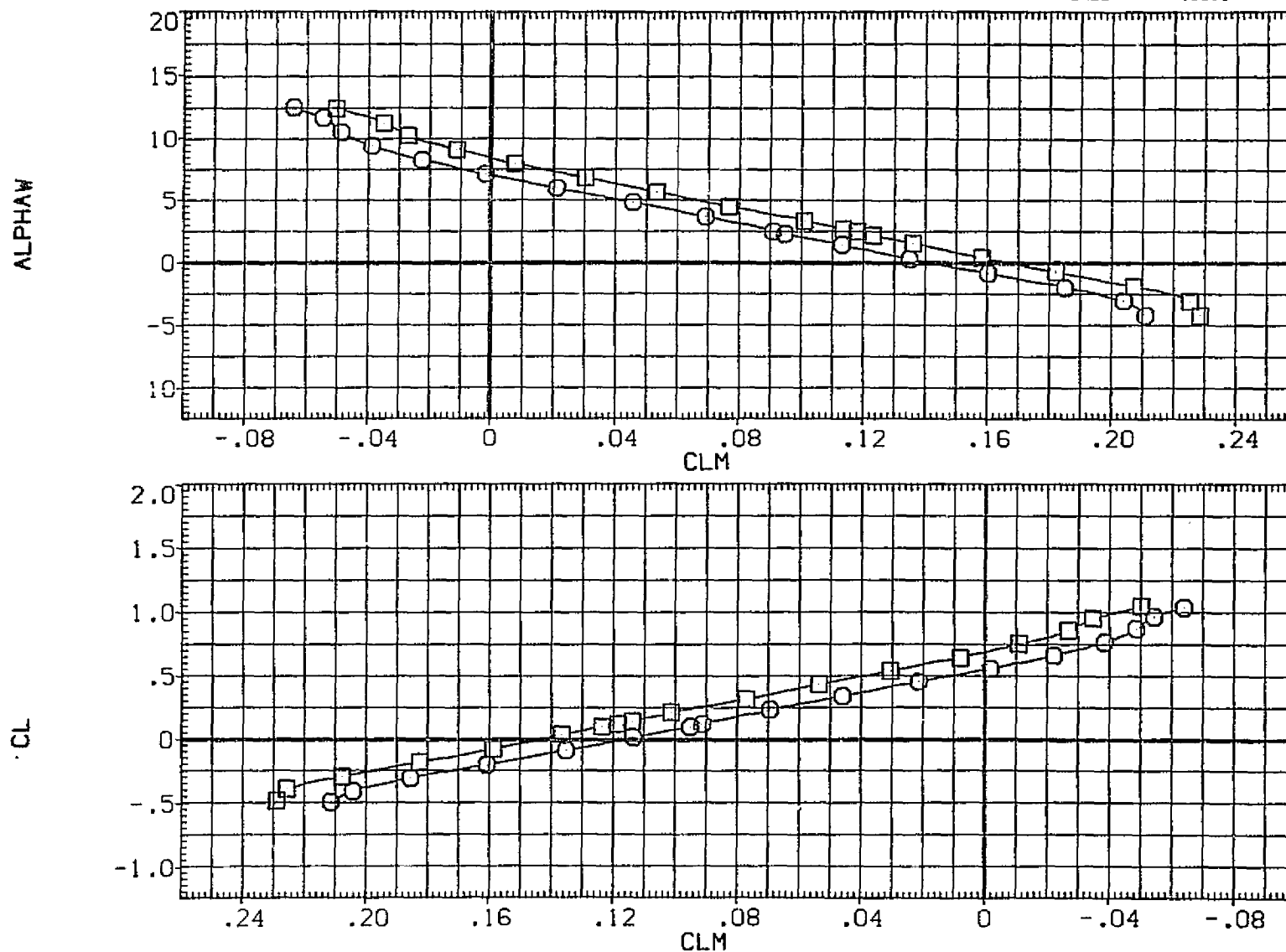


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION
(RGPO99)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	2.150	.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO6E)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	1.980	.000	6.000	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0900 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

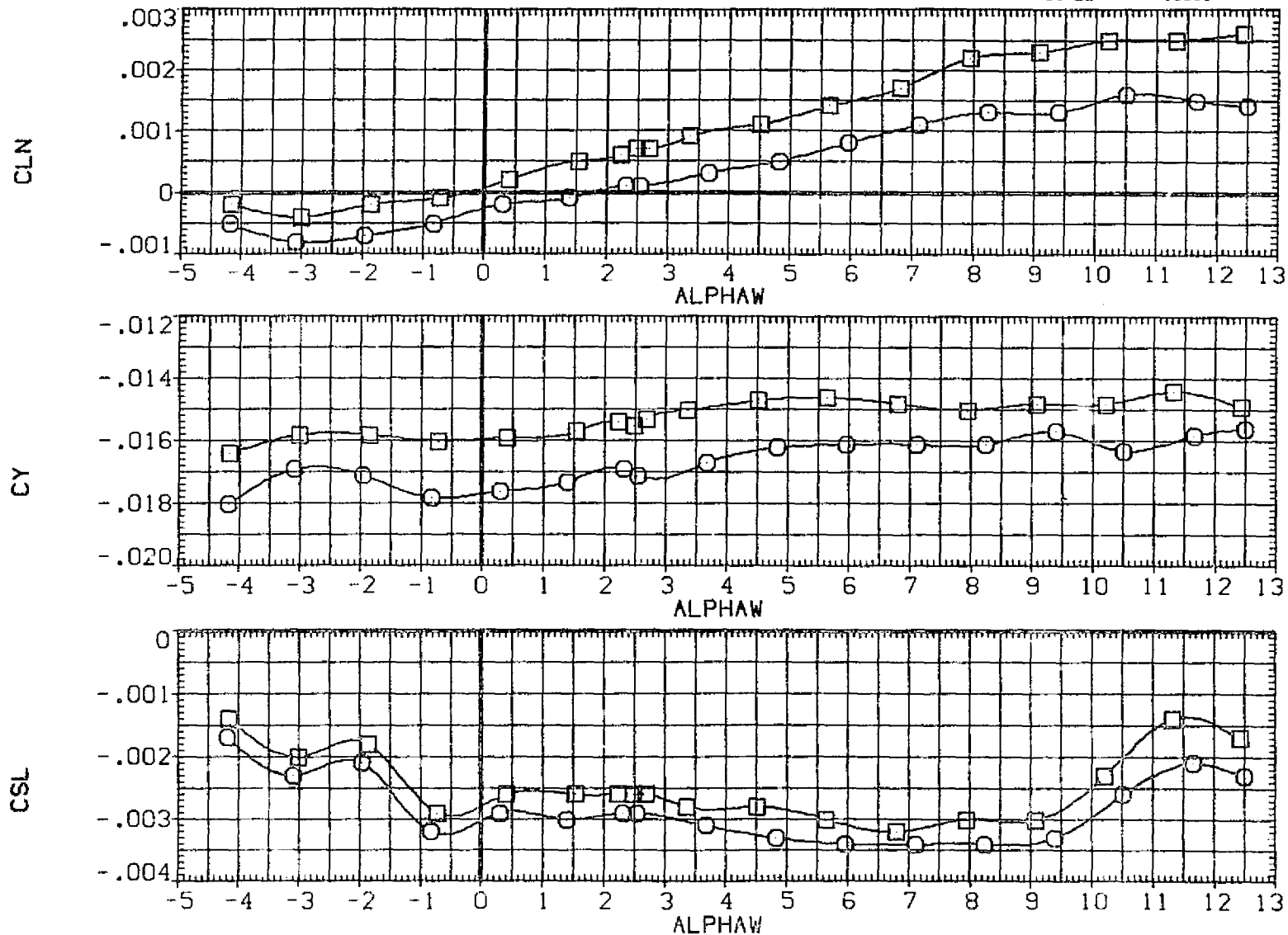


FIG. 34 TAILCONE EFFECTS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP132)	CAS K2H15.6.1V9.1S1-12 A1103.1/95-.30RBF8N24/26	4.950	.000	4.270	SREF	5500.0000 SQ.FT.
(RGP059)	CAS K2H15.6.1V9.1S1-12 A1103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF	327.8000 IN.
(RGP117)	CAS K2H15.6.1V9.1S1-12 A1103.1/95.3 0RBF8N24/28	4.750	.00	8.110	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

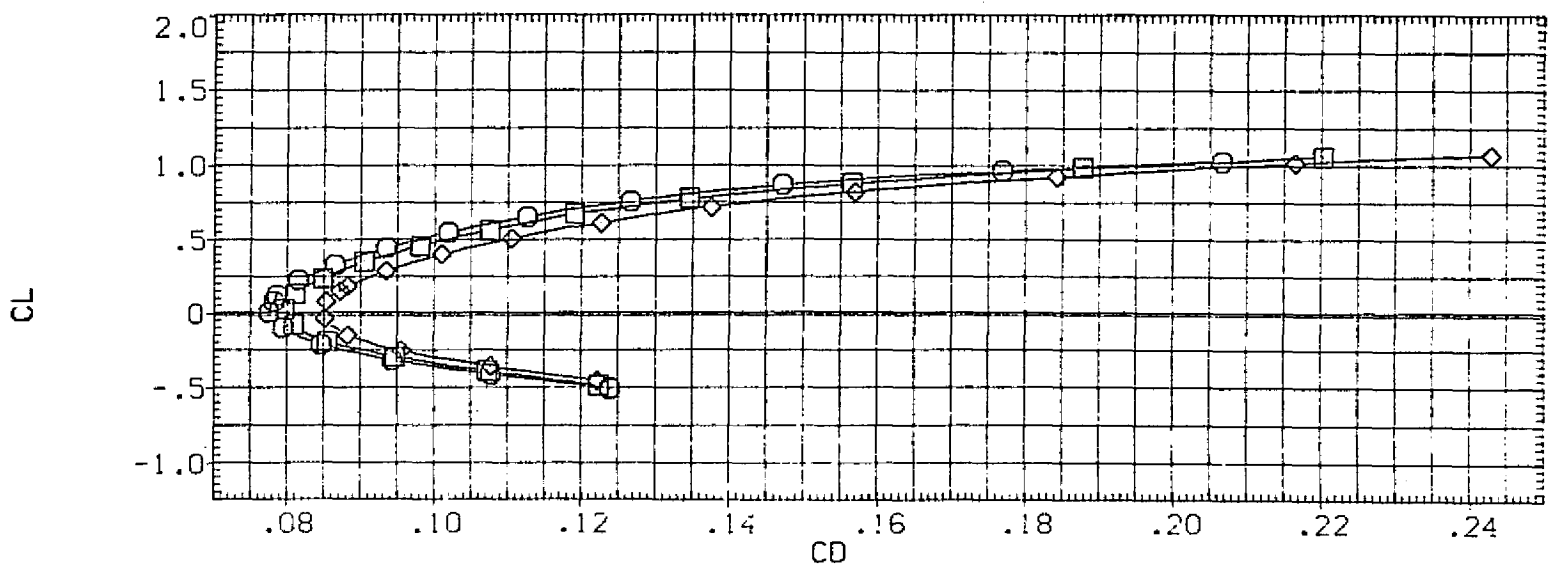
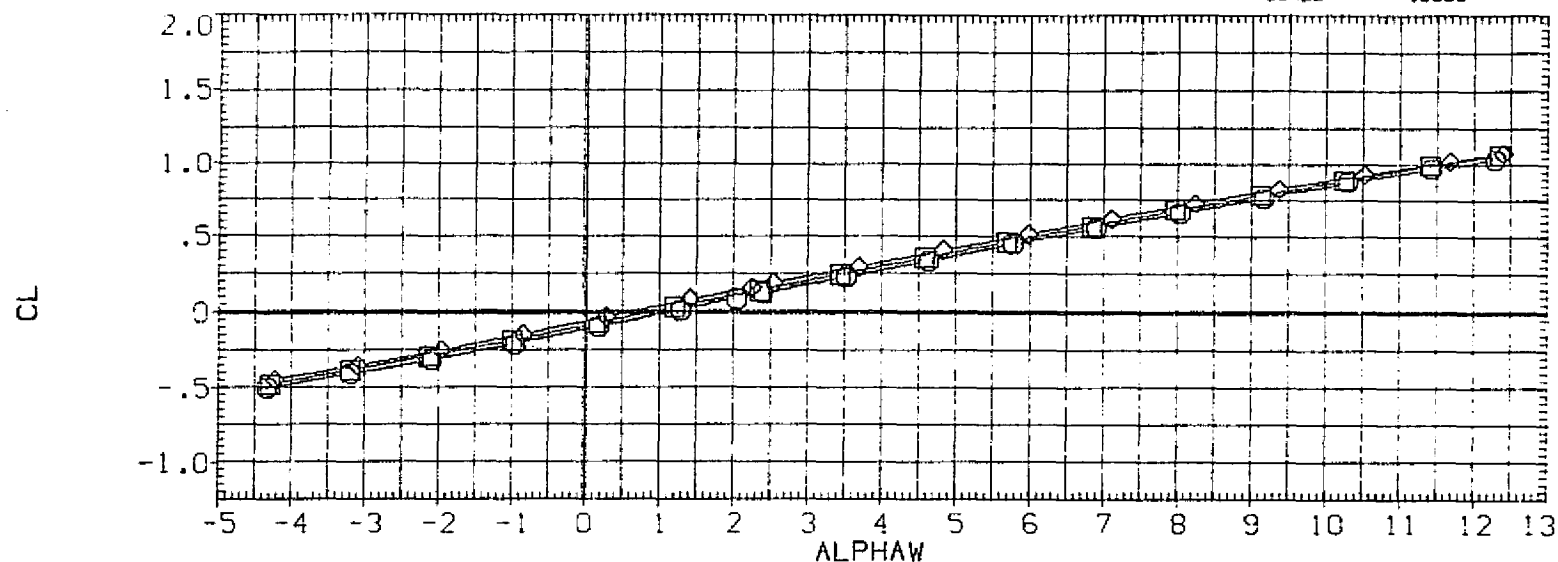


FIG. 35 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER 5
 (A)MACH = .80

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP132)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.950	.000	4.270	SREF 5500.0000 50.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 0RBF8N24/28	4.750	.000	8.110	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

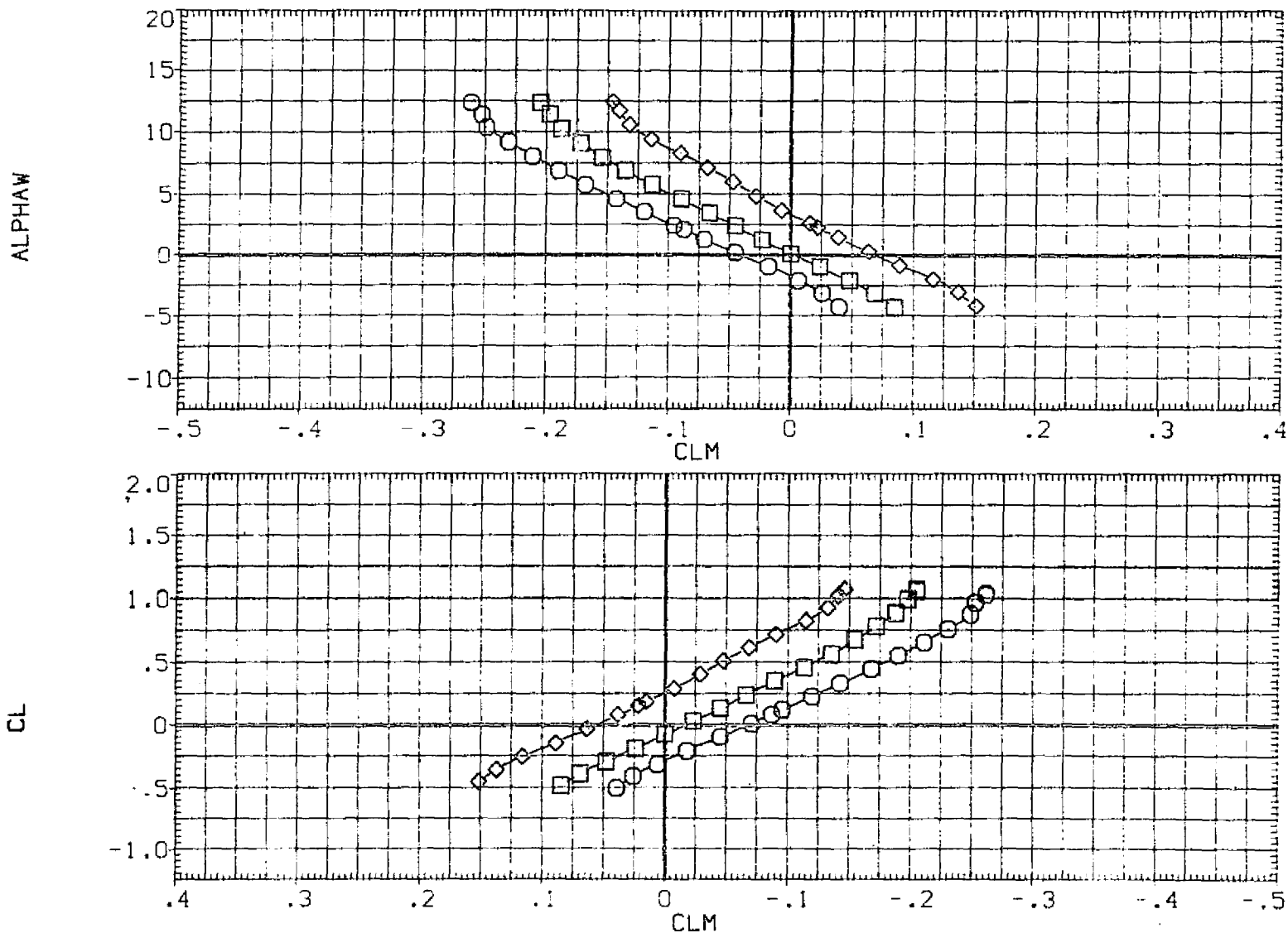


FIG. 35 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER 5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP132)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.950	.000	4.270	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 0RBF8N24/28	4.750	.000	8.110	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

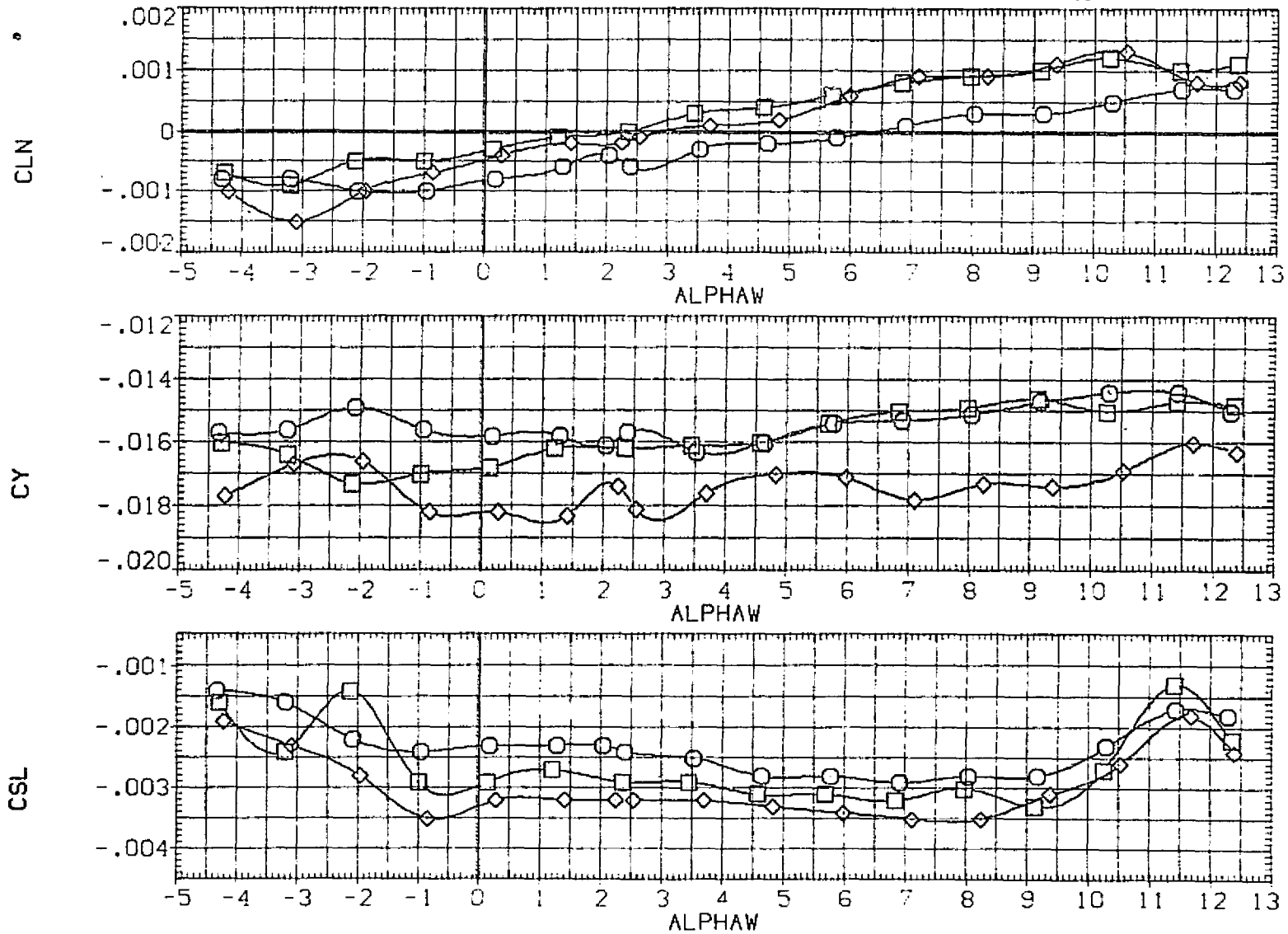


FIG. 35 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER 5
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	1ORB	ELEVON	REFERENCE INFORMATION		
(RGPO69)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	5.000	SREF	5500.0000	50.FT.
(RGPO79)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	.000	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

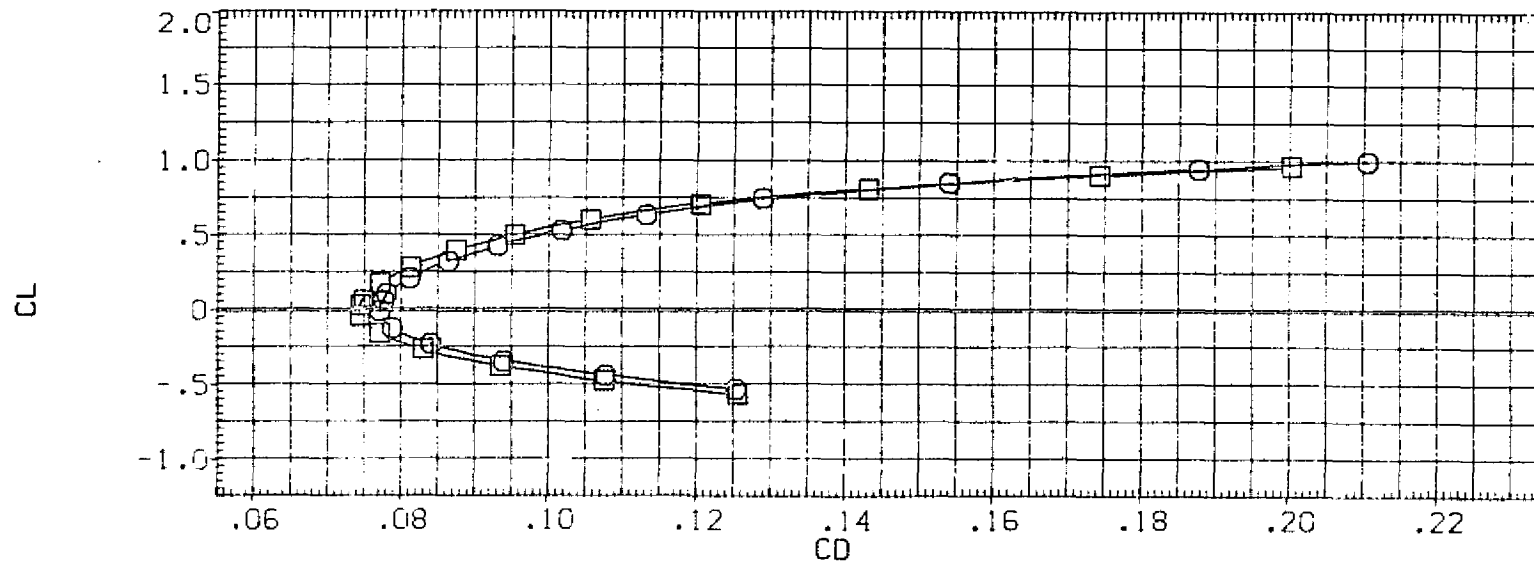
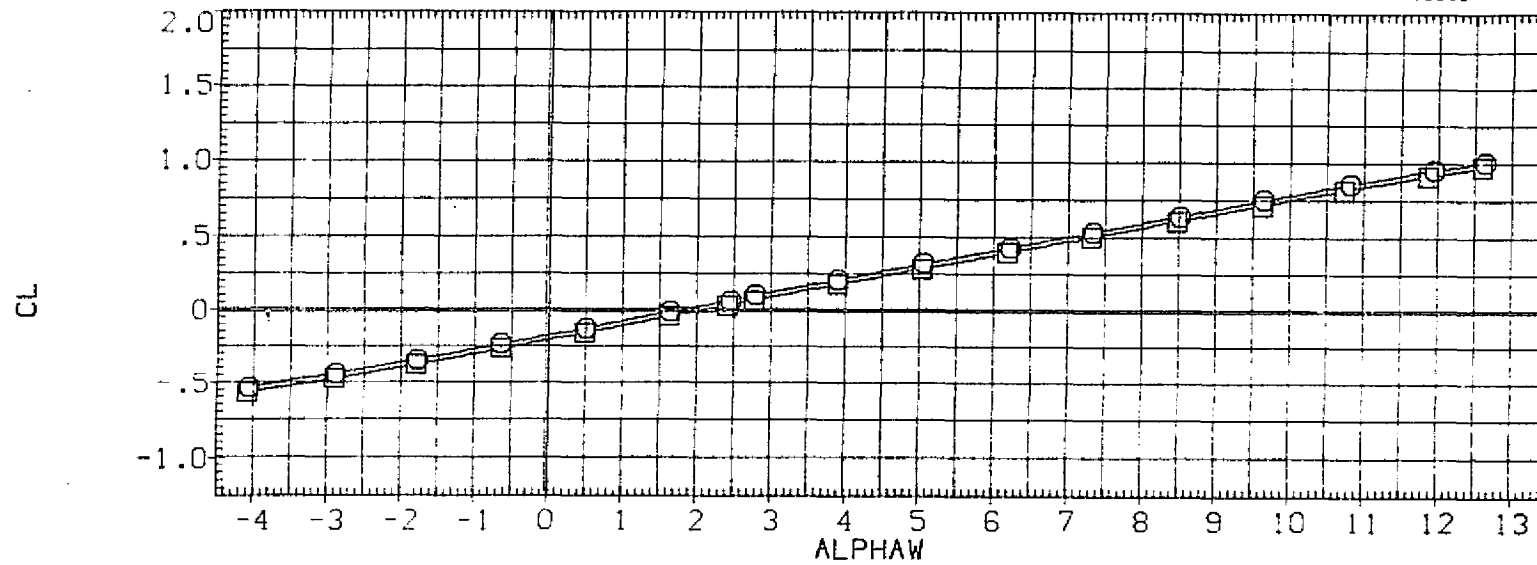


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	ICRB	ELEVON	REFERENCE INFORMATION	
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	5.000	SREF	5500.0000 SQ. FT.
(RGP079)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	.000	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMPP	1339.9000 IN. XC
					YMPP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

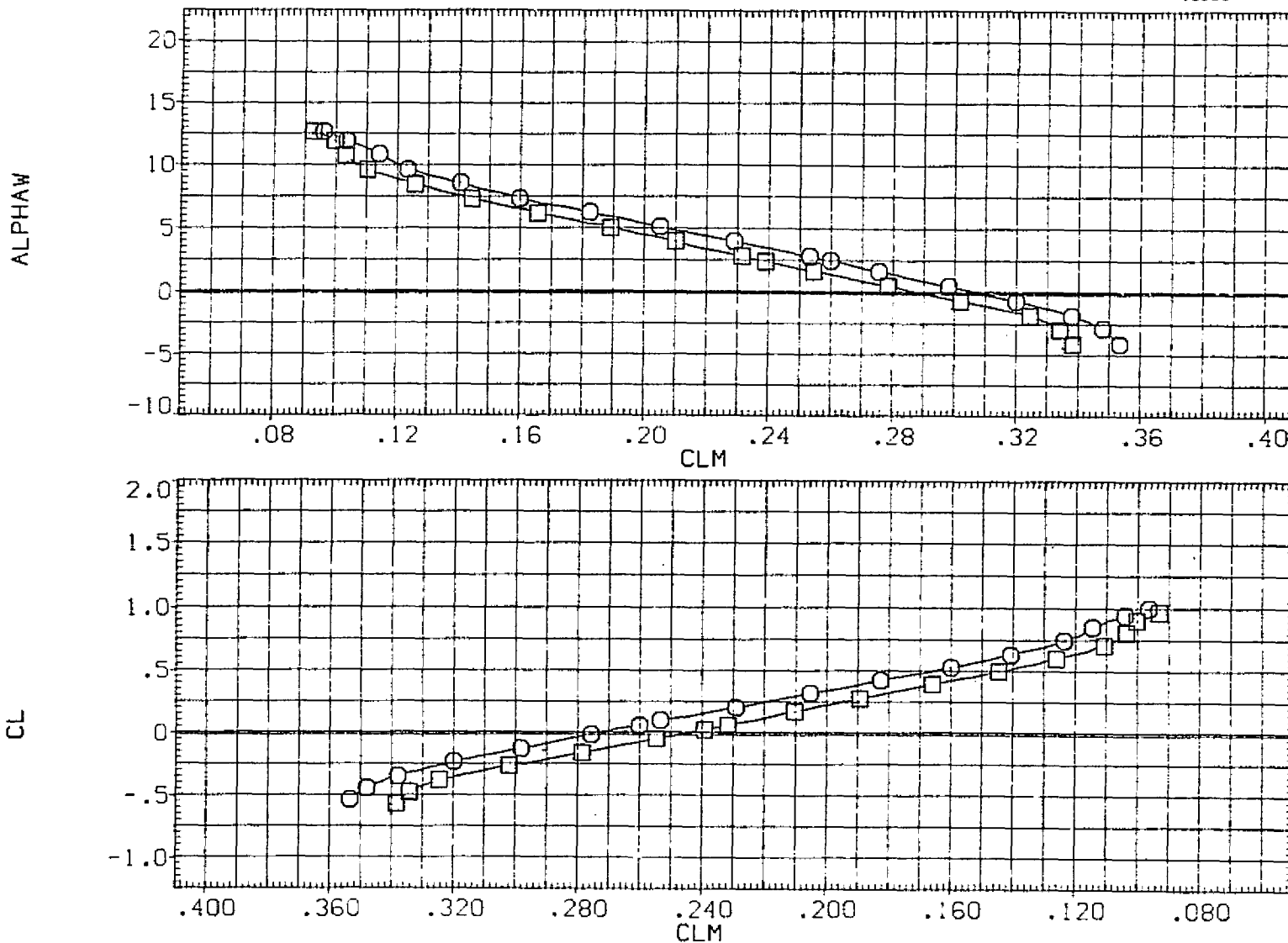


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	5.000	SREF 5500.0000 SQ.FT.
(RGP079)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	6.000	.000	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

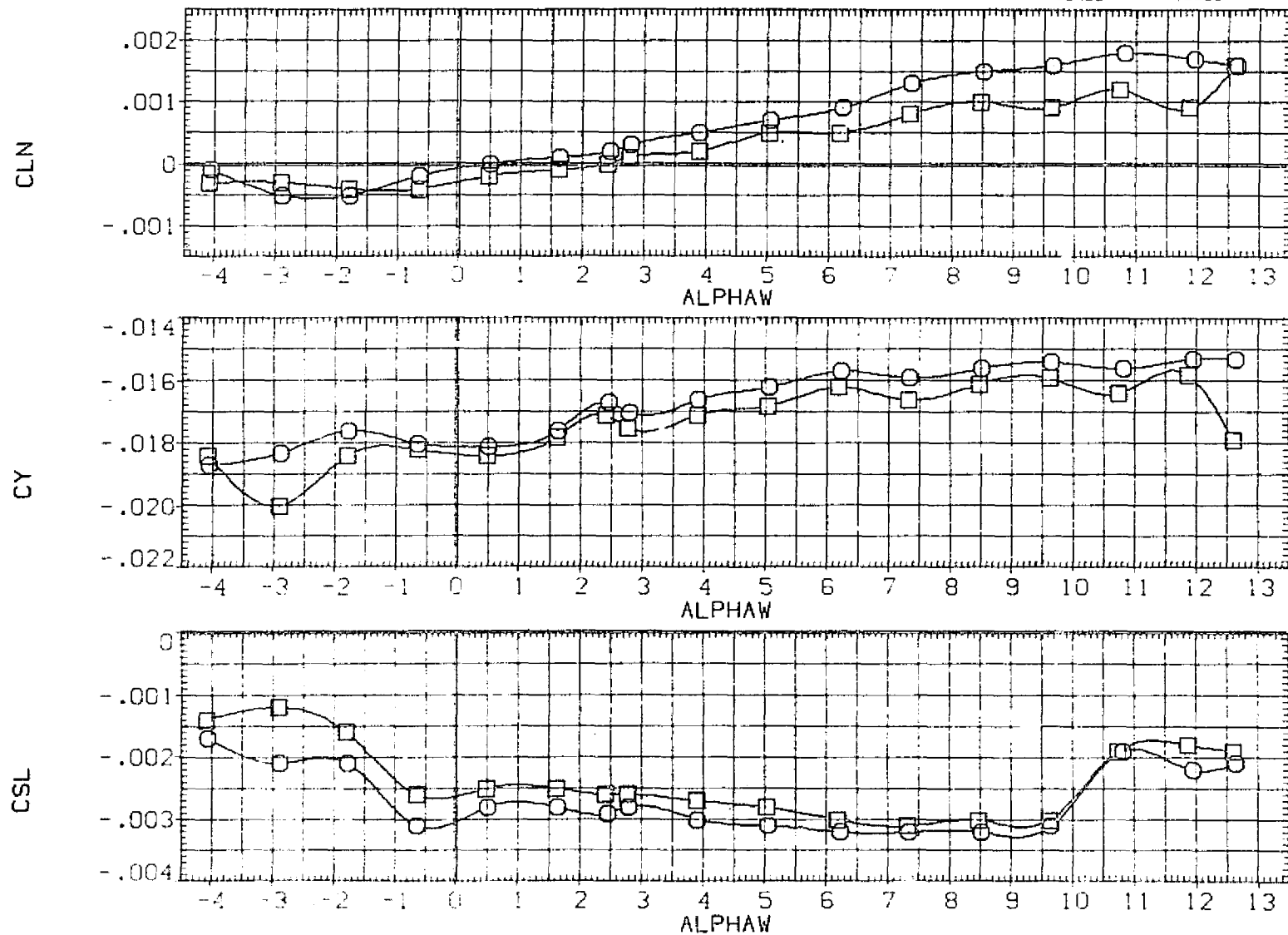


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	ICRB	ELEVON	REFERENCE INFORMATION
(RG067)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	6.000	5.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0300 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300
(RG076)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	6.000	.000	

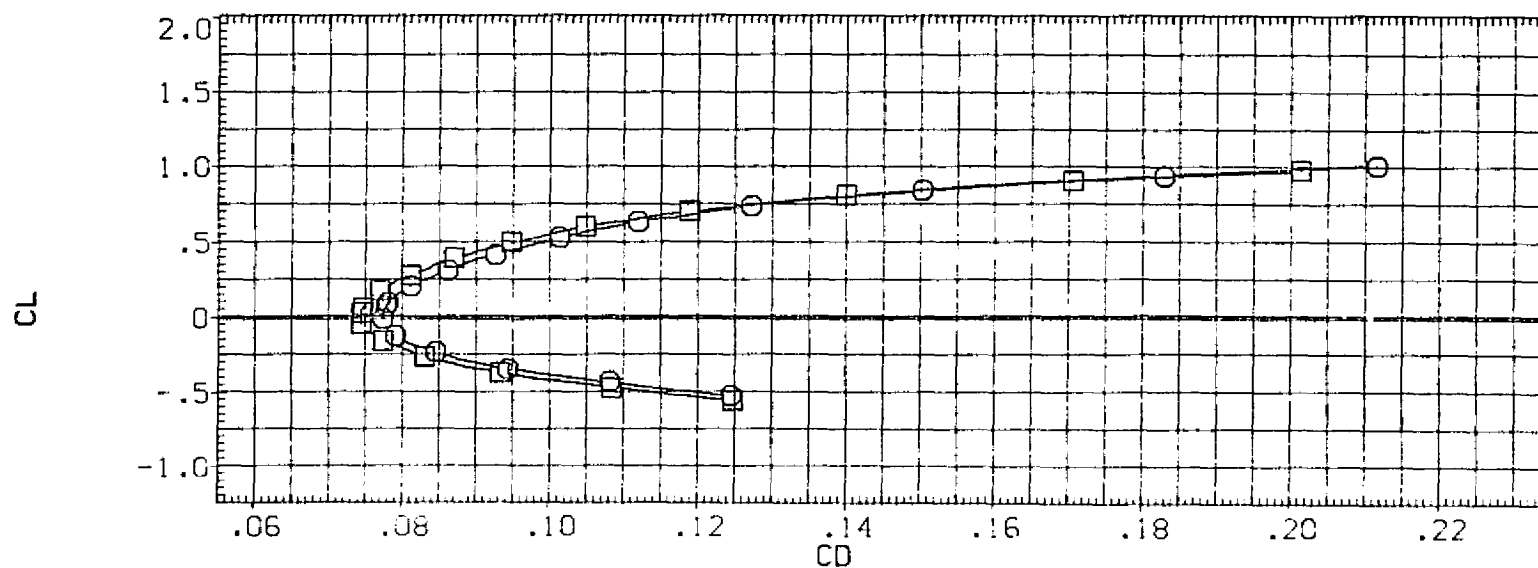
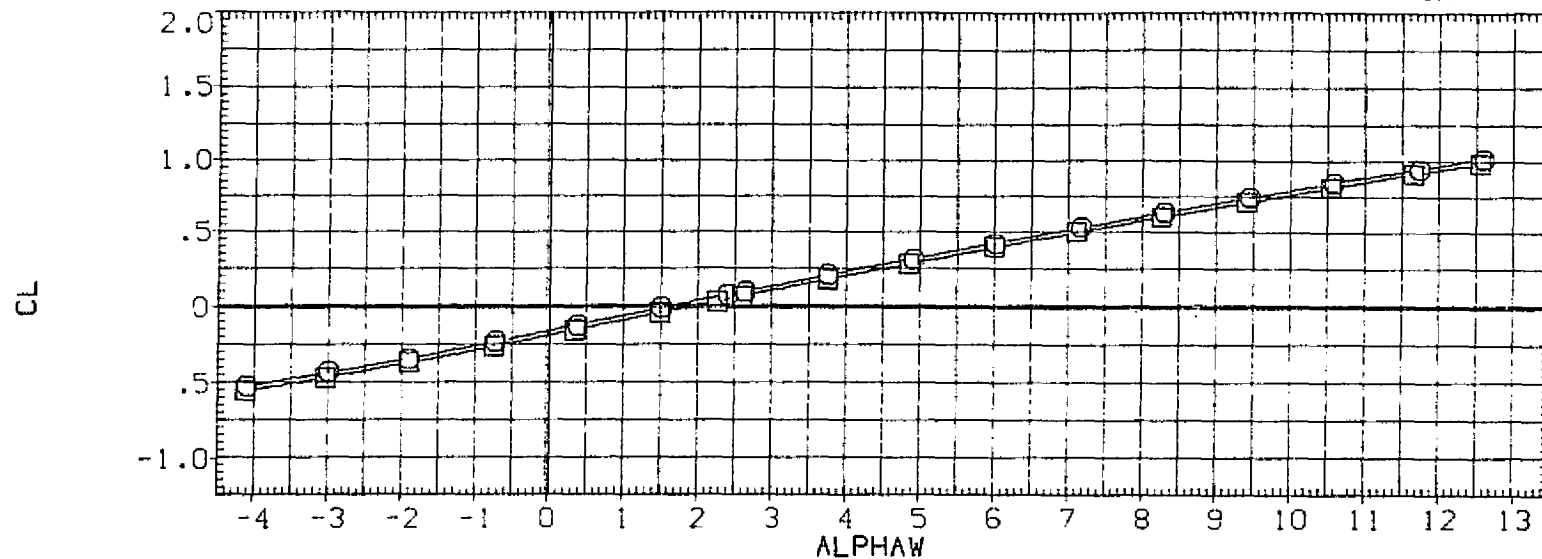


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGPO67)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	.040	6.000	5.000	SREF 5500.0000 SQ.FT.
(RGPO76)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	.000	6.000	.000	IREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

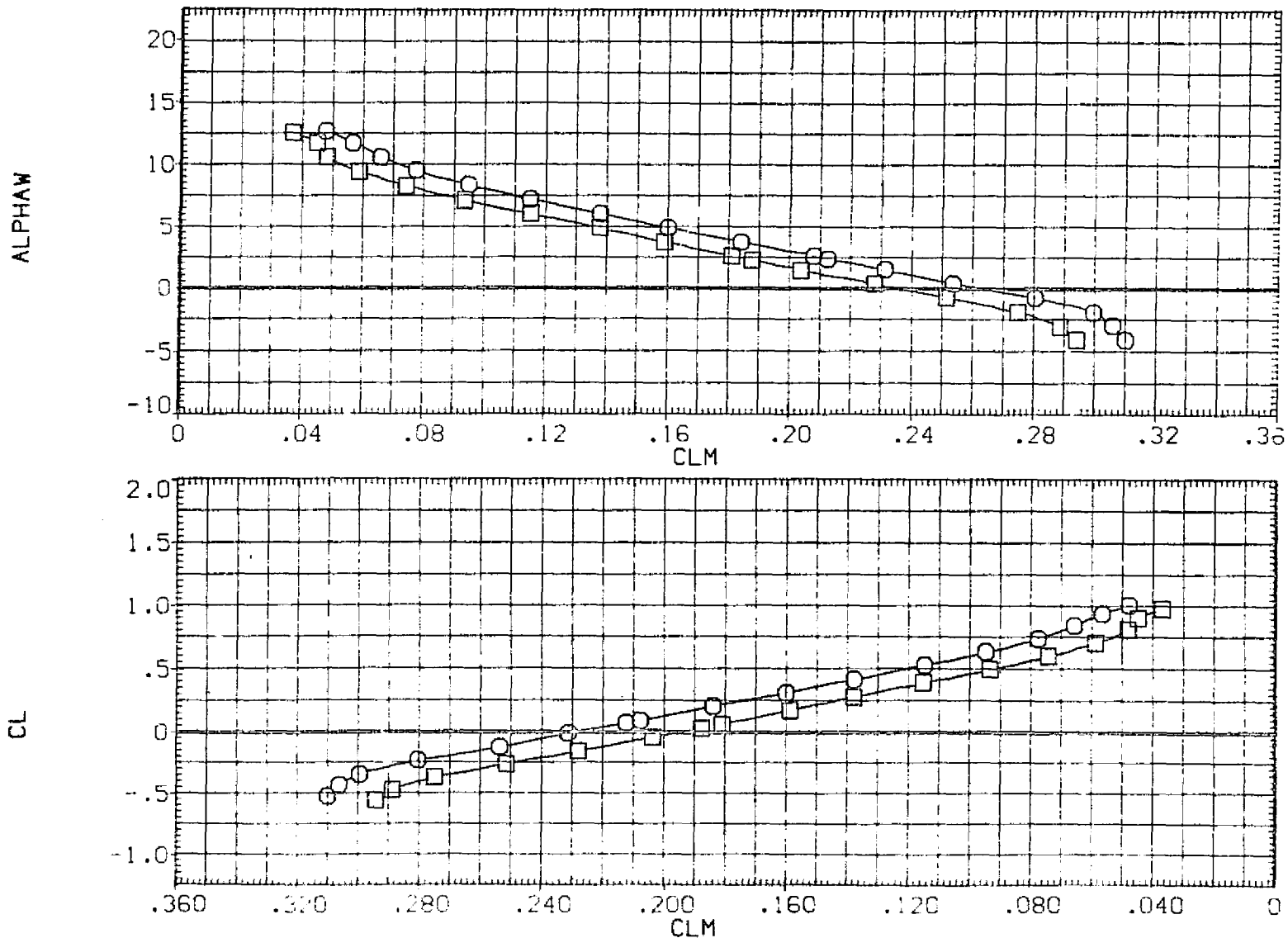


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP067)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.040	6.000	5.000	SREF	5500.0000	SG.FT.
(RGP076)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	.000	6.000	.000	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

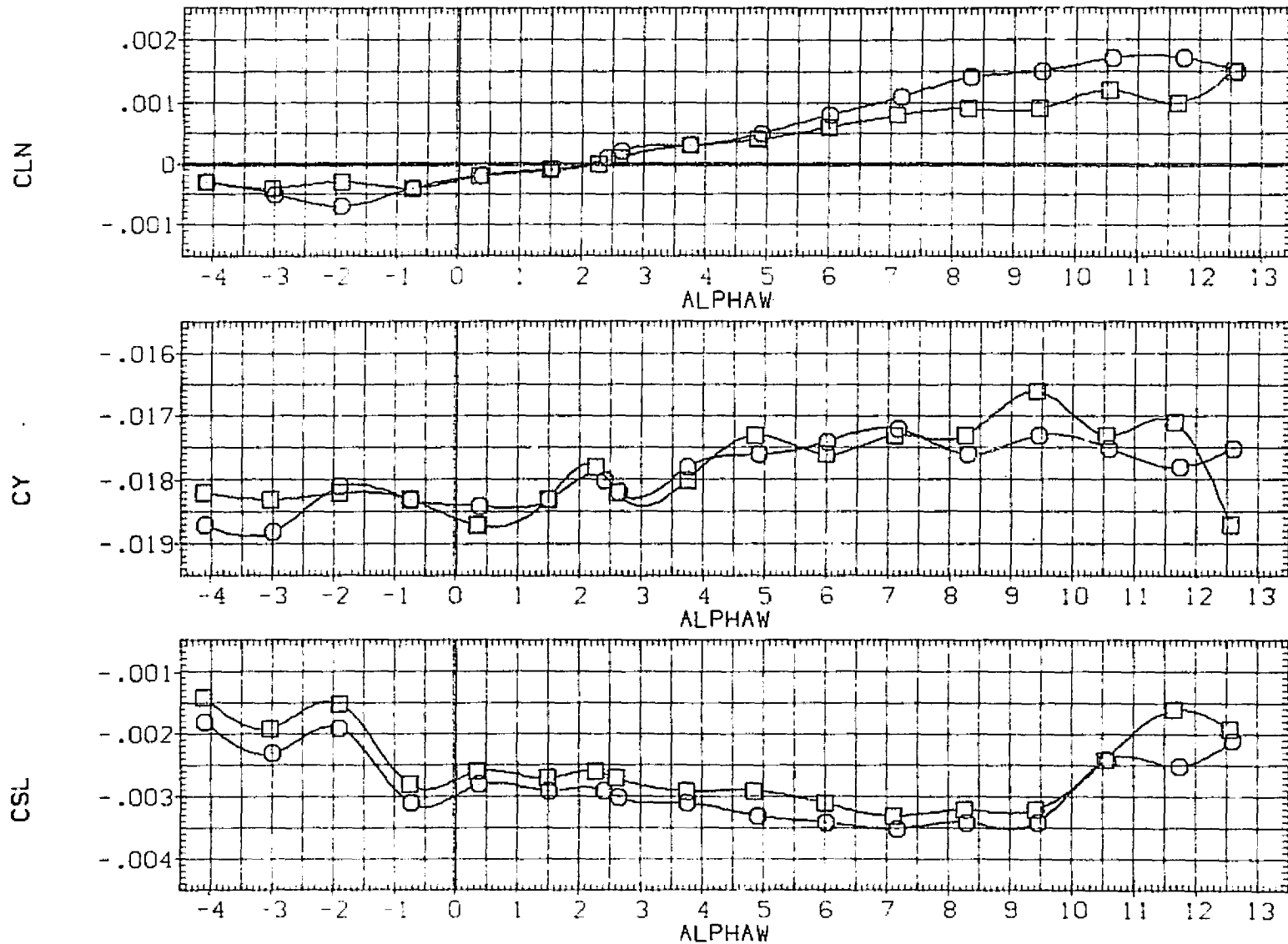


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP068)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	2.130	6.000	5.000	SREF 5590.0000 SQ.FT.
(RGP077)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBFBN24/28	2.210	6.000	.000	LREF 32,8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

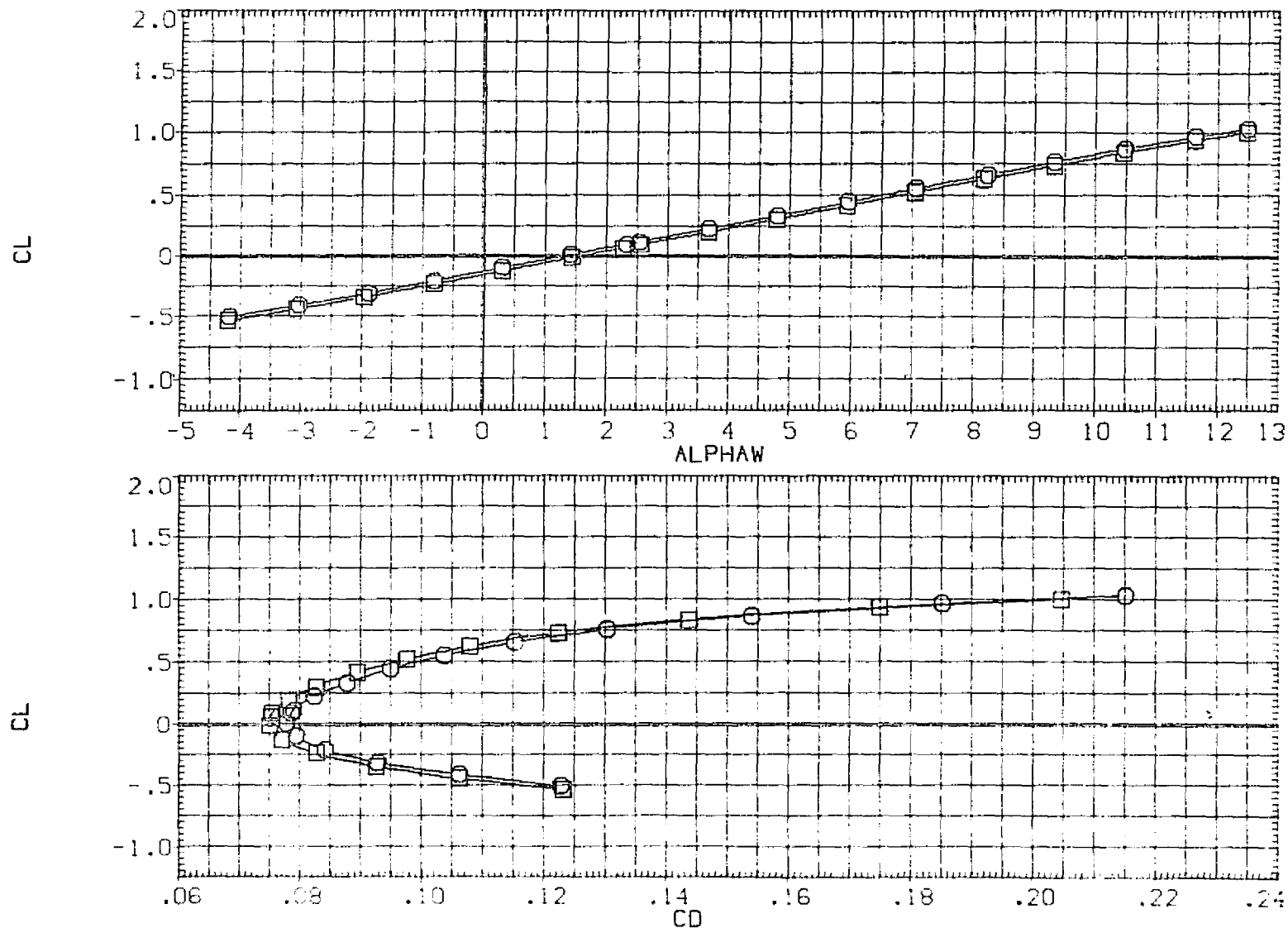


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGPO68)	CA6 K2H15.6,1V9,1S1-12 AT103.1/95-.30RBF8N24/28	2.130	6.000	5.000	SREF 5500.0000 SQ.Ft. LREF 327.8000 IN. BREF 2348.0000 IN.
(RGPO77)	CA6 K2H15.6,1V9,1S1-12 AT103.1/95-.30RBF8N24/28	2.210	6.000	.000	XMRP 1339.9° JJ IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

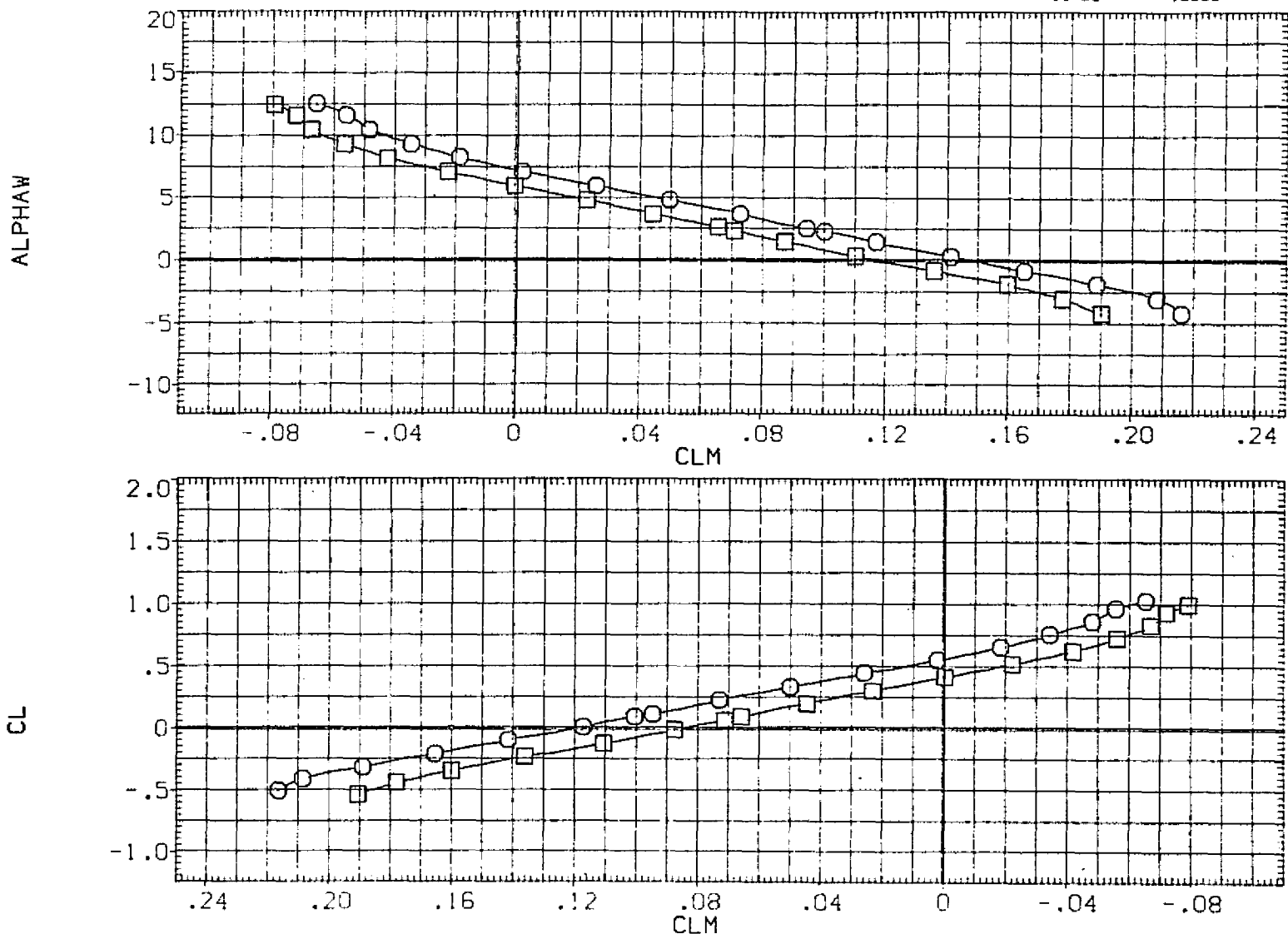


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IGRB	ELEVON	REFERENCE INFORMATION		
(RGP068)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	2.130	6.000	5.000	SREF	5500.0000	50.FT.
(RGP077)	CA6 K2H15.6.1V9.151-12 AT103.1/95-.30RBF8N24/28	2.210	6.000	.000	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.8000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

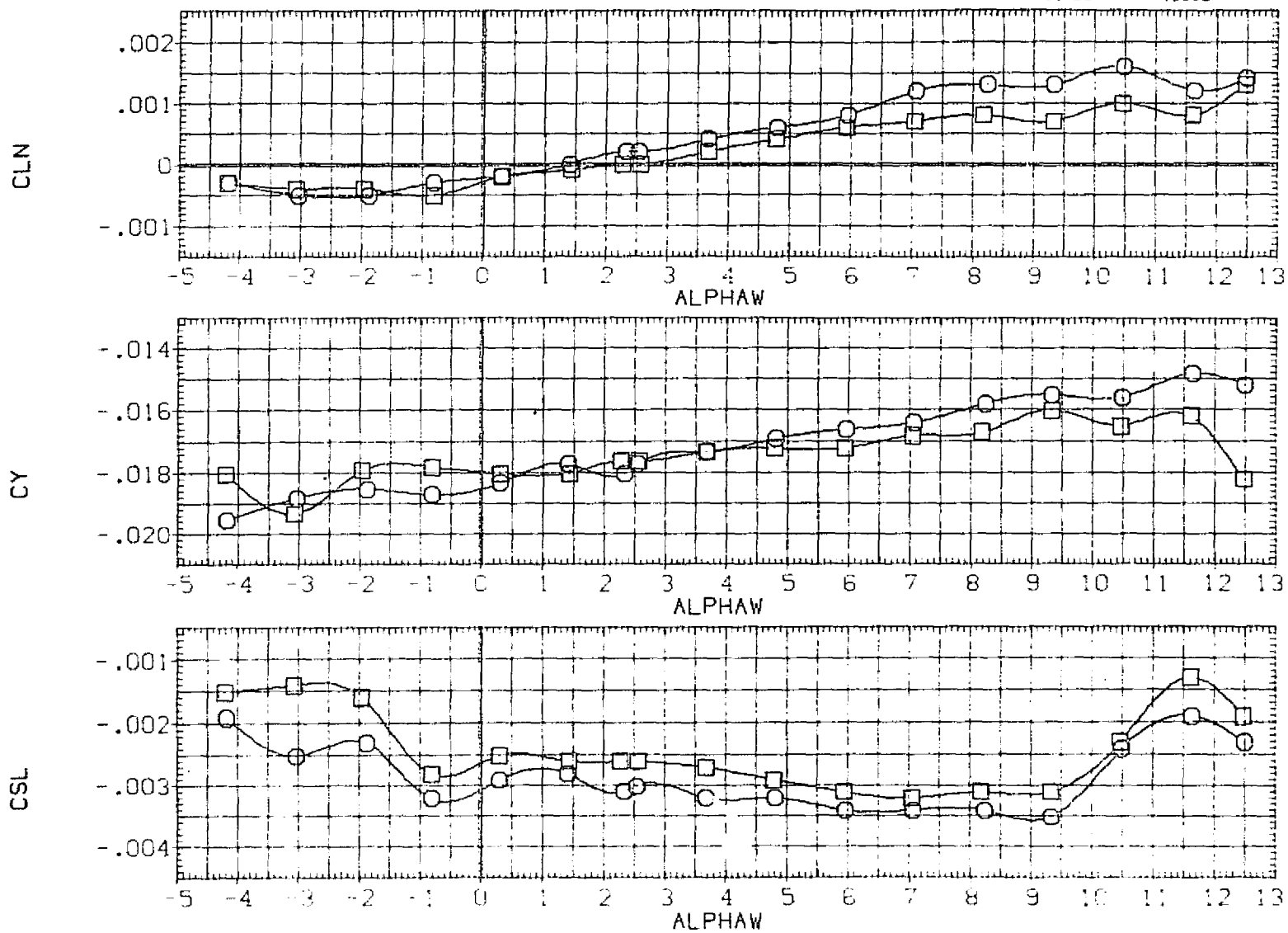


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGPO59)	□ CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF0N24/28	4.890	6.000	5.000	SREF 5500.0000 50.FT.
(RGPO78)	○ CAG K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF0N24/28	4.830	.000	LREF 327.8000 IN.	
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

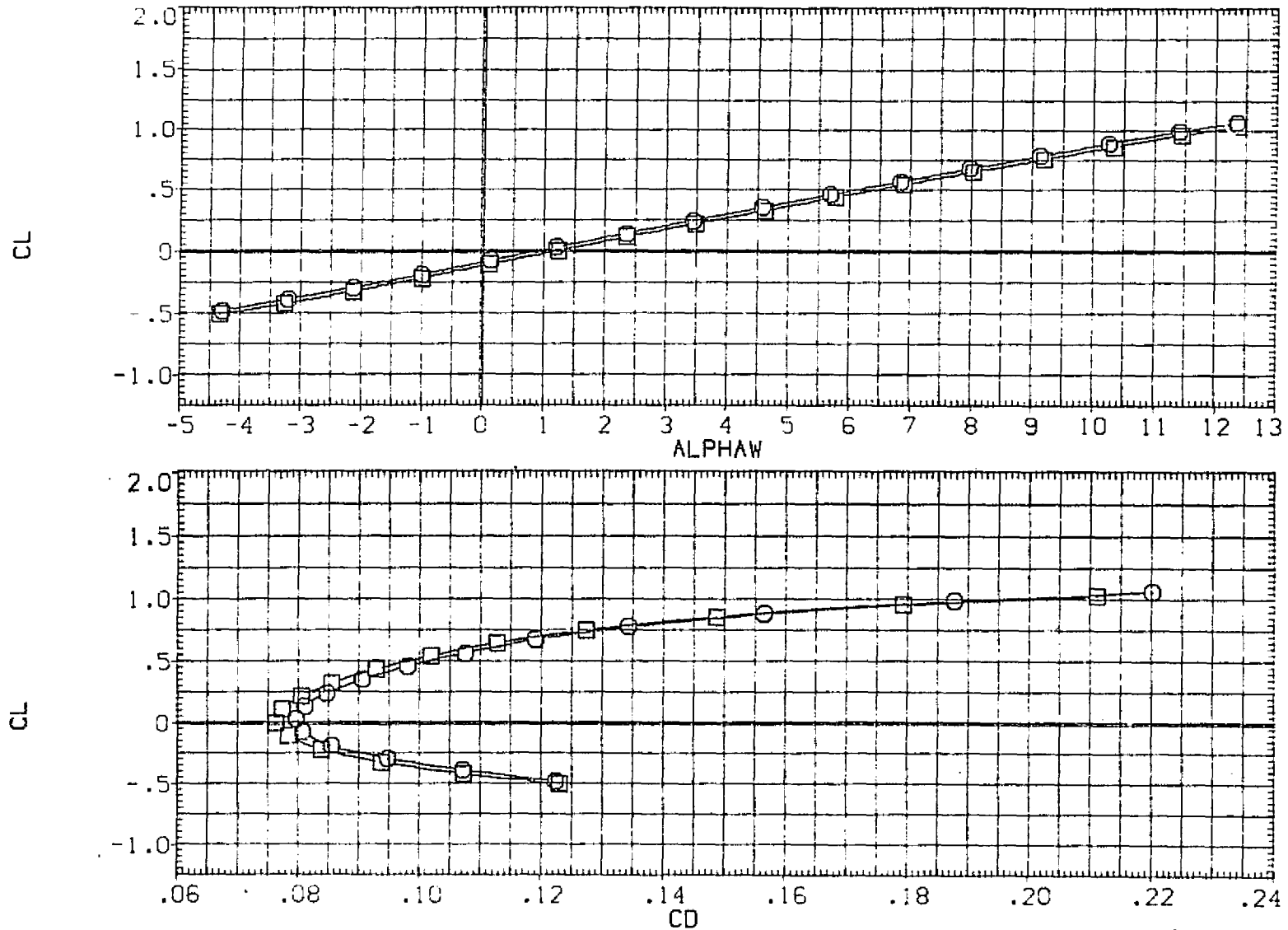


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RG-059) ○ CA6 K2H15.6.1V9.1S1-12 A7103.1795-.30RBF8N24/28
 (RG-078) □ CA6 K2H15.6.1V9.1S1-12 A7103.1795-.30RBF8N24/28

STAB ICRB ELEVON
 4.890 6.000 5.000
 4.830 6.000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ. FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

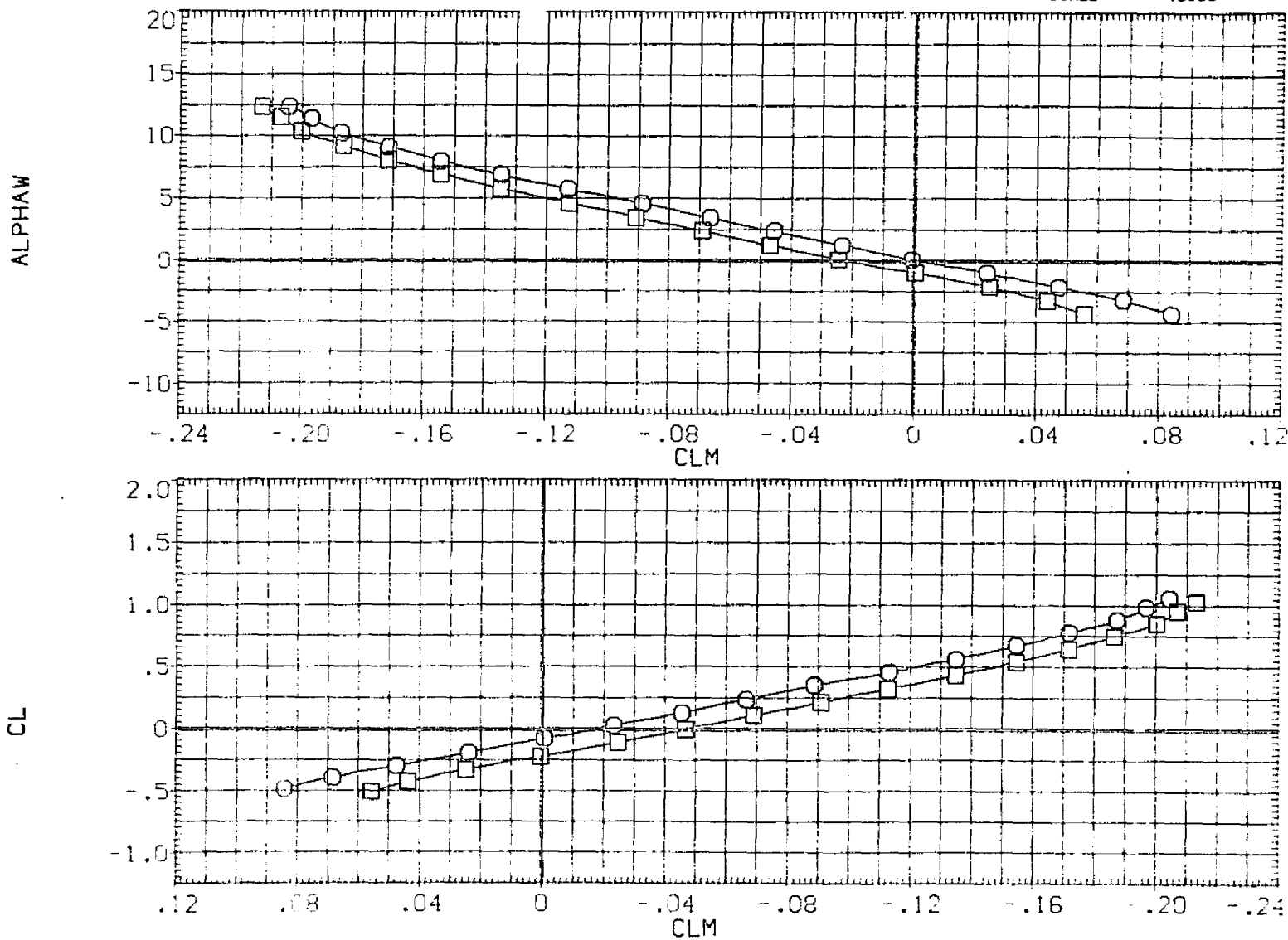


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	10RB	ELEVON	REFERENCE INFORMATION	
(RGPO59)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	6.000	5.000	SREF	5500.0000 SQ. FT.
(RGPO78)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.830	6.000	.000	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

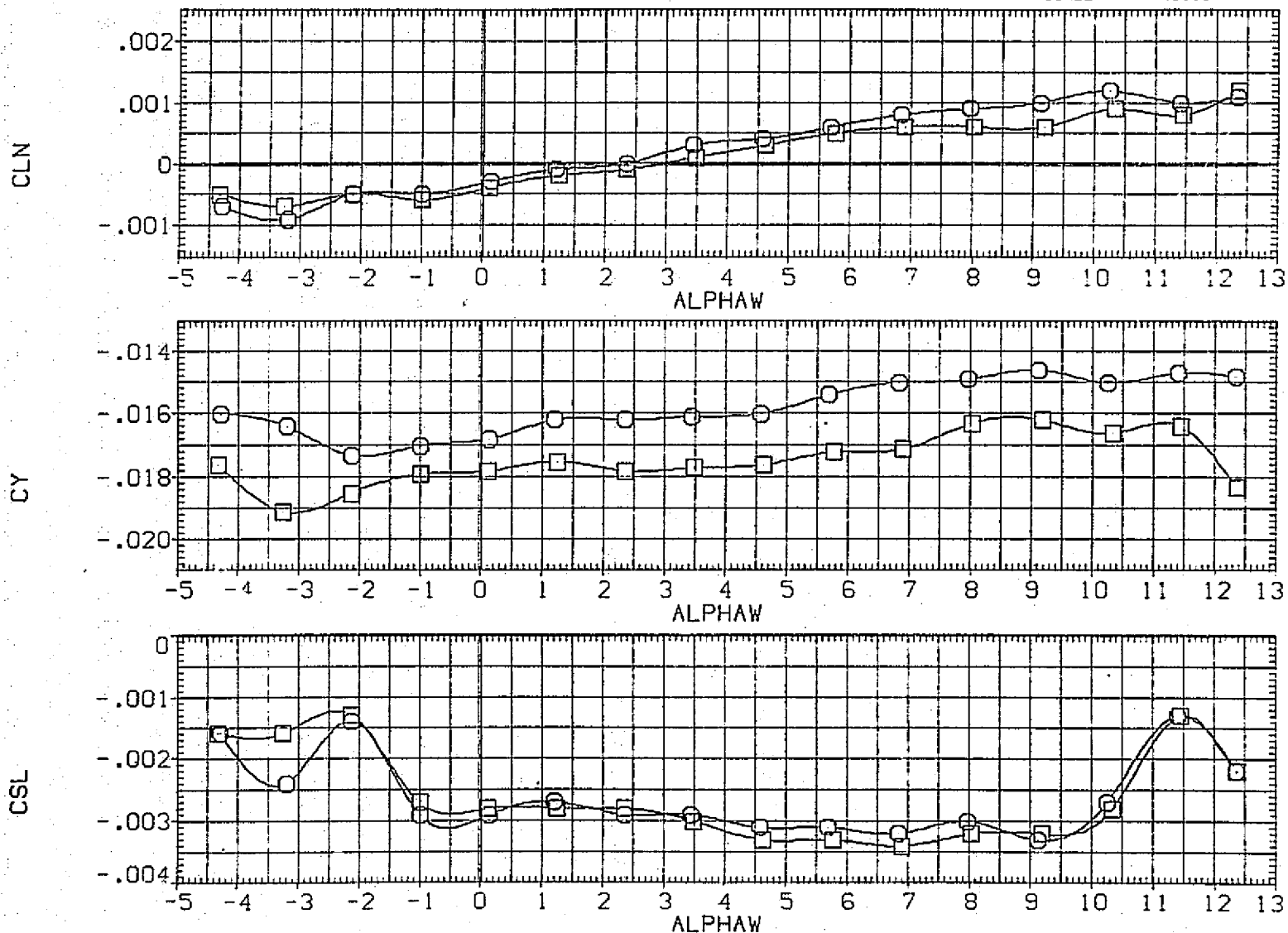


FIG. 36 ORBITER ELEVON EFFECTS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO98)	CAB K2 V9.1S1-12 AT103.1/105 DRB TC4	.000	.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO85)	CAB K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	.000	.000	6.000	LREF 327.8000 IN.
(RGPO86)	CAB K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	1.980	.000	6.000	BREF 2348.0000 IN.
(RGPOB4)	CAB K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	4.840	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

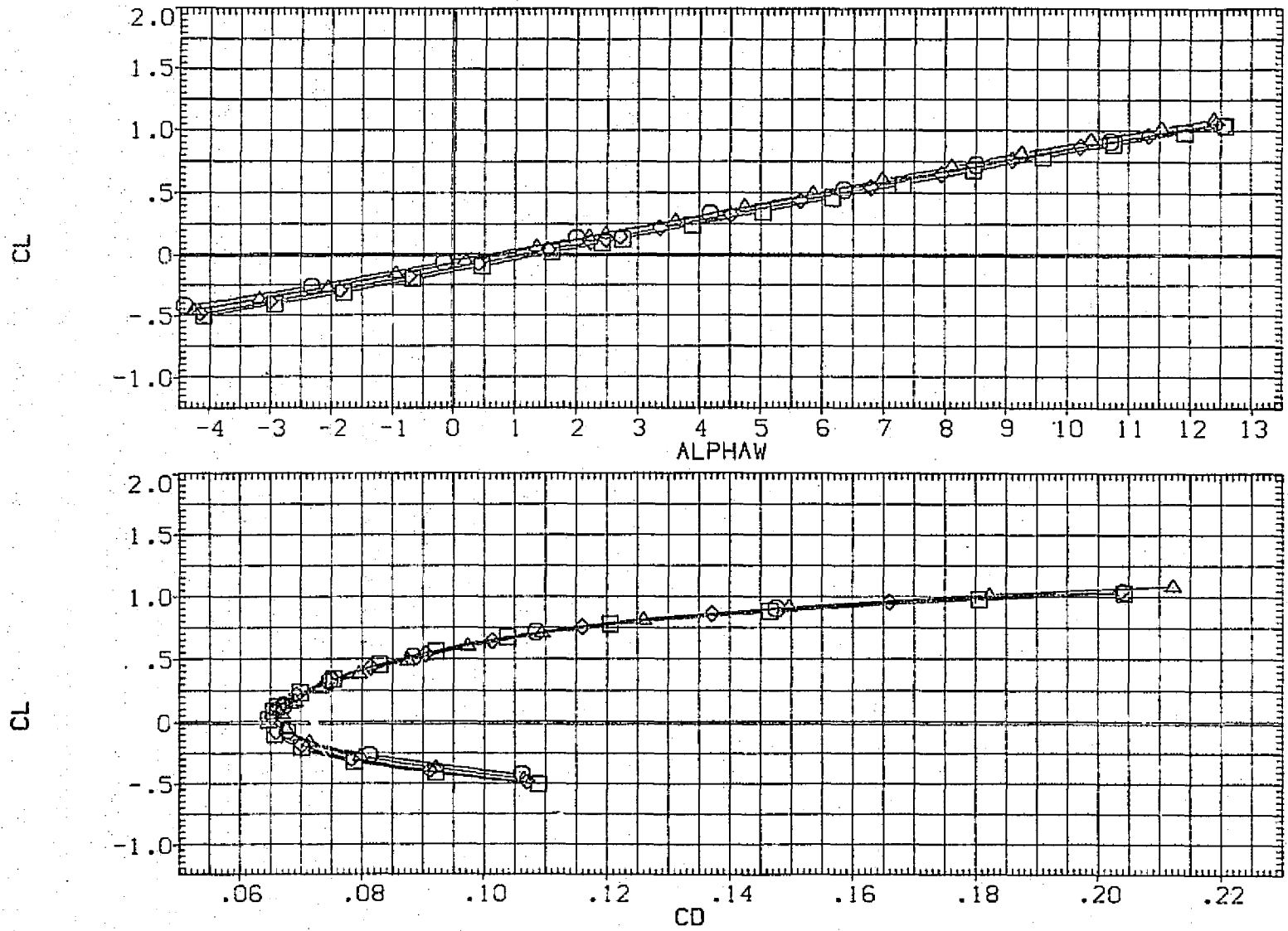


FIG. 37 STABILIZER EFFECTIVENESS ON LAUNCH CONFIGURATION
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP098)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4		.000	6.000	SREF 5500.0000 SQ.FT.
(RGP085)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	.000	6.000	LREF 327.8000 IN.
(RGP086)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	1.980	.000	6.000	BREF 2348.0000 IN.
(RGP084)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.840	.000	6.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

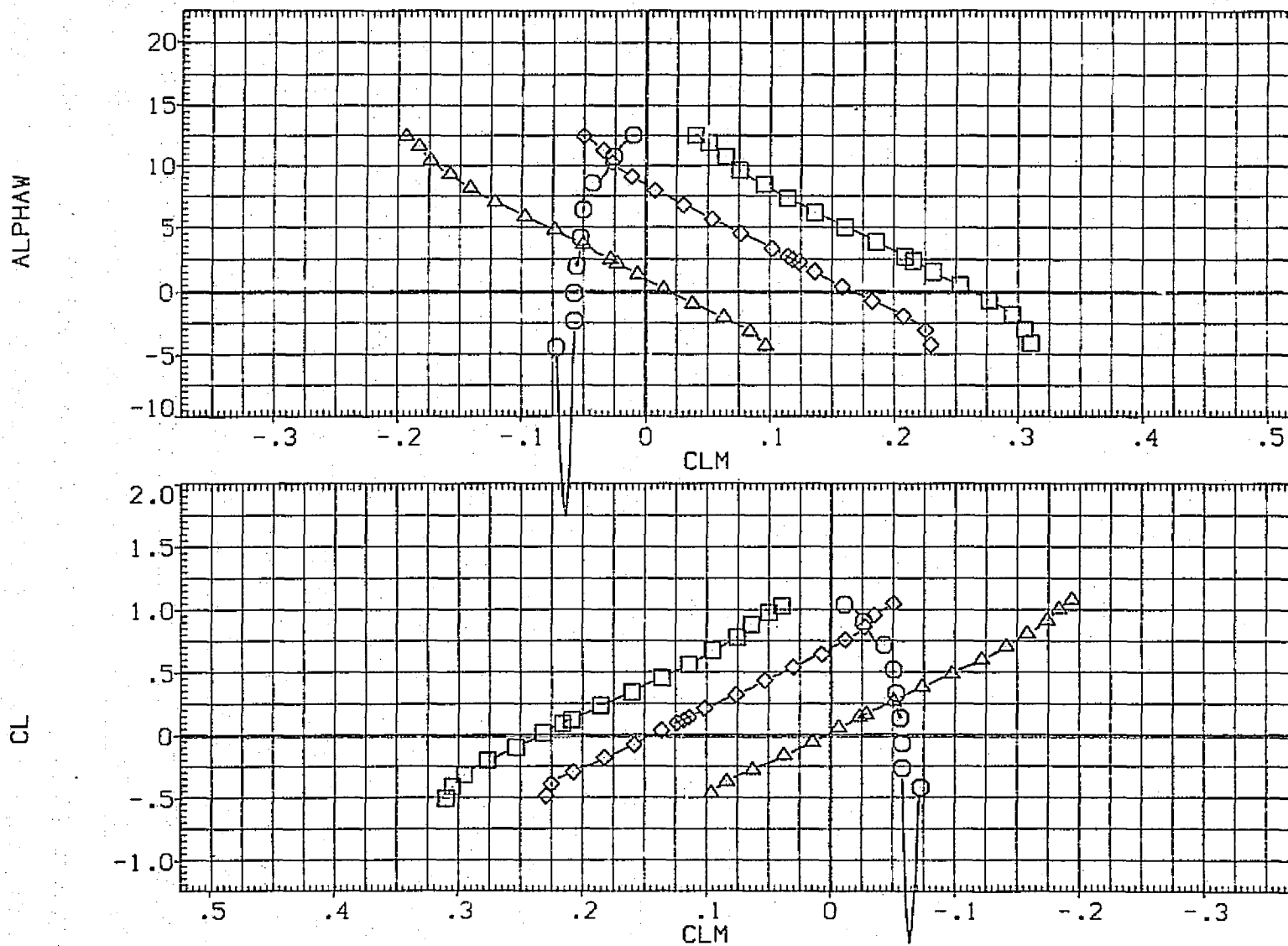


FIG. 37 STABILIZER EFFECTIVENESS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	10RB	REFERENCE INFORMATION
(RGP098)	□ CAS K2 V9.1S1-12 AT103.1/105 DRB TC4		.000	6.000	SREF 5500.0000 SQ.FT.
(RGP085)	○ CAS K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4		.000	6.000	LREF 327.8000 IN.
(RGP086)	◇ CAS K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	1.980	.000	6.000	BREF 2348.0000 IN.
(RGP084)	△ CAS K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	4.840	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

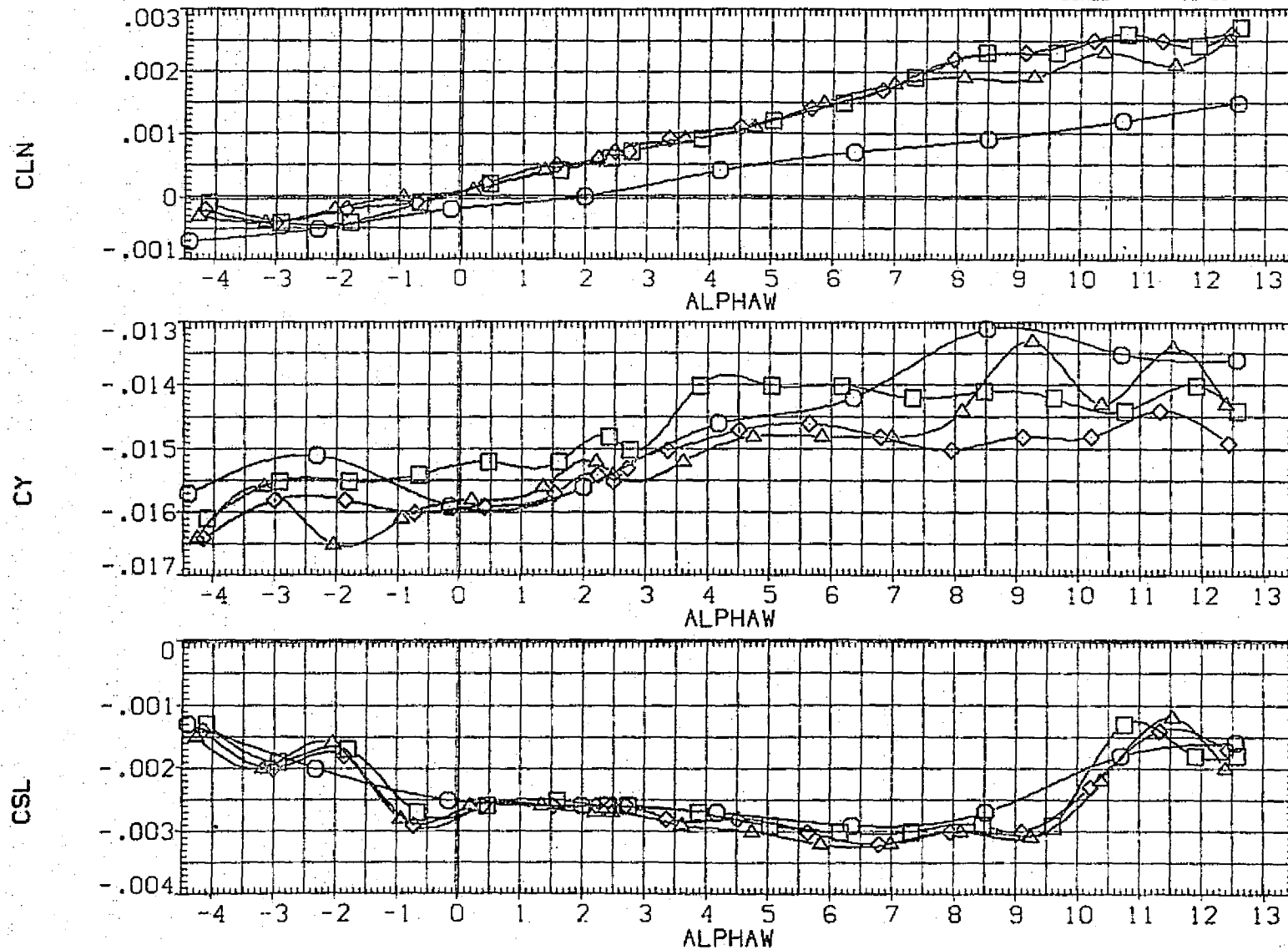


FIG. 37 STABILIZER EFFECTIVENESS ON LAUNCH CONFIGURATION

(A)MACH = .60

PAGE 210

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO87)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGPO84)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.840	.000	6.000	LREF 327.8000 IN.
(RGPO89)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	2.000	6.000	BREF 2348.0000 IN.
(RGPO88)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	4.000	6.000	XMRP 1339.9000 IN. XC
(RGPO90)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	6.000	6.000	YMRP .0000 IN. YC
(RGPO91)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

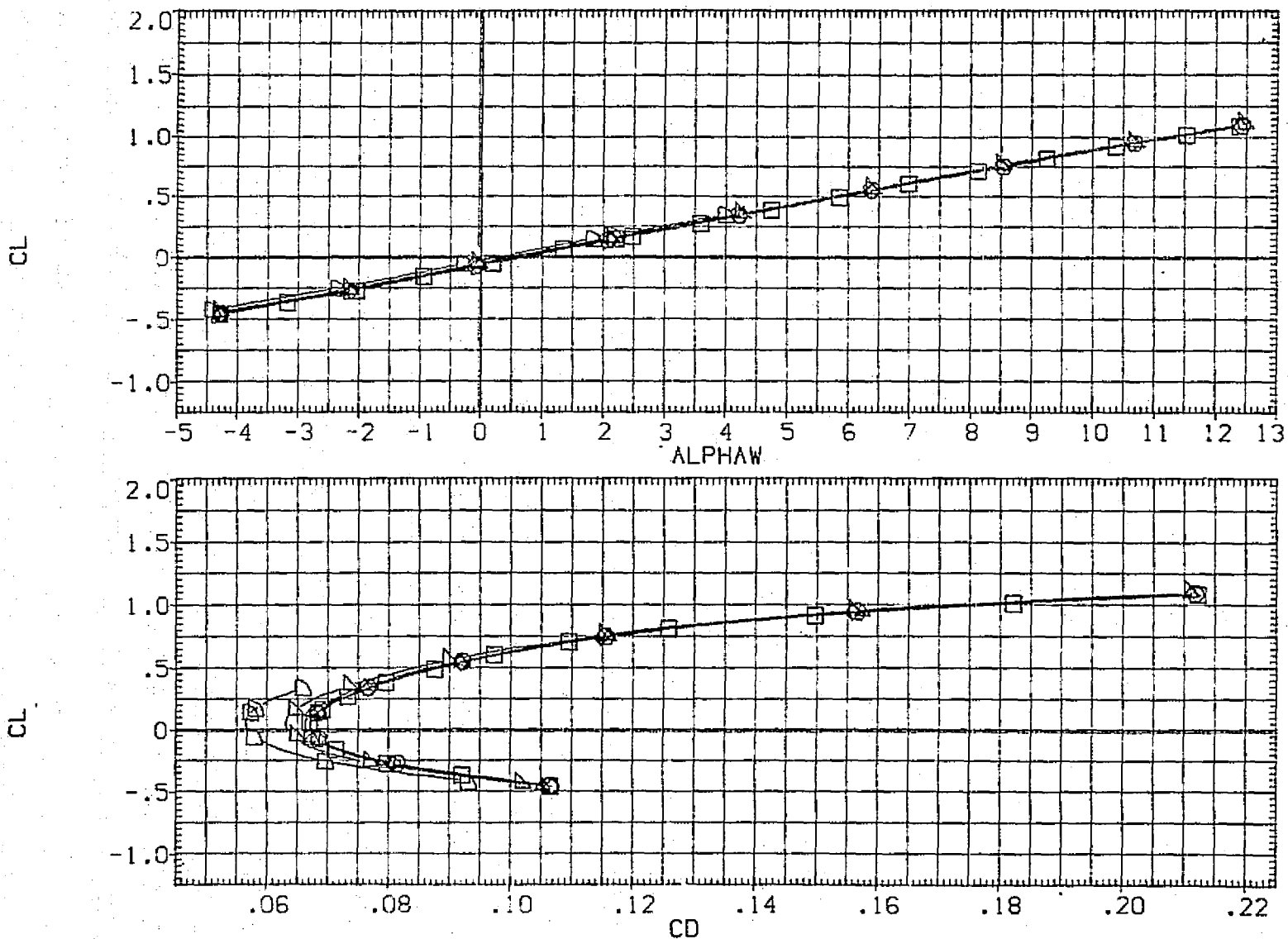


FIG. 38 LATERAL-DIRECTIONAL STABILITY OF LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP087)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP084)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.840	.000	6.000	LREF 327.8000 IN.
(RGP089)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	2.000	6.000	BREF 2348.0000 IN.
(RGP088)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP090)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	6.000	6.000	YMRP .0000 IN. YC
(RGP091)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

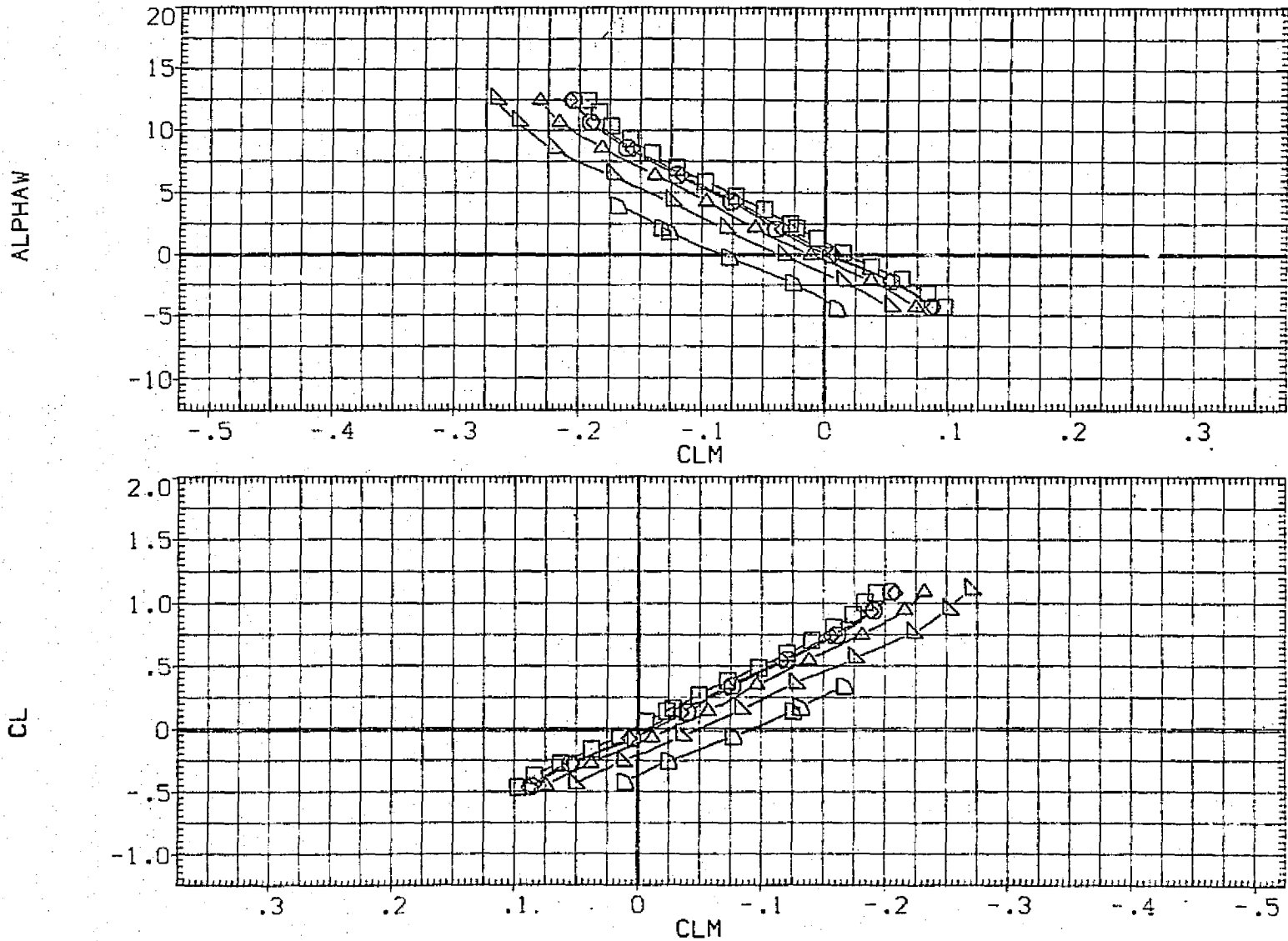


FIG. 38 LATERAL-DIRECTIONAL STABILITY OF LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP087)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP084)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.840	.000	6.000	LREF 327.8000 IN.
(RGP089)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	2.000	6.000	BREF 2348.0000 IN.
(RGP088)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP090)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	6.000	6.000	YMRP .0000 IN. YC
(RGP091)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.850	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

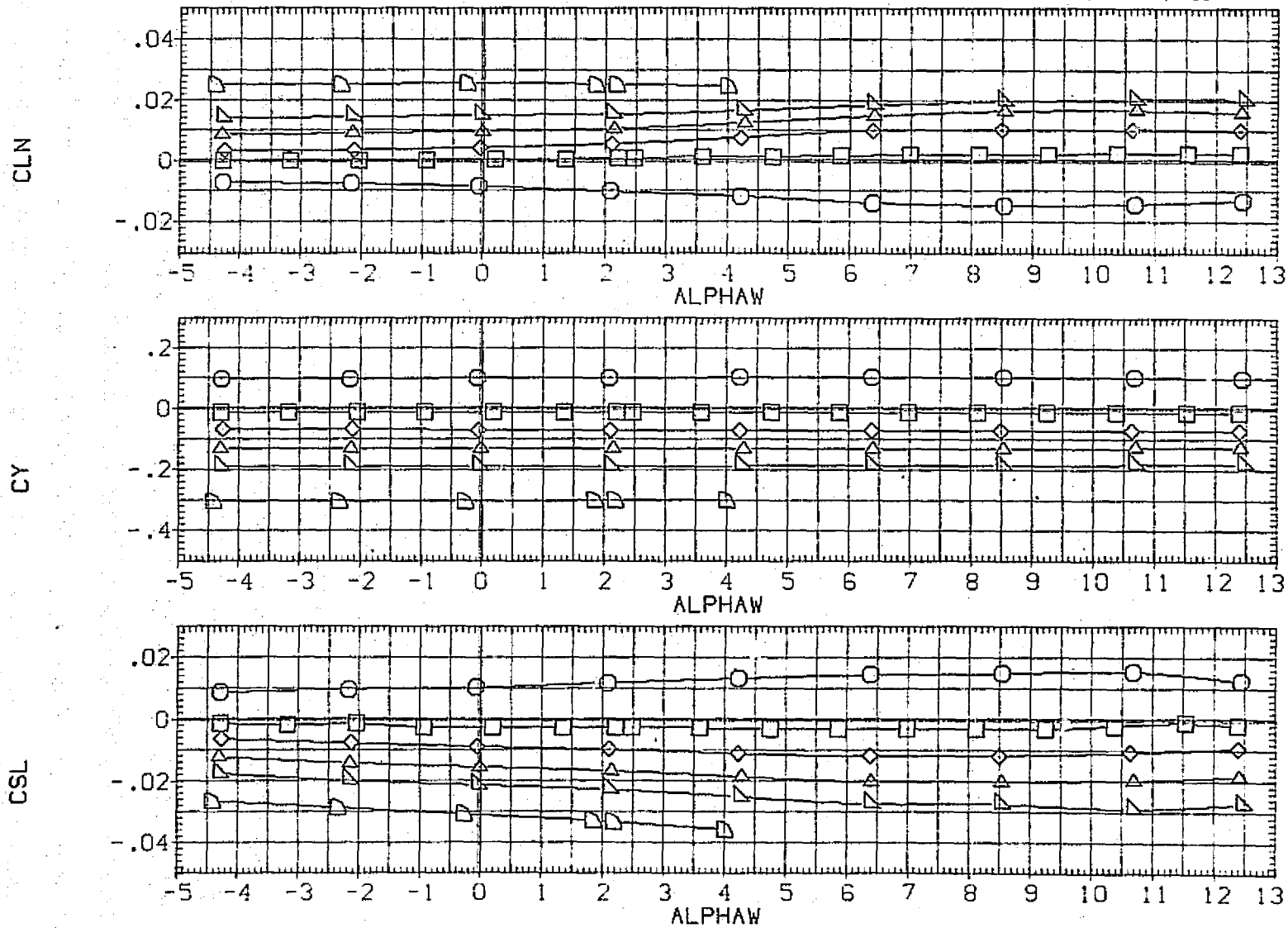


FIG. 38 LATERAL-DIRECTIONAL STABILITY OF LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION		
(RGPO84)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	.000	4.840	.000	SREF	5500.0000	50.FT.
(RGPO92)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	3.000	3.000	4.850	.000	LREF	327.8000	IN.
(RGPO93)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	10.000	4.850	.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0000	

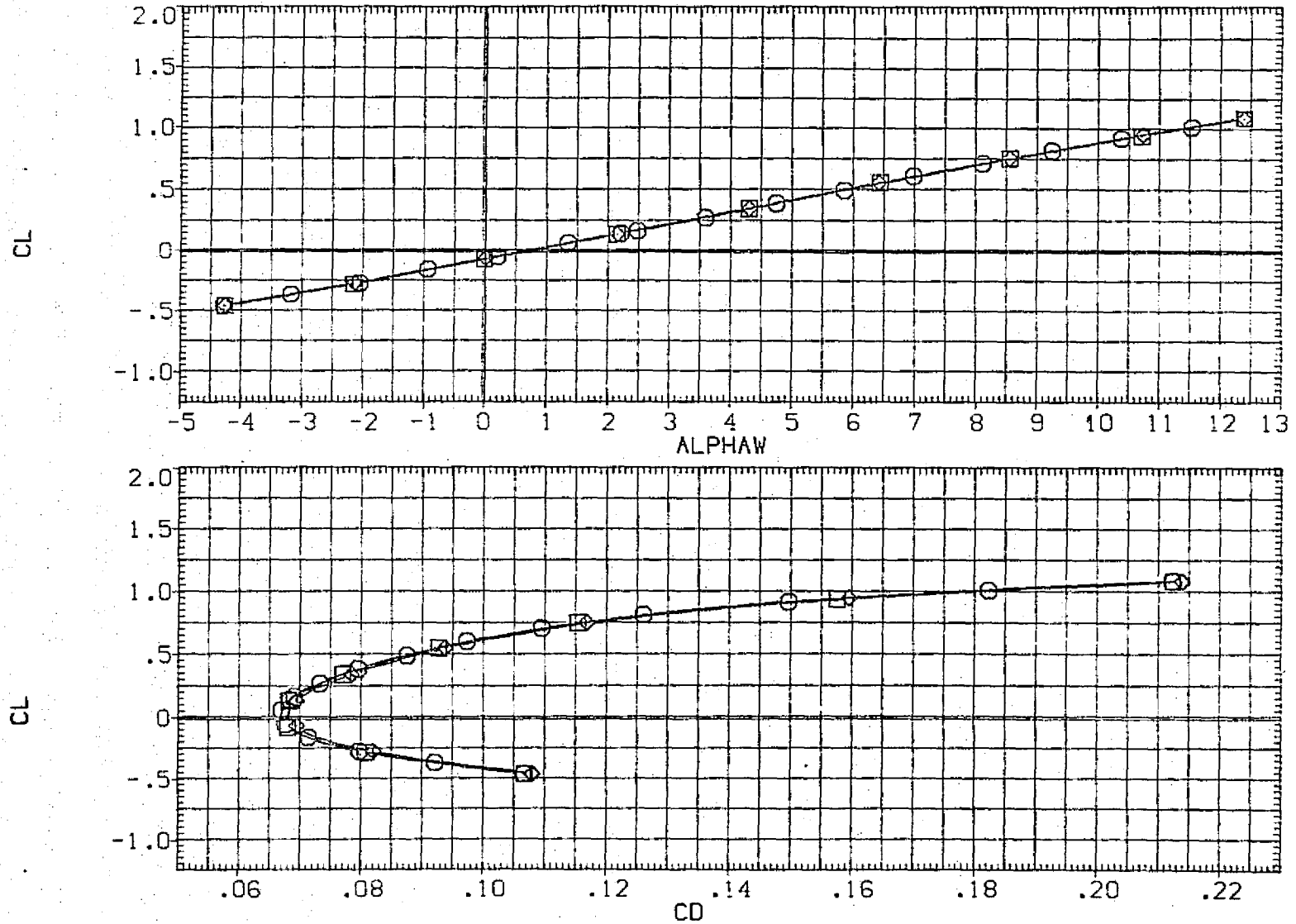


FIG. 39 RUDDER EFFECTIVENESS ON LAUNCH CONFIGURATION
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
(R6P084)	□ CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	.000	4.840	.000	SREF 5500.0000 SQ.FT.
(R6P092)	□ CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	3.000	3.000	4.850	.000	LREF 327.8000 IN.
(R6P093)	◇ CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	10.000	4.850	.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

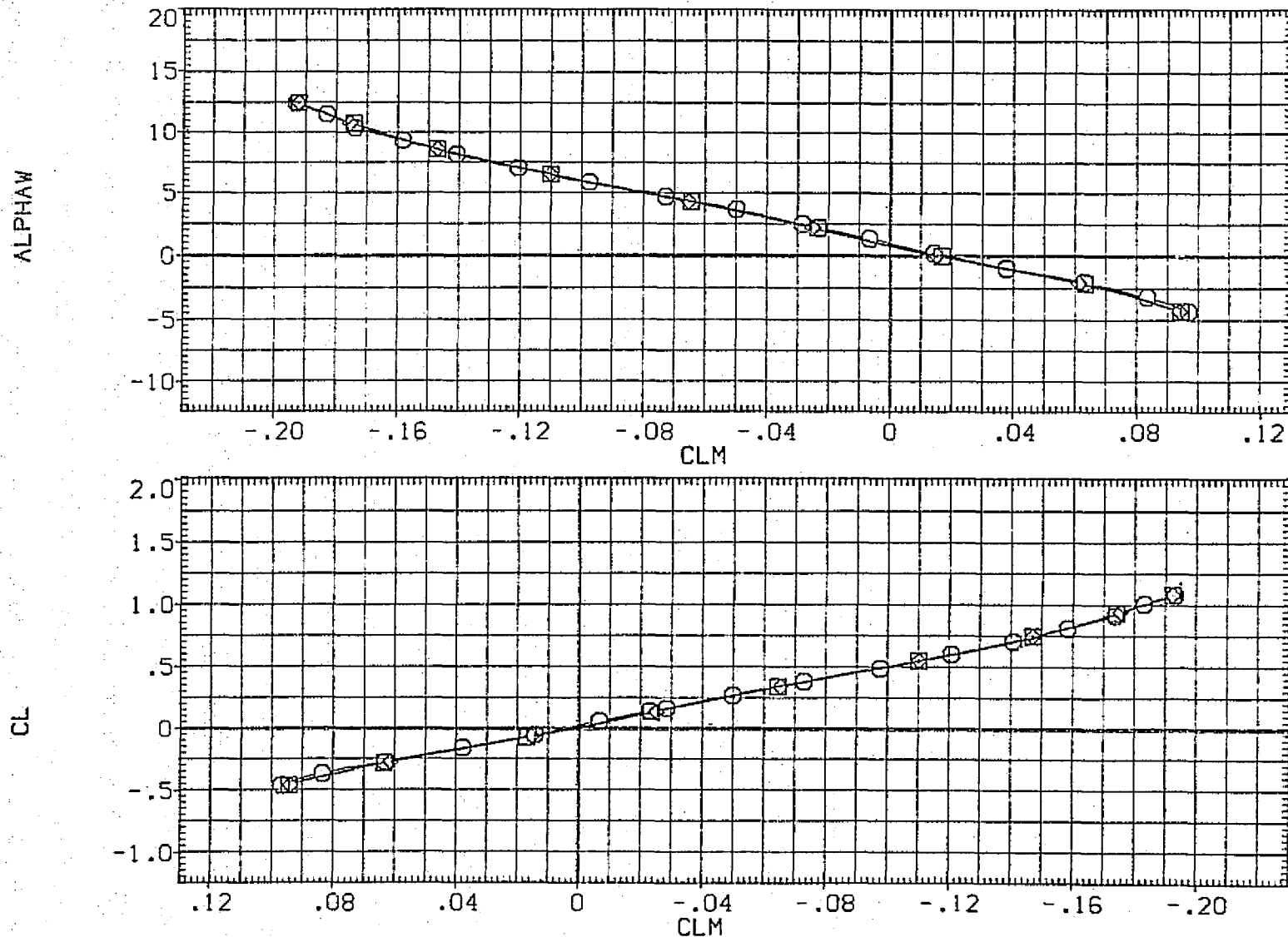


FIG. 39 RUDDER EFFECTIVENESS ON LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
(RGPO84)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	.000	4.840	.000	SREF 5500.0000 SQ.FT.
(RGPO92)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	3.000	3.000	4.850	.000	LREF 327.8000 IN.
(RGPO93)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	10.000	4.850	.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

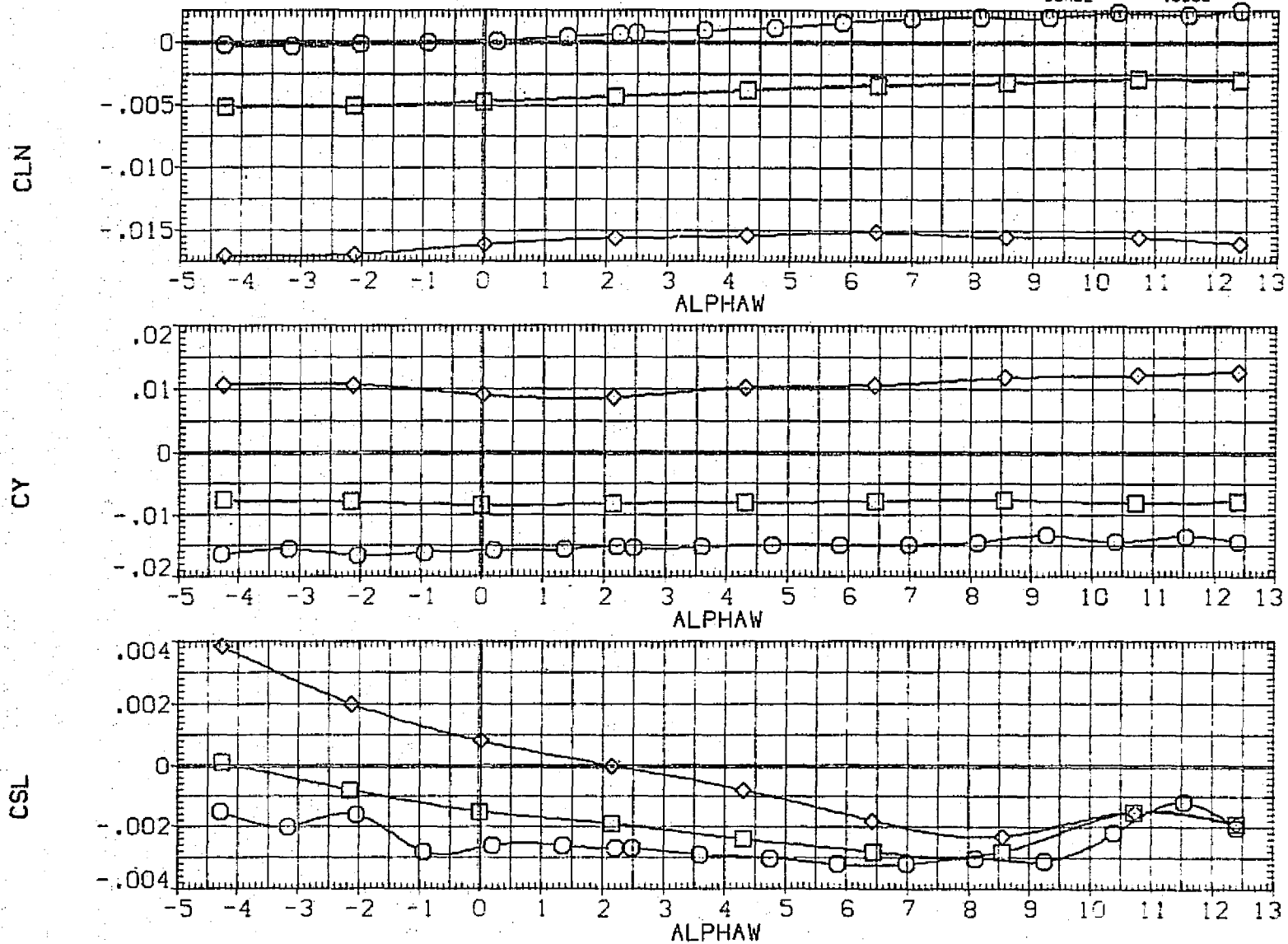


FIG. 39 RUDDER EFFECTIVENESS ON LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGPO95)	CA6 K2H15.1 S1-12 AT103.1/105 DRB TC4	4.790	-4.000	6.000	SREF 5500.0000 SO.FT.
(RGPO94)	CA6 K2H15.1 S1-12 AT103.1/105 DRB TC4	4.790	.000	LREF 327.8000 IN.	
(RGPO96)	CA6 K2H15.1 S1-12 AT103.1/105 DRB TC4	4.790	4.000	6.000	BREF 2348.0000 IN.
(RGPO97)	CA6 K2H15.1 S1-12 AT103.1/105 DRB TC4	4.790	10.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

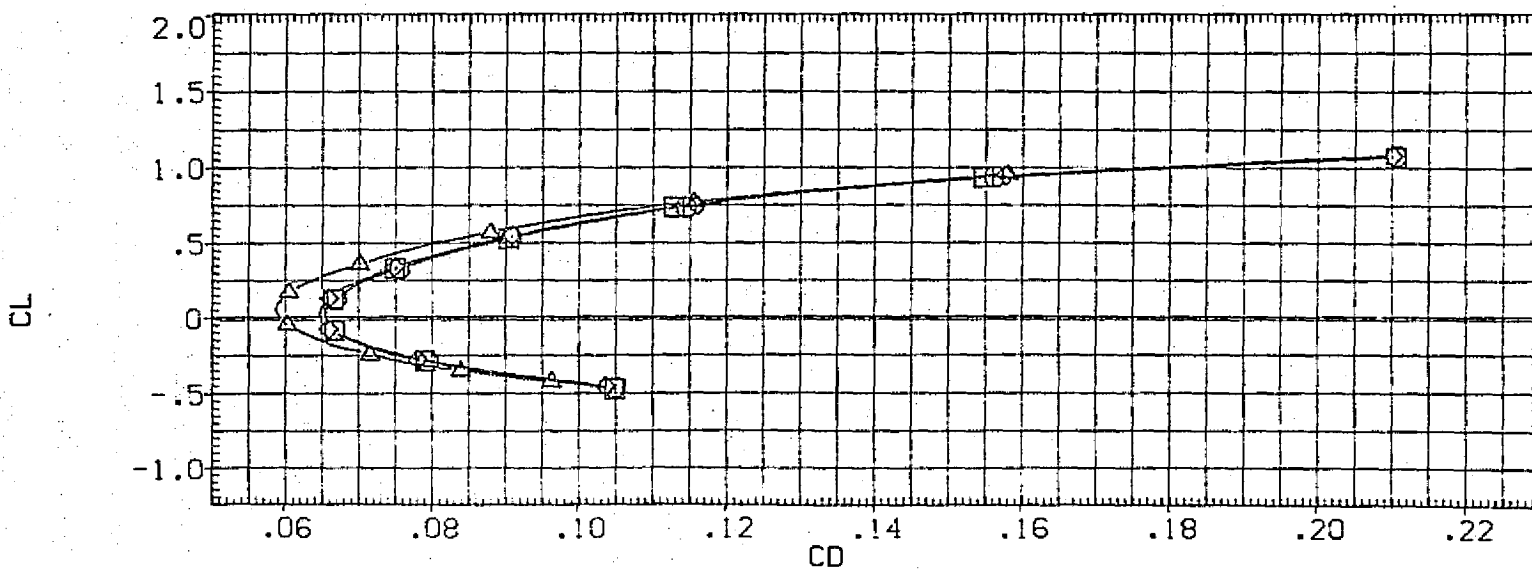
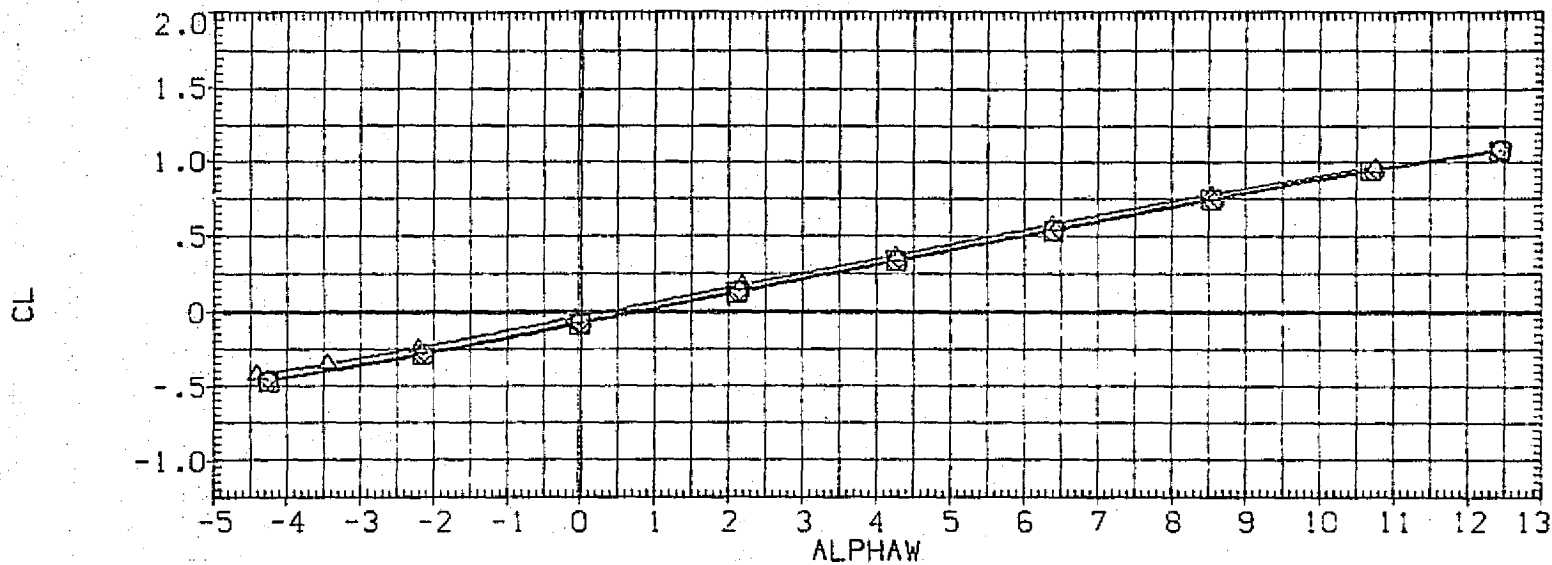


FIG. 40 EFFECT OF SIDESLIP, ALL VERTICAL TAILS OFF, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP095) ○	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	-4.000	6.000	SPEF 5500.0000 SQ.FT.
(RGP094) □	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	.000	6.000	LREF 327.8000 IN.
(RGP096) ◇	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	4.000	6.000	BREF 2348.0000 IN.
(RGP097) △	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	10.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

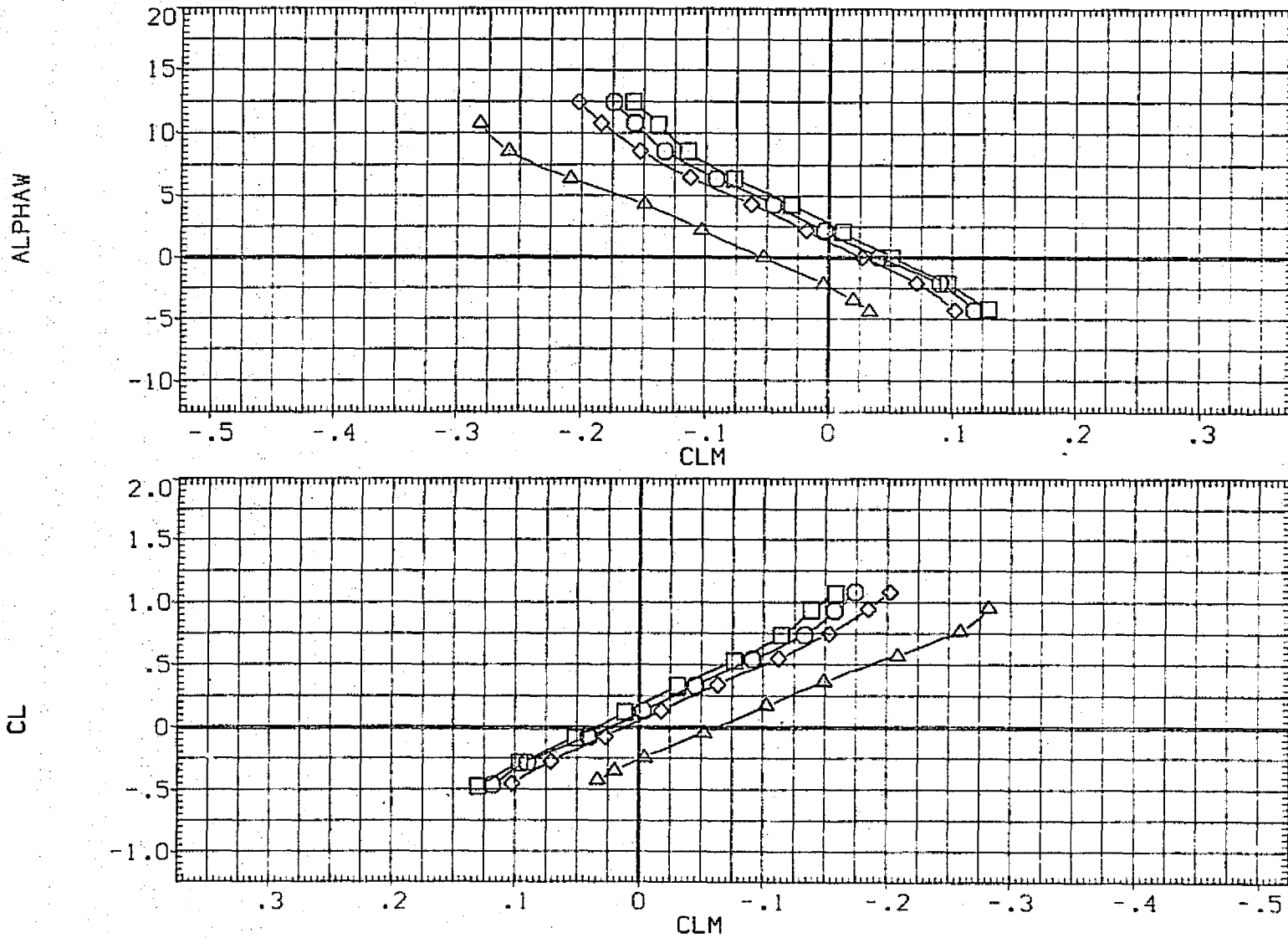


FIG. 40 EFFECT OF SIDESLIP, ALL VERTICAL TAILS OFF, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP095)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP094)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	.000	6.000	LREF 327.8000 IN.
(RGP096)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	4.000	6.000	BREF 2348.0000 IN.
(RGP097)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.790	10.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

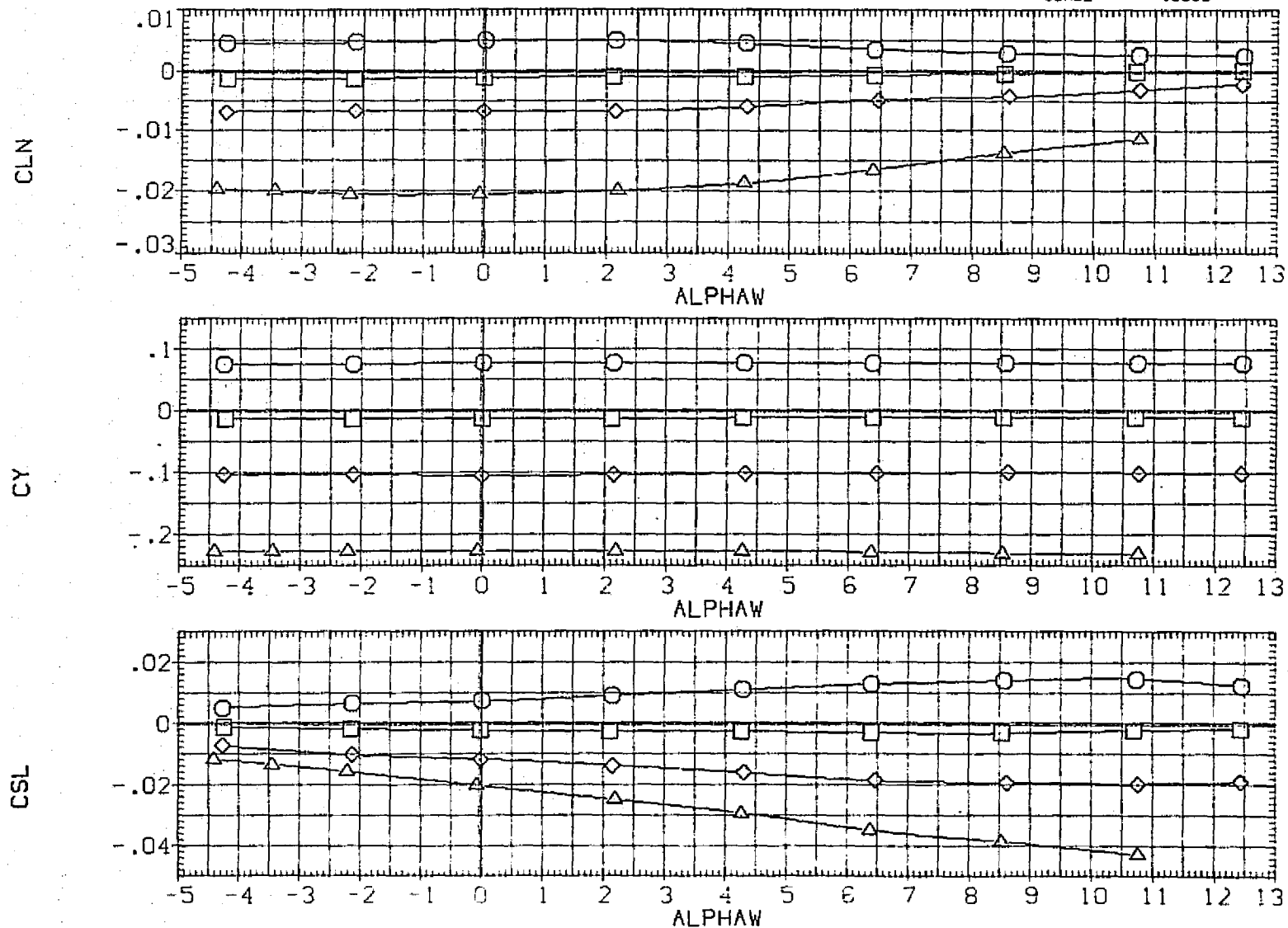


FIG. 40 EFFECT OF SIDESLIP, ALL VERTICAL TAILS OFF, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP133)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-.960	.000	4.270	SREF 5500.0000 SQ. FT.
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	LREF 327.8000 IN.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	-.900	.000	8.110	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

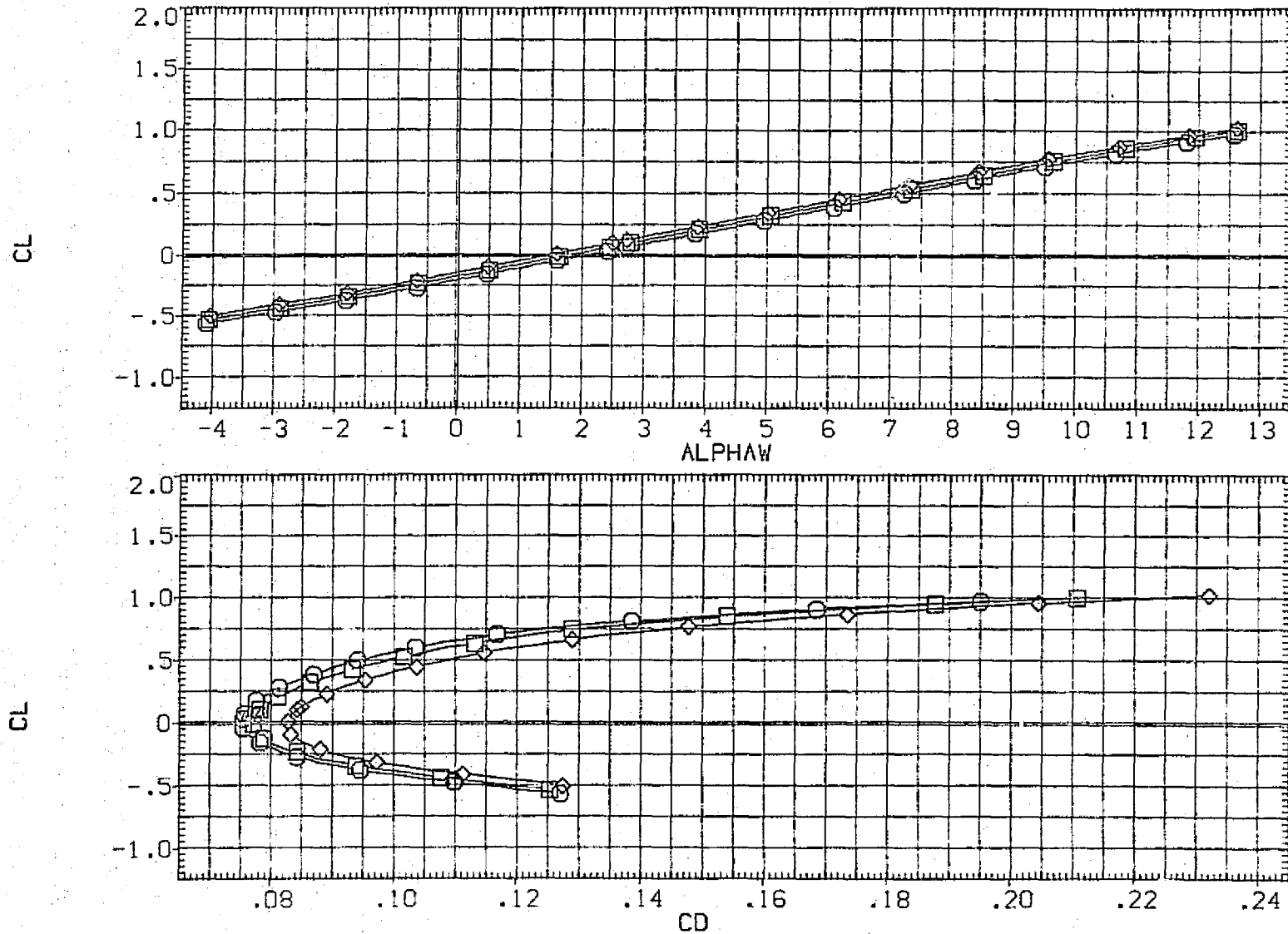


FIG. 41 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER -1

(A)MACH = .60

PAGE 220

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP133)	CA6 K2H15.6.1V9.1S1-12 AT103.1/55-.30RBF8N24/28	-.960	.000	4.270	SREF 5500.0000 SQ.FT.
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	LREF 327.8000 IN.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 DRBF8N24/28	-.900	.000	8.110	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

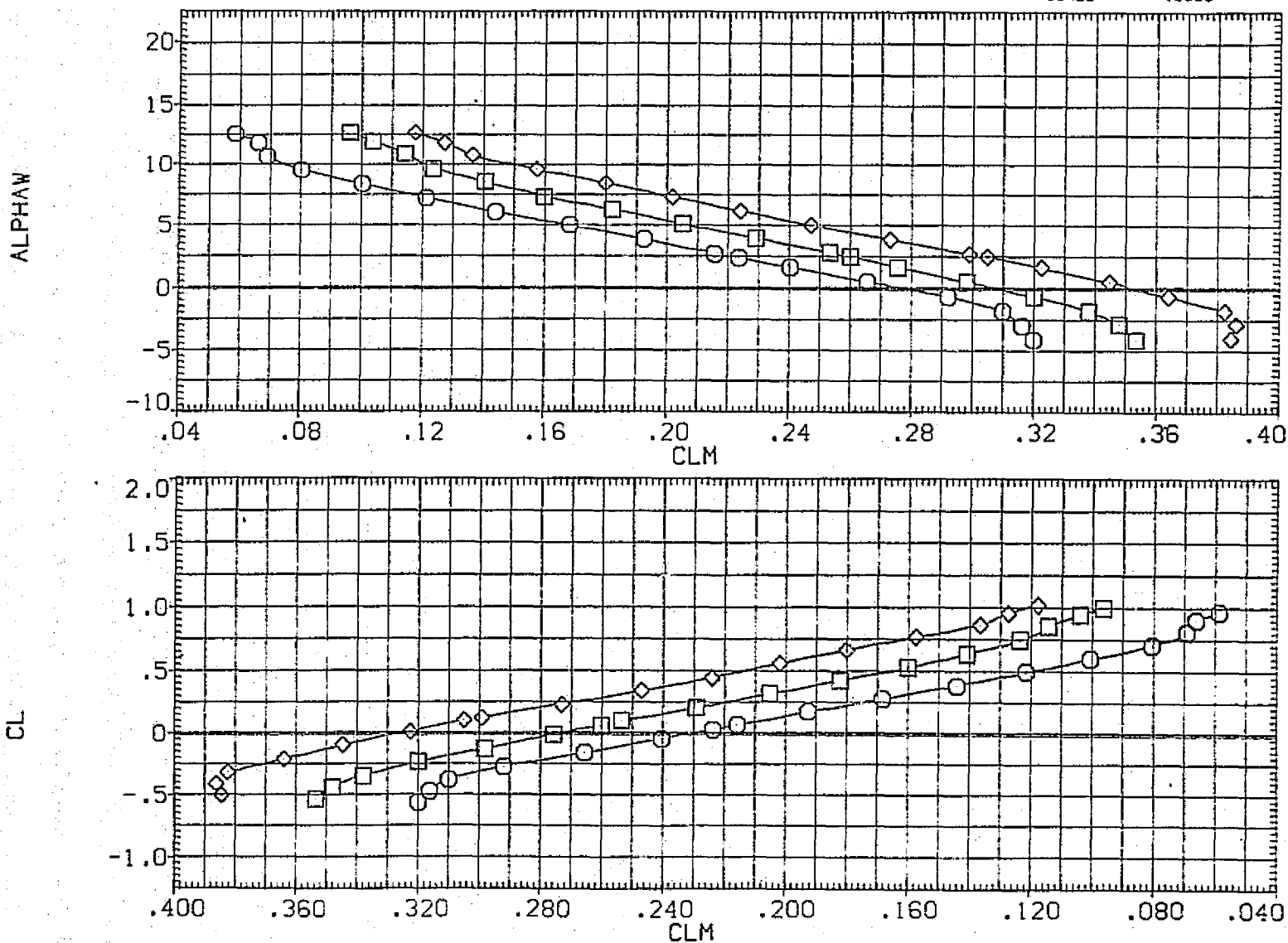


FIG. 41 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER -1

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP133)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-.960	.000	4.270	SREF	5500.0000 SQ.FT.
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	LREF	327.8000 IN.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 0RBF8N24/28	-.900	.000	8.110	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

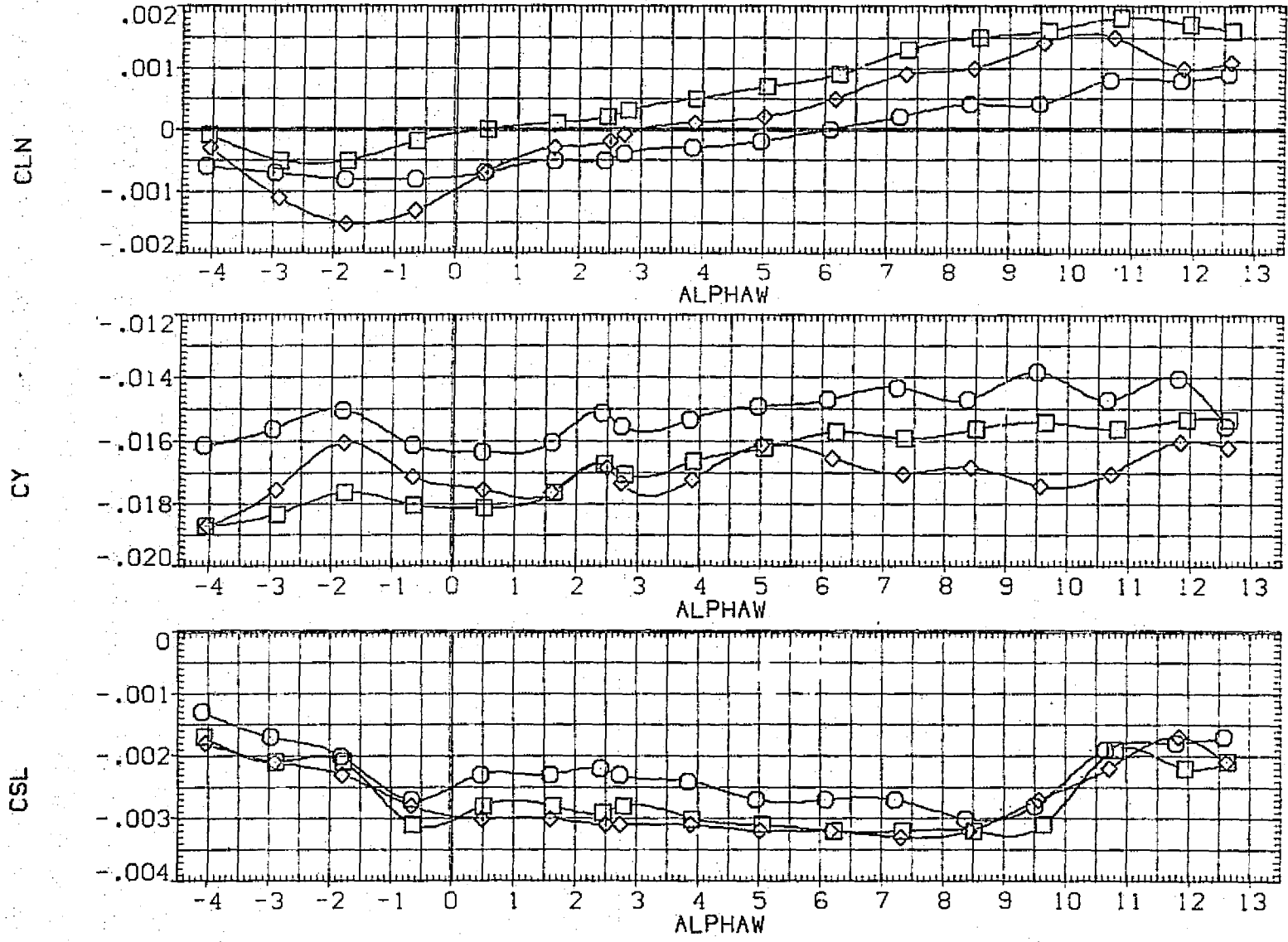


FIG. 41 ORBITER INCIDENCE EFFECTS ON LAUNCH CONFIGURATION, SPOILER -1
 (A)MACH = .60 PAGE 222

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP108)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
(RGP116)	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

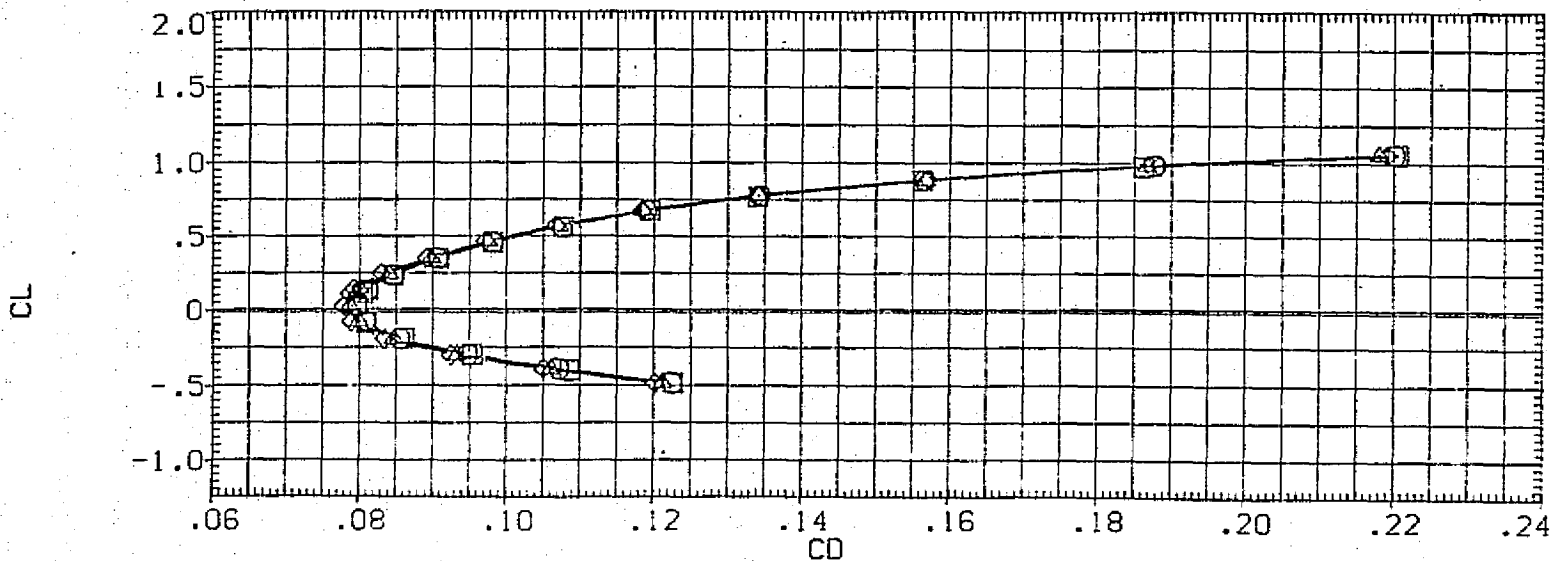
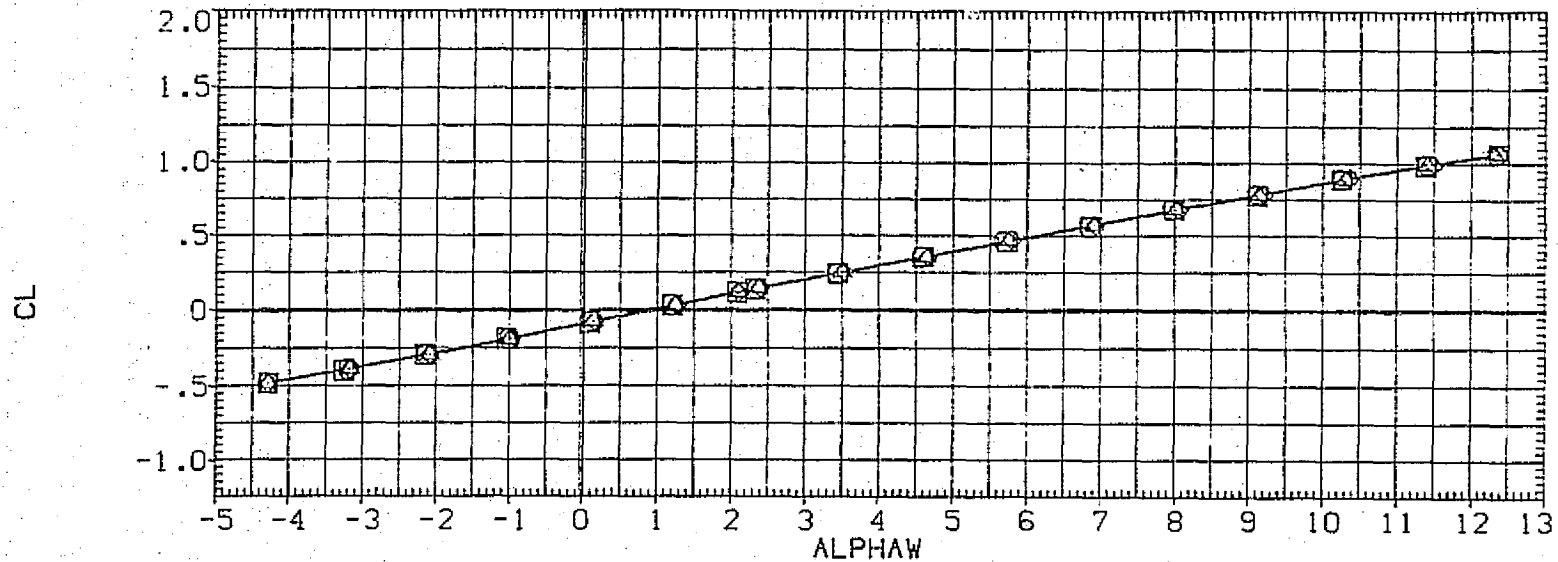


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP059)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP108)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP109)	◇ CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
(RGP116)	× CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

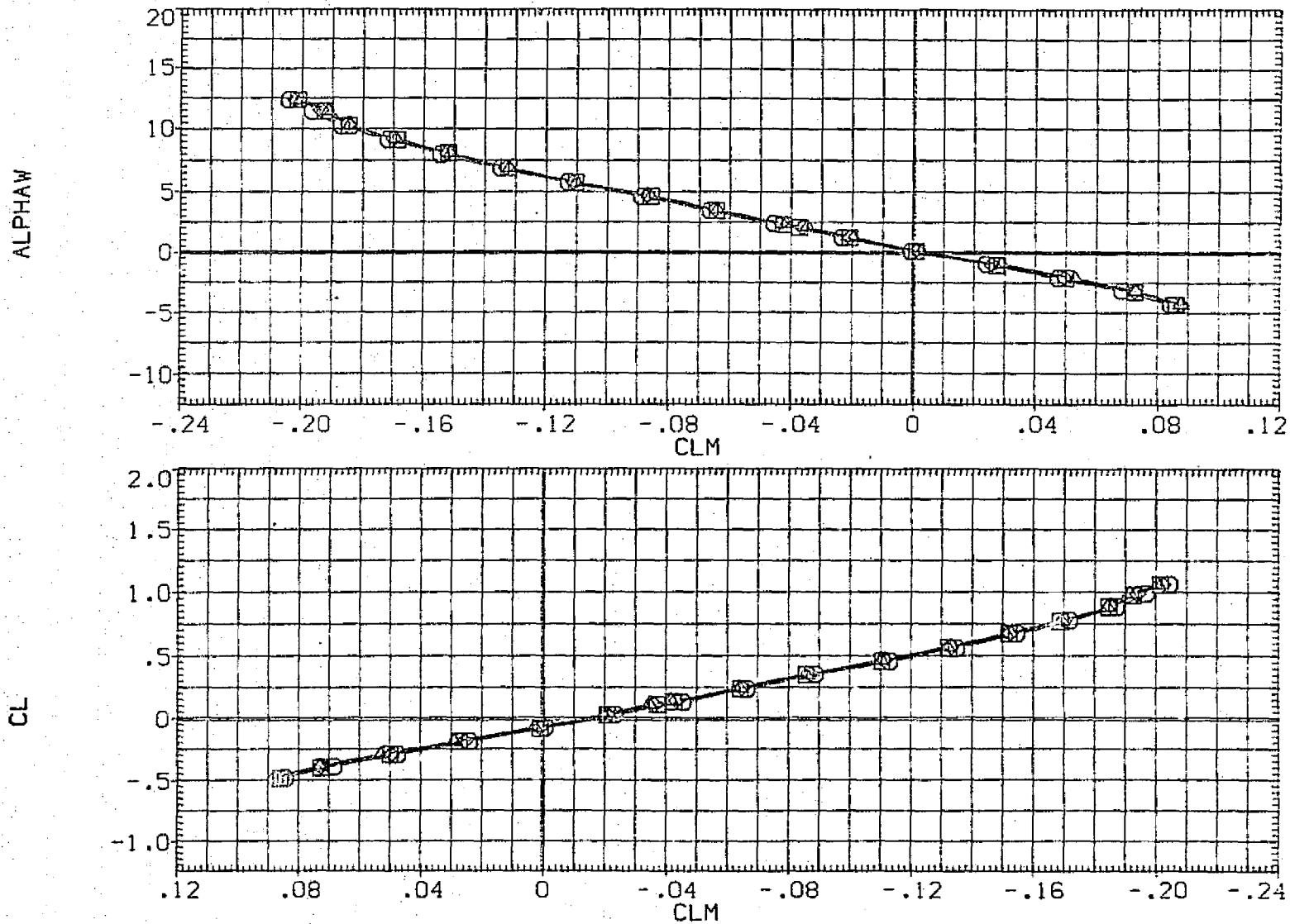


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP059)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP108)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP109)	◇ CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
(RGP116)	△ CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRF 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC
					SCALE .0300

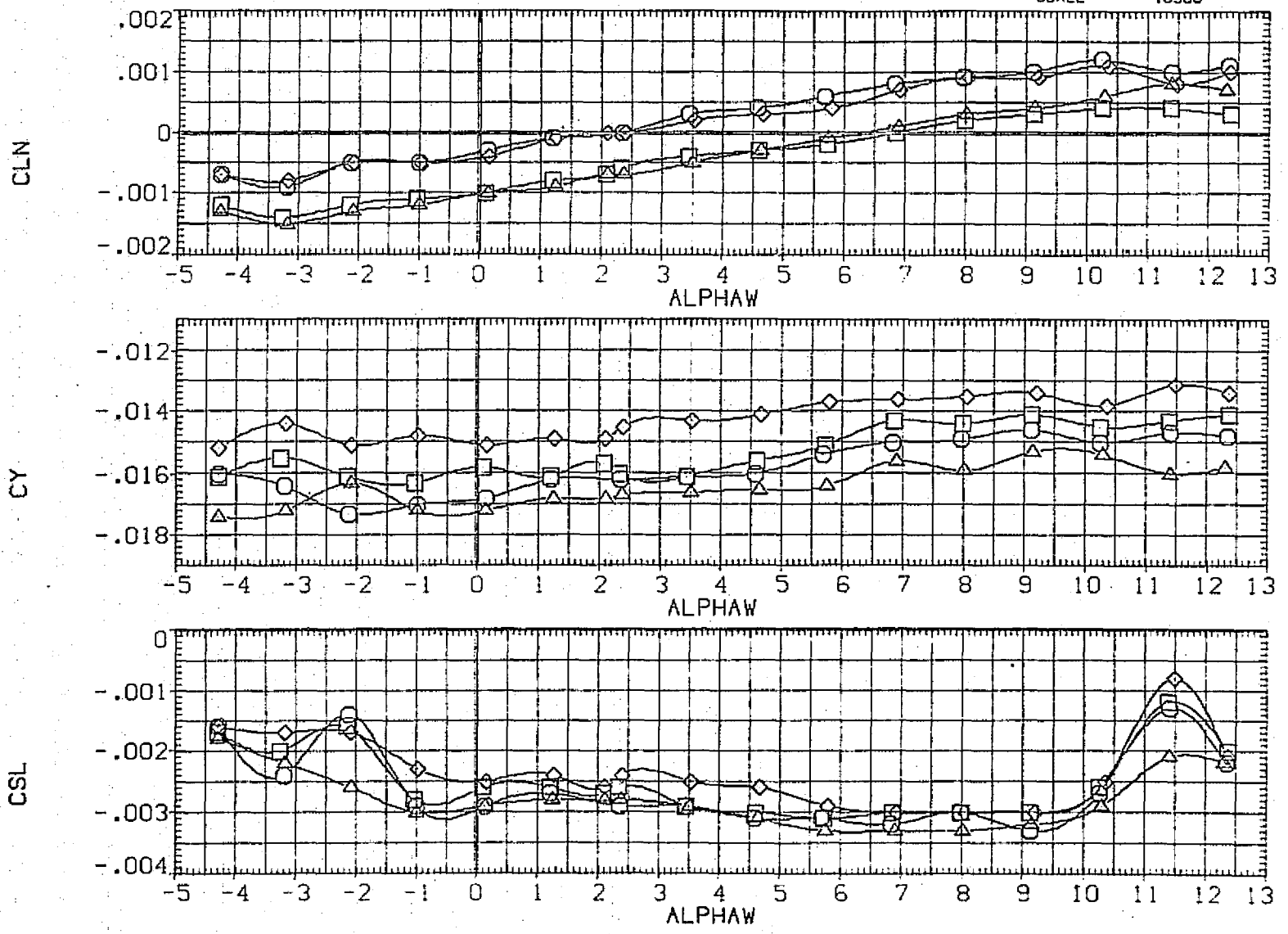


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0
 (A)MACH = .60 PAGE 225

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP059)	□	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF	5500.0000 SQ.FT.
(RGP108)	○	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF	327.8000 IN.
(RGP109)	△	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF	2348.0000 IN.
(RGP116)	◇	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

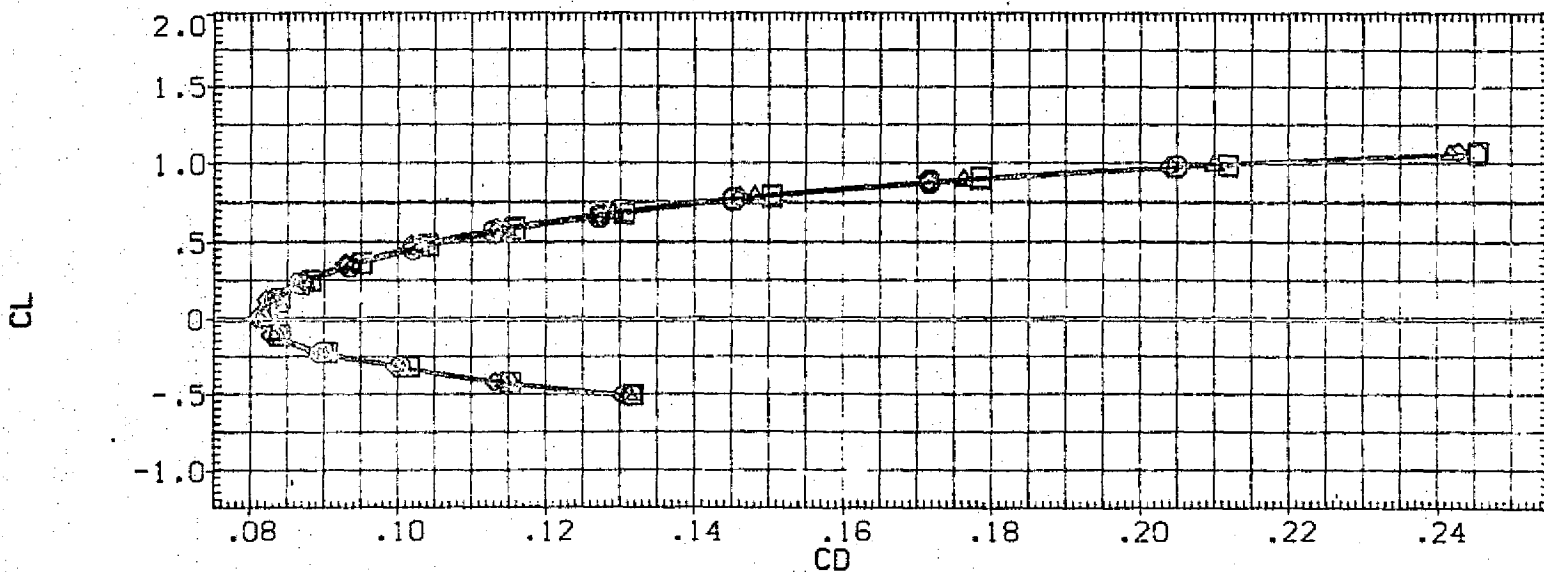
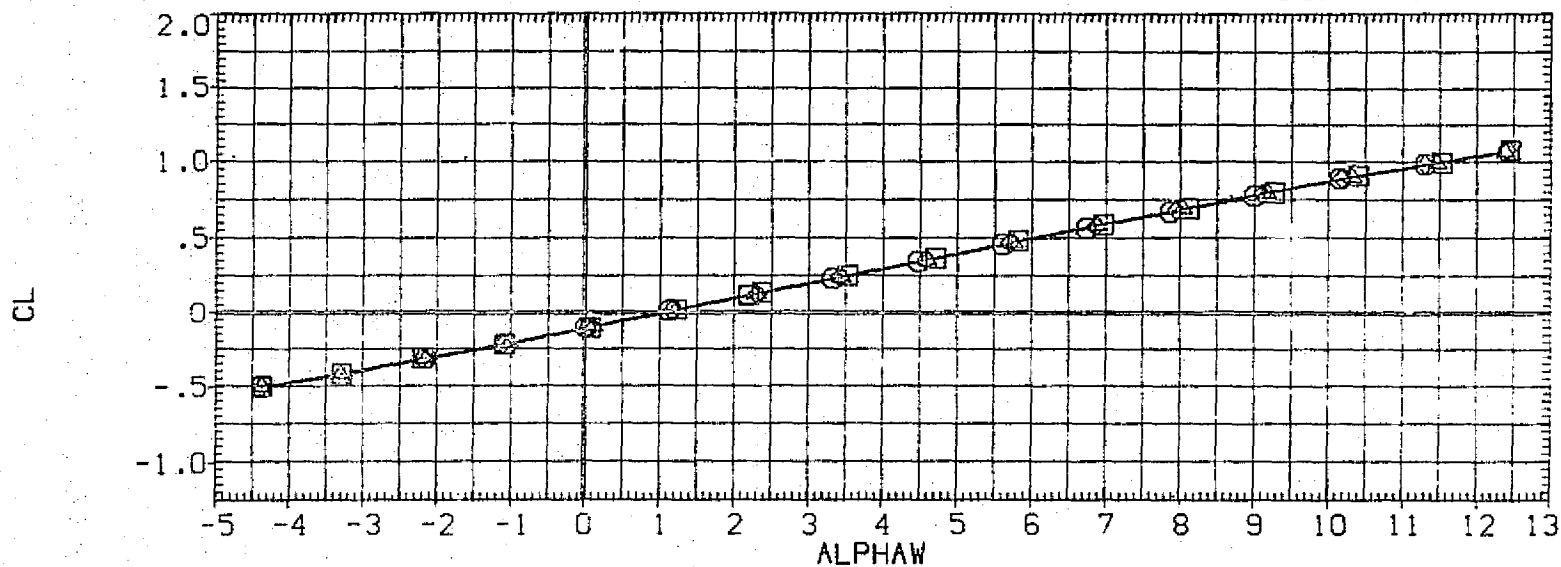


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP108)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
(RGP116)	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

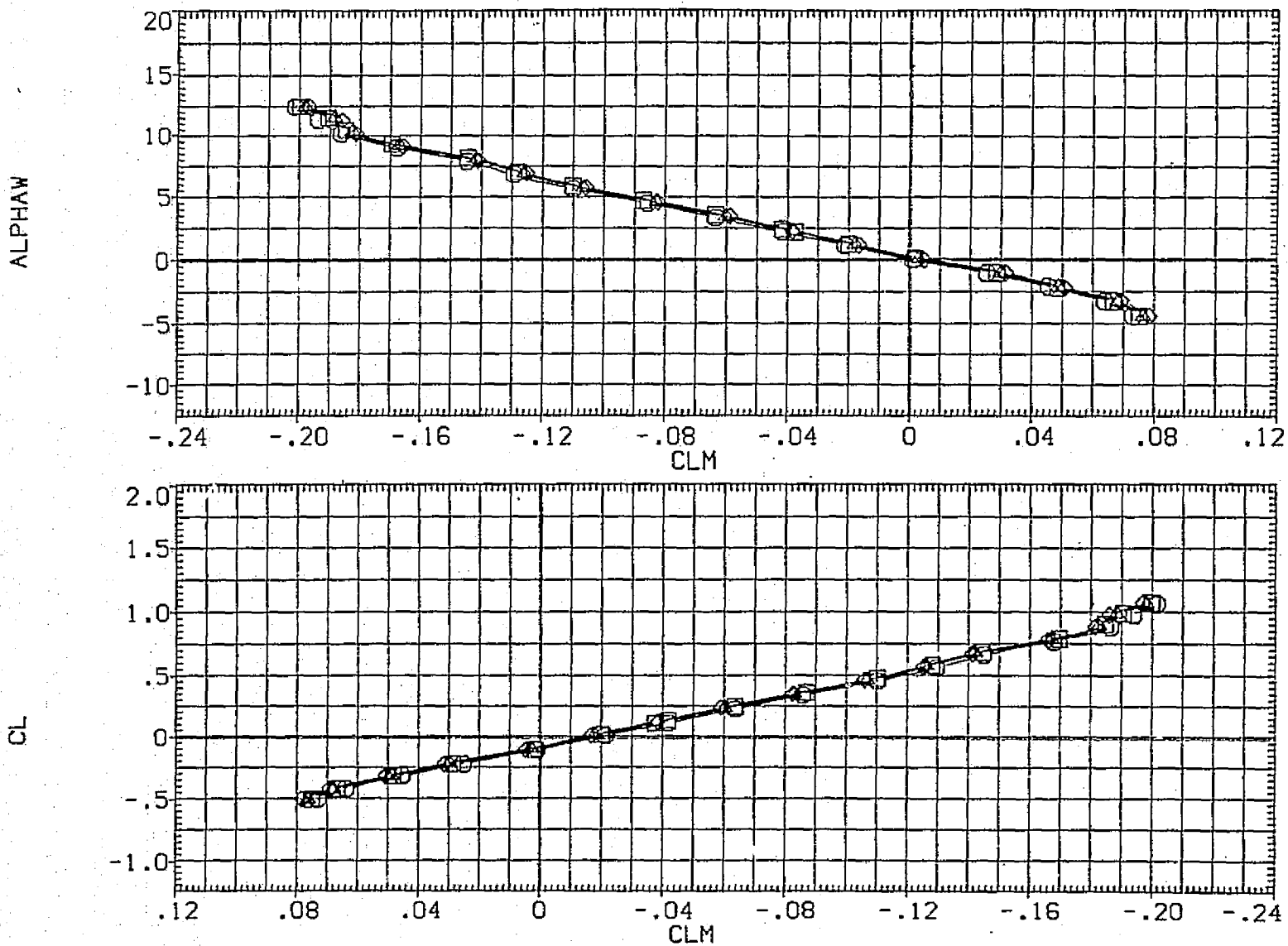


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SC.FT.
(RGP108)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
(RGP116)	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.750	.000	6.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

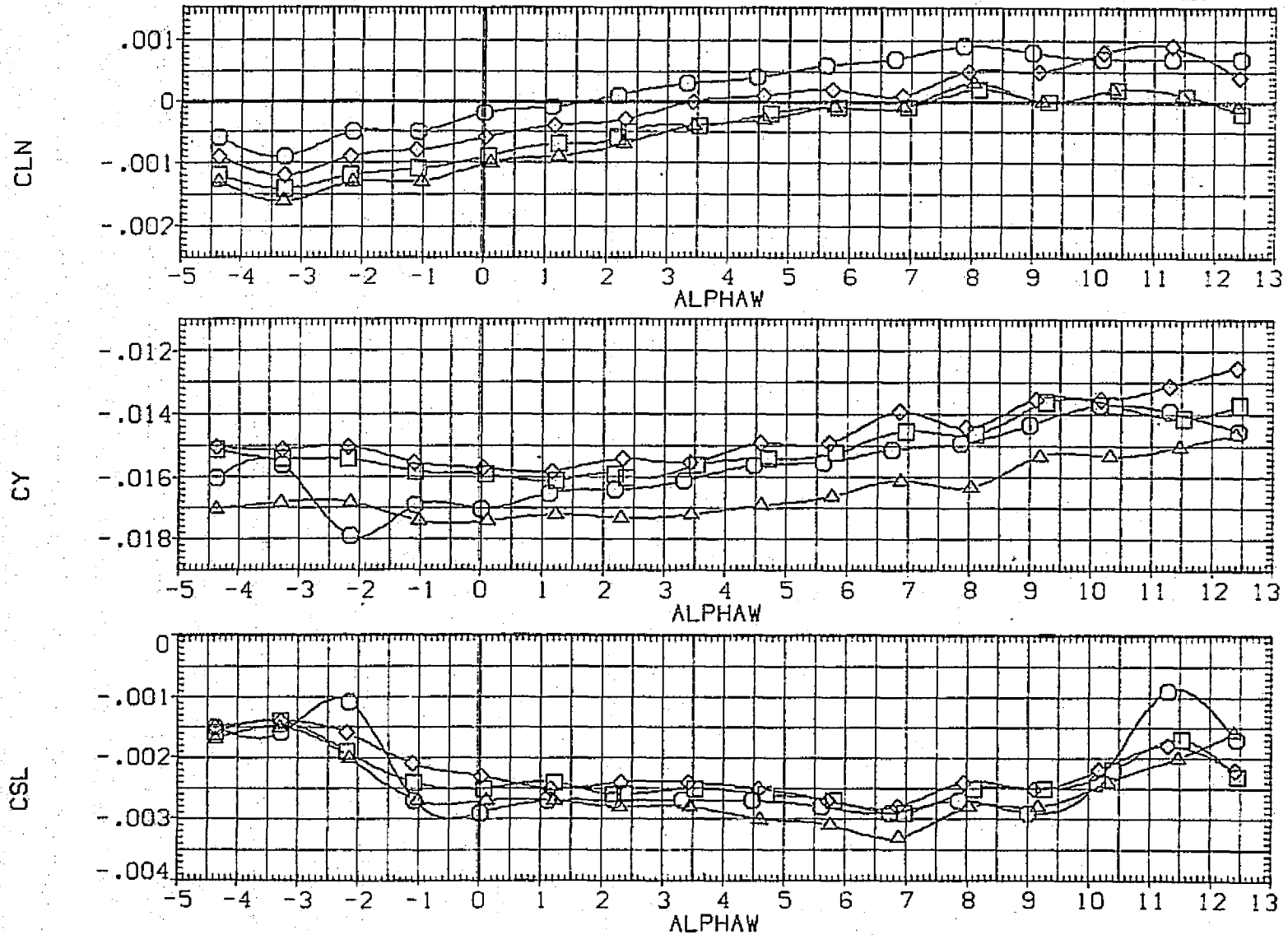


FIG. 42 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 0
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IDRB	REFERENCE INFORMATION
(RGP054)	□ CA6 K2H15.6.1V9.1SI-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP114)	◇ CA6 K2H15.6.1V9.1SI-12 AT108.1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF 327.8000 IN.
(RGP115)	◇ CA6 K2H15.6.1V9.1SI-12 AT112.1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

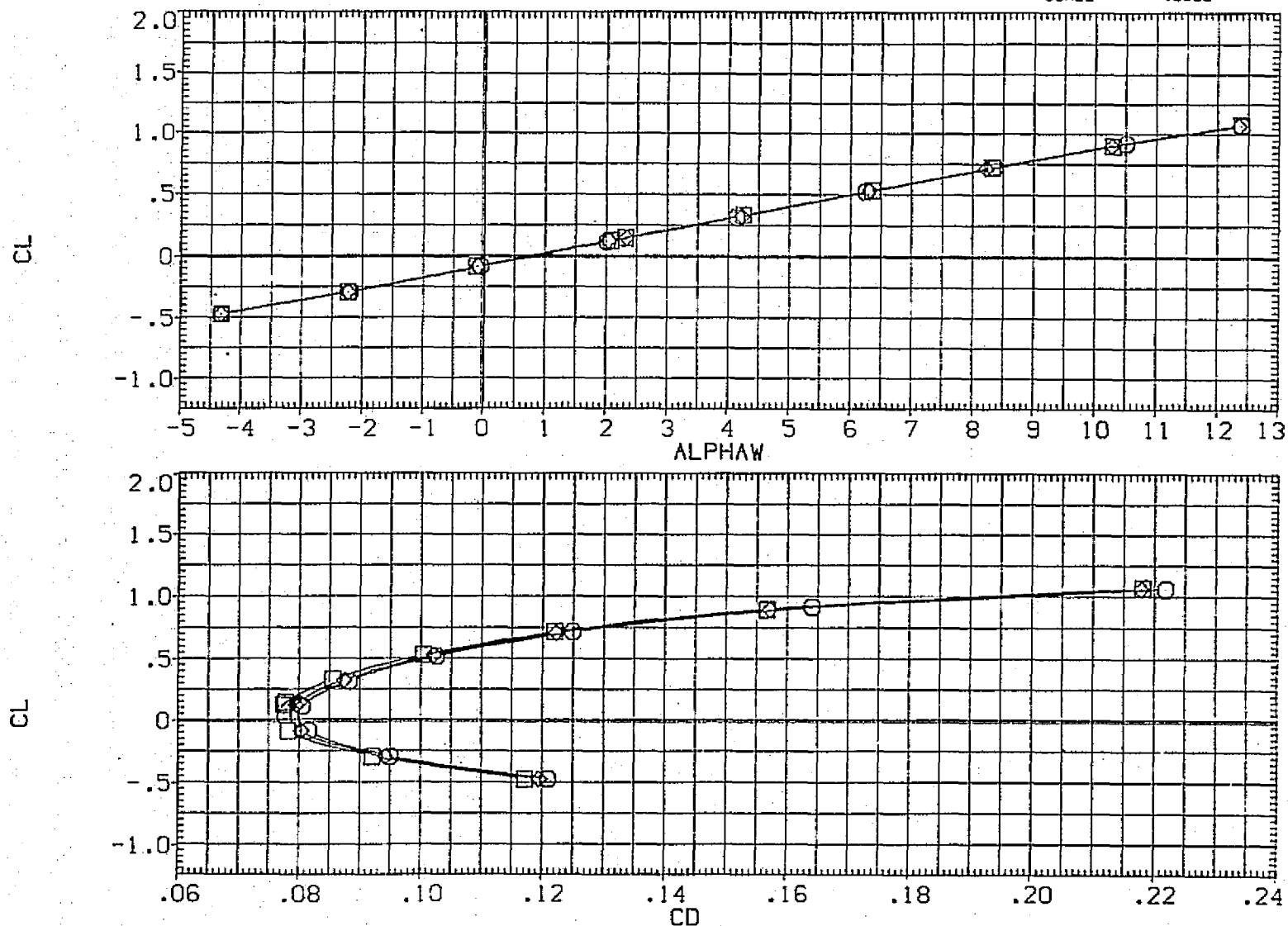


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP054)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP114)	CA6 K2H15.6.IV9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF 327.8000 IN.
(RGP115)	CA6 K2H15.6.IV9.1S1-12 AT112.1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF 2318.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0800 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

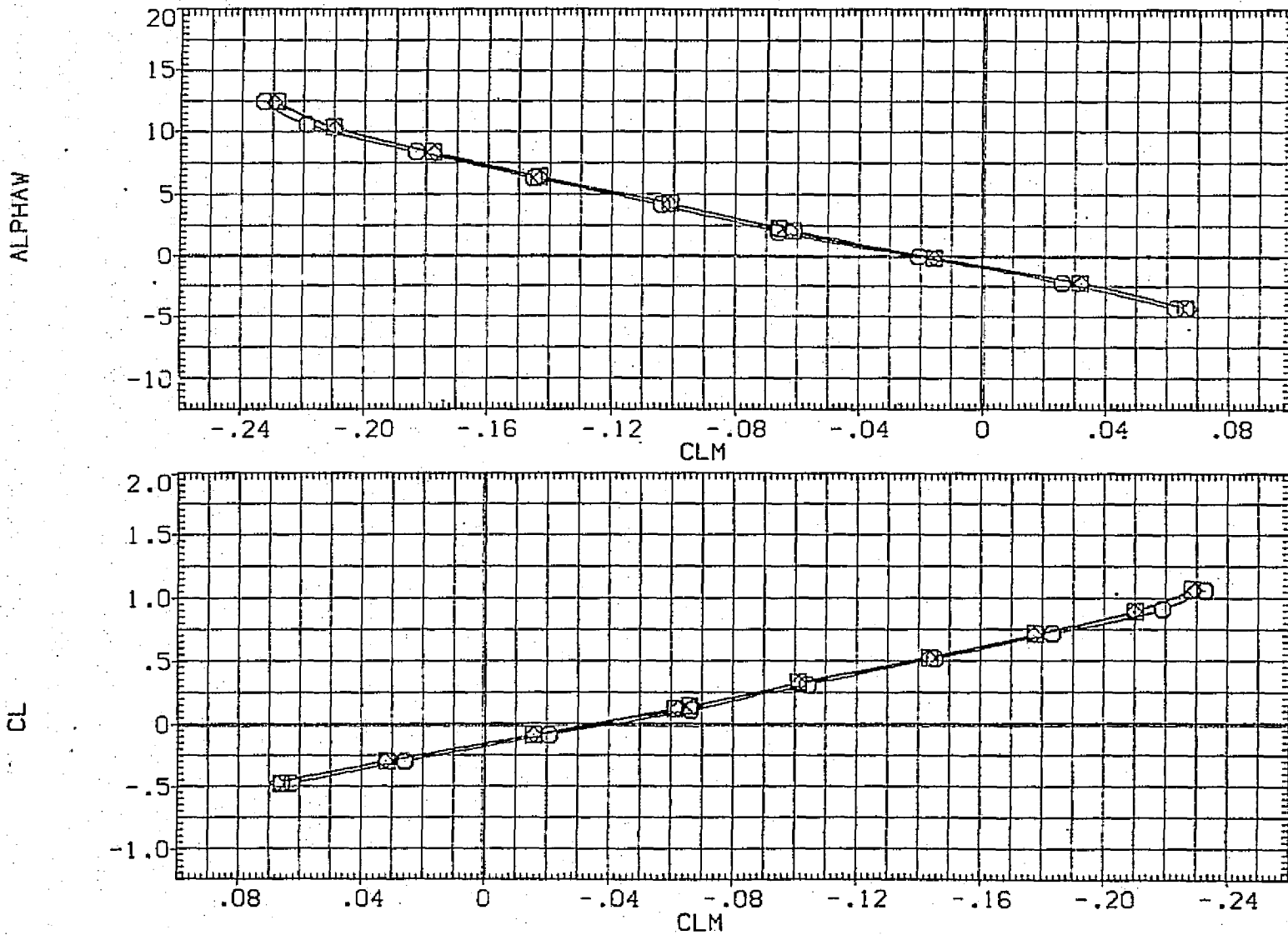


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(R6P054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000	50.FT.
(R6P114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF	327.8000	IN.
(R6P115)	CA6 K2H15.6.1V9.1S1-12 AT112 1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

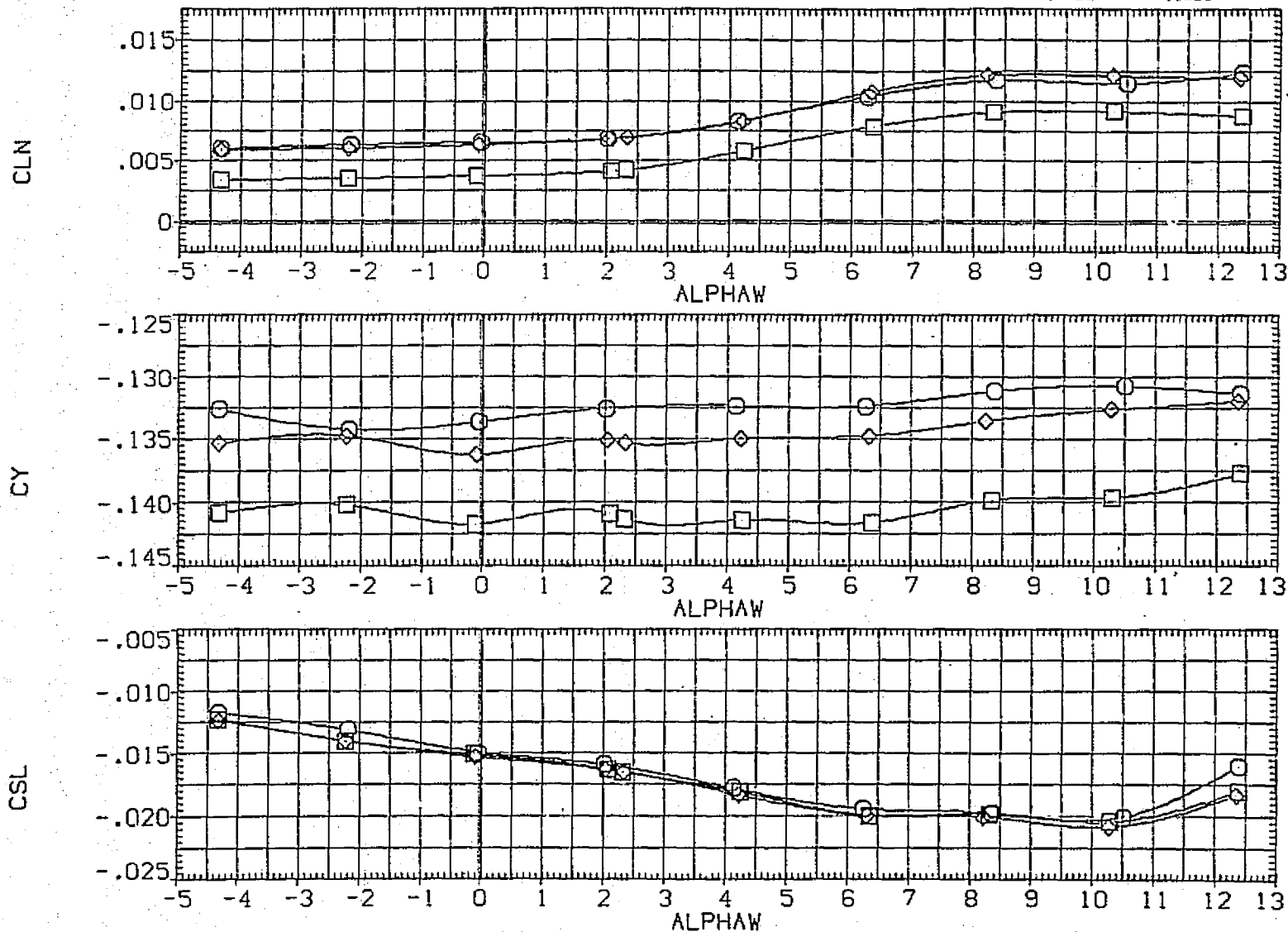


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000 SQ.FT.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF	327.8000 IN.
(RGP115)	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

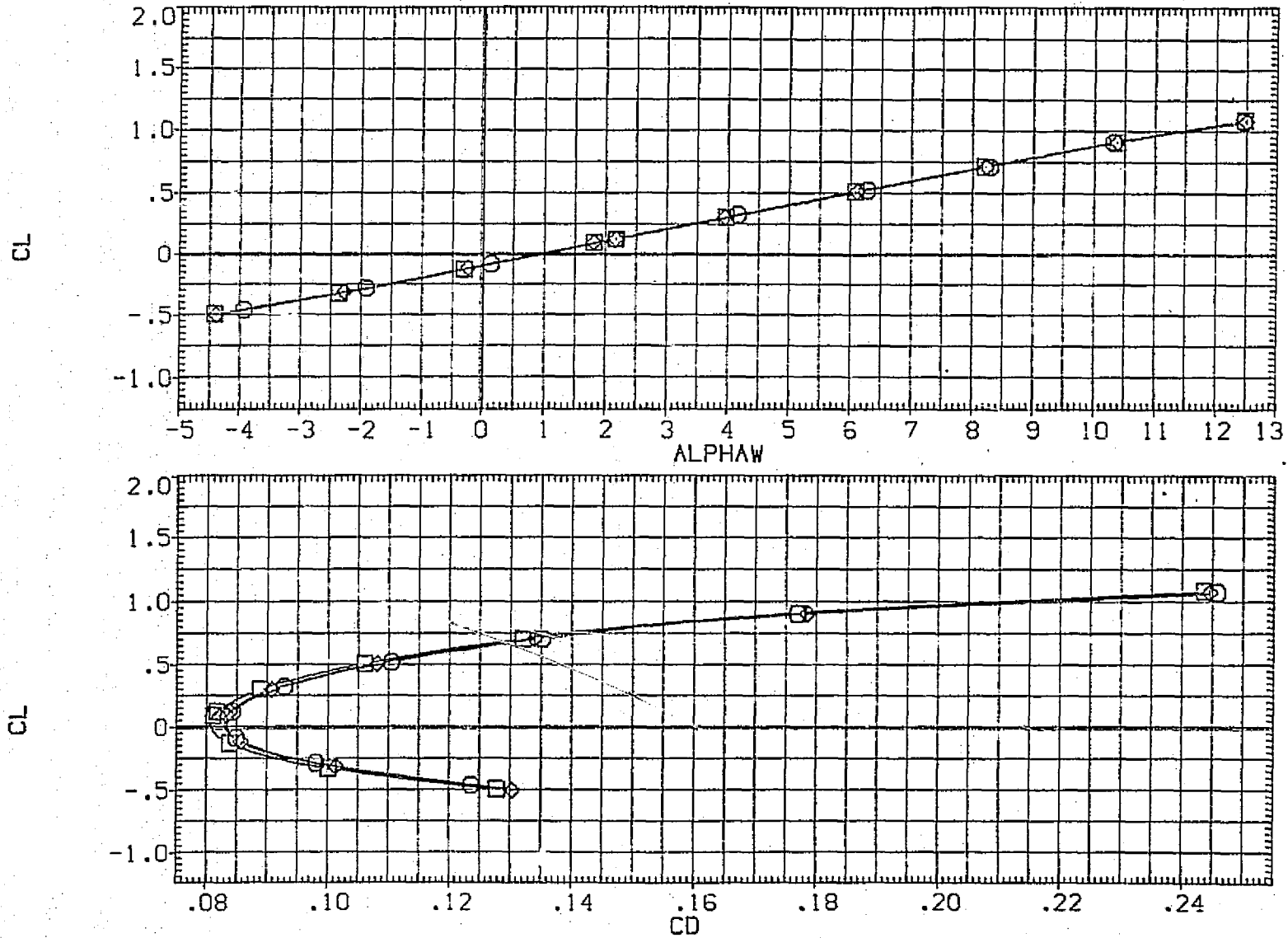


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP054) ○	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF	5500.0000 50.FT.
(RGP114) □	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF	327.8000 IN.
(RGP115) ◇	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

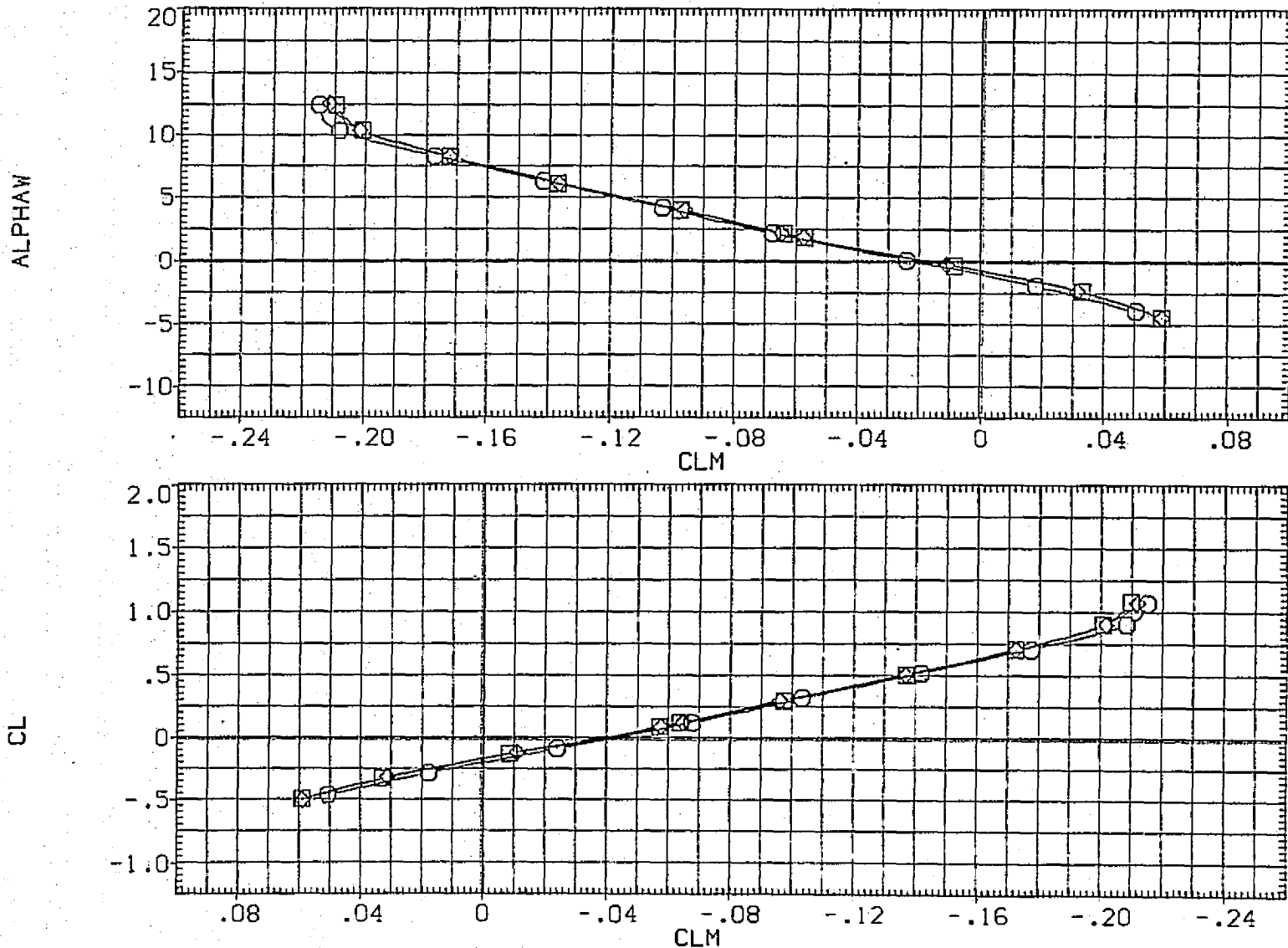


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	TORB	REFERENCE INFORMATION
(RGP054)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108.1/95-.30RBF8N24/28	4.770	4.000	6.000	LREF 327.8000 IN.
(RGP115)	CA6 K2H15.6.1V9.1S1-12 AT112.1/95-.30RBF8N24/28	4.770	4.000	6.000	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

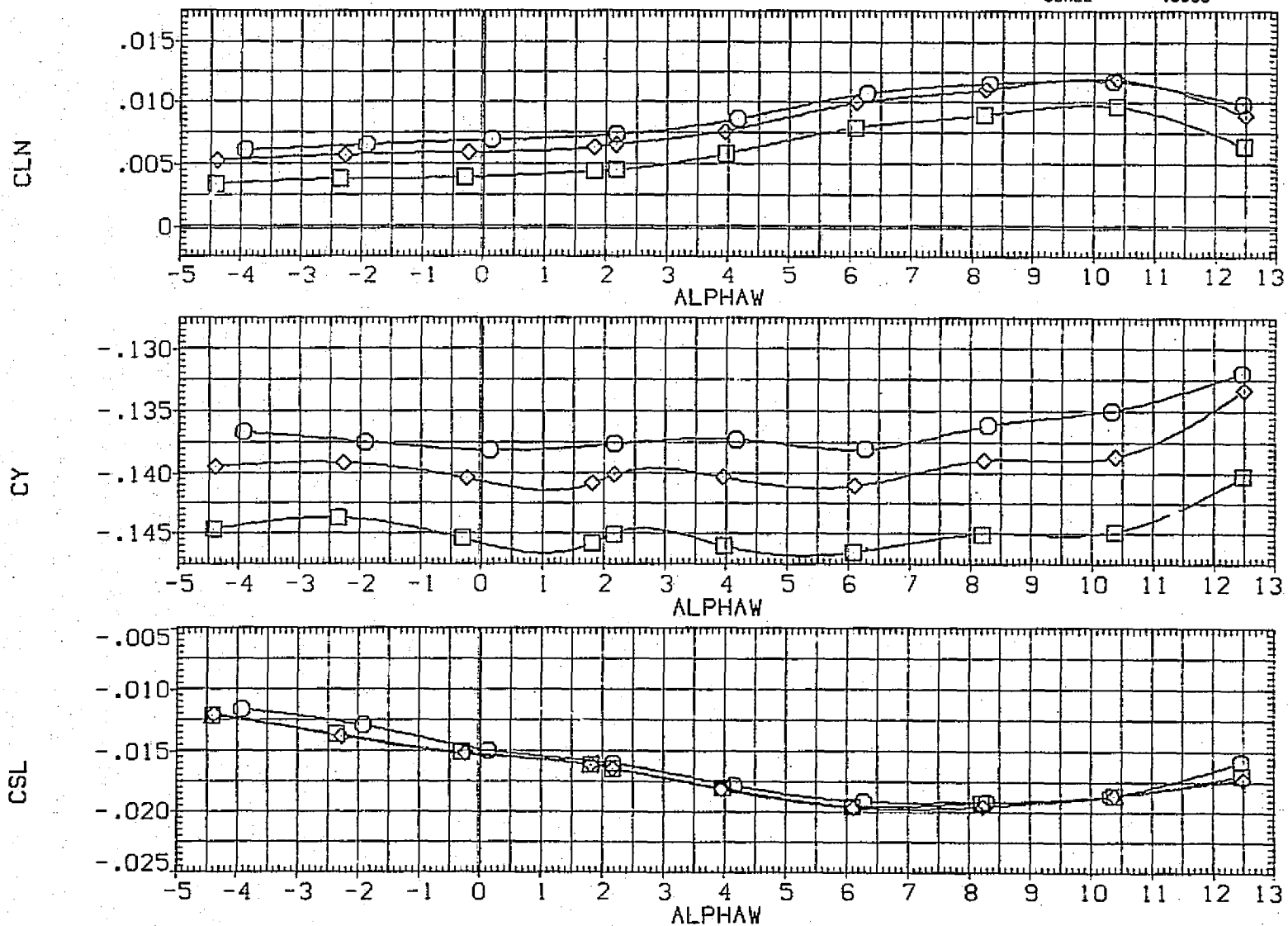


FIG. 43 ORB. FWD. STRUT TRADES, LAUNCH CONFIG., AFT STRUT CA23, BETA 4
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP081)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	4.840	.000	6.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(RGP083)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.40RB TC4	4.840	.000	6.000	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

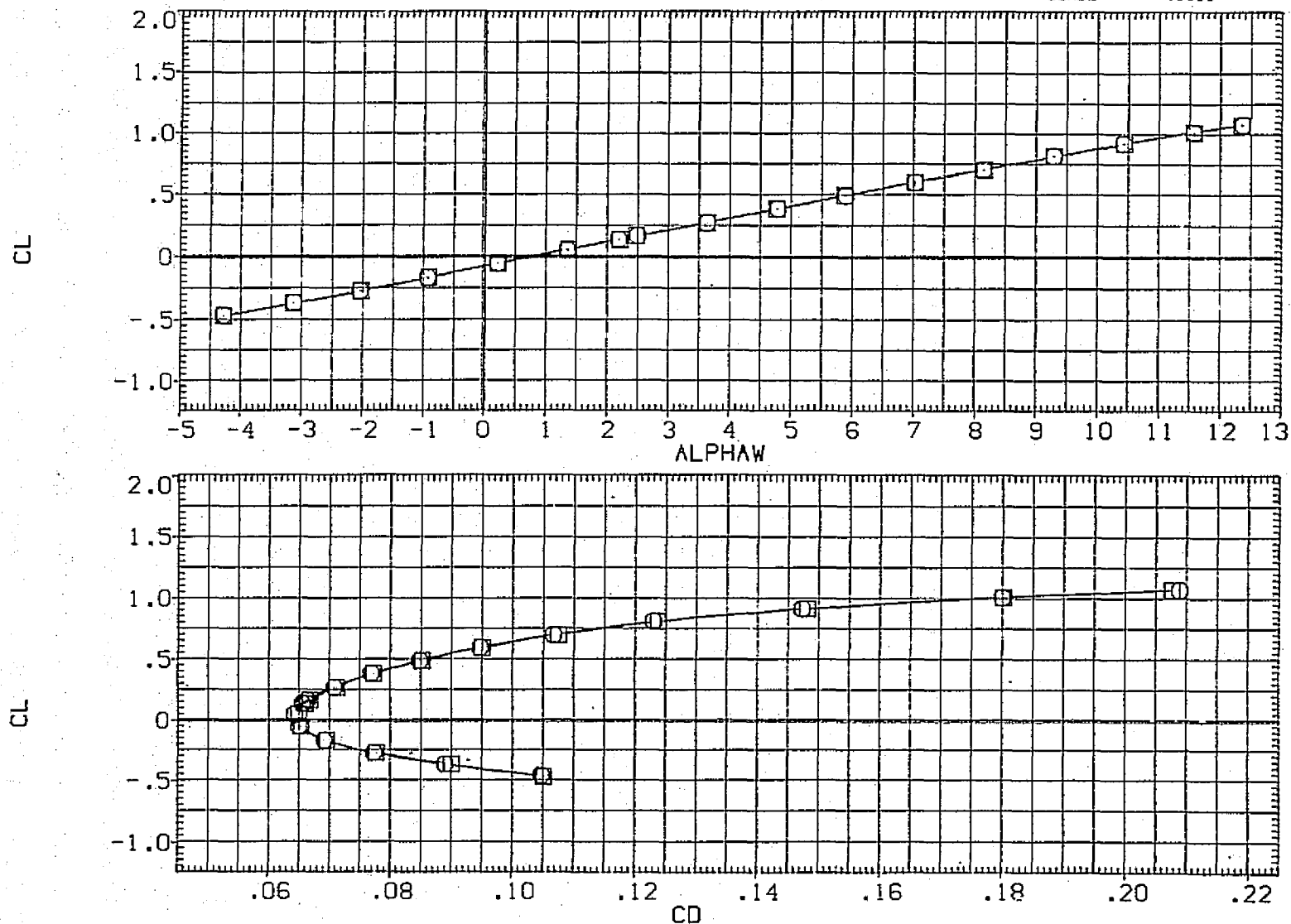


FIG. 44 EFFECT OF SIDE STRUT FAIRINGS ON LAUNCH CONFIG., CA23 AFT STRUT

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGPO81)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4
(RGPO83)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.40RB TC4

STAB	BETA	IORB
4.840	.000	6.000
4.840	.000	6.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

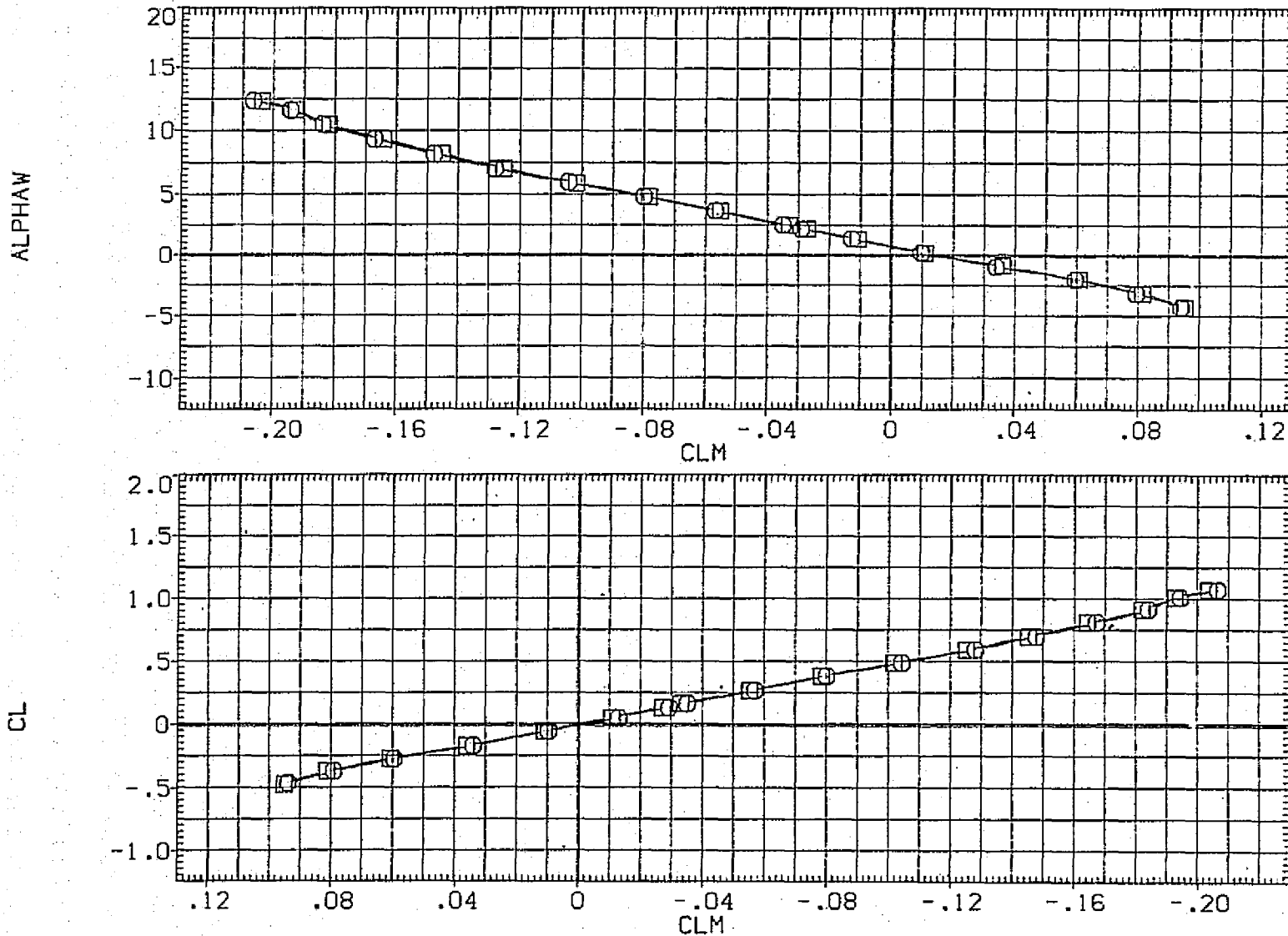


FIG. 44 EFFECT OF SIDE STRUT FAIRINGS ON LAUNCH CONFIG., CA23 AFT STRUT

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	10RB	REFERENCE INFORMATION
(RGPOB1)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	4.840	.000	6.000	SREF 5500.0000 SQ.FT.
(RGPOB3)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.40RB TC4	4.840	.000	6.000	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

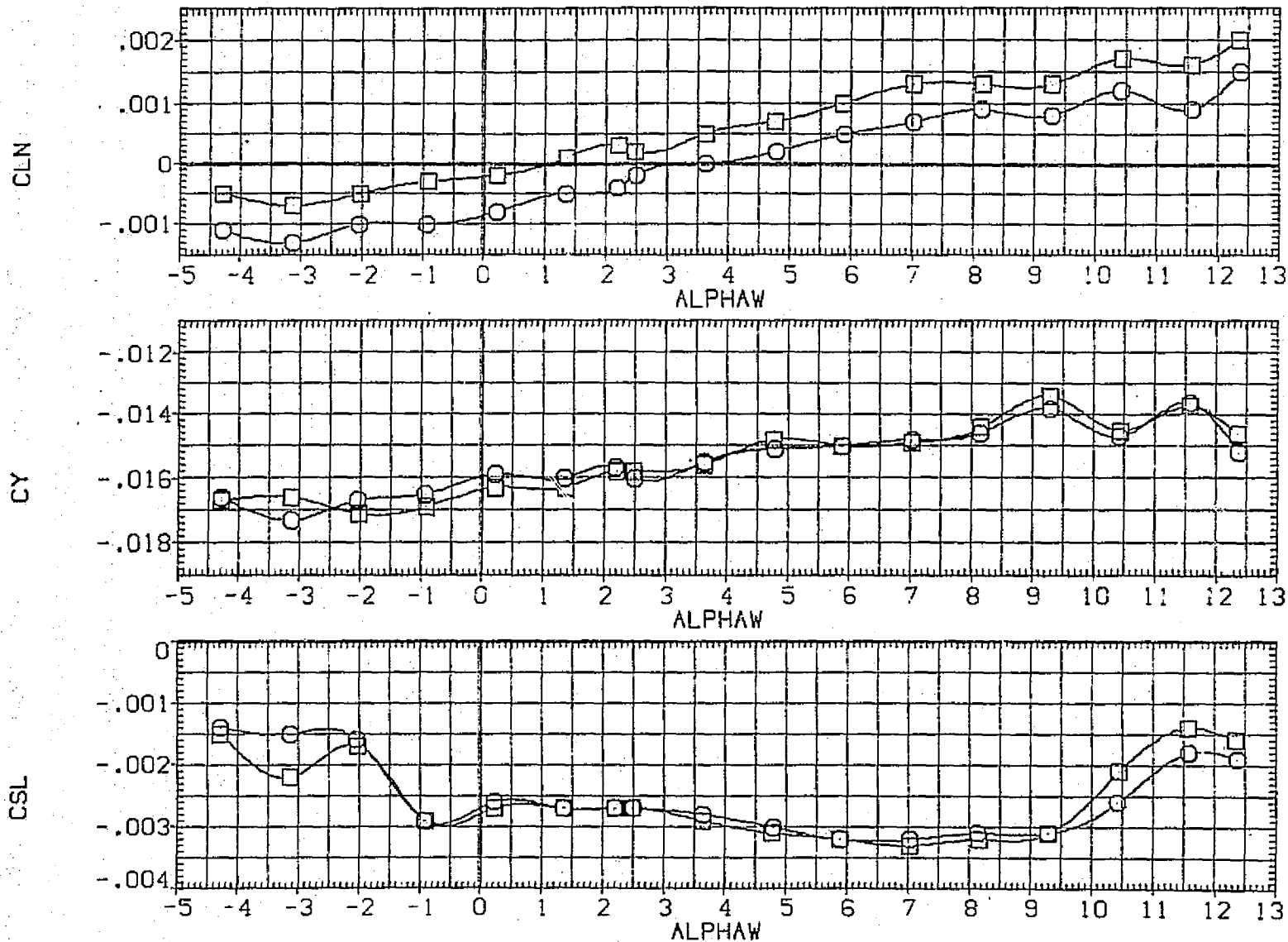


FIG. 44 EFFECT OF SIDE STRUT FAIRINGS ON LAUNCH CONFIG., CA23 AFT STRUT

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP037)	□ CA6 K2H15.6.IV9.I51-12 AT103.1/105 ORBF8N24/28	4.890	.000	6.000	SREF 5500.0000 50.FT.
(RGP059)	○ CA6 K2H15.6.IV9.I51-12 AT103.1/95-.3ORBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP136)	◇ CA6 K2H15.6.IV9.I51-12 AT112 .111.1ORBF8N24/28	4.980	.000	6.030	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

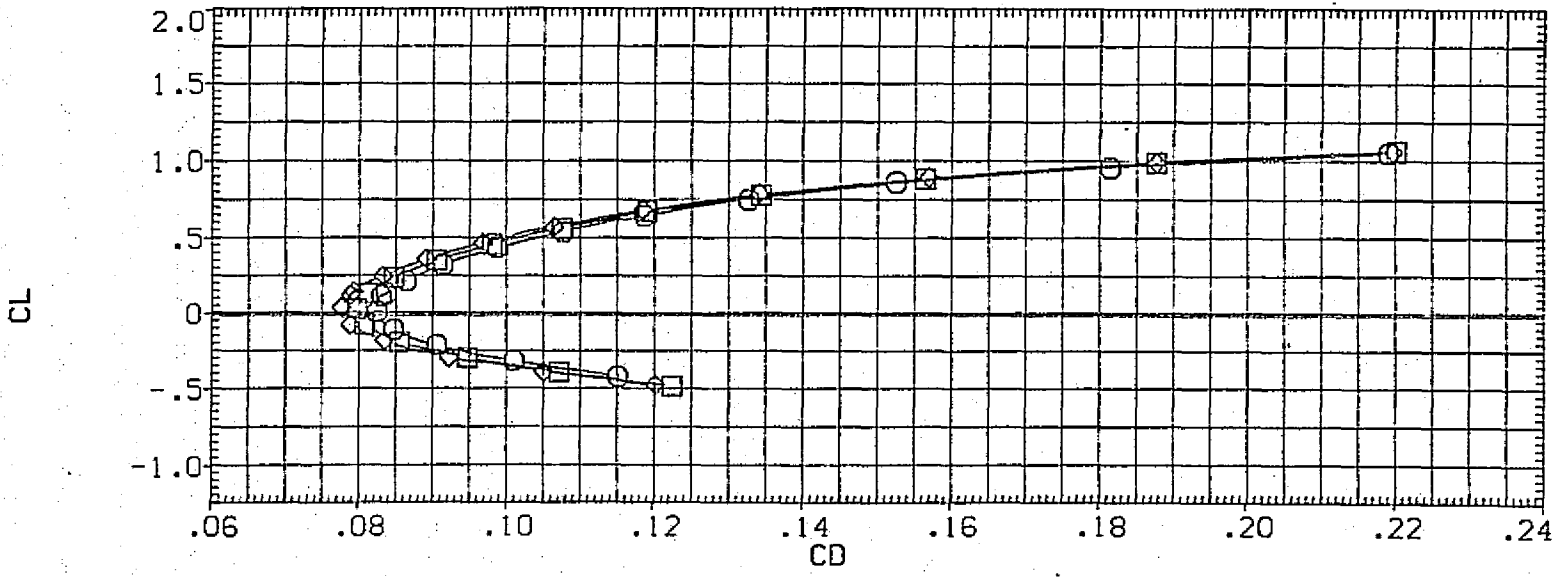
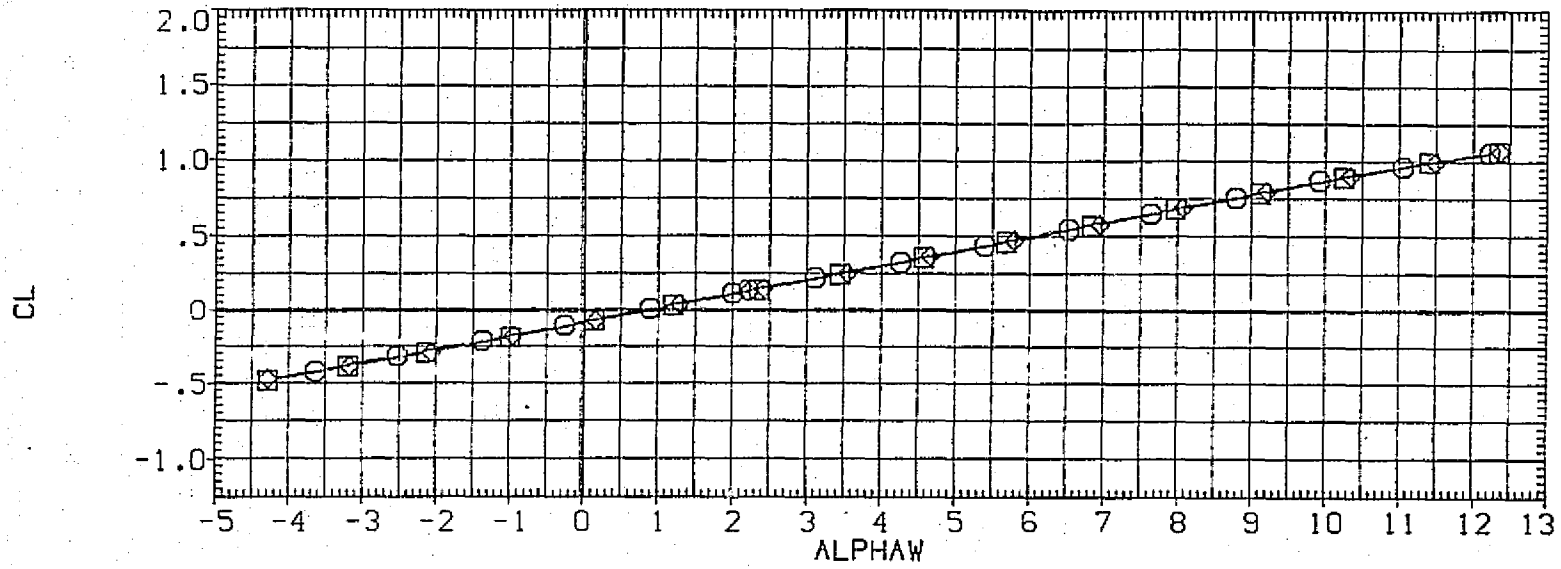


FIG. 45 COMPARISON OF CANDIDATE FAIRING CONFIGURATIONS, LAUNCH CONFIGURATION
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP037)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 0RBF8N24/28	4.890	.000	6.000	SREF	5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF	327.8000 IN.
(RGP136)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N2 /28	4.980	.000	6.030	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

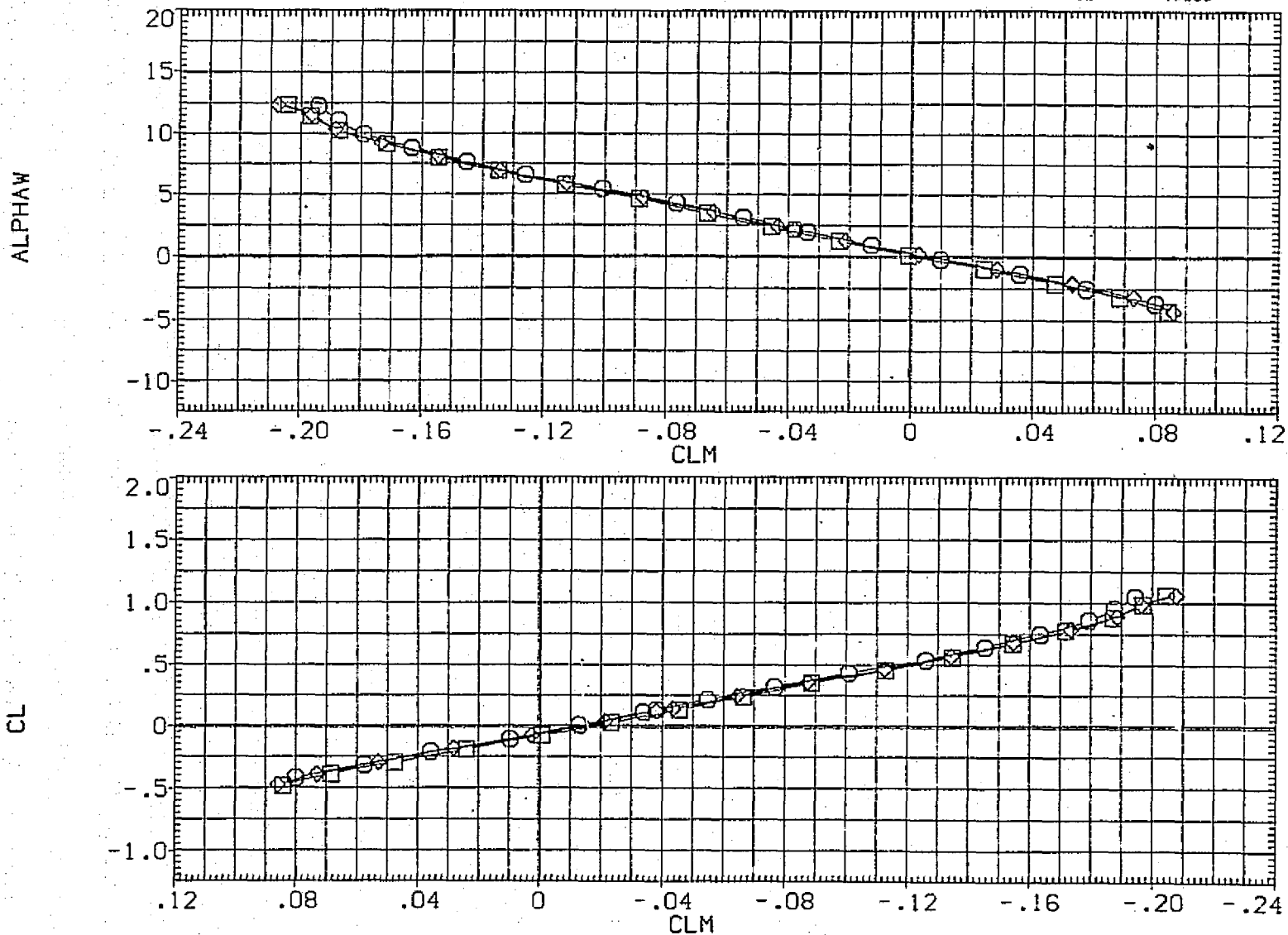


FIG. 45 COMPARISON OF CANDIDATE FAIRING CONFIGURATIONS, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP037)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.890	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	LREF 327.8000 IN.
(RGP136)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

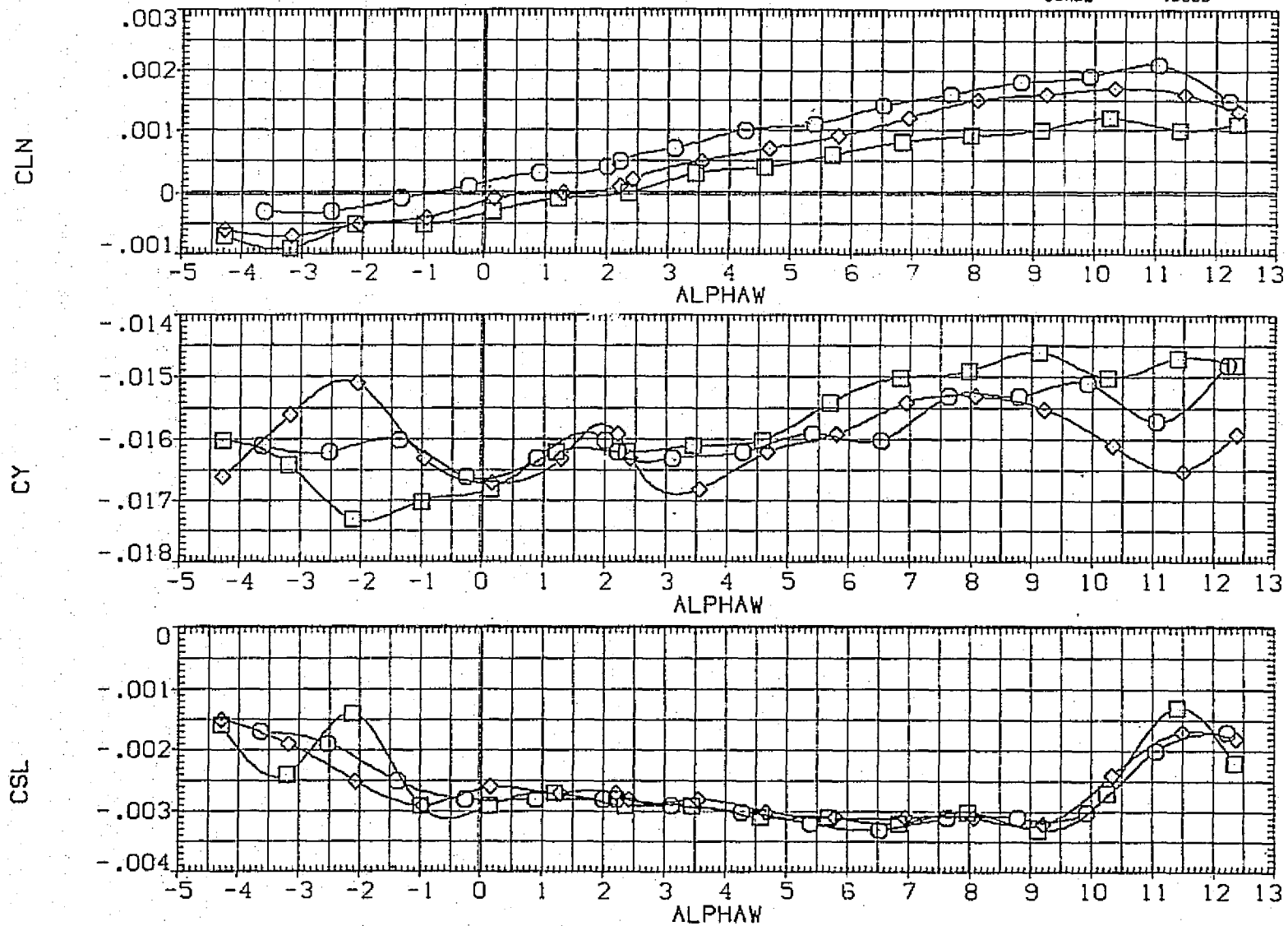


FIG. 45 COMPARISON OF CANDIDATE FAIRING CONFIGURATIONS, LAUNCH CONFIGURATION

(A)MACH = .60

PAGE 240

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP135) □	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	2.070	.000	6.030	SREF	5500.0000 SQ.FT.
(RGP134) □	CA6 K2H15.6.IV9.I51-12 AT112.1/111.20RBF8N24/28	2.070	.000	6.030	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

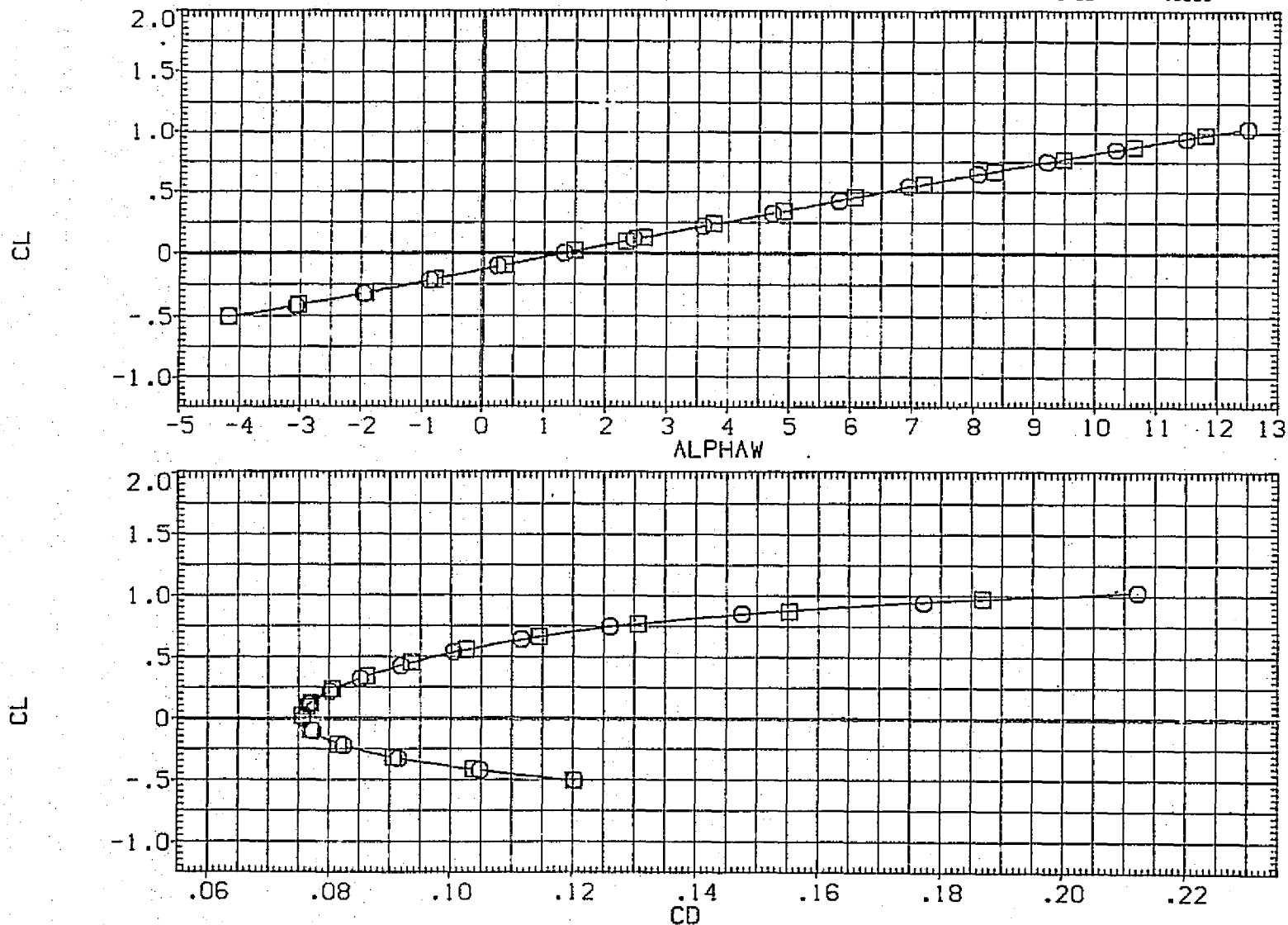


FIG. 46 EFFECT OF TRIP STRIPS ON SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGP135) ○	CAS K2H15.6.1V9.1SI-12 AT112 /111.10RBF0N24/28	2.070	.000	6.030	SREF	5500.0000	50.FT.
(RGP134) □	CAS K2H15.6.1V9.1SI-12 AT112.1/111.20RBF0N24/28	2.070	.000	6.030	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

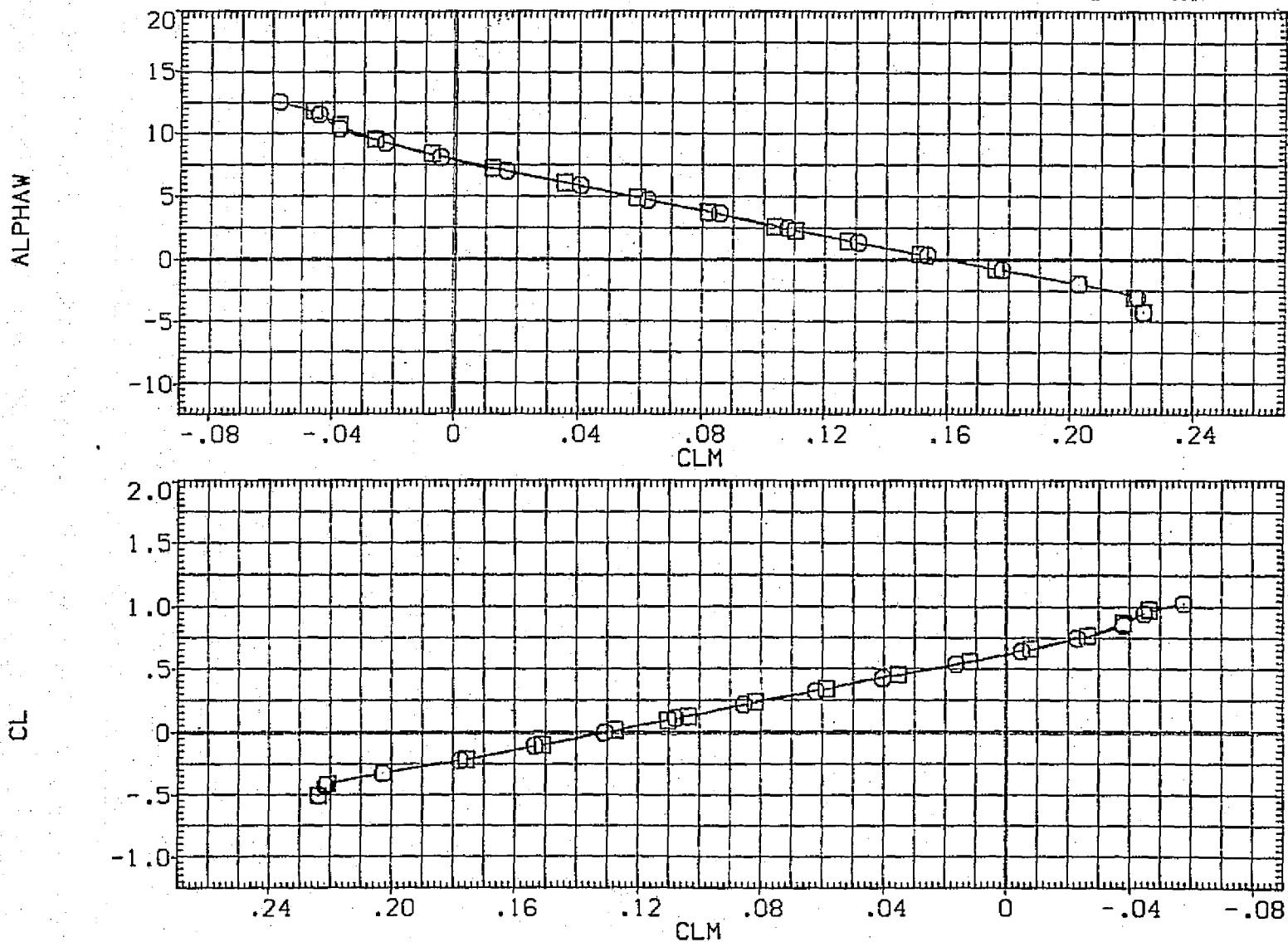


FIG. 46 EFFECT OF TRIP STRIPS ON SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION	
(RGP135)	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	2.070	.000	6.030	SREF	5500.0000 SQ.FT.
(RGP134)	CA6 K2H15.6.IV9.I51-12 AT112.1/111.20RBF8N24/28	2.070	.000	6.030	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0500

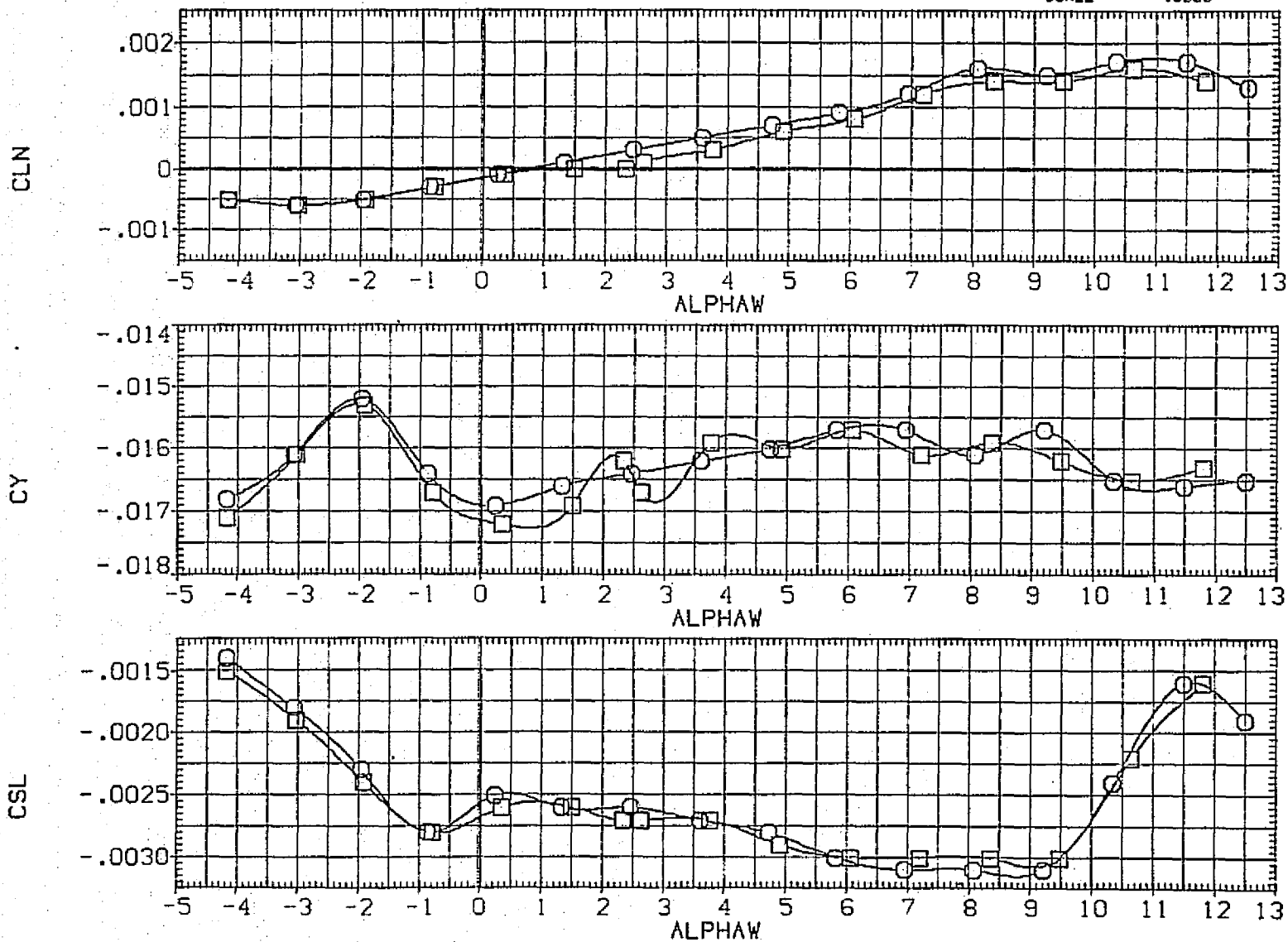


FIG. 46 EFFECT OF TRIP STRIPS ON SUPPORT STRUT FAIRINGS, LAUNCH CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
{ RGP100 }	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	-.020	.000	6.000	SREF	5500.0000	SQ.FT.
{ RGP099 }	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	2.150	.000	6.000	LREF	327.8000	IN.
{ RGP101 }	◇ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	4.770	.000	6.000	BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

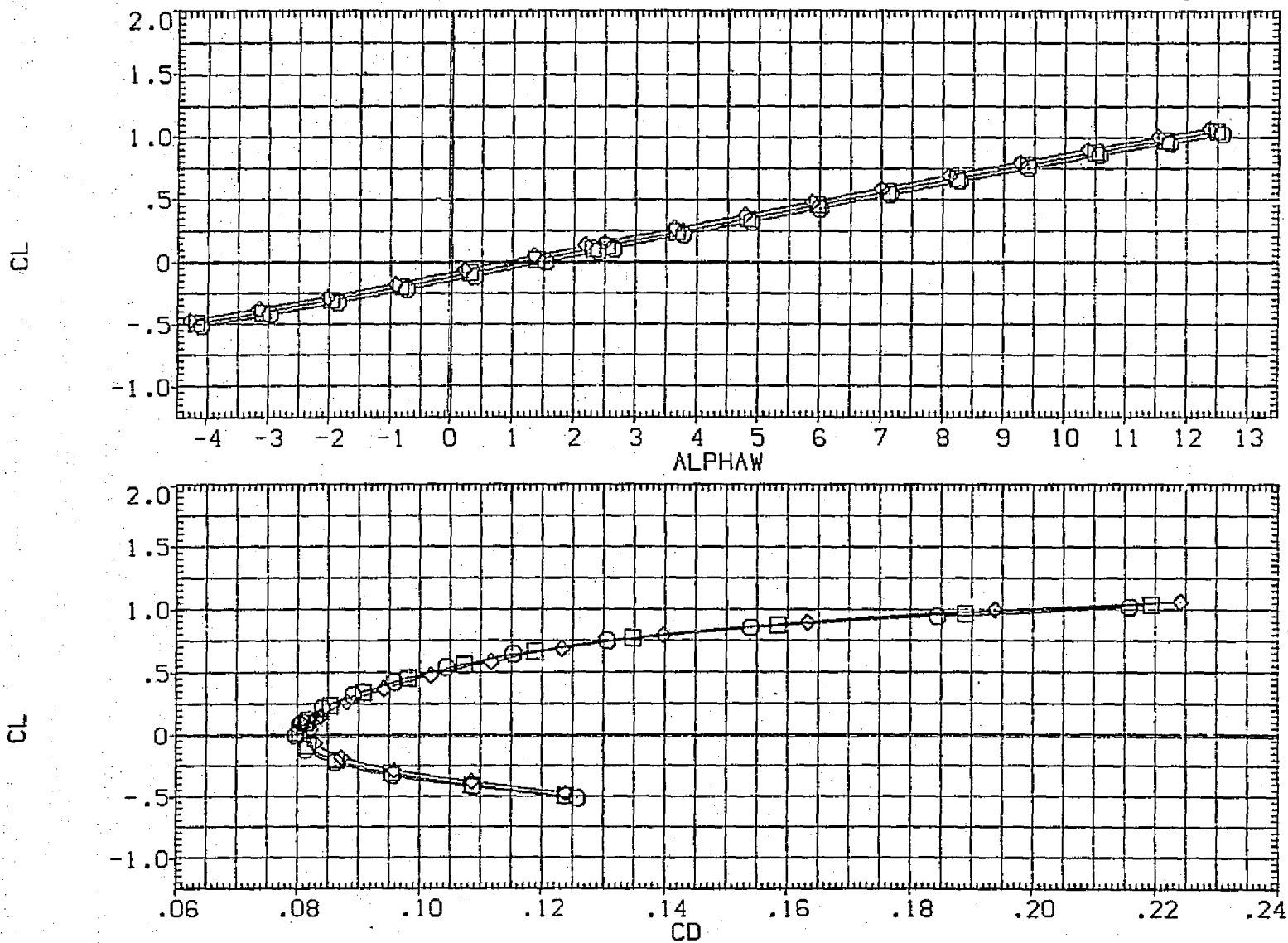


FIG. 47 STABILIZER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP100)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRBF8N24/28	-.020	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP099)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRBF8N24/28	2.150	.000	6.000	LREF 327.8000 IN.
(RGP101)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRBF8N24/28	4.770	6.000	BREF 2348.0000 IN.	
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

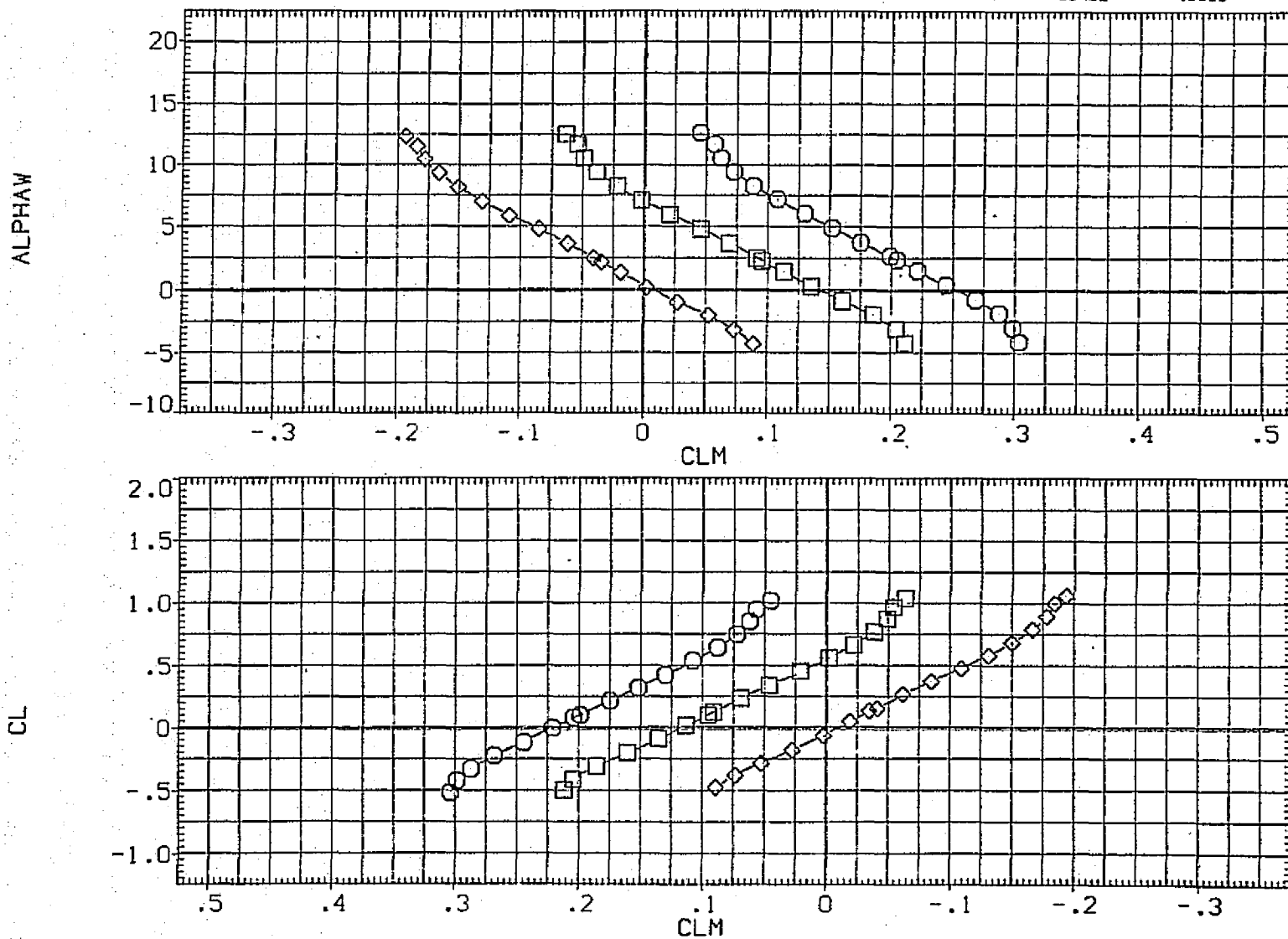


FIG. 47 STABILIZER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP100)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	- .020	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP099)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	2.150	.000	6.000	LREF 327.8000 IN.
(RGP101)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	.000	6.000	BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

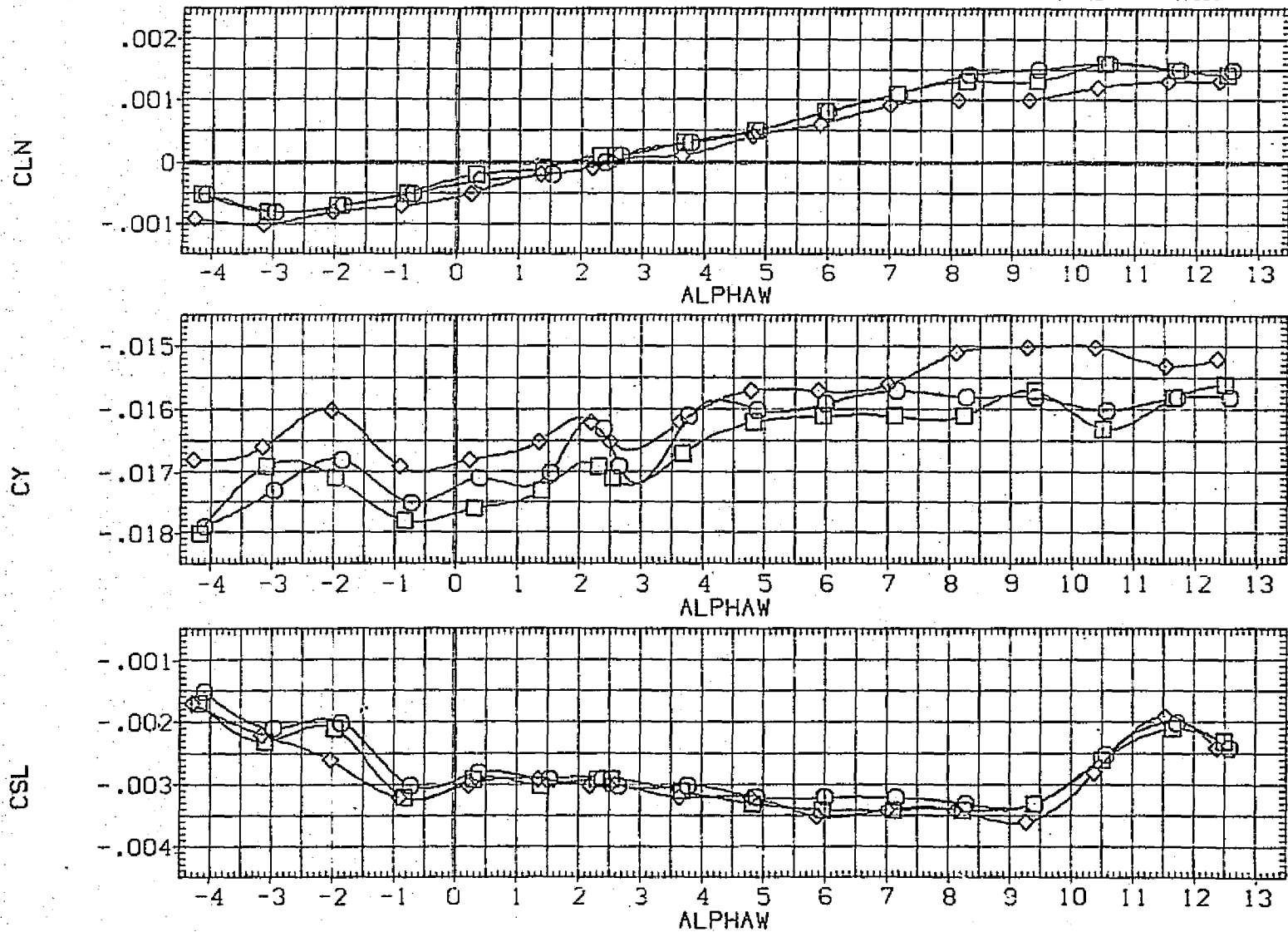


FIG. 47 STABILIZER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP102)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP101)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP103)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
(RGP104)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP105)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
(RGP106)	CA6 K2H15.6.1V9.1SI-12 AT103.1/105 ORBF8N24/28	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

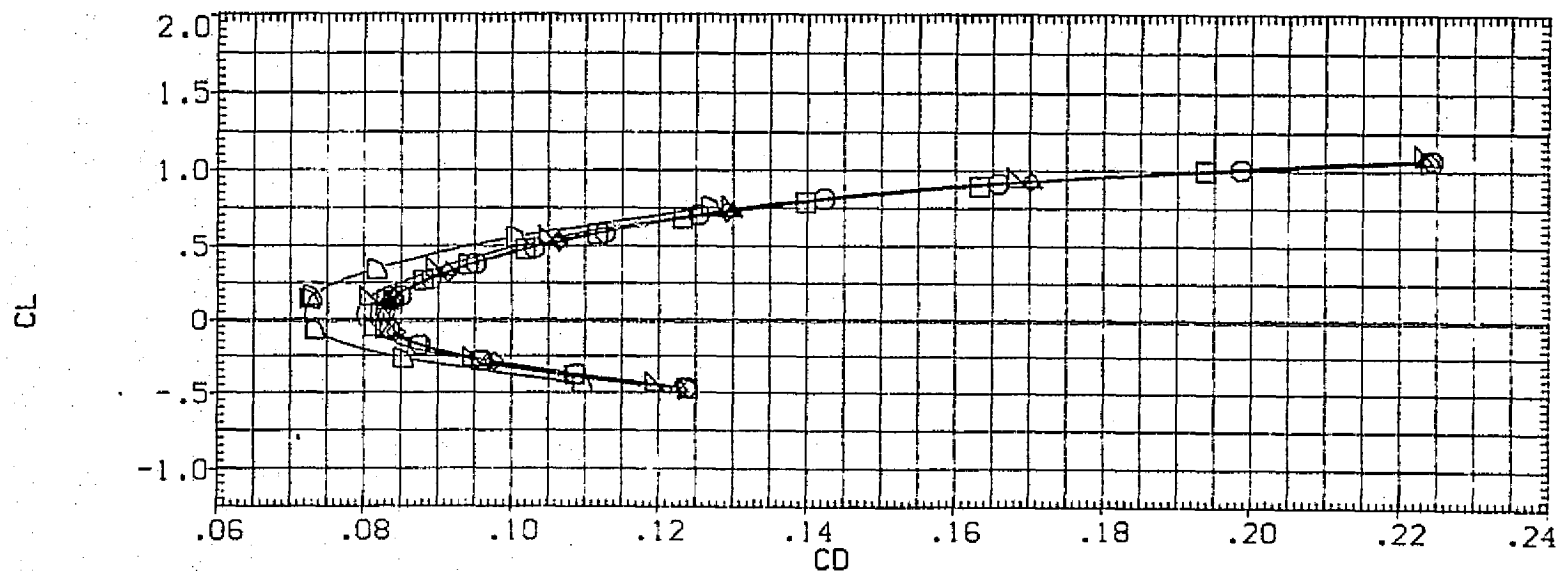
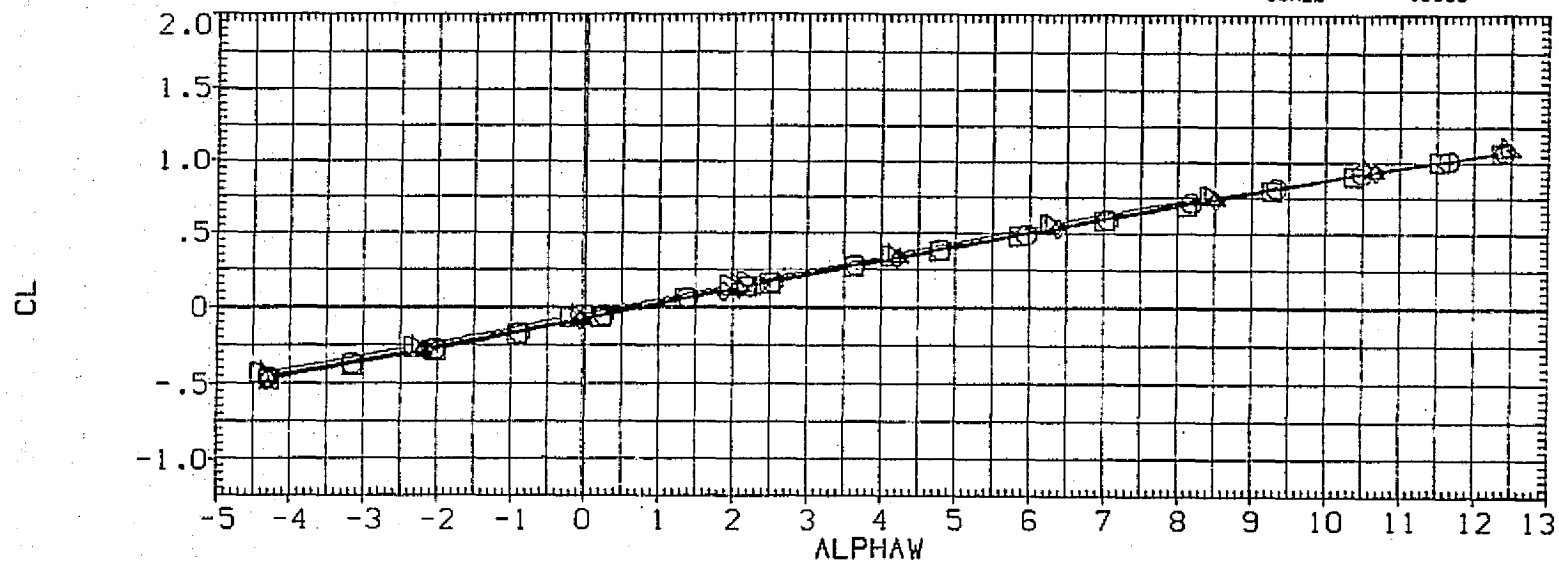


FIG. 48 LATERAL-DIRECTIONAL STABILITY, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP102)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP101)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP103)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
(RGP104)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP105)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
(RGP106)	CA6 K2H15.6.IV9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

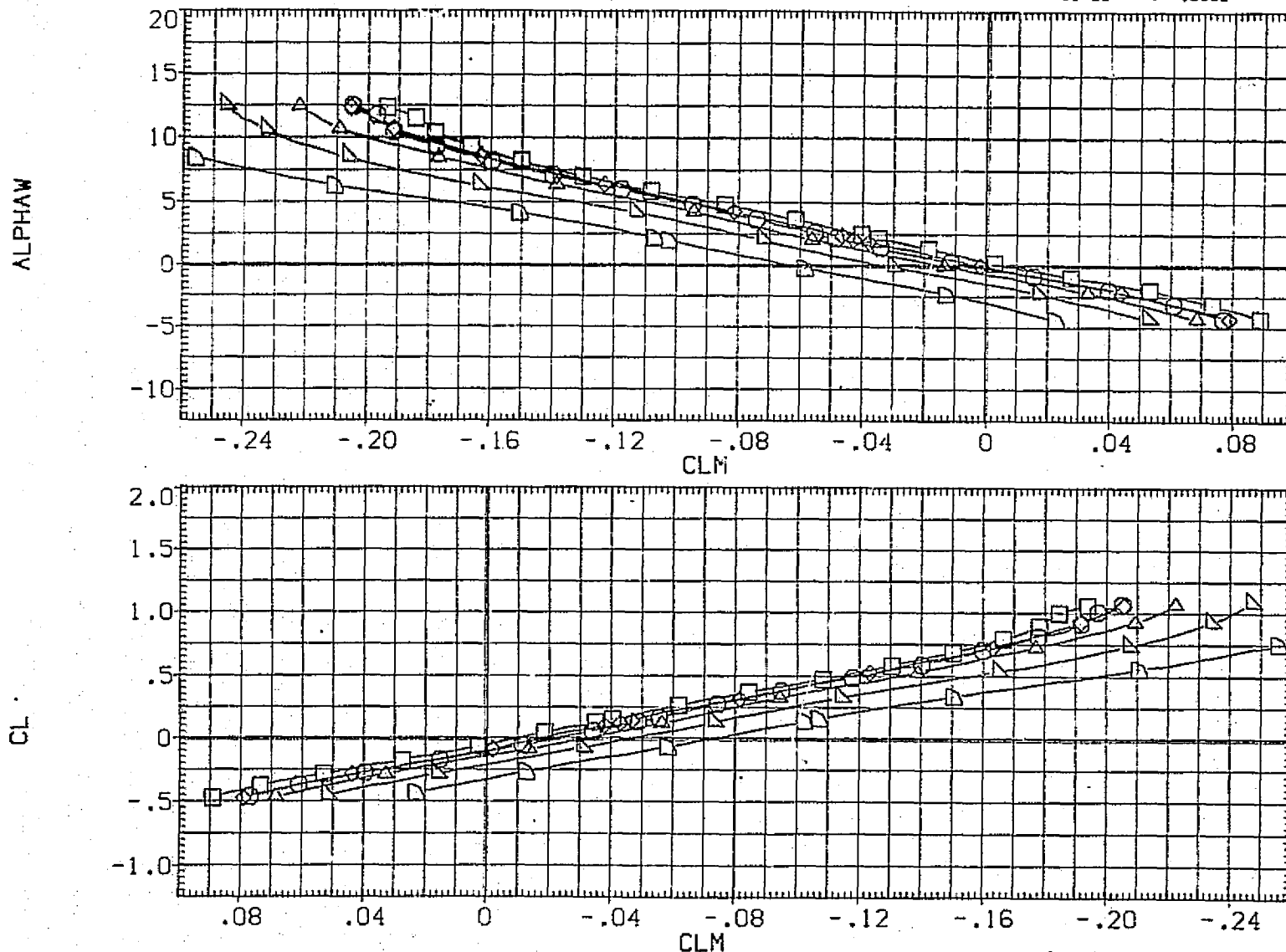


FIG. 48 LATERAL-DIRECTIONAL STABILITY, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP102)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP101)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP103)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
(RGP104)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP105)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
(RGP106)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

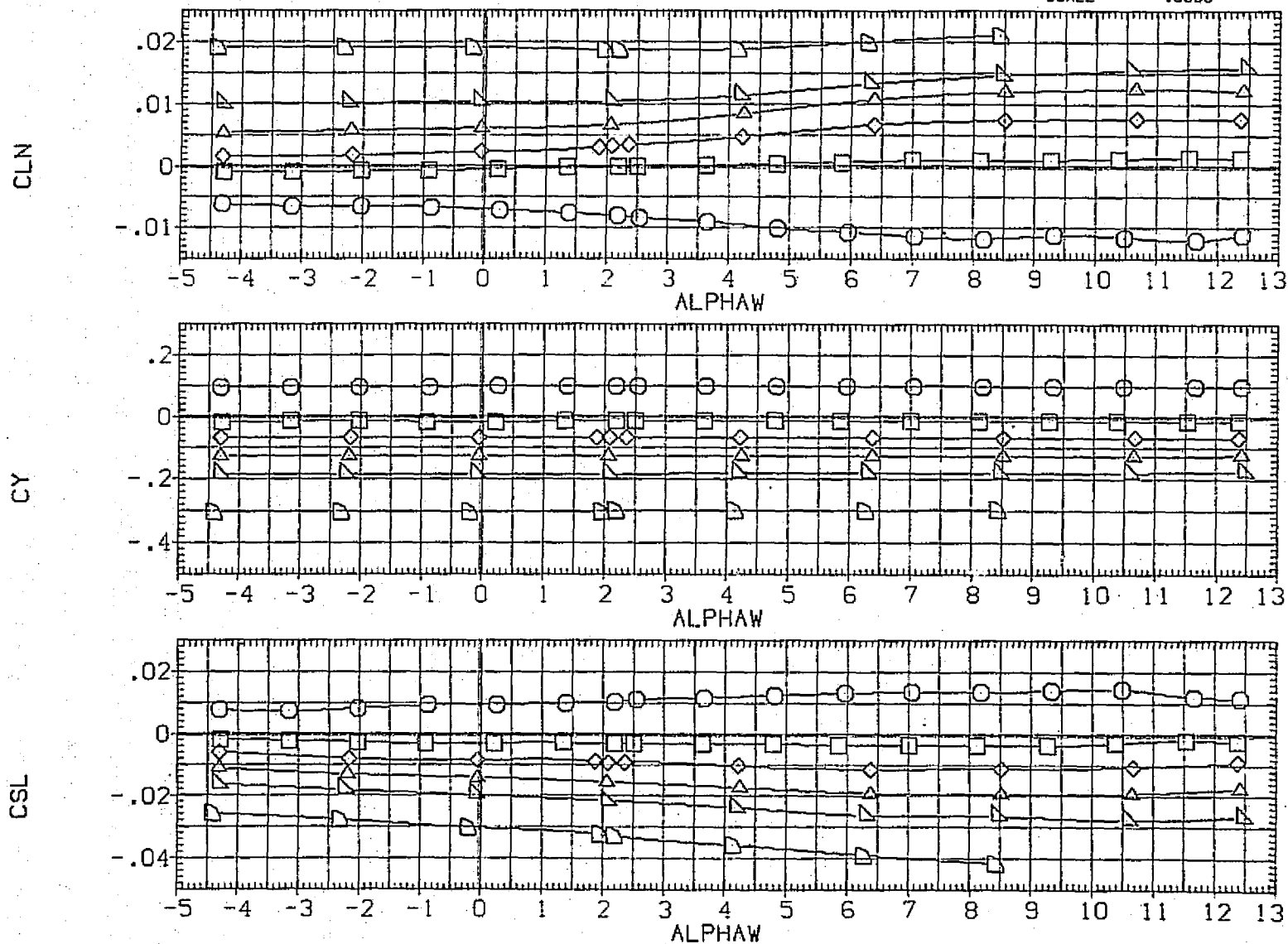


FIG. 48 LATERAL-DIRECTIONAL STABILITY, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION	
(RGP101)	CA6 K2H15.6.IV9.IS1-12 AT103.1/105 ORBF8N24/28	.000	.000	4.770	.000	SREF	5500.0000 SQ.FT.
(RGP107)	CA6 K2H15.6.IV9.IS1-12 AT103.1/105 ORBF8N24/28	10.000	10.000	4.770	.000	LREF	327.8000 IN.
						BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

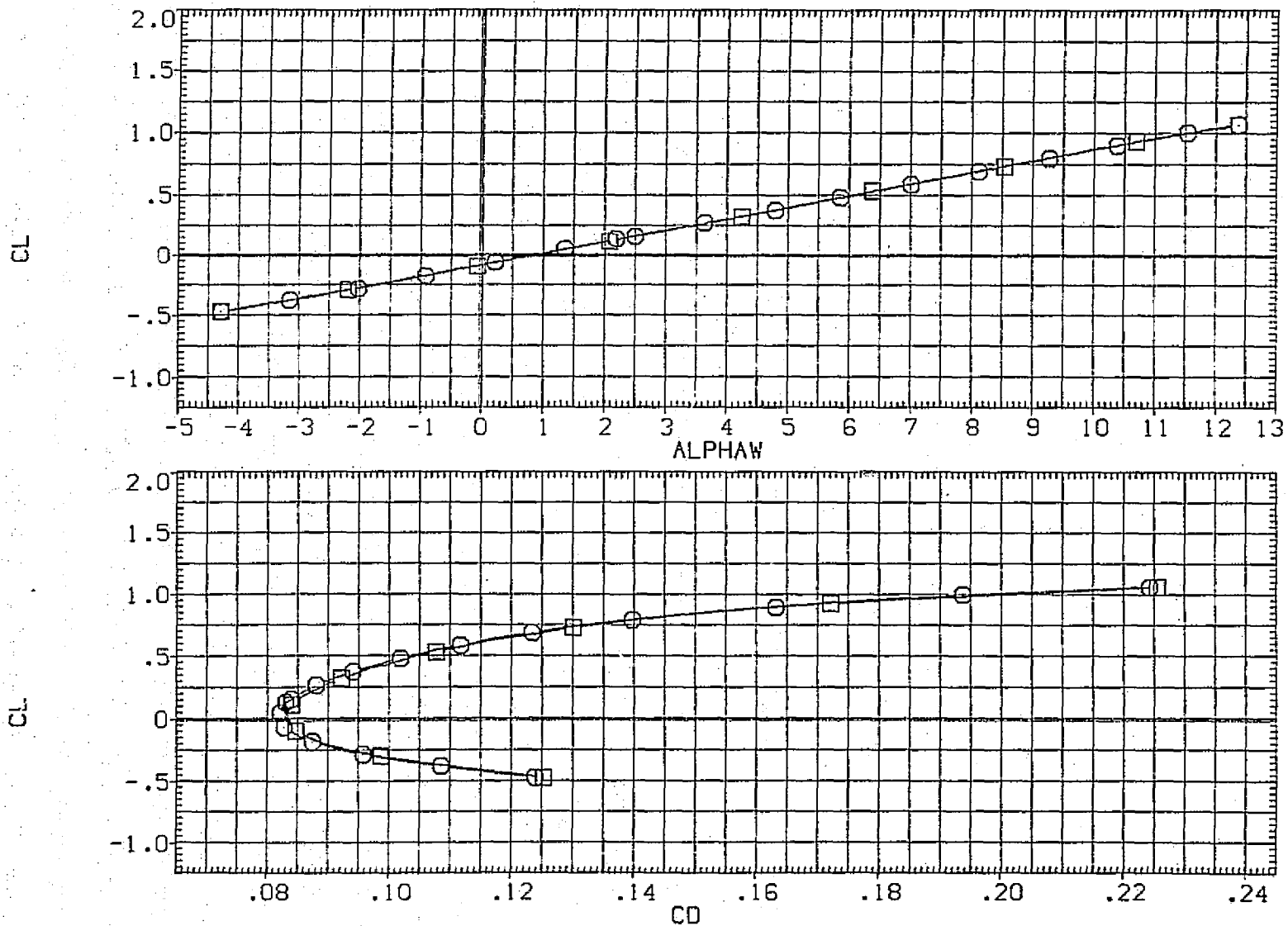


FIG. 49 RUDDER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION
(RGP101)	□ CAG K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	.000	4.770	.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN.
(RGP107)	○ CAG K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	10.000	10.000	4.770	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

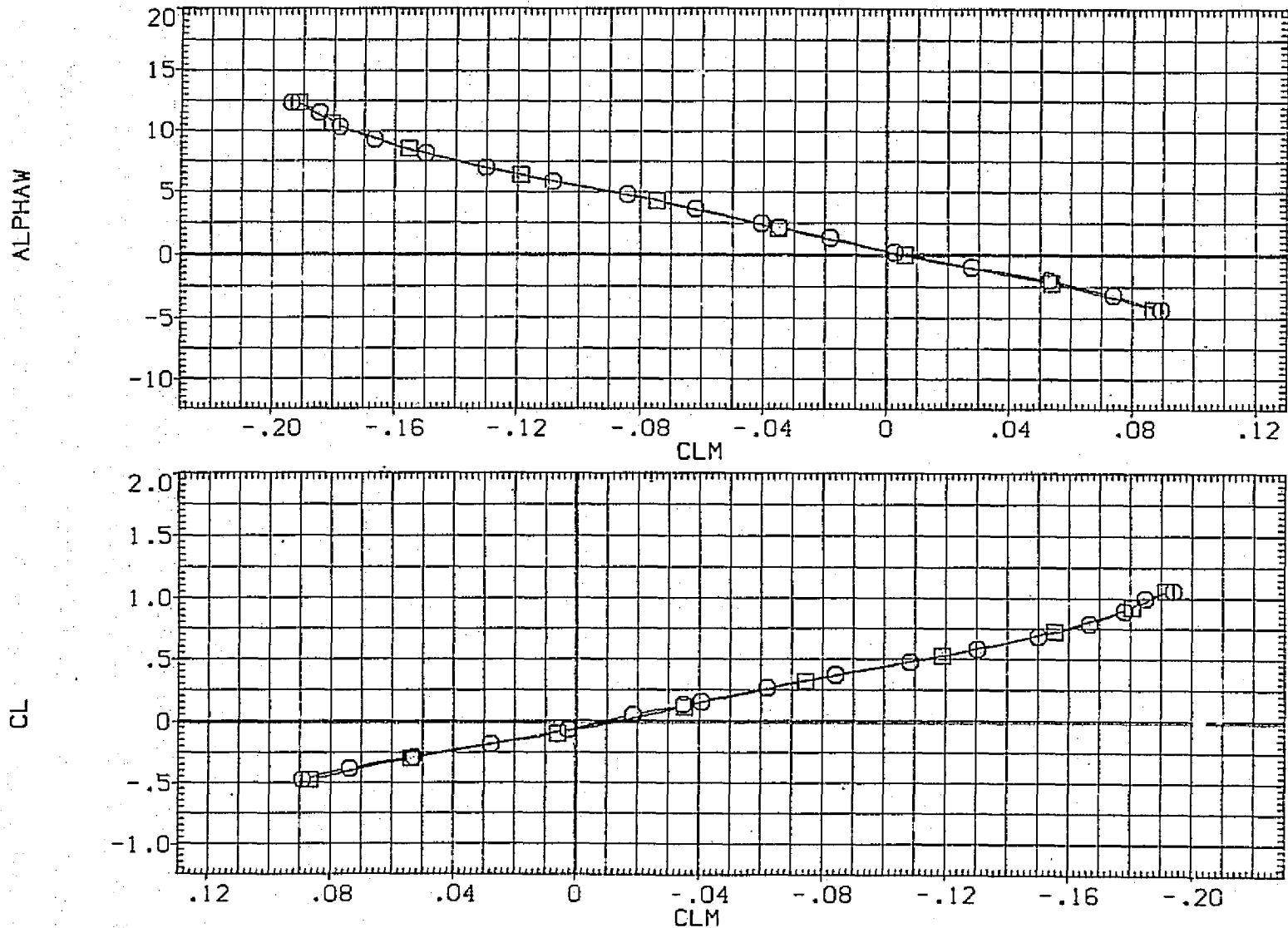


FIG. 49 RUDDER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	STAB	BETA	REFERENCE INFORMATION	
(RGP101)	CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	.000	4.770	.000	SREF	5500.0000 SQ. FT.
(RGP107)	CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	10.000	10.000	4.770	.000	LREF	327.8000 IN.
						BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

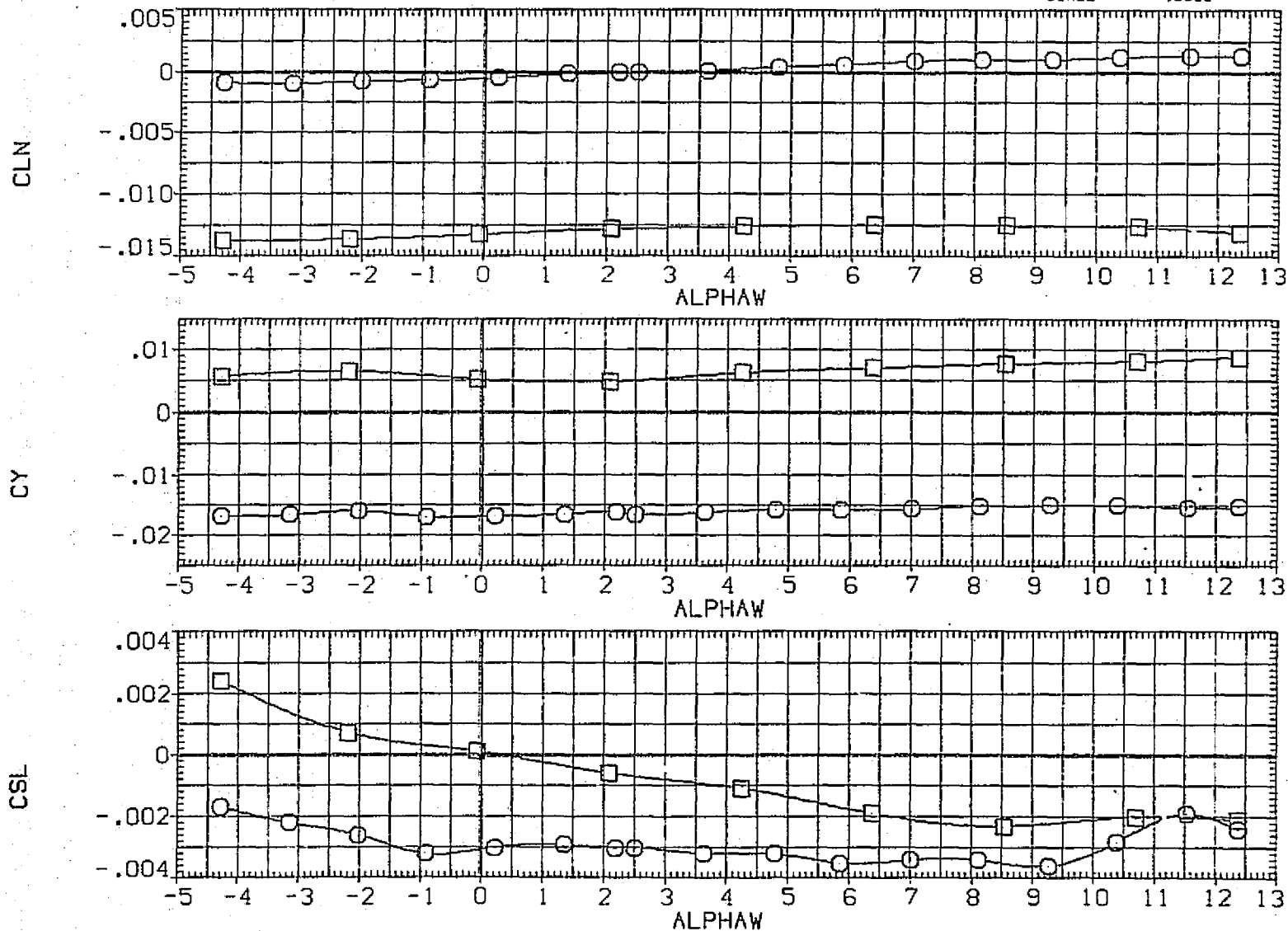


FIG. 49 RUDDER EFFECTIVENESS, STRUT FAIRINGS OFF, TC OFF

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP113)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	-4.000	6.000	SREF 5500.0000 SQ.FT.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP112)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	XMRP 1339.9000 IN. XC
(RGP111)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
(RGP110)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

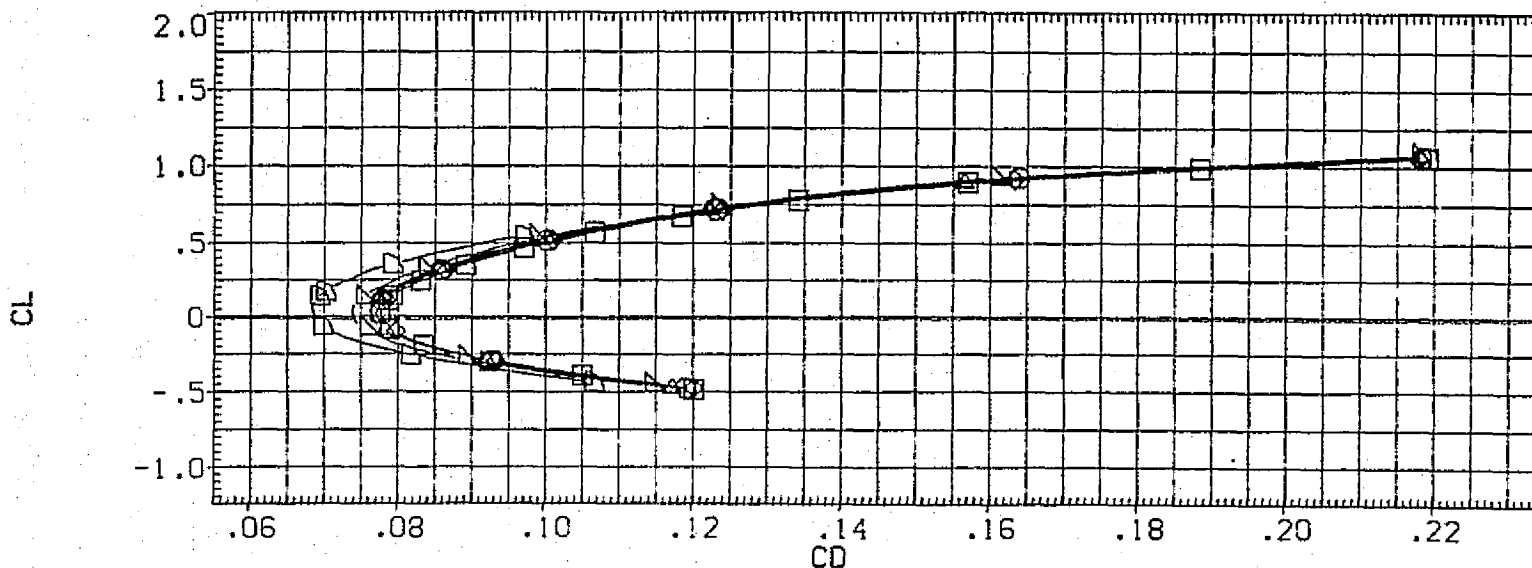
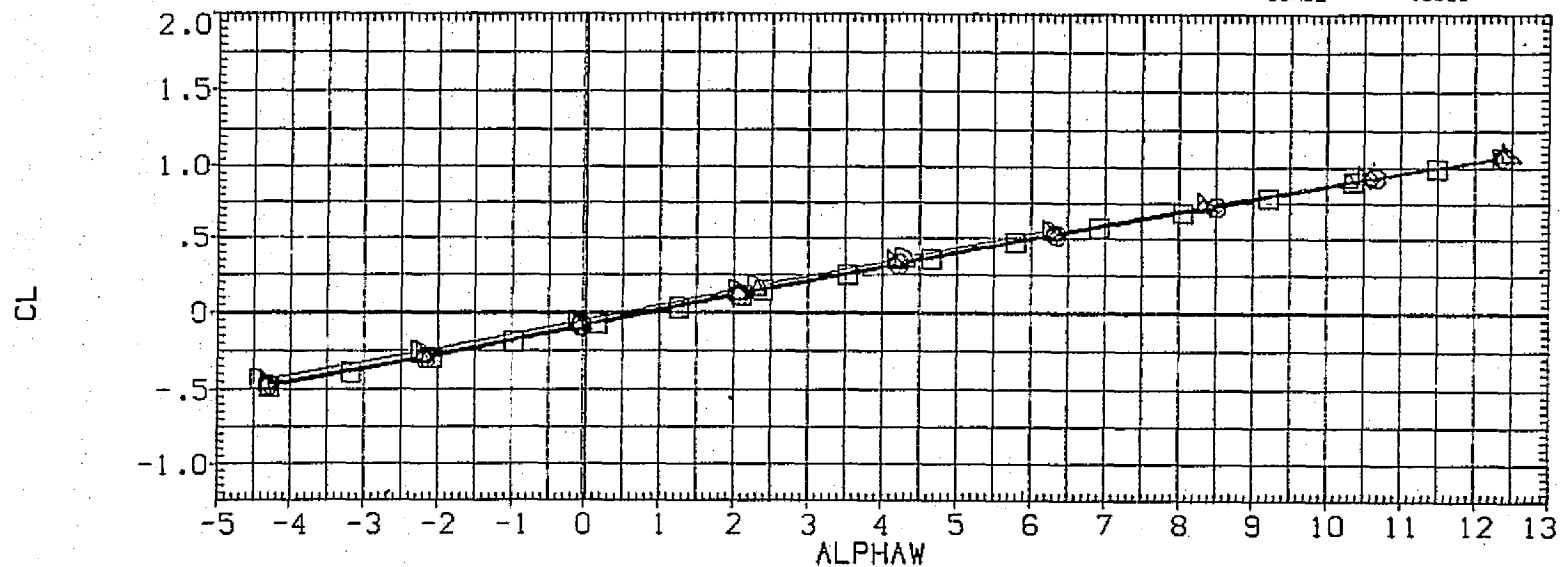


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGP113)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	-4.000	6.000	SREF	5500.0000	SQ.FT.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	.000	6.000	LREF	327.8000	IN.
(RGP112)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	2.000	6.000	BREF	2348.0000	IN.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	XMRP	1339.9000	IN. XC
(RGP111)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	6.000	6.000	YMRP	.0000	IN. YC
(RGP110)	CA6 K2H15.6.1V9.1S1-12 AT109 1/95-.30RBF8N24/28	4.770	10.000	6.000	ZMRP	190.7700	IN. ZC
					SCALE	.0300	

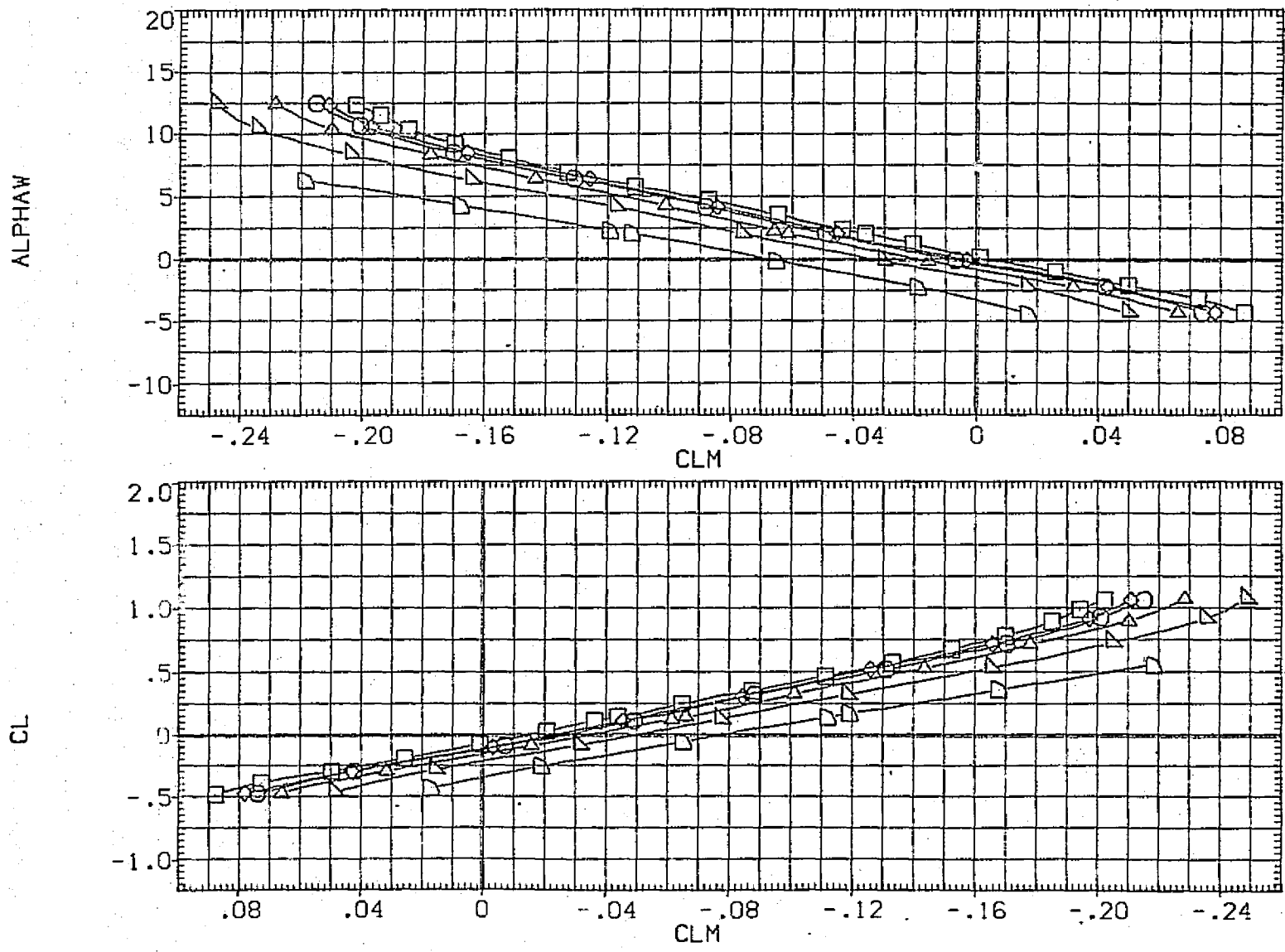


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.
 (A)MACH = .60 PAGE 254

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP113)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/23	4.770	-4.000	6.000	SREF 5500.0000 50.FT.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
(RGP112)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	XMRP 1339.9000 IN. YC
(RGP111)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
(RGP110)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

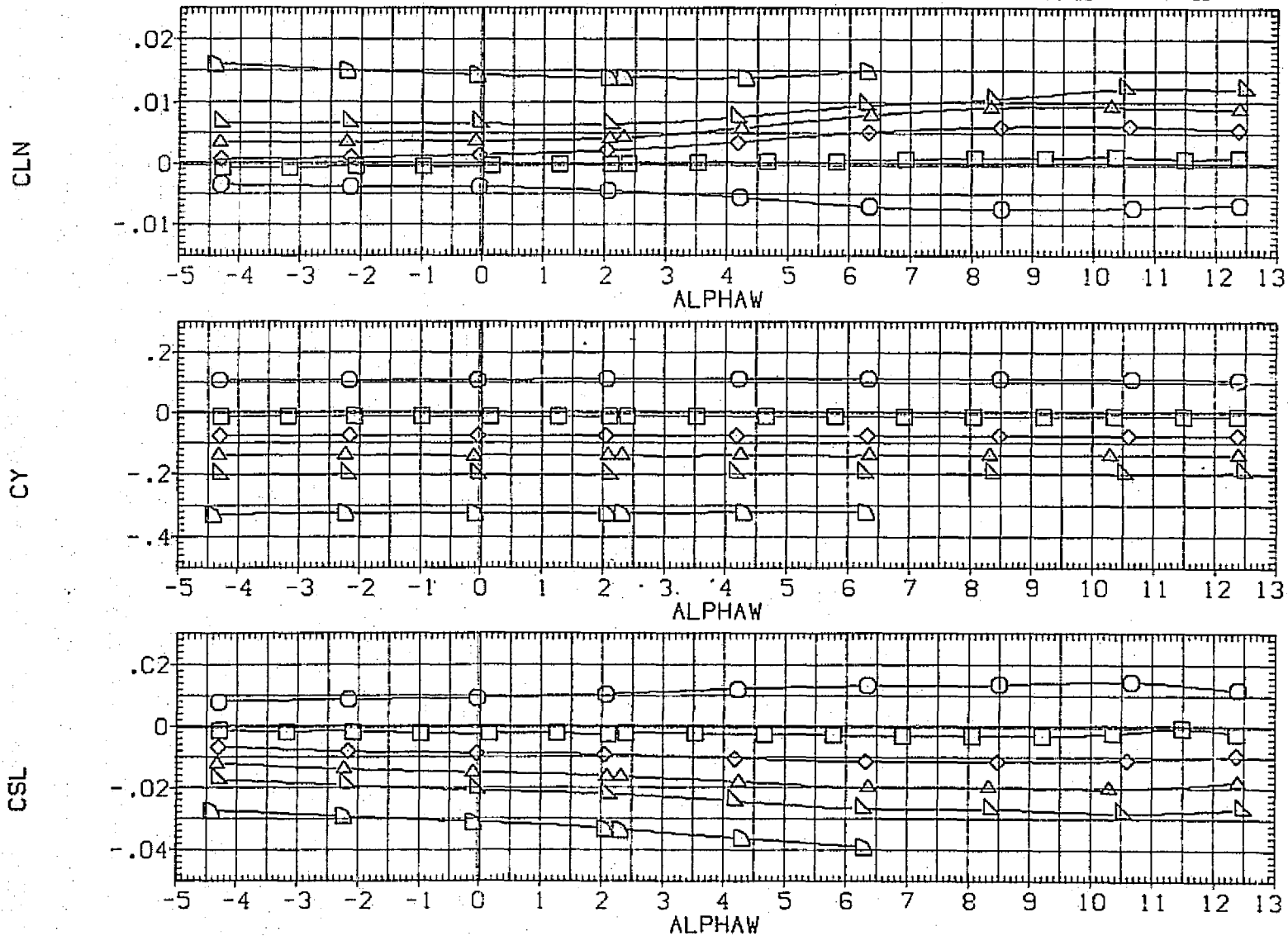


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
{RGP113}	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	-4.000	6.000	SREF 5500.0000 SQ.FT.
{RGP109}	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	.000	6.000	LREF 327.8000 IN.
{RGP112}	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	2.000	6.000	BREF 2348.0000 IN.
{RGP114}	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	XMRP 1338.9000 IN. XC
{RGP111}	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	6.000	6.000	YMRP .0000 IN. YC
{RGP110}	DATA NOT AVAILABLE	4.770	10.000	6.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

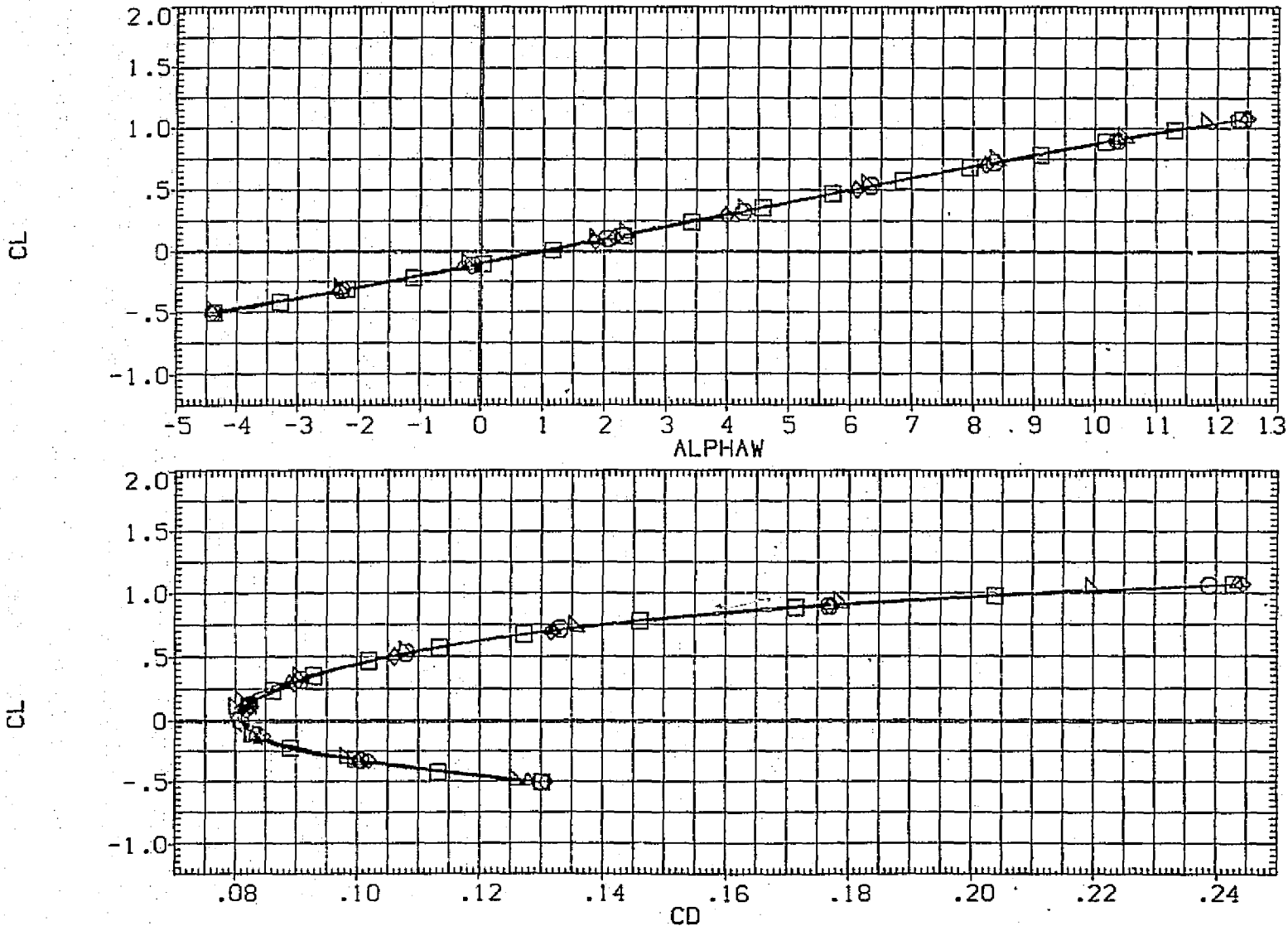


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGP113)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	-4.000	6.000	SREF	5500.0000	SQ.FT.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	.000	6.000	LREF	327.8000	IN.
(RGP112)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	2.000	6.000	BREF	2348.0000	IN.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	4.000	6.000	XMRP	1339.9000	IN. XC
(RGP111)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBF8N24/28	4.770	6.000	6.000	YMRP	.0000	IN. YC
(RGP110)	DATA NOT AVAILABLE	4.770	10.000	6.000	ZMRP	190.7700	IN. ZC
					SCALE	.0300	

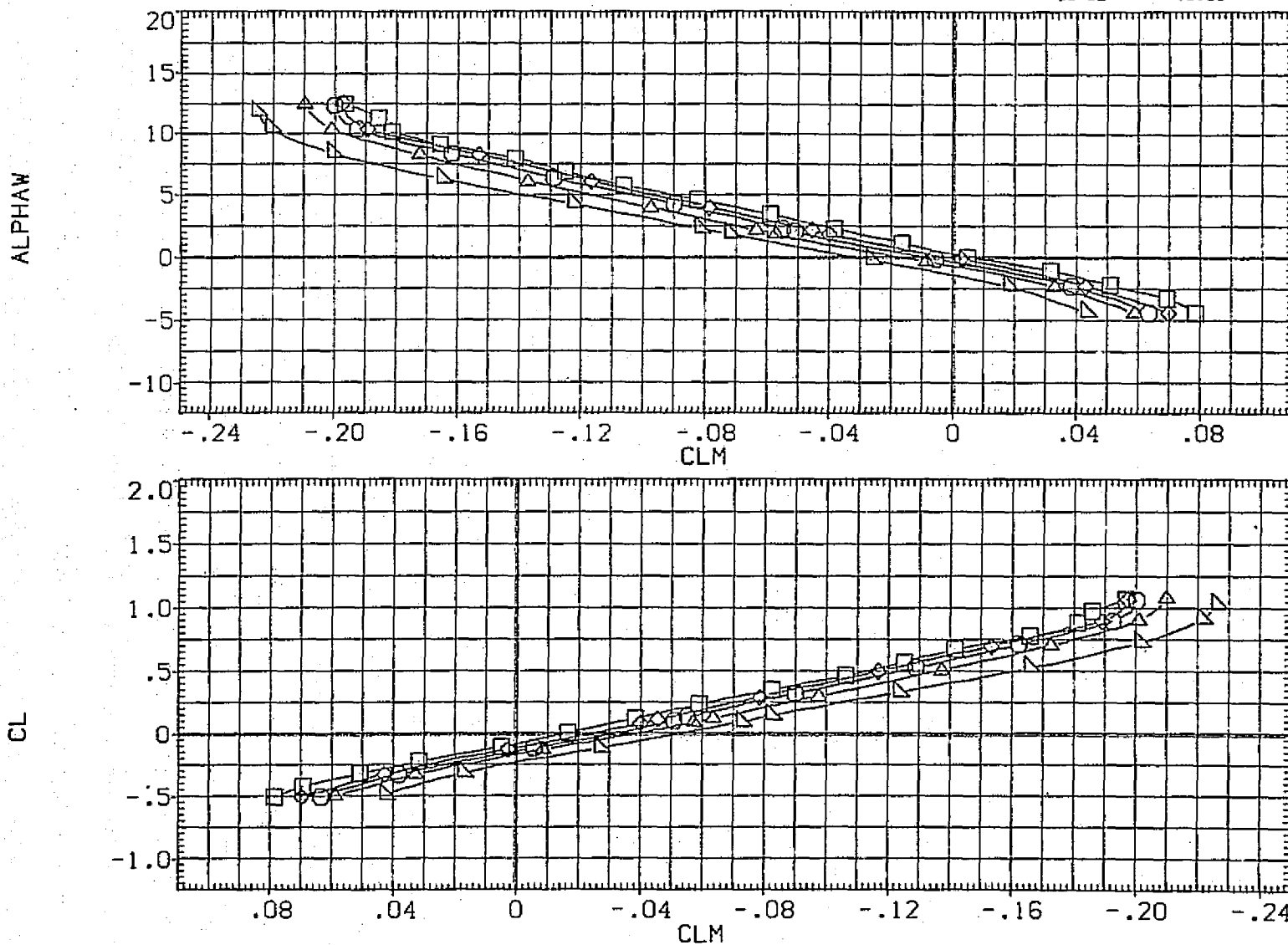


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP113)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBFBN24/28	4.770	-4.000	6.000	SREF	5500.0000 SQ.FT.
(RGP109)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBFBN24/28	4.770	.000	6.000	LREF	327.8000 IN.
(RGP112)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBFBN24/28	4.770	2.000	6.000	BREF	2348.0000 IN.
(RGP114)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBFBN24/28	4.770	4.000	6.000	XMRP	1339.9000 IN. XC
(RGP111)	CA6 K2H15.6.1V9.1S1-12 AT108 1/95-.30RBFBN24/28	4.770	6.000	6.000	YMRP	.0000 IN. YC
(RGP110)	DATA NOT AVAILABLE	4.770	10.000	6.000	ZMRP	190.7700 IN. ZC
					SCALE	.0300

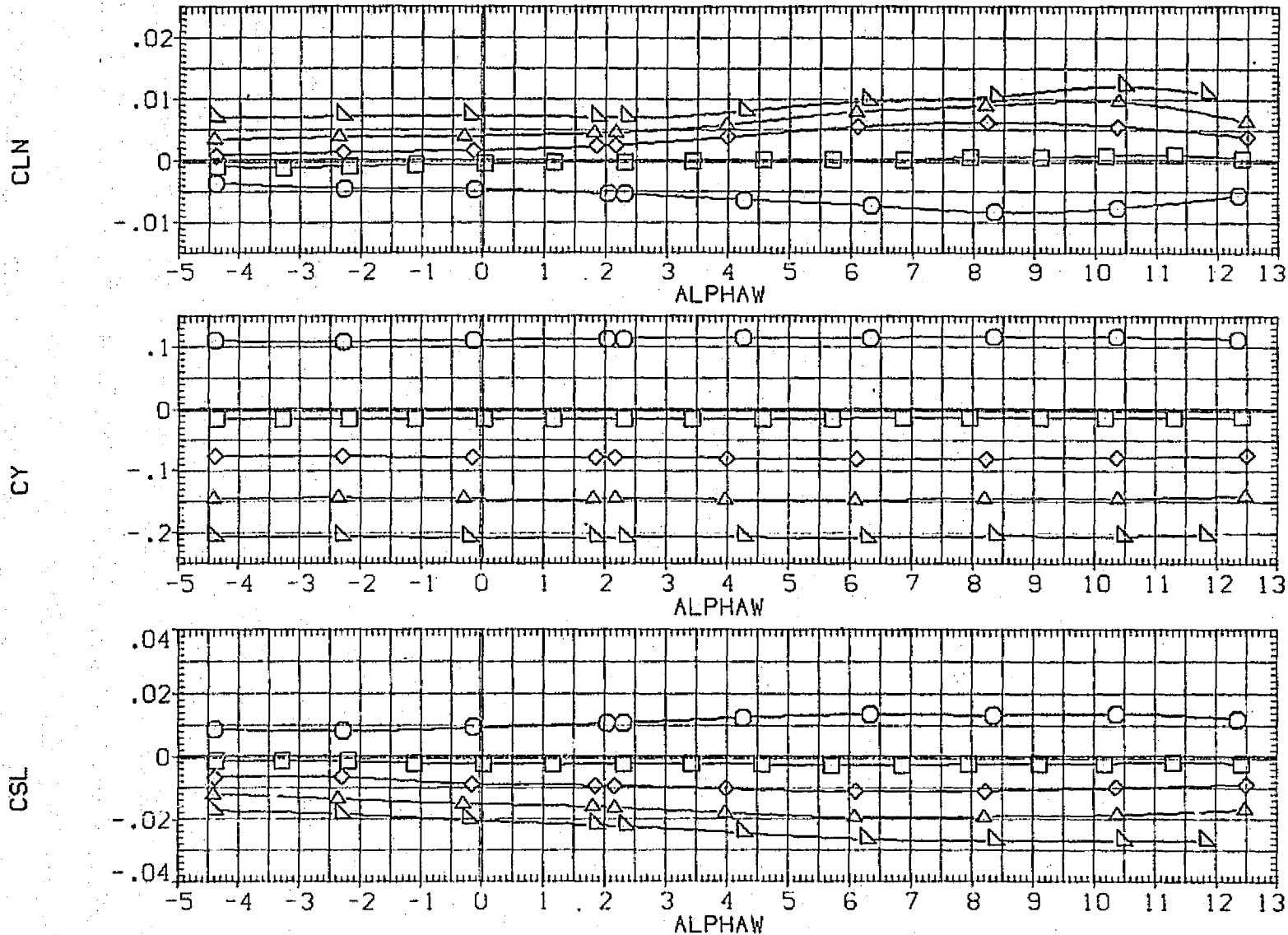


FIG. 50 LATERAL-DIRECTIONAL STABILITY, FAIRINGS CA23 AFT AND LONG CHORD FWD.

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP129)	□ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 SQ.FT.
(RGP130)	○ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	.000	8.110	LREF 327.8000 IN.
(RGP128)	◇ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	4.000	8.110	BREF 2348.0000 IN.
(RGP127)	△ CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	10.000	8.110	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

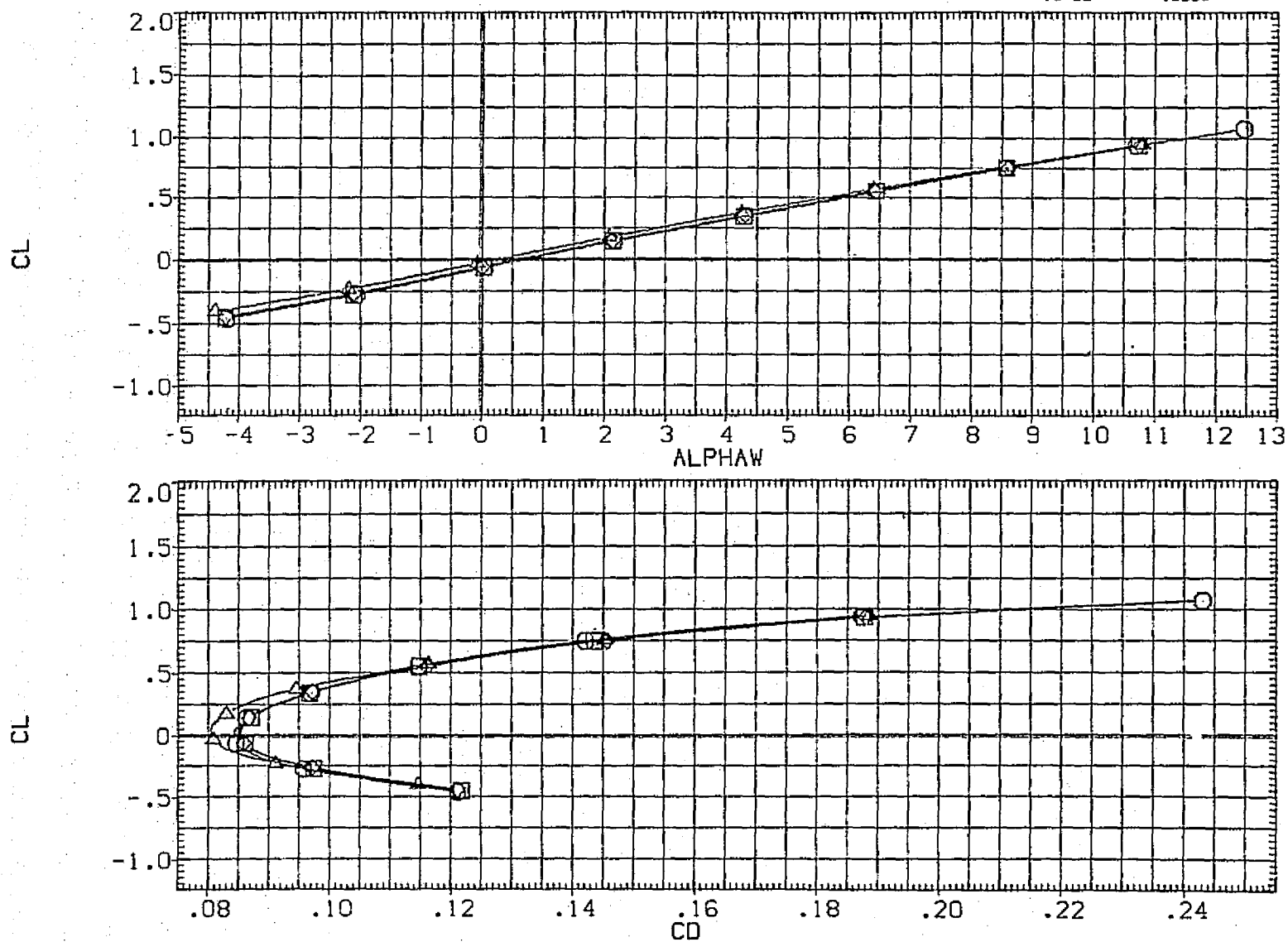


FIG. 51 ALL VERTICAL TAILS OFF, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP129)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 SQ.FT.
(RGP130)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	.000	8.110	LREF 327.8000 IN.
(RGP128)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	4.000	8.110	BREF 2348.0000 IN.
(RGP127)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	10.000	8.110	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

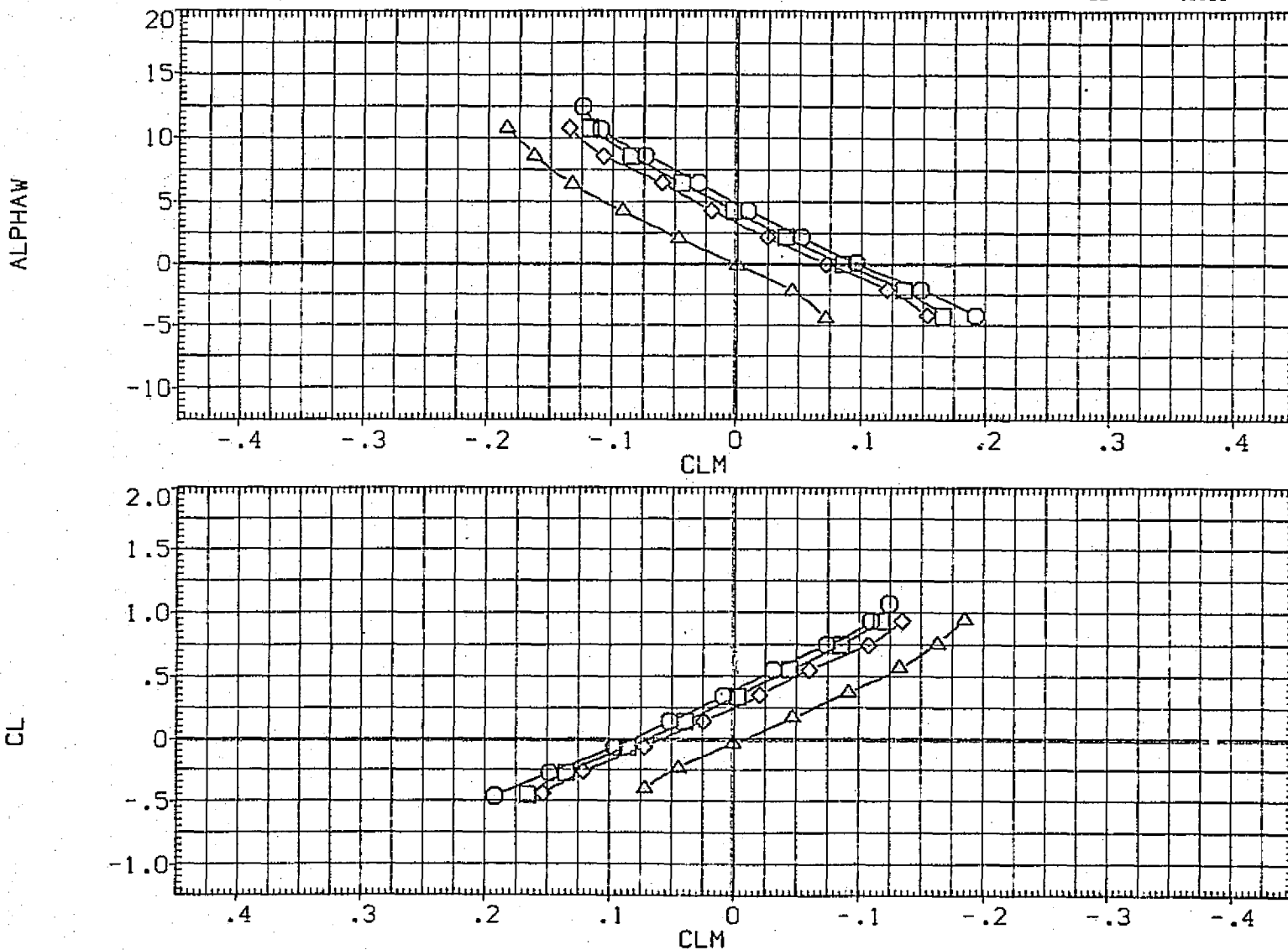


FIG. 51 ALL VERTICAL TAILS OFF, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP129)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 SQ.FT.
(RGP130)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	.000	8.110	LREF 327.8000 IN.
(RGP128)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	4.000	8.110	BREF 2348.0000 IN.
(RGP127)	CA6 K2H15.1 S1-12 AT103.1/95-.30RBF8N24/28	4.850	10.000	8.110	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

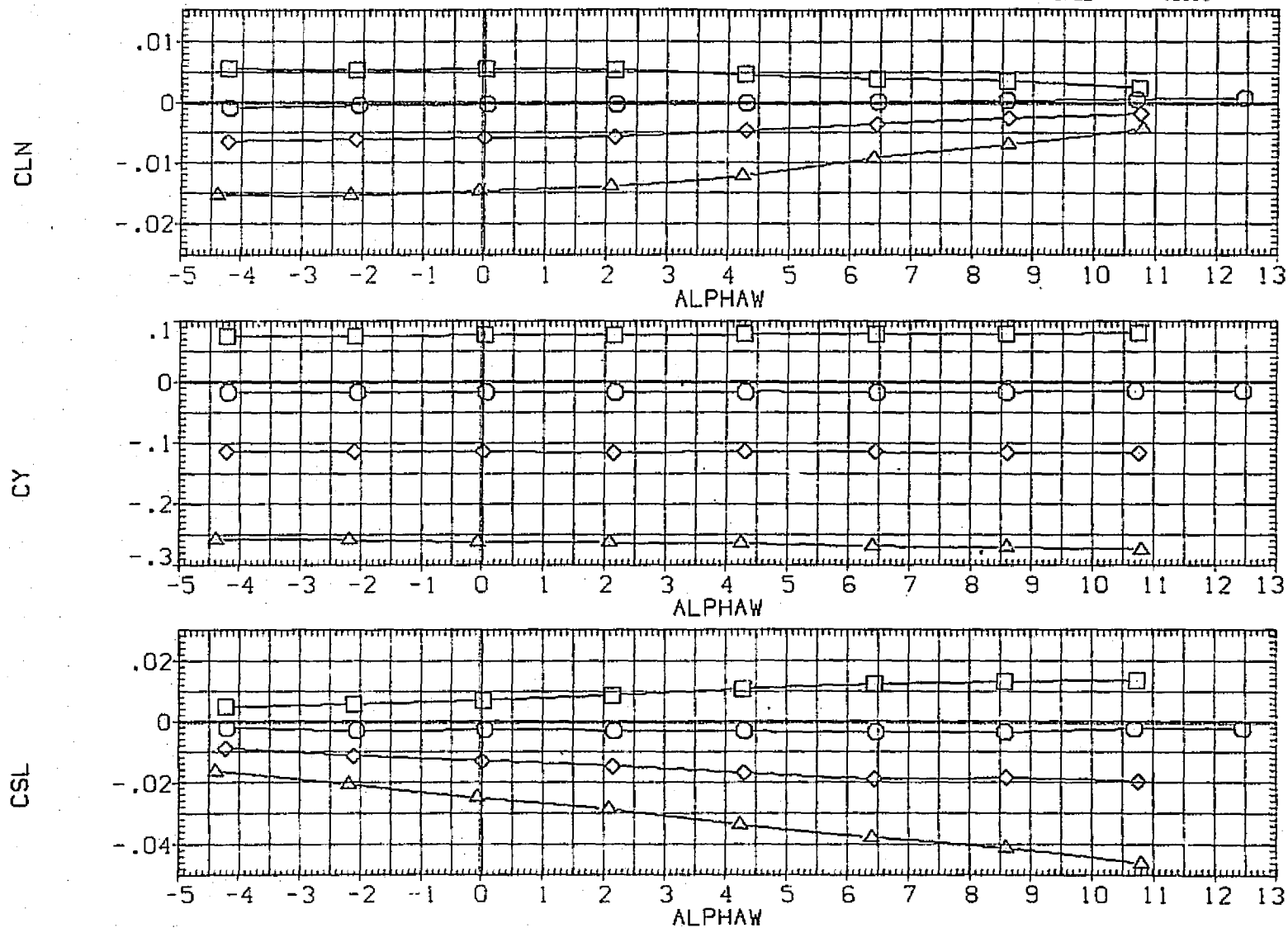


FIG. 51 ALL VERTICAL TAILS OFF, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.

(A)MACH = .60

PAGE 261

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP122)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 SQ.FT.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	LREF 327.8000 IN.
(RGP123)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	2.000	8.110	BREF 2348.0000 IN.
(RGP124)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	4.000	8.110	XMRP 1339.9000 IN. XC
(RGP125)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	6.000	8.110	YMRP .0000 IN. YC
(RGP126)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	10.000	8.110	ZMRP 190.7700 IN. ZC
					SCALE .0300

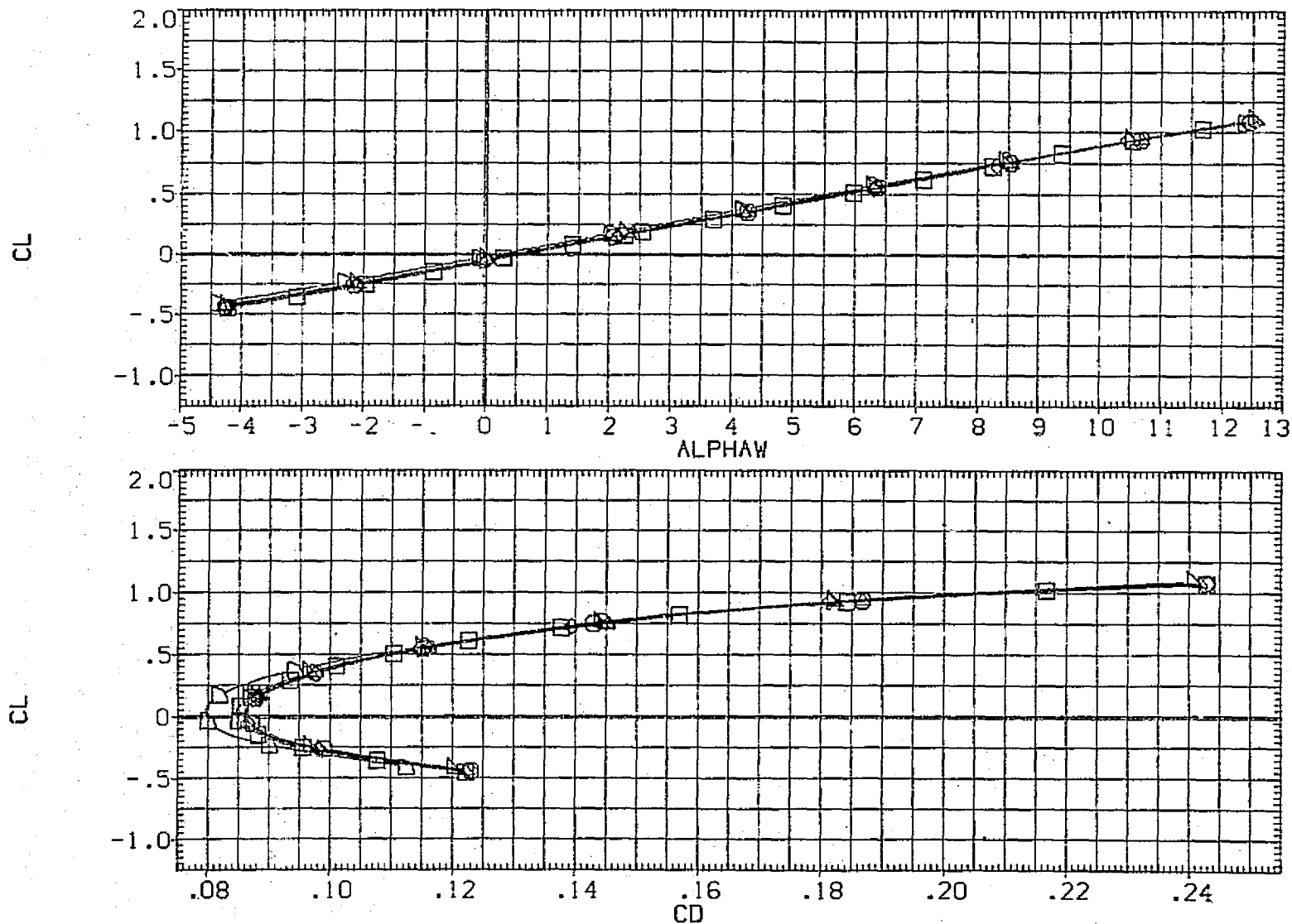


FIG. 52 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP122)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 SQ.FT.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	LREF 327.8000 IN.
(RGP123)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	2.000	8.110	BREF 2348.0000 IN.
(RGP124)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	4.000	8.110	XMRP 1339.9000 IN. XC
(RGP125)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	6.000	8.110	YMRP .0000 IN. YC
(RGP126)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	10.000	8.110	ZMRP 190.7700 IN. ZC
					SCALE .0300

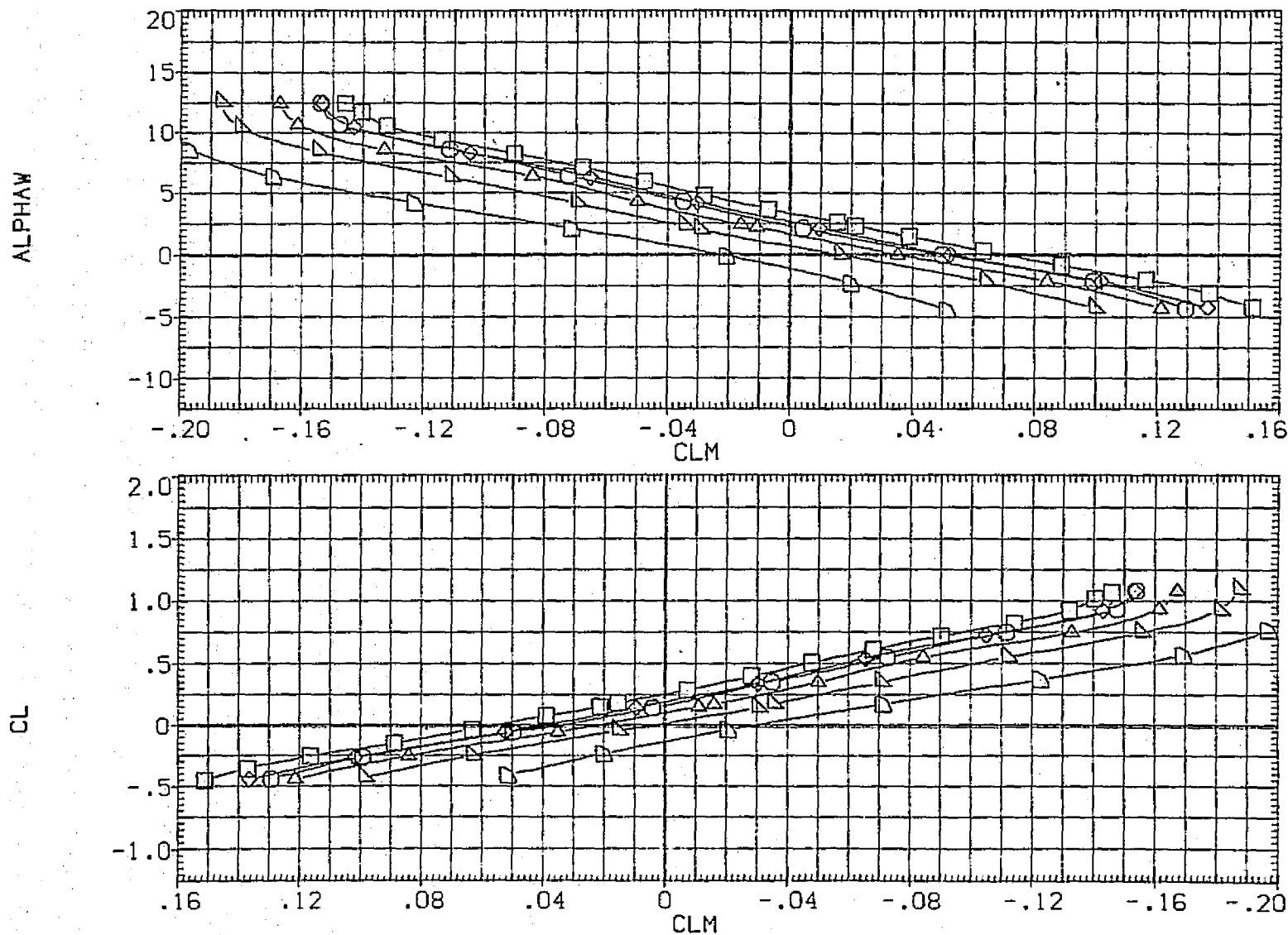


FIG. 52 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP122)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	4.850	-4.000	8.110	SREF 5500.0000 90.FT.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	LREF 327.8000 IN.
(RGP123)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	2.000	8.110	BREF 2348.0000 IN.
(RGP124)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	4.000	8.110	XMRP 1339.9000 IN. XC
(RGP125)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	6.000	8.110	YMRP .0000 IN. YC
(RGP126)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.850	10.000	8.110	ZMRP 190.7700 IN. ZC
					SCALE .0300

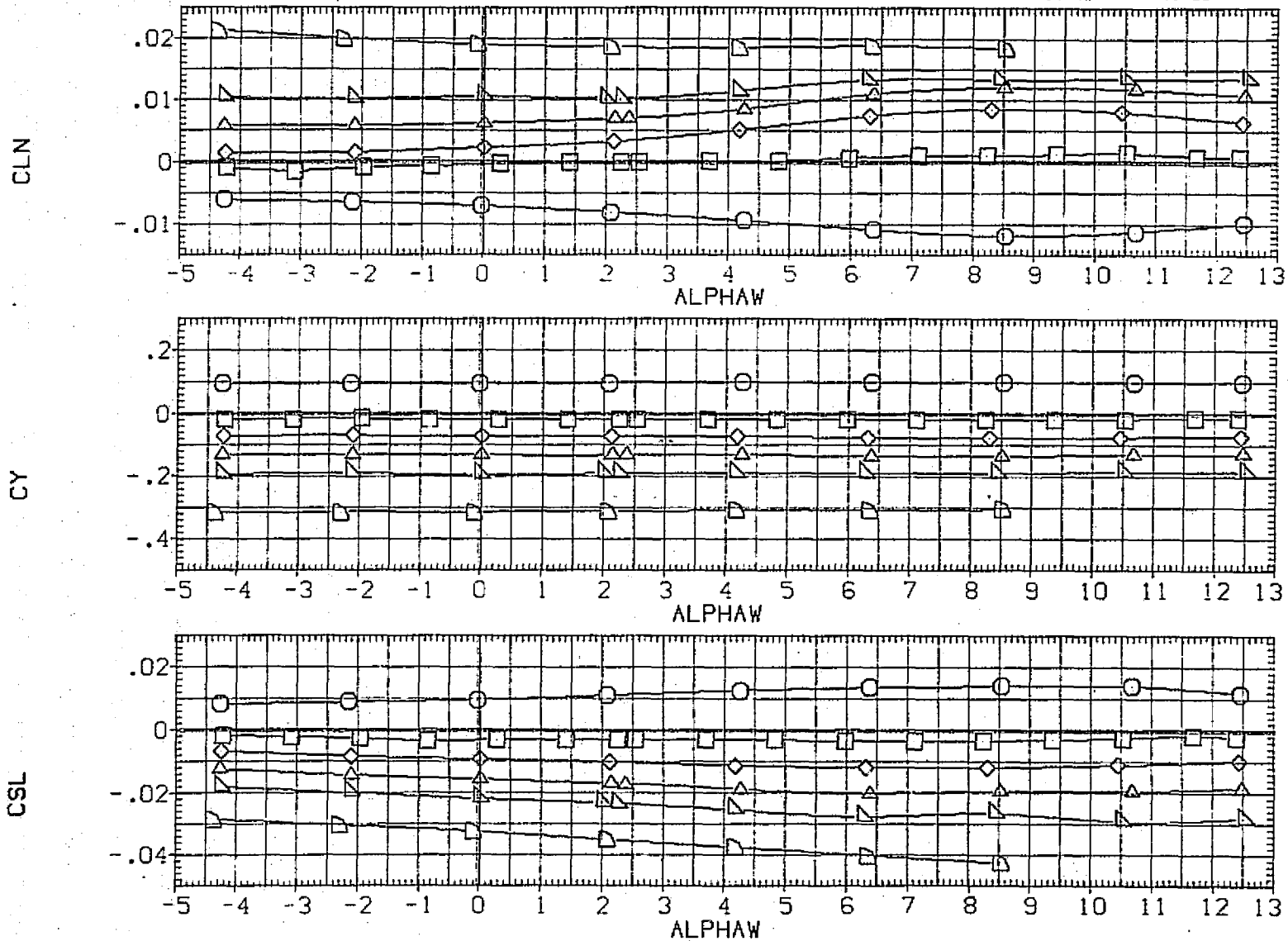


FIG. 52 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., CA23 AFT AND ROUND FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	TORB	REFERENCE INFORMATION
(RGP131)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	8.110	SREF 5500.0000 SQ.FT.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	-.900	.000	8.110	LREF 327.8000 IN.
(RGP120)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	2.060	.000	8.110	BREF 2348.0000 IN.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

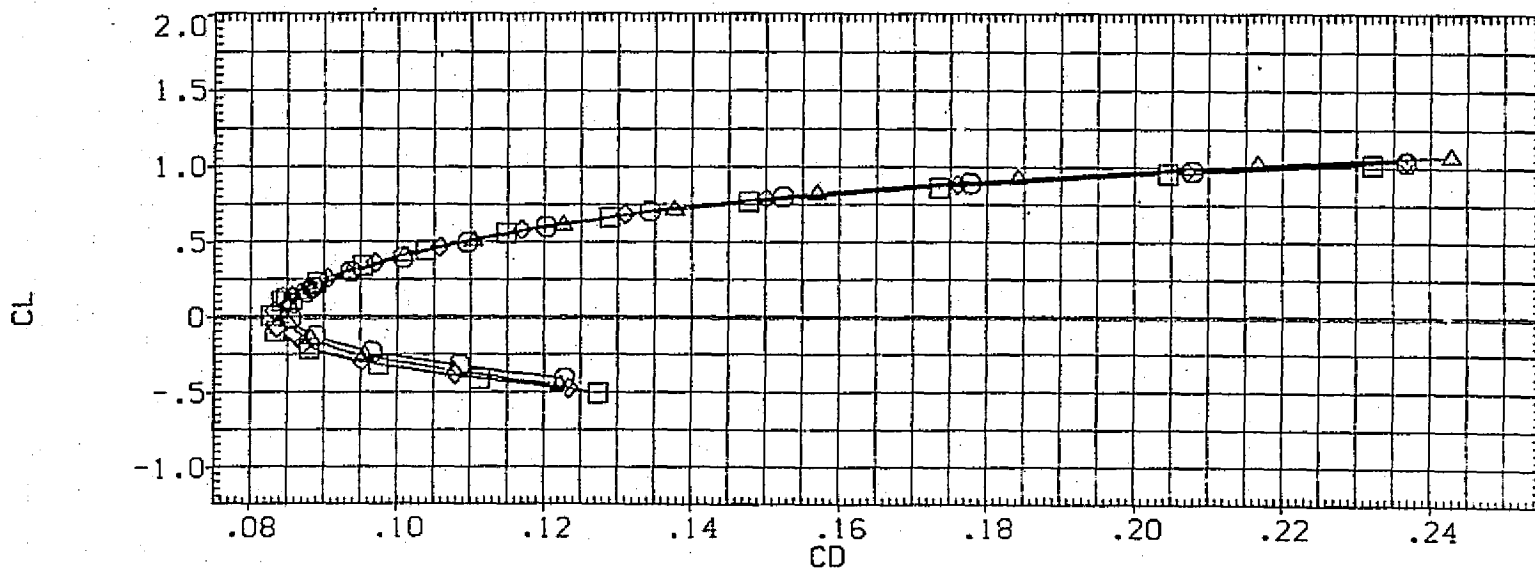
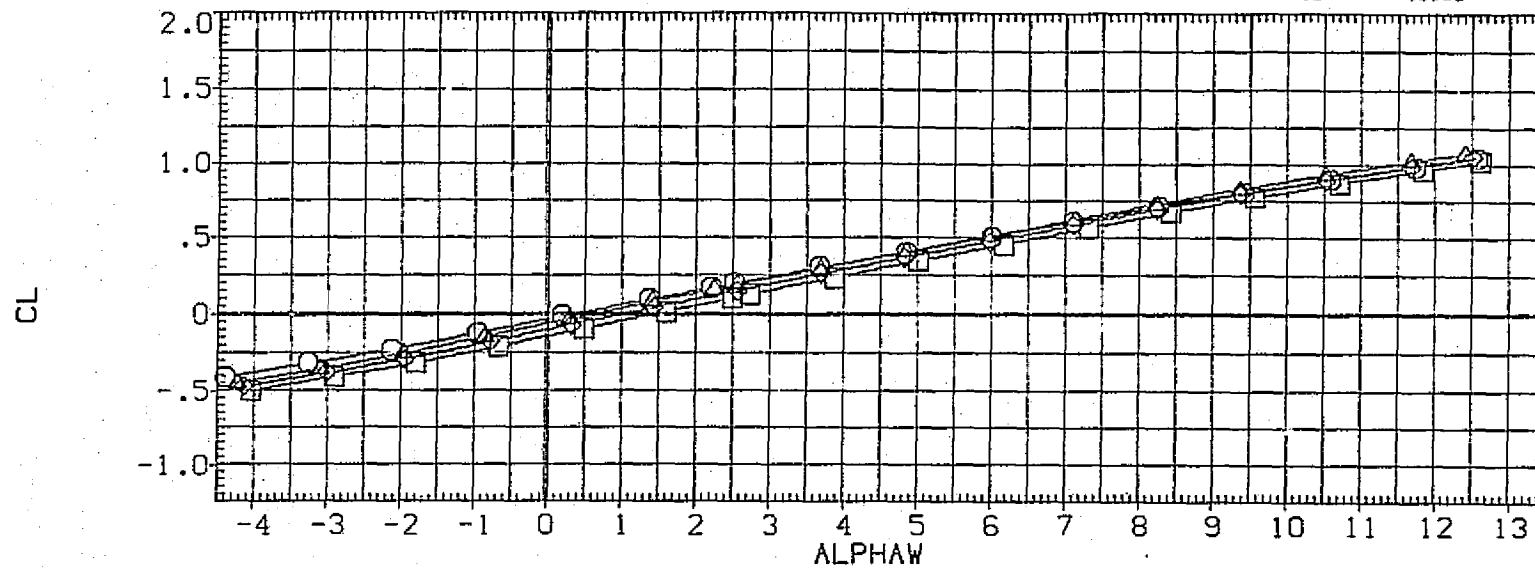


FIG. 53 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(RGP131)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	8.110	SREF	5500.0000	50.FT.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	- .900	.000	8.110	LREF	327.8000	IN.
(RGP120)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	2.060	.000	8.110	BREF	2348.0000	IN.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

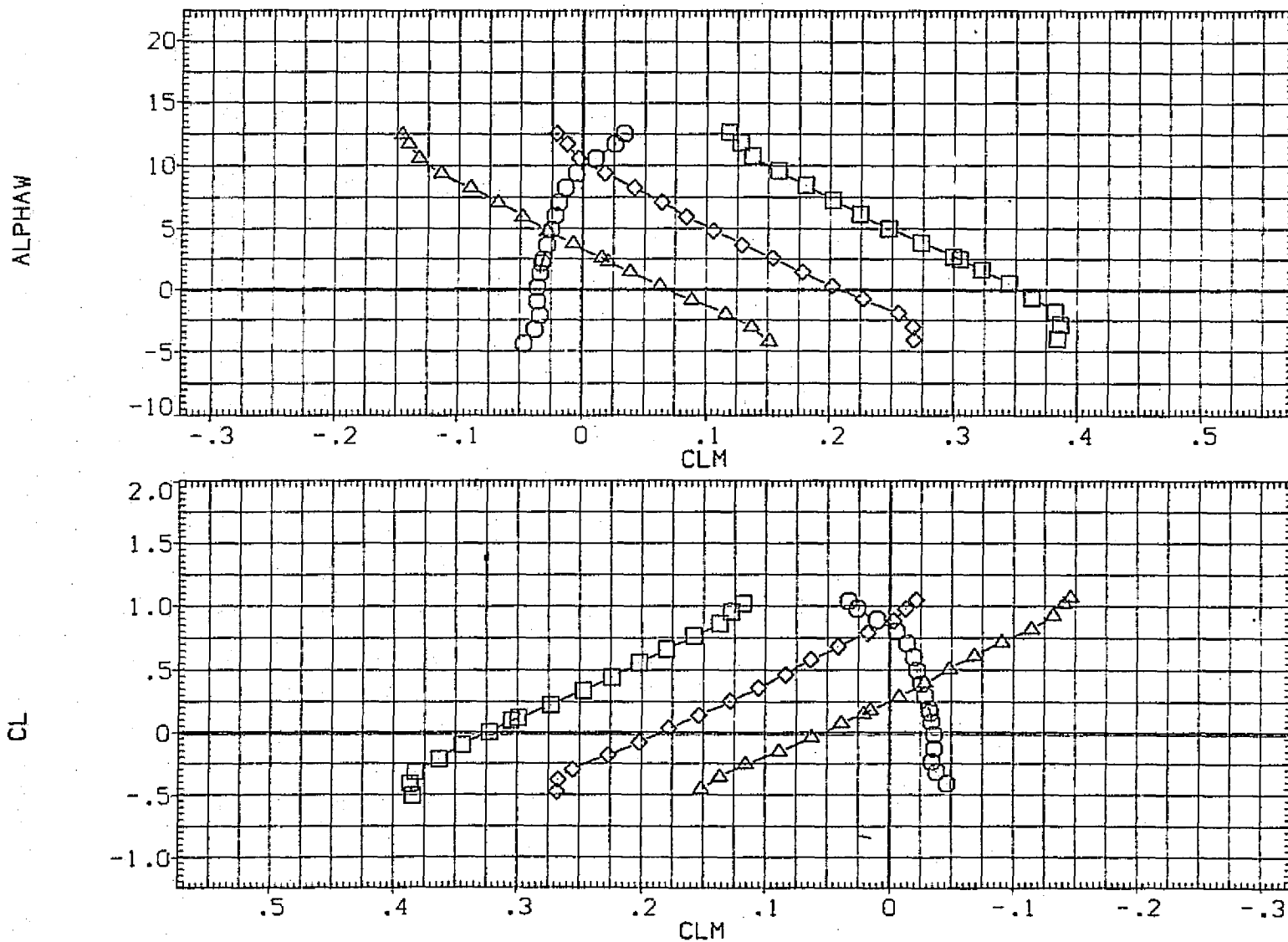


FIG. 53 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP131)	CA6 K2 V9.1S1-12 AT103.1/95-.30RBF8N24/28		.000	8.110	SREF 5500.0000 SQ.FT.
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	-.900	.000	8.110	LREF 327.8000 IN.
(RGP120)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	2.060	.000	8.110	BREF 2348.0000 IN.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

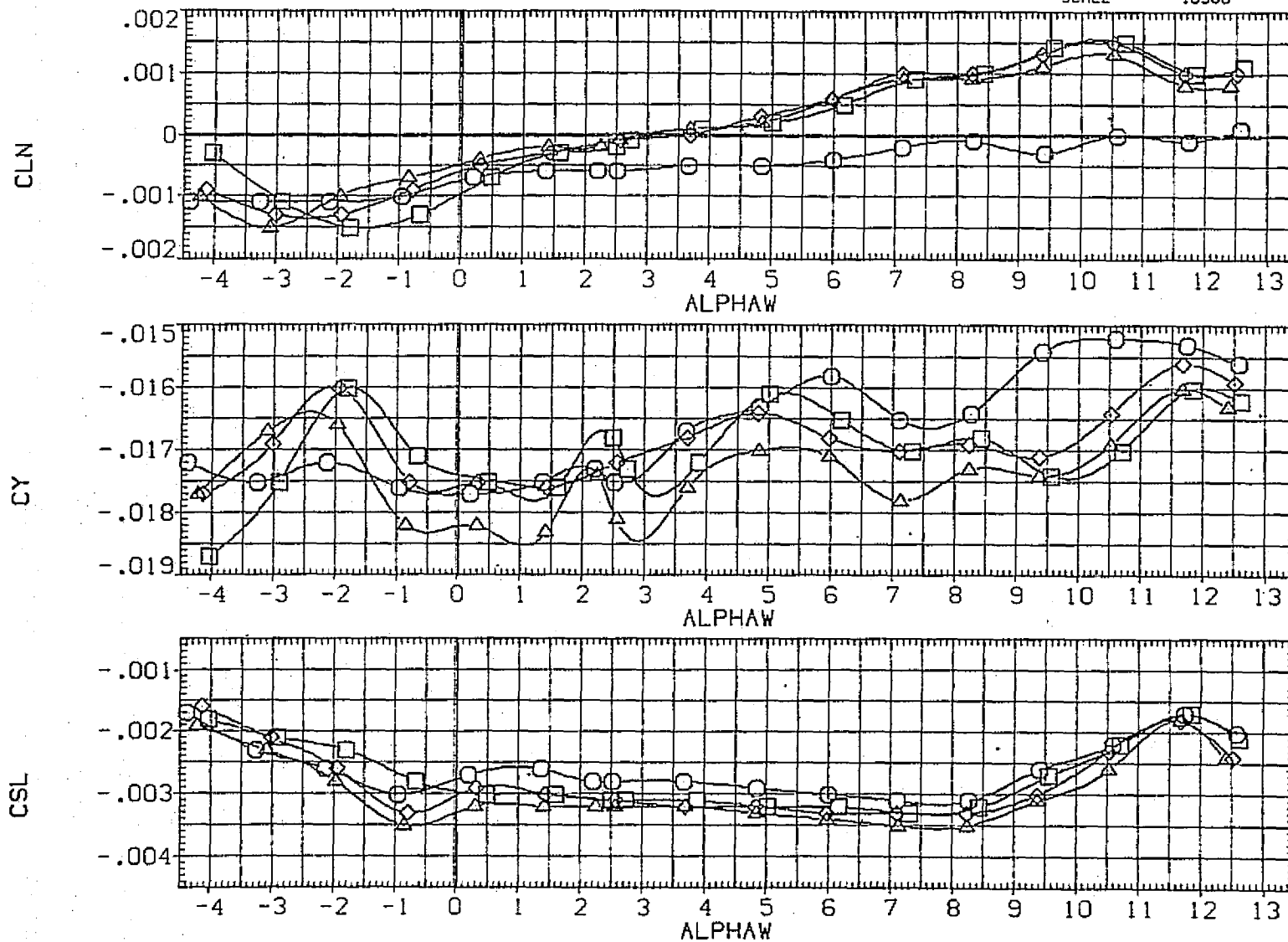


FIG. 53 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP136)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	SREF 5500.0000 SO.FT.
(RGP137)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	2.000	6.030	LREF 327.8000 IN.
(RGP138)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	4.000	6.030	BREF 2348.0000 IN.
(RGP139)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	6.000	6.030	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

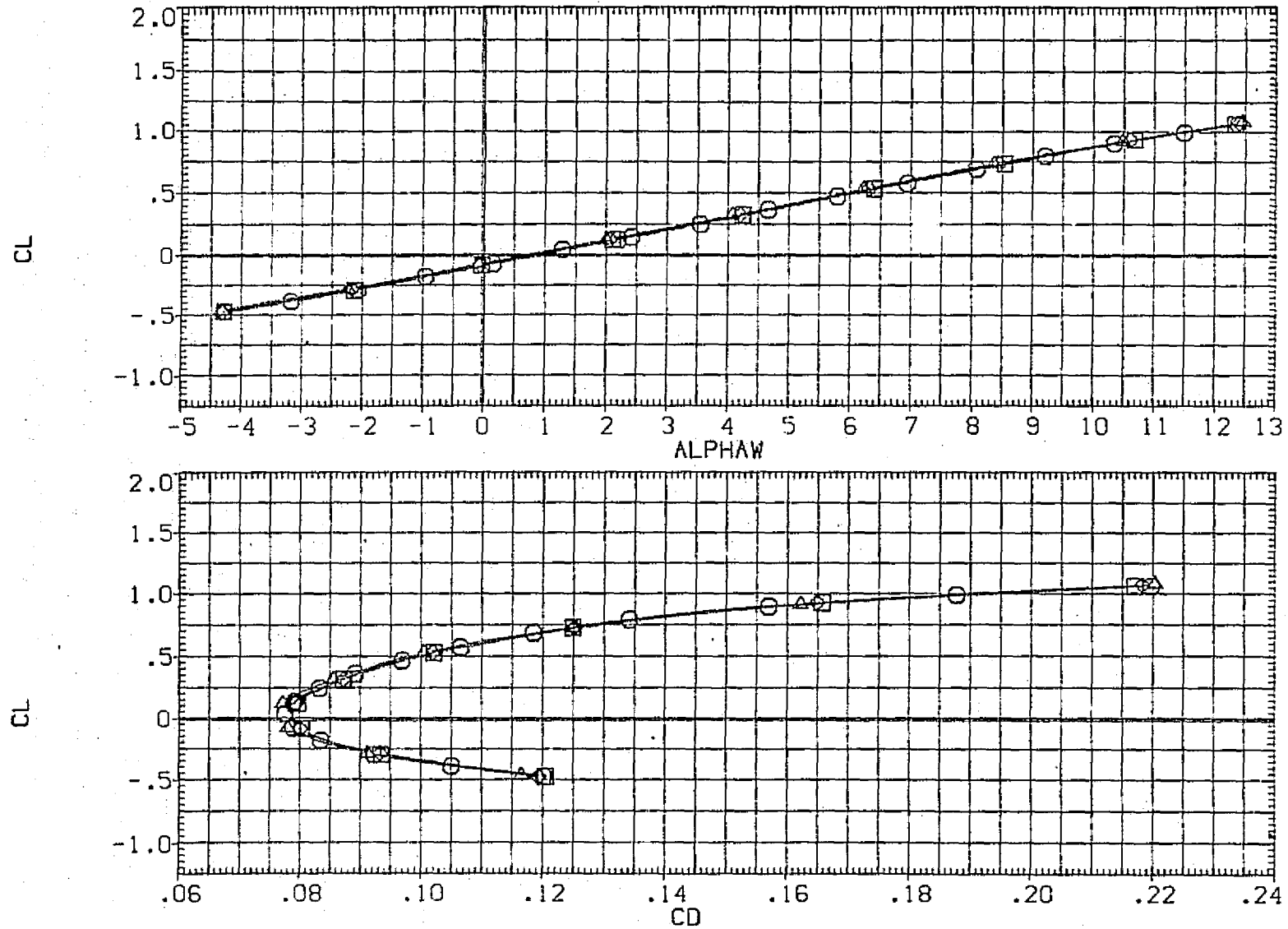


FIG. 54 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., MIN AFT AND GAITER FWD.

(A)MACH = .60

PAGE 268

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP136)	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	SREF 5500.0000 SQ.FT.
(RGP137)	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	4.980	2.000	6.030	LREF 327.8000 IN.
(RGP138)	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	4.980	4.000	6.030	BREF 2348.0000 IN.
(RGP139)	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	4.980	6.000	6.030	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

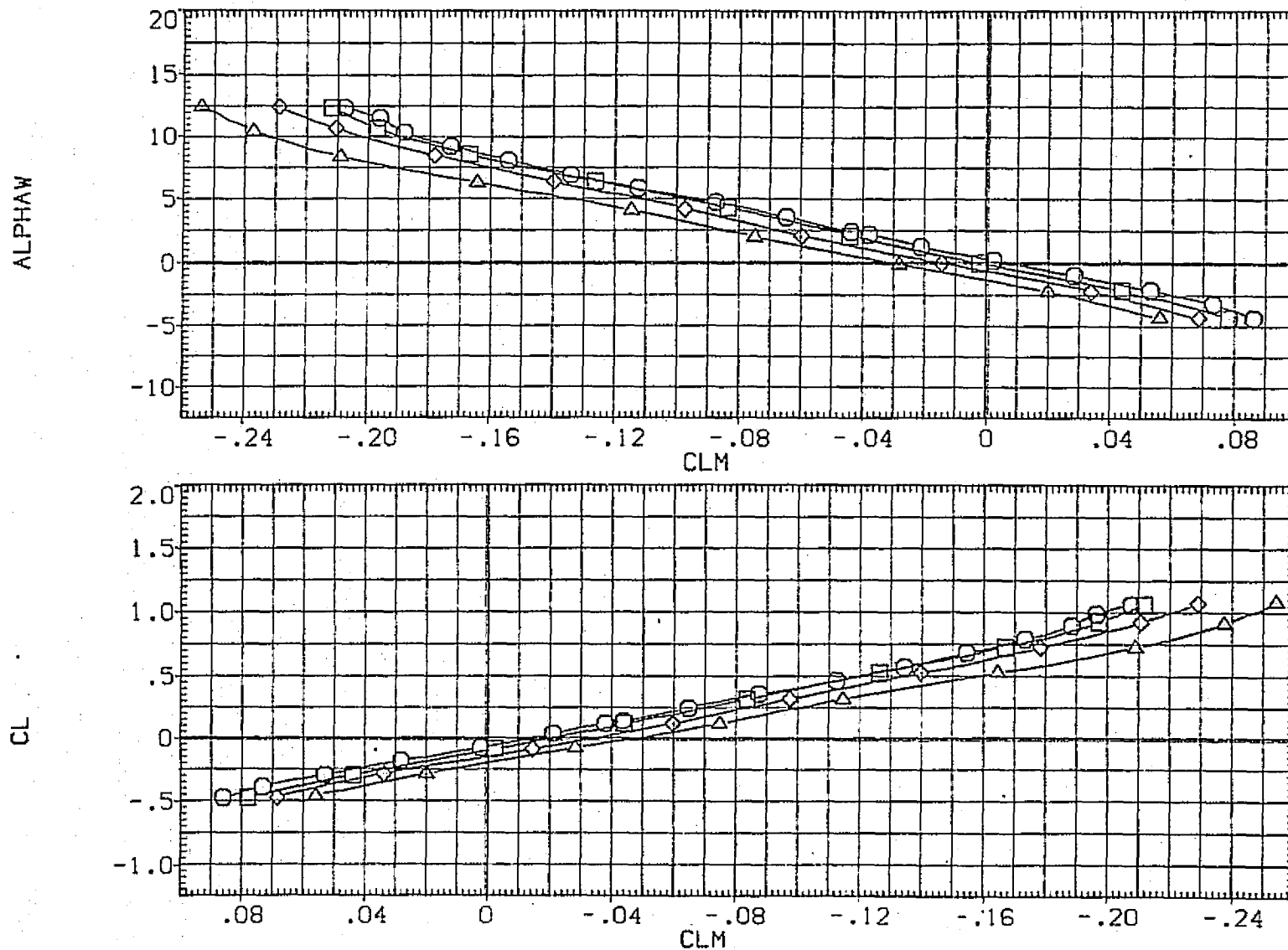


FIG. 54 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., MIN AFT AND GAITER FWD.
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP136)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	4.980	.000	6.030	SREF 5500.0000 SQ.FT.
(RGP137)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	4.980	2.000	6.030	LREF 327.8000 IN.
(RGP138)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	4.980	4.000	6.030	BREF 2348.0000 IN.
(RGP139)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	4.980	6.000	6.030	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

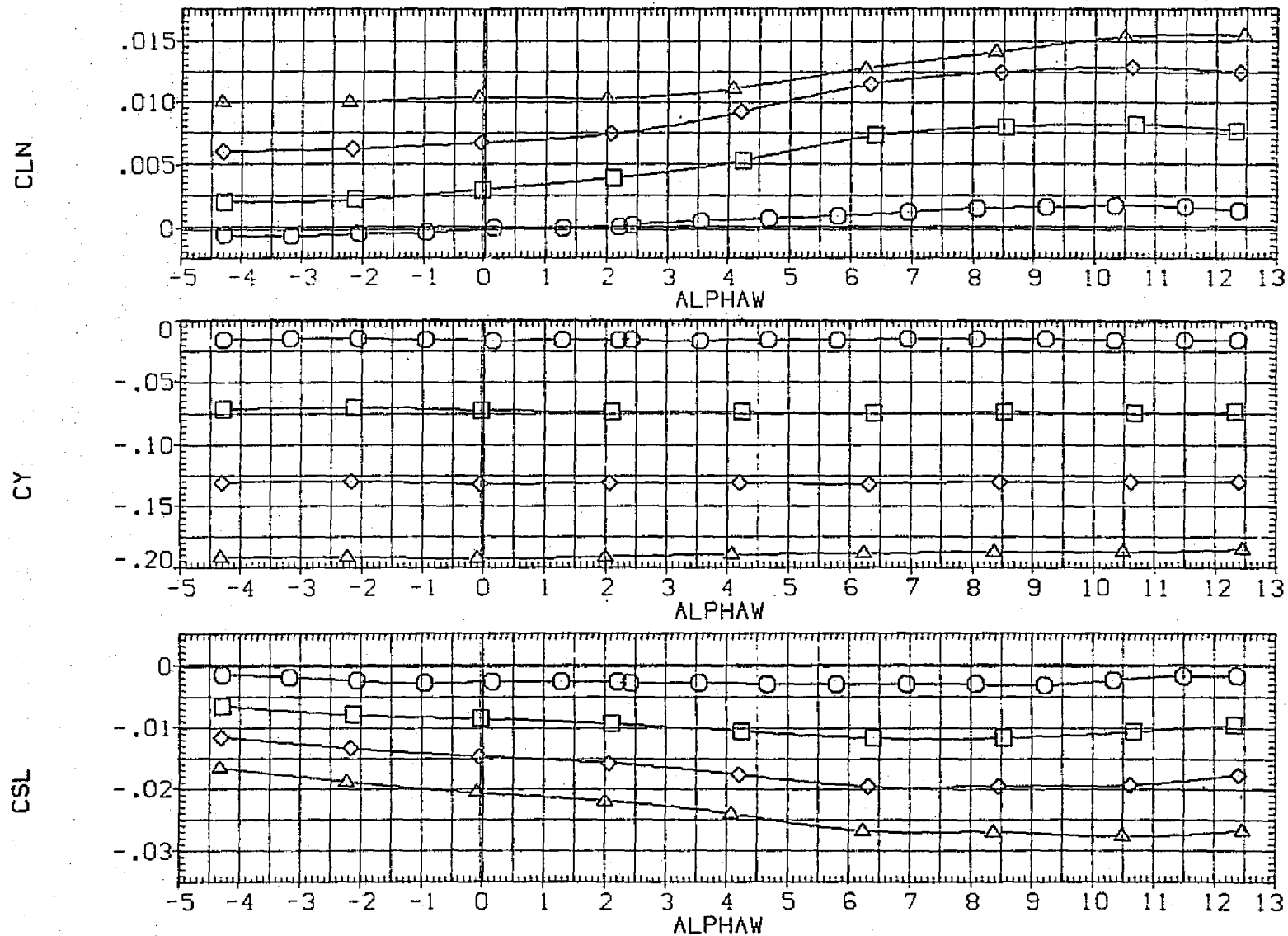


FIG. 54 LATERAL-DIRECTIONAL STABILITY, LAUNCH CONFIG., MIN AFT AND GAITER FWD.

(A)MACH = .60

PAGE 270

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IGRB	REFERENCE INFORMATION
(RGP135) ○	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	2.070	.000	6.030	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN.
(RGP136) □	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

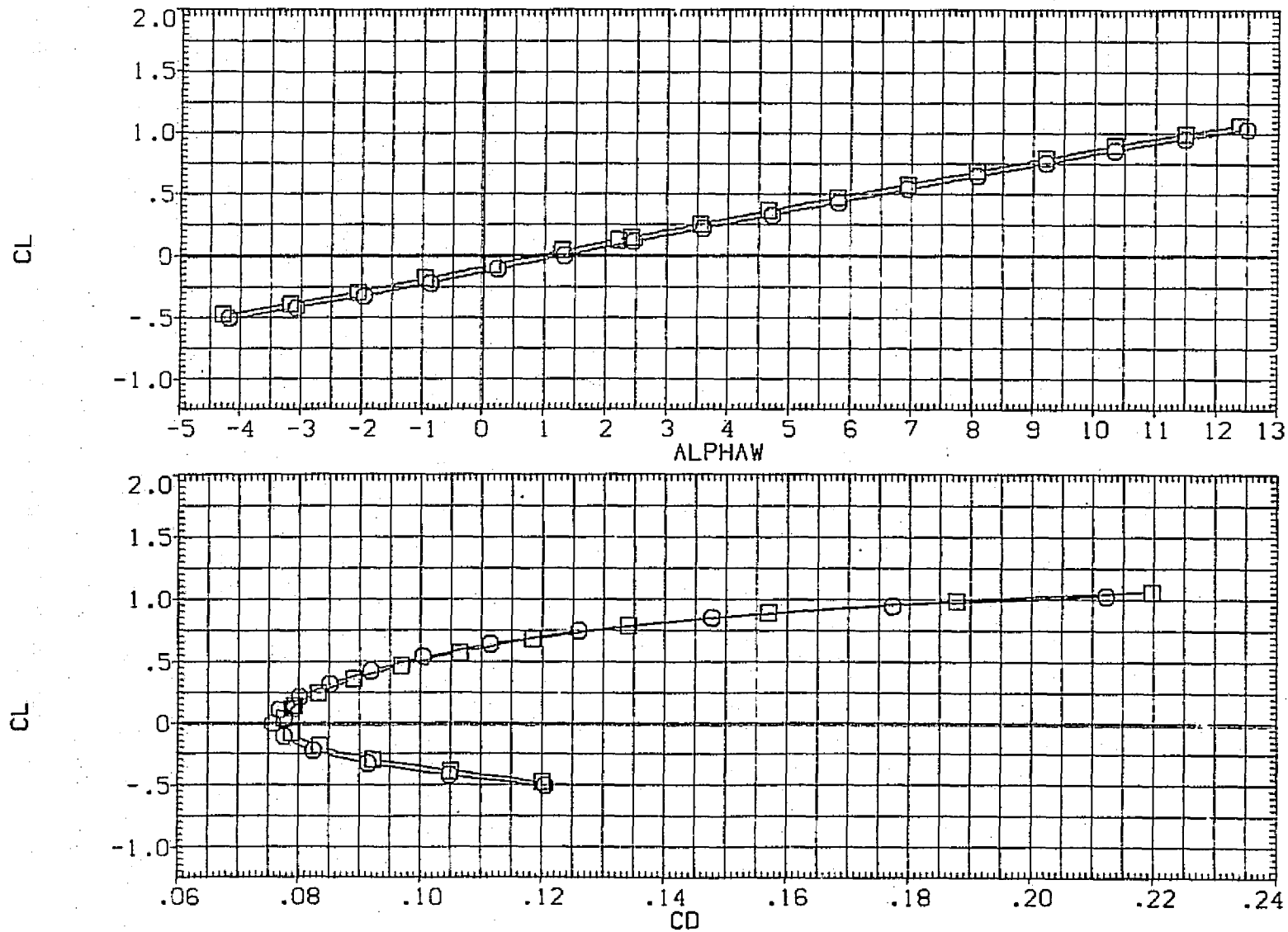


FIG. 55 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP135) \square	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.070	.000	6.030	SREF 5500.0000 SQ.FT.
(RGP136) \square	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

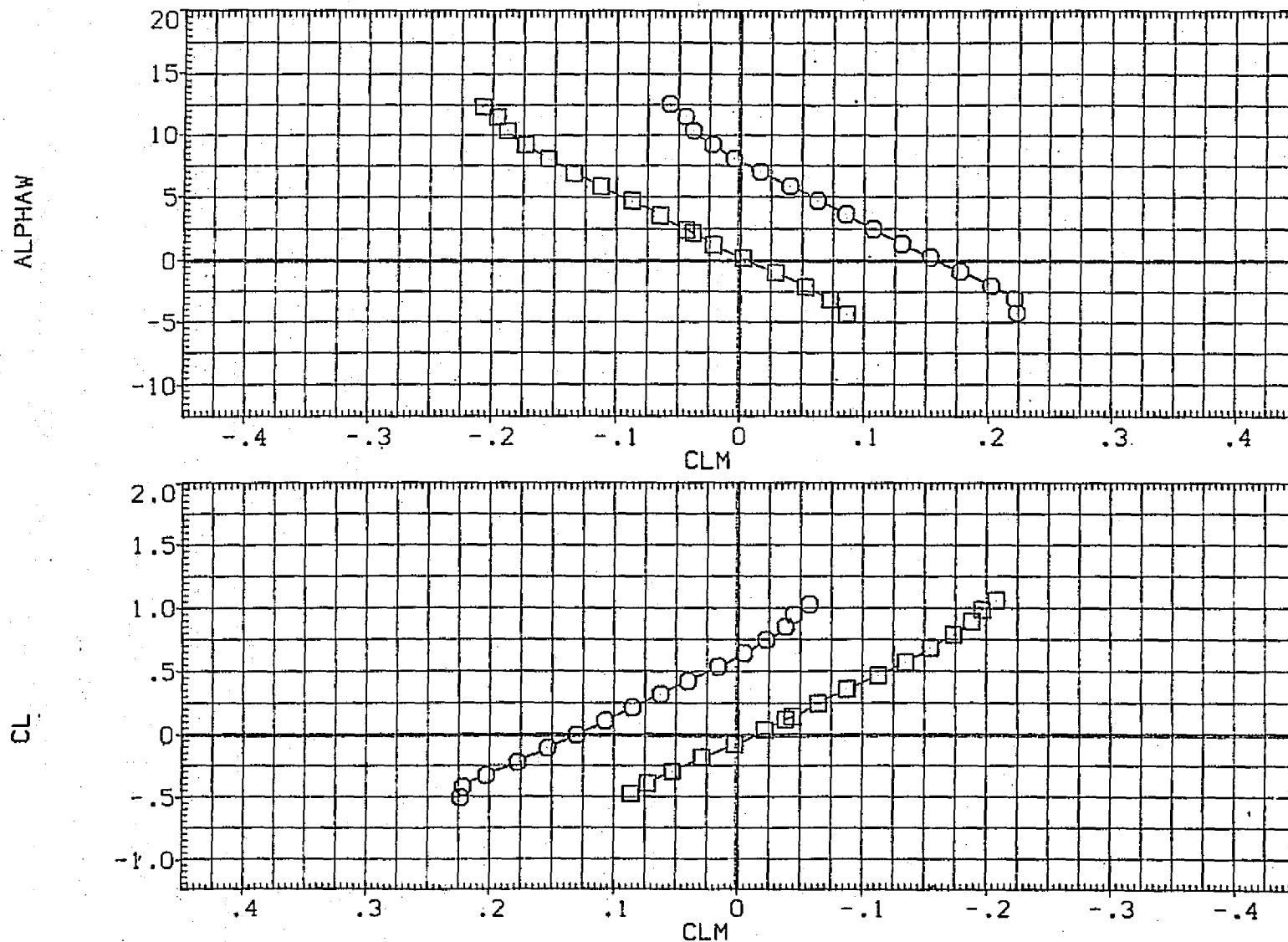


FIG. 55 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP135) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.070	.000	6.030	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300
(RGP136) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.980	.000	6.030	

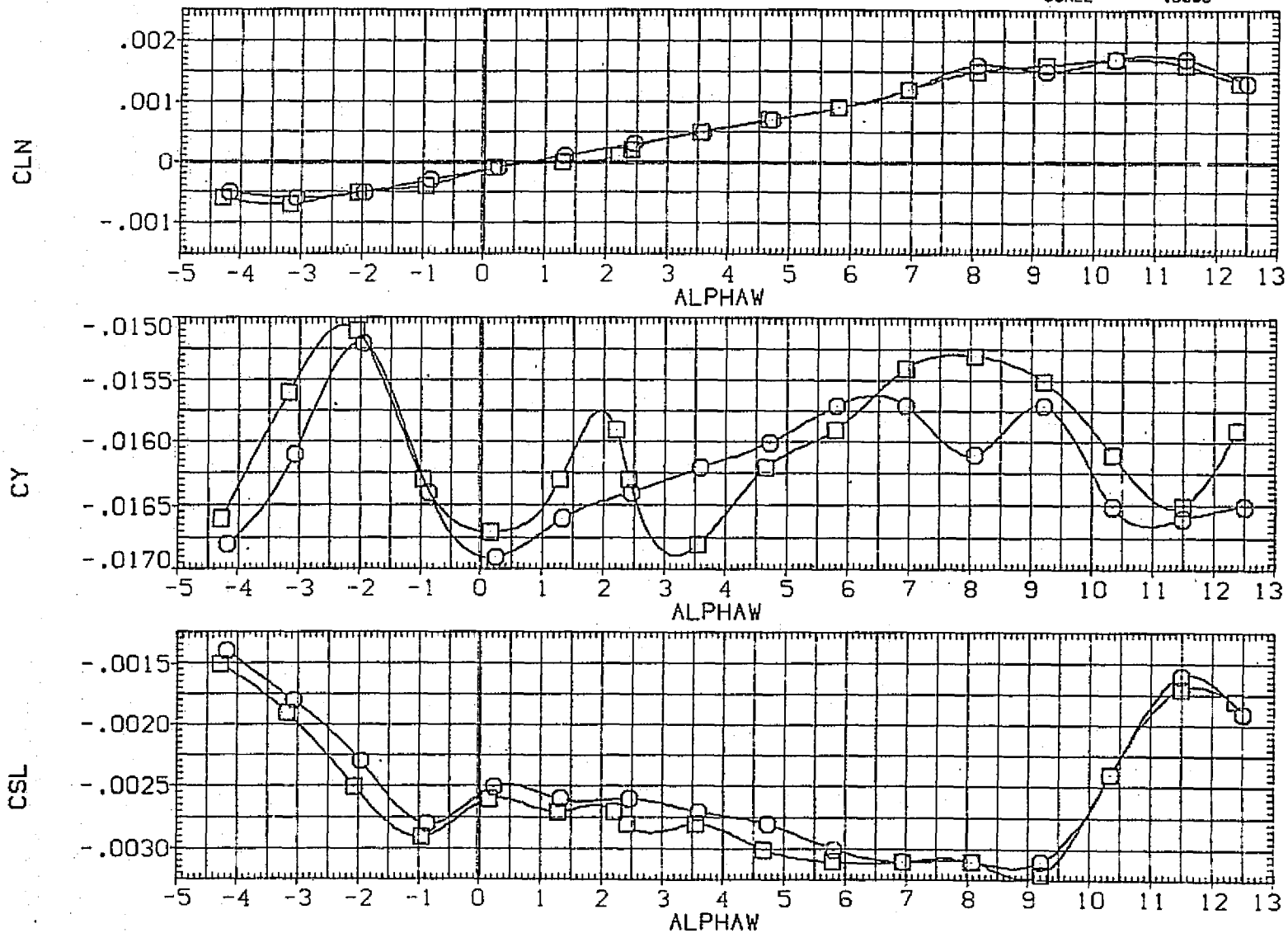


FIG. 55 STABILIZER EFFECTIVENESS, LAUNCH CONFIG., MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP119)	CA6 K2H15.6.IV9.1S1-12 AT112 /95 ORBF8N24/28	4.750	8.110	-10.000	-10.000	SREF	5500.0000	50.FT.
(RGP117)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	.000	.000	LREF	327.8000	IN.
(RGP118)	CA6 K2H15.6.IV9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	10.000	10.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

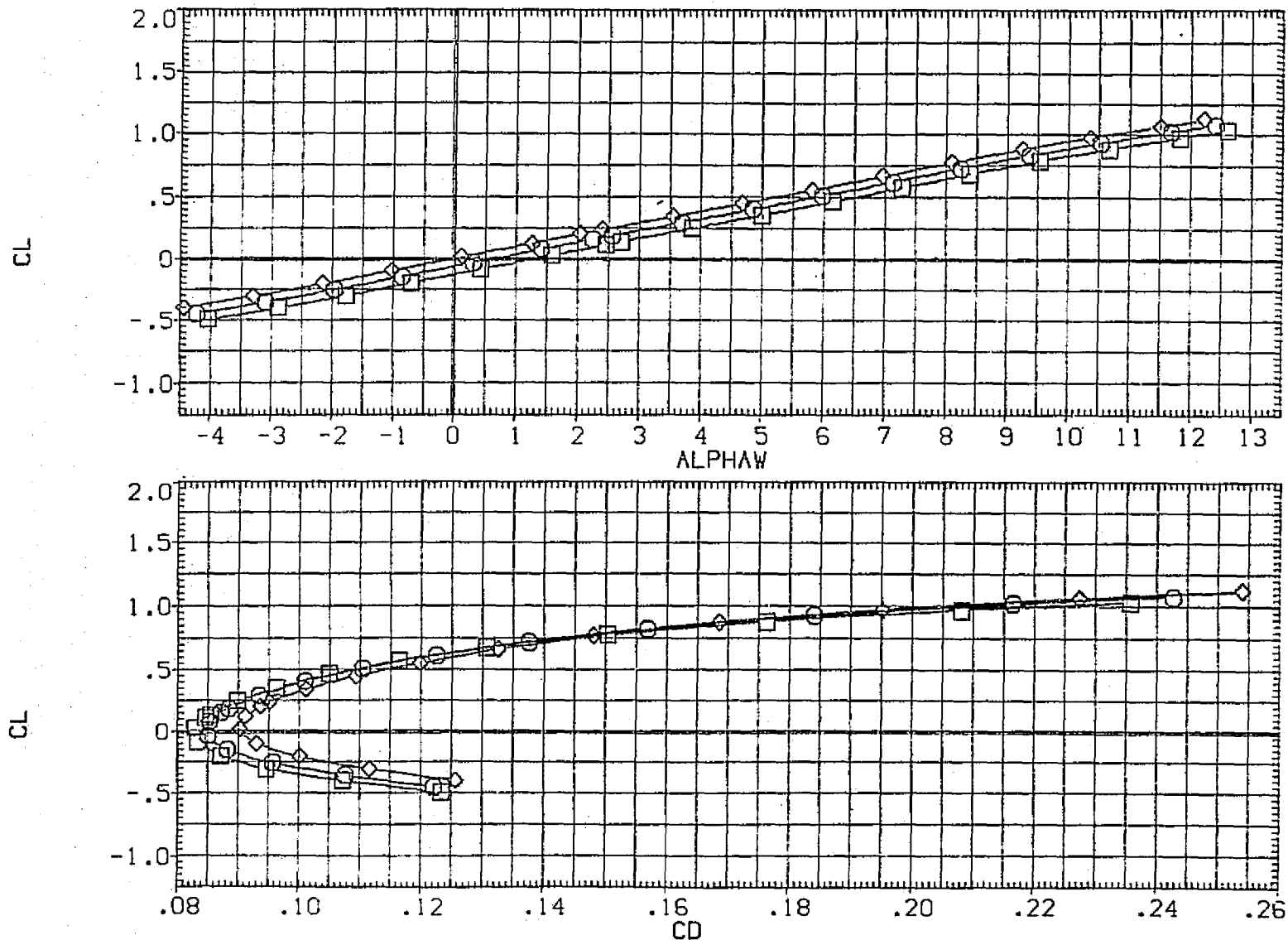


FIG. 56 ELEVATOR EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION	
(RGP119)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	4.750	8.110	-10.000	-10.000	SREF	5500.0000 SQ.FT.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	.000	.000	LREF	327.8000 IN.
(RGP118)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	10.000	10.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0003 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

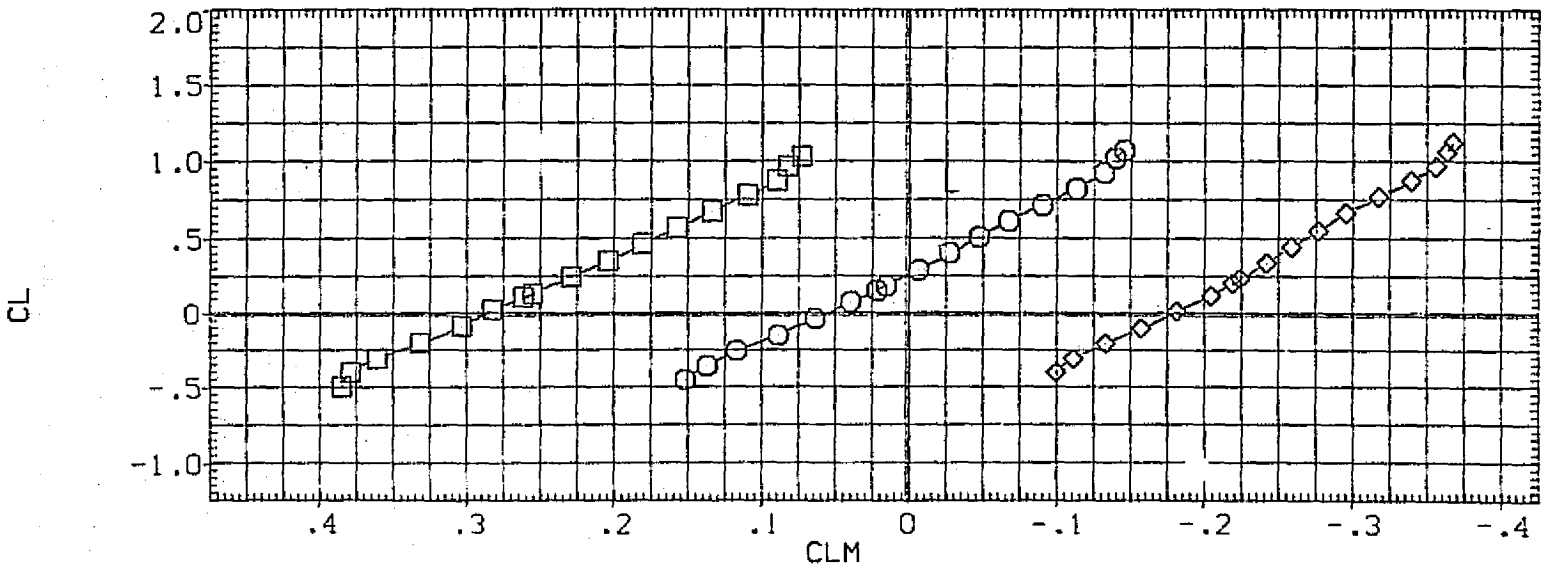
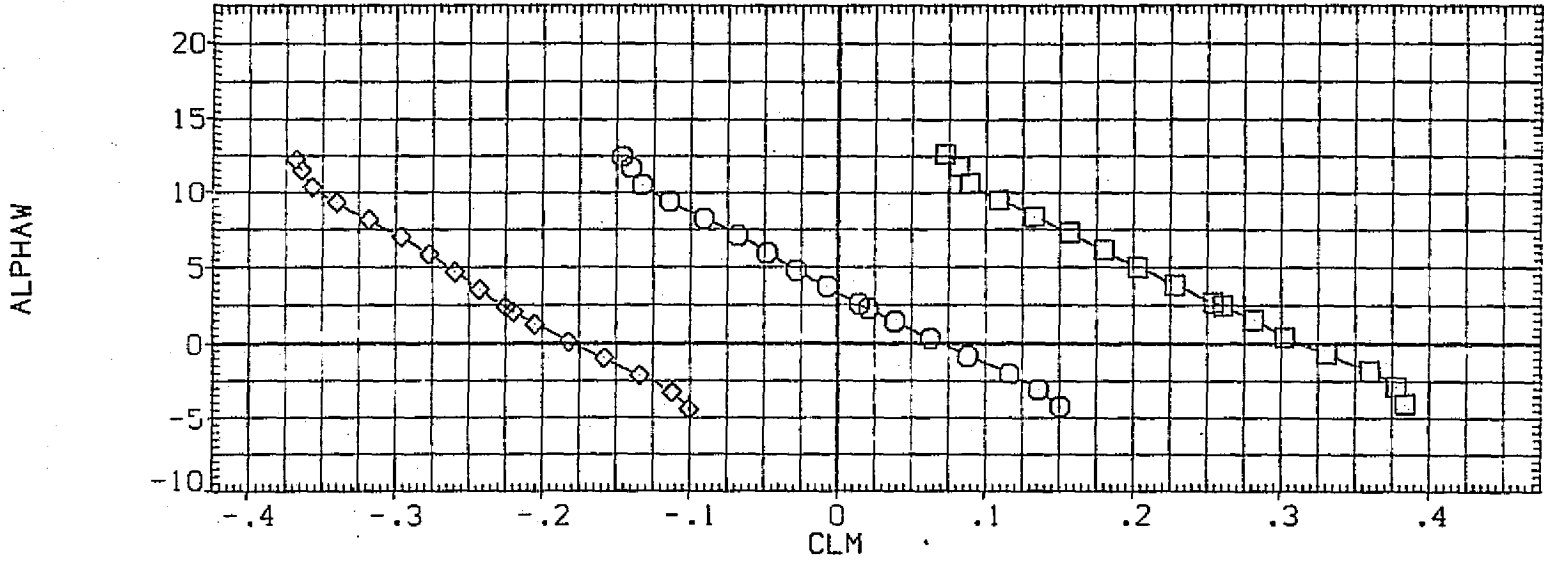


FIG. 56 ELEVATOR EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP119)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	4.750	8.110	-10.000	-10.000	SREF 5500.0000 SQ. FT.
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	.000	.000	LREF 327.8000 IN.
(RGP118)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	8.110	10.000	10.000	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

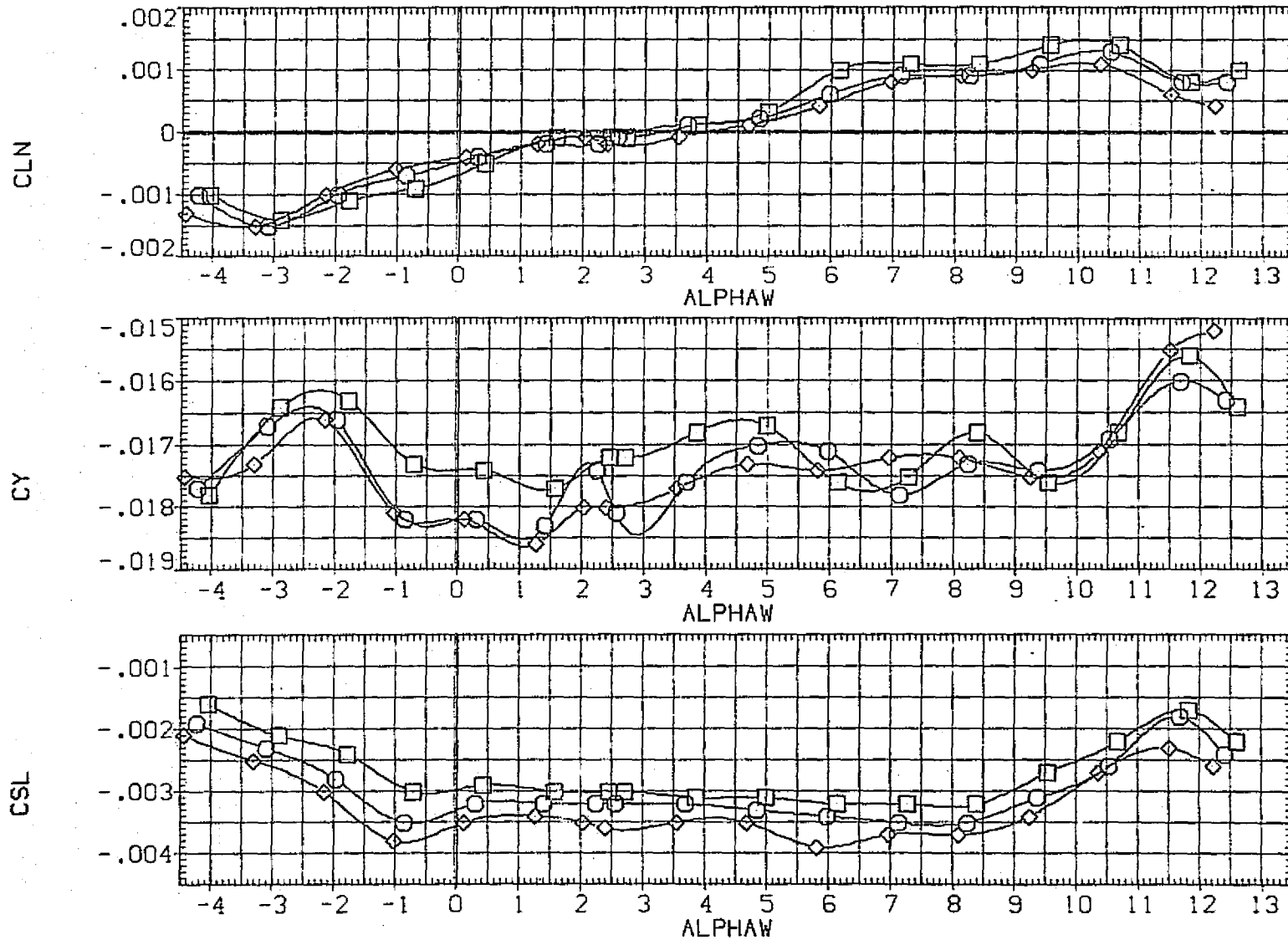


FIG. 56 ELEVATOR EFFECTIVENESS, LAUNCH CONFIG., CA23AFT AND ROUND FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP080)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	-1.010	.000	6.000	LREF 327.8000 IN.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	BREF 2348.0000 IN.
(RGP081)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	4.840	.000	6.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

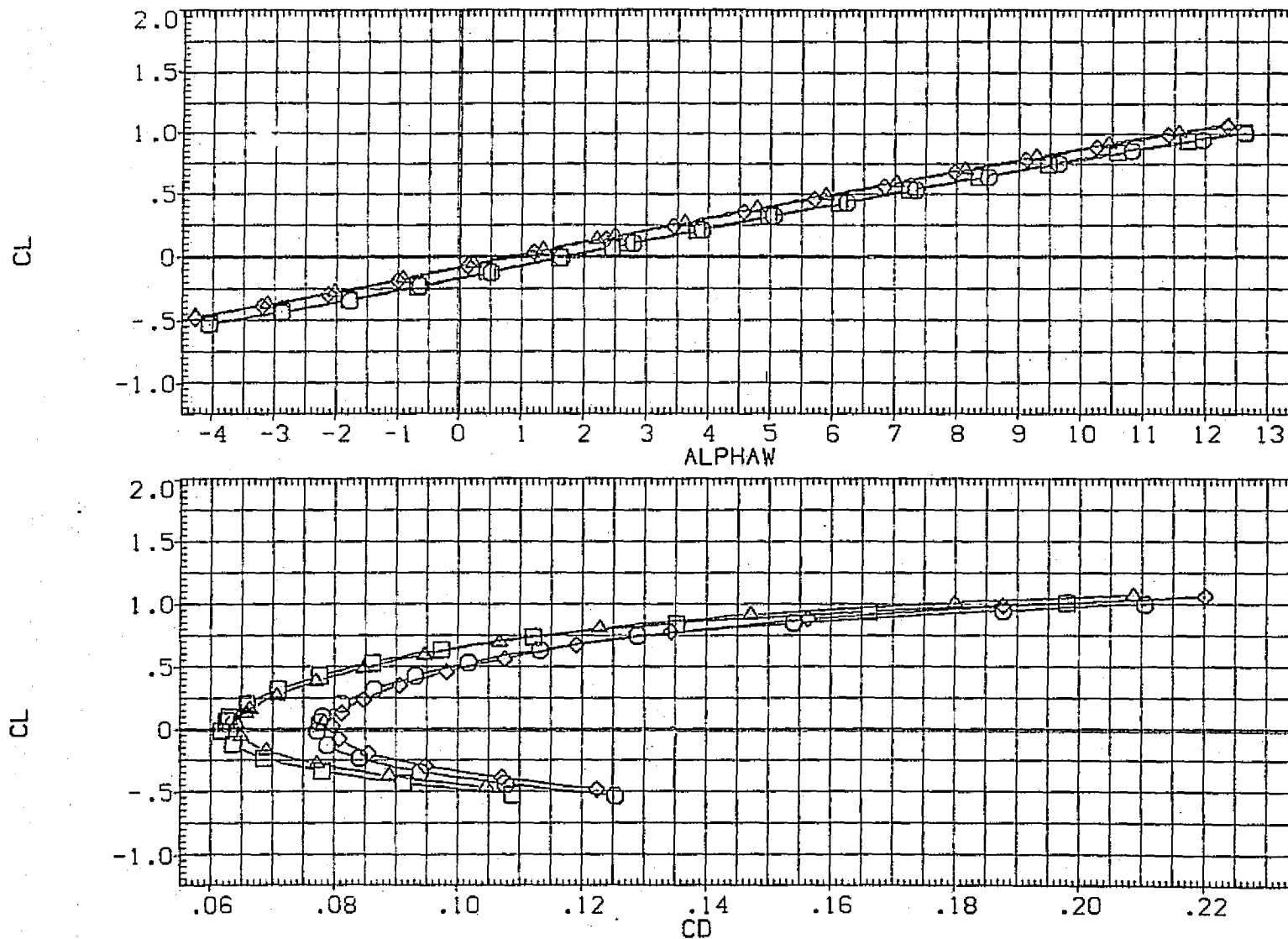


FIG. 57 EFFECT OF T.C. FAIRING ON LONGITUDINAL STABILITY, ALT LAUNCH

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION		
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	-1.010	.000	6.000	SREF	5500.0000	SO.FT.
(RGP080)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	-1.010	.000	6.000	LREF	327.8000	IN.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF8N24/28	4.890	.000	6.000	BREF	2348.0000	IN.
(RGP081)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	4.840	.000	6.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

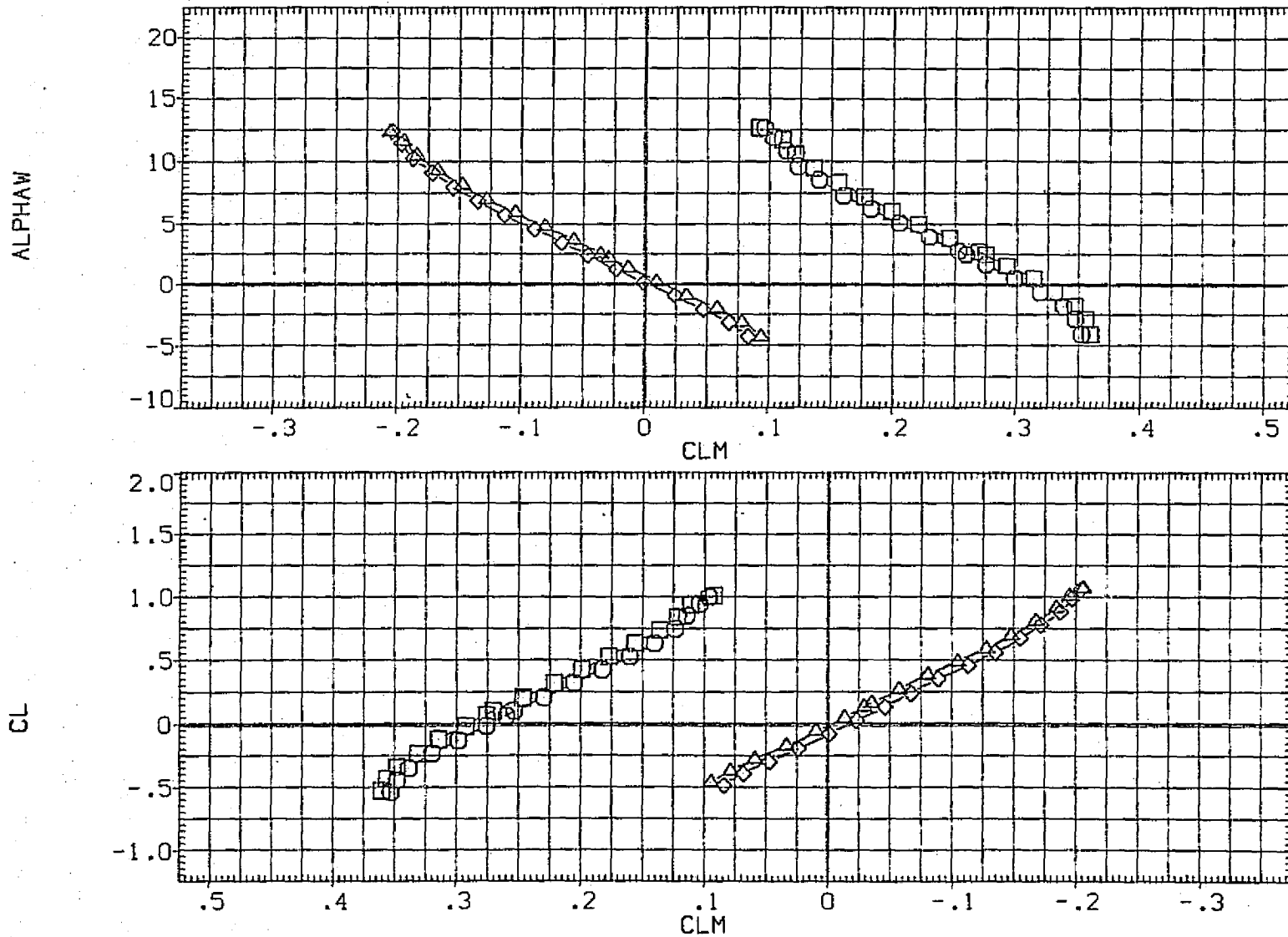


FIG. 57 EFFECT OF T.C. FAIRING ON LONGITUDINAL STABILITY, ALT LAUNCH

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP069)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF0N24/28	-1.010	.000	6.000	SREF 5500.0000 SQ.FT.
(RGP080)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	-1.010	.000	6.000	LREF 327.8000 IN.
(RGP059)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RBF0N24/28	4.890	.000	6.000	BREF 2348.0000 IN.
(RGP081)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95-.30RB TC4	4.840	.000	6.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

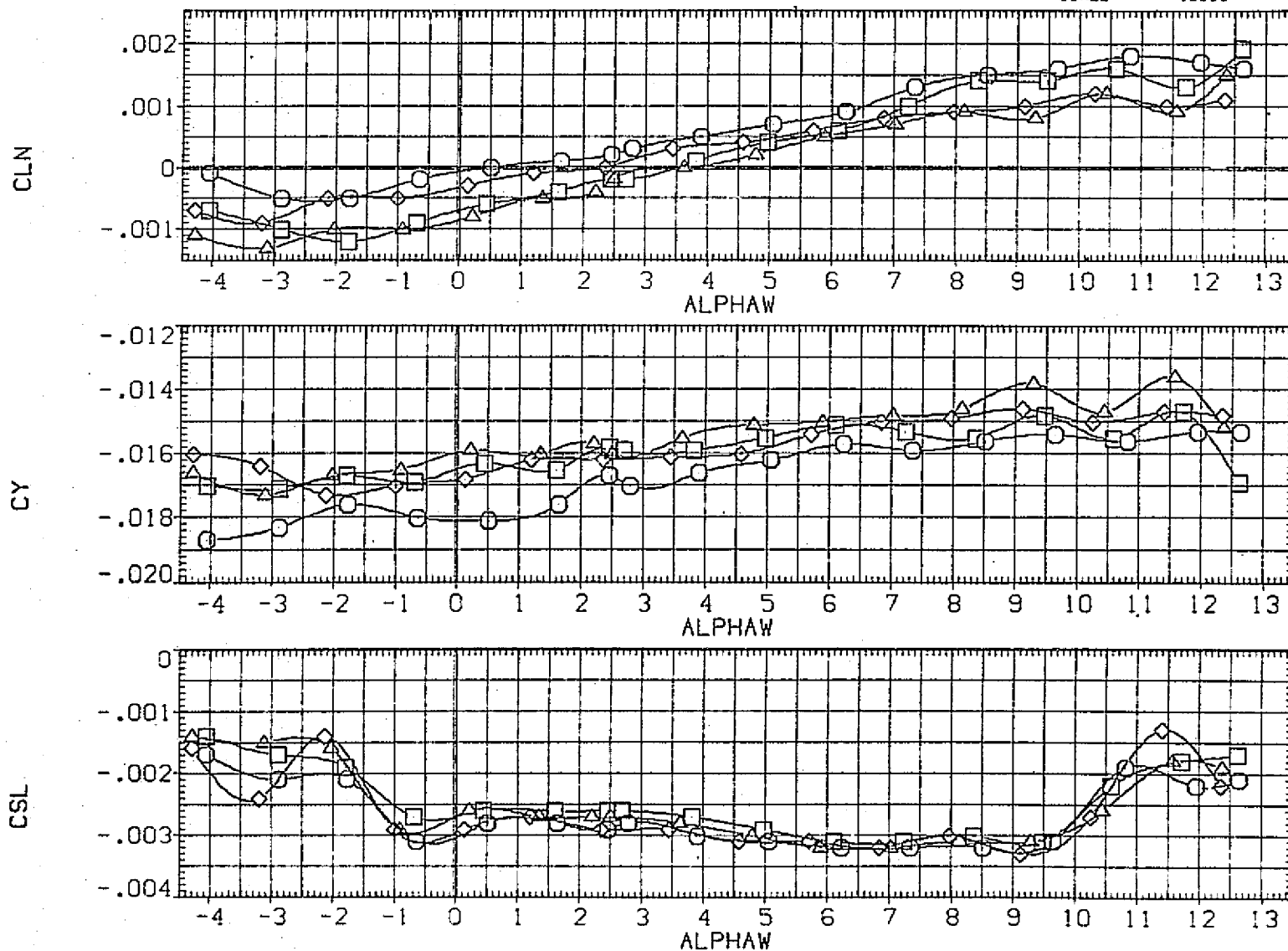


FIG. 57 EFFECT OF T.C. FAIRING ON LONGITUDINAL STABILITY, ALT LAUNCH

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP165)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	.000	SREF	5500.0000 SQ.FT.
(RGP142)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	6.030	.000	LREF	327.8000 IN.
(RGP143)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	6.030	.000	BREF	2348.0000 IN.
					XMRF	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

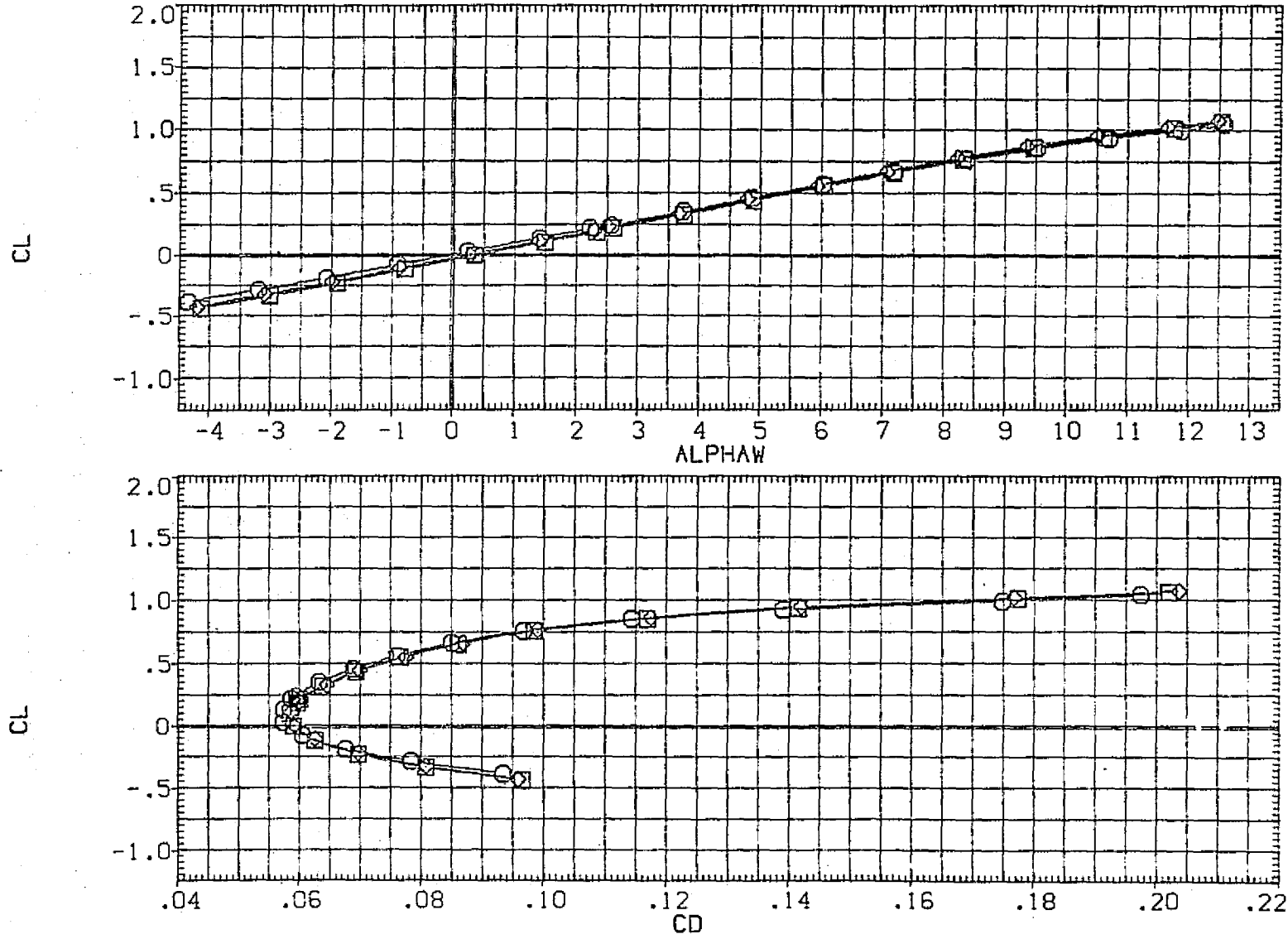


FIG. 58 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP165)	□ CAS K2 V9.1S1-12 AT112 /111.1GRBF8N24/28		6.030	.000	SREF	5500.0000 SQ.FT.
(RGP142)	□ CAS K2H15.6.1V9.1S1-12 AT112 /111.1GRBF8N24/28	.970	6.030	.000	LREF	327.8000 IN.
(RGP143)	◇ CAS K2H15.6.1V9.1S1-12 AT112 /111.1GRBF8N24/28	2.040	6.030	.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

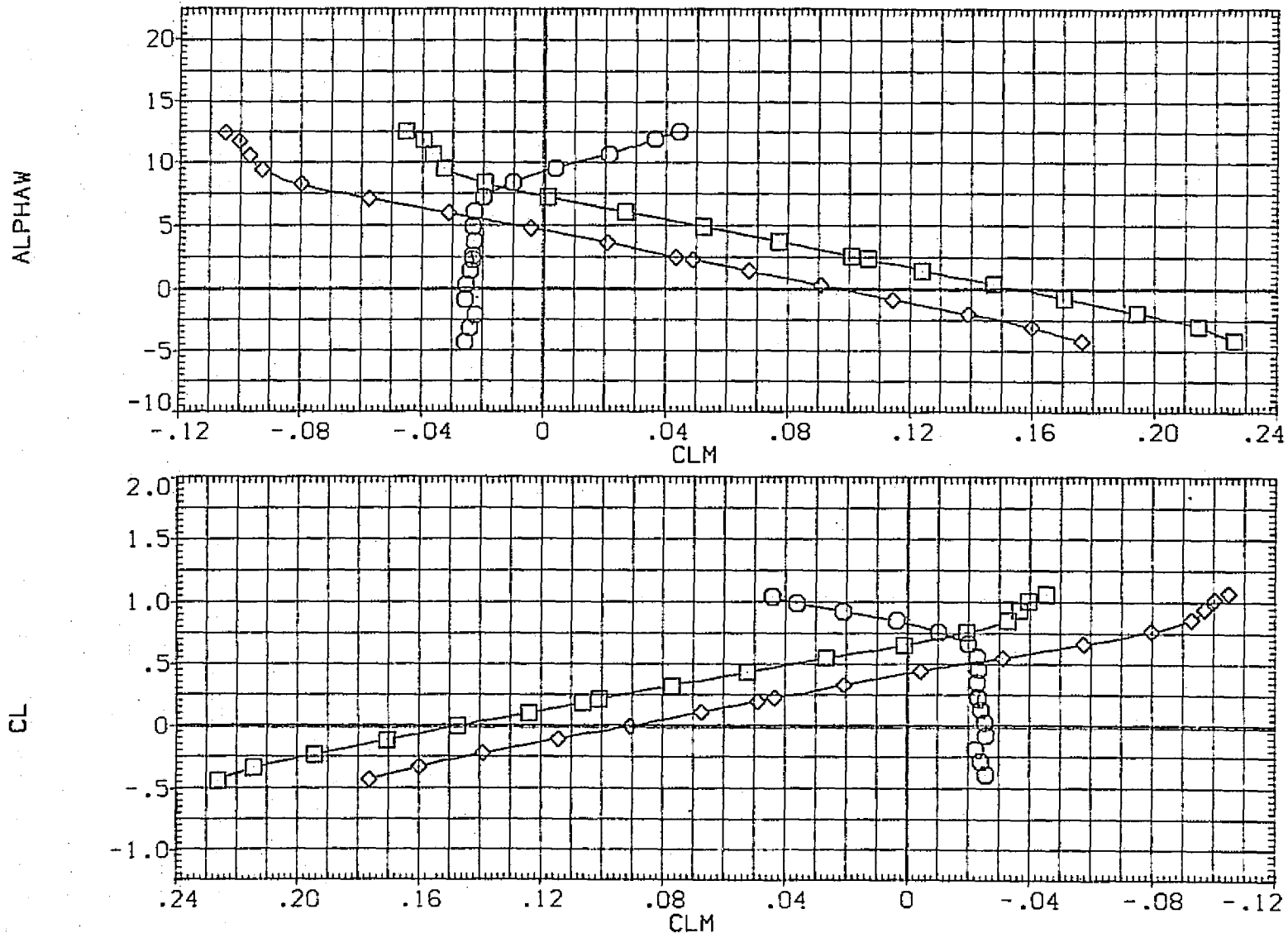


FIG. 58 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP165)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	.000	SREF	5500.0000 SQ.FT.
(RGP142)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	6.030	.000	LREF	327.8000 IN.
(RGP143)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	6.030	.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

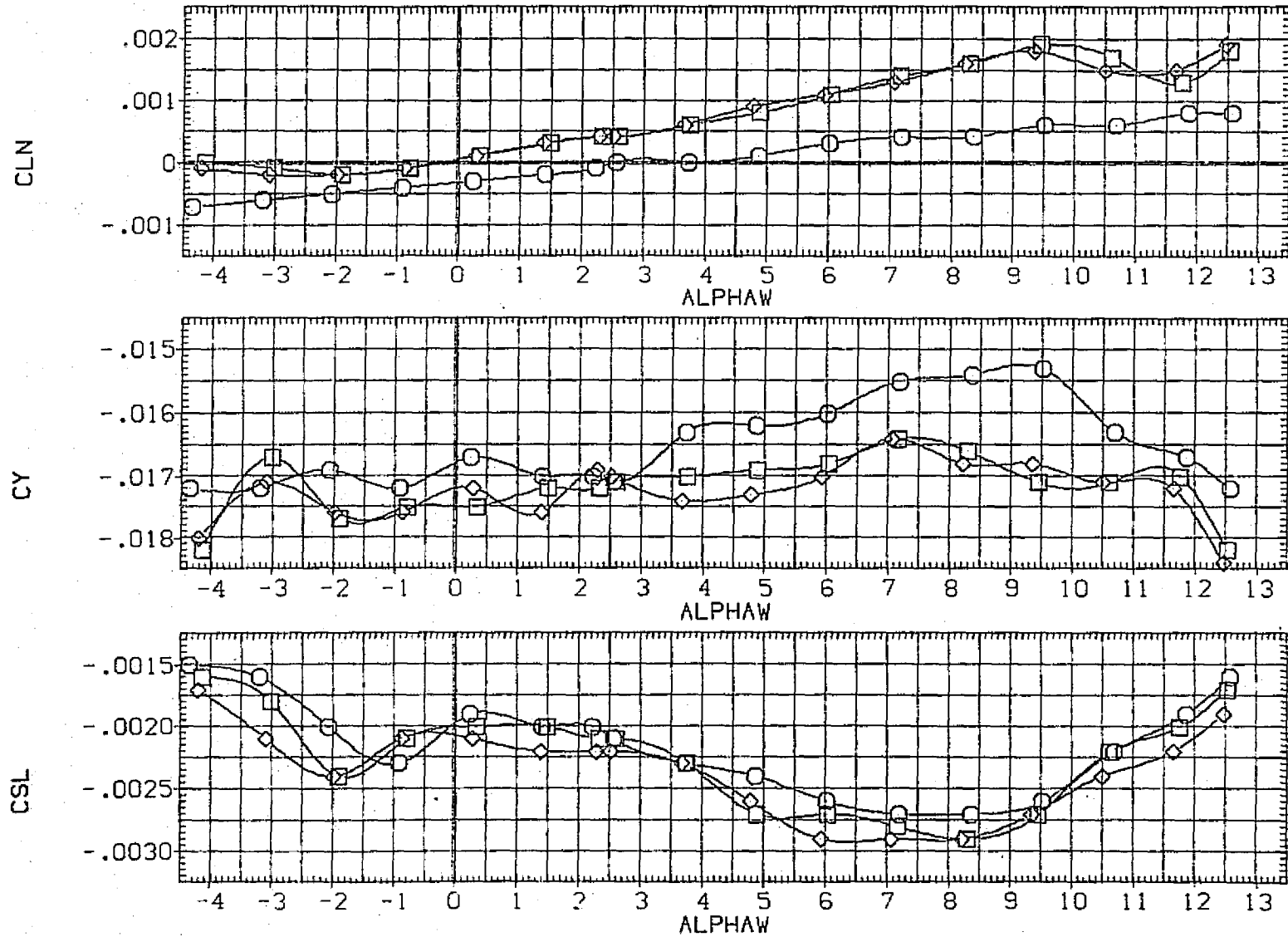


FIG. 58 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBFBN24/28		6.030	-5.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.150	6.030	-5.000	LREF 327.8000 IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	1.940	6.030	-5.000	BREF 2348.0000 IN.
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	4.950	6.030	-5.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

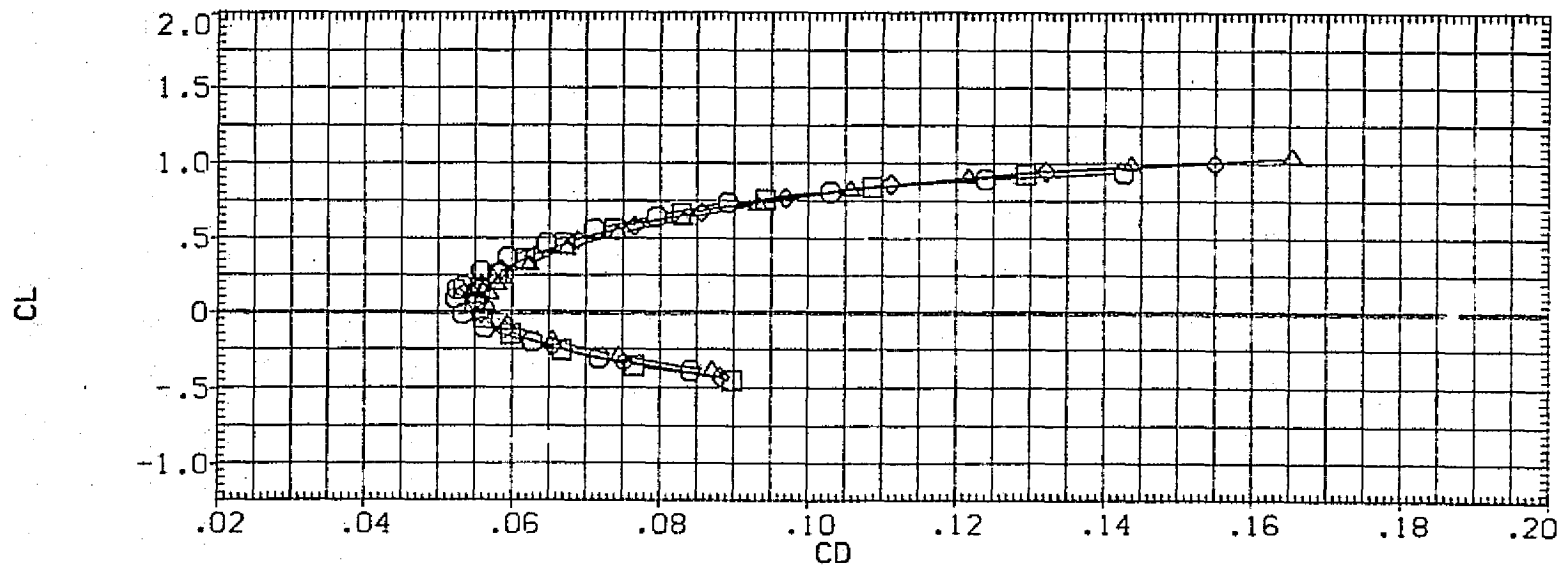
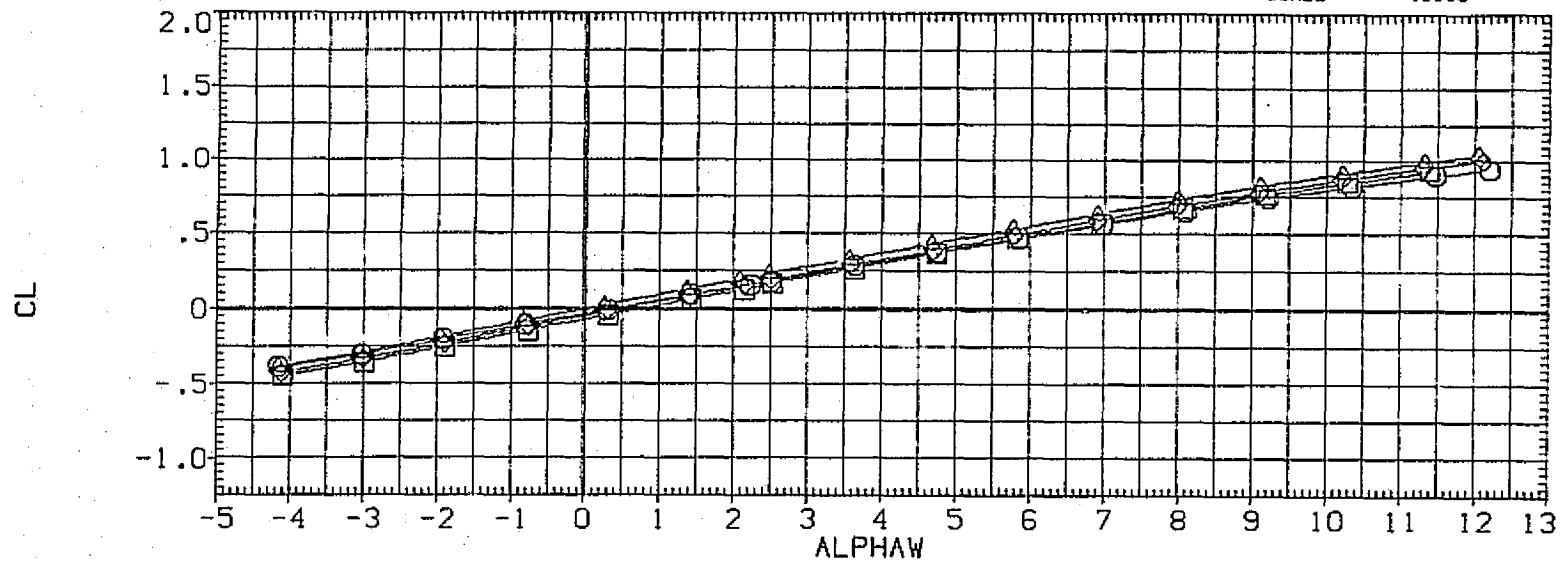


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000	SO.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000	IN.
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

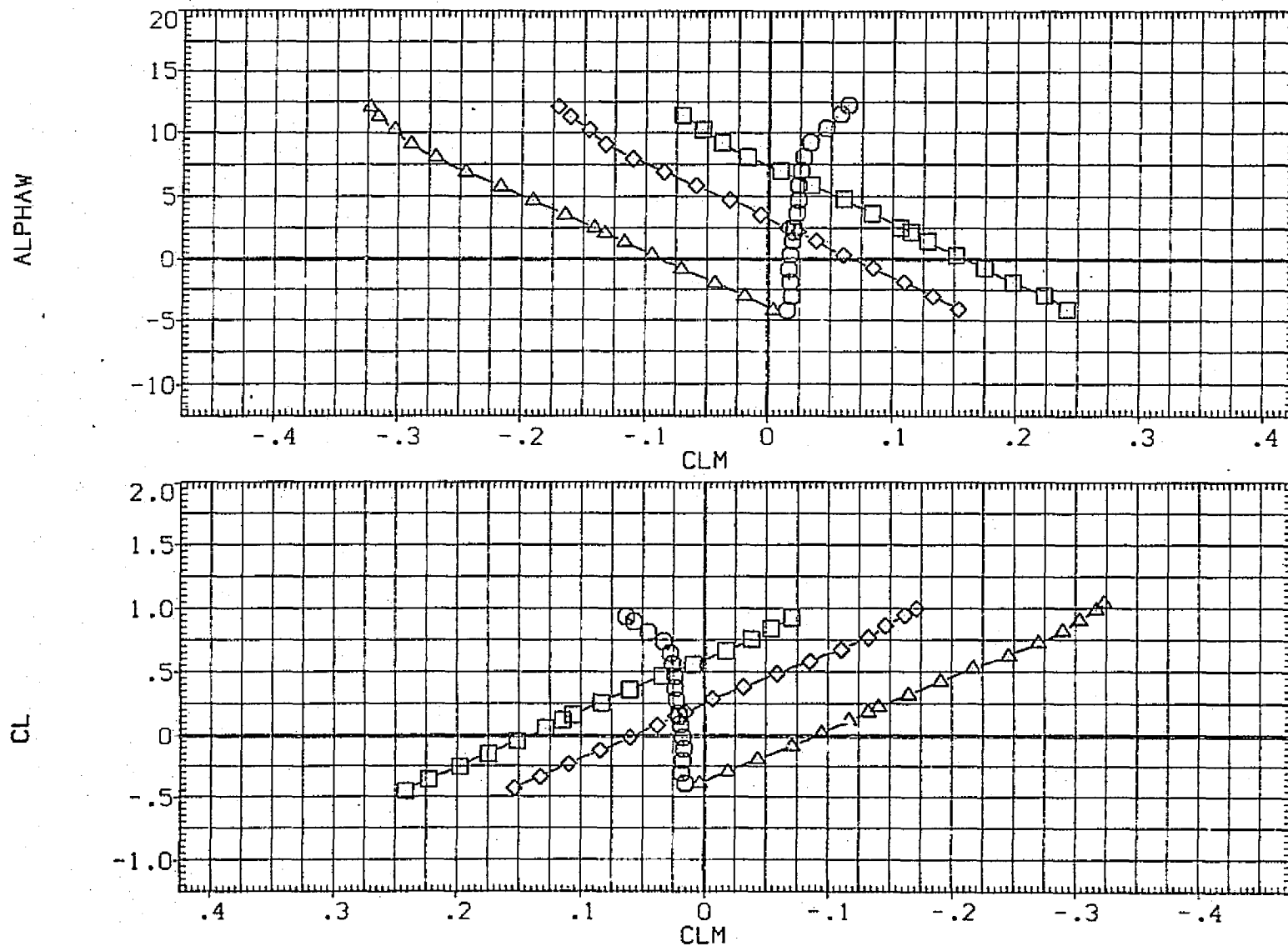


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP164)	CAG K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000	SQ.FT.
(RGP148)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000	IN.
(RGP158)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

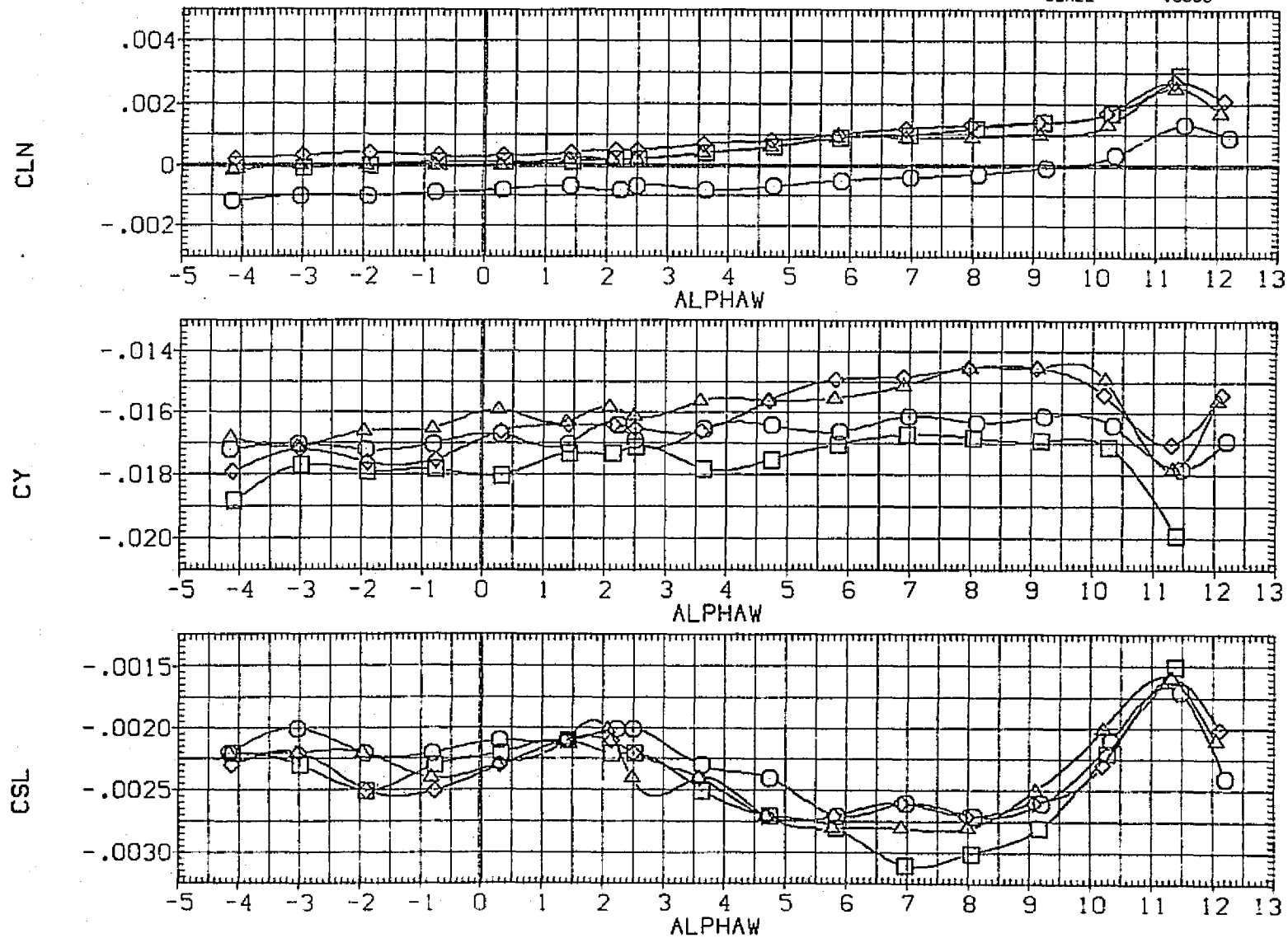


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP164)	□ CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000	SQ.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	SREF	2348.0000	IN.
(RGP158)	△ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

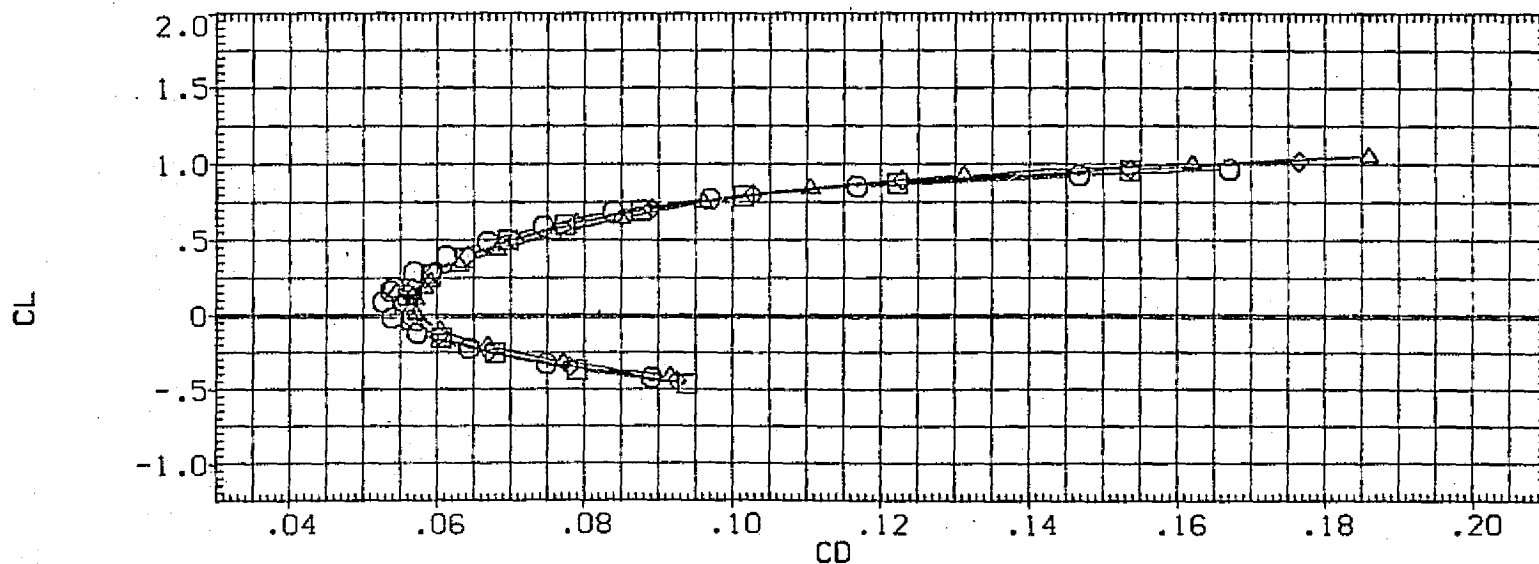
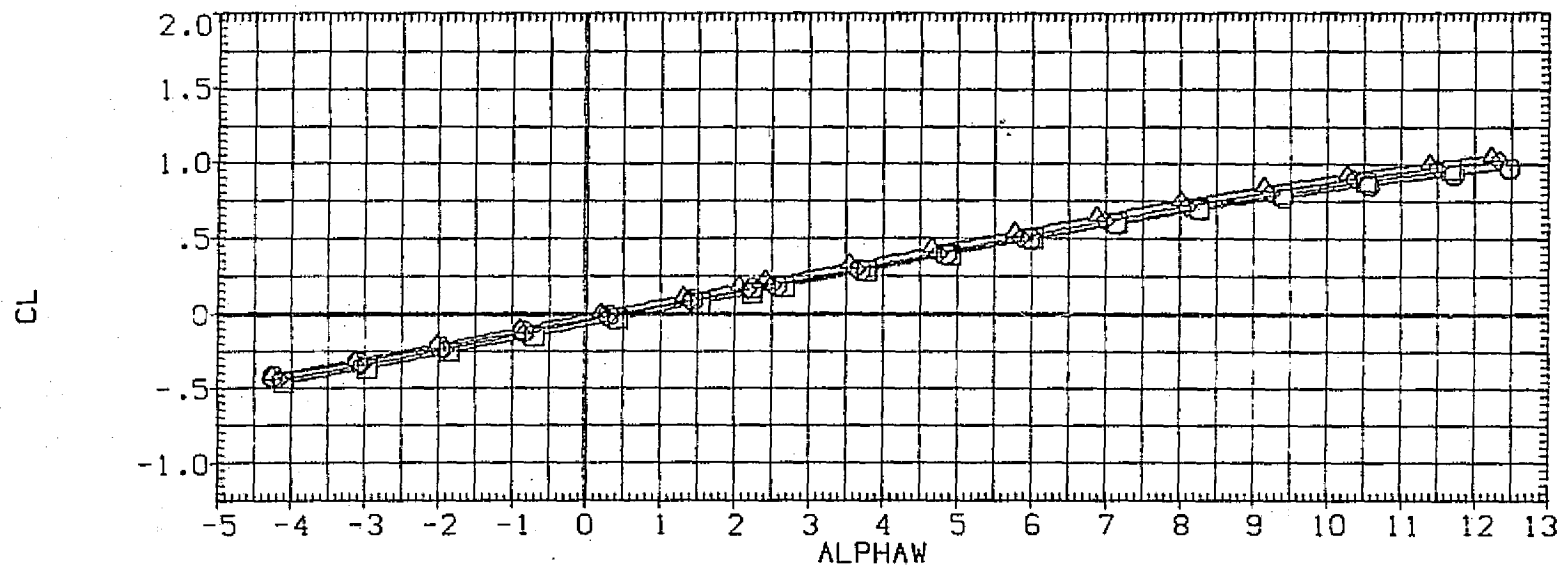


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000 IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000 IN.
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

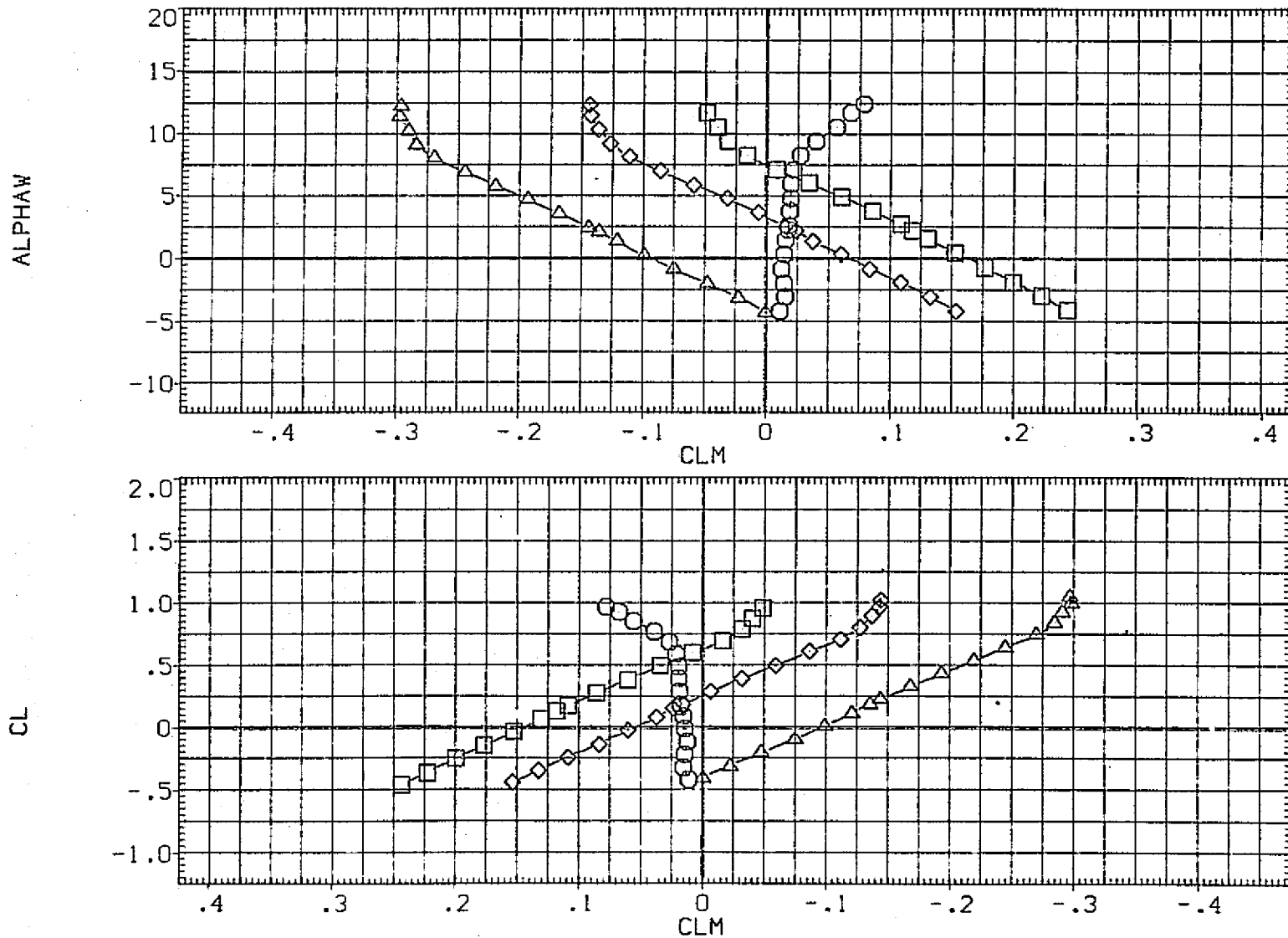


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP164)	CAG K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000	SG.FT.
(RGP148)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000	IN.
(RGP158)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

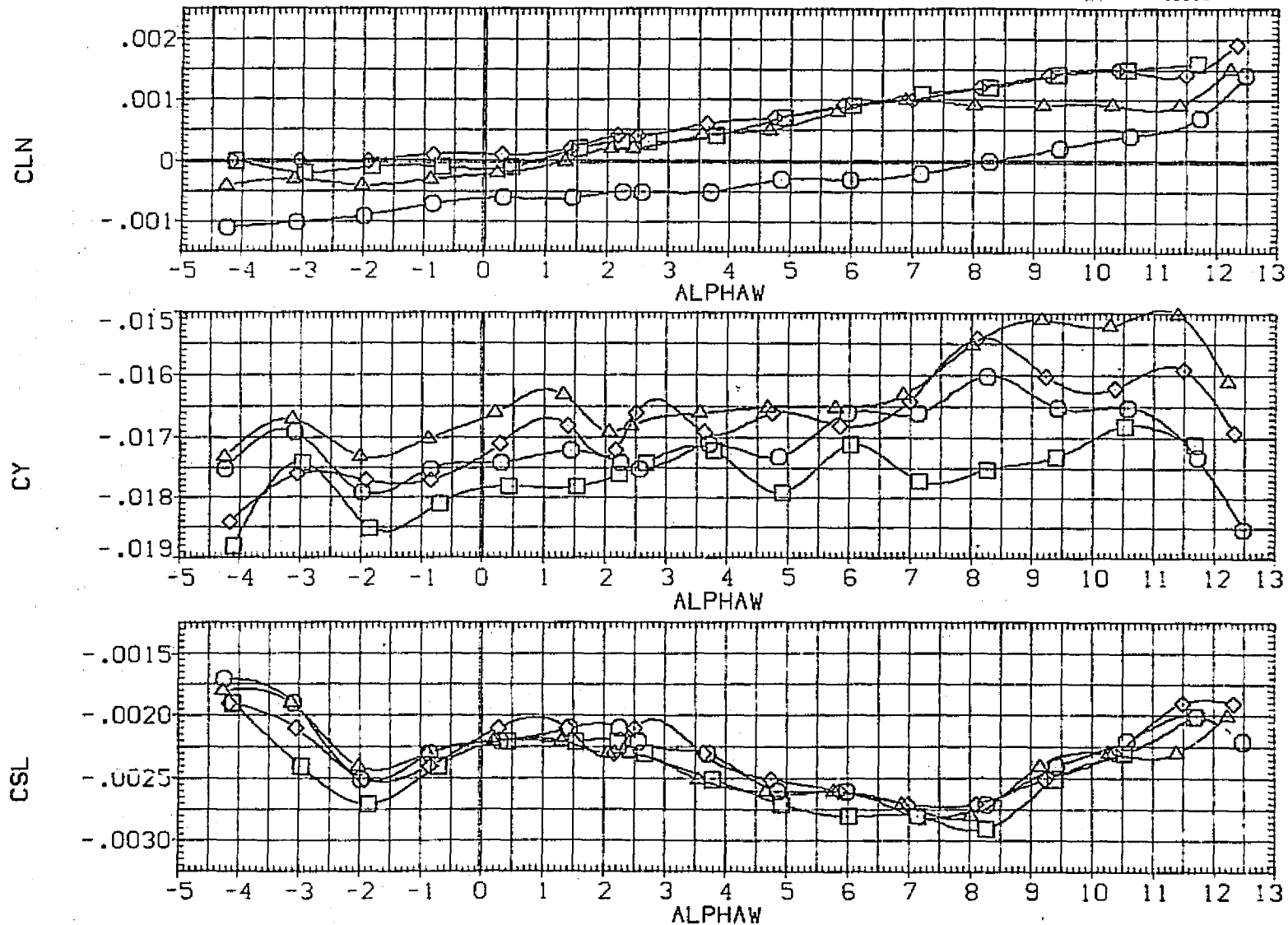


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	SREF 5500.0000 SQ.FT.
(RGP141)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	6.030	-5.000	LREF 327.8000 IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF 2348.0000 IN.
(RGP144)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	6.030	-5.000	XMRP 1339.9000 IN. XC
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	YMRP .0000 IN. YC
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	ZMRP 190.7700 IN. ZC
					SCALE .0300

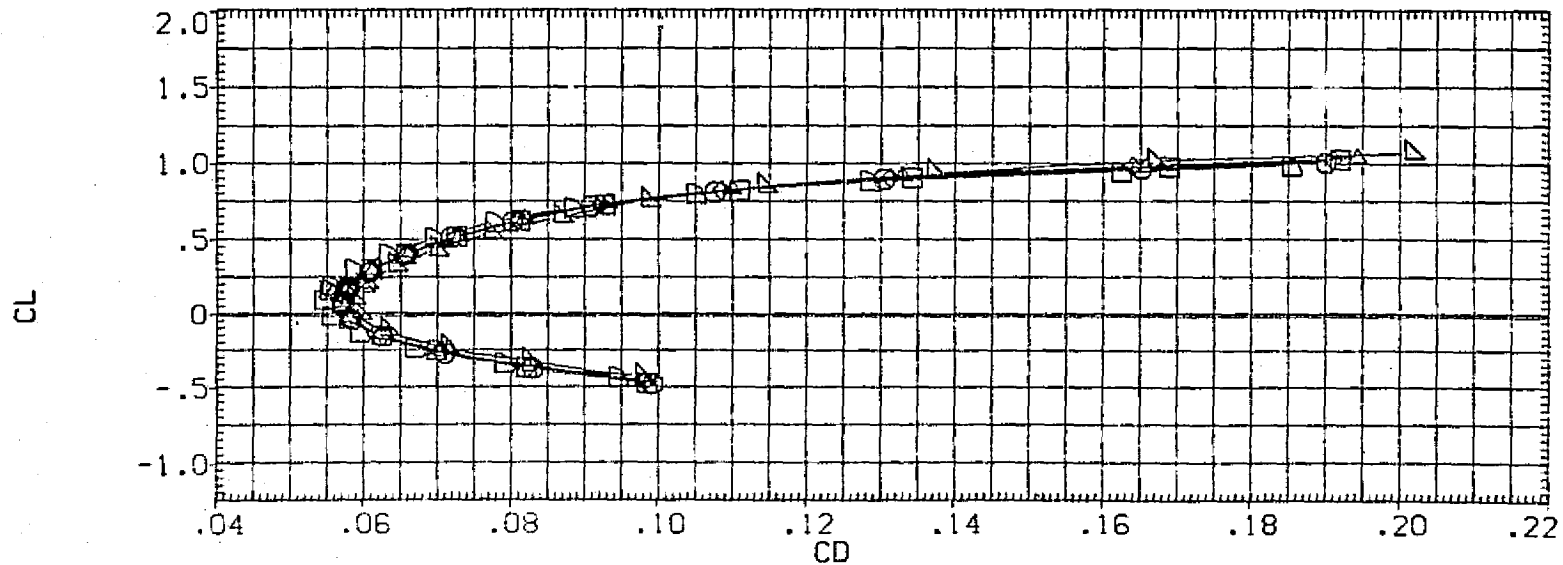
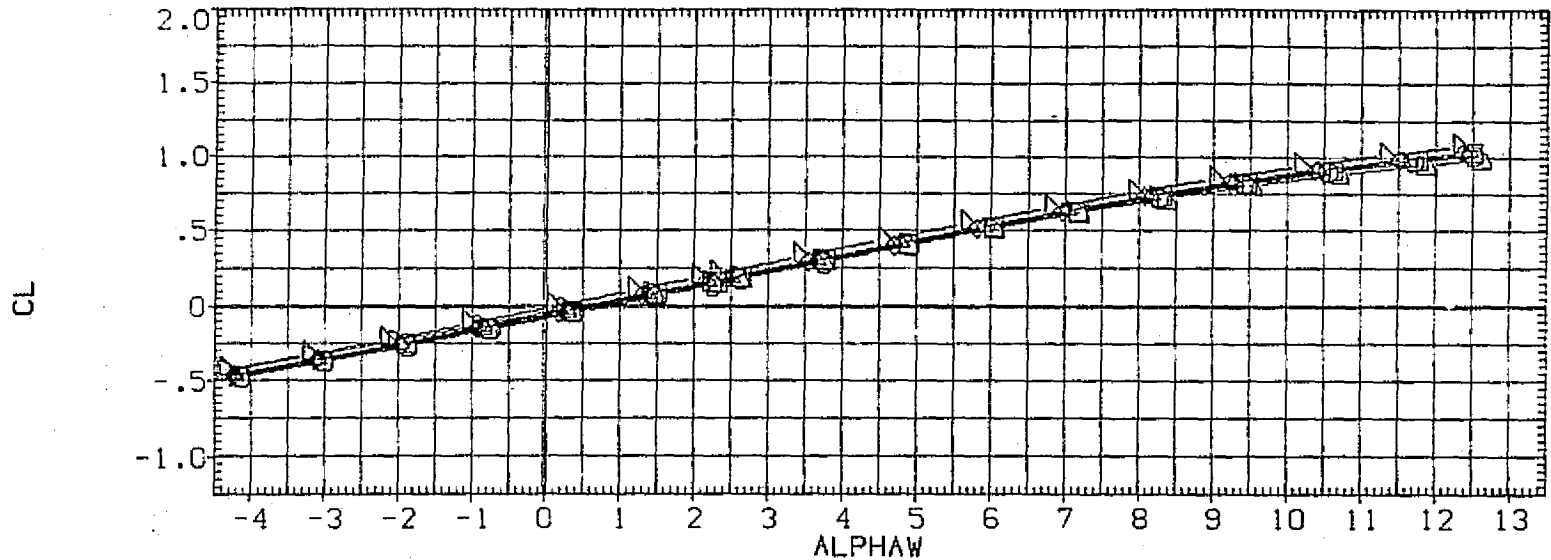


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	SREF	5500.0000	SQ.FT.
(RGP141)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000	IN.
(RGP144)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	6.030	-5.000	XMRP	1339.9000	IN. XC
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	YMRP	.0000	IN. YC
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	ZMRP	190.7700	IN. ZC
					SCALE	.0300	

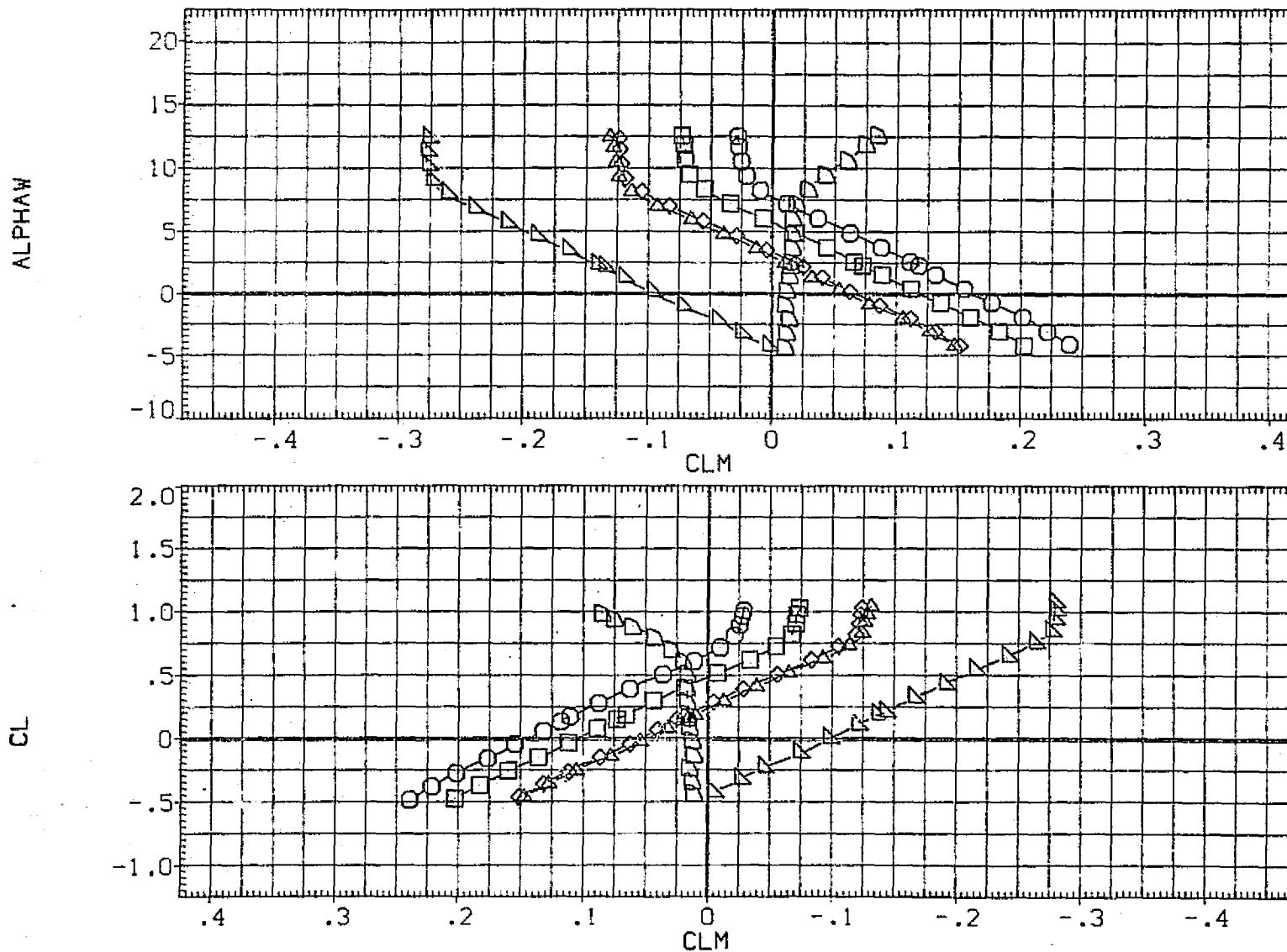


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	SREF	5500.0000 SQ.FT.
(RGP141)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	6.030	-5.000	LREF	327.8000 IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000 IN.
(RGP144)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	6.030	-5.000	XMRP	1339.8000 IN. XC
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	YMRP	.0000 IN. YC
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	ZMRP	190.7700 IN. ZC
					SCALE	.0300

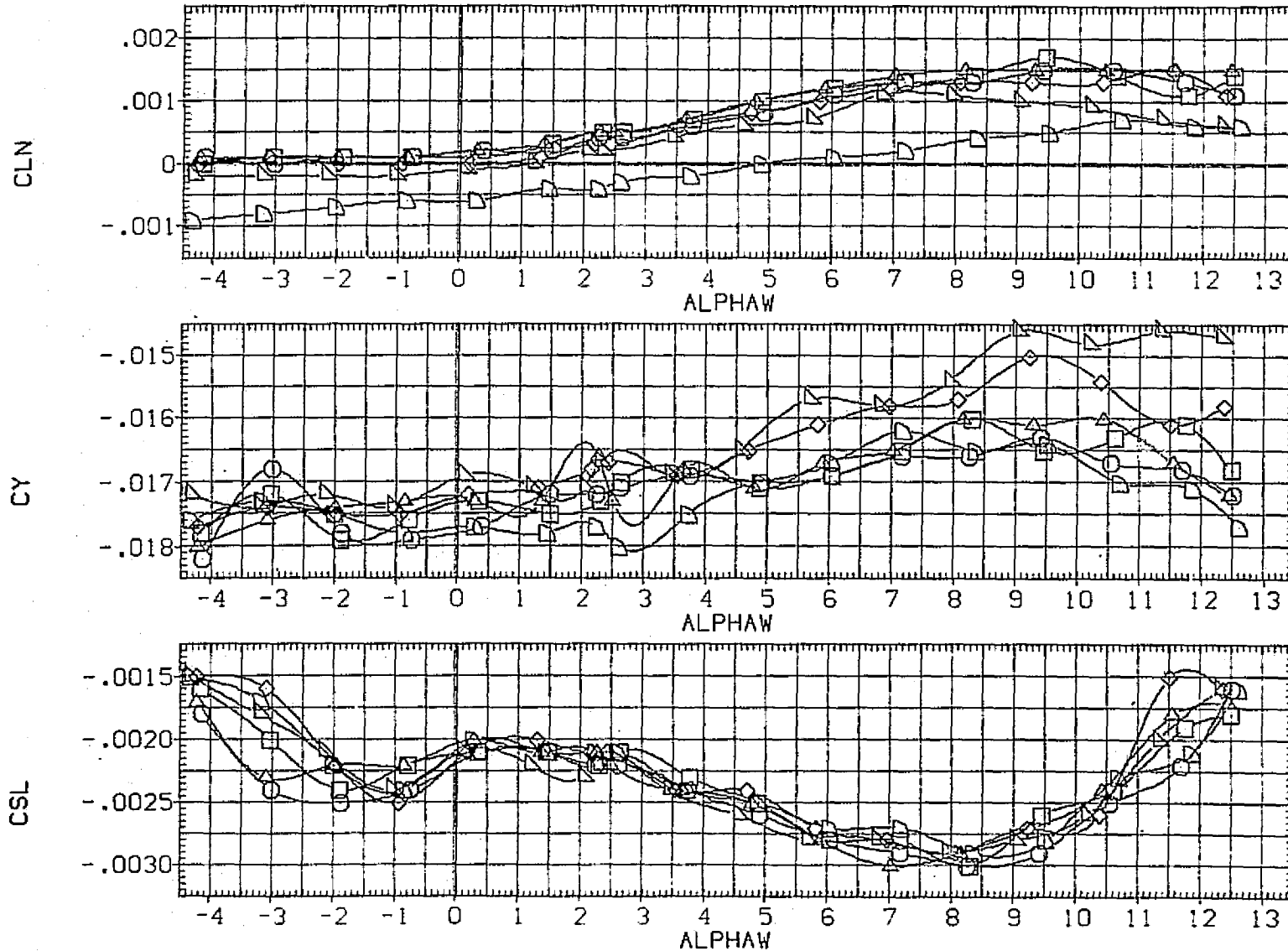


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP154)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF 327.8000 IN.
(RGP159)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF 2348.0000 IN.
(RGP158)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

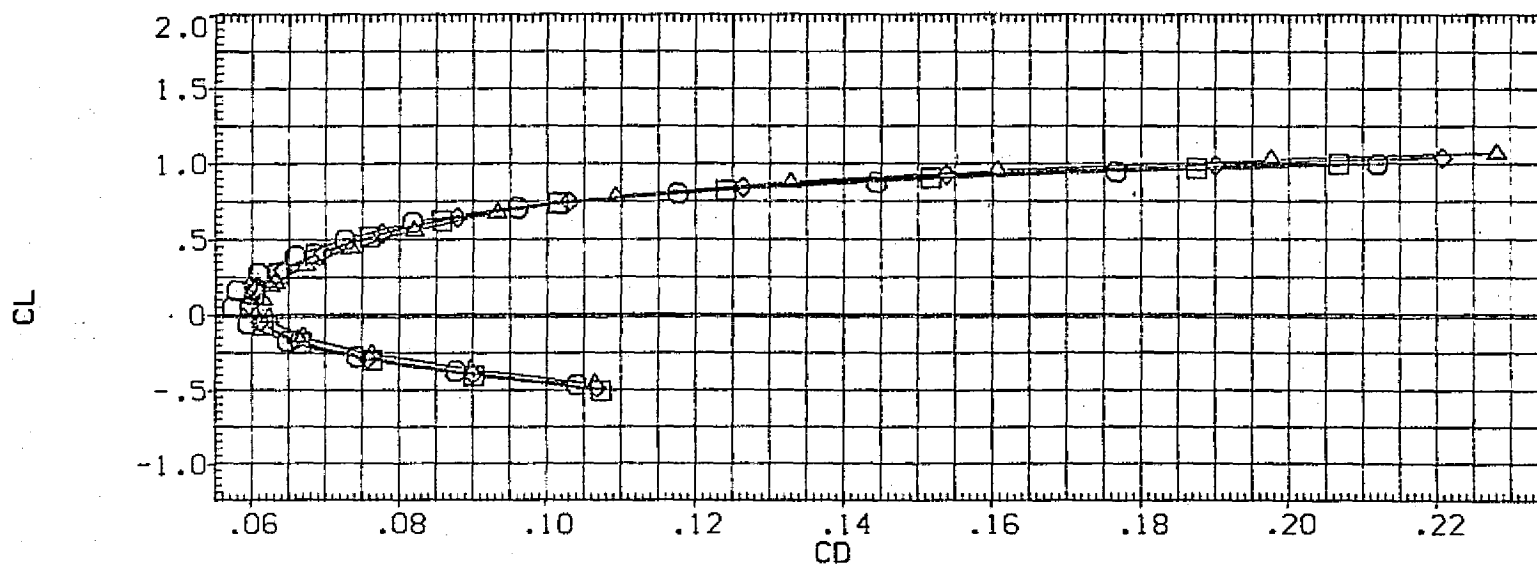
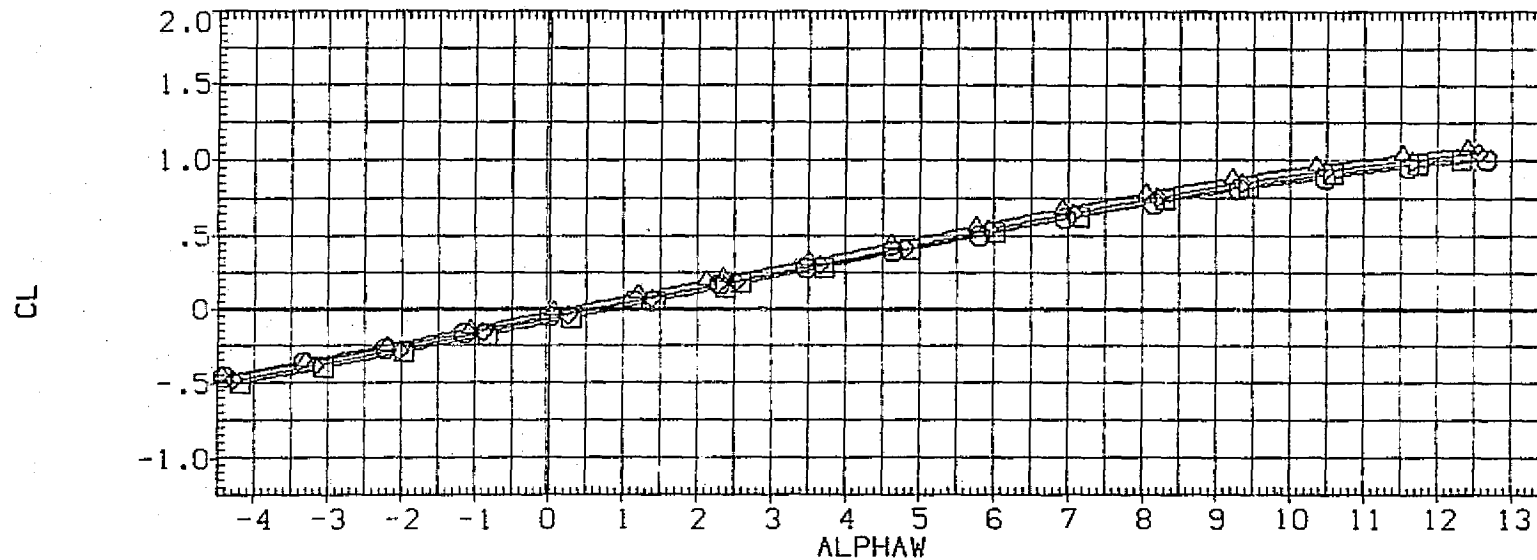


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION
(RGP164)	□ CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF 5500.0000 SQ.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF 327.8000 IN.
(RGP159)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF 2348.0000 IN.
(RGP158)	△ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

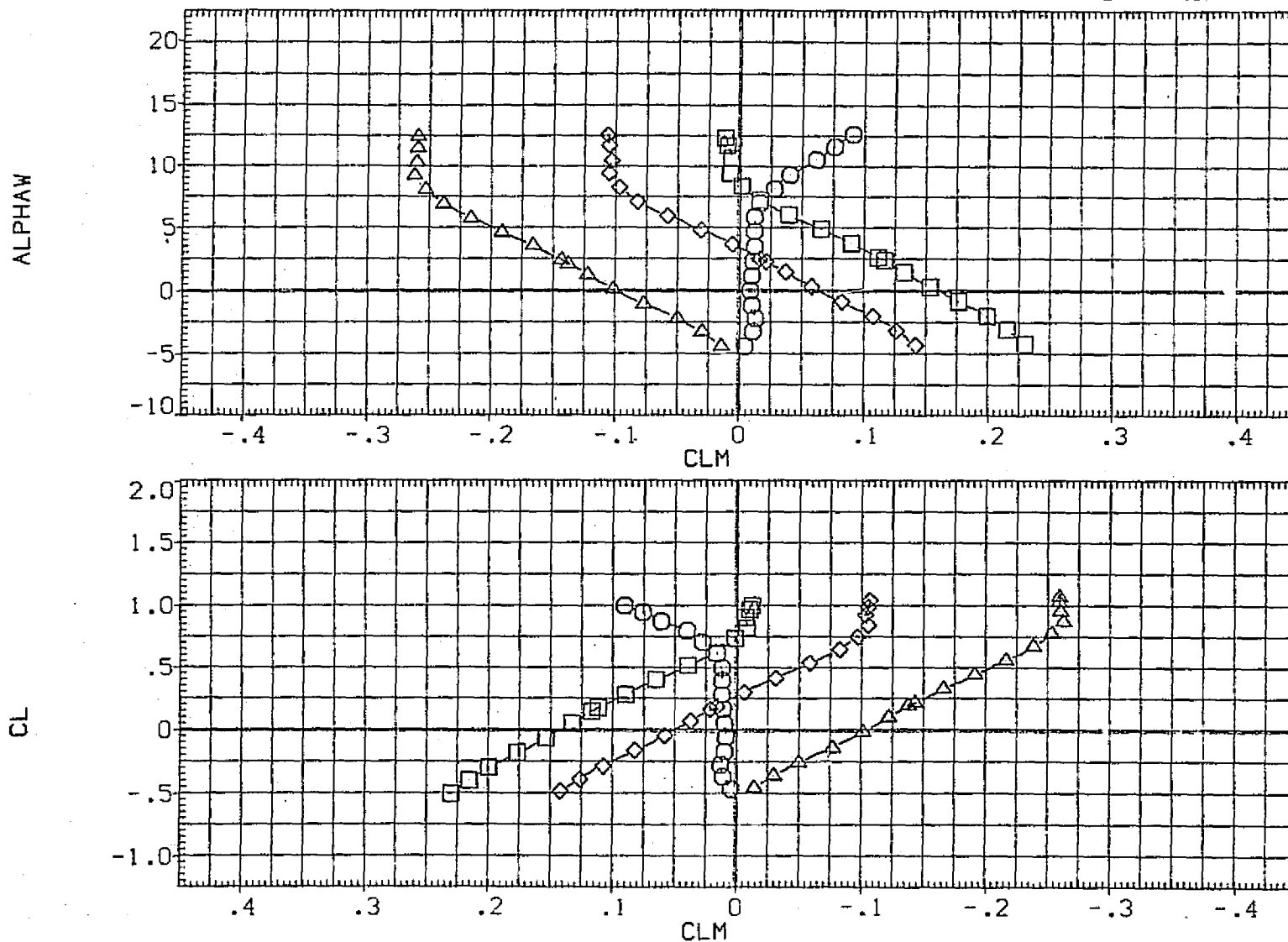


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP164)	CA6 K2 V9.1S1-12 AT112 /111.10RBF8N24/28		6.030	-5.000	SREF	5500.0000	50.FT.
(RGP148)	CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	-5.000	LREF	327.8000	IN.
(RGP159)	CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RBF8N24/28	1.940	6.030	-5.000	BREF	2348.0000	IN.
(RGP158)	CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RBF8N24/28	4.950	6.030	-5.000	XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

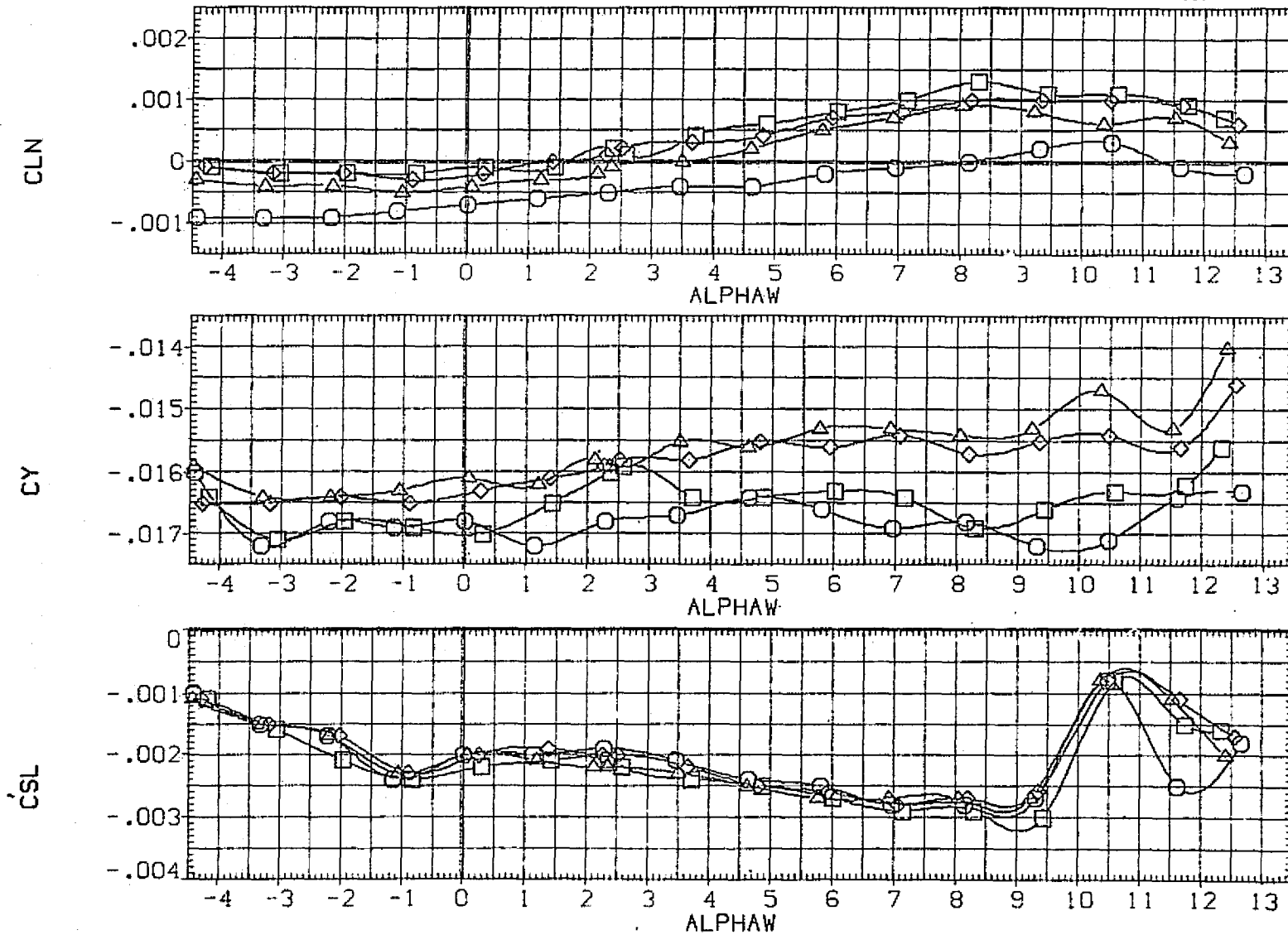


FIG. 59 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -5

(A)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB
(RGP140)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	.000	6.030
(RGP145)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	.000	6.030

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

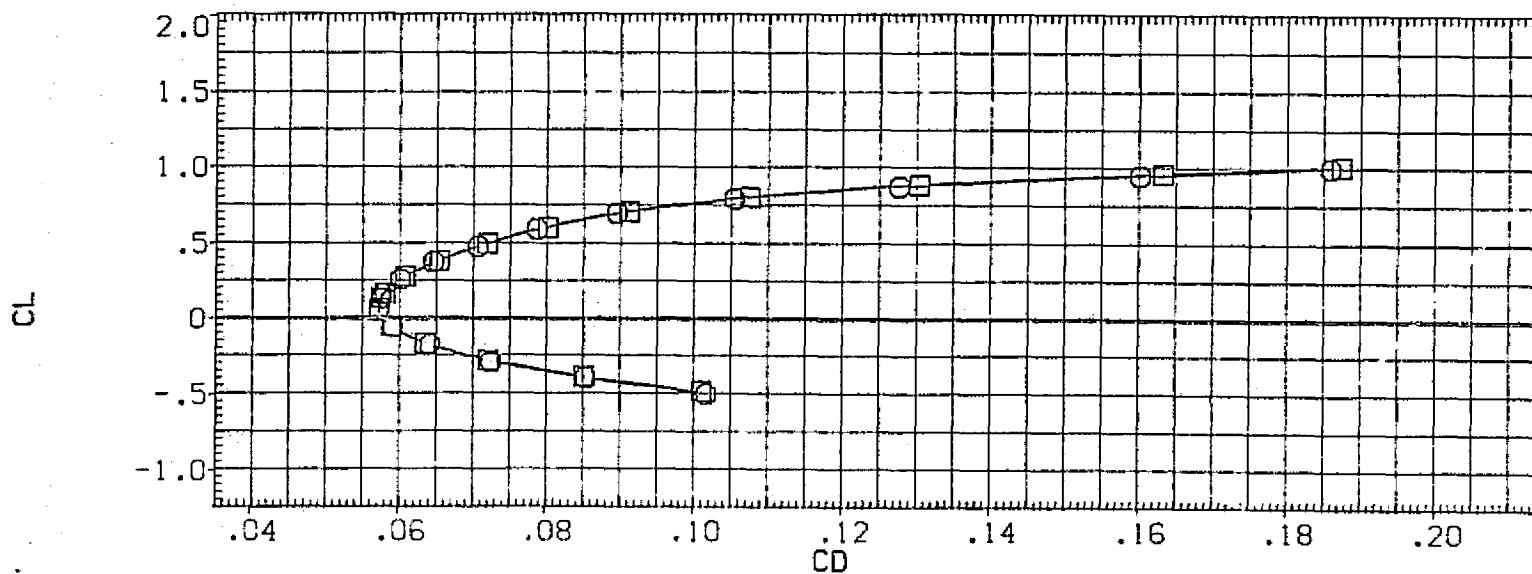
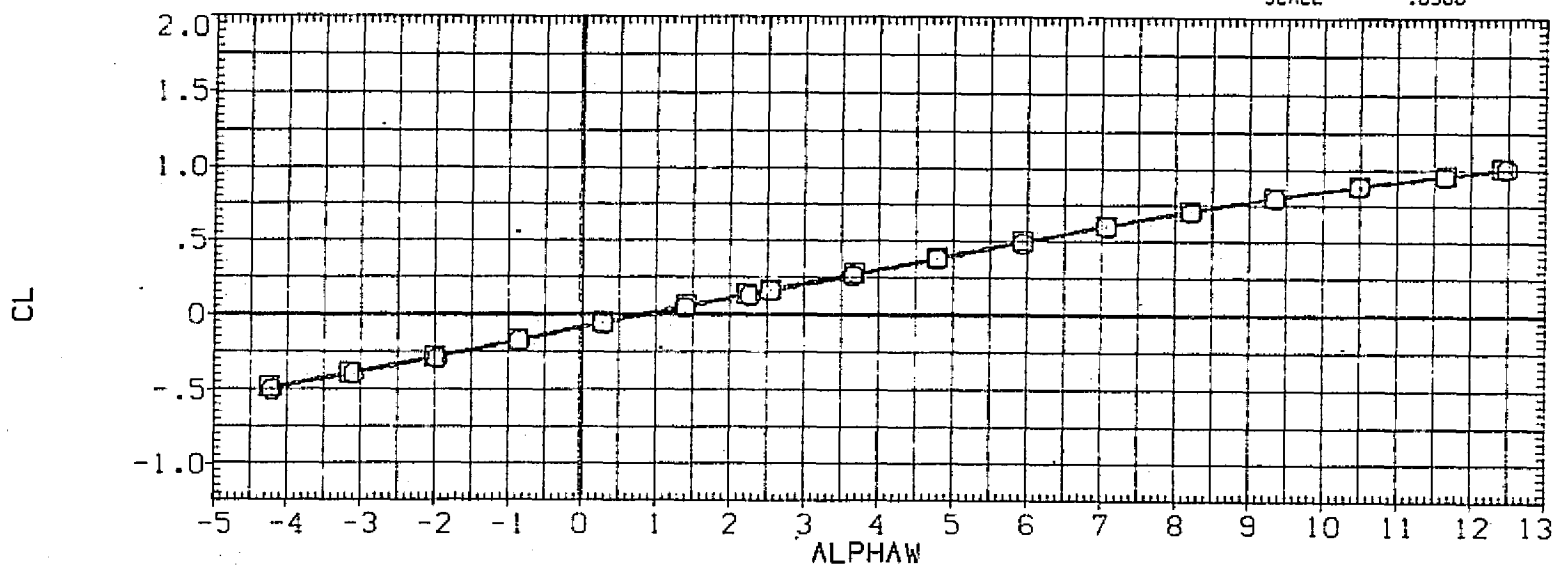


FIG. 60 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	REFERENCE INFORMATION
[RGP140] ○	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.970	.000	6.030	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN. XMRP 1339.9300 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300
[RGP145] □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	.000	6.030	

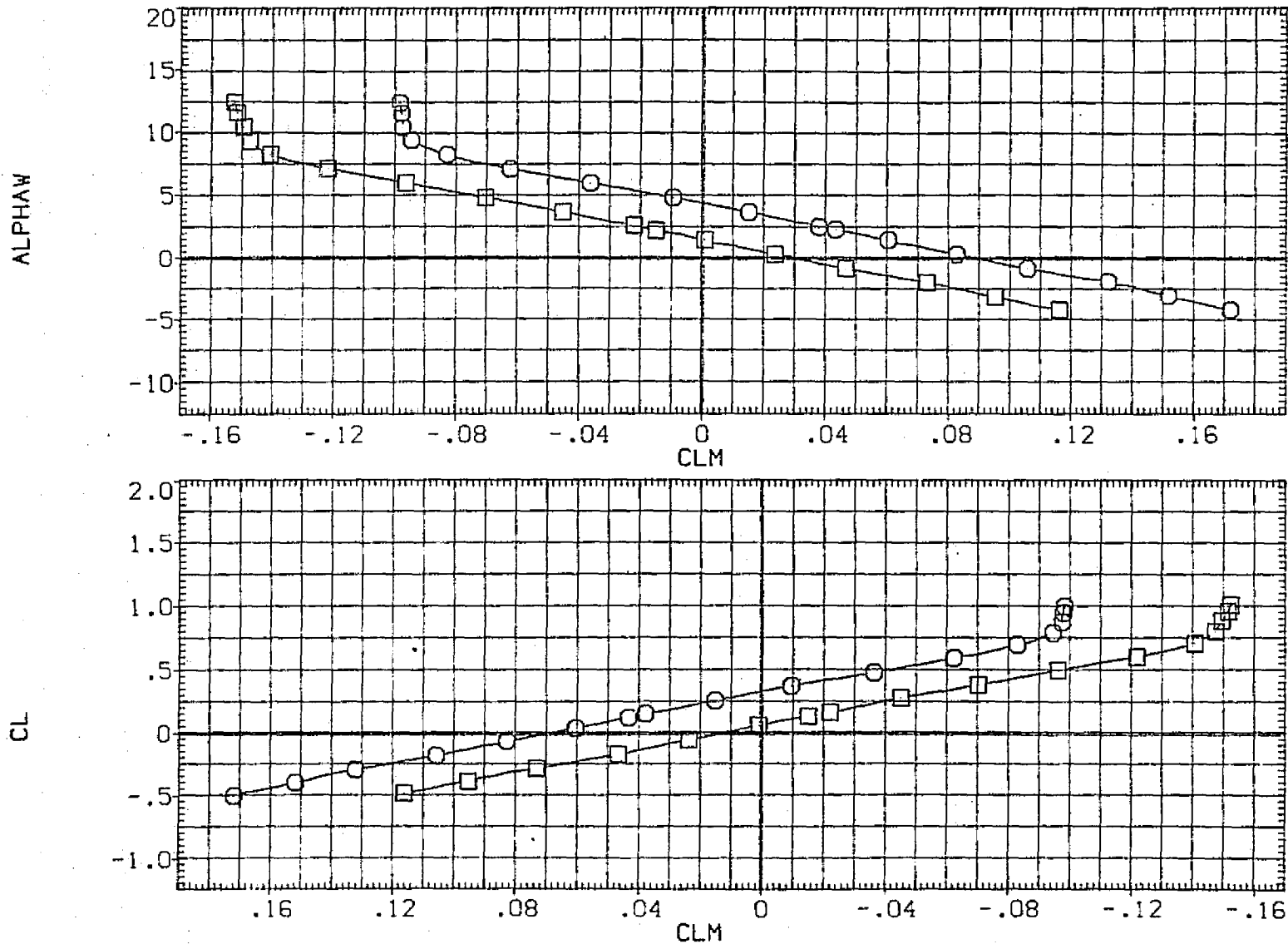


FIG. 60 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP140)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.970	.000	6.030	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(RGP145)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	2.040	.000	6.030	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

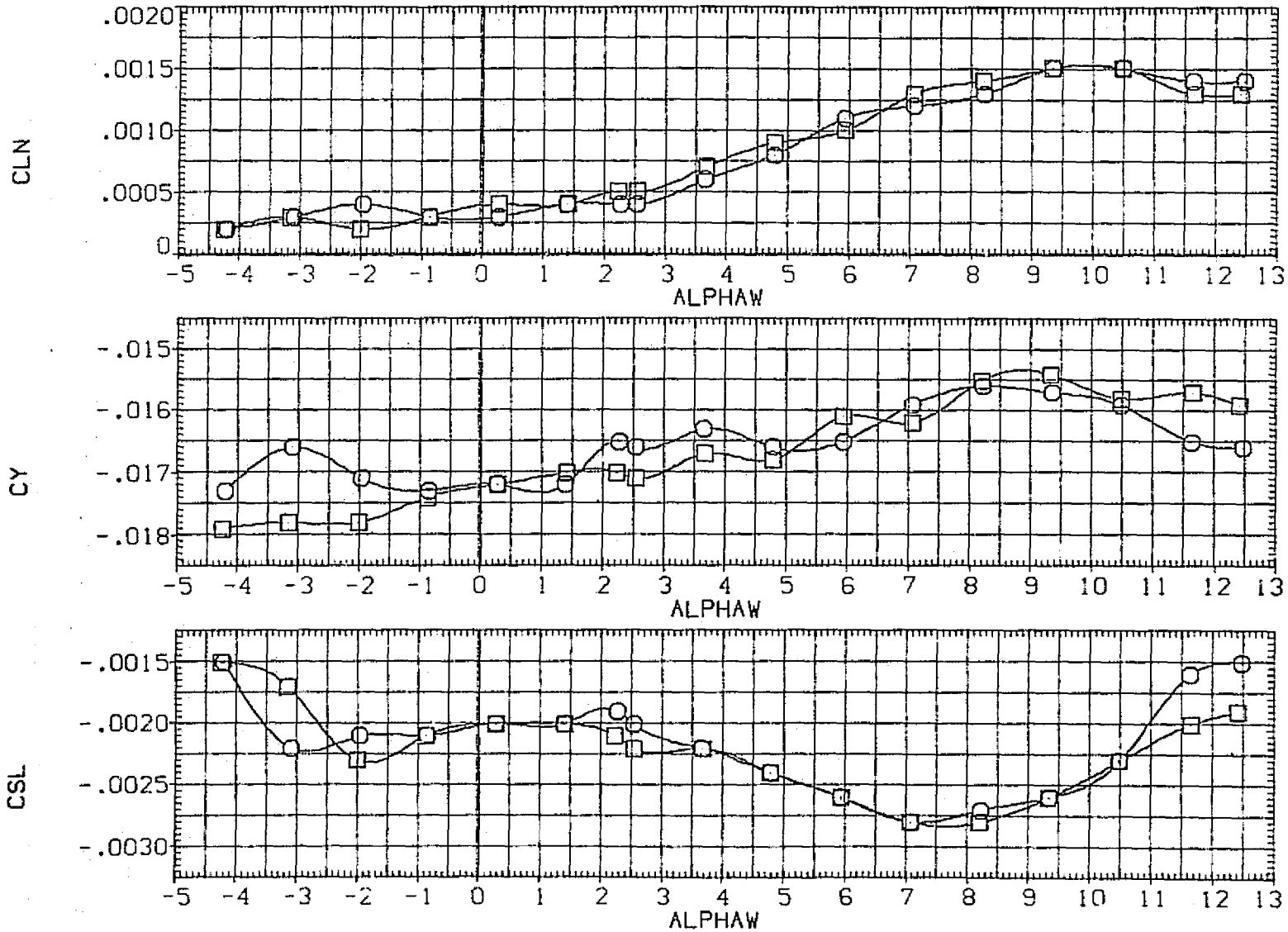


FIG. 60 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP 0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION	
(RGP147)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF0N24/28	.150	.000	6.030	SREF	5500.0000 SO.FT.
(RGP146)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF0N24/28	2.040	.000	6.030	LREF	327.8000 IN.
					BREF	2348.0000 IN.
					XM RP	1338.9000 IN. XC
					YM RP	.0000 IN. YC
					ZM RP	190.7700 IN. ZC
					SCALE	.0300

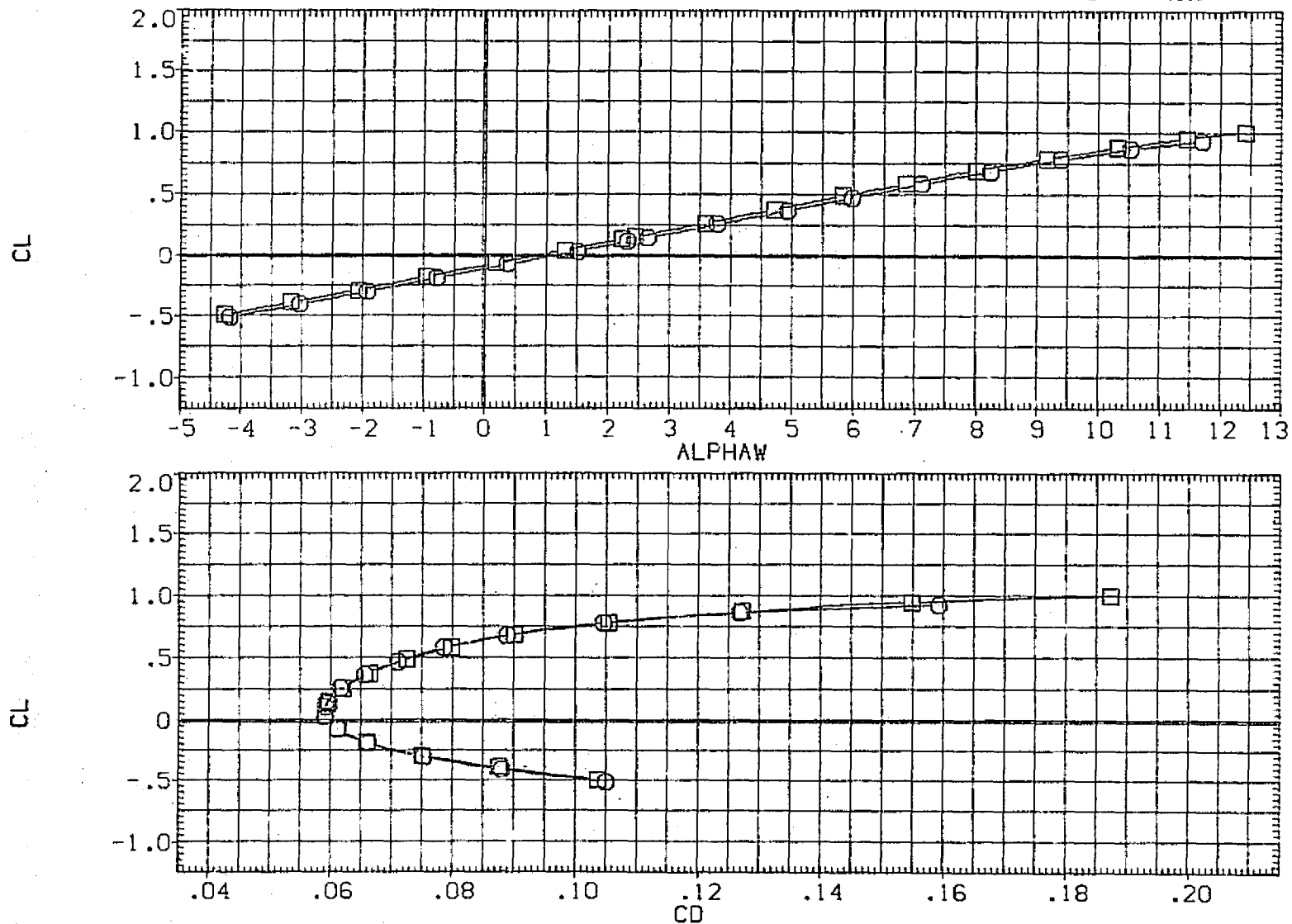


FIG. 61 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP -11.7

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP147)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	.000	6.030	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN.
(RGP146)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.040	.000	6.030	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

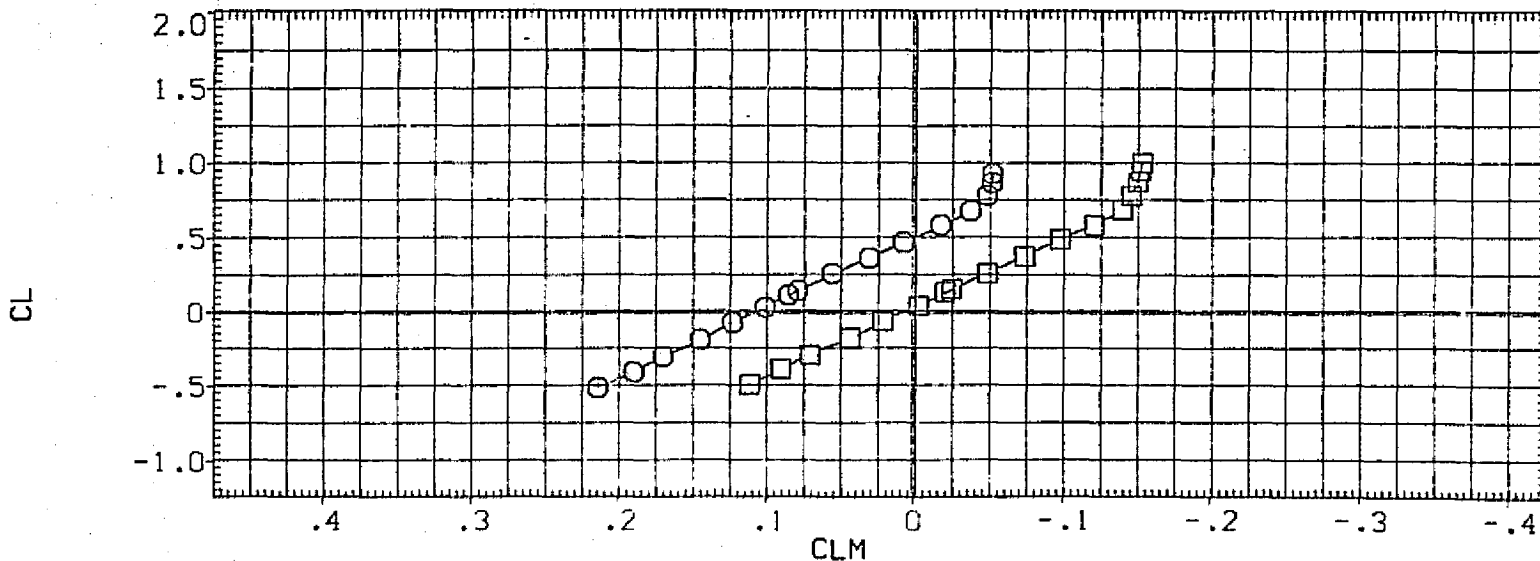
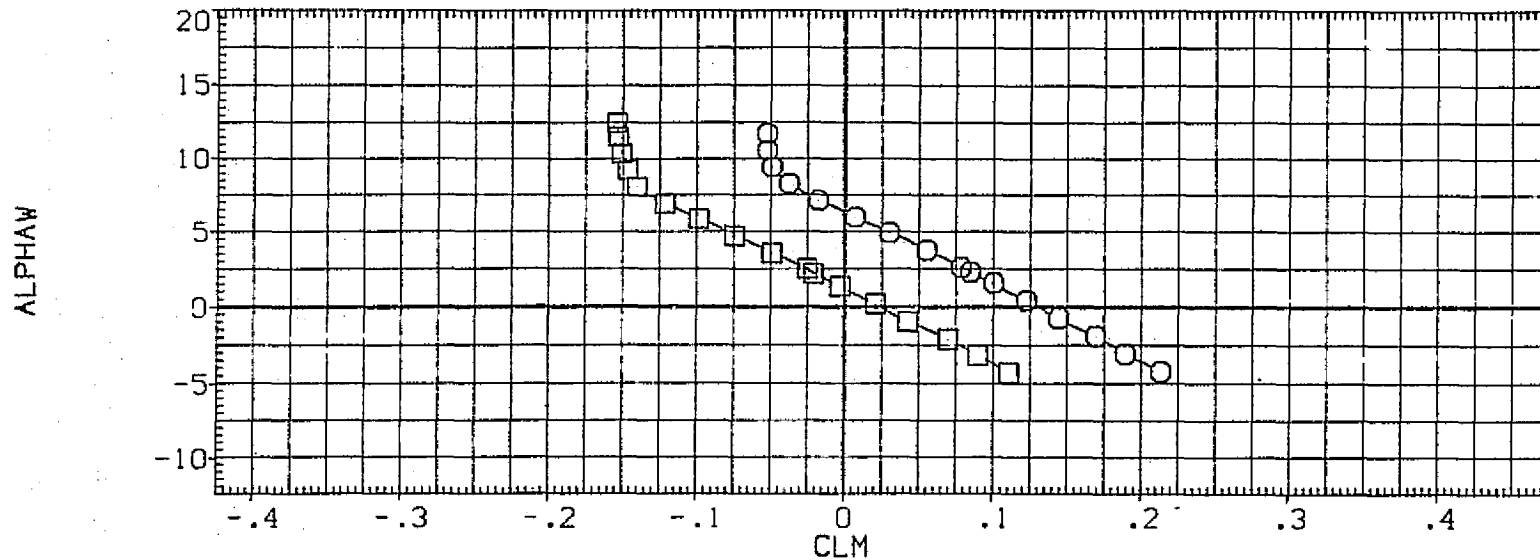


FIG. 61 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP -11.7

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP147) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1DRBF8N24/28	.150	.000	6.030	SREF 5500.0000 SQ.FT.
(RGP146) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1DRBF8N24/28	2.040	.000	6.030	LREF 327.8000 IN.
					BREF 2348.0000 IN.
					XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

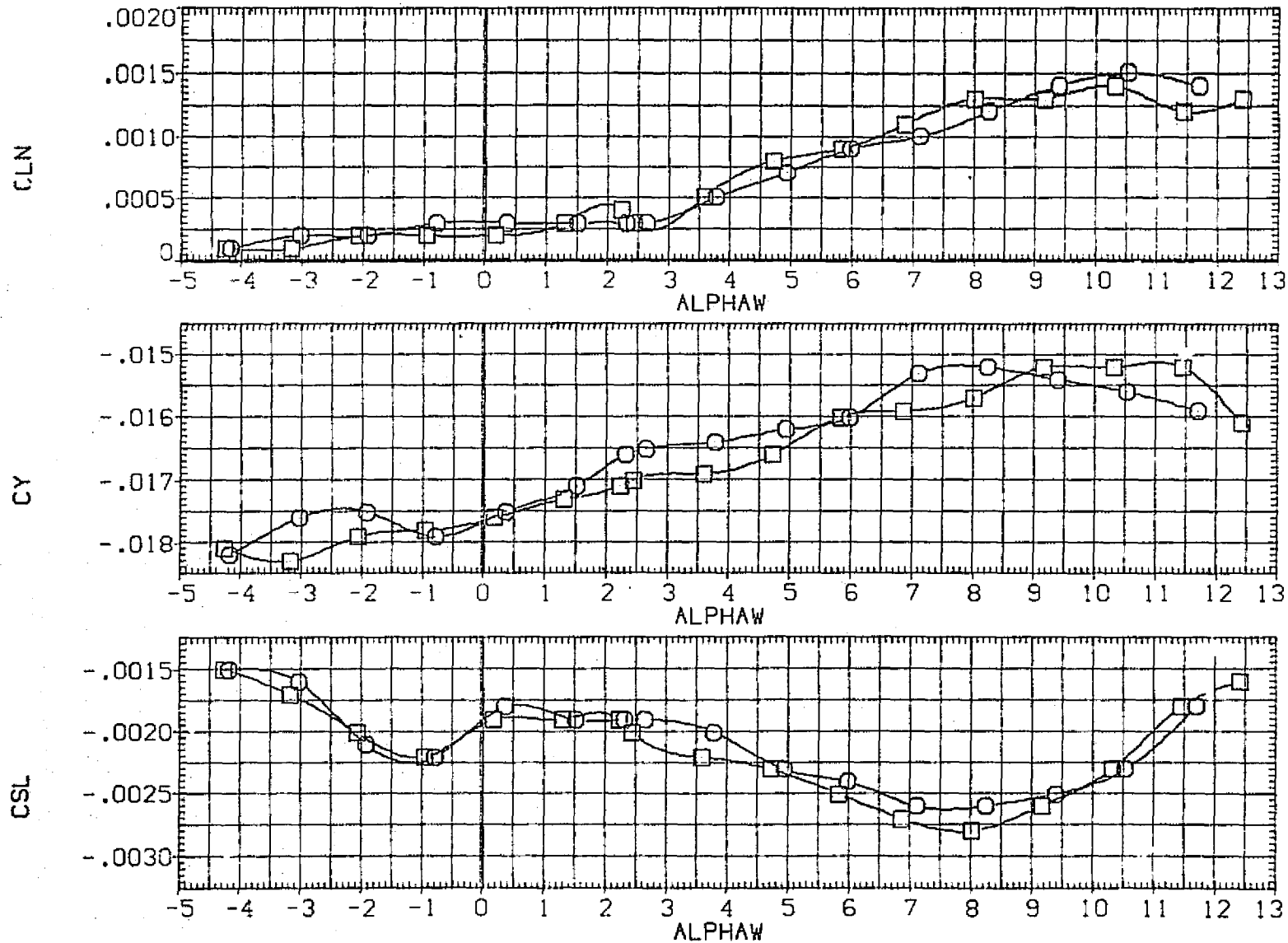


FIG. 61 STABILIZER EFFECTIVENESS, ALT CLIMB, ELEVON -10, BDFLAP -11.7

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP157)	□ CAB K2H15.6.1V9.1S1-12 AT112 /111.10RBF0N24/28	.140	6.030	-9.733	-9.900	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(RGP148)	○ CAB K2H15.6.1V9.1S1-12 AT112 /111.10RBF0N24/28	.150	6.030	.000	.000	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC
(RGP156)	◇ CAB K2H15.6.1V9.1S1-12 AT112 /111.10RBF0N24/28	.160	6.030	9.167	10.033	YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

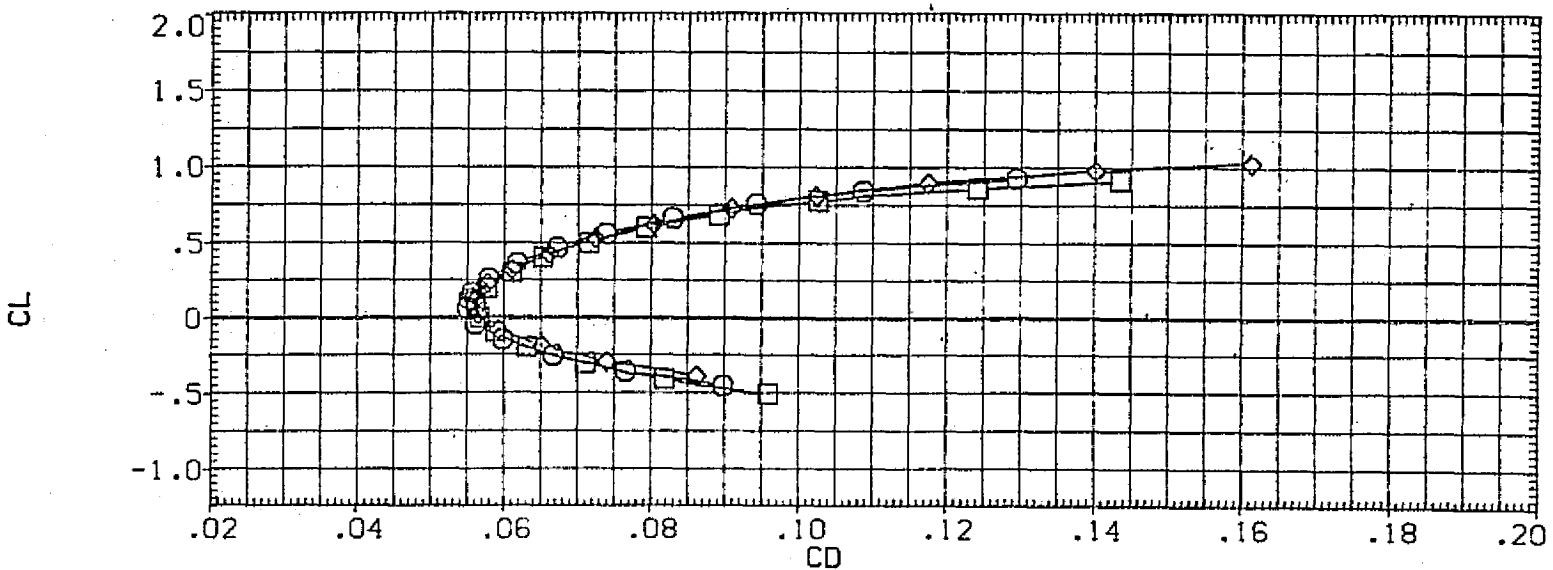
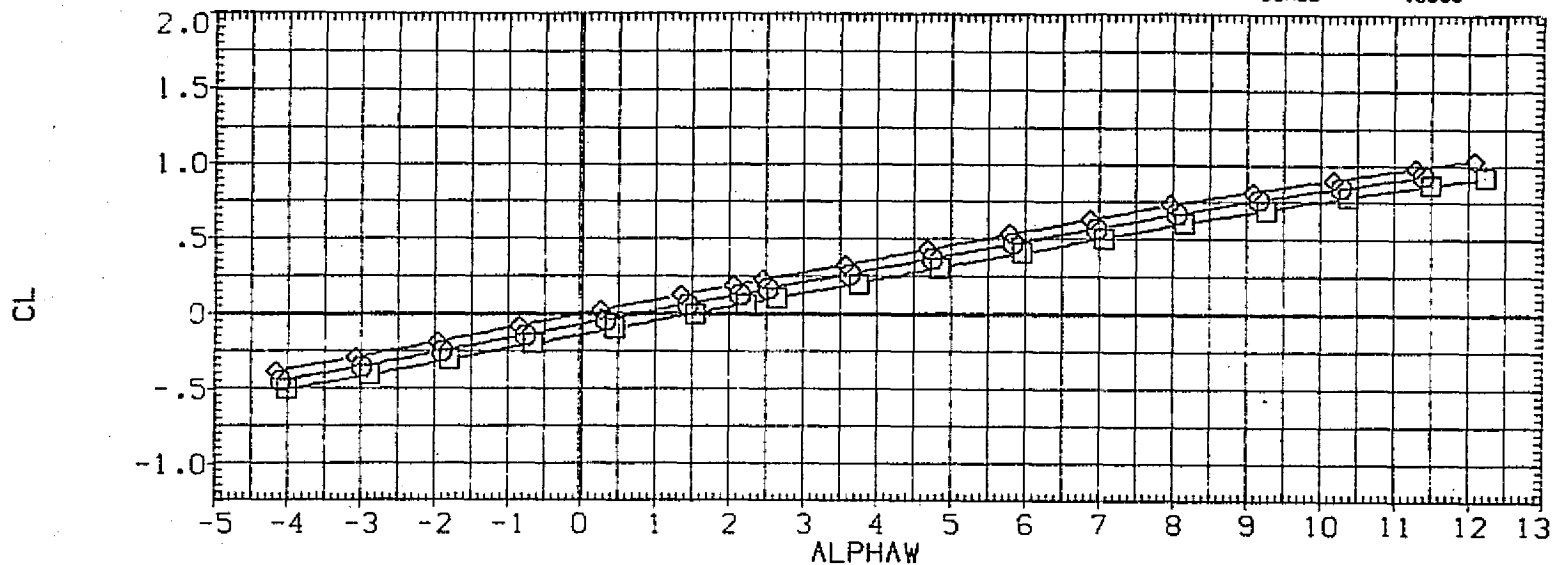


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP157)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF 5500.0000 SQ.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF 327.8000 IN.
(RGP156)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	6.030	9.167	10.033	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

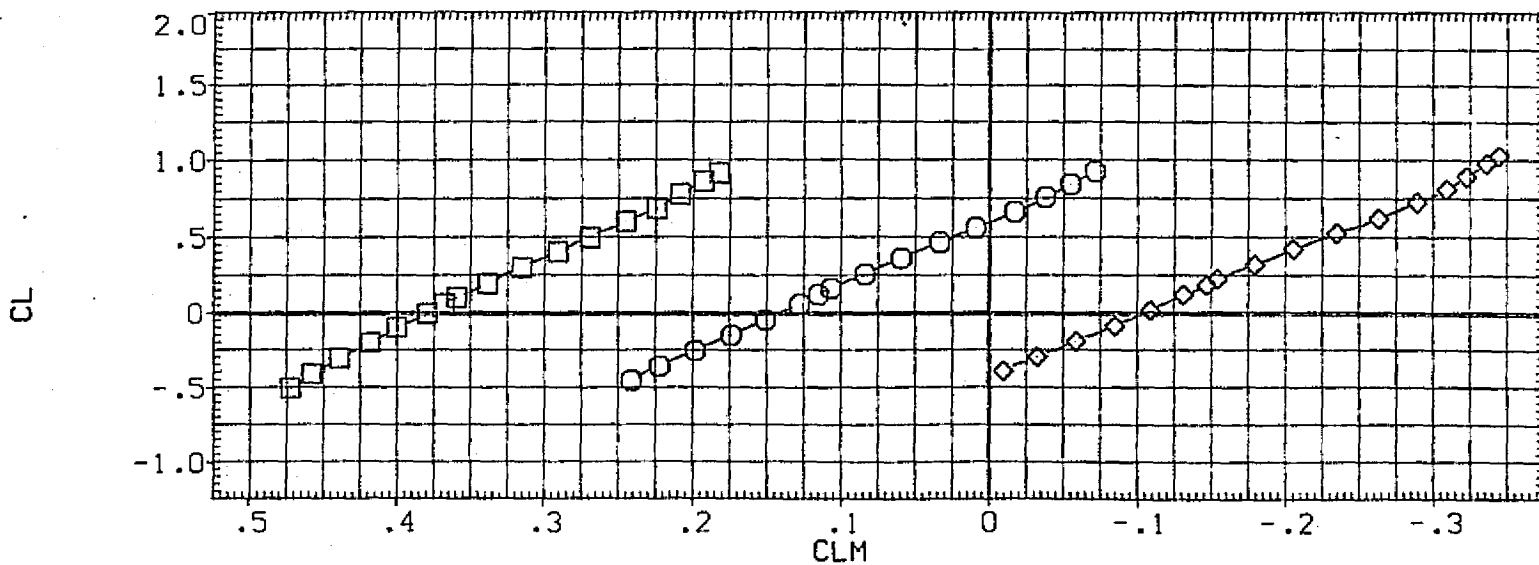
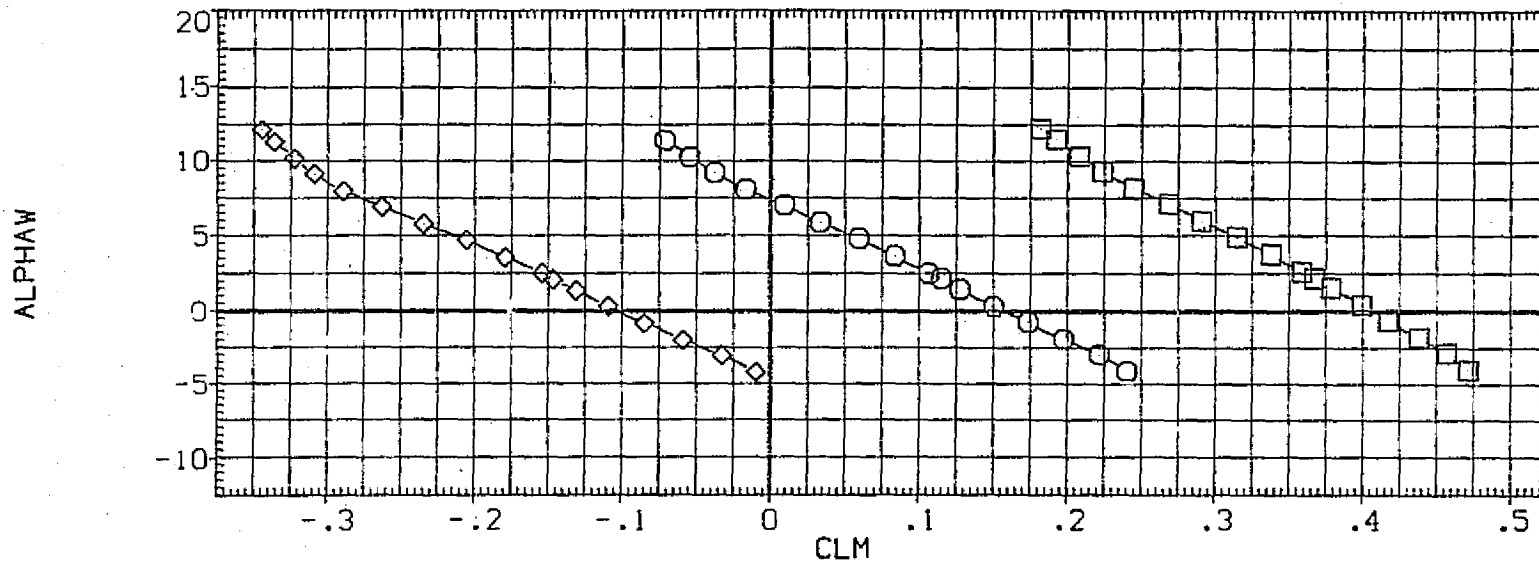


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP157)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF 5500.0000 SQ.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF 327.8000 IN.
(RGP156)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	9.167	10.033	BREF 2348.0000 IN. XMRP 1339.9000 IN.: XC YMRP .0000 IN.: YC ZMRP 190.7700 IN.: ZC SCALE .0300	

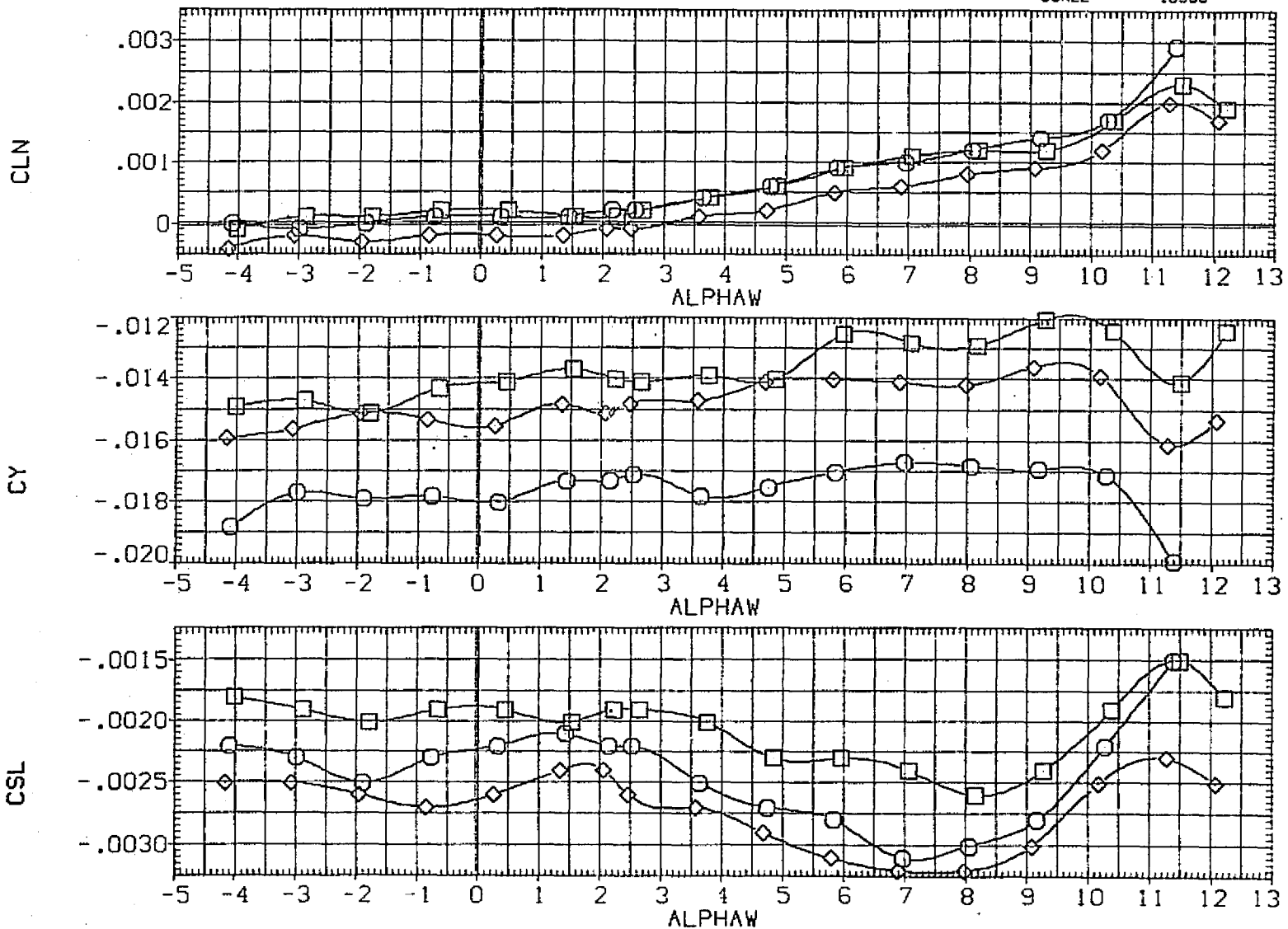


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP157)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000	50.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.150	6.030	.000	.000	LREF	327.8000	IN.
(RGP156)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.160	6.030	9.167	10.033	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

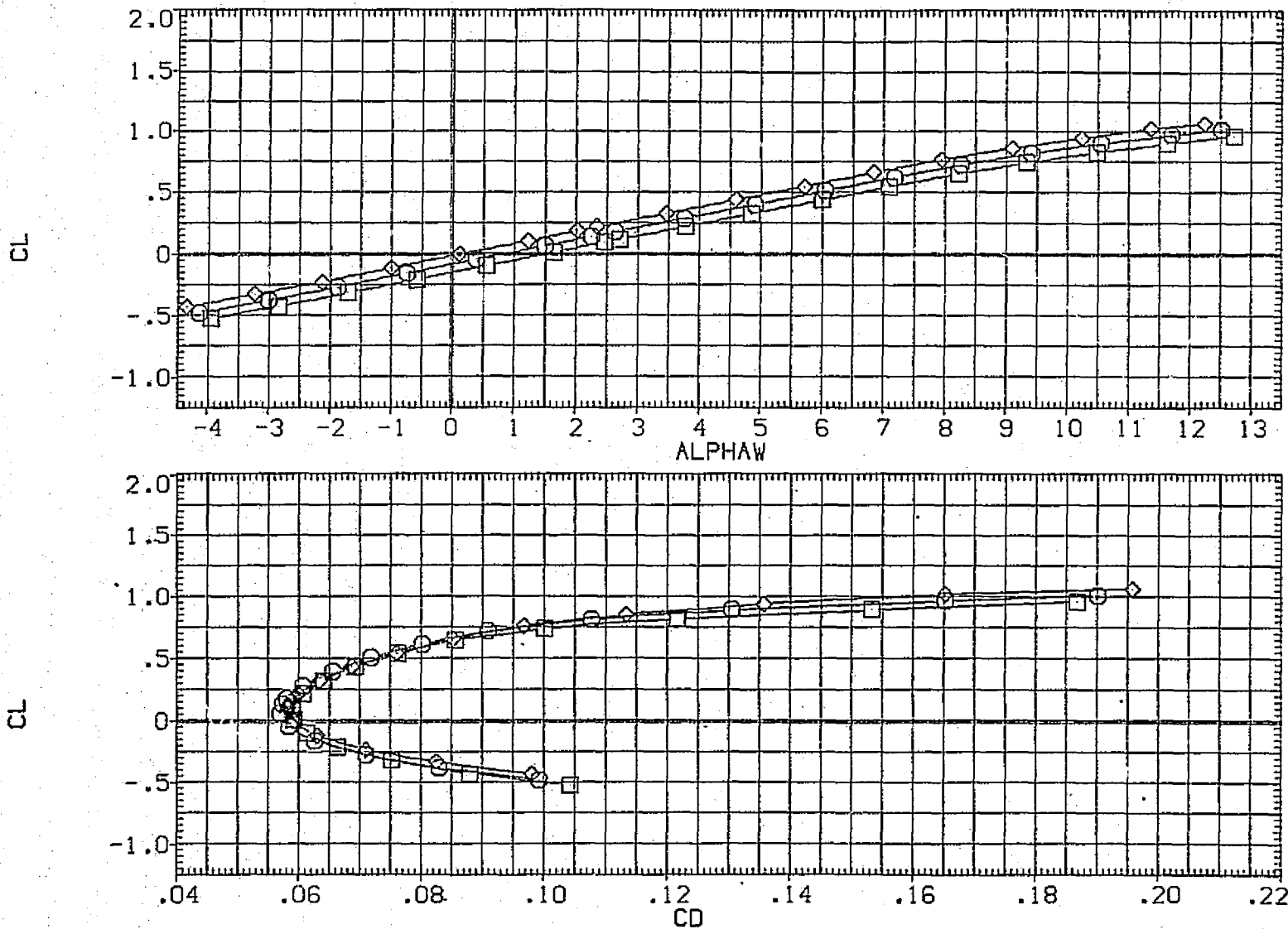


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP157)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000 SQ.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF	327.8000 IN.
(RGP156)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	9.167	10.033	BREF	2348.0000 IN.	
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

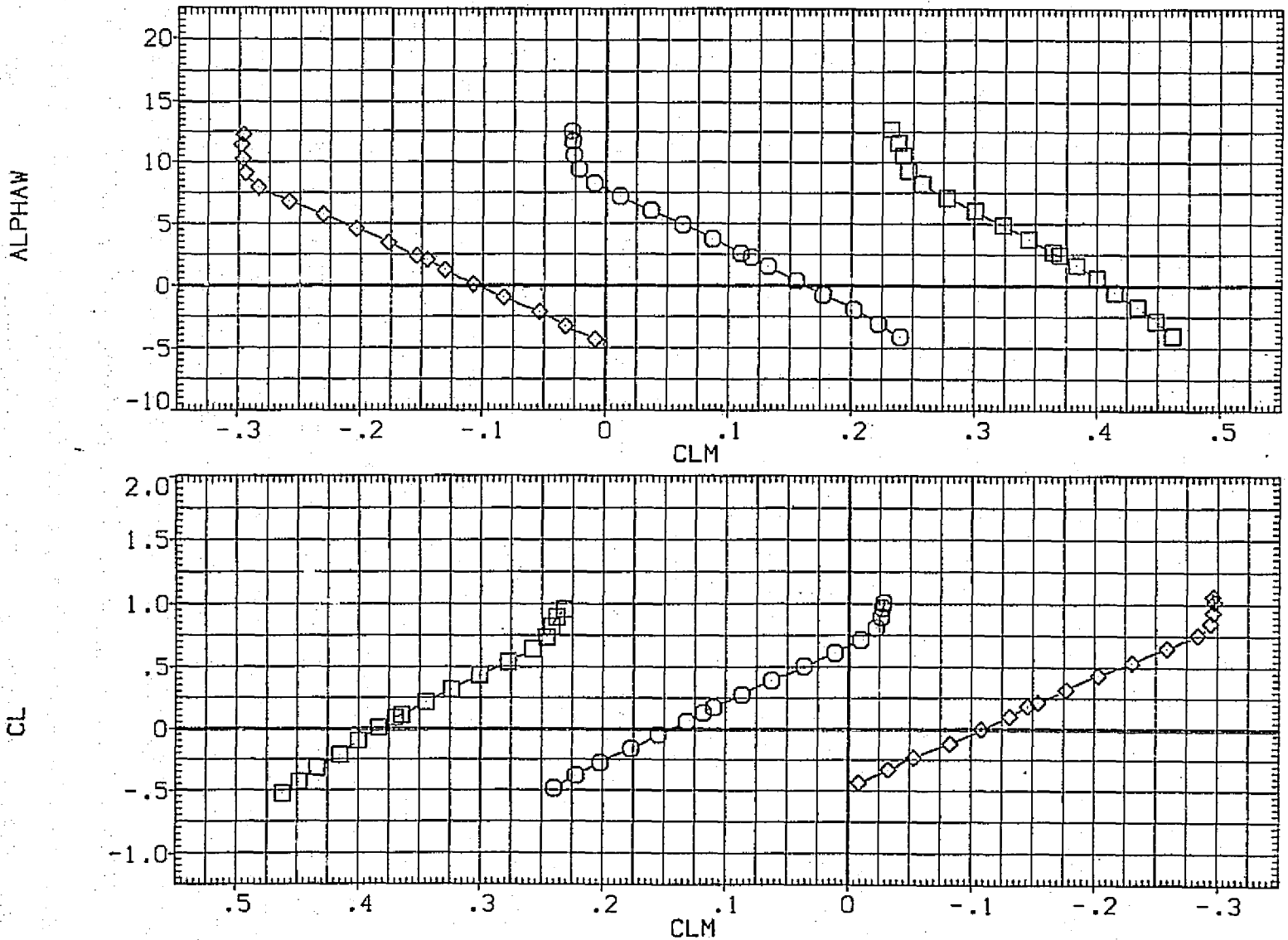


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6
(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
[RGP157]	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000	50.FT.
[RGP148]	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF	327.8000	IN.
[RGP156]	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	6.030	9.167	10.033	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

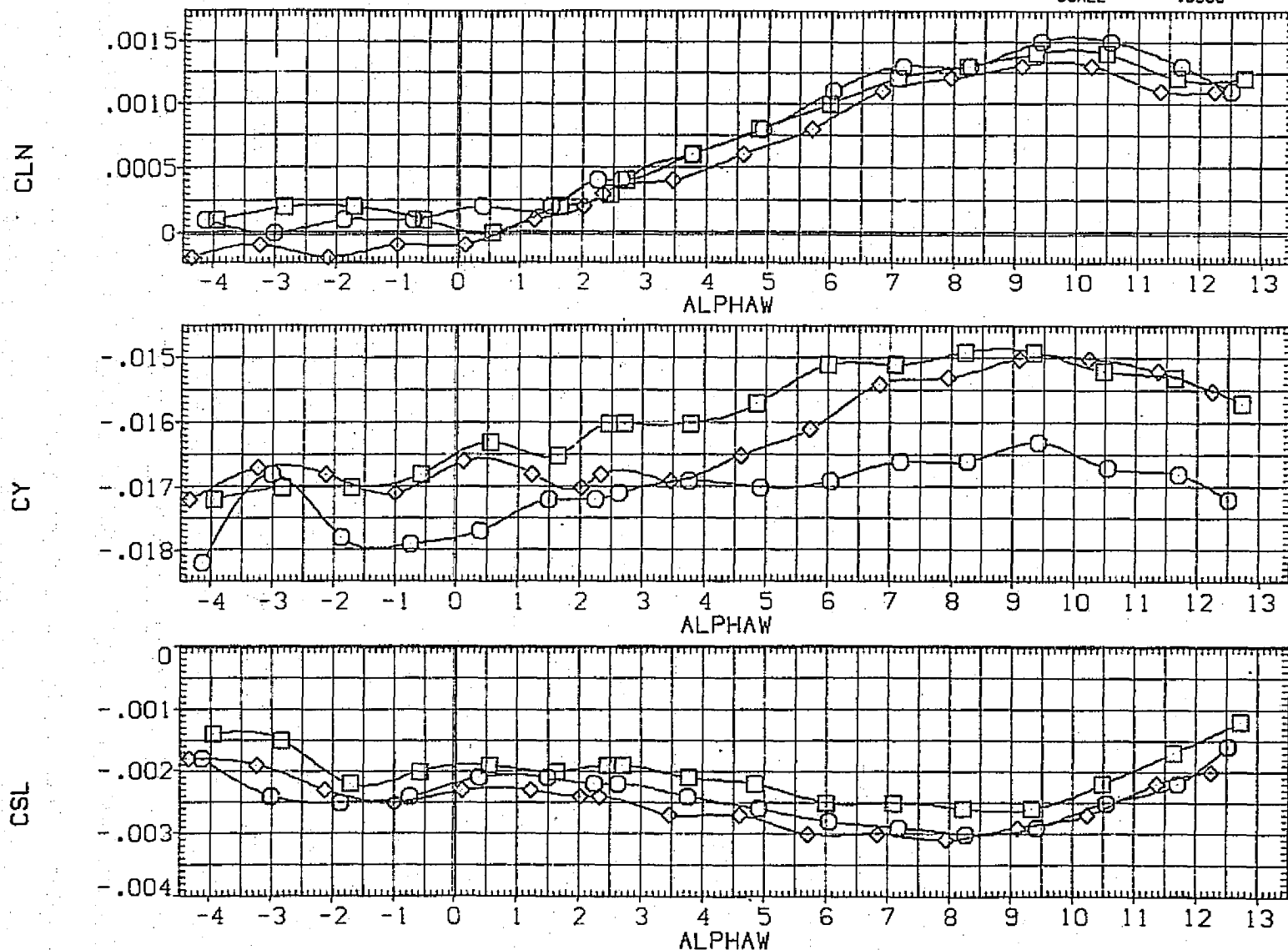


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP157)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000 50.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF	327.8000 IN.
(RGP156)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	6.030	9.167	10.033	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

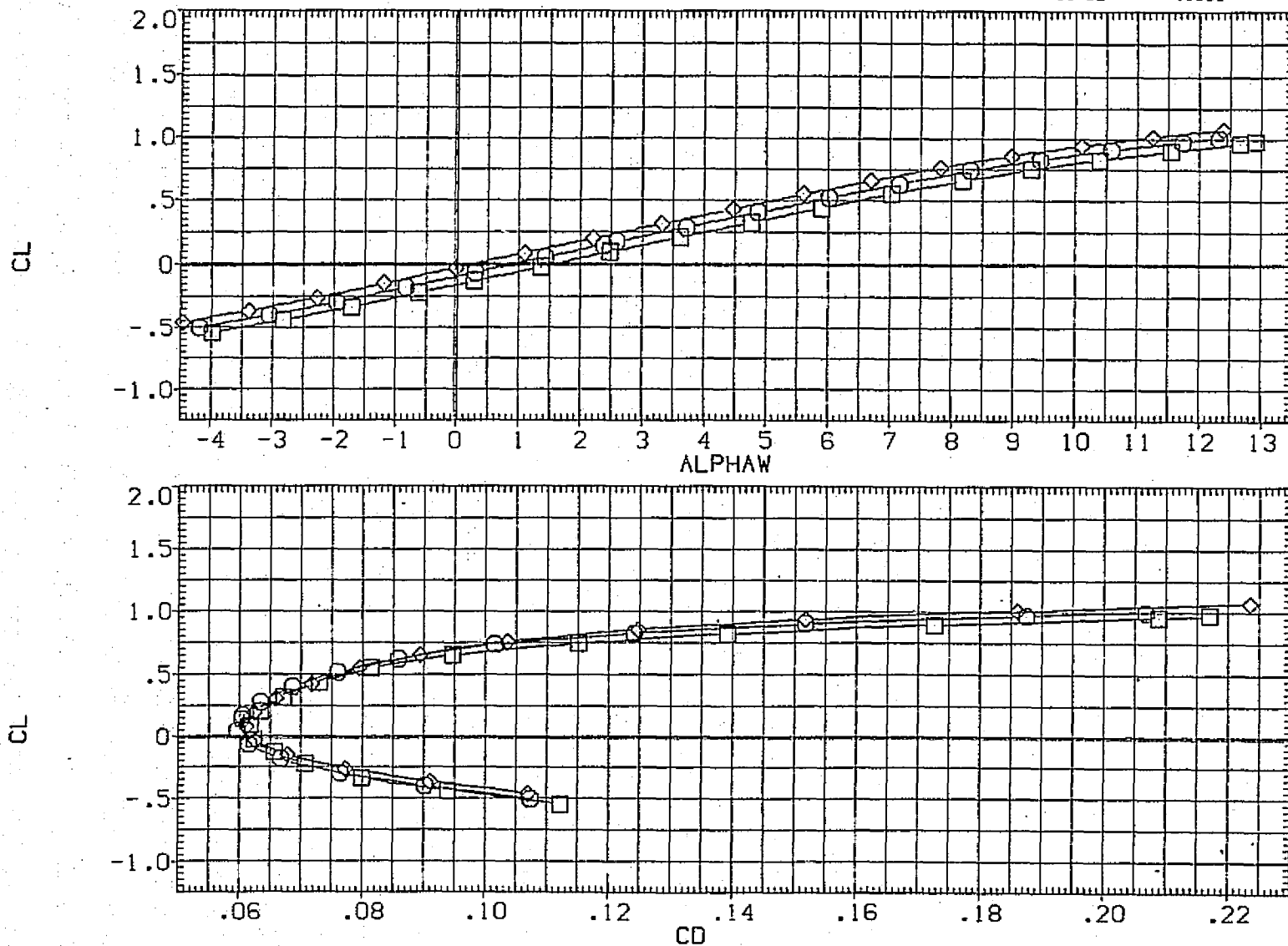


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION		
(RGP157)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000	50.FT.
(RGP148)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF	327.8000	IN.
(RGP156)	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	9.167	10.033	BREF	2348.0000	IN.	
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

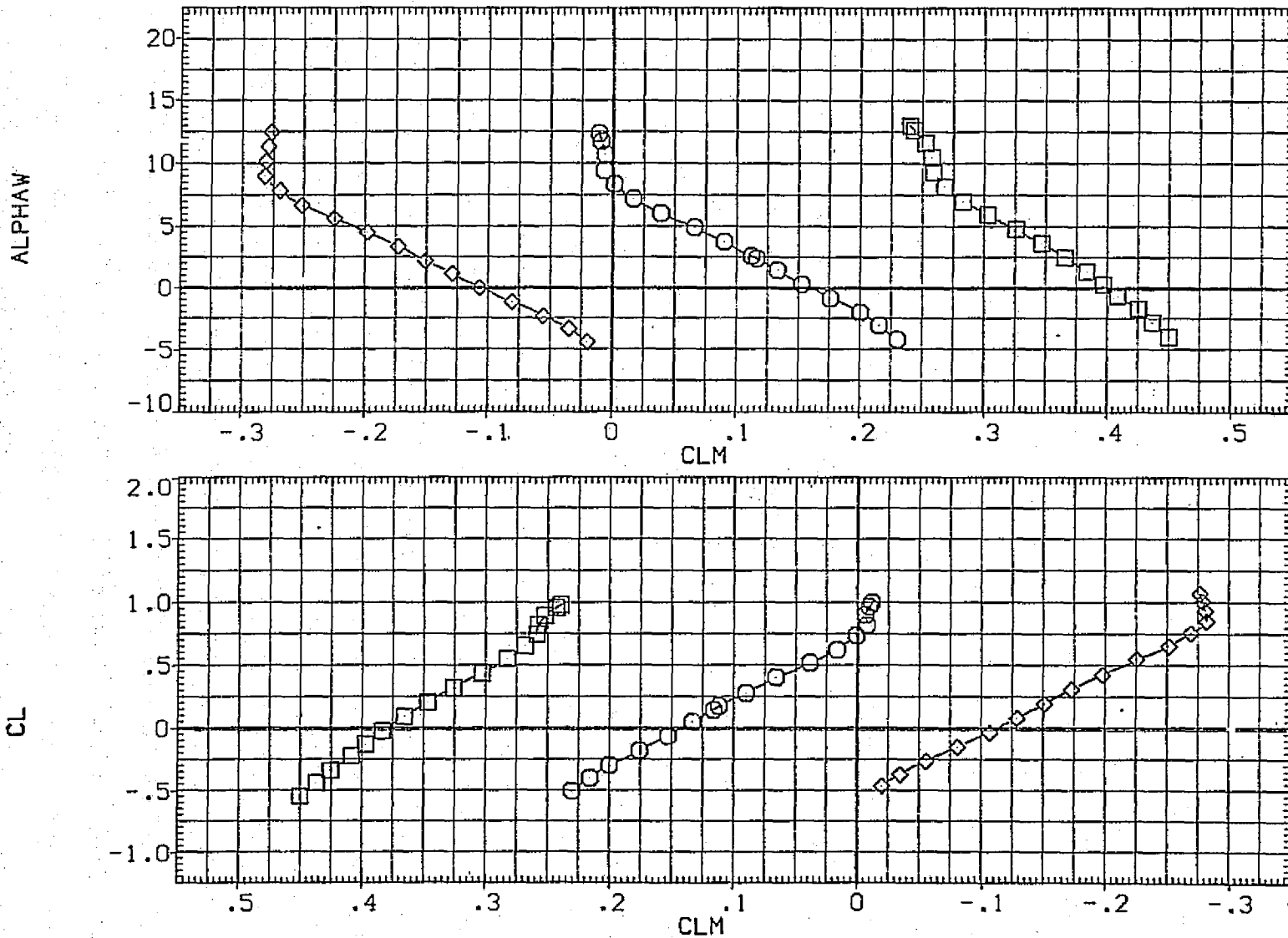


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6

(C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION	
(R6P157)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.140	6.030	-9.733	-9.900	SREF	5500.0000 SQ.FT.
(R6P148)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.150	6.030	.000	.000	LREF	327.8000 IN.
(R6P156)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.160	6.030	9.167	10.033	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

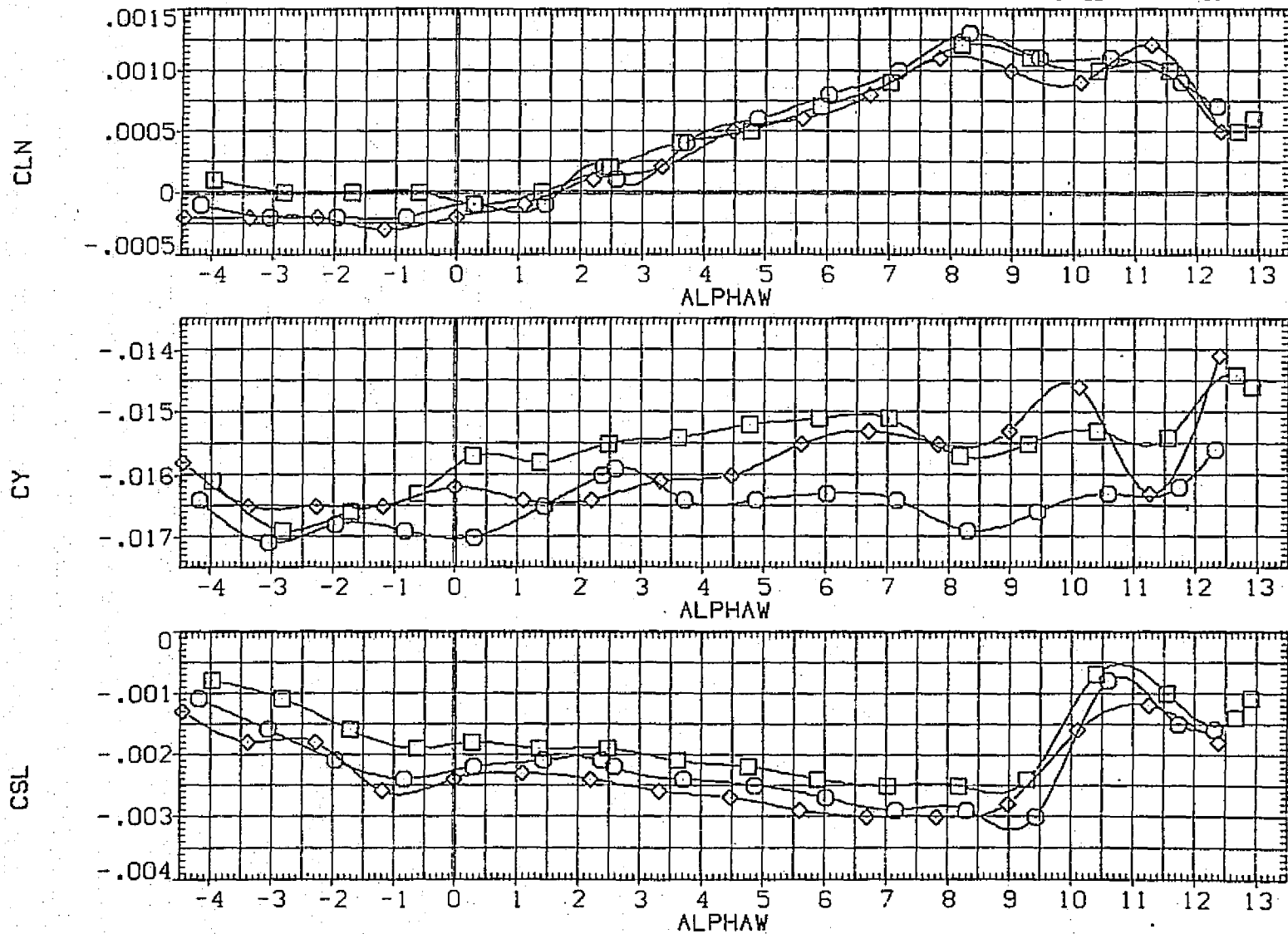


FIG. 62 ELEVATOR EFFECTIVENESS, ALT CLIMB, IORB 6
 (C)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 9500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	BREF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

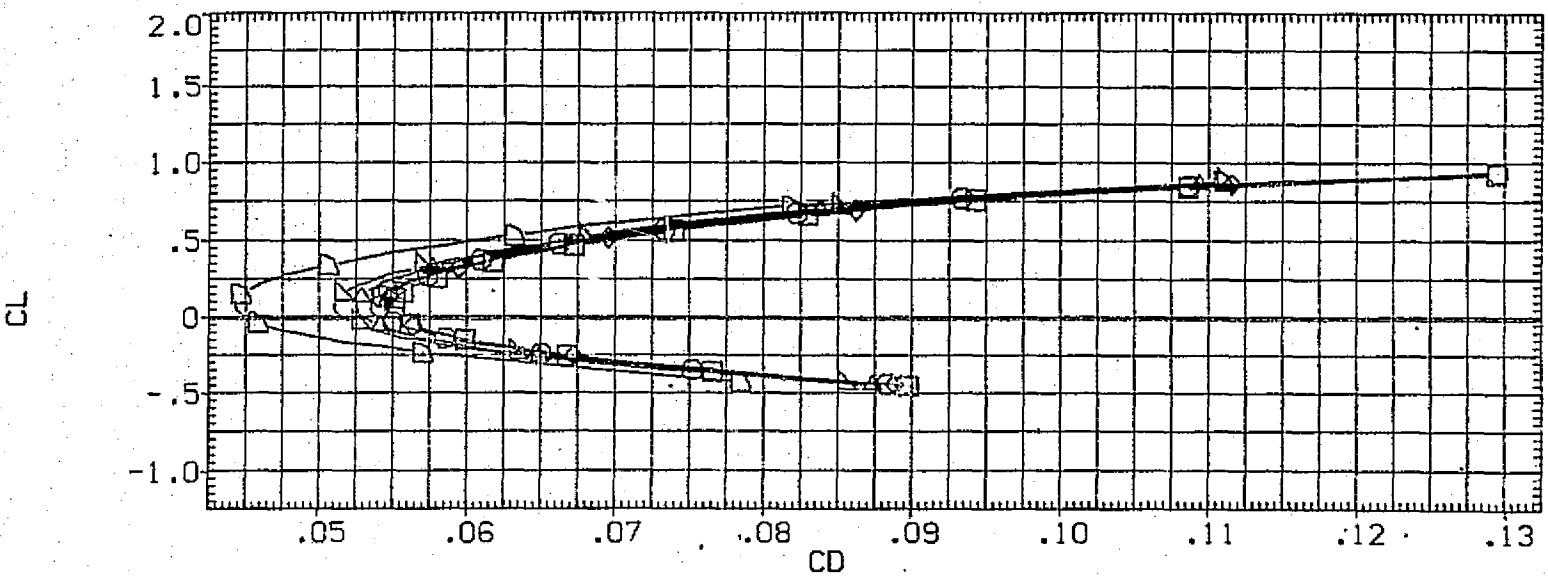
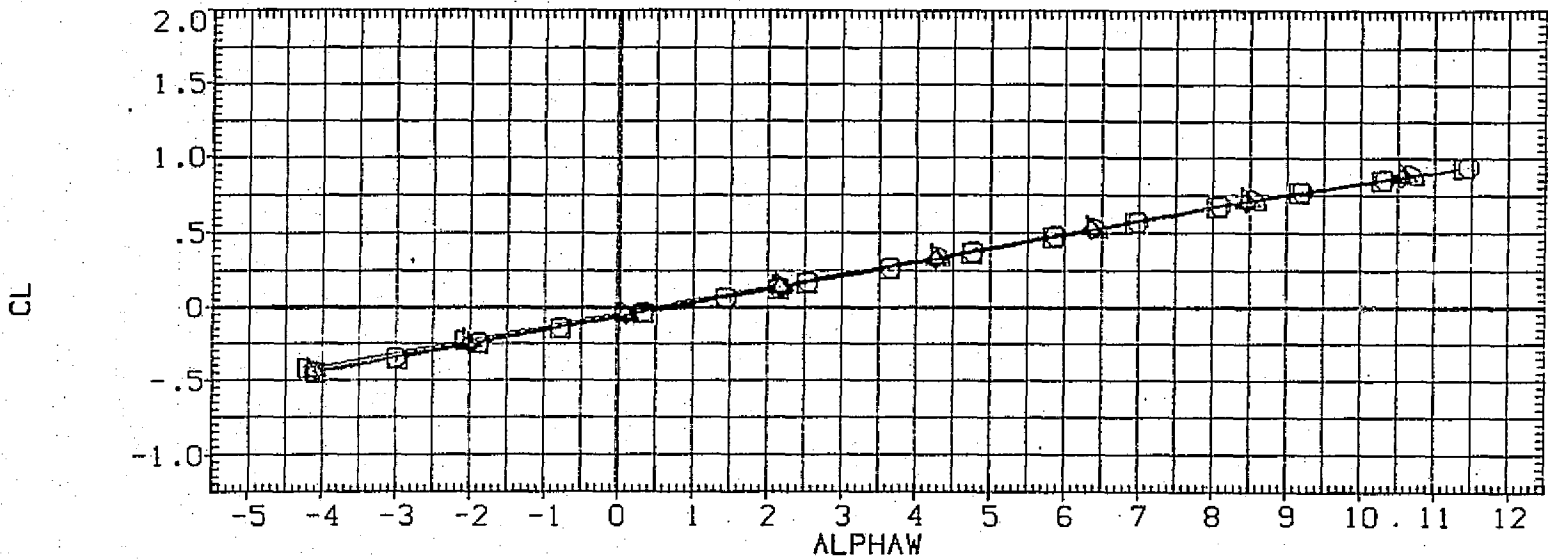


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	BREF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

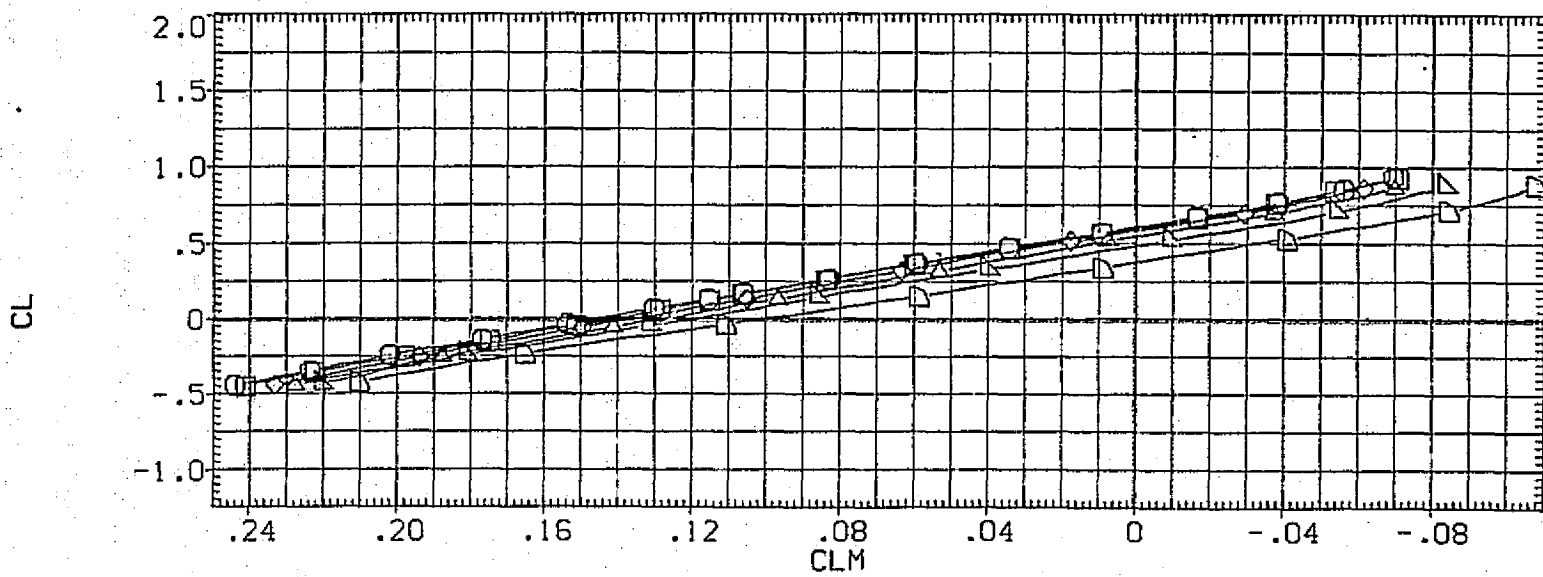
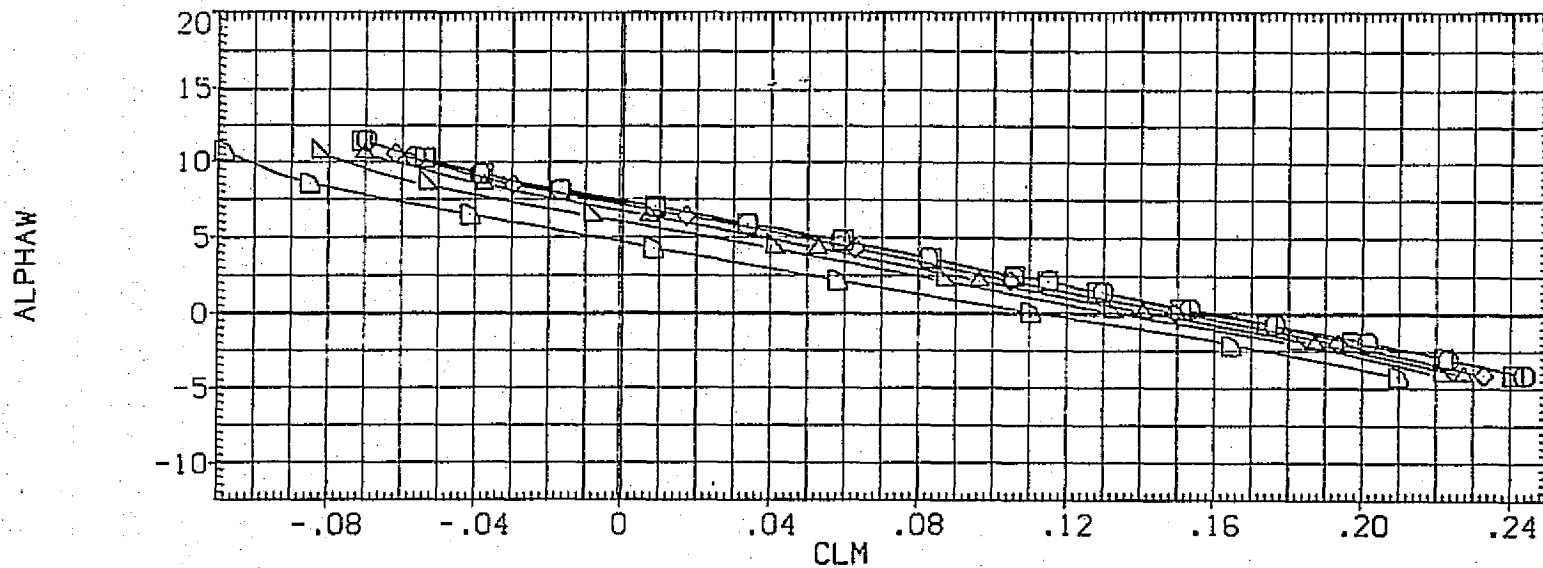


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	BREF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

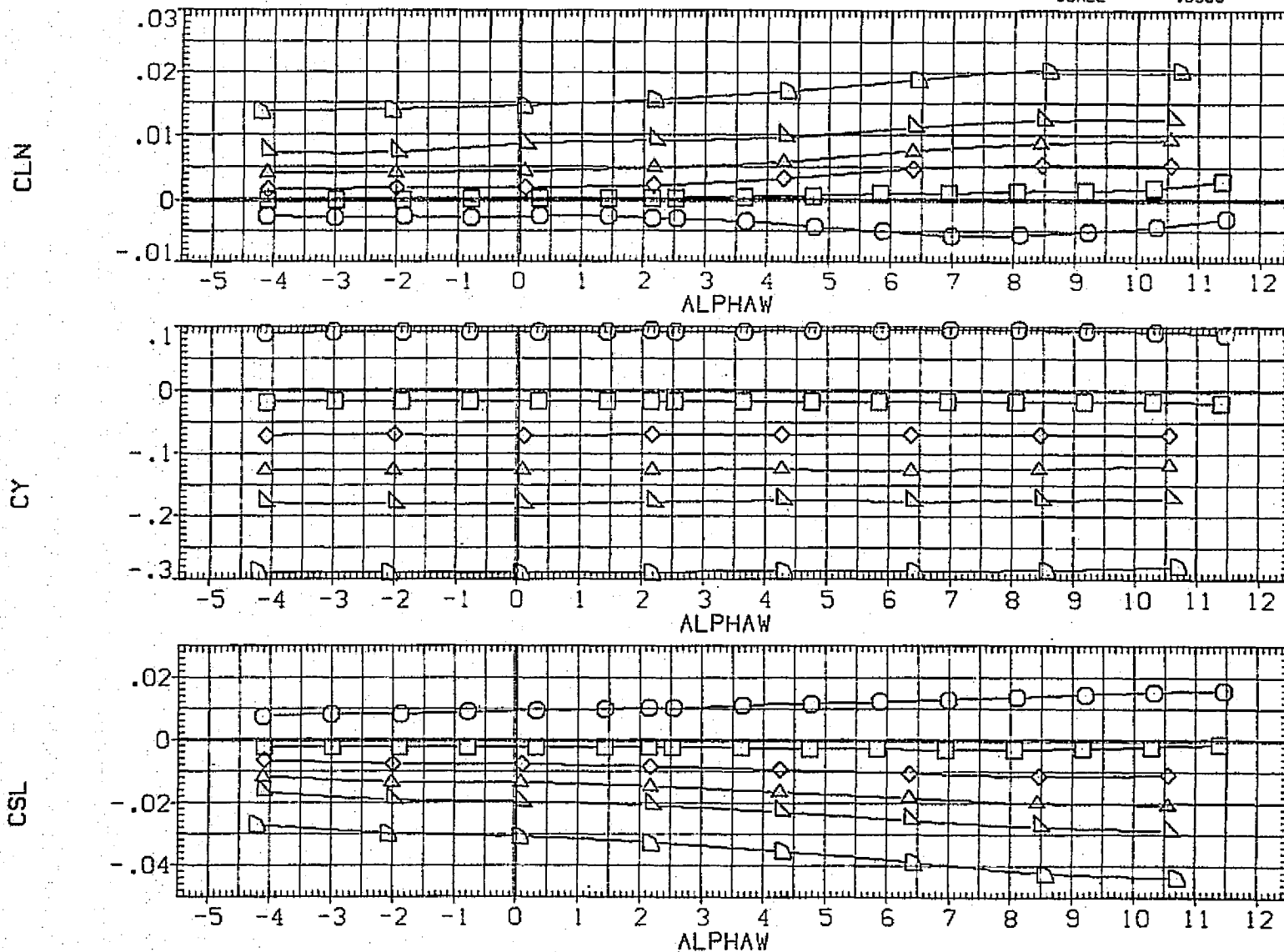


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	BREF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

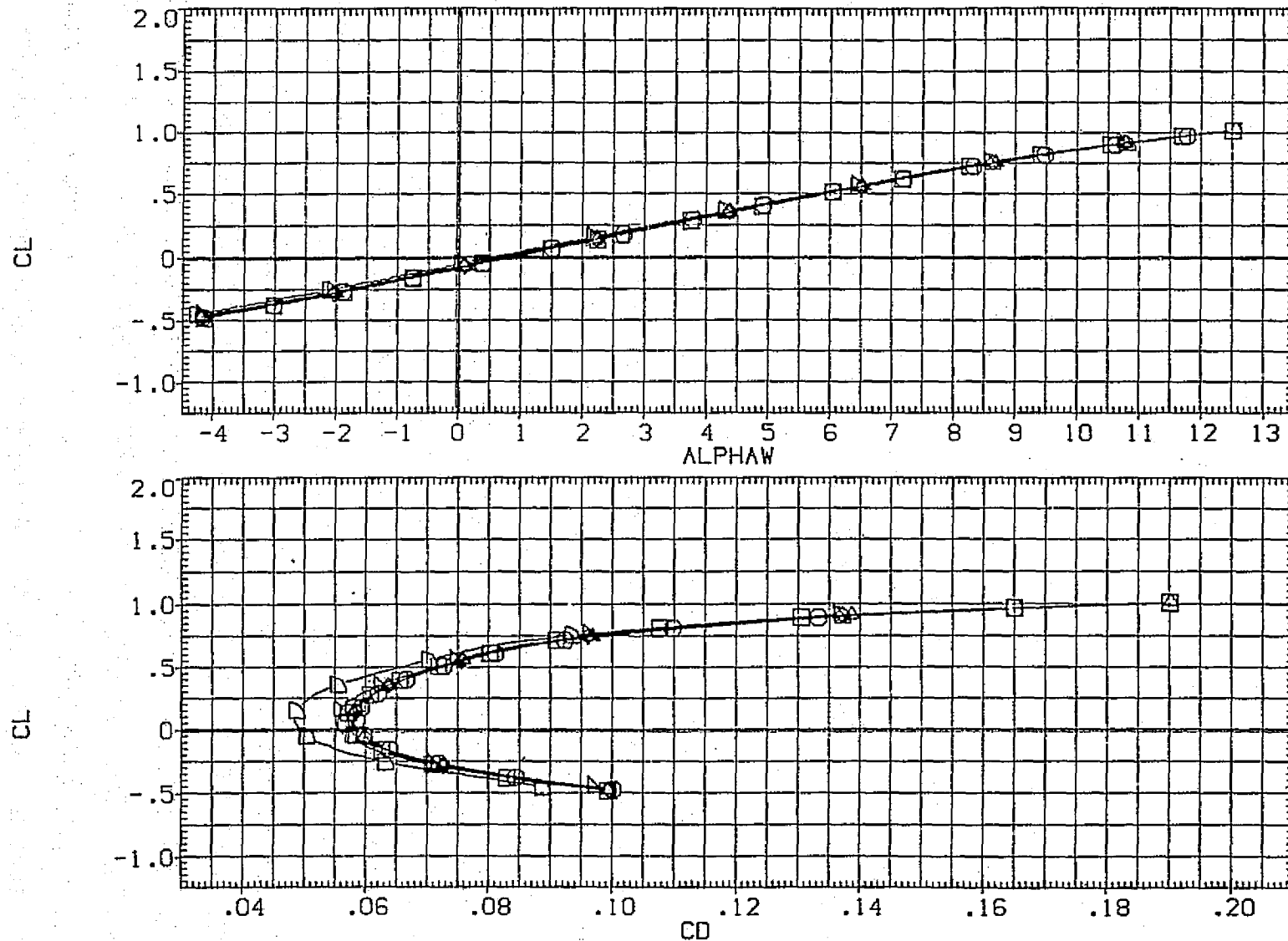


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-15	ELV-08	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	8REF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

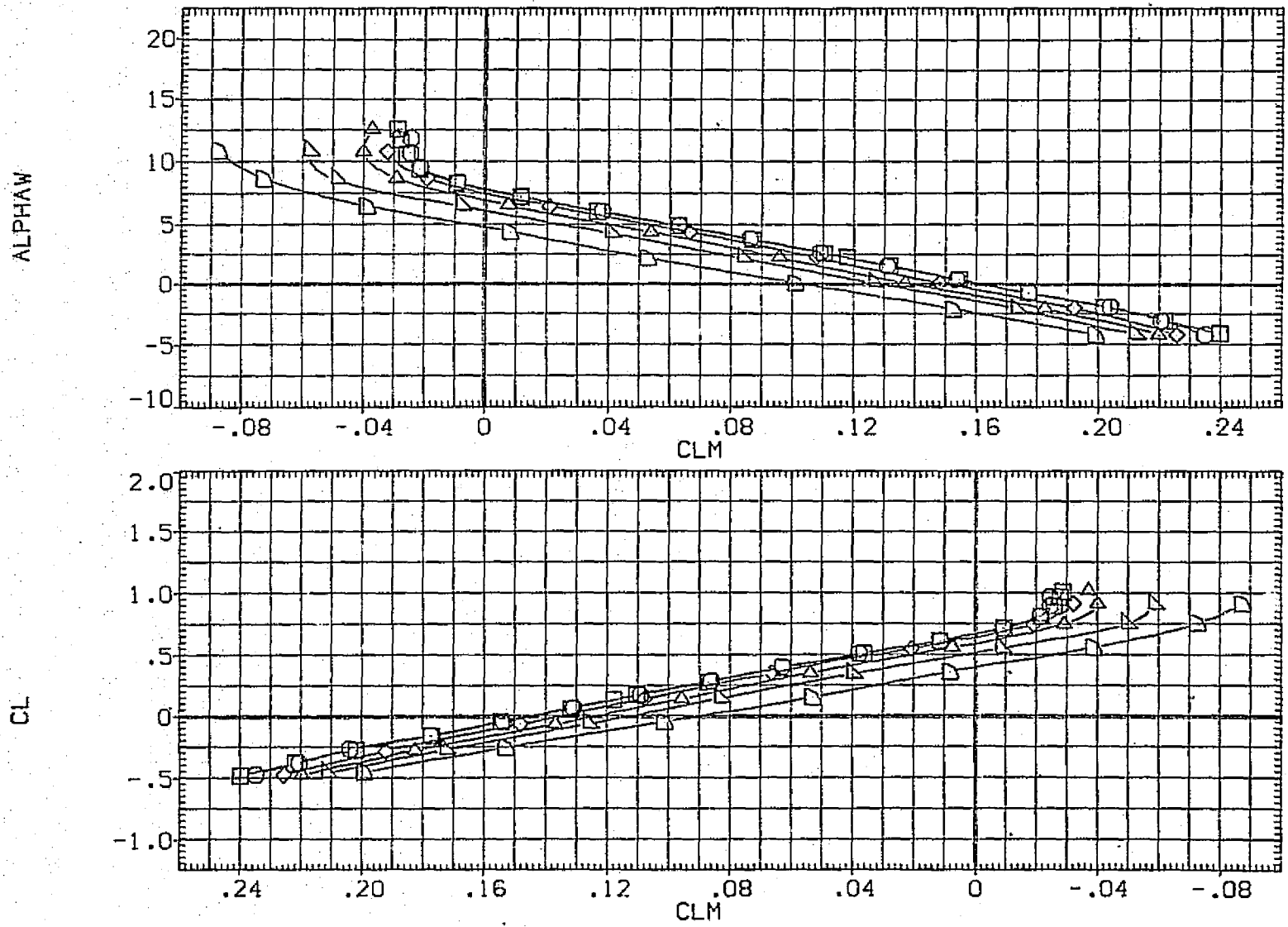


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP149)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	.000	.000	SREF 5500.0000 SQ.FT.
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	6.030	.000	.000	LREF 327.8000 IN.
(RGP150)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	2.000	6.030	.000	.000	BREF 2348.0000 IN.
(RGP151)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	.000	.000	XMRP 1339.9000 IN. XC
(RGP152)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	6.000	6.030	.000	.000	YMRP .0000 IN. YC
(RGP153)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

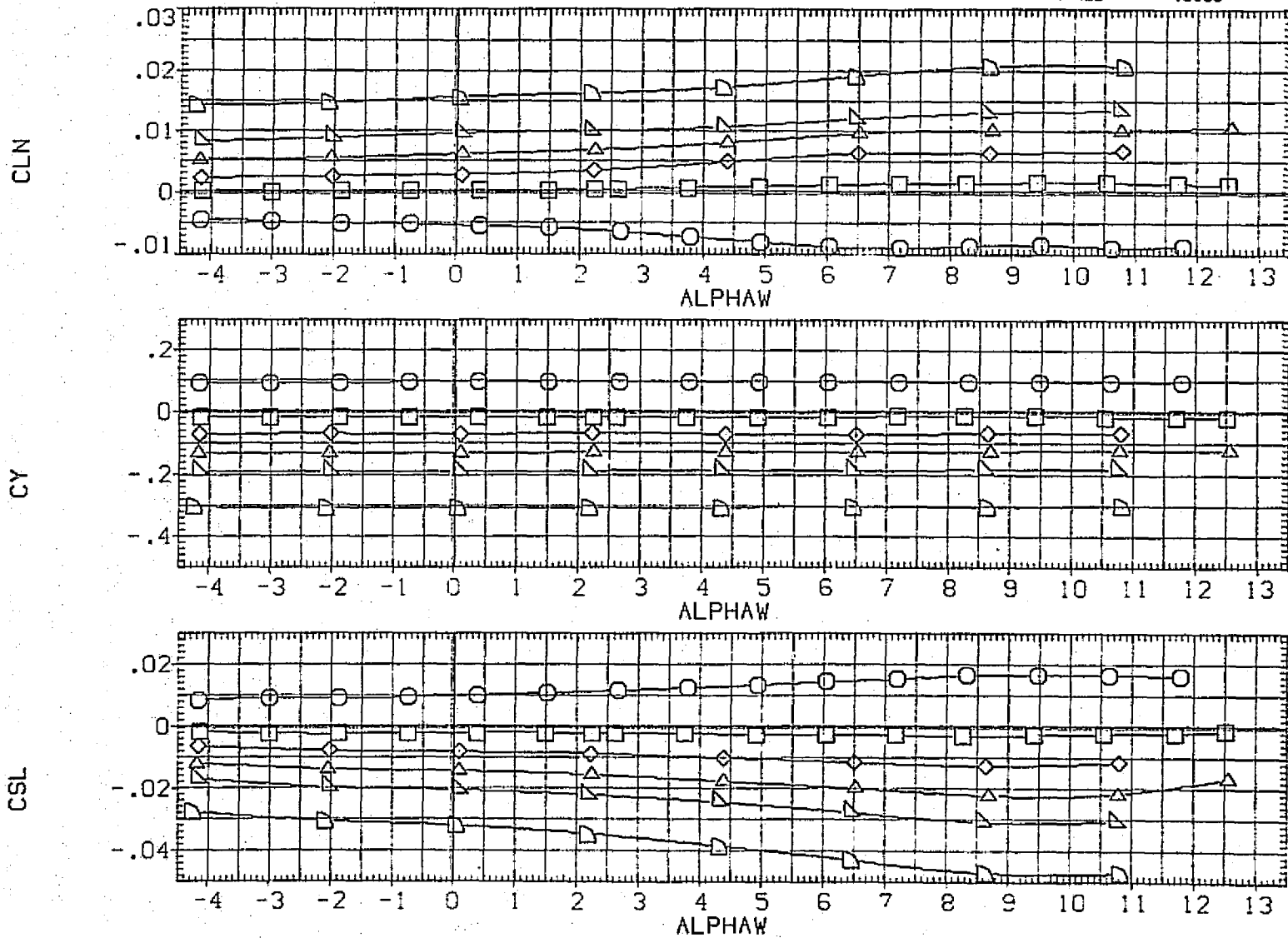


FIG. 63 LATERAL-DIRECTIONAL STABILITY, ALT CLIMB, IORB 6

(B)MACH = .60

DATA SET SYMBL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000	SQ.FT.
(RGP154)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGP155)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

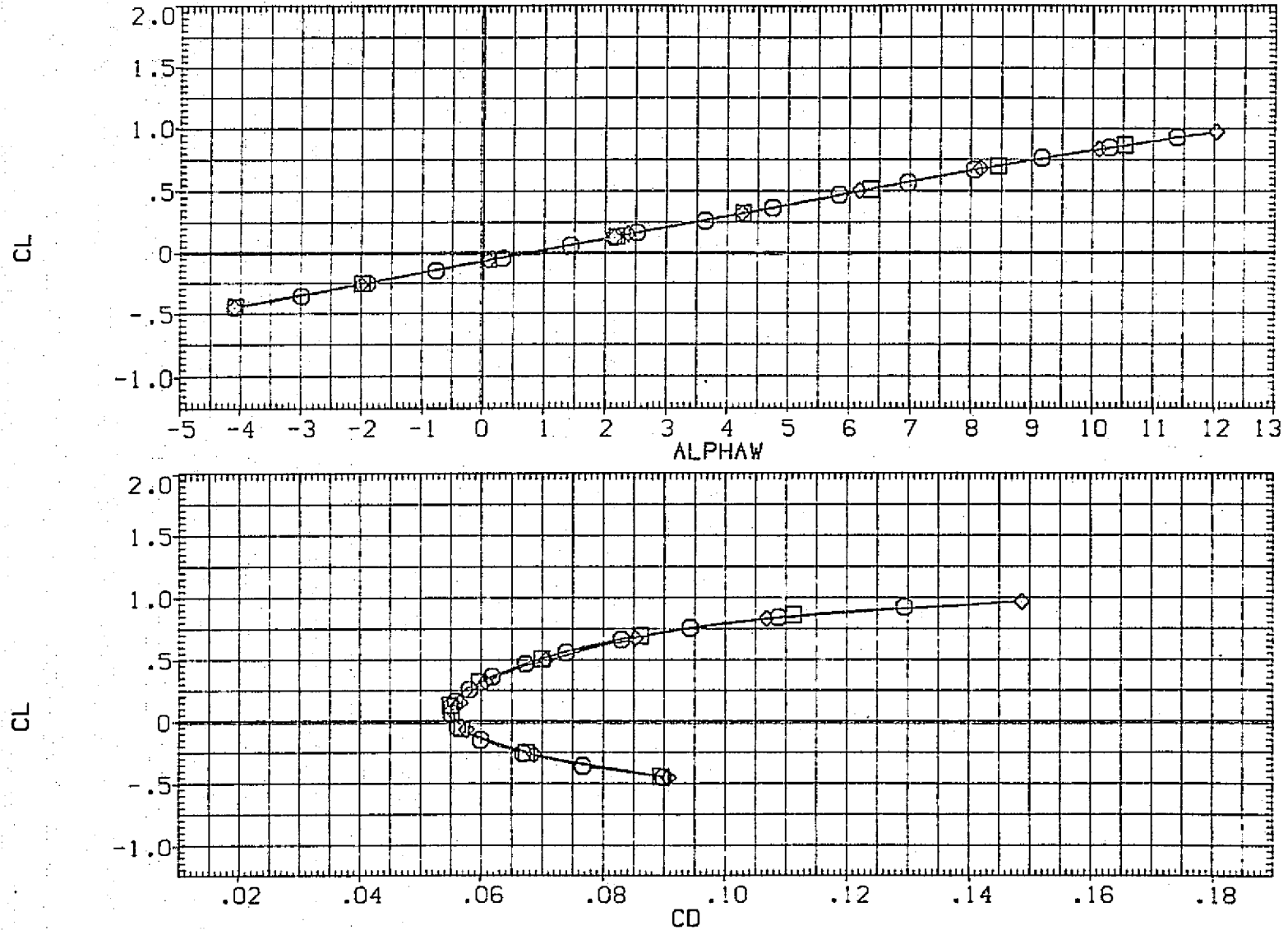


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP148)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGP154)	○ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP155)	◇ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	10.000	.000	.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0200 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

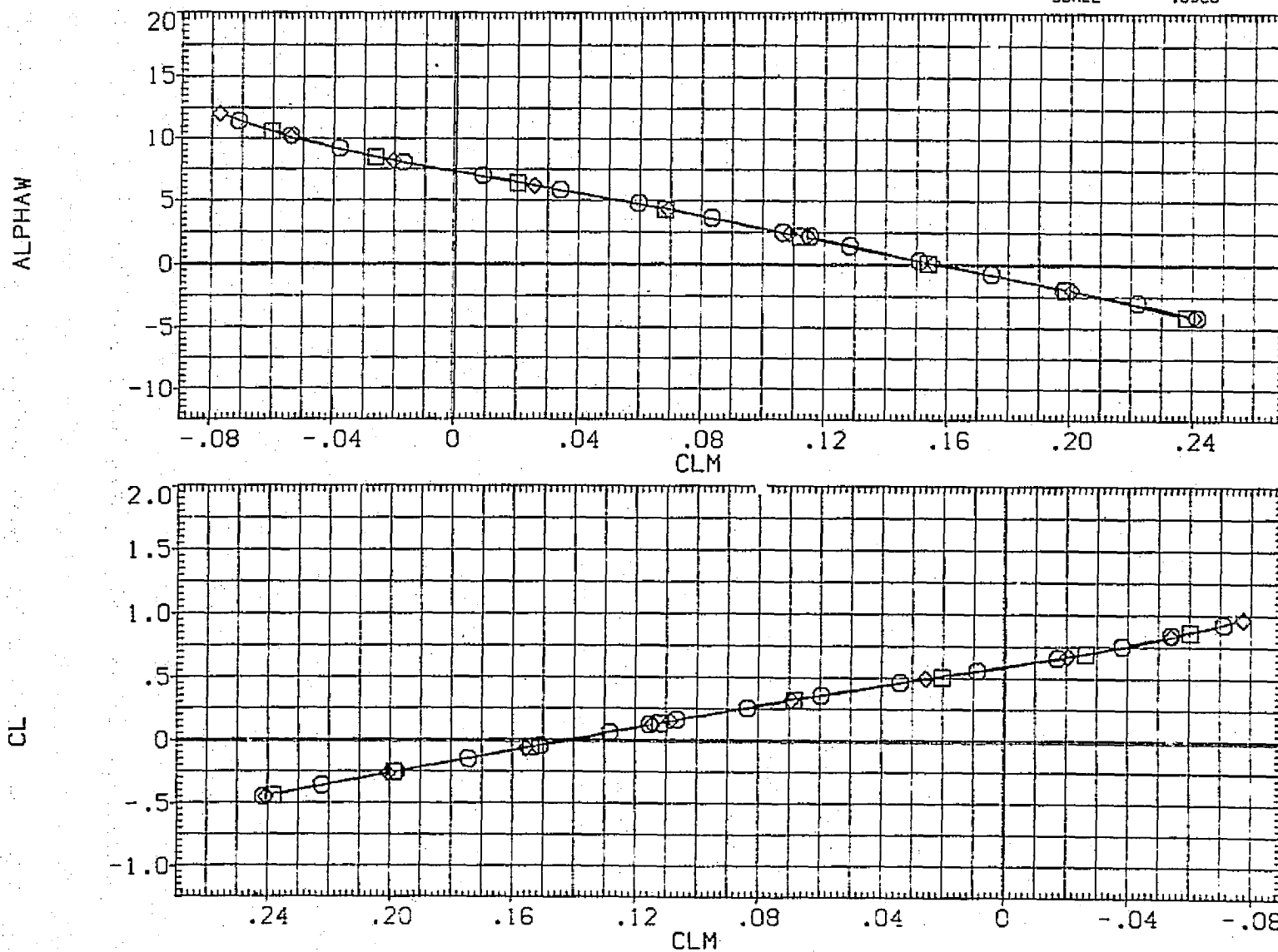


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, 10RB 6
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION	
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000 SC.FT.
(RGP154)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000 IN.
(RGP155)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

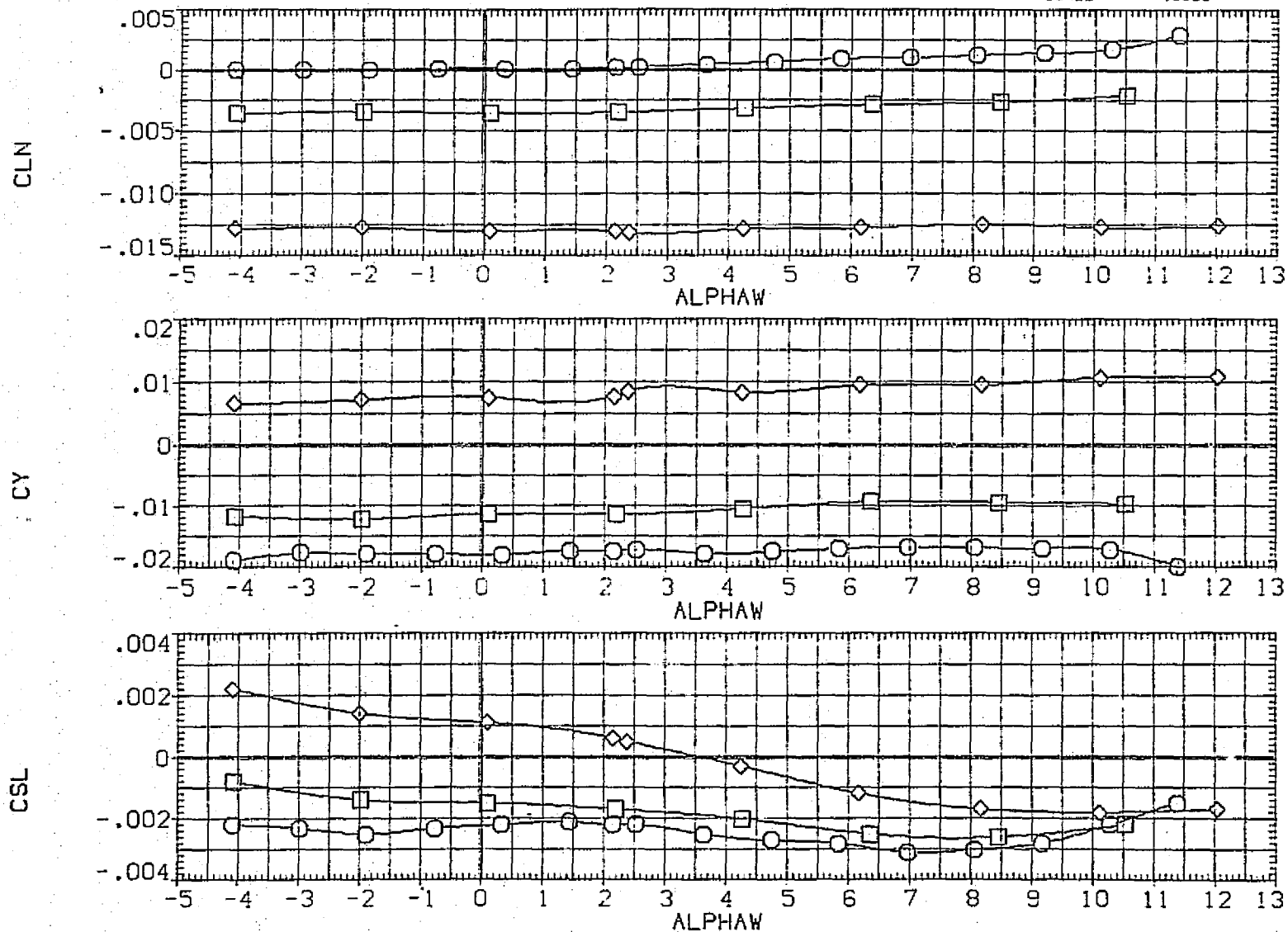


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-TB	ELV-OB	REFERENCE INFORMATION	
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000 SO.FT.
(RGP154)	DATA NOT AVAILABLE	3.000	3.000	.000	.000	LREF	327.8000 IN.
(RGP155)	DATA NOT AVAILABLE	10.000	10.000	.000	.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

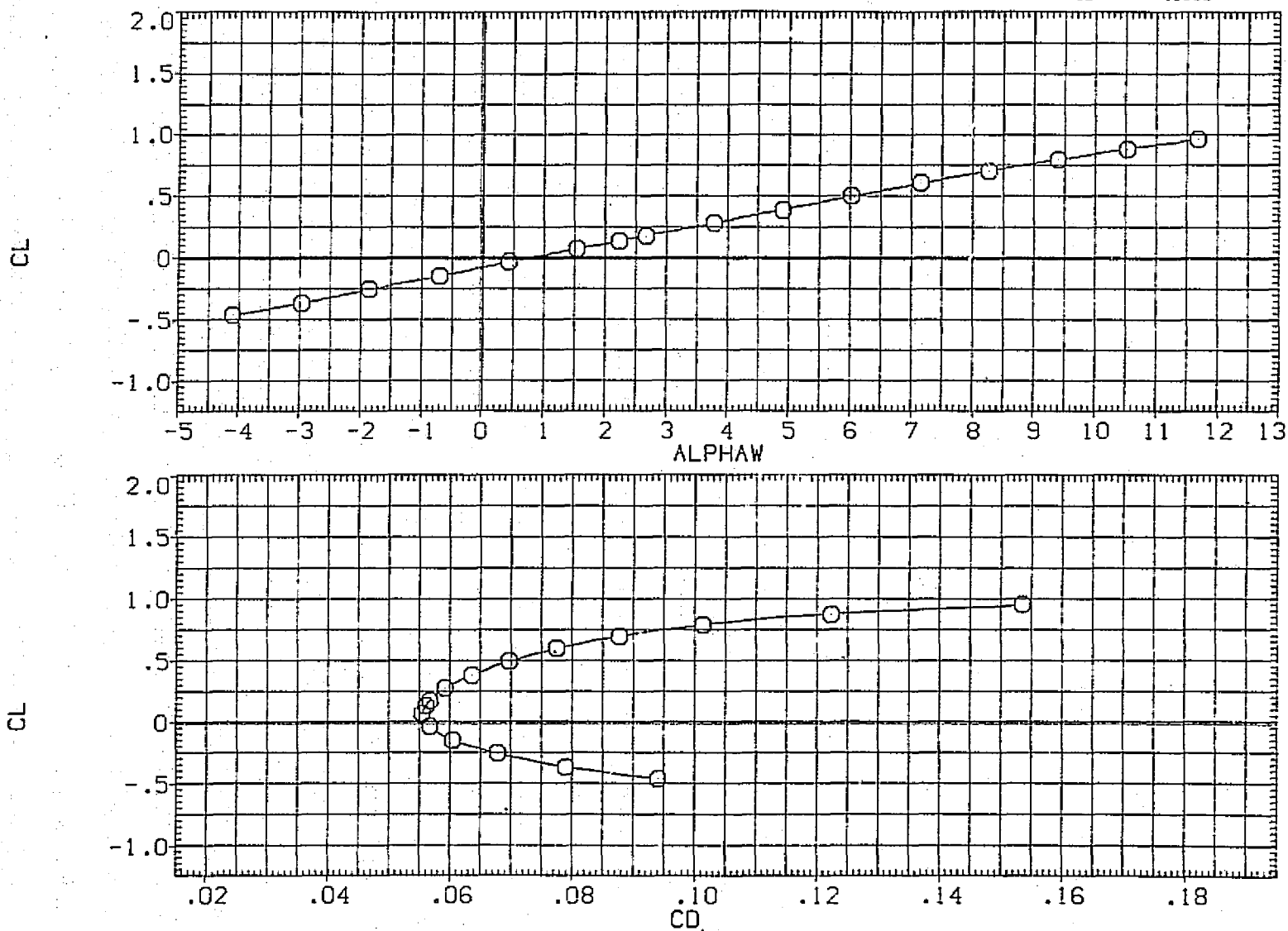


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP148)	□
(RGP154)	○
(RGP155)	◇

CAS K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28
 DATA NOT AVAILABLE
 DATA NOT AVAILABLE

RUD-U	RUD-L	ELV-18	ELV-08	REFERENCE INFORMATION
.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
3.000	3.000	.000	.000	LREF 327.8000 IN.
10.000	10.000	.000	.000	BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

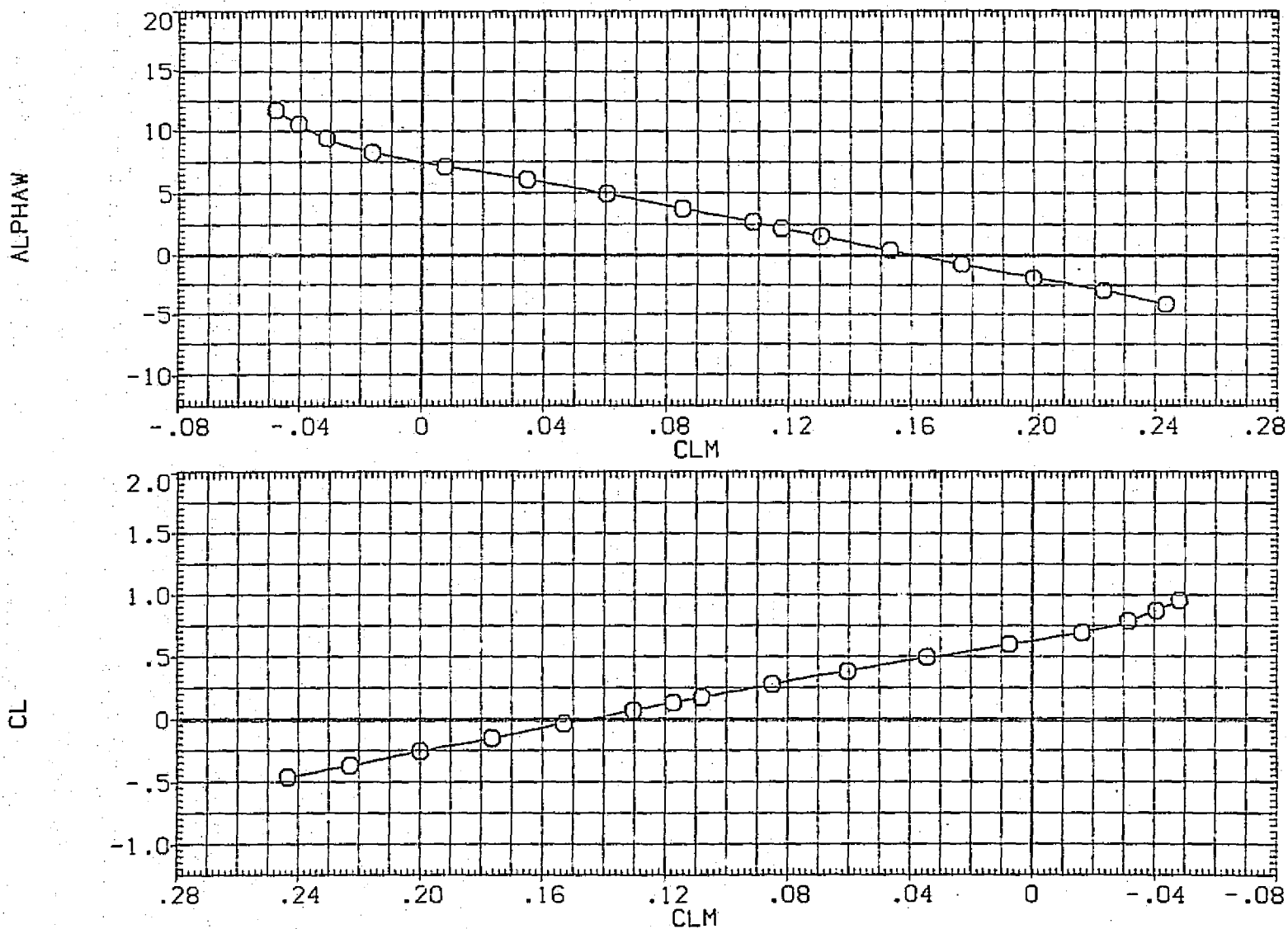


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6
 (B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP148) ○ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28
 (RGP154) □ DATA NOT AVAILABLE
 (RGP155) ◇ DATA NOT AVAILABLE

RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION		
.000	.000	.000	.000	SREF	5500.0000	SO.FT.
3.000	3.000	.000	.000	LREF	327.8000	IN.
10.000	10.000	.000	.000	BREF	2348.0000	IN.
				XMRP	1339.9000	IN. XC
				YMRP	.0000	IN. YC
				ZMRP	190.7700	IN. ZC
				SCALE	.0300	

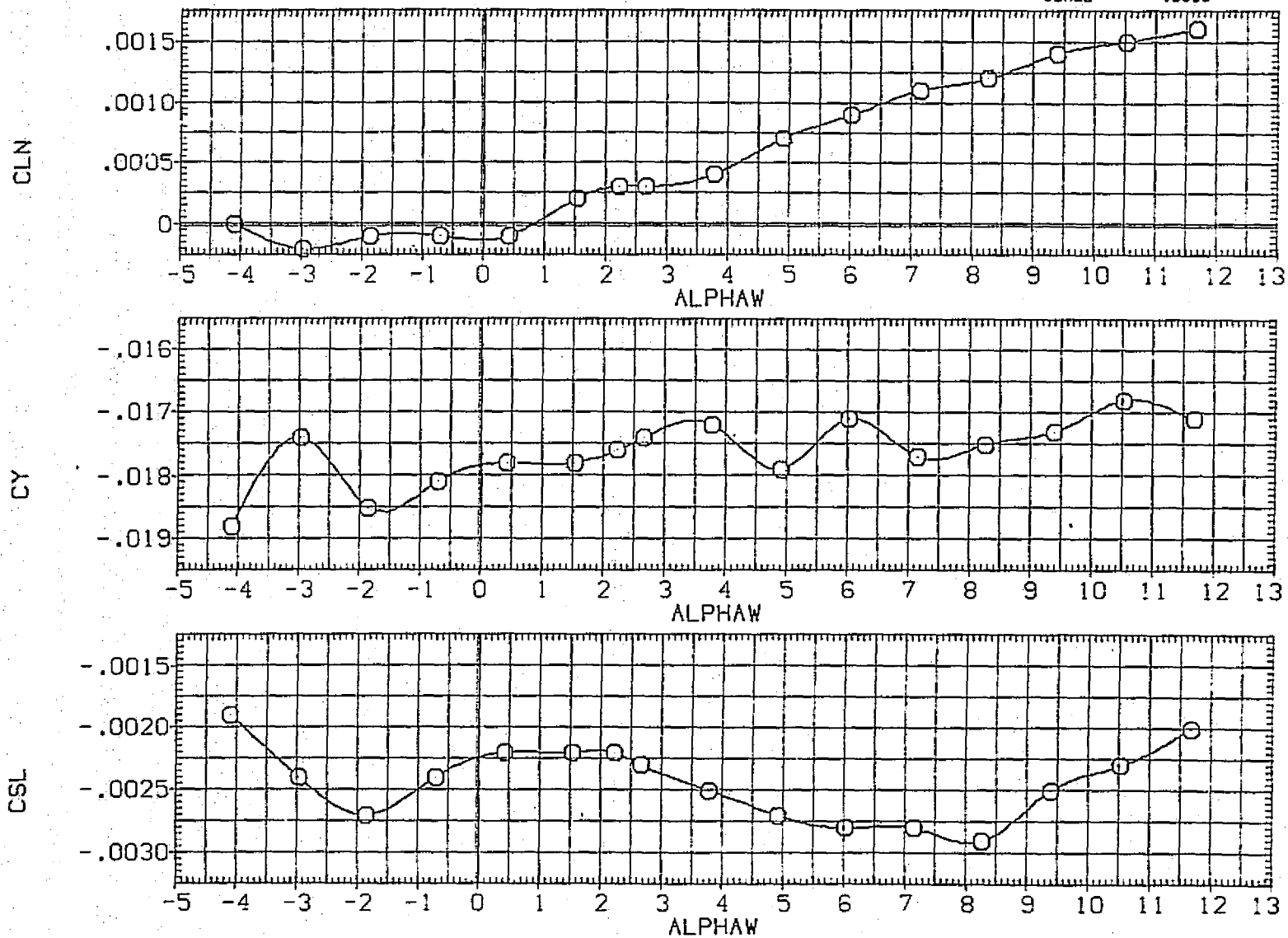


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
(RGP154)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	3.000	3.000	.000	.000	LREF	327.8000 IN.
(RGP155)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	10.000	.000	.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

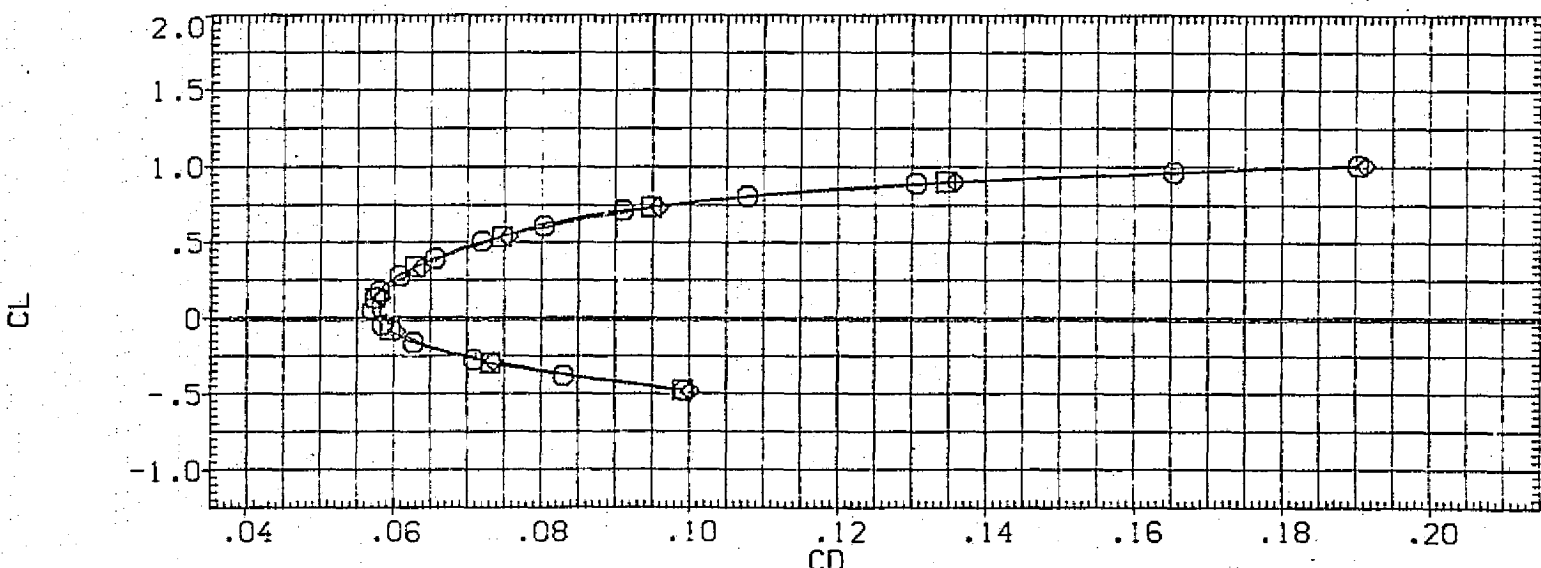
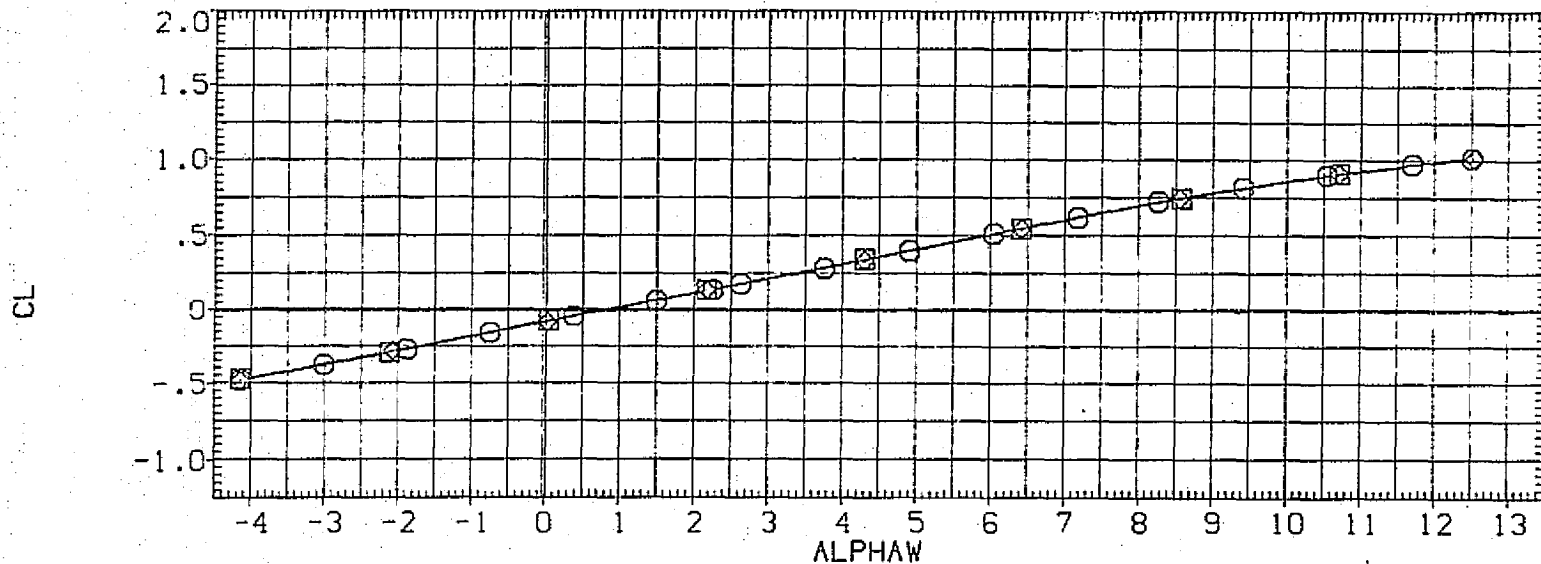


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGP154)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP155)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28	10.000	10.000	.000	.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

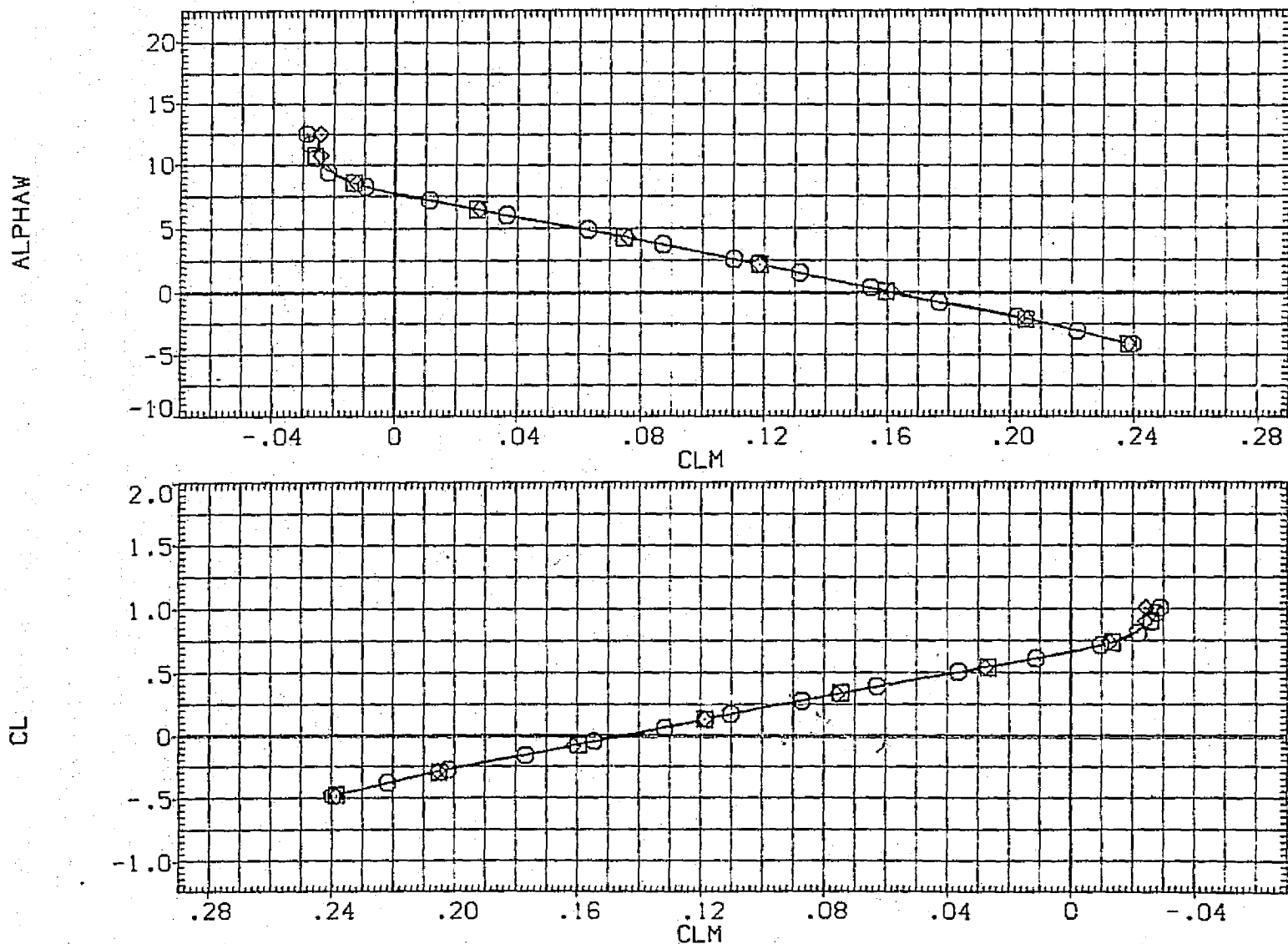


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, 10RB 6

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-18	ELV-08	REFERENCE INFORMATION
(RGP148)	CAS K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	.000	.000	.000	.000	SREF 5500.0000 SQ. FT.
(RGP154)	CAS K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP155)	CAS K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28	10.000	10.000	.000	.000	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

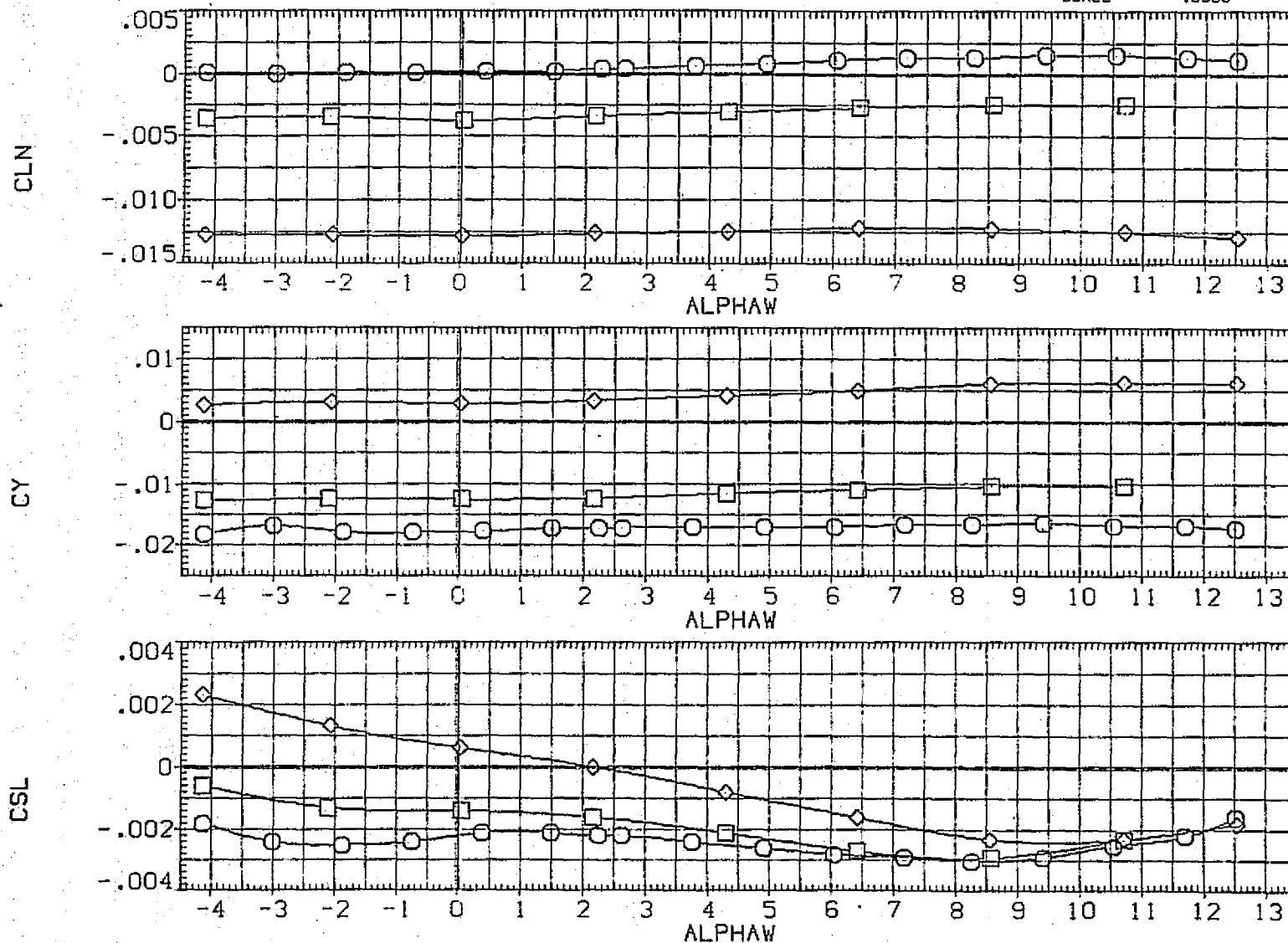


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP148)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RBFBN24/28
(RGP154)	□ DATA NOT AVAILABLE
(RGP155)	◇ DATA NOT AVAILABLE

RUD-U	RUD-L	ELV-18	ELV-08	REFERENCE INFORMATION	
.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
3.000	3.000	.000	.000	LREF	327.8000 IN.
10.000	10.000	.000	.000	BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

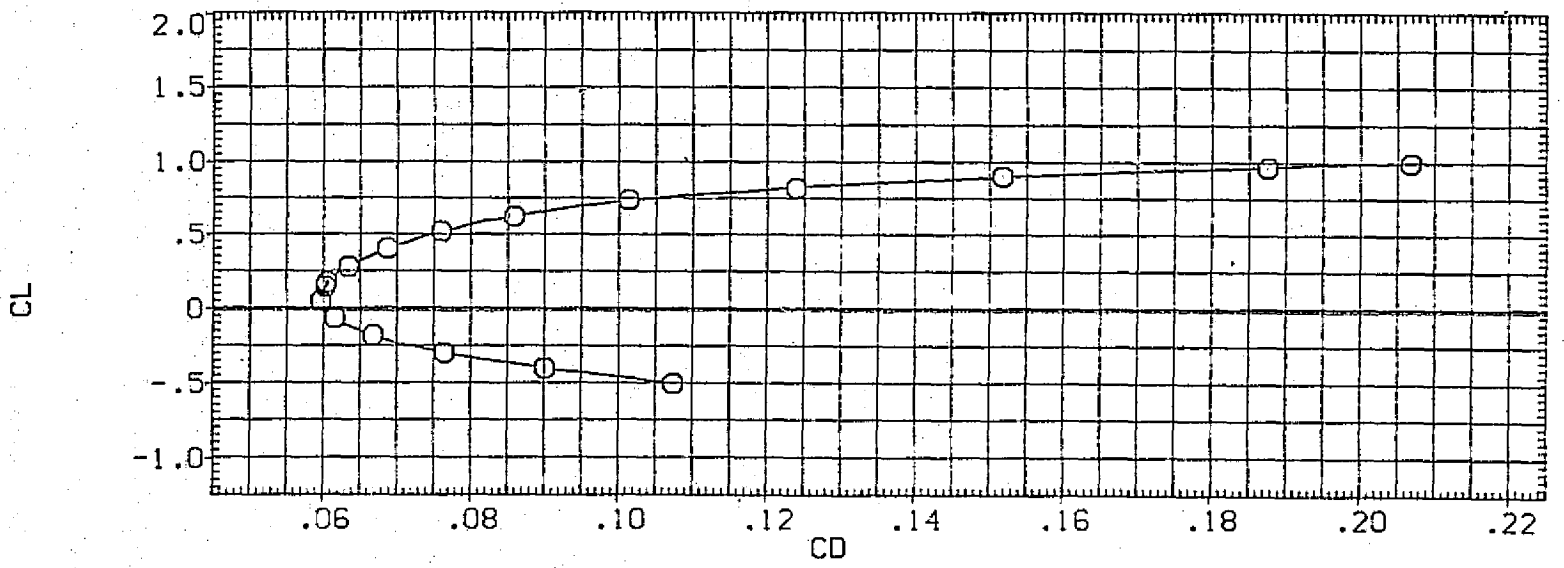
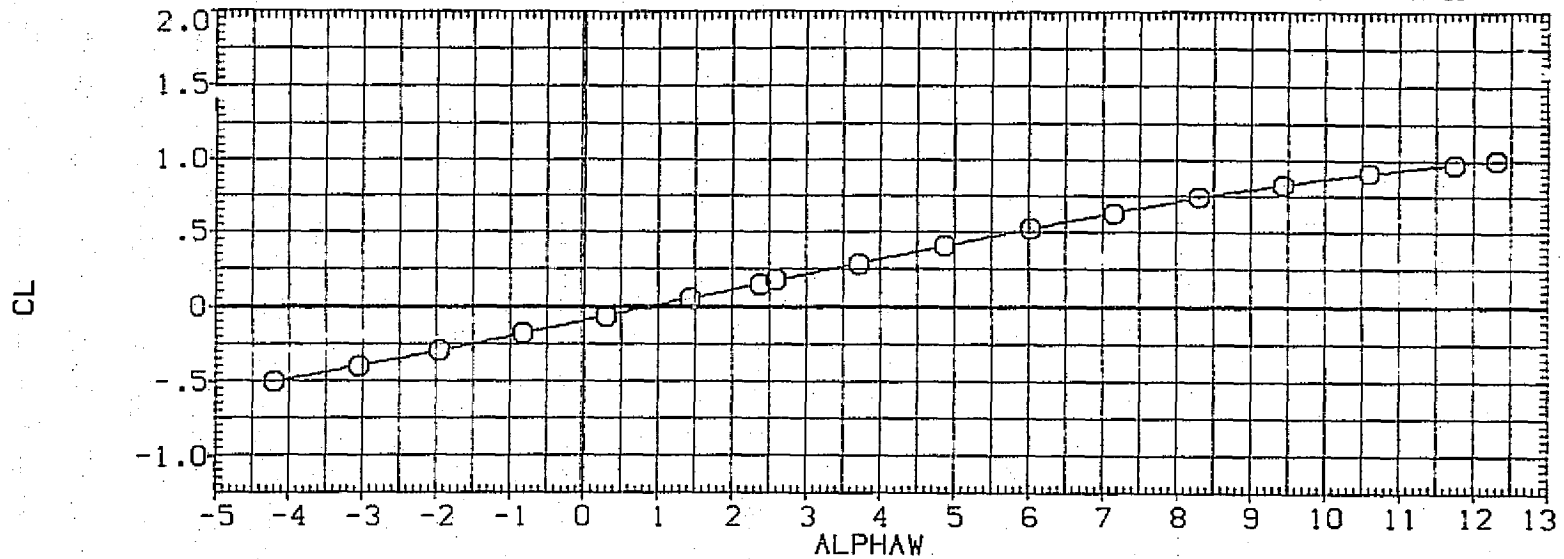


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6
 (CD)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-19	ELV-08	REFERENCE INFORMATION	
(RGP148)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10R6F8N24/28	.000	.000	.000	.000	SREF	5500.0000 SO.FT.
(R.P154)	DATA NOT AVAILABLE	3.000	3.000	.000	.000	LREF	327.8000 IN.
(RGP155)	DATA NOT AVAILABLE	10.000	10.000	.000	.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

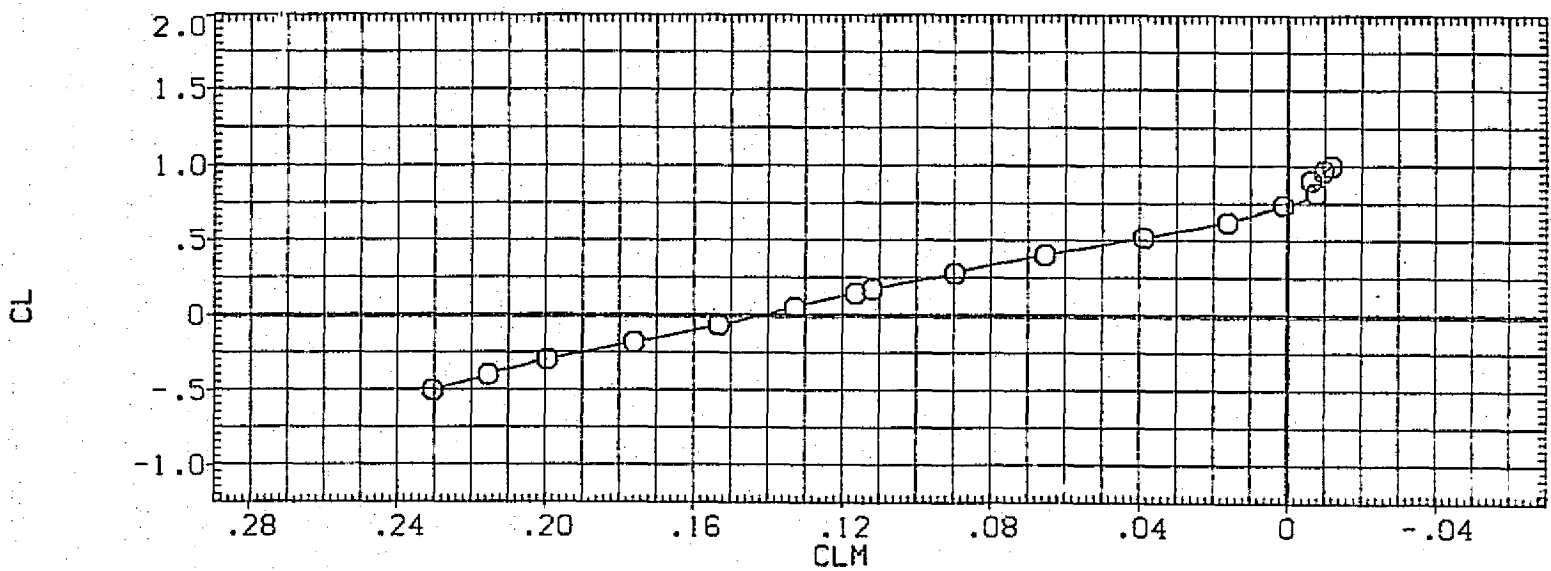
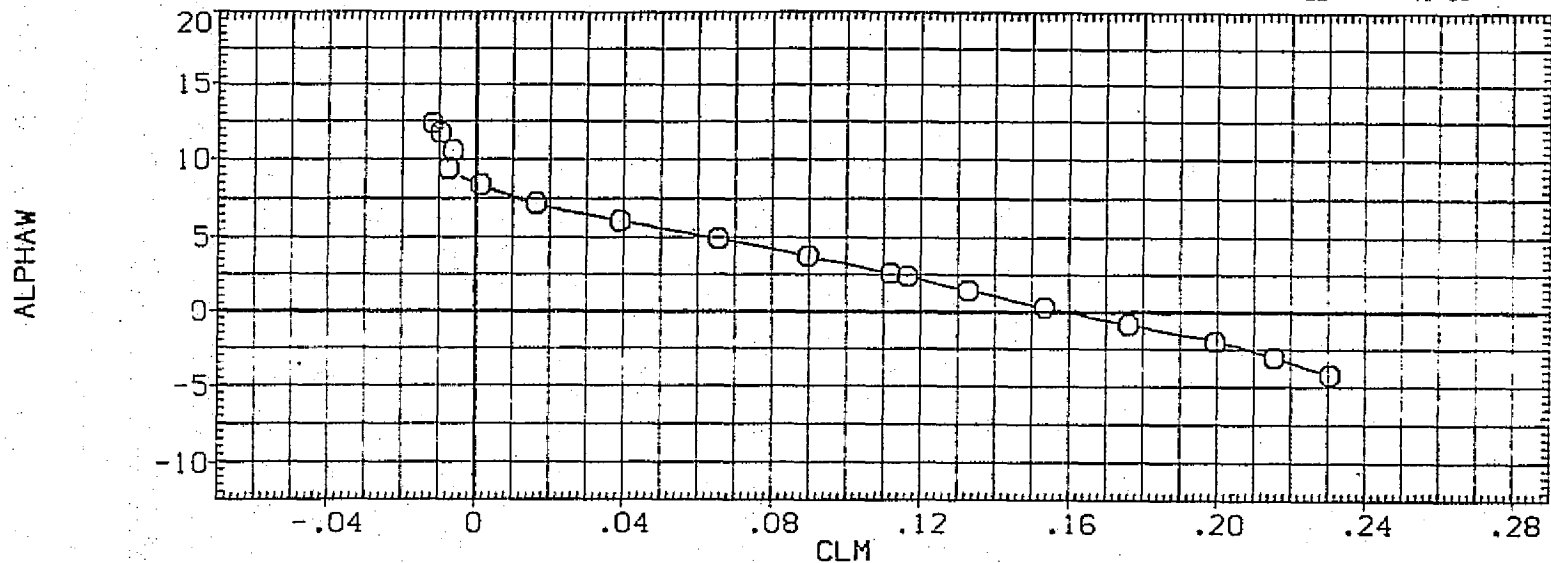


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, 10RB 6
 (D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP148) ○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RBF8N24/28
 (RGP154) □ DATA NOT AVAILABLE
 (RGP155) ◇ DATA NOT AVAILABLE

RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION	
.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
3.000	3.000	.000	.000	LREF	327.8000 IN.
10.000	10.000	.000	.000	BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

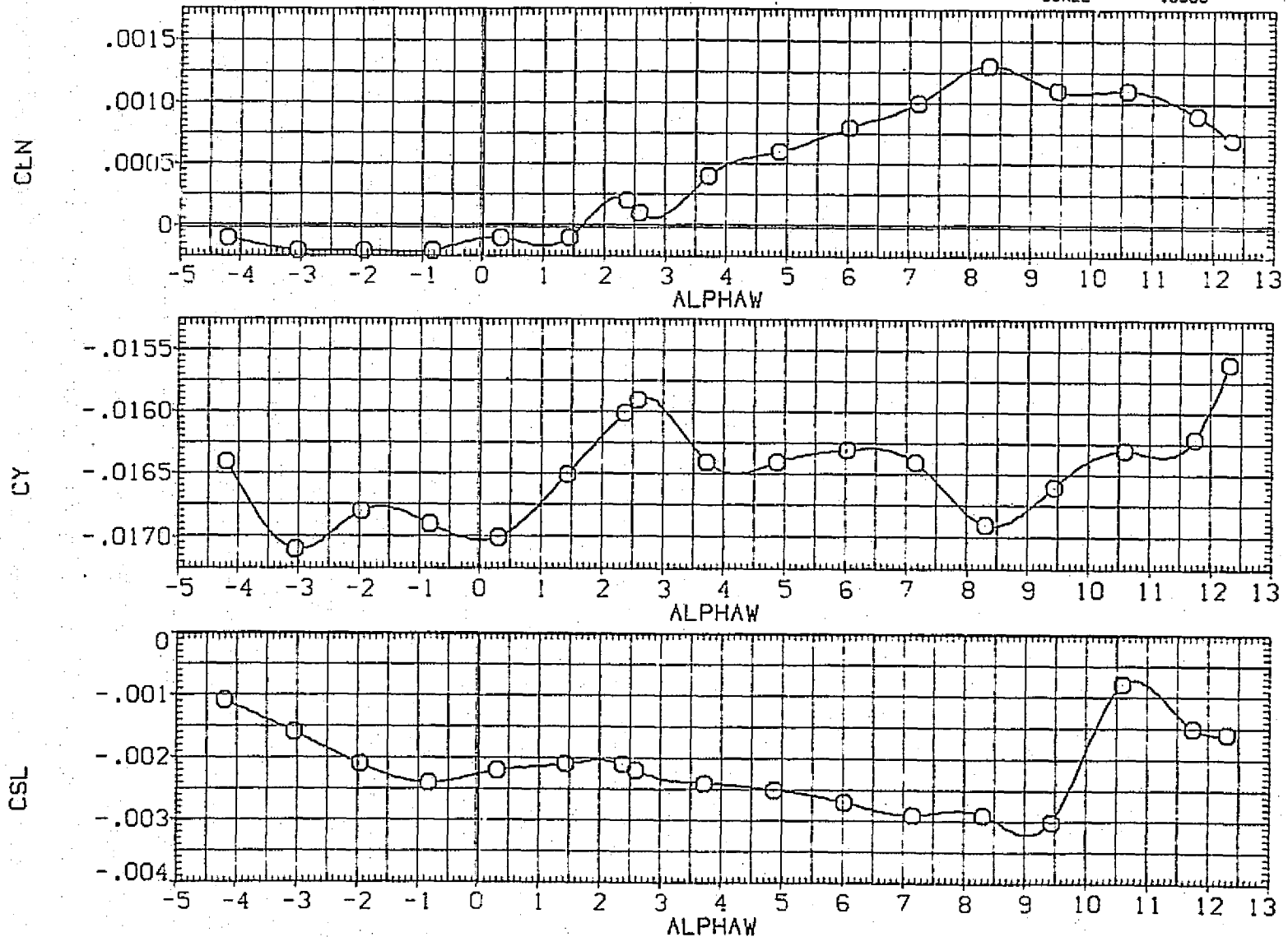


FIG. 64 RUDDER EFFECTIVENESS, ALT CLIMB, IORB 6

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP161)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	SREF 5500.0000 50.FT.
(RGP160)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	.000	6.030	LREF 327.8000 IN.
(RGP162)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	BREF 2348.0000 IN.
(RGP163)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

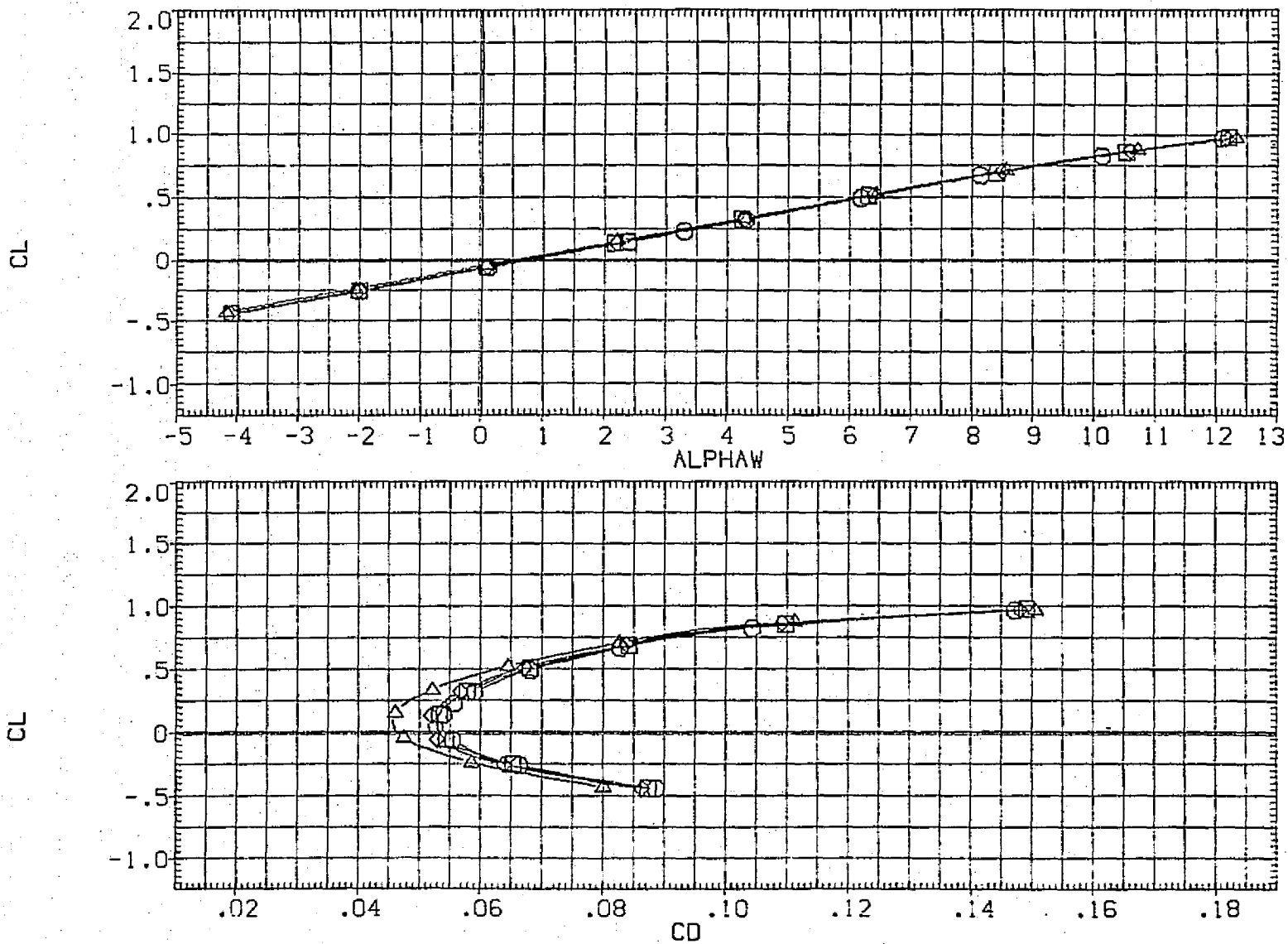


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB
 (A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION	
(RGP161)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	SREF	5500.0000 SQ.FT.
(RGP160)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	.000	6.030	LREF	327.8000 IN.
(RGP162)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	BREF	2348.0000 IN.
(RGP163)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	10.000	XMRP	1339.9000 IN. XC	
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

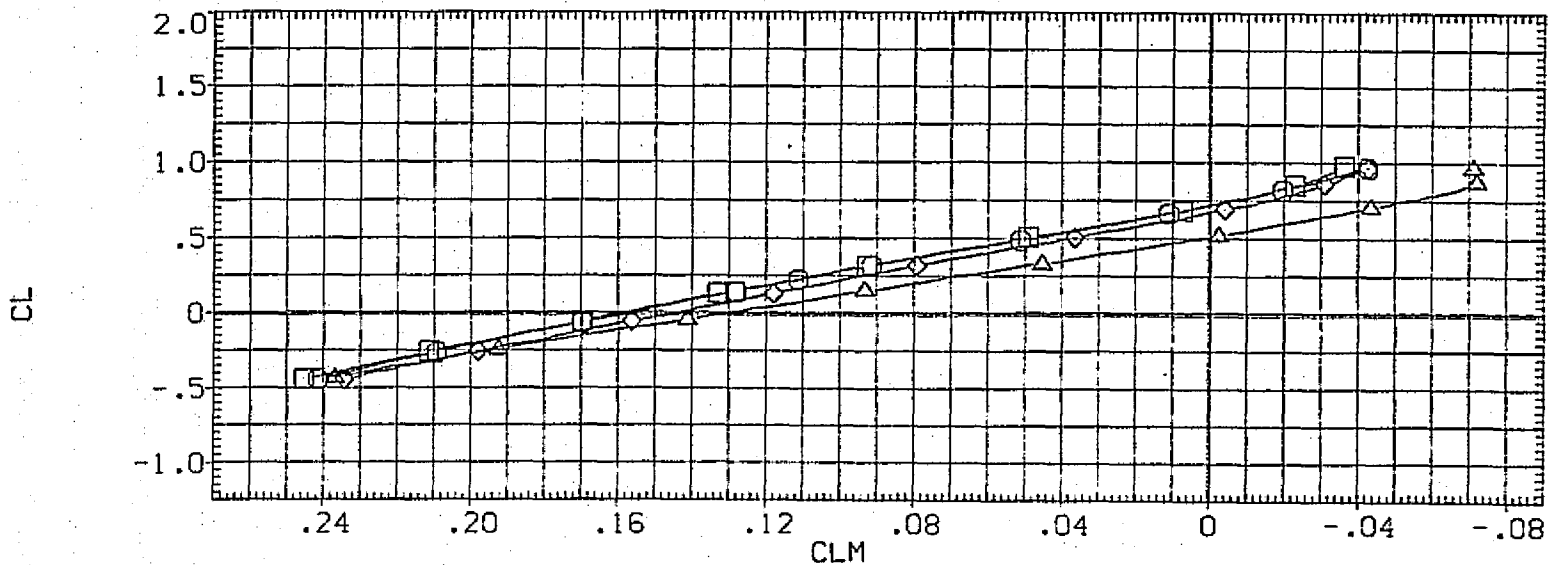
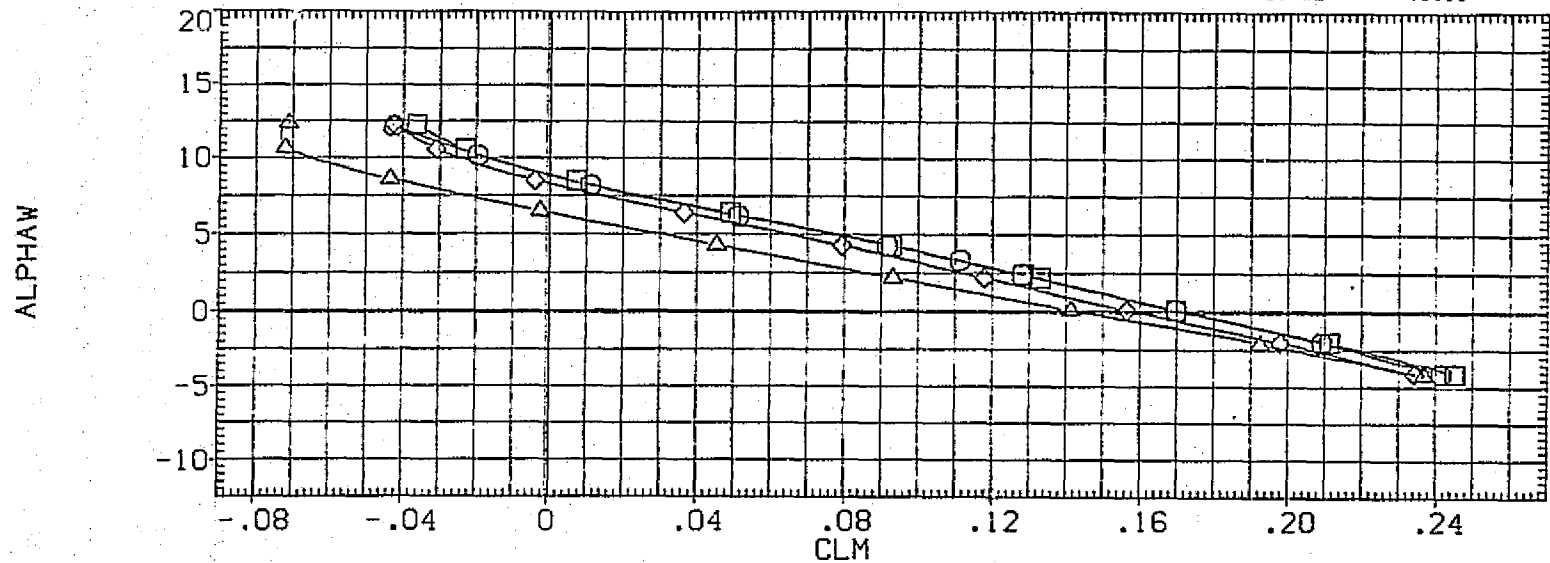


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP161)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	SREF 5500.0000 50.FT.
(RGP160)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	.000	6.030	LREF 327.8000 IN.
(RGP162)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	BREF 2348.0000 IN.
(RGP163)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

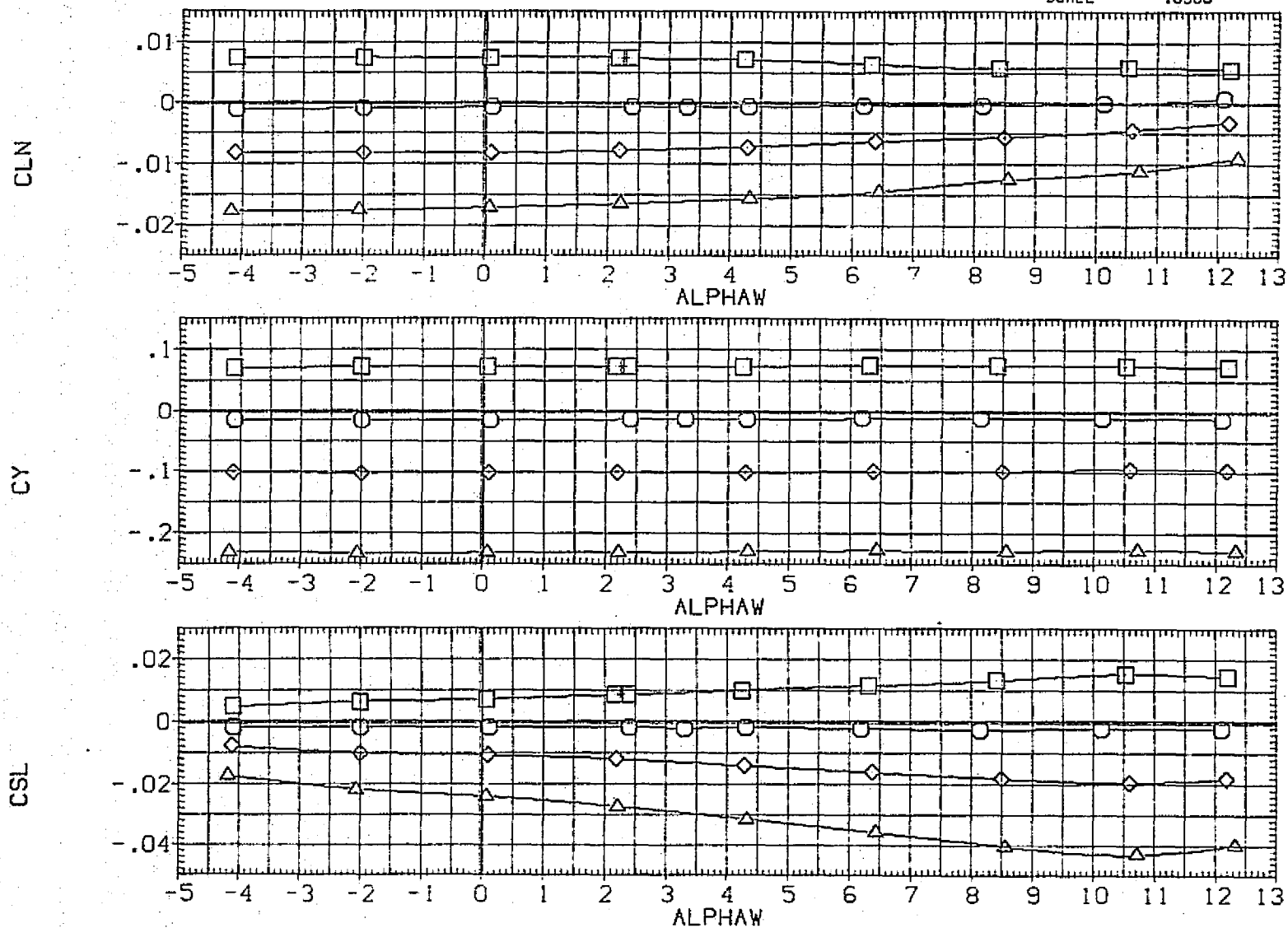


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IDRB	REFERENCE INFORMATION
(RGP161)	□ CAG K2H15.1 S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	SREF 5500.0000 SQ.FT.
(RGP160)	○ CAG K2H15.1 S1-12 AT112 /111.10RBF8N24/28	.000	6.030	LREF 327.8000 IN.
(RGP162)	◇ CAG K2H15.1 S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	BREF 2348.0000 IN.
(RGP163)	△ CAG K2H15.1 S1-12 AT112 /111.10RBF8N24/28	10.000	6.030	XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

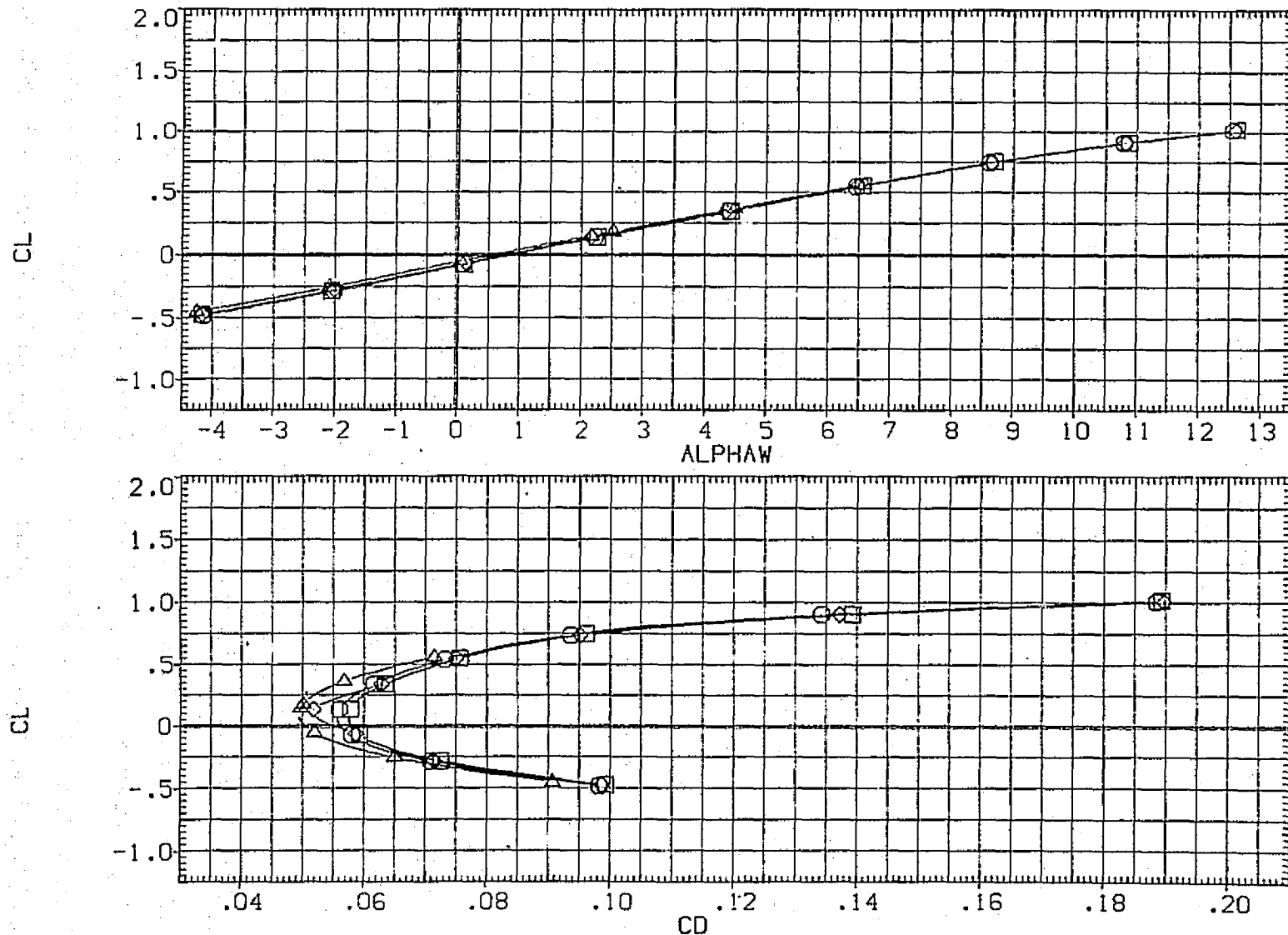


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP161)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	-4.000	6.030	SREF 5500.0000 SQ.FT.
(RGP160)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	.000	6.030	LREF 327.8000 IN.
(RGP162)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	4.000	6.030	BREF 2348.0000 IN.
(RGP163)	CA6 K2H15.1 S1-12 AT112 /111.10RBF8N24/28	10.000	YMRP 1339.9000 IN. XC	
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

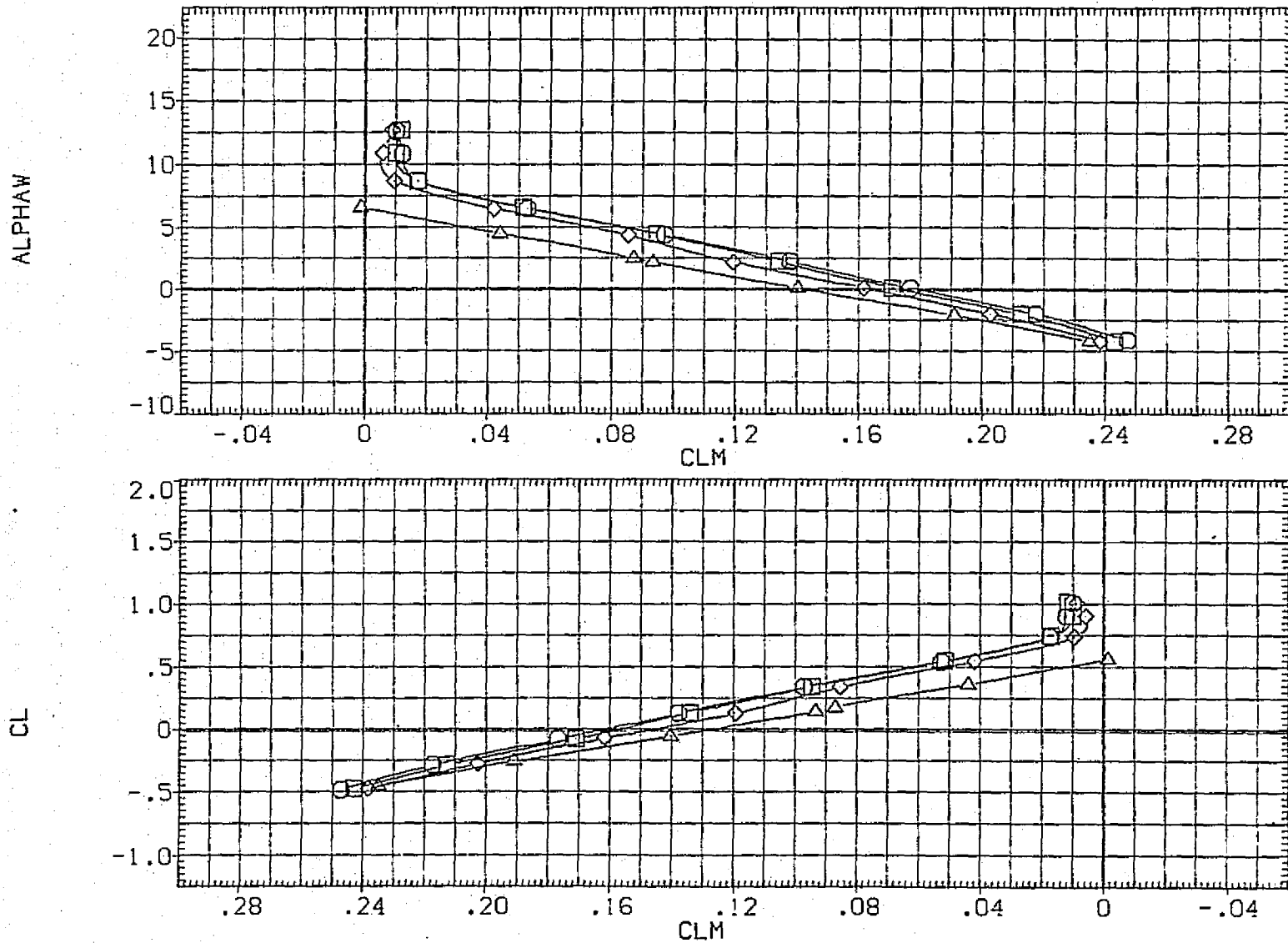


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	10RB	REFERENCE INFORMATION
(RGP161)	CAG K2H15.1 S1-12 AT112 /111.10RBFBN24/28	-4.000	6.030	SREF 5500.0000 SQ.FT.
(RGP160)	CAG K2H15.1 S1-12 AT112 /111.10RBFBN24/28	.000	6.030	LREF 327.8000 IN.
(RGP162)	CAG K2H15.1 S1-12 AT112 /111.10RBFBN24/28	4.000	6.030	BREF 2348.0000 IN.
(RGP163)	CAG K2H15.1 S1-12 AT112 /111.10RBFBN24/28	10.000	XMRP 1339.9000 IN. XC	
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

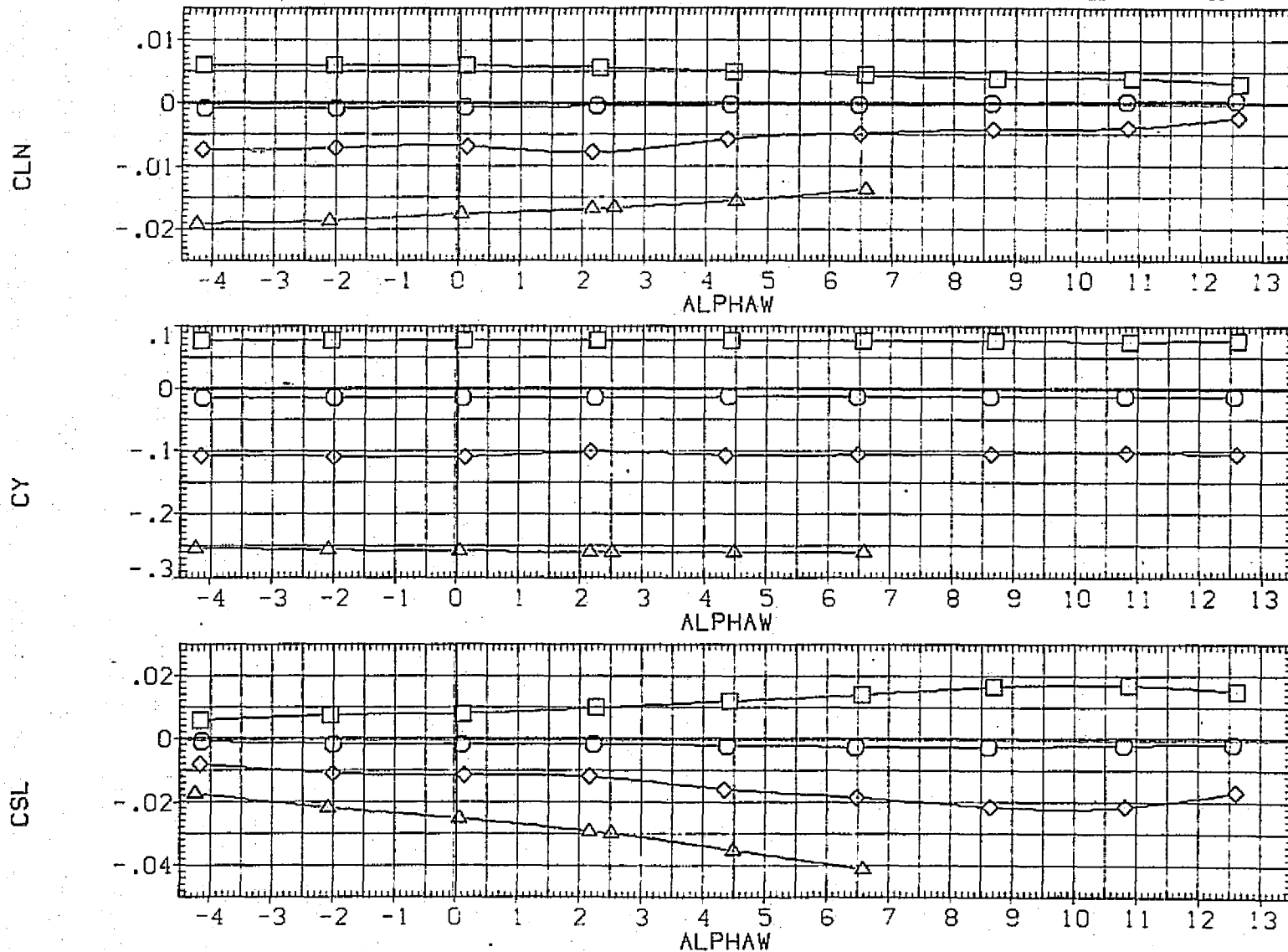


FIG. 65 LATERAL-DIRECTIONAL STABILITY, ALL VERTICAL TAILS OFF, ALT CLIMB

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	ICRB	ELEVON	REFERENCE INFORMATION		
(AGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	SREF	5500.0000	SQ.FT.
(AGP169)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	-5.000	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

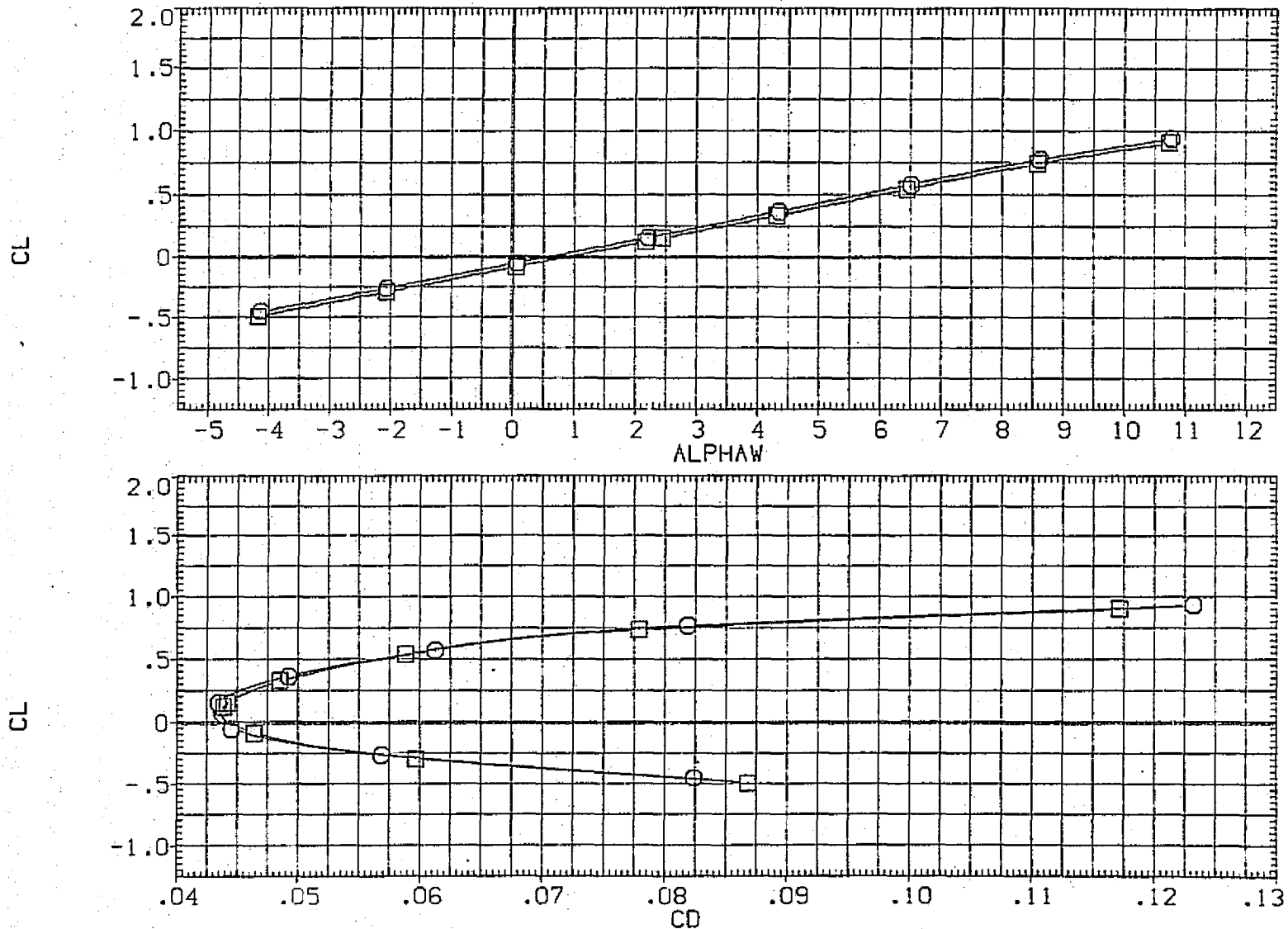


FIG. 66 ORBITER ELEVON EFFECTS, FERRY, ICRB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON
(AGP168) □	CA6 K2H15.6.IV9.IS1-12 AT112 /111.10RB TC4	-.060	4.250	.000
(AGP169) ○	CA6 K2H15.6.IV9.IS1-12 AT112 /111.10RB TC4	-.060	4.250	-5.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

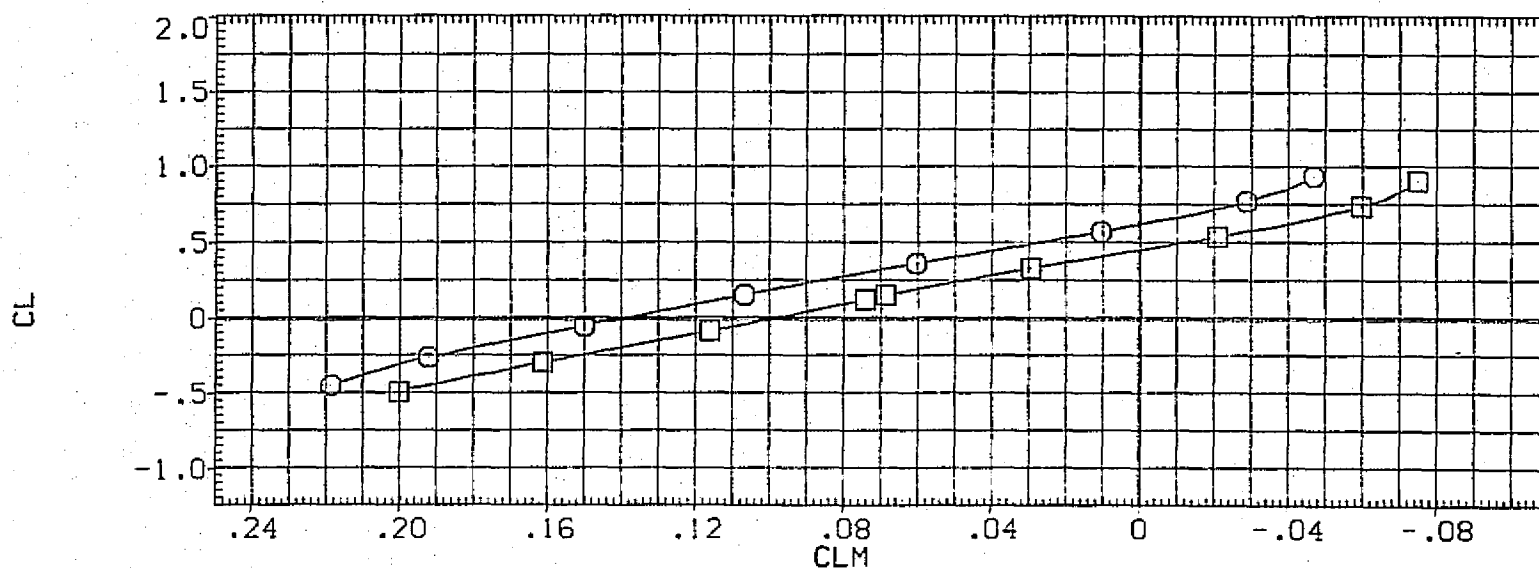
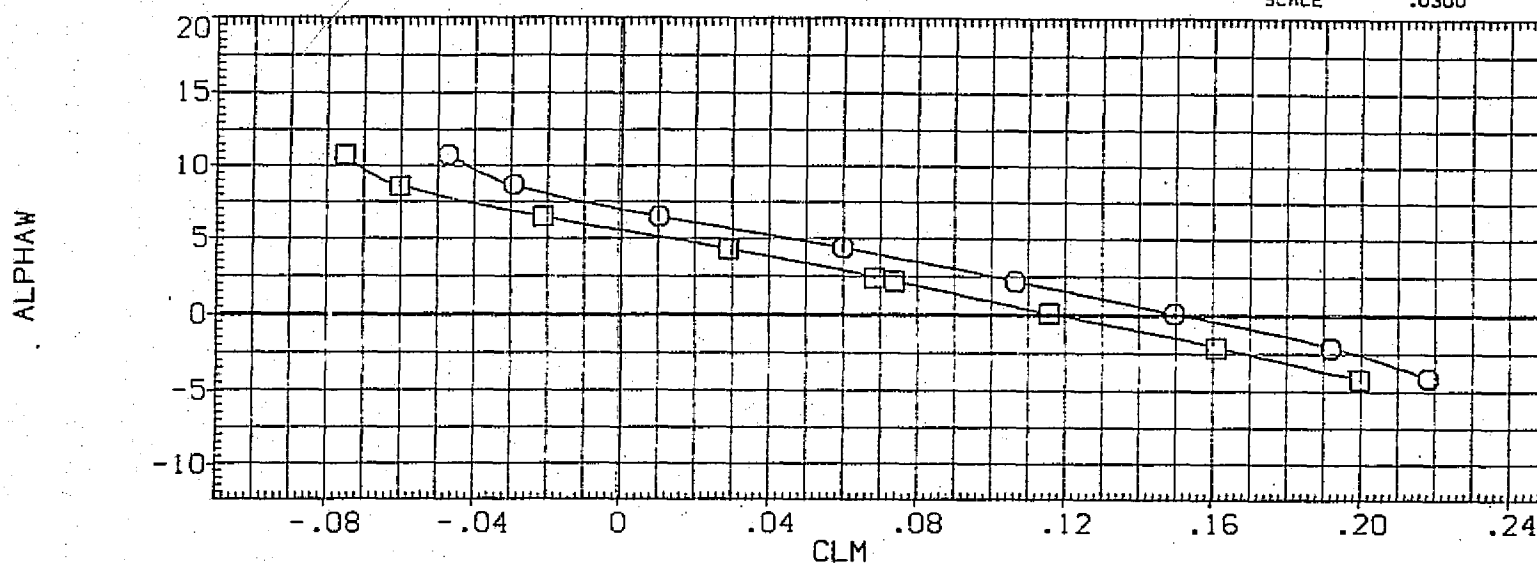


FIG. 66 ORBITER ELEVON EFFECTS, FERRY, IORB 4.25

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(AGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	SREF	5500.0000	SO.FT.
(AGP169)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	-5.000	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

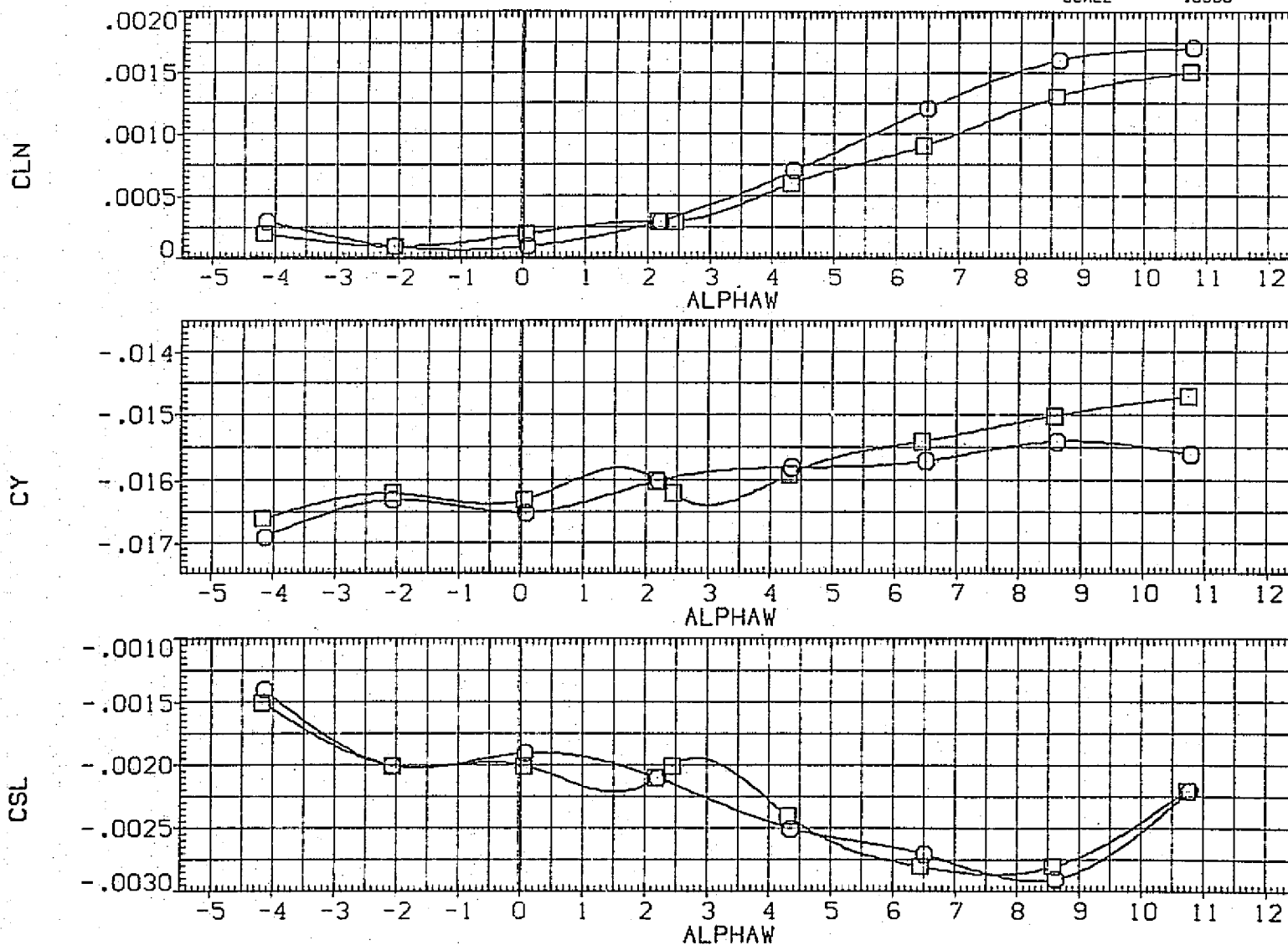


FIG. 66 ORBITER ELEVON EFFECTS, FERRY, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IGRB	REFERENCE INFORMATION
(RGP169)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP171)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

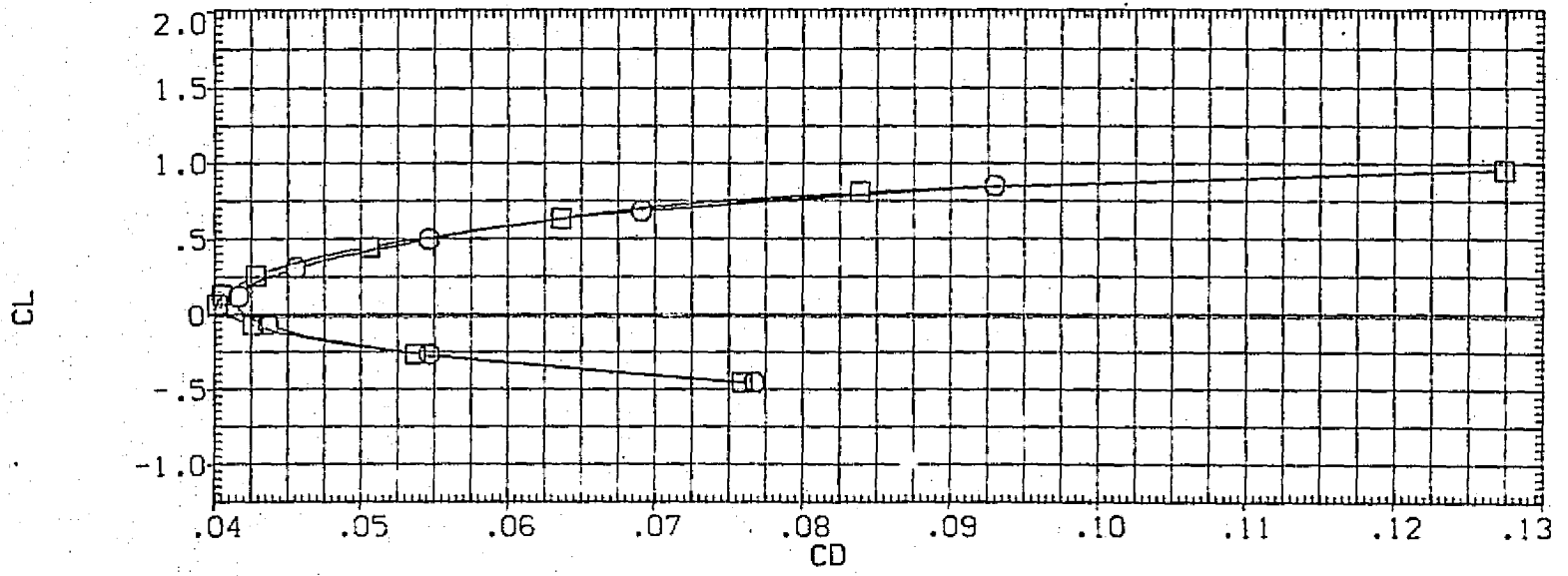
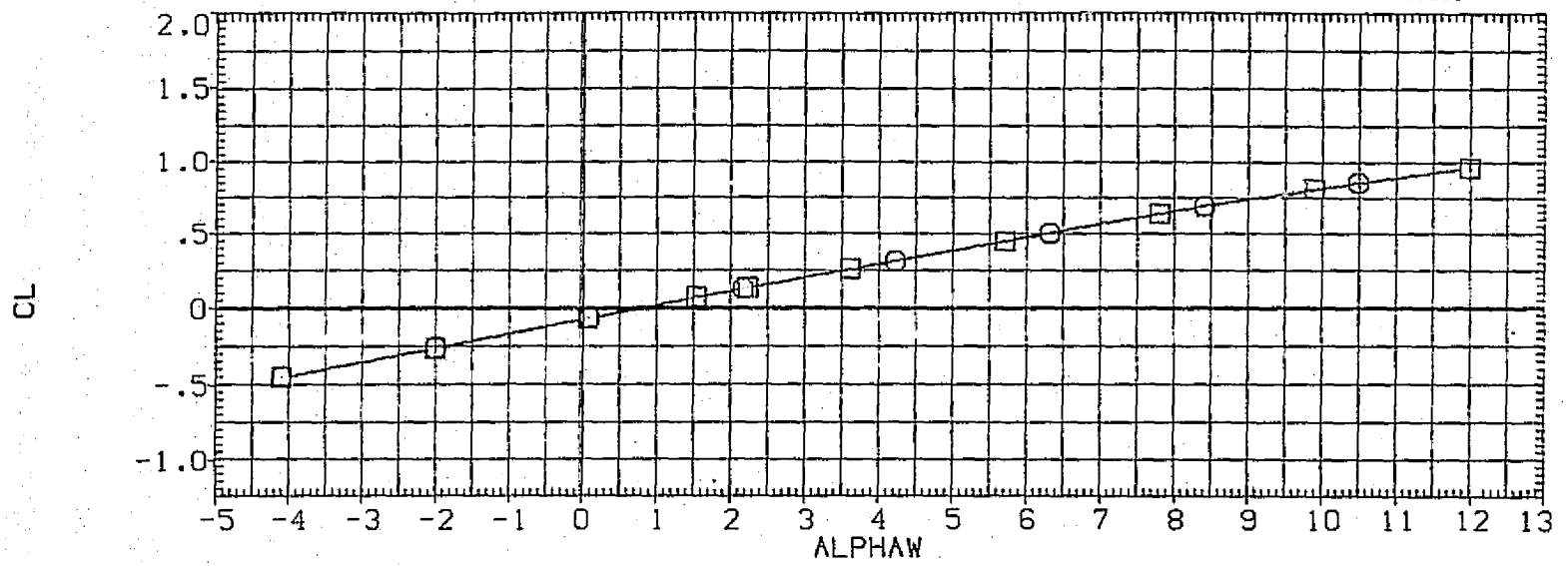


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IGRB 4.25, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP169) □ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4
 (RGP171) □ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

BETA IORB
 .000 4.250
 2.000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0800 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

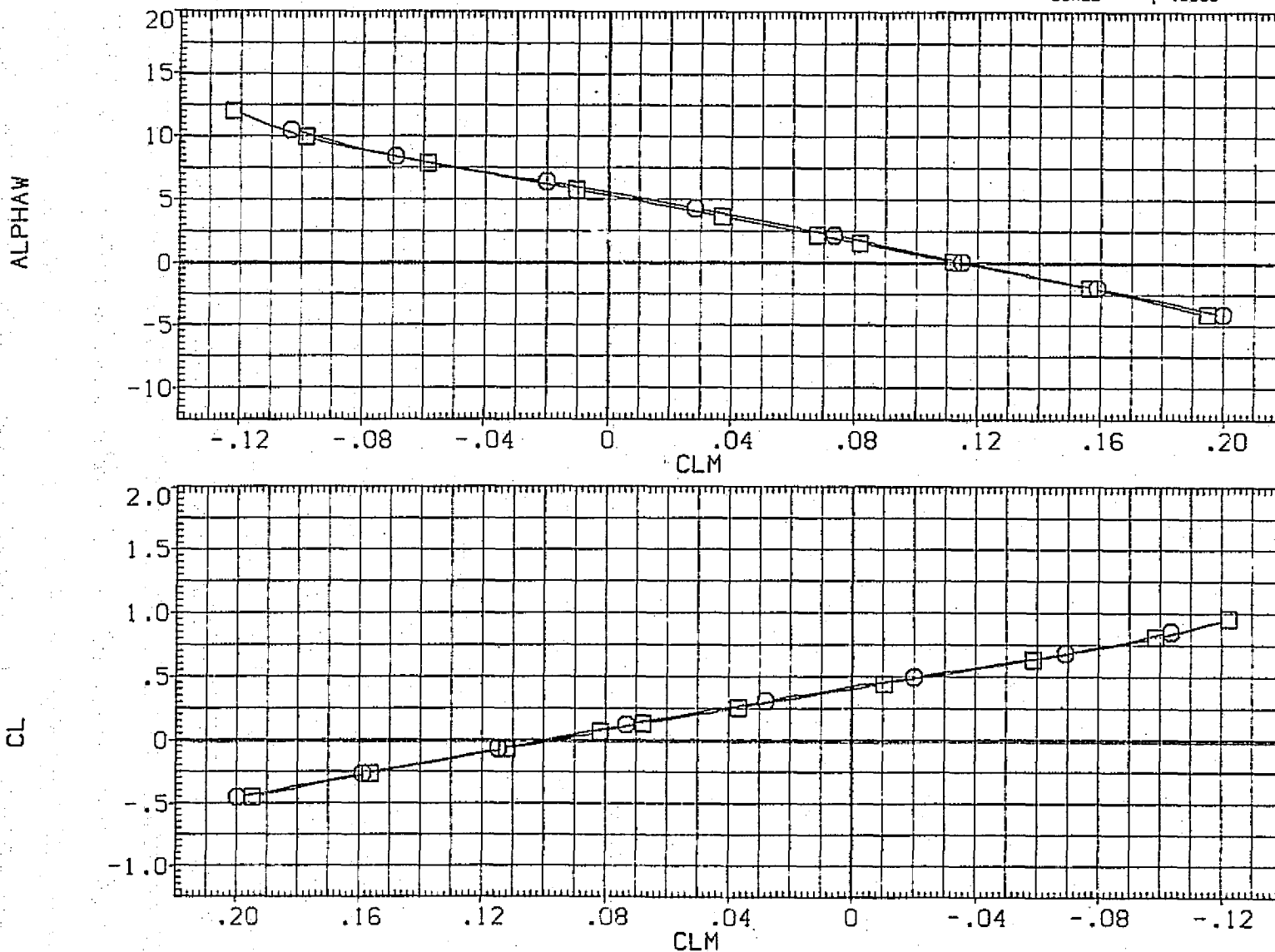


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB
(RGP169)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250
(RGP171)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250

BETA	IORB
.000	4.250
2.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

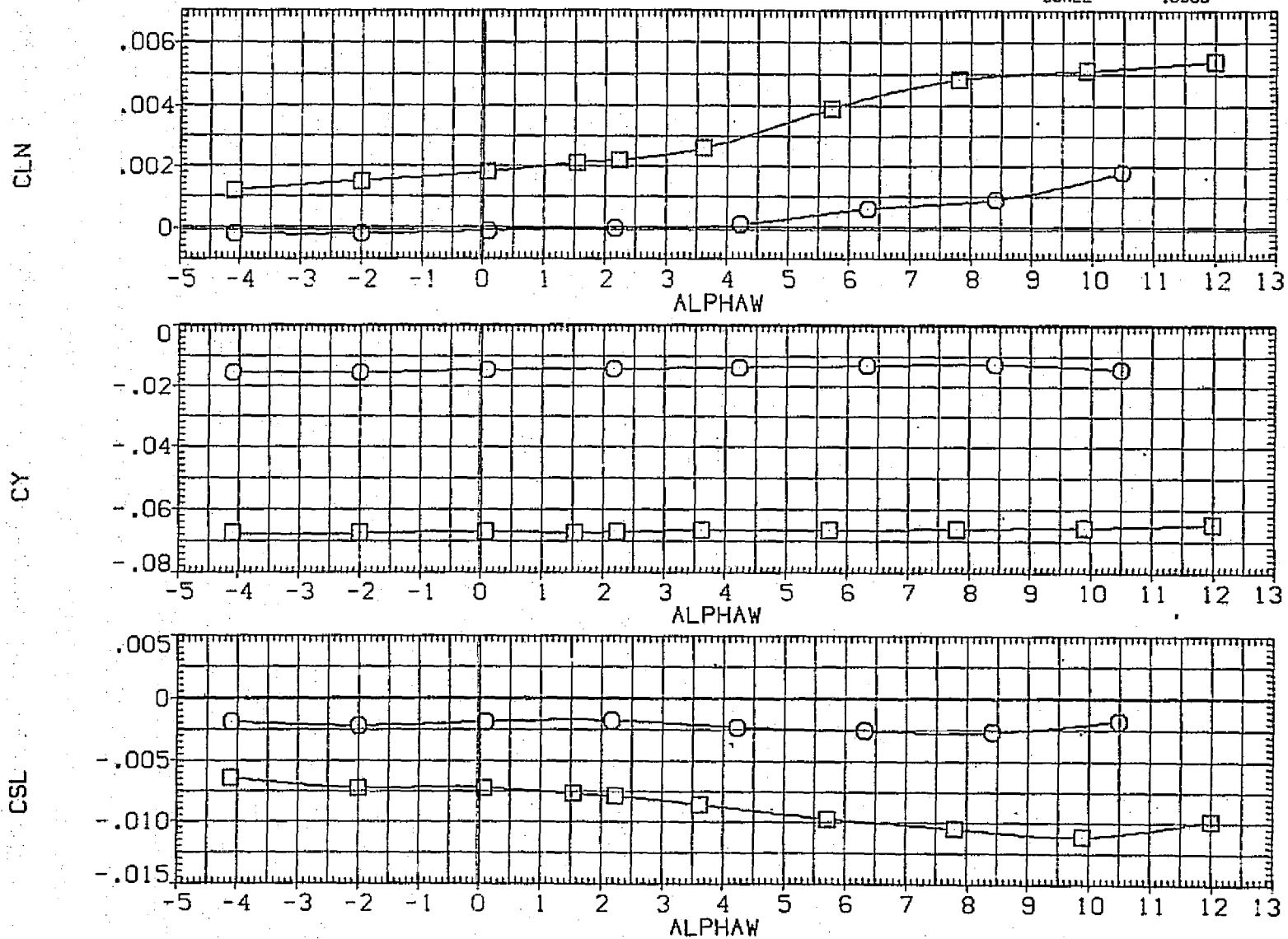


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP169) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4
 (RGP171) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

BETA IORB
 .000 4.250
 2.000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

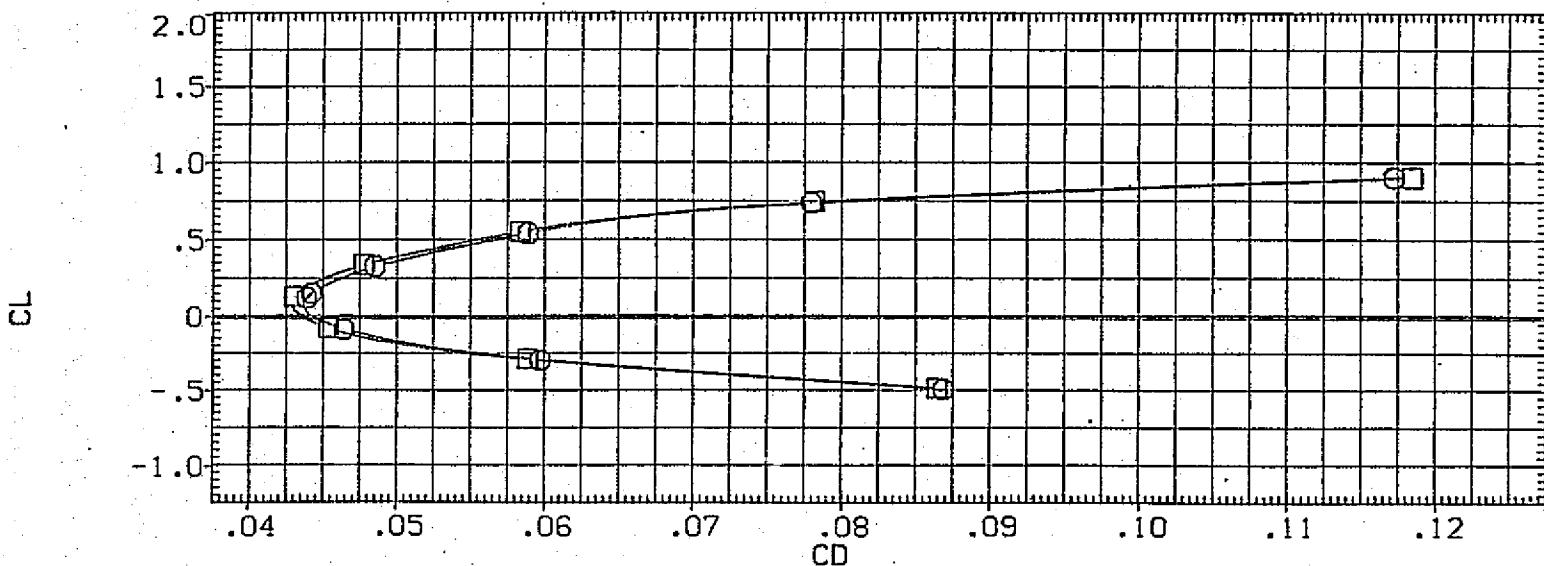
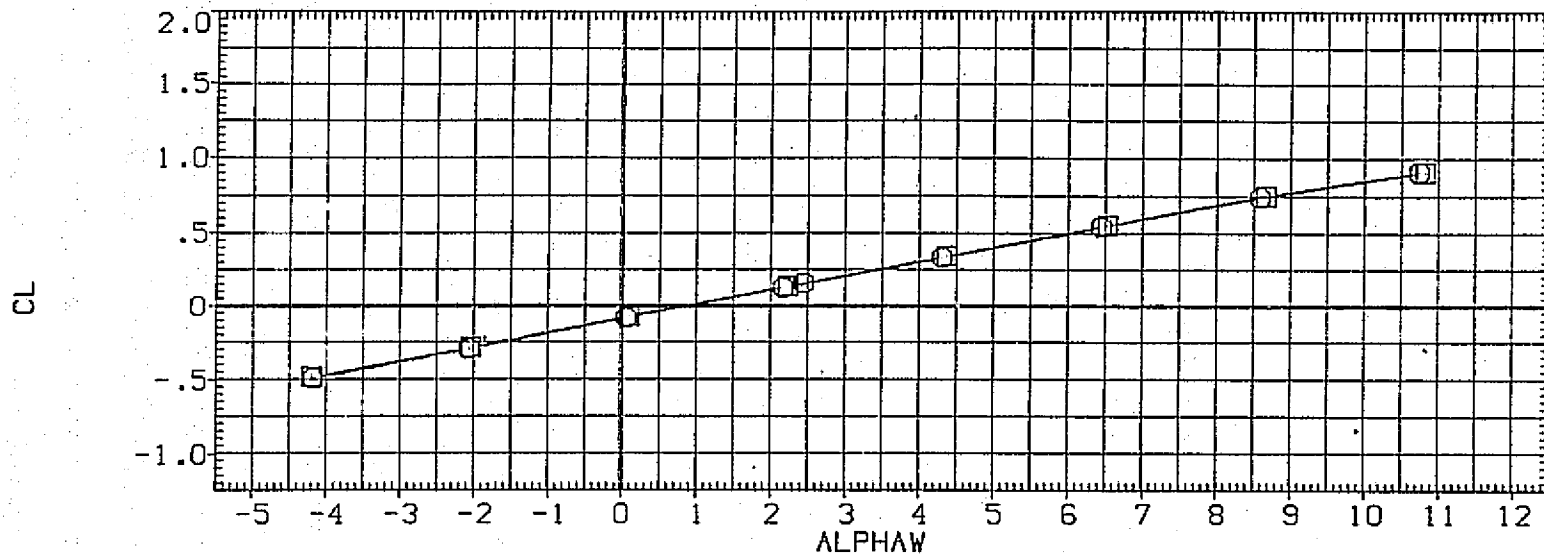


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB
(RGP169)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250
(RGP171)	□ CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250

BETA	IORB
.000	4.250
2.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

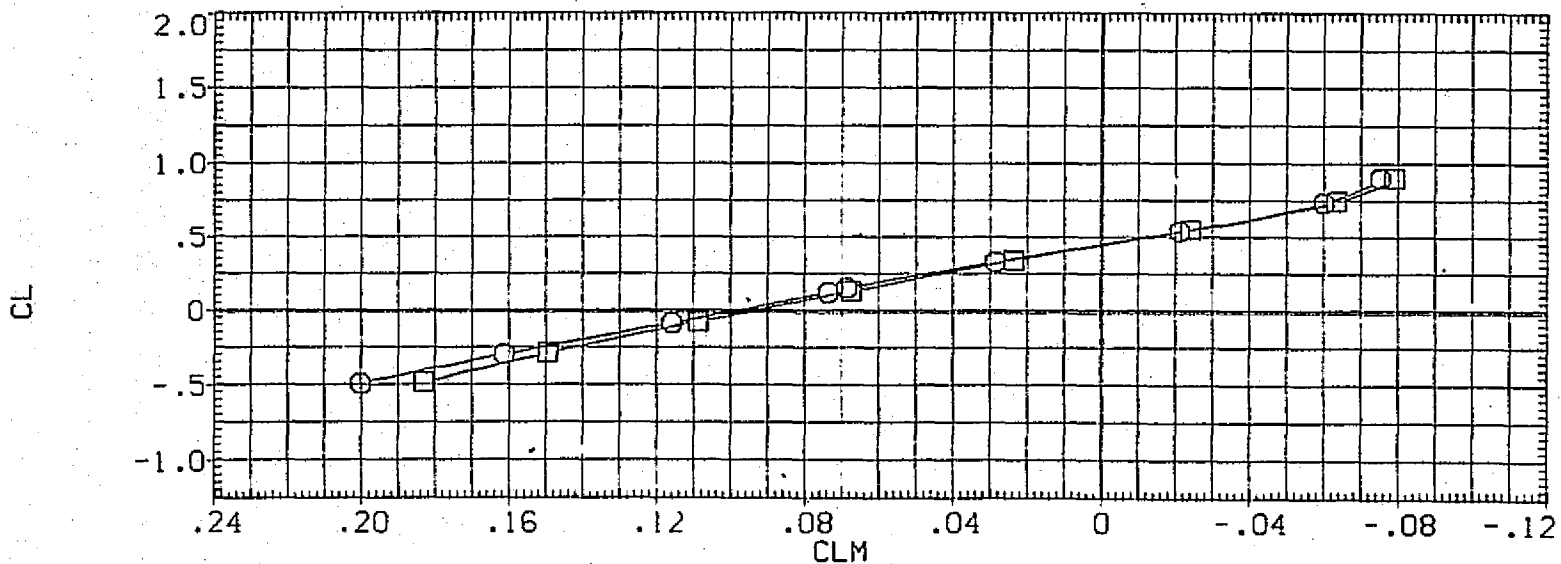
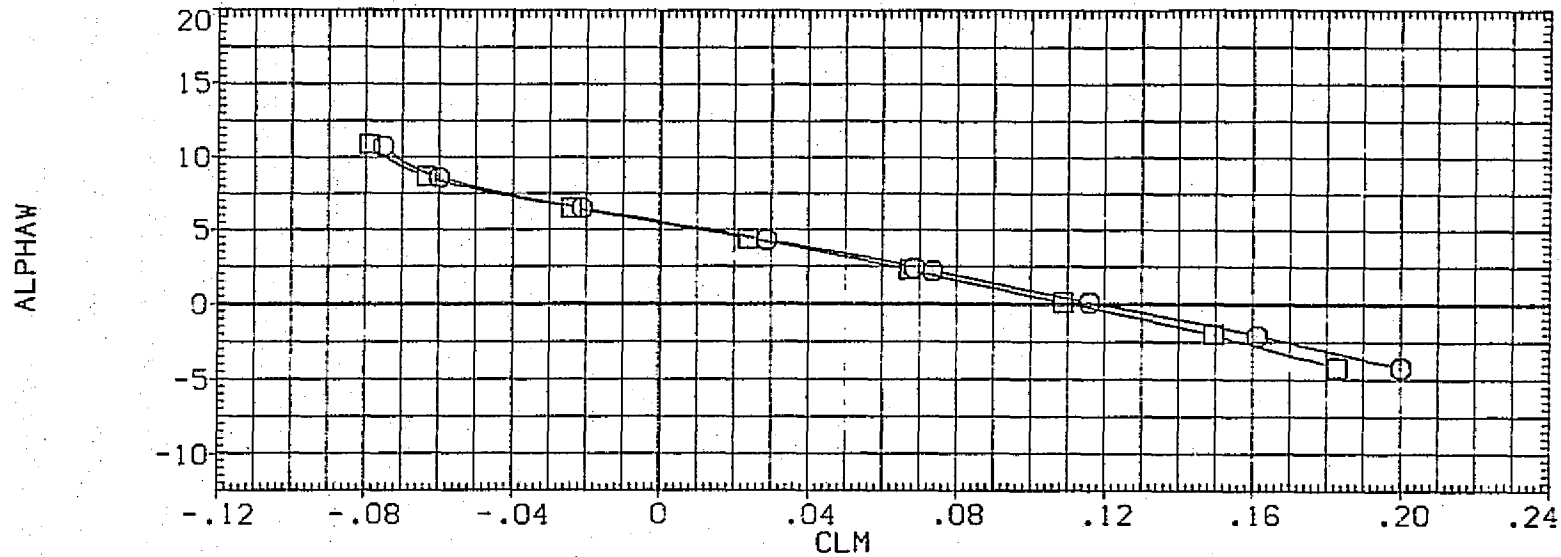


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB
(RGP169)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250
(RGP171)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250

BETA	IORB
.000	4.250
2.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	50. FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

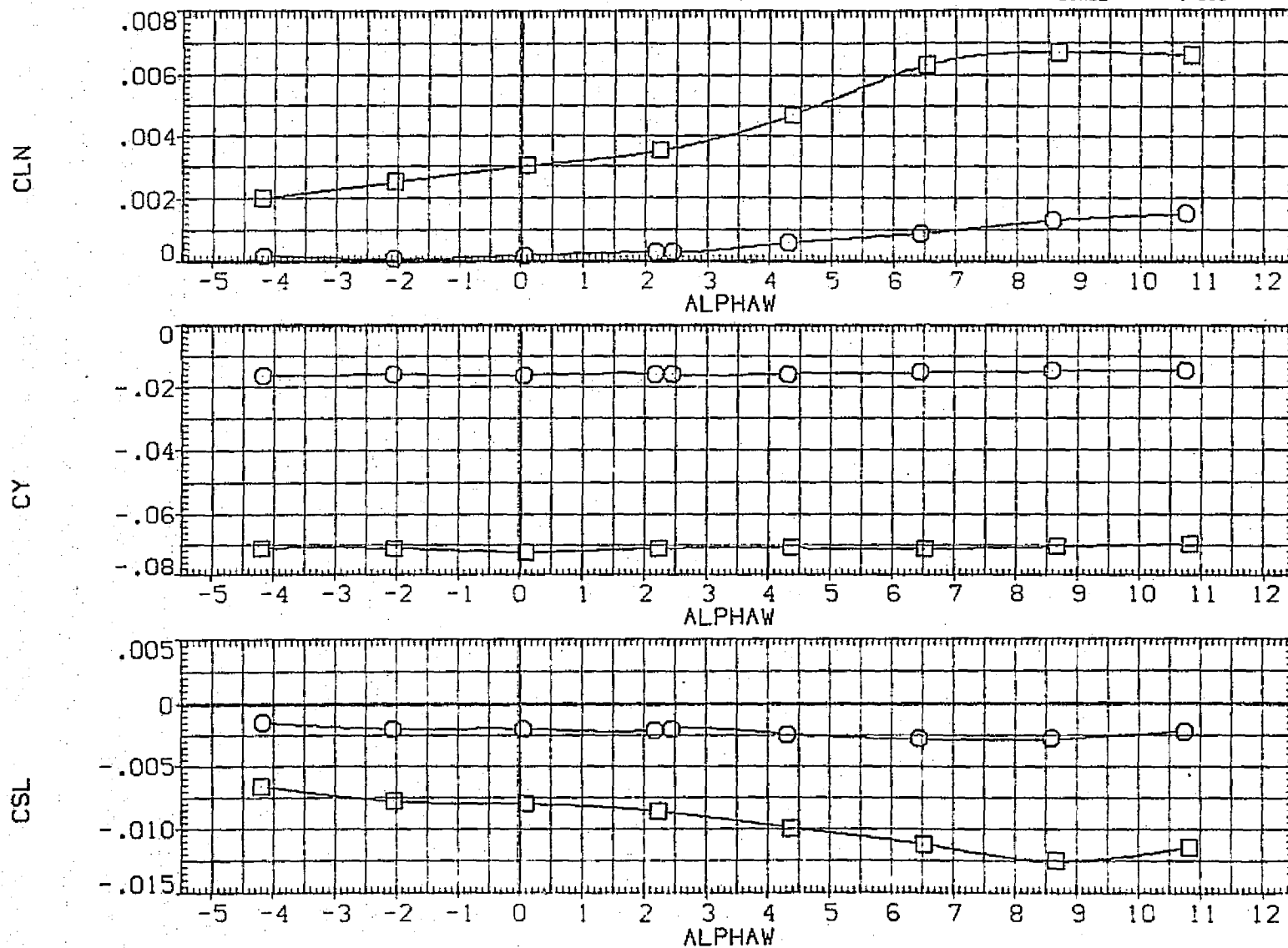


FIG. 67 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON -5

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-4.000	4.250	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250	BREF 2348.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	4.250	ZMRP 190.7700 IN. ZC
				SCALE .0300

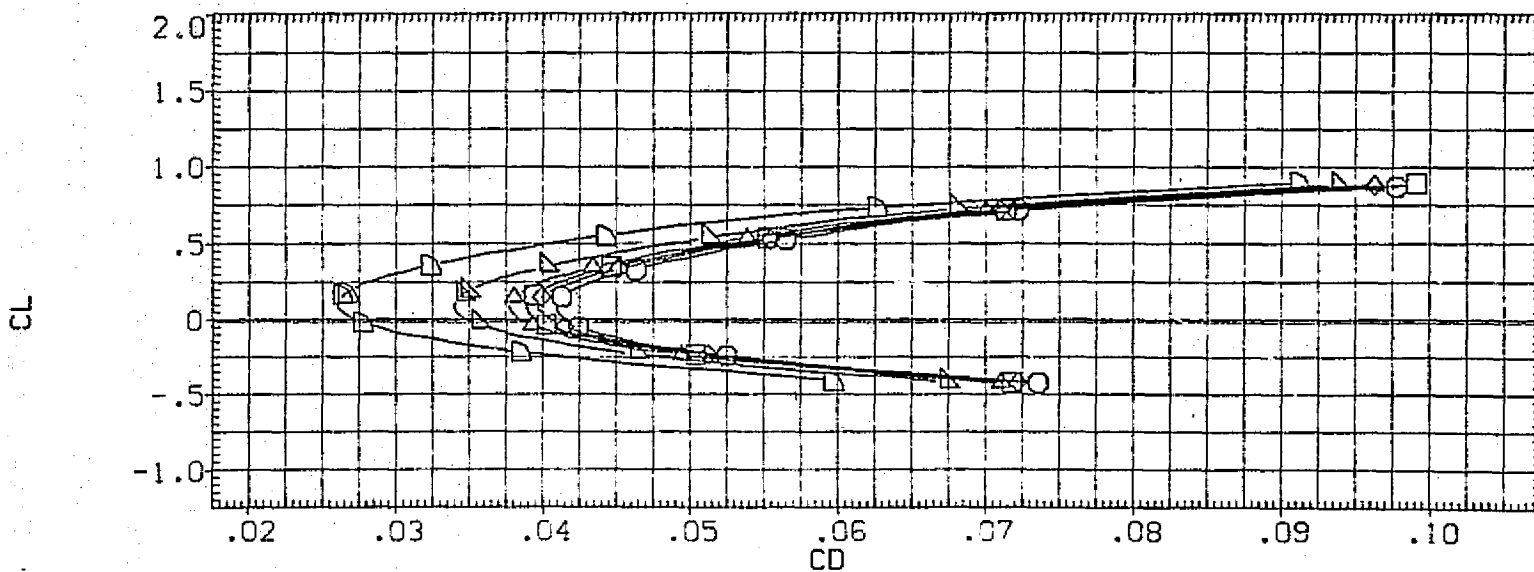
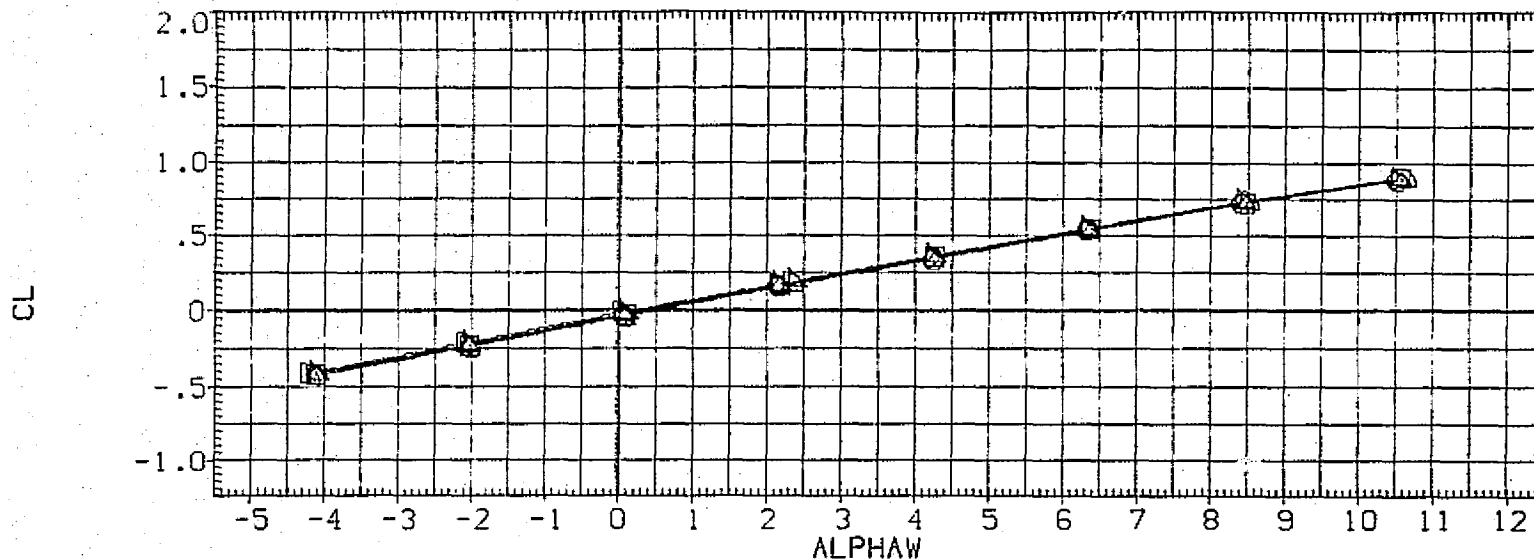


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	-4.000	4.250	SREF 5500.0000 SQ. FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	2.000	4.250	BREF 2348.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1CRB TC4	10.000	ZMRP 190.7700 IN. ZC	
				SCALE .0300

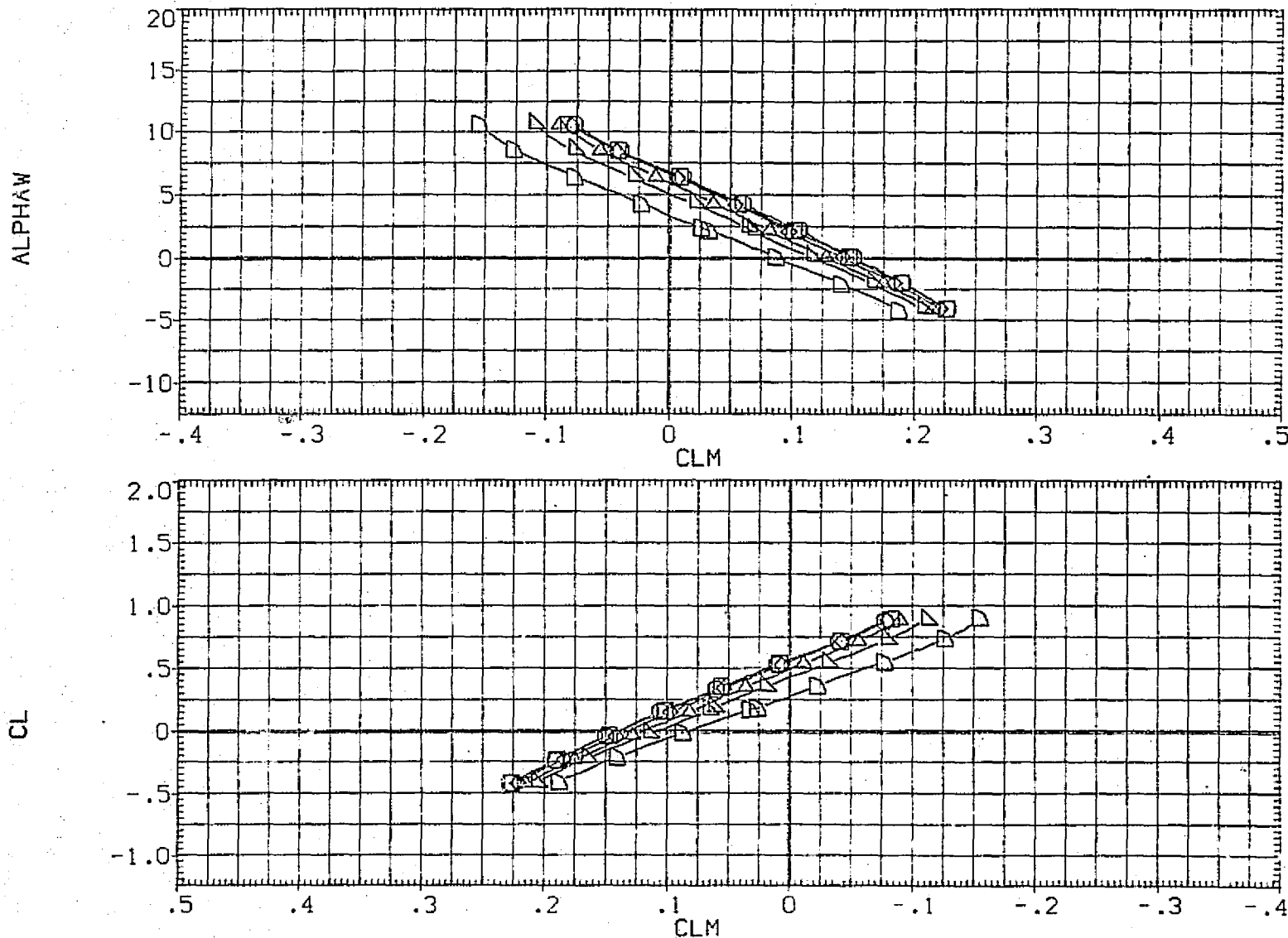


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-4.000	4.250	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	2.000	4.250	BREF 2348.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	10.000	ZMRP 190.7700 IN. ZC	
				SCALE .0300

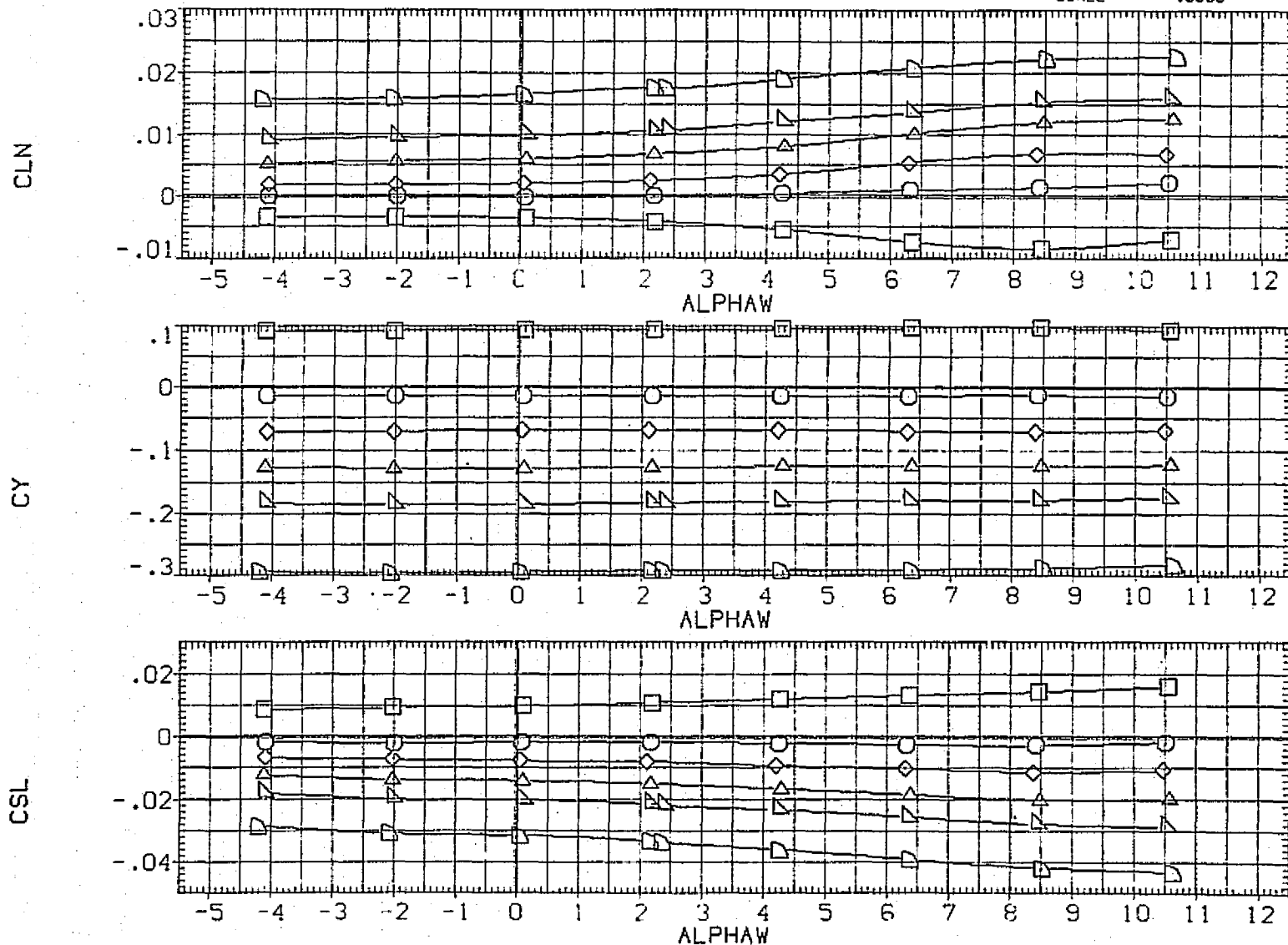


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-4.000	4.250	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250	BREF 2349.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	4.250	ZMRP 190.7700 IN. ZC
				SCALE .0300

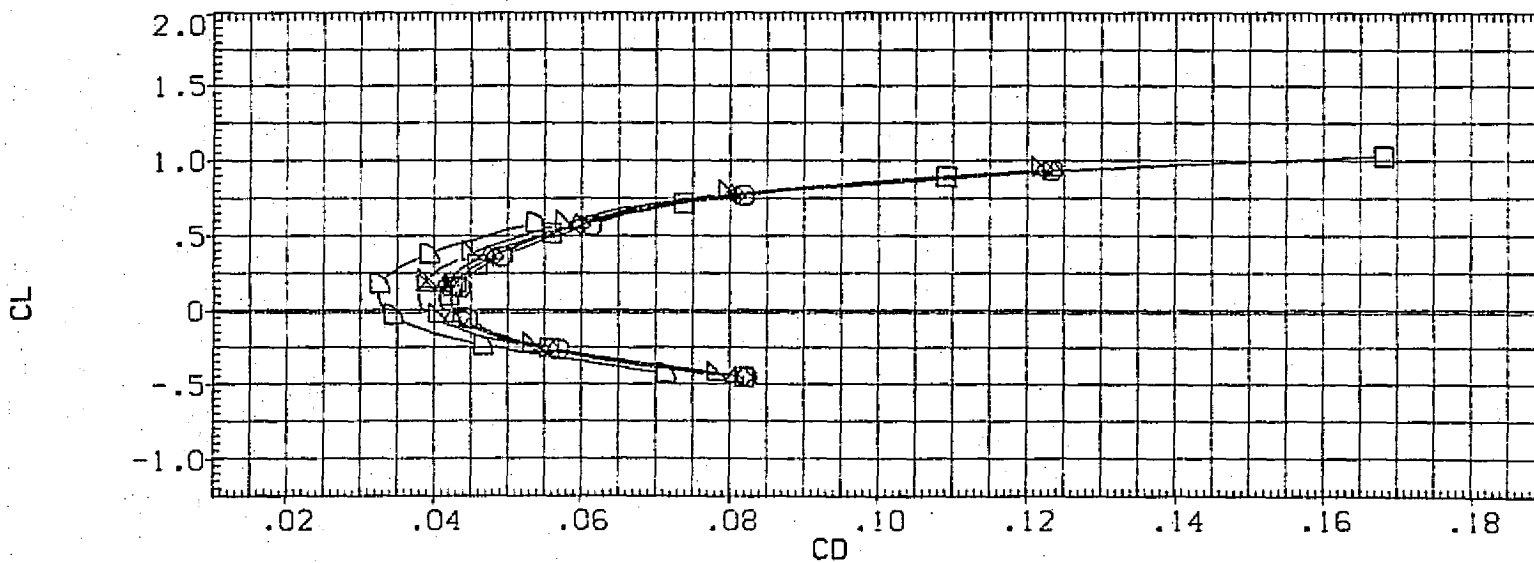
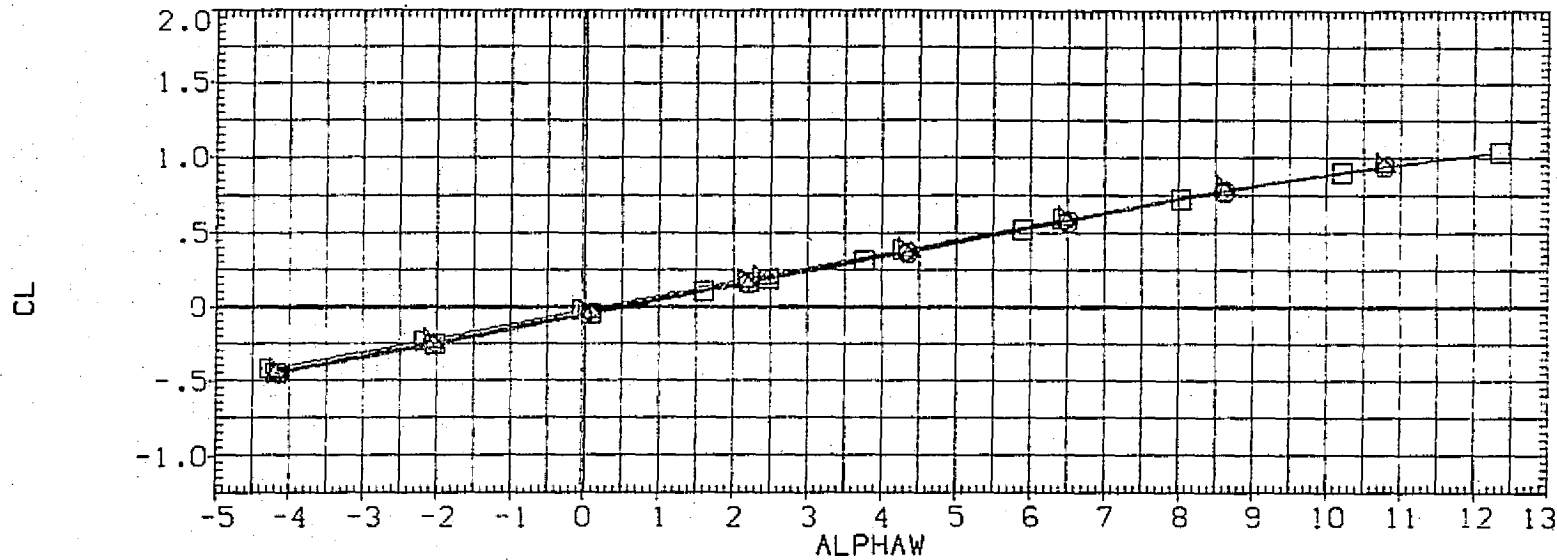


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-4.000	4.250	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	4.250	BREF 2348.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	ZMRP 190.7700 IN. ZC	
				SCALE .0300

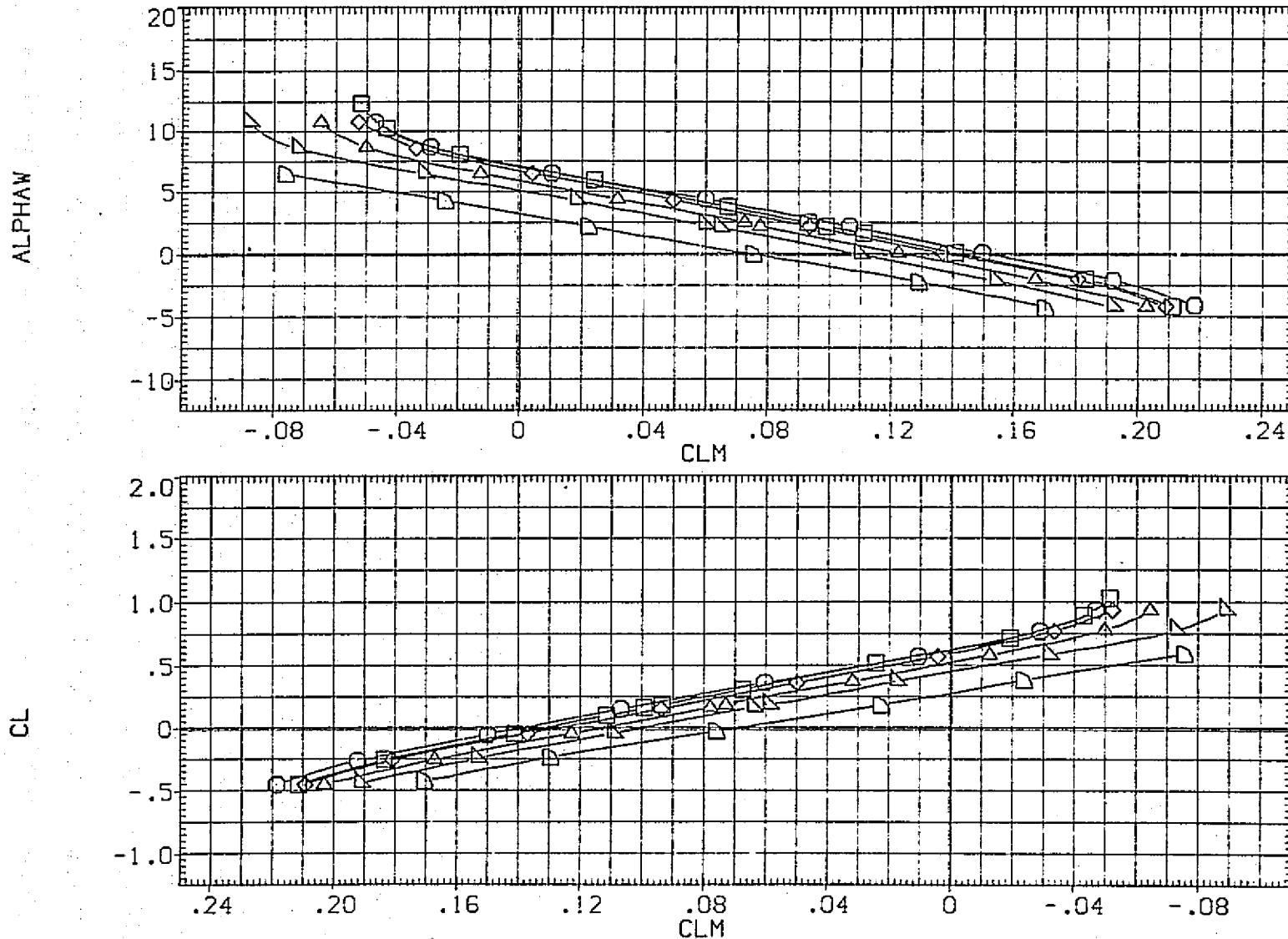


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP176)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-4.000	4.250	SREF 5500.0000 50. FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	.000	4.250	LREF 327.8000 IN.
(RGP172)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	2.000	4.250	BREF 2348.0000 IN.
(RGP173)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	4.000	4.250	XMRP 1339.9000 IN. XC
(RGP174)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	6.000	4.250	YMRP .0000 IN. YC
(RGP175)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	10.000	ZMRP 190.7700 IN. ZC	
				SCALE .0300

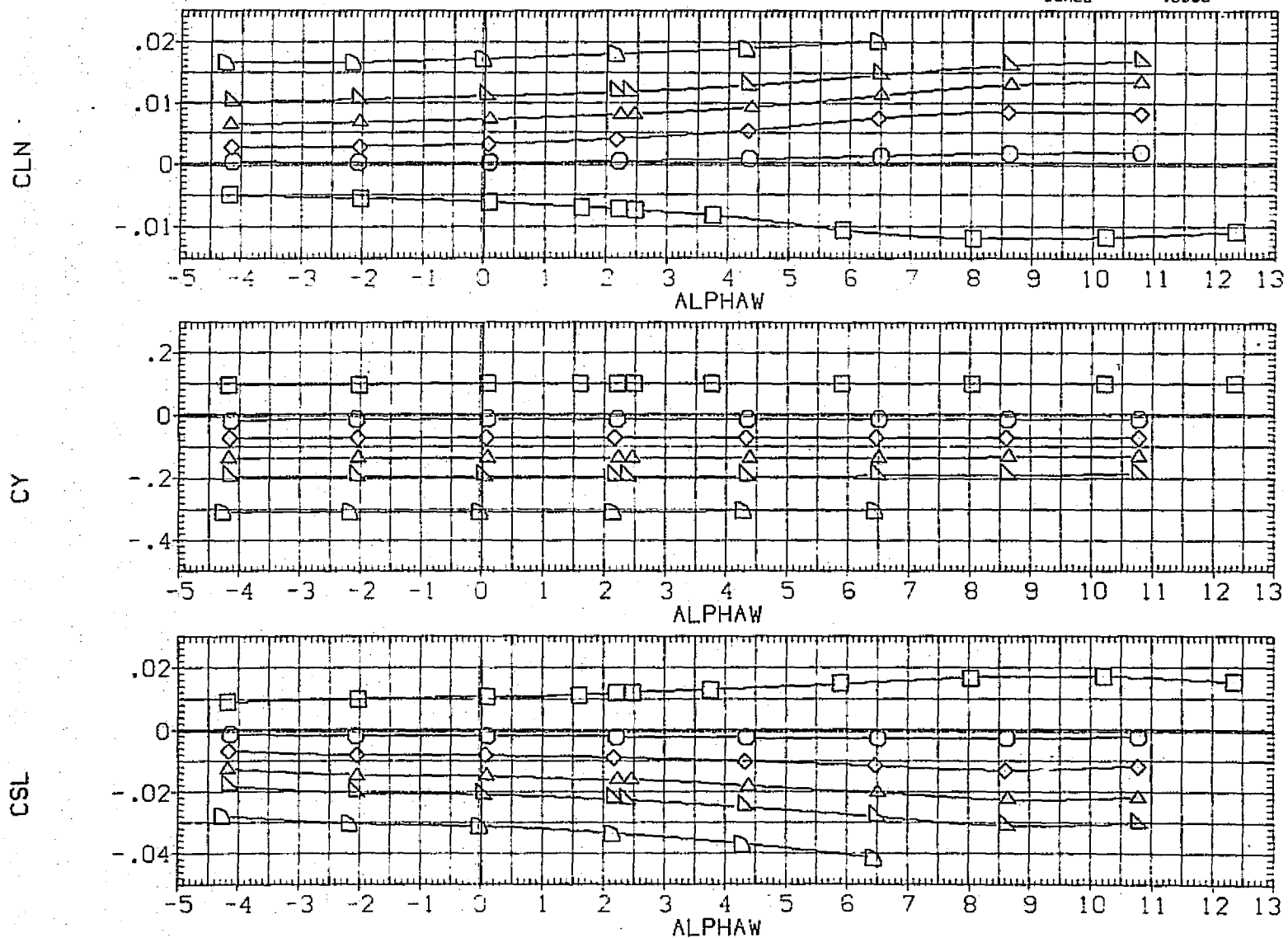


FIG. 68 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 4.25, ELEVON 0

(B)MACH = .63

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGP177)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP178)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF 2348.0000 IN.
(RGP179)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	10.000	.000	.000	XMRP 1339.9000 IN. XC
(RGP180)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	.000	.000	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

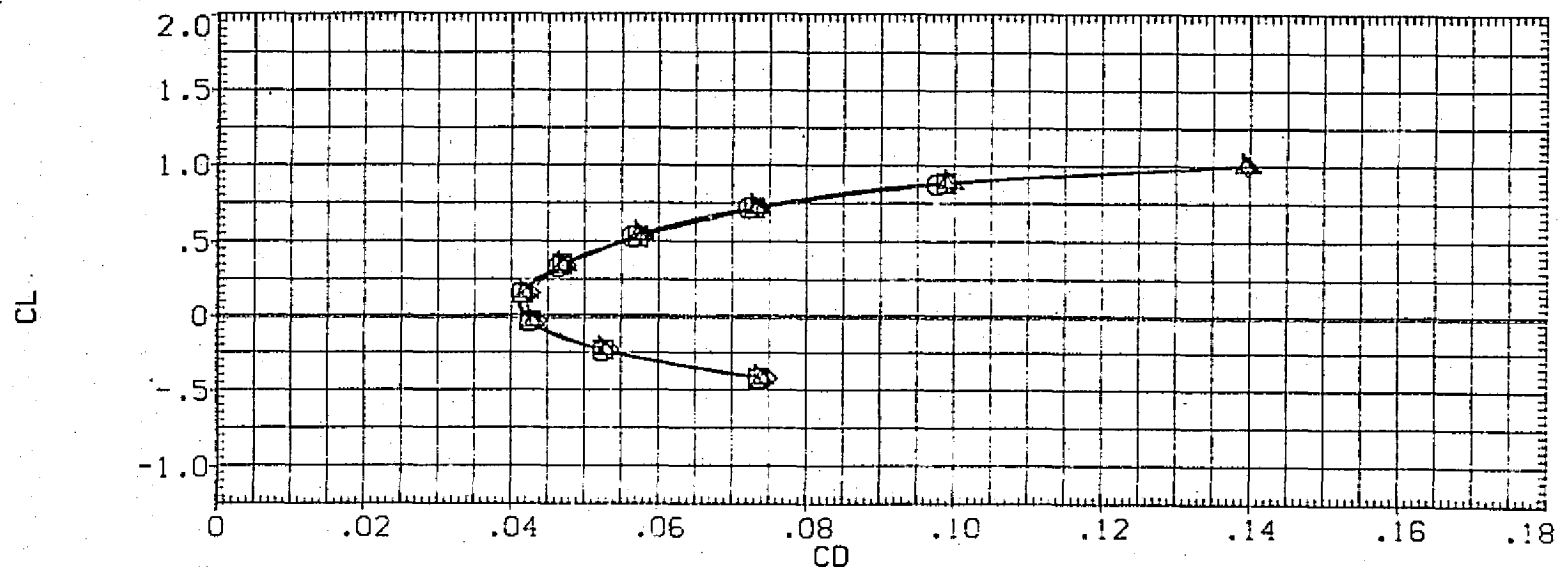
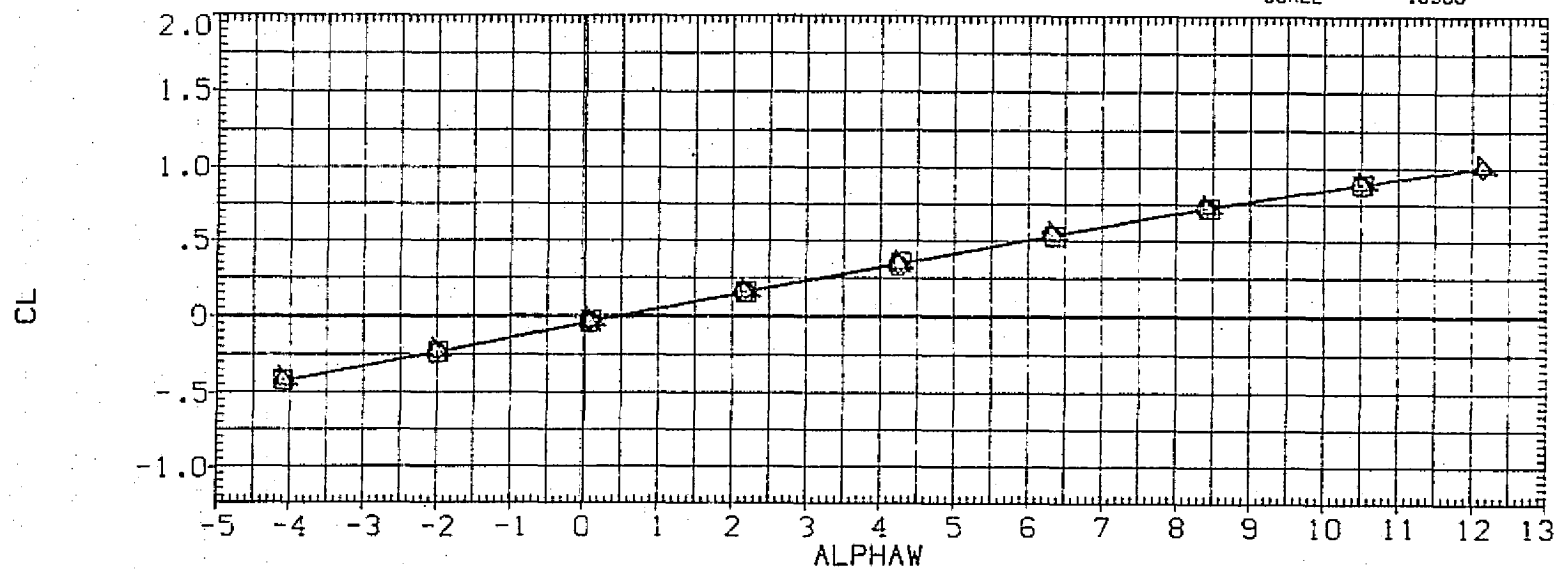


FIG. 69 RUDDER EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGP177)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP178)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF 2348.0000 IN.
(RGP179)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	10.000	.000	.000	XMRP 1339.9000 IN. XC
(RGP180)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	.000	.000	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

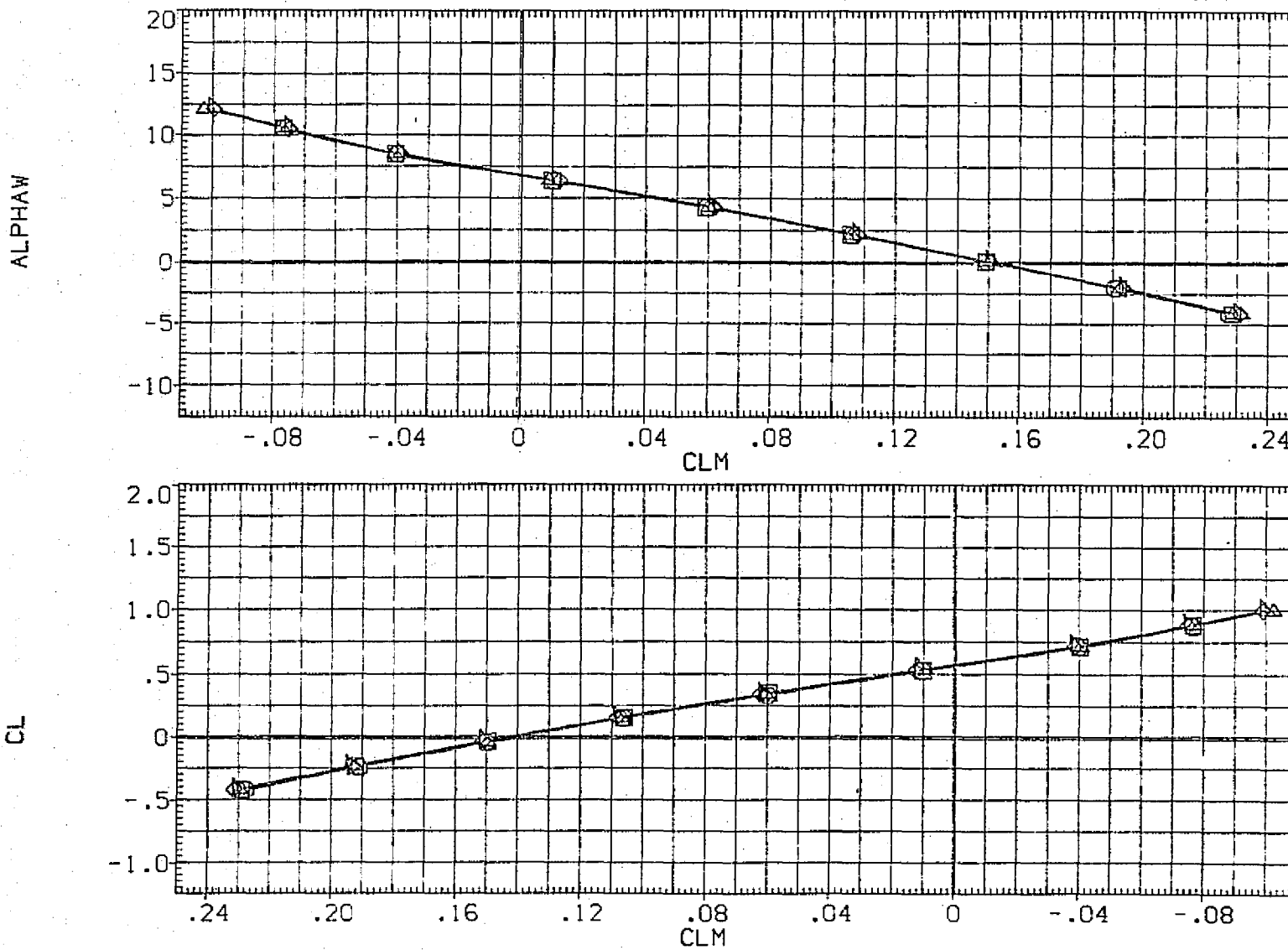


FIG. 69 RUDDER EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP168)	CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF	5500.0000	SG.FT.
(RGP177)	CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGP178)	CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGP179)	CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGP180)	CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

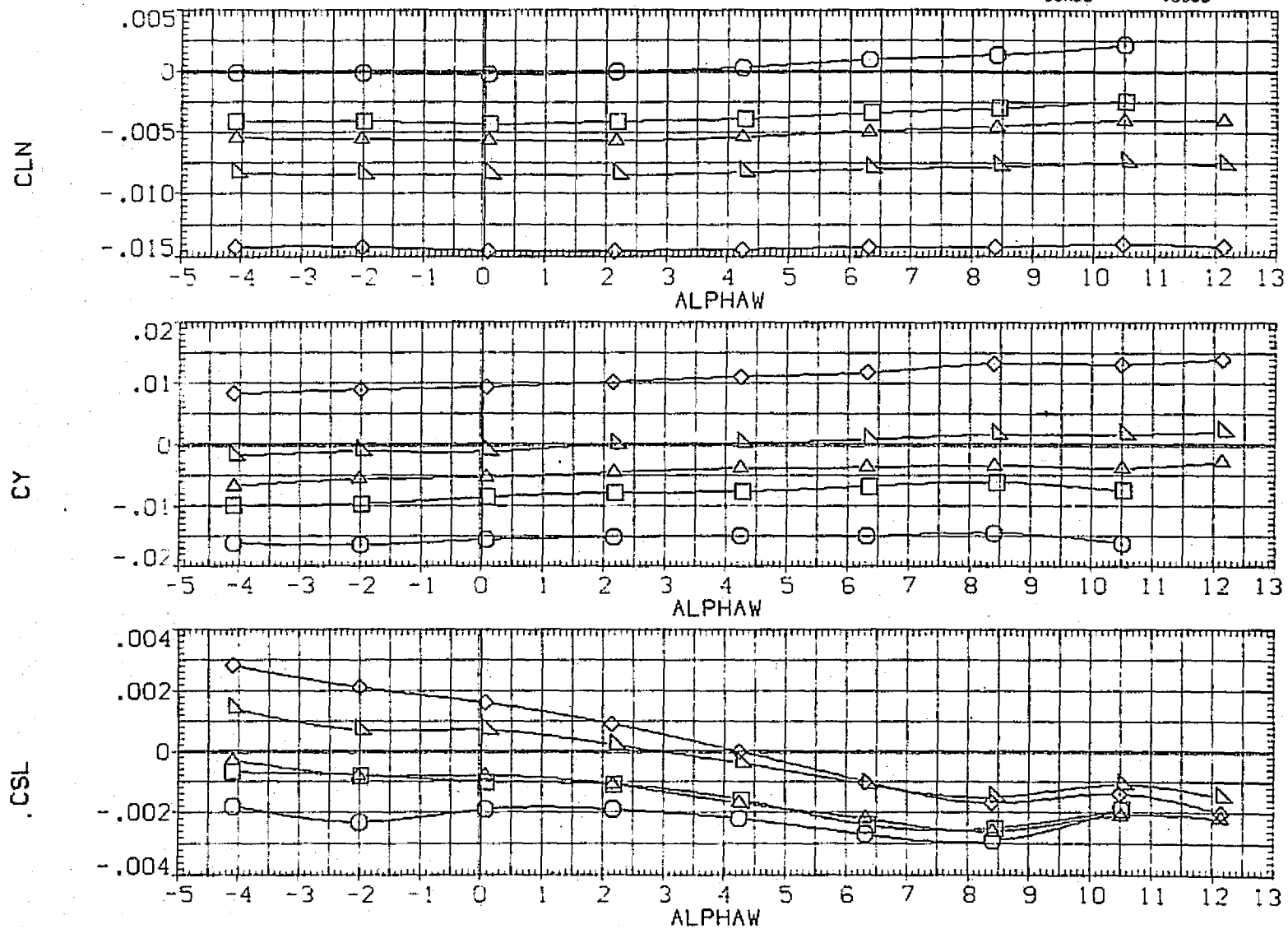


FIG. 69 RUDDER EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP169)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF 5500.0000 SQ.FT.
(RGP177)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	3.000	3.000	.000	.000	LREF 327.8000 IN.
(RGP178)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF 2348.0000 IN.
(RGP179)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	10.000	.000	.000	XMRP 1339.9000 IN. XC
(RGP180)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	.000	.000	.000	YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

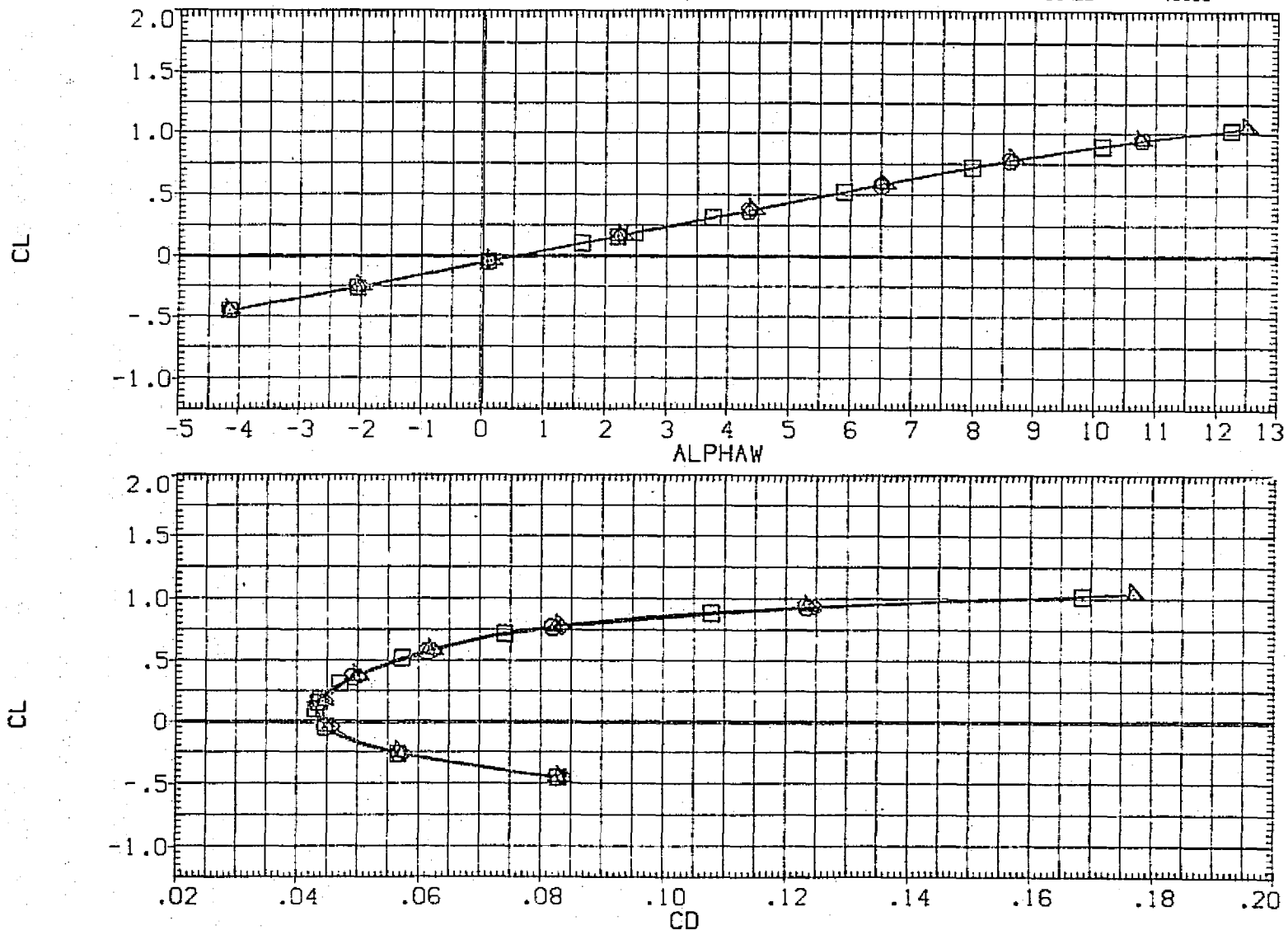


FIG. 69 RUDDER EFFECTIVENESS, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION		
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	.000	.000	.000	.000	SREF	5500.0000	50.FT.
(RGP177)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGP178)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGP179)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGP180)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

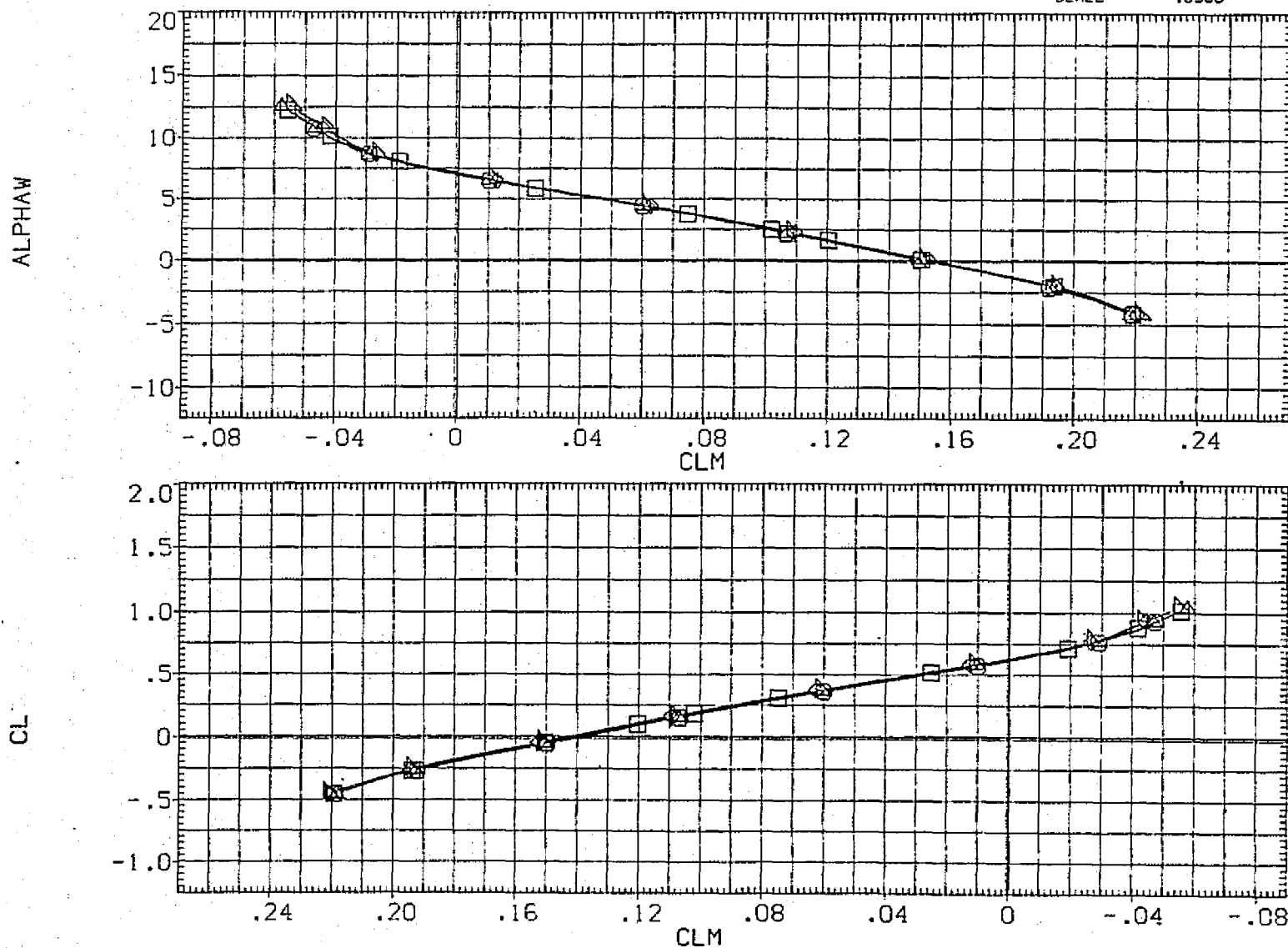


FIG. 69 RUDDER EFFECTIVENESS, FERRY, 10RB 4.25
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF	5500.0000	50.FT.
(RGP177)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	3.000	3.000	.000	.000	LREF	327.8000	IN.
(RGP178)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF	2348.0000	IN.
(RGP179)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	10.000	.000	.000	XMRP	1339.9000	IN. XC
(RGP180)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	.000	.000	.000	YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

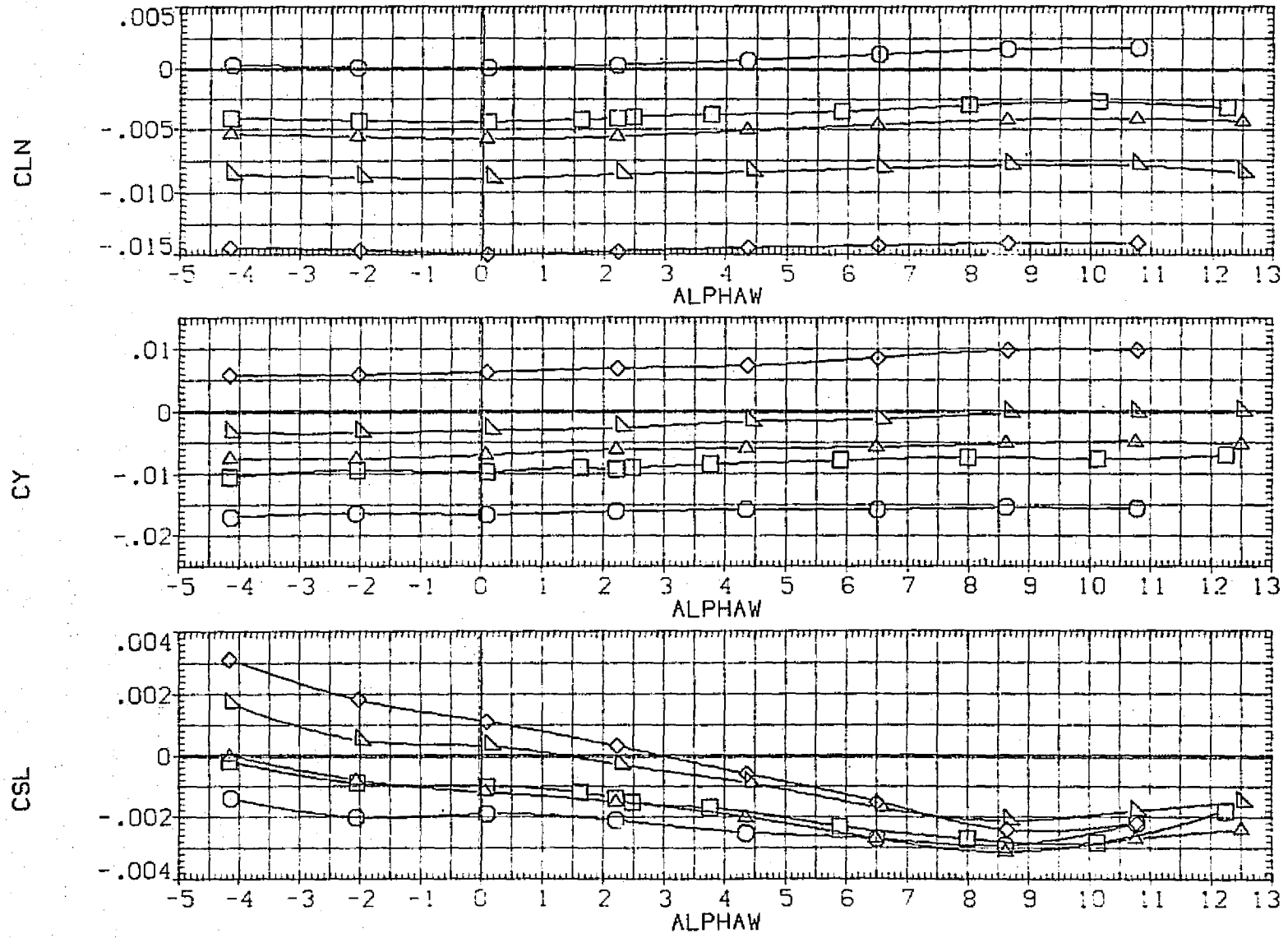


FIG. 69 RUDDER EFFECTIVENESS, FERRY, 10RB 4.25
 (B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	ICRB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP183)	CA6 K2H15.6.IV9.I51-12 A1112 /1111.ICRB TC4	-.100	4.250	-9.566	-10.017	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.IV9.I51-12 A1112 /1111.ICRB TC4	-.060	4.250	.000	.000	LREF 327.8000 IN.
(RGP182)	CA6 K2H15.6.IV9.I51-12 A1112 /1111.ICRB TC4	-.100	4.250	9.720	9.950	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

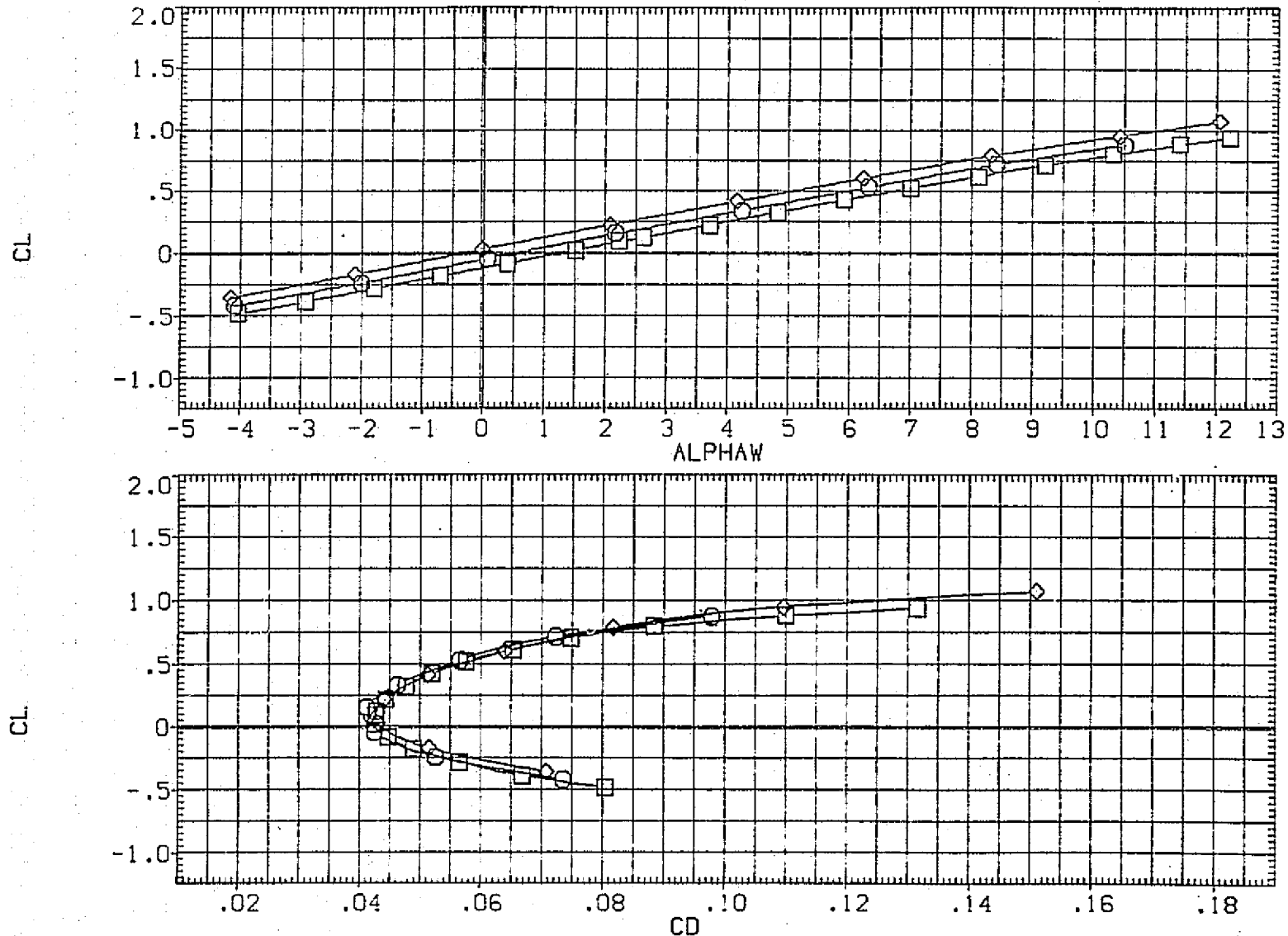


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, ICRB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
{ RGP183 }	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	-9.566	-10.017	SREF	5500.0000	SC.FT.
{ R.P168 }	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	LREF	327.8000	IN.
{ RGP182 }	◇ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	9.720	9.950	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

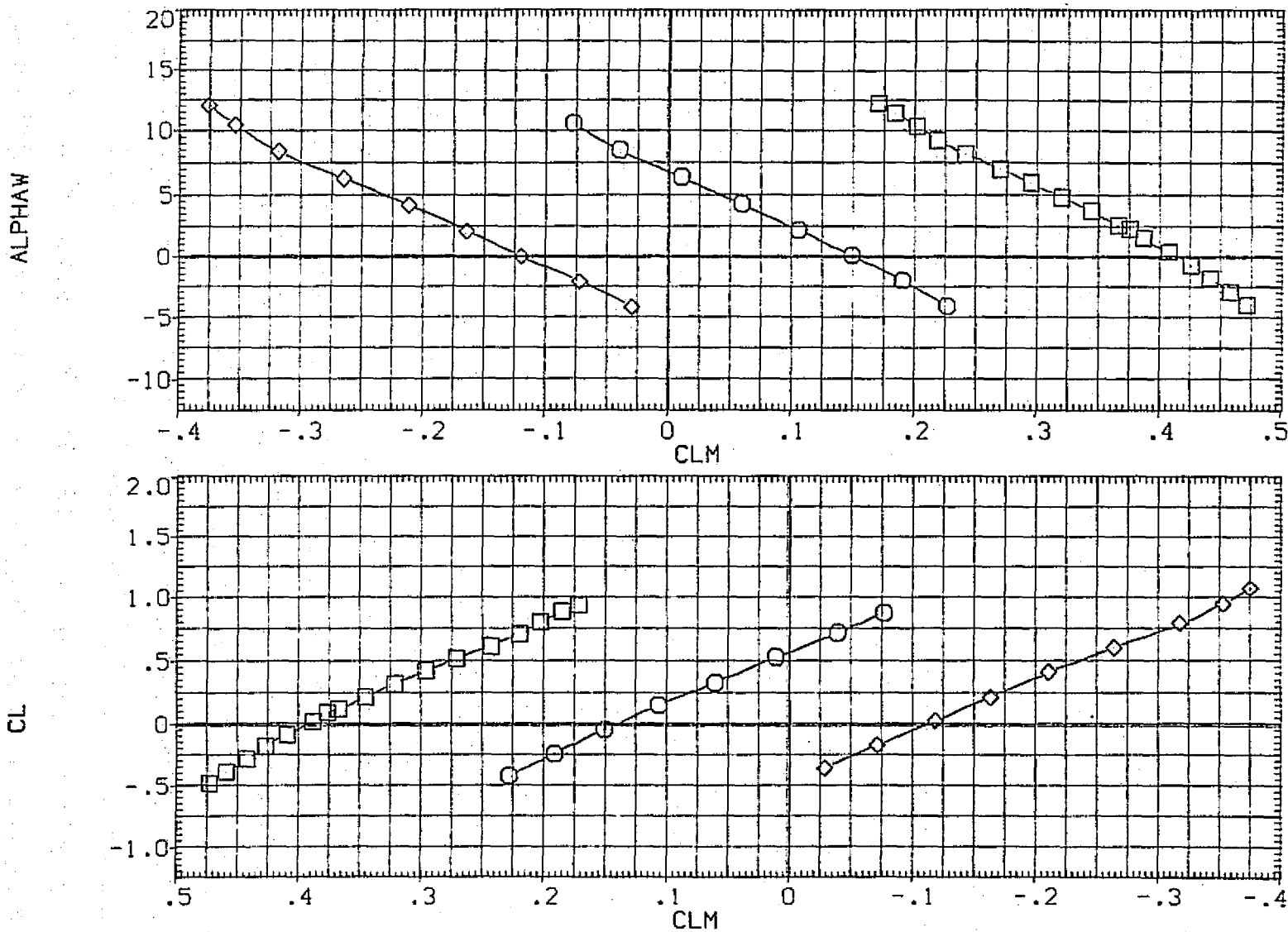


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION		
(RGP183)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.100	4.250	-9.566	-10.017	SREF	5500.0000	50.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	LREF	327.8000	IN.
(RGP182)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.100	4.250	9.720	9.950	BREF	2348.0000	IN.
						XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

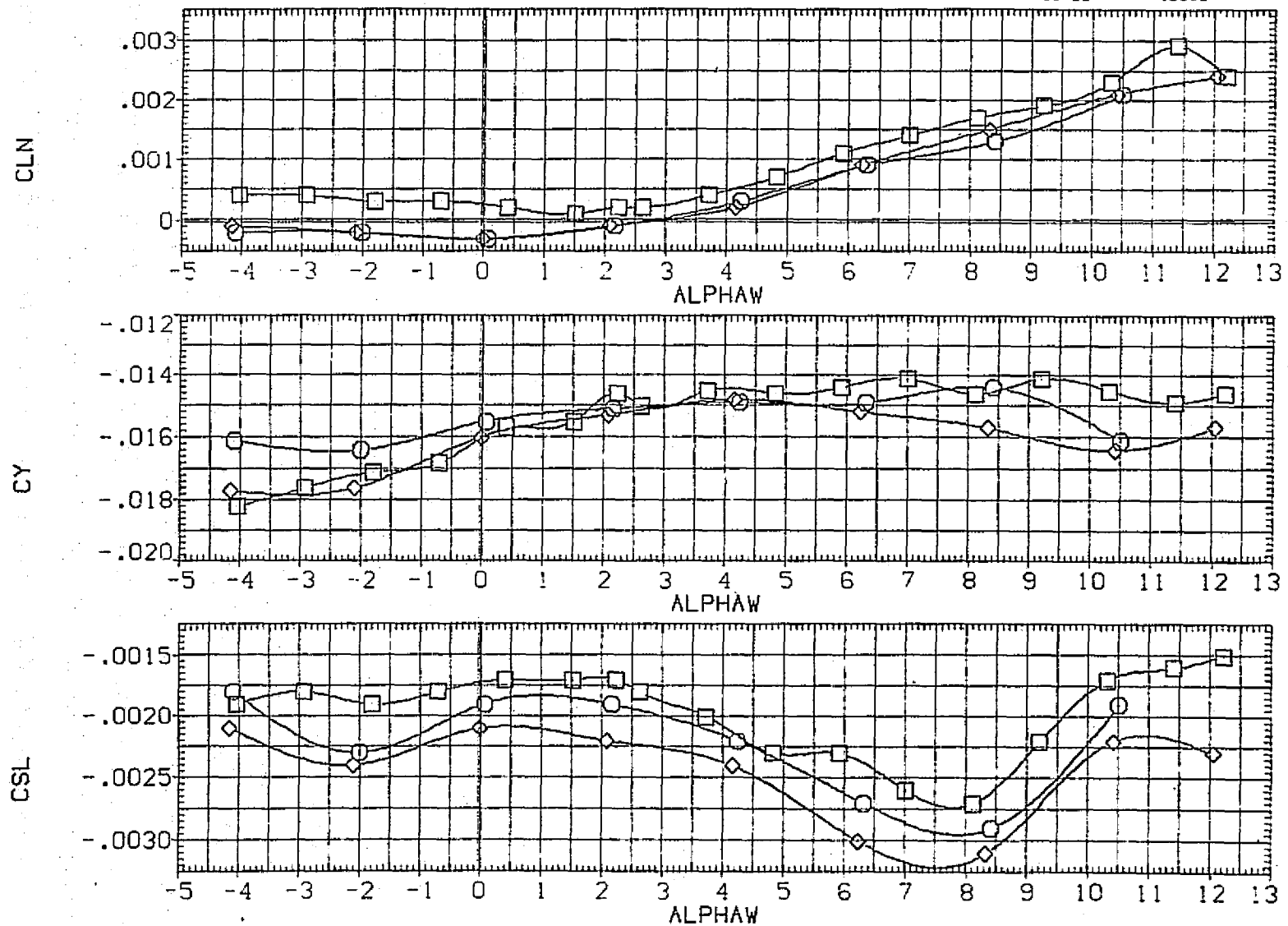


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION
(RGP183)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	-9.566	-10.017	SREF 5500.0000 SQ.FT.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	LREF 327.8000 IN.
(RGP182)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	9.720	9.950	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

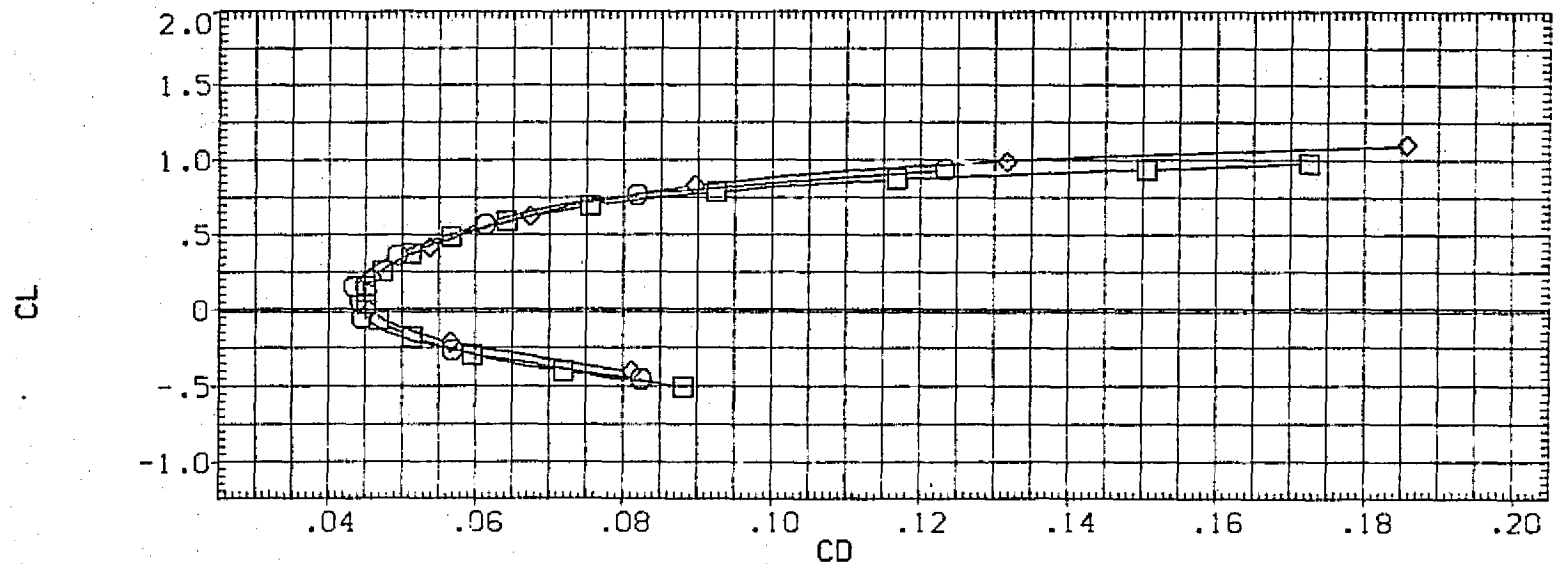
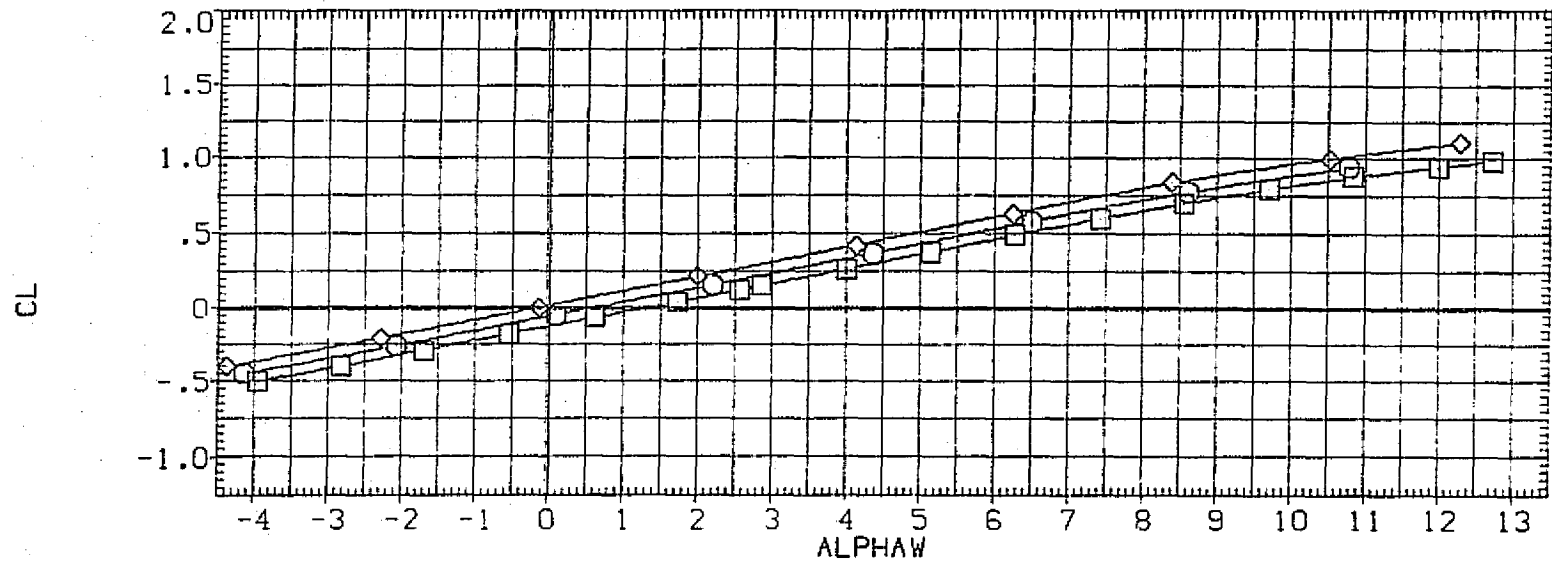


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP183)	□ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	-9.566	-10.017	SREF 5500.0000 SQ.FT.
(RGP168)	○ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	LREF 327.8000 IN.
(RGP182)	◇ CA6 K2H15.6.1.9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	9.720	9.950	BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

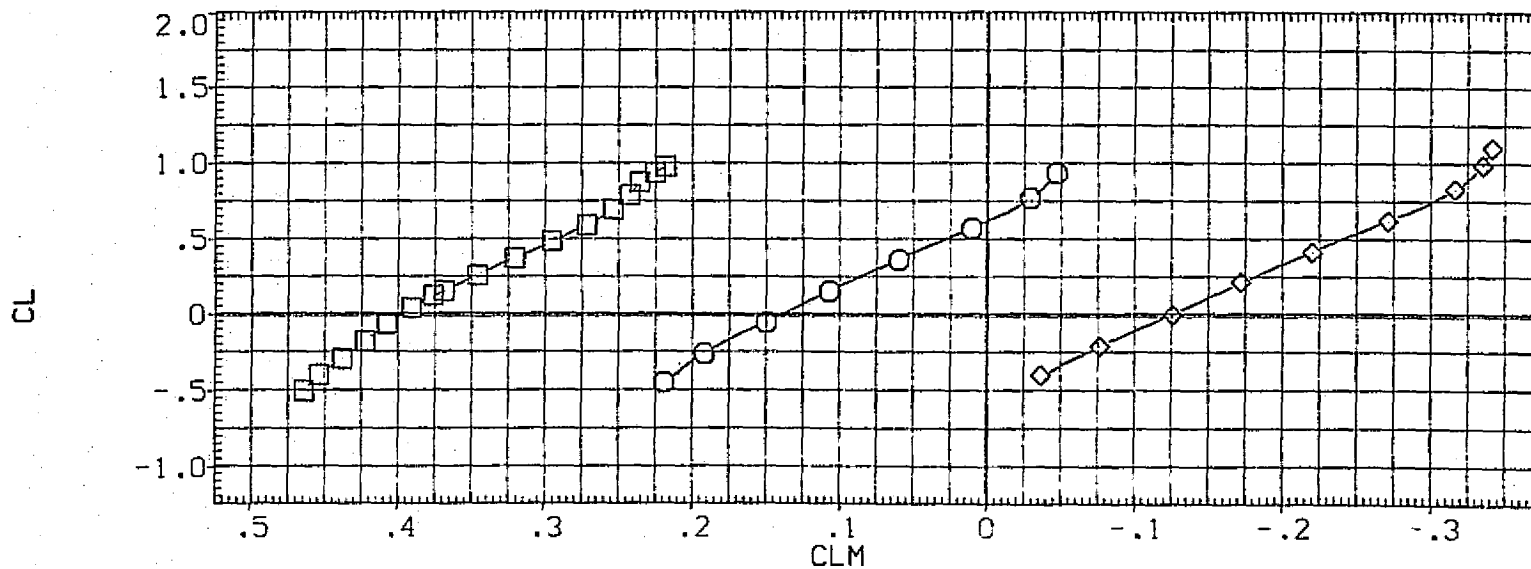
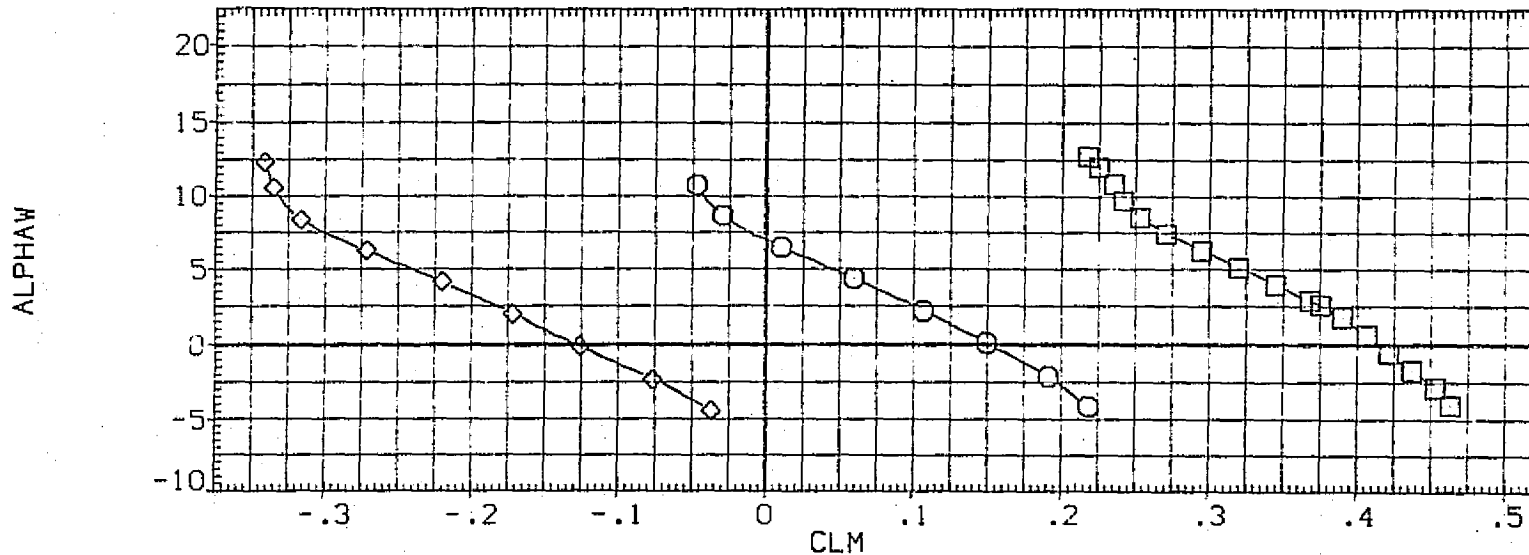


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP1B3)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	-9.566	-10.017	SREF	5500.0000 SQ.FT.
(RGP1B8)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	LREF	327.8000 IN.
(RGP1B2)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.100	4.250	9.720	9.950	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

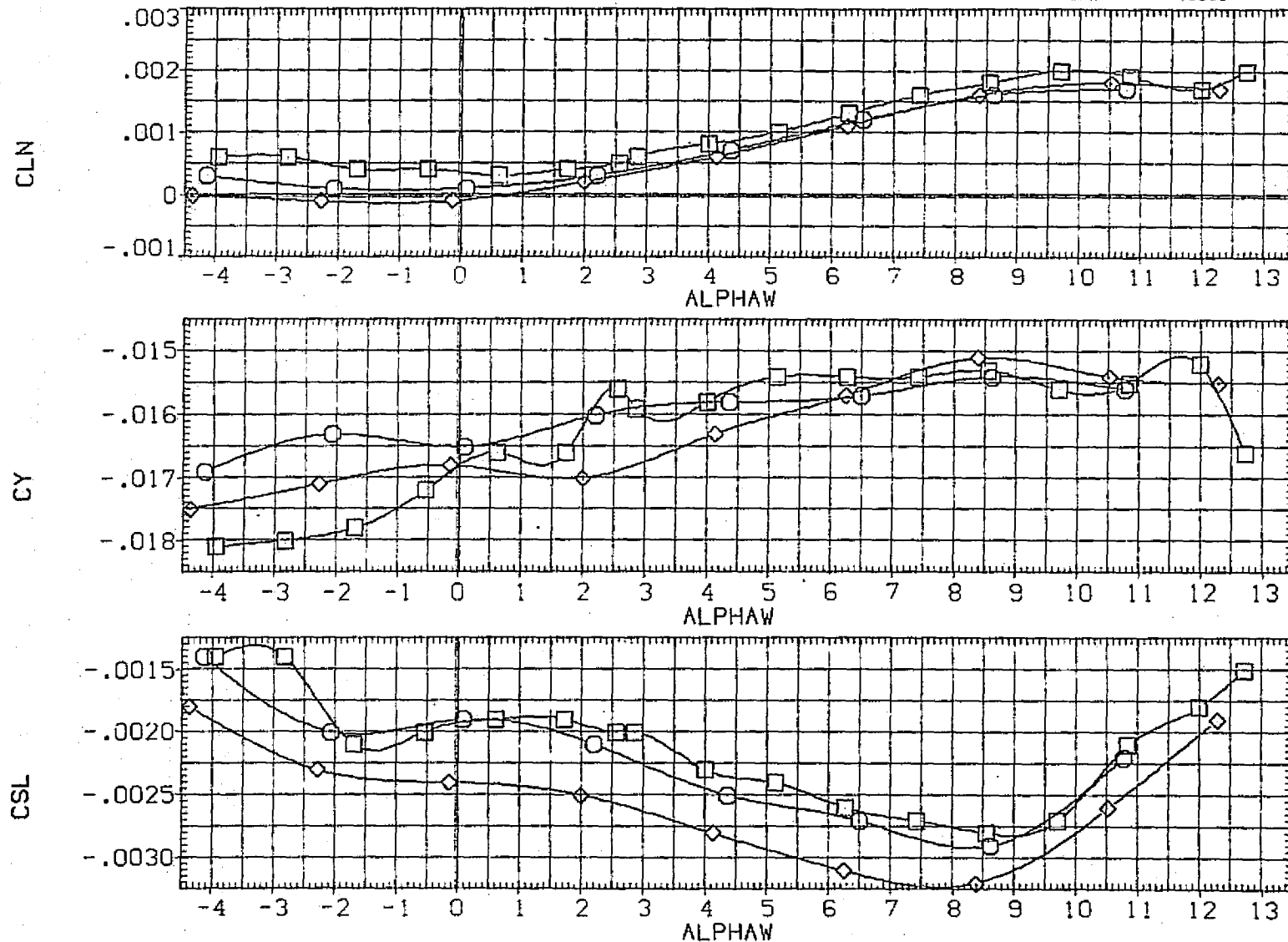


FIG. 70 ELEVATOR EFFECTIVENESS, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.1ORB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

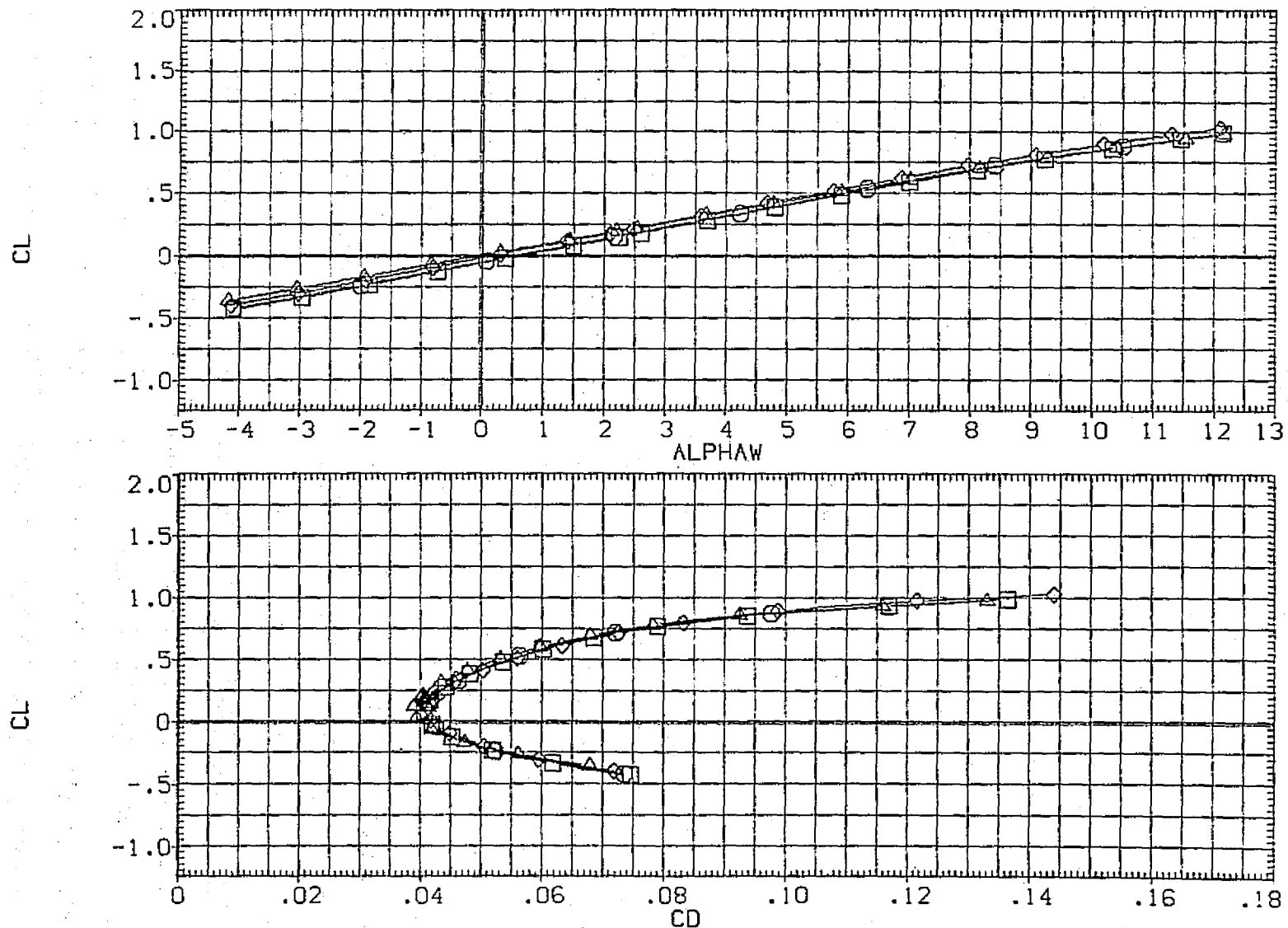


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	10RB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.10RB TC4		4.250			SREF	5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-1.010	4.250	.000	.000	LREF	327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	BREF	2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	1.970	4.250	.000	.000	XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

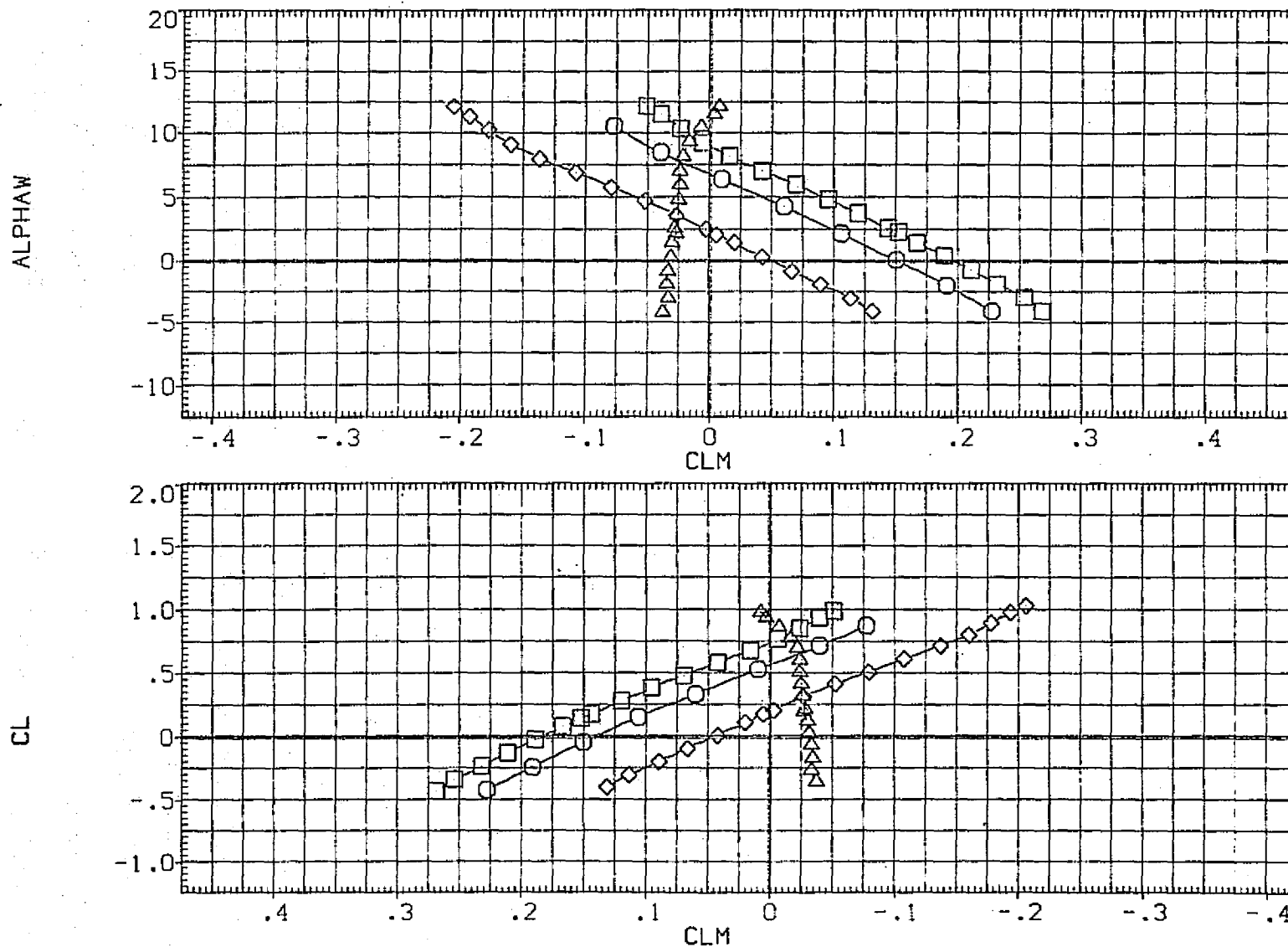


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, 10RB 4.25

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.1ORB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

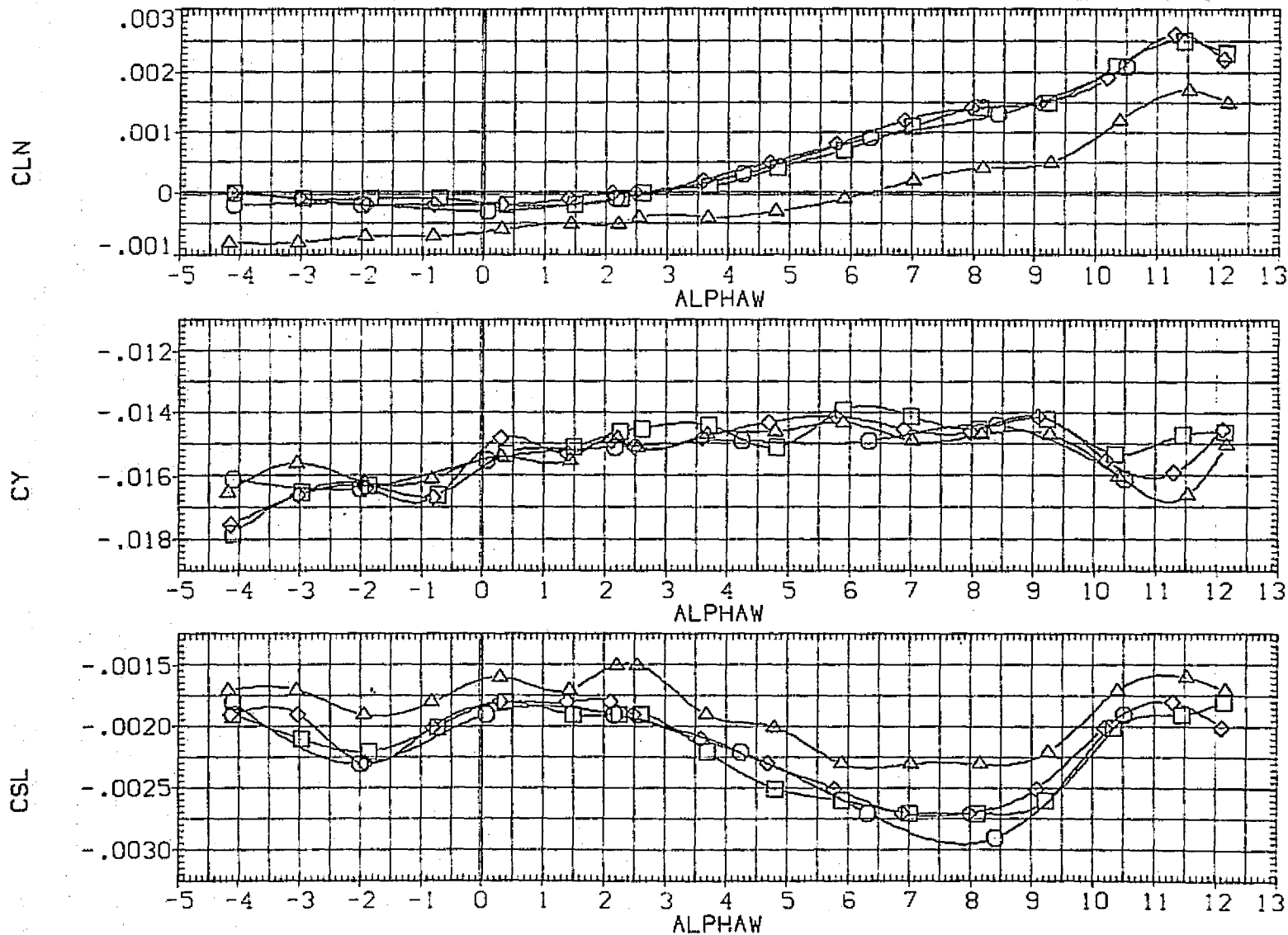


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25

(A)MACH = .30

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
[RGP190]	△	CA6	K2 V9.1SI-12 AT112 /111.10RB TC4		4.250			SREF	5500.0000	SQ.FT.
[RGP184]	□	CA6	K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	-1.010	4.250	.000	.000	LREF	327.8000	IN.
[RGP168]	○	CA6	K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	BREF	2348.0000	IN.
[RGP185]	◇	CA6	K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	1.970	4.250	.000	.000	XMRP	1339.9000	IN. XC
								YMRP	.0000	IN. YC
								ZMRP	190.7700	IN. ZC
								SCALE	.0300	

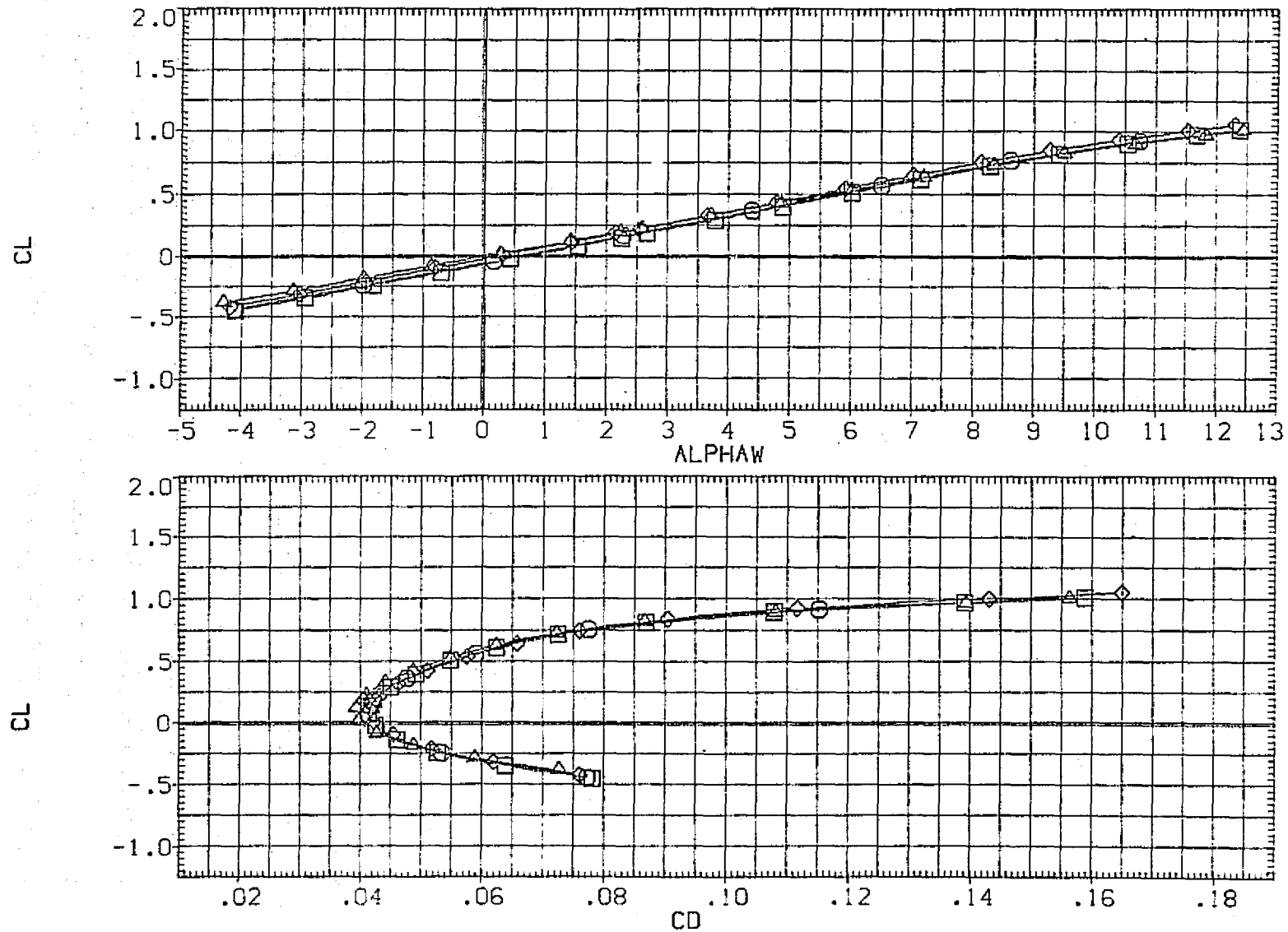


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.1ORB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

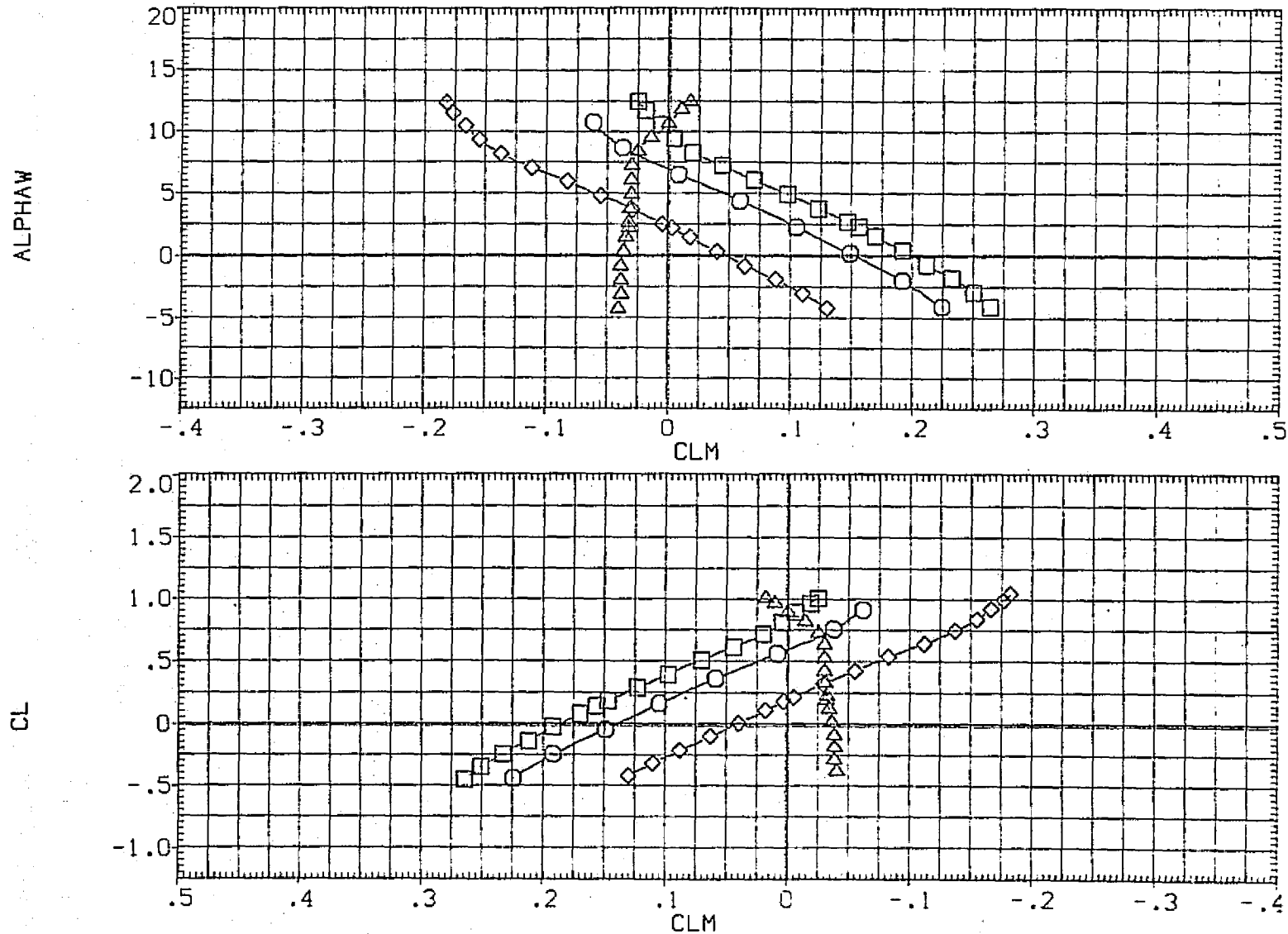


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25
 (B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.1ORB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

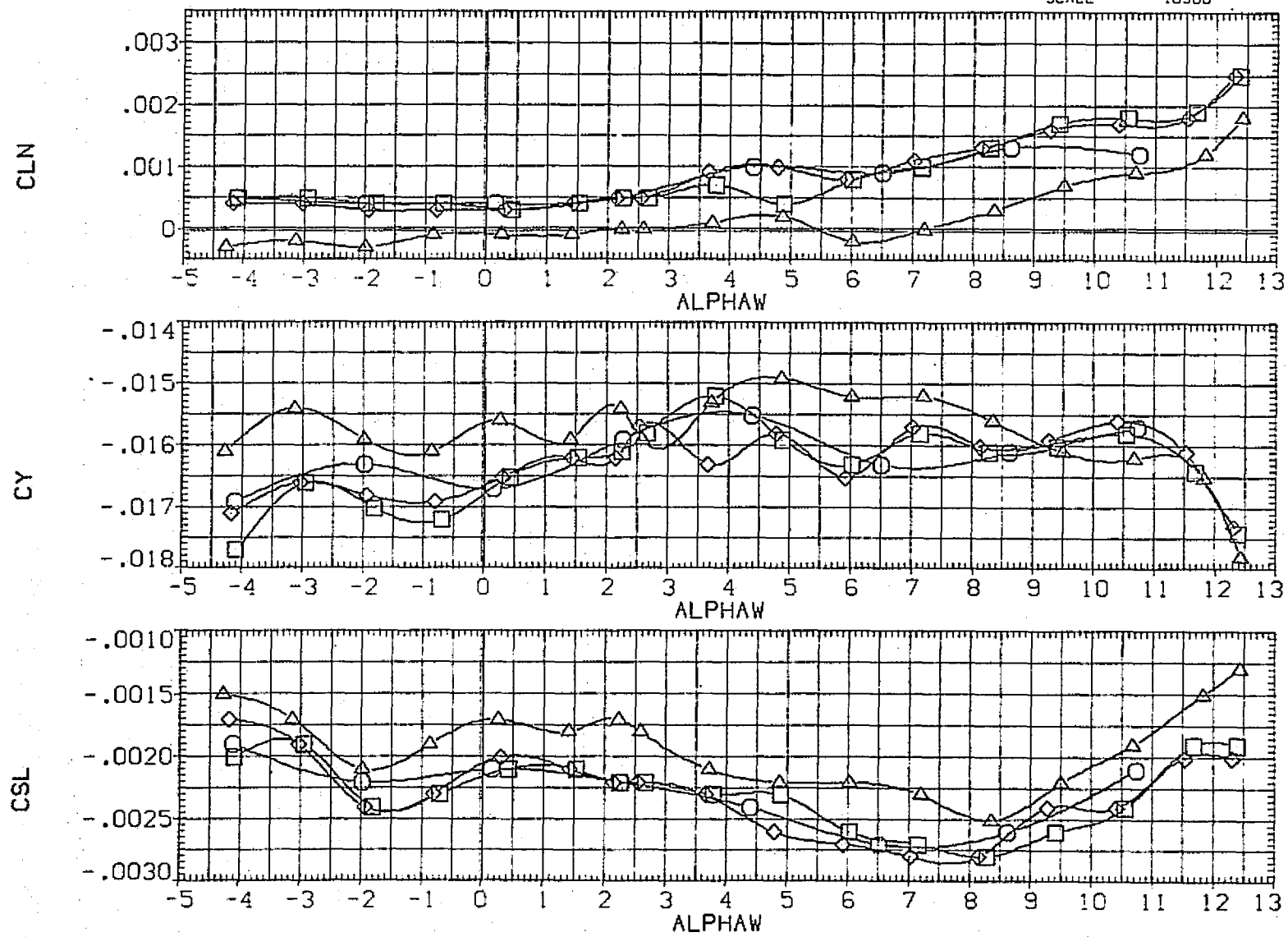


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25
(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP190) \triangle	CA6 K2 V9.1S1-12 AT112 /111.10RB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184) \square	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP188) \circ	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185) \diamond	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

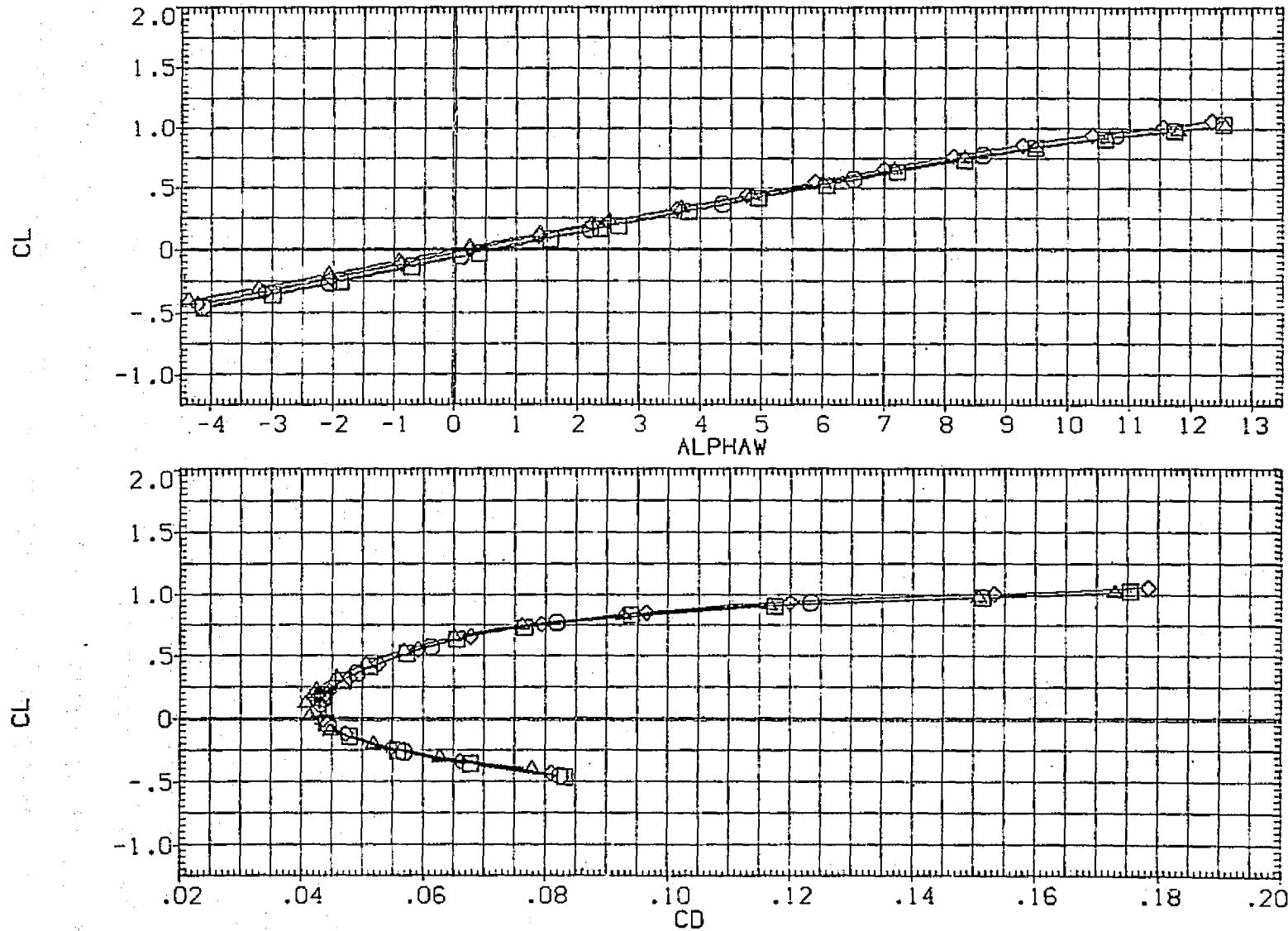


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25
(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP190)	CA6 K2 V9.1S1-12 AT112 /111.1ORB TC4		4.250			SREF 5500.0000 SQ.FT.
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
(RGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
(RGP185)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

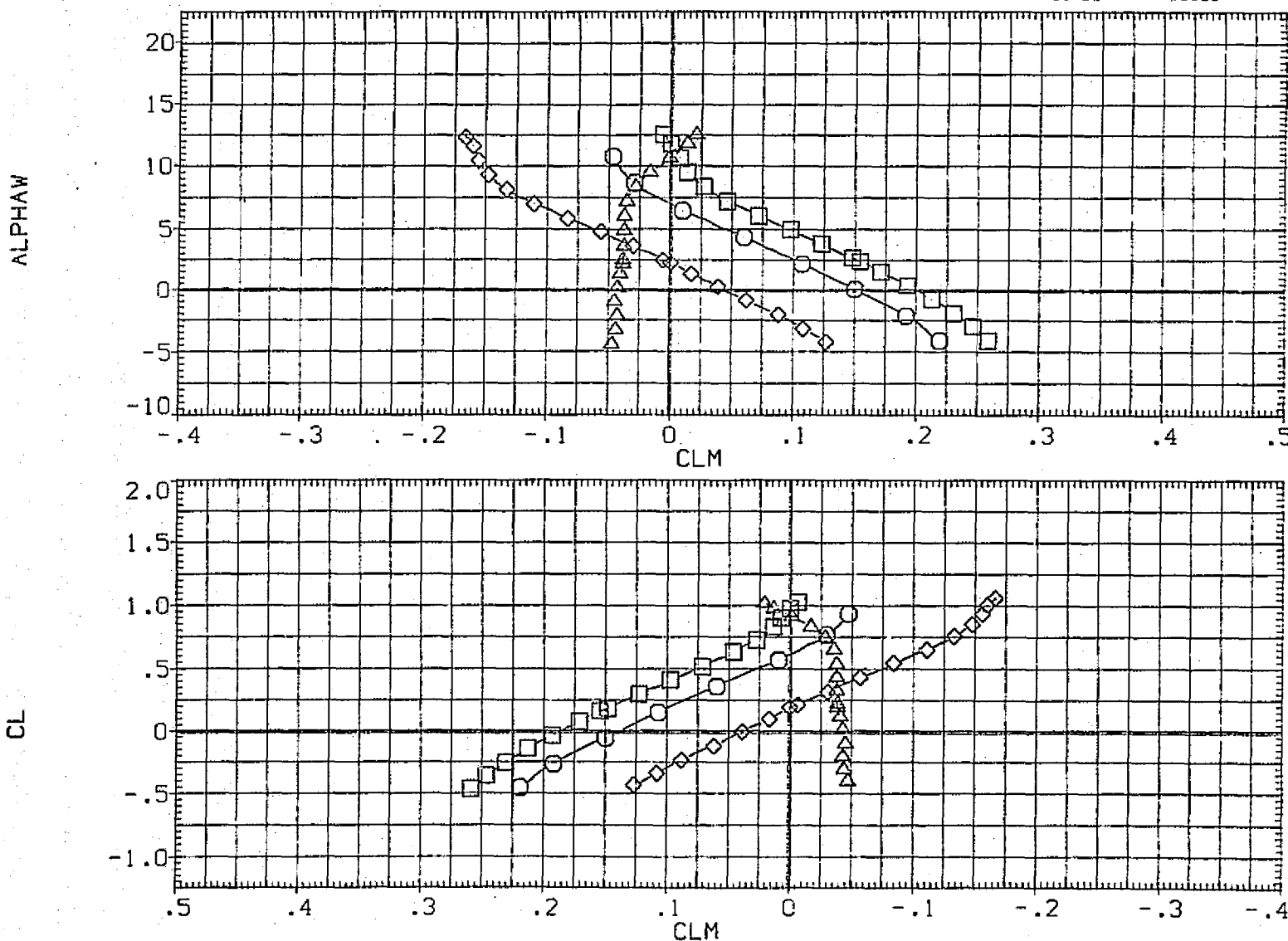


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
{RGP190}	CA6 K2 V9.1S1-12 AT112 /111.10RB TC4		4.250			SREF 5500.0000 SQ.FT.
{RGP184}	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-1.010	4.250	.000	.000	LREF 327.8000 IN.
{RGP168}	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	4.250	.000	.000	BREF 2348.0000 IN.
{RGP185}	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	1.970	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

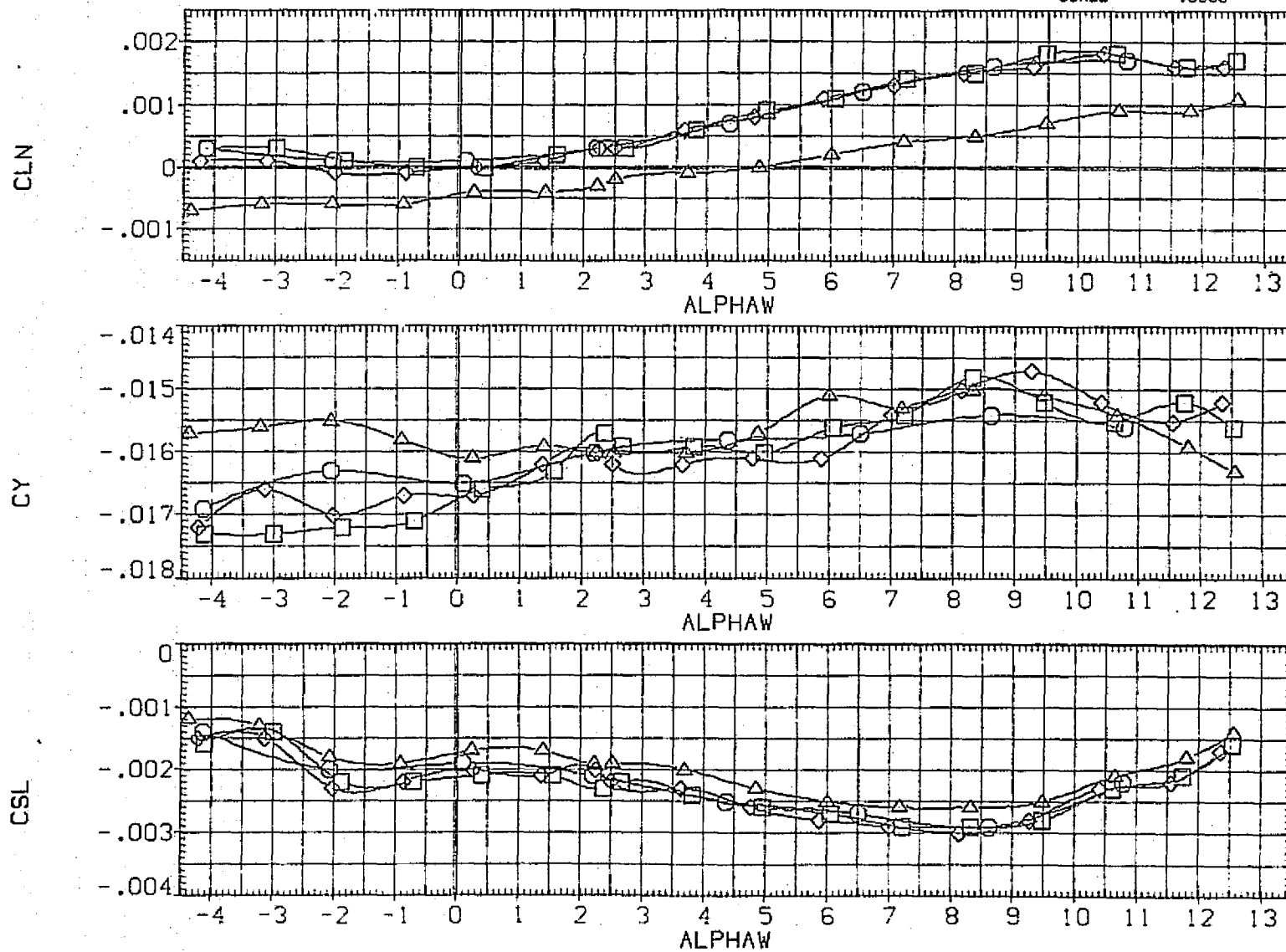


FIG. 71 STABILIZER EFFECTIVENESS, FERRY, IORB 4.25

(C)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP187)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP186)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	.000	.000	XMRP 1339.9000 IN. XC	
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

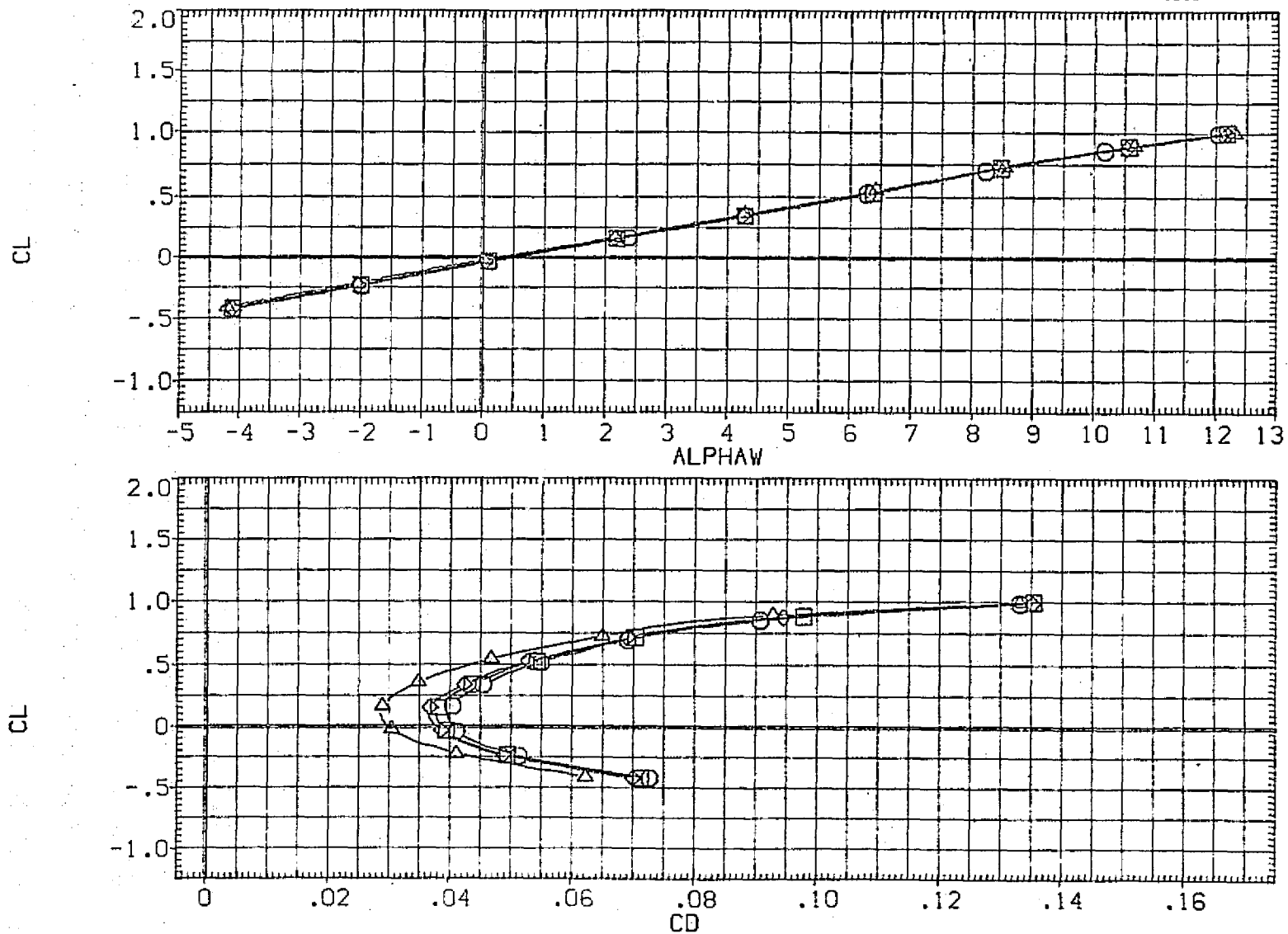


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP187)	□ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.,
(RGP186)	○ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	◇ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	△ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

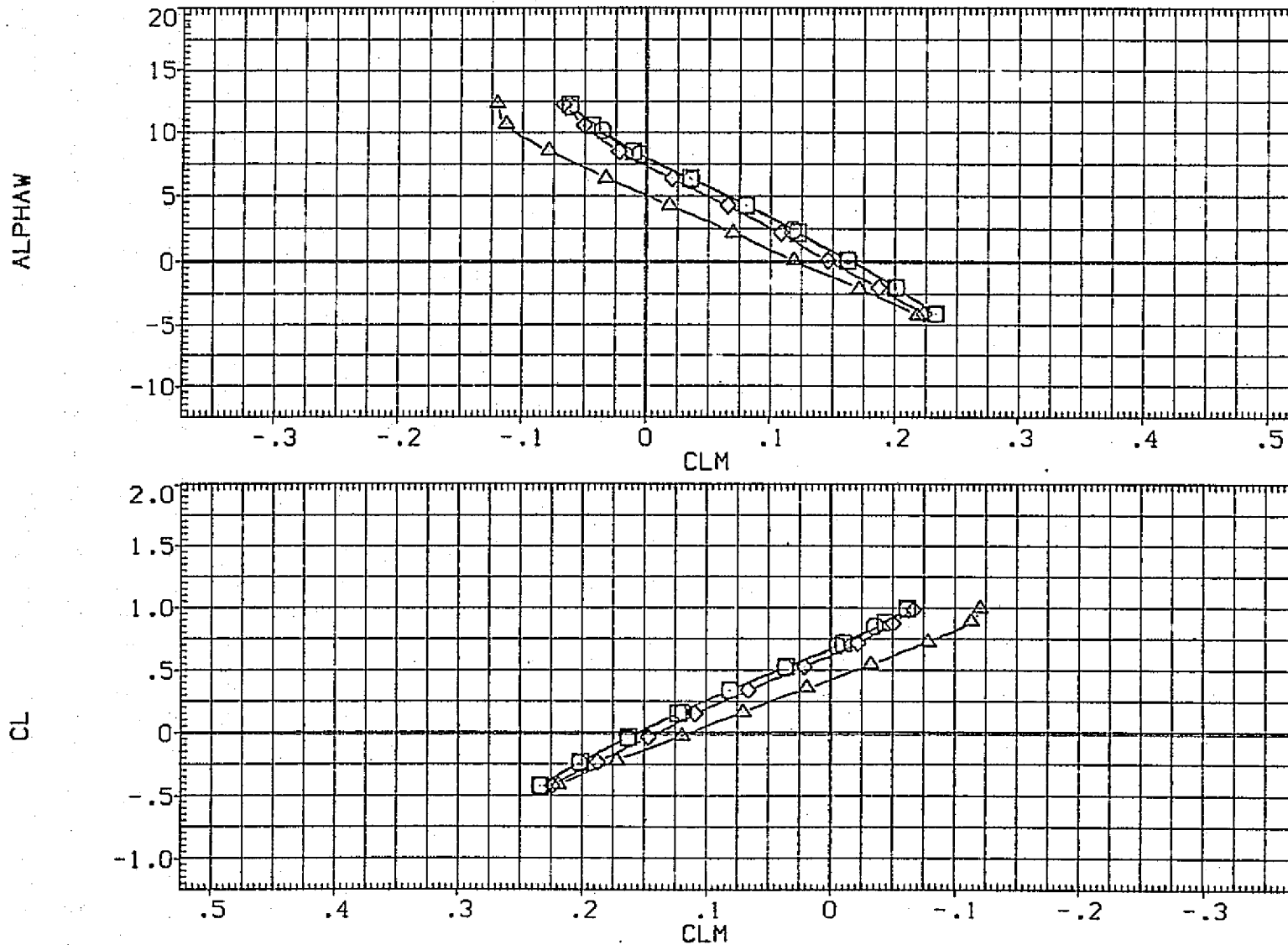


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP187)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP186)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

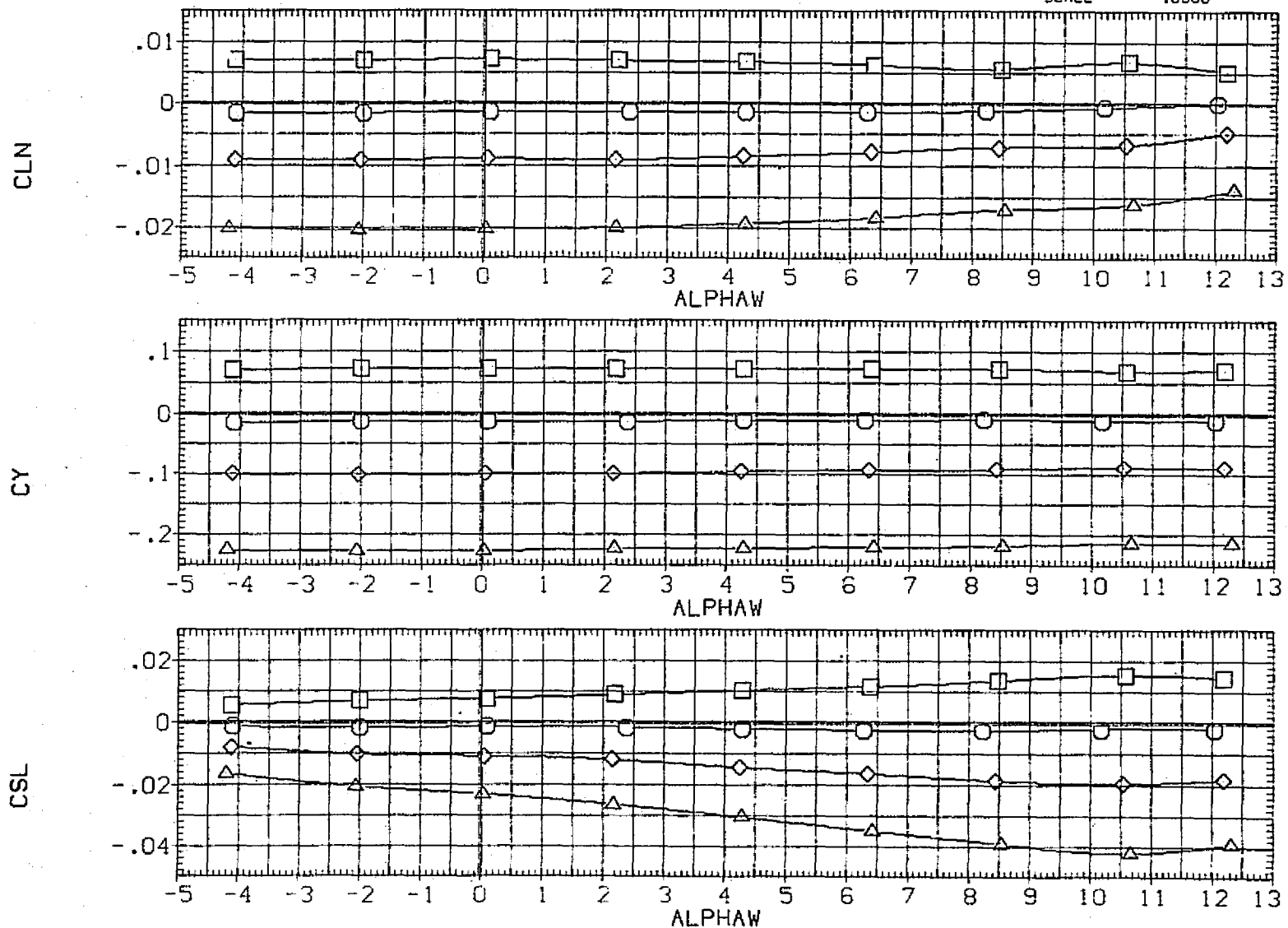


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP187)	□ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP186)	○ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	◇ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	△ CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

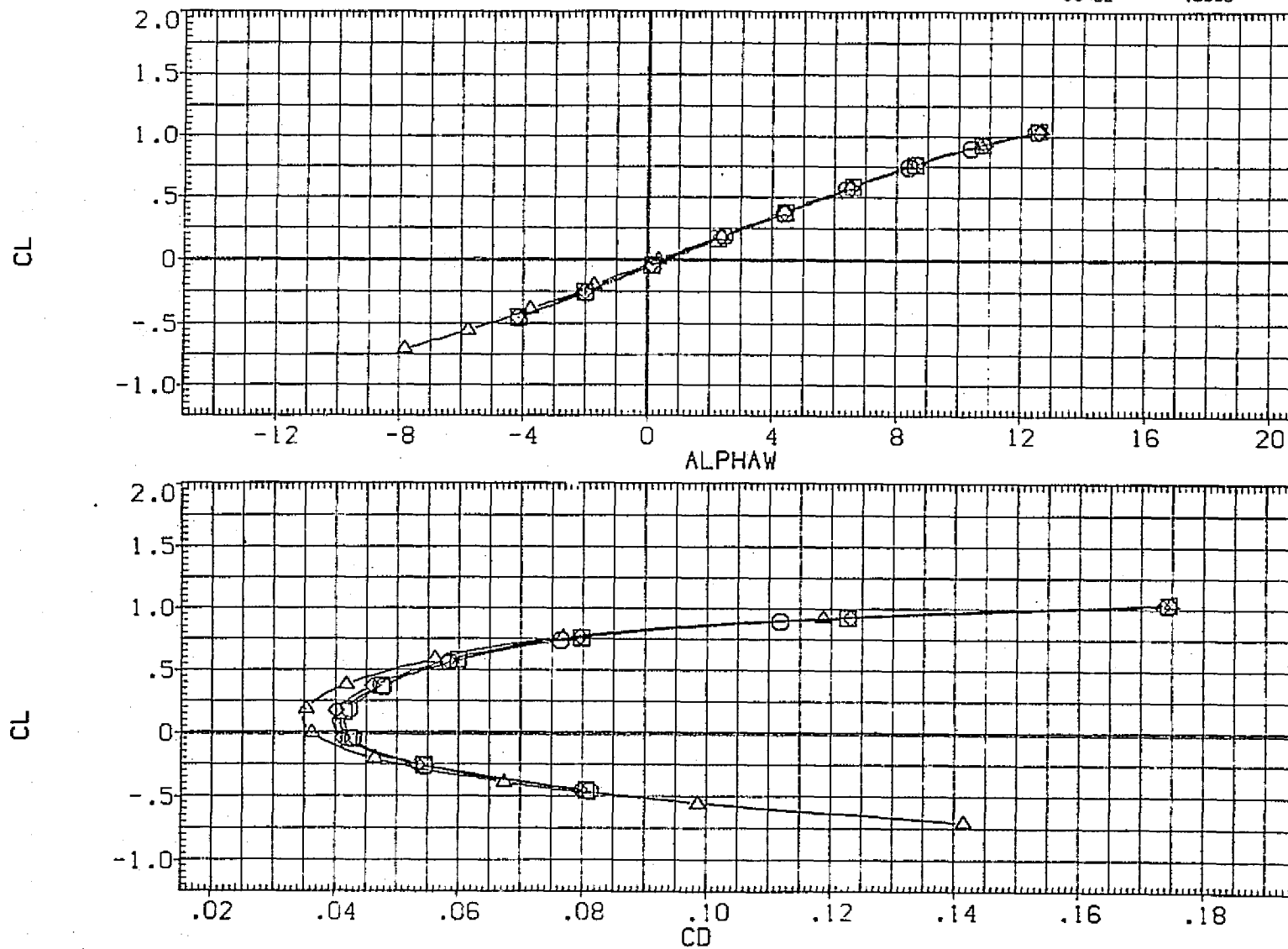


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION
(RGP187)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP186)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

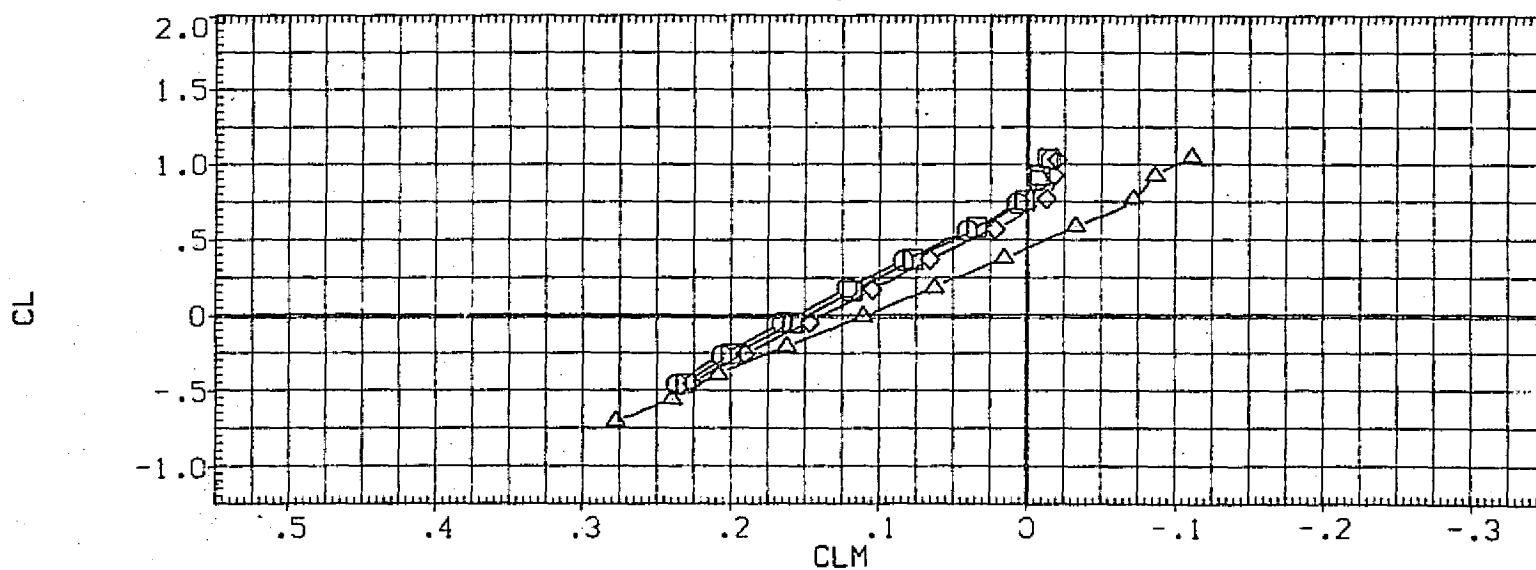
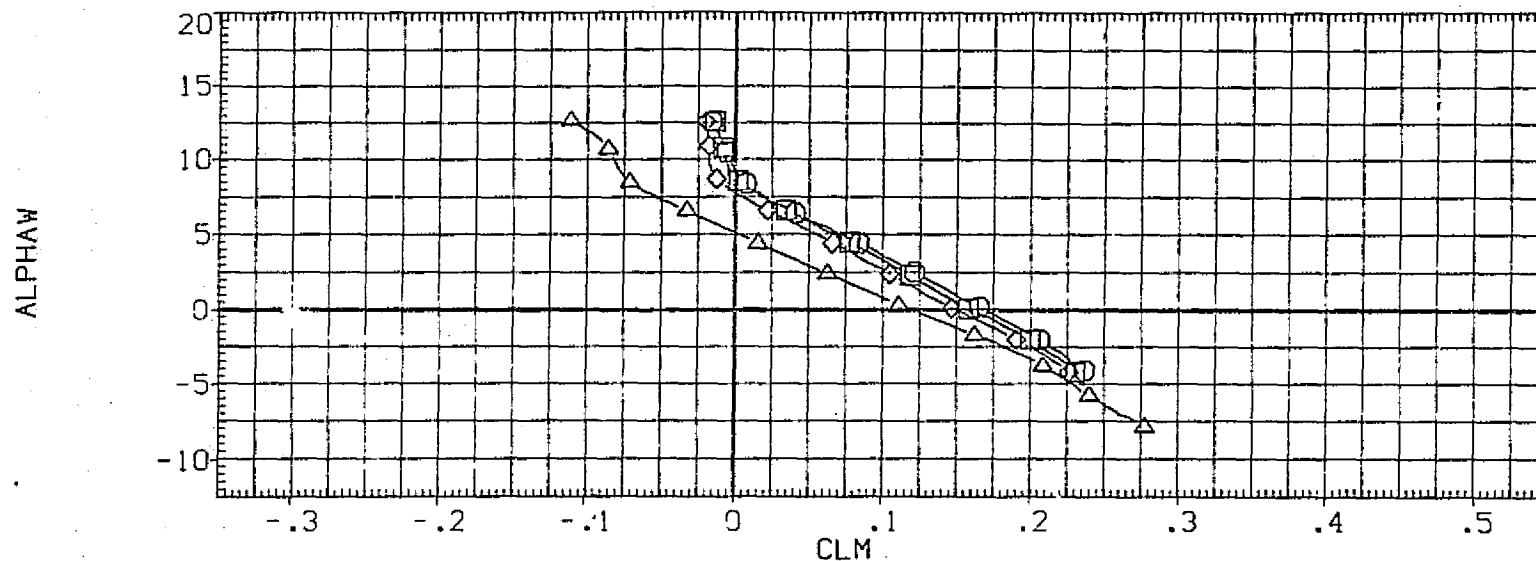


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25

(B)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP187)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP186)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP188)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP189)	CA6 K2H15.1 S1-12 AT112 /111.10RB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

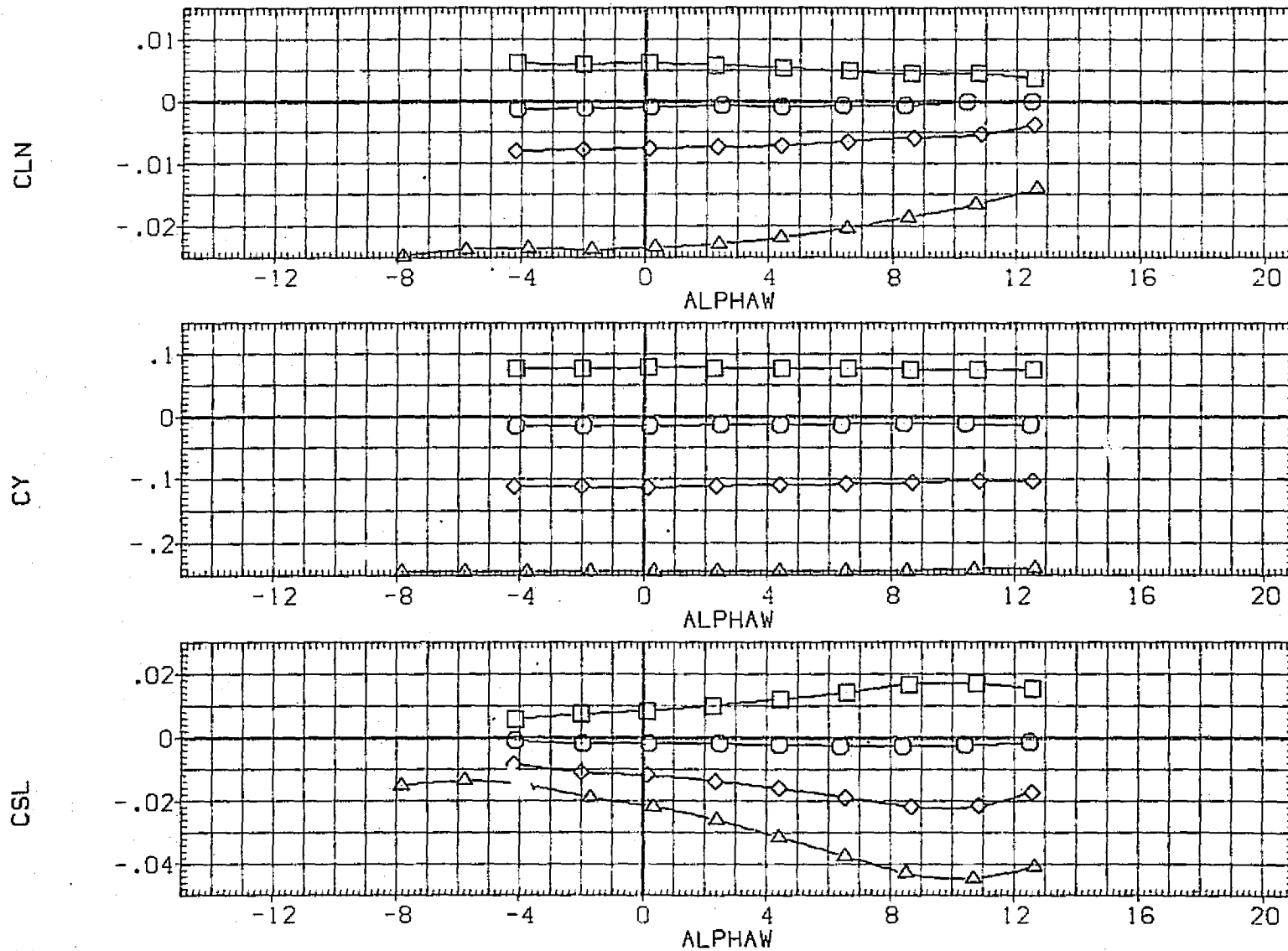


FIG. 72 ALL VERTICAL TAILS OFF, FERRY, IORB 4.25
(8)MACH = .60

CA6 K2

V9.1S1-12 AT112 /111.10RB TC4 (RGP190)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	RUD-U	.000	RUD-L	.000
□	.500	BETA	.000	SPOILR	.000
◇	.600	.000	IORB	4.250	

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

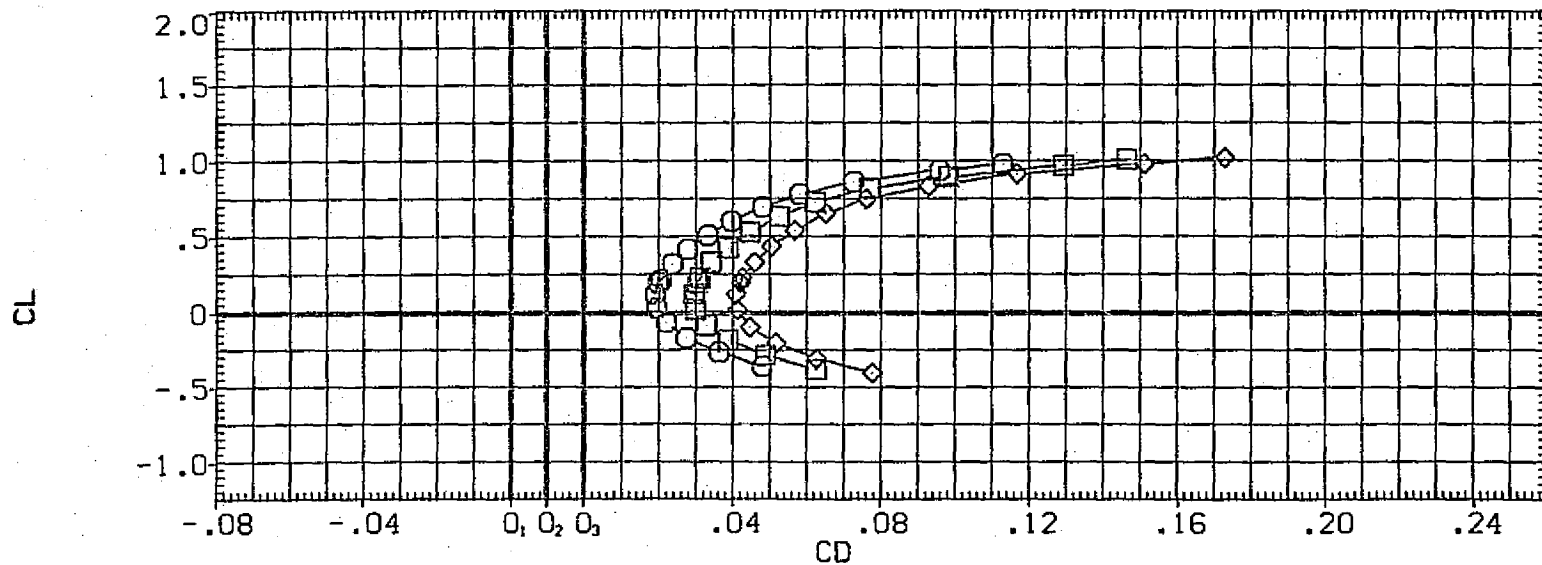
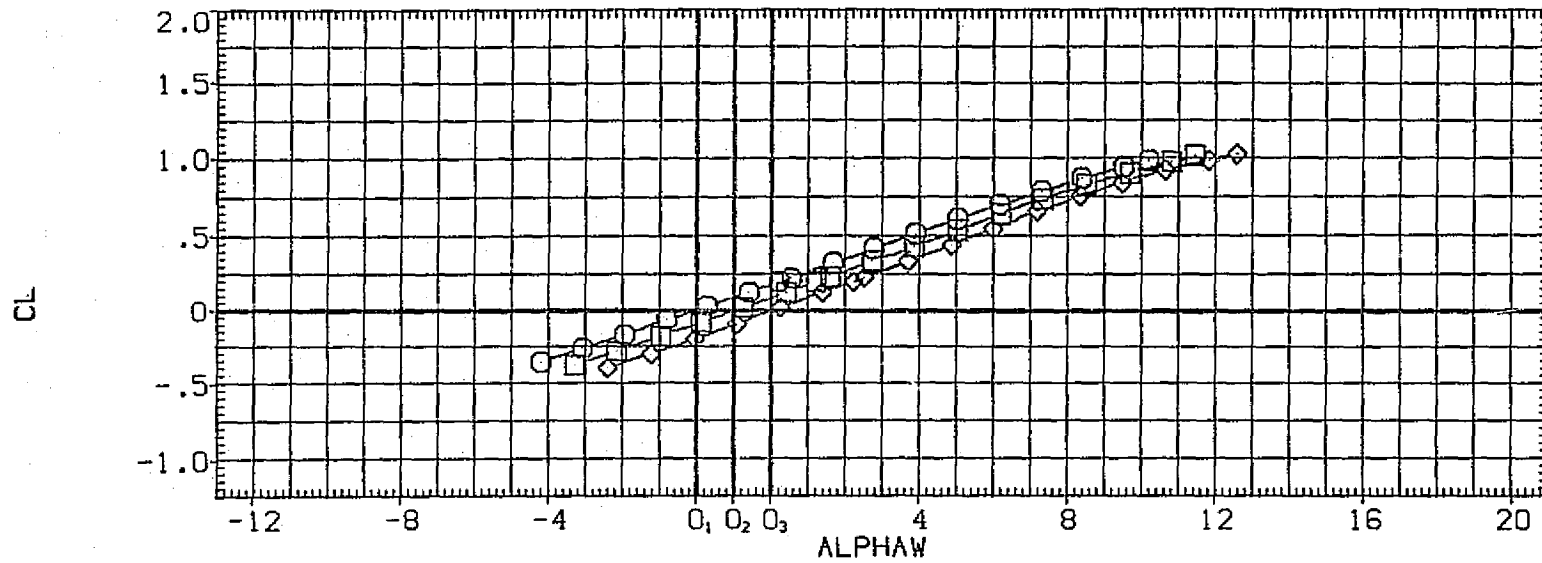


FIG. 73 HORIZONTAL TAIL OFF, FERRY, IORB 4.25

CA6 K2

V9.1S1-12 AT112 /111.10RB TC4 (RGP190)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	RUD-U	.000	RUD-L	.000
□	.500	BETA	.000	SPOILR	.000
◇	.600	ELEVON	.000	IORB	4.250

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

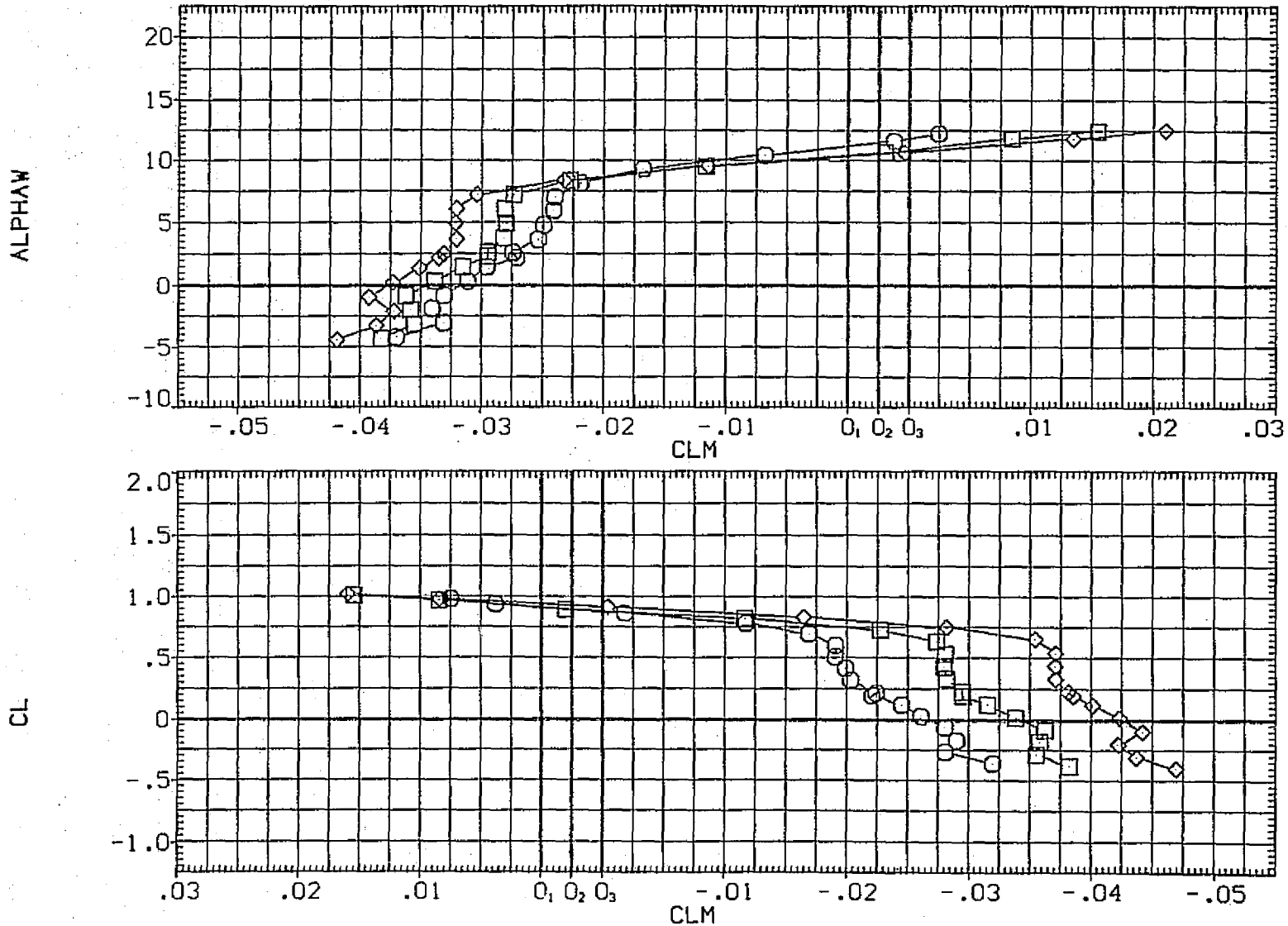


FIG. 73 HORIZONTAL TAIL OFF, FERRY, IORB 4.25

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.299	RUD-U .000 RUD-L .000	SREF 5500.0000 SQ.FT.
□	.500	BETA .000 SPOILR .000	LREF 327.8000 IN.
◇	.600	ELEVON .000 IORB 4.250	BREF 2348.0000 IN.
			XMRP 1339.9000 IN. XC
			YMRP .0000 IN. YC
			ZMRP 190.7700 IN. ZC
			SCALE .0300

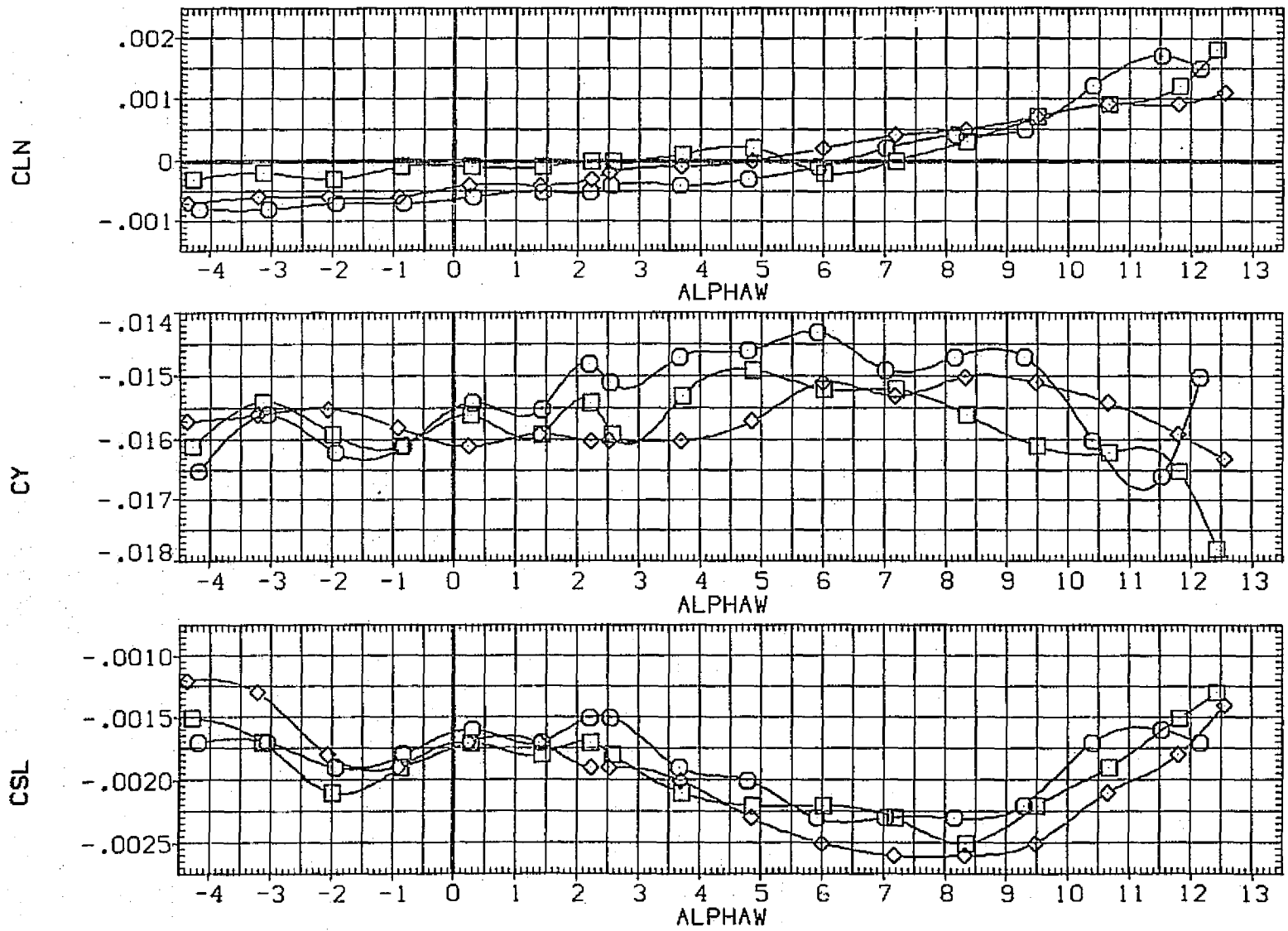


FIG. 73 HORIZONTAL TAIL OFF, FERRY, IORB 4.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP199)	□ CAS K2 V9.1S1-12 AT112 /111.10RB TC4		3.150	.000	SREF	5500.0000 SQ.FT.
(RGP192)	◇ CAS K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.040	3.150	.000	LREF	327.8000 IN.
(RGP248)	◇ CAS K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	1.930	3.150	.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

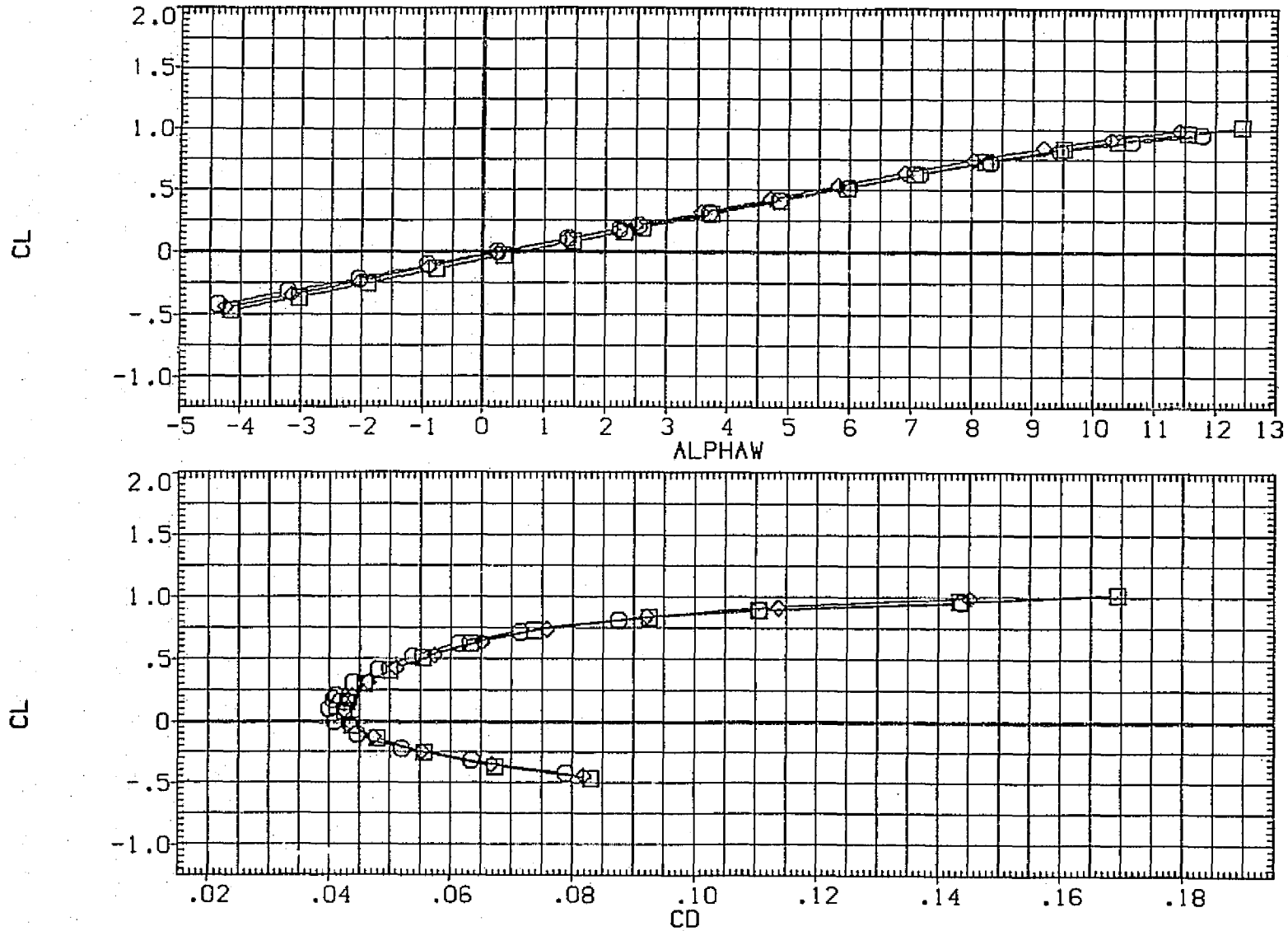


FIG. 74 STABILIZER EFFECTIVENESS, FERRY, IORB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION	
(RGP199)	CA6 K2 V9.I51-12 AT112 /111.10RB TC4		3.150	.000	SREF	5500.0000 SQ.FT.
(RGP192)	CA6 K2H15.6.1V9.I51-12 AT112 /111.10RB TC4	-.040	3.150	.000	LREF	327.8000 IN.
(RGP248)	CA6 K2H15.6.1V9.I51-12 AT112 /111.10RB TC4	1.930	3.150	.000	BREF	2348.0000 IN.
					XMRP	1339.9000 IN. XC
					YMRP	.0000 IN. YC
					ZMRP	190.7700 IN. ZC
					SCALE	.0300

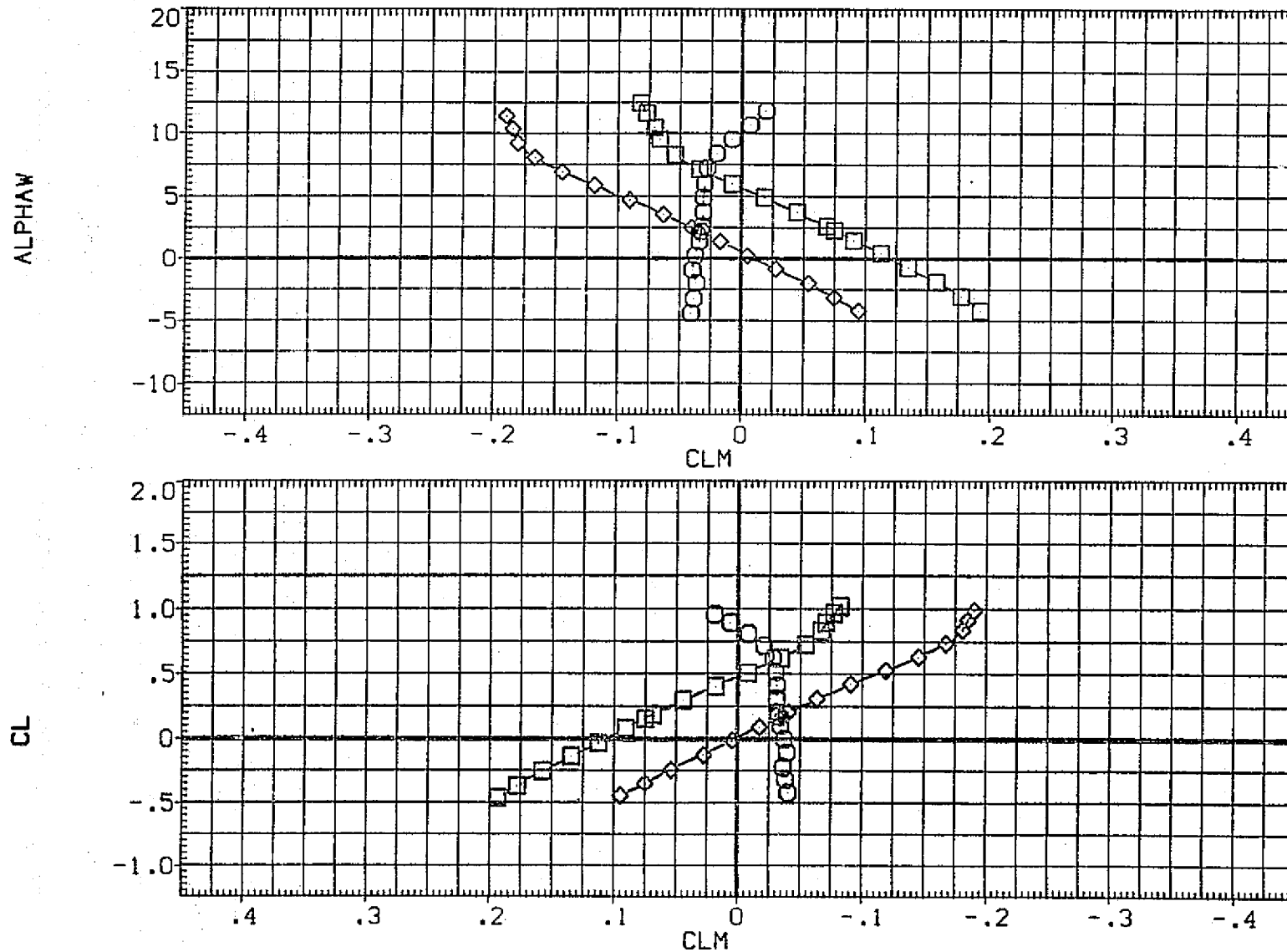


FIG. 74 STABILIZER EFFECTIVENESS, FERRY, IORB 3.0
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELEVON	REFERENCE INFORMATION		
(RGP199)	CAG K2 V9.1S1-12 AT112 /111.1ORB TC4		3.150	.000	SREF	5500.0000	SG.FT.
(RGP192)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	-.040	3.150	.000	LREF	327.8000	IN.
(RGP248)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4	1.930	3.150	.000	BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

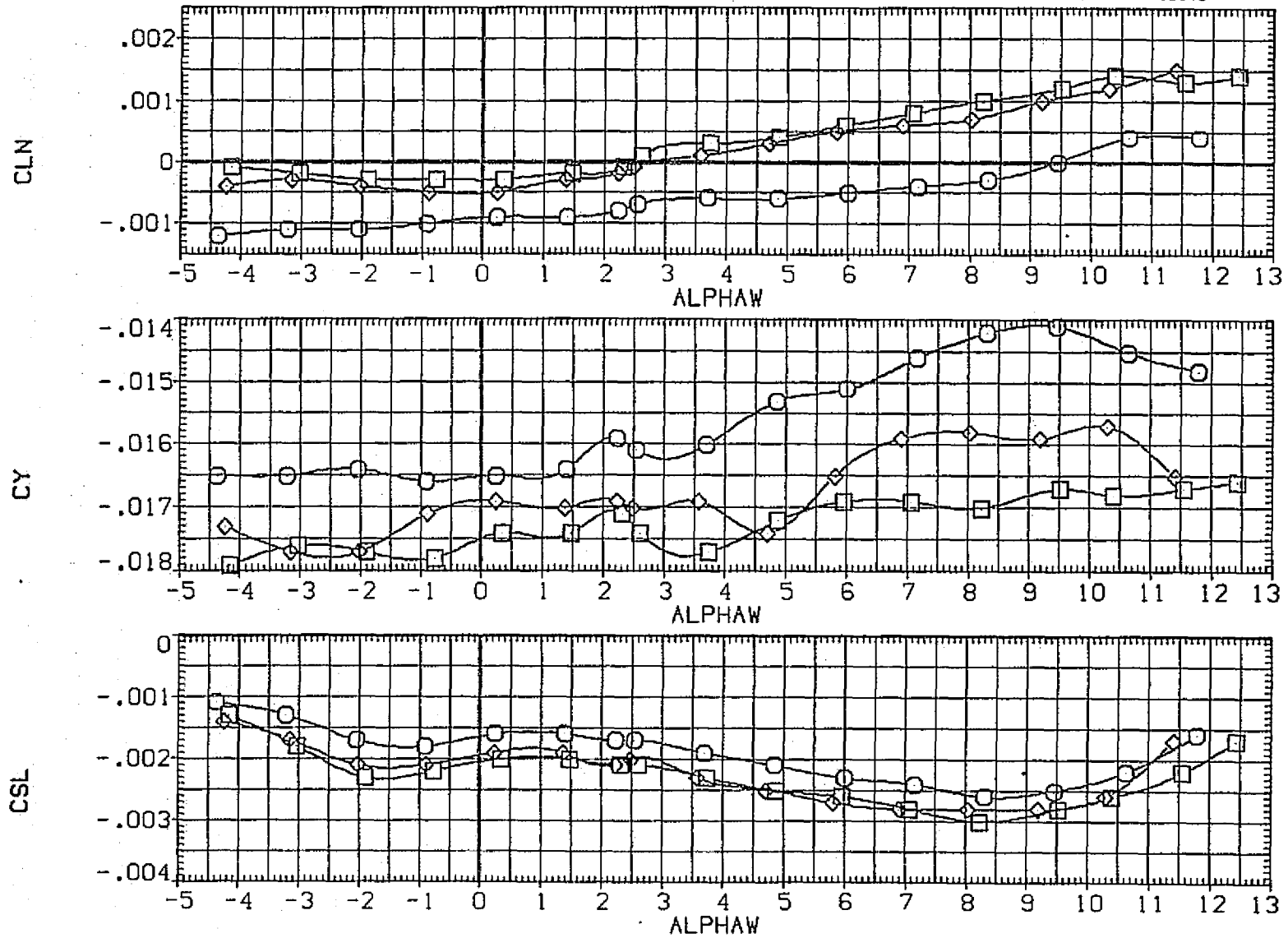


FIG. 74 STABILIZER EFFECTIVENESS, FERRY, IORB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP197)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	-4.000	3.150	.000	.000	SREF	5500.0000	50.FT.
(RGP192)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	.000	3.150	.000	.000	LREF	327.8000	IN.
(RGP193)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	2.000	3.150	.000	.000	BREF	2348.0000	IN.
(RGP194)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	4.000	3.150	.000	.000	XMRP	1339.9000	IN. XC
(RGP196)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	6.000	3.150	.000	.000	YMRP	.0000	IN. YC
(RGP195)	CA6 K2H15.6.1V9.1S1-12 AT112 /1111.10RB TC4	10.000	3.150	.000	.000	ZMRP	190.7700	IN. ZC
						SCALE	.0300	

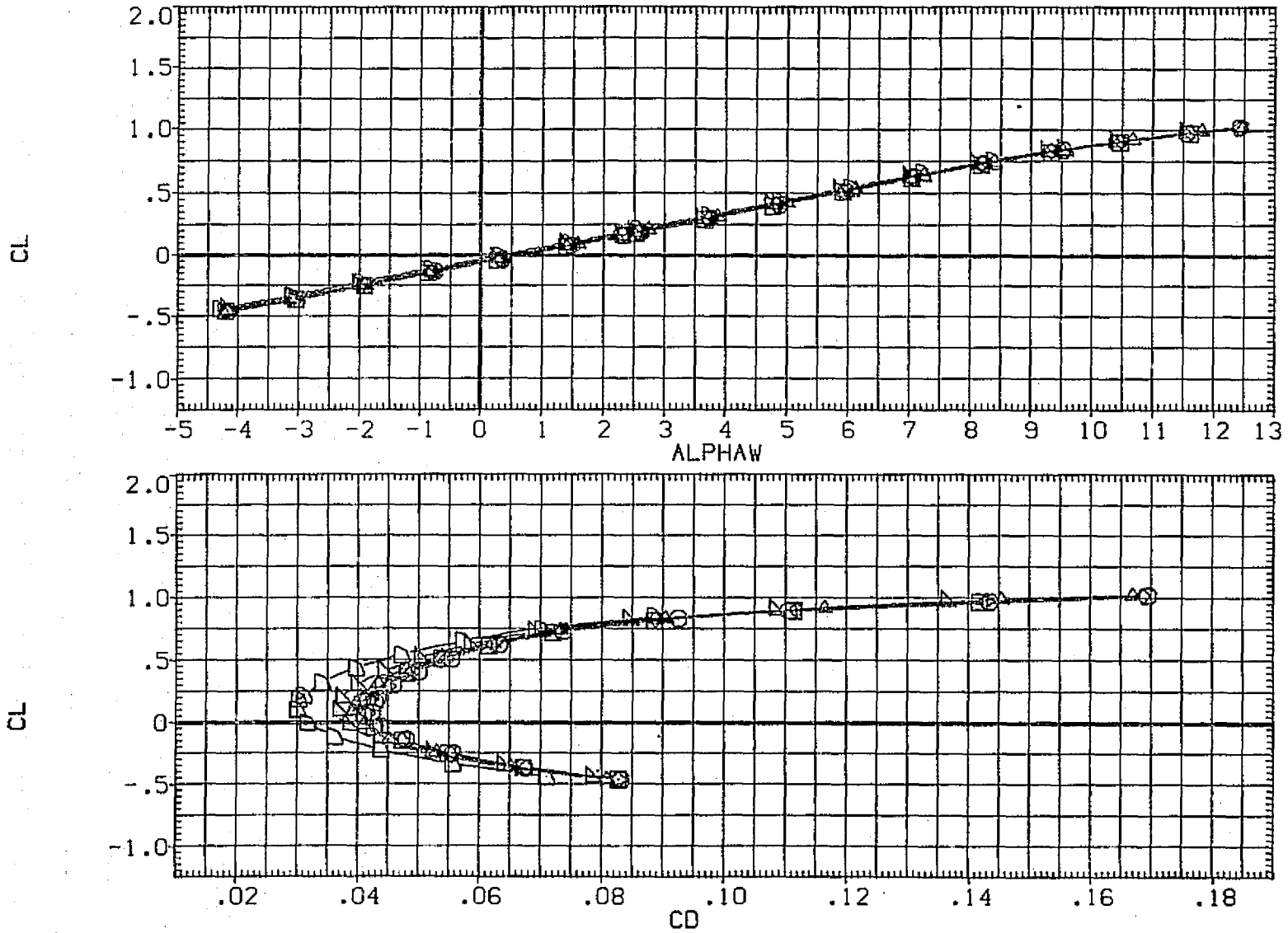


FIG. 75 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 3.0

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP197)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-4.000	3.150	.000	.000	SREF 5500.0000 SQ.FT.
(RGP192)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	3.150	.000	.000	LREF 327.8000 IN.
(RGP193)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	3.150	.000	.000	BREF 2348.0000 IN.
(RGP194)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	4.000	3.150	.000	.000	XMRP 1339.9000 IN. XC
(RGP196)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	6.000	3.150	.000	.000	YMRP .0000 IN. YC
(RGP195)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	3.150	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

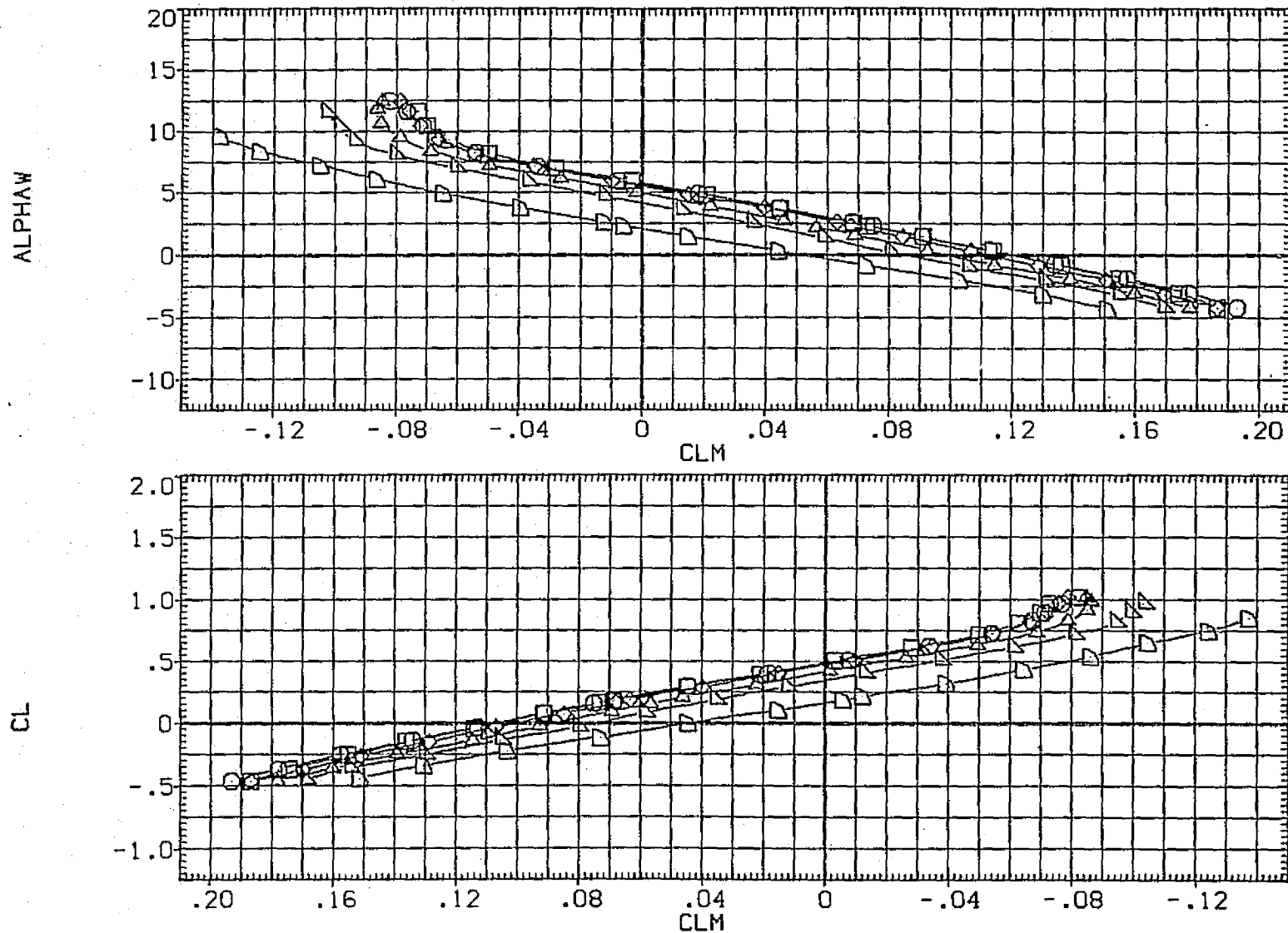


FIG. 75 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP197)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-4.000	3.150	.000	.000	SREF 5500.0000 50.FT.
(RGP192)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	3.150	.000	.000	LREF 327.8000 IN.
(RGP193)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	2.000	3.150	.000	.000	BREF 2348.0000 IN.
(RGP194)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	4.000	3.150	.000	.000	XMRP 1339.9000 IN. XC
(RGP196)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	6.000	3.150	.000	.000	YMRP .0000 IN. YC
(RGP195)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	3.150	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

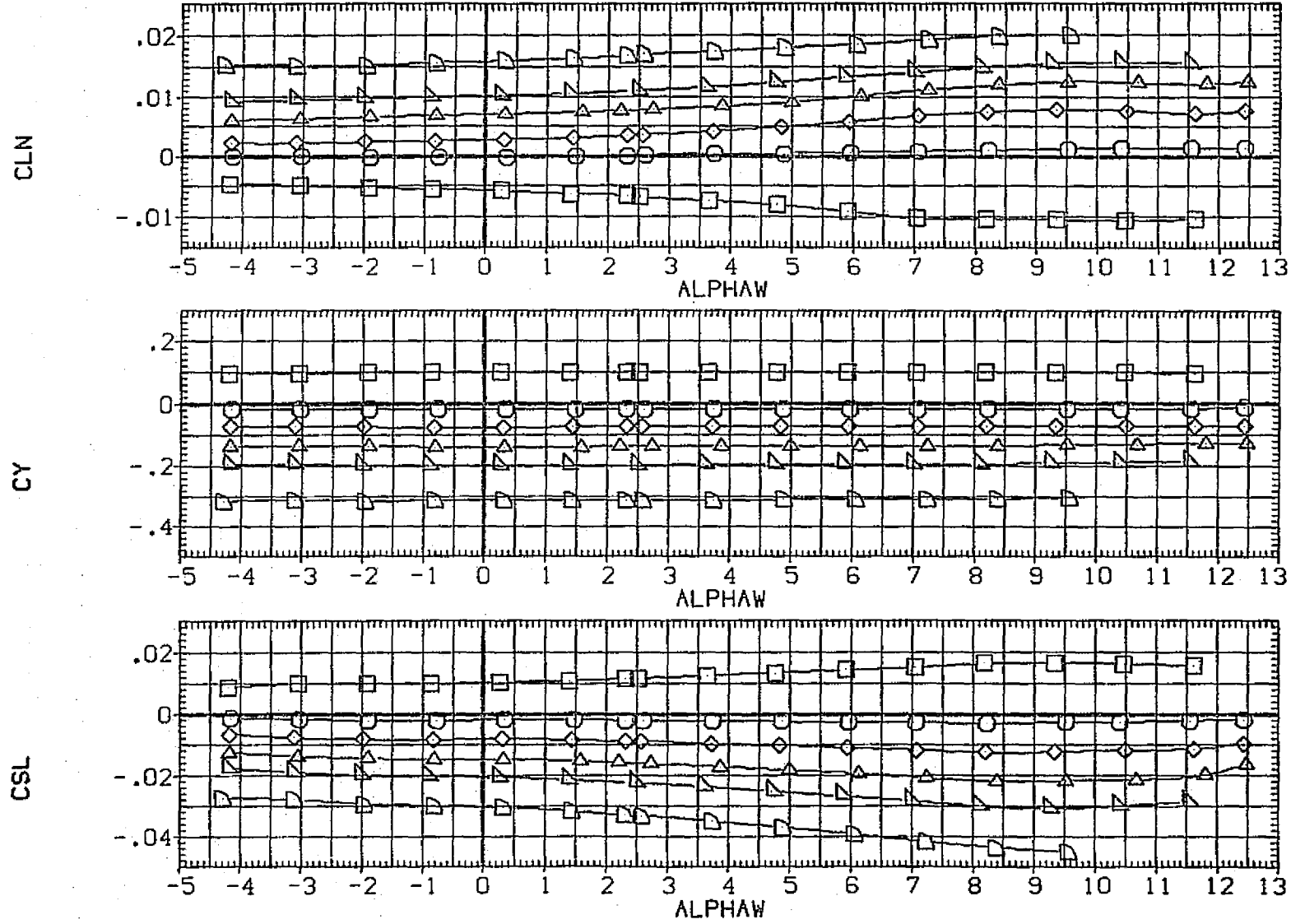


FIG. 75 LATERAL-DIRECTIONAL STABILITY, FERRY, IORB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-18	ELV-08	REFERENCE INFORMATION
(R6P192)	CA6 K2H15.6.IV9.IS1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(R6P198)	CA6 K2H15.6.IV9.IS1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

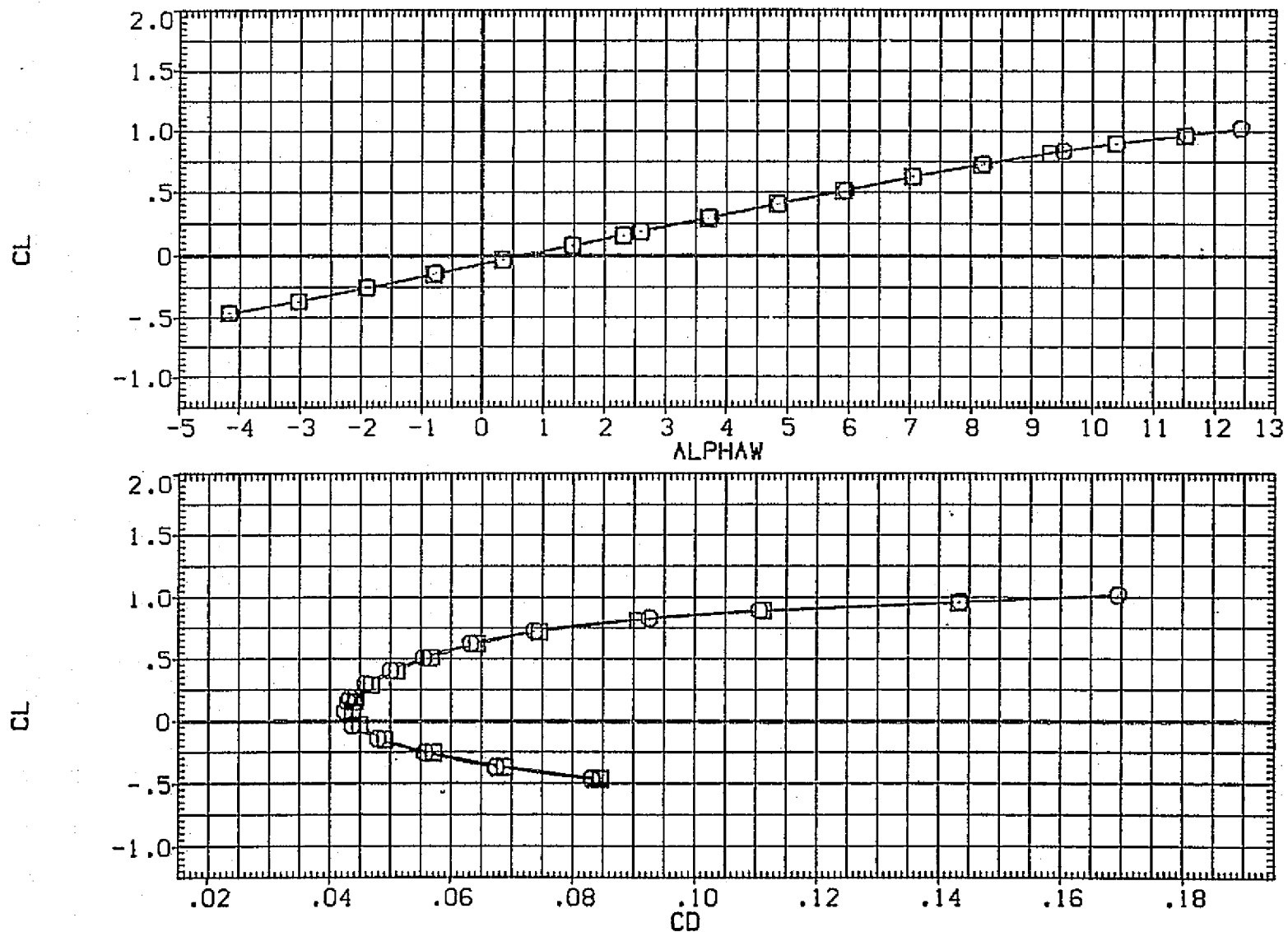


FIG. 76 RUDDER EFFECTIVENESS, FERRY, 10RB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-1B	ELV-0B	REFERENCE INFORMATION	
[RGP192]	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
[RGP198]	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	LREF	327.8000 IN.
						BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

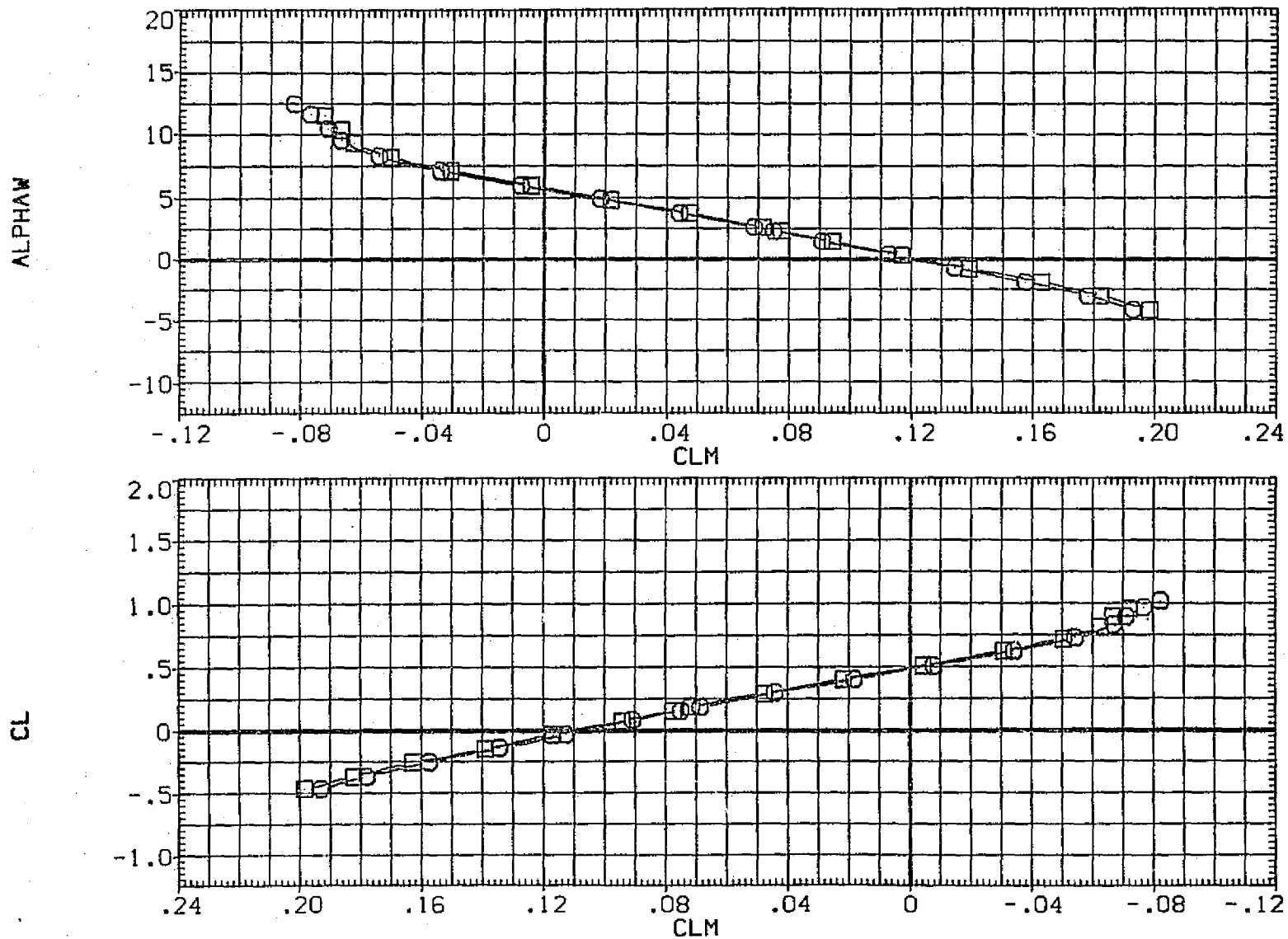


FIG. 76 RUDDER EFFECTIVENESS, FERRY, 10RB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUD-U	RUD-L	ELV-IB	ELV-OB	REFERENCE INFORMATION	
(RGP192) ○	CAB K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
(RGP198) □	CAB K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	10.000	10.000	.000	.000	LREF	327.8000 IN.
						BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

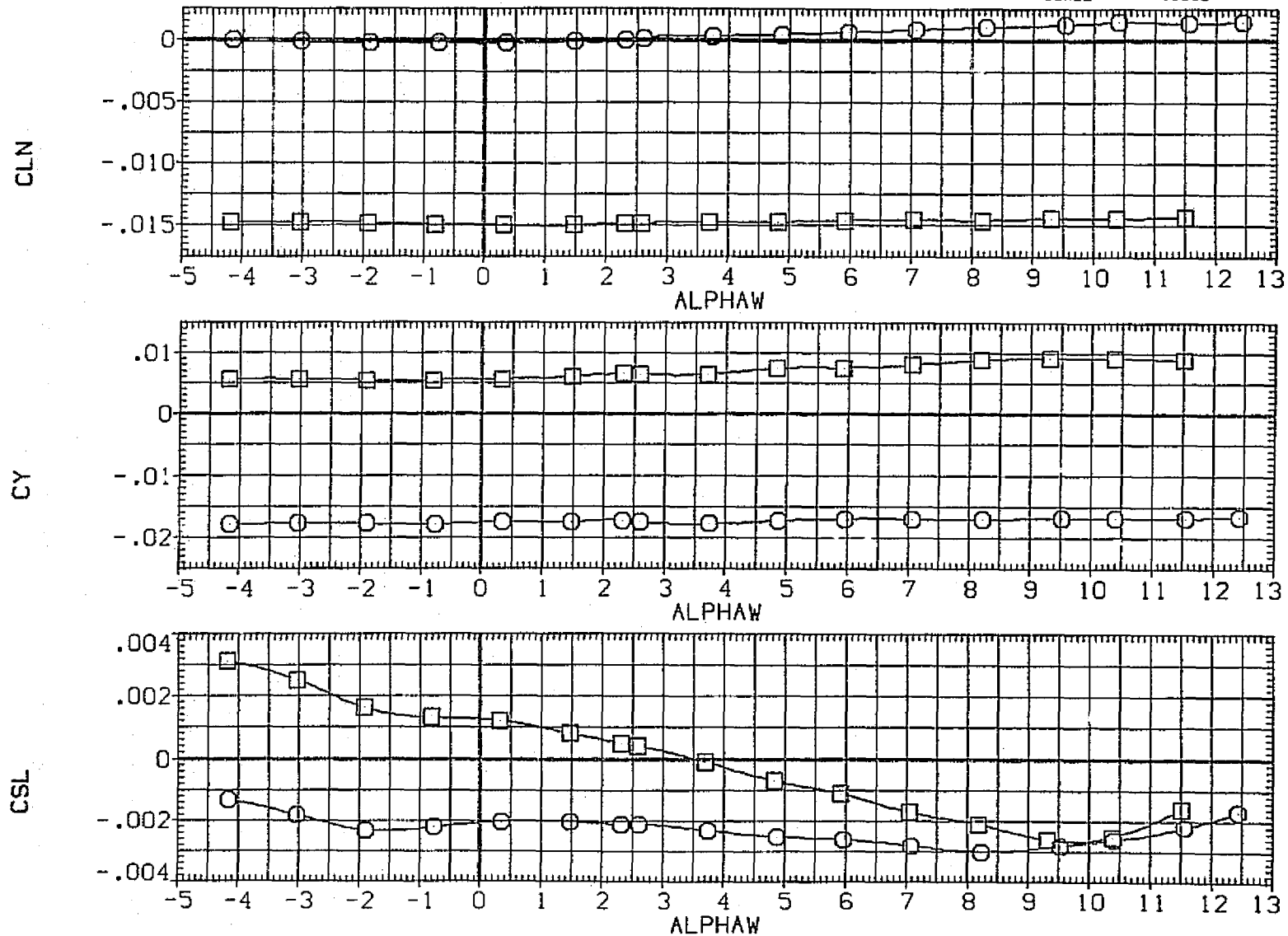


FIG. 76 RUDDER EFFECTIVENESS, FERRY, 10RB 3.0

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ORB	TC4	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP200)	CA6 K2 V9.1S1-12 AT103.1/105	ORB	TC4			4.250	SREF 5500.0000 SQ.FT.
(RGP202)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORB	TC4	-1.010	.000	4.250	LREF 327.8000 IN.
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORB	TC4	-.040	.000	4.250	BREF 2348.0000 IN.
(RGP201)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105	ORB	TC4	1.960	.000	4.250	XMRP 1339.9000 IN. XC
							YMRP .0000 IN. YC
							ZMRP 190.7700 IN. ZC
							SCALE .0300

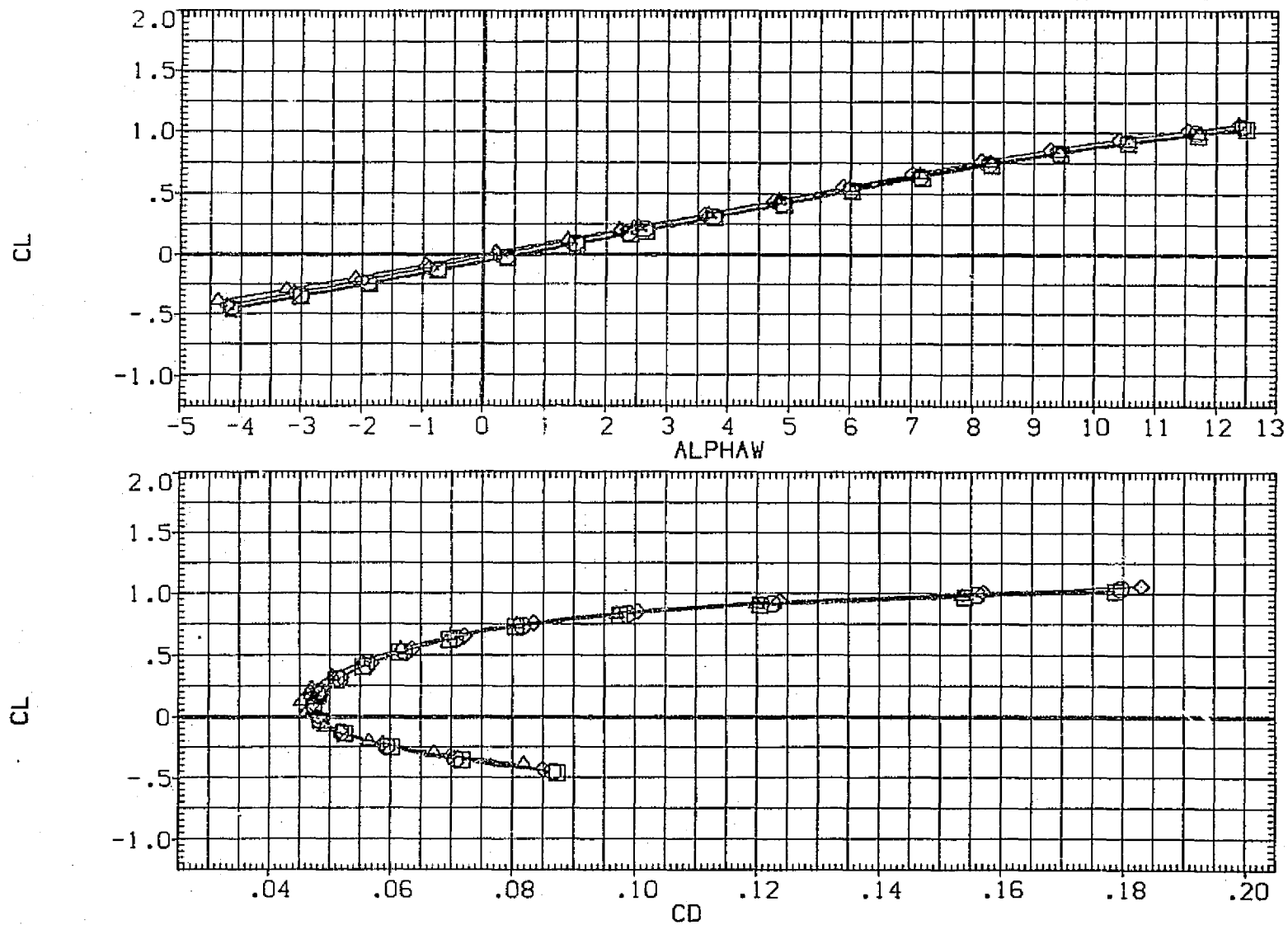


FIG. 77 STABILIZER EFFECTIVENESS, FERRY, UNFAIRED STRUTS, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP100)	CA6 K2 V9.1S1-12 AT103.1/105 DRB TC4		.000	4.250	SREF 5500.0000 SQ.FT.
(RGP202)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	-1.010	.000	4.250	LREF 327.8000 IN.
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	-1.040	.000	4.250	BREF 2348.0000 IN.
(RGP201)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 DRB TC4	1.960	.000	4.250	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

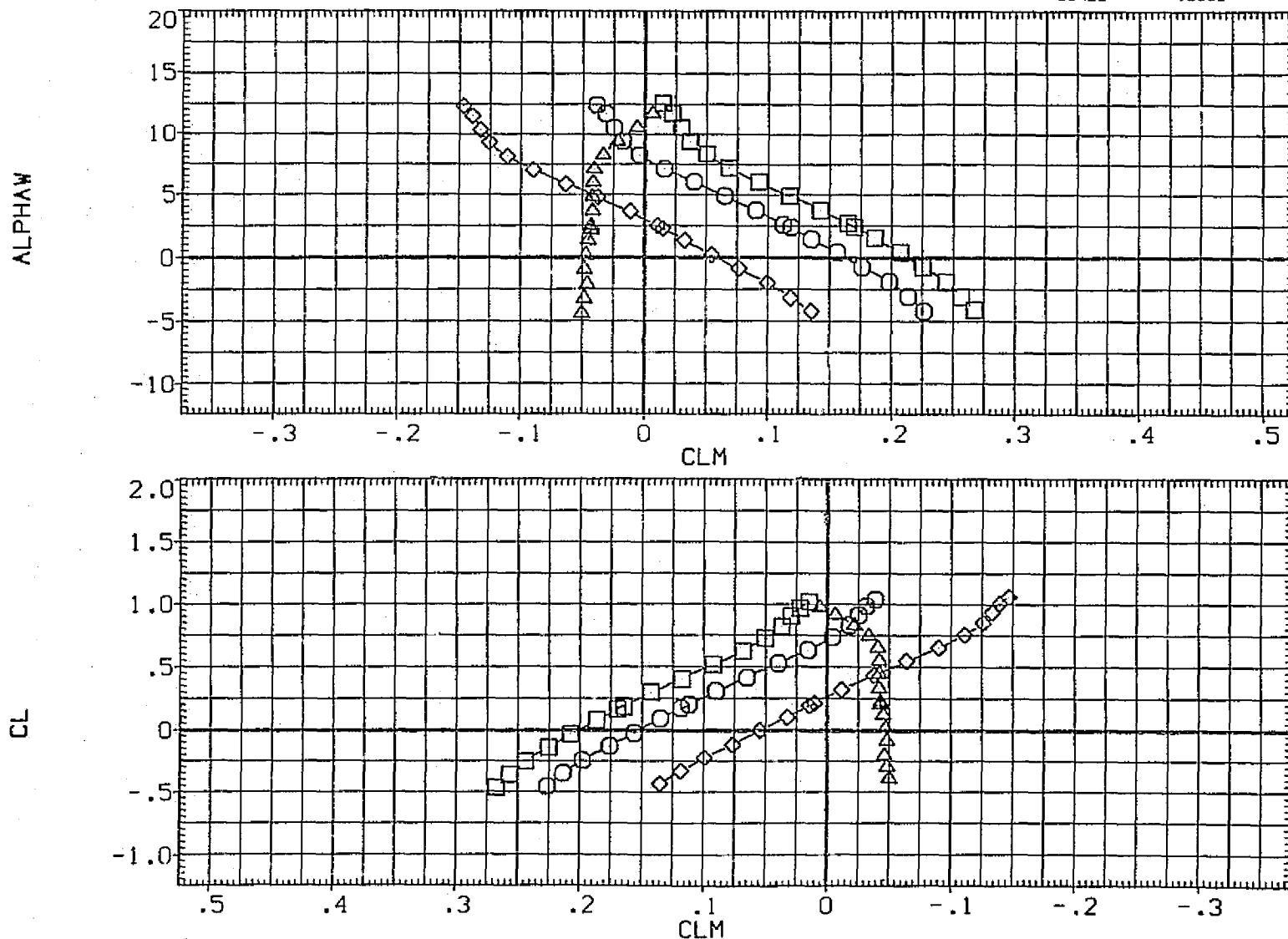


FIG. 77 STABILIZER EFFECTIVENESS, FERRY, UNFAIRED STRUTS, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION
(RGP200)	CA6 K2 V9.I51-12 AT103.1/105 ORB TC4		.000	4.250	SREF 5500.0000 SQ.FT.
(RGP202)	CA6 K2H15.6.1V9.I51-12 AT103.1/105 ORB TC4	-1.010	.000	4.250	LREF 327.8000 IN.
(RGP203)	CA6 K2H15.6.1V9.I51-12 AT103.1/105 ORB TC4	-.040	.000	4.250	BREF 2348.0000 IN.
(RGP201)	CA6 K2H15.6.1V9.I51-12 AT103.1/105 ORB TC4	1.960	.000	4.250	XMRP 1339.9000 IN. XC
					YMRP .0000 IN. YC
					ZMRP 190.7700 IN. ZC
					SCALE .0300

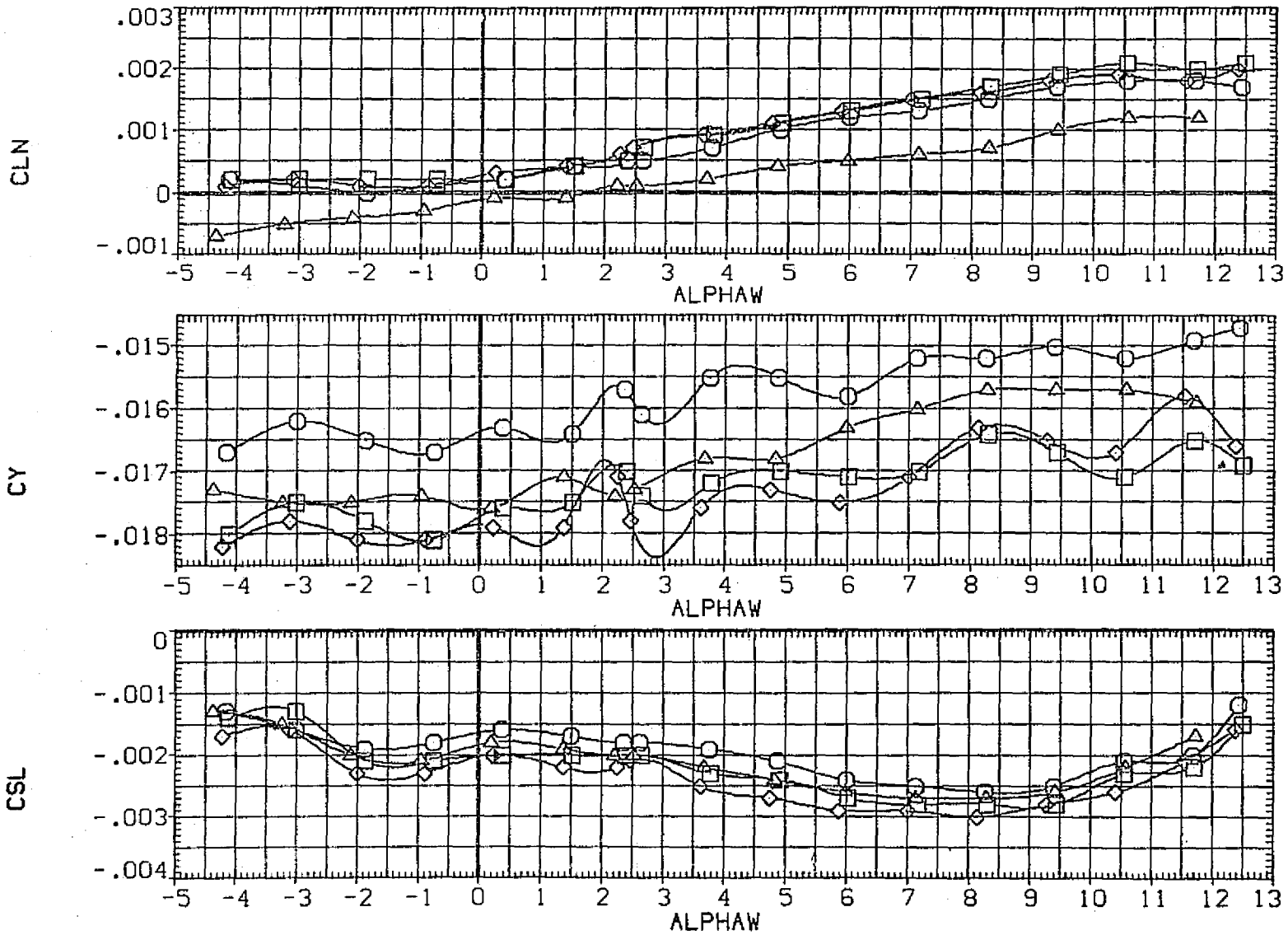


FIG. 77 STABILIZER EFFECTIVENESS, FERRY, UNFAIRED STRUTS, IORB 4.25

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP204)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP207)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	2.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP206)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
(RGP209)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	6.000	4.250	.000	.000	YMRP .0000 IN. YC
(RGP208)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

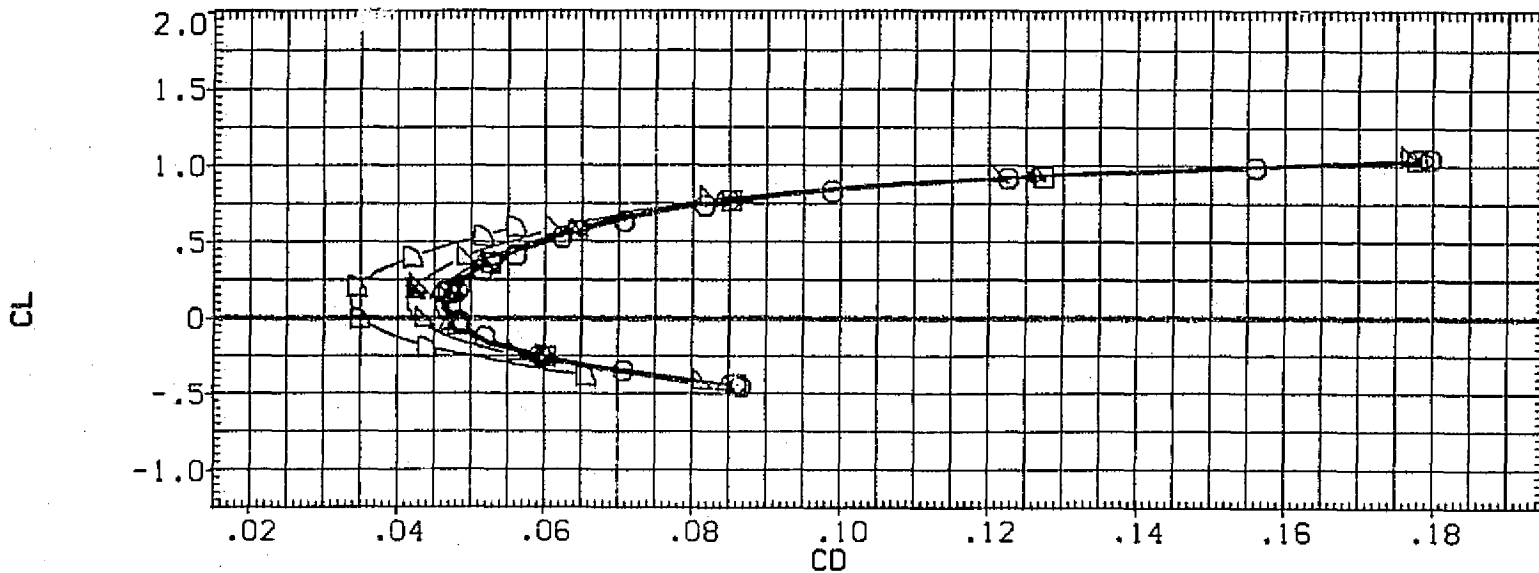
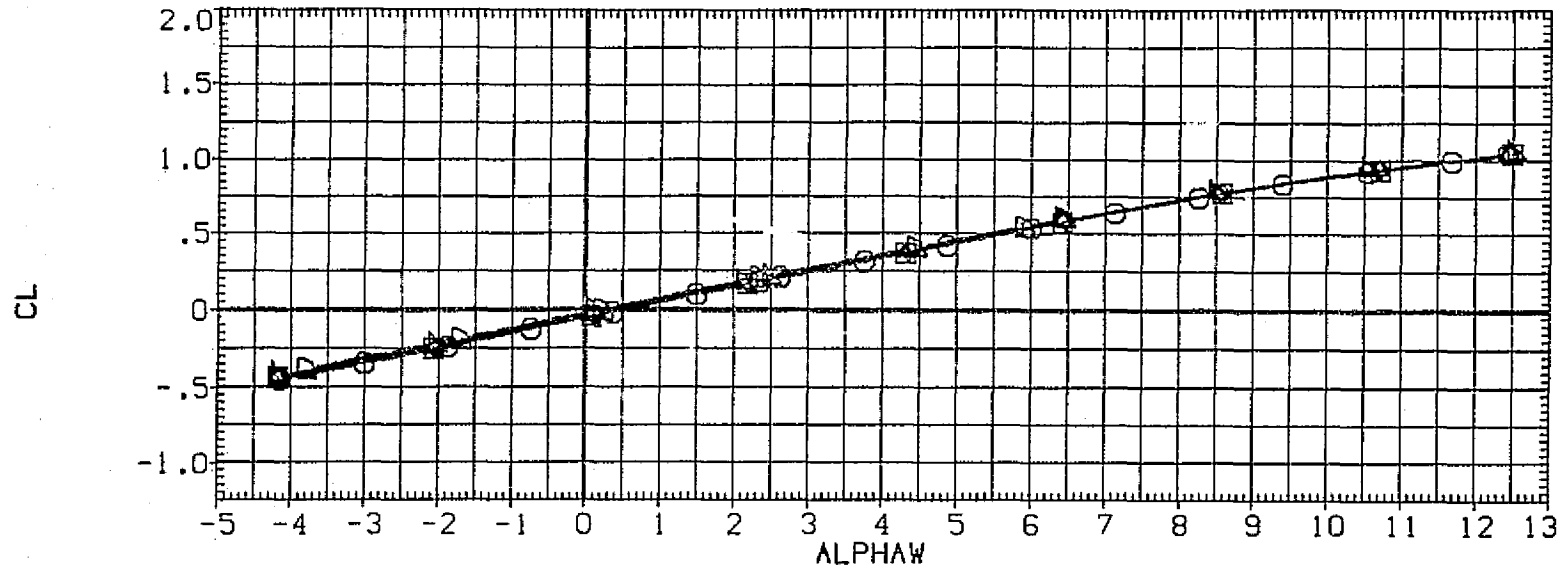


FIG. 78 LATERAL-DIRECTIONAL STABILITY, FERRY, UNFAIRED STRUTS, IORB 4.25

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-OB	REFERENCE INFORMATION
(RGP204)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP207)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	2.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP206)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	XMRP 1338.9000 IN. XC
(RGP209)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	6.000	4.250	.000	.000	YMRP .0000 IN. YC
(RGP208)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

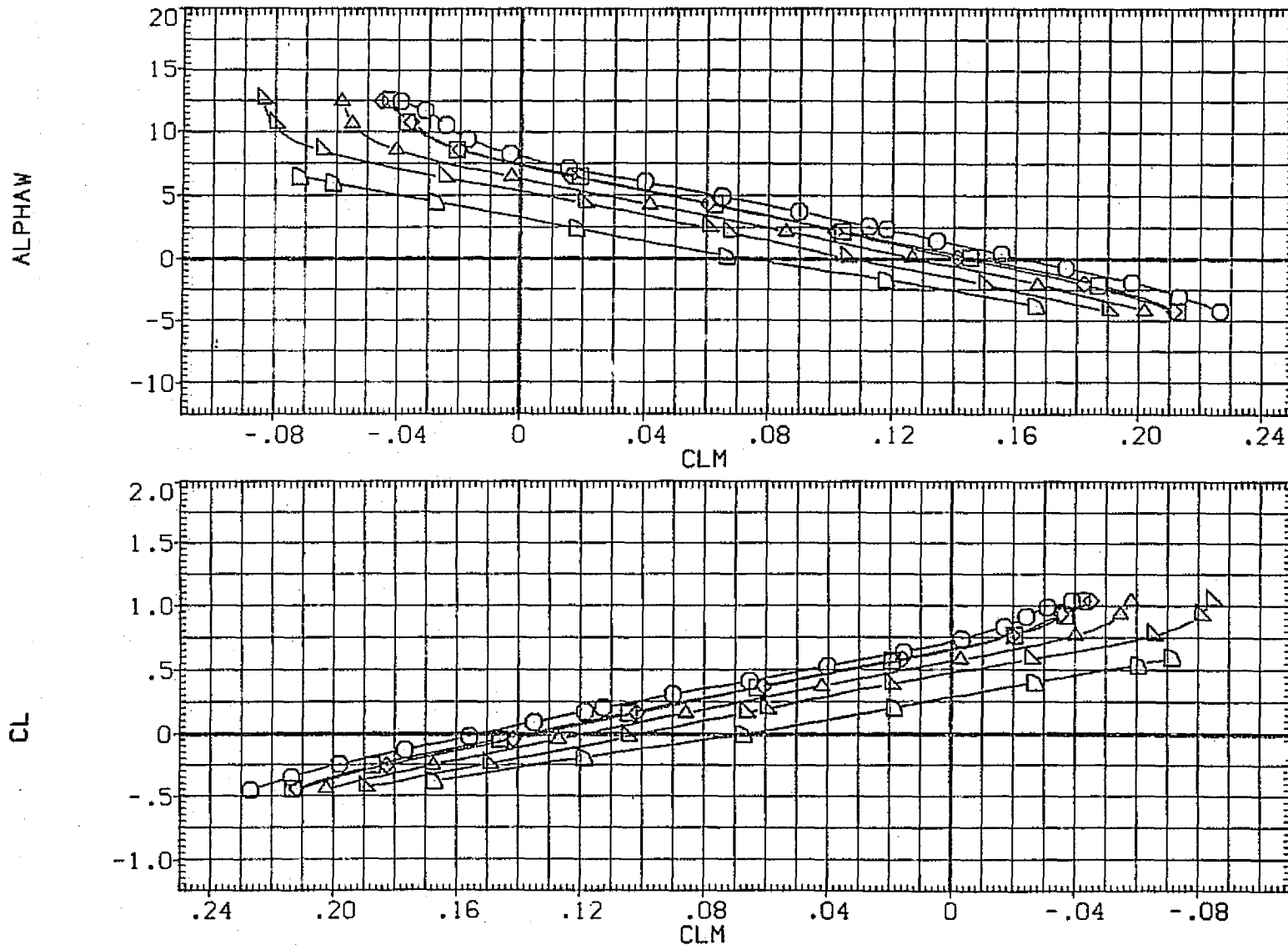


FIG. 78 LATERAL-DIRECTIONAL STABILITY, FERRY, UNFAIRED STRUTS, IORB 4.25

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP204)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP207)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	2.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP206)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
(RGP209)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	6.000	4.250	.000	.000	YMRP .0000 IN. YC
(RGP208)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	ZMRP 190.7700 IN. ZC
						SCALE .0300

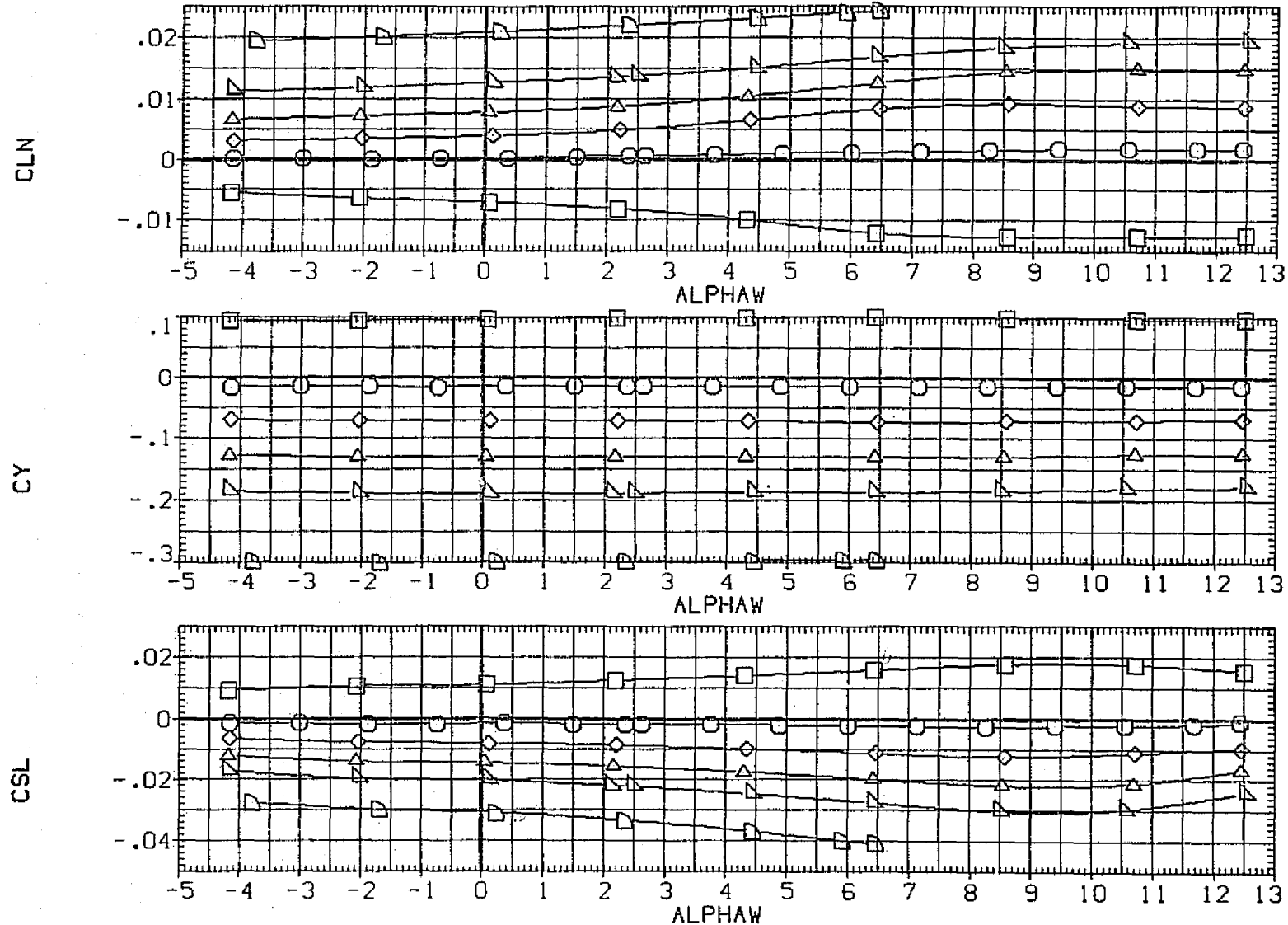


FIG. 78 LATERAL-DIRECTIONAL STABILITY, FERRY, UNFAIRED STRUTS, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP212)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP213)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP211)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP210)	CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .C300

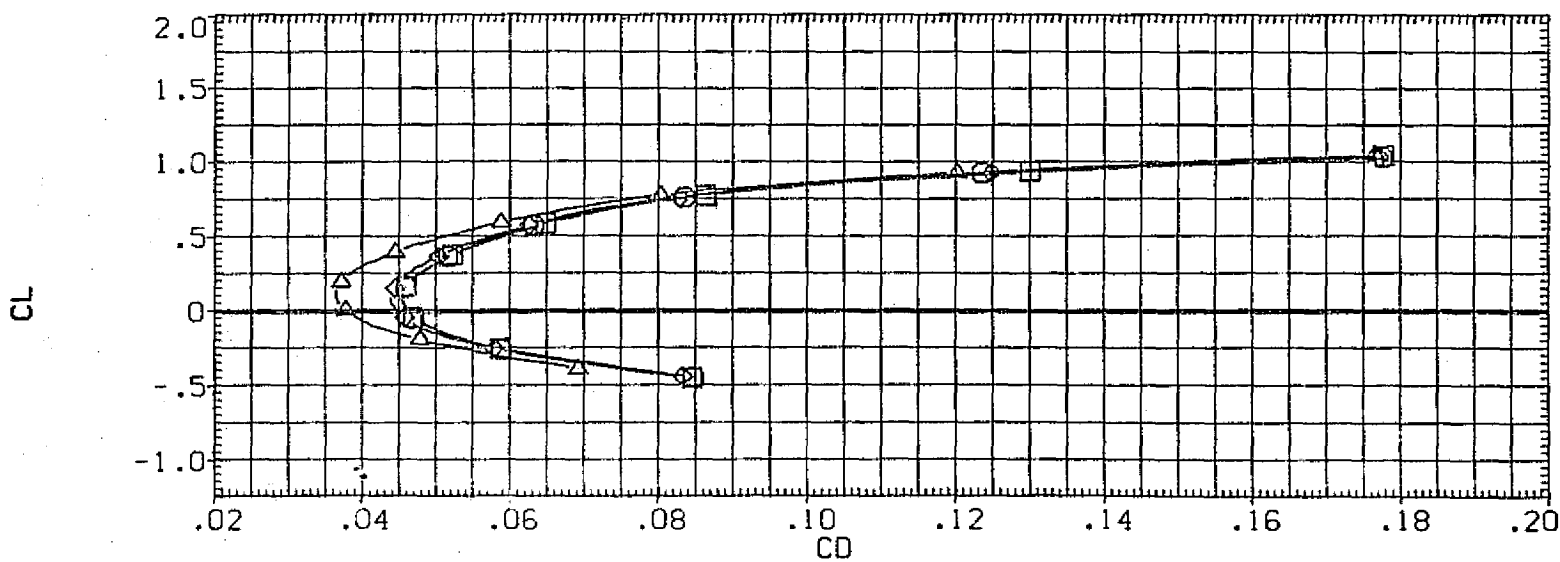
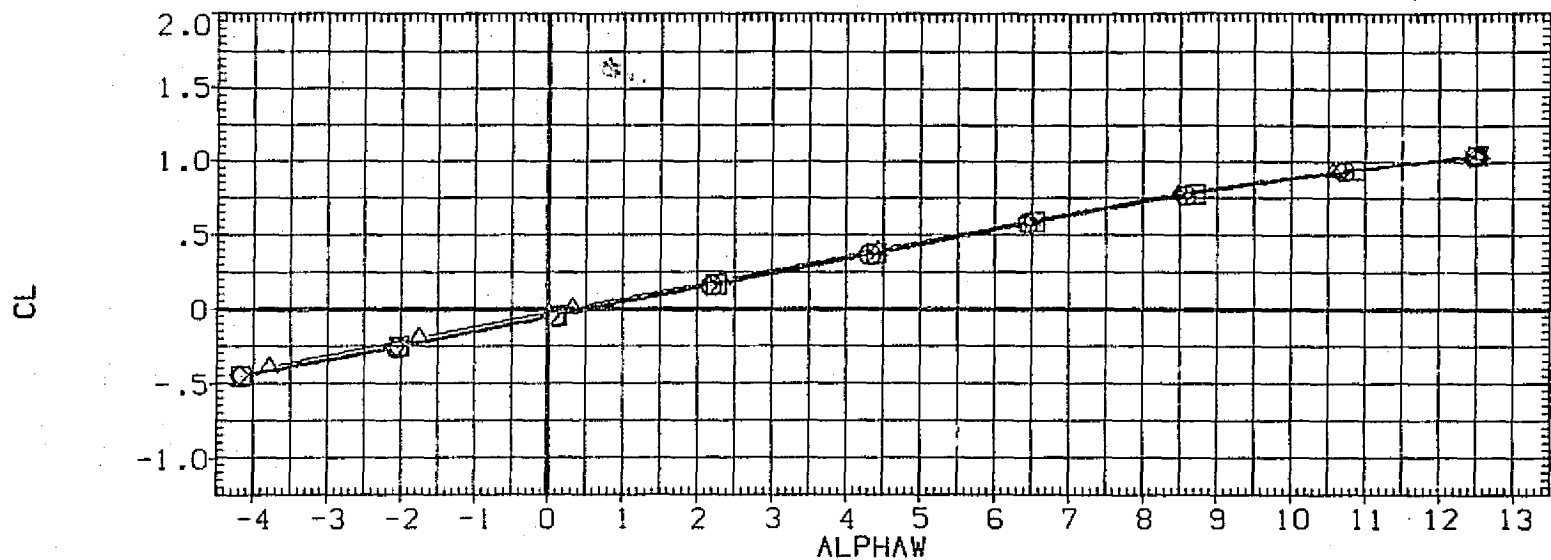


FIG. 79 ALL VERTICAL TAILS OFF, FERRY, UNFAIRED STRUTS, IORB 4.25
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP212)	□ CAS K2H15.1 S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP213)	○ CAS K2H15.1 S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF 327.8000 IN.
(RGP211)	◇ CAS K2H15.1 S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	BREF 2348.0000 IN.
(RGP210)	△ CAS K2H15.1 S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

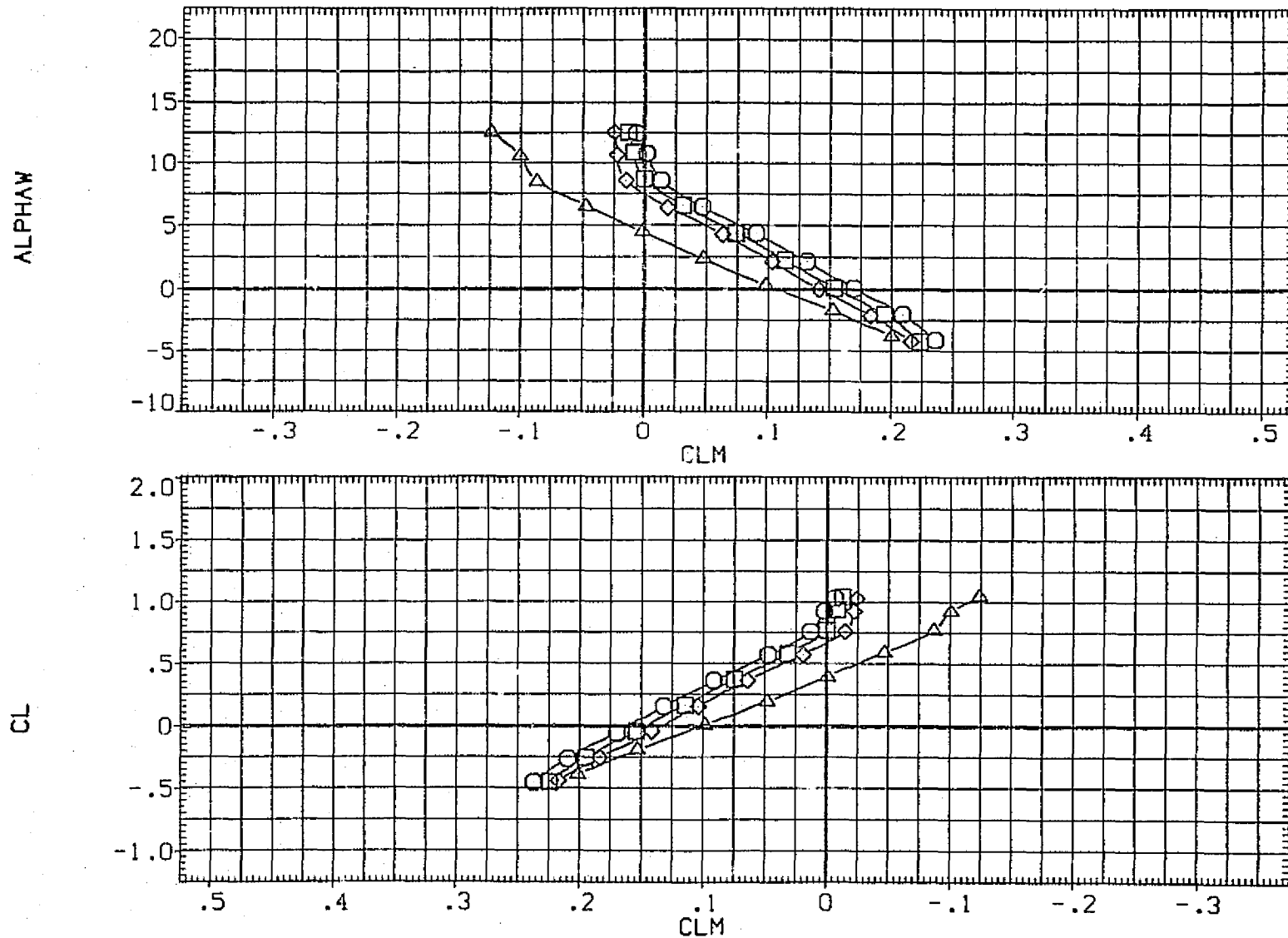


FIG. 79 ALL VERTICAL TAILS OFF, FERRY, UNFAIRED STRUTS, IORB 4.25
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION		
(RGP212)	□ CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	-4.000	4.250	.000	.000	SREF	5500.0000	50.FT.
(RGP213)	○ CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	.000	4.250	.000	.000	LREF	327.8000	IN.
(RGP211)	◇ CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	4.000	4.250	.000	.000	BREF	2348.0000	IN.
(RGP210)	△ CA6 K2H15.1 S1-12 AT103.1/105 ORB TC4	10.000	4.250	.000	.000	XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

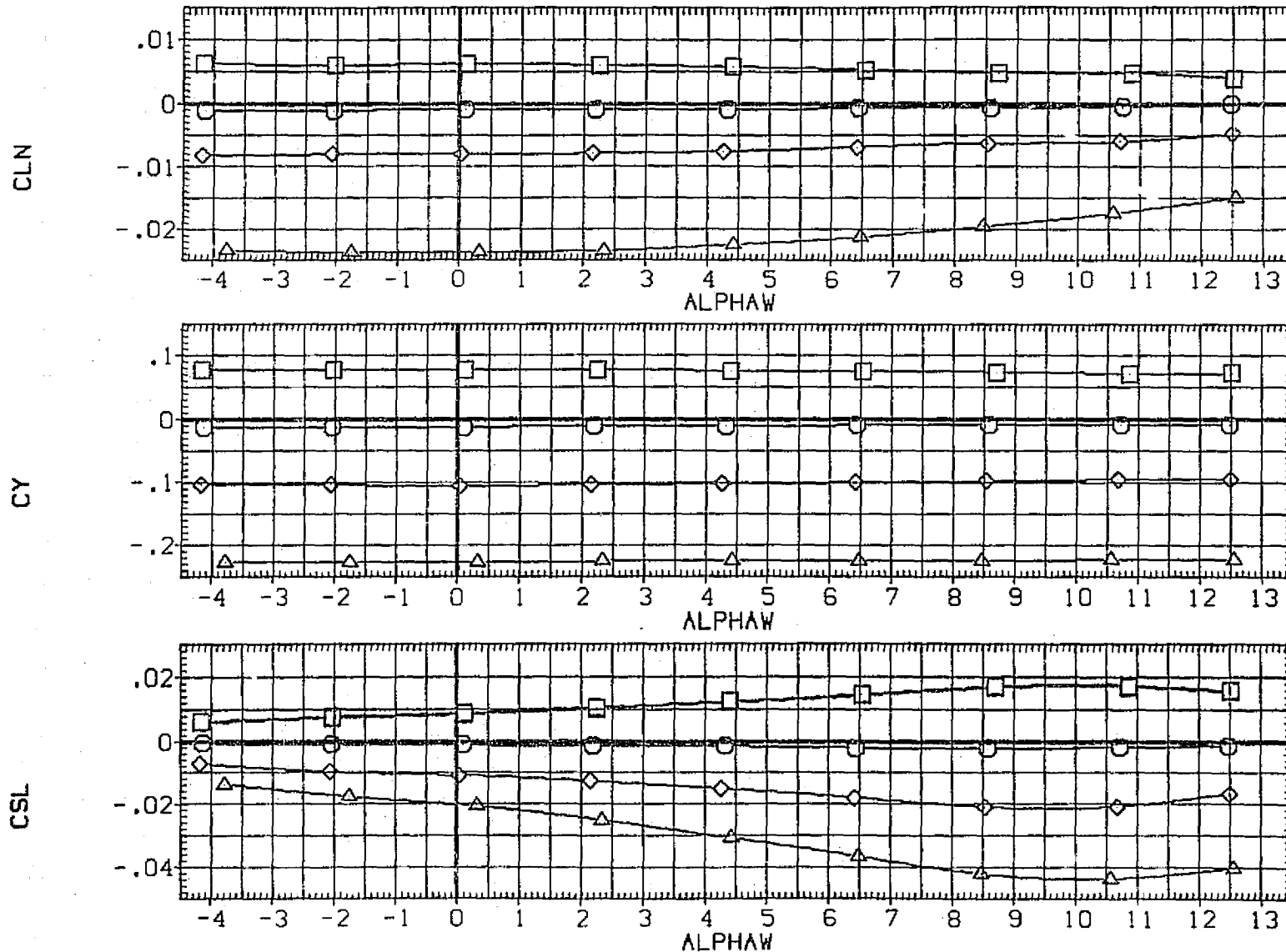


FIG. 79 ALL VERTICAL TAILS OFF, FERRY, UNFAIRED STRUTS, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP203)	□ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-.040	4.250	.000	.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN.
(RGP214)	○ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28	-.020	4.250	.000	.000	BREF 2348.0000 IN. XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

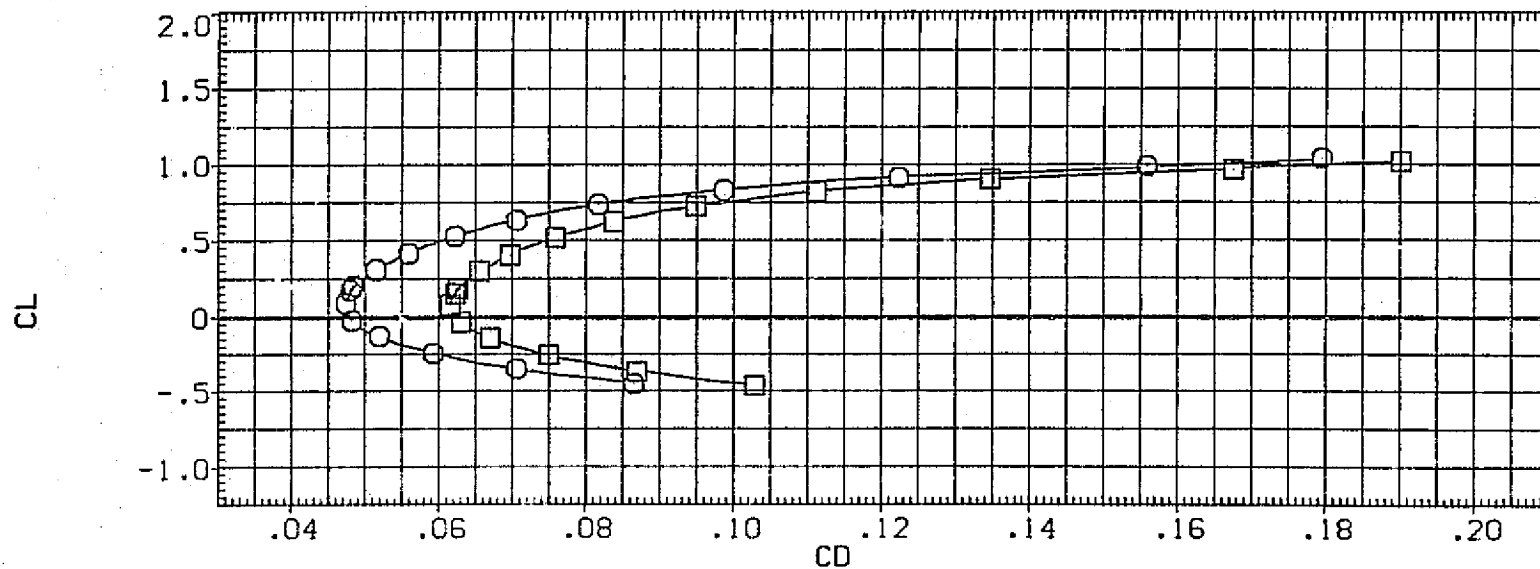
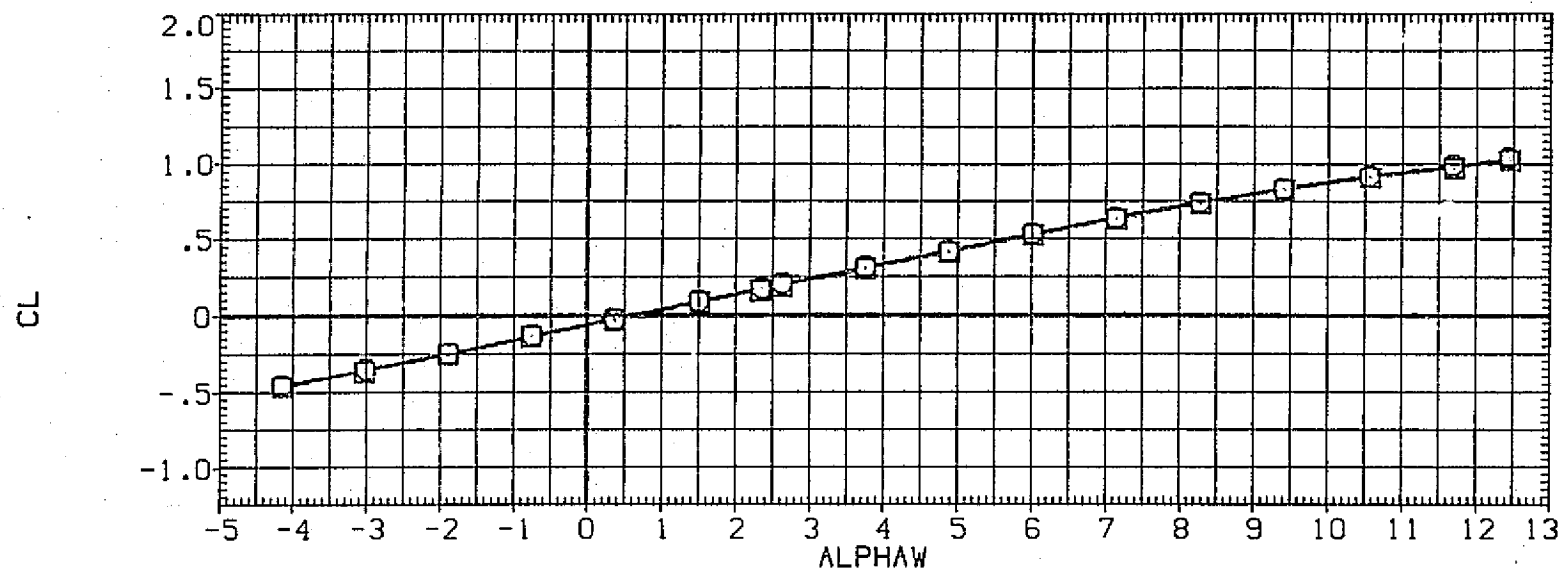


FIG. 80 TAILCONE EFFECTS, FERRY, UNFAIRED STRUTS, IORB 4.25

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-IB	ELV-OB	REFERENCE INFORMATION
(RGP203)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-.040	4.250	.000	.000	SREF 5500.0000 SQ.FT.
(RGP214)	CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	-.020	4.250	.000	.000	LREF 327.8000 IN.
						BREF 2348.0000 IN.
						XMRP 1339.9000 IN. XC
						YMRP .0000 IN. YC
						ZMRP 190.7700 IN. ZC
						SCALE .0300

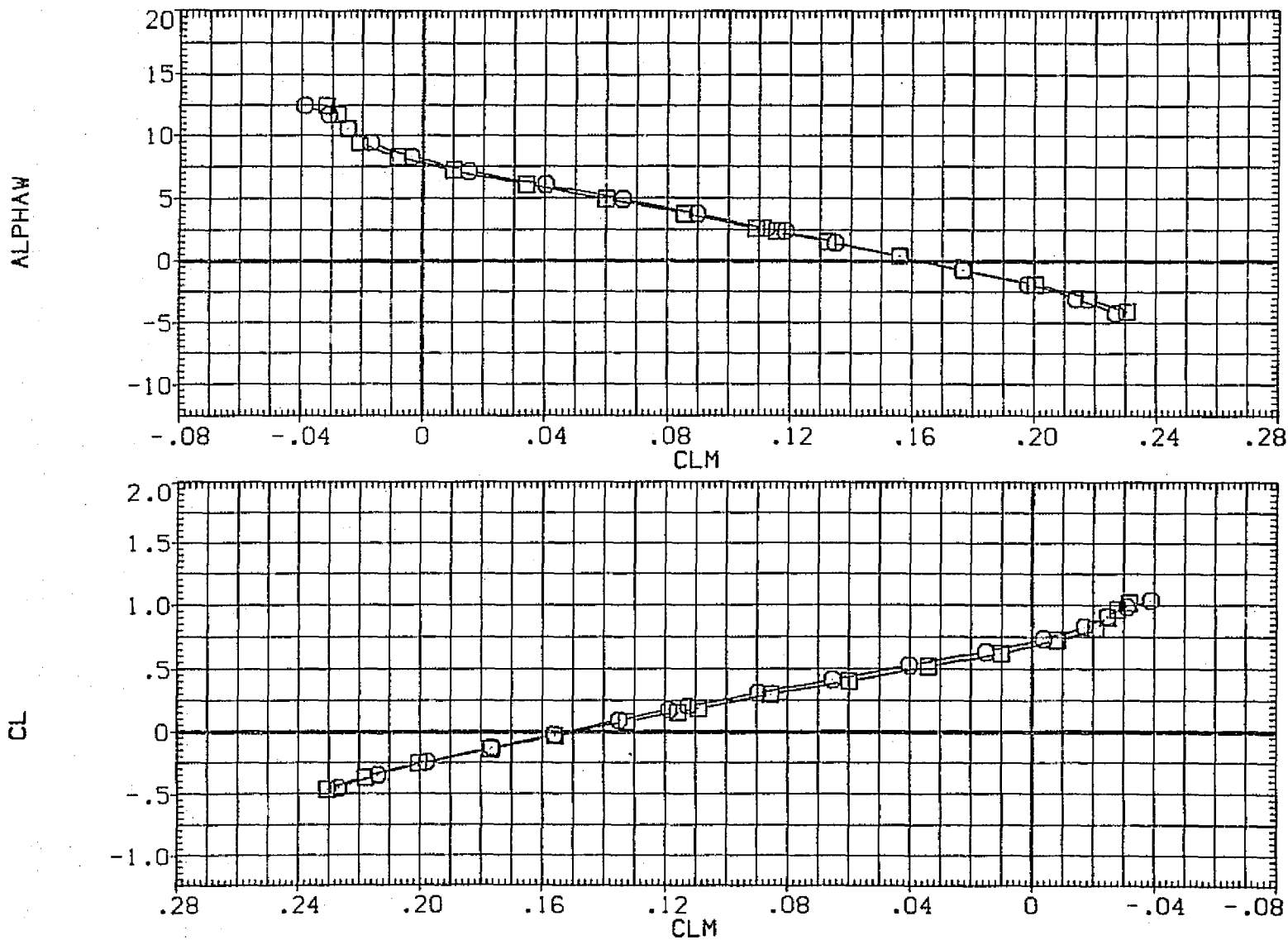


FIG. 80 TAILCONE EFFECTS, FERRY, UNFAIRED STRUTS, IORB 4.25
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	IORB	ELV-1B	ELV-0B	REFERENCE INFORMATION
(RGP203)	CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORB TC4	-.040	4.250	.000	.000	SREF 5500.0000 SQ.FT. LREF 327.8000 IN. BREF 2348.0000 IN.
(RGP214)	CAS K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28	-.020	4.250	.000	.000	XMRP 1339.9000 IN. XC YMRP .0000 IN. YC ZMRP 190.7700 IN. ZC SCALE .0300

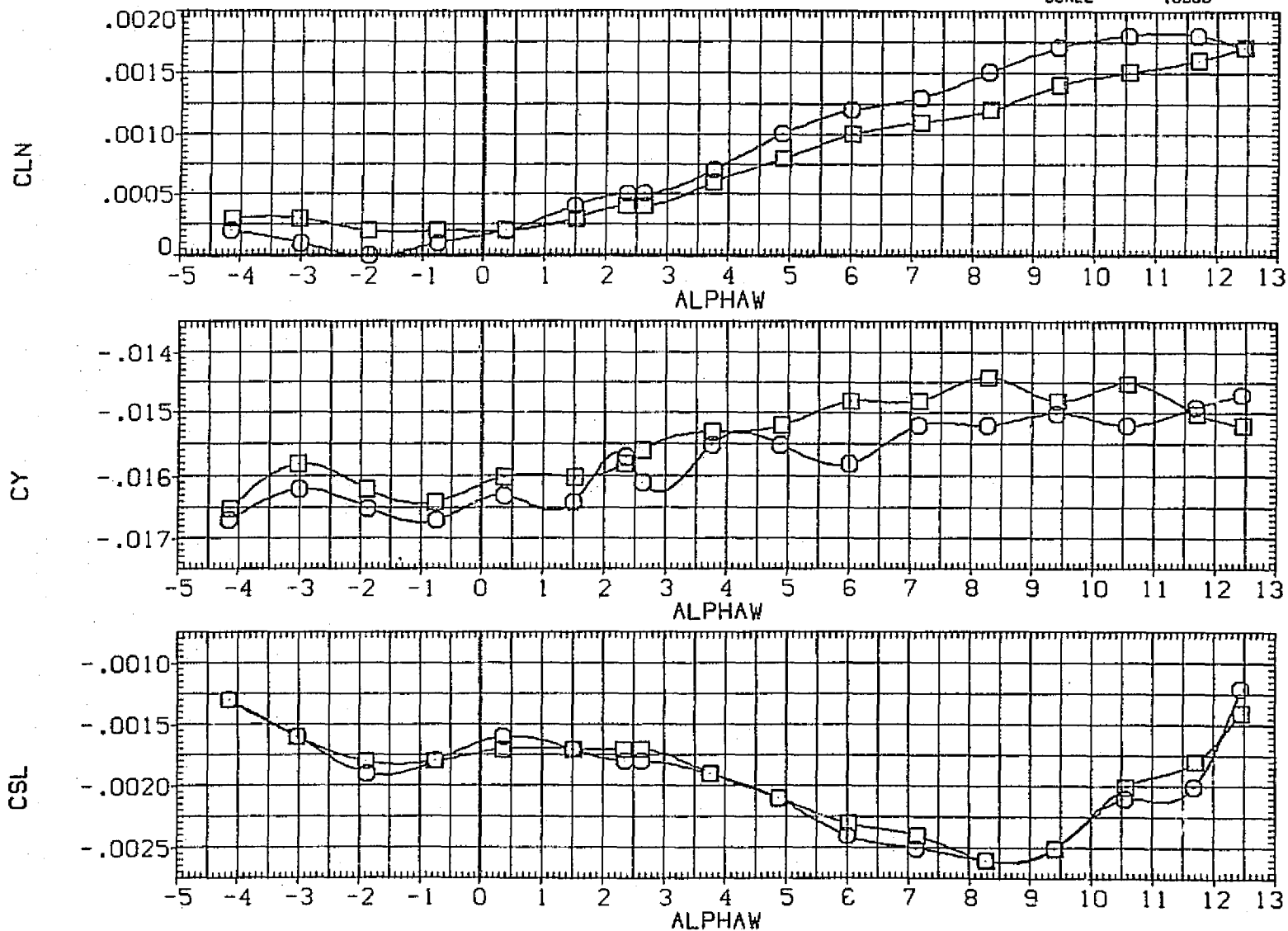


FIG. 80 TAILCONE EFFECTS, FERRY, UNFAIRED STRUTS, IORB 4.25

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	I3RB
(RGP218)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	8.070
(RGP219)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

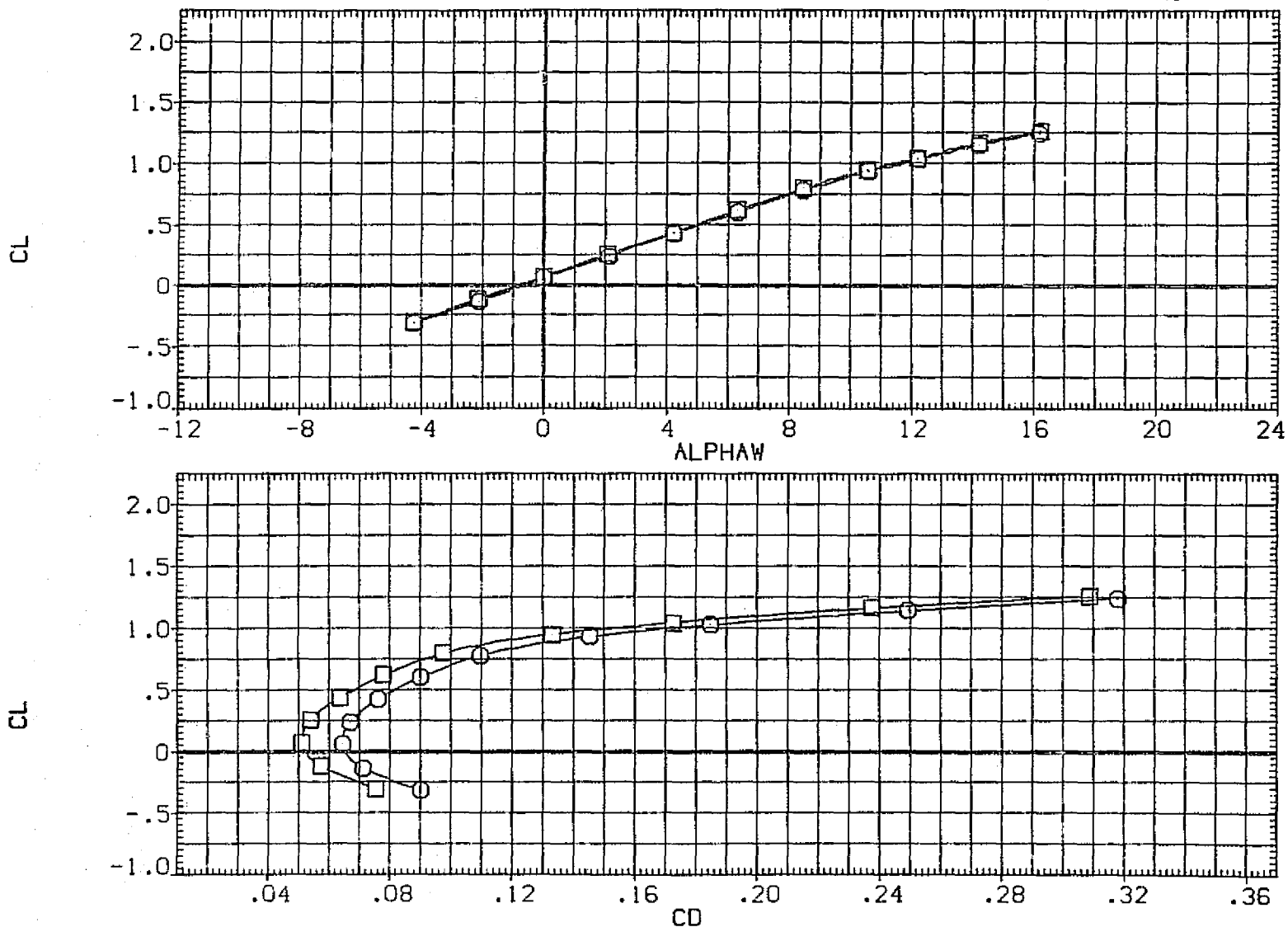


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8

(A)MACH = .40

C. 6

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP218)	□ CA6 K2 V9.1S1-12 AT103.1/105 ORBFBN24/28	.000	8.070	SREF 5500.0000 SQ.FT.
(RGP219)	○ CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

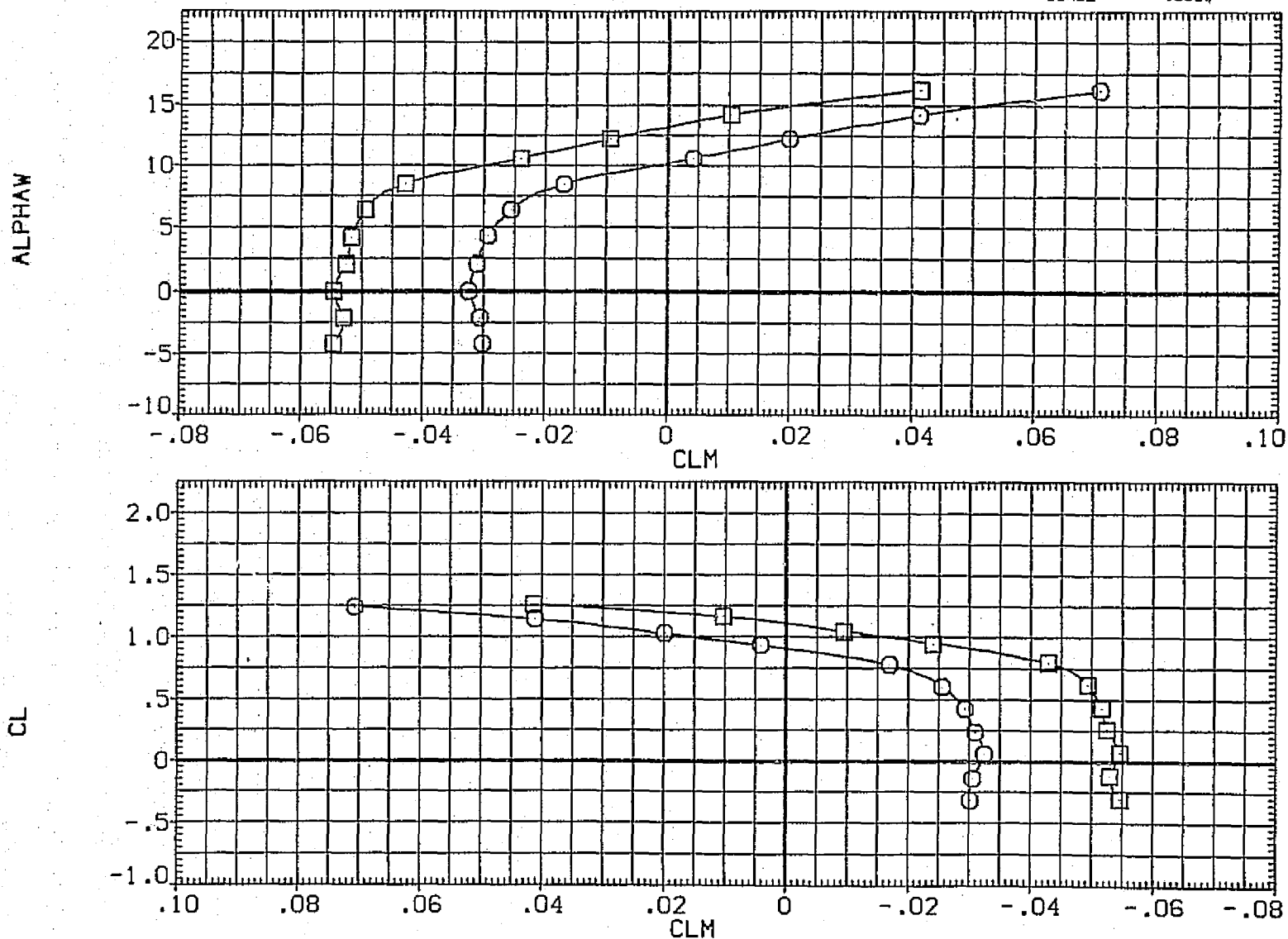


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP218)	CA6 K2 V9.1S1-12 AT103.1/105 ORBFBN24/28
(RGP219)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA	IORB
.000	8.070
.000	8.070

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

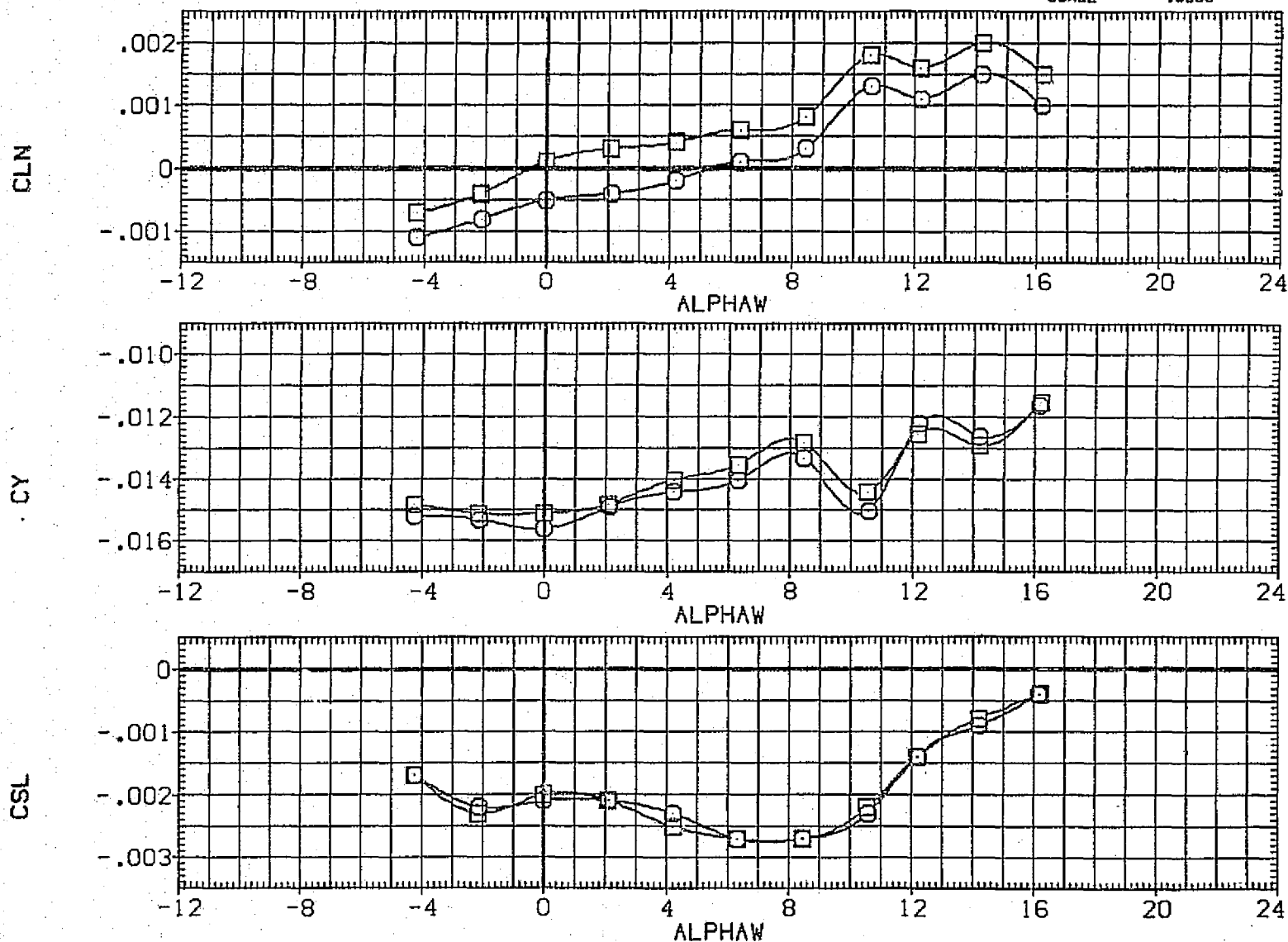


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP218)	CA6 K2 V9.1S1-12 AT103.1/105 DRBF8N24/28	.000	8.070	SREF 5500.0000 SQ.FT.
(RGP219)	CA6 K2 V9.1S1-12 AT103.1/105 DRB TC4	.000	8.070	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

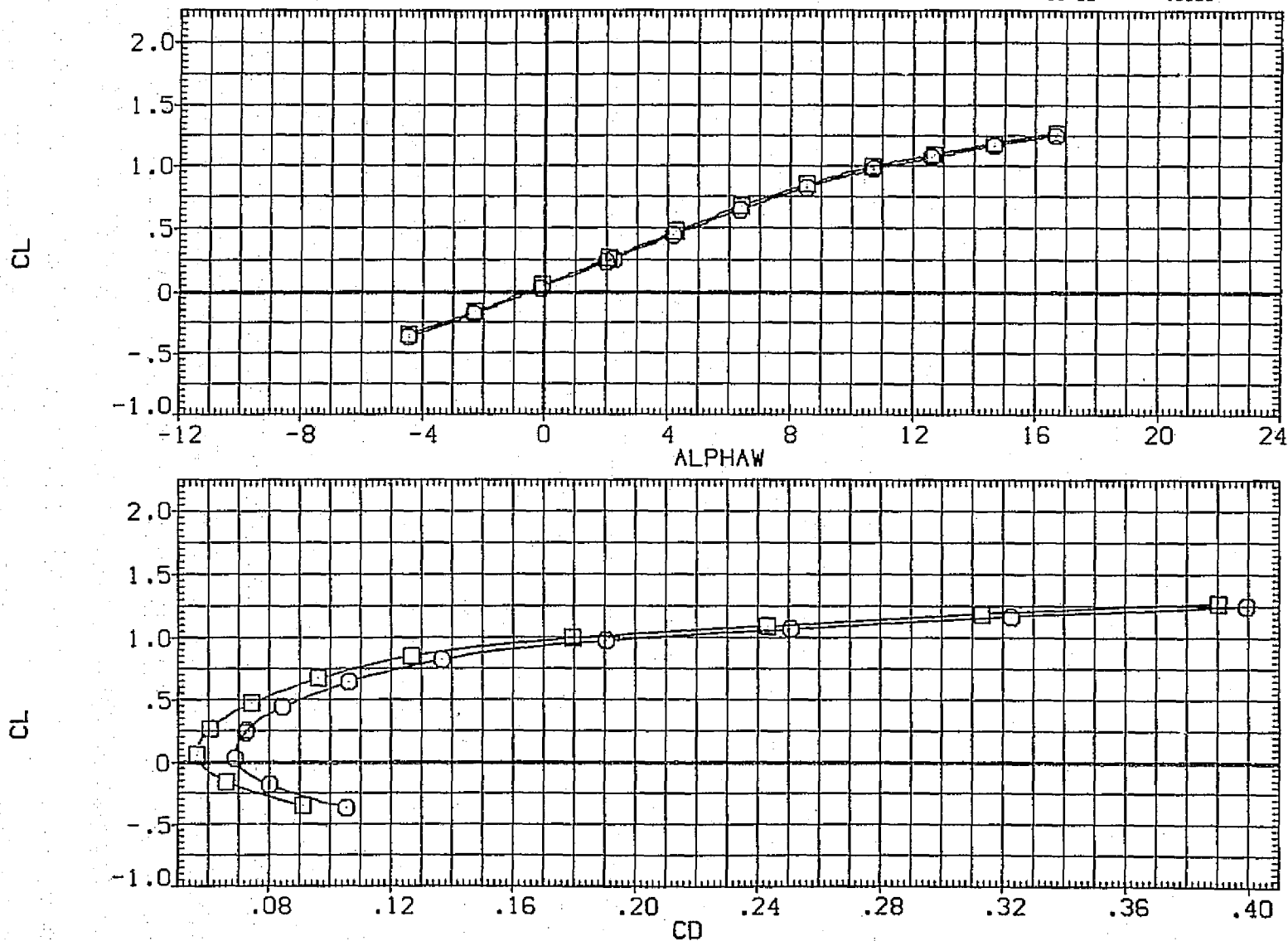


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP218)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28
(RGP219)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA	IORB
.000	8.070
.000	8.070

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

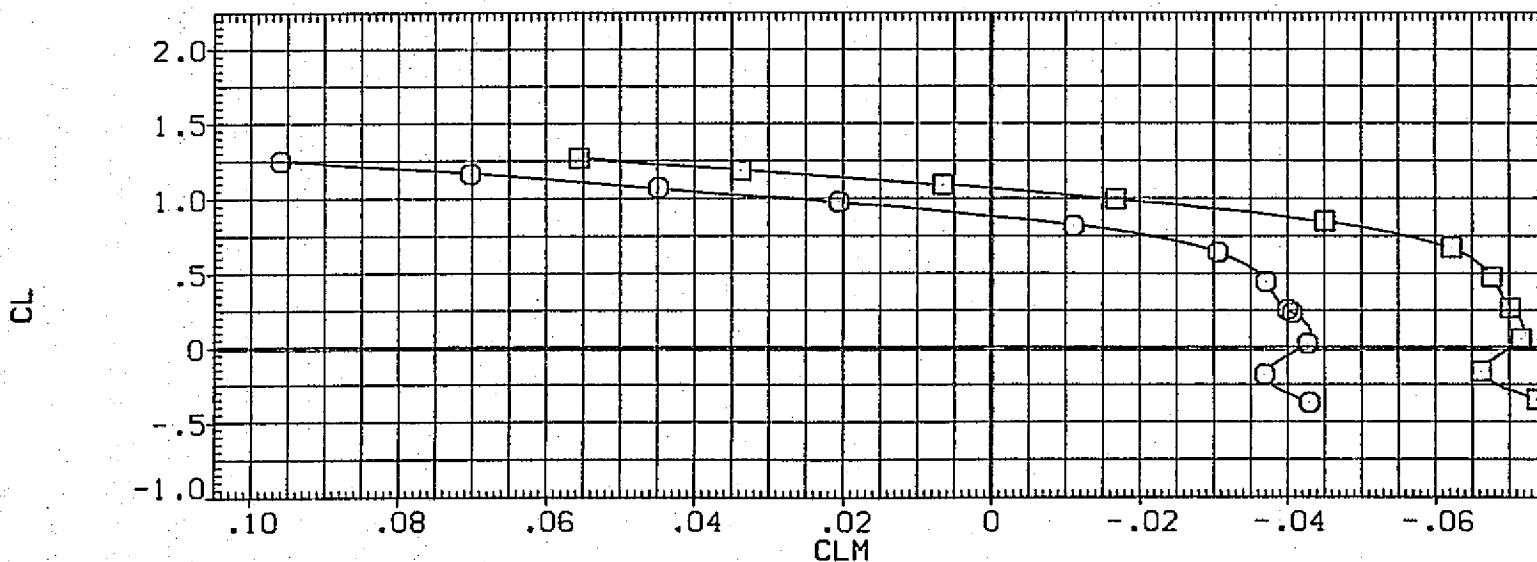
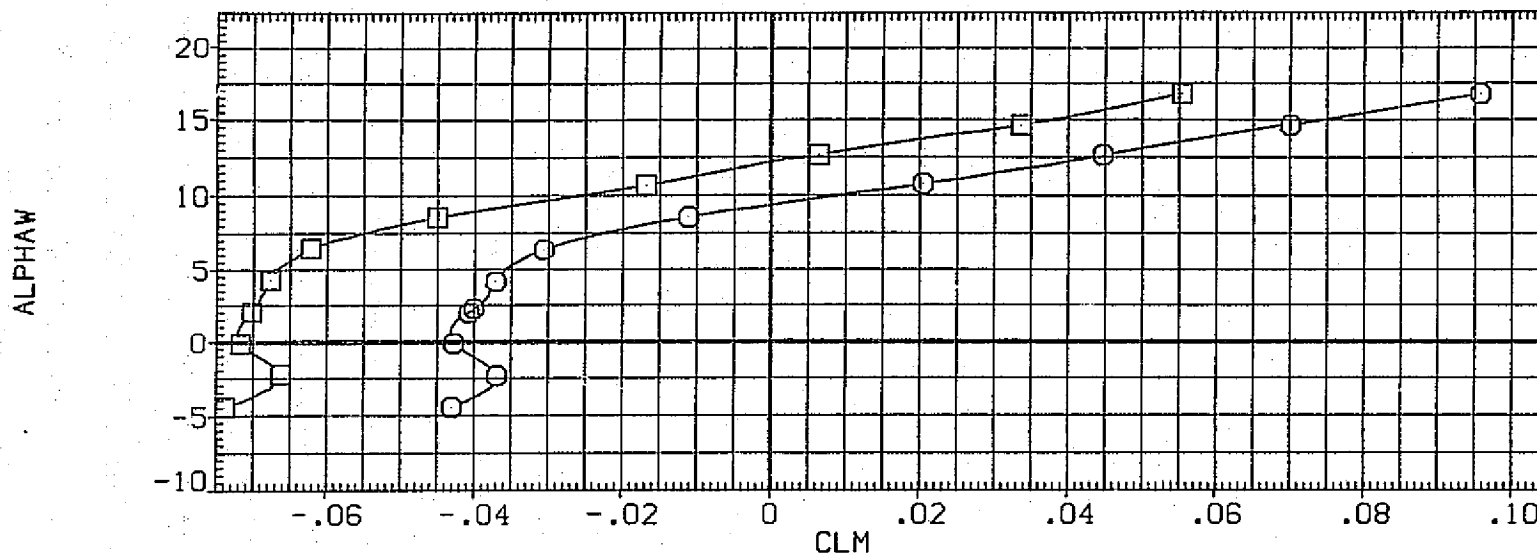


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP218)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	8.070	SREF 5500.0000 SQ.FT.
(RGP219)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

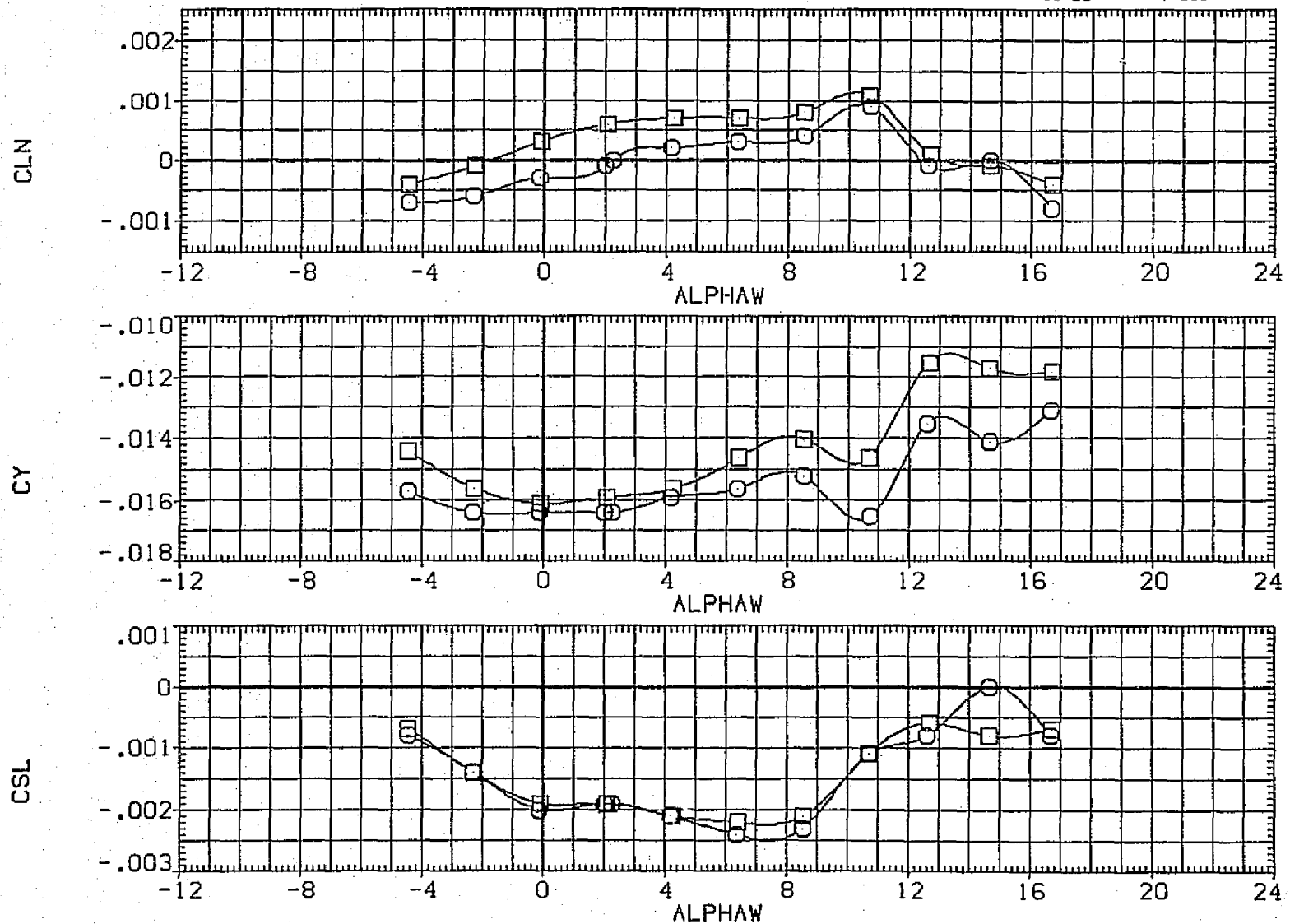


FIG. 81 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, ALT CLIMB, IORB 8
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP217)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28
(F3P220)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA	IORB
.000	8.070
.000	8.070

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

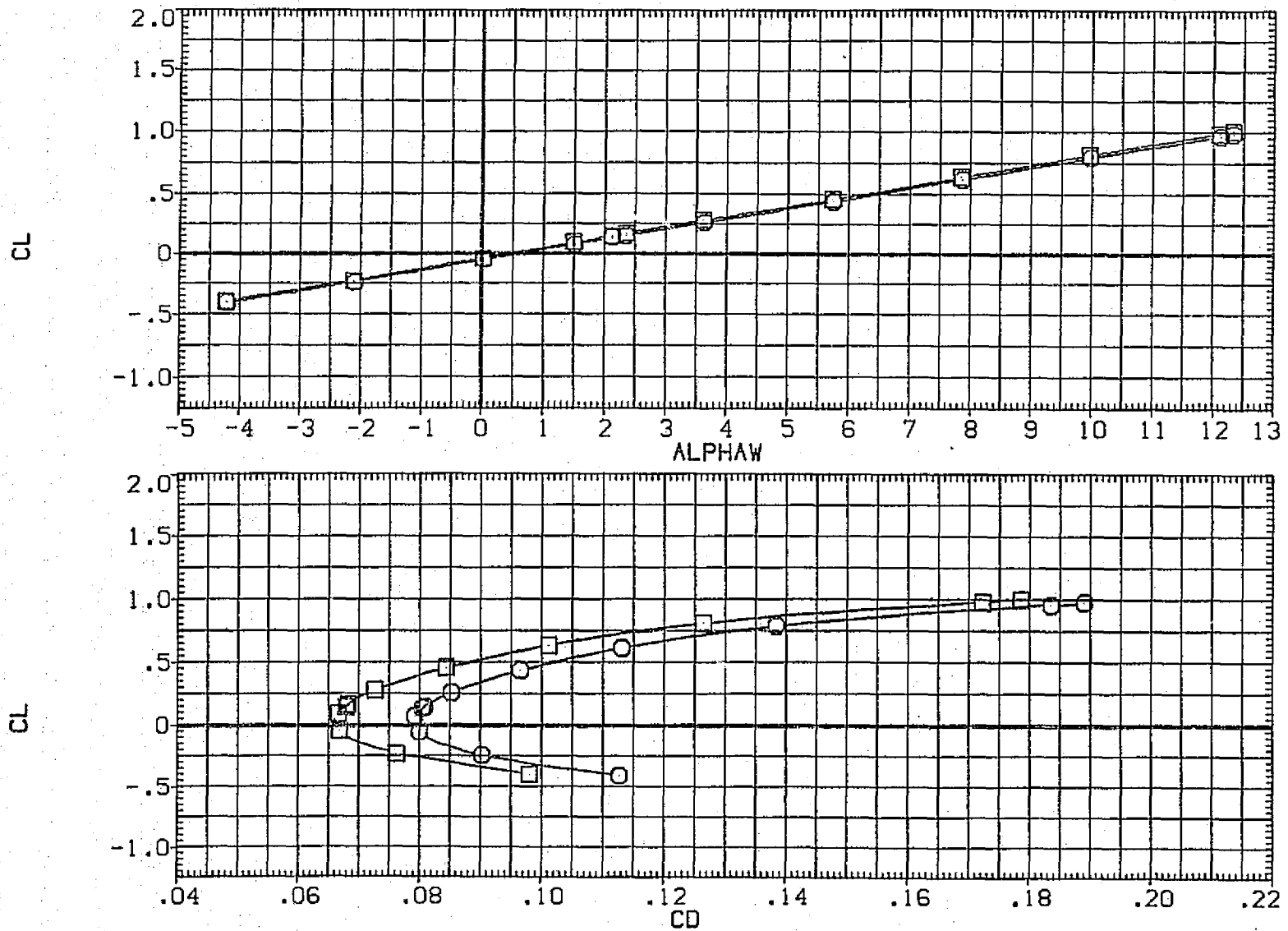


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP217)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	8.070	SREF 5500.0000 SQ.FT.
(RGP220)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

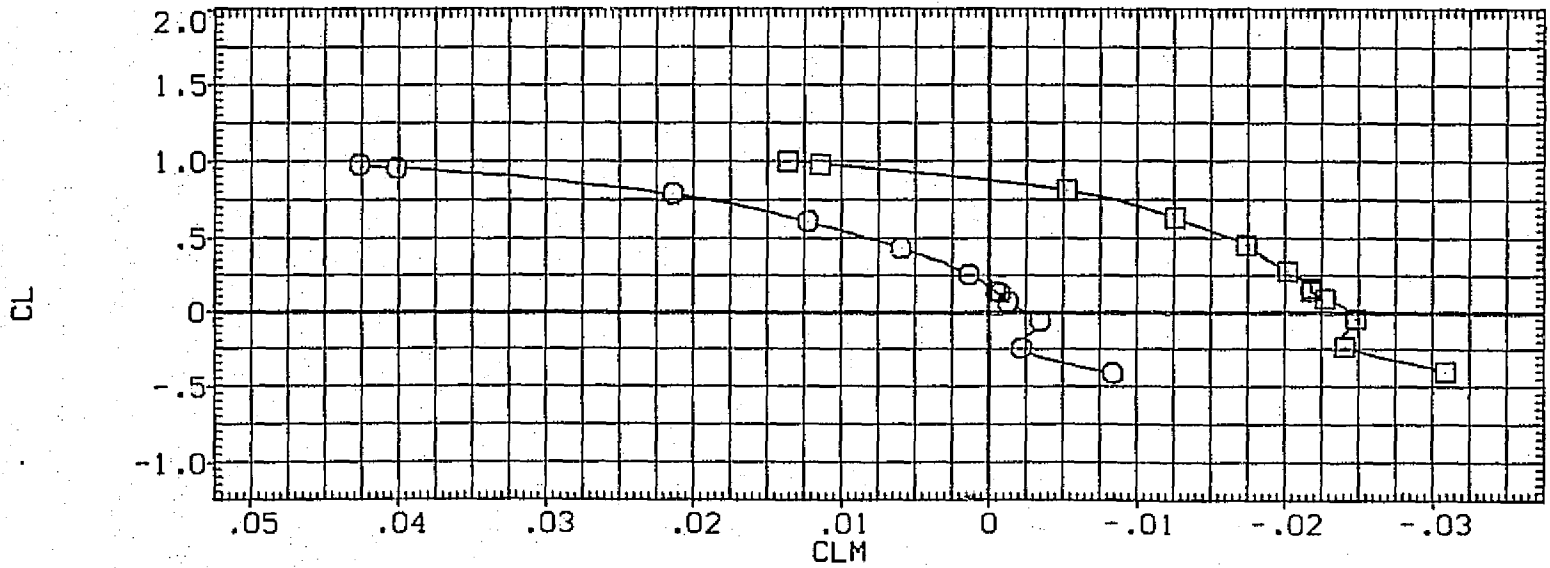
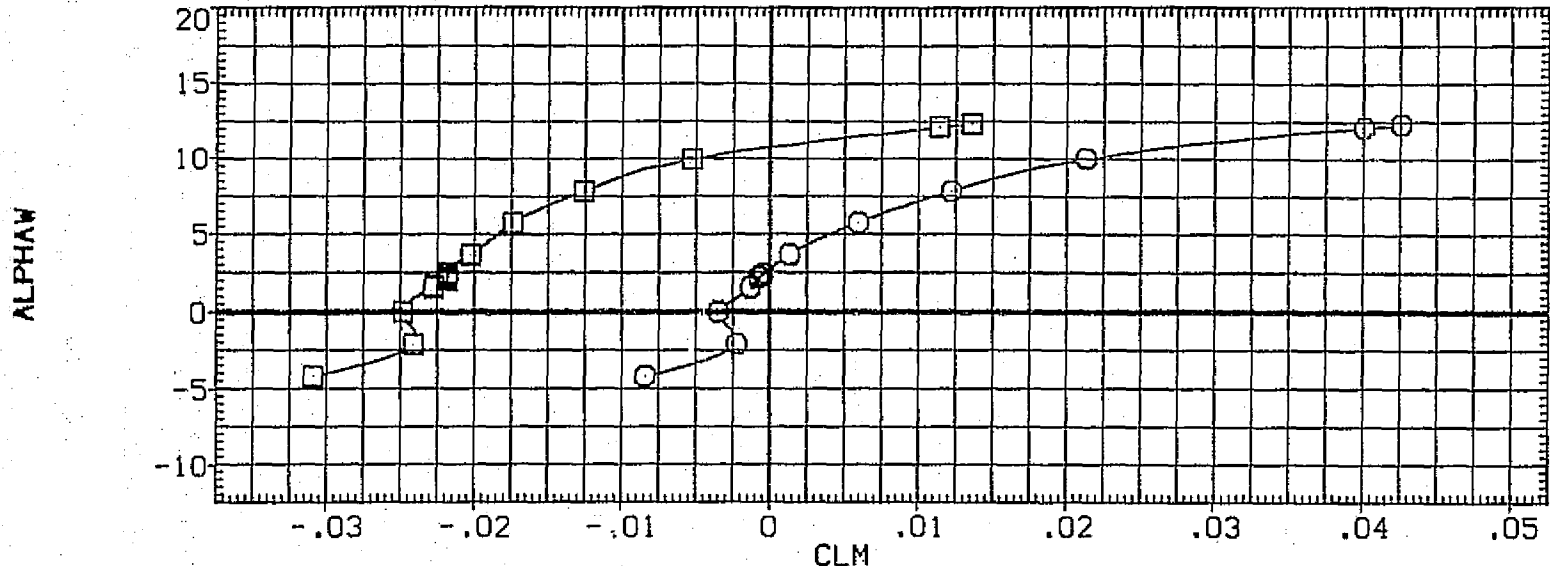


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8

(A)MACH = .40

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP217) CA6 K2 VS.151-12 AT103.1/105 ORBFBN24/28
 (RGP220) CA6 K2 VS.151-12 AT103.1/105 ORB TC4

BETA IORB
 .000 8.070
 .000 8.070

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339 9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

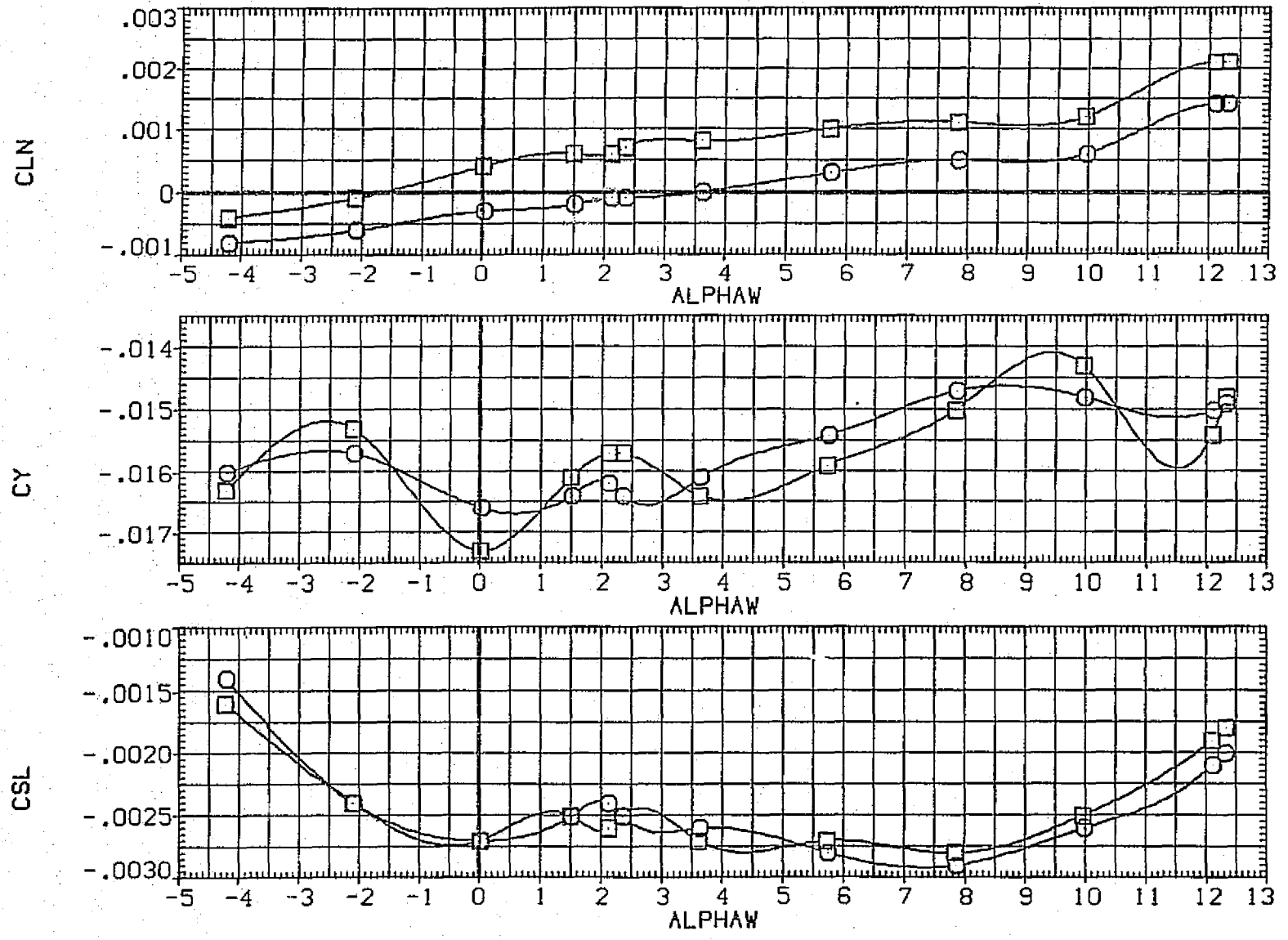


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8

(A) MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB
(RGP217)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	8.070
(RGP220)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

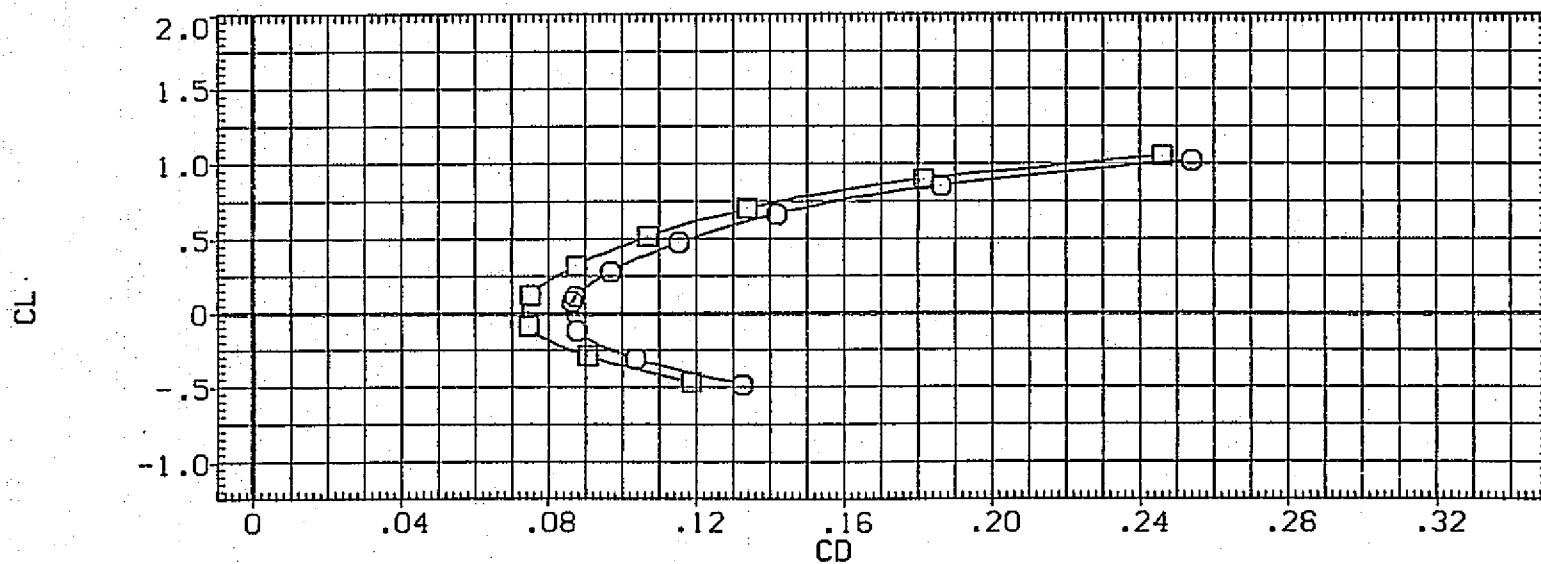
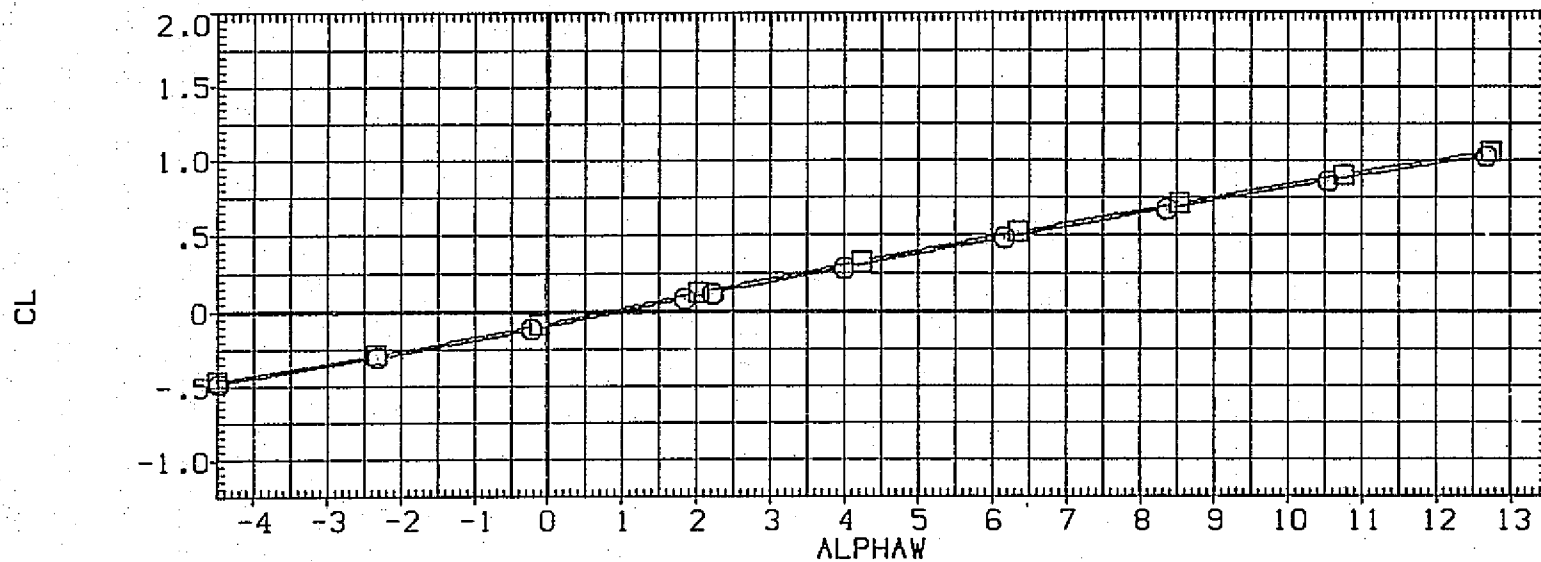


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8
 (B)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP217) □ CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28
 (RGP220) □ CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA IORB
 .000 8.070
 .000 8.070

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

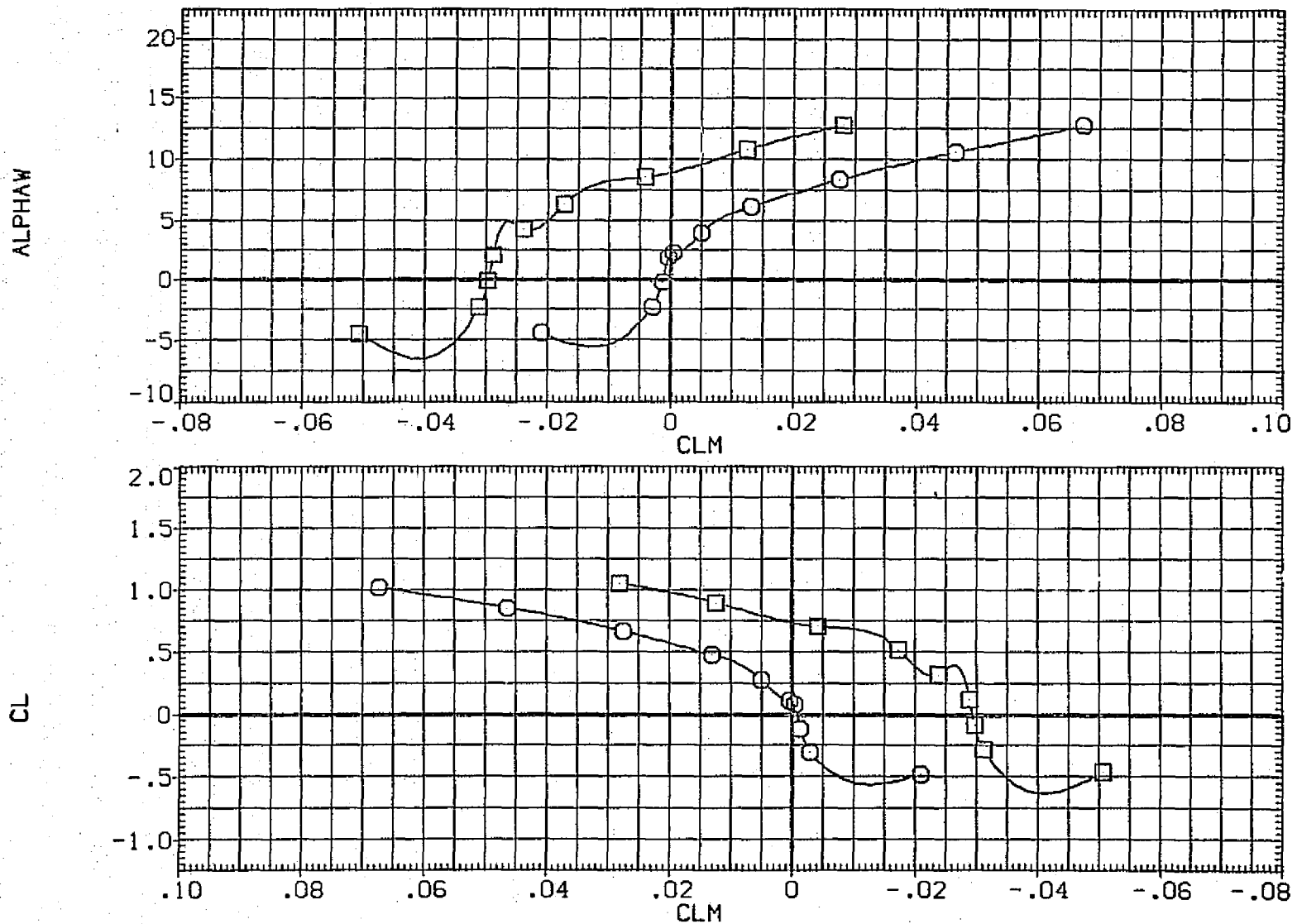


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP217)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	8.070	SREF 5500.0000 SQ.FT.
(RGP220)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	8.070	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

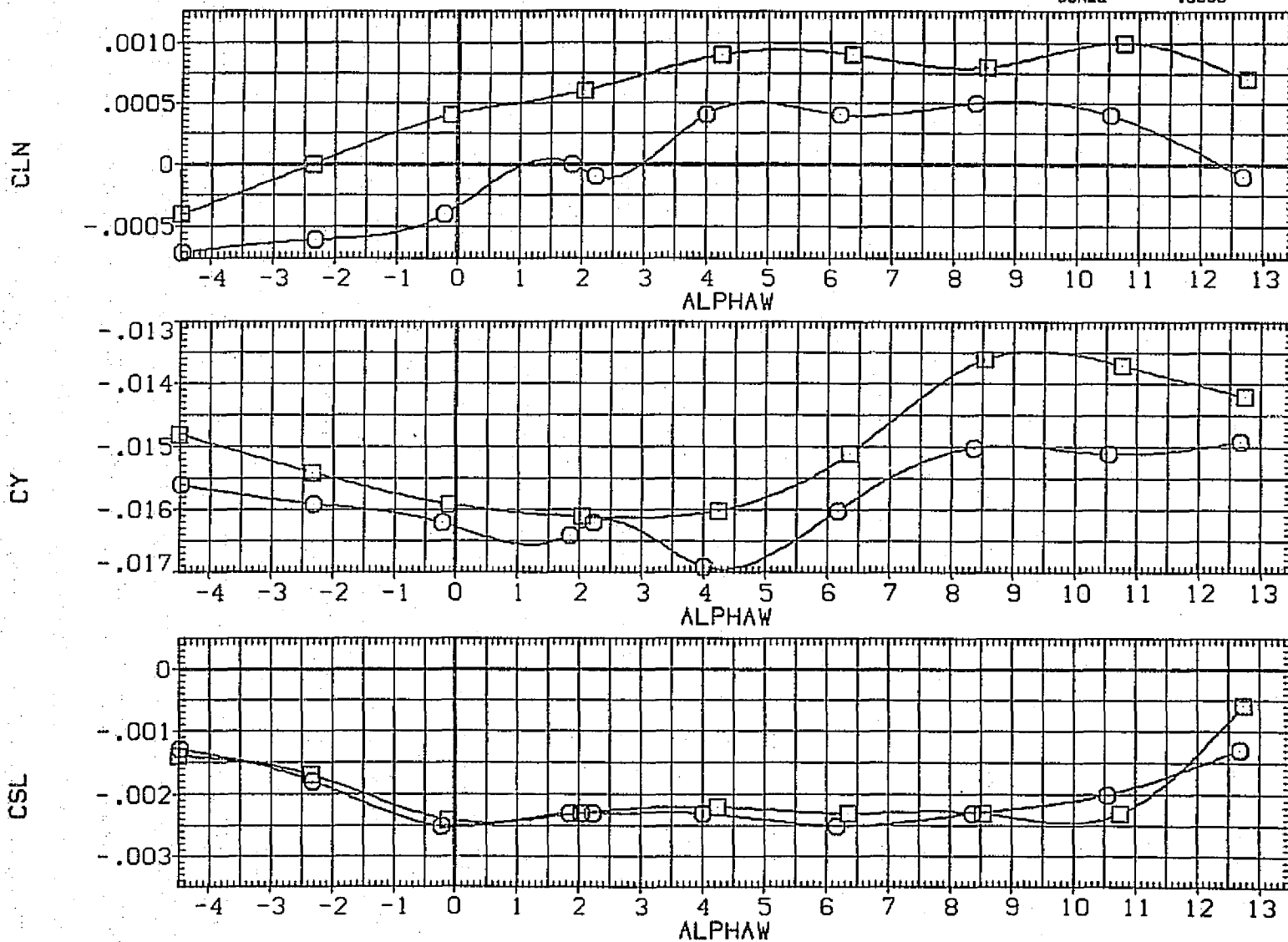


FIG. 82 HORIZONTAL TAIL OFF INFLIGHT SPEED BRKS, ALT LAUNCH, IORB 8

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP215)	CAG K2 V9.1S1-12 AF103.1/105 ORBFBN24/28
(RGP222)	CAG K2 V9.1S1-12 AF103.1/105 ORB TC4

BETA	IORB
.000	4.250
.000	4.230

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

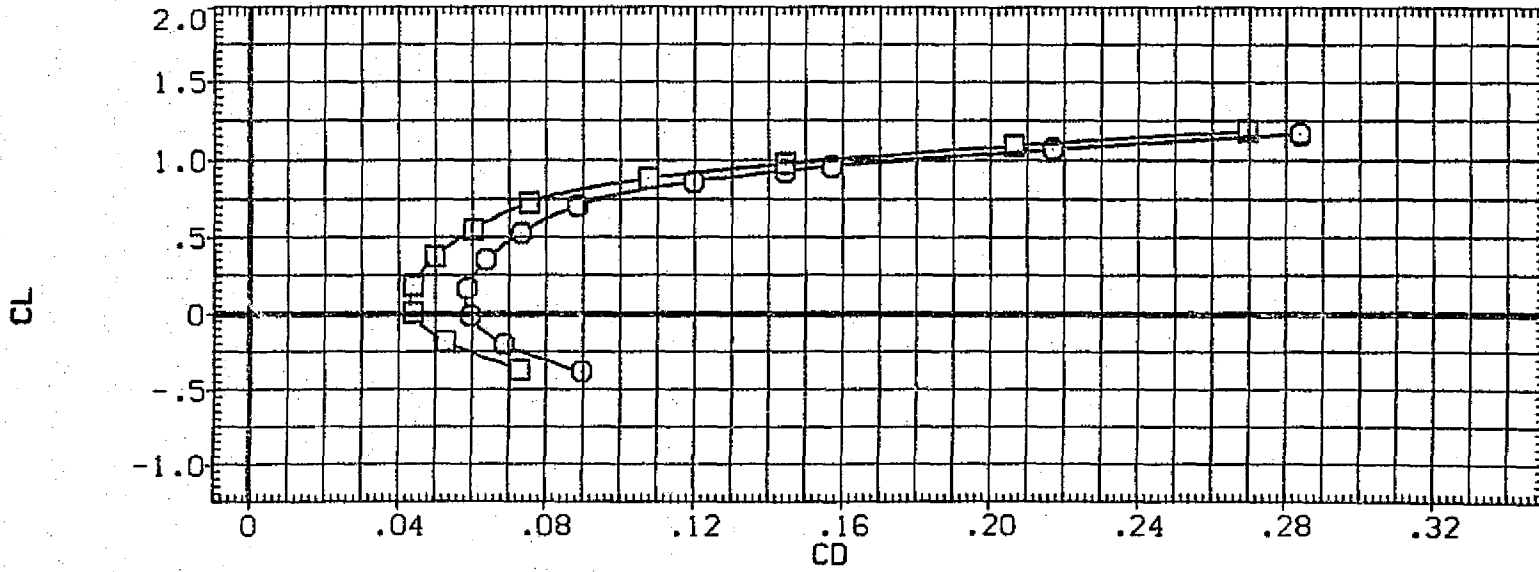
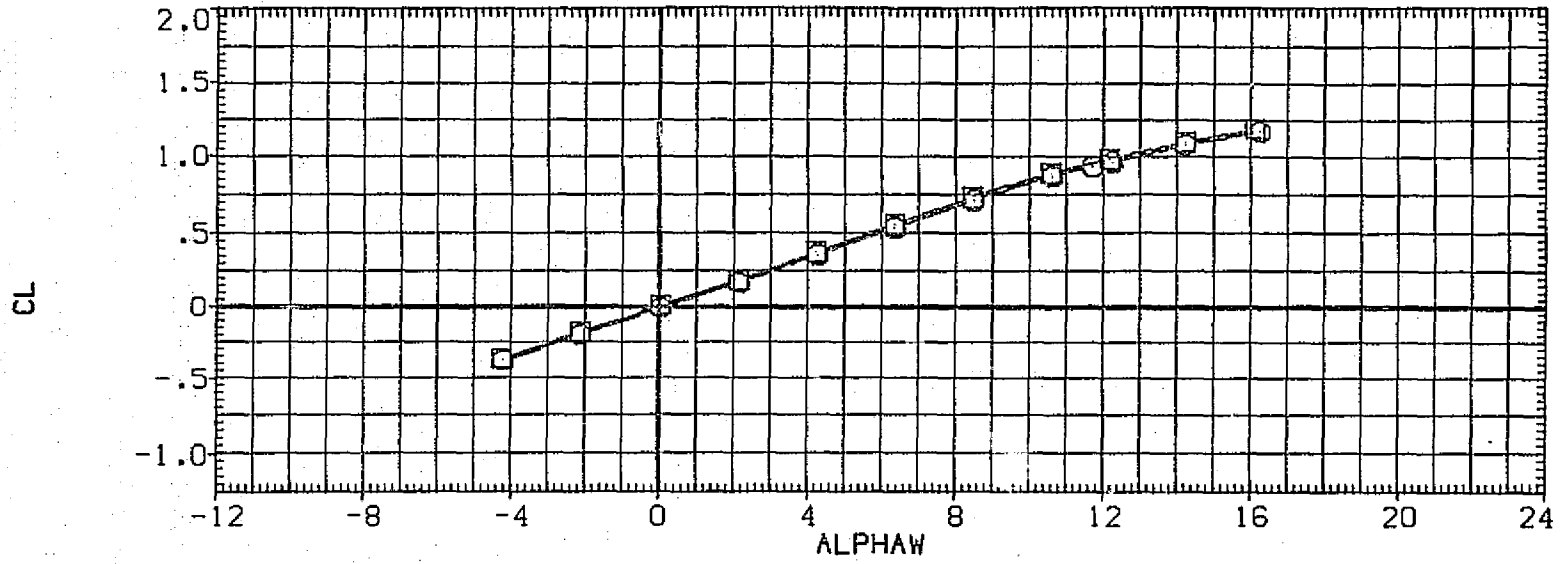


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP215)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8M24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP222)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7780 IN. ZC
				SCALE .0300

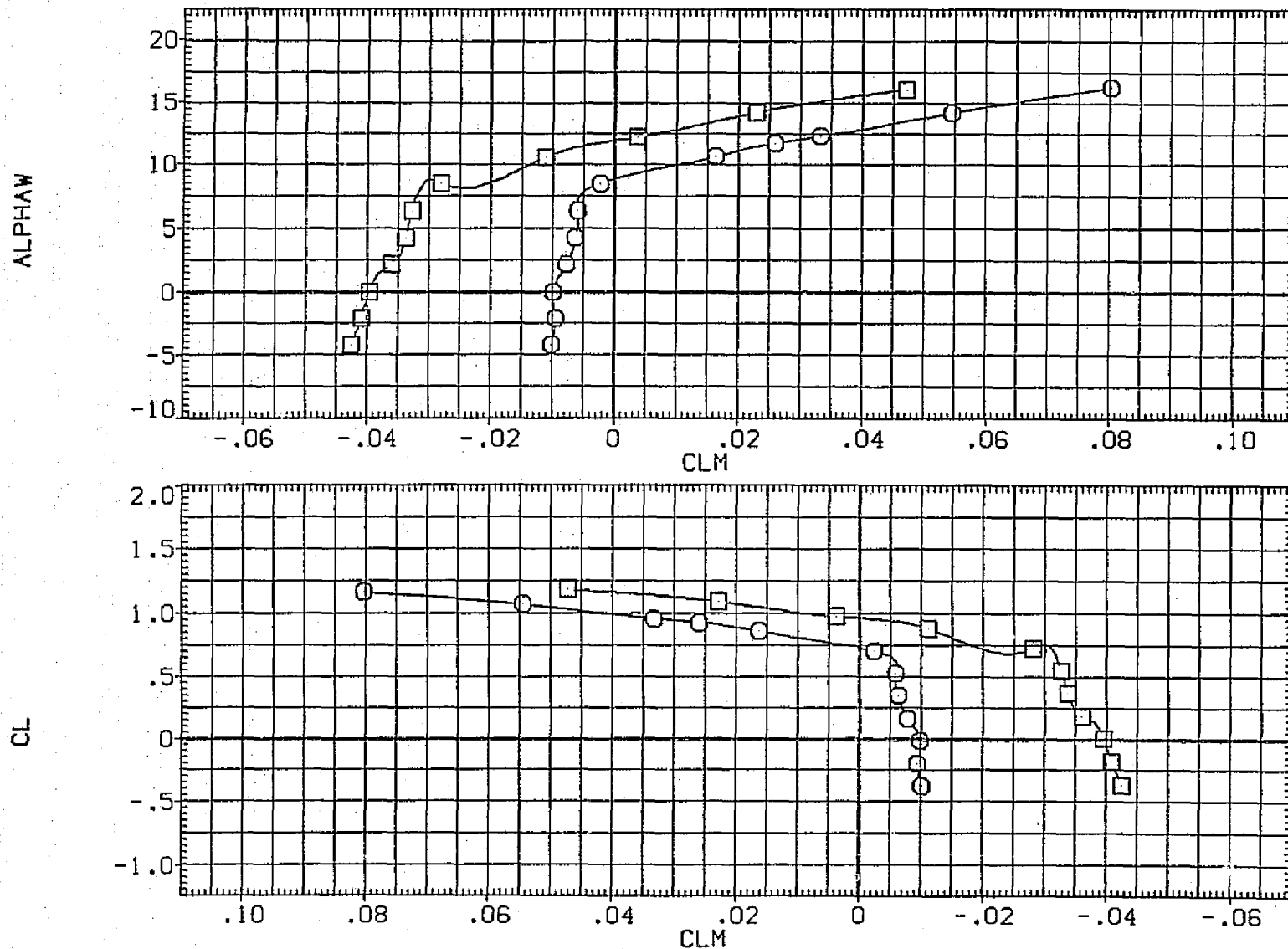


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP215)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28
(RGP222)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA	IORB
.000	4.250
.000	4.230

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

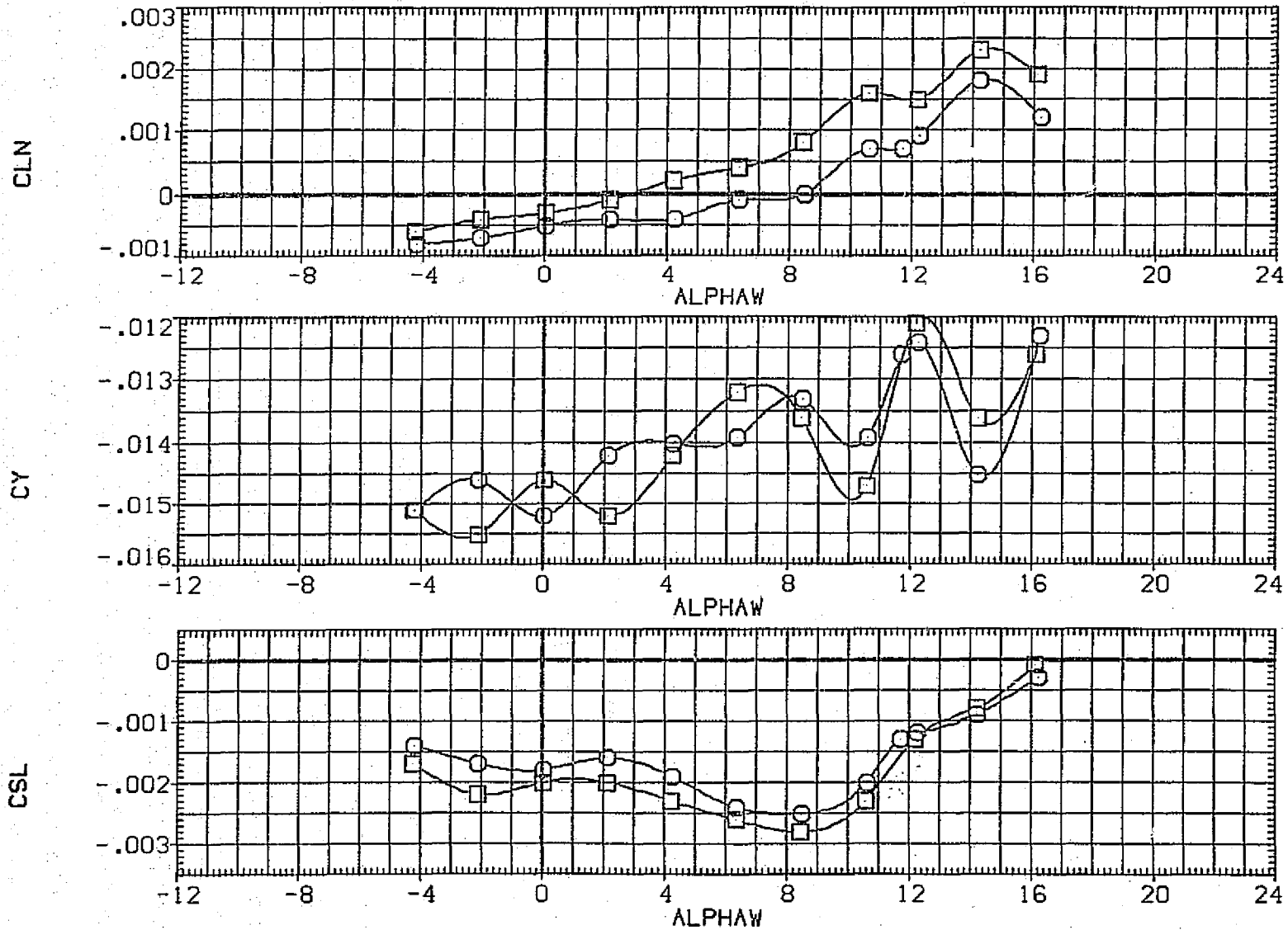


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP215)	CA6 K2 V9.151-12 AT103.1/105 ORBF8N24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP222)	CA6 K2 V9.151-12 AT103.1/105 ORB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

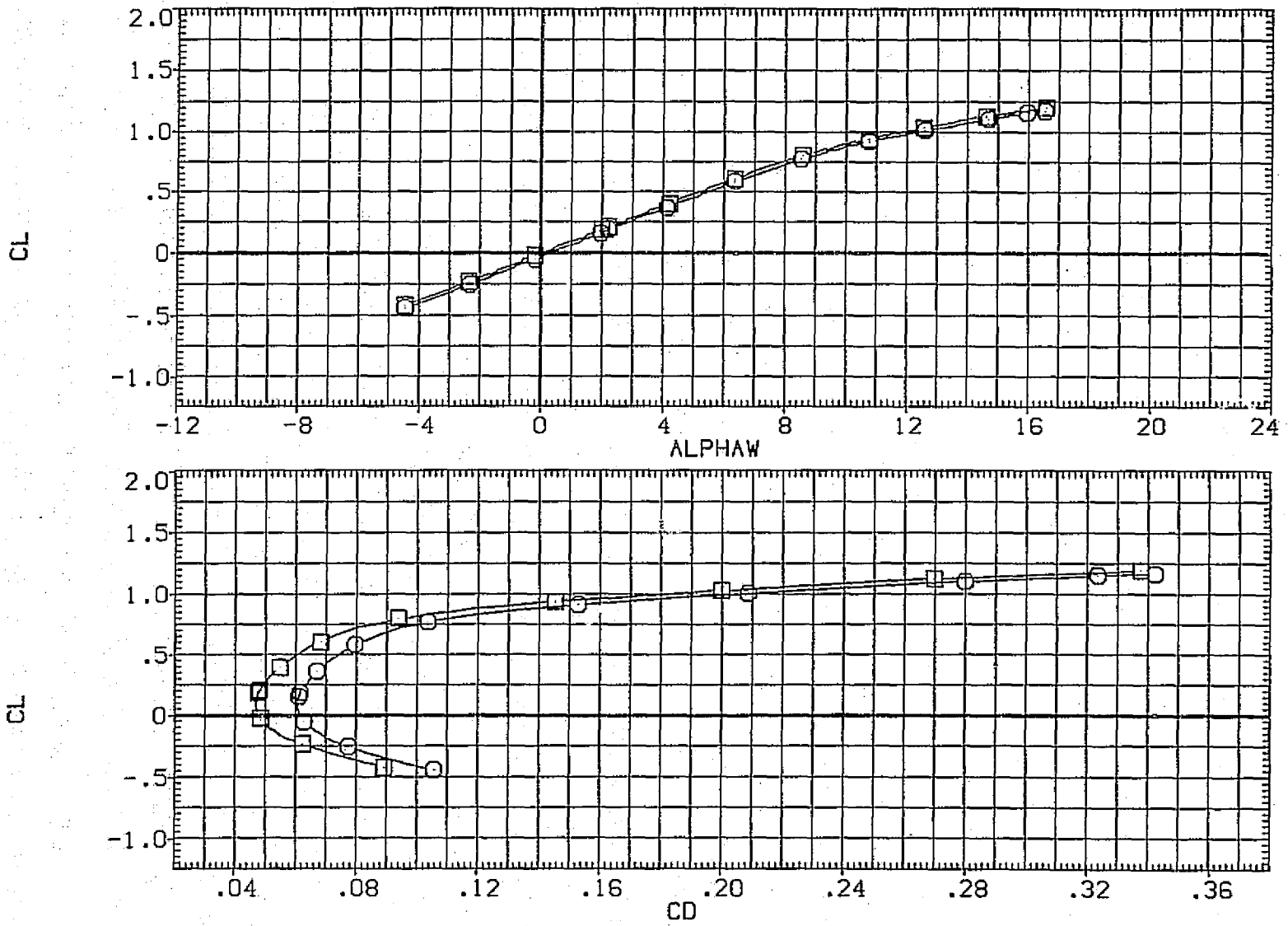


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION	
(RGP215)	CAS K2 V9.151-12 AT103.1/105 ORBF8N24/28	.000	4.250	SREF	5500.0000 SQ.FT.
(RGP222)	CAS K2 V9.151-12 AT103.1/105 ORB TC4	.000	4.230	LREF	327.8000 IN.
				BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

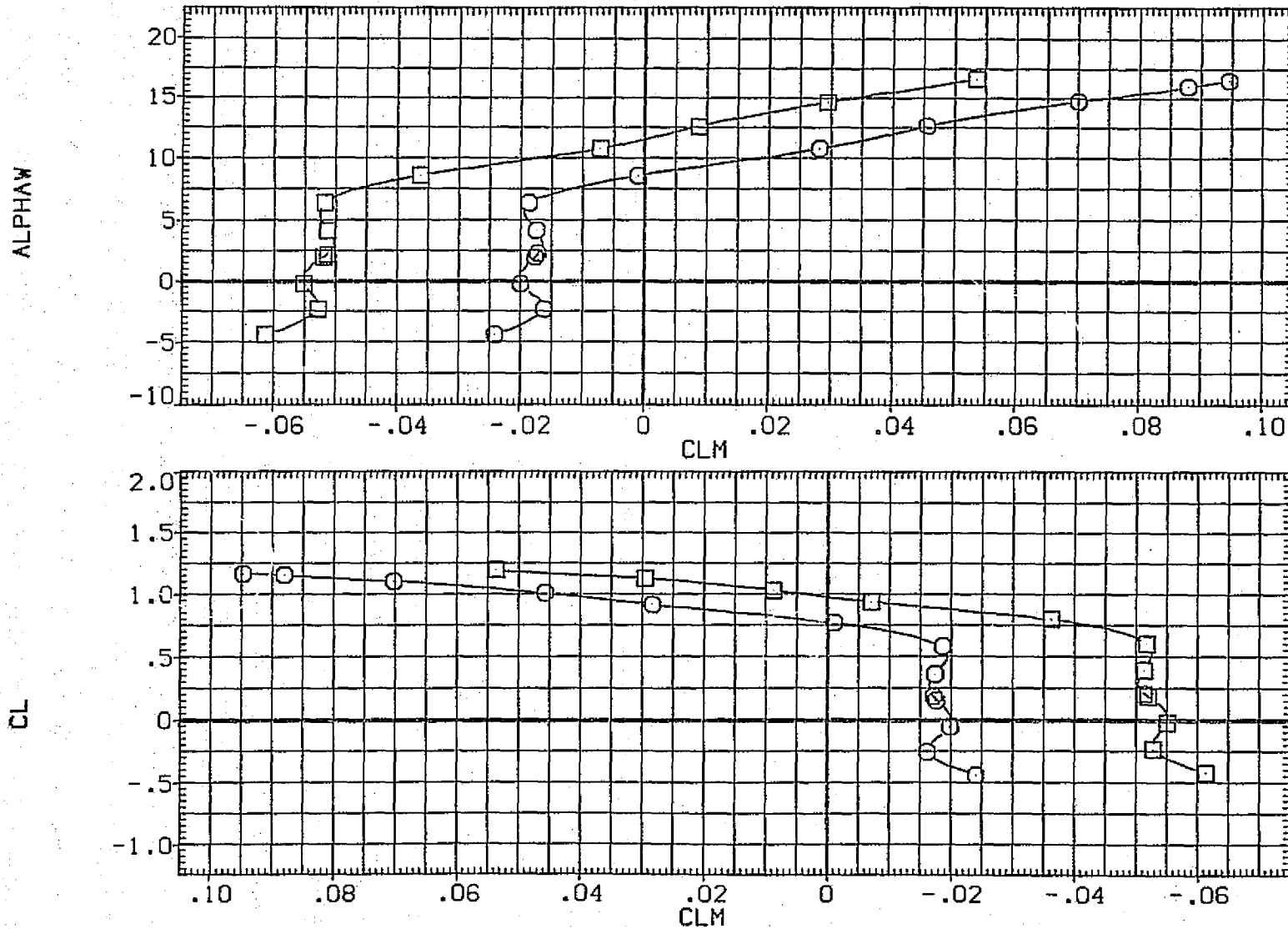


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(R6P215)	CA6 K2 V9.151-12 AT103.1/105 DRBF0N24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(R6P222)	CA6 K2 V9.151-12 AT103.1/105 DRB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

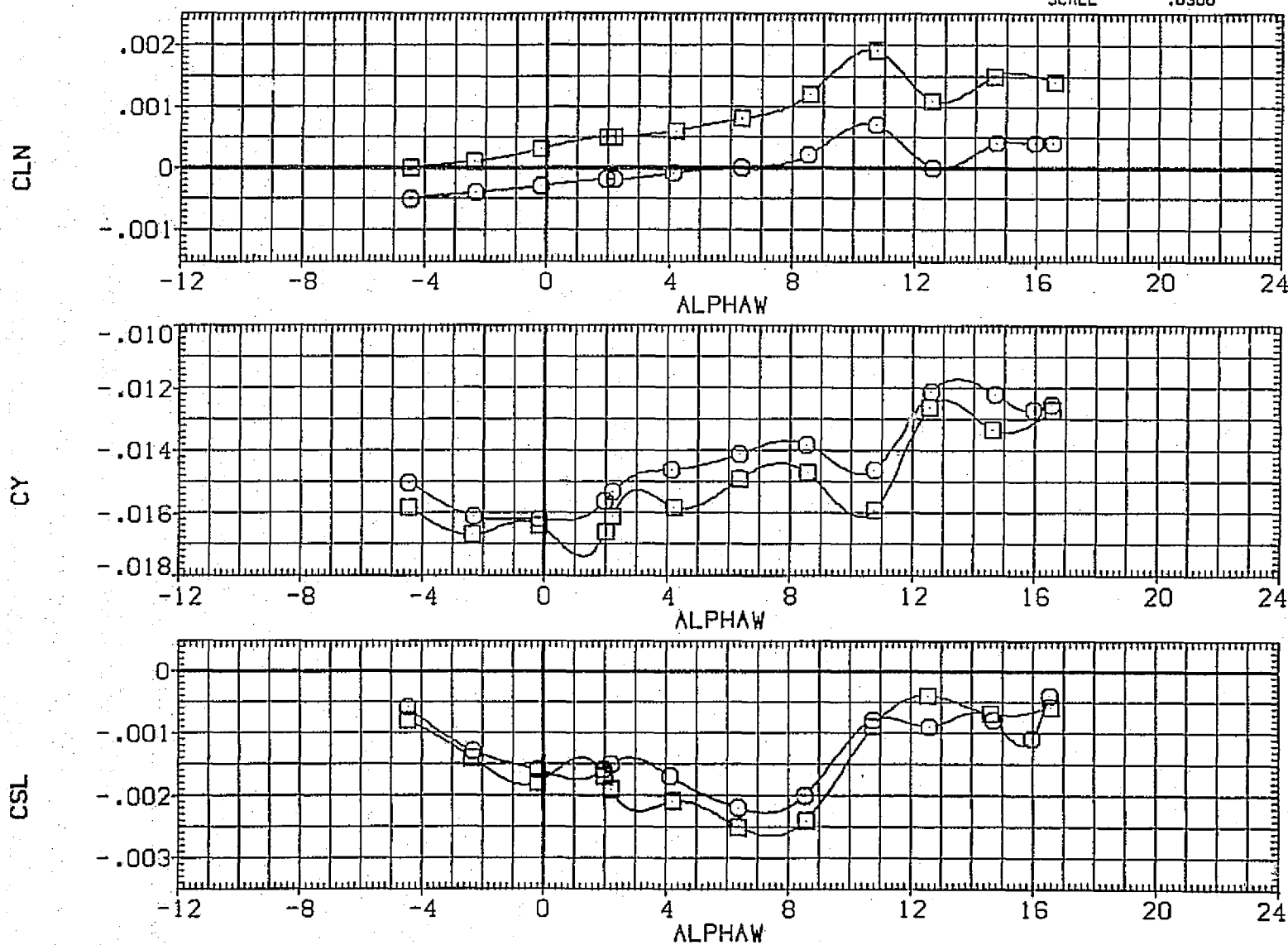


FIG. 83 HORIZONTAL TAIL OFF, SPEED BRKS FAIRED, FERRY, IORB 4.25

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION	
(RGP216)	CA6 K2 V9.1S1-12 AT103.1/105 DRBFBN24/28	.000	4.250	SREF	5500.0000 SQ.FT.
(RGP221)	CA6 K2 V9.1S1-12 AT103.1/105 DRB TC4	.000	4.230	LREF	327.8000 IN.
				BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

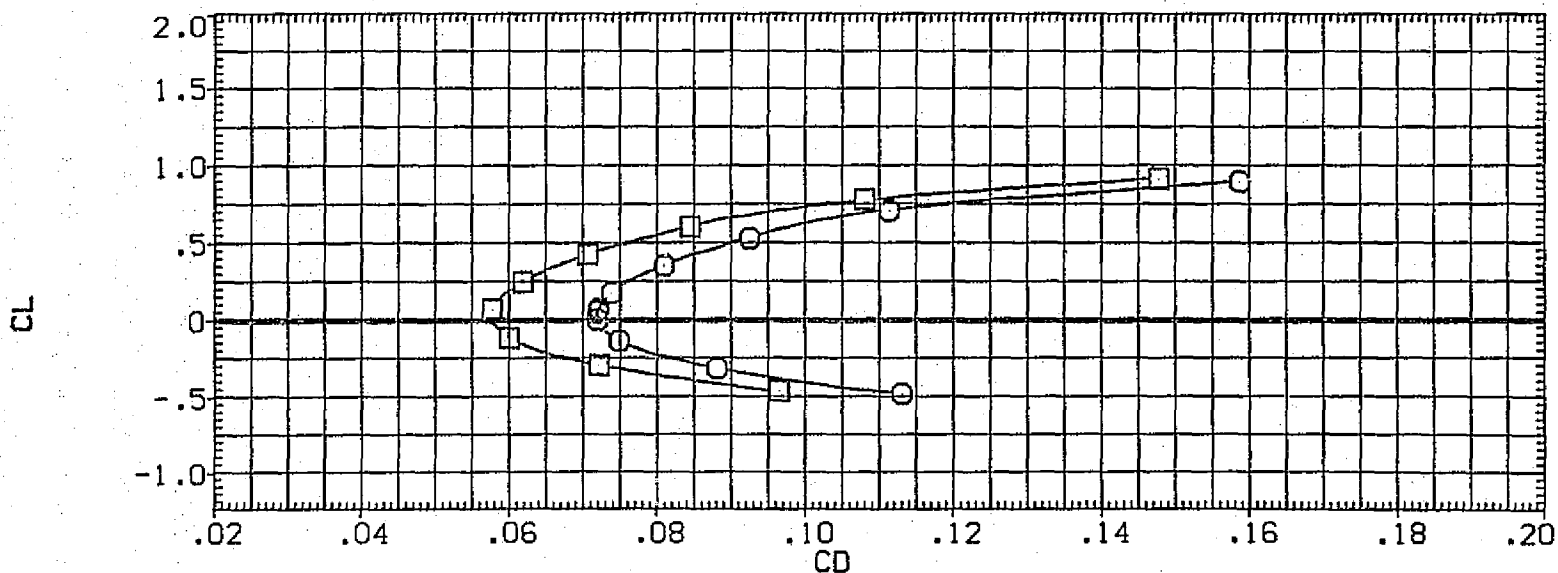
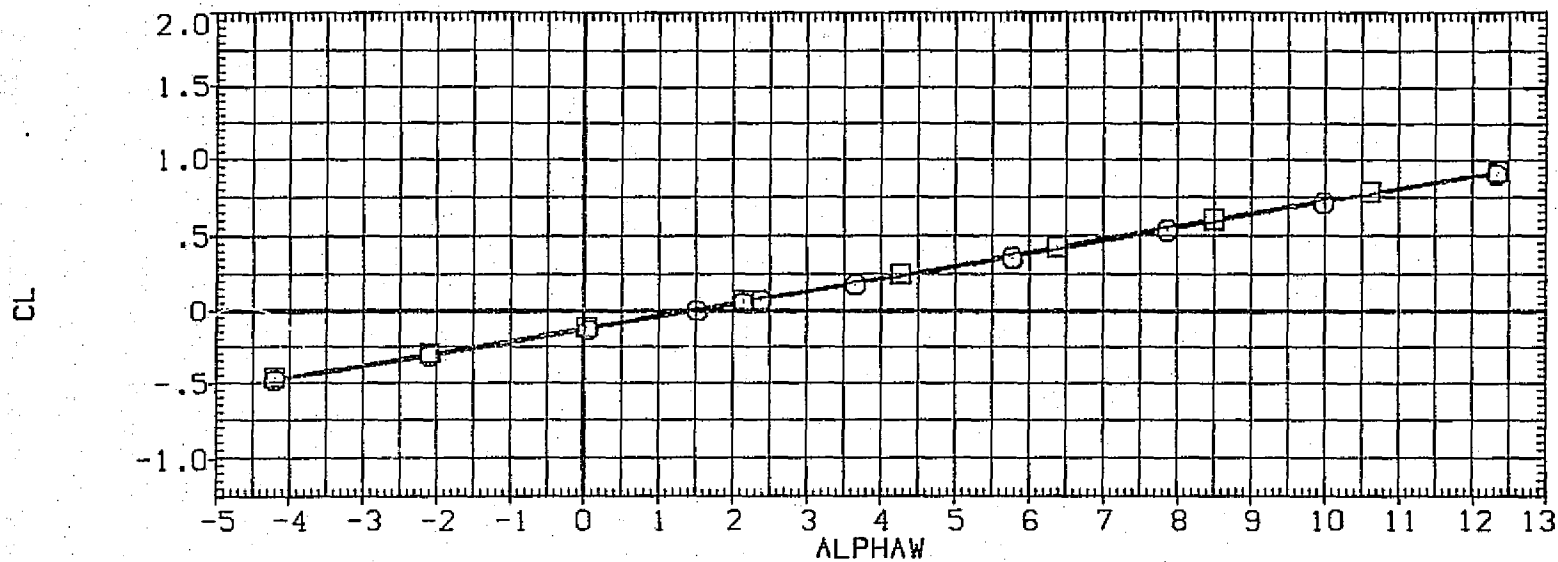


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP216)	○ CAS K2 V9.1S1-12 AT103.1/105 ORBF8N24/28
(RGP221)	□ CAS K2 V9.1S1-12 AT103.1/105 ORB TC4

BETA	IORB
.000	4.250
.000	4.230

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

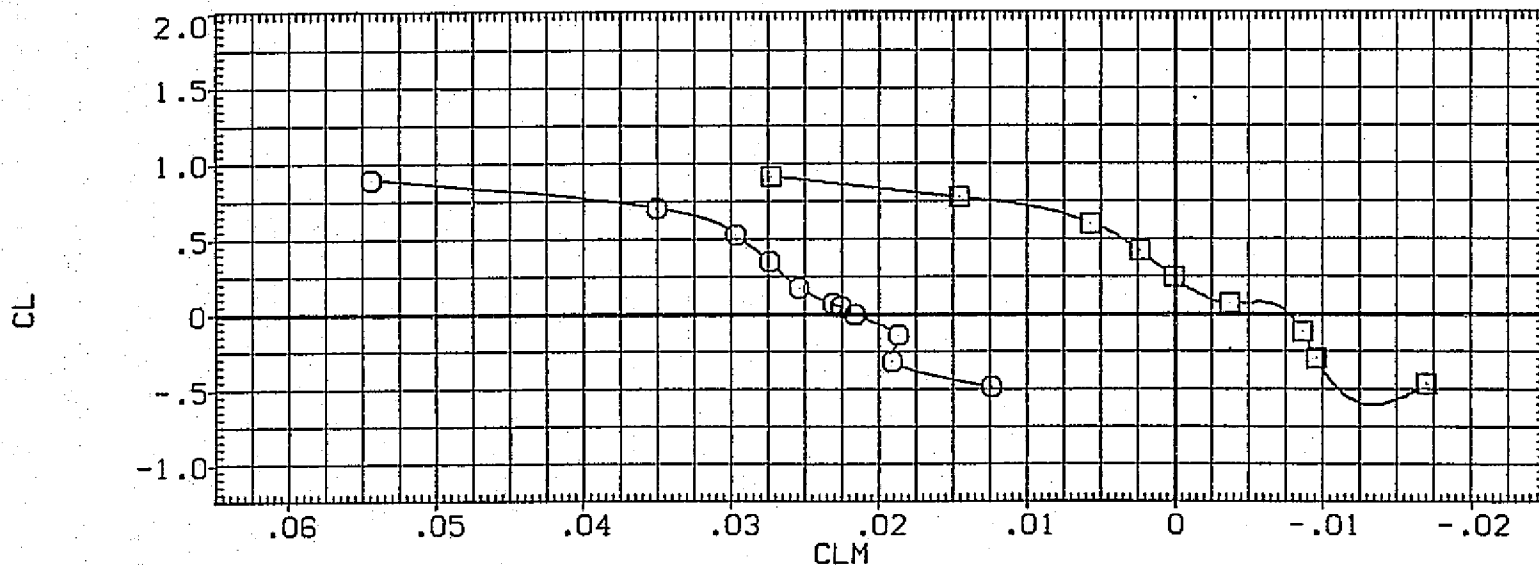
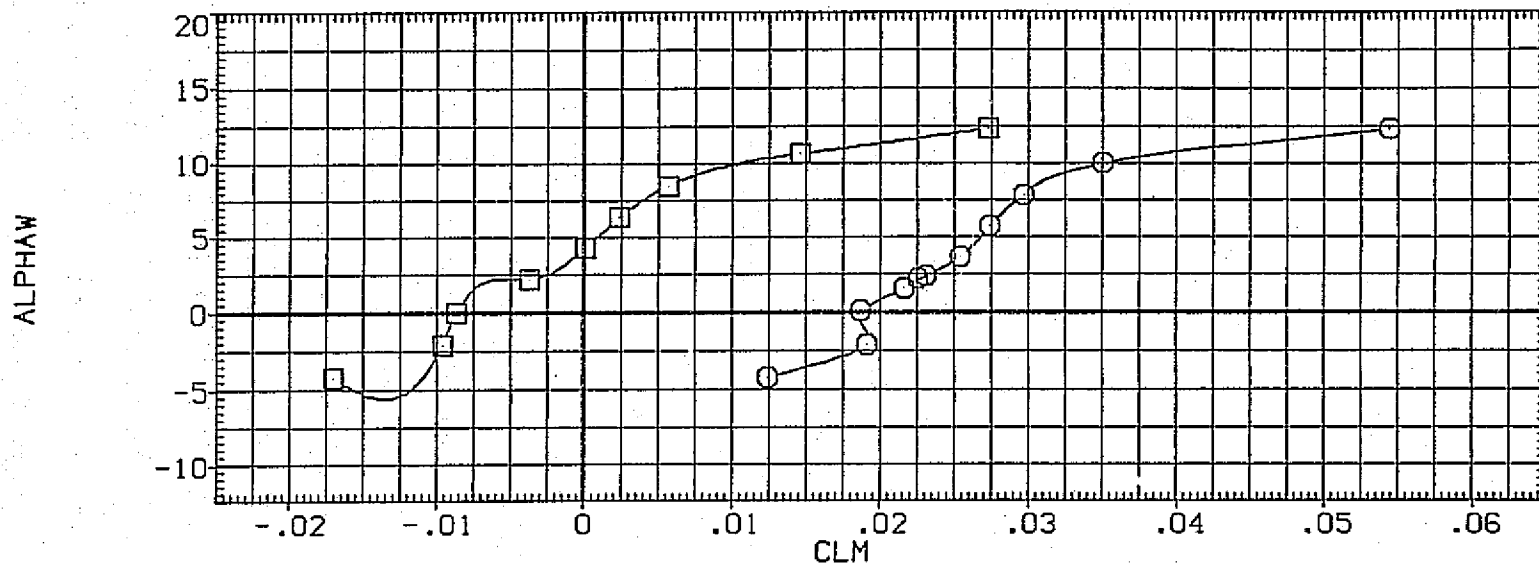


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25
 (A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP216)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP221)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

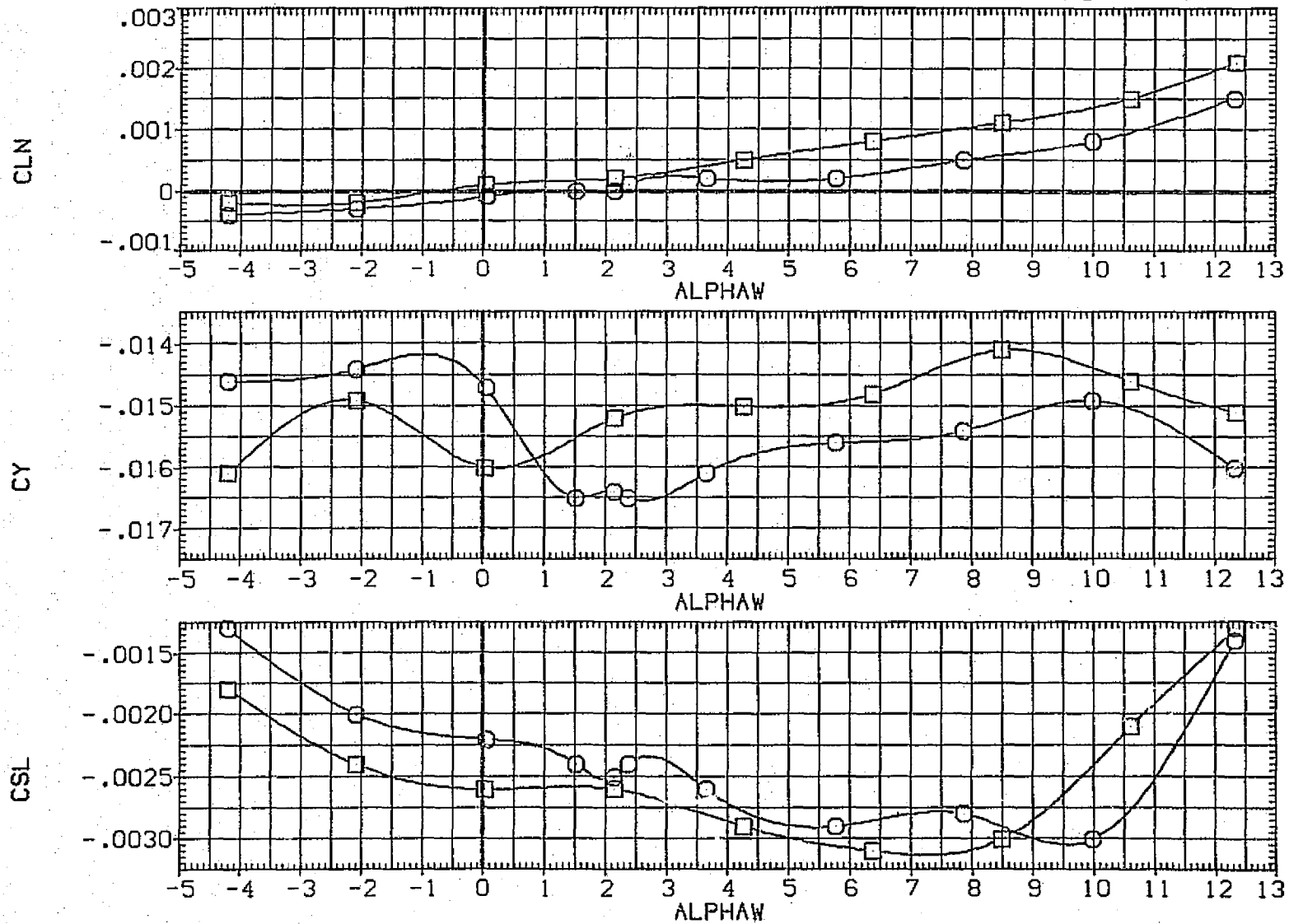


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25

(A)MACH = .40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP216)	□ CAG K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP221)	□ CAG K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

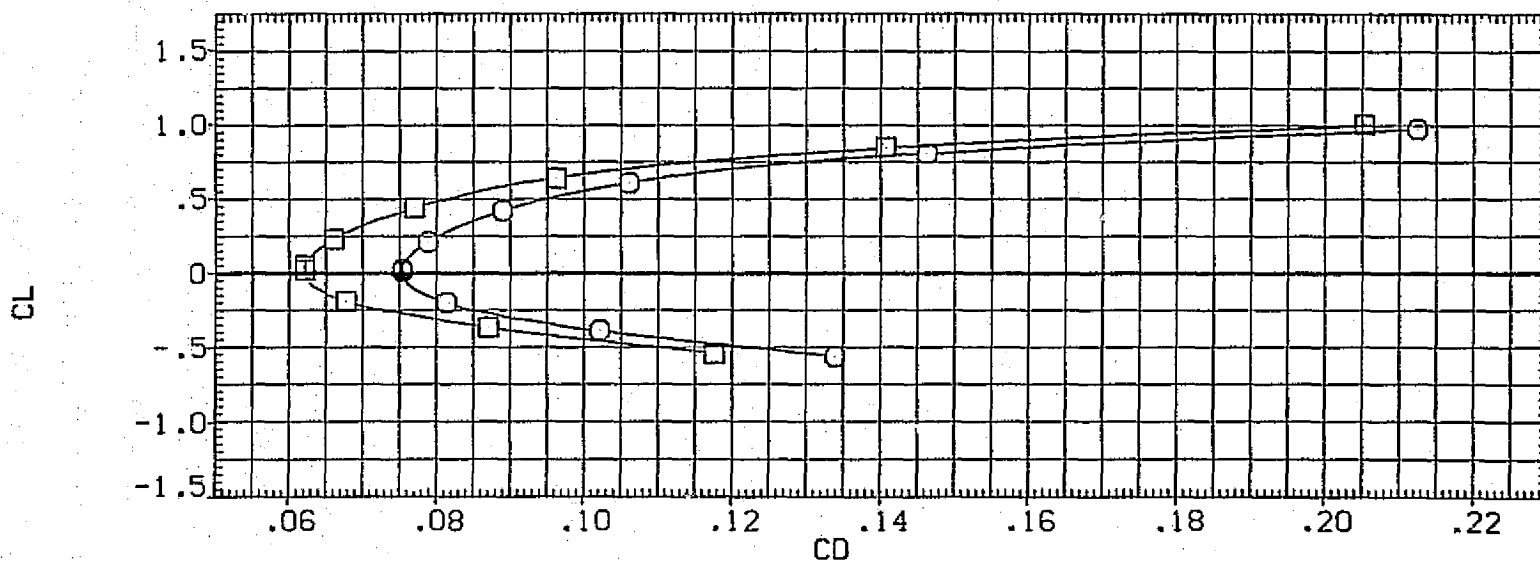
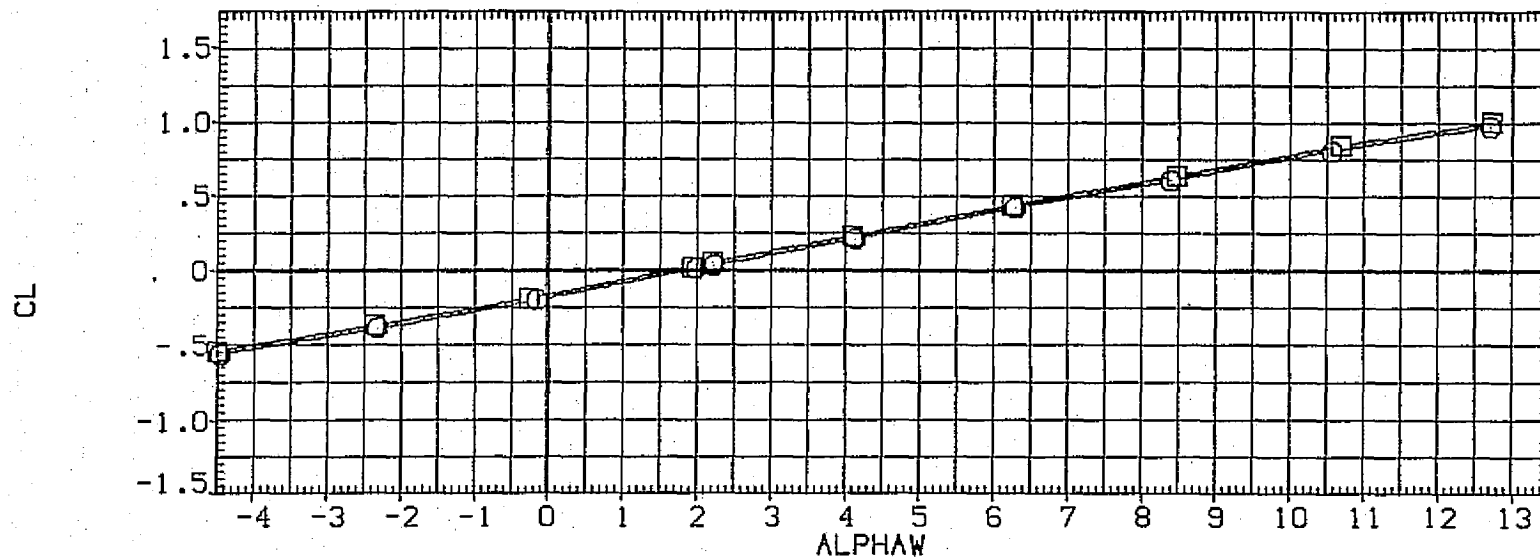


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB
(RGP216)	CA6 K2 V9.1S1-12 AT103.1/105	.000	4.250
(RGP221)	CA6 K2 V9.1S1-12 AT103.1/105	.000	4.230

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

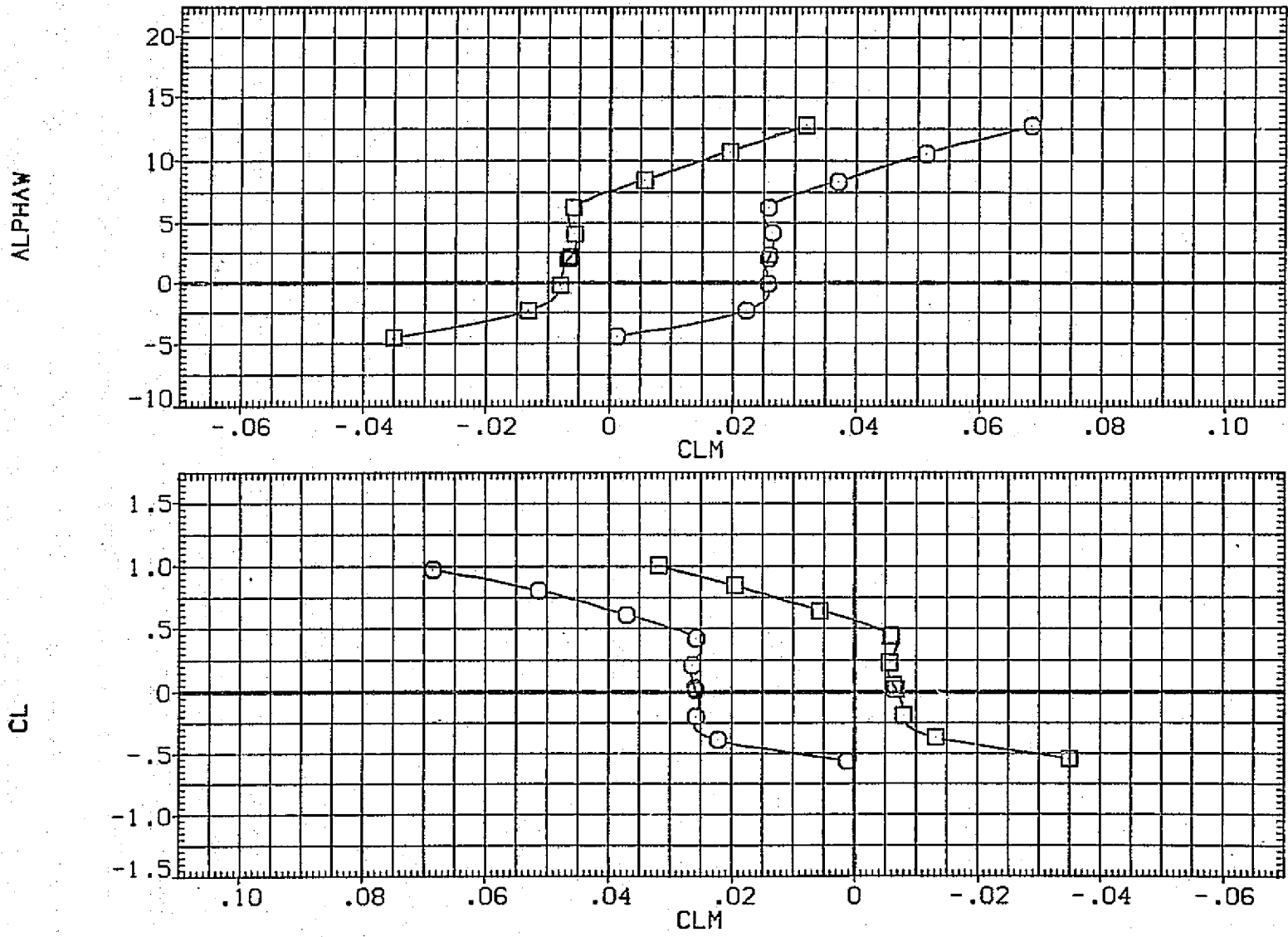


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	IORB	REFERENCE INFORMATION
(RGP216)	CA6 K2 V9.1S1-12 AT103.1/105 ORBF8N24/28	.000	4.250	SREF 5500.0000 SQ.FT.
(RGP221)	CA6 K2 V9.1S1-12 AT103.1/105 ORB TC4	.000	4.230	LREF 327.8000 IN.
				BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

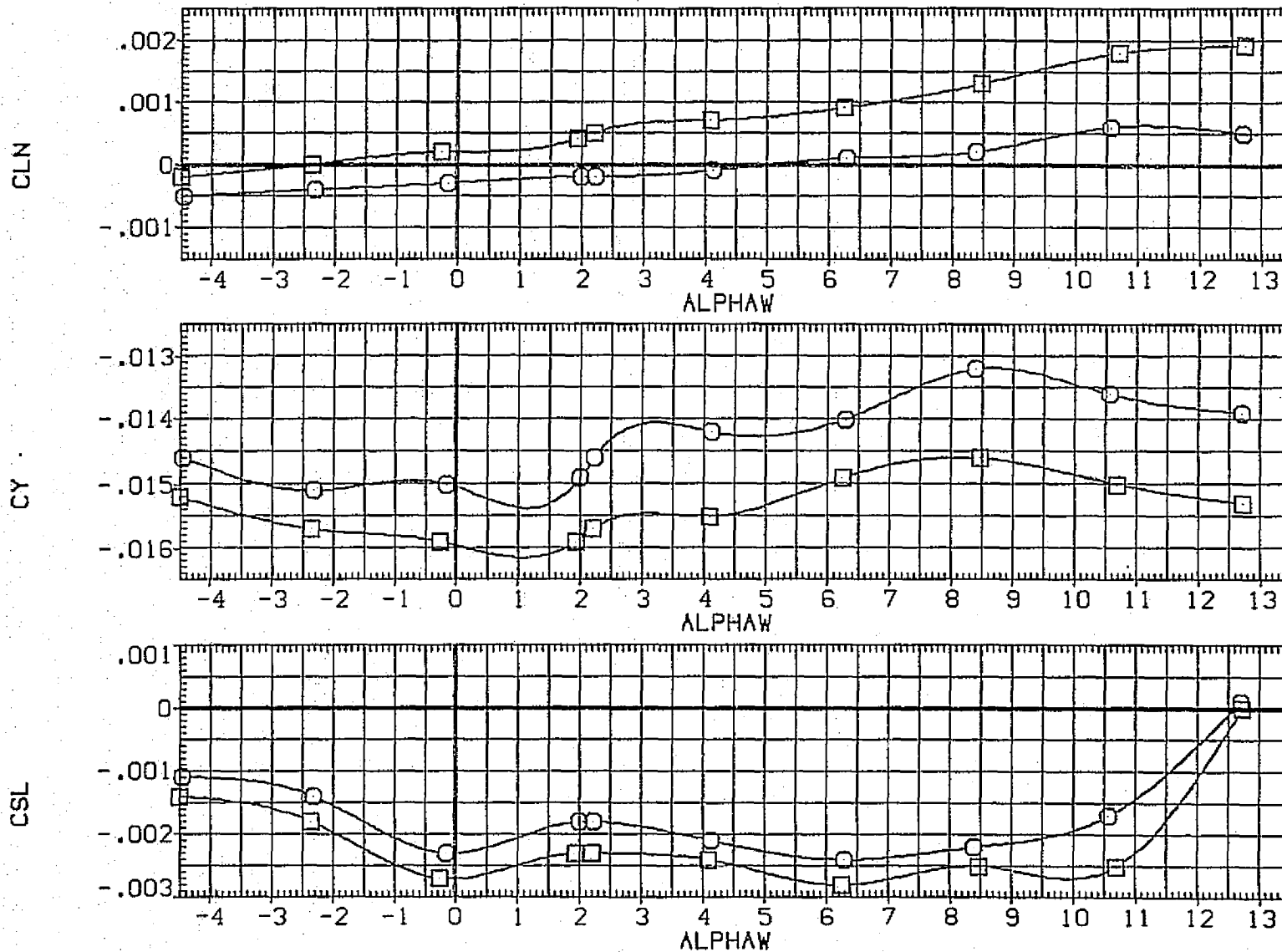


FIG. 84 HORIZONTAL TAIL OFF, INFLIGHT SPEED BRKS, FERRY, IORB 4.25

(B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP224)	CA6 K2 V9.1S1-12 AT103.3/105
(RGP223)	CA6 K2 V9.1

BETA
.000
.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

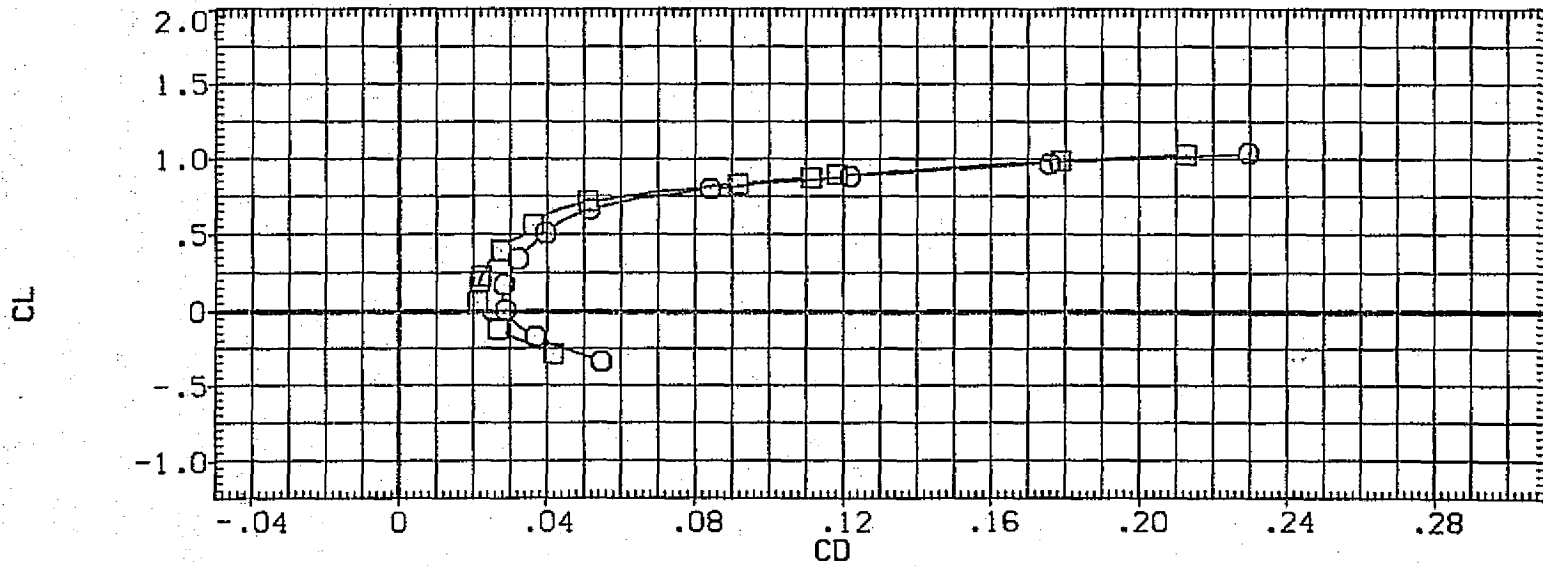
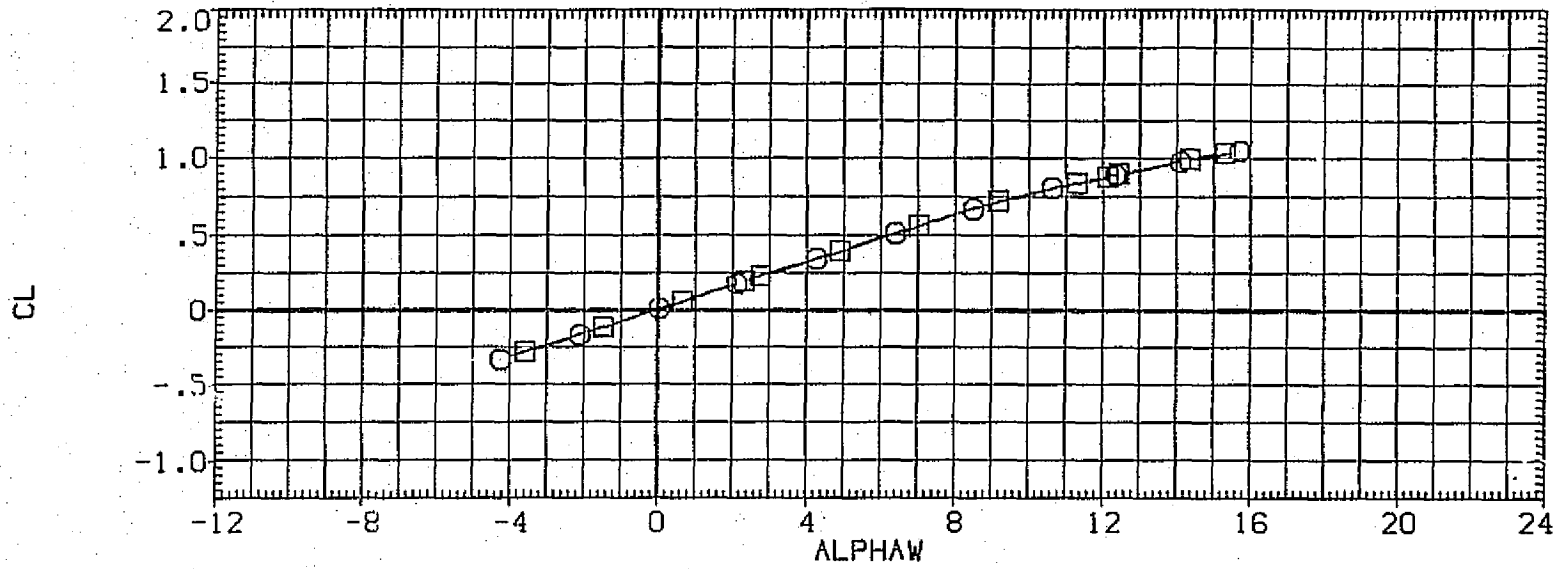


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF
(A)MACH = .40

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP224) □ CA6 K2 V9.1S1-12 AT103.3/105
 (RGP223) □ CA6 K2 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

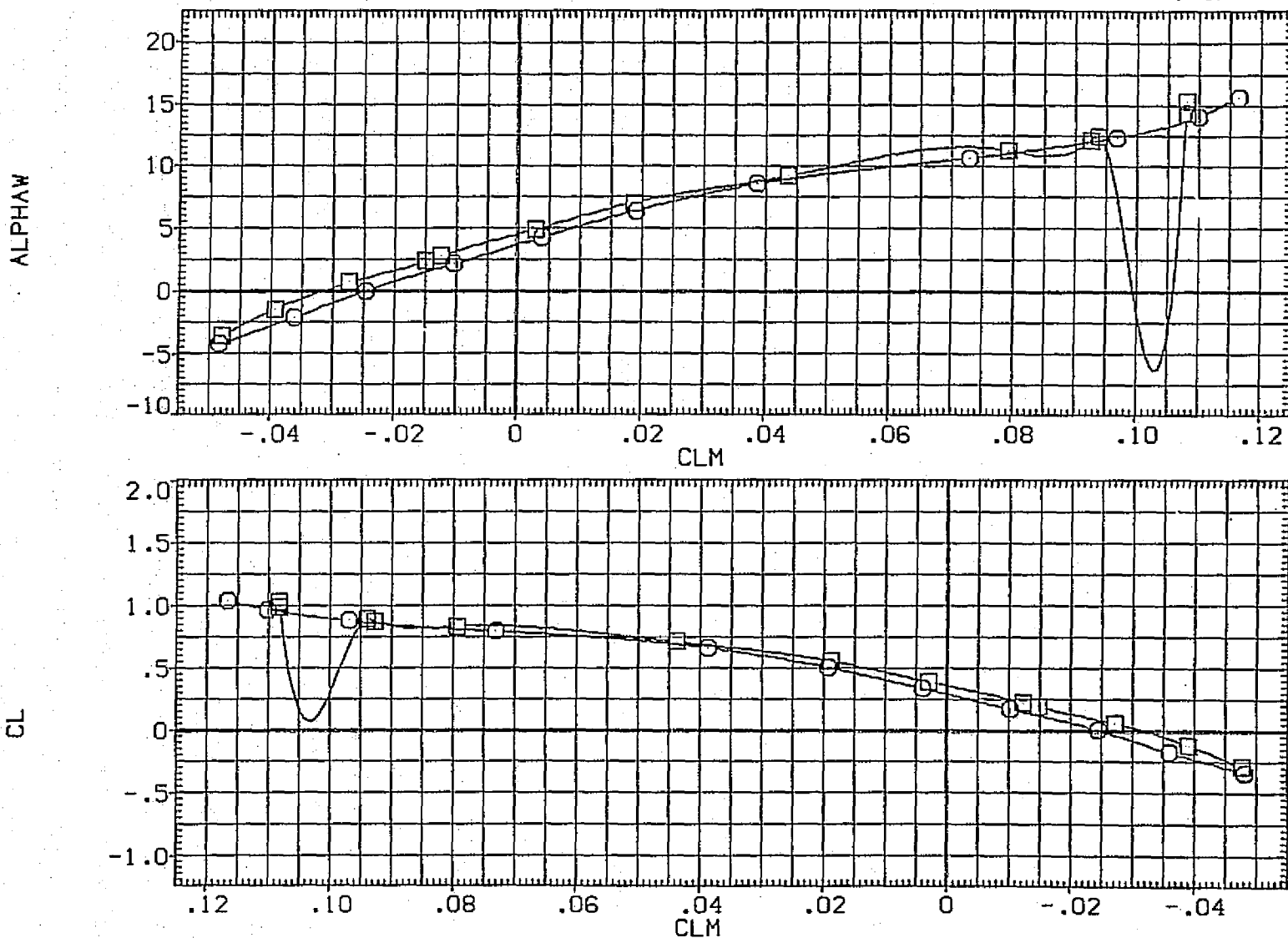


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF

(A)MACH = .40

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP224) □ CAG K2 V9.1S1-12 AT103.3/105
 (RGP223) ○ CAG K2 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

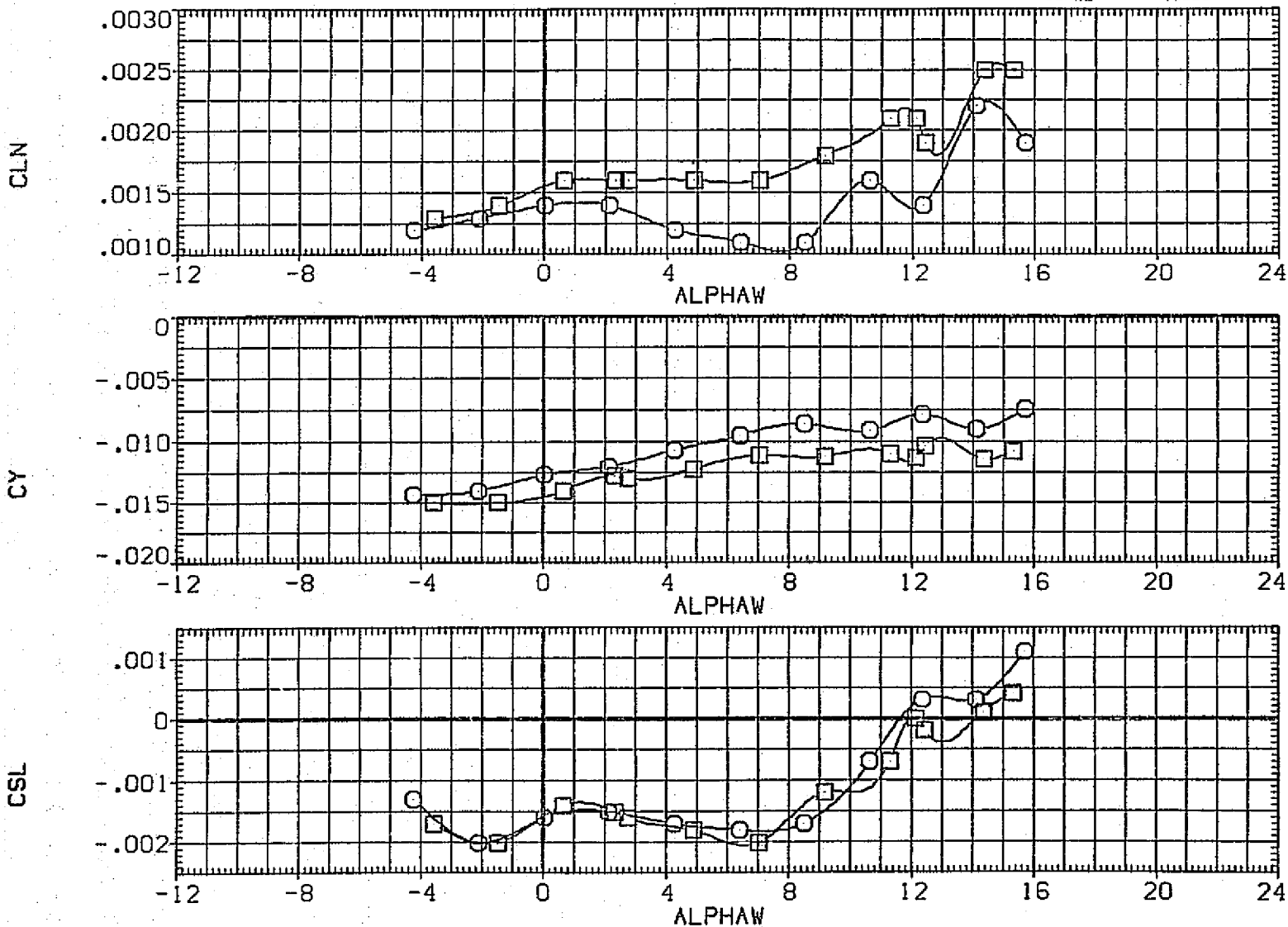


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF
 (A)MACH = .40

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP224) □ CA6 K2 V9.1S1-12 AT103.3/105
 (RGP223) □ CA6 K2 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

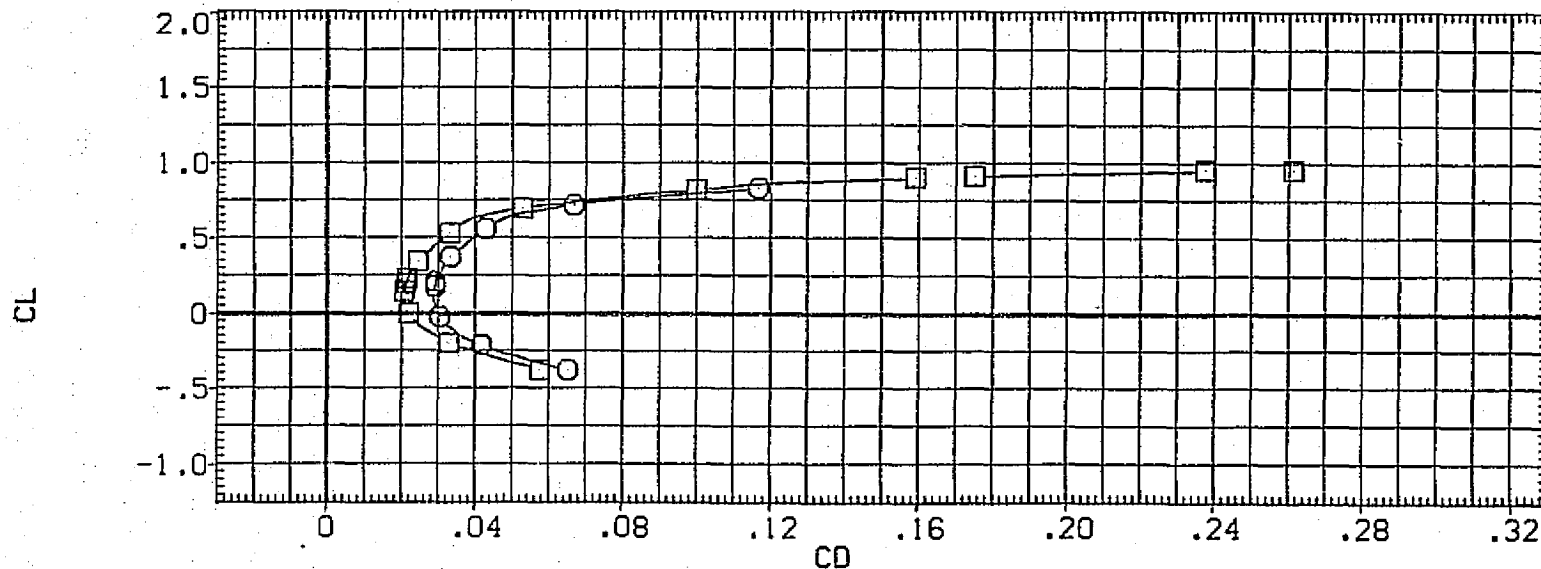
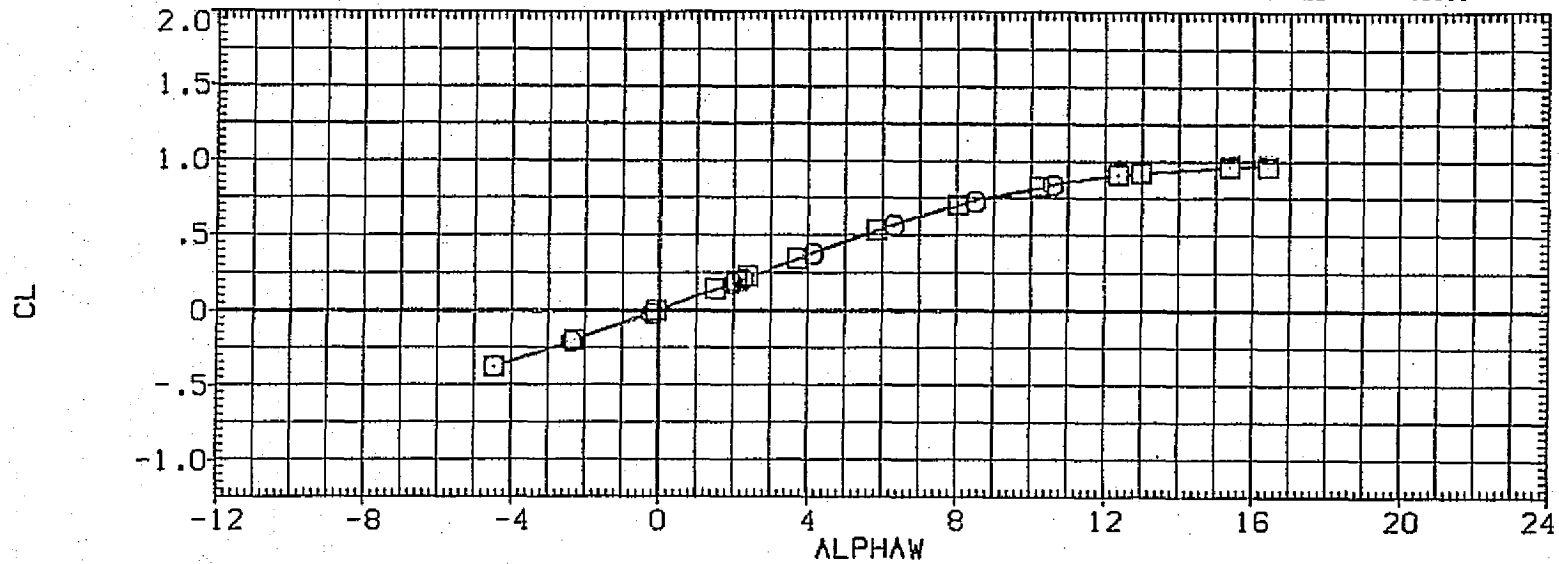


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF
 (B)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6P224) ○	CAG K2 V9.151-12 AT103.3/105
(R6P223) □	CAG K2 V9.1

BETA
.000
.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

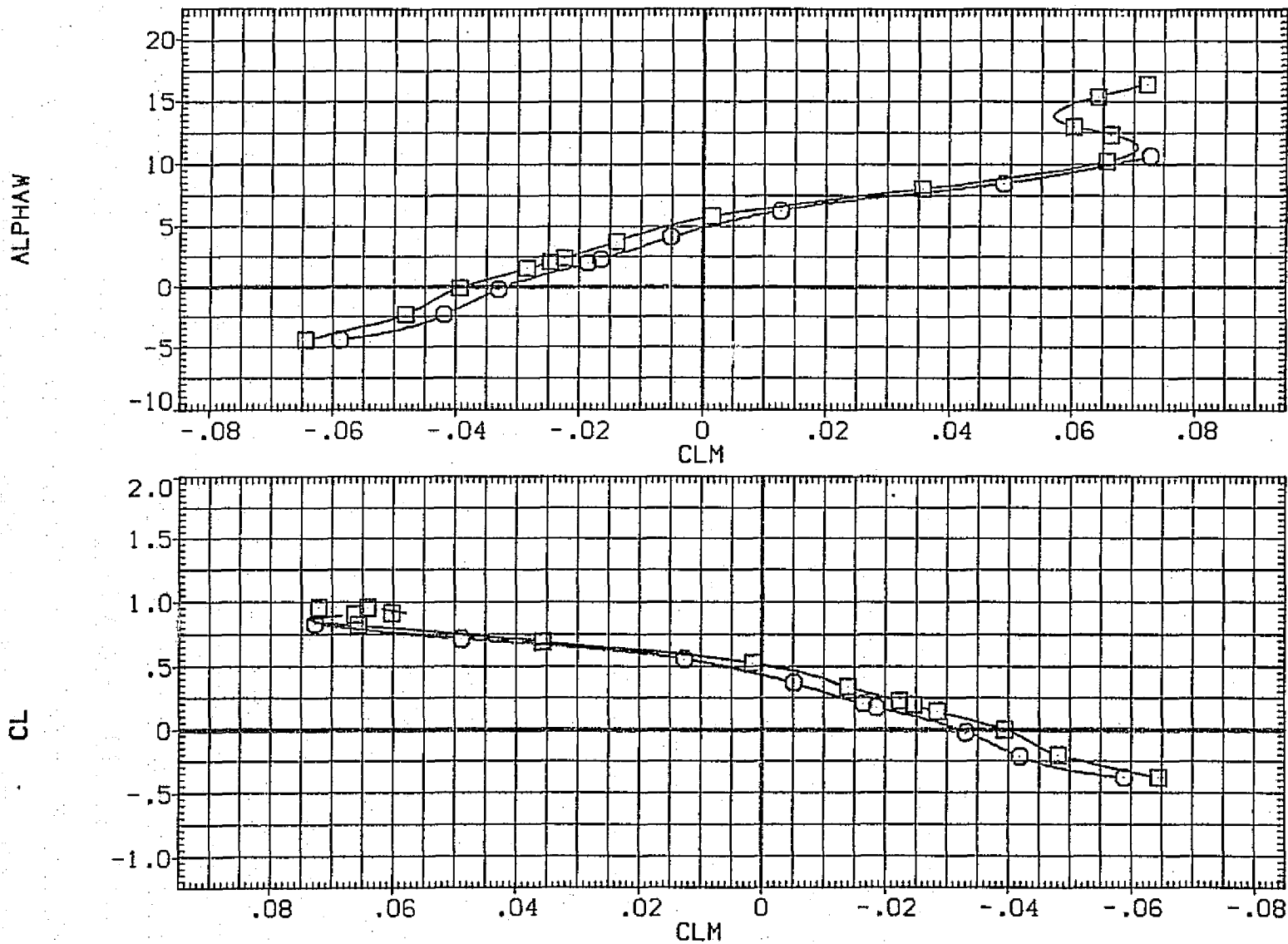


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF
(B)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP224) \square CAG K2 V9.1S1-12 AT103.3/105
 (RGP223) \circ CAG K2 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 50.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

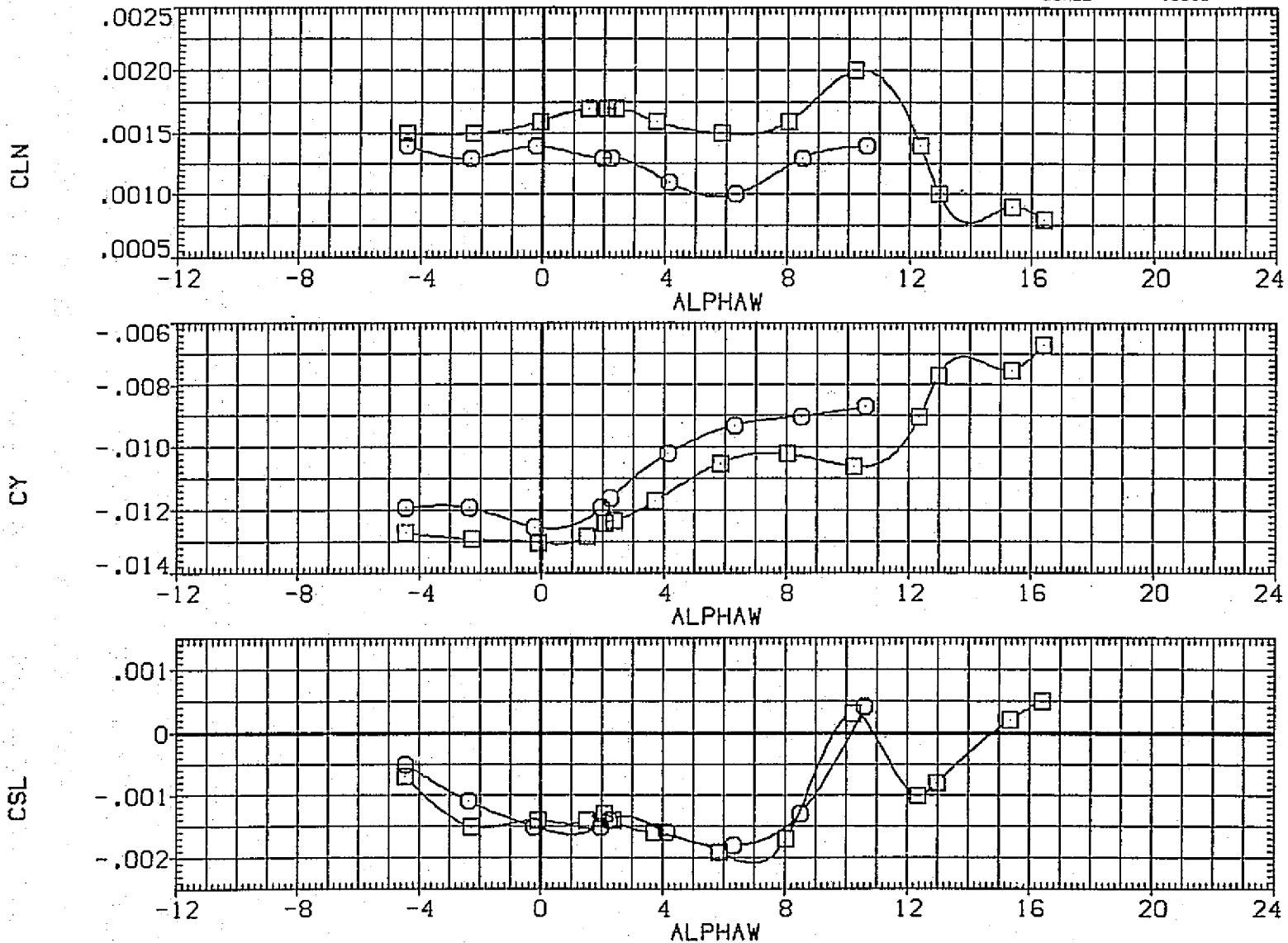


FIG. 85 747 CAM AND BASIC 747, HORIZONTAL TAIL OFF

(B)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP225) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
 (RGP226) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST STAB BETA
 4.250 5.070 .000
 6.000 5.070 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

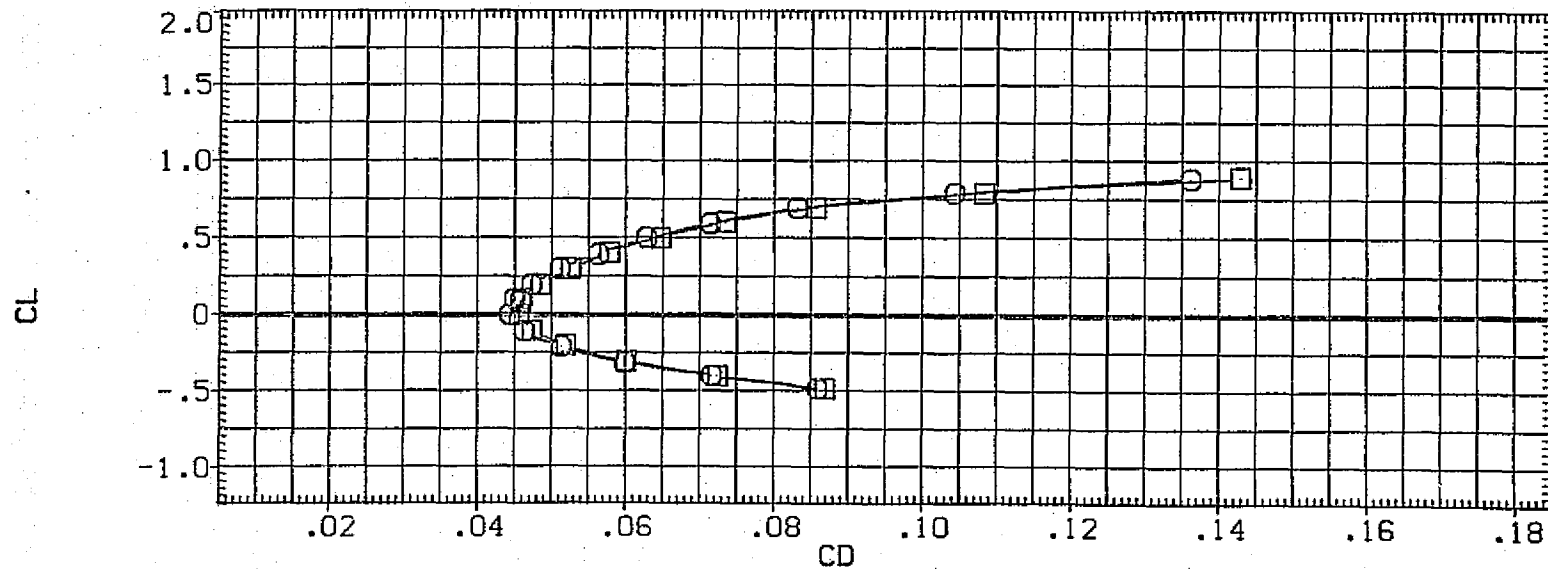
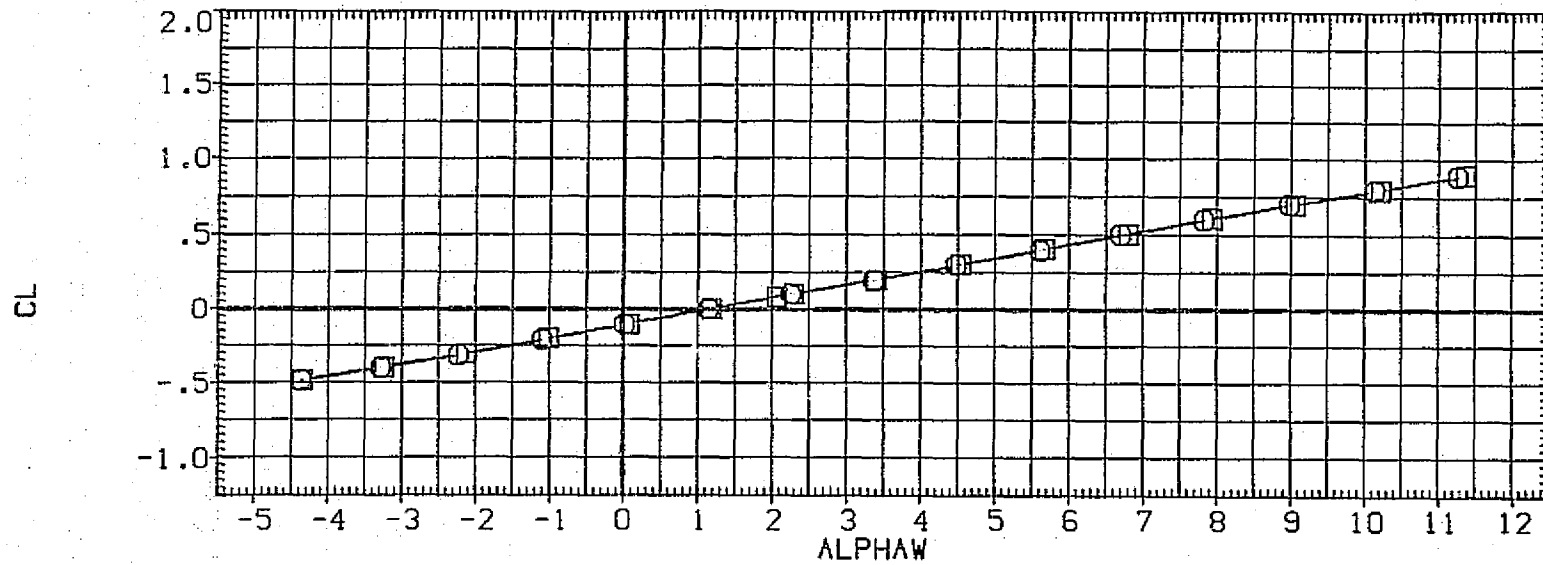


FIG. 86 EFFECT OF FORWARD STRUT HEIGHT, 747 CAM

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP225) □	CAS K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP226) □	CAS K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST	STAB	BETA
4.250	5.070	.000
6.000	5.070	.000

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XHRP	1339.9000 IN. XC
YHRP	.0000 IN. YC
ZHRP	190.7700 IN. ZC
SCALE	.0300

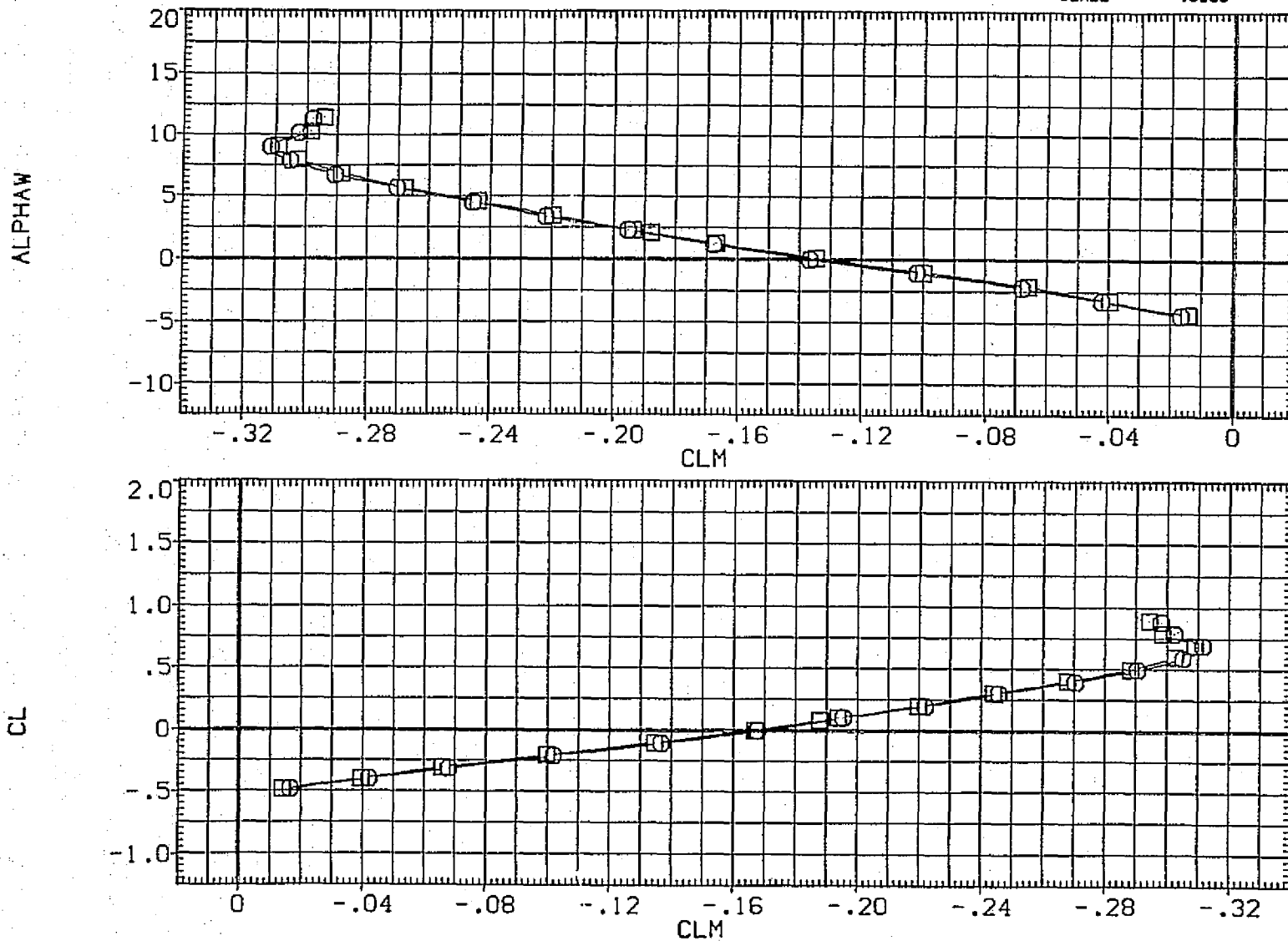


FIG. 86 EFFECT OF FORWARD STRUT HEIGHT, 747 CAM
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP225) ○	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP226) □	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST	STAB	BETA
4.250	5.070	.000
6.000	5.070	.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

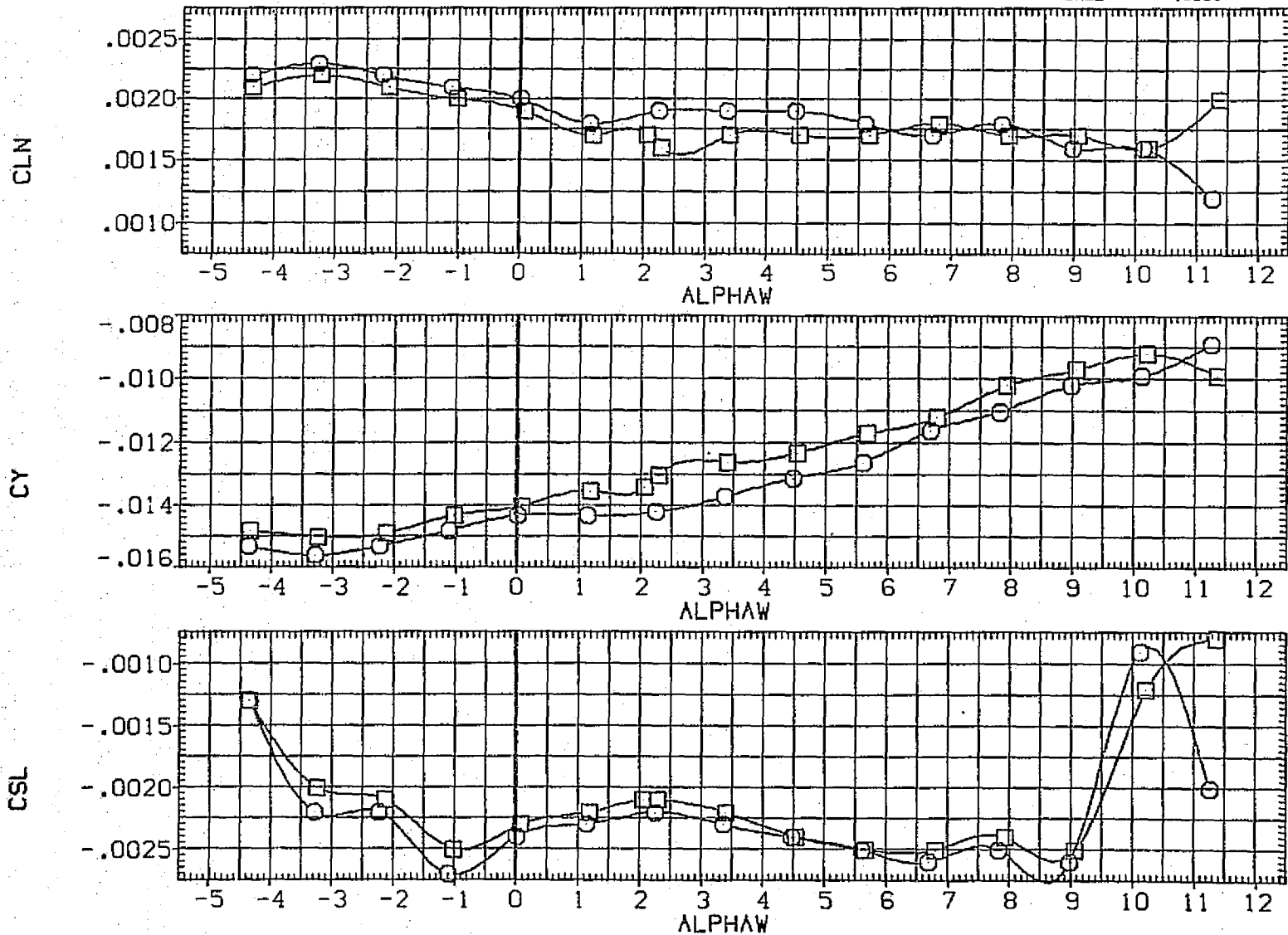


FIG. 86 EFFECT OF FORWARD STRUT HEIGHT, 747 CAM
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R6P226)	□ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(R6P236)	○ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST	STAB	BETA
6.000	5.070	.000
6.000	-1.060	.000

REFERENCE INFORMATION		
SREF	5500.0000	SG.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

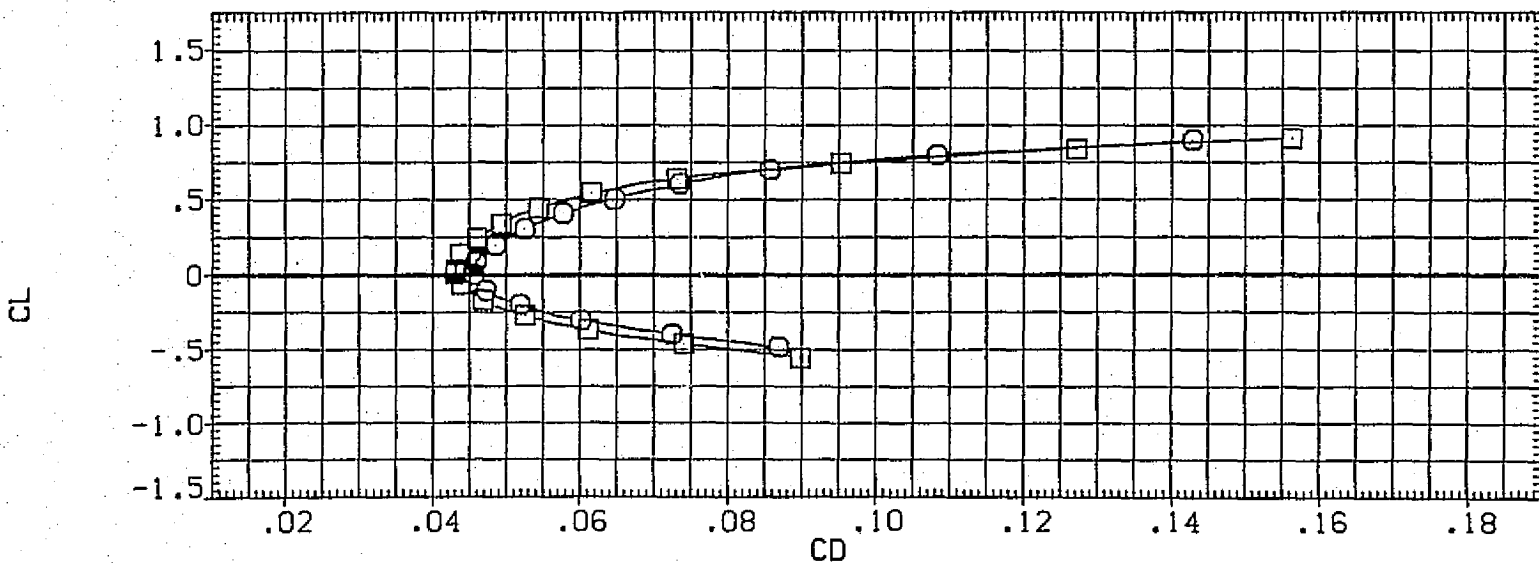
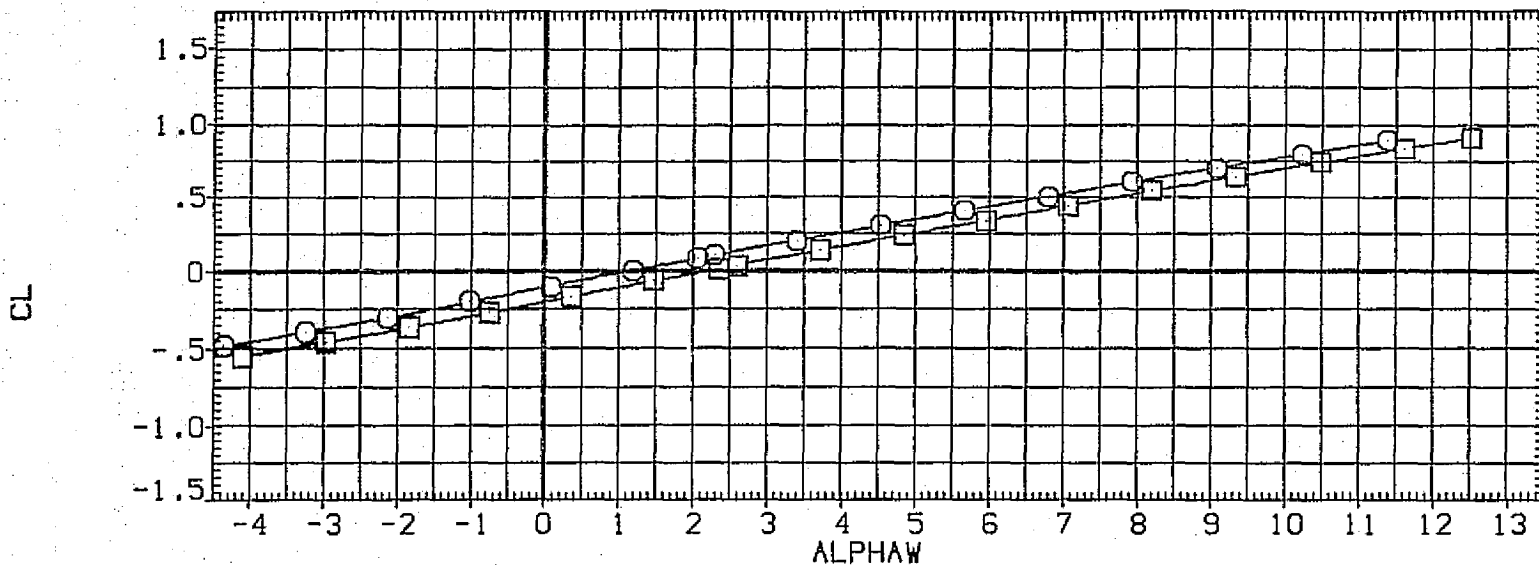


FIG. 87 STABILIZER EFFECTIVENESS, 747 CAM, CA23AFT-ROUND FWD

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP226) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
 (RGP236) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST STAB BETA
 6.000 5.070 .000
 6.000 -1.060 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

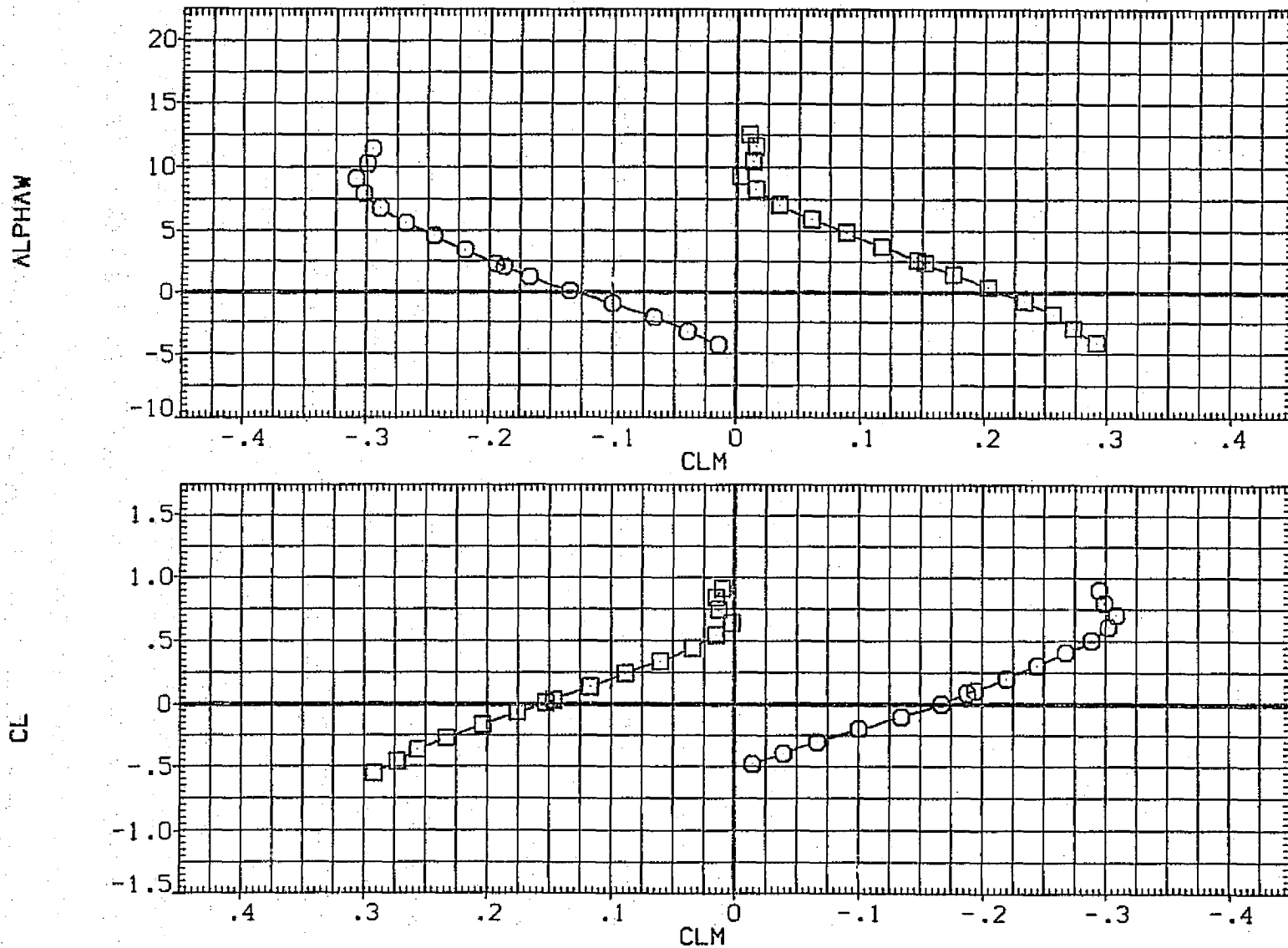


FIG. 87 STABILIZER EFFECTIVENESS, 747 CAM, CA23AFT-ROUND FWD
 (A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP226) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
 (RGP236) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

FWD ST STAB BETA
 6.000 5.070 .000
 6.000 -1.060 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

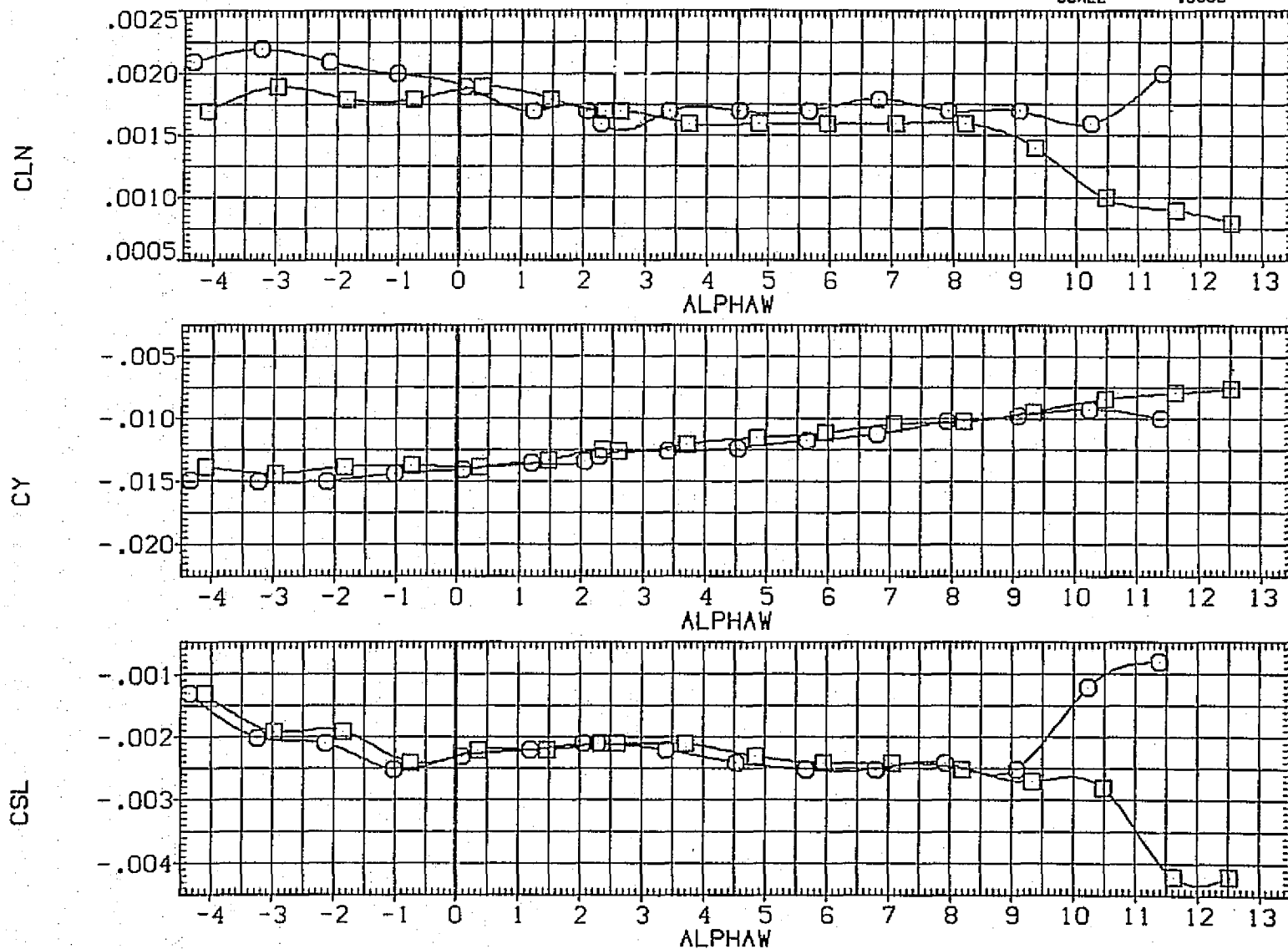


FIG. 87 STABILIZER EFFECTIVENESS, 747 CAM, CA23AFT-ROUND FWD

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA
(RGP227)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	-4.000
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000
(RGP228)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	2.000
(RGP229)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	4.000
(RGP230)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	6.000
(RGP231)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

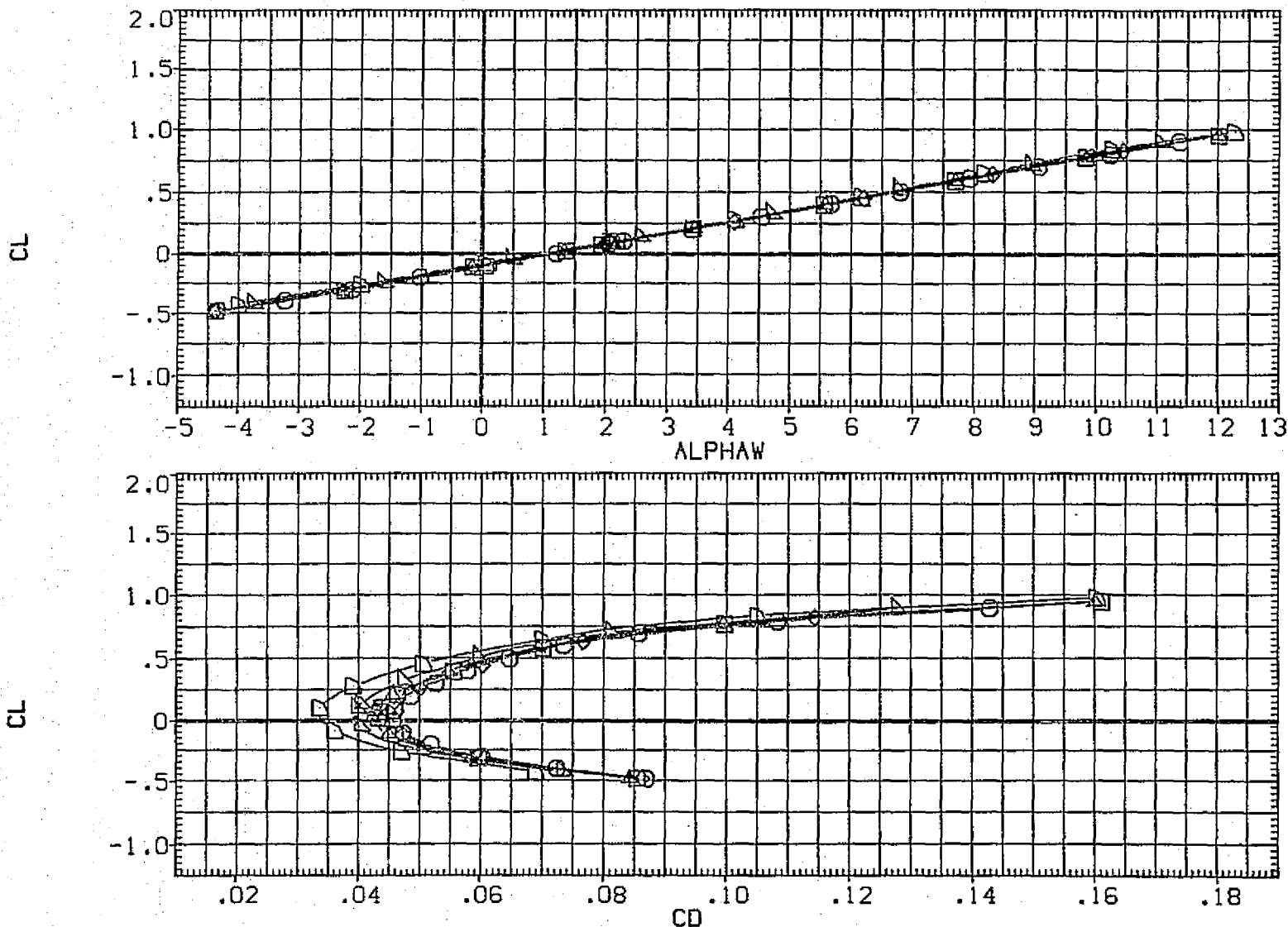


FIG. 88 LATERAL-DIRECTIONAL STABILITY, 747 CAM, CA23 AFT-ROUND FWD

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA
(RGP227)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	-4.000
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000
(RGP228)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	2.000
(RGP229)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	4.000
(RGP230)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	6.000
(RGP231)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SG.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

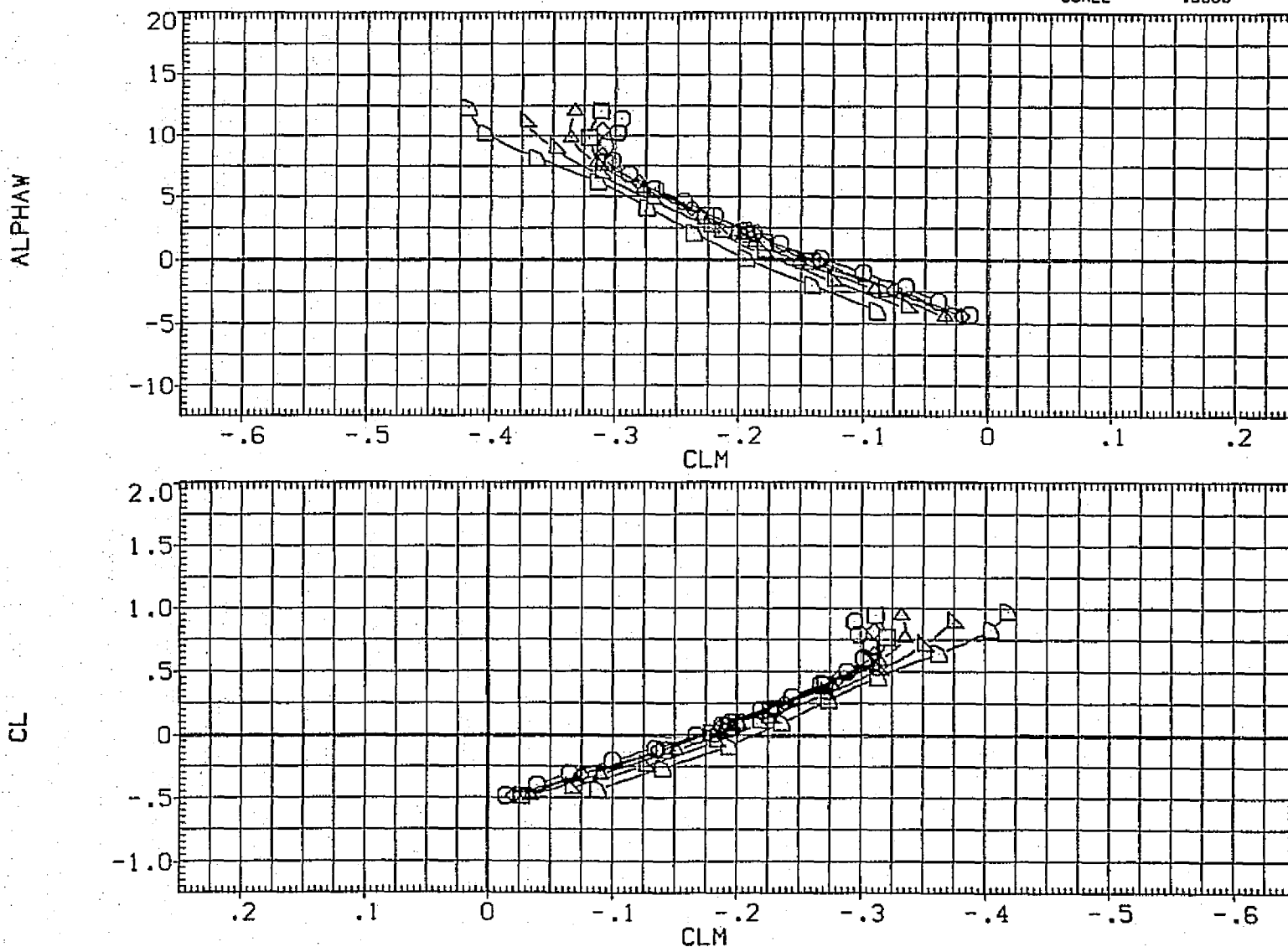


FIG. 88 LATERAL-DIRECTIONAL STABILITY, 747 CAM, CA23 AFT-ROUND FWD
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP227)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP228)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP229)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP230)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP231)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

BETA
-4.000
.000
2.000
4.000
6.000
10.000

REFERENCE INFORMATION		
SREF	5500.0000	50. FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

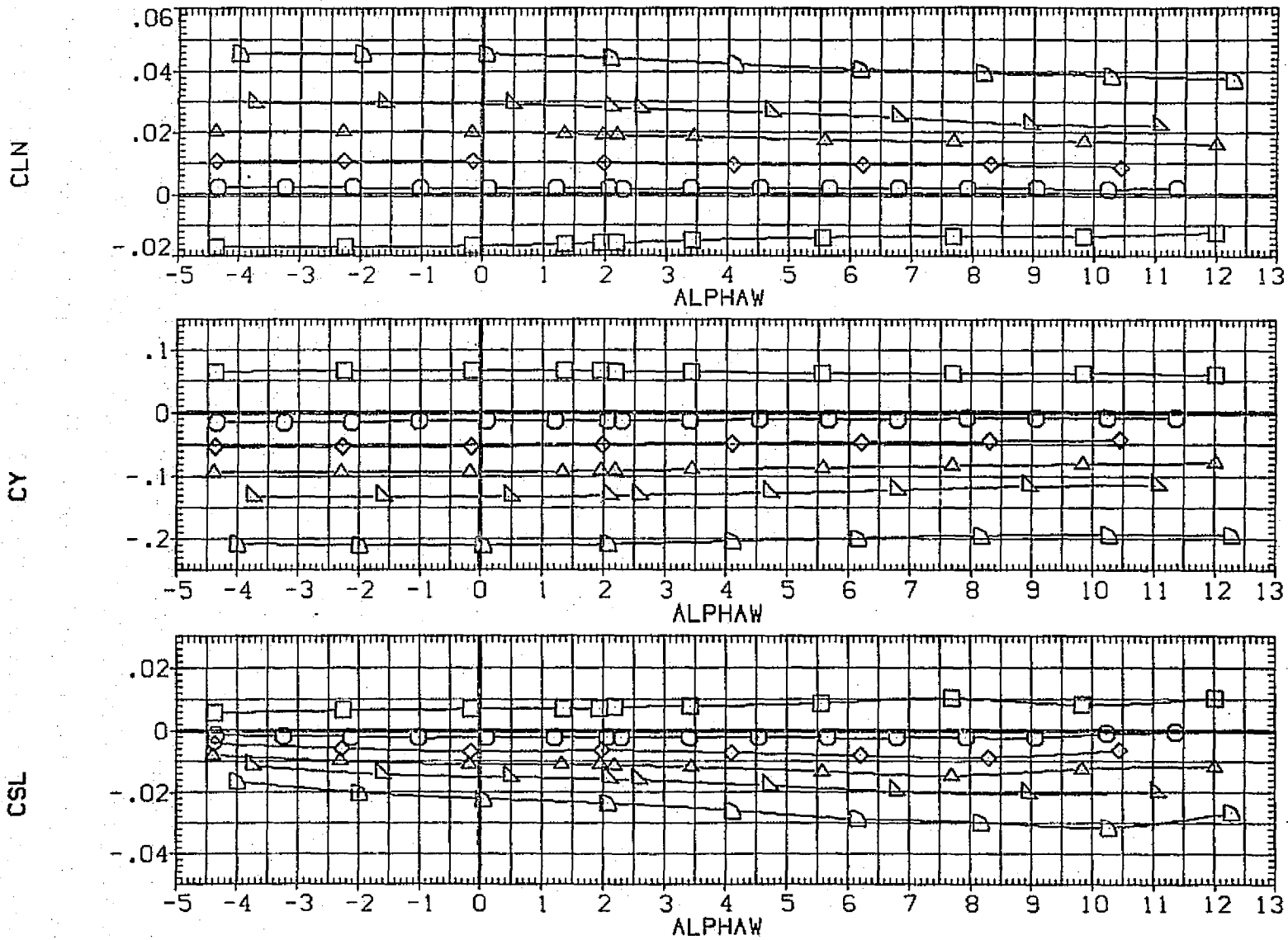


FIG. 88 LATERAL-DIRECTIONAL STABILITY, 747 CAM, CA23 AFT-ROUND FWD

(A)MACH = .60

CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

(RGP232)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.301	STAB	5.070	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.600	ELV-DB	.000	BETA	.000
△	.700	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

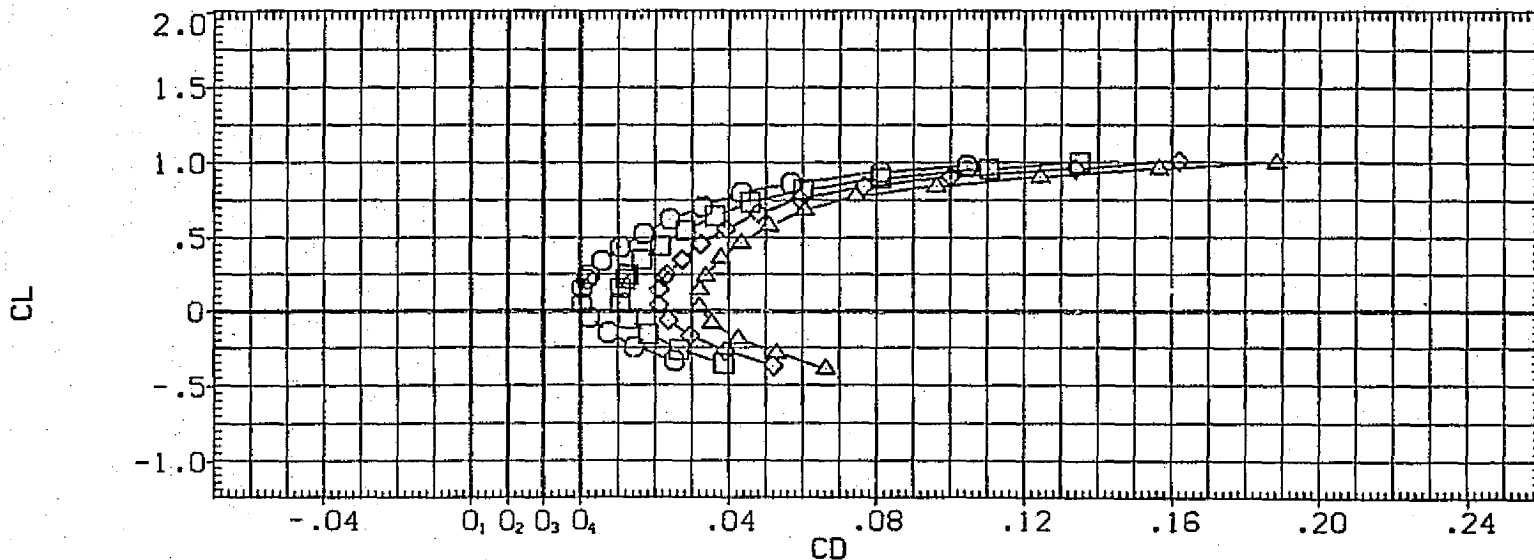
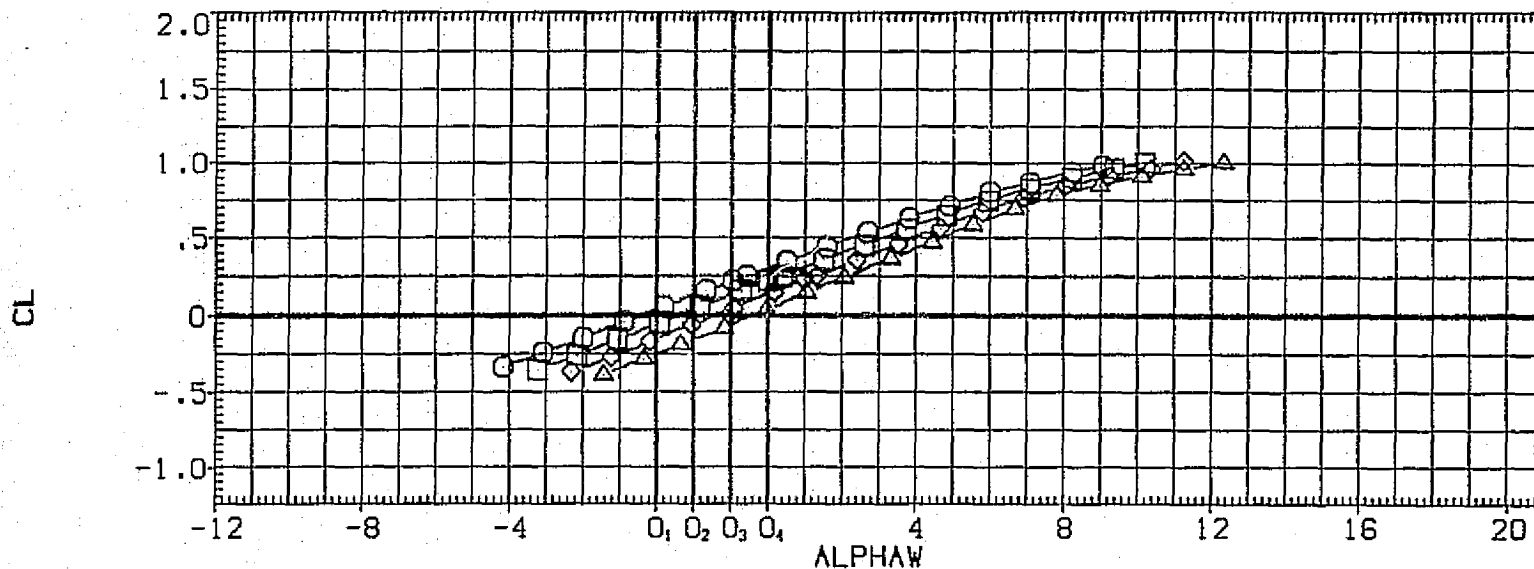


FIG. 89 MACH NUMBER EFFECTS, SPEED BRAKES DOWN, 747 CAM, CA23 AFT-ROUND FWD

SYMBOL	MACH	PARAMETRIC VALUES			
○	.301	STAB	5.070	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.600	ELV-OB	.000	BETA	.000
△	.700	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

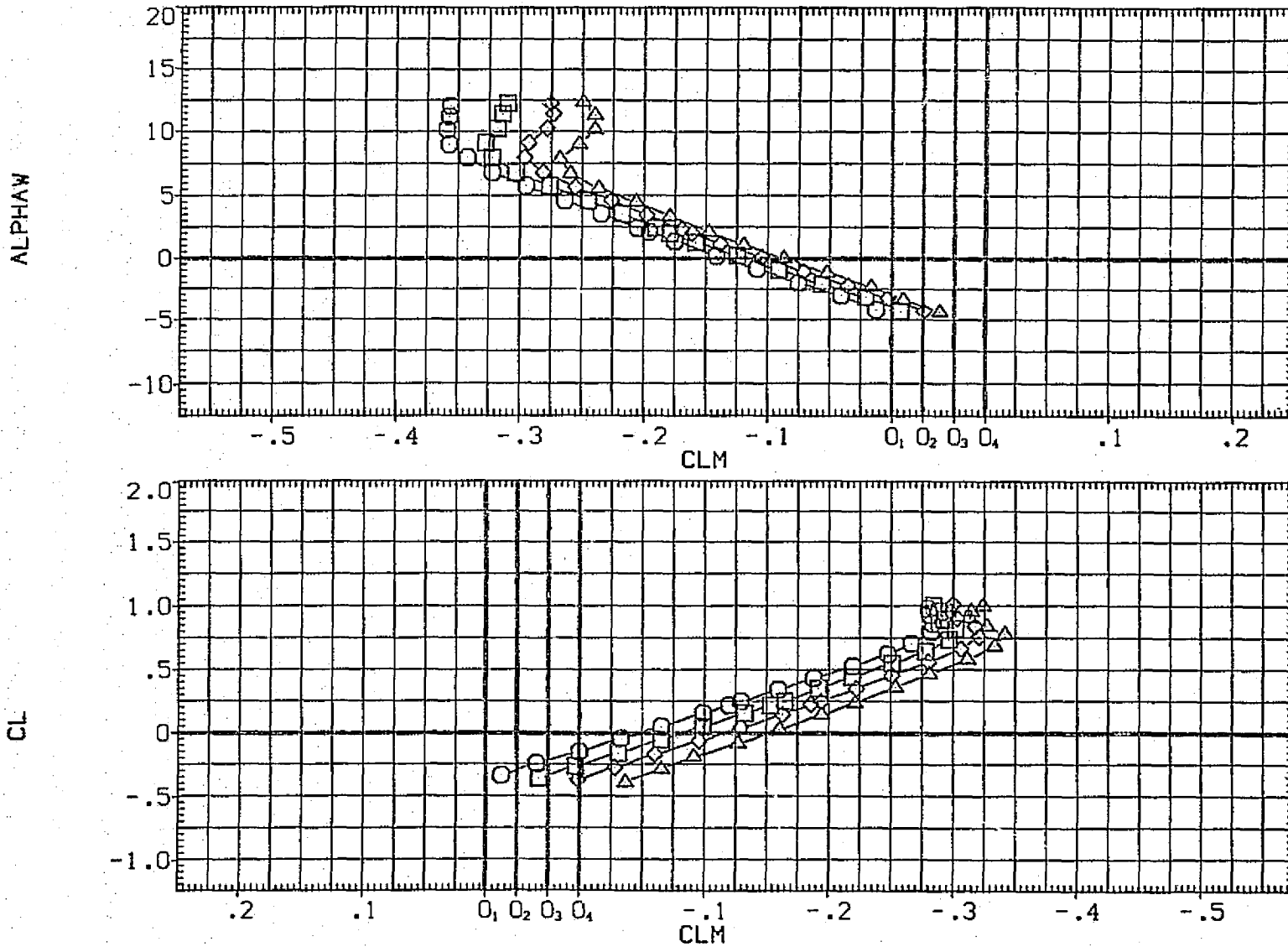


FIG. 89 MACH NUMBER EFFECTS, SPEED BRAKES DOWN, 747 CAM, CA23 AFT-ROUND FWD

CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

(RGP232)

SYMBOL	MACH	PARAMETRIC VALUES
○	.301	STAB 5.070 RUD-U .000
□	.499	RUD-L .000 ELV-1B .000
◇	.600	ELV-0B .000 BETA .000
△	.700	FWD ST 6.000 SPOILR .000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

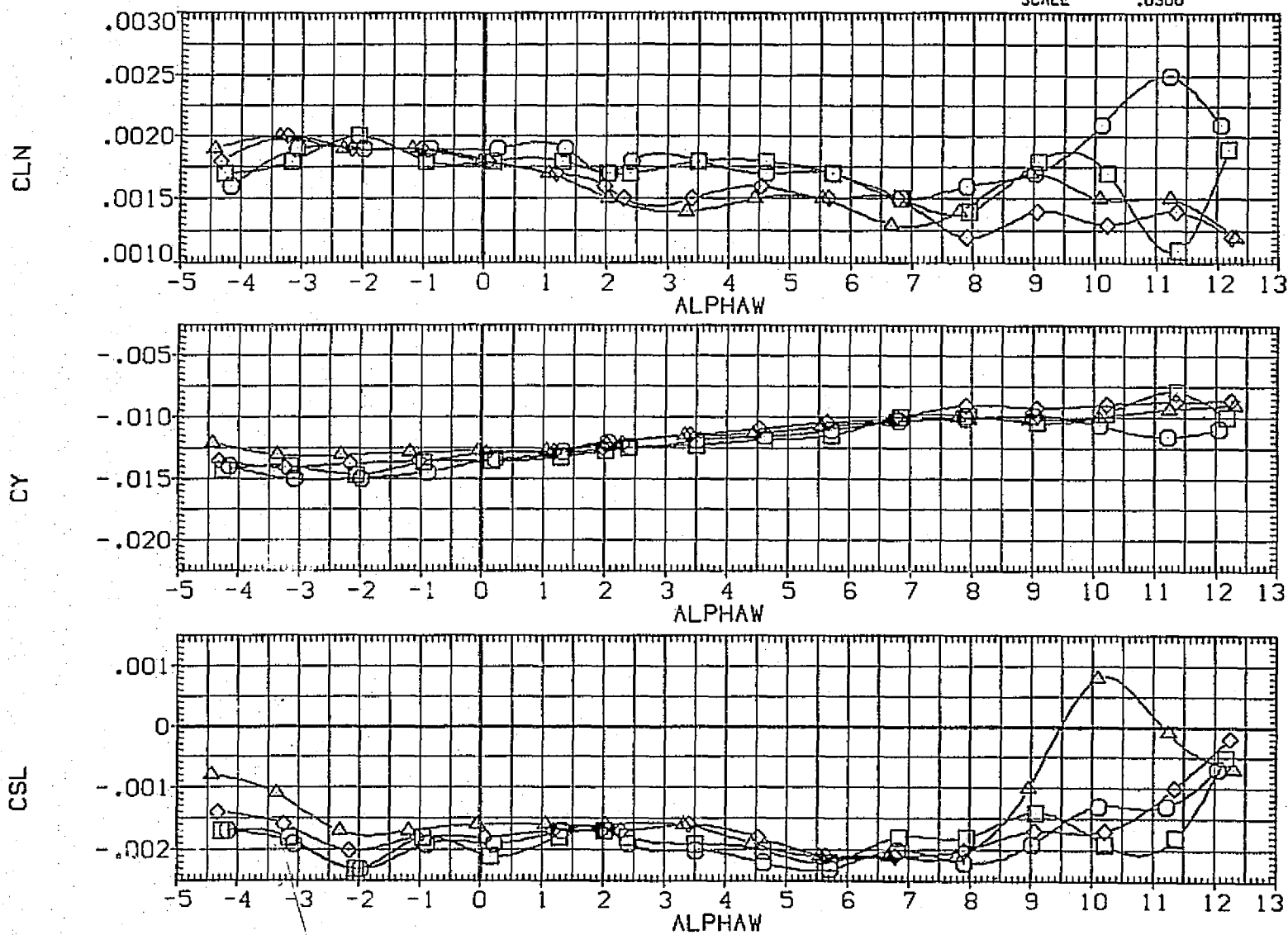


FIG. 89 MACH NUMBER EFFECTS, SPEED BRAKES DOWN, 747 CAM, CA23 AFT-ROUND FWD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP234)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP233)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION
.000	5.010	-9.584	-10.133	SREF 5500.0000 SQ.FT.
.000	5.070	.000	.000	LREF 327.8000 IN.
.000	5.060	9.800	10.000	BREF 2348.0000 IN.
				XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

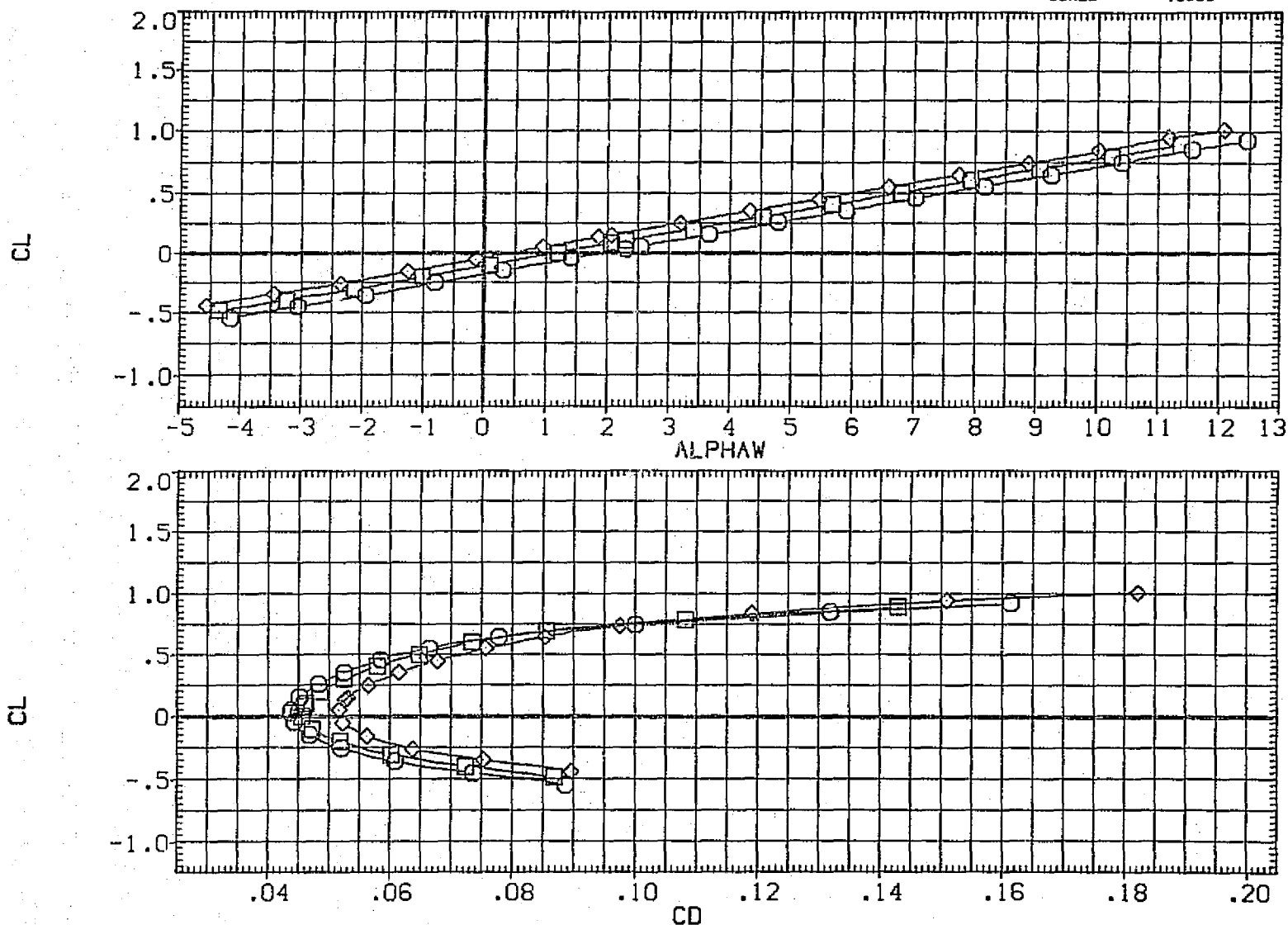


FIG. 90 ELEVATOR EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
(RGP234)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.010	-9.584	-10.133	SREF	5500.0000 SQ.FT.
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.070	.000	.000	LREF	327.8000 IN.
(RGP233)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.060	9.800	10.000	BREF	2348.0000 IN.
						XMRP	1339.9000 IN. XC
						YMRP	.0000 IN. YC
						ZMRP	190.7700 IN. ZC
						SCALE	.0300

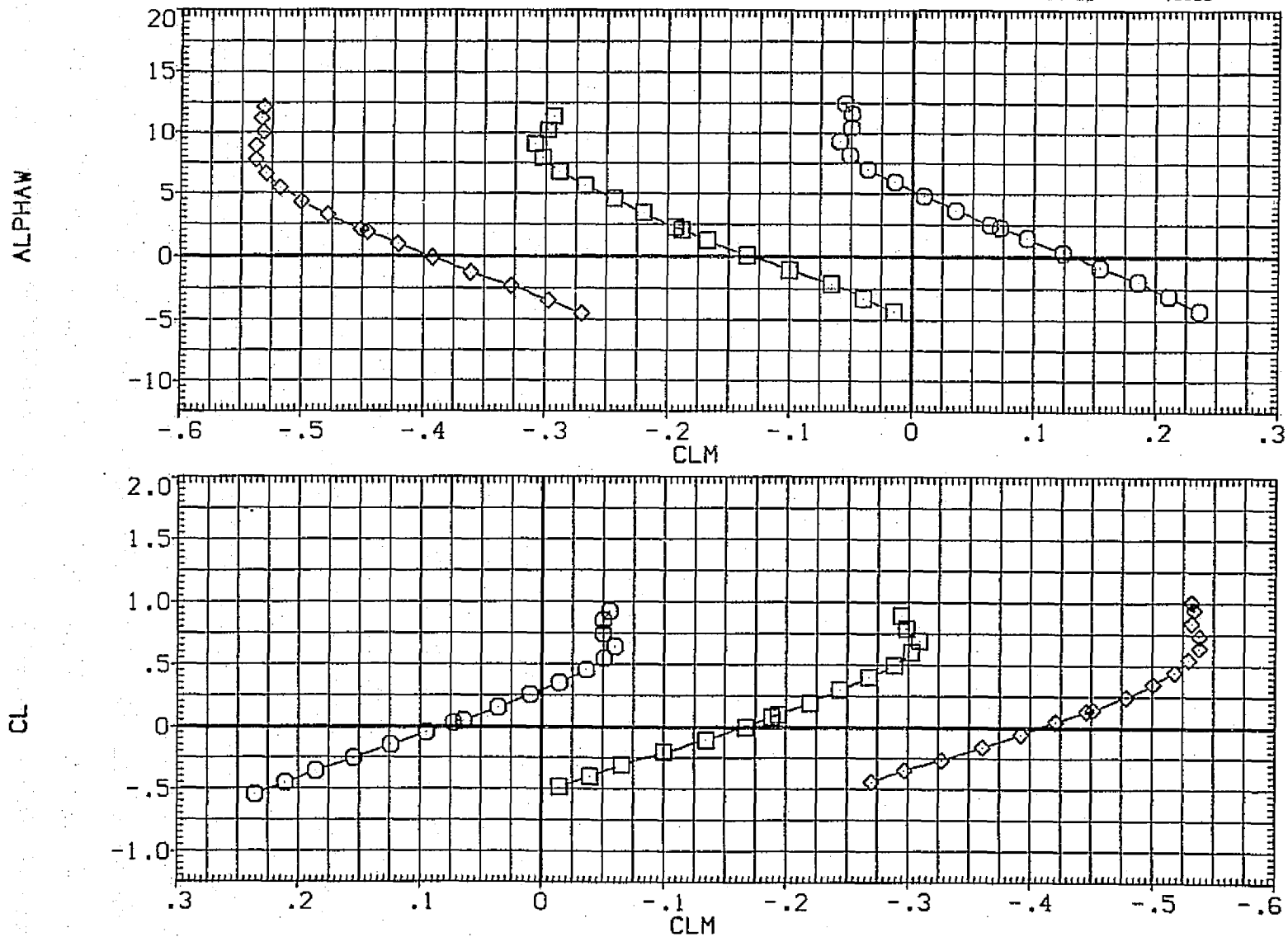


FIG. 90 ELEVATOR EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD
 (A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP234)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP233)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

BETA	STAB	ELV-1B	ELV-0B	REFERENCE INFORMATION	
.000	5.010	-9.584	-10.133	SREF	5500.0000 SQ.FT.
.000	5.070	.000	.000	LREF	327.8000 IN.
.000	5.060	9.800	10.000	BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

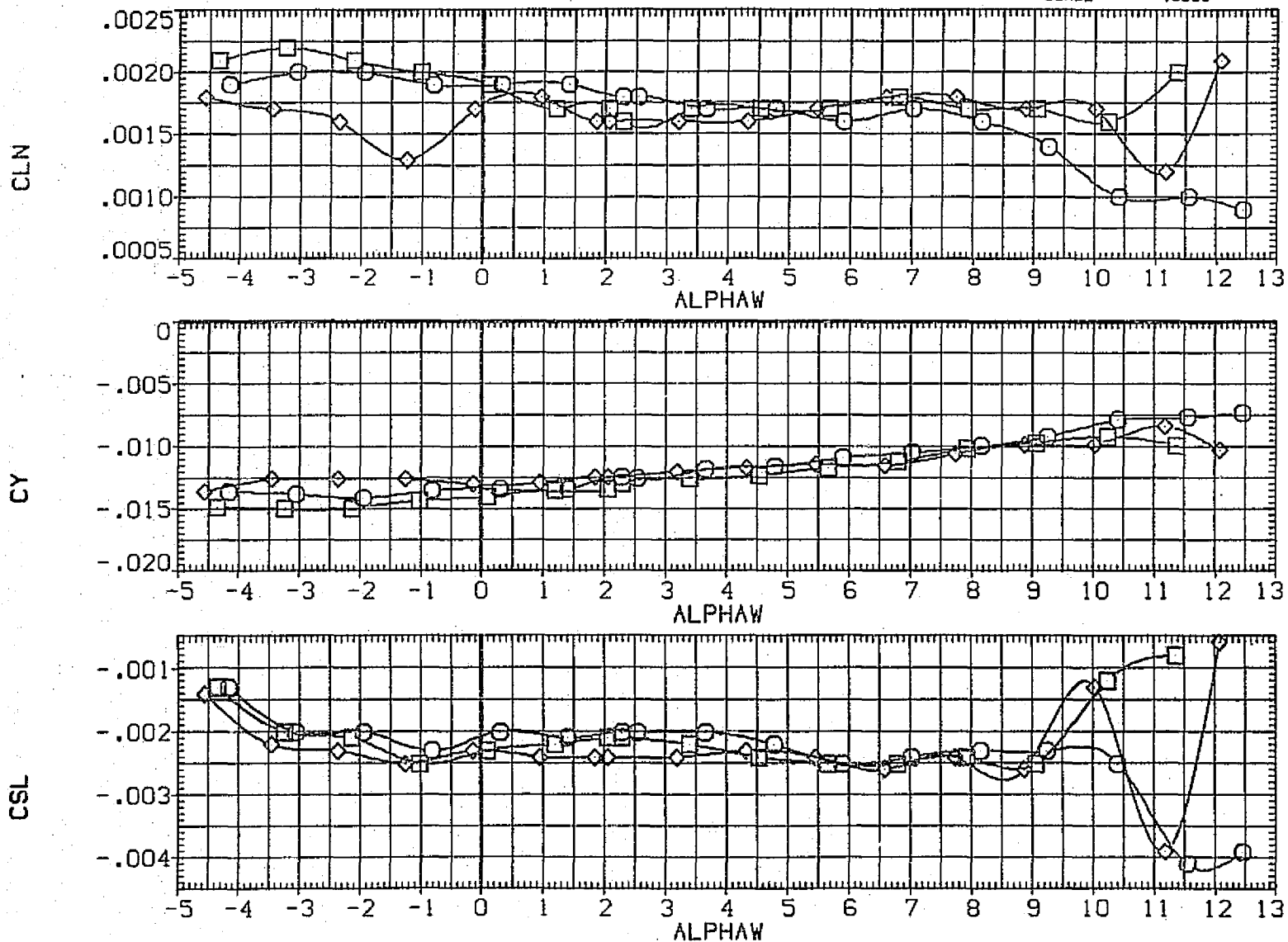


FIG. 90 ELEVATOR EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD
(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP235)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

RUD-U	RUD-L	ELV-18	ELV-08	REFERENCE INFORMATION	
.000	.000	.000	.000	SREF	5500.0000 SQ.FT.
10.000	10.000	.000	.000	LREF	327.8000 IN.
				BREF	2348.0000 IN.
				XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

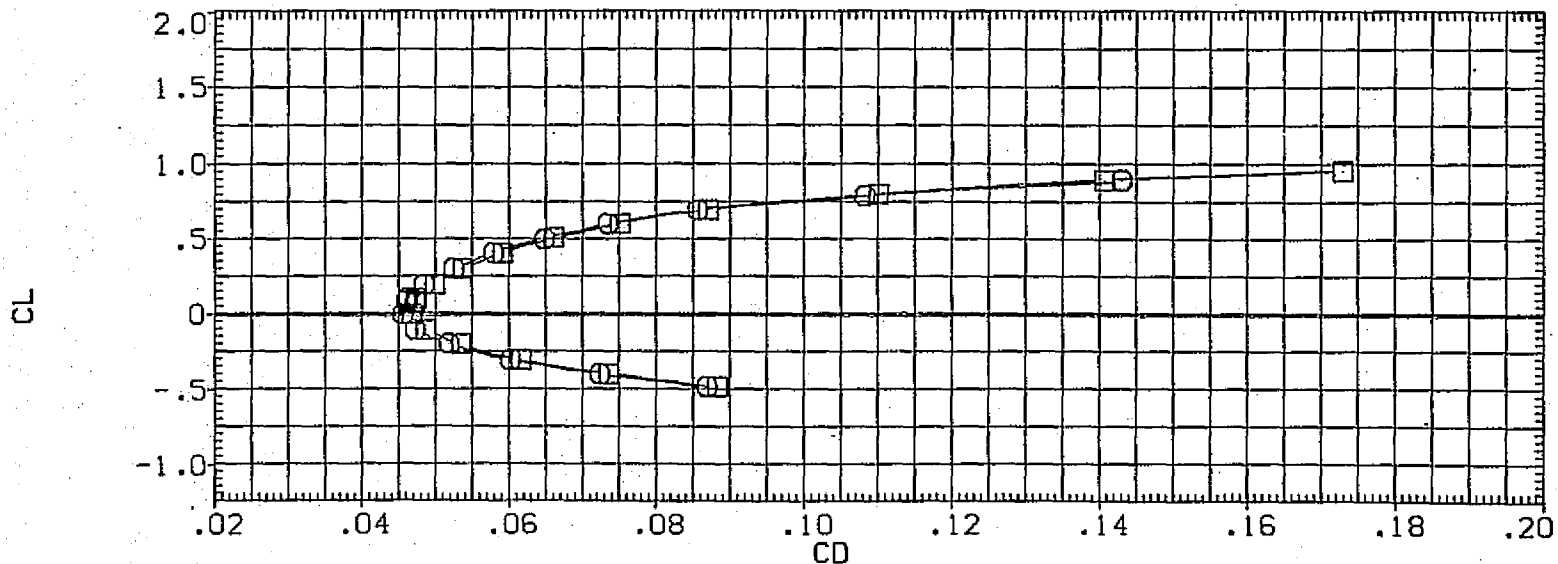
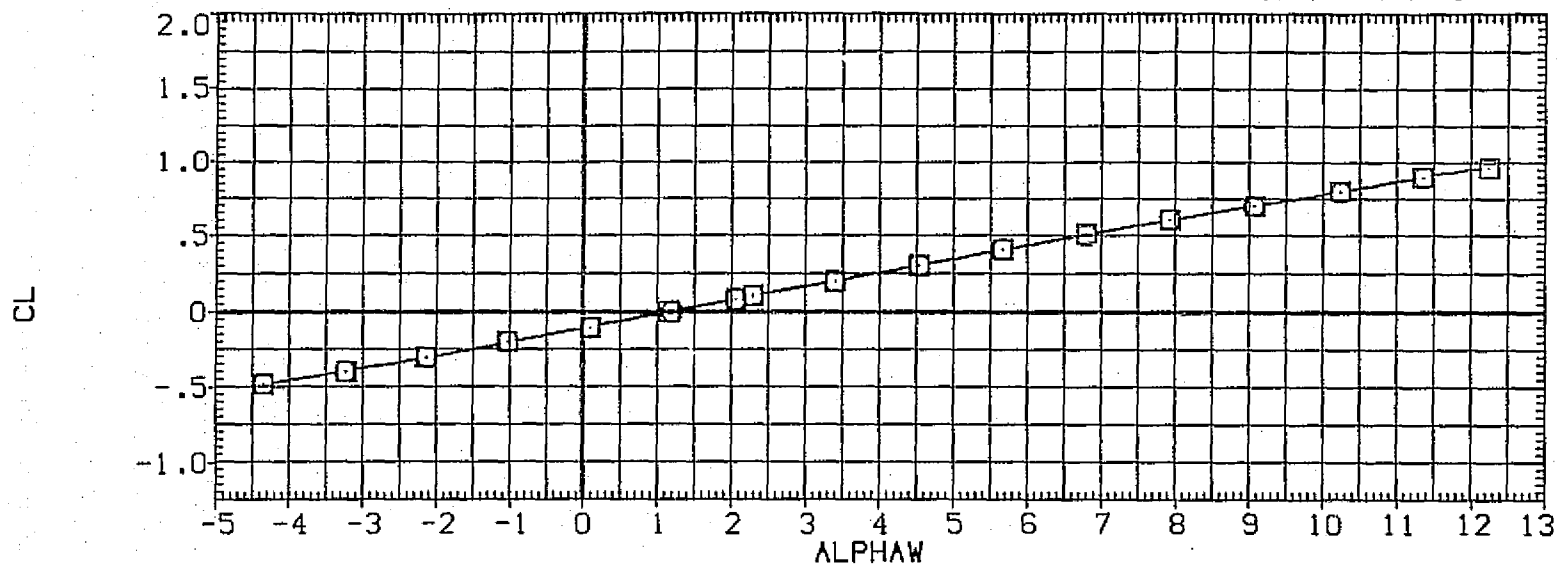


FIG. 91 RUDDER EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP226)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP235)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

RUD-U	RUD-L	ELV-18	ELV-09
.000	.000	.000	.000
10.000	10.000	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

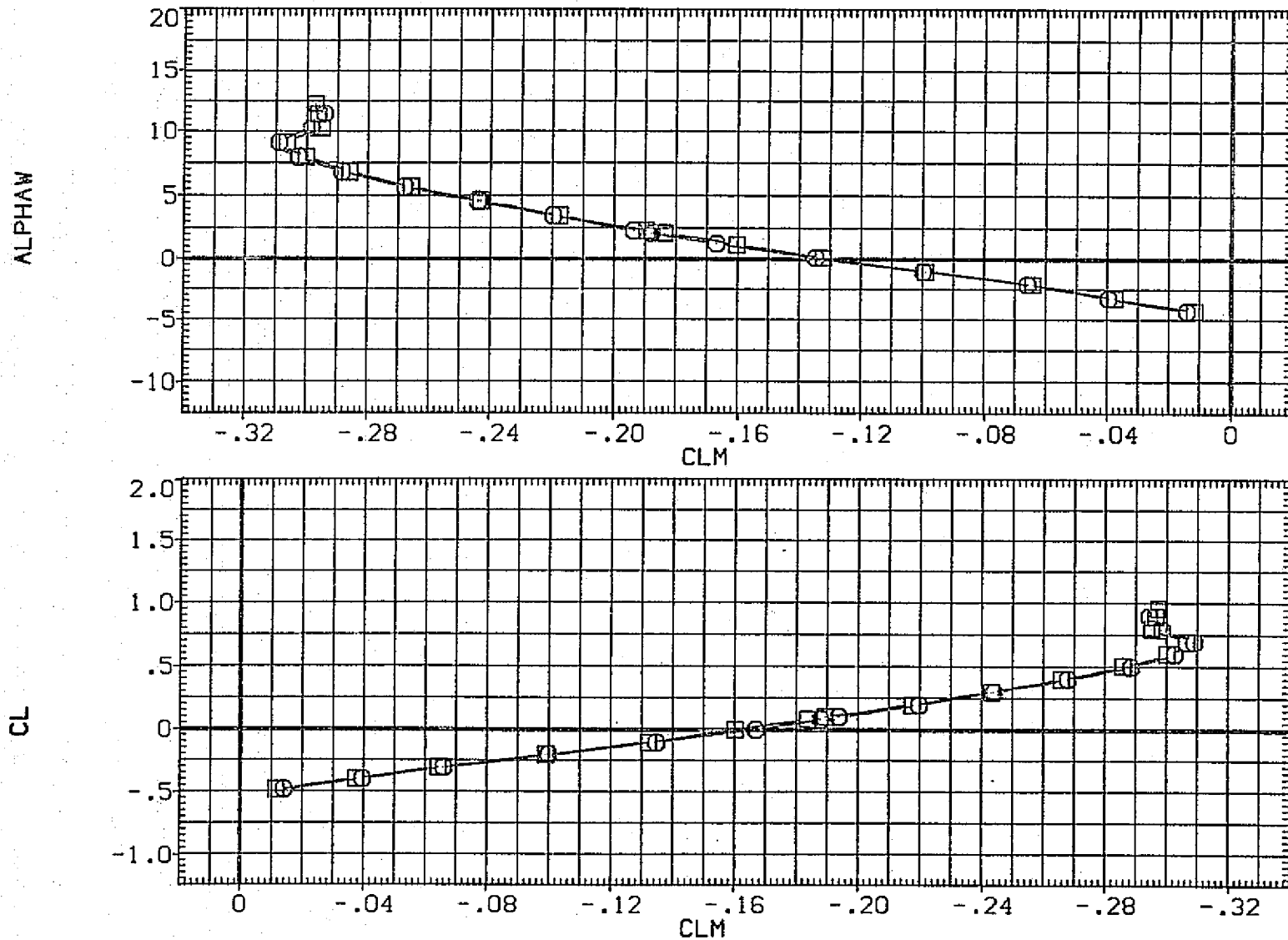


FIG. 91 RUDDER EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD
 (A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP226) ○ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
 (RGP235) □ CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3

RUD-U RUD-L ELV-18 ELV-08
 .000 .000 .000 .000
 10.000 10.000 .000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XHRP 1339.9000 IN. XC
 YHRP .0000 IN. YC
 ZHRP 190.7700 IN. ZC
 SCALE .0300

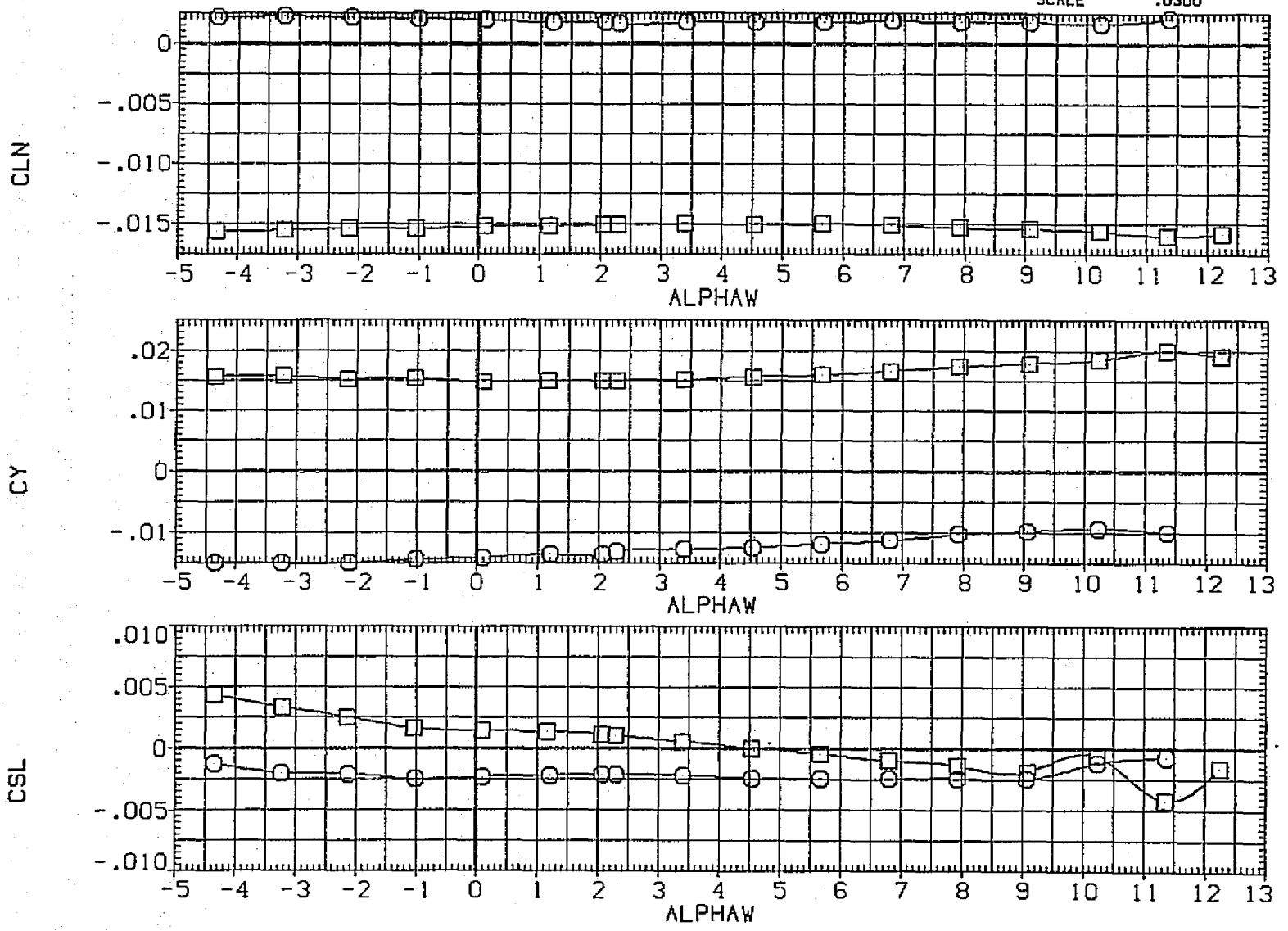


FIG. 91 RUDDER EFFECTIVENESS, 747 CAM, CA23 AFT-ROUND FWD

(A) MACH = .60

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	5.070	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.599	ELV-OB	.000	BETA	.000
△	.699	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

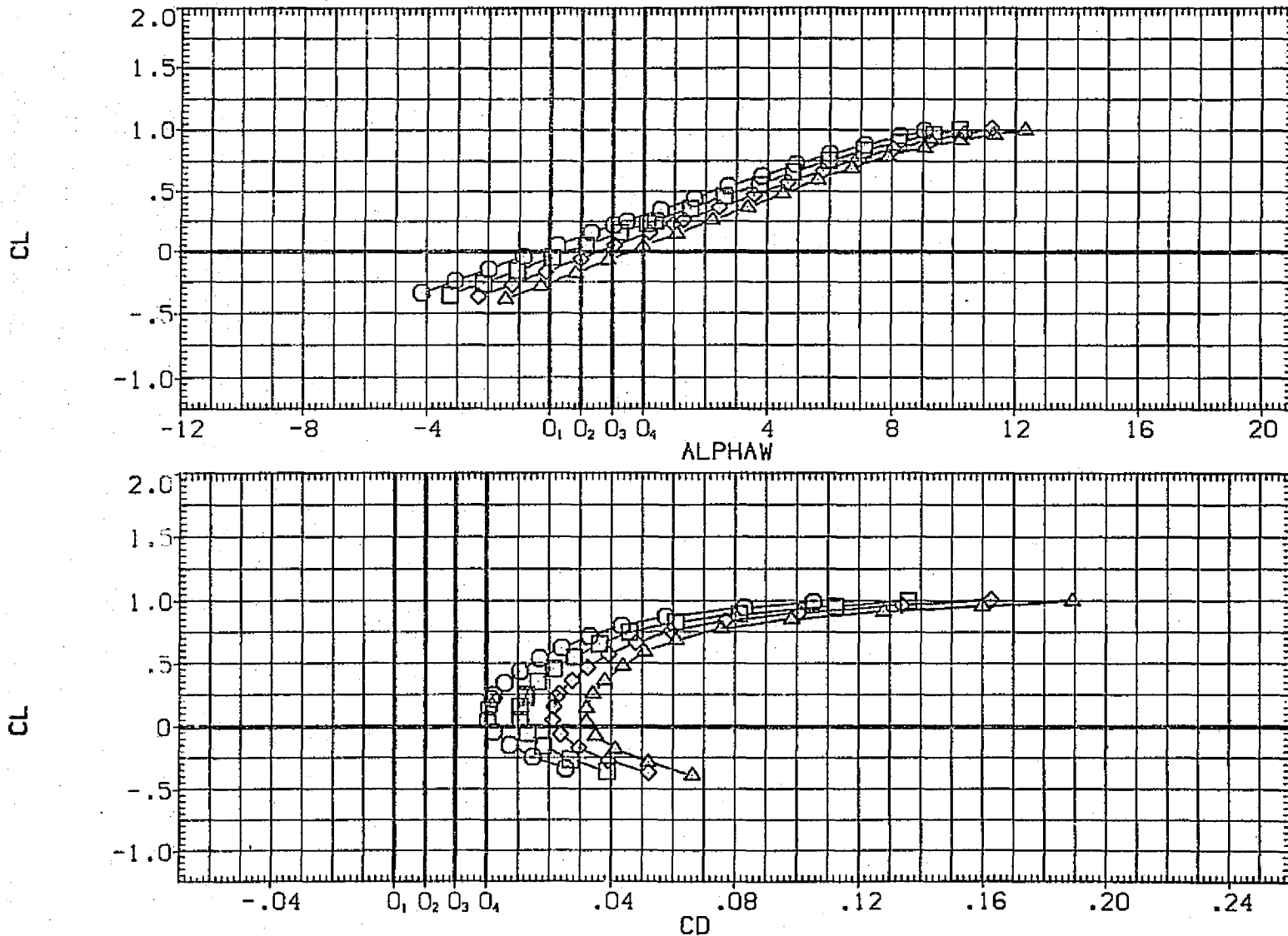


FIG. 92 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT-ROUND FWD

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	.299	STAB	5.070	RUD-U	.000	SREF	5500.0000	SQ.FT.
□	.499	RUD-L	.000	ELV-IB	.000	LREF	327.8000	IN.
◇	.599	ELV-OB	.000	BETA	.000	BREF	2348.0000	IN.
△	.699	FWD ST	6.000	SPOILR	.000	XMRP	1339.9000	IN. XC
						YMRP	.0000	IN. YC
						ZMRP	190.7700	IN. ZC
						SCALE	.0300	

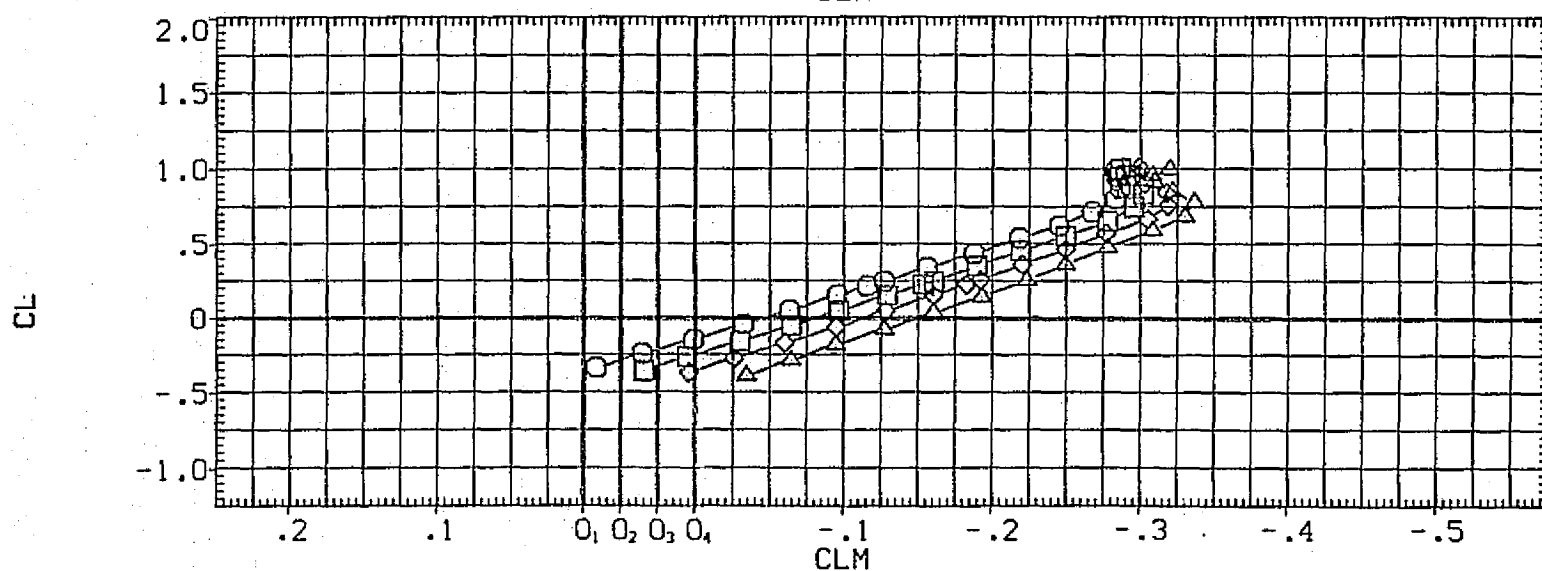
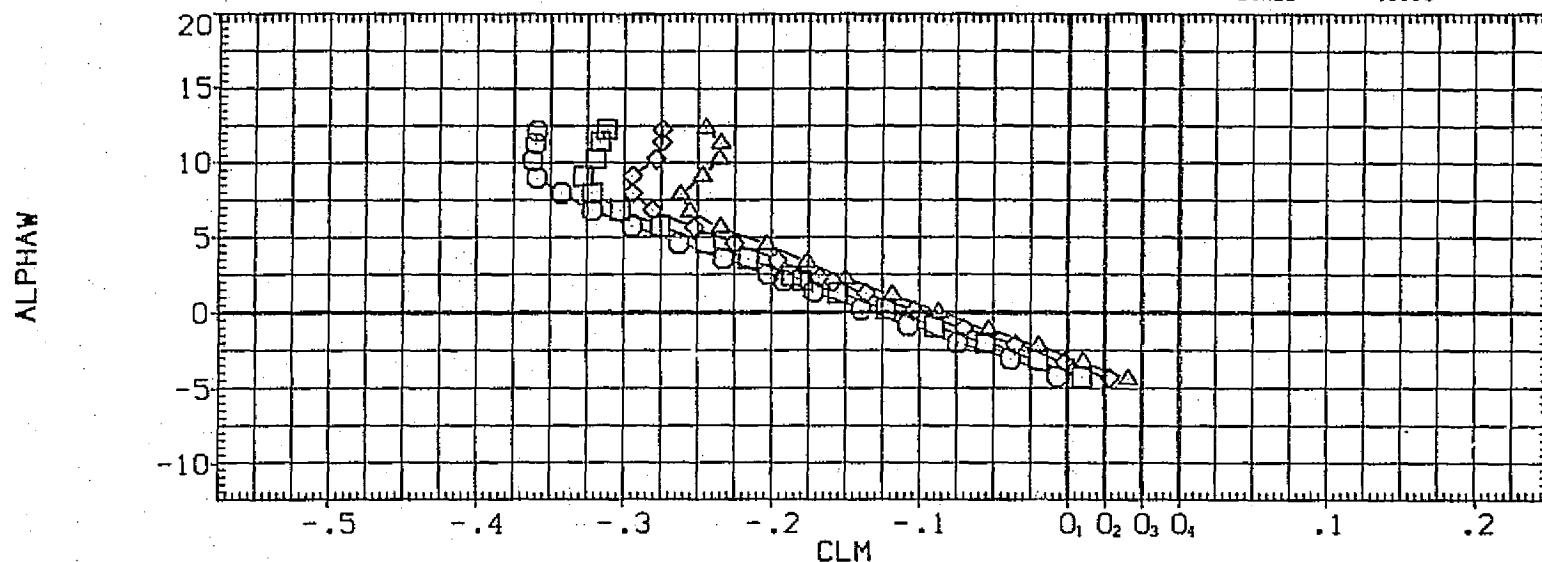


FIG. 92 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT-ROUND FWD

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	5.070	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.599	ELV-OB	.000	BETA	.000
△	.699	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

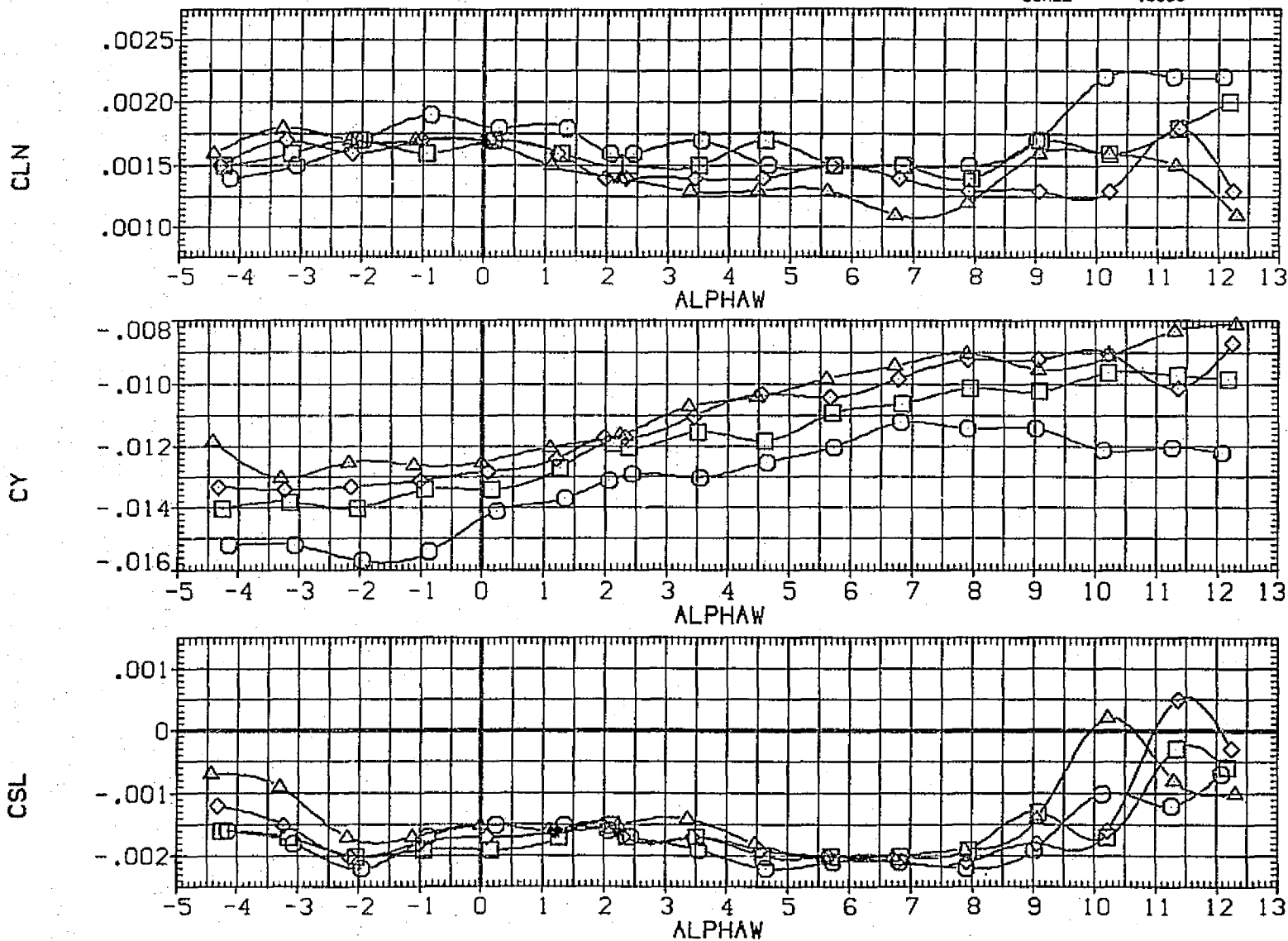


FIG. 92 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT-ROUND FWD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	□ CAS K2H15.6.IV9.IS1-12 AT103.3/95-.3
(RGP237)	○ CAS K2H15.6.IV9.IS1-12 AT103.3/111.1
(RGP238)	◇ CAS K2H15.6.IV9.IS1-12 AT112 /111.1
(RGP245)	△ CAS K2H15.6.IV9.IS1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

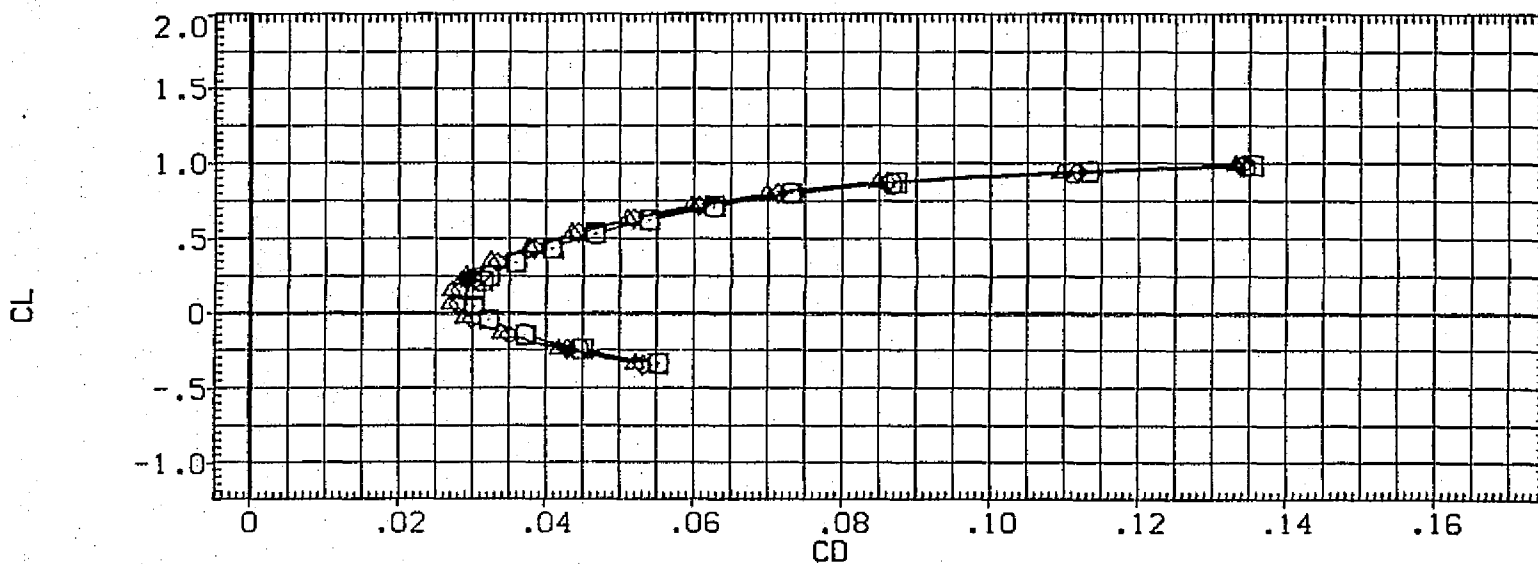
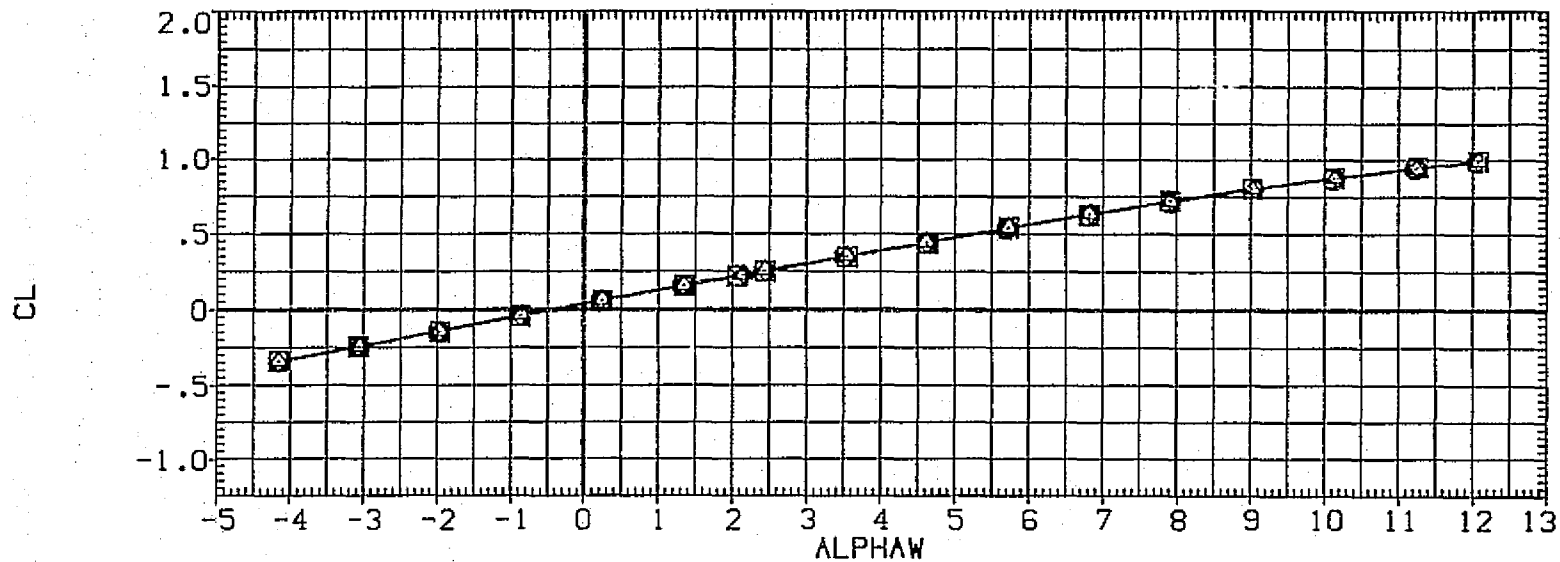


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(A) MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232) □	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237) □	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245) △	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. YC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

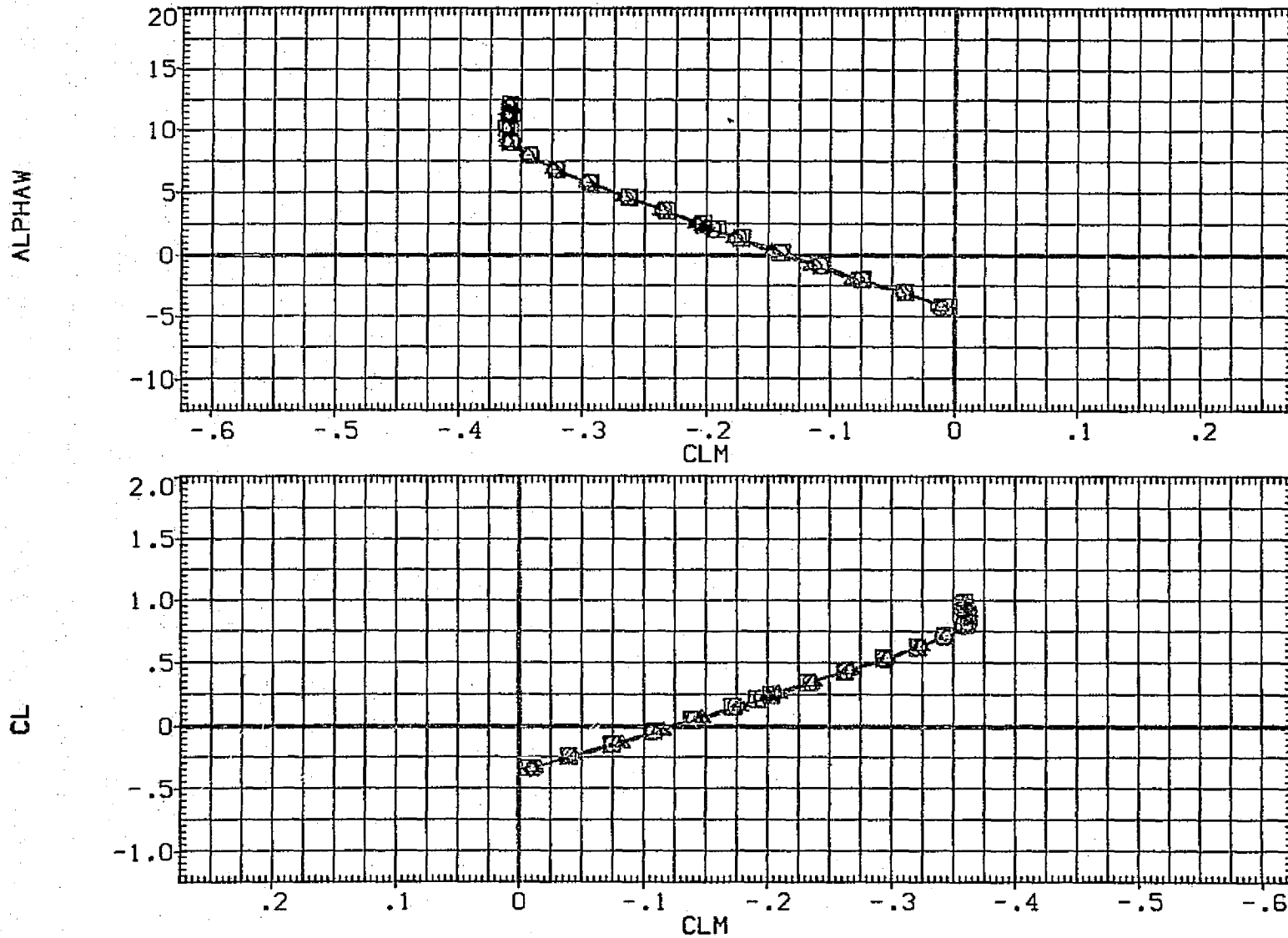


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN
 (A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	REFERENCE INFORMATION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.070	SREF 5500.0000 SQ.FT.
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1	.000	5.070	LREF 327.8000 IN.
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000	5.070	BREF 2348.0000 IN.
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1	.000	5.030	XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

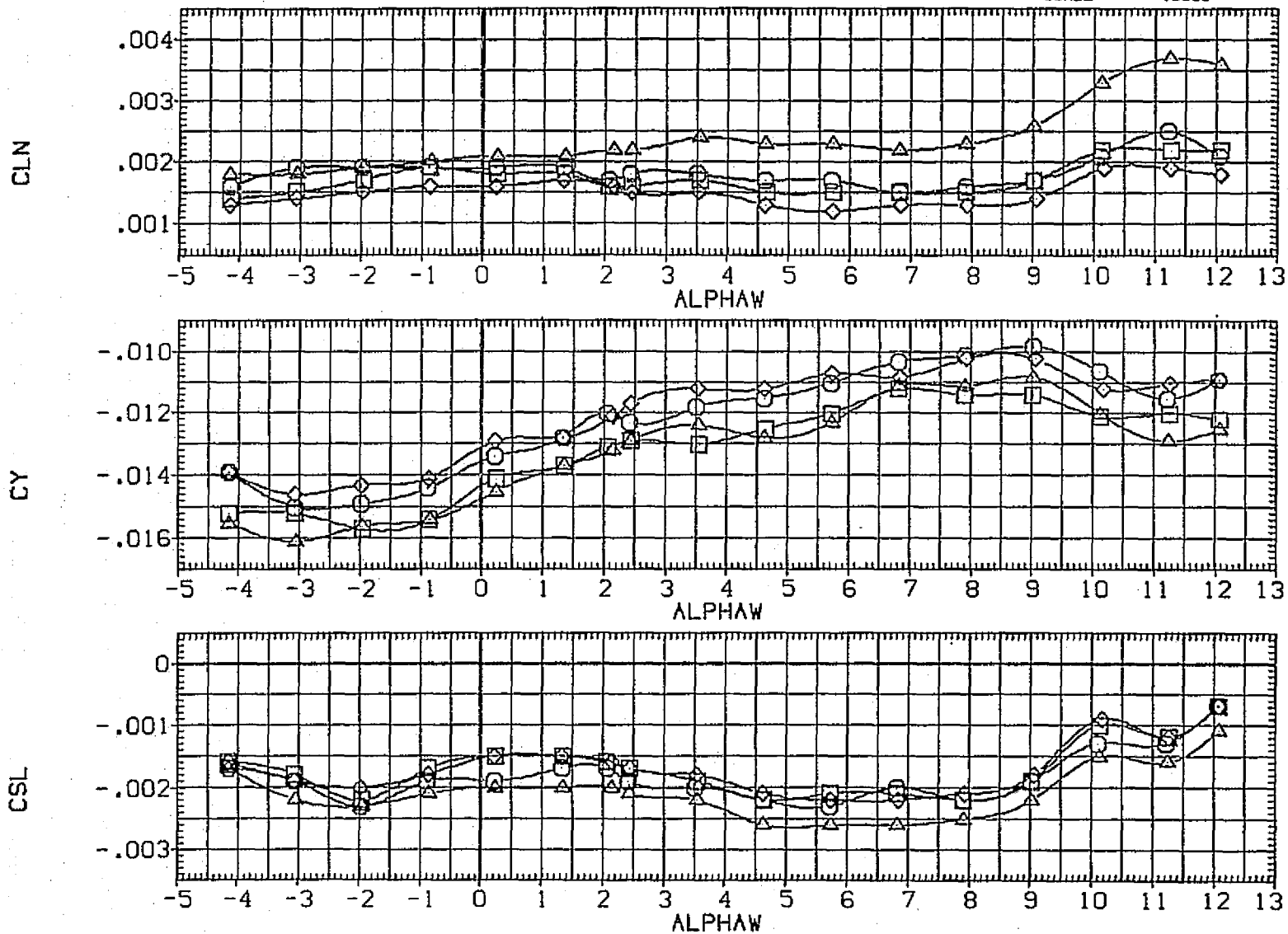


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

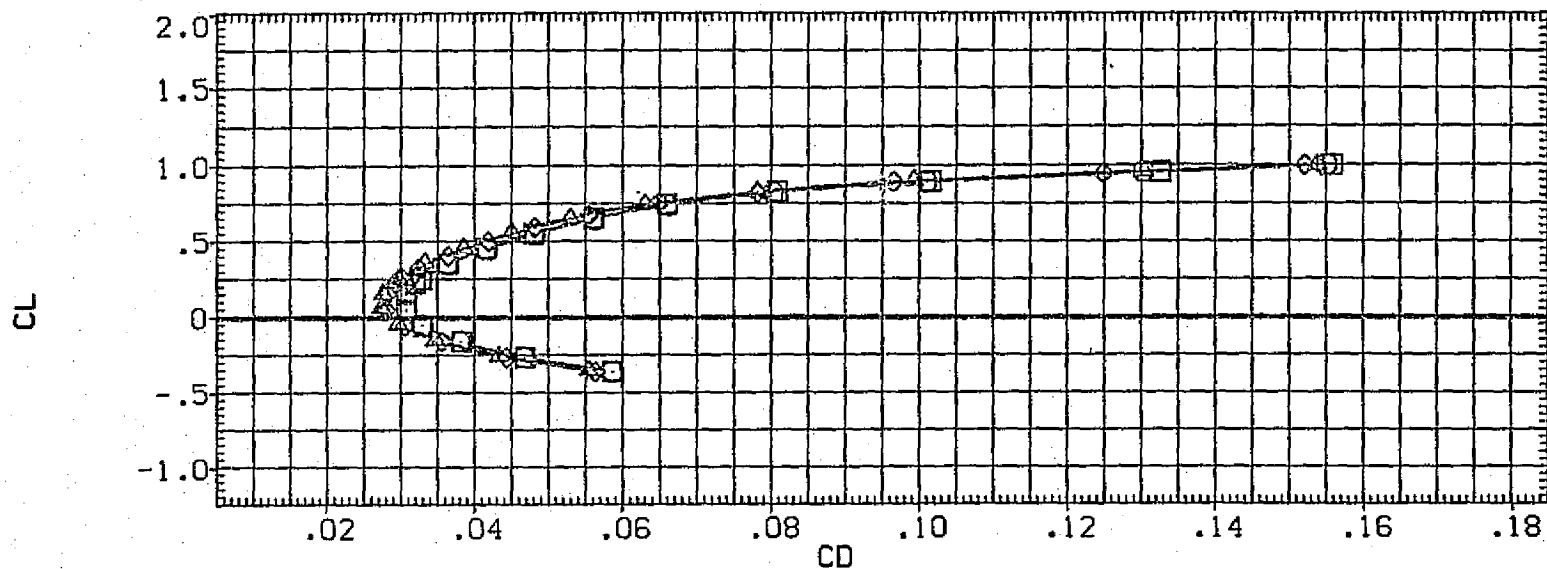
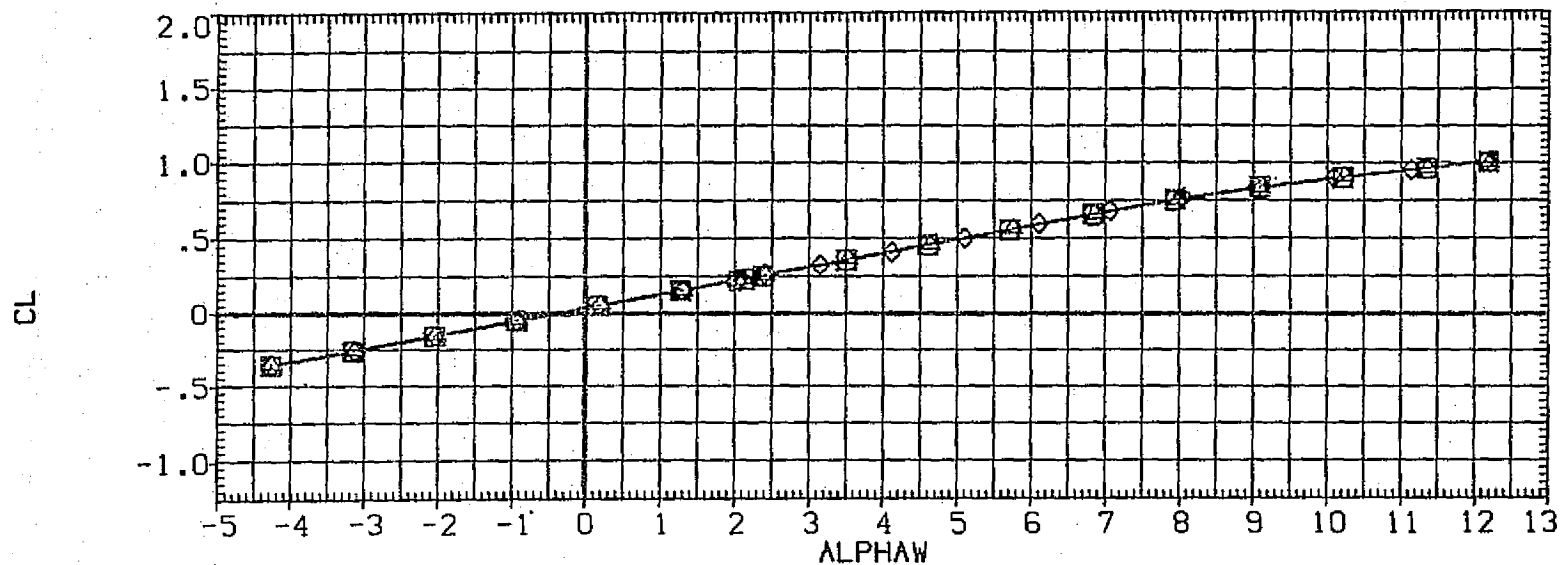


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XM RP	1339.9000	IN. XC
YM RP	.0000	IN. YC
ZM RP	190.7700	IN. ZC
SCALE	.0300	

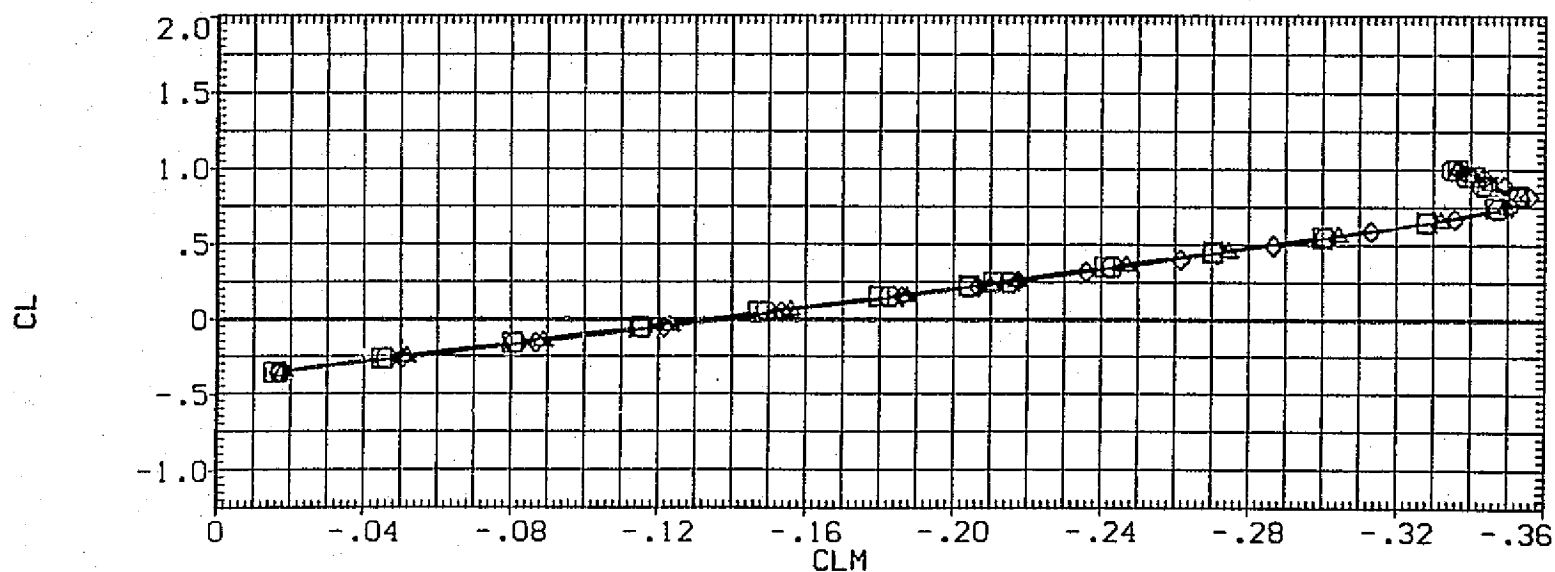
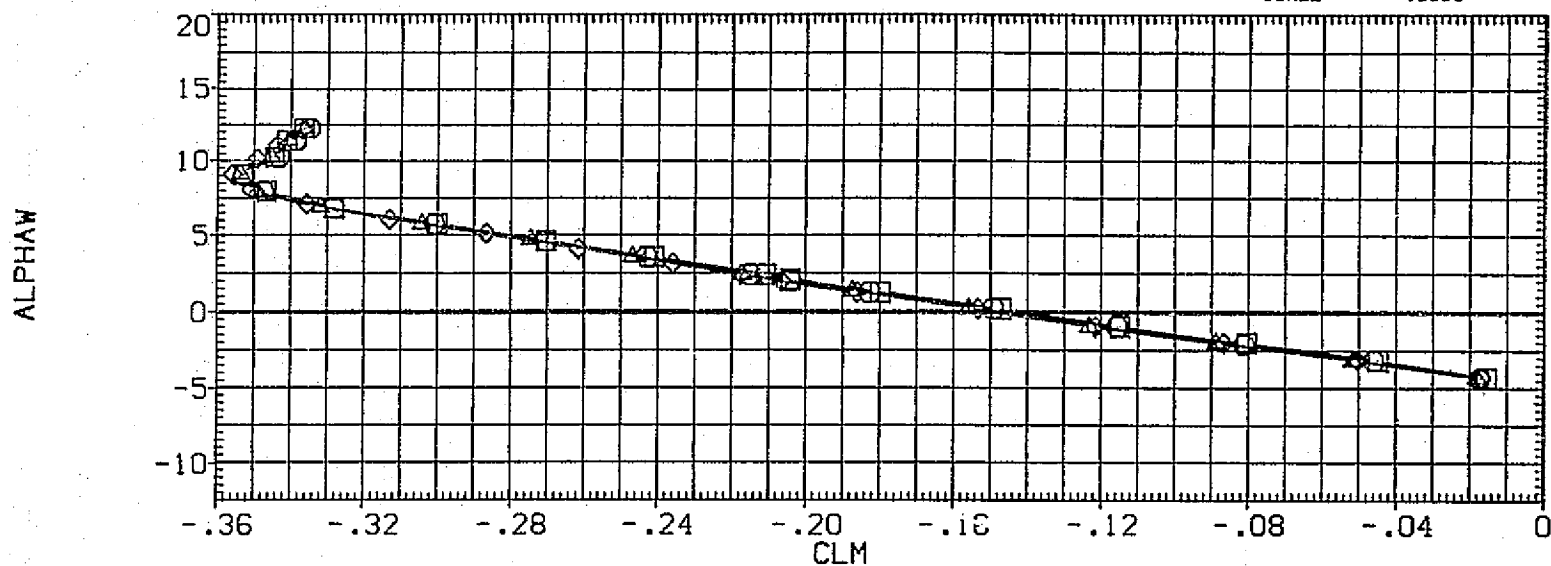


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

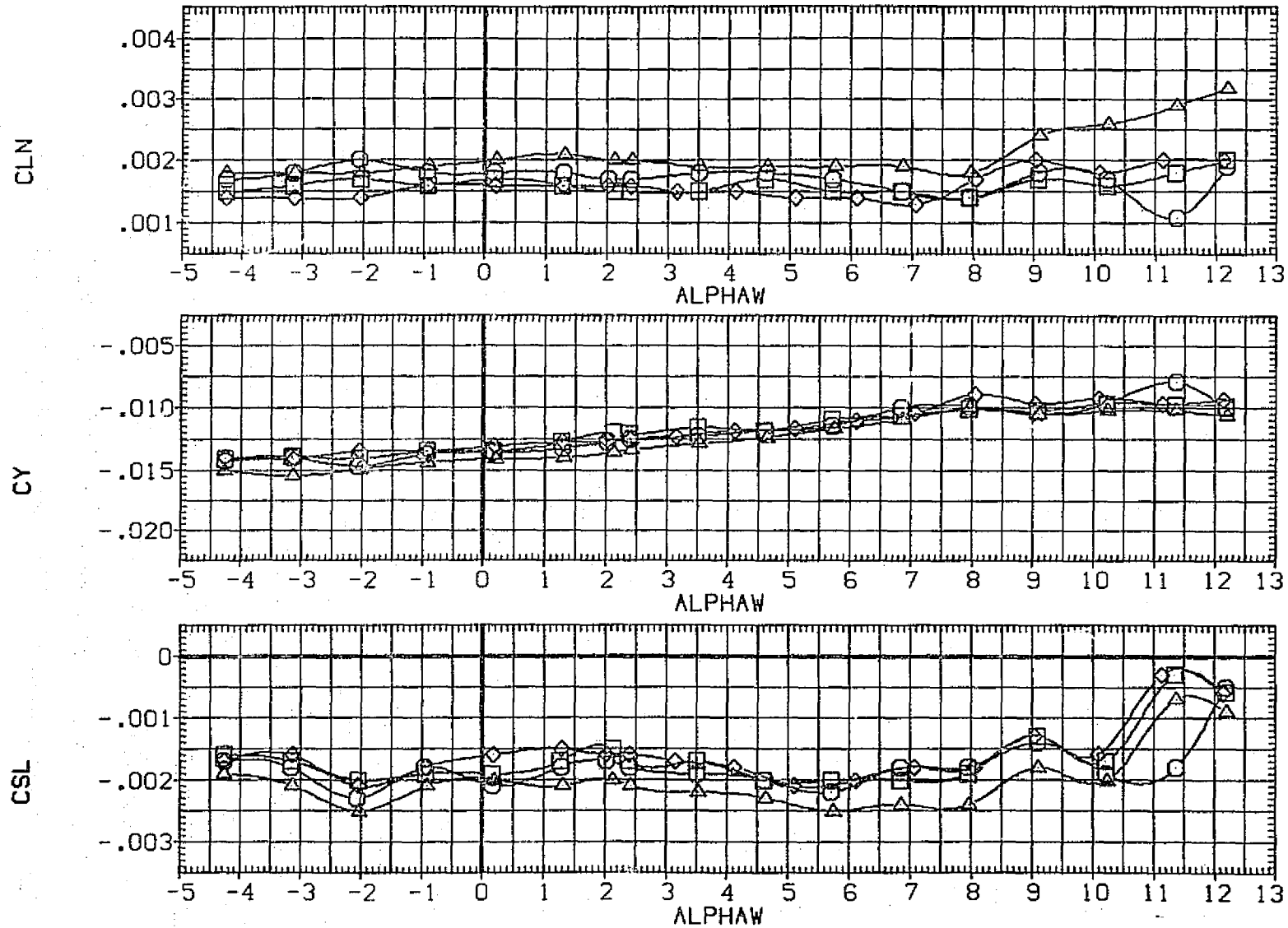
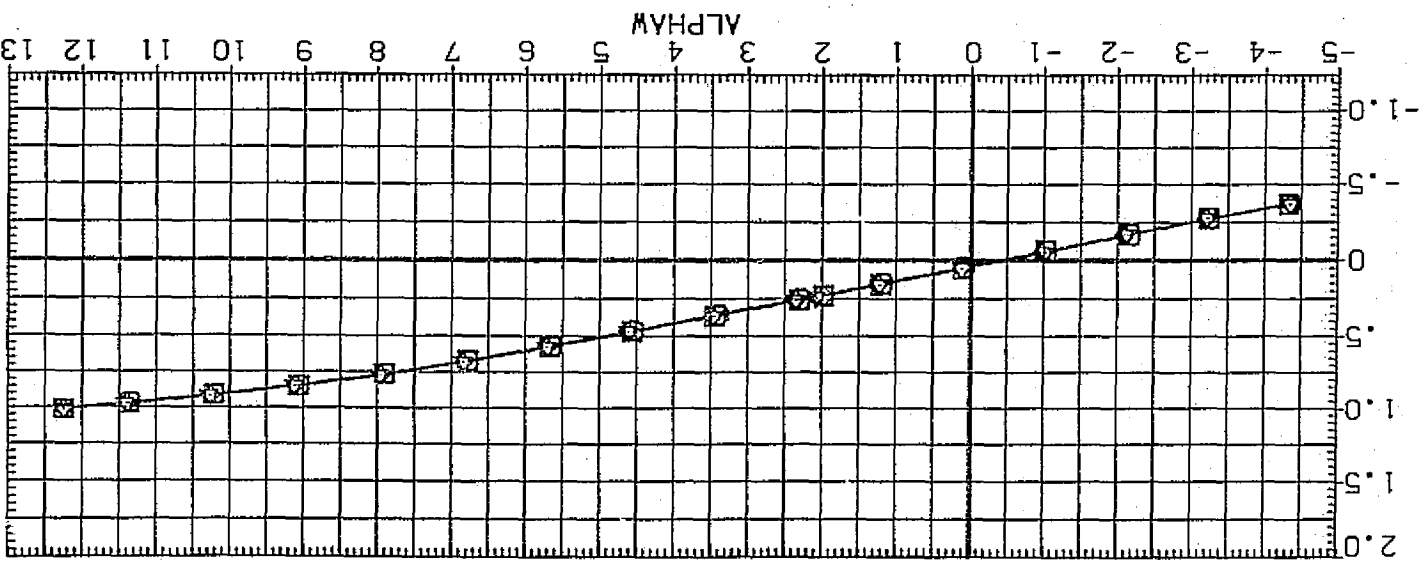
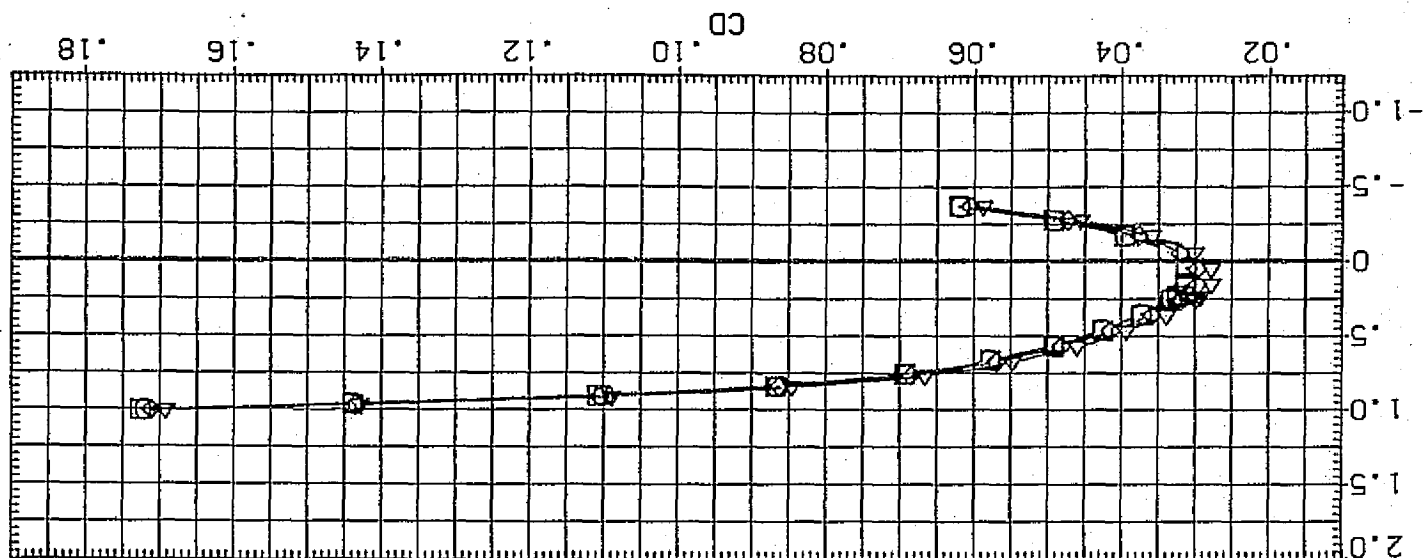


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN
 (B)MACH = .50

FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	REFERENCE INFORMATION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.070	SREF 5500.0000 50.FT.
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1	.000	5.070	LREF 327.8000 IN.
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000	5.070	BREF 2348.0000 IN.
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1	.000	5.030	XMRP 1339.9000 IN. XC
				YMRP .0000 IN. YC
				ZMRP 190.7700 IN. ZC
				SCALE .0300

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XM RP	1339.9000	IN. XC
YM RP	.0000	IN. YC
ZM RP	190.7700	IN. ZC
SCALE	.0300	

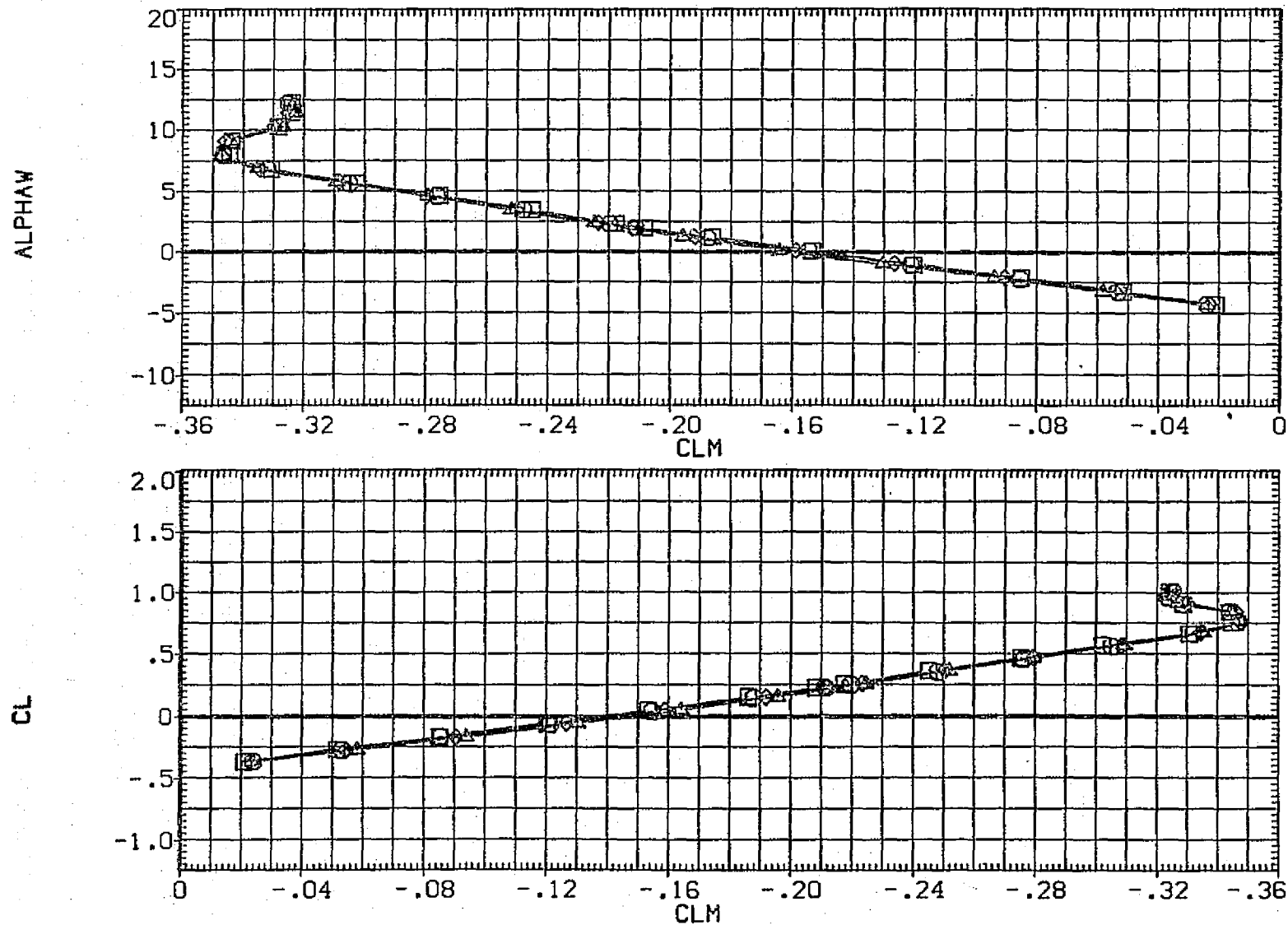


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	REFERENCE INFORMATION		
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.070	SREF	5500.0000	50.FT.
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1	.000	5.070	LREF	327.8000	IN.
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000	5.070	BREF	2348.0000	IN.
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1	.000	5.030	XMRP	1339.9000	IN. XC
				YMRP	.0000	IN. YC
				ZMRP	190.7700	IN. ZC
				SCALE	.0300	

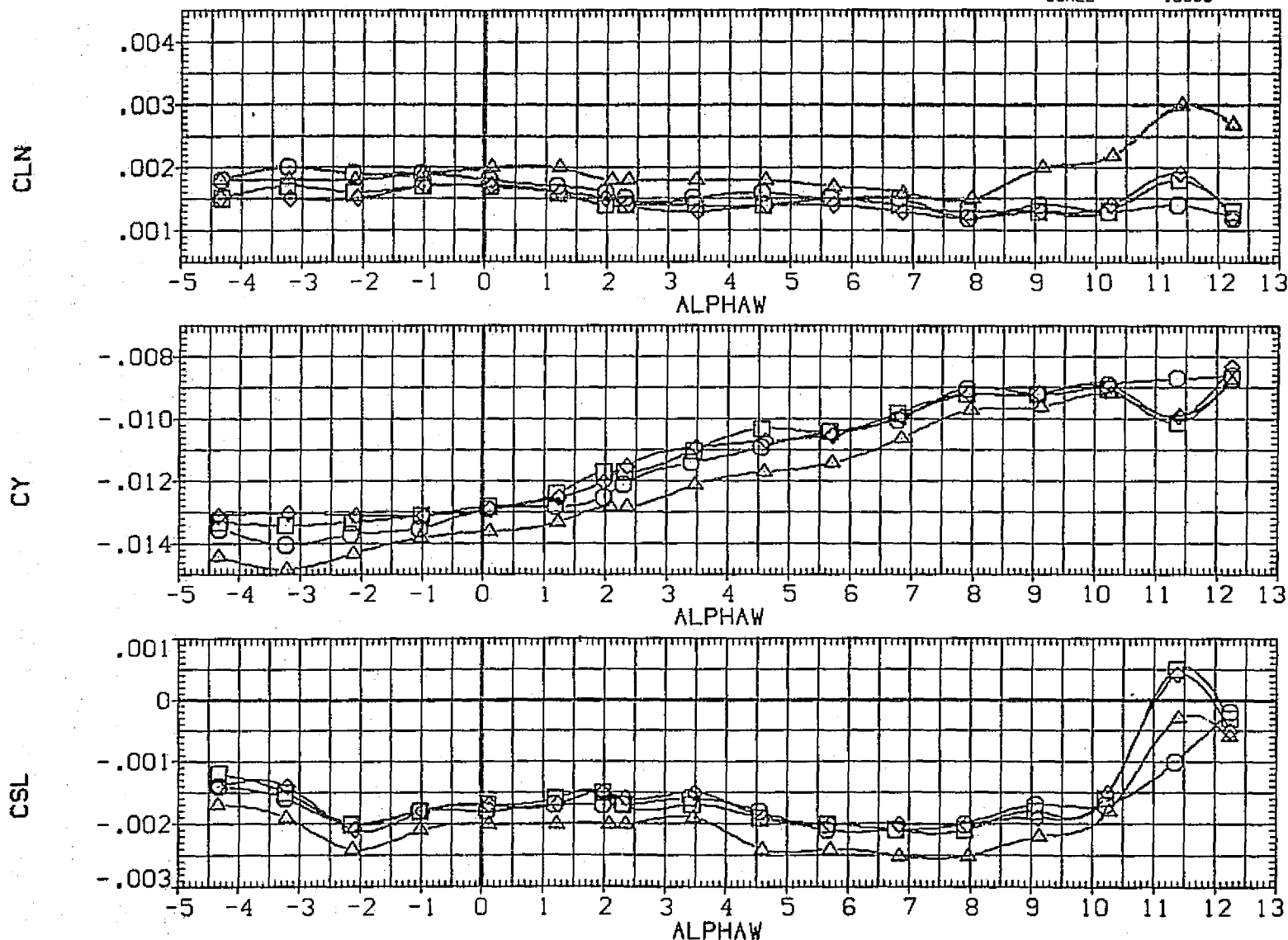


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

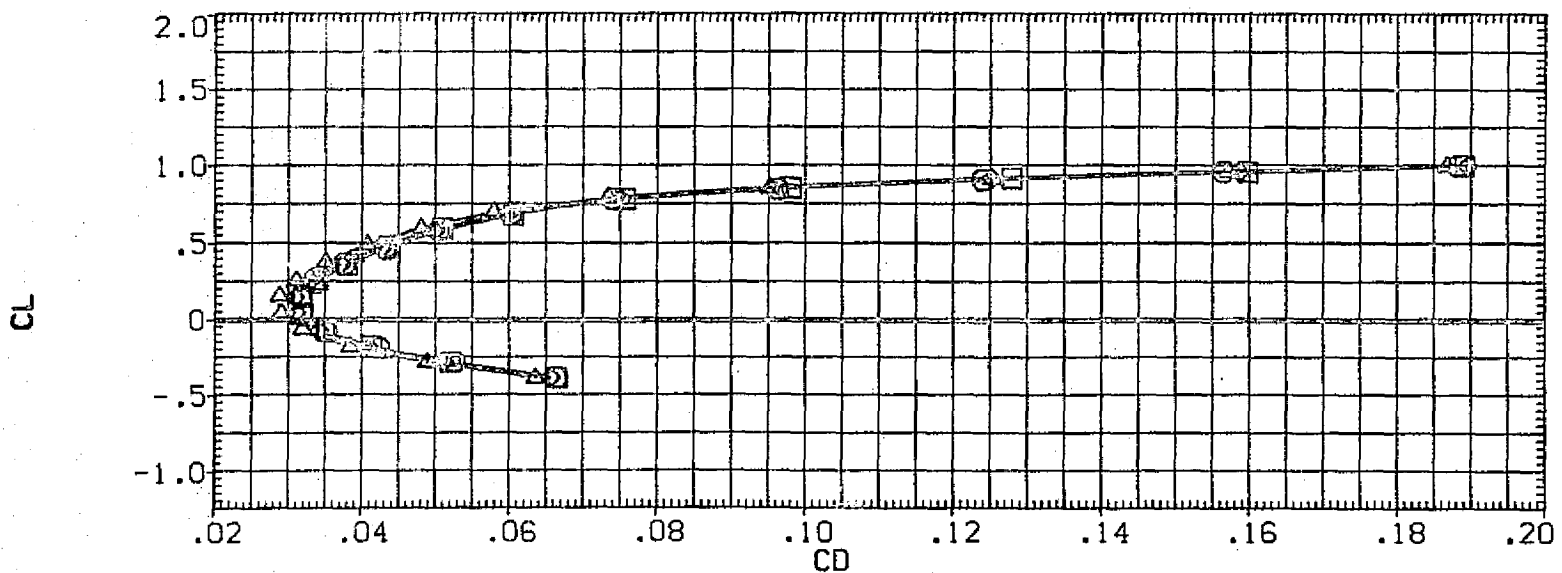
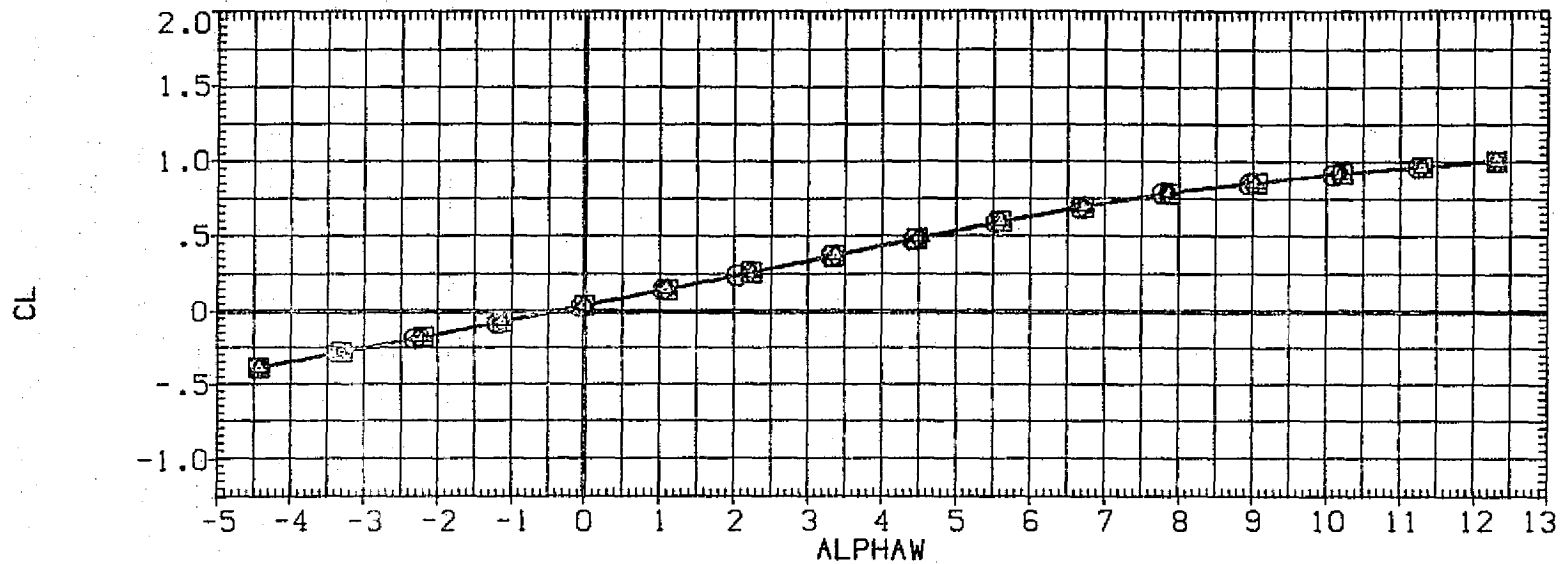


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(D)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB	REFERENCE INFORMATION	
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3	.000	5.070	SREF	5500.0000 SO.FT.
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1	.000	5.070	LREF	327.8000 IN.
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000	5.070	BREF	2348.0000 IN.
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1	.000	5.030	XMRP	1339.9000 IN. XC
				YMRP	.0000 IN. YC
				ZMRP	190.7700 IN. ZC
				SCALE	.0300

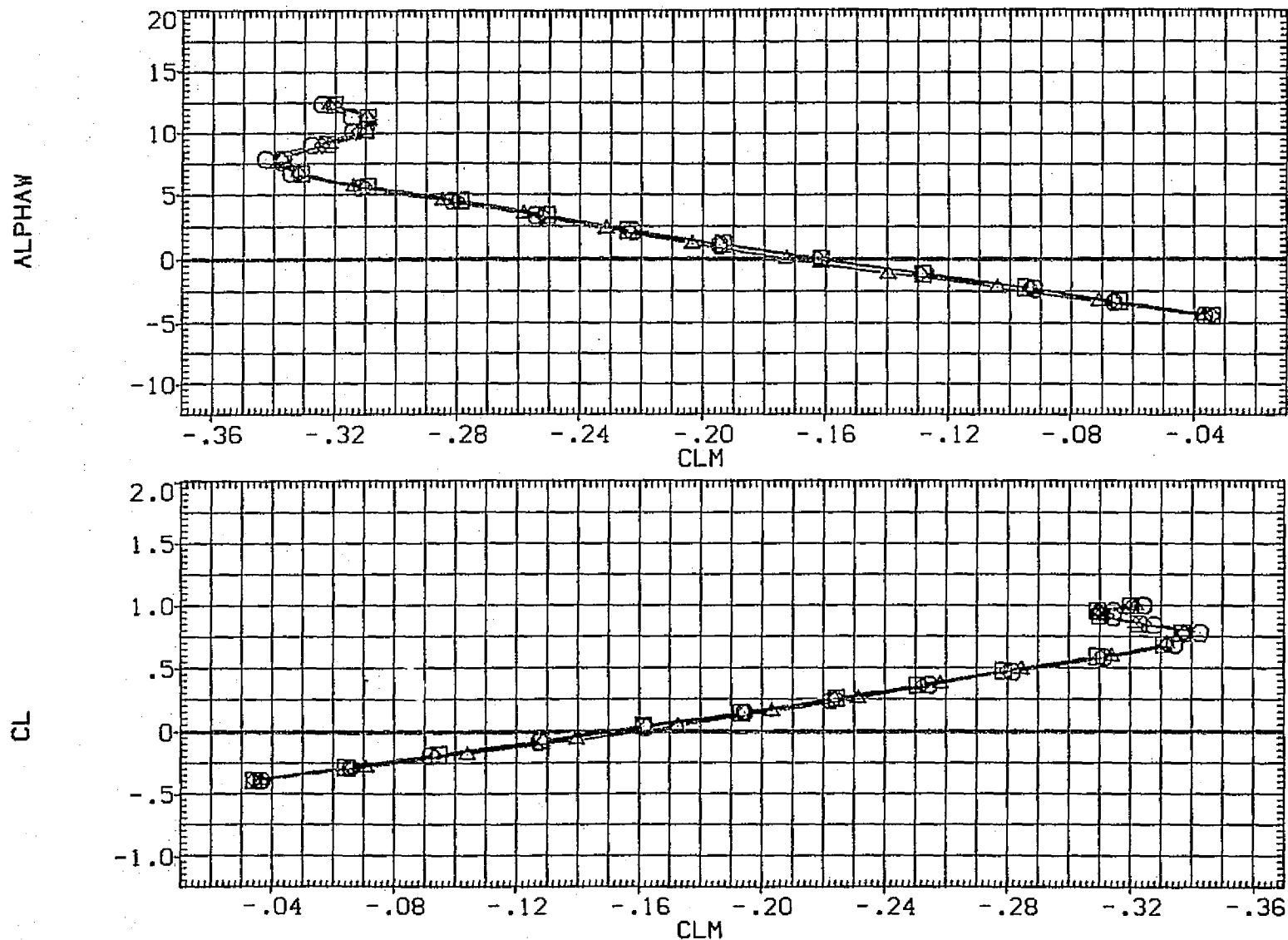


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN

(CD)MACH = .70

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP232)	CA6 K2H15.6.1V9.1S1-12 AT103.3/95-.3
(RGP237)	CA6 K2H15.6.1V9.1S1-12 AT103.3/111.1
(RGP238)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP245)	CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

BETA	STAB
.000	5.070
.000	5.070
.000	5.070
.000	5.030

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

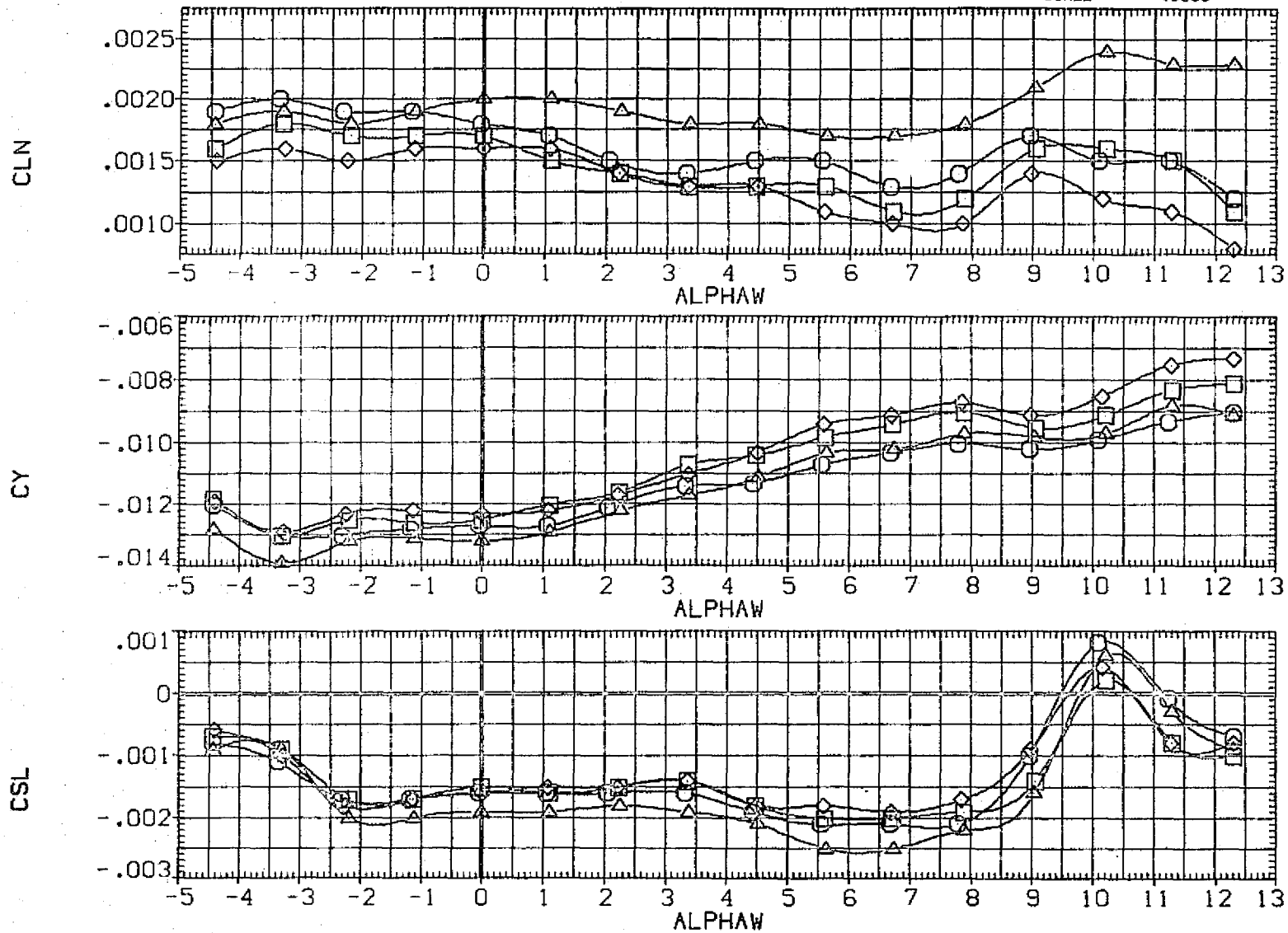


FIG. 93 EFFECT OF SUPPORT FAIRINGS, 747 CAM, SPEED BRAKE DOWN
 (D)MACH = .70

CA6 K2H15.6.1V9.1S1-12 AT112 /111.1

(RGP238)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.300	STAB	5.070	RUD-U	.000
□	.500	RUD-L	.000	ELV-1B	.000
◇	.600	ELV-0B	.000	BETA	.000
△	.699	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

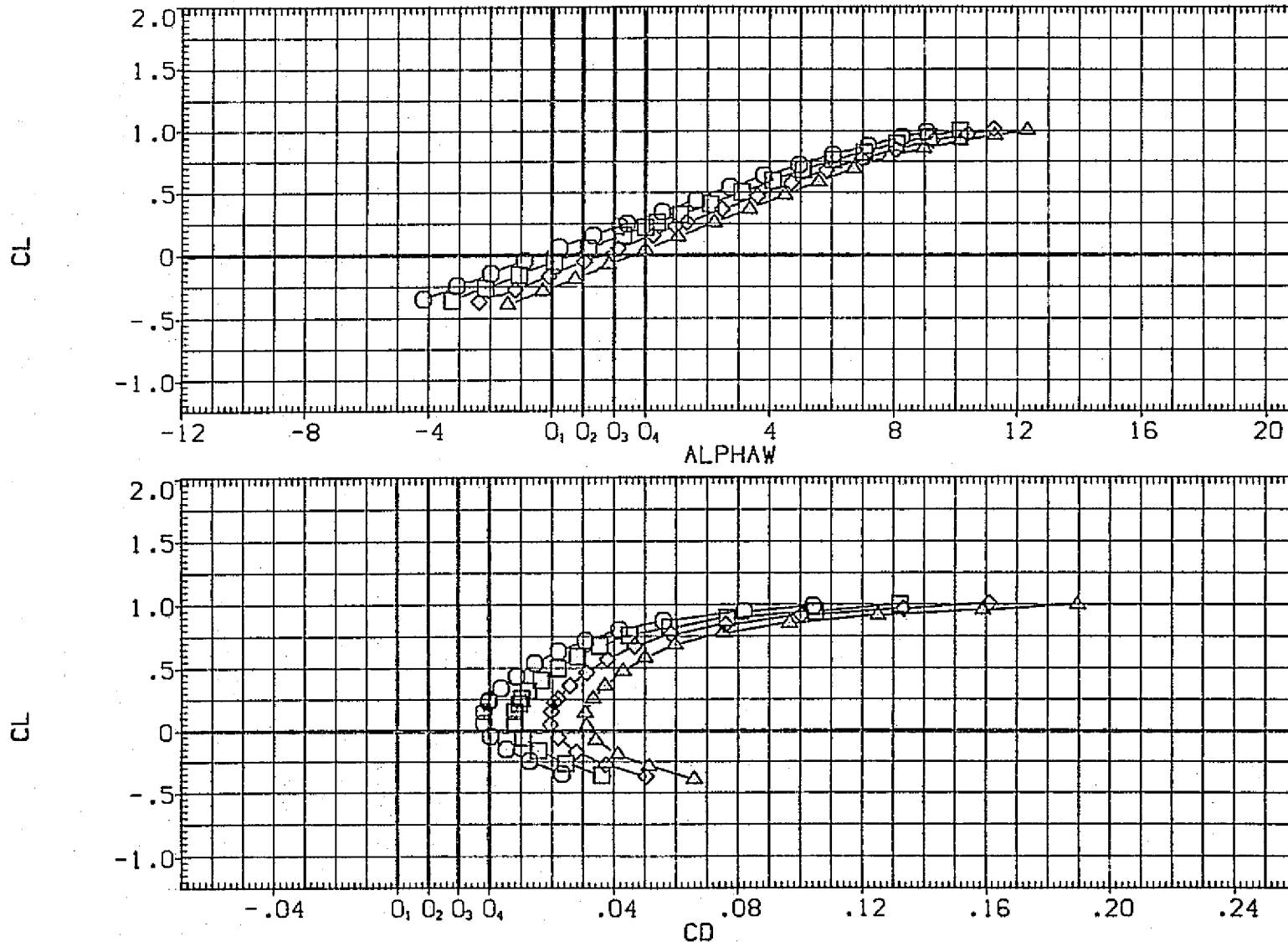


FIG. 94 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

SYMBOL	MACH	PARAMETRIC VALUES			
○	.300	STAB	5.070	RUD-U	.000
□	.500	RUD-L	.000	ELV-1B	.000
◇	.600	ELV-0B	.000	BETA	.000
△	.699	FWD ST	6.000	SP0ILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

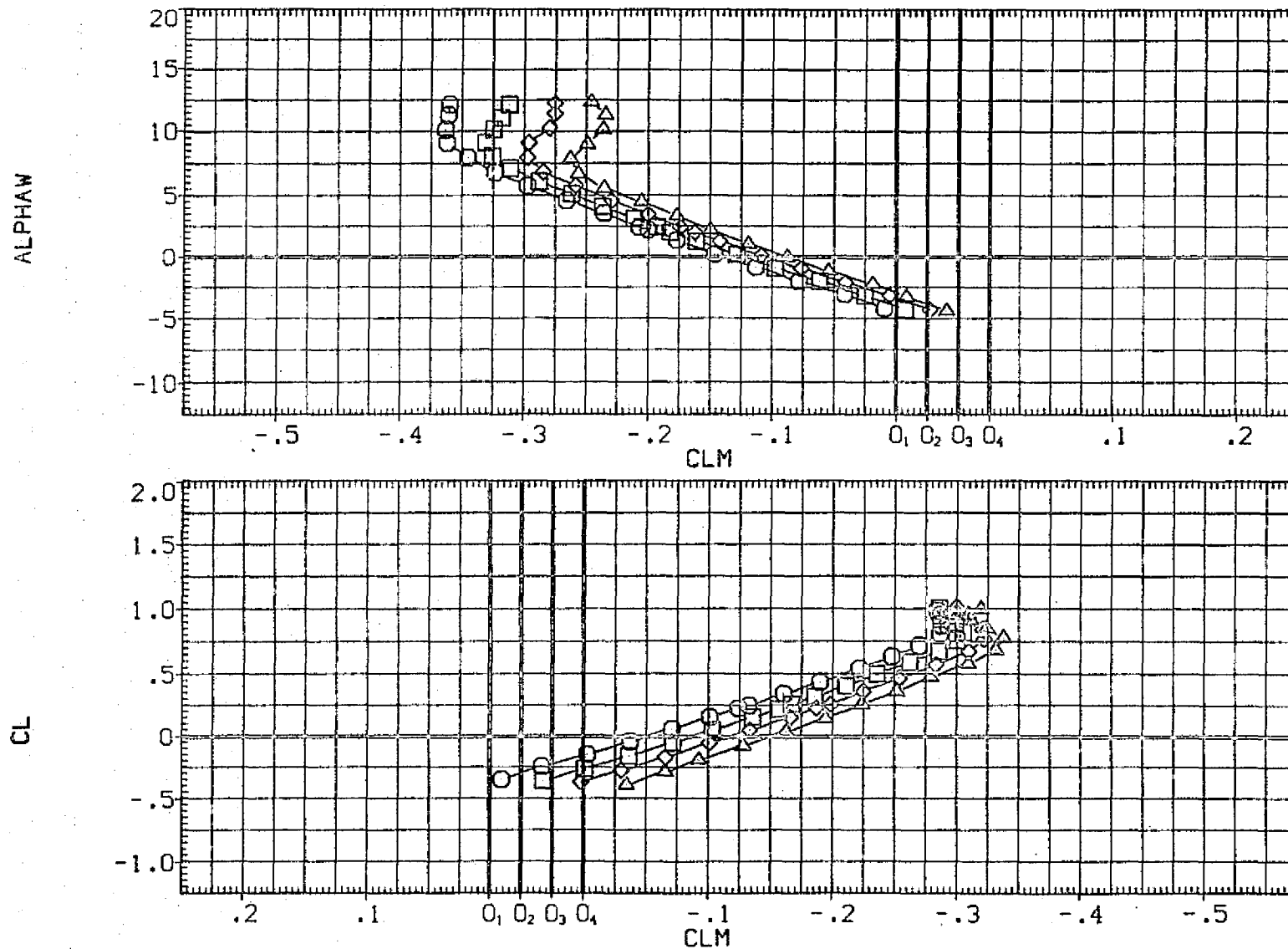


FIG. 94 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

CA6 K2H15.6.IV9.1S1-12 AT112 /111.1

(RGP238)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.300	STAB	5.070	RUD-U	.000
□	.500	RUD-L	.000	ELV-1B	.000
◇	.600	ELV-0B	.000	BETA	.000
△	.699	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SD.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

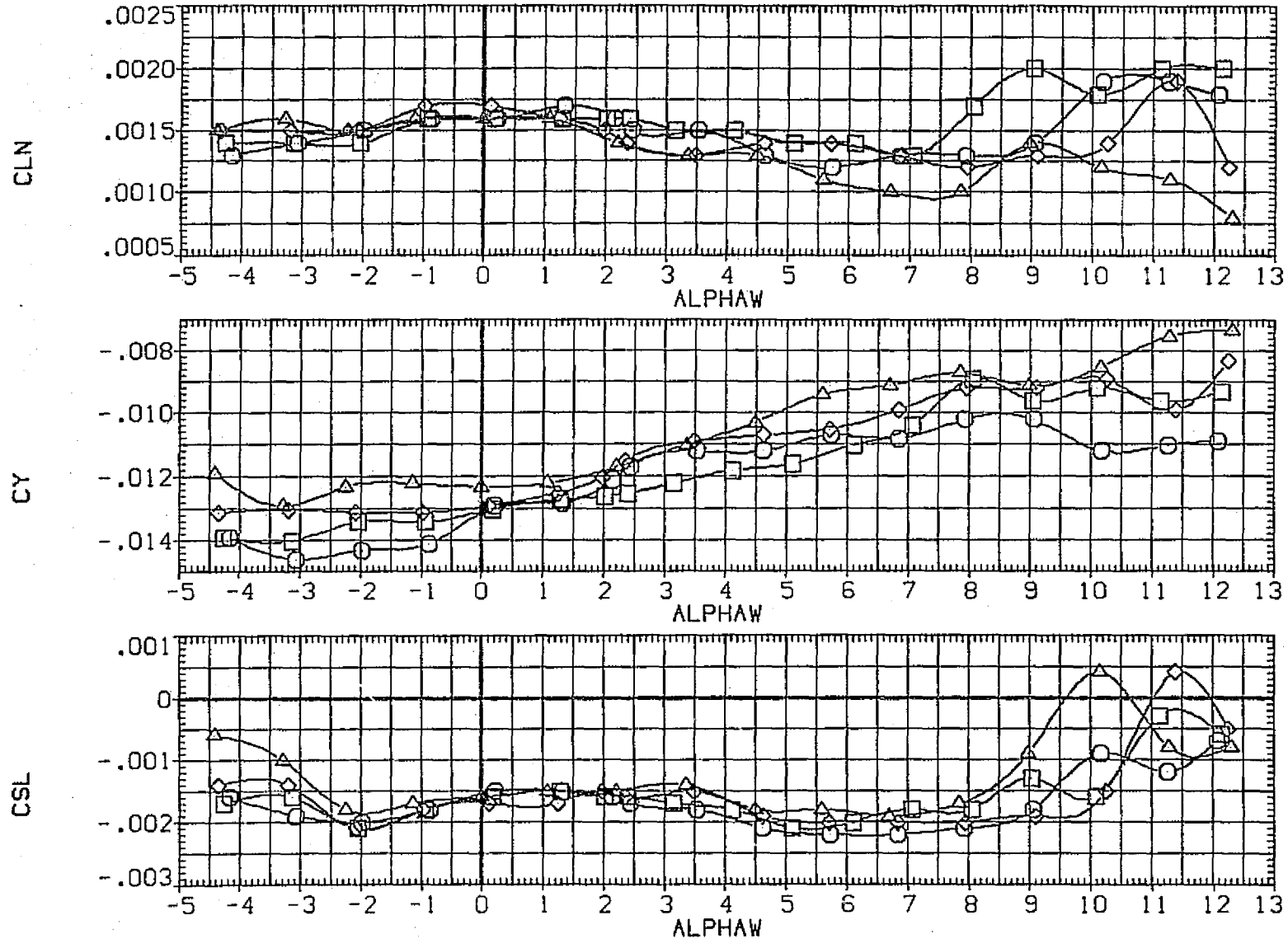


FIG. 94 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA
(RGP239)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000
(RGP240)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	2.000
(RGP241)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	4.000
(RGP242)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

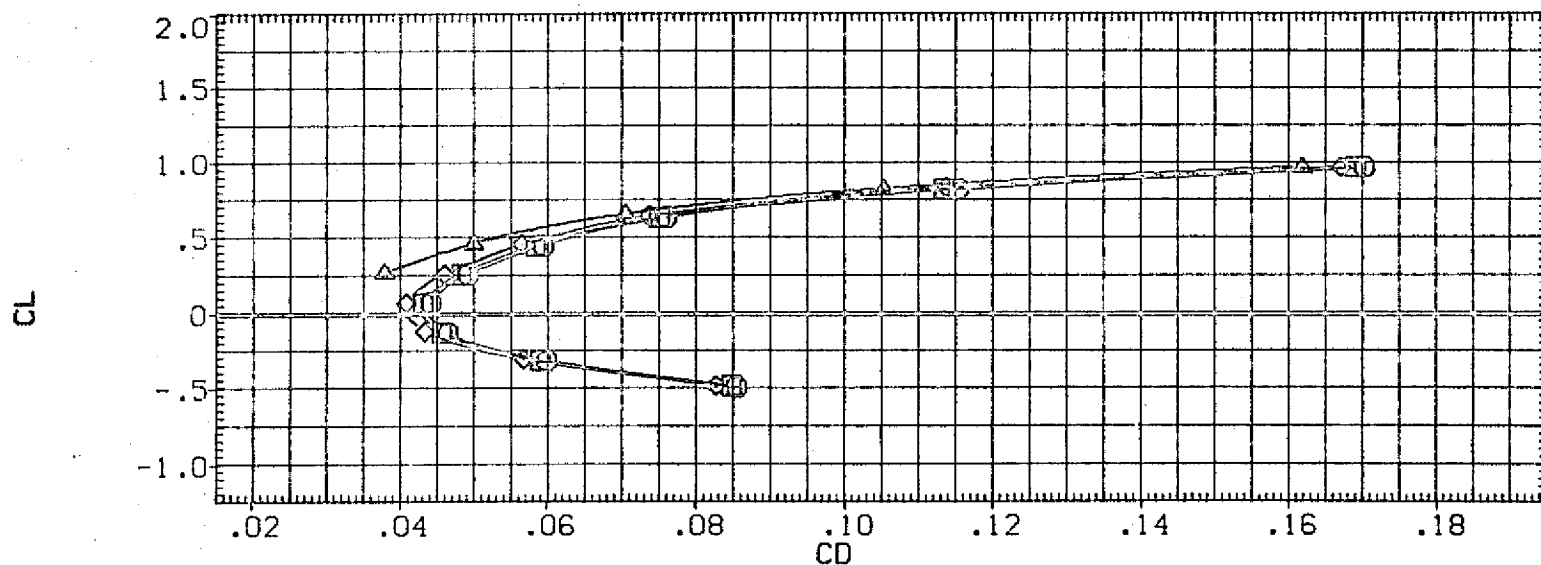
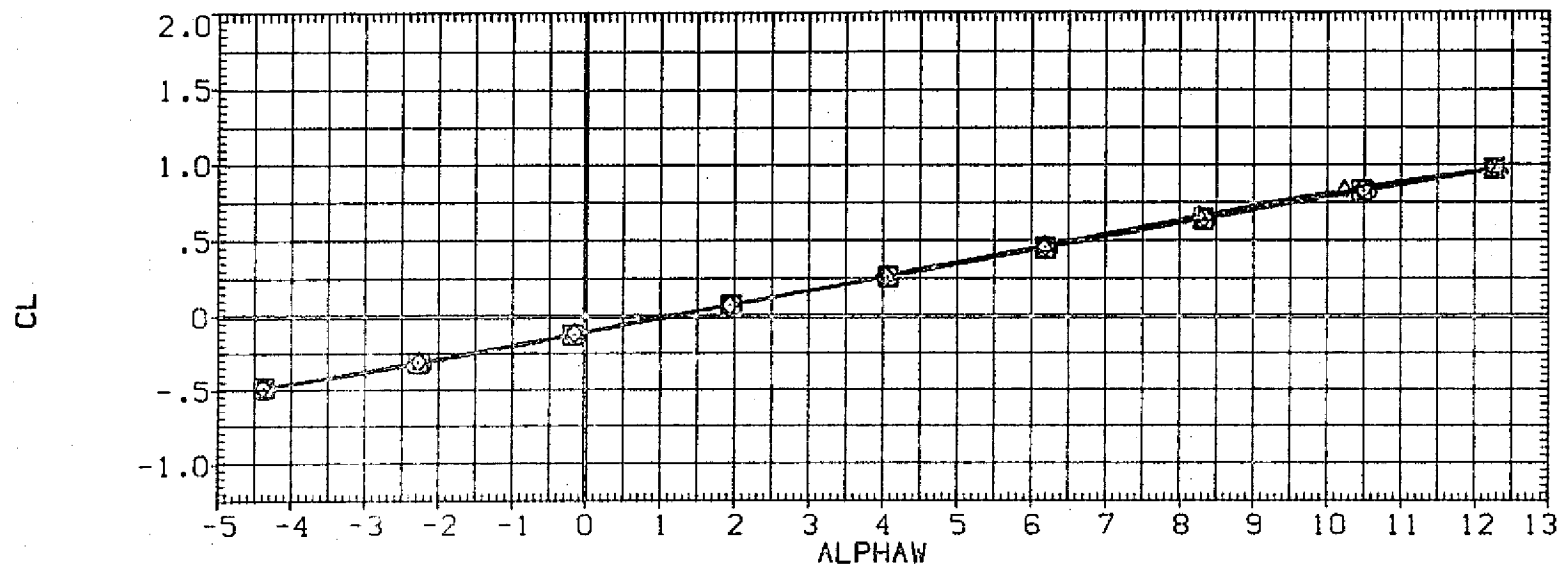


FIG. 95 LATERAL-DIRECTIONAL STABILITY, 747 CAM, MIN AFT AND GAITER FWD.

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA
(RGP239)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1	.000
(RGP240)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1	2.000
(RGP241)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1	4.000
(RGP242)	CAG K2H15.6.1V9.1S1-12 AT112 /111.1	10.000

REFERENCE INFORMATION		
SREF	5500.0000	SO. FT.
LREF	327.8000	IN.
BREF	2346.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

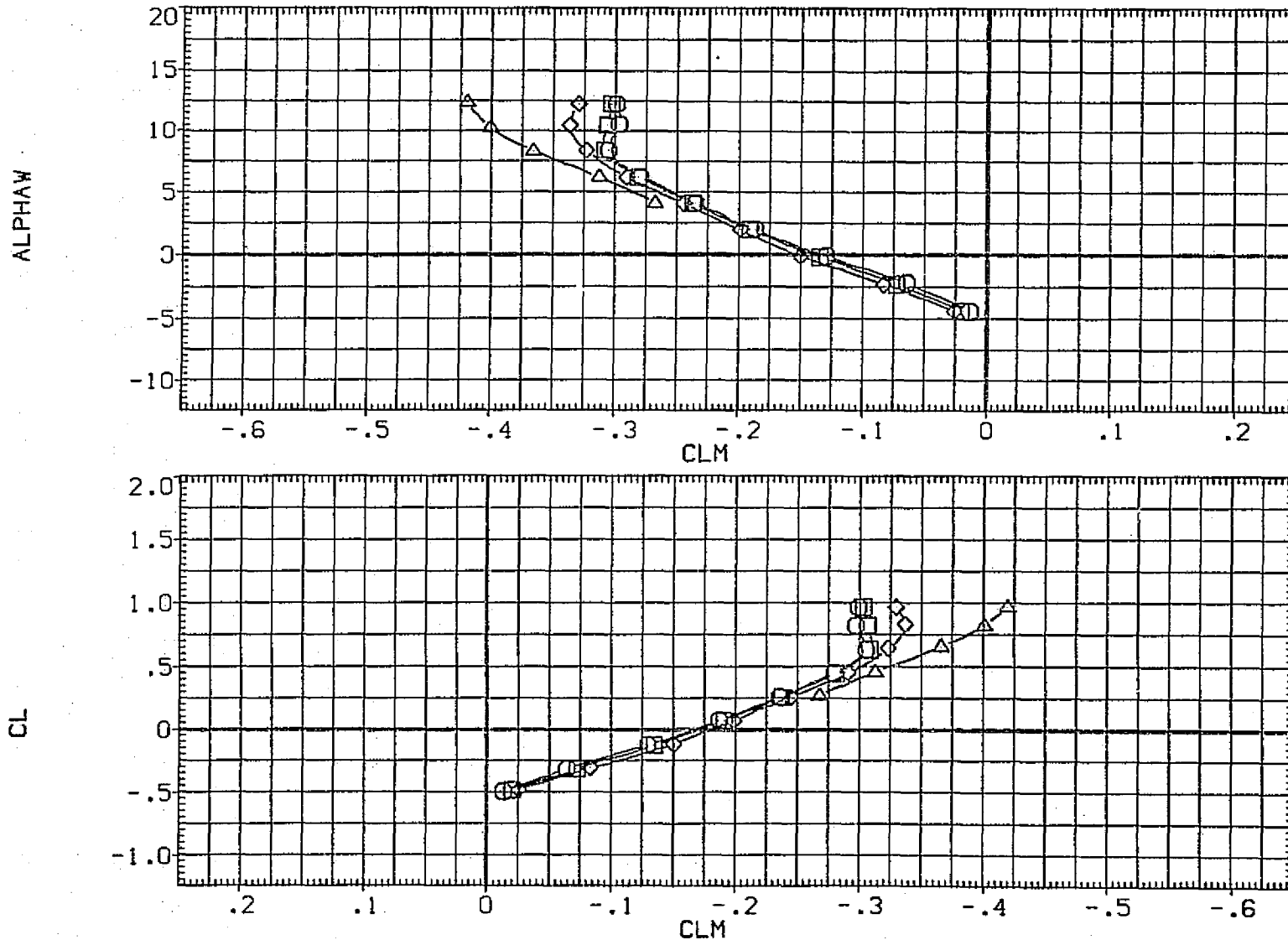


FIG. 95 LATERAL-DIRECTIONAL STABILITY, 747 CAM, MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP239)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP240)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP241)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP242)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1

BETA
.000
2.000
4.000
10.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

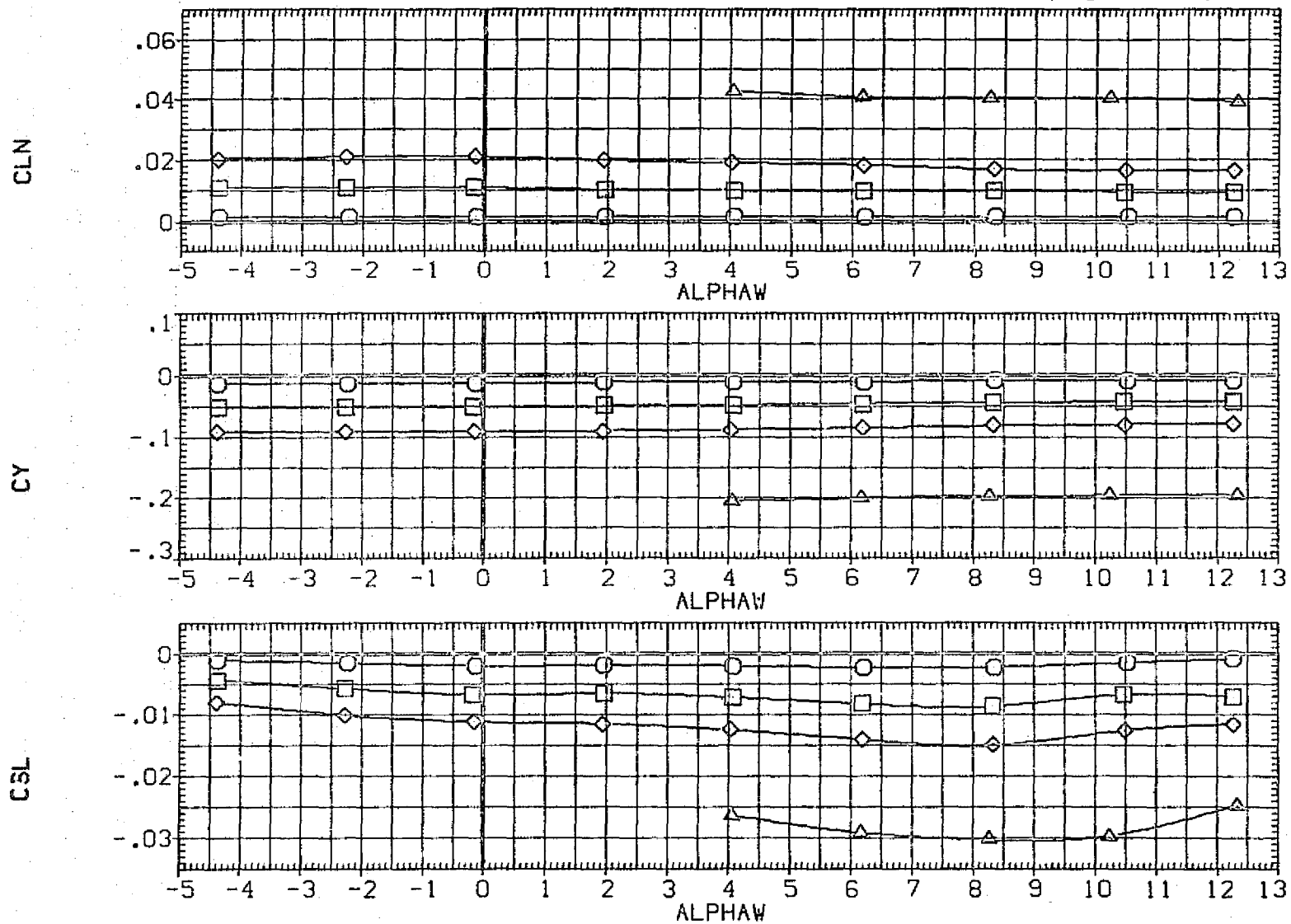


FIG. 95 LATERAL-DIRECTIONAL STABILITY, 747 CAM, MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP243)	□ CAS K2H15.6.1V9.1S1-12 AT112 /111.1
(RGP244)	○ CAS K2H15.6.1V9.1S1-12 AT112 /111.1

SP0ILR	BETA
2.000	.000
.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

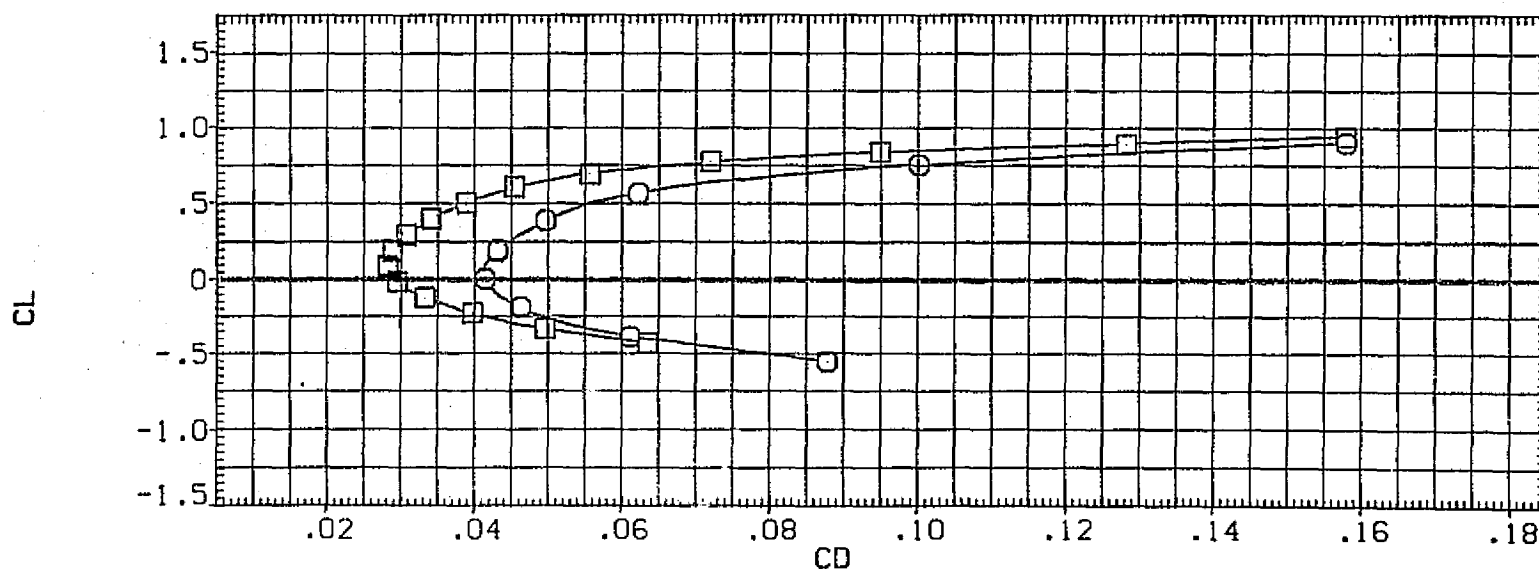
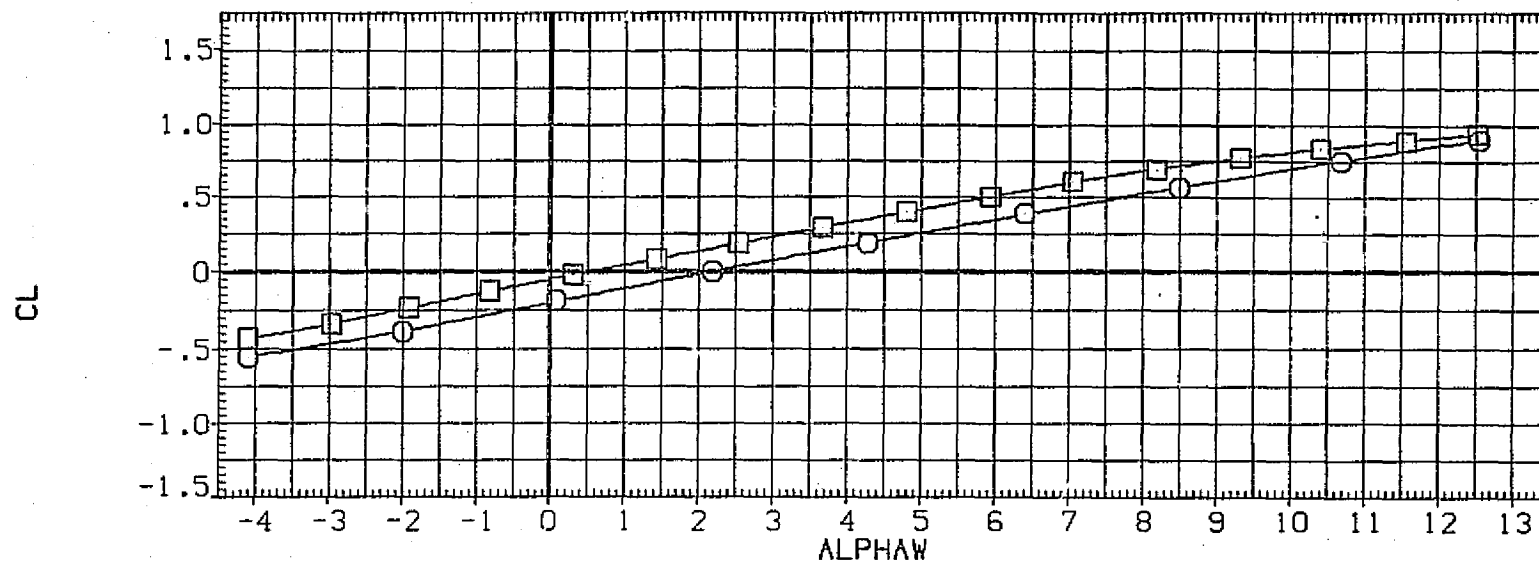


FIG. 96 EFFECT OF SPEED BRAKES, 747 CAM, MIN AFT AND GAITER FWD.

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	SPOILER	BETA
(RGP243)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	2.000	.000
(RGP244)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1	.000	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

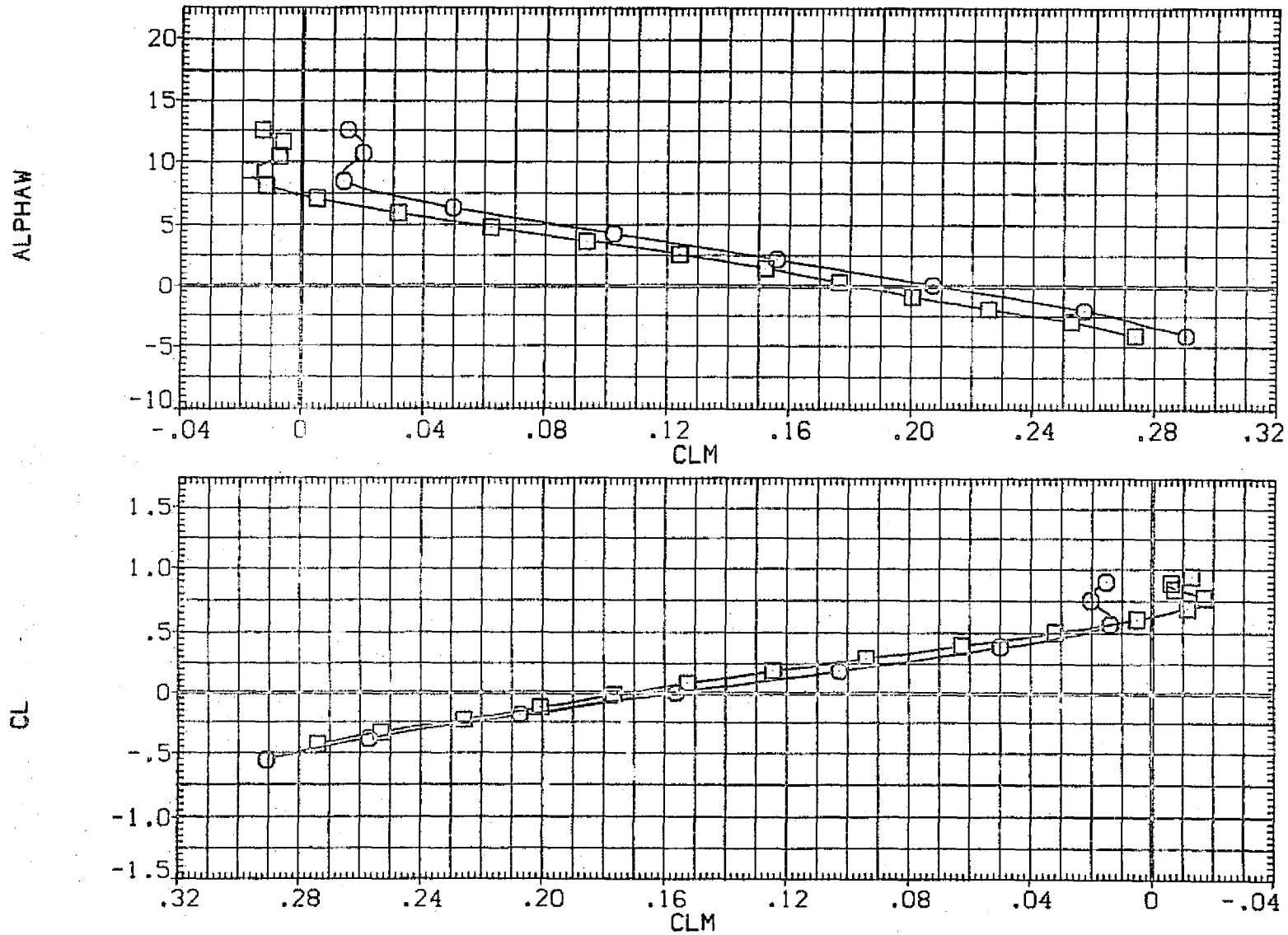


FIG. 96 EFFECT OF SPEED BRAKES, 747 CAM, MIN AFT AND GAITER FWD.

(A) MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP243) ○ CAG K2H15.6.1V9.1S1-12 AT112 /111.1
 (RGP244) □ CAG K2H15.6.1V9.1S1-12 AT112 /111.1

SPOILR BETA
 2.000 .000
 .000 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8600 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

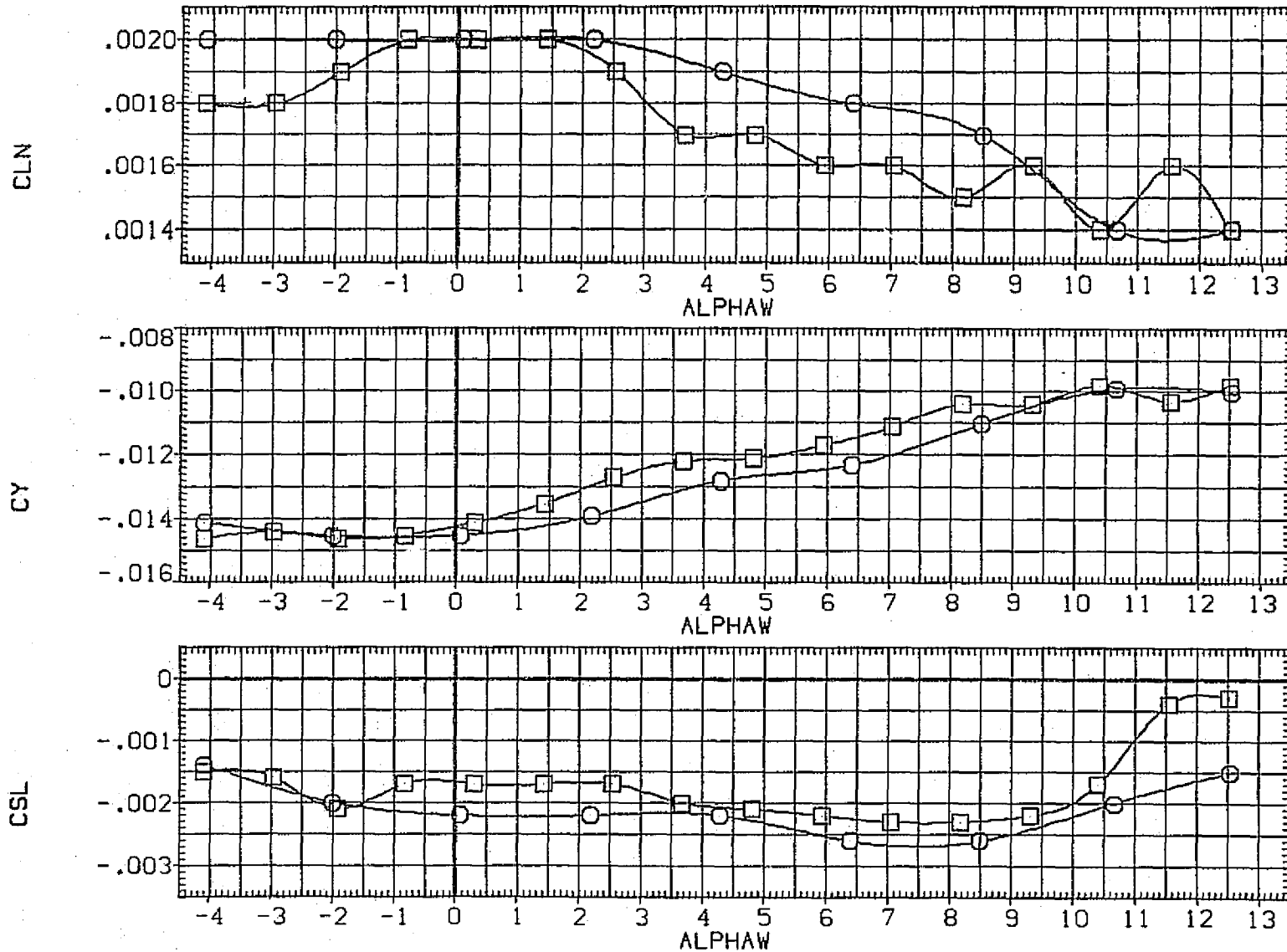


FIG. 96 EFFECT OF SPEED BRAKES, 747 CAM, MIN AFT AND GAITER FWD.

(A)MACH = .60

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	-.990	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.600	ELV-OB	.000	BETA	.000
△	.700	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

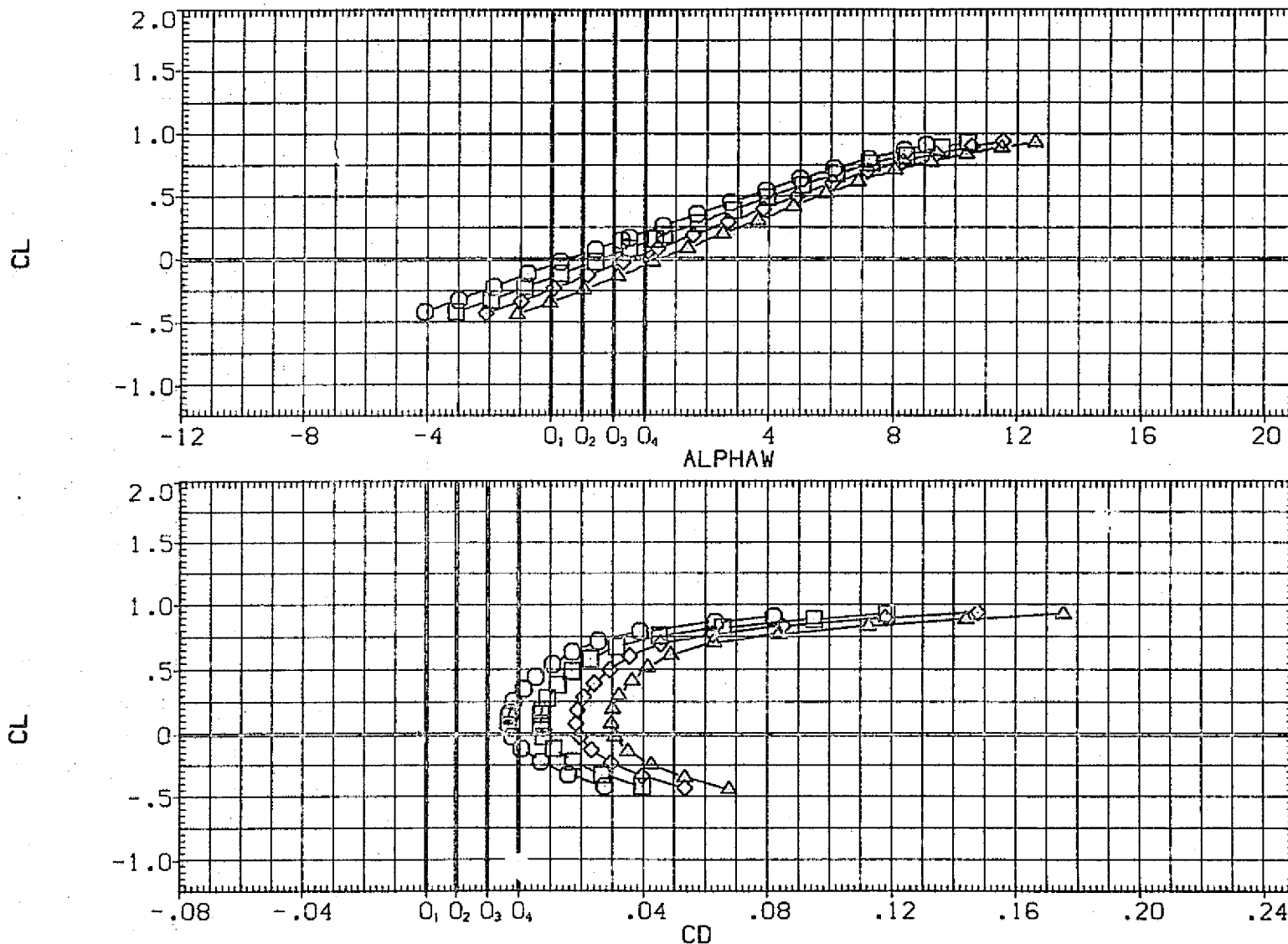


FIG. 97 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

CA6 K2H15.6.1V9.1S1-12 AT112 /111.1

(RGP244)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	-.990	RUD-U	.000
□	.499	RUD-L	.000	ELV-1B	.000
◇	.600	ELV-OB	.000	BETA	.000
△	.700	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XHRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

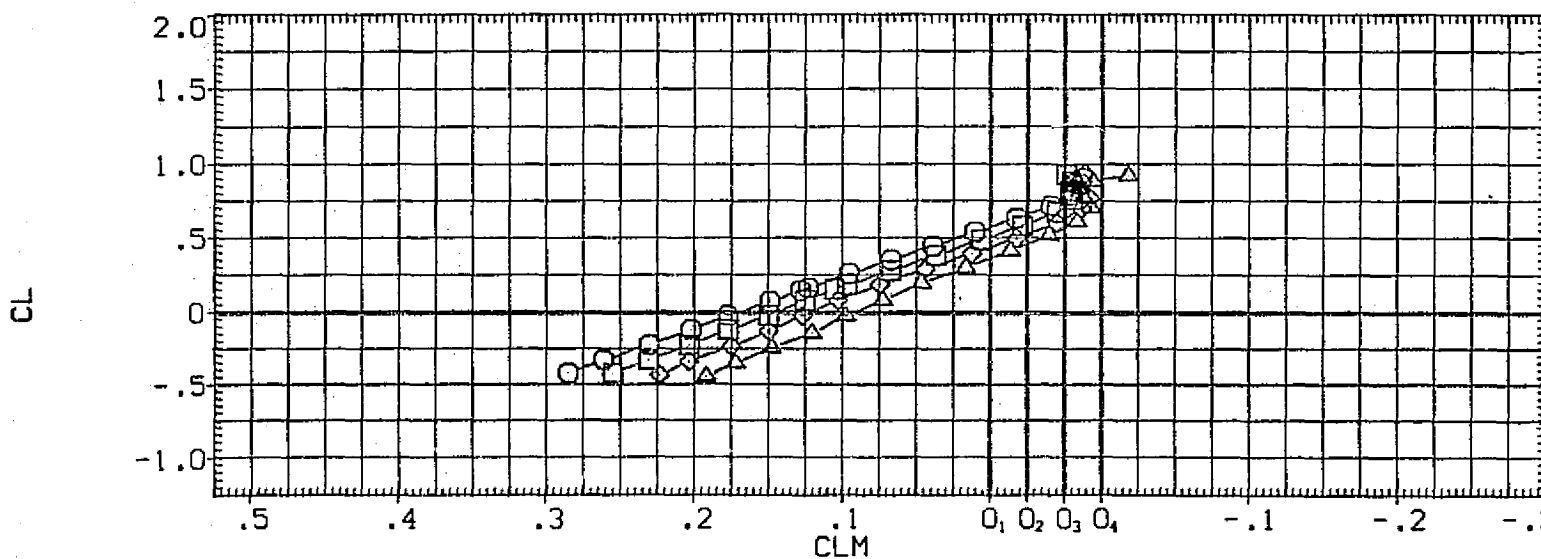
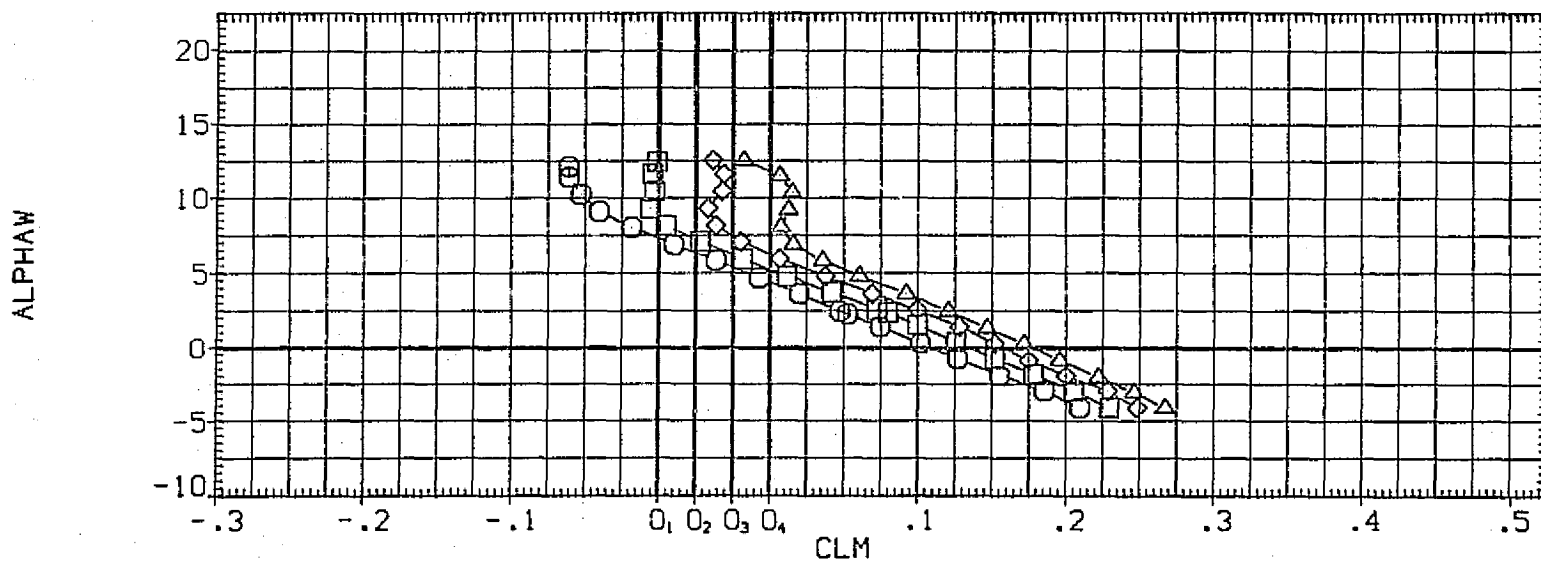


FIG. 97 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

SYMBOL	MACH	PARAMETRIC VALUES
○	.299	STAB -.990 RUD-U .000
□	.499	RUD-L .000 ELV-IB .000
◇	.600	ELV-OB .000 BETA .000
△	.700	FWD ST 6.000 SPOILR .000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

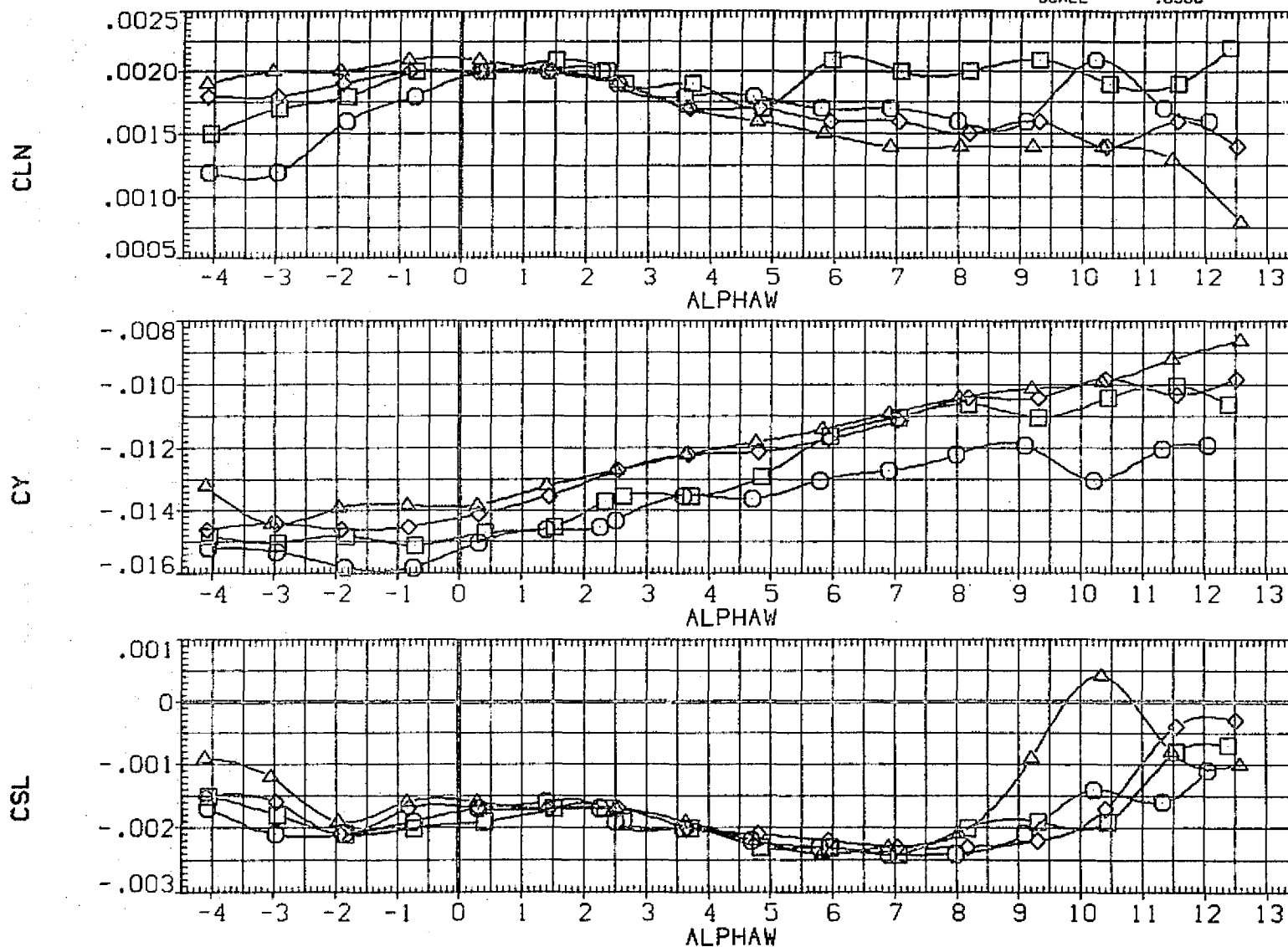


FIG. 97 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT AND GAITER FWD.

CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

(RGP245)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.300	STAB	5.030	RUD-U	.000
□	.499	RUD-L	.000	ELV-IB	.000
◇	.600	ELV-OB	.000	BETA	.000
△	.700	FWD ST	6.000	SPOILR	.000

REFERENCE INFORMATION		
SREF	5500.0000	SG.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

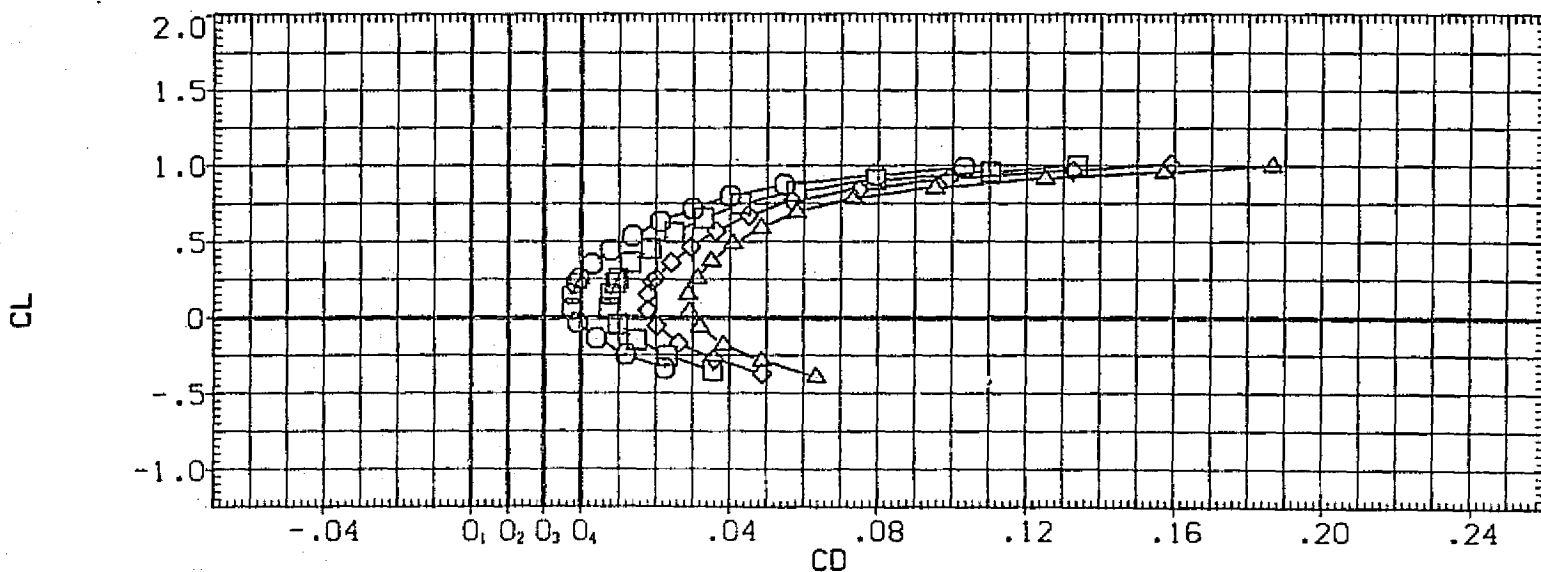
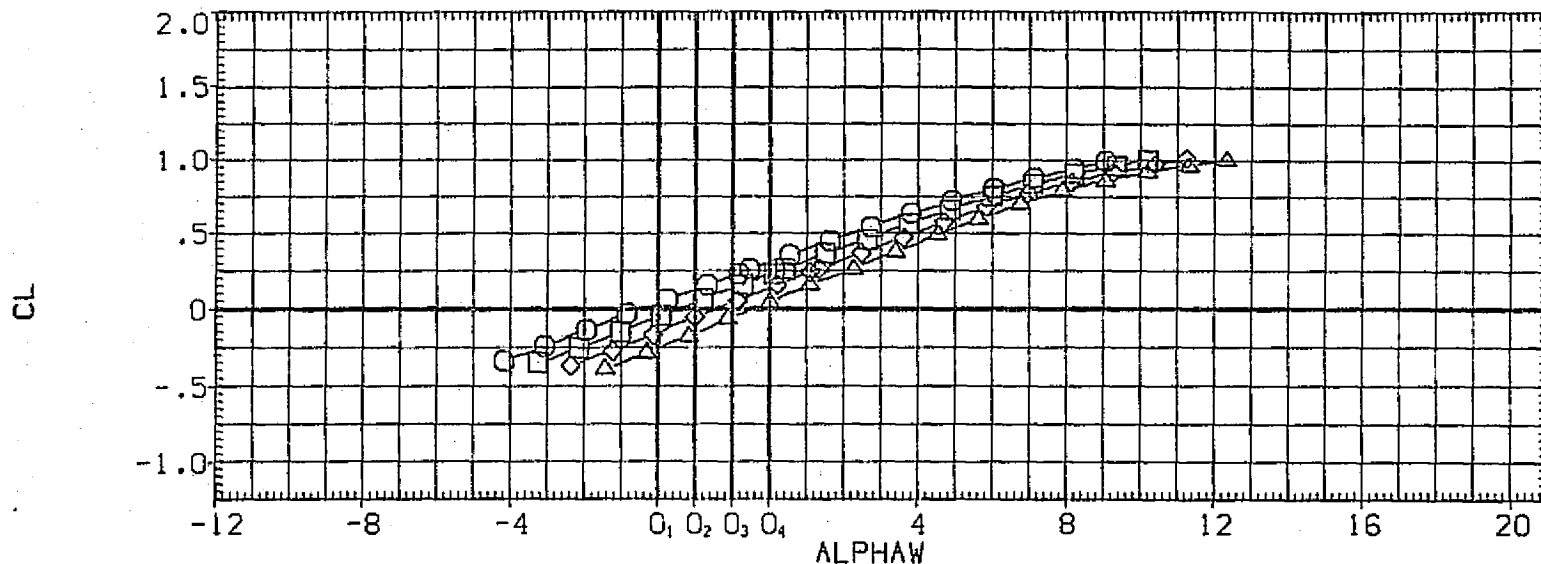


FIG. 98 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT, FAIRED FWD

SYMBOL	MACH	PARAMETRIC VALUES
○	.300	STAB 5.030 RUD-U .000
□	.499	RUD-L .000 ELV-IB .000
◇	.600	ELV-OB .000 BETA .000
△	.700	FWD ST 6.000 SPOILR .000

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

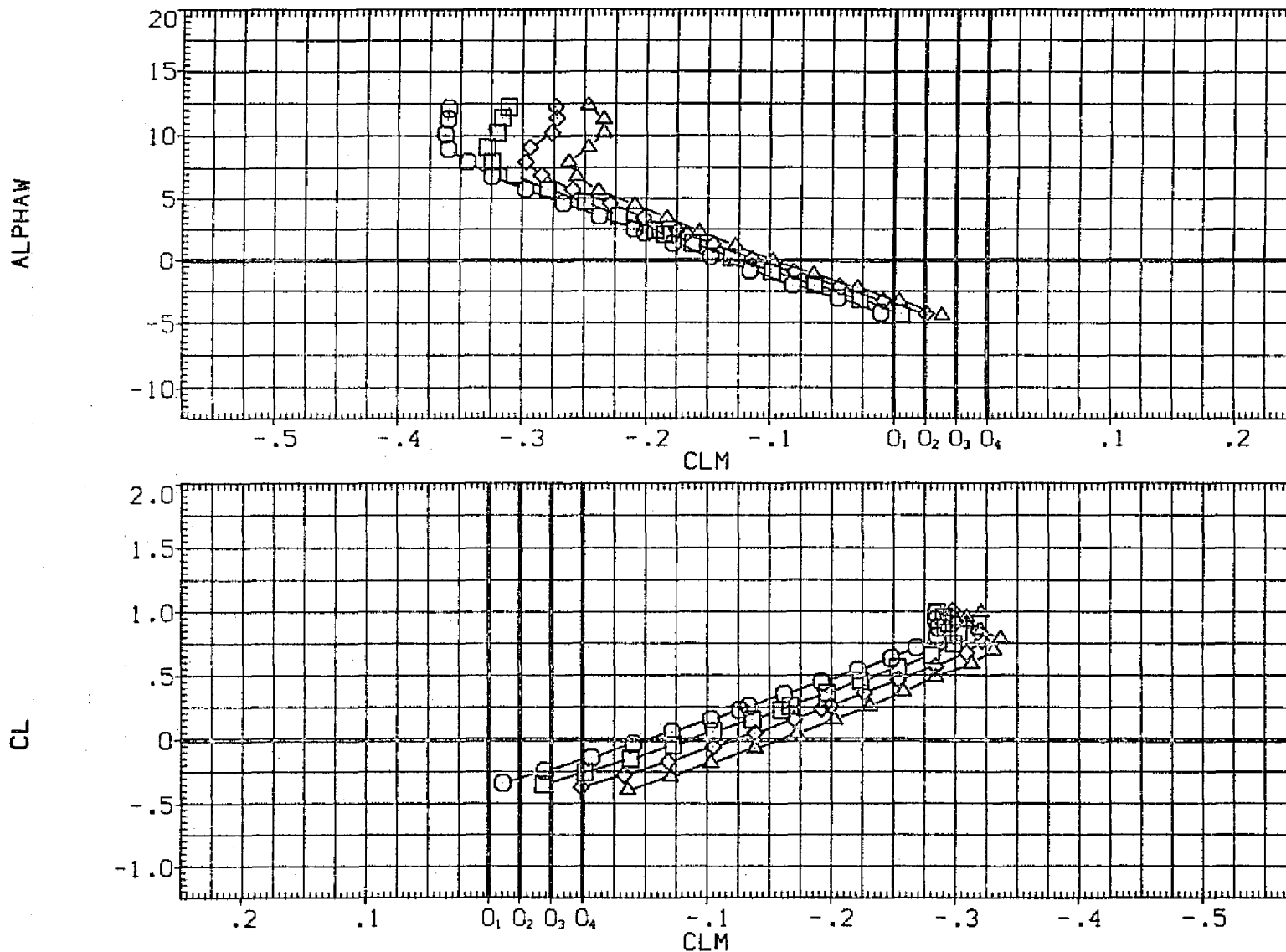


FIG. 98 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT, FAIRED FWD

CA6 K2H15.6.1V9.1S1-12 AT108 /111.1

(RGP245)

SYMBOL	MACH	PARAMETRIC VALUES
○	.300	STAB 5.030 RUD-U .000
□	.499	RUD-L .000 ELV-IB .000
◇	.600	ELV-OB .000 BETA .000
△	.700	FWD ST 6.000 SPOILR .000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

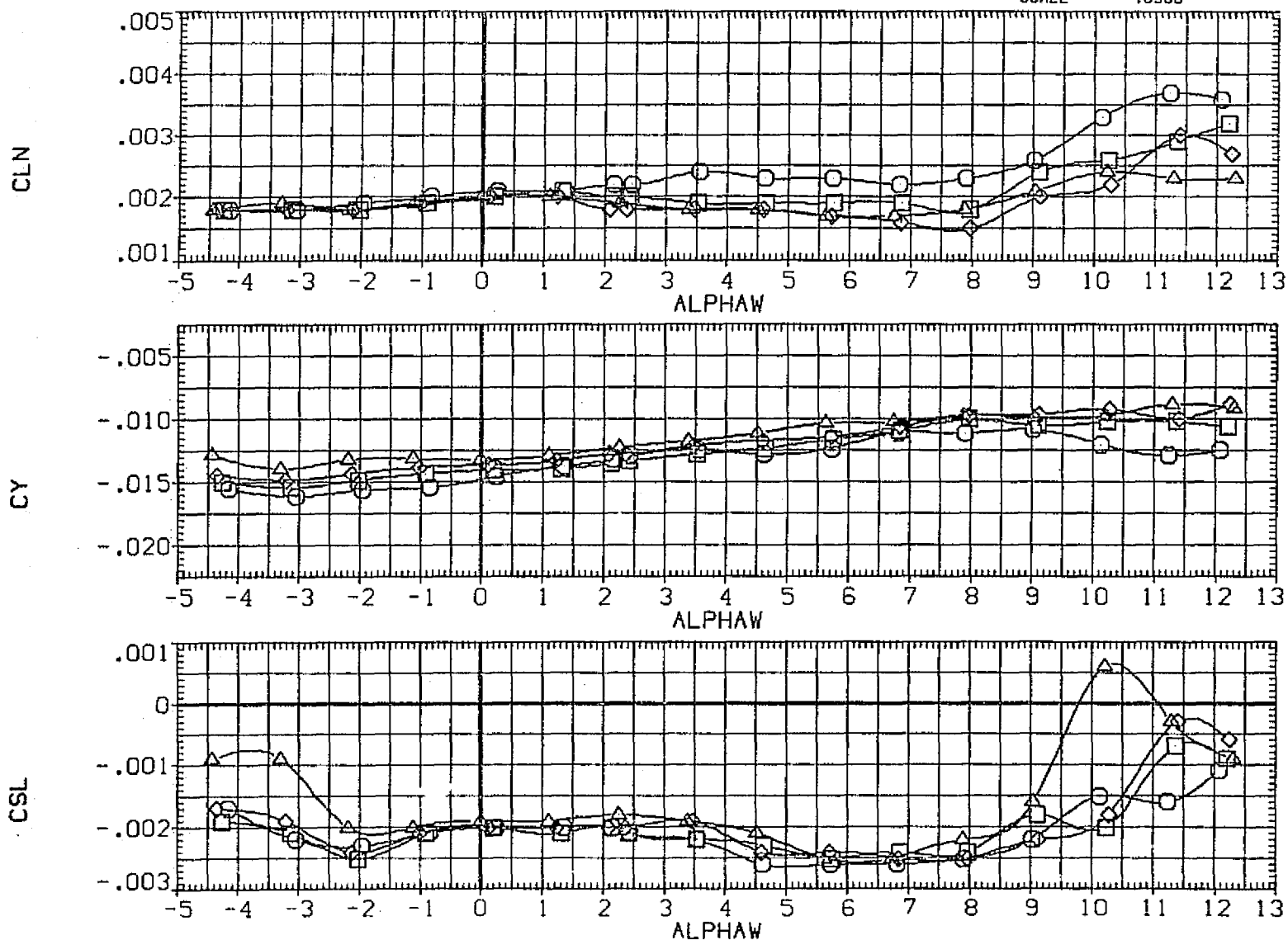


FIG. 98 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, MIN AFT, FAIRED FWD

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	5.030	RUD-U	.000
□	.500	RUD-L	.000	ELV-1B	.000
◇	.599	ELV-0B	.000	BETA	.000
△	.701	PHI	.000		

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

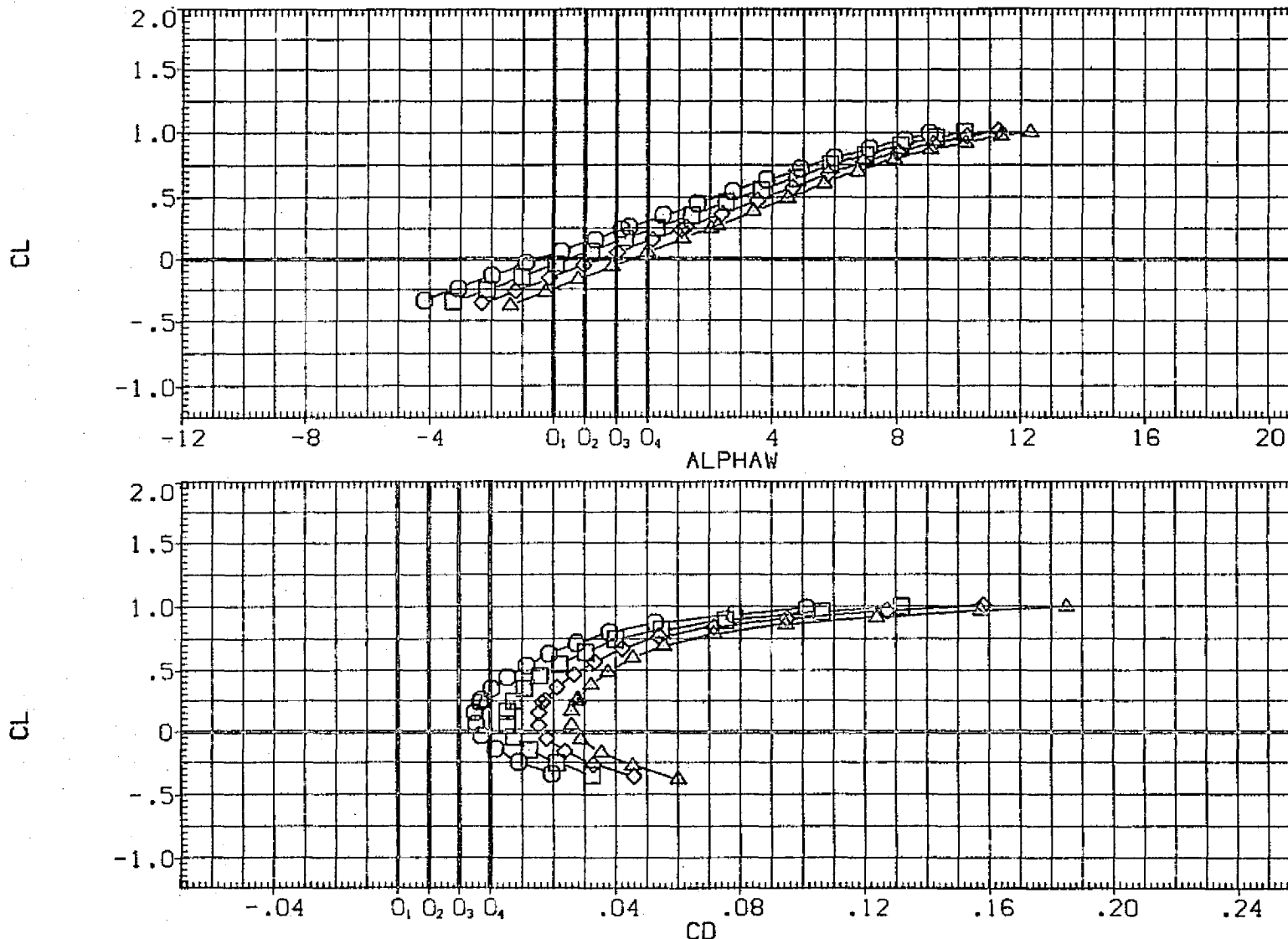


FIG. 99 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, CAM STRUTS OFF

CA6 K2H15.6.1V9.1

(RGP246)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	5.030	RUD-U	.000
□	.500	RUD-L	.000	ELV-IB	.000
◇	.599	ELV-OB	.000	BETA	.000
△	.701	PHI	.000		

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

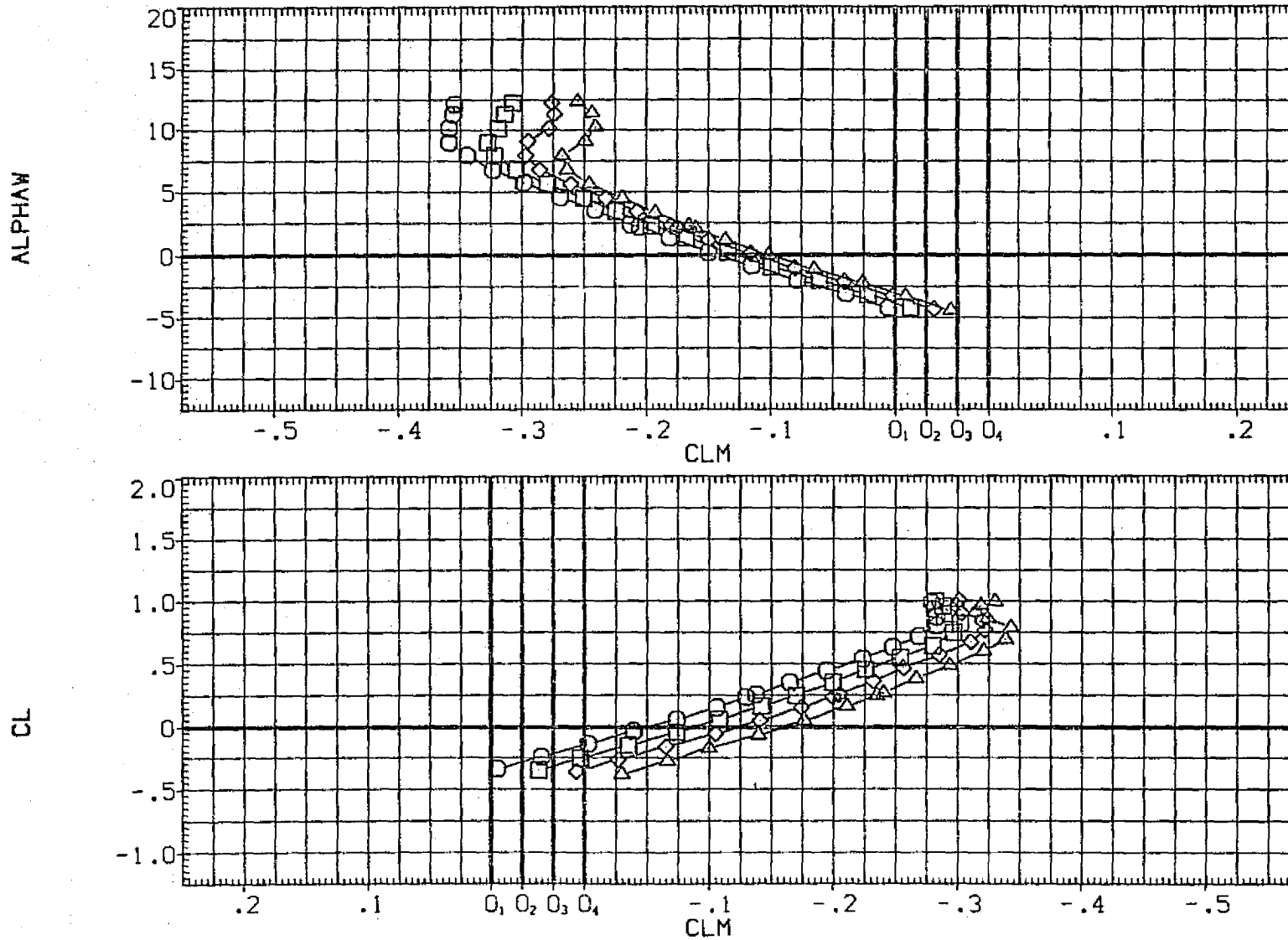


FIG. 99 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, CAM STRUTS OFF

SYMBOL	MACH	PARAMETRIC VALUES			
○	.299	STAB	5.030	RUD-U	.000
□	.500	RUD-L	.000	ELV-1B	.000
◇	.599	ELV-0B	.000	BETA	.000
△	.701	PHI	.000		

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

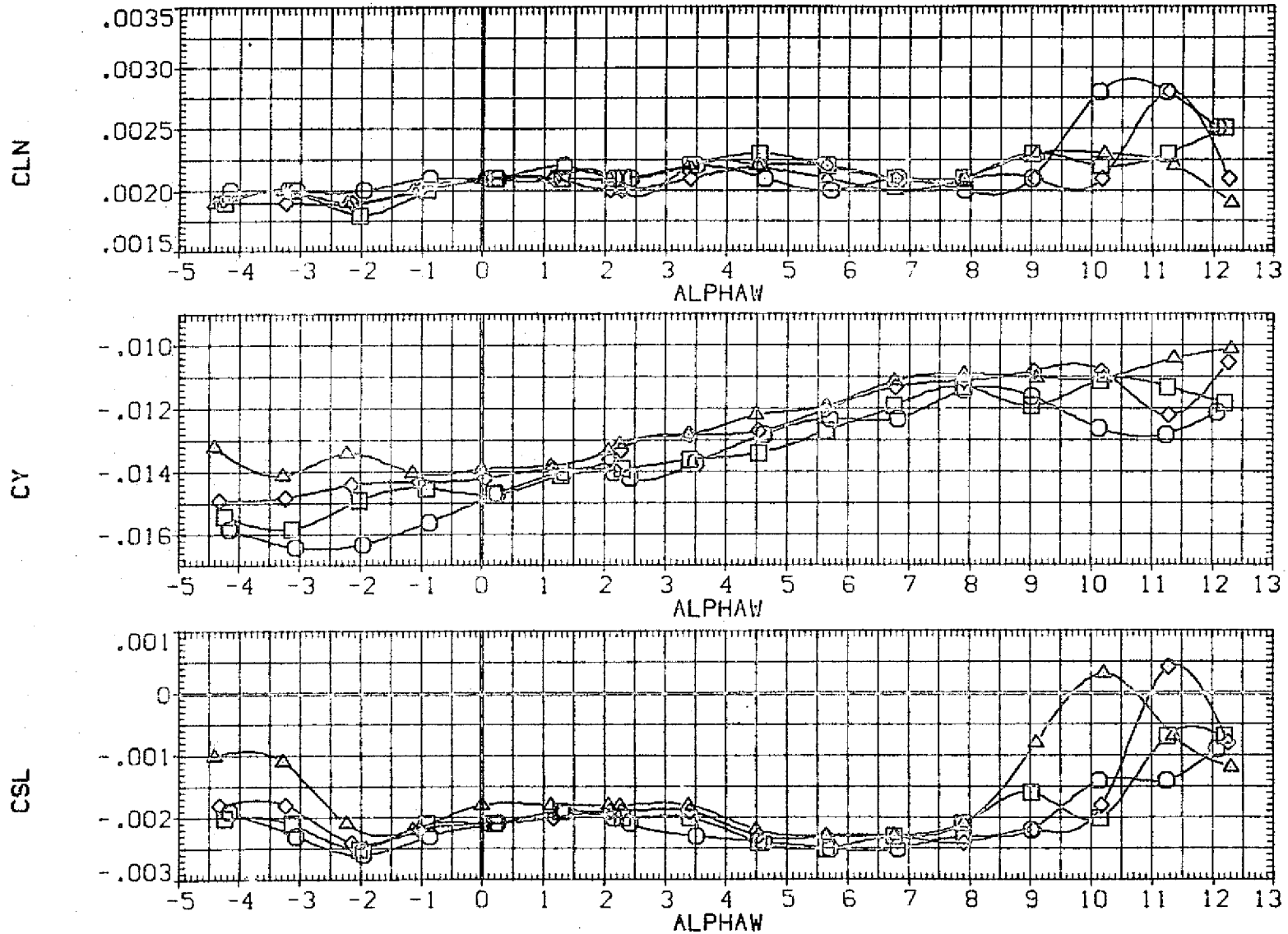


FIG. 99 MACH NUMBER EFFECTS, SPEED BRKS DWN, 747 CAM, CAM STRUTS OFF

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGP247) □ CA6 K2H15.1 V9.1
 (RGP014) □ CA6 K1H15.1 V9.1

BETA

.000
 .000

REFERENCE INFORMATION

SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

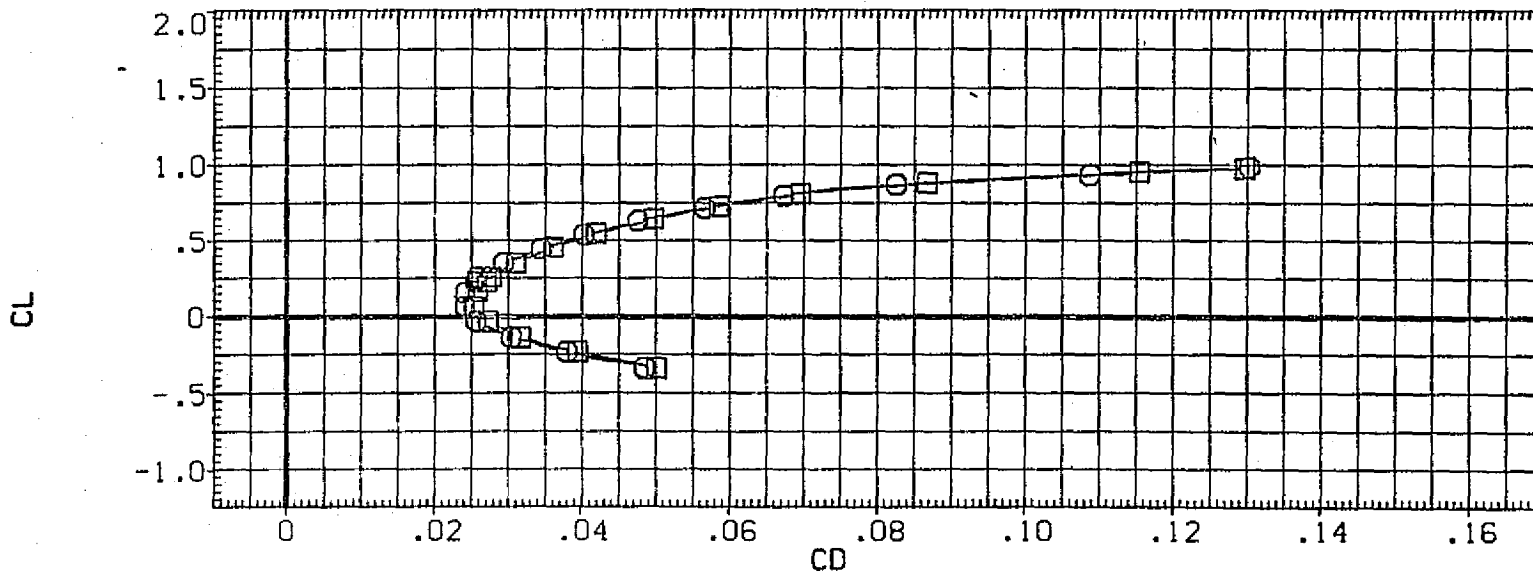
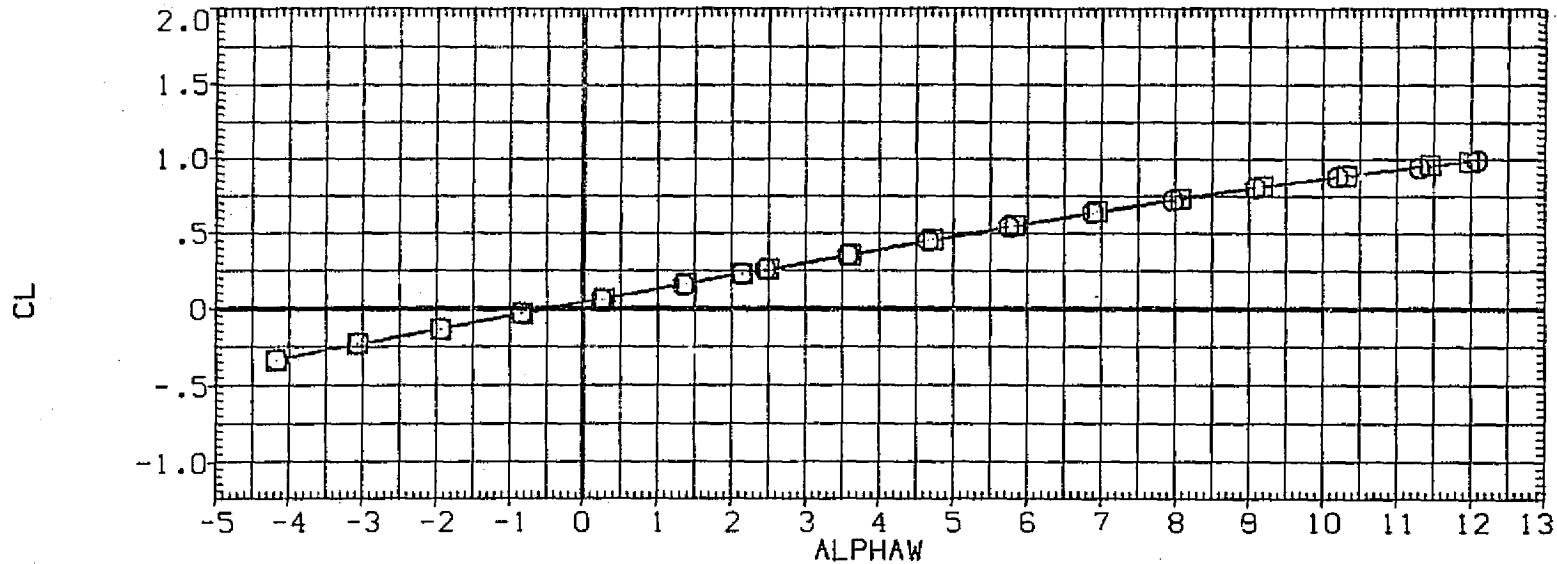


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGP247) \square CAB K2H15.1 V9.1
 (RGP014) \square CAB K1H15.1 V9.1

BETA

.000
 .000

REFERENCE INFORMATION

SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

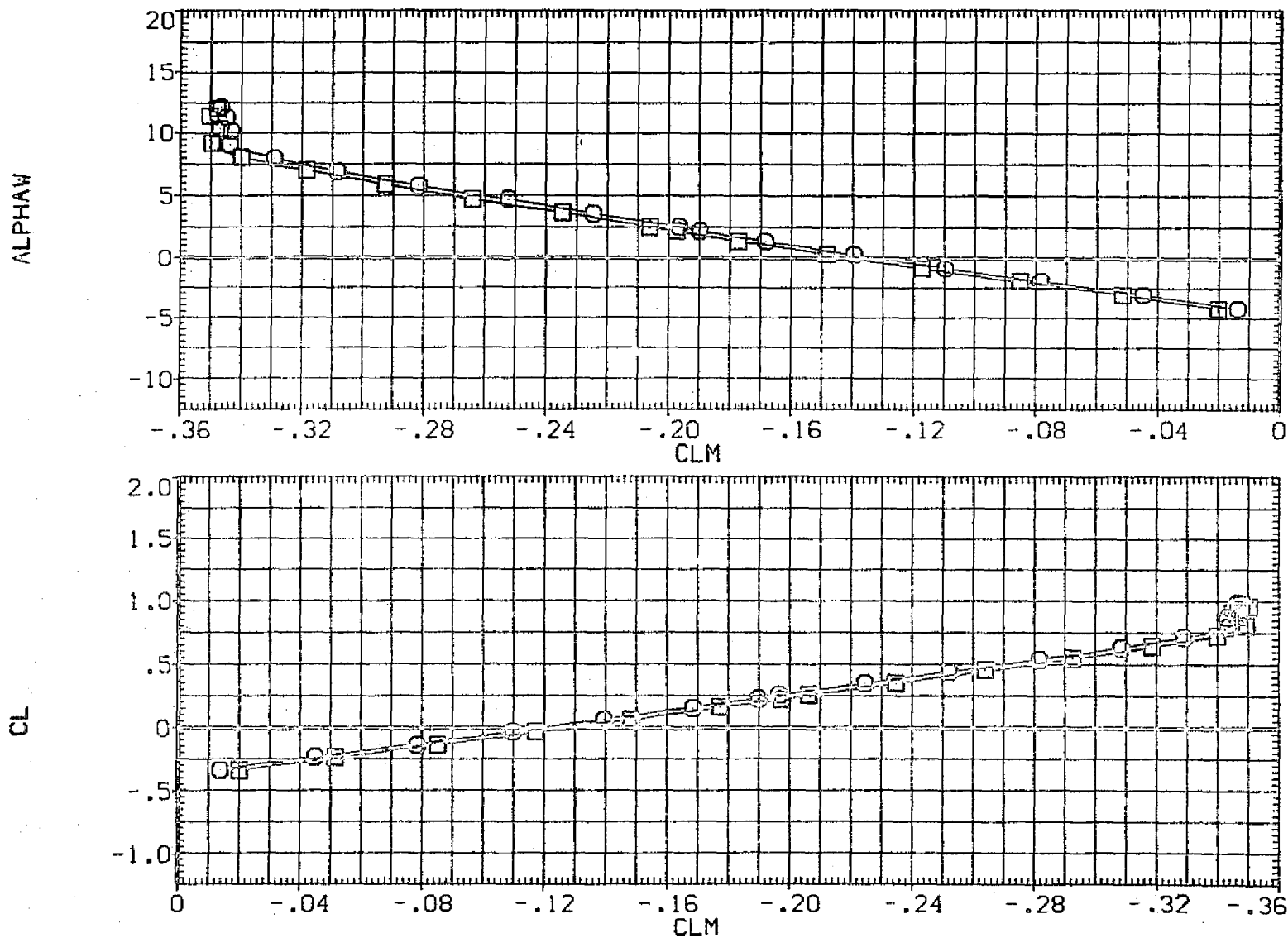


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RGP247)	○	CA6 K2H15.1 V9.1
(RGP014)	□	CA6 K1H15.1 V9.1

BETA
.000
.000

REFERENCE INFORMATION

SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

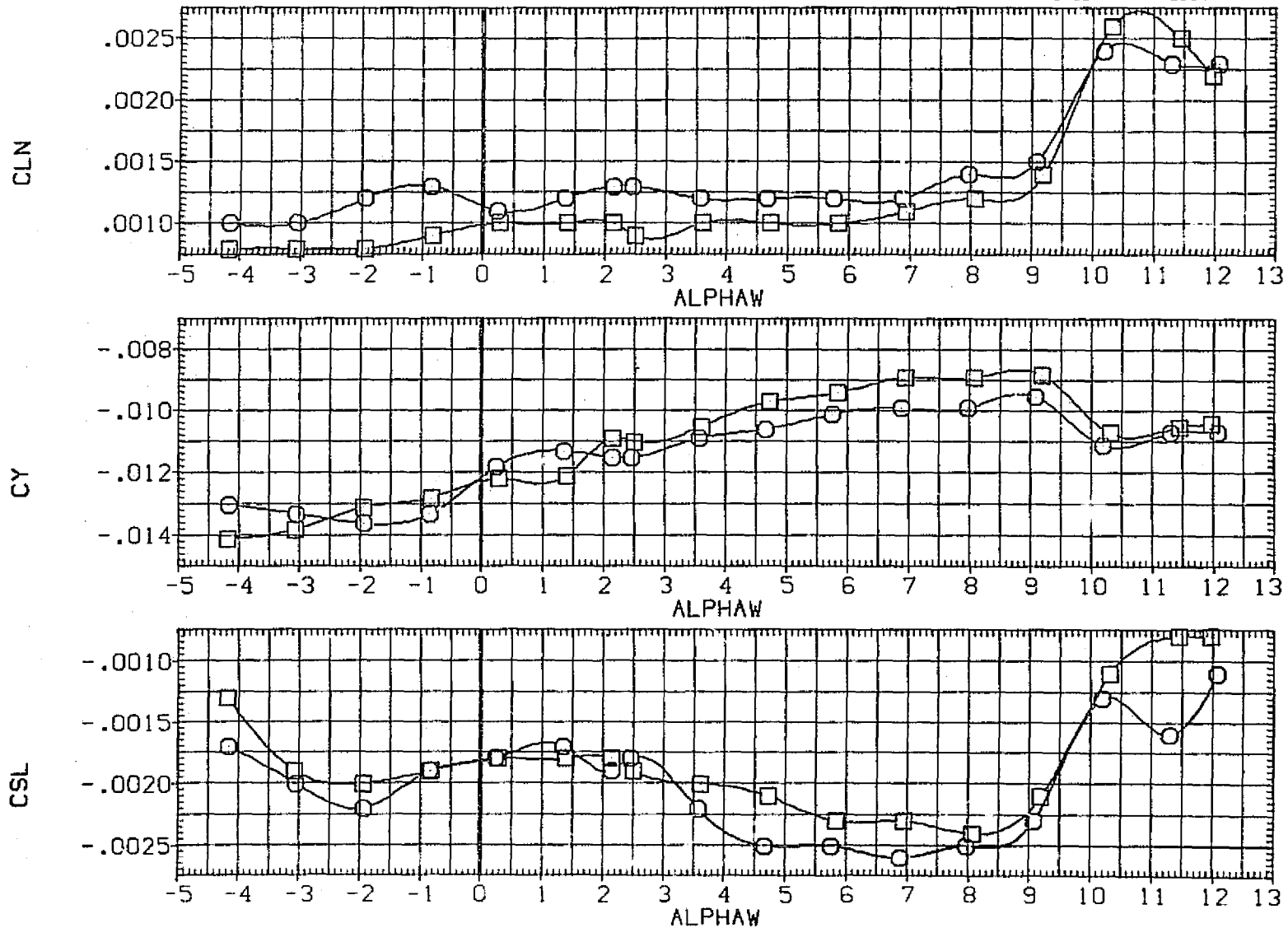


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CA6 K2H15.1 V9.1
 (RGP014) □ CA6 K1H15.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

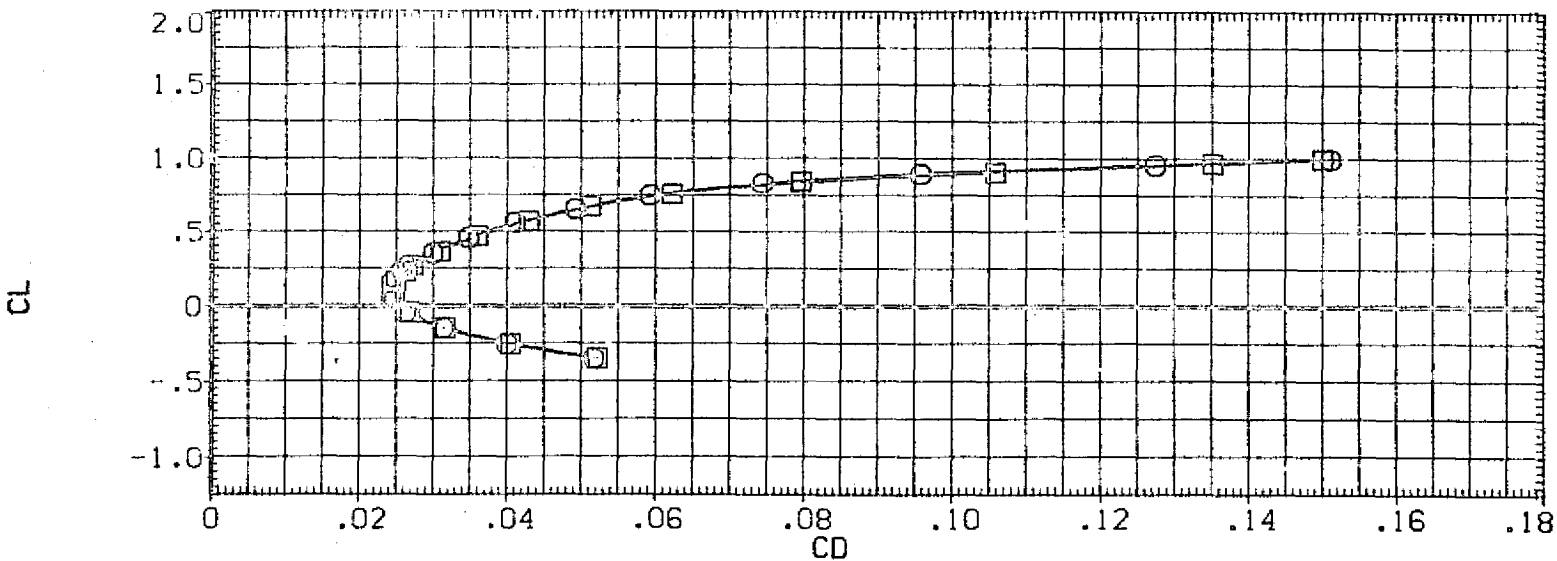
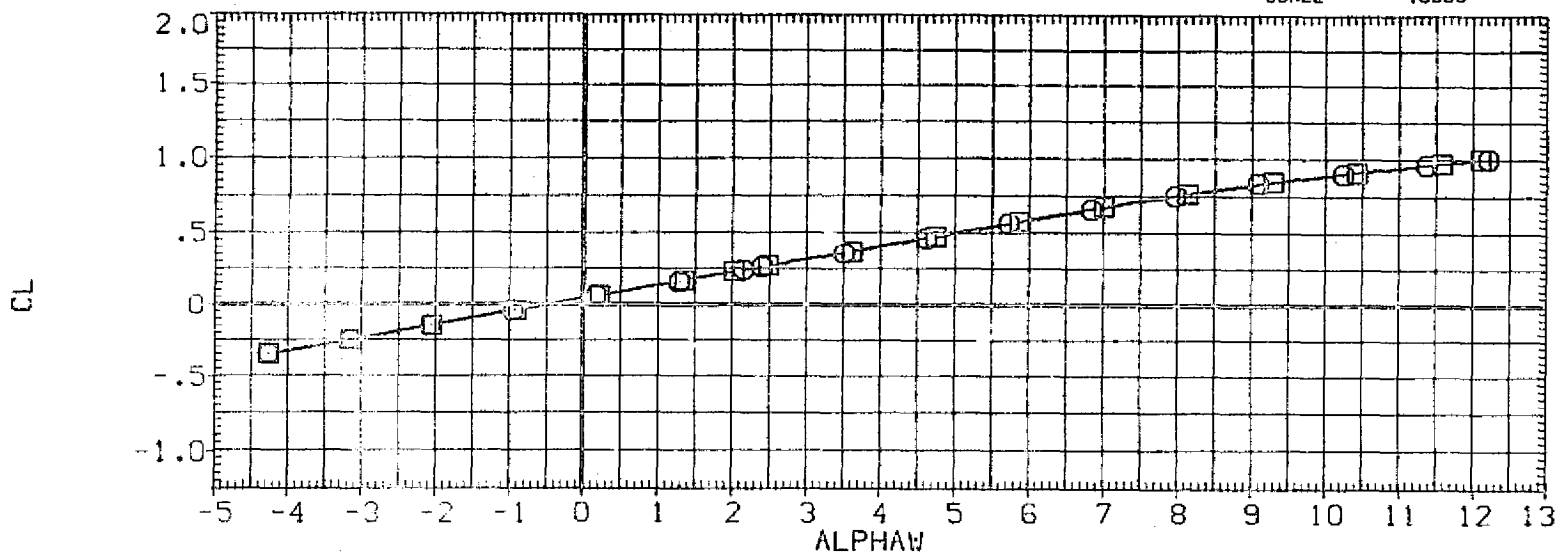


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CA6 K2H15.1 V9.1
 (RGP014) ○ CA6 K1H15. V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XM RP 1339.9000 IN. XC
 YM RP .0000 IN. YC
 ZM RP 190.7700 IN. ZC
 SCALE .0300

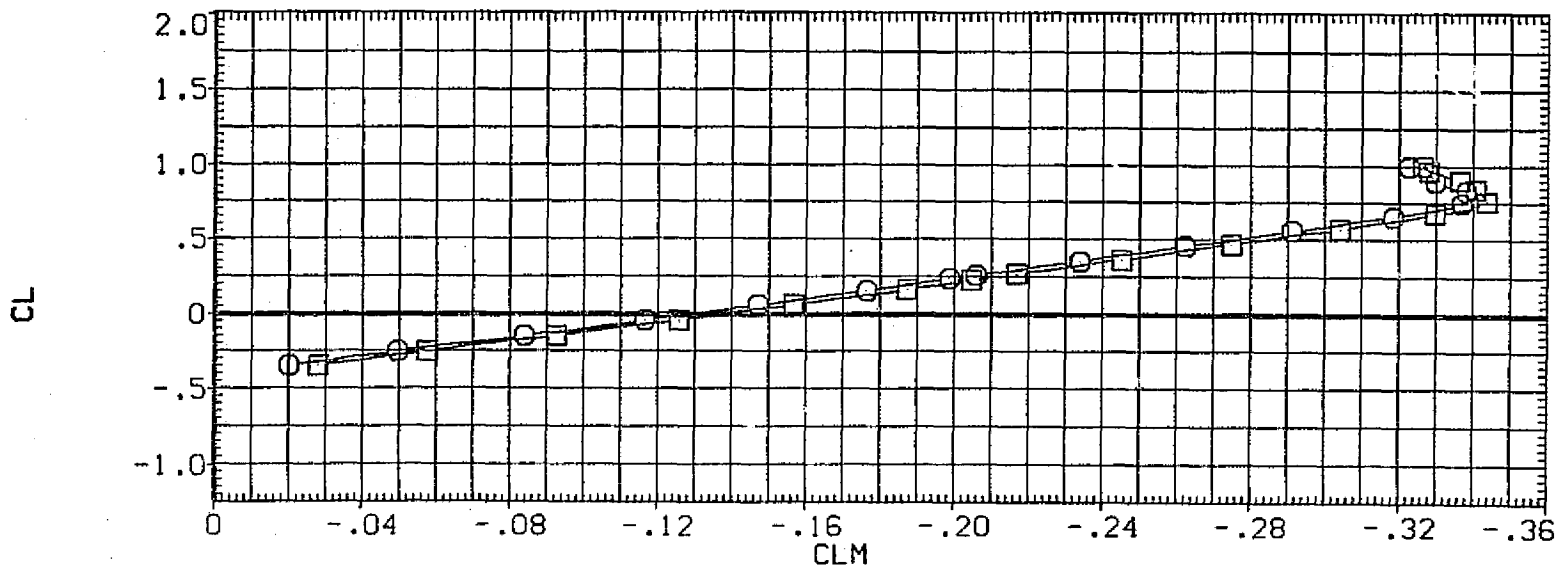
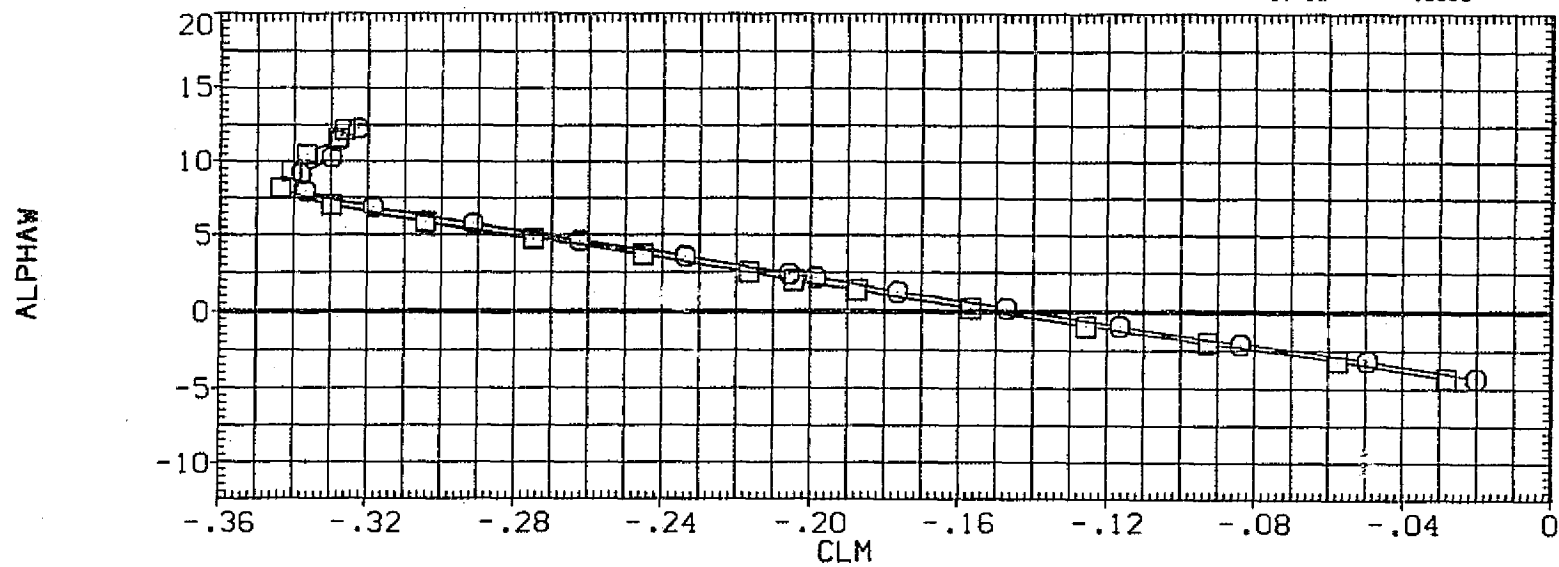


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CAB K2H15.1 V9.1
 (RGP014) □ CAB K1H15.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

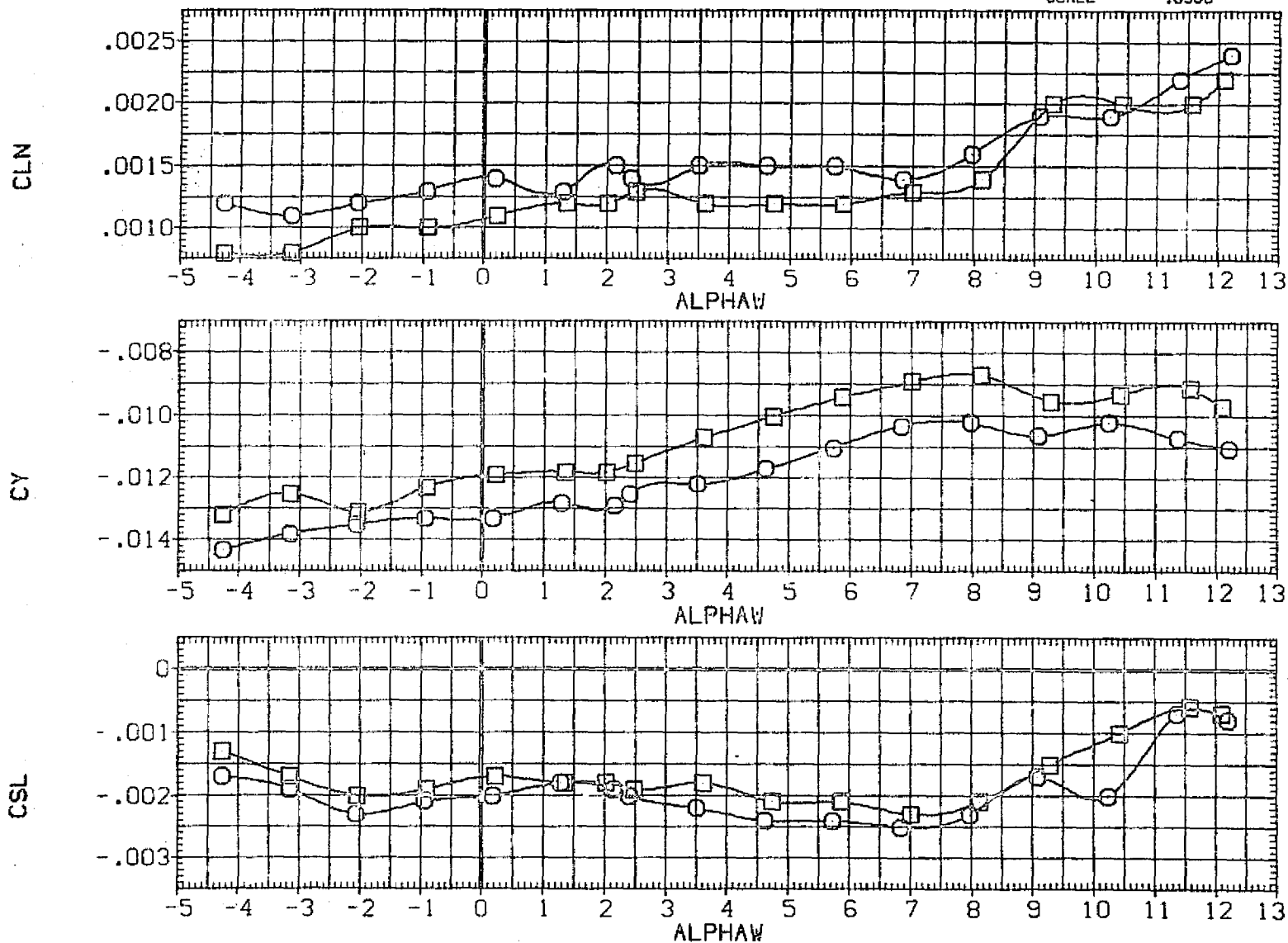


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP247)	CA6 K2H15.1 V9.1
(RGP014)	CA6 K1H15.1 V9.1

BETA
.000
.000

REFERENCE INFORMATION
SREF 5500.0000 SQ.FT.
LREF 327.8000 IN.
BREF 2348.0000 IN.
XMRP 1339.9000 IN. XC
YMRP .0000 IN. YC
ZMRP 190.7700 IN. ZC
SCALE .0300

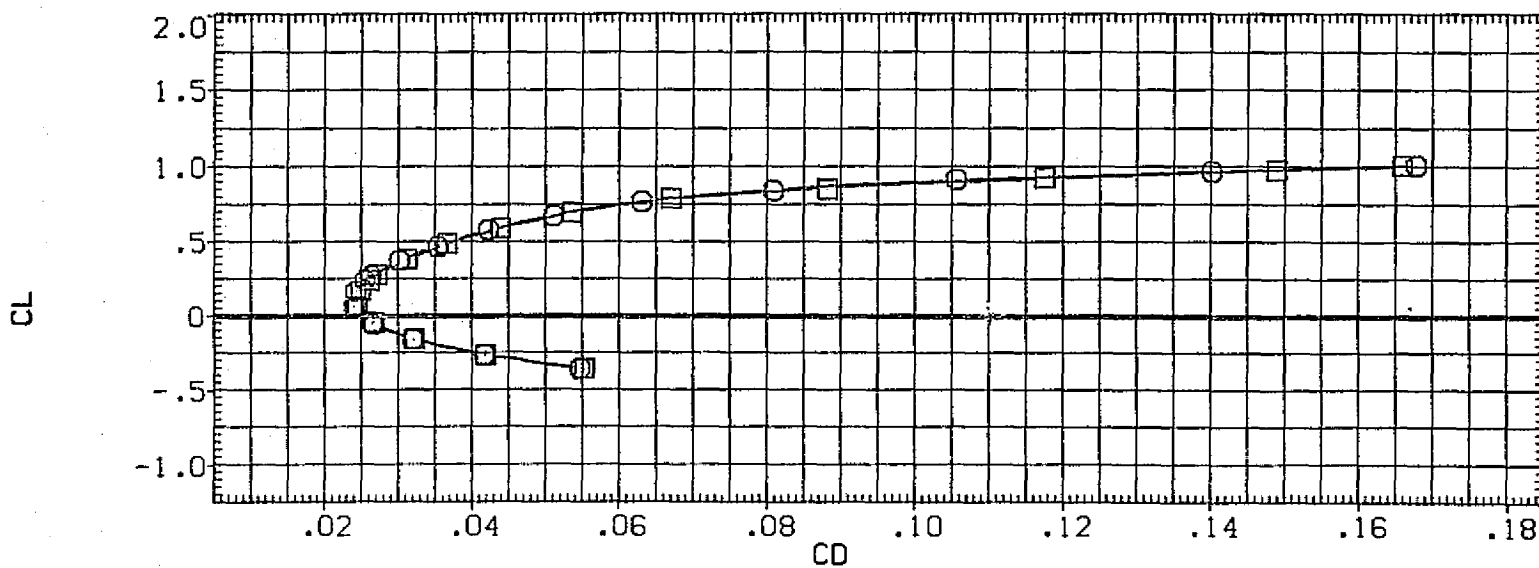
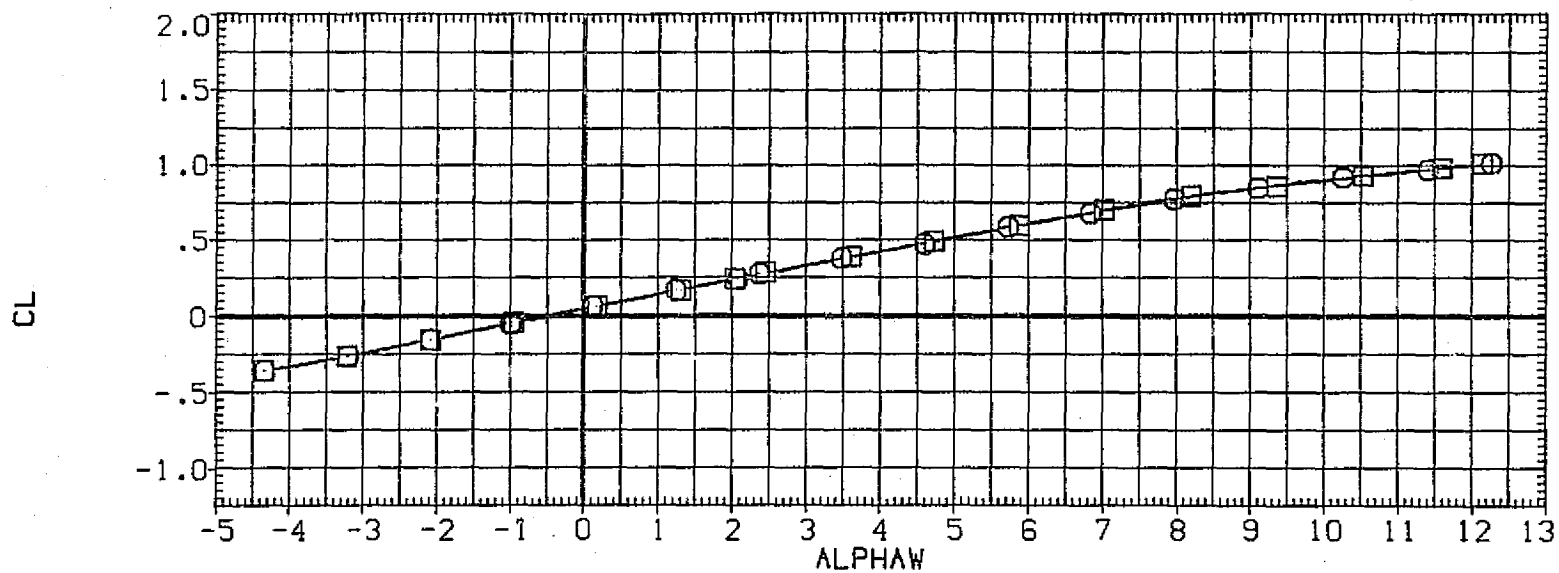


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CA6 K2H15.1 V9.1
 (RGP014) □ CA6 K1H15.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

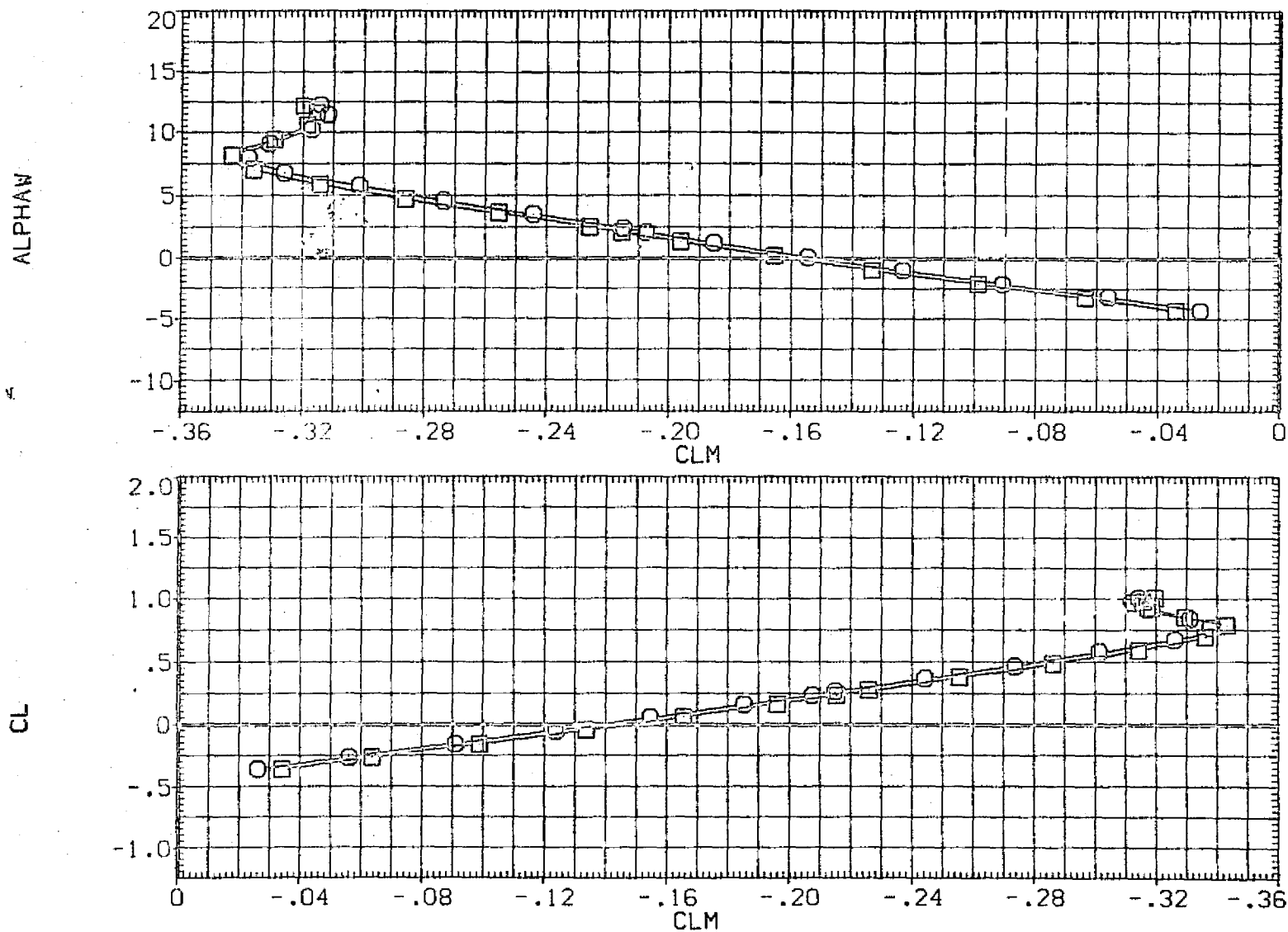


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RGP247)	○ CA6 K2H15.1 V9.1
(RGP014)	□ CA6 K1H15.1 V9.1

BETA
.000
.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

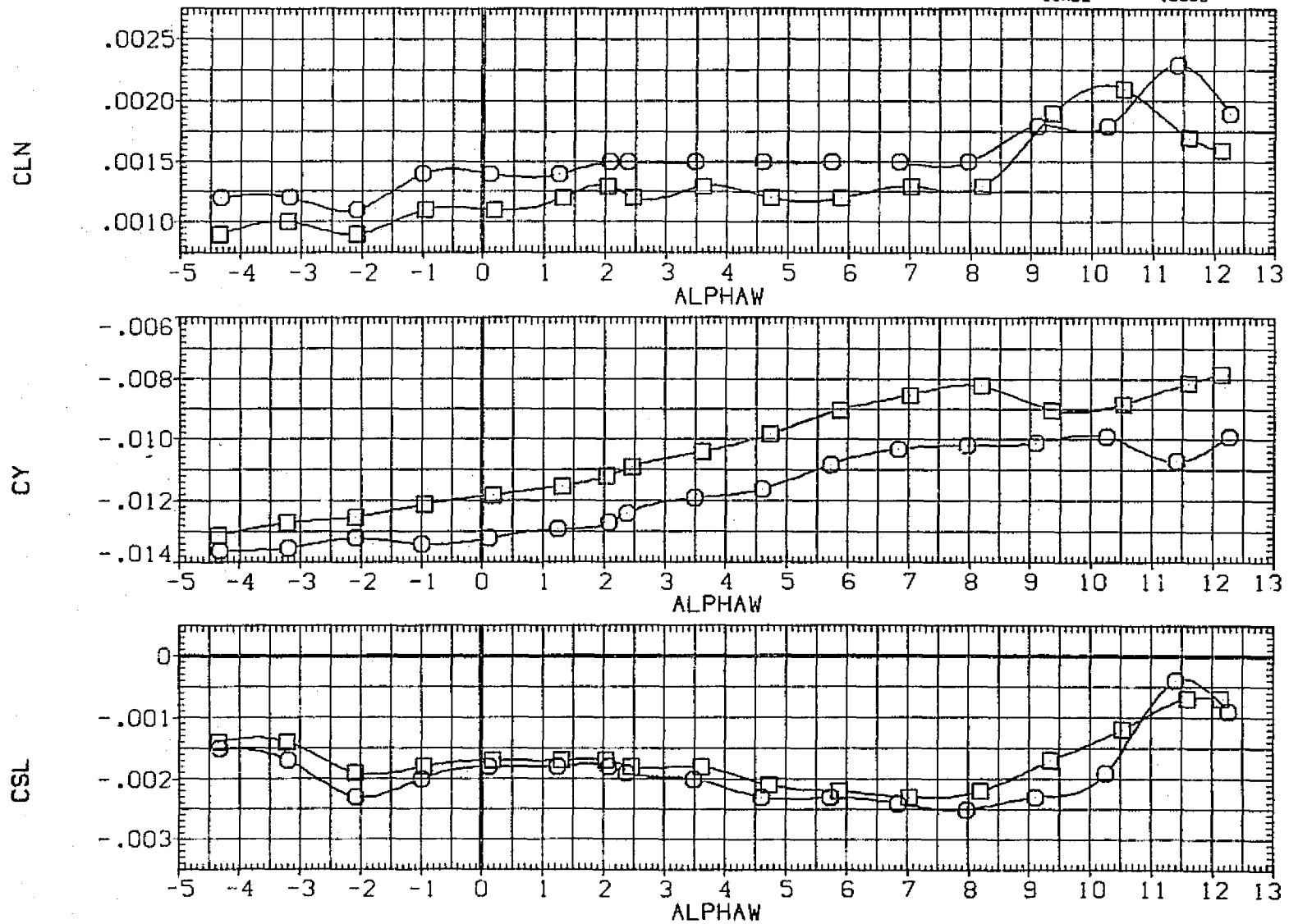


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CAG K2H15.1 V9.1
 (RGP014) □ CAG K1H15.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

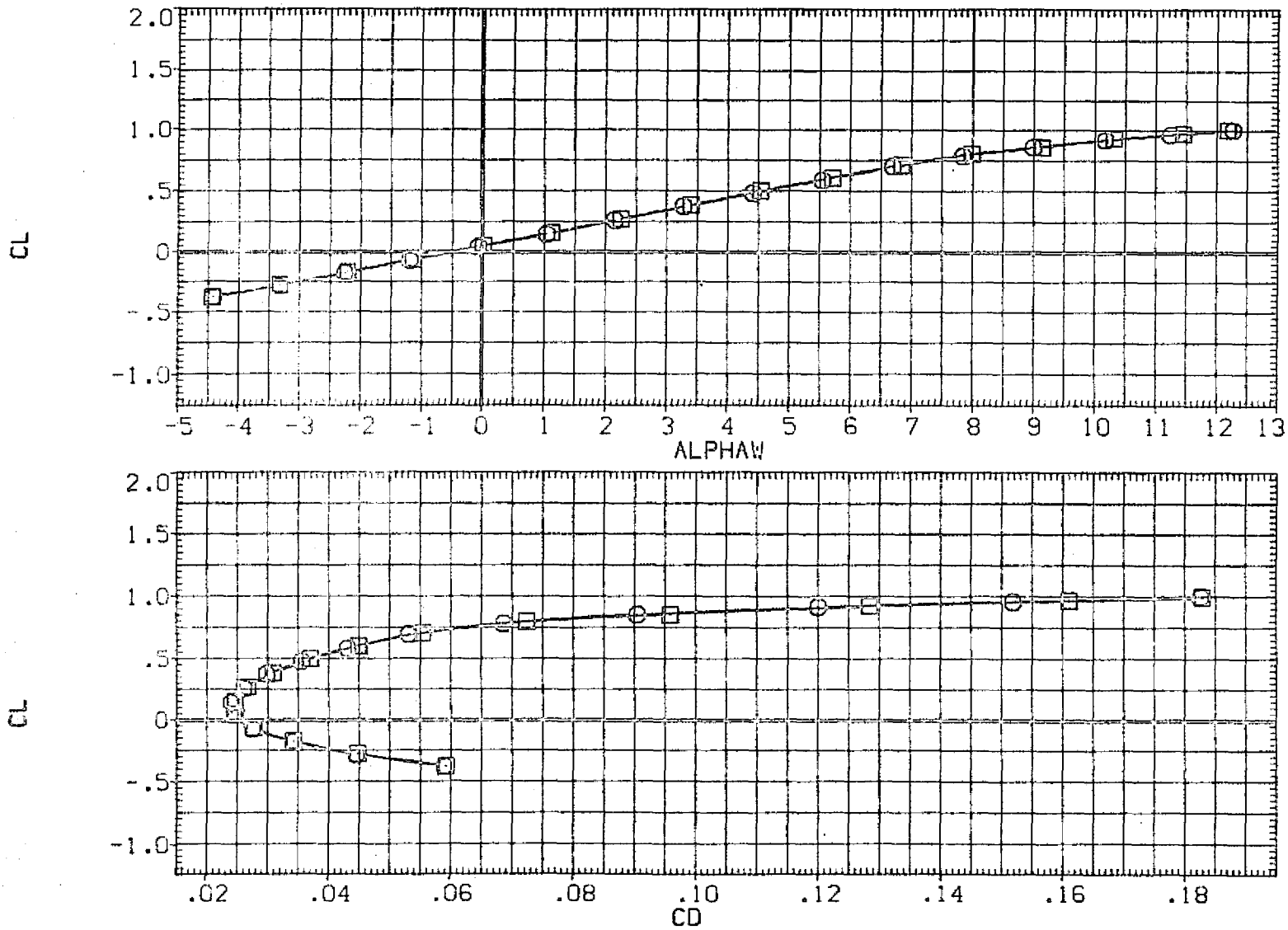


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(CD)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) ○ CA6 K2H:5.1 V9.1
 (RGP014) □ CA6 K1H:5.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

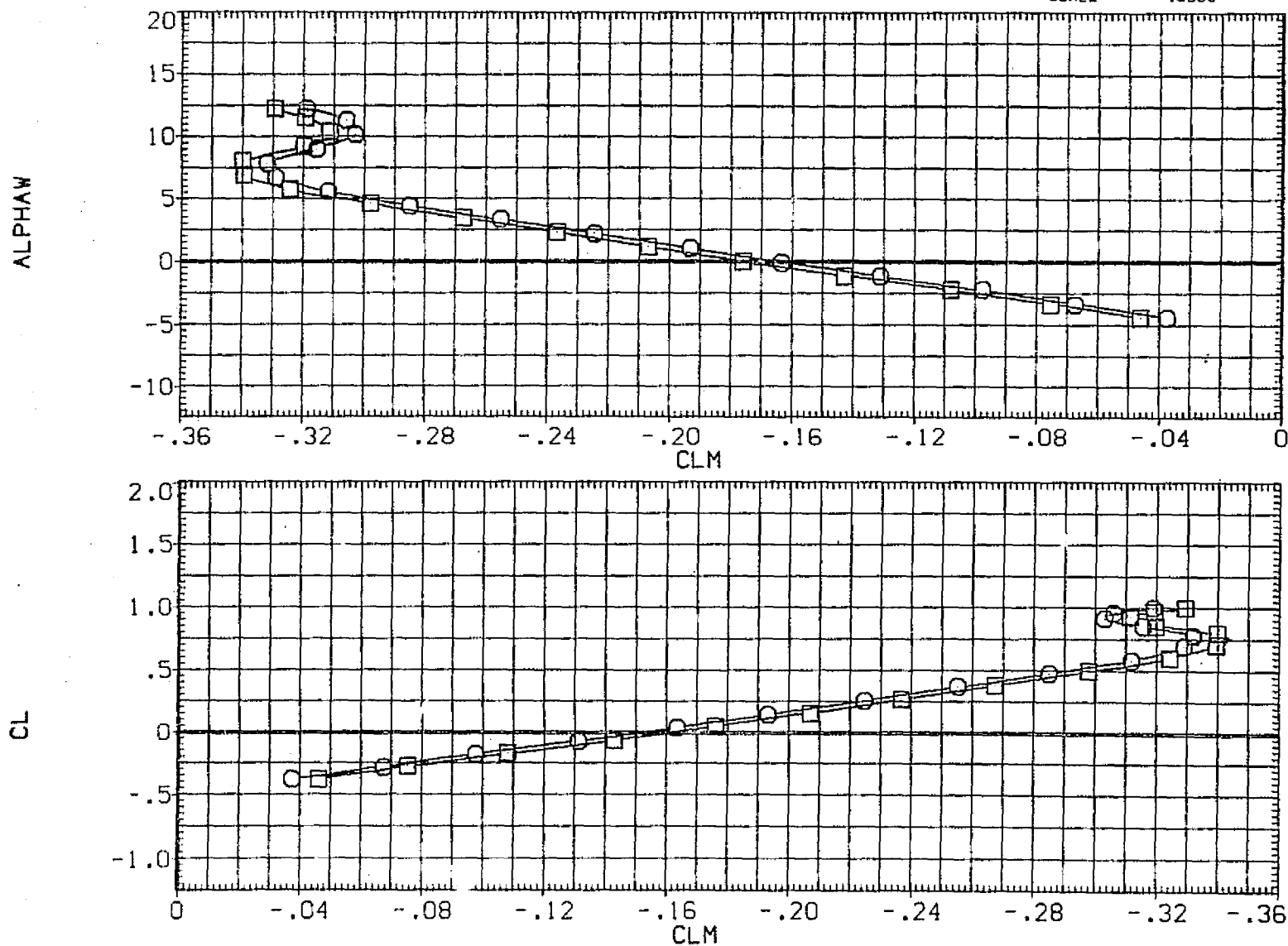


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RGP247) □ CAG K2H15.1 V9.1
 (RGP014) □ CAG K1H15.1 V9.1

BETA
 .000
 .000

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

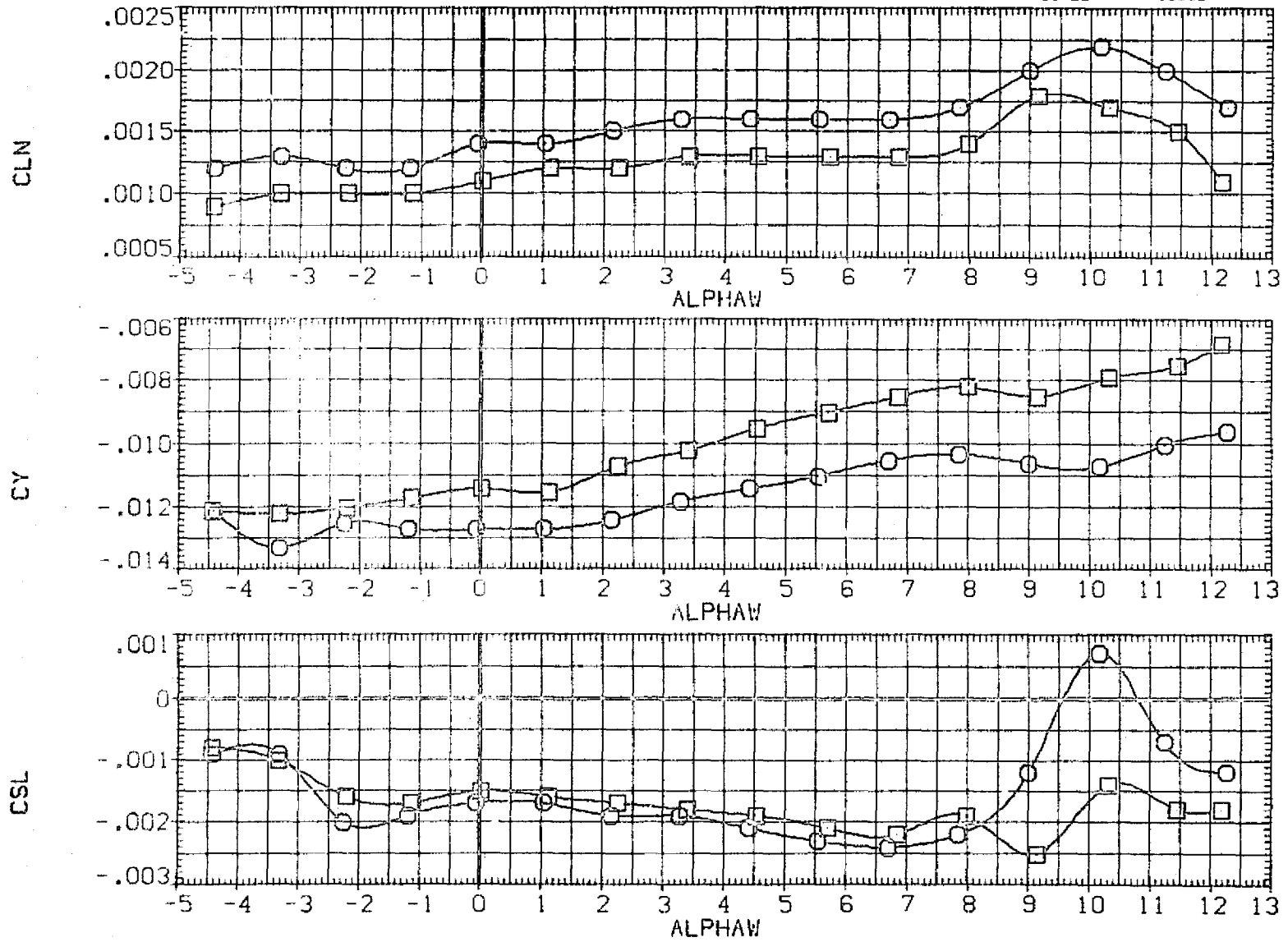


FIG. 100 REPEATABILITY STUDY, SPEED BRAKES DOWN, BASIC 747

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGND40) □ BTWT-143(CAS KI FO M15.1A V9.1
 (RGPD20) □ CAS KIH15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SG.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

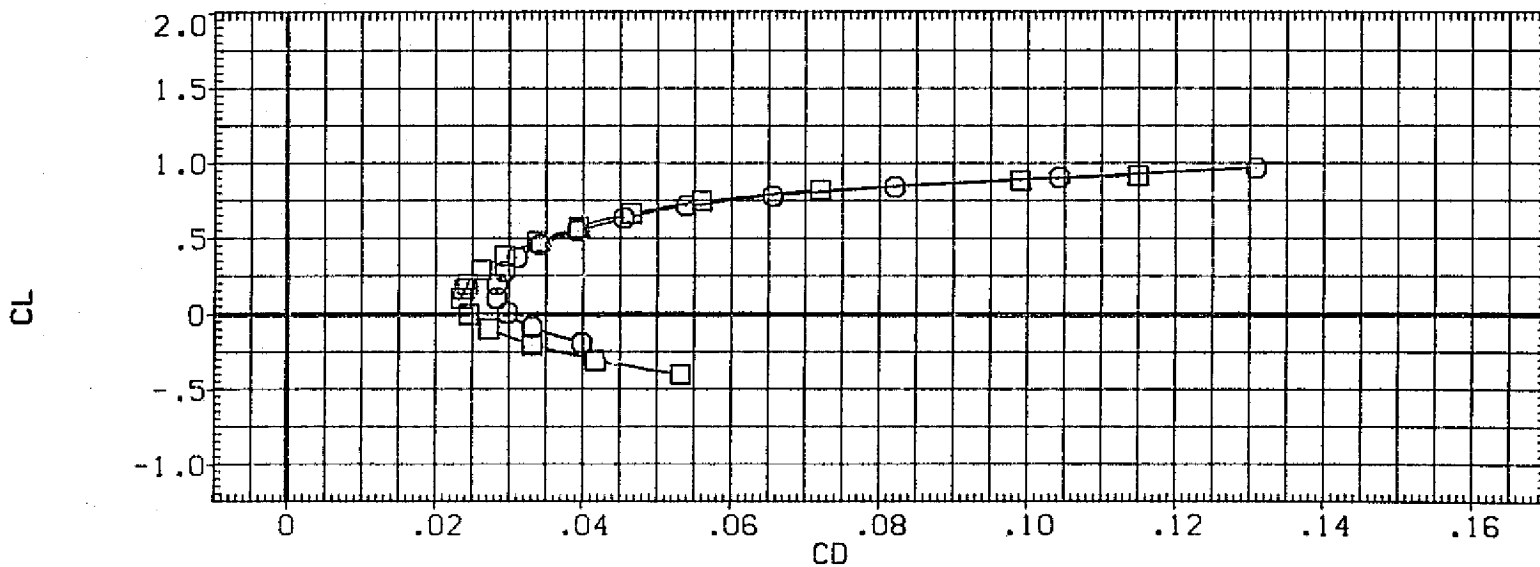
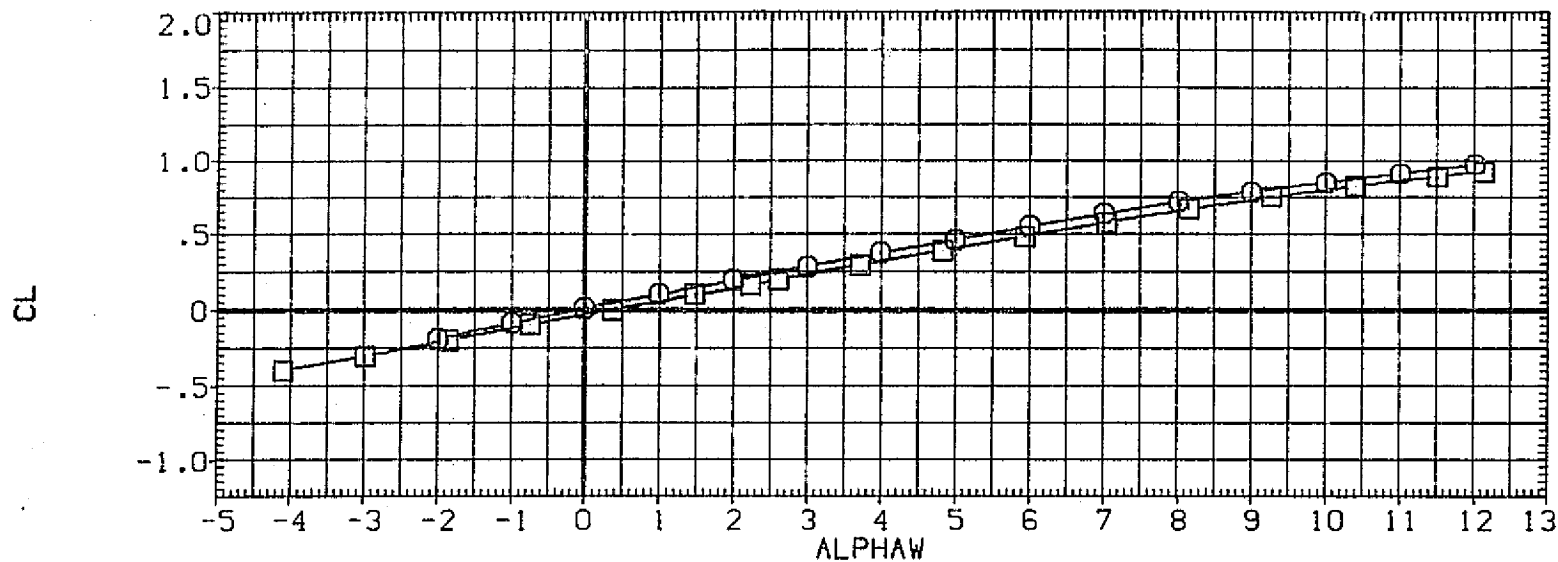


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(A) MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) ○ BTWT-1431CA5 K1 FO H15.1A V9.1
 (RGPO20) □ CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

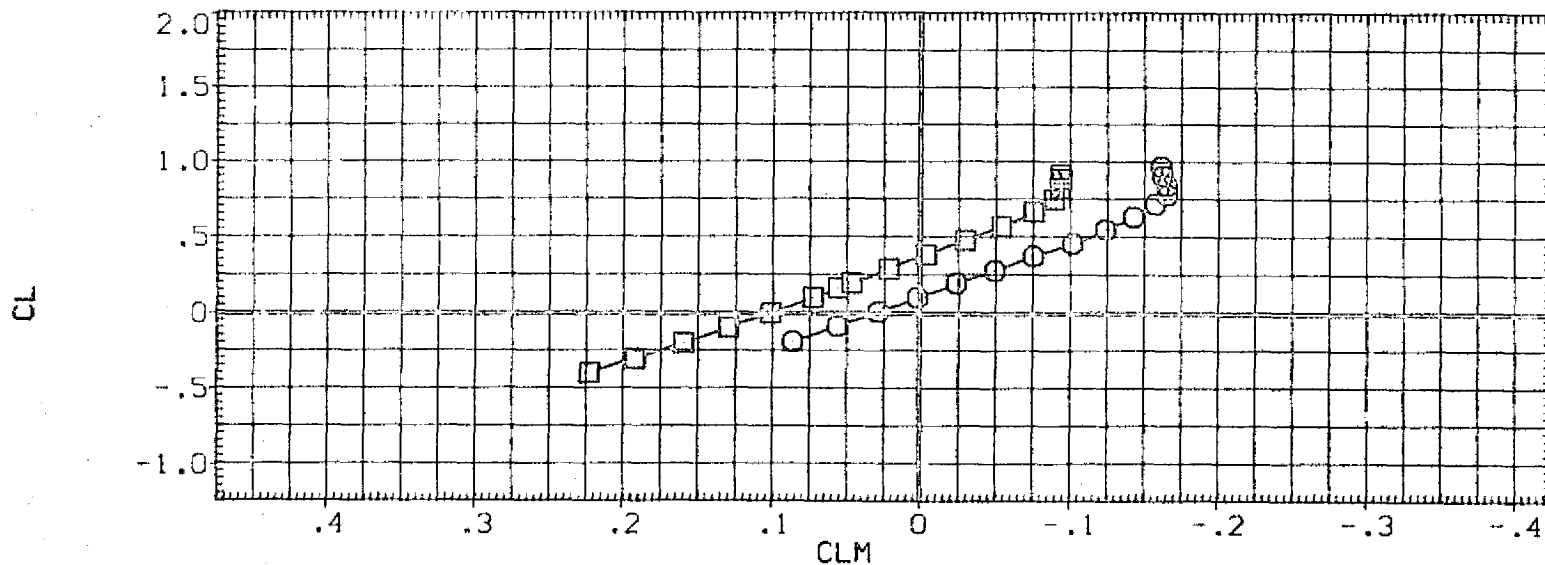
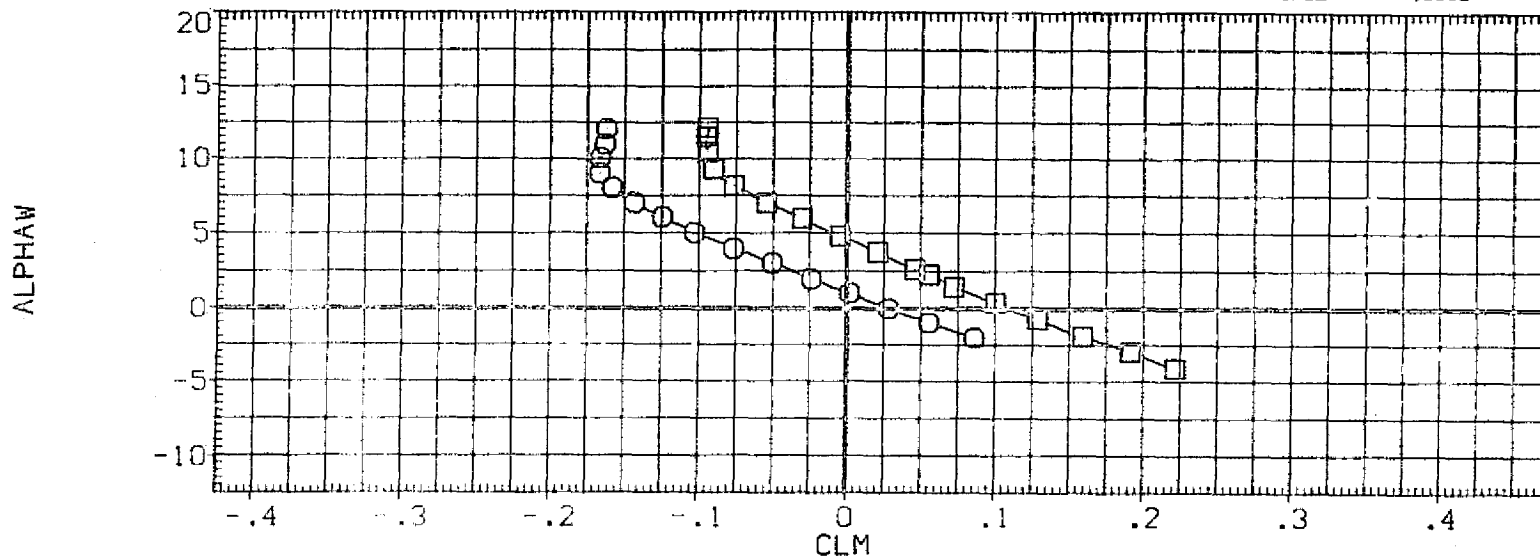


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(A)MACH - .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) \circ BTWT-1431CAS KI FO H15.1A V9.1
 (RGPO20) \square CA6 KI H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

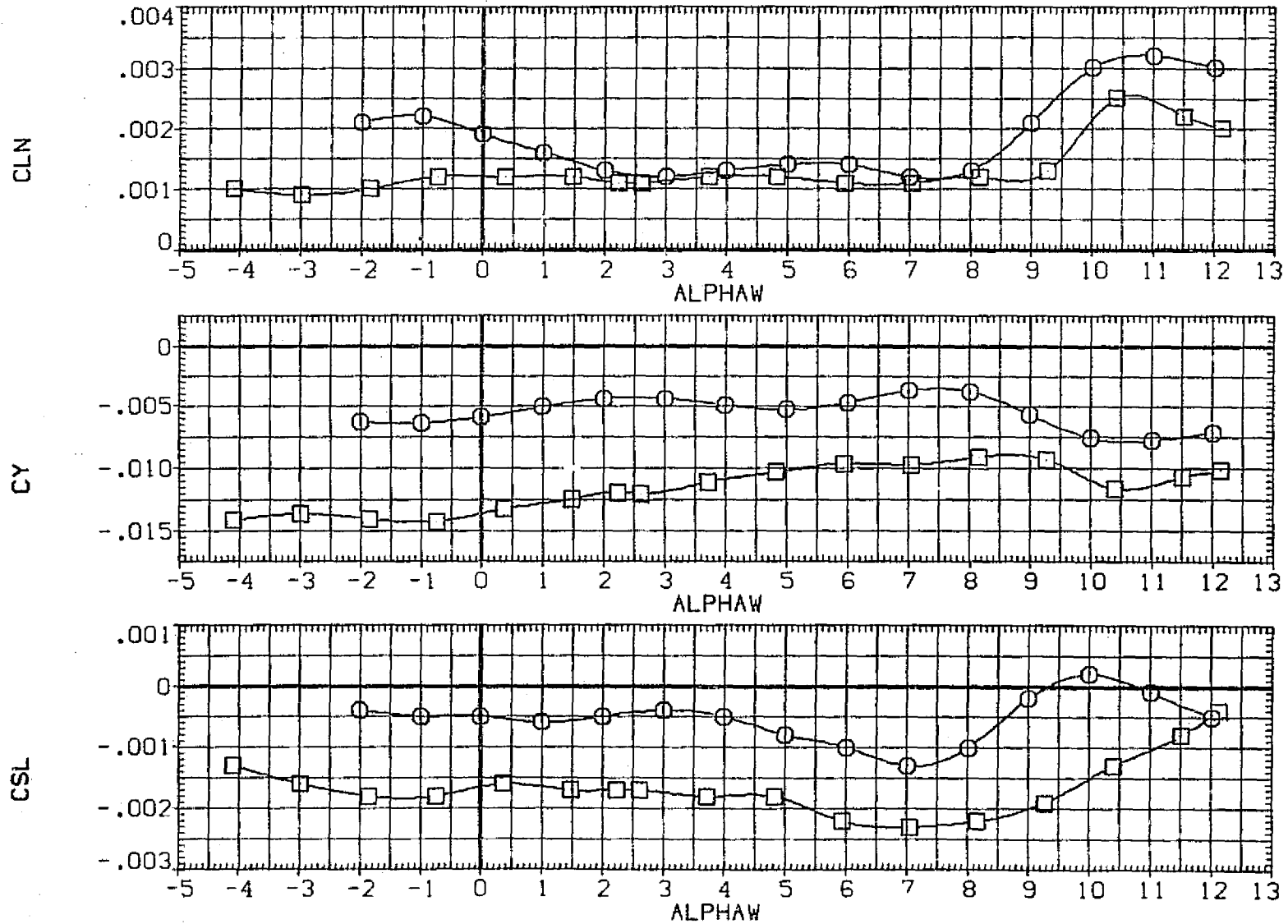


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) \square BTWT-1431CA5 KI FO H15.1A V9.1
 (RGP020) \square CAS K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

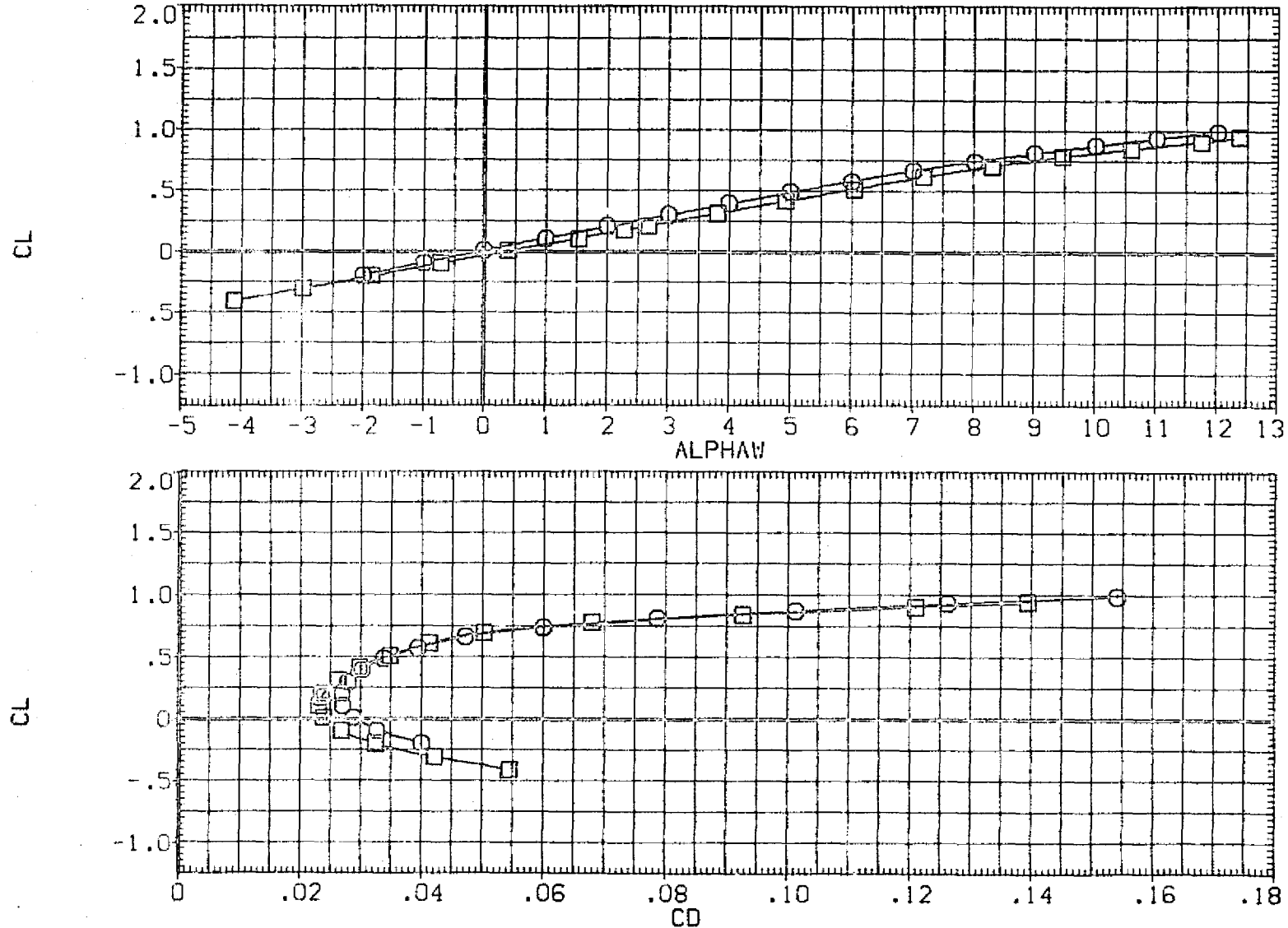


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE
 (B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) \square BTWT-1431CAS K1 FO H15.1A V9.1
 (RGPO20) \circ CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

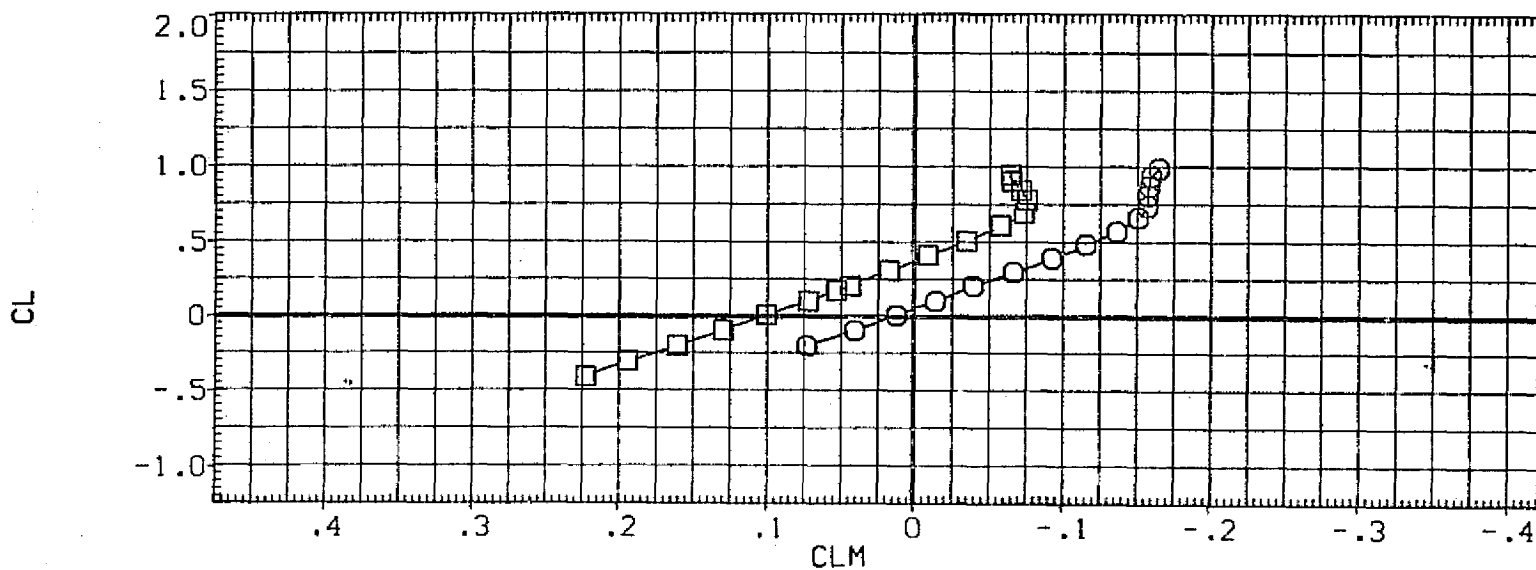
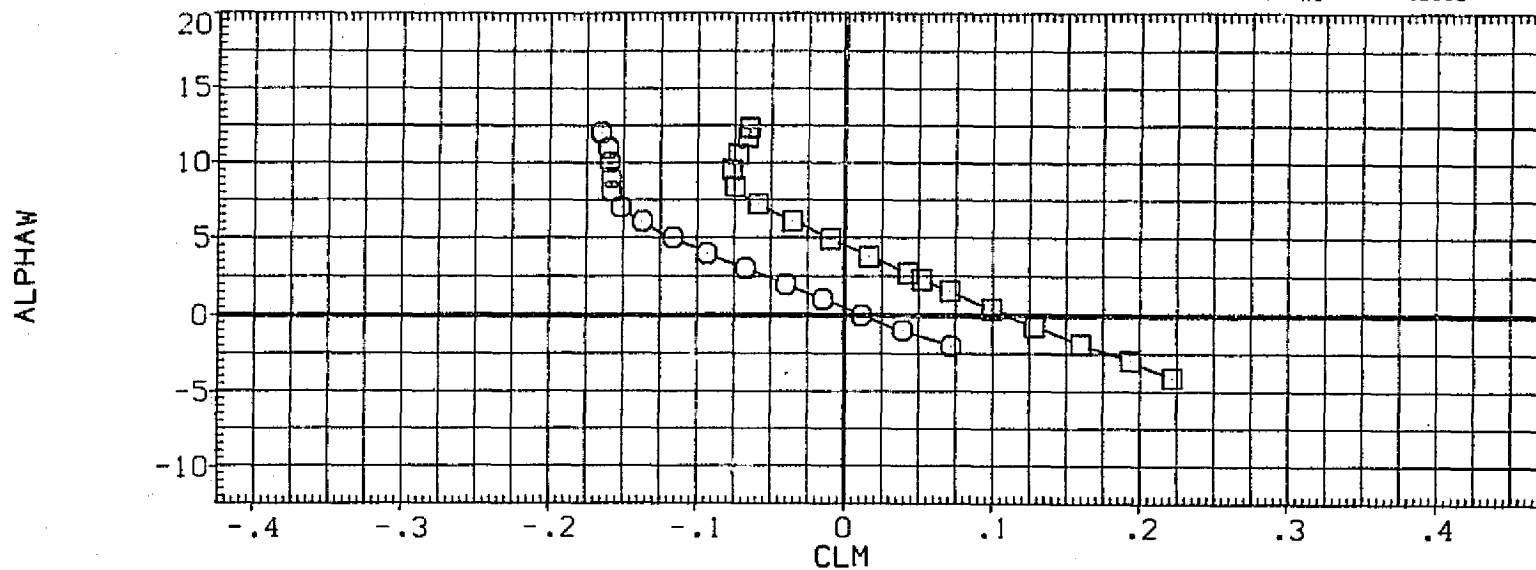


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(B)MACH = .50

C.7

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGMD40) □ BTWT-1431CA5 K1 FO H15.1A V9.1
 (R6PD20) □ CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

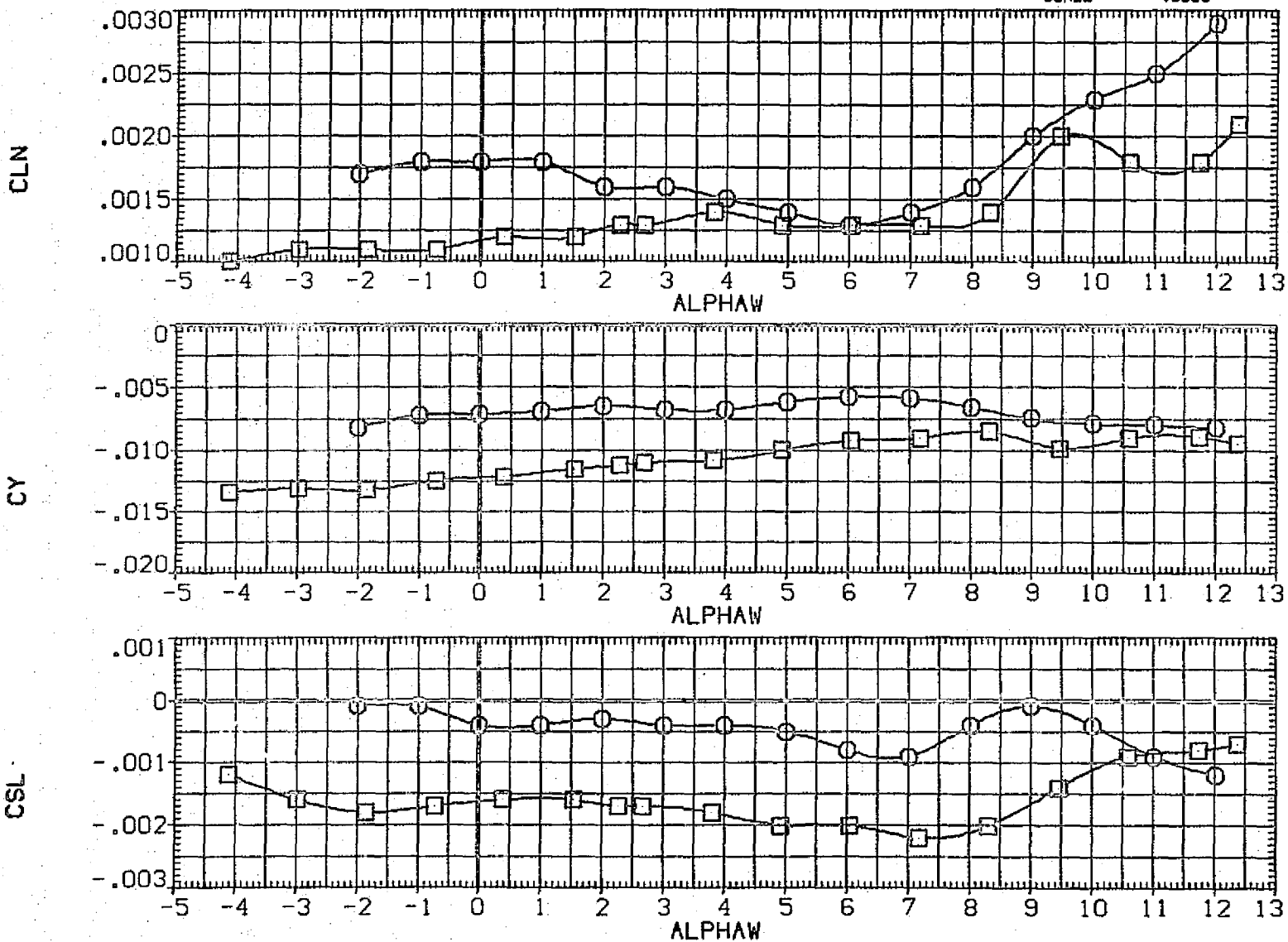


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) ○ BTWT-1431CA5 K1 FO H15.1A V9.1
 (RGP020) □ CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

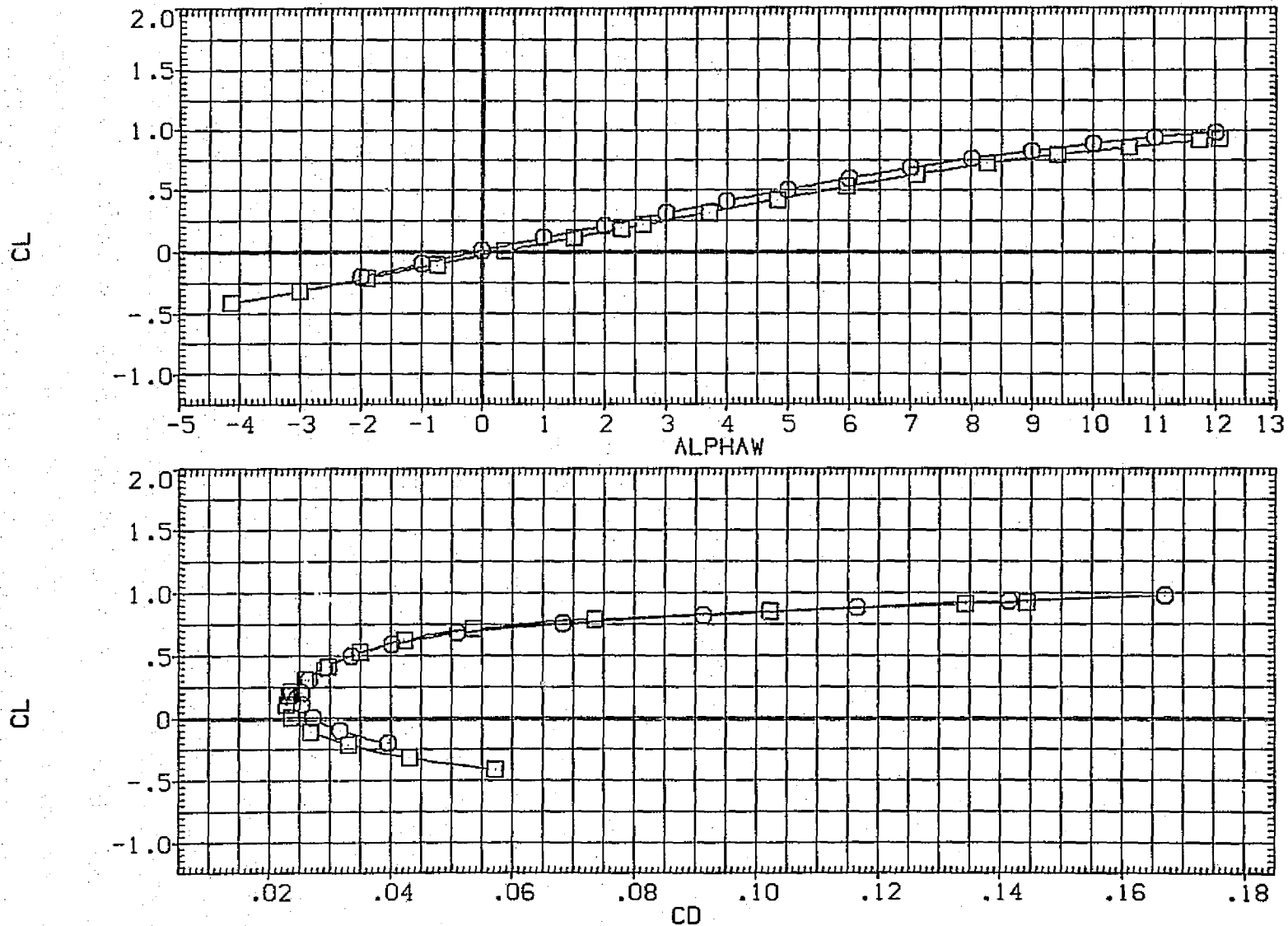




FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGMD40)  BTWT-1431CA5 K1 FO H15.1A V9.1
 (R6PD20)  CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

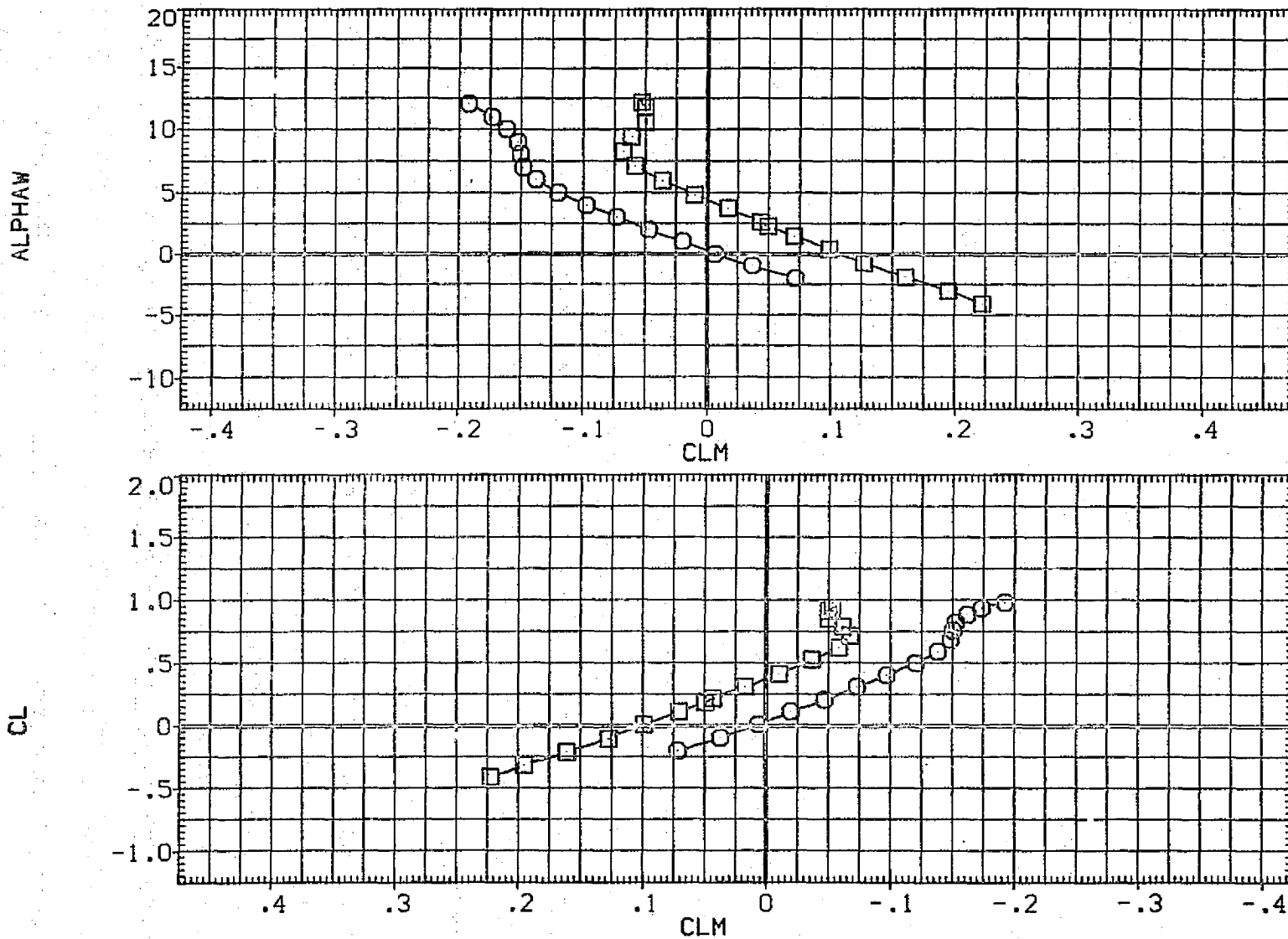


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) \square BTWT-1431CA5 KI FO H15.1A V9.1
 (RGPO20) \square CA6 KI H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

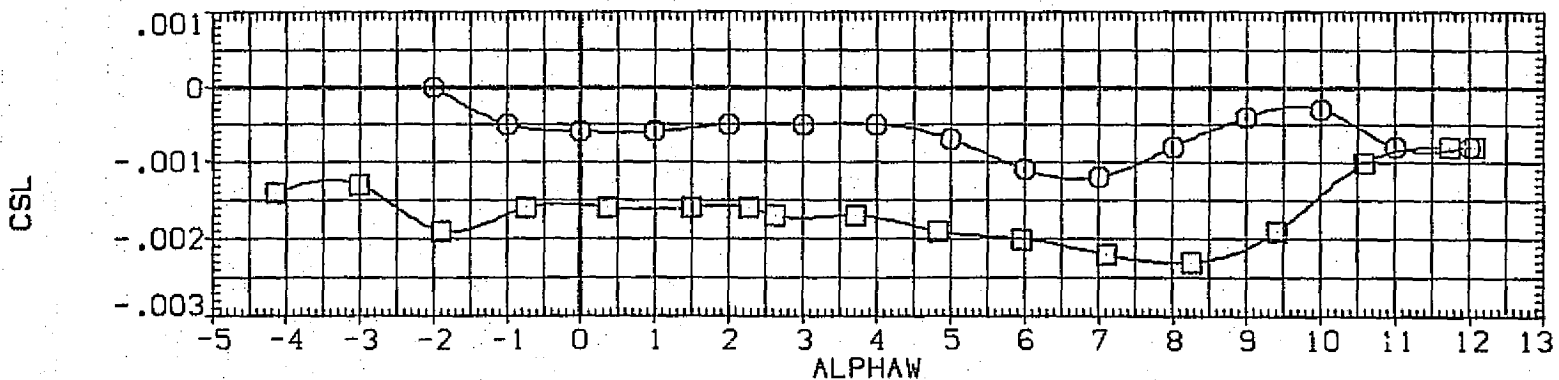
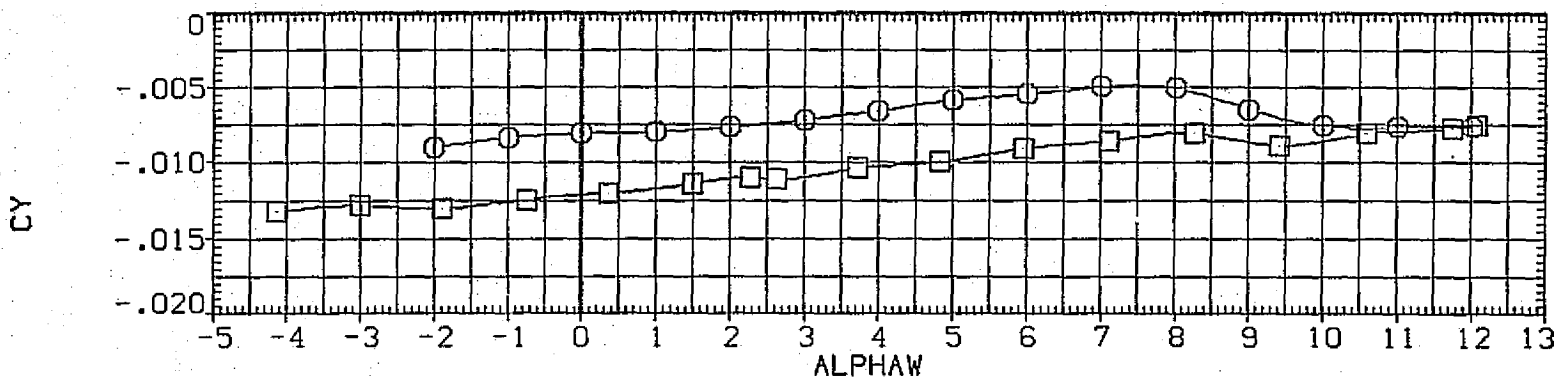
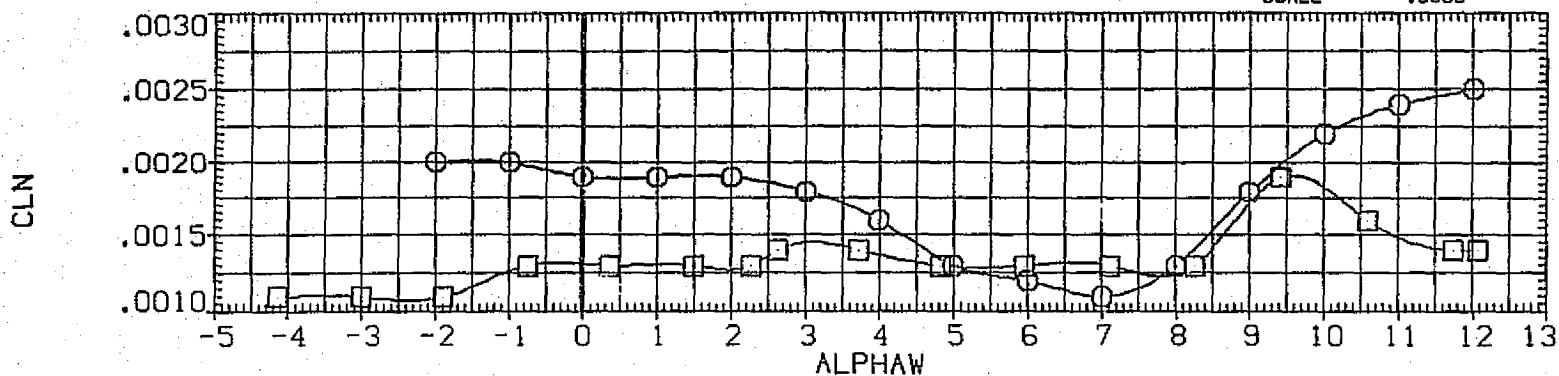


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) □ BTWT-1431CA5 K1 FO HIS.1A VS.1
 (RGP020) □ CA6 K1HIS.1 VS.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

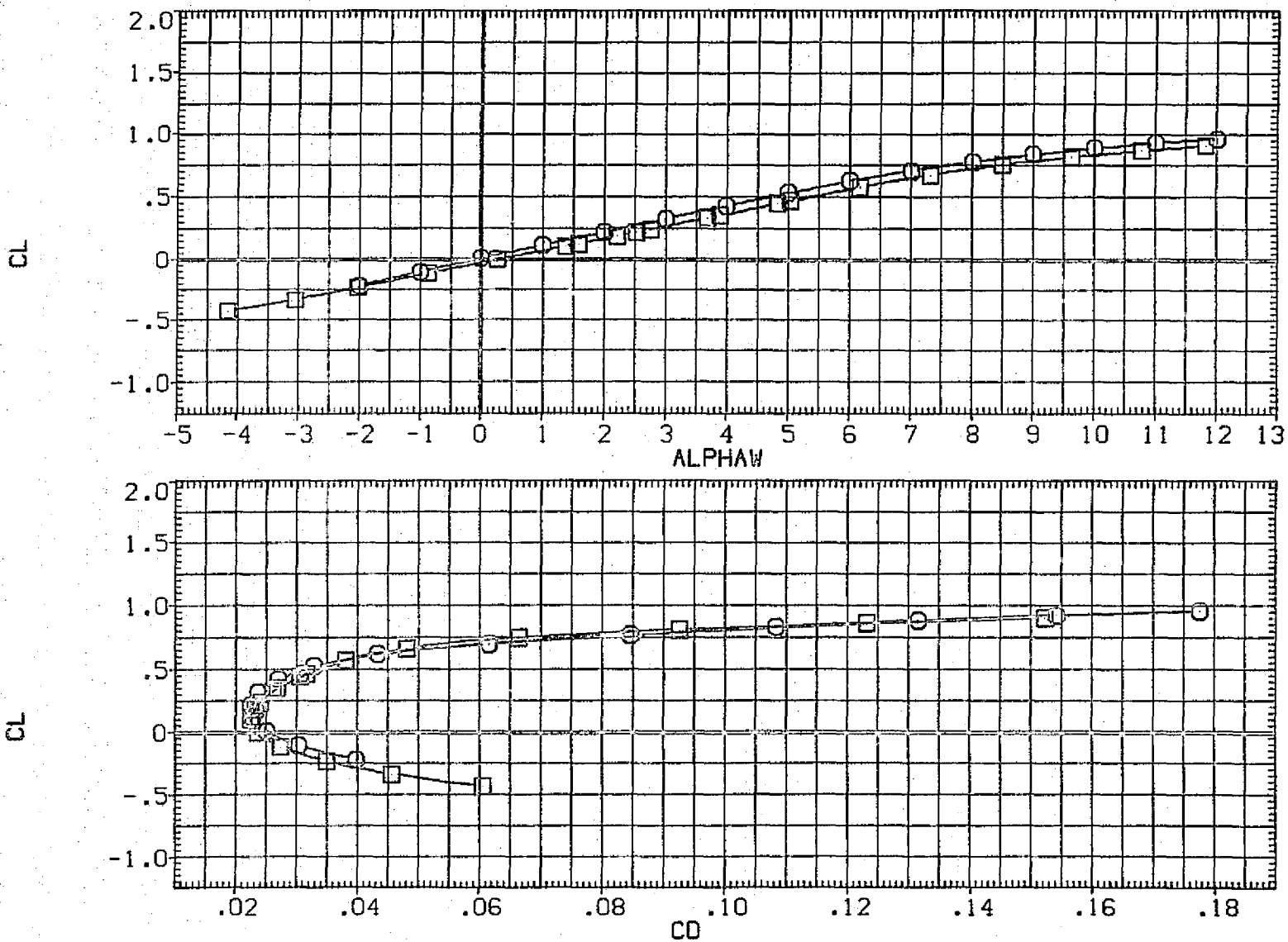


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(CD)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040) ○ BTWT-1431CA5 K1 FO H15.1A V9.1
 (RGPO20) □ CA6 K1H15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

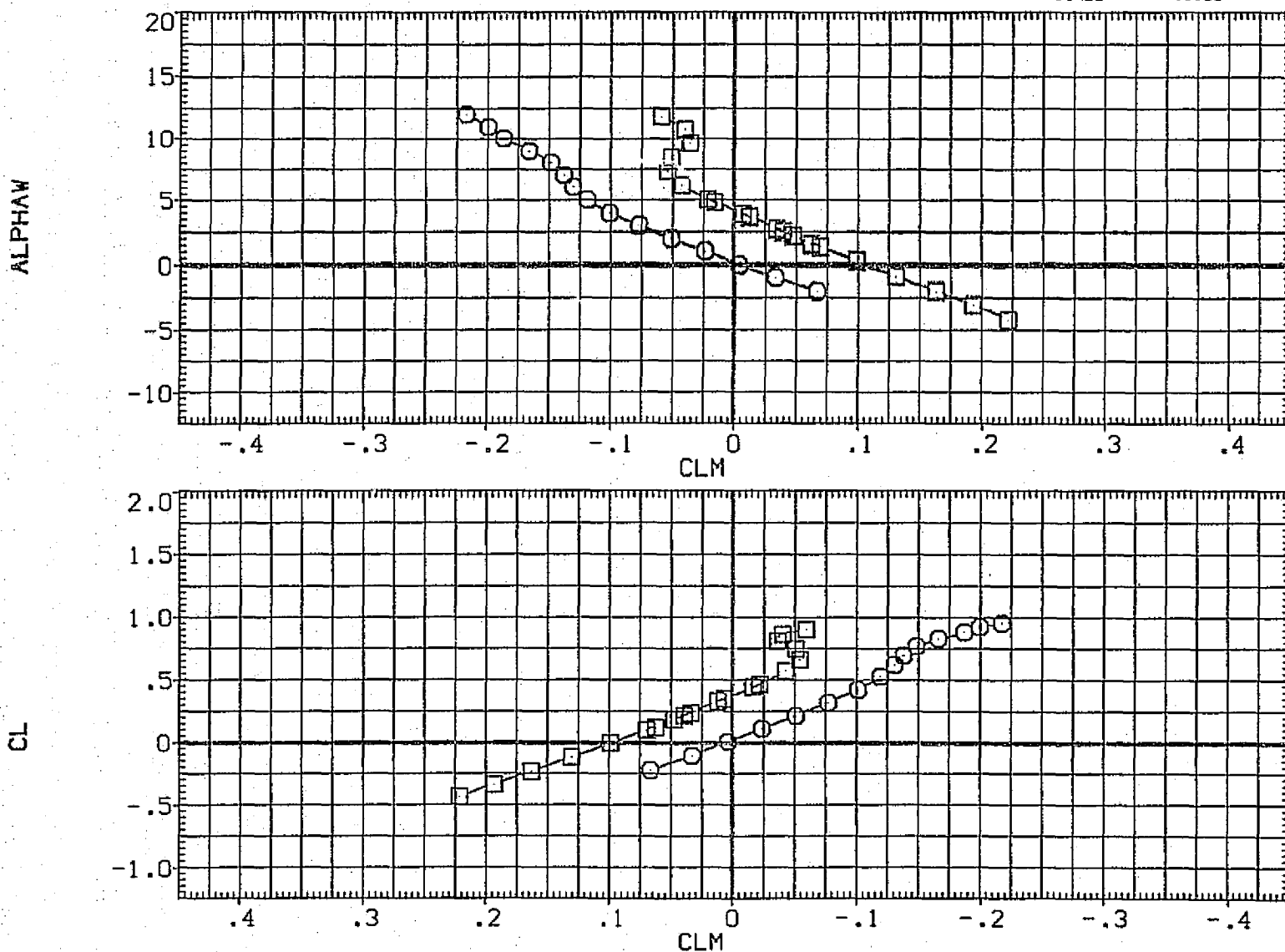




FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE
 (D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM040)  BTWT-1431CA5 K1 FO H15.1A V9.1
 (RGP020)  CA6 KIH15.1 V9.1

BETA STAB
 .000 -2.000
 .000 -.030

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

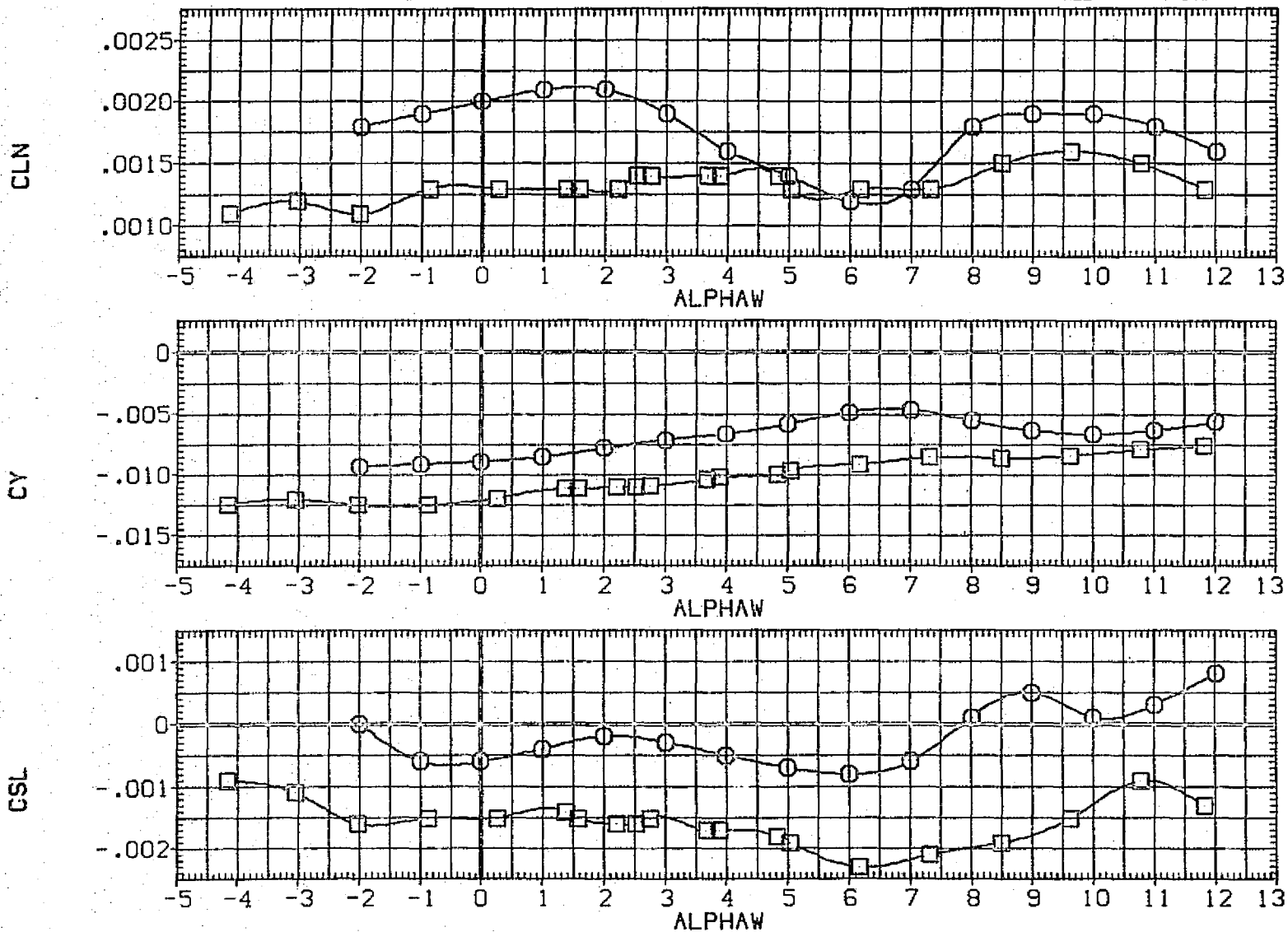


FIG. 101 CA-5 AND CA-6 COMPARISON, BASIC 747 ALONE

(D)MACH = .70

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM117) \square CA5 K1 FO H15.6 V9.1 (PLUS. GRB TC5 AT38.3)
 (AGP168) \square CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -2.000 .000 4.000
 -.060 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

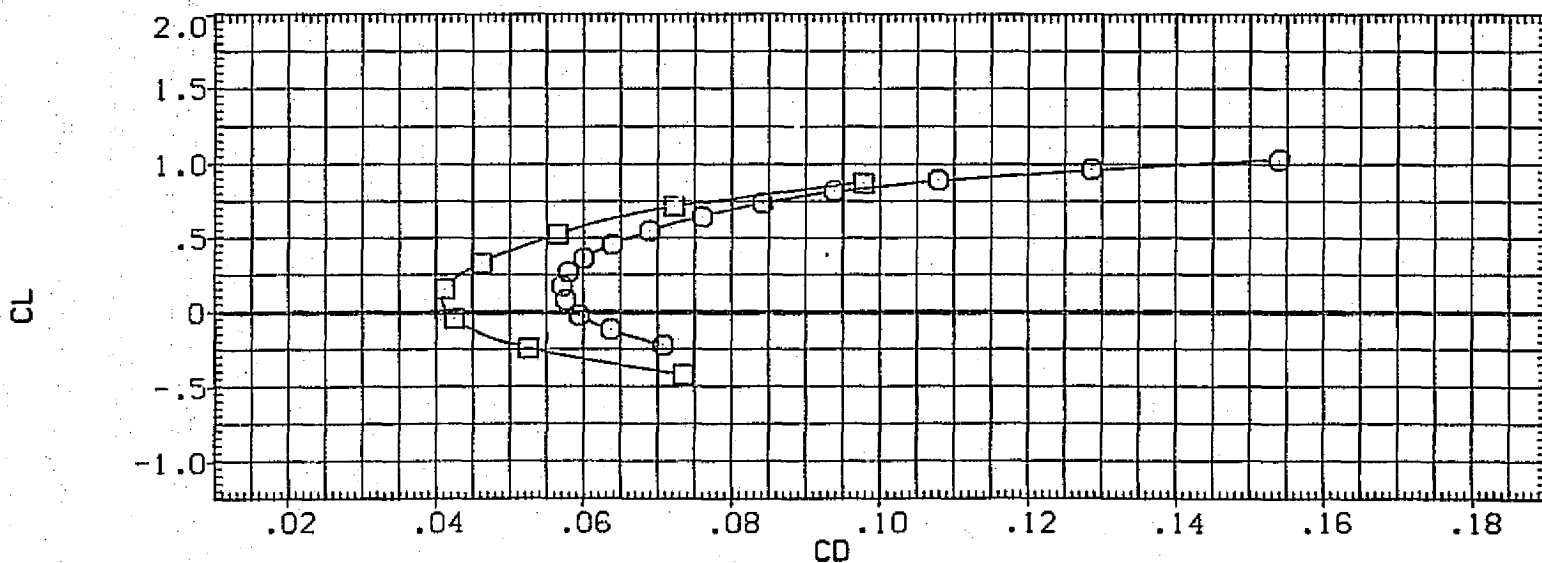
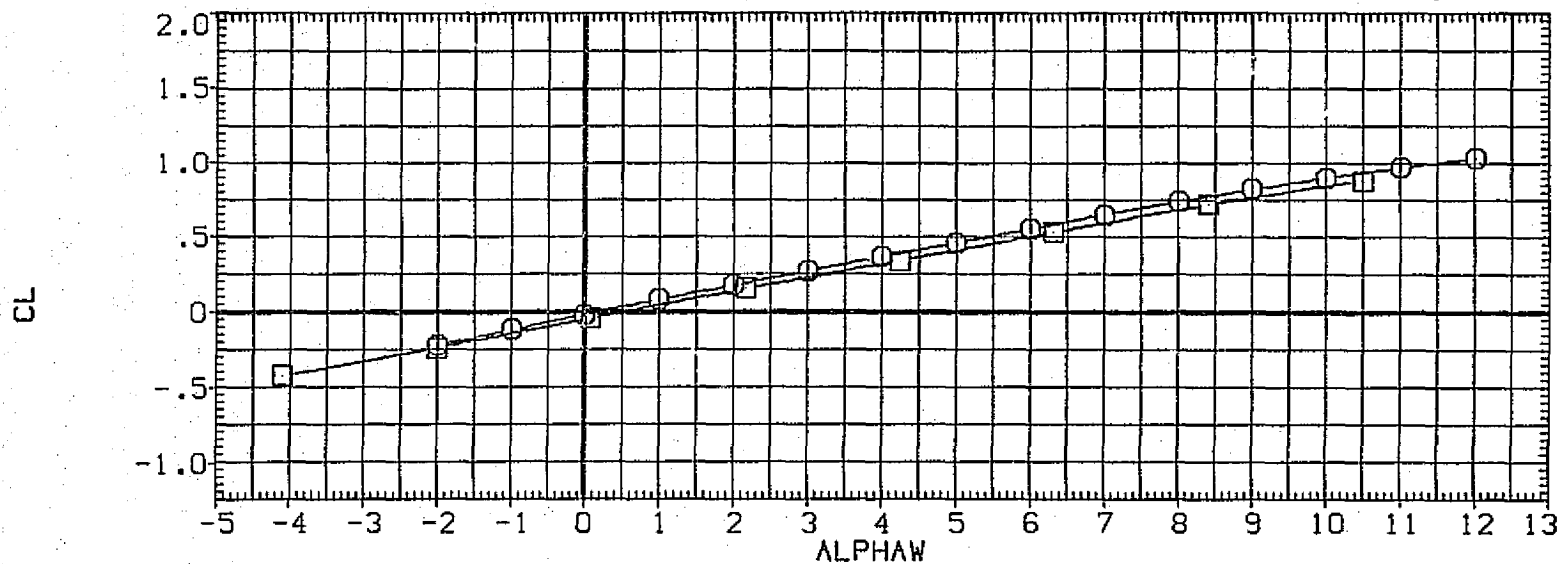


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0
 (A)MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGH117) □ CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
 (AGP168) □ CA6 K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4

STAB BETA IORB
 -2.000 .000 4.800
 -.060 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SG.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

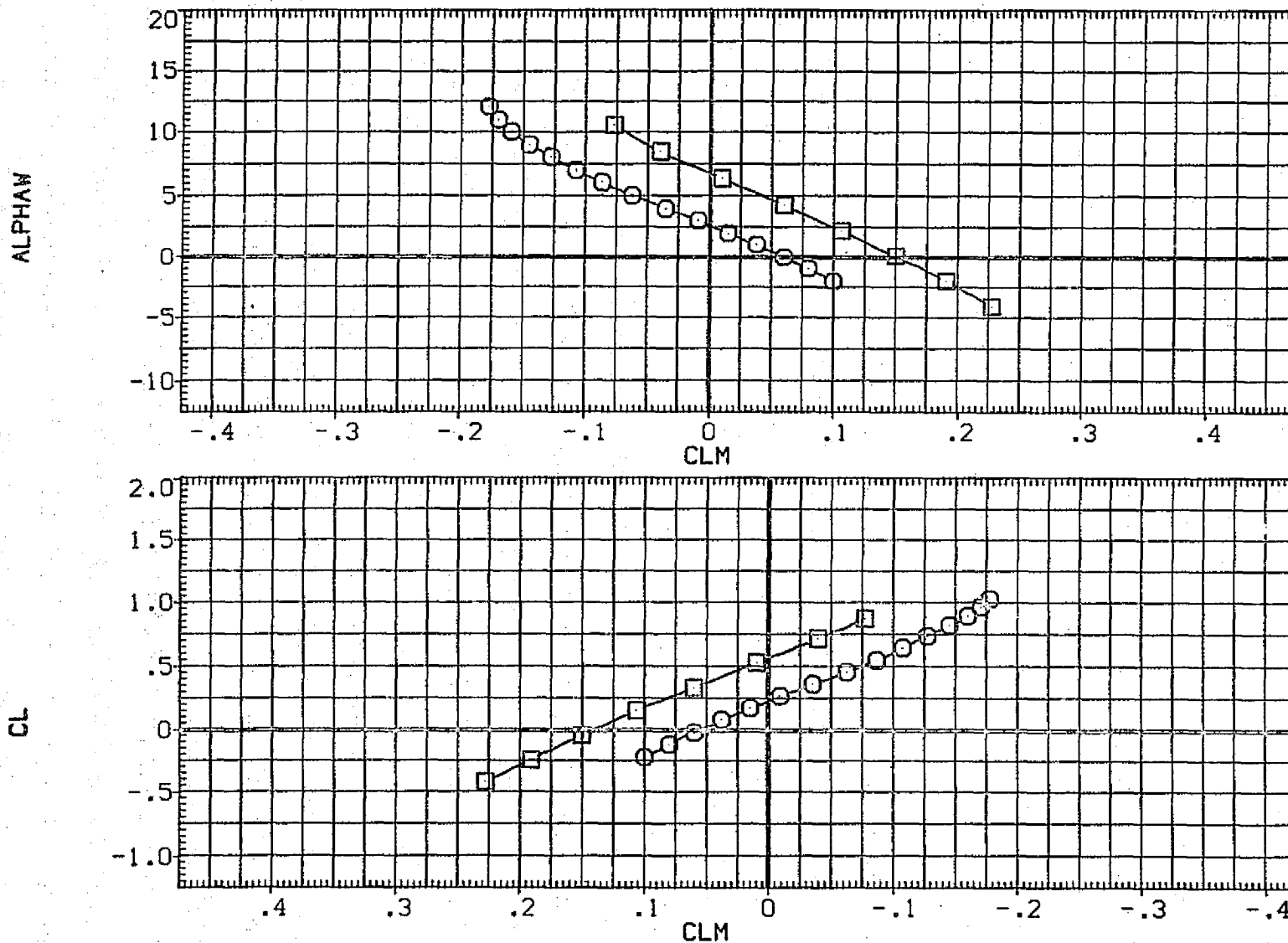


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	REFERENCE INFORMATION		
(AGM117)	CA5 K1 F0 H15.6 V9.1 (PLUS. ORB TC5 AT38.3)	-2.000	.000	4.000	SREF	5500.0000	SG.FT.
(AGP168)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4	-.060	.000	4.250	LREF	327.8000	IN.
					BREF	2348.0000	IN.
					XMRP	1339.9000	IN. XC
					YMRP	.0000	IN. YC
					ZMRP	190.7700	IN. ZC
					SCALE	.0300	

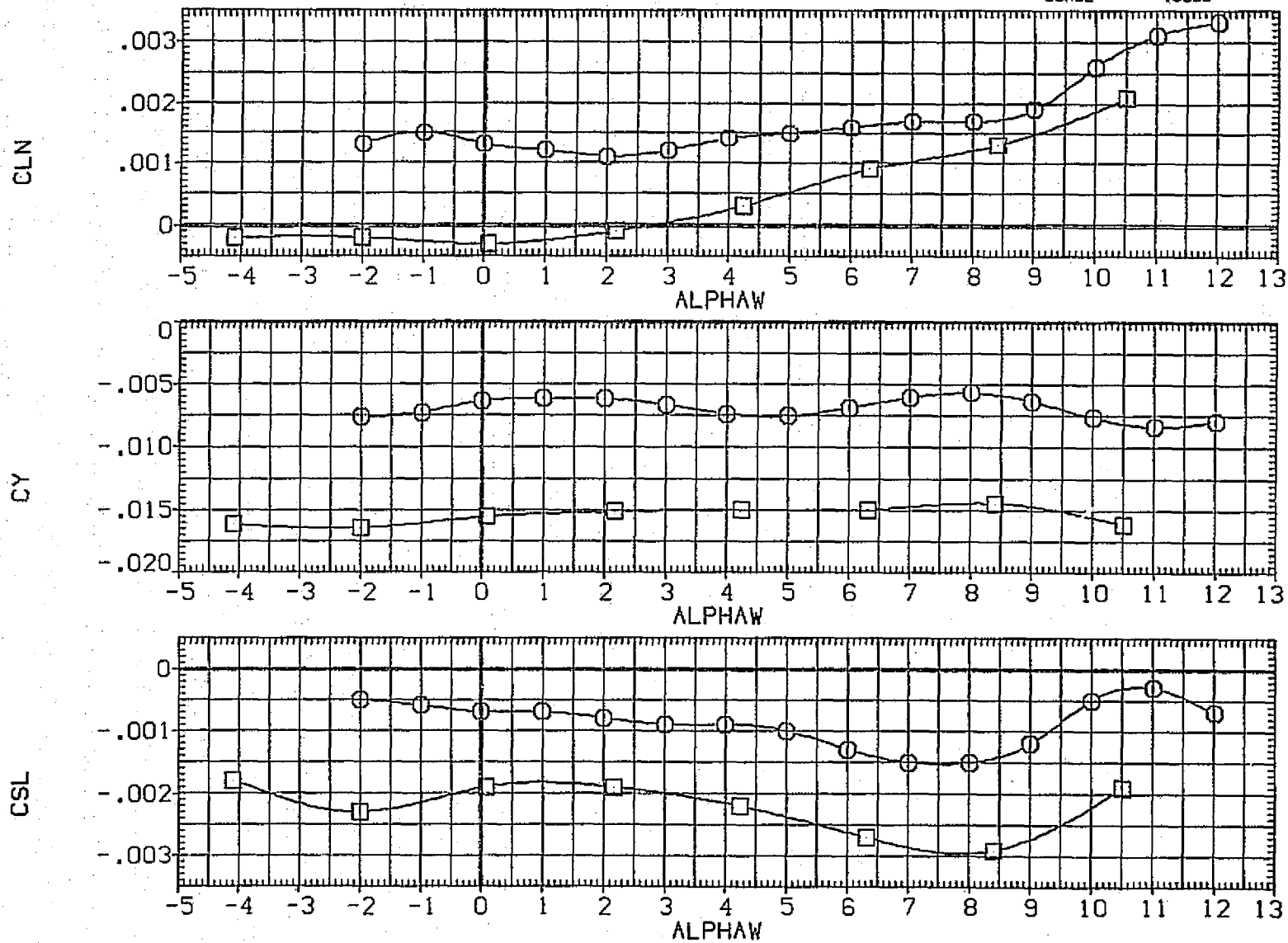


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM117) □	CA5 K1 F0 H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
(AGP168) □	CA6 K2H15.6,IV9.1S1-12 AT112 /111.1ORB TC4

STAB	BETA	IORB
-2.000	.000	4.000
-.060	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XHRP	1339.9000	IN. XC
YHRP	.0000	IN. YC
ZHRP	190.7700	IN. ZC
SCALE	.0300	

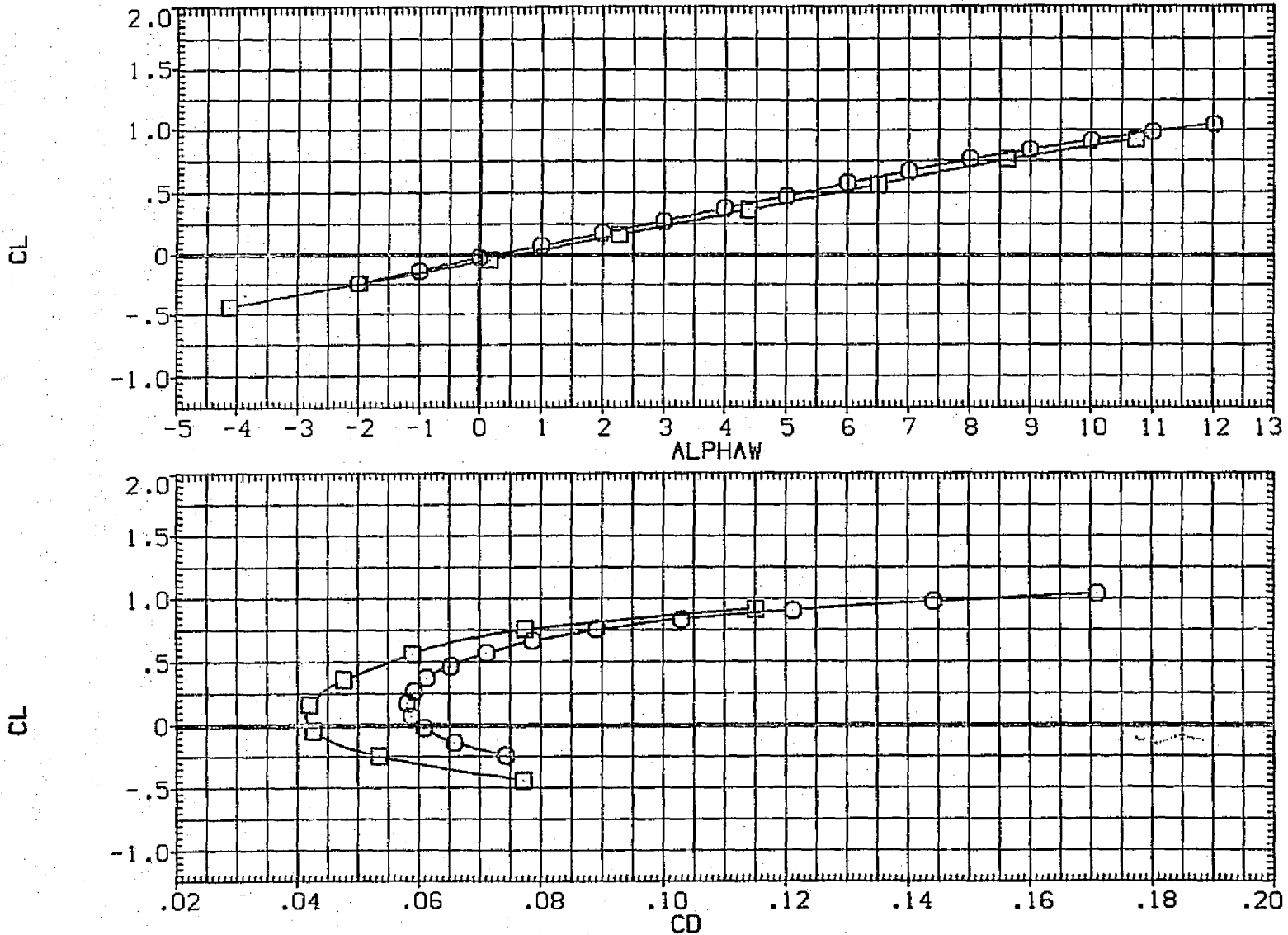


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM117) ○	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
(AGP168) □	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RB TC4

STAB	BETA	IORB
-2.000	.000	4.000
-.060	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	50.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

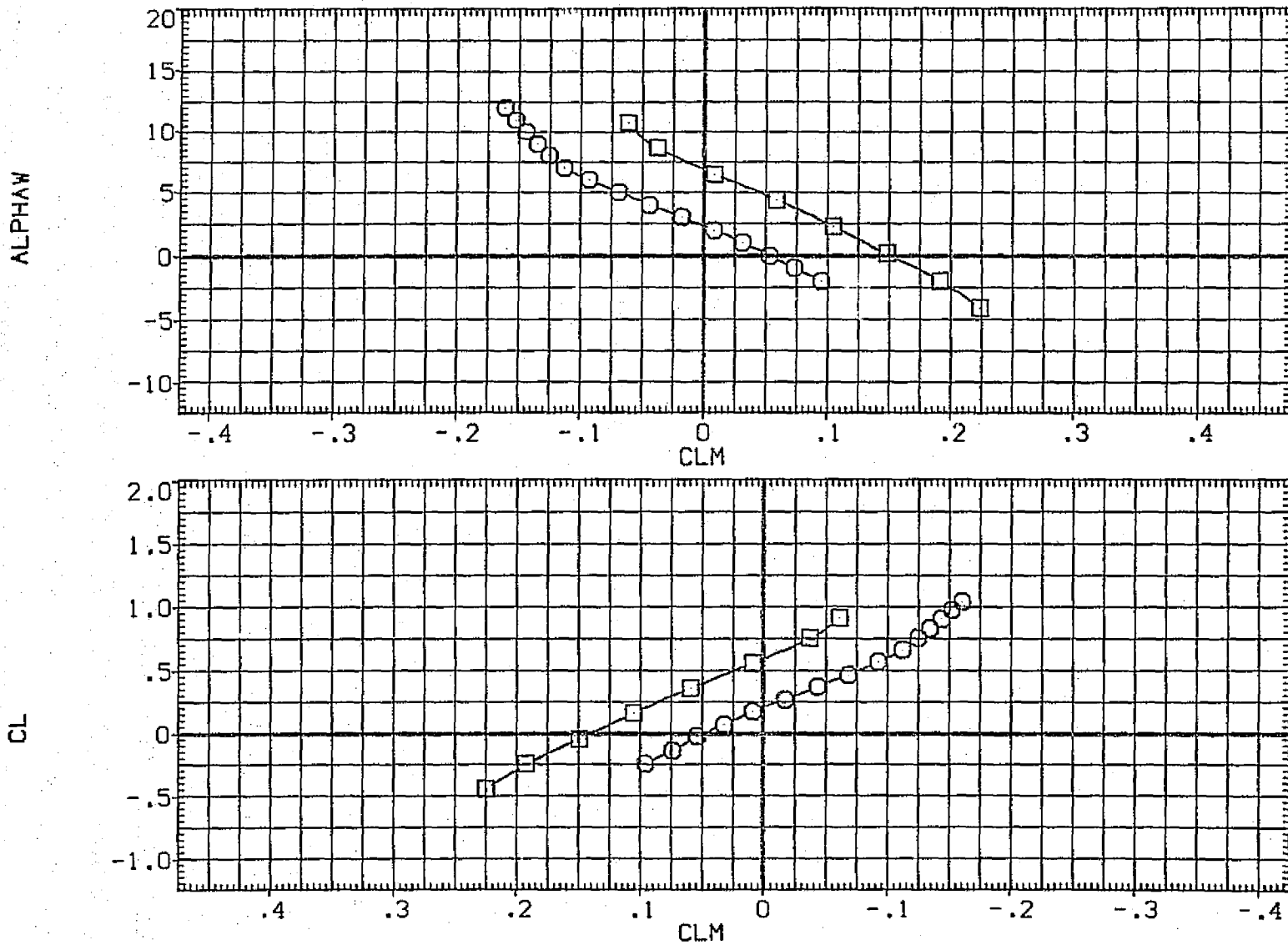


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGH117) □ CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
 (AGP168) □ CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RB TC4

STAB BETA 10RB
 -2.000 .000 4.000
 -.060 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

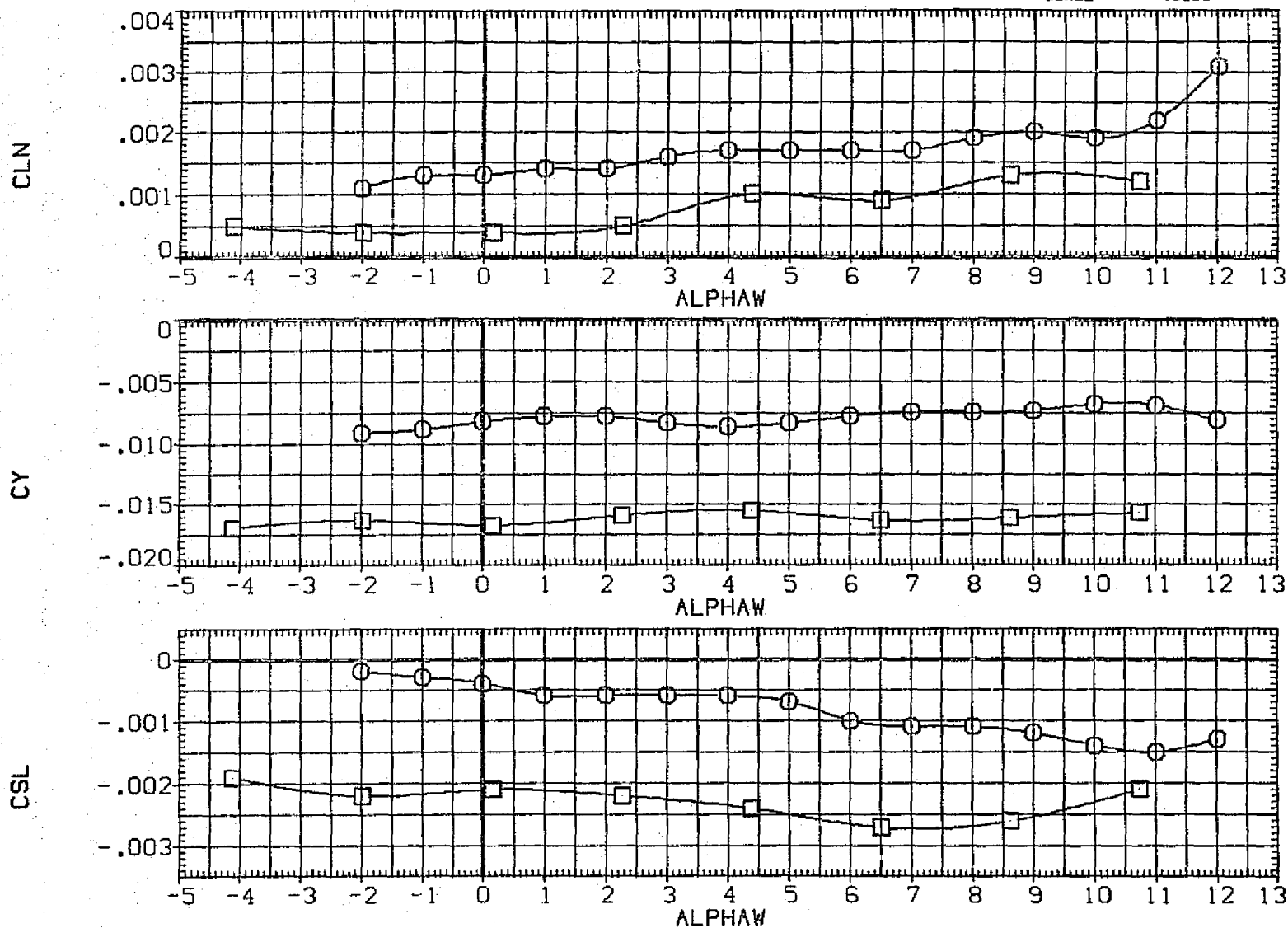


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0
 (B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM117) □ CA5 K1 FD H15.6 V9.1 (PLUS. GRB TC5 AT38.3)
 (AGP168) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -2.000 .000 4.000
 -.060 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

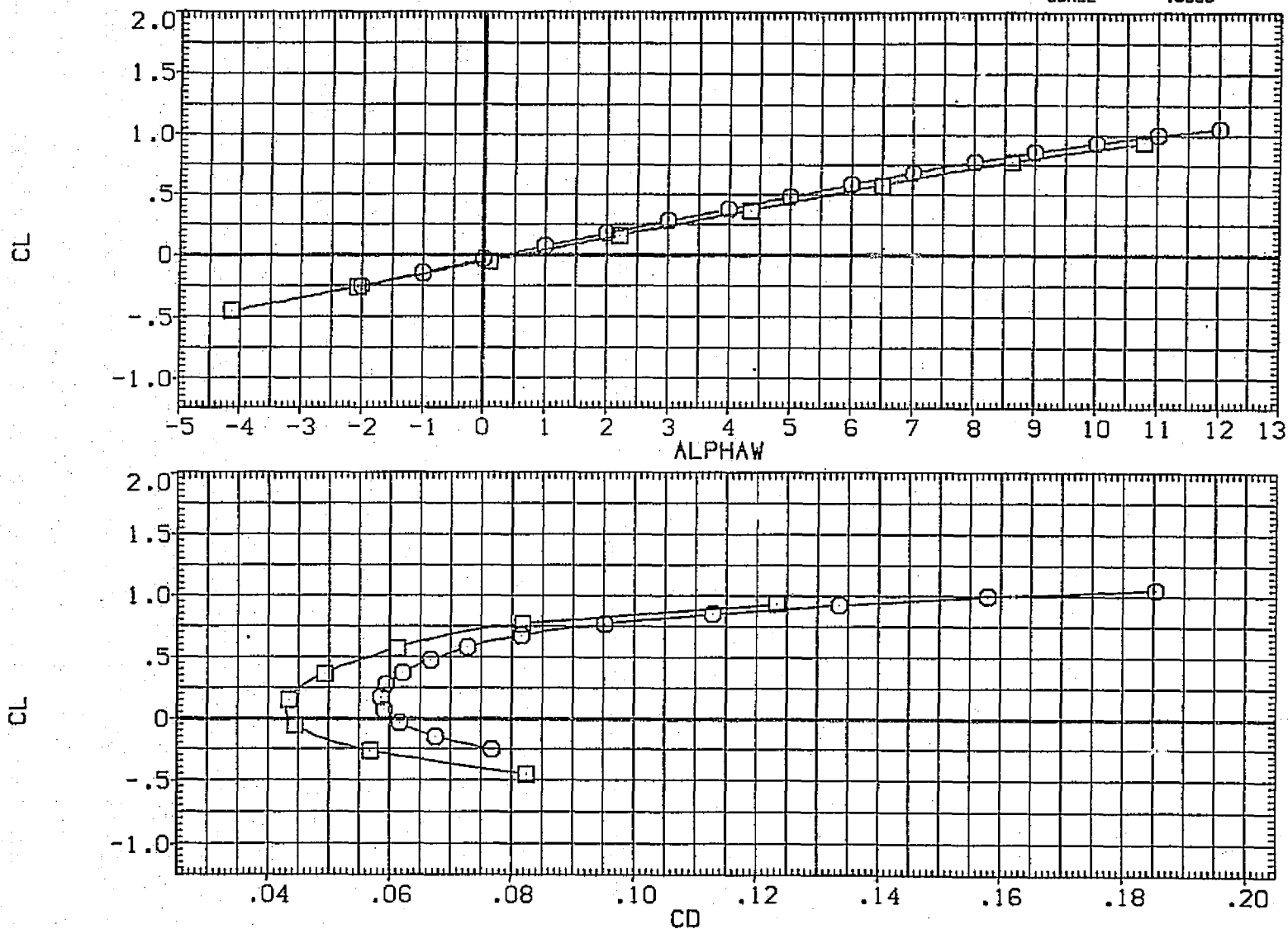


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM117) CA5 K1 FO H15.6 V9.1 (PLUS. ORB TCS AT39.3)
 (AGP168) CA6 K2H15.6.IV9.I51-12 AT112 /111.1ORB TC4

STAB BETA IORB
 -2.000 .000 4.000
 -.060 .000 4.250

REFERENCE INFORMATION
 SREF 9500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

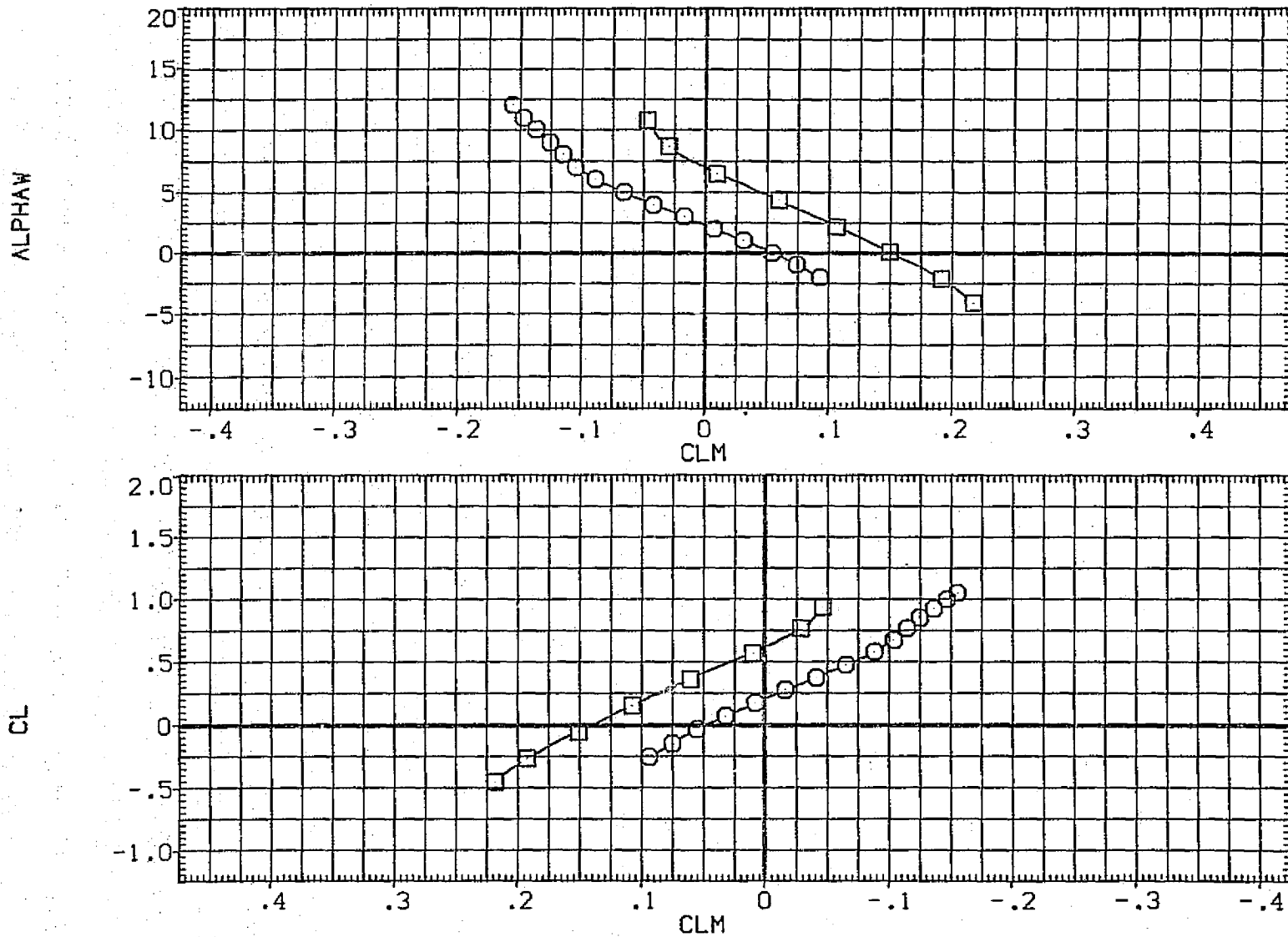


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGM117) \square CA5 K1 FD H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
 (AGP168) \square CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -2.000 .000 4.000
 -.060 .000 4.250

REFERENCE INFORMATION

SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

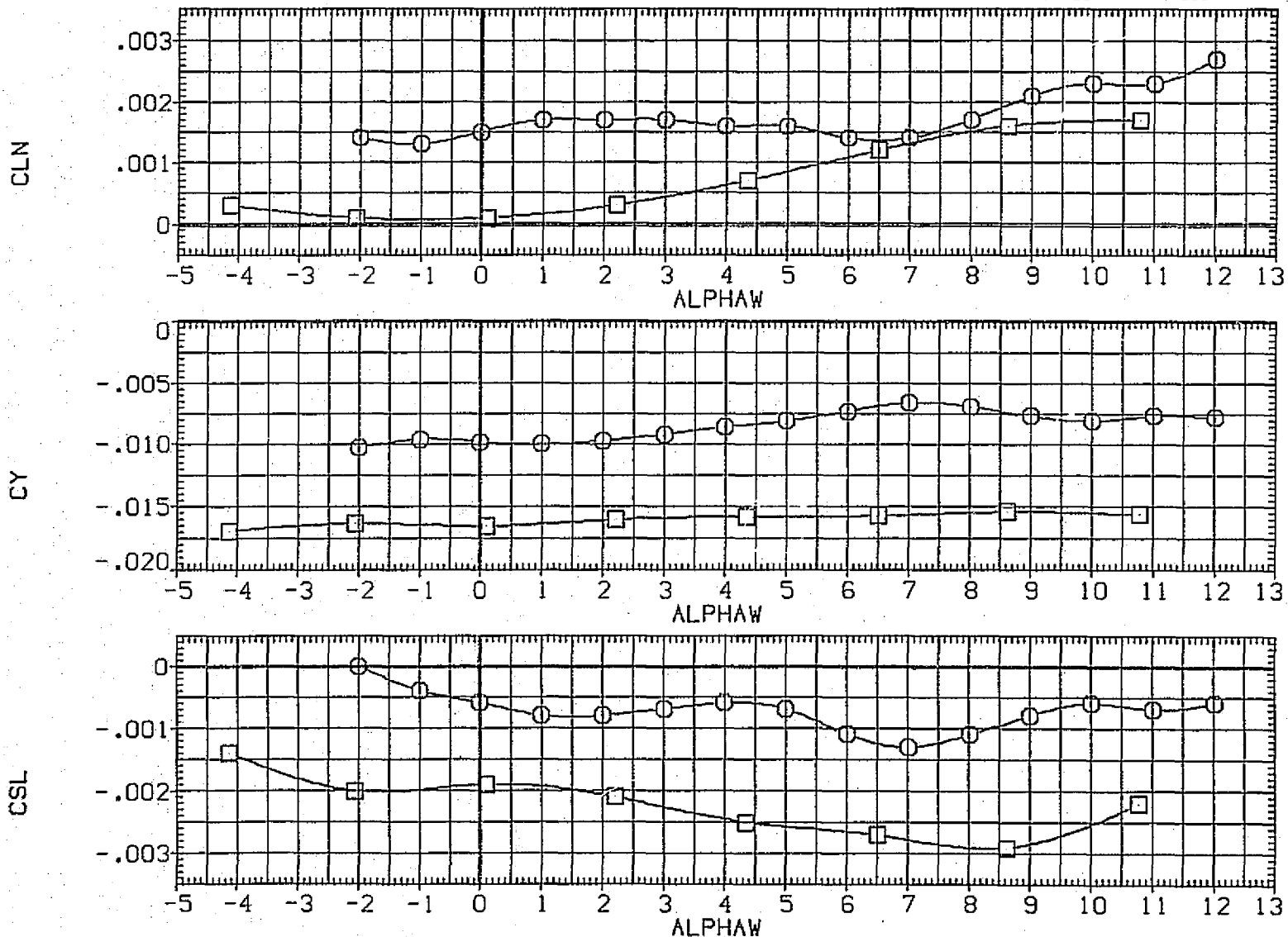


FIG. 102 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= 0

(C)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGH112) ○	CA5 KI FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
(RSP184) □	CA6 K2H15.6.IV9.I51-12 AT112 /111.10RB TC4

STAB	BETA	IORB
-3.200	.000	4.000
-1.010	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

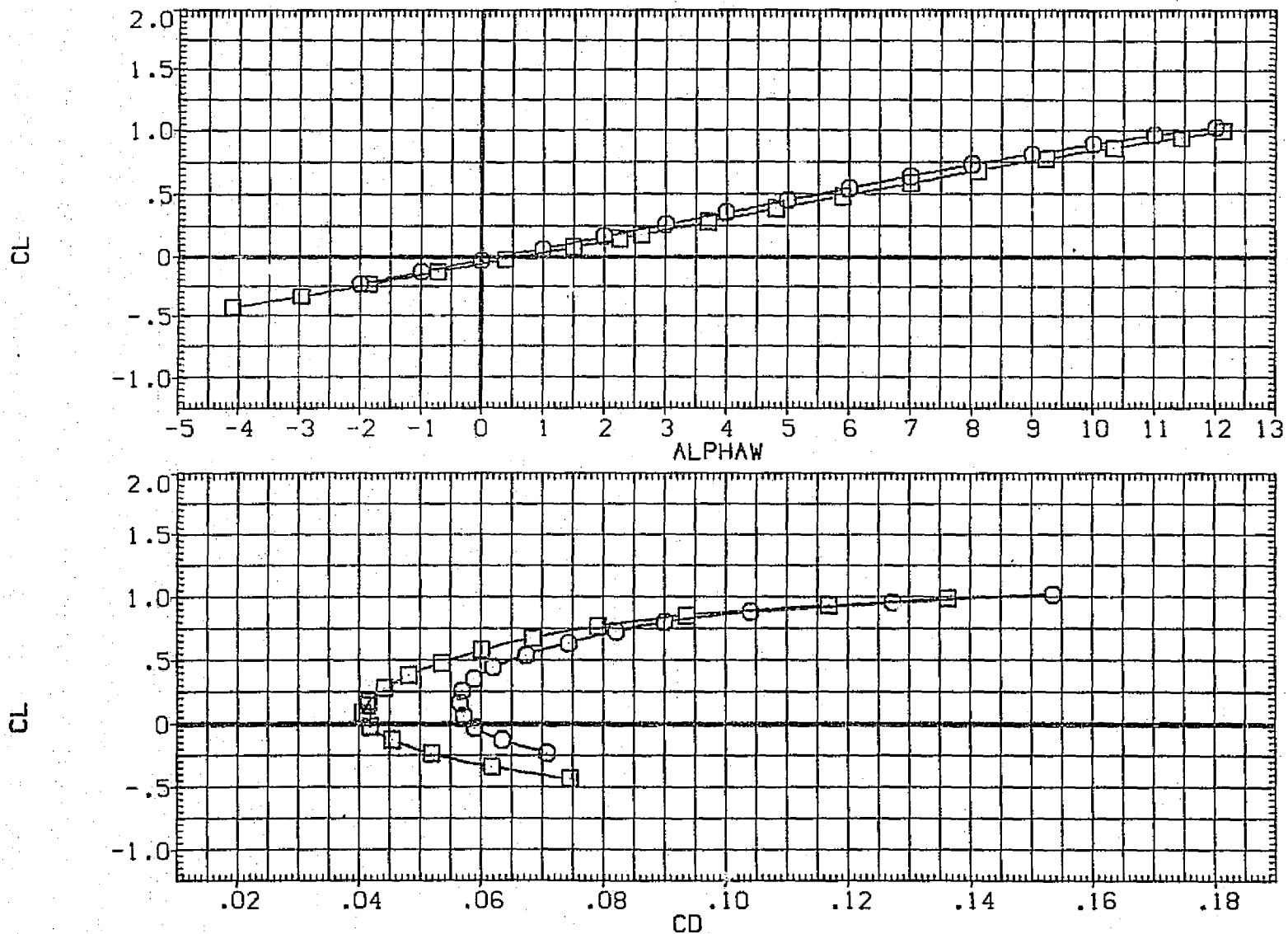


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB
(AGM112) ○	CAS K1 FO H15.6 V9.1 (PLUS. ORP TCS AT38.3)	-3.200	.000	4.000
(RGP184) □	CAS K2H15.6.1V9.1SI-12 AT112 /111.10RB TC4	-1.010	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

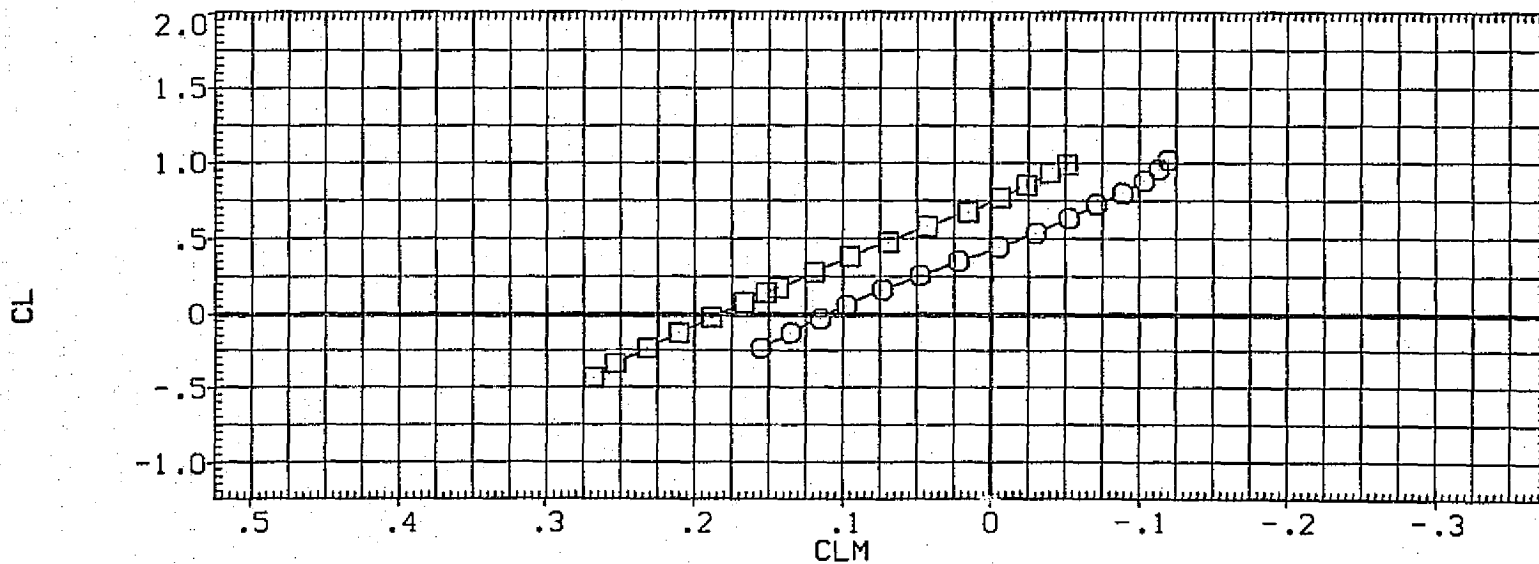
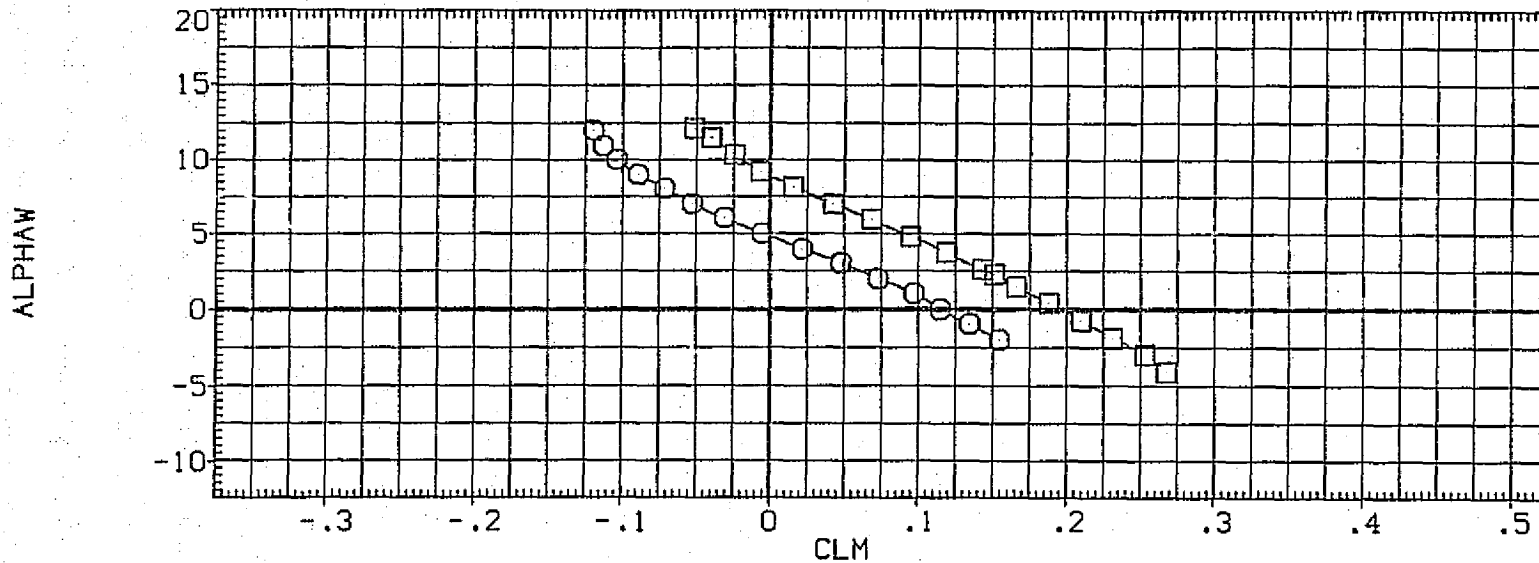


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(A) MACH = .30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM112) □ CA5 K1 F0 H15.6 V9.1 (PLUS. ORB TCS AT38.3)
 (RGP184) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -3.200 .000 4.000
 -1.010 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

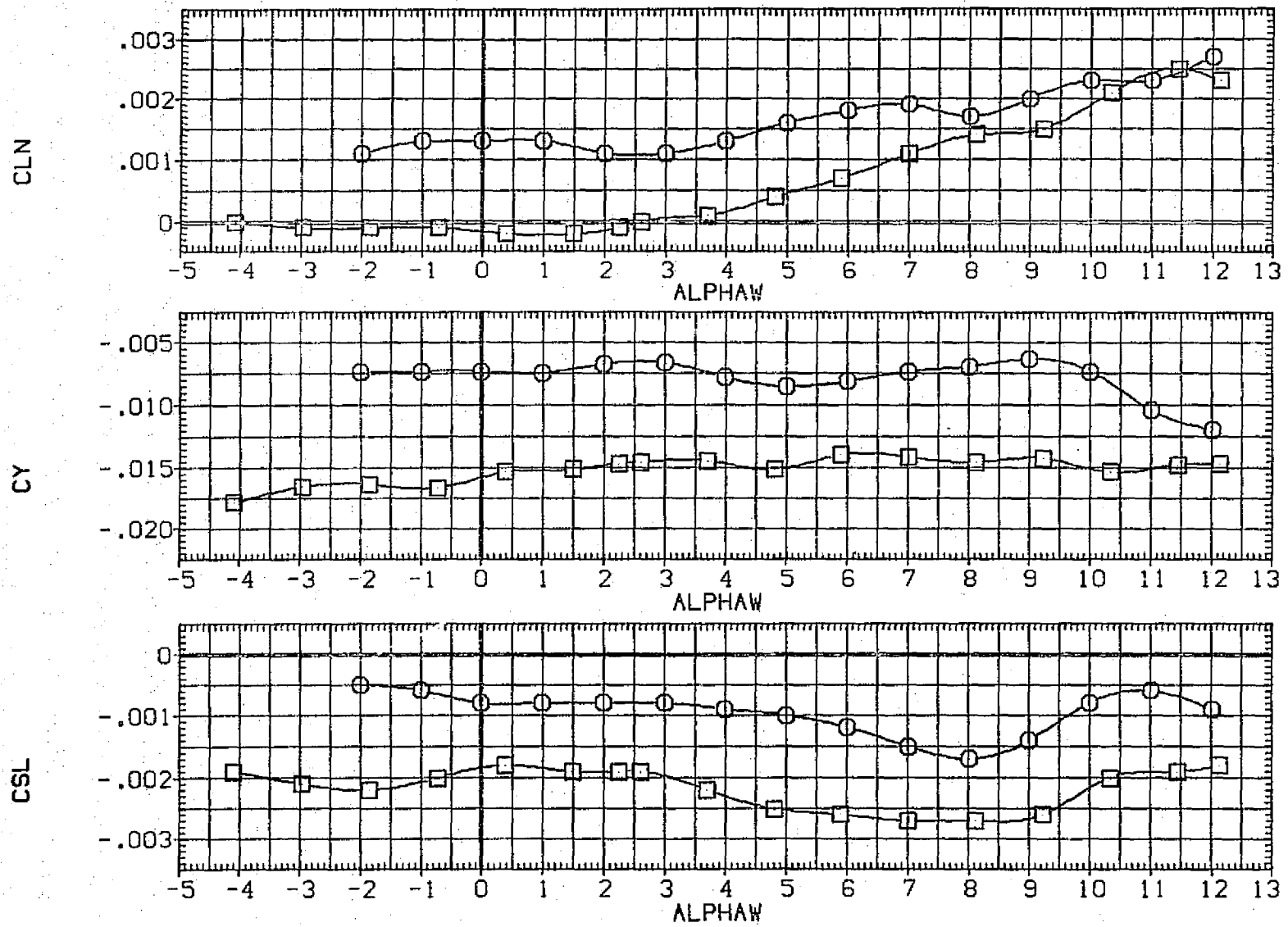


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= -1

(A)MACH = .30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM112)	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
(RGP184)	CA6 K2H15.6.IV9.1S1-12 AT112 /111.10RB TC4

STAB	BETA	IORB
-3.200	.000	4.000
-1.010	.000	4.250

REFERENCE INFORMATION	
SREF	5500.0000 SQ.FT.
LREF	327.8000 IN.
BREF	2348.0000 IN.
XMRP	1339.9000 IN. XC
YMRP	.0000 IN. YC
ZMRP	190.7700 IN. ZC
SCALE	.0300

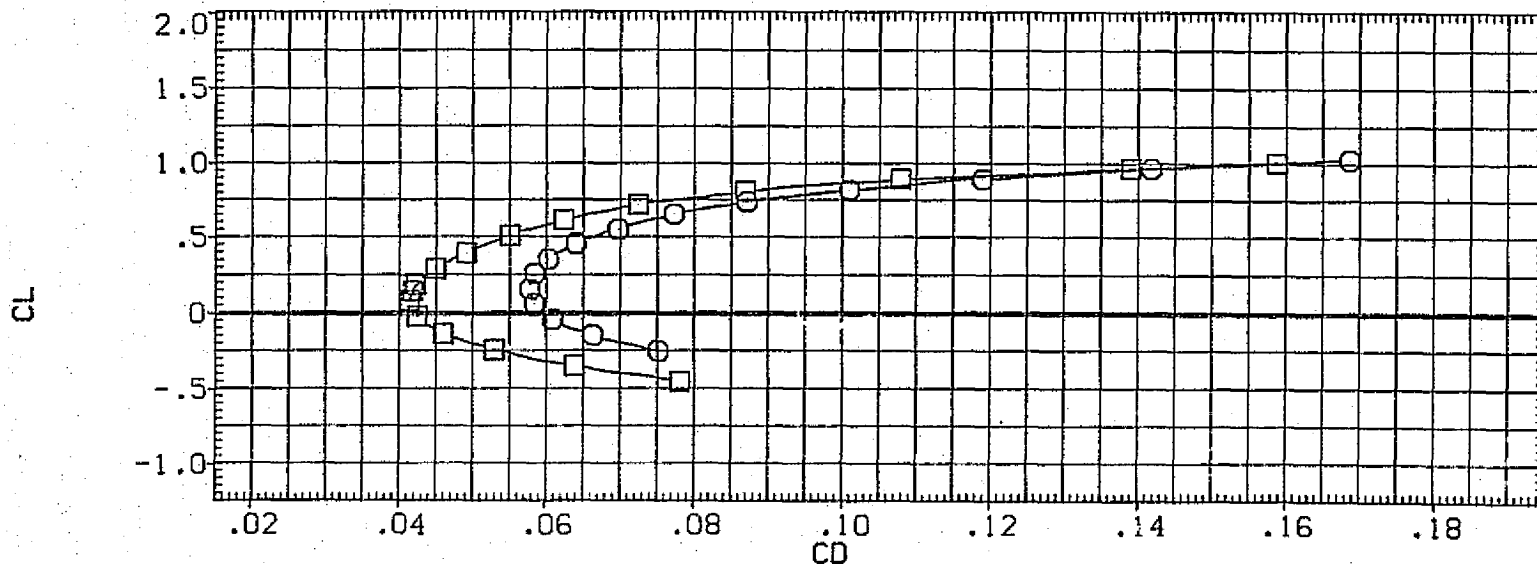
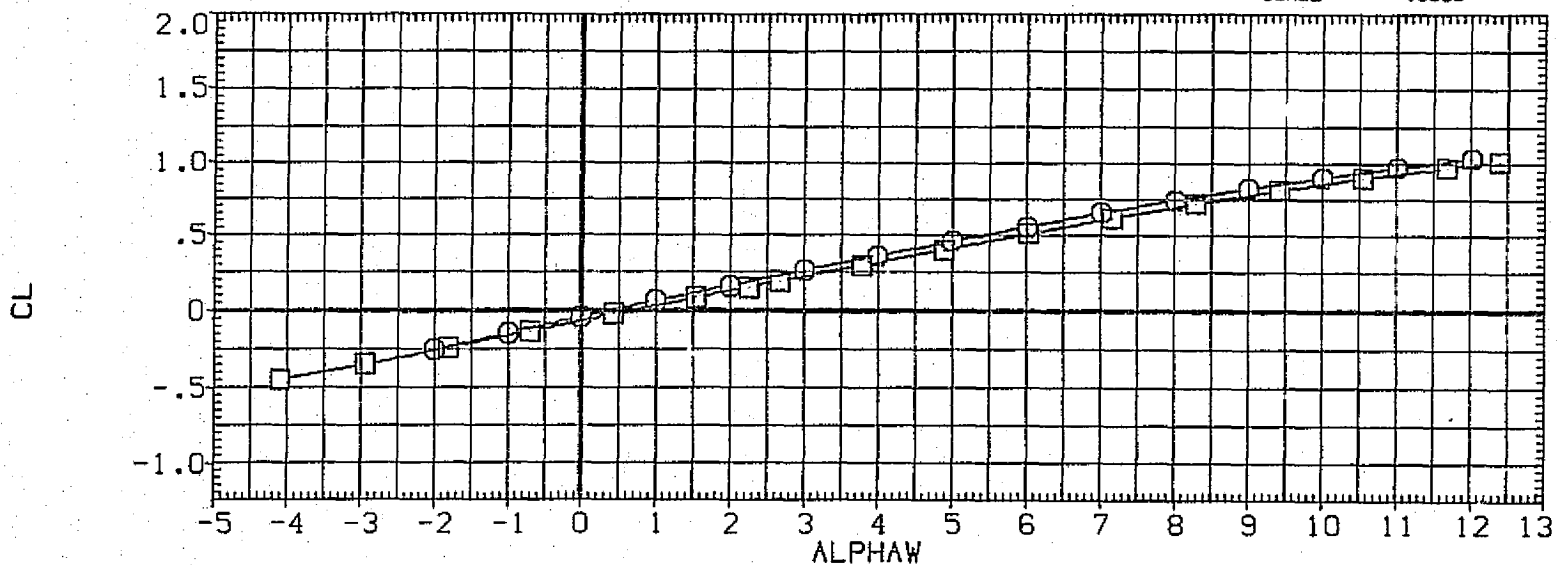


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(B)MACH = .50

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM112) ○	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
(RGP184) □	CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB	BETA	IORB
-3.200	.000	4.000
-1.010	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SO.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

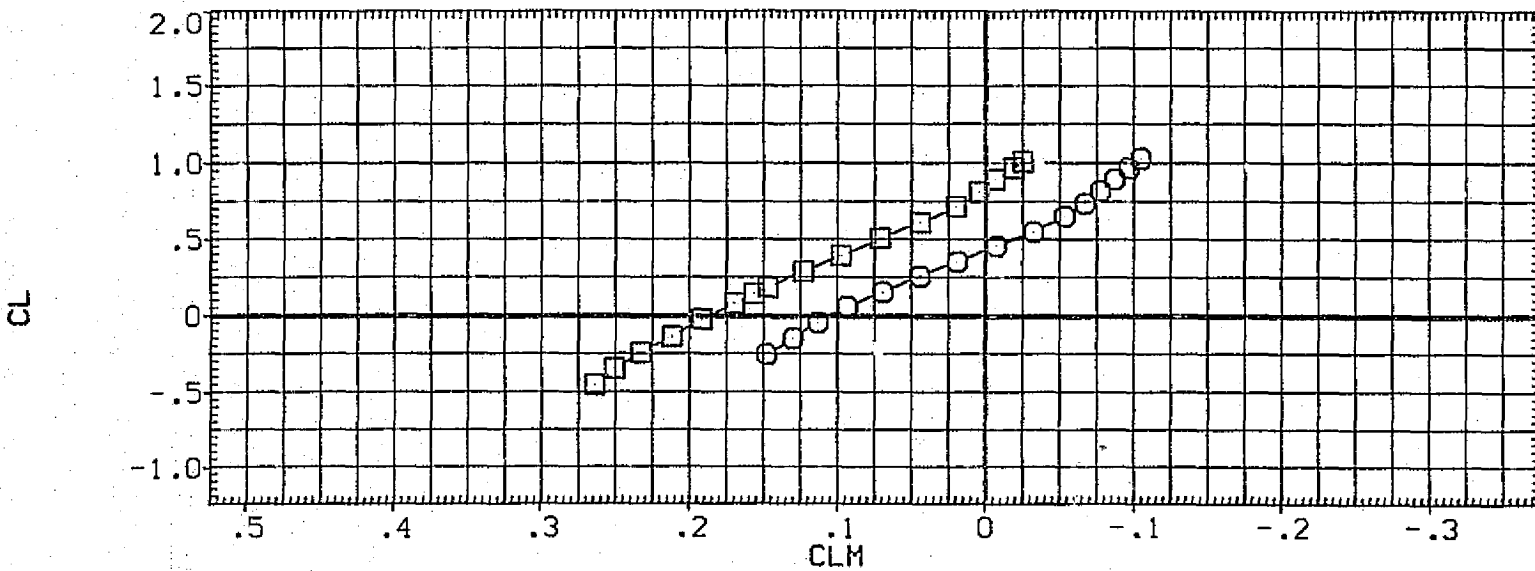
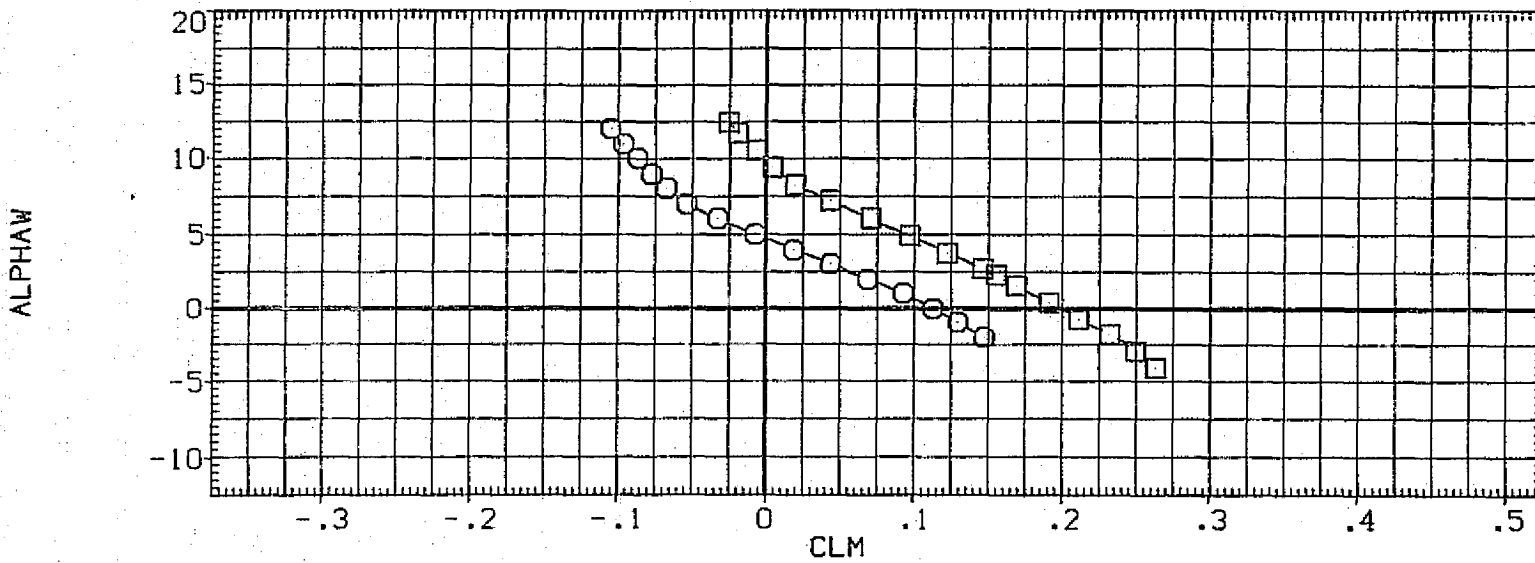


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= -1

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGH112) ○ CA5 K1 F0 H15.6 V9.1 (PLUS. ORB TCS AT30.3)
 (RGP184) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -3.200 .000 4.000
 -1.010 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

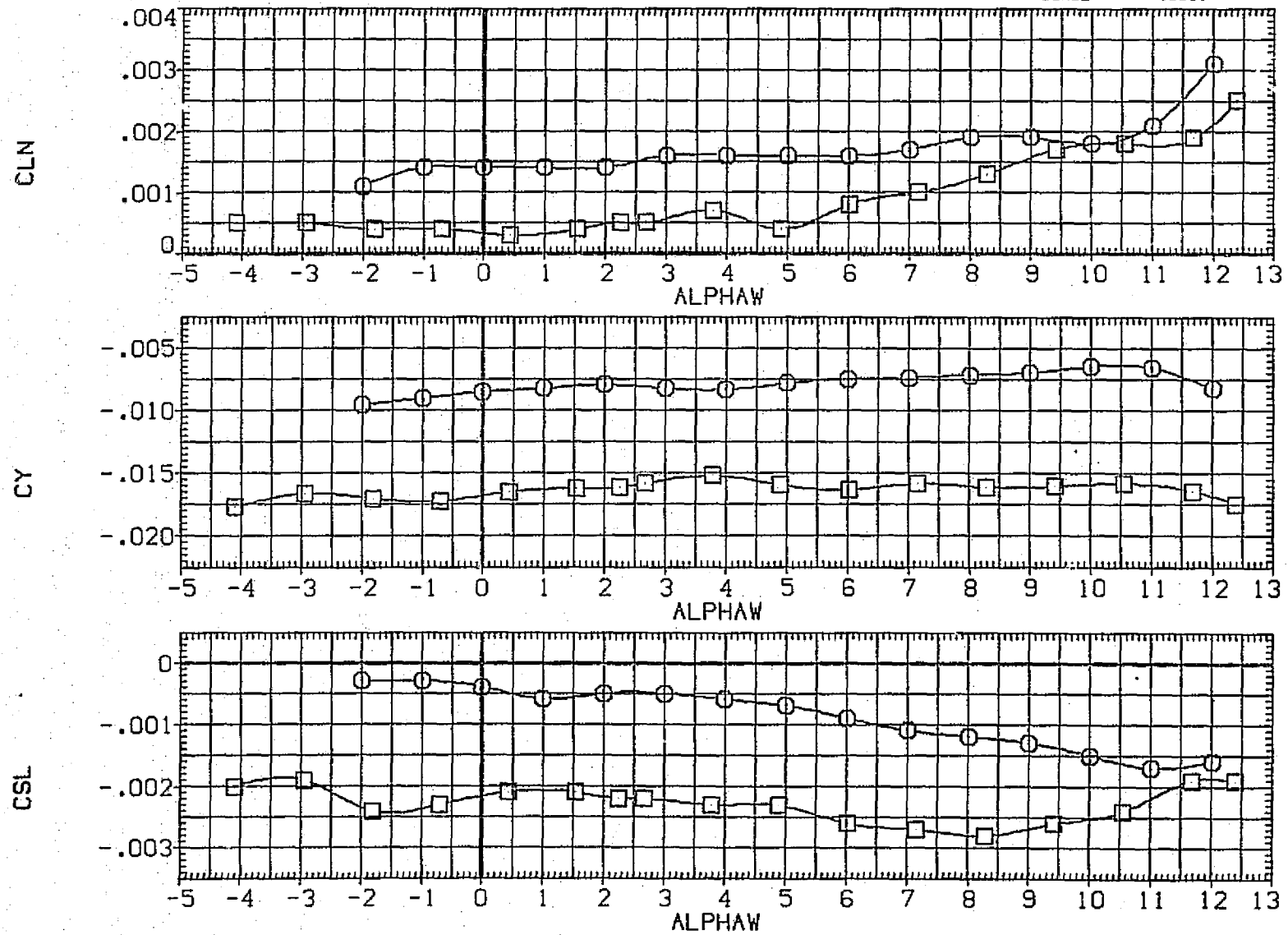


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(B)MACH = .50

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM112) \square CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
 (RGP184) \circ CA6 K2H15.6.IV9.I51-12 AT112 /111.10RB TC4

STAB BETA IORB
 -3.200 .000 4.000
 -1.010 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMHP 1339.9000 IN. XC
 YMHP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

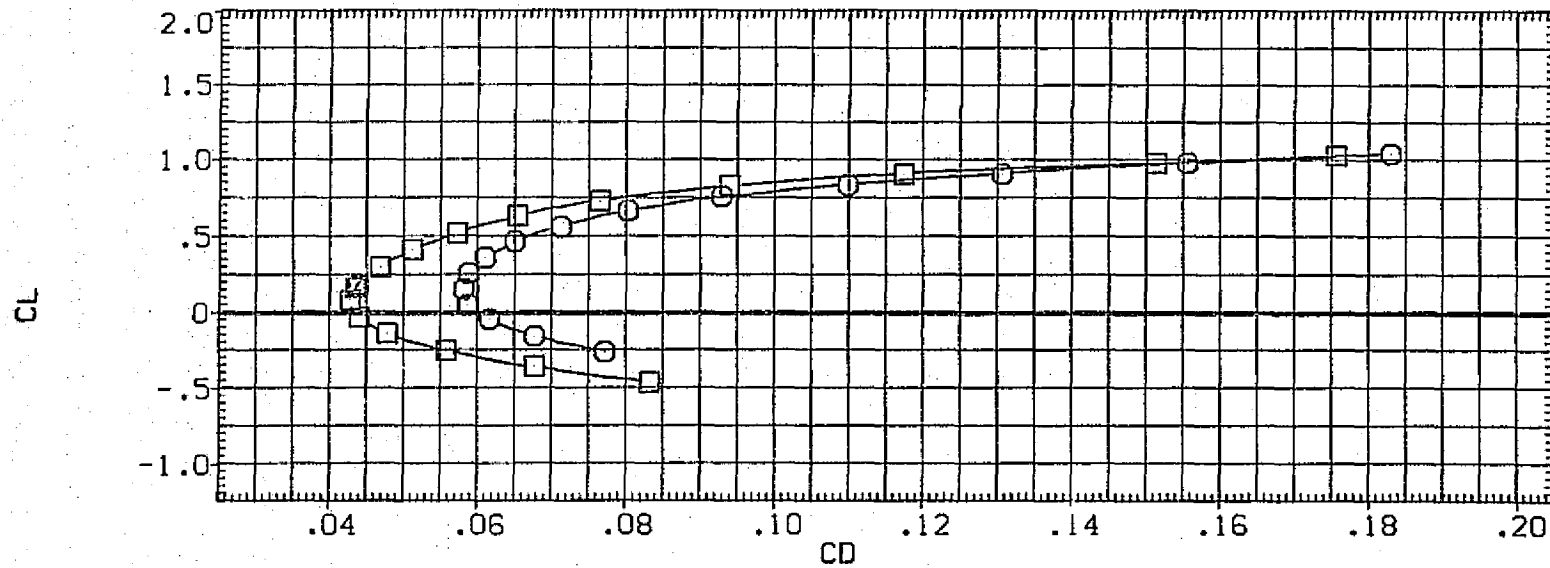
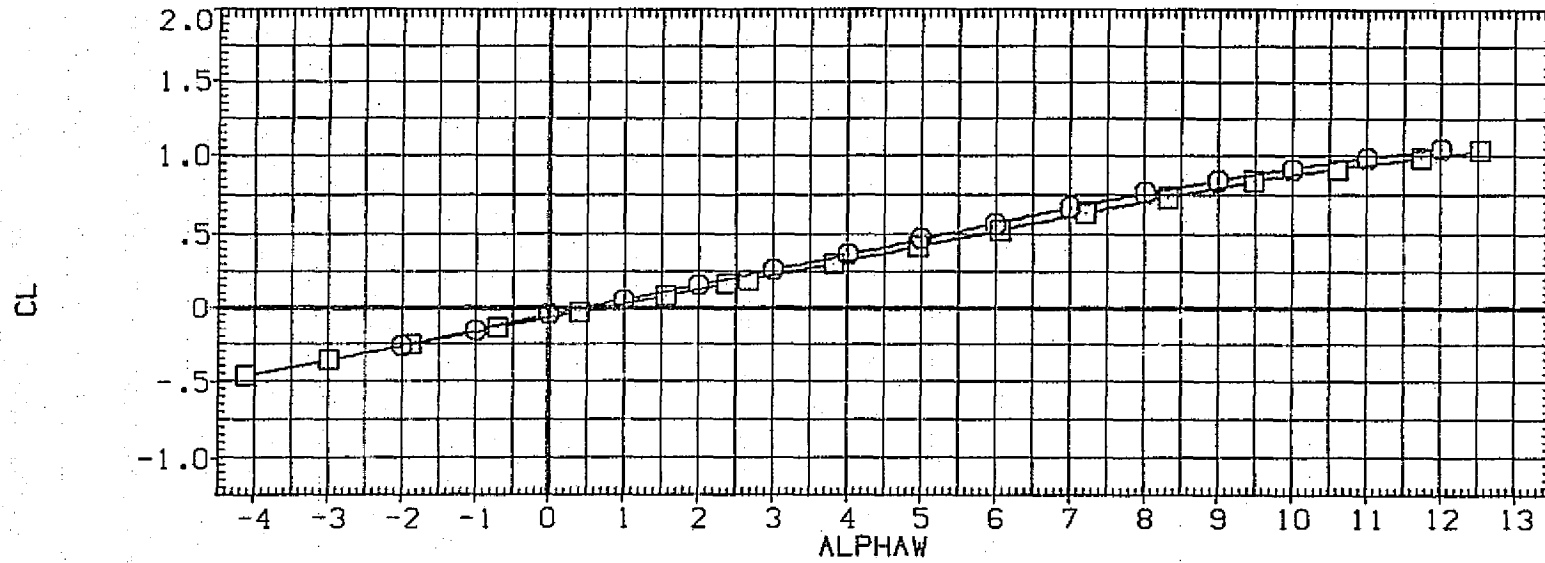


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(C)MACH = .60

PAGE 520

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM112)	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TCS AT38.3)
(RGP184)	CA6 K2H15.6.1V9.1S1-12 AT112 /111.1ORB TC4

STAB	BETA	IORB
-3.200	.000	4.000
-1.010	.000	4.250

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.8000	IN.
BREF	2348.0000	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7700	IN. ZC
SCALE	.0300	

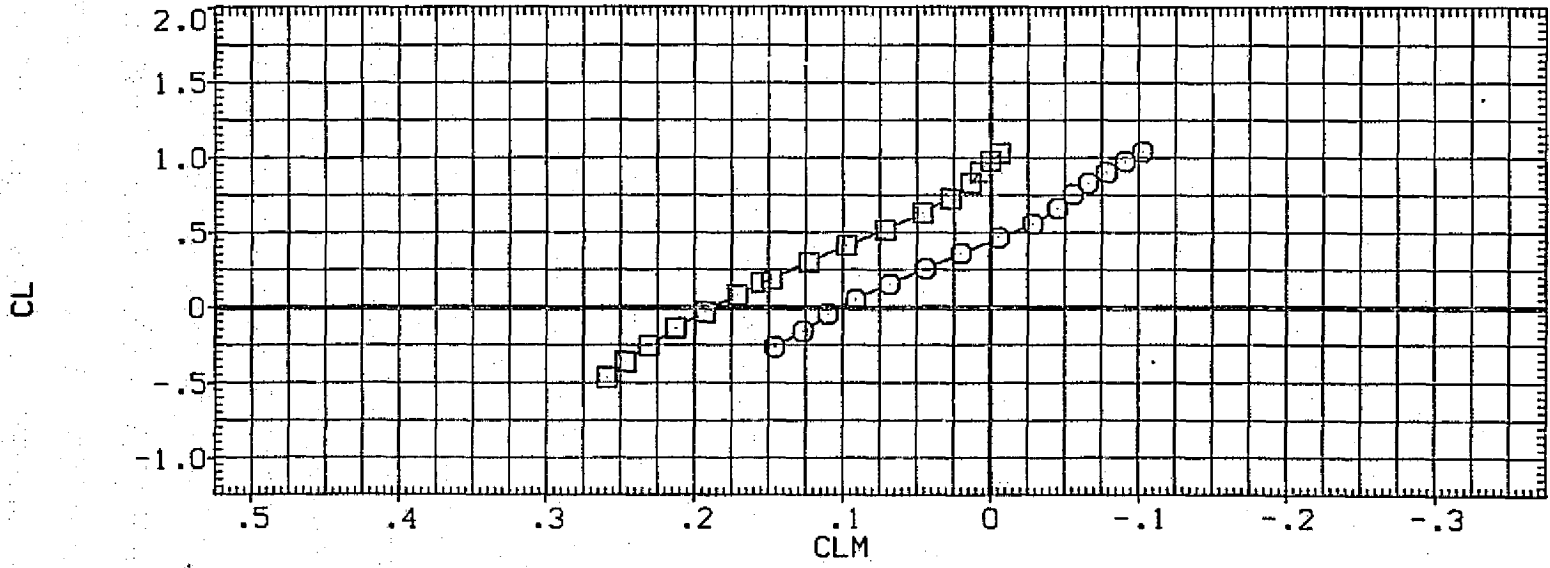
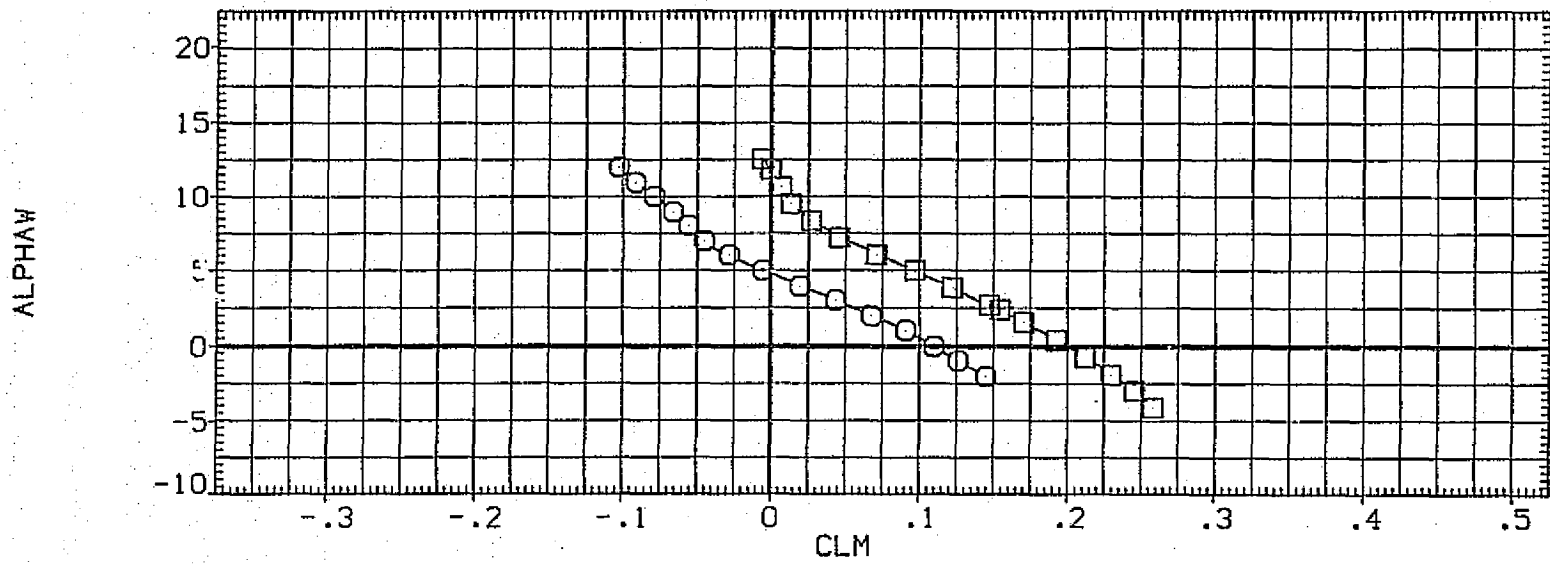


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= -1

(C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM112) □ CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)
 (R6P184) □ CA6 K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB BETA IORB
 -3.200 .000 4.000
 -1.010 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREI 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

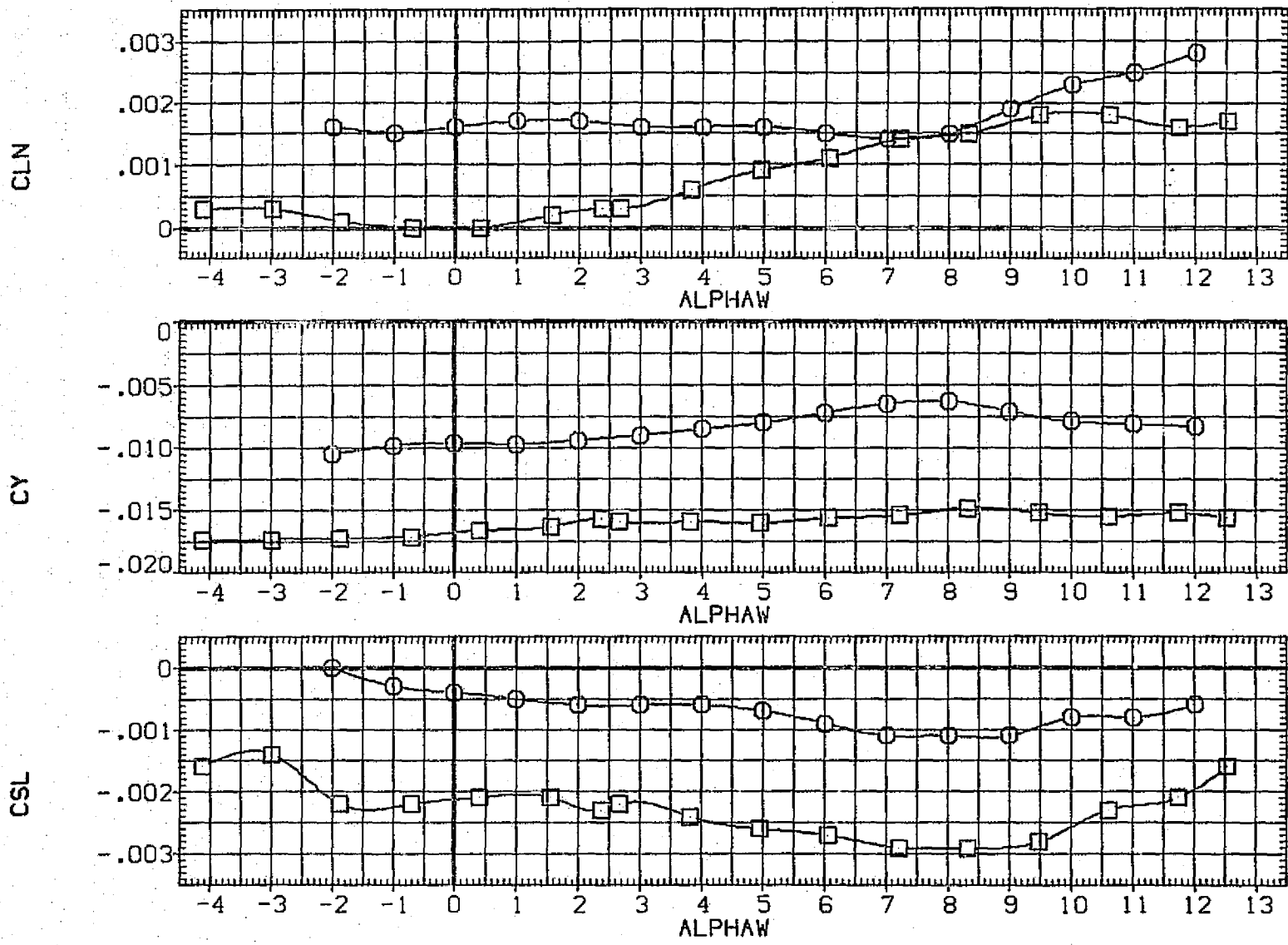


FIG. 103 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER= -1
 (C)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AGM126) \square CA5 K1 F3 H15.6 V9.1 (PLUS. ORB N02 AT38.3)
 (RGP214) \square CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBF8N24/28

STAB BETA IORB
 -2.000 .000 4.000
 -.020 .000 4.250

REFERENCE INFORMATION

SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

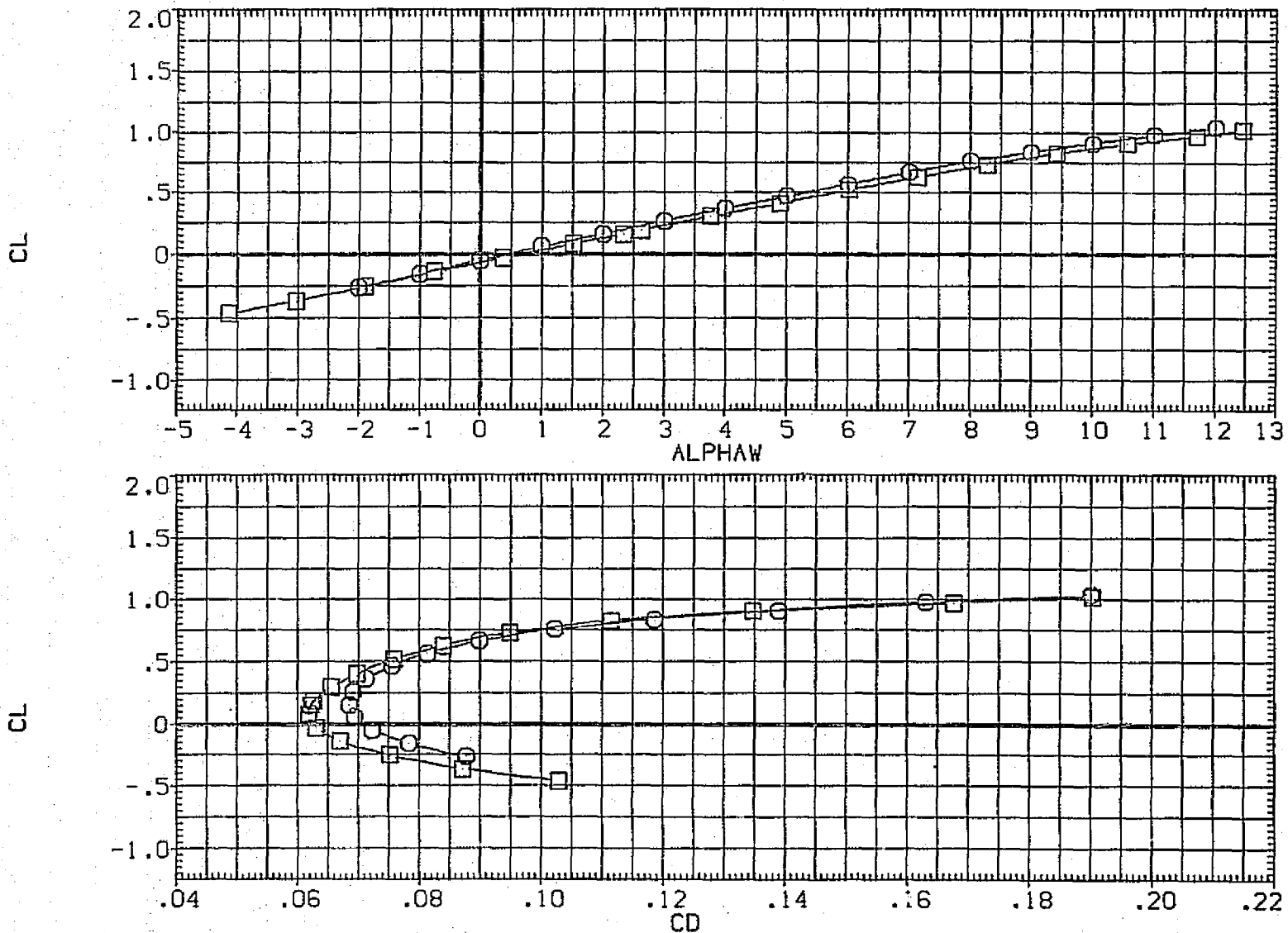


FIG. 104 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, TAILCONE OFF

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM126) ○ CAS K1 FO H15.6 V9.1 (PLUS. ORB NOZ AT38.3)
 (RGP214) □ CA6 K2H15.6.1V9.1S1-12 AT103.1/105 ORBFBN24/28

STAB BETA IORB
 -2.000 .000 4.000
 -.020 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.9000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

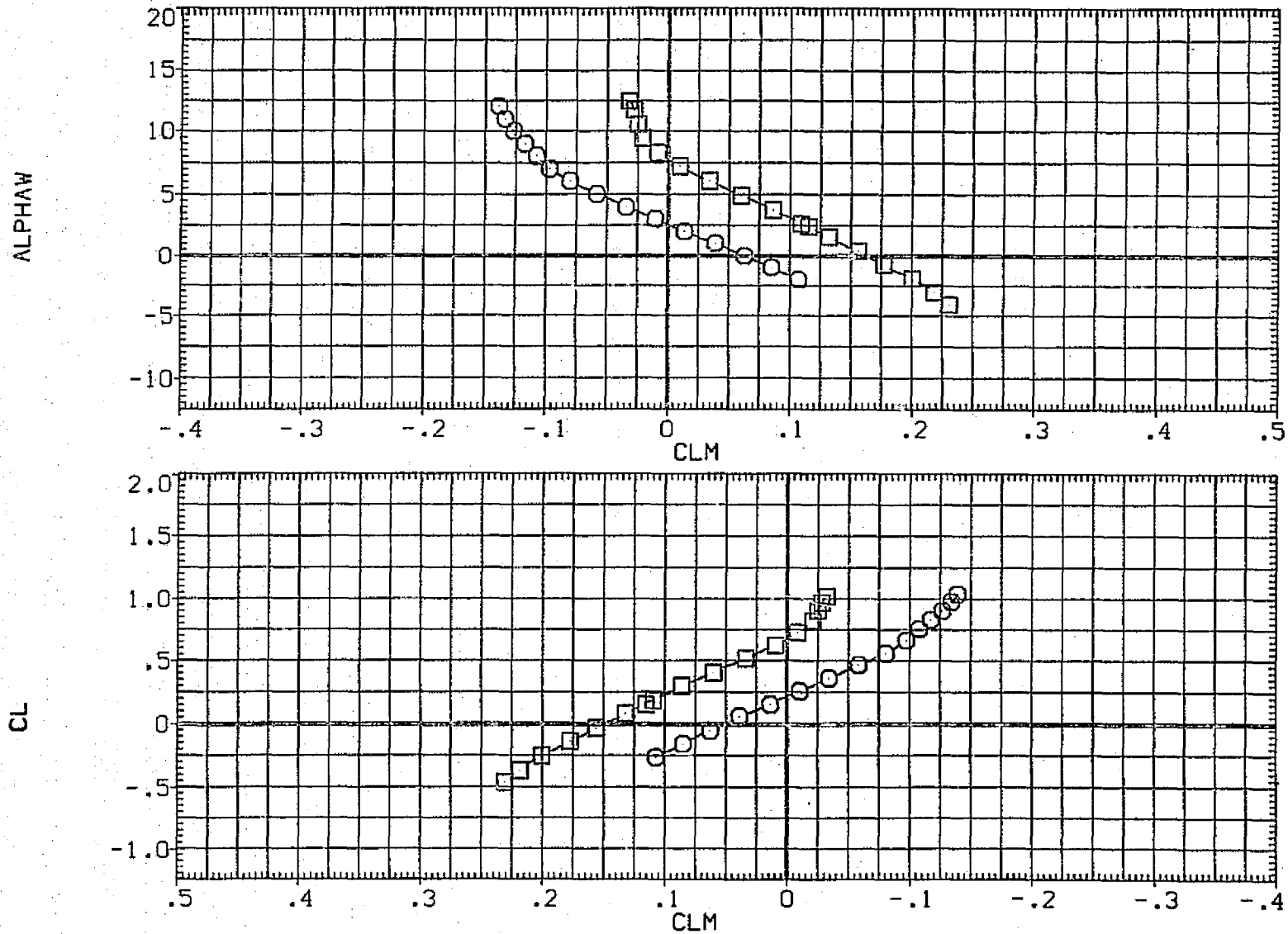


FIG. 104 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, TAILCONE OFF

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AGM126) ○ CA5 K1 F0 H15.6 V9.1 (PLUS. ORB NOZ AT38.3)
 (RGP214) □ CA6 K2H15.6.1V9.1S1-12 AT1D3.1/105 ORBF0N24/28

STAB BETA TORB
 -2.000 .000 4.000
 -.020 .000 4.250

REFERENCE INFORMATION
 SREF 5500.0000 SQ.FT.
 LREF 327.8000 IN.
 BREF 2348.0000 IN.
 XMRP 1339.8000 IN. XC
 YMRP .0000 IN. YC
 ZMRP 190.7700 IN. ZC
 SCALE .0300

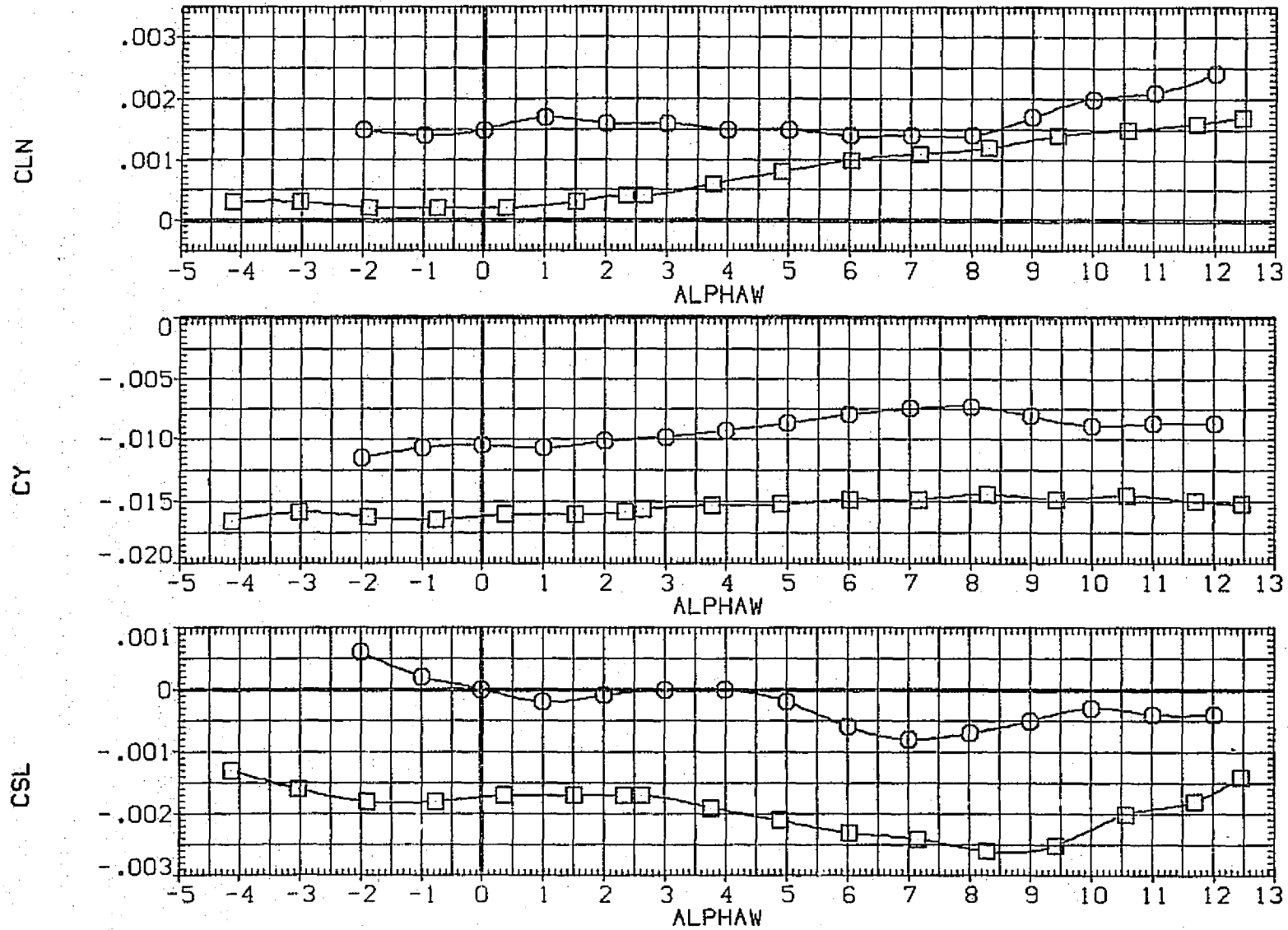


FIG. 104 CA-5 AND CA-6 COMPARISON, FERRY CONFIGURATION, TAILCONE OFF

(A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE9814) □ ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)
 (RGPO13) □ CA6 KIH15.1 VS.1

BETA STAB
 .000 -1.000
 .000 -1.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

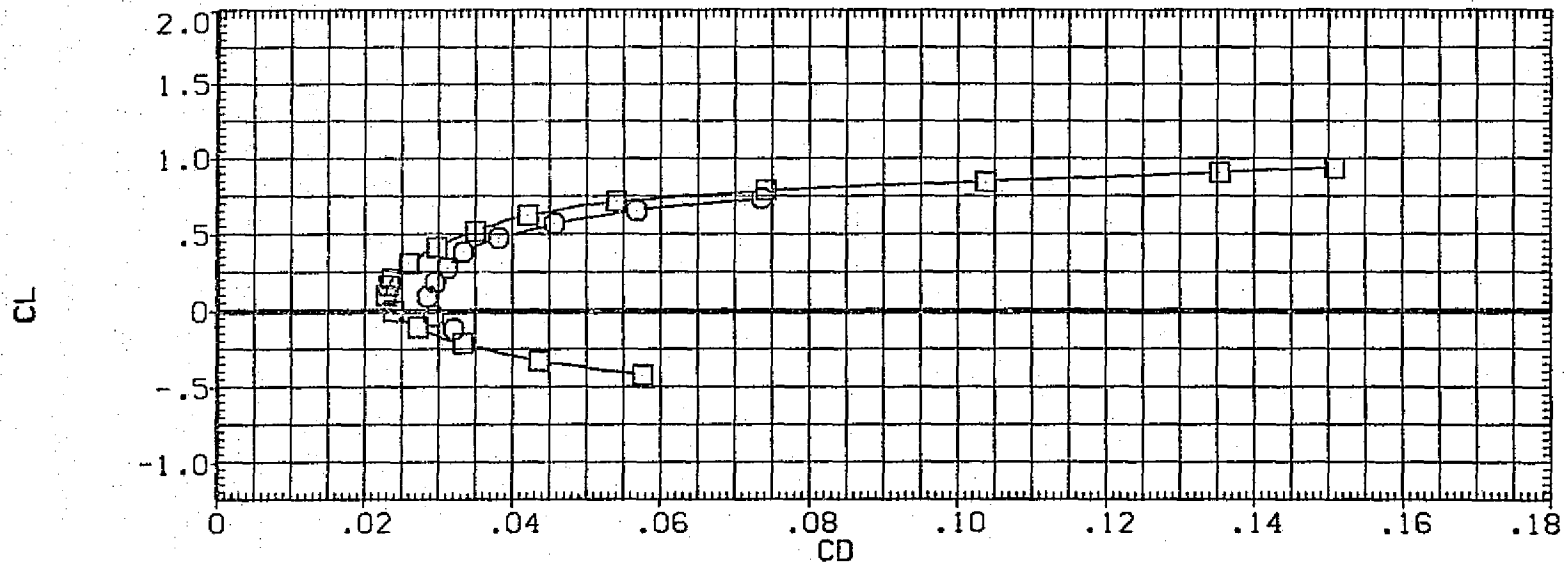
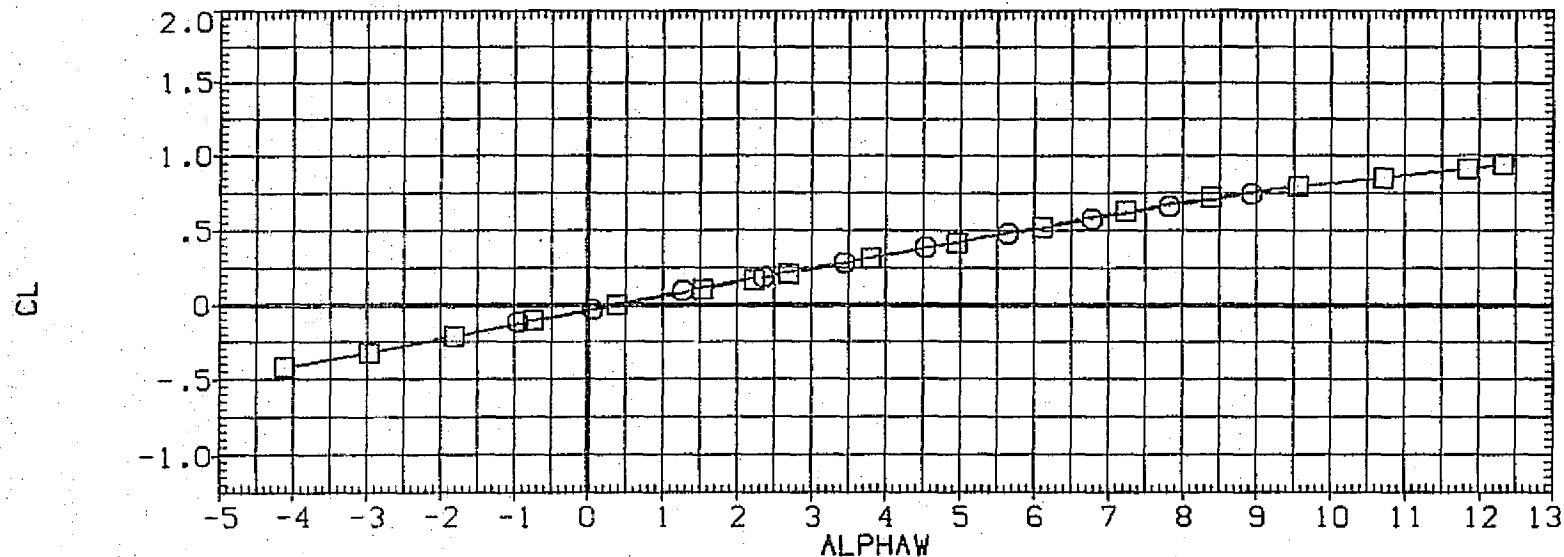


FIG. 105 CA-23 AND CA-6 COMPARISON, BASIC 747 CONFIGURATION, SPOILER = -1
 (A)MACH = .60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CE9B14) □ ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)
 (RGP013) ○ CA6 KIH15.1 V9.1

BETA STAB
 .000 -1.000
 .000 -1.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

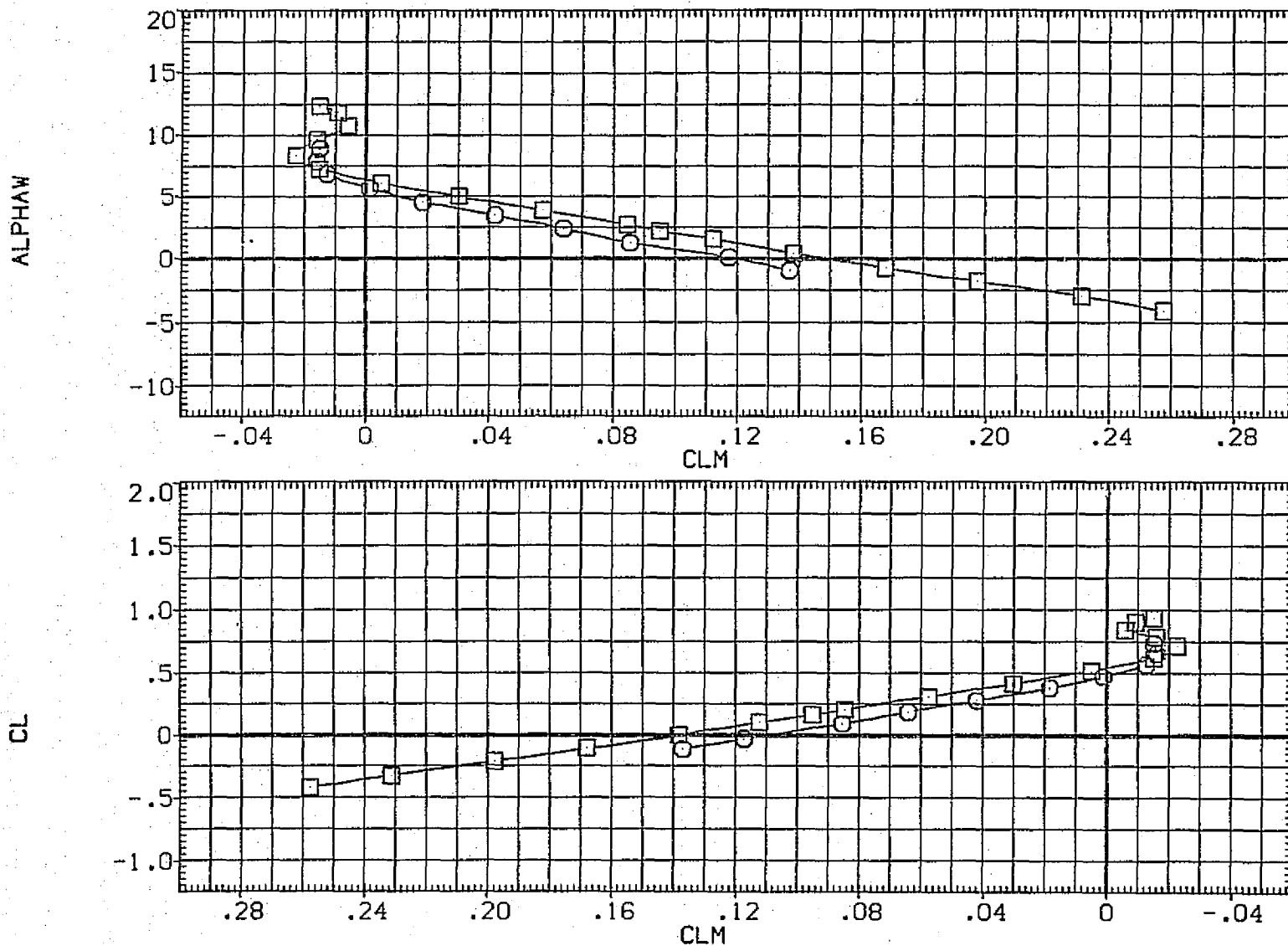


FIG. 105 CA-23 AND CA-6 COMPARISON, BASIC 747 CONFIGURATION, SPOILER = -1
 CAJMACH = .60

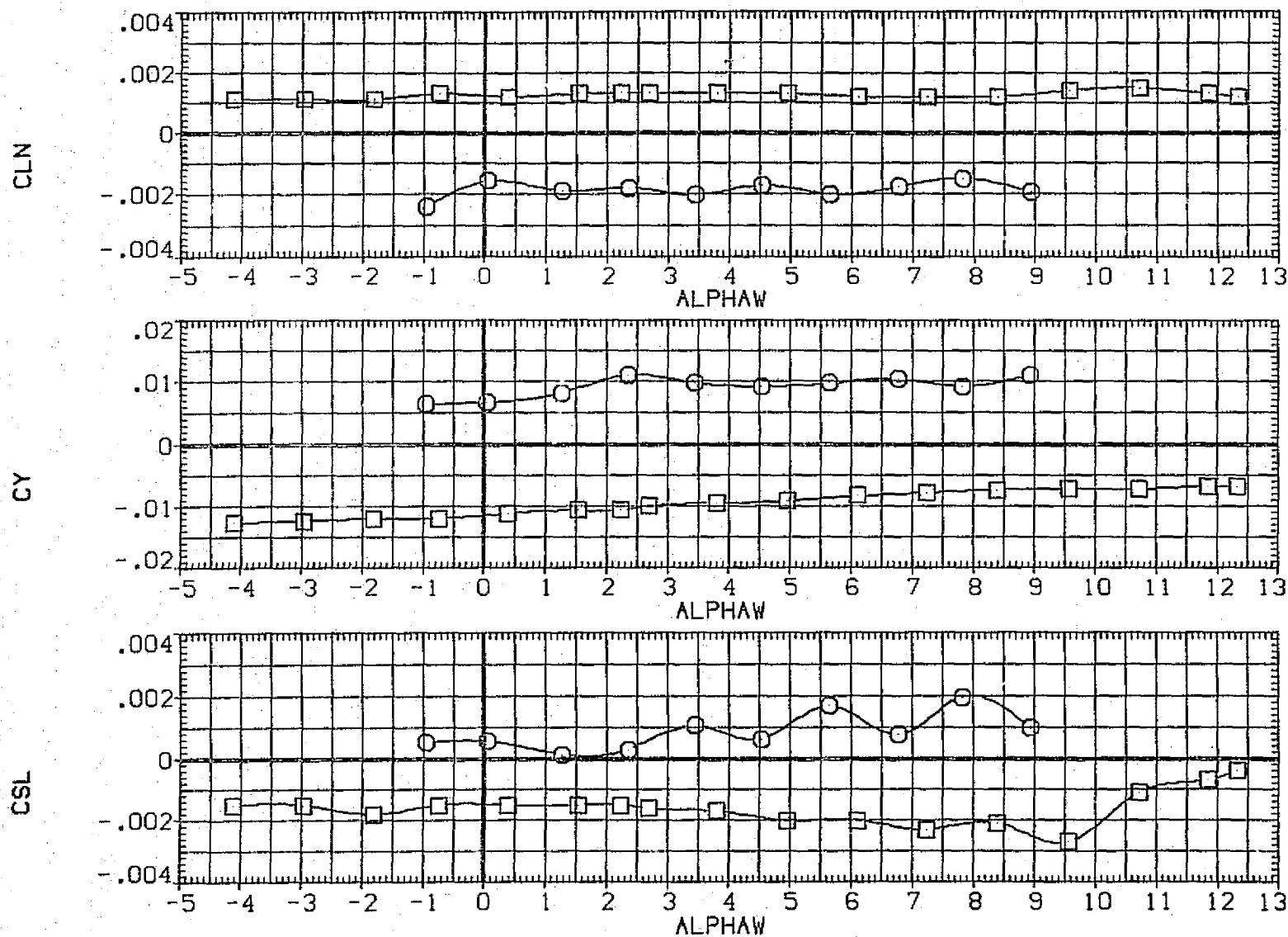


FIG. 105 CA-23 AND CA-6 COMPARISON, BASIC 747 CONFIGURATION, SPOILER = -1

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB
(CE9D37)	ARC14-080-1 CA23 747/1 01 AT1 (MATED)	5.000	.000	8.000
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 0RBF8N24/28	4.750	.000	8.110

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

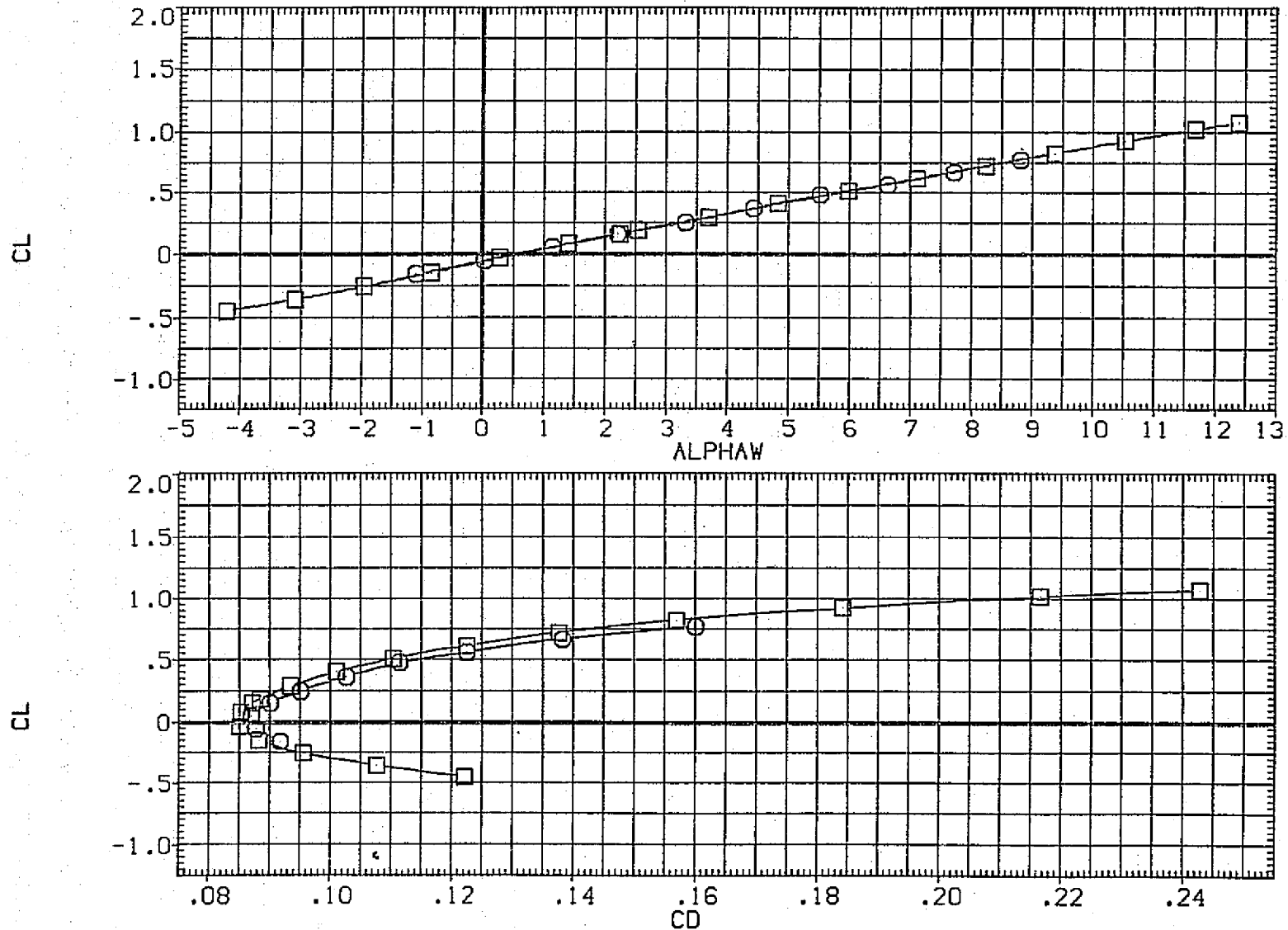


FIG. 106 CA-23 AND CA-6 COMPARISON, LAUNCH CONFIGURATION, SPOILER = 5

(A)MACH = .60

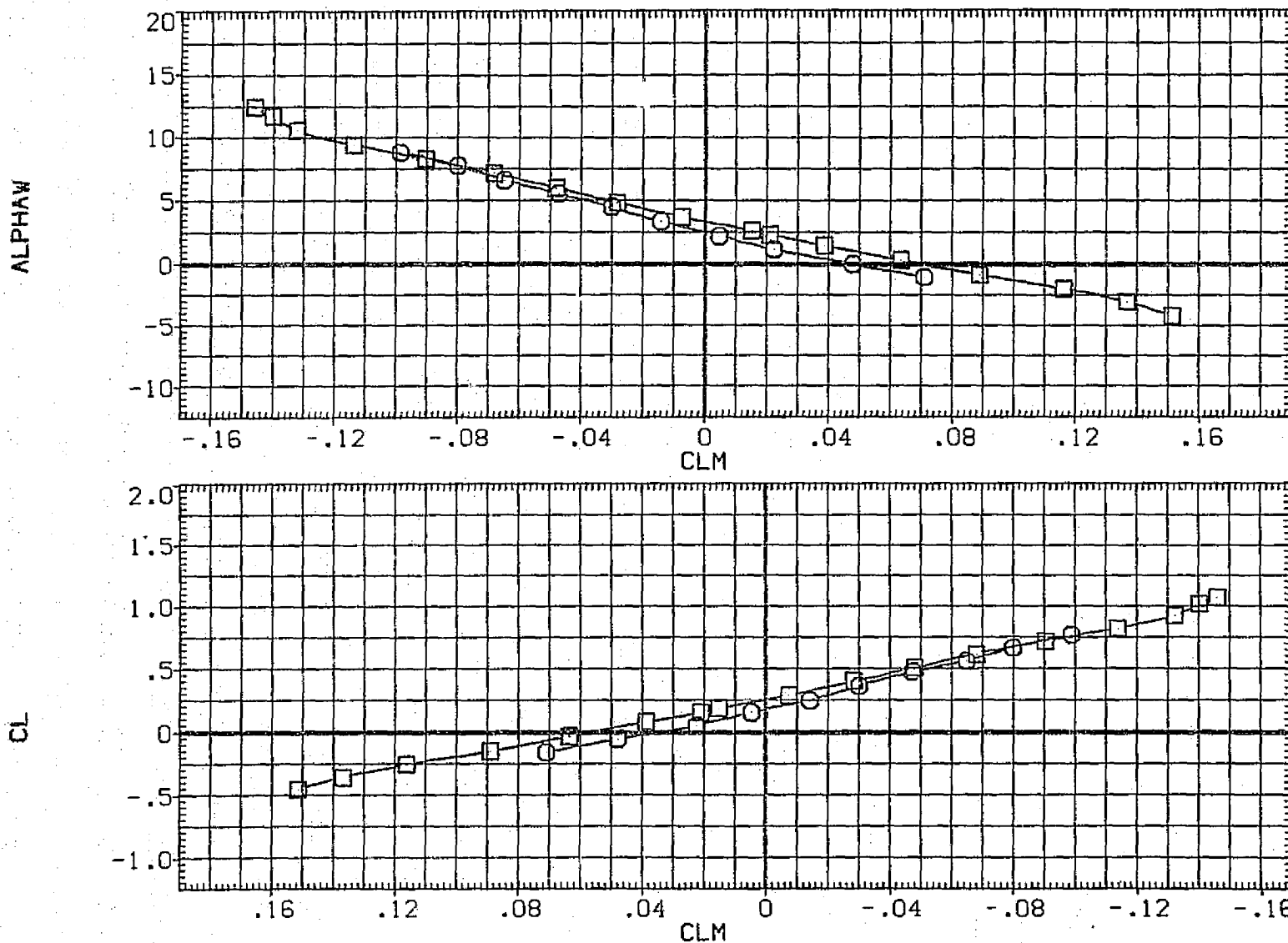


FIG. 106 CA-23 AND CA-6 COMPARISON, LAUNCH CONFIGURATION, SPOILER = 5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB
(CE9037)	ARC14-Q80-1 CA23 747/1 01 AT1 (MATED)	5.000	.000	8.000
(RGP117)	CA6 K2H15.6.1V9.1S1-12 AT103.1/95.3 ORBF8N24/28	4.750	.000	8.110

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

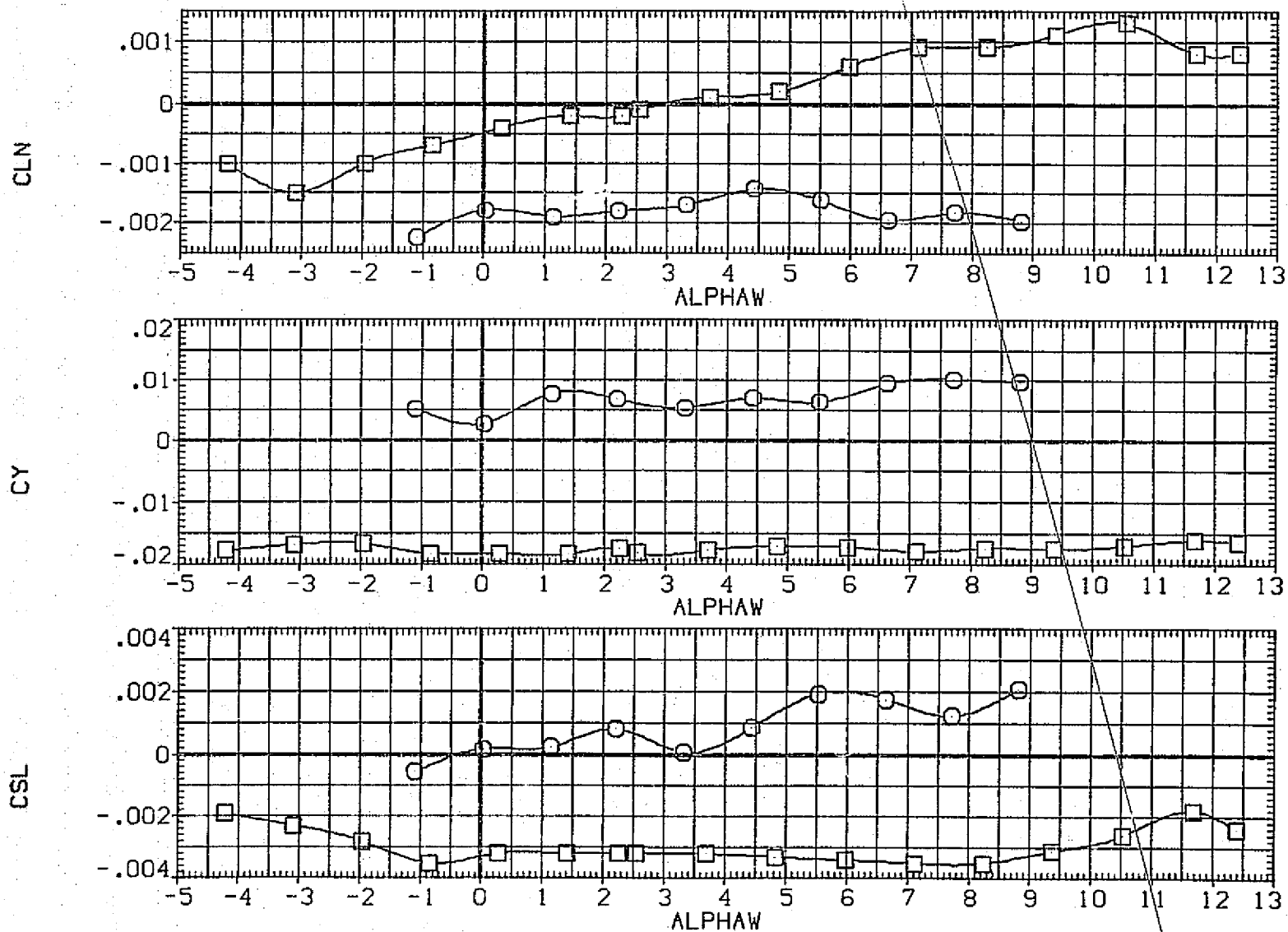


FIG. 106 CA-23 AND CA-6 COMPARISON, LAUNCH CONFIGURATION, SPOILER = 5

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM040)	BTWT-1431CAS K1 FO H15.1A V9.1
(RGPD20)	CAS K1H15.1 V9.1
(CESB14)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)
(CESB13)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)

BETA	STAB
.000	-2.000
.000	-.030
.000	-1.000
.000	1.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

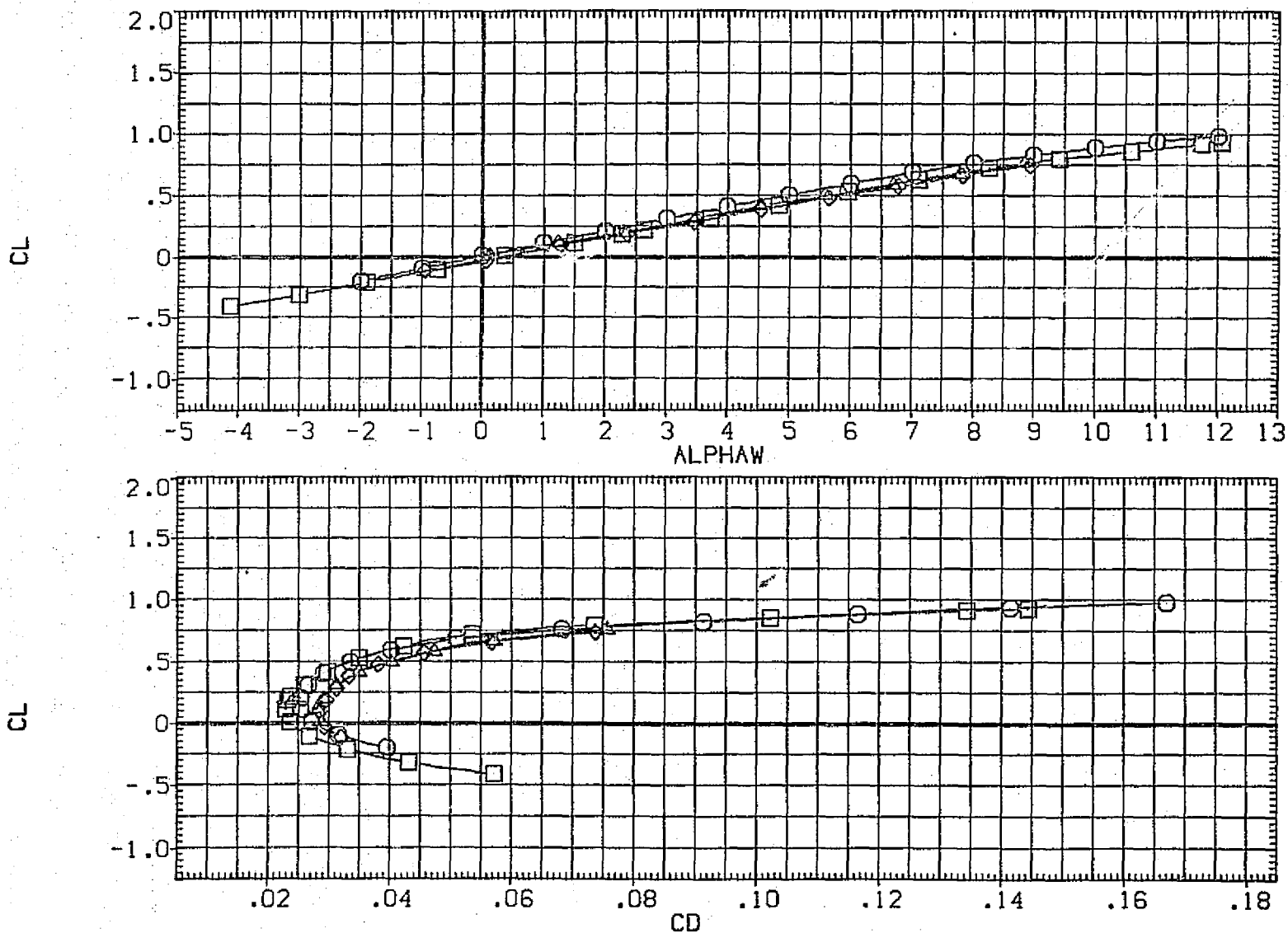


FIG. 107 CA-23, CA-5, CA-6 COMPARISON, BASIC 747 CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	STAB
(AGM040)	BTWT-1431CA5 KI FO HIS.1A V9.1	.000	-2.000
(RG020)	CA6 KIH15.1 V9.1	.000	-.030
(CE9B14)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)	.000	-1.000
(CE9B13)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)	.000	1.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

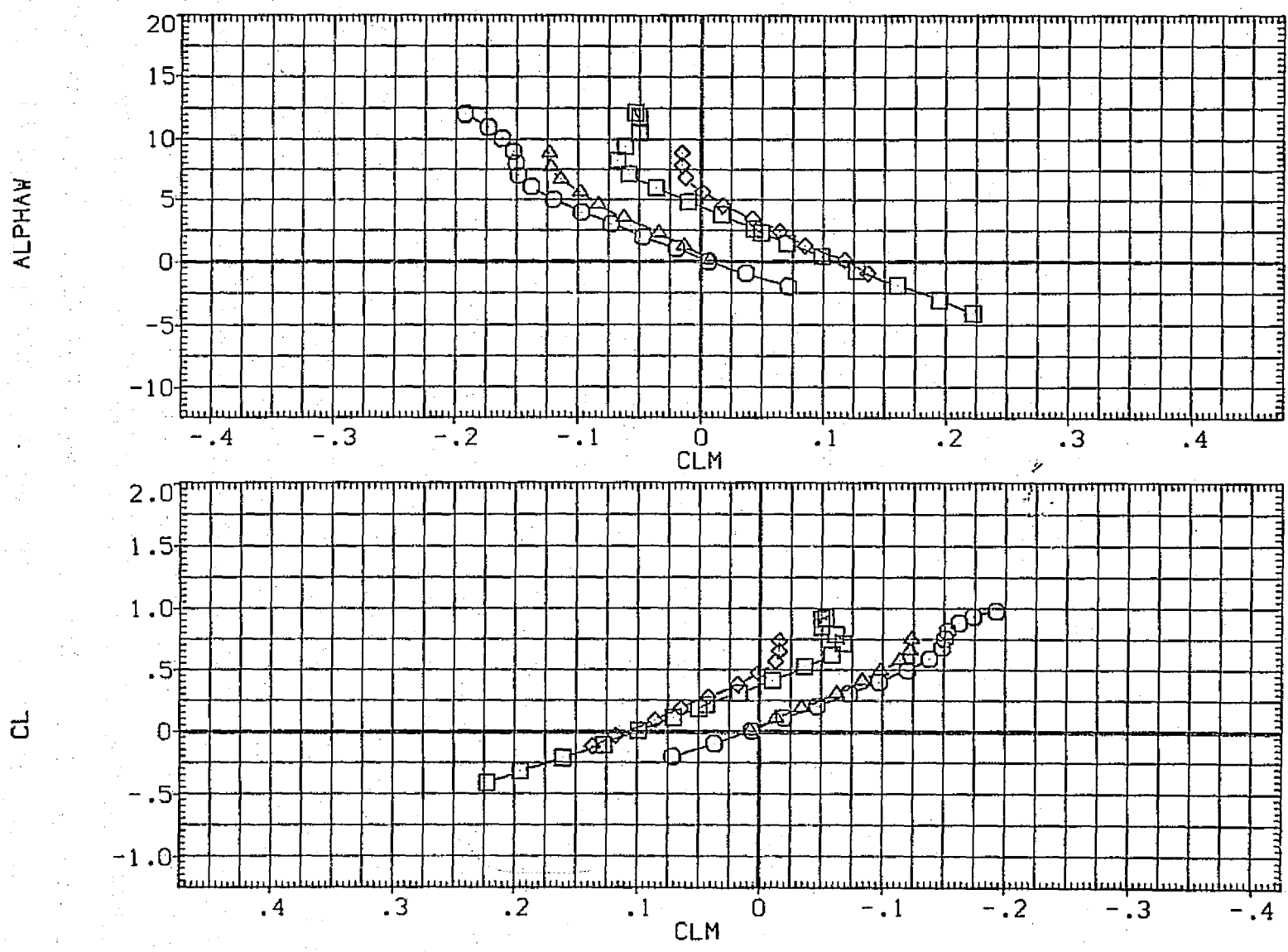


FIG. 107 CA-23,CA-5,CA-6 COMPARISON, BASIC 747 CONFIGURATION
 (A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGM040)	BTWT-1431CA5 K1 F0 H15.1A V9.1
(RGPO20)	CA6 K1H15.1 V9.1
(CE9B14)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)
(CE9B13)	ARC14-080-1 CA23 747/3 (CARRIER ISOLATED)

BETA	STAB
.000	-2.000
.000	-.030
.000	-1.000
.000	1.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

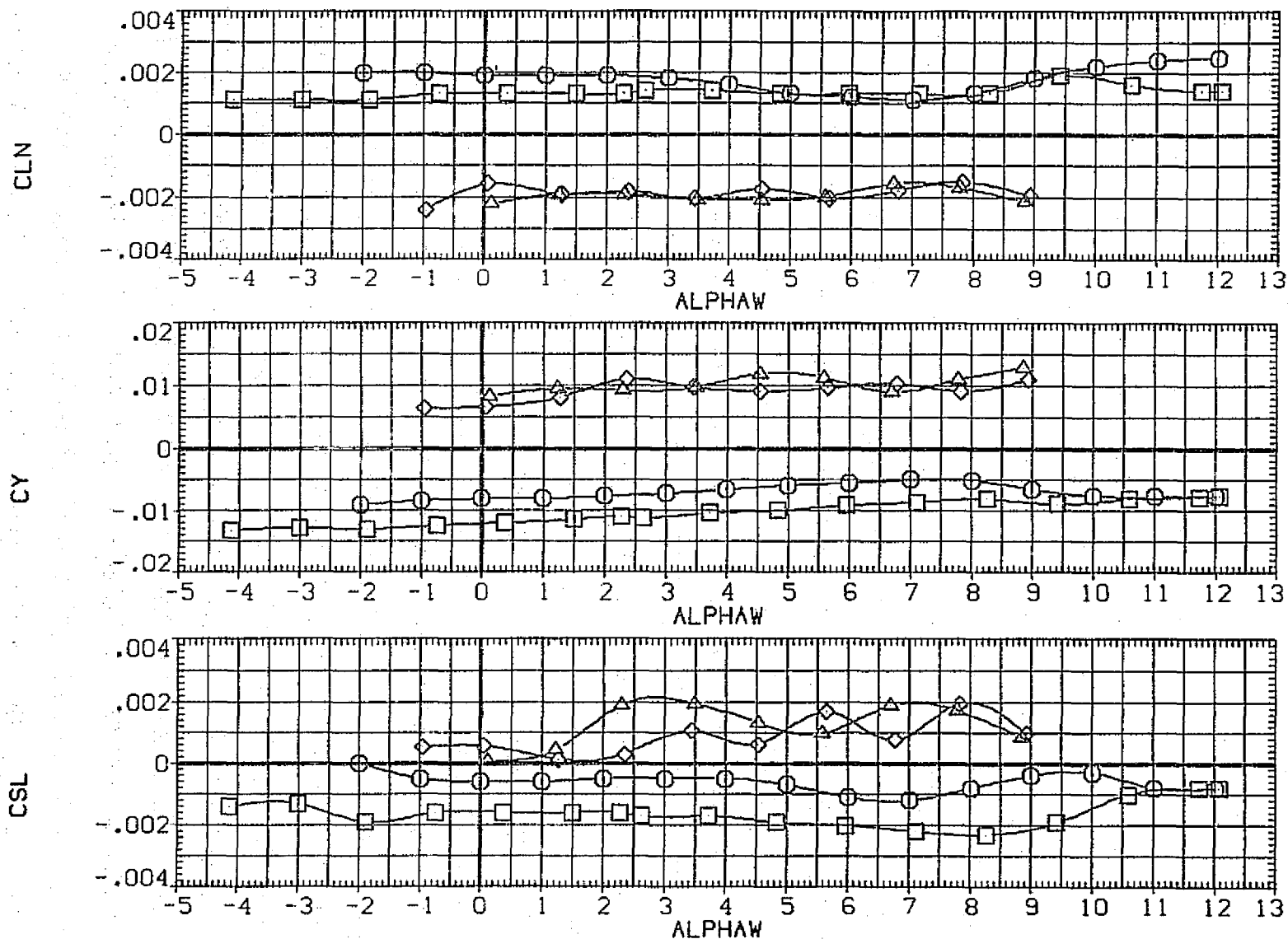


FIG. 107 CA-23, CA-5, CA-6 COMPARISON, BASIC 747 CONFIGURATION

(A) MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS
{CE9D58}	ARC14-080-1 CA23 747/1(-S1-S12)03 AT1(MATED)	-1.000	.000	4.000	
{AGM112}	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TC5 AT38.3)	-3.200	.000	4.000	
{RGP184}	CA6 K2H15.6.V9.1S1-12 AT112 /111.1ORB TC4	-1.010	.000	4.250	

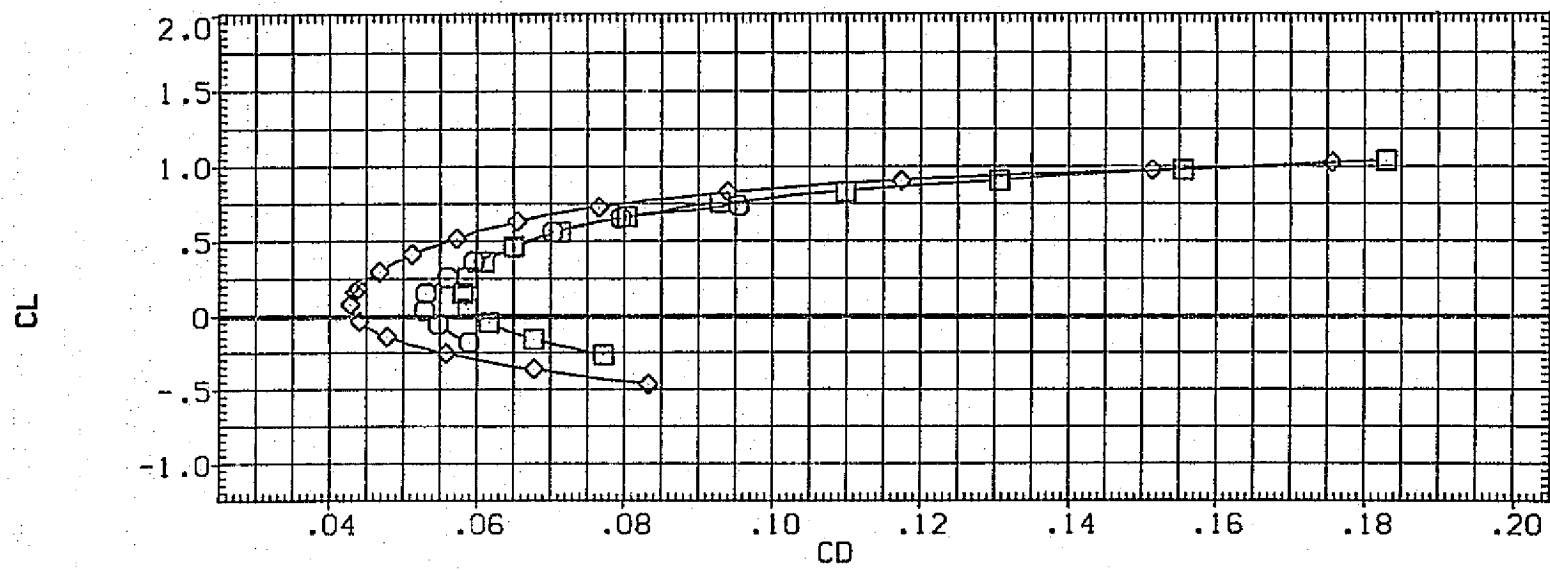
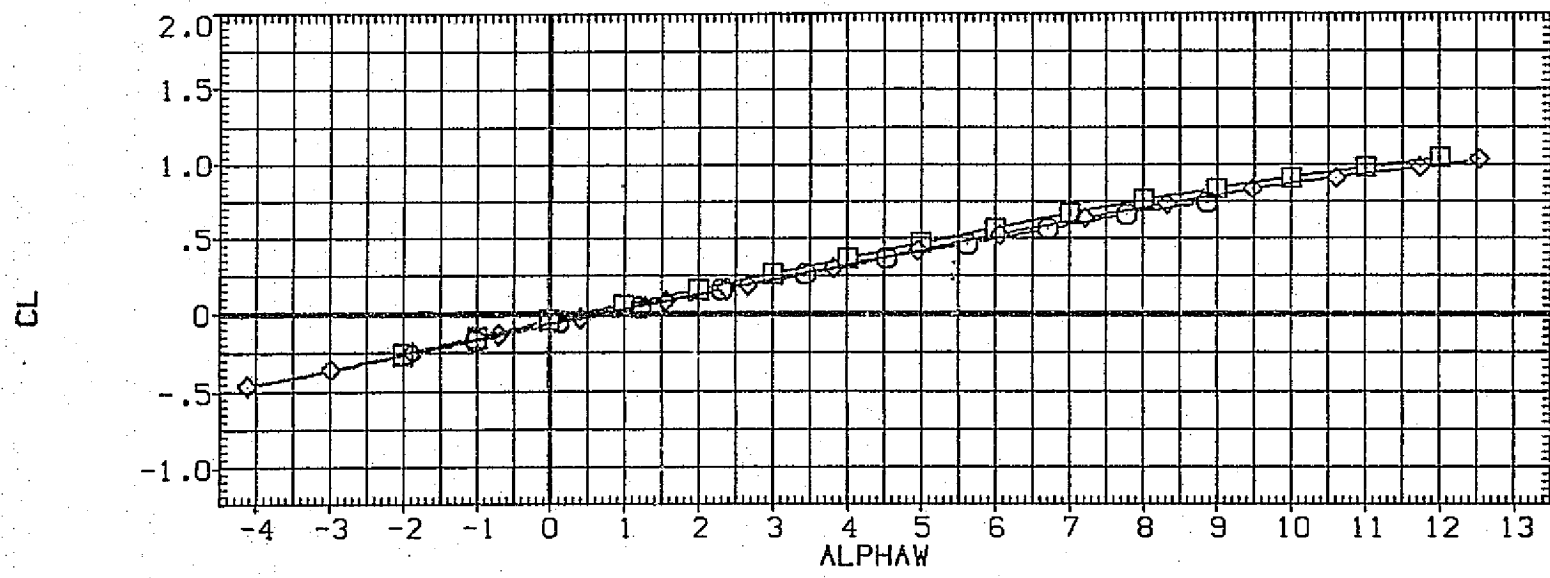


FIG. 108 CA-23,CA-5,CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1
 (A)MACH = .60 PAGE 535

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(CE9058)	ARC14-080-1 CA23 747/1(-S1-S12)03 AT1(MATED)
(AGM112)	CAS K1 FO H15.6 V9.1 (PLUS. ORB TCS AT38.3)
(RGP184)	CAG K2H15.6.1V9.1S1-12 AT112 /111.10RB TC4

STAB	BETA	IORB
-1.000	.000	4.000
-3.200	.000	4.000
-1.010	.000	4.250

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

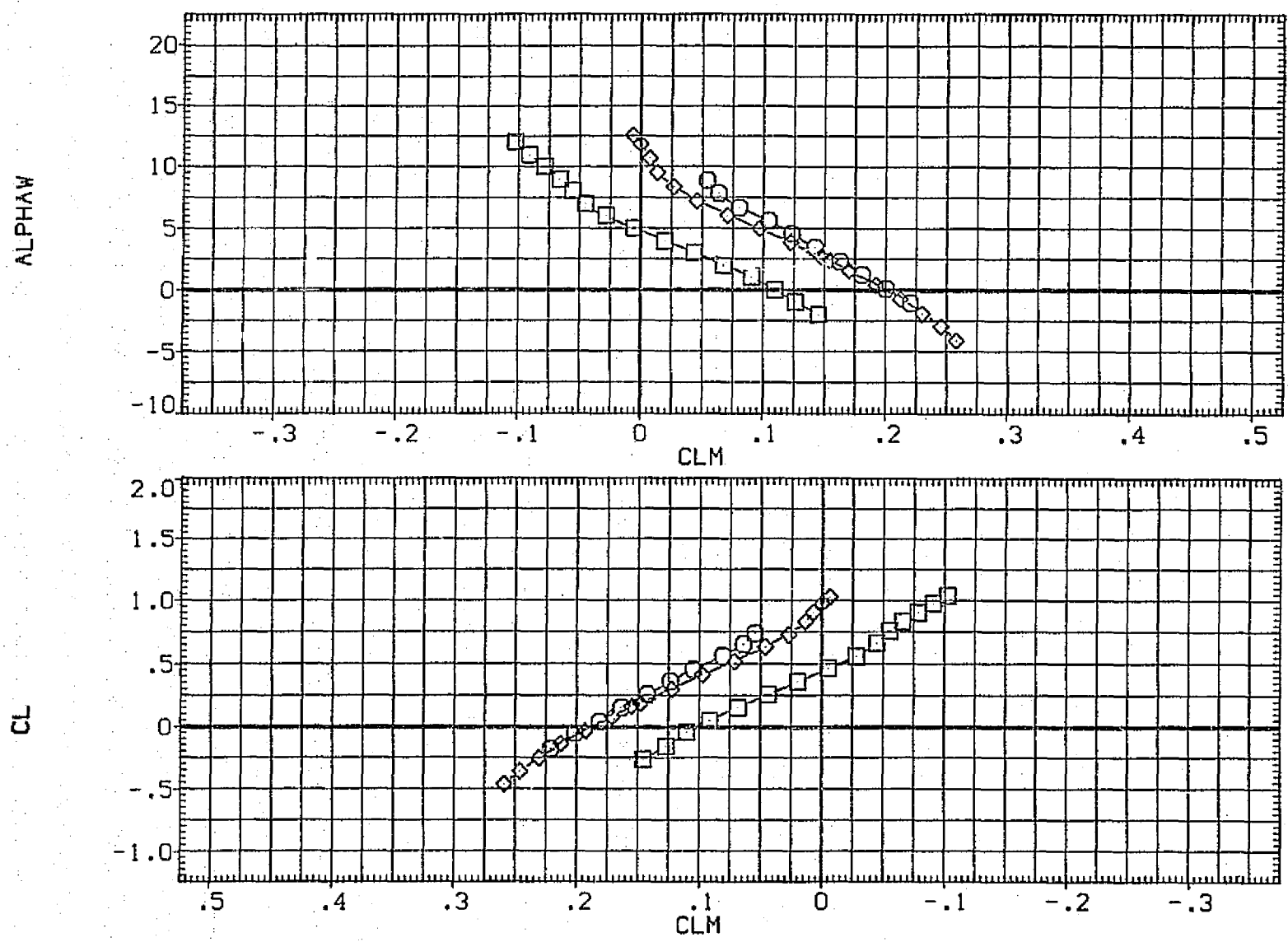


FIG. 108 CA-23, CA-5, CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1
 (A) MACH = .60 PAGE 536

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS
(CE9D58)	ARC14-080-1 CA23 747/1(-S1-S12)03 AT1(MATED)	-1.000	.000	4.000	
(AGH112)	CA5 K1 FO H15.6 V9.1 (PLUS. ORB TCS AT38.3)	-3.200	.000	4.000	
(RGP184)	CA6 K2H15.6.IV9.1S1-12 AT112 /111.1ORB TC4	-1.010	.000	4.250	

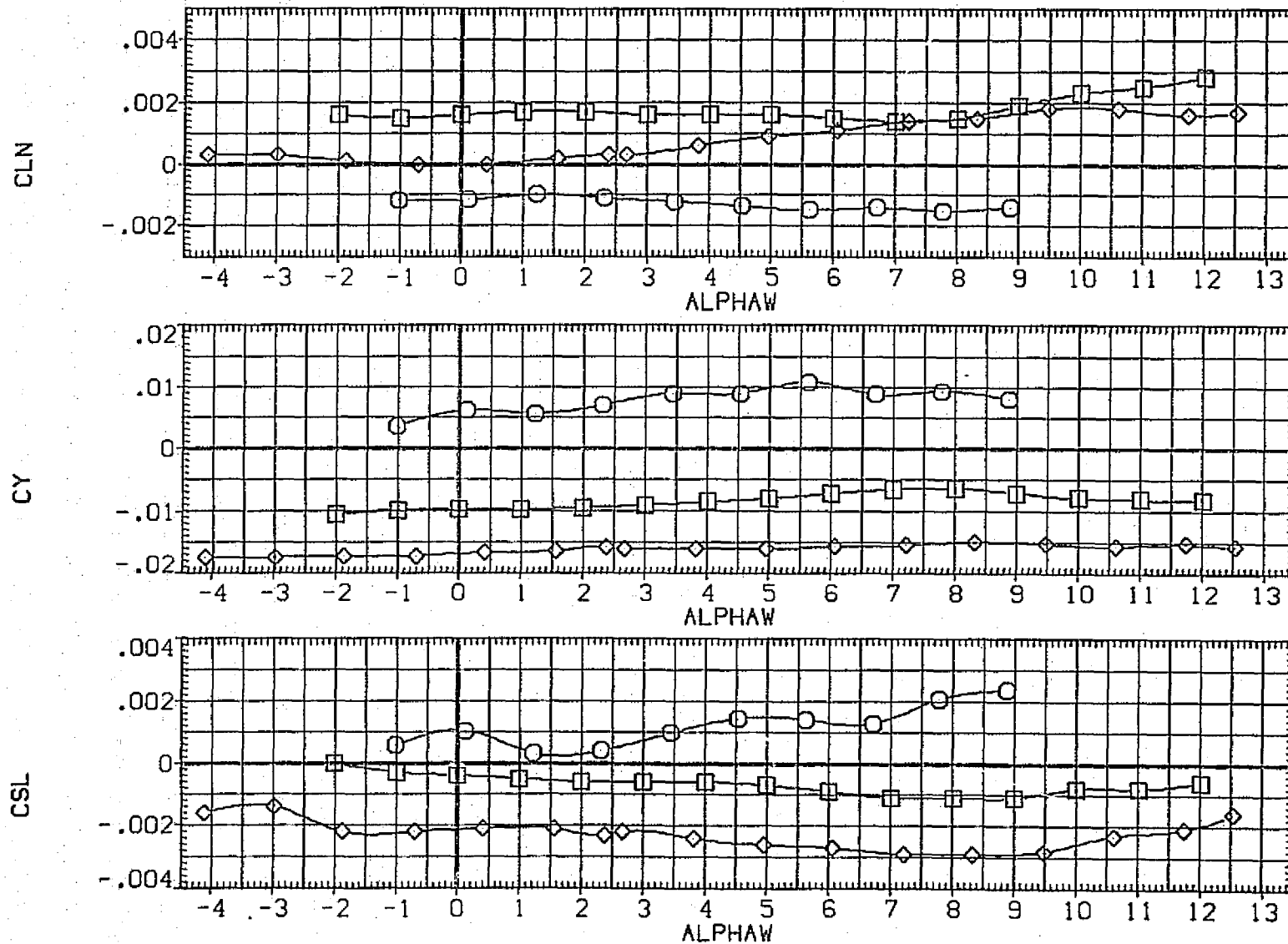


FIG. 108 CA-23,CA-5,CA-6 COMPARISON, FERRY CONFIGURATION, SPOILER = -1

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AGH091)	CA5 K1 F0 H15.6 V9.1 (PLUS. ORB NOZ AT38.2)
(AGH092)	CA5 K1 F0 H15.6 V9.1 (PLUS. ORB NOZ AT38.2)
(CE9D39)	ARC14-080-1 CA23 747/1 01 AT1 (MATED)
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28

STAB	BETA	IORB
-2.000	.000	7.850
-1.000	.000	7.850
-1.000	.000	8.000
-.900	.000	8.110

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

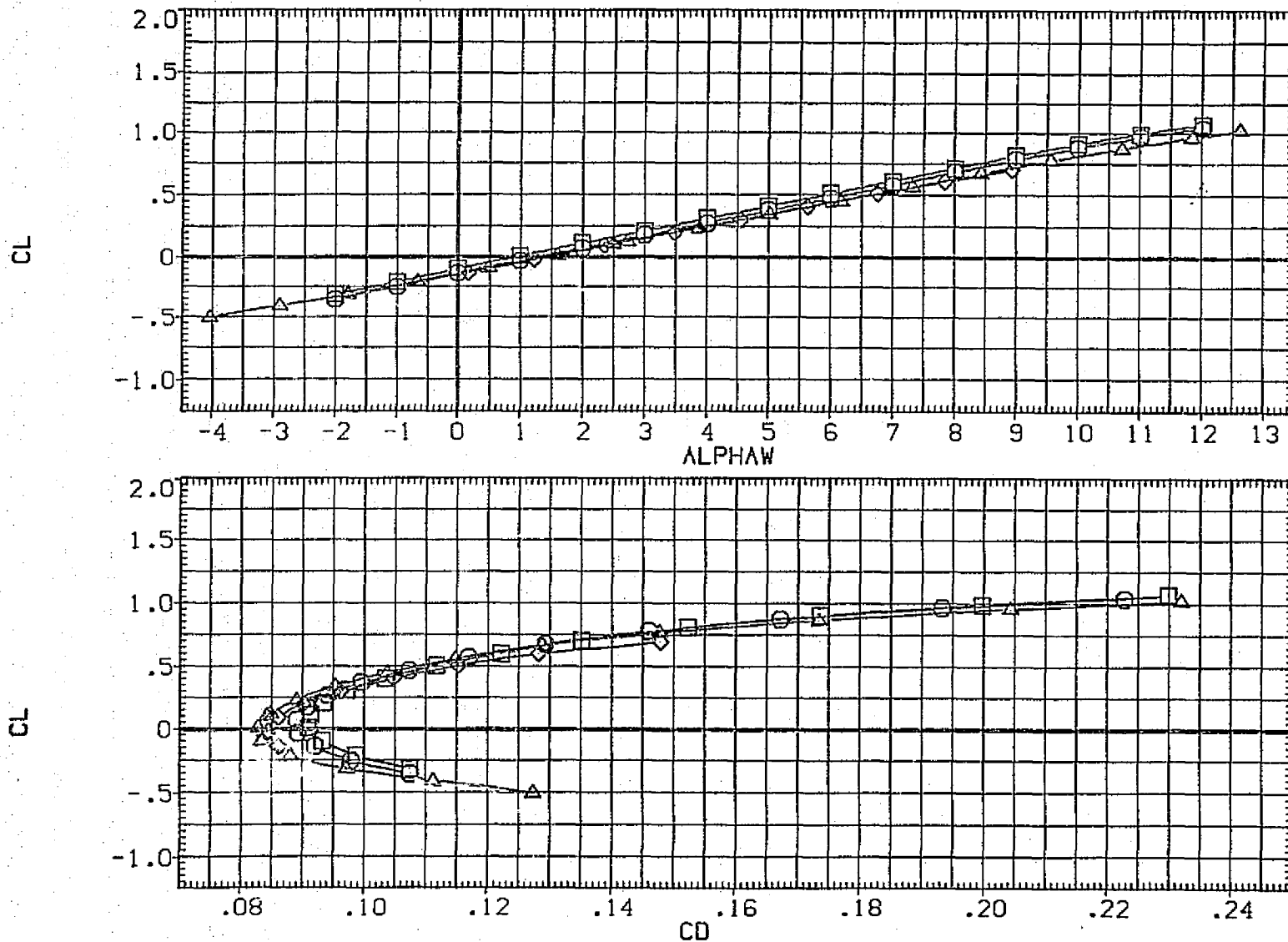


FIG. 109 CA-23, CA-5, CA-6 COMPARISON, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	IORB
(AGM091)	CA5 KI FO H15.6 V9.1 (PLUS, ORB NOZ AT38.2)	-2.000	.000	7.850
(AGM092)	CA5 KI FO H15.6 V9.1 (PLUS, ORB NOZ AT38.2)	1.000	.000	7.850
(CE9D39)	ARC14-080-1 CA23 747/1 G1 AT1 (MATED)	-1.000	.000	8.000
(RGP121)	CA6 K2H15.6.1V9.1S1-12 AT112 /95 ORBF8N24/28	-.900	.000	8.110

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

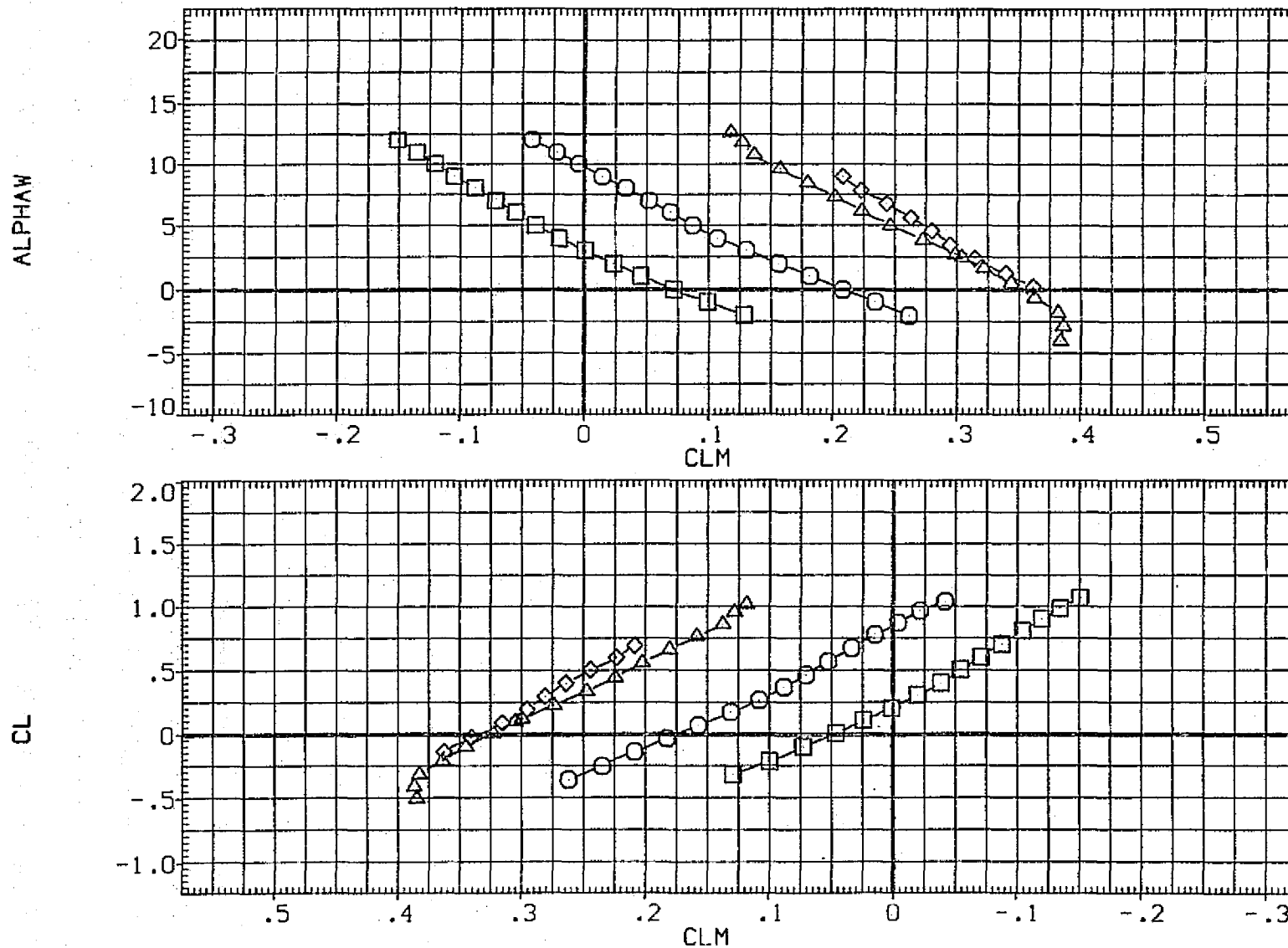


FIG. 109 CA-23, CA-5, CA-6 COMPARISON, LAUNCH CONFIGURATION

(A)MACH = .60

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	STAB	BETA	ICRB	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS
(AGM091)	CA5 K1 FD H15.6 V9.1 (PLUS. ORB NOZ AT38.2)	-2.000	.000	7.850	
(AGM092)	CA5 K1 FD H15.6 V9.1 (PLUS. ORB NOZ AT38.2)	1.000	.000	7.850	
(CE9D39)	ARC14-080-1 CA23 747/1 01 AT1 (MATED)	-1.000	.000	8.000	
(RGP121)	CA6 K2H15.6.1V9.191-12 AT112 /95 ORBFBN24/28	-.900	.000	8.110	

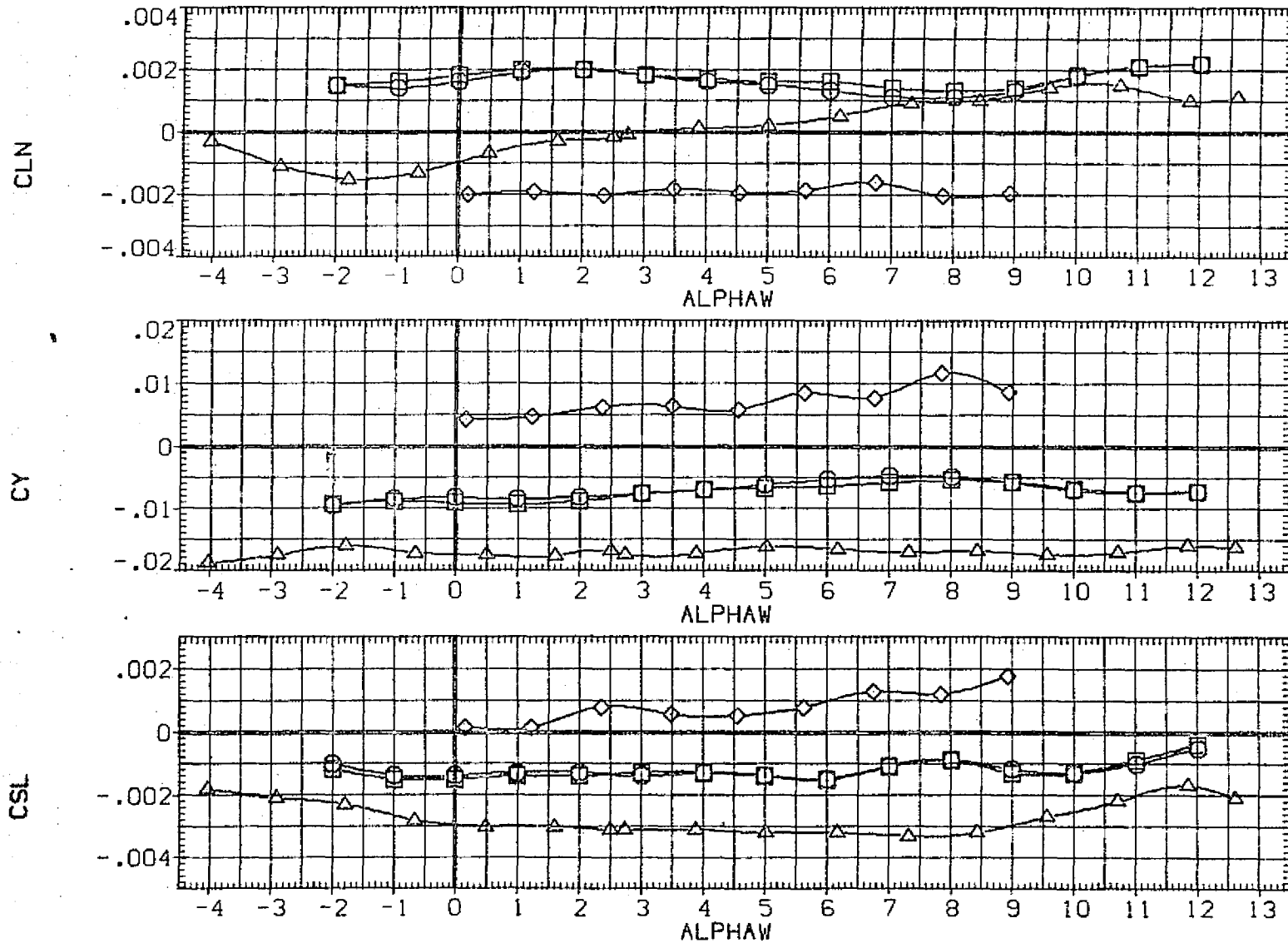


FIG. 109 CA-23, CA-5, CA-6 COMPARISON, LAUNCH CONFIGURATION

(A)MACH = .60