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WIND TUNNEL INVESTIGATION OF NACELLE-AIRFRAME INTERFERENCE AT MACH NUMBERS OF 0.9 to 1.4 – FORCE DATA

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16. Abstract

Detailed interference force and pressure data were obtained on a representative wing-body-nacelle combination at Mach numbers of 0.9 to 1.4. The model consisted of a delta wing-body aerodynamic force model with four independently supported nacelles located beneath the wing-body combination. The model was mounted on a six-component force balance, and the left-hand wing was pressure-instrumented. Each of the two right-hand nacelles was mounted on a six-component force balance housed in the thickness of the nacelle, while each of the left-hand nacelles was pressure-instrumented. The primary variables examined included Mach number, angle of attack, nacelle position, and nacelle mass-flow ratio. Four different configurations were tested to identify various interference forces and pressures on each component; these included tests of the isolated nacelle, the isolated wing-body combination, the four nacelles as a unit, and the total wing-body-nacelle combination. Nacelle axial location, relative to both the wing-body combination and to each other, was the most important variable in determining the net interference among the components. The overall interference effects were found to be essentially constant over the operating angle-of-attack range of the configuration, and nearly independent of nacelle mass-flow ratio.

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WIND TUNNEL INVESTIGATION OF NACELLE-AIRFRAME INTERFERENCE AT MACH NUMBERS OF 0.9 TO 1.4 - FORCE DATA

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SUMMARY

Detailed interference force and pressure data were obtained on a representative wing-body-nacelle combination at Mach numbers of 0.9 to 1.4. The model consisted of a delta wing-body aerodynamic force model with four independently supported nacelles located beneath the wing-body combination. The model was 62.2 in. long and had a wing span of 40.8 in. The model was mounted on a six-component force balance, and the left-hand wing was pressure-instrumented. Each of the two right-hand nacelles was mounted on a six-component force balance housed in the thickness of the nacelle, while each of the left-hand nacelles was pressure-instrumented. The nacelle support system provided the flexibility of varying the position of the nacelles relative to the wing-body combination and each other, and the capability of controlling the mass flow through each nacelle.

The experimental program was conducted in the Ames 11- by 11-Foot Wind Tunnel at a constant unit Reynolds number of 3.0×10^6/ft. The primary variables examined included Mach number, angle of attack, nacelle position, and nacelle mass-flow ratio. Four different configurations were tested to identify various interference forces and pressures on each component; these included tests of the isolated nacelle, the isolated wing-body combination, the four nacelles as a unit, and the total wing-body-nacelle combination. Nacelle axial location, relative to both the wing-body combination and to each other, was the most important variable in determining the net interference among the components. The overall interference effects were found to be essentially constant over the operating angle-of-attack range of the configuration, and nearly independent of nacelle mass-flow ratio.

INTRODUCTION

To achieve a substantial increase in cruise speed of current transport aircraft, recent efforts have been devoted to exploring the feasibility of a low supersonic transport aircraft which does not produce a

noticeable overpressure at ground level (ref. 1). Due to the inherently high drag and large interference effects associated with the transonic Mach number range, the design of an efficient aircraft is critically dependent upon the integration of the various components. This is particularly true for the propulsion system design and integration, since the installation effects must be included in the selection of the engine cycle. Little data is available that is directly applicable to propulsion system integration problems at these Mach numbers. Therefore, an experimental program was formulated to obtain detailed interference data on a representative transport over this Mach number range. The principal objectives of this program were to evaluate the performance penalties associated with the propulsion system installation and operation and to acquire detailed force and pressure data to be used for the evaluation of analytical techniques. The force data is presented in this report, and the pressure data is presented in reference 2.

NOMENCLATURE

The lift, drag, and pitching moment of the wing-body and wing-body-nacelle configurations are presented in the stability-axis coordinate system. The individual nacelle forces are presented in the body-axis coordinate system.

Symbol	Definition
A_{AC}	nacelle aft cavity cross-sectional area
A_C	nacelle capture area of nacelle; πR_C^2
A_{FC}	nacelle forward cavity cross-sectional area
A_L	nacelle lip cavity cross-sectional area
A_{S1}	first-order, nacelle seal, balance constant
A_{S2}	second-order, nacelle seal, balance constant
A_{SF}	nacelle forward internal lip surface area
ALPHA	angle of attack
B	wing span, 40.8 in.
c	chord

Symbol	Definition
CAI,CAO	axial force coefficient of inboard and outboard nacelles, respectively; axial force/qA_c
CAO-AC	aft cavity, outboard nacelle, axial force balance correction; aft cavity axial force/qA_c(table 3)
CAO-FC	forward cavity, outboard nacelle, axial force balance correction; forward cavity axial force/qA_c (table 3)
CAO-L	lip cavity, outboard nacelle, axial force balance correction; forward lip cavity axial force/qA_c (table 3)
CAO-S	seal, outboard nacelle, axial force balance correction; seal force/qA_c(table 3)
CAO-SF	internal lip skin friction, outboard nacelle, axial force balance correction; internal lip frictional force/qA_c(table 3)
CAO-T	total outboard nacelle, axial force balance correction; (CAO-AC) + (CAO-FC) + (CAO-L) + (CAO-S) + (CAO-SF), added to gross axial force coefficient (table 3)
CD-WB	drag coefficient of wing-body combination; drag of wing-body/qS
CD-WBN	drag coefficient of wing-body-nacelle combination; drag of wing-body plus drag of nacelles/qS
CFO	internal lip, average skin-friction coefficient
CLMI,CLMO	pitching-moment coefficient of inboard and outboard nacelles, respectively; pitching moment/qLA_c
CL-WB	lift coefficient of wing-body combination; lift of wing-body/qS
CL-WBN	lift coefficient of wing-body-nacelle combination; lift of wing-body plus lift of nacelles/qS
CM-WB	pitching-moment coefficient of wing-body combination; pitching moment of wing-body/qC_RS

Symbol	Definition
CM-WBN	pitching-moment coefficient of wing-body-nacelle combination; pitching moment of wing-body plus pitching moment of nacelles/qC_RS
CNI,CNO	normal force coefficient of inboard and outboard nacelles, respectively; normal force/qA_c
C_R	reference root chord of wing-body combination, 29.23 in.
CYI,CYO	side-force coefficient of inboard and outboard nacelles, respectively; side force/qA_c
CYNI,CYNO	yawing-moment coefficient of inboard and outboard nacelles, respectively; yawing moment/qLA_c
DX	axial position of the outboard nacelle lip minus the axial position of the inboard nacelle lip, (X-OUTBD) - (X-INBD)
DXI	axial position of the outboard left-hand (pressure instrumentation) nacelle minus the axial position of the outboard right-hand (force-instrumented) nacelle
L	nacelle length, 10.54 in.
L	lower wing surface
L/D-WB	lift-to-drag ratio of wing-body combination, (CL-WB)/(CD-WB)
L/DWBN	lift-to-drag ratio of wing-body-nacelle combination, (CL-WBN)/(CD-WBN)
MFR-AV	average mass-flow ratio of the four nacelles
MFR-LI	mass-flow ratio of left-hand inboard nacelle
MFR-LO	mass-flow ratio of left-hand outboard nacelle
MFR-RI	mass-flow ratio of right-hand inboard nacelle
MFR-RO	mass-flow ratio of right-hand outboard nacelle

Symbol	Definition
MO	average Mach number over the internal lip surface of outboard nacelle
PAC	average, nacelle aft balance cavity static pressure
PB1/PI	ratio of average wing-body base pressure to free stream
PB2/PI	ratio of average wing-body sting cavity pressure to free stream
PFC	average, nacelle forward balance cavity static pressure
PI	free stream static pressure
PL	average, nacelle internal lip static pressure
q	free stream dynamic pressure
R	nacelle radius
R_c	nacelle capture radius
RNO	average Reynolds number x 10^{-6} over the internal lip surface of outboard nacelle
S	reference wing area, 4.435 ft^2
U	upper wing surface
WDP	wing design plane (figure 2(a))
X	wing-body axial coordinate, positive going downstream (figure 2(a))
X-INBD	X coordinate of the inboard nacelle lip
X-MA	X coordinate of the inboard nacelle lip with the delta axial drive at its most forward position
X-OUTBD	X coordinate of the outboard nacelle lip
x	local nacelle or root chord axial coordinate
Y	wing-body lateral coordinate, positive out left-hand wing (figure 2(a))

Symbol	Definition
2YI/B	lateral position of the inboard nacelles as a fraction of the semispan
2YO/B	lateral position of the outboard nacelles as a fraction of the semispan
Z	wing-body vertical coordinate, positive up (figure 2(a))
z	local wing surface coordinate
Θ, THETA	angular location of pressure orifices on the nacelle, 0° at top and positive going clockwise, looking downstream

MODEL AND INSTRUMENTATION

The wind tunnel model consisted of a basic wing-body combination with four independently supported nacelles located beneath the model. Photographs of the model and support system installed in the Ames 11-by 11-Foot Wind Tunnel are shown in figures 1(a) and 1(b).

Aerodynamic Model

The aerodynamic force model consisted of a delta wing-body combination, shown in figure 2(a), and was designated WB. The model had an over-all length of 62.2 in. and a wing span of 40.8 in. The wing had a delta planform with a leading-edge sweep of 50.5° and a leading-edge extension with a sweep of 75.0°. The reference wing area and root chord were 4.435 ft^2 and 29.23 in., respectively. The wing coordinates are tabulated in tables 1 and 2. The model was supported by a six-component internal strain gage balance, and the moment center was located at X = 52.92 in. and Z = 5.04 in. The left-hand wing was pressure-instrumented with 95 static pressure orifices on the lower surface and 31 on the upper surface; the location of the orifices is described in figure 2(b).

Nacelles

Two different nacelle geometries were tested and are described in figure 2(c). Nacelle N1 employed a sharp cowl lip while nacelle N2 employed a slightly blunt lip. The nacelle contours are included in figure

2(c). To adequately support the nacelles while maintaining an unrestricted flow passage through the nacelle and support sting, the aft end of the nacelle was modified as illustrated in figure 2(c).

Of the four individual nacelles supported beneath the wing-body model, the two on the left-hand side (looking upstream) were pressure-instrumented, and each of the two nacelles on the right side was mounted on a six-component internal strain gage balance. The locations of the surface static pressure orifices on the N1 and N2 nacelles are presented in figure 2(d). The two six-component force balances used to support the right-hand nacelles were housed in the thickness of each nacelle. The balance is basically a two-shell, flow-through force balance using eight instrumented flexures located 90° apart at two axial locations. A schematic, showing the balance installed within the contours of the N1 nacelle, is presented in figure 2(e). To prevent flow through the balance cavity, the metric and non-metric components were bridged with a flexable rubber seal, as indicated in figure 2(e). To provide the necessary base area corrections for each nacelle, the pressure on the flow side of the seal was measured, as were the pressures in the forward and aft balance cavities. The pressure instrumentation is outlined in figure 2(e). Five separate corrections, described in table 3, were applied to the measured nacelle axial force balance readings to obtain the final aerodynamic data. These corrections included the pressure forces within the forward and aft balance cavities, on the forward lip cavity, across the balance seal, and the skin friction on the internal nacelle lip. The areas associated with each of these forces are identified in figure 2(e) and listed in table 3. The cross-sectional areas for the forward and aft balance cavity forces and the forward lip force were based on the physical geometry of the nacelles, while the seal force was obtained through a calibration of the nacelle-balance system. The internal skin friction from the nacelle lip to the seal was based on the average turbulent skin friction for this length, as indicated in reference 3.

Nacelle Support System

The nacelle support system, shown in figure 3, was designed to independently support four nacelles beneath the wing-body combination while providing the flexibility of positioning the nacelles relative to both the wing-body combination and themselves. The support system also provided the independent control and measurement of the mass flow through each nacelle. The major components of the nacelle support system consisted of the main cross support, four vertical support and positioning units, and four flow-through nacelle stings and flow-metering units.

Eleven independent drives provided, in effect, a three-dimensional, nacelle-positioning capability. These included two lateral drives which positioned the inboard and outboard nacelle pairs symmetrically about

the vertical center line. Four vertical drives were used to control the vertical position of the four nacelle stings. A main axial drive controlled the position of the main cross support and hence the position of all four nacelles as a single unit. Each nacelle sting had a delta axial drive unit which allowed the position of each individual nacelle to be varied relative to the other three. Of the 11 drives, all were remotely controlled except the four vertical drives, which were manually operated. The maximum travel of each drive, relative to its mid-position, is summarized in table 4, and the range of achievable nacelle positions, in the coordinate system of the wing-body model, is presented in table 5. Incorporated into each nacelle sting was a mass-flow control plug to vary and appropriate instrumentation to measure the flow through each nacelle. Each plug was remotely controlled.

Boundary-Layer Trips

To insure a turbulent boundary layer over the wing-body combination and nacelles, transition trips were applied to each of these components. The trips consisted of glass beads with a diameter range of 0.0049 in. to 0.0058 in. The transition strips, each 0.0625 in. wide, were located on: the fuselage, 1.5 in. downstream of the nose; the upper and lower surfaces of the wing, 0.75 in. behind and parallel to the wing leading edge; the nacelles, 1.00 in. downstream of the nacelle lip. Trip effectiveness was verified through the use of sublimation tests.

RESULTS AND DISCUSSION - PRESSURE DATA

A listing of the configurations tested is given in table 6 and a detailed tabulation of the data plotted is given in table 7. The pressure data on the outboard nacelle is presented in figure 4, the inboard nacelle data in figure 5, the lower wing surface data in figure 6, and the upper wing surface data in figure 7. The isolated nacelle characteristics of both nacelles at two different angles of attack and mass-flow ratios are presented in figure 4, items 1 through 4 (see table 7). The nacelle-nacelle interference effects are contained in figure 4, items 5 through 10, and figure 5, items 19 through 24 as a function of nacelle axial and lateral position and mass-flow ratio. The wing-body-nacelle characteristics are shown in figure 4, items 11 through 18; figure 5, items 25 through 32; figure 6, items 33 through 40; and figure 7, items 45 through 52. The effects of variations in nacelle axial and lateral position, nacelle stagger, angle of attack, and mass-flow ratio are presented. The vertical positions of the nacelles were held constant; the centerlines of the inboard nacelles were located at Z = 2.44 in. and the centerlines of the outboard nacelles at Z = 3.02 in. The isolated wing-body characteristics were obtained with the nacelle support mounted behind the model to allow the interference of the support system, as a function of its position, to be identified. These results are presented in figure 6, items 40 through

The characteristics of the wing-body-nacelle combination are shown in figures 11, 12, 13, and 14. The results are presented in terms of the wing-body forces, the nacelle forces, and the combined wing-body-nacelle forces. The vertical positions of the nacelles were held constant; the centerline of the inboard nacelles was located at Z = 2.44 in., and the centerline of the outboard nacelles at Z = 3.02 in. Figure 11 presents the effects of nacelle axial position; figure 12, the effects of mass-flow ratio; figure 13, the effects of angle of attack; and figure 14, the effects of nacelle lateral position.

The isolated wing-body characteristics are presented in figures 15 and 16. The isolated wing-body data was obtained with the nacelle support system mounted behind the model to allow the interference of the support system, as a function of its position to be identified. These results also are presented in figures 15 and 16.

In all cases, data is presented over the Mach number range tested. However, care must be exercised in using the data for Mach numbers near 1.0 because of the significant interference of the nacelle support system on the wing-body combination. An analysis of the interference forces and pressures on the various components for limited portions of the data contained herein is presented in reference 4.

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REFERENCES

1. Bradley, E. S.; Johnson, W. H.; and Von Keszycki, C. H.: Passenger Transport at Low Supersonic Speeds. AIAA Paper 69-776, July 1969.

2. Bencze, D. P.: Wind Tunnel Investigation of Nacelle-Airframe Interference at Mach Numbers of 0.9 to 1.4 - Pressure Data. NASA TM X-62,514, 1976

3. Schlichting, H.: Boundary Layer Theory. McGraw Hill, 1968.

4. Bencze, D. P.: Experimental Evaluation of Nacelle-Airframe Interference Forces and Pressures at Mach Numbers of 0.9 to 1.4. NASA TM X-3321, 1976.

TABLE 1. - WING PLANFORM

%2Y/B	Y in.	c in.	$z^*_{L.E.}$ in.	$z^*_{T.E.}$ in.
0.0	0	39.88	-.567	-.295
9.80	2.0	32.20	-.755	+.038
19.61	4.0	25.26	-.663	+.360
29.41	6.0	21.44	-.265	+.692
39.22	8.0	18.74	-.062	+.842
49.02	10.0	16.22	+.044	+.800
58.82	12.0	13.80	+.085	+.689
68.63	14.0	11.35	+.092	+.557
78.43	16.0	8.94	+.096	+.454
88.24	18.0	6.47	+.102	+.340
98.04	20.0	3.58	+.088	+.250

*z measured relative to the wing design plane (WDP) at Z = 4.68 in

TABLE 2. - WING THICKNESS DISTRIBUTION - % z/c*

%2Y/B→	0.0		9.80		19.61		29.41		39.22		49.02		58.82	
% c ↓	U	L	U	L	U	L	U	L	U	L	U	L	U	L
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1.17	.48	.99	.21	.62	.19	.29	.36	.34	.34	.27	.33	.27	.33
10	1.77	.60	1.61	.36	1.07	.42	.52	.66	.54	.66	.45	.64	.47	.60
15	2.11	.72	2.05	.49	1.50	.66	.73	.93	.72	.92	.63	.91	.68	.83
20	2.28	.83	2.31	.63	1.91	.95	.92	1.16	.88	1.15	.80	1.12	.86	1.04
30	2.31	1.01	2.50	.92	2.55	1.48	1.23	1.55	1.10	1.57	1.04	1.48	1.15	1.36
40	2.15	1.16	2.51	1.19	2.76	1.89	1.39	1.81	1.21	1.81	1.16	1.70	1.32	1.56
50	2.07	1.31	2.37	1.43	2.58	2.13	1.38	1.94	1.21	1.93	1.18	1.81	1.36	1.65
60	1.81	1.46	2.09	1.59	2.19	1.91	1.25	1.89	1.11	1.87	1.13	1.75	1.28	1.59
70	1.46	1.52	1.65	1.55	1.67	1.49	1.03	1.64	.96	1.60	1.00	1.52	1.09	1.43
80	.99	1.29	1.10	1.27	1.15	1.06	.74	1.20	.71	1.16	.78	1.08	.79	1.13
90	.45	.75	.51	.79	.64	.57	.40	.64	.43	.62	.48	.55	.43	.60
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0

%2Y/B→	68.63		78.43		88.24		98.04	
% c ↓	U	L	U	L	U	L	U	L
0	0	0	0	0	0	0	0	0
5	.34	.30	.26	.31	.29	.32	.89	.34
10	.53	.57	.43	.58	.47	.63	1.14	.68
15	.73	.81	.62	.83	.64	.86	1.36	.93
20	.91	1.00	.92	1.03	.81	1.15	1.61	1.19
30	1.22	1.33	1.15	1.33	1.09	1.37	1.88	1.55
40	1.43	1.45	1.33	1.52	1.34	1.56	1.99	1.70
50	1.49	1.53	1.39	1.60	1.42	1.61	1.98	1.70
60	1.54	1.49	1.33	1.53	1.42	1.53	1.92	1.60
70	1.22	1.31	1.15	1.33	1.35	1.31	1.64	1.49
80	.93	1.02	.89	.99	1.12	.95	1.30	1.13
90	.53	.54	.55	.54	.82	.50	.93	.67
100	0	0	0	0	0	0	0	0

* z measured normal to local chord line

TABLE 3. - NACELLE BALANCE CORRECTIONS

Correction*	Symbol	Expression
Aft balance cavity	CAO-AC	$-(PAC-PI)\ A_{AC}/qA_c$
Forward balance cavity	CAO-FC	$(PFC-PI)\ A_{FC}/qA_c$
Lip cavity	CAO-L	$(PL-PI)\ A_L/qA_c$
Seal	CAO-S	$\dfrac{(PFC-PL)\ A_{S1} + (PFC-PL)^2 A_{S2}}{qA_c}$
Skin friction	CAO-SF	$-\left[\dfrac{\frac{0.455}{(\log_{10}RNO)^{2.58}} - \frac{1050}{RNO}}{1.0 + 0.85\ \frac{\gamma-1}{2}\ MO^2}\right]\dfrac{A_{SF}}{A_c}$
Total	CAO-T	(CAO-AC) + (CAO-FC) + (CAO-L) + (CAO-S) + (CAO-SF)

Constants:

$A_{AC} = 0.959\ in^2$

$A_{FC} = 1.141\ in^2$

$A_L = 0.565\ in^2$

$A_{S1} = 0.807 \times 10^{-3} in^2$ (INB'D); $1.194 \times 10^{-3} in^2$ (OUTB'D)

$A_{S2} = 0.17 \times 10^{-6} in^4/lb$ (INB'D); $0.30 \times 10^{-6} in^4/lb$ (OUTB'D)

$A_{SF} = 12.283\ in^2$

* Balance corrections added to nacelle balance axial force

TABLE 4· - RANGE OF TRAVEL OF THE NACELLE DRIVES

Drive	Range Relative to Mid Position
Inboard lateral	± 2.10 in[1]
Outboard lateral	± 2.10 in[2]
Vertical	± 2.50 in
Main axial	± 6.00 in
Delta axial	± 4.00 in

TABLE 5. - RANGE OF NACELLE POSITIONS RELATIVE TO MODEL COORDINATES (Figure 2(a))

Position	Range
Inboard lateral	$4.08 \leq Y \leq 8.28$ in[1]
Outboard lateral	$8.04 \leq Y \leq 12.24$ in[2]
Vertical	$-1.97 \leq Z \leq 3.03$ in
Axial	$40.0 \leq X \leq 60.0$ in[3]

1- Outboard lateral drive at outboard limit
2- Inboard lateral drive at inboard limit
3- Maximum axial separation of any two nacelles limted to 8.0 in.

TABLE 6. - CONFIGURATION DESCRIPTION

No.	Config.	Left-Hand Nacelles Outb'd	Inb'd	Right-Hand Nacelles Inb'd	Outb'd	Wing-Body
1	N1	N1	*	*	N1	**
2	N2	N2	*	*	N2	**
3	N2N2	N2	N2	N2	N2	**
4	N1N1	N1	N1	N1	N1	**
5	WBN1N1	N1	N1	N1	N1	WB
6	WBN2N2	N2	N2	N2	N2	WB
7	WB***	*	*	*	*	WB

*- Nacelle and nacelle sting not installed

**- Wing-body not installed, sting fairing installed

***-Nacelle support system installed, but nacelles and nacelle stings not installed

TABLE 7. - INDEX OF PLOTTED DATA (Force)

Fig.	Title	Config.	Dependent Variable	Independent Variable	Independent Parameter*	Nominal ALPHA	MFR	Plot Page(s)
4	Interference effects of aft nacelle	N1	CA0	DXI	—	0°	Max.	1
5	Effects of angle-of-attack on isolated nacelle forces	N1,N2	CN0,CA0, CLM0,MFR-R0	ALPHA	Config.	Var.	Max.	2-5
6	Effects of mass-flow ratio on isolated nacelle characteristics	N1,N2	CA0	MFR-R0	Config.	0°	Var.	6-12
6	Effects of mass-flow ratio on isolated nacelle characteristics	N1,N2	CA0-T,CA0-L	MFR-R0	Config.	0°	Var.	13-19
6	Effects of mass-flow ratio on isolated nacelle characteristics	N1,N2	CA0-FC,CA0-AC, CA0-SF,CA0-S	MFR-R0	Config.	0°	Var.	20-26
6	Effects of mass-flow ratio on isolated nacelle characteristics	N1,N2	CF0,M0 RN0	MFR-R0	Config.	0°	Var.	27-33
7	Interference of sting fairing on nacelle axial force	N2N2	CAI,CA0	X-INBD	—	0°	Max.	34-35
8	Effects of nacelle position on nacelle forces	N1N1 N2N2	CAI,CA0	DX	Config.	0°	Max.	36-42
8	Effects of nacelle position on nacelle forces	N1N1	CA0,CAI, CN0,CNI	DX	2YI/B=.23,.25,.30 2Y0/B=.60,.55,.50	0°	Max.	43-45

* Mach number is an independent parameter in all cases

TABLE 7. - Continued

Fig.	Title	Config.	Dependent Variable	Independent Variable	Independent Parameter*	Nominal ALPHA	Nominal MFR	Plot Page(s)
8	Effects of nacelle position on nacelle forces	N1N1	CLMO,CLMI CYO,CYI	DX	2YI/B=.23,.25,.30 2YO/B=.60,.55,.50	0°	Max.	46-48
8	Effects of nacelle position on nacelle forces	N1N1	CYNO,CYNI	DX	2YI/B=.23,.25,.30 2YO/B=.23,.25,.30	0°	Max.	49-51
9	Effects of angle-of-attack on nacelle forces	N1N1, N2N2	CAO,CAI	ALPHA	Config.	Var.	Max.	52-54
9	Effects of angle-of-attack on nacelle forces	N1N1, N2N2	MFR-RO,MFR-RI MFR-LO,MFR-LI	ALPHA	Config.	Var.	Max.	55-57
10	Effects of mass-flow ratio on nacelle axial force	N1N1 N2N2	CAO,CAI	MFR-AV	Config.	0°	Var.	58-60
10	Effects of mass-flow ratio on nacelle axial force	N1N1 N2N2	MFR-RO,MFR-RI,MFR-AV MFR-LO,MFR-LI		Config.	0°	Var.	61-63
11	Effects of nacelle position on nacelle and wing-body forces	WBN1N1, WBN2N2	CD-WB, CD-WBN	X-INBD	DX=0,4,8 and config.	0°	Max.	64-70
11	Effects of nacelle position on nacelle and wing-body forces	WBN1N1, WBN2N2	CL-WB,CL-WBN CM-WB,CM-WBN	X-INBD	DX=0,4,8 and config.	0°	Max.	71-77
11	Effects of nacelle position on nacelle and wing-body forces	WBN1N1, WBN2N2	CAO,CAI	X-INBD	DX=0,4,8 and config.	0°	Max.	78-84
11	Effects of nacelle position on nacelle and wing-body forces	WBN1N1, WBN2N2	CNO,CNI, CLMO,CLMI	X-INBD	DX=0,4,8 and config.	0°	Max.	85-91

* Mach number is an independent parameter in all cases

TABLE 7. - Continued.

Fig.	Title	Config.	Dependent Variable	Independent Variable	Independent Parameter*	Nominal ALPHA	MFR	Plot Page(s)
11	Effects of nacelle position on nacelle and wing-body forces	WBN1N1, WBN2N2	ALPHA,MFR-AV, PB1/PI,PB2/PI	X-INBD	DX=0,4,8 and config.	0°	Max.	92-98
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	CD-WB, CD-WBN	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	99-105
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	CL-WB,CL-WBN, CM-WB,CM-WBN	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	106-112
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	CAO,CAI	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	113-119
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	CNO,CNI CLMO,CLMI	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	120-126
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	MRR-RO,MFR-RI MFR-LO,MFR-LI	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	127-133
12	Effects of mass-flow ratio on nacelle and wing-body forces	WBN1N1, WBN2N2	ALPHA	MFR-AV	X-INBD=40,48, 56 and config.	0°	Var.	134-140
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CD-WB	CL-WB	X-INBD=40,48, 56 and config.	Var.	Max.	141-147
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CD-WBN	CL-WBN	X-INBD=40,48, 56 and config.	Var.	Max.	148-154
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CL-WB,CL-WBN	ALPHA	X-INBD=40,48, 56 and config.	Var.	Max.	155-161

* Mach number is an independent parameter in all cases

TABLE 7. - Continued.

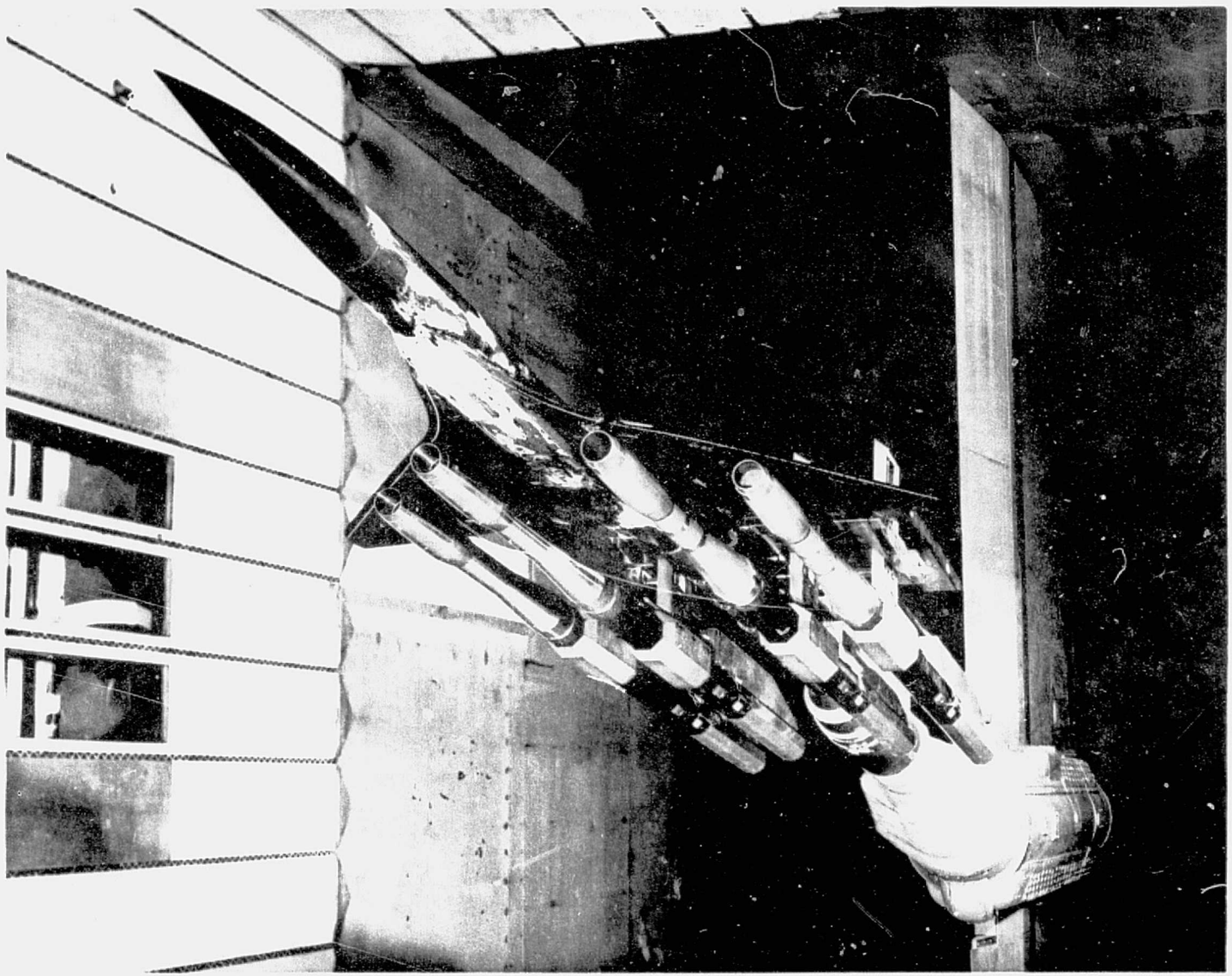
Fig.	Title	Config.	Dependent Variable	Independent Variable	Independent Parameter*	Nominal ALPHA	MFR	Plot Page(s)
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	L/D-WB, L/D-WBN	CL-WB, CL-WBN	X-INBD=40,48 56 and config.	Var.	Max.	162-168
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CM-WB, CM-WBN	CL-WB CL-WBN	X-INBD=40,48 56 and config.	Var.	Max.	169-175
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CAO,CAI	ALPHA	X-INBD=40,48 56 and config.	Var.	Max.	176-182
13	Effects of angle-of-attack on nacelle and wing-bdoy forces	WBN1N1, WBN2N2	CNO,CNI	ALPHA	X-INBD=40,48 56 and config.	Var.	Max.	183-189
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	CLMO,CLMI	ALPHA	X-INBD=40,48 56 and config.	Var.	Max.	190-196
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	MFR-RO,MFR-RI MFR-LO,MFR-LI	ALPHA	X-INBD=40,48 56 and config.	Var.	Max.	197-203
13	Effects of angle-of-attack on nacelle and wing-body forces	WBN1N1, WBN2N2	PB1/PI,PB2/PI	ALPHA	X-INBD=40,48 56 and config.	Var.	Max.	204-210

TABLE 7. - Concluded

Fig.	Title	Config.	Dependent Variable	Independent Variable	Independent Parameter*	Nominal ALPHA	MFR	Plot Page(s)
14	Effects of nacelle spanwise location on nacelle and wing-body forces	WBN1N1	CD-WB, CD-WBN	2YI/B**	X-INBD=40,48 56 and config.	0°	Max.	211-216
15	Effects of angle-of-attack on isolated wing-body forces	WB	CD-WB	CL-WB	X-MA=40,48 52	Var.	——	217-223
15	Effects of angle-of-attack on isolated wing-body forces	WB	CL-WB, CM-WB	ALPHA, CL-WB	X-MA=40,48 52	Var.	——	224-230
15	Effects of angle-of-attack on isolated wing-body forces	WB	PB1/PI, PB2/PI, L/D-WB	ALPHA, CL-WB	X-MA=40,48 52	0°	——	231-237
16	Effects of support system position on isolated wing-body forces	WB	CD-WB,CL-WB, CM-WB,ALPHA	X-INBD	X-MA=40,48 52	0°	——	238-244
16	Effects of support system position on isolated wing-body	WB	PB1/PI,PB2/PI	X-INBD	X-MA=40,48	0°	——	245-251

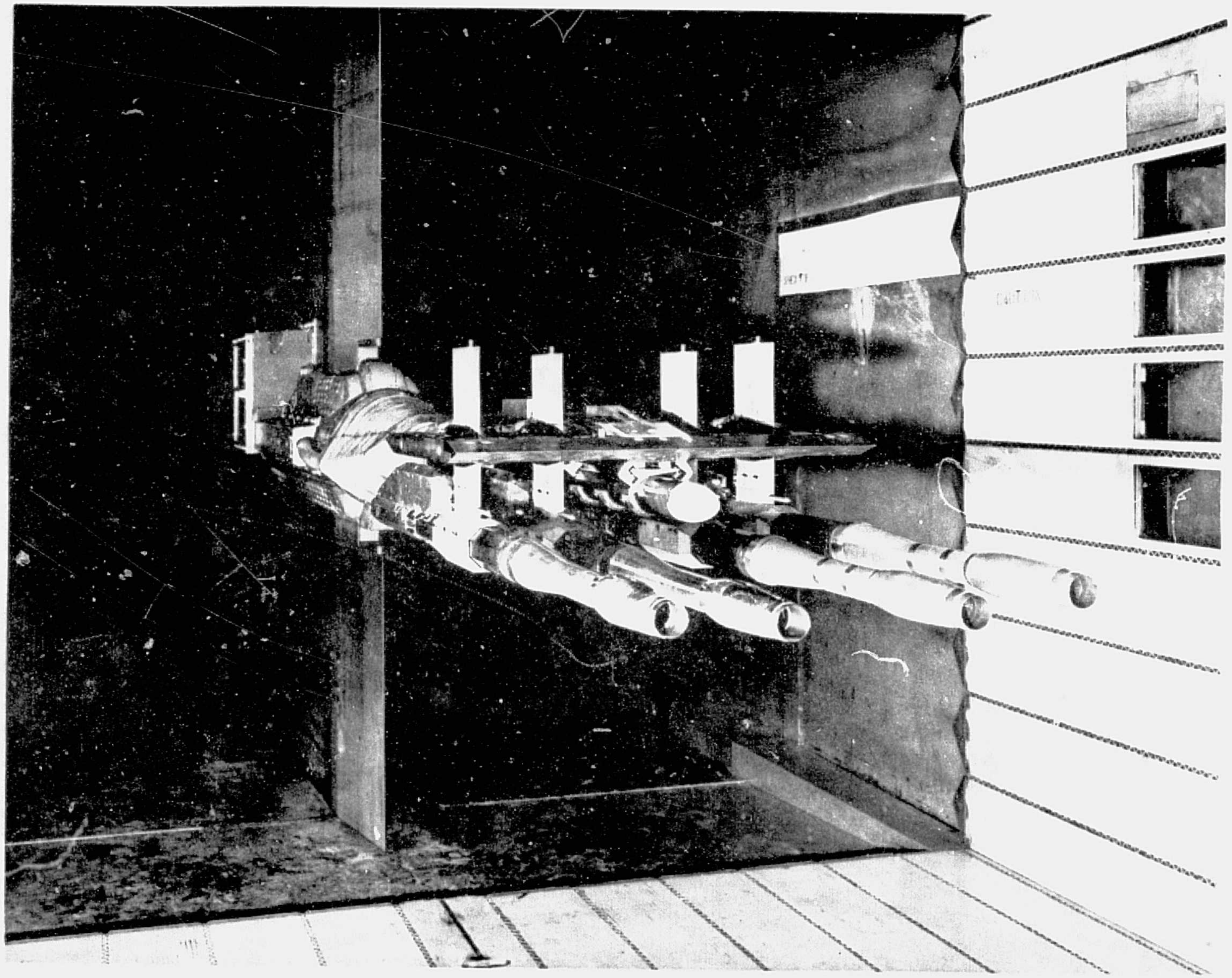
* Mach number is an independent parameter in all cases ** The corresponding values of 2YO/B are:

2YI/B	2YO/B
.23	.60
.25	.55
.55	.50



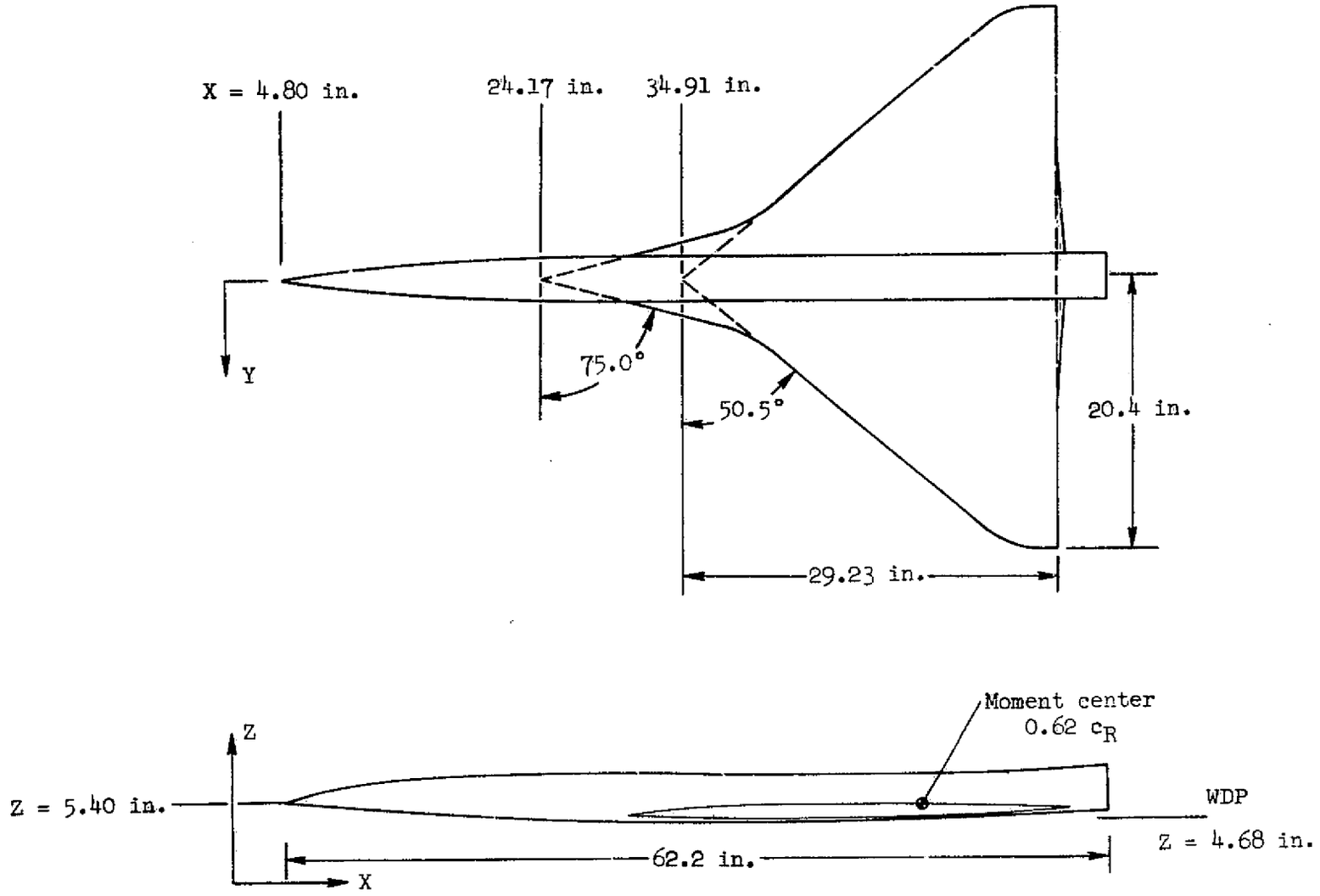
(a) Wing-body-nacelle combination.

Figure 1. - Installation photographs.



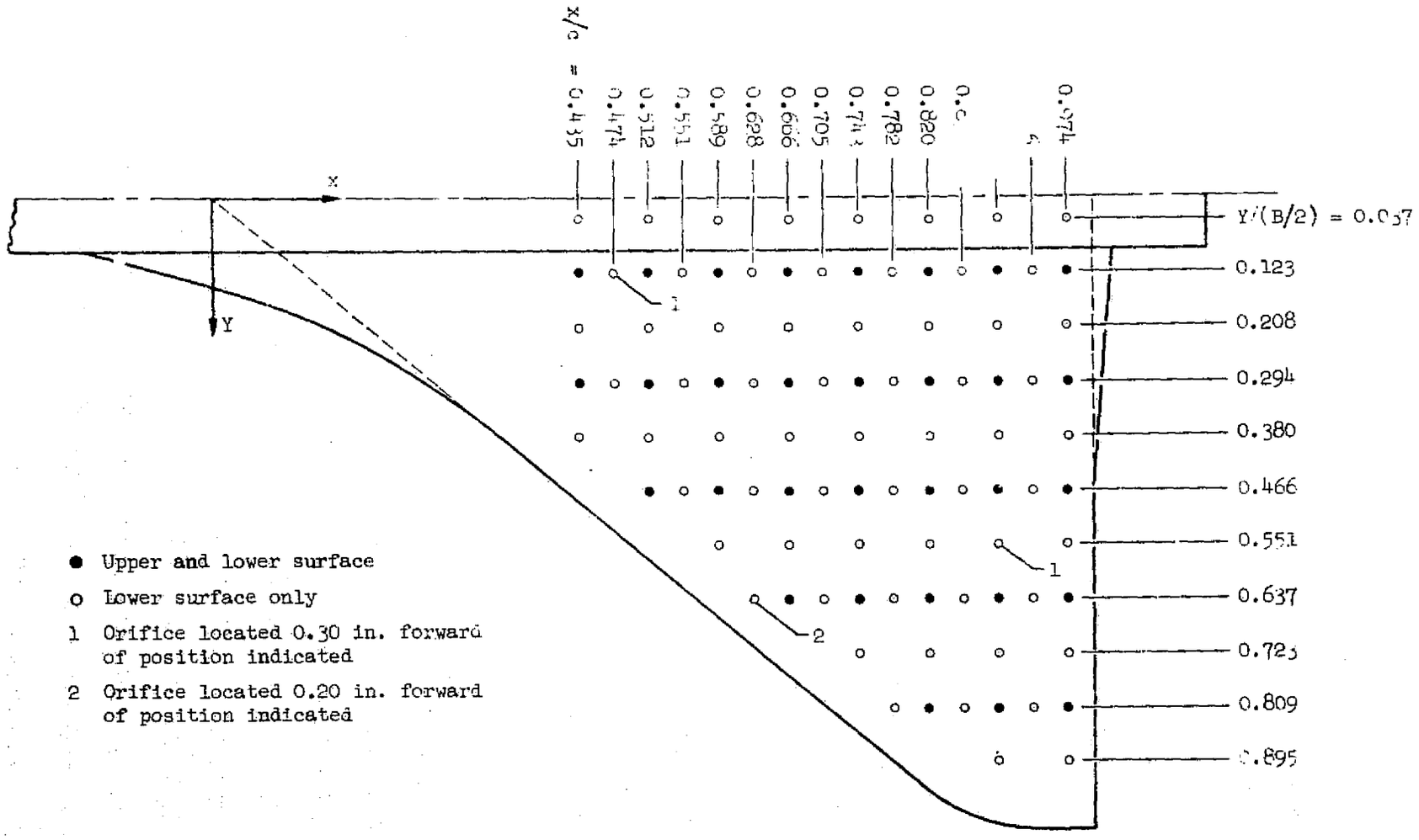
(b) Nacelle support system.

Figure 1. - Concluded.



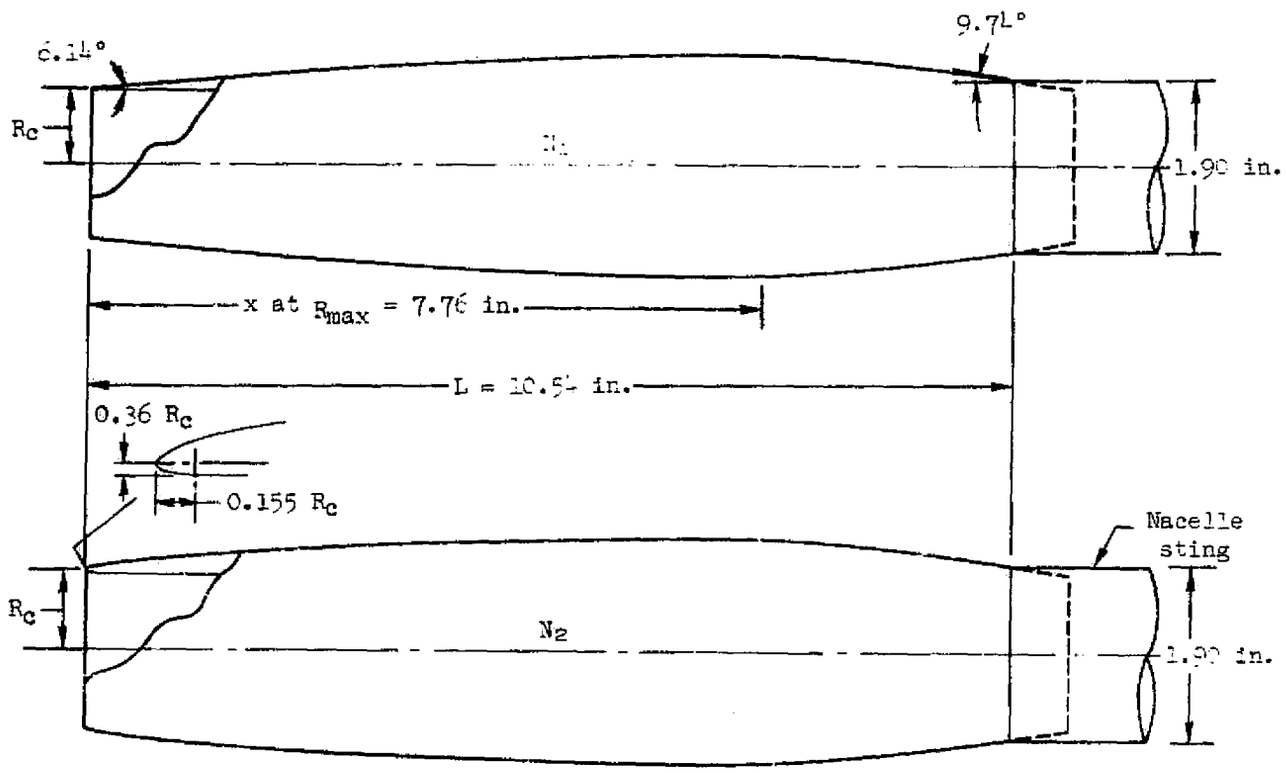
(a) Wing-body combination.

Figure 2. - Wind tunnel model and instrumentation.



(b) Wing pressure instrumentation.

Figure 2. - Continued.



Nacelle, N_1

x/R_c	R/R_c	x/R_c	R/R_c
0.000	1.000	7.326	1.474
0.666	1.069	7.992	1.486
1.332	1.133	8.658	1.492
1.998	1.192	9.026	1.492
2.664	1.246	9.325	1.484
3.331	1.294	9.991	1.441
3.996	1.337	10.656	1.379
4.662	1.375	11.322	1.302
5.328	1.407	11.988	1.213
5.994	1.435	12.654	1.113
6.660	1.458	13.320	1.004

R_c = 0.850 in.

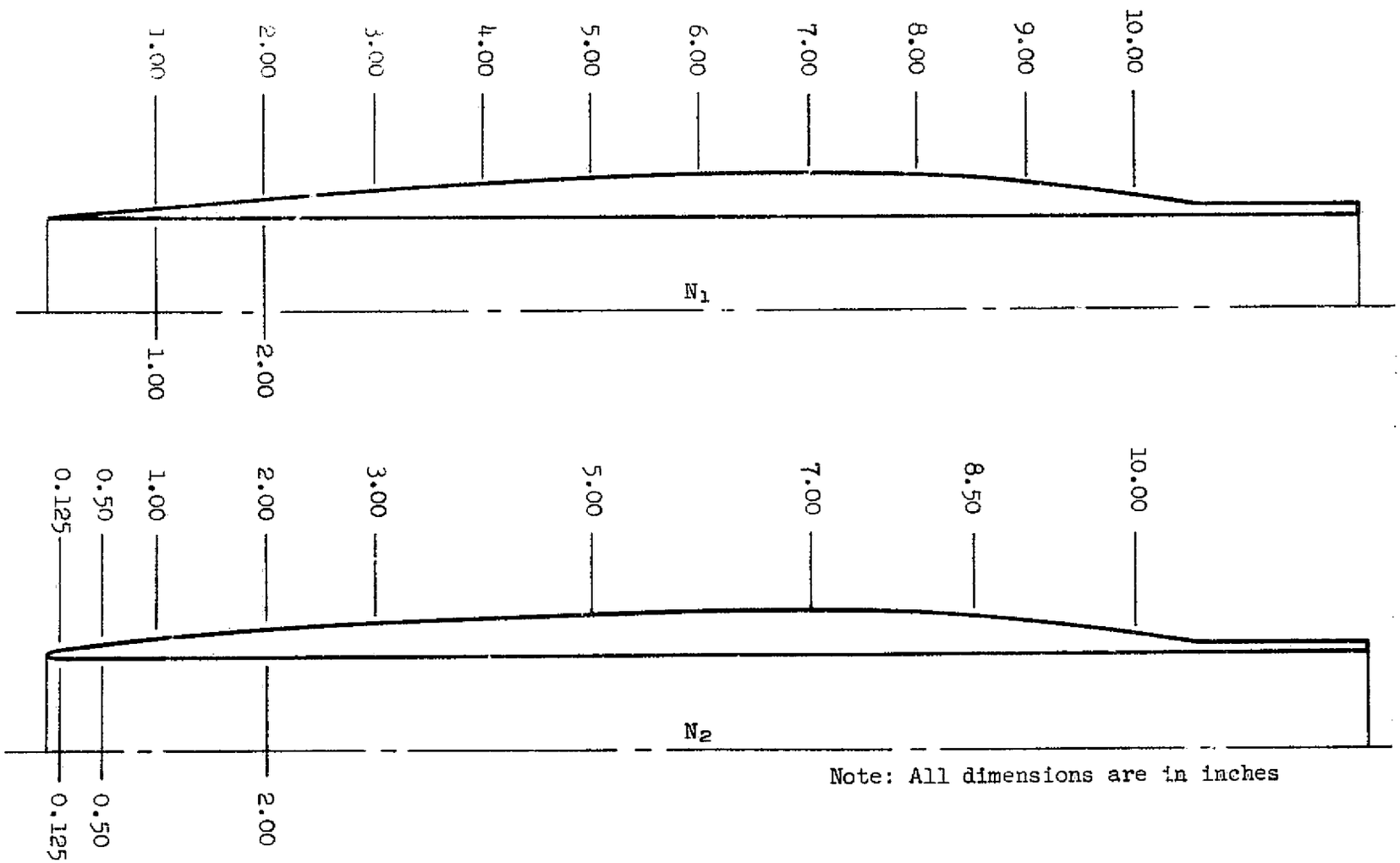
Nacelle, N_2

x/R_c	R/R_c	x/R_c	R/R_c
0.000	1.000	4.349	1.362
0.130	1.056	5.654	1.401
0.384	1.094	6.524	1.417
0.609	1.129	7.393	1.431
1.002	1.167	8.698	1.438
1.218	1.192	8.986	1.430
1.478	1.212	9.628	1.389
1.739	1.230	10.270	1.329
2.262	1.264	10.912	1.255
2.783	1.294	11.553	1.169
3.392	1.320	12.195	1.073
4.001	1.349	12.837	0.967

R_c = 0.838 in.

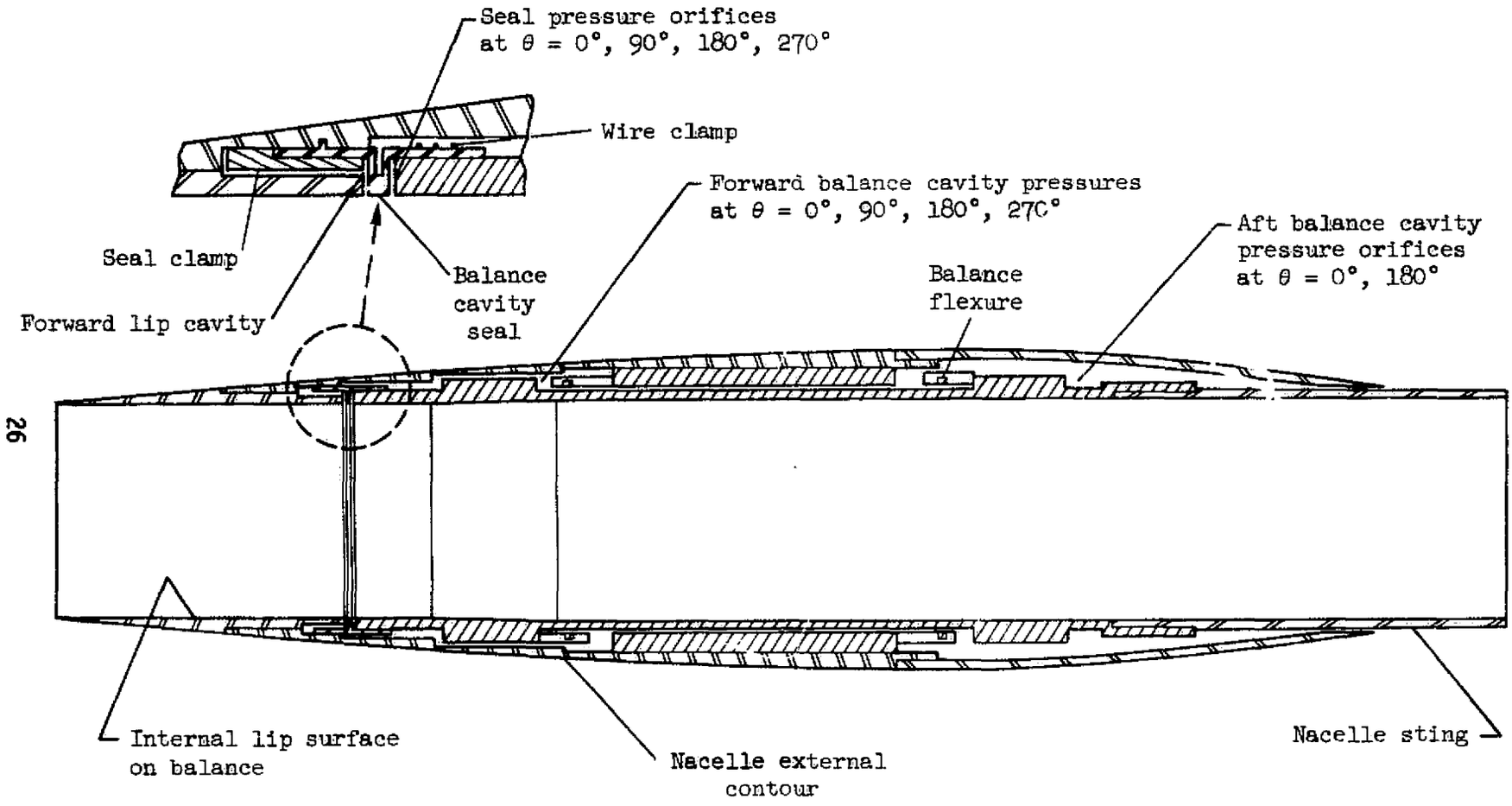
(c) Nacelle geometries.

Figure 2. - Continued.



(d) Nacelle pressure instrumentation.

Figure 2. - Continued.



(e) Nacelle flow through balance.

Figure 2. - Concluded.

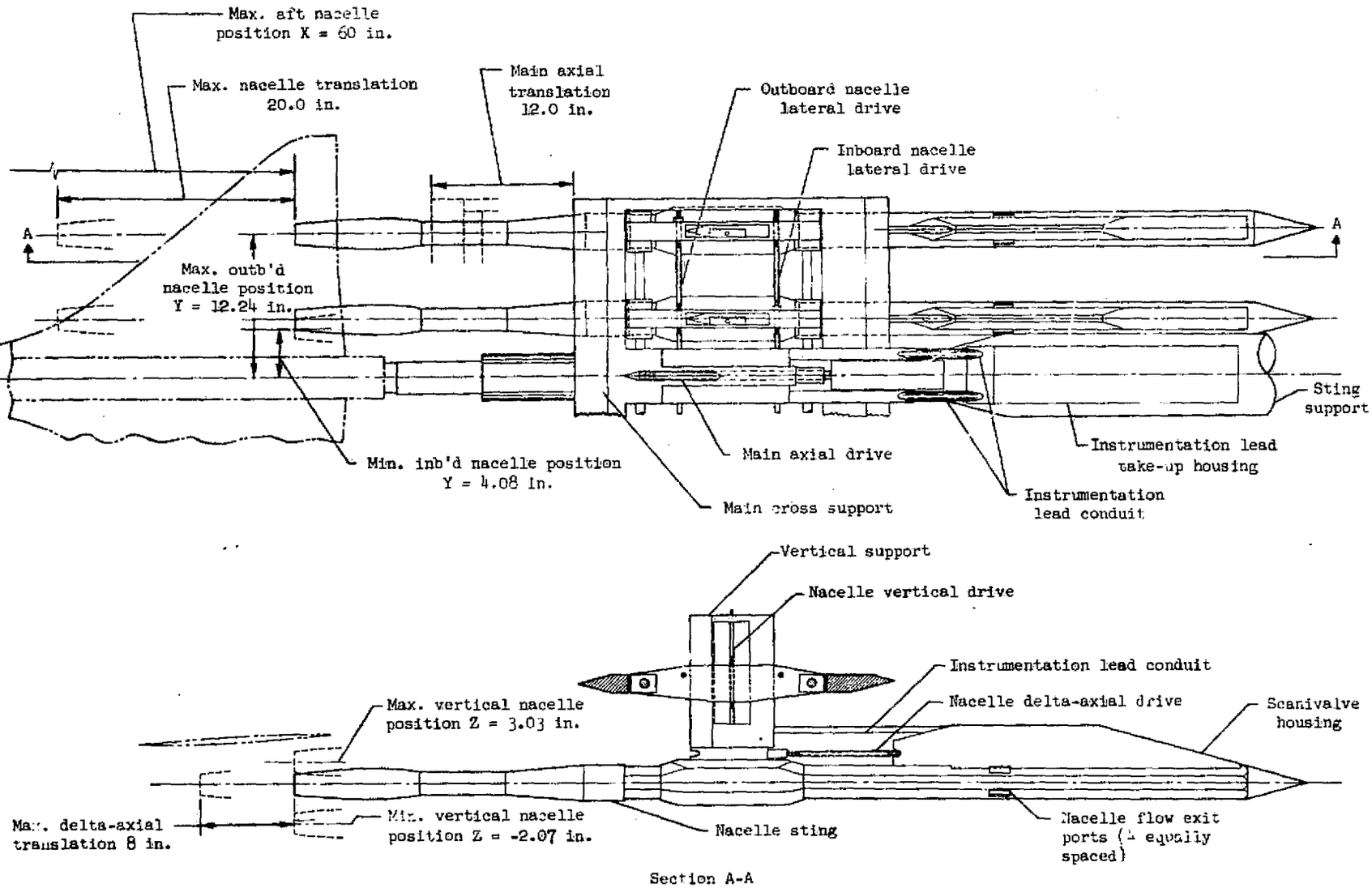


Figure 3. - Nacelle support system.

DATA FIGURES

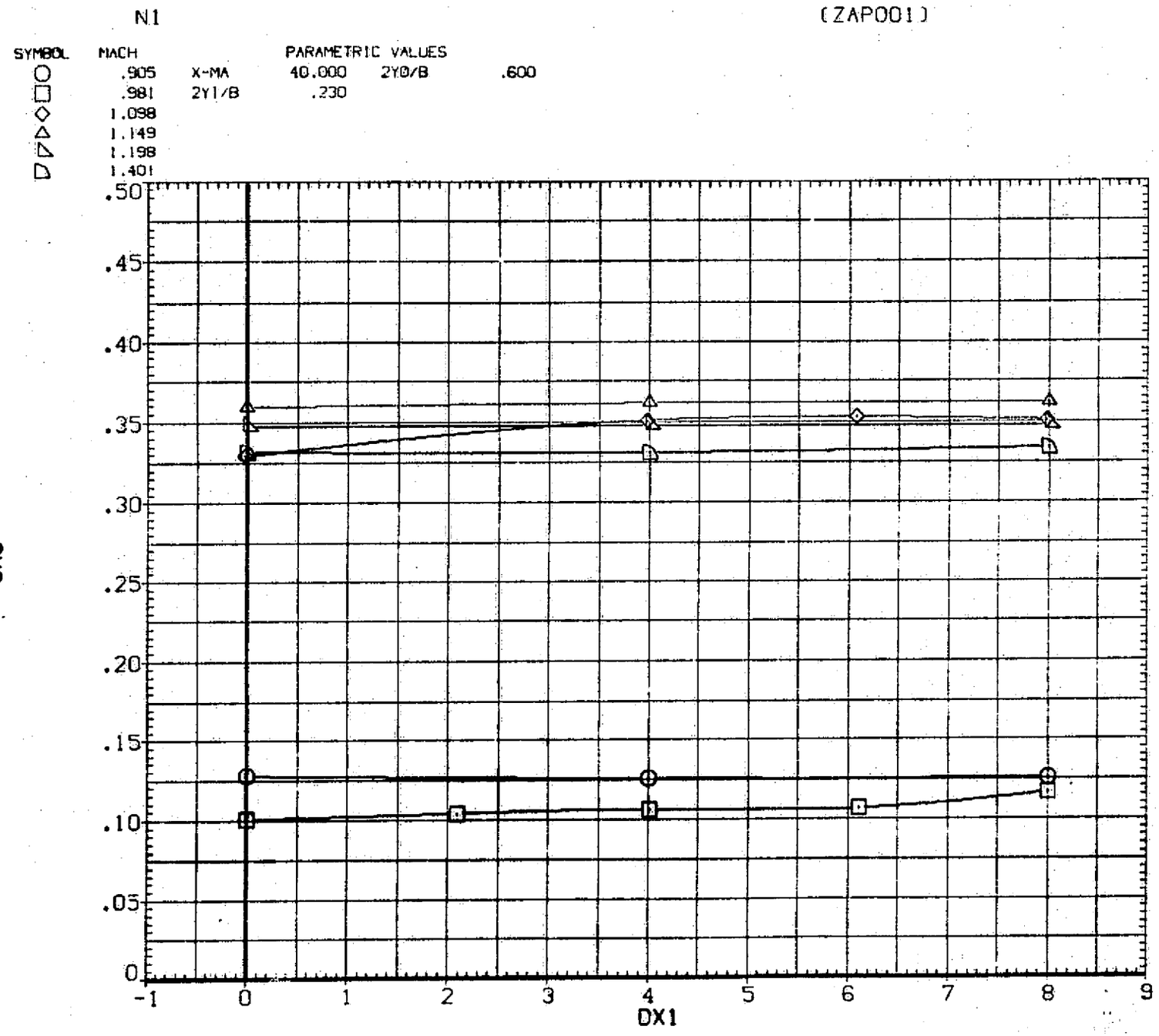


FIG. 4 INTERFERENCE EFFECTS OF AFT NACELLE.

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2Y0/B	X-MA
(RAP002)	○	DATA NOT AVAILABLE	8.000	.230	.600	40.000
(RAP006)	□	N2	8.000	.230	.600	40.000

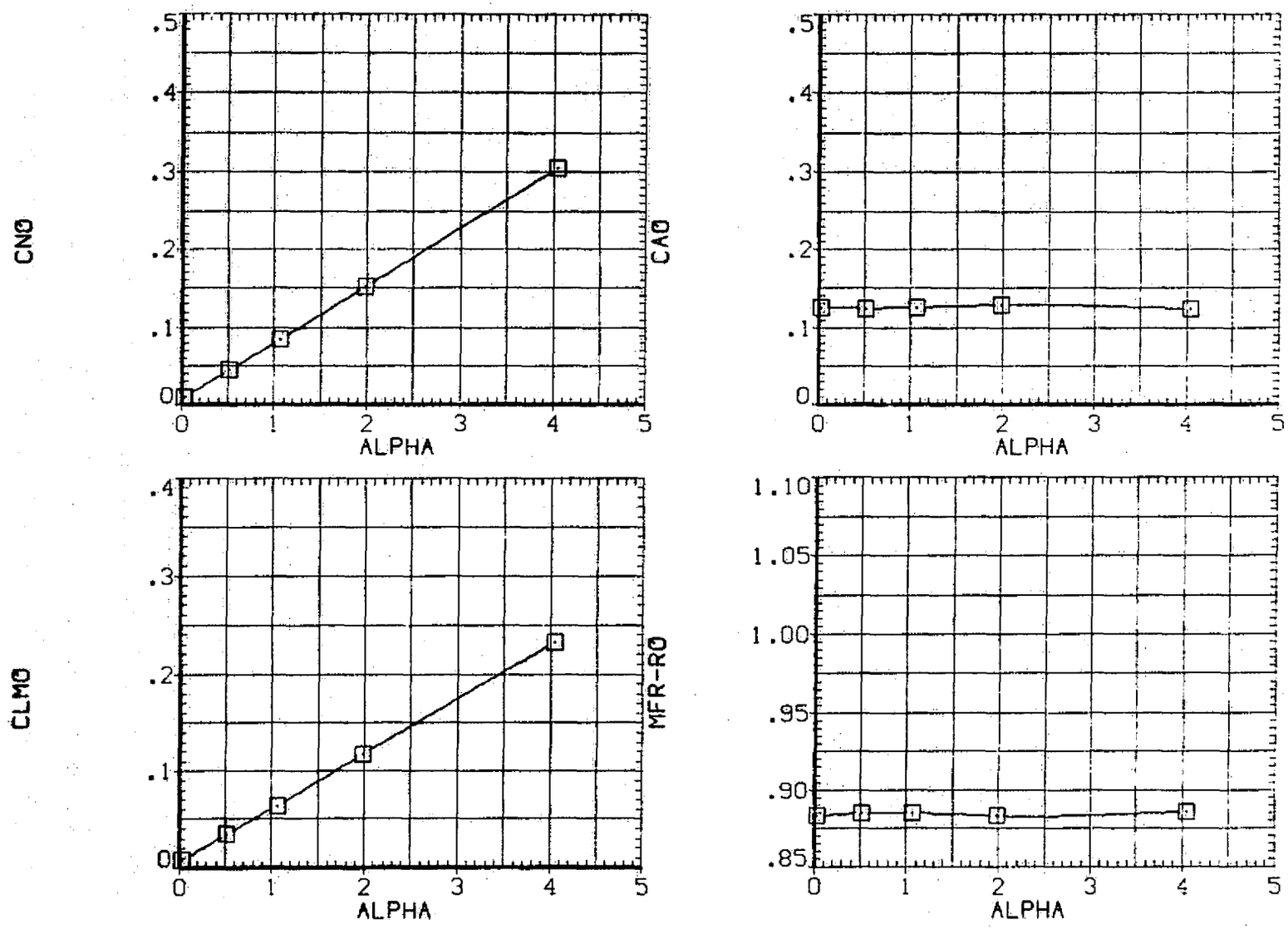


FIG. 5 EFFECTS OF ANGLE OF ATTACK ON ISOLATED NACELLE FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(RAP002)		NI	8.000	.230	.600	40.000
(RAP006)		DATA NOT AVAILABLE	8.000	.230	.600	40.000

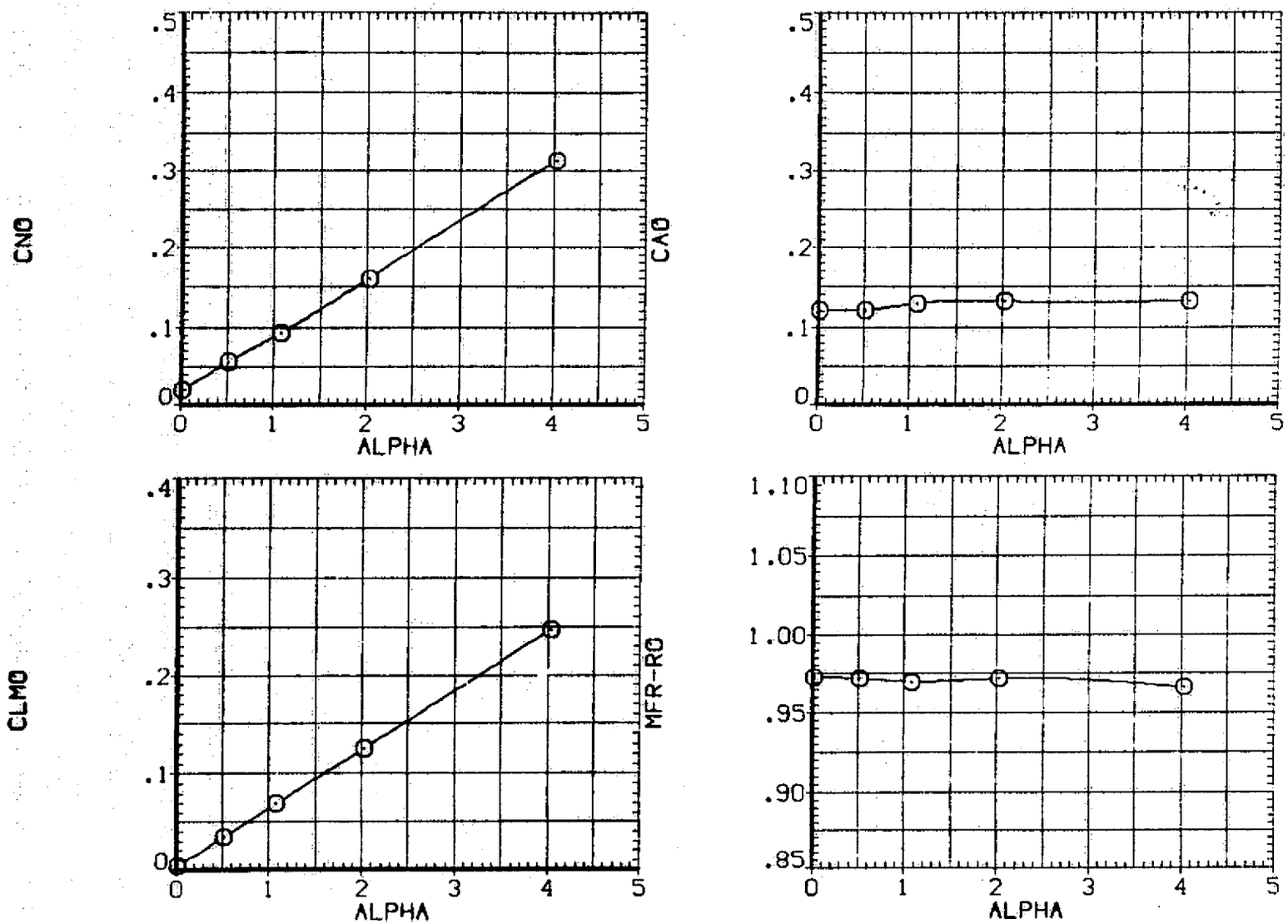


FIG. 5 EFFECTS OF ANGLE OF ATTACK ON ISOLATED NACELLE FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2Y0/B	X-MA
(RAP002)	○	N1	8.000	.230	.600	40.000
(RAP006)	□	N2	8.000	.230	.600	40.000

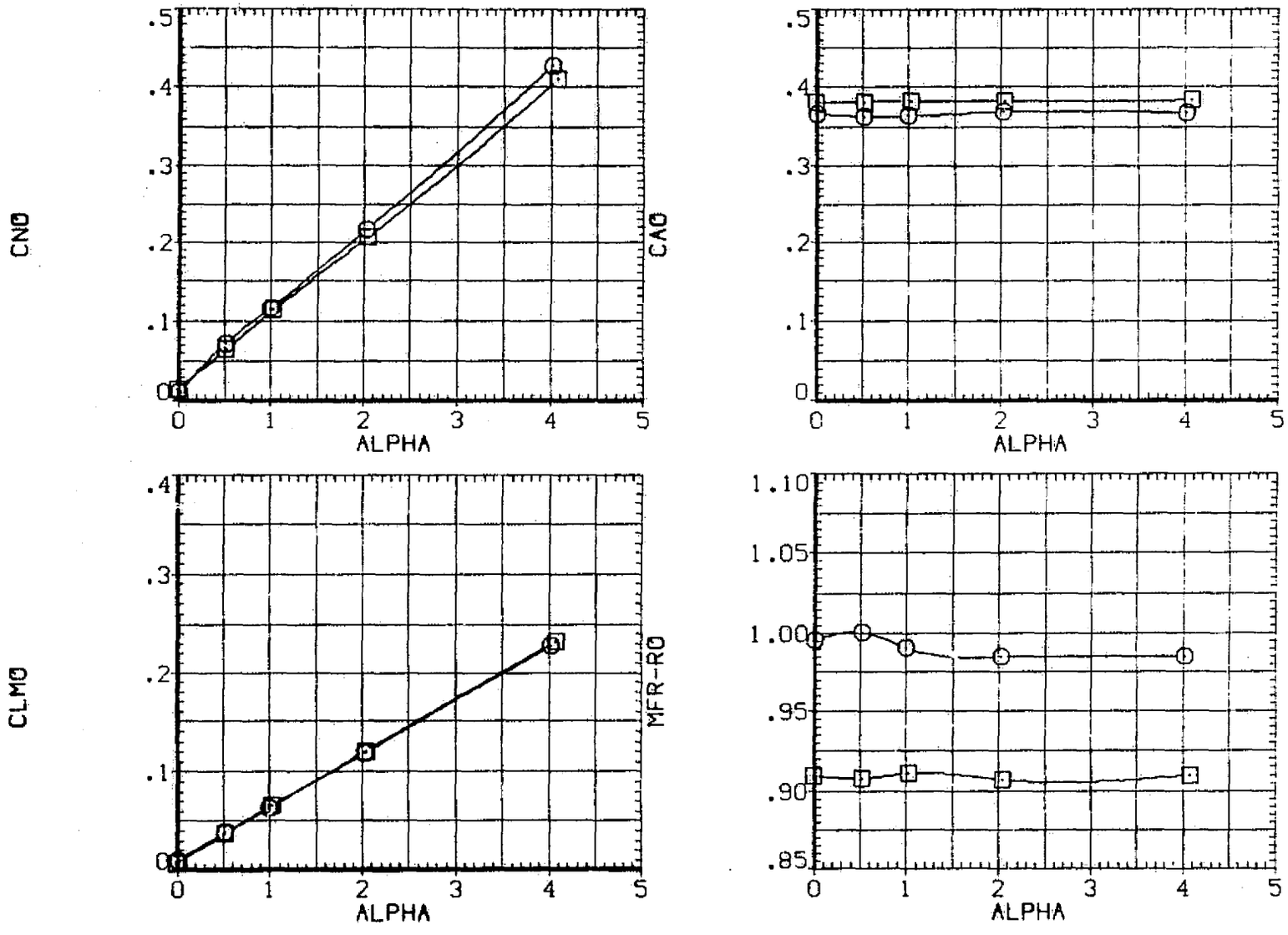


FIG. 5 EFFECTS OF ANGLE OF ATTACK ON ISOLATED NACELLE FORCES.

(C)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(RAP002)		N1	8.000	.230	.600	40.000
(RAP006)		N2	8.000	.230	.600	40.000

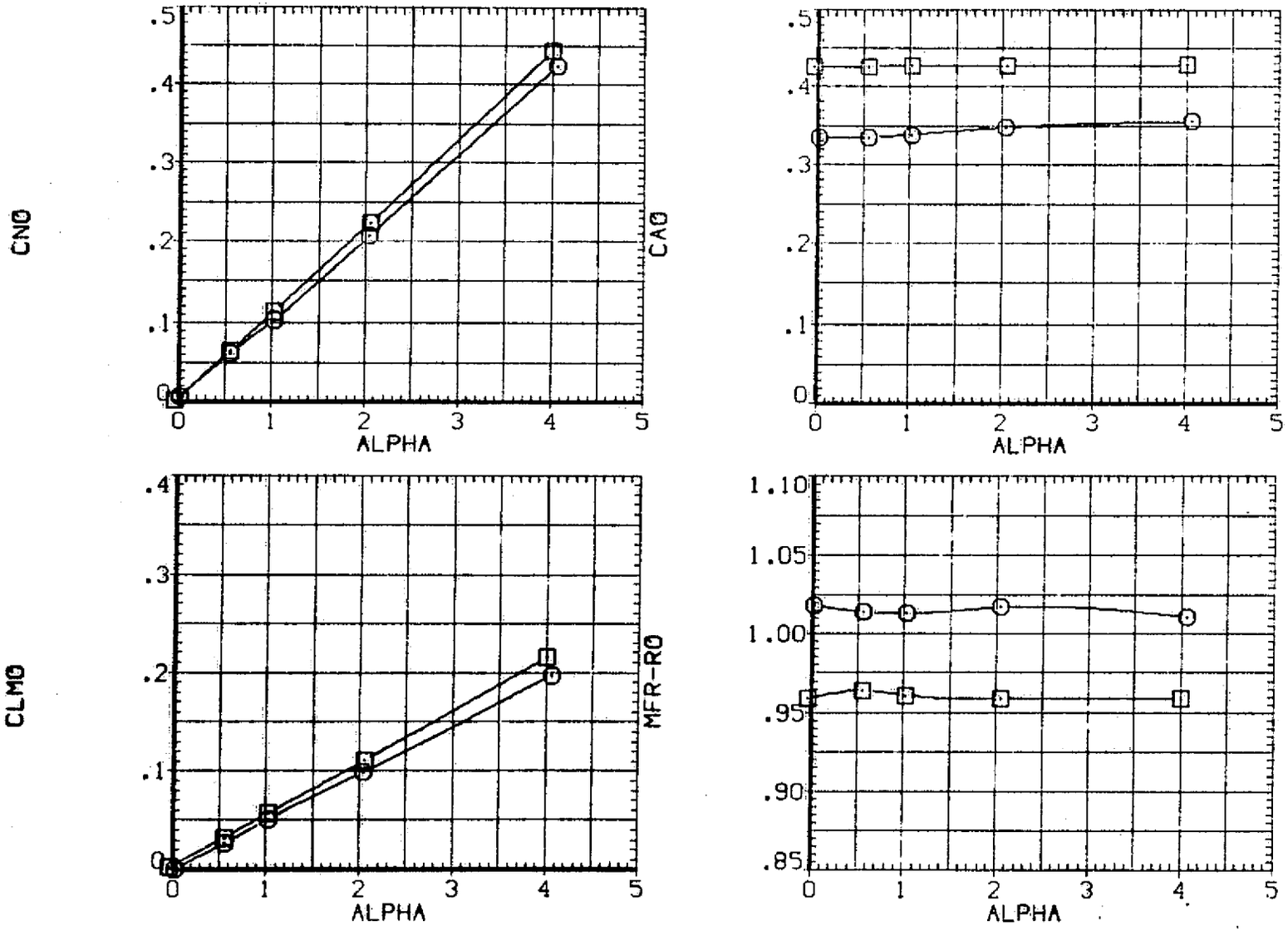


FIG. 5 EFFECTS OF ANGLE OF ATTACK ON ISOLATED NACELLE FORCES.

(D)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	N2	8.000	.230	.600	40.000

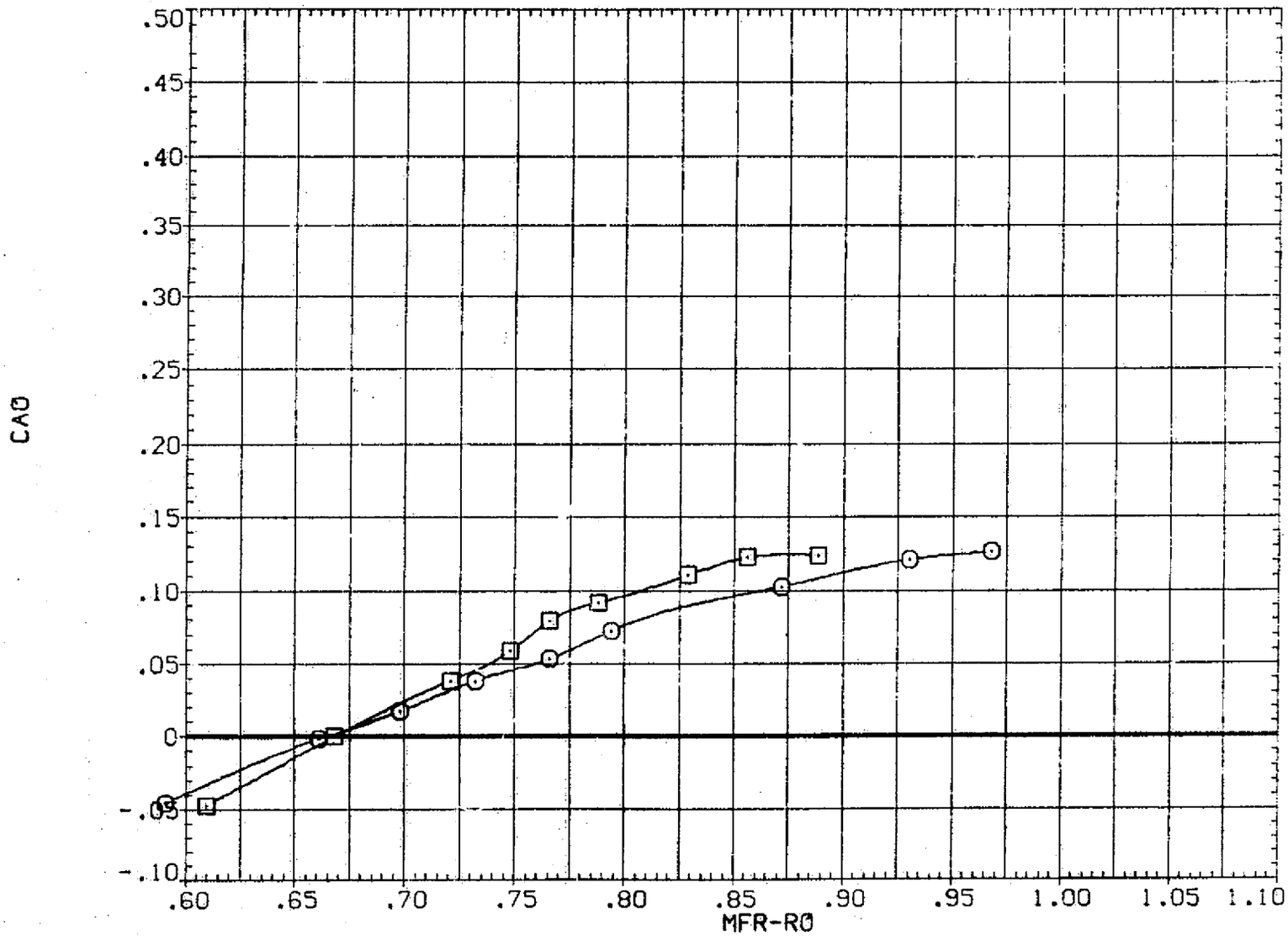


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(A)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	N2	8.000	.230	.600	40.000

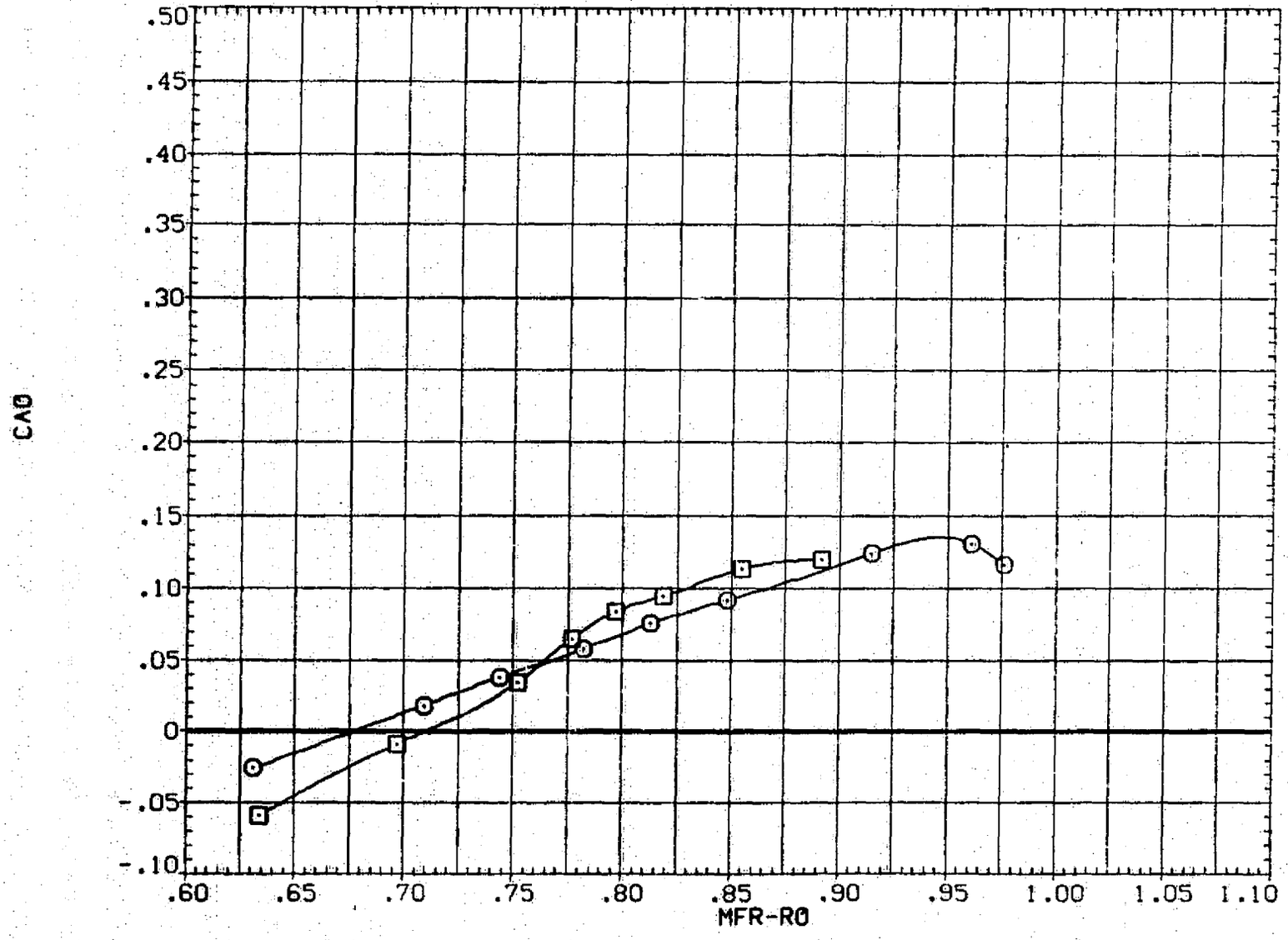


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2Y0/B	X-Mn
[AAP004]		N1	8.000	.230	.600	40.000
[AAP008]		DATA NOT AVAILABLE	8.000	.230	.600	40.000

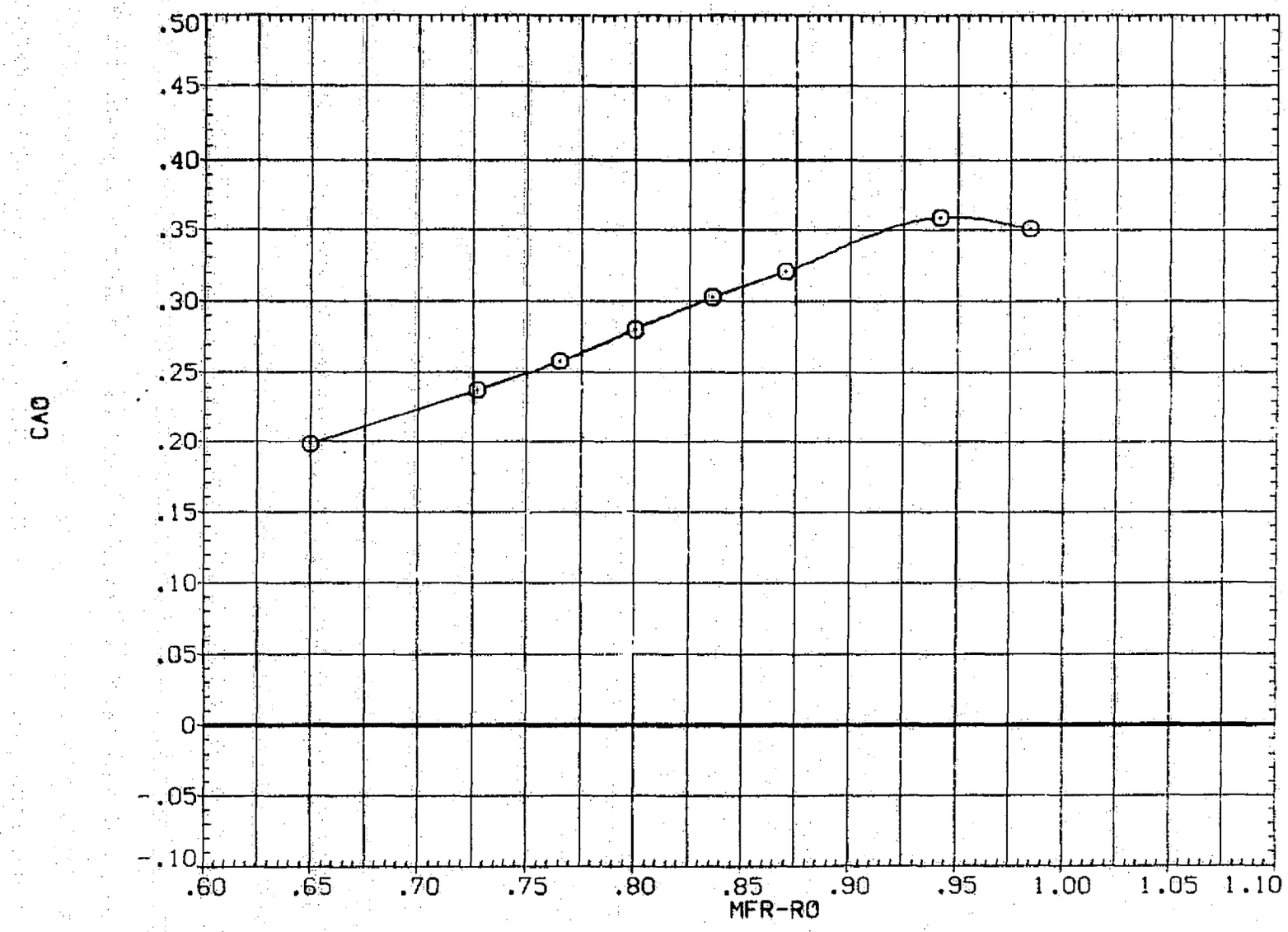


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(C)MACH = 1.10

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2Y1/B	2Y0/B	X-MA
(AAP004)	N1	0.000	.230	.600	40.000
(AAP008)	N2	0.000	.230	.600	40.000

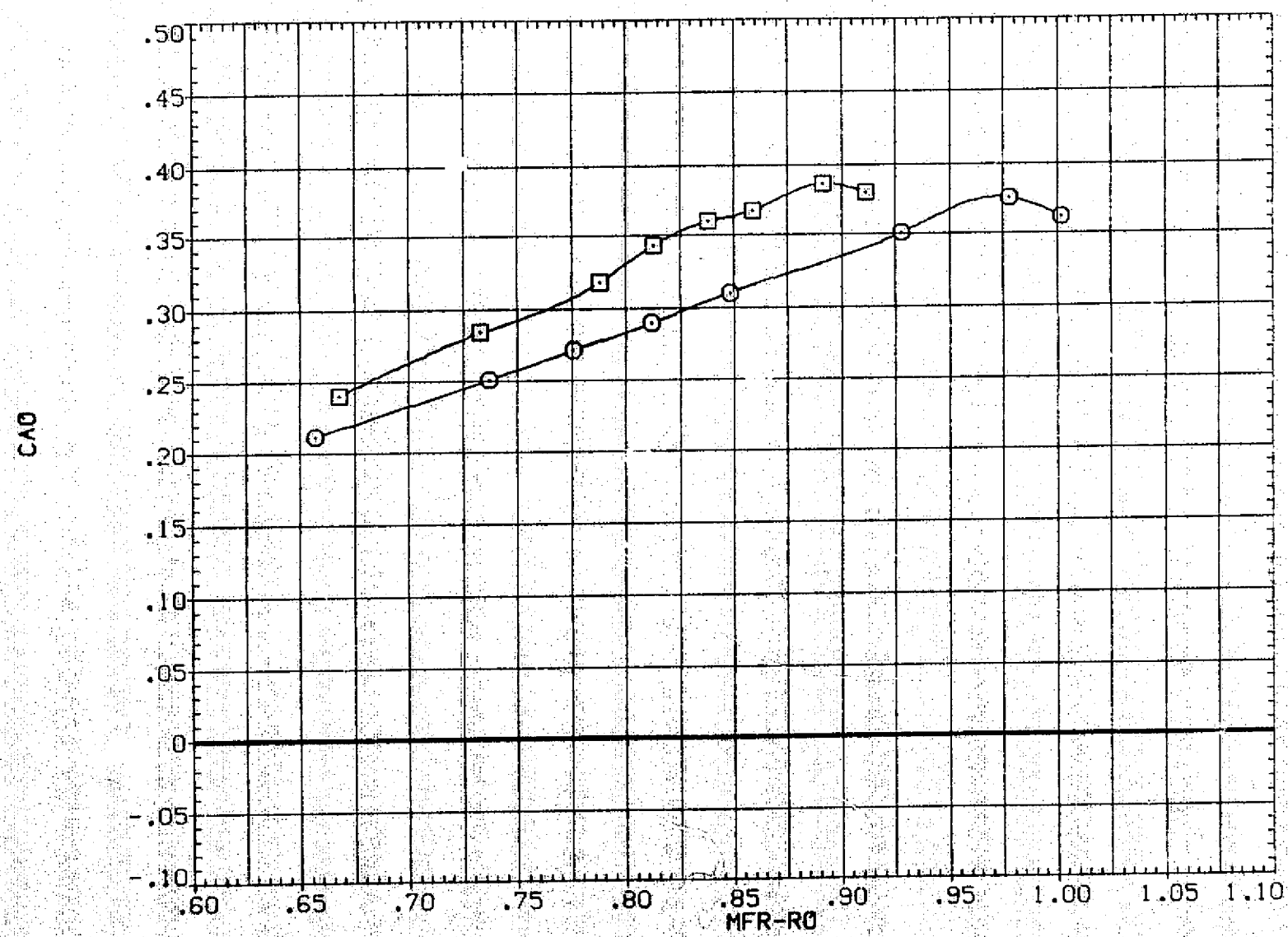


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2YO/B	X-MA
[AAP004]	○	N1	8.000	.230	.600	40.000
[AAP008]	□	DATA NOT AVAILABLE	8.000	.230	.600	40.000

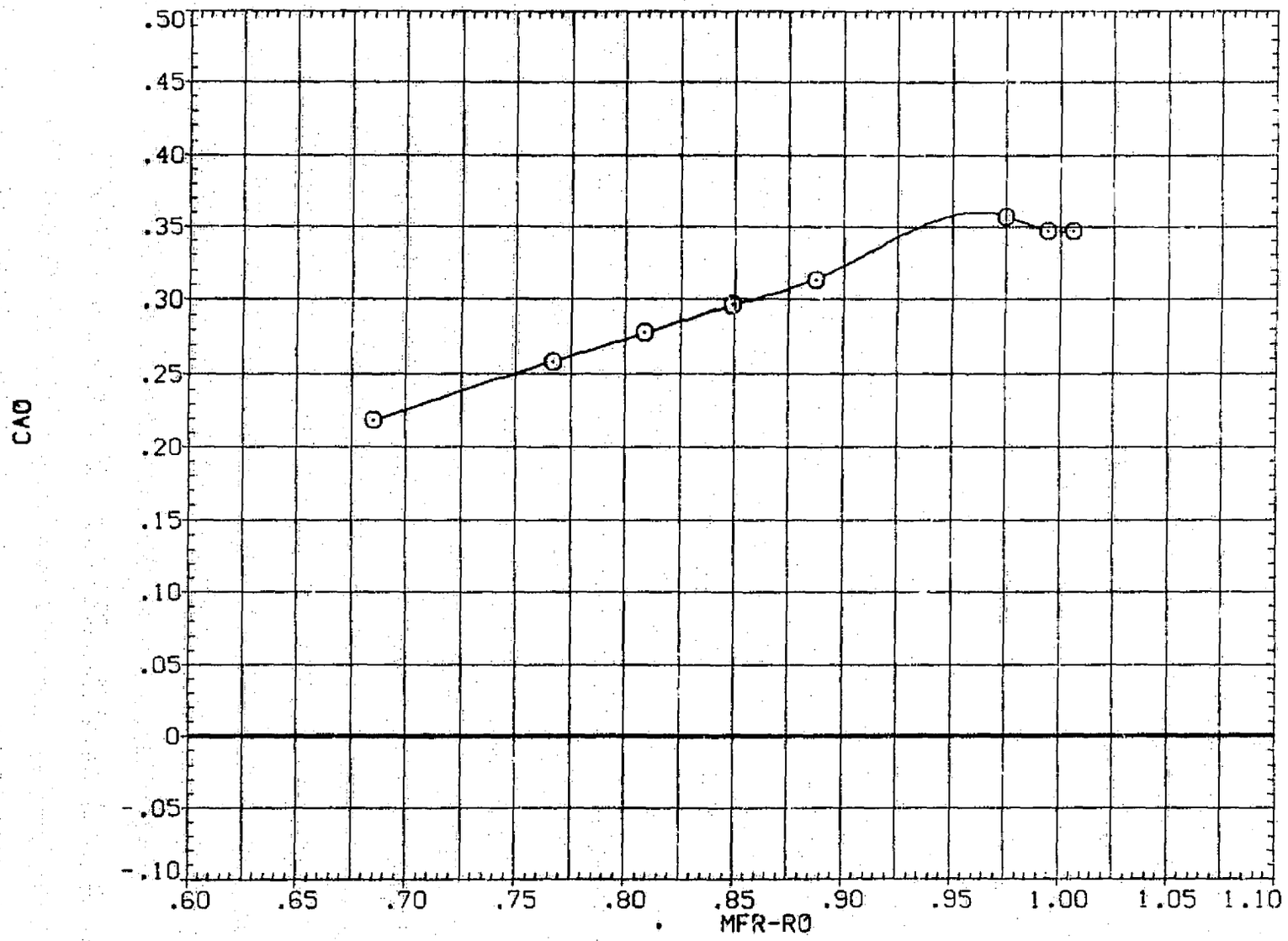


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(E)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2YO/B	X-MA
(AAP004)	NI	8.000	.230	.600	40.000
(AAP008)	DATA NOT AVAILABLE	8.000	.230	.600	40.000

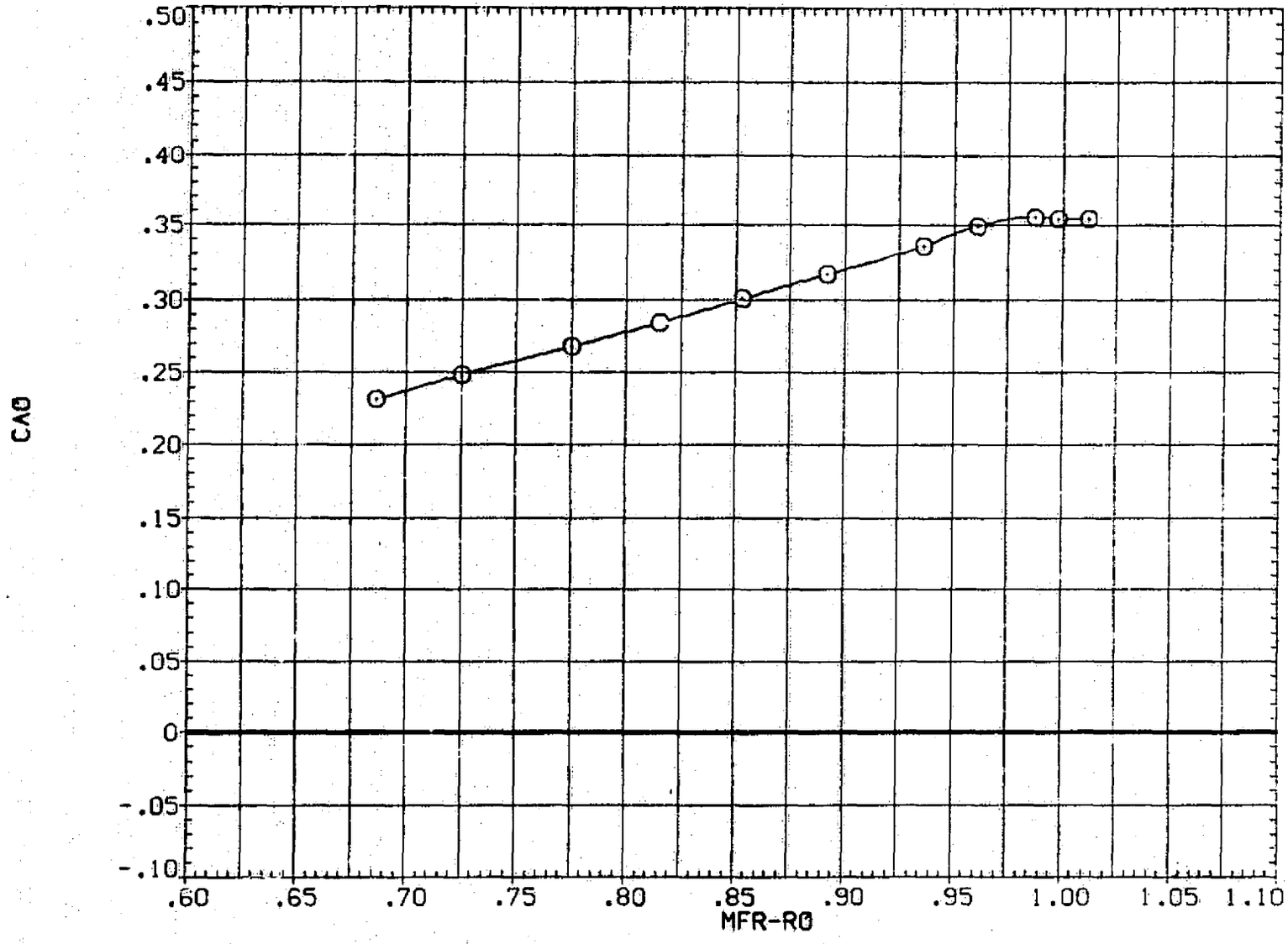


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2YD/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	N2	8.000	.230	.600	40.000

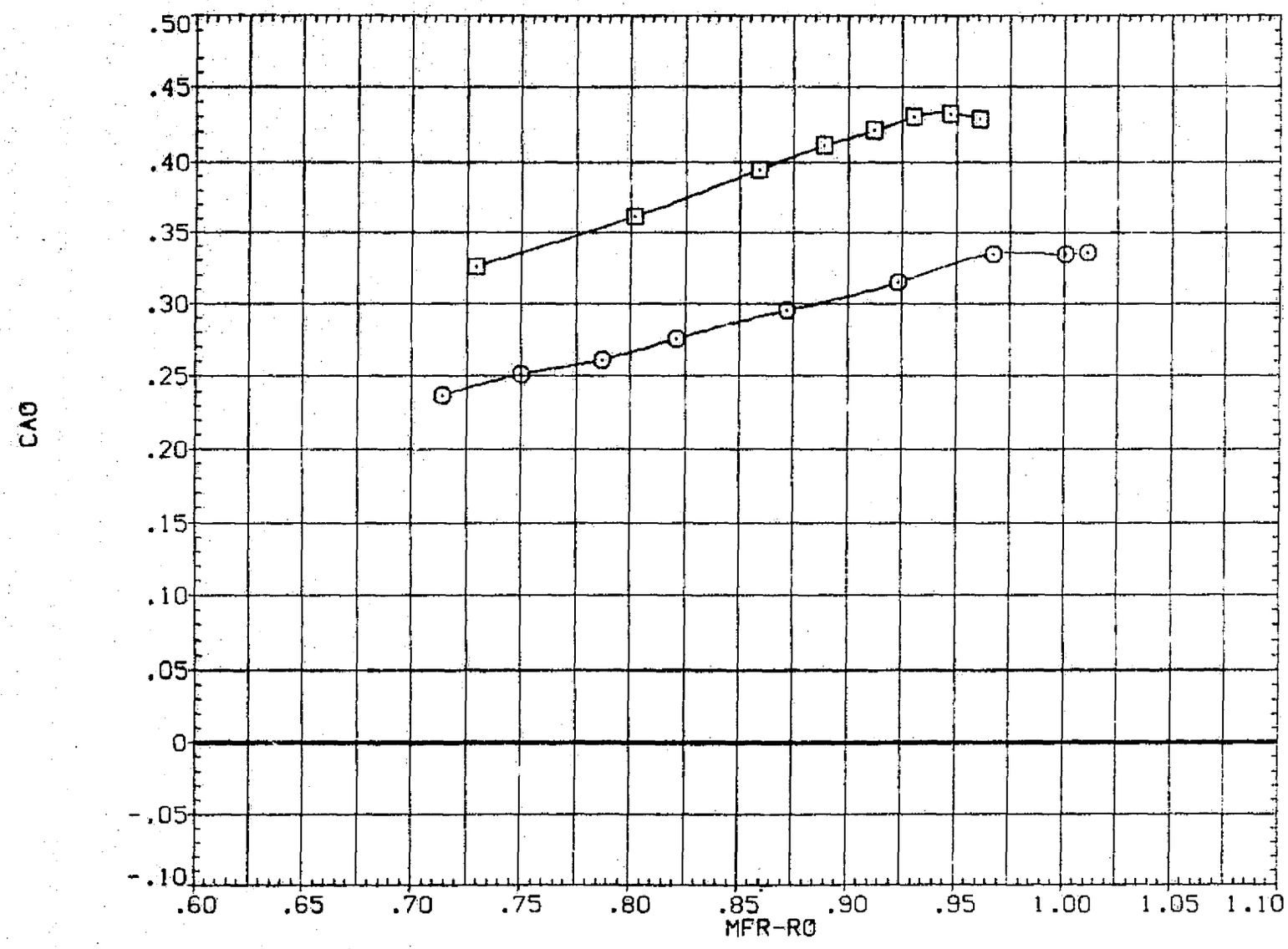


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(G)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DX1	2YI/B	2YO/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	N2	8.000	.230	.600	40.000

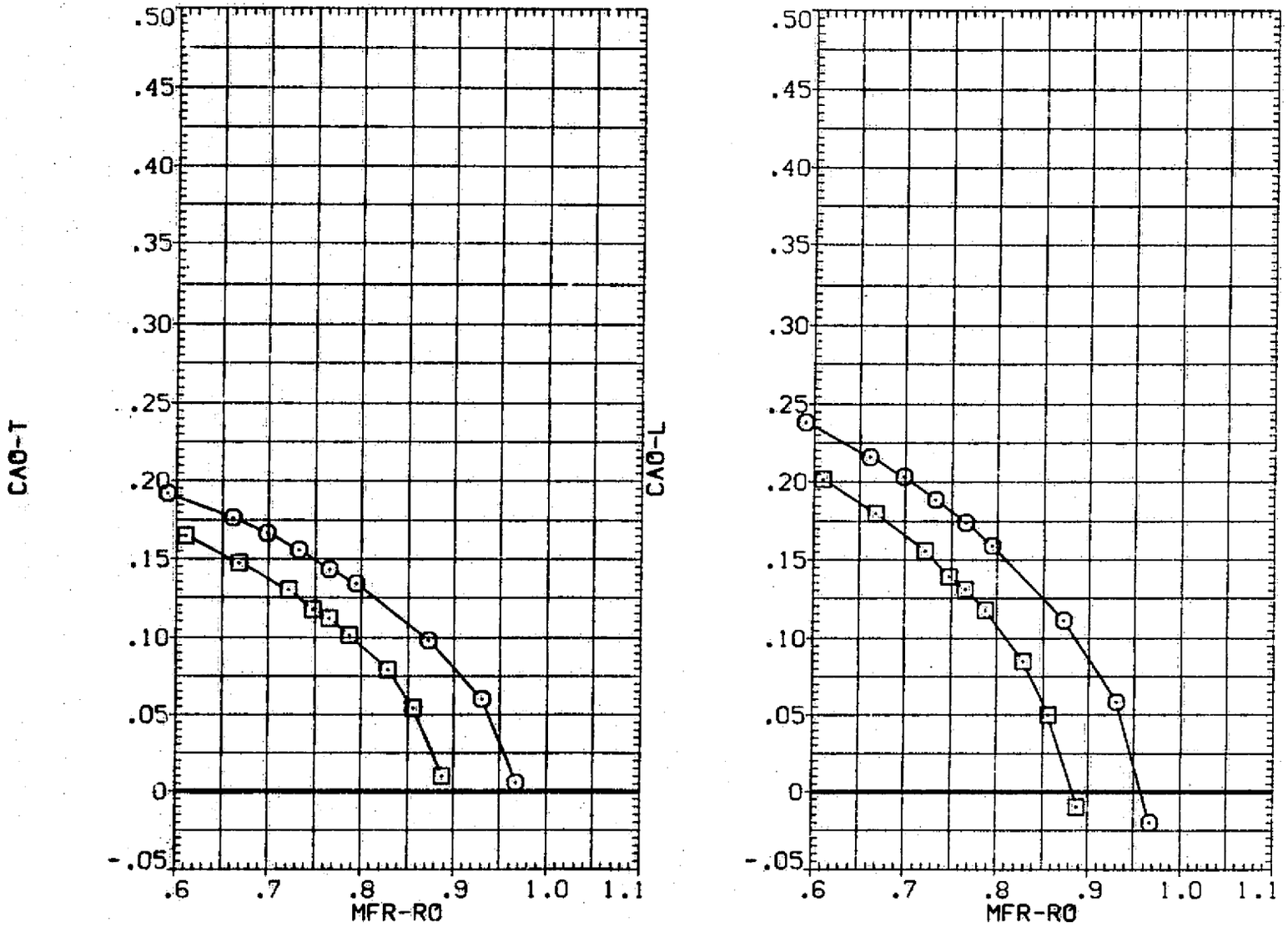


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	N2	8.000	.230	.600	40.000

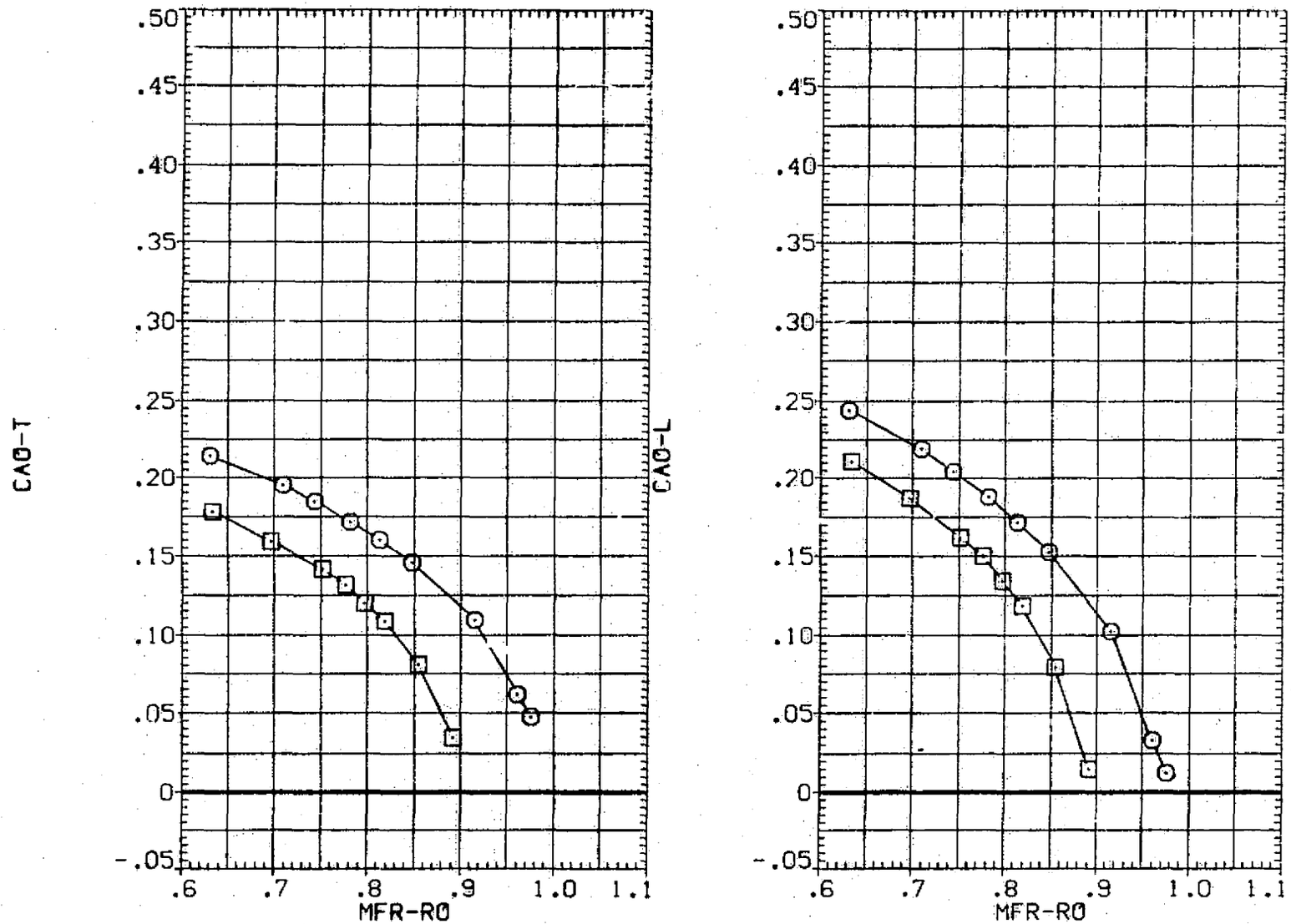


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(B)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	DATA NOT AVAILABLE	8.000	.230	.600	40.000

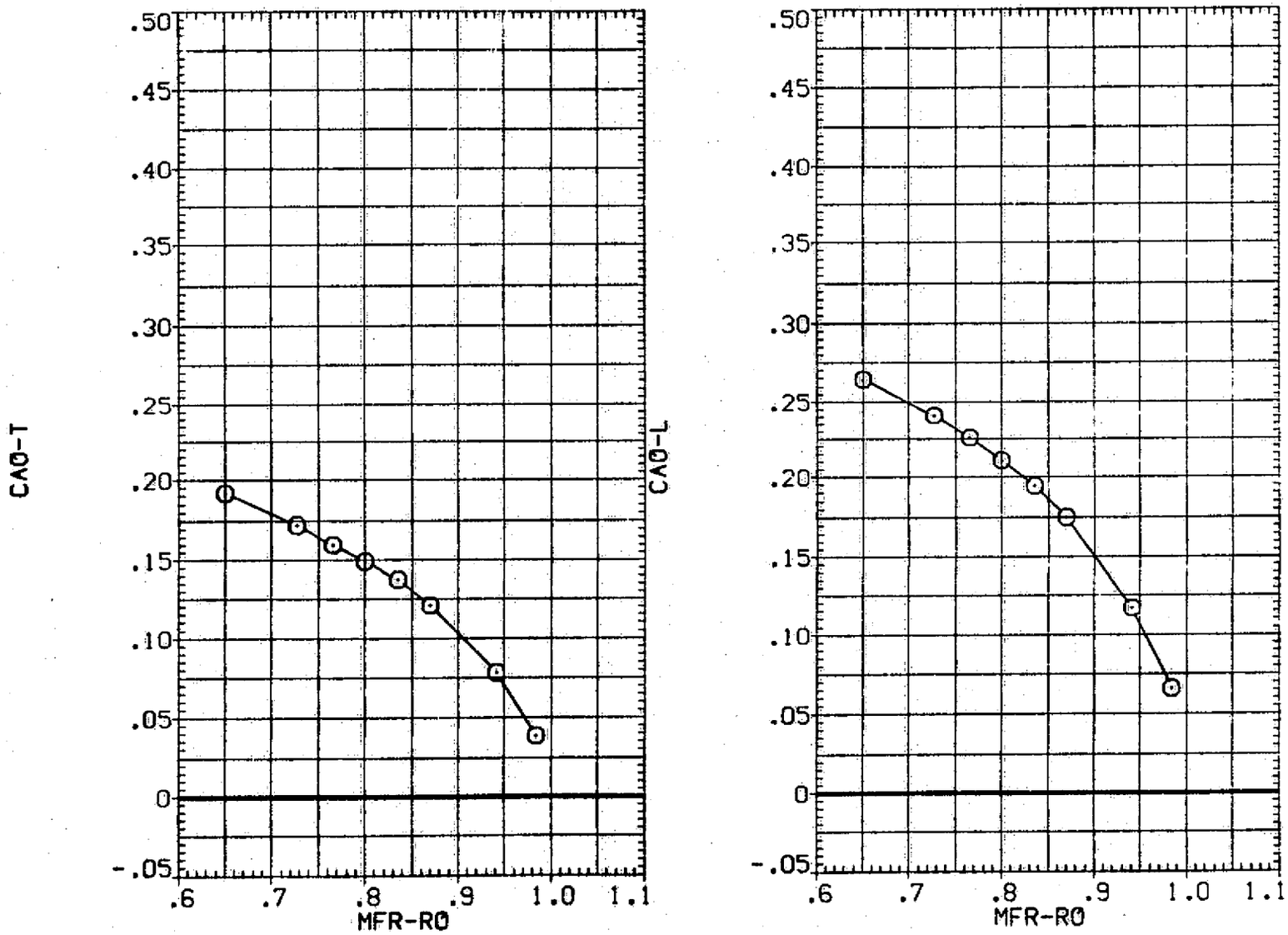


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(C)MACH = 1.10

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2Y0/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	N2	8.000	.230	.600	40.000

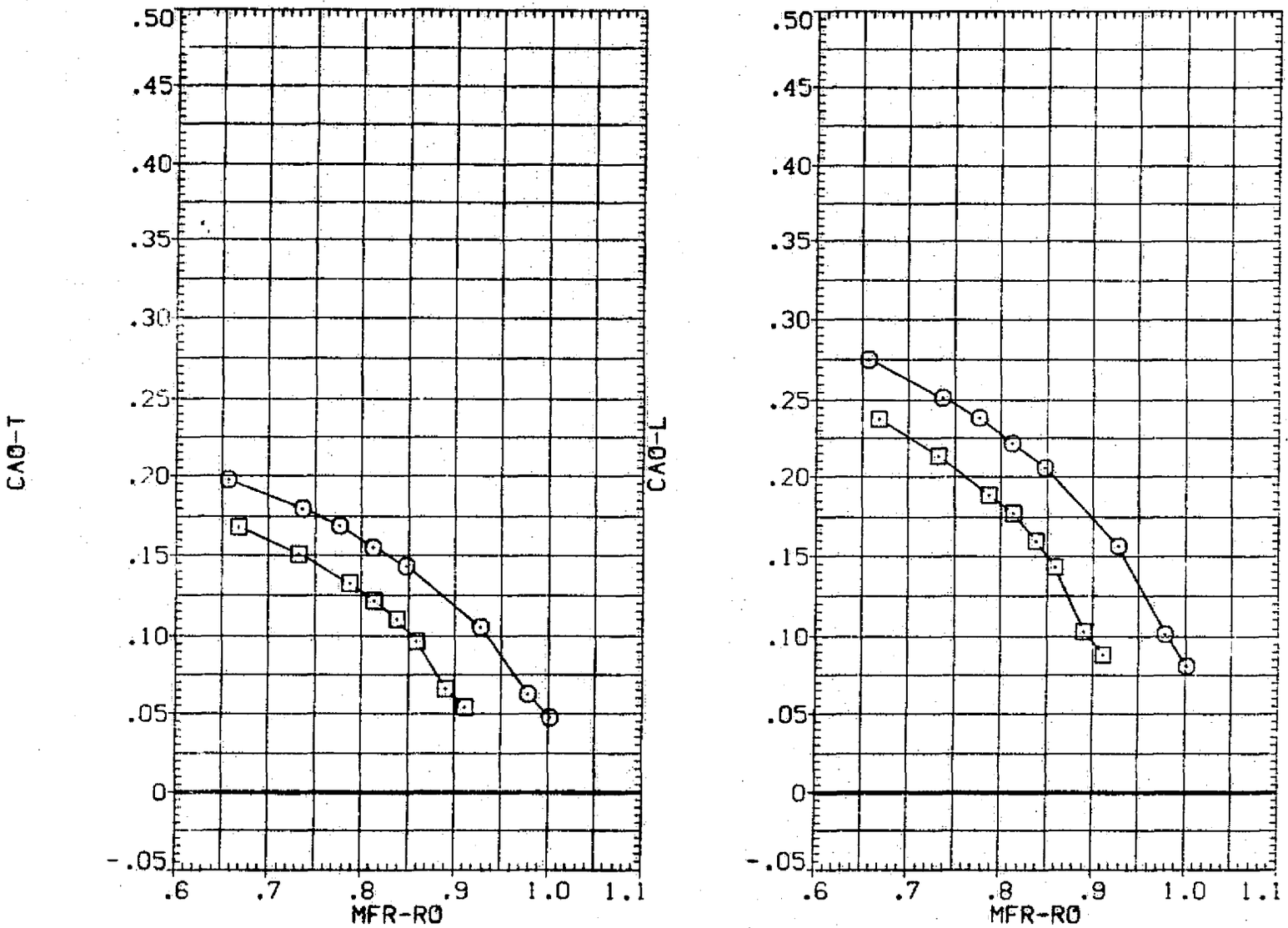


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
[AAP004]	N1
[AAP006]	DATA NOT AVAILABLE

DX1	2Y1/B	2Y0/B	X-MA
8.000	.230	.600	40.000
8.000	.230	.600	40.000

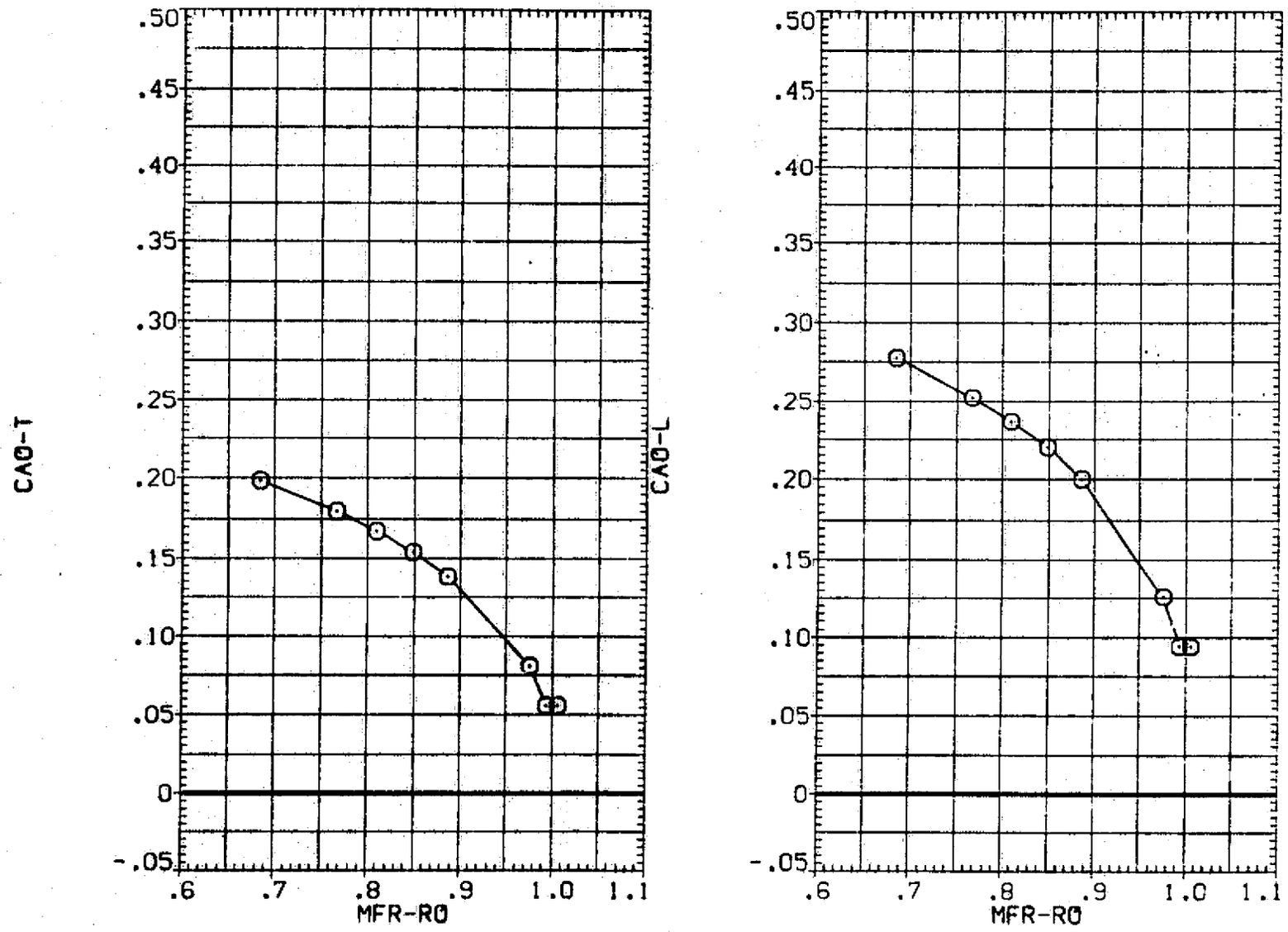


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(E)MACH = 1.20

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	⊖	NI	0.000	.230	.600	40.000
(AAP008)	⊟	DATA NOT AVAILABLE	0.000	.230	.600	40.000

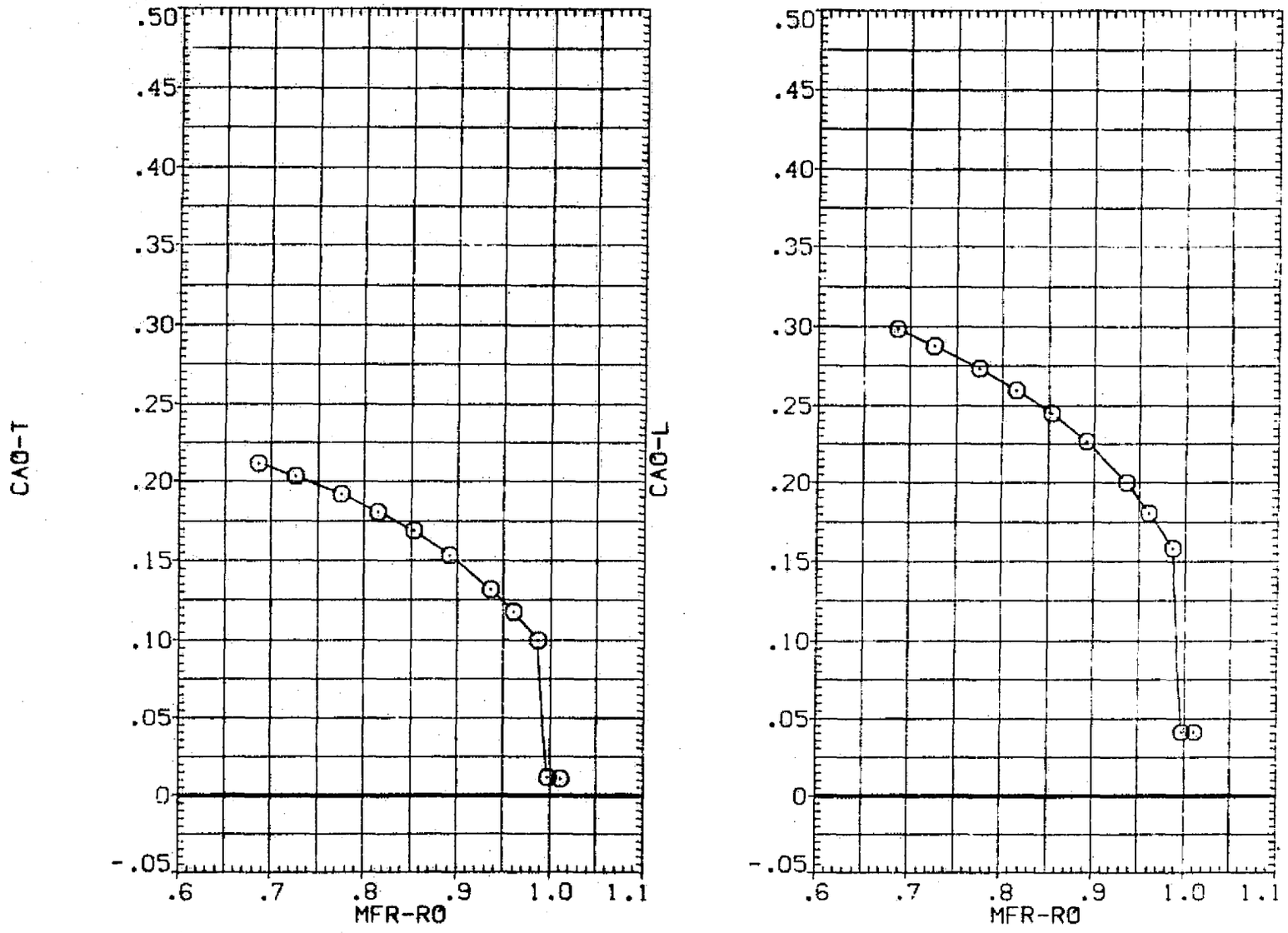


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(F)MACH = 1.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(AAP004)	N1
(AAP008)	N2

DXI	2YI/B	2YO/B	X-MA
8.000	.230	.600	40.000
8.000	.230	.600	40.000

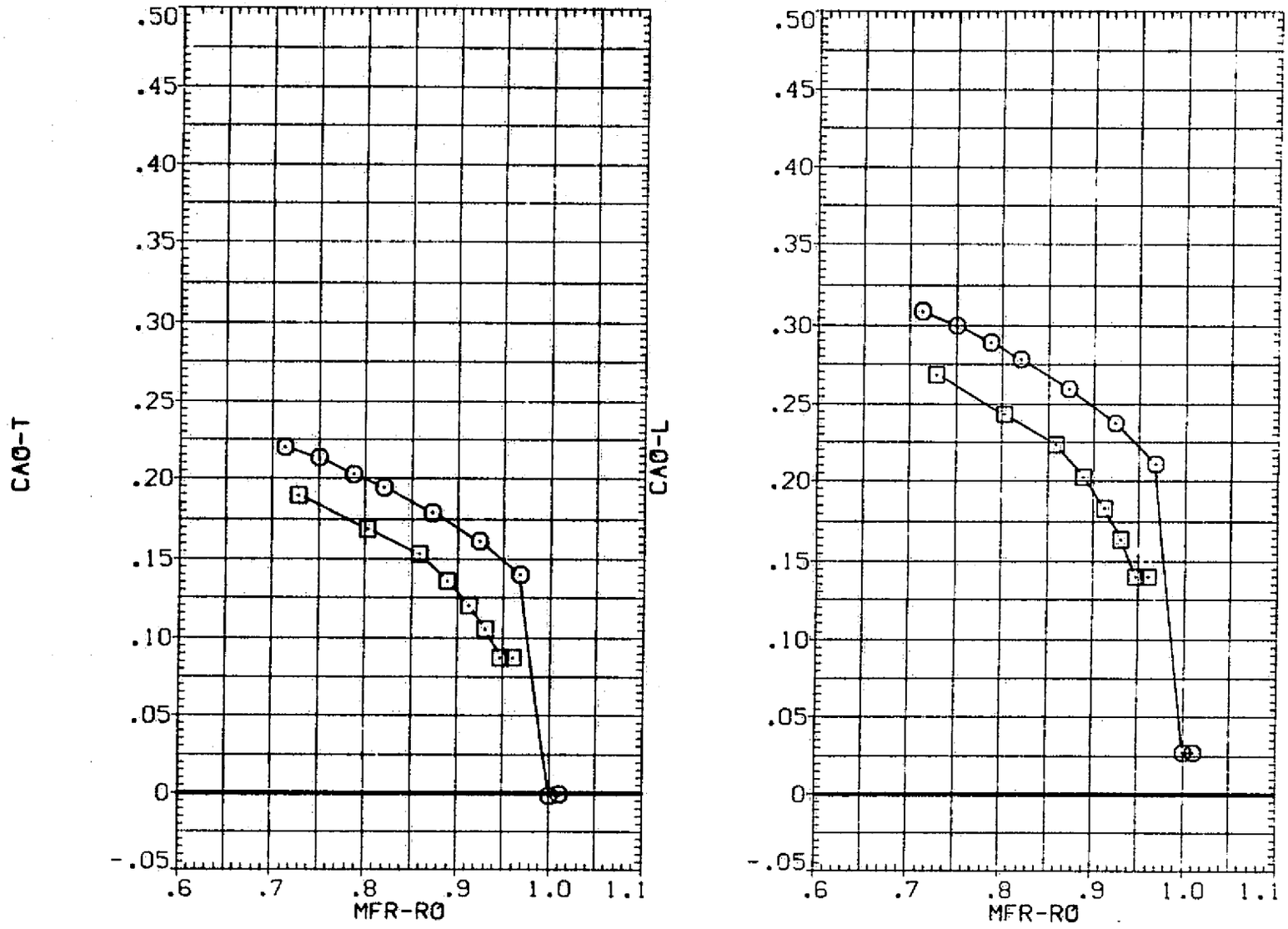


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	N2	8.000	.230	.600	40.000

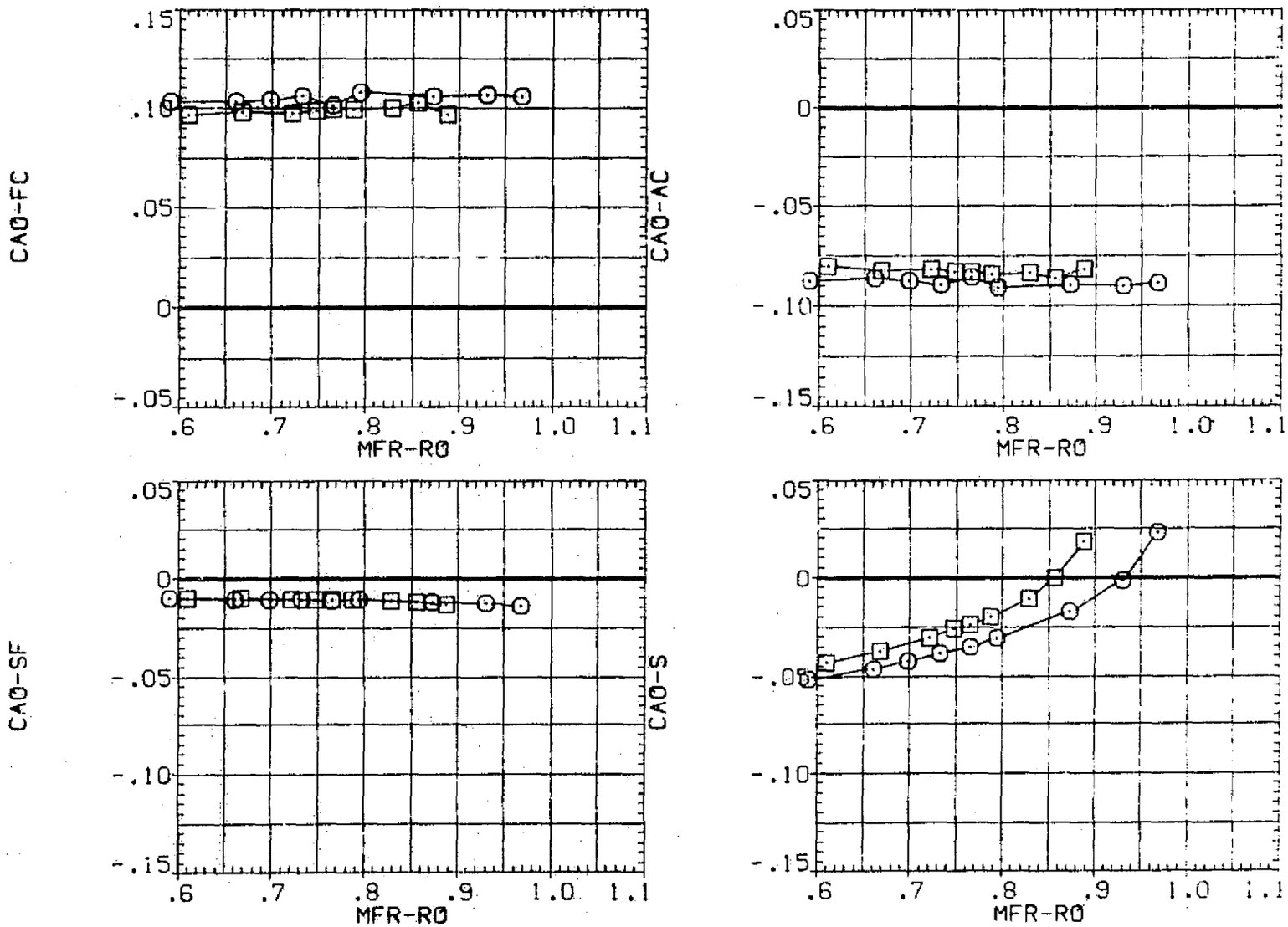


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	N2	8.000	.230	.600	40.000

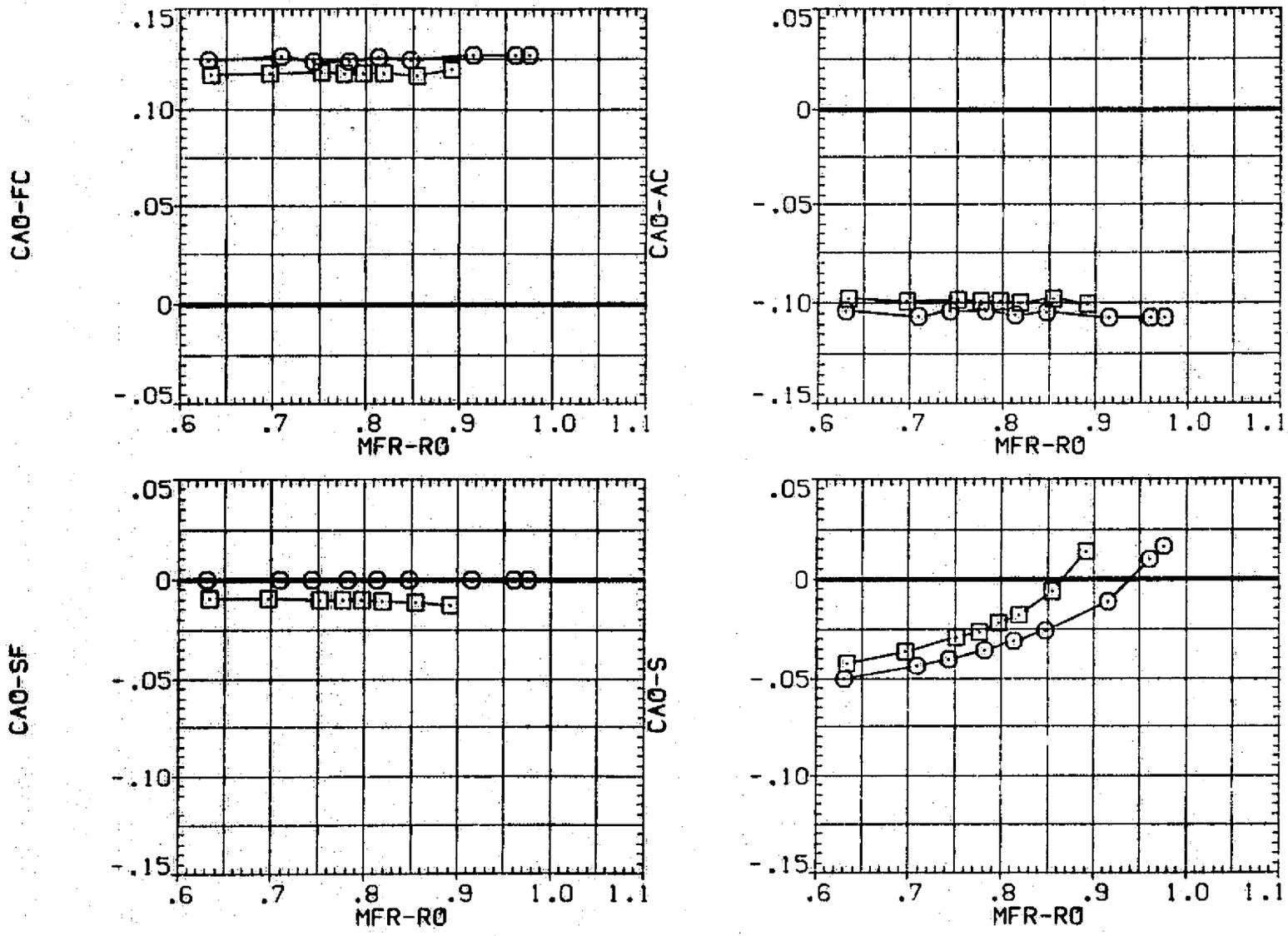


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(B)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2Y1/B	2Y0/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	DATA NOT AVAILABLE	8.000	.230	.600	40.000

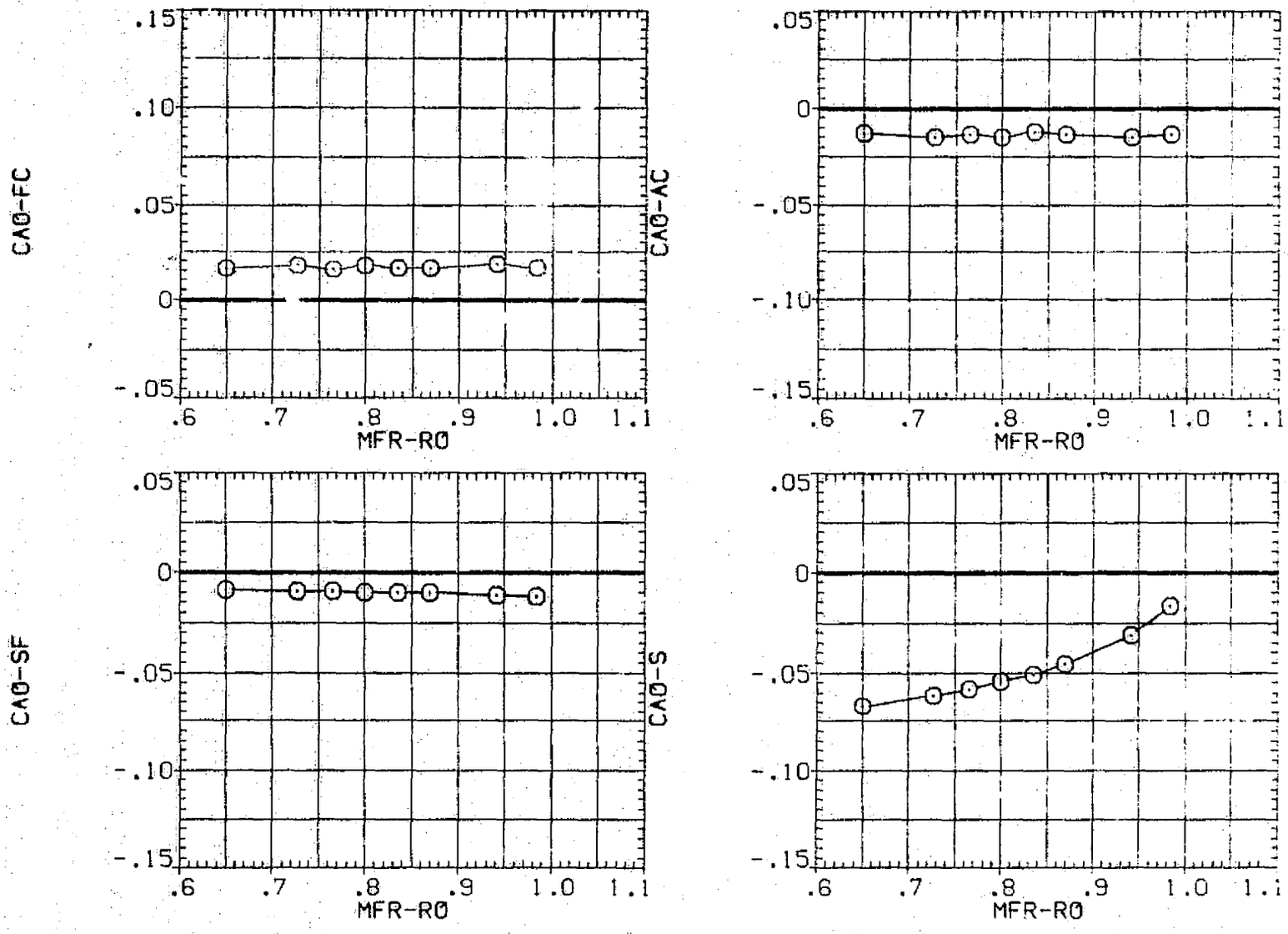


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(C)MACH = 1.10

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2Y0/B	X-MA
(AAP004)	N1	8.000	.230	.600	40.000
(AAP008)	N2	8.000	.230	.600	40.000

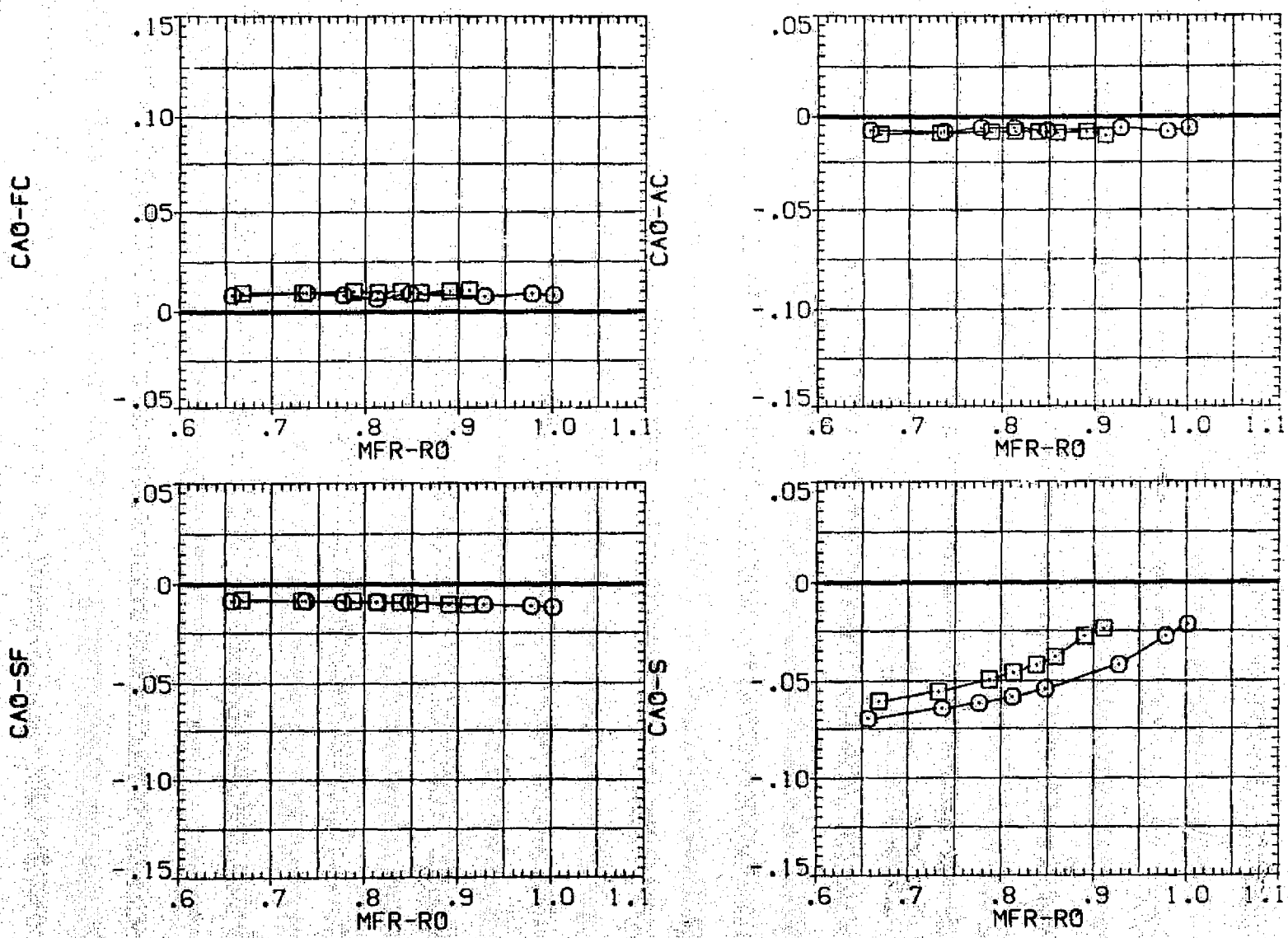


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2Y1/B	2Y0/B	X-MA
(AAP004)	○	N1	8.000	.230	.600	40.000
(AAP008)	□	DATA NOT AVAILABLE	8.000	.230	.600	40.000

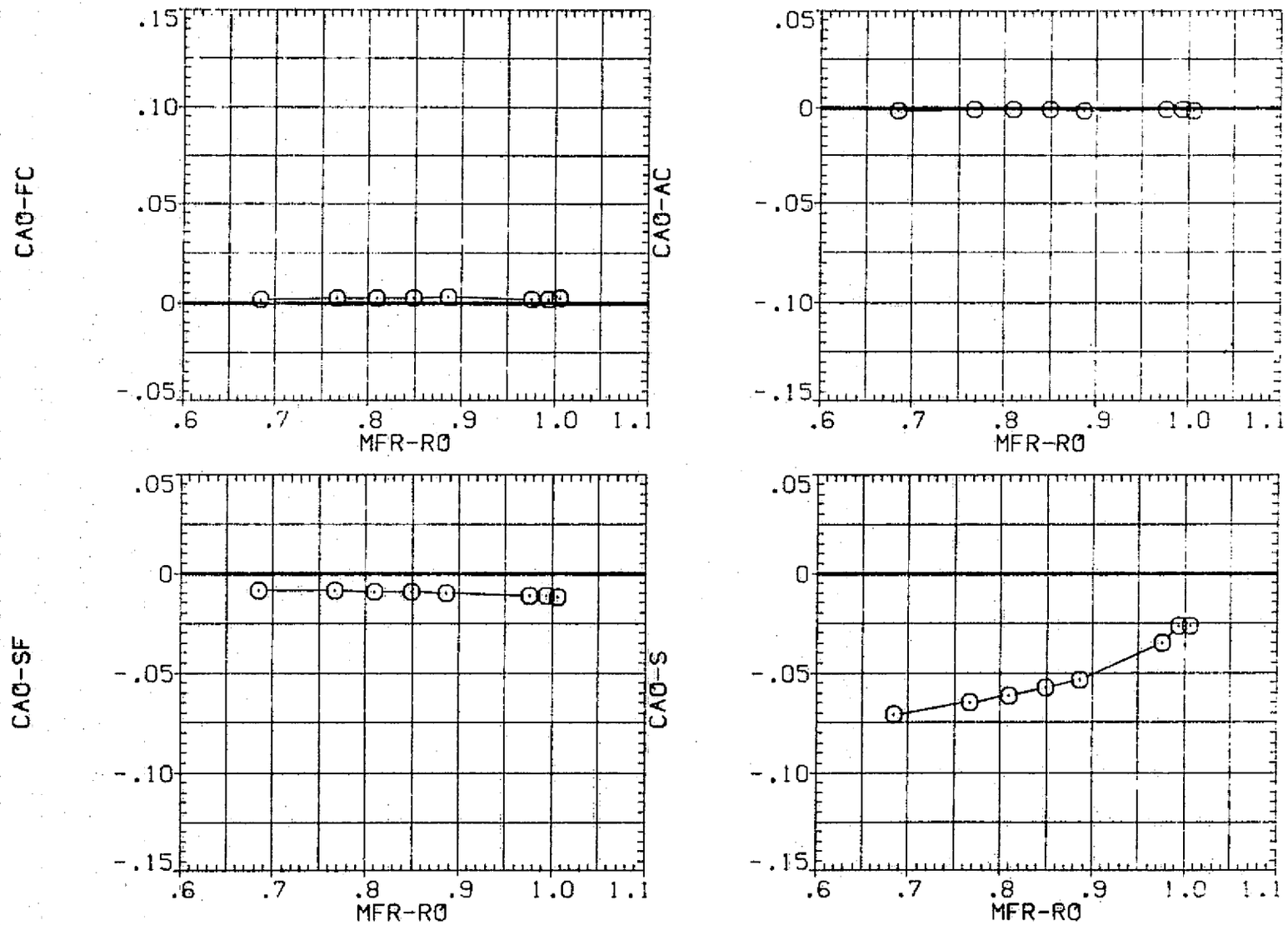


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(AAP004)	○	N1
(AAP008)	□	DATA NOT AVAILABLE

DX1	2Y1/B	2Y0/B	X-MA
8.000	.230	.600	40.000
8.000	.230	.600	40.000

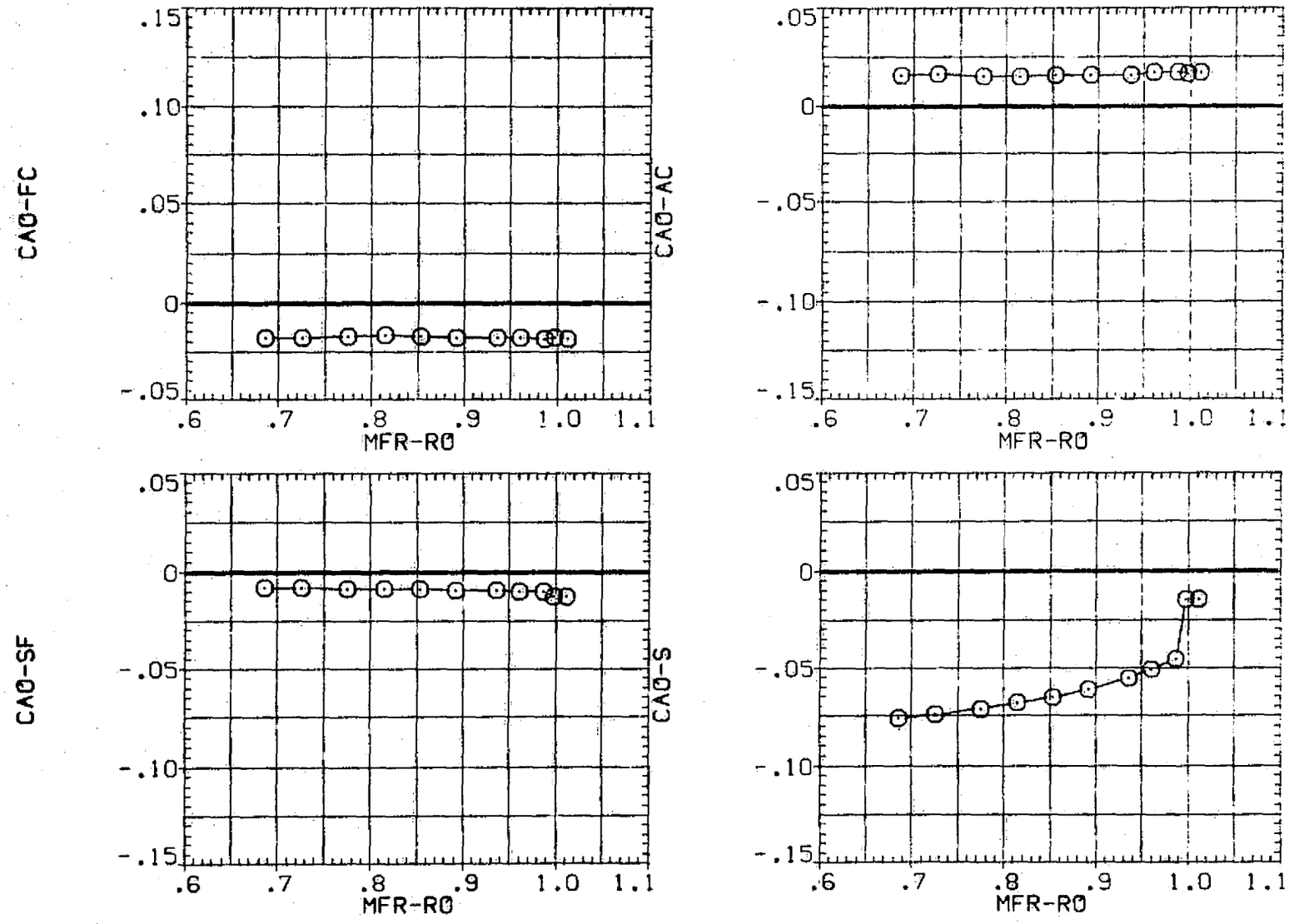


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DX/I	2YI/B	2YO/B	X-MA
[AAP004]	○	N1	8.000	.230	.600	40.000
[AAP008]	□	N2	8.000	.230	.600	40.000

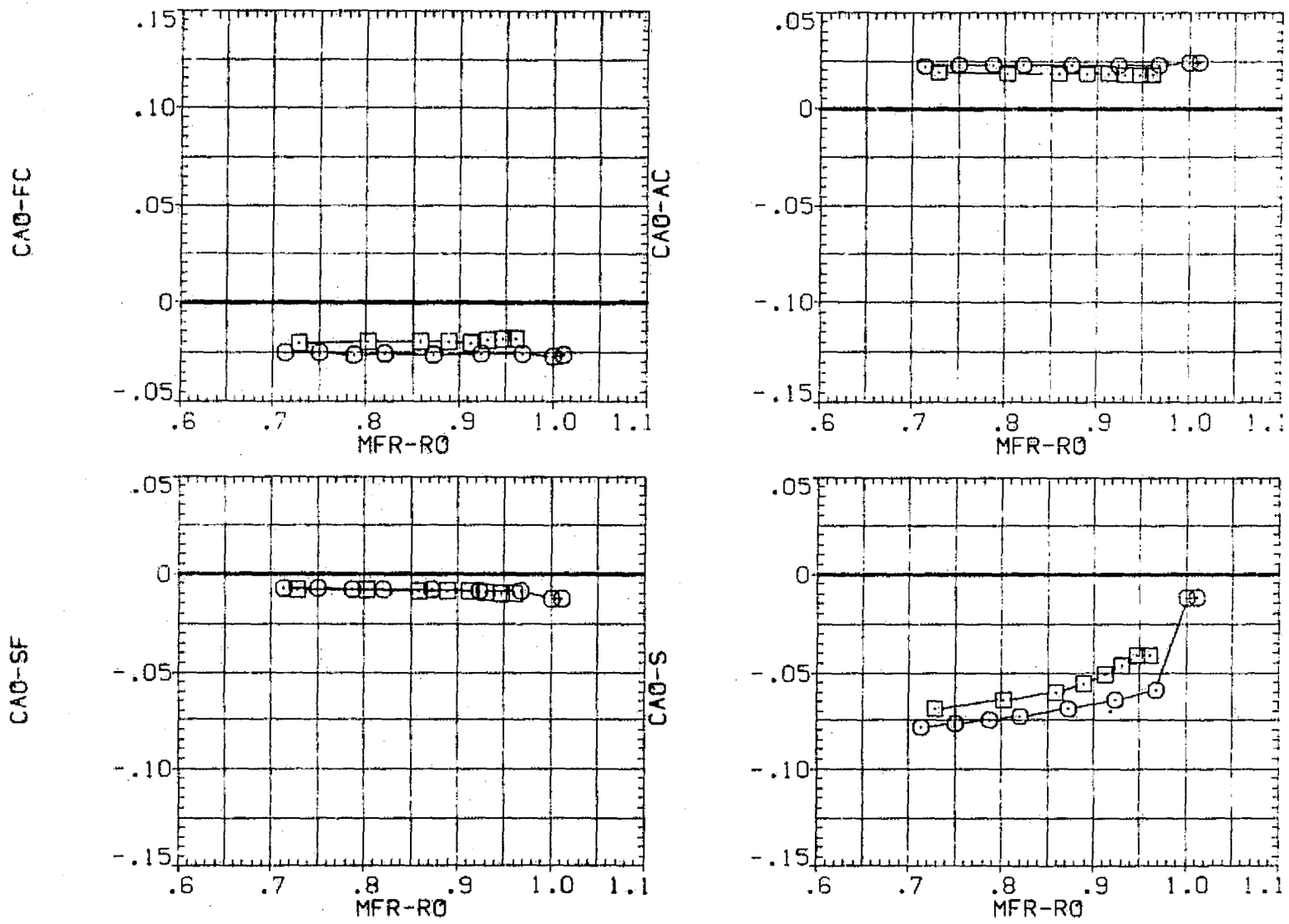


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP004)		N1
(BAP008)		N2

DX1	2Y1/B	2YD/B	X-MA
8.000	.230	.600	40.000
8.000	.230	.600	40.000

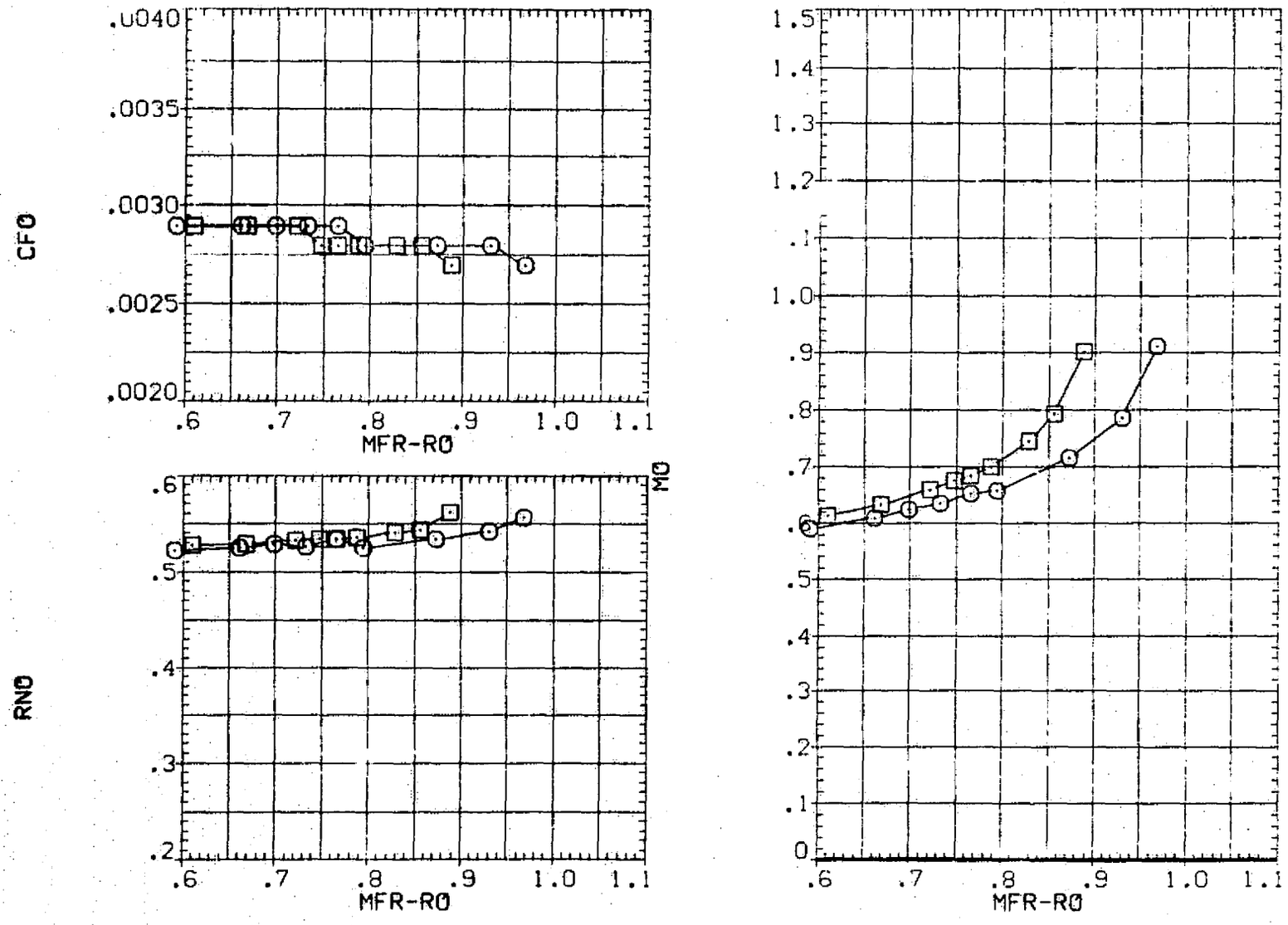


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(BAP004)	○	N1	8.000	.230	.600	40.000
(BAP008)	□	N2	8.000	.230	.600	40.000

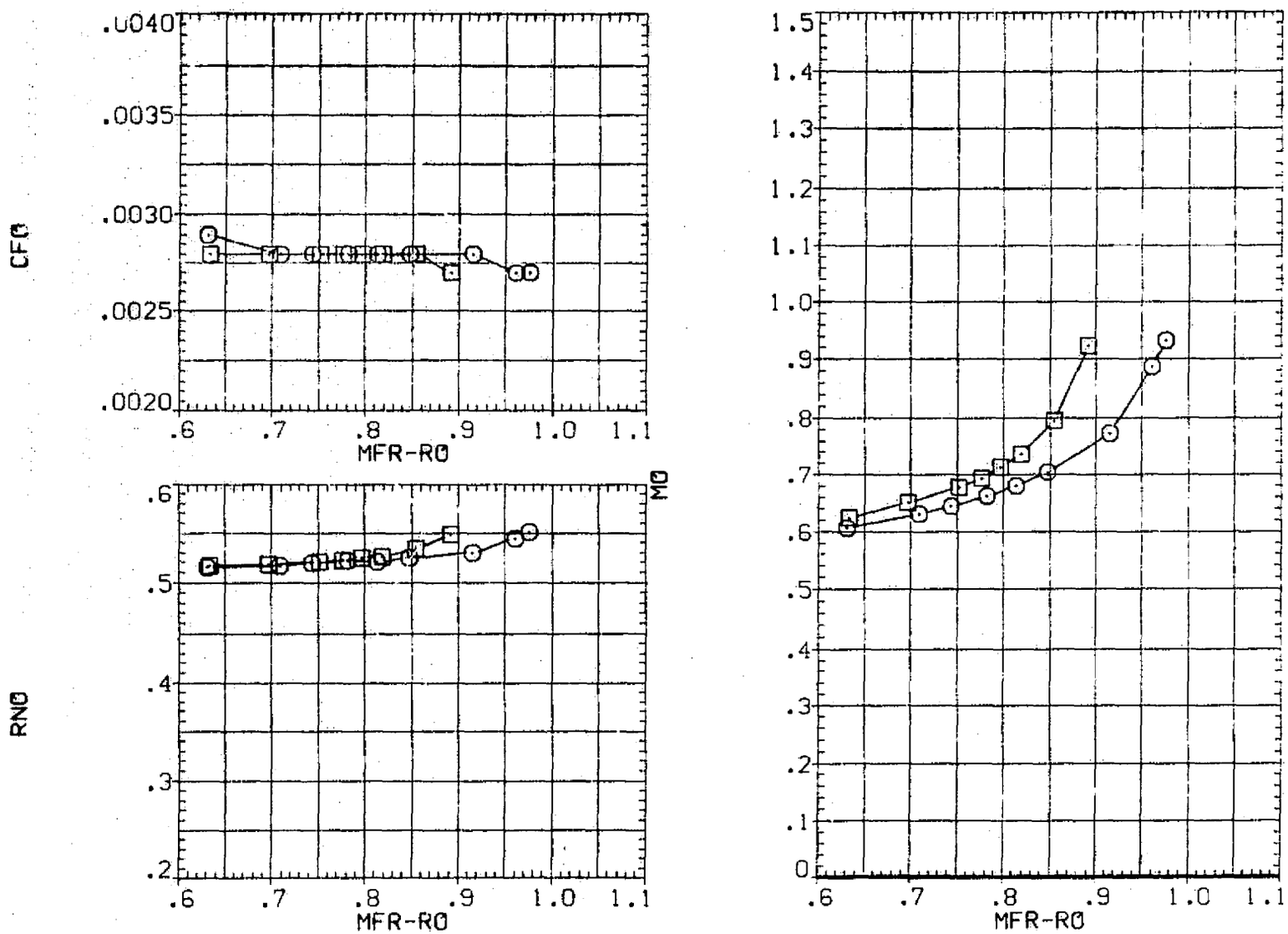


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2Y1/B	2Y0/B	X-MA
[BAP004]	○	NI	8.000	.230	.600	40.000
[BAP008]	□	DATA NOT AVAILABLE	8.000	.230	.600	40.000

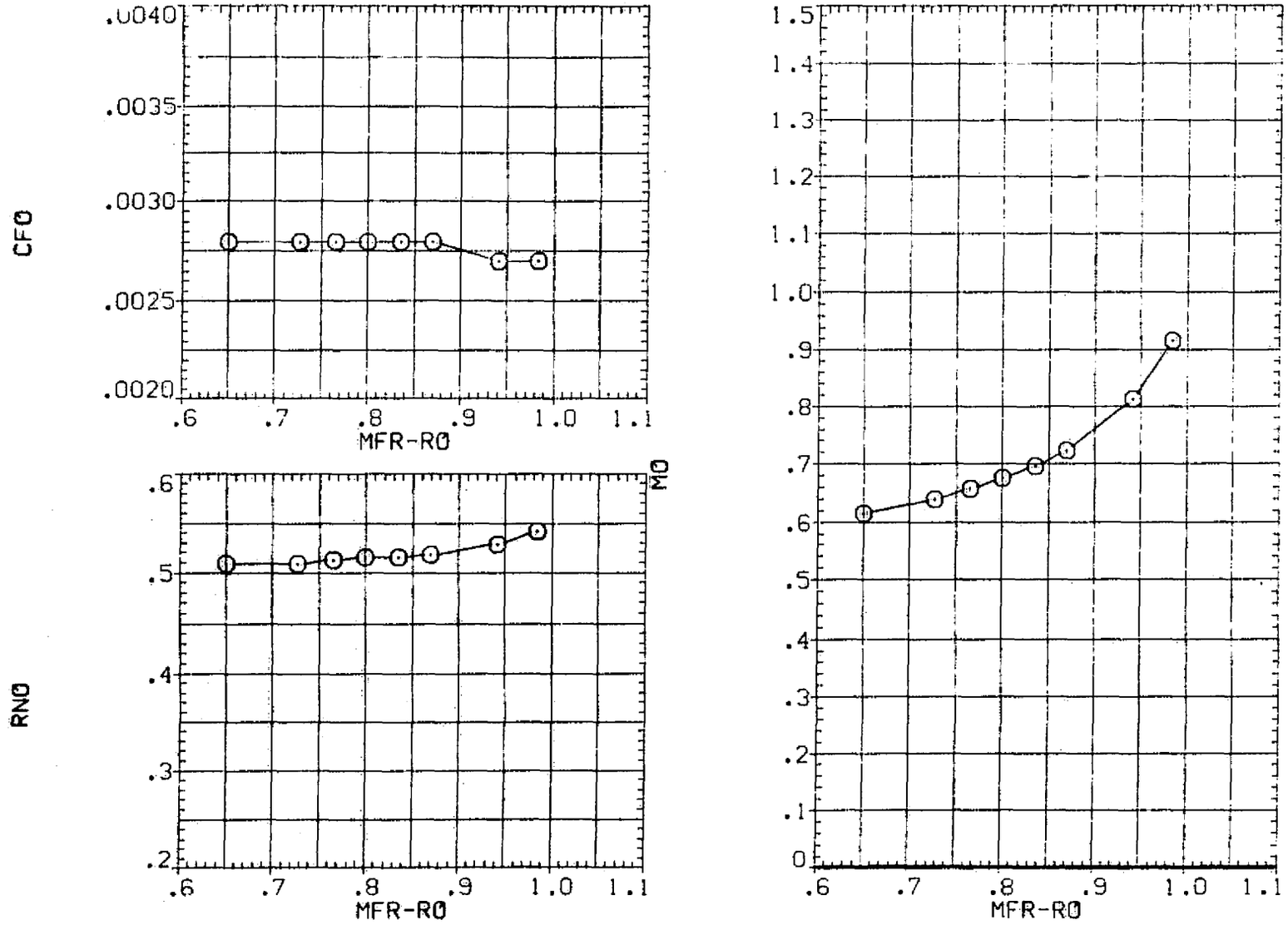


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(BAP004)	○	N1	8.000	.230	.600	40.000
(BAP008)	□	N2	8.000	.230	.600	40.000

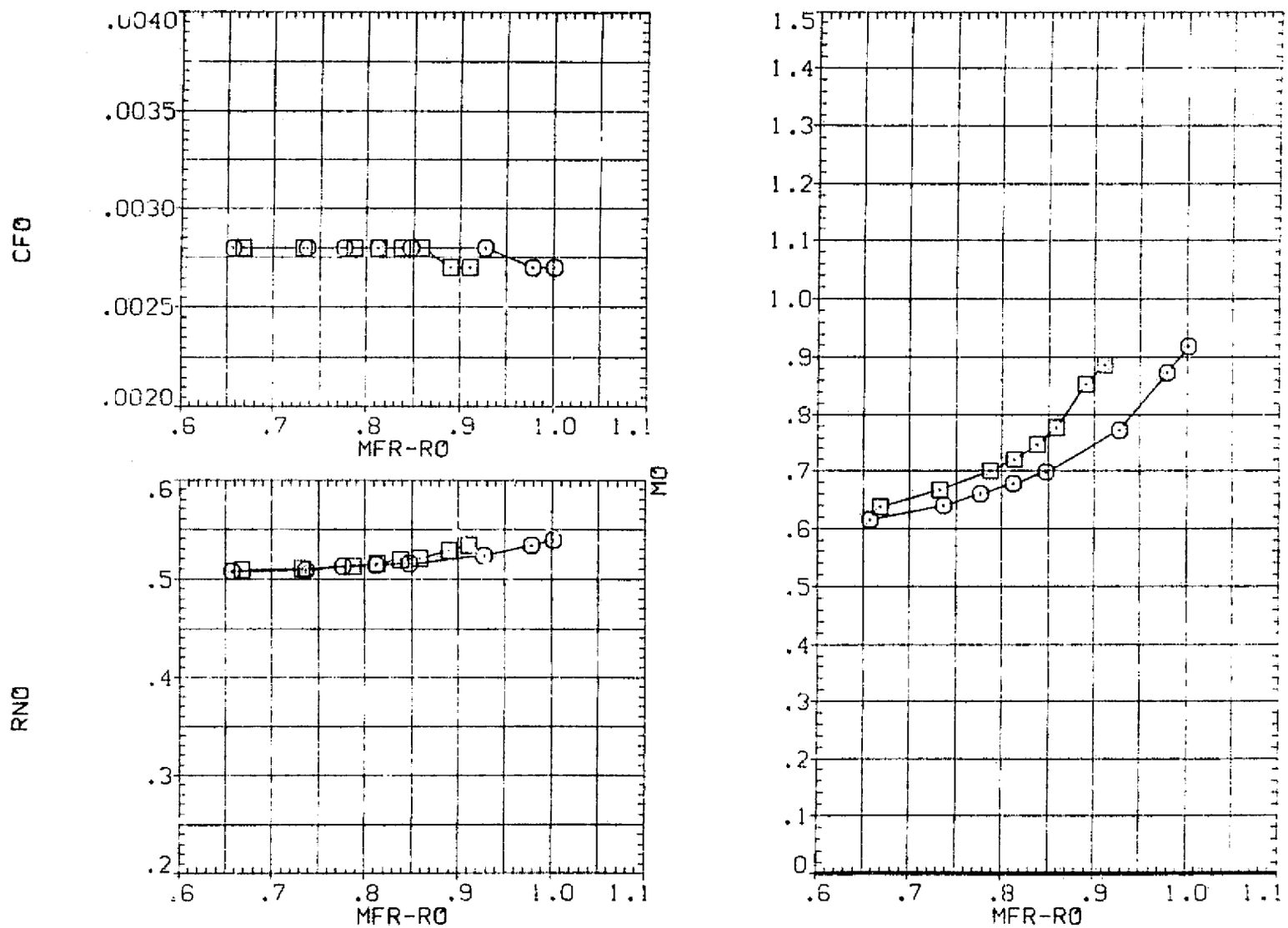


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DXI	2YI/B	2YO/B	X-MA
(BAP004) ○	N1	8.000	.230	.600	40.000
(BAP008) □	DATA NOT AVAILABLE	8.000	.230	.600	40.000

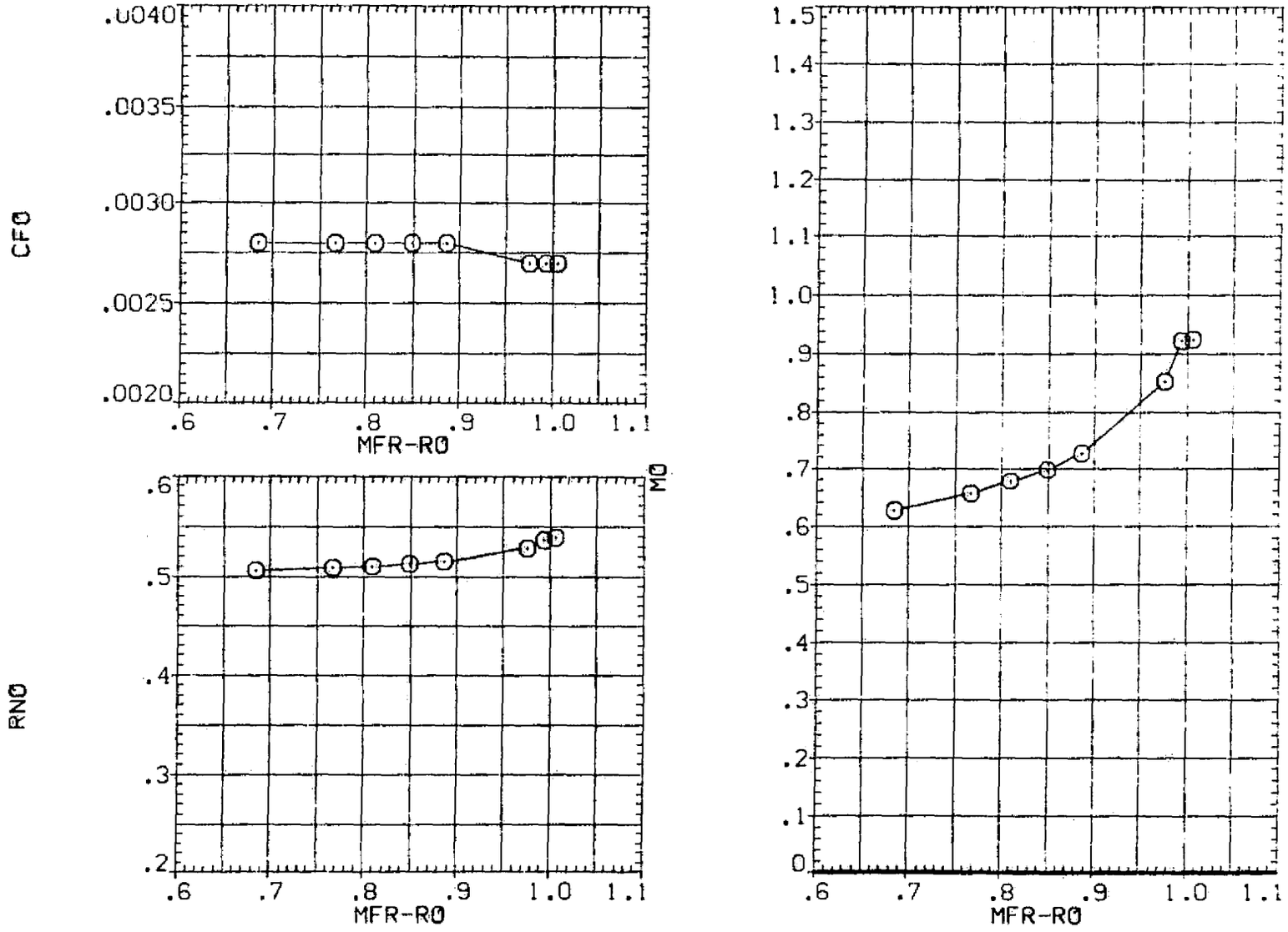


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(E)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DX1	2Y1/B	2Y0/B	X-MA
(BAP004)	NI	8.000	.230	.600	40.000
(BAP008)	DATA NOT AVAILABLE	8.000	.230	.600	40.000

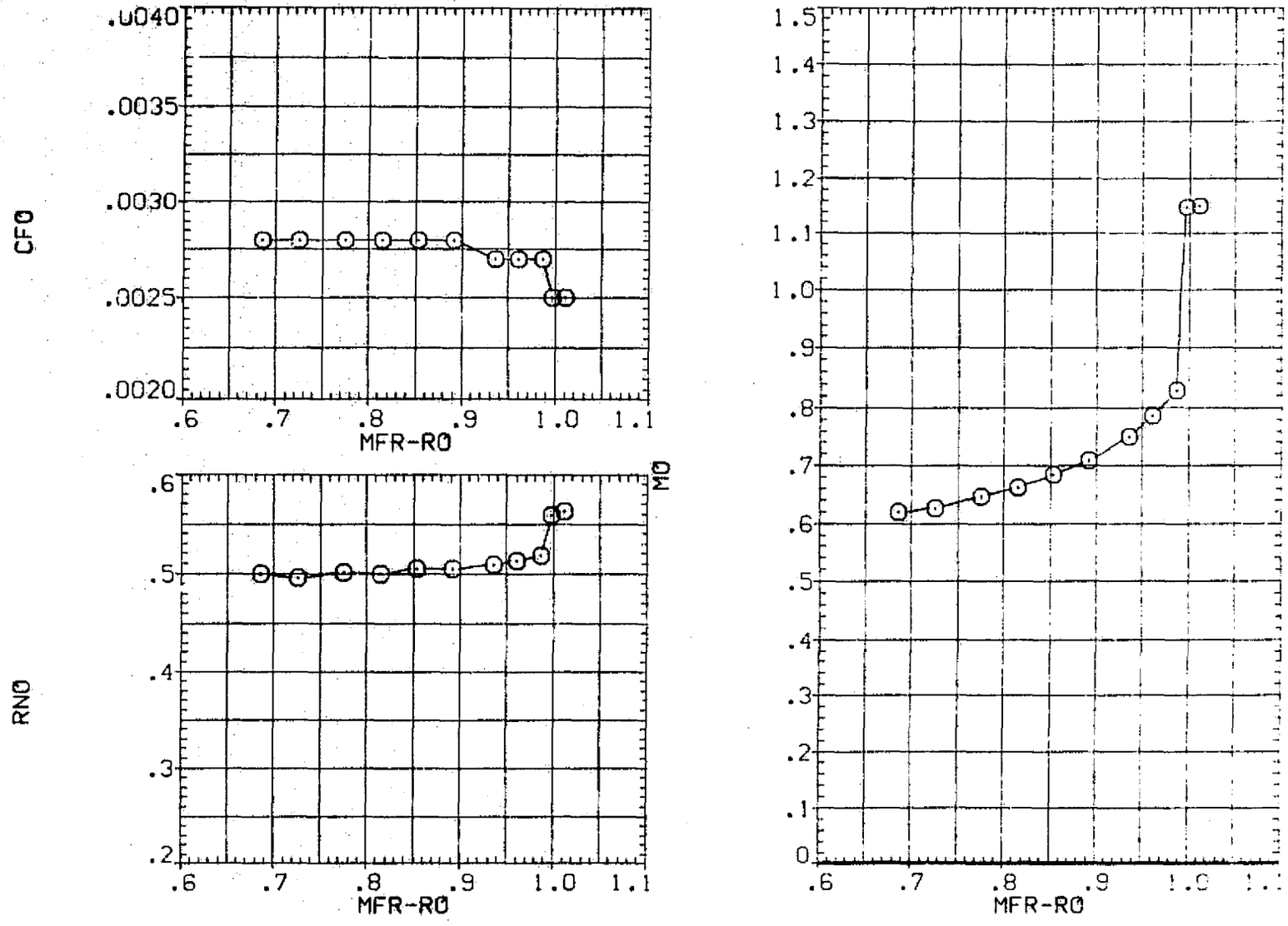


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(F)MACH = 1.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BX1	2Y1/B	2Y0/B	X-MA
(BAP004)	N1	8.000	.230	.600	40.000
(BAP008)	N2	8.000	.230	.600	40.000

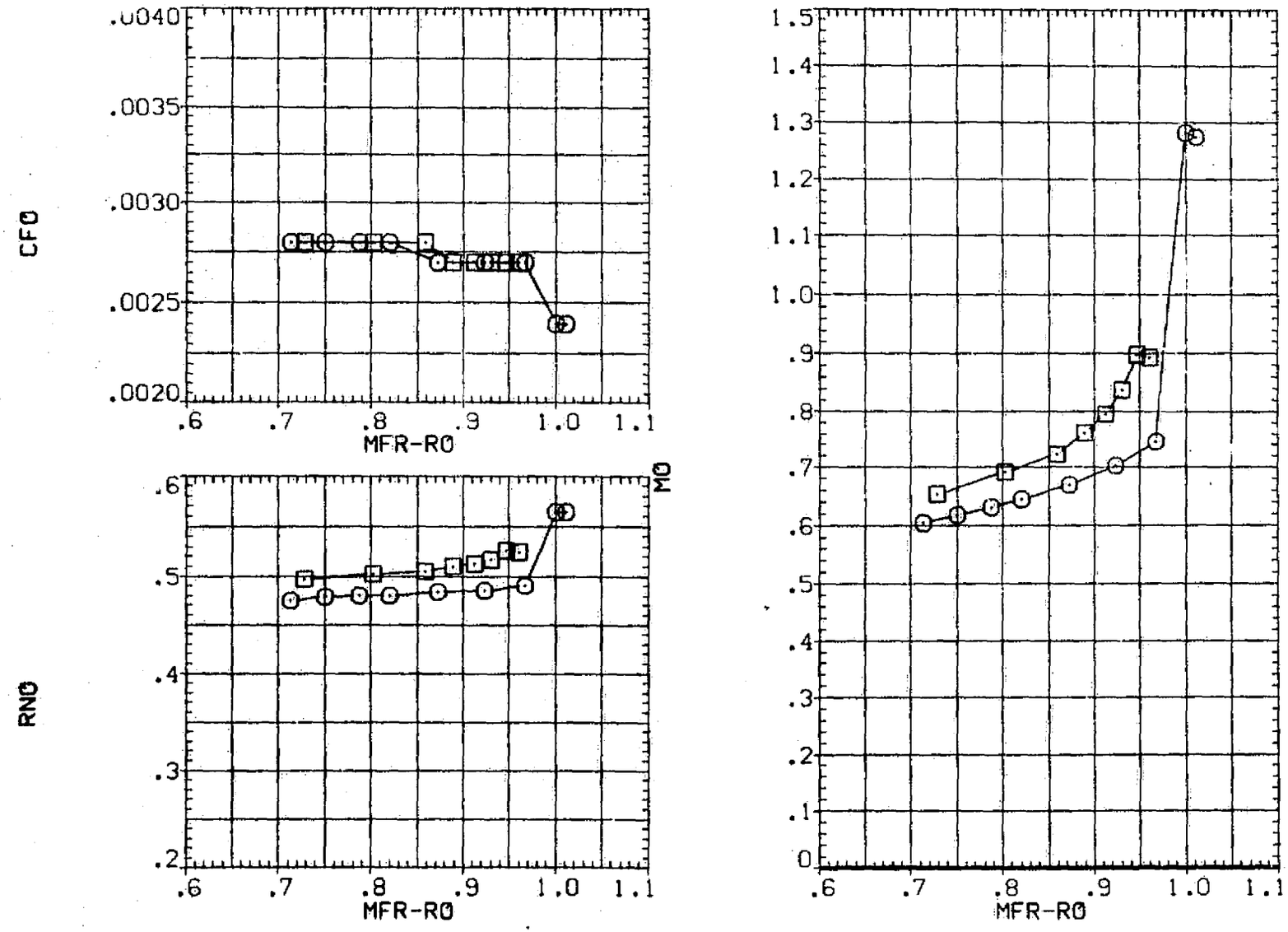


FIG. 6 EFFECTS OF MASS FLOW RATIO ON ISOLATED NACELLE CHARACTERISTICS.

(G)MACH = 1.40

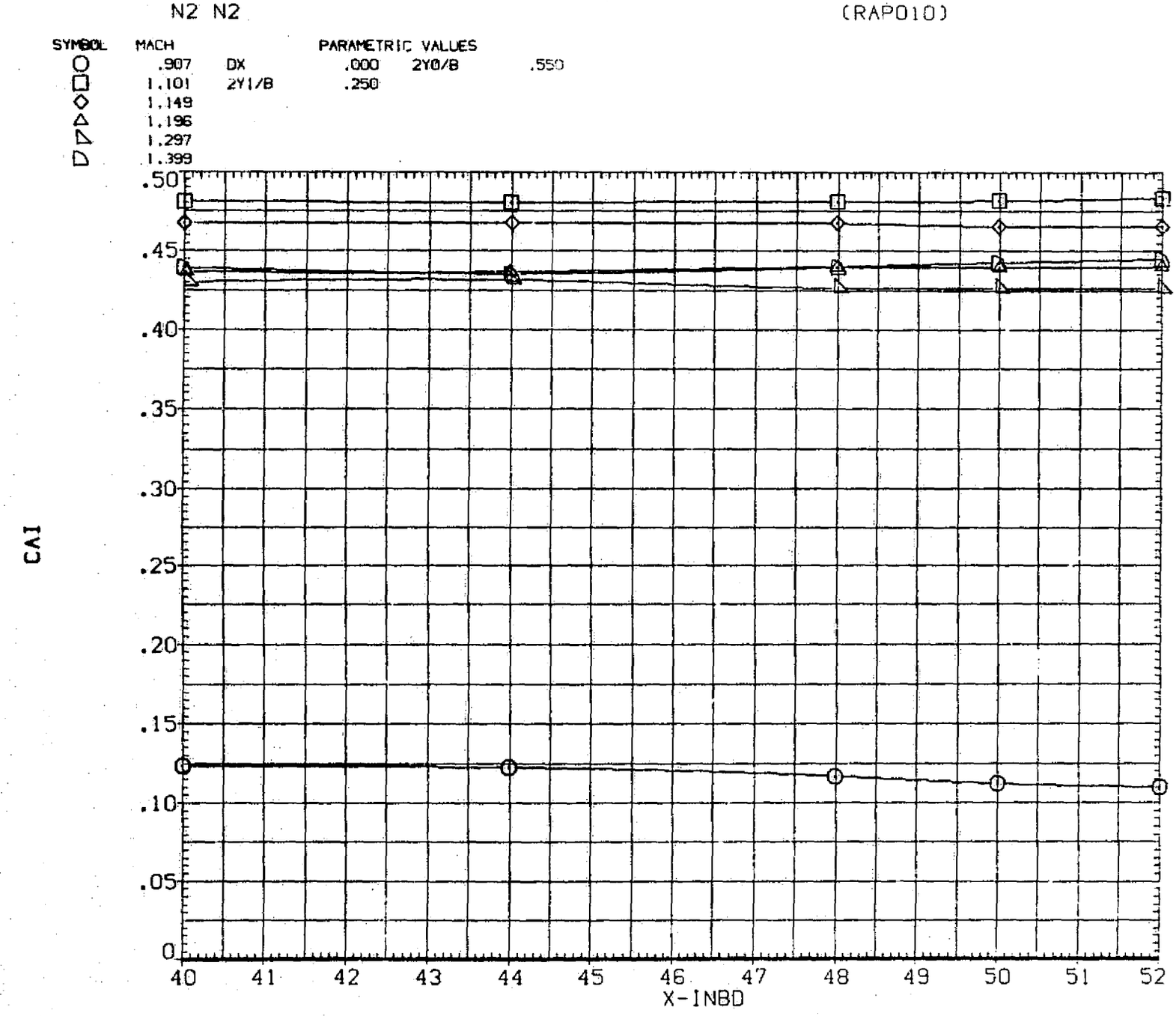


FIG. 7 INTERFERENCE OF STING FAIRING ON NACELLE AXIAL FORCE.

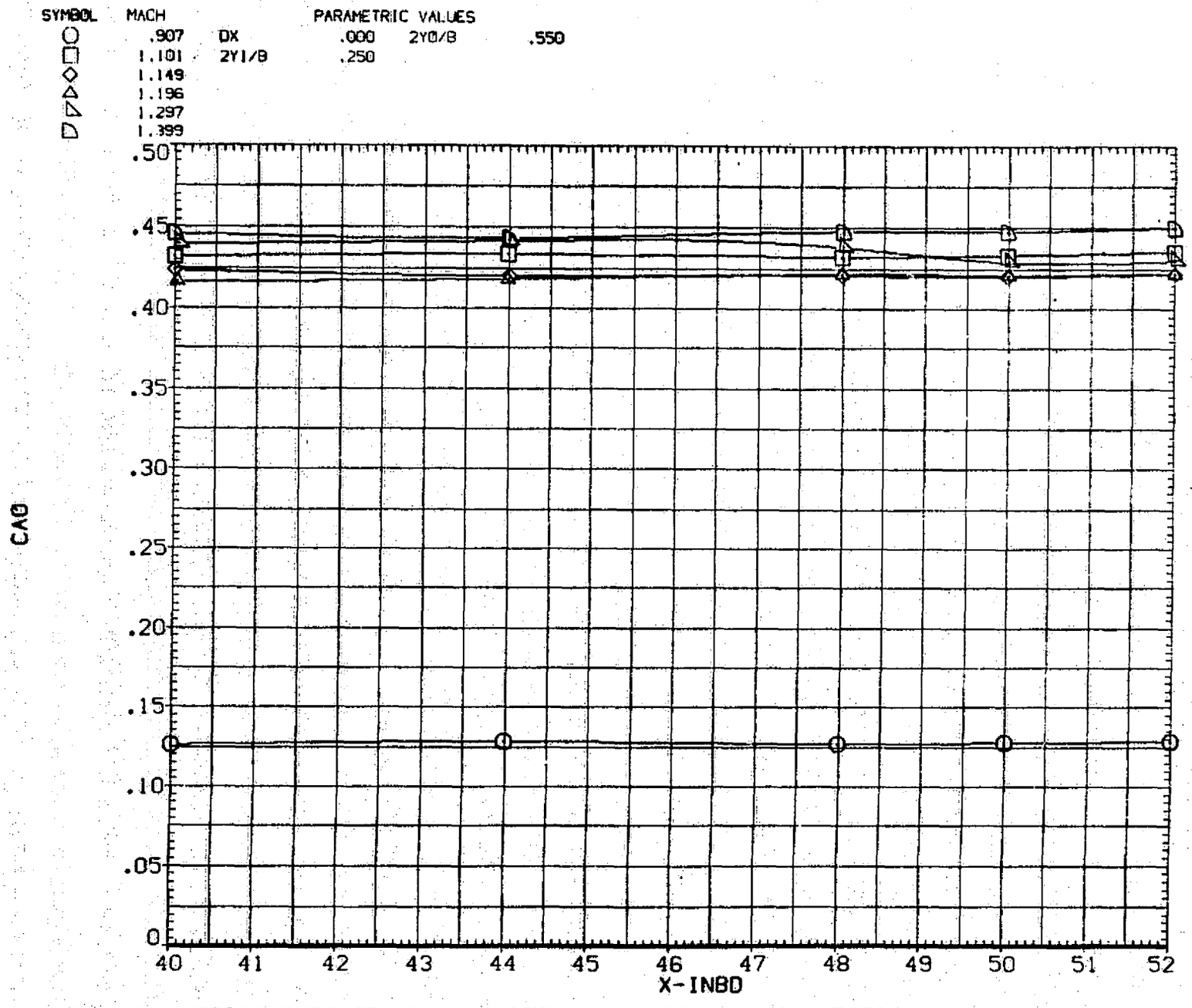


FIG. 7 INTERFERENCE OF STING FAIRING ON NACELLE AXIAL FORCE.

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(ZAPO11)	○	N2 N2	40.000	.250	.550
(RAPO14)	□	N1 N1	40.000	.250	.550

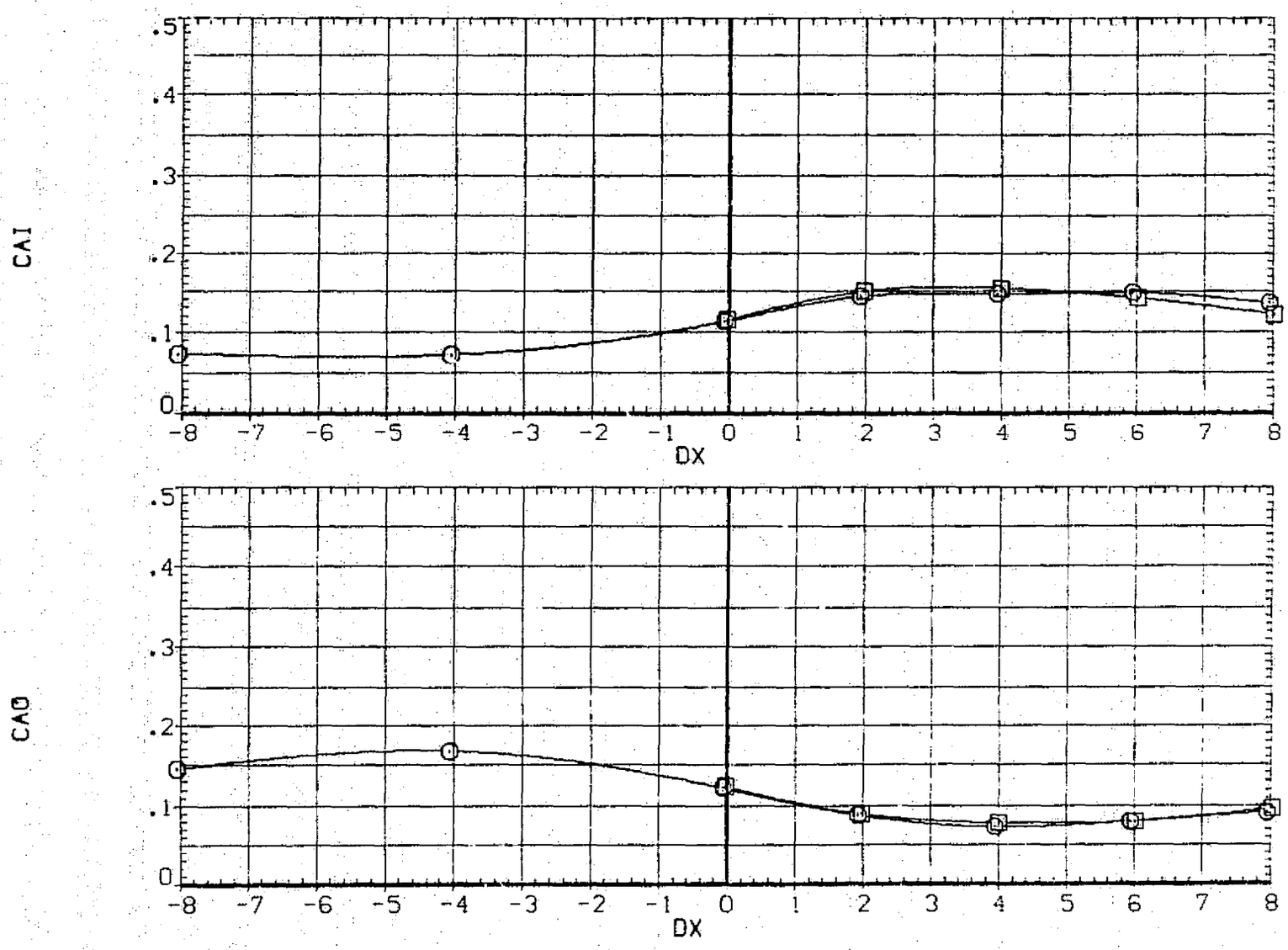


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(A)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(ZAP011)	N2 N2	40.000	.250	.550
(RAP014)	N1 N1	40.000	.250	.550

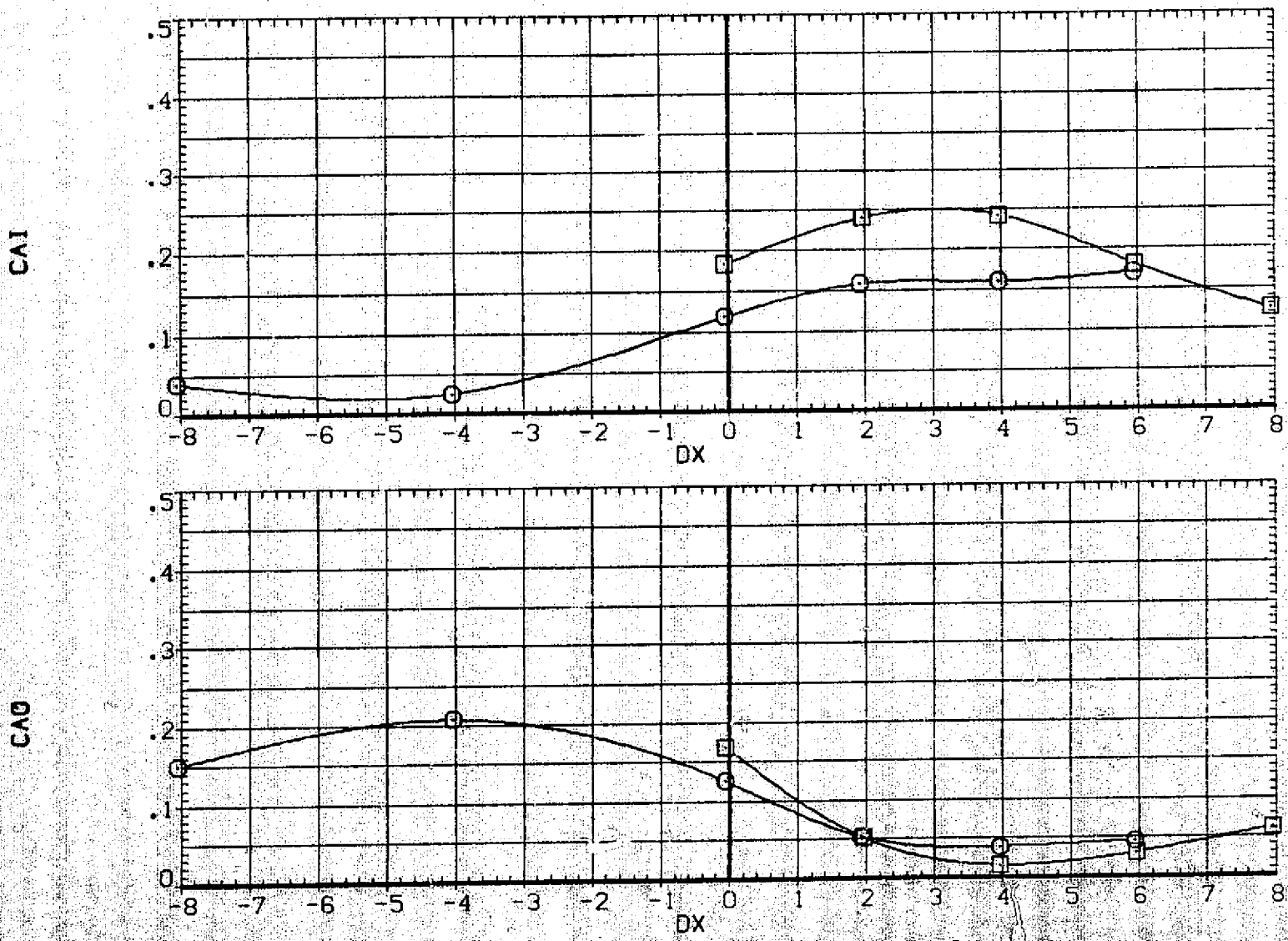


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
[ZAP011]	○	N2 N2	40.000	.250	.550
[RAP014]	□	N1 N1	40.000	.250	.550

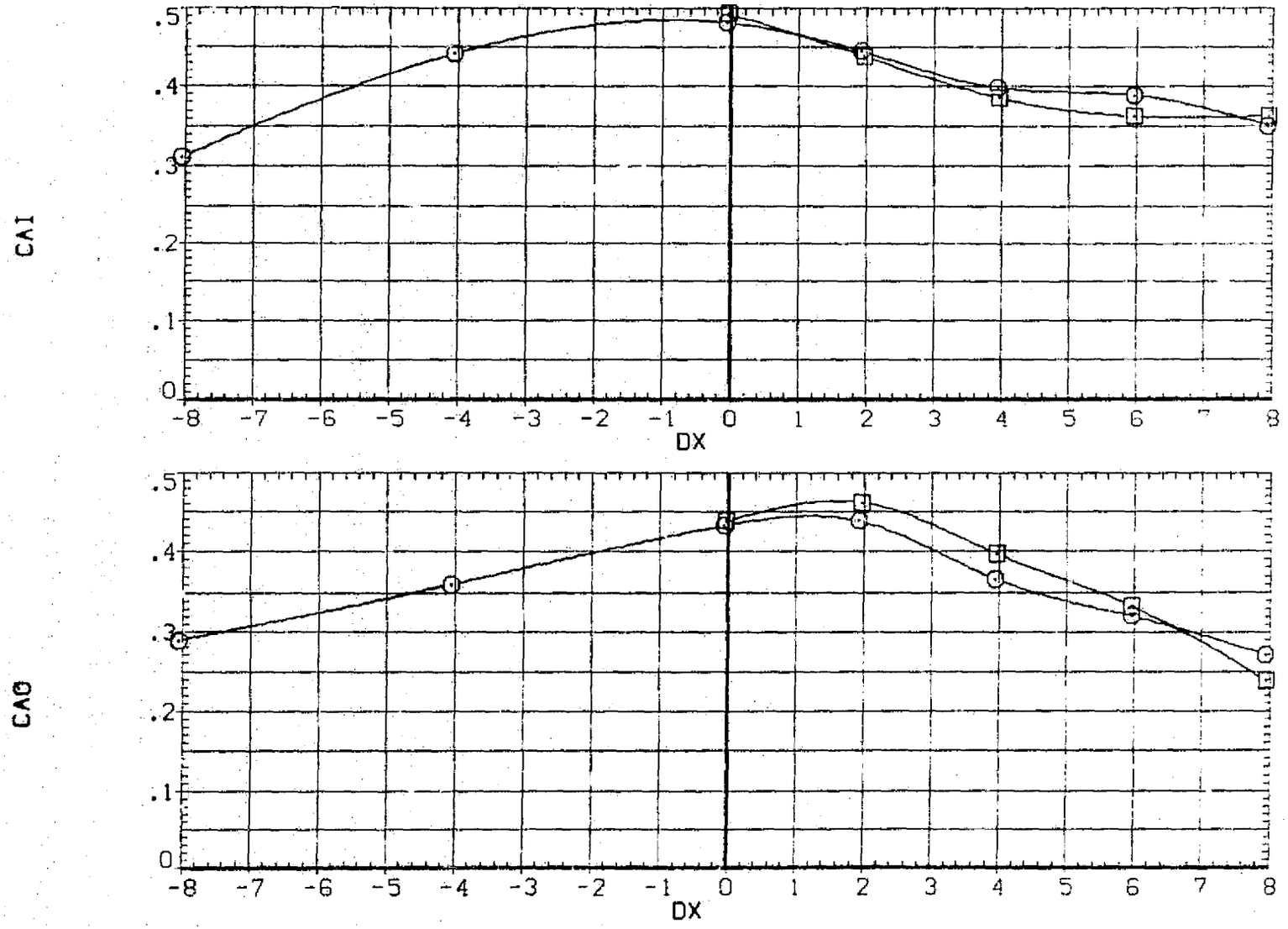


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(ZAP011)	○	N2 N2	40.000	.250	.550
(RAP014)	□	N1 N1	40.000	.250	.550

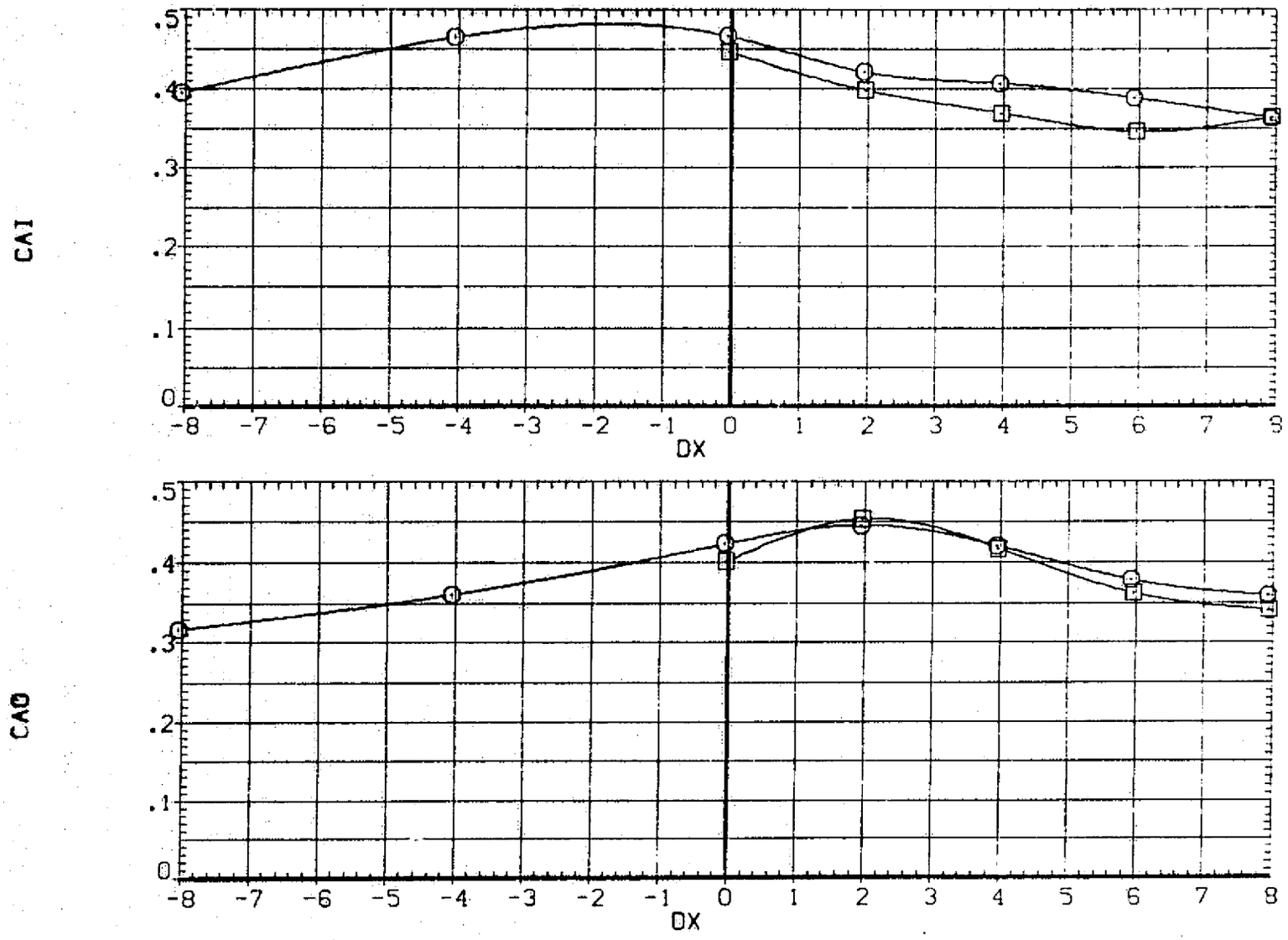


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(ZAP011)	N2 N2	40.000	.250	.550
(RAP014)	N1 N1	40.000	.250	.550

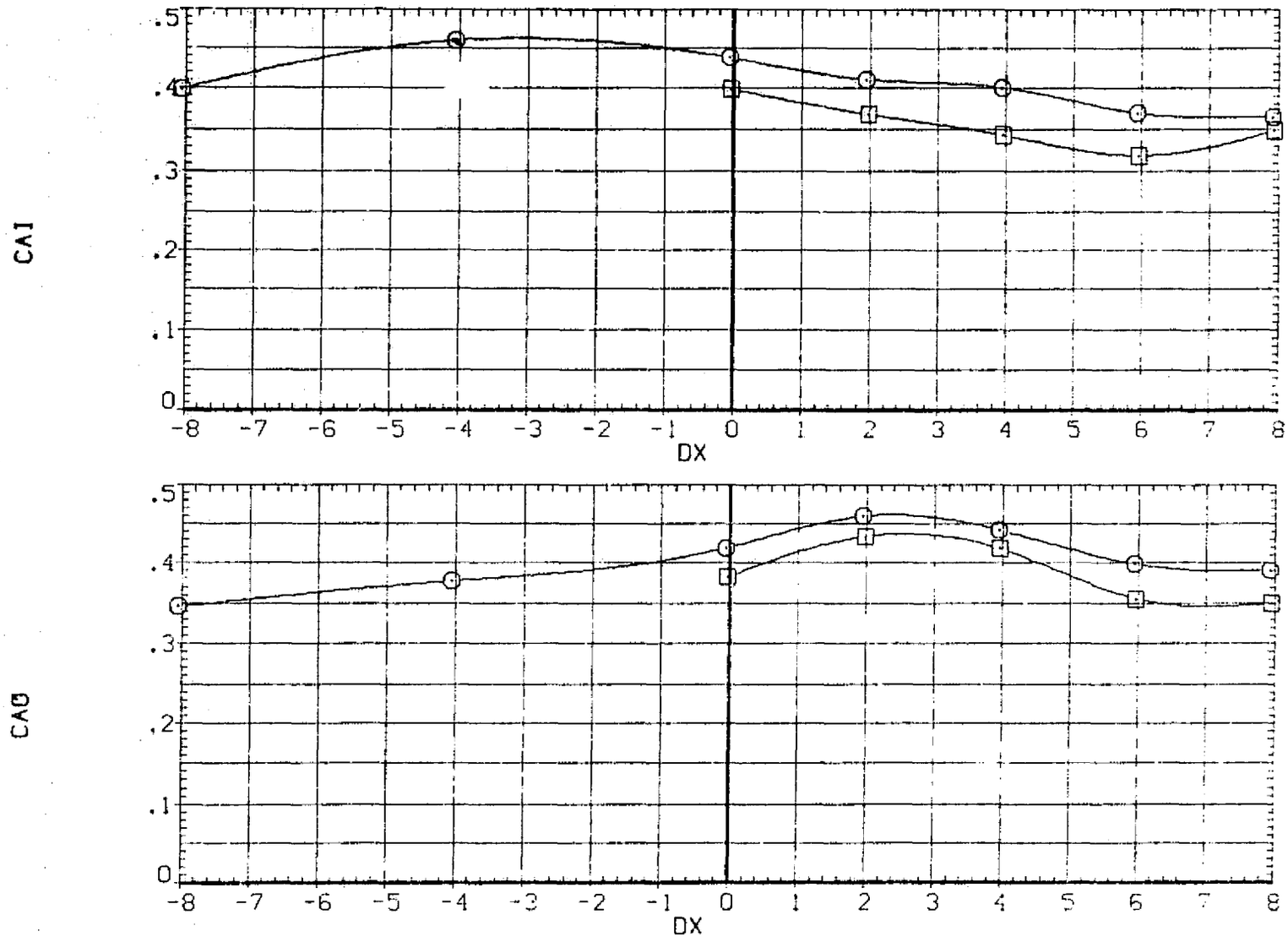


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(E)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	ZT/D	ZT0/B
[ZAP011] ○	N2 N2	40.000	.250	.550
[RAP014] □	N1 N1	40.000	.250	.550

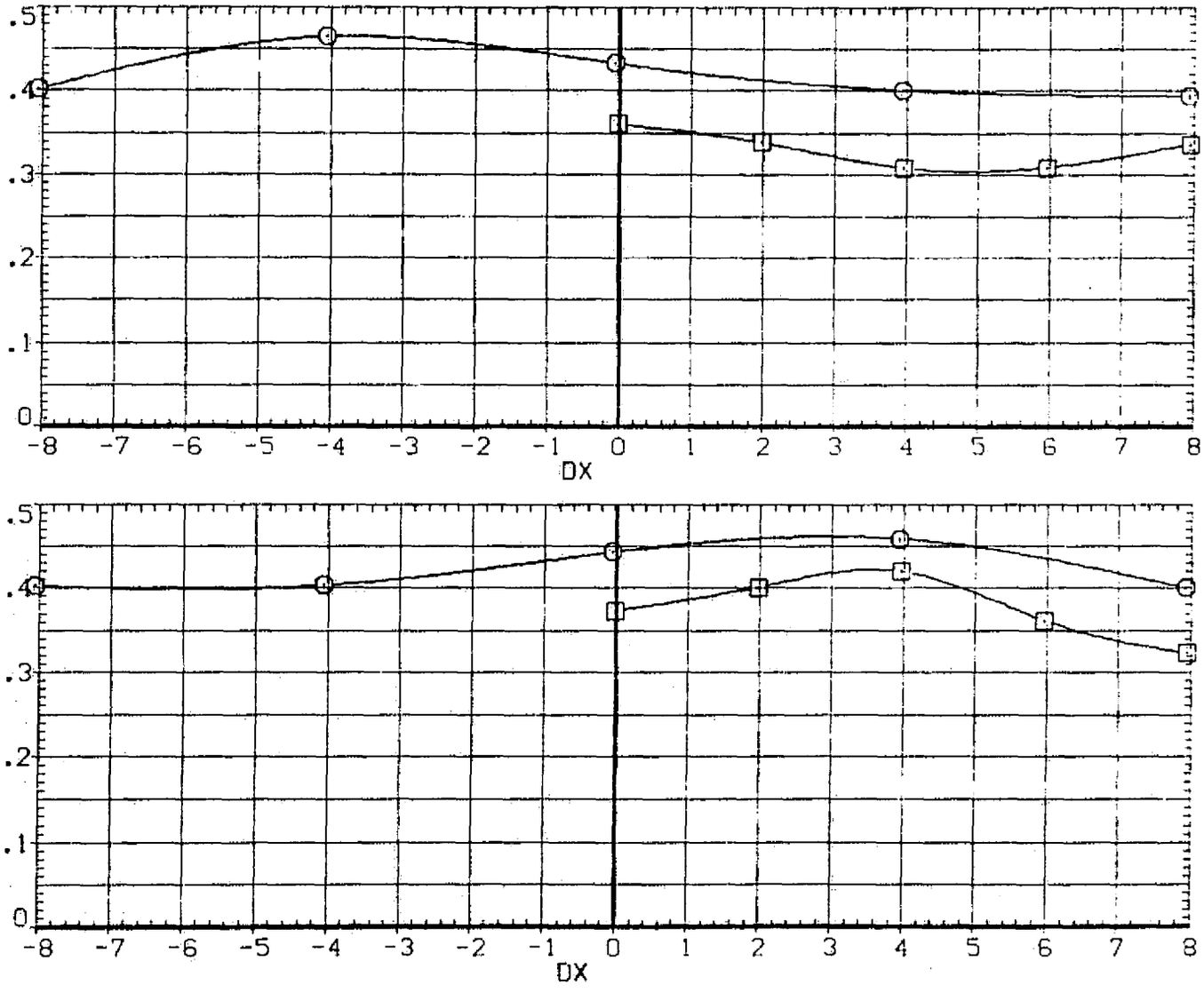


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(F)MACH = 1.30

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(ZAP011)	○	N2 N2	40.000	.250	.550
(RAP014)	□	N1 N1	40.000	.250	.550

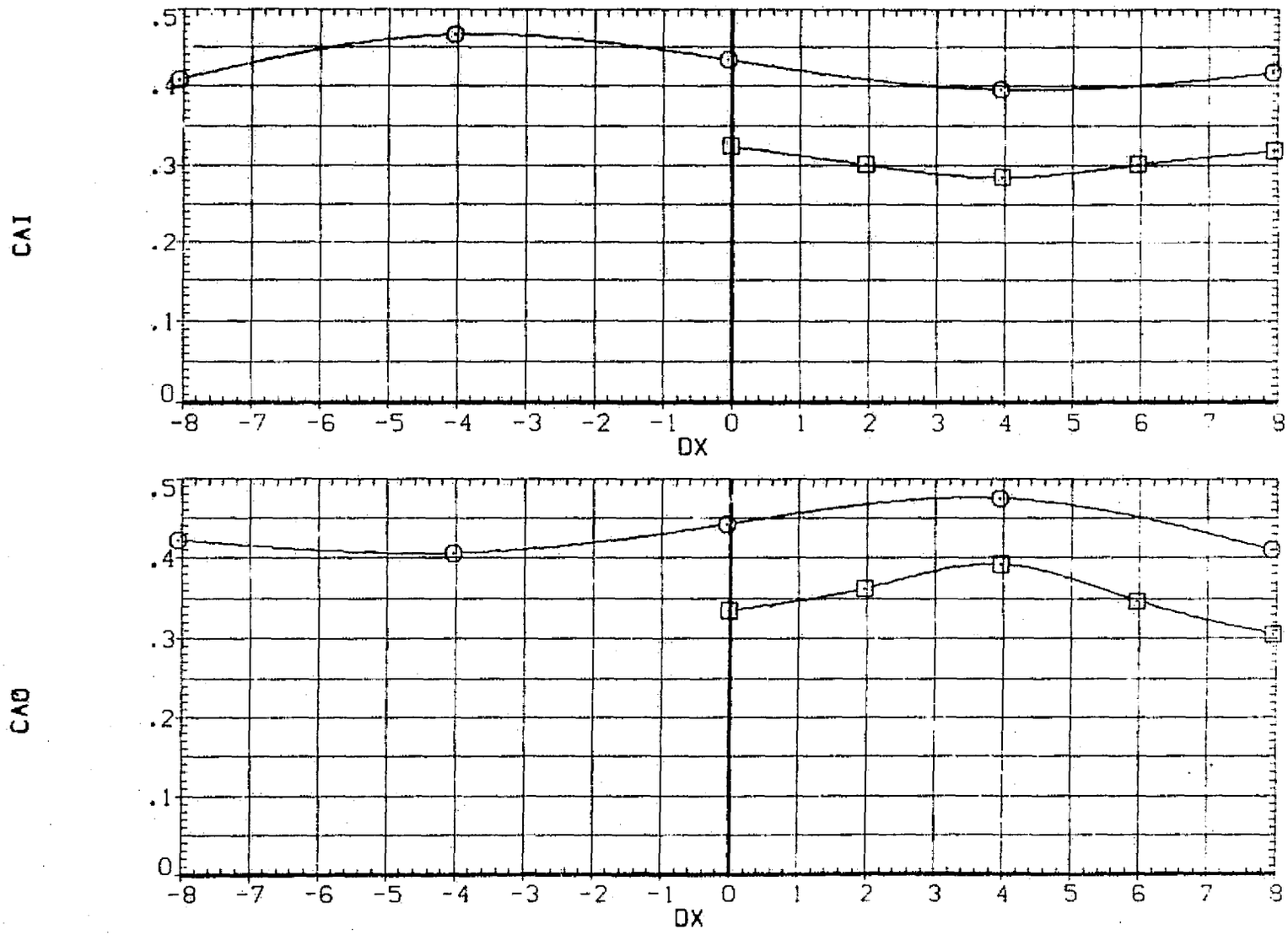


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(G)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(RAP042) ○	NI NI	40.000	.250	.550
(DAP015) □	NI NI	40.000	.230	.600
(RAP016) ◇	NI NI	40.000	.300	.500

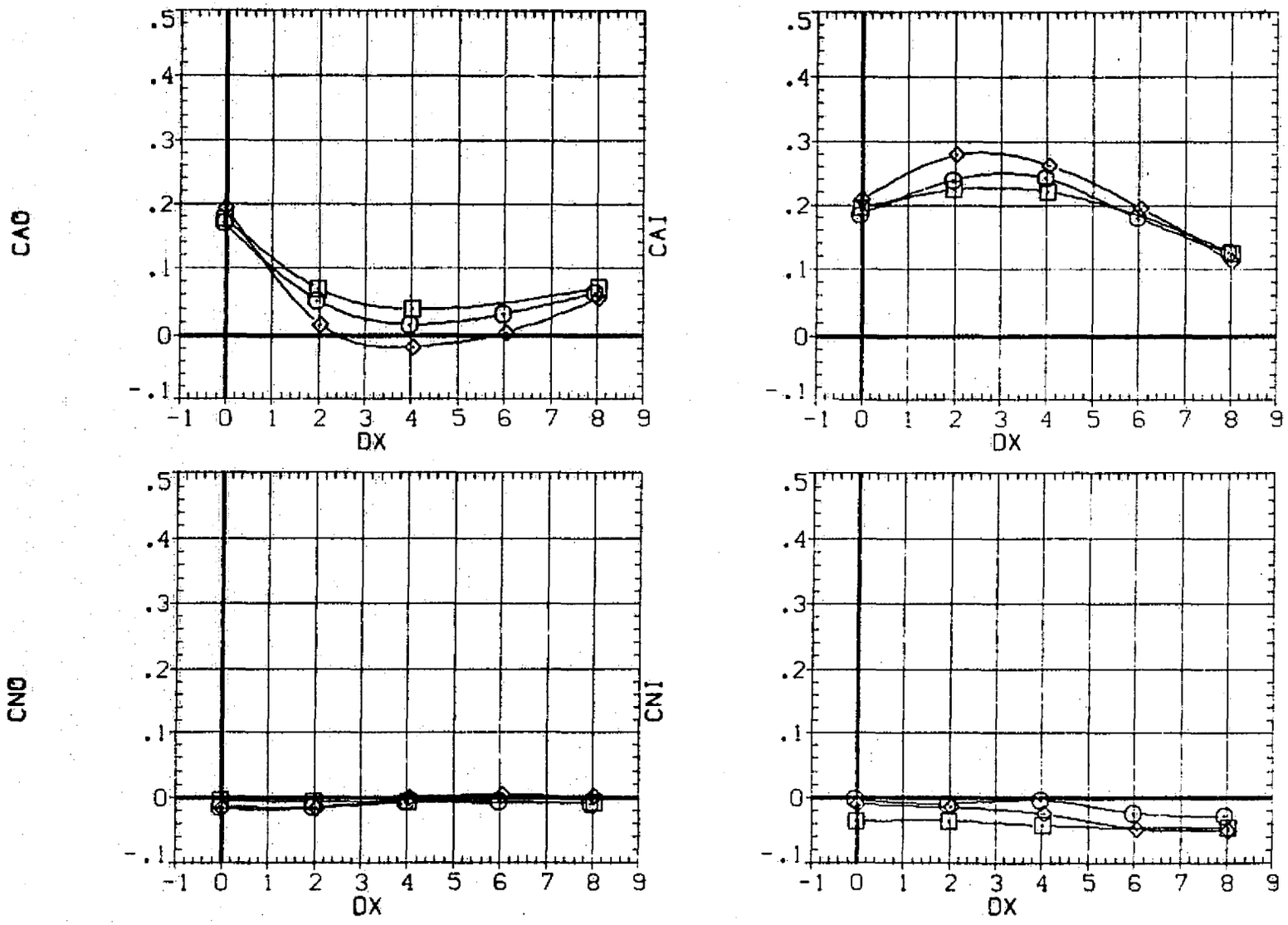


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(A)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(RAPD42)	N1 N1	40.000	.250	.550
(DAPD15)	N1 N1	40.000	.230	.600
(RAPD16)	N1 N1	40.000	.300	.500

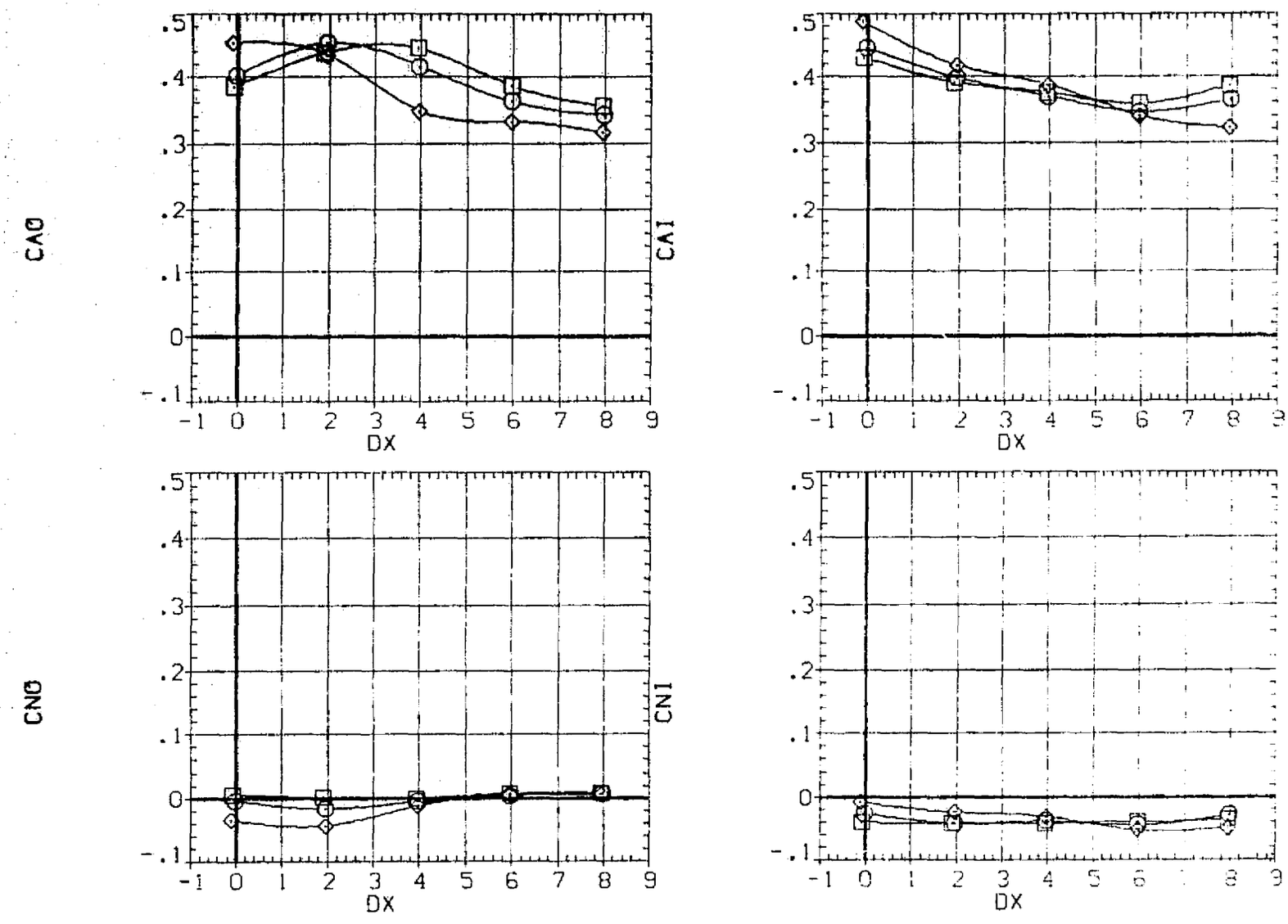


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(RAP042)	○	NI NI	40.000	.250	.550
(DAP015)	□	NI NI	40.000	.230	.600
(RAP01C)	◇	NI NI	40.000	.300	.500

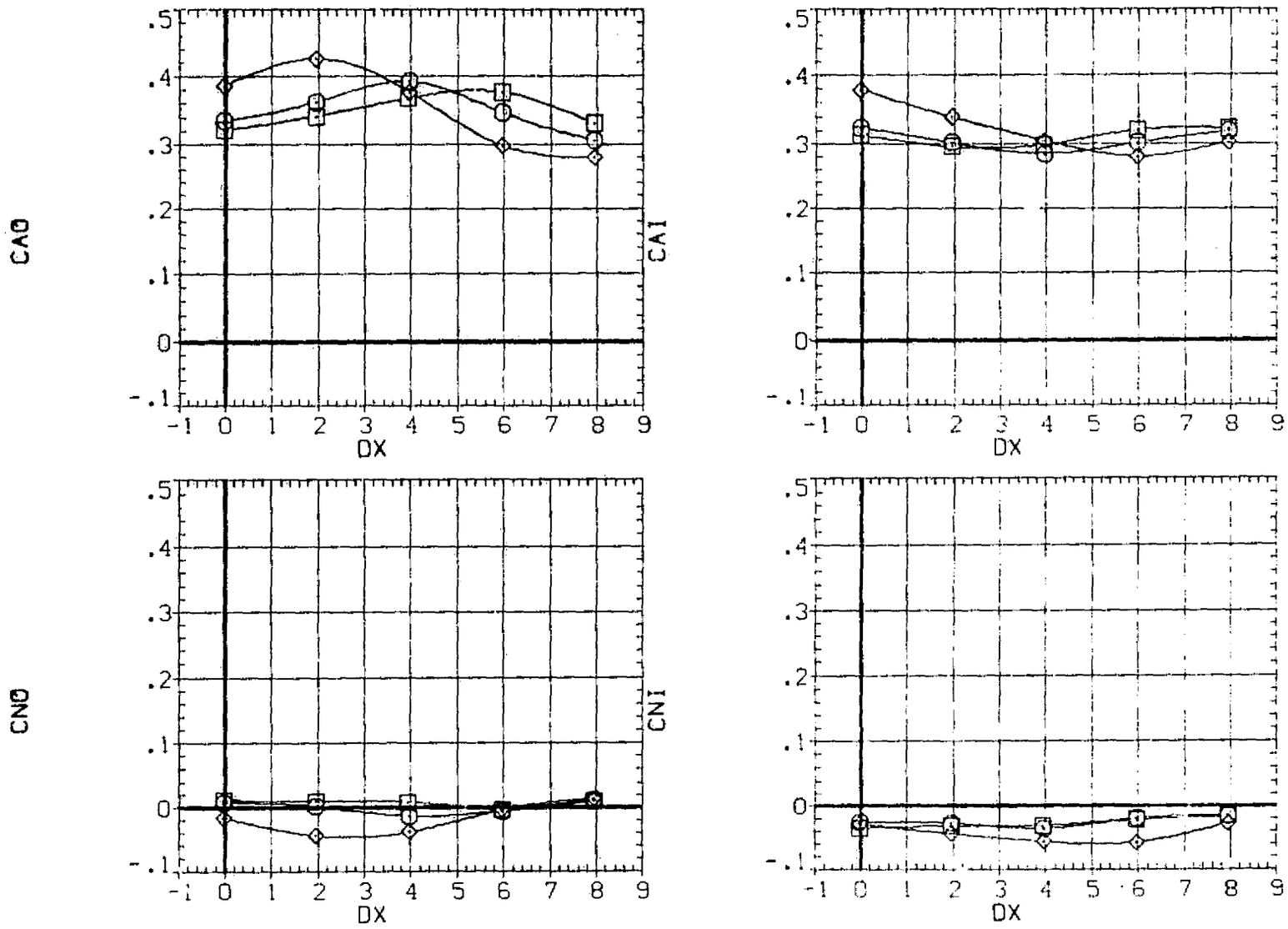


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(C)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(RAP042)	○	NI NI	40.000	.250	.550
(DAP015)	□	NI NI	40.000	.200	.600
(RAP016)	◇	NI NI	40.000	.300	.500

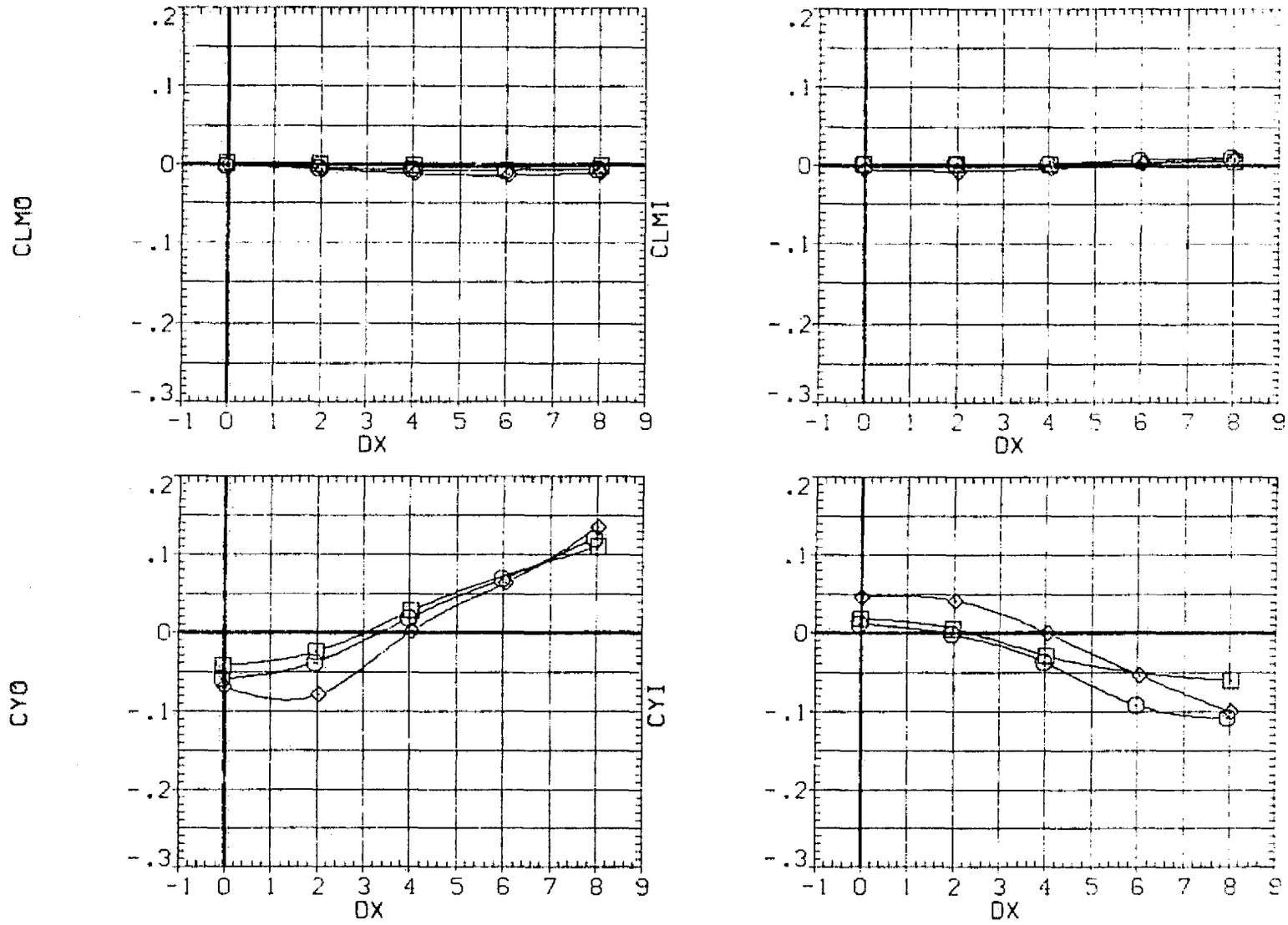


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(A)MACH = .96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(RAP042)	○	NI NI	40.000	.250	.550
(DAP015)	□	NI NI	40.000	.230	.600
(RAP016)	◇	NI NI	40.000	.300	.500

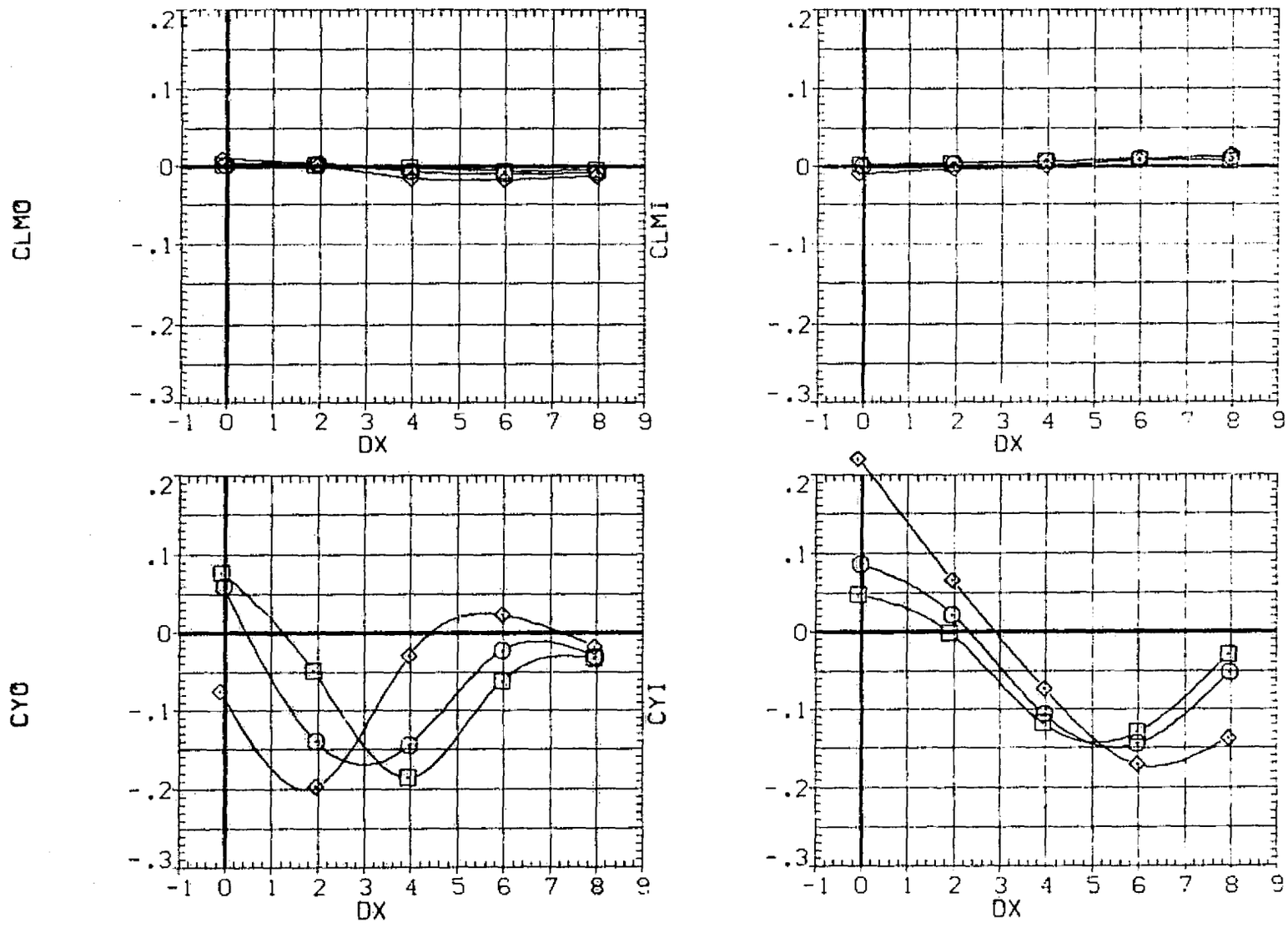


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(B)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(RAP042)	NI NI	40.000	.250	.550
(DAP015)	NI NI	40.000	.230	.600
(RAP016)	NI NI	40.000	.300	.500

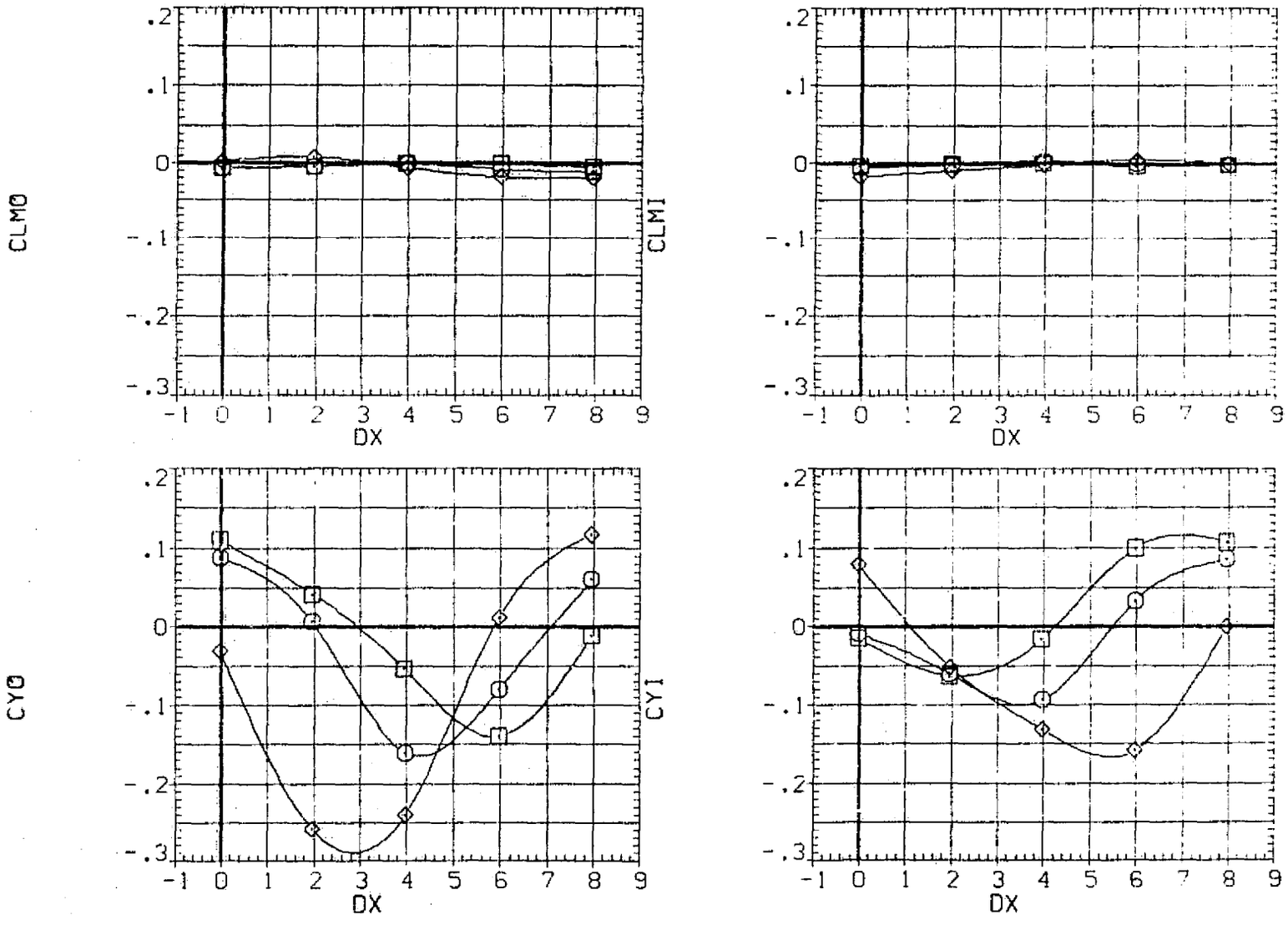


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(C)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(RAP042) ○	N1 N1	40.000	.250	.550
(DAP015) □	N1 N1	40.000	.230	.600
(RAP016) ◇	N1 N1	40.000	.300	.500

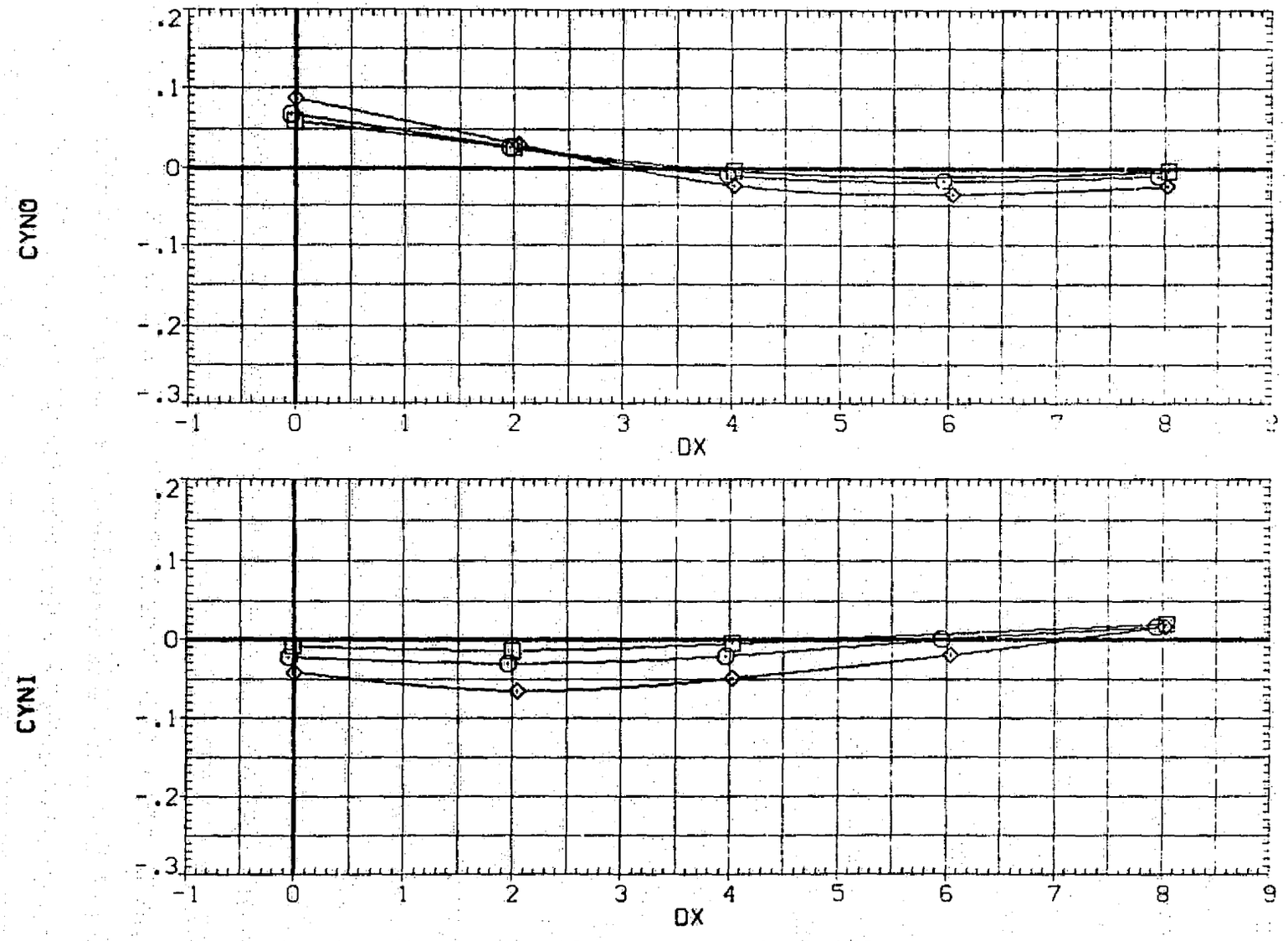


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(A)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B
(RAP042)	NI NI	40.000	.250	.550
(DAP015)	NI NI	40.000	.230	.600
(RAP016)	NI NI	40.000	.300	.500

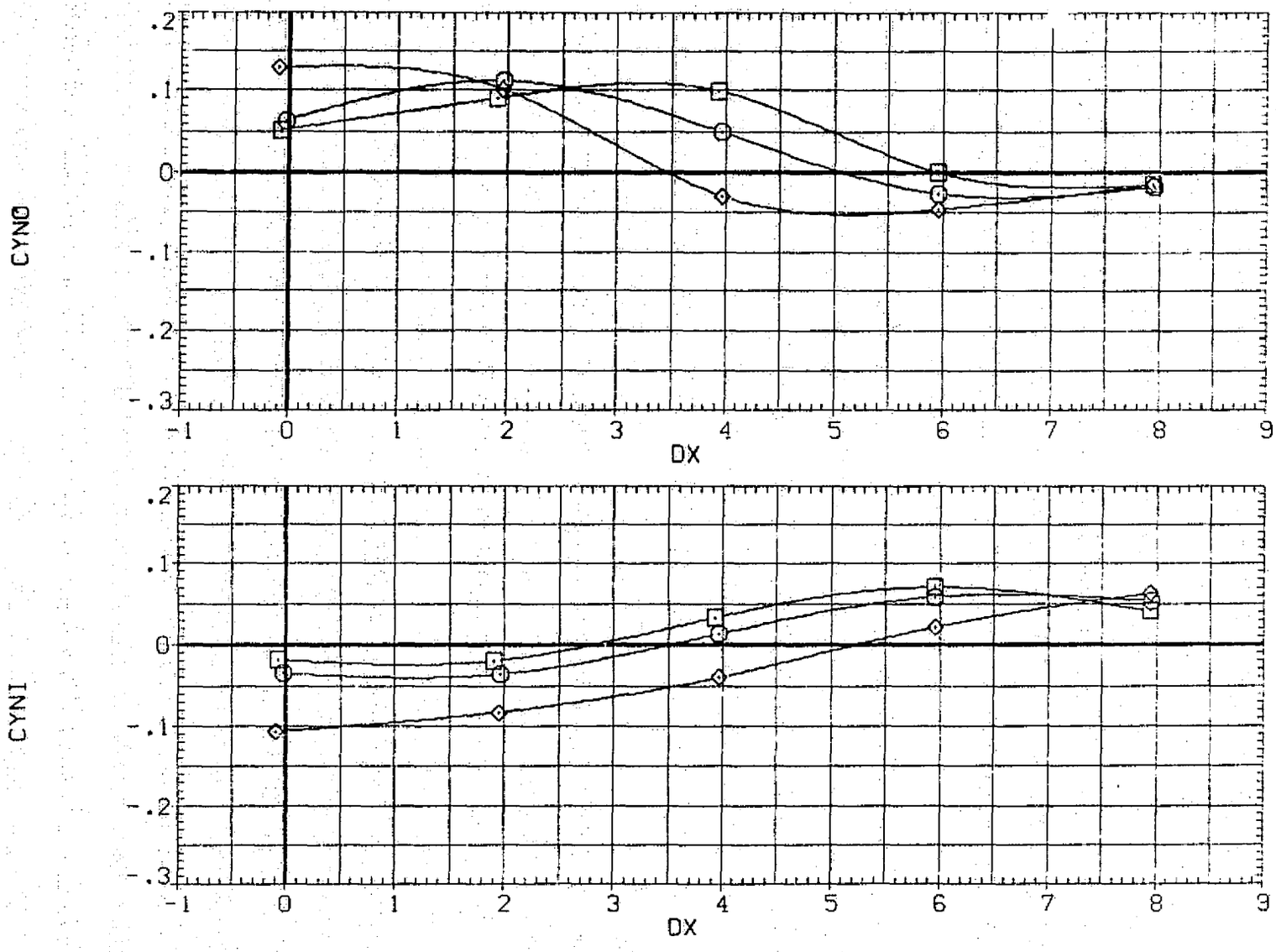


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B
(RAP042)	○	NI NI	40.000	.250	.550
(DAP015)	□	NI NI	40.000	.230	.600
(RAP016)	◇	NI NI	40.000	.300	.500

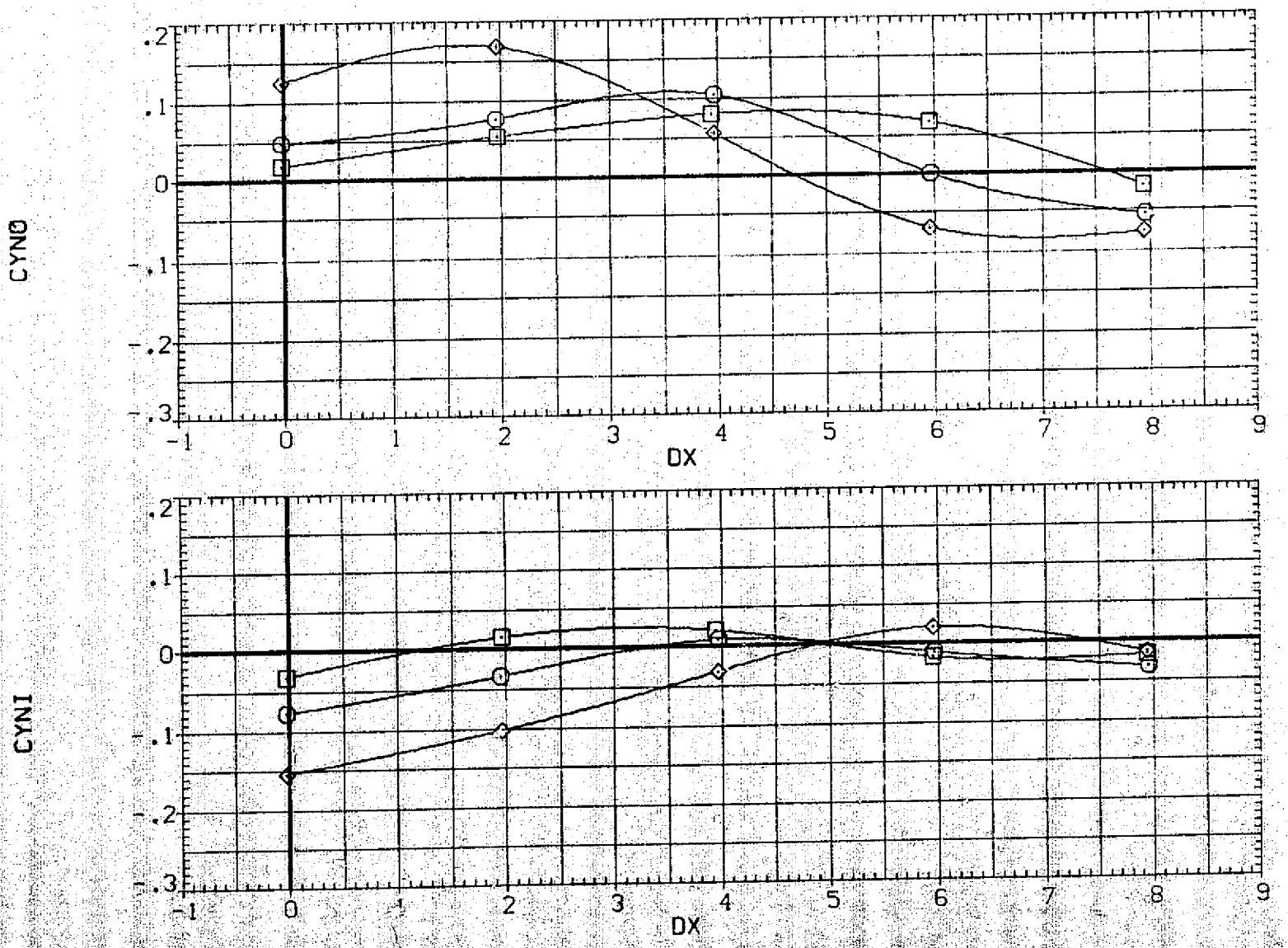


FIG. 8 EFFECTS OF NACELLE POSITION ON NACELLE FORCES.

(C)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(RAP012)	N2 N2	40.000	.250	.550	8.000
(RAP018)	N1 N1	40.000	.250	.550	8.000

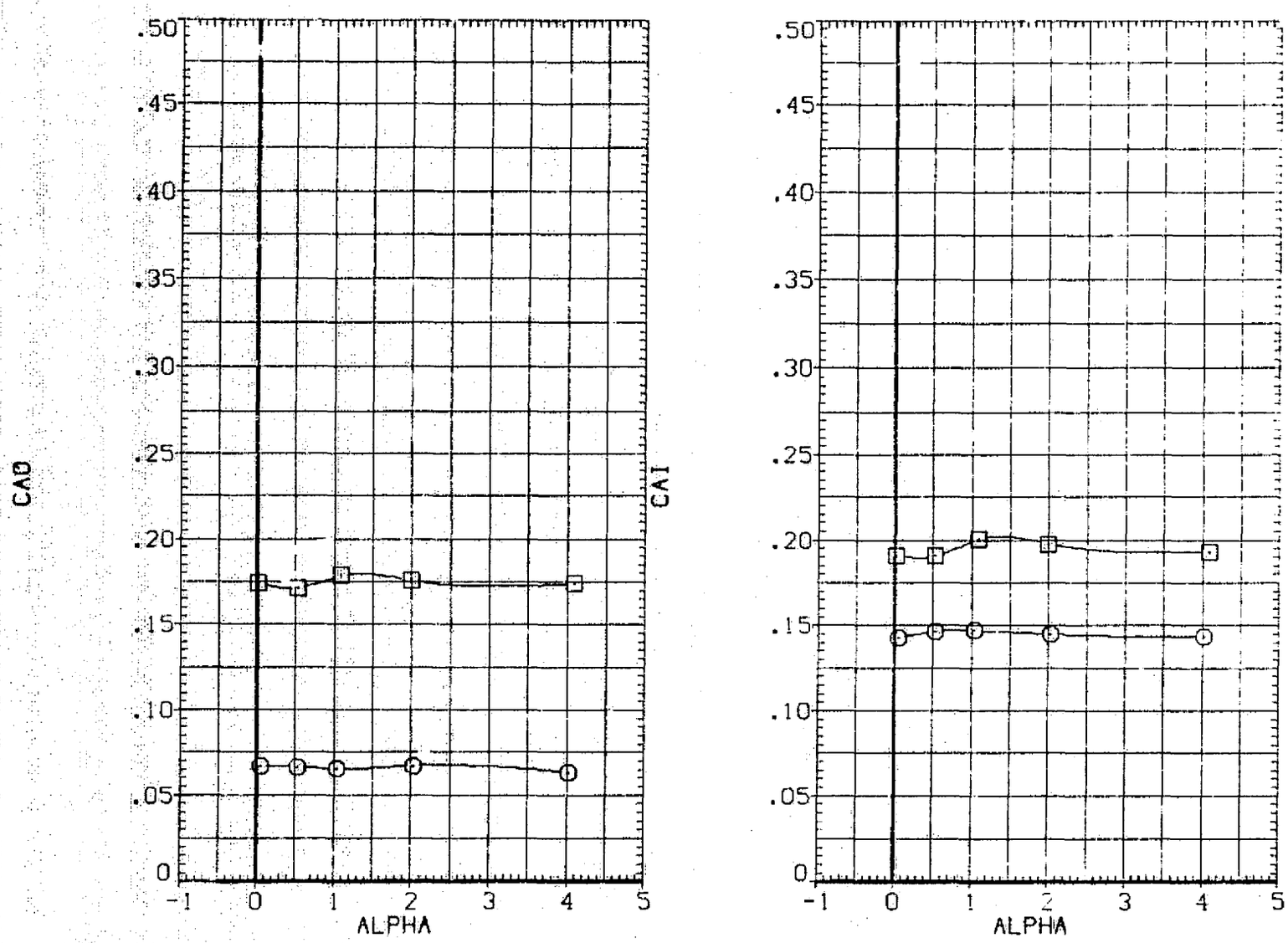


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP012)	○	N2 N2	40.000	.250	.550	8.000
(RAP018)	□	N1 N1	40.000	.250	.550	8.000

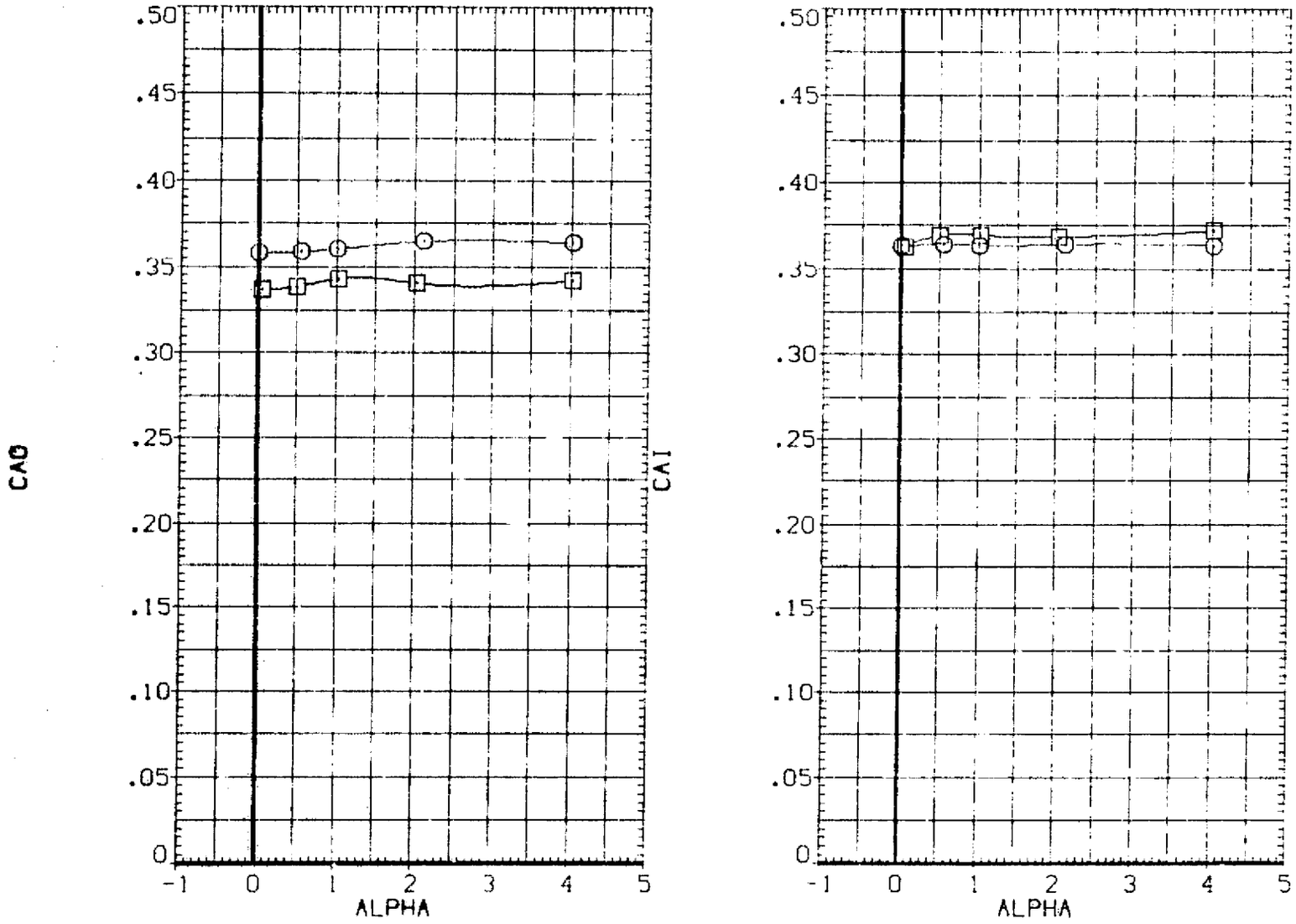


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAPO(2)	○	N2 N2
(RAPO(8)	□	N1 N1

X-INBD	2Y1/B	2Y0/B	DX
40.000	.250	.550	8.000
40.000	.250	.550	8.000

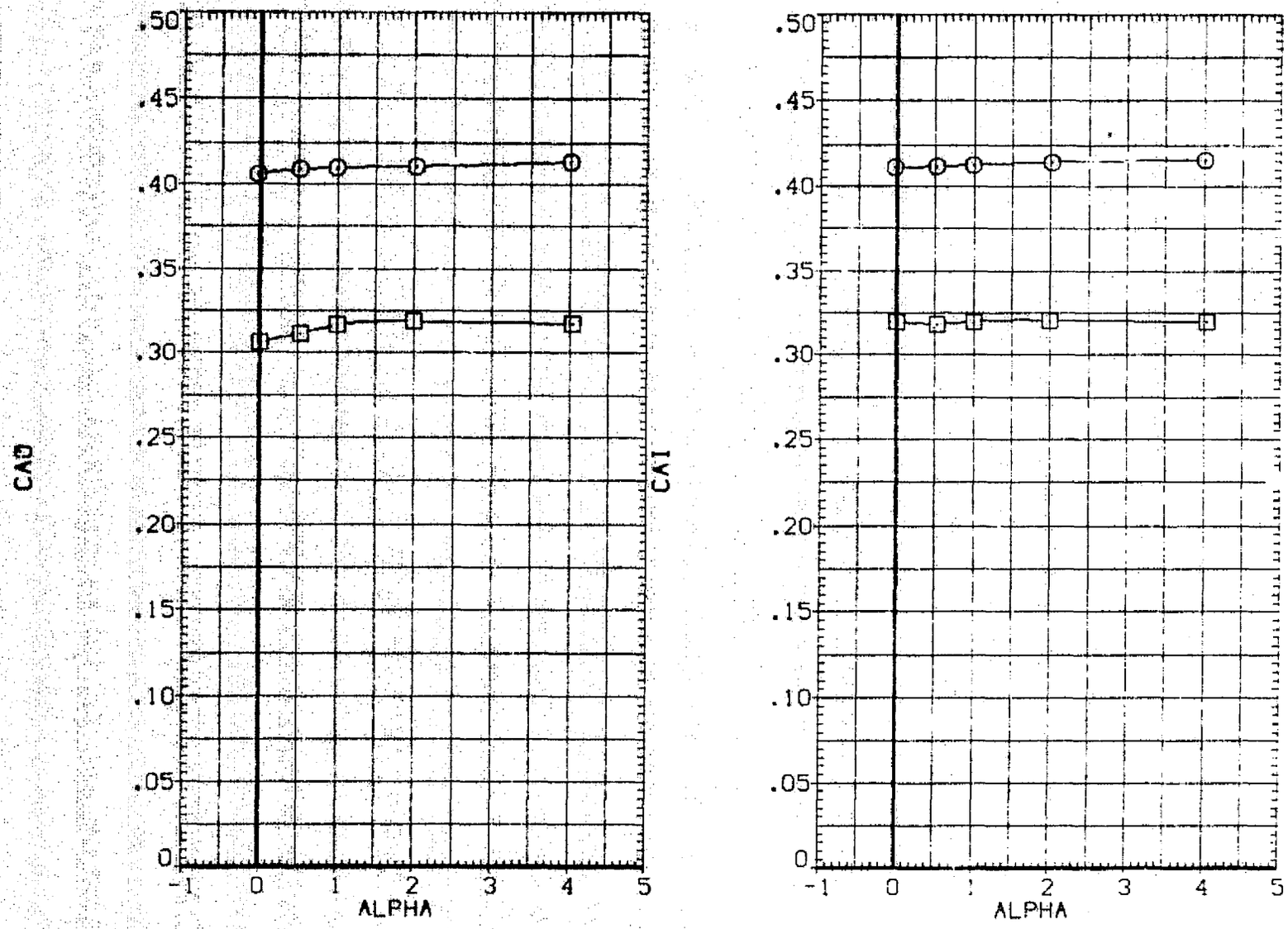


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(C)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP012)	○	N2 N2	40.000	.250	.550	8.000
(RAP018)	□	N1 N1	40.000	.250	.550	8.000

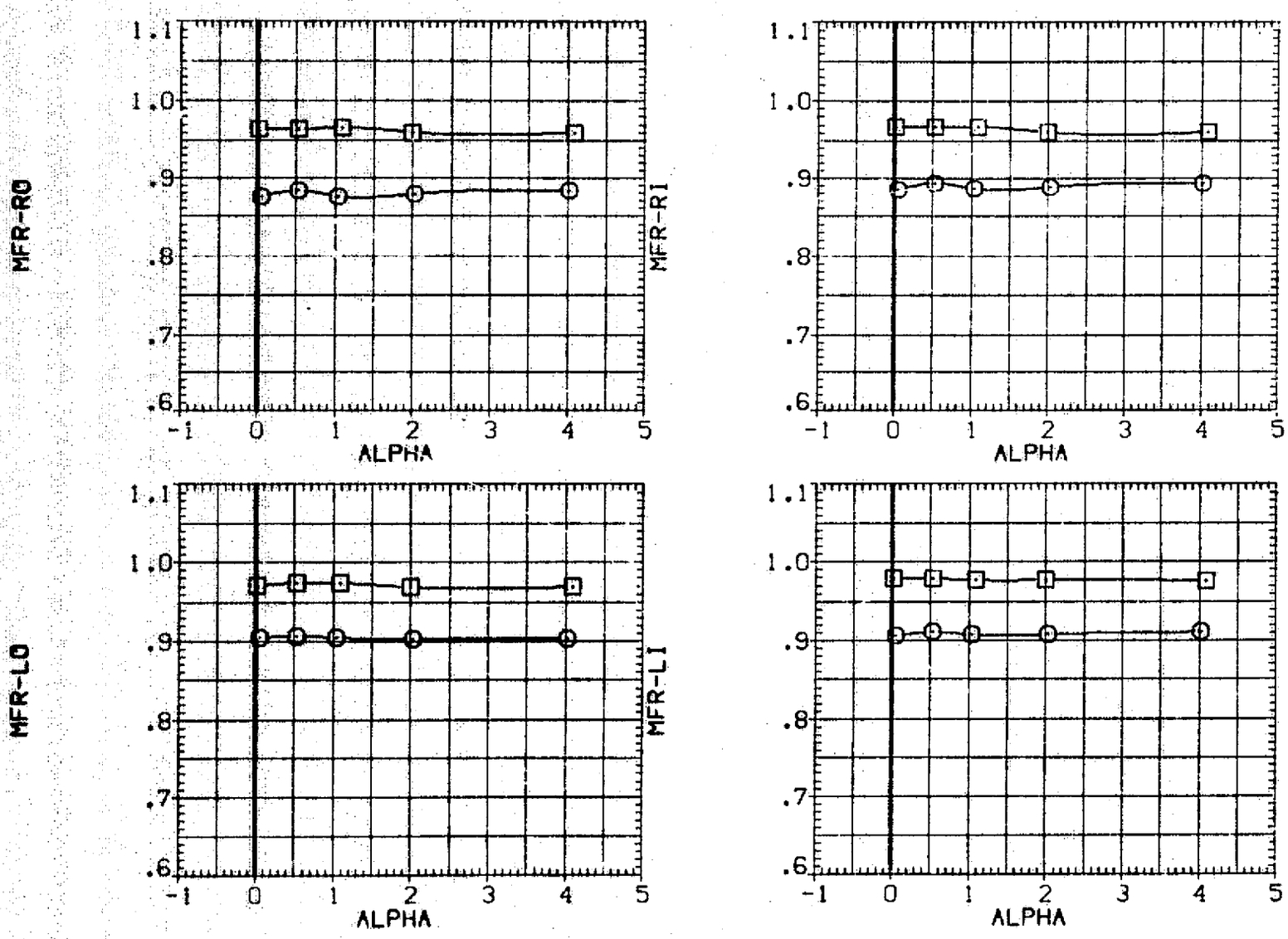


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP012)	○	N2 N2	40.000	.250	.550	8.000
(RAP018)	□	N1 N1	40.000	.250	.550	8.000

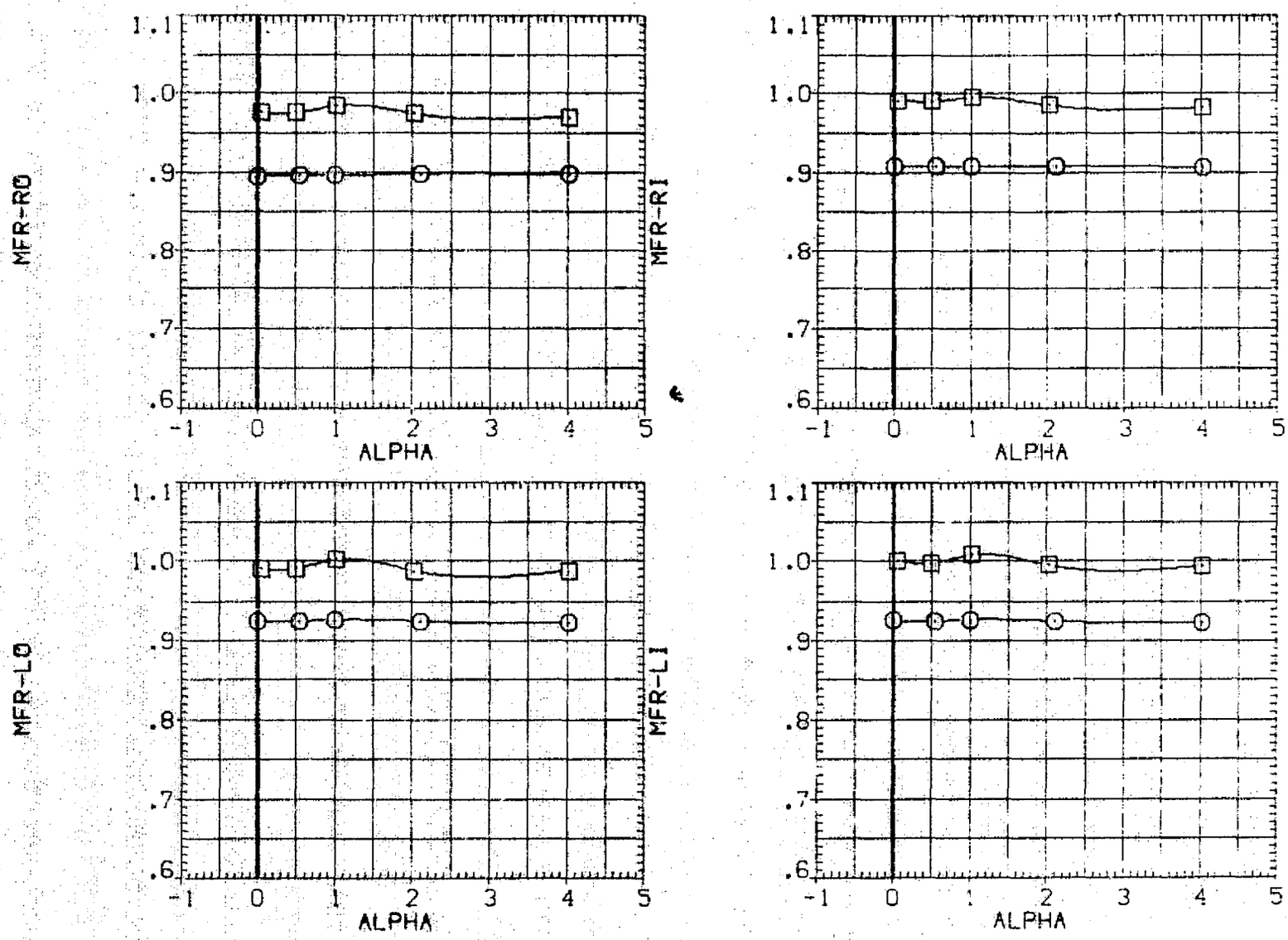


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(B)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(RAP012)	N2 N2	40.000	.250	.550	8.000
(RAP018)	N1 N1	40.000	.250	.550	8.000

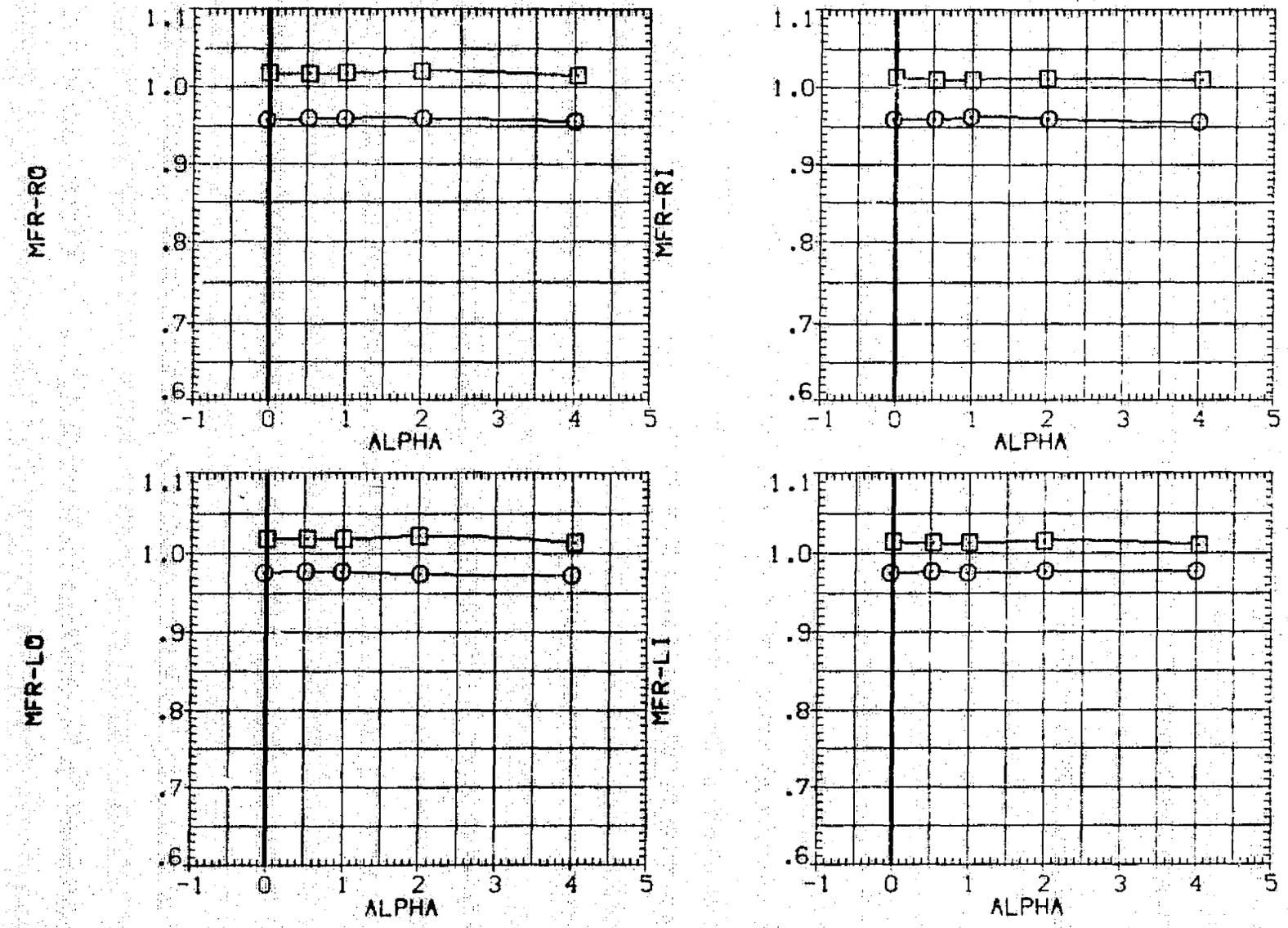


FIG. 9 EFFECTS OF ANGLE OF ATTACK ON NACELLE FORCES.

(C)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	Dx
(RAP013) ○	DATA NOT AVAILABLE	40.000	.250	.550	8.000
(DAP017) □	NI NI	40.000	.250	.550	8.000

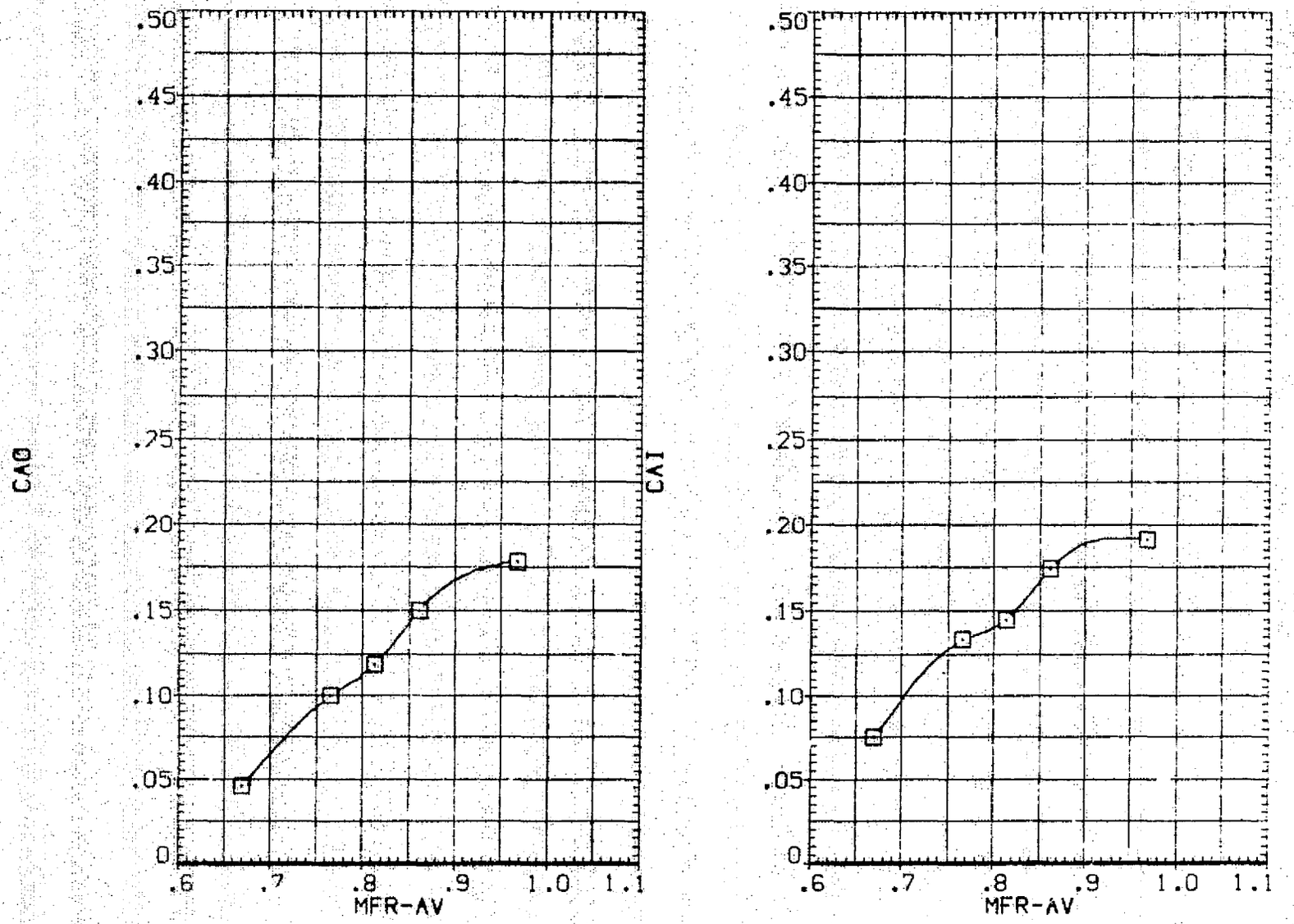


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(A)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(RAPD13)	N2 N2	40.000	.250	.550	8.000
(DAPD17)	N1 N1	40.000	.250	.550	8.000

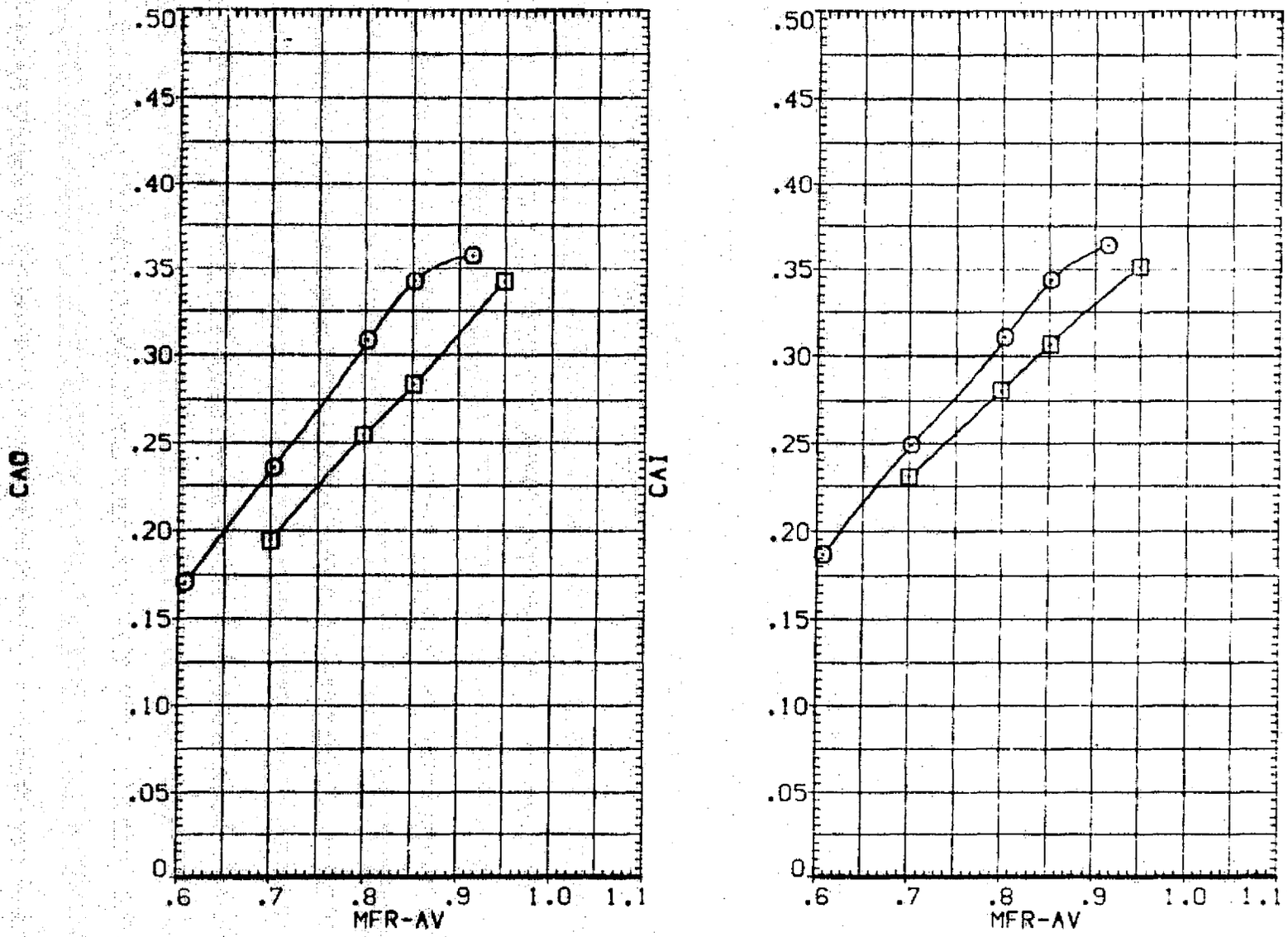


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP013)	○	N2 N2	40.000	.250	.550	8.000
(DAP017)	□	N1 N1	40.000	.250	.550	8.000

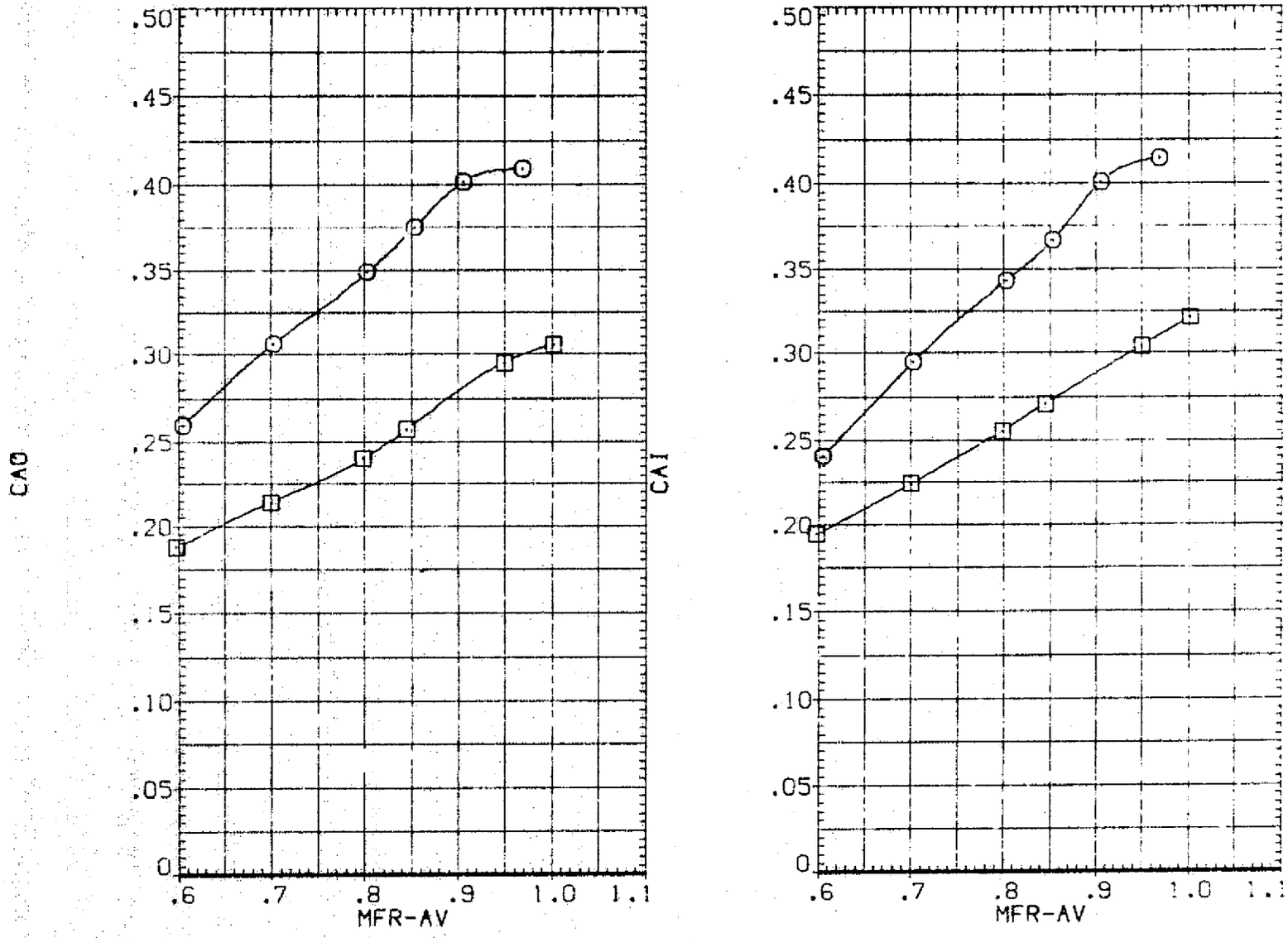


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(C)MACH = 1.40

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	Dx
(RAP013)	DATA NOT AVAILABLE	40.000	.250	.550	8.000
(DAP017)	N1 N1	40.000	.250	.550	8.000

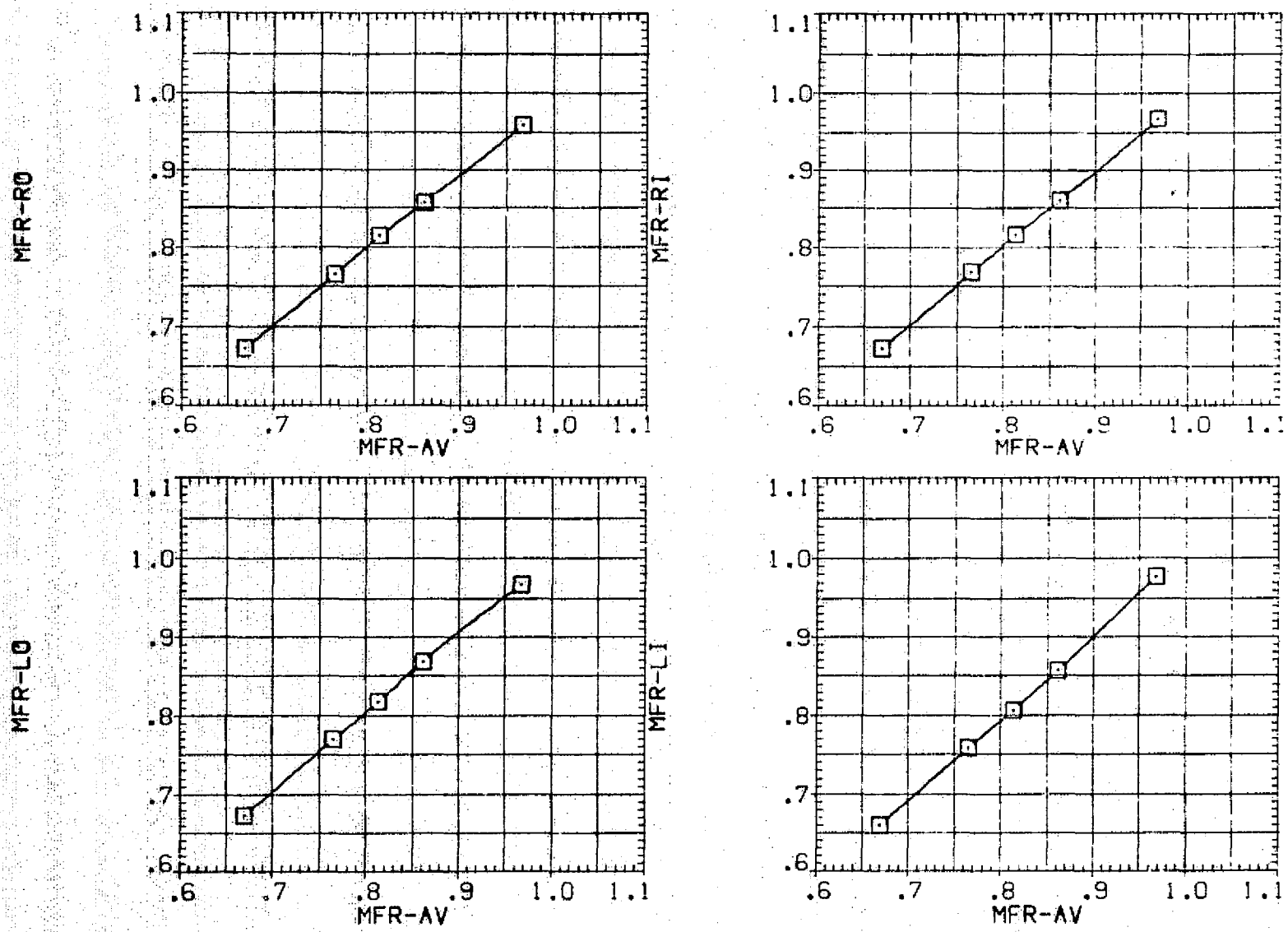


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(A)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP013)	N2 N2	40.000	.250	.550	8.000
(DAP017)	N1 N1	40.000	.250	.550	8.000

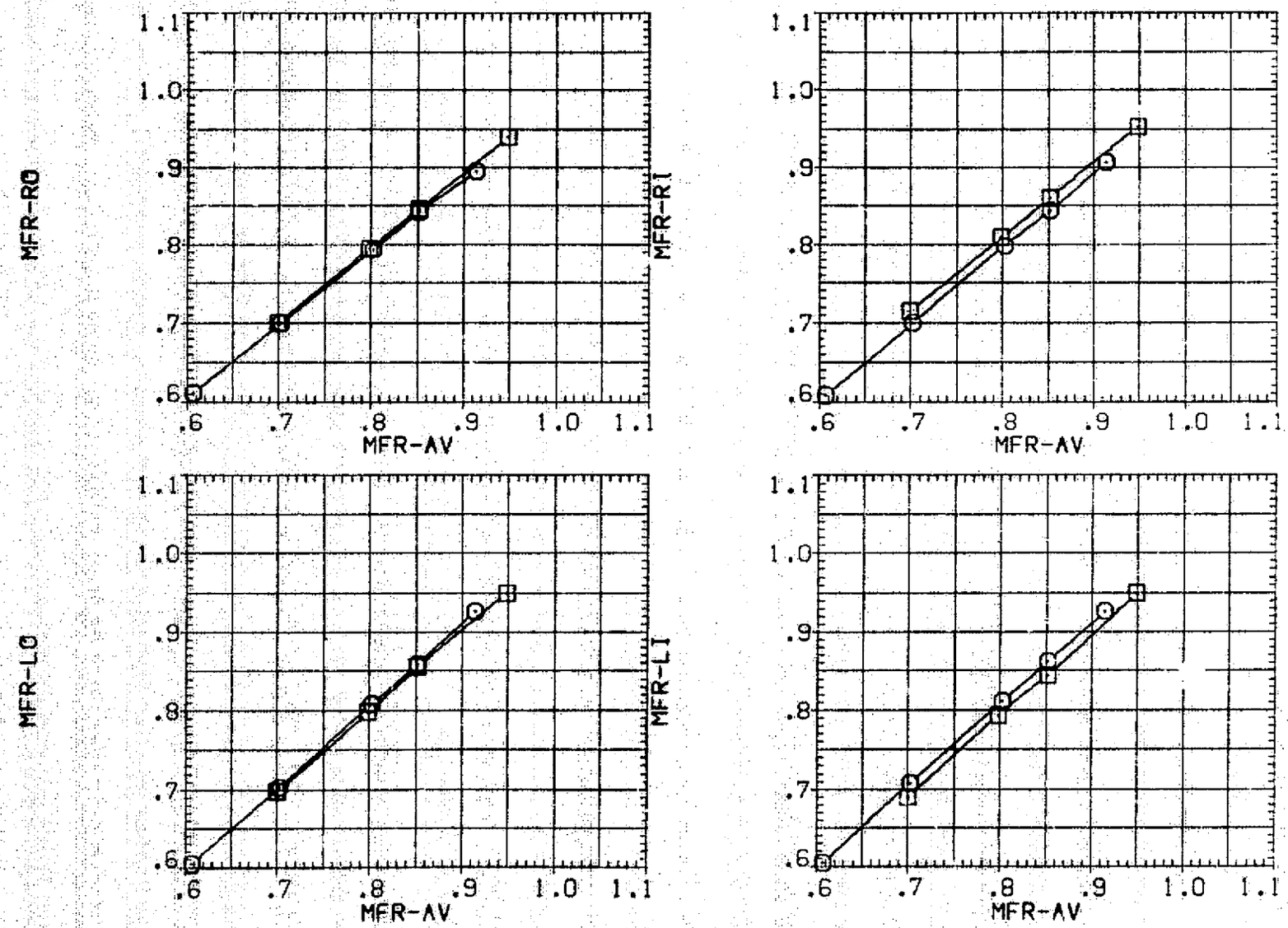


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(B)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP013) ○	N2 N2	40.000	.250	.550	8.000
(DAP017) □	N1 N1	40.000	.250	.550	8.000

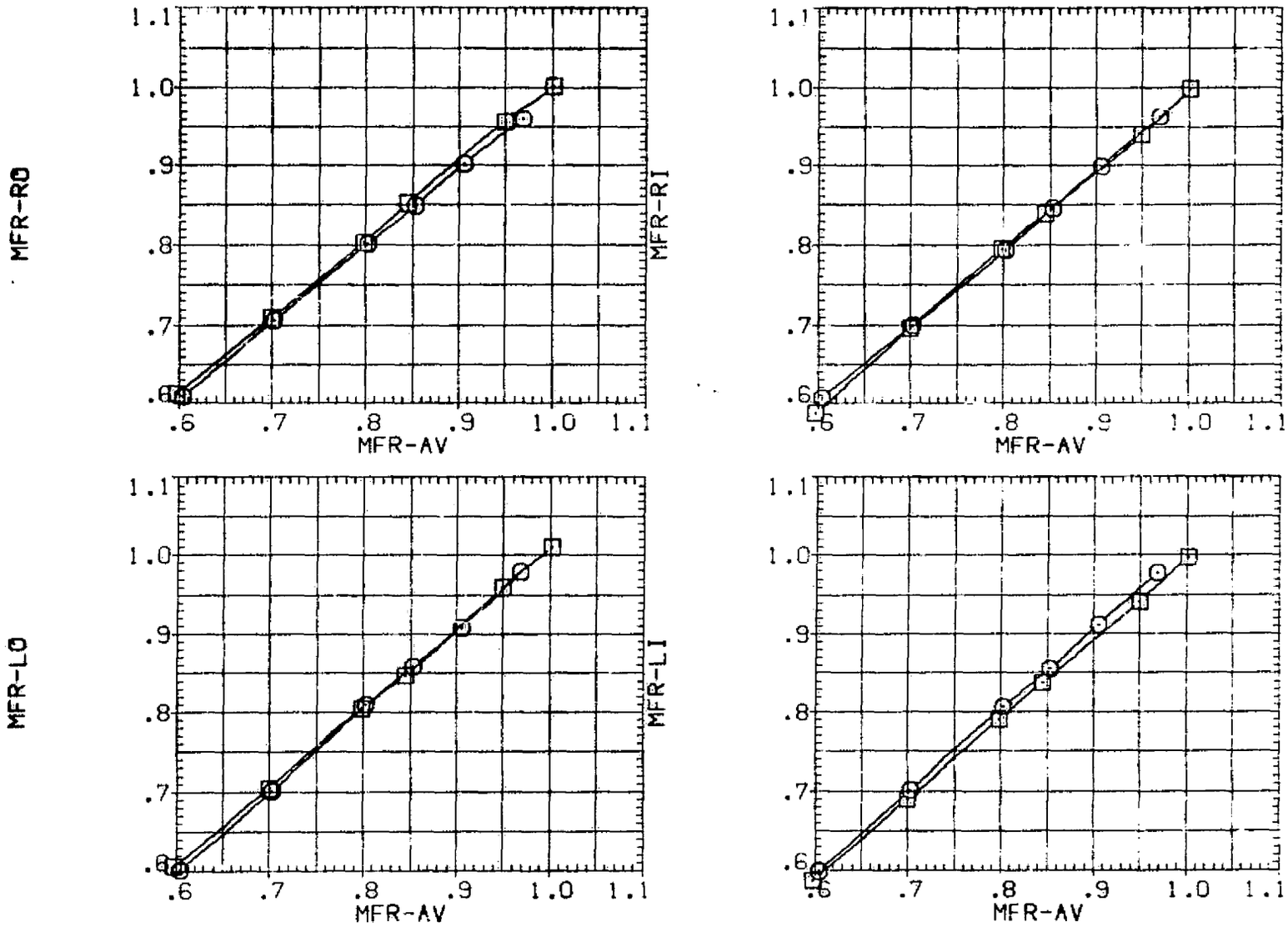


FIG. 10 EFFECTS OF MASS FLOW RATIO ON NACELLE AXIAL FORCE.

(C)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YB/B	DX
(RAP019)	○	W B NI NI	.250	.550	.000
(RAP020)	□	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	⋈	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)	△	DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	▽	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)	◇	DATA NOT AVAILABLE	.250	.550	8.000

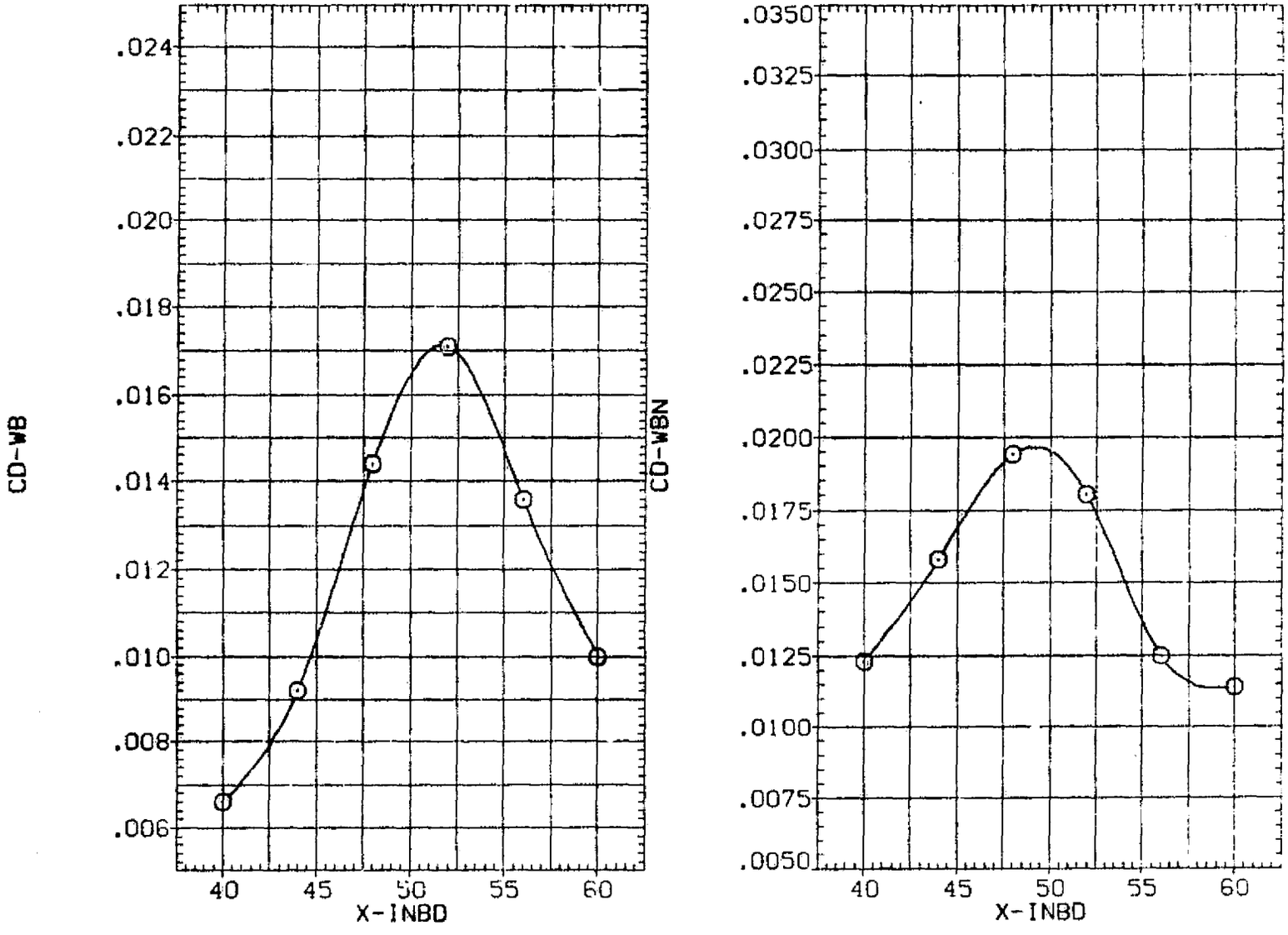


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	◁	W B N1 N1	.250	.550	4.000
(RAP021)	▷	W B N1 N1	.250	.550	8.000
(RAP031)	◇	W B N2 N2	.250	.550	.000
(RAP032)	○	W B N2 N2	.250	.550	4.000
(RAP033)	△	W B N2 N2	.250	.550	8.000

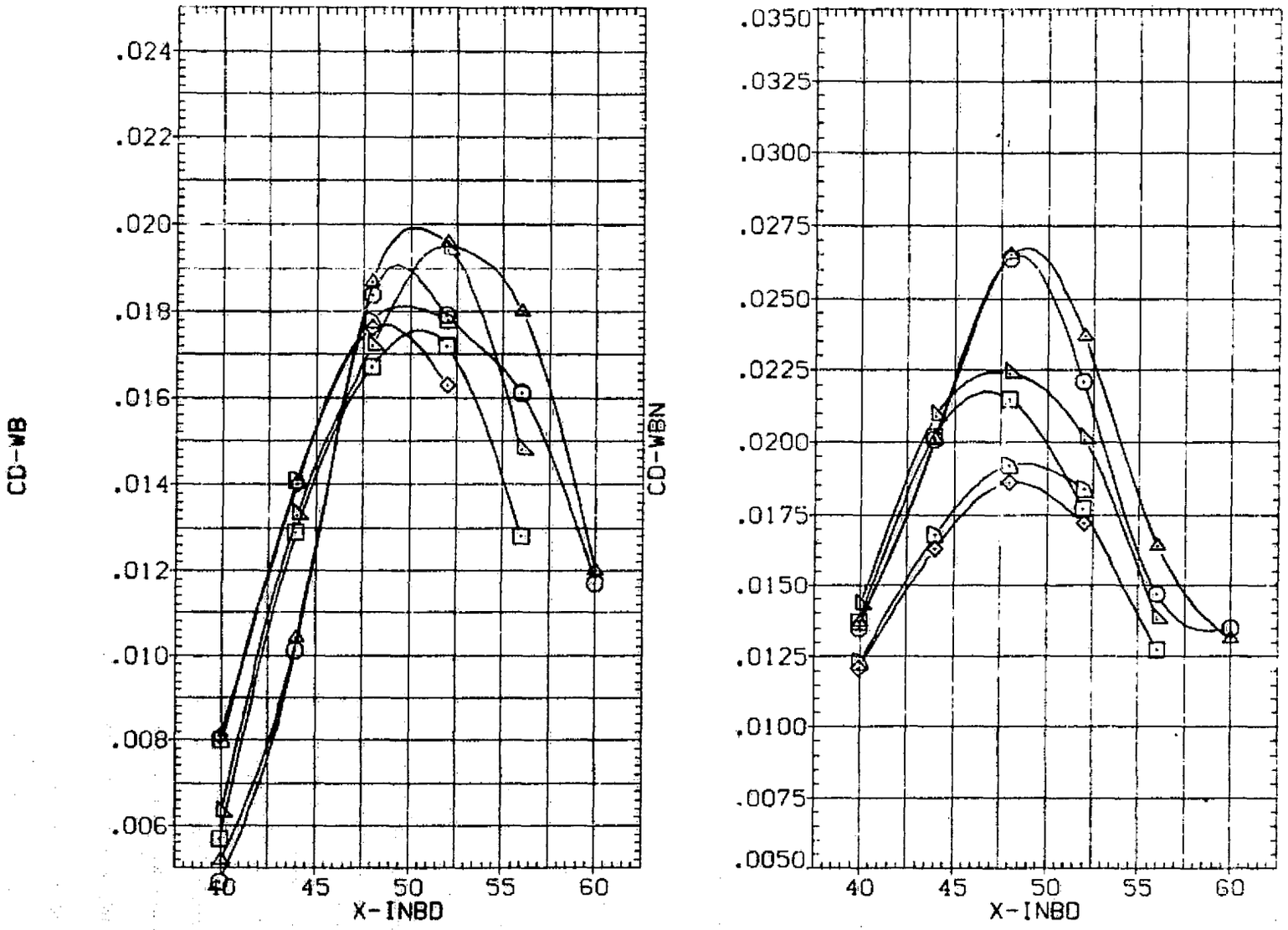
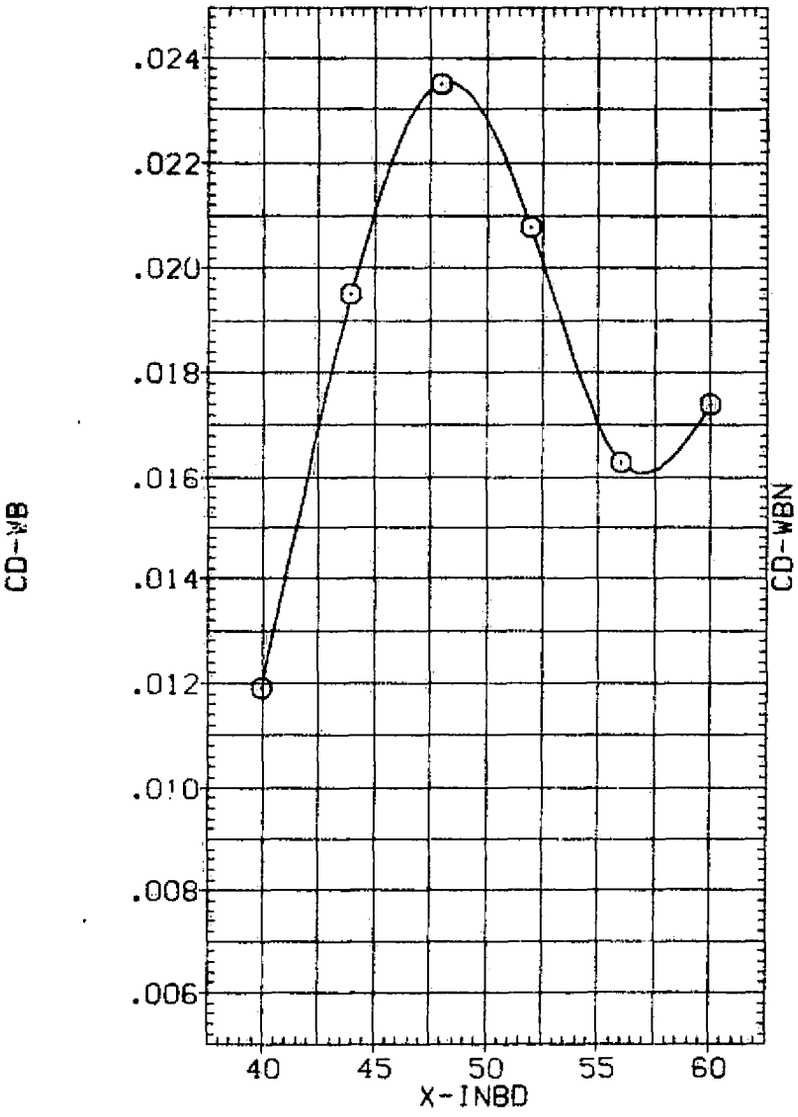


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

C.2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	⊠	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	◪	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000



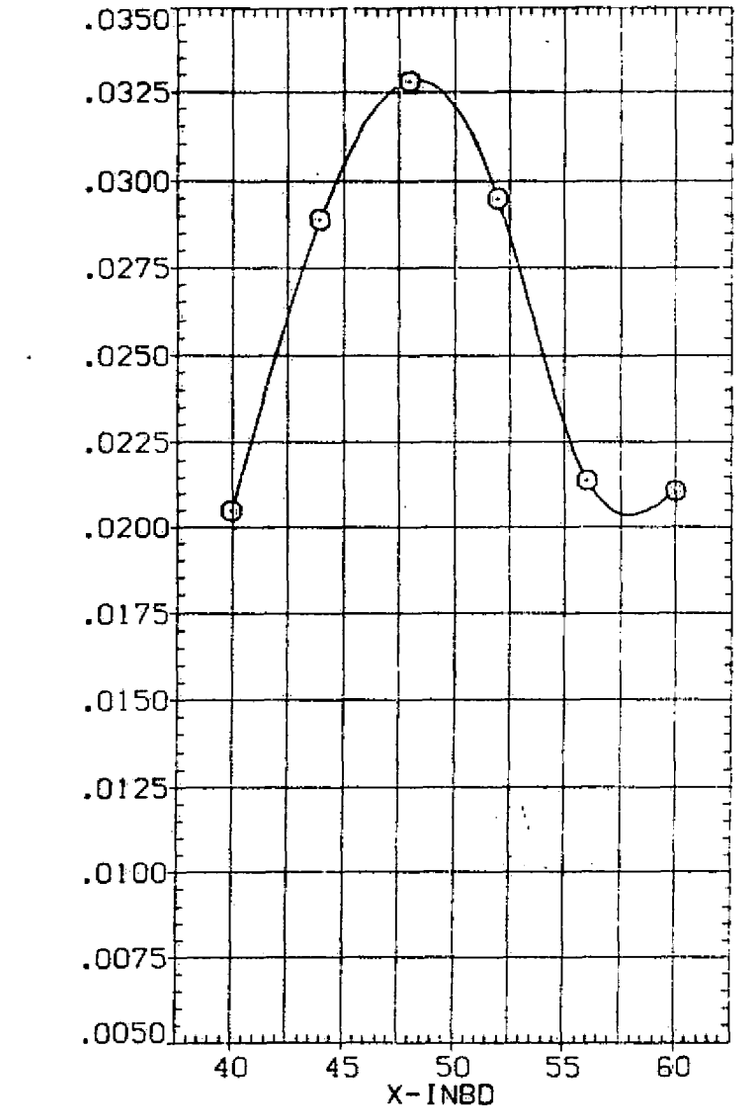


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	○	W B N1 N1	.250	.550	.000
(RAP020)	□	W B N1 N1	.250	.550	4.000
(RAP021)	◇	W B N1 N1	.250	.550	8.000
(RAP031)	△	W B N2 N2	.250	.550	.000
(RAP032)	▽	W B N2 N2	.250	.550	4.000
(RAP033)	▷	W B N2 N2	.250	.550	8.000

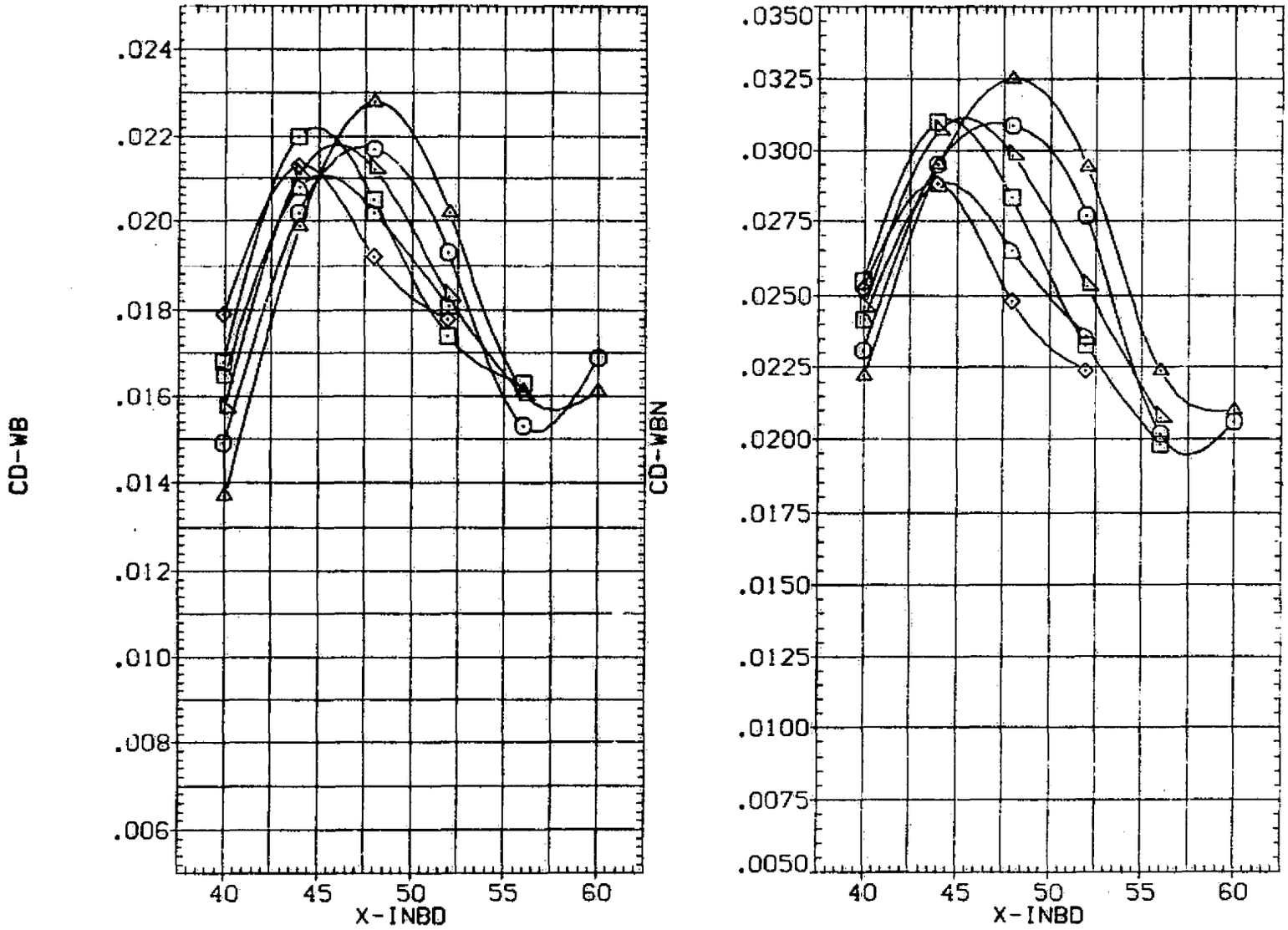


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)	○	W B NI NI	.250	.550	.000
(RAP020)	□	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	◇	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)	△	DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	△	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)	▷	DATA NOT AVAILABLE	.250	.550	8.000

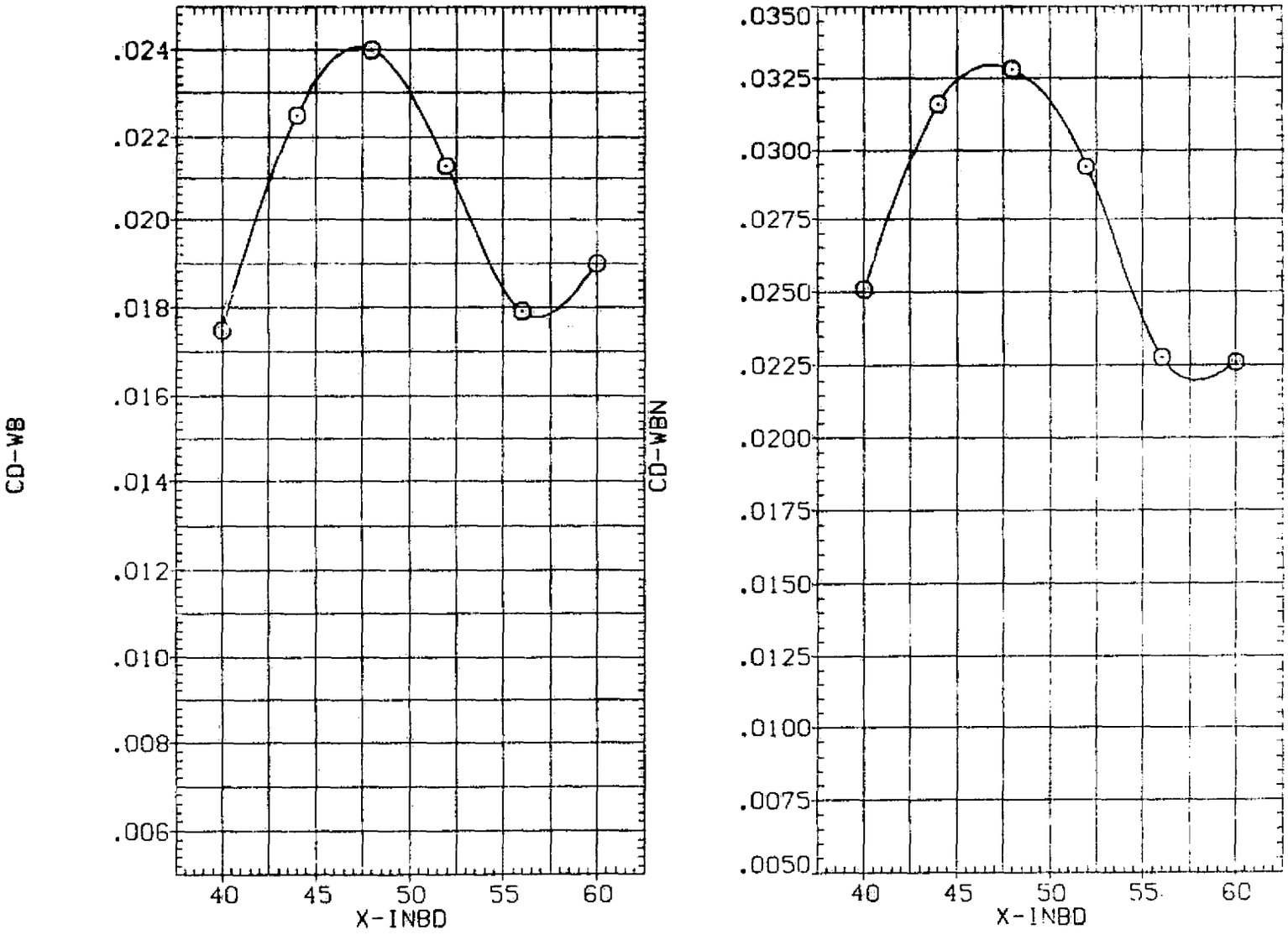


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	□	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	◇	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)	◁	DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	◁	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)	▷	DATA NOT AVAILABLE	.250	.550	8.000

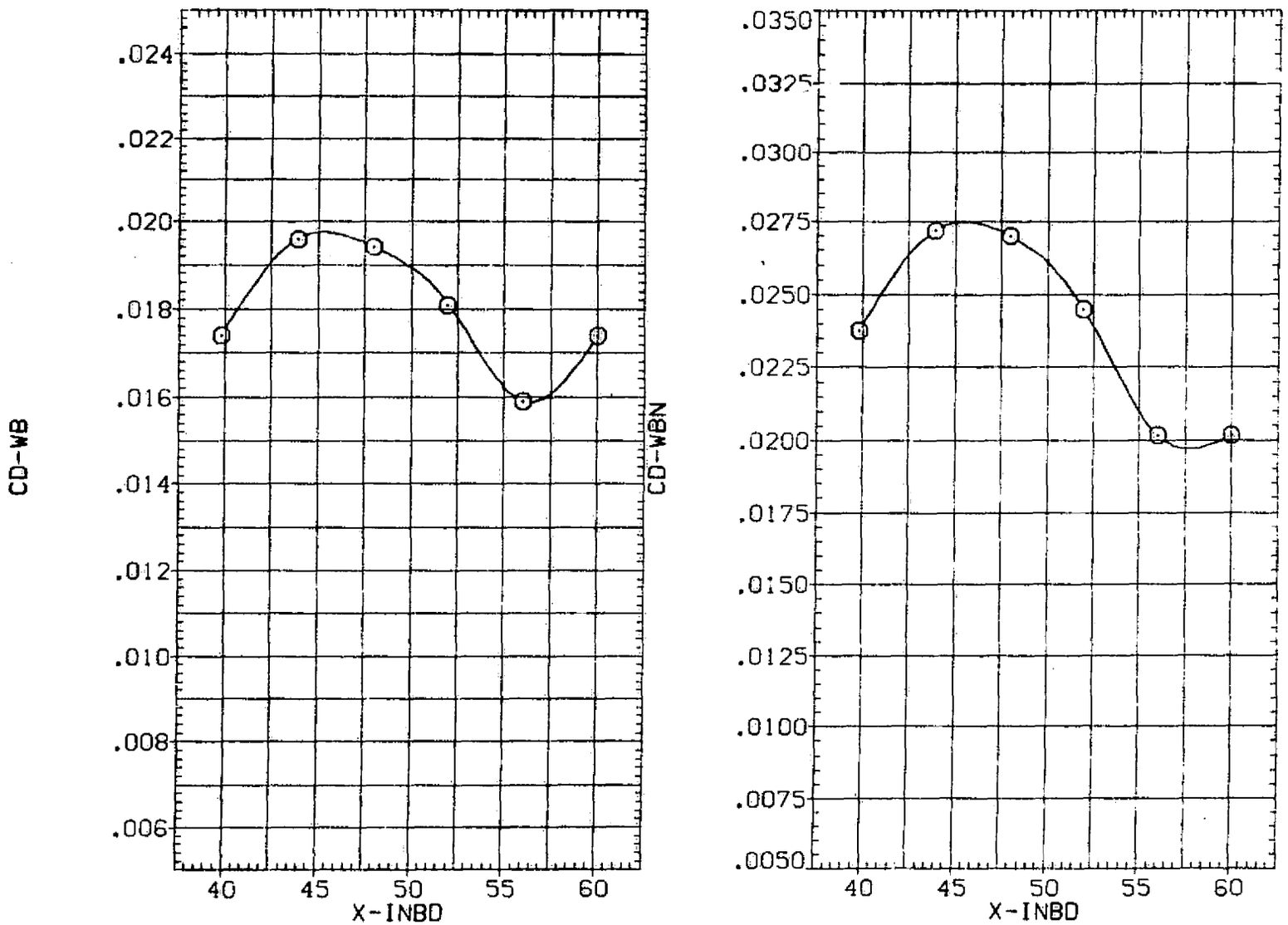


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	□	W B N1 N1	.250	.550	4.000
(RAP021)	◇	W B N1 N1	.250	.550	8.000
(RAP031)	△	W B N2 N2	.250	.550	.000
(RAP032)	△	W B N2 N2	.250	.550	4.000
(RAP033)	△	W B N2 N2	.250	.550	8.000

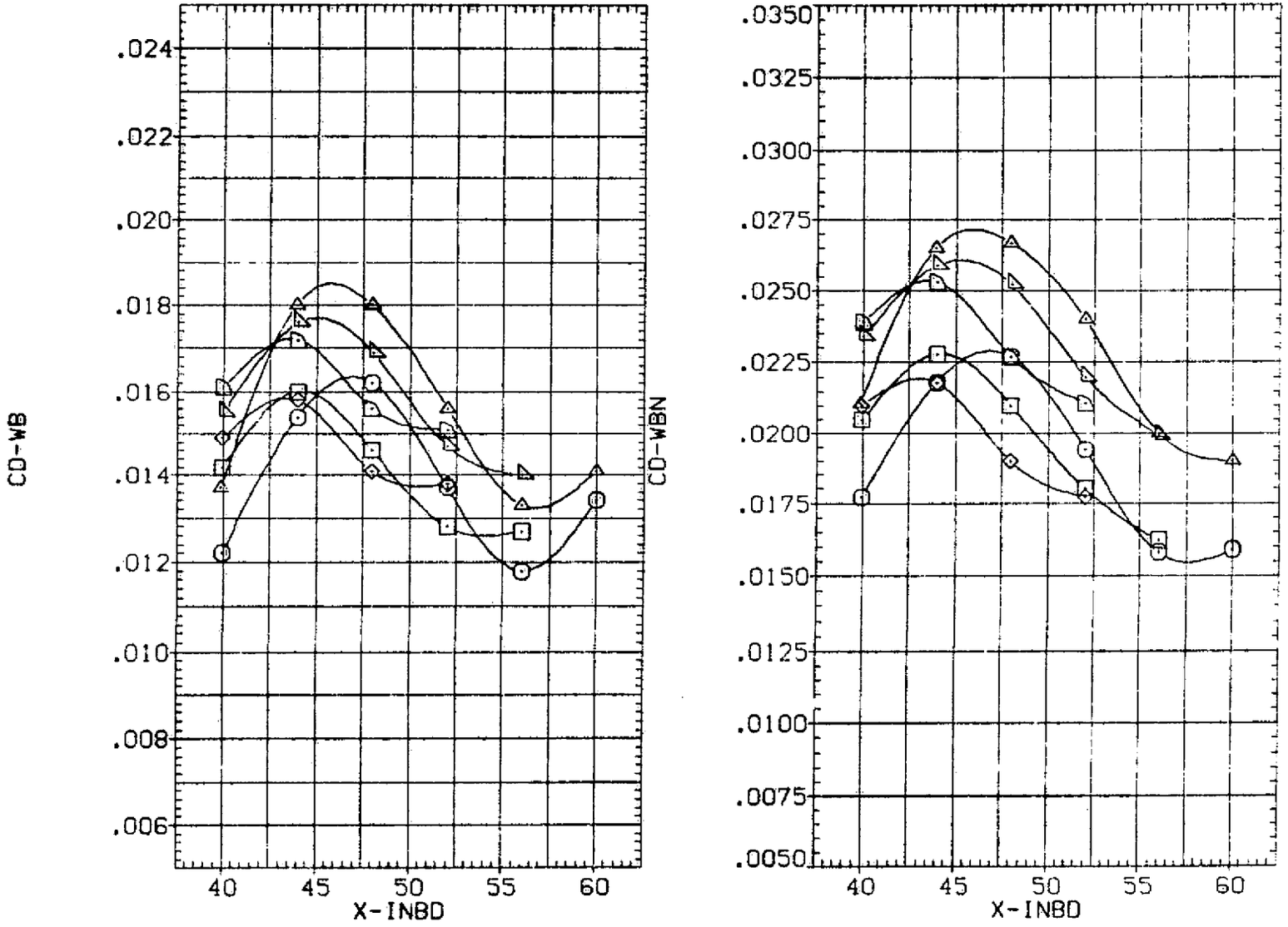


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.39

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)		W B NI N1	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

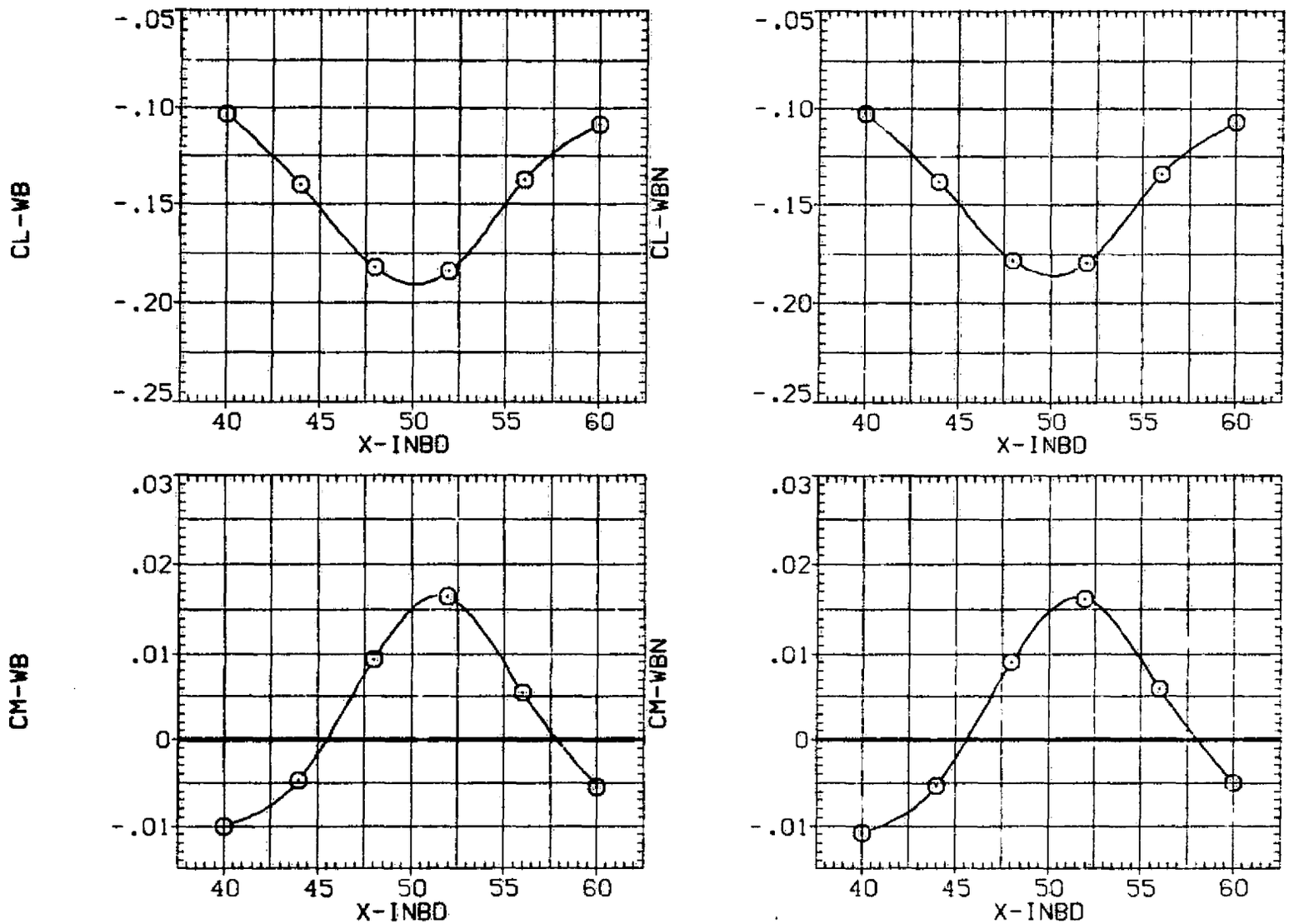


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2YD/B	DX
(RAP019)		W B N1 N1	.250	.550	.000
(RAP020)		W B N1 N1	.250	.550	4.000
(RAP021)		W B N1 N1	.250	.550	8.000
(RAP031)		W B N2 N2	.250	.550	.000
(RAP032)		W B N2 N2	.250	.550	4.000
(RAP033)		W B N2 N2	.250	.550	8.000

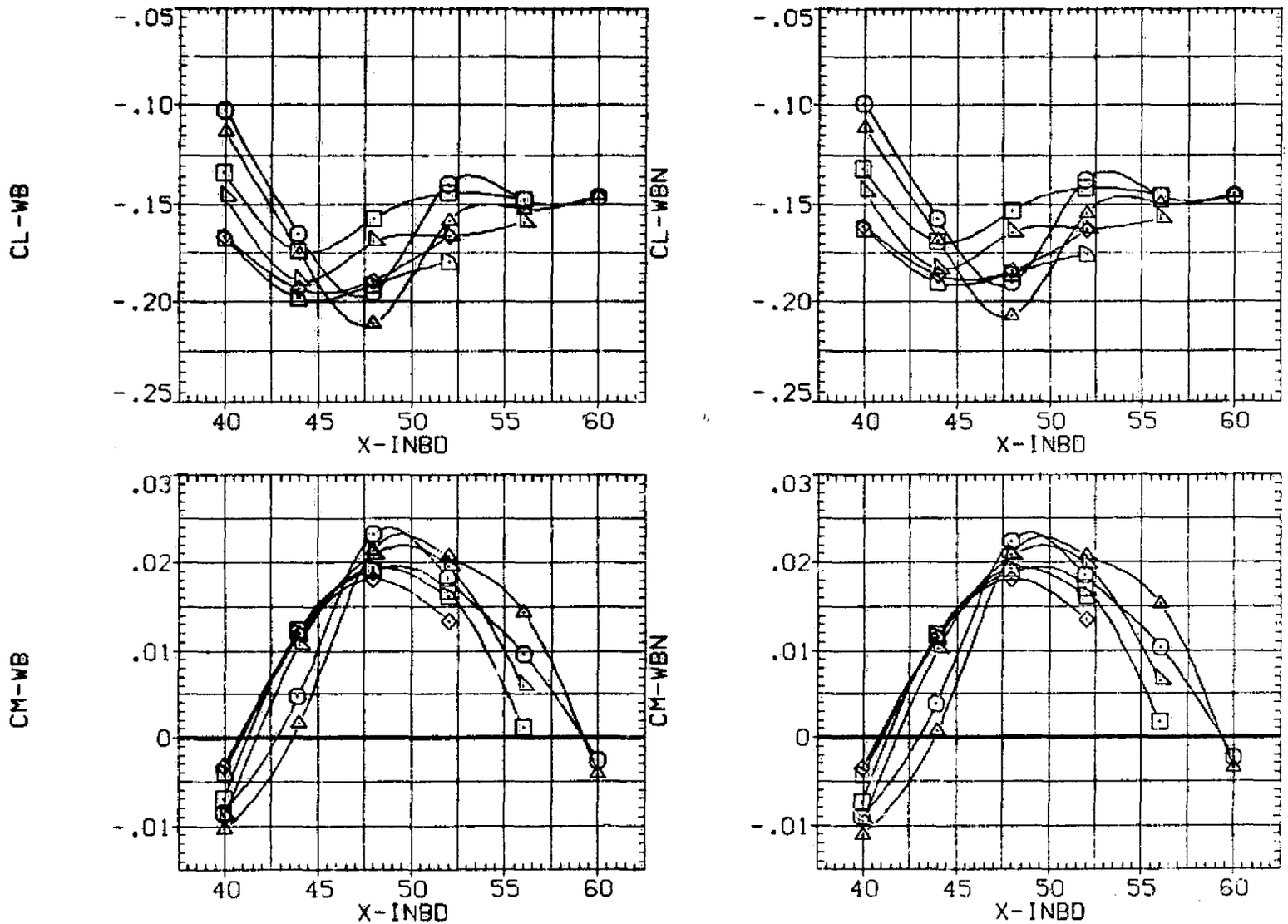


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)		W B N1 N1	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

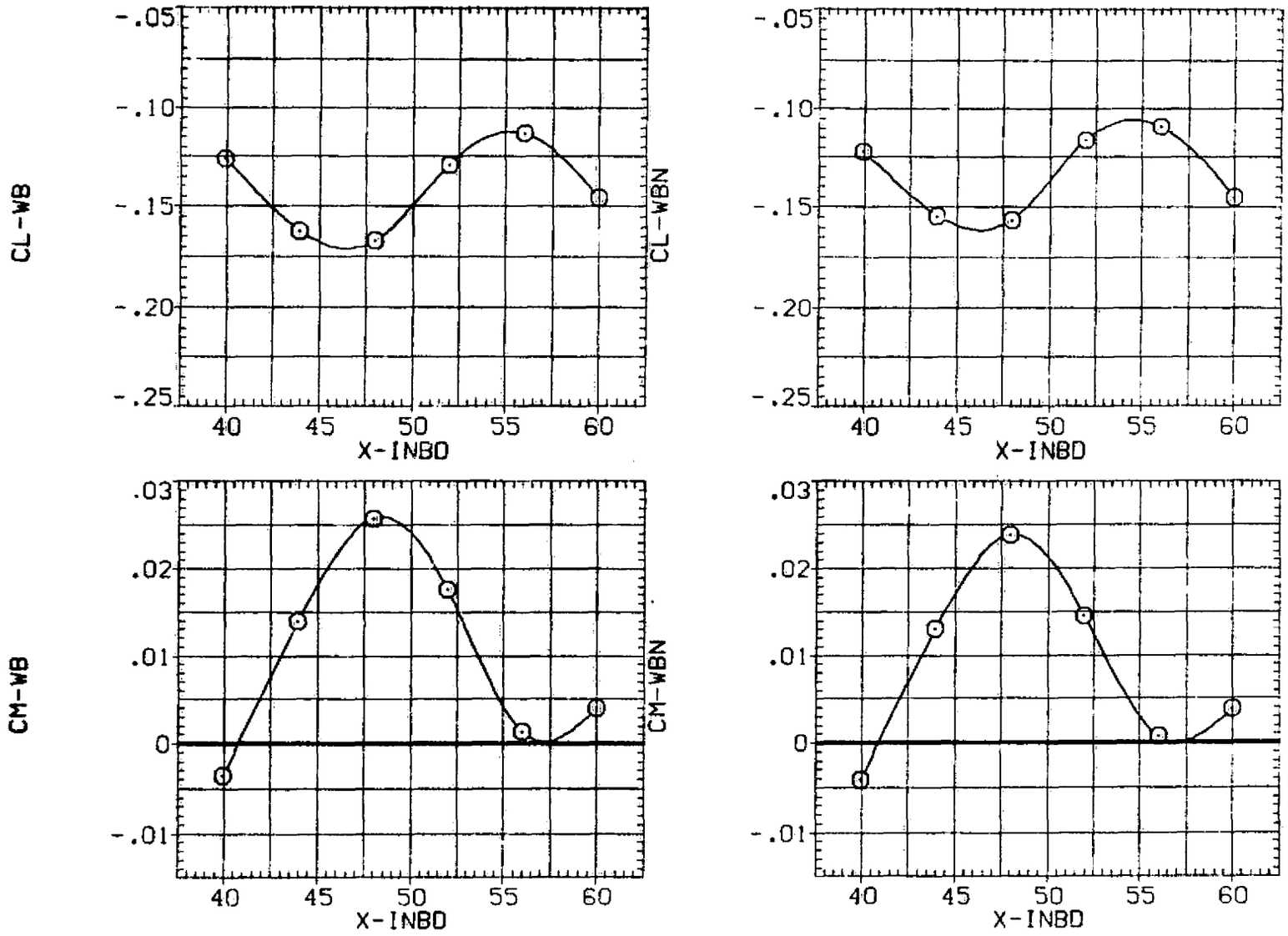


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	○	W B N1 N1	.250	.550	.000
(RAP020)	□	W B N1 N1	.250	.550	4.000
(RAP021)	◇	W B N1 N1	.250	.550	8.000
(RAP031)	△	W B N2 N2	.250	.550	.000
(RAP032)	▽	W B N2 N2	.250	.550	4.000
(RAP033)	▷	W B N2 N2	.250	.550	8.000

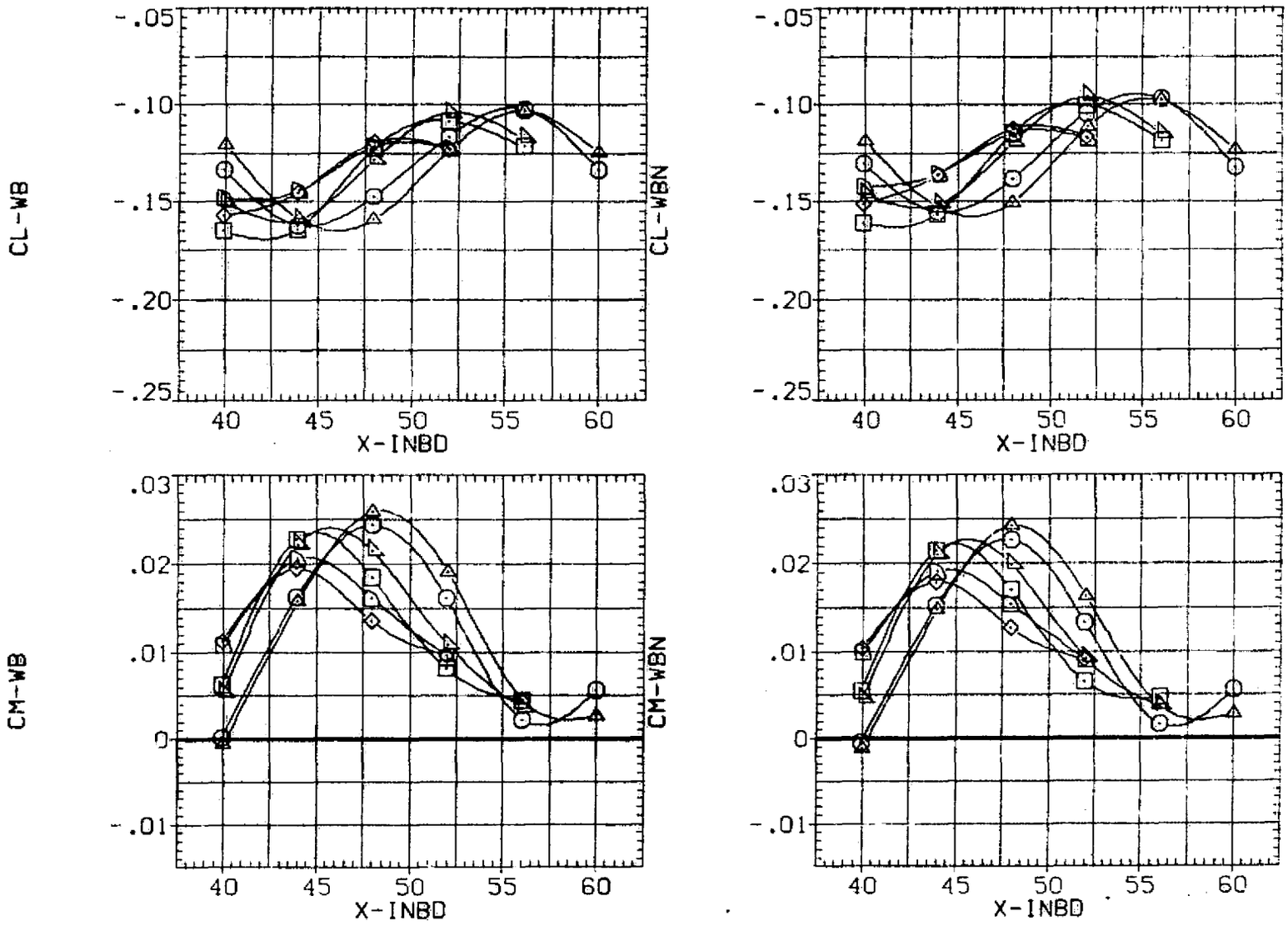


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	ΔX
(RAP019)	□	W B NI NI	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

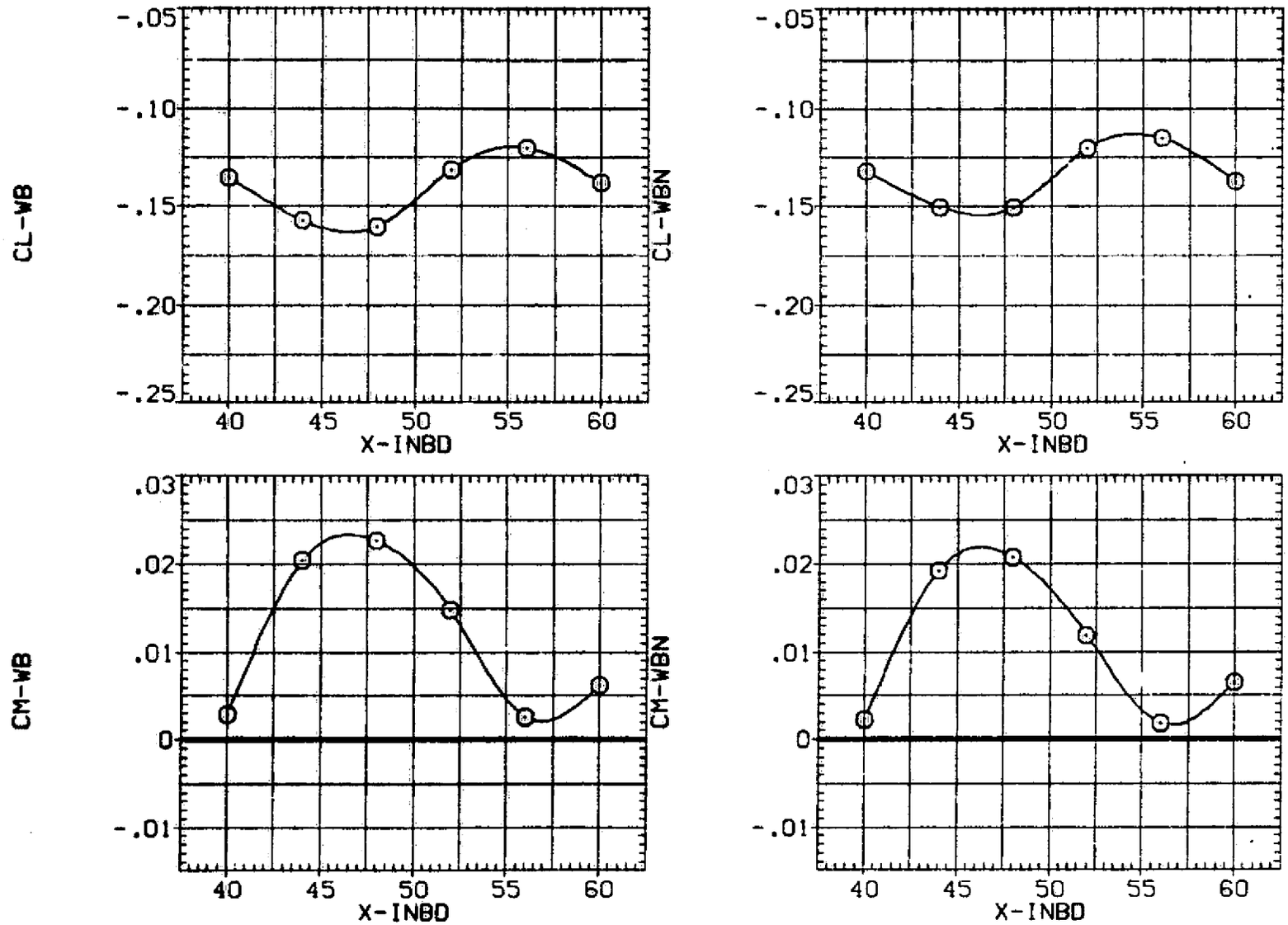


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)	○	W B NI NI	.250	.550	.000
(RAP020)	□	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	◇	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)	△	DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	▽	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)	▷	DATA NOT AVAILABLE	.250	.550	8.000

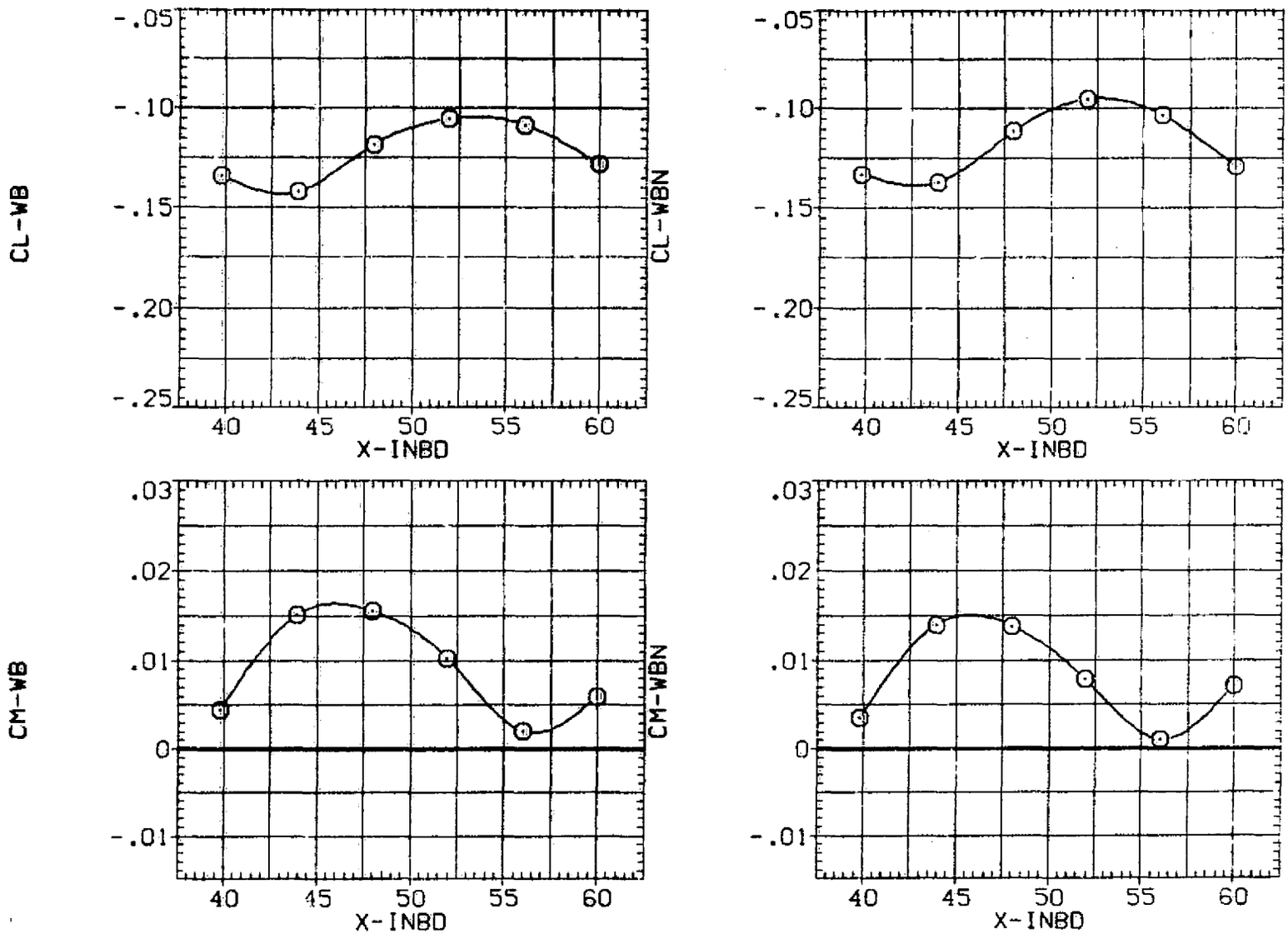


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	⊠	W B N1 N1	.250	.550	4.000
(RAP021)	◁▷	W B N1 N1	.250	.550	8.000
(RAP031)	△	W B N2 N2	.250	.550	.000
(RAP032)	◁	W B N2 N2	.250	.550	4.000
(RAP033)	▷	W B N2 N2	.250	.550	8.000

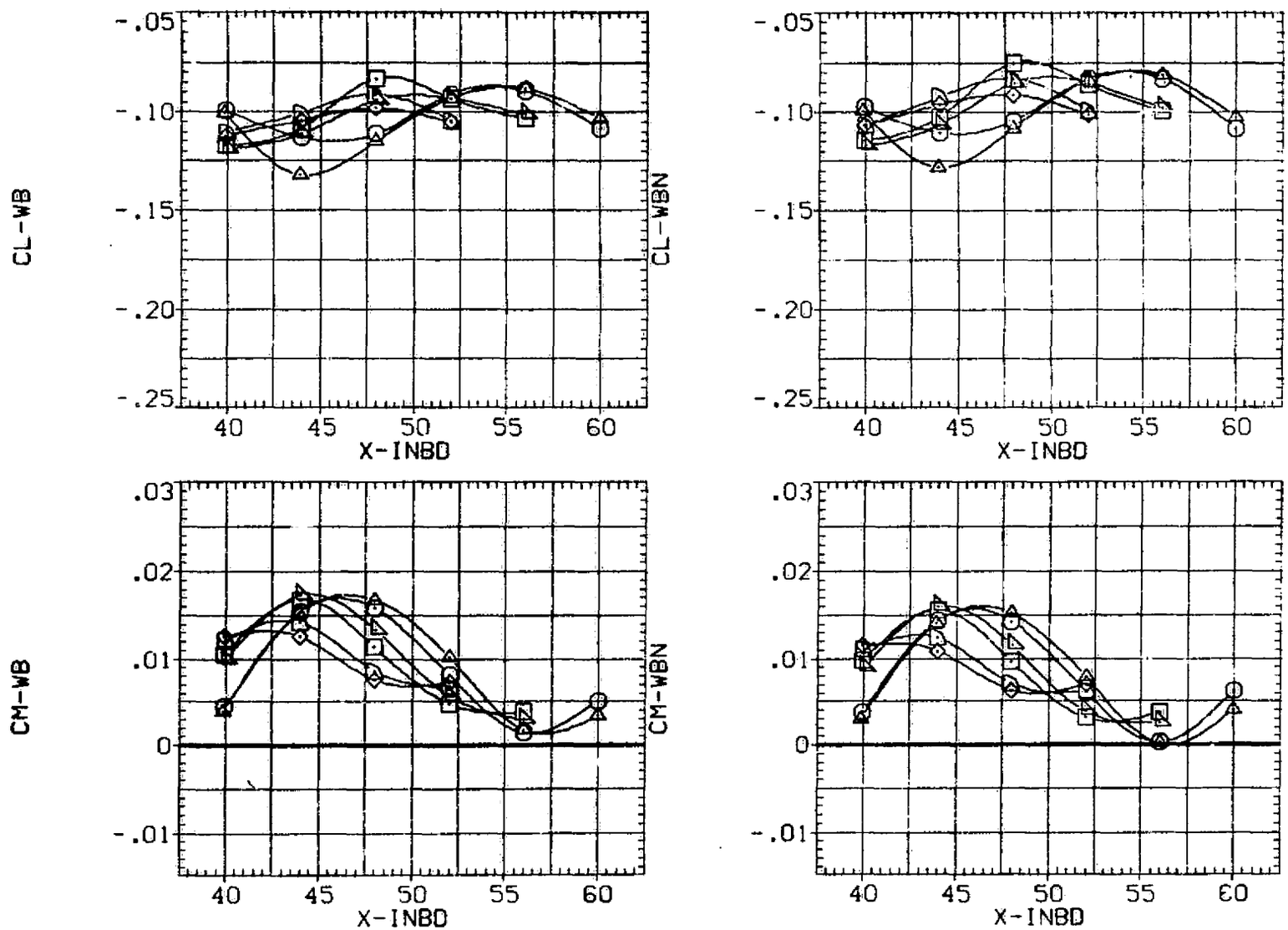


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.39

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	W B NI NI	.250	.550	.000
(RAP020)	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)	DATA NOT AVAILABLE	.250	.550	.000
(RAP032)	DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)	DATA NOT AVAILABLE	.250	.550	8.000

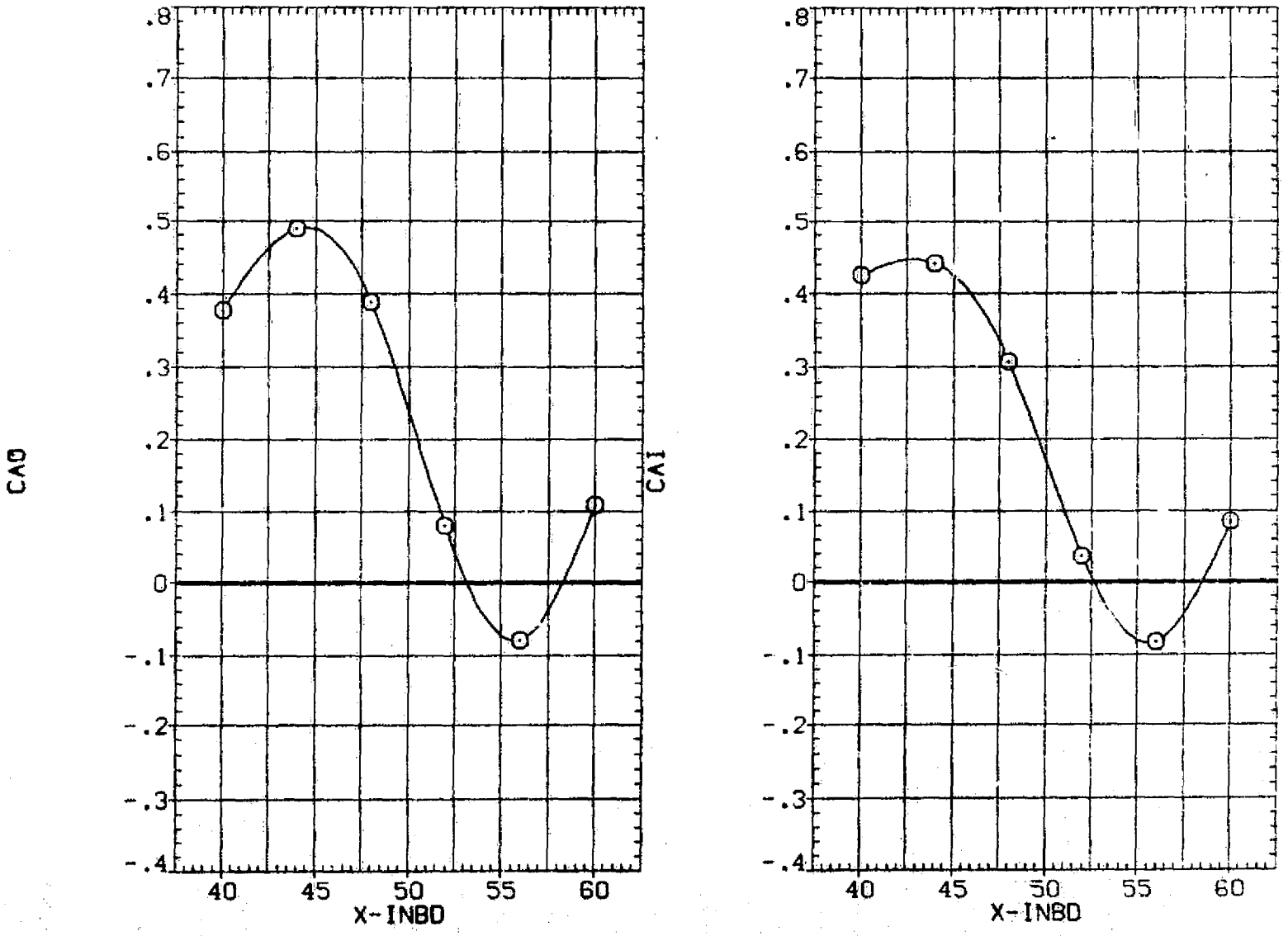


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	ØX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	○	W B N1 N1	.250	.550	4.000
(RAP021)	△	W B N1 N1	.250	.550	8.000
(RAP031)	◇	W B N2 N2	.250	.550	.000
(RAP032)	⊡	W B N2 N2	.250	.550	4.000
(RAP033)	⊙	W B N2 N2	.250	.550	8.000

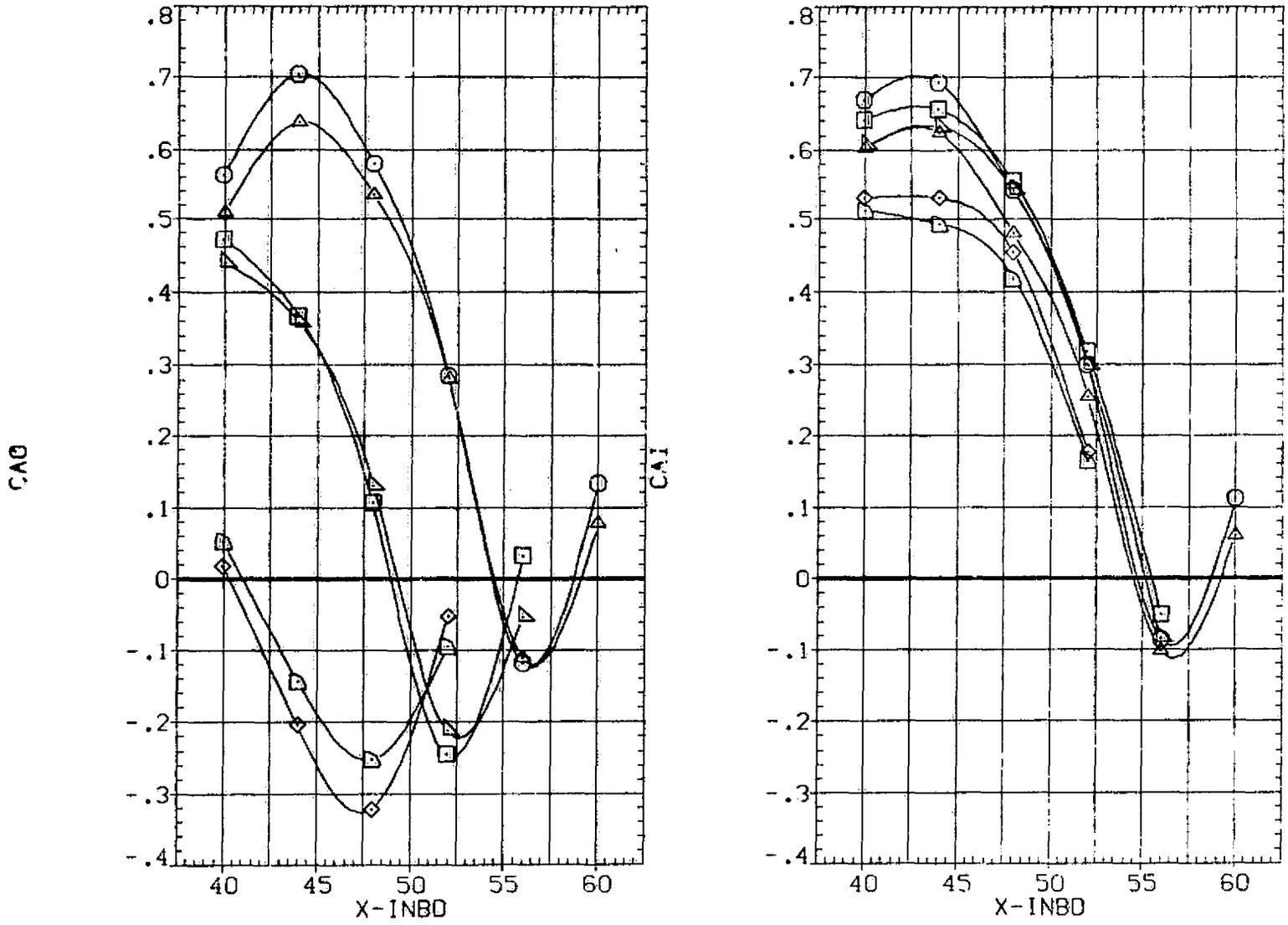


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	□×14	DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)	△	DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

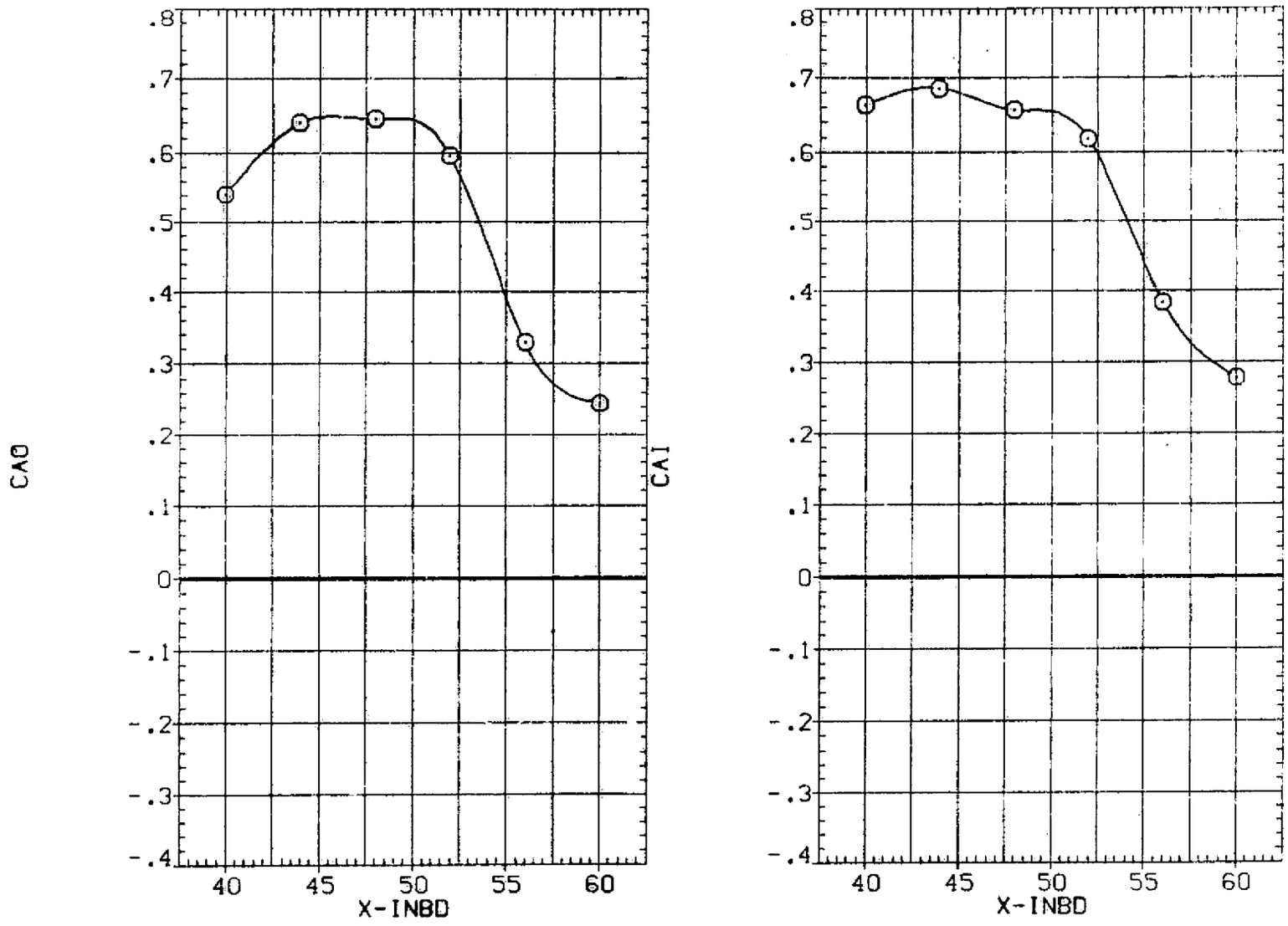


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)	□	W B N1 N1	.250	.550	.000
(RAP020)	◇	W B N1 N1	.250	.550	4.000
(RAP021)	△	W B N1 N1	.250	.550	8.000
(RAP031)	◇	W B N2 N2	.250	.550	.000
(RAP032)	△	W B N2 N2	.250	.550	4.000
(RAP033)	▷	W B N2 N2	.250	.550	8.000

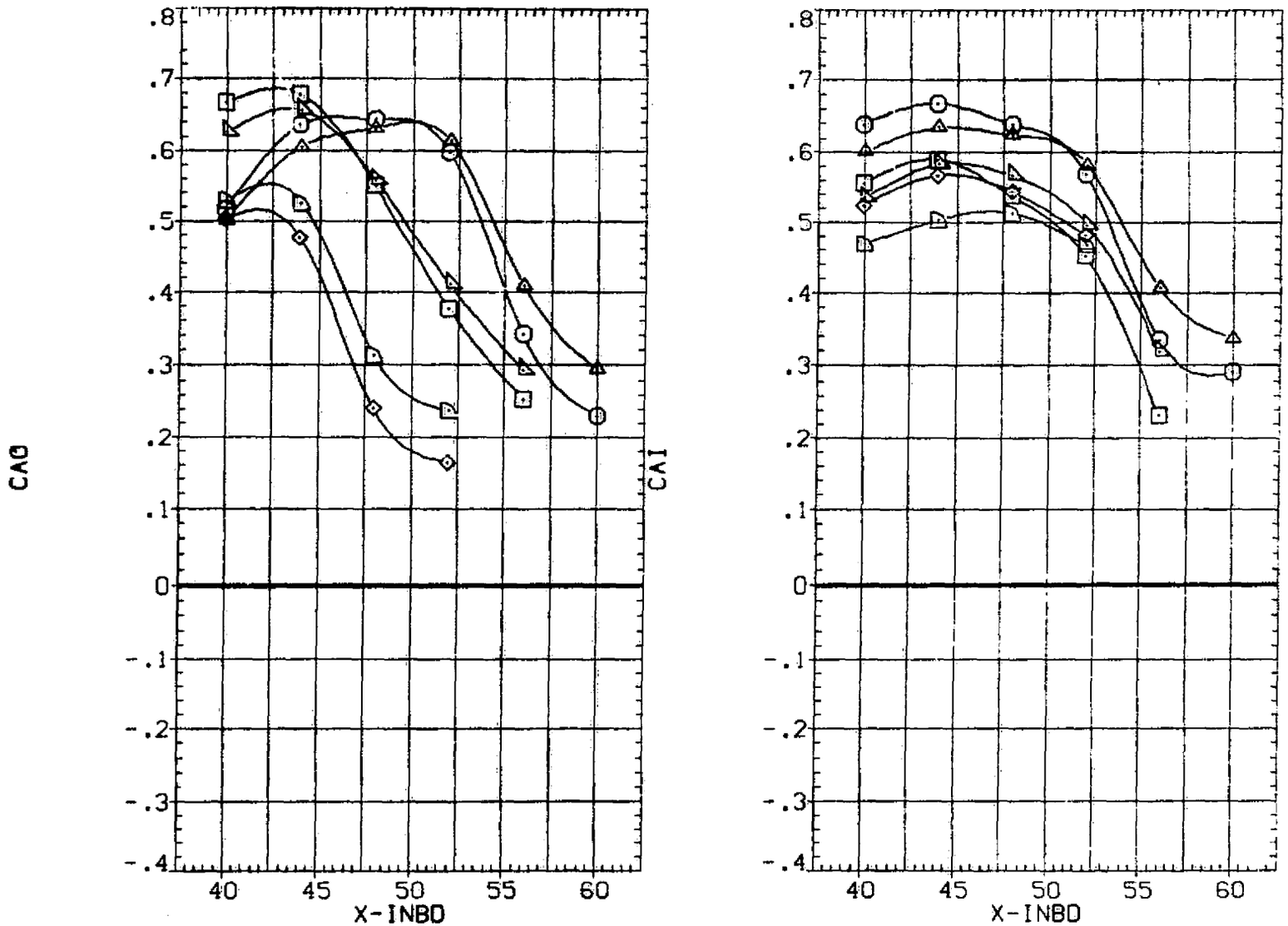


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)		W B NI NI	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

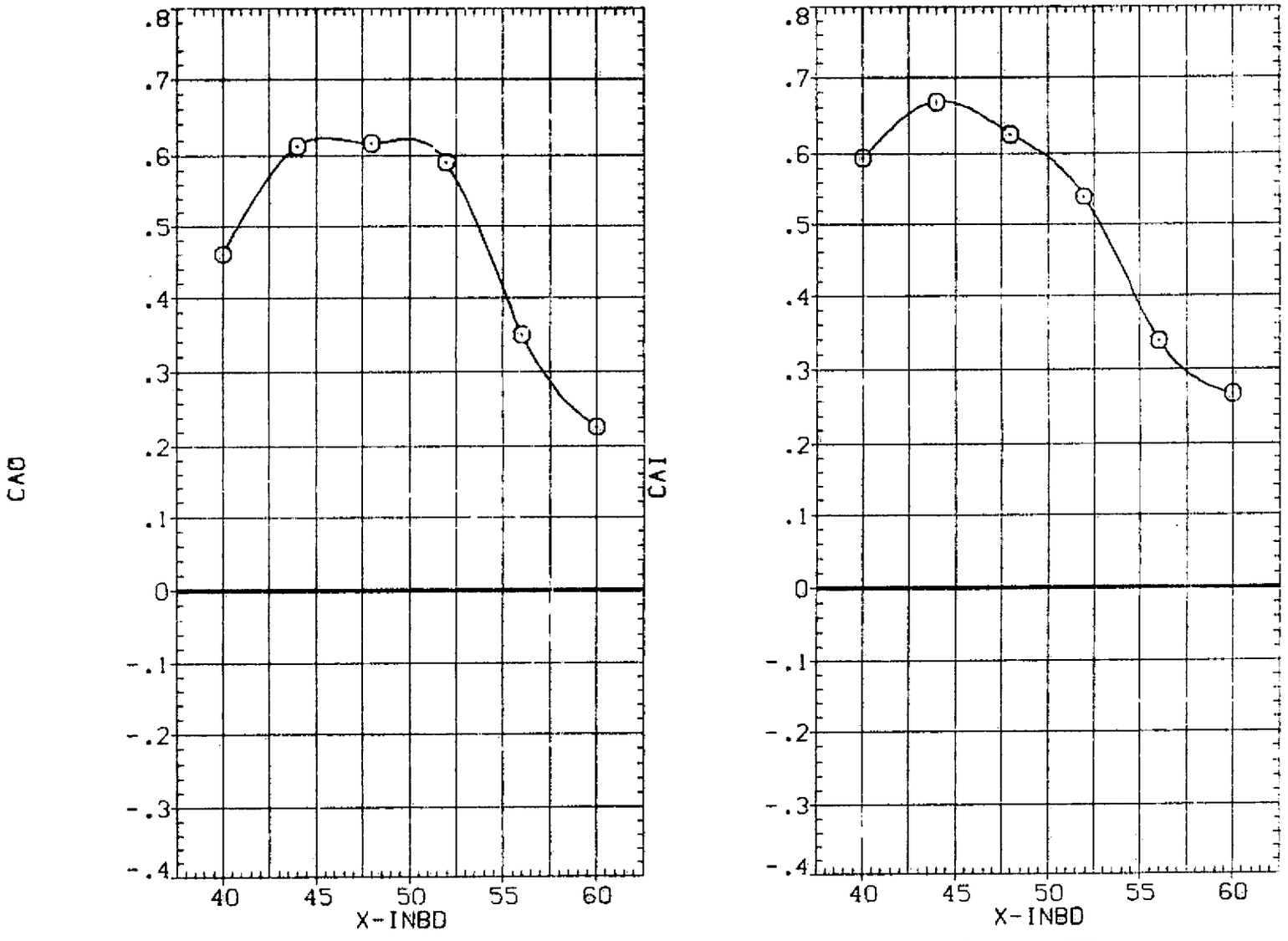


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(RAP019)		W B N1 N1	.250	.550	.000
(RAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(RAP031)		DATA NOT AVAILABLE	.250	.550	.000
(RAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(RAP033)		DATA NOT AVAILABLE	.250	.550	8.000

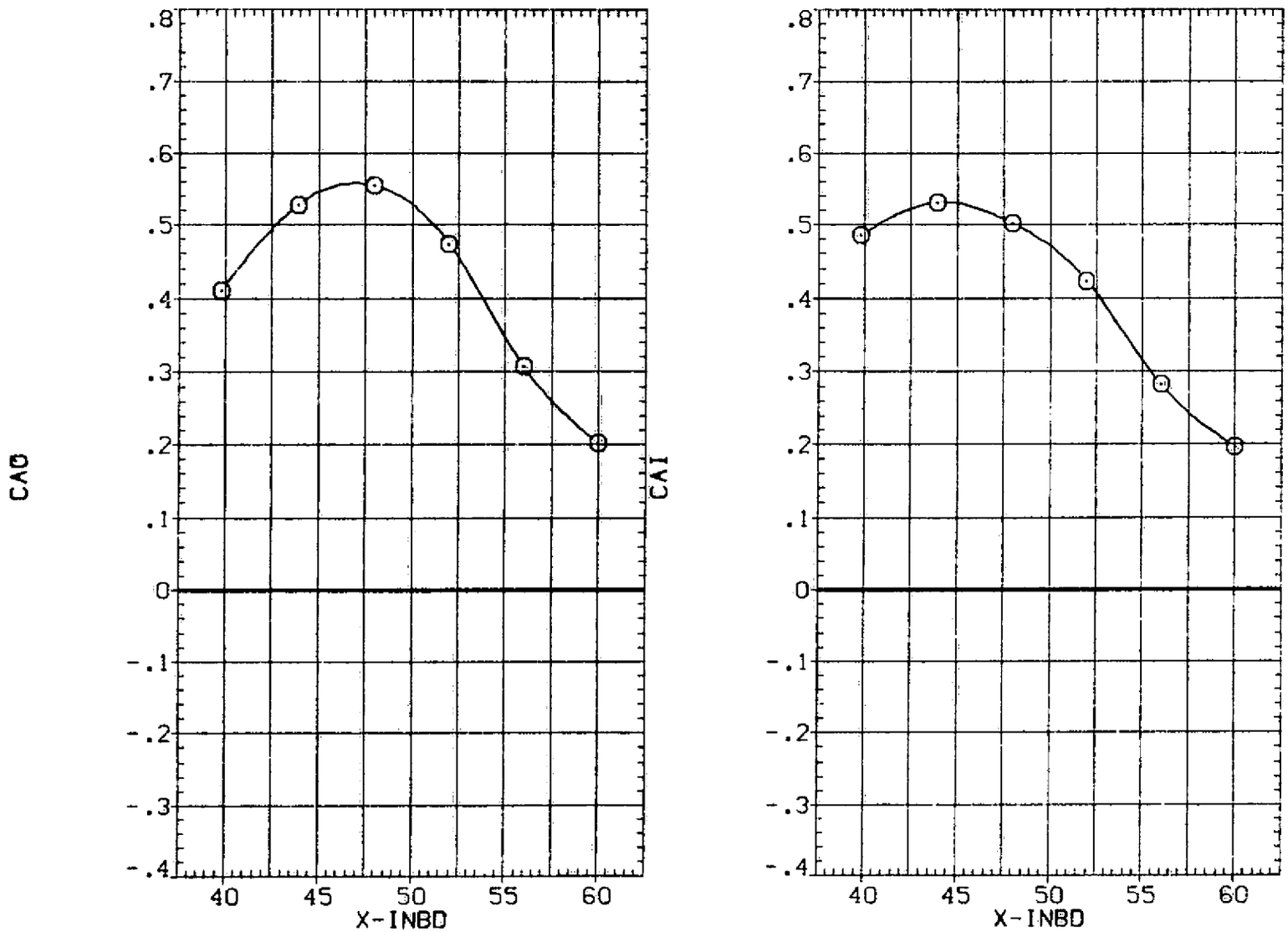


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(RAP019)	○	W B N1 N1	.250	.550	.000
(RAP020)	□	W B N1 N1	.250	.550	4.000
(RAP021)	◇	W B N1 N1	.250	.550	8.000
(RAP031)	△	W B N2 N2	.250	.550	.000
(RAP032)	◁	W B N2 N2	.250	.550	4.000
(RAP033)	▷	W B N2 N2	.250	.550	8.000

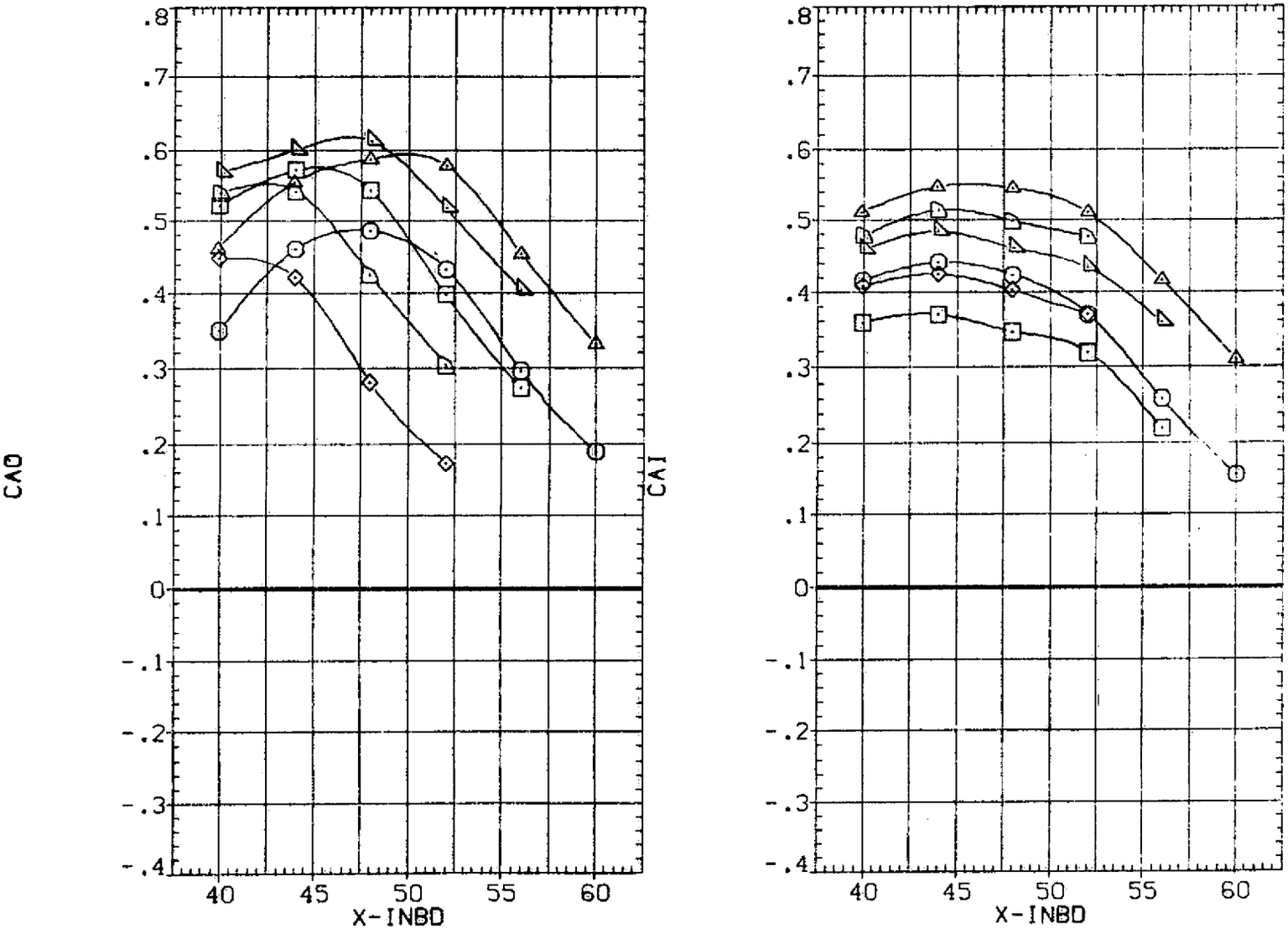


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.39

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)	□	W B N1 N1	.250	.550	.000
(BAP020)	⊠	DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)	⊠	DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)	◁▷	DATA NOT AVAILABLE	.250	.550	.000
(BAP032)	◁▷	DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)	◁▷	DATA NOT AVAILABLE	.250	.550	8.000

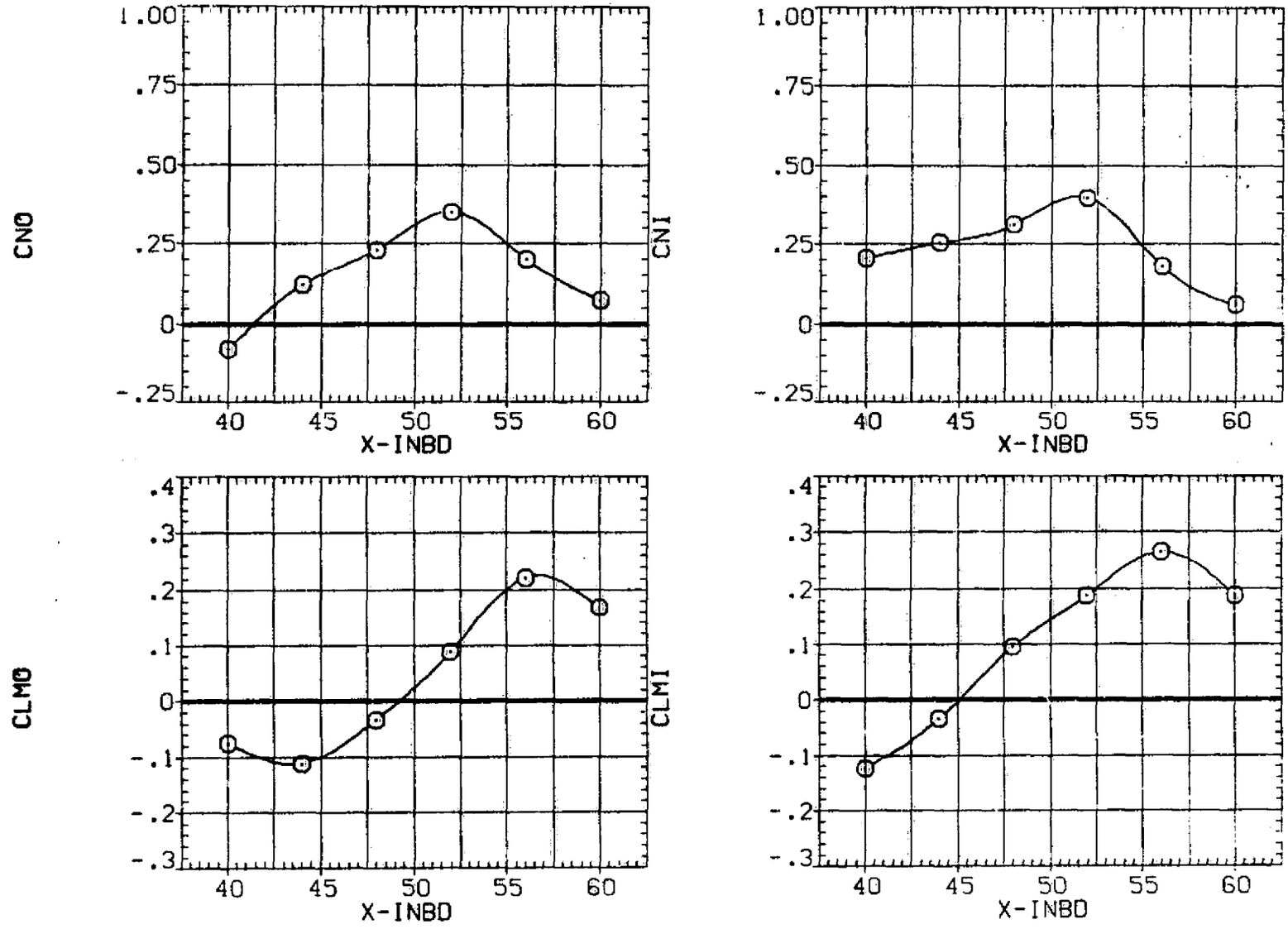


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(BAP019)	□	W B N1 N1	.250	.550	.000
(BAP020)	◇	W B N1 N1	.250	.550	4.000
(BAP021)	△	W B N1 N1	.250	.550	8.000
(BAP031)	▷	W B N2 N2	.250	.550	.000
(BAP032)	○	W B N2 N2	.250	.550	4.000
(BAP033)	⬠	W B N2 N2	.250	.550	8.000

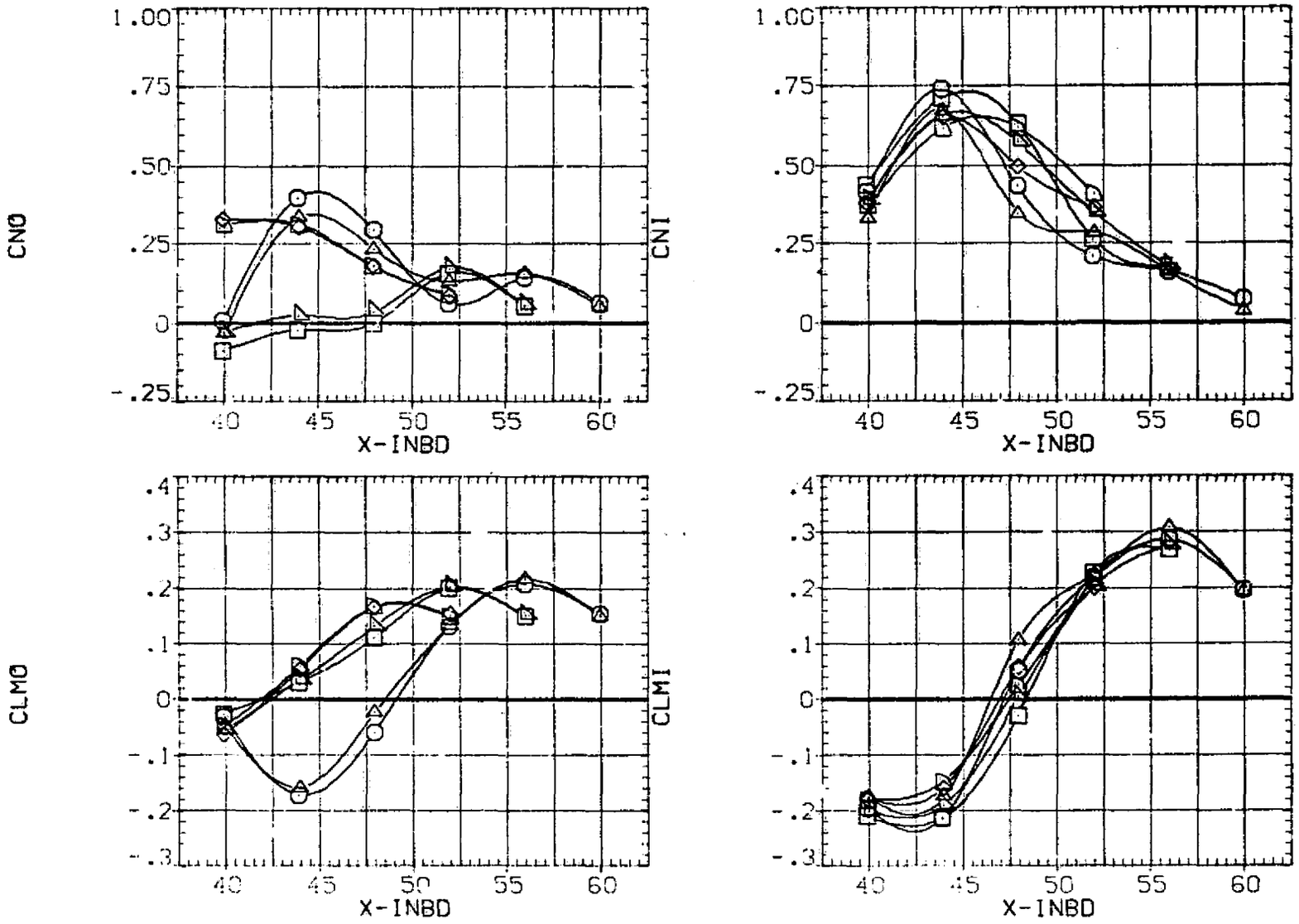


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2YO/B	DX
(BAP019)	W B N1 N1	.250	.550	.000
(BAP020)	DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)	DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)	DATA NOT AVAILABLE	.250	.550	.000
(BAP032)	DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)	DATA NOT AVAILABLE	.250	.550	8.000

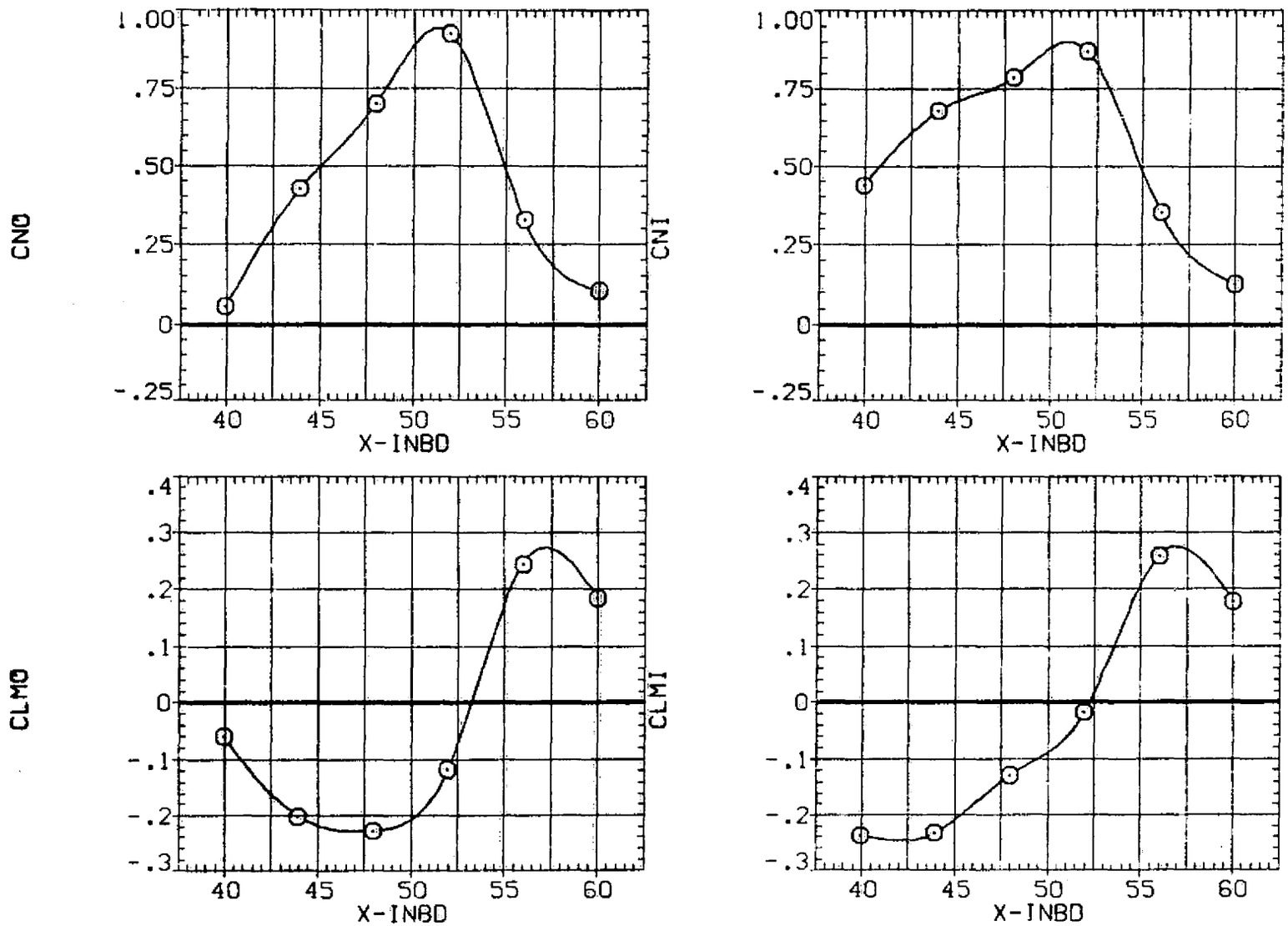


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)		W B N1 N1	.250	.550	.000
(BAP020)		W B N1 N1	.250	.550	4.000
(BAP021)		W B N1 N1	.250	.550	8.000
(BAP031)		W B N2 N2	.250	.550	.000
(BAP032)		W B N2 N2	.250	.550	4.000
(BAP033)		W B N2 N2	.250	.550	8.000

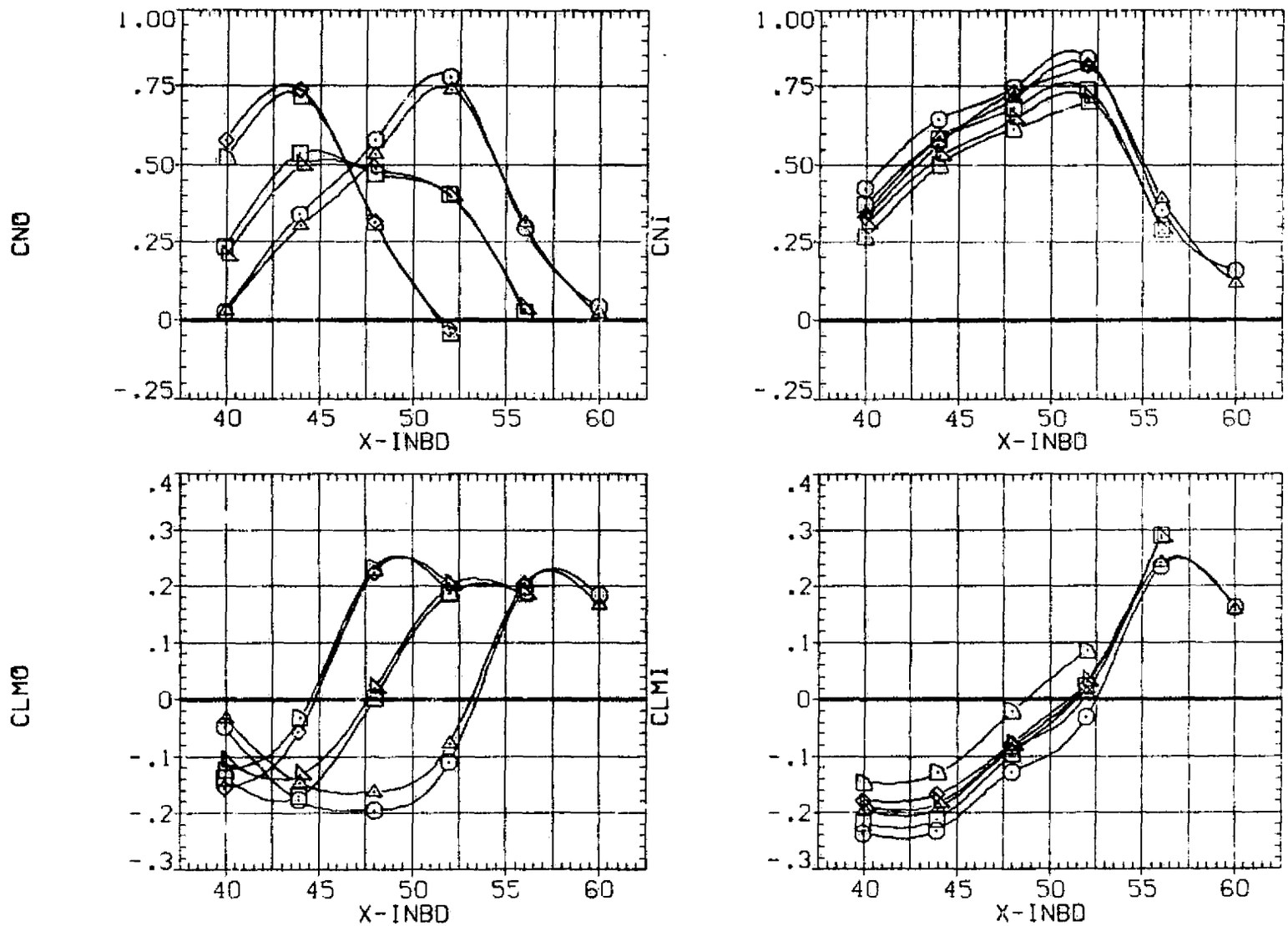


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)		W B NI NI	.250	.550	.000
(BAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)		DATA NOT AVAILABLE	.250	.550	.000
(BAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)		DATA NOT AVAILABLE	.250	.550	8.000

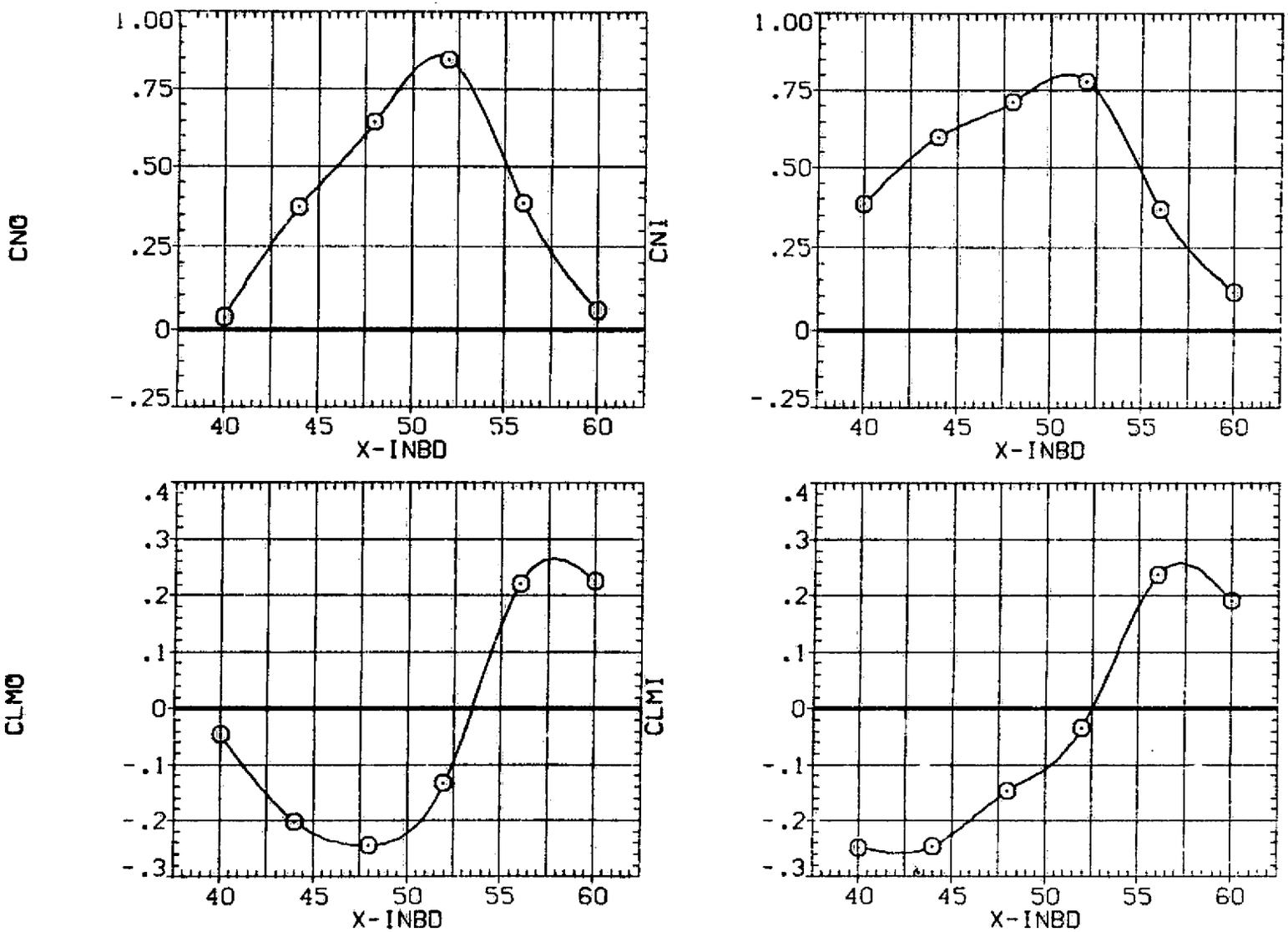


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(BAP019)	○	W B NI NI	.250	.550	.000
(BAP020)	□	DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)	◇	DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)	△	DATA NOT AVAILABLE	.250	.550	.000
(BAP032)	▽	DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)	⬠	DATA NOT AVAILABLE	.250	.550	8.000

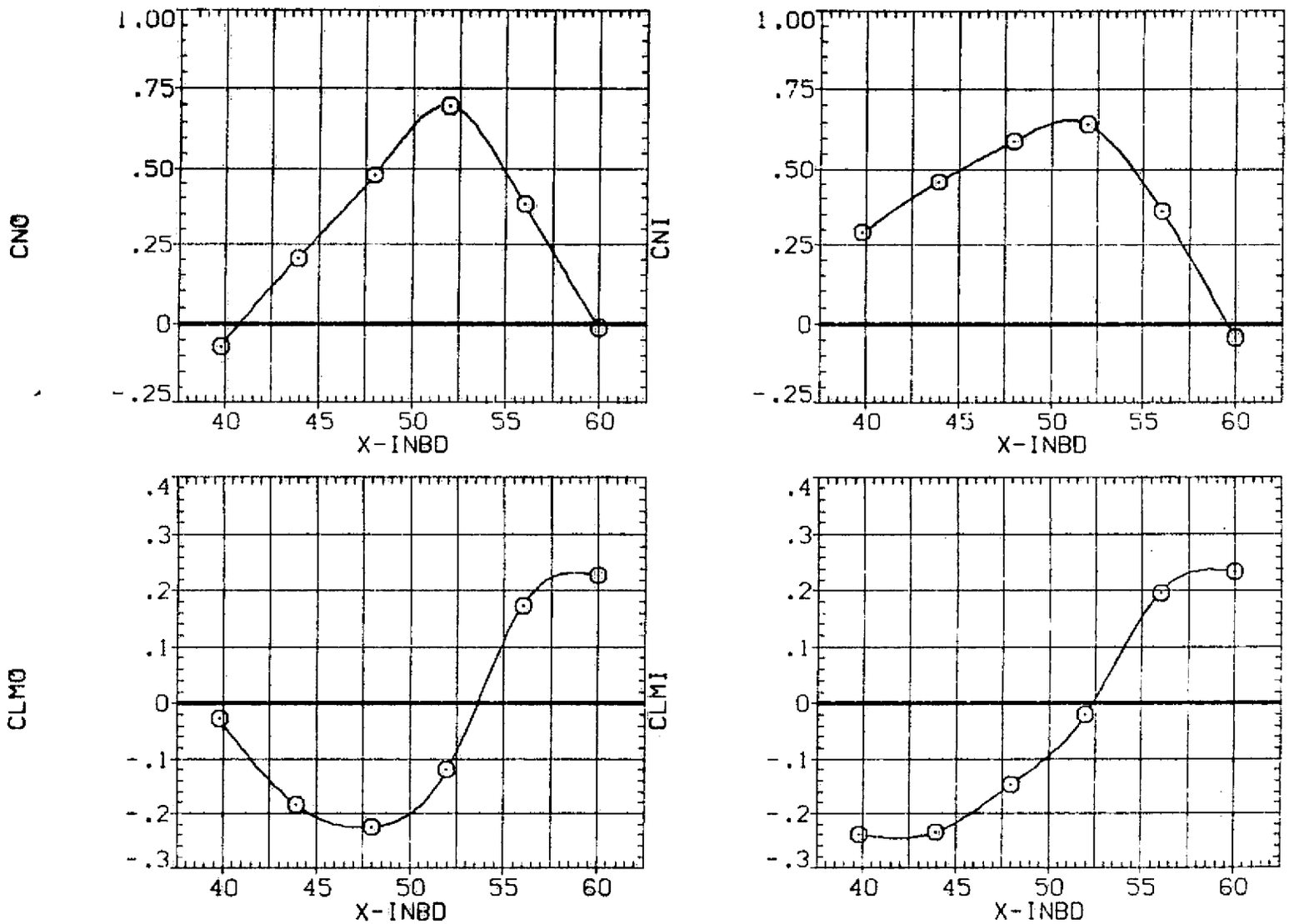


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)	□	W B N1 N1	.250	.550	.000
(BAP020)	◇	W B N1 N1	.250	.550	4.000
(BAP021)	△	W B N1 N1	.250	.550	8.000
(BAP031)	□	W B N2 N2	.250	.550	.000
(BAP032)	◇	W B N2 N2	.250	.550	4.000
(BAP033)	△	W B N2 N2	.250	.550	8.000

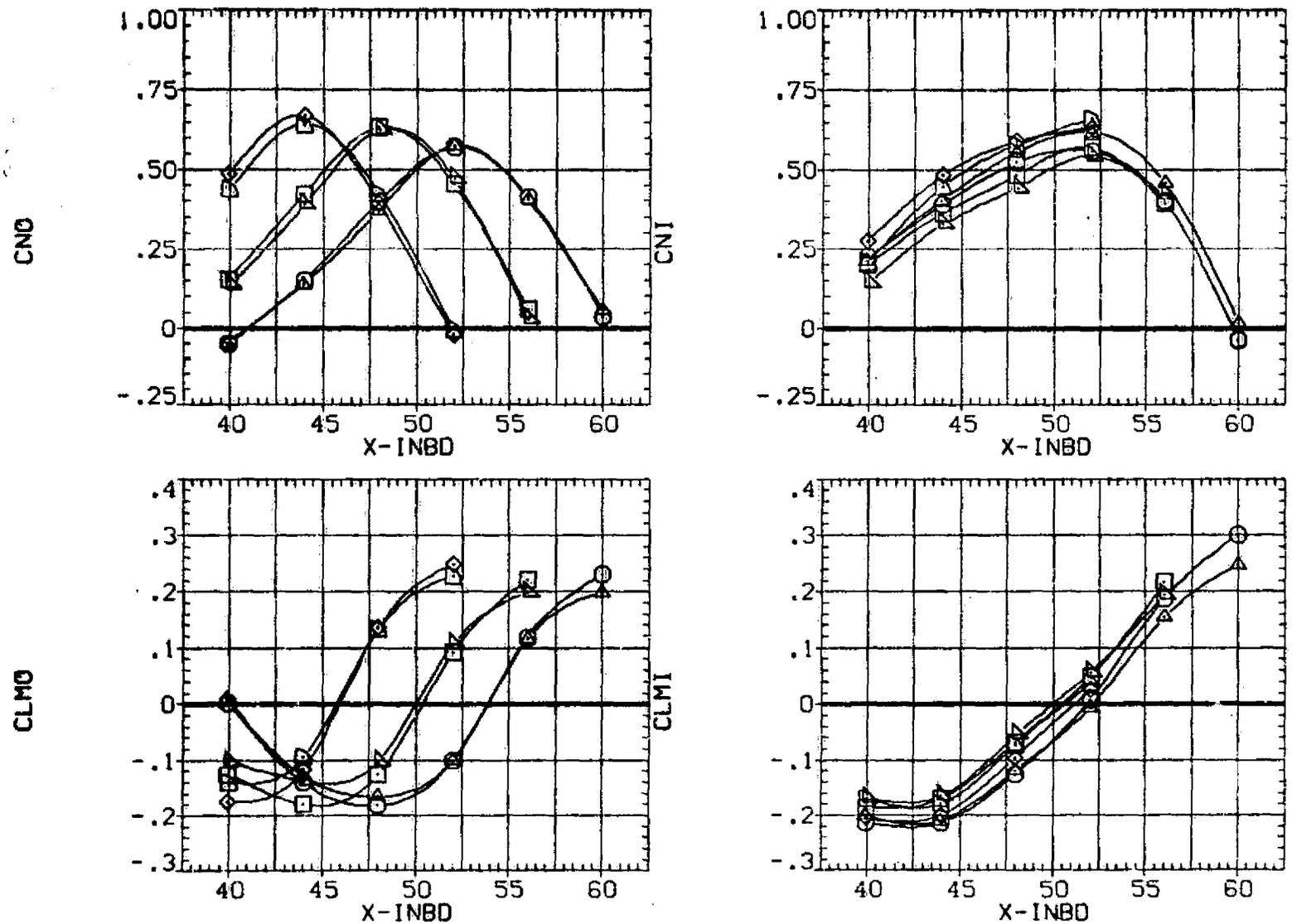


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.39

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)		W B N1 N1	.250	.550	.000
(BAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)		DATA NOT AVAILABLE	.250	.550	.000
(BAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)		DATA NOT AVAILABLE	.250	.550	8.000

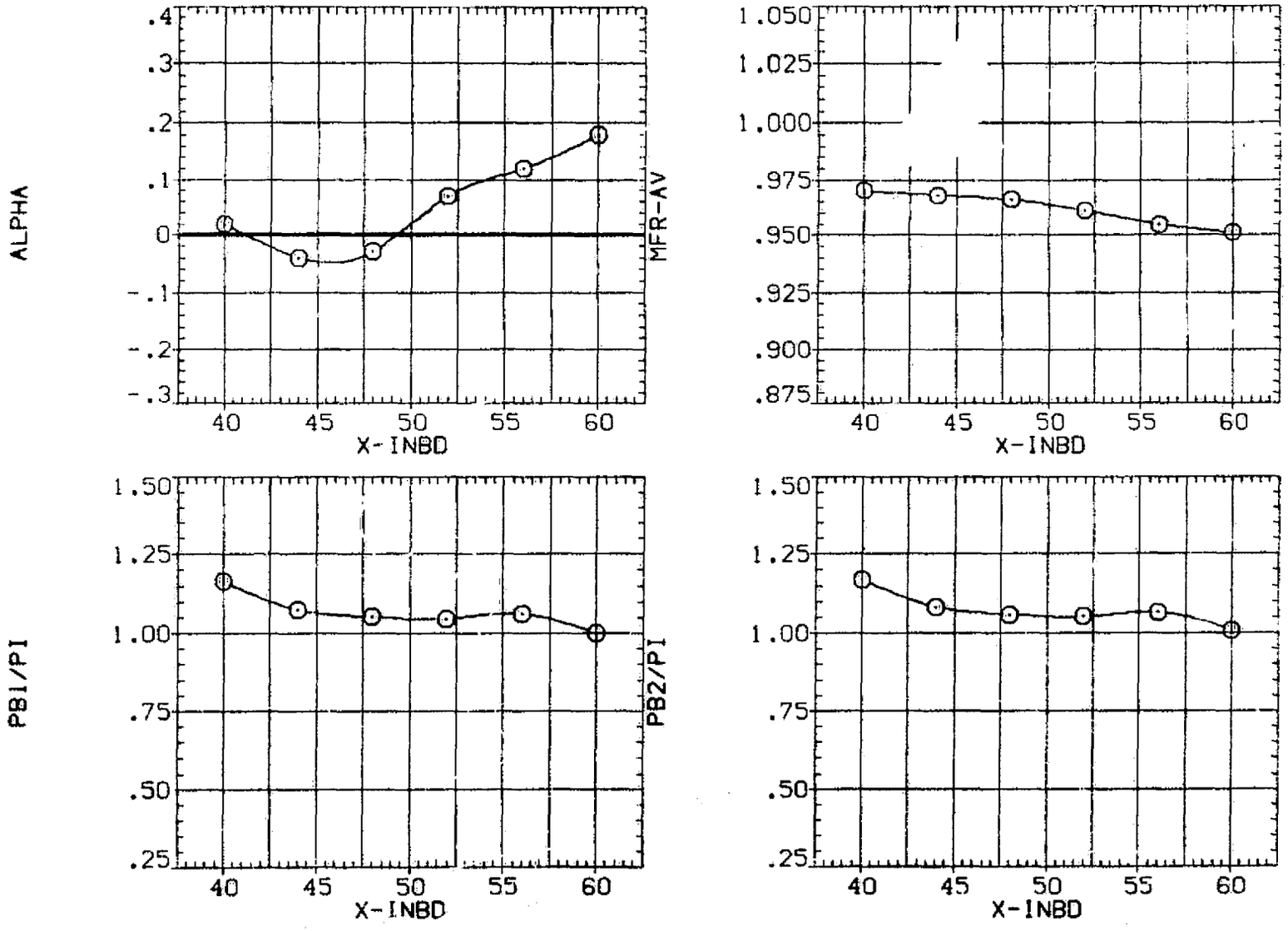


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)		W B N1 N1	.250	.550	.000
(BAP020)		W B N1 N1	.250	.550	4.000
(BAP021)		W B N1 N1	.250	.550	8.000
(BAP031)		W B N2 N2	.250	.550	.000
(BAP032)		W B N2 N2	.250	.550	4.000
(BAP033)		W B N2 N2	.250	.550	8.000

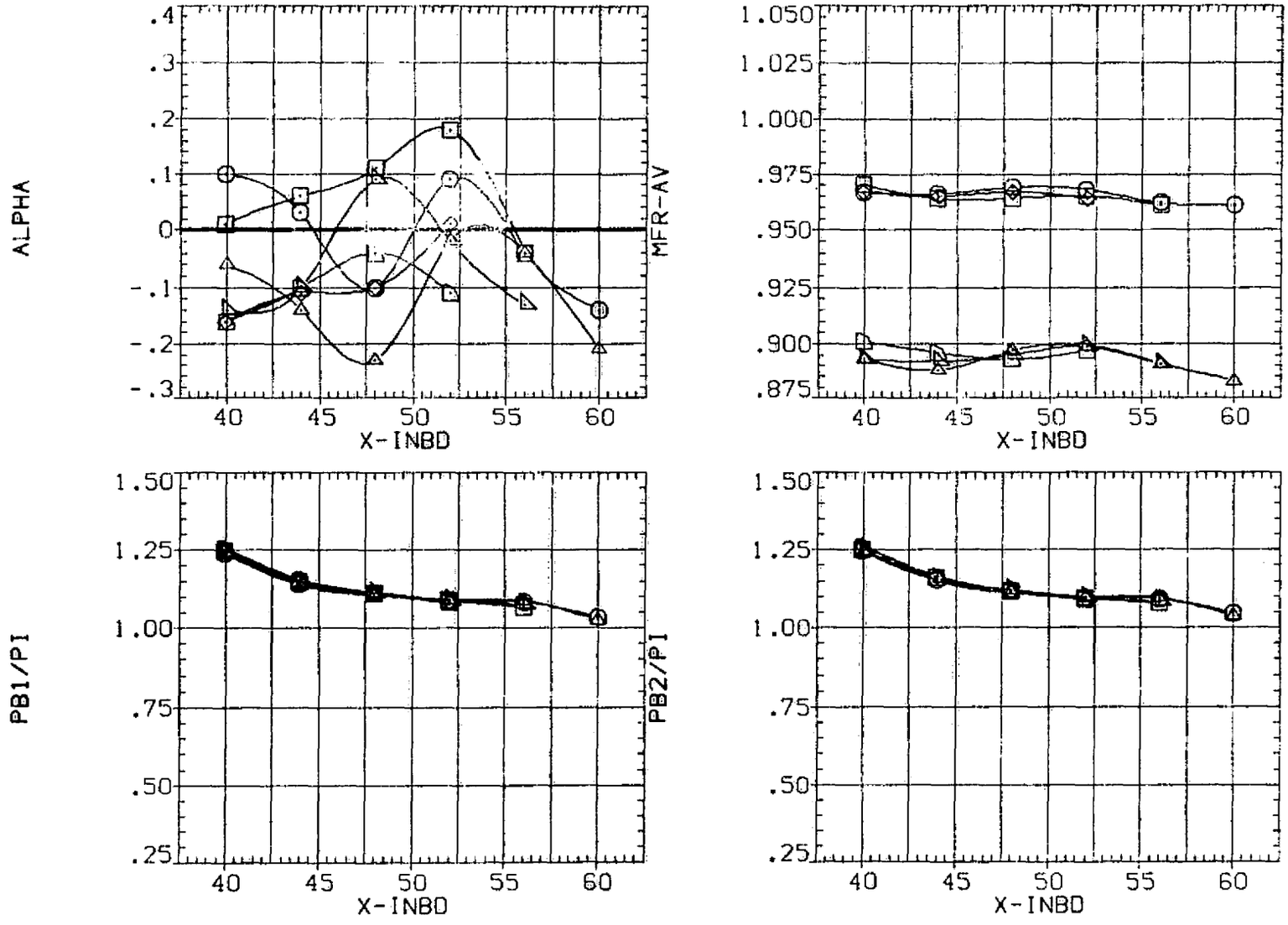


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2Y1/B	2Y0/B	DX
(BAP019)		W B N1 N1	.250	.550	.000
(BAP020)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)		DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)		DATA NOT AVAILABLE	.250	.550	.000
(BAP032)		DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)		DATA NOT AVAILABLE	.250	.550	8.000

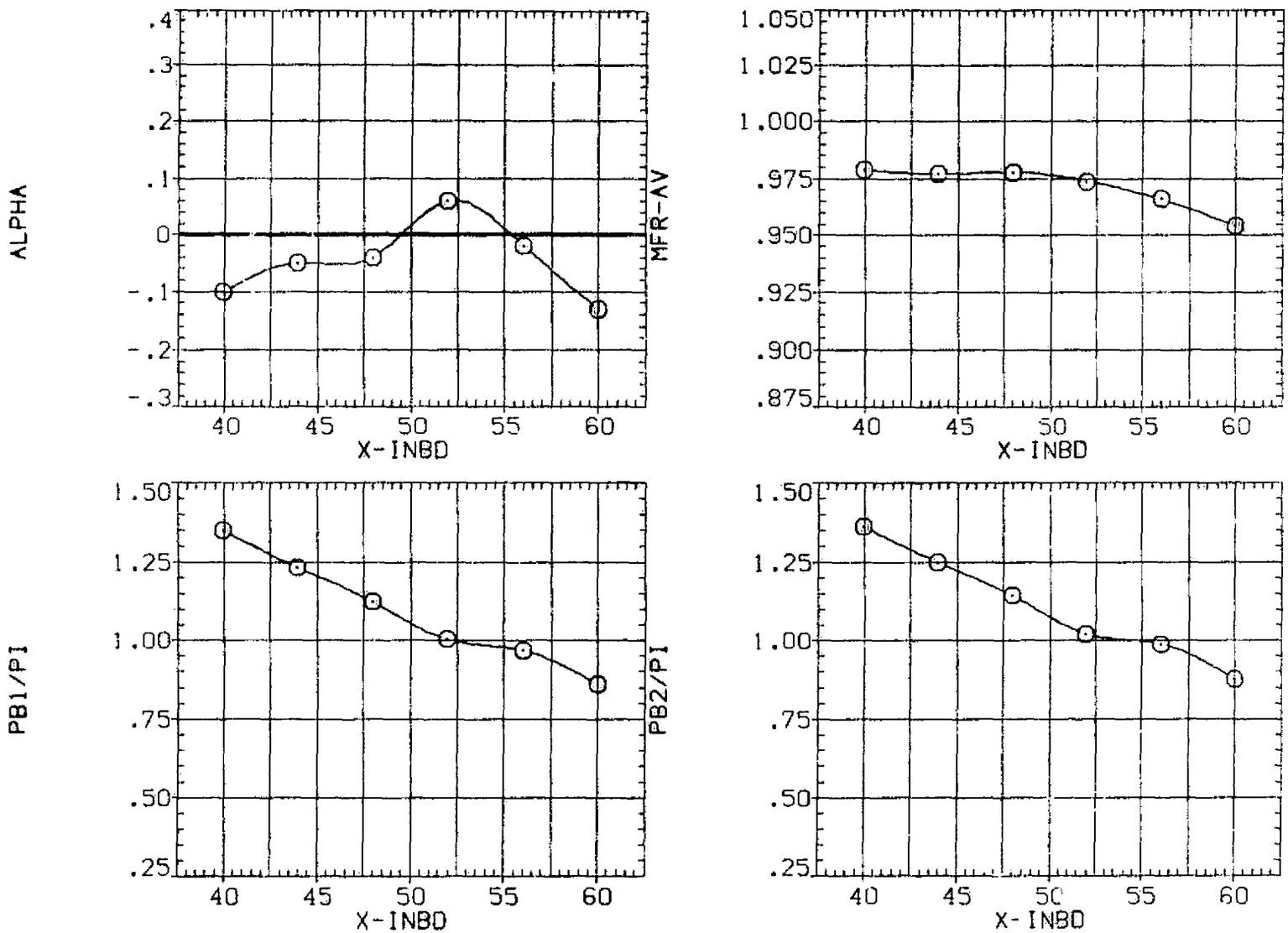


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(BAP019)	○	W B N1 N1	.250	.550	.000
(BAP020)	□	W B N1 N1	.250	.550	4.000
(BAP021)	◇	W B N1 N1	.250	.550	8.000
(BAP031)	△	W B N2 N2	.250	.550	.000
(BAP032)	◁	W B N2 N2	.250	.550	4.000
(BAP033)	▷	W B N2 N2	.250	.550	8.000

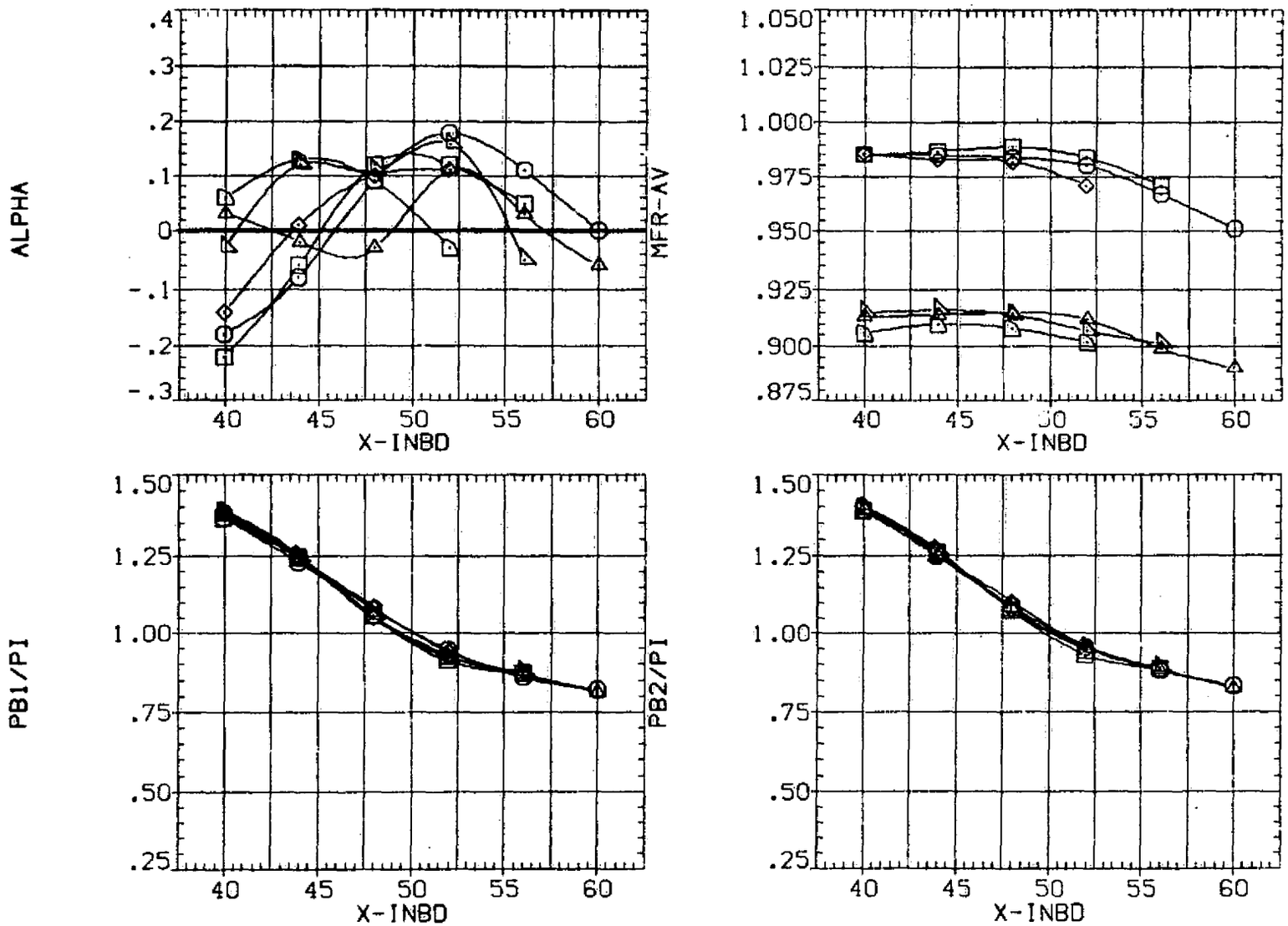


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(BAP019)	W B NI NI	.250	.550	.000
(BAP020)	DATA NOT AVAILABLE	.250	.550	4.000
(BAP021)	DATA NOT AVAILABLE	.250	.550	8.000
(BAP031)	DATA NOT AVAILABLE	.250	.550	.000
(BAP032)	DATA NOT AVAILABLE	.250	.550	4.000
(BAP033)	DATA NOT AVAILABLE	.250	.550	8.000

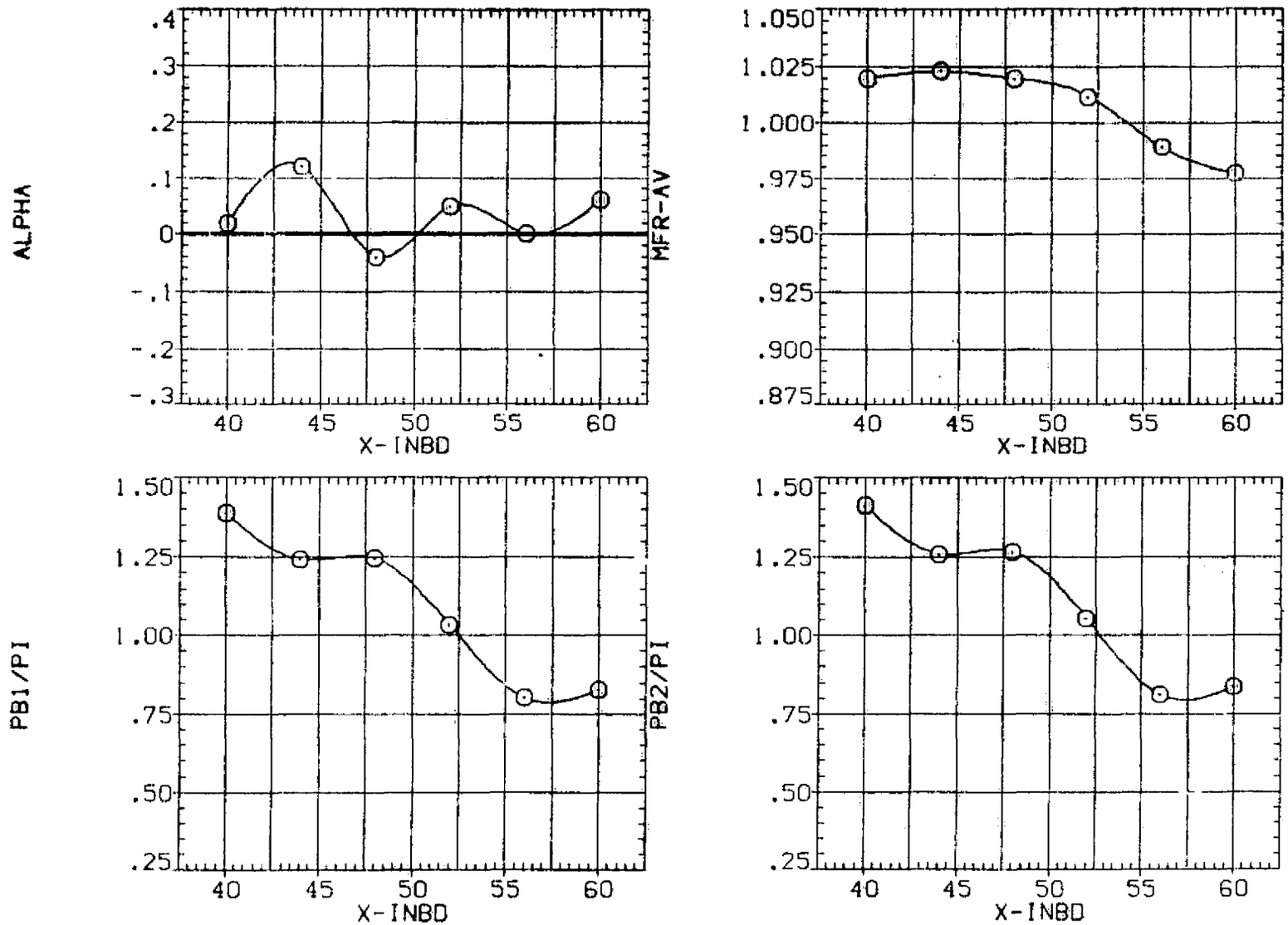


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
[illegible]	W B N NI	.250	.550	.000
[illegible]	DATA NOT AVAILABLE	.250	.550	4.000
[illegible]	DATA NOT AVAILABLE	.250	.550	8.000
[illegible]	DATA NOT AVAILABLE	.250	.550	.000
[illegible]	DATA NOT AVAILABLE	.250	.550	4.000
[illegible]	DATA NOT AVAILABLE	.250	.550	8.000

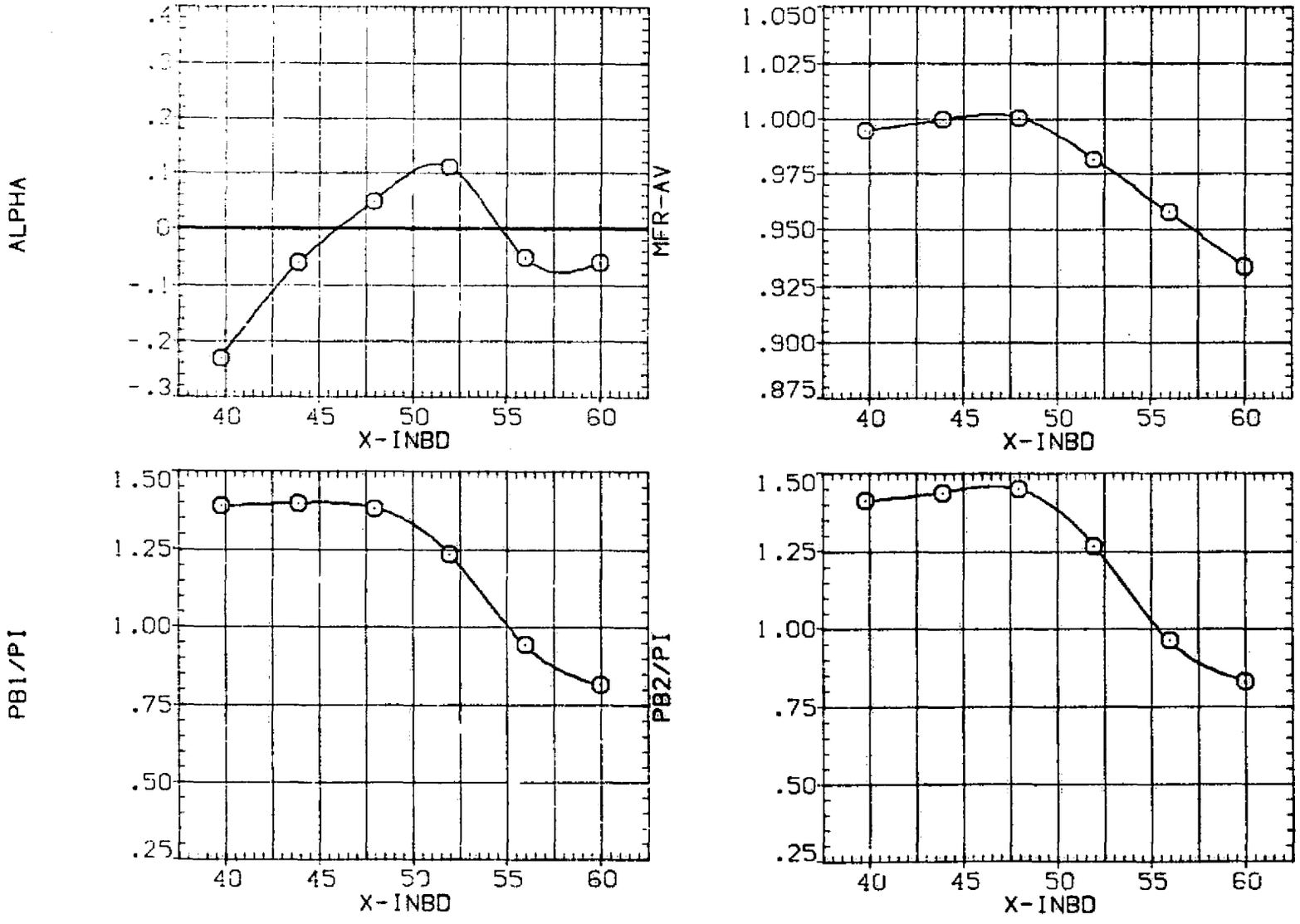


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	2YI/B	2YO/B	DX
(BAP019)		W B N1 N1	.250	.550	.000
(BAP020)		W B N1 N1	.250	.550	4.000
(BAP021)		W B N1 N1	.250	.550	8.000
(BAP031)		W B N2 N2	.250	.550	.000
(BAP032)		W B N2 N2	.250	.550	4.000
(BAP033)		W B N2 N2	.250	.550	8.000

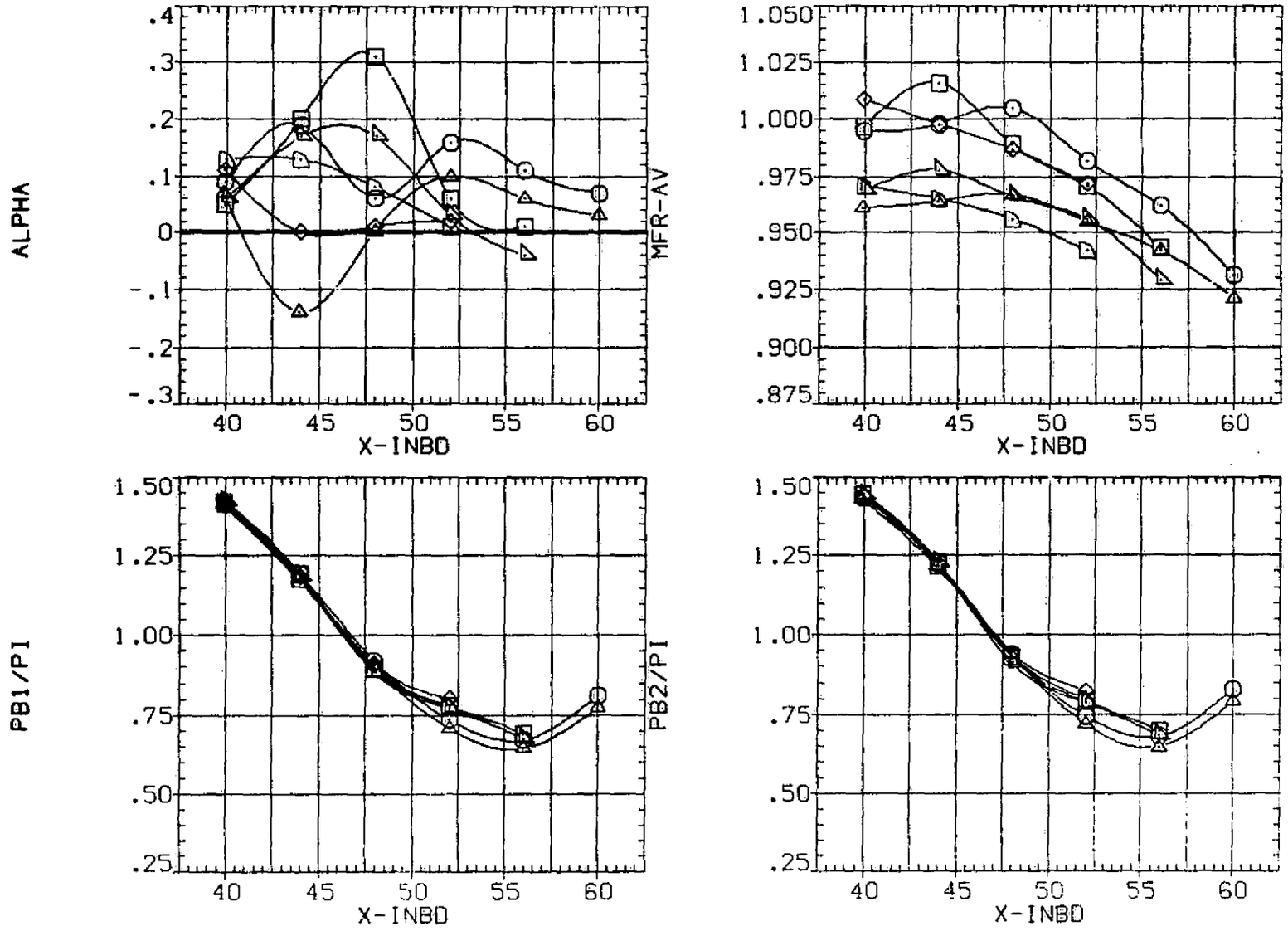


FIG. 11 EFFECTS OF NACELLE POSITION ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.39

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)		W B NI NI
(RAP023)		DATA NOT AVAILABLE
(ZAP024)		DATA NOT AVAILABLE
(RAP034)		DATA NOT AVAILABLE
(RAP035)		DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	Dx
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

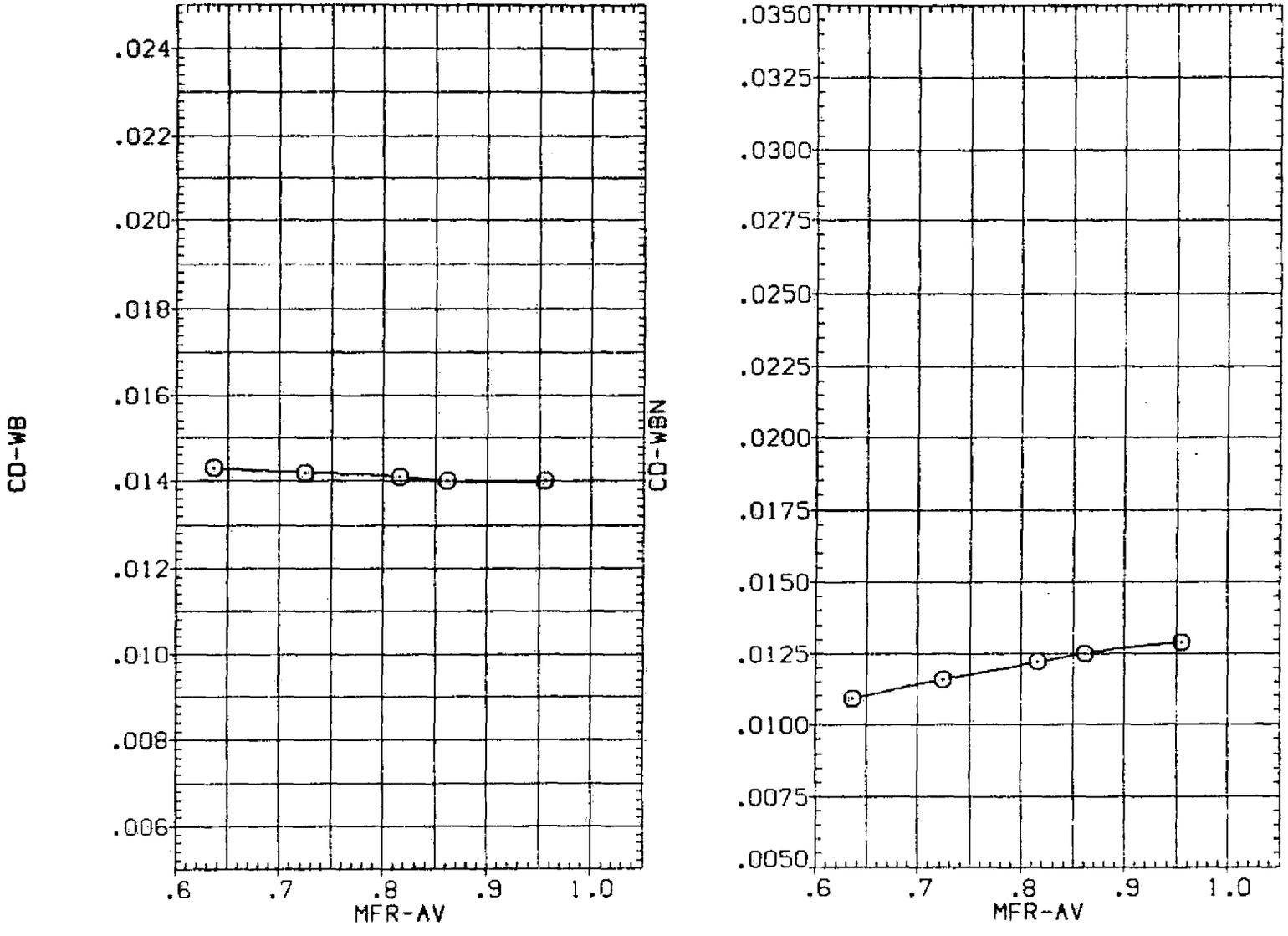


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	□	W B N1 N1
(RAP023)	▽	W B N1 N1
(ZAP024)	◇	W B N1 N1
(RAP034)	△	W B N2 N2
(RAP035)	◁	W B N2 N2

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

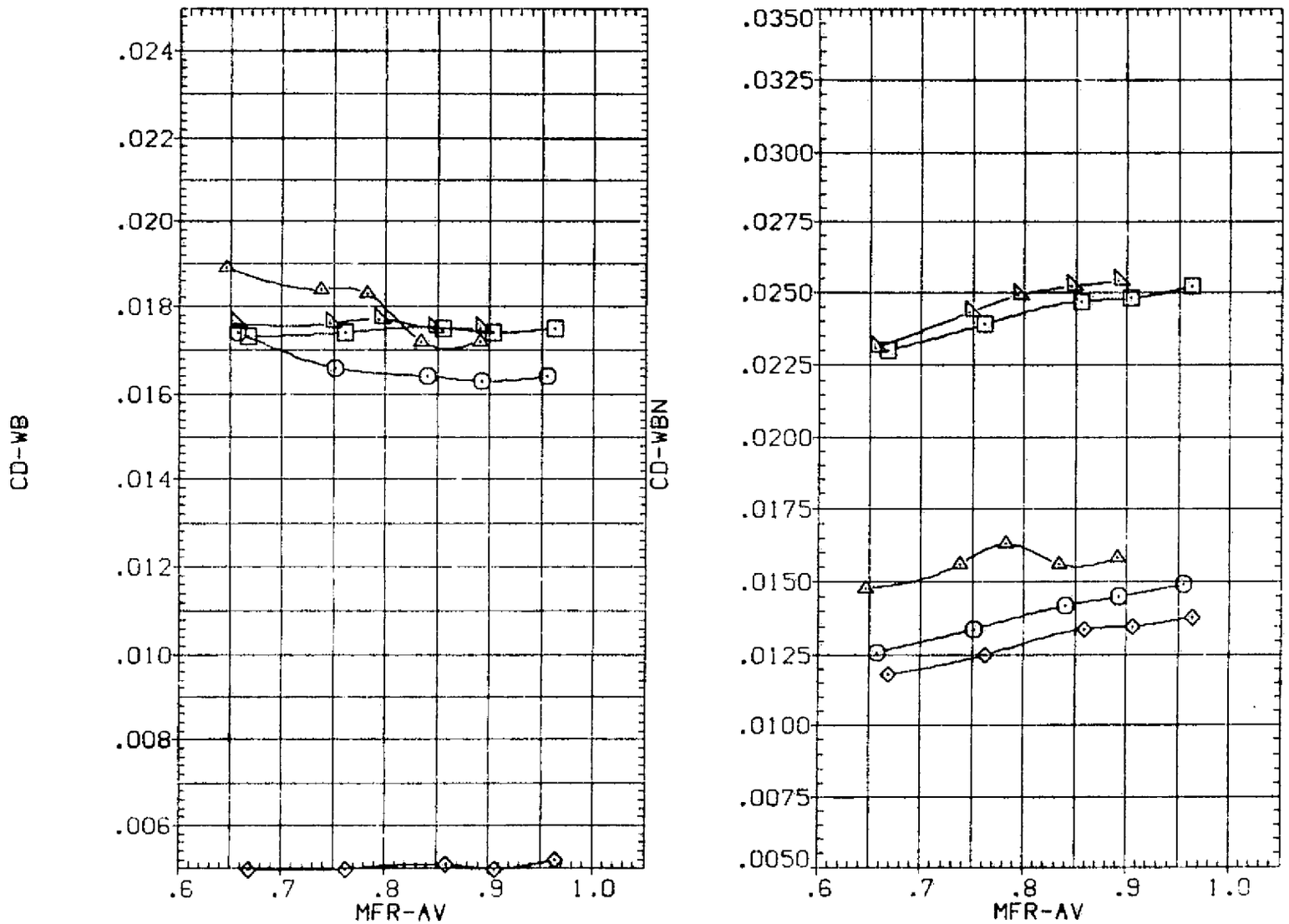


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	□	W B NI NI
(RAP023)	⊠	DATA NOT AVAILABLE
(ZAP024)	◁	DATA NOT AVAILABLE
(RAP034)		DATA NOT AVAILABLE
(RAP035)		DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

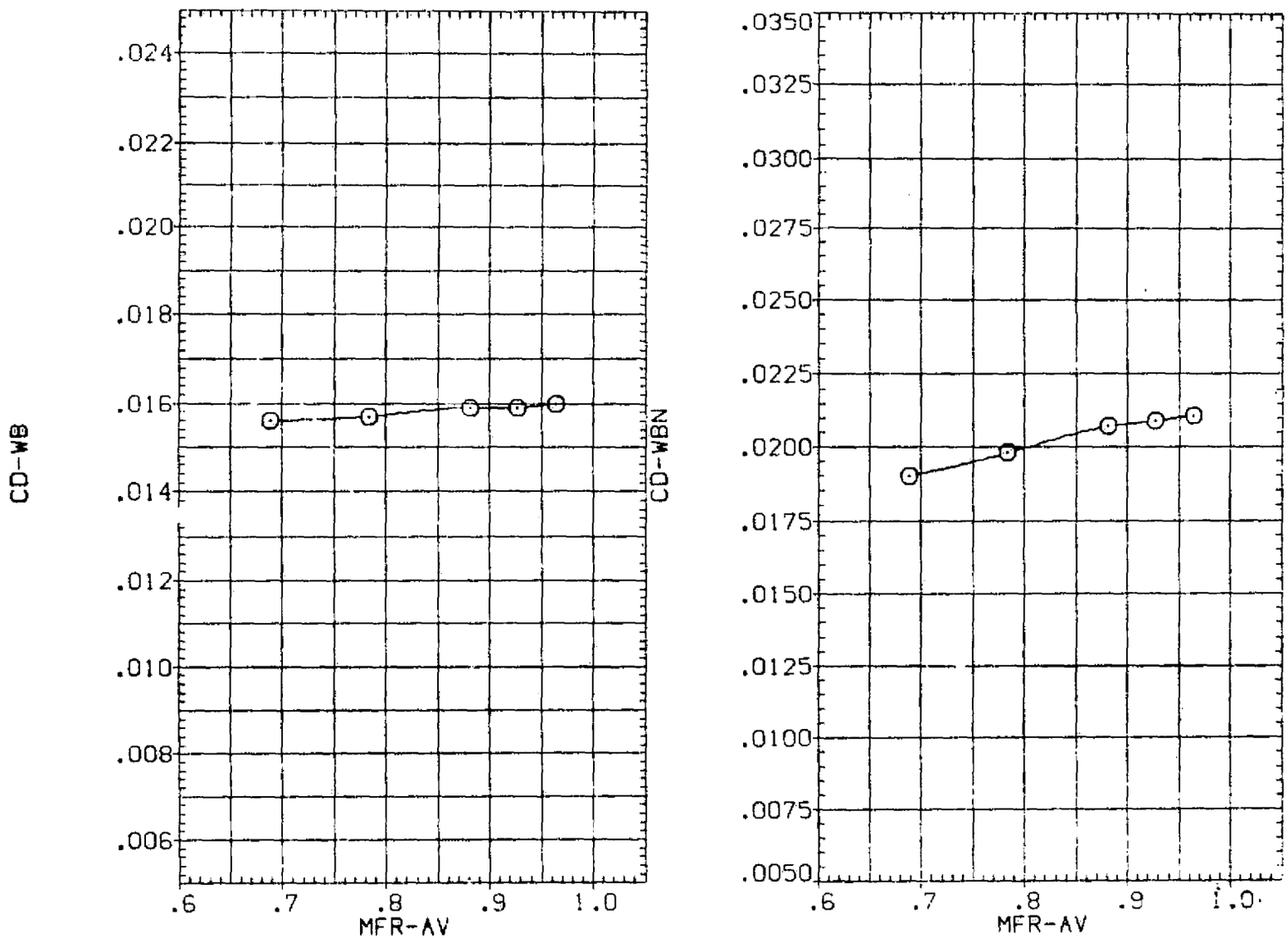


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	□	W B N1 N1
(RAP023)	▽	W B N1 N1
(ZAP024)	◇	W B N1 N1
(RAP034)	△	W B N2 N2
(RAP035)	◺	W B N2 N2

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	[illegible]
48.500	.250	.550	[illegible]
40.000	.250	.550	[illegible]
32.000	.250	.550	[illegible]
48.000	.250	.550	[illegible]

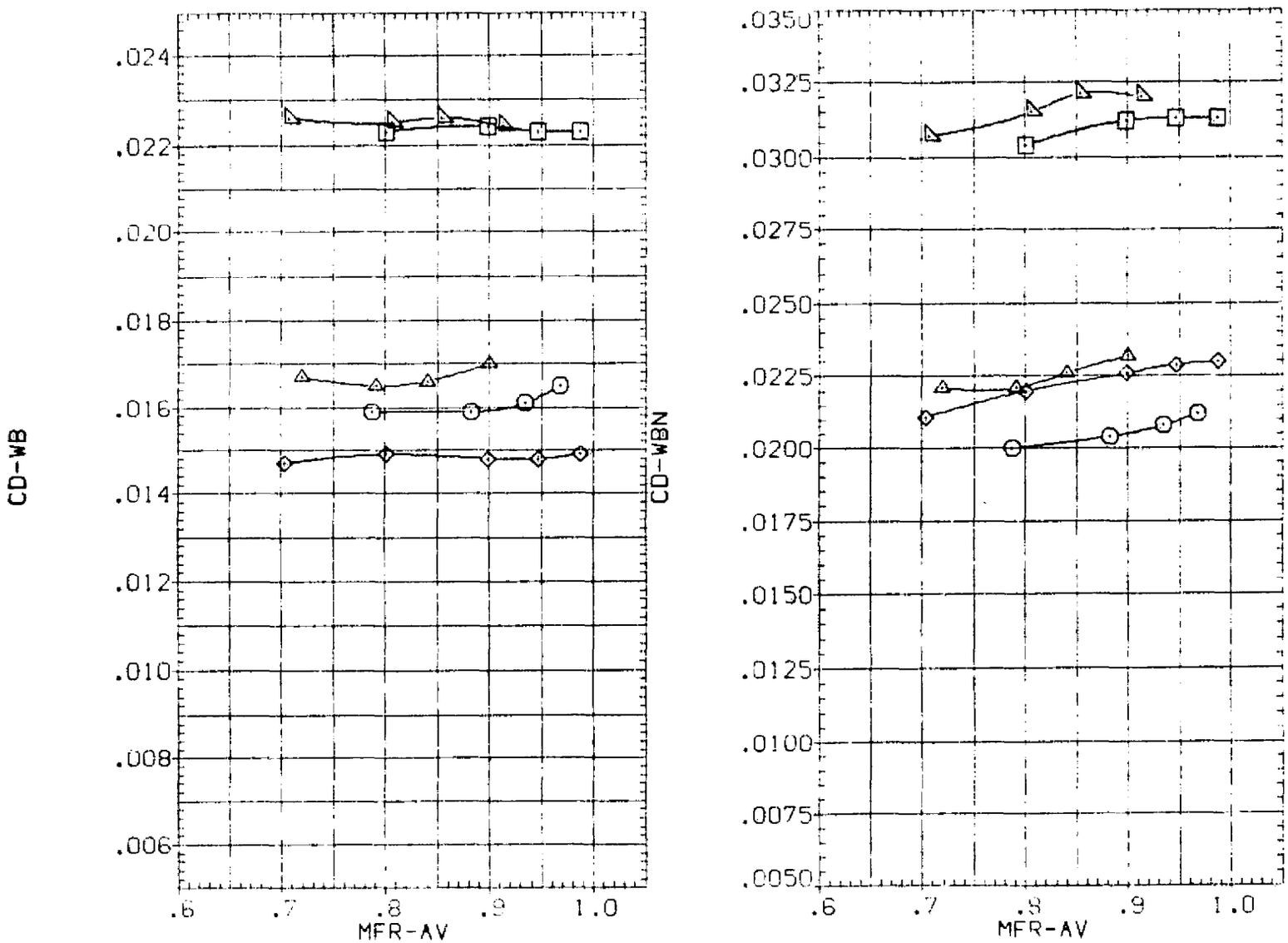


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	□	W B NI NI
(RAP023)	◇	DATA NOT AVAILABLE
(ZAPU24)	⊠	DATA NOT AVAILABLE
(RAP034)	▽	DATA NOT AVAILABLE
(RAP035)	△	DATA NOT AVAILABLE

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

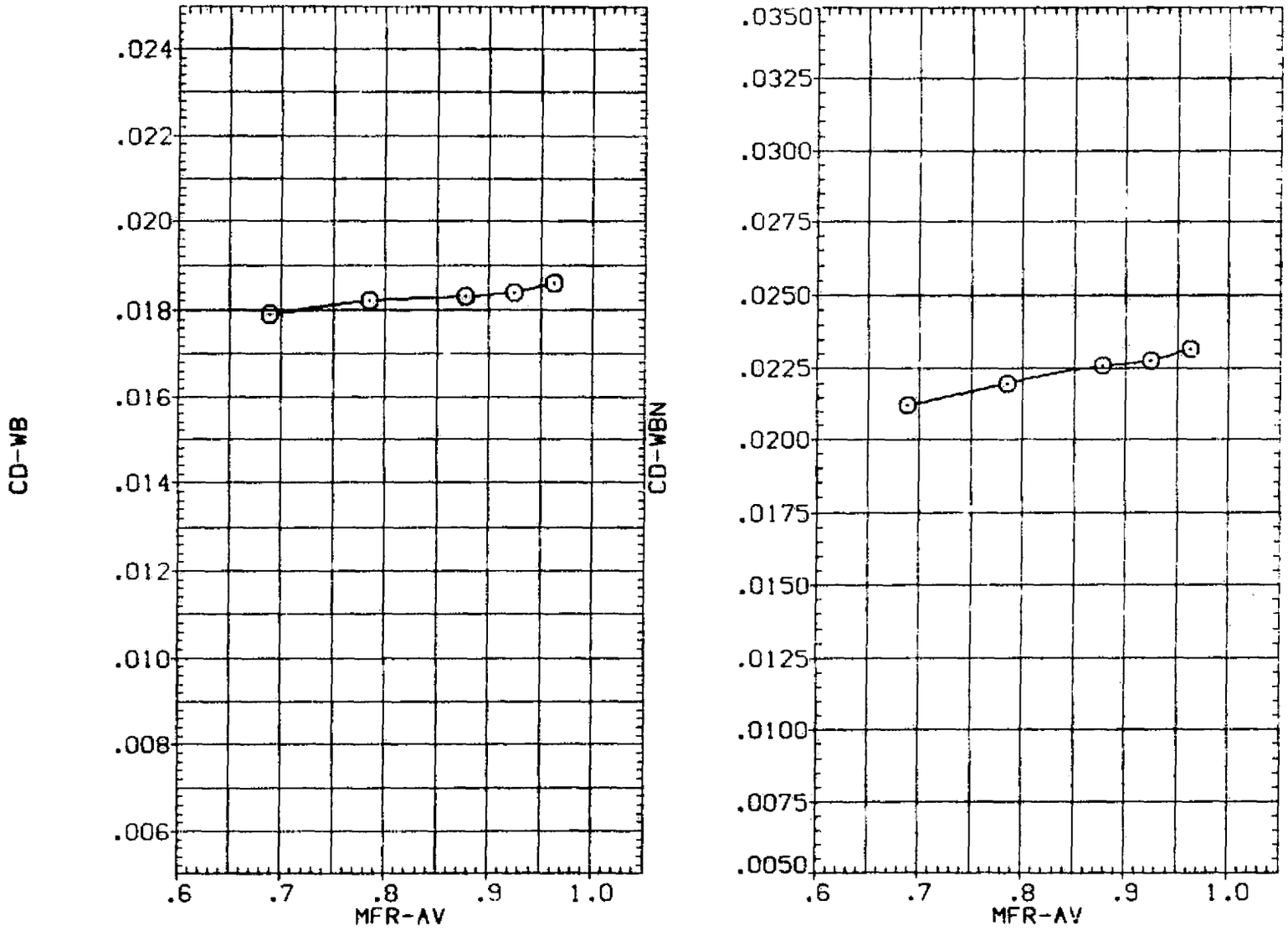


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(RAP022)	□	W B N1 N1	56.000	.250	.550	.000
(RAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

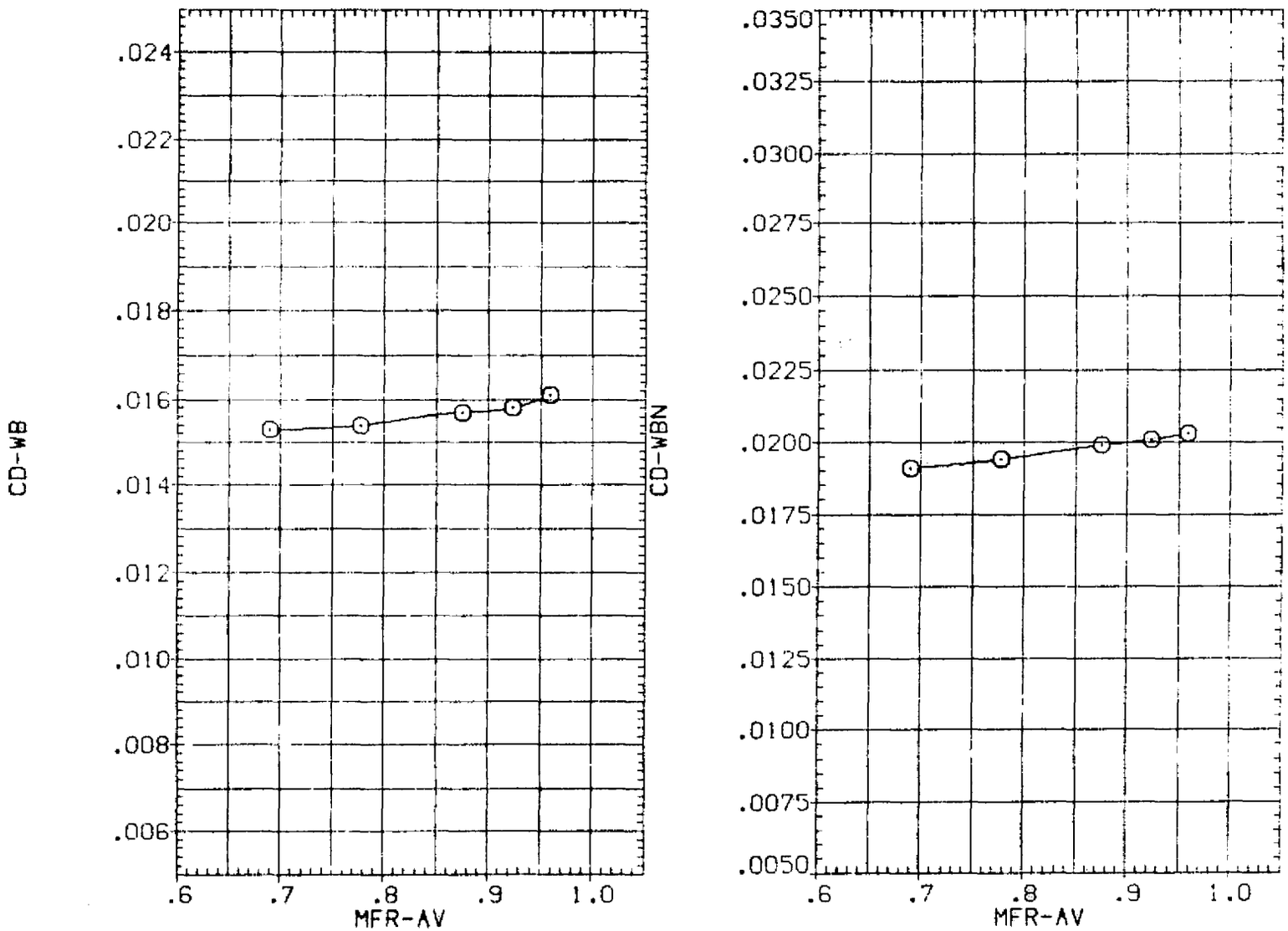


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)	○	W B N1 N1	56.000	.250	.550	.000
(RAP023)	□	W B N1 N1	48.000	.250	.550	.000
(ZAP024)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP034)	△	W B N2 N2	56.000	.250	.550	.000
(RAP035)	▽	W B N2 N2	48.000	.250	.550	.000

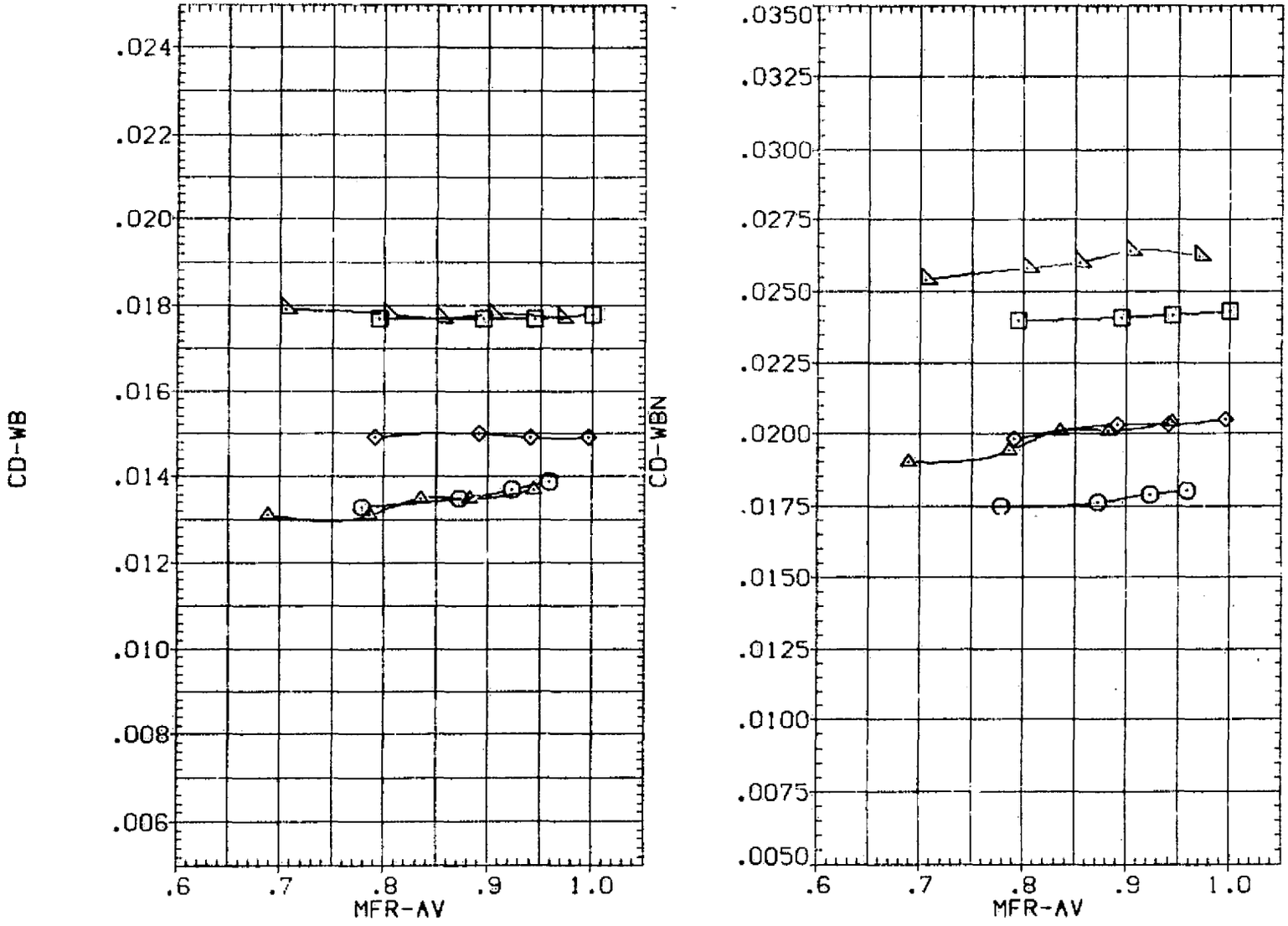


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)		W B N1 N1	56.000	.250	.550	.000
(RAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.000

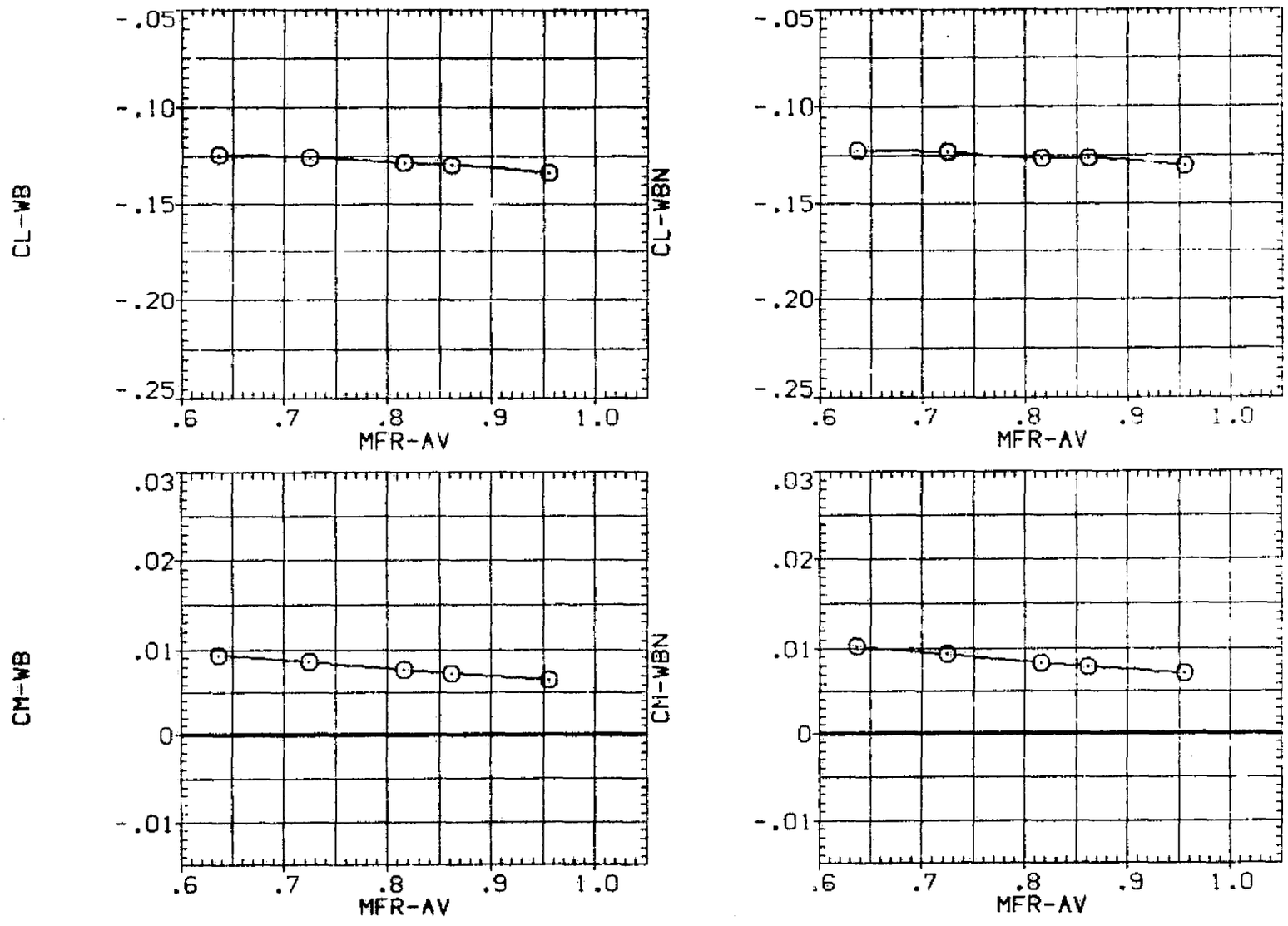


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y2/B	TX
(RAP022)		W B N1 N1	56.000	.250	.550	.000
(RAP023)		W B N1 N1	48.000	.250	.550	.000
(ZAP024)		W B N1 N1	40.000	.250	.550	.000
(RAP034)		W B N2 N2	56.000	.250	.550	.000
(RAP035)		W B N2 N2	48.000	.250	.550	.000

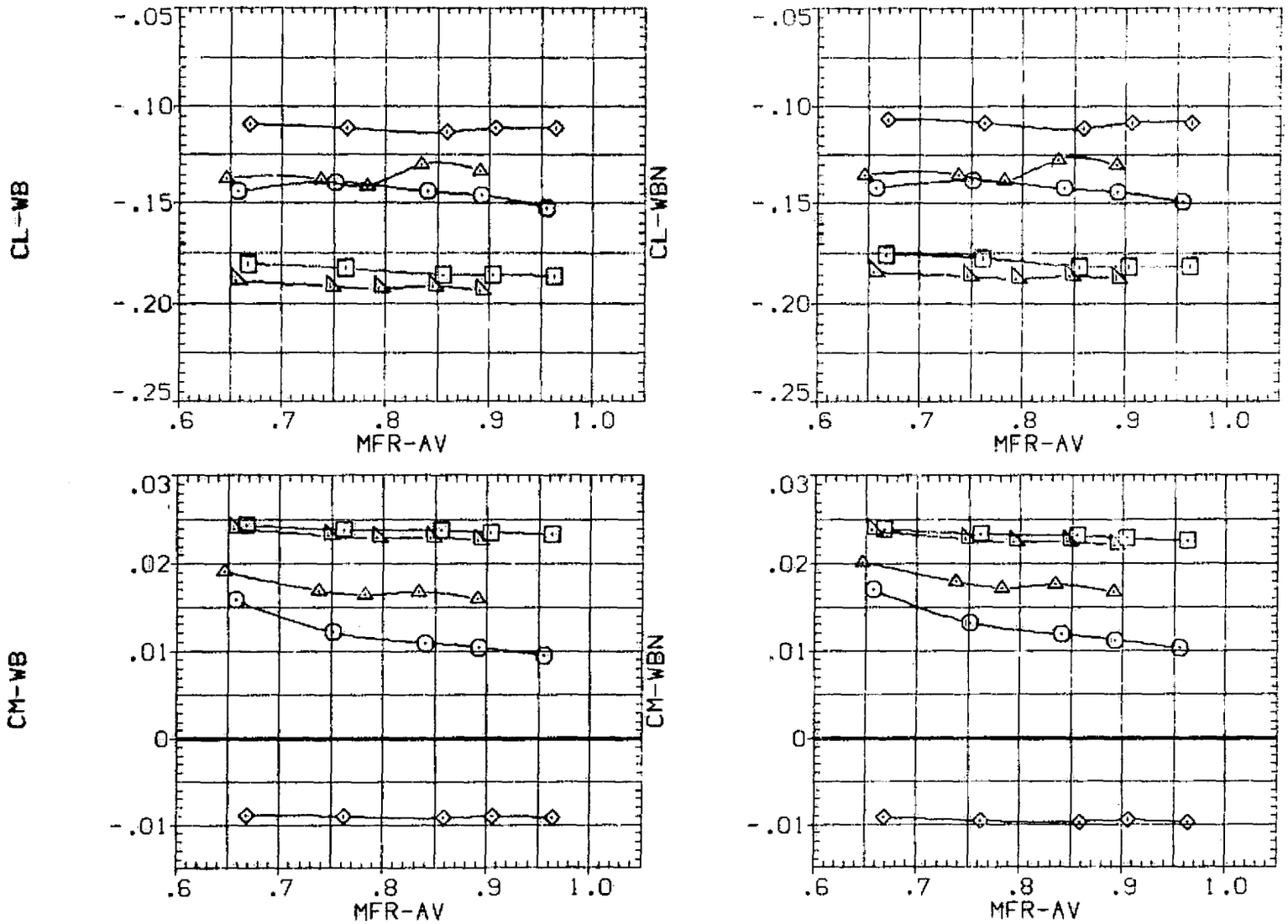


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP022)		W B NI NI	56.000	.250	.550	.000
(RAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.000

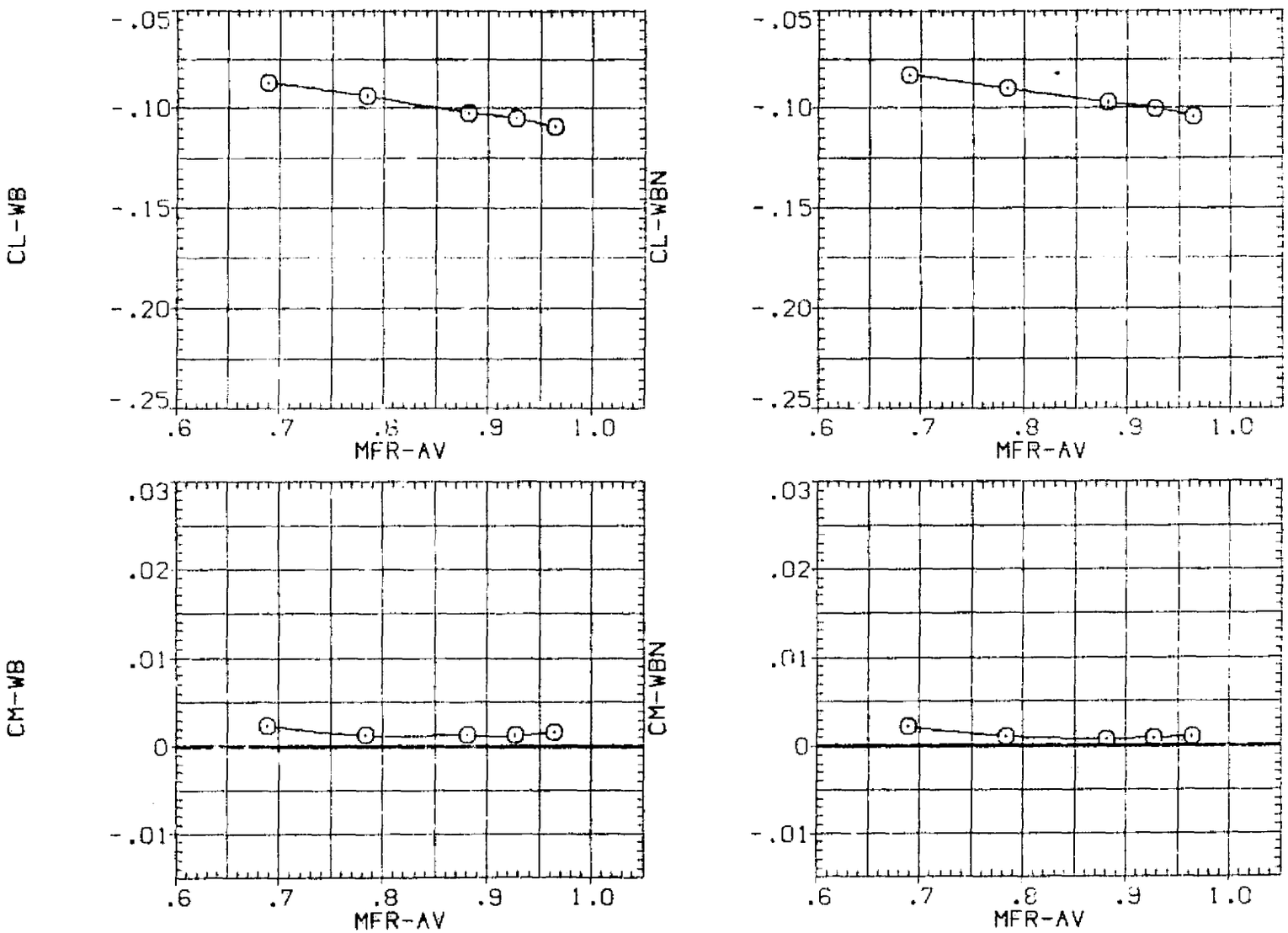


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)	○	W B N1 N1	56.000	.250	.590	.000
(RAP023)	□	W B N1 N1	48.000	.250	.550	.000
(ZAP024)	⊠	W B N1 N1	40.000	.250	.550	.000
(RAP034)	△	W B N2 N2	56.000	.250	.550	.000
(RAP035)	◺	W B N2 N2	48.000	.250	.550	.000

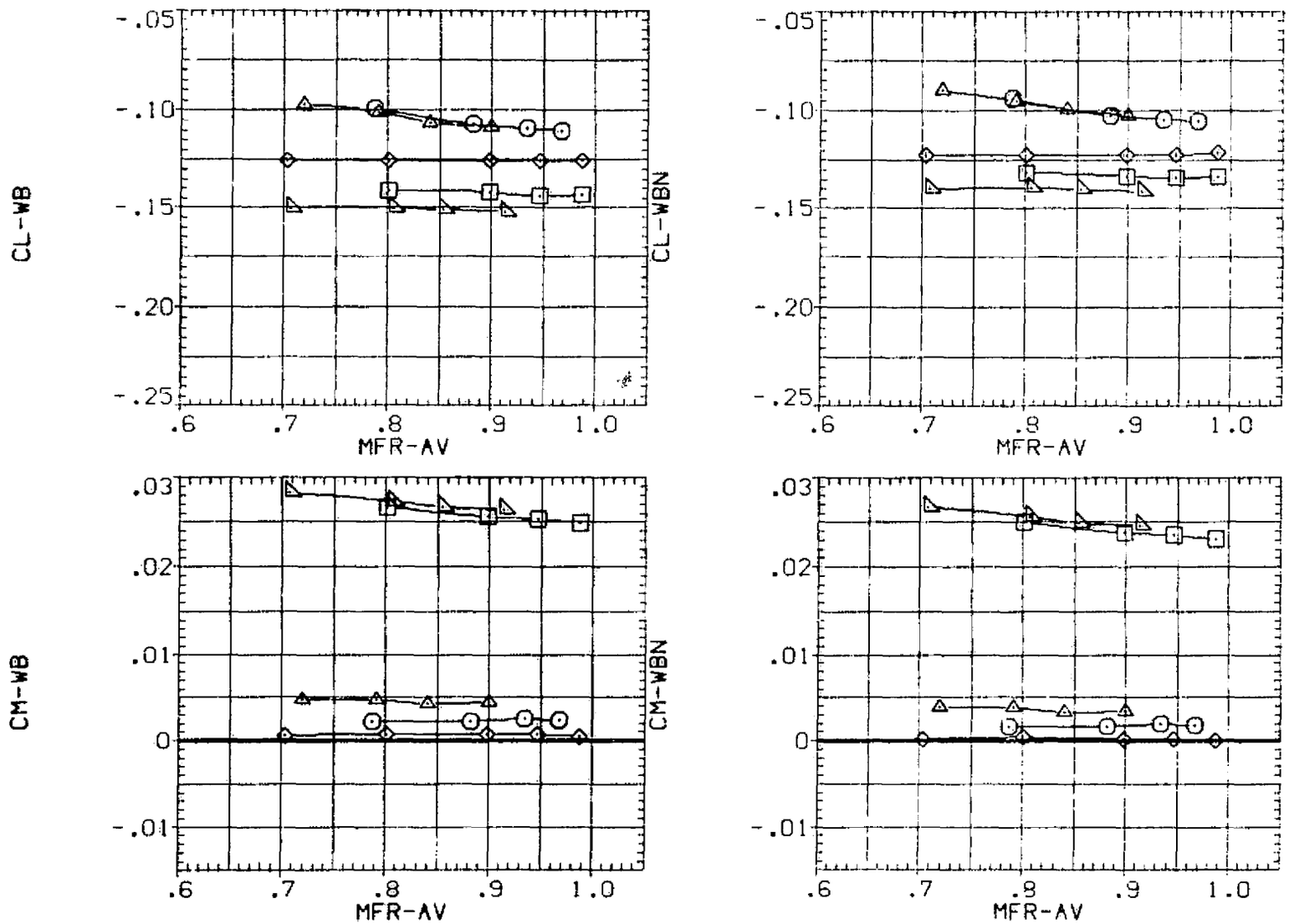


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(RAP022)	□	W B NI NI	56.000	.250	.550	.000
(RAP023)	○	DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

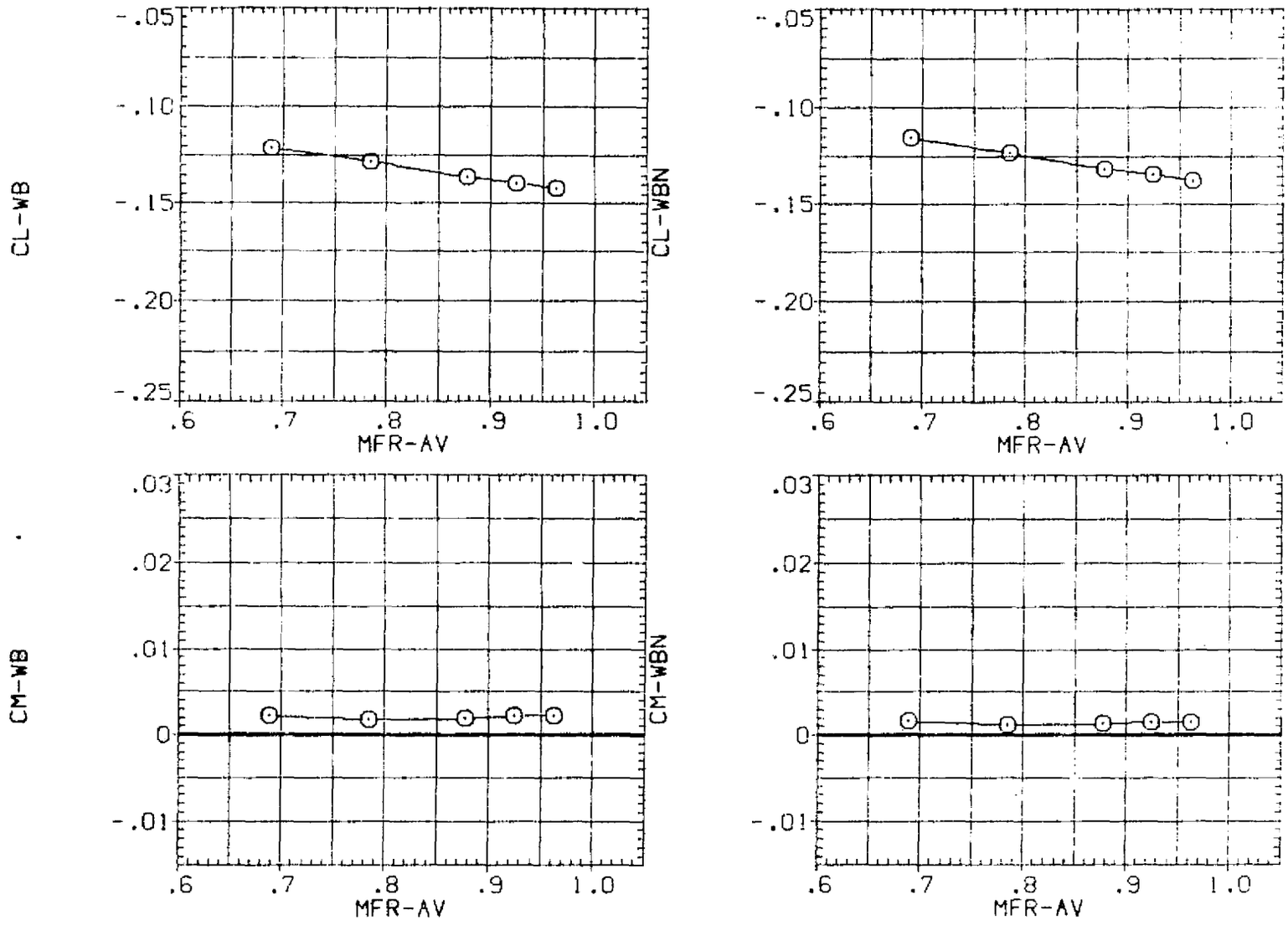


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)		W B N1 N1	56.000	.250	.550	.000
(RAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.000

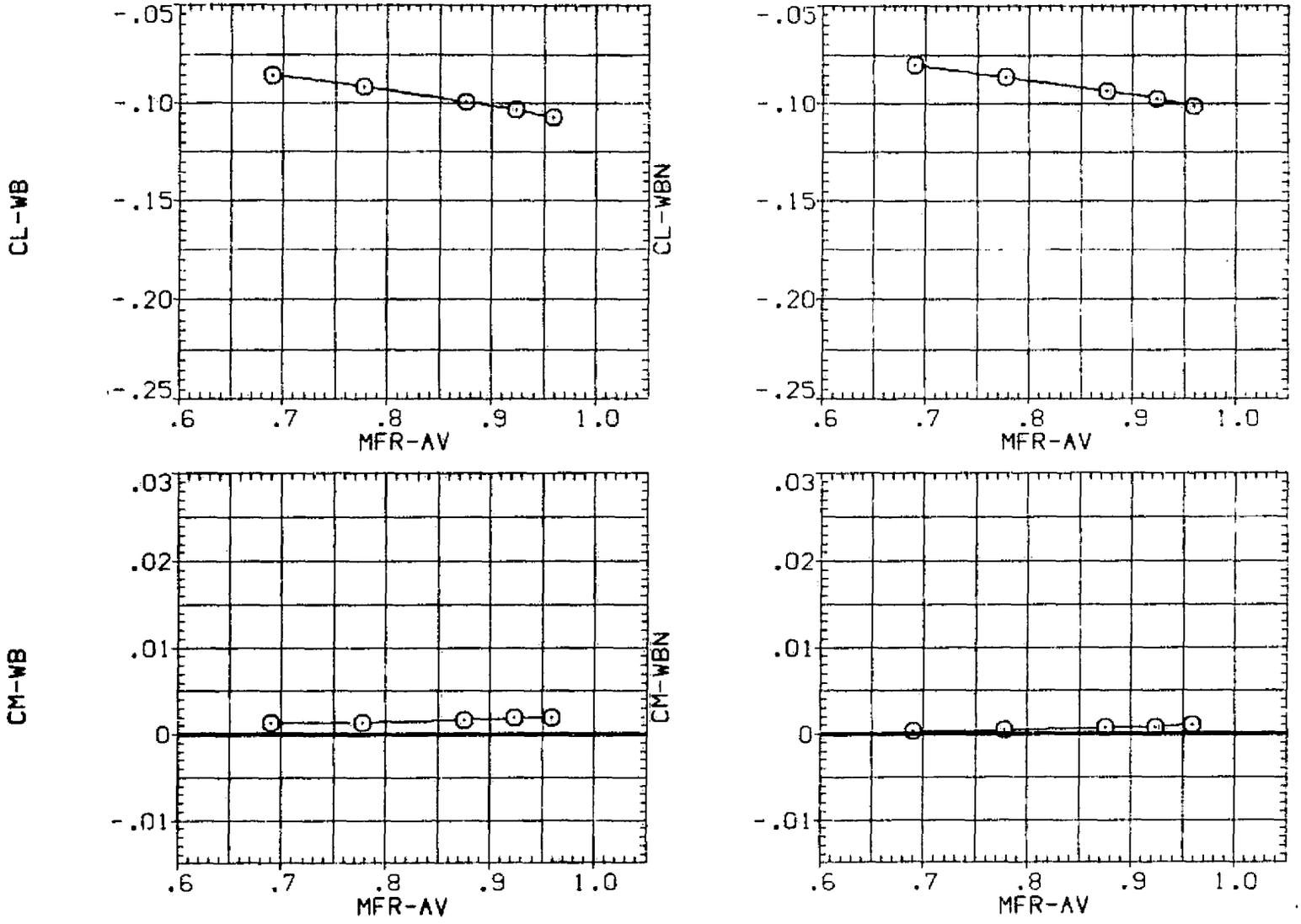


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	○	W B N1 N1
(RAP023)	□	W B N1 N1
(ZAP024)	◇	W B N1 N1
(RAP034)	△	W B N2 N2
(RAP035)	◁	W B N2 N2

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

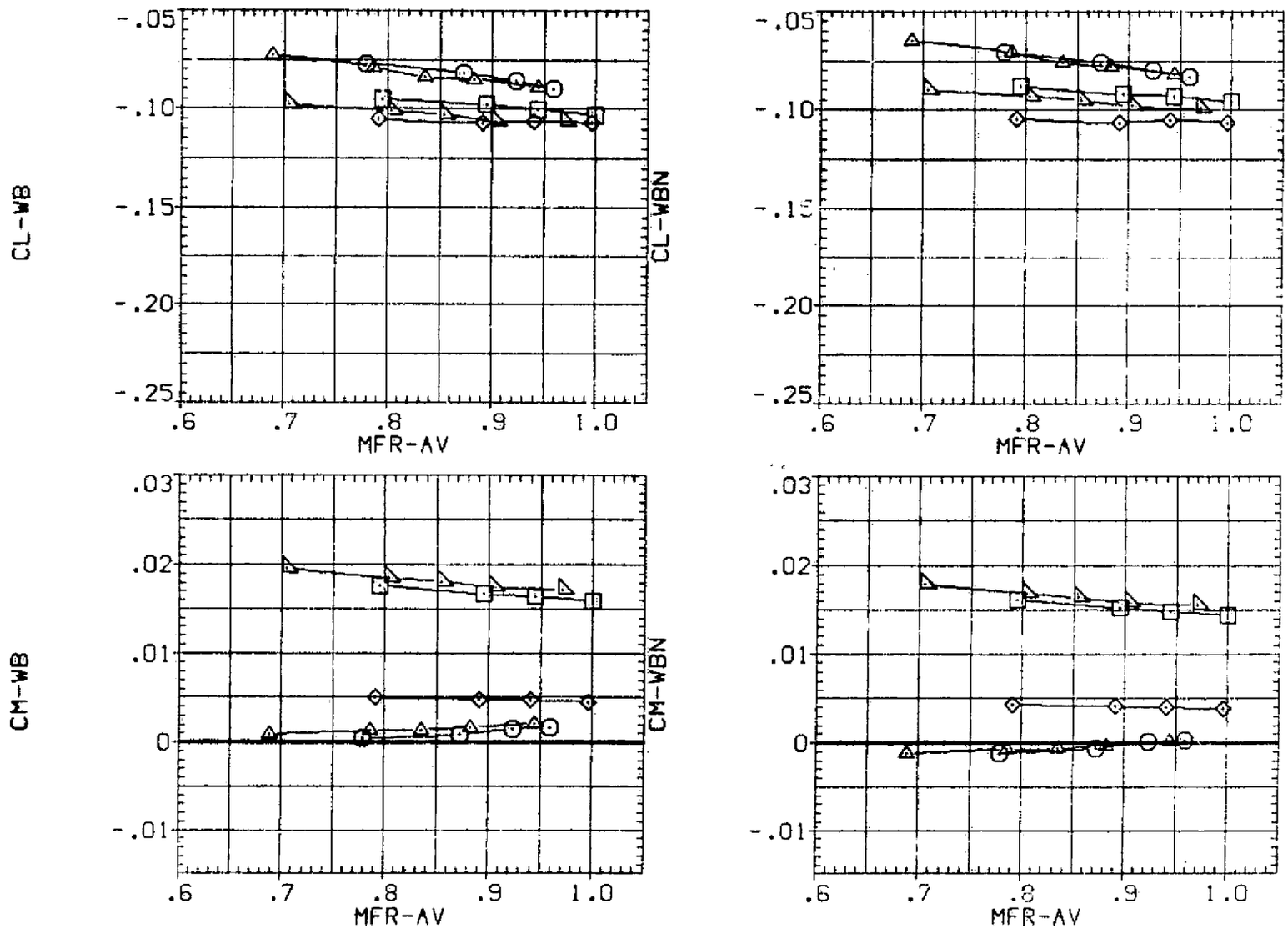


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)		W B N1 N1	56.000	.250	.550	.000
(RAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)		DATA NOT AVAILABLE	48.000	.250	.560	.000

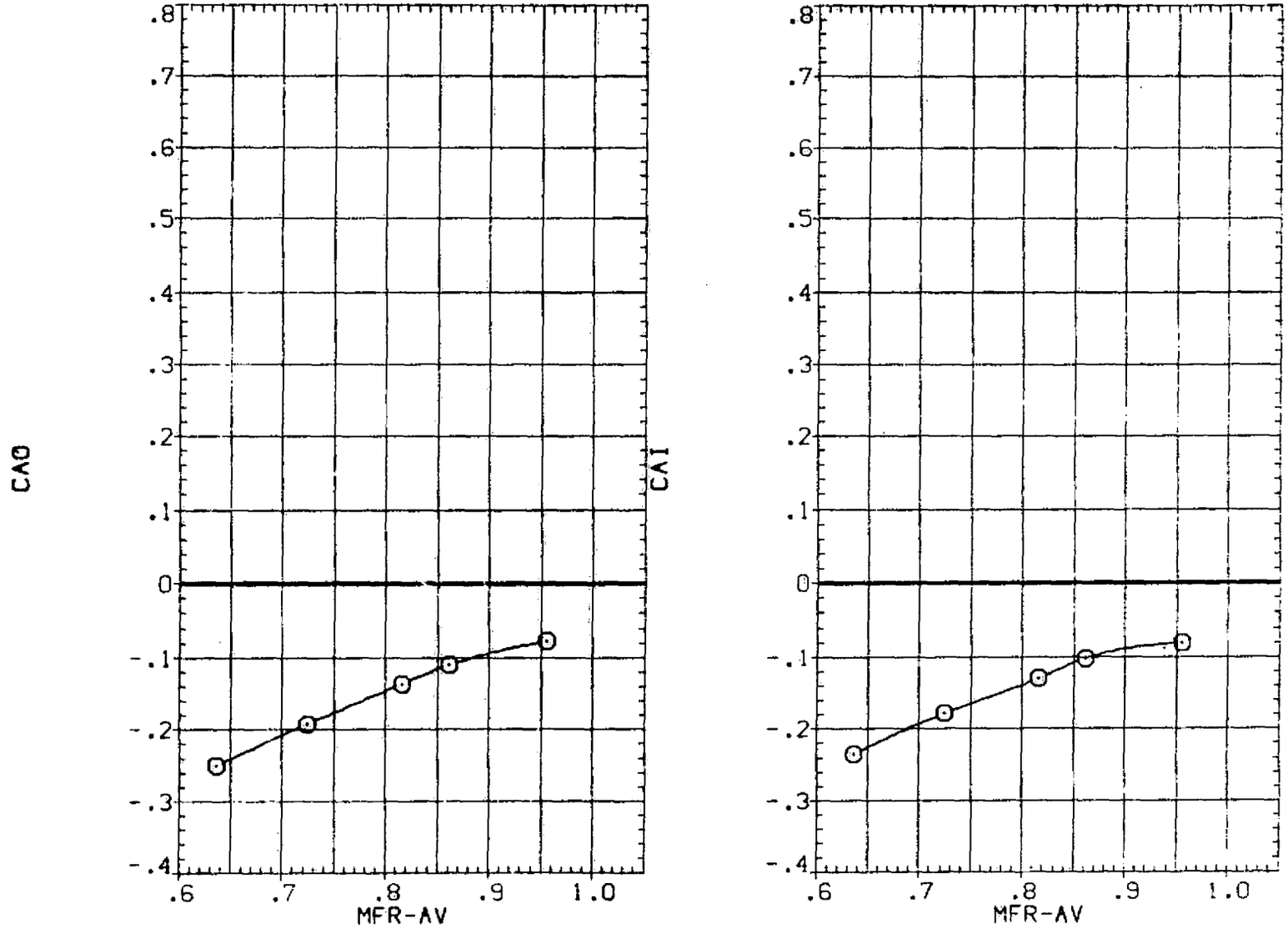


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP022)	○	W B N1 N1	56.000	.250	.550	.000
(RAP023)	□	W B N1 N1	48.000	.250	.550	.000
(ZAP024)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP034)	▽	W B N2 N2	56.000	.250	.550	.000
(RAP035)	△	W B N2 N2	48.000	.250	.550	.000

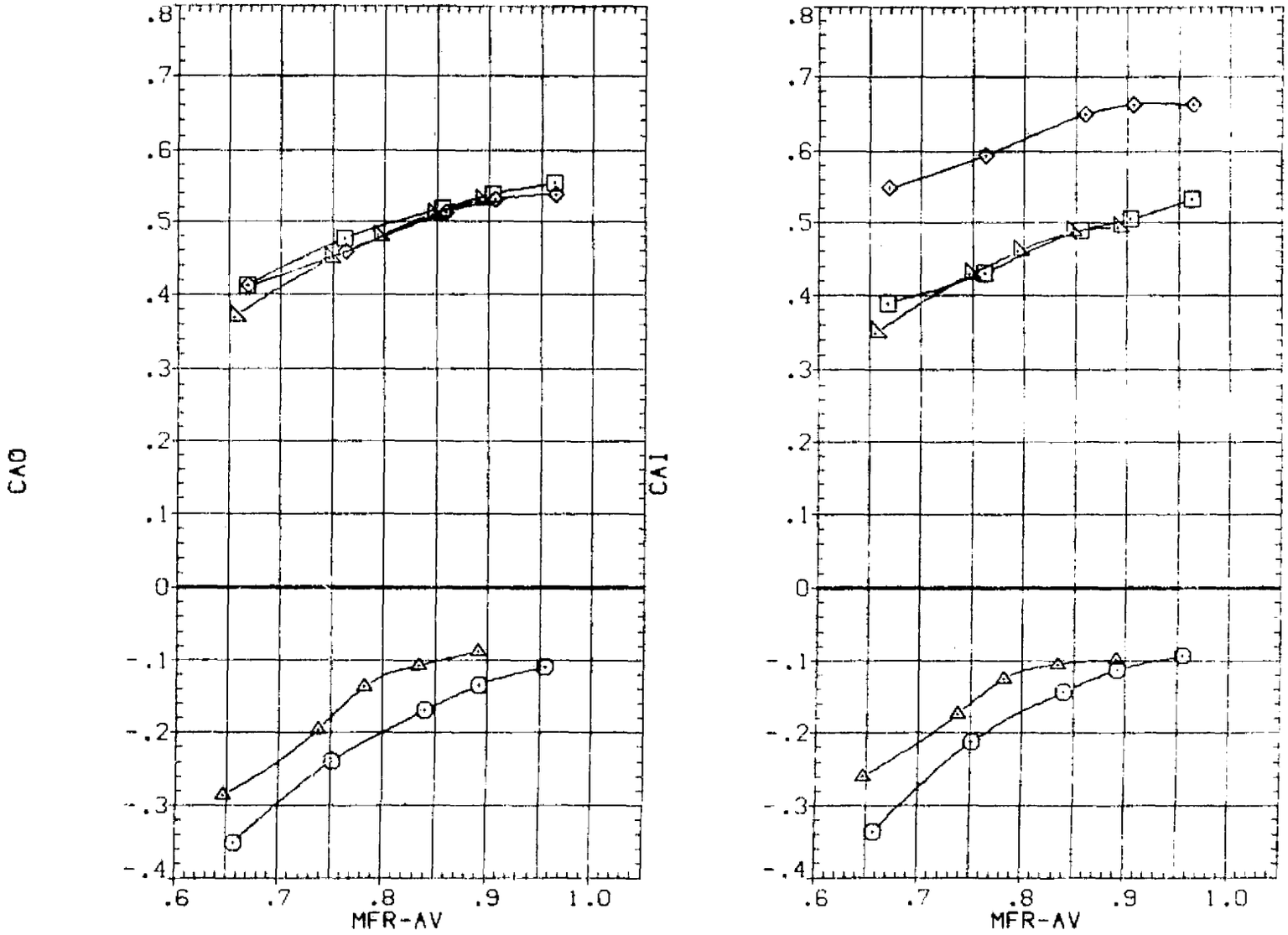


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	○	W B NI NI
(RAP023)	□	DATA NOT AVAILABLE
(ZAP024)	◇	DATA NOT AVAILABLE
(RAP034)	△	DATA NOT AVAILABLE
(RAP035)	▽	DATA NOT AVAILABLE

X-INBD	ZY1/B	ZY2/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

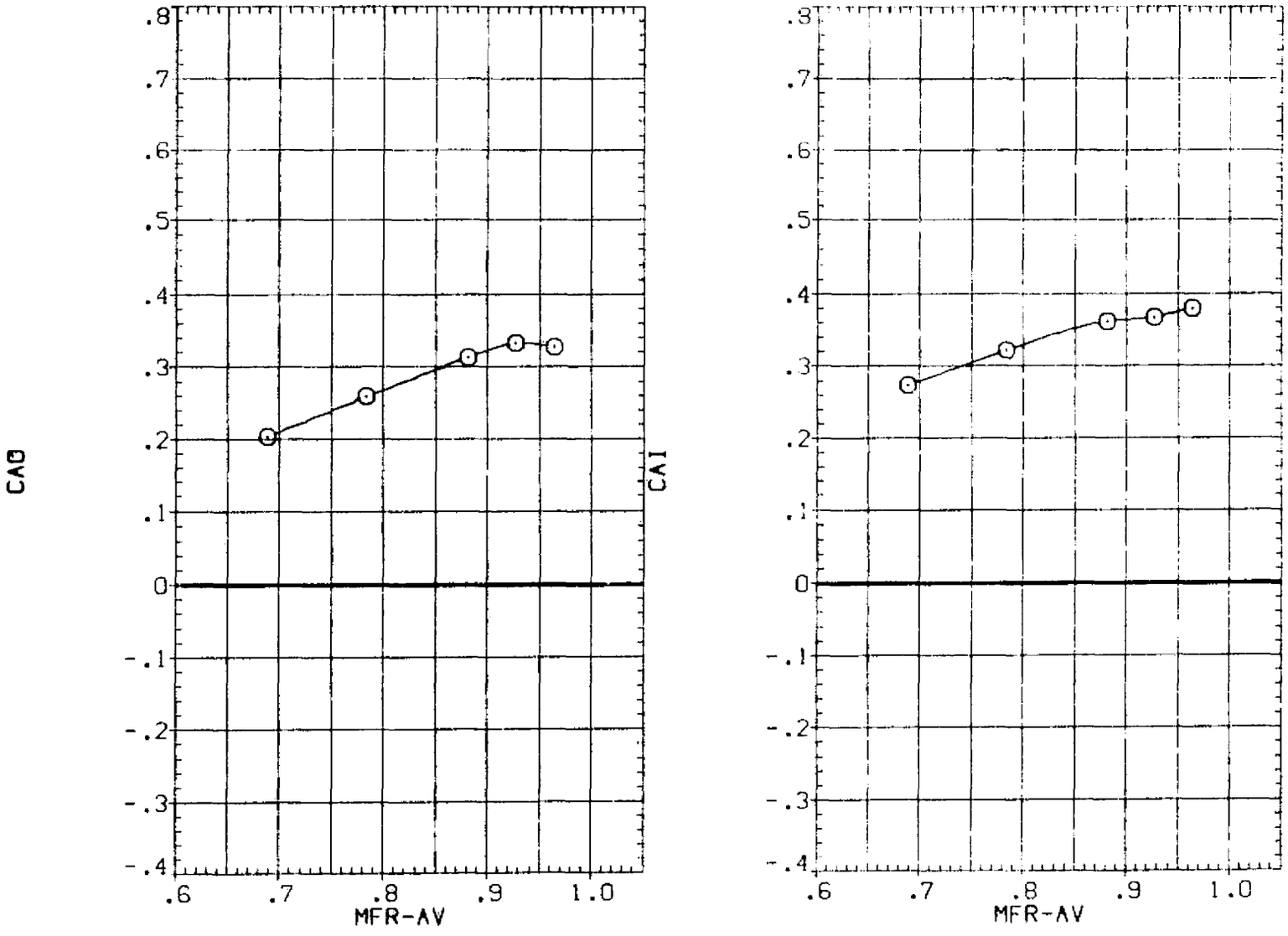


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP022)		W B N1 N1	56.000	.250	.560	.000
(RAP023)		W B N1 N1	48.000	.250	.560	.000
(ZAP024)		W B N1 N1	40.000	.250	.560	.000
(RAP034)		W B N2 N2	56.000	.250	.560	.000
(RAP035)		W B N2 N2	48.000	.250	.560	.000

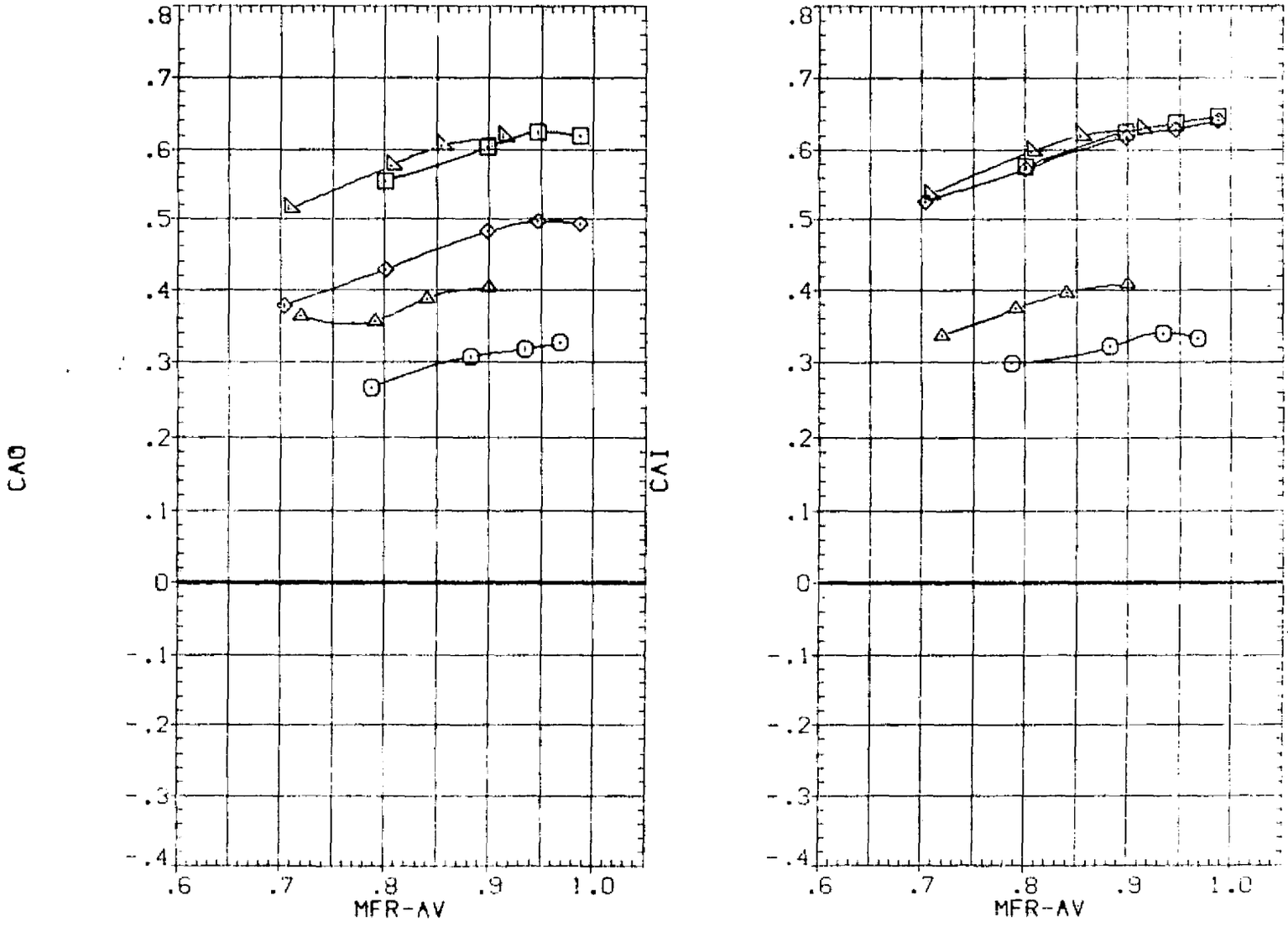


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP022)	○	W B NI NI
(RAP023)	□	DATA NOT AVAILABLE
(ZAP024)	◇	DATA NOT AVAILABLE
(RAP034)	△	DATA NOT AVAILABLE
(RAP035)	▽	DATA NOT AVAILABLE

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

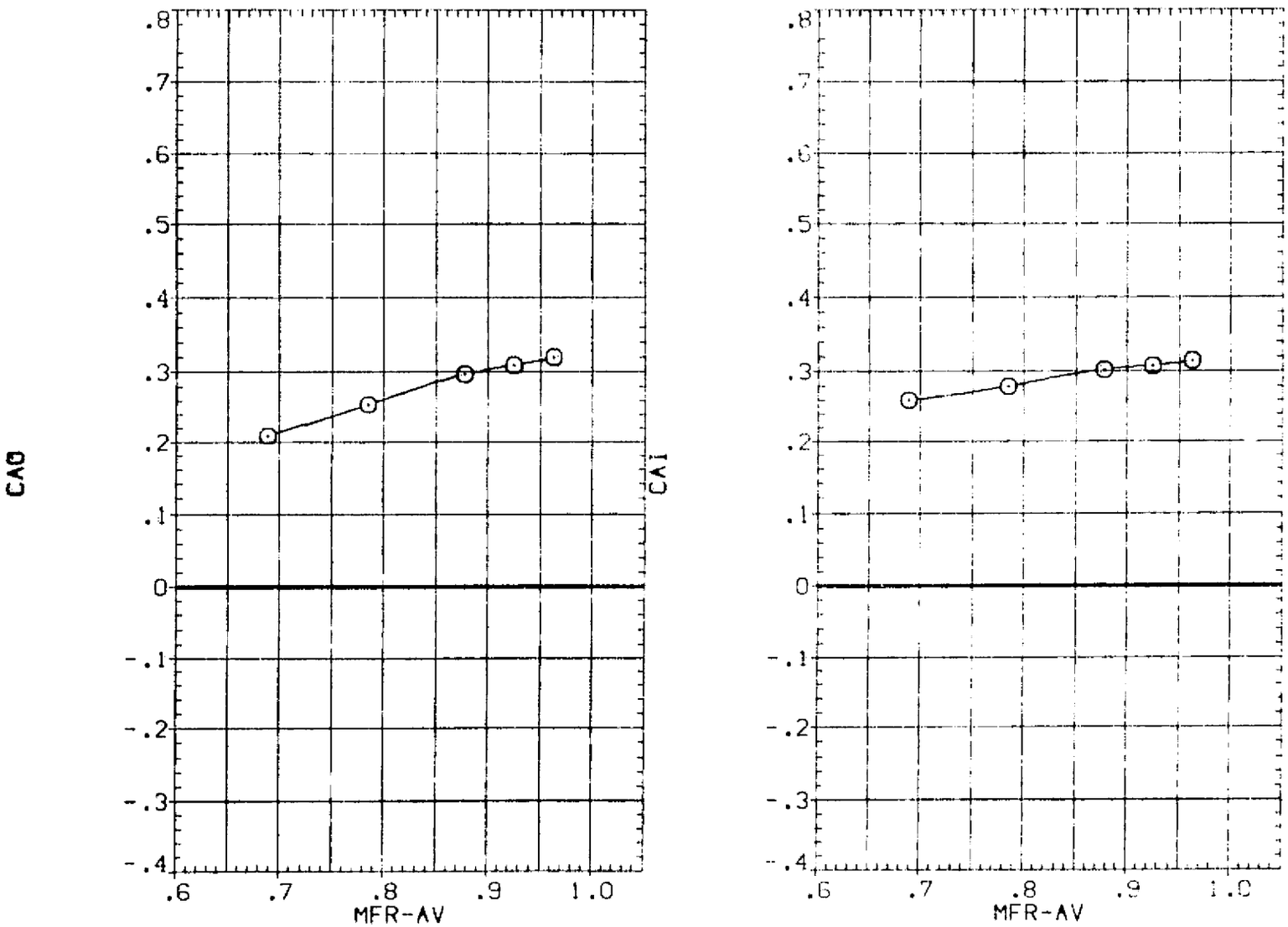


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(RAP022)	○	W B N1 N1	56.000	.250	.550	.000
(RAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(ZAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP035)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

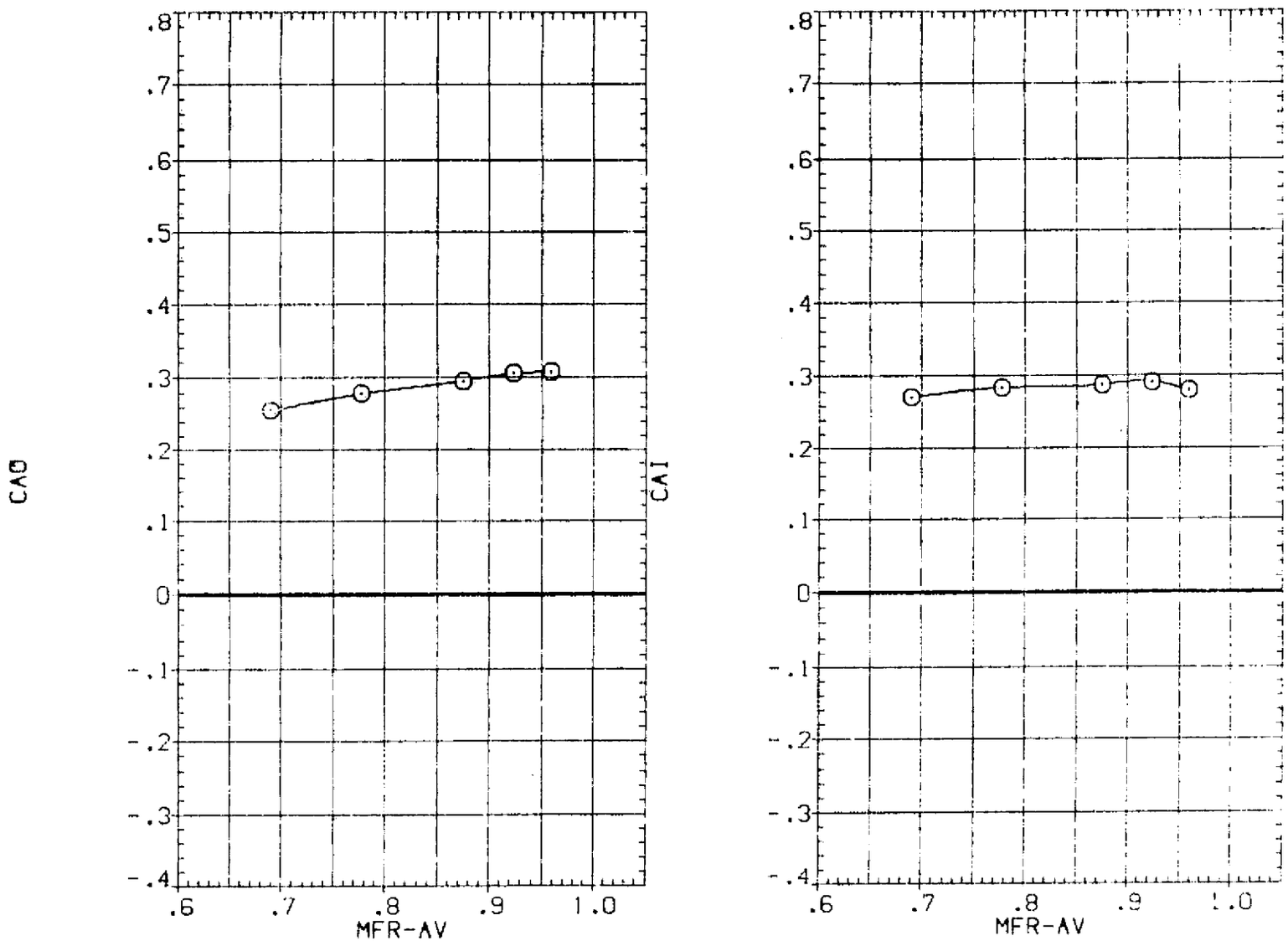


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(RAP022)		W B N1 N1	56.000	.250	.550	.000
(RAP023)		W B N1 N1	48.000	.250	.550	.000
(ZAP024)		W B N1 N1	40.000	.250	.550	.000
(RAP034)		W B N2 N2	56.000	.250	.550	.000
(RAP035)		W B N2 N2	48.000	.250	.550	.000

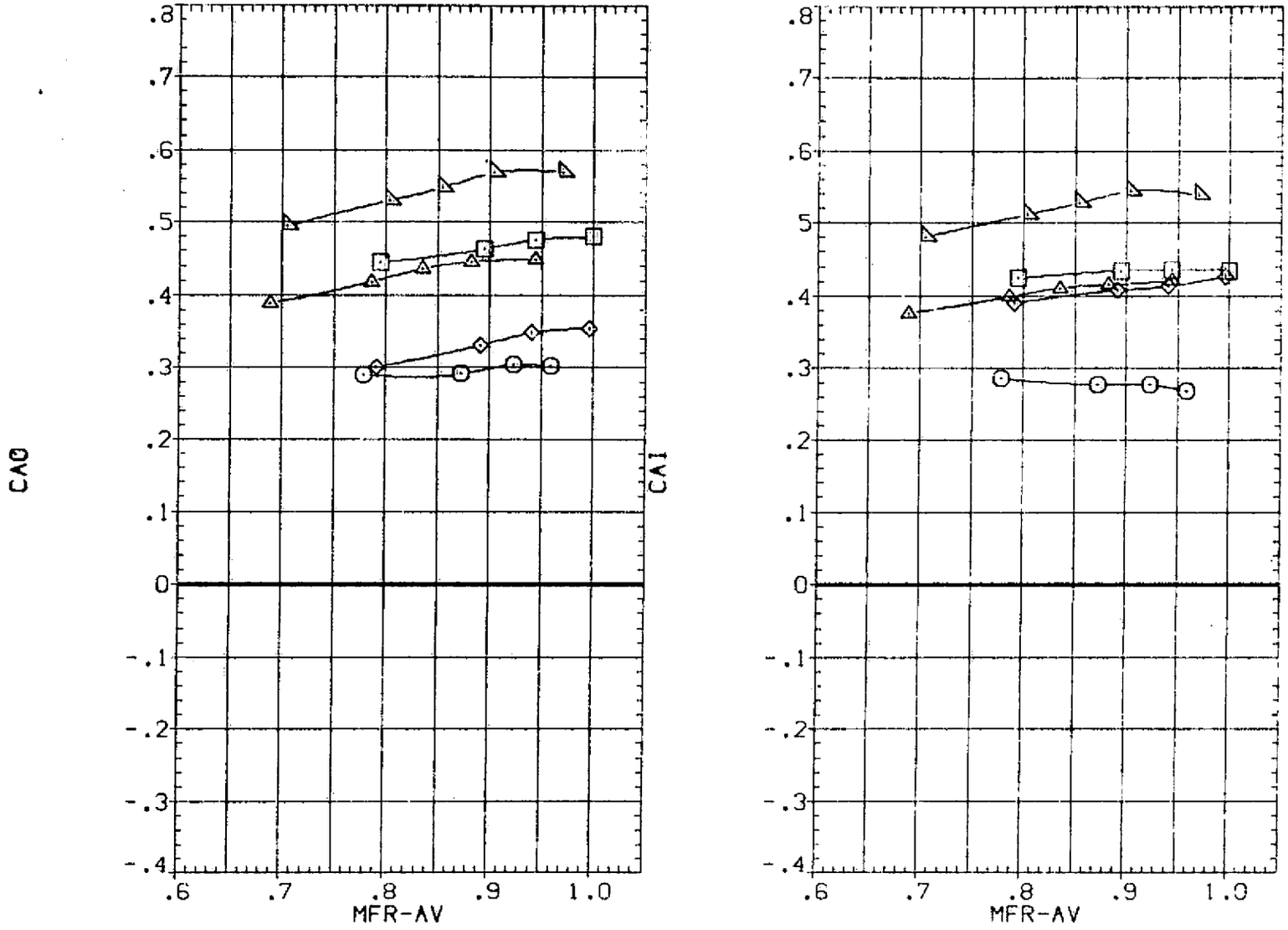


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)	□	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

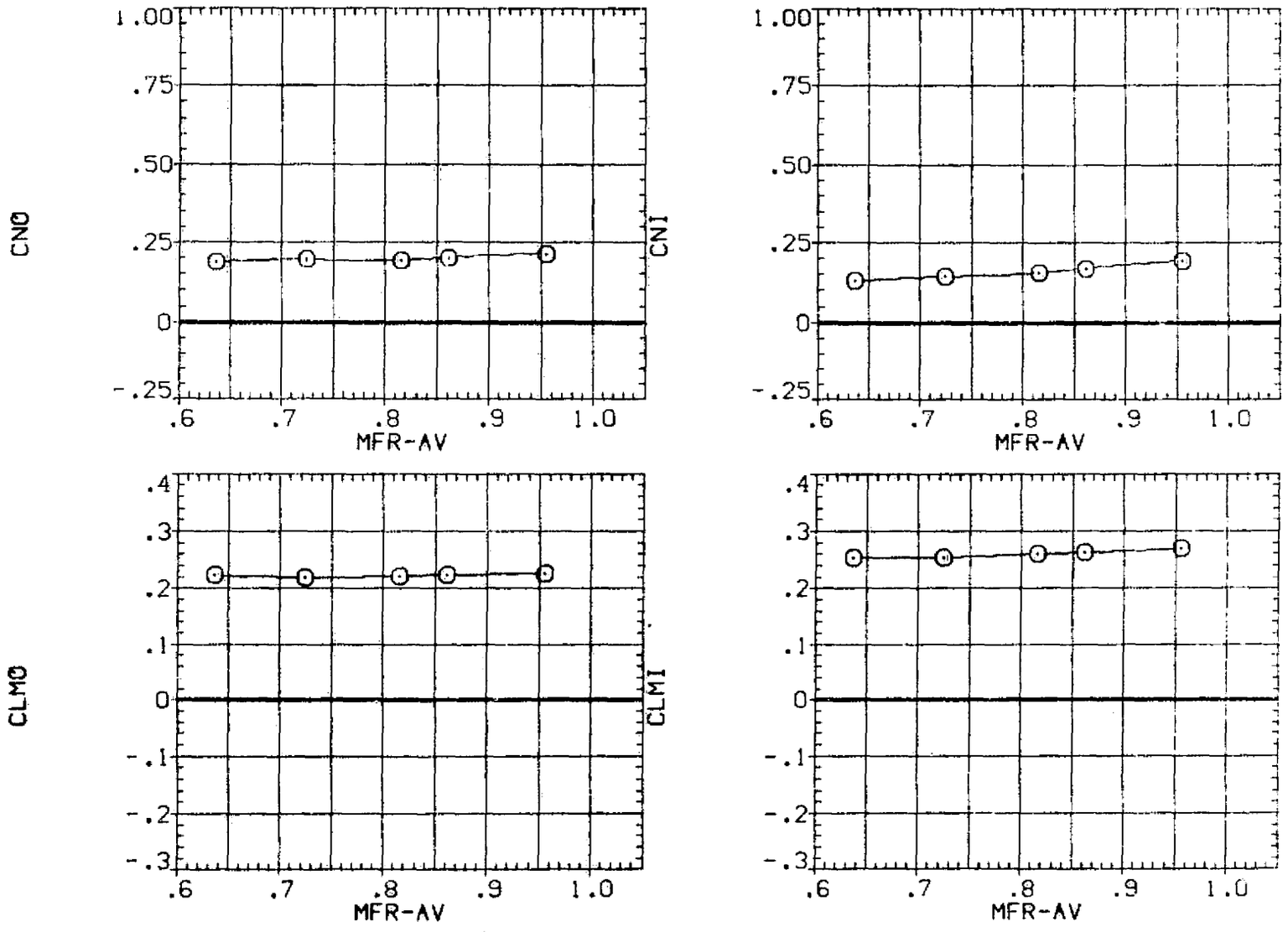


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	□	W B N1 N1	56.000	.250	.550	.000
(BAP023)	◇	W B N1 N1	48.000	.250	.550	.000
(BAP024)	△	W B N1 N1	40.000	.250	.550	.000
(BAP034)	▷	W B N2 N2	56.000	.250	.550	.000
(BAP035)	▽	W B N2 N2	48.000	.250	.550	.000

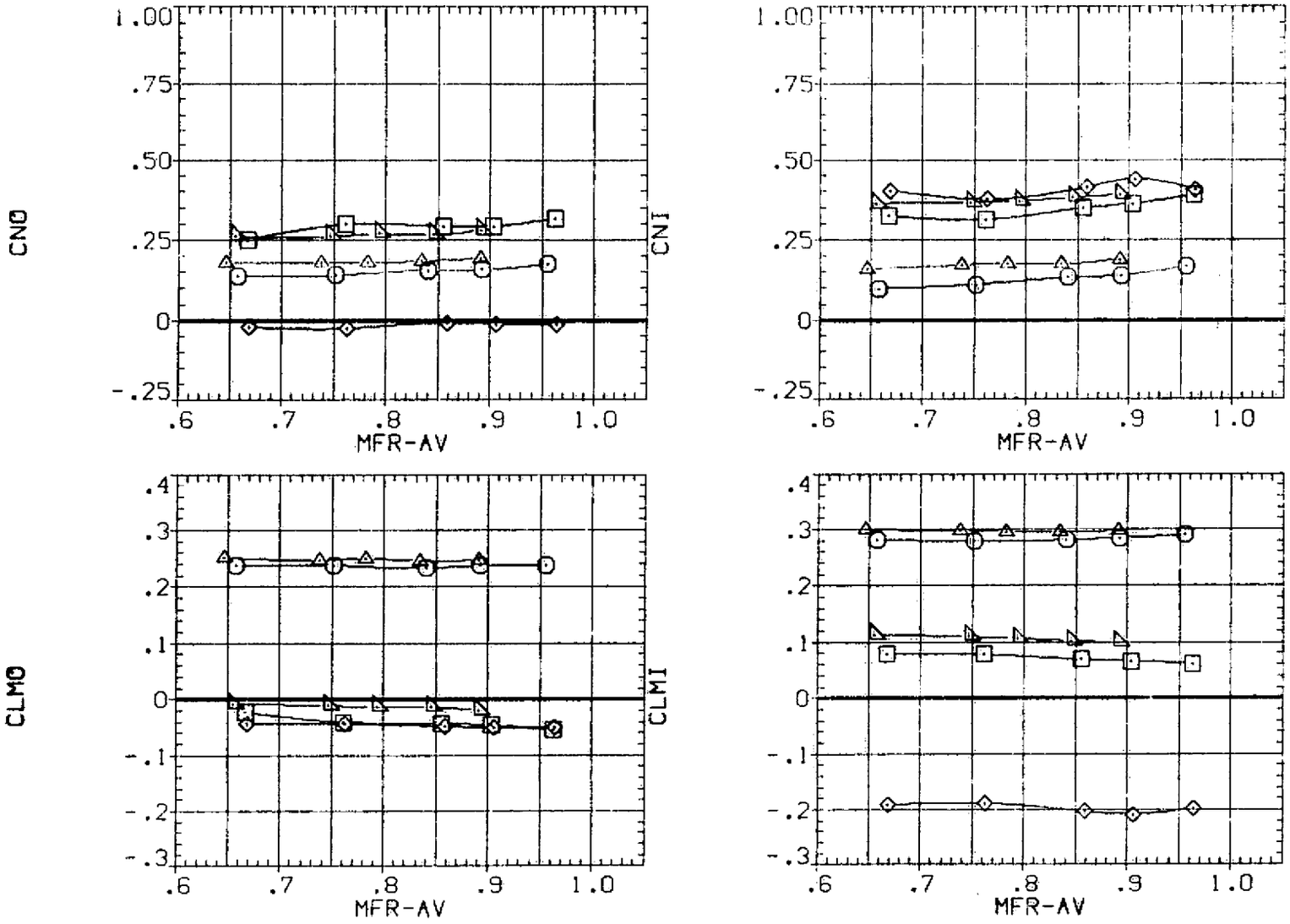


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)		W B NI NI	56.000	.250	.550	.000
(BAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.000

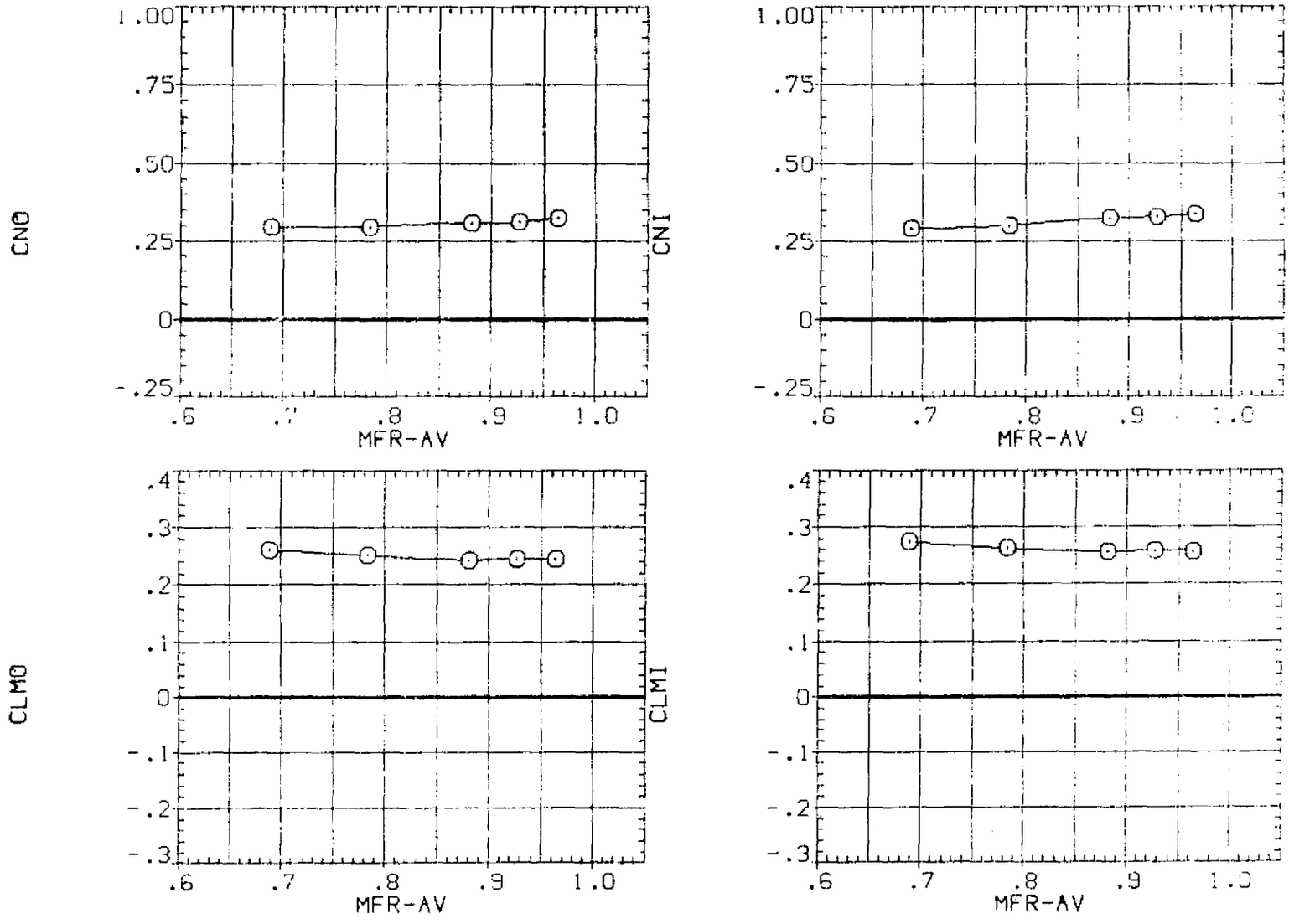


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP022)		W B N1 N1
(BAP023)		W B N1 N1
(BAP024)		W B N1 N1
(BAP034)		W B N2 N2
(BAP035)		W B N2 N2

X-INBD	2Y1/B	2Y0/B	Dx
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

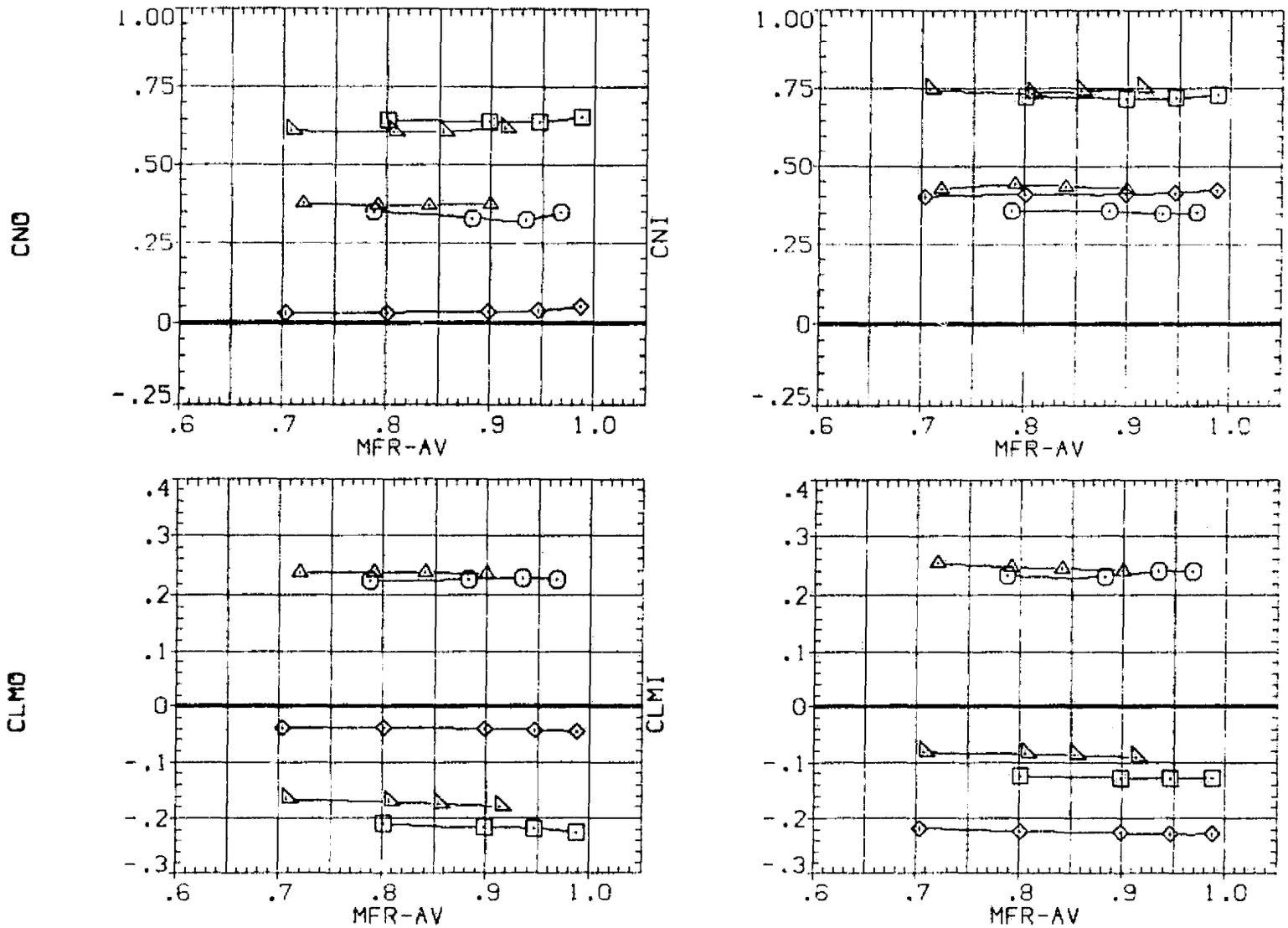


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	○	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

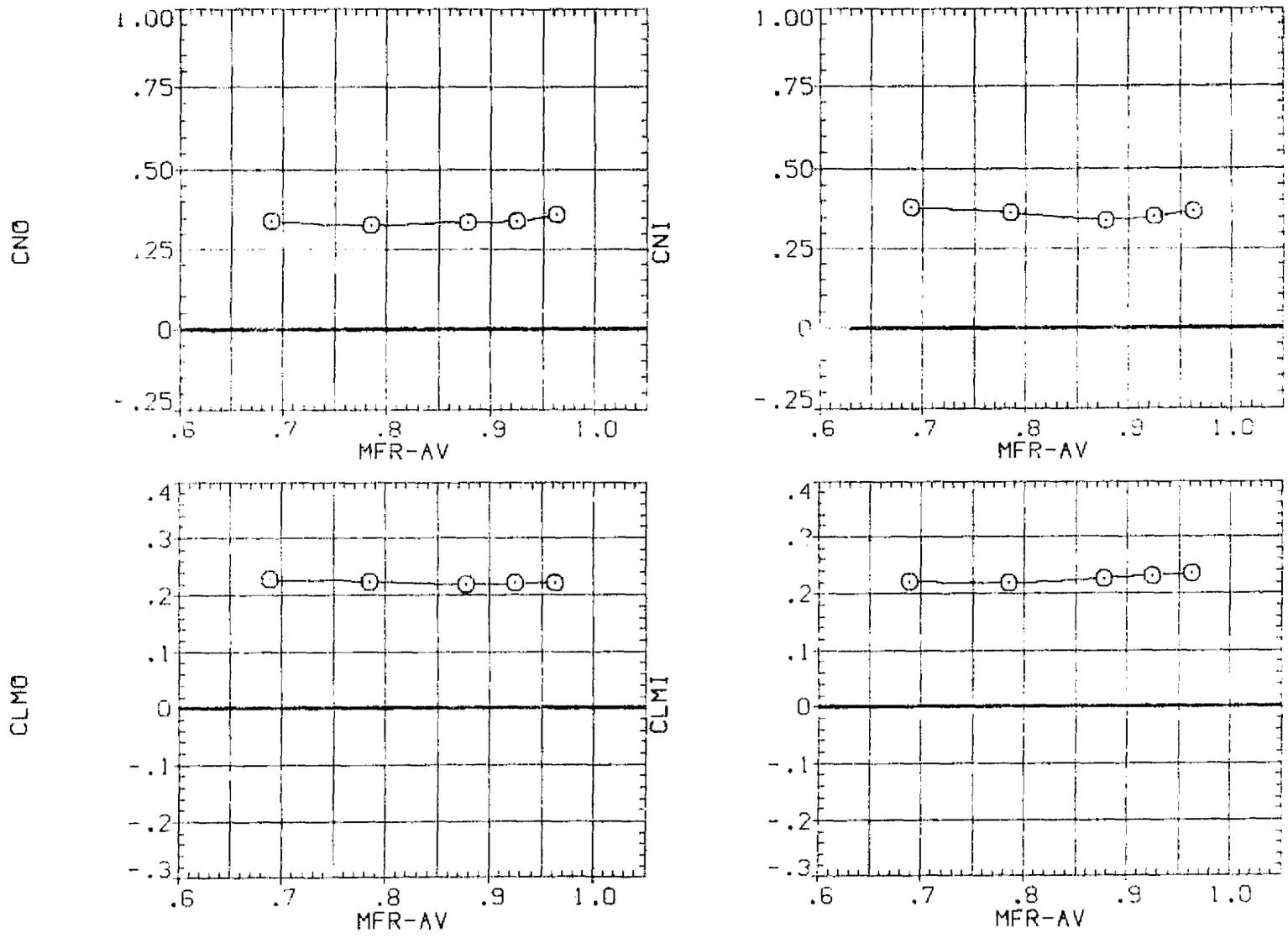


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)	○	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	▷	DATA NOT AVAILABLE	48.000	.250	.550	.000

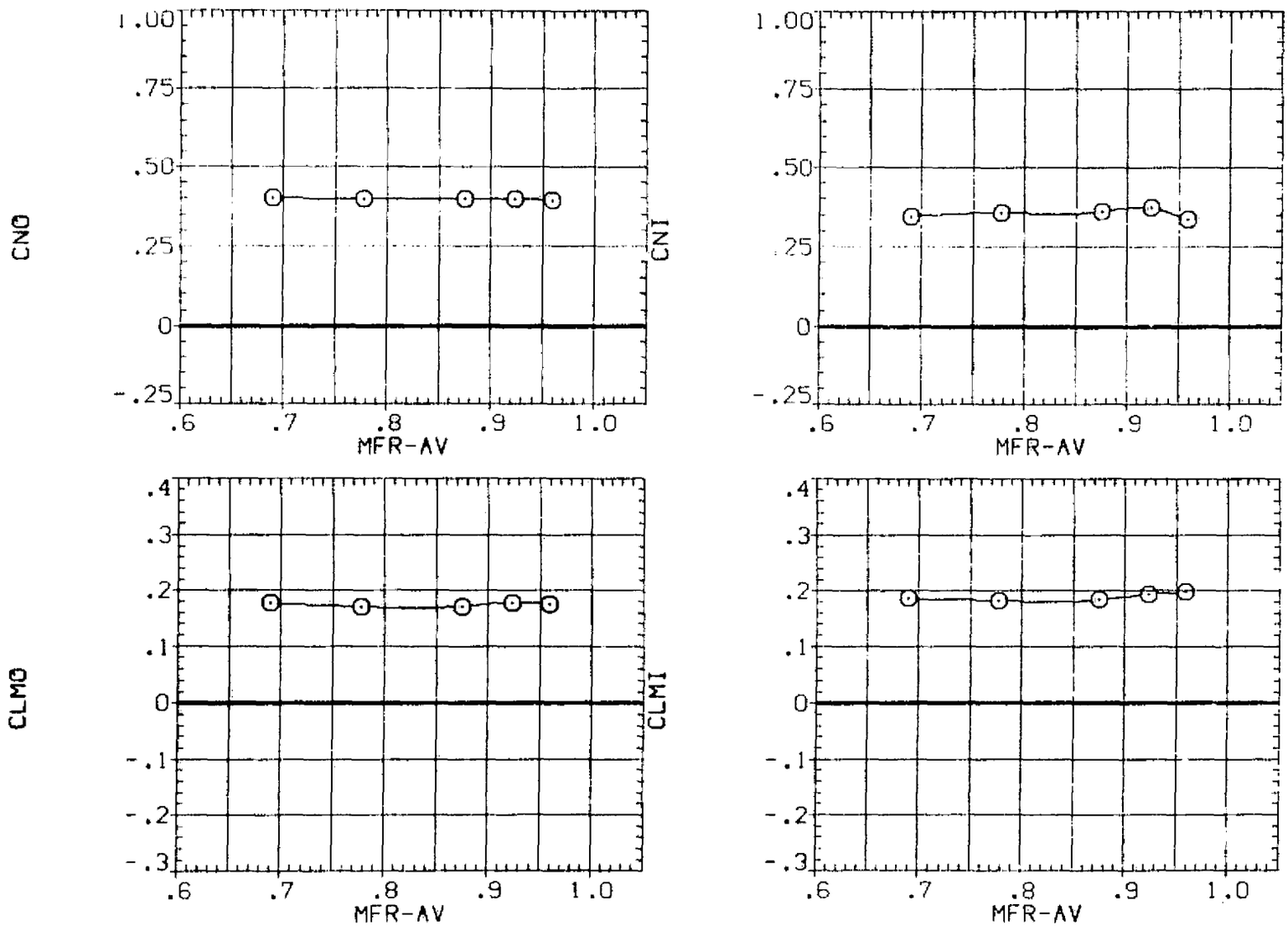


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)		W B N1 N1	56.000	.250	.550	.000
(BAP023)		W B N1 N1	48.000	.250	.550	.000
(BAP024)		W B N1 N1	40.000	.250	.550	.000
(BAP034)		W B N2 N2	56.000	.250	.550	.000
(BAP035)		W B N2 N2	48.000	.250	.550	.000

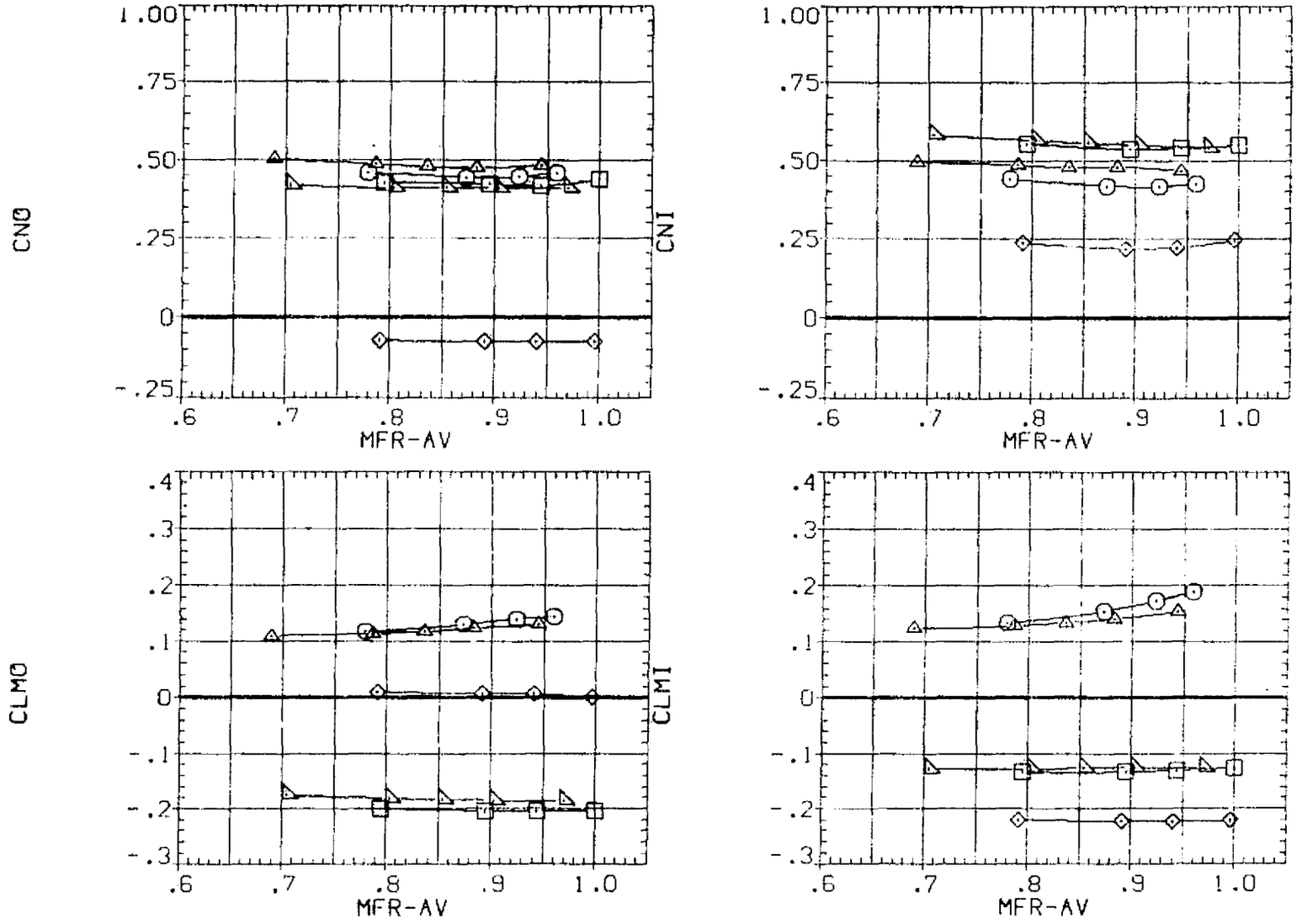


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

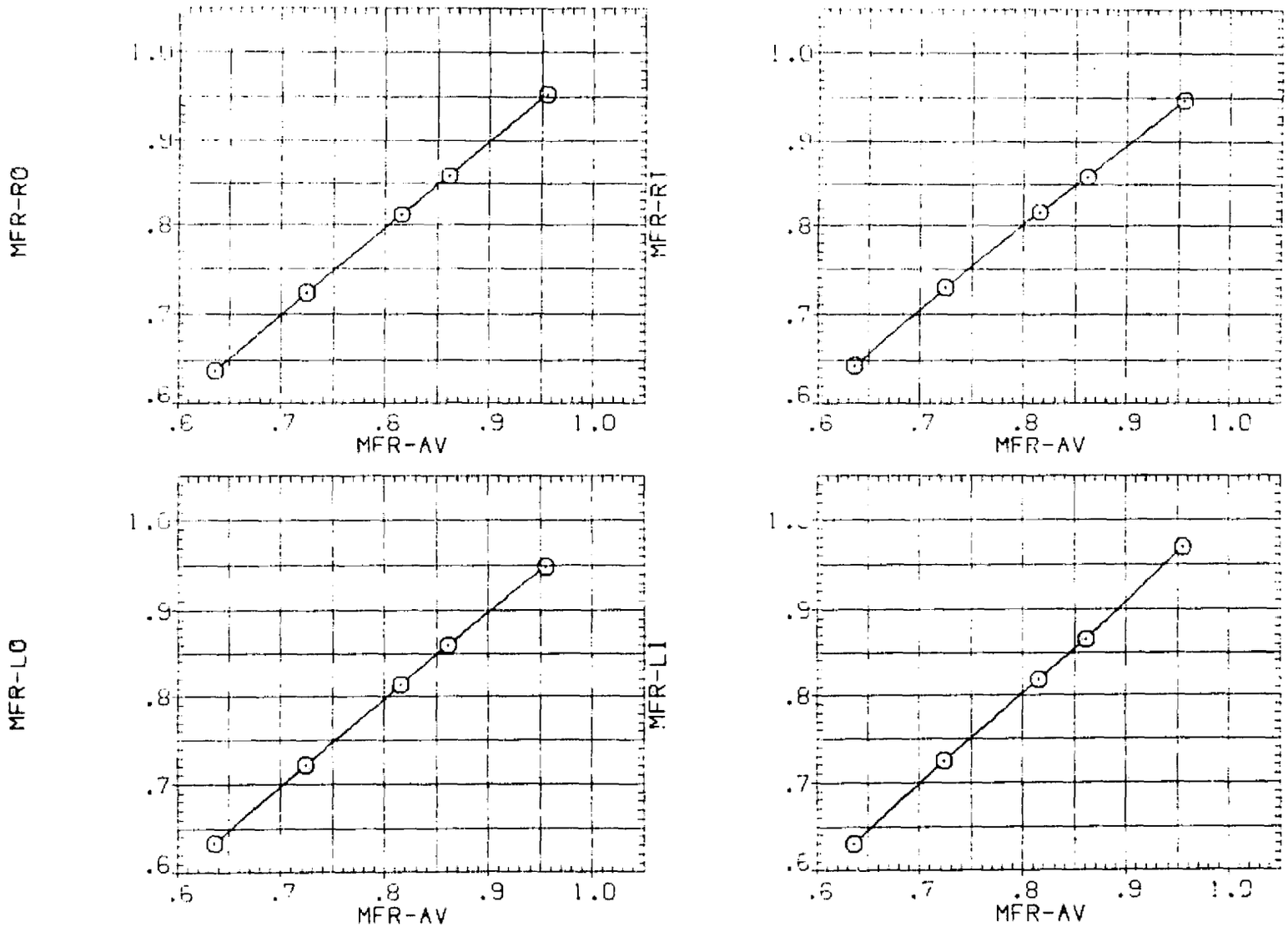


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	W B N1 N1	56.000	.250	.550	.000
(BAP023)	W B N1 N1	48.000	.250	.550	.000
(DAP024)	W B N1 N1	40.000	.250	.550	.000
(BAP034)	W B N2 N2	56.000	.250	.550	.000
(BAP035)	W B N2 N2	48.000	.250	.550	.000

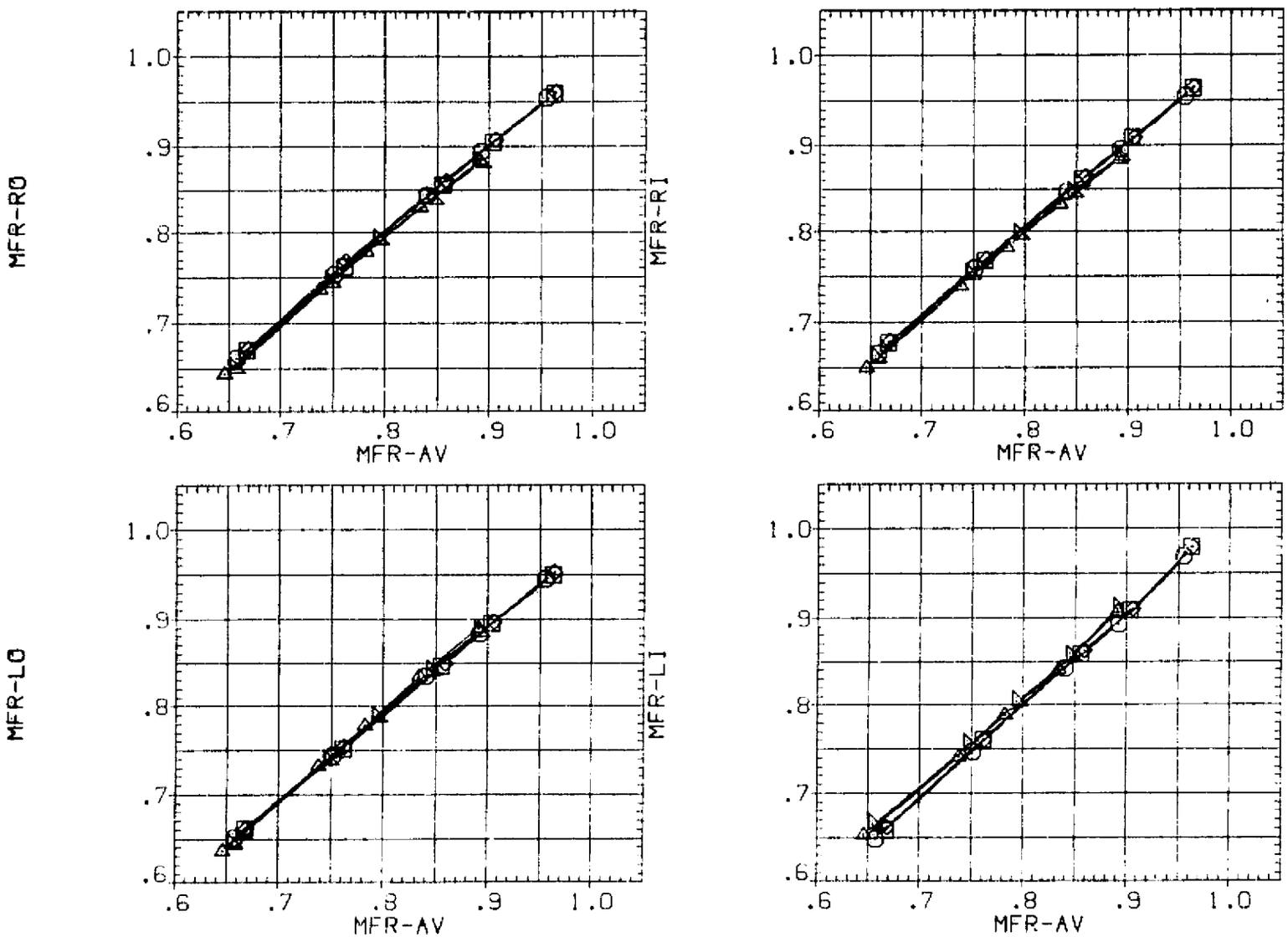


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)	□	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	◇	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

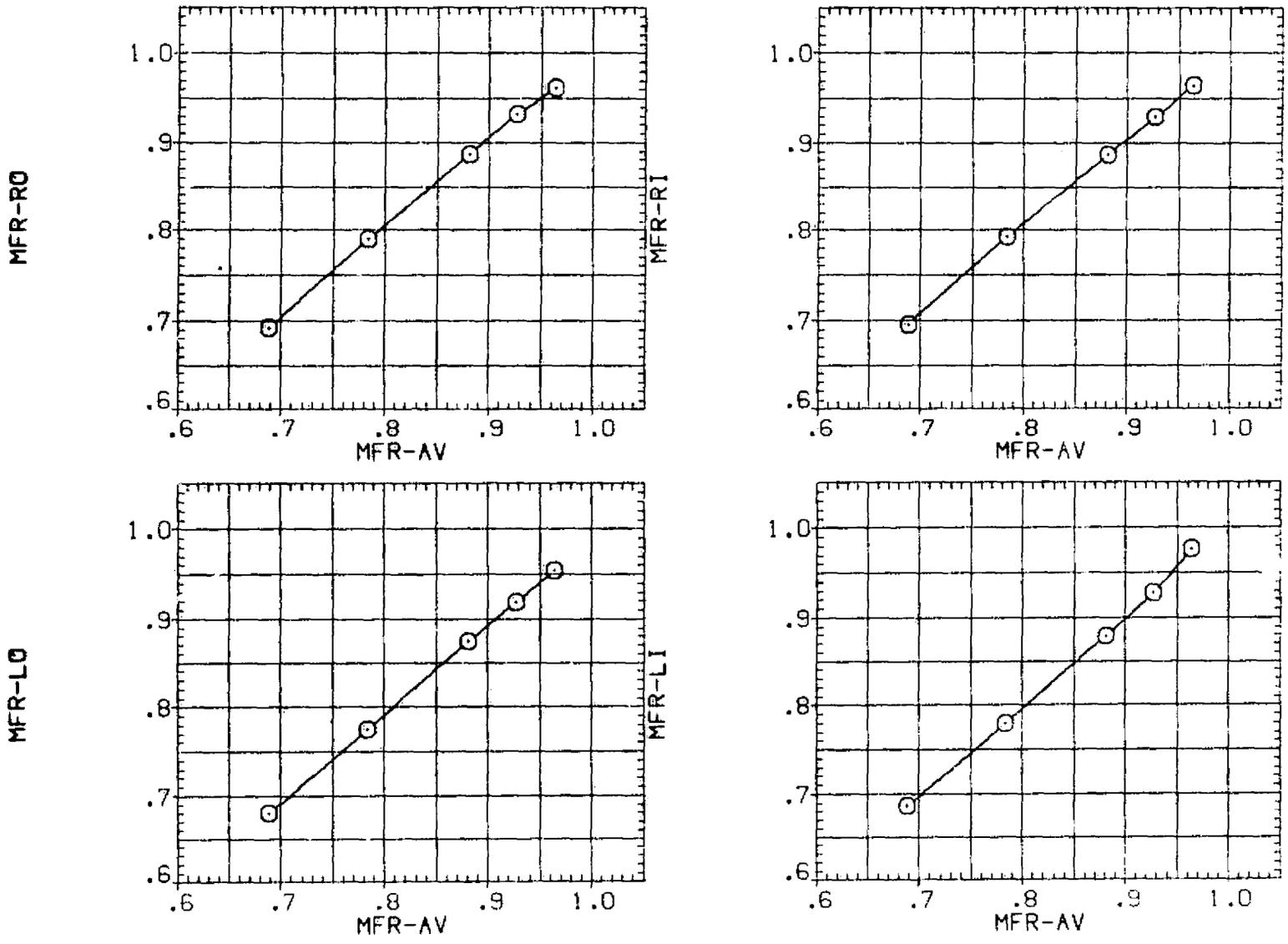


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP022)		W B N1 N1
(BAP023)		W B N1 N1
(BAP024)		W B N1 N1
(BAP034)		W B N2 N2
(BAP035)		W B N2 N2

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

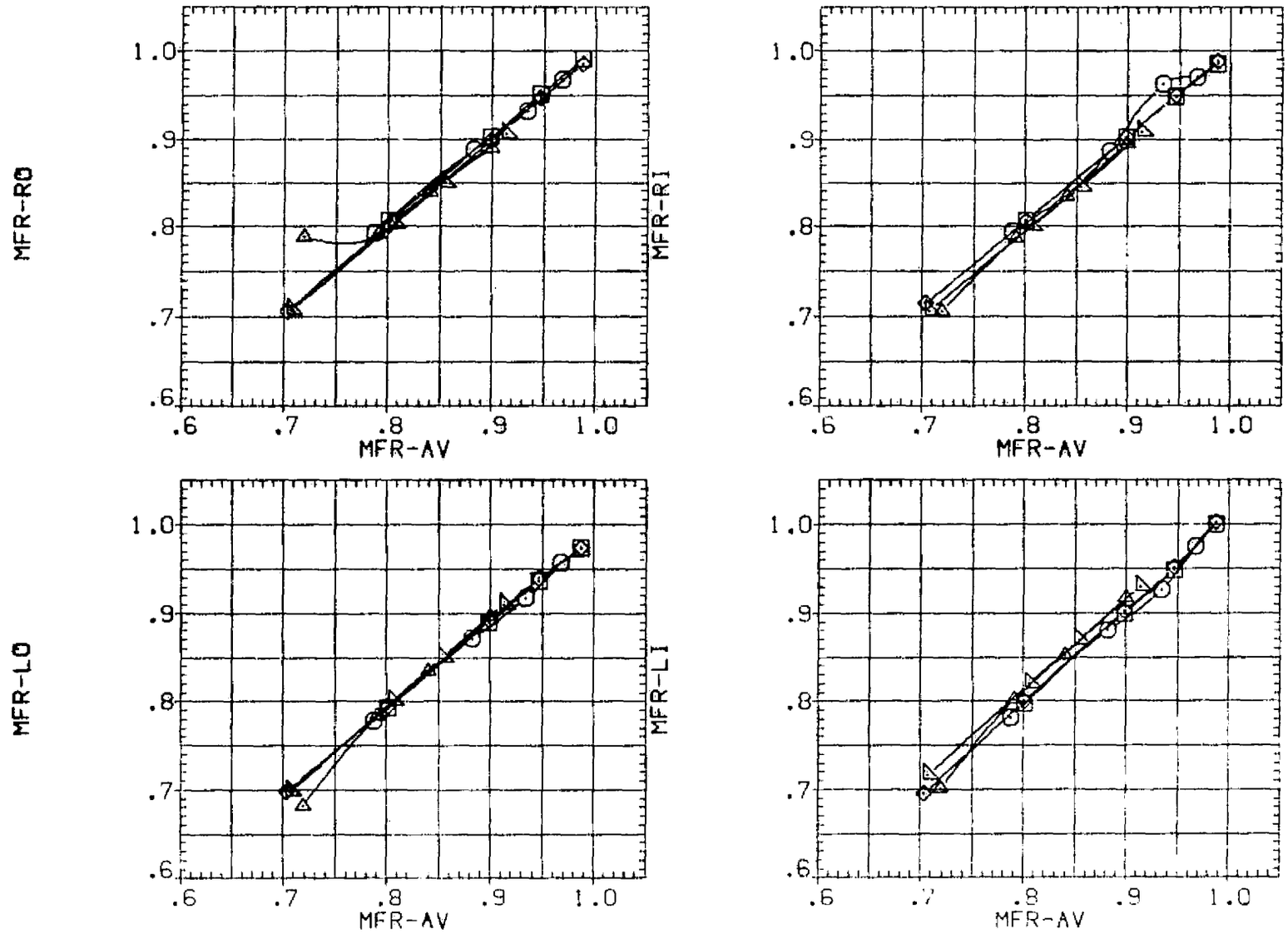


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)	○	W B NI NI	56.000	.250	.550	.000
(BAP023)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	◇	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	◺	DATA NOT AVAILABLE	48.000	.250	.550	.000

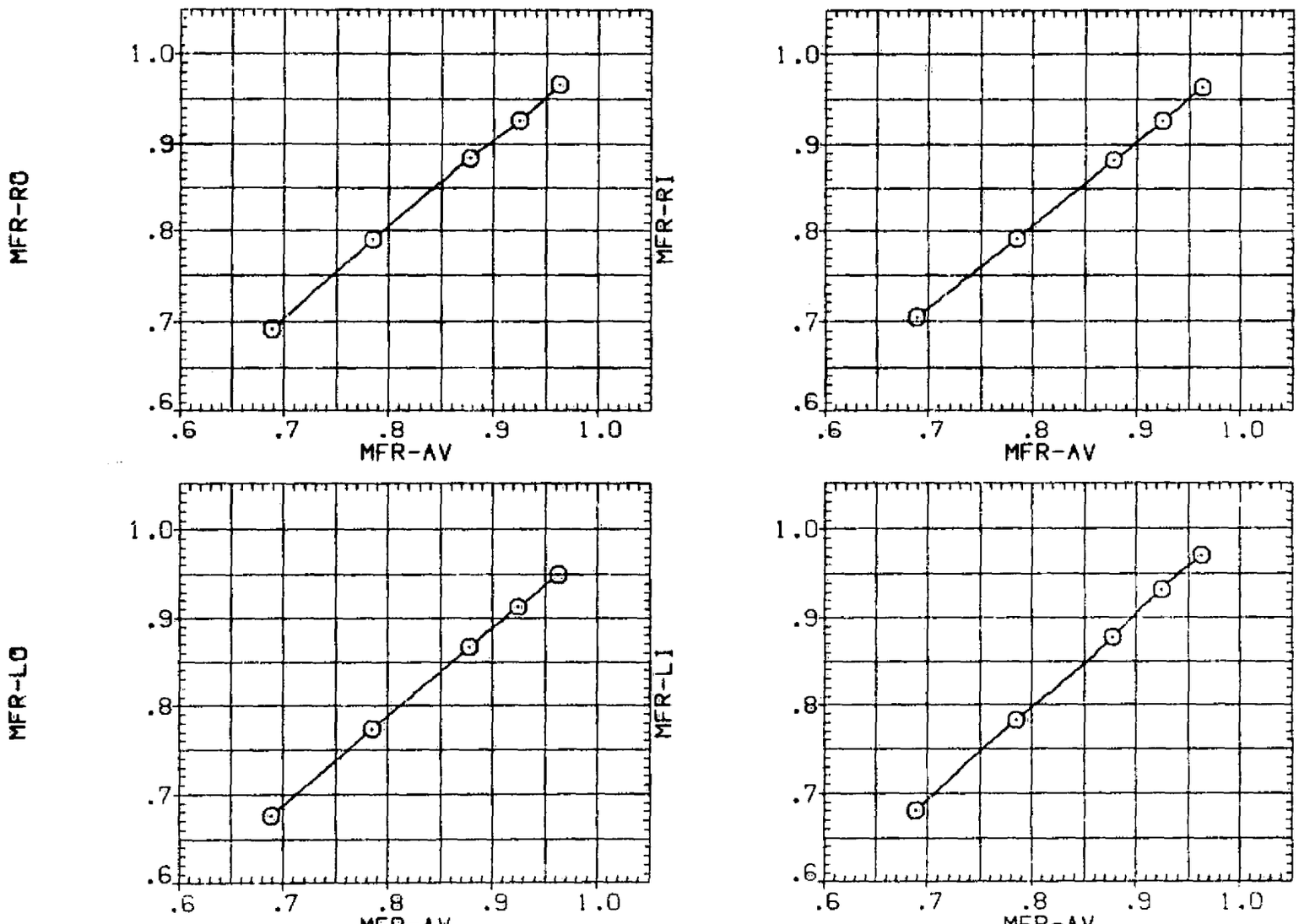


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)		W B NI NI	56.000	.250	.550	.000
(BAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.000

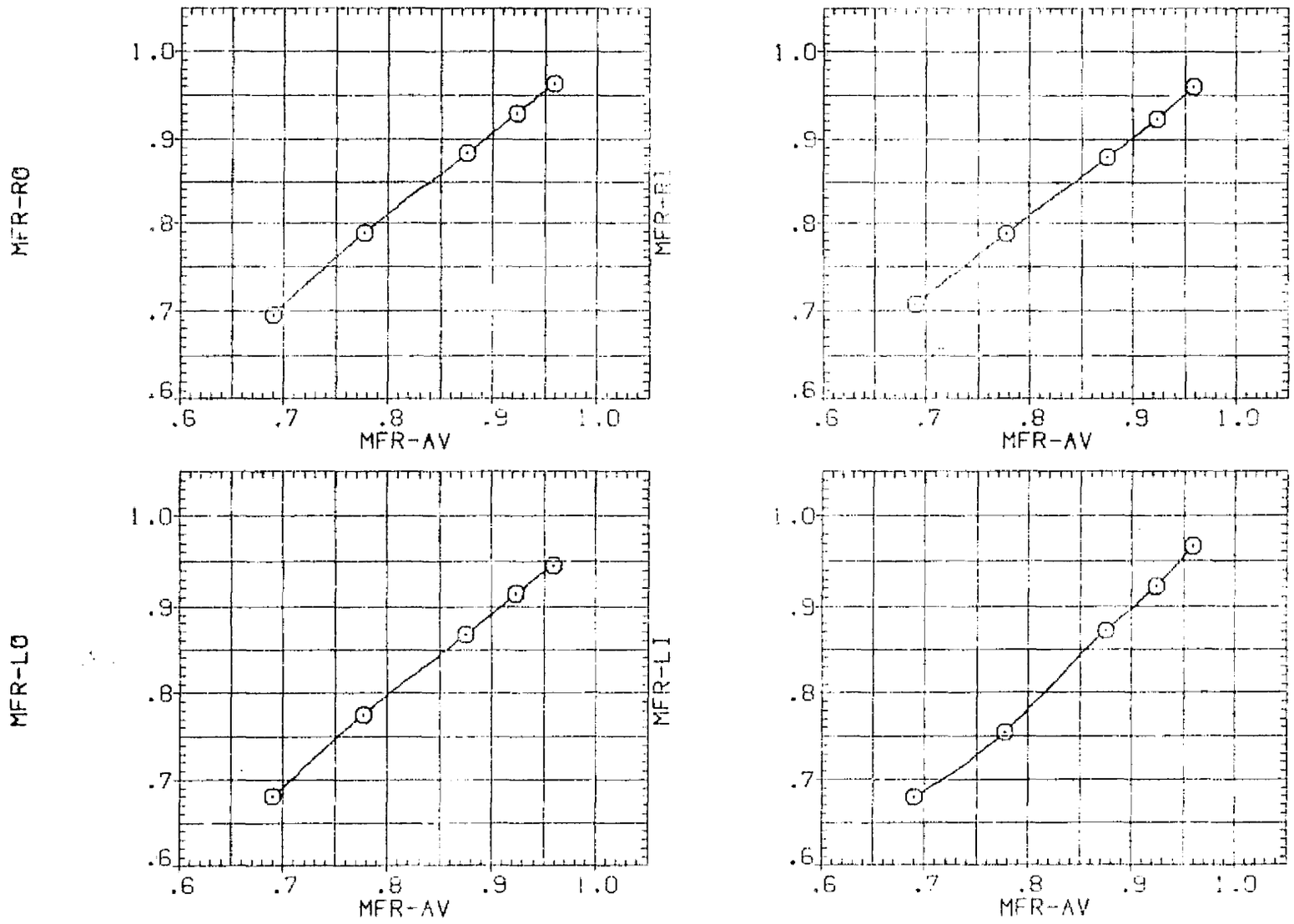


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	W B N1 N1	56.000	.250	.550	.000
(BAP023)	W B N1 N1	48.000	.250	.550	.000
(DAP024)	W B N1 N1	40.000	.250	.550	.000
(BAP034)	W B N2 N2	56.000	.250	.550	.000
(BAP035)	W B N2 N2	48.000	.250	.550	.000

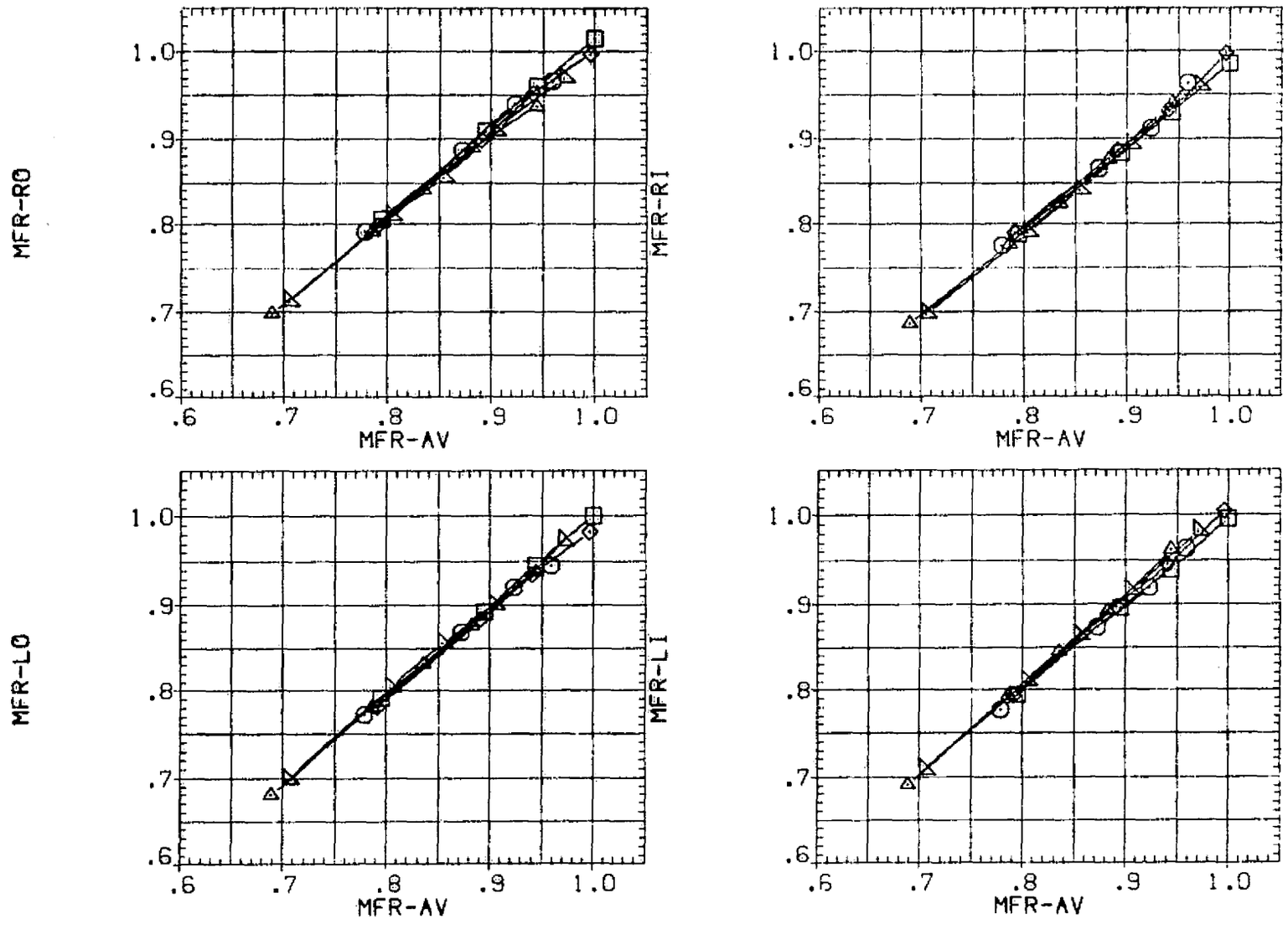


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	□	W B NI NI	56.000	.250	.550	.000
(BAP023)	⊠	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP024)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

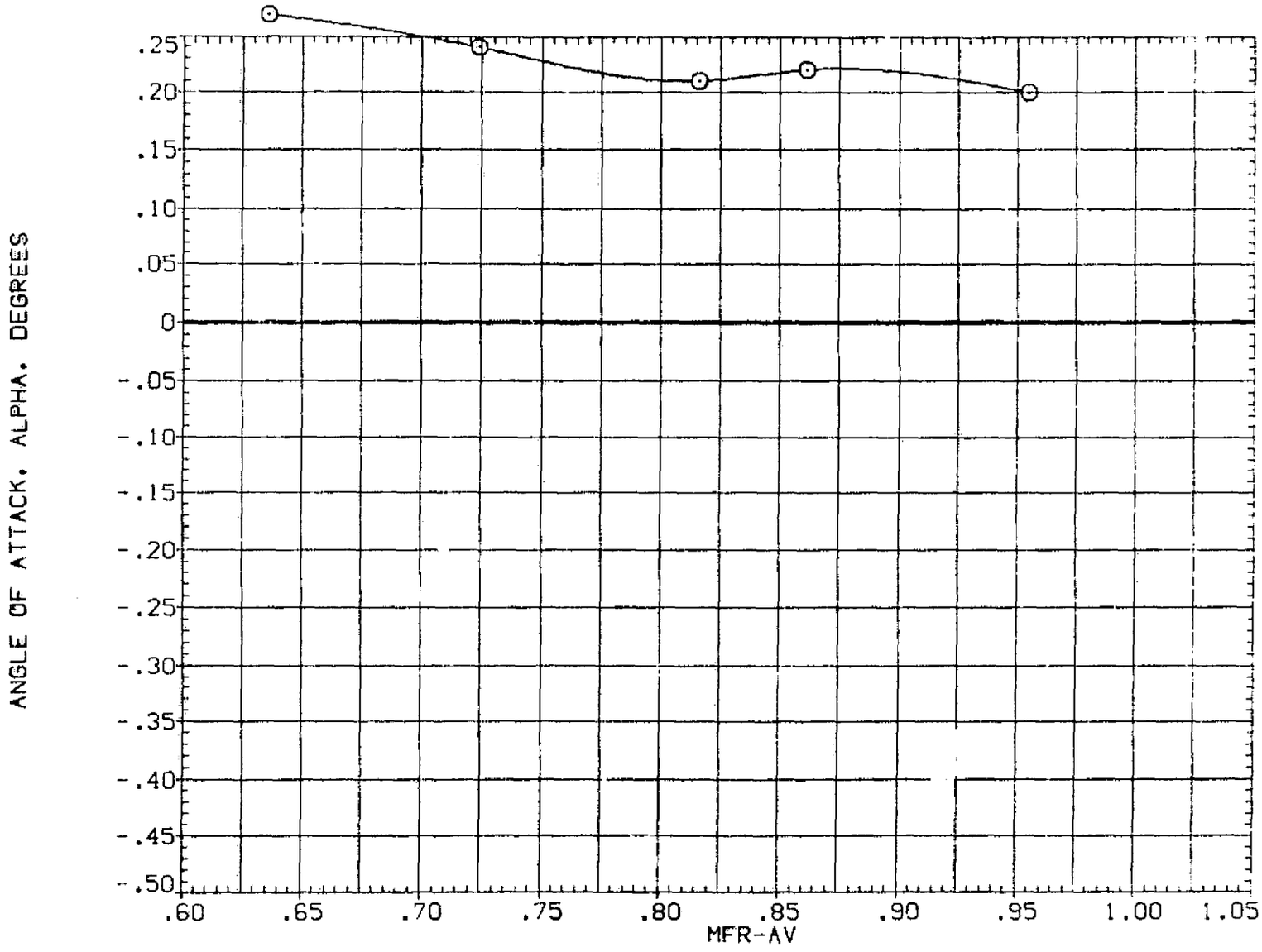


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y2/B	DX
(BAP022)	□	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	W B N1 N1	48.000	.250	.550	.000
(BAP024)	◇	W B N1 N1	40.000	.250	.550	.000
(BAP034)	△	W B N2 N2	56.000	.250	.550	.000
(BAP035)	△	W B N2 N2	48.000	.250	.550	.000

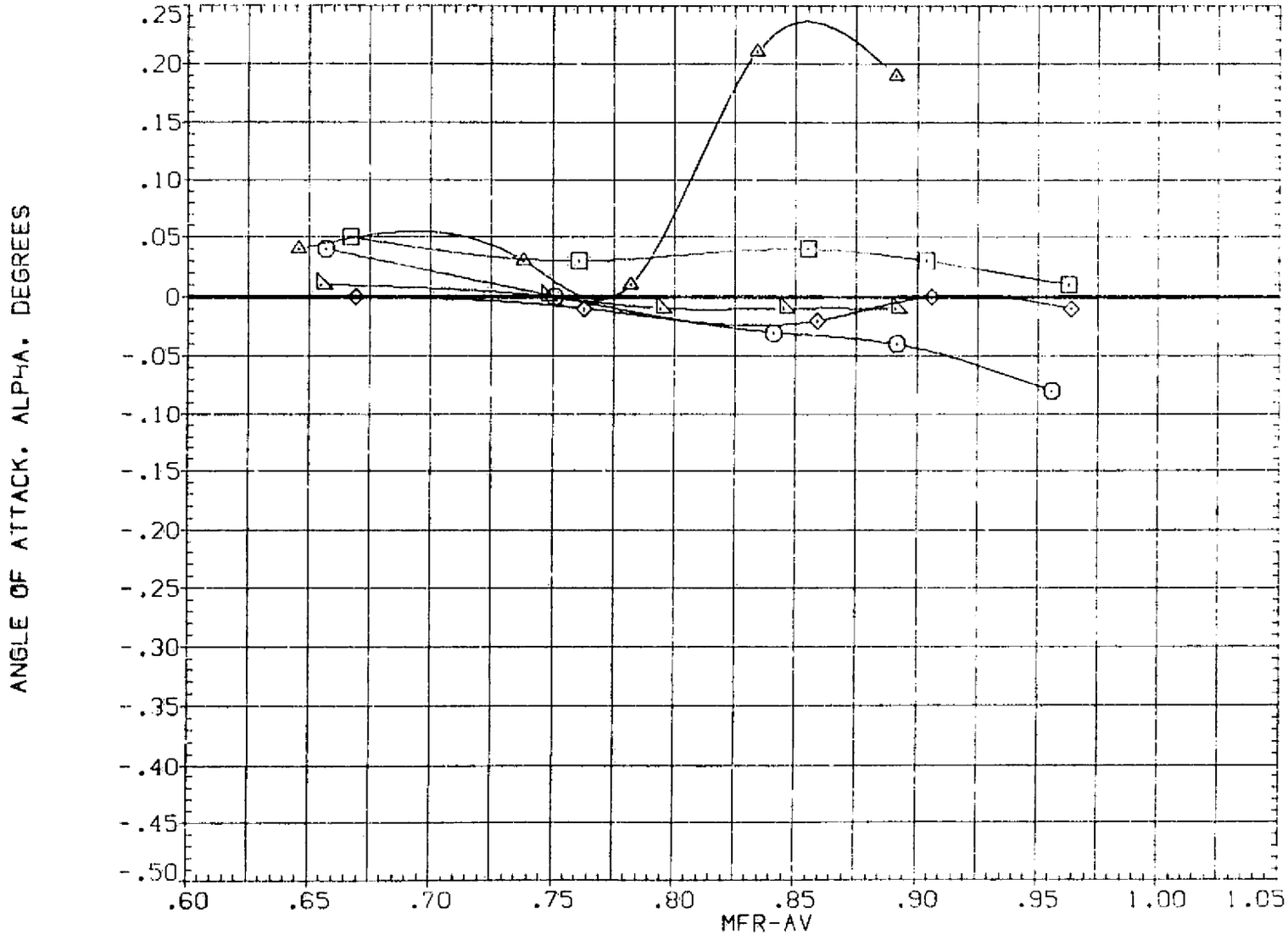


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP022)	□	W B NI NI	56.000	.250	.550	.000
(BAP023)	◇	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP024)	△	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	▽	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	◁	DATA NOT AVAILABLE	48.000	.250	.550	.000

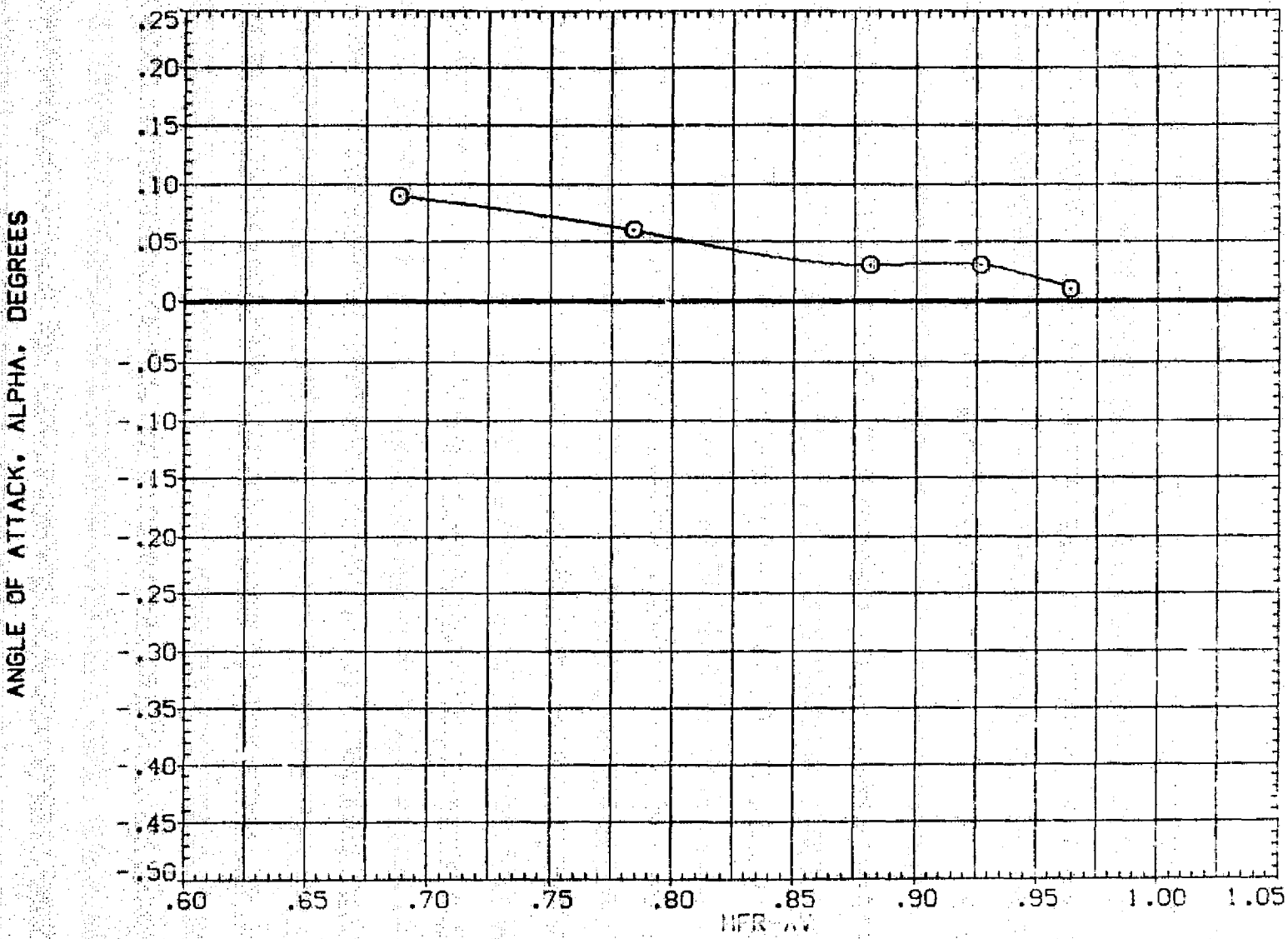


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP022)	□	W B N1 N1	56.000	.250	.550	.000
(BAP023)	□	W B N1 N1	48.000	.250	.550	.000
(BAP024)	◇	W B N1 N1	40.000	.250	.550	.000
(BAP034)	△	W B N2 N2	56.000	.250	.550	.000
(BAP035)	△	W B N2 N2	48.000	.250	.550	.000

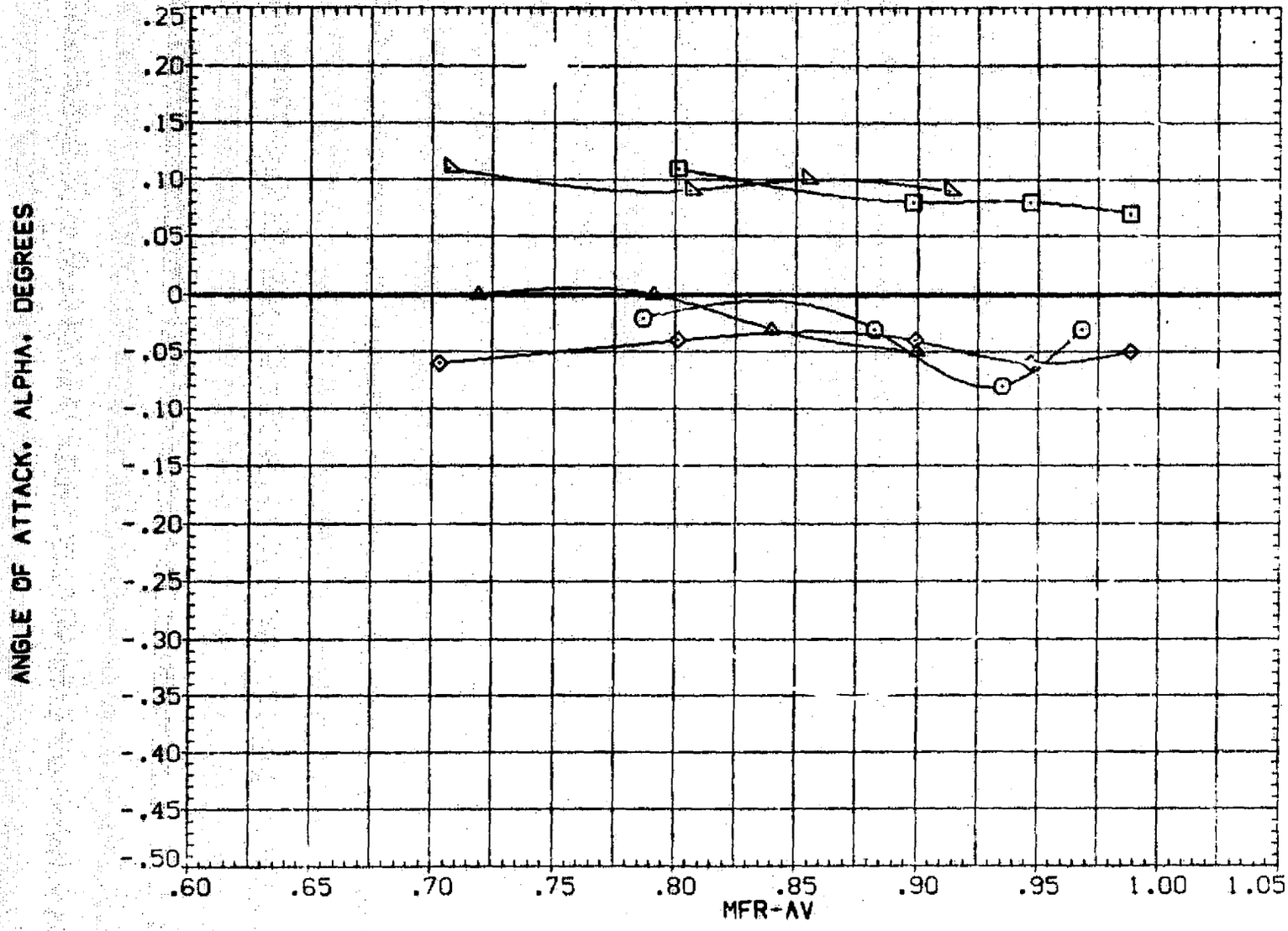


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-|NBD	2Y1/B	2Y0/B	DX
(BAP022)		W B N1 N1	56.000	.250	.550	.000
(BAP023)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP024)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)		DATA NOT AVAILABLE	56.000	.250	.550	.700
(BAP035)		DATA NOT AVAILABLE	48.000	.250	.550	.700

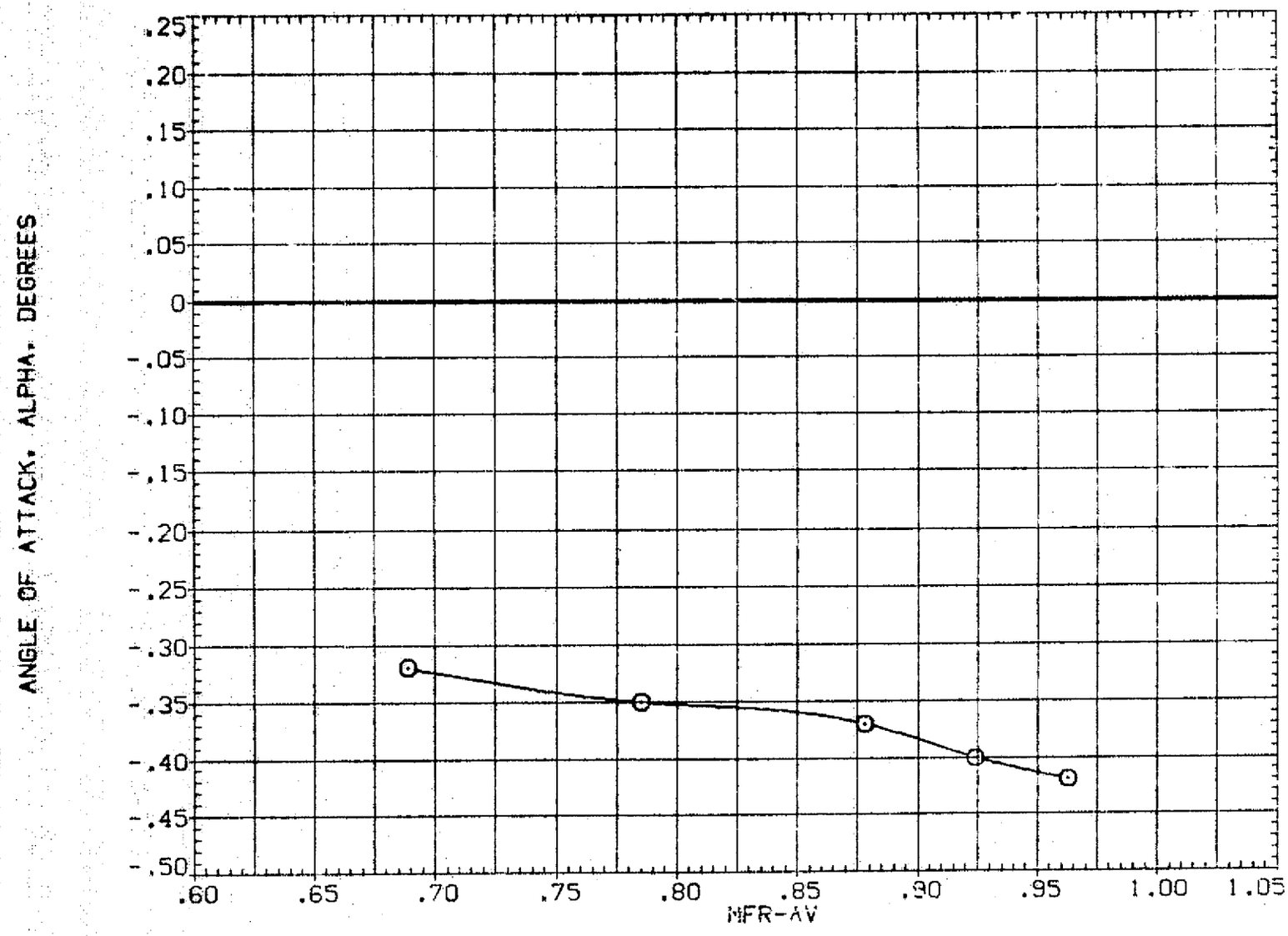


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.20

DATA SET S(NBD)	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(BAP022)	W B N1 N1	56.000	.250	.550	.000
(BAP023)	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP034)	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP034)	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP035)	DATA NOT AVAILABLE	48.000	.250	.550	.000

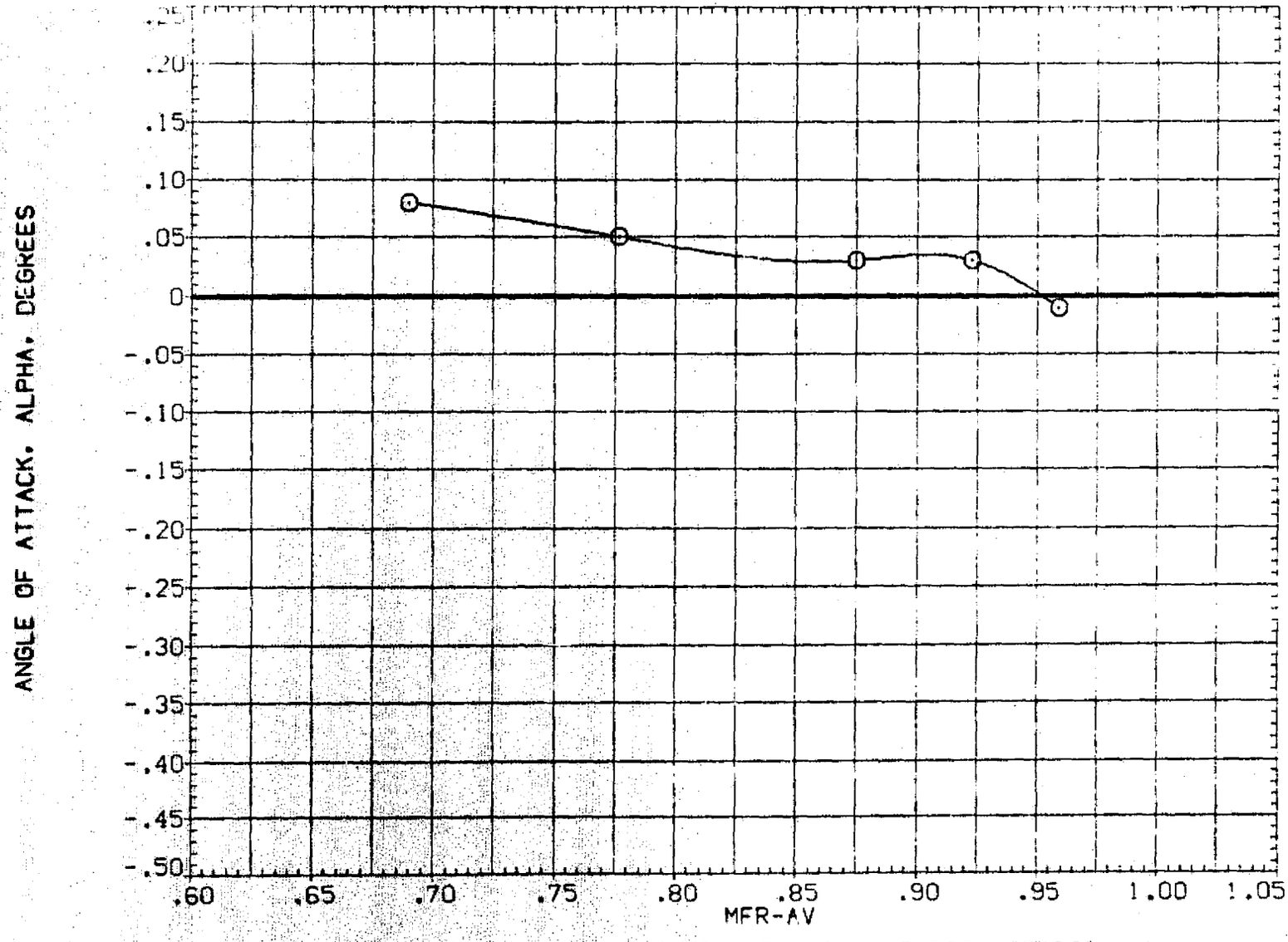


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y2/B	LS
(BAP022)	□	W B N1 N1	56.000	.250	.[illegible]	[illegible]
(BAP023)	◇	W B N1 N1	48.000	.250	.[illegible]	[illegible]
(BAP024)	△	W B N1 N1	40.000	.250	.[illegible]	[illegible]
(BAP034)	○	W B N2 N2	56.000	.250	.550	[illegible]
(BAP035)	▽	W B N2 N2	48.000	.250	.550	[illegible]

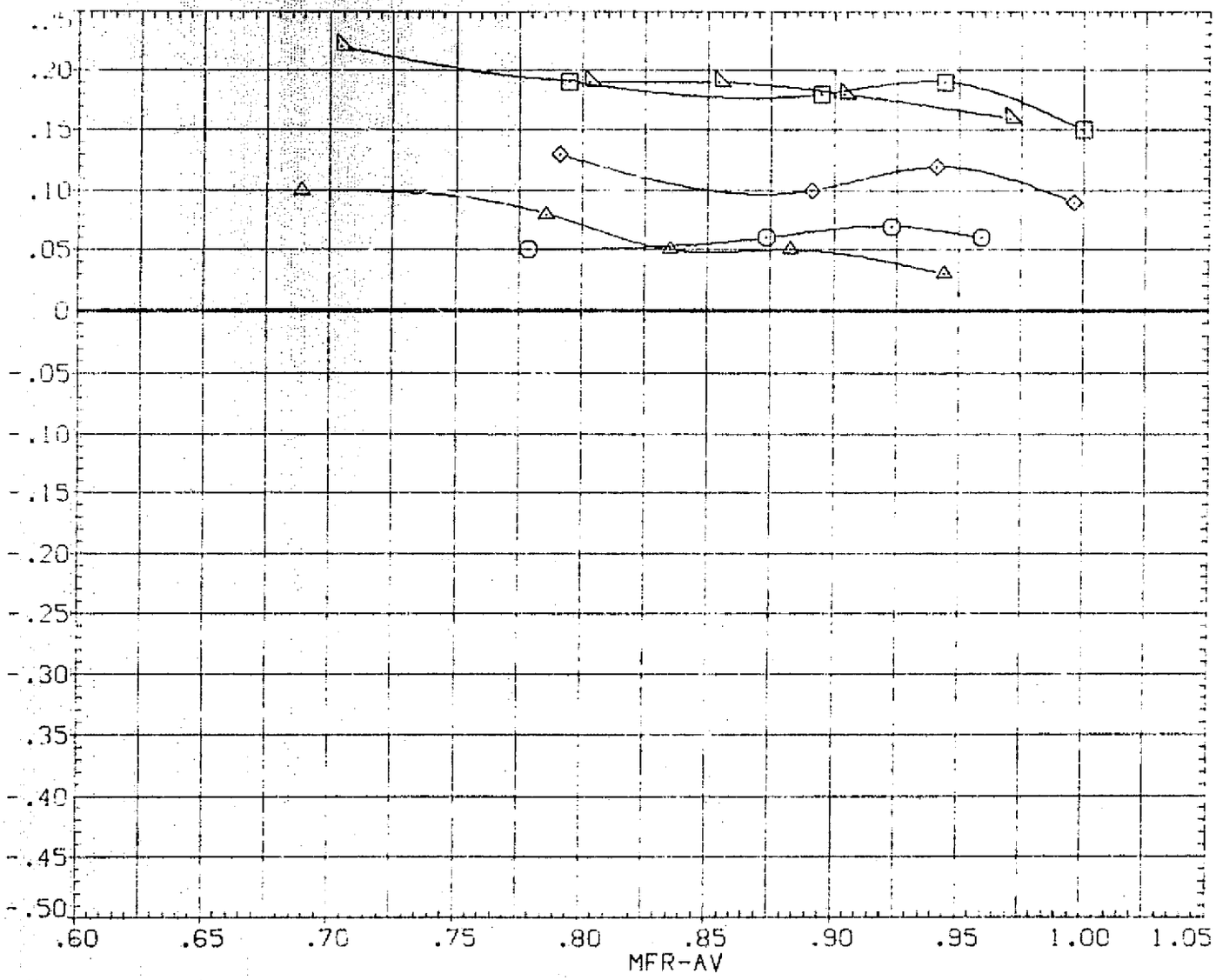


FIG. 12 EFFECTS OF MASS FLOW RATIO ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)		W B NI NI	56.000	.250	.550	.000
(RAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

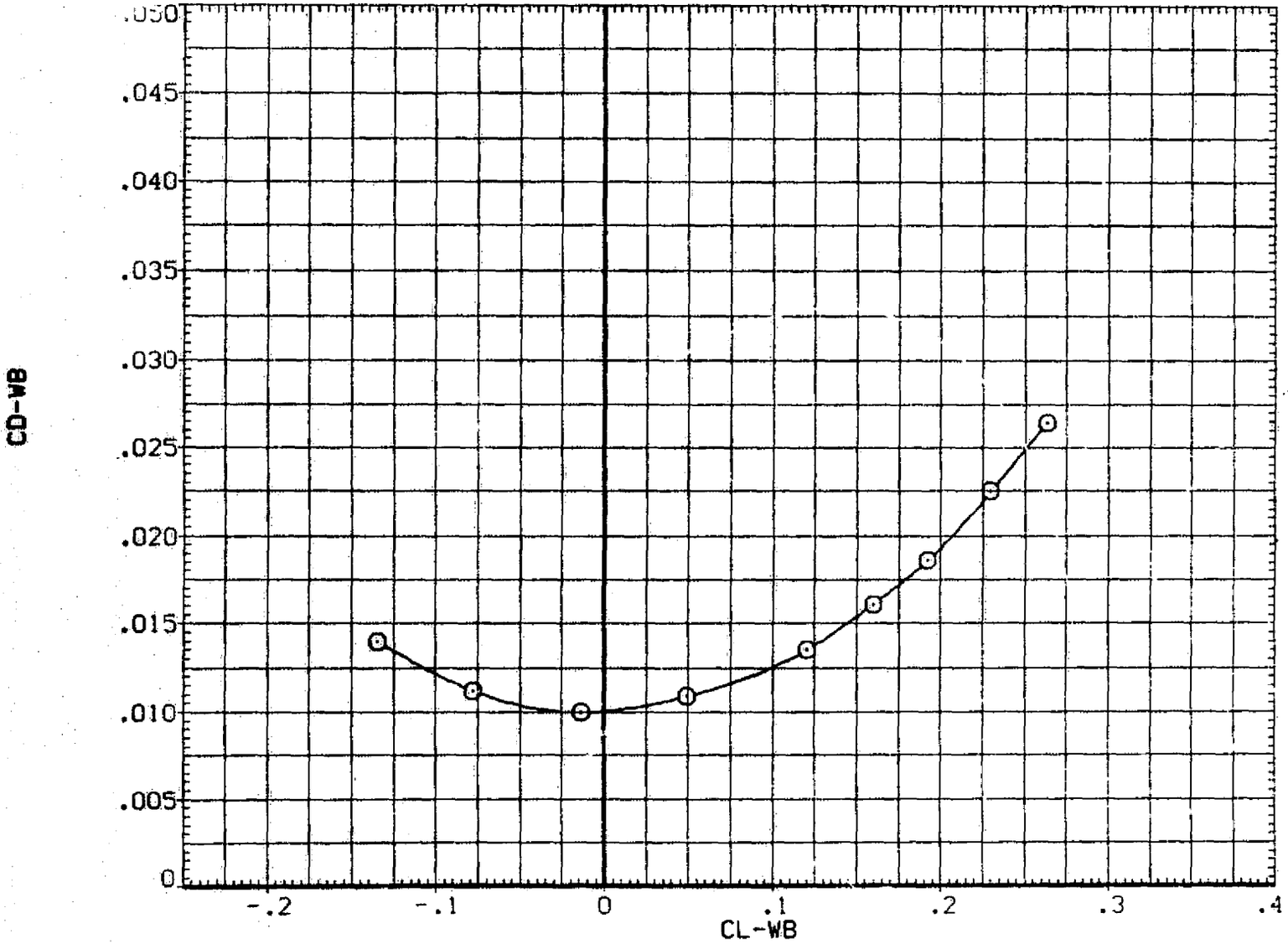


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(RAP027)	⊠	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000

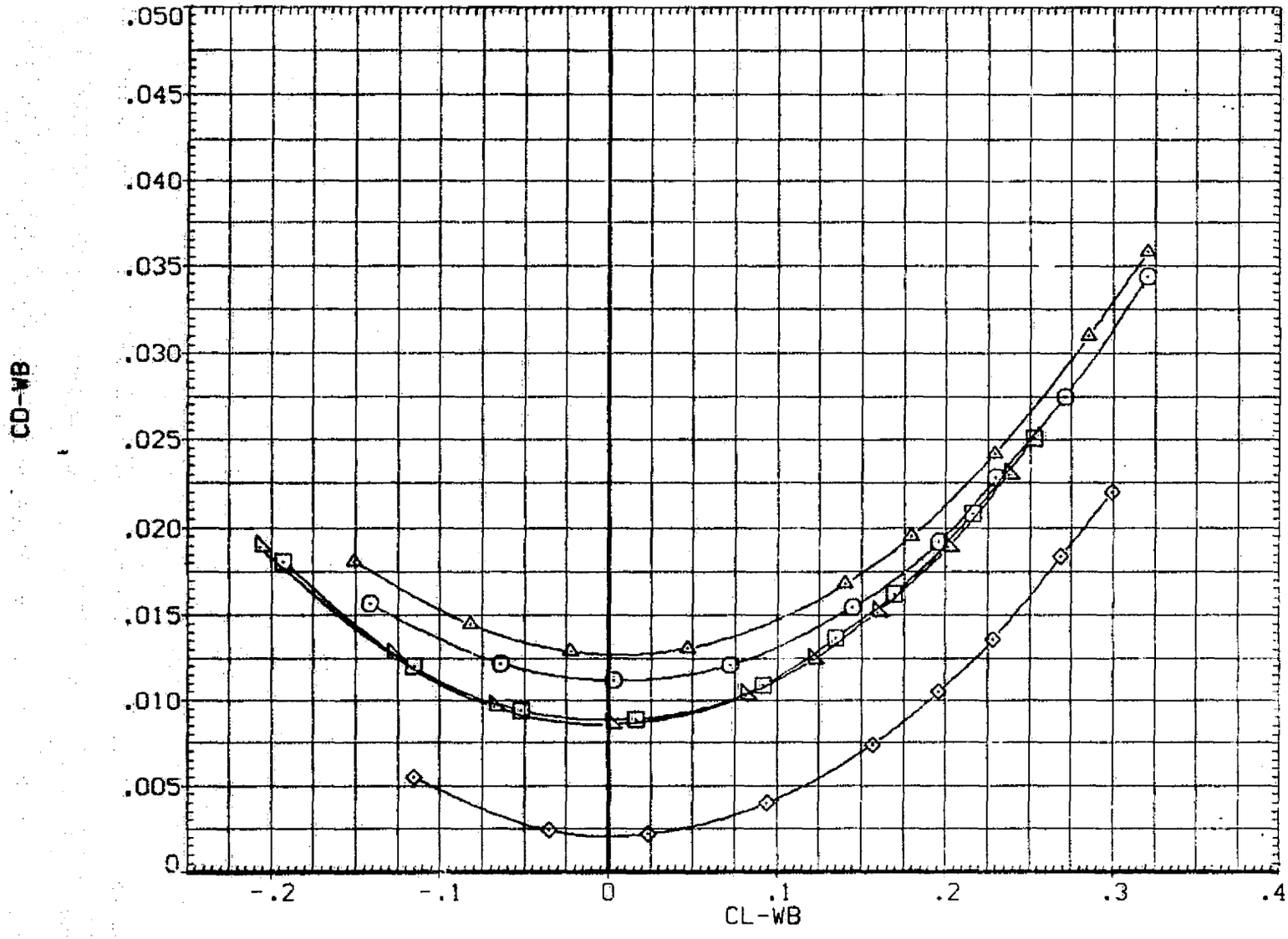


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)		W B N1 N1	56.000	.250	.550	.000
(RAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

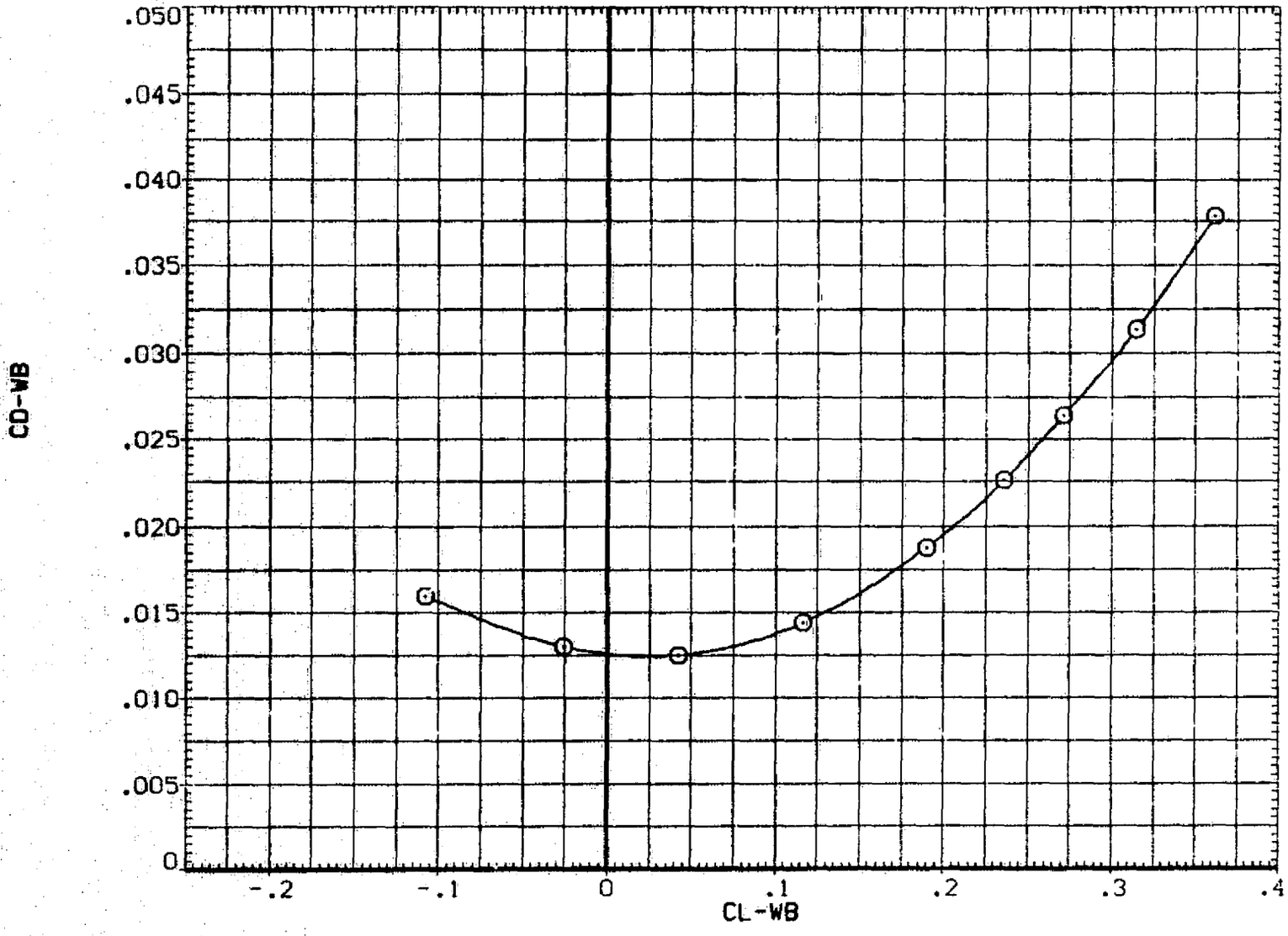


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	△	W B N2 N2	48.000	.250	.550	.000

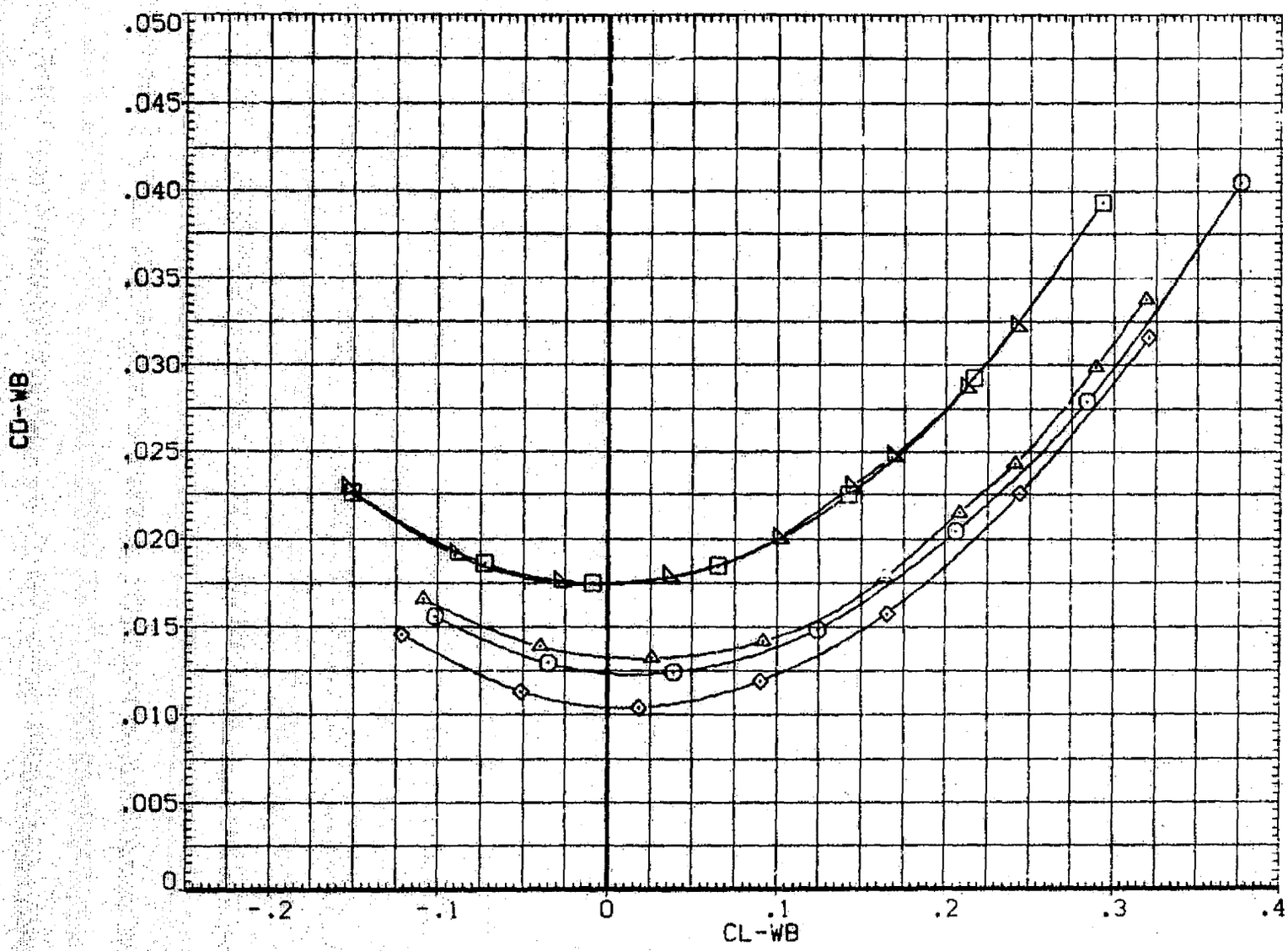


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	○	W,B,NI,NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.350	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	◺	DATA NOT AVAILABLE	48.000	.250	.550	.000

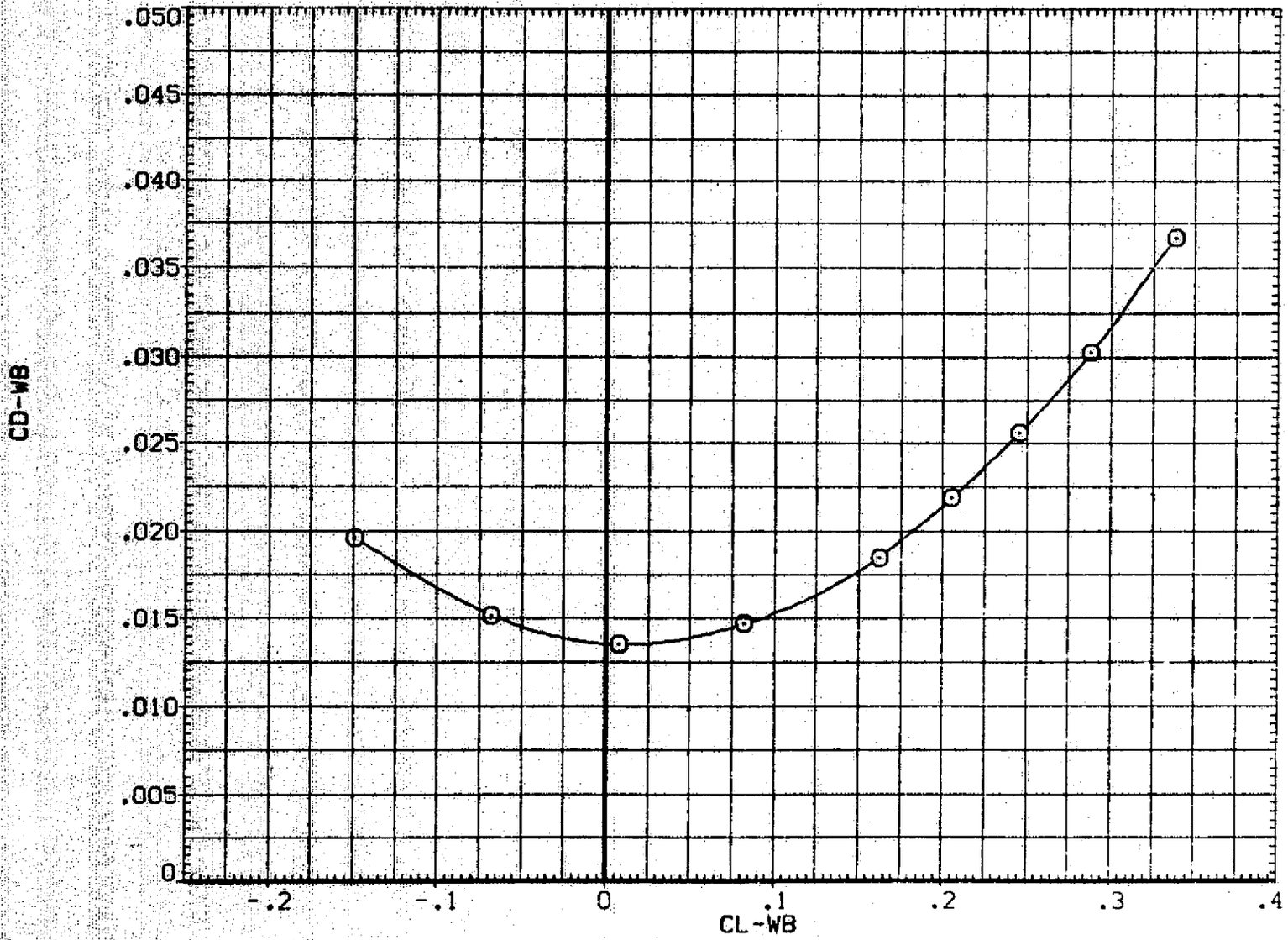


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.1

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	W B NI NI	56.000	.250	.550	.000
(RAP026)	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	DATA NOT AVAILABLE	48.000	.250	.550	.000

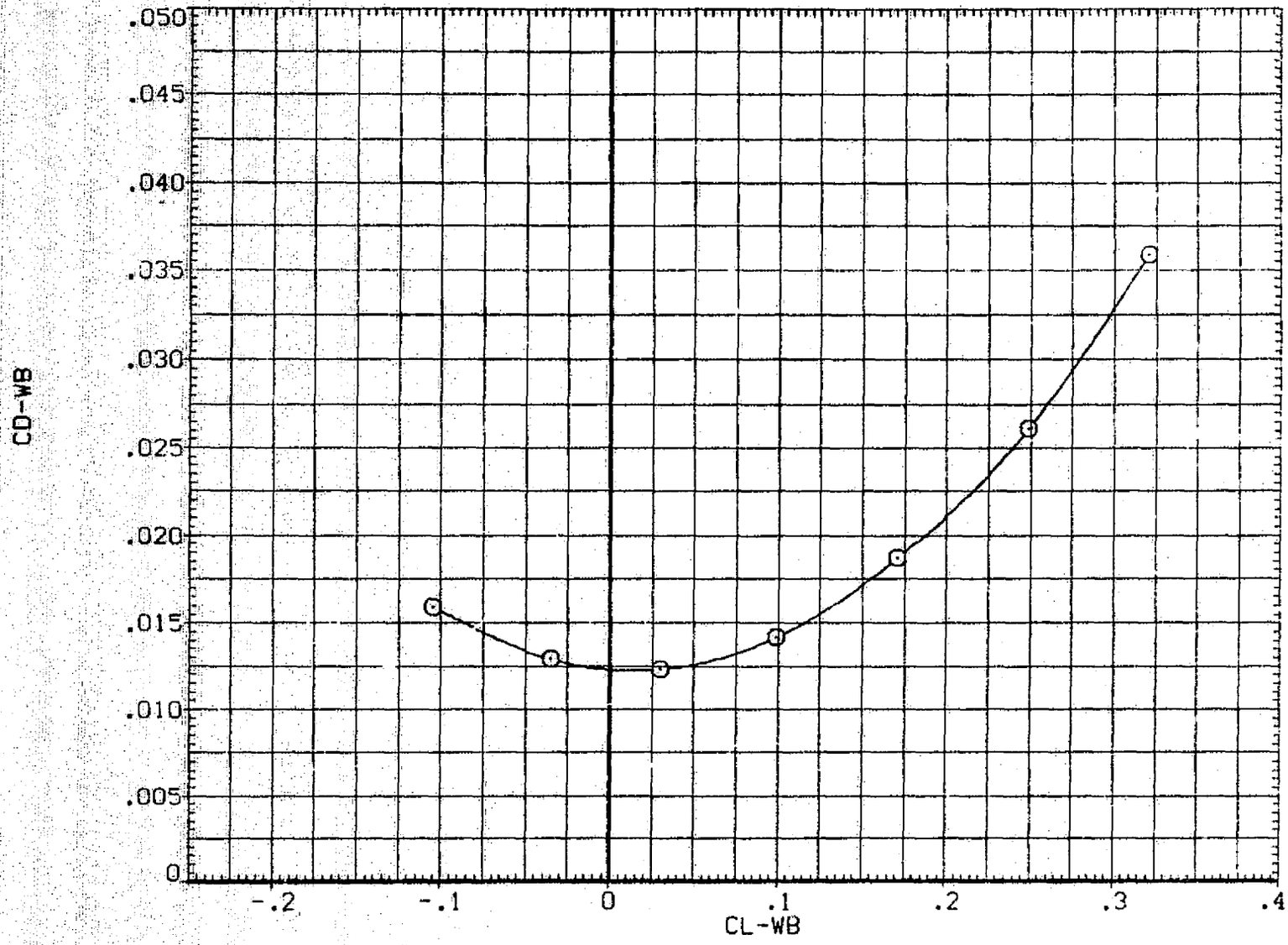


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)		W B N1 N1	56.000	.250	.550	.000
(RAP026)		W B N1 N1	48.000	.250	.550	.000
(RAP027)		W B N1 N1	40.000	.250	.550	.000
(RAP036)		W B N2 N2	56.000	.250	.550	.000
(RAP037)		W B N2 N2	48.000	.250	.550	.000

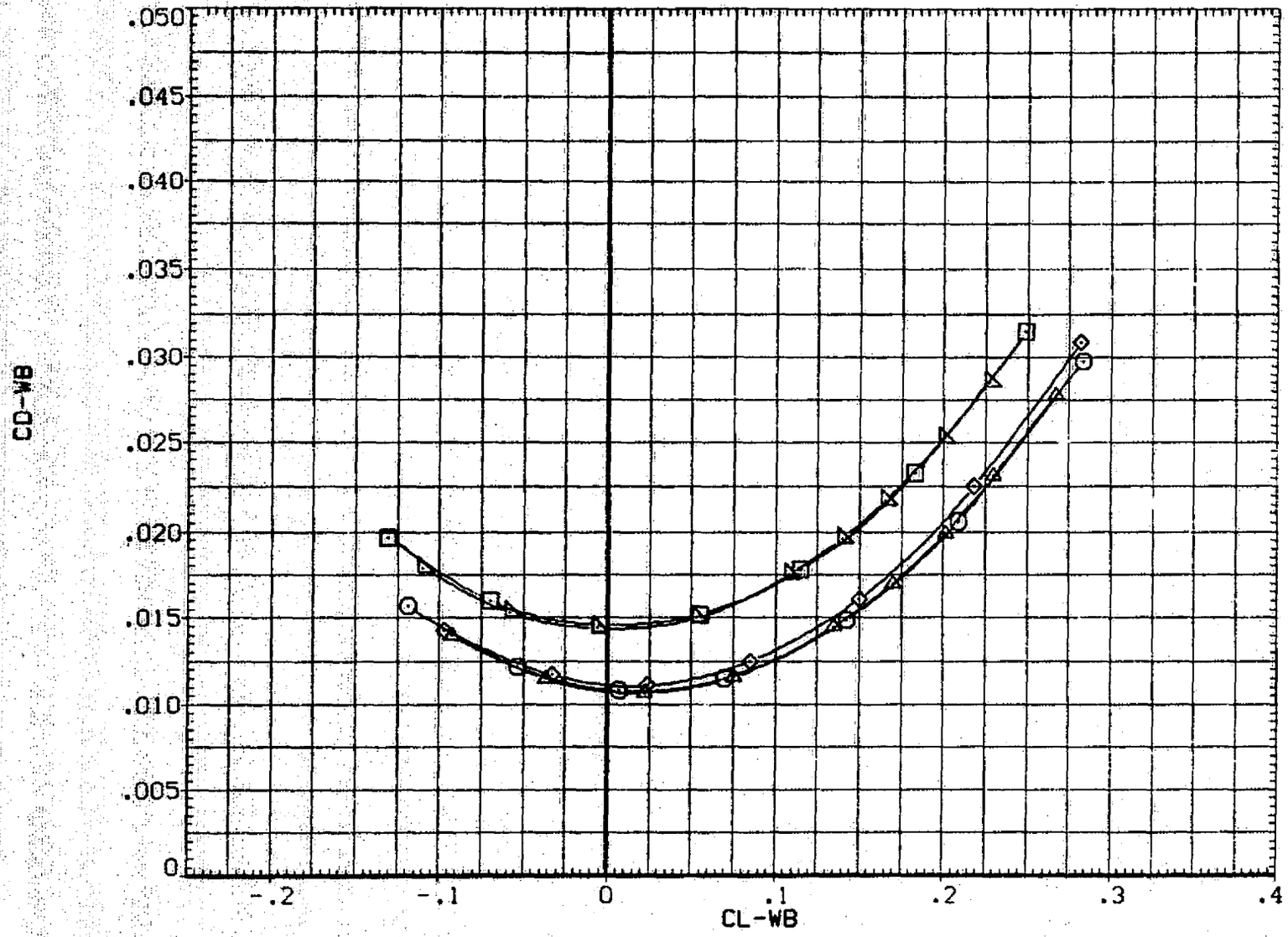


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)		W B N1 N1	56.000	.250	.550	.000
(RAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

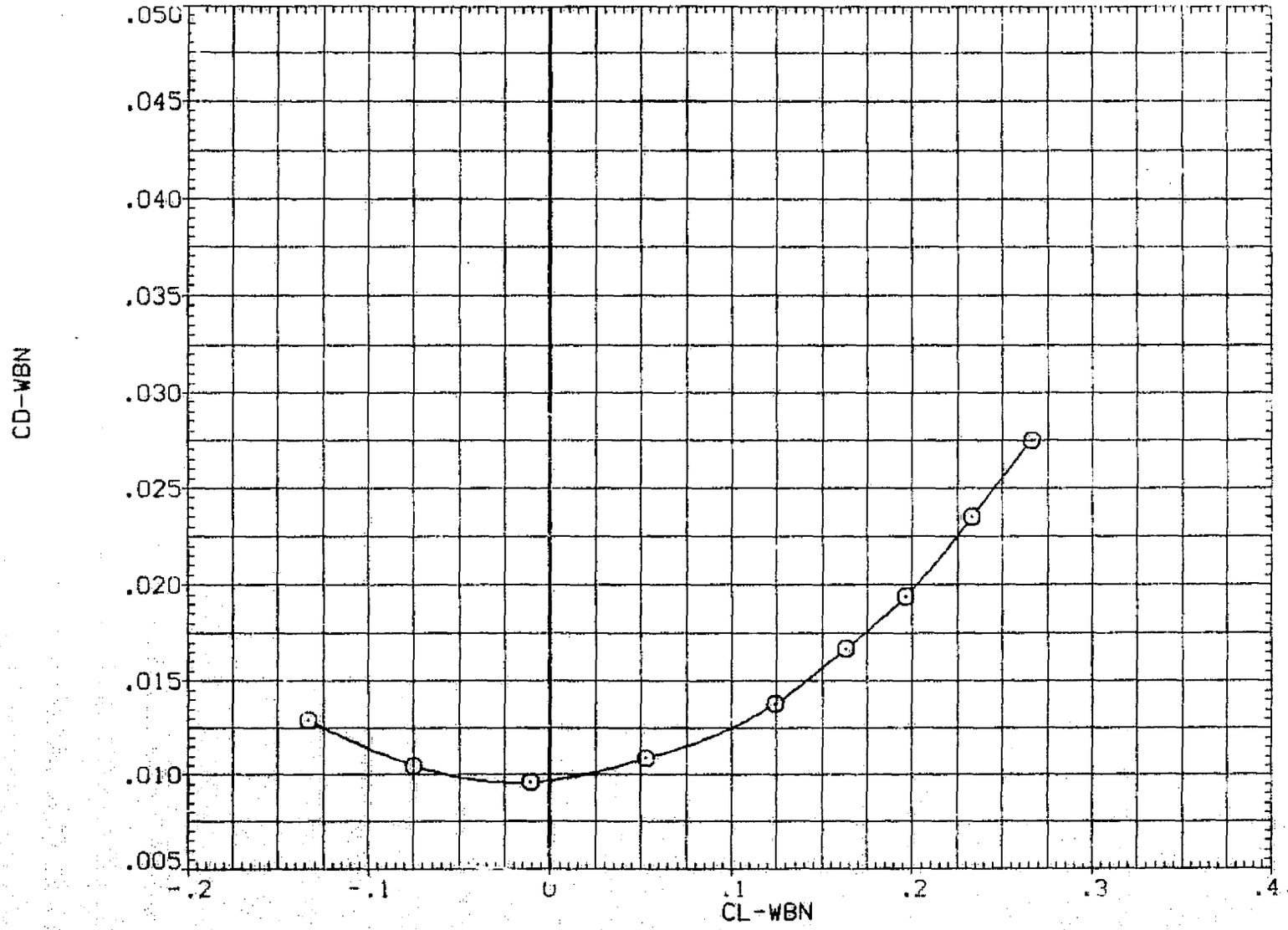


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(ZAP025)	○	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000

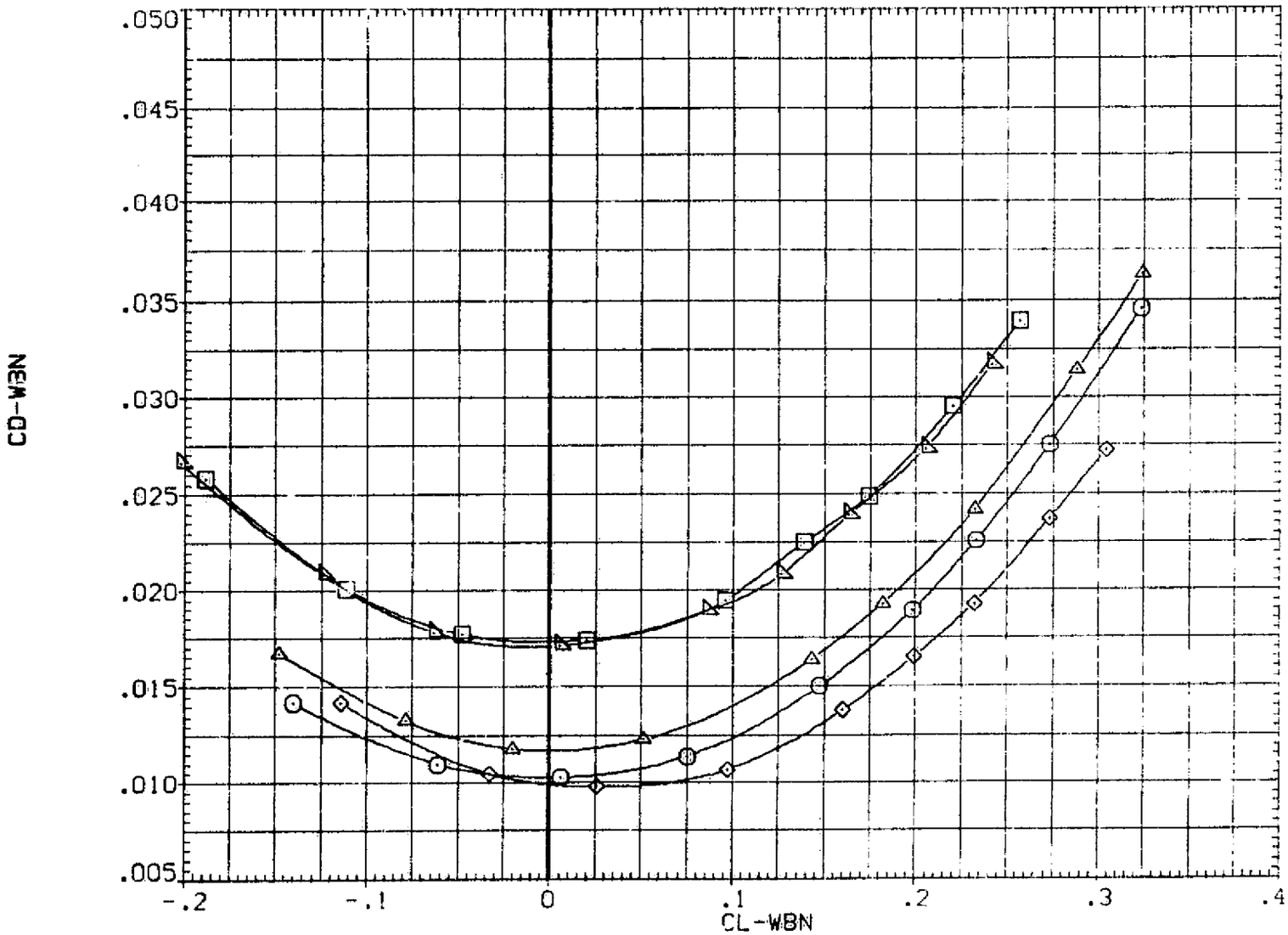


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)		W B NI NI	56.000	.250	.550	.000
(RAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

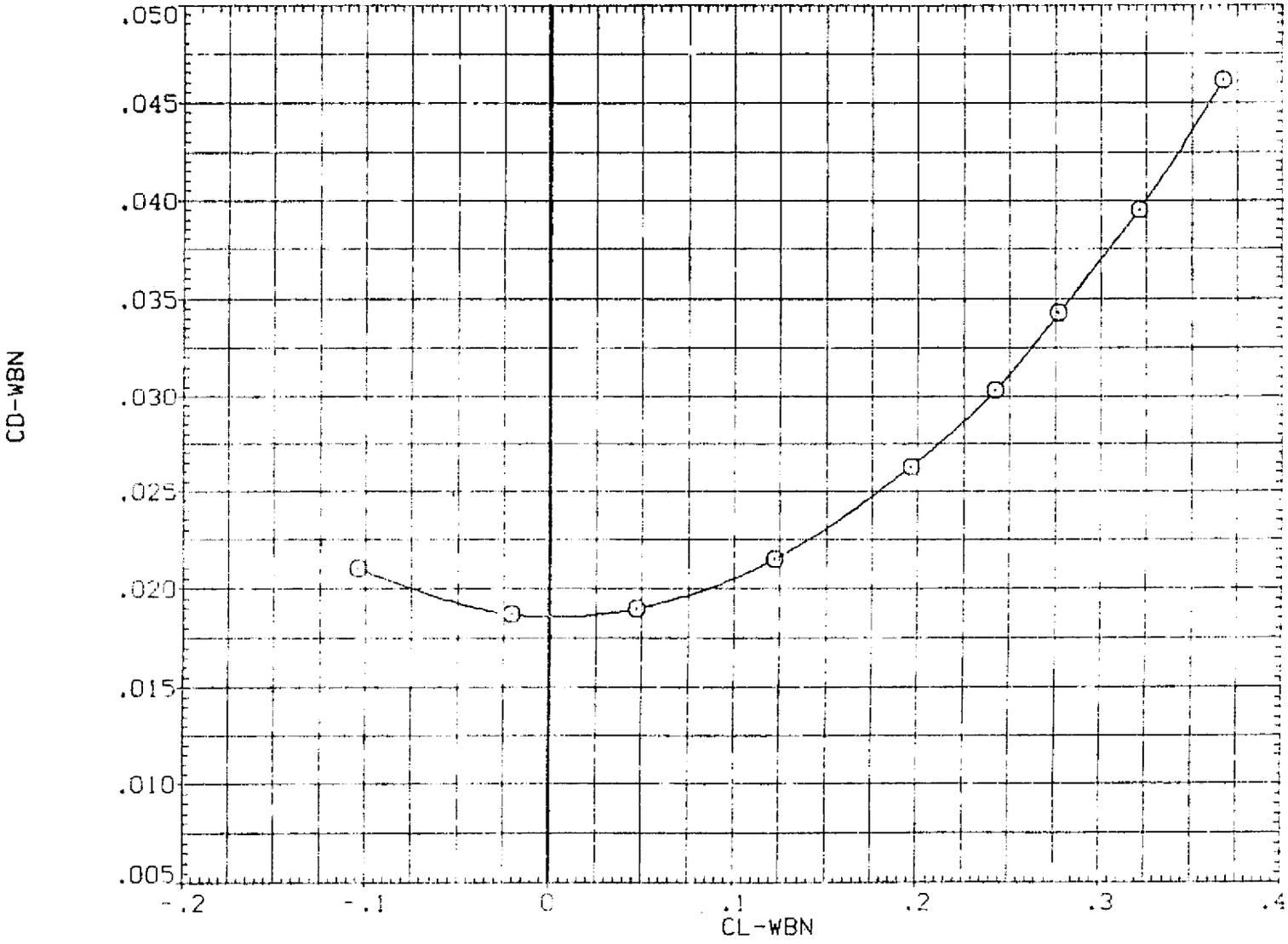


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	○	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	⋈	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000

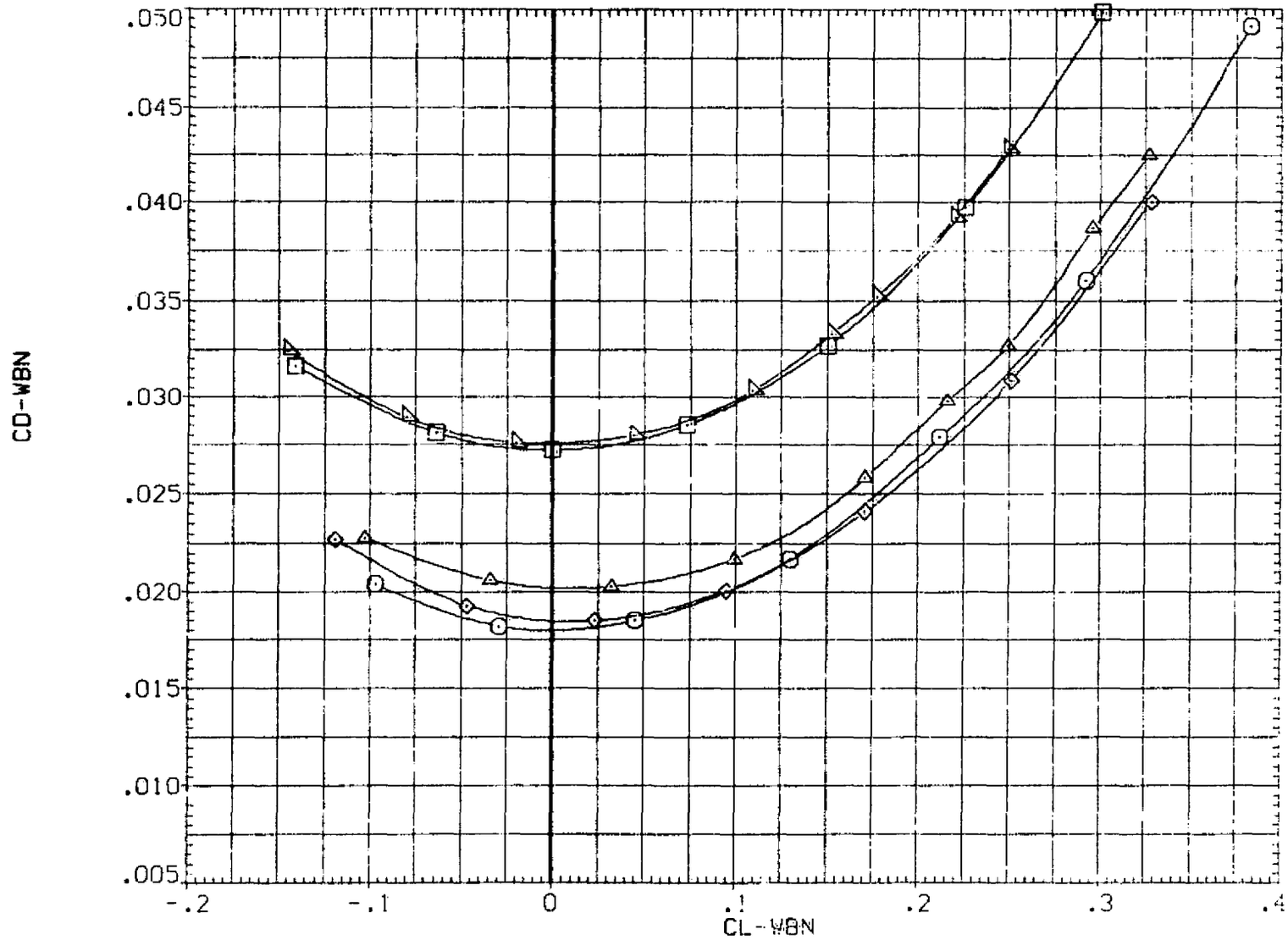


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	□	W B NI NI	56.000	.250	.550	.000
(RAP026)	○	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	⊠	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	◇	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

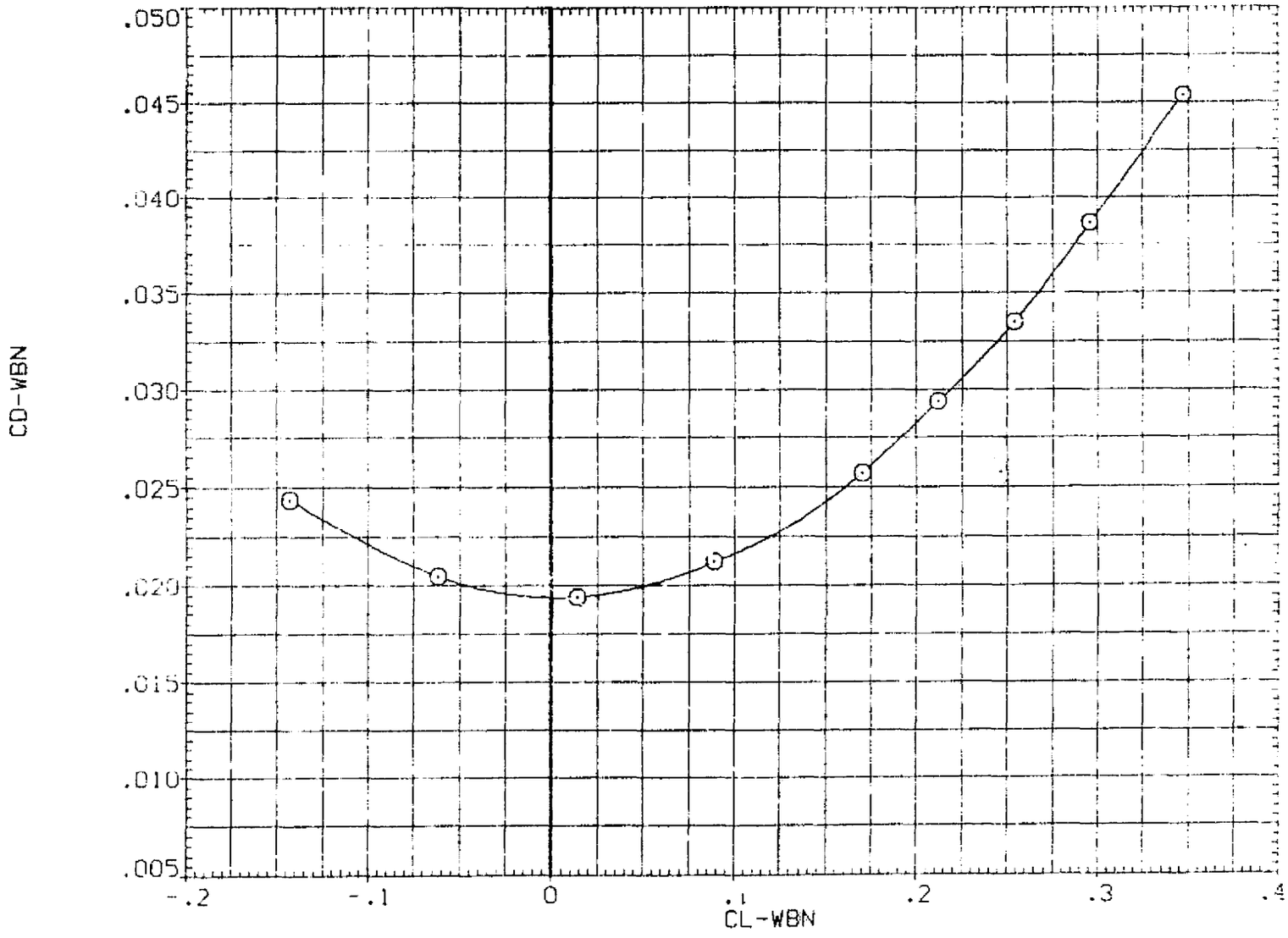


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	○	W B NI NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

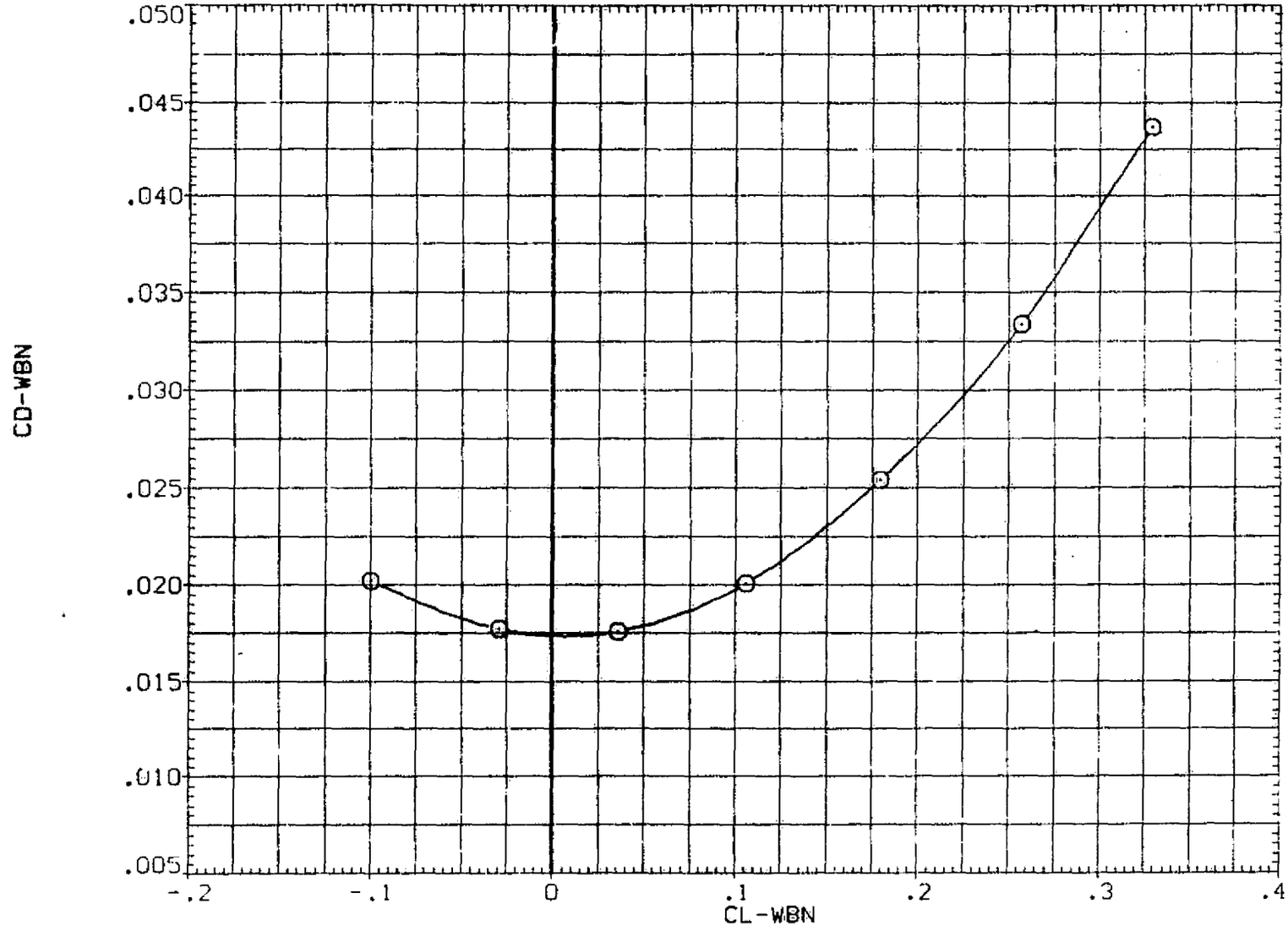


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-WBN	2Y1/B	2Y0/B	DX
(ZAP025)		W B N1 N1	56.000	.250	.550	.000
(RAP026)		W B N1 N1	48.000	.250	.550	.000
(RAP027)		W B N1 N1	40.000	.250	.550	.000
(RAP036)		W B N2 N2	56.000	.250	.550	.000
(RAP037)		W B N2 N2	48.000	.250	.550	.000

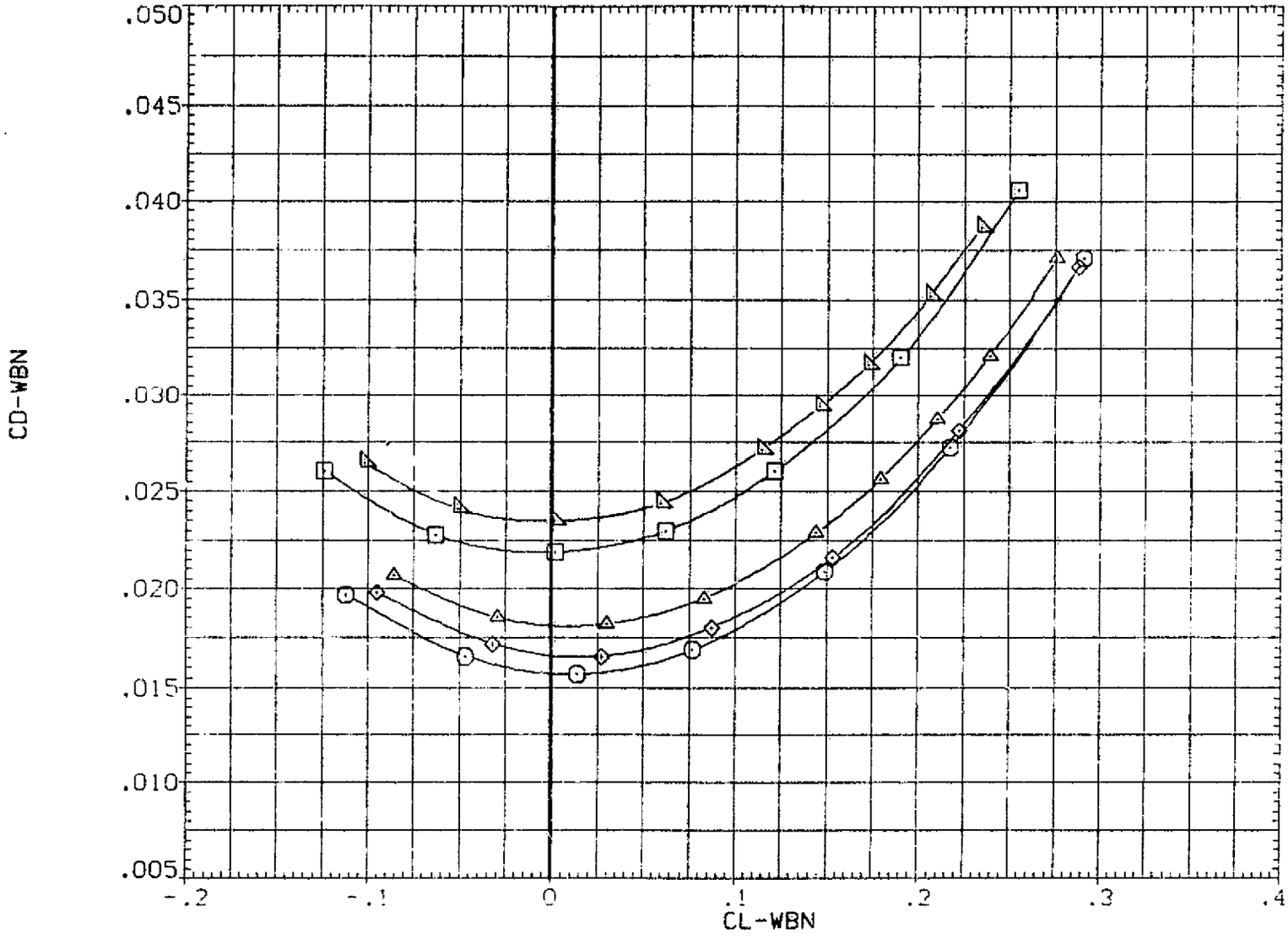


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	□	W B NI NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

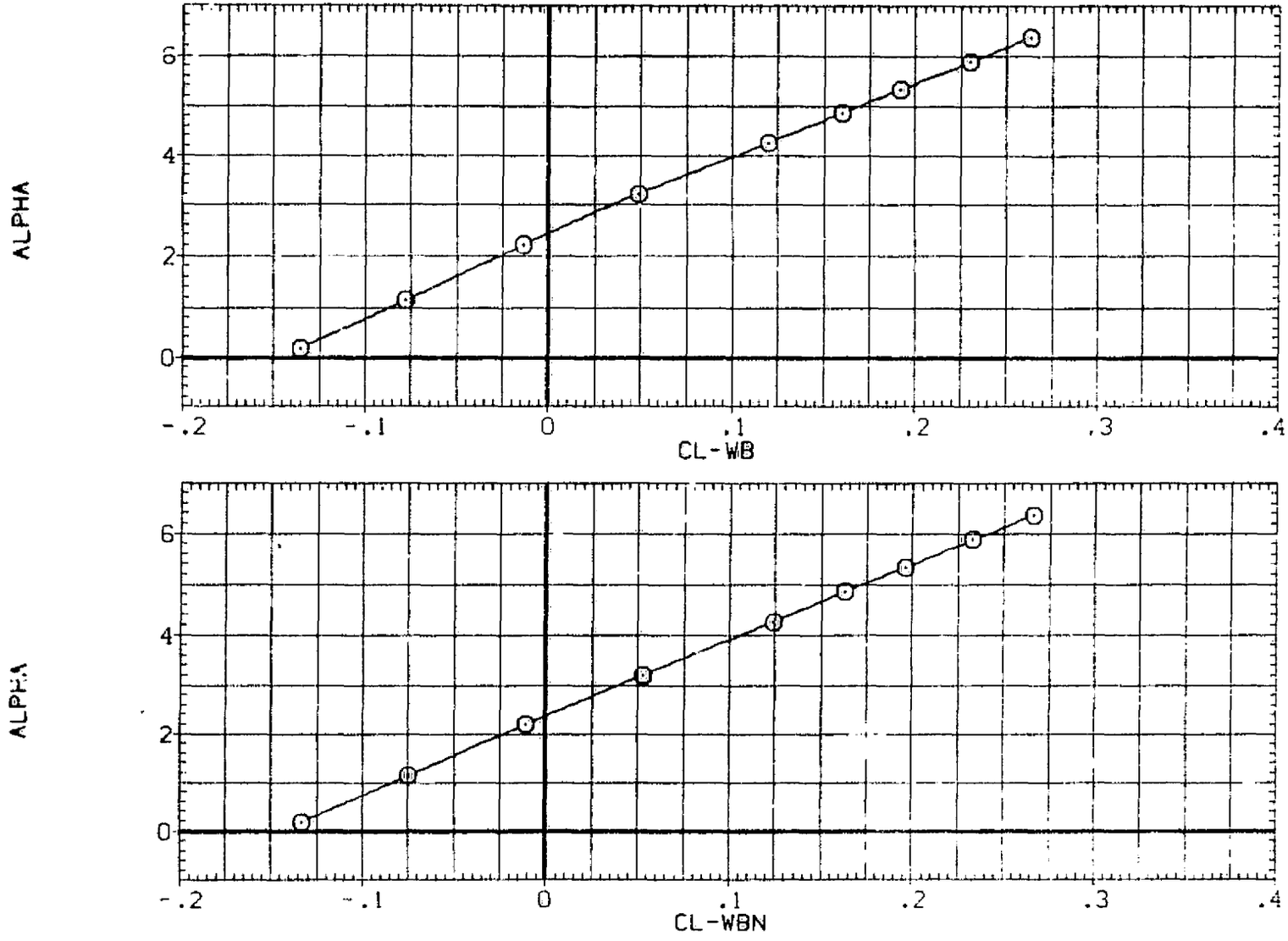


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAPD25)	△	W B N1 N1	56.000	.250	.550	.000
(RAPD26)	□	W B N1 N1	48.000	.250	.550	.000
(RAPD27)	◇	W B N1 N1	40.000	.250	.550	.000
(RAPD36)	△	W B N2 N2	56.000	.250	.550	.000
(RAPD37)	□	W B N2 N2	48.000	.250	.550	.000

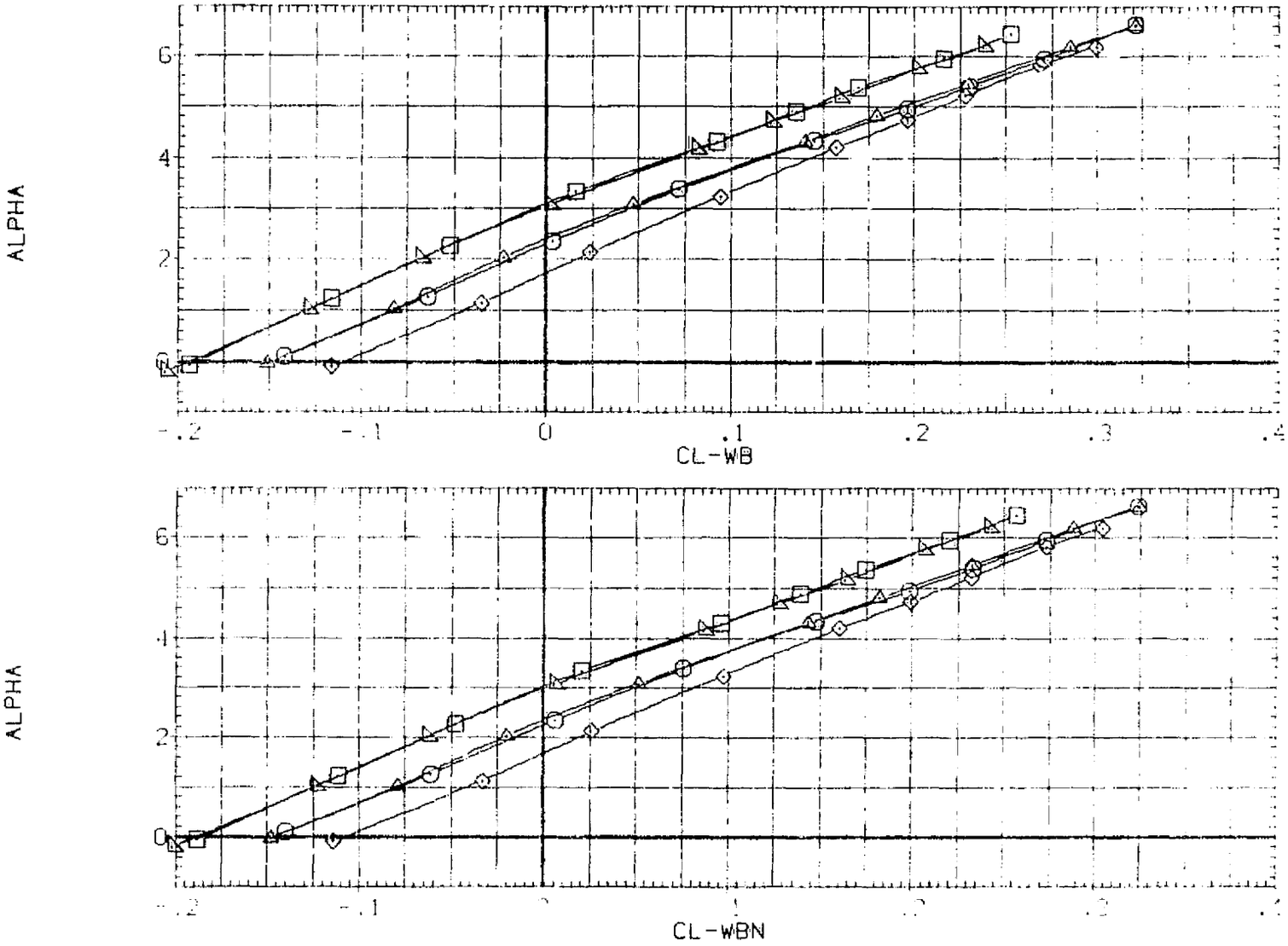


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	○	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	⋈	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▷	DATA NOT AVAILABLE	48.000	.250	.550	.000

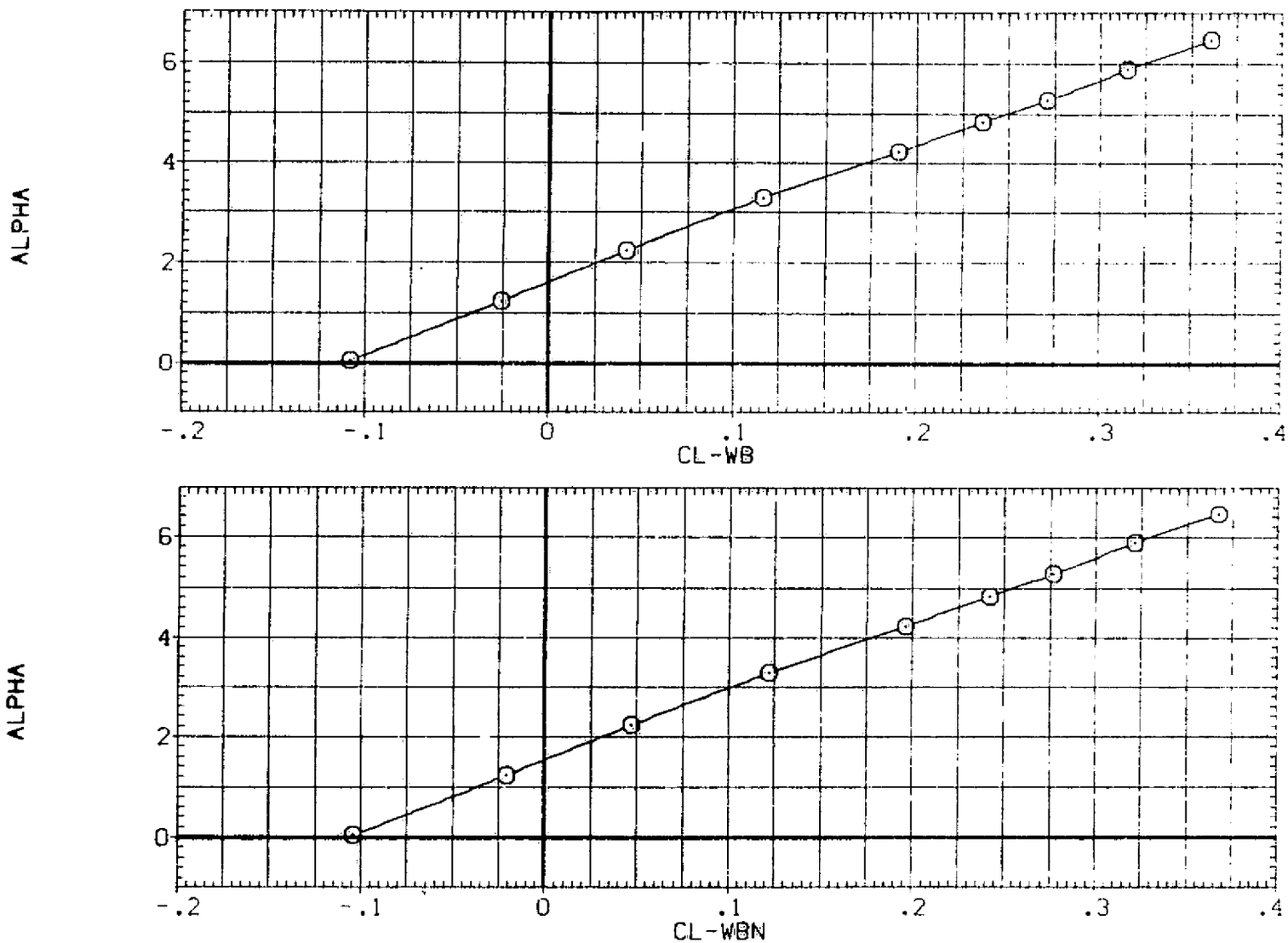


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	W B N1 N1	56.000	.250	.550	.000
(RAP026)	W B N1 N1	48.000	.250	.550	.000
(RAP027)	W B N1 N1	40.000	.250	.550	.000
(RAP036)	W B N2 N2	56.000	.250	.550	.000
(RAP037)	W B N2 N2	48.000	.250	.550	.000

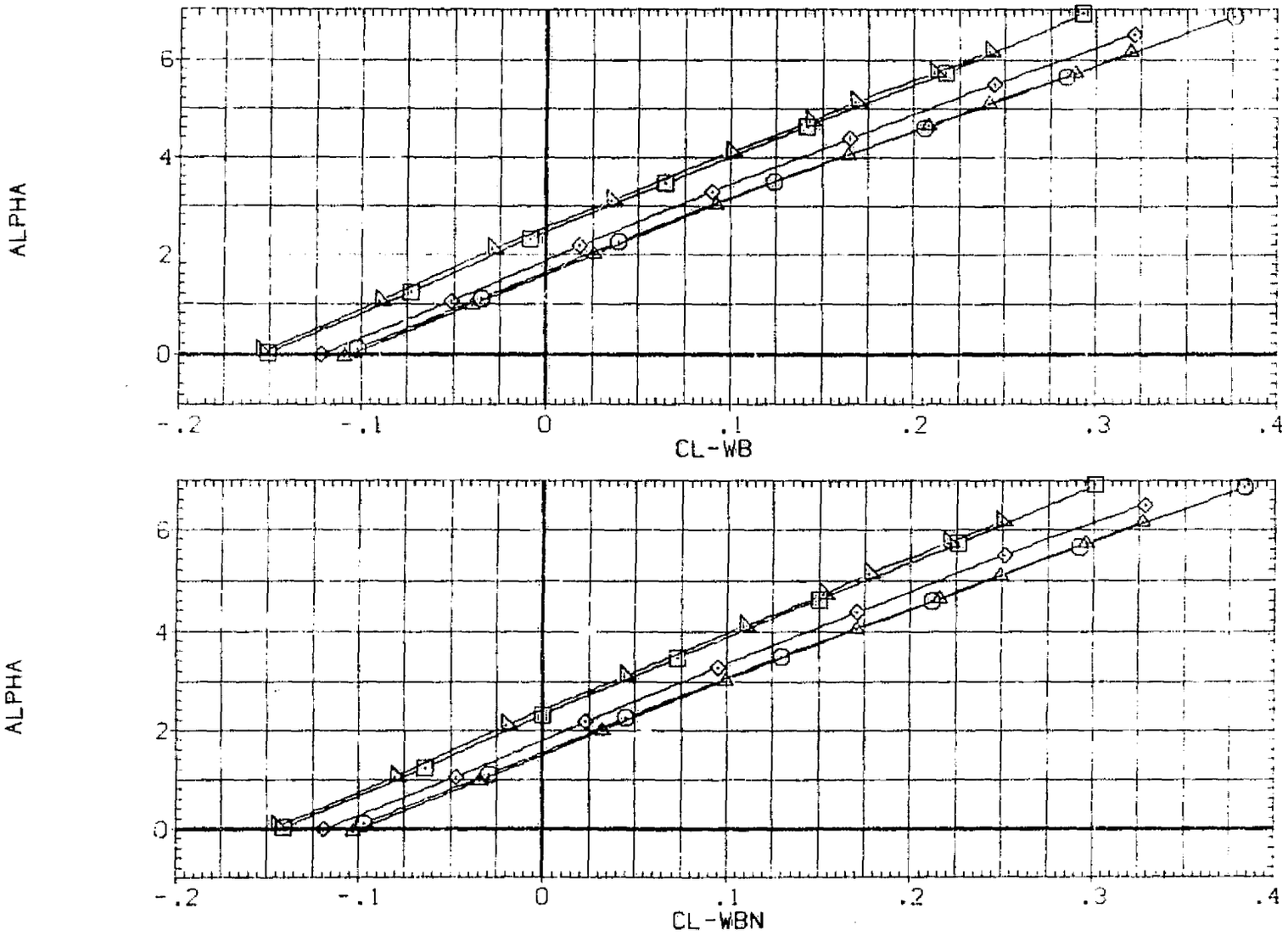
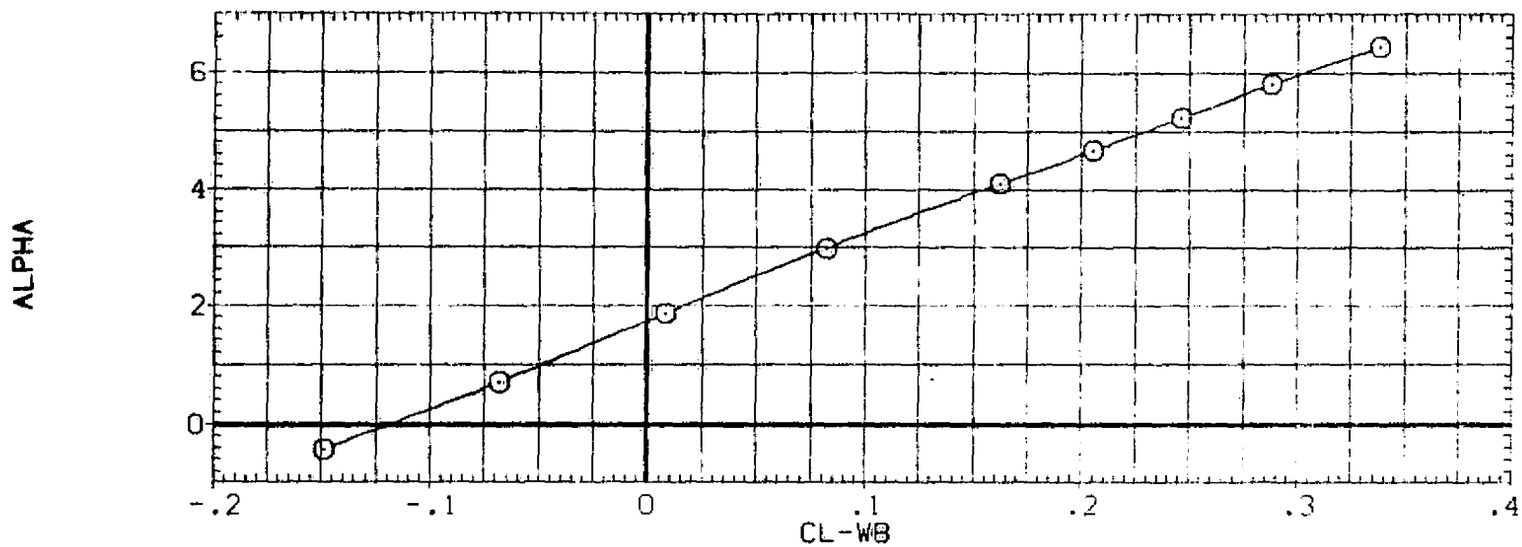


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000



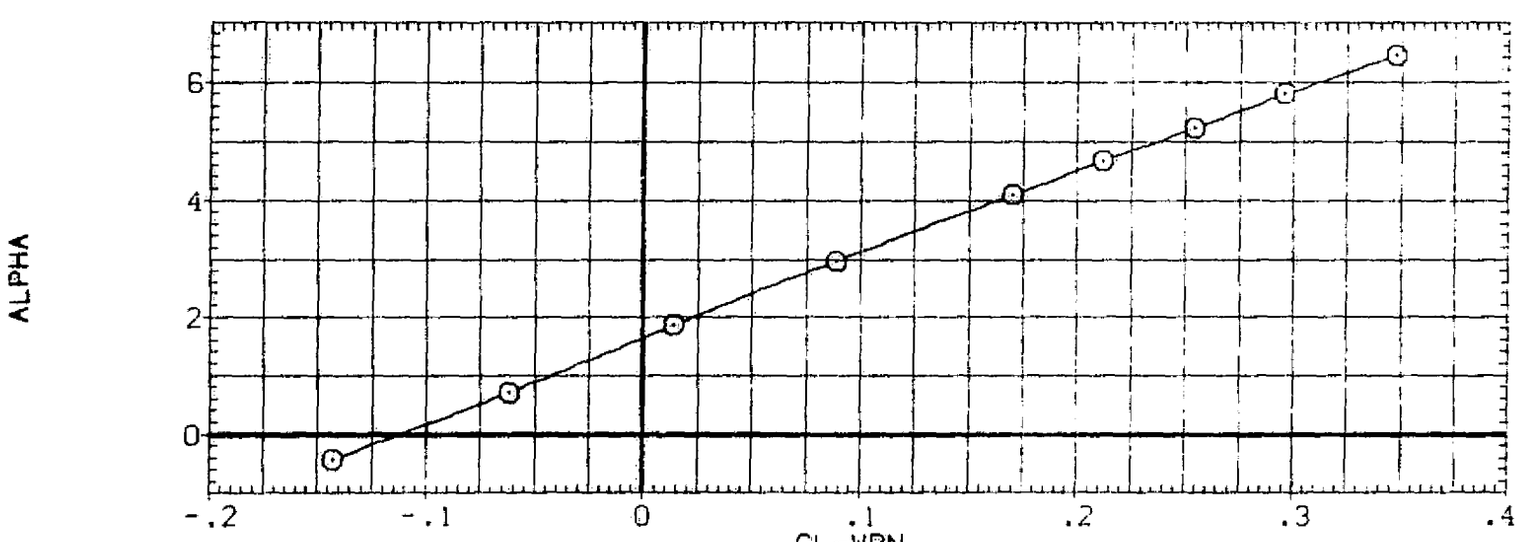


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	△	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	⊗	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

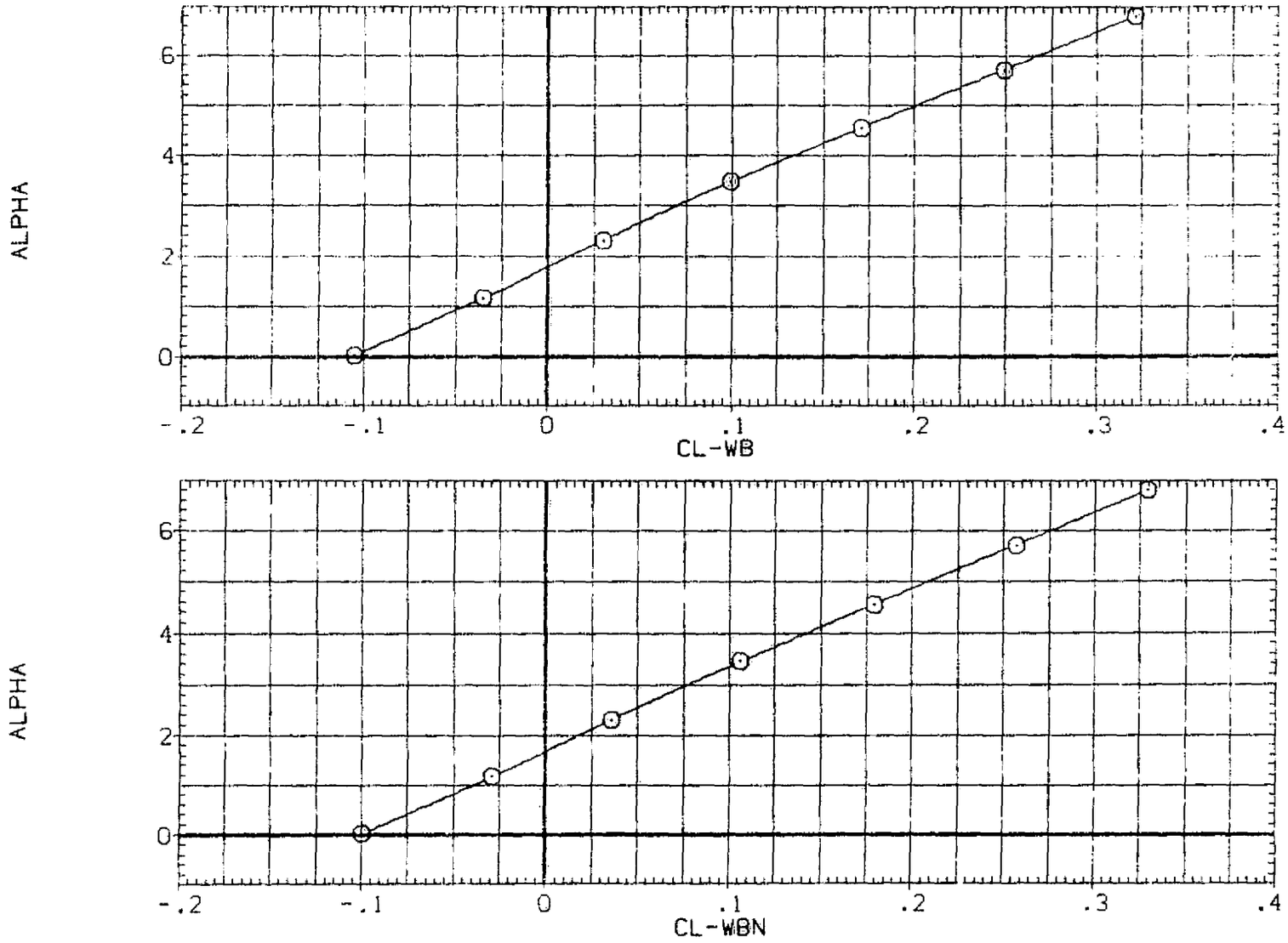


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	○	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000

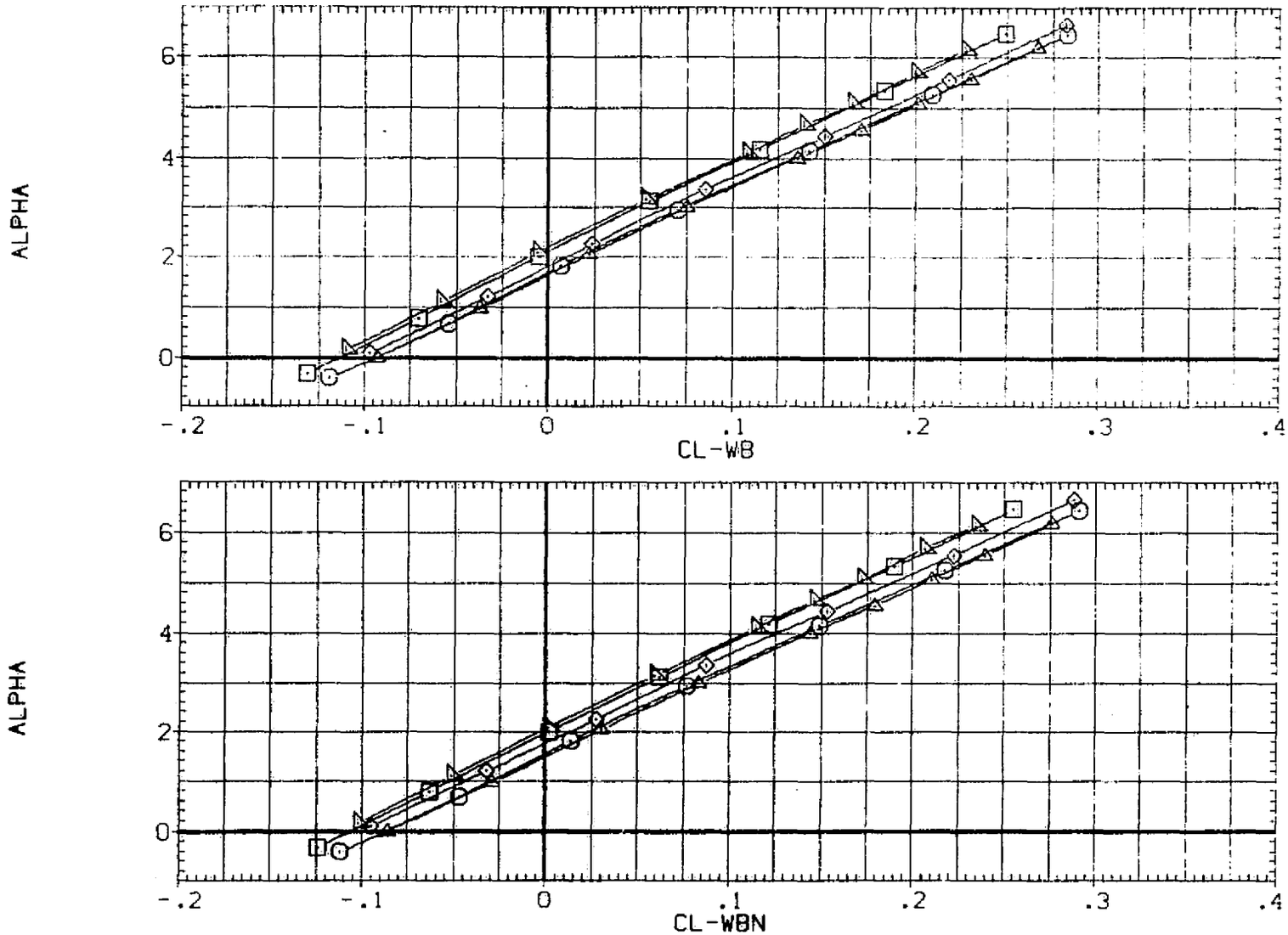


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
[ZAP025]		W B N1 N1
[RAP026]		DATA NOT AVAILABLE
[RAP027]		DATA NOT AVAILABLE
[RAP036]		DATA NOT AVAILABLE
[RAP037]		DATA NOT AVAILABLE

X-INBD	2Y1/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

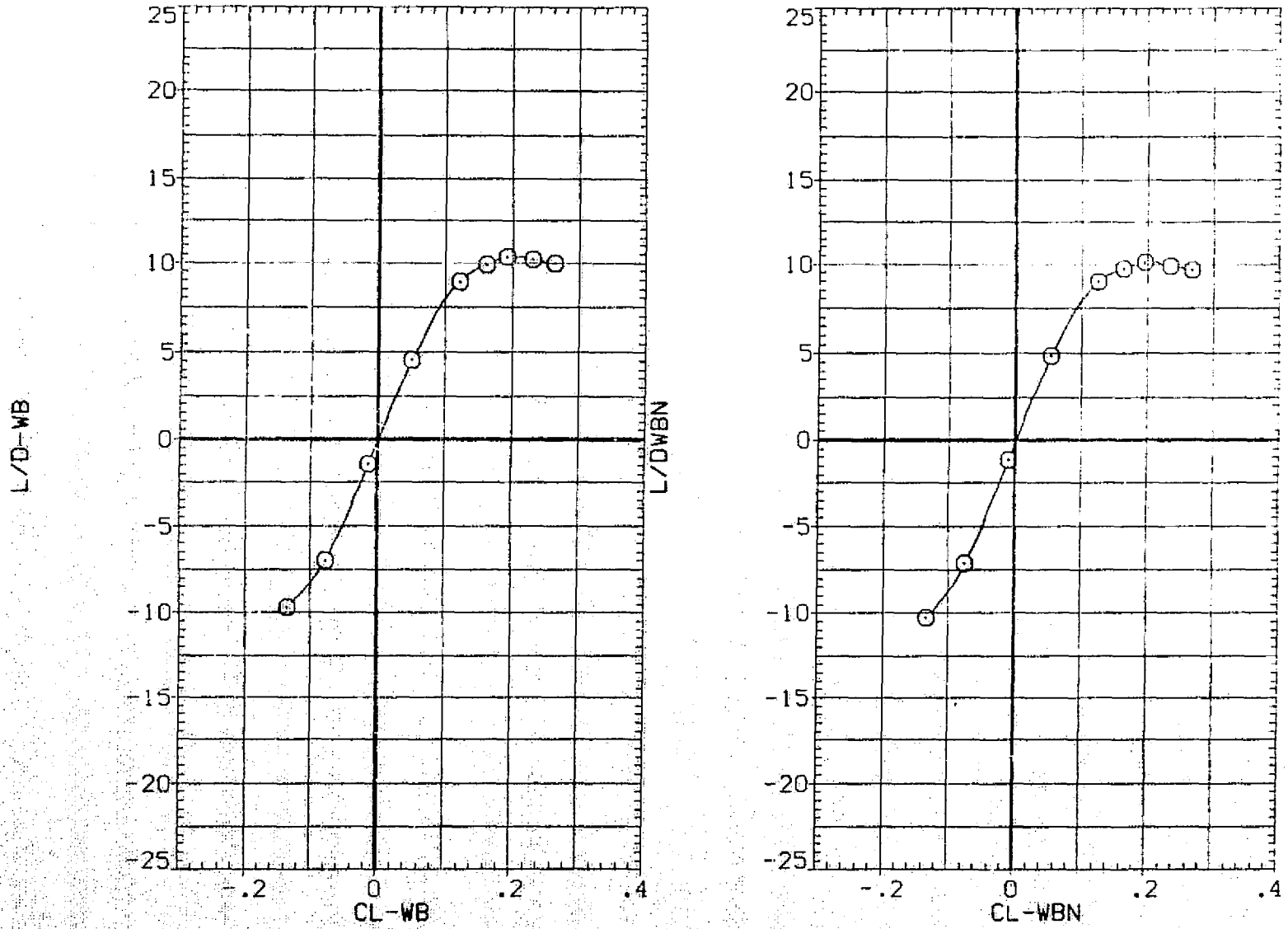


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

[A]MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(ZAP025)	◇	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◁	W B N1 N1	40.000	.250	.550	.000
(RAP036)	○	W B N2 N2	56.000	.250	.550	.000
(RAP037)	△	W B N2 N2	48.000	.250	.550	.000

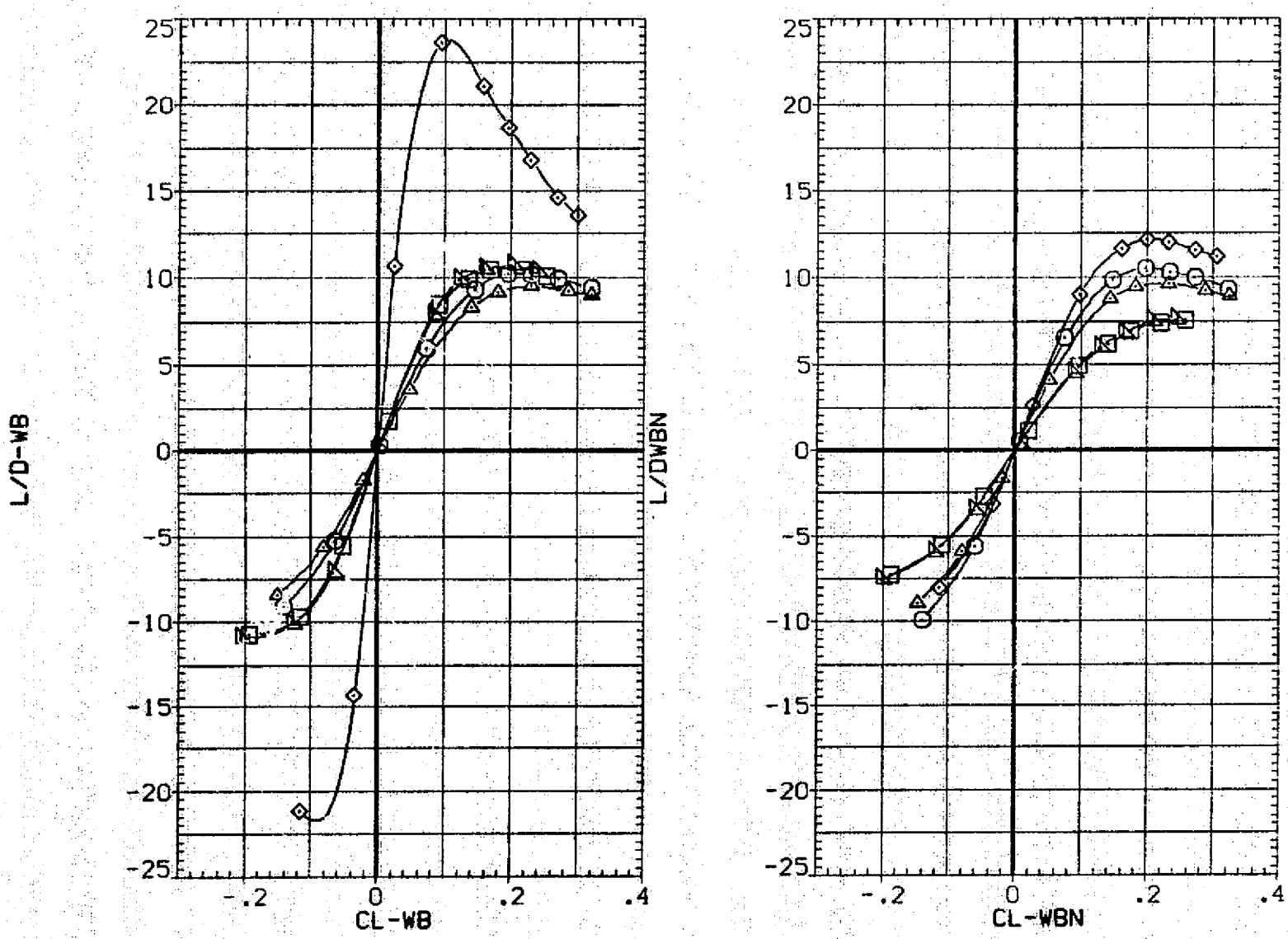


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	▽	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	⊲	DATA NOT AVAILABLE	48.000	.250	.550	.000

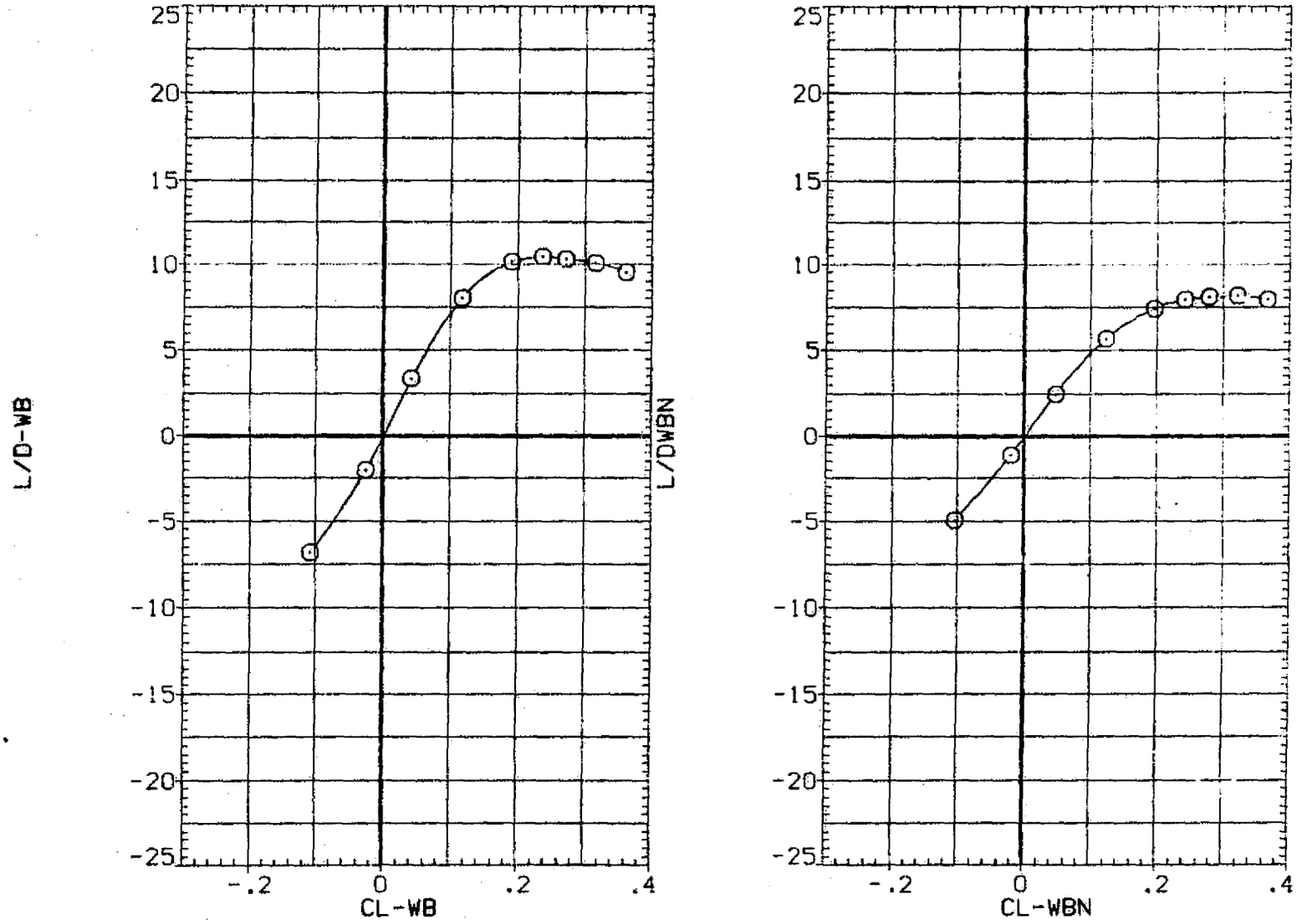


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(ZAP025)	□	W B N1 N1
(RAP026)	◇	W B N1 N1
(RAP027)	△	W B N1 N1
(RAP036)	▽	W B N2 N2
(RAP037)	◁	W B N2 N2

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

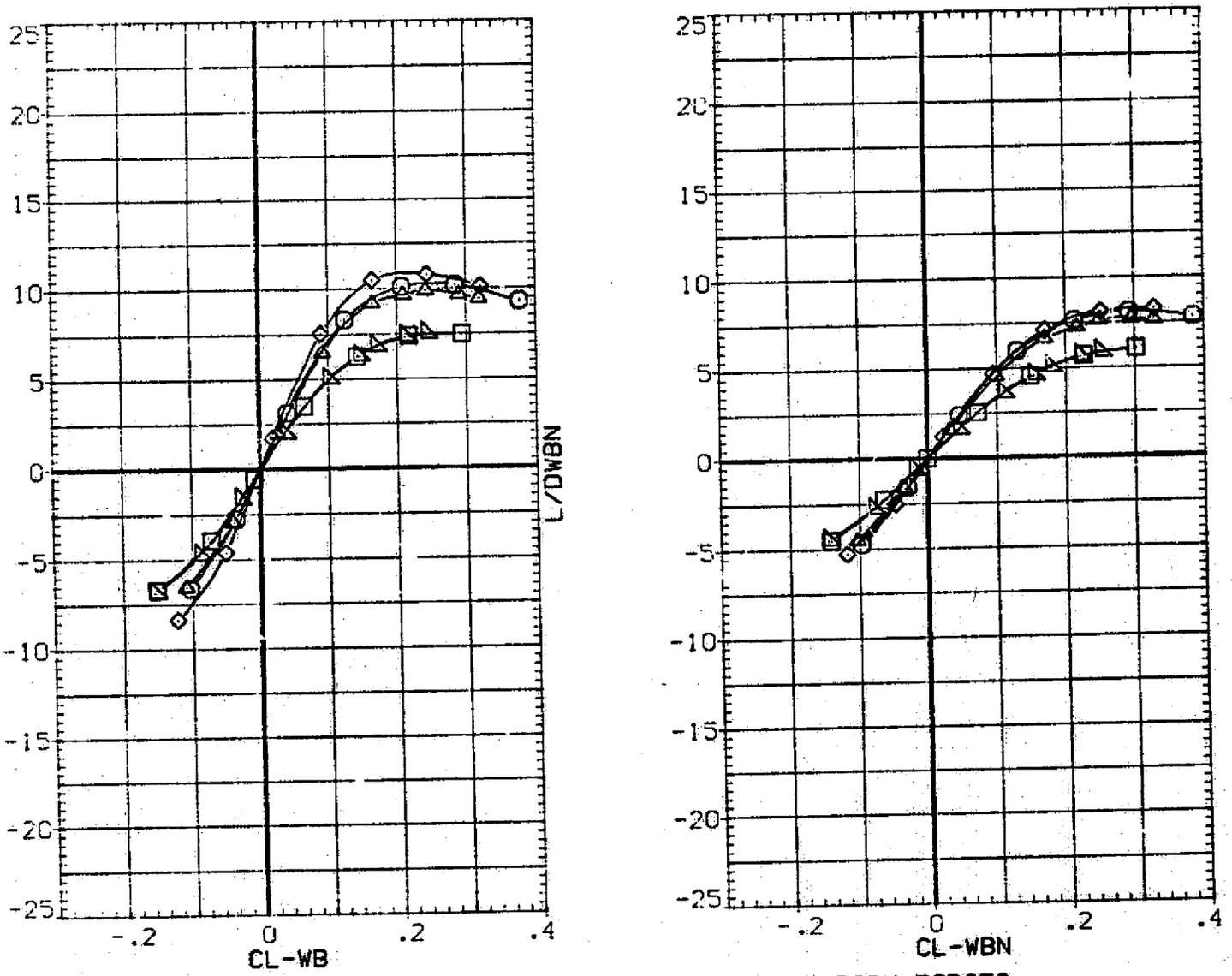


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(DIVACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
[ZAP025]		W B NI N1
[RAP026]		DATA NOT AVAILABLE
[RAP027]		DATA NOT AVAILABLE
[RAP036]		DATA NOT AVAILABLE
[RAP037]		DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

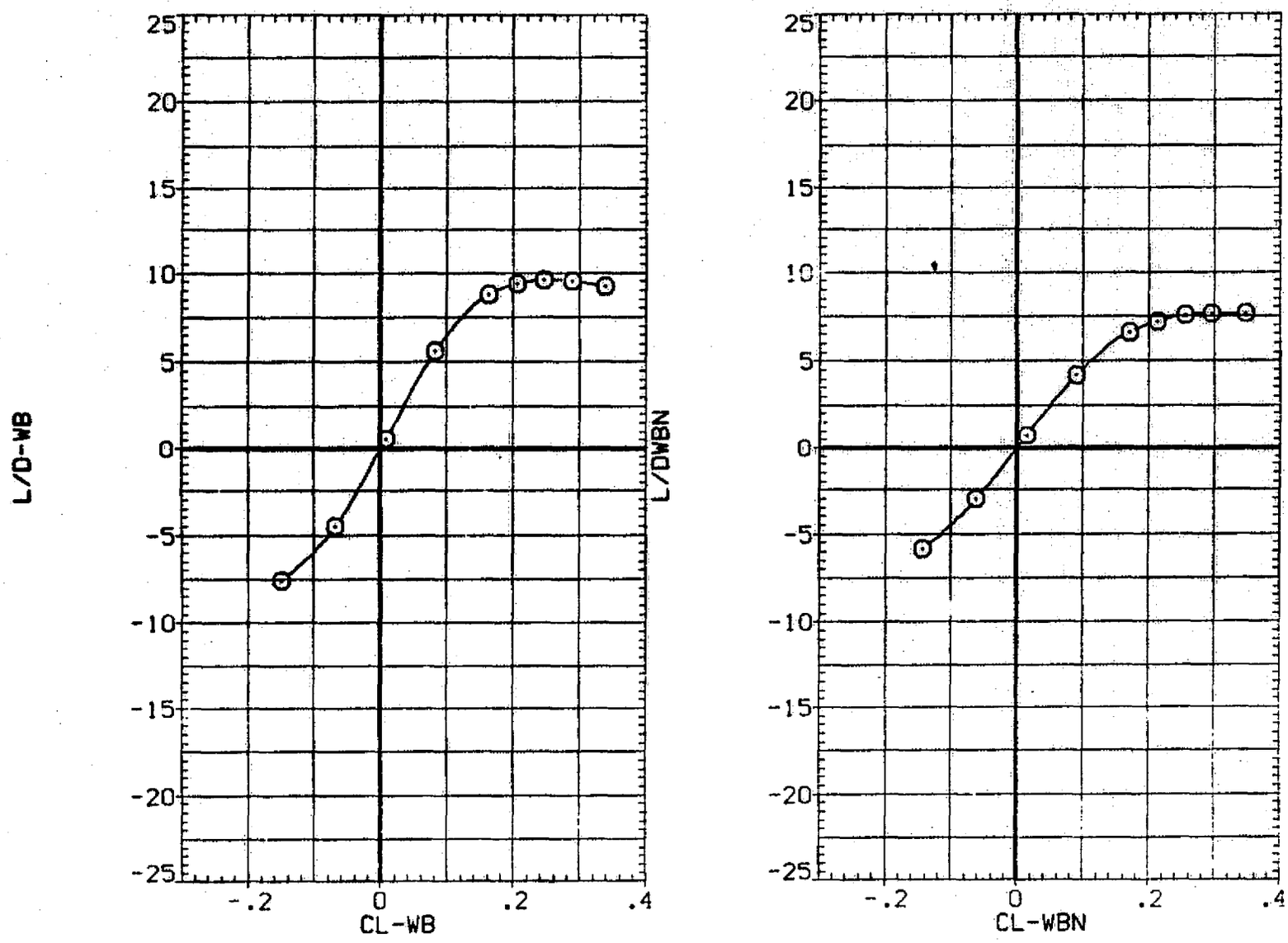


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(ZAP025)		W B N1 N1
(RAP026)		DATA NOT AVAILABLE
(RAP027)		DATA NOT AVAILABLE
(RAP036)		DATA NOT AVAILABLE
(RAP037)		DATA NOT AVAILABLE

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

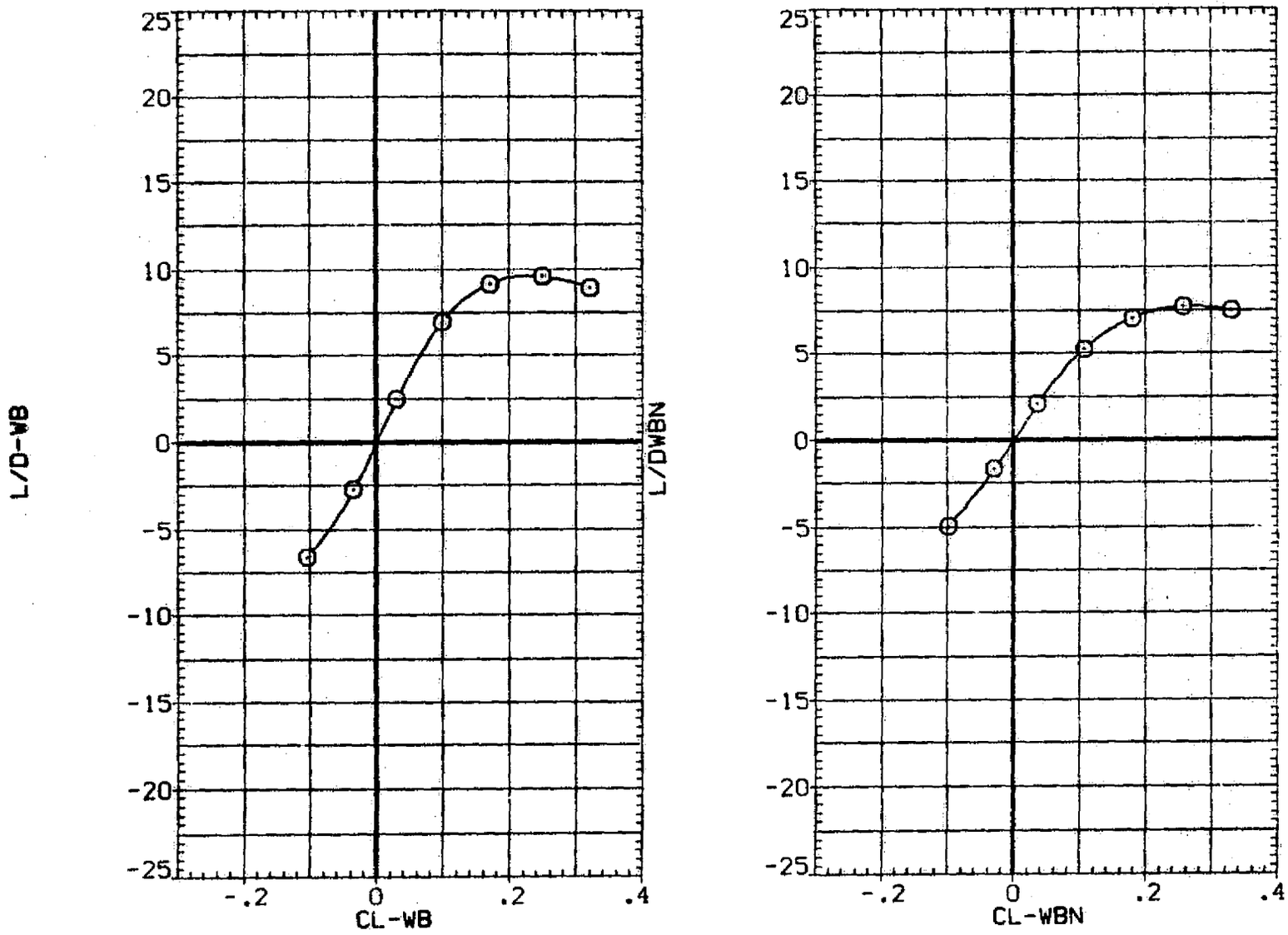


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◁	W B N1 N1	40.000	.250	.550	.000
(RAP036)	○	W B N2 N2	56.000	.250	.550	.000
(RAP037)	△	W B N2 N2	48.000	.250	.550	.000

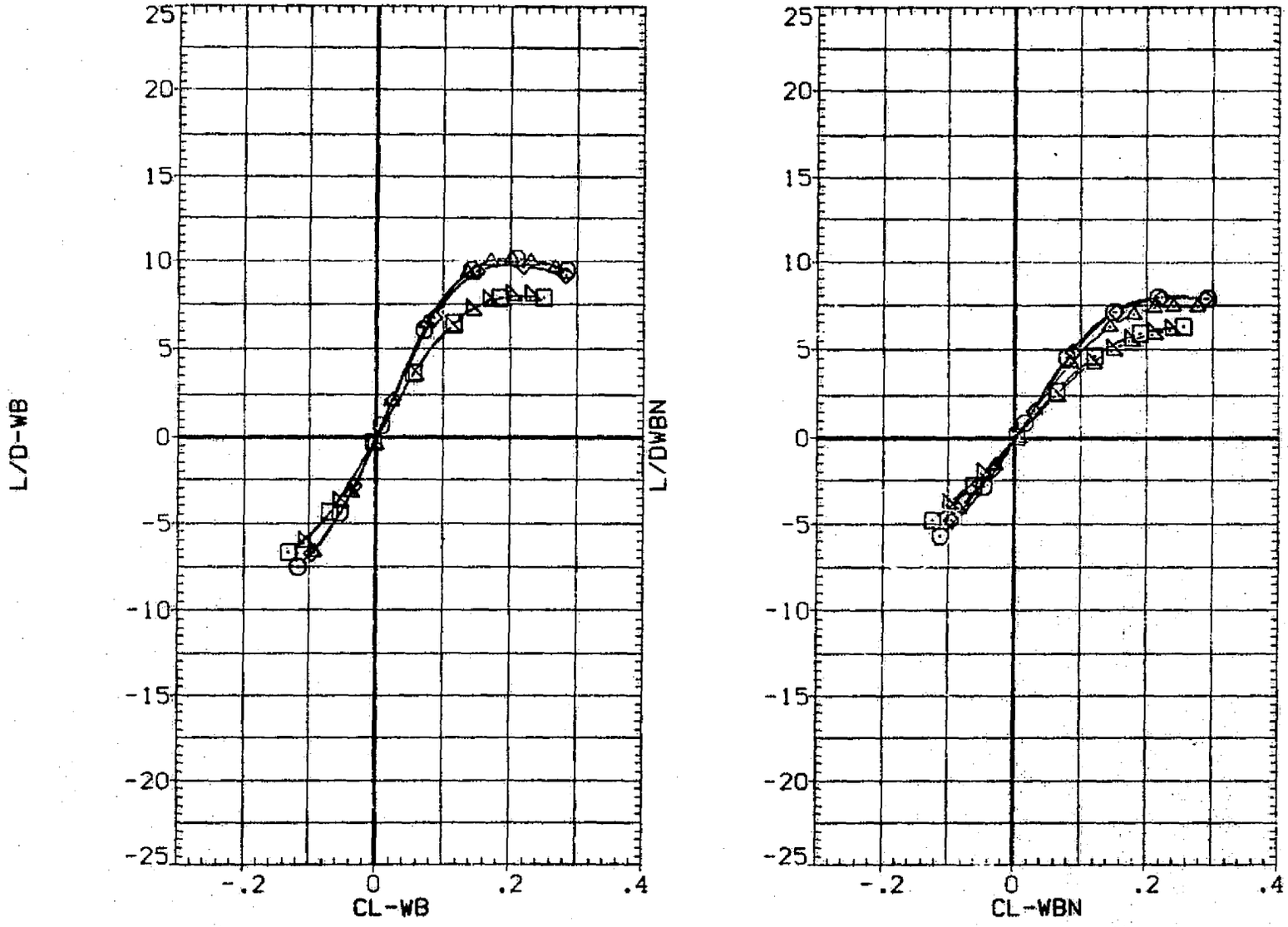


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	○	W B NI NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	⊠	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	◁	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	◺	DATA NOT AVAILABLE	48.000	.250	.550	.000

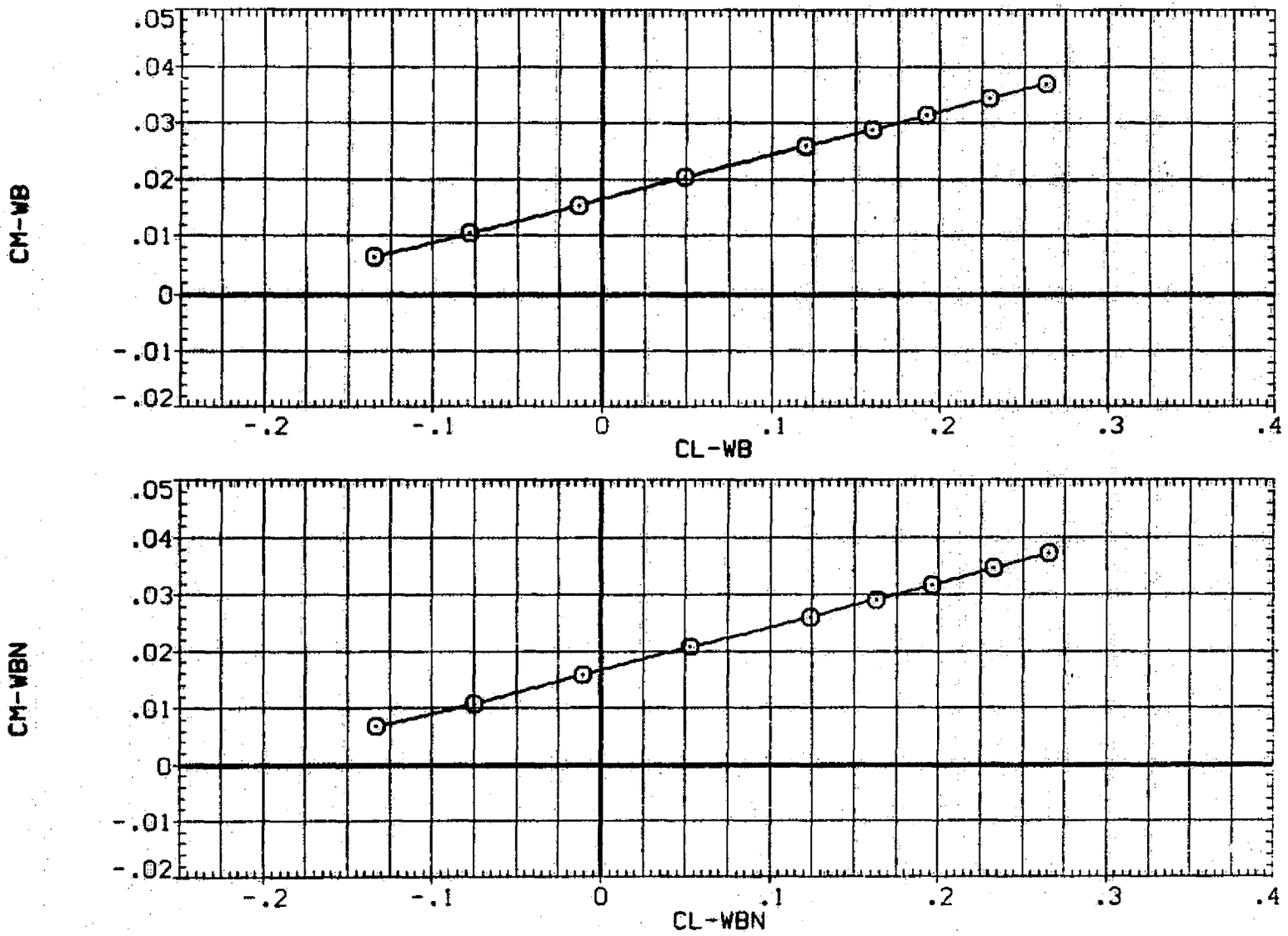
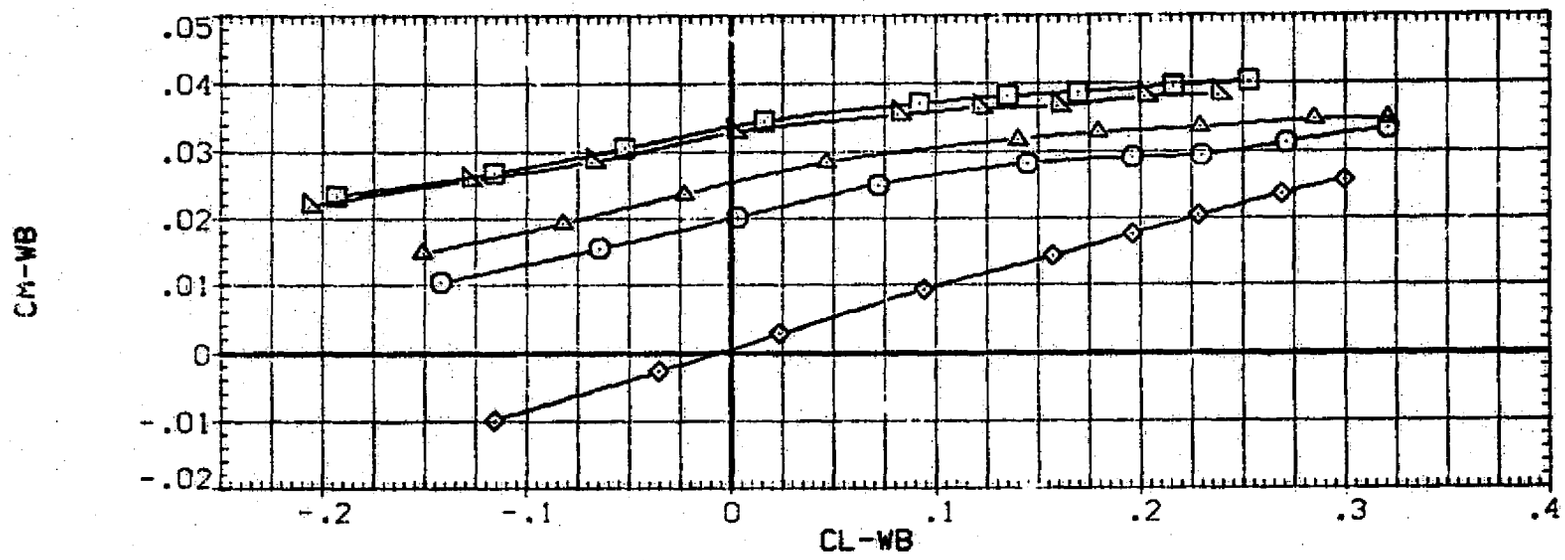


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	△	W B N1 N1	48.000	.250	.550	.000
(RAP027)	○	W B N1 N1	40.000	.250	.550	.000
(RAP036)	◇	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000



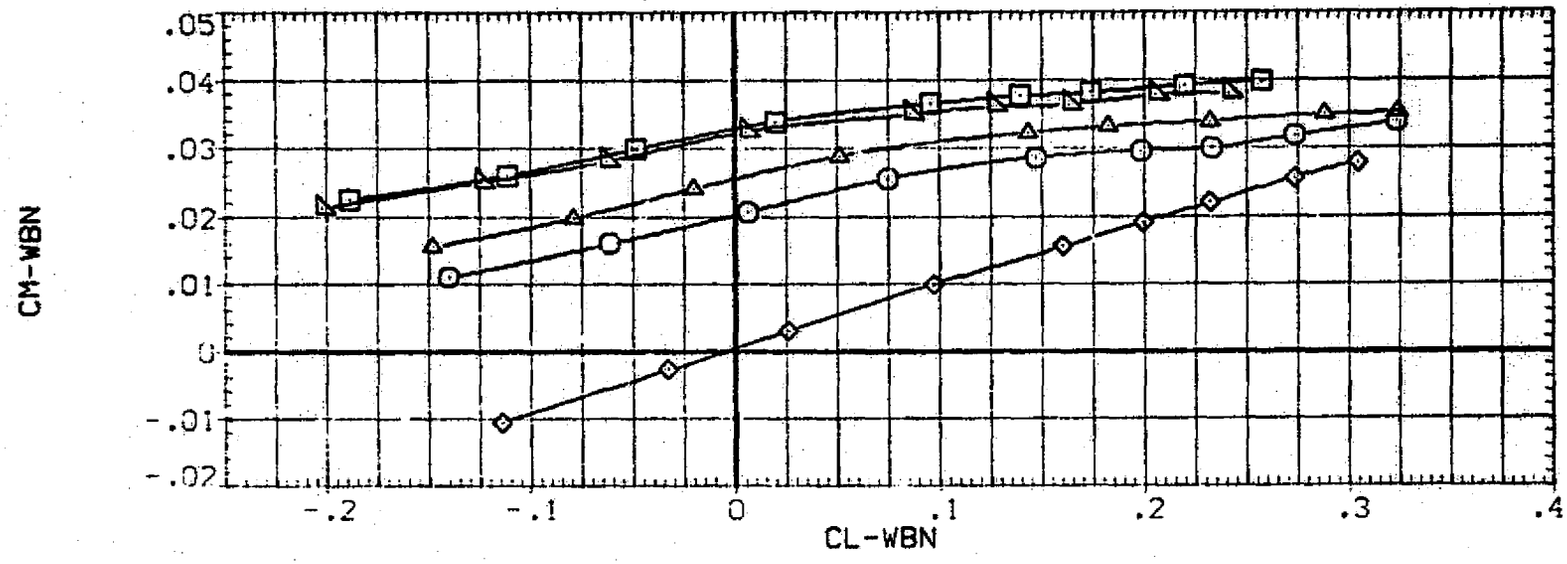


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B NI NI	56.000	.750	.550	.000
(RAP026)	◇	DATA NOT AVAILABLE	48.000	.750	.550	.000
(RAP027)	△	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	⊲	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▷	DATA NOT AVAILABLE	48.000	.250	.550	.000

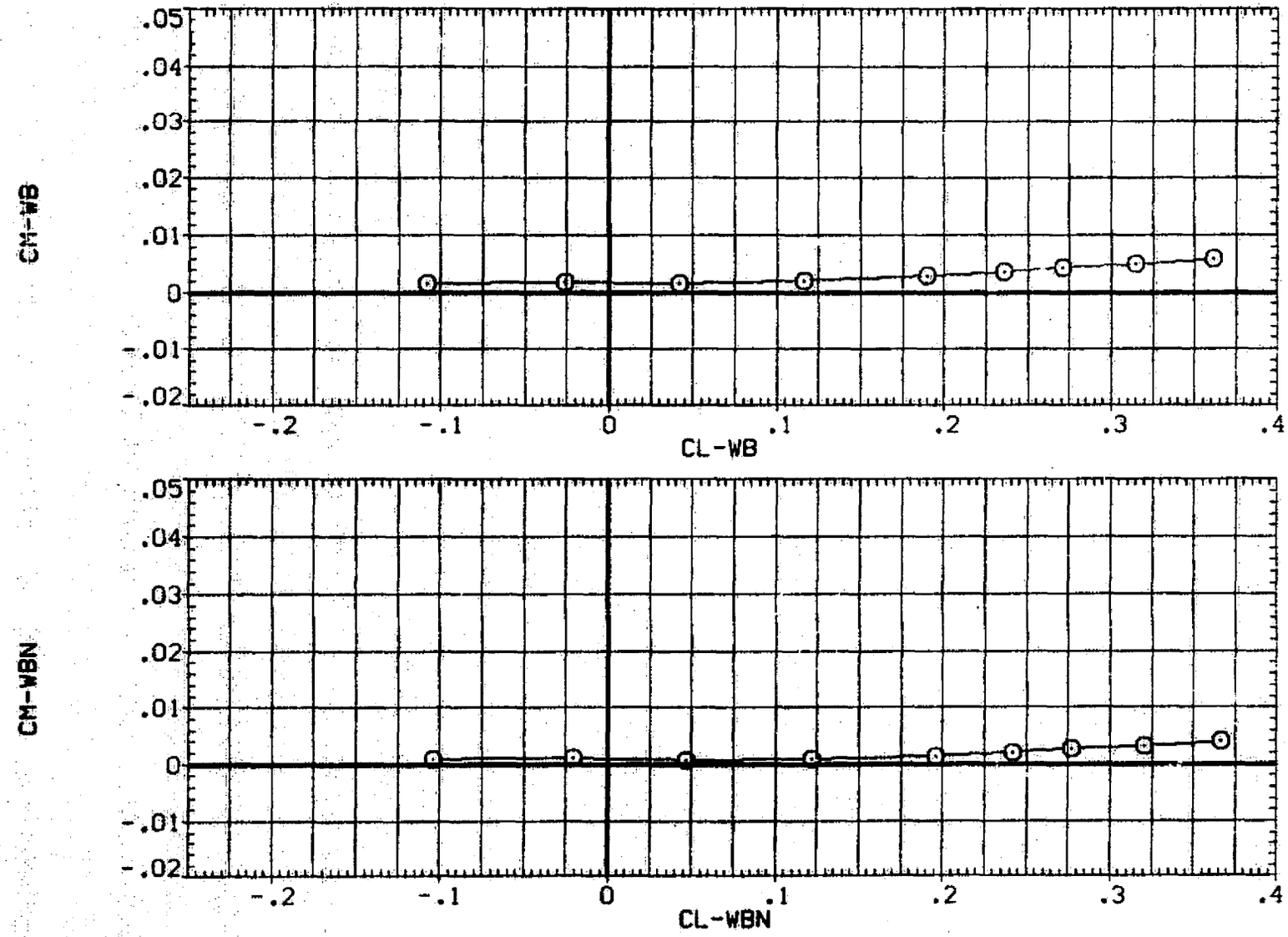
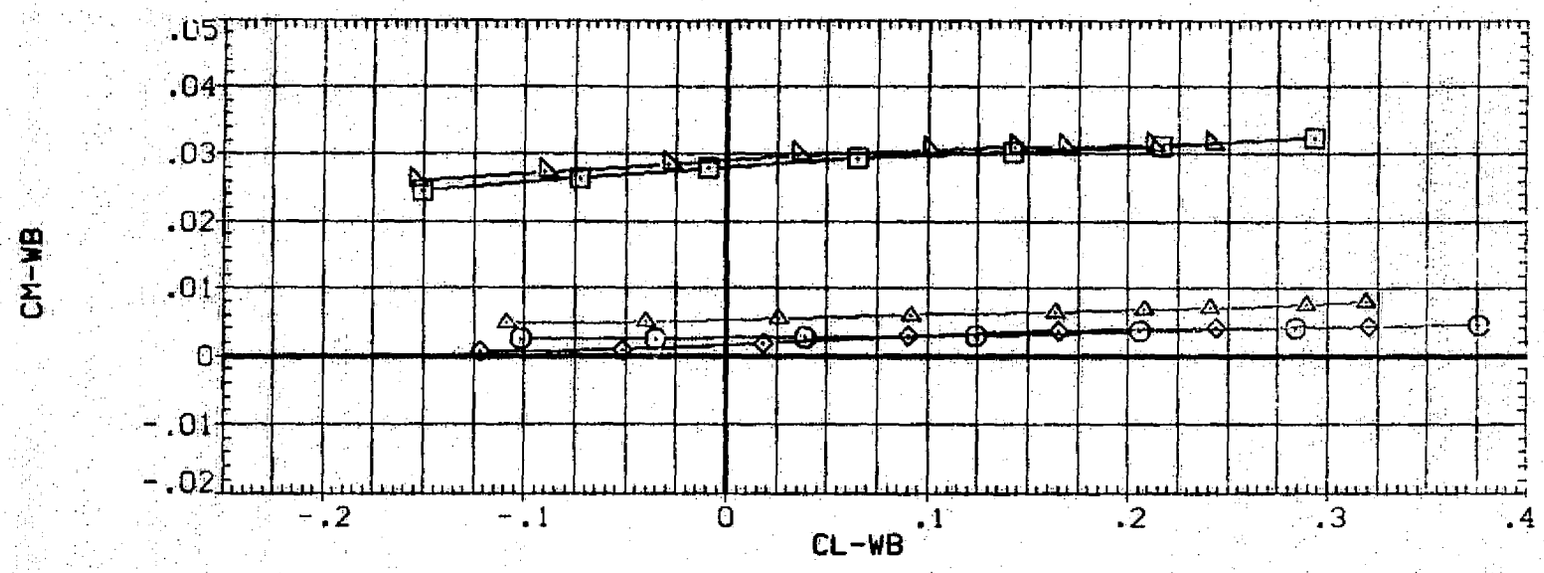


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	○	W B N1 N1	48.000	.250	.550	.000
(RAP027)	△	W B N1 N1	40.000	.250	.550	.000
(RAP036)	◇	W B N2 N2	56.000	.250	.550	.000
(RAP037)	⊲	W B N2 N2	48.000	.250	.550	.000



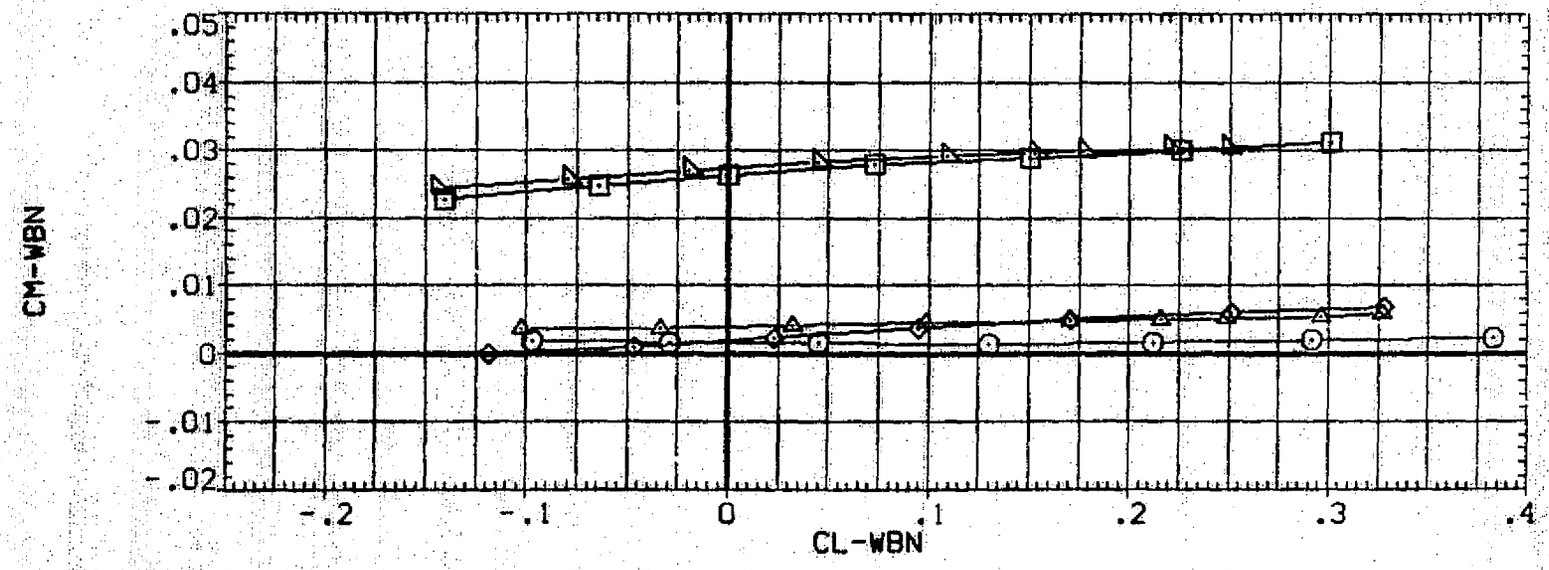
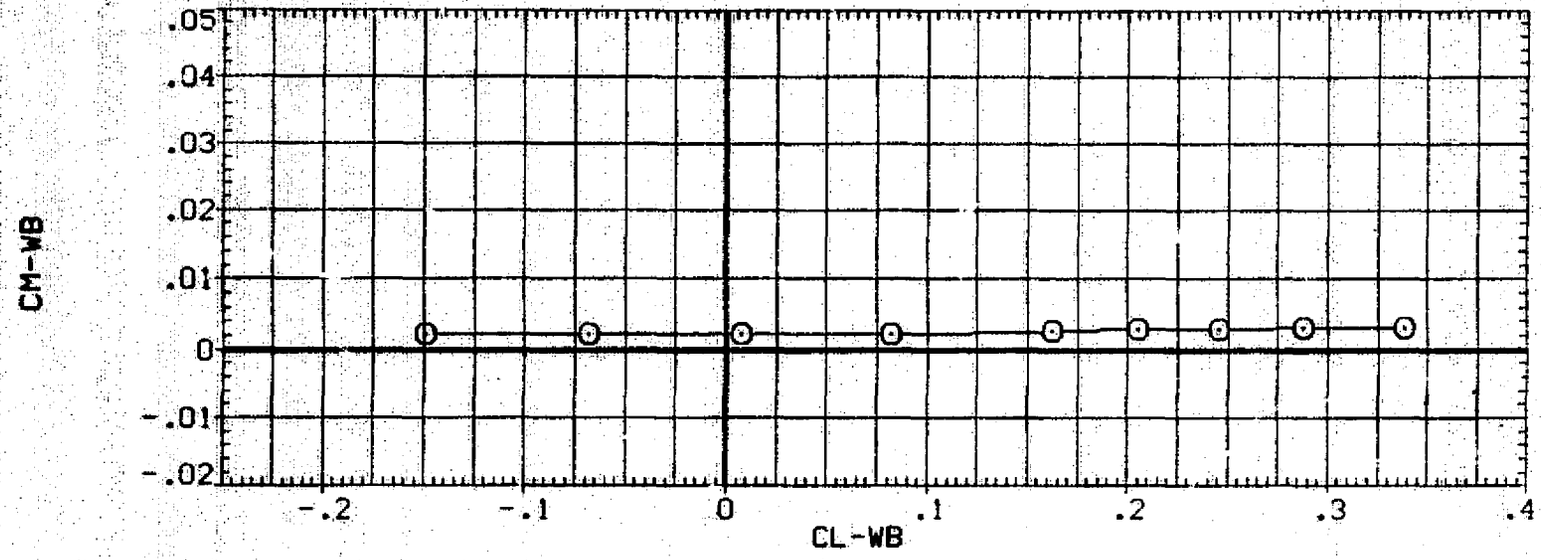


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	○	W B NI NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000



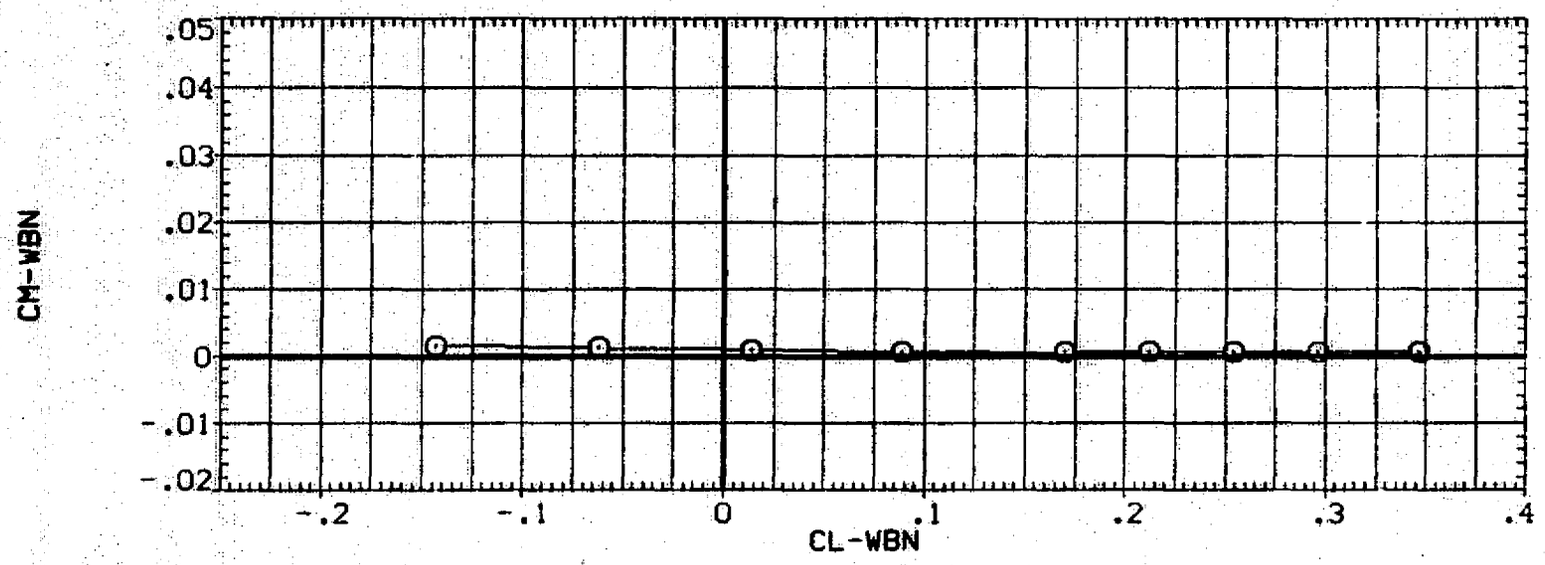


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B NI NI	56.000	.250	.550	.000
(RAP026)	◇	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	⊠	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

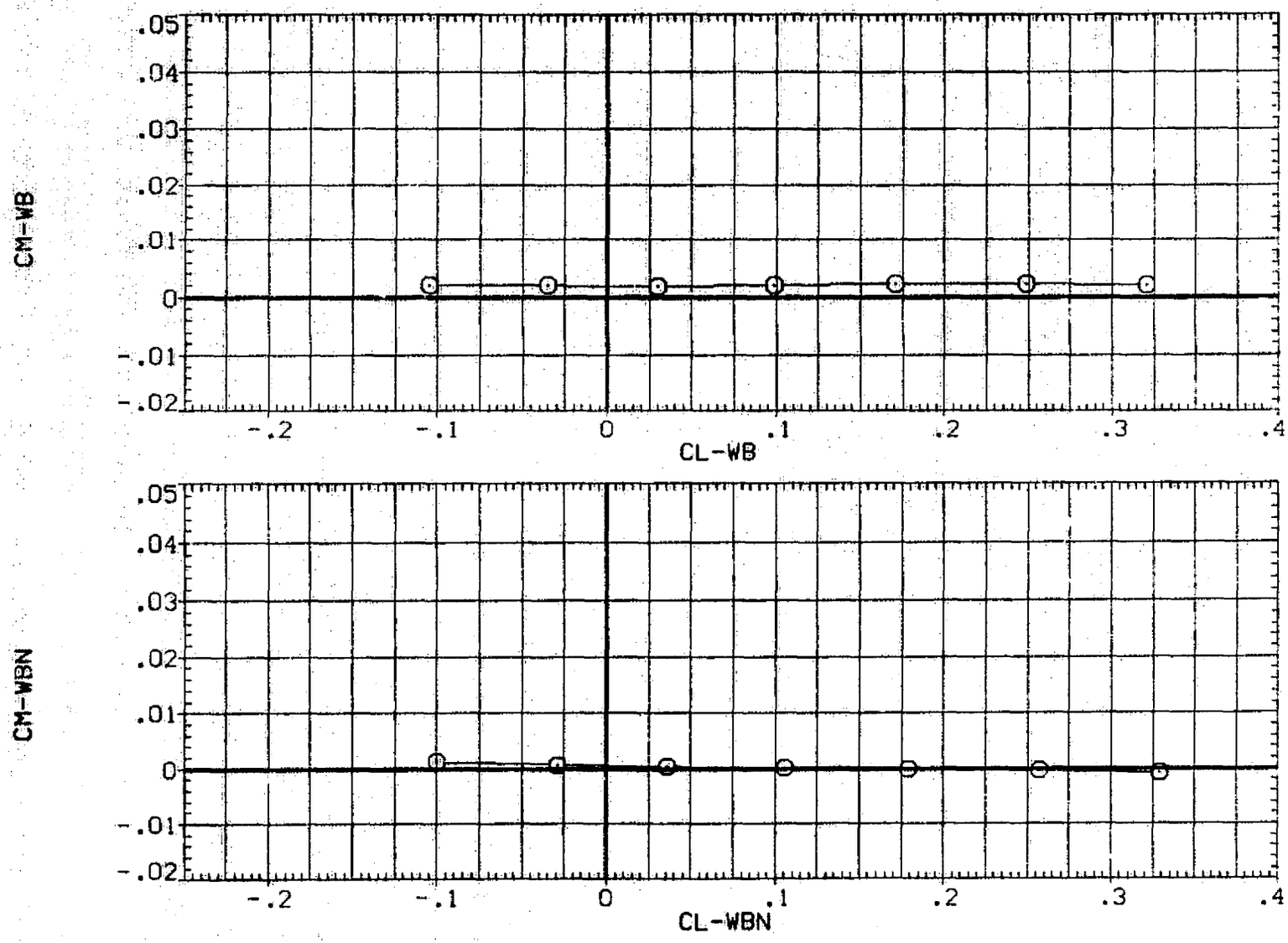
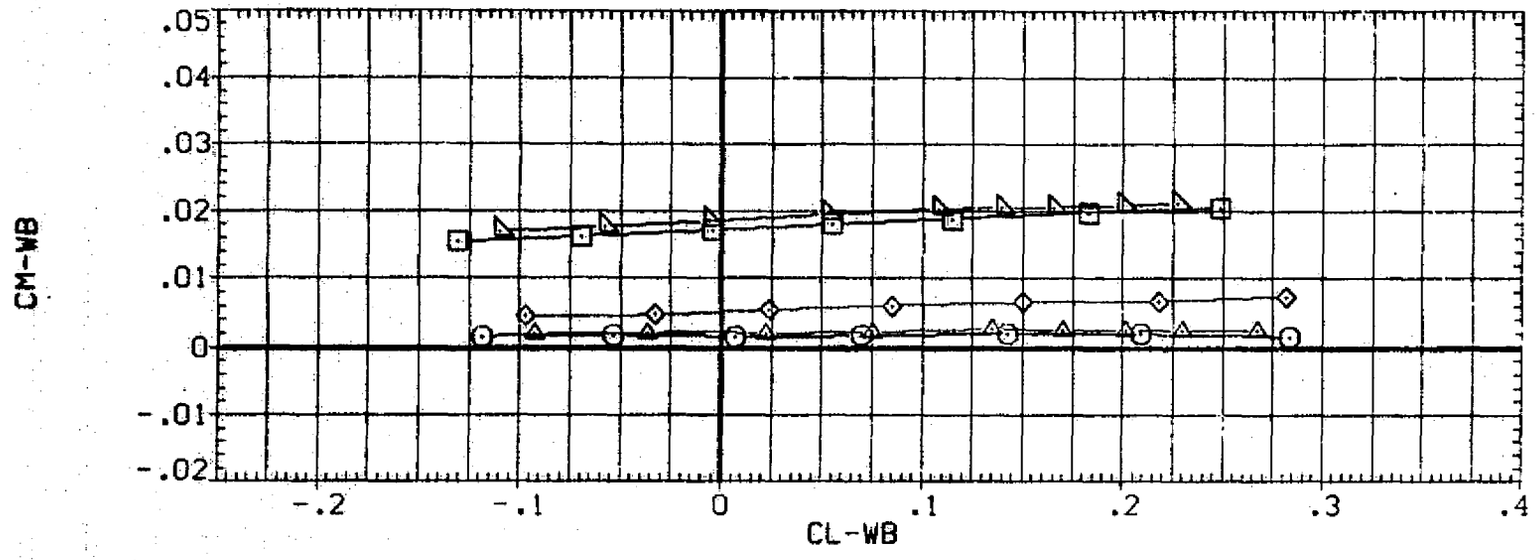


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(RAP027)	△	W B N1 N1	40.000	.250	.550	.000
(RAP036)	○	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000



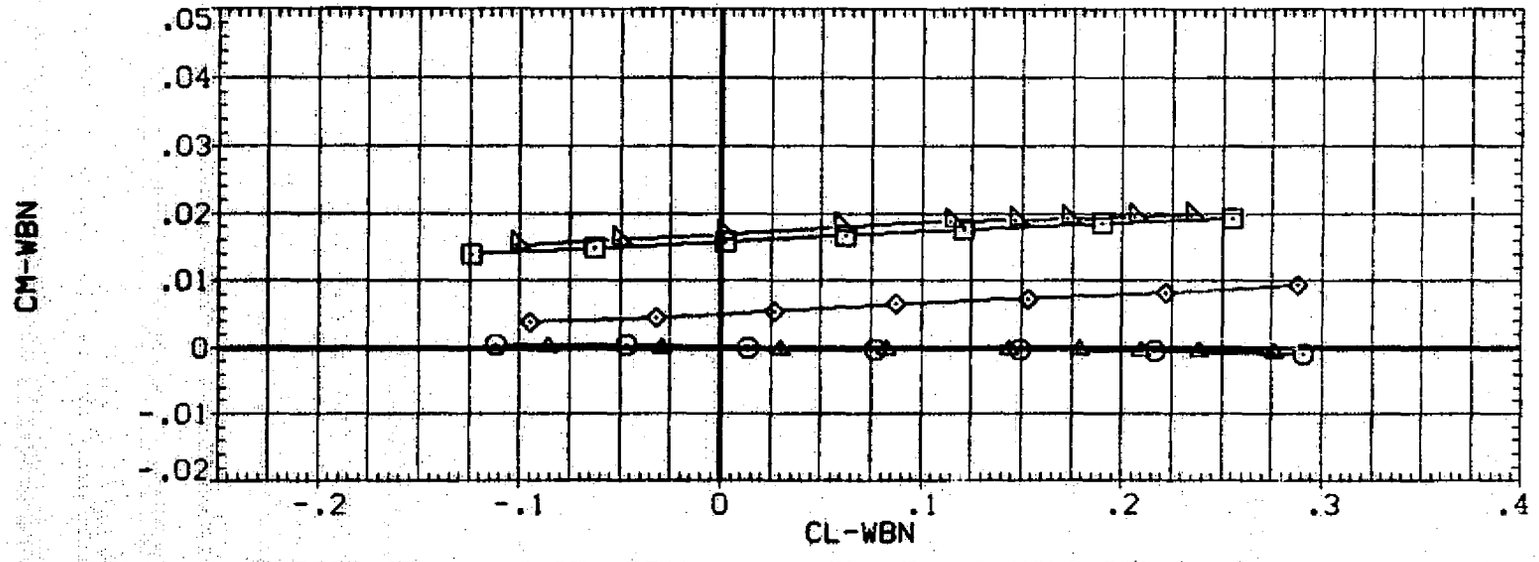


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	○	W B NI NI	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	◁	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

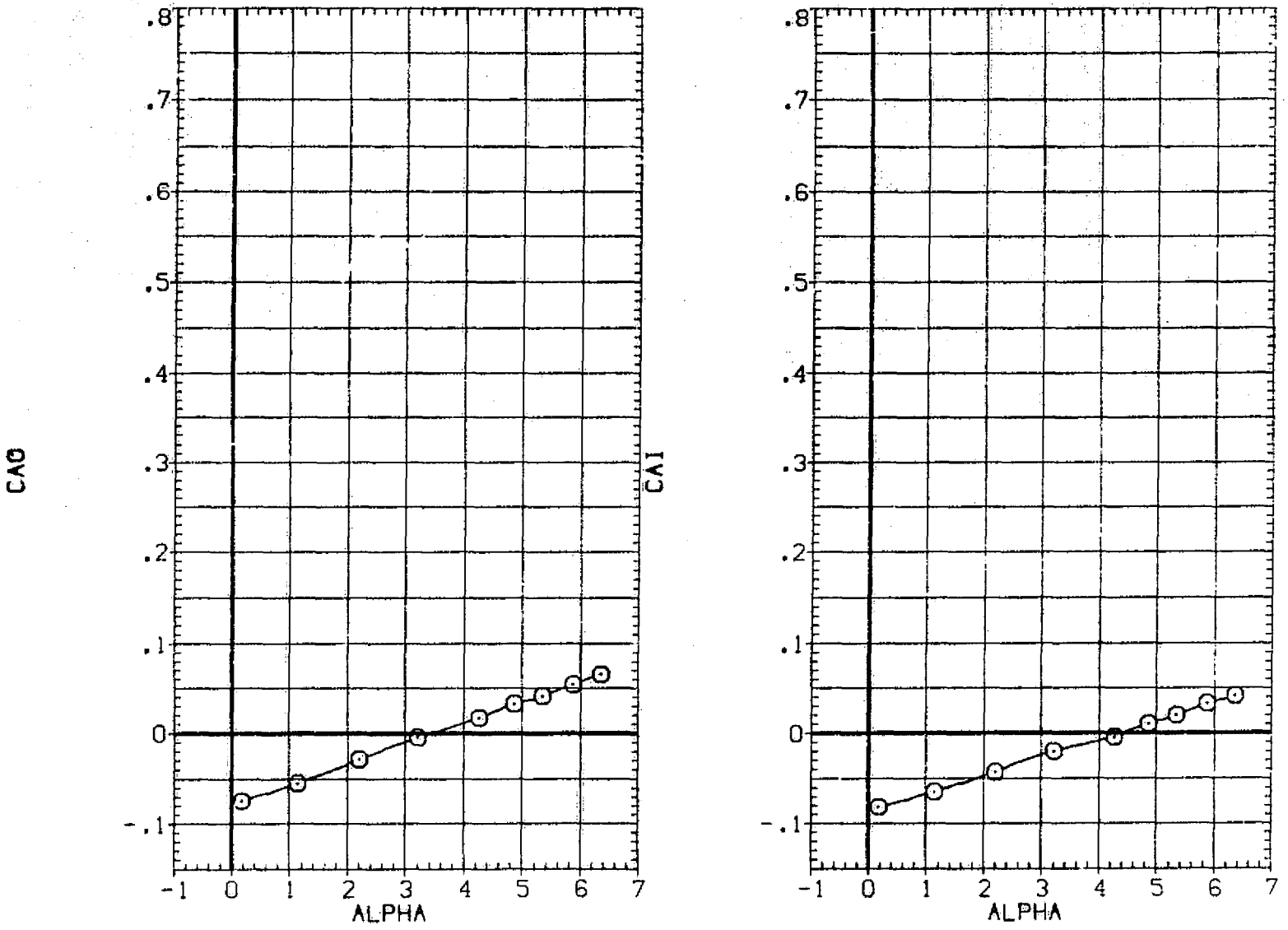


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(RAP027)	⊠	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	▽	W B N2 N2	48.000	.250	.550	.000

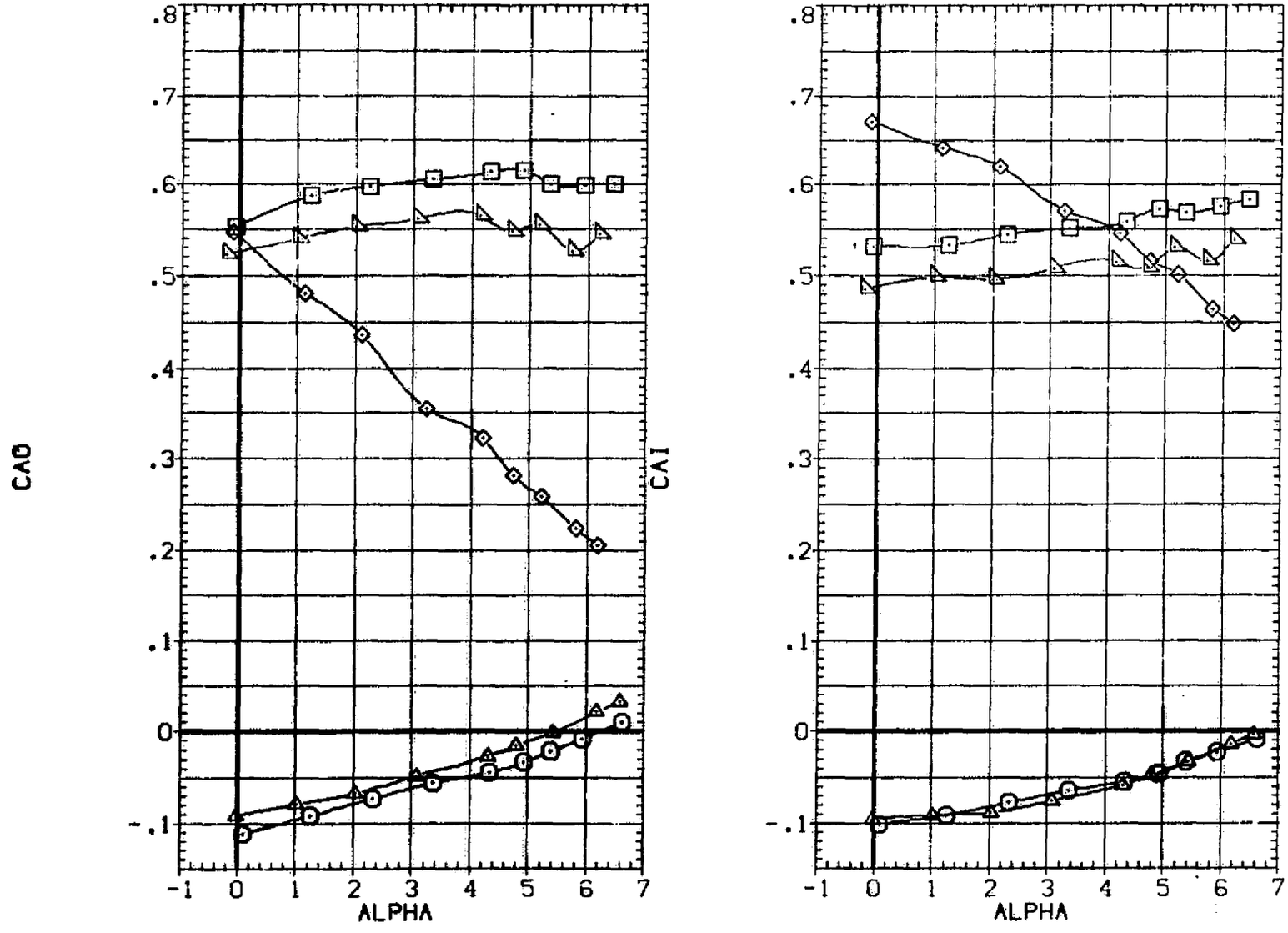


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

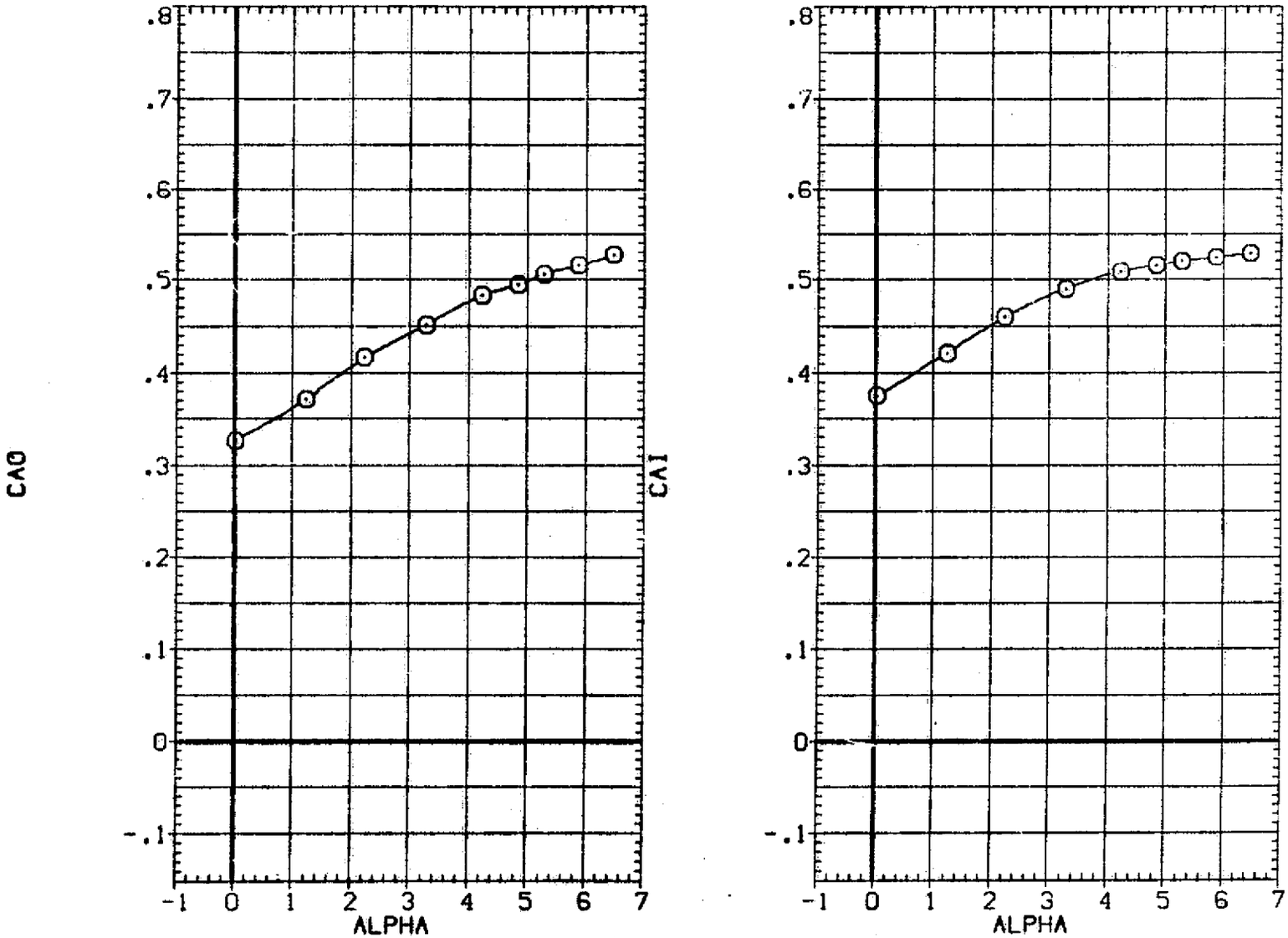


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)		W B N1 N1	56.000	.250	.550	.000
(RAP026)		W B N1 N1	48.000	.250	.550	.000
(RAP027)		W B N1 N1	40.000	.250	.550	.000
(RAP036)		W B N2 N2	56.000	.250	.550	.000
(RAP037)		W B N2 N2	48.000	.250	.550	.000

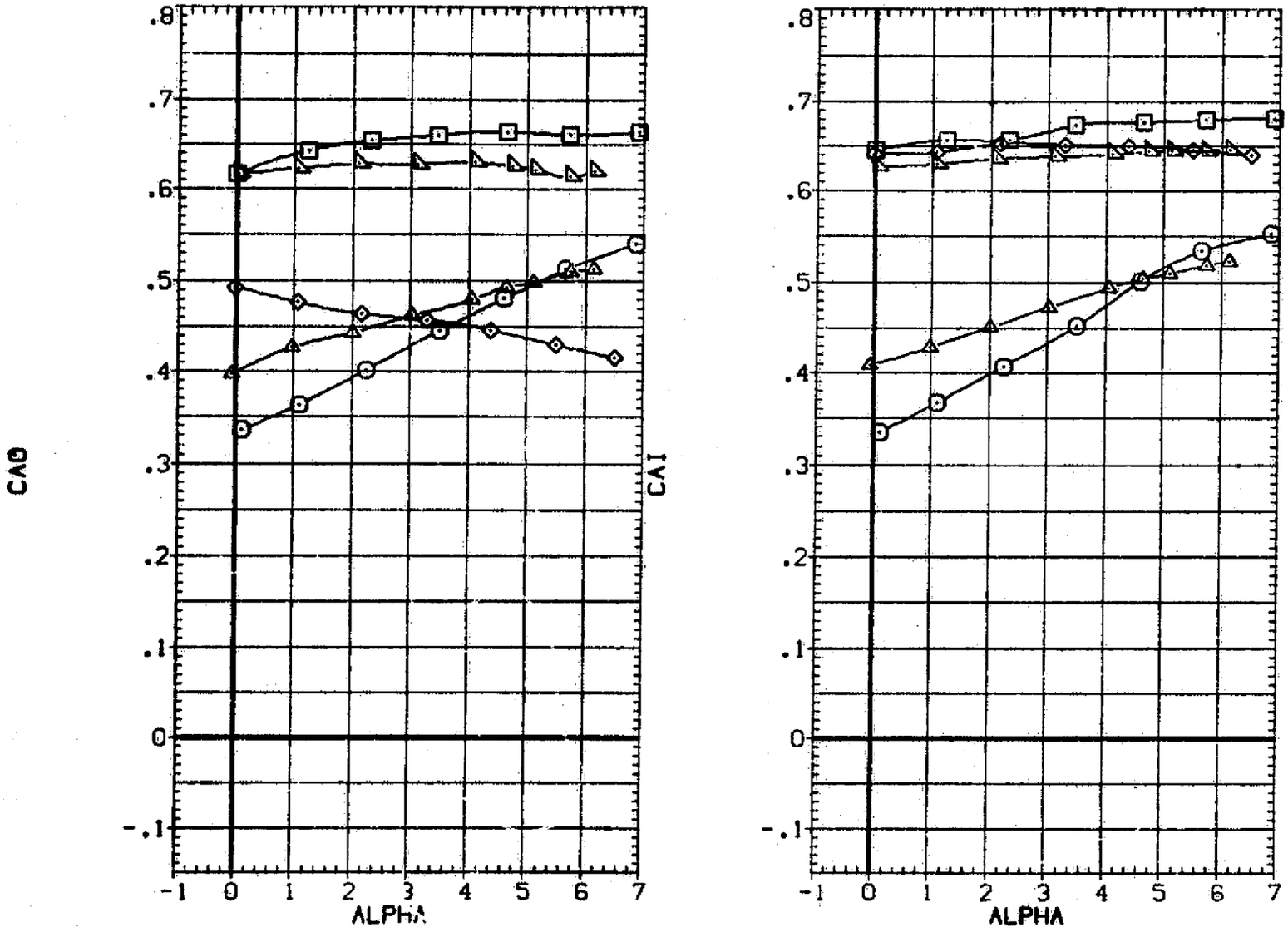


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(ZAP025)	□	W B NI NI	56.000	.250	.550	.000
(RAP026)	○	DATA NOT AVAILABLE	48.000	.250	.550	.000
(RAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(RAP036)	▽	DATA NOT AVAILABLE	56.000	.250	.550	.000
(RAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

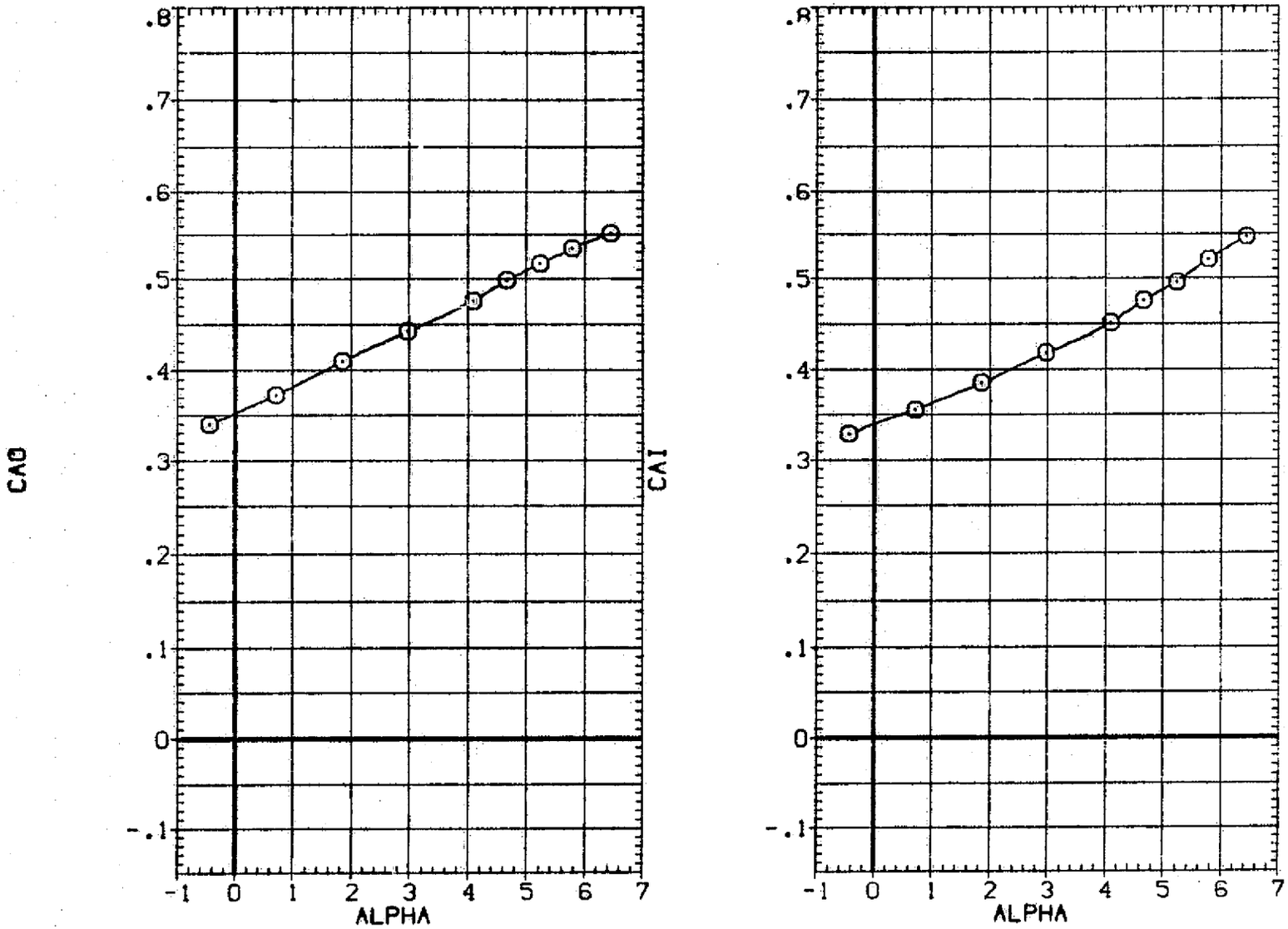


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
[ZAP025]		W B N1 N1	56.000	.250	.550	.000
[RAP026]		DATA NOT AVAILABLE	48.000	.250	.550	.000
[RAP027]		DATA NOT AVAILABLE	40.000	.250	.550	.000
[RAP036]		DATA NOT AVAILABLE	56.000	.250	.550	.000
[RAP037]		DATA NOT AVAILABLE	48.000	.250	.550	.000

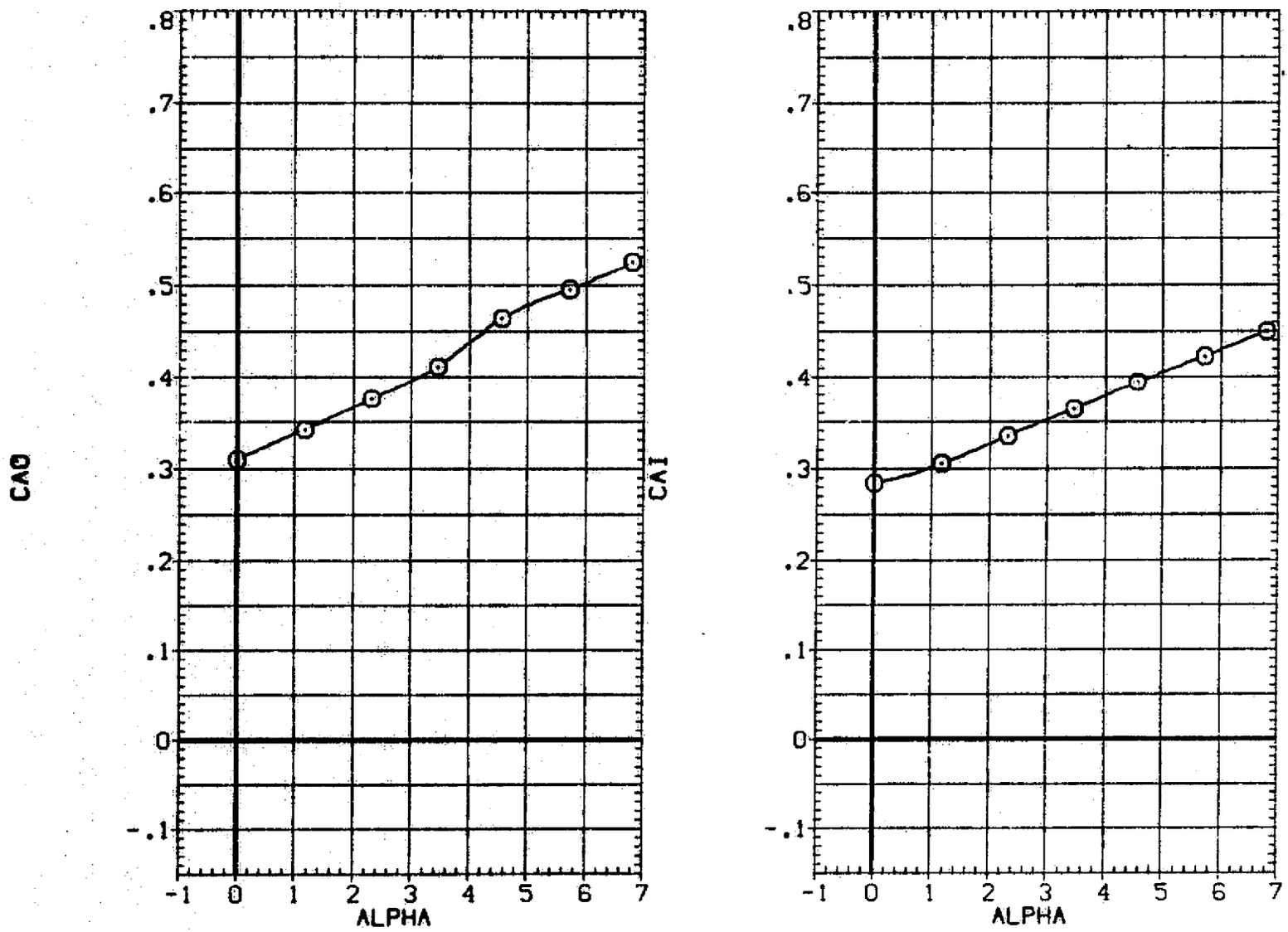


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(ZAP025)	□	W B N1 N1	56.000	.250	.550	.000
(RAP026)	□	W B N1 N1	48.000	.250	.550	.000
(RAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(RAP036)	△	W B N2 N2	56.000	.250	.550	.000
(RAP037)	△	W B N2 N2	48.000	.250	.550	.000

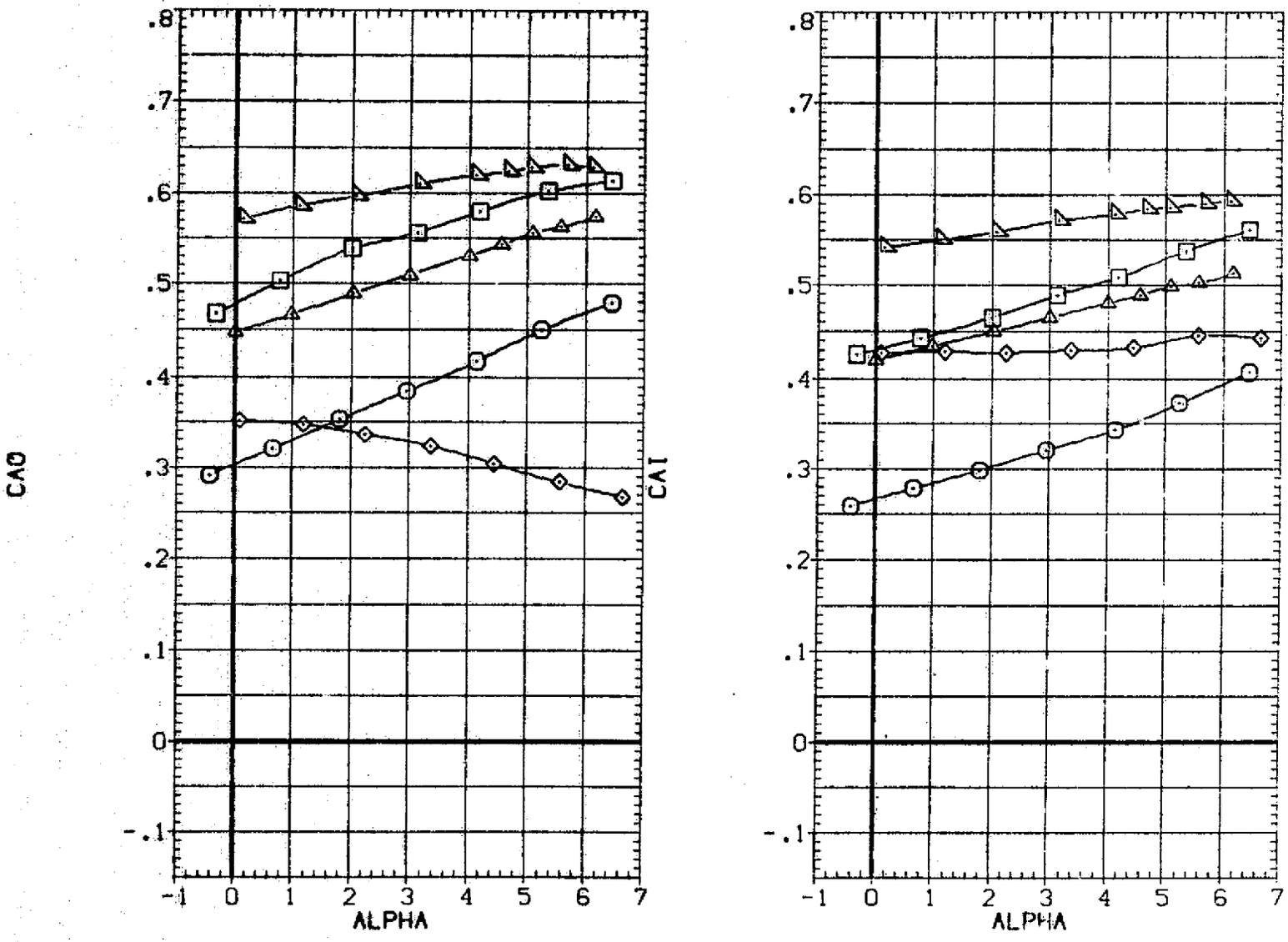


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(DAP025)		W B NI NI	56.000	.250	.550	.000
(BAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

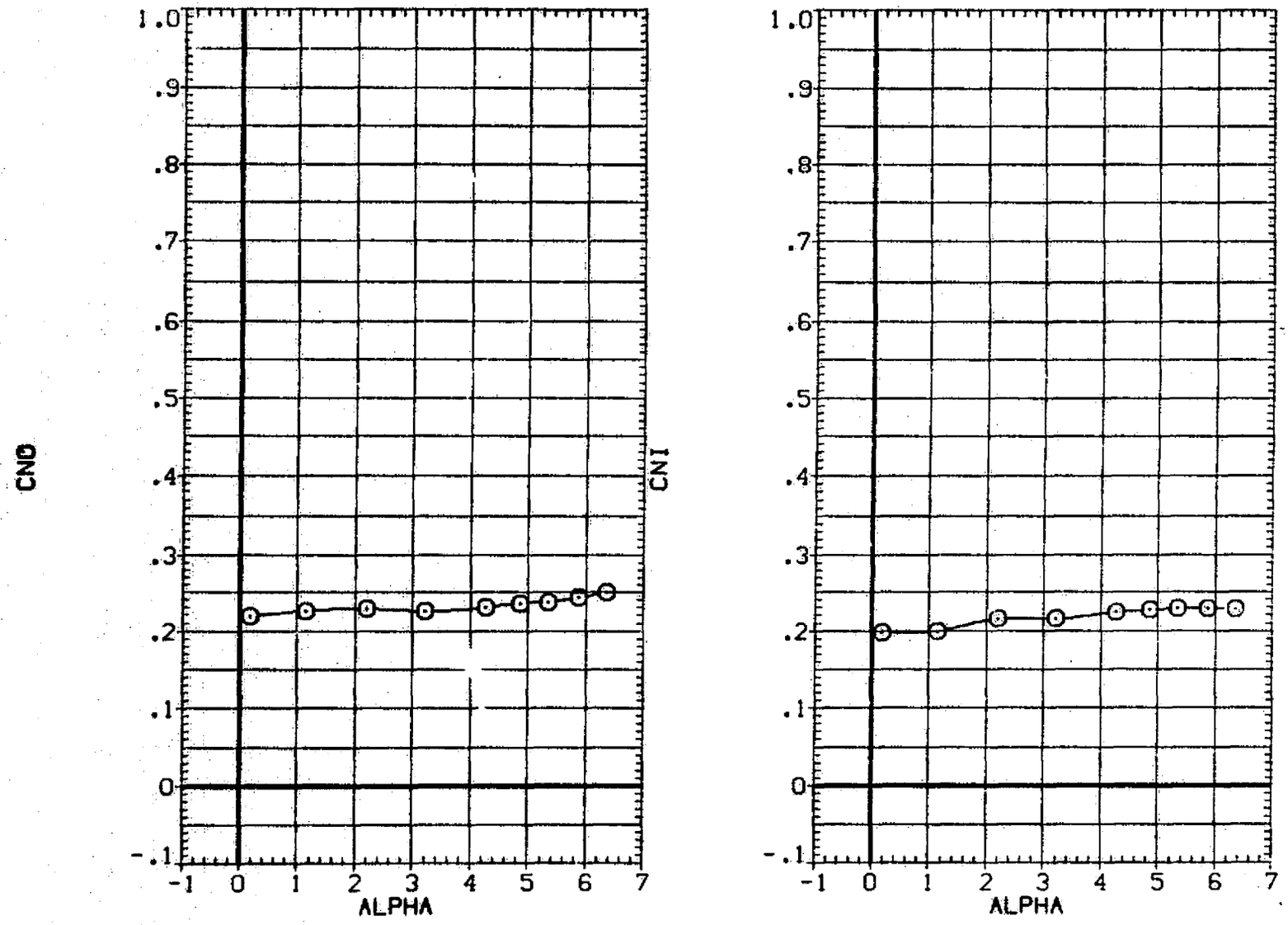


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	□	W B N1 N1	56.000	.250	.550	.000
(BAP026)	□	W B N1 N1	48.000	.250	.550	.000
(BAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(BAP036)	△	W B N2 N2	56.000	.250	.550	.000
(BAP037)	△	W B N2 N2	48.000	.250	.550	.000

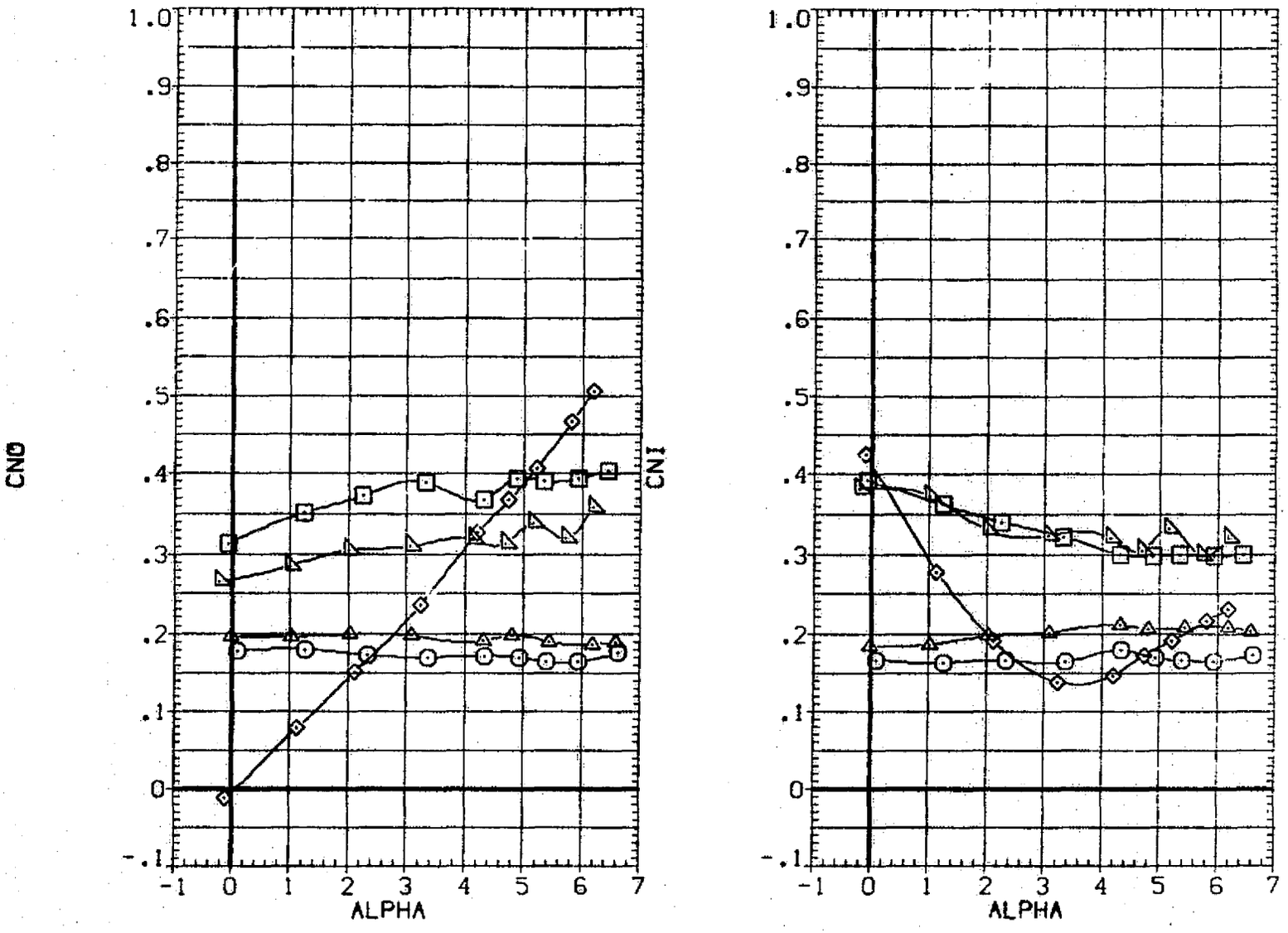


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	□	W B NI N1	56.000	.250	.550	.000
(BAP026)	◇	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)	△	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)	▷	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

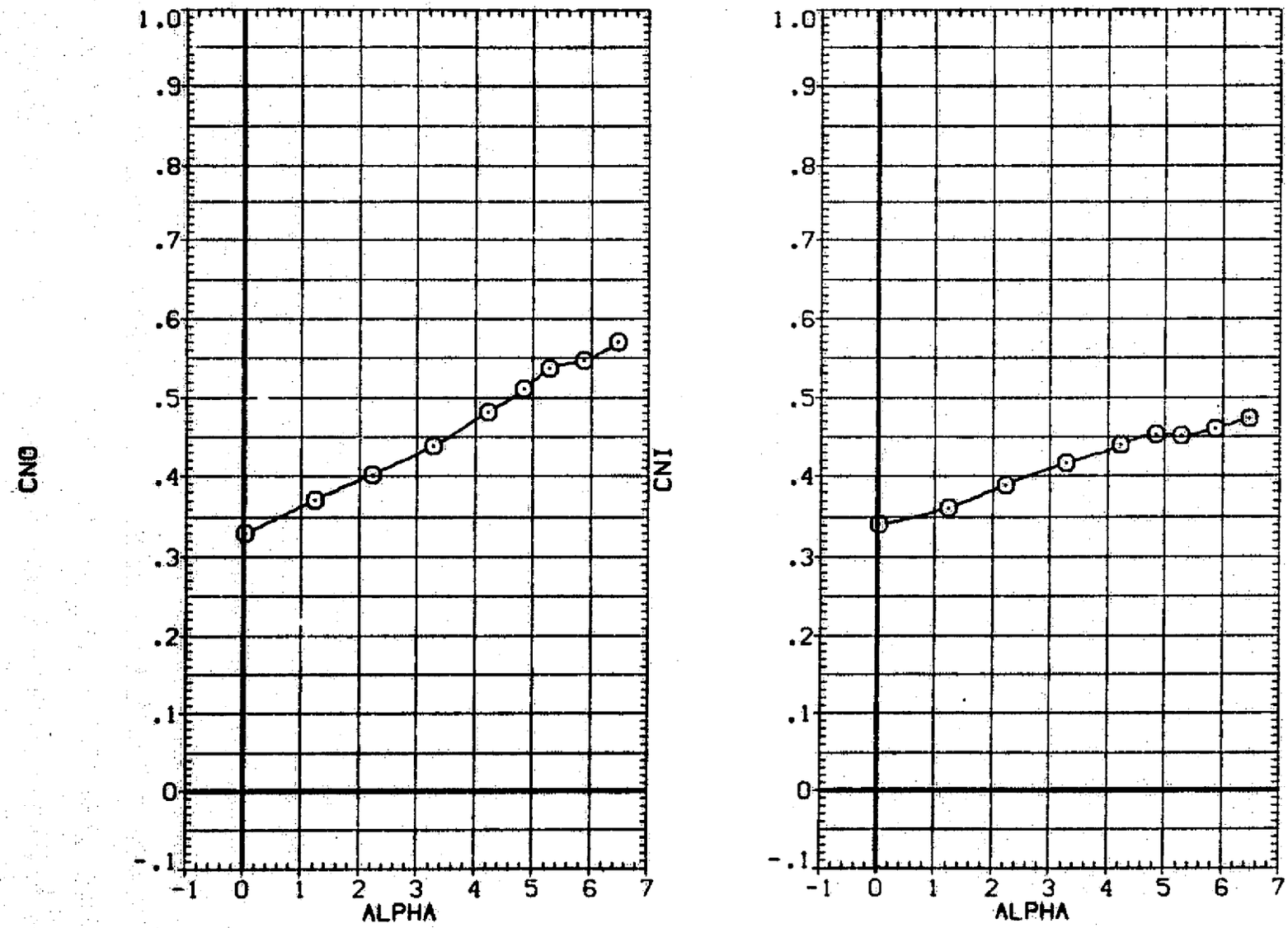


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP025)	□	W B N1 N1	56.000	.250	.550	.000
(BAP026)	□	W B N1 N1	48.000	.250	.550	.000
(BAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(BAP036)	△	W B N2 N2	56.000	.250	.550	.000
(BAP037)	△	W B N2 N2	48.000	.250	.550	.000

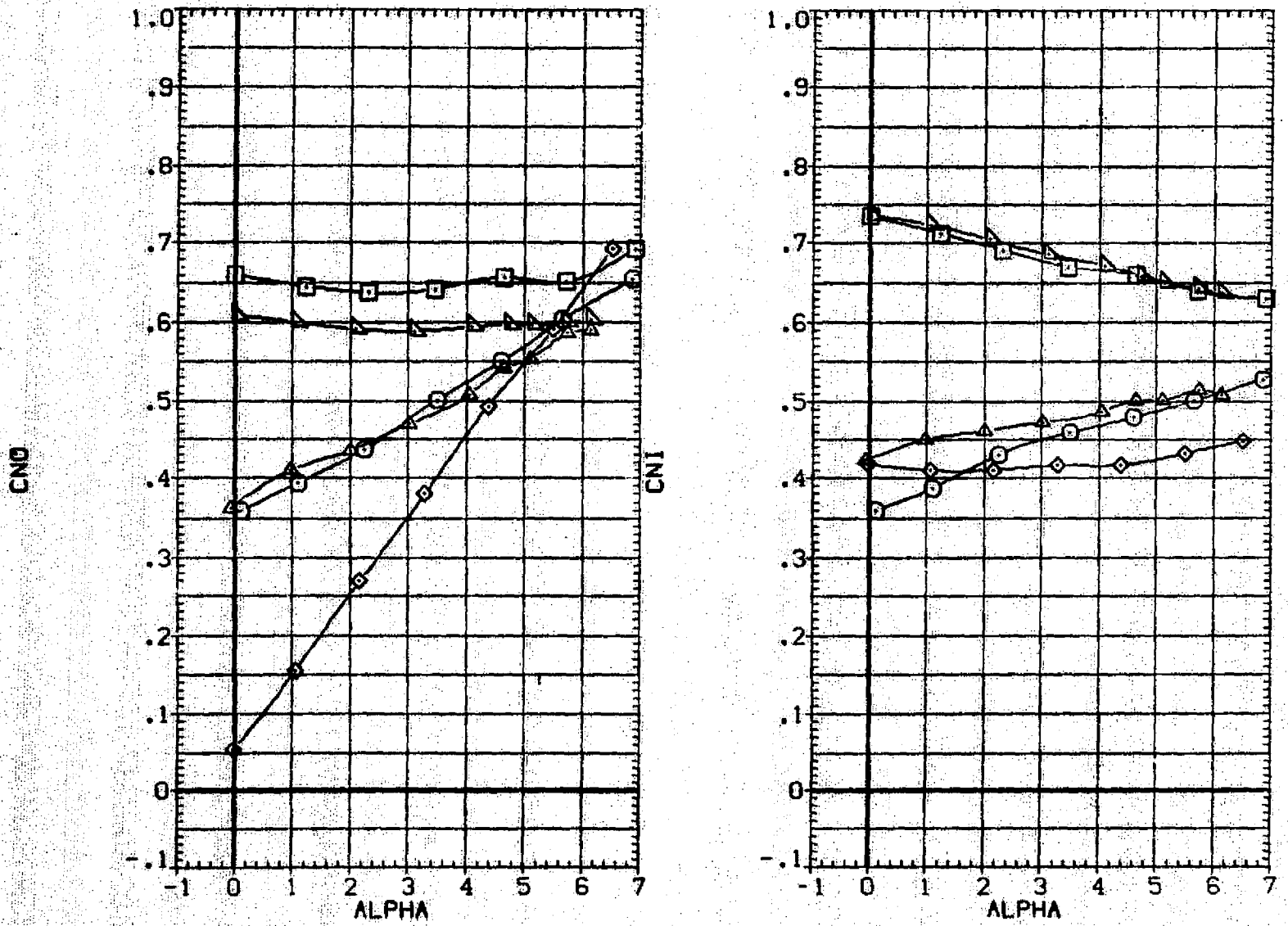
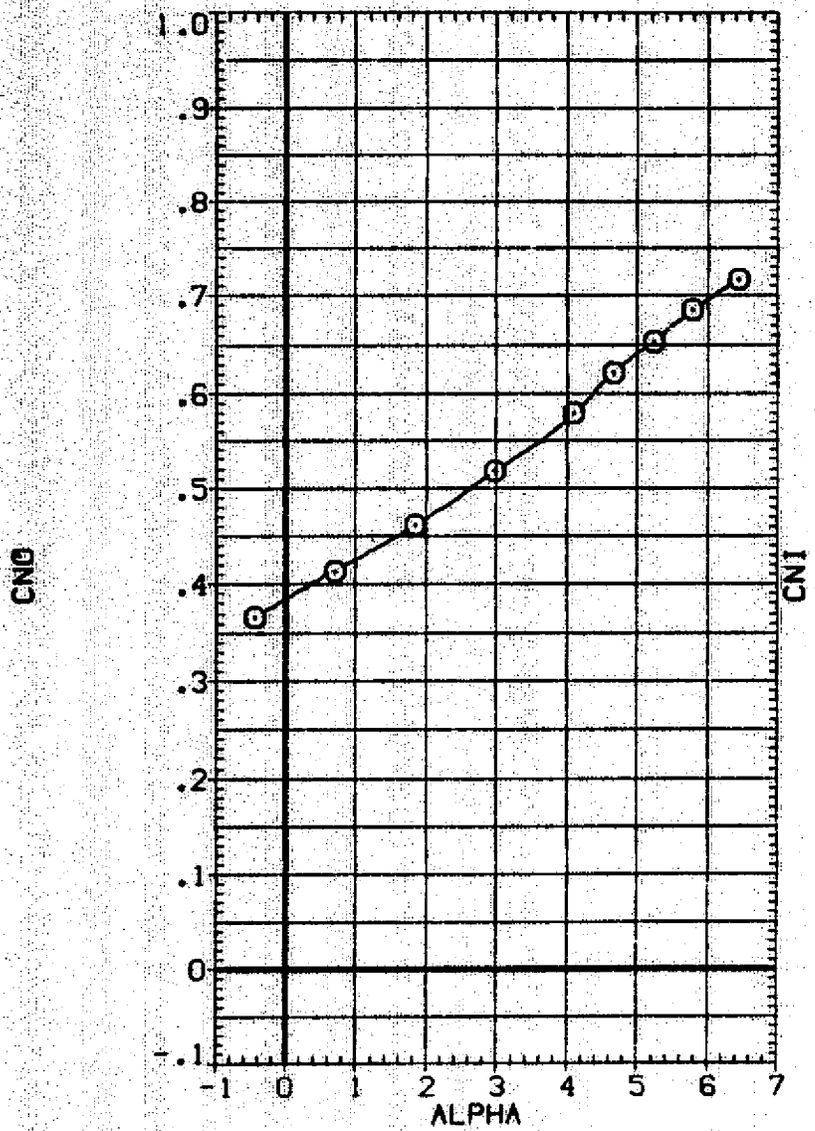


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
[DAP025]	W B NI NI
[DAP026]	DATA NOT AVAILABLE
[DAPu27]	DATA NOT AVAILABLE
[DAP036]	DATA NOT AVAILABLE
[DAP037]	DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000



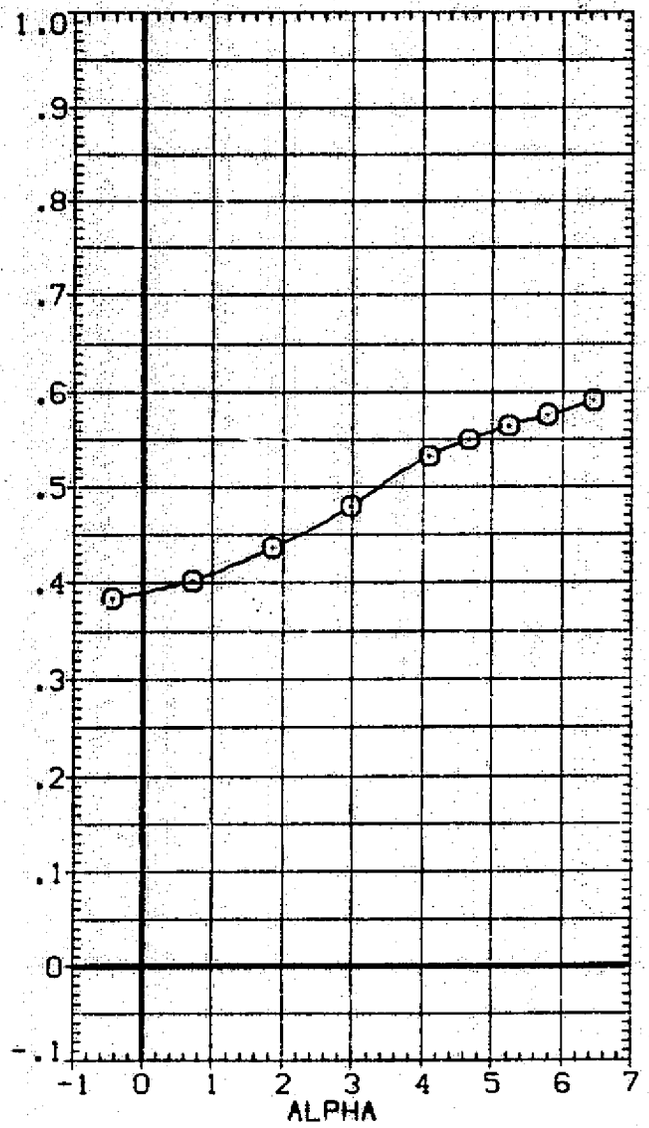
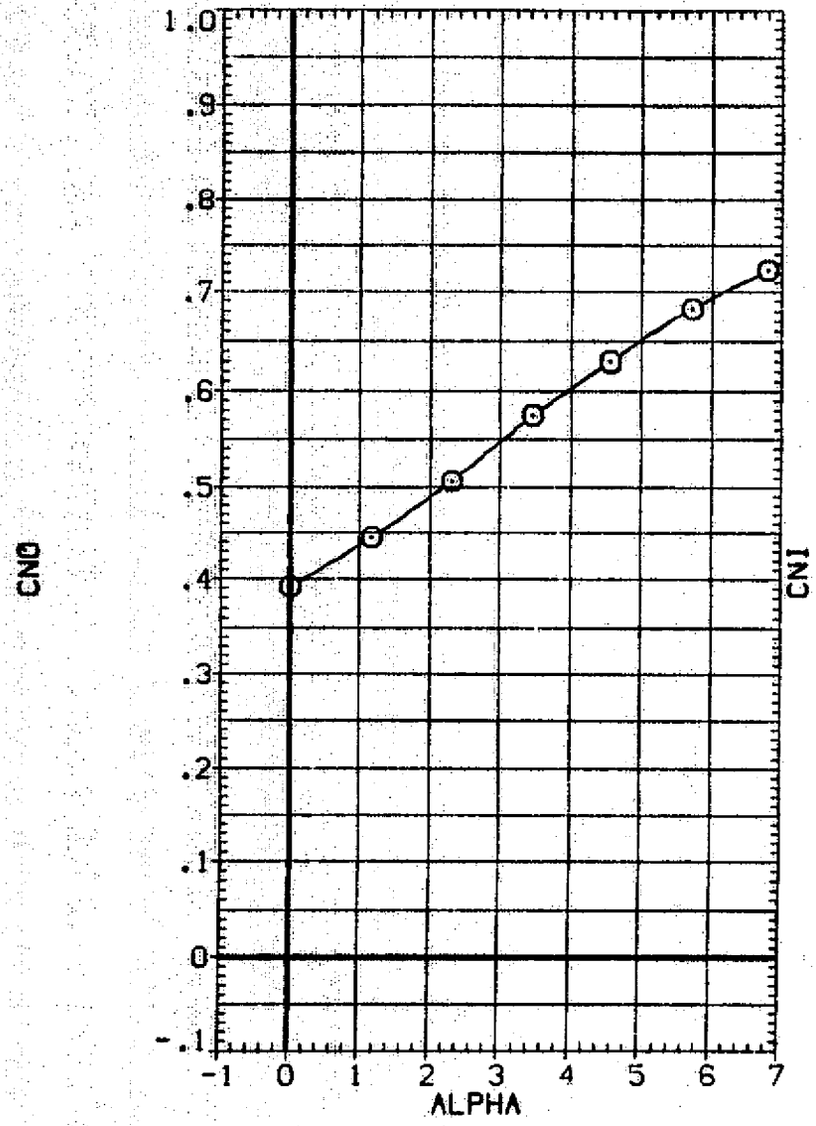


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)		W B NI NI
(BAP026)		DATA NOT AVAILABLE
(BAP027)		DATA NOT AVAILABLE
(BAP036)		DATA NOT AVAILABLE
(BAP037)		DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000



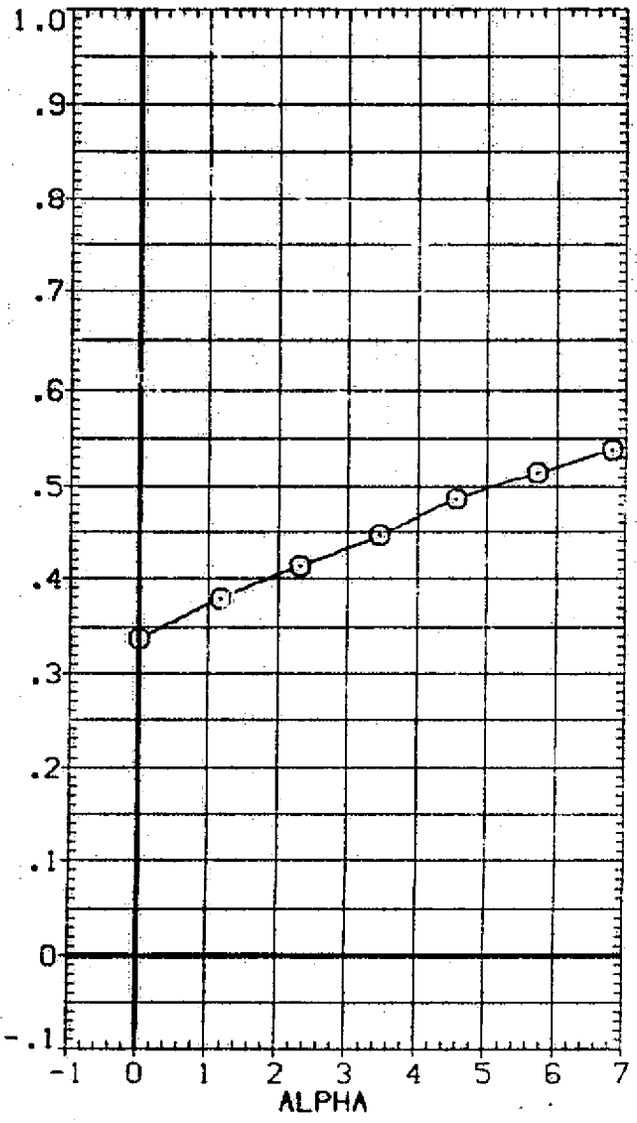


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	□	W B N1 N1	56.000	.250	.550	.000
(BAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(BAP027)	△	W B N1 N1	40.000	.250	.550	.000
(BAP036)	▽	W B N2 N2	56.000	.250	.550	.000
(BAP037)	◁	W B N2 N2	48.000	.250	.550	.000

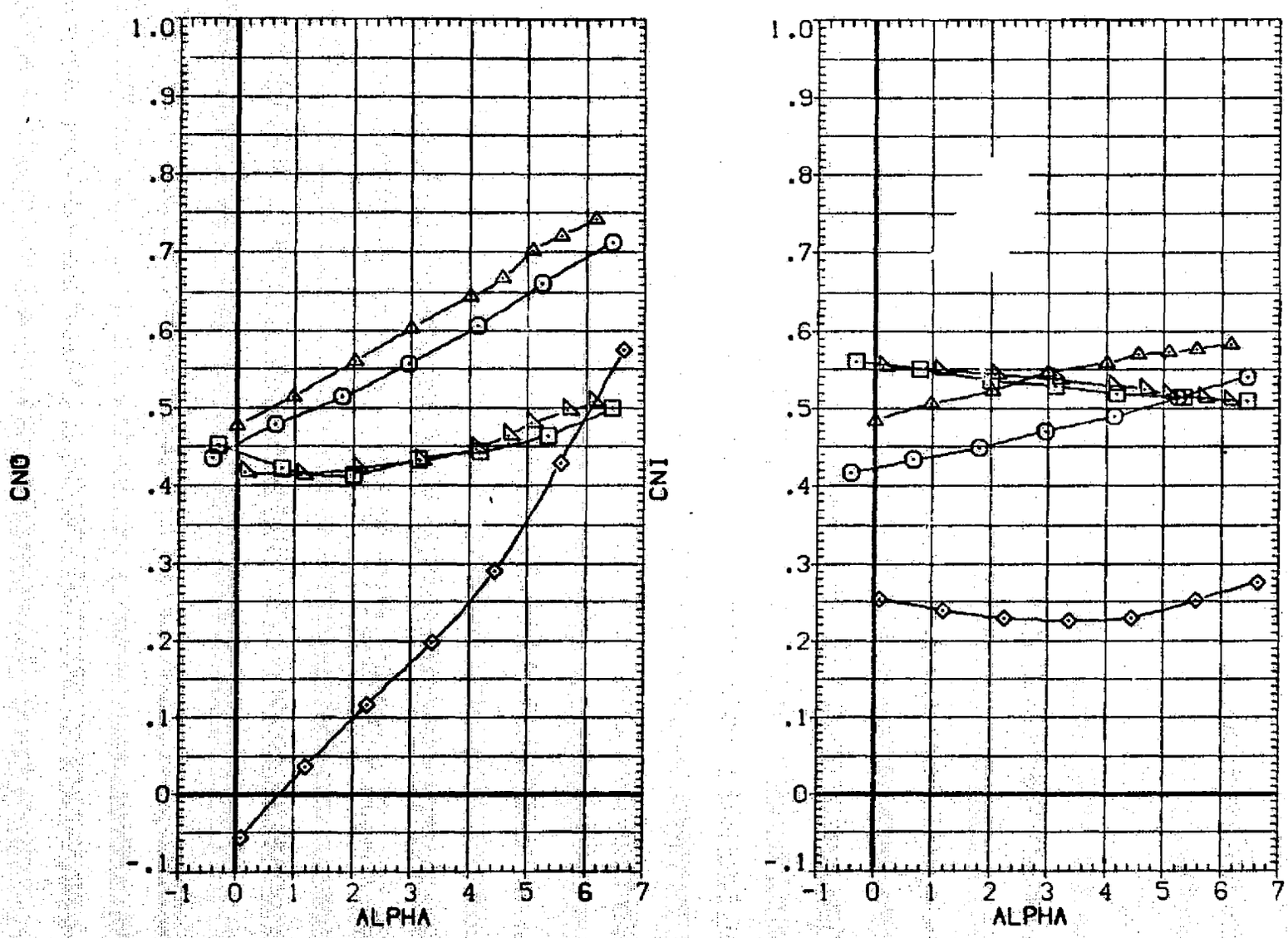


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(DAP025)	□	W B NI NI	56.000	.250	.550	.000
(BAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)	⋈	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)	◁	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)	◁	DATA NOT AVAILABLE	48.000	.250	.550	.000

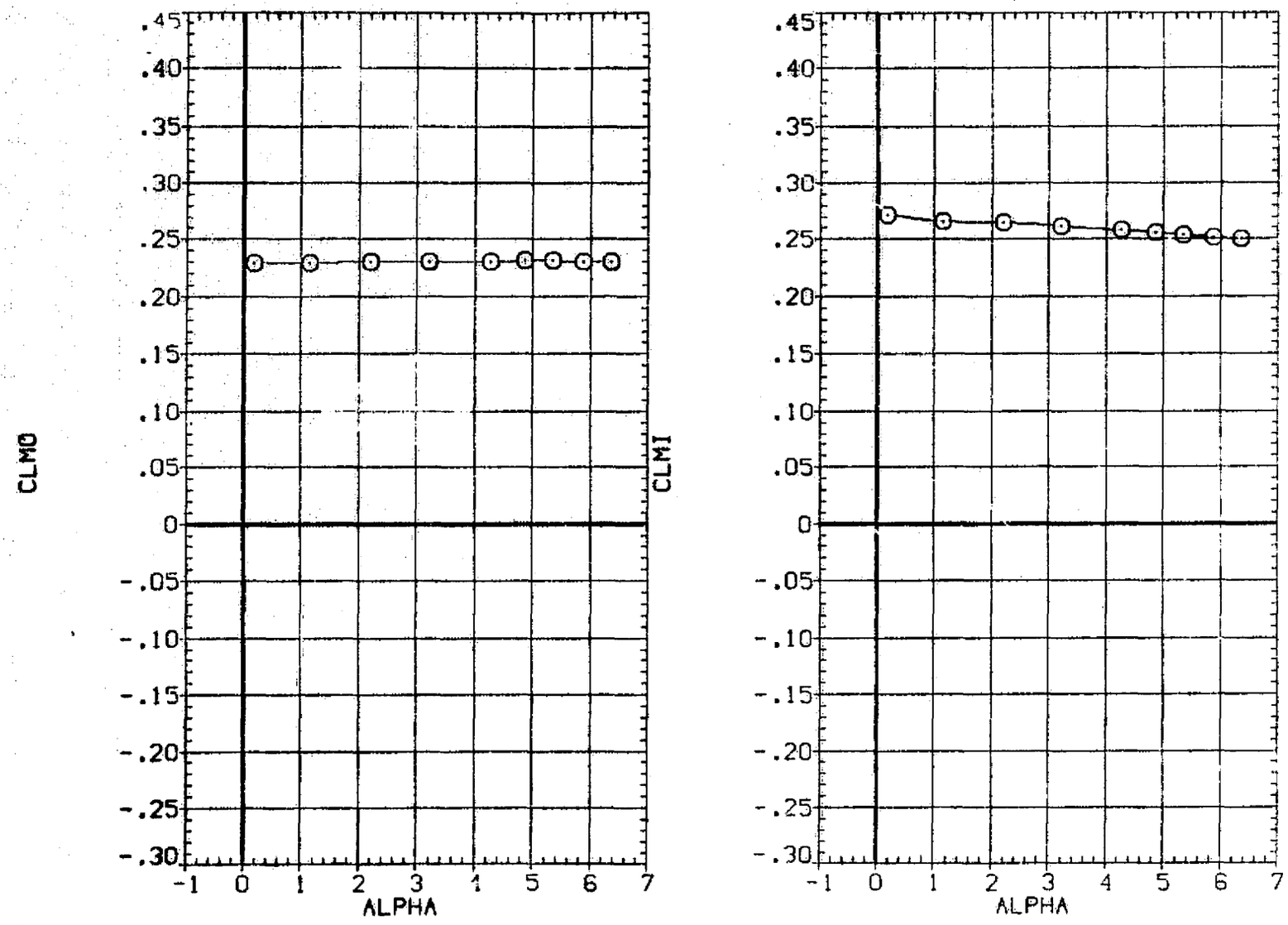


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(DAP025)		W B N1 N1	56.000	.250	.550	.000
(BAP026)		W B N1 N1	48.000	.250	.550	.000
(BAP027)		W B N1 N1	40.000	.250	.550	.000
(BAP036)		W B N2 N2	56.000	.250	.550	.000
(BAP037)		W B N2 N2	48.000	.250	.550	.000

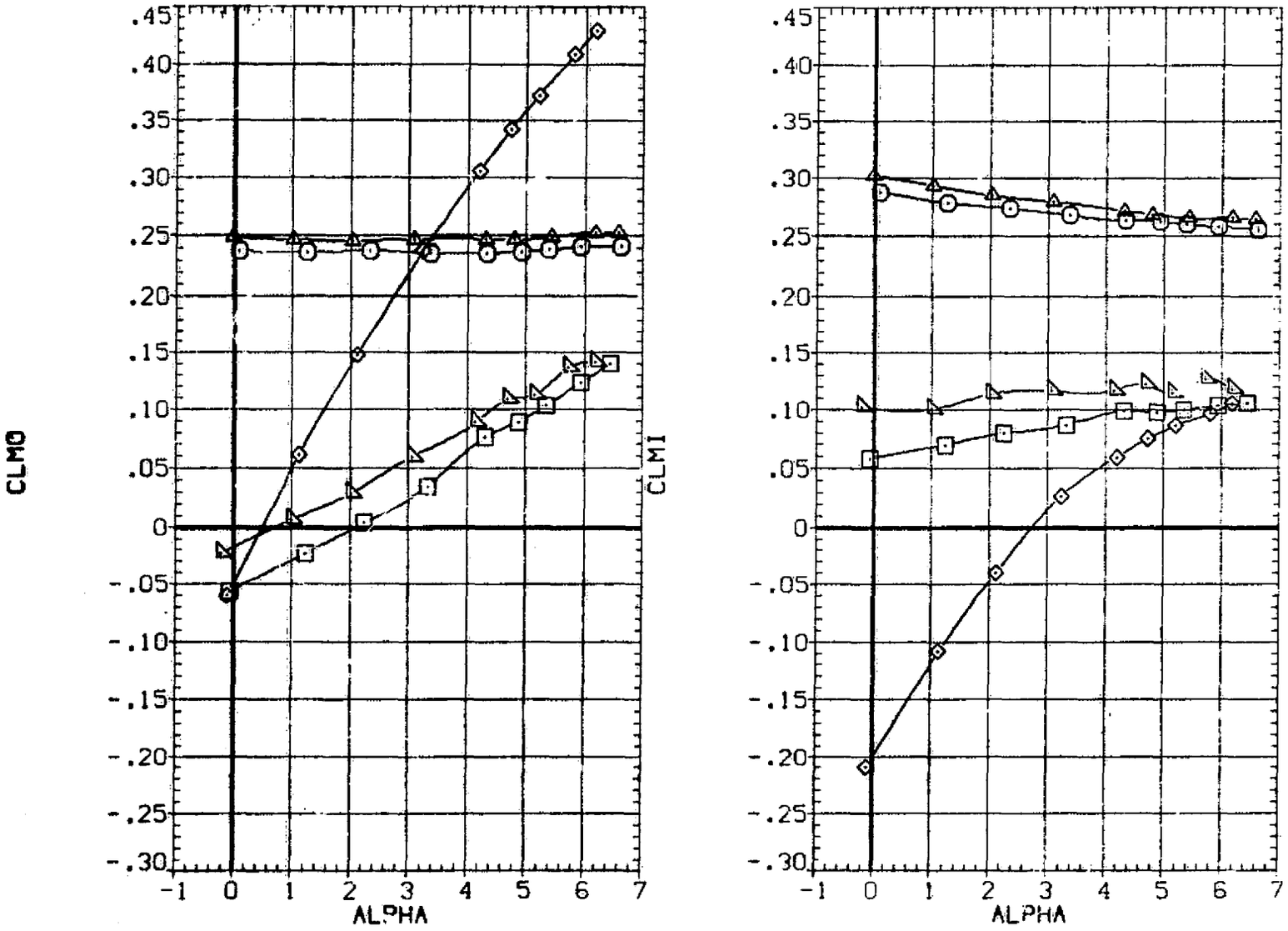


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	○	W B NI NI
(BAP026)	□	DATA NOT AVAILABLE
(BAP027)	◇	DATA NOT AVAILABLE
(BAP036)	△	DATA NOT AVAILABLE
(BAP037)	▽	DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

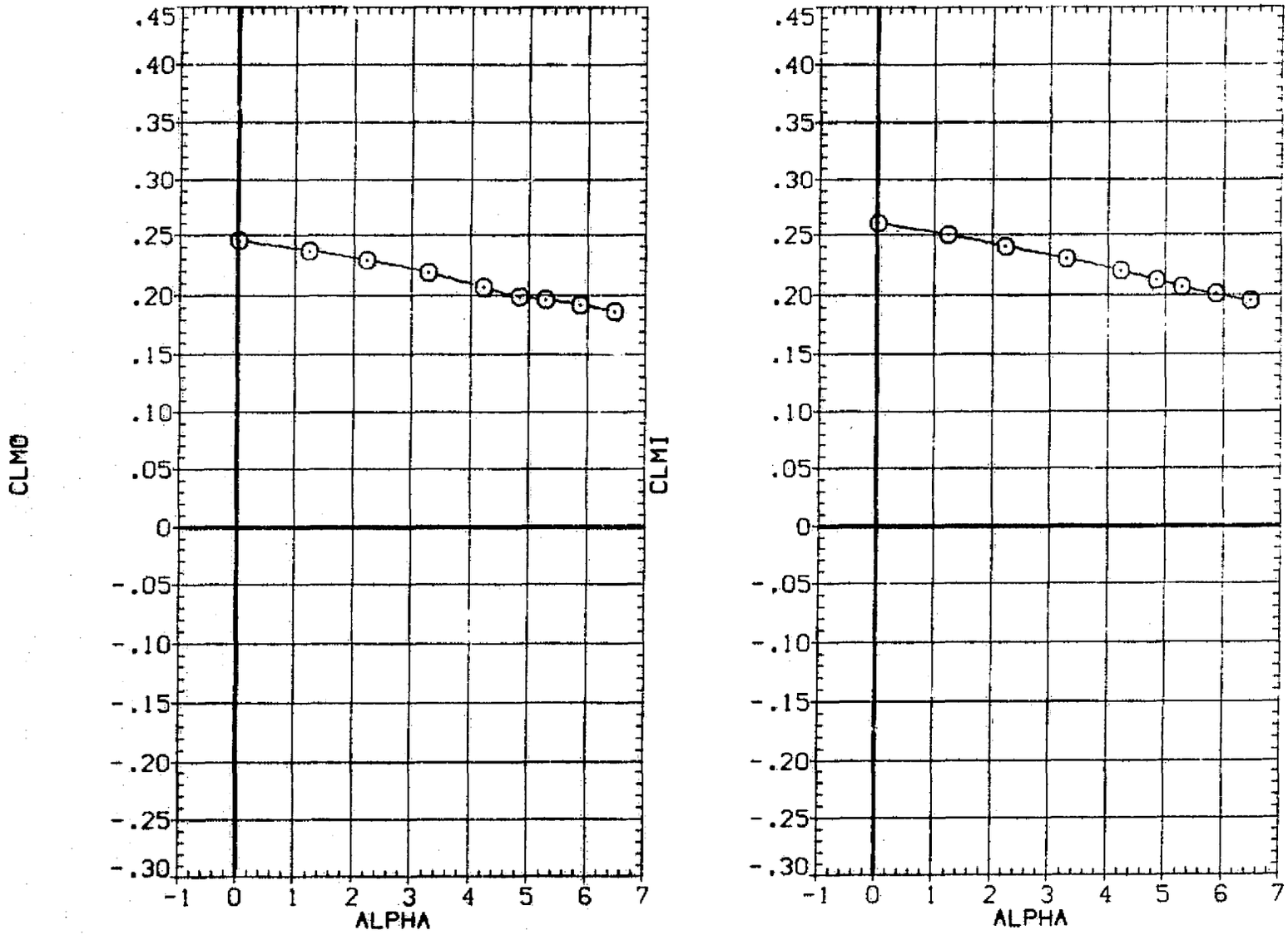


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	□	W B N1 N1
(BAP026)	◇	W B N1 N1
(BAP027)	△	W B N1 N1
(BAP036)	◇	W B N2 N2
(BAP037)	△	W B N2 N2

X-INBD	2Y1/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

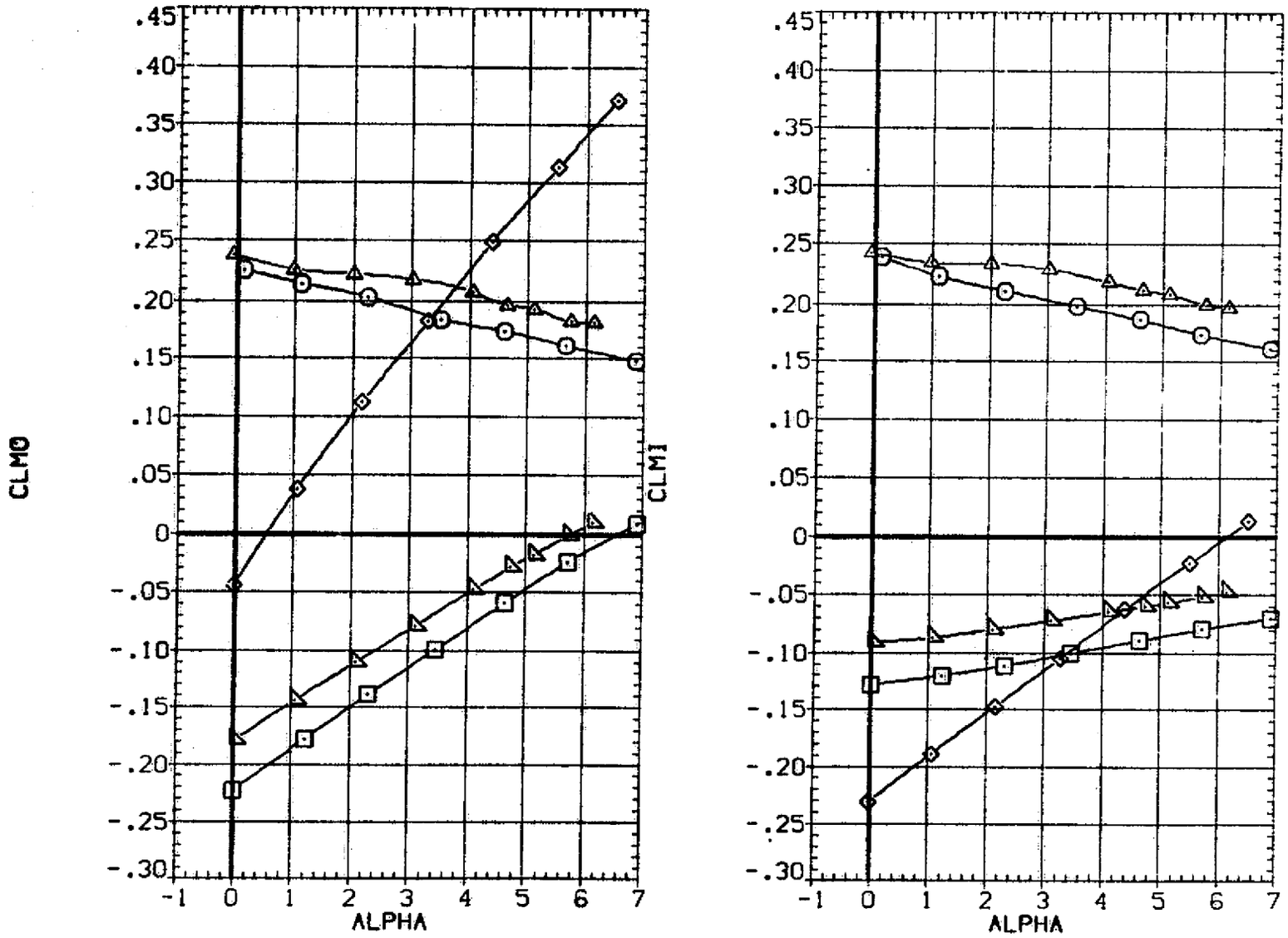


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	○	W B NI NI
(BAP026)	□	DATA NOT AVAILABLE
(BAP027)	◇	DATA NOT AVAILABLE
(BAP036)	△	DATA NOT AVAILABLE
(BAP037)	▷	DATA NOT AVAILABLE

X-IN80	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

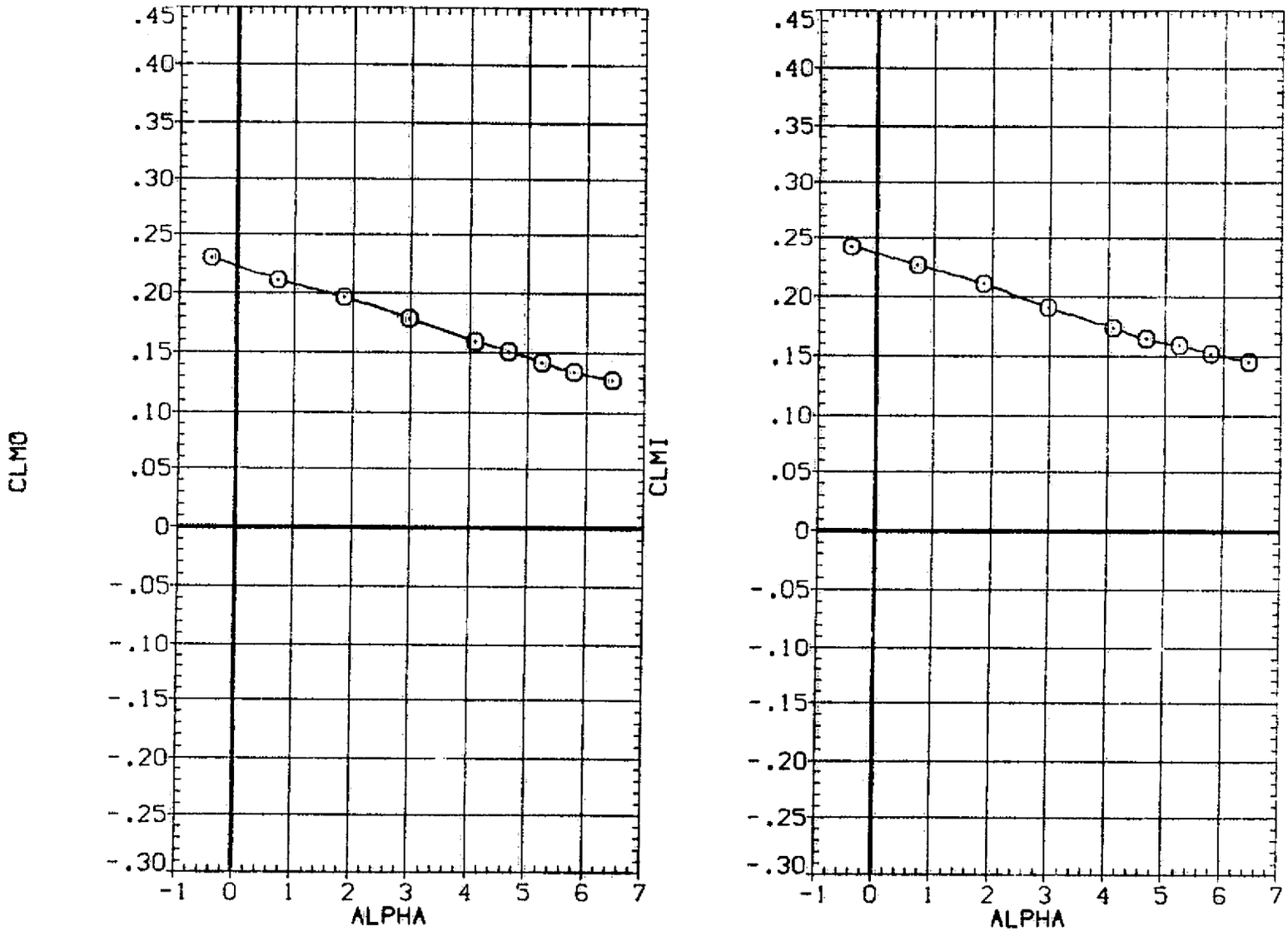


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP025)		W B N1 N1	56.000	.250	.550	.000
(BAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

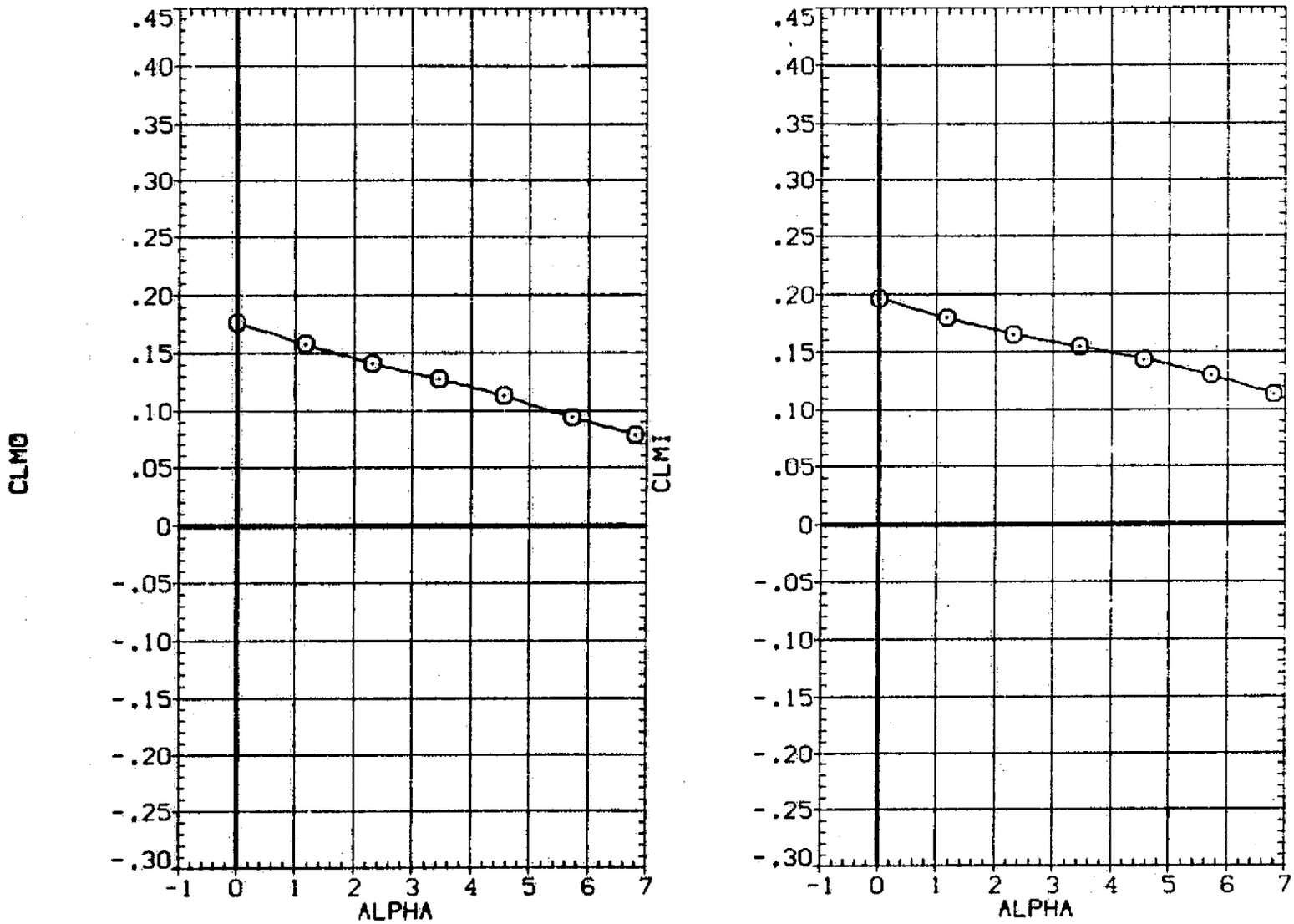


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP025)		W B N1 N1	56.000	.250	.550	.000
(BAP026)		W B N1 N1	48.000	.250	.550	.000
(BAP027)		W B N1 N1	40.000	.250	.550	.000
(BAP036)		W B N2 N2	56.000	.250	.550	.000
(BAP037)		W B N2 N2	48.000	.250	.550	.000

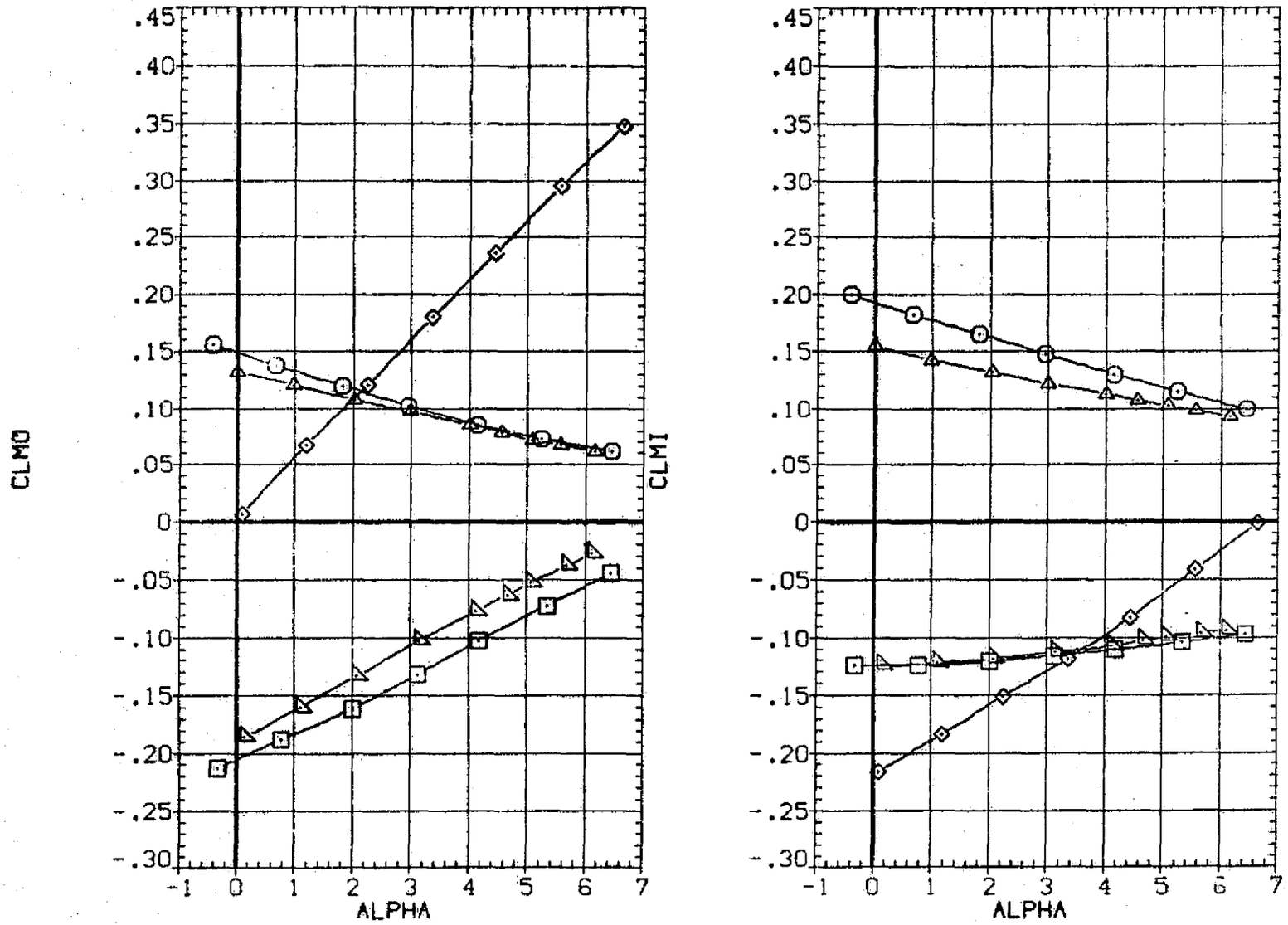


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Yi/B	2YO/B	DX
(BAP025)		W B NI NI	56.000	.250	.550	.000
(BAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

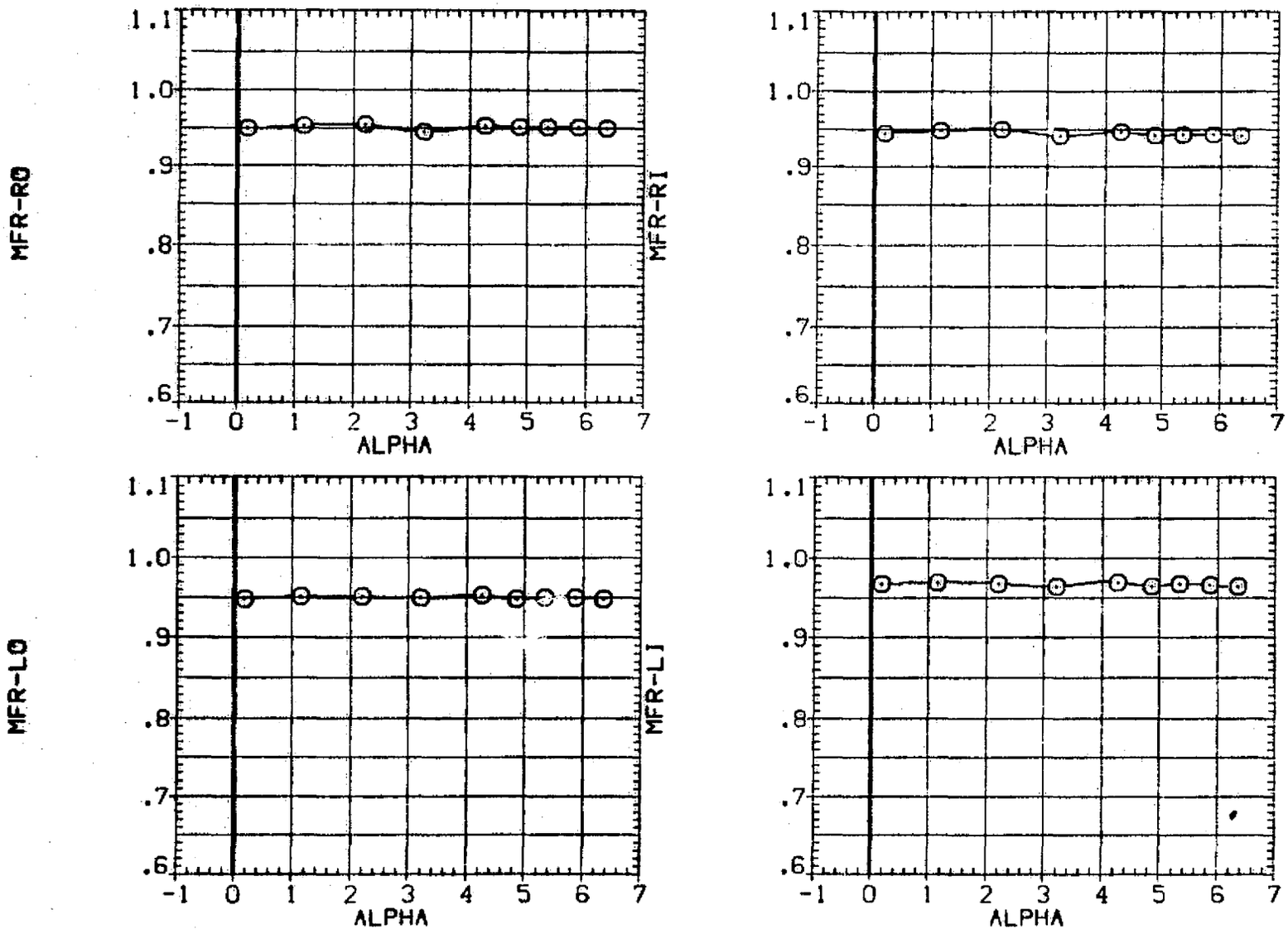


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	○	W B N1 N1	56.000	.250	.550	.000
(BAP026)	□	W B N1 N1	48.000	.250	.550	.000
(BAP027)	◇	W B N1 N1	40.000	.250	.550	.000
(BAP036)	△	W B N2 N2	56.000	.250	.550	.000
(BAP037)	▽	W B N2 N2	48.000	.250	.550	.000

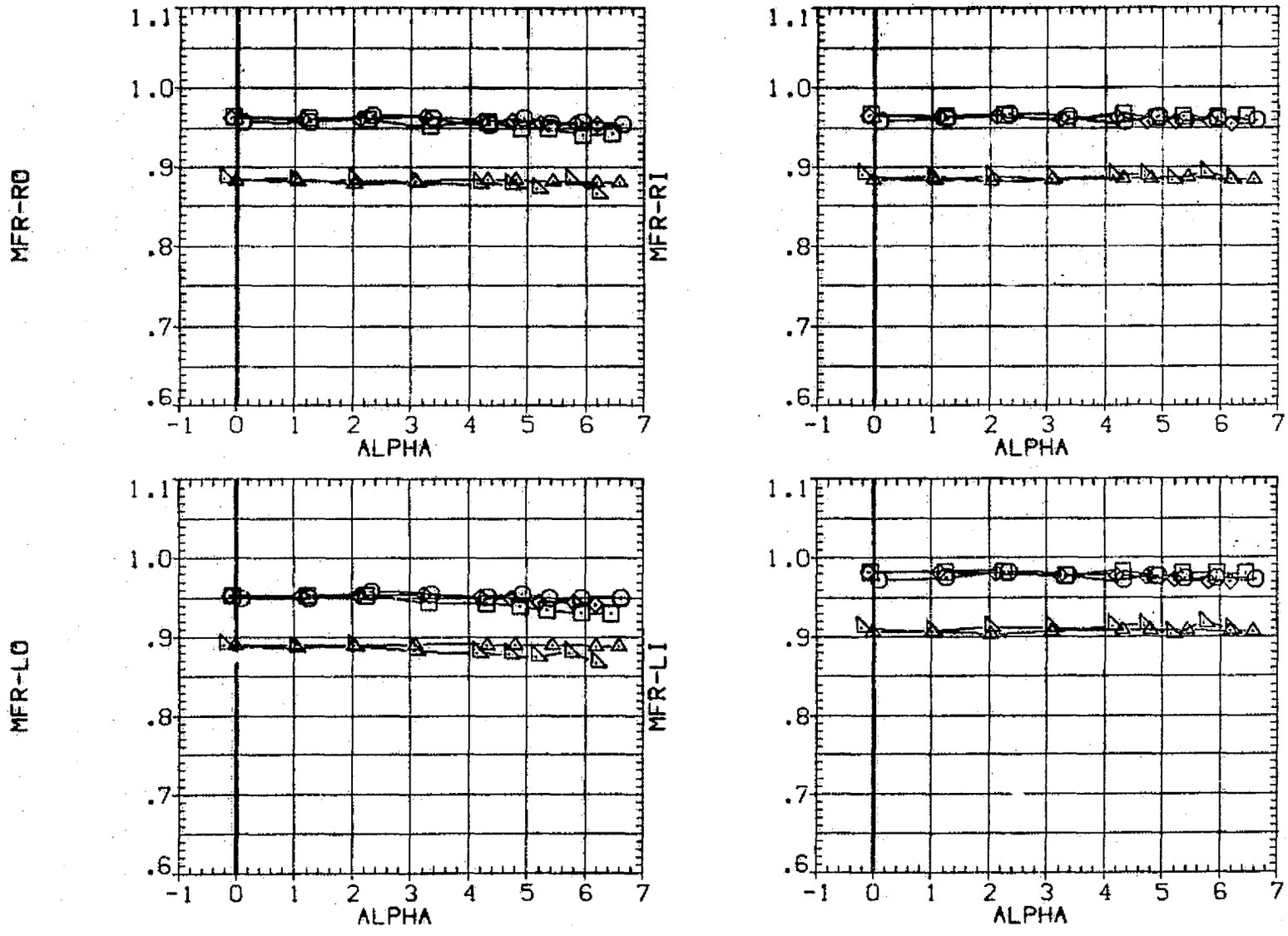


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(DAP025)		W B N1 N1
(BAP026)		DATA NOT AVAILABLE
(BAP027)		DATA NOT AVAILABLE
(BAP036)		DATA NOT AVAILABLE
(BAP037)		DATA NOT AVAILABLE

X-INBD	2Y1/B	2Y0/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

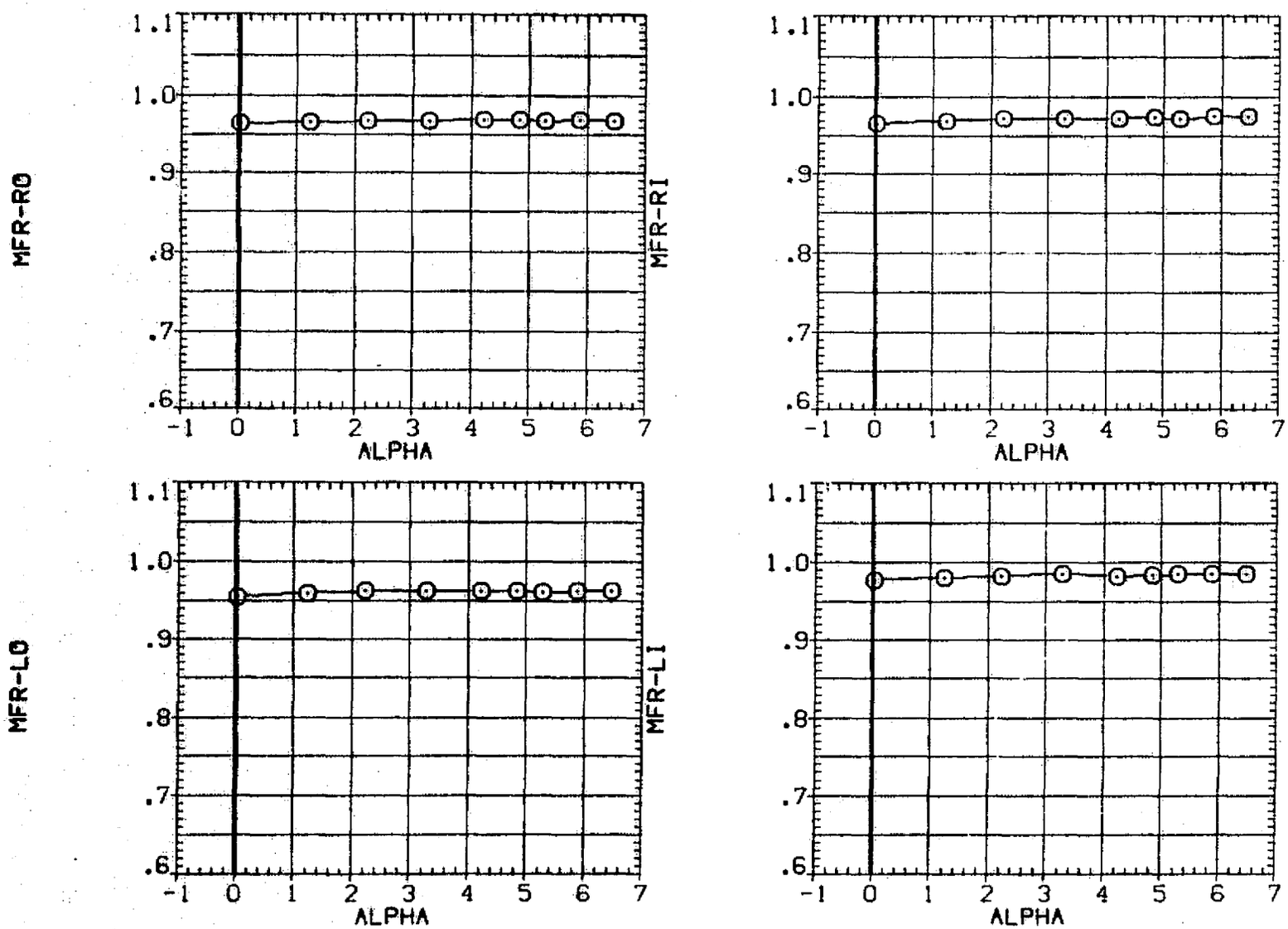


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(BAP025)		W B N1 N1	56.000	.250	.550	.000
(BAP026)		W B N1 N1	48.000	.250	.550	.000
(BAP027)		W B N1 N1	40.000	.250	.550	.000
(BAP036)		W B N2 N2	56.000	.250	.550	.000
(BAP037)		W B N2 N2	48.000	.250	.550	.000

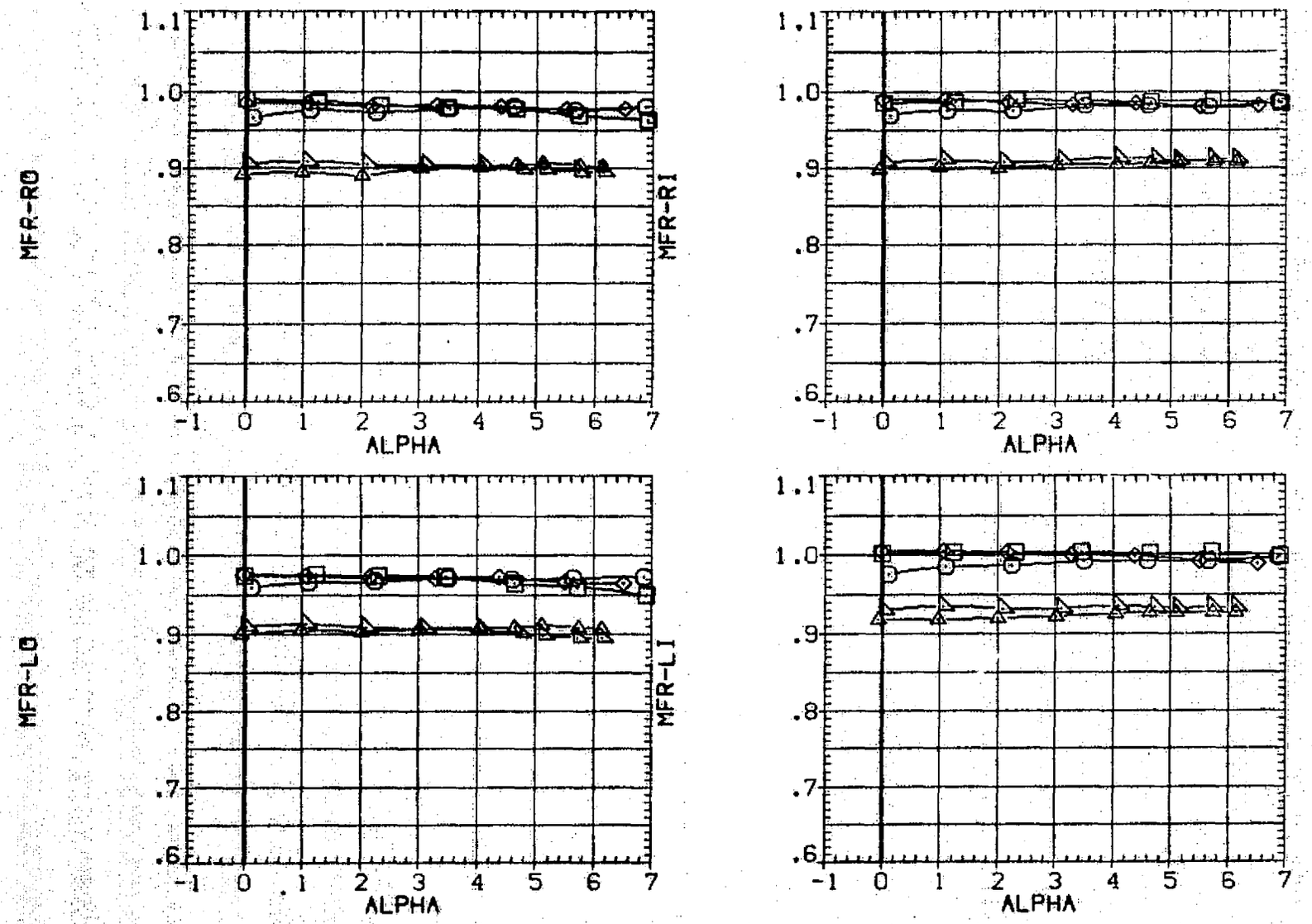


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	W B NI NI
(BAP026)	DATA NOT AVAILABLE
(BAP027)	DATA NOT AVAILABLE
(BAP036)	DATA NOT AVAILABLE
(BAP037)	DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

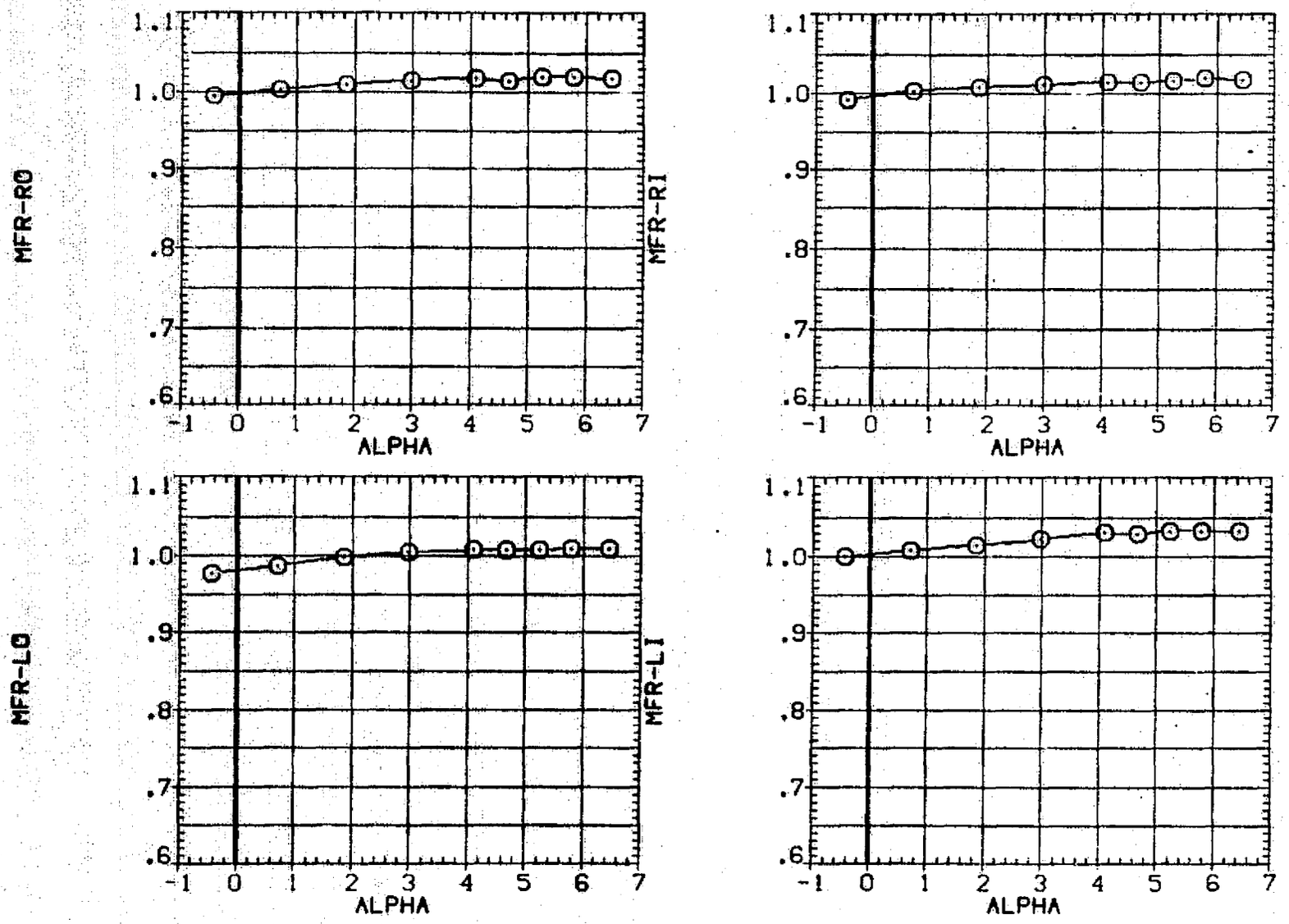


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	W B NI NI
(BAP026)	DATA NOT AVAILABLE
(BAP027)	DATA NOT AVAILABLE
(BAP036)	DATA NOT AVAILABLE
(BAP037)	DATA NOT AVAILABLE

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

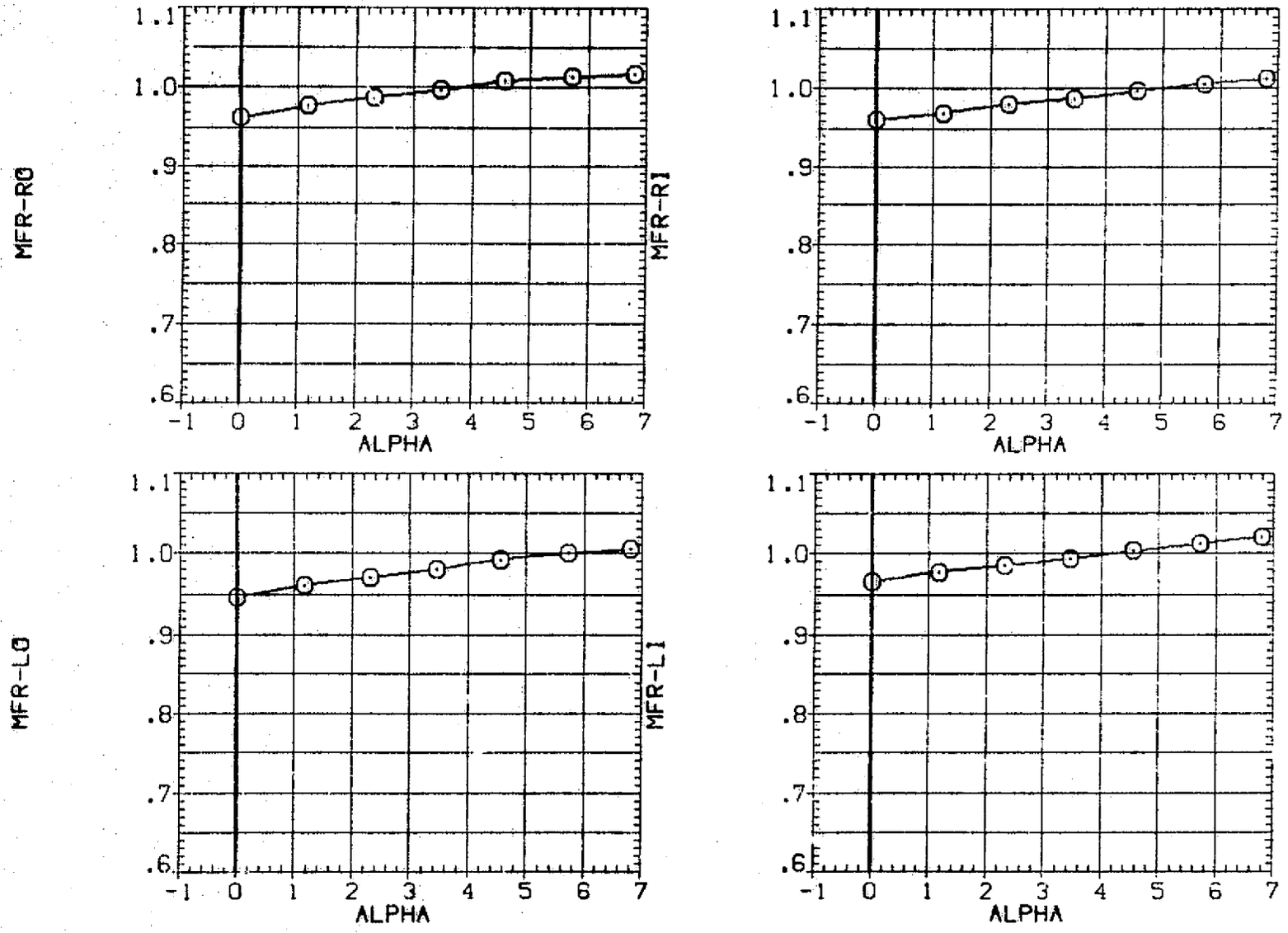


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(BAP025)	○	W B N1 N1
(BAP026)	□	W B N1 N1
(BAP027)	⊠	W B N1 N1
(BAP036)	△	W B N2 N2
(BAP037)	▽	W B N2 N2

X-INBD	2YI/B	2YO/B	DX
56.000	.250	.550	.000
48.000	.250	.550	.000
40.000	.250	.550	.000
56.000	.250	.550	.000
48.000	.250	.550	.000

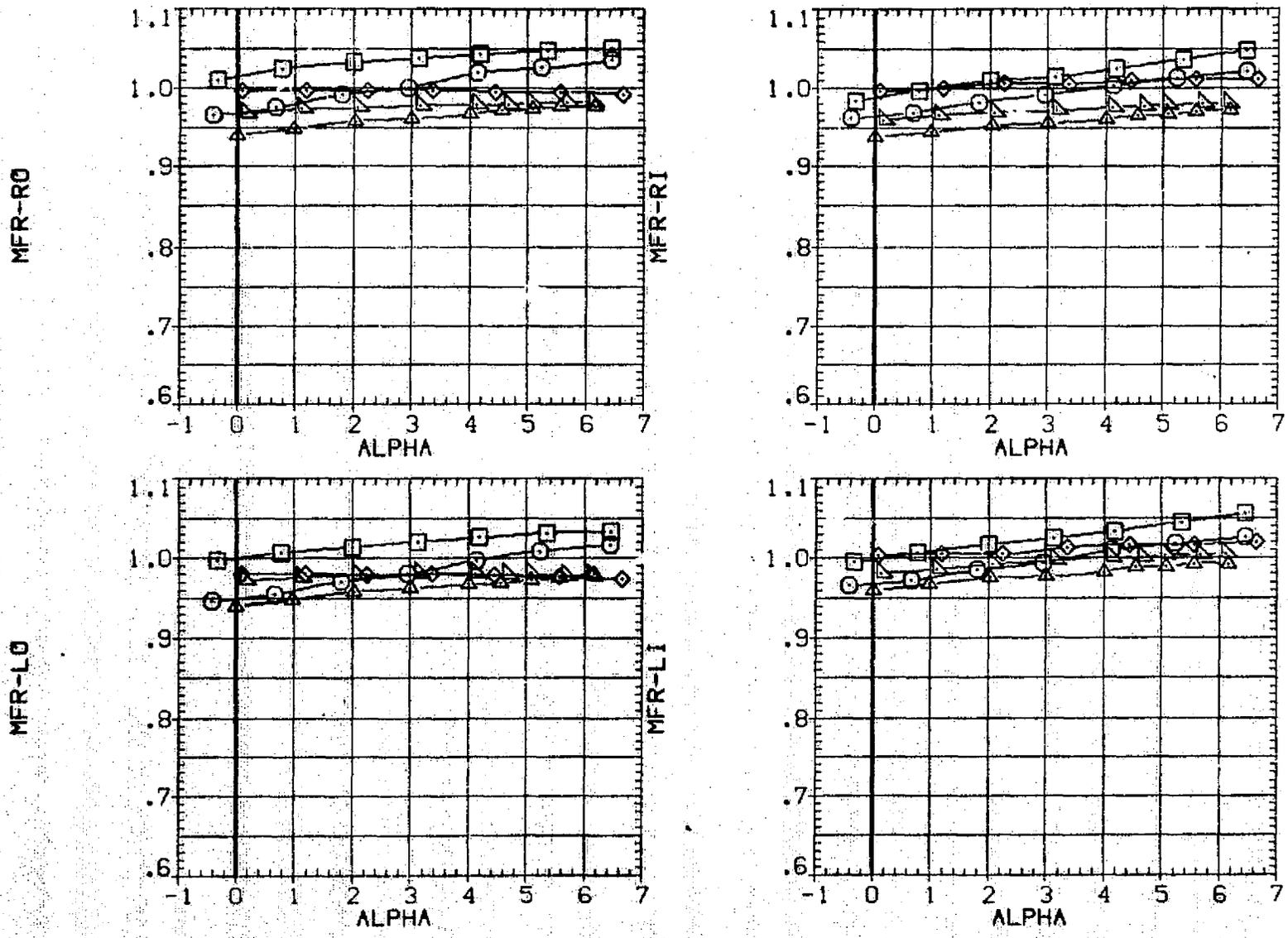


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	□	W B NI NI	56.000	.250	.550	.000
(BAP026)	⊠	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)	⋈	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)	◁	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)	◁	DATA NOT AVAILABLE	48.000	.250	.550	.000

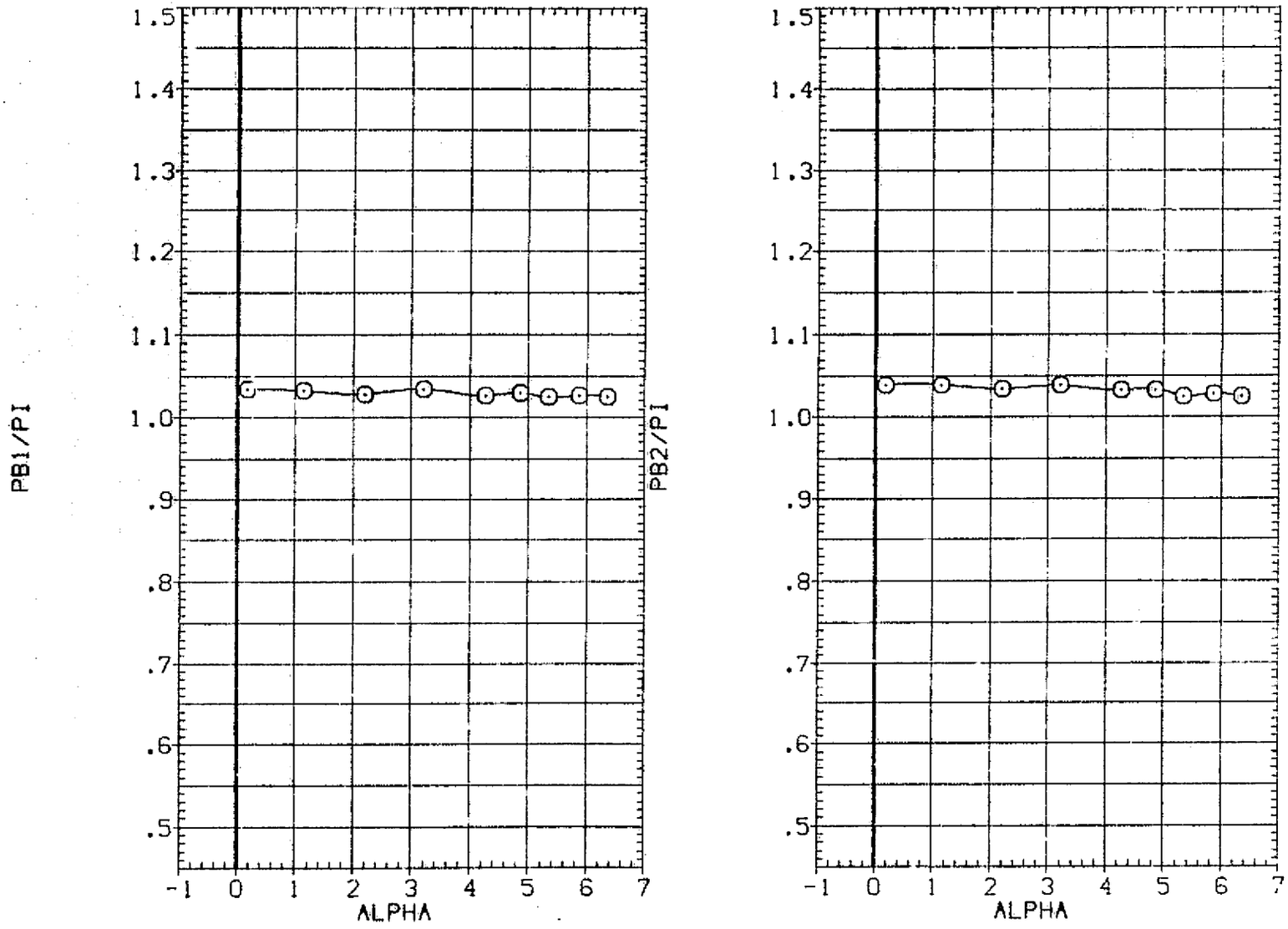


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2Y0/B	DX
(DAP025)	◇	W B N1 N1	56.000	.250	.550	.000
(BAP026)	□	W B N1 N1	48.000	.250	.550	.000
(BAP027)	△	W B N1 N1	40.000	.250	.550	.000
(BAP036)	◇	W B N2 N2	56.000	.250	.550	.000
(BAP037)	△	W B N2 N2	48.000	.250	.550	.000

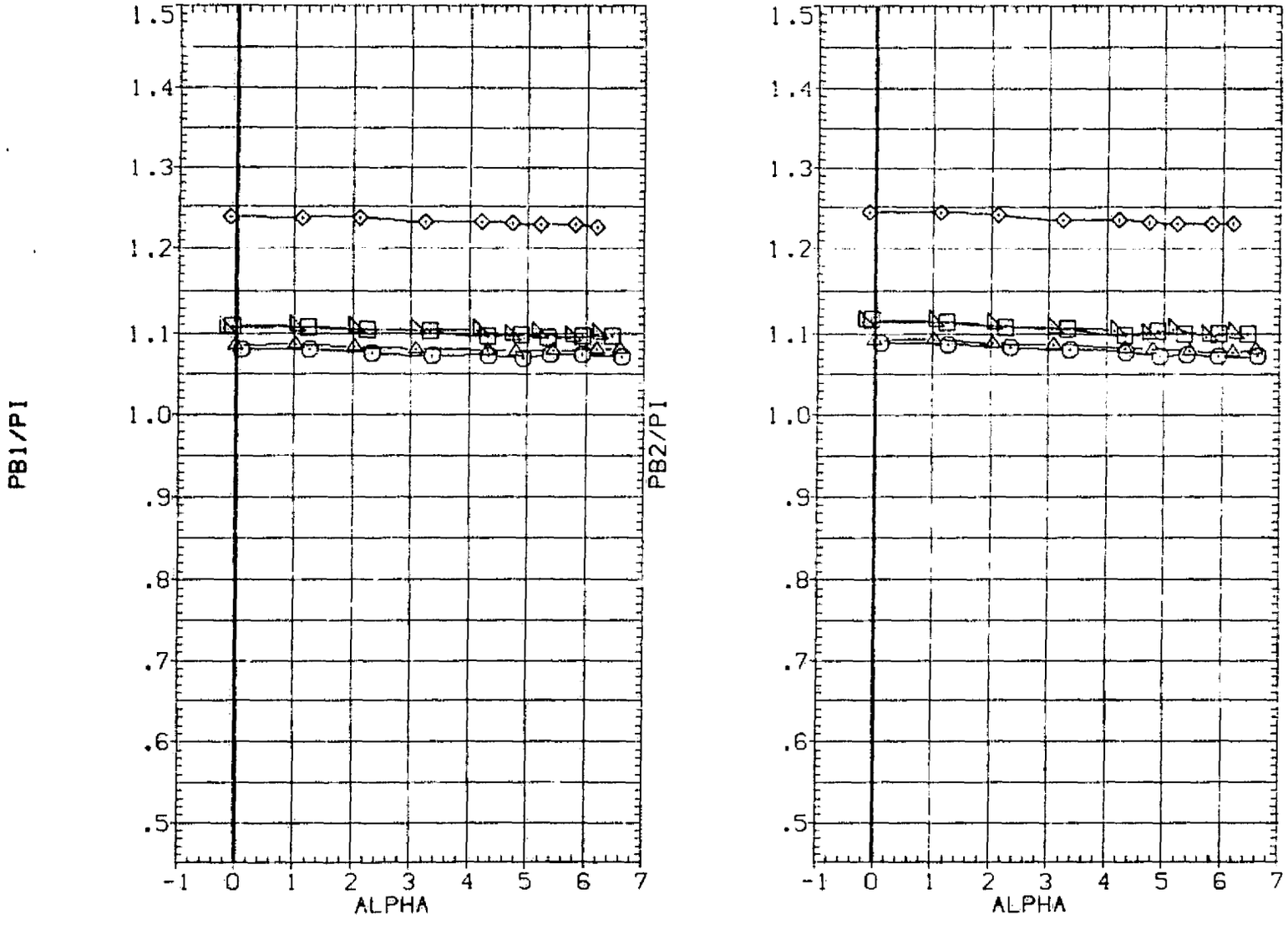


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2Y1/B	2YO/B	DX
(DAP025)	□	W B NI NI	56.000	.250	.550	.000
(DAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(DAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(DAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(DAP037)	△	DATA NOT AVAILABLE	48.000	.250	.550	.000

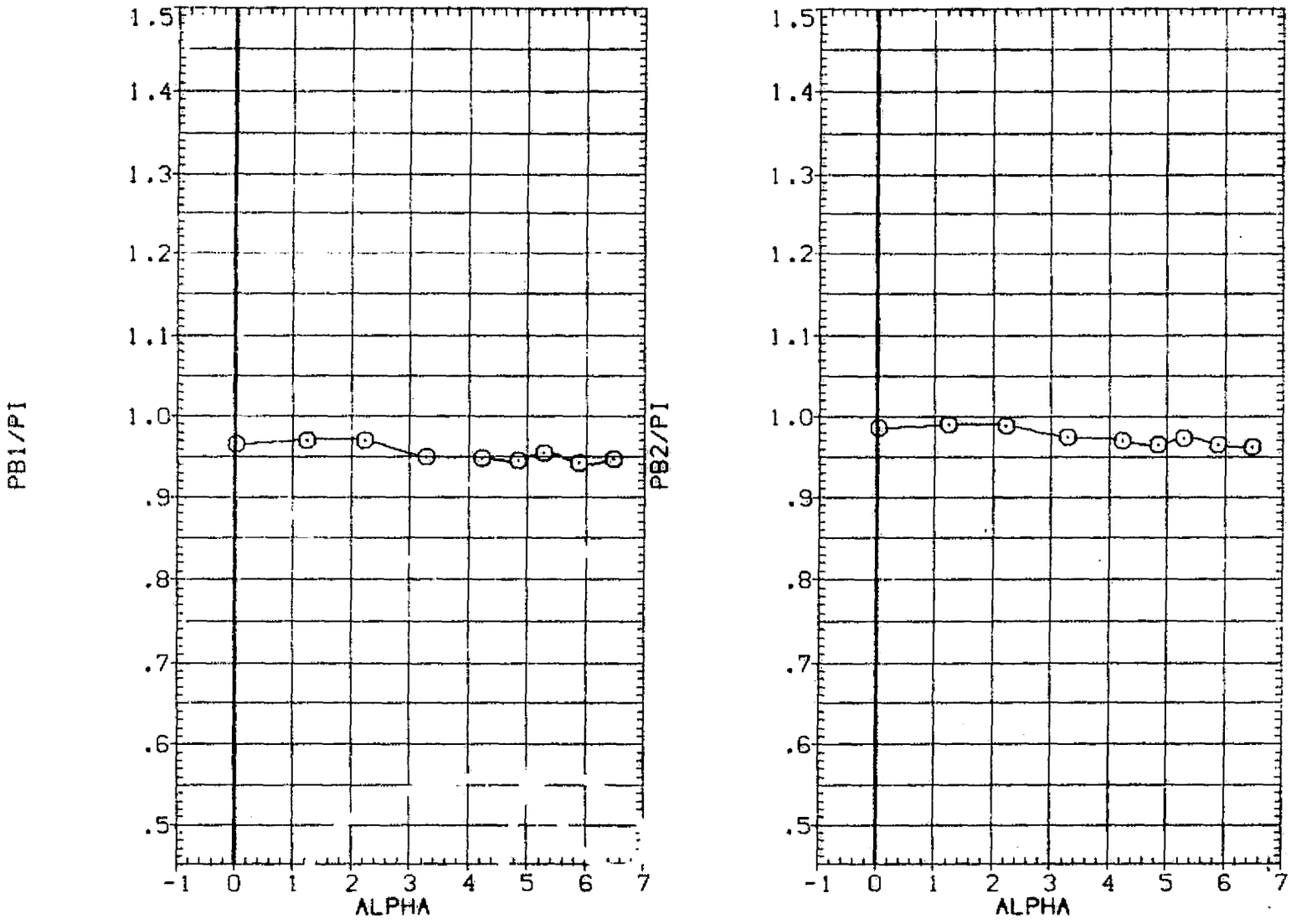


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	Dx
(DAP025)	□	W B N1 N1	56.000	.250	.550	.000
(DAP026)	◇	W B N1 N1	48.000	.250	.550	.000
(DAP027)	△	W B N1 N1	40.000	.250	.550	.000
(DAP036)	▽	W B N2 N2	56.000	.250	.550	.000
(DAP037)	○	W B N2 N2	48.000	.250	.550	.000

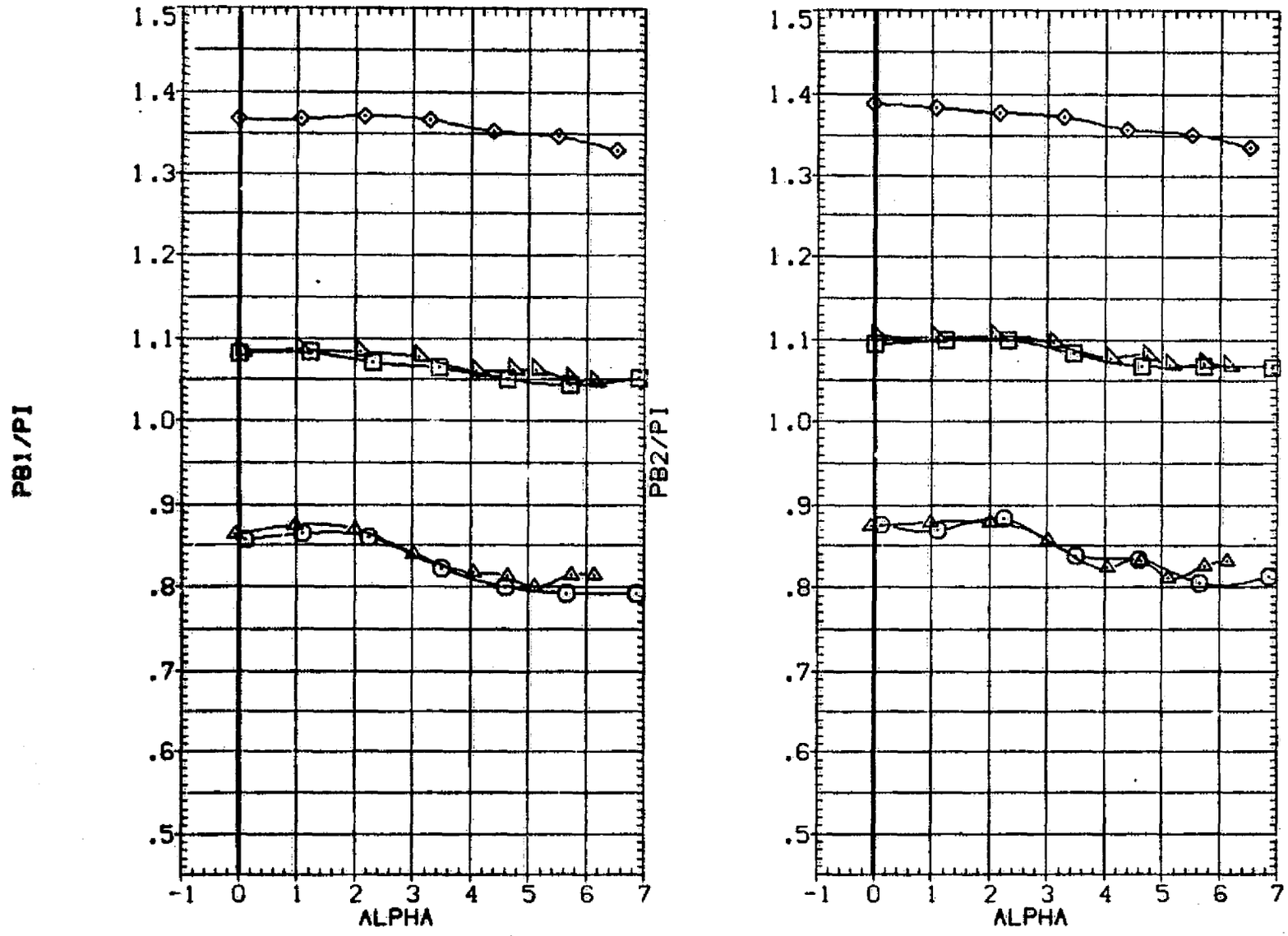


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(DAP025)	○	W B NI NI	56.000	.250	.550	.000
(BAP026)	□	DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)	◇	DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)	△	DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)	▽	DATA NOT AVAILABLE	48.000	.250	.550	.000

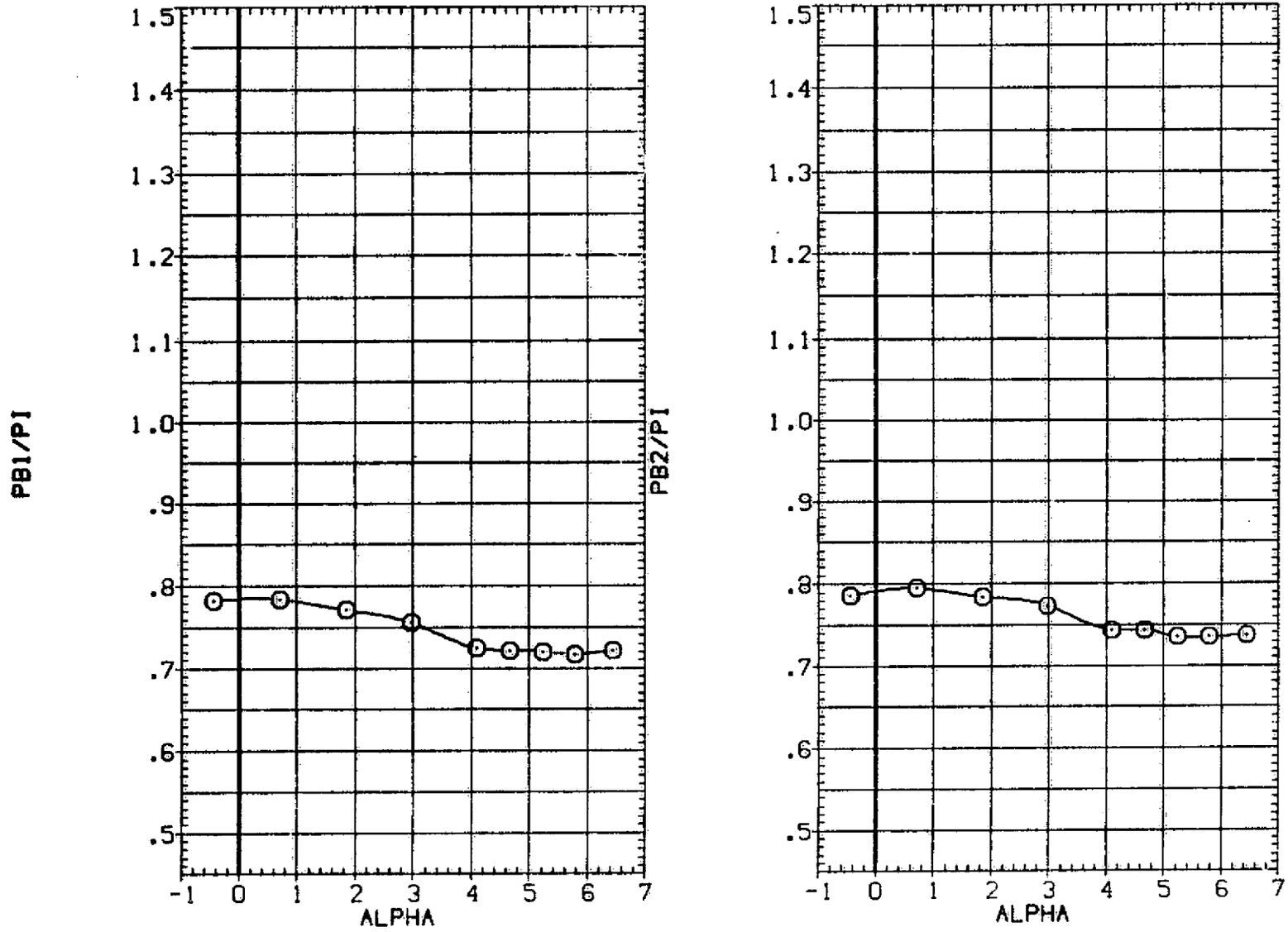


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(E)MACH = 1.17

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)		W B NI NI	56.000	.250	.550	.000
(BAP026)		DATA NOT AVAILABLE	48.000	.250	.550	.000
(BAP027)		DATA NOT AVAILABLE	40.000	.250	.550	.000
(BAP036)		DATA NOT AVAILABLE	56.000	.250	.550	.000
(BAP037)		DATA NOT AVAILABLE	48.000	.250	.550	.000

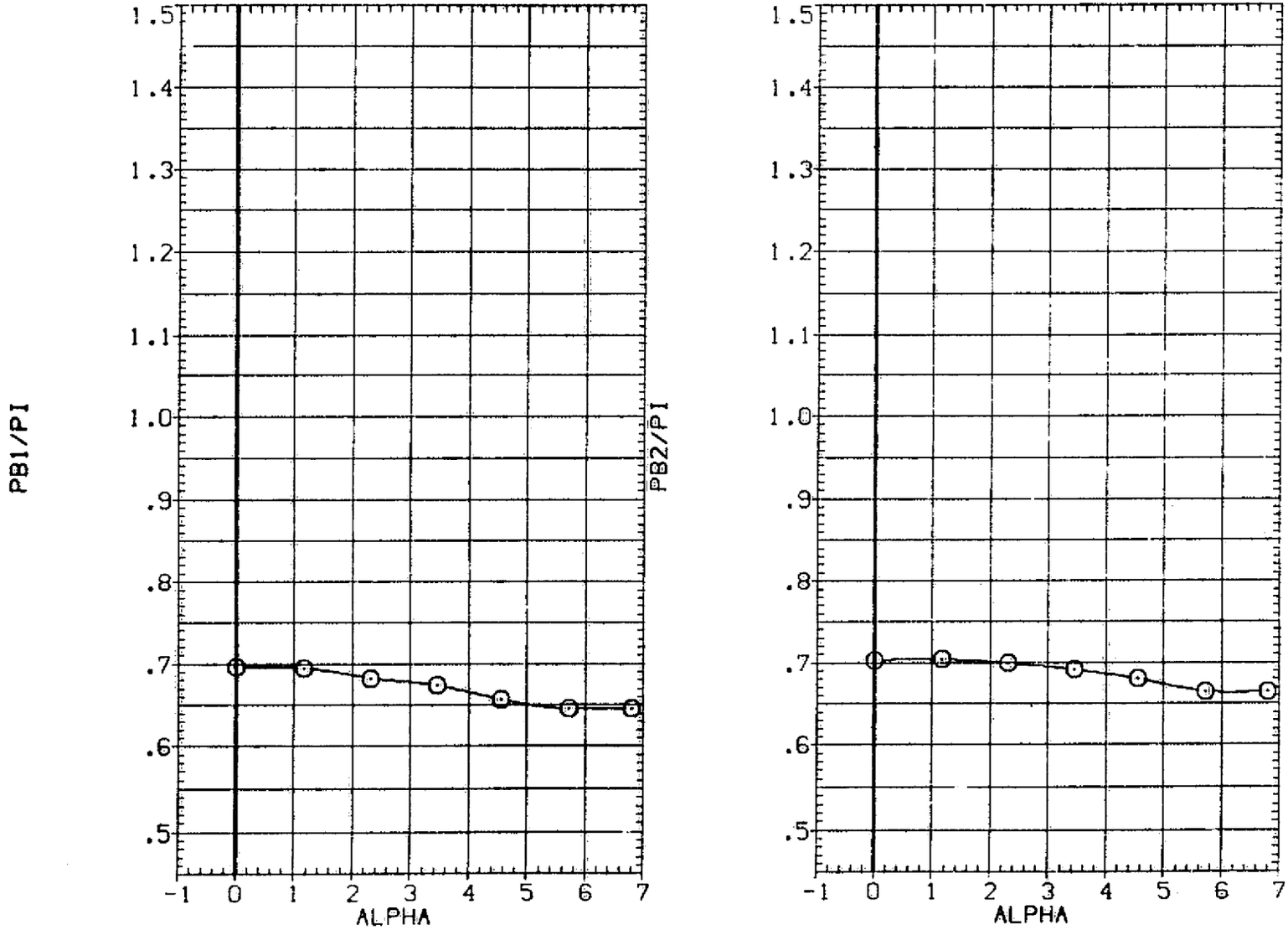


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	2YI/B	2YO/B	DX
(BAP025)	◇	W B N1 N1	56.000	.250	.550	.000
(BAP026)	□	W B N1 N1	48.000	.250	.550	.000
(BAP027)	△	W B N1 N1	40.000	.250	.550	.000
(BAP036)	○	W B N2 N2	56.000	.250	.550	.000
(BAP037)	▽	W B N2 N2	48.000	.250	.550	.000

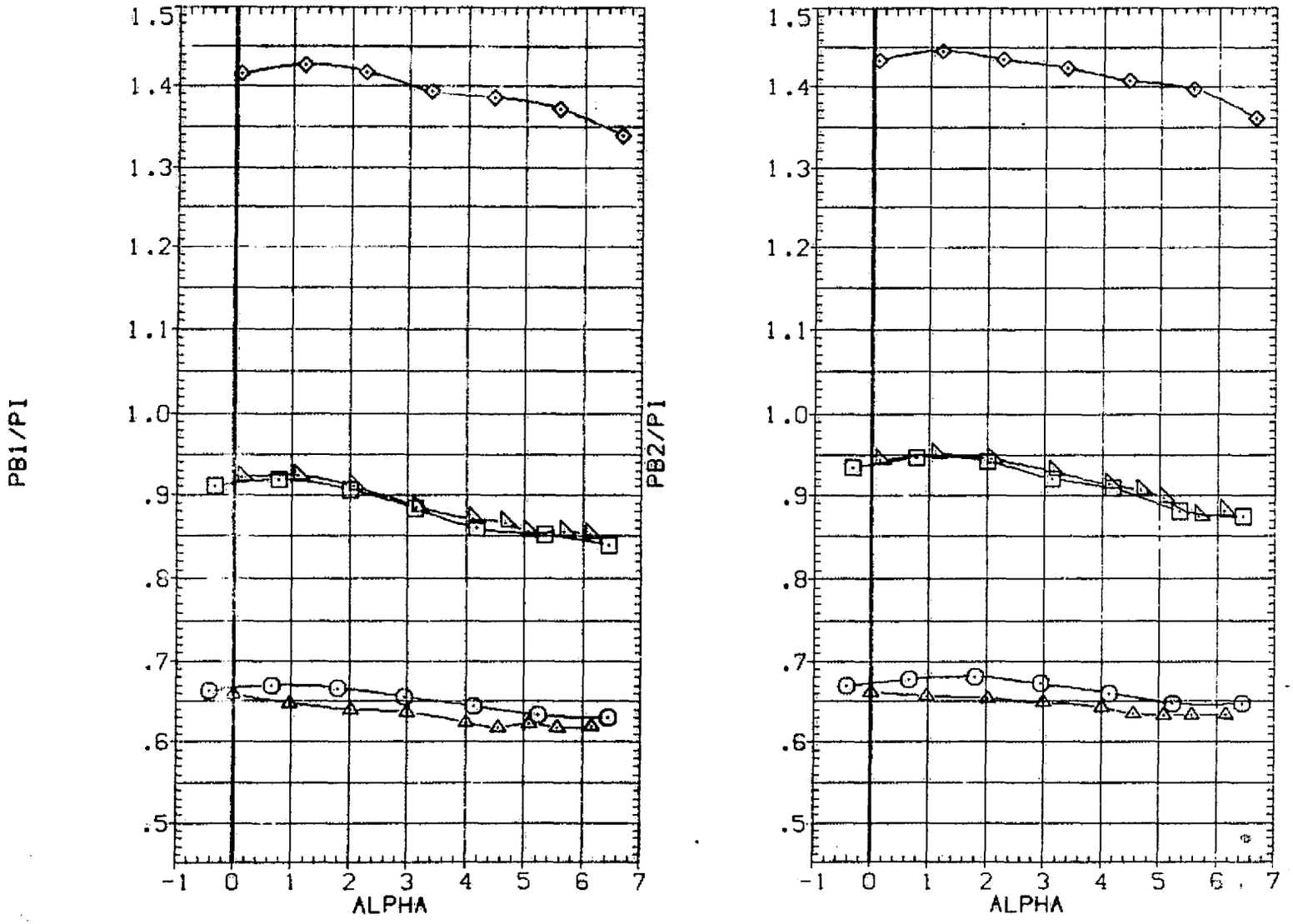


FIG. 13 EFFECTS OF ANGLE OF ATTACK ON NACELLE AND WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	▢	W B NI NI	56.000	.000
(RAP029)	□	W B NI NI	48.000	.000
(RAP030)	◇	W B NI NI	40.000	.000

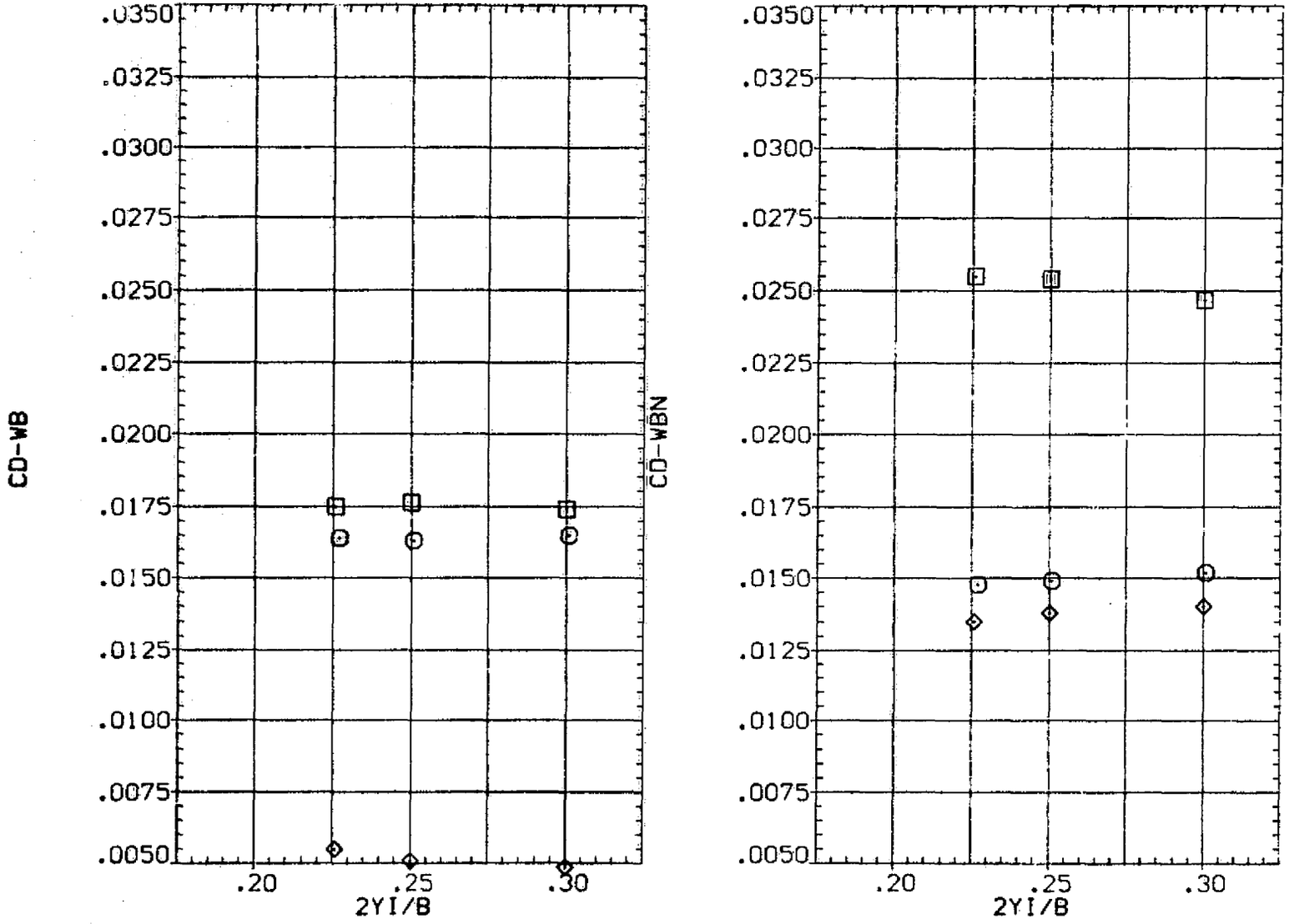


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	○	W B N1 N1	56.000	.000
(RAP029)	□	W B N1 N1	48.000	.000
(RAP030)	◇	W B N1 N1	40.000	.000

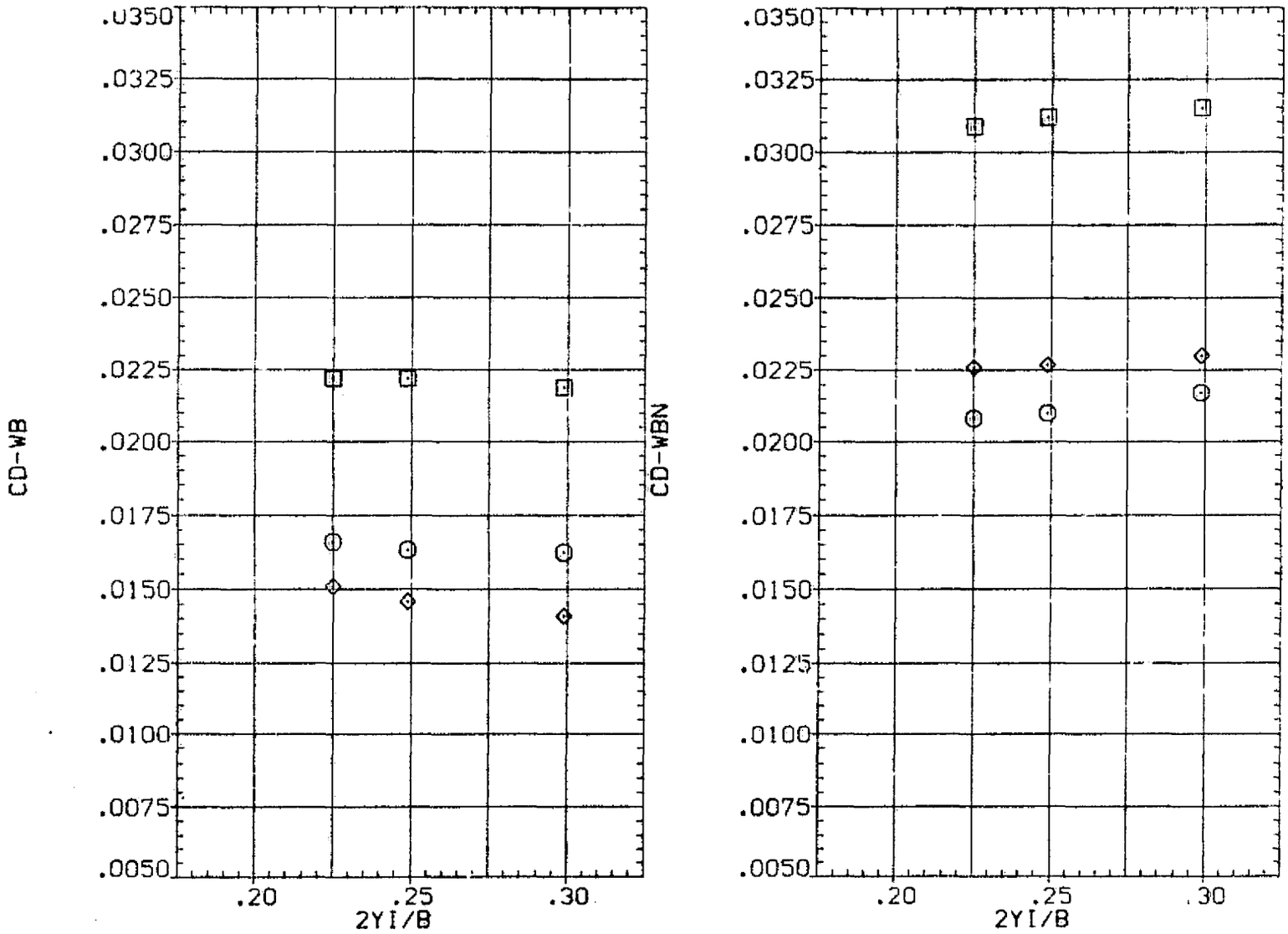


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	□	W B NI NI	56.000	.000
(RAP029)	◇	W B NI NI	48.000	.000
(RAP030)	○	W B NI NI	40.000	.000

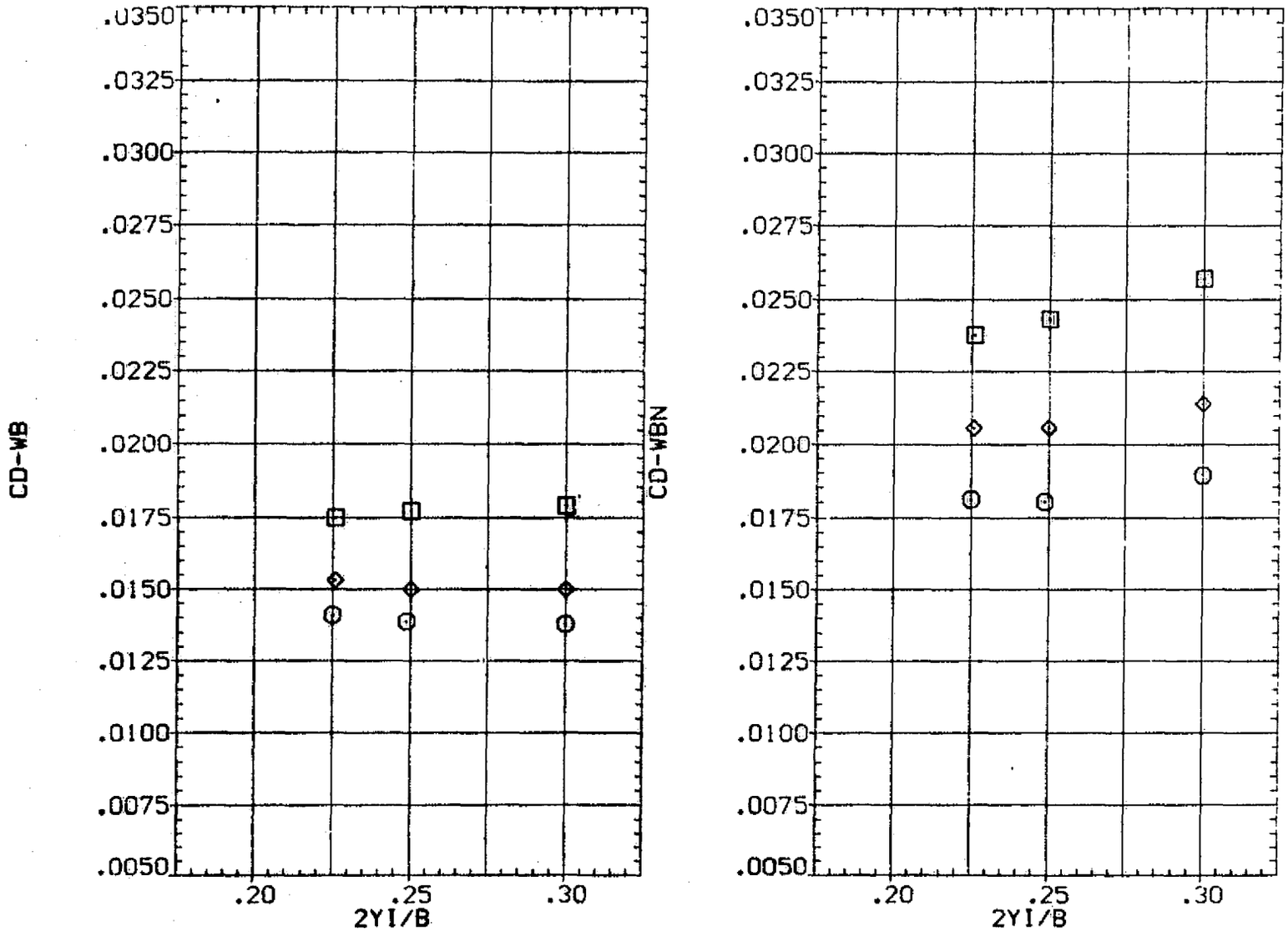


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	○	W B N1 N1	56.000	.000
(RAP029)	□	W B N1 N1	48.000	.000
(RAP030)	◇	W B N1 N1	40.000	.000

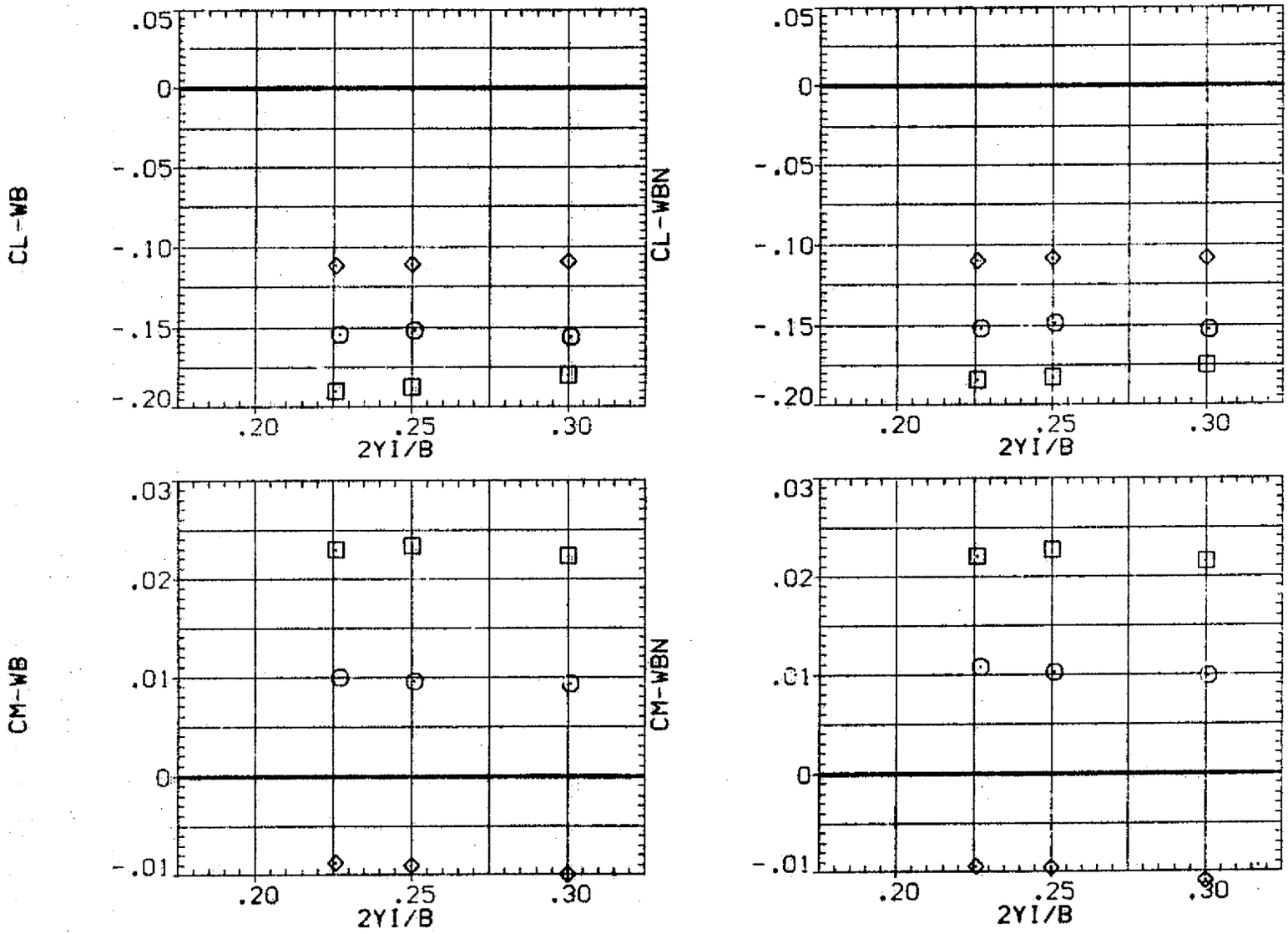


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	□	W B NI NI	56.000	.000
(RAP029)	▭	W B NI NI	48.000	.000
(RAP030)	◇	W B NI NI	40.000	.000

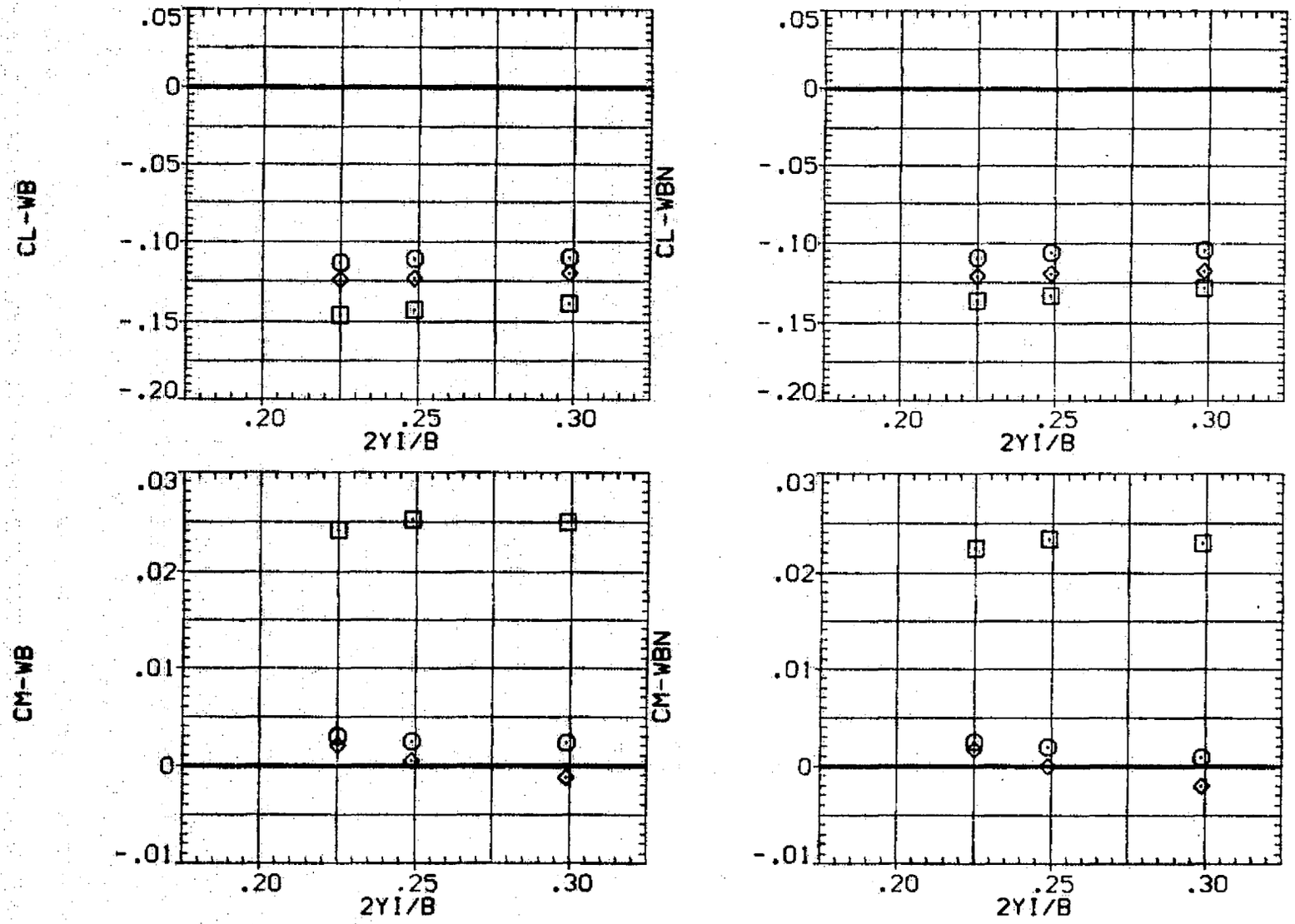


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(B)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-INBD	DX
(RAP028)	○	W B N1 N1	56.000	.000
(RAP029)	□	W B N1 N1	48.000	.000
(RAP030)	◇	W B N1 N1	40.000	.000

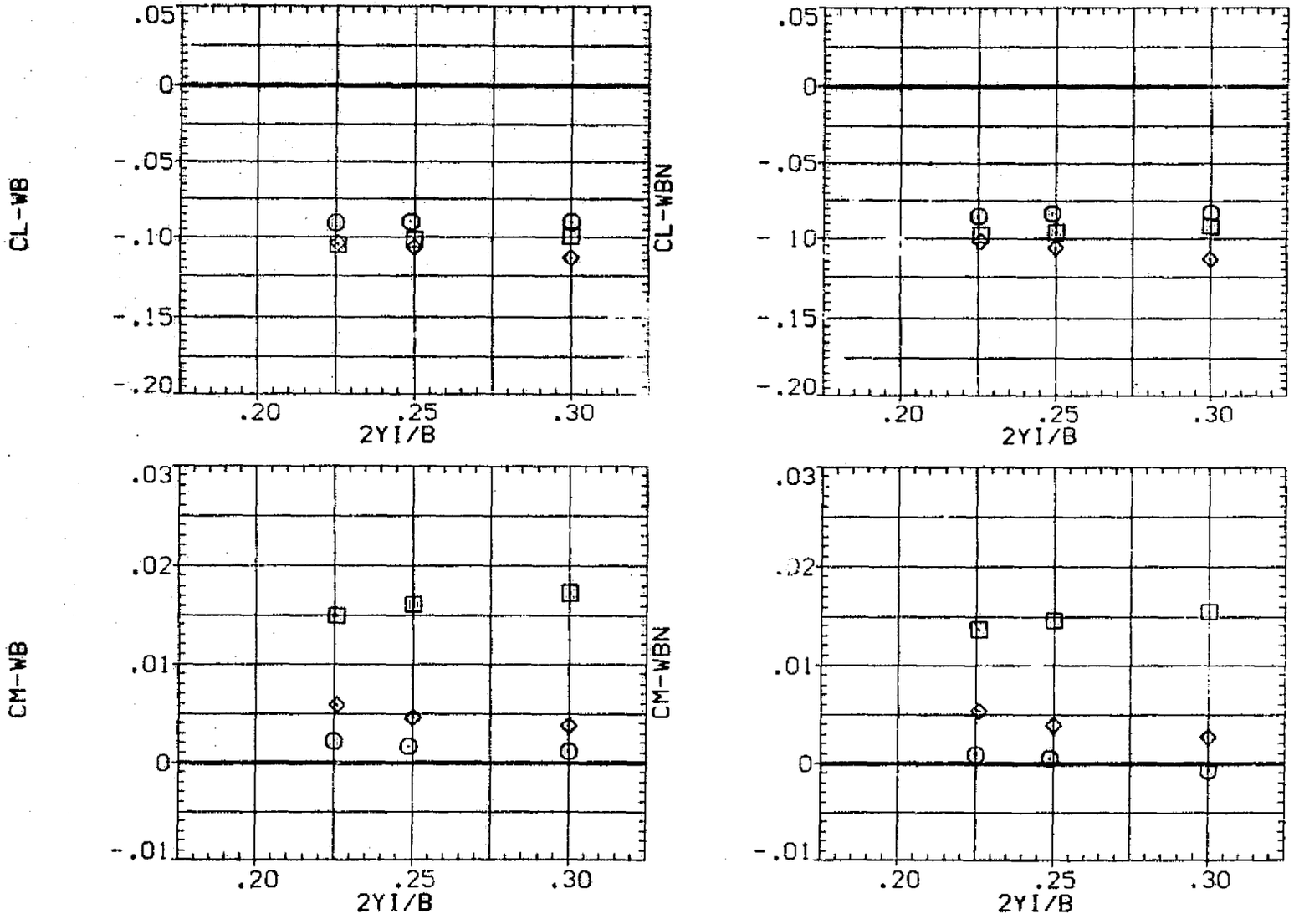


FIG. 14 EFFECTS OF NACELLE SPANWISE LOCATION ON NACELLE AND WING BODY FORCES.

(C)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

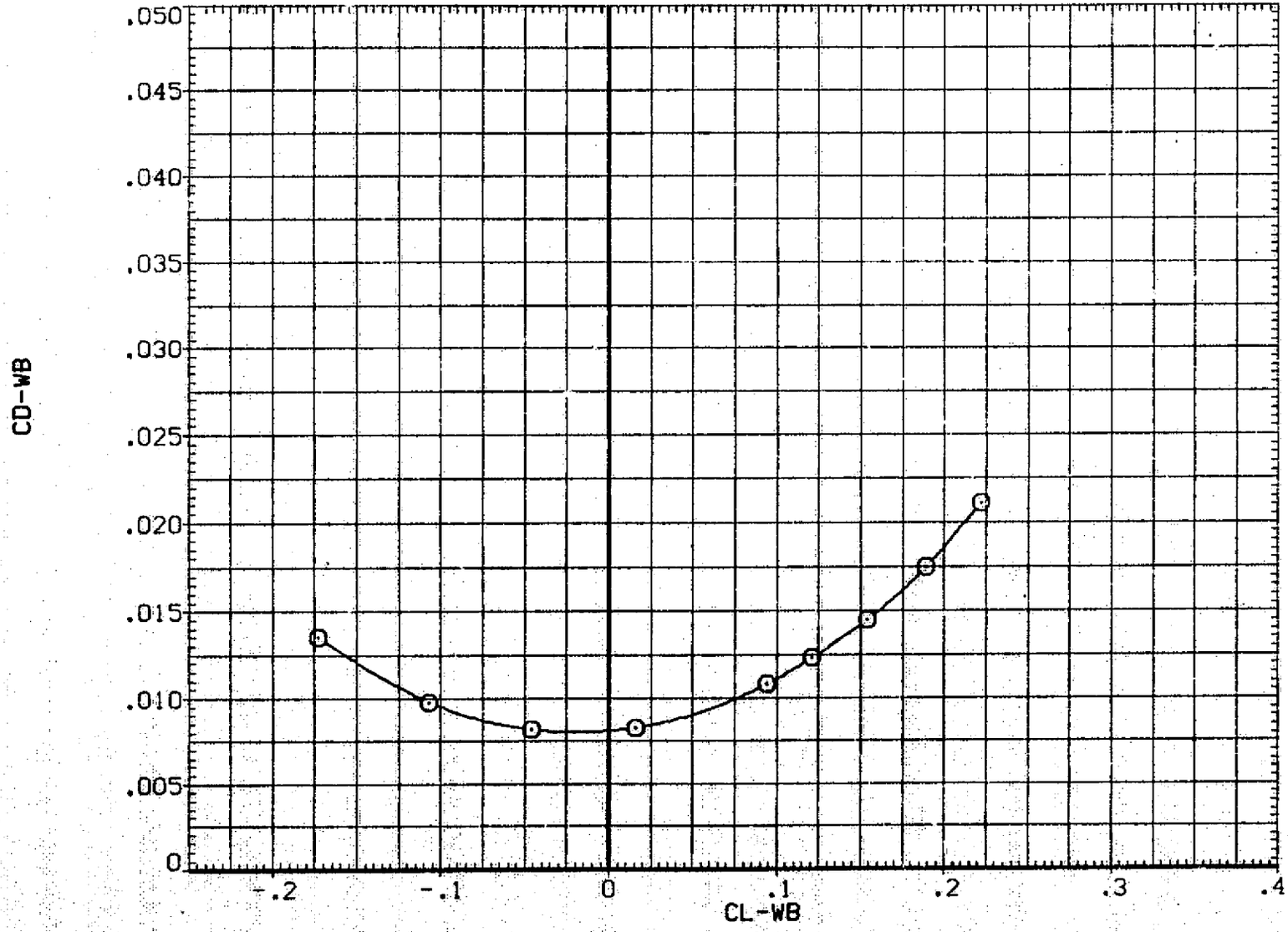


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)	○	W B
(RAP039)	□	W B
(RAP040)	◇	W B

X-MA	DX	2Y1/B	2Y0/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

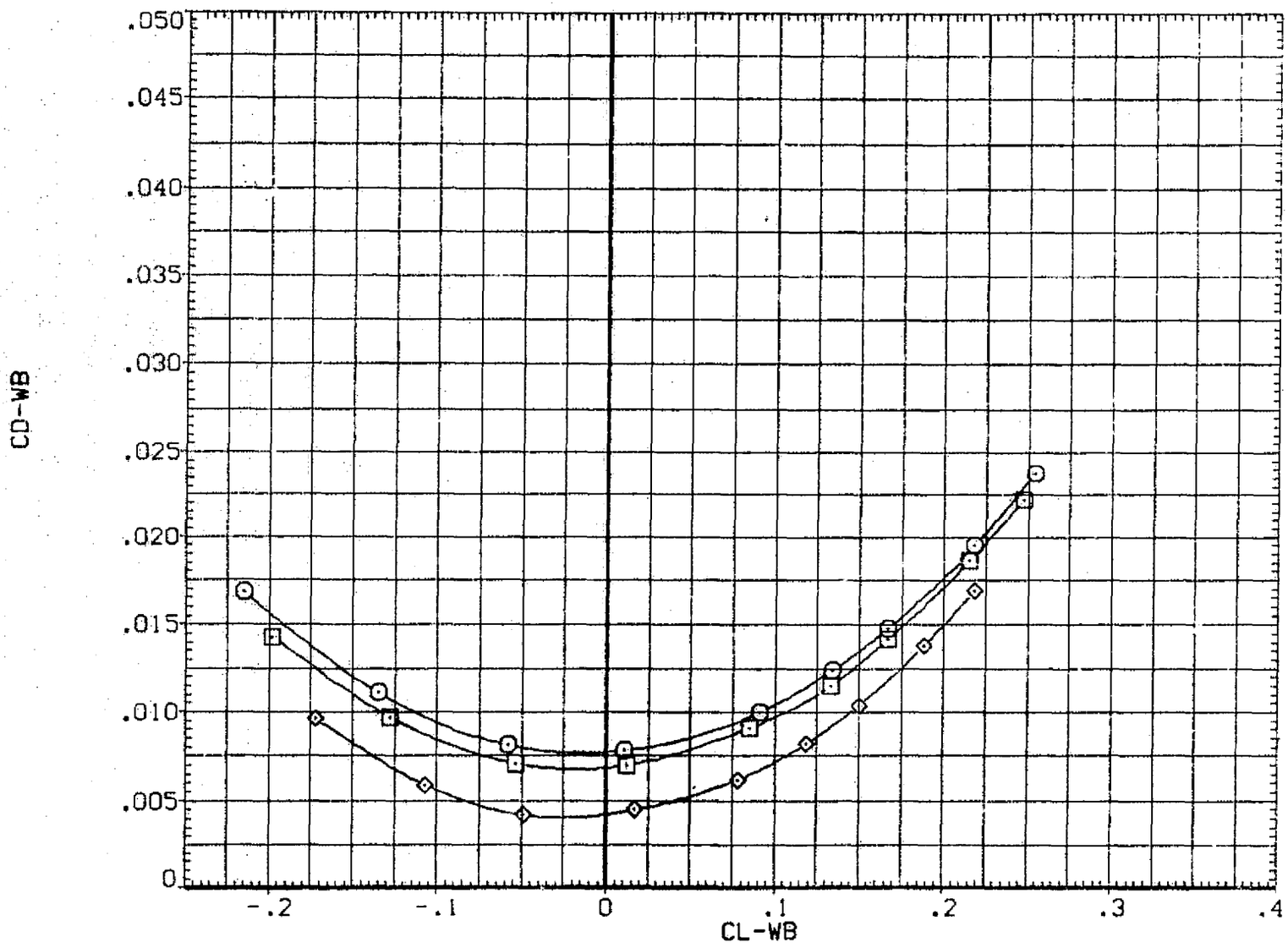


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

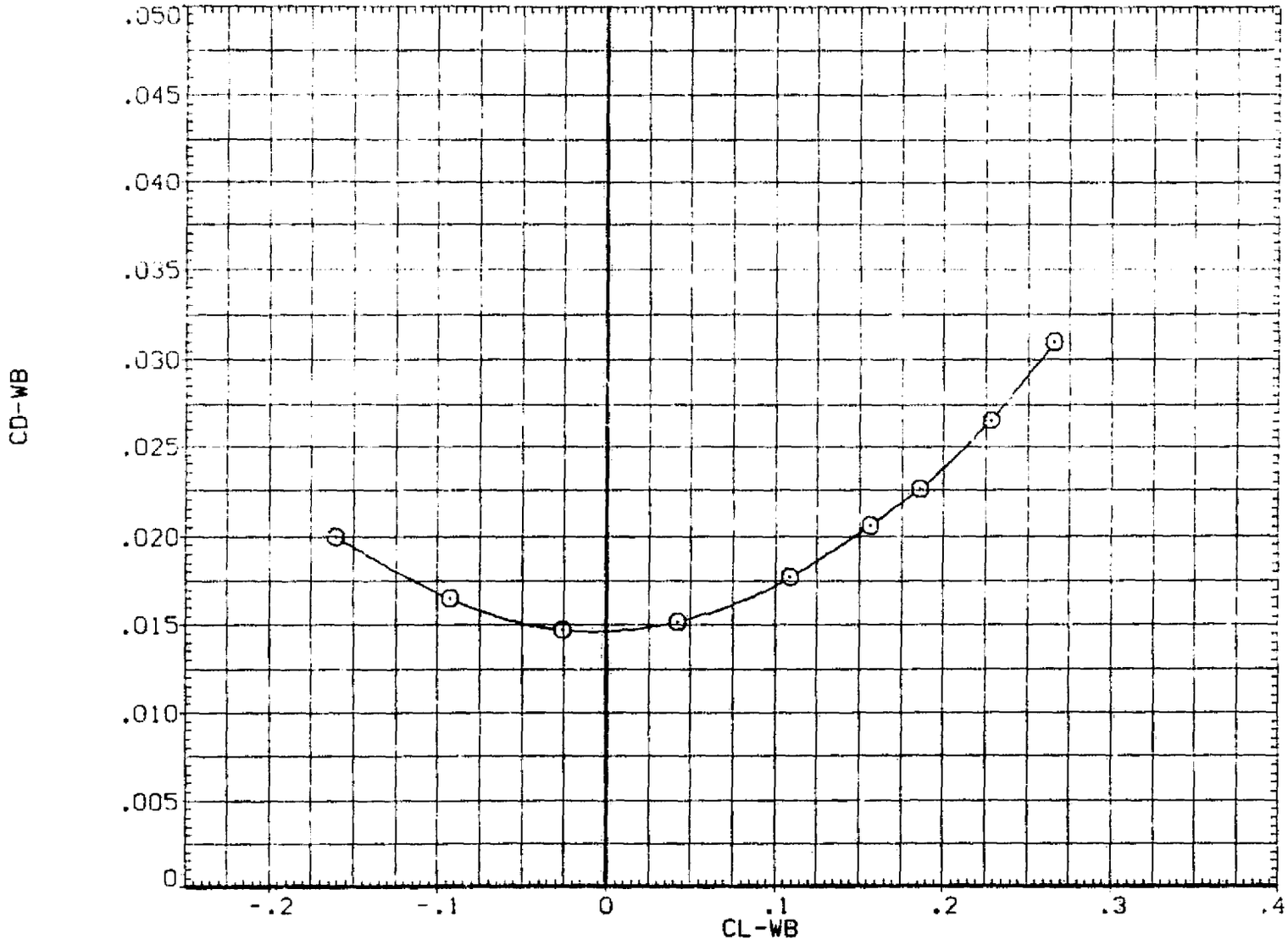


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)	□	W B
(RAP039)	◇	W B
(RAP040)	⊗	W B

X-MA	DX	2Y1/B	2Y0/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

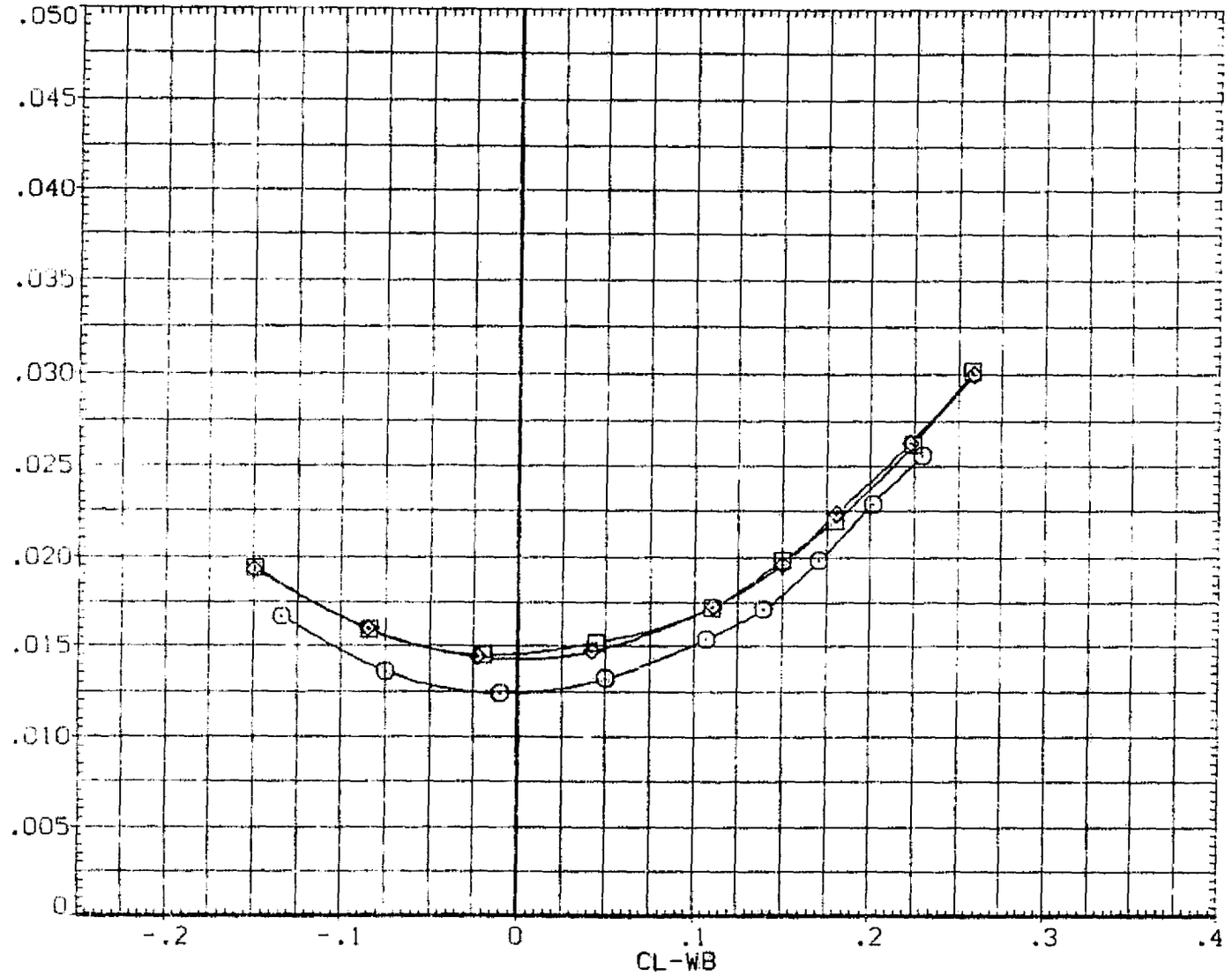


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	Y-MA	DX	2Y1/B	2Y0/B
(RAP038)	□	W B	52.000	.000	.250	.550
(RAP039)	◇	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

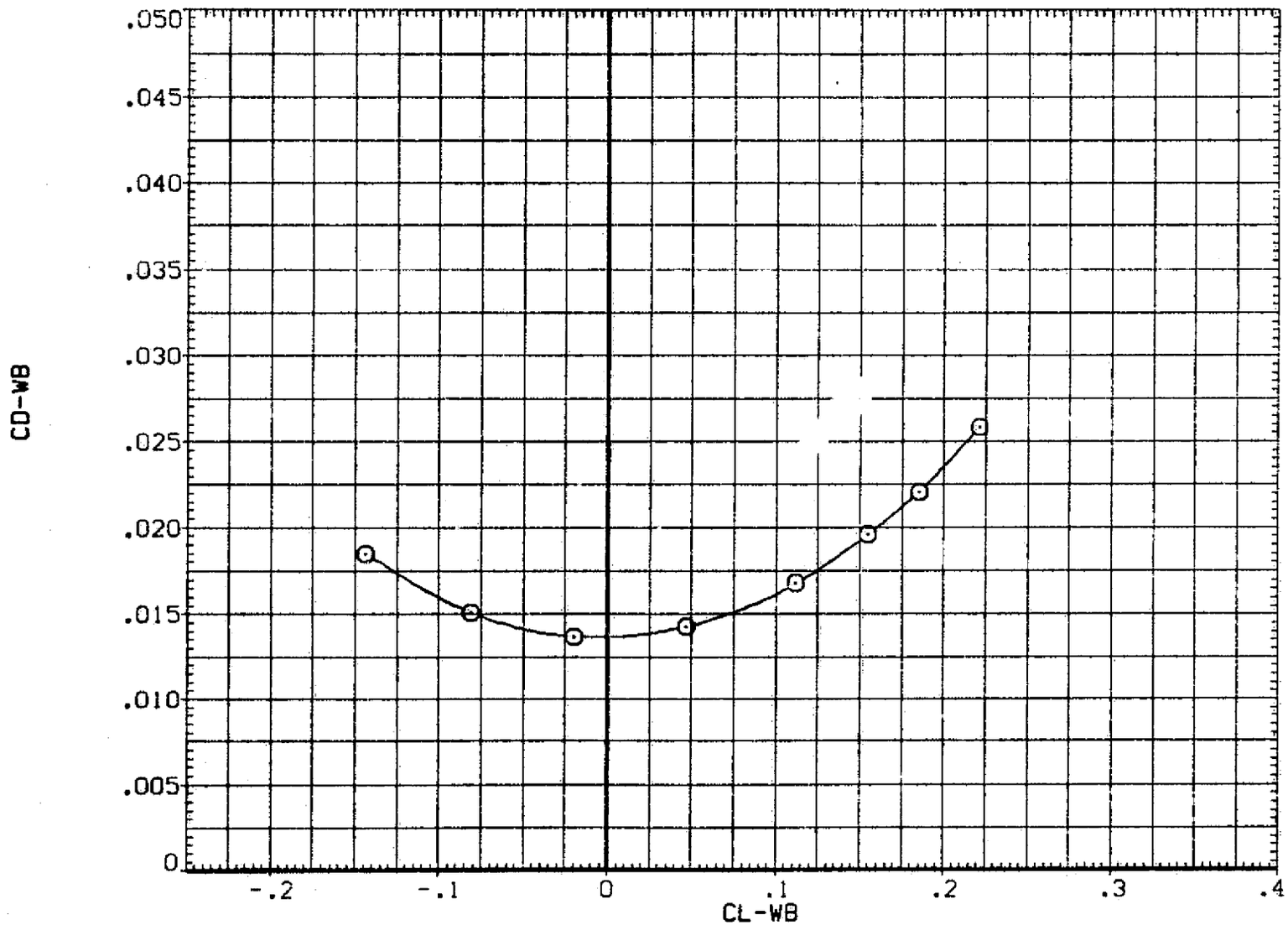


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(E)MACH = 1.20

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	W B	52.000	.000	.250	.550
(RAP039)	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	DATA NOT AVAILABLE	40.000	.000	.250	.550

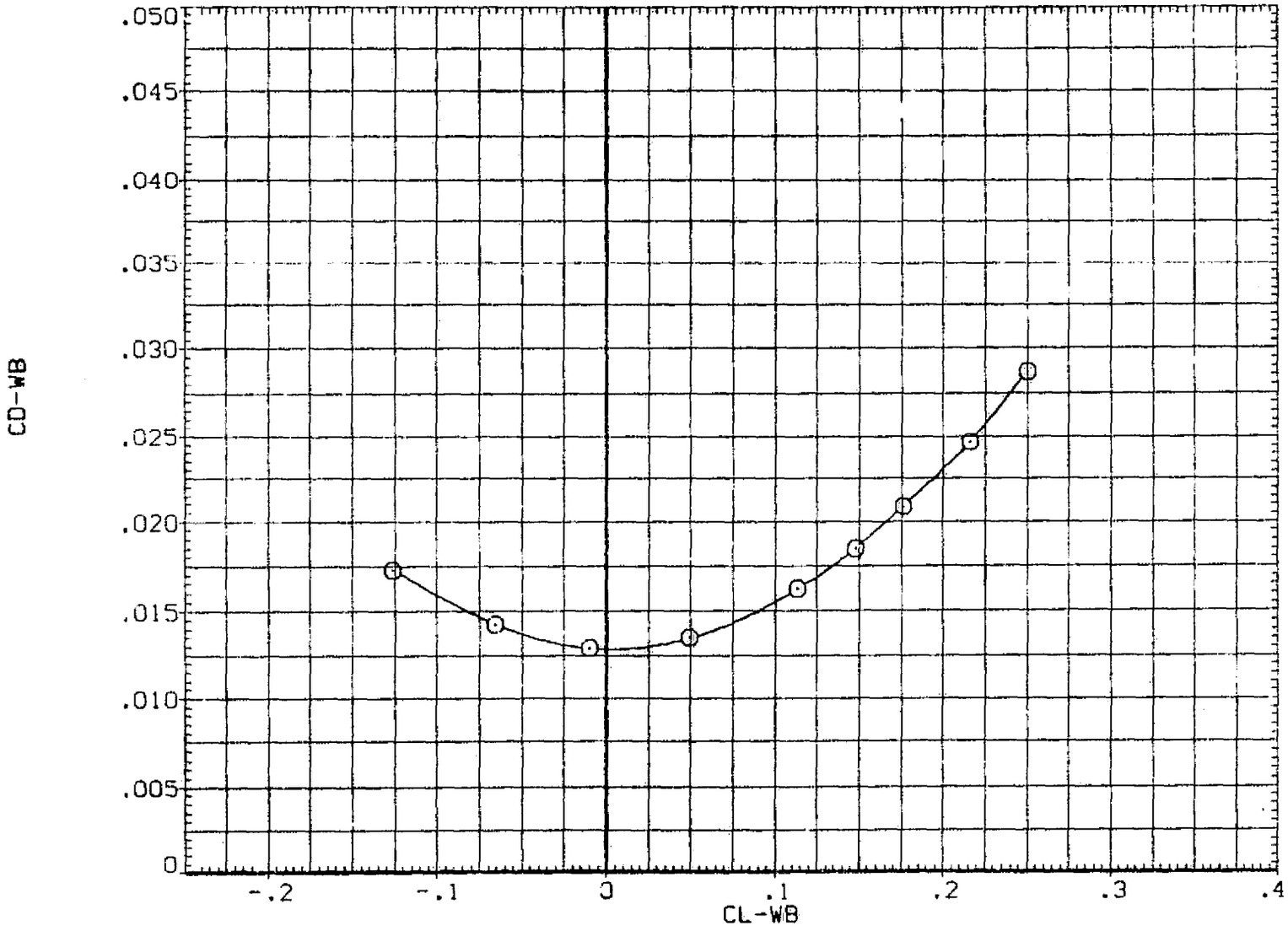


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2YI/B	2YO/B
[RAP038]	○	W B	52.000	.000	.250	.550
[RAP039]	□	W B	48.000	.000	.250	.550
[RAP040]	◇	W B	40.000	.000	.250	.550

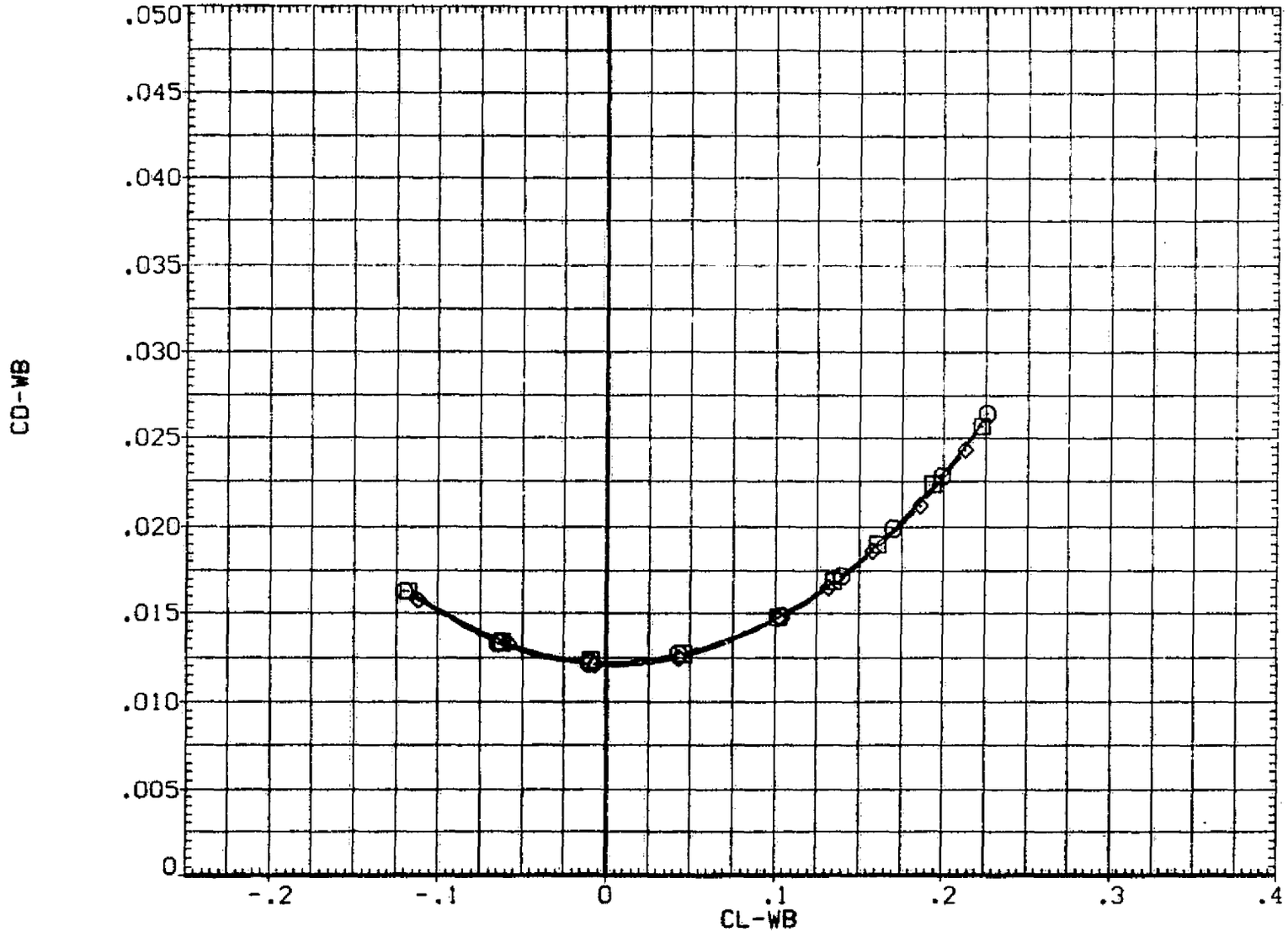


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

[G]MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2YI/B	2YO/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

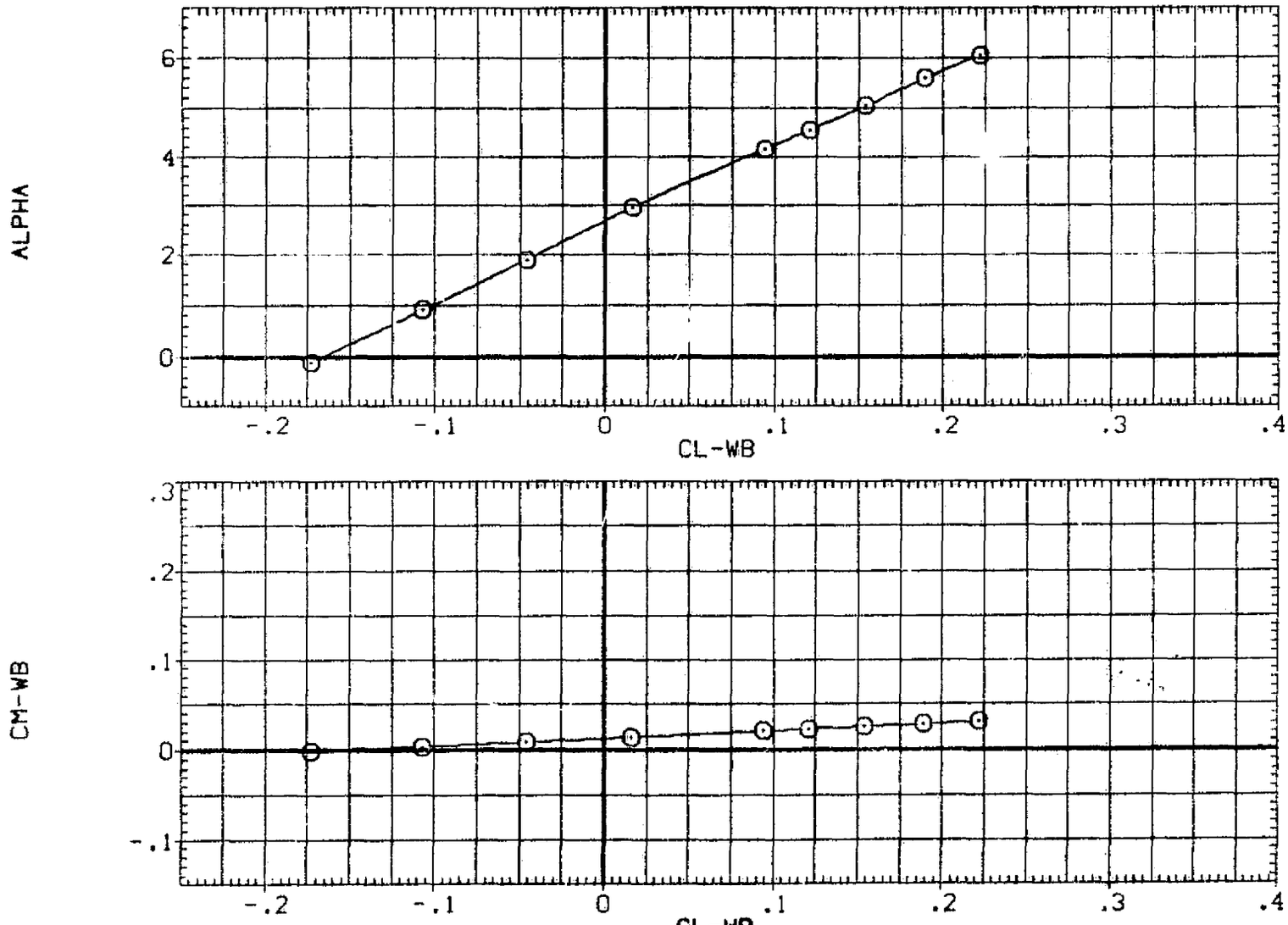


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2YI/B	2YO/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	W B	46.000	.000	.250	.550
(RAP040)	◇	W B	40.000	.000	.250	.550

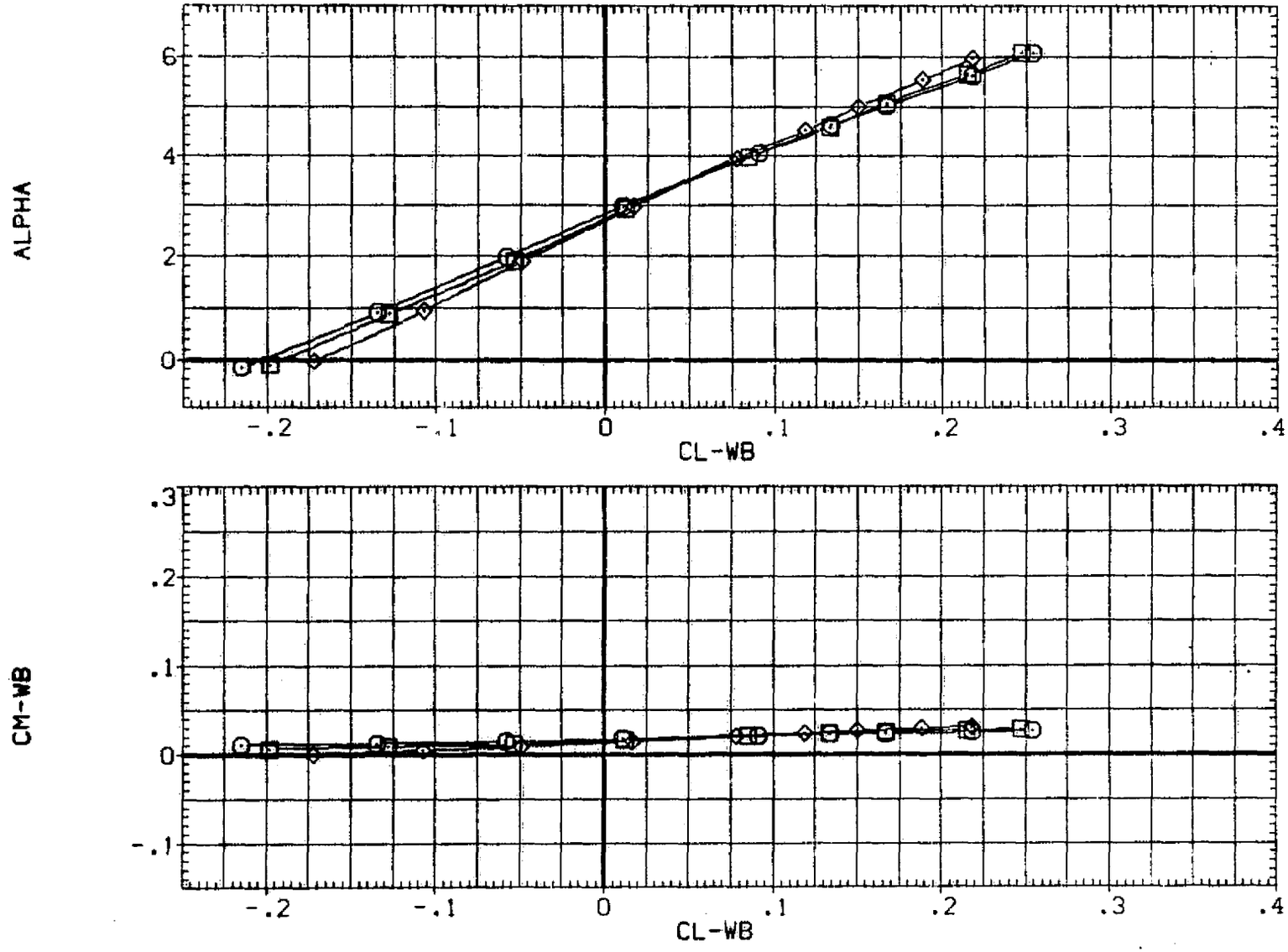


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2YI/B	2YO/B
(RAP038)	□	W B	52.000	.000	.250	.550
(RAP039)	◇	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)		DATA NOT AVAILABLE	40.000	.000	.250	.550

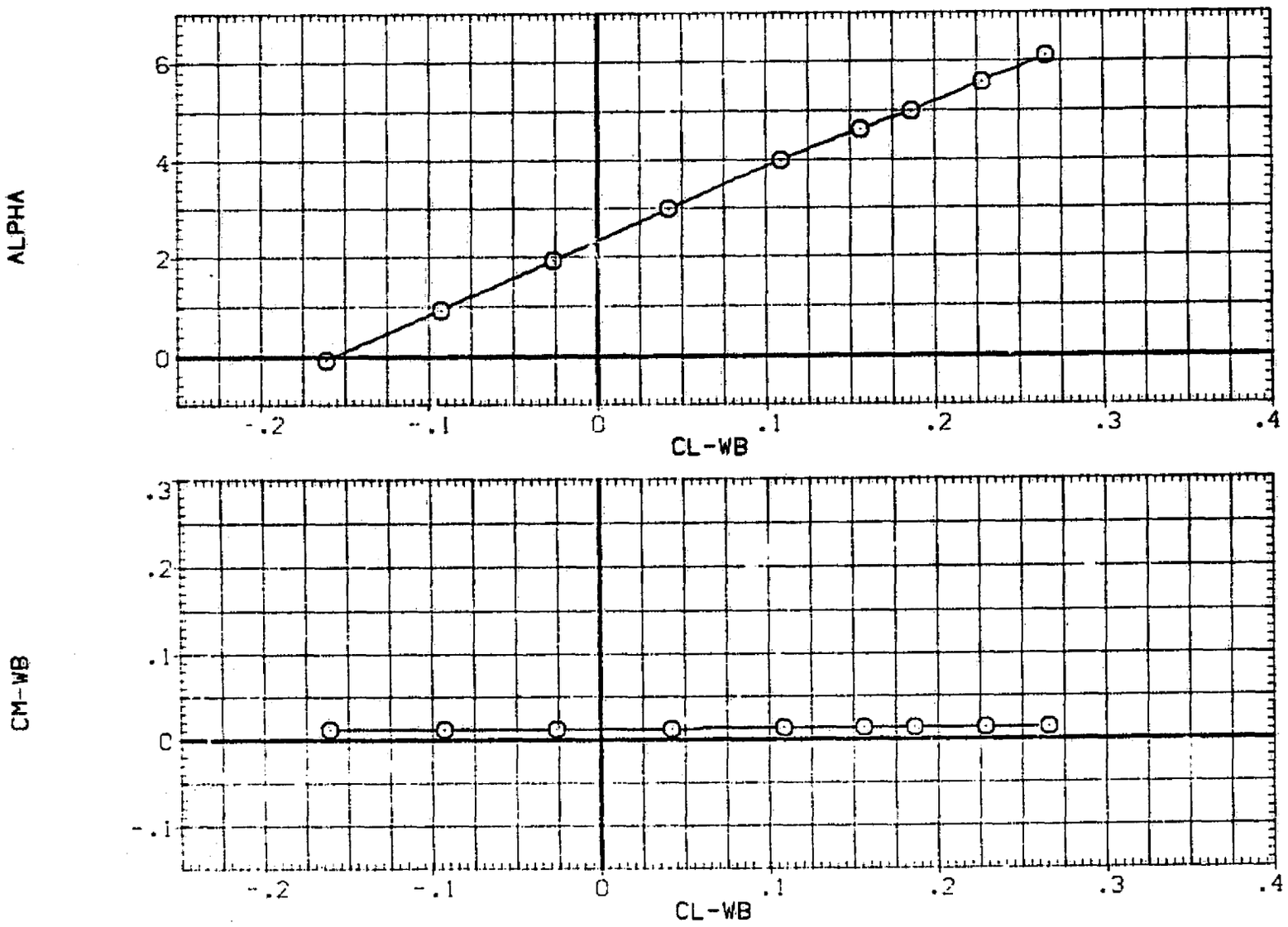


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)		W B
(RAP039)		W B
(RAP040)		W B

X-MA	DX	2Y1/B	2YO/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

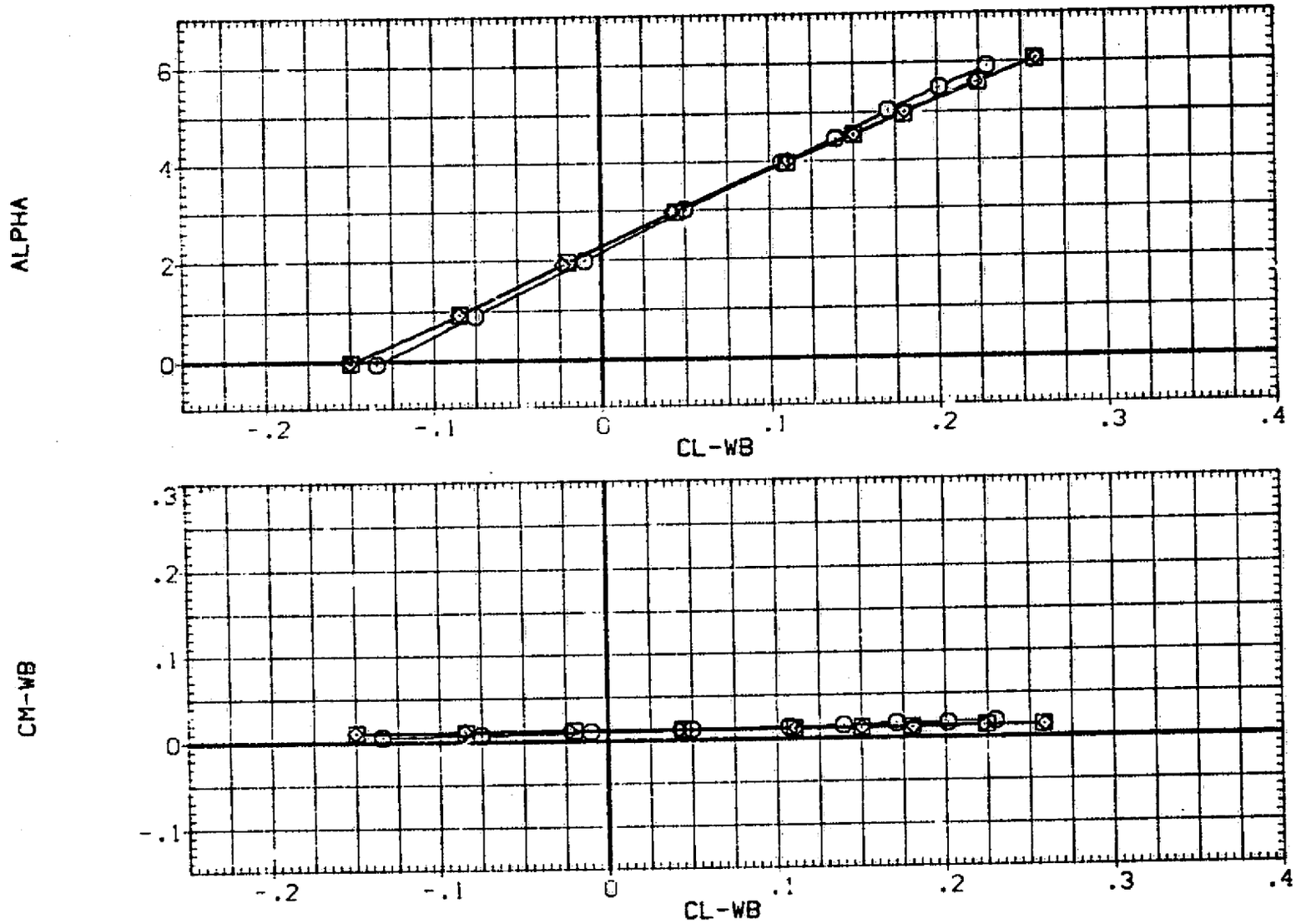


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2YI/B	2YO/B
(RAP038)		W B	52.000	.000	.250	.550
(RAP039)		DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)		DATA NOT AVAILABLE	40.000	.000	.250	.550

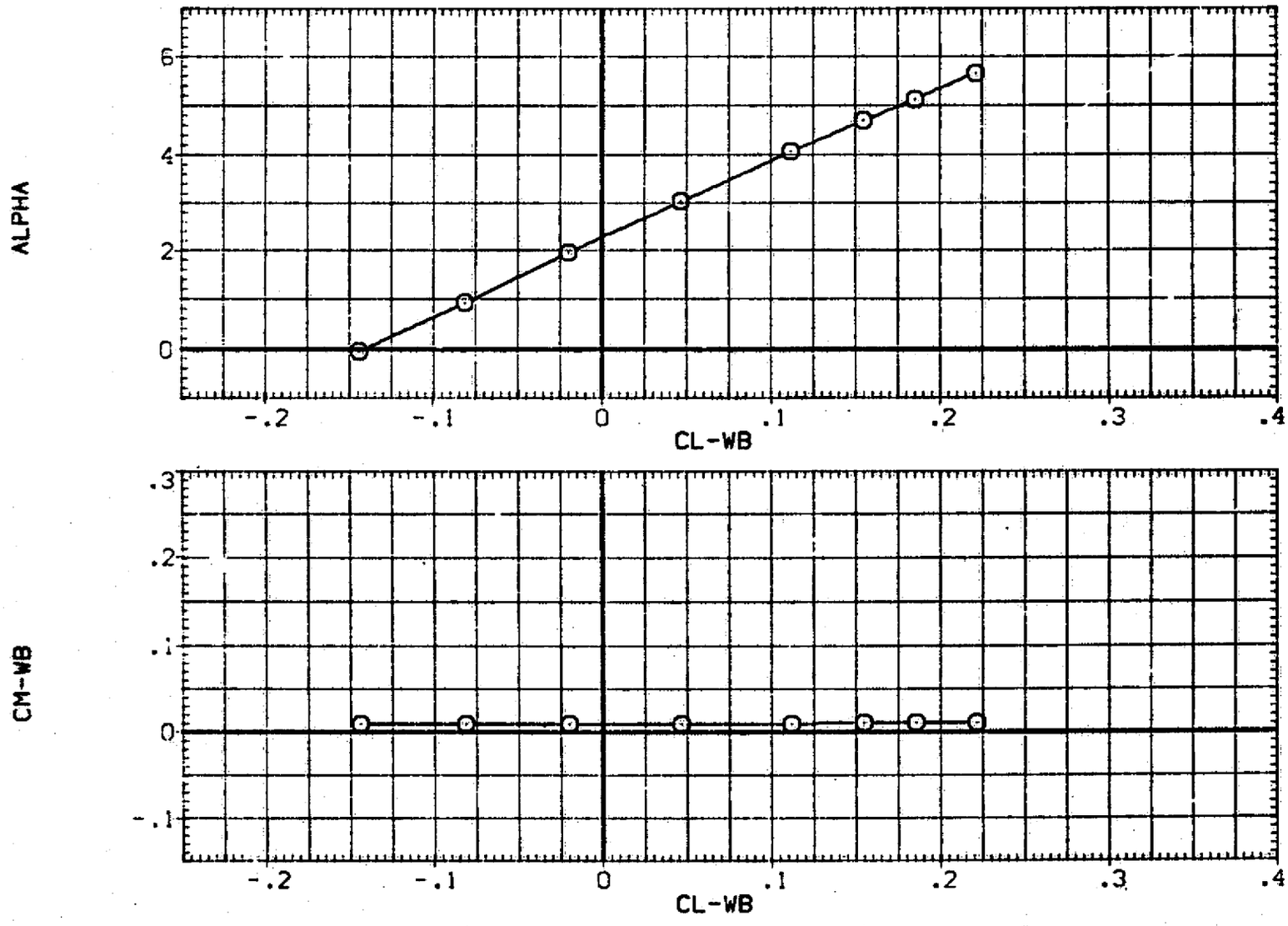


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	□	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

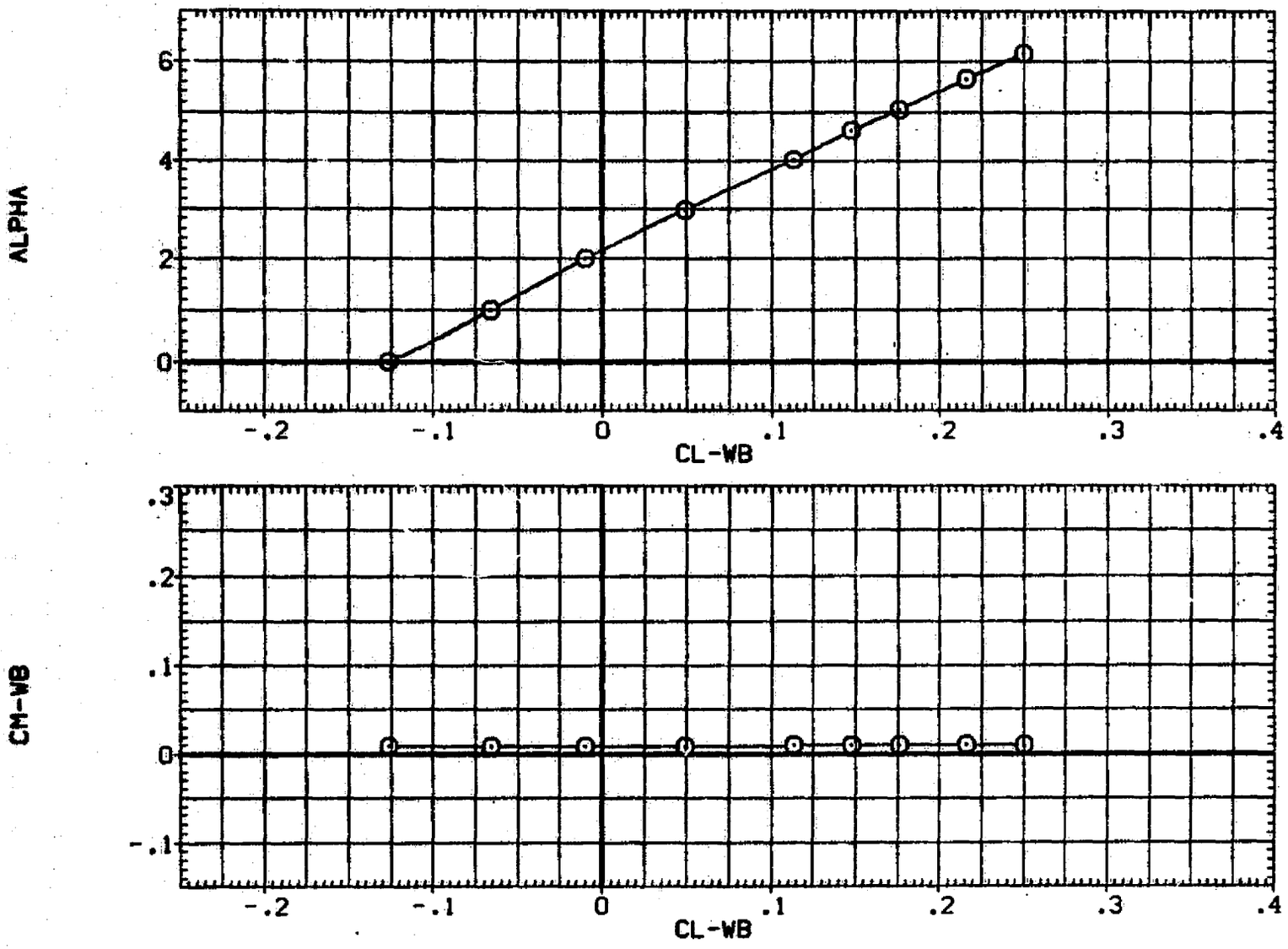


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(F)MACH = 1.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	W B	52.000	.000	.250	.550
(RAP039)	W B	48.000	.000	.250	.550
(RAP040)	W B	40.000	.000	.250	.550

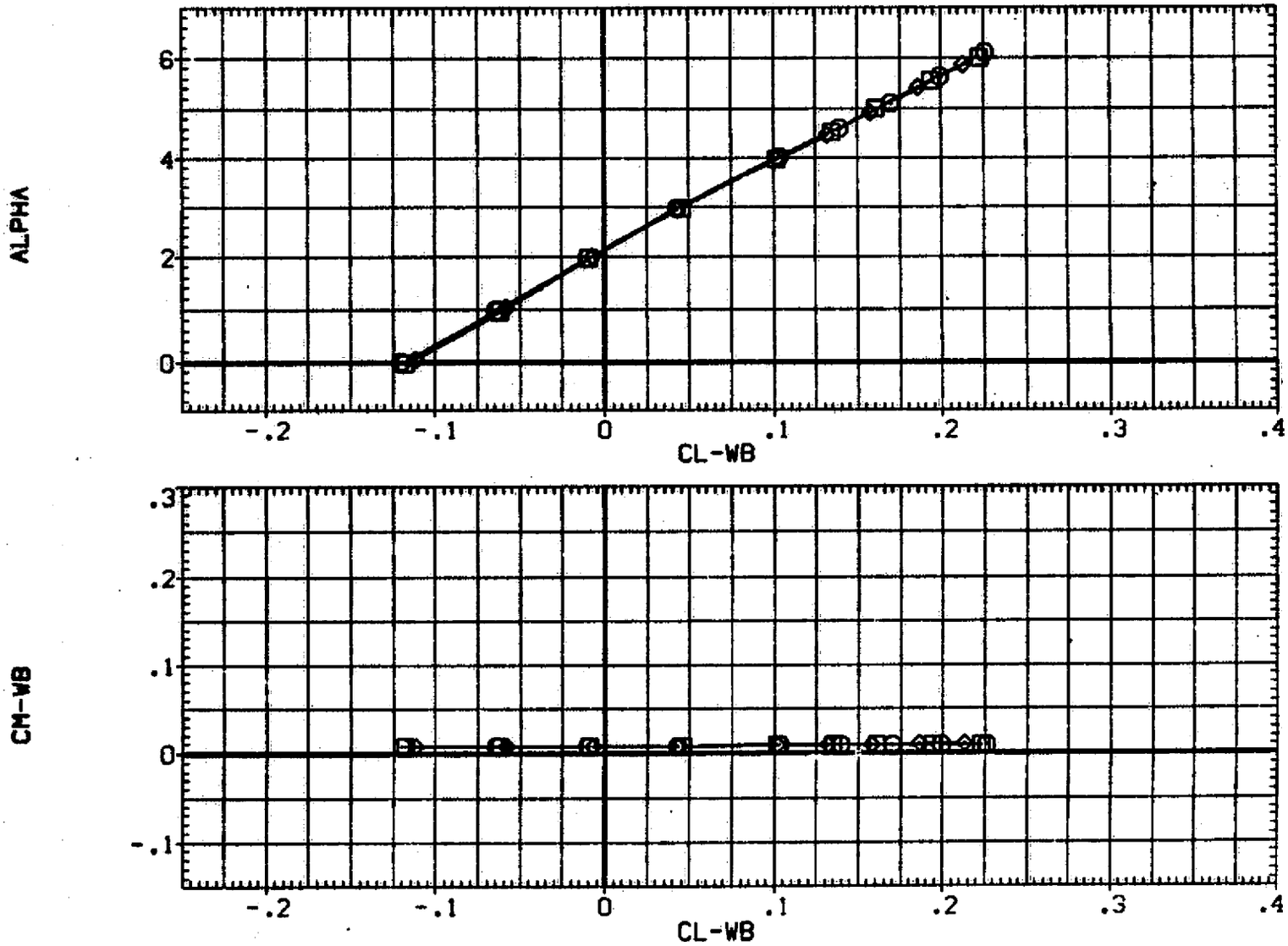


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(G)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2YO/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

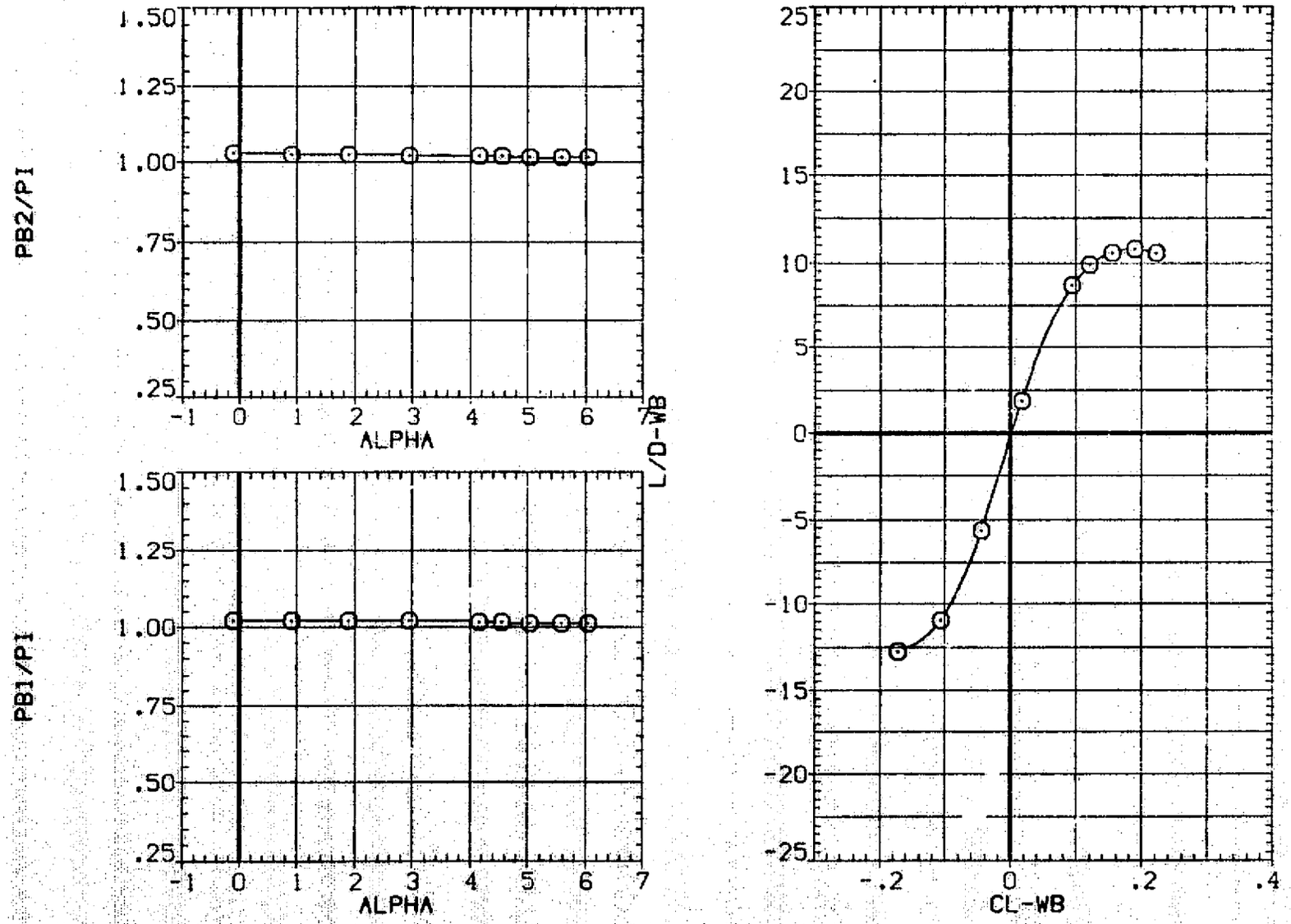


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	W B	48.000	.000	.250	.550
(RAP040)	◇	W B	40.000	.000	.250	.550

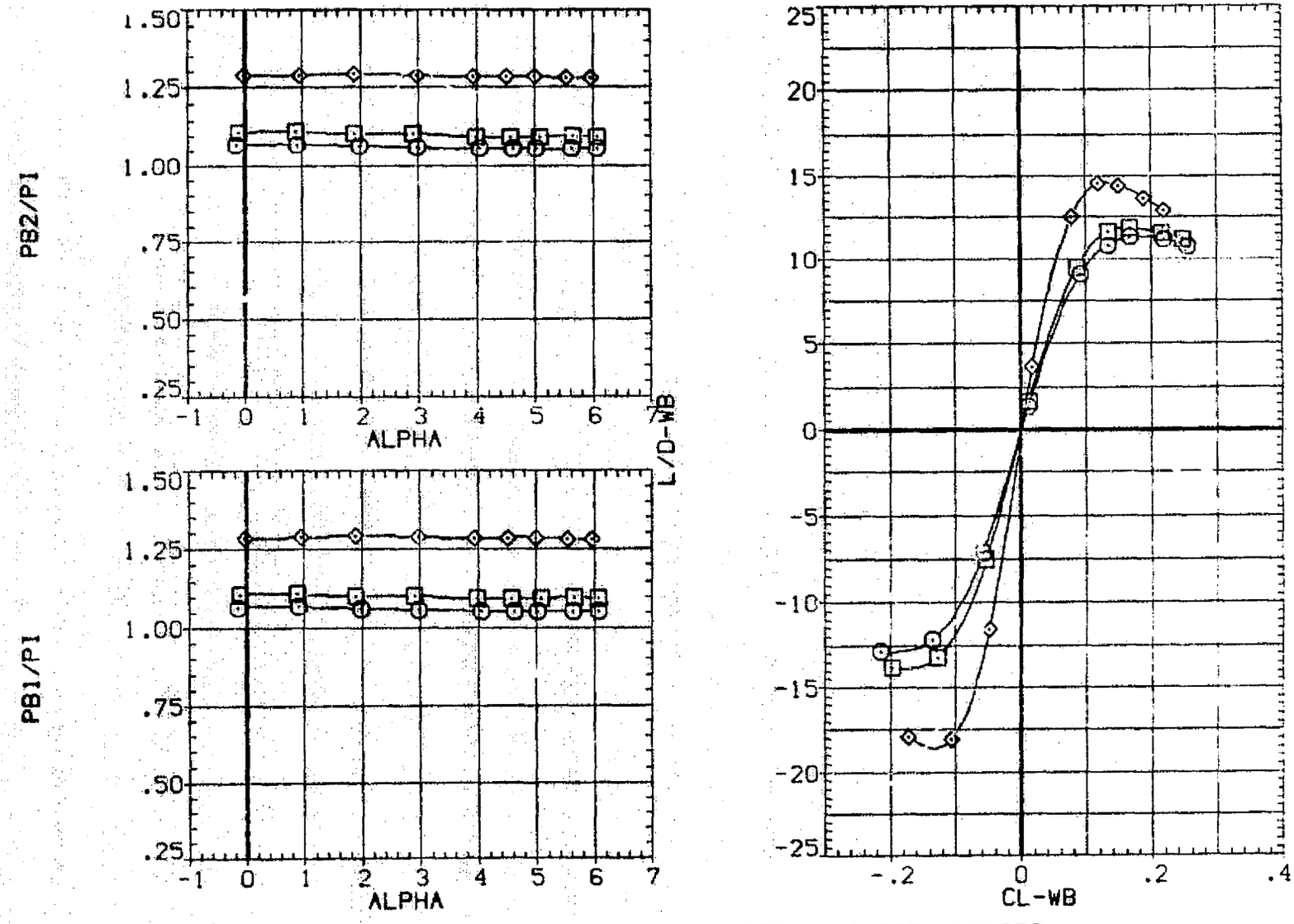


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(B)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)	□	W B
(RAP039)	◇	DATA NOT AVAILABLE
(RAP040)	○	DATA NOT AVAILABLE

X-MA	DX	2Y1/B	2Y0/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

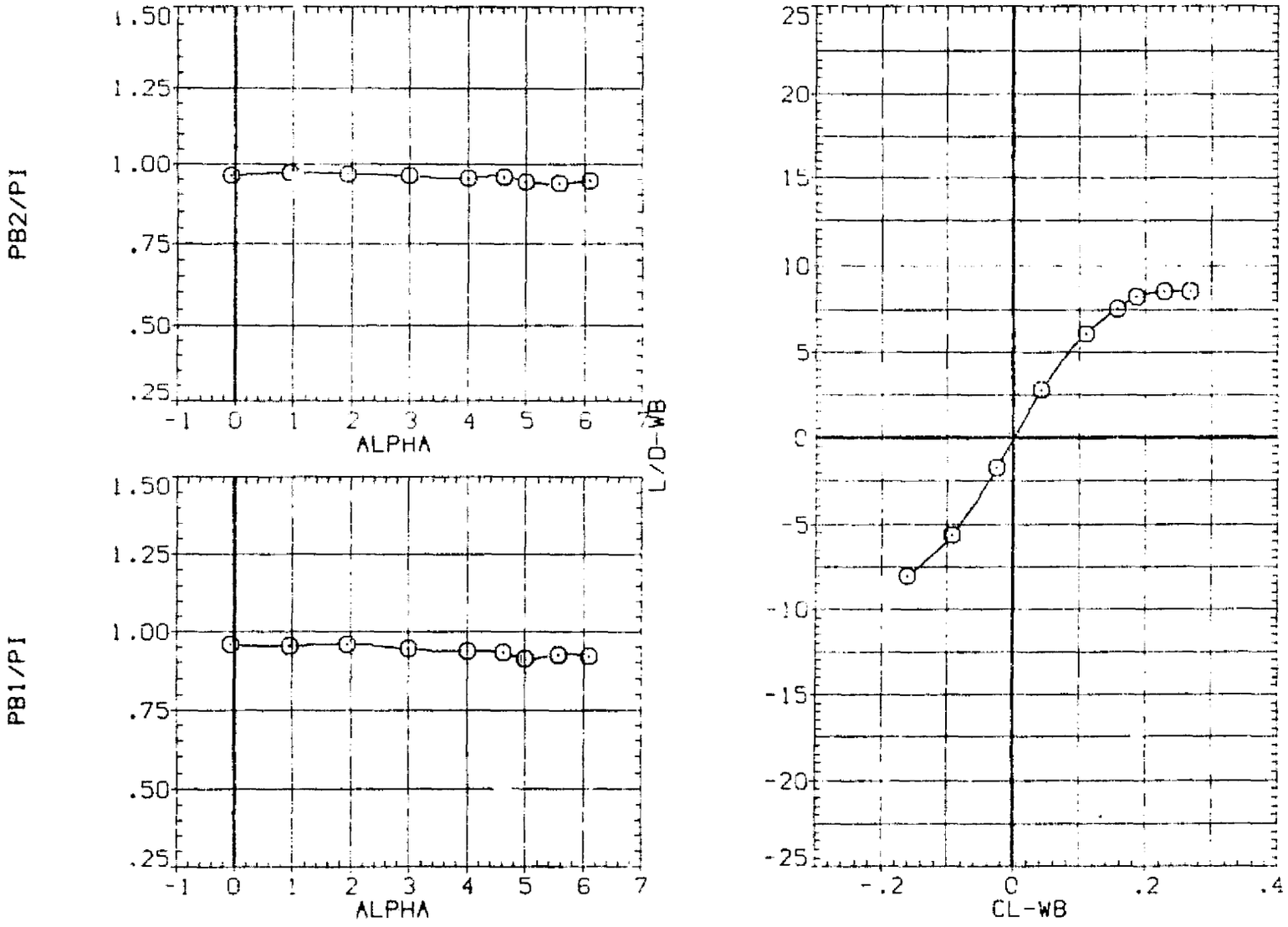


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	W B	48.000	.000	.250	.550
(RAP040)	◇	W B	40.000	.000	.250	.550

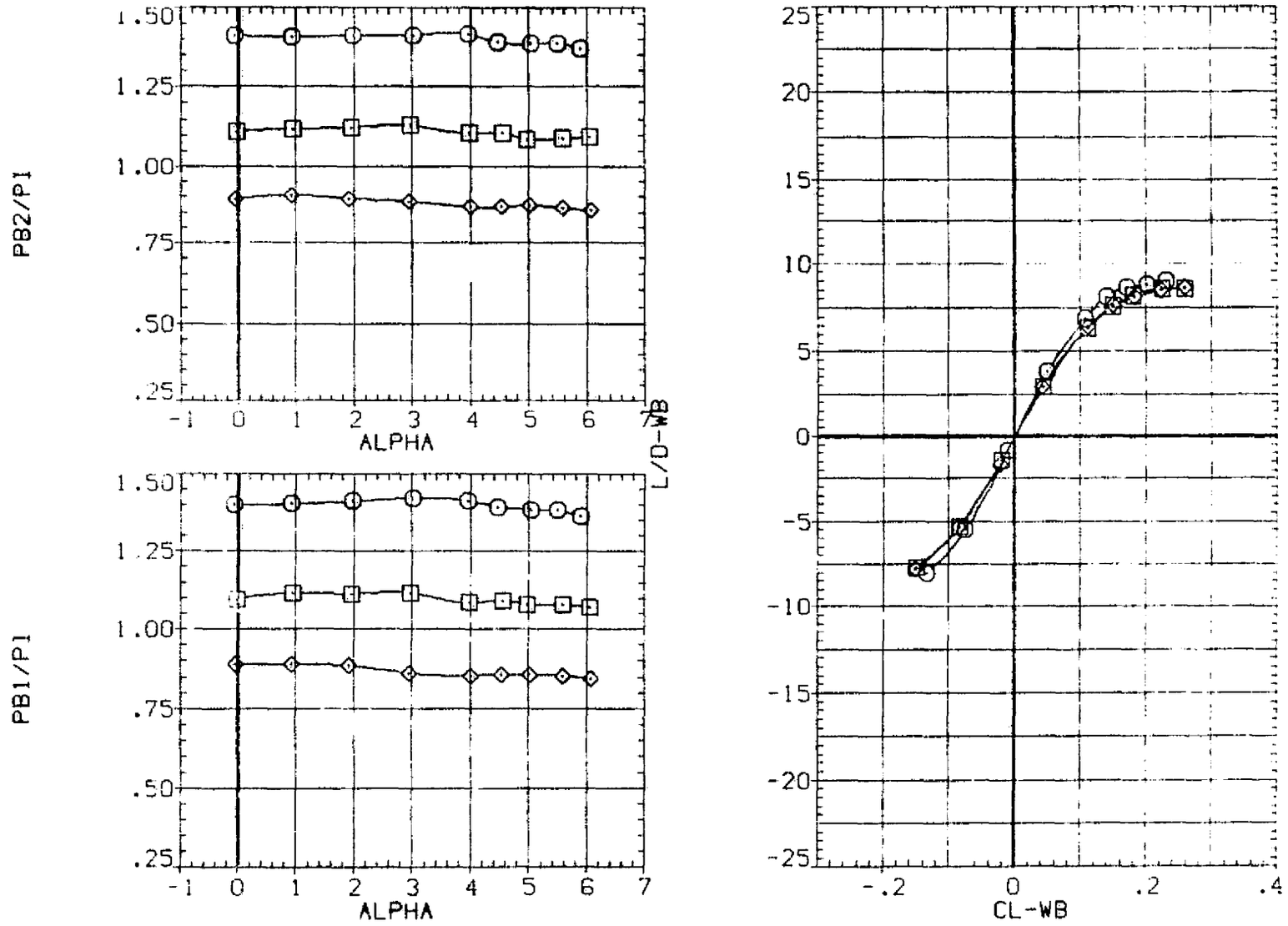


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)	○□	W B
(RAP039)		DATA NOT AVAILABLE
(RAP040)	◇	DATA NOT AVAILABLE

X-MA	DX	2Y1/B	2Y0/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

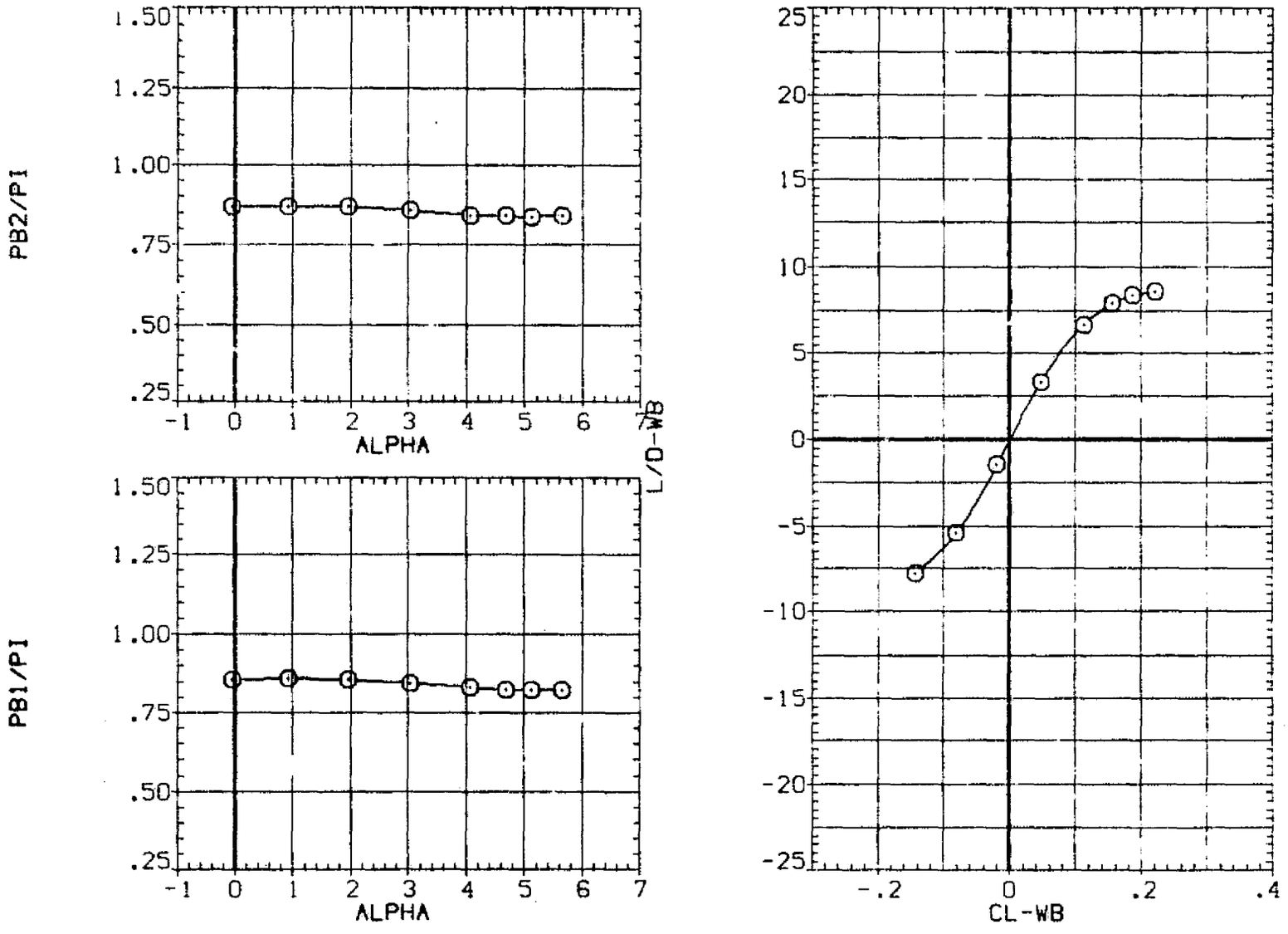


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(E)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	X-MA	DX	2Y1/B	2Y0/B
(RAP038)	○	W B	52.000	.000	.250	.550
(RAP039)	□	DATA NOT AVAILABLE	48.000	.000	.250	.550
(RAP040)	◇	DATA NOT AVAILABLE	40.000	.000	.250	.550

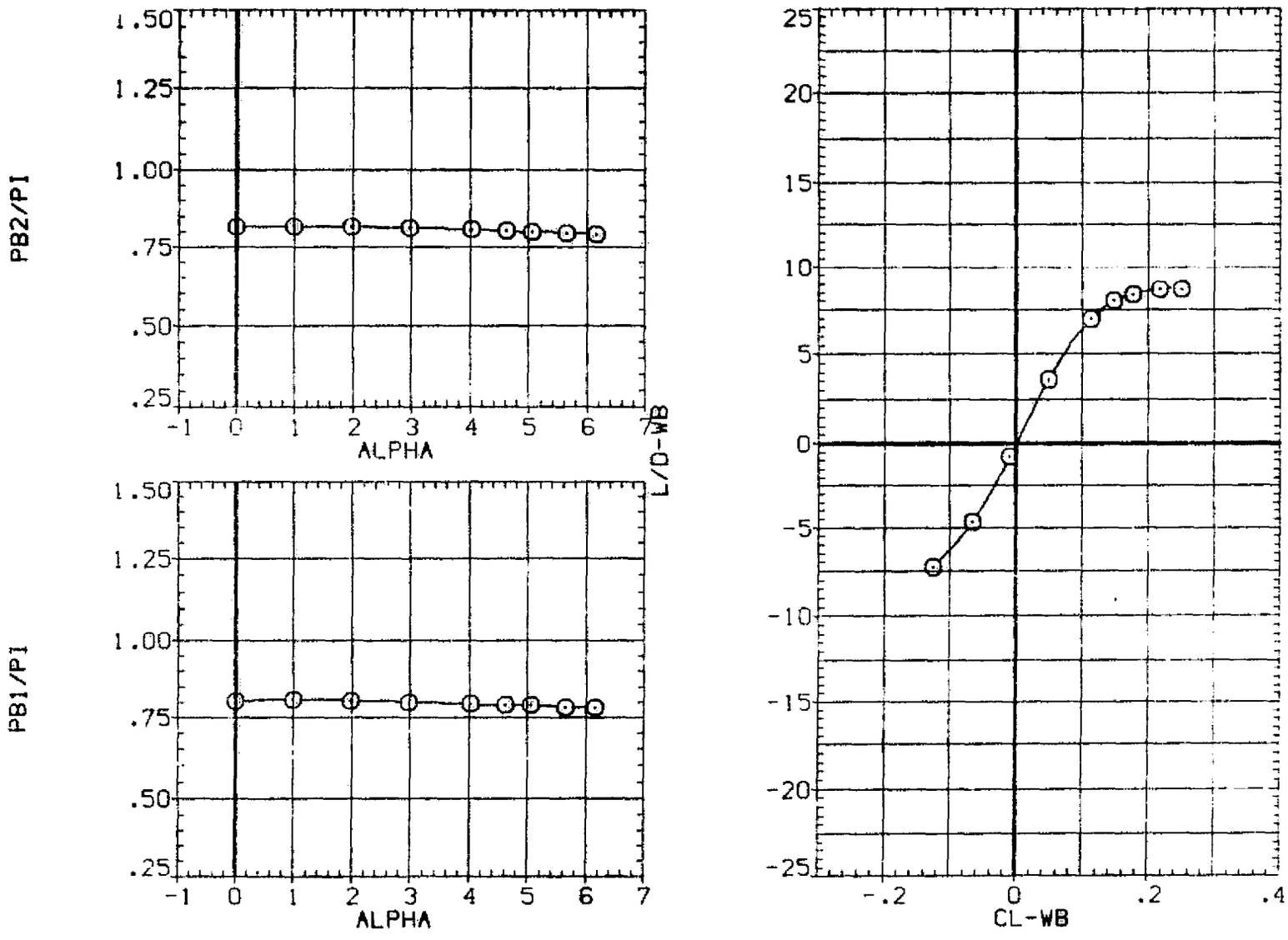


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(F)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RAP038)	◇	W B
(RAP039)	□	W B
(RAP040)	○	W B

X-MA	DX	2YI/B	2YO/B
52.000	.000	.250	.550
48.000	.000	.250	.550
40.000	.000	.250	.550

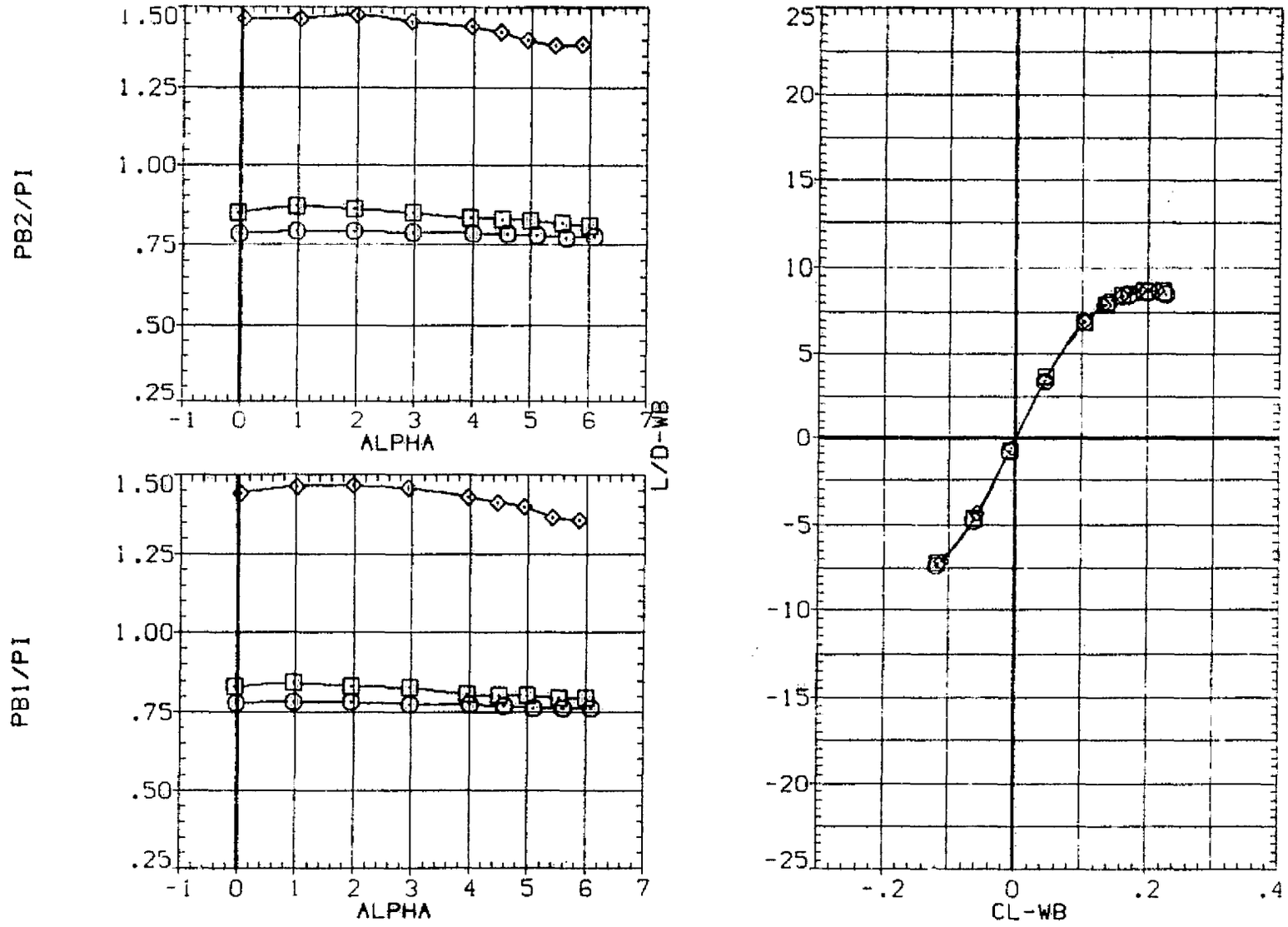


FIG. 15 EFFECTS OF ANGLE OF ATTACK ON ISOLATED WING BODY FORCES.

(G)MACH = 1.40

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.899	DX	.000	2YB/B	.550
		2YI/B	.250		

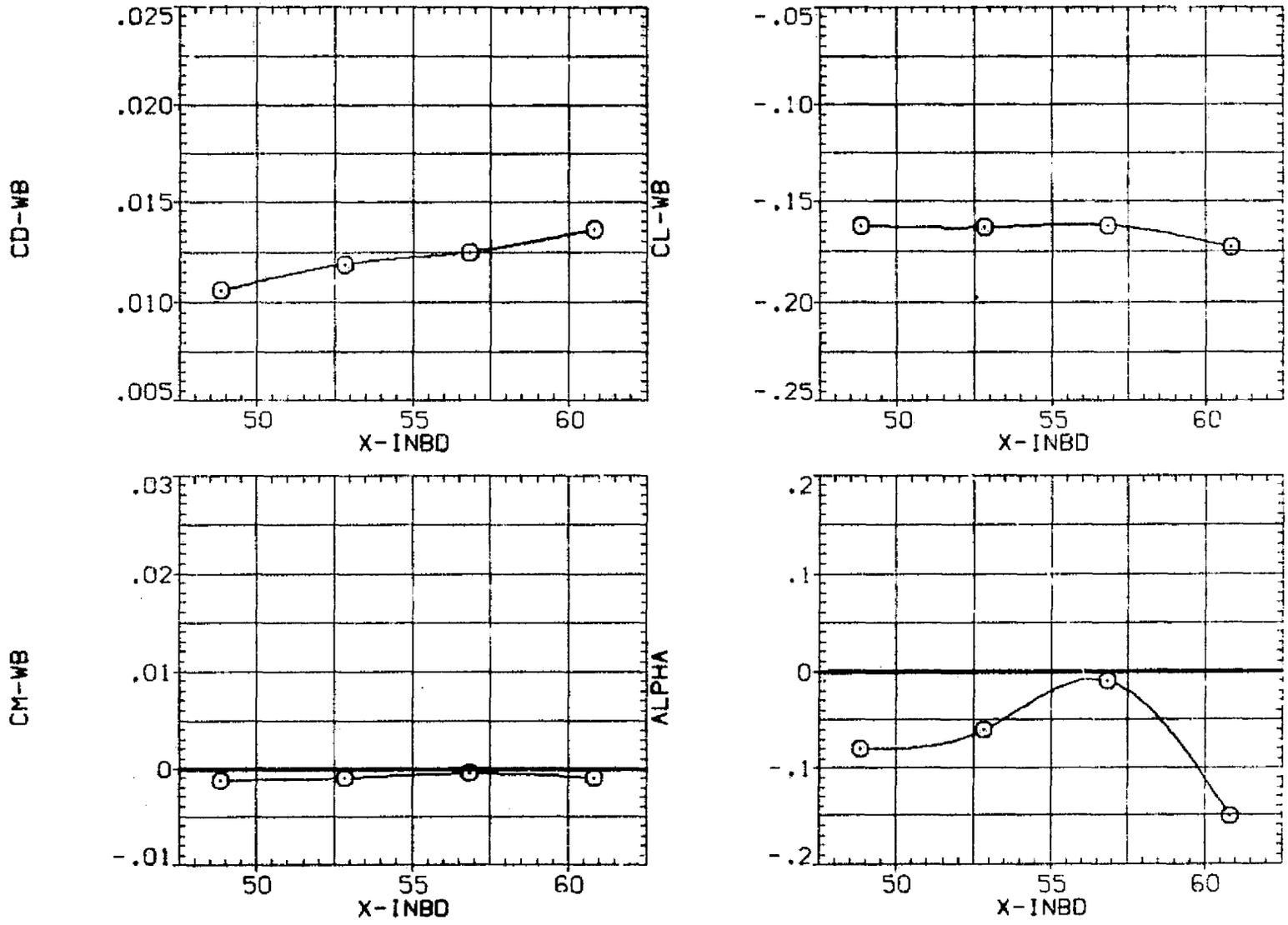


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.970	DY	.000	ZYC/B	.550
		ZYC/B	.050		

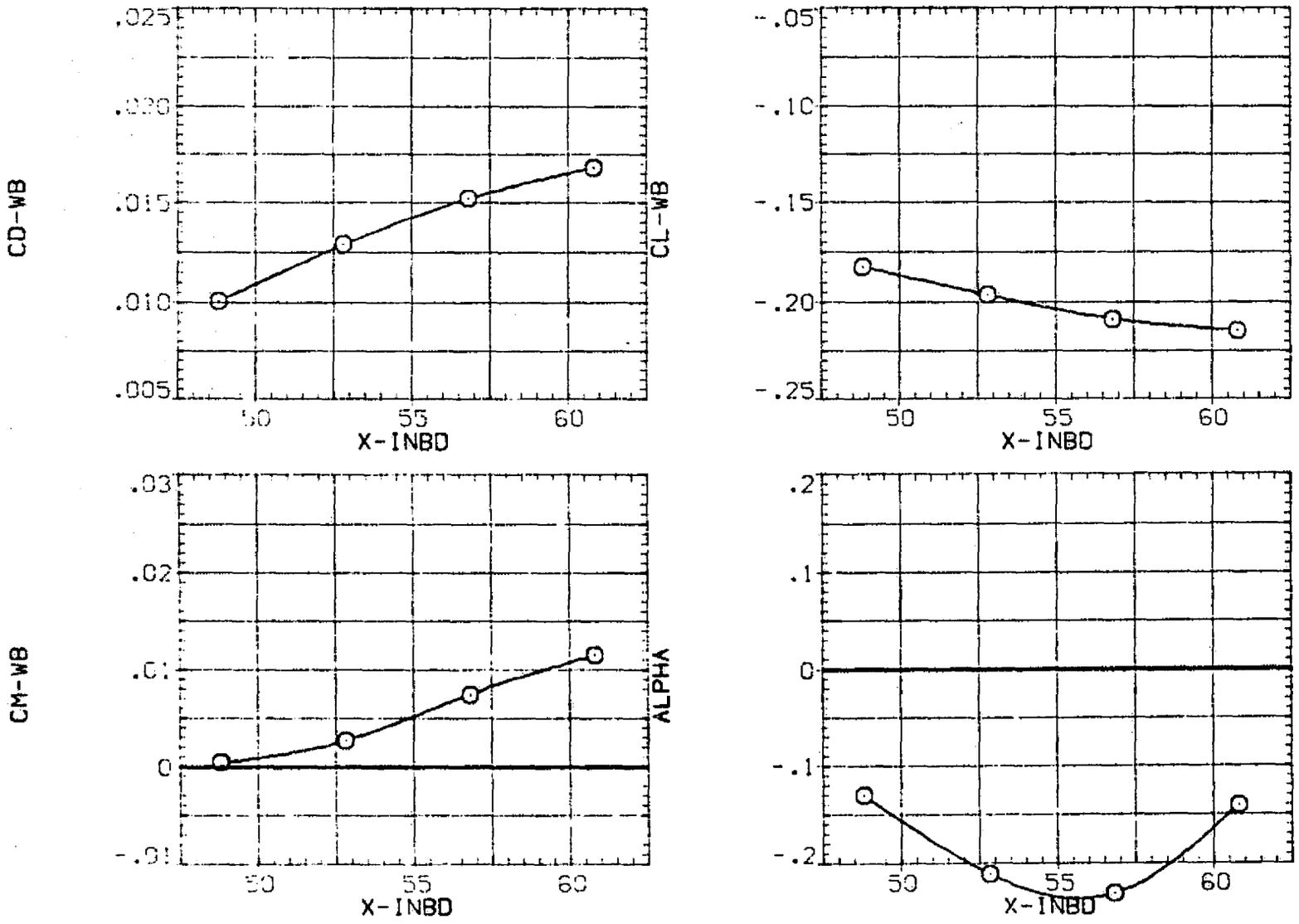


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

SYMBOL	MACH		PARAMETRIC VALUES		
O	1.100	DX	.000	2YB/B	.550
		2YI/B	.250		

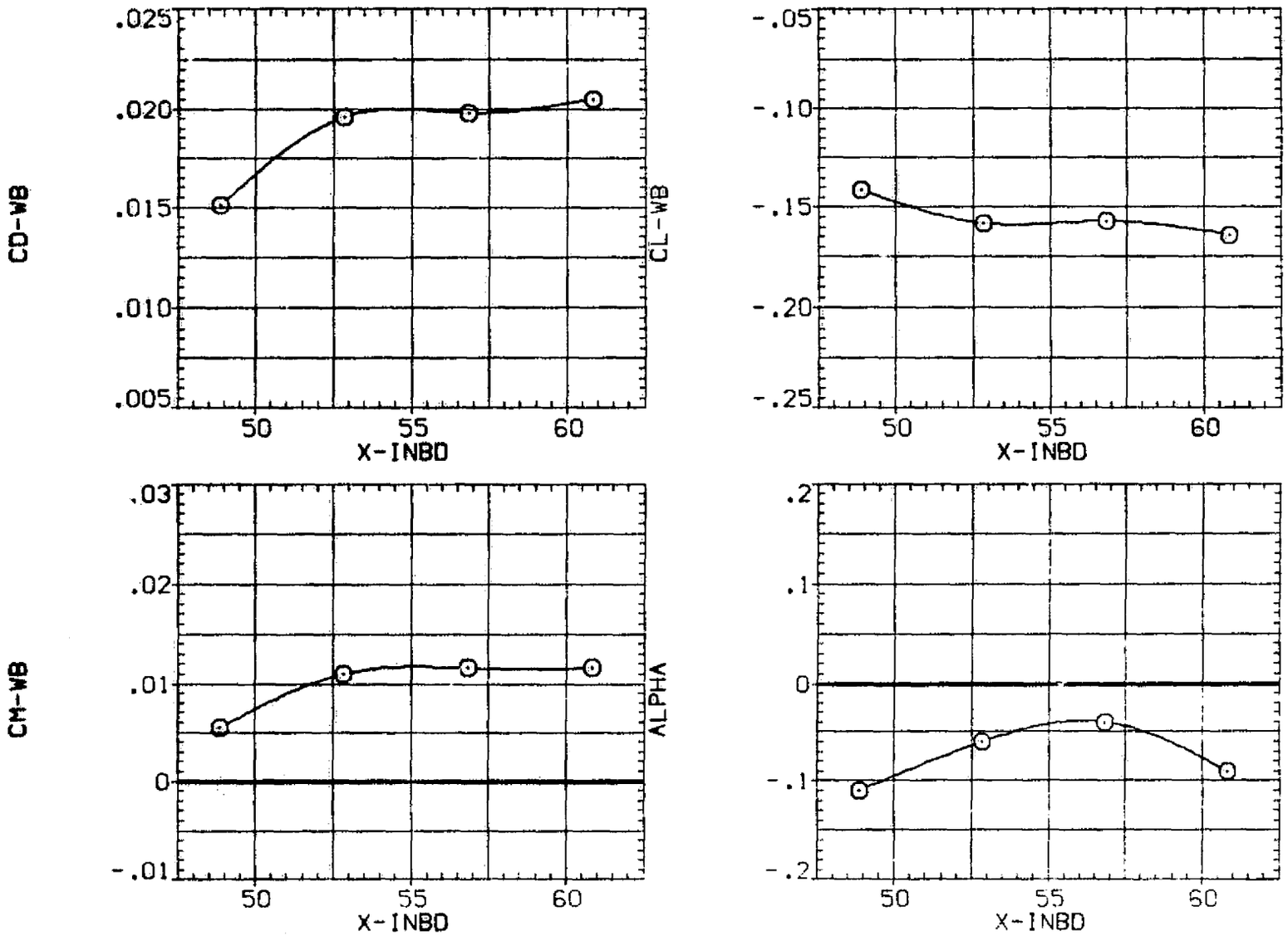


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.152	ΔX	.000	2Y0/B	.550
		2Y1/B	.250		

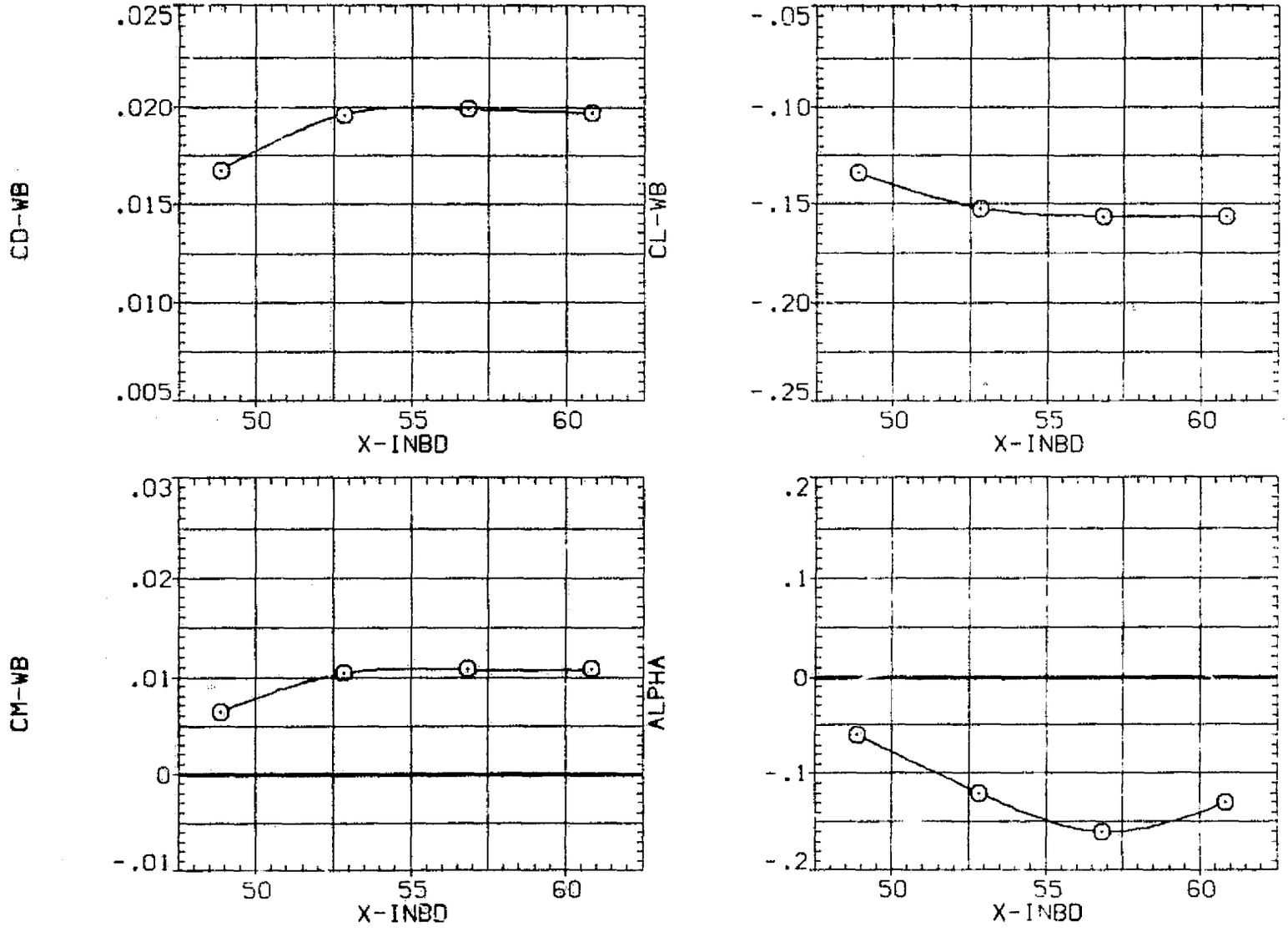


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
O	1.199	DX	.000	2Y0/B	.550
		2Y1/B	.250		

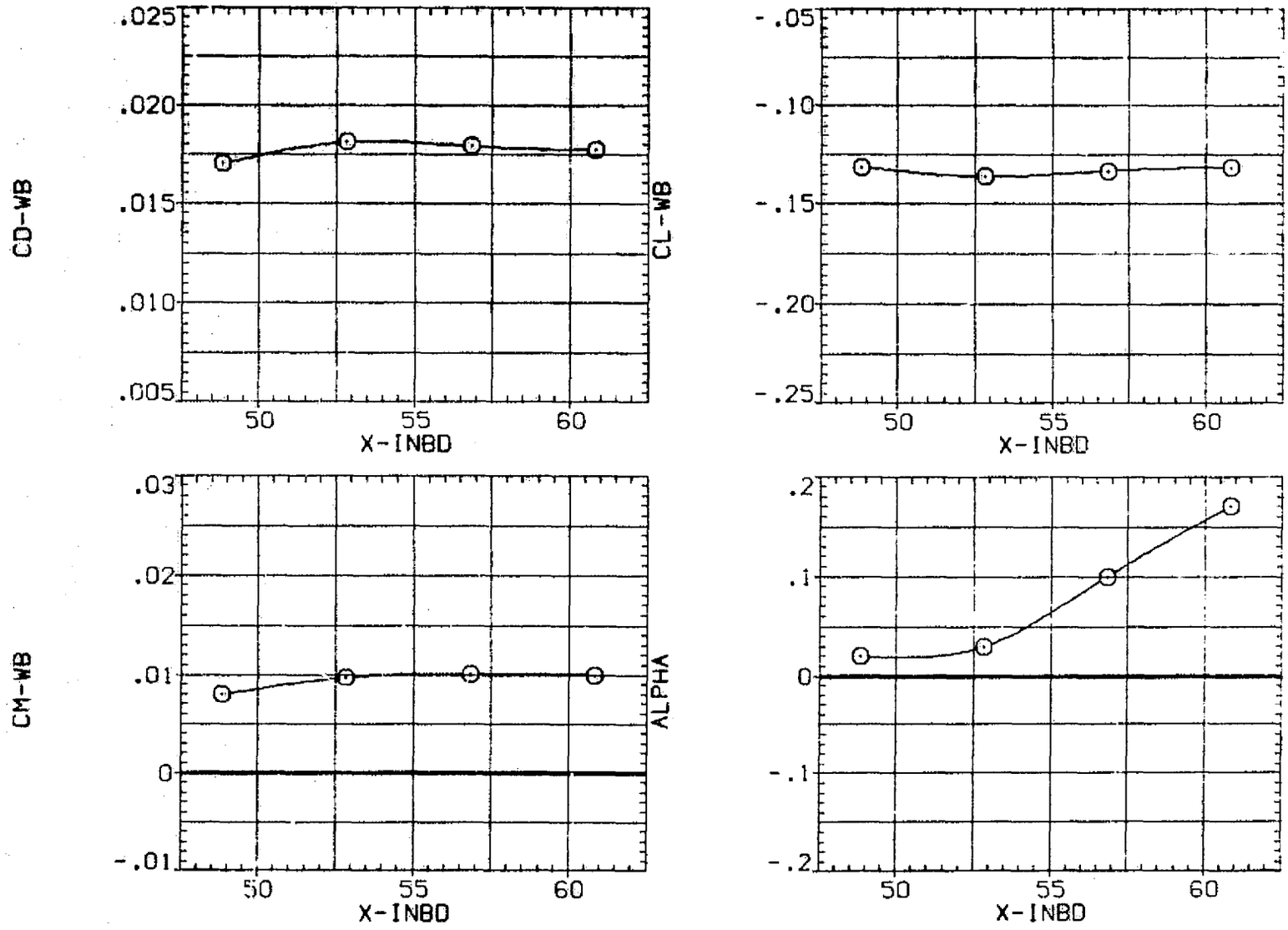


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.300	DX	.000	2Y0/B	.550
		2Y1/B	.250		

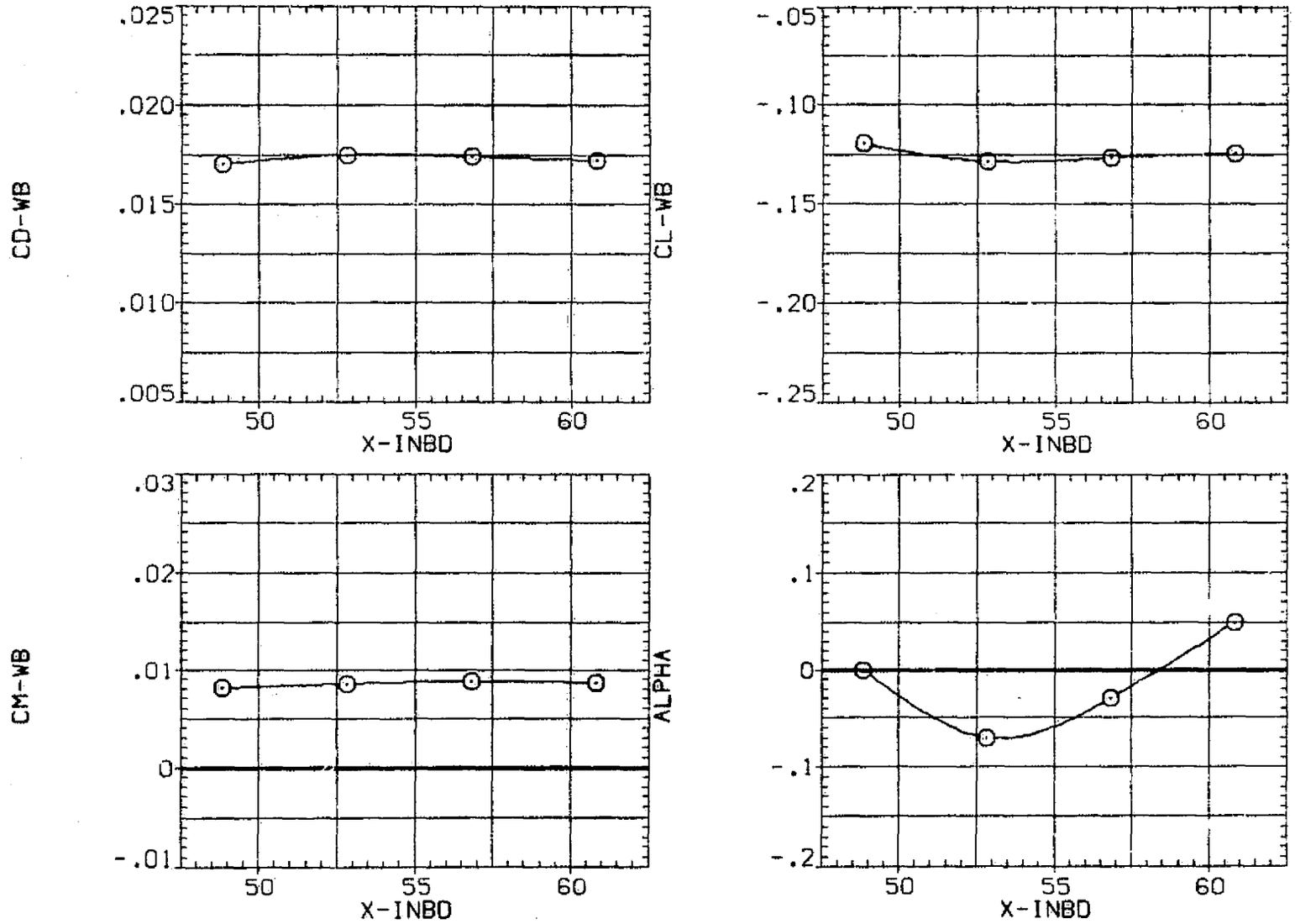


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.400	DX	.000	2Yβ/B	.550
		2Y1/B	.250		

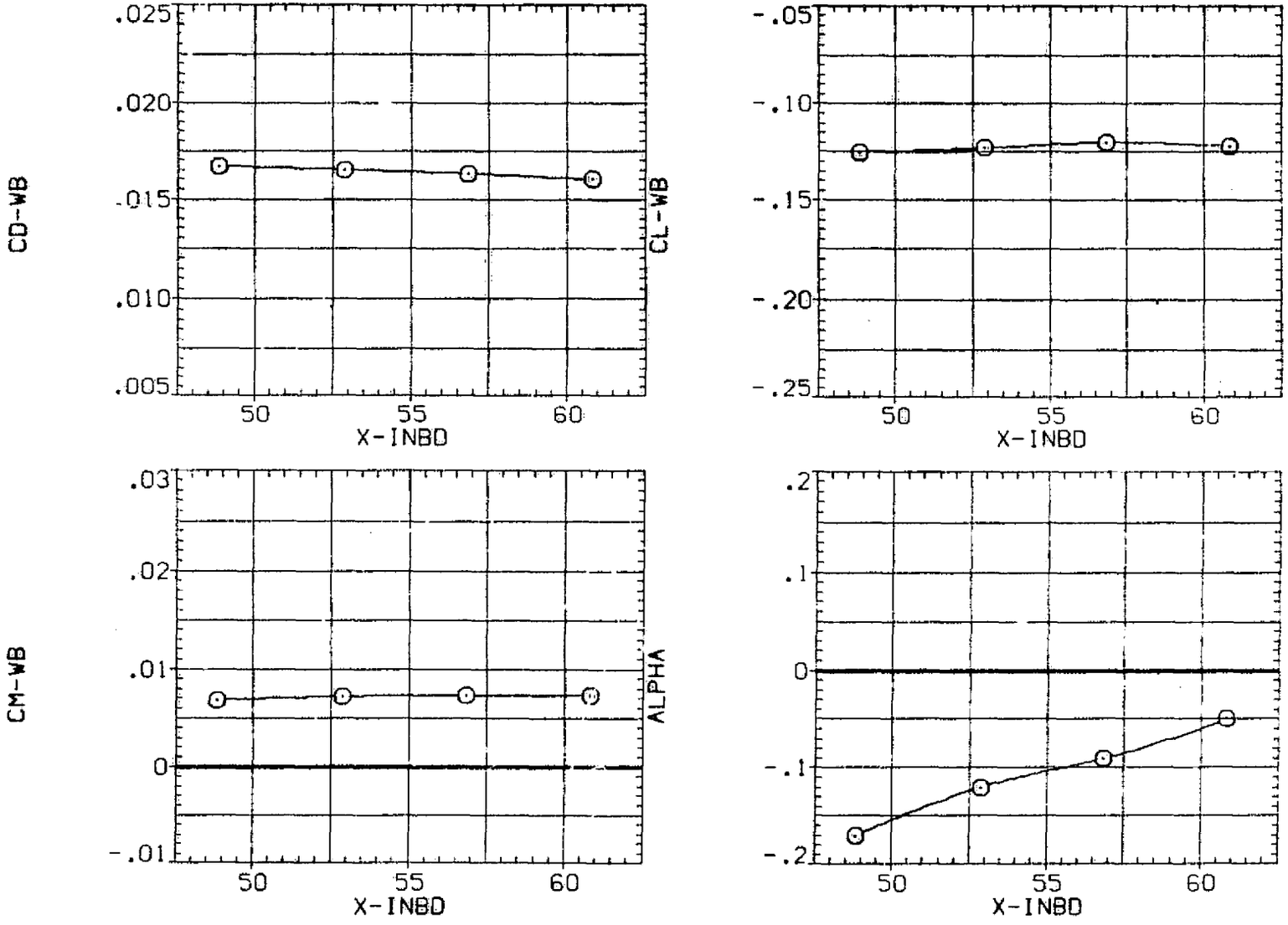


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.899	DX	.000	2Y0/B	.550
		2Y1/B	.250		

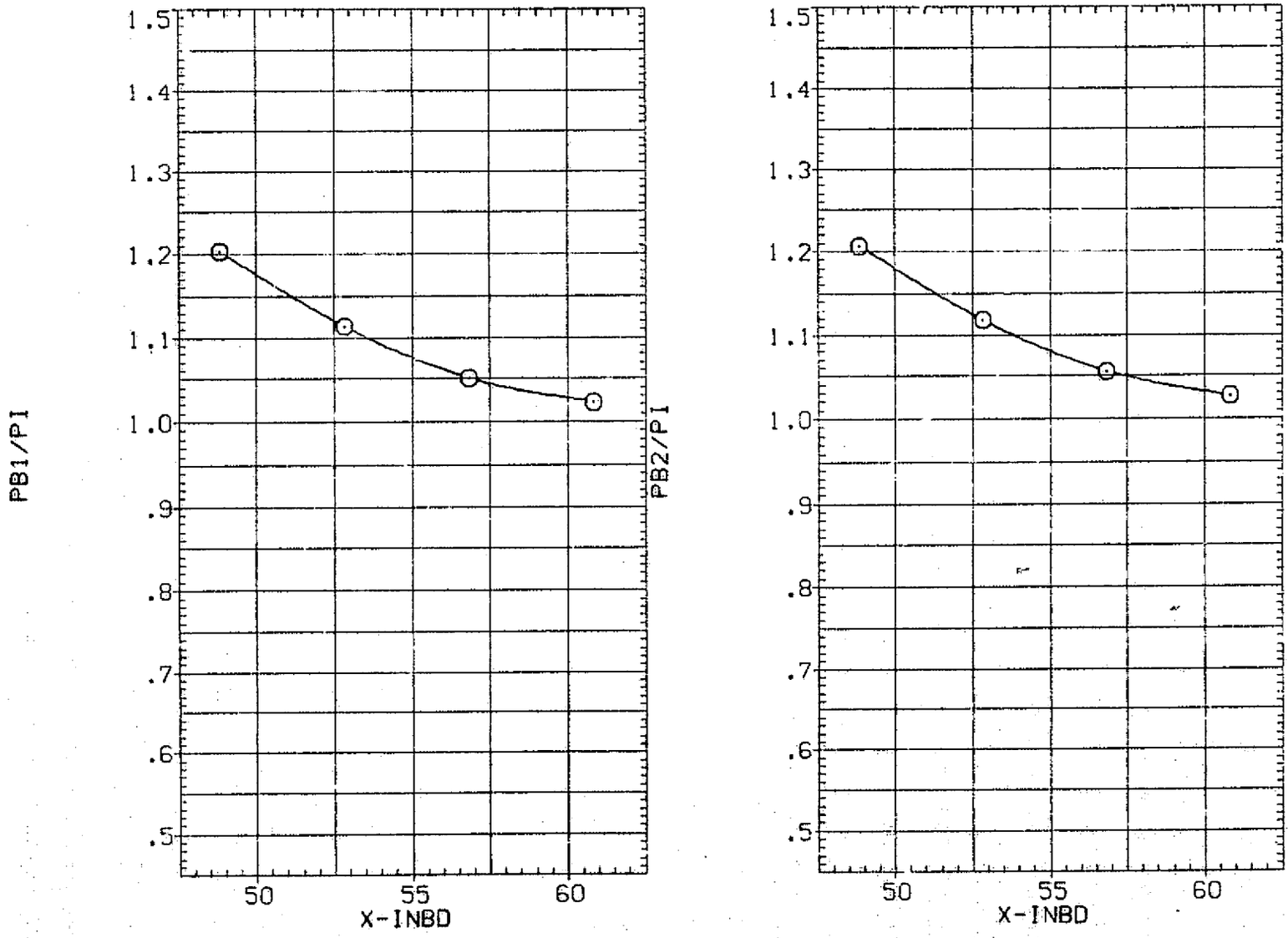


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W 5 (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.979	DX	.000	2YB/B	.550
		2Y1/B	.250		

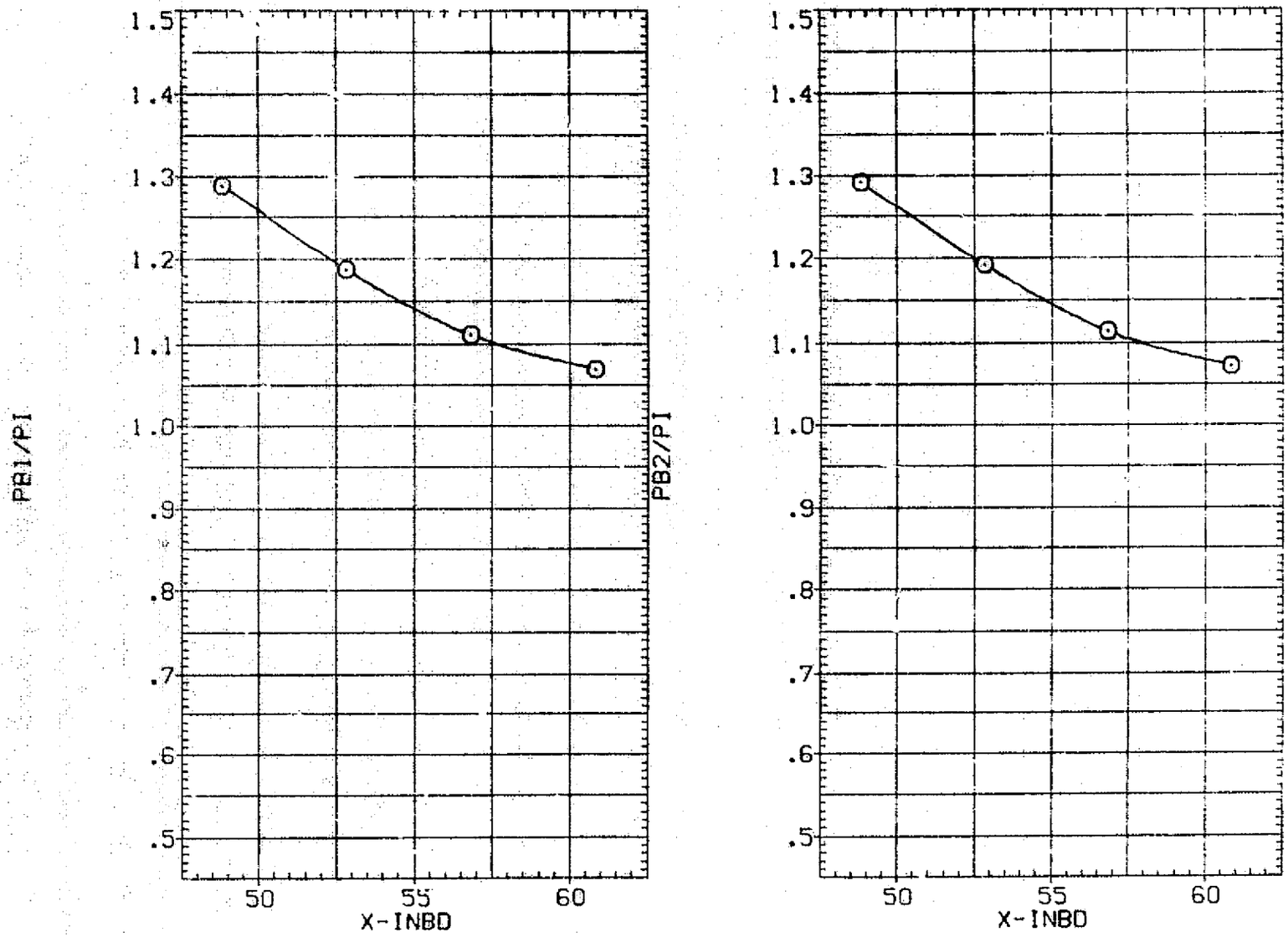


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.100	DX	.000	2Y0/B	.550
		2Y1/B	.250		

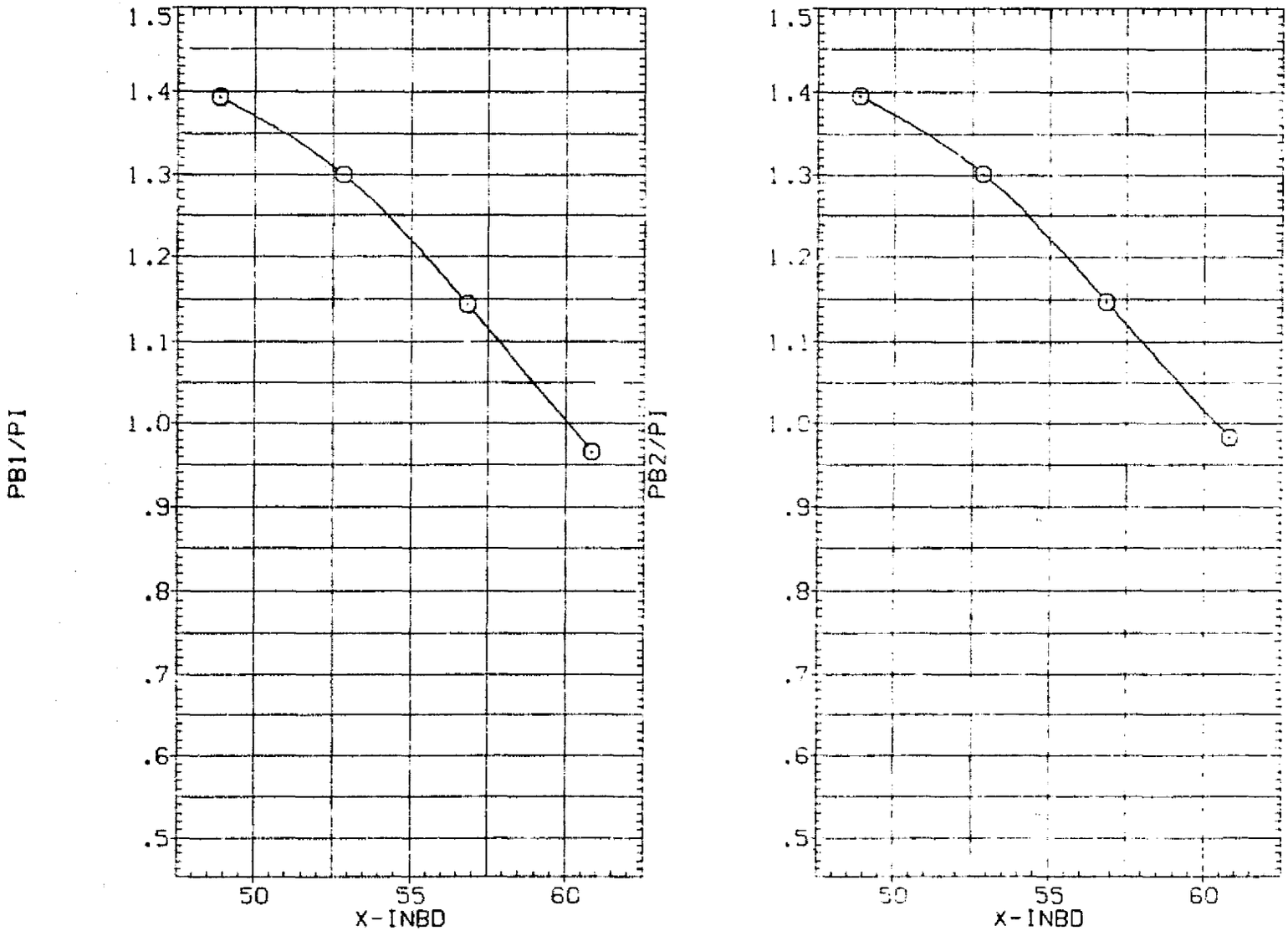


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.152	DX	.000	2YO/B	.550
		2YI/B	.25		

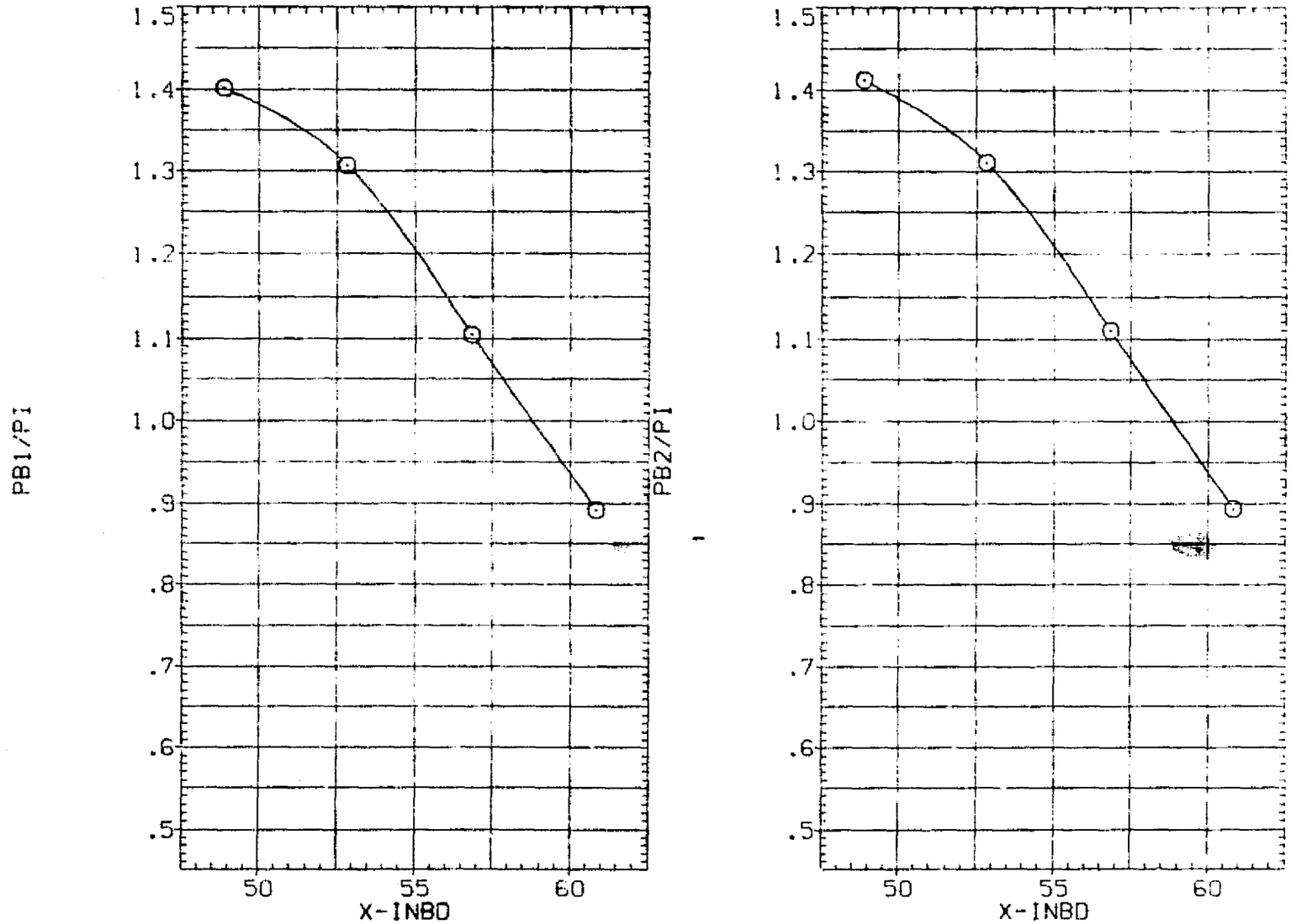


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.199	DX	.000	2Y0/B	.550
		Z-Z/B	.250		

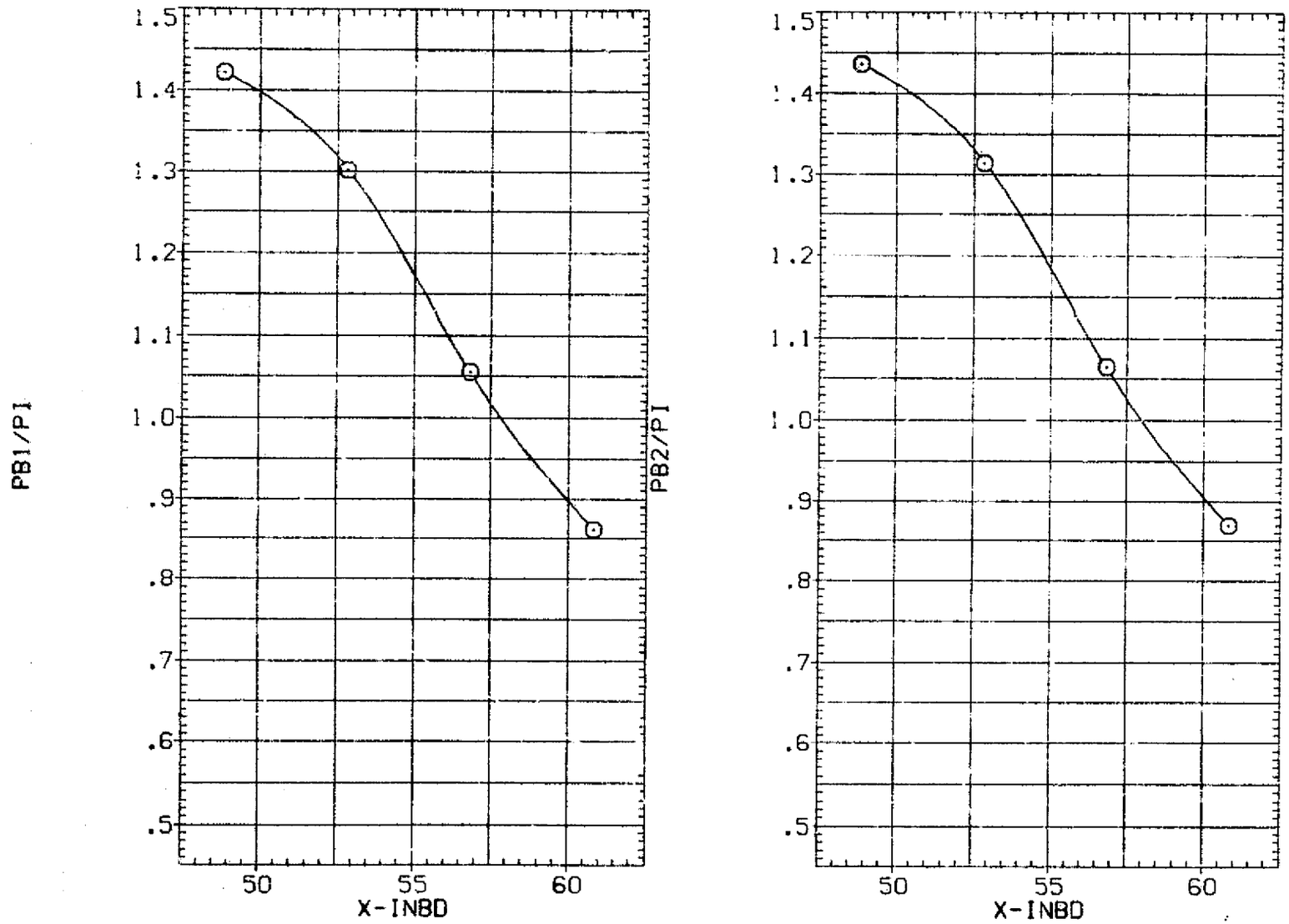


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B (RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
O	1.300	DX	.000	2Y0/B	.550
		2Y1/B	.250		

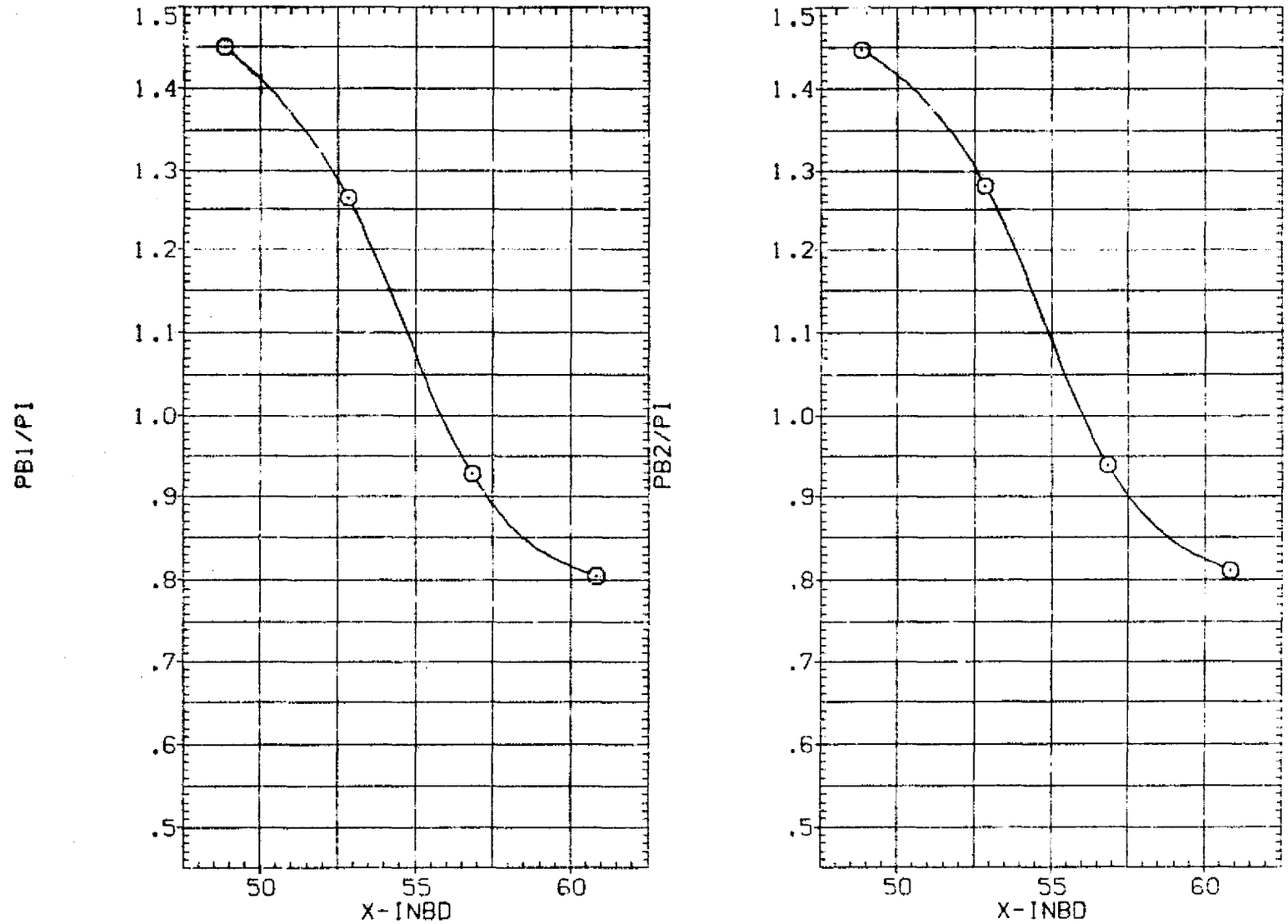


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.

W B

(RAP041)

SYMBOL	MACH		PARAMETRIC VALUES		
○	1.400	DX	.000	2Y0/B	.550
		2Y1/B	.250		

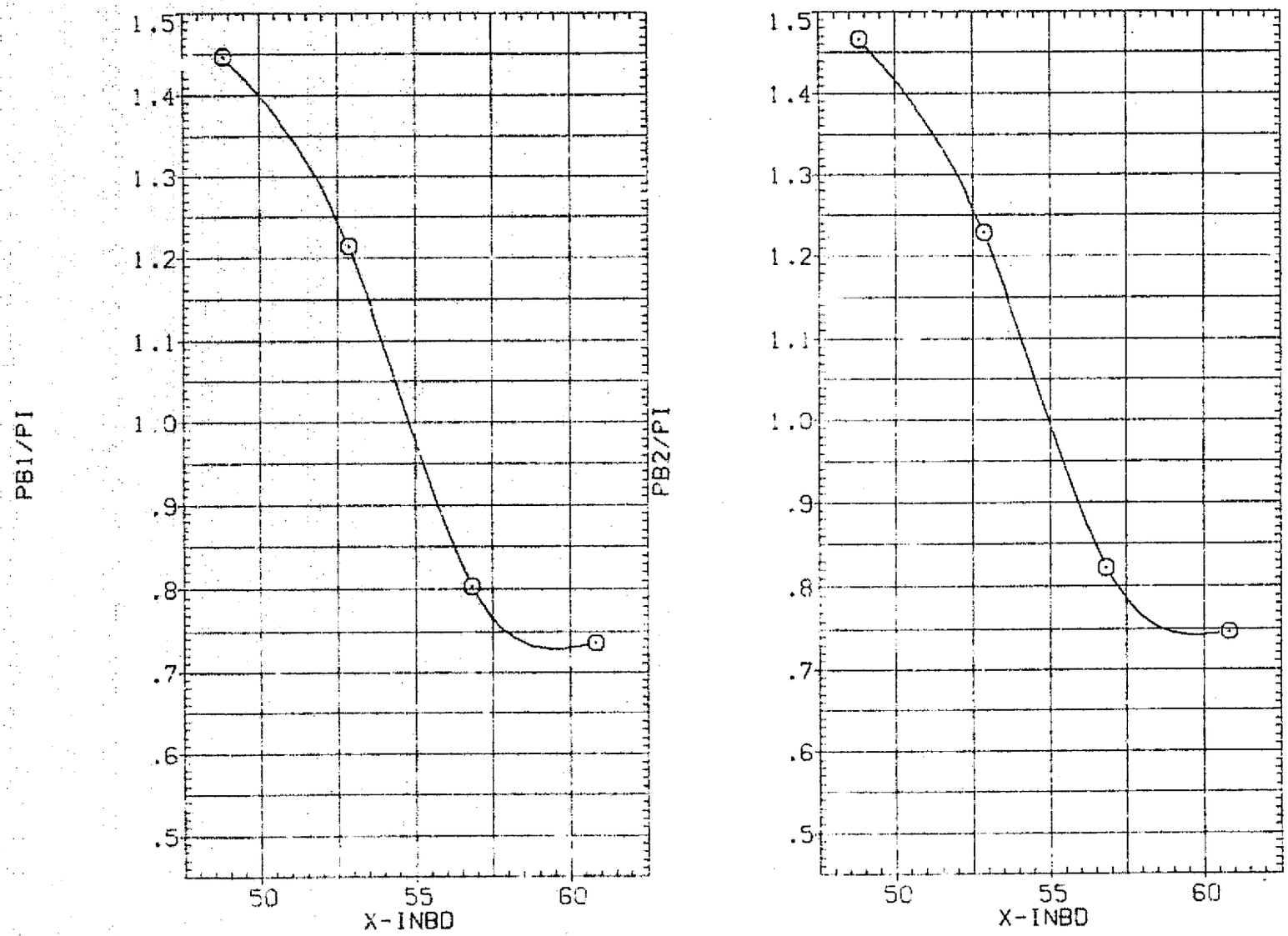


FIG. 16 EFFECTS OF SUPPORT SYSTEM POSITION ON ISOLATED WING BODY FORCES.