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NASA CR-
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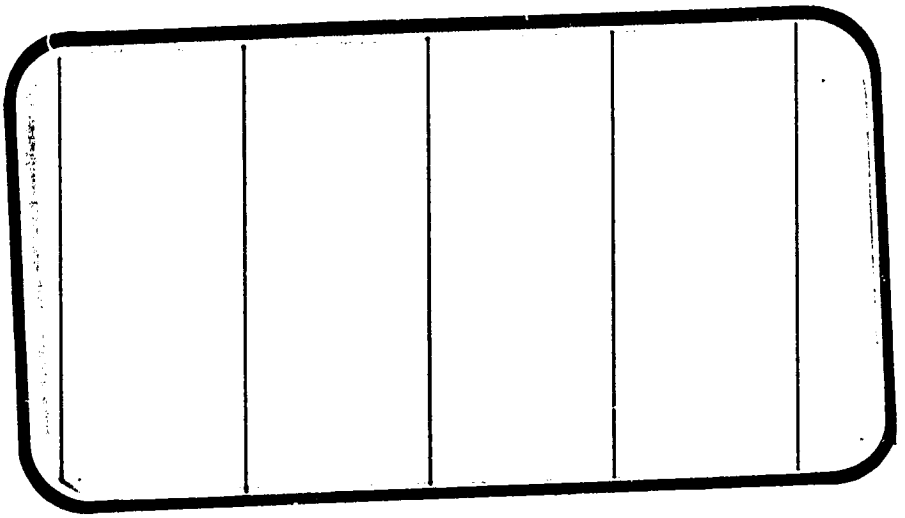

N75-17407

(NASA-CR-141504) RESULTS FROM INVESTIGATIONS IN THE NASA/MSFC TWT ON A .04 SCALE MODEL SPACE SHUTTLE LAUNCH VEHICLE (MODEL 13P-OTS) TO DETERMINE GAS SUPPLY STRUT EFFECTS ON MODEL PRESSURE

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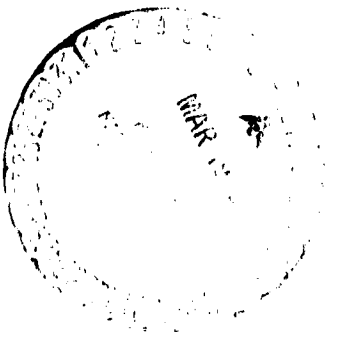

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

January 1975

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RESULTS FROM INVESTIGATIONS IN THE NASA/MSFC TWT ON A .004 SCALE MODEL SPACE SHUTTLE LAUNCH VEHICLE (MODEL 13P-OTS) TO DETERMINE GAS SUPPLY STRUT EFFECTS ON MODEL PRESSURE ENVIRONMENT (IA53)

by

W. P. Garton

Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	MSFC TWT 588
NASA Series No.:	IA53
Occupancy Hours:	39
Date:	Dec., 1973 - Jan., 1974

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RESULTS FROM INVESTIGATIONS IN THE NASA/MSFC TWT ON A .004 SCALE MODEL SPACE SHUTTLE LAUNCH VEHICLE (MODEL 13P-OTS) TO DETERMINE GAS SUPPLY STRUT EFFECTS ON MODEL PRESSURE ENVIRONMENT (IA53)

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W. P. Garton

ABSTRACT

Results from tests in the NASA/MSFC 14 x 14 inch TWT consist of pressure measurements on the aft portion, in the base regions, and on the wing surfaces of the Rockwell Space Shuttle Launch Vehicle components. Additionally, axial force determinations were made from the pressure data. All data are in coefficient form.

Data were recorded with the model at zero degrees angle of attack and sideslip through a Mach number range from 0.9 to 3.0. Since the purpose of the tests was to determine the effects of strut mounting on the model, the only configuration changes investigated were strut mounting techniques and gas line fairing location between ET and orbiter.

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FORCE

PRESSURE

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SCHEDULE OF COEFFICIENTS PLOTTED: A) CPB1 thru CPB22 vs Mach Number
B) CABO, CABT, CABS vs Mach Number
C) CP vs X/C
D) CT vs 2Y/B

NOMENCLATURE

SYMBOL	DATAMAN SYMBOL	DEFINITION
A_b		base area, in.^{2}
b	BREF	reference span, in.
C_A	CA	axial force coefficient, F_A/qS_{ref}
C_{A_b}	CAB	base axial force coefficient, $[(p_\infty - p_b)/q]\ (A_b/S_{ref})$
C_{p_x}	CP	pressure coefficient, $(p_x - p_\infty)/q$
C_{pB_x}	CPBX	base pressure coefficient at orifice, $(p_x - p_\infty)/q$
F_A		axial force, lb.
ℓ_{ref}	LREF	reference length, in.
M	MACH	Mach number
p	P	static pressure, psi
P	PO	total pressure, psi
q	Q(PSI)	dynamic pressure, psi
RN/L	RN/L	Reynolds number per unit length; million/ft.
S_{ref}	SREF	reference area, in.^{2}
T		temperature, ^oF
X		longitudinal displacement along centerline
Y		lateral displacement from centerline
Z		vertical displacement from centerline
α	ALPHA	angle-of-attack, angle between the projection of the wind X_w- axis on the body X, Z-plane and the body X-axis; deg.
β	BETA	sideslip angle, angle between the wind X_w-axis and the projection of this axis on the body X, Z-plane; deg.

NOMENCLATURE (Continued)

SYMBOL	DATAMAN SYMBOL	DEFINITION
ϕ	PHI	model roll angle, positive right wing down
X/c	X/C	chordwise location, ratio of distance from the leading edge to the length of the local chord
Y/b/2	2Y/B	semi-span location, ratio of distance from the longitudinal centerline to the wing semi-span

SUBSCRIPTS

b	base
o	orbiter
s	solid rocket booster
T	total conditions
t	external tank
w	wing
x	orifice number
∞	free stream conditions
ref	reference conditions
1,2,etc	pressure orifice number

INTRODUCTION

Several wind tunnel tests are planned to investigate the effects of Solid Rocket Booster (SRB) and Main Propulsion System (MPS) engine plume effects on the aft body and base pressure environment of the Space Shuttle Launch Configuration. The gases used to simulate the engine exhaust plume flows during these tests must be introduced into the model through a supporting strut or struts. The purpose of the investigation reported herein was to determine the effects of the various proposed gas supply strut configurations on the vehicle base pressure environment so that optimum strut configuration and placement could be achieved.

Some of the strut configurations investigated during this test were large enough to cause tunnel blockage concern. These configurations will be tested in the Rockwell 7 x 7 ft Trisonic Tunnel using the same model and model support hardware for comparison results.

All data were taken at zero degrees angle of attack and sideslip covering a Mach number range from 0.9 to 3.0. The Rockwell designation for the integrated vehicle model was 13P-OTS. Designations for the orbiter, external tank, and solid rocket booster individually were 13P-O, T17, and S16. The test was conducted during December 1973 - January 1974 carrying a test number of MSFC TWT 588 and a NASA series number of IA53.

CONFIGURATIONS INVESTIGATED

The model used in this test is designated 13P-OTS. It is comprised of the following major components, all constructed to .004-scale:

Orbiter, 13P-O Vehicle 2A (modified), with provisions for 19 pressure measurements. Elevon, aileron, rudder and speed brake deflections were all zero. The specific elements of the orbiter vehicle are:

Element	Identifier
Body	B58
Canopy	C5
Elevon	E18
Body Flap	F4
OMS Pod	M3
Rudder	R5
Vertical Tail	V2
Wing	W87

Modifications to the vehicle 2A configuration consisted of removal of the manipulator arm fairings (D7) and alteration of the nose forward of body station 300 to approximate vehicle 3 contours (Drawing VL70-000139B). Dimensional data for these elements are given in Table III.

External Tank, T17 Vehicle 3 configuration, with 11 pressure measurements. Dimensional data appear in Table III.

Solid Rocket Boosters S16 Vehicle 3A configuration. Dimensional data appear in Table III. The left-hand booster has provisions for 7 base pressure measurements.

Launch Configuration C1	Consists of orbiter, external tank and solid rocket booster with attachment hardware and protuberances
Strut M1	Single strut mounted to lower surface of external tank.
Strut M2	Single strut mounted to the side of the left solid rocket booster.
Fairings G1 and G2	These fairings, G1 forward and G2 aft, are shown in the sketch of figure 5, together with pertinent dimensional data.

Each of the dummy gas supply struts may be installed in one of two positions (forward or aft) on the integrated vehicle model. These positions, in terms of strut leading and trailing edge intersections with the body to which it is mated, are given in Table IV.

The gas supply fairings, G1 and G2, between the orbiter and external tank can each be installed in one position only. The respective leading and trailing edge positions are as follows:

	Leading Edge	Trailing Edge
G1	X_o = 378*	X_o = 663.5
G2	X_o = 1031.5	X_o = 1317

* Theoretical location because of presence of forward orbiter/external tank attach post.

Minor components which may be installed on the major components of model assembly include the external tank and solid rocket booster protuberances, the attach structures, feedlines, and umbilical door fairing support. In general, the configuration and arrangement of these parts, when installed, is in agreement with the following drawings:

VL72-000088D	General Arrangement
VL78-000041B	External Tank
VL77-000036A	Solid Rocket Booster
VL70-000139B	Orbiter

The specific components used in this test include simulations of the following:

Item	Description	Designation
ET Protuberance	LOX Vent Line Fairing	PT_1
ET Protuberance	LOX Feed Line	PT_2
ET Protuberance	LH_2 Vent Line	PT_3
SRB Protuberance	Attach Ring	PS_2
SRB Protuberance	Separation Rocket Fairing	PS_3
SRB Protuberance	Electrical Tunnel Fairing	PS_1
Attach Structure	Front Orbiter/ET	AT_5
Attach Structure	Left Rear Orbiter/ET	AT_6
Attach Structure	Right Rear Orbiter/ET	AT_7
Attach Structure	Front SRB/ET	AT_8
Attach Structure	Rear SRB/ET	AT_9
Orbiter Feedline	LOX Feedline	FL_1
Orbiter Feedline	LH_2 Feedline	FL_2
Fairing Support	Umbilical Door Fairing Support	F^1

The model was supported in the tunnel on the upper arm of a special dual sting inserted in the base of the orbiter model. When struts M1 or M2 are installed, their outer ends are attached to and supported by the lower arm of the dual sting. To enable the outer ends of both the SRB - mounted and ET - mounted struts to mate with the lower arm of the sting, the upper arm, with the attached integrated vehicle model, can be rotated about an axis coincident with the external tank longitudinal centerline. The general arrangement of the model and support hardware in the tunnel is shown in Figures 2 and 3.

The arrangement and locations of the pressure orifices on the orbiter wing and base, on the external tank, and on the base of the left-hand solid rocket booster are shown in Figure 6. The locations of the pressure orifices on the orbiter wing are given in terms of percent chord and percent semi span of the theoretical wing in Table V, and the orbiter nominal base pressure measurement locations are shown in Table VI.

The nominal locations of the pressure orifices in the bases of the external tank and solid rocket are shown in Tables VII and VIII, respectively. The angular displacements are measured counterclockwise from the top of the body as viewed from the rear (see Figure 6), and the radial displacements are measured in inches, model scale, from the body longitudinal centerline.

TEST CONDITIONS

All data were recorded with the model at zero degrees angle of attack and sideslip. The tunnel conditions existing during the test are presented in Table I.

The model was assembled for tunnel installation with a standoff (spacer) of incorrect length at the forward orbiter/external tank attach point. The error was not detected and rectified until runs number 1 through 18 had been accomplished. Runs 9/1 and 10/1 were then performed to verify that this model configuration change had no significant effect on the measured base pressures. All other runs (numbers 19 through 45) were made with the longer (correct length) standoff installed.

Tunnel blockage factors for the various model/strut configurations were 3.51 for M1G1 or M1G2 and 3.37 for M2G1 or M2G2.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93, and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo-actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° ($\pm$10°). Sting offsets are available for obtaining various maximum angles of attack up to 25°.

The diffuser section has movable floor and ceiling panels which are the primary means of controlling the subsonic Mach numbers and permit more efficient running supersonically. The sector assembly and supersonic diffuser telescope into the subsonic diffuser to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by a total of 500 hp.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

DATA REDUCTION

The pressure data were reduced to coefficient form and recorded on tape with the wind tunnel parameters, model configuration and run number. The base pressure coefficients for all three vehicle components were integrated in accordance with the following approximate equations to obtain base axial force coefficients:

Orbiter:

$$C_{A_{bo}} = \frac{-1}{q\, S_{ref}} (.184\, C_{p_1} + .170\, C_{p_2} + .390\, C_{p_3} + .214\, C_{p_4})$$

External Tank:

$$C_{A_{bt}} = \frac{-1}{q\, S_{ref}} [.072\, (C_{p_5}+C_{p_9}) + .144\, (C_{p_{10}} + C_{p_{14}} + C_{p_{15}}) + .082\, (C_{p_6} + C_{p_7} + C_{p_8}) + .164\, (C_{p_{11}} + C_{p_{12}} + C_{p_{13}})]$$

Solid Rocket Booster (One):

$$C_{A_{bs}} = \frac{-1}{q\, S_{ref}} [.0158\, C_{p_{16}} + .0594\, (C_{p_{19}} + C_{p_{20}} + C_{p_{21}} + C_{p_{22}}) + .1049\, (C_{p_{17}} + C_{p_{18}})]$$

The numeral subscripts in these equations indicate the pressure orifice numbers shown in Figure 6 and listed in Tables VI through VIII. Pressure coefficients were calculated by:

$$C_{p_x} = (p_x - p_\infty)/q$$

where x indicates the pressure orifice number.

Reference dimensions used were:

Parameter	Dimension	
	Full Scale	Model Scale
Reference Area (S_{ref})	2690 ft^2	6.198 in^2
Base Areas (A_b)		
Orbiter	427.8 ft^2	0.958 in^2*
External Tank	572.55 ft^2	1.319 in^2
Solid Rocket (1)	201.06 ft^2	0.4632 in^2

*Represents sum of model areas to be used in computation of $C_{A_{bo}}$.

DATA PRESENTATION

The data have been plotted in a manner to permit ready comparison of the effects of the various strut configurations on the aft pressure field experienced by the model. Three groupings of model configurations have been employed for all data presentation:

CONFIGURATION GROUPS

1	2	3
$C1F^1$	$C1F^1$	$C1F^1$
$C1F^1M1_1$	$C1F^1G_1$	$C1F^1G2M2_1$
$C1F^1M1_2$	$C1F^1G_2$	$C1F^1G2M2_2$
$C1F^1M2_1$		
$C1F^1M2_2$		

Group 1 compares horizontal versus vertical strut mounting techniques. Group 2 compares forward or aft mounting of the gas supply fairing while Group 3 is a combination of Groups 1 and 2.

In accordance with the groupings shown above, base pressure coefficients for each configuration are first plotted as a function of Mach number. Then the base axial force coefficient for each model component (i.e., orbiter, external tank, and SRB) is also presented as a function of Mach number. Finally, for each test Mach number, orbiter wing pressure coefficients are plotted as chordwise and spanwise profiles of pressure distribution for both upper and lower wing surfaces. The index of Data Figures should assist in location of any specific data plot. Data tabulations have been included as an appendix to this report.

TABLE I.

TEST : MSFC TWT-588 DATE : 11/26/73

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBE (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.9	6.2×10^6/ft	7.37	100
1.2	6.7×10^6/ft	10.68	100
1.46	6.5×10^6/ft	9.47	100
1.96	7.0×10^6/ft	10.24	100
2.99	4.0×10^6/ft	5.19	140

BALANCE UTILIZED: NONE

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF			
SF			
AF			
PM			
RM			
YM			

COMMENTS: Pressure data only

TABLE II.

TEST: 11SFC TWT 568 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 11-26-73

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES φ	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.9	1.2	1.46	1.96	2.99	TEST RUN NUMBERS
R96001	C1F1	0	0	0	5	1001	1002	1015	1016	1025	
02	M1/1			0	5	1004	1003	1014	1017	1024	
03	M1/2			0	5	1005	1006	1013	1018	1023	
04	M2/1			-90	5	1030	1031	1032	1035	1026	
05	M2/2			-90	5	1042	1043	1038	1037	1044	
06	G1			0	5	1008	1007	1012	1019	1022	
07	G2			0	5	1009/1	1010/1	1011	1020	1021	
08	G2M2/1			-90	5	1029	1028	1033	1034	1027	
09	G2M2/2			-90	5	1041	1040	1039	1036	1045	

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

CPB1, CPB2, CPB3, CPB4, CABΦ, CABS, CABT, 7

α OR β SCHEDULES: α = 0°; β = 0°

COEFFICENTS

IDVAR (1) IDVAR (2) NDV

TABLE II (Continued)

TEST: MSFC TWT 588 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 11-26-73

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES φ	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.9	1.2	1.46	1.96	2.99	TEST RUN NUMBERS
R96101	CIFI	0	0	0	5	2001	2002	2015	2016	2025	
02	M1/1			0	5	2004	2003	2014	2017	2024	
03	M1/2			0	5	2005	2006	2013	2018	2023	
04	M2/1			-90	5	2030	2031	2032	2035	2026	
05	M2/2			-90	5	2042	2043	2038	2037	2044	
06	G1			0	5	2008	2007	2012	2019	2022	
07	G2			0	5	2009/1	2010/1	2011	2020	2021	
08	G2M2/1			-90	5	2029	2028	2033	2034	2027	
09	G2M2/2			-90	5	2041	2040	2039	2036	2045	

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

CPB5, CPB6, CPB7, CPB12, CPB13, CPB14, CPB15, 7

α OR β SCHEDULES — COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

TABLE II (Continued)

TEST: 11%FC TWT 568 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 11-26-73

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES ϕ	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.9	1.2	1.46	1.96	2.99	TEST RUN NUMBERS
R96201	C1F1	0	0	0	5	3001	3002	3015	3016	3045	
02	M1/1			0	5	3004	3003	3014	3017	3024	
03	M1/2			0	5	3005	3006	3013	3018	3023	
04	M2/1			-90	5	3030	3031	3032	3035	3026	
05	M2/2			-90	5	3042	3043	3038	3037	3044	
06	G1			0	5	3008	3007	3012	3019	3022	
07	G2			0	5	3009/1	3010/1	3011	3020	3021	
08	G2M2/1			-90	5	3029	3028	3033	3034	3027	
09	G2M2/2			-90	5	3041	3040	3039	3036	3045	

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

CPB.1, CPB.8, CPB.9, CPB.10, CPB.11, CPB.12, CPB.15 — 7

COEFFICENTS — IDVAR (1) — IDVAR (2) — NDV

α OR β SCHEDULES

TABLE II (Continued)

TEST: MSFC TWT 356

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 11-26-73

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.9	1.2	1.46	1.96	2.99	TEST RUN NUMBERS
R96301	C1F1	0	0	0	5	4001	4002	4015	4016	4025	
02	M1/1			0	5	4004	4003	4014	4017	4024	
03	M1/2			0	5	4005	4006	4013	4018	4023	
04	M2/1			-90	5	4030	4031	4032	4035	4026	
05	M2/2			-90	5	4042	4043	4038	4037	4044	
06	G1			0	5	4008	4007	4012	4019	4022	
07	G2			0	5	4009/1	4010/1	4011	4020	4021	
08	G2M2/1			-90	5	4029	4028	4033	4034	4027	
09	G2M2/2			-90	5	4041	4040	4039	4036	4045	

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

CPB16, CPB17, CPB18, CPB19, CPB20, CPB21, CPB22 — COEFFICENTS

IDVAR (1) IDVAR (2) NDV

2

α OR β SCHEDULES

TABLE II (Concluded)

TEST: AMC TWT 565 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 11-26-73

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUE φ	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 0.9	1.2	1.46	1.96	2.99	TEST RUN NUMBERS
R96401	C1F1	C	C	0	5	001	002	015	016	025	
02	M1/1			0	5	004	003	014	017	024	
03	M1/2			0	5	005	006	013	018	023	
04	M2/1			-90	5	030	031	032	035	026	
05	M2/2			-90	5	042	043	038	037	044	
06	C-1			0	5	008	007	012	019	022	
07	C-2			0	5	009	010	011	020	021	
08	C2M2/1			-90	5	029	028	033	034	027	
09	C2M2/2			-90	5	041	040	039	036	045	

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

CP

Note: Upper and Lower Wing Pressure Data

α OR β SCHEDULES

COEFFICIENTS

IDVAR (1) IDVAR (2) NDV

TABLE III. MODEL COMPONENT DIMENSIONAL DATA

MODEL COMPONENT: Body B58

GENERAL DESCRIPTION: Double Delta Wing Fuselage Per Lines VL70-000093, except nose modified to conform to Vehicle 3 configuration forward of Station 300 (Station 338 on Lines VL70-000139)

DRAWING NUMBER: VL72-000061 VL70-000139 VL70-000093

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length, in.	1328.3	5.313
Max. Width X_o 560 to X_o 1307, in.	216.0	0.864
Max. Depth, in.	239.0	0.956
Fineness Ratio	5.495	5.495
Area		
Max. Cross-Sectional	319.556	0.005
Planform		
Wetted		
Base		

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: Canopy - C5

GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000092.

Scale Model = .004

DRAWING NUMBER: VL70-000092

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Sta. Fwd. Bulkhead	391.00	1.564
Sta. T. E.	560.0	2.240
Canopy Intersects Body ML	391.00	1.564
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: Elevon E-18

GENERAL DESCRIPTION: 2A Configuration Per W-87. NR Lines VL70-000093

Data for (1) of (2) Sides

Model Scale = .004

DRAWING NUMBER: VL70-000093

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area, FT^2	205.517	0.0033
Span (equivalent), in.	353.34	1.413
Inb'd equivalent chord	114.78	0.459
Outb'd equivalent chord	55.00	0.220
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	.208	.208
At Outb'd equiv. chord	.400	.400
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Tailing Edge	-10.02	-10.02
Hingeline	0.00	0.00
Area Moment (Normal to hinge line), FT^3 Product of area moment	1548.07	0.00010

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: F4 Body Flap

GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000094 "A"

Scale Model = .004

DRAWING NUMBER: VL70-000094A

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length, in.	84.70	0.3388
Max. Width , in.	265.00	1.060
Max. Depth		
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform, ft^2	142.63715	0.002282
Wetted		
Base		

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: OMS PODS-M3

GENERAL DESCRIPTION: 2A Light WT Configuration; per MC120074,
Per NR Lines VL70-000094.

Scale Model = .004

DRAWING NUMBER: VL70-000094

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length, in.	346.0	1.440
Max. Width, in.	108.0	0.432
Max. Depth, in.	72.8	0.291
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

℄ of OMS POD

WP = 463.9 inches FS; WP 400.0 + 63.9 = 463.90 INFS
1.600 + .2556 = 1.8556 INMS

BP = 80.0 in. FS; 0.320 INMS

From Fuselage Station 1214.0 to 1560 INFS = 346.0 INFS
4.856 to 6.240 = 1.384 INMS

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Rudder R5

GENERAL DESCRIPTION: 2A Configuration Per NR Lines VL70-000095.

Scale Model - .004

DRAWING NUMBER: VL70-000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area, FT^2	98.67	0.0016
Span (equivalent), in.	201.0	0.804
Inb'd equivalent chord	91.585	0.366
Outb'd equivalent chord	50.833	0.203
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83314	34.83314
Tailing Edge	26.24915	26.24915
Hingeline	34.83314	34.83314
Area Moment (Normal to hinge line), FT^3	526.125	0.00003
Product of area and mean chord		

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: Vertical Tail V5 (Light Wt. Orbiter Config)

GENERAL DESCRIPTION: Center Line Vertical Tail on the Double Delta Configuration with Double Wedge Airfoil and Rounded Leading Edge, Total Data Includes Void Area Listed Below Scale Model = .004

DRAWING NUMBER: VL70-000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, FT^2	386.05	0.006
* Void (included above), FT^2	13.17	0.0002
Blanketed included above, FT^2	12.67	0.0002
Span (equivalent), FT	24.37	0.097
Aspect Ratio	1.590	1.590
Rate of Taper	0.507	0.507
Taper Ratio	0.426	0.426
Dihedral Angle, degrees	--	--
Incidence Angle, degrees	--	--
Aerodynamic Twist, degrees	--	--
Toe-In Angle	0.0	0.0
Cant Angle	0.0	0.0
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Wing Sta. 0.0)	257.99	1.032
Tip, (equivalent)	109.78	0.439
MAC	193.84	0.775
Fus. Sta. of .25 MAC	1473.64	5.895
W.P. of .25 MAC	647.31	2.589
B.L. of .25 MAC	0.0	0.0
Airfoil Section		
Root		
Tip		
EXPOSED DATA		
Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

*Void area noted is the area located at lower aft portion of tail surface.

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: Wing W-87 New Light Weight

GENERAL DESCRIPTION: Orbiter Configuration per lines VL70-000093

Scale Model = .004

DRAWING NUMBER: VL70-000093

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, FT^2 (W.R.P.)		
Planform	2689.38	0.043
Wetted	--	--
Span (equivalent), FT	77.12	0.308
Aspect Ratio	2.214	2.214
Rate of Taper	1.176	1.176
Taper Ratio	0.209	0.209
Diehedral Angle, degrees @ 75.33% element line	3.860	3.860
Incidence Angle, degrees @ .425% tol.00%	3.000	3.000
Aerodynamic Twist, degrees	--	--
Toe-In Angle	--	--
Cant Angle	--	--
Sweep Back Angles, degrees		
Leading Edge	44.873	44.873
Trailing Edge	-10.242	-10.242
0.25 Element Line	35.050	35.050
Chords:		
Root (Wing Sta. 0.0)	690.19	2.761
Tip, (equivalent)	144.30	0.577
MAC	476.76	1.907
Fus. Sta. of .25 MAC	1136.12	4.544
W.P. of .25 MAC	289.44	1.158
B.L. of .25 MAC	181.03	0.724
Airfoil Section		
Root		
Tip		
EXPOSED DATA		
Area, FT^2	1746.87	6.987
Span, (equivalent), FT	59.16	0.237
Aspect Ratio	2.004	2.004
Taper Ratio	0.256	0.256
Chords		
Root	562.77	2.251
Tip	144.30	0.577
MAC	394.81	1.579
Fus. Sta. of .25 MAC	1185.17	4.741
W.P. of .25 MAC	291.56	1.166
B.L. of .25 MAC	250.54	1.002
LEADING EDGE CUFF (data for (1) side)		
Plan form area, FT^2 (BP 108.0)	120.333	0.0019
L.E. Intersect Fus ML @ STA	560.0	2.240
L.E. Intersects Wing @ STA	1035.0	4.140

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Continued)

MODEL COMPONENT: EXTERNAL TANK - T17

GENERAL DESCRIPTION: External Tank per NR Control VL78-000041B

DRAWING NUMBER: VL78-000041B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length, in.	1865	7.460
Max. Width (Dia), in.	324.0	1.296
Max. Depth		
Fineness Ratio, L/D	5.75617	5.75617
Area, Ft^2		
Max. Cross-Sectional	572.56	0.009161
Planform		
Wetted		
Base		

TABLE III. MODEL COMPONENT DIMENSIONAL DATA (Concluded)

MODEL COMPONENT: BOOSTER SOLID ROCKET MOTOR - S16

GENERAL DESCRIPTION: Configuration 3A. Data for (1) of (2) sides, per Rockwell Lines VL77-000036A

DRAWING NUMBER: VL72-000088A
VL77-000036A

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length (Includes Nozzle), in.	1741.0	6.9640
Max. Width (Tank Dia), in.	142.3	0.5692
Max. Depth (Aft Shroud), in.	192.0	0.7680
Fineness Ratio, L/D	9.06771	9.06771
Area, Ft^2		
Max. Cross-Sectional	201.06193	0.00322
Planform		
Wetted		
Base		
WP of BSRM Centerline (Z_T), in.	400	1.6000
FS of BSRM Nose (X_T), in.	200	0.8000

TABLE IV. X-COORDINATES OF STRUT LEADING AND TRAILING EDGE INTERSECTIONS WITH BODY PROFILES

Strut	Position	Leading Edge	Trailing Edge
$M1_1$	Forward	X_t = 711	X_t = 1735
$M1_2$	Aft	X_t = 1028	X_t = 2052
$M2_1$	Forward	X_s = 388	X_s = 1412
$M2_2$	Aft	X_s = 772	X_s = 1796

TABLE V. WING PRESSURE ORIFICE LOCATIONS*

ORIFICE NO.	WING SURFACE	LOCATION % CHORD	% SEMISPAN
23	Upper	10.7	50.0
24	Upper	30.0	49.8
25	Upper	49.1	51.1
26	Upper	70.0	49.5
27	Upper	90.7	50.6
28	Upper	50.6	34.4
29	Upper	50.7	64.1
30	Upper	50.4	78.5
31	Lower	7.2	52.5
32	Lower	28.0	52.5
33	Lower	49.0	52.1
34	Lower	69.0	52.4
35	Lower	48.9	38.5
36	Lower	48.8	66.0
37	Lower	48.5	79.7

*Refer to Drawing VL 70-000093

TABLE VI. NOMINAL LOCATIONS, ORBITER BASE PRESSURE ORIFICES

Measurement Number	Orifice Location			
	Full Scale		Model Scale	
	Y_o	Z_o	Y_o	Z_o
1	0	493	0	1.972
2	-106	492	-.424	1.968
3	-92.5	400	-.370	1.600
4	0	304.8	0	1.219

TABLE VII. NOMINAL LOCATIONS OF EXTERNAL TANK PRESSURE ORIFICES

Measurement Number	Angular Displacement (degrees)	Radial Distance (inches)
5	0	0.648
6	0	0.324
7	0	0
8	180	0.324
9	180	0.648
10	135	0.648
11	135	0.324
12	90	0.324
13	45	0.324
14	45	0.648
15	90	0.648

TABLE VIII. NOMINAL LOCATIONS OF SOLID ROCKET BOOSTER PRESSURE ORIFICES

Measurement Number	Angular Displacement (degrees)	Radial Distance (inches)
16	0	0
17	90	.334
18	270	.334
19	0	.142
20	180	.142
21	90	.142
22	270	.142

Notes:

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

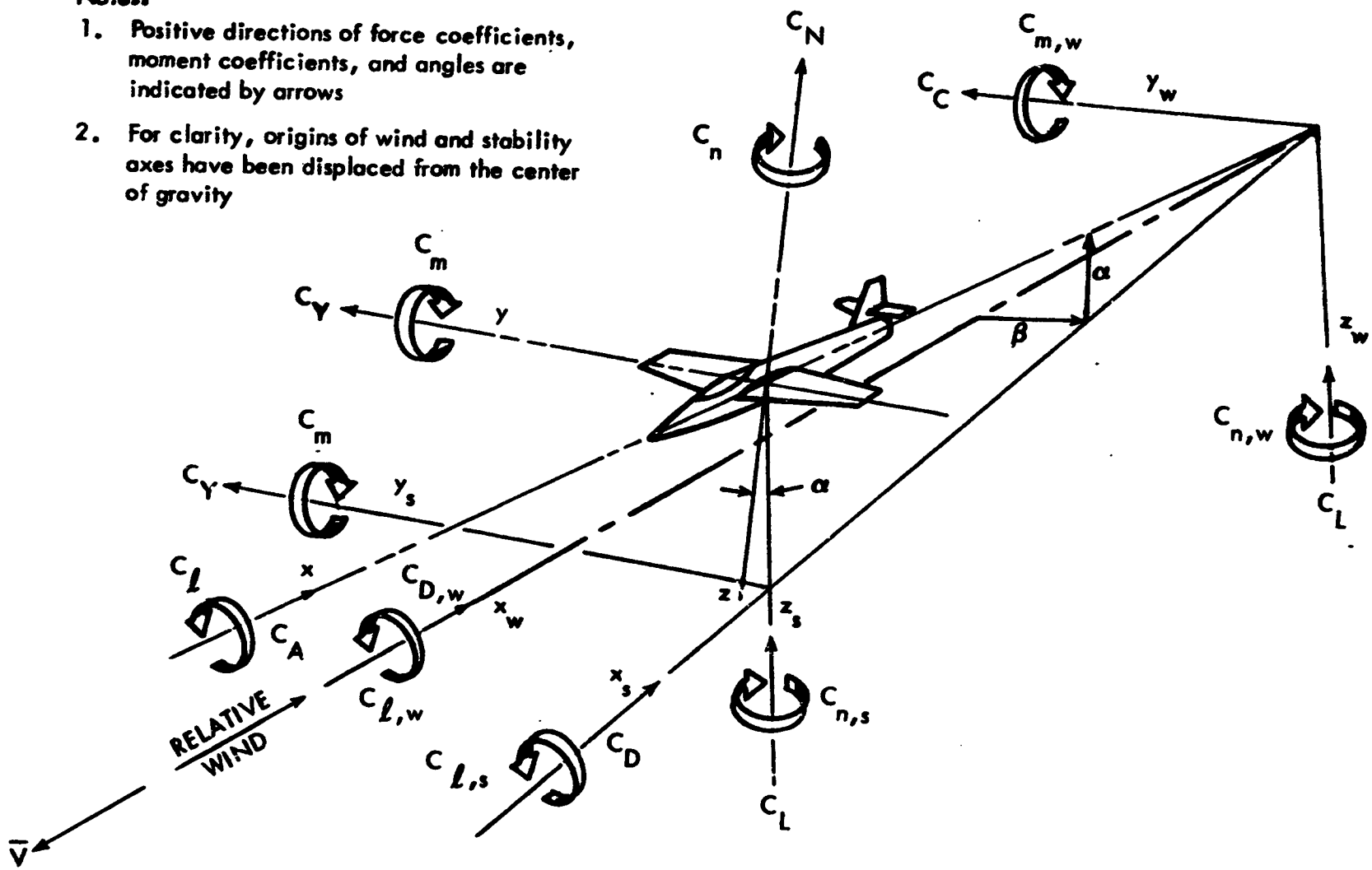


Figure 1. Axis System

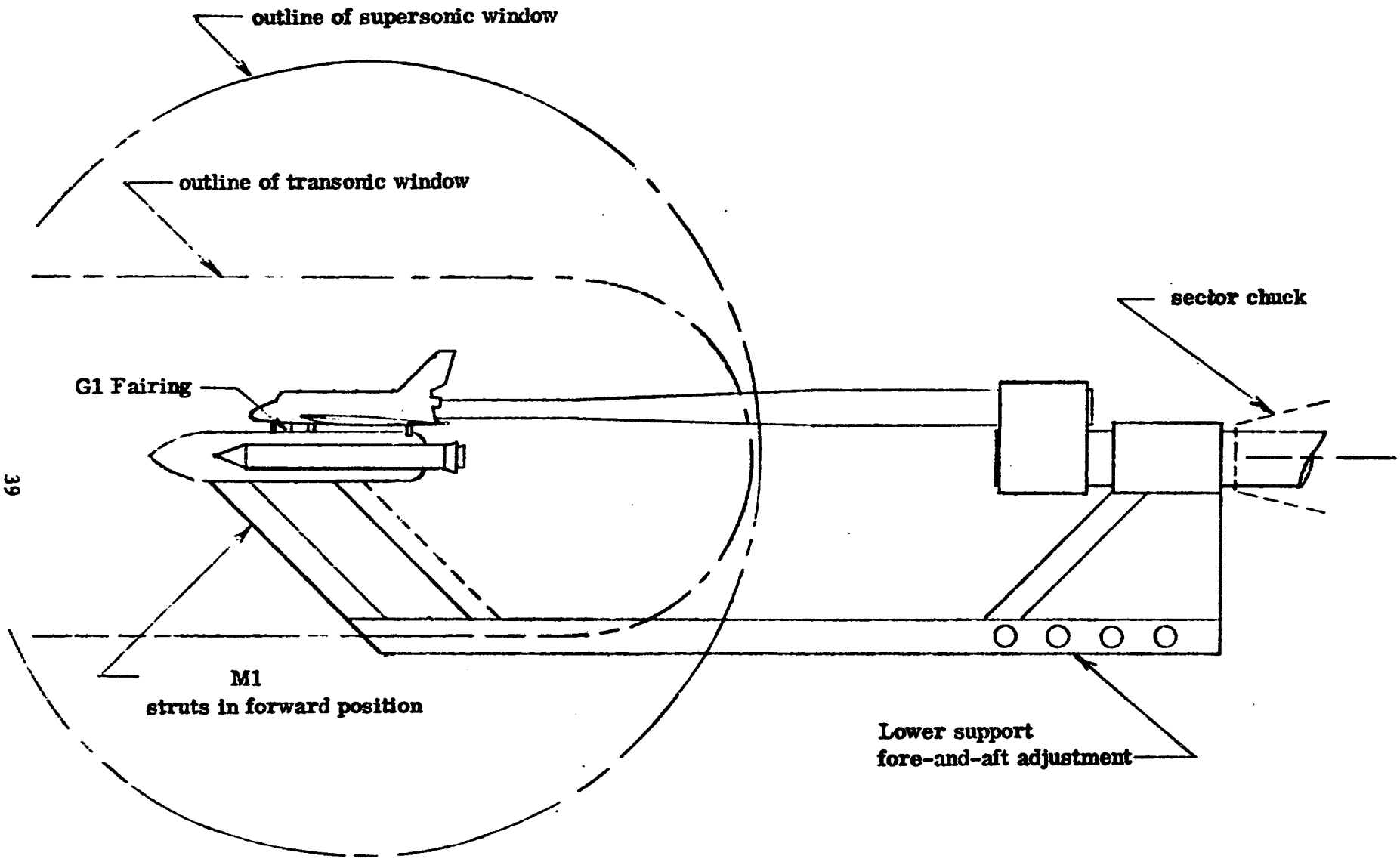


Figure 2 - Model and Support Installation in MSFC 14" X 14" Trisonic Wind Tunnel

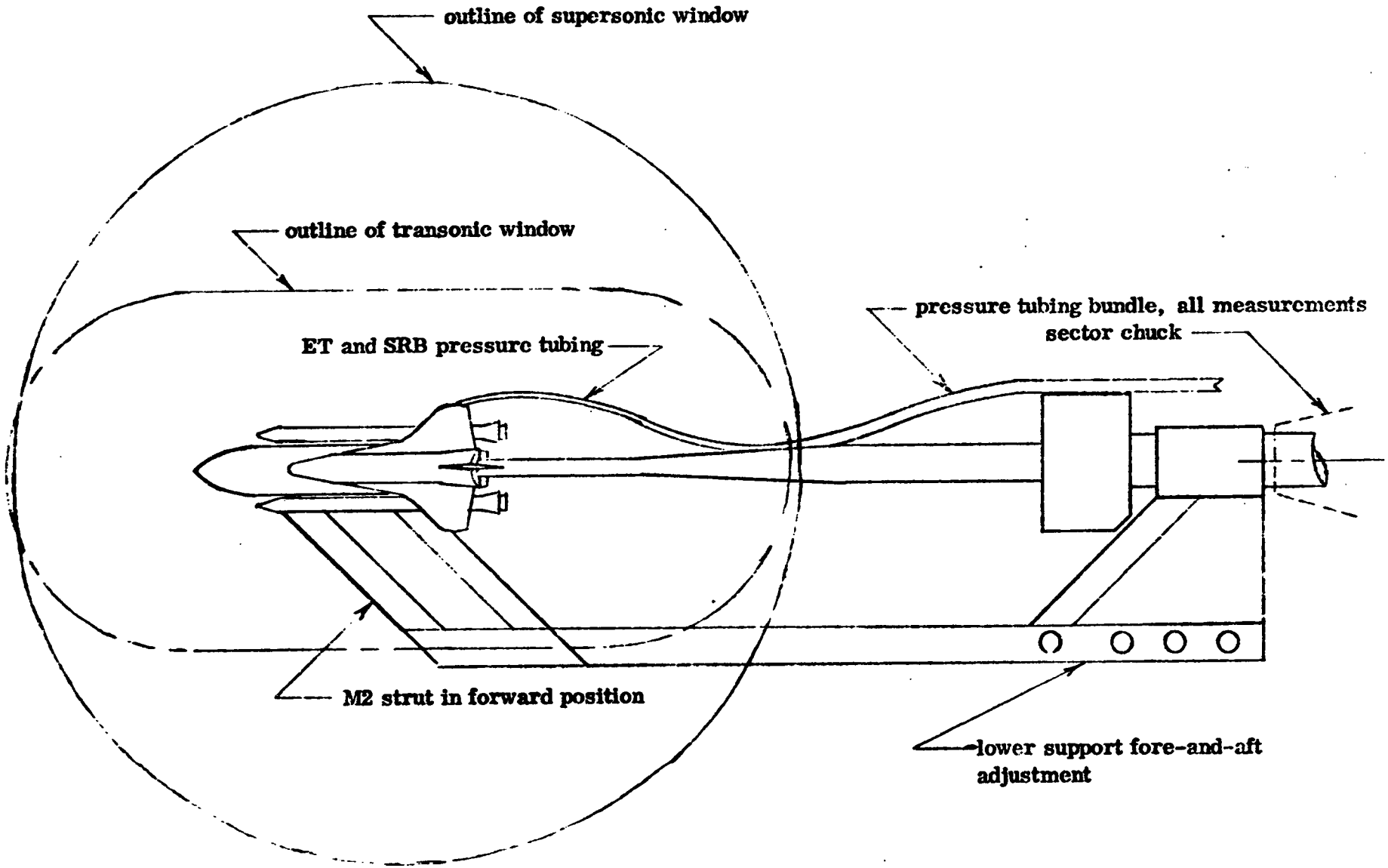
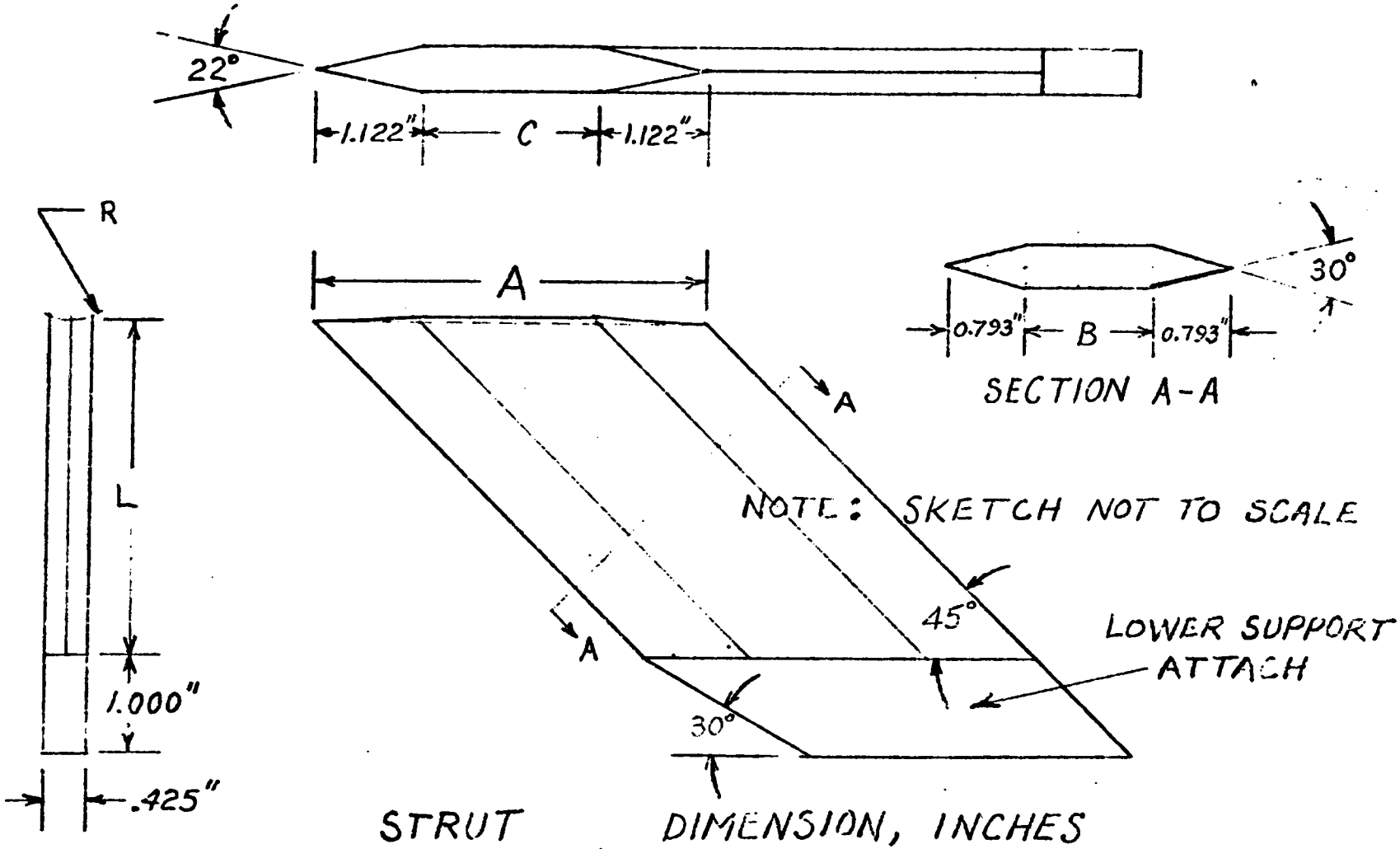


Figure 3 - Model and Support Installation in MSFC 14" X 14" Trisonic Wind Tunnel, Single Strut Mounted to SRB



STRUT	DIMENSION, INCHES				
	A	B	C	L	R
M1	4.097	1.310	1.[illegible]	3.502	0.648
M2	4.097	1.310	1.553	3.243	0.2845

Figure 4 - Strut M1, and M2 Configurations and Dimensional Data

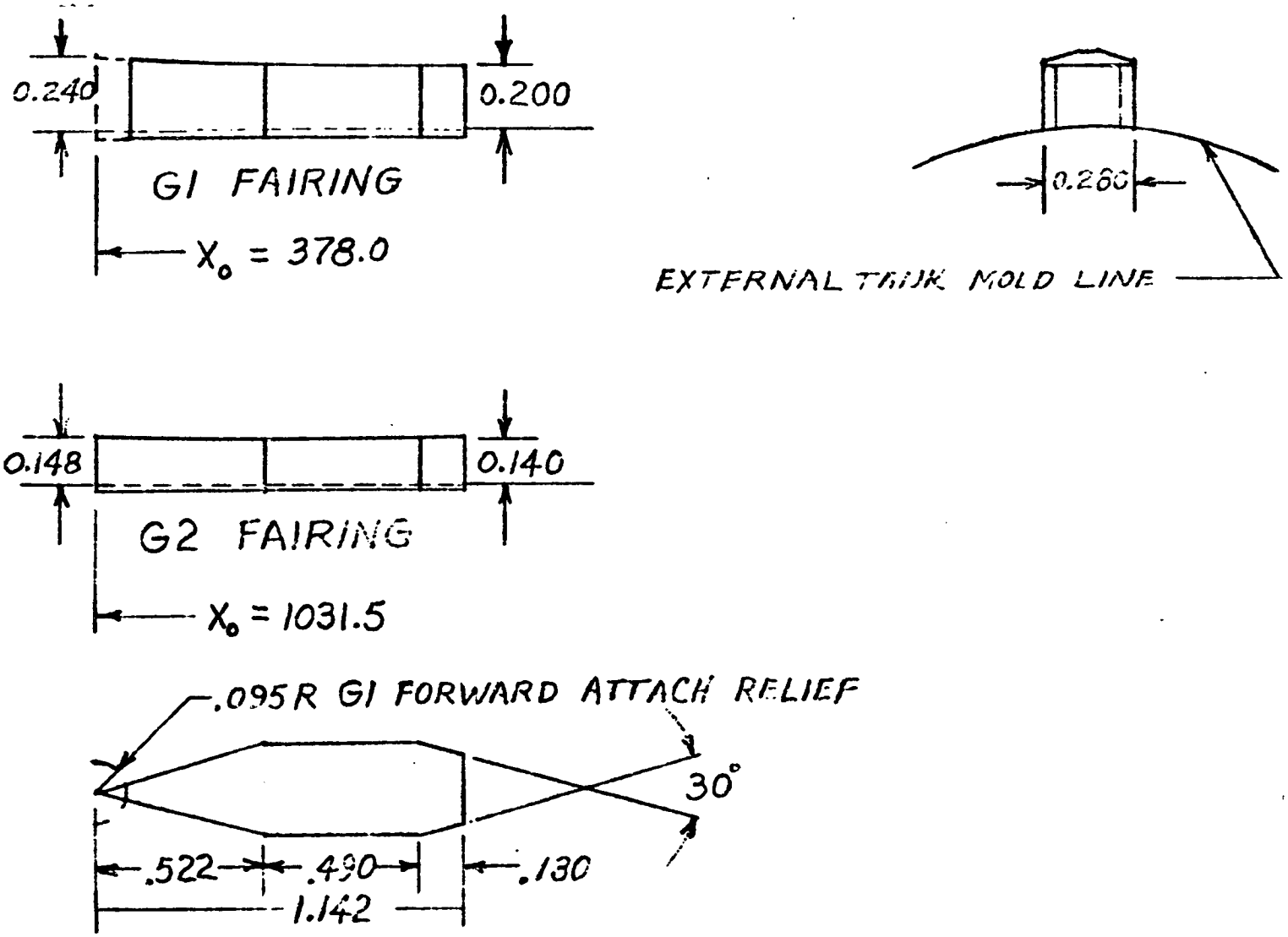
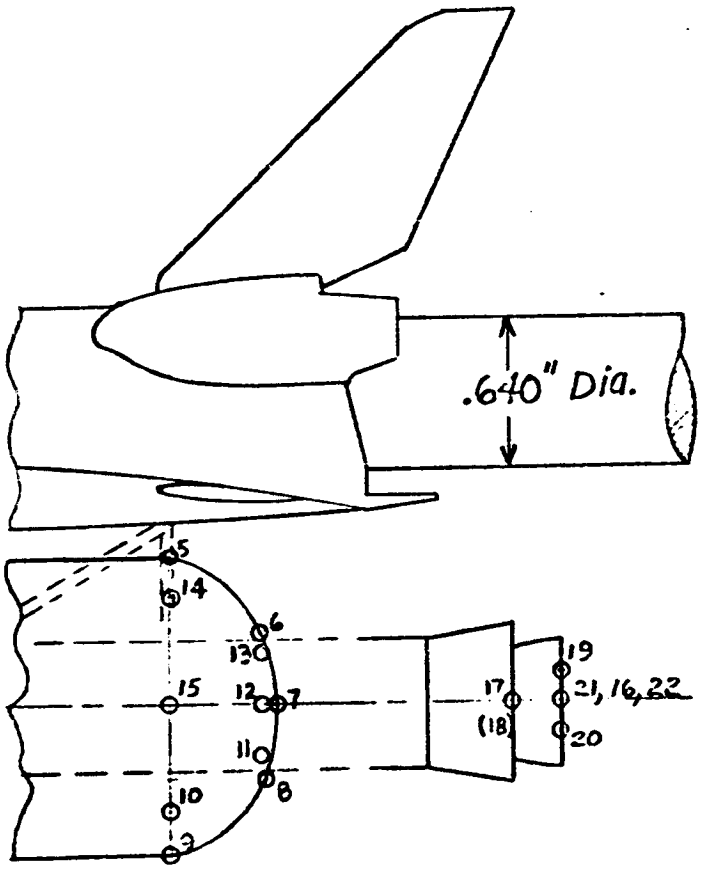


Figure 5. - G1 (Forward) and G2 (Aft) Orbiter/ET Gas Supply Fairings

Pressure Tap Numbering:

Orbiter Base	1-4
External Tank Base	5-15
Solid Rocket Booster	16-22
Orbiter Wing Upper	23-30
Orbiter Wing Lower	31-37



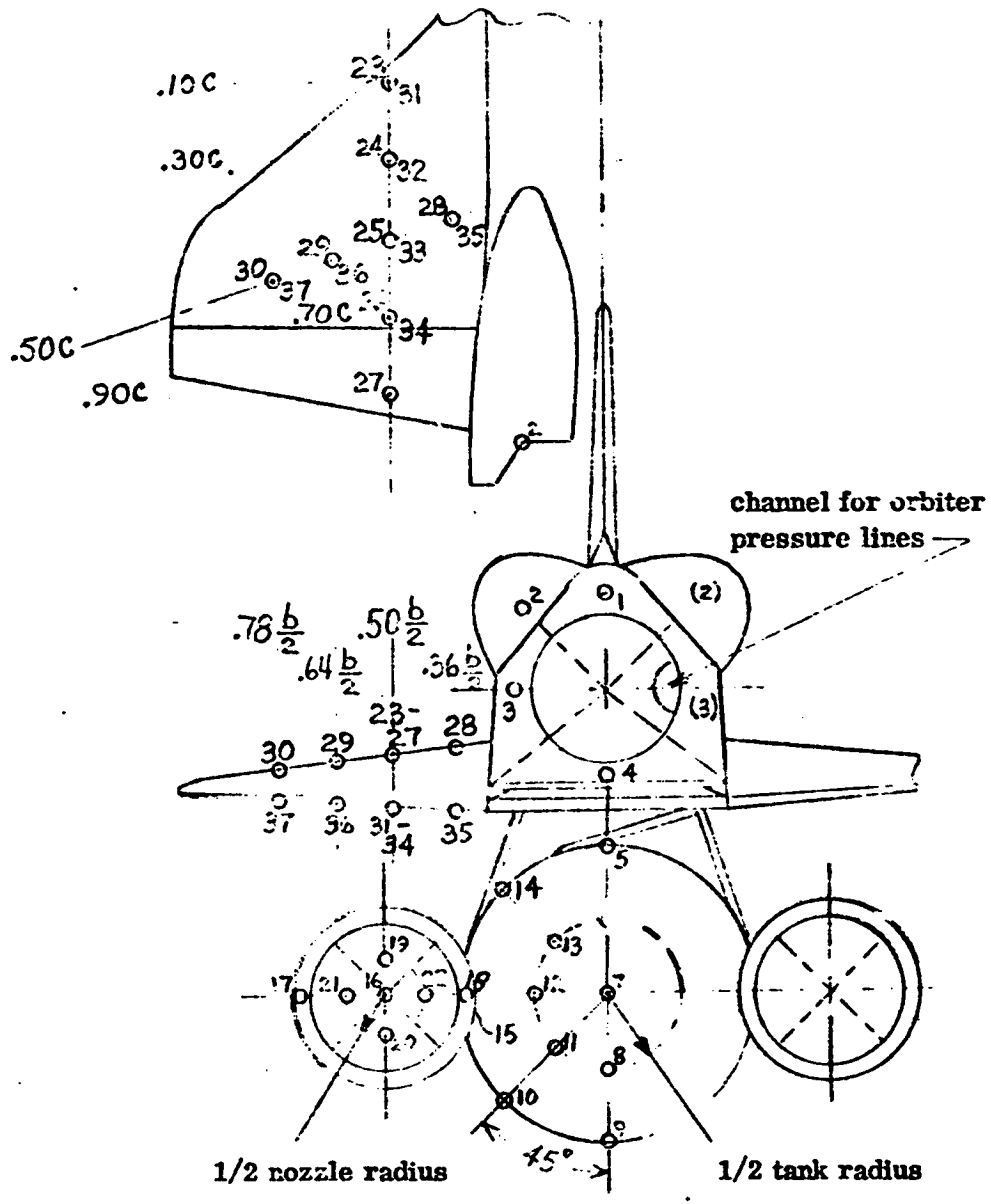
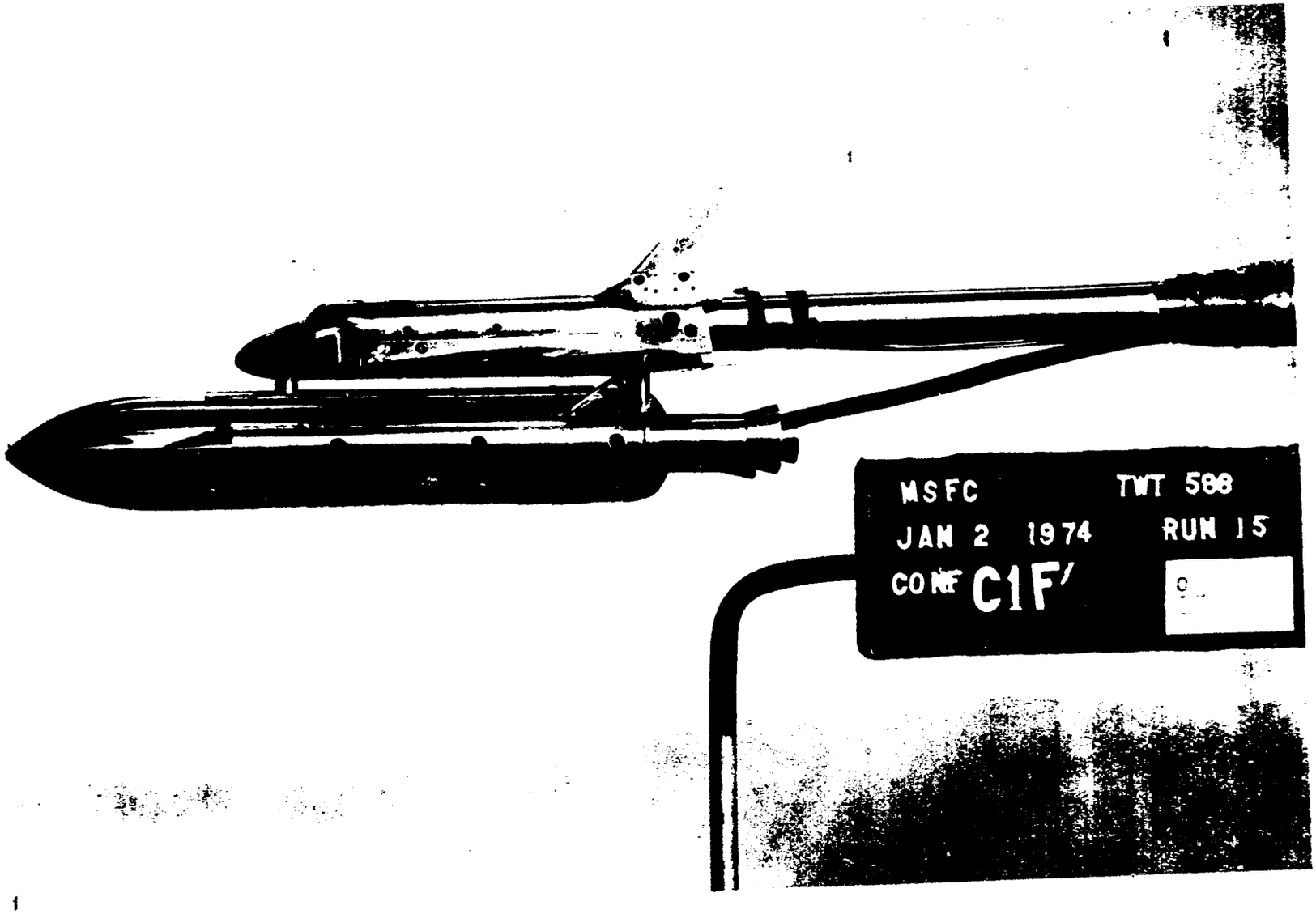
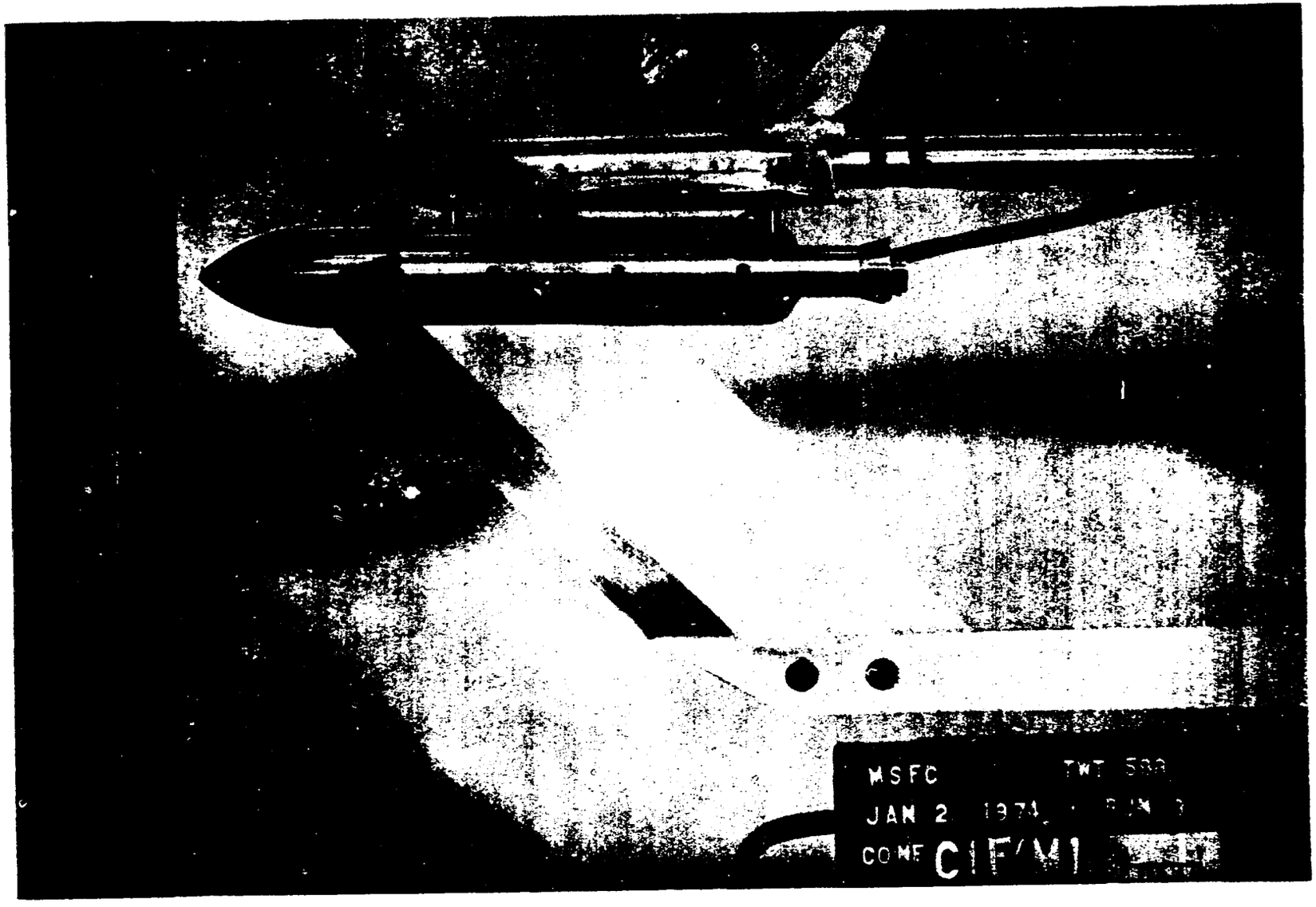


Figure 6 - Nominal Pressure Tap Locations and Numbering Scheme



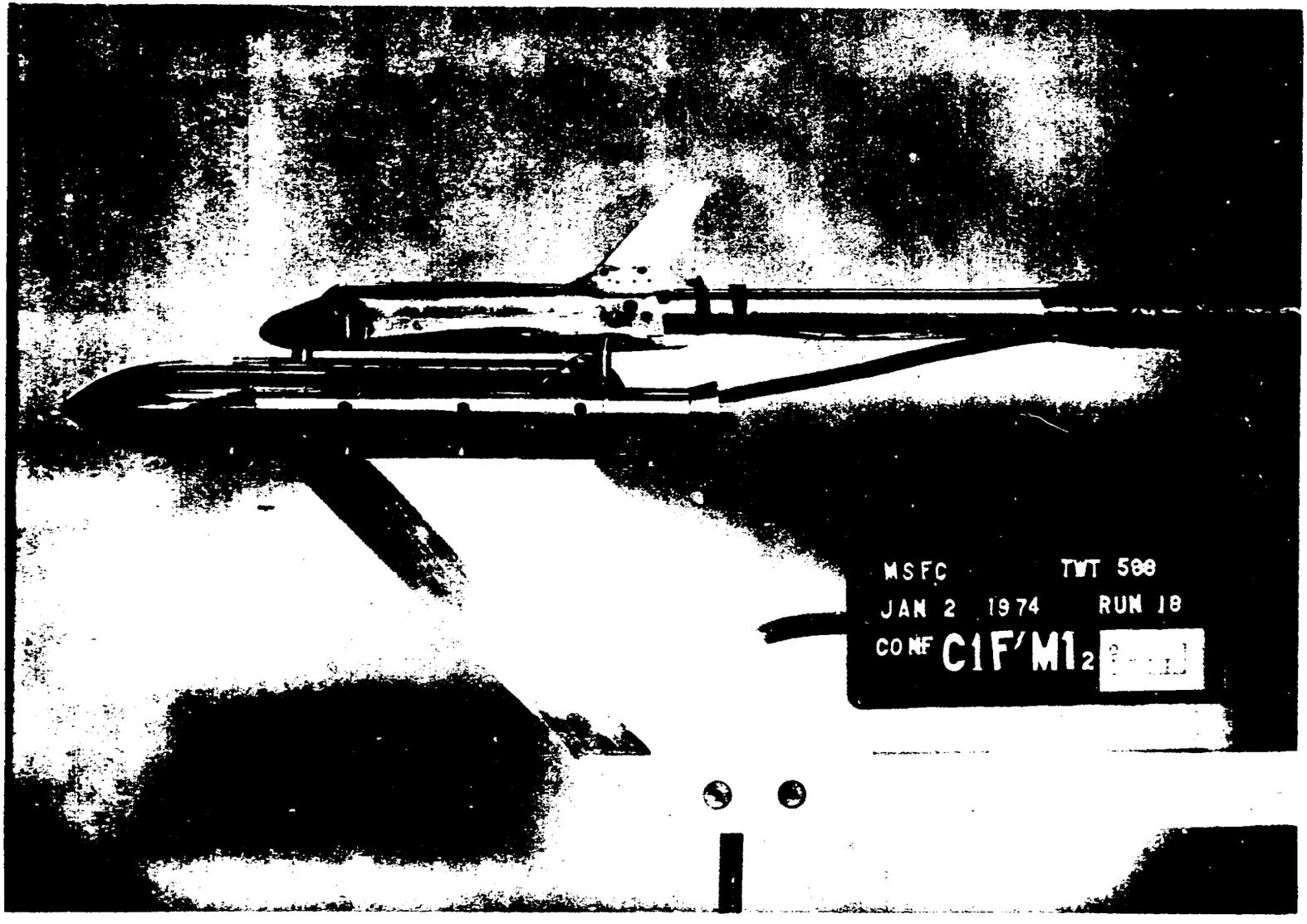
a) Configuration C1F[1]

Figure 7. Tunnel Installation Photographs



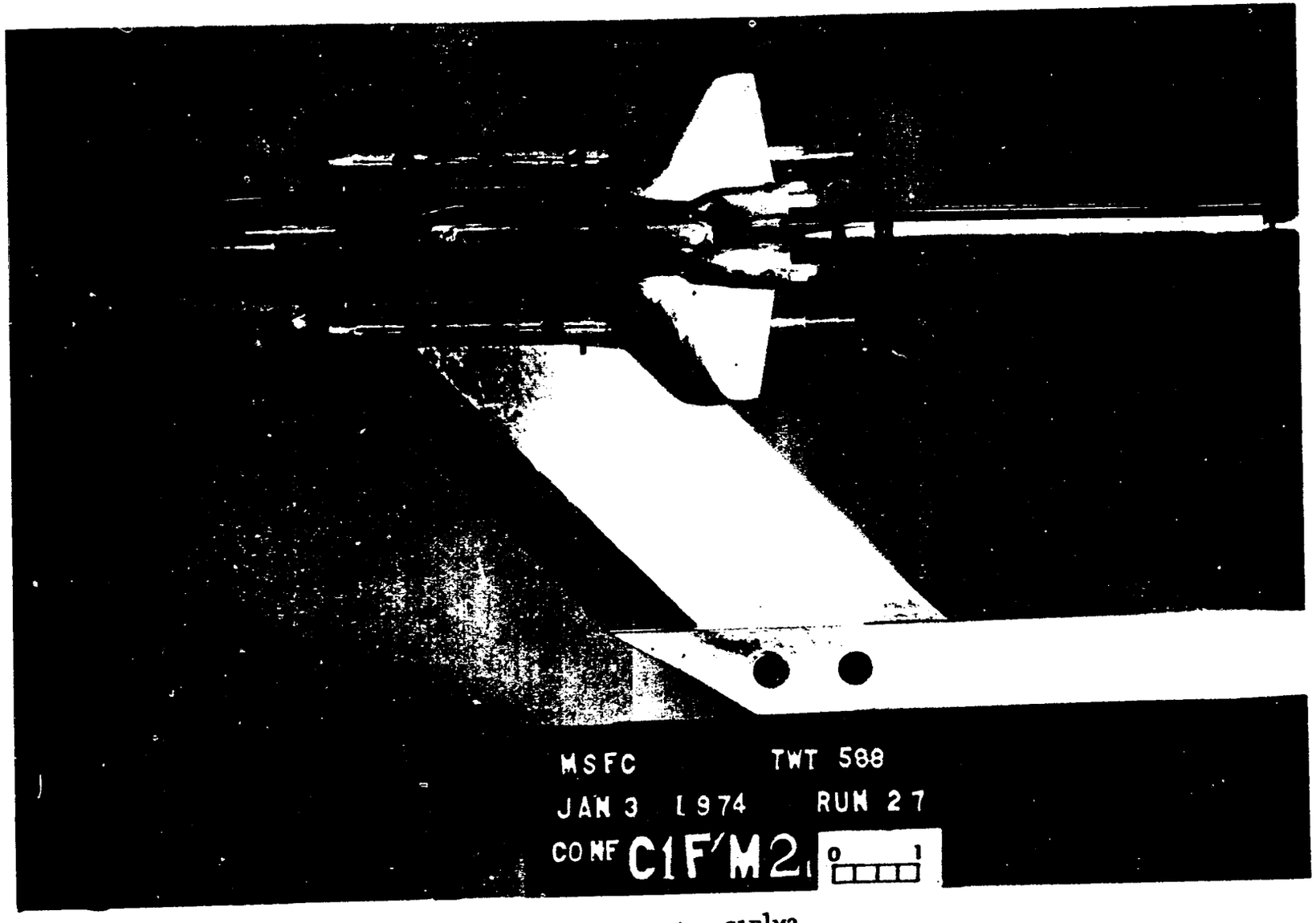
b) Configuration $C1F^{1}M1_{1}$

Figure 7. Continued



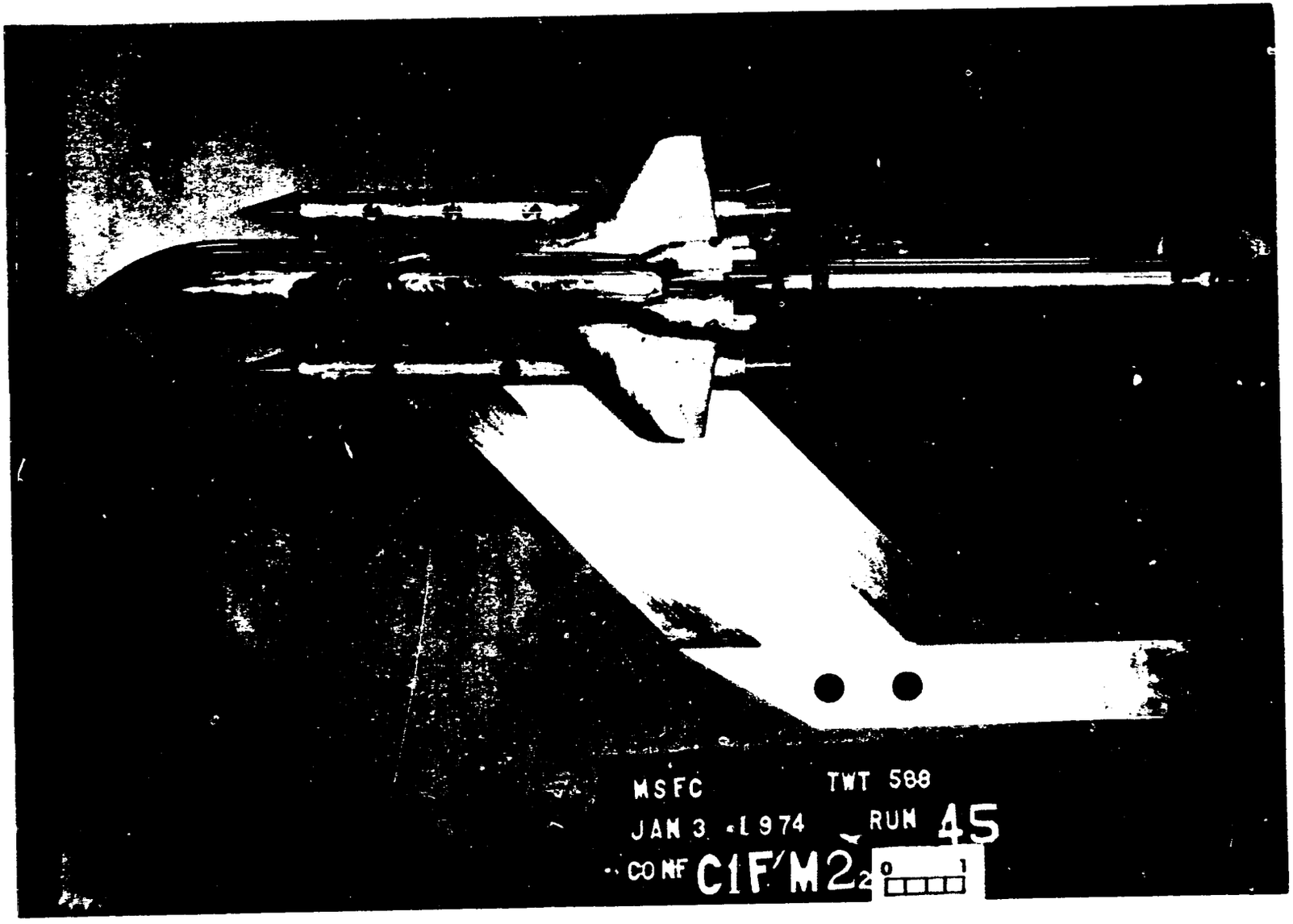
c) Configuration $C1F^{1}M1_{2}$

Figure 7. Continued



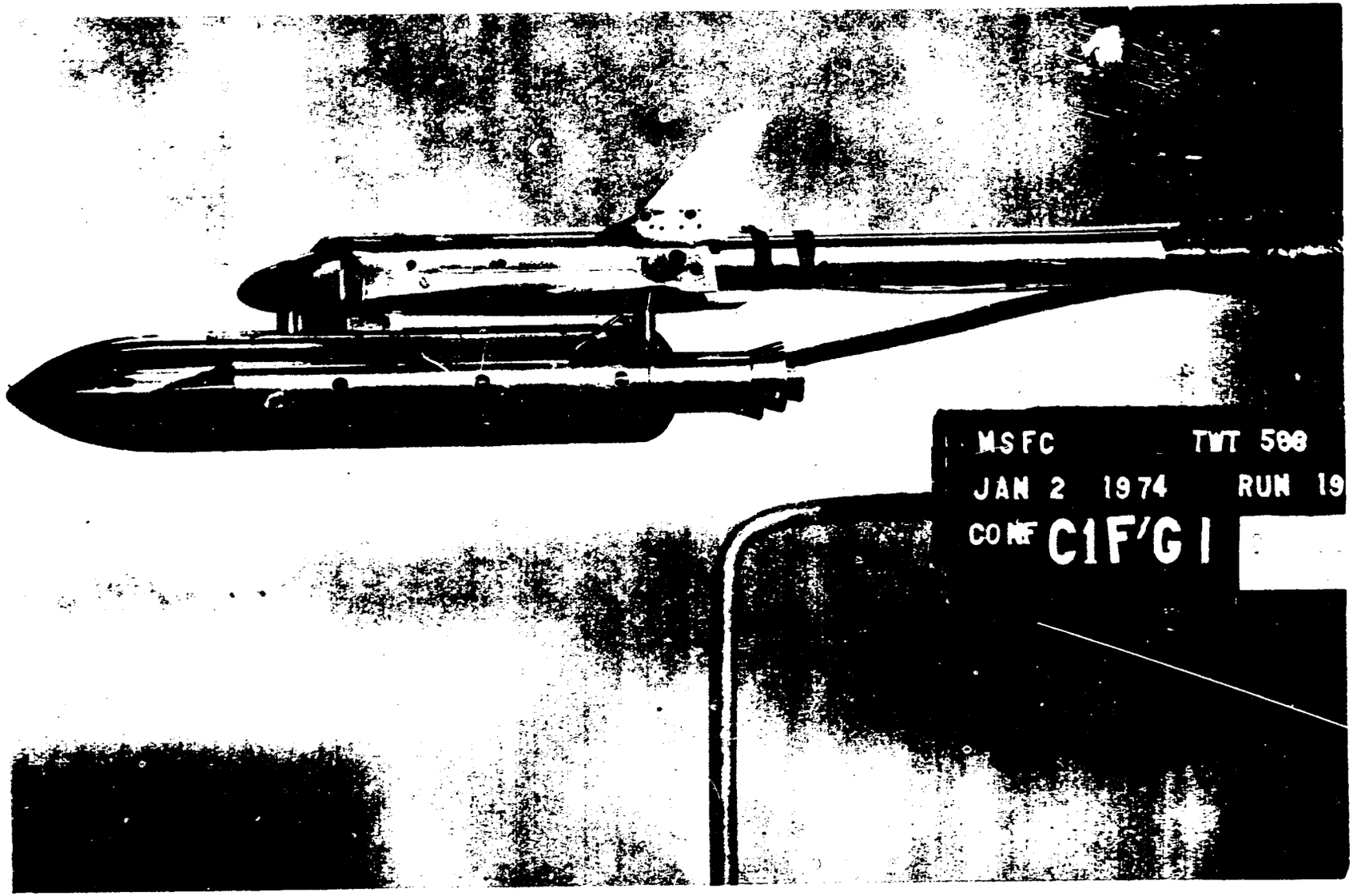
d) Configuration $C1F^1M2_1$

Figure 7. Continued



e) Configuration $C1F^1M2_2$

Figure 7. Continued



f) Configuration C1F1G1

Figure 7. Continued

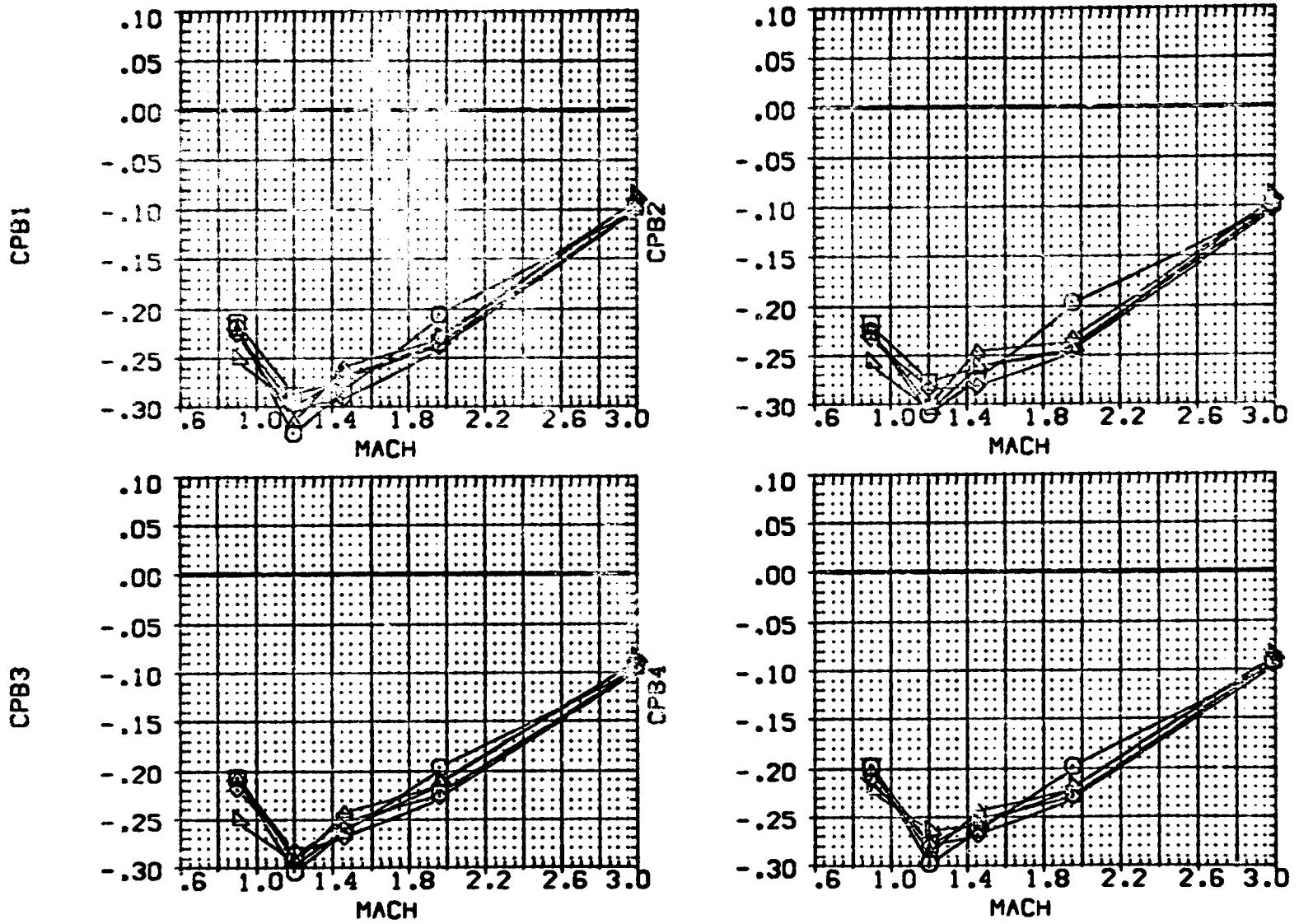
g) Configuration C1F[1]G2

Figure 7. Concluded

DATA FIGURES

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896001]	□	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/1]	.000	.000	.000
[896002]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/1 M1/1]	.000	.000	.000
[896003]	⋈	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/1 M1/2]	.000	.000	.000
[896004]	△	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/1 M2/1]	.000	.000	-90.000
[896005]	⋈	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/1 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

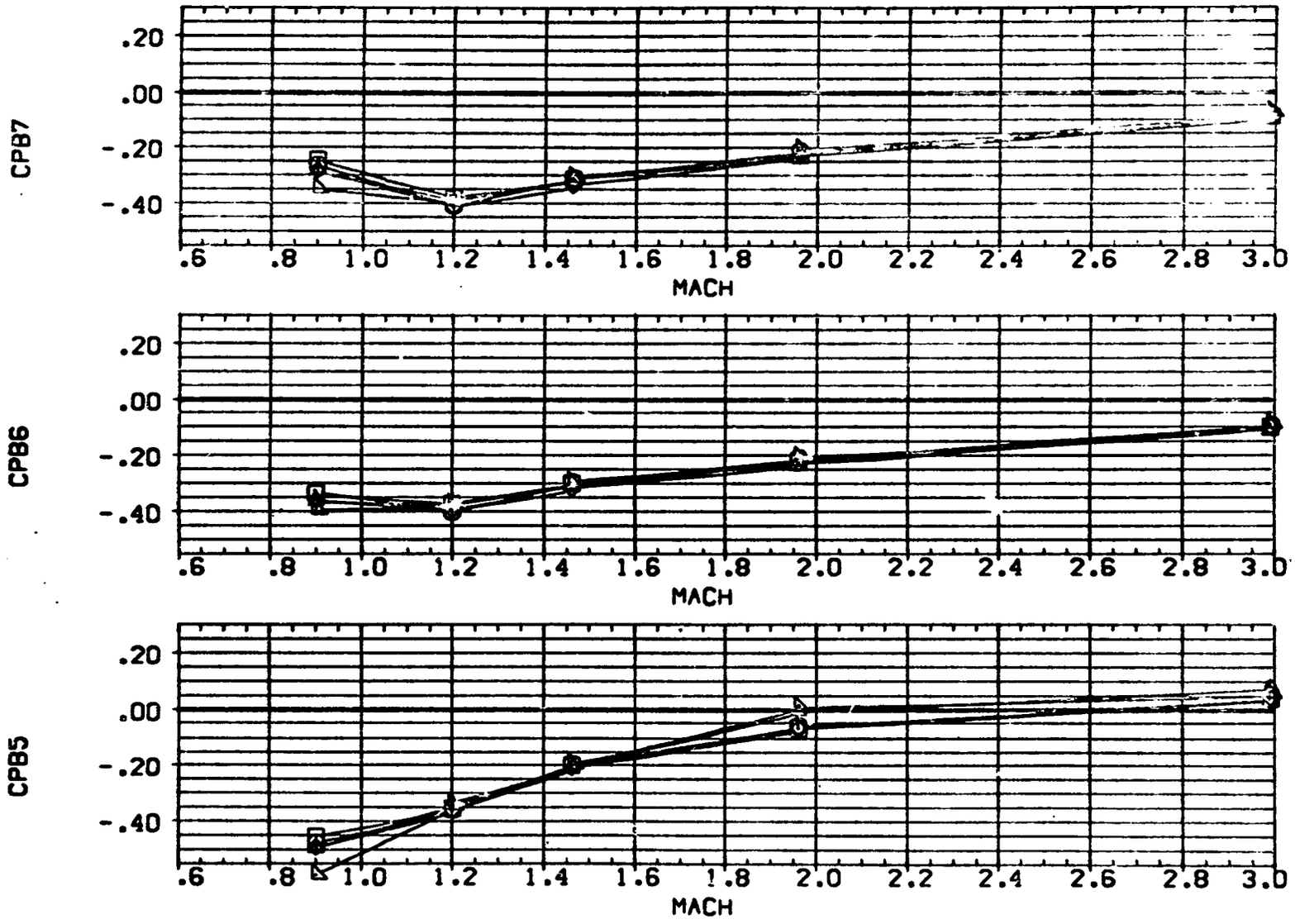


STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(896101)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(896102)	▭	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(896103)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(896104)	◺	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(896105)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



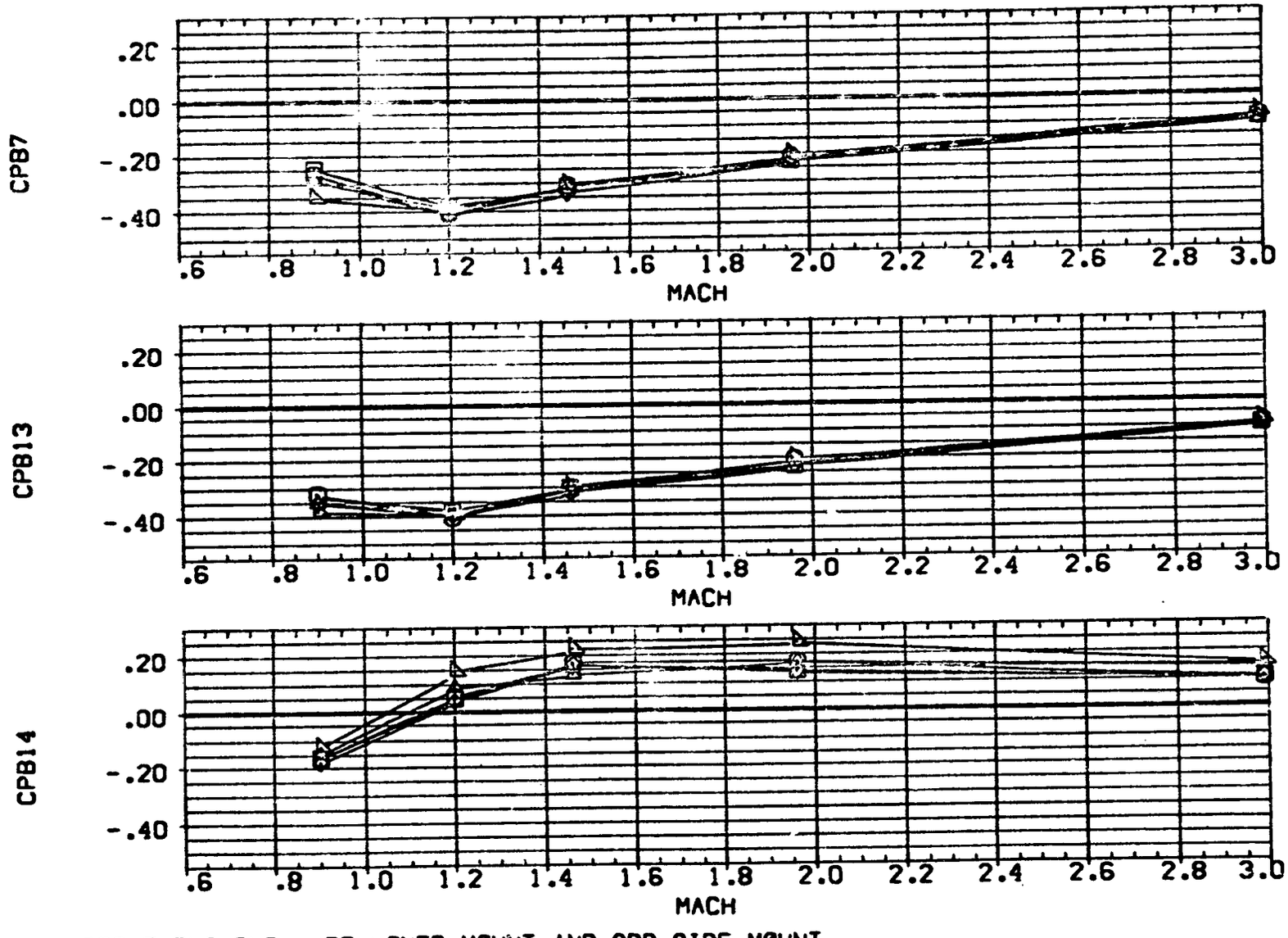
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(896101)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(896102)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(896103)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	-90.000
(896104)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(896105)	▽	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



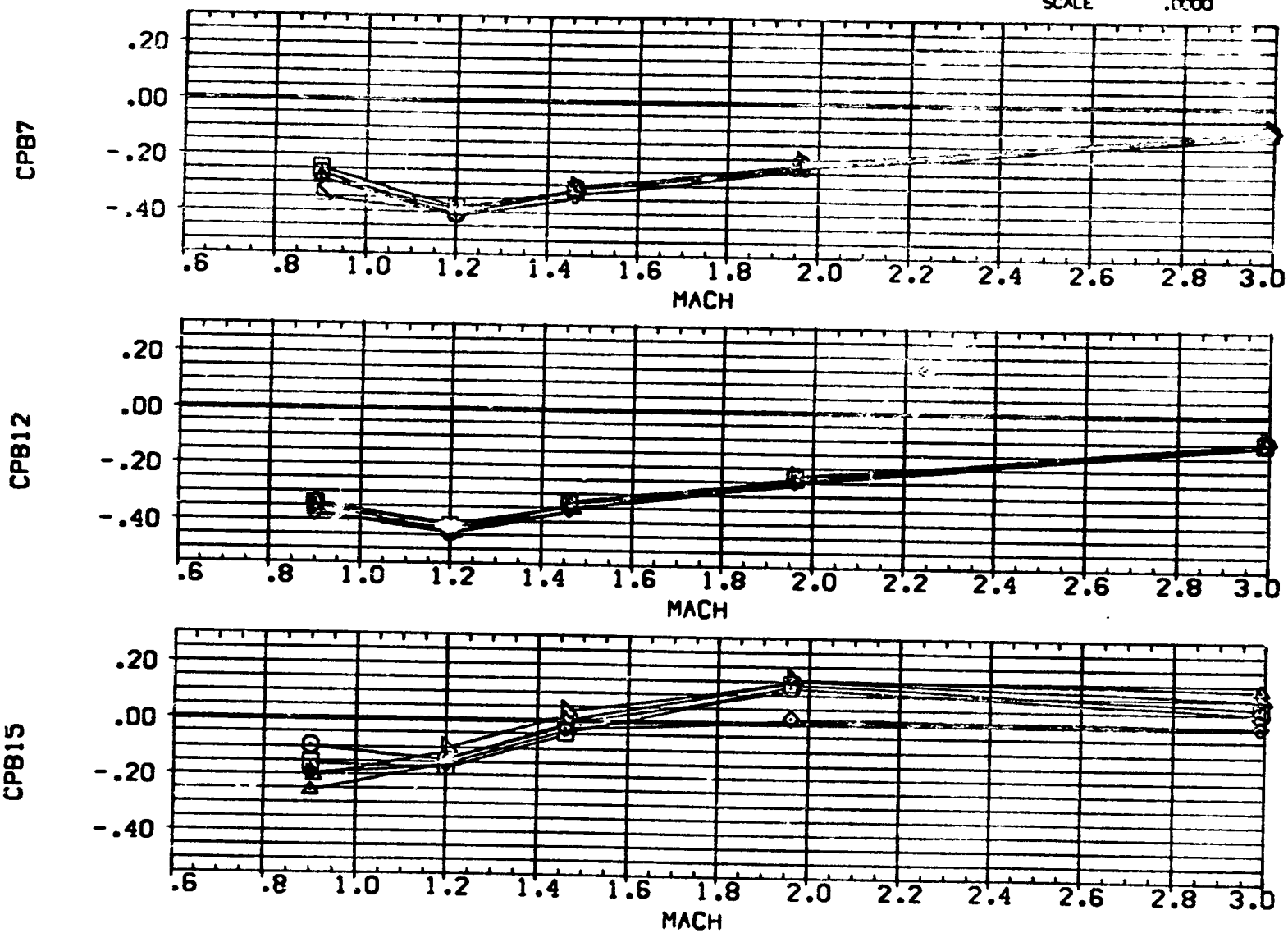
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896101]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[896102]	⊠	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[896103]	⊠	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[896104]	◁	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[896105]	◁	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

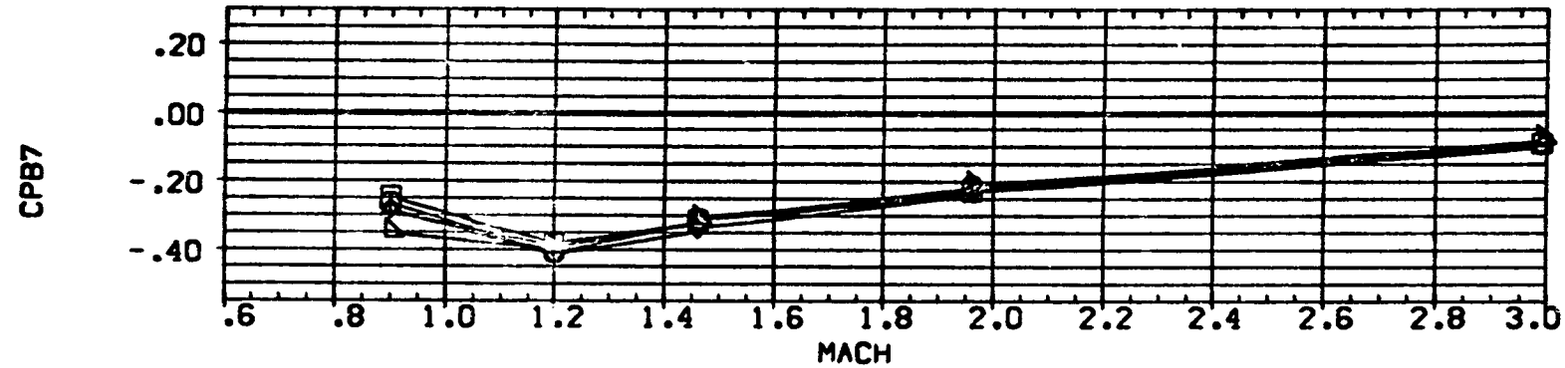


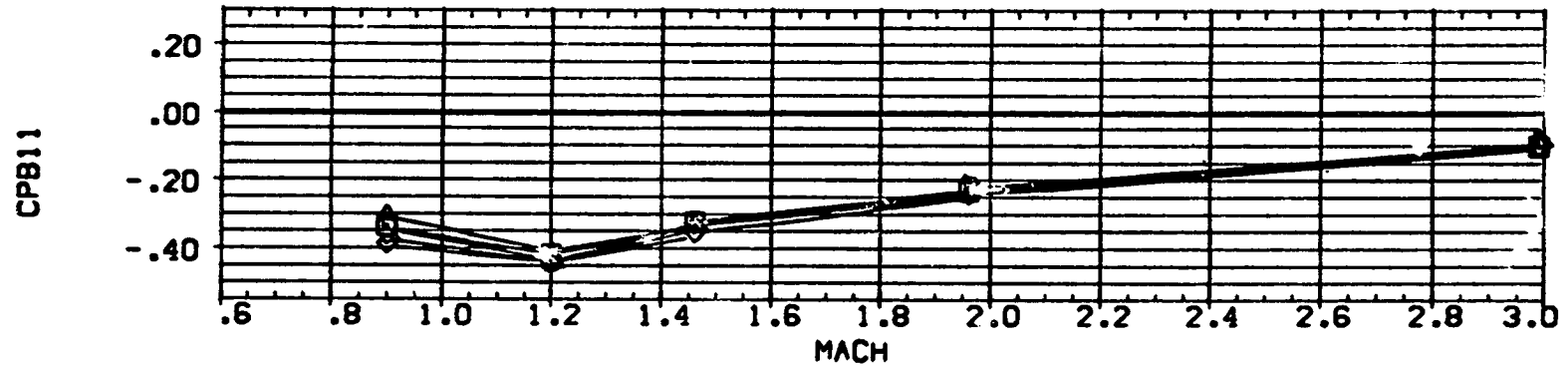
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

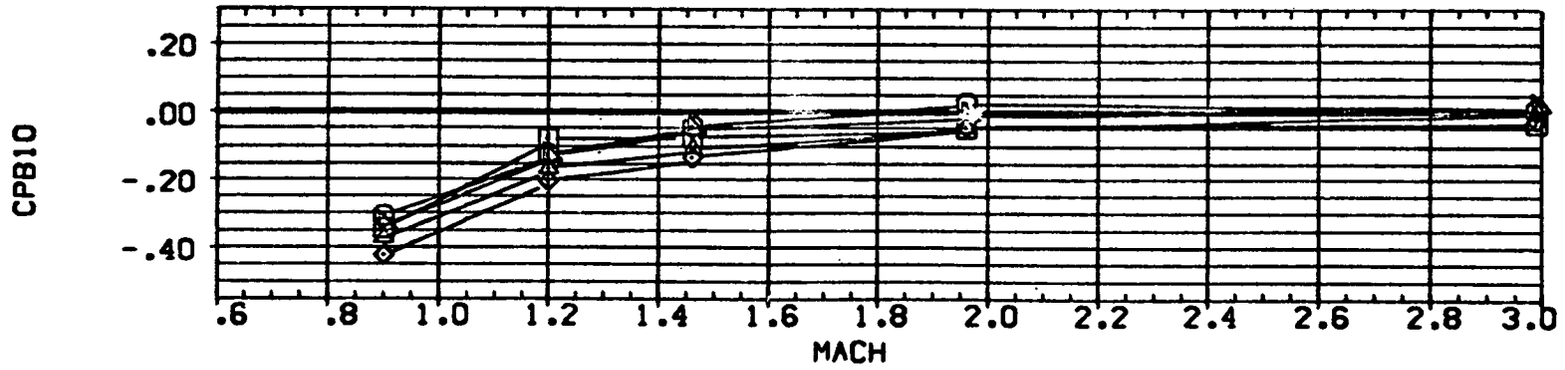
[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(896201)	□	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(896202)	○	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(896203)	◇	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(896204)	△	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(896205)	▽	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	







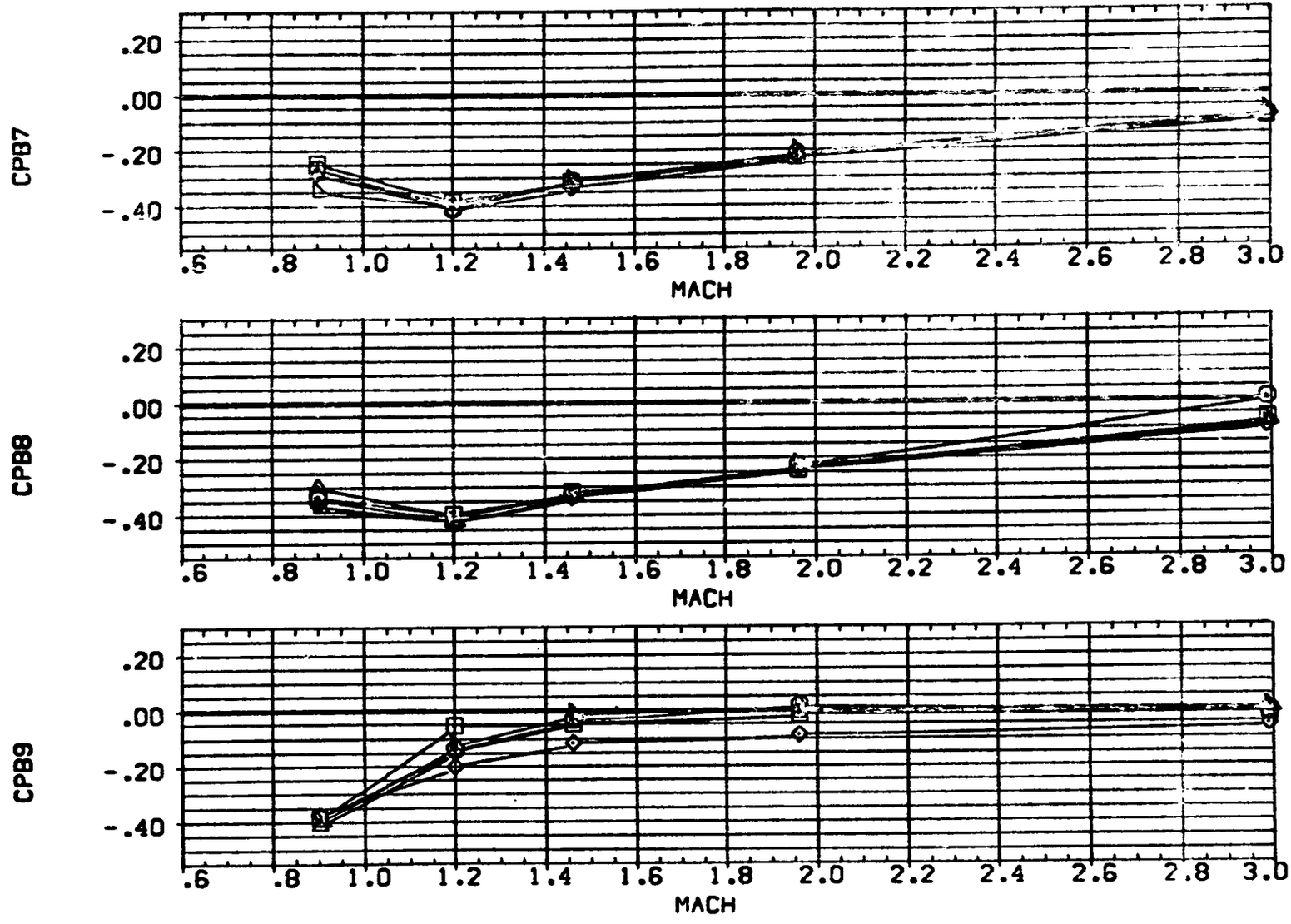
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96201]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B96202]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[B96203]	⊠	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[B96204]	△	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[B96205]	◁	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



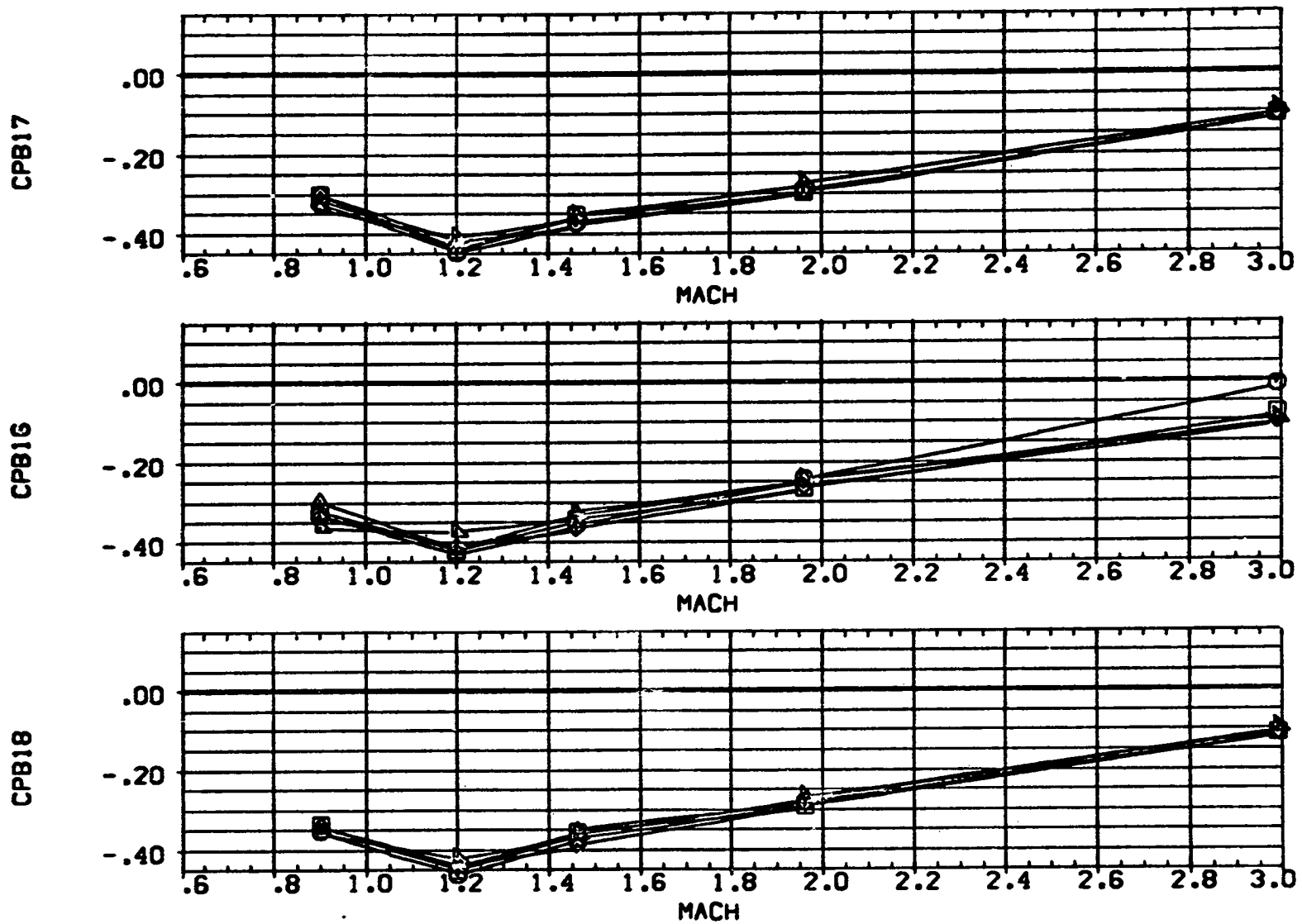
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896301]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[896302]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[896303]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[896304]	△	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[896305]	▽	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

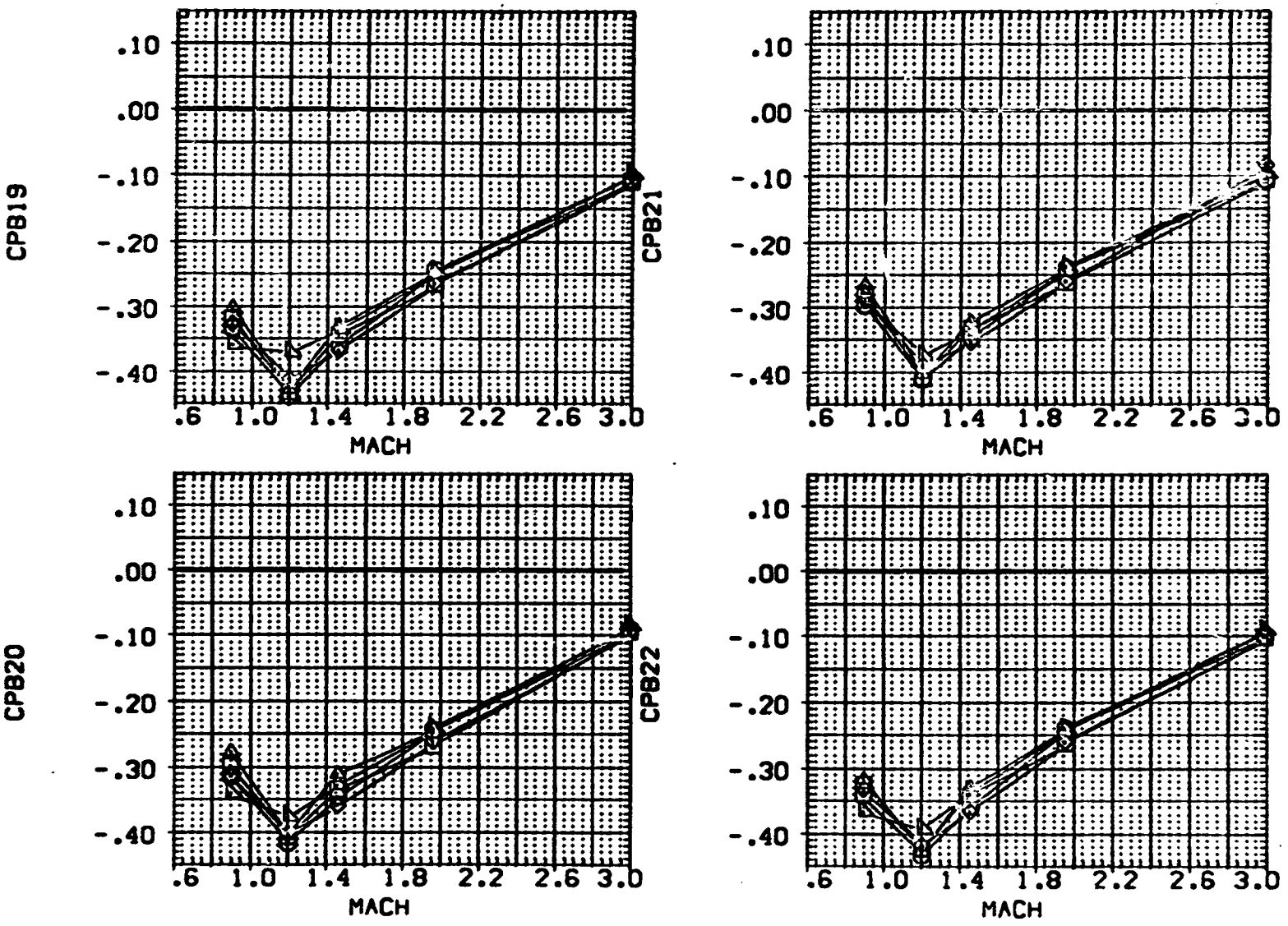


STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96301)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96302)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(B96303)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(B96304)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(B96305)	◸	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



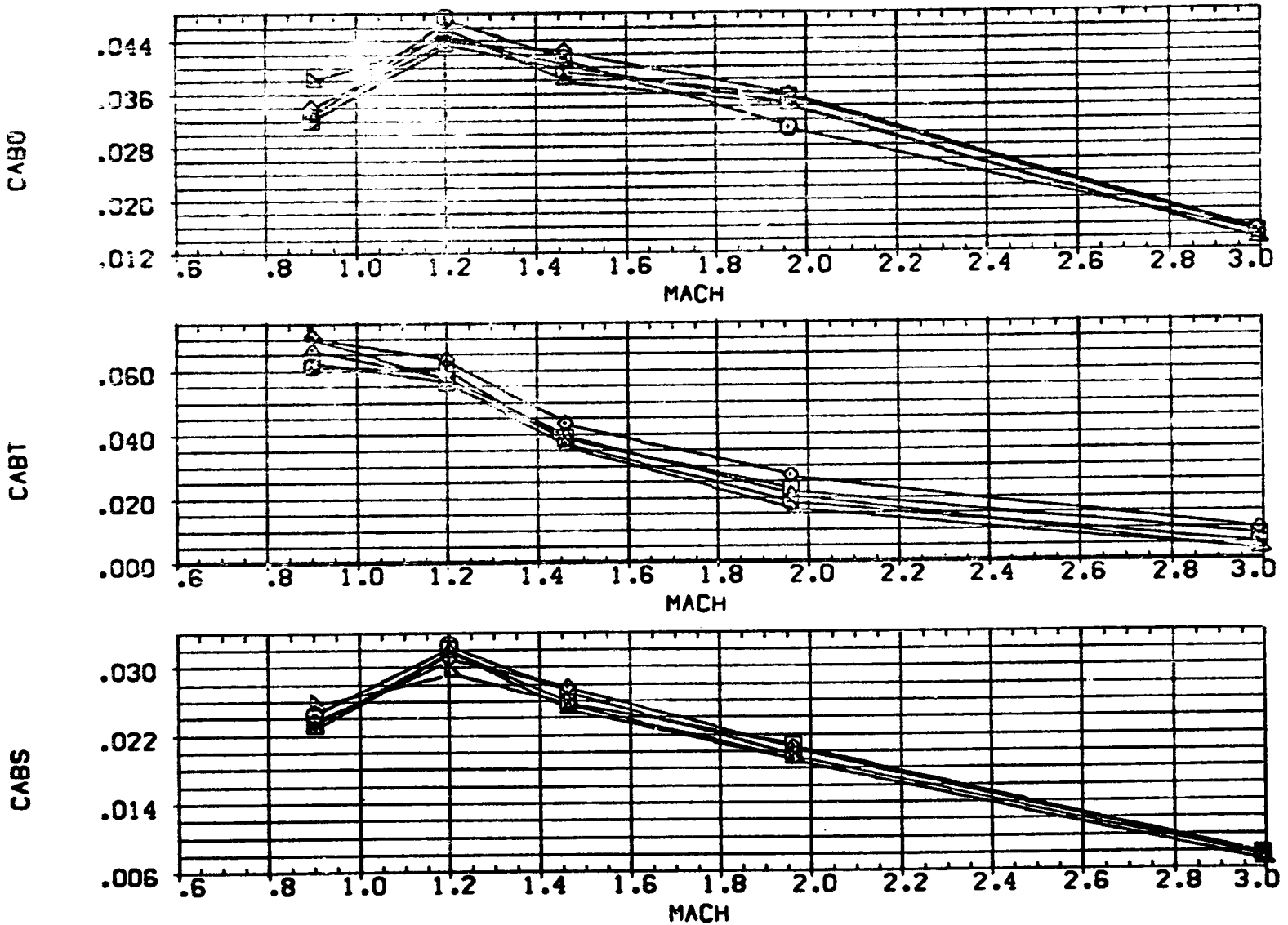
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96001)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96002)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(B95003)	⊠	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(B95004)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(B95005)	▷	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



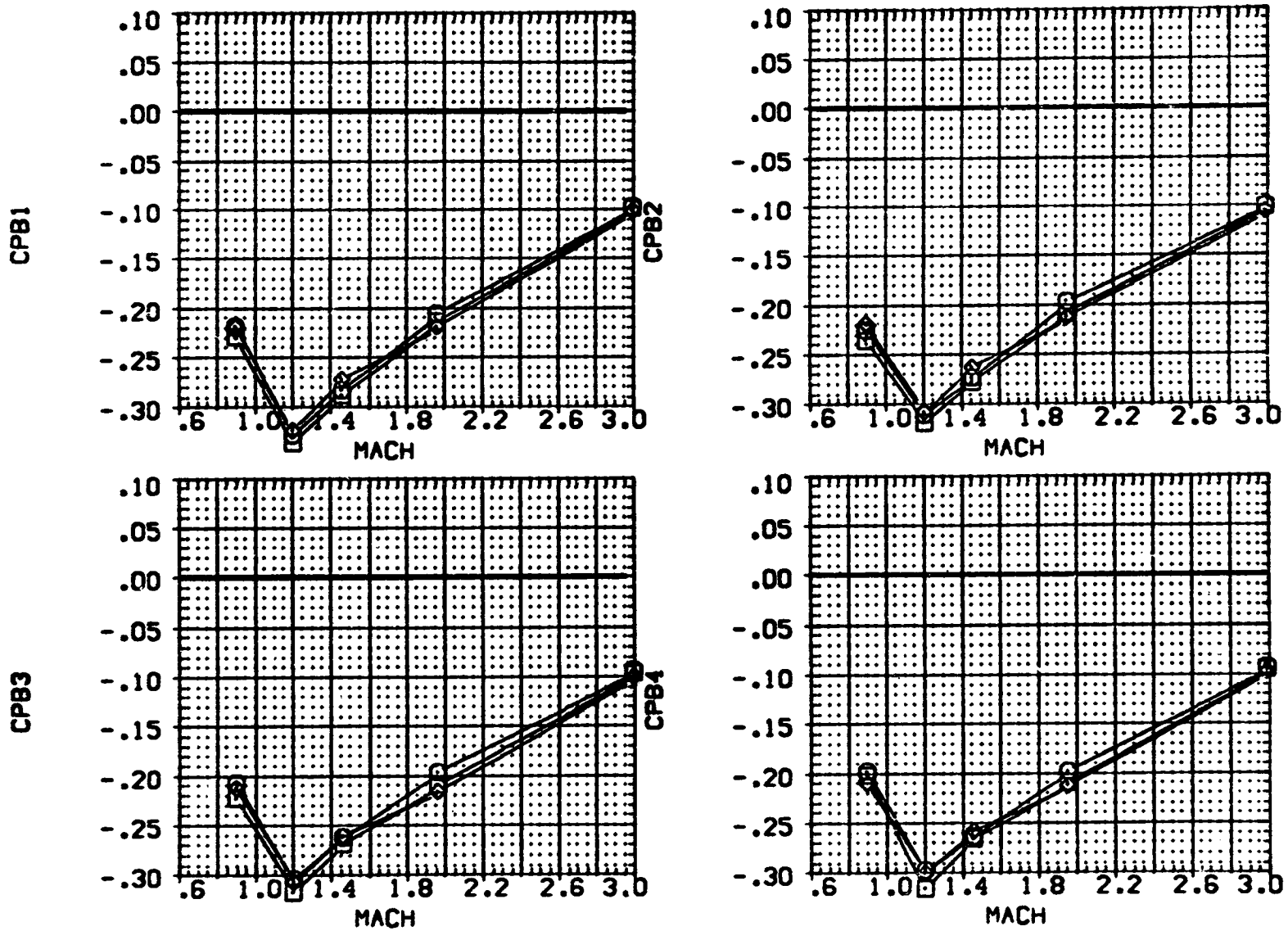
STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96001)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96006)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 B1)	.000	.000	.000
(B96007)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 B2)	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

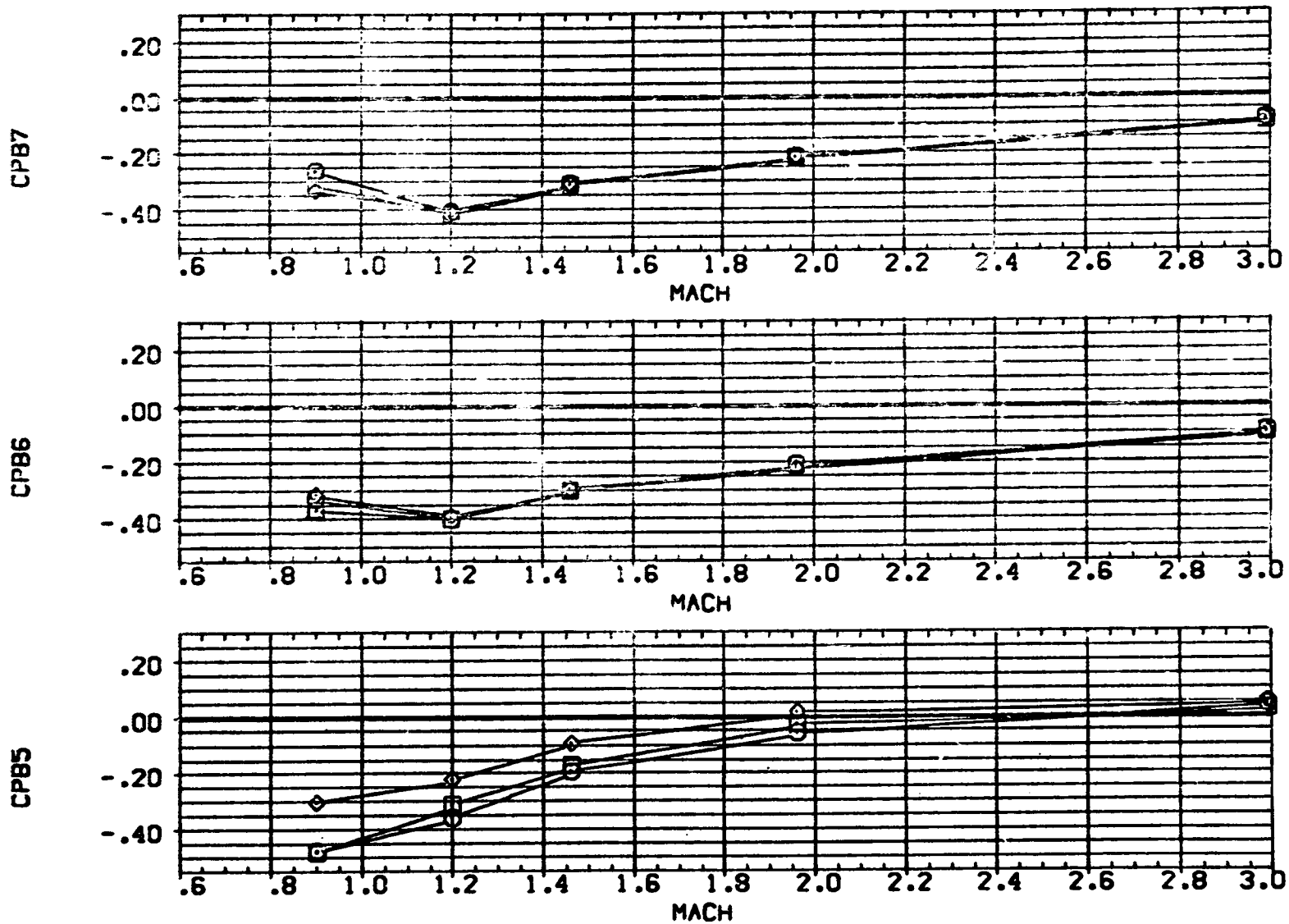


ORBITER / ET AIR SUPPLY FAIRING EFFECTS

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96101]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B96106]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[B96107]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



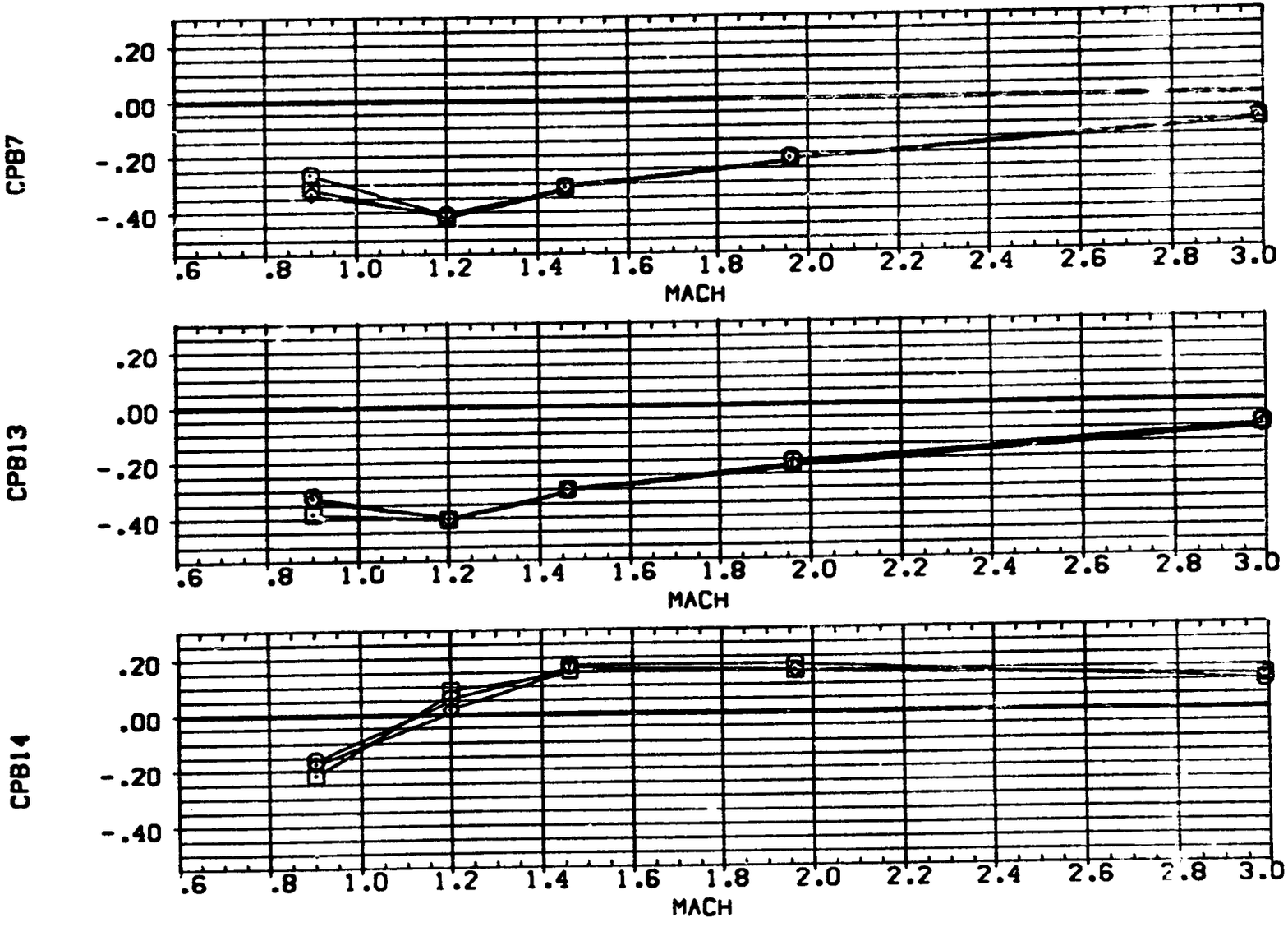
ORBITER / ET AIR SUPPLY FAIRING EFFECTS

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96101]	○	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[B96106]	□	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
[B96107]	◇	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1965	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

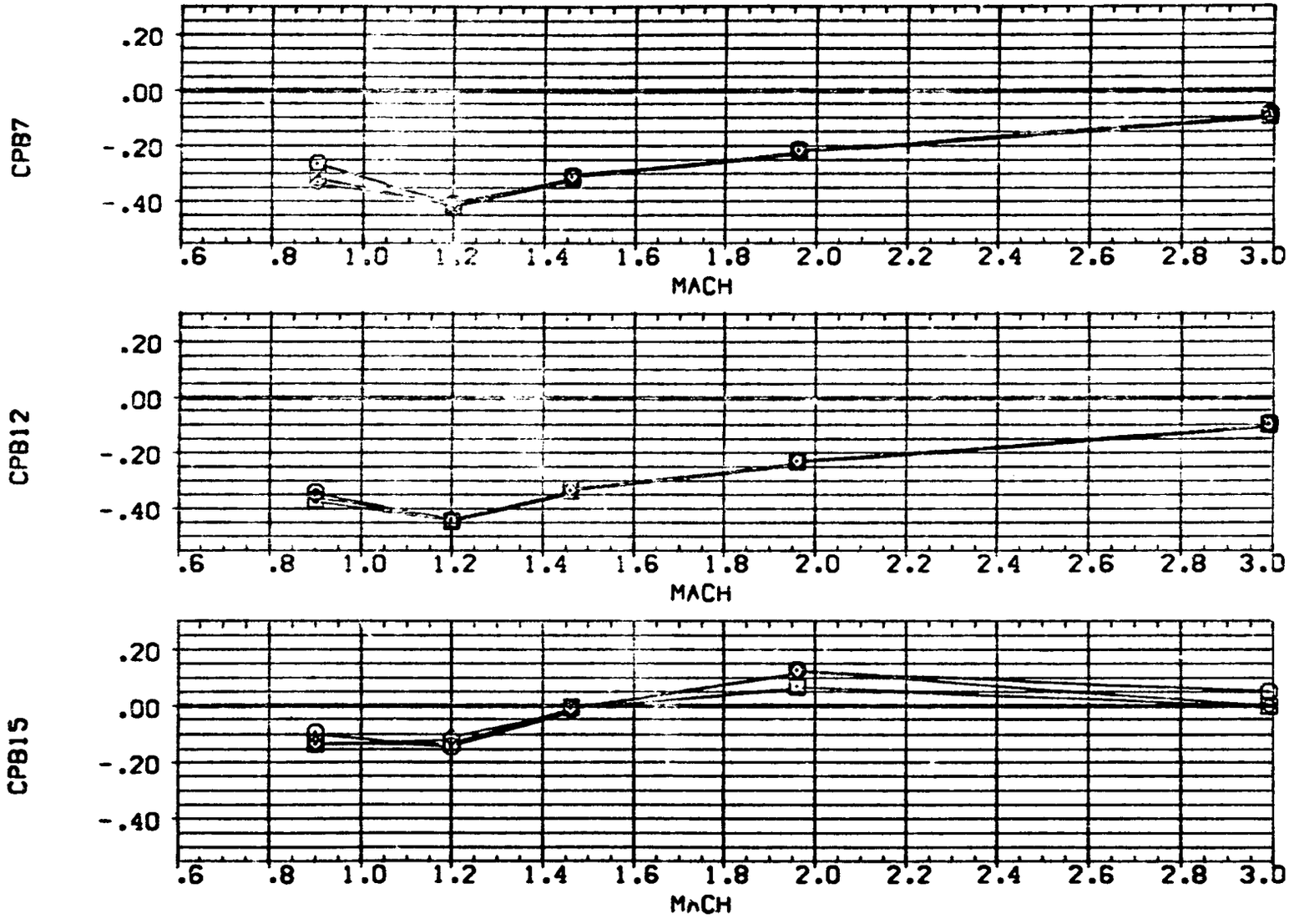


ORBITER / ET AIR SUPPLY FAIRING EFFECTS

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[886101]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[886106]	△	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[886107]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



ORBITER / ET AIR SUPPLY FAIRING EFFECTS

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896201]	○	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[896206]	□	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
[896207]	◇	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
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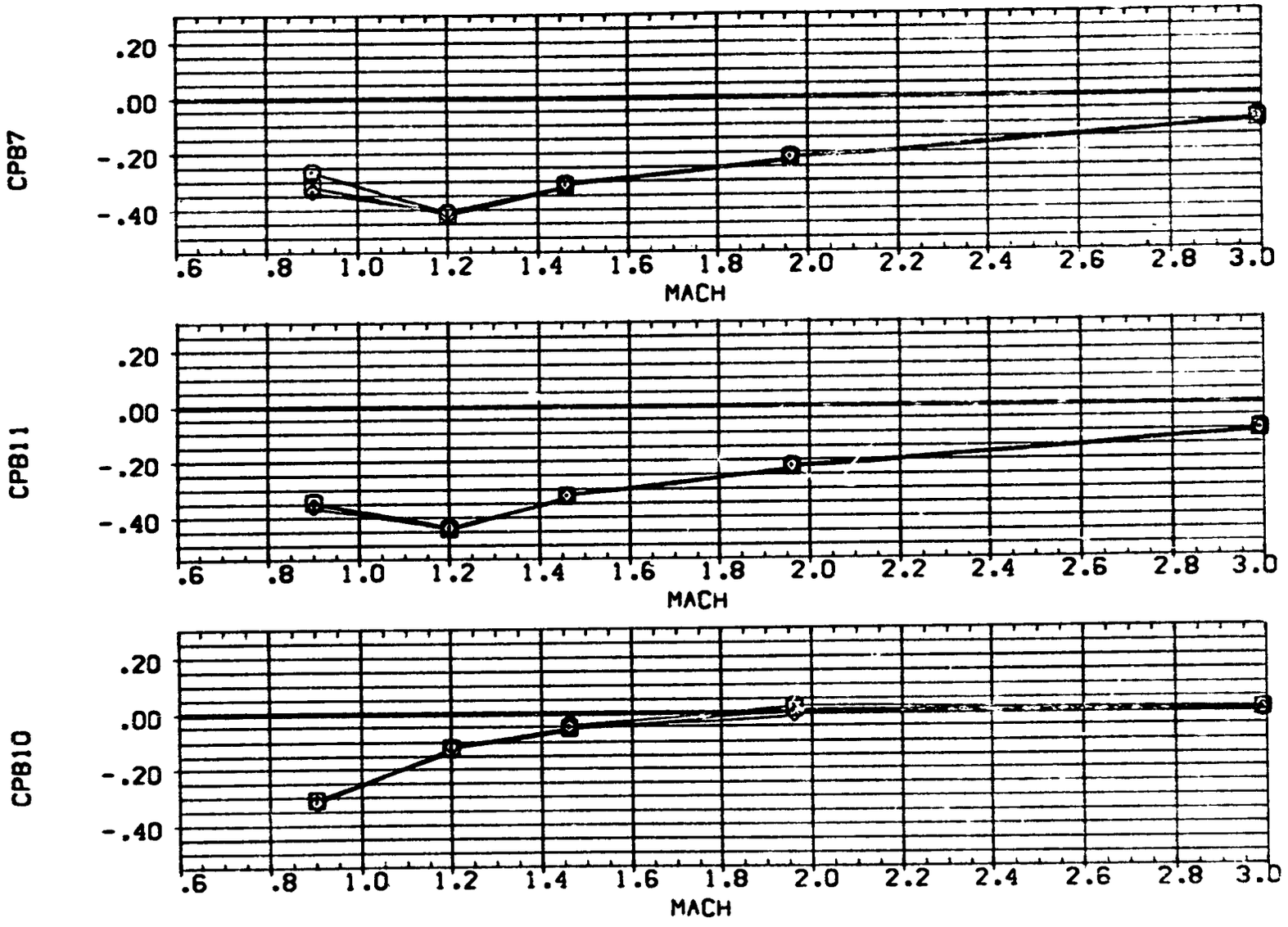


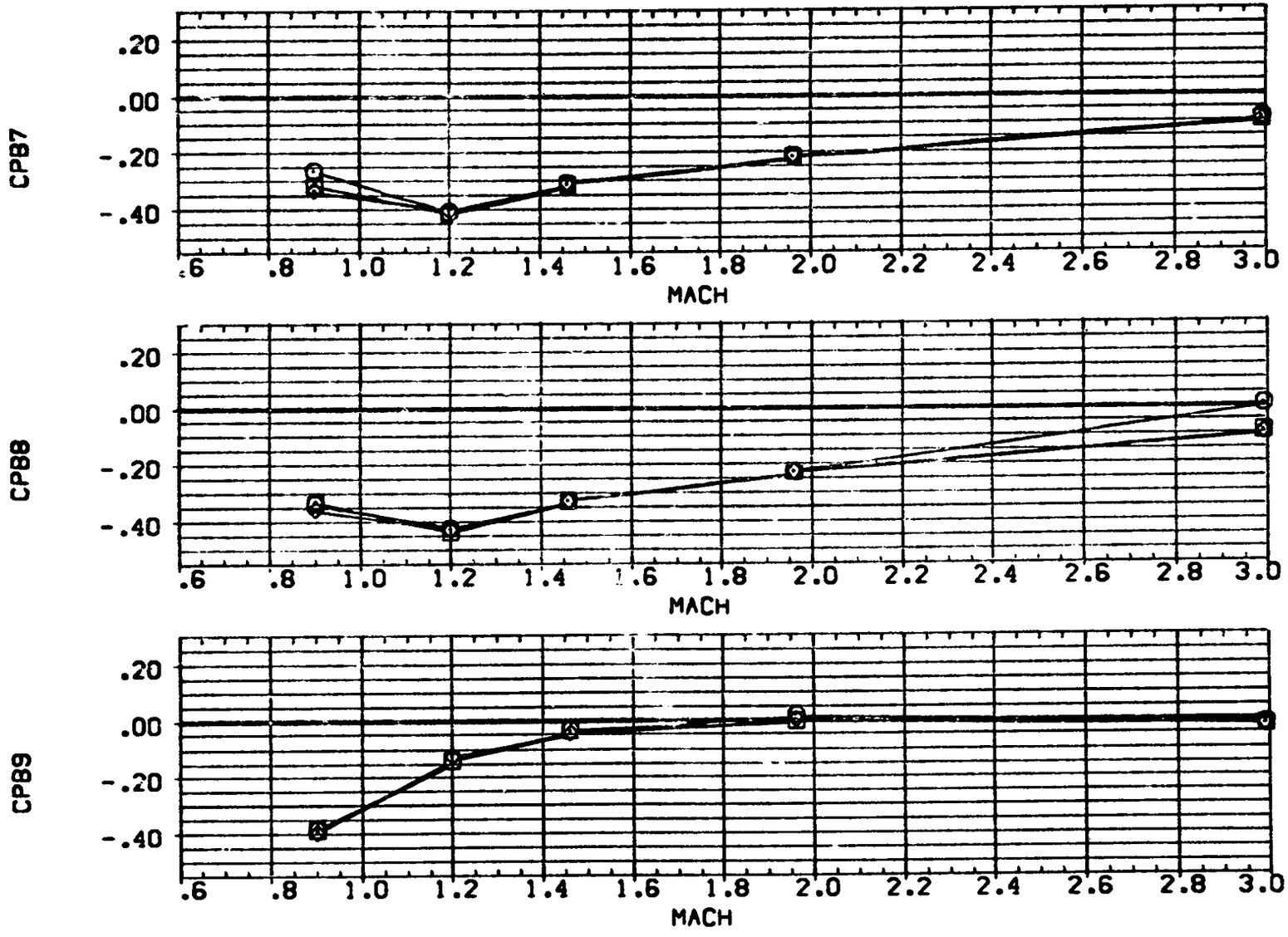
ORBITER / ET AIR SUPPLY FAIRING EFFECTS

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96201)	○	MSFC 588(!A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96206)	◇	MSFC 588(!A53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(B96207)	▽	MSFC 588(!A53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



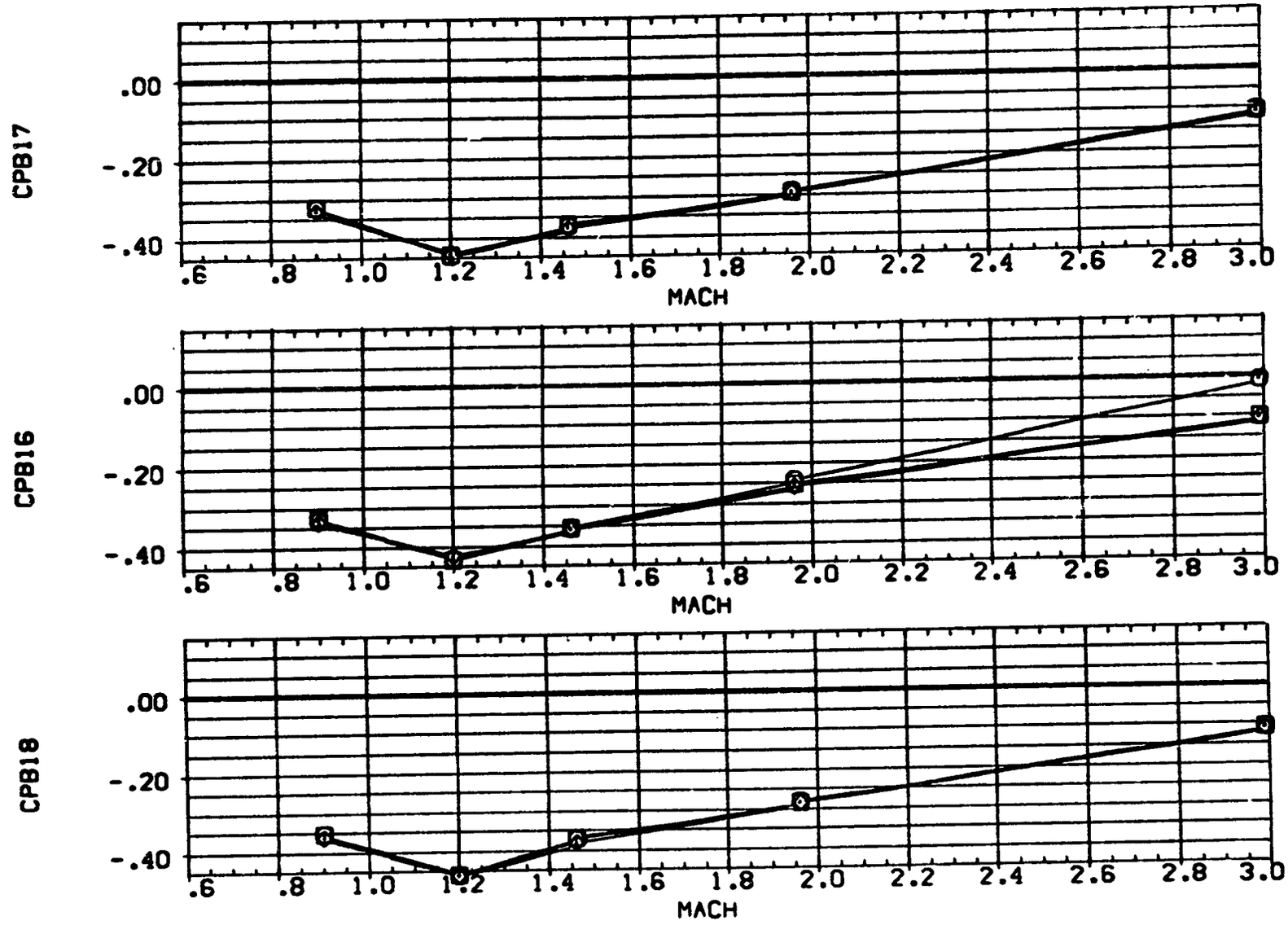
ORBITER / ET AIR SUPPLY FAIRING EFFECTS

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B86301]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B86306]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[B86307]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



ORBITER / ET AIR SUPPLY FAIRING EFFECTS

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(B96301)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)
(B96306)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)
(B96307)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)

ALPHA	BETA	PHI
.000	.000	.000
.000	.000	.000
.000	.000	.000

REFERENCE INFORMATION

SREF	6.1580	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
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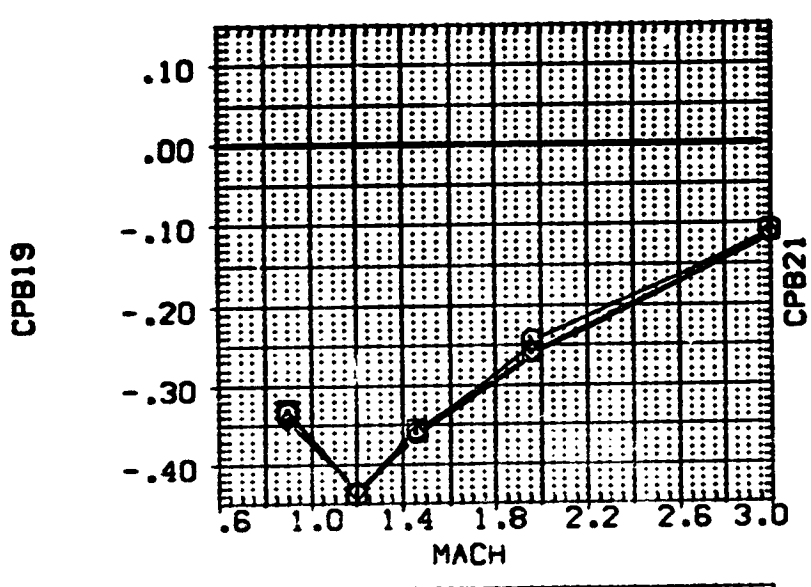
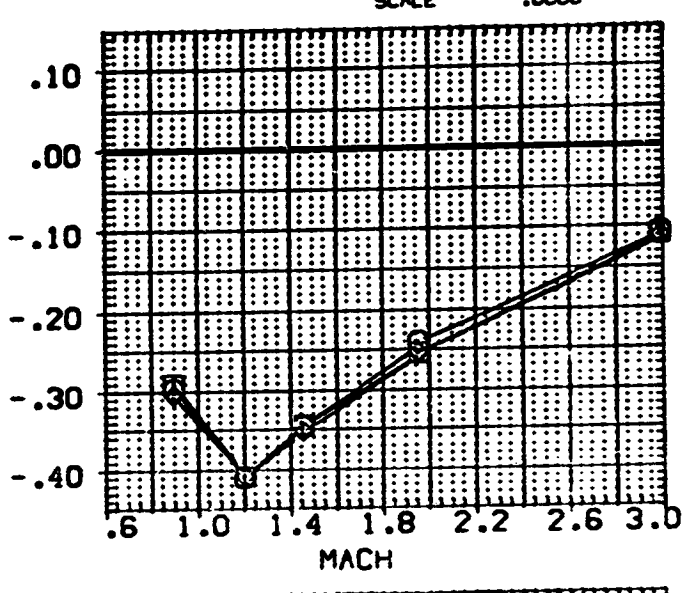
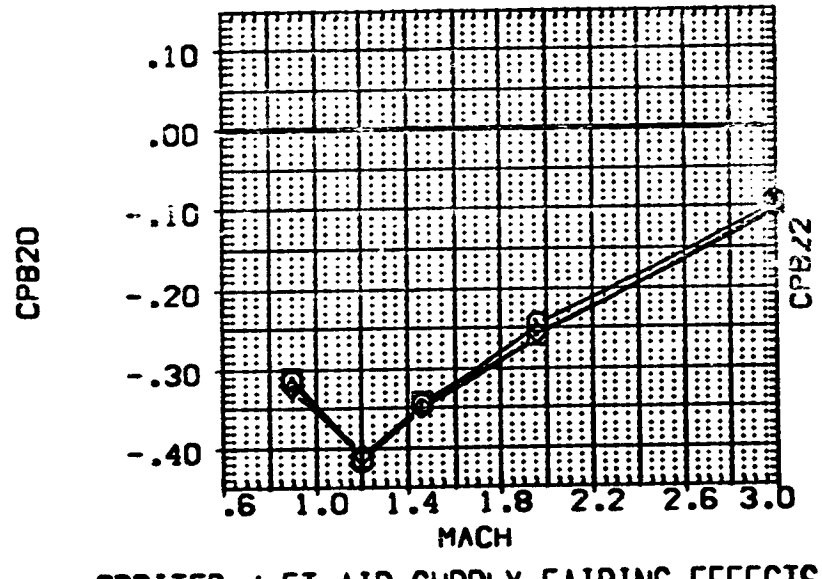
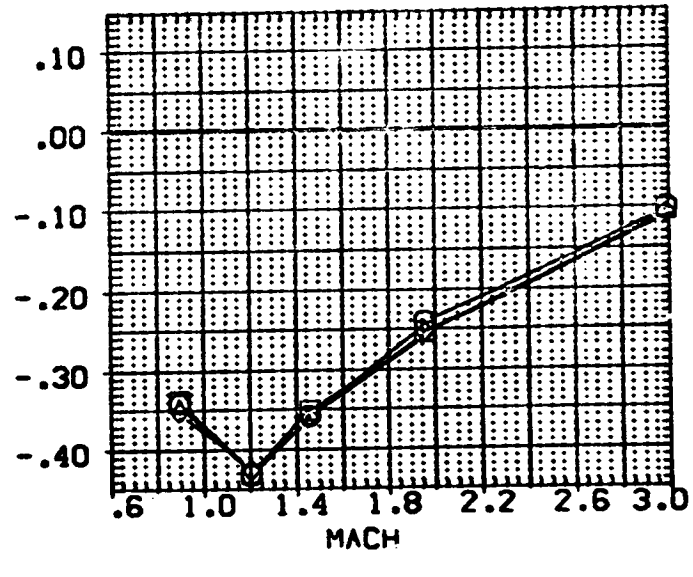
SCALE	.0000	









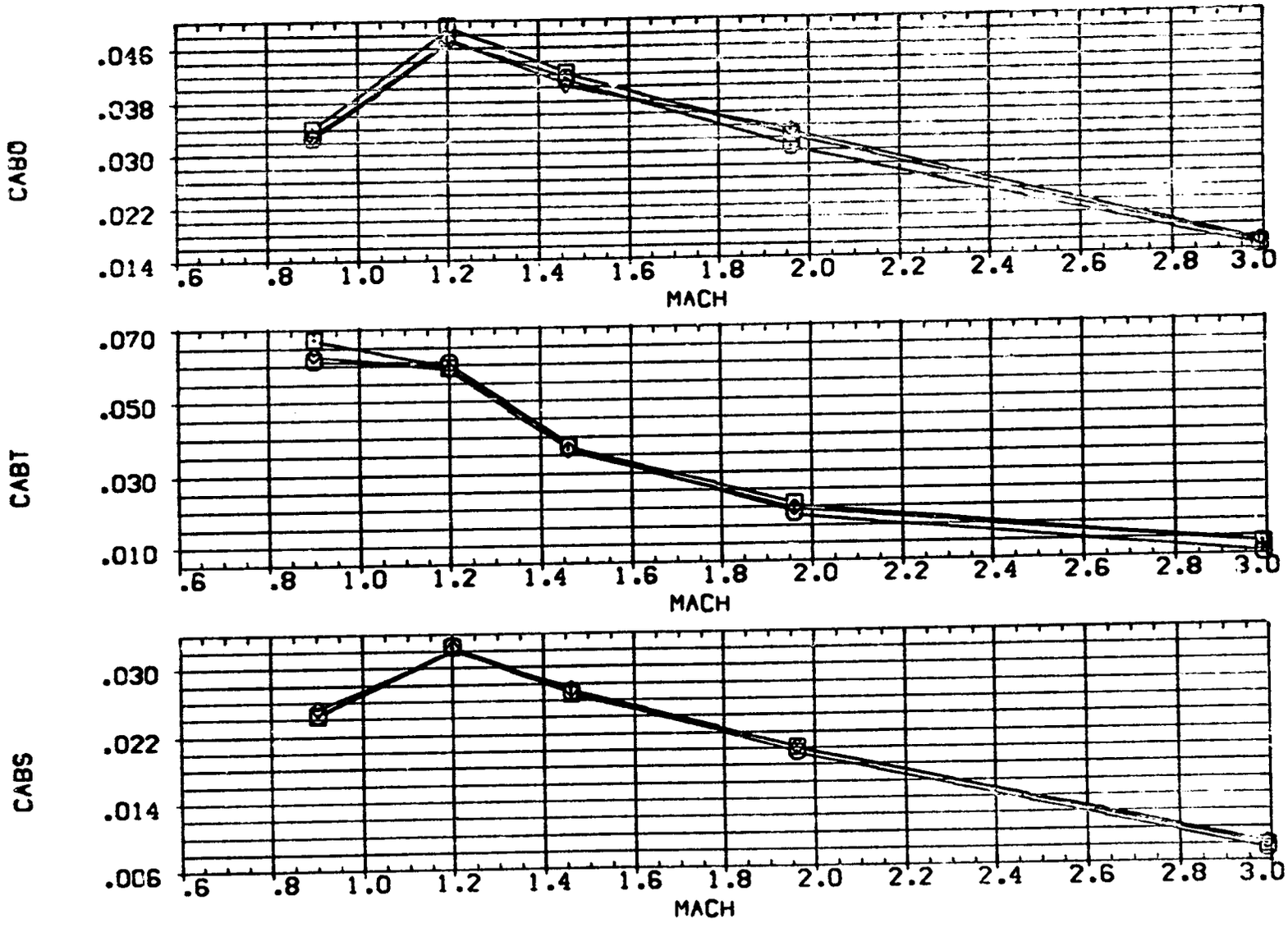
ORBITER / ET AIR SUPPLY FAIRING EFFECTS

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96001]	○	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/I]	.000	.000	.000
[B96006]	□	MSFC 588[IA53] GAS SUPPLY STRUT [CIF/I G1]	.000	.000	.000
[B96007]	◇	MSFC 598[IA53] GAS SUPPLY STRUT [CIF/I G2]	.000	.000	.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

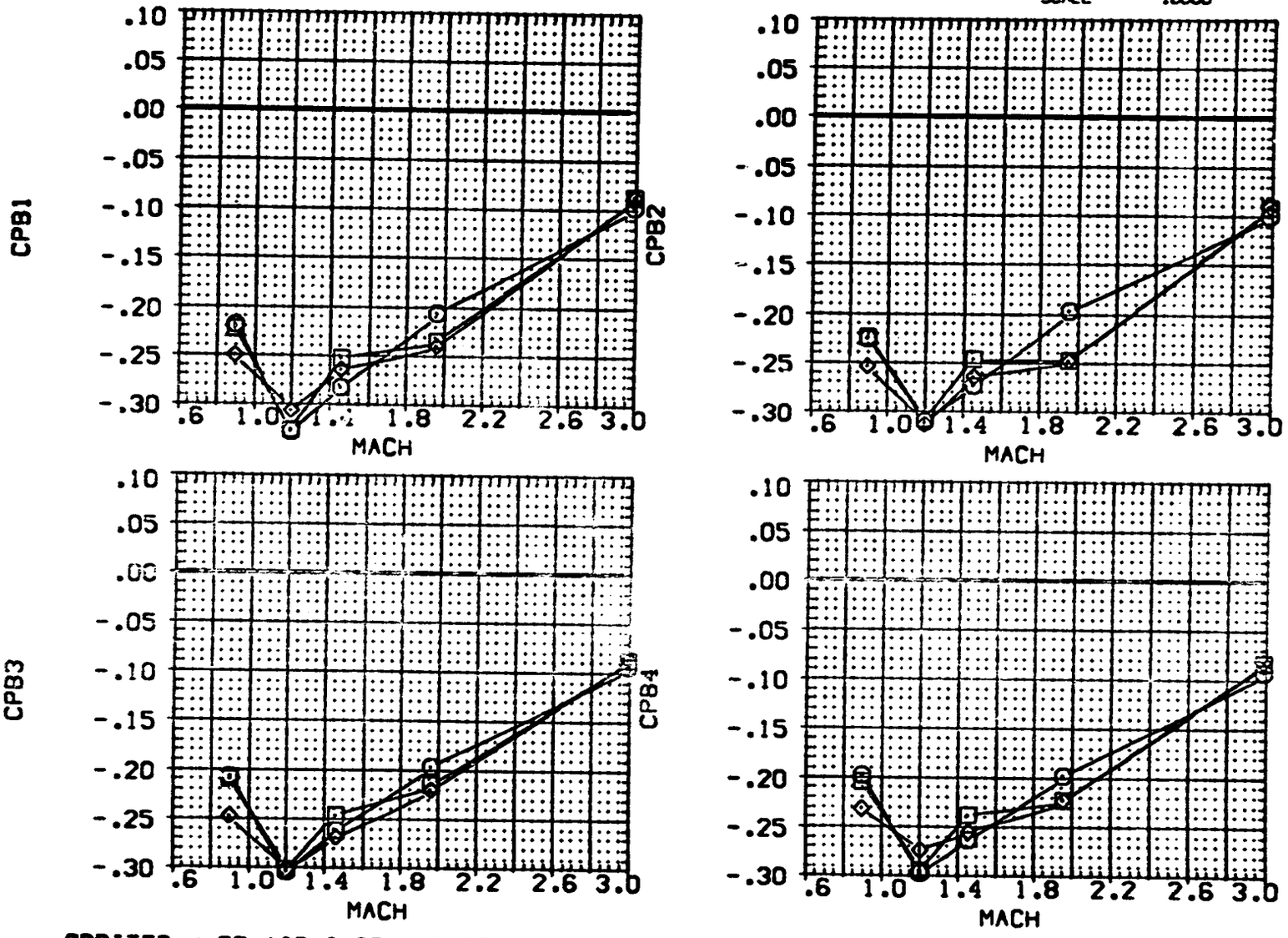


ORBITER / ET AIR SUPPLY FAIRING EFFECTS

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96001]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B96008]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[B96009]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.4980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



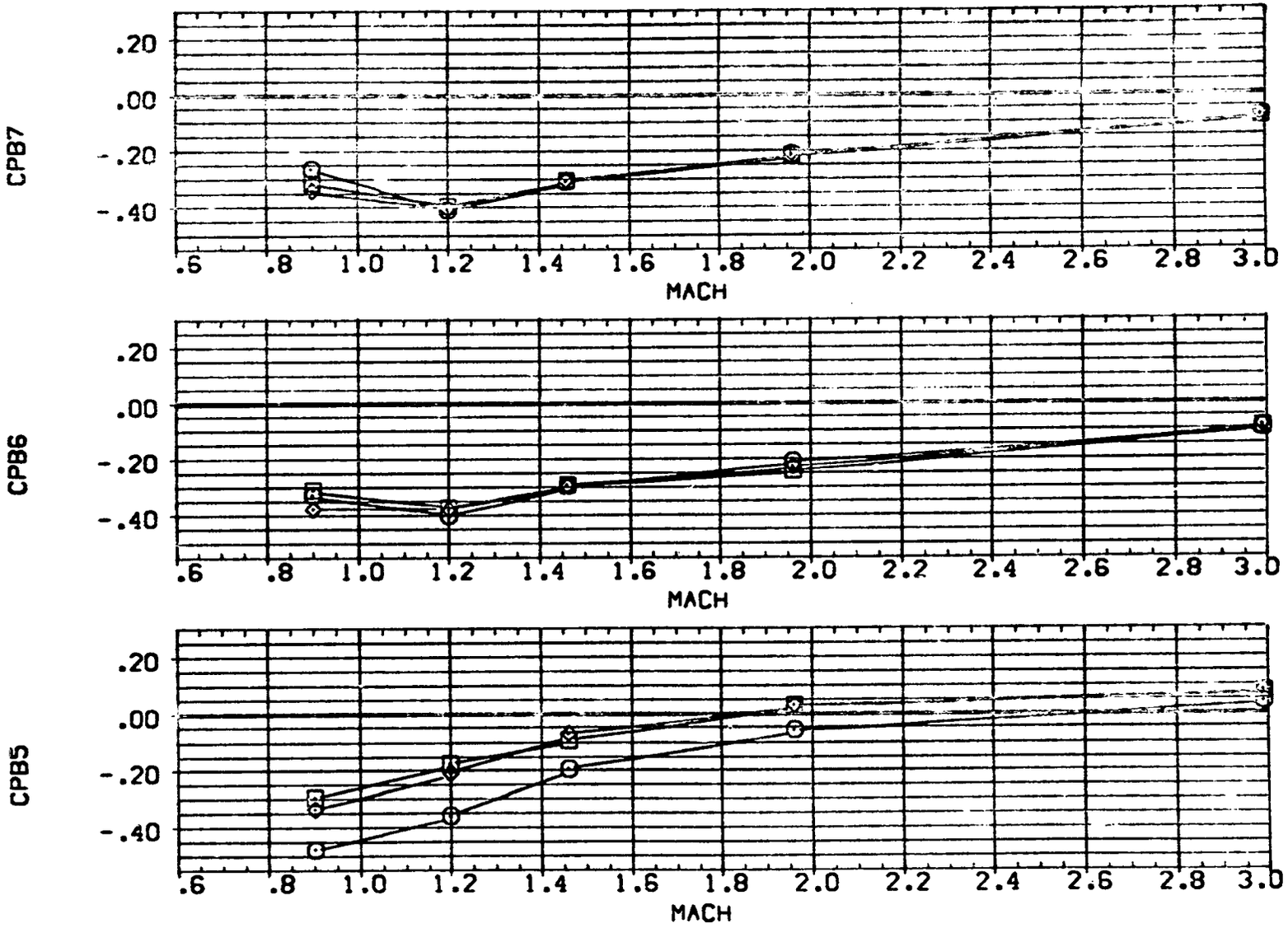
ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B961C1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B96108]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[B96109]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



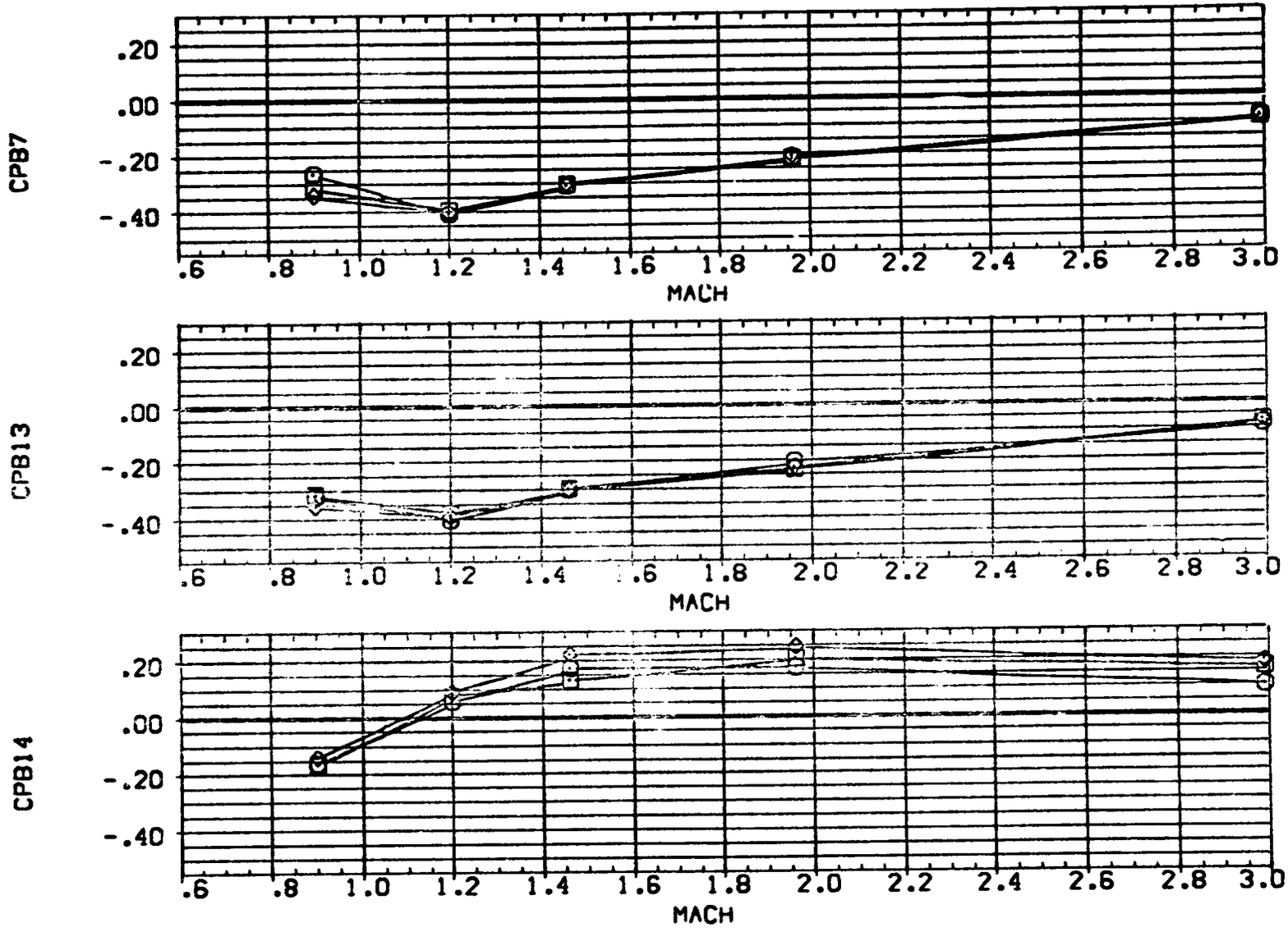
ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96101)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96108)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(B96109)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

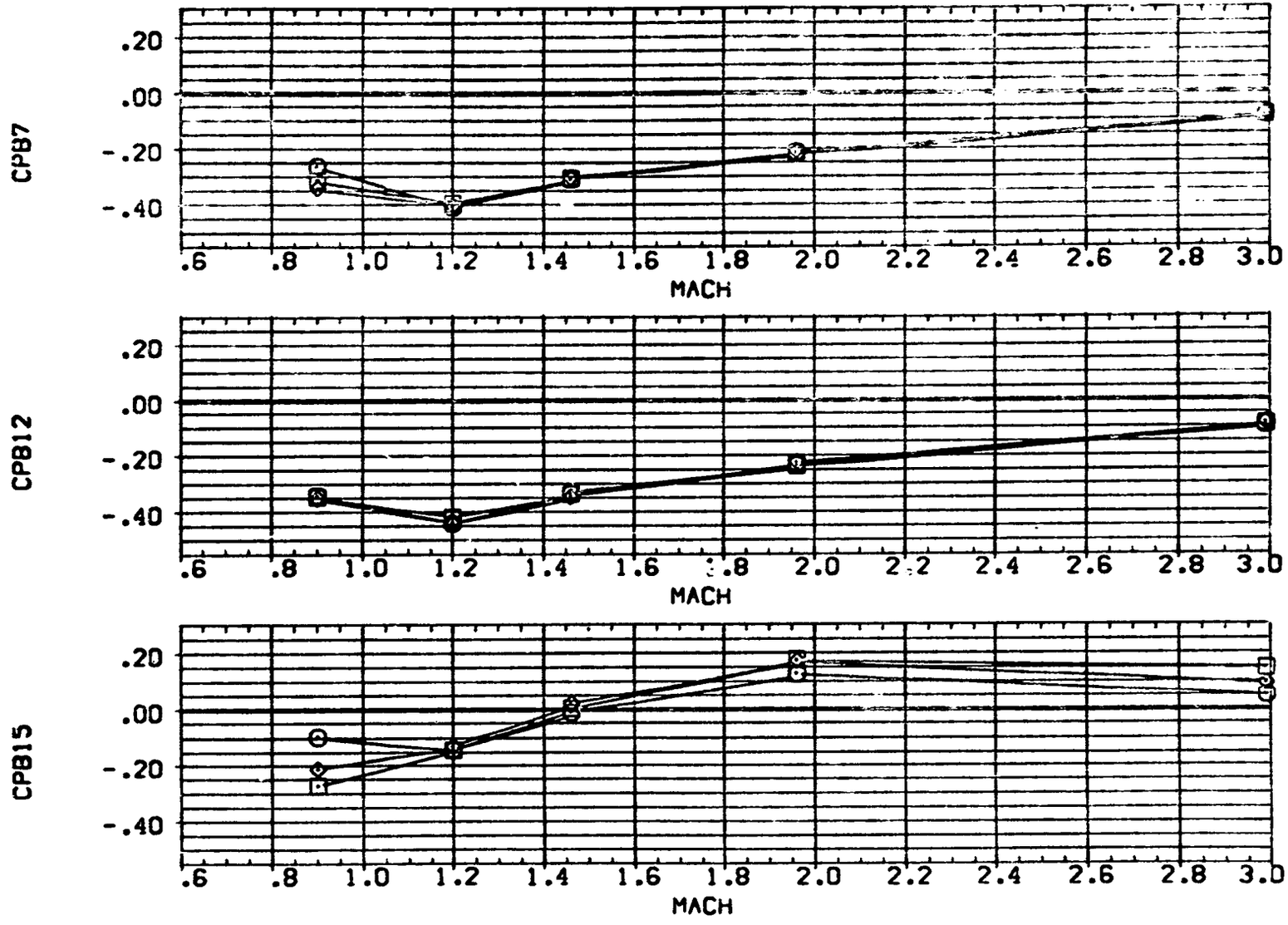


ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(B96101)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(B96108)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(B96109)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

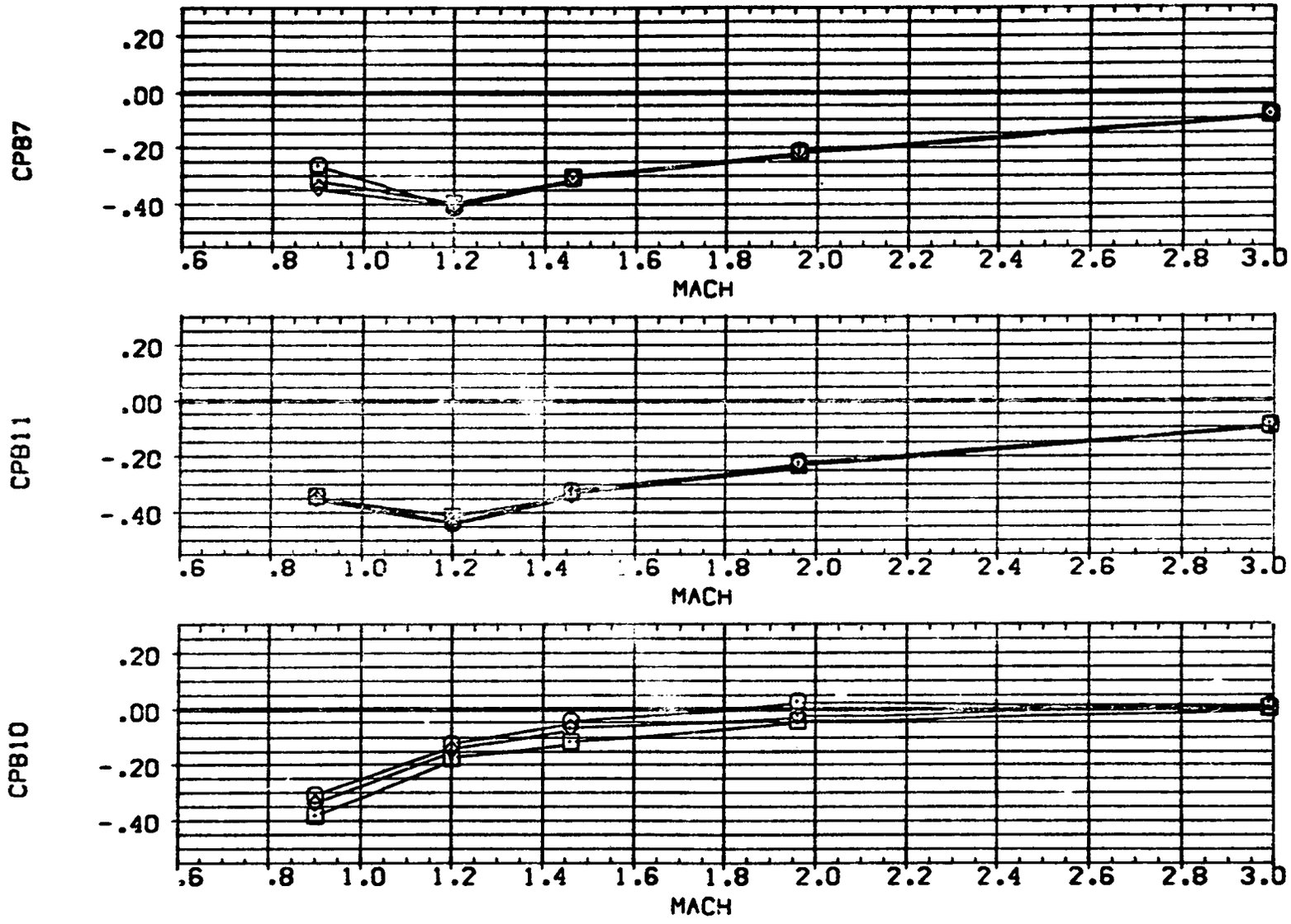


ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896201]	□	MSFC SRB[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[896208]	⊡	MSFC SRB[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[896209]	◇	MSFC SRB[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

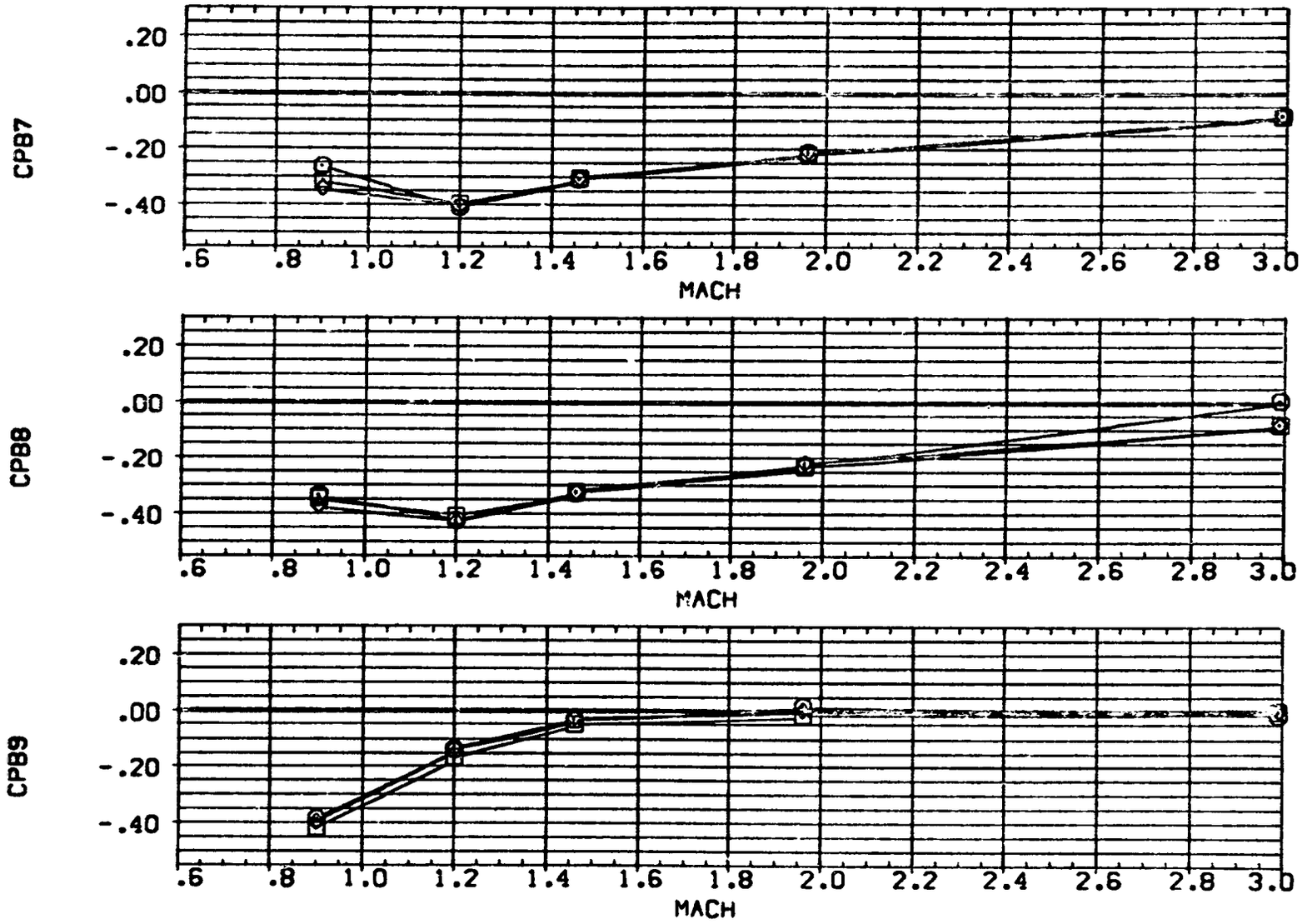


ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

[A]ALPHA = -.00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896201]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[896208]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[896209]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	

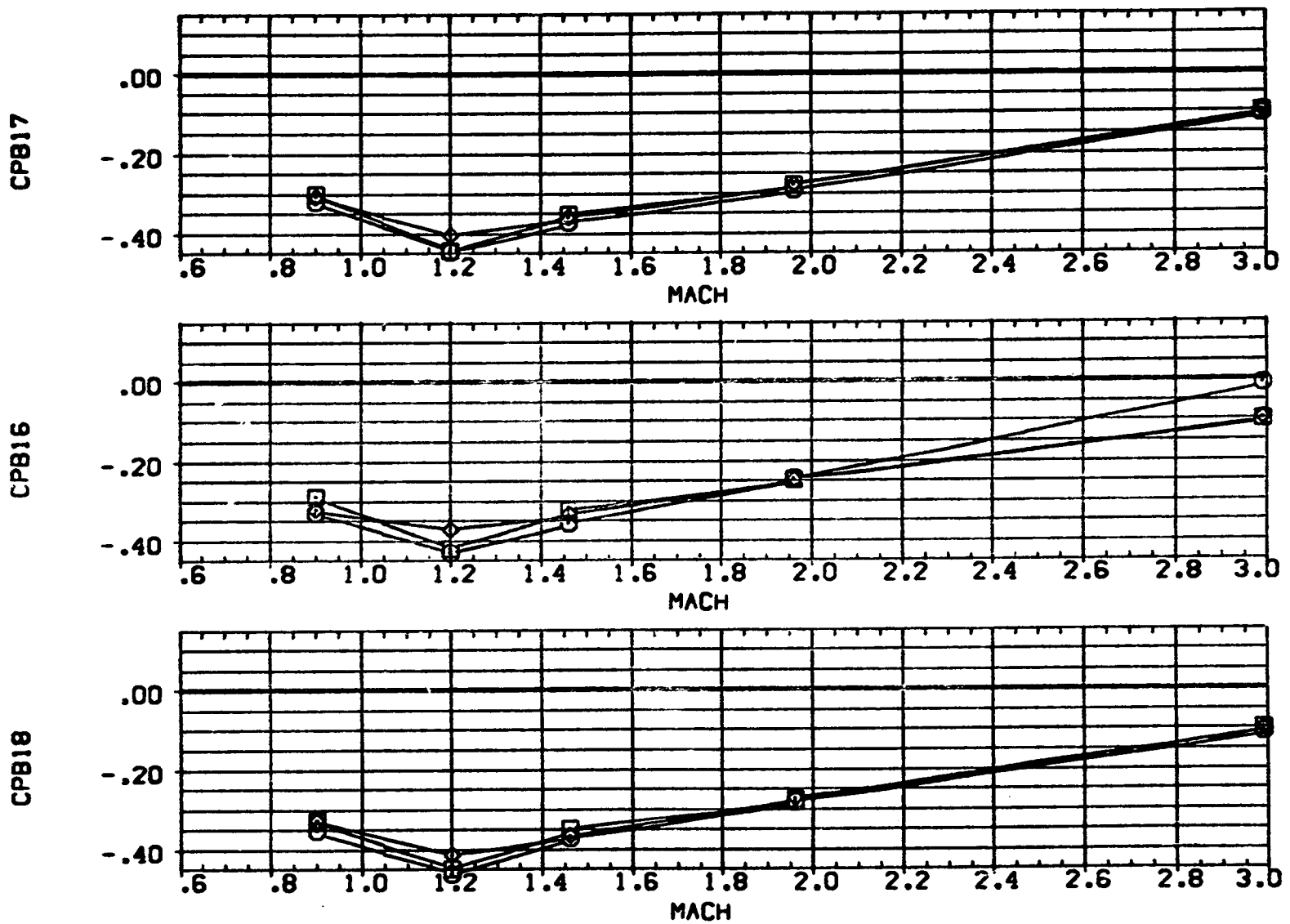


ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

[A]ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(896301)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(896308)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(896309)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION		
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



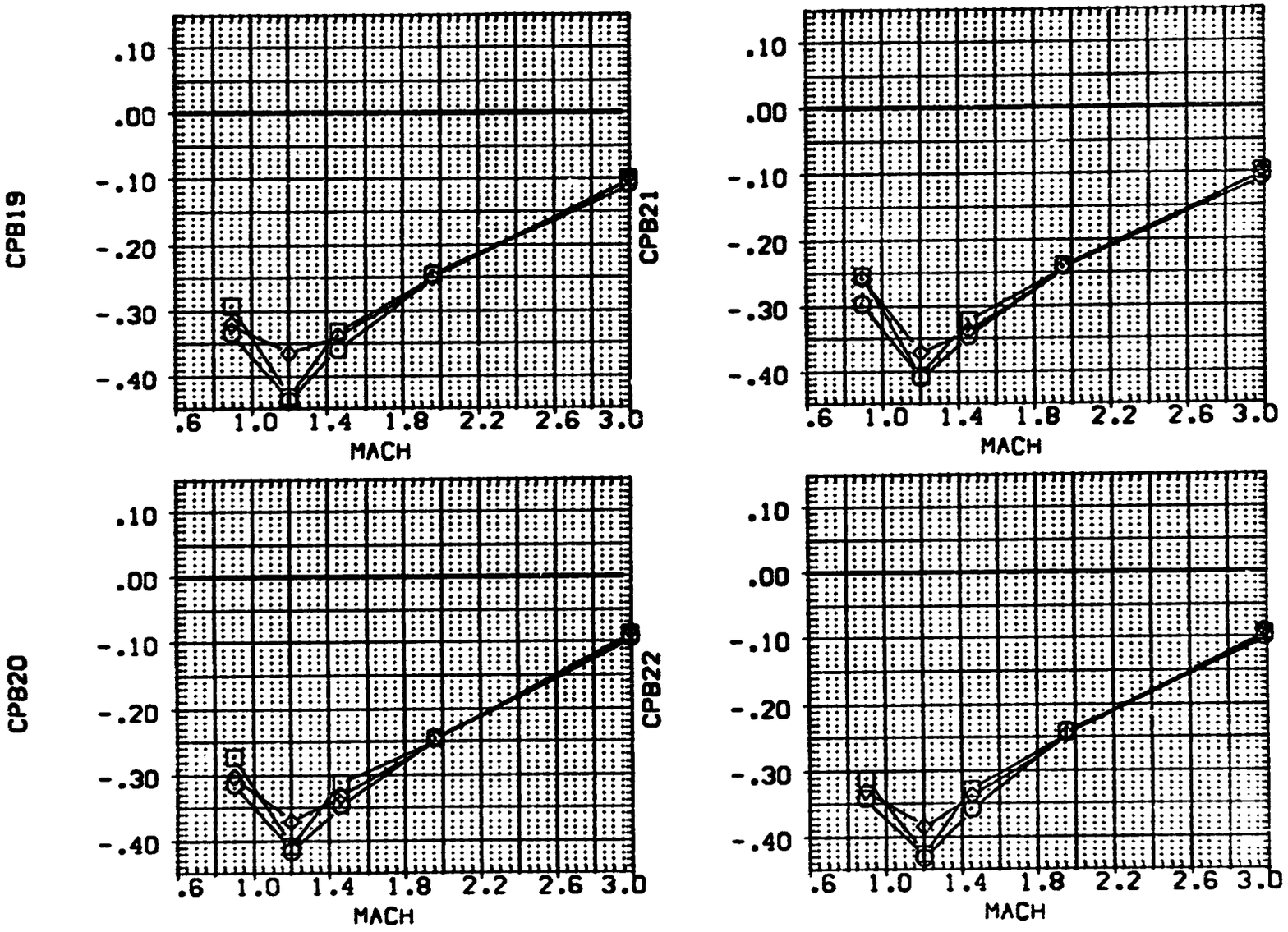
ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[B96301]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[B96308]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[B96309]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000

REFERENCE INFORMATION

SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



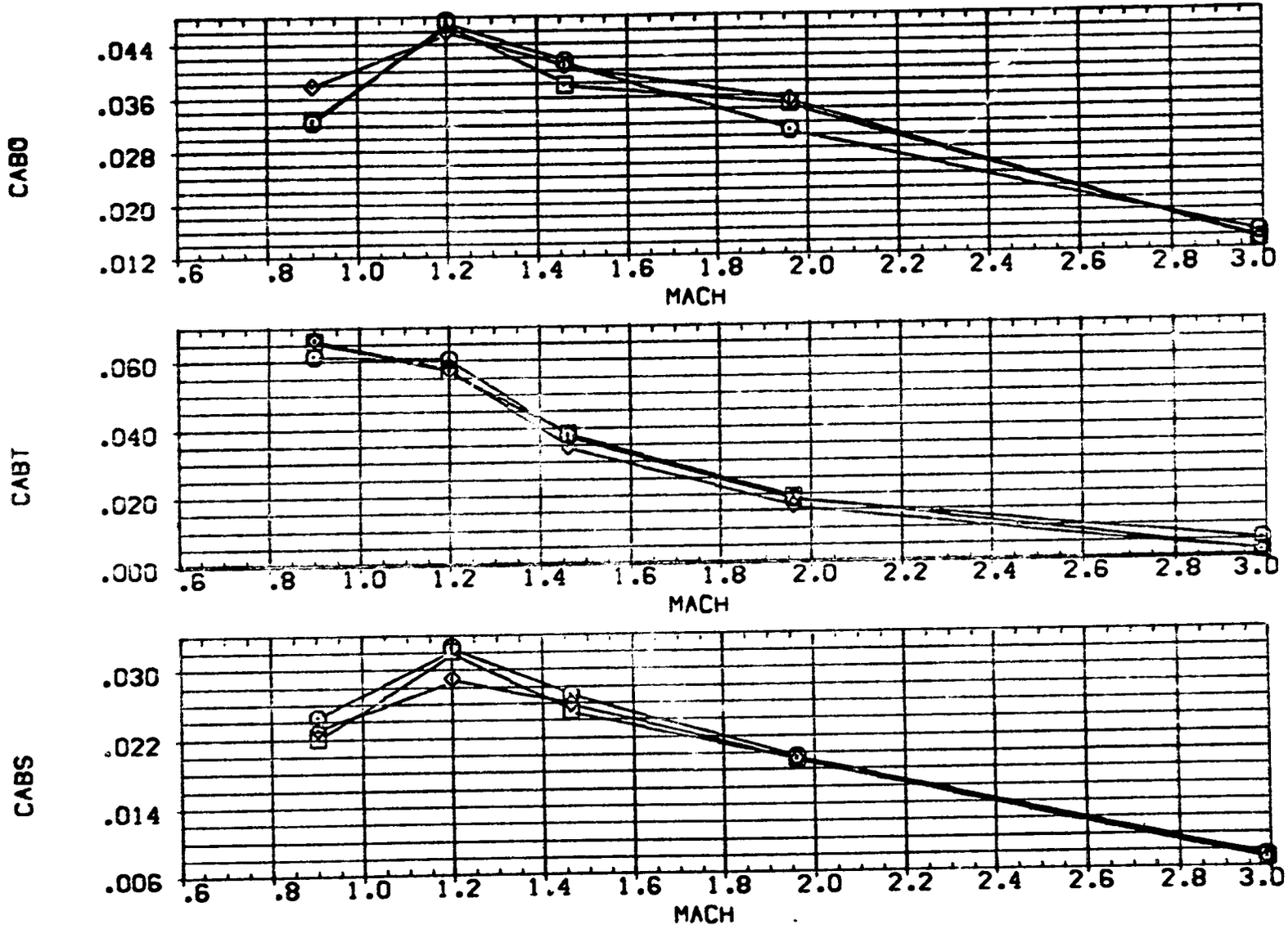
ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[896001]	□	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[896008]	□	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
[896009]	◇	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000

REFERENCE INFORMATION

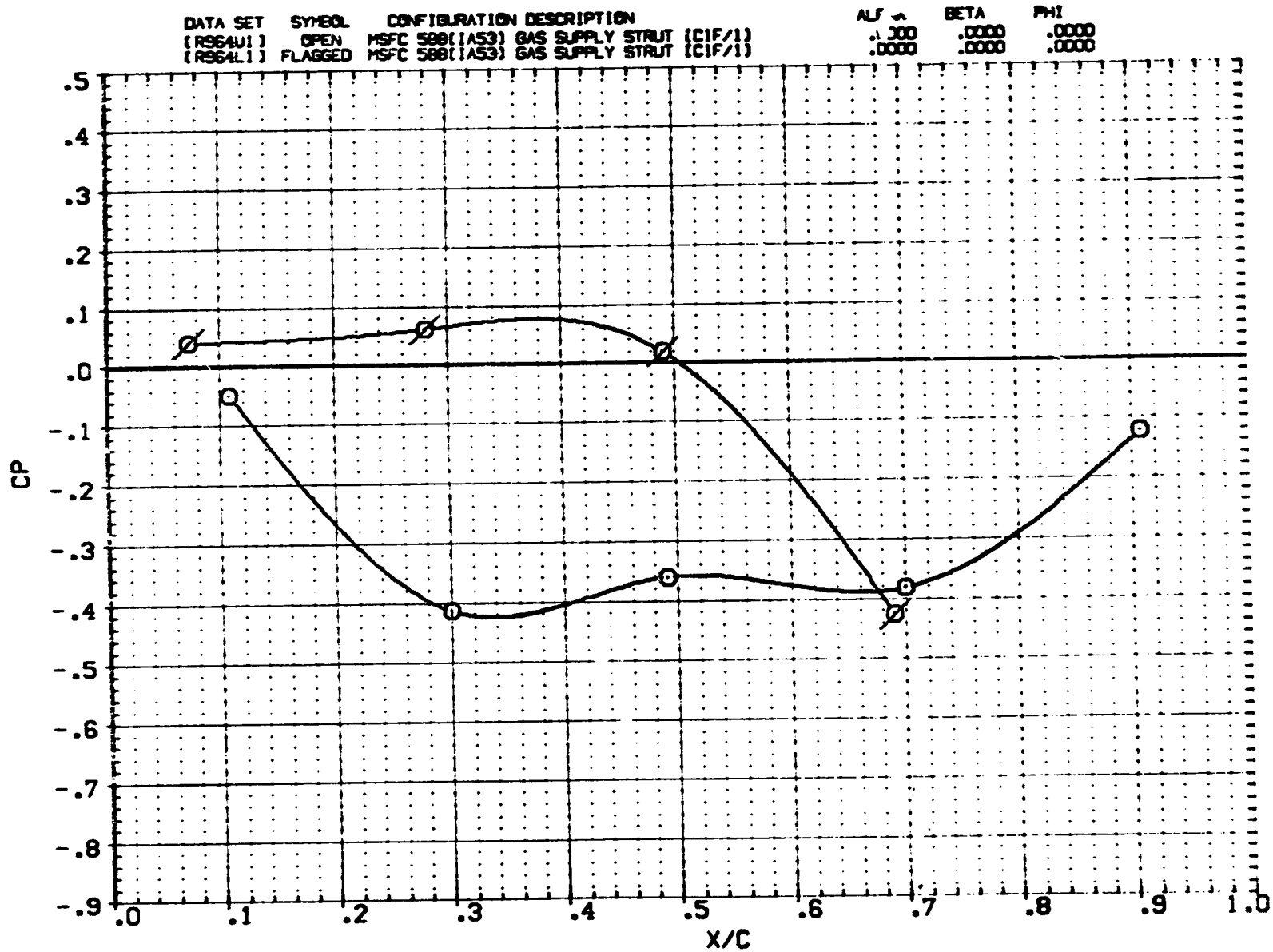
SREF	6.1980	SQ. IN
LREF	5.3130	IN.
BREF	5.3130	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0000	



ORBITER / ET AIR SUPPLY FAIRING EFFECTS WITH SRB SIDE MOUNT

(A)ALPHA = .00

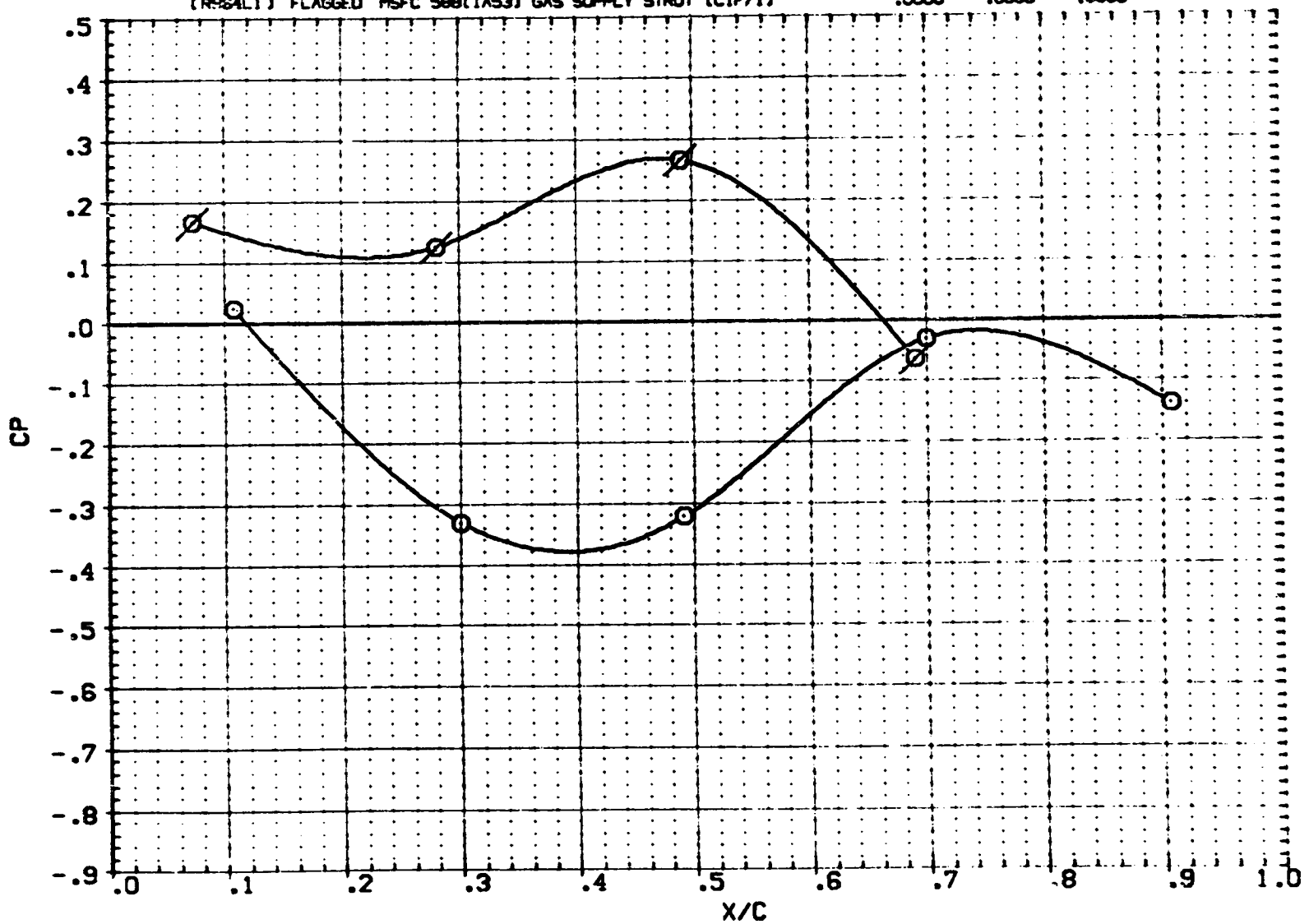
SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	.905



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.197

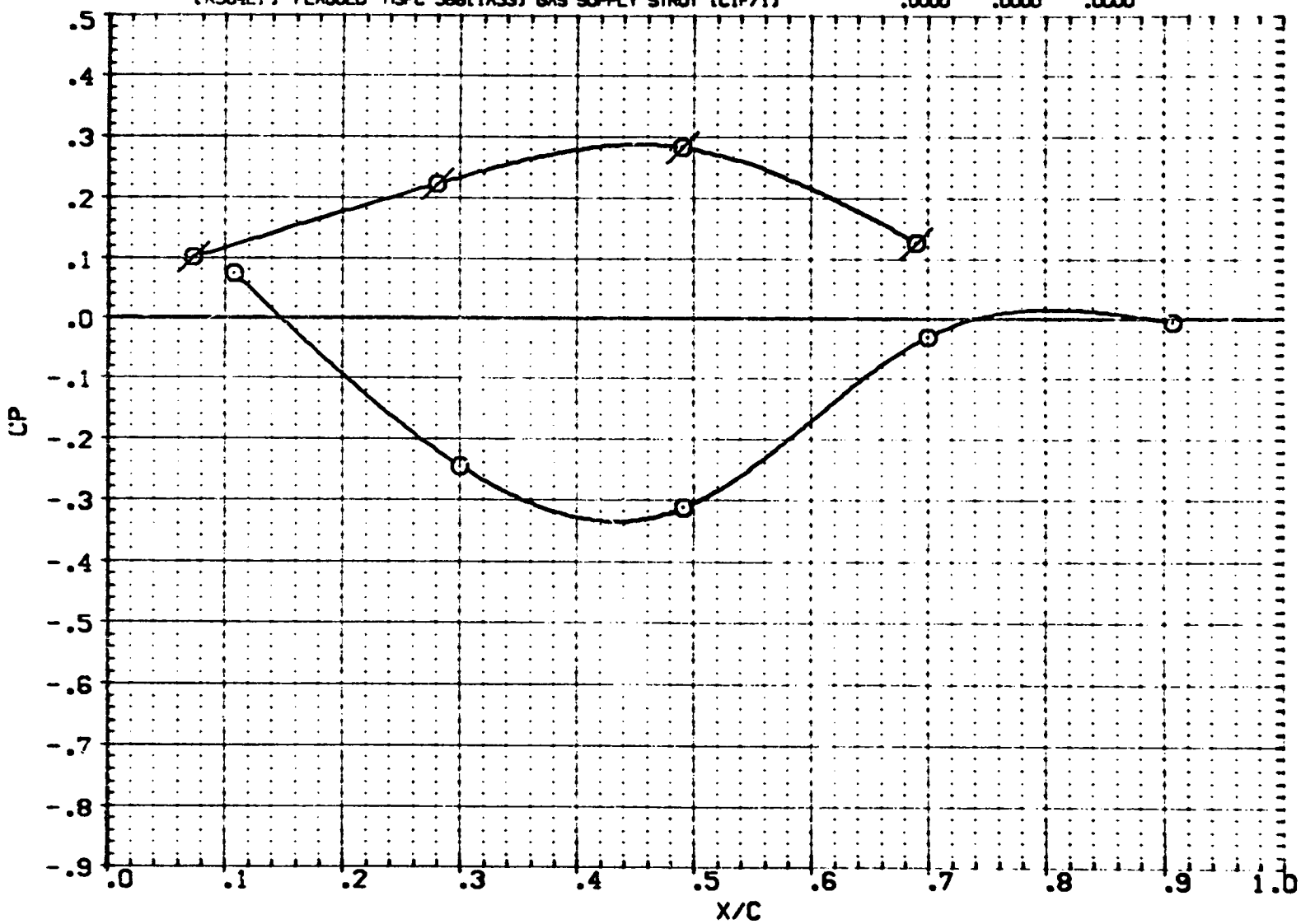
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
(R964L1)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.456

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	OPEN	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
(R964L1)	FLAGGED	MSFC 588[(A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

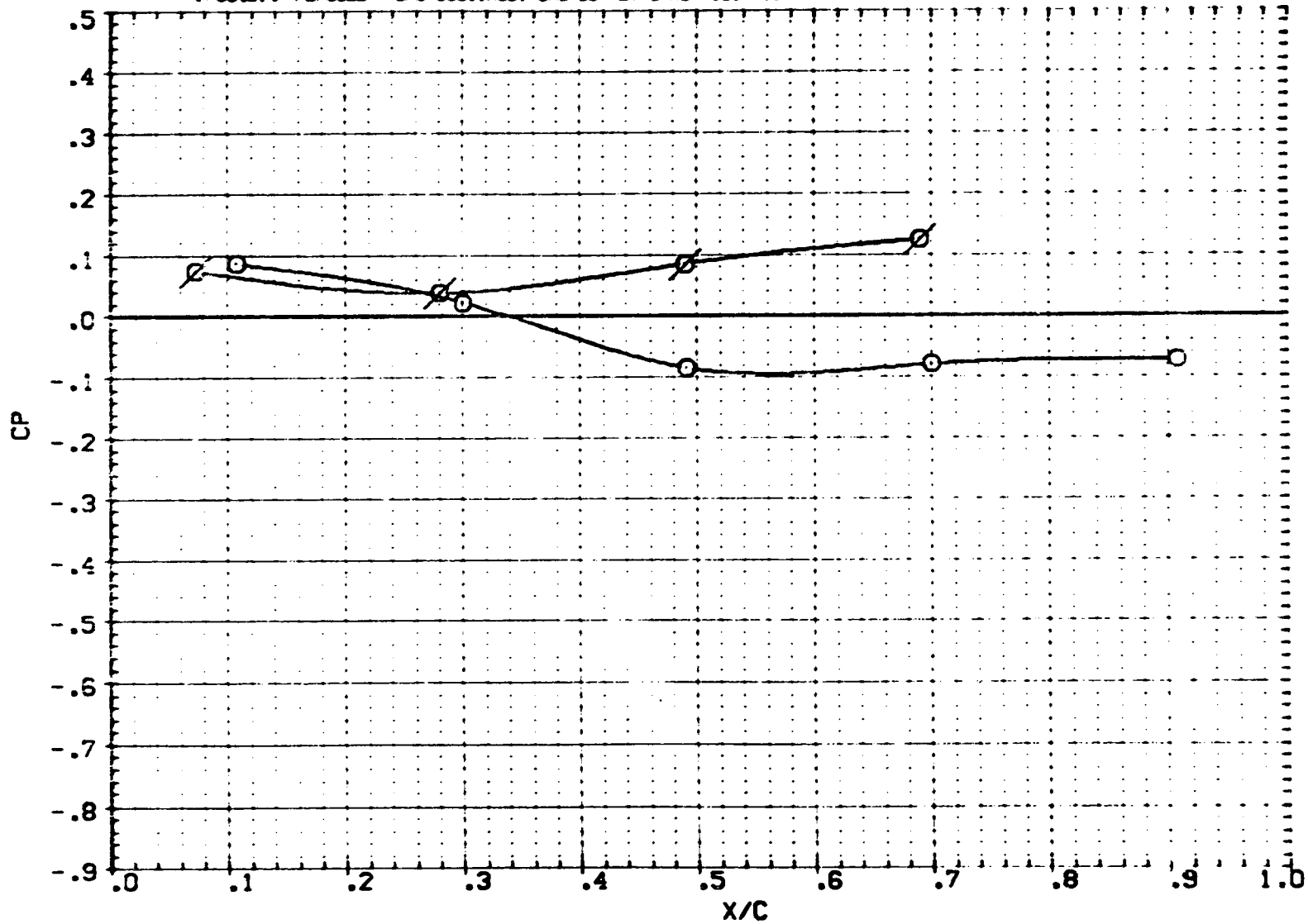
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.698

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
(R964L1)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	2.990

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	OPEN	MSFC 580(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
(R964L1)	FLAGGED	MSFC 580(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000



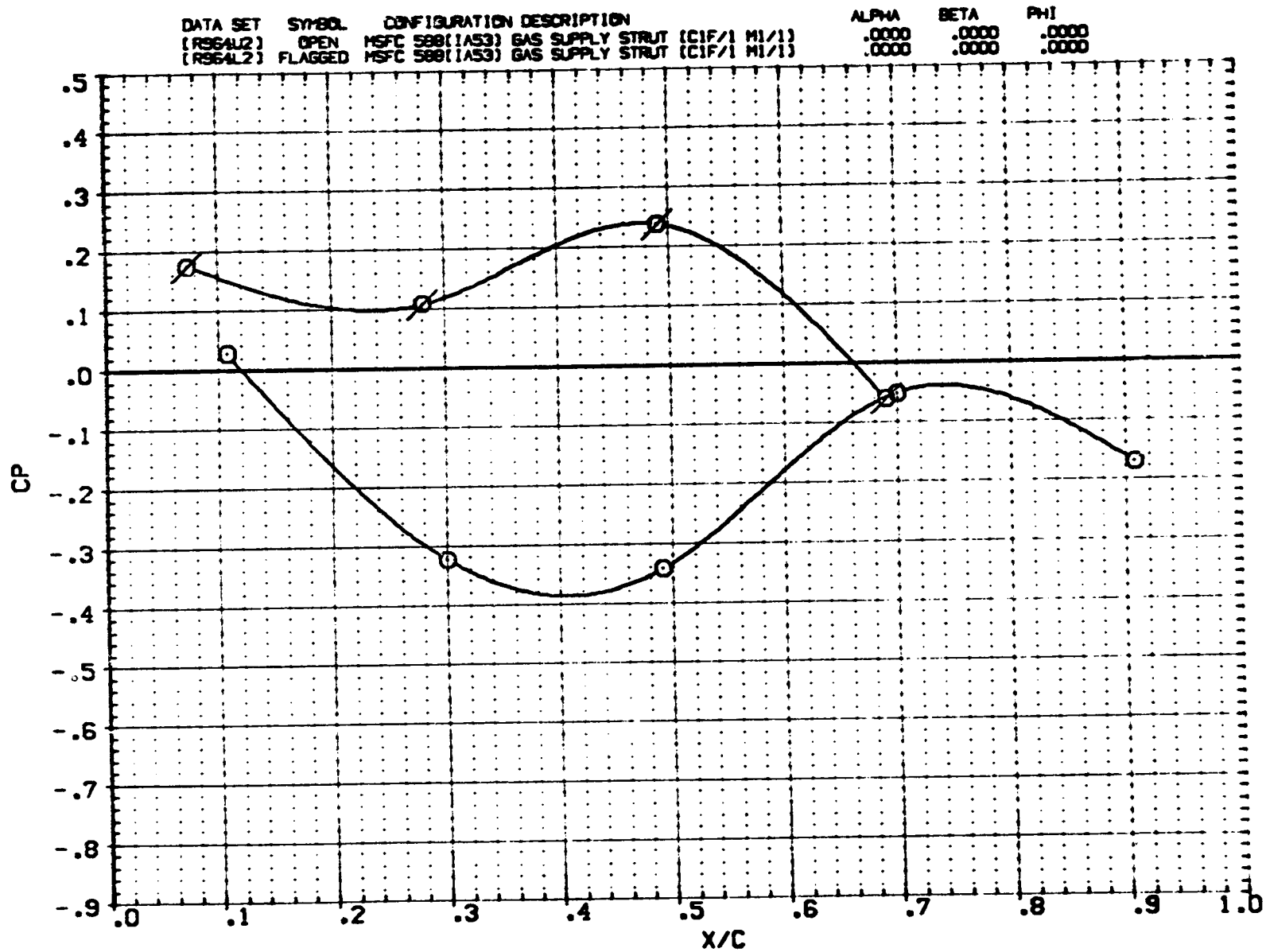
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	.905

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U2)	OPEN	MSFC 568(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
(R964L2)	FLAGGED	MSFC 568(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.201

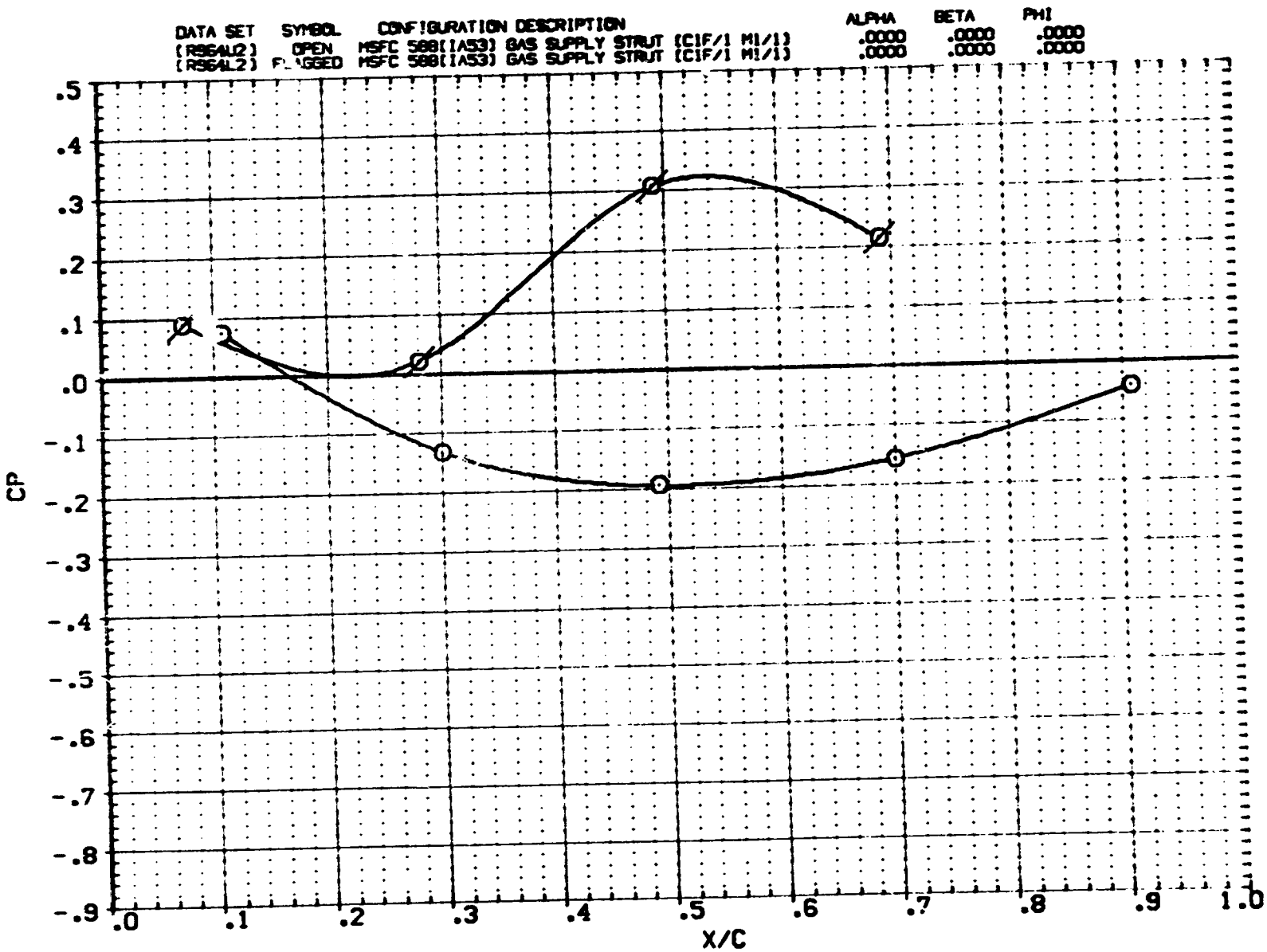


PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	1.464

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

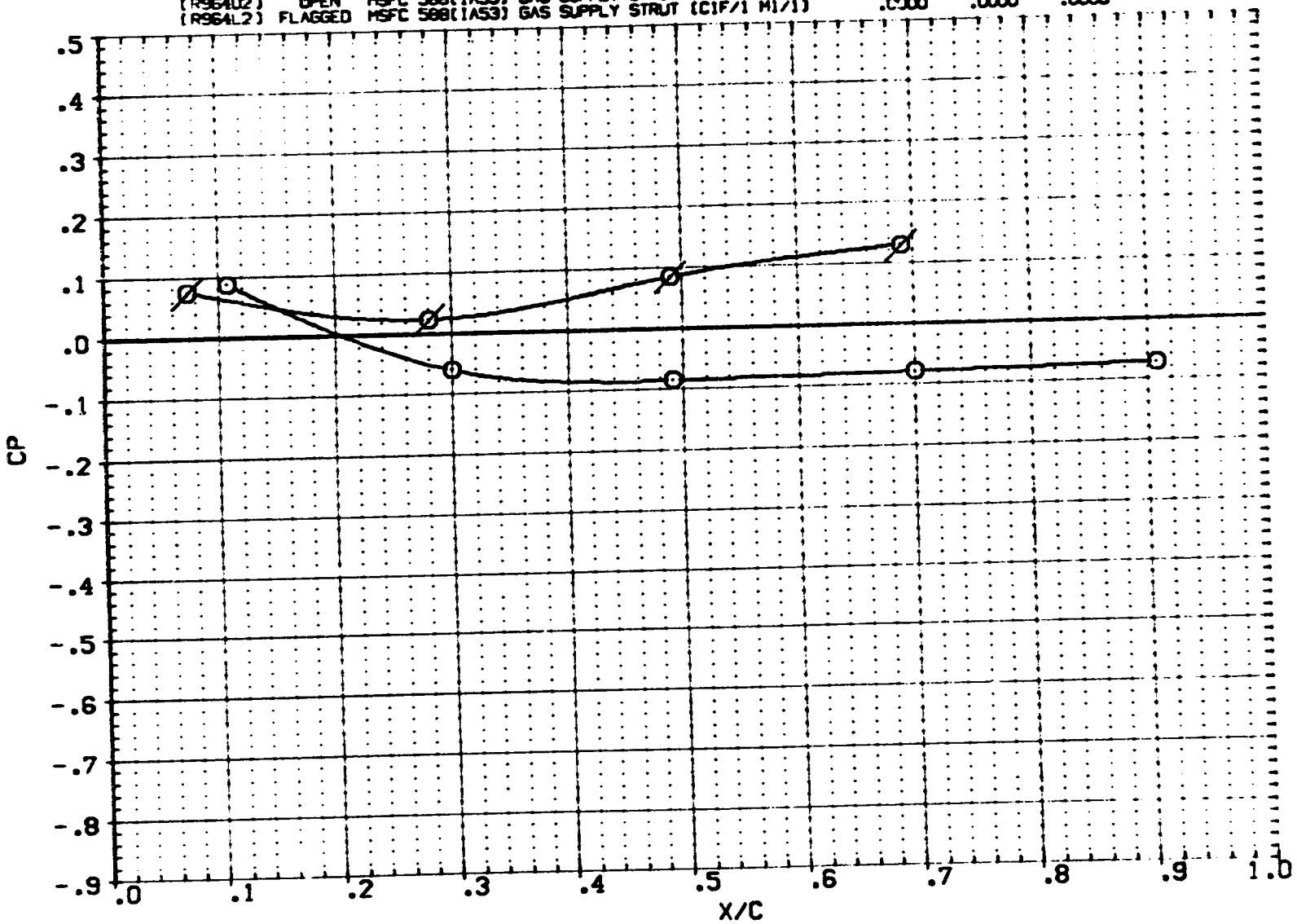
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.961



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.980

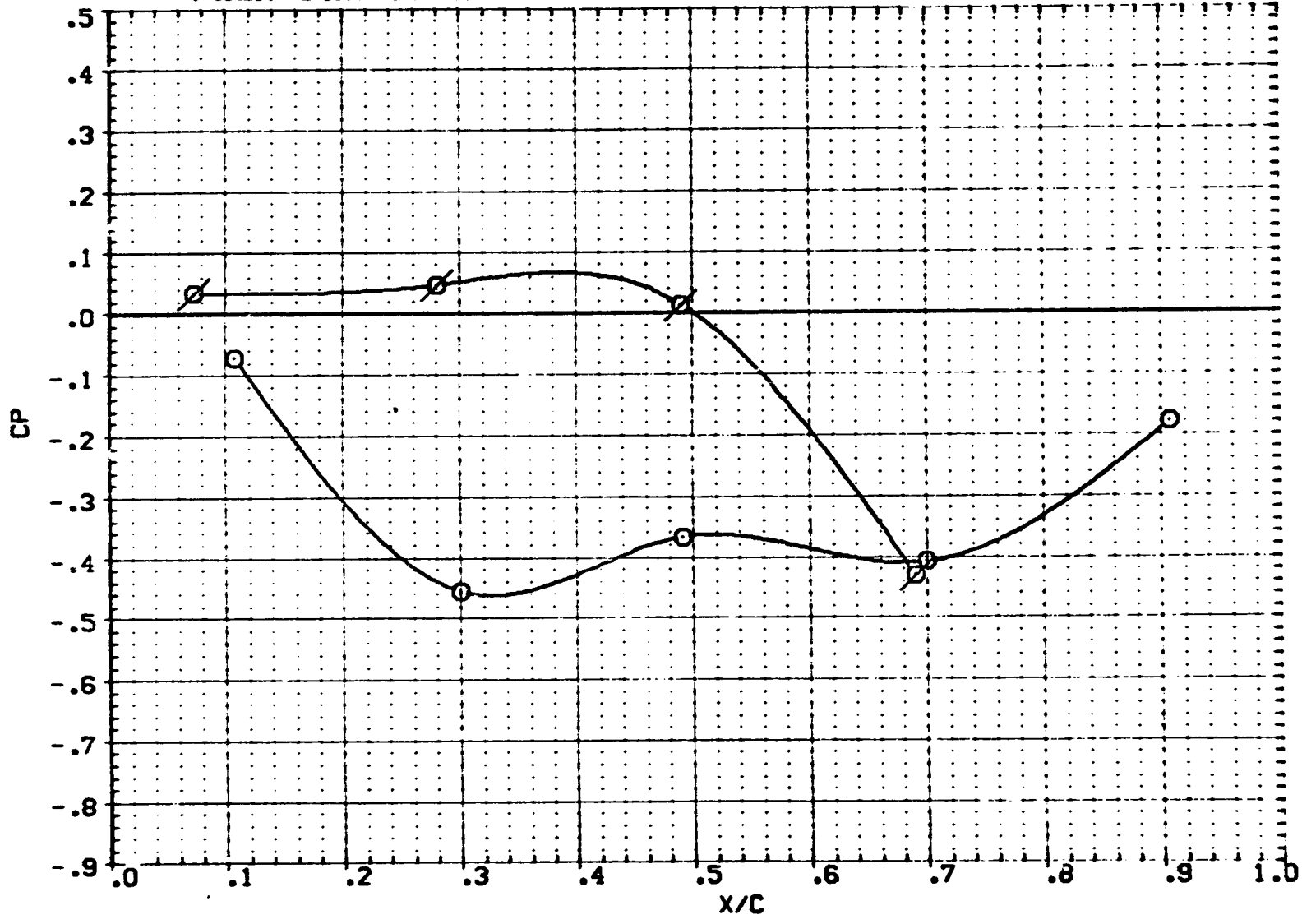
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U2)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
(R964L2)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

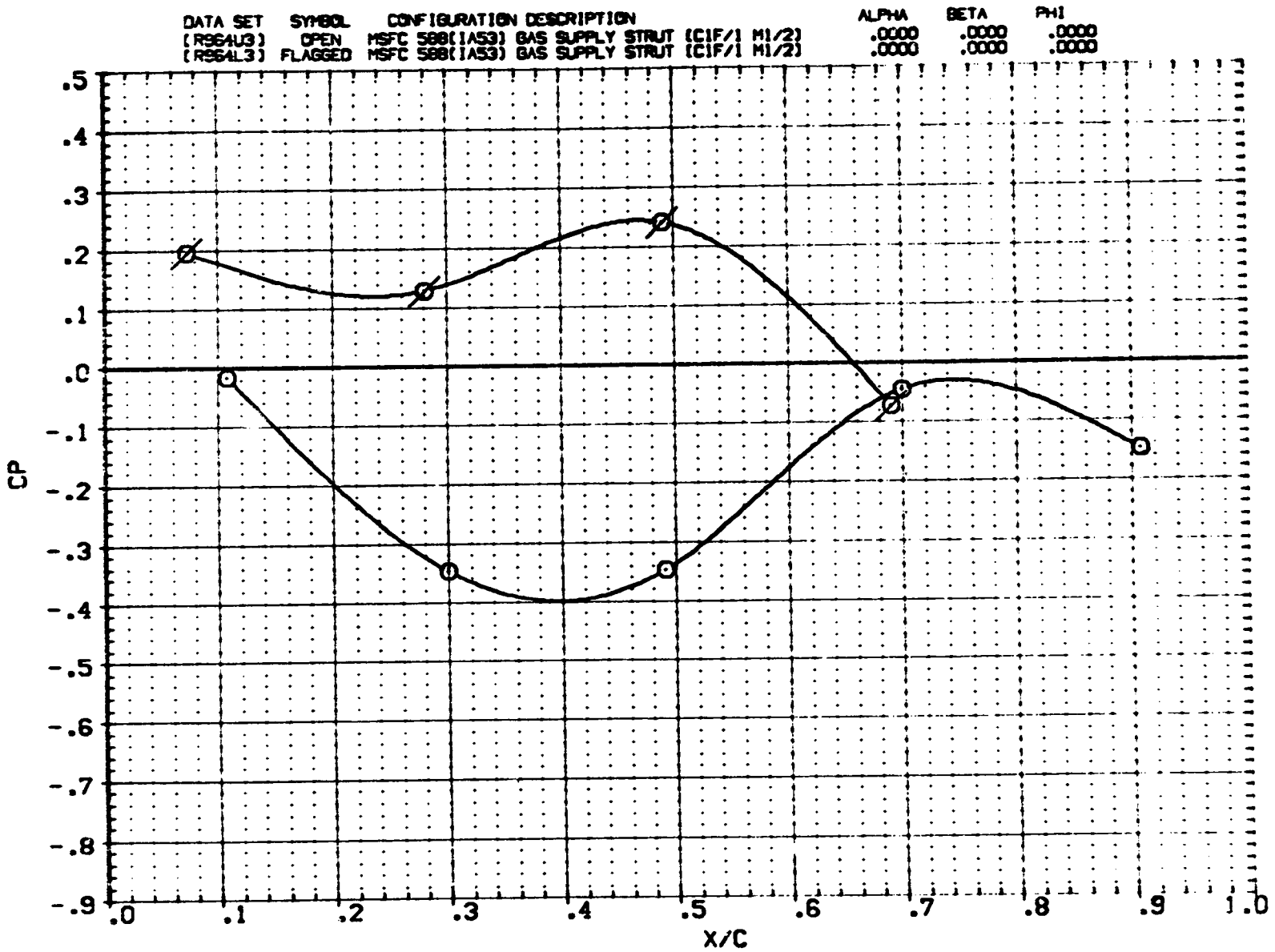
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	.901

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U3)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000
(R964L3)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000



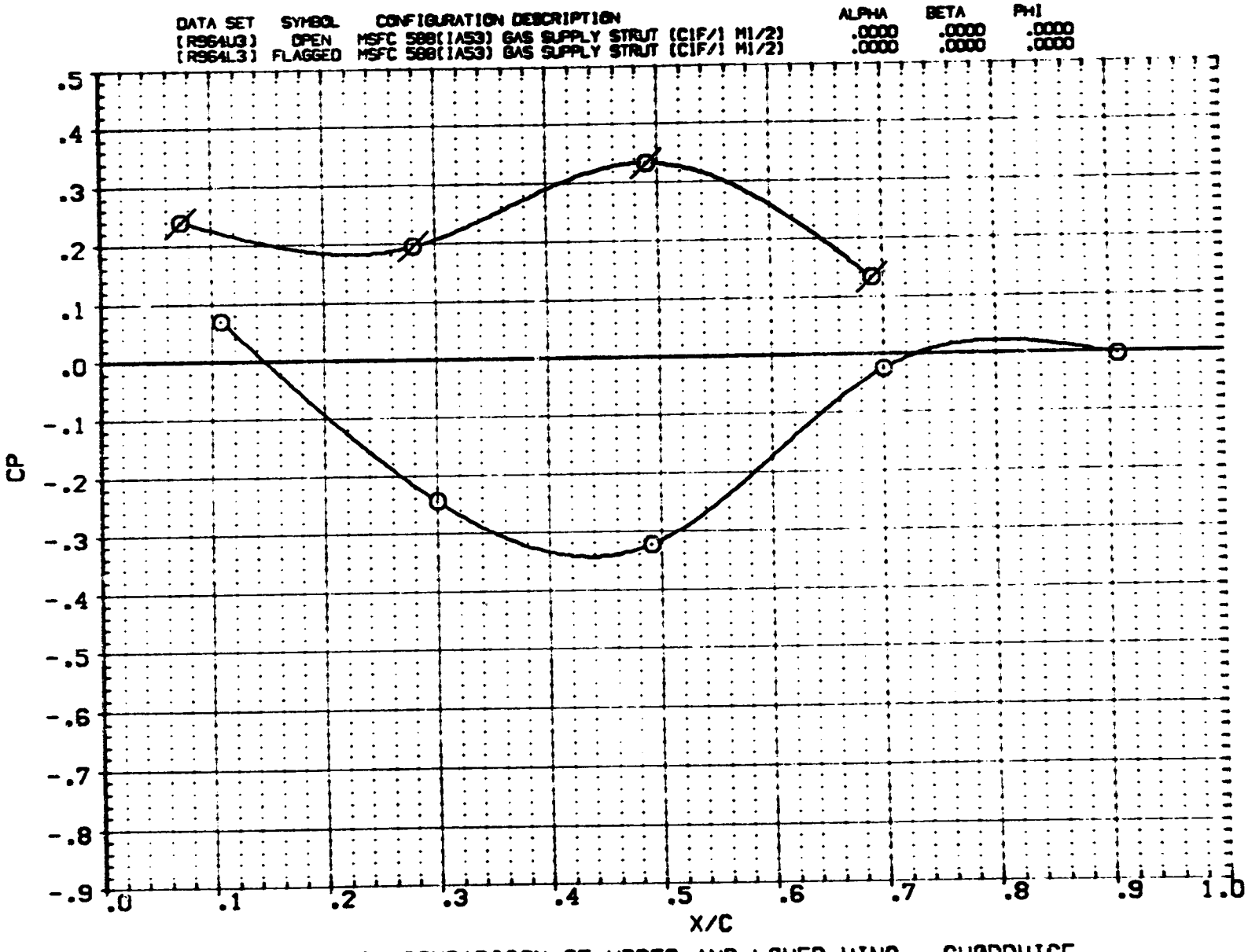
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.190



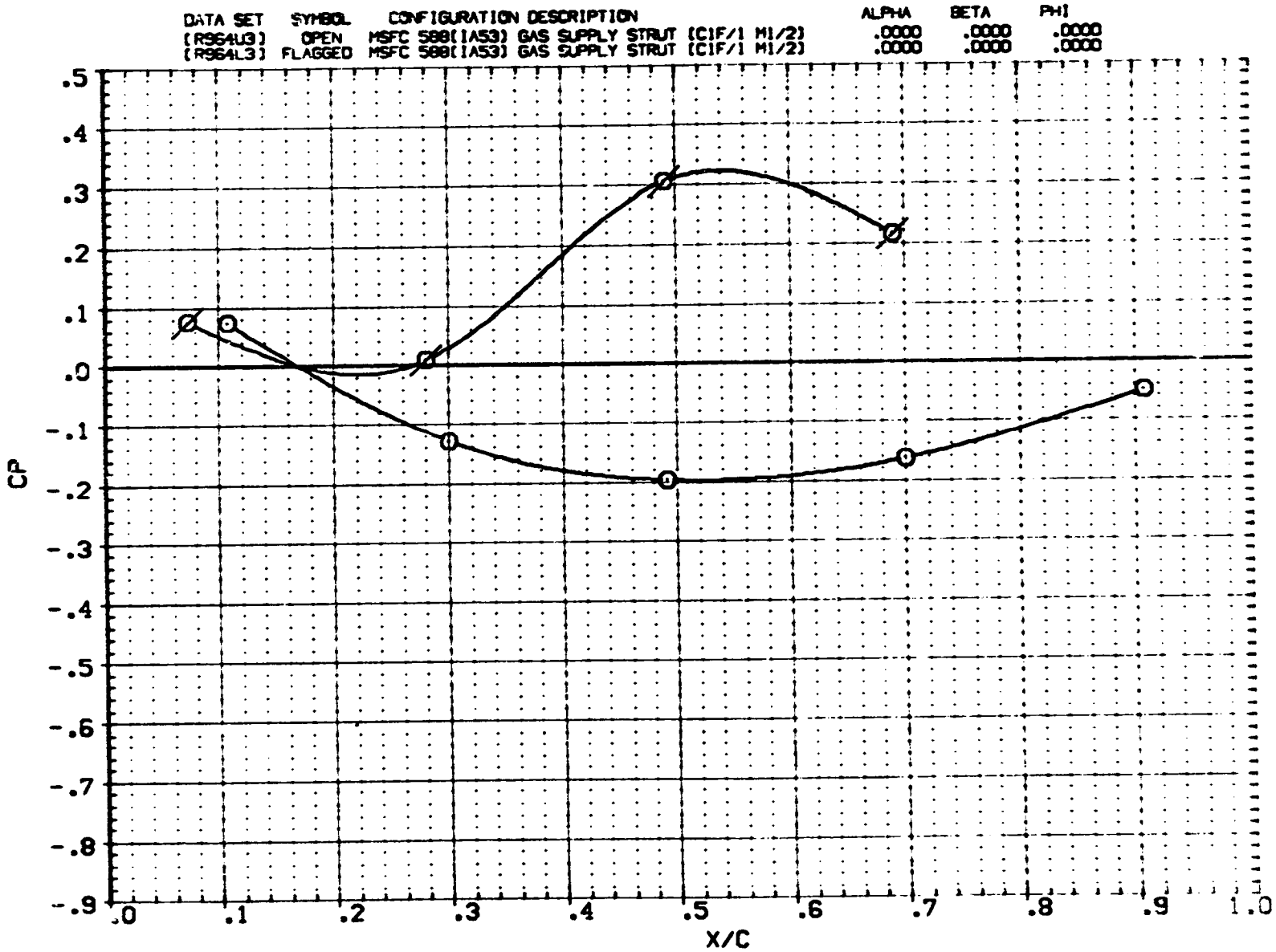
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	1.456



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

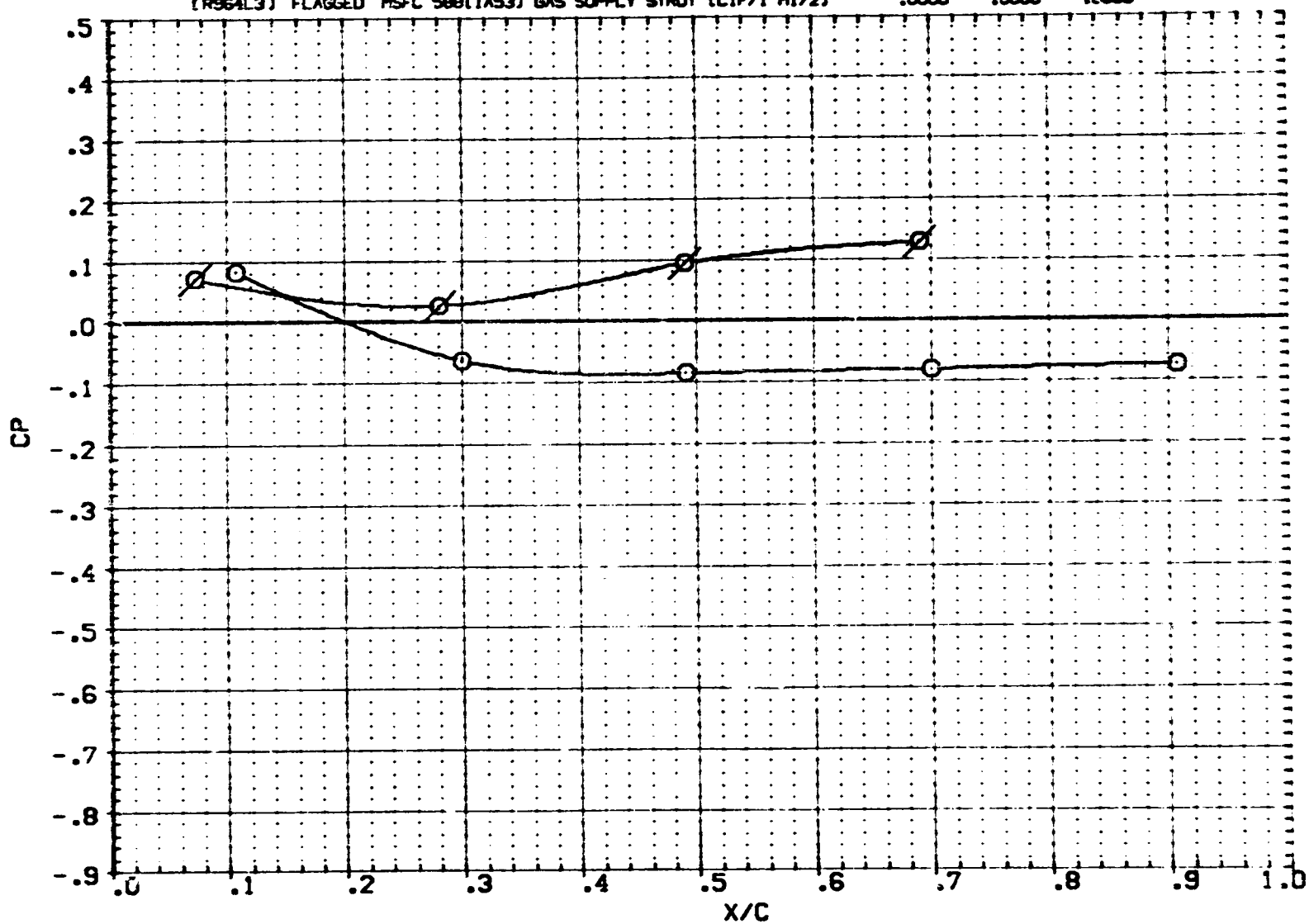
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.952



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.990

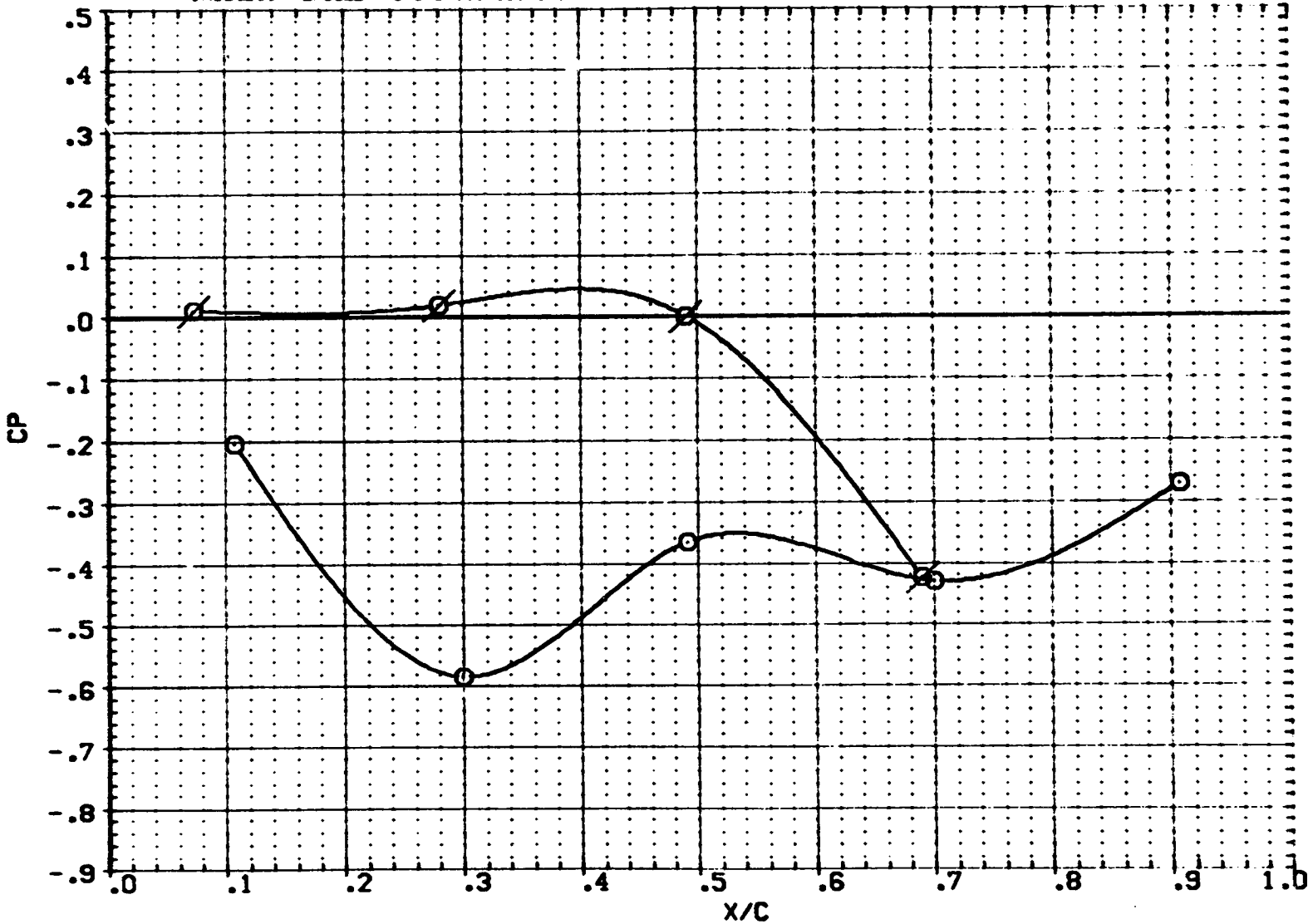
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U3)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000
(R964L3)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	.897

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U4)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000
(R964L4)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000



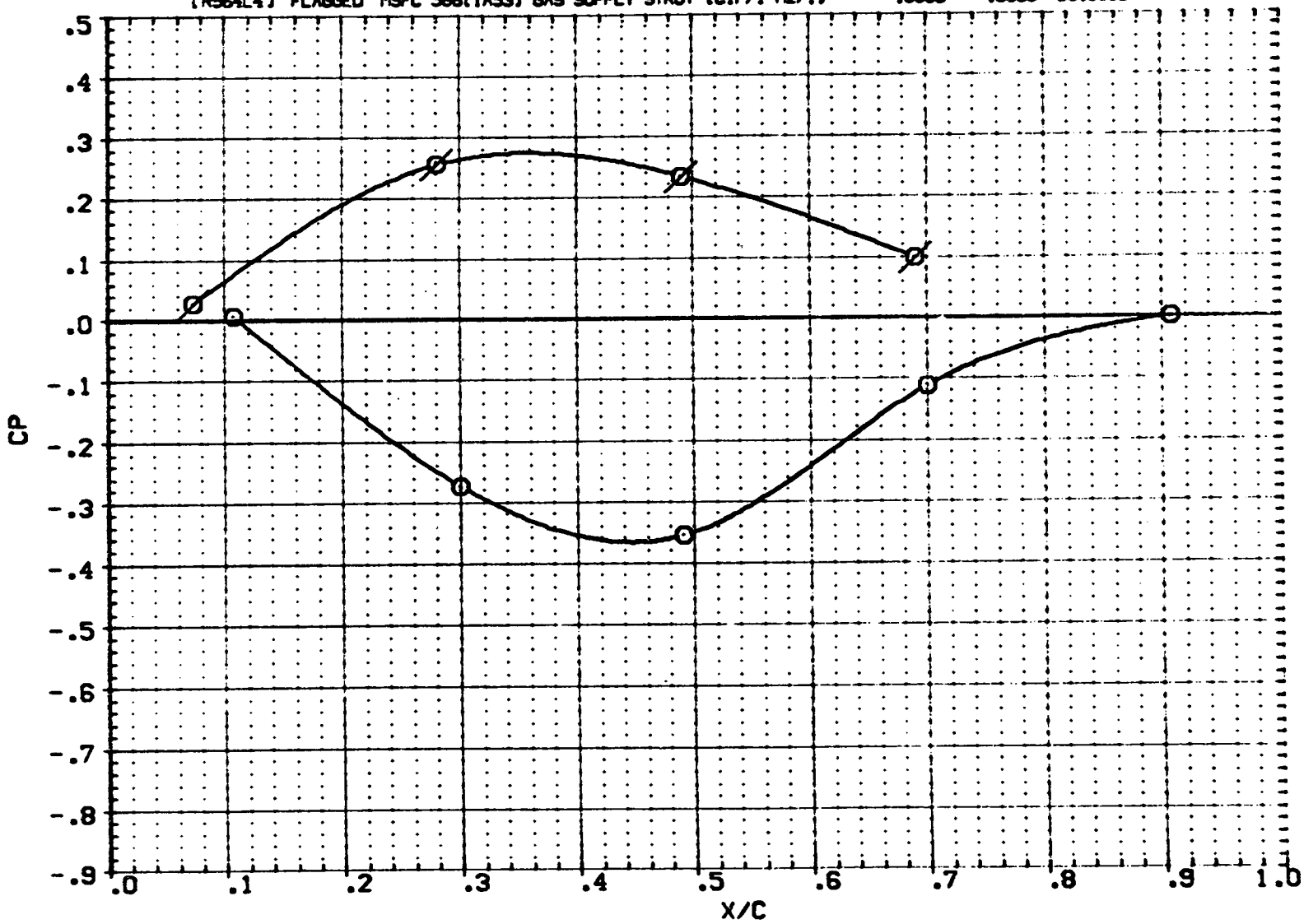
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.207

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

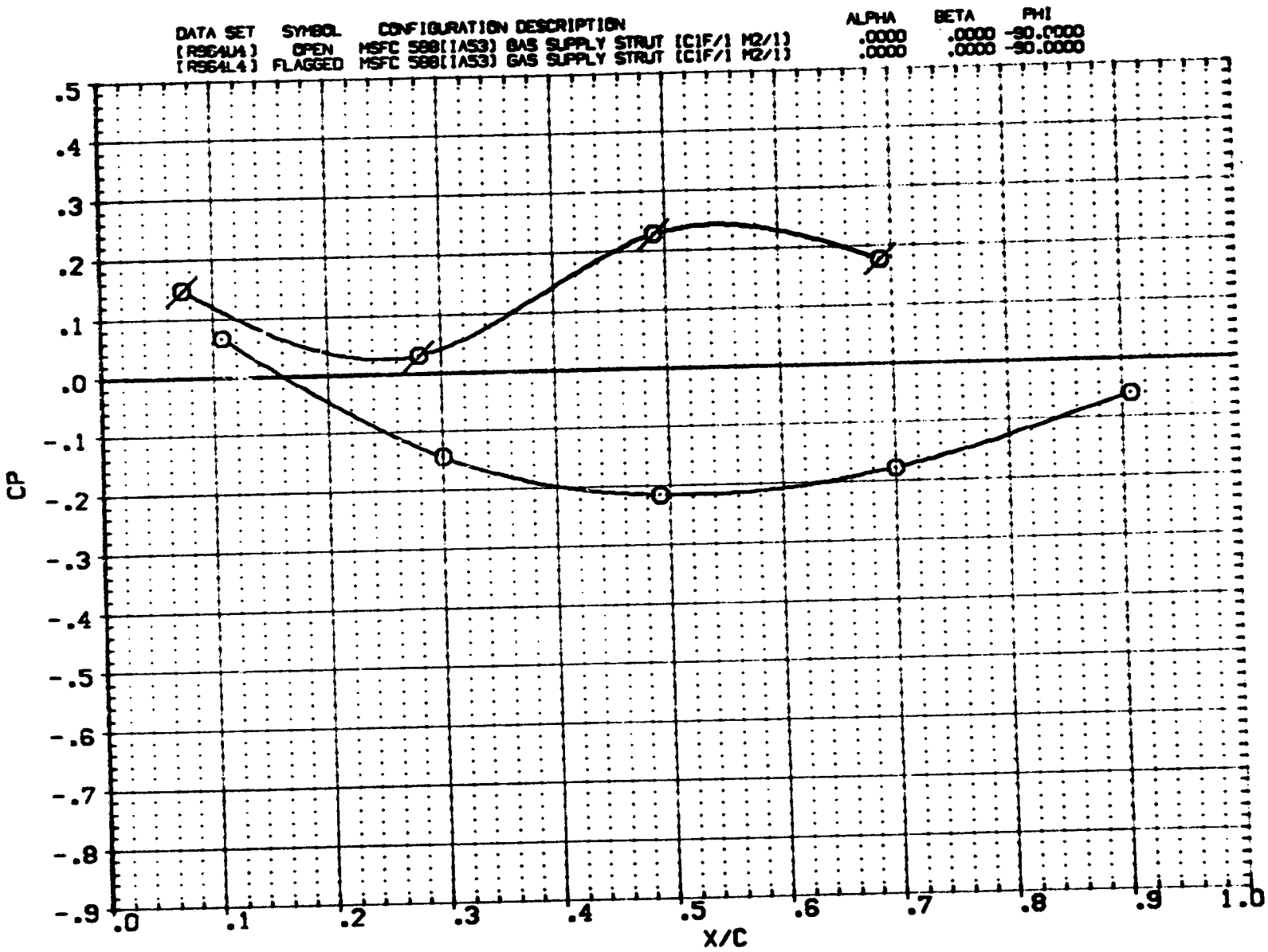
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.464

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U4]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.0000	.0000	-90.0000
[R964L4]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.950

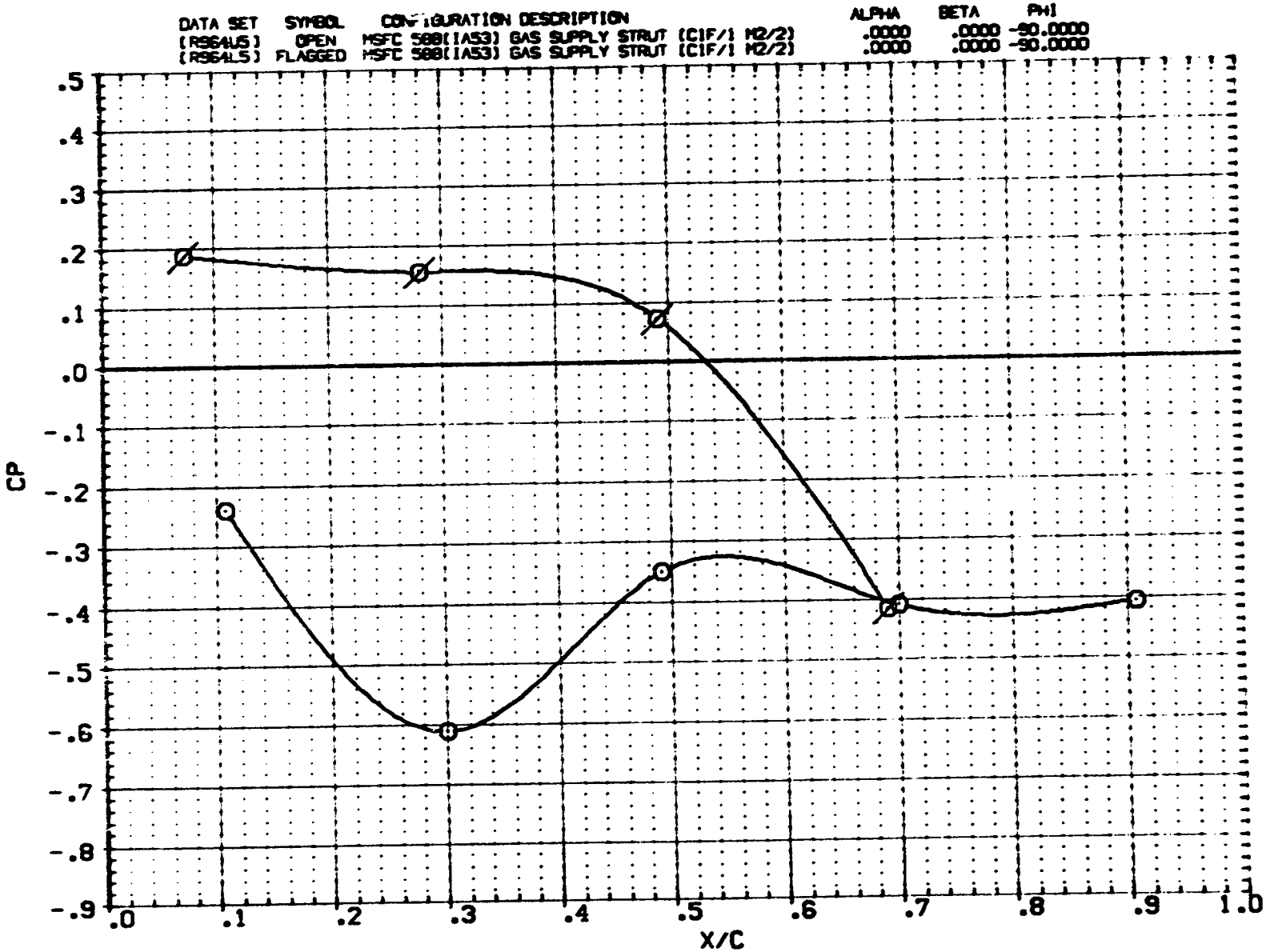


PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.990

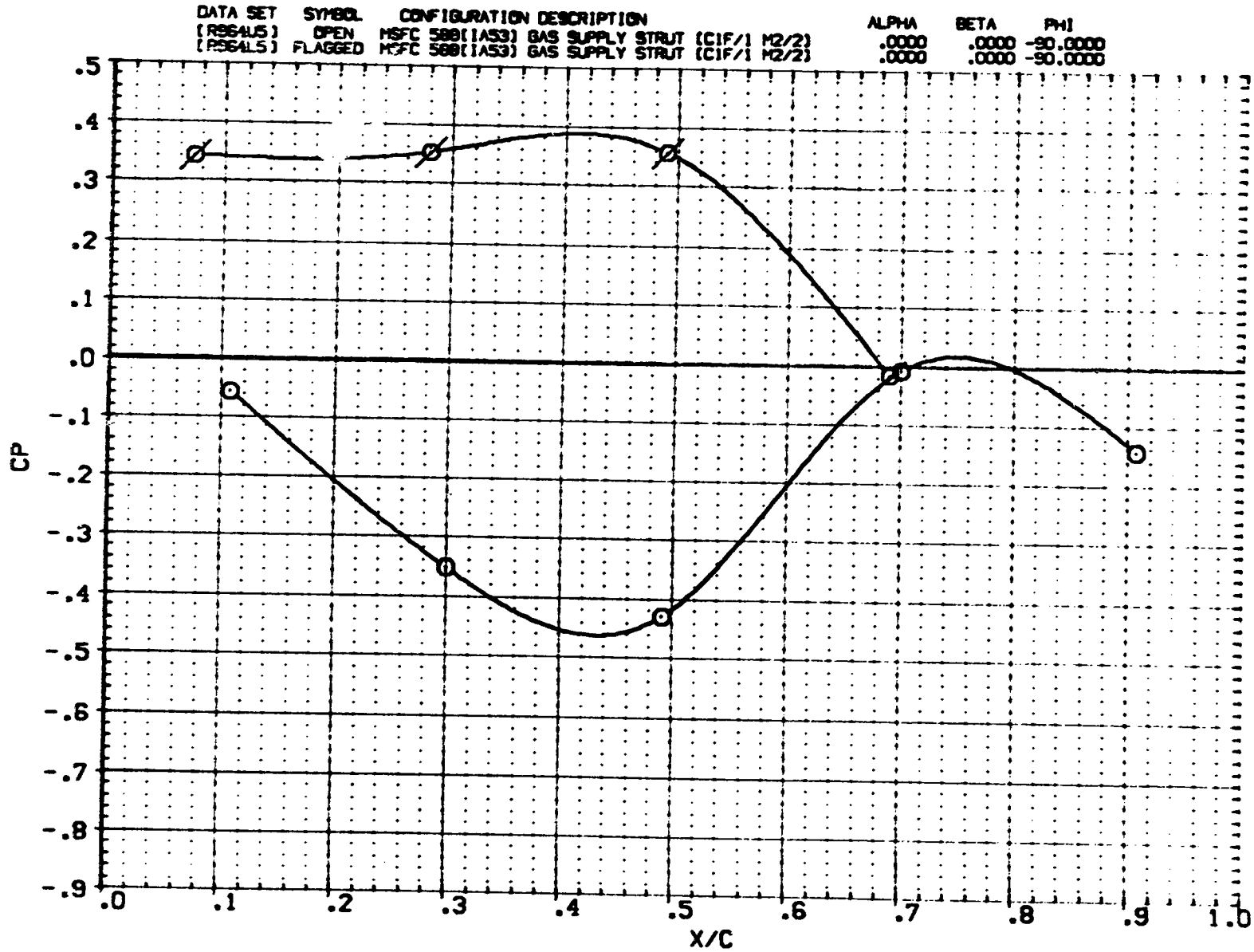
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	ZY/B	ALPHA	MACH
O	.511	.000	.902



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.199

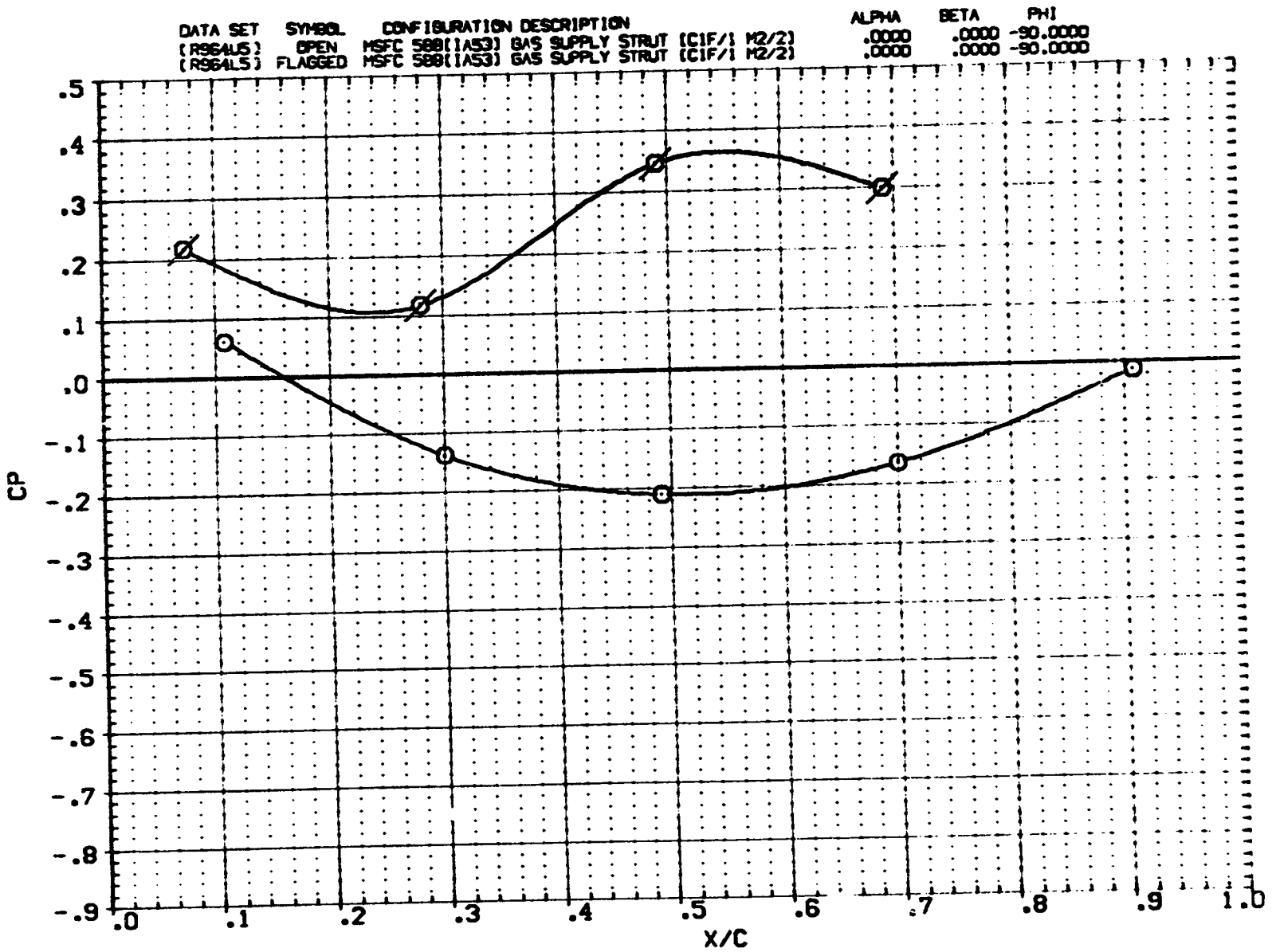


PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	1.457

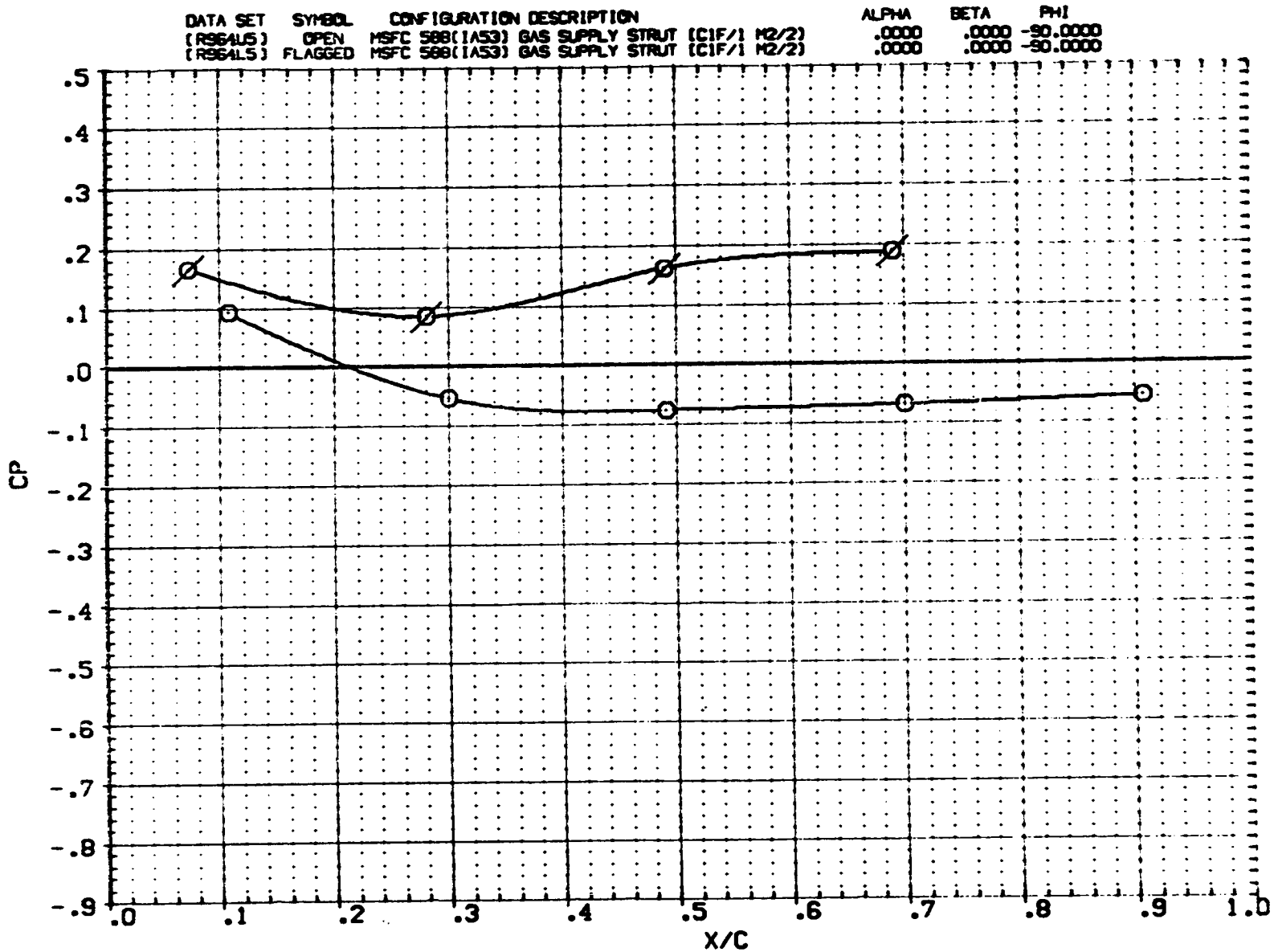
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.949



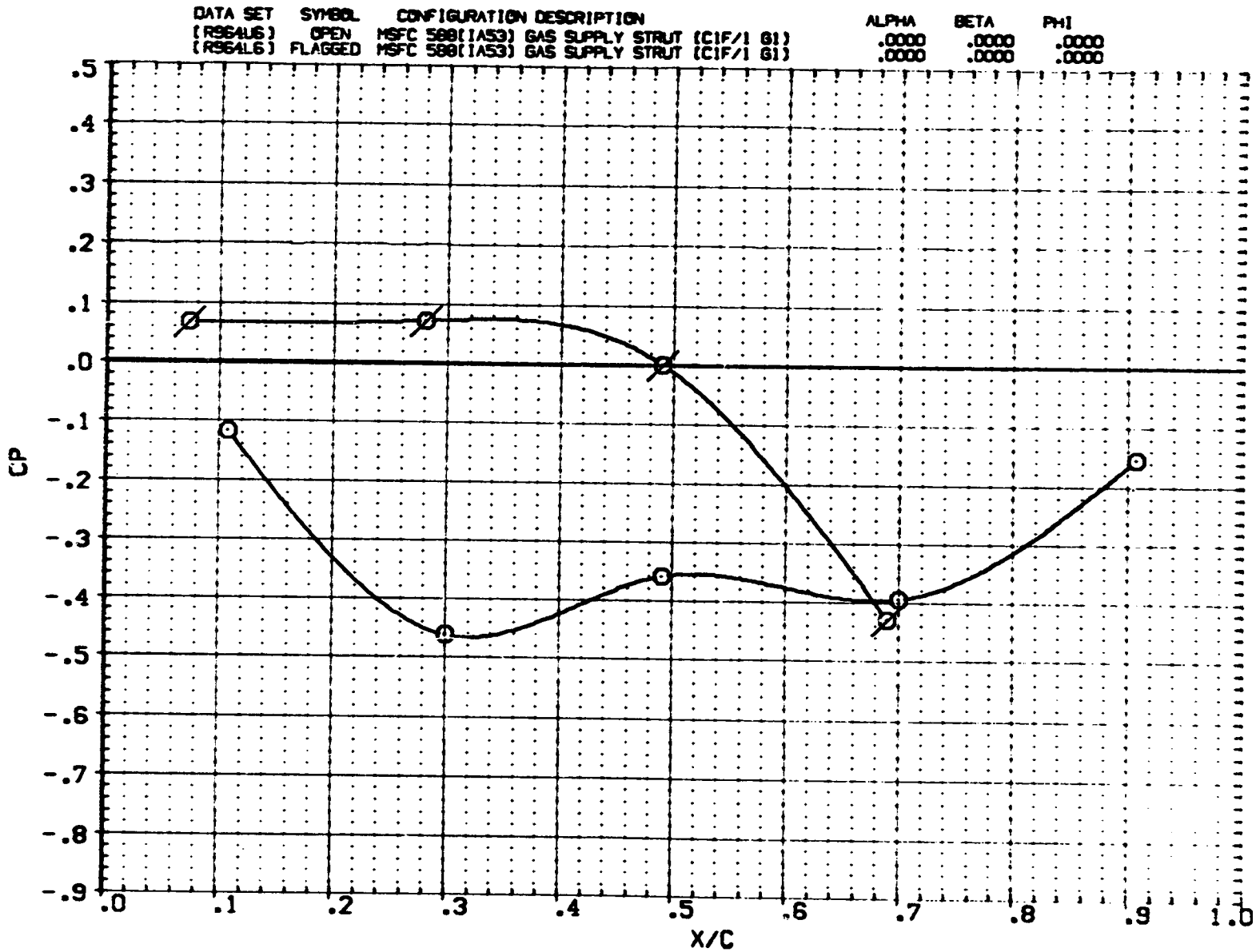
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.990



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

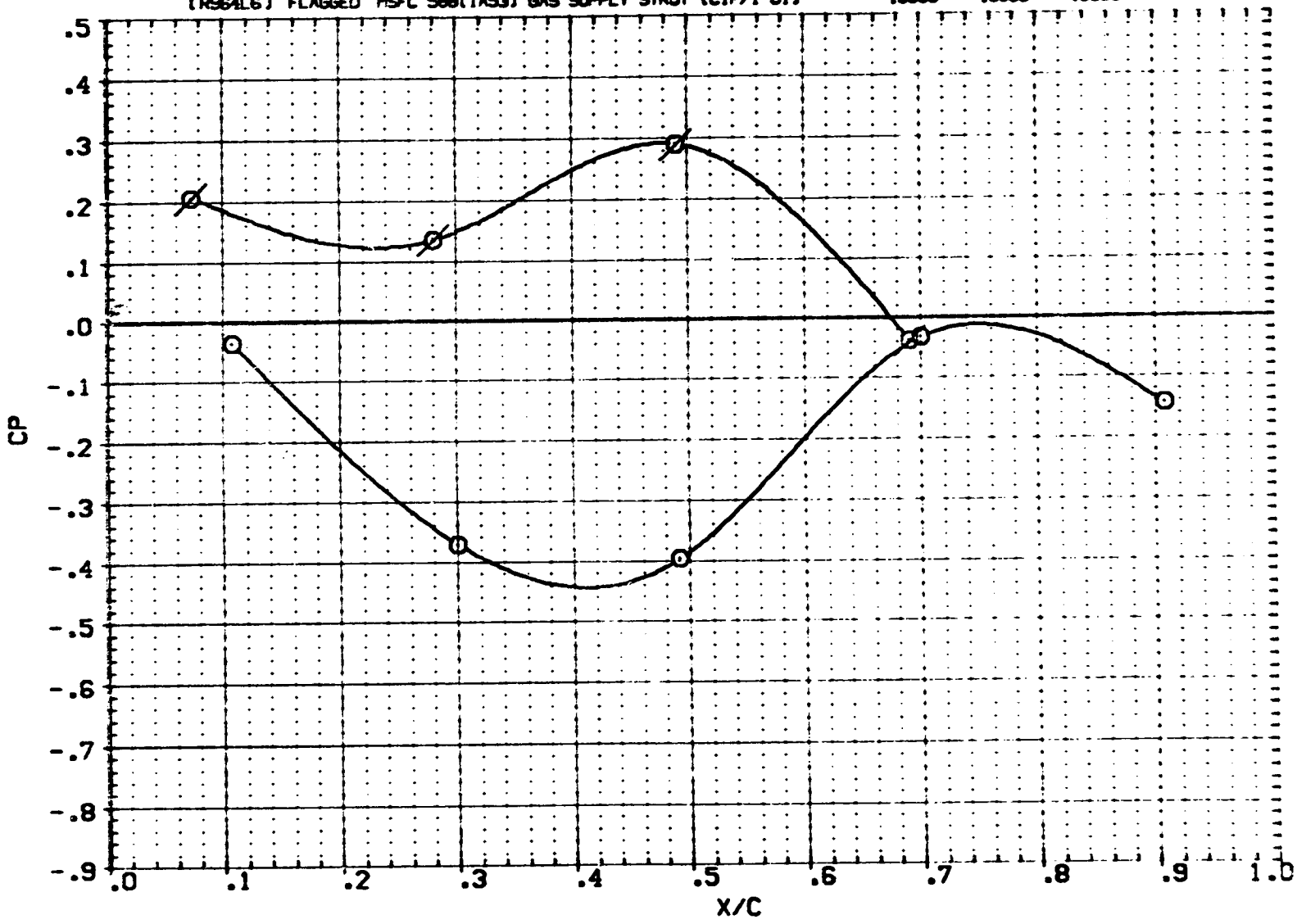
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	.906



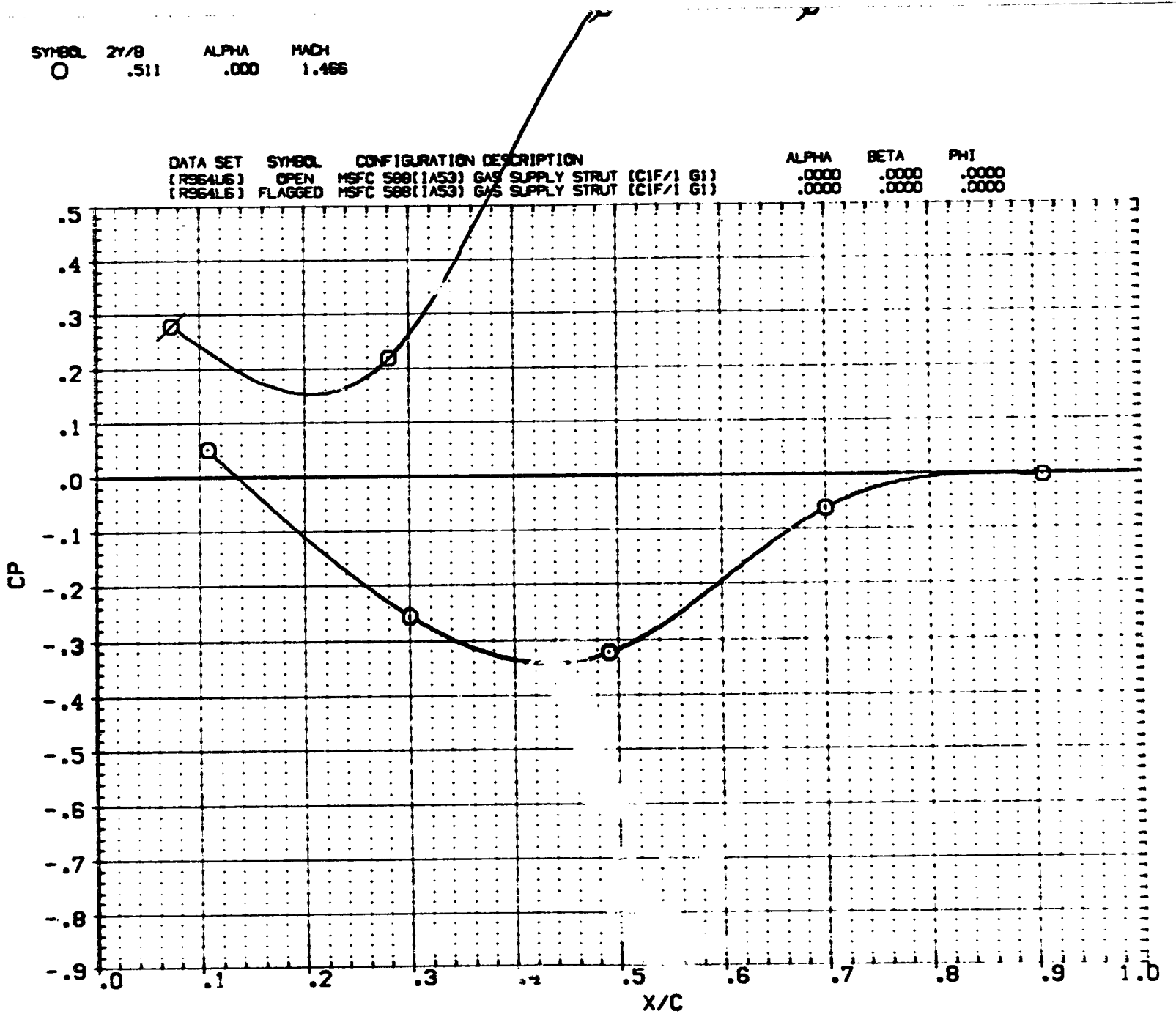
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.196

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U6)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000
(R964L6)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000



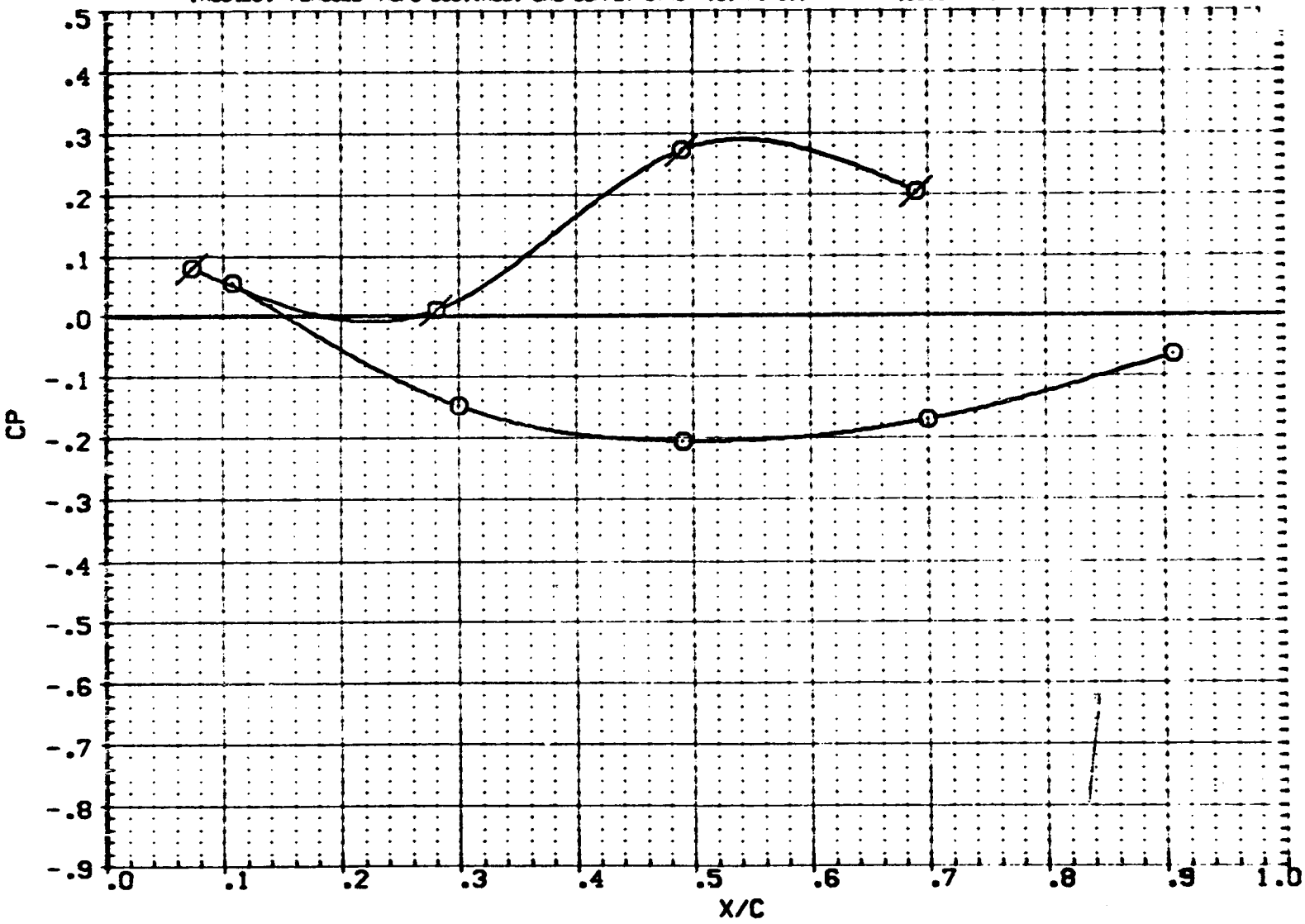
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

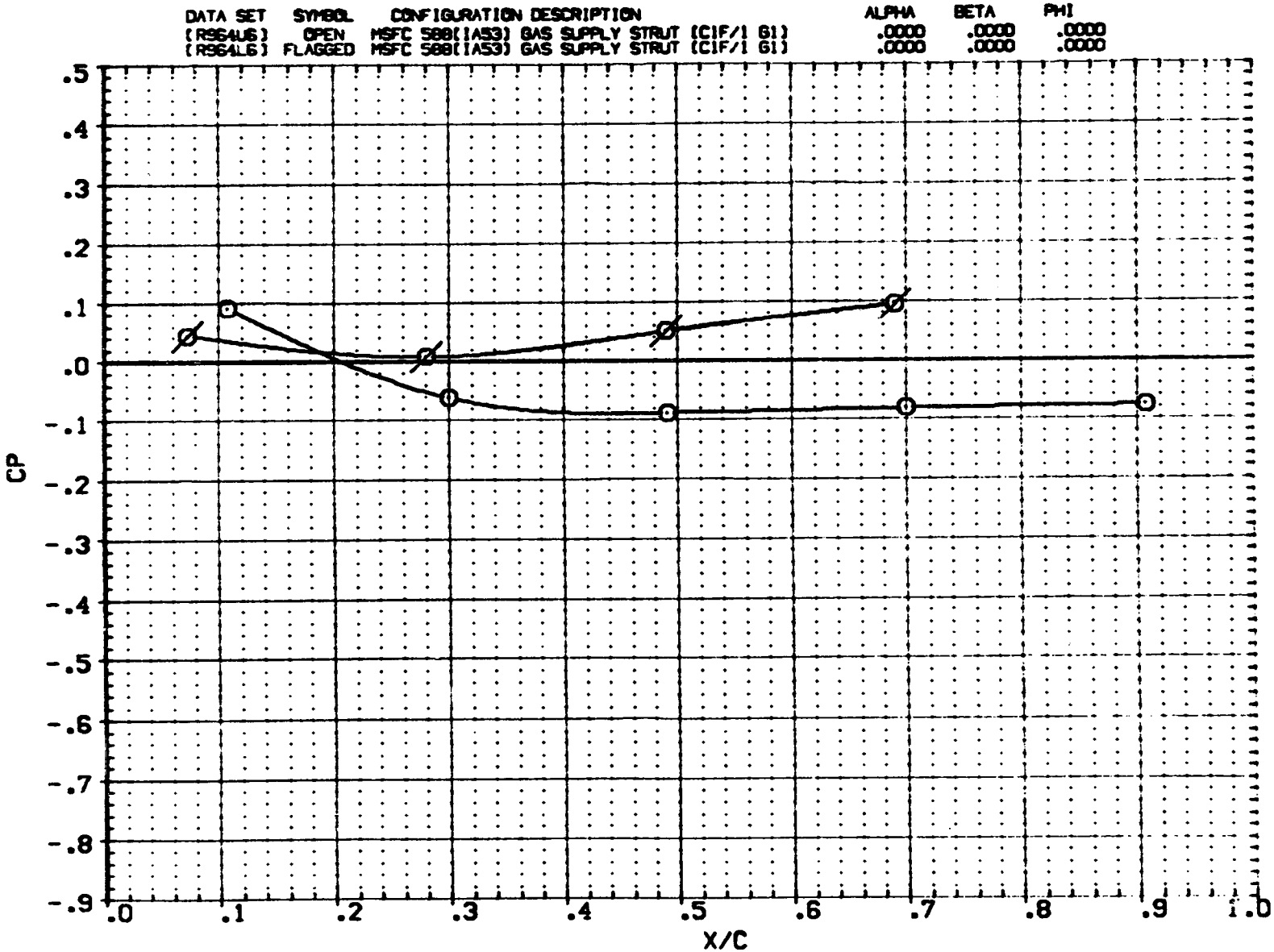
SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	1.959

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U6)	OPEN	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000
(R964L6)	FLAGGED	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

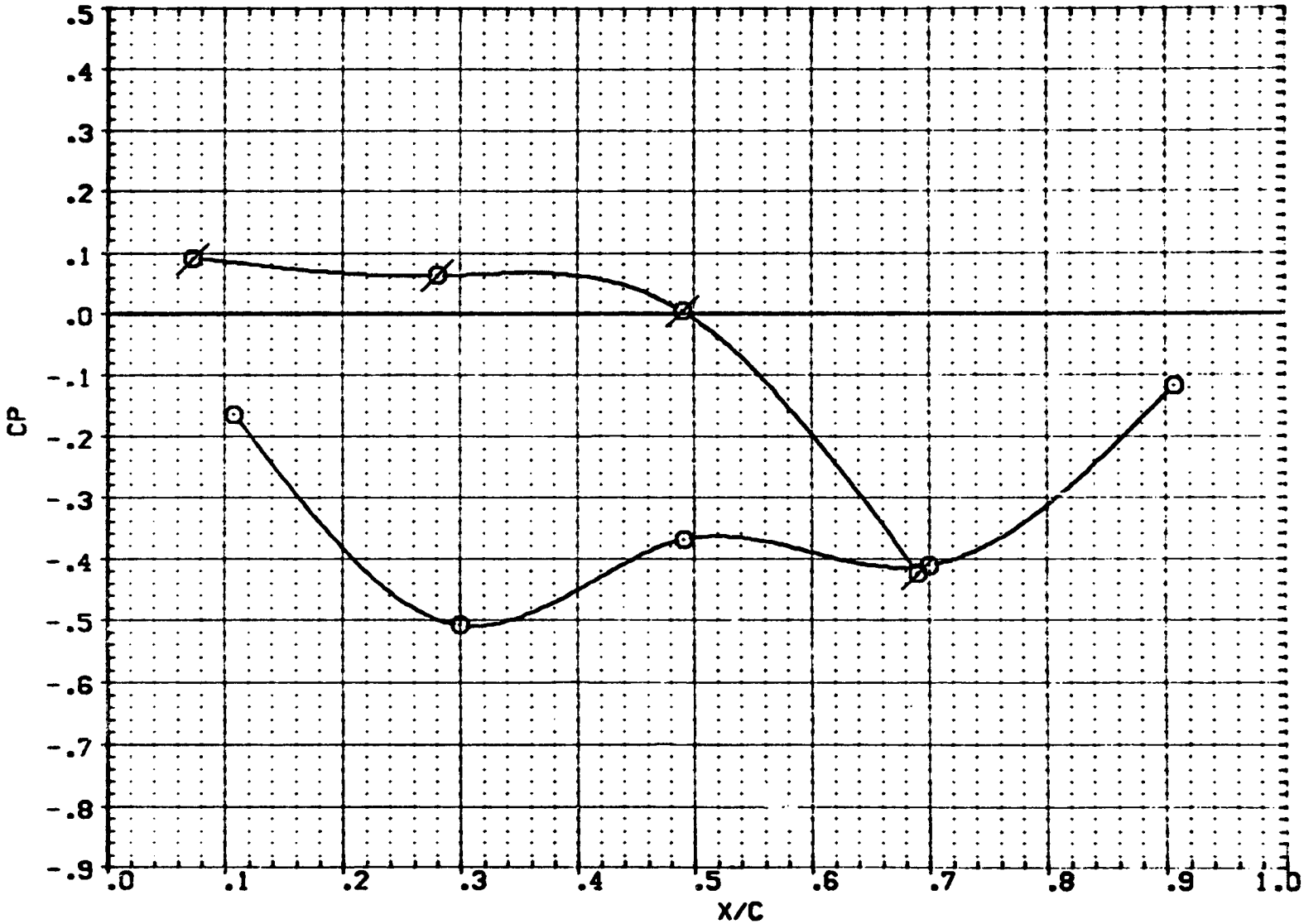
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.990



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	.896

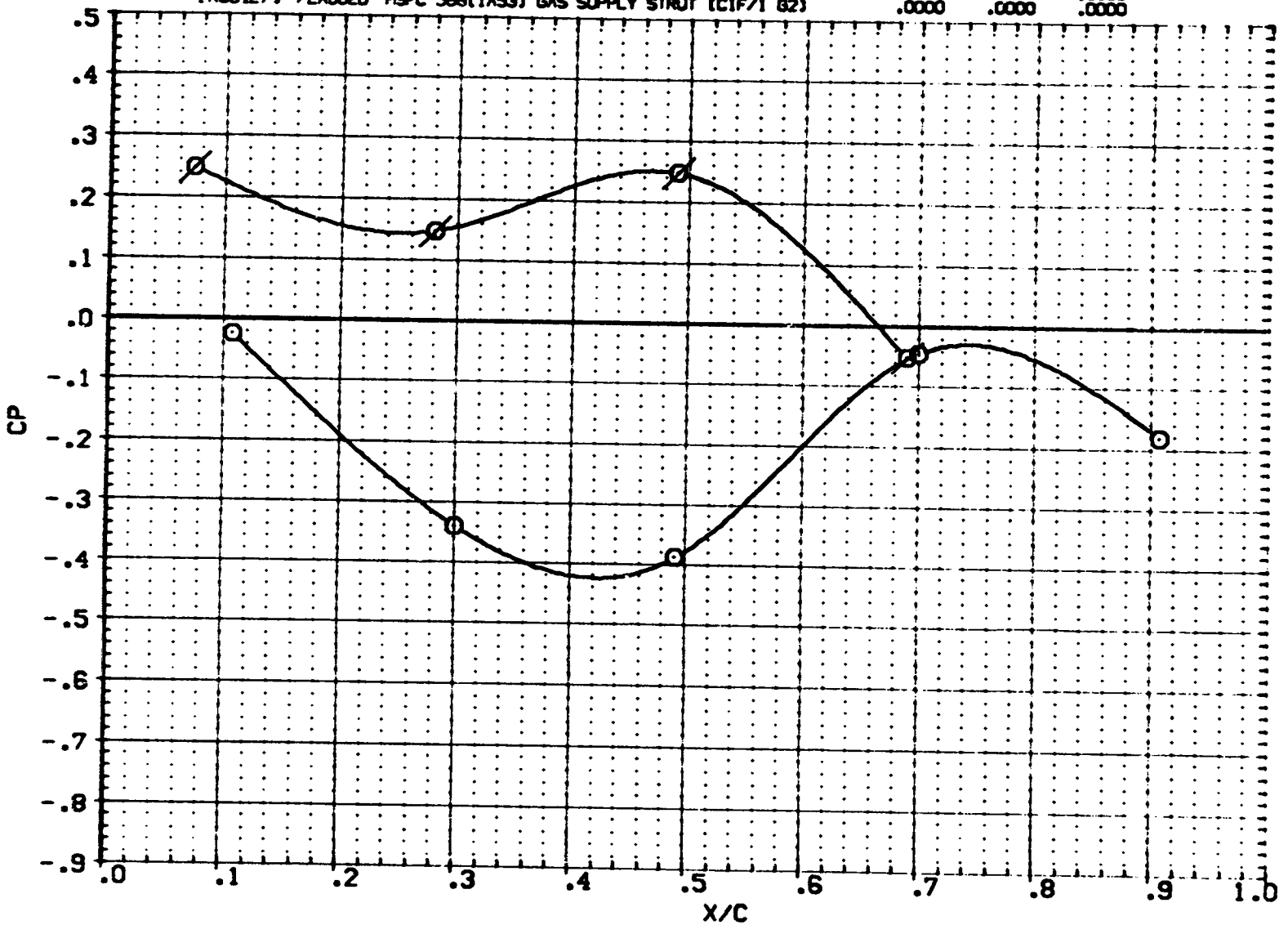
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U7)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000
(R964L7)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

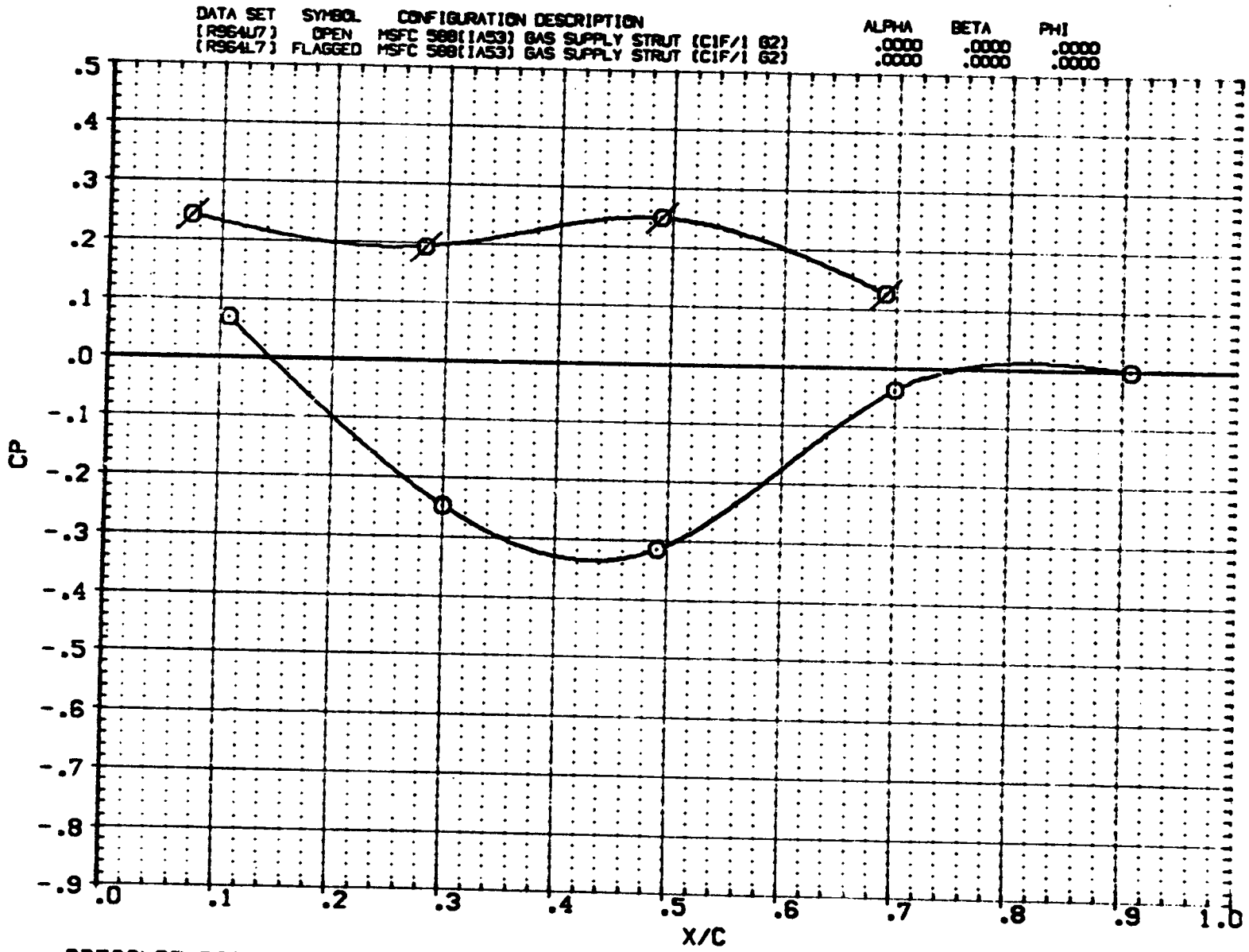
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.204

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U7)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000
(R964L7)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000



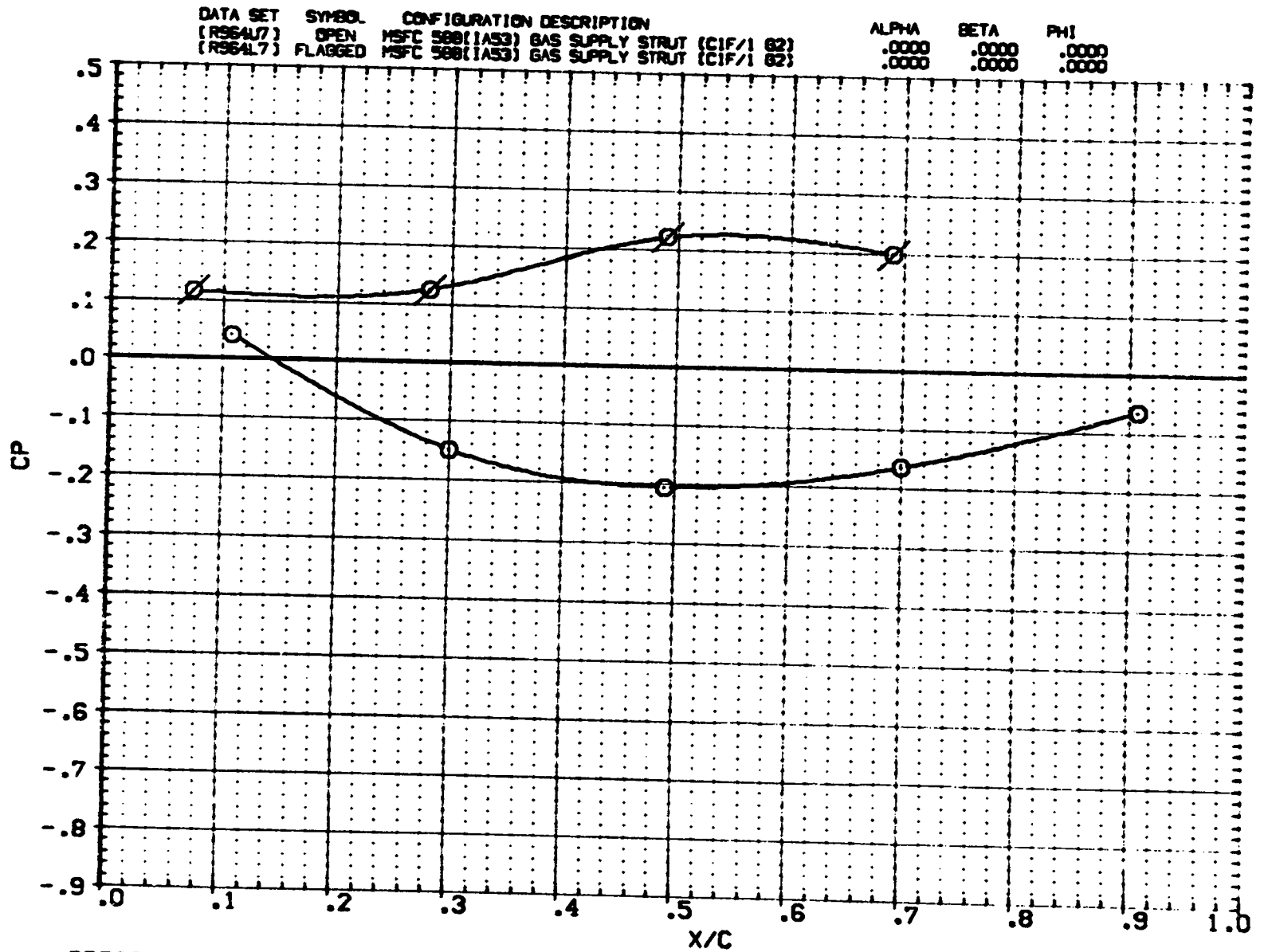
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.463



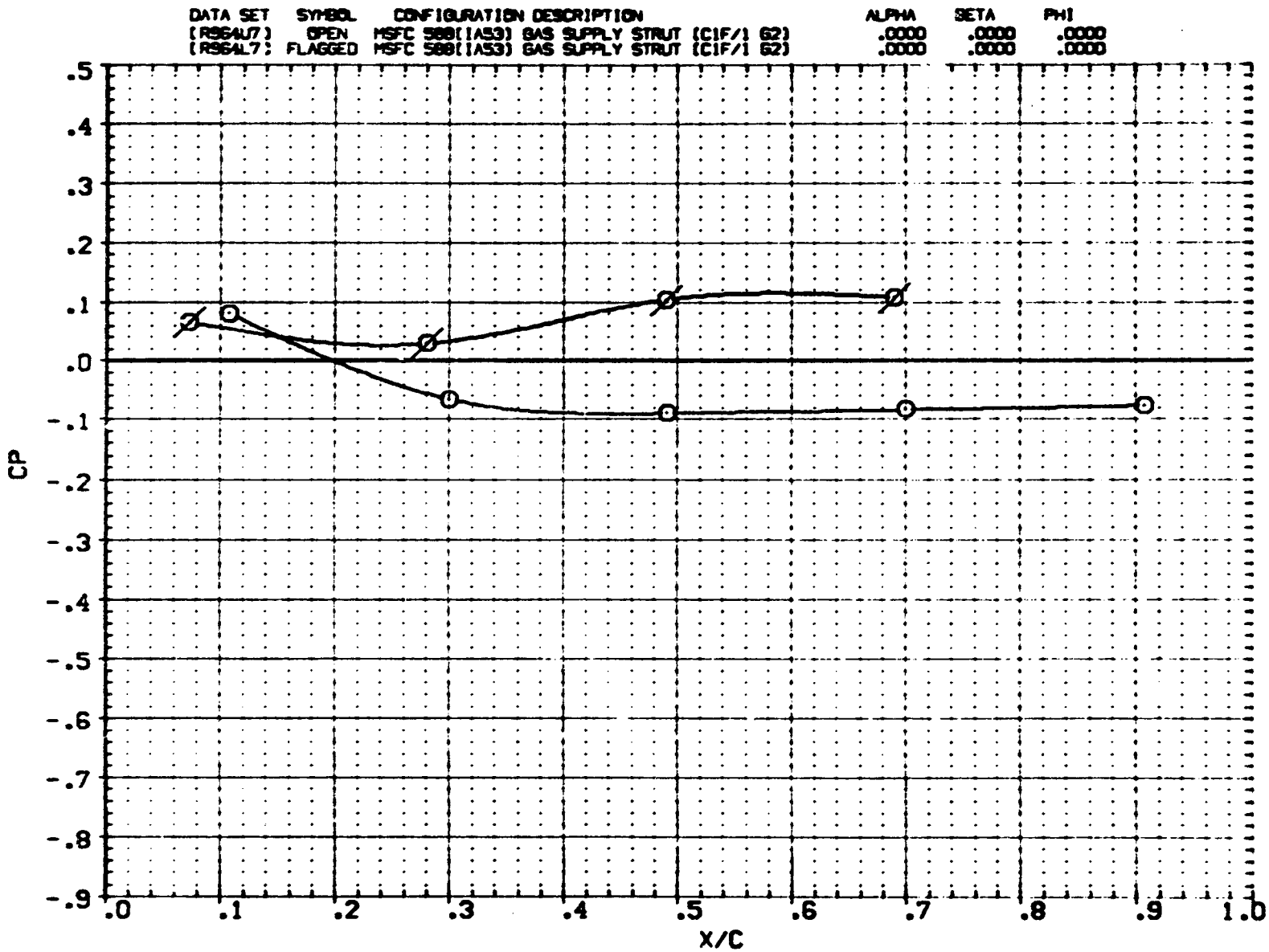
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.958



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

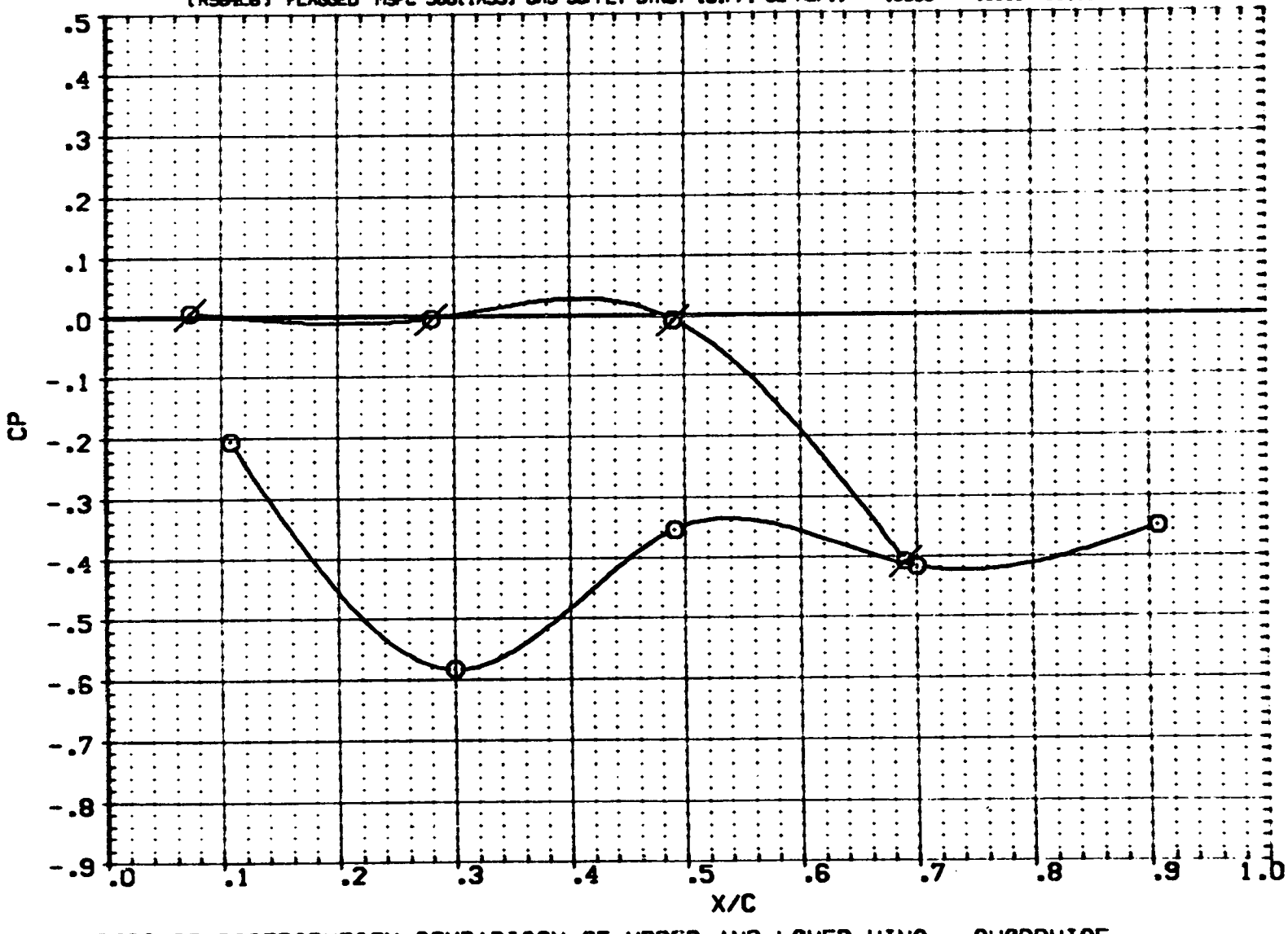
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	2.980



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	.904

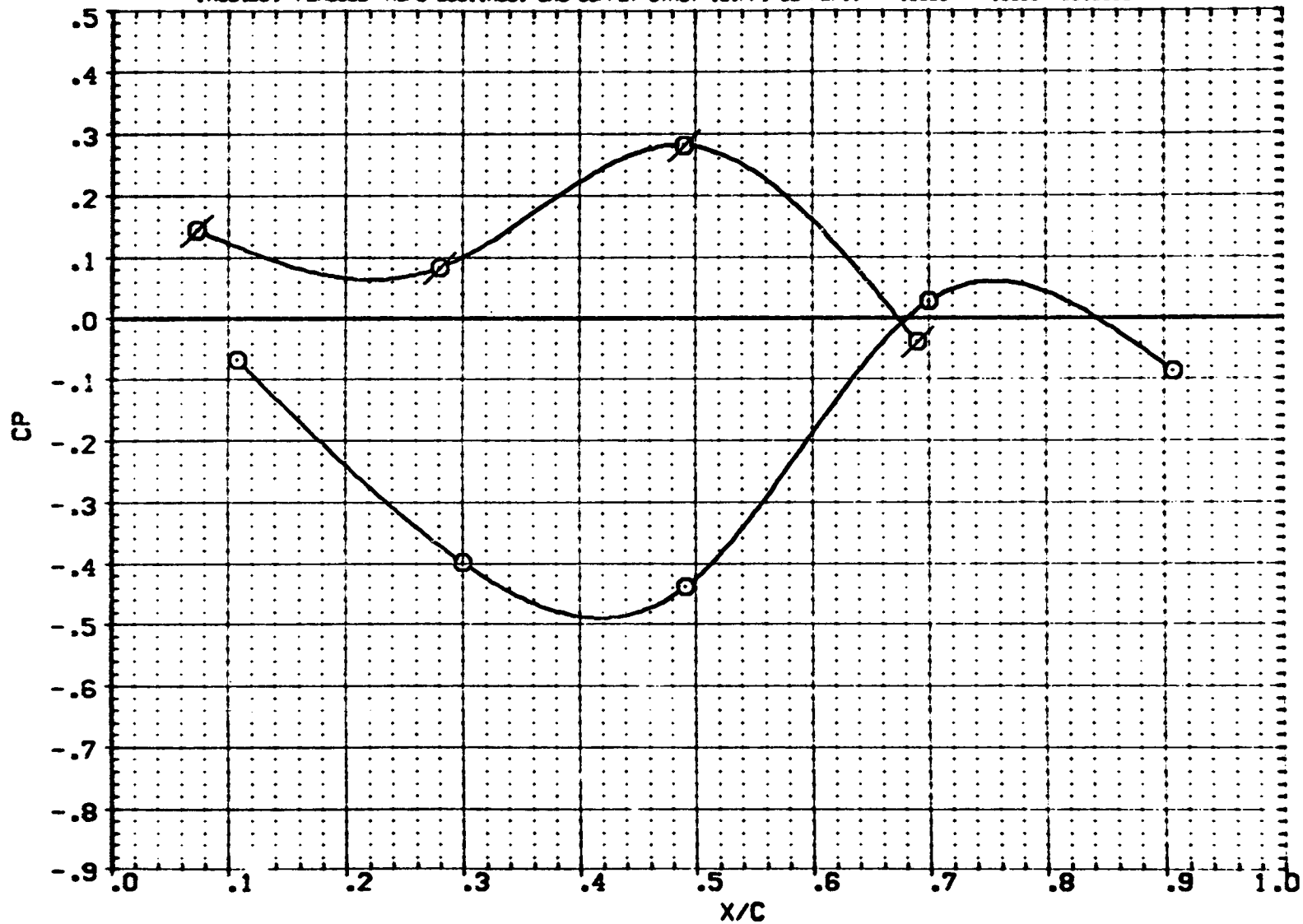
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RSG4UB)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(RSG4LB)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.196

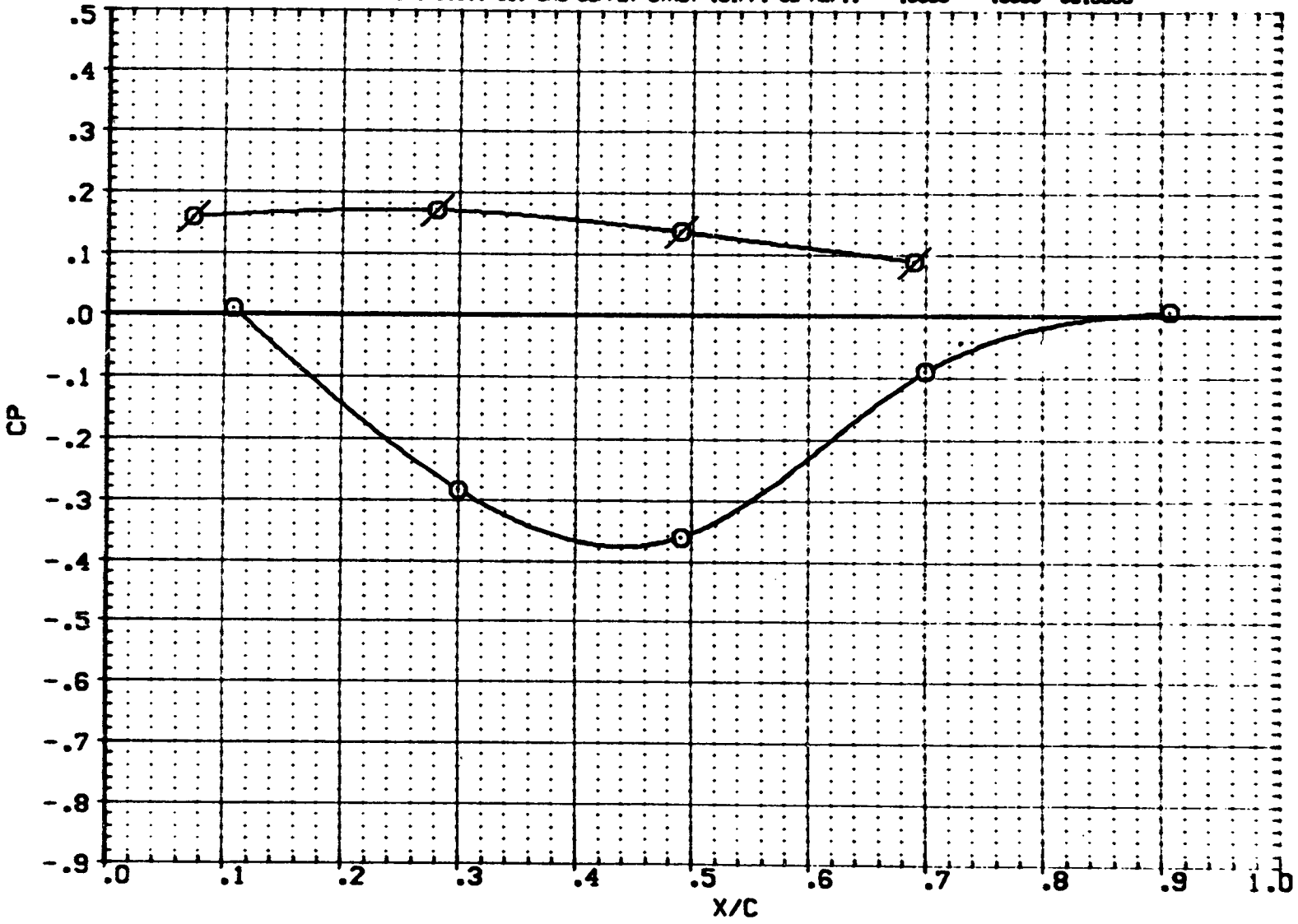
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U8)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(R964L8)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.453

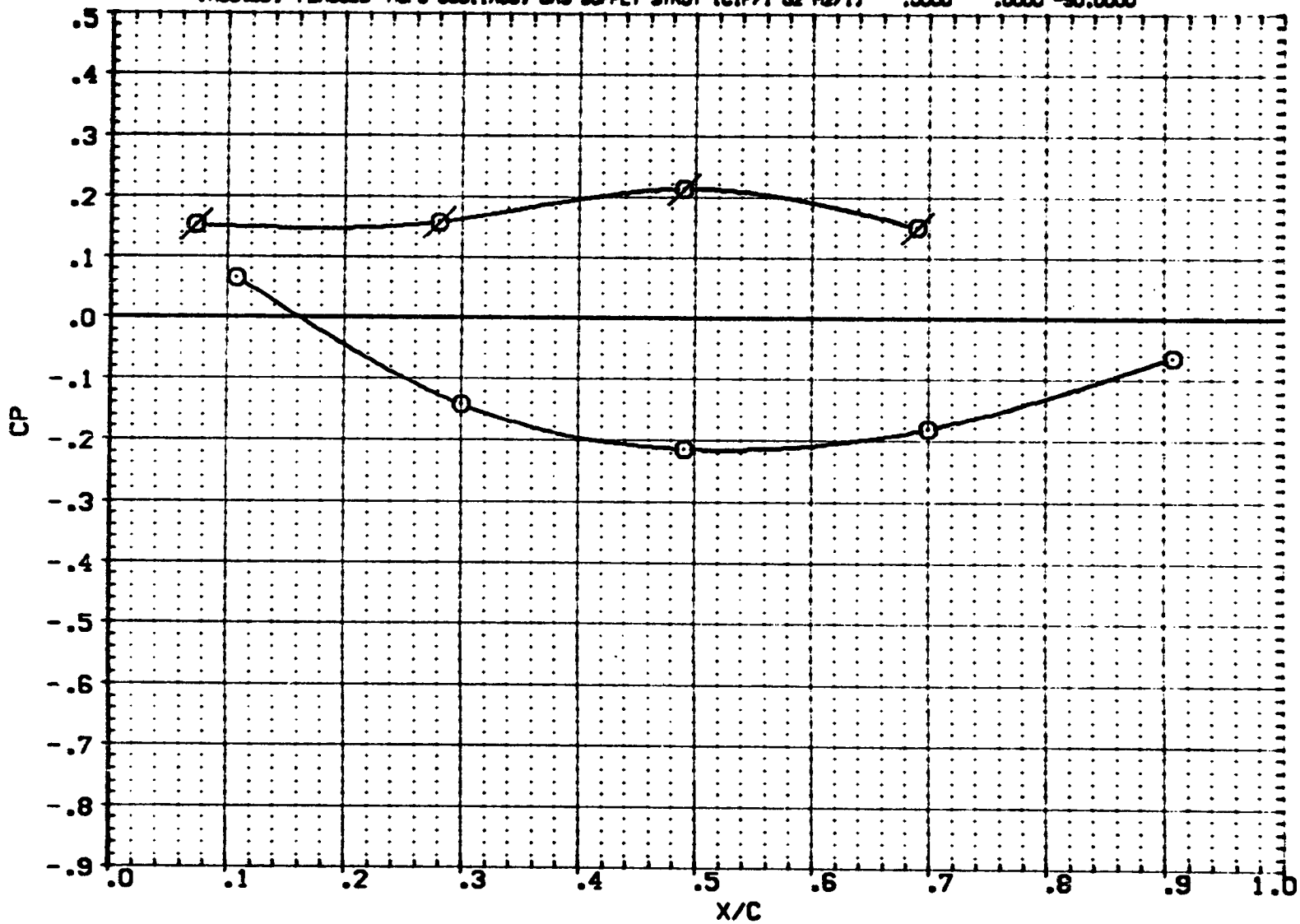
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964UB]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.0000	.0000	-90.0000
[R964LB]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.958

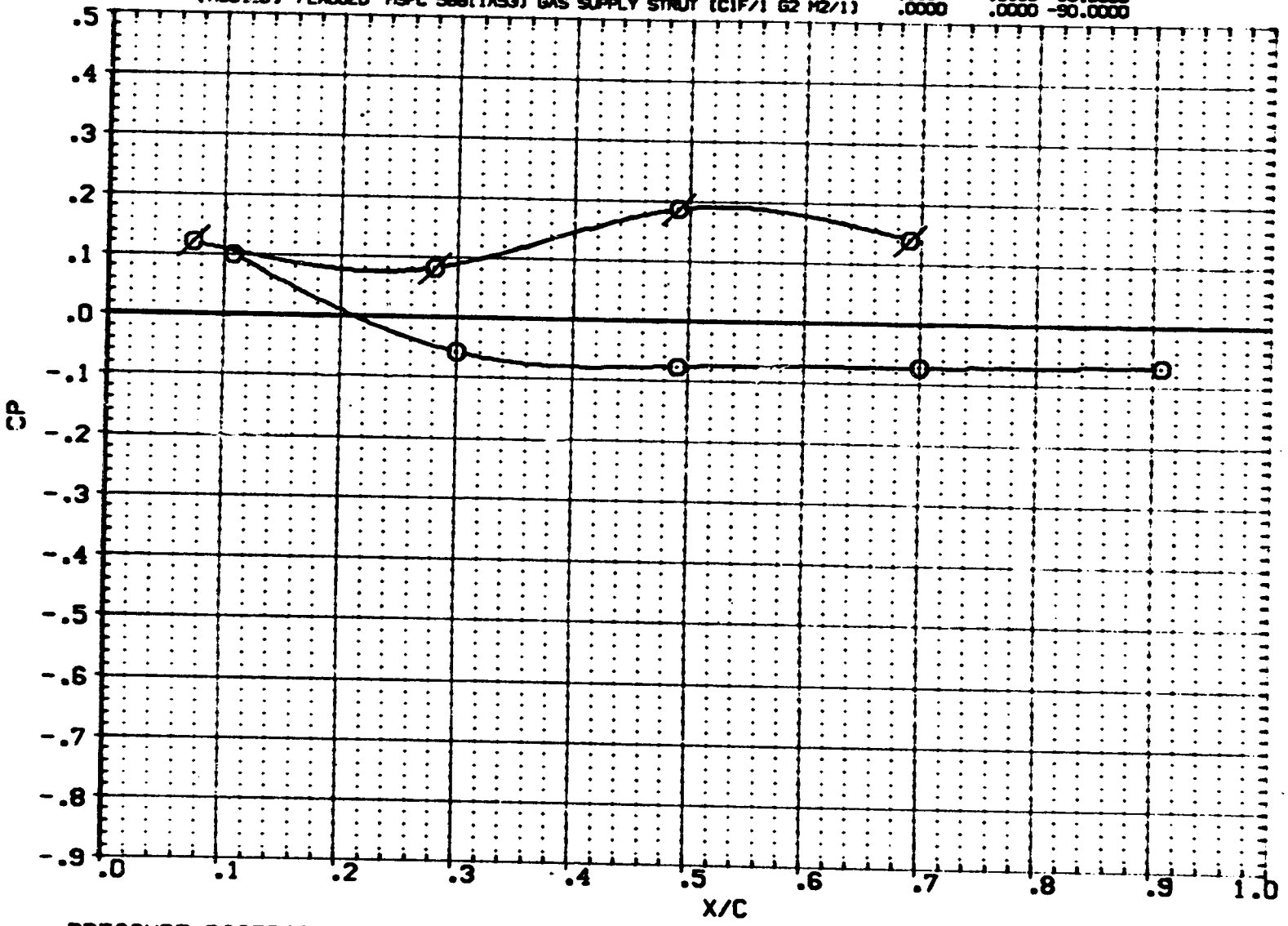
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GALUB)	OPEN	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(R9GALUB)	FLAGGED	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	2.950

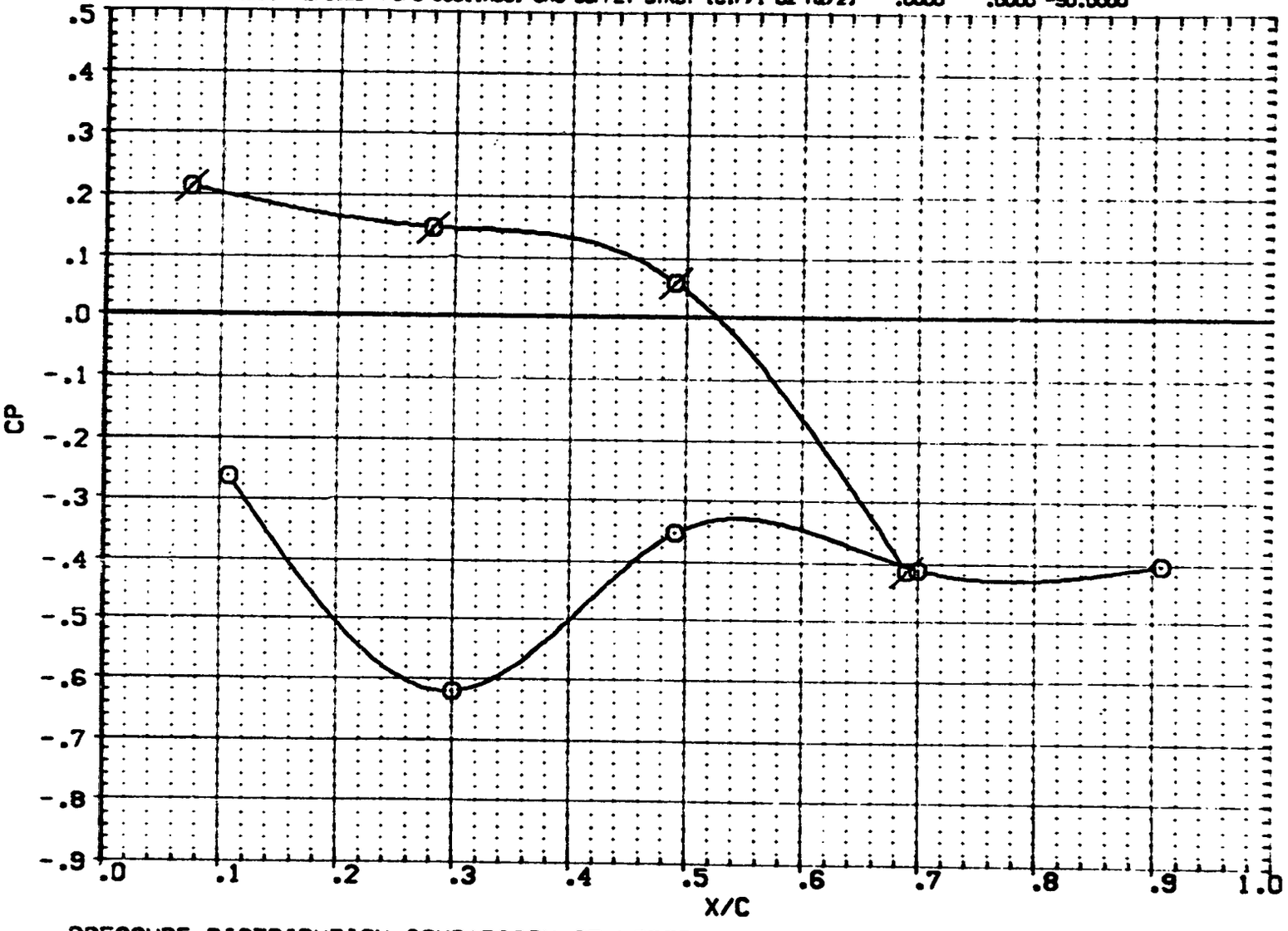
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64UB)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/1)	.0000	.0000	-90.0000
(RS64LB)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER ANC LOWER WING - CHORDWISE

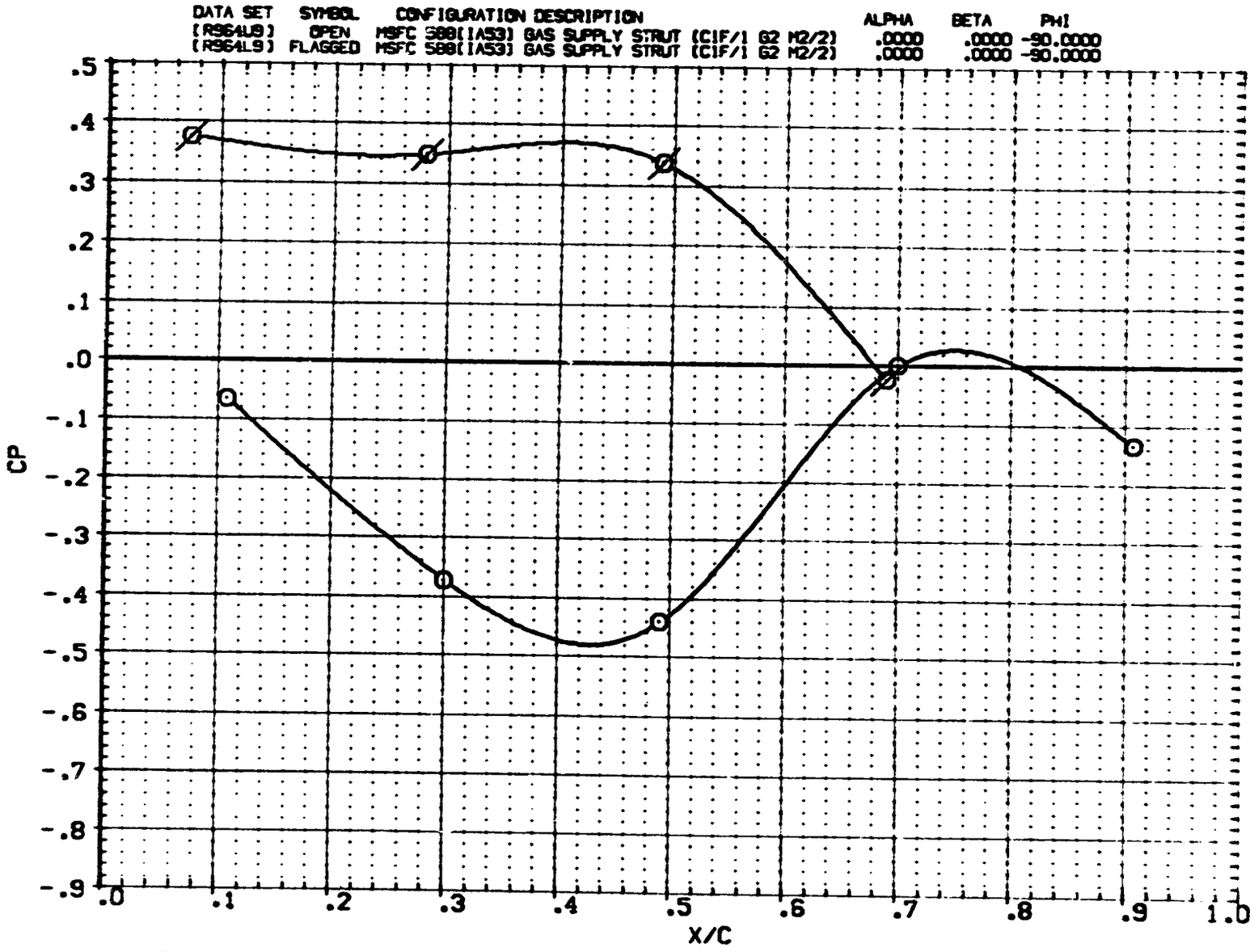
SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	.902

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U9)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 82 M2/2)	.0000	.0000	-90.0000
(R964L9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 82 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

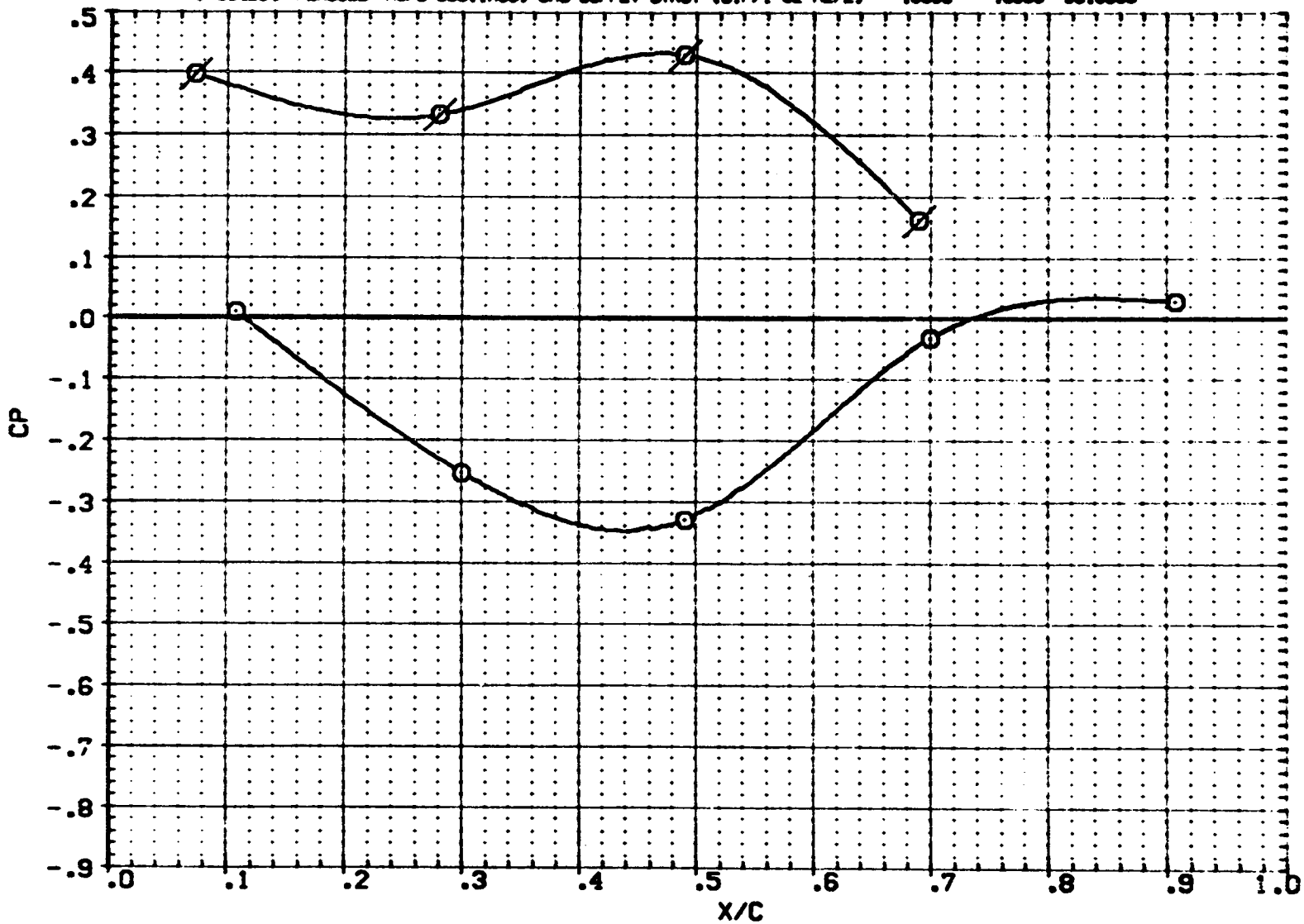
SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.199



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.462

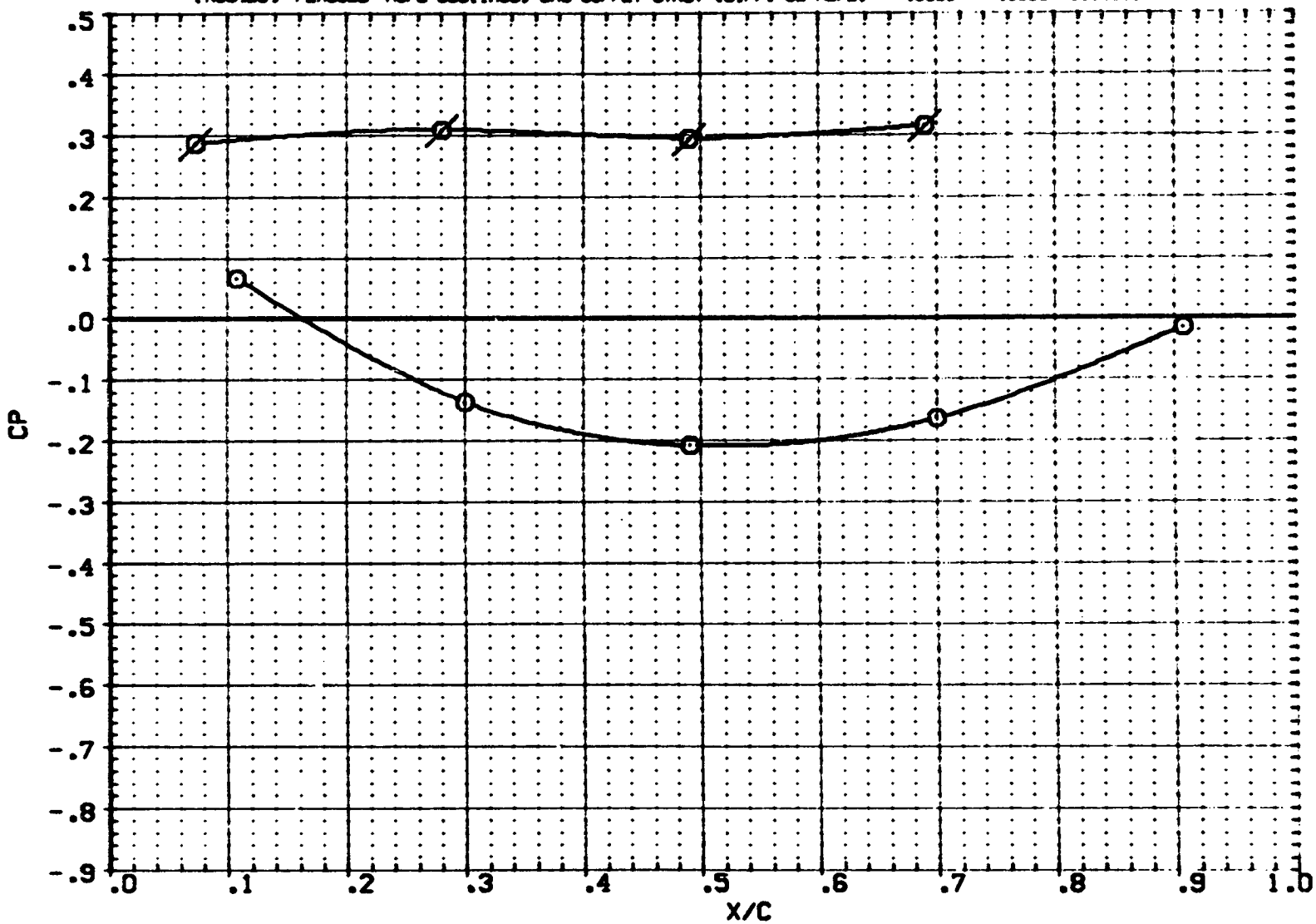
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U9)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000
(R964L9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
O	.511	.000	1.954

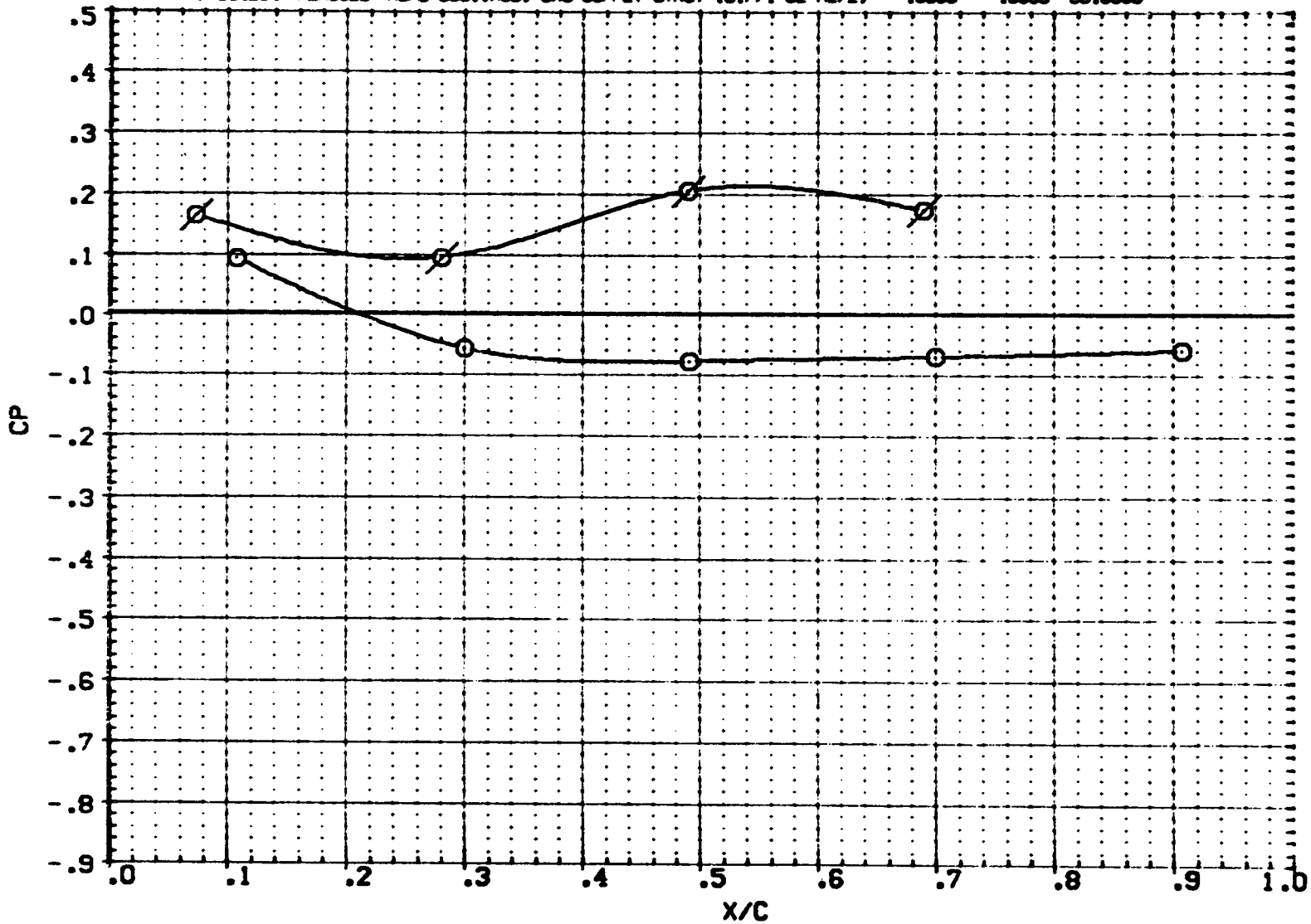
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64U8)	OPEN	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 02 H2/2)	.0000	.0000	-90.0000
(RS64L9)	FLAGGED	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 02 H2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	2Y/B	ALPHA	MACH
○	.511	.000	2.990

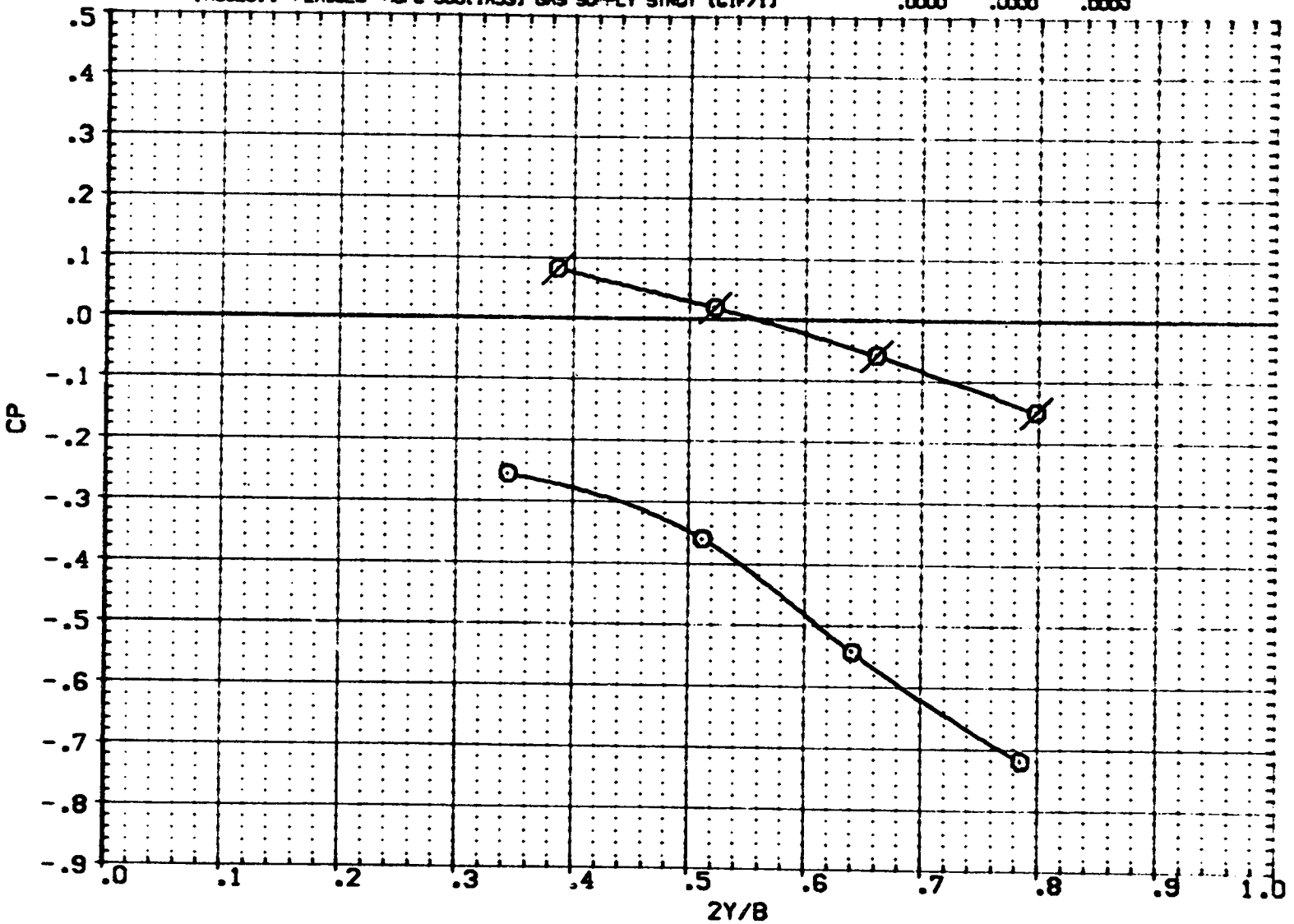
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64U8)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/2)	.0000	.0000	-90.0000
(RS64L9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/2)	.0000	.0000	-90.0000



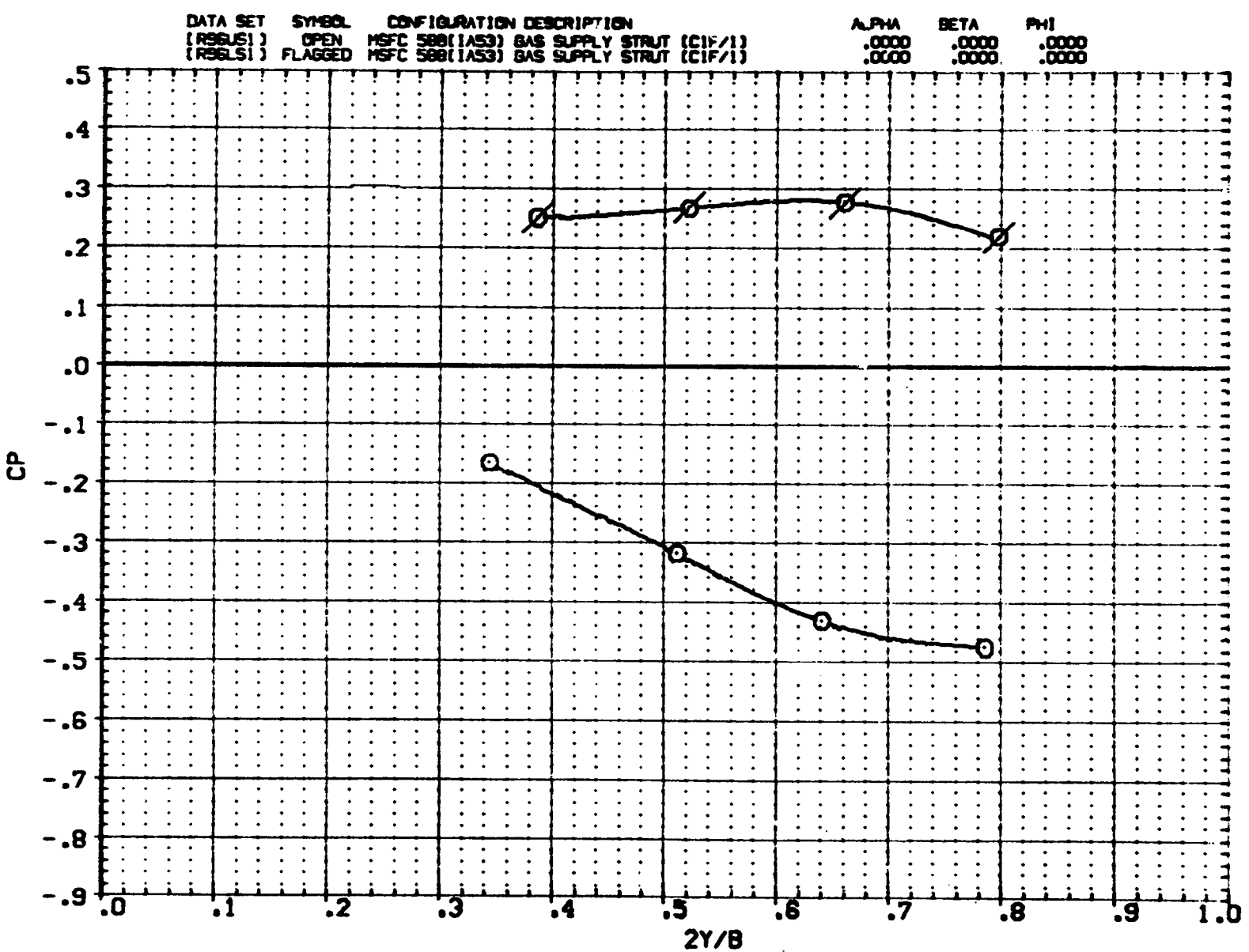
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - CHORDWISE

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.905

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96U8]]	OPEN	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
[R96LS]]	FLAGGED	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000

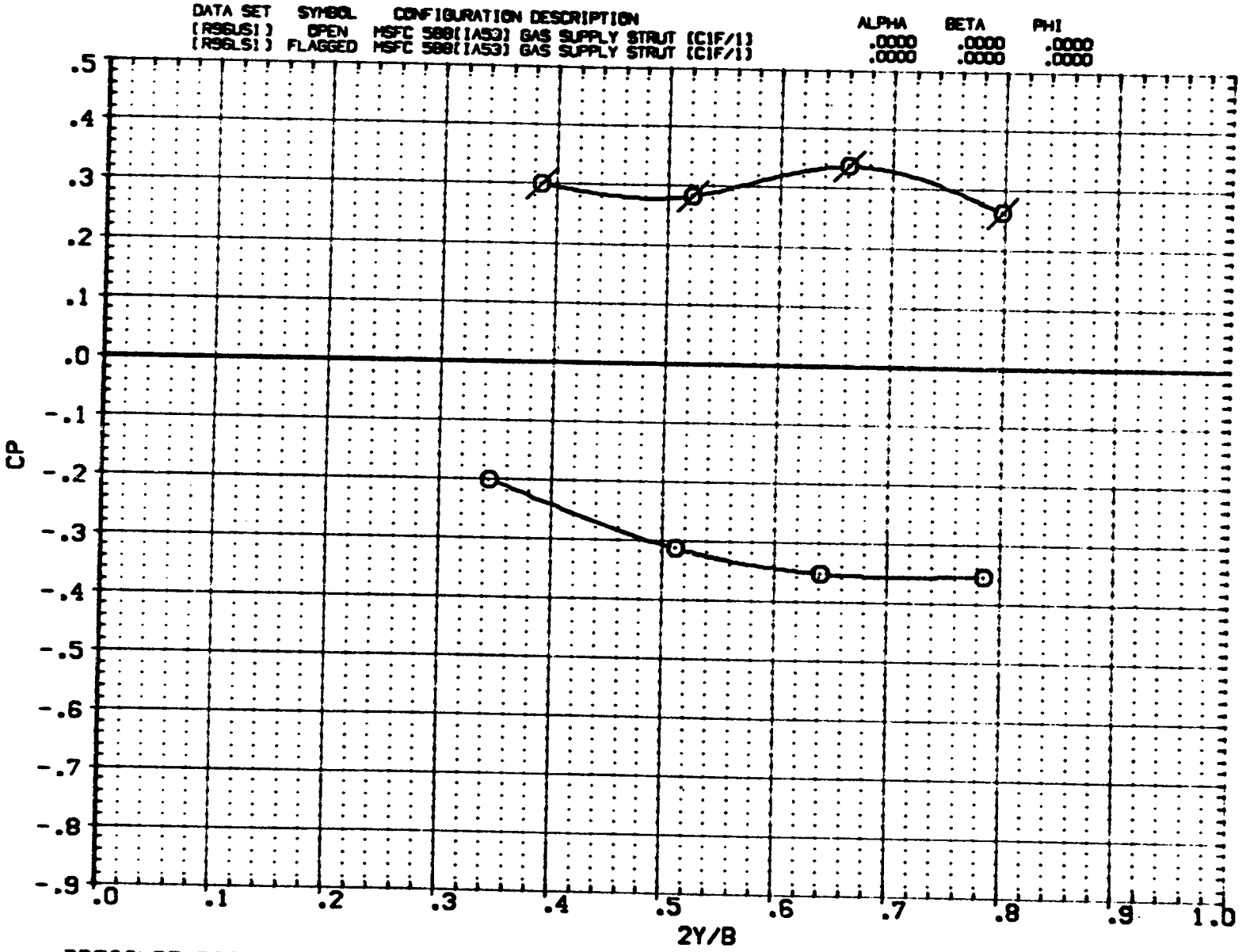


PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

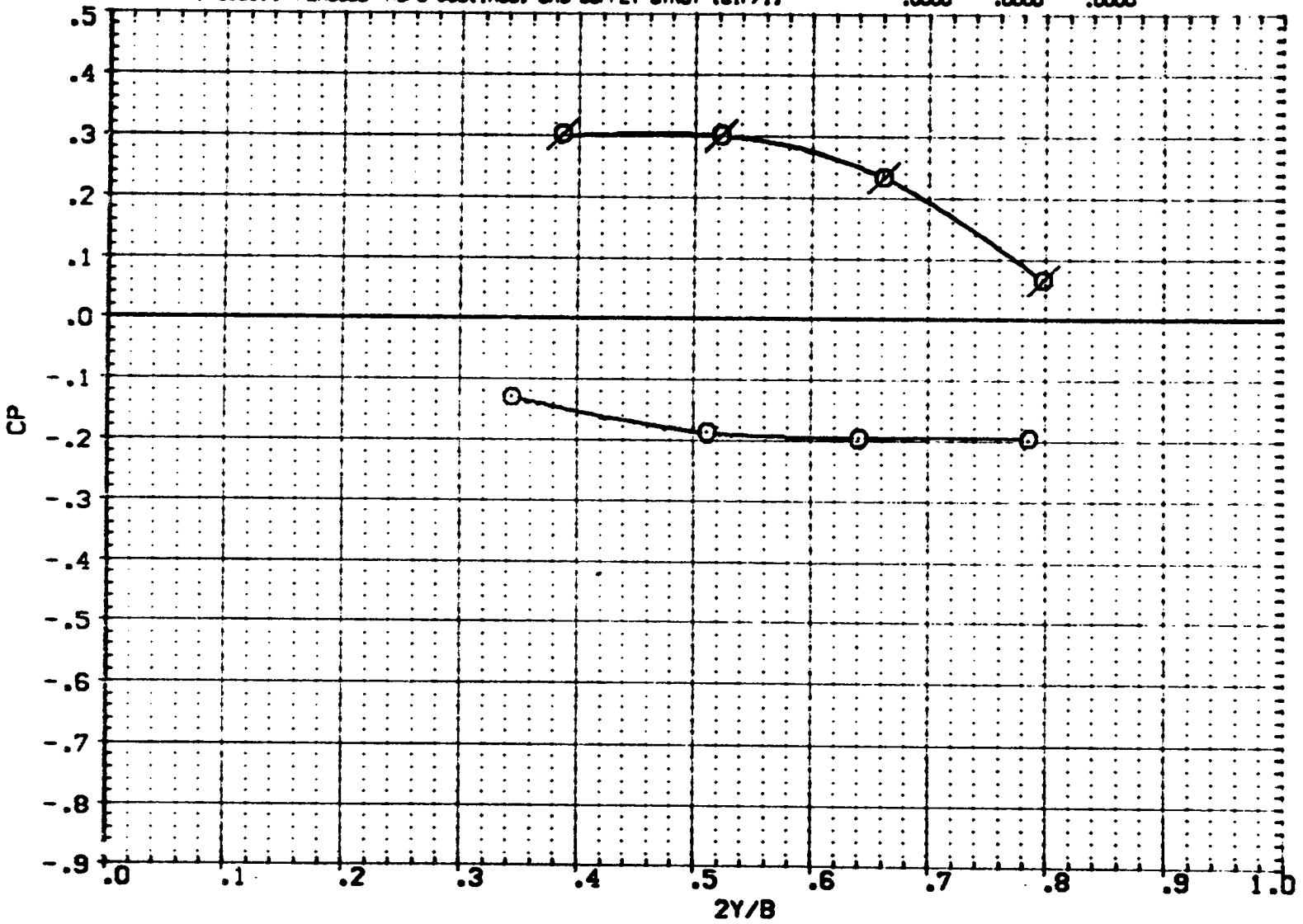
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.456



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
○	.190	.000	1.898

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000
(R96LS1)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.0000	.0000	.0000



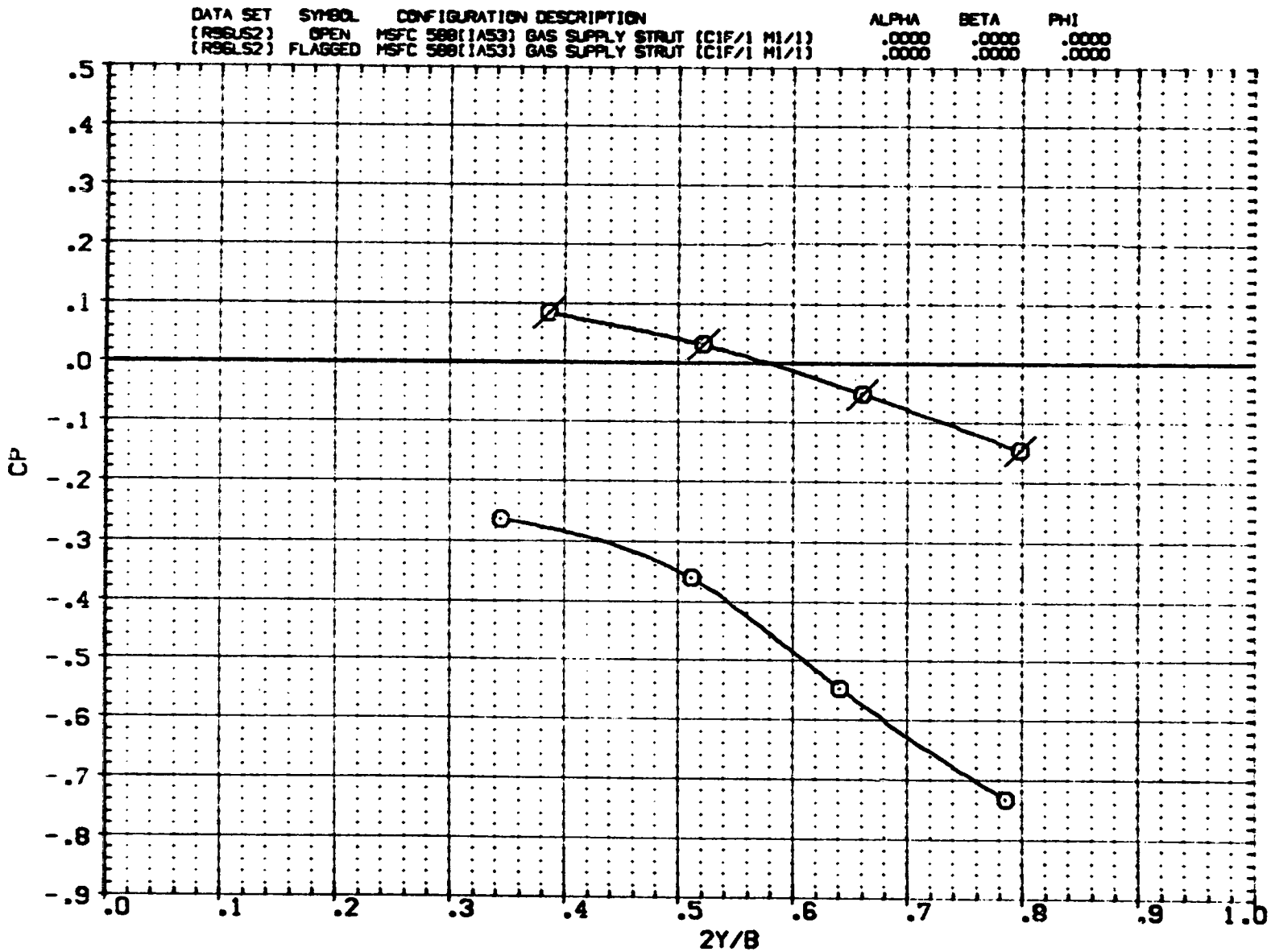
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[RSGUS1]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.0000	.0000	.0000
[RSGLS1]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.0000	.0000	.0000

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

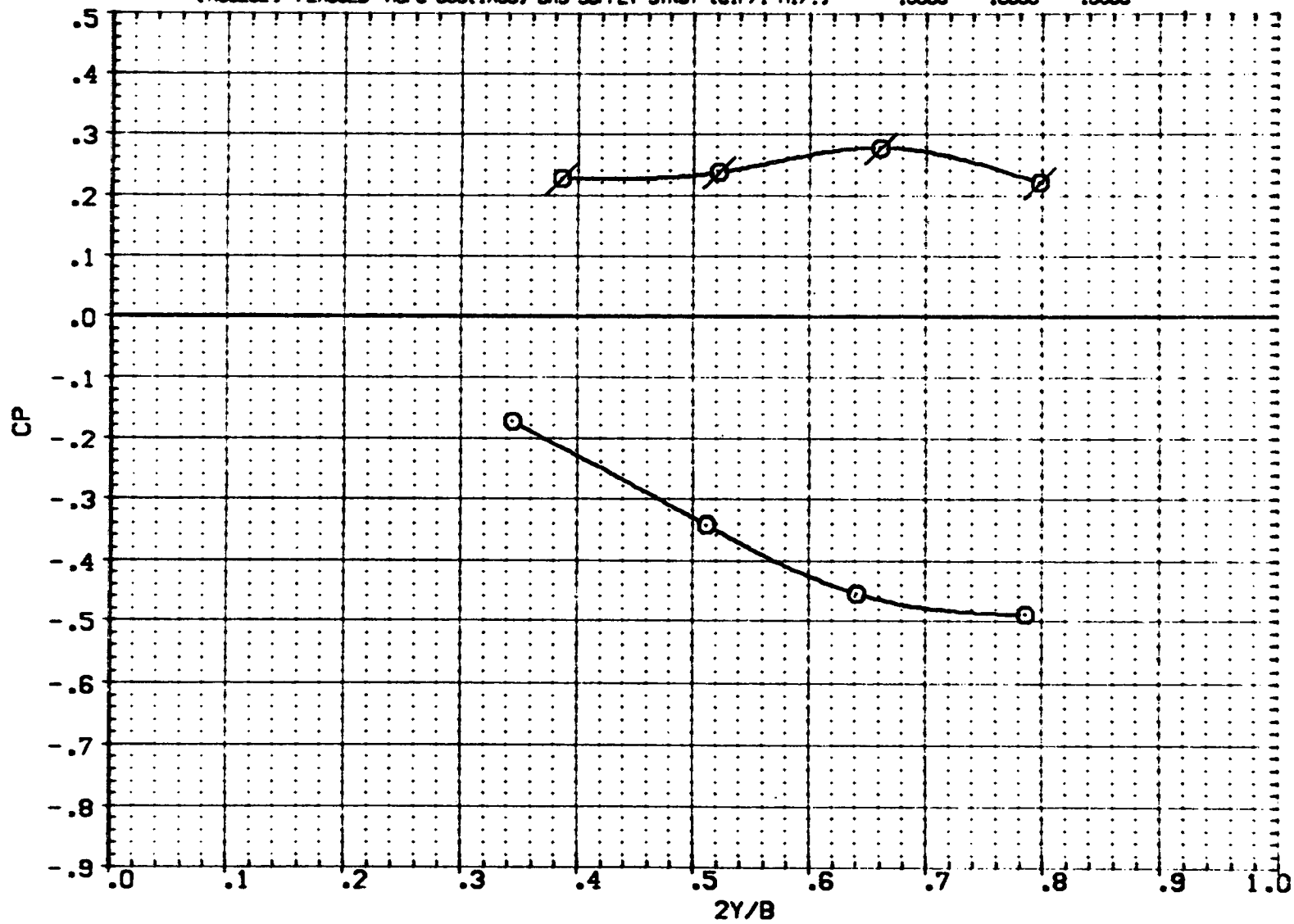
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.905



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.201

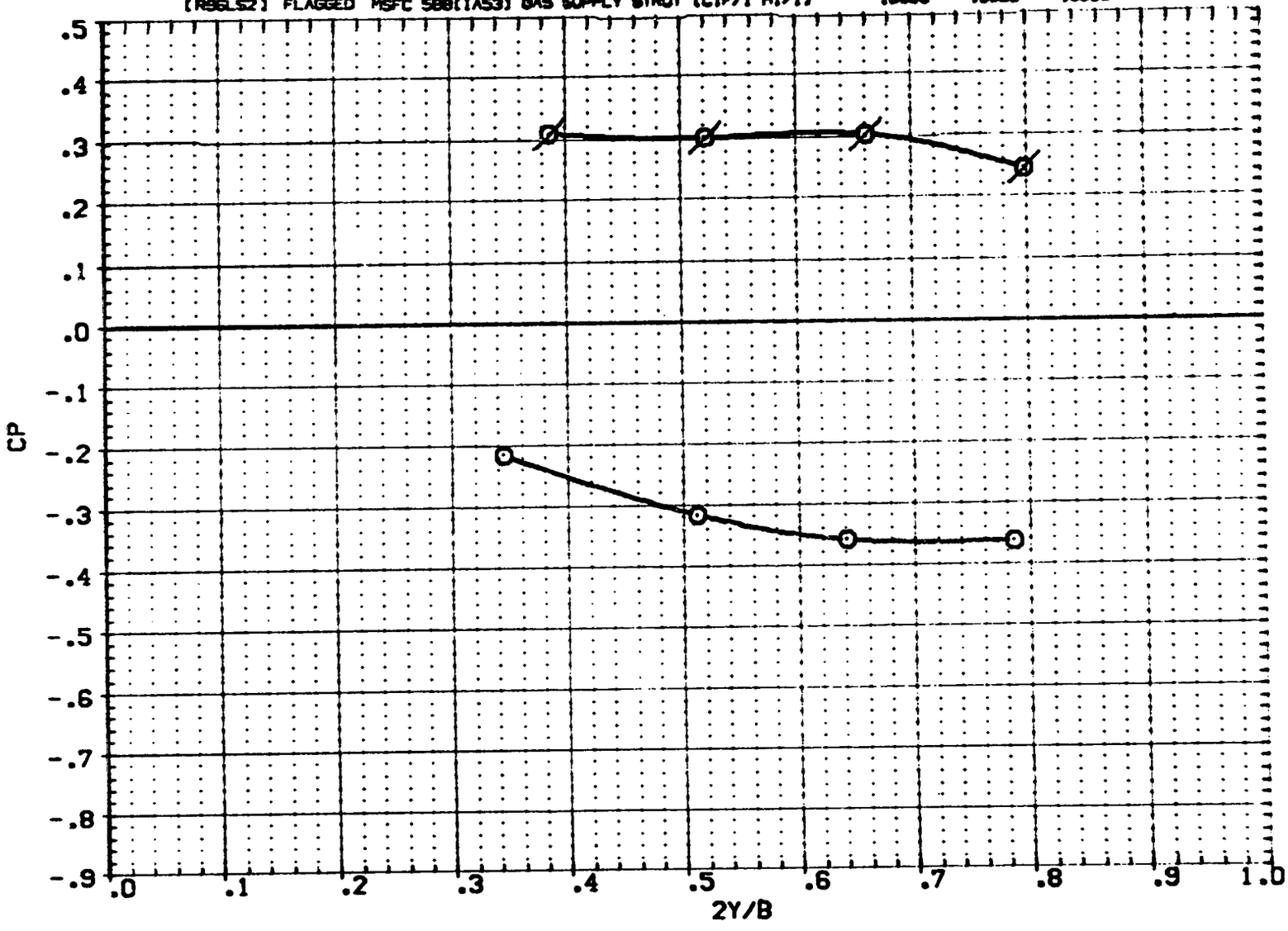
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS2)	OPEN	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
(R9GLS2)	FLAGGED	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
○	.490	.000	1.464

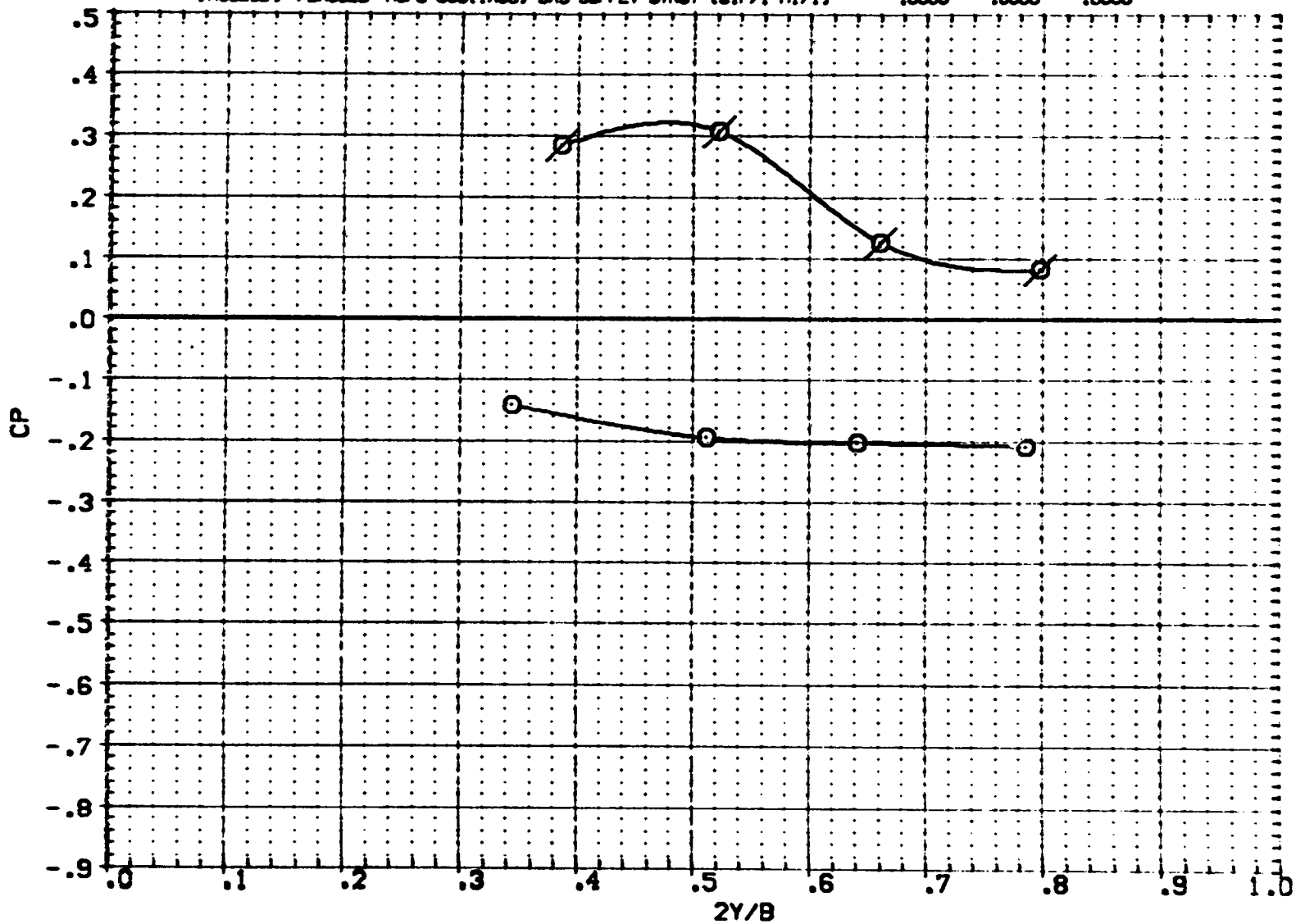
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R98US2]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
[R98LS2]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.961

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS2)	OPEN	MSFC 588(IAS3) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
(R9GLS2)	FLAGGED	MSFC 588(IAS3) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

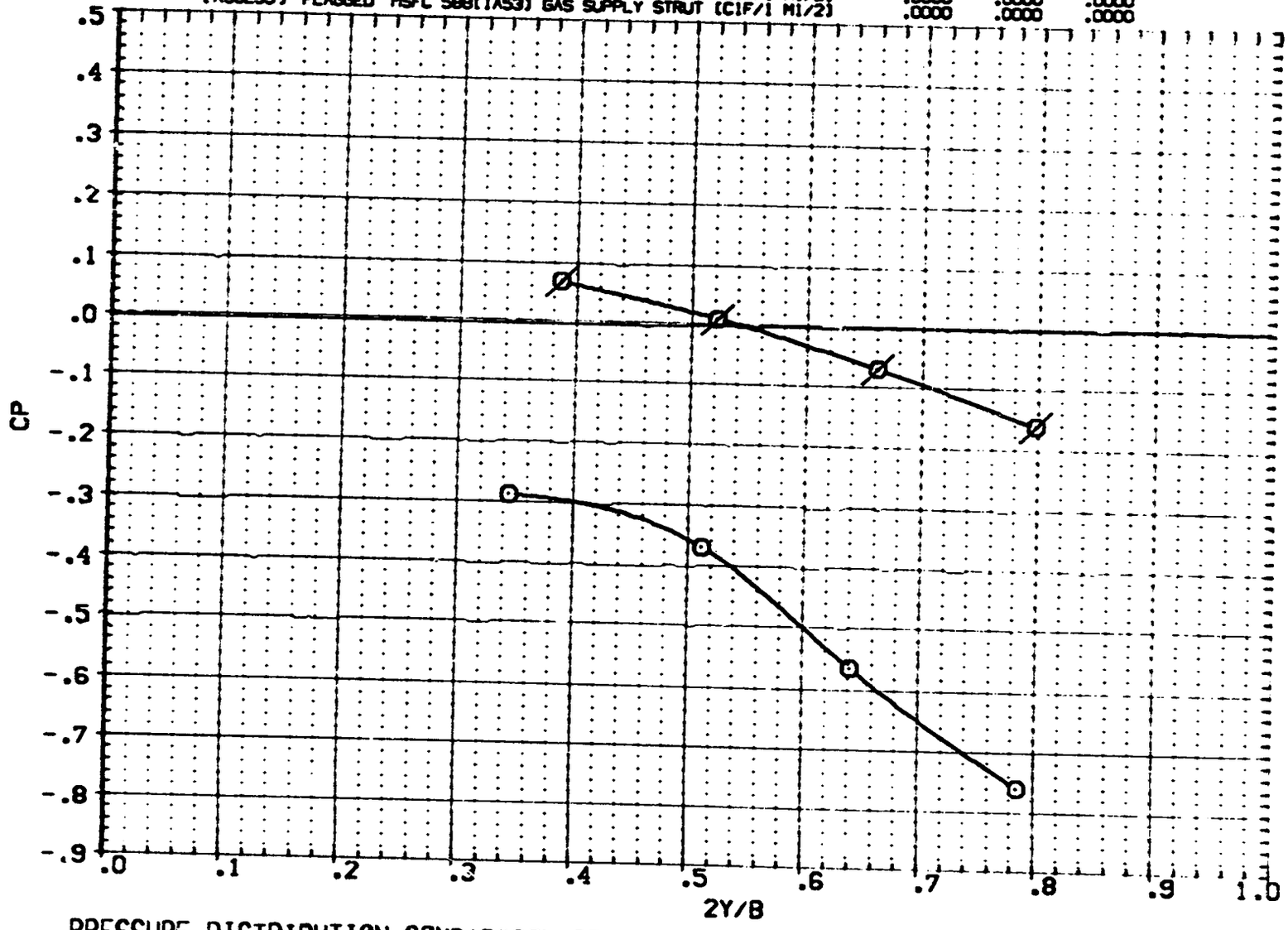
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.990

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96UB2)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000
(R96LS2)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.0000	.0000	.0000

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.901

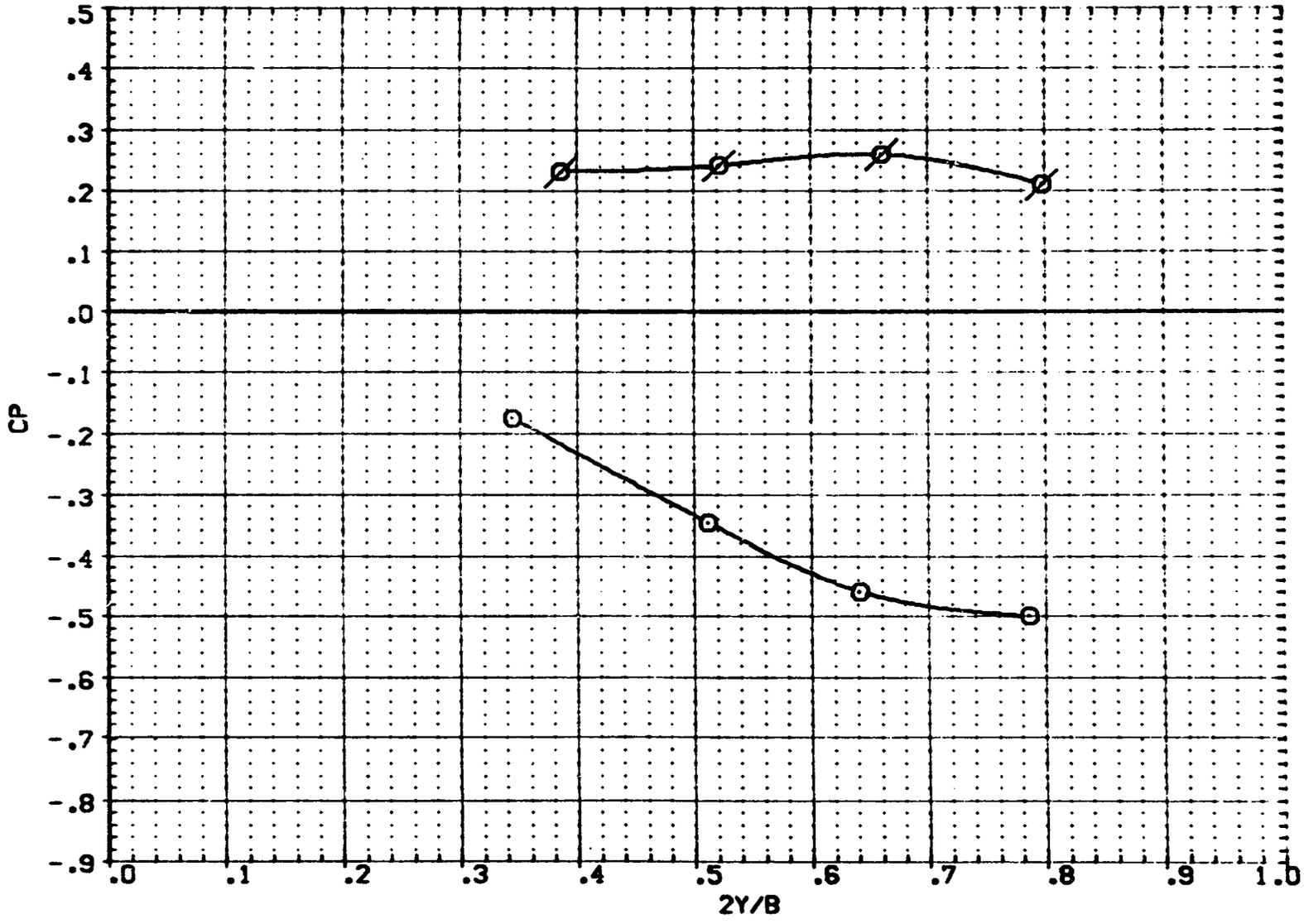
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US3)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000
(R96LS3)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.198

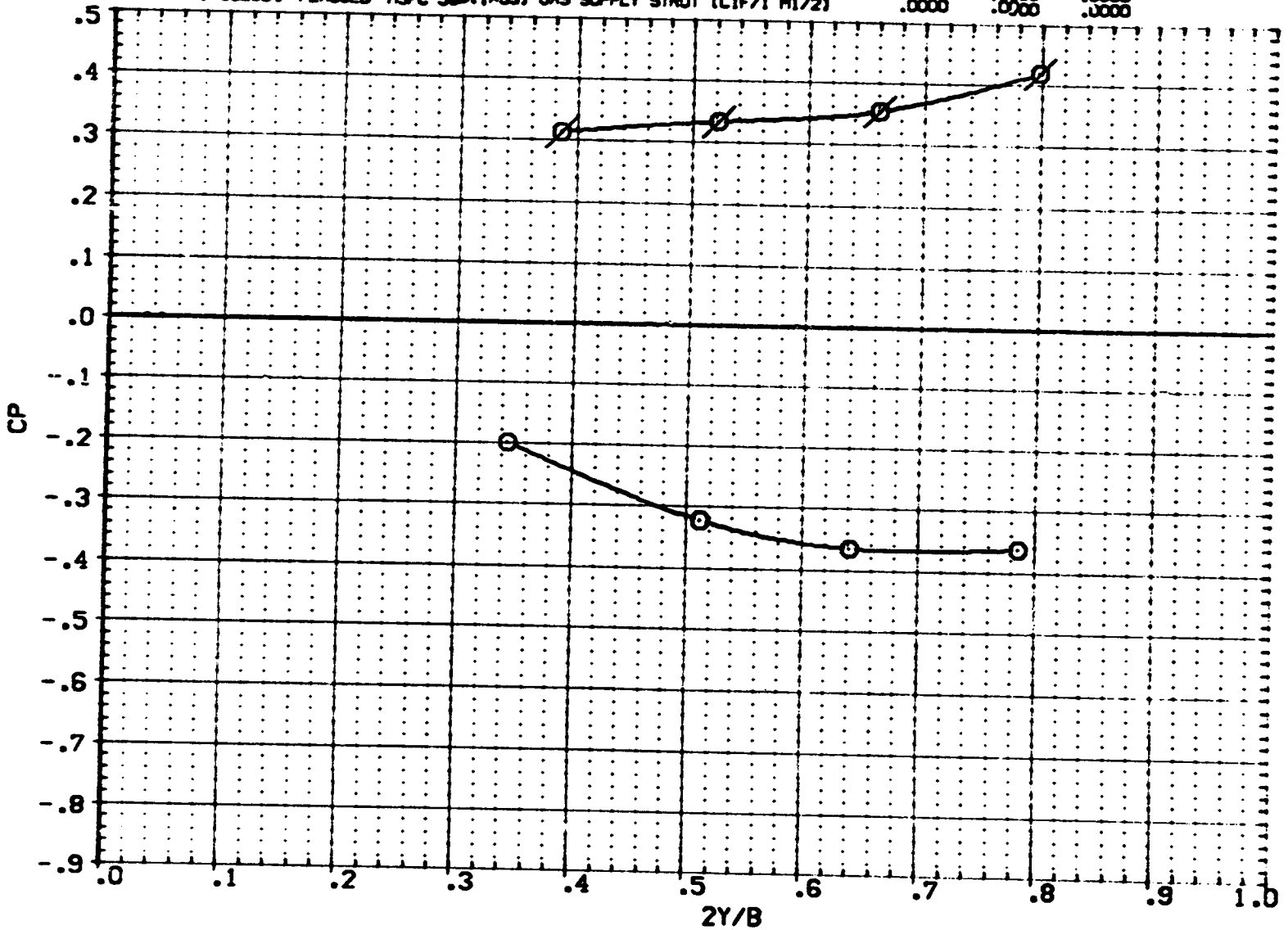
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R9GUS3]	OPEN	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000
[R9GLS3]	FLAGGED	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
○	.490	.000	1.456

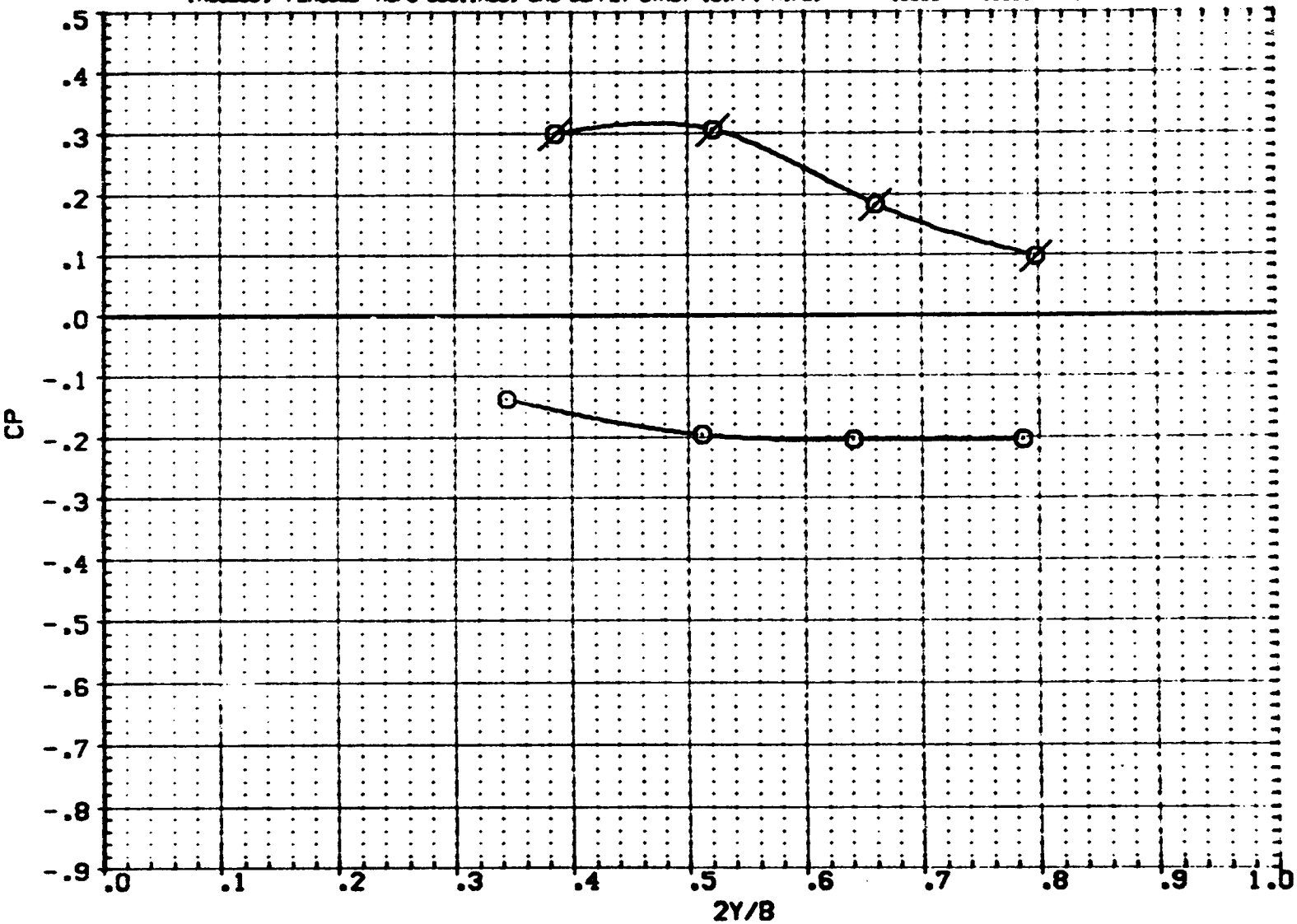
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R5GUS3]	OPEN	MSFC 588[(A53) GAS SUPPLY STRUT [(E/[M1/3]	.0000	.0000	.0000
[R5GLS3]	FLAGGED	MSFC 588[(A63) GAS SUPPLY STRUT [(E/[M1/2]	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.952

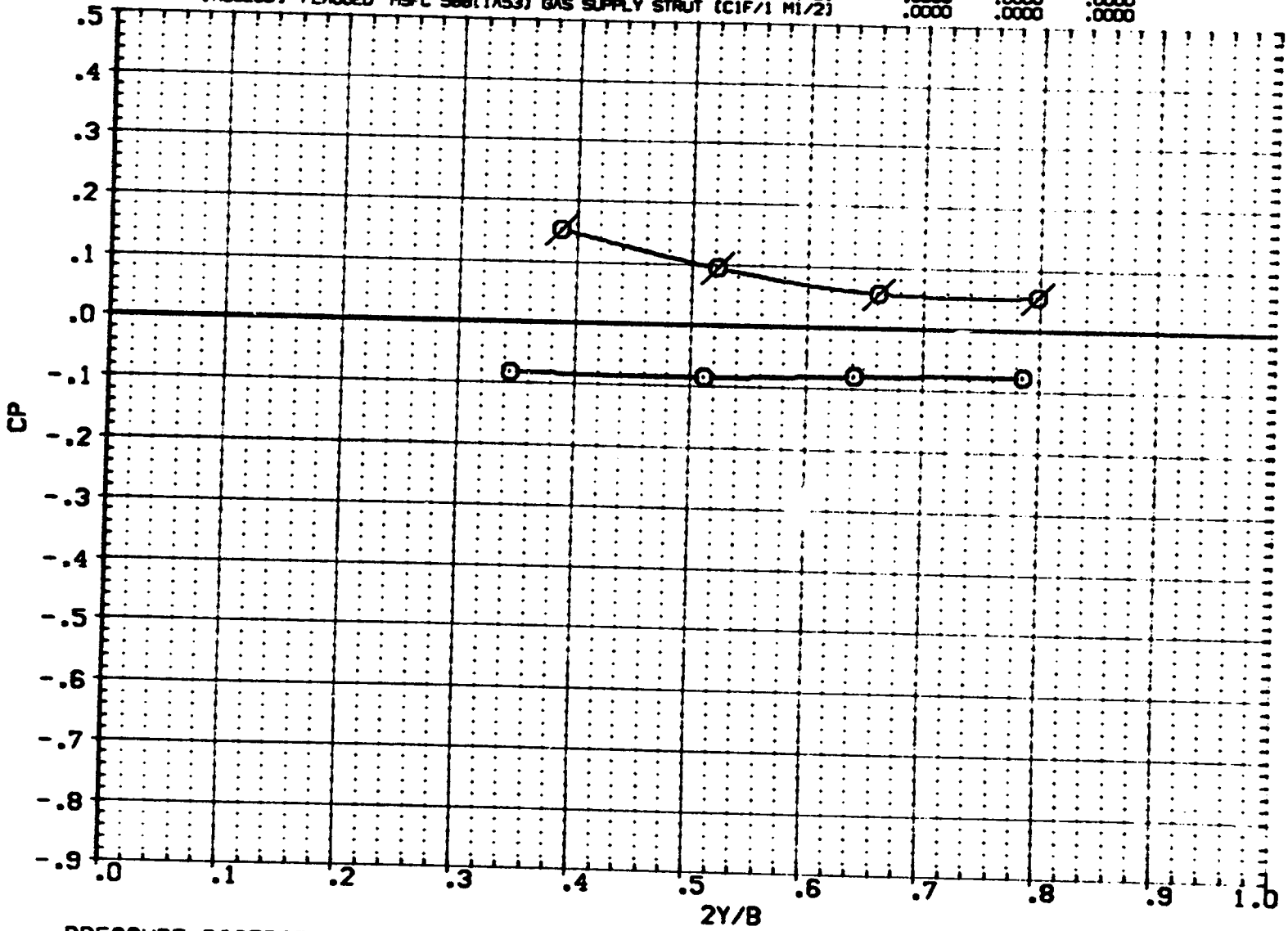
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US3)	OPEN	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/) M1/2)	.0000	.0000	.0000
(R96LS3)	FLAGGED	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/) M1/2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.990	.000	2.980

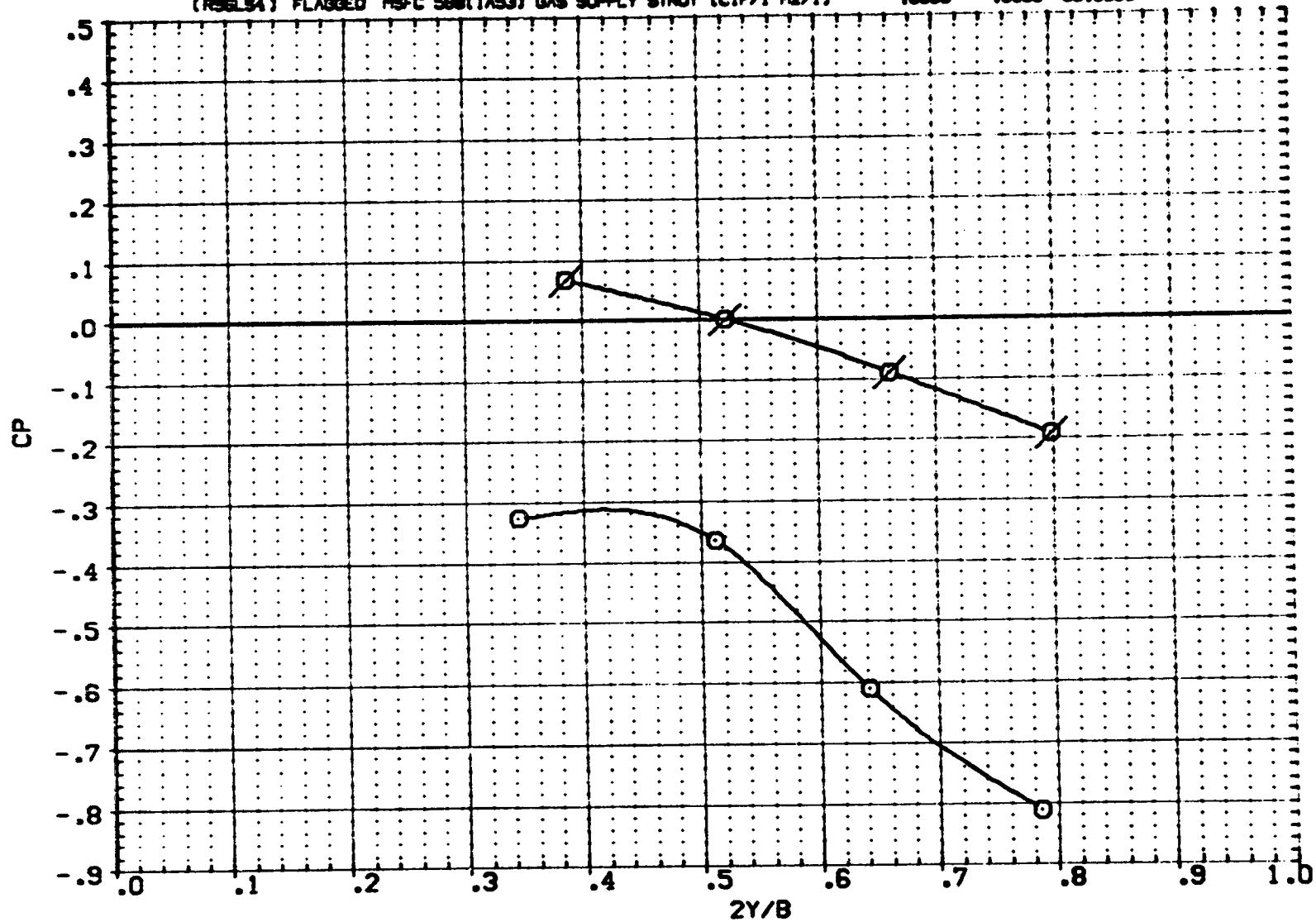
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US3)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000
(R96LS3)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.897

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GLS4)	OPEN	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000
(R9GLS4)	FLAGGED	MSFC 588((A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000



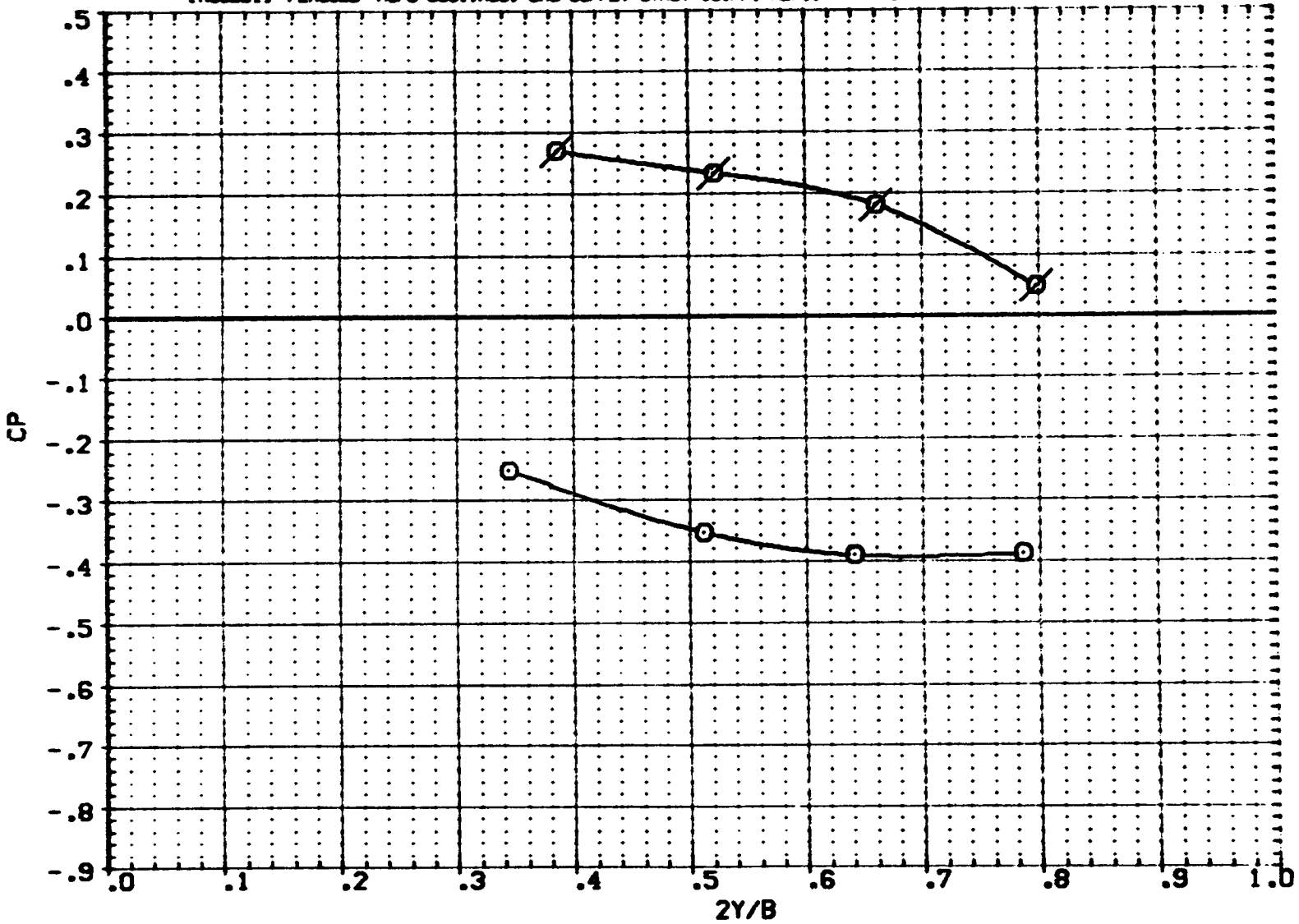
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.207

PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.484

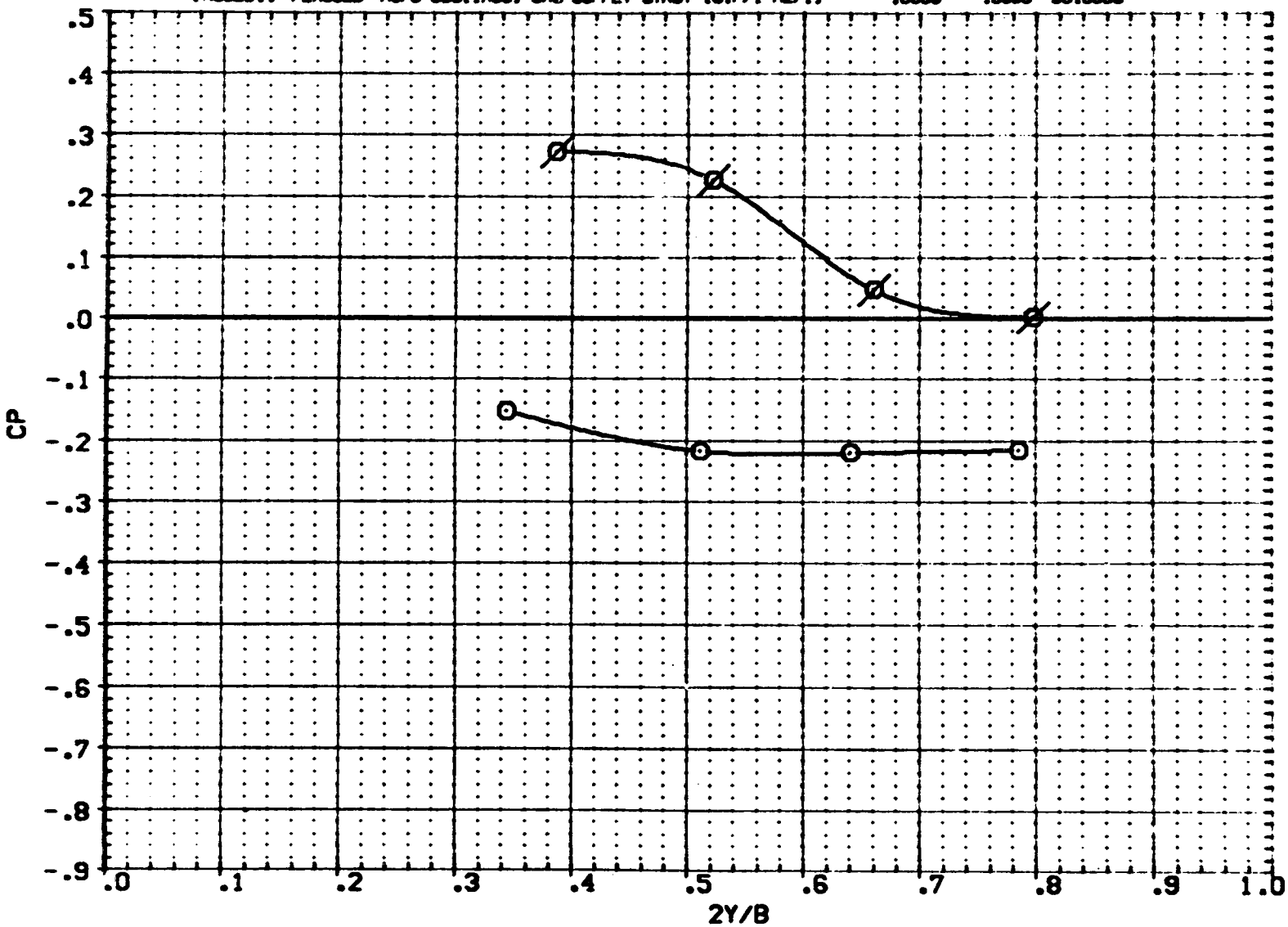
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS4)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000
(R9GLS4)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.950

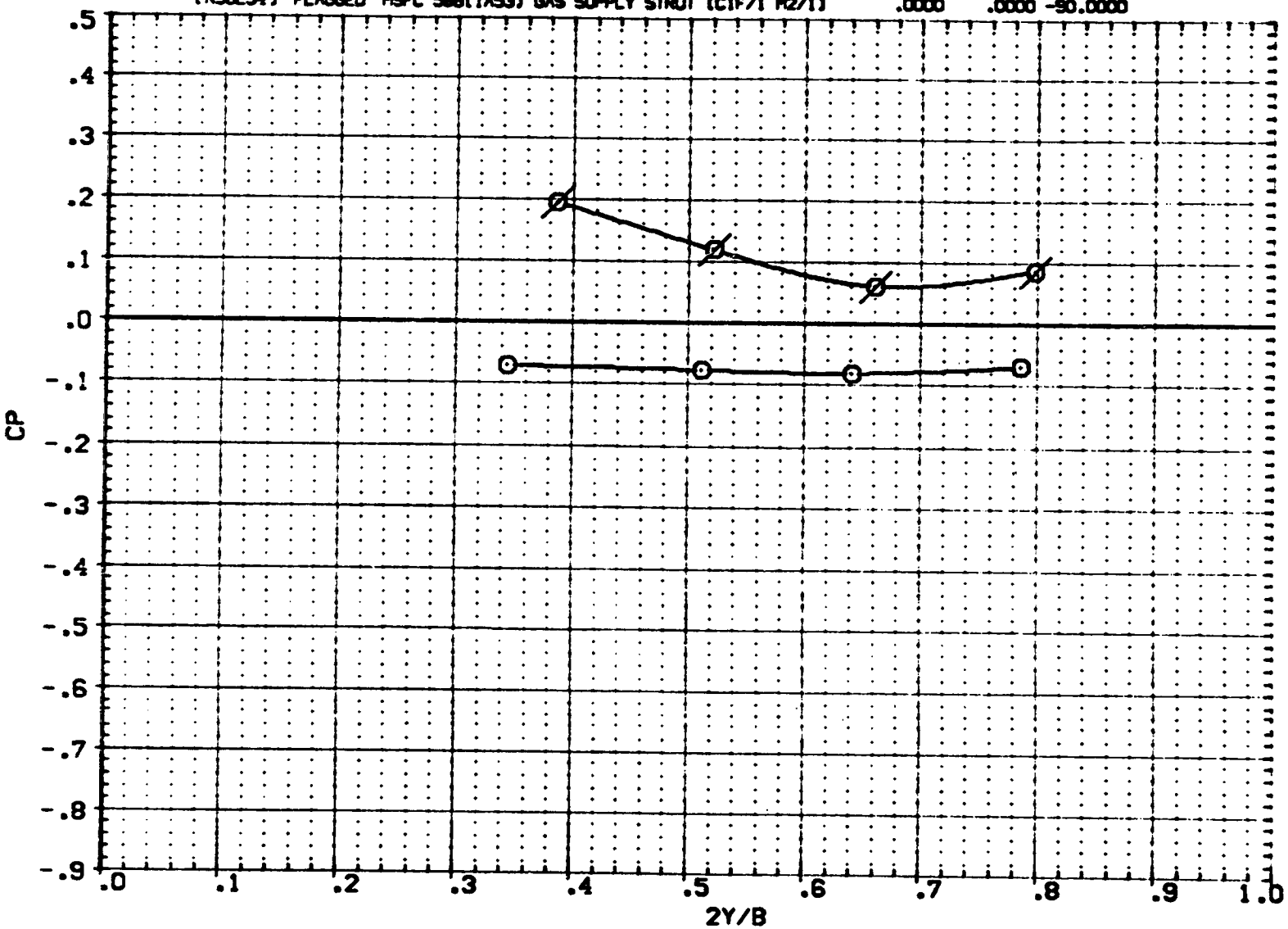
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS4)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000
(R9GLS4)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.990

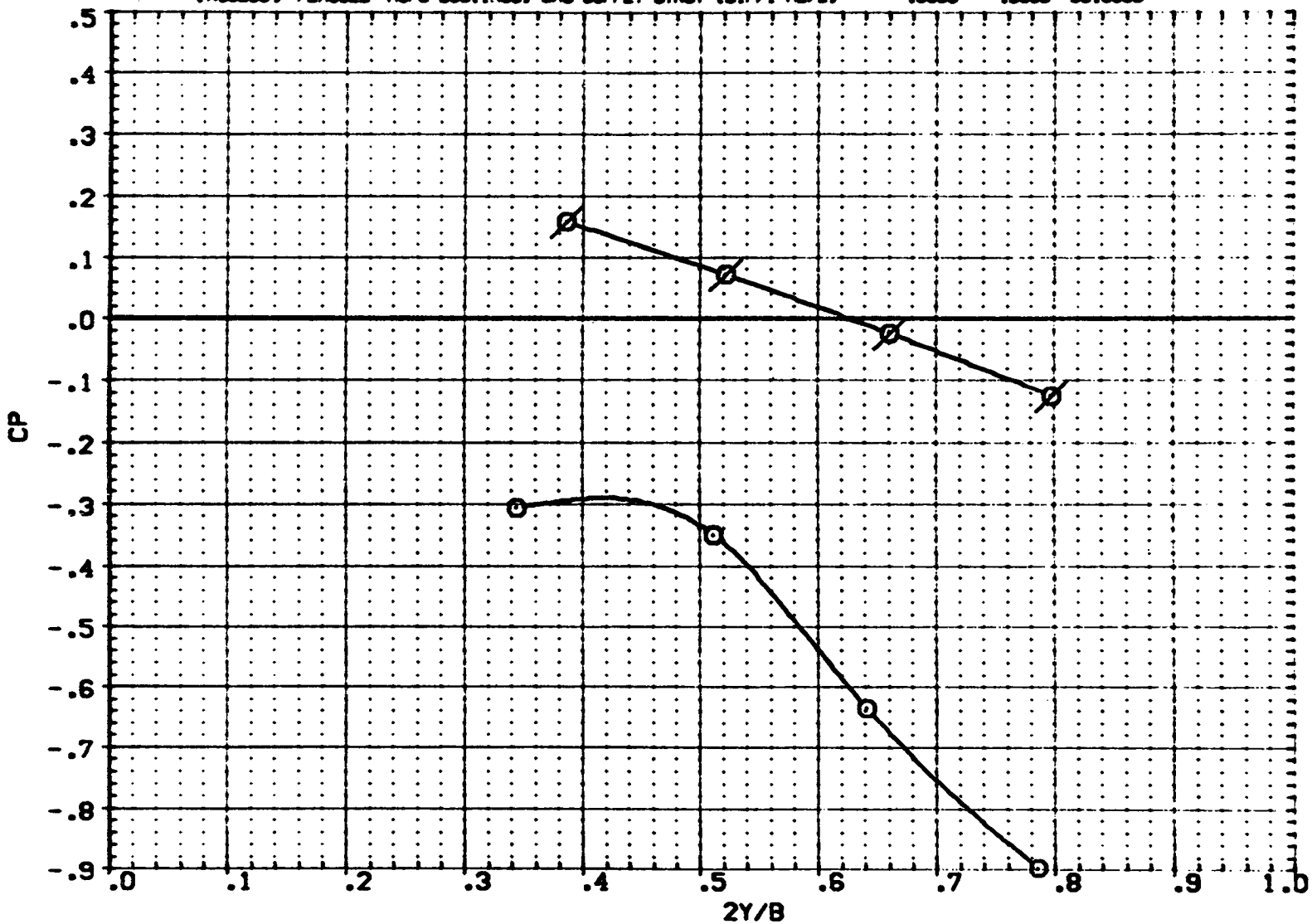
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US4)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000
(R96LS4)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

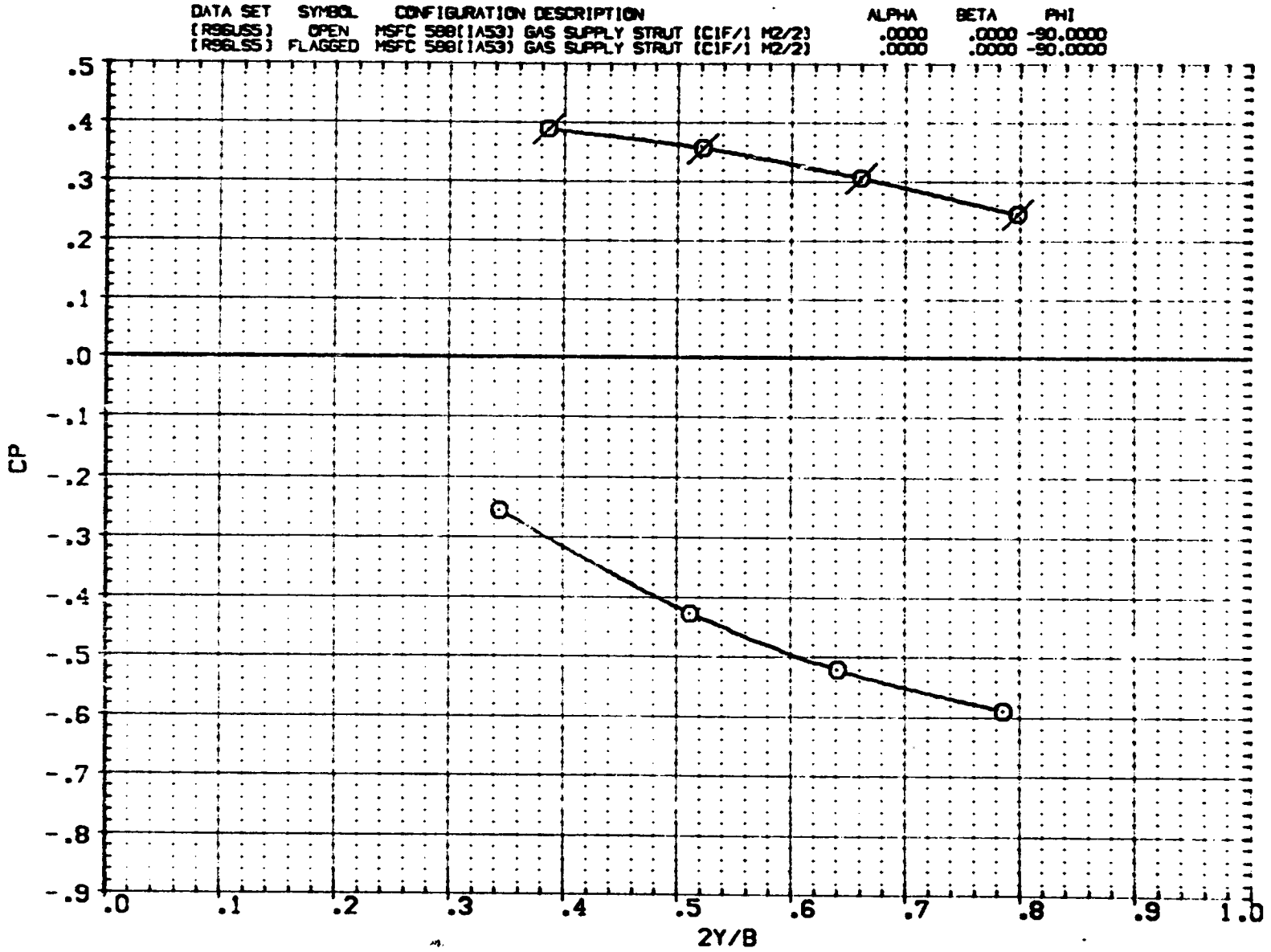
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.902

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96USS)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.0000	.0000	-90.0000
(R96LSS)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.0000	.0000	-90.0000



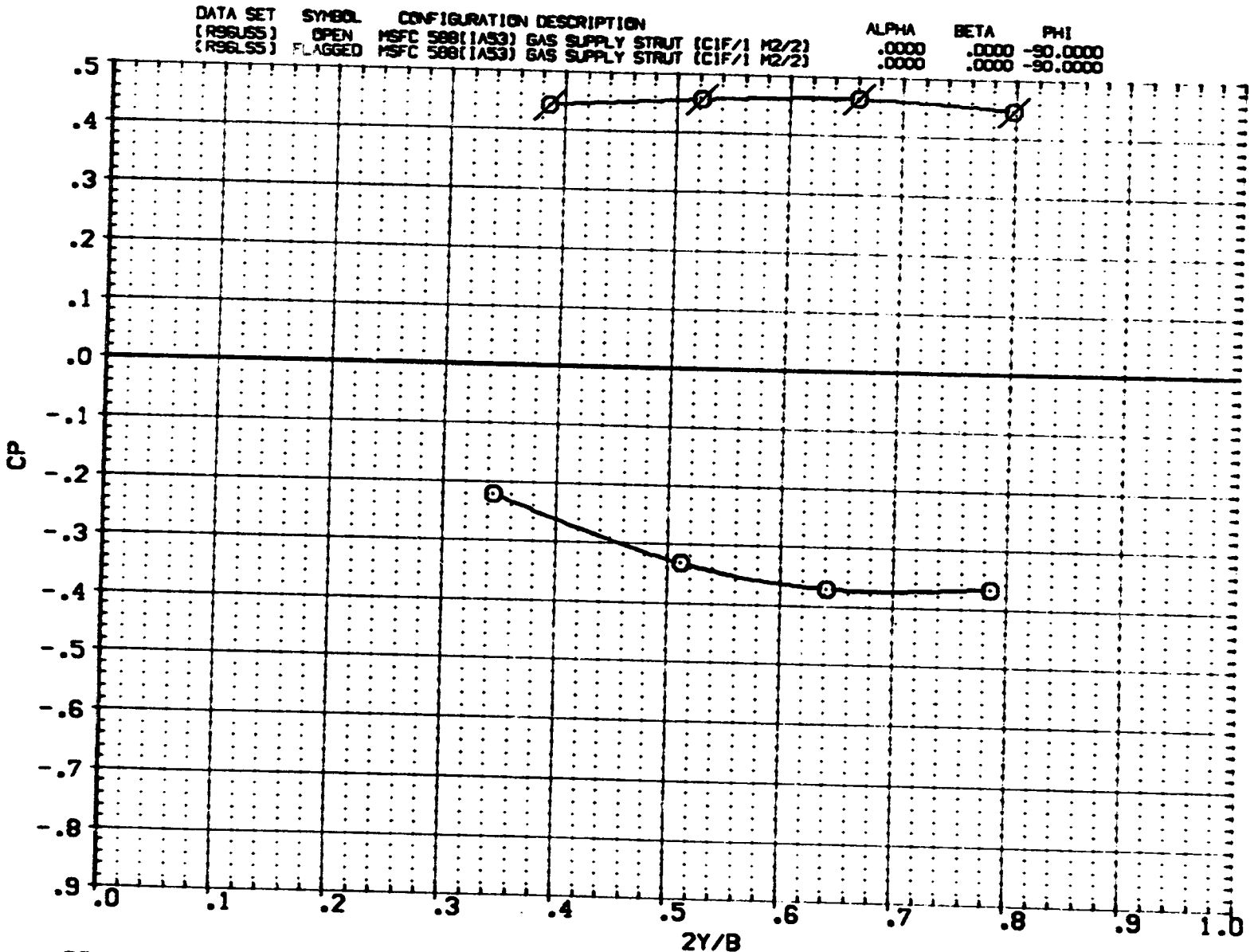
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.199



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

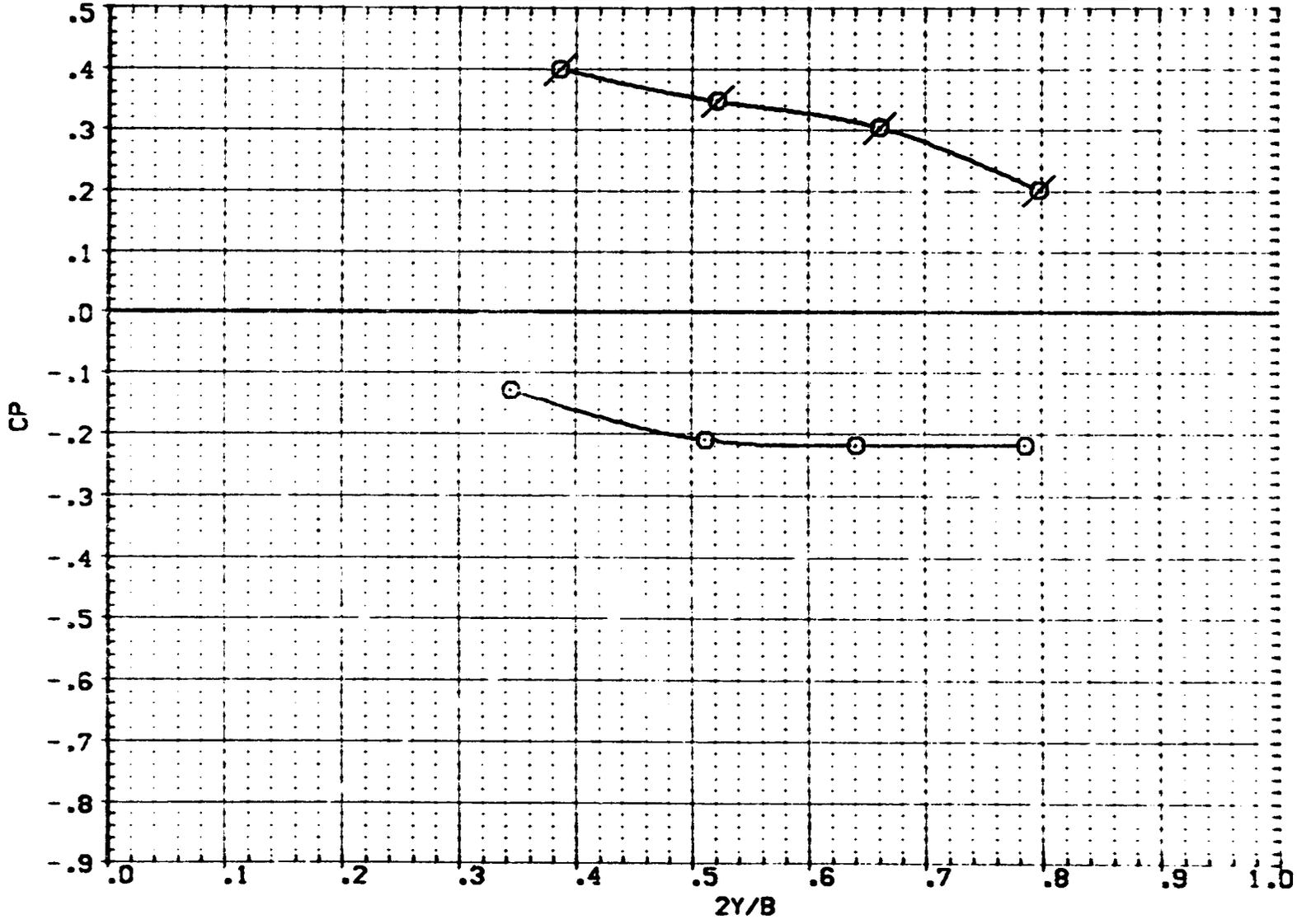
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.457



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.949

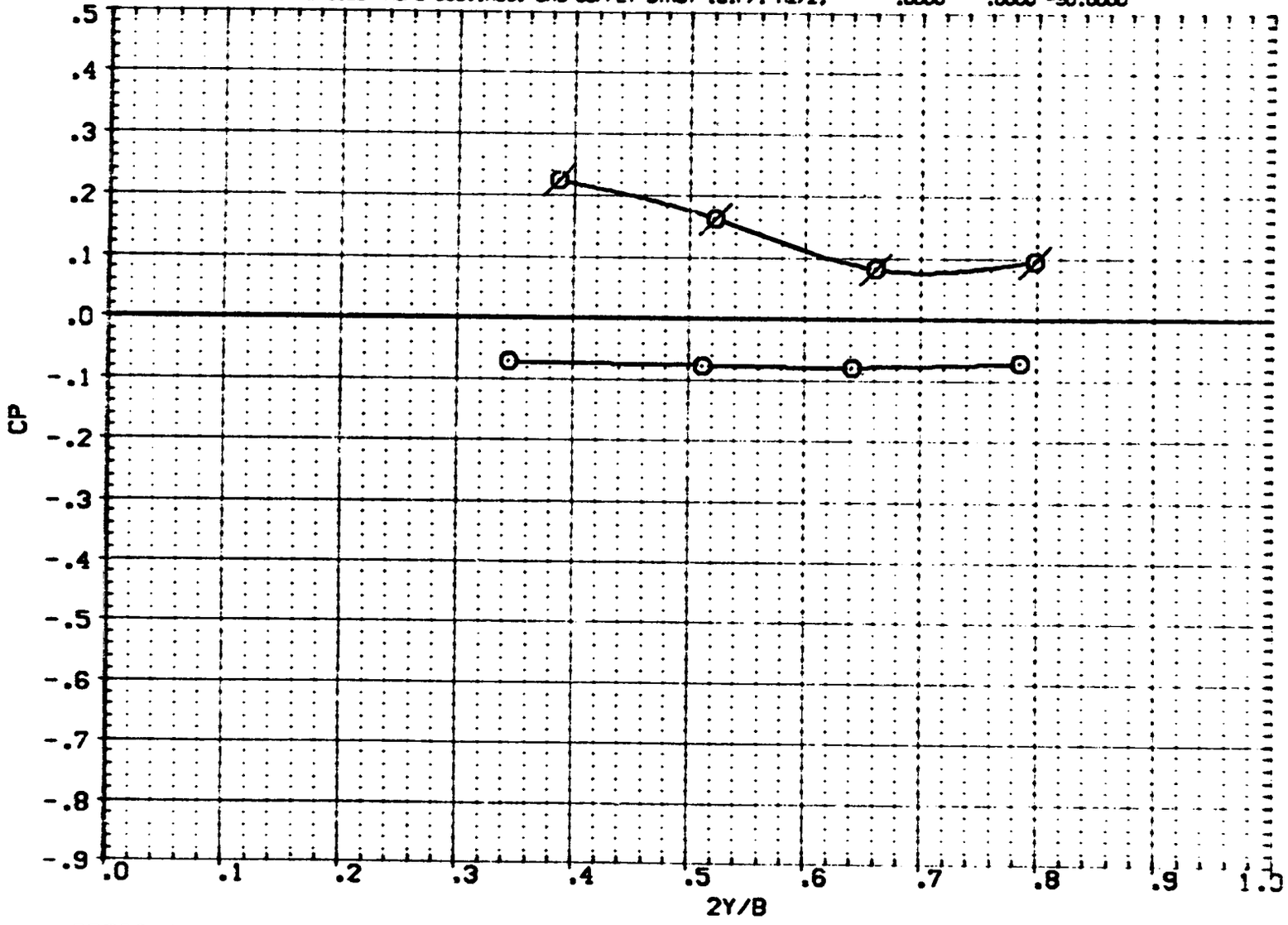
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9BUSS)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (CIF/1 M2/2)	.0000	.0000	-90.0000
(R9BLSS)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (CIF/1 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.980

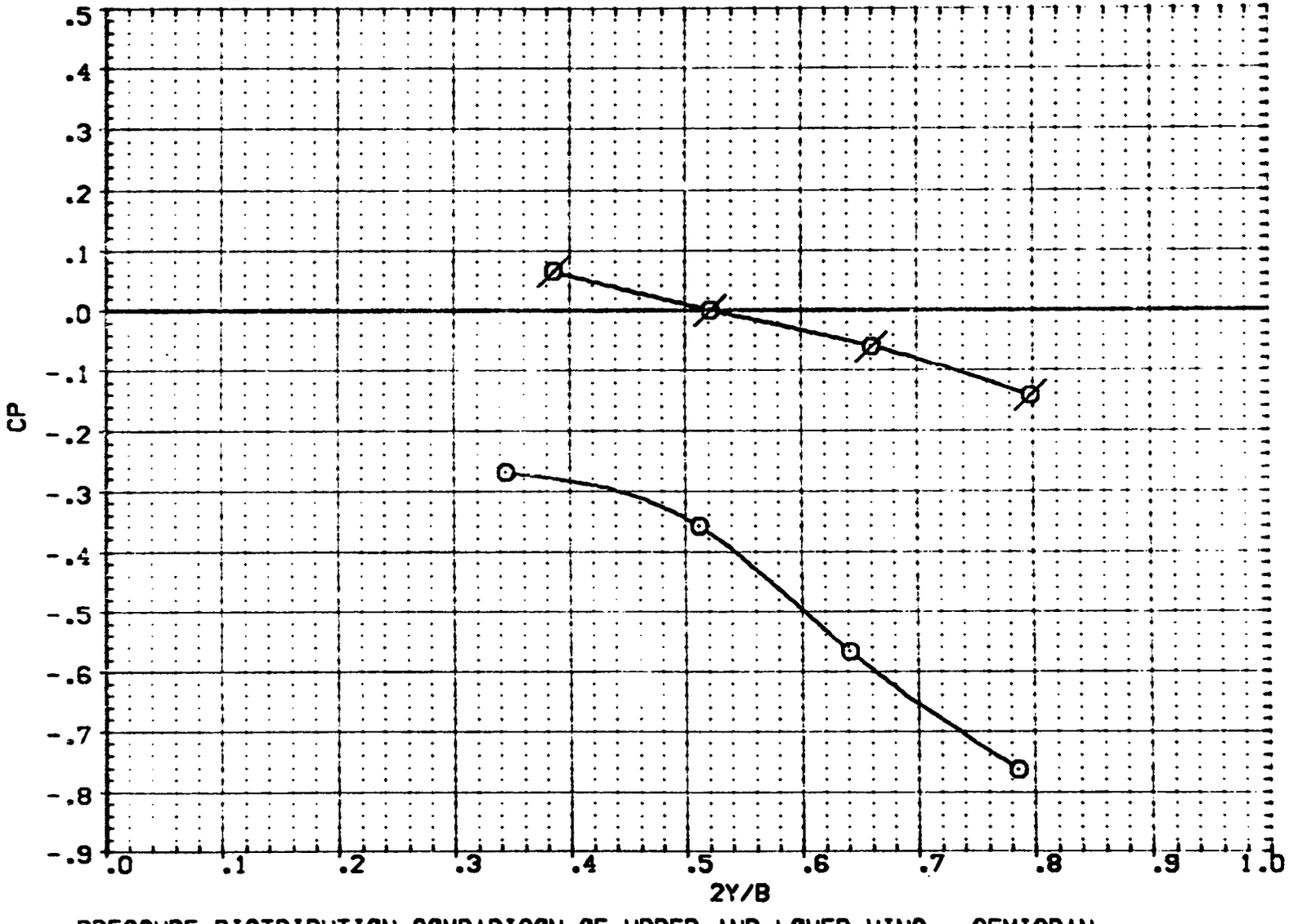
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US5)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.0000	.0000	-90.0000
(R96LS5)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
○	.490	.000	.906

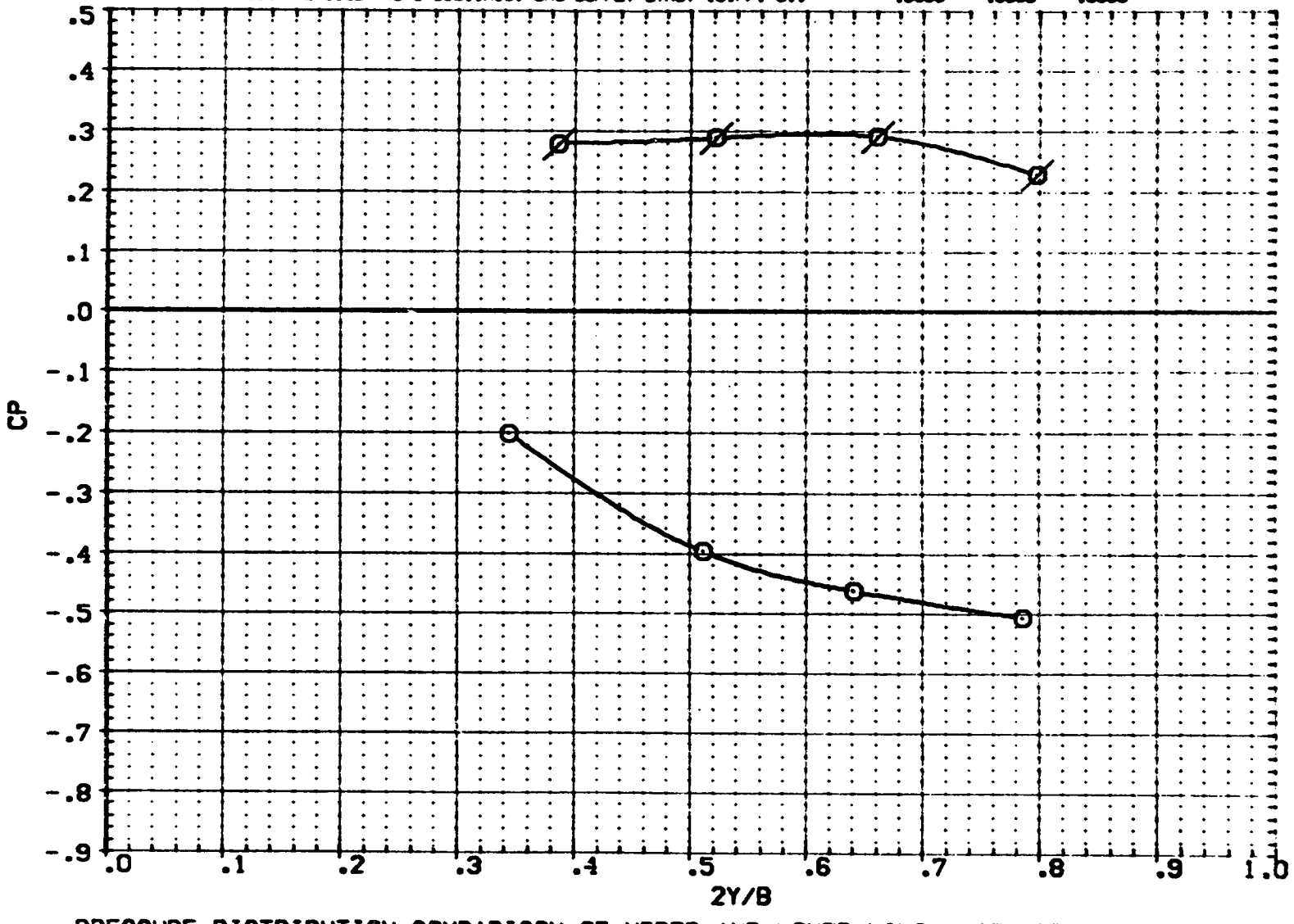
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US6)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000
(R96LS6)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.0000	.0000	.0000



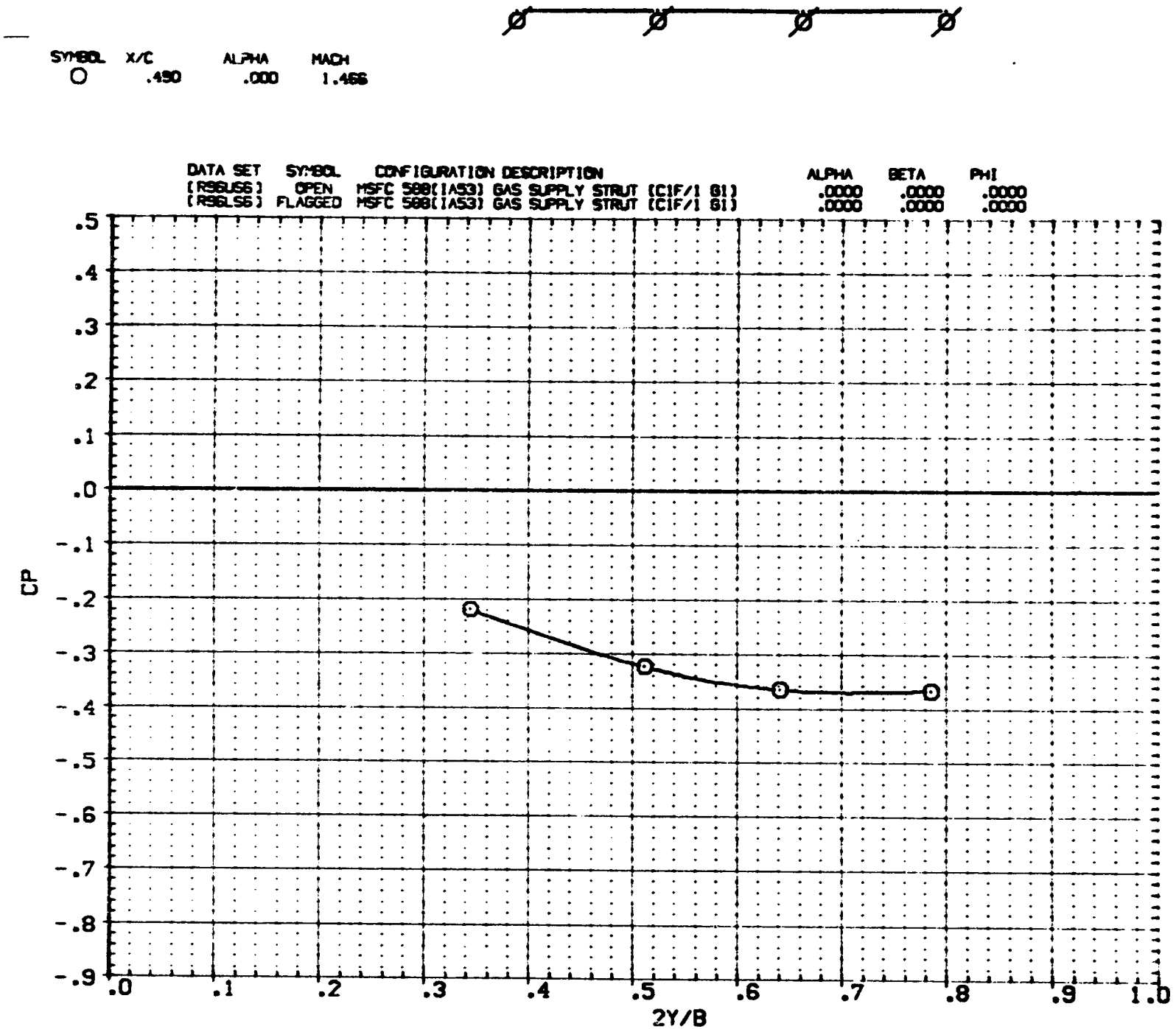
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.450	.000	1.196

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US6)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B1)	.0000	.0000	.0000
(R96LS6)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B1)	.0000	.0000	.0000

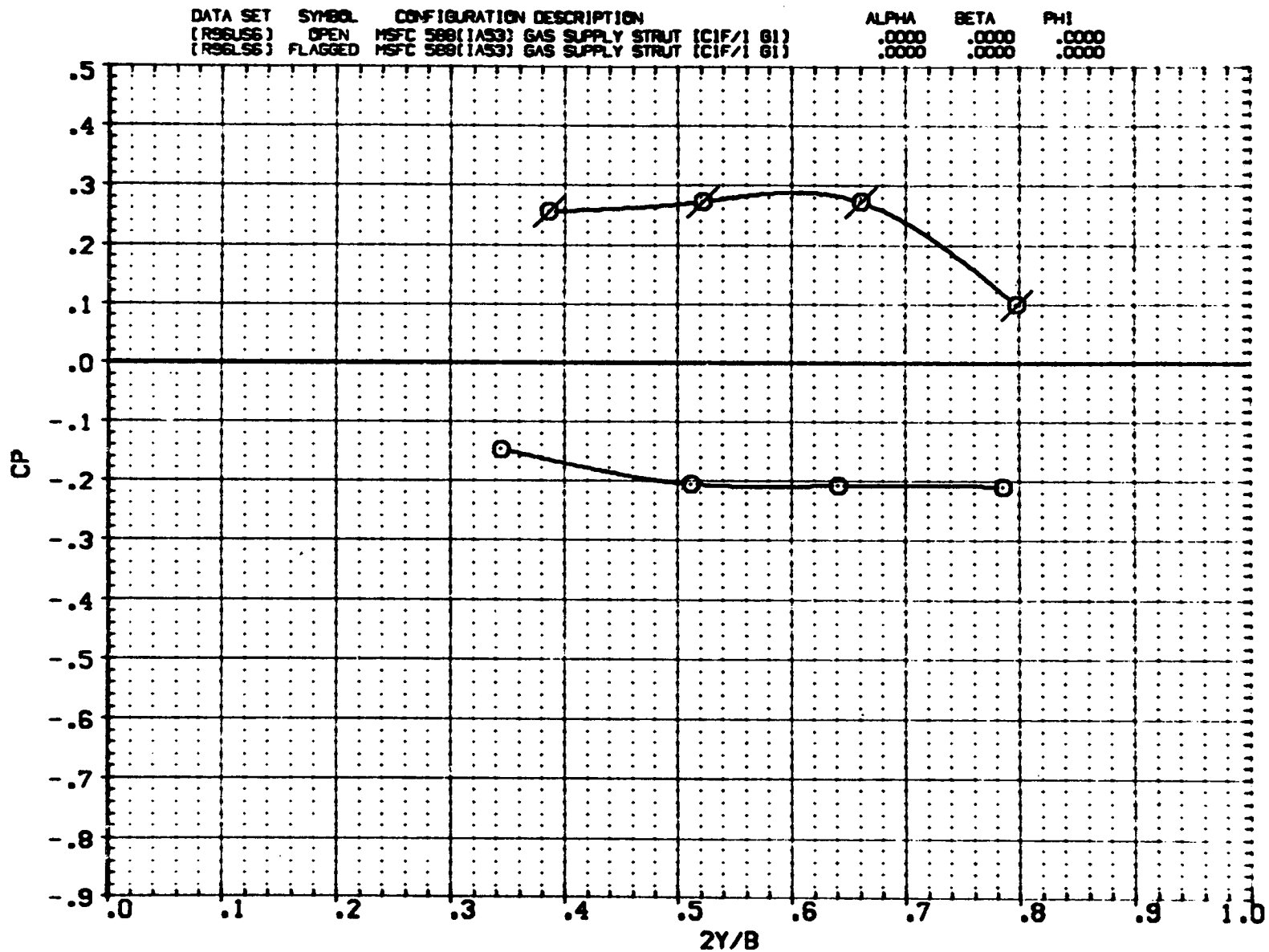


PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN



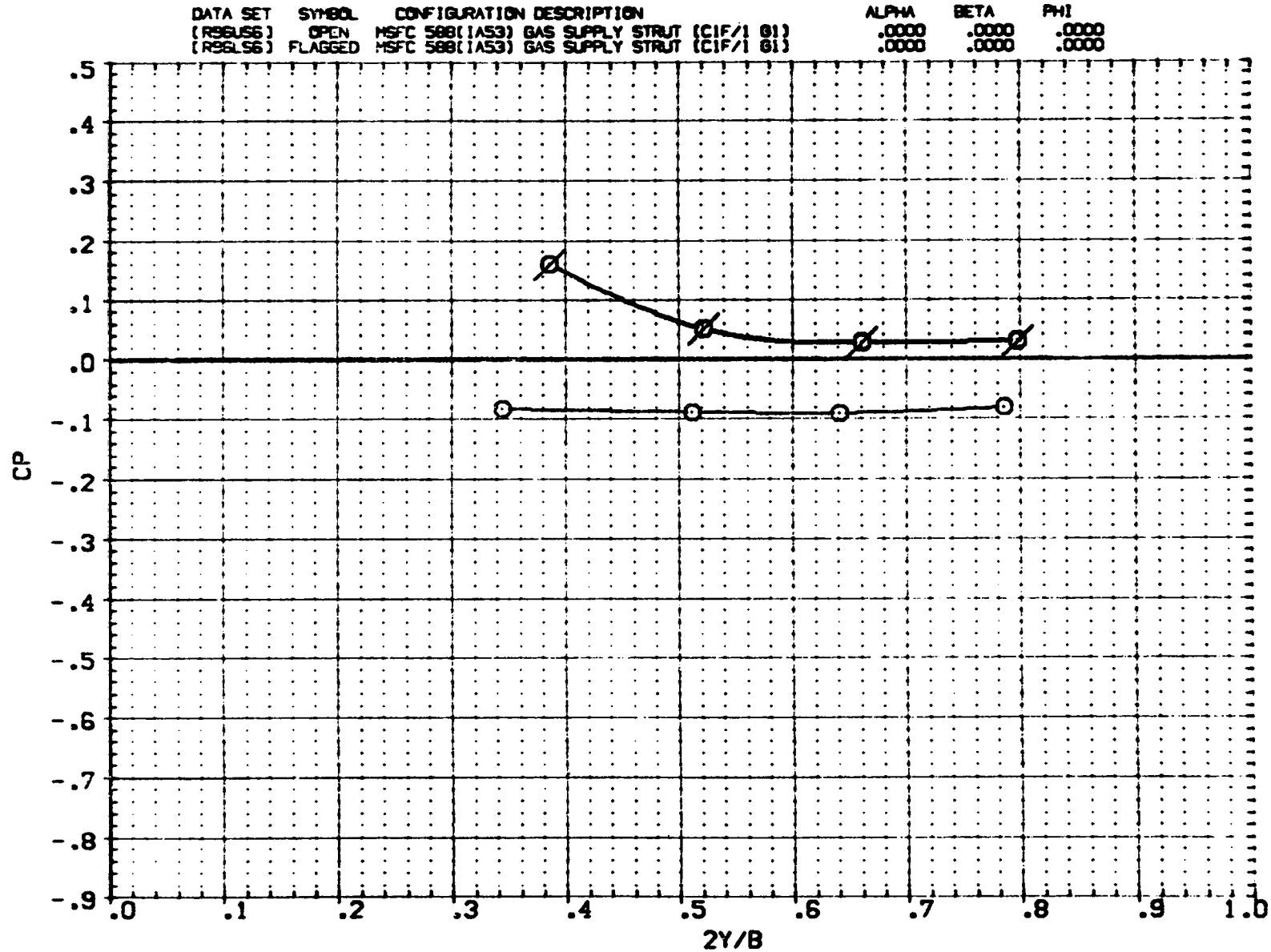
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.450	.000	1.959



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

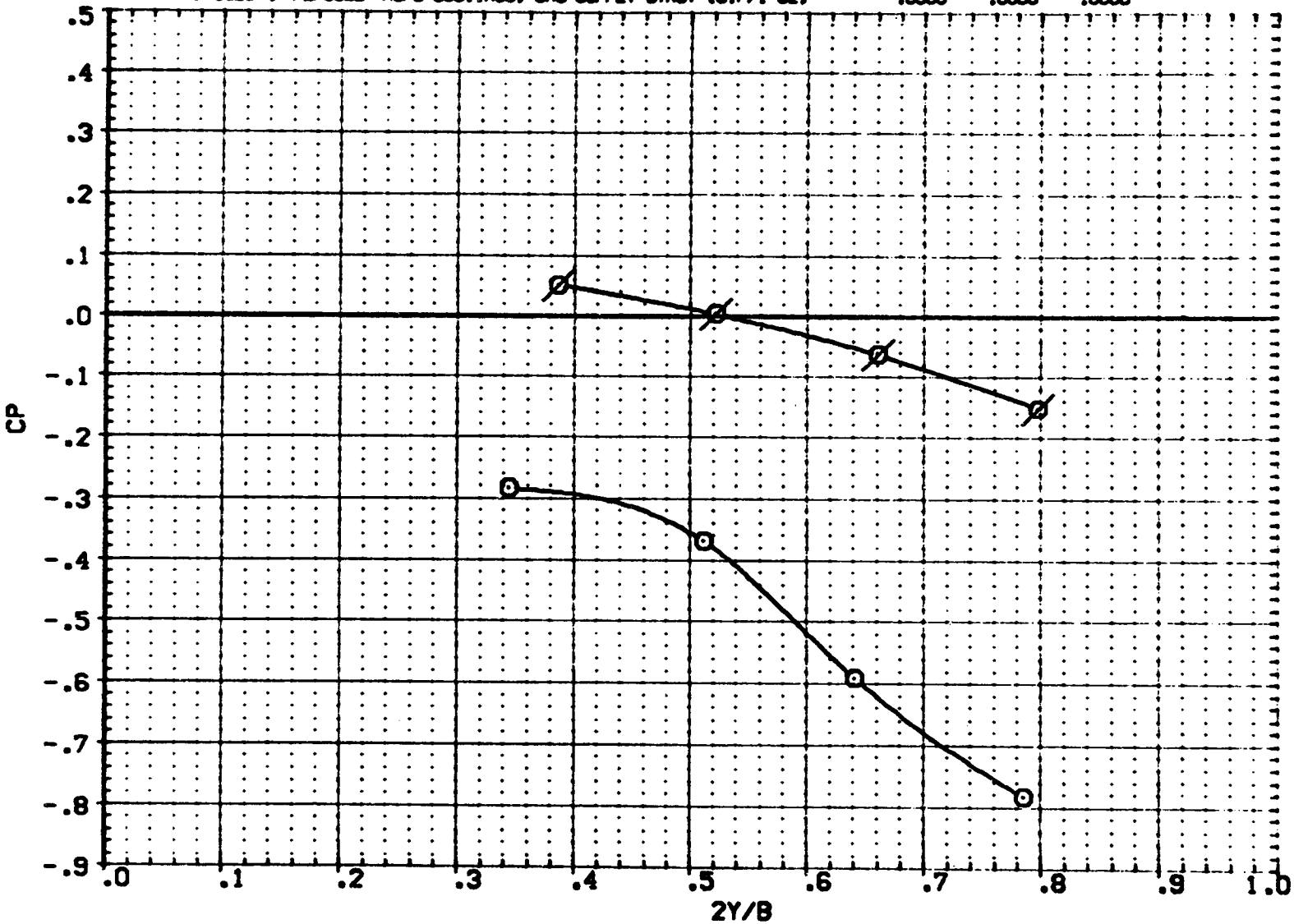
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.990



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.450	.000	.886

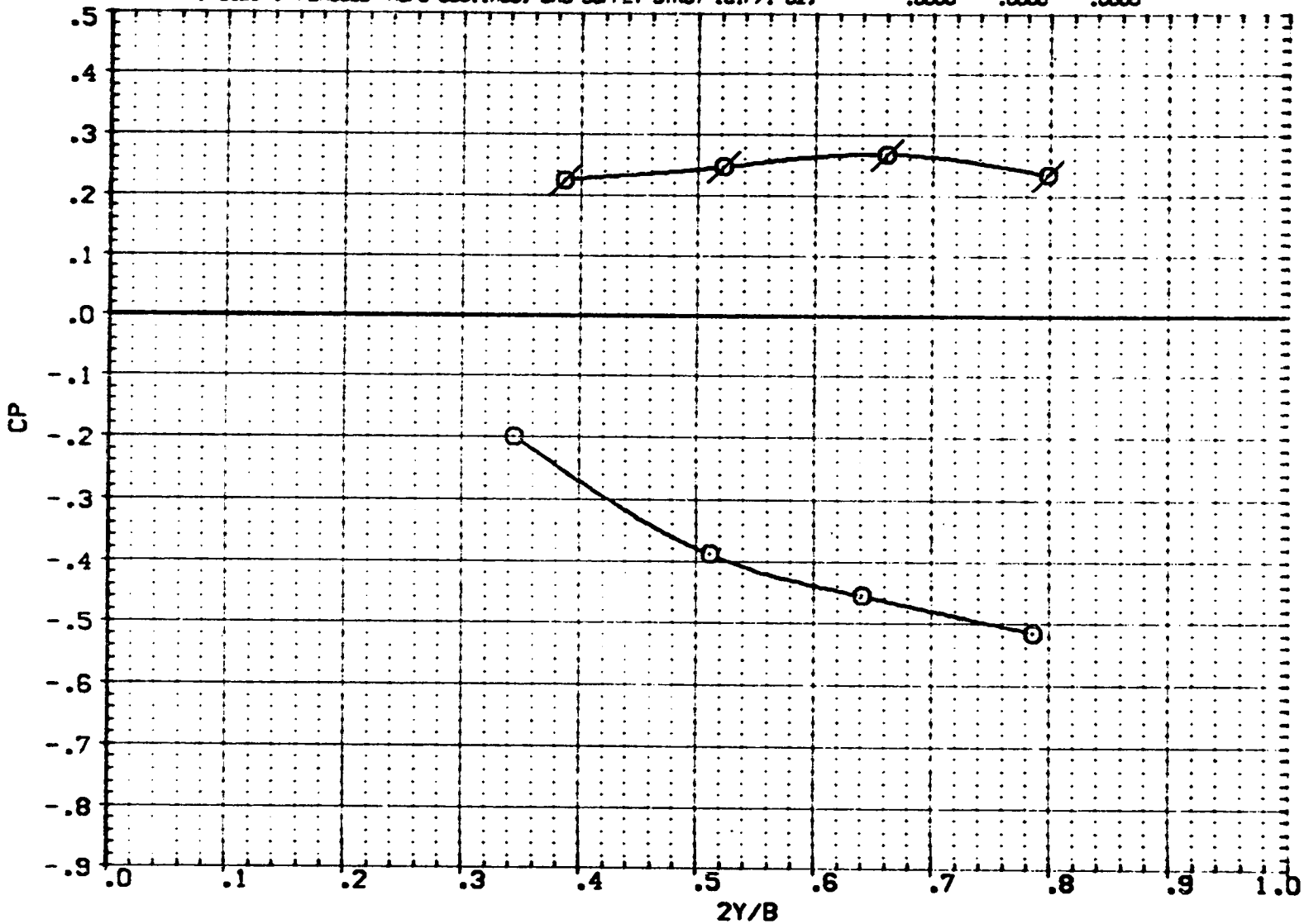
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96U57]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000
[R96L57]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.204

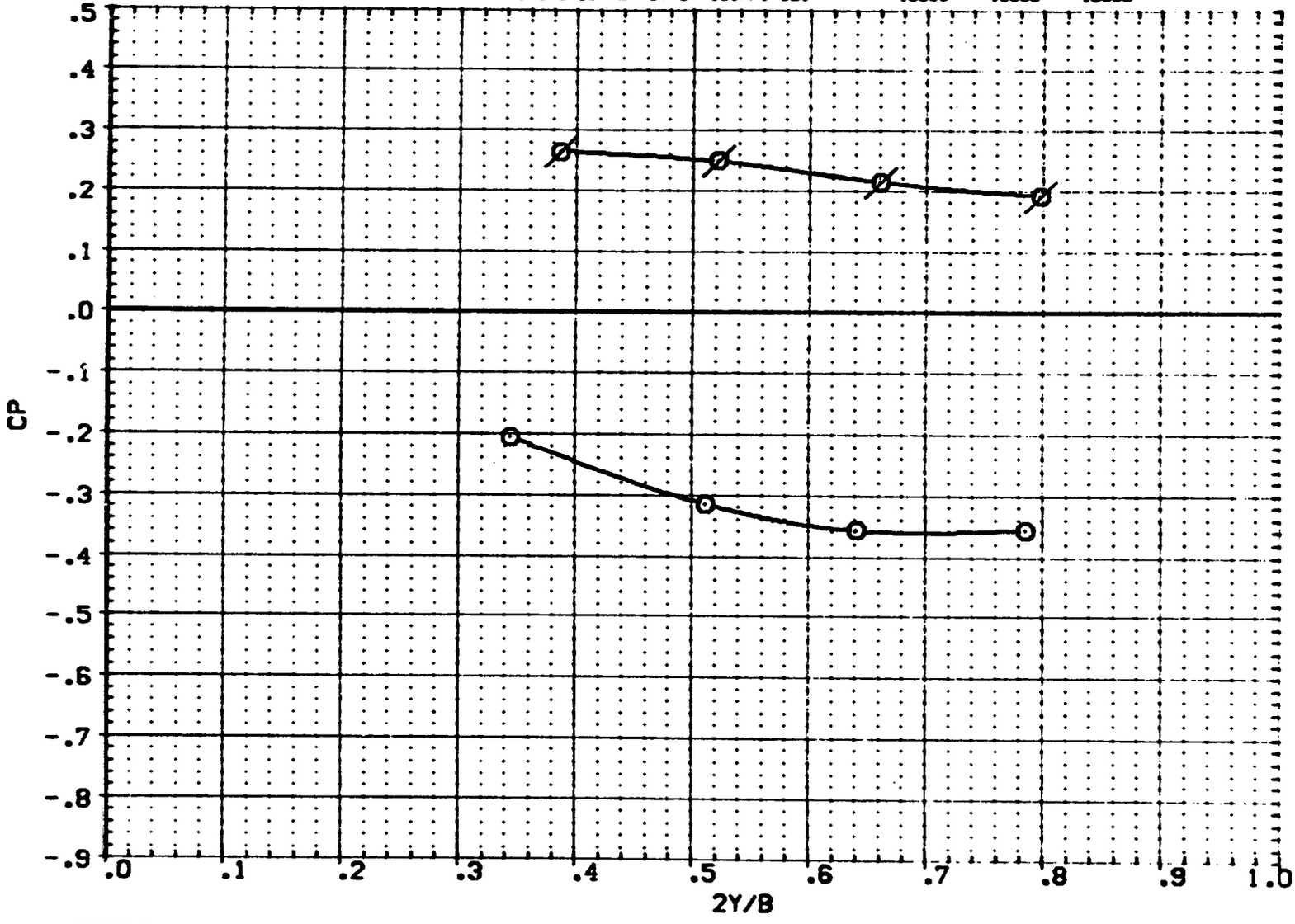
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US7)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000
(R96LS7)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.463

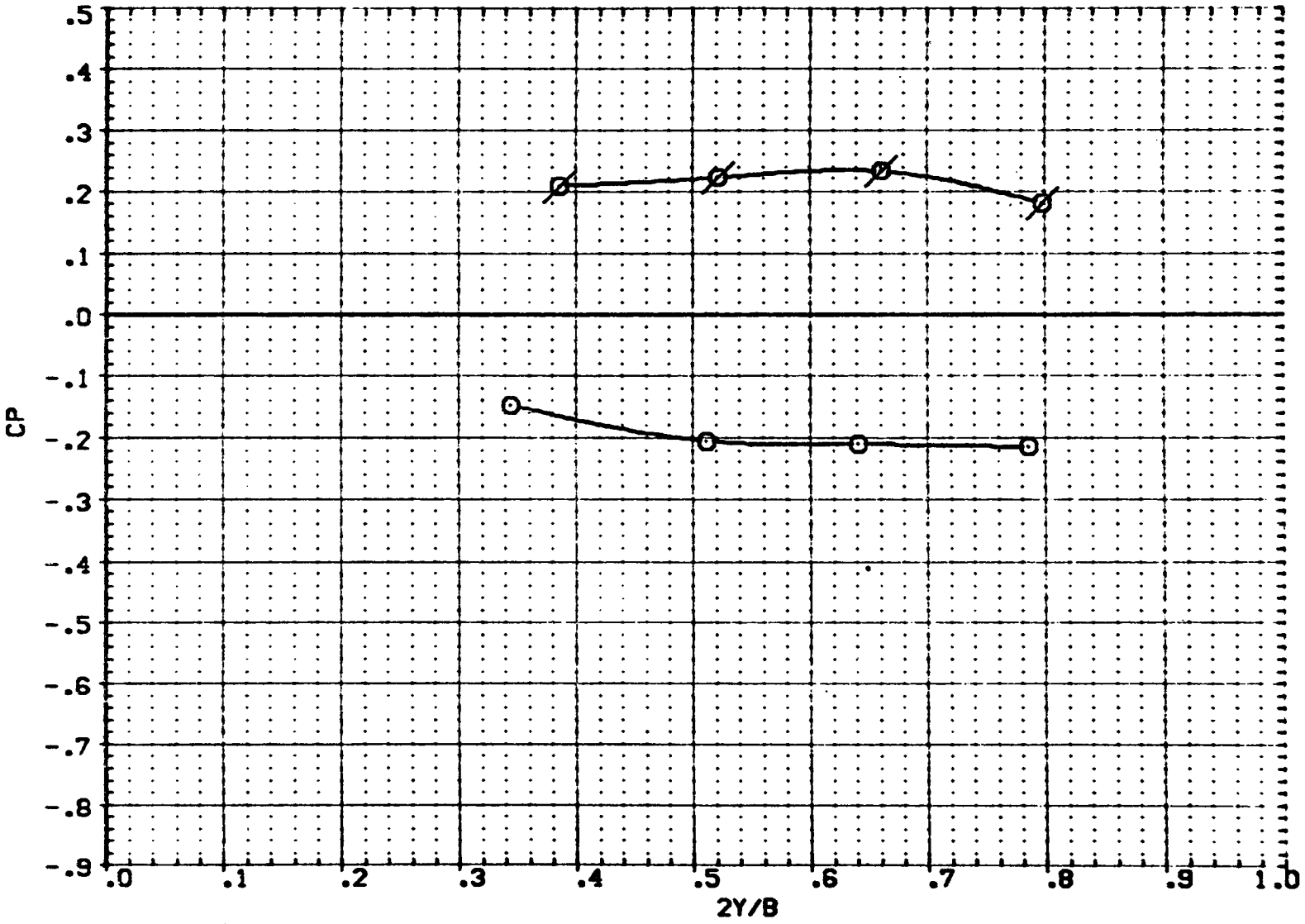
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US7)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000
(R96LS7)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.958

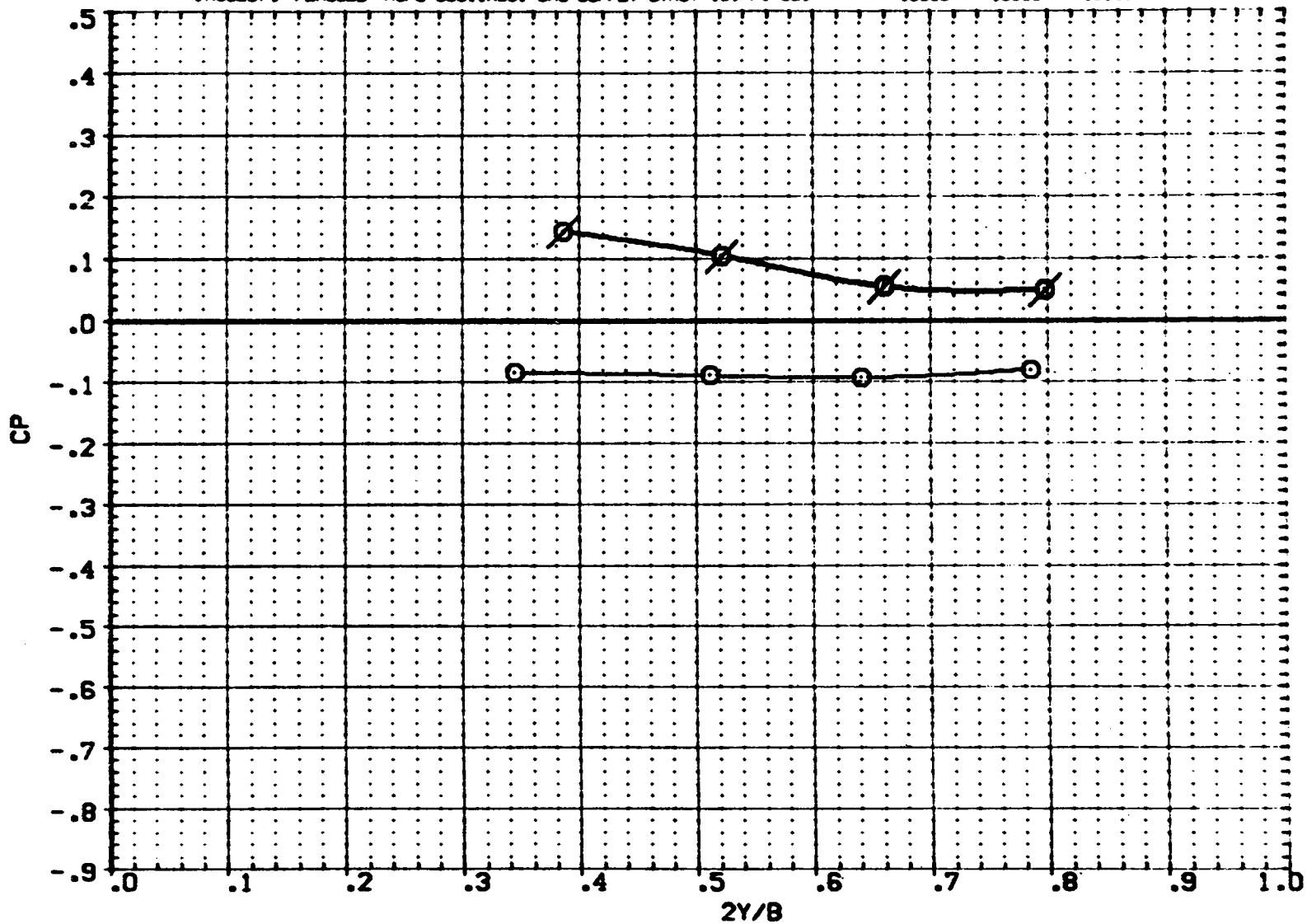
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS7)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000
(R9GLS7)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

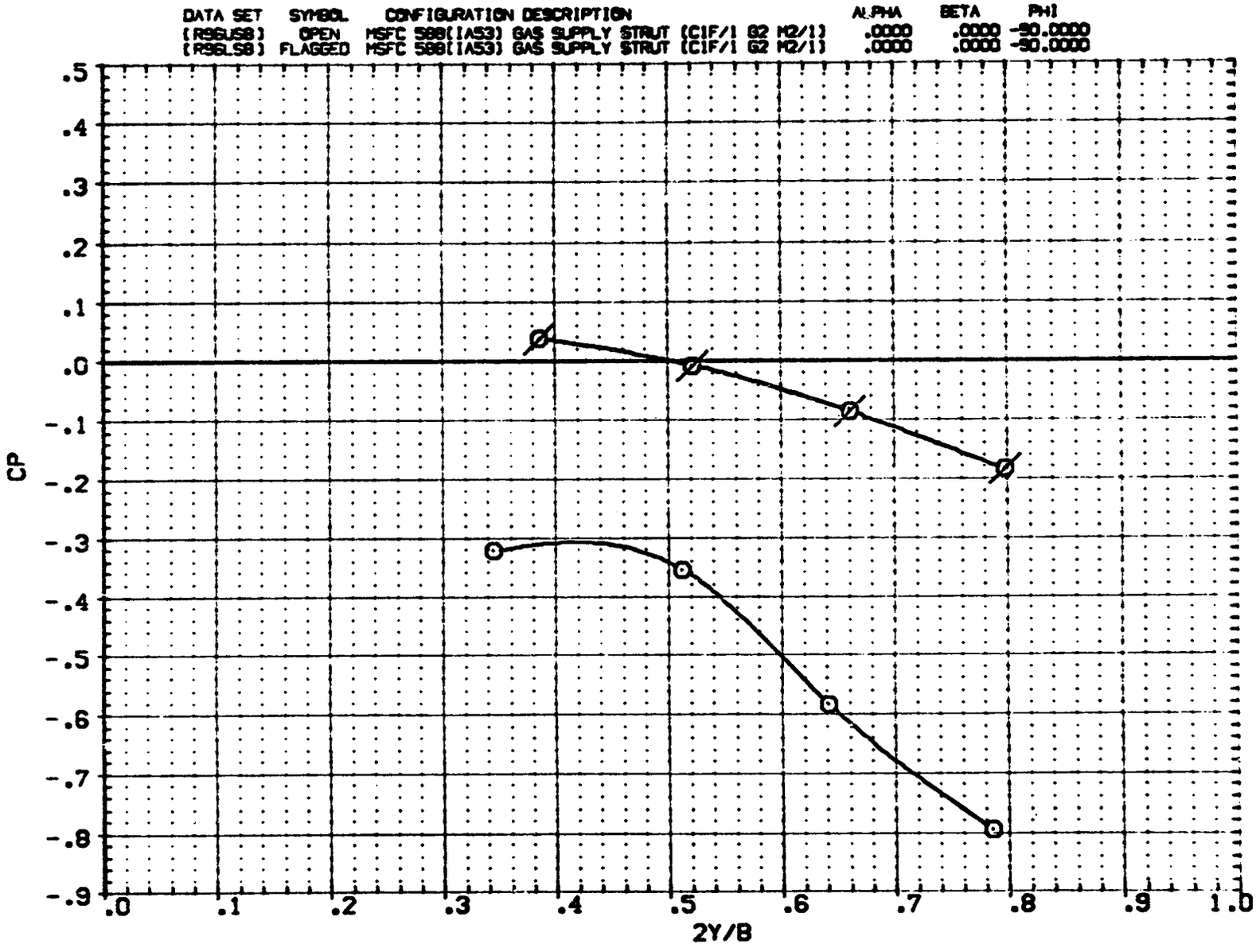
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.990

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US7)	OPEN	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000
(R96LS7)	FLAGGED	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2)	.0000	.0000	.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

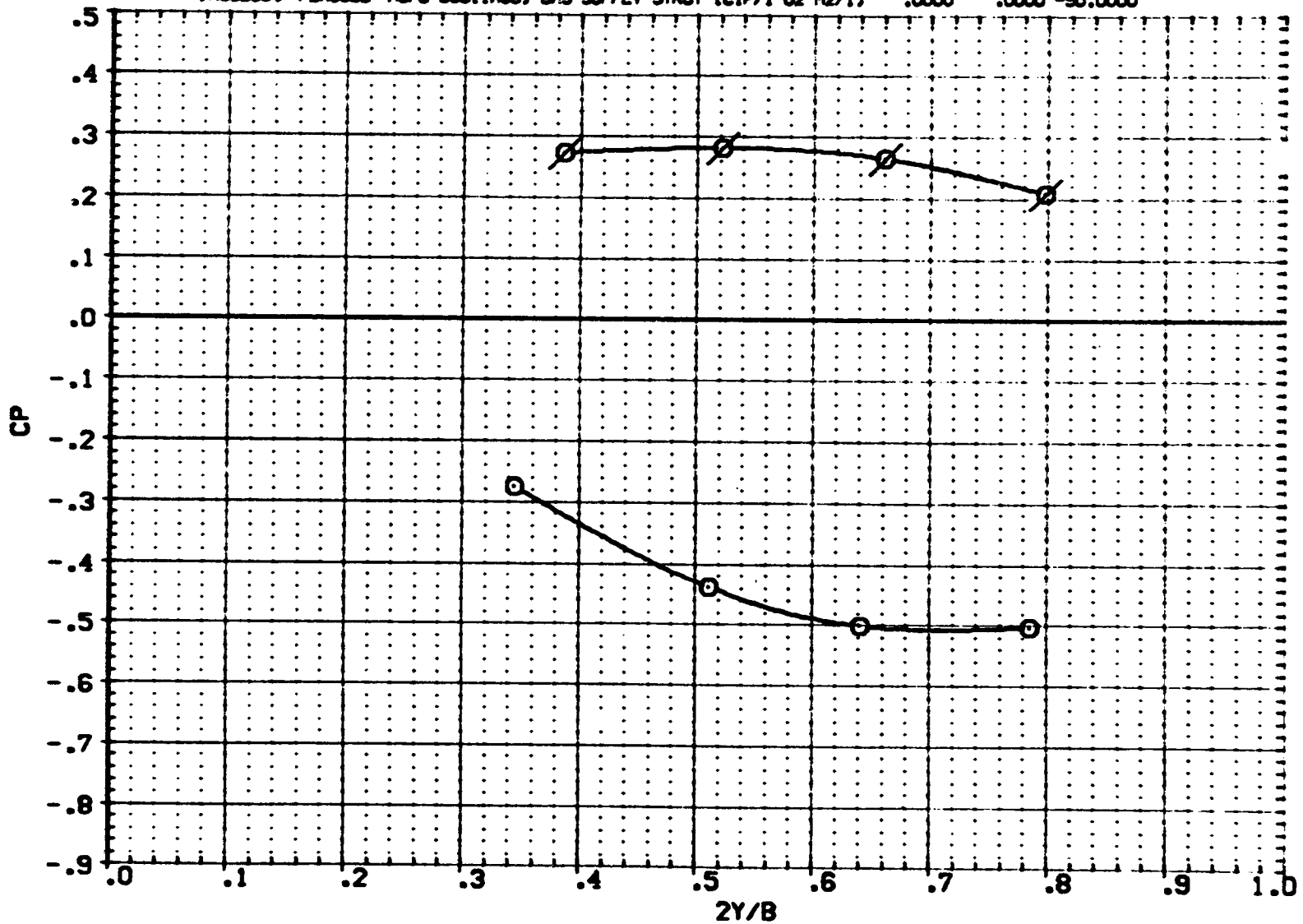
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.904



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.196

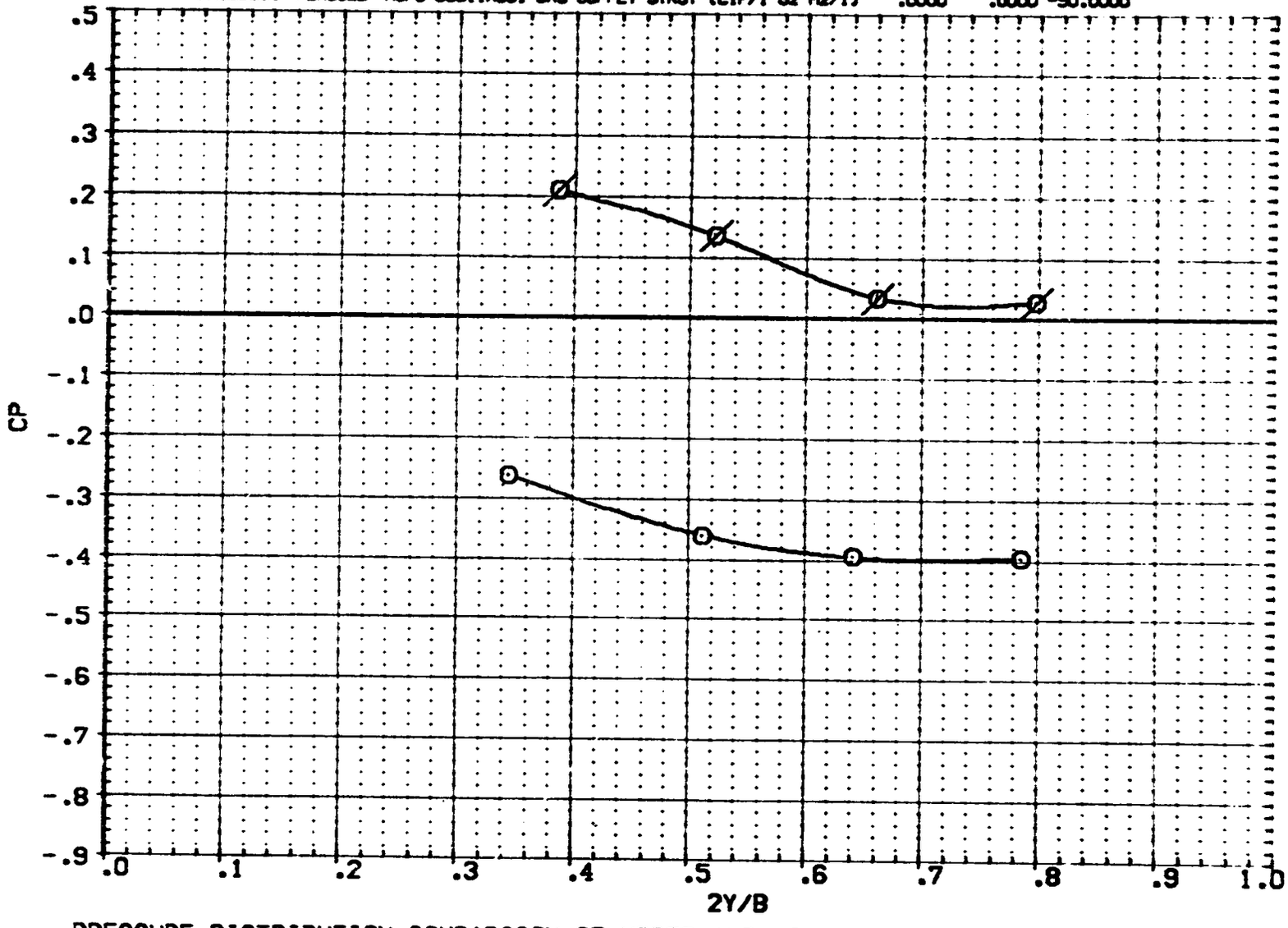
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUSB)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(R9GLSB)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.453

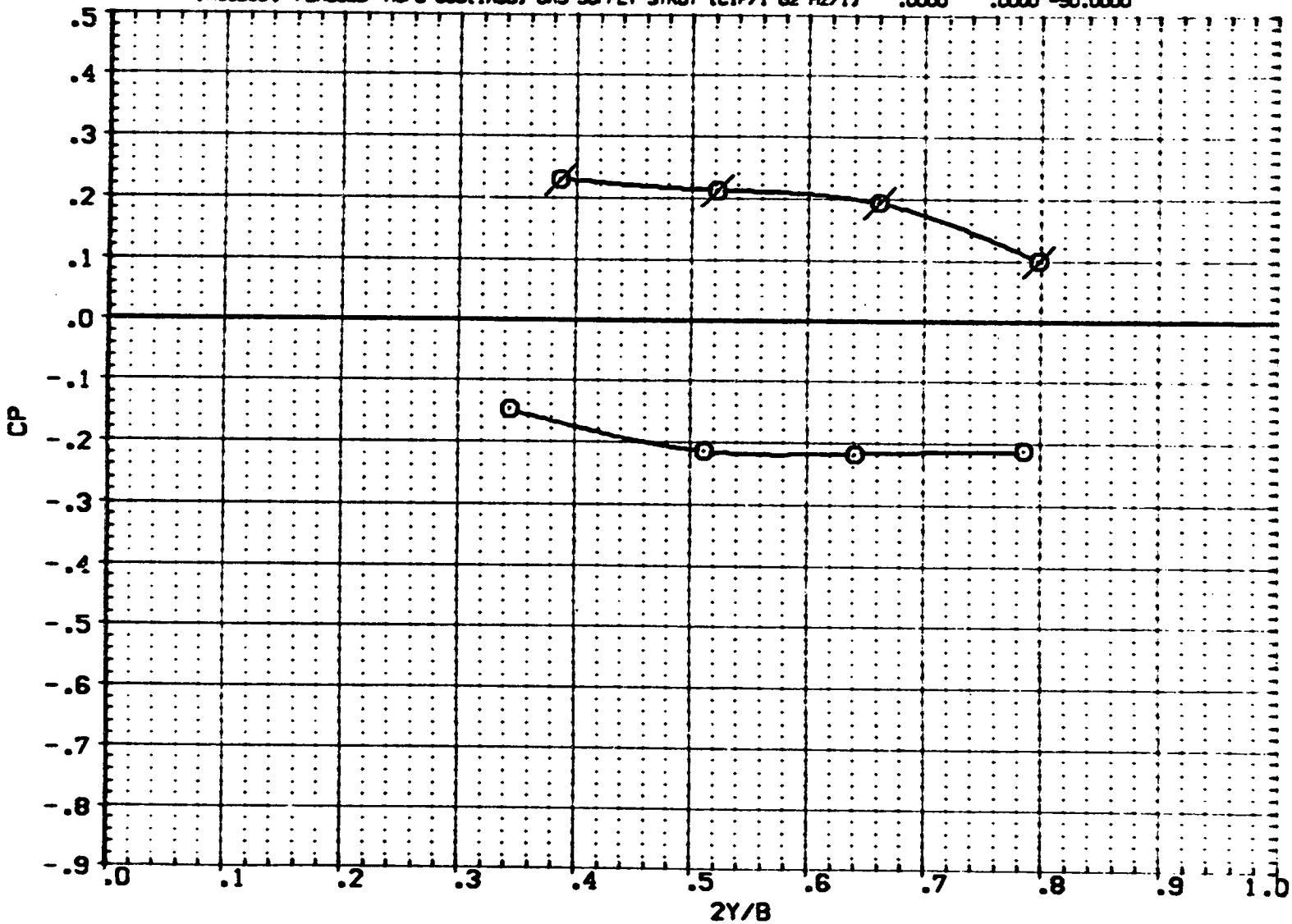
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96US8]	OPEN	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 82 M2/1]	.0000	.0000	-90.0000
[R96LS8]	FLAGGED	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 82 M2/1]	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.958

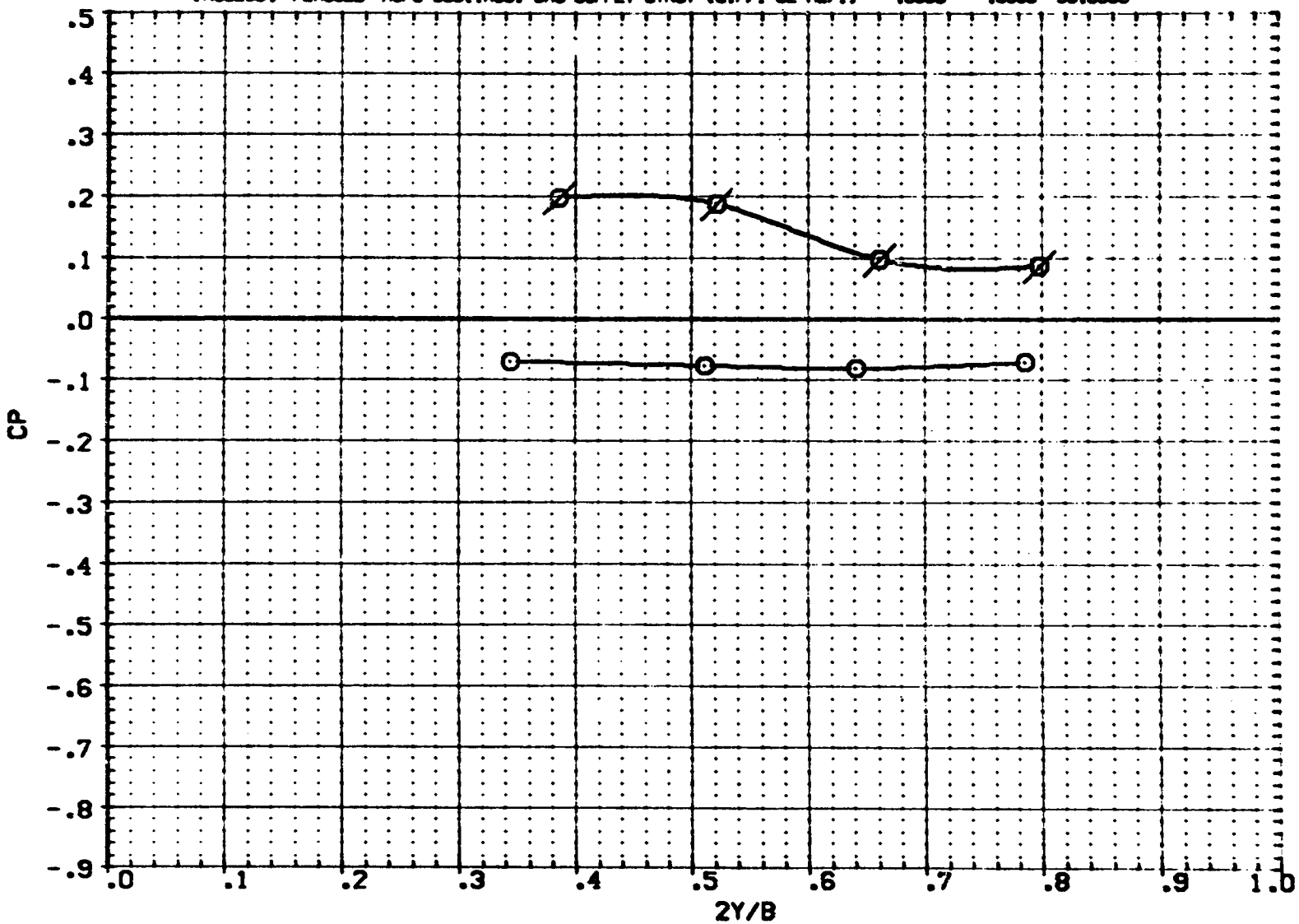
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96USB)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(R96LSB)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	2.990

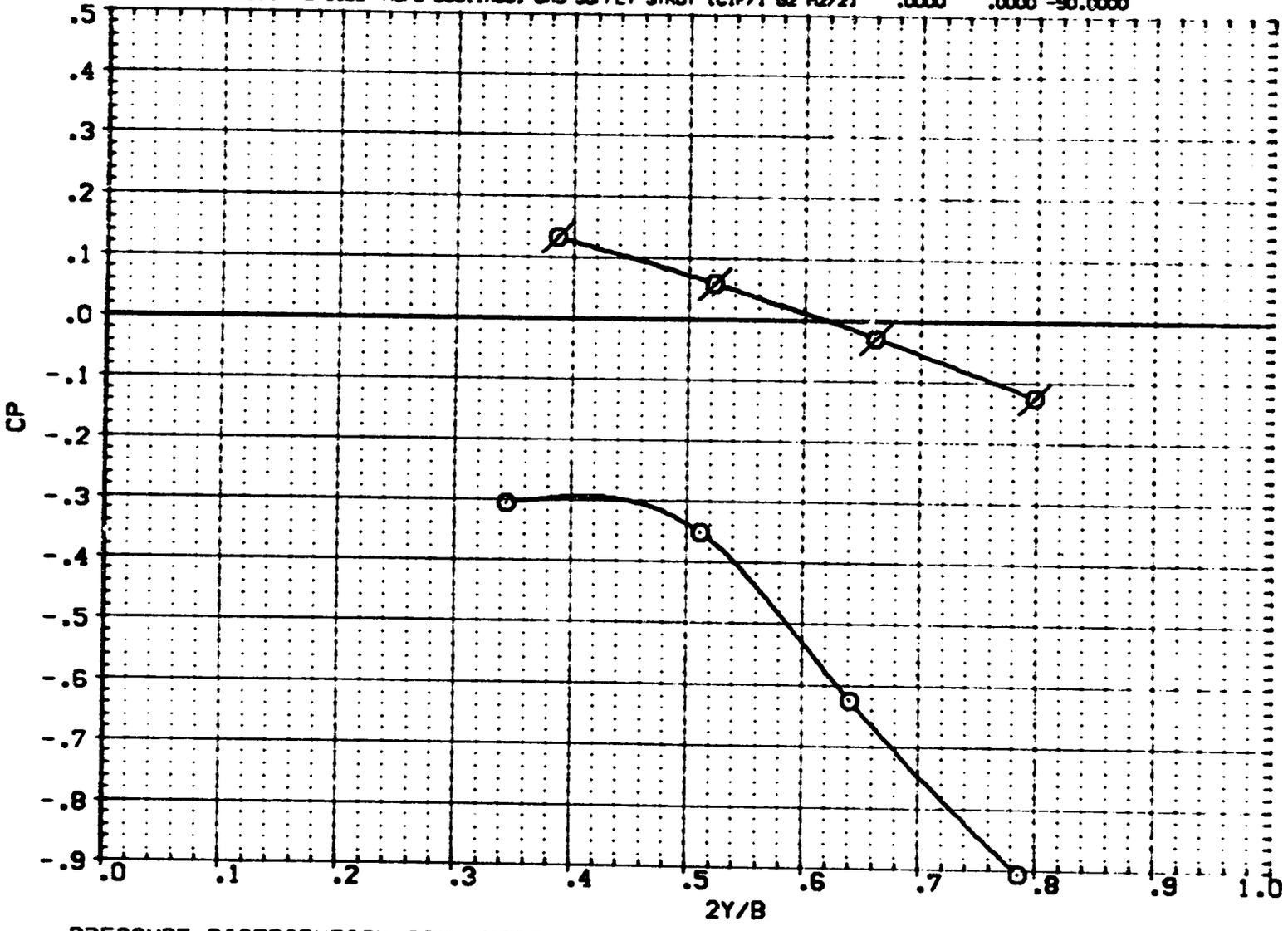
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS8)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000
(R9GLS8)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	.902

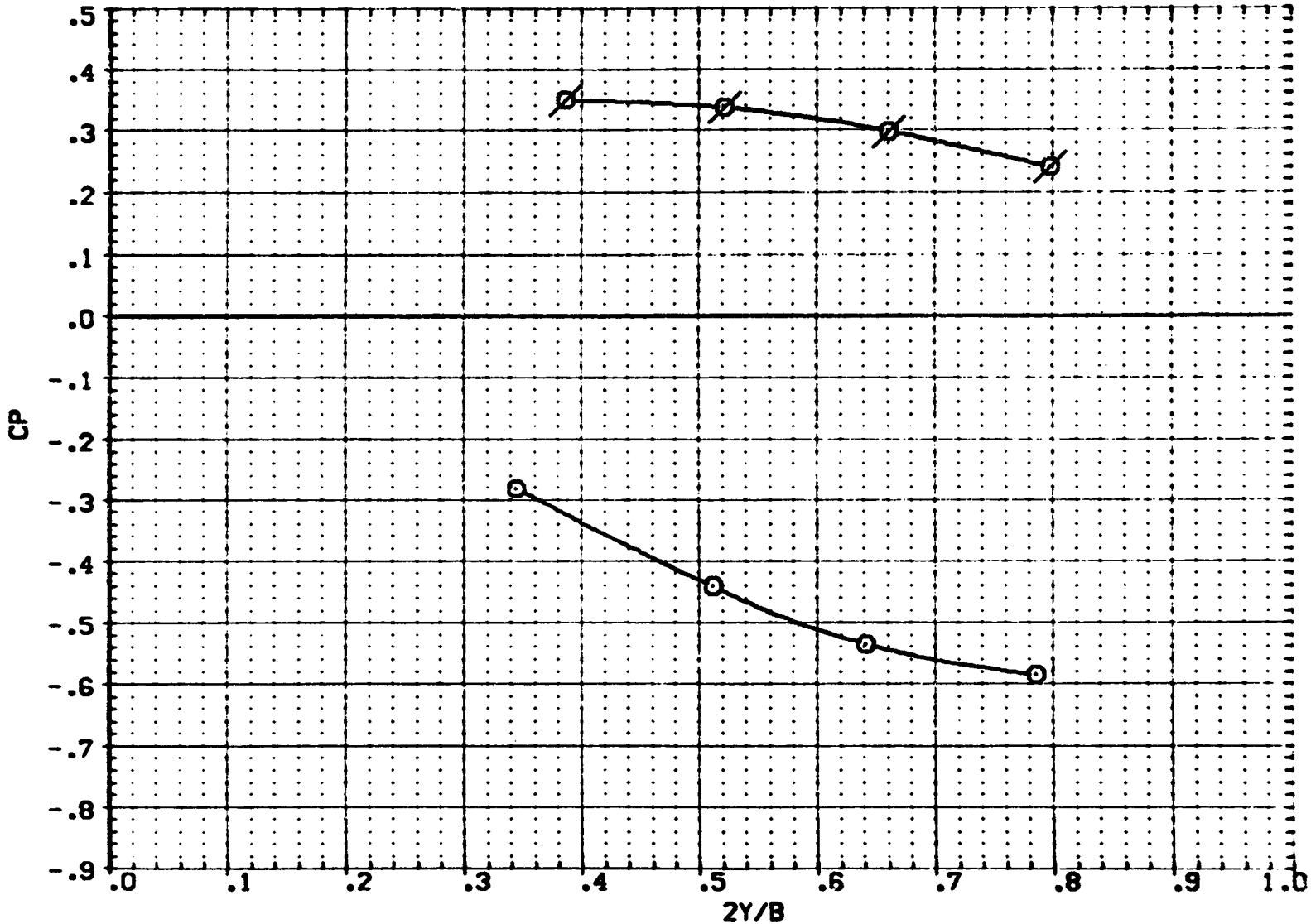
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GUS9)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000
(R9GLS9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

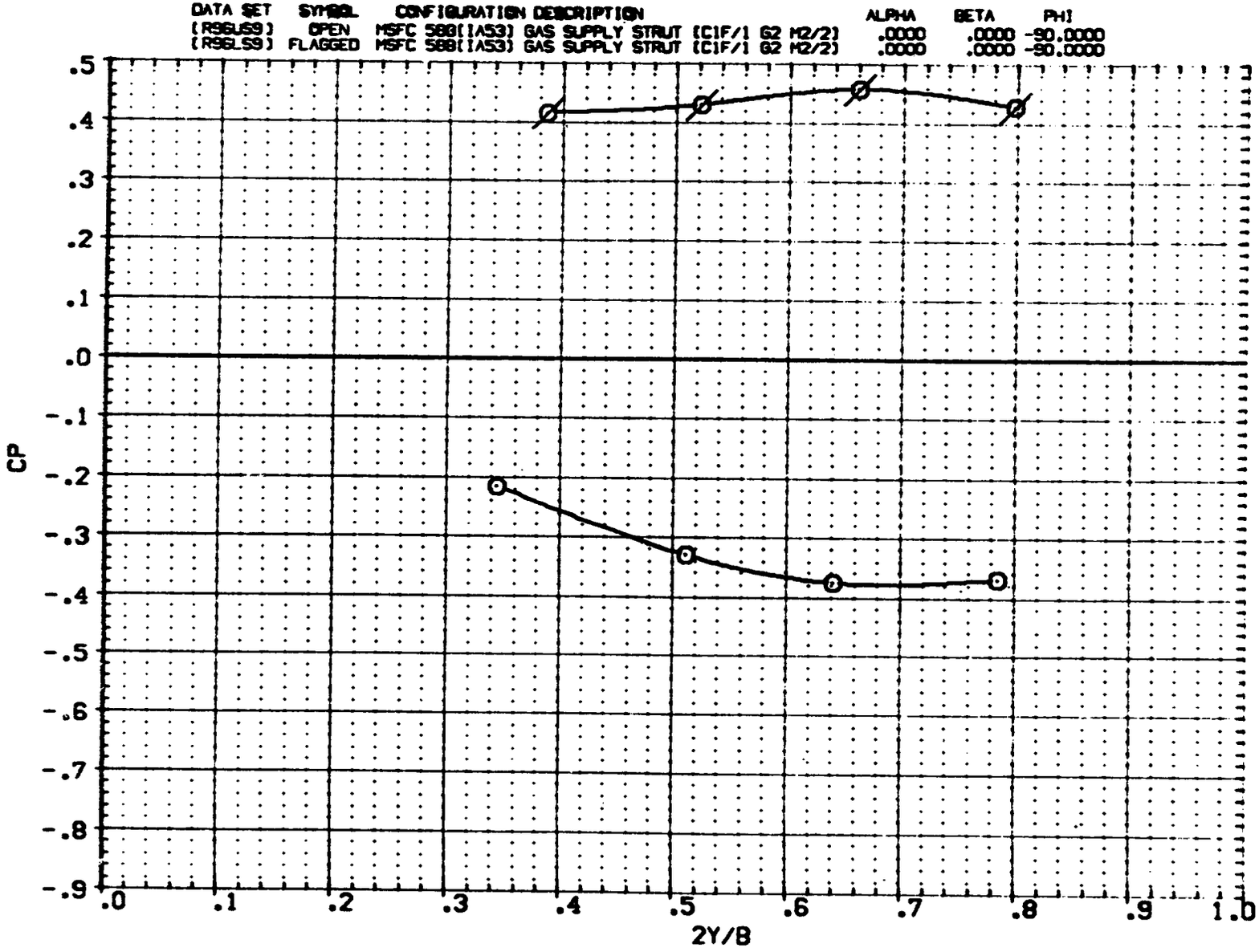
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.199

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US9)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000
(R96LS9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000



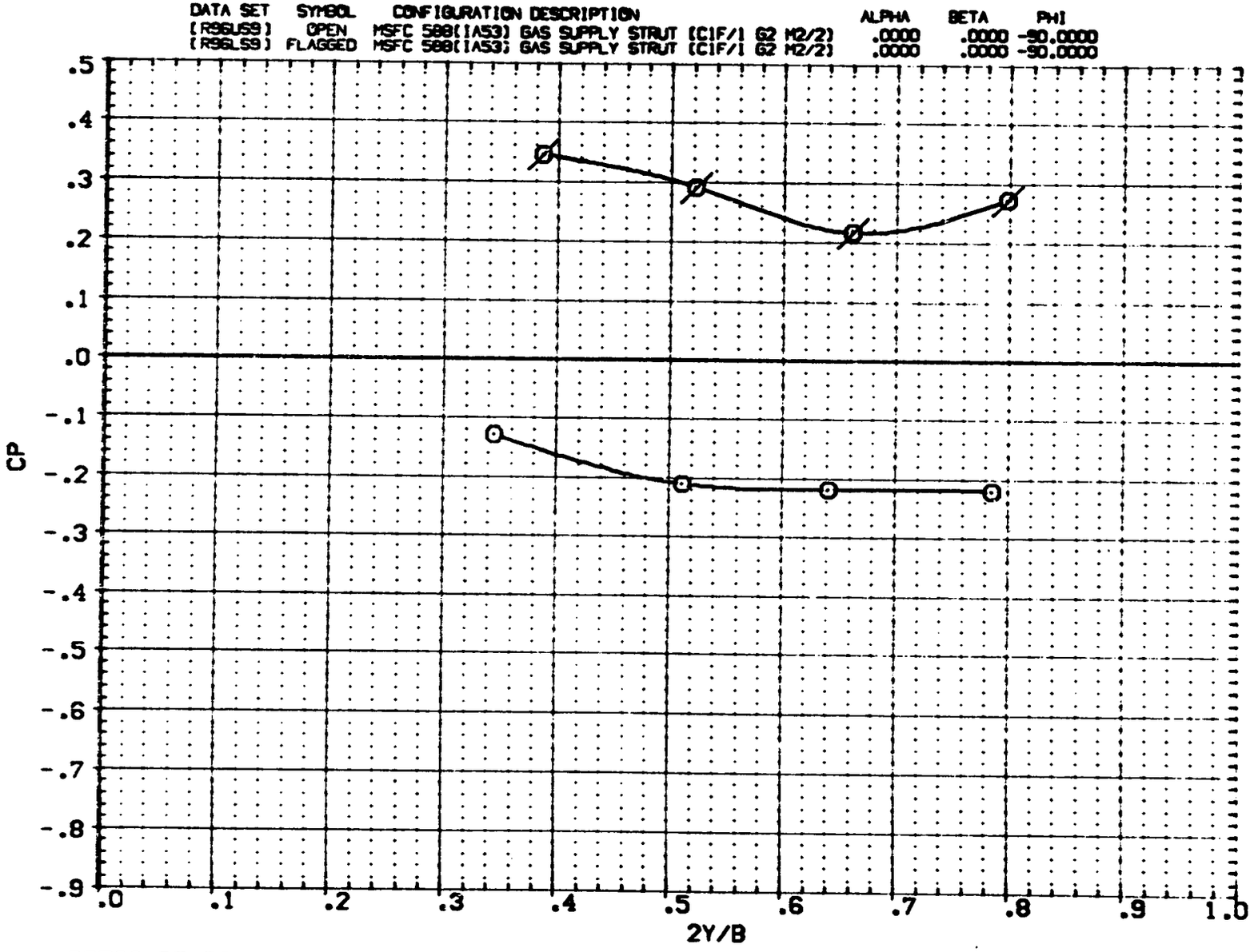
PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.462



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

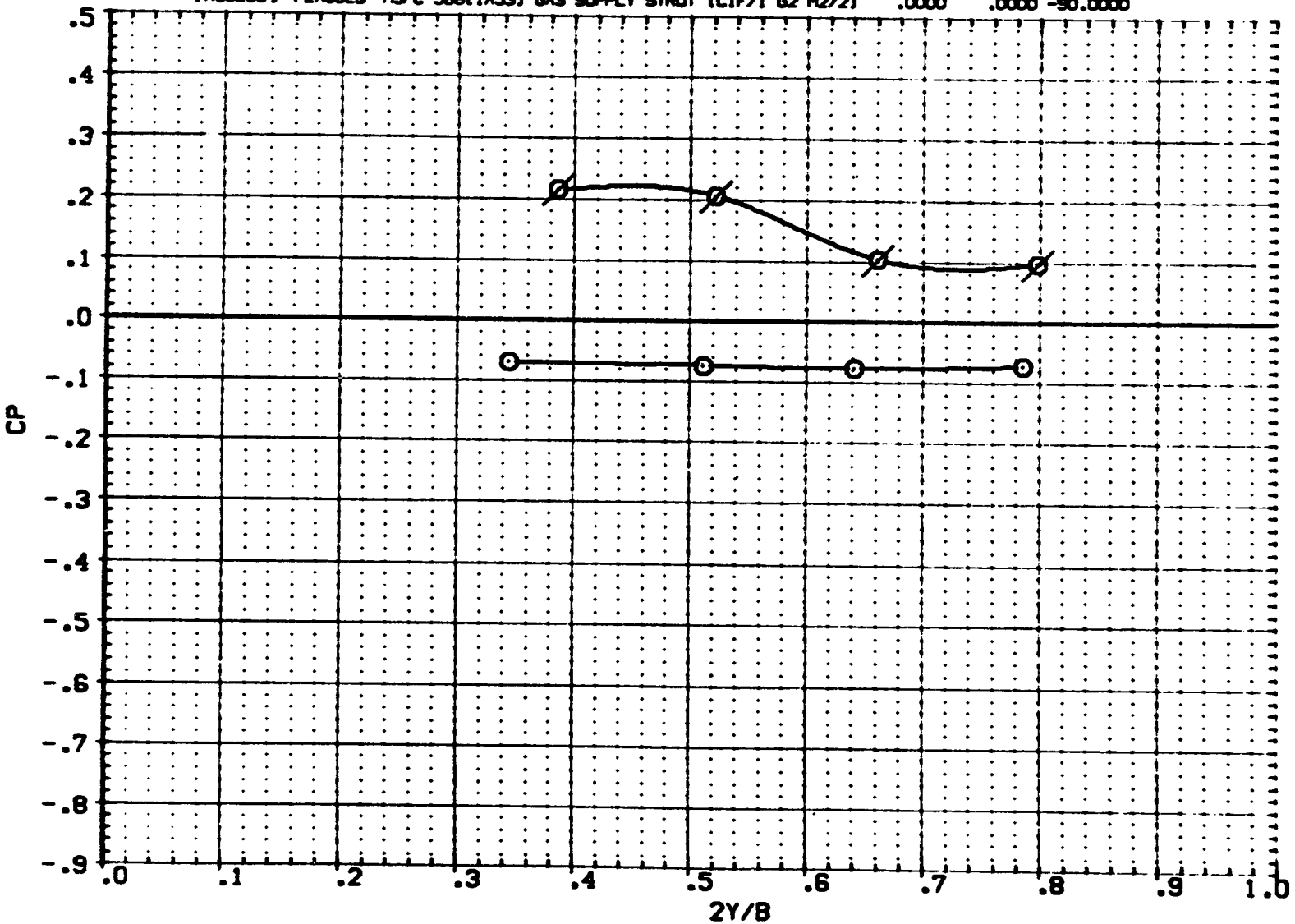
SYMBOL	X/C	ALPHA	MACH
O	.490	.000	1.954



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

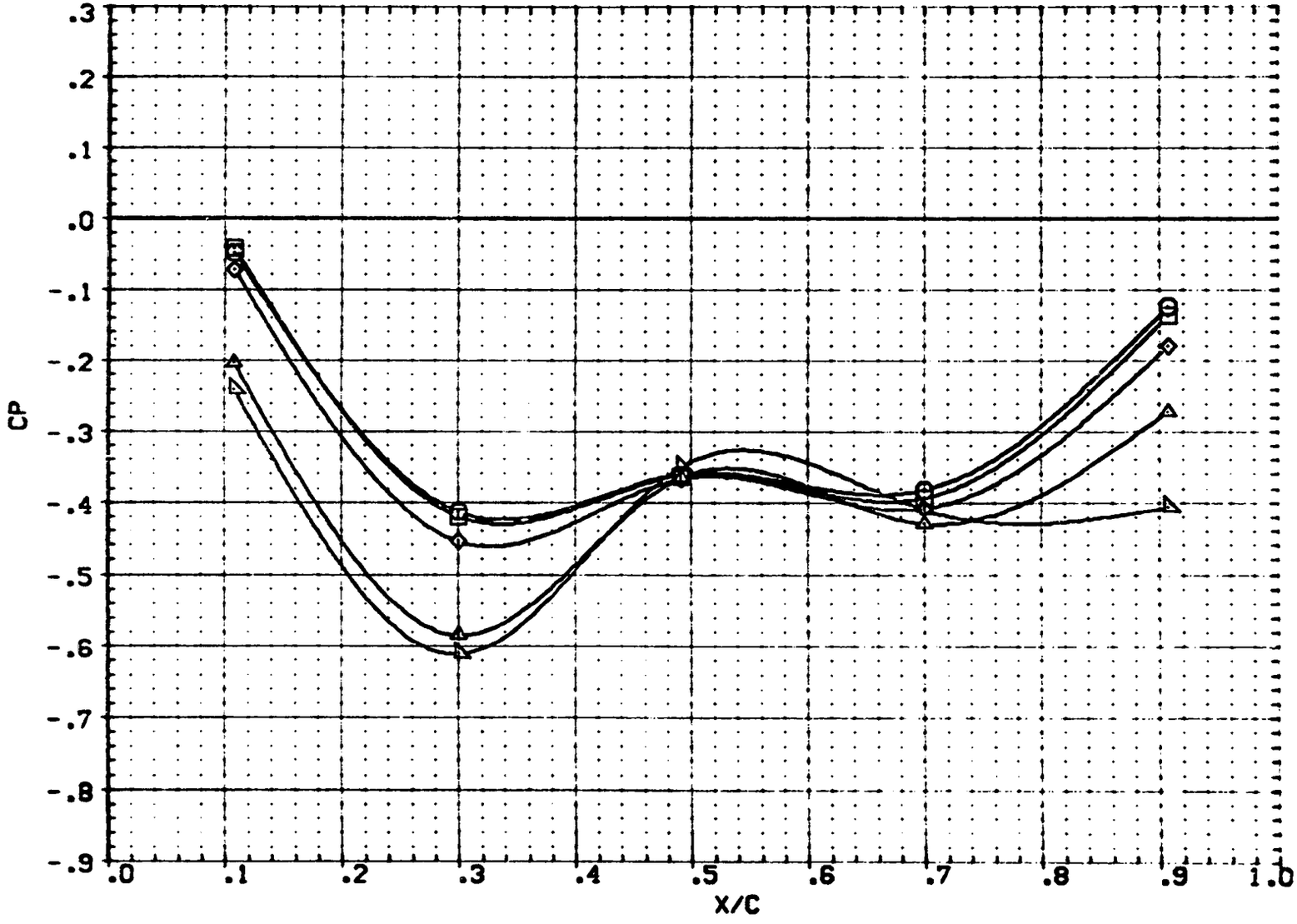
SYMBOL	X/C	ALPHA	MACH
○	.490	.000	2.990

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US9)	OPEN	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000
(R96LS9)	FLAGGED	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.0000	.0000	-90.0000



PRESSURE DISTRIBUTION COMPARISON OF UPPER AND LOWER WING - SEMISPAN

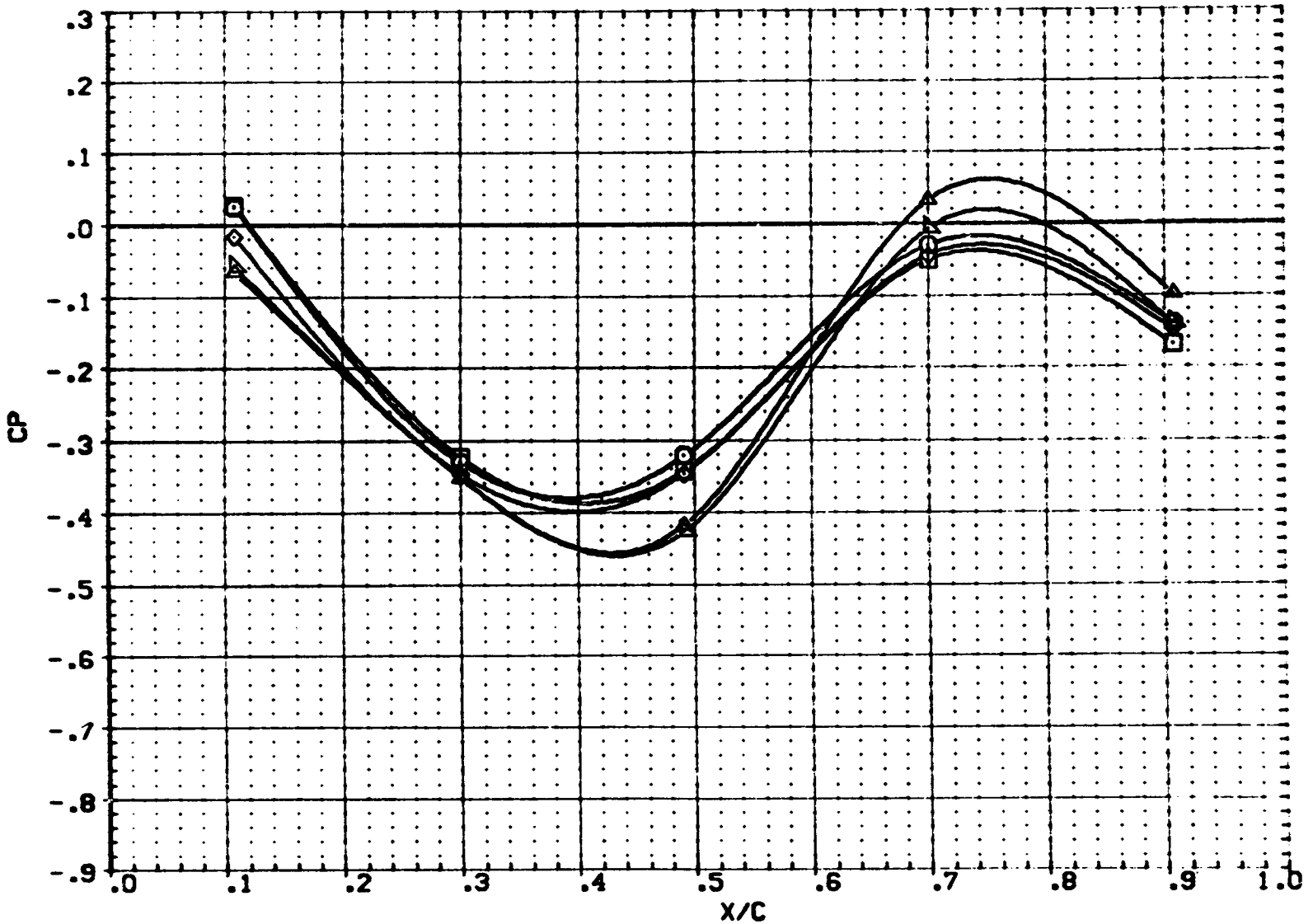
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964U3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964U4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964U5)	◁	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = .905 ALPHA = .000 2Y/B = .511

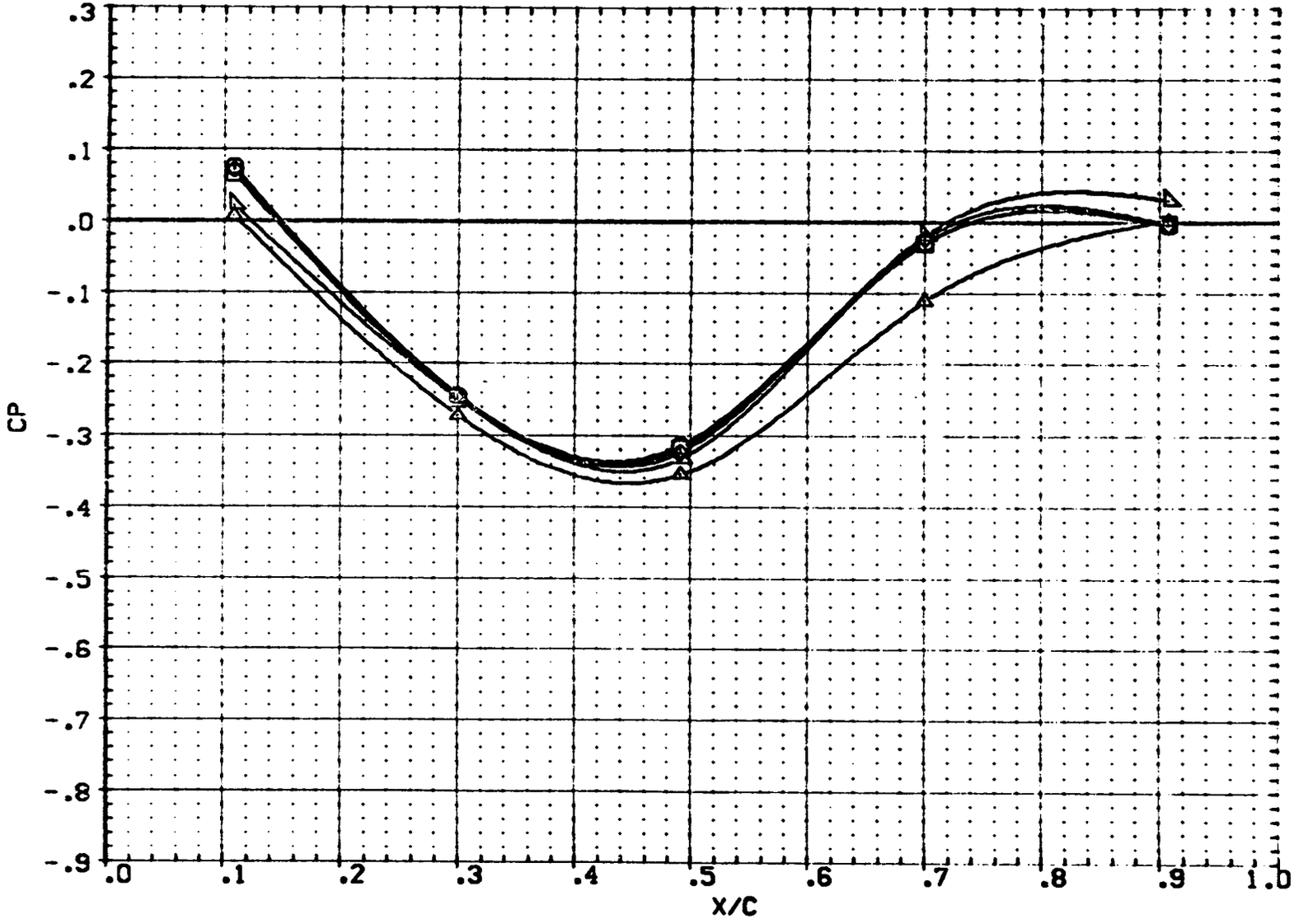
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U2)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964U3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964U4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964U5)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.197 ALPHA = .000 2Y/B = .511

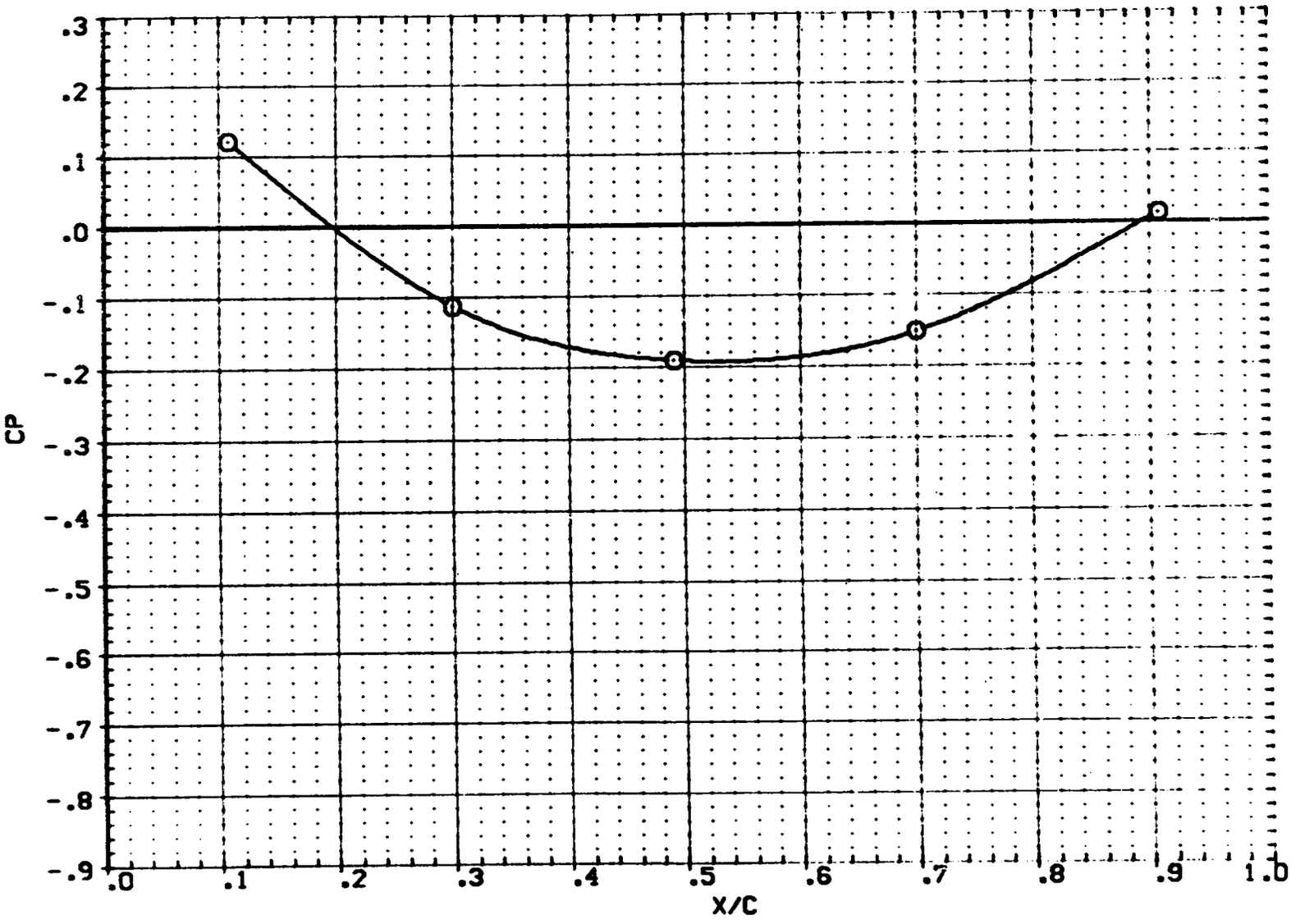
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[IA53] GAS SUPPLY STRUT (CIF/1)	.000	.000	.000
[R964U2]	□	MSFC 588[IA53] GAS SUPPLY STRUT (CIF/1 M1/1)	.000	.000	.000
[R964U3]	◇	MSFC 588[IA53] GAS SUPPLY STRUT (CIF/1 M1/2)	.000	.000	.000
[R964U4]	△	MSFC 588[IA53] GAS SUPPLY STRUT (CIF/1 M2/1)	.000	.000	-90.000
[R964U5]	▷	MSFC 588[IA53] GAS SUPPLY STRUT (CIF/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.456 ALPHA = .000 2Y/B = .511

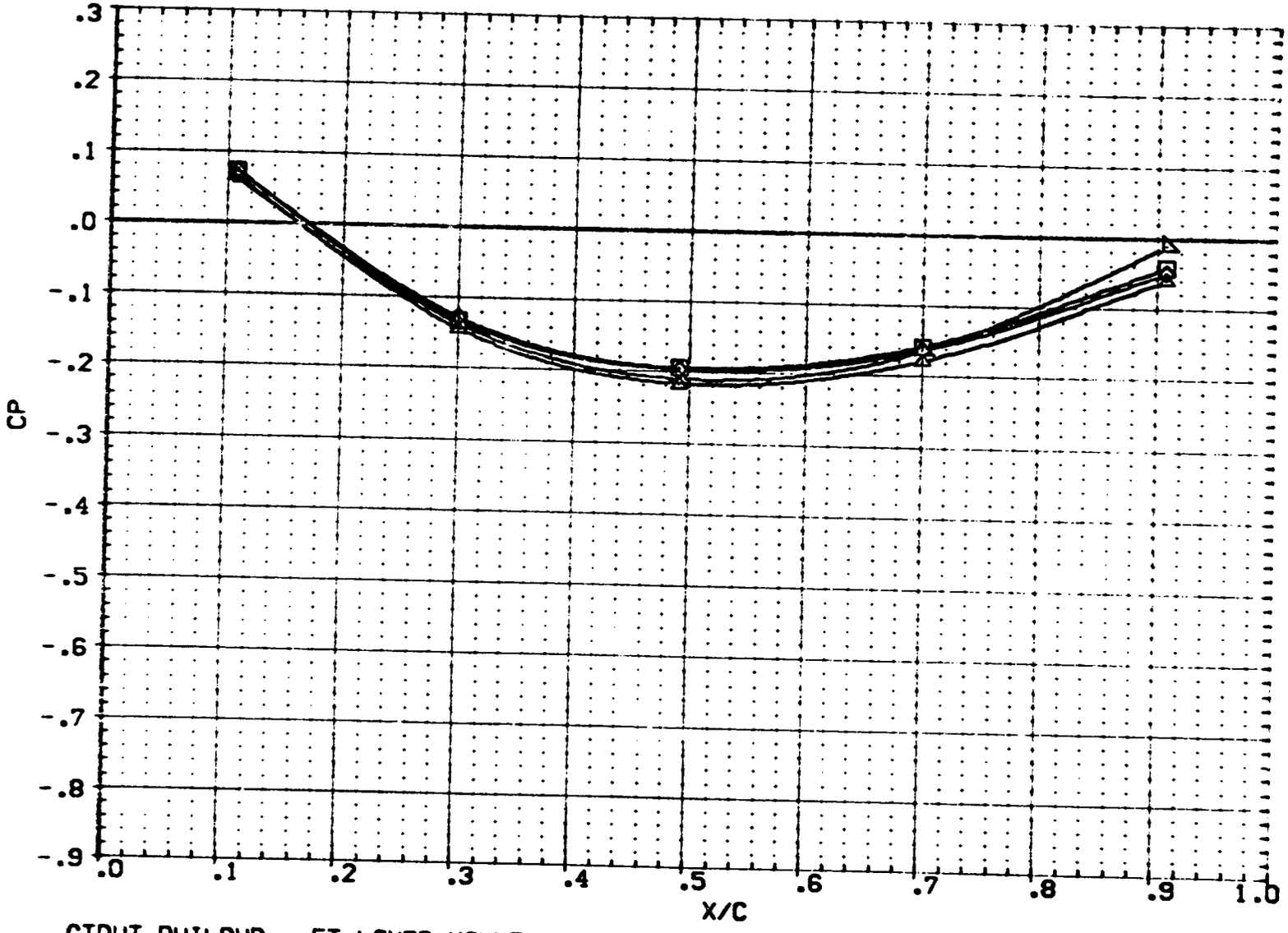
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U2)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964U3)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964U4)	⋈	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964U5)	▷	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.898 ALPHA = .000 2Y/B = .511

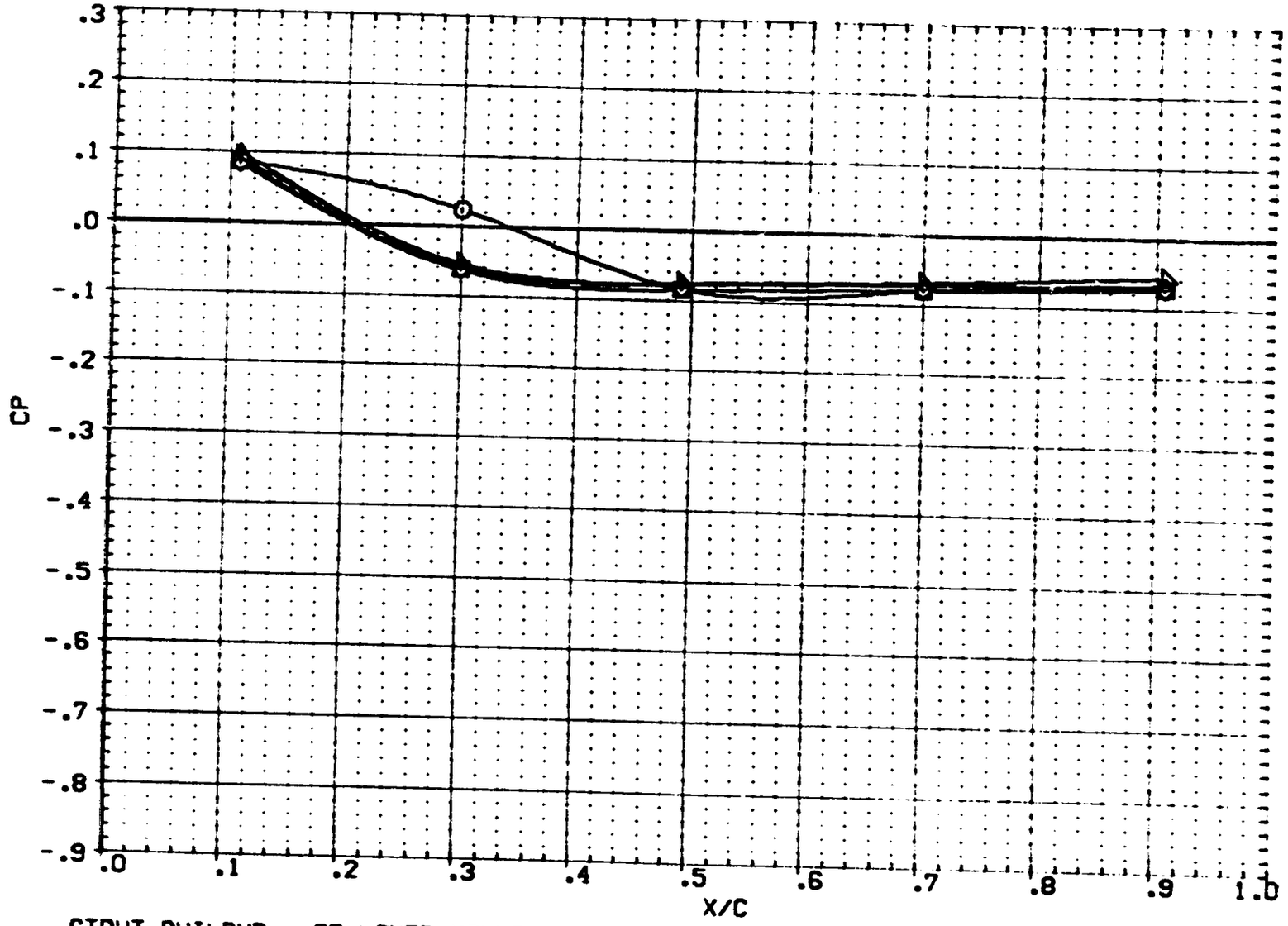
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64U1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(RS64U2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(RS64U3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(RS64U4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(RS64U5)	◁	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.961 ALPHA = .000 2Y/B = .511

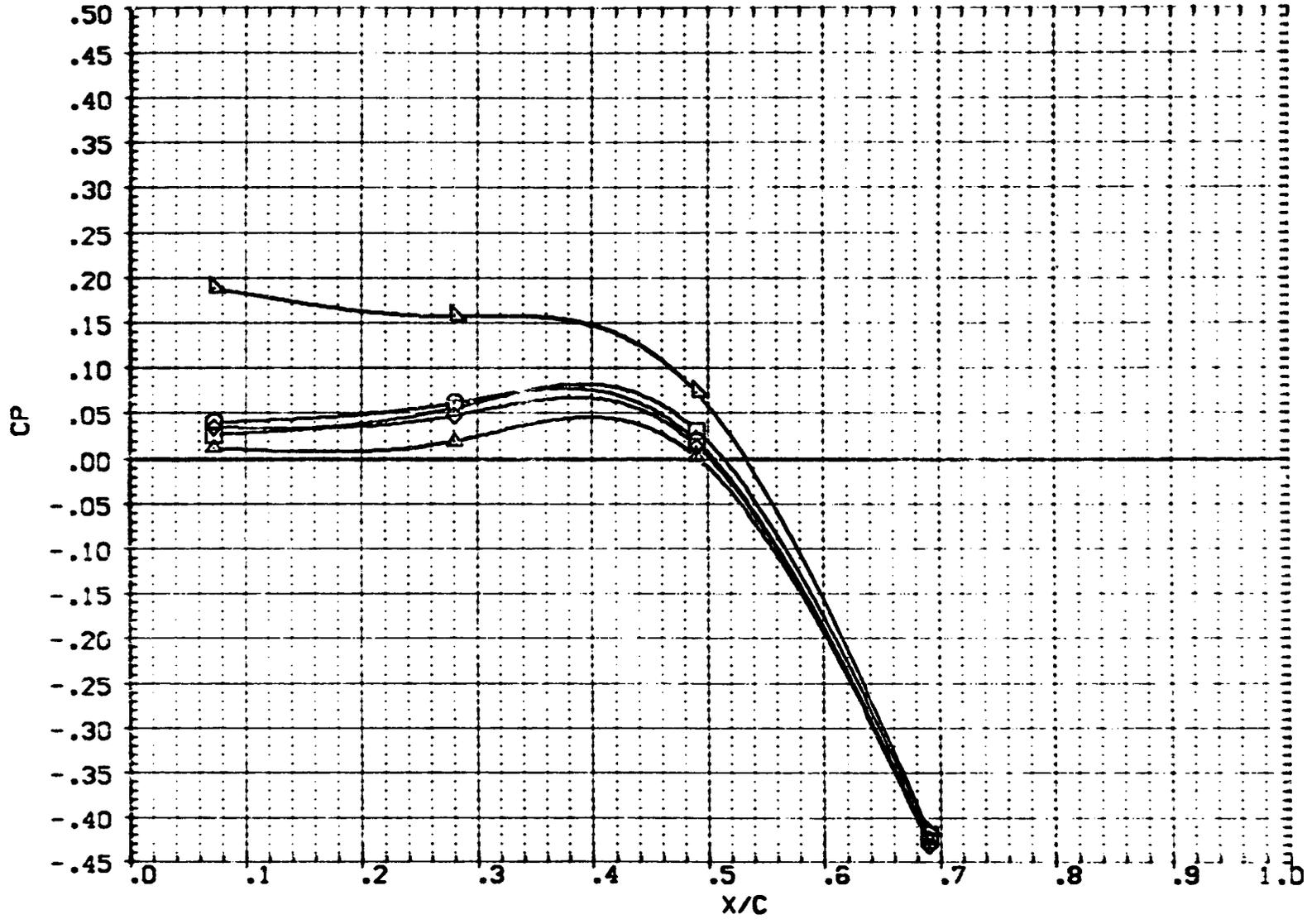
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64U1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(RS64U2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(RS64U3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(RS64U4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(RS64U5)	▷	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 2.990 ALPHA = .000 2Y/B = .511

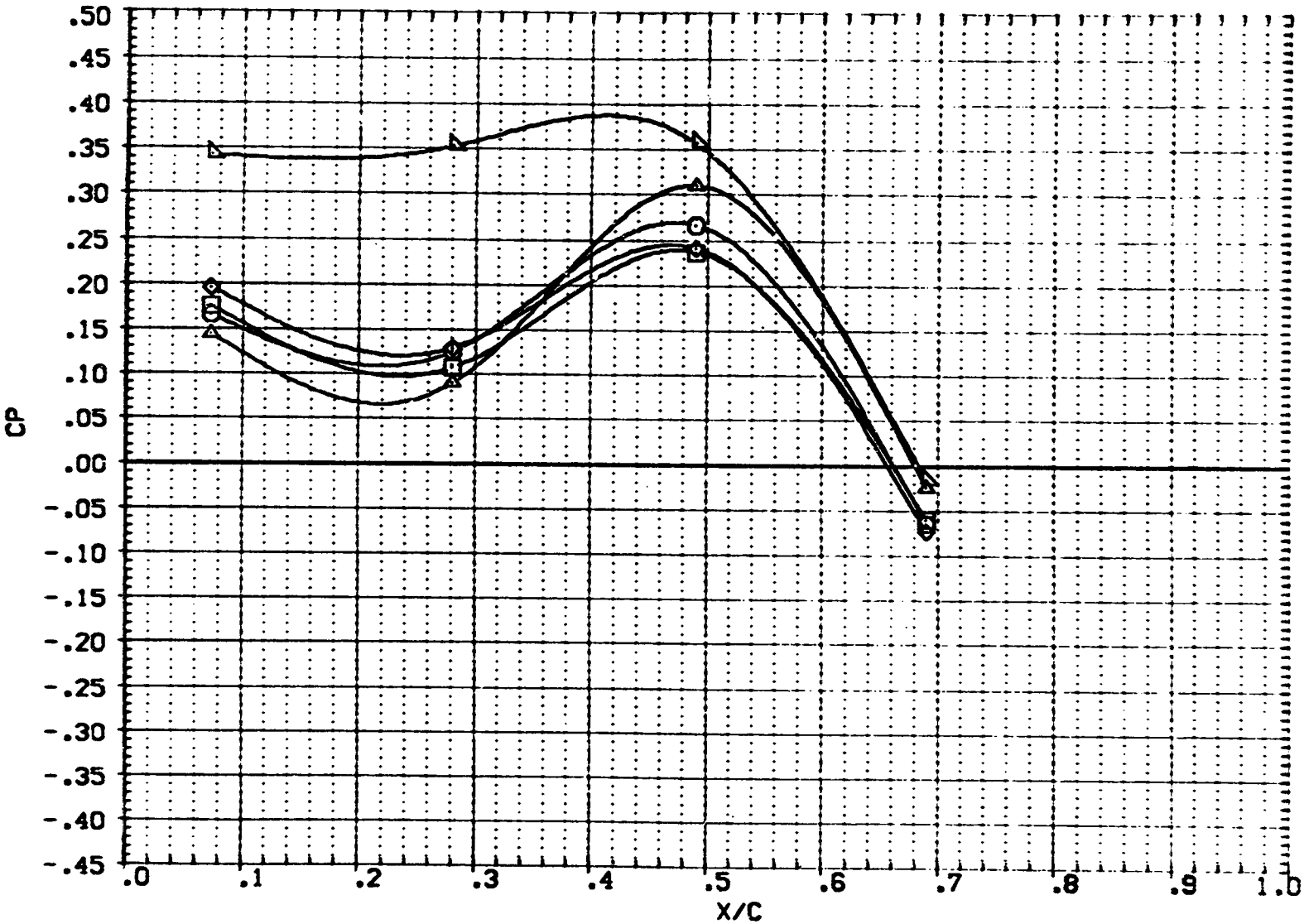
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L2)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964L3)	⋈	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964L4)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964L5)	◁	MSFC 588(1A53) GAS SUPPLY S RUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = .905 ALPHA = .000 2Y/B = .521

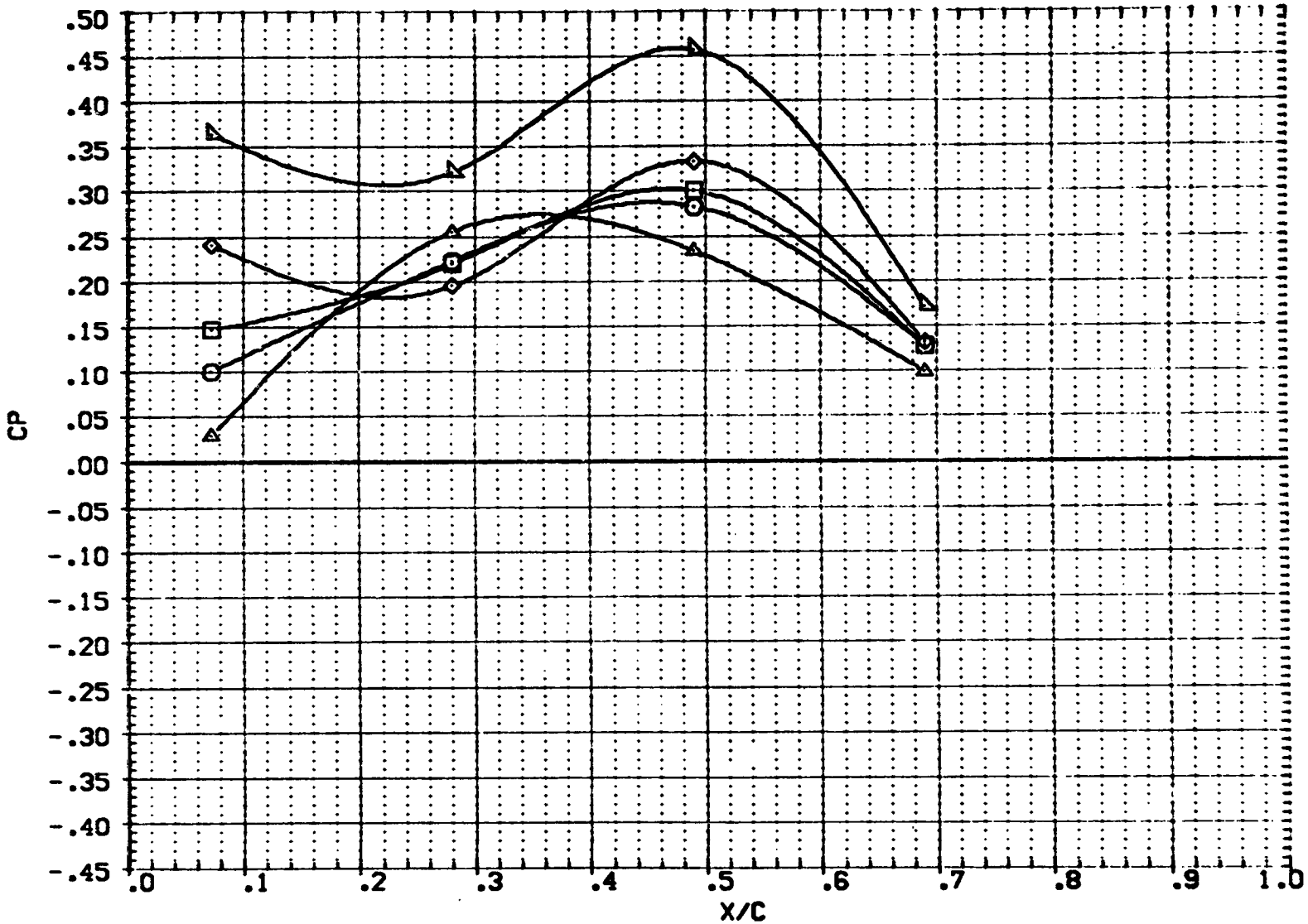
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964L3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964L4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964L5)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.197 ALPHA = .000 2Y/B = .521

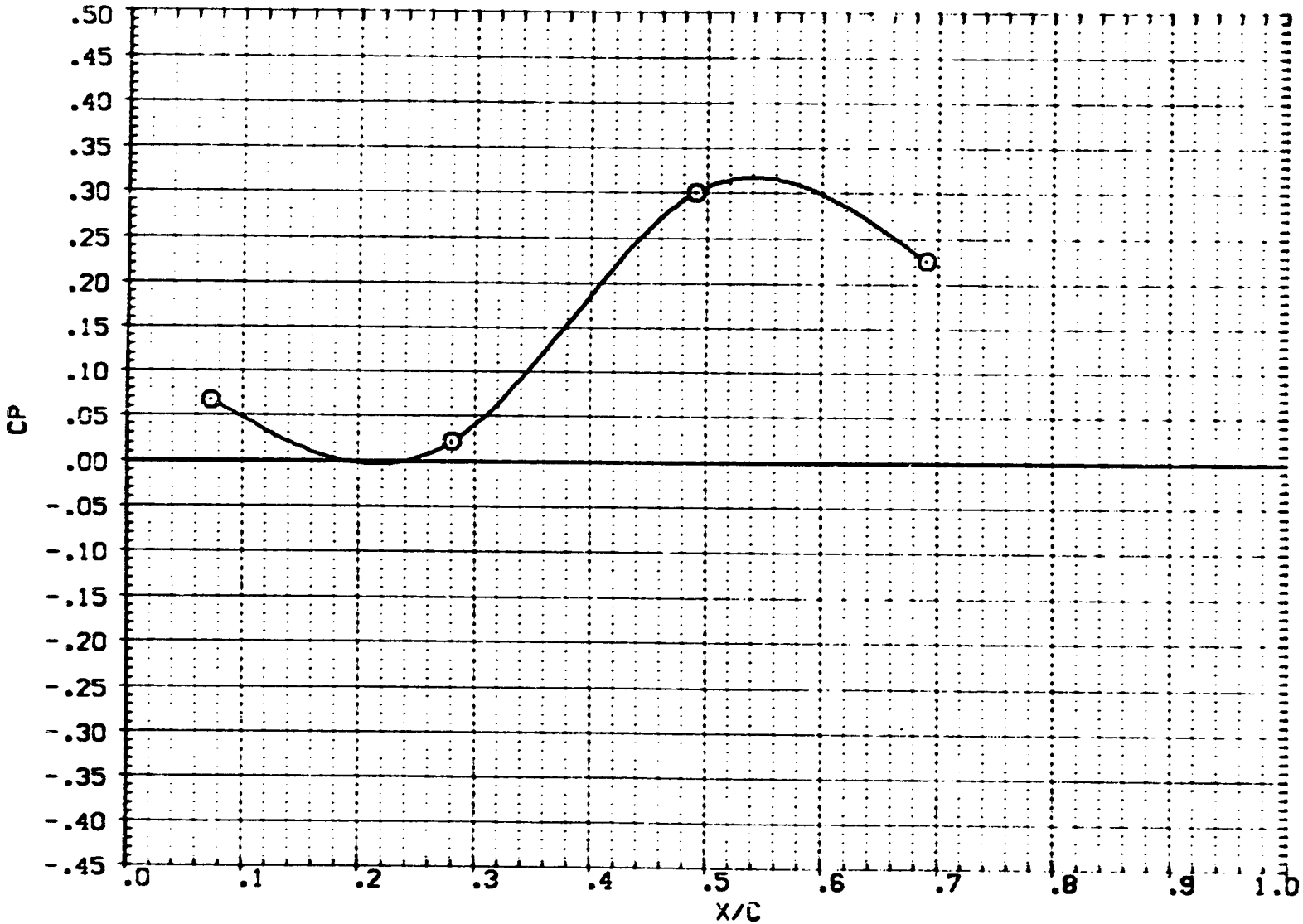
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964L1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964L2]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[R964L3]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[R964L4]	△	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[R964L5]	◁	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.456 ALPHA = .000 2Y/B = .521

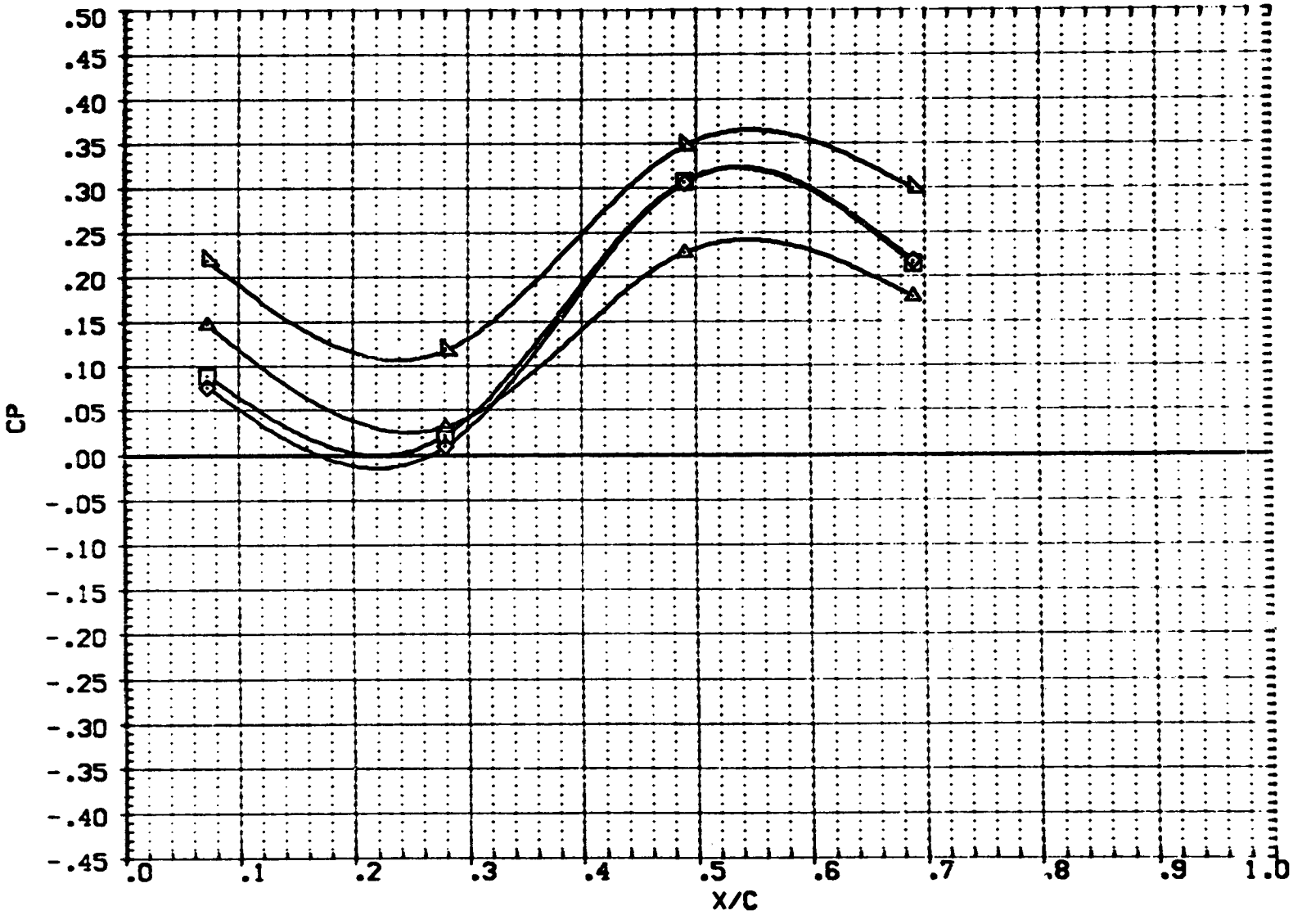
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L2)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964L3)	⊲	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964L4)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964L5)	▷	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.898 ALPHA = .000 2Y/B = .521

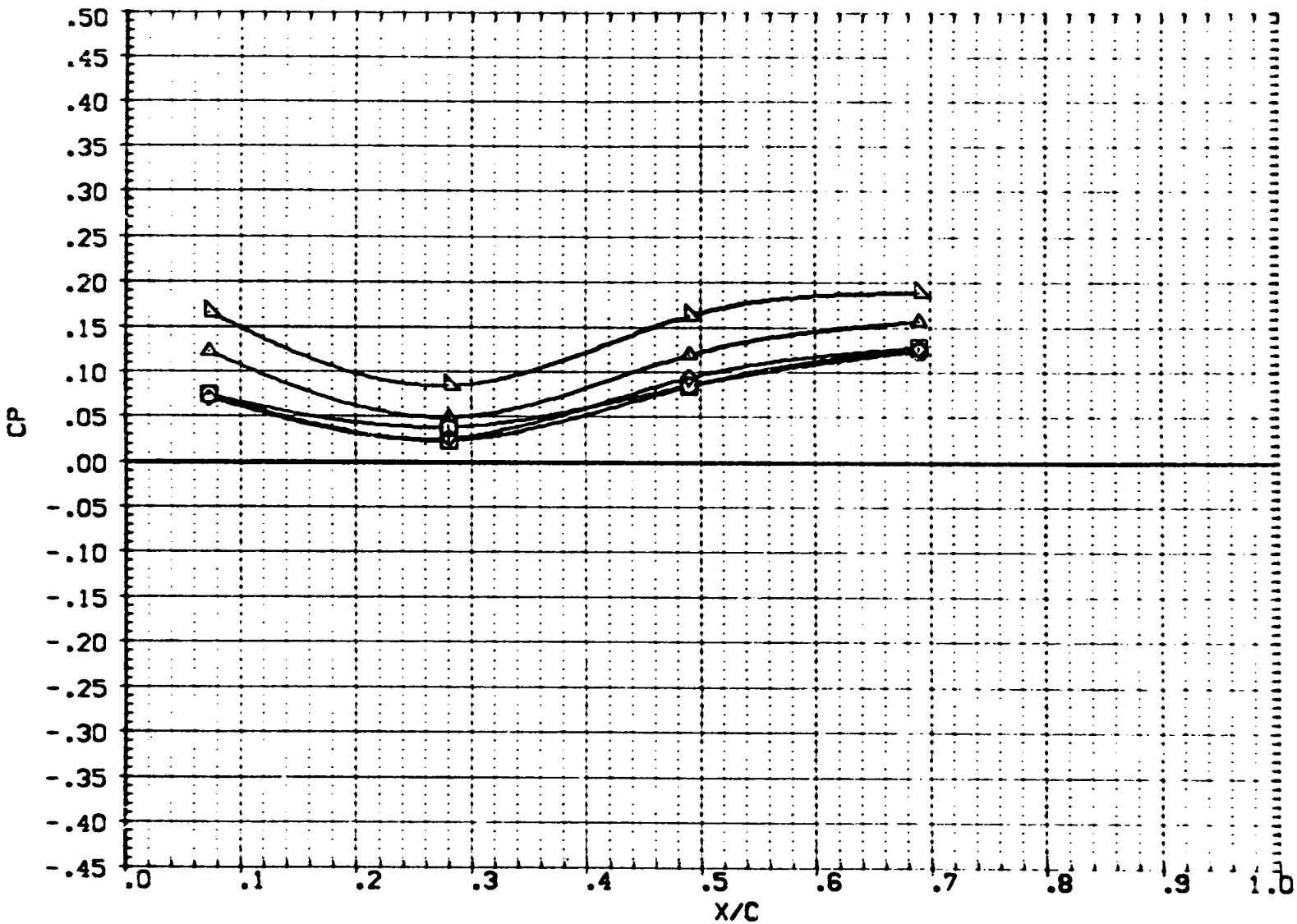
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L2)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R964L3)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R964L4)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R964L5)	◺	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.961 ALPHA = .000 2Y/B = .521

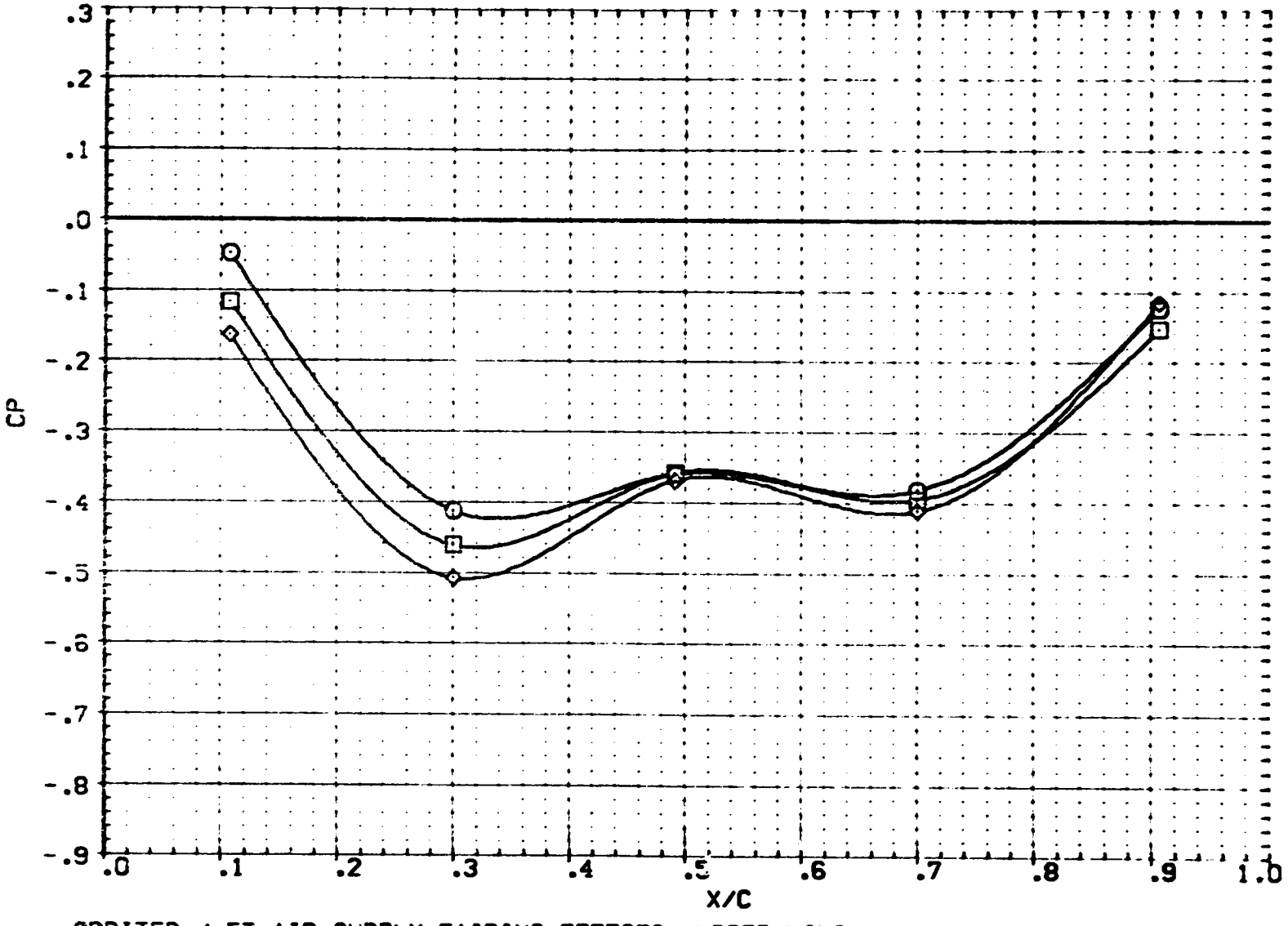
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(P96AL1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(P96AL2)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(P96AL3)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(P96AL4)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(P96AL5)	▽	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 2.990 ALPHA = .000 2Y/B = .521

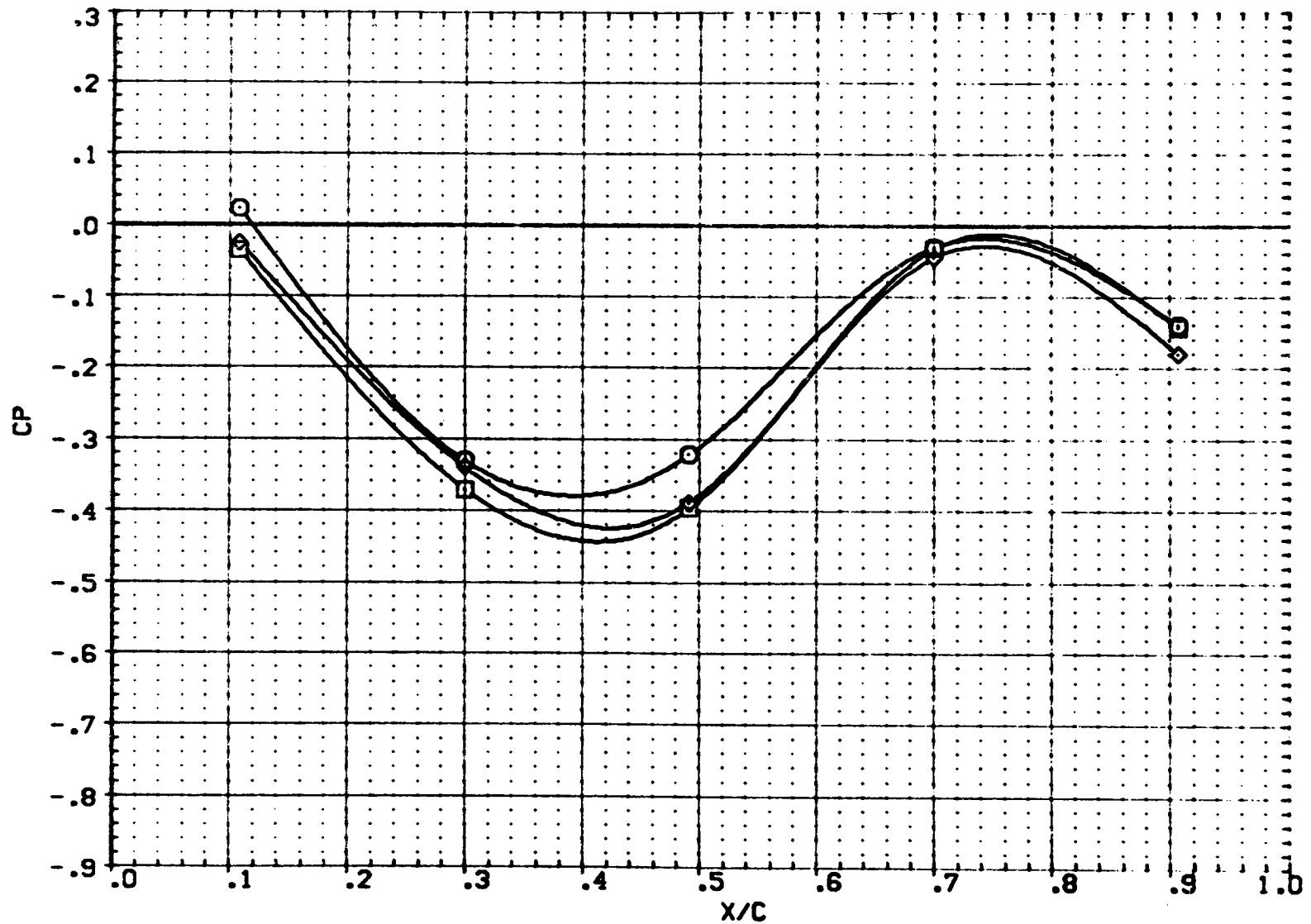
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U6]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B1]	.000	.000	.000
[R964U7]		MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = .905 ALPHA = .000 2Y/B = .511

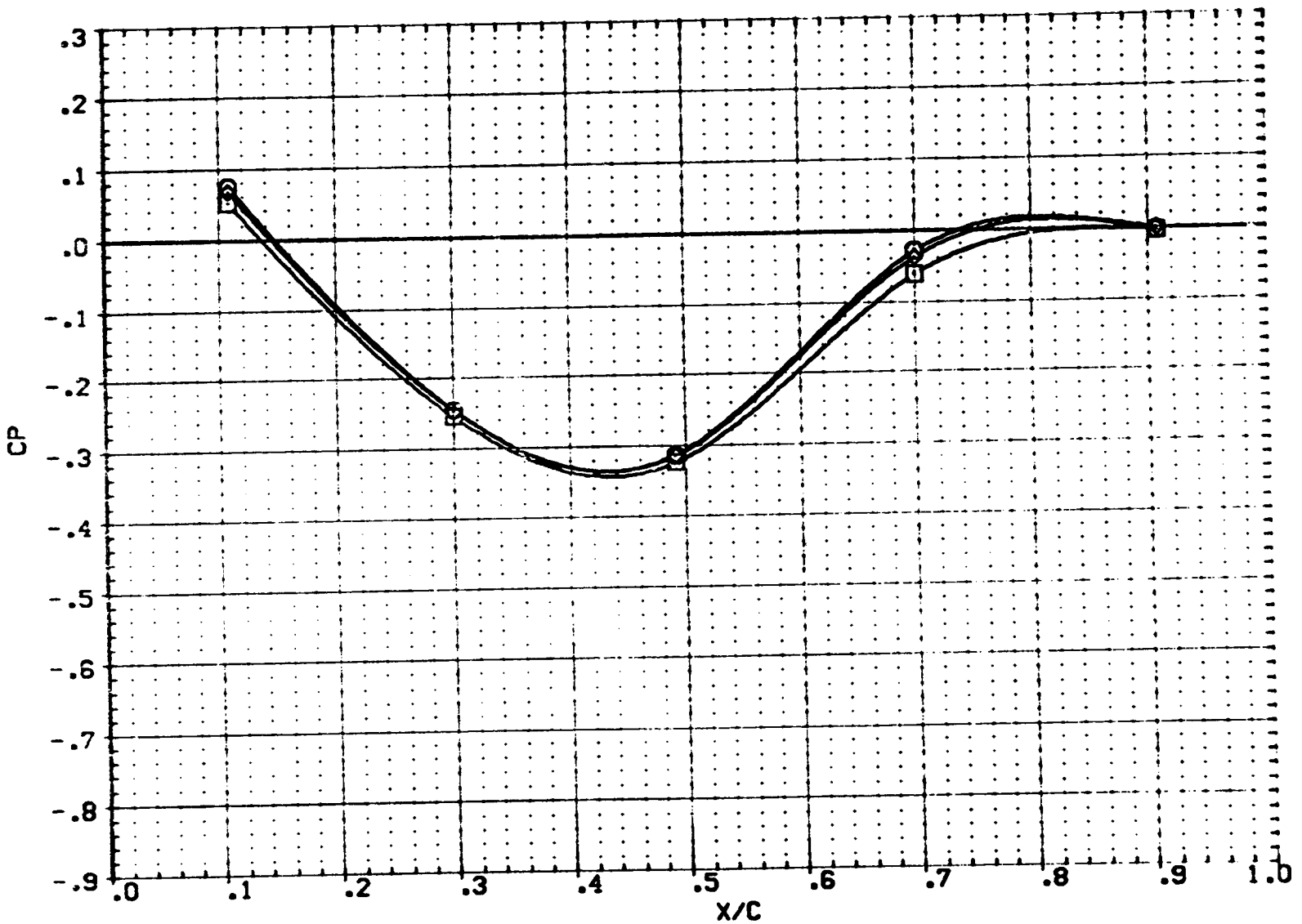
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U6]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B1]	.000	.000	.000
[R964U7]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.197 ALPHA = .000 2Y/B = .511

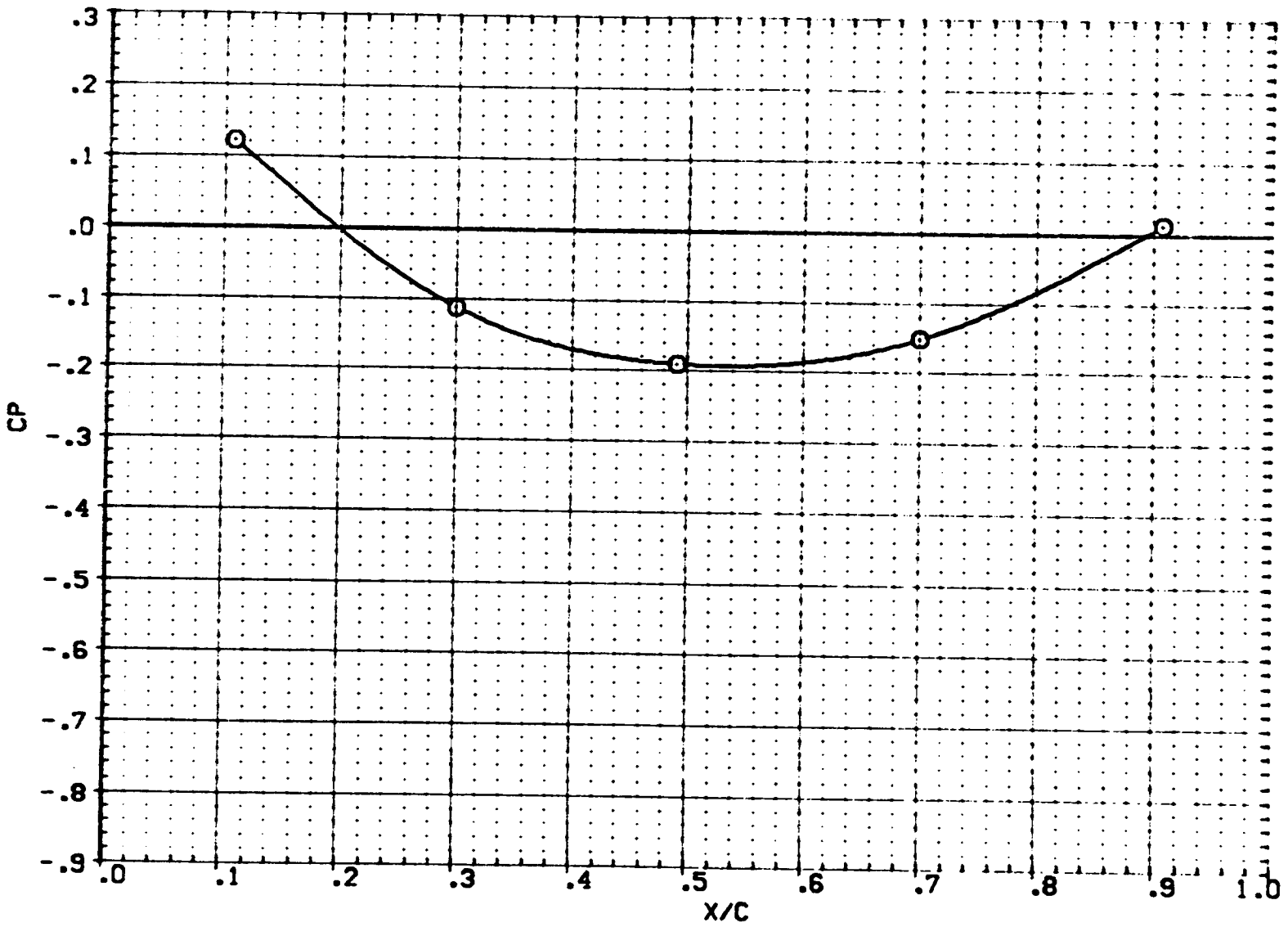
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1] ○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U6] □	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R964U7] ◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.456 ALPHA = .000 2Y/B = .511

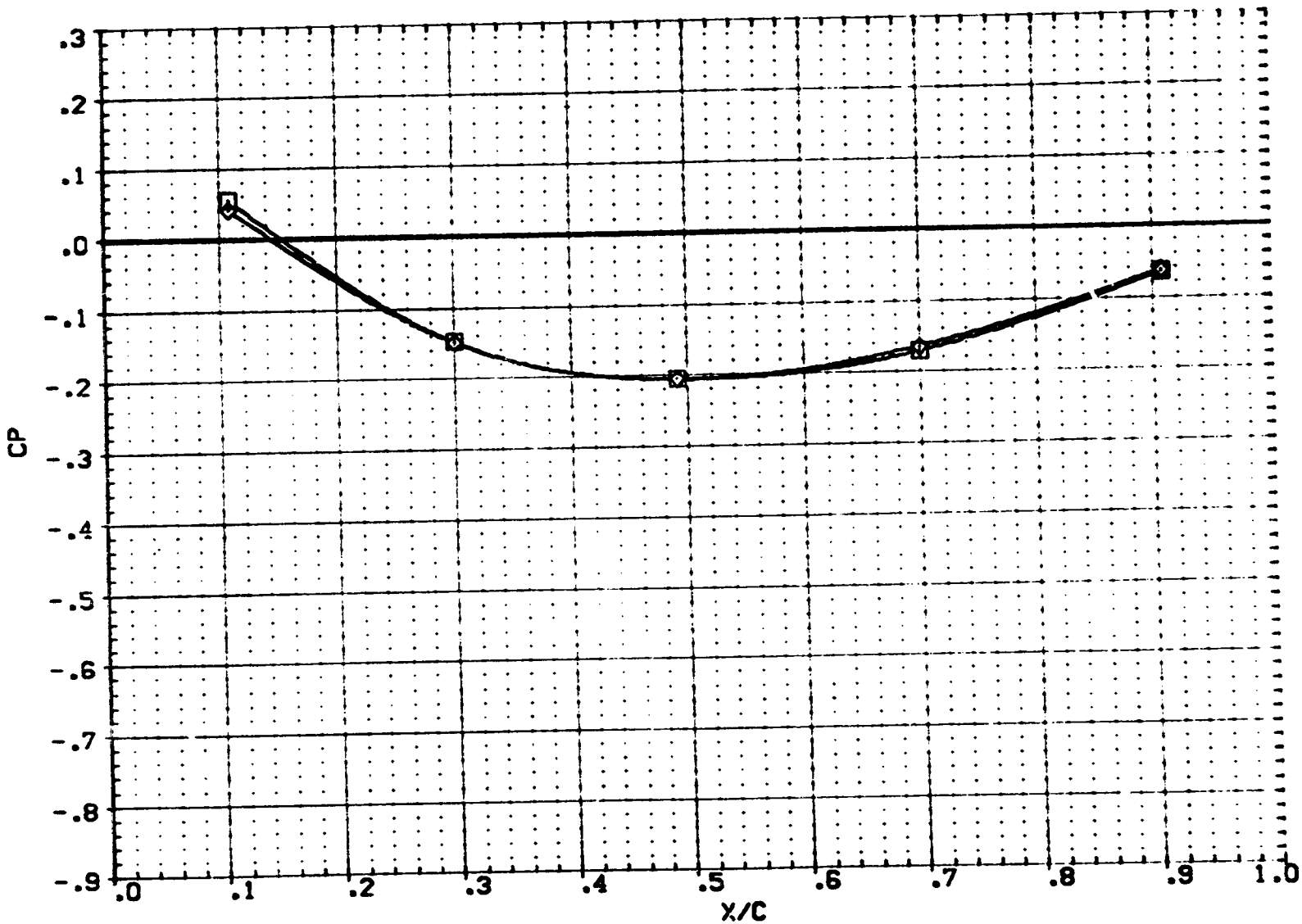
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U6]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R964U7]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.898 ALPHA = .000 2Y/B = .511

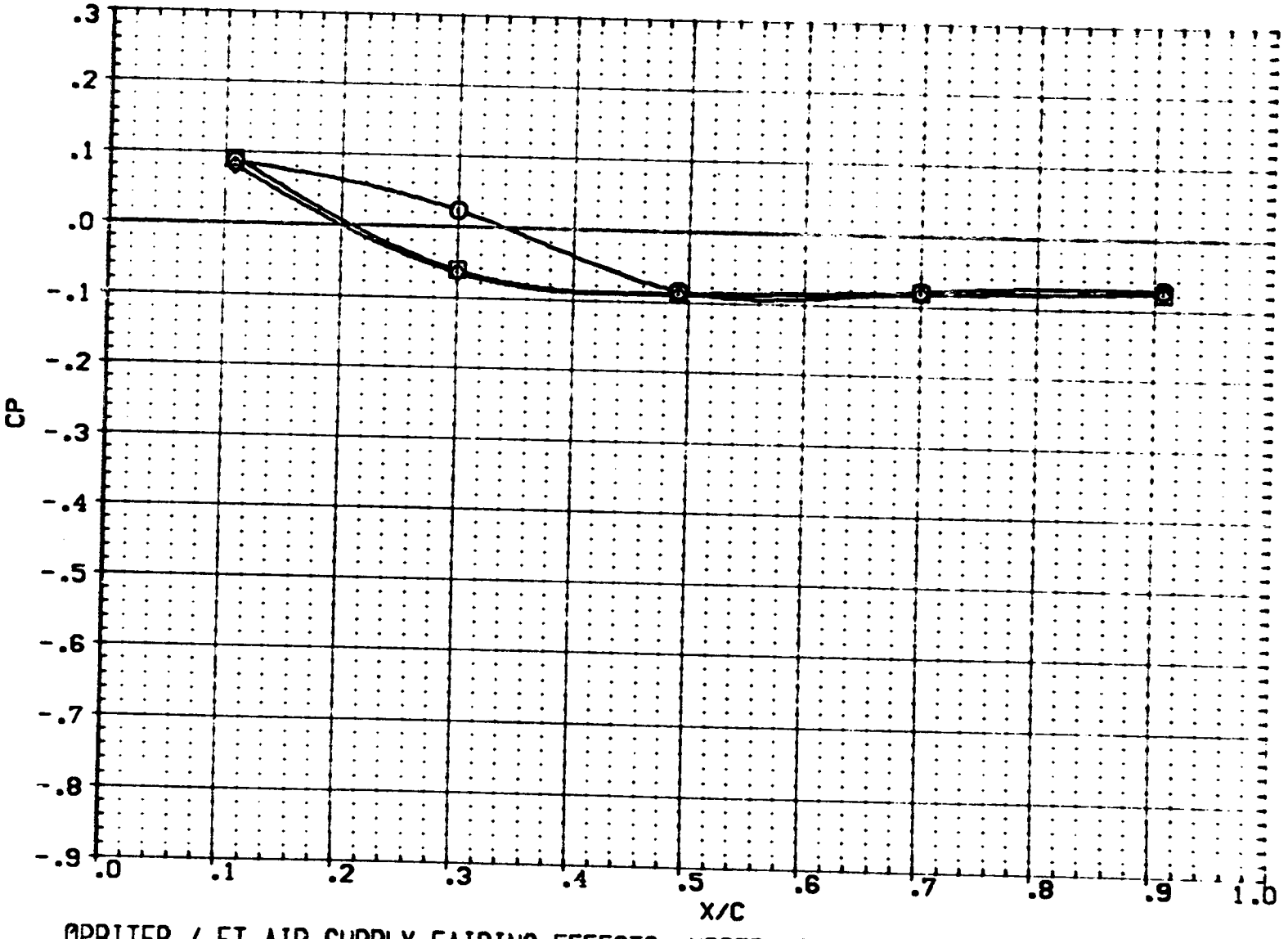
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U6)	▭	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(R964U7)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.959 ALPHA = .000 2Y/B = .511

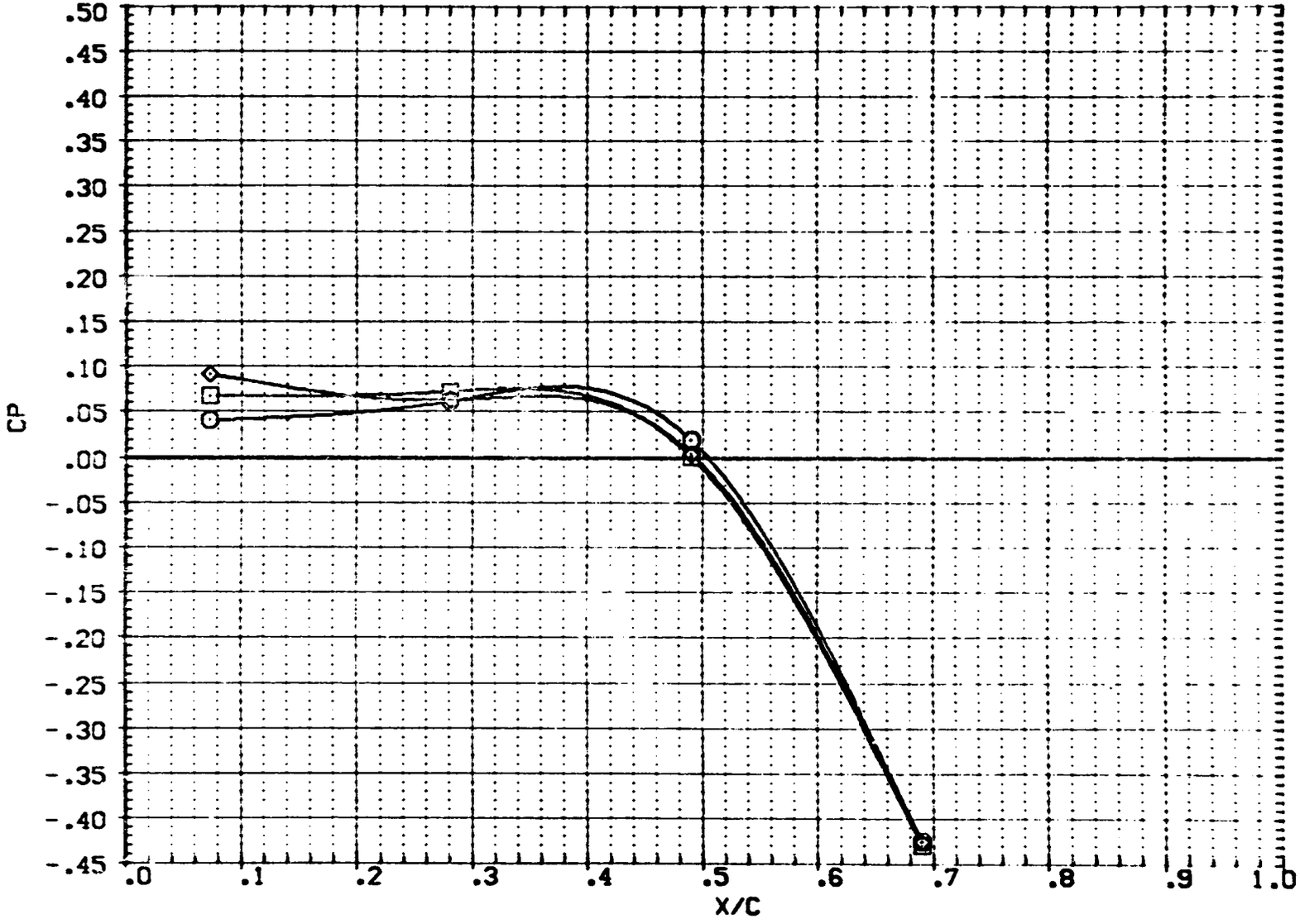
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64U1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1)	.000	.000	.000
(RS64U6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1 B1)	.000	.000	.000
(RS64U7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1 B2)	.000	.003	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 2.990 ALPHA = .000 2Y/B = .511

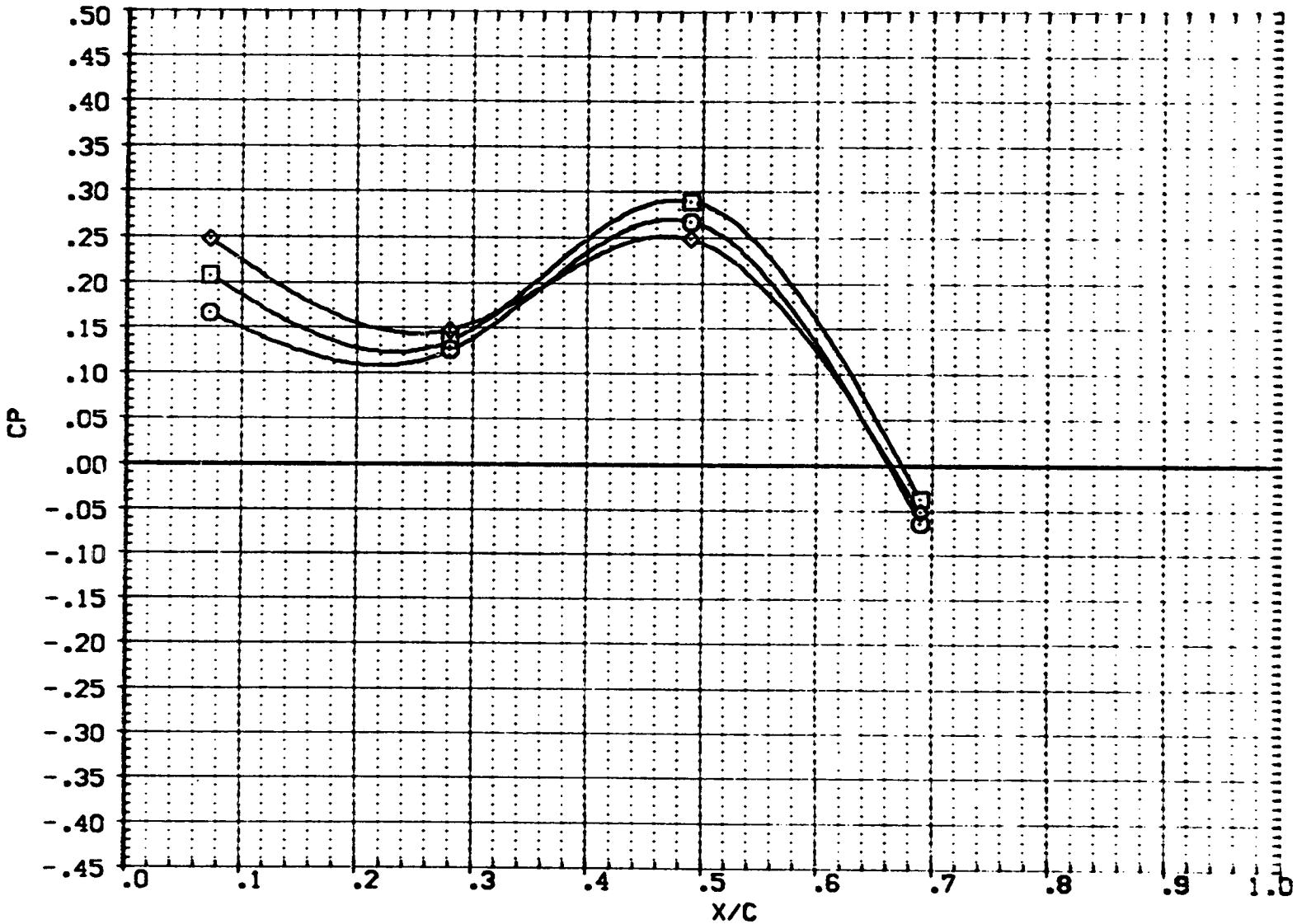
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RS64L1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(RS64L6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(RS64L7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

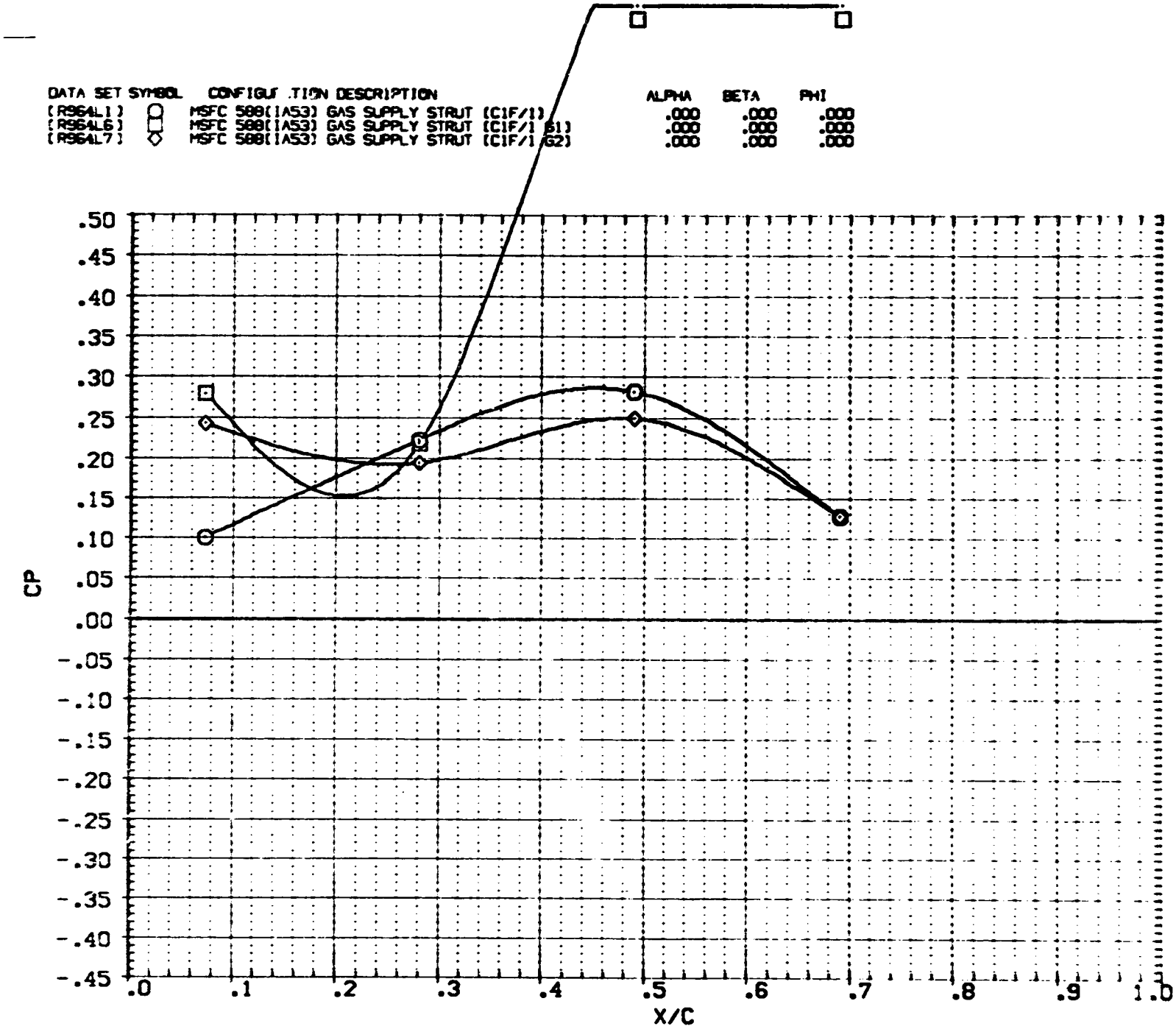
MACH = .905 ALPHA = .000 2Y/B = .521

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(R964L7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

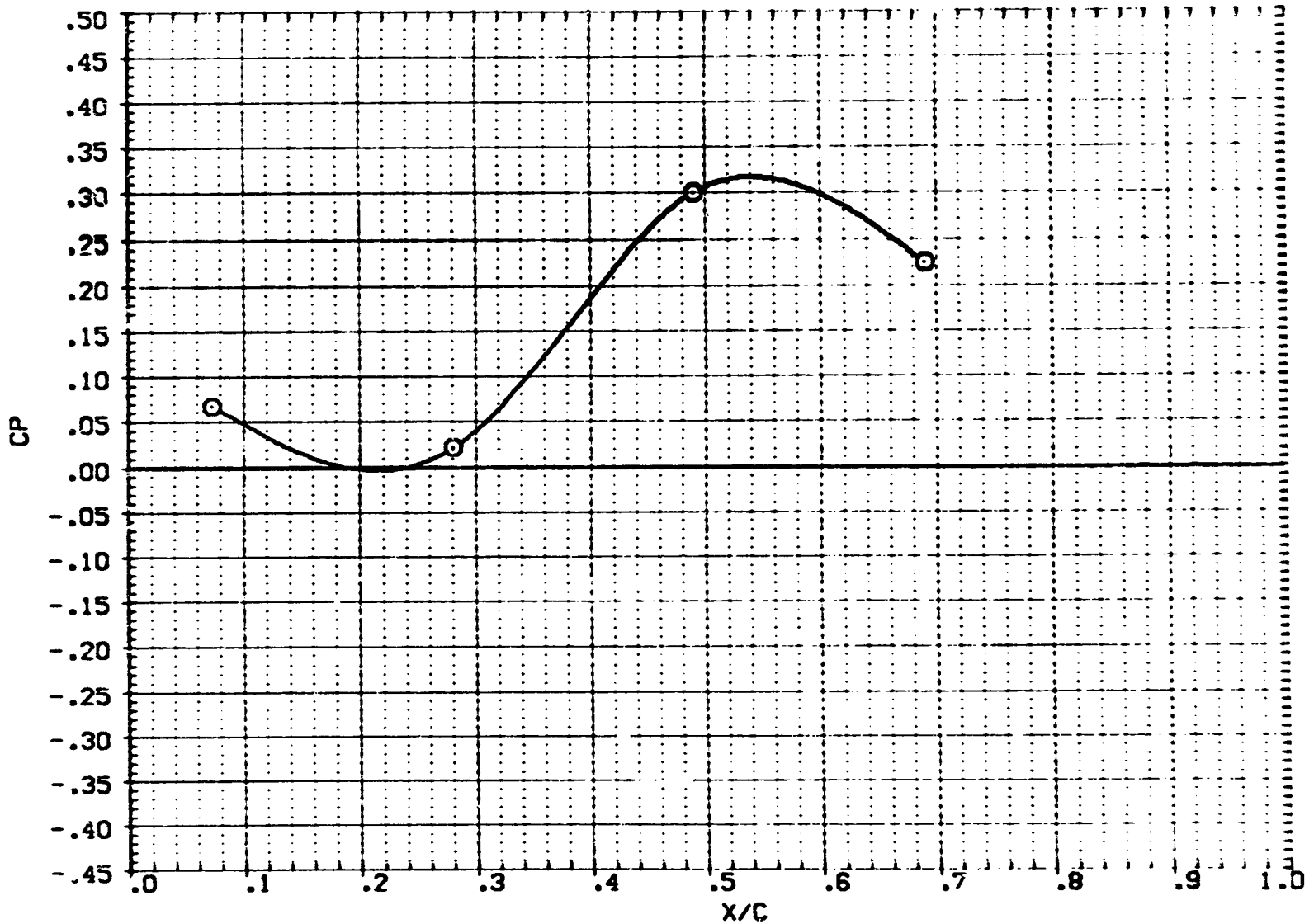
MACH = 1.197 ALPHA = .000 2Y/B = .521



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.456 ALPHA = .000 2Y/B = .521

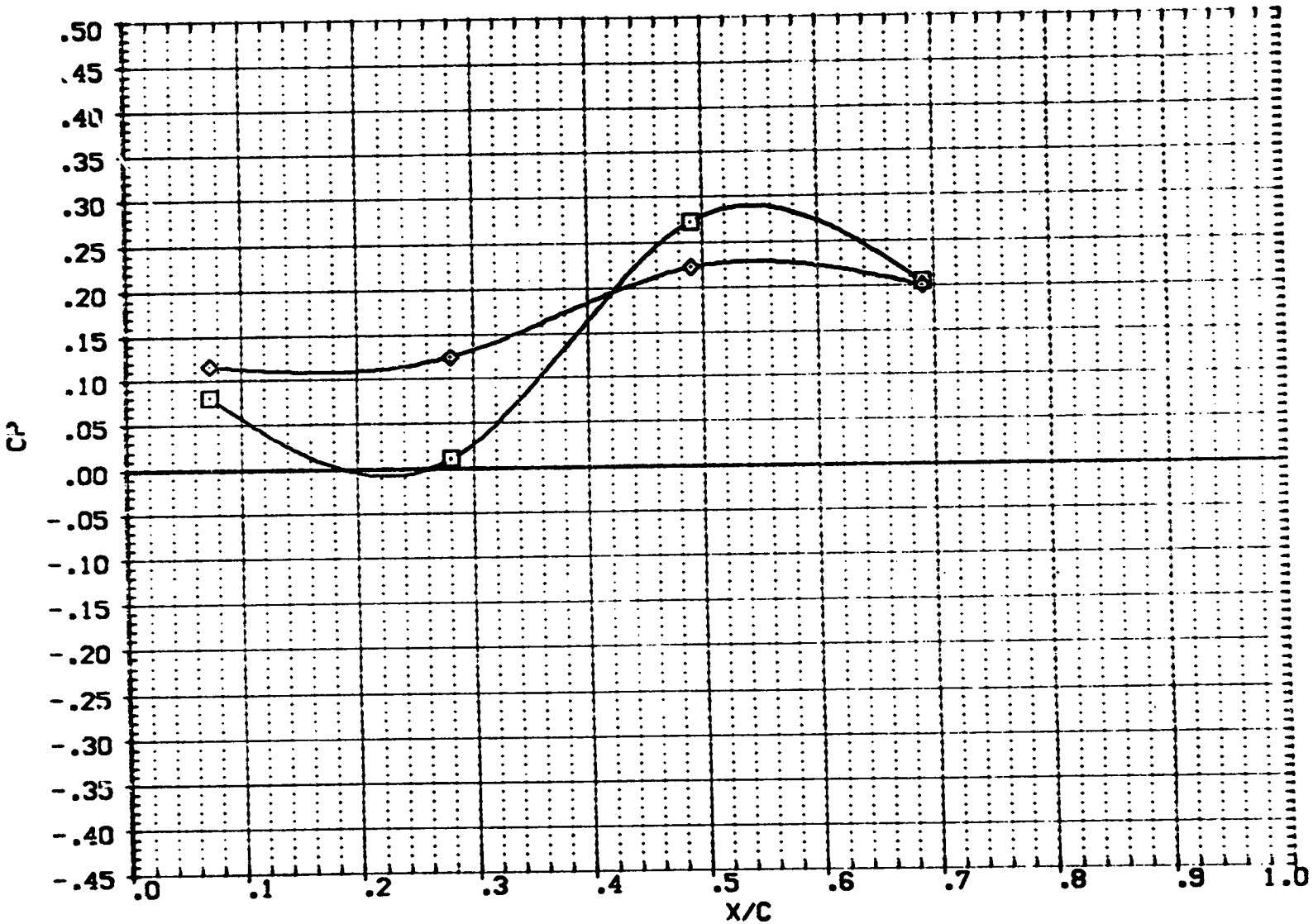
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964L1]	○	MSFC 598[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964L6]	□	MSFC 598[1A53] GAS SUPPLY STRUT [C1F/1 61]	.000	.000	.000
[R964L7]	◇	MSFC 598[1A53] GAS SUPPLY STRUT [C1F/1 62]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.898 ALPHA = .000 2Y/B = .521

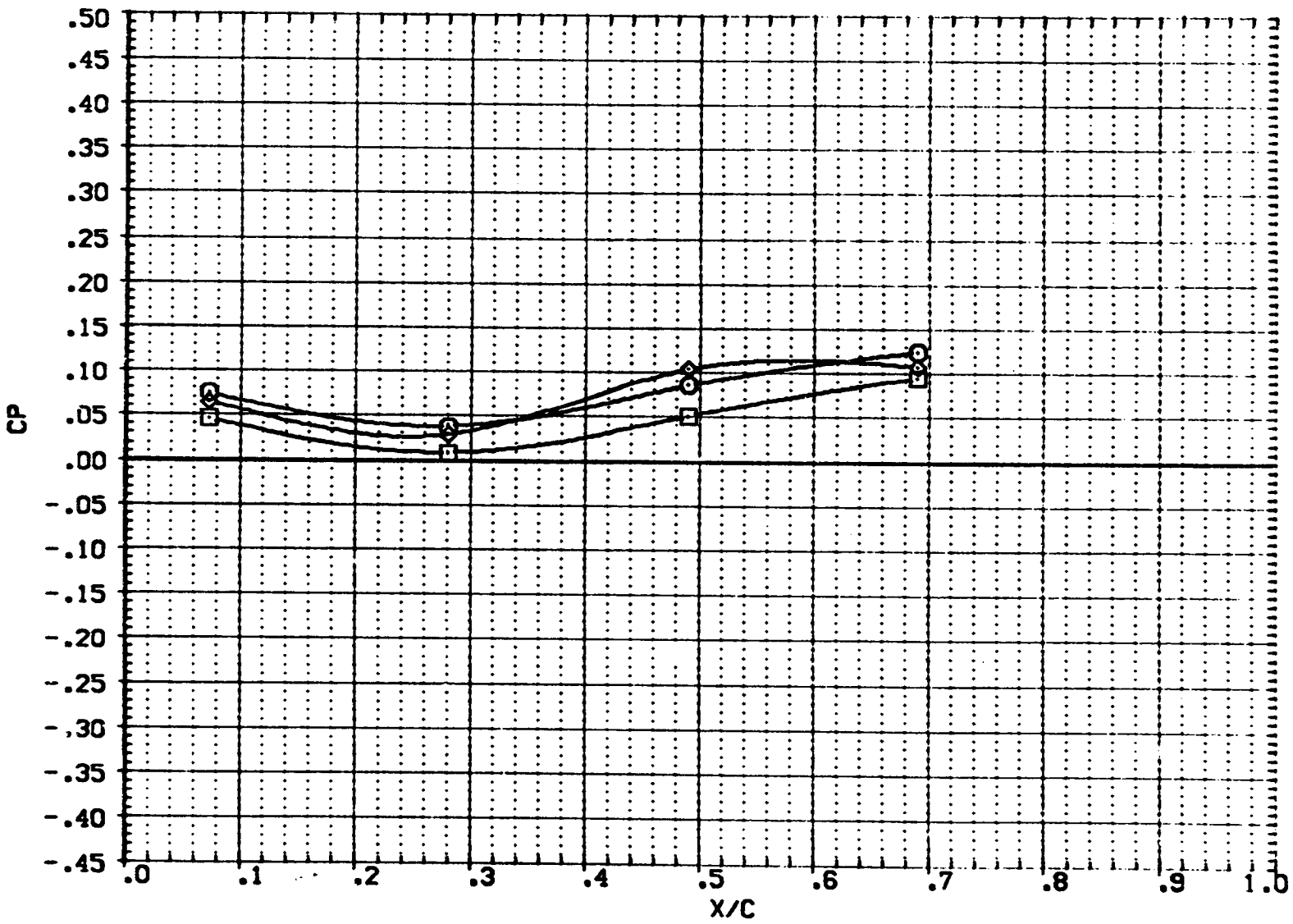
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 B1)	.000	.000	.000
(R964L7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 B2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.959 ALPHA = .000 2Y/B = .521

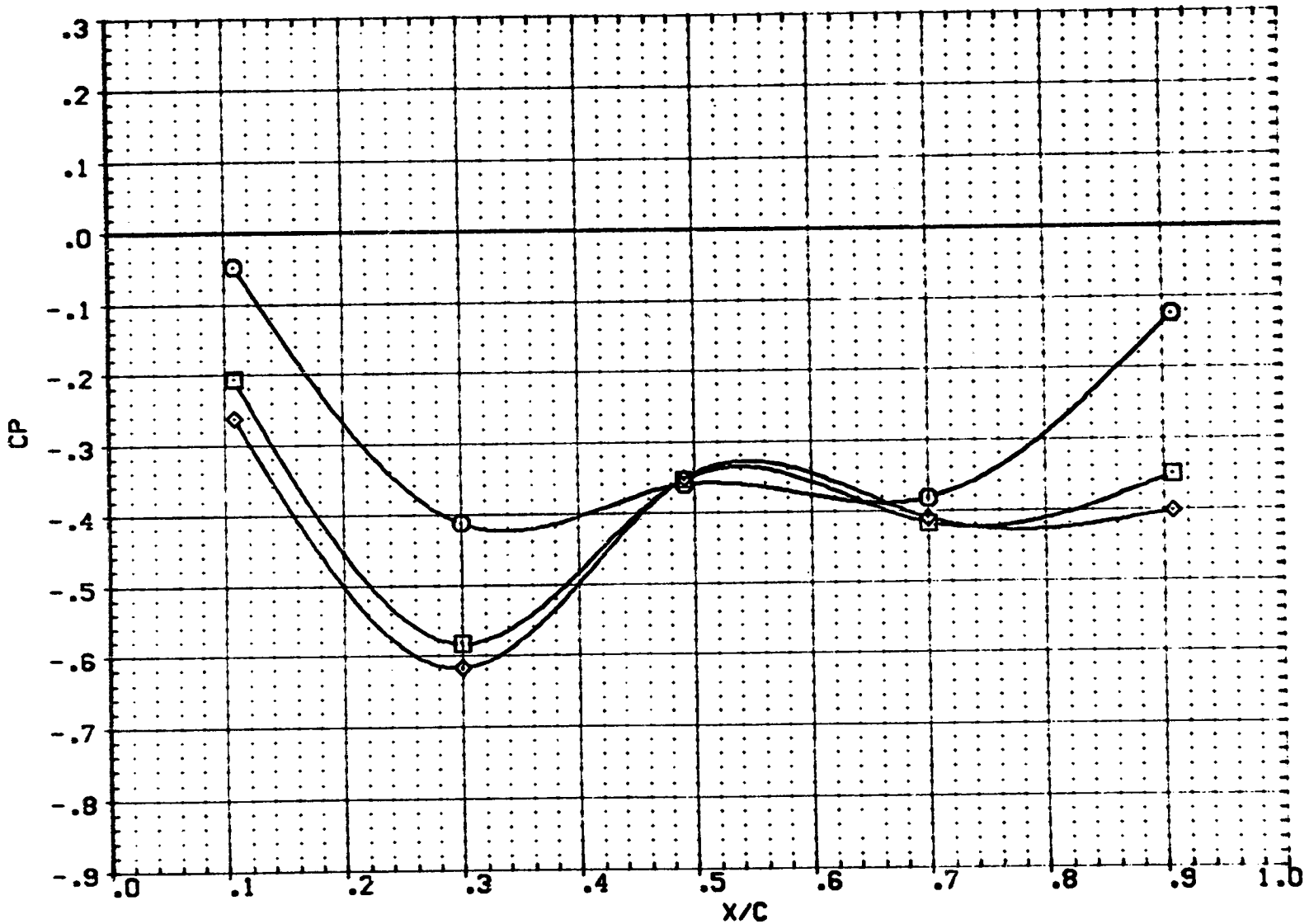
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(R964L7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 2.990 ALPHA = .000 2Y/B = .521

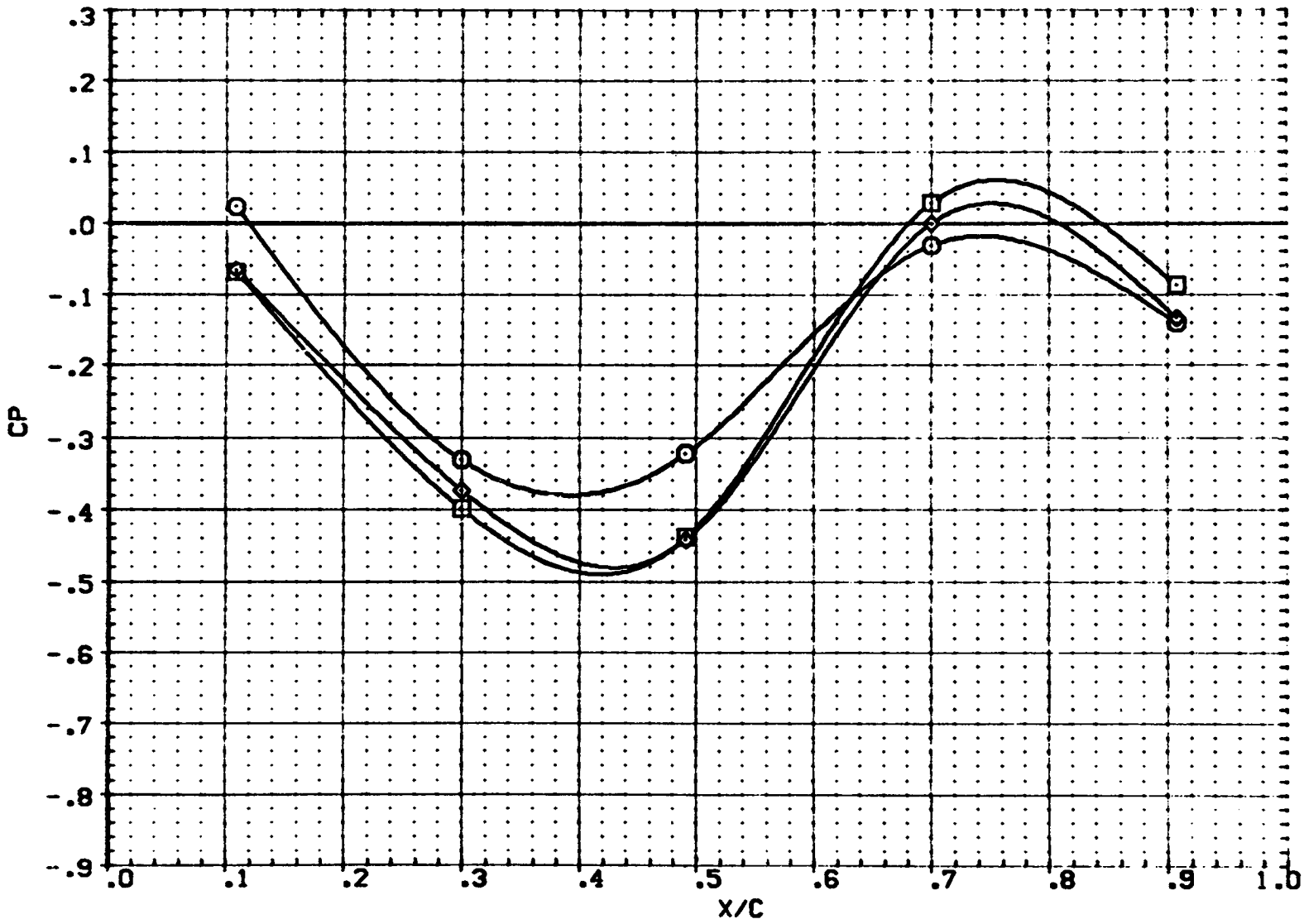
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 82 M2/1]	.000	.000	-90.000
[R964U9]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 82 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = .905 ALPHA = .000 2Y/B = .511

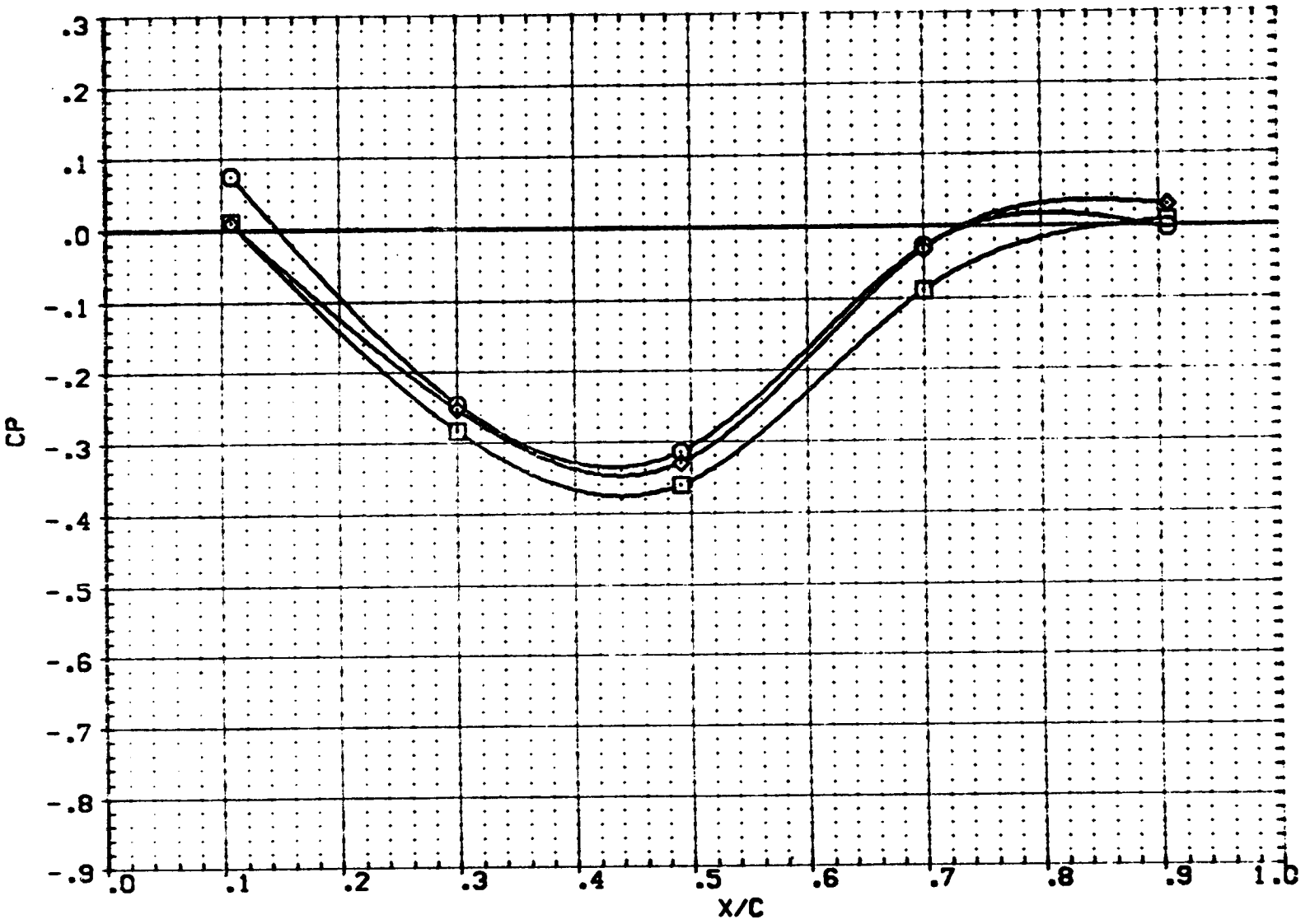
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964U9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.137 ALPHA = .000 2Y/B = .511

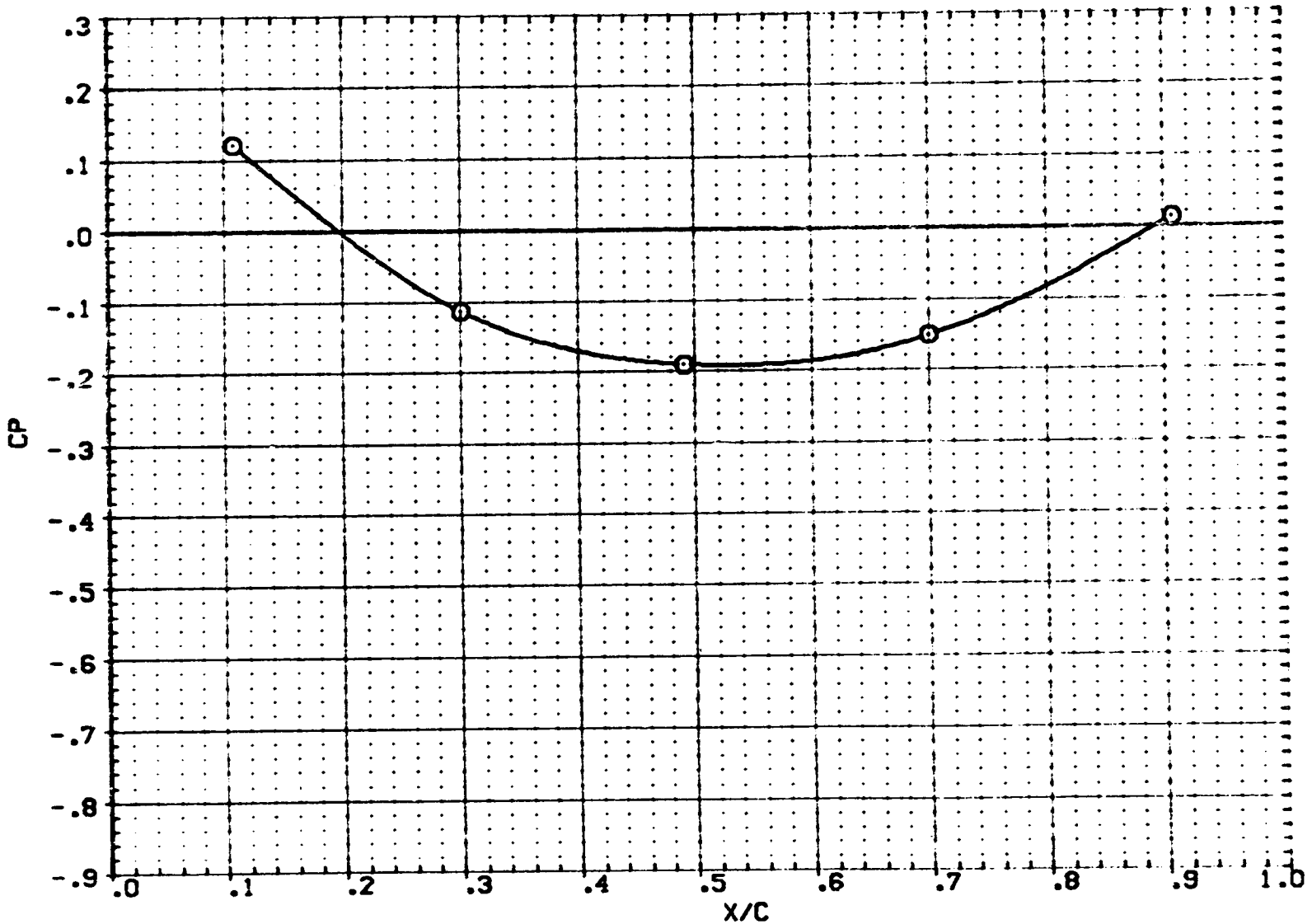
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U8]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R964U9]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.456 ALPHA = .000 2Y/B = .511

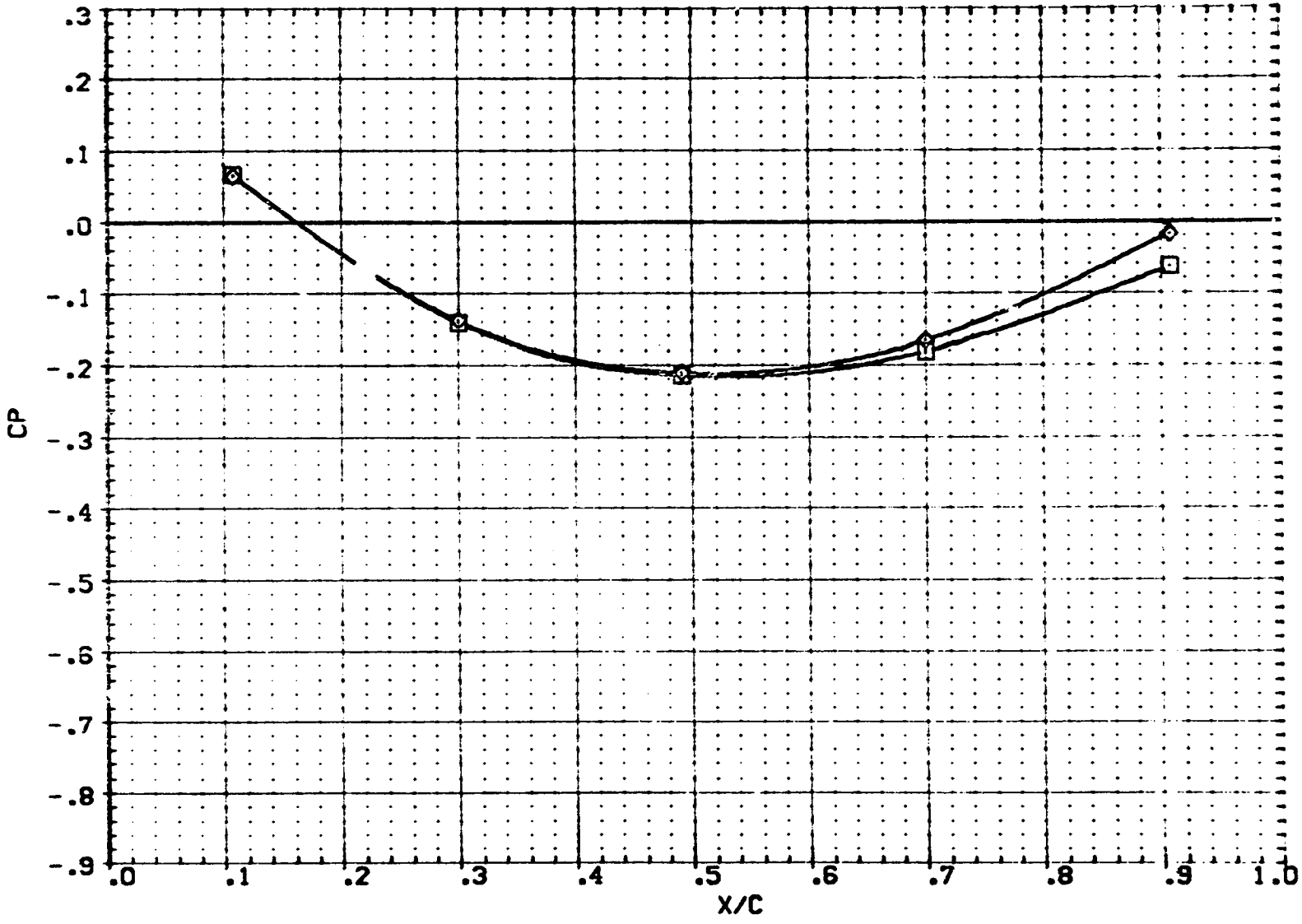
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R964U9]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.898 ALPHA = .000 2Y/B = .511

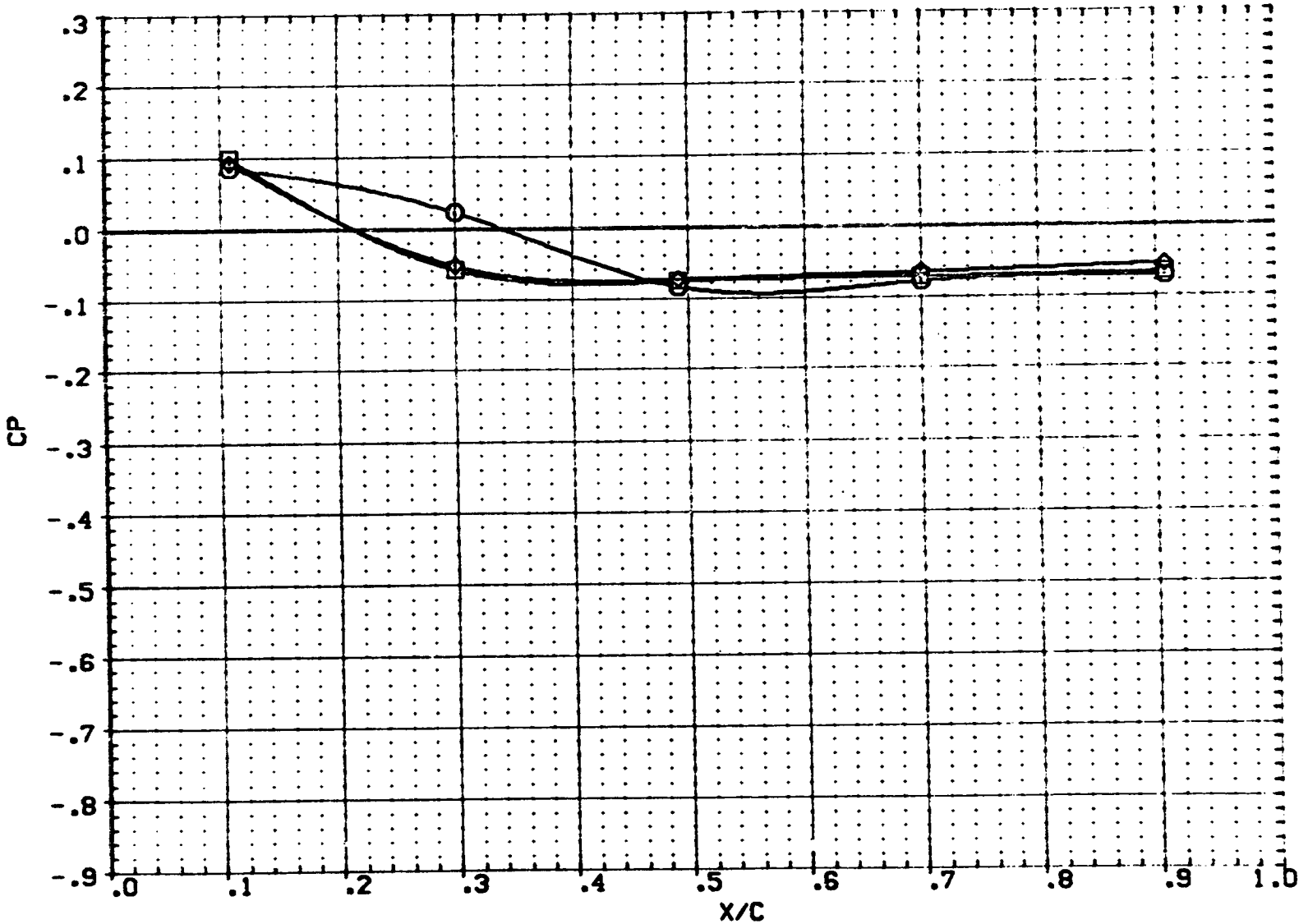
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964U1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964U8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964U9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.958 ALPHA = .000 2Y/B = .511

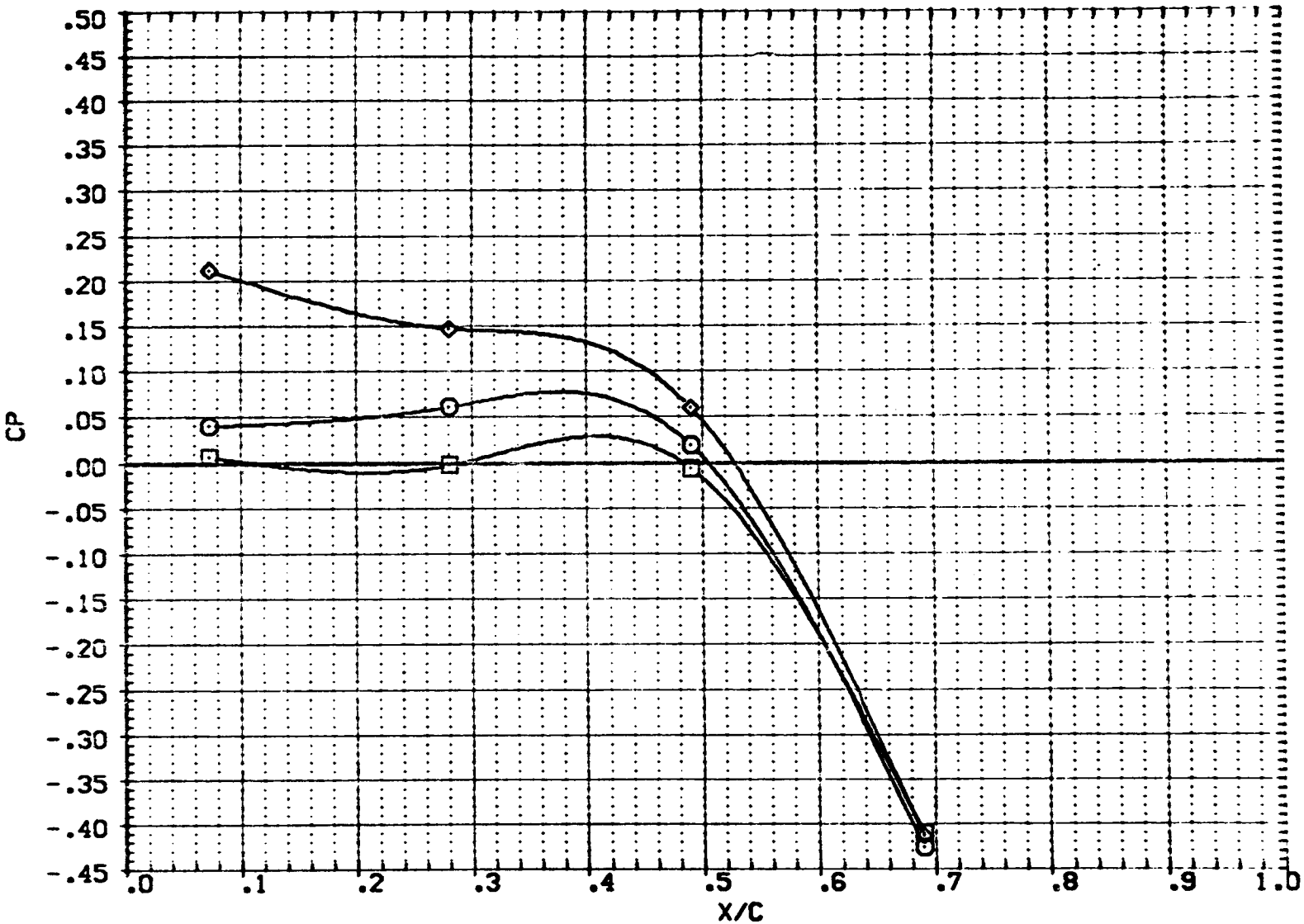
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964U1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964U8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R964U9]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 2.990 ALPHA = .000 2Y/B = .511

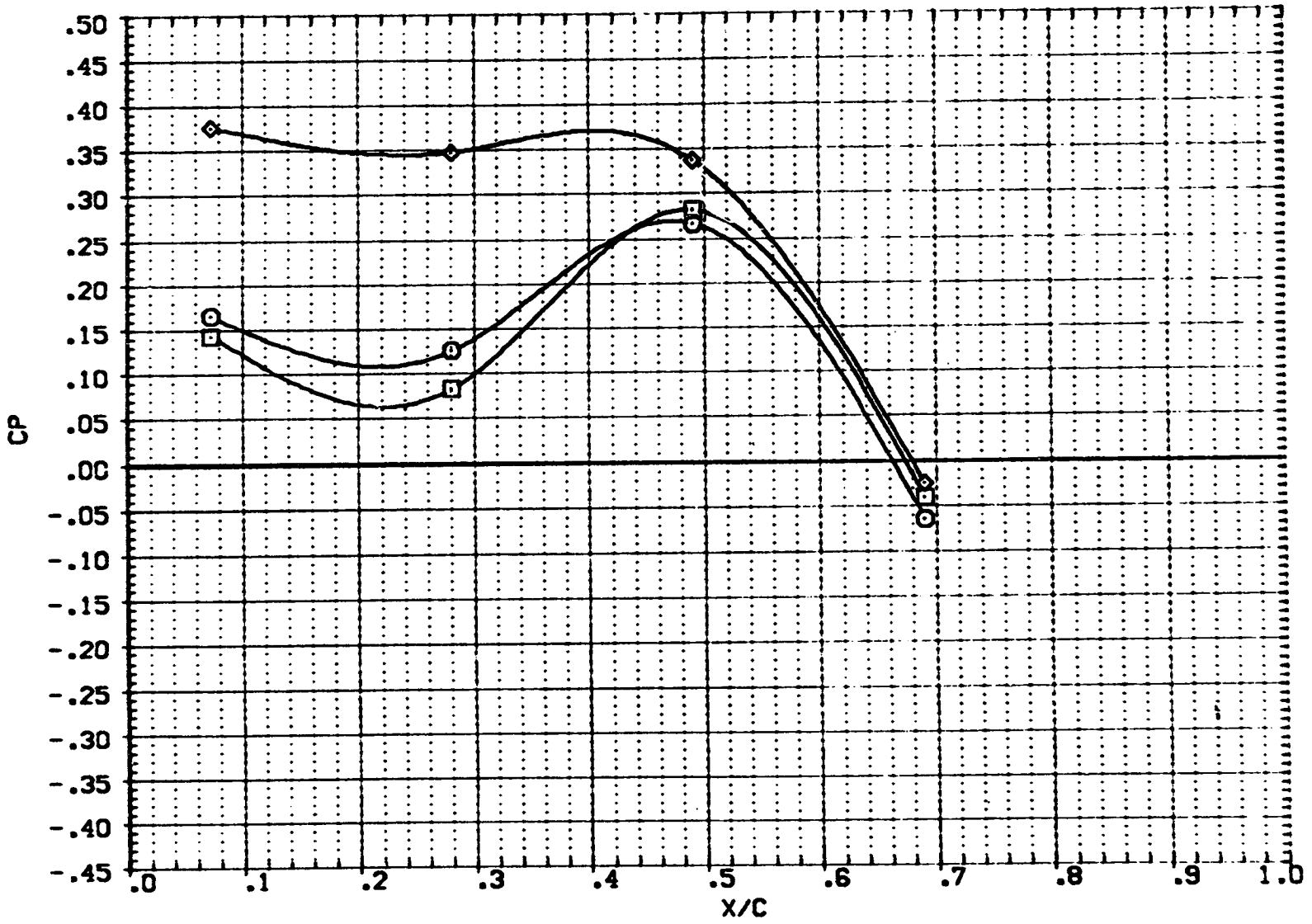
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R964L1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R964L8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 62 M2/1]	.000	.000	-90.000
[R964L9]	◇	MSFC 568[1A53] GAS SUPPLY STRUT [C1F/1 62 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = .905 ALPHA = .000 2Y/B = .521

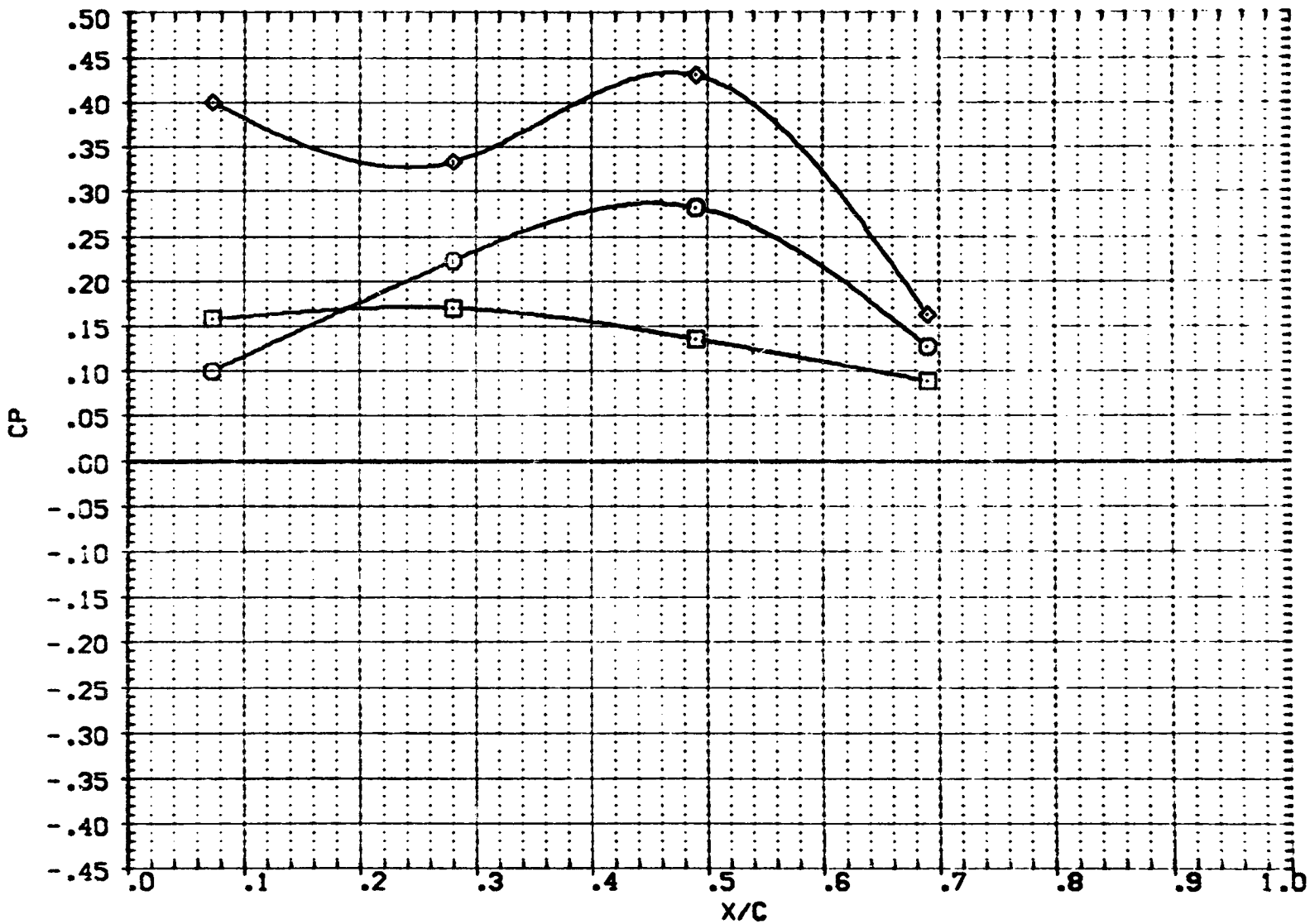
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L8)	▽	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964L9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.197 ALPHA = .000 2Y/B = .521

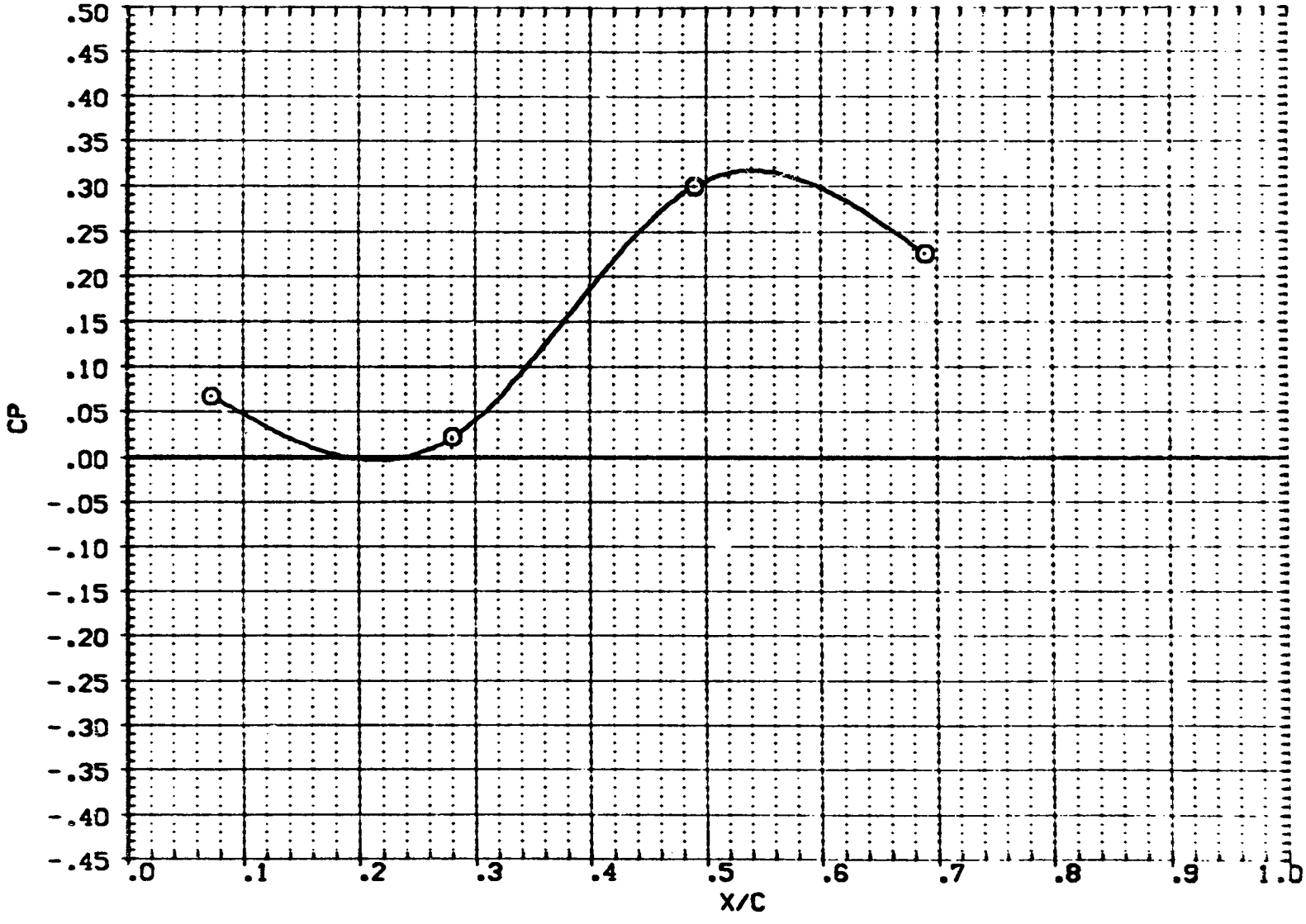
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964L9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.456 ALPHA = .000 2Y/B = .521

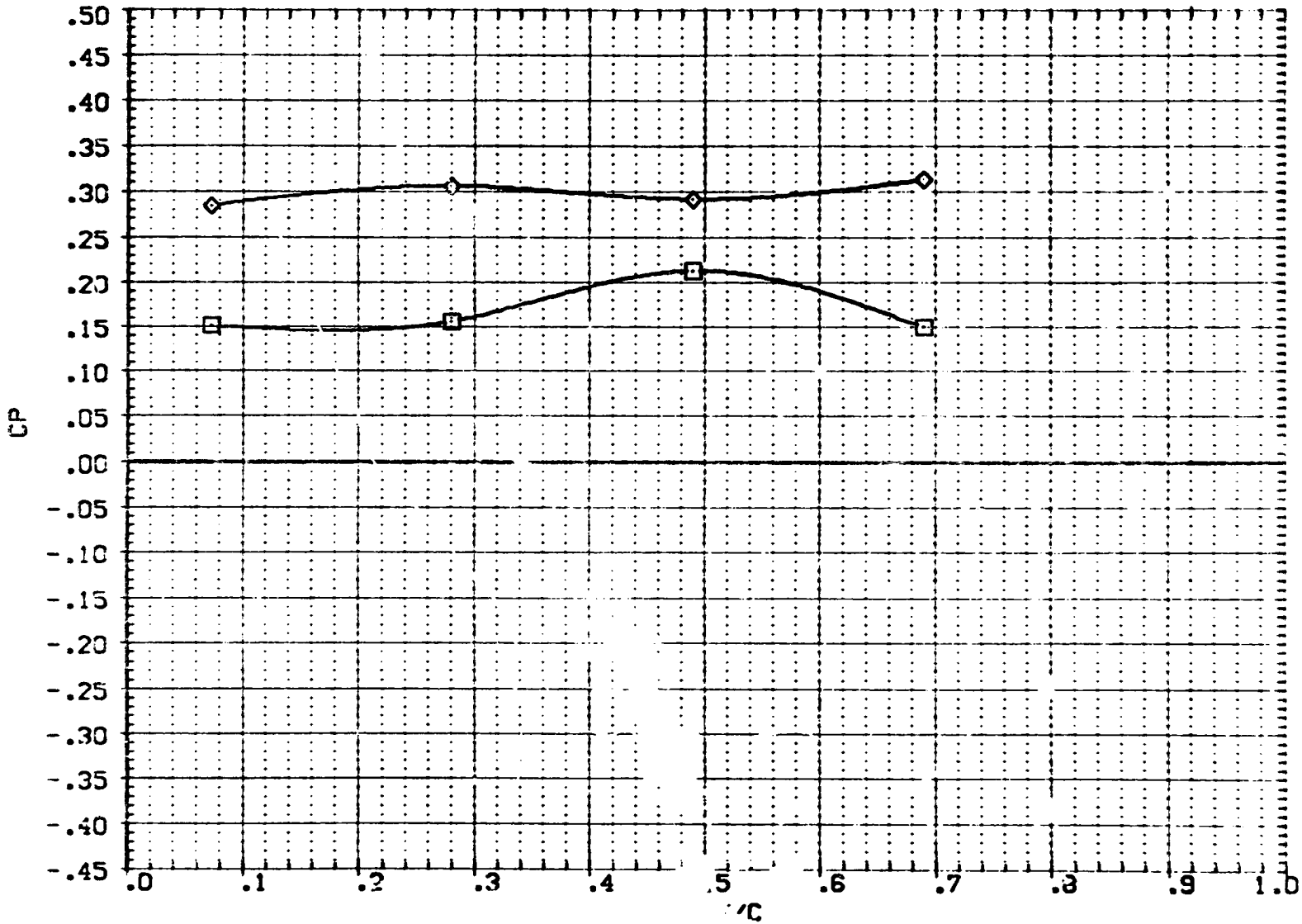
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L8)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964L9)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.898 ALPHA = .000 2Y/B = .521

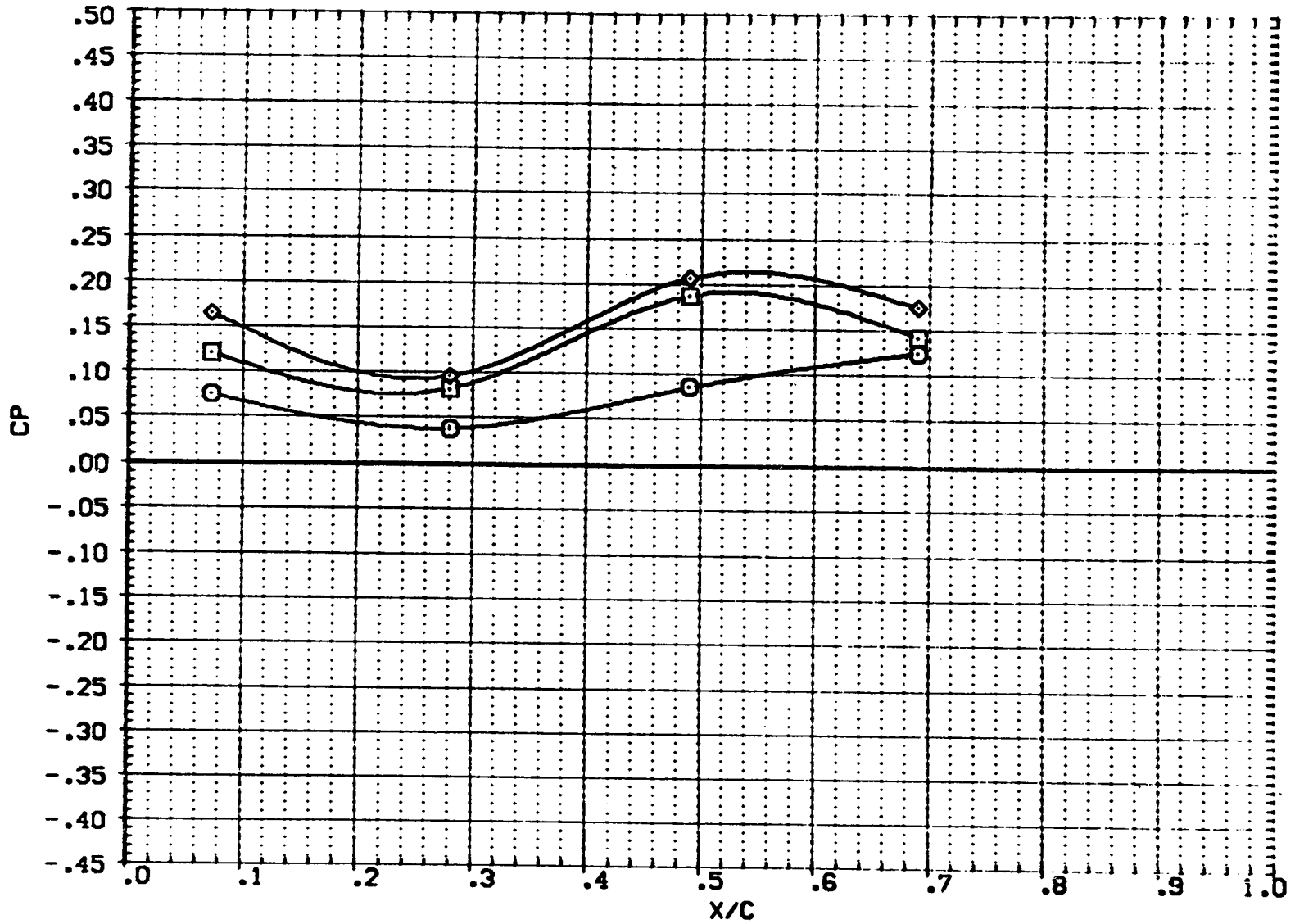
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B2 M2/1)	.000	.000	-90.000
(R964L9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, [illegible] SRB SIDE MOUNT, LOWER WING

MACH = 1.958 ALPHA = .000 2Y/B = .521

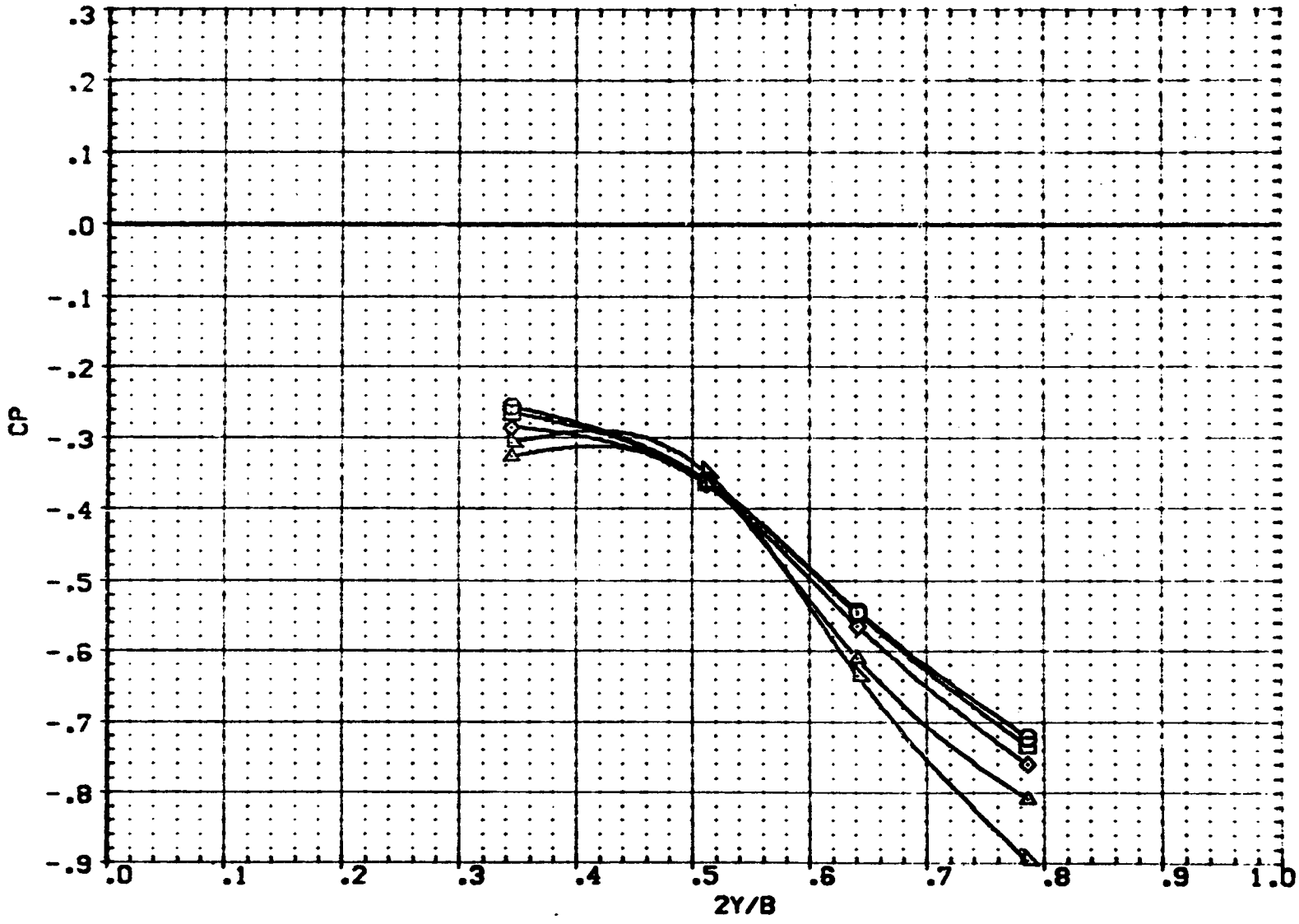
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R964L1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R964L8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R964L9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 2.990 ALPHA = .000 2Y/B = .521

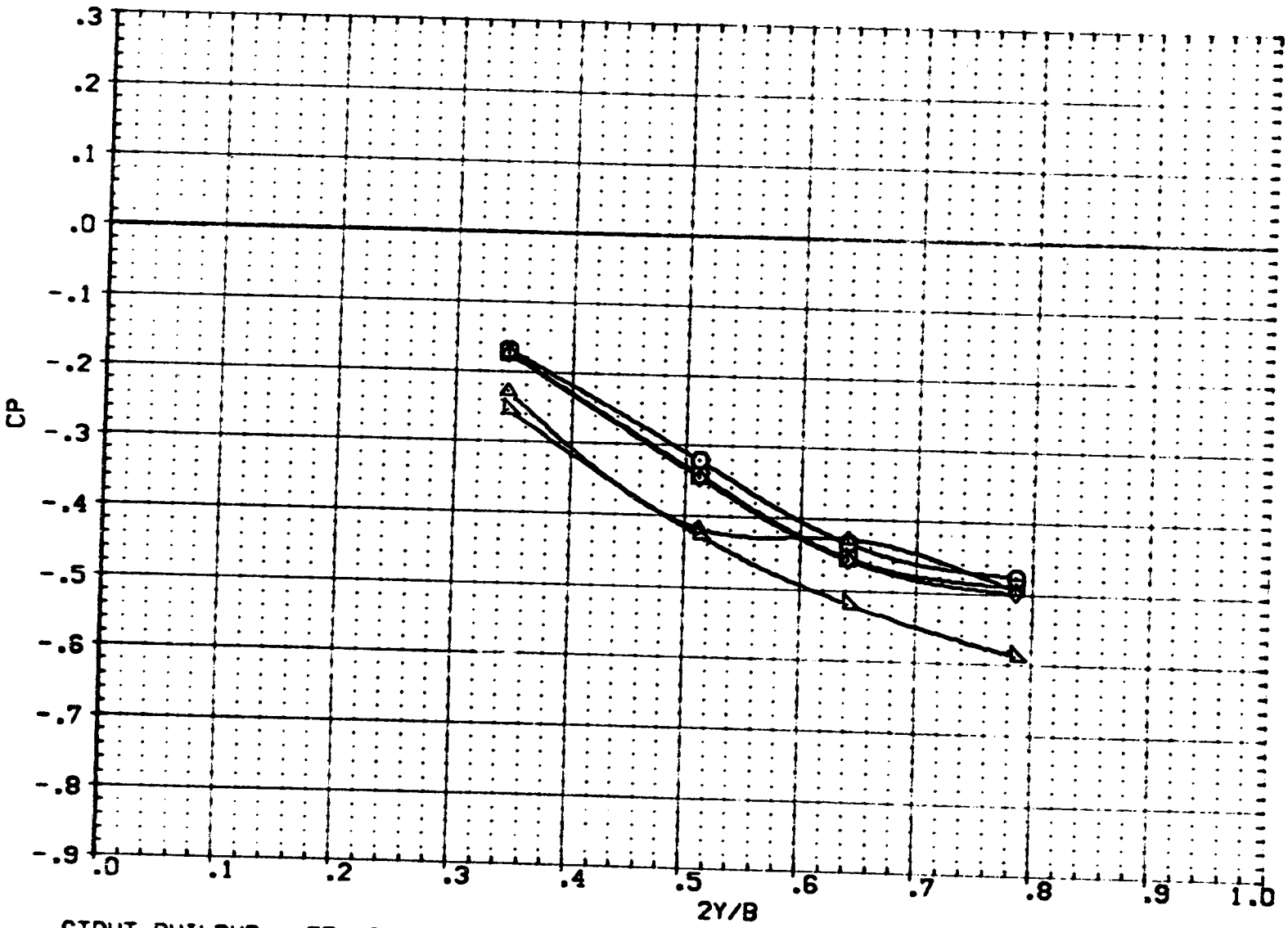
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	⋀	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = .905 ALPHA = .000 X/C = .491

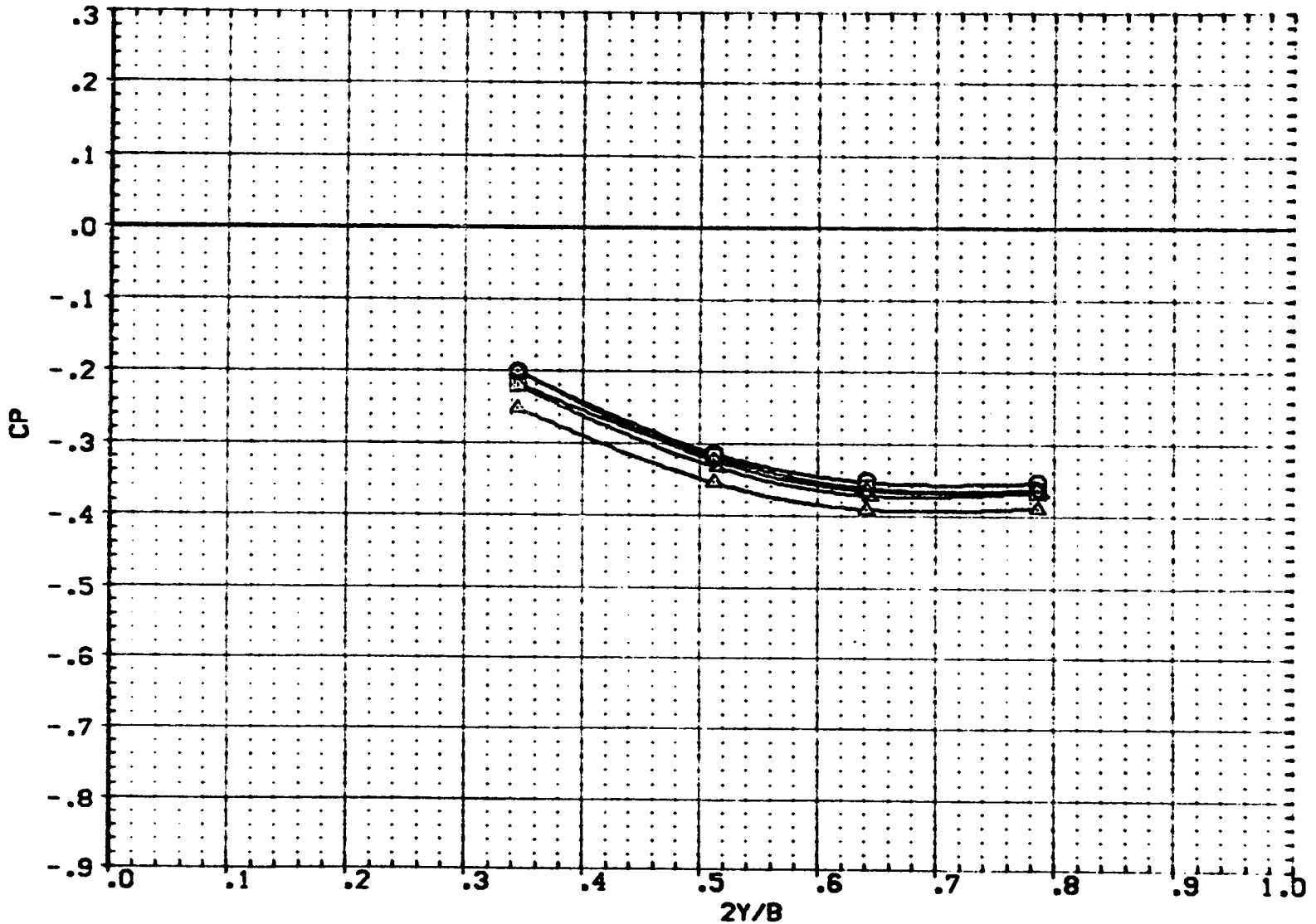
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)	▷	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.197 ALPHA = .000 X/C = .491

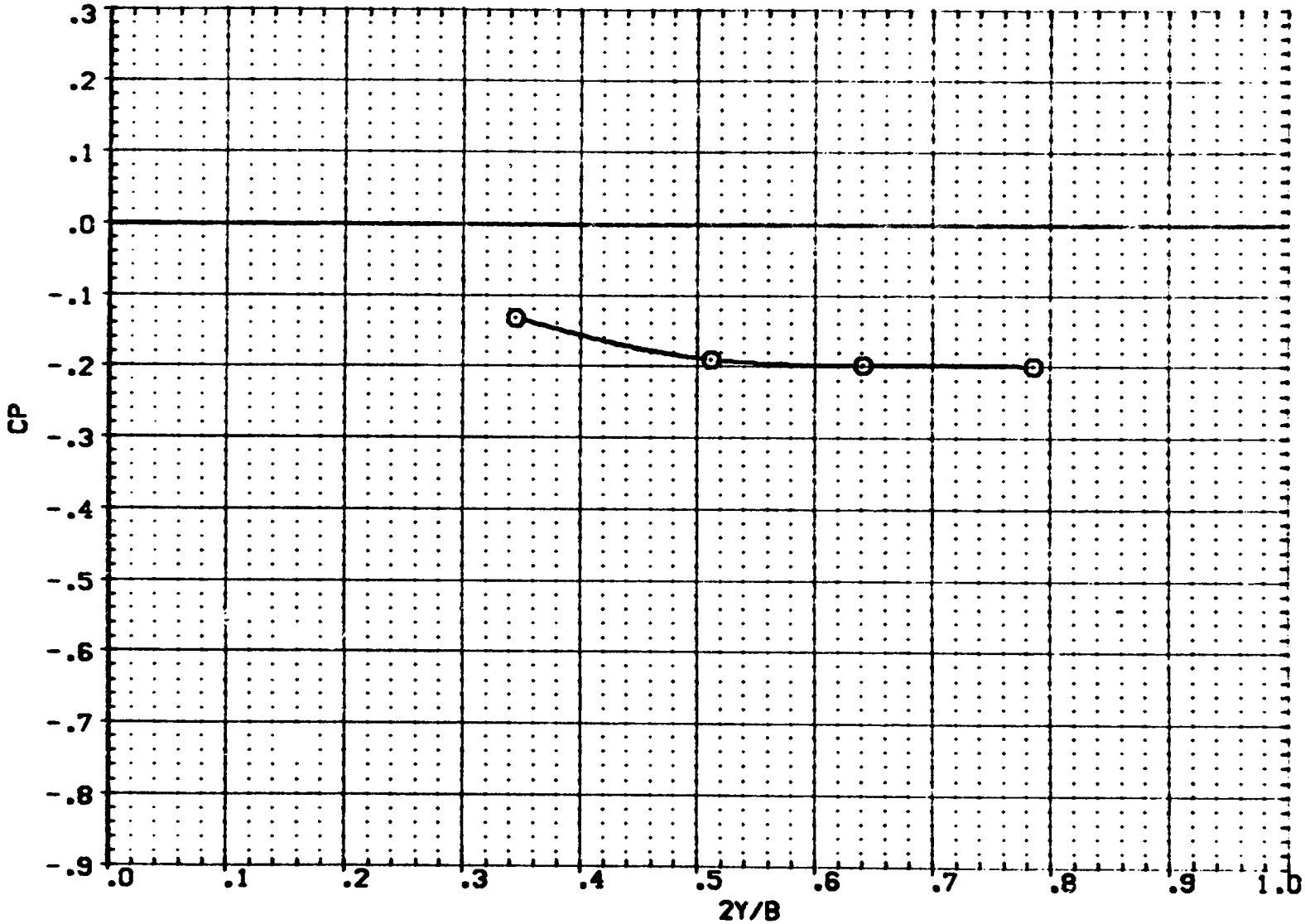
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)	◺	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.456 ALPHA = .000 X/C = .491

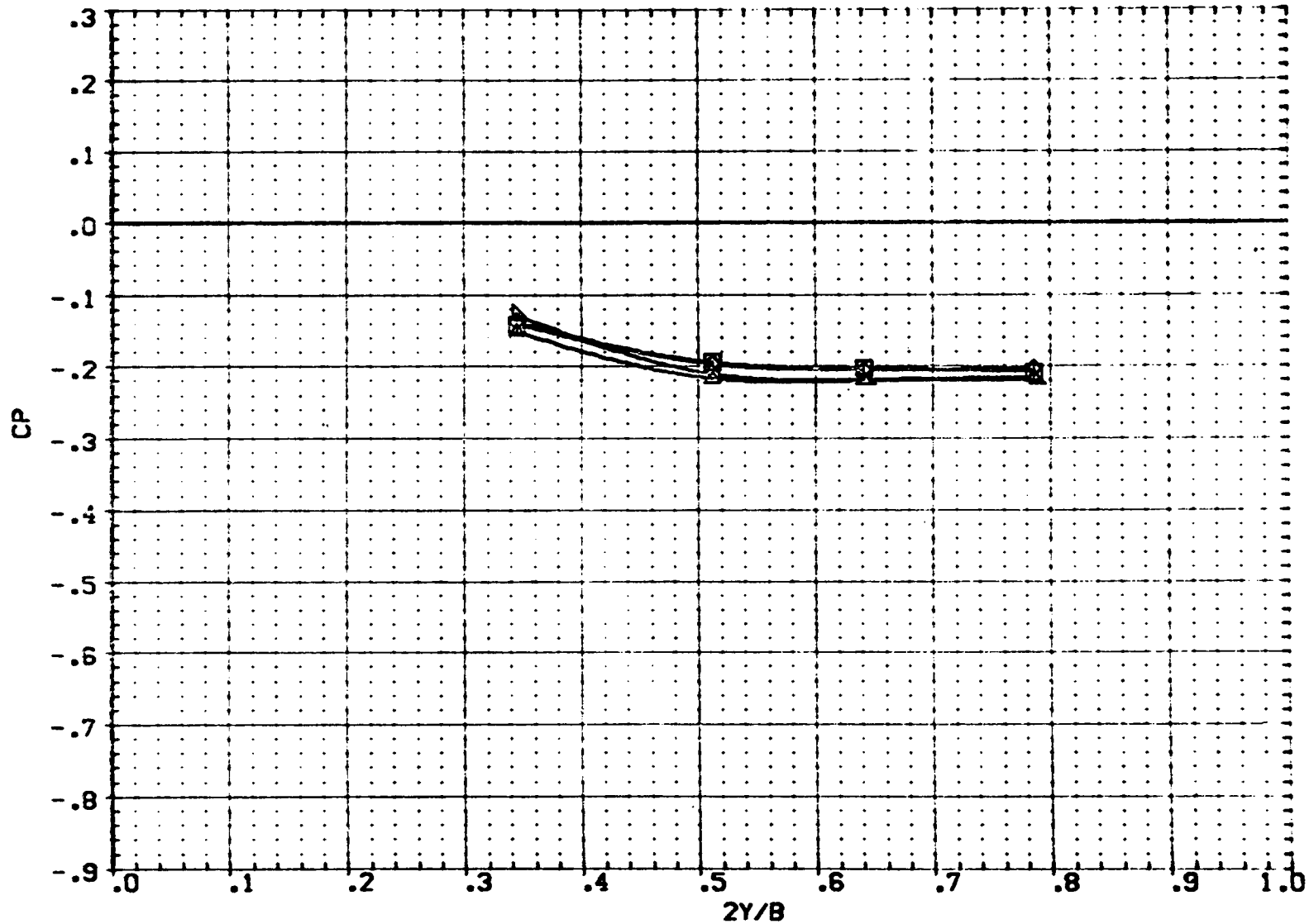
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	⋈	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	◁	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)		MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.898 ALPHA = .000 X/C = .491

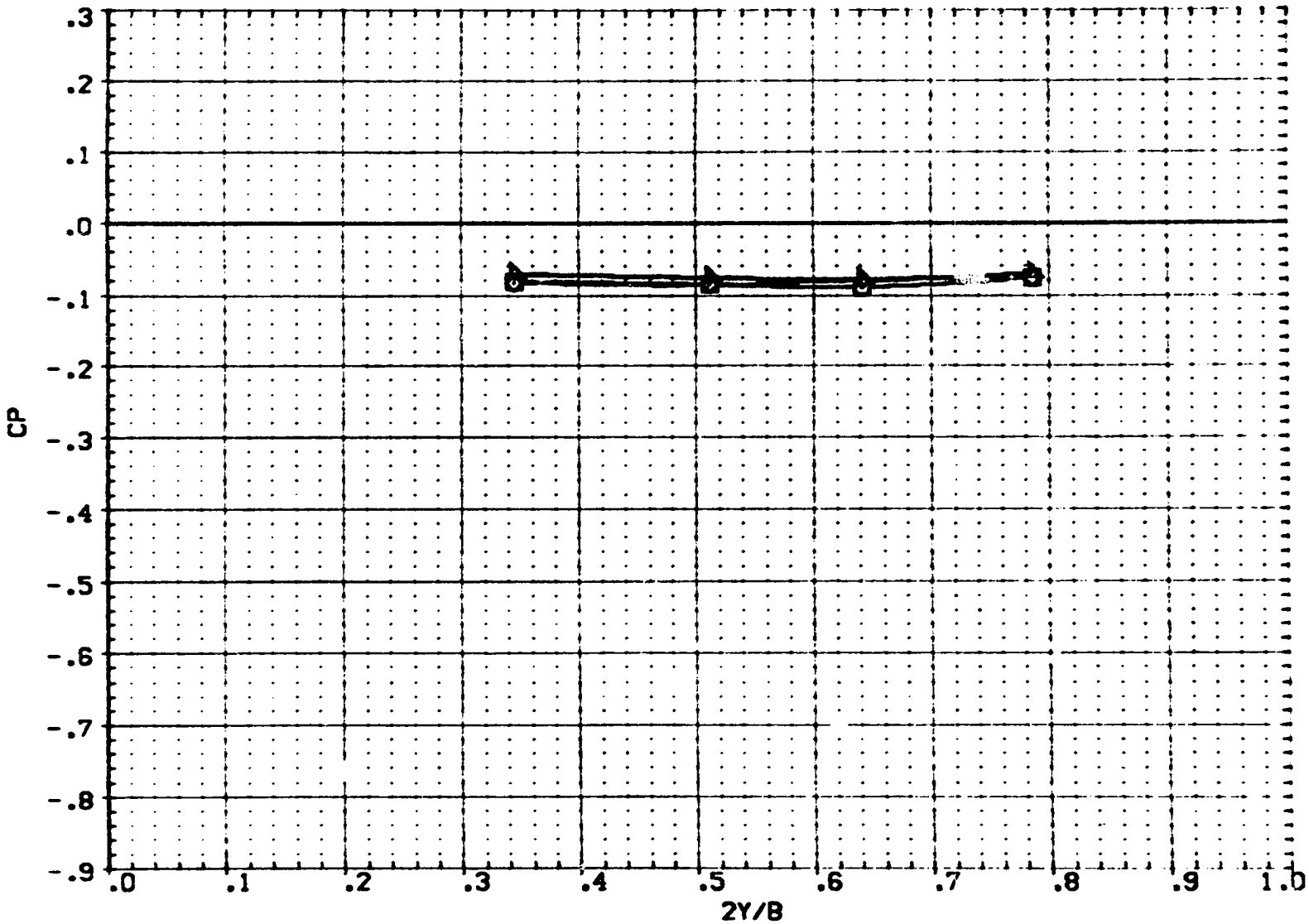
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	▽	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)	◁	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 1.961 ALPHA = .000 X/C = .491

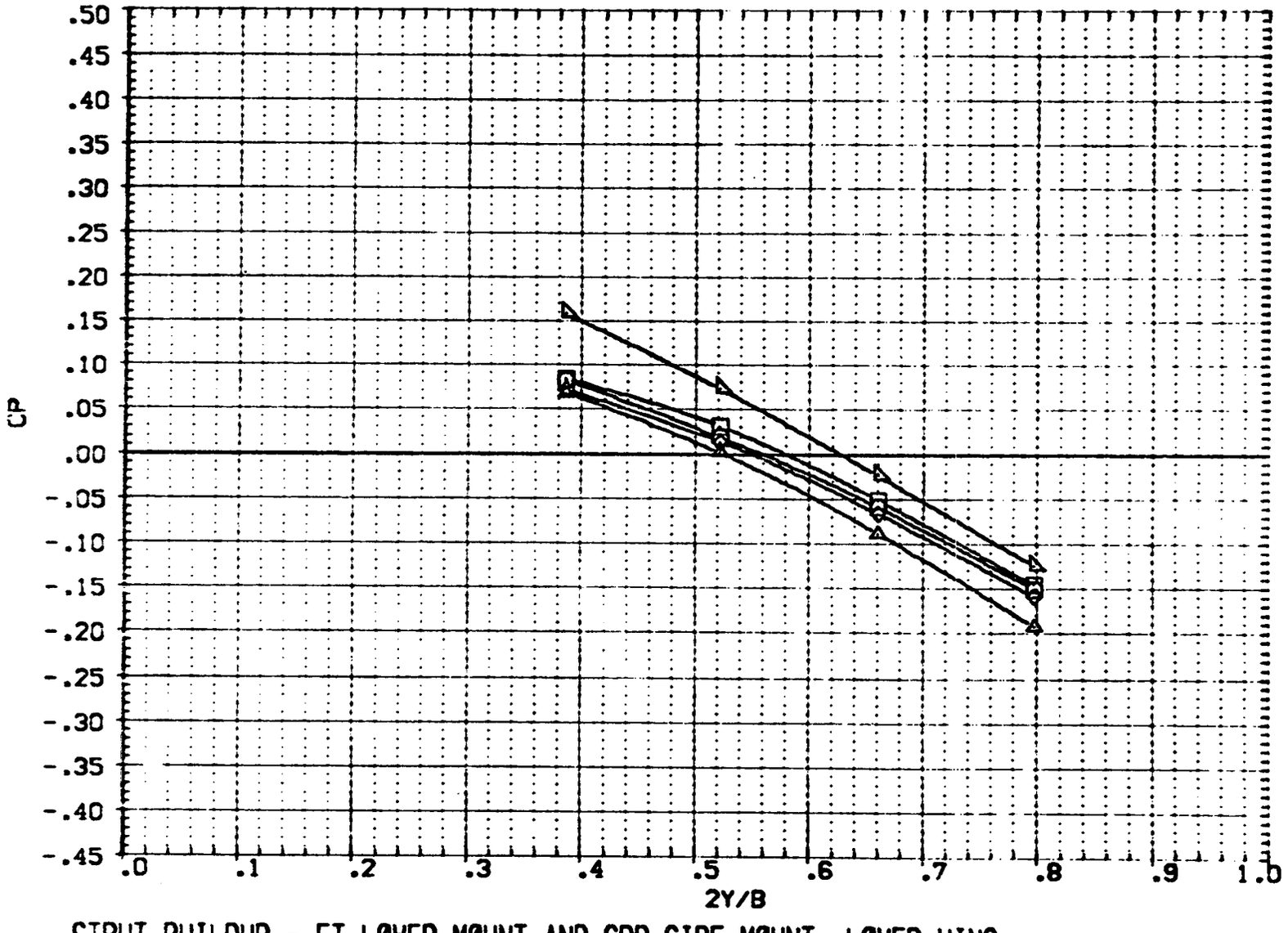
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US2)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96US3)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96US4)	△	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96US5)	◺	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, UPPER WING

MACH = 2.990 ALPHA = .000 X/C = .491

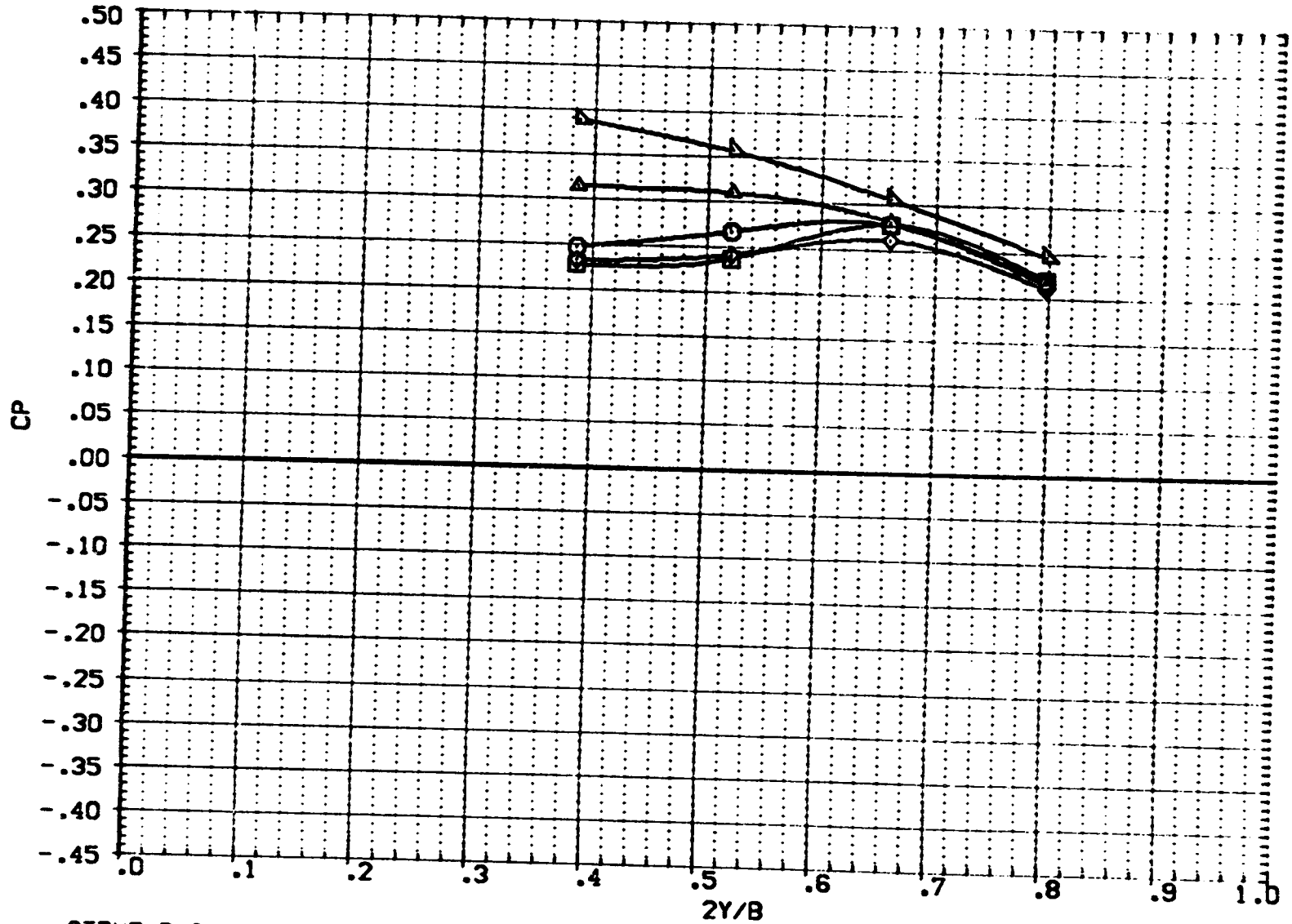
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS2]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[R96LS3]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[R96LS4]	△	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[R96LS5]	▷	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = .905 ALPHA = .000 X/C = .490

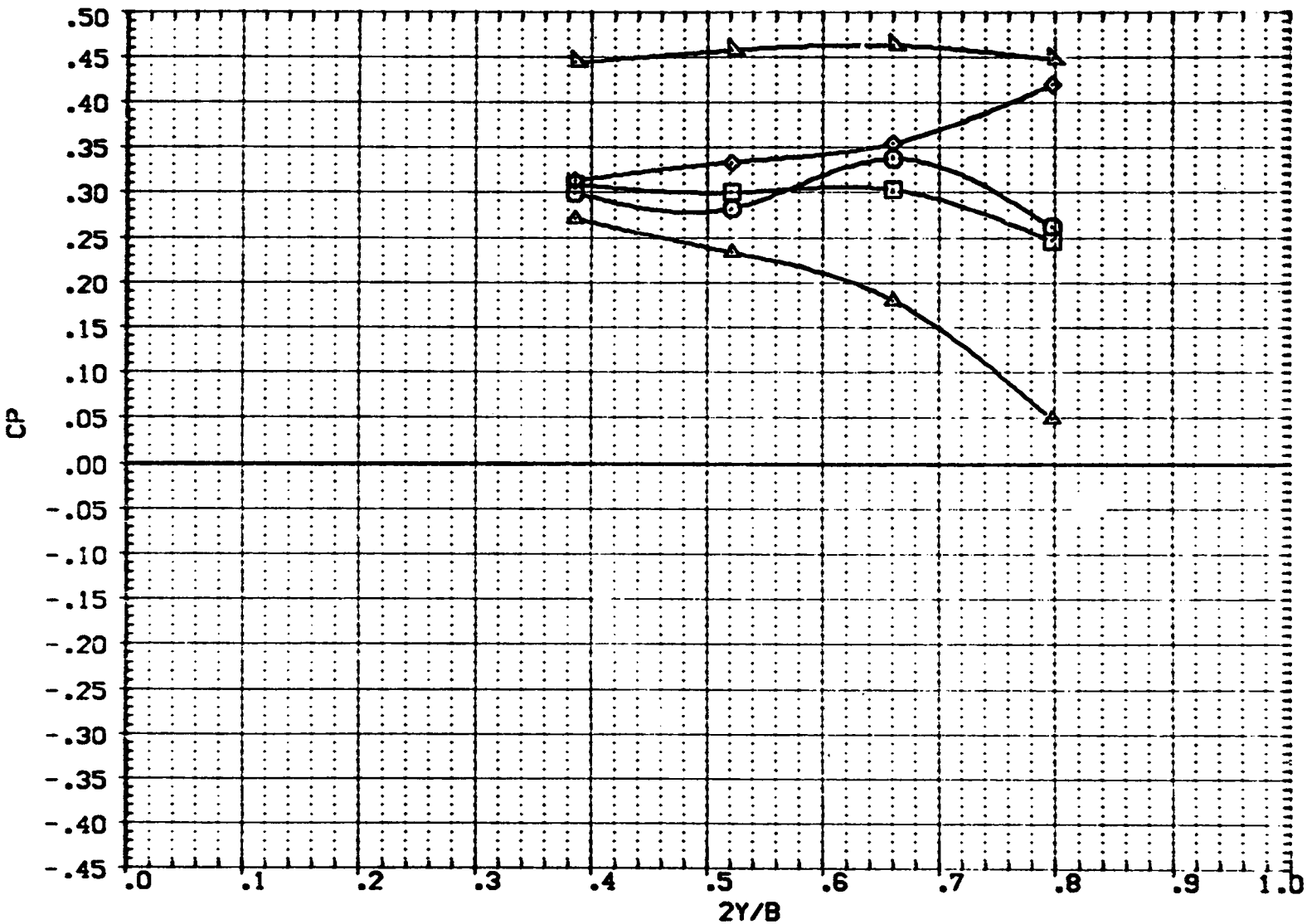
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	□	M=FC 588[IA53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[R96LS2]	◇	M=FC 588[IA53] GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
[R96LS3]	⊠	M=FC 588[IA53] GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
[R96LS4]	△	M=FC 588[IA53] GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
[R96LS5]	◁	M=FC 588[IA53] GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.197 ALPHA = .000 X/C = .490

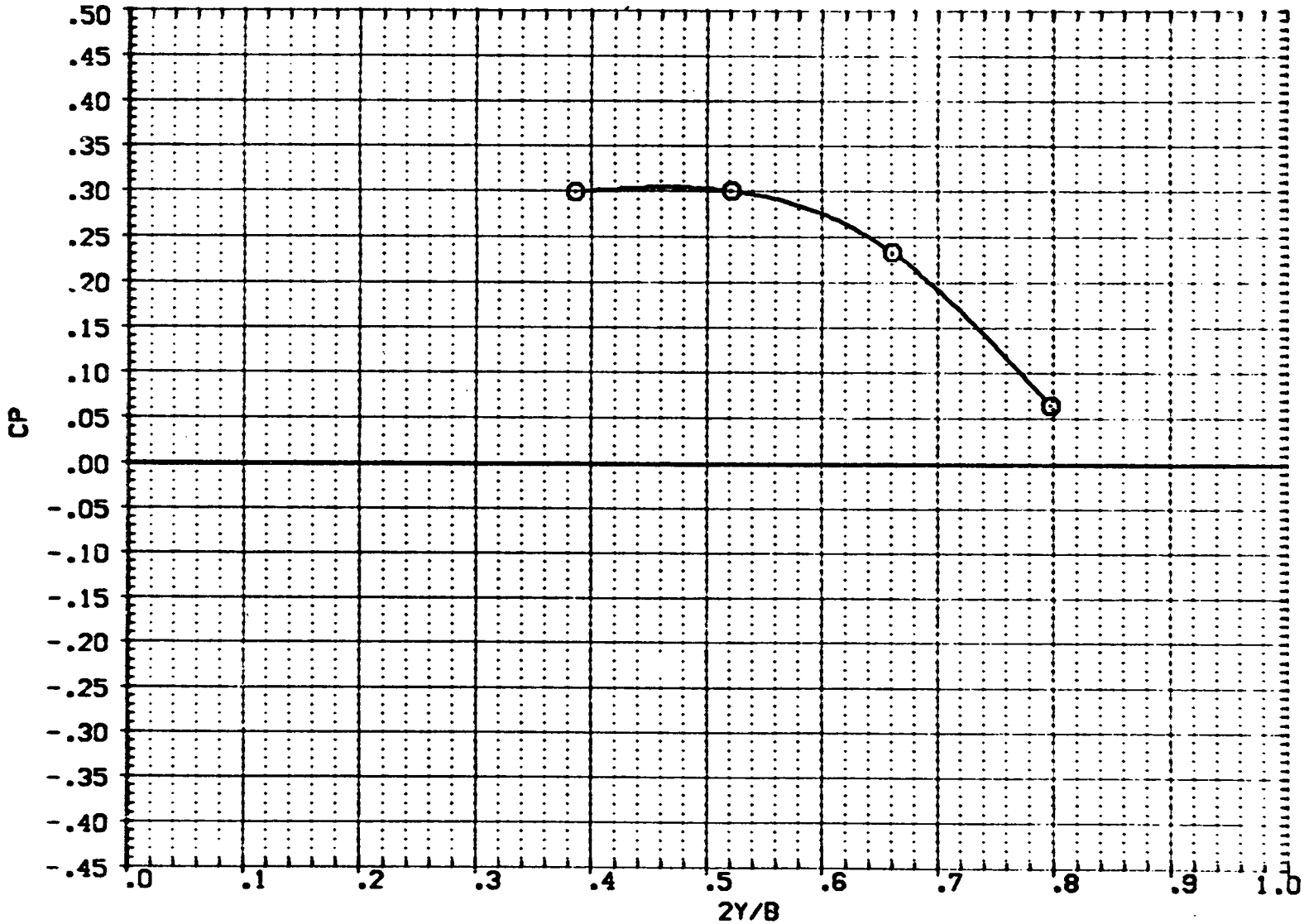
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GLS1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R9GLS2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R9GLS3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R9GLS4)	⊠	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R9GLS5)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.456 ALPHA = .000 X/C = .490

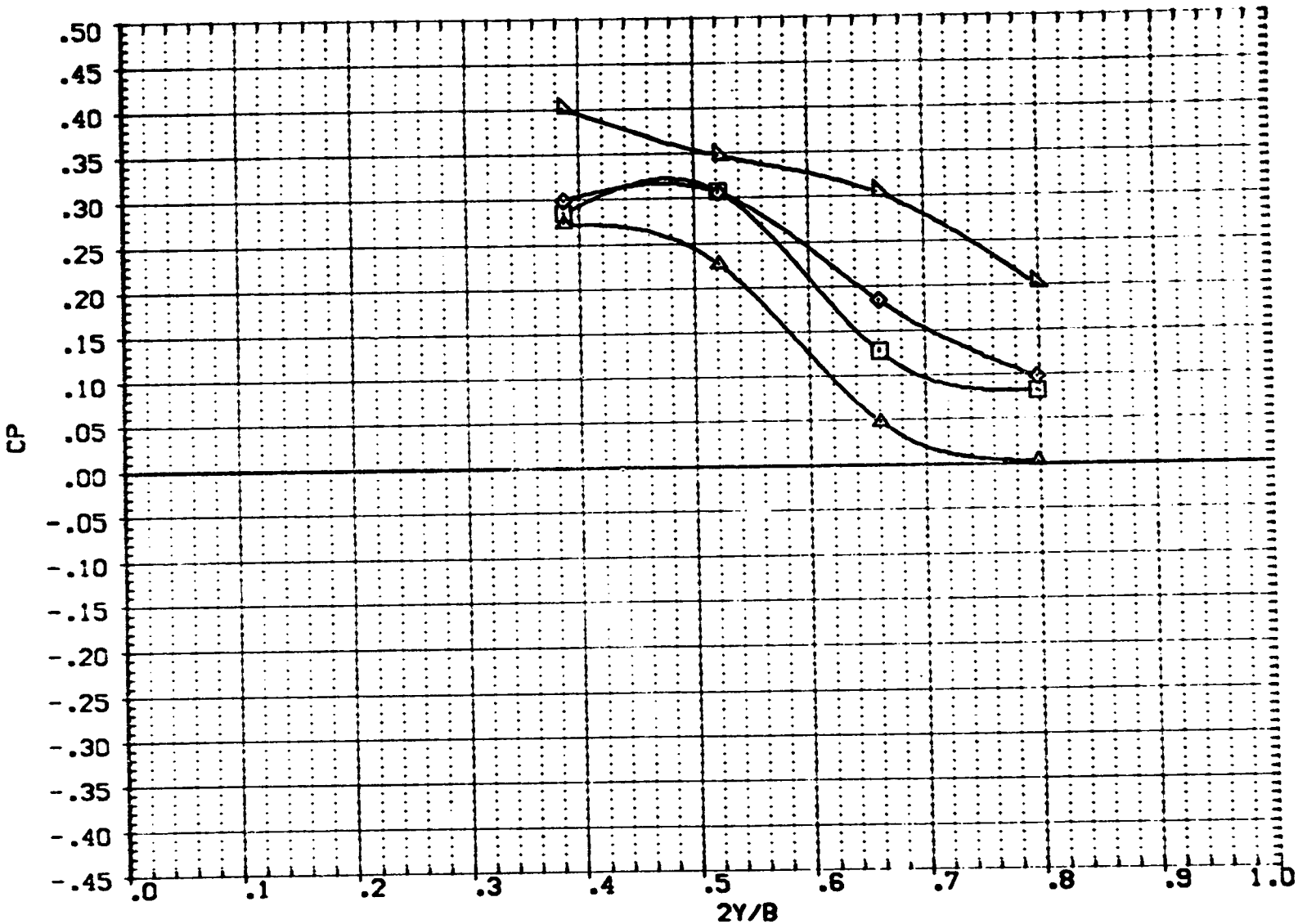
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96LS1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96LS2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96LS3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96LS4)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96LS5)	▷	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.898 ALPHA = .000 X/C = .490

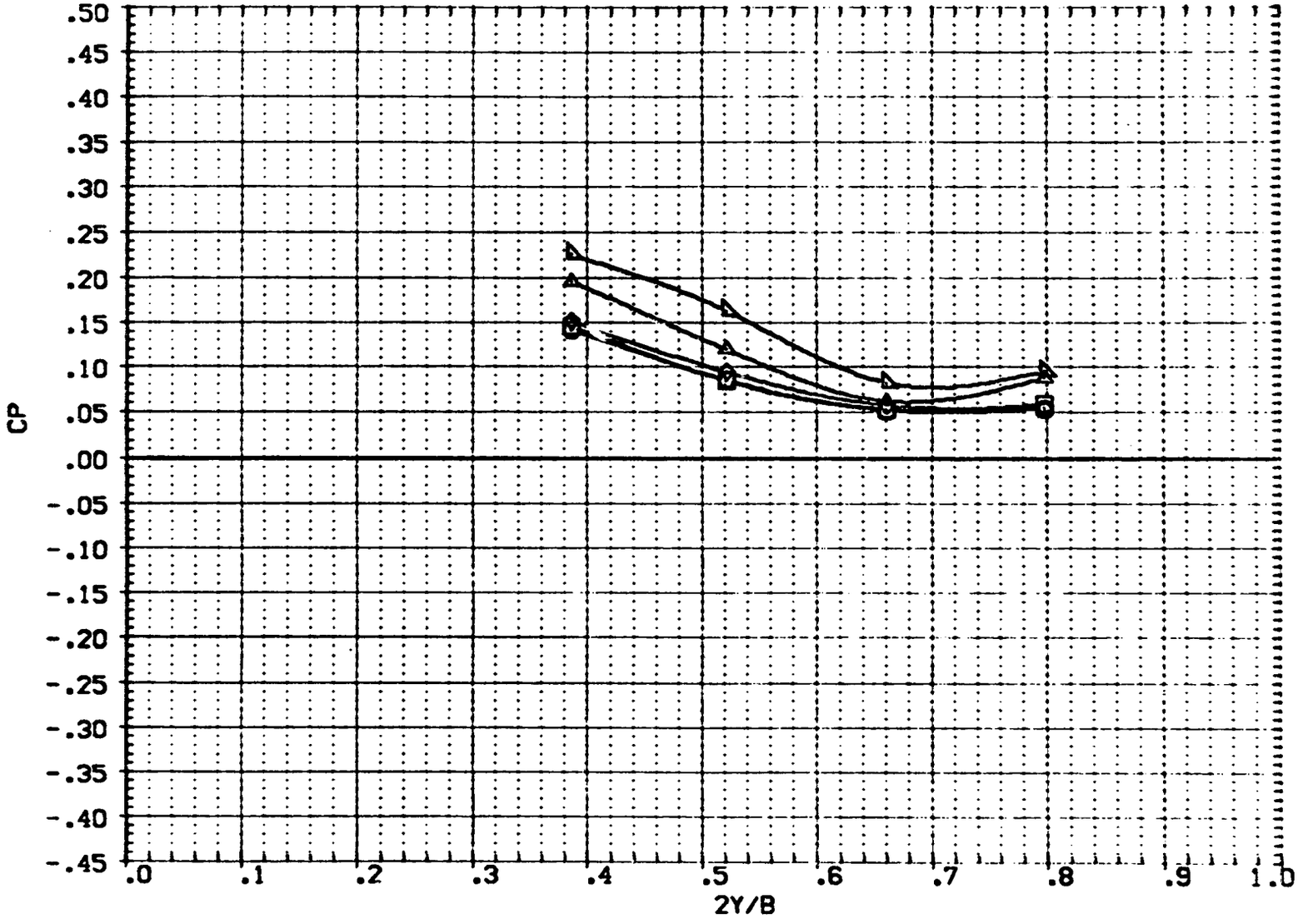
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96LS1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96LS2)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1)	.000	.000	.000
(R96LS3)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2)	.000	.000	.000
(R96LS4)	▽	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1)	.000	.000	-90.000
(R96LS5)	△	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2)	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 1.961 ALPHA = .000 X/C = .490

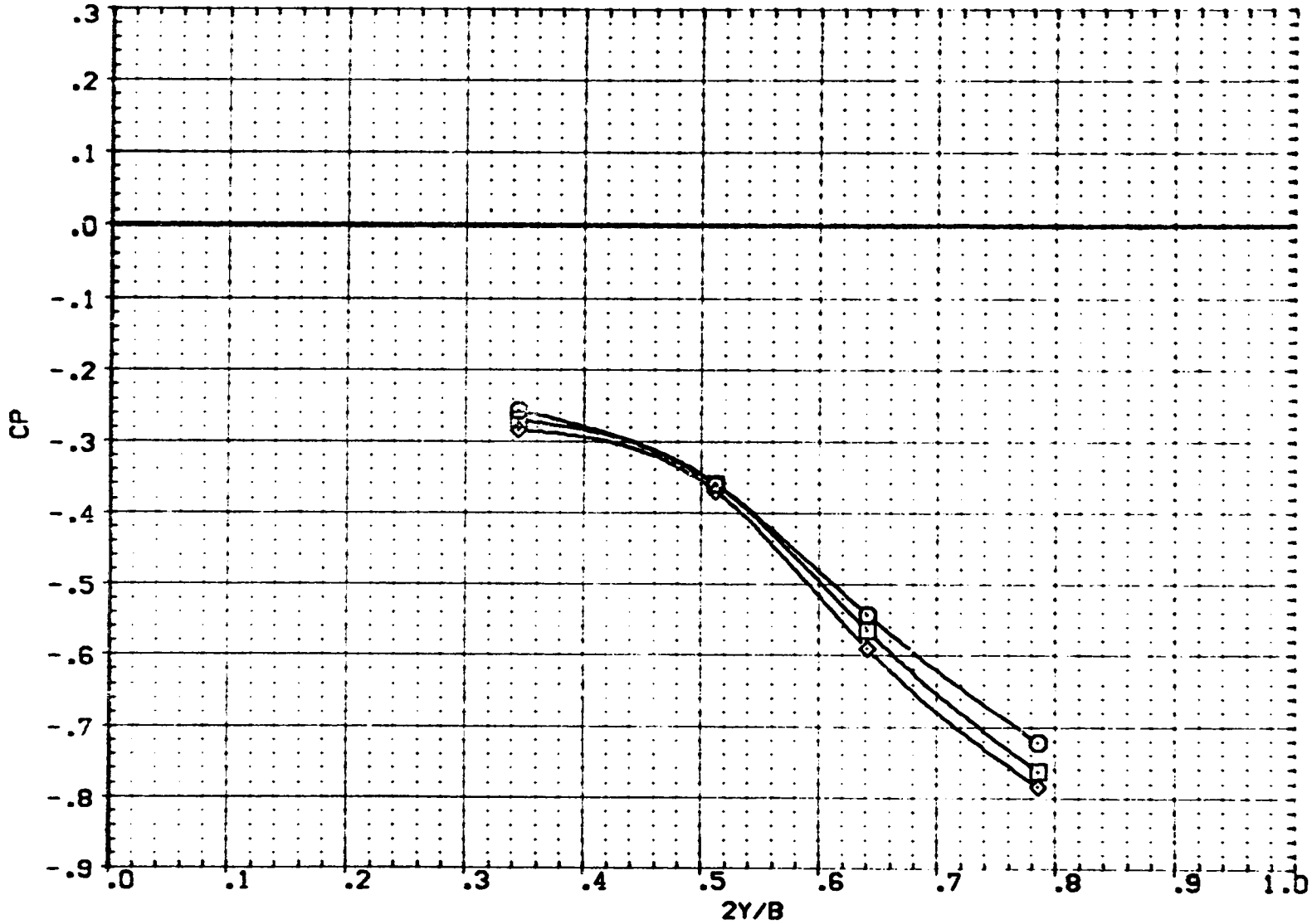
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS2]	▽	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M1/1]	.000	.000	.000
[R96LS3]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M1/2]	.000	.000	.000
[R96LS4]	△	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M2/1]	.000	.000	-90.000
[R96LS5]	▷	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 M2/2]	.000	.000	-90.000



STRUT BUILDUP - ET LOWER MOUNT AND SRB SIDE MOUNT, LOWER WING

MACH = 2.990 ALPHA = .000 X/C = .490

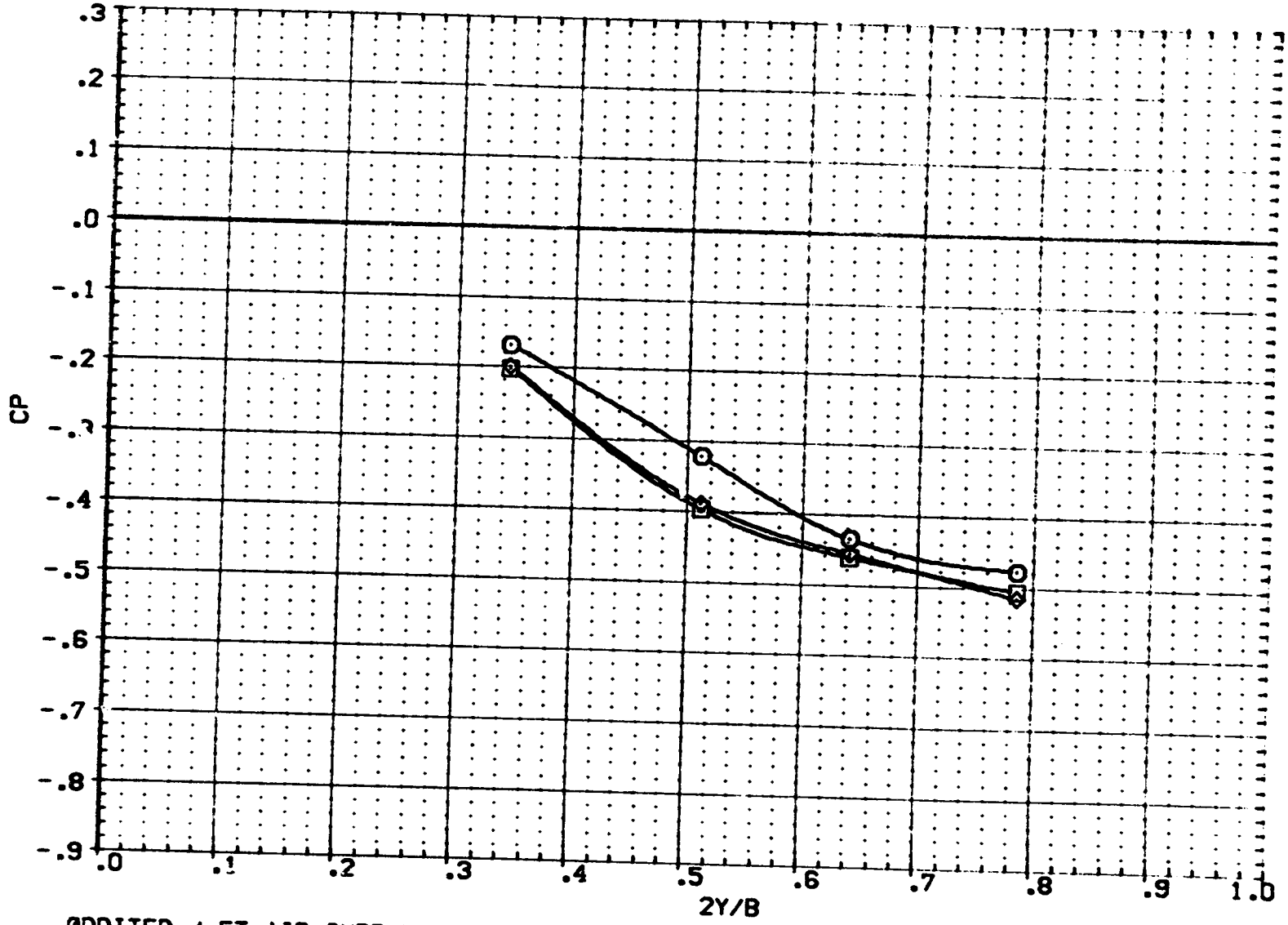
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96US1]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96US6]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R96US7]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = .905 ALPHA = .000 X/C = .491

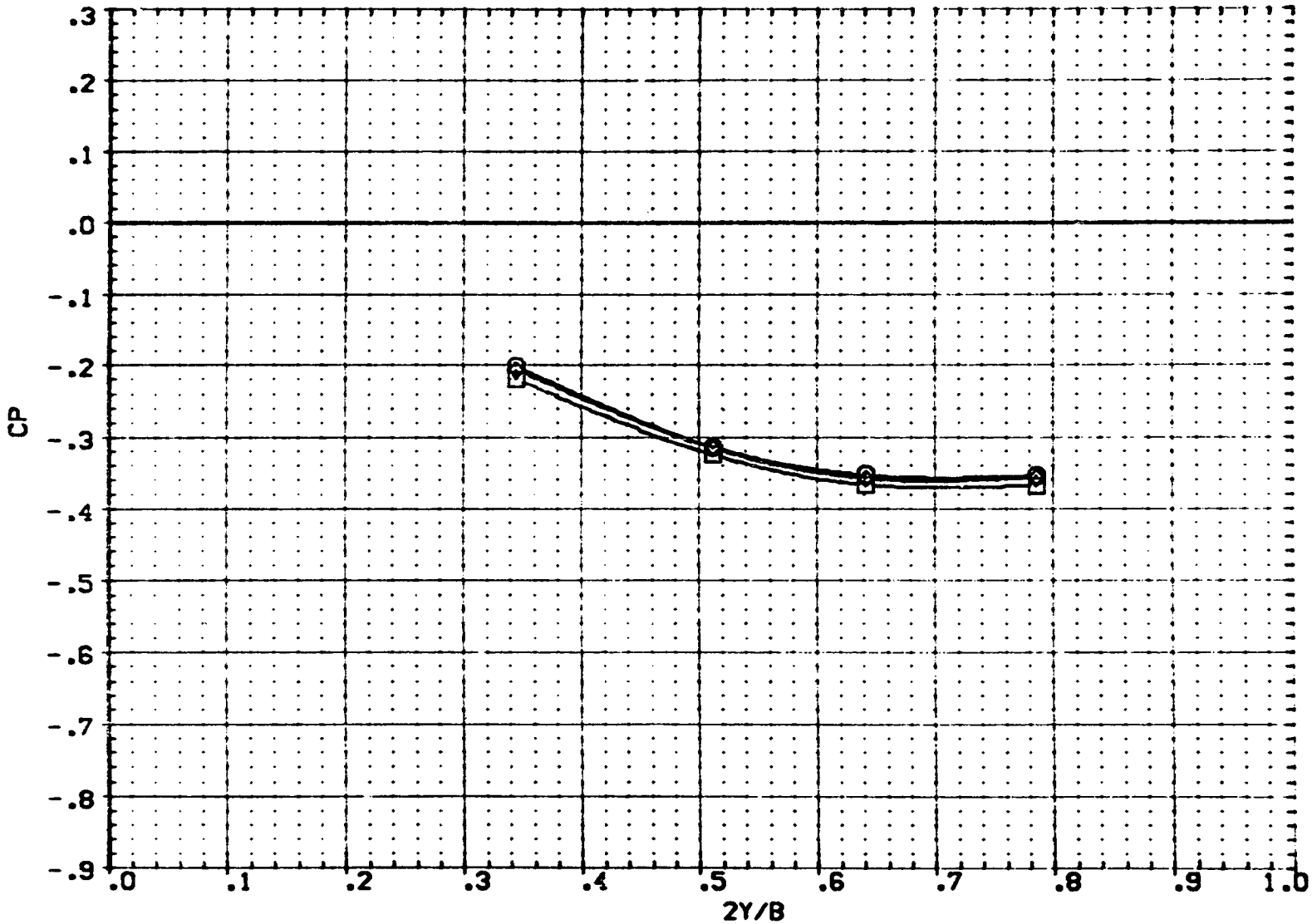
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 508(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US6)	□	MSFC 508(IA53) GAS SUPPLY STRUT (C1F/1 B1)	.000	.000	.000
(R96US7)	◇	MSFC 508(IA53) GAS SUPPLY STRUT (C1F/1 B2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.197 ALPHA = .000 X/C = .491

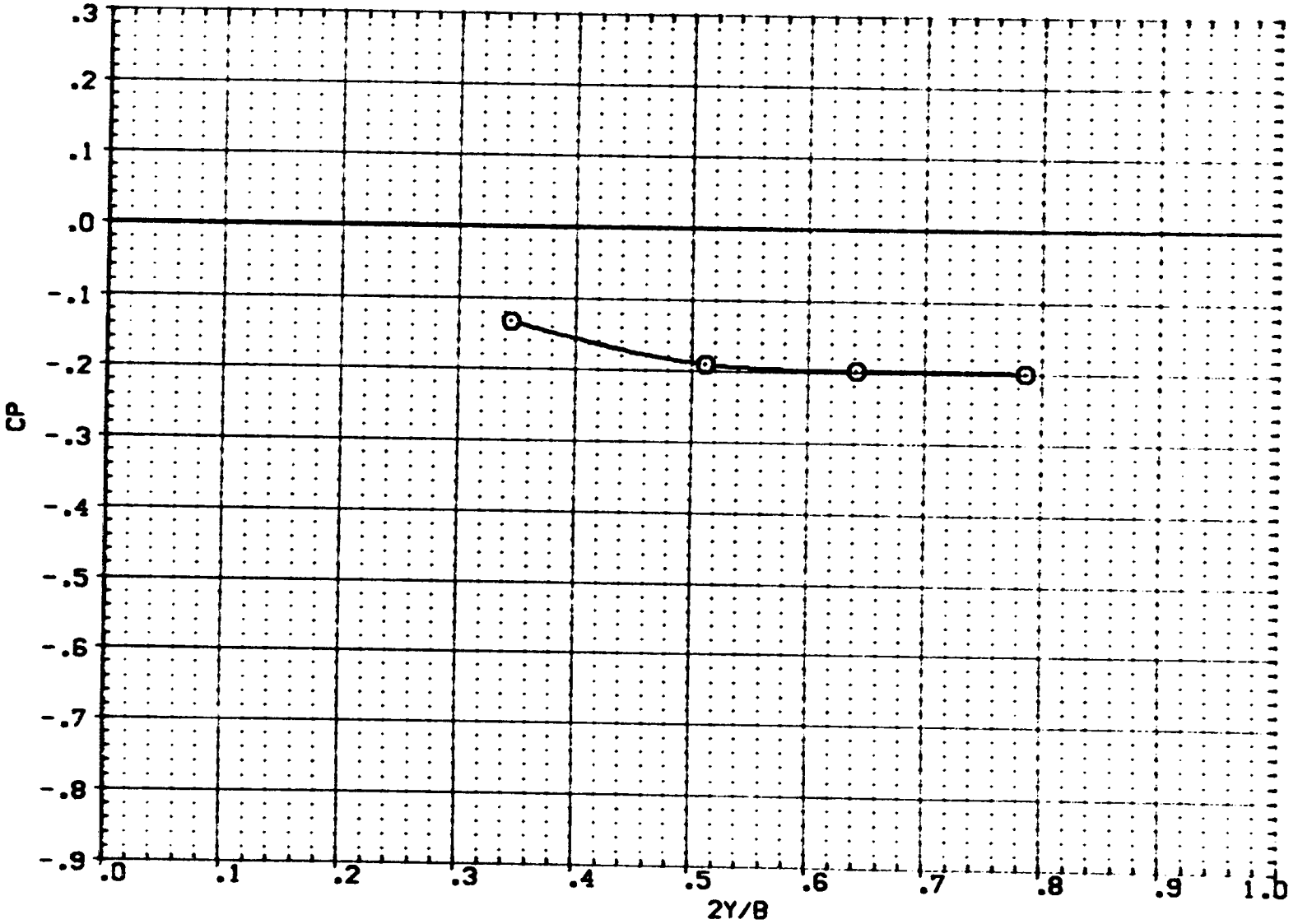
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R9GUS1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R9GUS6]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R9GUS7]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.456 ALPHA = .000 X/C = .491

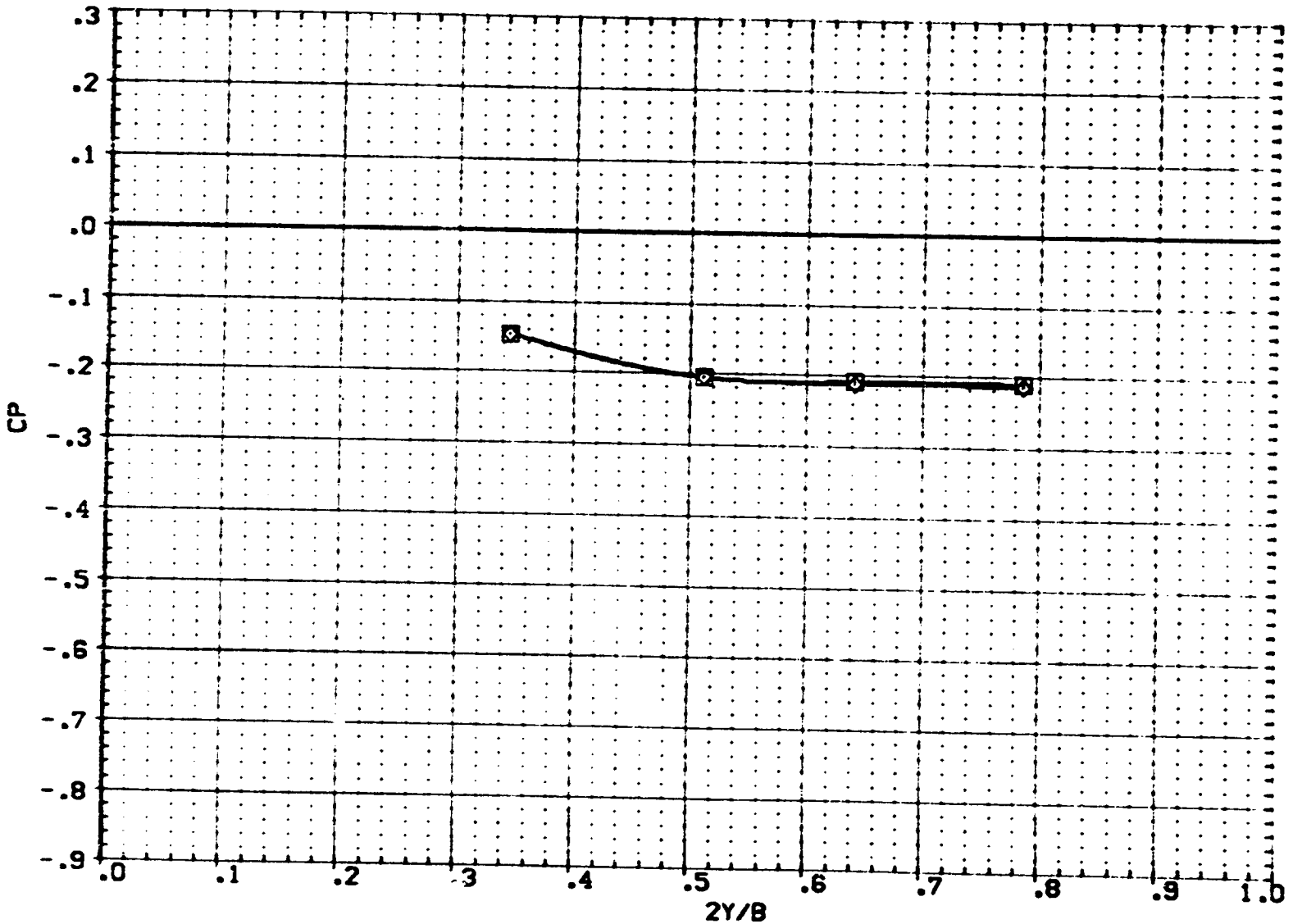
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(RSGUS1)	□	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1)	.000	.000	.000
(RSGUS6)	□	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1 B1)	.000	.000	.000
(RSGUS7)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (CIF/1 B2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.898 ALPHA = .000 X/C = .491

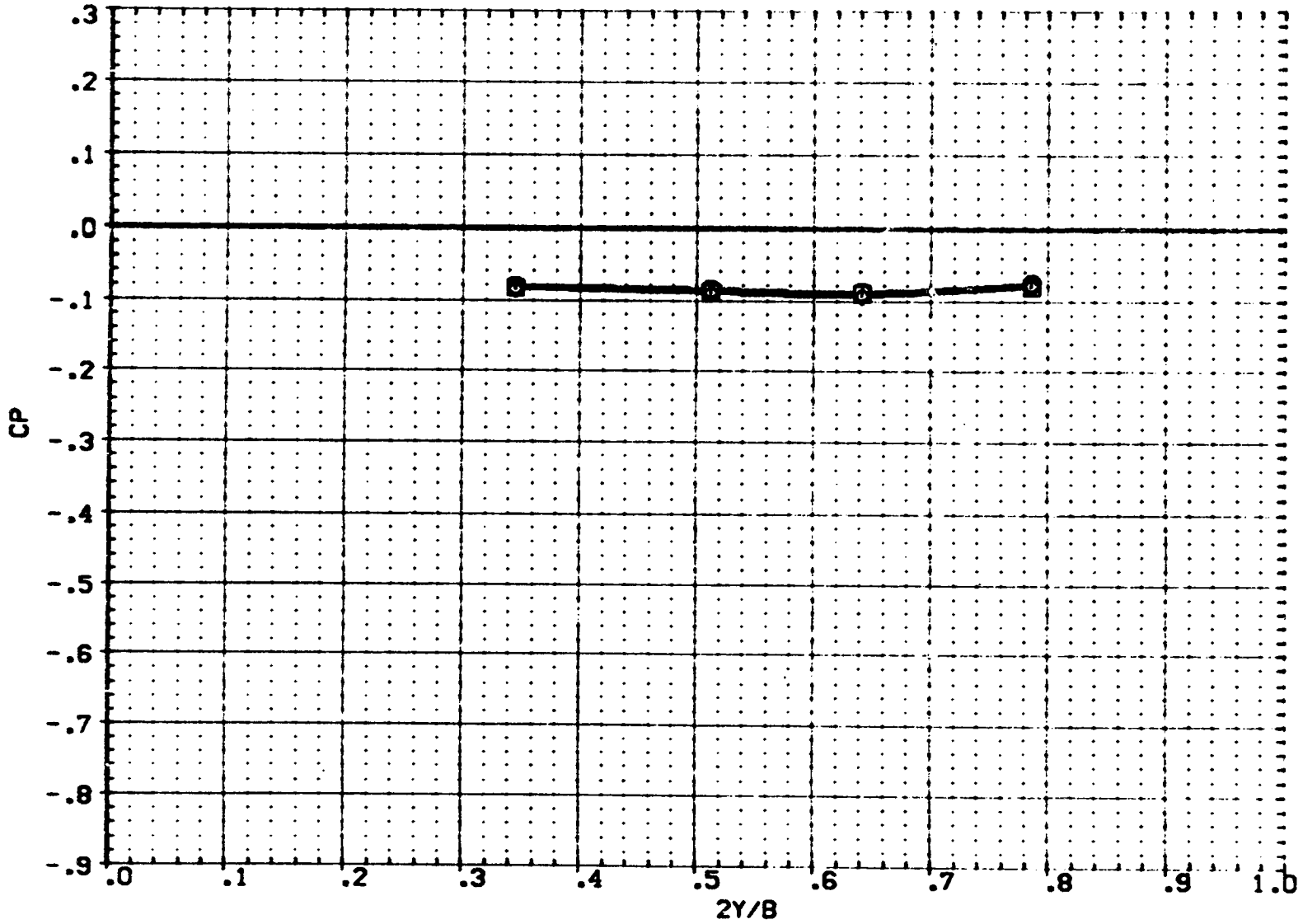
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	▢	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US6)	▢	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B1)	.000	.000	.000
(R96US7)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 B2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 1.959 ALPHA = .000 X/C = .491

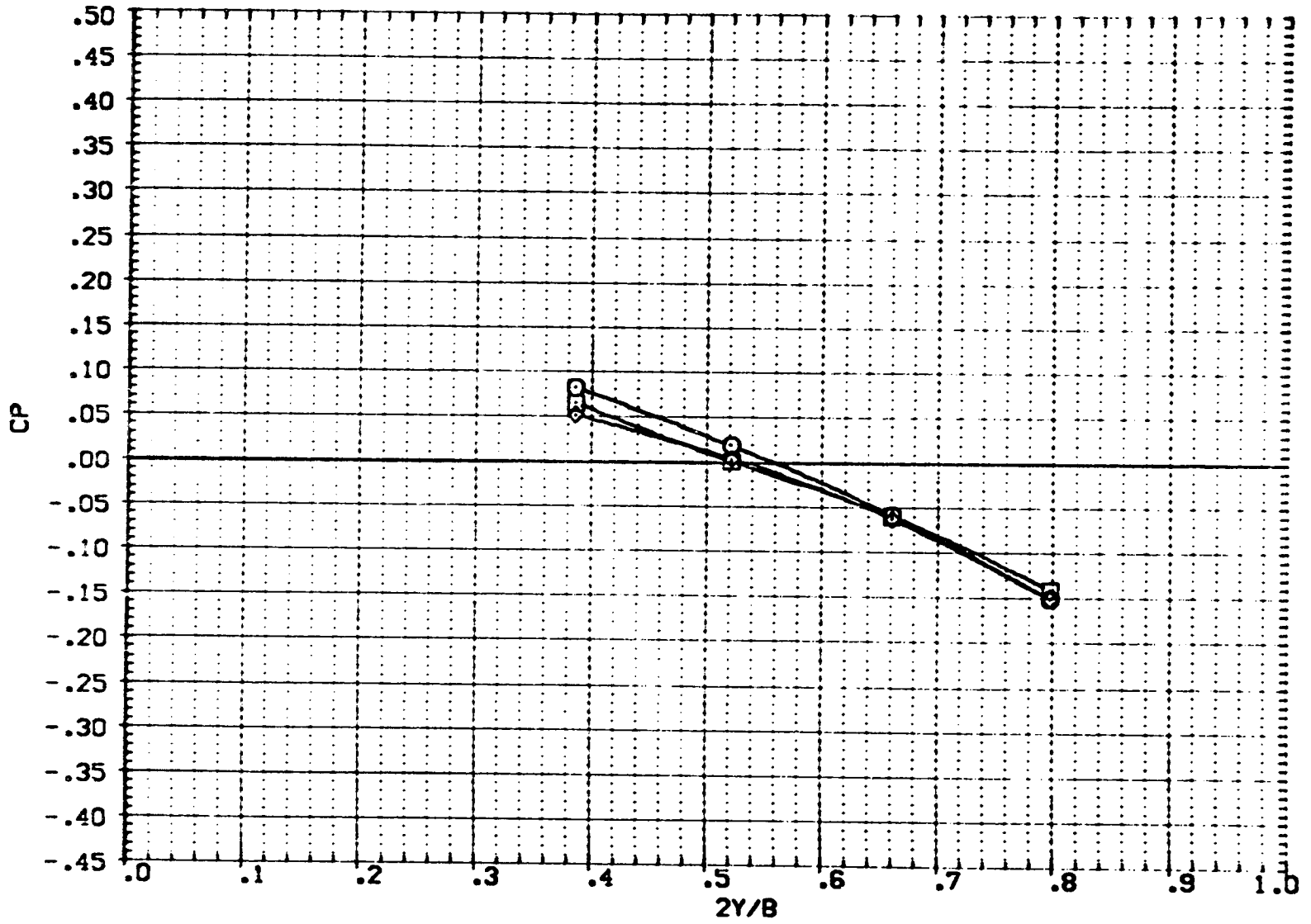
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96US1]	○	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[R96US6]	□	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
[R96US7]	◇	MSFC 588[1A53] GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, UPPER WING

MACH = 2.990 ALPHA = .000 X/C = .491

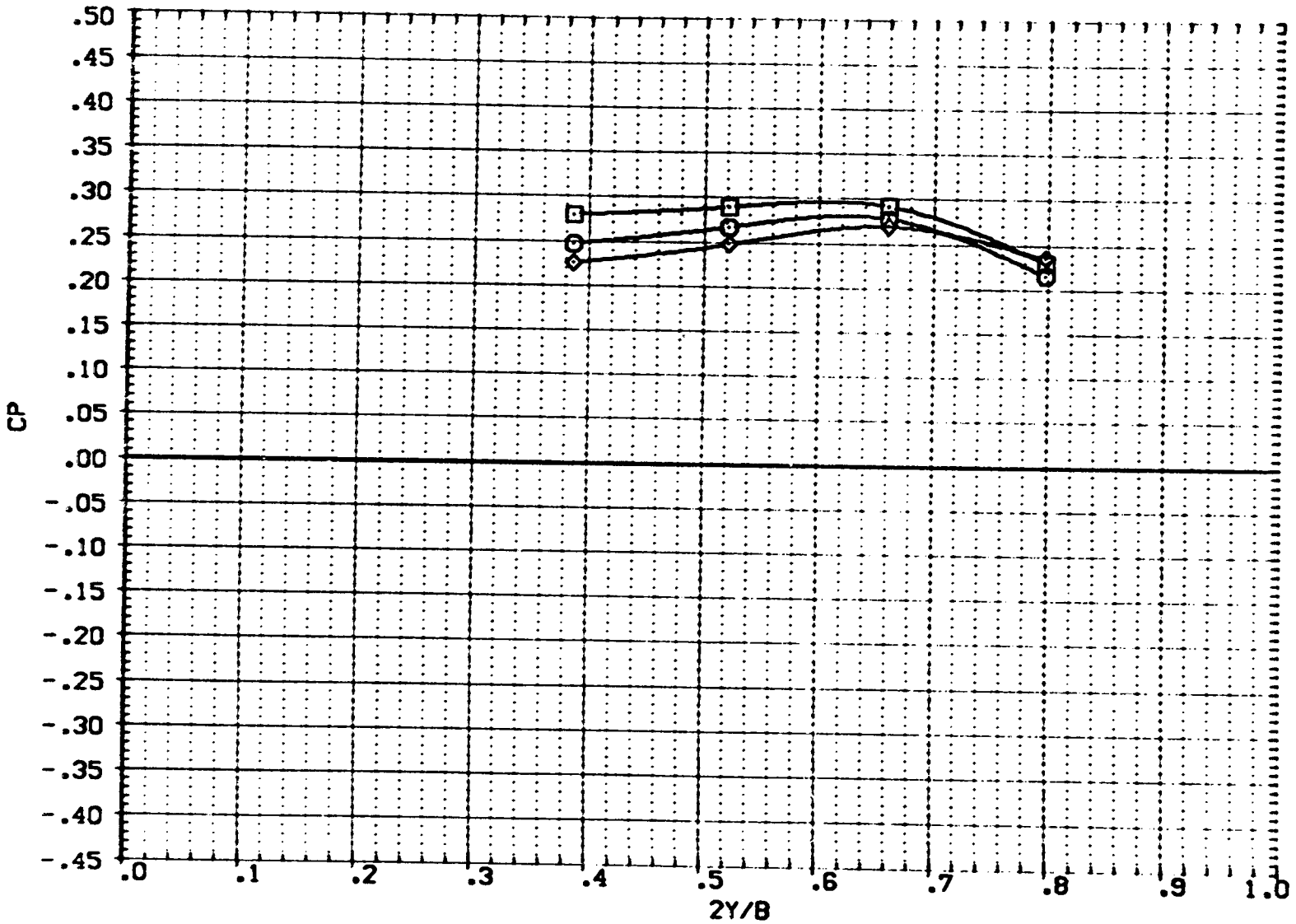
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS6]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R96LS7]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = .905 ALPHA = .000 X/C = .490

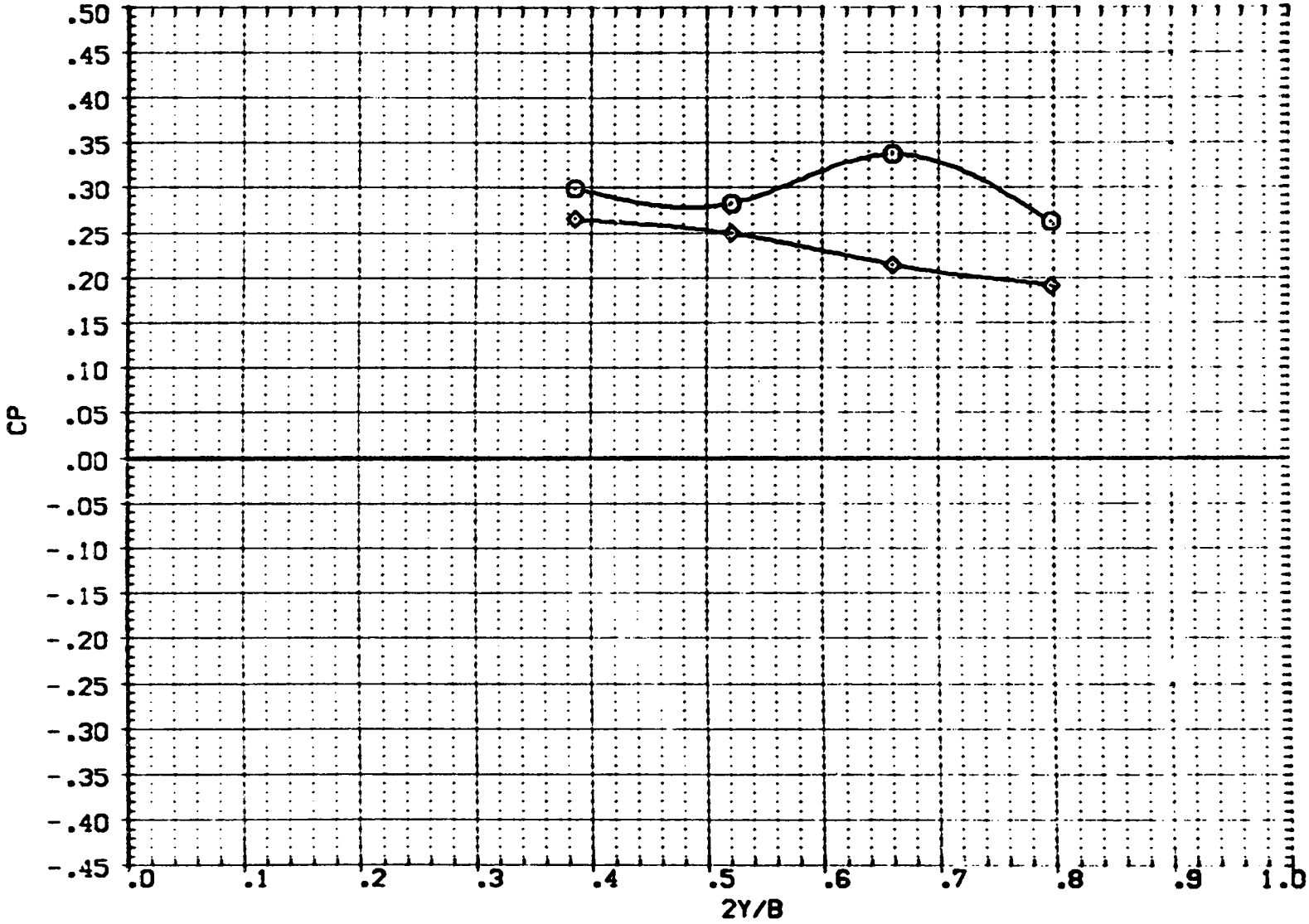
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS6]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R96LS7]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.197 ALPHA = .000 X/C = .490

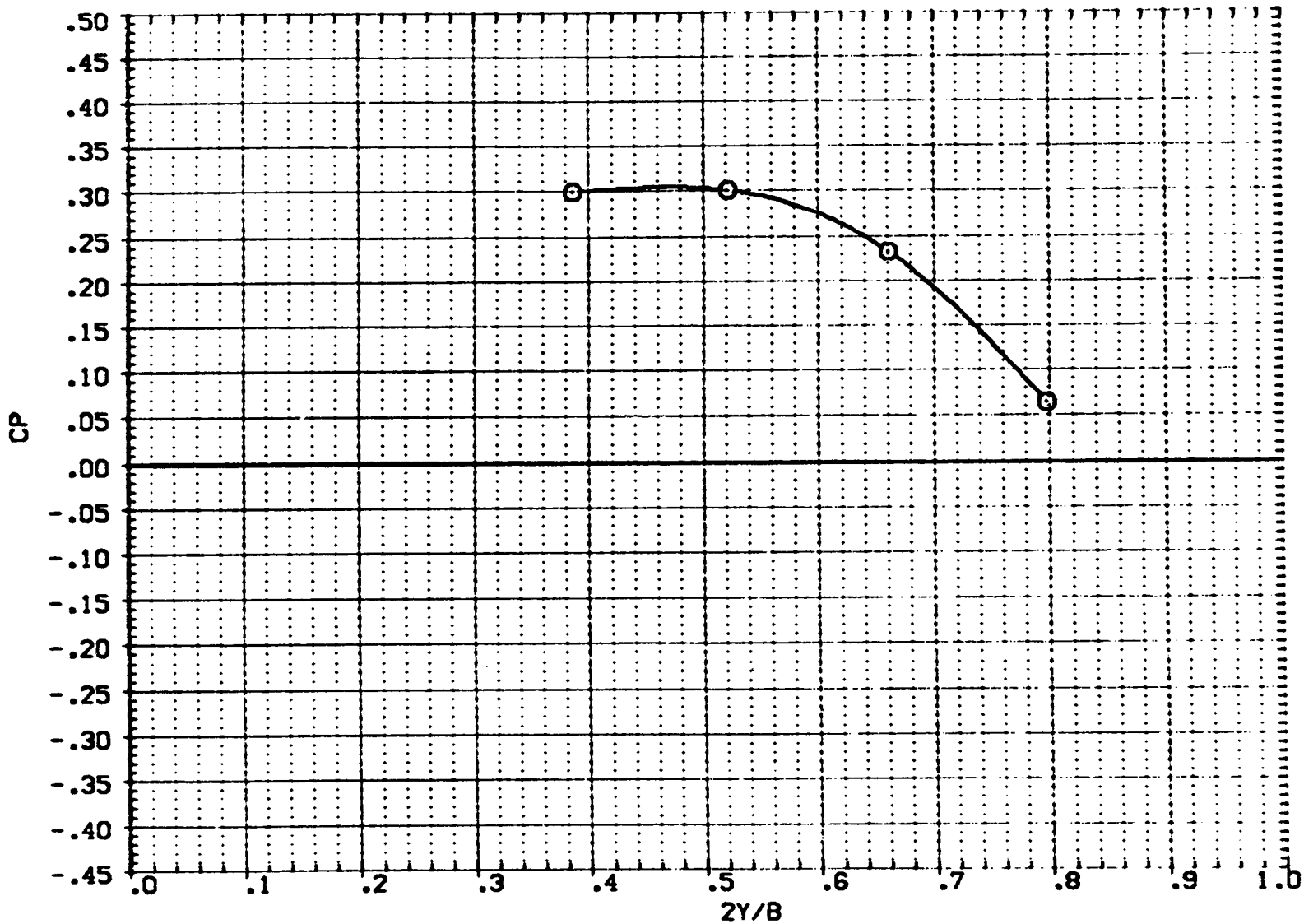
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
[R96LS6]	□	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
[R96LS7]	◇	MSFC 588[IA53] GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.456 ALPHA = .000 X/C = .490

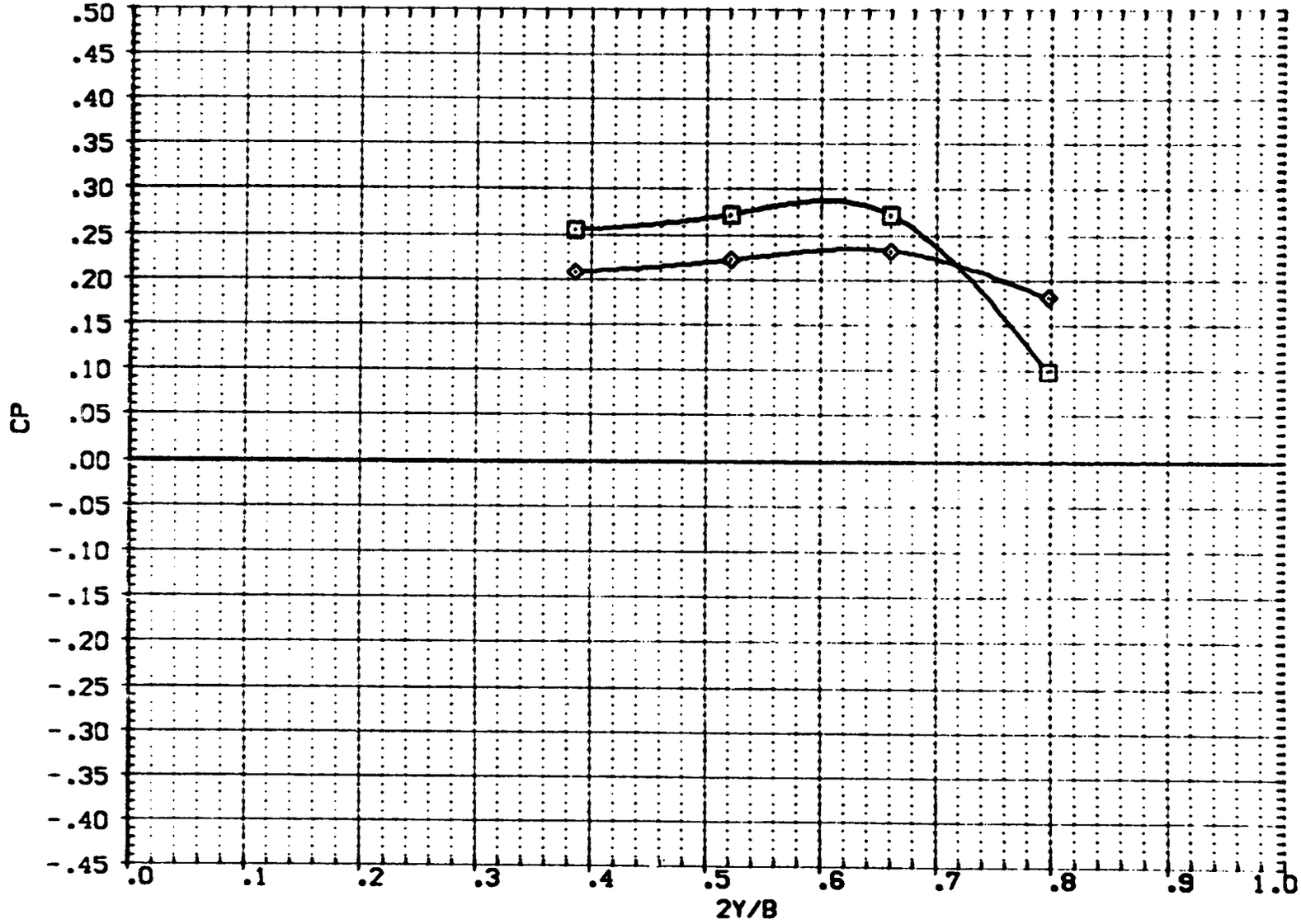
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96LS1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96LS6)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1)	.000	.000	.000
(R96LS7)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2)	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.898 ALPHA = .000 X/C = .490

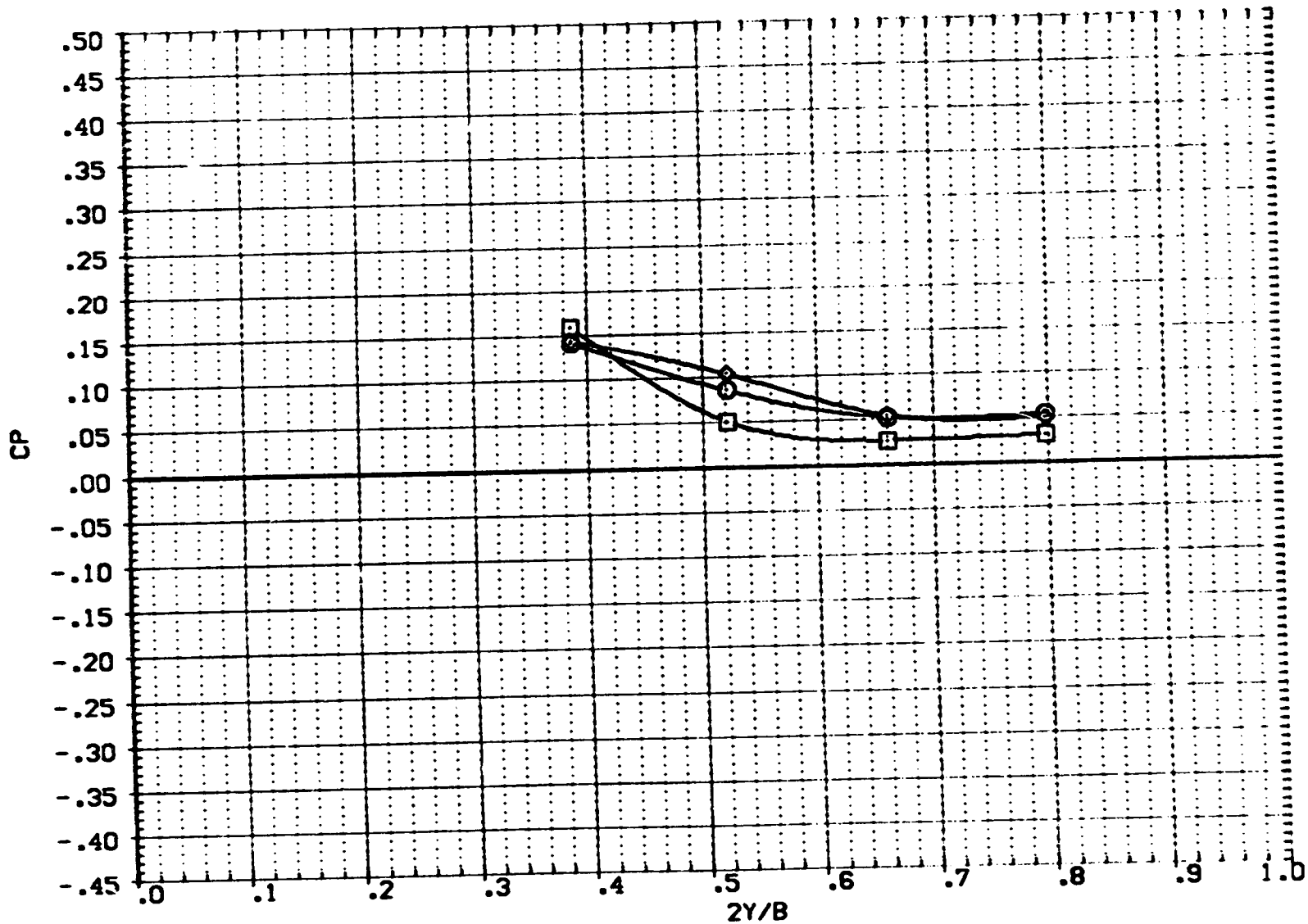
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R9GLS1]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R9GLS6]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G1]	.000	.000	.000
[R9GLS7]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 1.959 ALPHA = .000 X/C = .490

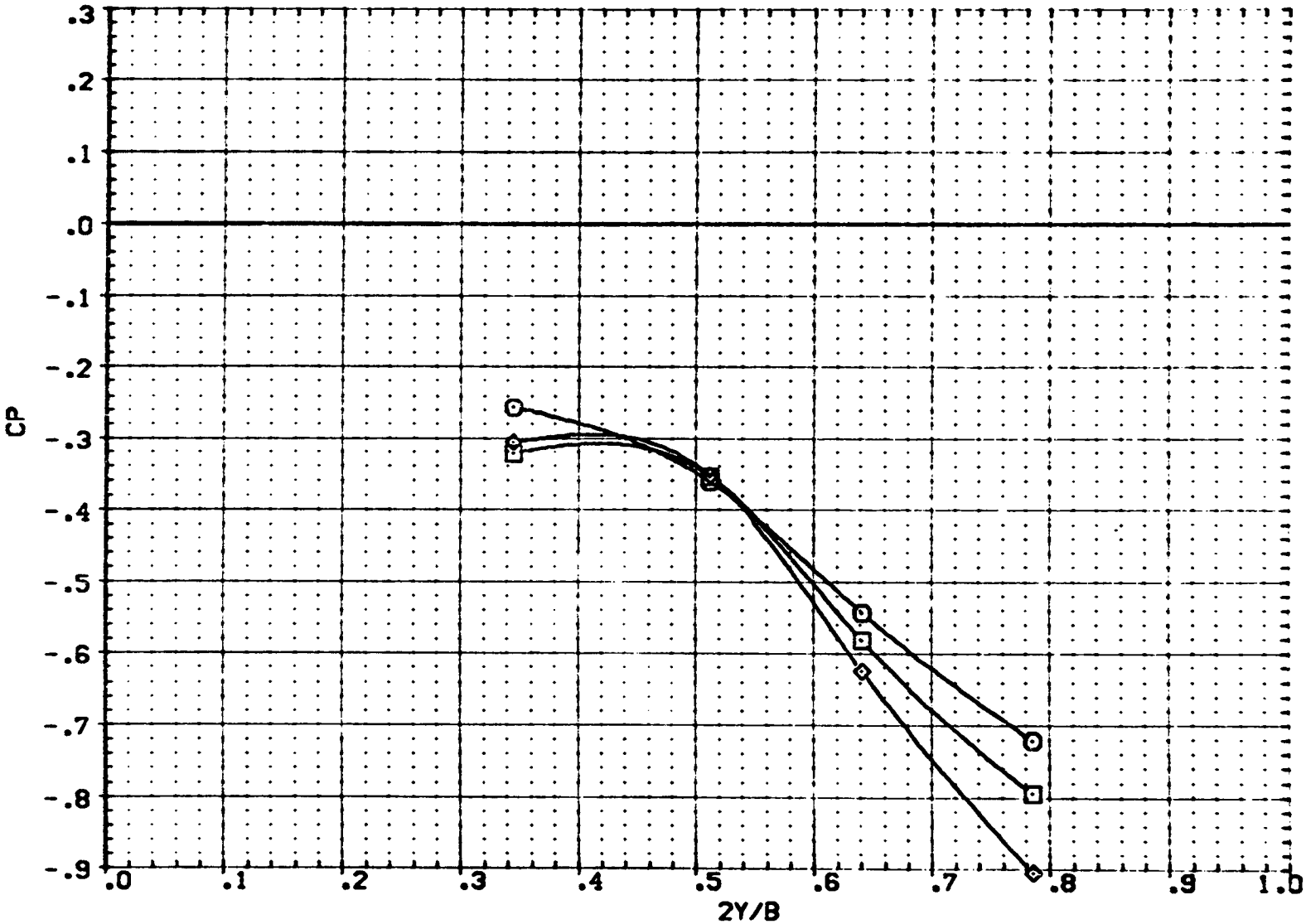
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS6]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B1]	.000	.000	.000
[R96LS7]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 B2]	.000	.000	.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, LOWER WING

MACH = 2.990 ALPHA = .000 X/C = .490

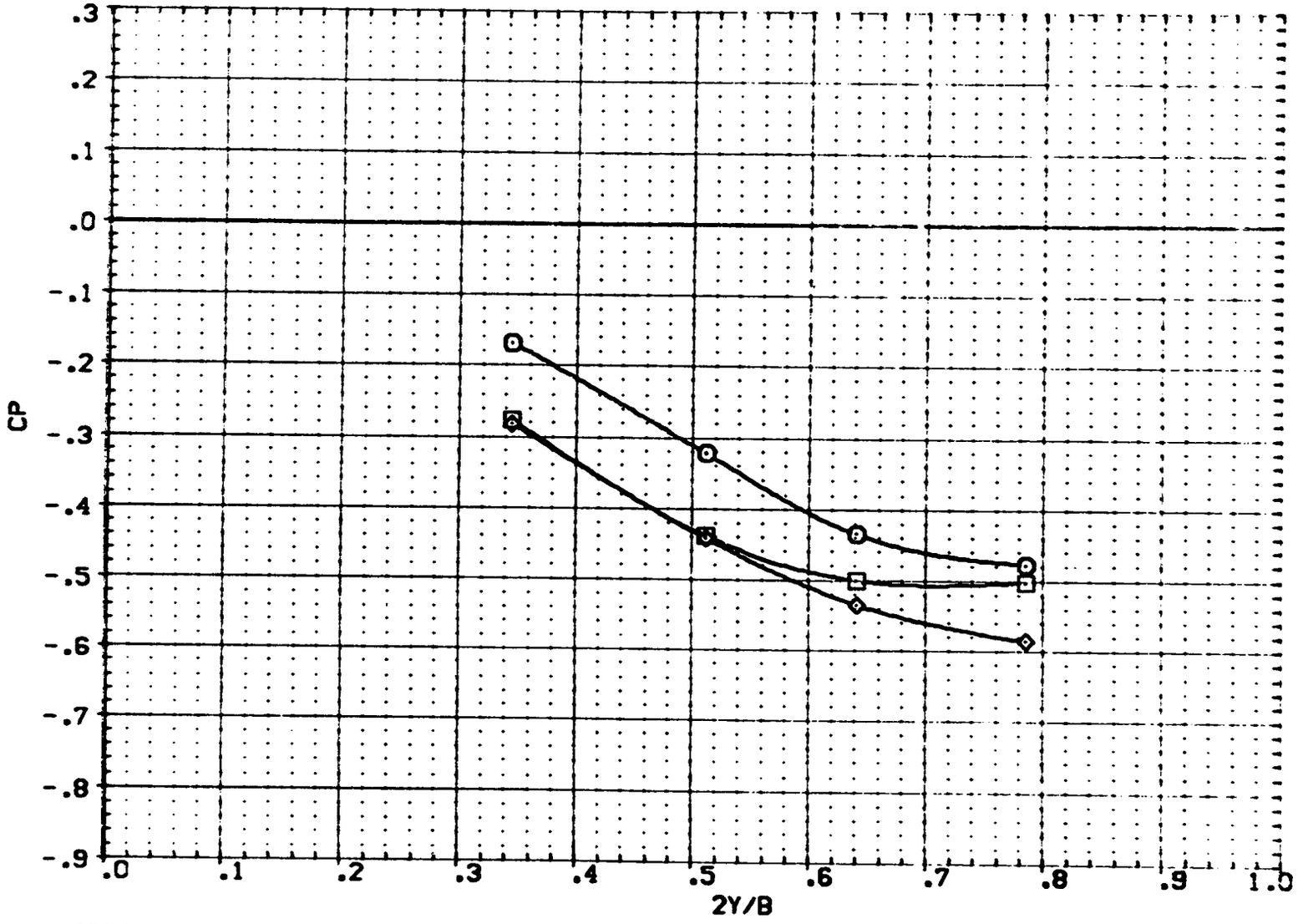
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96US1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96US8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R96US5]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = .905 ALPHA = .000 X/C = .491

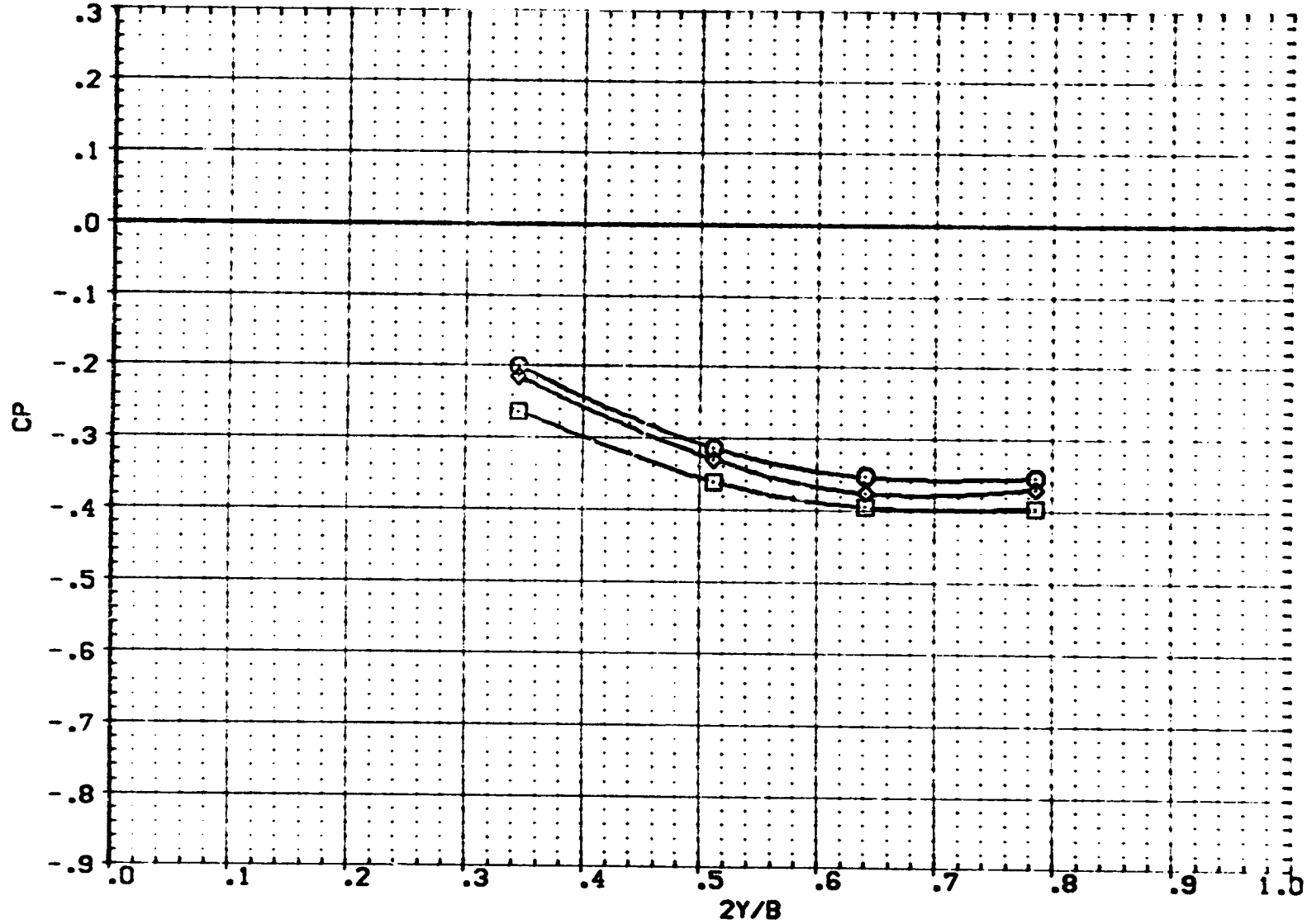
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96US1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96US8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R96US9]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.197 ALPHA = .000 X/C = .491

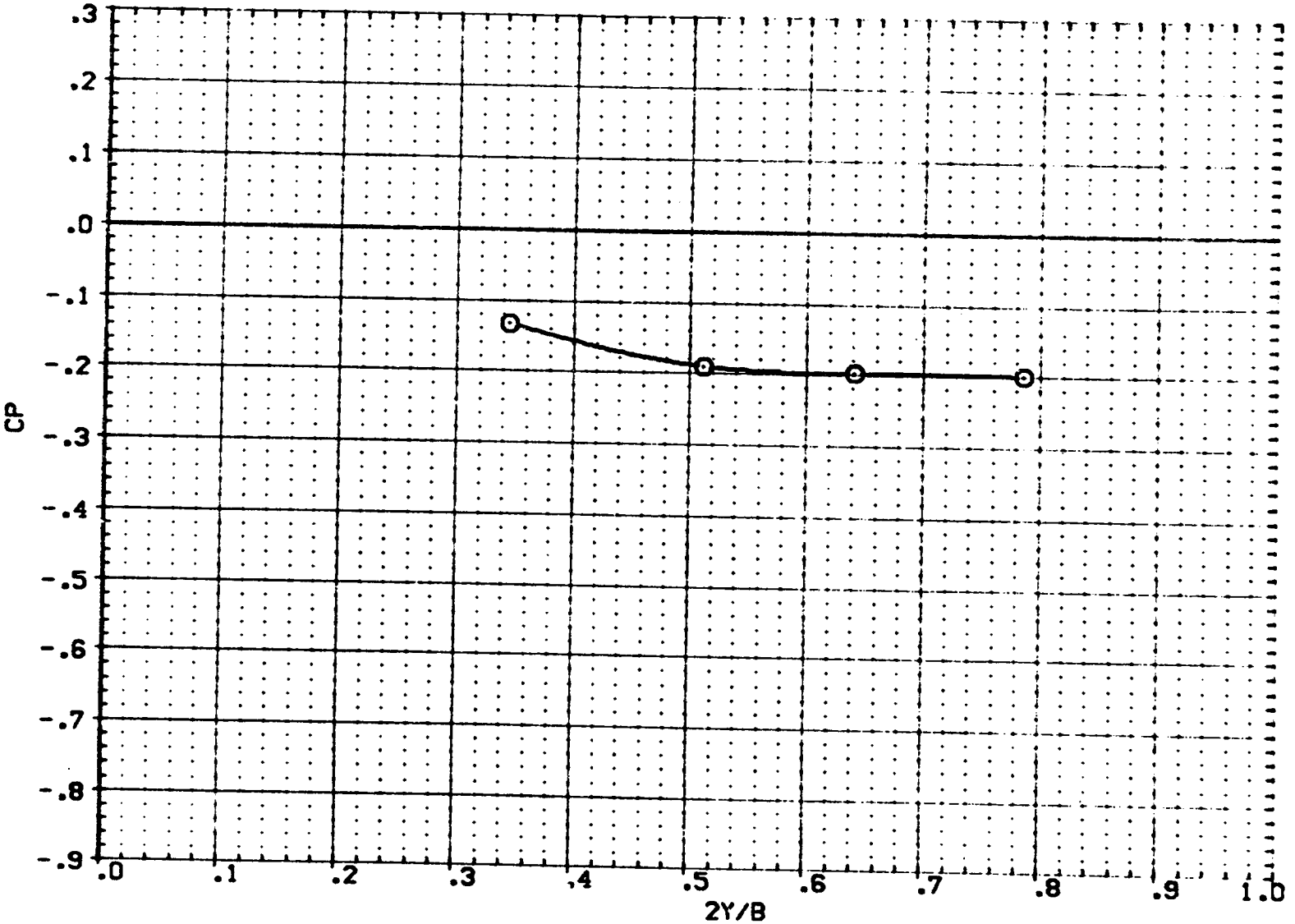
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US8)	□	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R96US9)	◇	MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.456 ALPHA = .000 X/C = .491

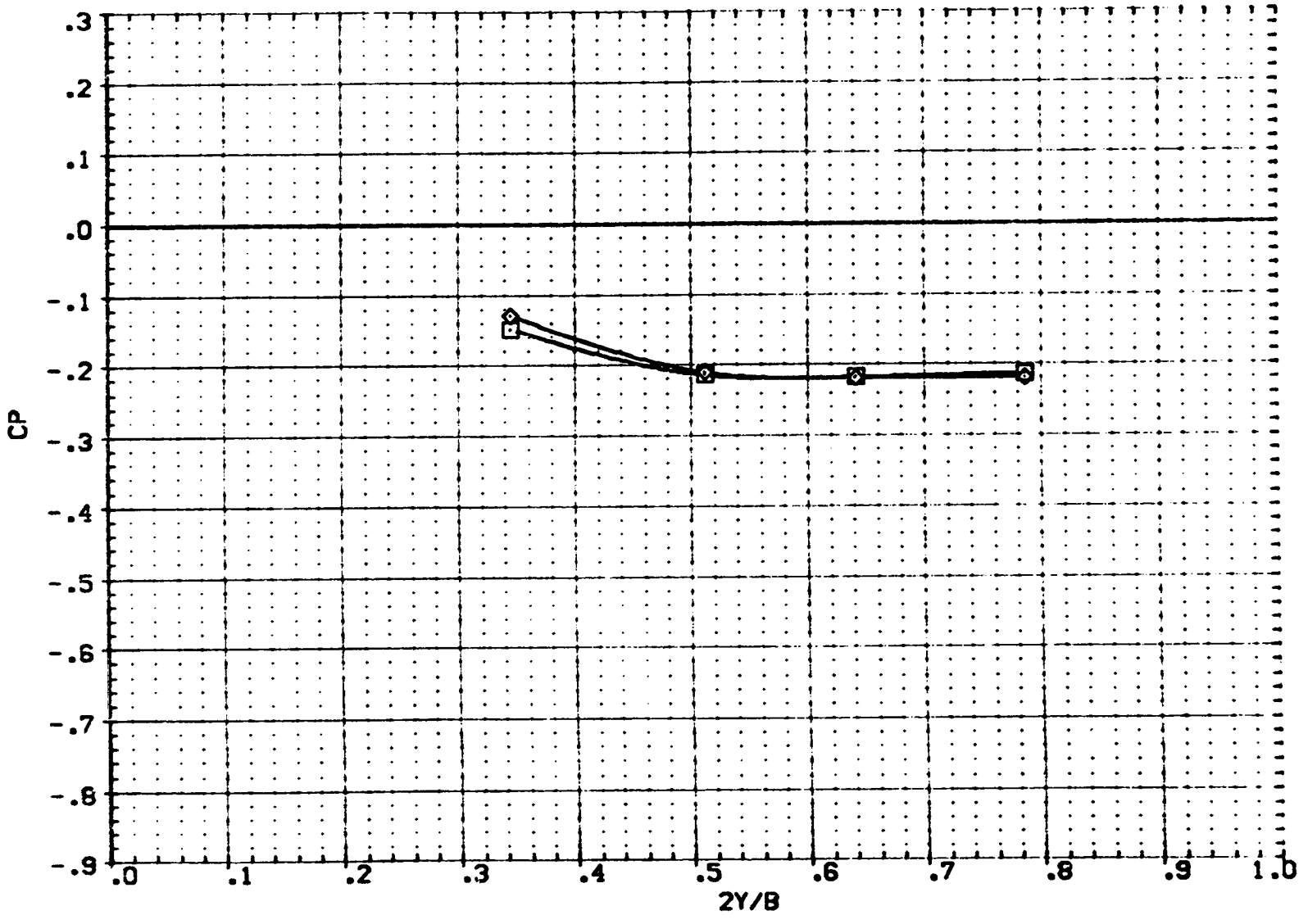
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R96US9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.898 ALPHA = .000 X/C = .491

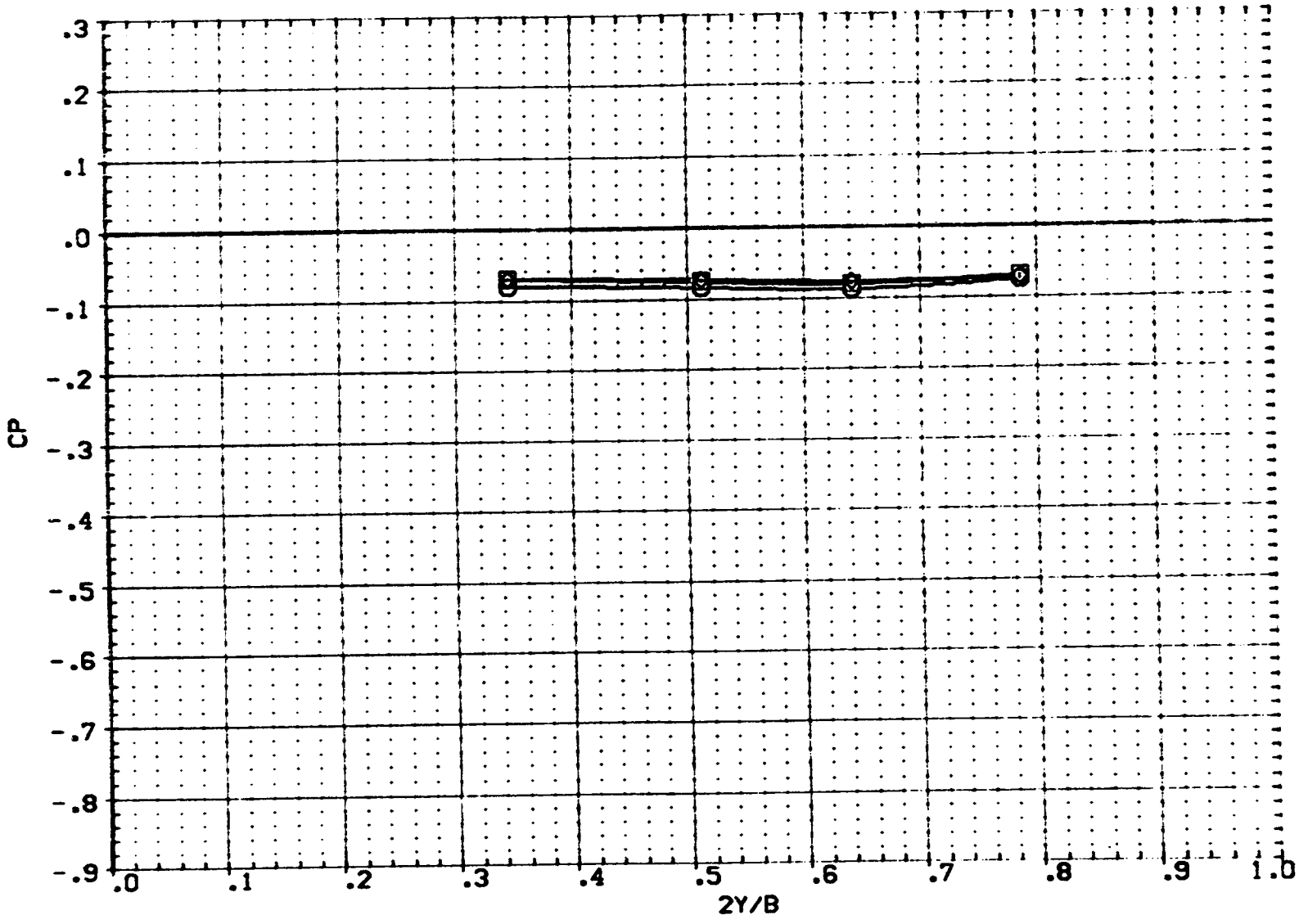
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US8)	▽	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R96US9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 1.958 ALPHA = .000 X/C = .491

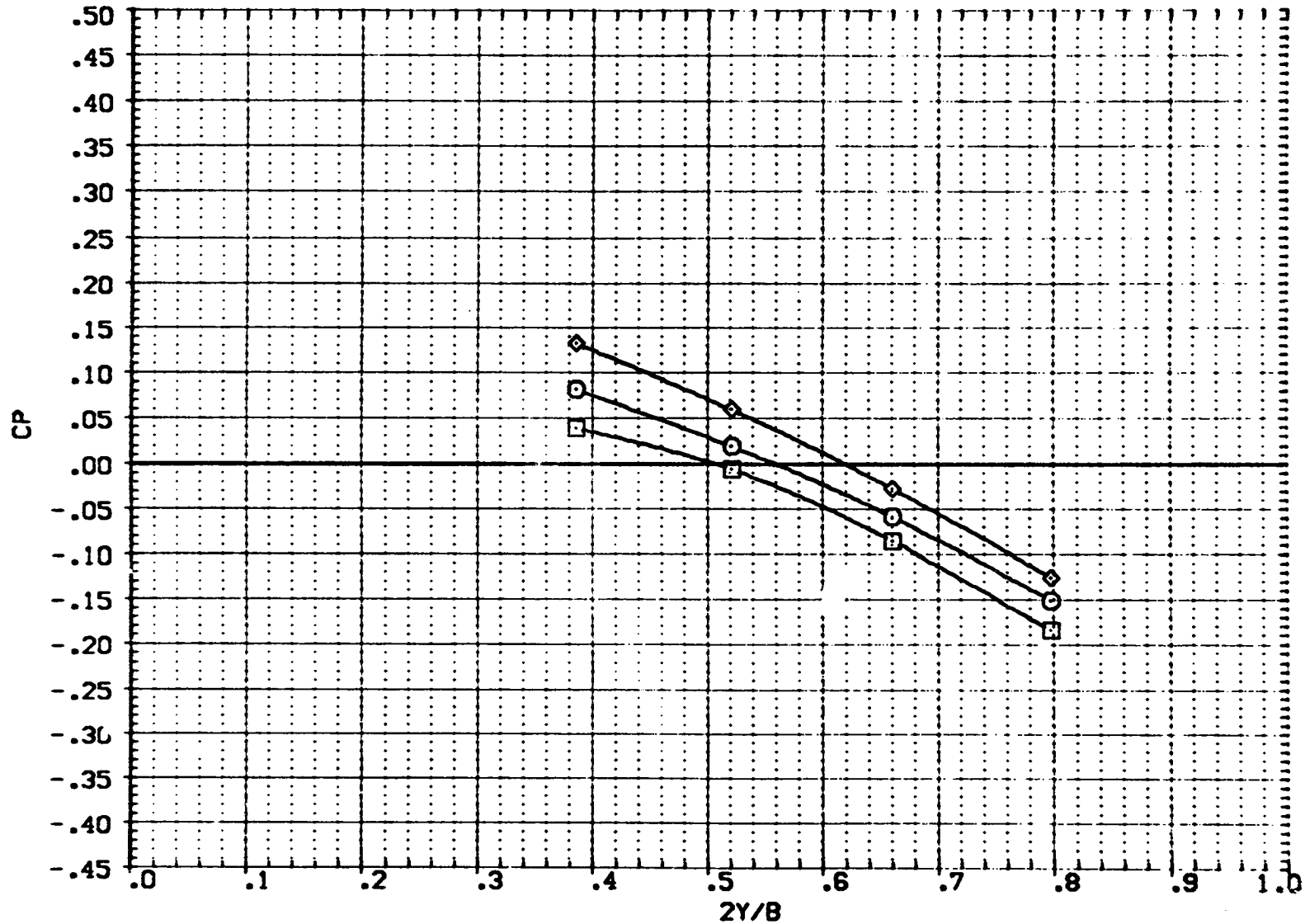
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96US1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96US8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R96US9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, UPPER WING

MACH = 2.960 ALPHA = .000 X/C = .491

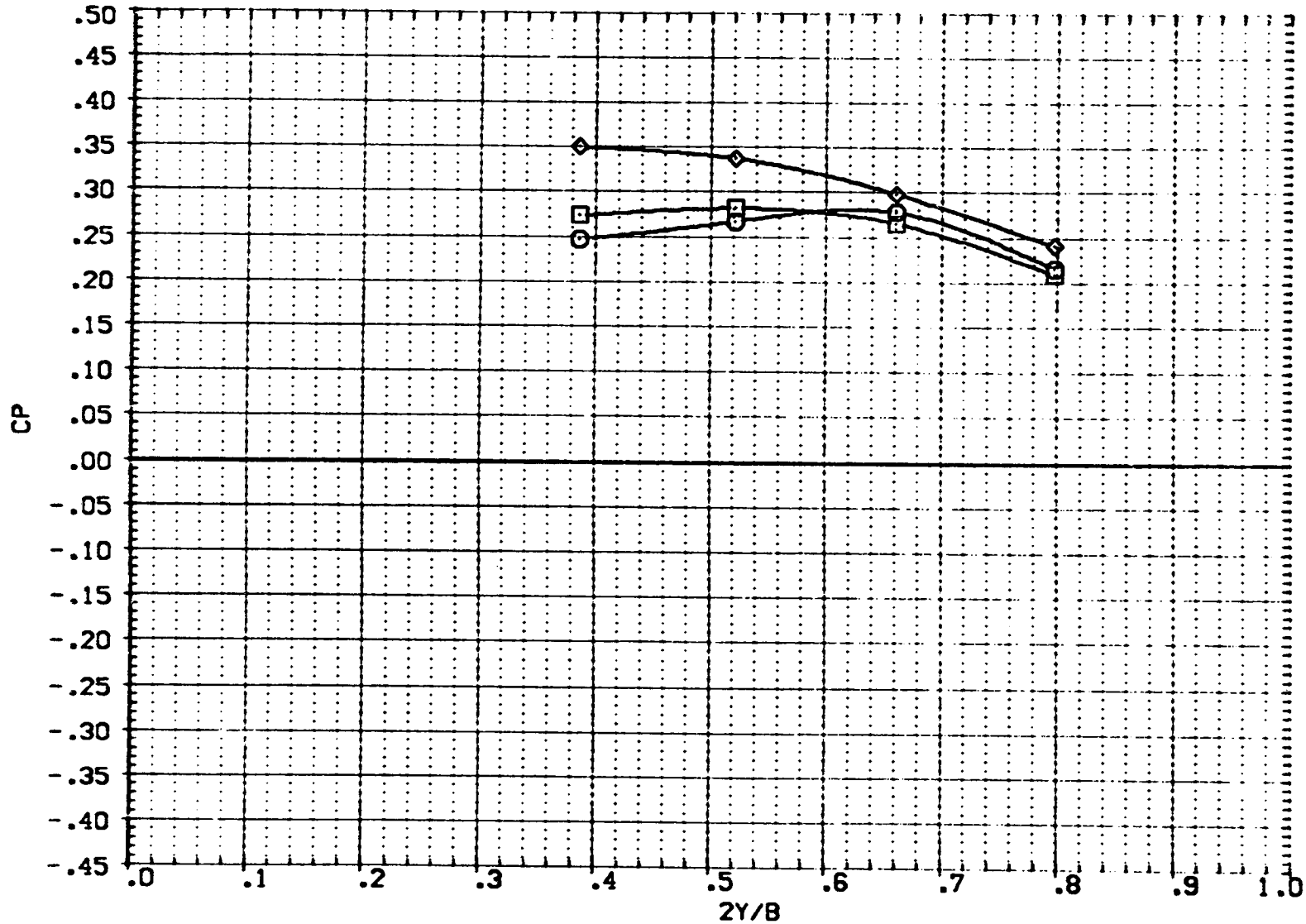
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R9GLS1]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R9GLS8]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R9GLS9]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = .905 ALPHA = .000 X/C = .490

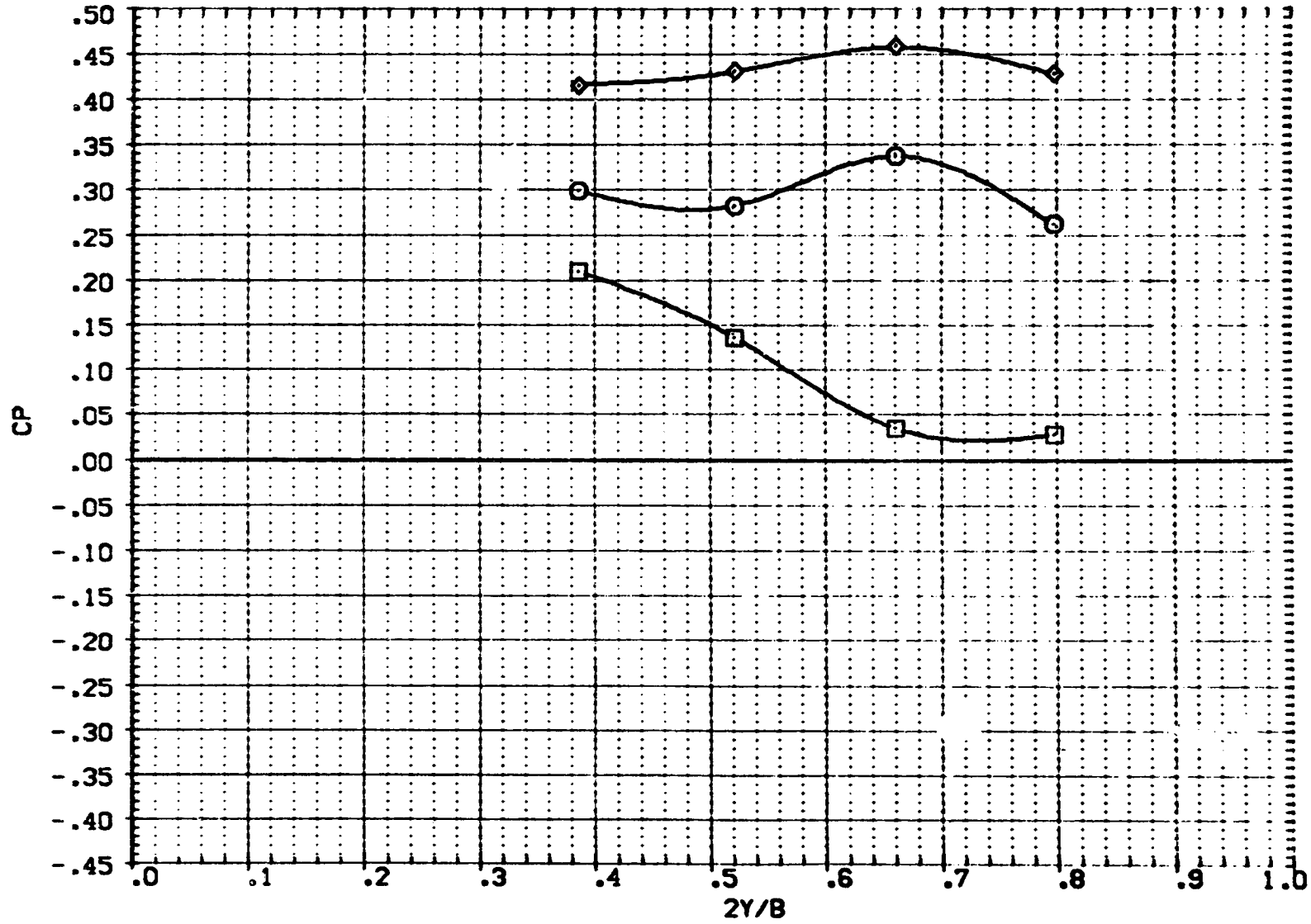
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS8]	□	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R96LS9]	◇	MSFC 588[IA53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.197 ALPHA = .000 X/C = .490

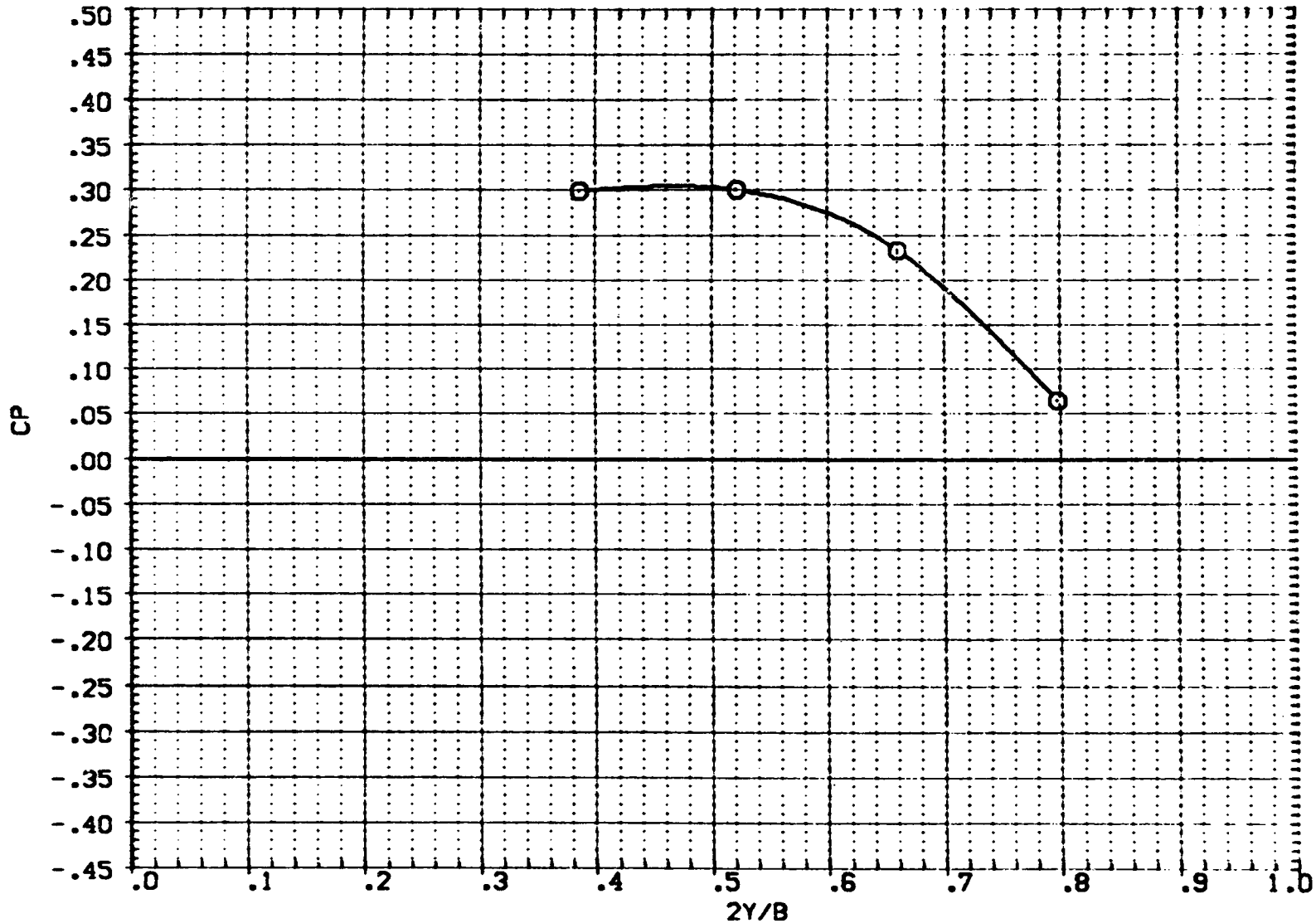
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9GLS1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R9GLS8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R9GLS9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.456 ALPHA = .000 X/C = .490

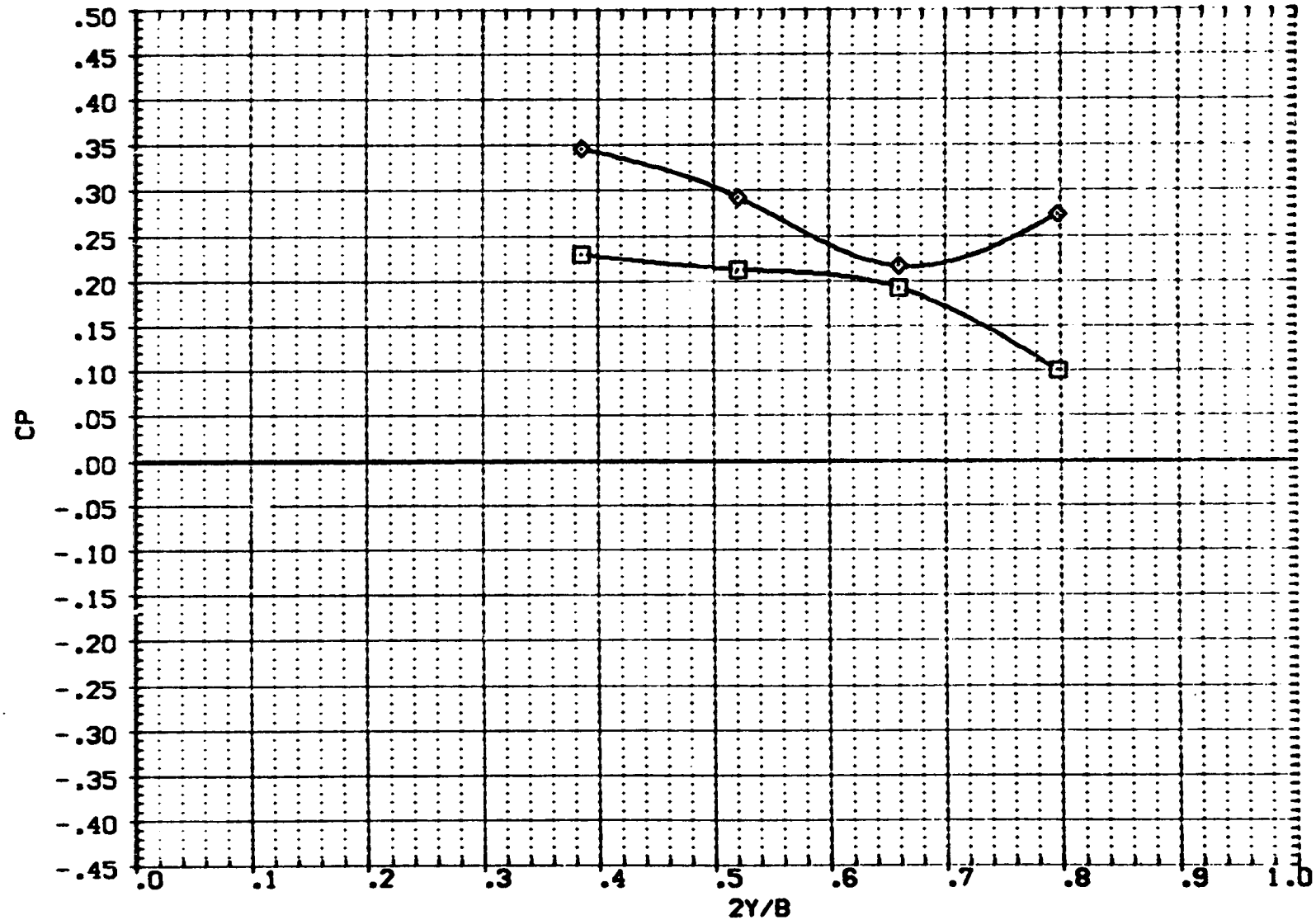
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
[R96LS1]	○	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1]	.000	.000	.000
[R96LS8]	□	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/1]	.000	.000	-90.000
[R96LS9]	◇	MSFC 588[1A53] GAS SUPPLY STRUT [C1F/1 G2 M2/2]	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.898 ALPHA = .000 X/C = .490

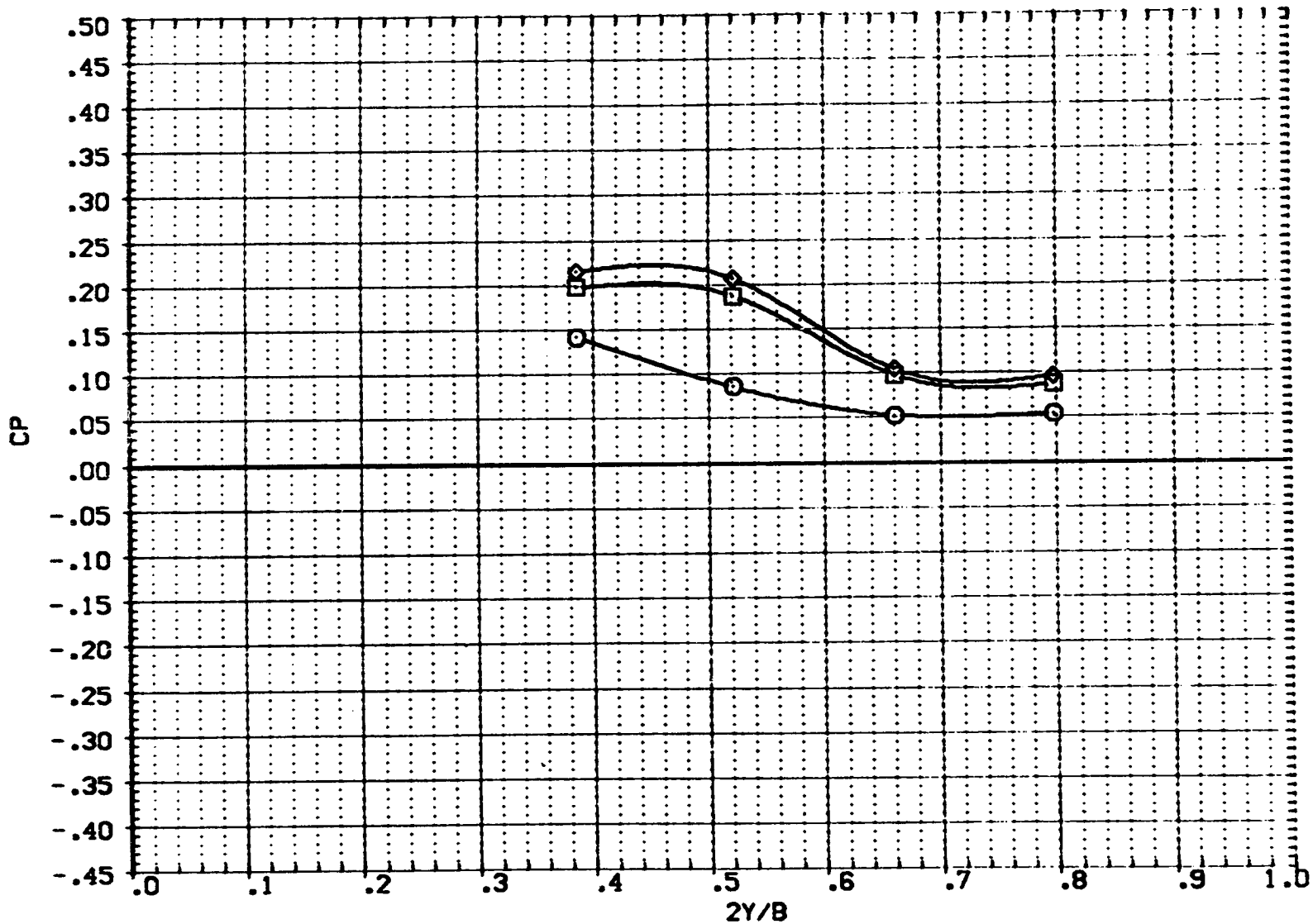
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R9ELS1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96LS8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1)	.000	.000	-90.000
(R96LS9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 1.958 ALPHA = .000 X/C = .490

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	PHI
(R96LS1)	○	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1)	.000	.000	.000
(R96LS8)	□	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/1)	.000	.000	-90.000
(R96LS9)	◇	MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/2)	.000	.000	-90.000



ORBITER / ET AIR SUPPLY FAIRING EFFECTS, WITH SRB SIDE MOUNT, LOWER WING

MACH = 2.990 ALPHA = .000 X/C = .490

APPENDIX

TABULATED SOURCE DATA

FORCE DATA

Tabulations of plotted data are available on request from Data Management Services.

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96001) (21 FEB 74)

REFERENCE DATA

SREF =	6.1900 SQ. IN	XMRP =	.0000 IN.		
LREF =	5.3130 IN.	YMRP =	.0000 IN.		
BREF =	5.3130 IN.	ZMRP =	.0000 IN.		
SCALE =	.0000				

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 1001/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.904	.000	-.22040	-.22670	-.20900	-.19960	.03280	.02470	.06170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1002/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.197	.000	-.32630	-.30980	-.30300	-.29620	.04740	.03260	.06080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1015/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.456	.000	-.28380	-.27360	-.26260	-.26420	.04150	.02710	.03780
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1016/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.898	.000	-.21270	-.20430	-.20250	-.20400	.03170	.02020	.01960
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1025/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.09720	-.09940	-.09350	-.09200	.01460	.00740	.00560
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96002) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 1004/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.905	.000	-.21510	-.21870	-.20830	-.20000	.03240	.02350	.03020
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1003/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.200	.000	-.28790	-.27690	-.28620	-.27900	.04370	.03210	.05650
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1014/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

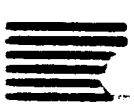
MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.463	.000	-.27060	-.25960	-.25100	-.25060	.03960	.02570	.03900
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1017/ 0 RN/L = 6.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.961	.000	-.23390	-.24070	-.22180	-.22630	.03530	.02070	.02280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1024/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.09720	-.09800	-.09350	-.09120	.01460	.00770	.00740
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000



MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96003) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 1005/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.900	.000	-.22560	-.23140	-.21880	-.21050	.03400	.02370	.07060
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1005/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.198	.000	-.29940	-.28410	-.28290	-.27820	.04400	.03100	.06350
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1013/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.456	.000	-.29200	-.28130	-.26910	-.26830	.04250	.02770	.04390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1018/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.951	.000	-.23860	-.24570	-.22690	-.22990	.03600	.02050	.02730
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1023/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.09870	-.10170	-.09650	-.09500	.01500	.00750	.00950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R96004) (21 FEB 74)

REFERENCE DATA

SREF = 8.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 1030/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.897	.000	-.22170	-.22220	-.20590	-.20170	.03260	.02270	.06690
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1031/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.206	.000	-.31620	-.30060	-.29300	-.28630	.04590	.03190	.05770
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1032/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.464	.000	-.25020	-.24510	-.24230	-.24310	.03800	.02490	.03960
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1035/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.950	.000	-.22820	-.23310	-.21170	-.21880	.03400	.01920	.02130
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1026/ 0 RN/L = 4.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.08830	-.09130	-.08600	-.08380	.01340	.00700	.00280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96005) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 1042/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.901	.000	-.25110	-.25840	-.25110	-.22230	.03800	.02560	.07090
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1043/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.199	.000	-.29890	-.30570	-.29560	-.26470	.04500	.02950	.05700
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1038/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.457	.000	-.26850	-.26190	-.26070	-.25790	.04040	.02570	.03640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1037/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.949	.000	-.23220	-.24270	-.21190	-.22010	.03440	.01920	01680
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1044/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.08750	-.09120	-.08600	-.08530	.01340	.00700	.00290
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G1) (R96006) (21 FEB 74)

REFERENCE DATA

BREF = 5.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 1008/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.905	.000	-.23170	-.23740	-.22440	-.20460	.03450	.02450	.06740
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1007/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.195	.000	-.33380	-.31730	-.31600	-.31470	.04930	.03240	.05970
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1012/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.465	.000	-.28670	-.27610	-.26670	-.26470	.04200	.02660	.03720
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1019/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.958	.000	-.21360	-.20800	-.21020	-.20910	.03250	.02020	.02120
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1022/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.09870	-.10170	-.09570	-.09420	.01500	.00790	.00830
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2) (R96007) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 1009/ 1 RN/L = 6.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.695	.000	-.21660	-.21660	-.21030	-.20760	.03270	.02500	.06310
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1010/ 1 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.205	.000	-.32340	-.30780	-.30570	-.29940	.04760	.03230	.05840
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1011/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.463	.000	-.27180	-.26240	-.25950	-.25670	.04040	.02730	.03610
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1020/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.937	.000	-.21810	-.21250	-.21620	-.21210	.03320	.02020	.01980
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1021/ 0 RN/L = 4.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.10170	-.10340	-.10020	-.09720	.01550	.00820	.00860
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96008) (21 FEB 74)

REFERENCE DATA

SREF = 8.1680 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .3000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 1029/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.904	.000	-.22440	-.22540	-.21080	-.20660	.03320	.02230	.06600
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1028/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.198	.000	-.32500	-.30720	-.30130	-.29410	.04710	.03210	.05740
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1033/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.453	.000	-.25430	-.24700	-.24740	-.23960	.03810	.02530	.03900
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1034/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.957	.000	-.23400	-.24720	-.21510	-.22270	.03490	.01930	.01940
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1027/ 0 RN/L = 4.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.08750	-.09050	-.08680	-.08310	.01340	.00710	.00180
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R96009) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 83. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 1041/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
.901	.000	-.25000	-.25370	-.24740	-.23220	.03790	.02310	.06640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1040/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.199	.000	-.30640	-.31190	-.30170	-.27380	.04600	.02900	.05770
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1039/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.461	.000	-.26400	-.26440	-.26850	-.25540	.04080	.02590	.03470
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1036/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
1.953	.000	-.23990	-.24780	-.22000	-.22300	.03540	.01940	.01660
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 1045/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CABO	CABS	CABT
2.990	.000	-.08680	-.08980	-.08530	-.08230	.01320	.00700	.00170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96101) (21 FEB 74)

REFERENCE DATA

SREF =	8.1980 SQ. IN	XMRP =	.0000 IN.		
LREF =	5.3130 IN.	YMRP =	.0000 IN.		
BREF =	5.3130 IN.	ZMRP =	.0000 IN.		
SCALE =	.0000				

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 2001/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.904	.000	-.47500	-.32740	-.26320	-.34040	-.31960	-.15990	-.09990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2002/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.197	.000	-.35800	-.39660	-.40800	-.43970	-.40420	.05470	-.14380
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2015/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.456	.000	-.19760	-.29690	-.30870	-.33360	-.30100	.16940	-.01390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2016/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.898	.000	-.06750	-.21090	-.21570	-.23210	-.21050	.17580	.11830
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2025/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.03920	-.09500	-.08450	-.09200	-.08450	.09810	.04810
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (A96102) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 2004/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.905	.000	-.45270	-.33340	-.24790	-.33910	-.32140	-.15670	-.15990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2003/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.200	.000	-.35180	-.36870	-.38050	-.41600	-.37970	.04780	-.17080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2014/ 0 RN/L = 3.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.463	.000	-.19630	-.29560	-.31070	-.32860	-.29720	.16600	-.04350
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2017/ 0 RN/L = 6.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.981	.000	-.06530	-.22180	-.22400	-.23420	-.22630	.13860	.13710
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2024/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.04060	-.09570	-.08980	-.09720	-.08750	.10100	.06670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2) (A96103) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 2005/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.900	.000	-.48860	-.35500	-.27910	-.37550	-.34560	-.17740	-.19260
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2006/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.198	.000	-.36410	-.39380	-.41150	-.42510	-.39460	.03620	-.15760
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2013/ 0 RN/L = 6.48 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.456	.000	-.20780	-.31730	-.33730	-.35400	-.31770	.16530	-.02980
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2018/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.951	.000	-.06680	-.22620	-.22810	-.24650	-.22810	.13500	.01770
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2023/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.04130	-.09720	-.09200	-.09870	-.08380	.10090	.00330
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/1) (R96104) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 2030/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.897	.000	-.49630	-.36270	-.28270	-.32950	-.34740	-.15180	-.25640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2031/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.206	.000	-.33100	-.37200	-.39060	-.41210	-.37960	.09110	-.14520
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2032/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.464	.000	-.19900	-.29370	-.30520	-.33290	-.29580	.13060	-.00170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2035/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.950	.000	-.00830	-.21810	-.21510	-.24970	-.21660	.17010	.15320
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2026/ 0 RN/L = 4.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.08160	-.08900	-.07930	-.08830	-.07860	.14040	.12850
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96105) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 3.3130 IN. YMRP = .0000 IN.
BREF = 3.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 2042/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.901	.000	-.58670	-.39190	-.34740	-.36520	-.37880	-.12440	-.20710
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2043/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.199	.000	-.34170	-.37380	-.39540	-.44280	-.39120	.14130	-.10600
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2038/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.457	.000	-.19790	-.29660	-.30970	-.35340	-.29790	.22040	.02610
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2037/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.949	.000	.00360	-.20770	-.20960	-.23100	-.20440	.24100	.15310
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2044/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.05480	-.08680	-.07710	-.08450	-.08080	.15390	.09950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 61) (R96106) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 2008/ 0 RN/L = 8.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.905	.000	-.47500	-.36810	-.31350	-.36820	-.38120	-.21090	-.13590
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2007/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.195	.000	-.31520	-.39940	-.41630	-.44300	-.40360	.08050	-.12080
	GRADIENT	.00000	.00000	.00000	.00300	.00000	.00000	.00000

RUN NO. 2012/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.465	.000	-.16700	-.29610	-.30880	-.32960	-.29530	.15240	-.00400
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2019/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.958	.000	-.02530	-.20980	-.21400	-.23140	-.21020	.14740	.06440
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2022/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.02640	-.09720	-.09200	-.09720	-.08980	.11580	-.00260
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 508(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96107) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 2009/ 1 RN/L = 6.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.895	.000	-.30510	-.31140	-.32620	-.35200	-.32250	-.18020	-.13440
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2010/ 1 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.203	.000	-.21870	-.38680	-.40410	-.43750	-.39740	.01940	-.10970
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2011/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.483	.000	-.09080	-.29060	-.30530	-.32940	-.29430	.16730	-.00950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2020/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.957	.000	.01680	-.22190	-.21100	-.22610	-.22190	.14920	.12390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2021/ 0 RN/L = 4.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.04800	-.10170	-.09420	-.09800	-.09570	.11510	-.00180
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 500(IA53) CAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96108) (21 FEB 74)

REFERENCE DATA

BREF = 8.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 2029/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.904	.000	-.29020	-.30790	-.31370	-.34650	-.31210	-.18070	-.26670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2028/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.198	.000	-.17840	-.37070	-.39360	-.41770	-.38170	.07140	-.14410
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2033/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.453	.000	-.09470	-.29310	-.30620	-.33560	-.29720	.13020	-.00280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2034/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.957	.000	.02770	-.23740	-.21740	-.23250	-.22830	.20050	.17480
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2027/ 0 RN/L = 4.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.07410	-.08900	-.08230	-.08680	-.07190	.16200	.14340
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R96109) (21 FEB 74)

REFERENCE DATA

SREF = 8.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 2041/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
.901	.000	-.33530	-.37360	-.34060	-.34840	-.35210	-.13910	-.21290
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2040/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.199	.000	-.20900	-.37700	-.40110	-.44090	-.38930	.08870	-.12950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2039/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.461	.000	-.06960	-.29500	-.30030	-.34080	-.29540	.22140	.02130
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2036/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
1.953	.000	.02720	-.22710	-.20830	-.22070	-.21920	.24510	.17170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 2045/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB5	CPB6	CPB7	CPB12	CPB13	CPB14	CPB15
2.990	.000	.07940	-.08600	-.07780	-.08230	-.05890	.18070	.08900
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1) (R96201) (21 FEB 74)

REFERENCE DATA

BREF = 8.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 3001/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.904	.000	-.26320	-.33520	-.38220	-.30340	-.34040	-.34040	-.09990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3002/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.197	.000	-.40800	-.42240	-.14000	-.12430	-.43590	-.43970	-.14380
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3015/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.458	.000	-.30870	-.32670	-.03350	-.04610	-.32380	-.33360	-.01390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3016/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.898	.000	-.21570	-.23180	.01480	.02060	-.22410	-.23210	.11030
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3025/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.06450	.00560	-.01670	.00490	-.09270	-.09200	.04810
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96202) (21 FEB 74)

REFERENCE DATA

SREF =	6.1980 SQ. IN	XMRP =	.0000 IN.
LREF =	5.3130 IN.	YMRP =	.0000 IN.
BREF =	5.3130 IN.	ZMRP =	.0000 IN.
SCALE =	.0000		

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 3004/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.905	.000	-.24790	-.33080	-.37610	-.33760	-.33550	-.33910	-.15990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3003/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.200	.000	-.38050	-.39320	-.05320	-.07730	-.41600	-.41600	-.17080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3014/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.483	.000	-.31070	-.31600	-.04590	-.07740	-.32130	-.32860	-.04350
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3017/ 0 RN/L = 6.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.981	.000	-.22400	-.23840	-.01470	-.04790	-.22740	-.23420	.13710
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3024/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.08980	-.06660	-.01670	-.03380	-.09800	-.09720	.06670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96203) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 3005/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.900	.000	-.27910	-.35360	-.36820	-.42050	-.38230	-.37550	-.19260
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3006/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.198	.000	-.41150	-.41920	-.19780	-.20410	-.43820	-.42510	-.15760
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3013/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.456	.000	-.33730	-.33480	-.11880	-.13350	-.35280	-.35400	-.02980
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3018/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.951	.000	-.22810	-.23560	-.08750	-.04420	-.24200	-.24650	.01770
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3023/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.09200	-.09270	-.05850	-.02420	-.09950	-.09870	.00330
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 500(IA53) GAS SUPPLY STRUT (C1F/1 M2/1) (R96204) (21 FEB 74)

REFERENCE DATA

SREF = 6.1990 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 3030/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.897	.000	-.28270	-.29110	-.41420	-.37370	-.30010	-.32950	-.25640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3031/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.206	.000	-.39060	-.40360	-.14020	-.16340	-.40790	-.41210	-.14520
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3032/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.464	.000	-.30520	-.32070	-.04170	-.10710	-.32440	-.33290	-.00170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3035/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.950	.000	-.21510	-.23690	-.01620	-.04780	-.23650	-.24970	.15320
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3026/ 0 RN/L = 4.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.07930	-.08310	-.00330	.00110	-.08830	-.08830	.12850
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 500(IA53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96205) (21 FEB 74)

REFERENCE DATA

SREF = 6.1900 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 3042/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.901	.000	-.34740	-.37250	-.39610	-.33330	-.36420	-.36520	-.20710
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3043/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.199	.000	-.39540	-.42200	-.12340	-.13180	-.43680	-.44280	-.10600
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3038/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.457	.000	-.30970	-.32890	-.01710	-.05220	-.33500	-.35340	.02610
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3037/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.949	.000	-.20960	-.22500	.01260	-.01280	-.22050	-.23100	.15310
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3044/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.07710	-.07930	-.00110	.01670	-.08380	-.08450	.09950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAB SUPPLY STRUT (C1F/1 61)

(R96206) (21 FEB 74)

REFERENCE DATA

SREF =	6.1980 SQ. IN	XMRP =	.0000 IN.		
LREF =	5.3130 IN.	YMRP =	.0000 IN.		
BREF =	5.3130 IN.	ZMRP =	.0000 IN.		
SCALE =	.0000				

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 3008/ 0 RN/L = 8.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.905	.000	-.31350	-.32760	-.37970	-.30460	-.34740	-.36820	-.13590
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3007/ 0 RN/L = 6.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.195	.000	-.41650	-.43240	-.14160	-.12090	-.43750	-.44300	-.12980
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3012/ 0 RN/L = 5.46 GRADIENT INTERVAL = -5.00/ 5.00

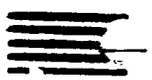
MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.465	.000	-.30980	-.32060	-.03180	-.05060	-.31980	-.32960	-.00400
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3019/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.958	.000	-.21400	-.22380	-.00420	.01000	-.21850	-.23140	.06440
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3022/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.09200	-.08980	-.02200	.00770	-.09600	-.09720	-.00260
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000



MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96207) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 3009/ 1 RN/L = 6.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.895	.000	-.32620	-.35200	-.39630	-.32040	-.35250	-.35200	-.13440
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3010/ 1 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.203	.000	-.40410	-.42480	-.12500	-.11480	-.43490	-.43750	-.10970
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3011/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.483	.000	-.30530	-.32330	-.04260	-.04870	-.32080	-.32940	-.00950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3020/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.957	.000	-.21100	-.22380	.00170	-.00770	-.21660	-.22610	.12390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3021/ 0 RN/L = 4.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.09420	-.09200	-.02040	-.00400	-.09870	-.09800	-.00180
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96208) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 3029/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.904	.000	-.31370	-.34650	-.41080	-.37470	-.34240	-.34650	-.26670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3028/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.196	.000	-.39360	-.40670	-.16740	-.17840	-.41390	-.41770	-.14410
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3033/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.453	.000	-.30620	-.32170	-.05100	-.11470	-.32780	-.33560	-.00280
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3034/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.957	.000	-.21740	-.22790	-.01520	-.04500	-.22980	-.23250	.17480
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3027/ 0 RN/L = 4.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.08230	-.07930	-.00180	.00400	-.08750	-.08680	.14340
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (898209) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 3041/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
.901	.000	-.34060	-.36940	-.39400	-.33220	-.34790	-.34840	-.21290
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3040/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.199	.000	-.40110	-.42440	-.13540	-.14300	-.43670	-.44090	-.12950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3039/ 0 RN/L = 5.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.461	.000	-.30030	-.31910	-.02680	-.06430	-.33220	-.34080	.02130
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3036/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
1.953	.000	-.20830	-.21550	.00350	-.02500	-.22000	-.22070	.17170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 3045/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB15
2.990	.000	-.07730	-.07930	.00030	.01900	-.08230	-.08230	.08900
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 500(IA53) GAS SUPPLY STRUT (C1F/1) (R98301) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 4001/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.904	.000	-.33310	-.32320	-.35450	-.33630	-.31640	-.29970	-.34360
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4002/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.197	.000	-.42790	-.44440	-.46220	-.43720	-.41520	-.40970	-.43170
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4015/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.458	.000	-.35650	-.37370	-.37450	-.36020	-.34670	-.34710	-.35770
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4016/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.998	.000	-.25480	-.29840	-.29000	-.25340	-.25340	-.25010	-.25080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4025/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.00770	-.10460	-.10760	-.10610	-.09350	-.10460	-.09940
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96302) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 4004/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.905	.000	-.32300	-.30320	-.33960	-.32190	-.30210	-.28230	-.32560
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4003/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.200	.000	-.42070	-.43970	-.45110	-.43080	-.40550	-.40880	-.42110
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4014/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.463	.000	-.34170	-.35110	-.35520	-.34210	-.33310	-.33070	-.33930
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4017/ 0 RN/L = 6.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.961	.000	-.26600	-.29700	-.29090	-.26560	-.26670	-.26180	-.26110
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4024/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.08080	-.10540	-.10760	-.10760	-.09350	-.10540	-.10090
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96303) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 4005/ 0 RN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.900	.000	-.33300	-.29840	-.34040	-.32680	-.31470	-.28750	-.33150
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4006/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.198	.000	-.41110	-.41830	-.43740	-.41240	-.40140	-.38780	-.41540
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4013/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.456	.000	-.36630	-.38020	-.38710	-.36750	-.35930	-.35400	-.36550
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4018/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.951	.000	-.26490	-.29500	-.28710	-.26490	-.26340	-.26040	-.26080
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4023/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.10320	-.10620	-.10770	-.10770	-.09500	-.08380	-.10090
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A33) GAS SUPPLY STRUT (C1F/1 M2/1) (R96304) (21 FEB 74)

REFERENCE DATA

BREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 4030/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.897	.000	-.29380	-.31010	-.33590	-.30110	-.27540	-.26270	-.31530
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4031/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.206	.000	-.41800	-.43700	-.44500	-.42810	-.40450	-.40200	-.42520
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4032/ 0 RN/L = 6.44 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.484	.000	-.32150	-.35010	-.34640	-.32890	-.30930	-.32030	-.32640
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4035/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.950	.000	-.24330	-.27710	-.27520	-.24440	-.24290	-.23760	-.23950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4026/ 0 RN/L = 4.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.09720	-.09570	-.09800	-.09800	-.08380	-.09570	-.09200
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

NSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96305) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 4042/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.901	.000	-.36050	-.33590	-.35470	-.35840	-.34110	-.29190	-.36630
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4043/ 0 RN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.199	.000	-.37590	-.41060	-.42290	-.37040	-.37640	-.37550	-.39200
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4038/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.457	.000	-.33210	-.35500	-.36150	-.33620	-.32930	-.33500	-.33700
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4037/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.949	.000	-.24720	-.27720	-.27080	-.24870	-.24310	-.24230	-.24380
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4044/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.09720	-.09570	-.09800	-.09800	-.08600	-.09720	-.09120
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R96306) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 4008/ 0 RN/L = 6.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.905	.000	-.32600	-.32240	-.35410	-.33230	-.31350	-.29370	-.33950
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4007/ 0 RN/L = 6.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.195	.000	-.43320	-.44090	-.45860	-.43540	-.41290	-.40870	-.42940
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4012/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.465	.000	-.35250	-.36720	-.36720	-.35330	-.34070	-.34270	-.34960
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4019/ 0 RN/L = 6.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.958	.000	-.25440	-.29320	-.28640	-.25810	-.25890	-.25360	-.25400
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4022/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.10240	-.10770	-.10840	-.10990	-.09720	-.10990	-.10390
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96307) (21 FEB 74)

REFERENCE DATA

SREF = 6.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

RUN NO. 4009/ 1 RN/L = 6.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.895	.000	-.33510	-.32720	-.36040	-.34090	-.32140	-.30140	-.34990
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4010/ 1 RN/L = 6.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.203	.000	-.42400	-.44000	-.46030	-.43410	-.40830	-.40710	-.42560
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4011/ 0 RN/L = 6.46 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.463	.000	-.35920	-.37760	-.37840	-.36040	-.34900	-.35060	-.35760
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4020/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.937	.000	-.25960	-.29320	-.28500	-.25890	-.25770	-.25400	-.25400
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4021/ 0 RN/L = 4.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.10540	-.11210	-.11210	-.11290	-.10170	-.11060	-.10620
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96308) (21 FEB 74)

REFERENCE DATA

SREF = 8.1980 SQ. IN XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 4029/ 0 PN/L = 6.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.904	.000	-.29120	-.30270	-.32780	-.29640	-.27550	-.25730	-.31520
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4028/ 0 PN/L = 6.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.196	.000	-.41940	-.44060	-.44990	-.43130	-.40720	-.40670	-.42620
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4033/ 0 PN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.452	.000	-.32660	-.35440	-.35230	-.33520	-.31440	-.32540	-.33150
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4034/ 0 PN/L = 5.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.957	.000	-.24530	-.27890	-.27430	-.24680	-.24600	-.24110	-.24270
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4027/ 0 PN/L = 4.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.09950	-.09720	-.09870	-.09870	-.08680	-.09720	-.09270
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

HSFC 588(IA33) GAS SUPPLY STRUT (C1F/1 G2 H2/2)

(R96309) (21 FEB 74)

REFERENCE DATA

SREF =	6.1980 SQ. IN	XMRP =	.0000 IN.
LREF =	5.3130 IN.	YMRP =	.0000 IN.
BREF =	5.3130 IN.	ZMRP =	.0000 IN.
SCALE =	.0000		

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

RUN NO. 4041/ 0 RN/L = 6.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
.901	.000	-.32120	-.30710	-.32800	-.31960	-.30290	-.25890	-.33060
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4040/ 0 RN/L = 6.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.199	.000	-.37150	-.40450	-.41420	-.36520	-.37070	-.36980	-.38550
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4039/ 0 RN/L = 6.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.481	.000	-.33260	-.35870	-.36320	-.33830	-.33100	-.33750	-.33670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4036/ 0 RN/L = 6.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
1.953	.000	-.24670	-.27980	-.27270	-.25120	-.24600	-.24300	-.24670
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

RUN NO. 4045/ 0 RN/L = 4.58 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22
2.990	.000	-.09650	-.09420	-.09720	-.09720	-.08360	-.09650	-.08980
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000

APPENDIX

TABULATED SOURCE DATA

PRESSURE DATA

Tabulations of plotted data are available on request from Data Management Services.

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96US1) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.412 PO = 22.000 P = 12.941 RN/L = 6.240

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2564
.511	-.3603
.641	-.5434
.785	-.7208

MACH (2) = 1.197 ALPHA (1) = .000 Q = 9.134 PO = 22.003 P = 9.108 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1688
.511	-.3220
.641	-.4351
.785	-.4770

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.468 PO = 21.993 P = 6.381 RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2013
.511	-.3136
.641	-.3528
.785	-.3541

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96US1)

MACH (4) = 1.000 ALPHA (1) = .000 Q = 10.567 PD = 28.[illegible] P = 4.190 RN/L = 7.160

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1333
.511	-.1904
.641	-.1974
.785	-.1988

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.186 PD = 29.998 P = .829 RN/L = 4.560

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.0808
.511	-.0845
.641	-.0882
.785	-.0756

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96US2) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.421 PO = 22.010 P = 12.938 RN/L = 6.250

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2646
.511	-.3620
.641	-.5470
.785	-.7331

MACH (2) = 1.201 ALPHA (1) = .000 Q = 9.144 PO = 22.000 P = 9.484 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1729
.511	-.3425
.641	-.4549
.785	-.4896

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.466 PO = 21.998 P = 6.313 RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2179
.511	-.3188
.641	-.3617
.785	-.3646

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96US2)

MACH (4) = 1.961 ALPHA (1) = .000 Q = 10.233 PO = 28.712 P = 3.801 RN/L = 6.970

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.1413
.511	-.1946
.641	-.2025
.785	-.2078

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.008 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.0808
.511	-.0853
.641	-.0883
.785	-.0763

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96US3) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .901 ALPHA (1) = .000 Q = 7.381 PO = 22.105 P = 13.100 RN/L = 6.240

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B
.344 -.2848
.511 -.3666
.641 -.5646
.785 -.7600

MACH (2) = 1.198 ALPHA (1) = .000 Q = 9.136 PO = 22.003 P = 9.197 RN/L = 6.650

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B
.344 -.1745
.511 -.3459
.641 -.4585
.785 -.4996

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.469 PO = 21.995 P = 6.381 RN/L = 6.470

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B
.344 -.19[illegible]
.511 -.3230
.641 -.3651
.785 -.3634

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96U83)

MACH (4) = 1.952 ALPHA (1) = .000 Q = 10.285 PO = 28."12 P = 3.858 RN/L = 7.000

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.1375
.511	-.1961
.641	-.2044
.785	-.2036

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.0823
.511	-.0853
.641	-.0793
.785	-.0764

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R96U84) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .897 ALPHA (1) = .000 Q = 7.352 PD = 22.005 P = 15.049 RN/L = 6.220

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.3264
.511	-.3648
.641	-.6110
.785	-.8153

MACH (2) = 1.207 ALPHA (1) = .000 Q = 9.159 PD = 21.988 P = 8.987 RN/L = 6.65L

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2288
.511	-.4180
.641	-.4286
.785	-.4957

MACH (3) = 1.484 ALPHA (1) = .000 Q = 9.467 PD = 22.000 P = 6.312 RN/L = 6.44L

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2521
.511	-.3546
.641	-.3914
.785	-.3889

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 N2/1)

(R9EUB4)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.287 PL = 27.099 P = 3.864 RN/L = 7.140

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

Z/B	
.344	-.1519
.511	-.2168
.641	-.2196
.785	-.2151

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PL = 30.013 P = .829 RN/L = 4.550

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

Z/B	
.344	-.0704
.511	-.0764
.641	-.0801
.785	-.0689

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96U85) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.387 PO = 22.003 P = 12.968 RN/L = 6.280

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.3066
.511	-.3500
.641	-.6348
.785	-.8960

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.141 PO = 22.003 P = 9.079 RN/L = 8.830

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2539
.511	-.4271
.641	-.5202
.785	-.5883

MACH (3) = 1.457 ALPHA (1) = .000 Q = 9.474 PO = 22.008 P = 6.378 RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2207
.511	-.3321
.641	-.3713
.785	-.3664

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96US5)

MACH (4) = 1.949 ALPHA (1) = .000 Q = 10.295 PD = 28.[illegible] P = 3.872 RN/L = 6.99D

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.1289
.511	-.2104
.641	-.2194
.785	-.2198

MACH (5) = 2.99D ALPHA (1) = .000 Q = 5.188 PD = 30.[illegible] P = .829 RN/L = 4.58D

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .491D

2Y/B	
.344	-.D711
.511	-.D756
.641	-.D778
.785	-.D711

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R96U86) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.80. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .1000

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .906 ALPHA (1) = .000 Q = 7.424 PO = 22.000 P = 12.931 RN/L = 6.250

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2697
.511	-.3588
.641	-.5661
.785	-.7630

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.137 PO = 22.023 P = 9.133 RN/L = 6.620

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2026
.511	-.3973
.641	-.4616
.785	-.5060

MACH (3) = 1.466 ALPHA (1) = .000 Q = 9.465 PO = 21.990 P = 6.297 RN/L = 6.470

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2195
.511	-.3241
.641	-.3662
.785	-.3674

NSFC 500(1A53) GAS SUPPLY STRUT (C1P/1 G1) (R9QU88)

MACH (4) = 1.959 ALPHA (1) = .000 Q = 10.240 PO = 20.712 P = 3.818 RN/L = 6.960

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1468
.511	-.2057
.641	-.2087
.785	-.2098

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.018 P = .830 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.0831
.511	-.0883
.641	-.0905
.785	-.0808

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62) - (R96U87) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0400

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .896 ALPHA (1) = .000 Q = 7.338 PD = 21.998 P = 13.063 RN/L = 6.140

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2835
.511	-.3694
.641	-.5912
.785	-.7846

MACH (2) = 1.204 ALPHA (1) = .000 Q = 9.157 PD = 22.046 P = 9.029 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1997
.511	-.3009
.641	-.4561
.785	-.5156

MACH (3) = 1.463 ALPHA (1) = .000 Q = 9.465 PD = 21.995 P = 6.316 RN/L = 6.460

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2060
.511	-.3147
.641	-.3572
.785	-.3560

MSFC 588(1.453) GAS SUPPLY STRUT (C1F/1 G2) (R9EU87)

MACH (4) = 1.958 ALPHA (1) = .000 Q = 10.252 PU = 28.[illegible] P = 3.822 RN/L = 6.980

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1472
.511	-.2053
.641	-.2113
.785	-.2147

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PU = 30.008 P = .829 RN/L = 4.570

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.0845
.511	-.0898
.641	-.0935
.785	-.0961

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96U88) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .904 ALPHA (1) = .000 Q = 7.408 PO = 21.995 P = 12.946 RN/L = 6.280

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

ZY/B	
.344	-.3210
.511	-.3539
.641	-.5825
.785	-.7950

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.129 PO = 22.000 P = 9.119 RN/L = 5.630

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

ZY/B	
.344	-.2763
.511	-.4385
.641	-.5012
.785	-.5025

MACH (3) = 1.453 ALPHA (1) = .000 Q = 9.471 PO = 21.995 P = 6.408 RN/L = 6.486

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

ZY/B	
.344	-.2833
.511	-.3601
.641	-.3958
.785	-.3980

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96US0)

MACH (4) = 1.958 ALPHA (1) = .000 Q = 10.258 PO = 28.[illegible] P = 3.822 RN/L = 6.980

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.1487
.511	-.2147
.641	-.2178
.785	-.2136

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.0696
.511	-.0764
.641	-.0808
.785	-.0764

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 62 MR/2) (R90U80) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.388 PD = 21.998 P = 12.980 RN/L = 6.235

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.3080
.511	-.3528
.641	-.6248
.785	-.9049

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.140 PD = 22.000 P = 9.080 RN/L = 6.650

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2814
[illegible]	-.4417
.641	-.5348
.785	-.5880

MACH (3) = 1.462 ALPHA (1) = .000 Q = 9.470 PD = 22.008 P = [illegible] RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

2Y/B	
.344	-.2158
.511	-.3297
.641	-.3795
.785	-.3893

MSFC 508(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R96US9)

MACH (4) = 1.954 ALPHA (1) = .000 Q = 10.274 PO = 28.712 P = 3.846 RN/L = 7.000

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

Z/B	
.344	-.1293
.511	-.2106
.641	-.2189
.785	-.2200

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.008 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

X/C .4910

Z/B	
.344	-.0696
.511	-.0734
.641	-.0771
.785	-.0726

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96L81) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.412 PO = 22.000 P = 12.941 RN/L = 6.280

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.0820
.521	.0189
.660	-.0587
.797	-.1505

MACH (2) = 1.197 ALPHA (1) = .000 Q = 9.134 PO = 22.003 P = 9.106 RN/L = 6.640

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2469
.521	.2668
.660	.2778
.797	.2155

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.468 PO = 21.993 P = 6.381 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2997
.521	.2825
.660	.3373
.797	.2617

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1) (R96L81)

MACH (4) = 1.898 ALPHA (1) = .000 Q = 10.587 PO = 28.[illegible] P = 4.190 RN/L = 7.160

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.2995
.521	.3006
.660	.2329
.797	.0653

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.186 PO = 29.998 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.1413
.521	.0854
.660	.0526
.797	.0541

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1) (R9ELS2) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.421 PO = 22.010 P = 12.938 RN/L = 6.250

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.0839
.521	.0313
.660	-.0510
.797	-.1458

MACH (2) = 1.201 ALPHA (1) = .000 Q = 9.144 PO = 22.000 P = 9.064 RN/L = 6.640

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2275
.521	.2372
.660	.2778
.797	.2199

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.466 PO = 21.998 P = 6.313 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.3090
.521	.3000
.660	.3032
.797	.2465

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R96L82)

MACH (4) = 1.961 ALPHA (1) = .000 Q = 10.233 PO = 28.712 P = 3.801 RN/L = 5.97D

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

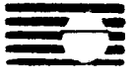
2Y/B	
.385	.2849
.521	.3076
.660	.1269
.797	.0816

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.000 P = .829 RN/L = 4.58D

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1464
.521	.0846
.660	.0533
.797	.0585



MSFC 566(1A53) GAB SUPPLY STRUT (C1F/1 M1/2) (R96L83) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .901 ALPHA (1) = .000 Q = 7.381 PO = 22.005 P = 13.000 RN/L = 6.240

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

ZY/B	
.385	.0713
.521	.0142
.660	-.0659
.797	-.1586

MACH (2) = 1.198 ALPHA (1) = .000 Q = 9.136 PO = 22.003 P = 9.097 RN/L = 6.650

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

ZY/B	
.385	.2321
.521	.2414
.660	.2601
.797	.2105

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.469 PO = 21.995 P = 6.381 RN/L = 6.47?

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

ZY/B	
.385	.3127
.521	.3338
.660	.3544
.797	.4197

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (R96L83)

MACH (4) = 1.952 ALPHA (1) = .000 Q = 10.285 PO = 20.712 P = 3.658 RN/L = 7.000

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2997
.521	.3085
.660	.1839
.797	.0971

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.500

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1509
.521	.0942
.660	.0577
.797	.0547

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1)

(R98L84) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0400

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .897 ALPHA (1) = .000 Q = 7.392 PS = 22.000 P = 13.049 RN/L = 6.220

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.0600
.521	.0017
.660	-.0881
.797	-.1923

MACH (2) = 1.207 ALPHA (1) = .000 Q = 9.159 PS = 21.980 P = 8.987 RN/L = 6.650

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.3140
.521	.3102
.660	.2811
.797	.2157

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.467 PS = 22.000 P = 6.312 RN/L = 6.440

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.2707
.521	.2335
.660	.1804
.797	.0485

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R96L84)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.287 PO = 27.^98 P = 3.984 RN/L = 7.000

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.2731
.521	.2265
.660	.0480
.797	.0025

MACH (5) = 2.980 ALPHA (1) = .000 Q = 5.109 PO = 30.013 P = .829 RN/L = 4.590

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.1956
.521	.1198
.660	.0622
.797	.0075

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96L85) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.387 PU = 22.003 P = 12.988 RN/L = 6.220

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1582
.521	.0729
.660	-.0239
.797	-.1239

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.141 PU = 22.003 P = 9.079 RN/L = 6.630

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.3892
.521	.3566
.660	.3059
.797	.2454

MACH (3) = 1.457 ALPHA (1) = .000 Q = 9.474 PU = 22.008 P = 6.376 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.4433
.521	.4571
.660	.4624
.797	.4473

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96L85)

MACH (4) = 1.949 ALPHA (1) = .000 Q = 10.295 PU = 28.[illegible] P = 3.872 RN/L = 6.990

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.4010
.521	.3477
.660	.3041
.797	.2612

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PU = 30.008 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2247
.521	.1628
.660	.0823
.797	.0050

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R90L86) (11 APR 74)

REFERENCE DATA

BREF = 6.1900 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
BSCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA .000
PHI = .000

MACH (1) = .906 ALPHA (1) = .000 Q = 7.424 PO = 22.048 P = 12.931 RN/L = 6.290

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.305	.0651
.521	.0010
.660	-.0598
.797	-.1406

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.137 PO = 22.023 P = 9.133 RN/L = 6.620

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.305	.2730
.521	.2095
.660	.2921
.797	.2299

MACH (3) = 1.486 ALPHA (1) = .000 Q = 9.465 PO = 21.998 P = 6.297 RN/L = 6.470

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.305	.0754
.521	.0754
.660	.0754
.797	.0754

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R96L86)

MACH (4) = 1.959 ALPHA (1) = .000 Q = 10.248 PO = 28.712 P = 3.810 RN/L = 6.980

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2553
.521	.2727
.660	.2723
.797	.0983

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.010 P = .830 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1598
.521	.0510
.660	.0271
.797	.0308

MSFC 500(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96L87) (11 APR 74)

REFERENCE DATA

SREF = 6.1900 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .896 ALPHA (1) = .000 Q = 7.338 PO = 21.998 P = 13.063 RN/L = 6.140

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.0521
.521	.0041
.660	-.0627
.797	-.1512

MACH (2) = 1.204 ALPHA (1) = .000 Q = 9.157 PO = 12.005 P = 9.029 RN/L = 6.640

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.2255
.521	.2474
.660	.2690
.797	.2348

MACH (3) = 1.463 ALPHA (1) = .000 Q = 9.465 PO = 21.995 P = 6.316 RN/L = 6.460

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.305	.2645
.521	.2490
.660	.2143
.797	.1918

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96L97)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.252 PO = 20.[illegible] P = 3.822 RN/L = 6.960

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2088
.521	.2220
.660	.2329
.797	.1809

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.000 P = .829 RN/L = 4.570

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1442
.521	.1040
.660	.0548
.797	.0495

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 GR MB/1) (R96L80) (11 APR 74)

REFERENCE DATA

BREF = 6.1320 IN.80. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .904 ALPHA (1) = .000 Q = 7.406 PO = 21.995 P = 12.946 RN/L = 6.240

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.0302
.521	-.0048
.660	-.0855
.797	-.1842

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.129 PO = 22.000 P = 9.119 RN/L = 6.836

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2731
.521	.2815
.660	.2650
.797	.2091

MACH (3) = 1.453 ALPHA (1) = .000 Q = 9.471 PO = 21.995 P = 6.468 RN/L = 6.460

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2100
.521	.1383
.660	.0350
.797	.0281

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R96L88)

MACH (4) = 1.958 ALPHA (1) = .000 Q = 10.252 PO = 28.709 P = 3.822 RN/L = 6.980

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.2299
.521	.2129
.660	.1925
.797	.1001

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

Z/B	
.385	.1978
.521	.1874
.660	.0979
.797	.0868

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R9ELS9) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.388 PD = 21.998 P = 12.980 RN/L = 6.230

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.1325
.521	.0598
.660	-.0276
.797	-.1249

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.140 PD = 22.000 P = 9.080 RN/L = 6.650

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.3498
.521	.3371
.660	.2982
.797	.2410

MACH (3) = 1.462 ALPHA (1) = .000 Q = 9.470 PD = 22.006 P = 6.333 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.4162
.521	.4305
.660	.4574
.797	.4280

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 62 M2/2) (R96LS9)

MACH (4) = 1.954 ALPHA (1) = .000 Q = 10.274 PD = 28.712 P = 3.846 RN/L = 7.000

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.3464
.521	.2925
.660	.2161
.797	.2730

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PD = 30.008 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

X/C .4900

2Y/B	
.385	.2158
.521	.2068
.660	.1040
.797	.0965

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1) (R964U1) (11 APR 74)

REFERENCE DATA

SREF = 6.1900 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
EREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.412 PD = 22.000 P = 12.941 RN/L = 6.240

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	-.0483
.300	-.4135
.491	-.3603
.700	-.3022
.907	-.1234

MACH (2) = 1.197 ALPHA (1) = .000 Q = 9.134 PD = 22.003 P = 9.116 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0229
.300	-.3300
.491	-.3280
.700	-.0308
.907	-.1400

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.468 PD = 21.993 P = 6.501 RN/L = 6.456

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0747
.300	-.2454
.491	-.3136
.700	-.0298
.907	-.0049

MSFC 500(1A53) GAS SUPPLY STRUT (C1P/1) (R964U1)

MACH (4) = 1.000 ALPHA (1) = .000 Q = 10.567 PO = 28.[illegible] P = 4.190 RN/L = 7.160

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.1216
.300	-.1128
.491	-.1904
.700	-.1516
.907	.0126

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.186 PO = 29.990 P = .829 RN/L = 4.5[illegible]

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0881
.300	.0220
.491	-.0845
.700	-.0793
.907	-.0726

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R964U2) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .903 ALPHA (1) = .000 Q = 7.421 PO = 22.010 P = 12.930 RN/L = 6.250

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0416
.300	-.4199
.491	-.3620
.700	-.3933
.907	-.1359

MACH (2) = 1.201 ALPHA (1) = .000 Q = 9.144 PO = 22.000 P = 9.064 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0271
.300	-.3234
.491	-.3425
.700	-.0907
.907	-.1699

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.466 PO = 21.990 P = 6.313 RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0659
.300	-.2694
.491	-.3188
.700	-.0308
.907	-.1422

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1) (R964UE)

MACH (4) = 1.961 ALPHA (1) = .000 Q = 10.233 PD = 28.712 P = 3.801 RN/L = 6.970

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0733
.300	-.1330
.491	-.1946
.700	-.1575
.907	-.0419

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PD = 30.008 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0861
.300	-.0807
.491	-.1053
.700	-.0793
.907	-.0719

MSFC 588(IA53) GAB SUPPLY STRUT (C1F/1 M1/2) (R964US) (11 APR 74)

REFERENCE DATA

BREF = 6.1900 IN.BB. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .901 ALPHA (1) = .000 Q = 7.361 PO = 22.005 P = 13.000 RN/L = 6.240

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0721
.300	-.4551
.491	-.3666
.700	-.4080
.907	-.1795

MACH (2) = 1.198 ALPHA (1) = .000 Q = 9.136 PO = 22.003 P = 9.197 RN/L = 6.650

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0158
.300	-.3468
.491	-.3459
.700	-.0446
.907	-.1483

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.469 PO = 21.995 P = 6.301 RN/L = 6.470

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0706
.300	-.2446
.491	-.3230
.700	-.0241
.907	-.1432

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (RS64U3)

MACH (4) = 1.952 ALPHA (1) = .000 Q = 10.285 PO = 28.712 P = 3.858 RN/L = 7.000

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0734
.300	-.1284
.491	-.1981
.700	-.1626
.907	-.0495

MACH (5) = 2.980 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.500

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0625
.300	-.0637
.491	-.0853
.700	-.0801
.907	-.0734

MSFC 506(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R964U0) (11 APR 74)

REFERENCE DATA

SREF = 6.1960 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .807 ALPHA (1) = .000 Q = 7.352 PS = 22.065 P = 13.049 RN/L = 6.220

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	-.2033
.300	-.5841
.491	-.3648
.700	-.4295
.907	-.2712

MACH (2) = 1.207 ALPHA (1) = .000 Q = 9.159 PS = 21.988 P = 8.987 RN/L = 6.650

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	-.0850
.300	-.3517
.491	-.4180
.700	.0320
.907	-.1096

MACH (3) = 1.484 ALPHA (1) = .000 Q = 9.467 PS = 22.000 P = [illegible] RN/L = 6.440

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0072
.300	-.2725
.491	-.3548
.700	-.1120
.907	.1019

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R964U4)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.287 PO = 27.099 P = 3.964 RN/L = 7.000

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0652
.300	-.1440
.491	-.2166
.700	-.1782
.907	-.0602

MACH (5) = 2.950 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.590

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0894
.300	-.0562
.491	-.0764
.700	-.0719
.907	-.0674

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2) (R964U5) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
SREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.387 PO = 22.003 P = 12.988 RN/L = 6.220

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	-.2401
.300	-.6107
.491	-.3500
.700	-.4097
.907	-.4066

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.141 PO = 22.003 P = 9.079 RN/L = 6.630

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	-.0574
.300	-.3514
.491	-.4271
.700	-.0079
.907	-.1412

MACH (3) = 1.457 ALPHA (1) = .000 Q = 9.474 PO = 22.008 P = 6.376 RN/L = 6.450

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

ZY/B .5110

X/C	
.107	.0212
.300	-.2499
.491	-.3321
.700	-.0199
.907	.0346

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R964U5)

MACH (4) = 1.949 ALPHA (1) = .000 Q = 10.295 PO = 28.704 P = 3.872 RN/L = 6.990

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0622
.300	-.1375
.491	-.2104
.700	-.1642
.907	-.0109

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.000 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0920
.300	-.0540
.491	-.0756
.700	-.0681
.907	-.0562

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R964U6) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .906 ALPHA (1) = .000 Q = 7.424 PO = 22.008 P = 12.931 RN/L = 6.250

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.1166
.300	-.4620
.491	-.3588
.700	-.3948
.907	-.1531

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.137 PO = 22.023 P = 9.133 RN/L = 6.620

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0358
.300	-.3710
.491	-.3073
.700	-.0333
.907	-.1442

MACH (3) = 1.486 ALPHA (1) = .000 Q = 9.465 PO = 21.998 P = 6.297 RN/L = 6.470

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0500
.300	-.2558
.491	-.3241
.700	-.0422
.907	-.0038

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 61) (R964U6)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.248 PO = 28.712 P = 3.818 RN/L = 6.980

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0549
.300	-.1483
.491	-.2057
.700	-.1710
.907	-.0649

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.018 P = .830 RN/L = 4.584

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0019
.300	-.0622
.491	-.0883
.700	-.0816
.907	-.0771

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 GE) (R964U7) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .896 ALPHA (1) = .000 Q = 7.338 PO = 21.998 P = 13.083 RN/L = 6.140

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.1634
.300	-.5080
.491	-.3694
.700	-.4115
.907	-.1159

MACH (2) = 1.204 ALPHA (1) = .000 Q = 9.157 PO = 22.005 P = 9.129 RN/L = 6.640

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0249
.300	-.3399
.491	-.3889
.700	-.0451
.907	-.1803

MACH (3) = 1.483 ALPHA (1) = .000 Q = 9.465 PO = 21.995 P = 6.316 RN/L = 6.480

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0678
.300	-.2477
.491	-.3147
.700	-.0377
.907	-.0445

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2) (R964U7)

MACH (4) = 1.958 ALPHA (1) = .000 Q = 10.252 PO = 28.709 P = 3.822 RN/L = 6.980

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0413
.300	-.1491
.491	-.2053
.700	-.1646
.907	-.0639

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.048 P = .829 RN/L = 4.570

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0801
.300	-.0659
.491	-.0898
.700	-.0838
.907	-.0771

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R964U8) (11 APR 74)

REFERENCE DATA

SREF = 5.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .904 ALPHA (1) = .000 Q = 7.406 PU = 21.995 P = 12.946 RN/L = 6.240

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.2071
.300	-.5836
.491	-.3539
.700	-.4176
.907	-.3507

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.109 PU = 22.000 P = 9.119 RN/L = 6.630

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	-.0678
.300	-.3991
.491	-.4385
.700	.0282
.907	-.0873

MACH (3) = 1.453 ALPHA (1) = .000 Q = 9.471 PU = 21.995 P = 6.408 RN/L = 6.480

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0087
.300	-.2833
.491	-.3601
.700	-.0898
.907	.0460

MSFC 508(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R964UR)

MACH (4) = 1.950 ALPHA (1) = .000 Θ = 10.252 PO = 20.[illegible] P = 3.822 RN/L = [illegible]

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0662
.300	-.1419
.491	-.2147
.700	-.1812
.907	-.0639

MACH (5) = 2.990 ALPHA (1) = .000 Θ = 5.109 PO = 30.013 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0994
.300	-.0585
.491	-.0764
.700	-.0719
.907	-.0674

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R964U9) (11 APR 74)

REFERENCE DATA

SREF = 6.198U IN.SQ. XMRP = .UUUU IN.
LREF = 5.313U IN. YMRP = .UUUU IN.
BREF = 5.313U IN. ZMRP = .UUUU IN.
SCALE = .UU4U

PARAMETRIC DATA

ALPHA = .UUU BETA = .UUU
PHI = -9U.UUU

MACH (1) = .9U2 ALPHA (1) = .UUU Q = 7.3U8 PU = 21.99U P = 12.98U RN/L = 6.23U

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .511U

X/C	
.1U7	-.2626
.3UU	-.618U
.491	-.3526
.7UU	-.41U7
.9U7	-.4U23

MACH (2) = 1.199 ALPHA (1) = .UUU Q = 9.14U PU = 22.UUU P = 9.UUU RN/L = 6.65U

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .511U

X/C	
.1U7	-.U652
.3U0	-.3732
.491	-.4417
.7U0	.UUUU
.9U7	-.1337

MACH (3) = 1.462 ALPHA (1) = .UUU Q = 9.47U PU = 22.UU8 P = 6.333 RN/L = 6.45U

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .511U

X/C	
.1U7	.UU97
.3U0	-.2534
.491	-.3297
.7U0	-.1321
.9U7	.U283

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R9G4U9)

MACH (4) = 1.954 ALPHA (1) = .000 Θ = 10.274 PO = 28.712 P = 3.848 RN/L = 7.000

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0641
.300	-.1394
.491	-.2106
.700	-.1665
.907	-.0175

MACH (5) = 2.980 ALPHA (1) = .000 Θ = 5.180 PO = 30.000 P = .829 RN/L = 4.580

SECTION (1)ORBITER UPPER WING DEPENDENT VARIABLE CP

2Y/B .5110

X/C	
.107	.0909
.300	-.0532
.491	-.0734
.700	-.0659
.907	-.0555

MSFC 500(1A53) GAS SUPPLY STRUT (C1F/1) (R964L1) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.412 PO = 22.000 P = 12.941 RN/L = 6.240

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0403
.280	.0617
.490	.0189
.690	-.4255

MACH (2) = 1.197 ALPHA (1) = .000 Q = 9.134 PO = 22.003 P = 9.106 RN/L = 6.640

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1852
.280	.1254
.490	.2060
.690	-.0642

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.460 PO = 21.993 P = 6.381 RN/L = 6.456

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1000
.280	.2229
.490	.2025
.690	.1274

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1) (R96AL1)

MACH (4) = 1.898 ALPHA (1) = .000 Q = 10.567 PD = 28.709 P = 4.190 RN/L = 7.160

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0682
.280	.0217
.490	.3006
.690	.2252

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PD = 29.998 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0742
.280	.0384
.490	.0854
.690	.1249

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/1) (R964L2) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .905 ALPHA (1) = .000 Q = 7.421 PO = 22.010 P = 12.930 RN/L = 6.250

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0866
.280	.0563
.490	.0313
.690	-.4178

MACH (2) = 1.201 ALPHA (1) = .000 Q = 9.144 PO = 22.000 P = 9.064 RN/L = 6.640

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1755
.280	.1074
.490	.2372
.690	-.1604

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.466 PO = 21.990 P = 6.313 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1468
.280	.2191
.490	.3040
.690	.1272

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/1) (R964L2)

MACH (4) = 1.961 ALPHA (1) = .000 Q = 10.233 PO = 28.'12 P = 3.601 RN/L = 6.97[illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0888
.280	.0219
.490	.3076
.690	.2135

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.008 P = .829 RN/L = 4.5[illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0749
.280	.0242
.490	.0846
.690	.1293

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M1/2) (R964L3) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0400

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .901 ALPHA (1) = .000 Q = 7.381 PO = 22.005 P = 13.000 RN/L = 6.240

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0348
.280	.0477
.490	.0142
.690	-.4305

MACH (2) = 1.198 ALPHA (1) = .000 Q = 9.136 PO = 22.003 P = 9.197 RN/L = 6.650

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1961
.280	.1293
.490	.2414
.690	-.0725

MACH (3) = 1.456 ALPHA (1) = .000 Q = 9.469 PO = 21.995 P = 6.381 RN/L = 6.470

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2405
.280	.1951
.490	.3336
.690	.1318

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M1/2) (R9E4L3)

MACH (4) = 1.952 ALPHA (1) = .000 Q = 10.285 PO = 28.412 P = 3.858 RN/L = 7.000

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0780
.280	.1091
.490	.3065
.690	.2166

MACH (5) = 2.980 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.500

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0711
.280	.1284
.490	.0912
.690	.1278

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R9E4L4) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .897 ALPHA (1) = .000 Q = 7.352 PO = 22.105 P = 13.049 RN/L = 6.220

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0117
.280	.0196
.490	.0017
.690	-.4247

MACH (2) = 1.207 ALPHA (1) = .000 Q = 9.159 PO = 21.988 P = 8.987 RN/L = 6.650

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1443
.280	.0898
.490	.3102
.690	-.0253

MACH (3) = 1.464 ALPHA (1) = .000 Q = 9.467 PO = 22.000 P = 8.312 RN/L = 6.440

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0289
.280	.2552
.490	.2335
.690	.0995

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 M2/1) (R9E4L4)

MACH (4) = 1.990 ALPHA (1) = .000 Q = 10.287 PO = 27.099 P = 3.864 RN/L = 7.100

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1468
.280	.0310
.490	.2265
.690	.1773

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.590

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1225
.280	.0495
.490	.1196
.690	.1568

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 M2/2) (R964L5) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.387 PO = 22.003 P = 12.988 RN/L = 6.220

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

ZY/B .5210

X/C	
.072	.1881
.280	.1566
.490	.0729
.690	-.4155

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.141 PO = 22.003 P = 9.079 RN/L = 6.630

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

ZY/B .5210

X/C	
.072	.3427
.280	.3528
.490	.3586
.690	-.0155

MACH (3) = 1.457 ALPHA (1) = .000 Q = 9.474 PO = 22.008 P = 6.378 RN/L = 6.450

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

ZY/B .5210

X/C	
.072	.3649
.280	.3216
.490	.4571
.690	.1706

MSFC 586(1A53) GAS SUPPLY STRUT (C1F/1 M2/2) (R96L5)

MACH (4) = 1.949 ALPHA (1) = .000 Q = 10.295 PO = 28.[illegible] P = 3.872 RN/L = [illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2185
.280	.1174
.490	.3477
.690	.2996

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.000 P = .829 RN/L = 4.5[illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1650
.280	.0846
.490	.1628
.690	.1882

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G1) (R964L6) (11 APR 74)

REFERENCE DATA

BREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
DREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .908 ALPHA (1) = .000 Q, = 7.424 PO = 22.008 P = 12.931 RN/L = 6.250

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0672
.280	.0724
.490	.0010
.690	-.4297

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.137 PO = 22.023 P = 9.133 RN/L = 6.620

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2070
.280	.1355
.490	.2895
.690	-.0379

MACH (3) = 1.466 ALPHA (1) = .000 Q = 9.465 PO = 21.998 P = 6.297 RN/L = 6.470

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2797
.280	.2184
.490	.8754
.690	.8754

MSFC 508(1A53) GAS SUPPLY STRUT (C1F/1 G1) (R9E4L6)

MACH (4) = 1.959 ALPHA (1) = .000 Q = 10.248 PO = 28.[illegible]12 P = 3.818 RN/L = 6.980

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0808
.280	.0104
.490	.2727
.690	.2044

MACH (5) = 2.990 ALPHA (1) = .000 Q = [illegible] PO = 30.018 P = .630 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0457
.280	.0085
.490	.0510
.690	.0949

MSFC 588(1A53) CAB SUPPLY STRUT (C1F/1 G2) (R964L7) (11 APR 74)

REFERENCE DATA

SREF = 6.1980 IN.SQ. XMRP = .0000 IN.
LREF = 5.3130 IN. YMRP = .0000 IN.
BREF = 5.3130 IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = .000

MACH (1) = .896 ALPHA (1) = .000 Q = 7.330 PO = 21.990 P = 13.663 RN/L = 6.140

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0916
.280	.0631
.490	.0041
.690	-.4247

MACH (2) = 1.204 ALPHA (1) = .000 Q = 9.157 PO = 22.005 P = 9.629 RN/L = 6.840

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2470
.280	.1473
.490	.2474
.690	-.0523

MACH (3) = 1.463 ALPHA (1) = .000 Q = 9.465 PO = 21.995 P = 6.316 RN/L = 6.480

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2421
.280	.1943
.490	.2490
.690	.1269

MSFC 588(IA53) GAS SUPPLY STRUT (C1F/1 G2) (R96AL7)

MACH (4) = 1.958 ALPHA (1) = .000 Q = 10.252 PO = 28.[illegible] P = 3.822 RN/L = 6.980

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1156
.280	.1250
.490	.2220
.590	.2001

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.[illegible] P = .829 RN/L = 4.570

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.0652
.280	.0294
.490	.1040
.690	.1077

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R964L8) (11 APR 74)

REFERENCE DAT.

SREF = 6.198G IN.SQ. XMRP = .0000 IN.
LREF = 5.313G IN. YMRP = .0000 IN.
EREF = 5.313G IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .904 ALPHA (1) = .000 Q = 7.406 PD = 21.995 P = 12.946 RN/L = 6.24G

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .521G

X/C	
.072	.0068
.28G	-.0025
.49G	-.0066
.69G	-.4G97

MACH (2) = 1.196 ALPHA (1) = .000 Q = 9.129 PD = 22.000 P = 9.119 RN/L = 6.63G

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .521G

X/C	
.072	.1434
28G	.0829
.49G	.2815
.69G	-.G399

MACH (3) = 1.453 ALPHA (1) = .000 Q = 9.471 PD = 21.995 P = 6.4G8 RN/L = 6.46G

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .521G

X/C	
.072	.1584
.28G	.1702
.49G	.1363
.69G	.G893

MSFC 508(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/1) (R964L8)

MACH (4) = 1.950 ALPHA (1) = .000 Q = 10.252 PO = 28.[illegible] P = 3.822 RN/L = 6.9[illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1511
.280	.1563
.490	.2129
.690	.1495

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.189 PO = 30.013 P = .829 RN/L = 4.5[illegible]

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1203
.280	.0823
.490	.1874
.690	.1419

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2)

(R964L9) (11 APR 74)

REFERENCE DATA

SREF = 6.198D IN.SQ. XMRP = .0000 IN.
LREF = 5.313D IN. YMRP = .0000 IN.
BREF = 5.313D IN. ZMRP = .0000 IN.
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 BETA = .000
PHI = -90.000

MACH (1) = .902 ALPHA (1) = .000 Q = 7.388 PD = 21.998 P = 12.980 RN/L = 6.23D

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

2Y/B .521D

X/C	
.072	.2126
.28D	.1477
.49D	.0598
.69D	-.4128

MACH (2) = 1.199 ALPHA (1) = .000 Q = 9.14D PD = 22.000 P = 9.08D RN/L = 6.65D

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

2Y/B .521D

X/C	
.072	.3760
.28D	.3477
.49D	.3371
.69D	-.025D

MACH (3) = 1.482 ALPHA (1) = .000 Q = 9.47D PD = 22.005 P = 6.333 RN/L = 6.45D

SECTION (1)ORBITER LOWER WING

DEPENDENT VARIABLE CP

2Y/B .521D

X/C	
.072	.3994
.28D	.3333
.49D	.4305
.69D	.163D

MSFC 588(1A53) GAS SUPPLY STRUT (C1F/1 G2 M2/2) (R964L9)

MACH (4) = 1.954 ALPHA (1) = .000 Q = 10.274 PO = 28.112 P = 3.846 RN/L = 7.000

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.2854
.280	.3065
.490	.2925
.690	.3129

MACH (5) = 2.990 ALPHA (1) = .000 Q = 5.188 PO = 30.000 P = .829 RN/L = 4.580

SECTION (1)ORBITER LOWER WING DEPENDENT VARIABLE CP

2Y/B .5210

X/C	
.072	.1643
.280	.1958
.490	.2068
.690	.1755