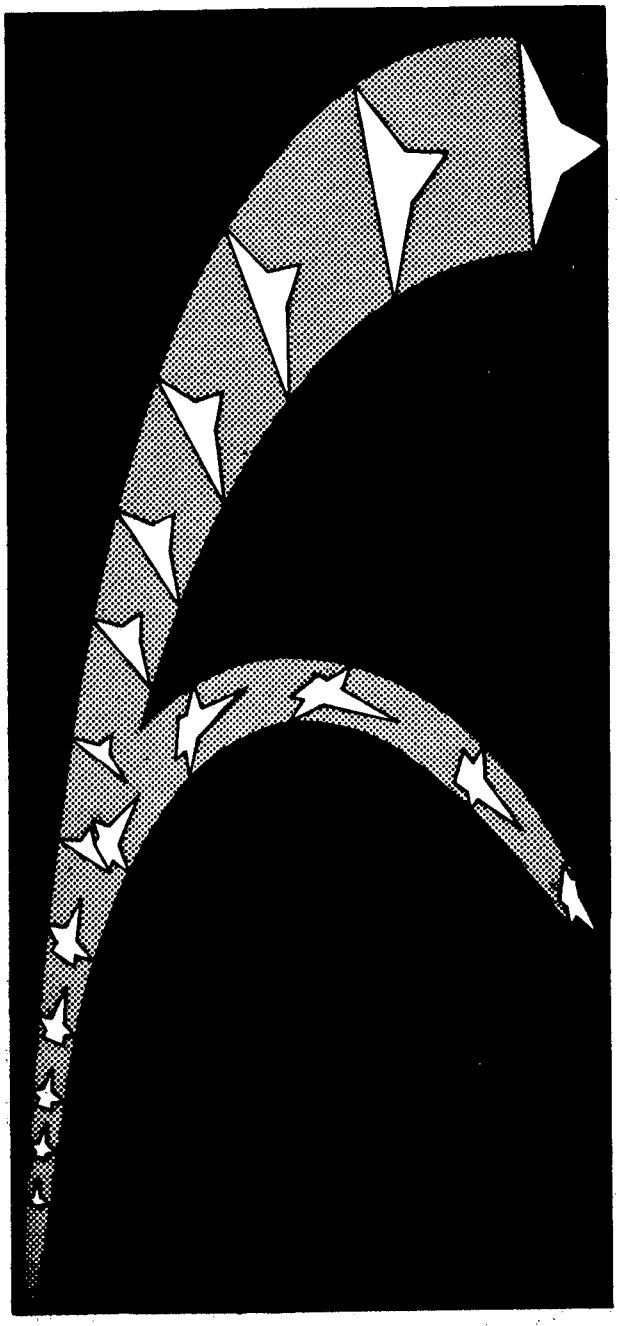
2P Data Management Copy # 3
m 1X

DMS-DR-1174
CR-120,063
JUNE 1972



—SPACE SHUTTLE—

SPACE SHUTTLE ABORT SEPARATION PRESSURE INVESTIGATION

VOLUME IV

ORBITER DATA AT MACH

by

L. L. Trimmer, ARO

D. A. Love, LMSC/HREC

J. M. Rampy, NSI

J. P. Decker, LaRC

K. L. Blackwell, MSFC

W. T. Strike, ARO

(NASA-CR-120063) SPACE SHUTTLE ABORT SEPARATION PRESSURE INVESTIGATION. VOLUME 4: ORBITER DATA AT MACH 3 L.L. Trimmer, et al (Chrysler Corp.) Jun. 1972 447 p CSCL 22B G3/31 Unclas 34205 N72-27928

JUL 1972 RECEIVED NASA STI FACILITY INPUT BRANCH

AEDC-VKF TUNNEL A

Arnold Engineering Development Center

SADSAC SPACE SHUTTLE AEROTHERMODYNAMIC DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
MARSHALL SPACE FLIGHT CENTER

SPACE DIVISION CHRYSLER CORPORATION

This document should be referenced as NASA CR-120,063

NASA Series Number: P-1002

DMS-DR-1174
VOLUME IV
CR-120,063
JUNE, 1972

SADSAC/SPACE SHUTTLE

WIND TUNNEL TEST DATA REPORT

CONFIGURATION: MDAC Orbiter and Booster Shuttle Models; 0.00556 Scale

TEST PURPOSE: Experimental Pressure Investigation of Space Shuttle Booster and Orbiter Vehicles in Proximity at Mach Numbers of 2.0 to 5.0

TEST FACILITY: AEDC-VKF Tunnel A

TESTING AGENCY: LaRC/MSFC

TEST NO. & DATE: AEDC STS 1163; 22 through 27 July, 1971

FACILITY COORDINATOR: L. L. Trimmer, ARO; D. A. Love, LMSC/HREC

PROJECT ENGINEER(S): J. M. Rampy, NSI
J. P. Decker, LaRC
K. L. Blackwell, MSFC
W. T. Strike, ARO

Details of illustrations in this document may be better studied on microfiche

DATA MANAGEMENT SERVICES

LIAISON: Alberta Martin for J. E. Vaughn

DATA OPERATIONS: J. L. Glynn

RELEASE APPROVAL: J. L. Glynn FOR N. D. Kemp, Supervisor
Aero Thermo Data Group

CONTRACT NAS 8-4016 AMENDMENT 158 DRL 297 - 84a

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

SADSAC COORDINATORS:

Mr. L. L. Trimmer
VKF - SH
ARO, INC.
Arnold Air Force Station,
Tennessee 37389

Phone: (615) 455-2611-X7377

Mr. D. A. Love
Lockheed Missile & Space Company
Huntsville Research Engineering Center
4800 Bradford Blvd.
Huntsville, Alabama 35805

Phone: (205) 837-1800-X378

PROJECT ENGINEERS:

Mr. J. M. Rampy
Northrop Services, Inc
6025 Technology Drive
P. O. Box 1484
Huntsville, Alabama 35805

Phone: (205) 837-0580-X208

Mr. J. P. Decker
Langley Research Center
Langley Station
Hampton, Virginia 23365

Phone: (703) 827-3911

Mr. K. L. Blackwell
Marshall Spaceflight Center
Mail Stop S&E - AERO - AAE
Huntsville, Alabama 35801

Phone: (205) 453-2517

Mr. W. T. Strike
ARO, INC.
Arnold Air Force Station,
Tennessee 37389

Phone: (615) 455-2611-X360

SADSAC LIAISON:

Mr. J. E. Vaughn
Chrysler Corporation Space Division
102 Wynn Drive
Department 4820
Huntsville, Alabama 35805

Phone: (205) 895-1560

SADSAC OPERATIONS:

Mr. J. L. Glynn
Chrysler Corporation Space Division
P. O. Box 29200
Department 2780
New Orleans, Louisiana 70129

Phone: (504) 255-2304

TABLE OF CONTENTS

	PAGE NUMBER
SUMMARY	2
NOMENCLATURE	3
CONFIGURATIONS INVESTIGATED	5
NOZZLE CALIBRATIONS	6
TEST PROCEDURE	8
TEST FACILITY DESCRIPTION	9
DATA REDUCTION	10
REFERENCES	11
TABLES	
I. DATASET COLLATION SHEETS	12
II. ORBITER PRESSURE TAP LOCATIONS	15
III. BOOSTER PRESSURE TAP LOCATIONS	16
IV. DIMENSIONAL DATA	19
V. INDEX OF MODEL FIGURES	26
VI. INDEX OF DATA FIGURES	27
FIGURES	
MODEL	28
DATA	40

SPACE SHUTTLE ABORT SEPARATION

PRESSURE INVESTIGATION

By D. A. Love, etc.

S U M M A R Y

This report presents pressure data obtained from a joint Langley Research Center (LaRC)/Marshall Space Flight Center (MSFC) Space Shuttle abort stage separation wind tunnel test. The .00556 scale models of the McDonnell-Douglas orbiter and booster configurations were tested in proximity in Tunnel A of the Von Karman Facility (VKF), Arnold Engineering Development Center (AEDC) during the time period of July 22 to July 27, 1971. Data were obtained for nominal Mach numbers of 5.0, 3.0, and 2.0 and nominal Reynolds numbers of 1.09, 1.60, and 1.74 million per foot, respectively. Pressure data were obtained for the booster upper surface and orbiter lower surface at angles of attack of -10°, -5, 0, 5, and 10° for zero degrees sideslip. For the complete pressure tap layout refer to figures 1 and 2 and tables II and III. The models were tested at incidence angles of 0 and 5° for several separation distances and power conditions. Plug nozzles utilizing air were used to simulate booster and orbiter plumes at various altitudes along a nominal ascent trajectory. Powered conditions were 100, 50, and 0 percent of full power for the orbiter and 100, 50 and 0 percent of full power for the booster. Data were also obtained with the booster canard off in close proximity.

Plotted data for this test will be published under one data report number (DMS-DR-1174) with six volumes as described below:

Volume	Description
I (Parts A & B)	Mach Number 5 Booster Pressure Data
II (Parts A & B)	Mach Number 5 Orbiter Pressure Data
III	Mach Number 4 Booster Pressure Data
IV	Mach Number 3 Orbiter Pressure Data
V	Mach Number 2 Booster Pressure Data
VI	Mach Number 2 Orbiter Pressure Data

NOMENCLATURE

AEDC STS 1163

SYMBOL	SADSAC SYMBOL	DEFINITION
a		Speed of sound; m/sec, ft/sec
b/2		Vehicle wing semi-span; in.
c		Local airfoil chord; in.
c.g.		Center of gravity
CP	CP	Pressure coefficient, $\frac{P_\ell - P_\infty}{q}$
L	L	Body length; in.
M_∞	MACH	Free stream mach number; V/a
P_ℓ		Local static pressure; psia
P_o		Free stream total pressure; psia
P_∞		Free stream static pressure; psia
q		Dynamic pressure; psi
RN/L	RN/L	Unit Reynolds number; per foot
T_o		Freestream total temperature, ^oF
V		Velocity; m/sec, ft/sec
x		Distance from vehicle nose; in.
x/c	X/C	Local chord position
x/L	X/L	Longitudinal position
y		Distance from lateral centerline, in.
y/b/2	Y/B	Local semi-span position

NOMENCLATURE (Continued)

AEDC STS 1163

SYMBOL	SADSAC SYMBOL	DEFINITION
α_B	ALPHAB	Booster angle of attack; degrees
α_O	ALPHAØ	Orbiter angle of attack; degrees
α_i	ALPHAI	Incidence angle between the orbiter and booster, $\alpha_i = \alpha_O - \alpha_B$; degrees
β	BETA	Angle of sideslip; degrees
θ	THETA	Angle measured from vehicle top centerline; degrees
PWR_B	BSTPØW	Booster power, percent of full thrust
PWR_O	ØRBPØW	Orbiter power, percent of full thrust
X/L_B	DELTAX	Distance between the c.g. of the orbiter and booster measured parallel to the longitudinal axis of the booster, positive when the orbiter c.g. is forward of the booster c.g., the distance has been normalized with respect to the booster fuselage length (16.184 inches)
Z/L_B	DELTAZ	Distance between the c.g. of the orbiter and booster measured normal to the longitudinal axis of the booster, positive when the orbiter c.g. is above the booster c.g., the distance has been normalized with respect to the booster fuselage length (16.184 inches)

CONFIGURATIONS INVESTIGATED

The two configurations tested were the MDAC orbiter and booster, figures 3 and 4 respectively. The orbiter is basically the configuration illustrated on MDAC drawing number 255BJ0050. Modifications made on the orbiter to allow for installation of the nozzle assembly are shown in figure 3.

The booster configuration is basically the configuration designated 19A by MDAC (drawing number 256-19-0001). The body, wing, and canard of the booster model are that of configuration 19A except that the body does not have a base flare or boattail, figure 4. The vertical tails are those which were designed for the configuration designated 17 (drawing number 256-17-001).

Dimensional data for both vehicles are shown in Table IV. Figures 7, 8, and 9 are photographs showing both models and models with associated separation hardware. Figures 8 and 9 also show the trip strip installation. For Mach 5 a grit size of #26 was utilized.

NOZZLE CALIBRATION

Two plug nozzle systems were designed and fabricated to simulate the rocket exhause plume emitting from the booster and orbiter main propulsion systems during the staging. Each nozzle was designed based on the gasdynamic simulation parameters established in Ref. 1. A variable area ratio capability was incorporated into both nozzle systems to permit the proper gasdynamic simulation of the full scale rocket exhause plume at the various trajectory conditions of interest. Photographs of the nozzle hardware are shown in figures 10, 11 and 12.

Nozzle Calibration Test Objectives

The objectives of the nozzle calibration test were:

- Establish, experimentally, nozzle performance characteristics for the range of area ratio settings to be used with the booster and orbiter nozzles, respectively.
- Establish the degree of plume simulation obtained with the booster and orbiter nozzles, respectively.
- Establish a curve (based on experimental results) of nozzle exit conditions as a function of nozzle area ratio setting.

Nozzle Calibration

Calibration testing of the booster and orbiter plug nozzles was accomplished in Tunnel C of the Arnold Engineering Development Center's Von Karmon Gas Dynamics Facility. The nozzles were tested individually at a series of area ratio settings. Nozzle operating conditions (chamber pressure, P_{oj}; and chamber temperature, T_{oj}) were maintained in a range compatible with the abort staging test conditions. A quiescent low pressure, P_b, condition was maintained in the test cell. Data recorded at each area ratio setting included: optical data to determine plume shapes; static pressure measurements on the sting surface at the nozzle exit; nozzle mass flow measurements; and pitot pressure surveys in the plume at several locations downstream of the nozzle exit plane. The various test parameters sampled at each setting were correlated during the data evaluation to establish actual nozzle performance characteristics.

In a parallel effort, analytical solutions of the nozzle flow field and associated plume were generated for various area ratio settings of the booster and orbiter models. A method of characteristics solution employing real gas thermodynamic data for air was utilized in the calculations. Analytical results for each area ratio setting included: plume shape; static pressure distribution

along sting surface; and plots of constant Mach number and constant pitot pressure contours in the plume flow field. These results formed a baseline for evaluating the experimentally measured performance of the plug nozzles.

A detailed evaluation of the calibration test results has been prepared and presented in Reference 2. Included in this reference are curves relating experimentally measured nozzle performance to nozzle area ratio settings for both booster and orbiter. These curves were utilized to set the correct nozzle area ratio for exhaust plume gasdynamic simulations during the test.

TEST PROCEDURE

Abort staging was simulated by movement of the orbiter model through a matrix of points in the booster model flow field. Vertical and axial translation of the orbiter model was provided by an electrically driven remotely controlled positioning mechanism. The general arrangement of the models in the tunnel is shown in figure 5. The orbiter positioning mechanism and the booster model support were attached to the wind tunnel angle of attack system which provided ±10-degree angle of attack variation for the booster-orbiter combination. Incidence angle variation was provided by manual adjustment of the orbiter sting.

The orbiter positioning mechanism provided axial translation of approximately 17 inches and vertical translation of approximately 15 inches with respect to the booster. An automatic control system allowed a series of positions to be programmed prior to a test run. The control system had provisions for 25 different X-positions and 25 different Z-positions. For these tests, however, only a maximum of 6 X-positions and 5 Z-positions were utilized. All X and Z positions except the first and last could be switched in or out of the matrix as desired.

The automatic positioning mechanism was utilized in the pitch pause mode for this test. Pressure data was obtained at pre-selected angles of attack for a given relative position after which the automatic mechanism advanced to the next matrix position. The entire matrix was covered in this manner.

Plume simulation was provided by a single torodial nozzle in each model. The nozzles were designed with variable area ratio capability to permit proper simulation of the full-scale rocket plume at the various trajectory conditions of interest. Pretest calibration of the nozzles was used to correlate area ratio settings with measured plume shapes, nozzle mass flow, and nozzle exit static pressure. Air heated to approximately 100°F was supplied to the nozzles, and separate controls for the booster and orbiter supplies were provided.

TEST FACILITY DESCRIPTION

Tunnel A is a continuous, closed-circuit, variable density wind tunnel with an automatically driven flexible-plate-type nozzle and a 40- by 40-inch test section. The tunnel can be operated at Mach numbers from 1.5 to 6 at maximum stagnation pressures from 29 to 200 psia, respectively, and stagnation temperatures up to 750°R ($M_\infty = 6$). Minimum operating pressures range from about one-tenth to one-twentieth of the maximum at each Mach number. For a more comprehensive description of Tunnel A, see Reference 3.

DATA REDUCTION

The DELTAX and DELTAZ distances were referenced to nominal center of gravity locations on the orbiter and booster and to the booster body axis system. The nominal c.g. for the orbiter was located 4.917 inches aft of the nose, on the orbiter lateral centerline, and 1.390 inches below the top fuselage surface. Nominal c.g. for the booster was 7.528 inches aft of the model nose, on the booster lateral centerline, and 1.194 inches above the bottom fuselage surface. As illustrated in figure 6, the DELTAX distance is, then, parallel to the longitudinal axis of the booster and between the nominal center of gravity points on the orbiter and booster. The DELTAZ is perpendicular to the longitudinal axis of the booster and is the distance between the center of gravity points on the orbiter and booster. Values for DELTAX and DELTAZ are positive when the orbiter c.g. is forward and above the booster c.g. Both DELTAX and DELTAZ were normalized using the booster fuselage length of 16.184 inches.

R E F E R E N C E S

1. Sims, Joseph L., "Plume Simulation for Space Shuttle Abort Staging Aerodynamic Testing," Memo S&E-AERO-AF-70-6, December 1970.

2. Baker, L. R., "Calibration of the Propulsion Simulation Nozzles for the Space Shuttle Booster and Orbiter Models for the Abort/Separation Staging Experimental Program," LMSC/HREC D225144, June 1971.

3. "Test Facilities Handbook" (8th Edition), Arnold Engineering Development Center, December 1969.

TABLE I

TEST AEDC 1163 PRESSURE DATASET COLLATION SHEET

☐ PRETEST
☒ POSTTEST

DATASET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	P_o PSIA	T_o °F	PARAMETER VALUES M	PARAMETER VALUES α_i	PARAMETER VALUES PWR_B	PARAMETER VALUES PWR_C	NO. OF RUNS	DELTAZ .105	DELTAZ .112	DELTAZ .120	DELTAZ .151	DELTAZ .228	DELTAZ .908	
(1)T851(2)	BOOSTER/ORBITER	A	0°	22	135	5.0	0°	0	0	116		A	B	B	B	C	Refer to page 14 for DELTAZ schedules.
T852		A					0°	100	50	22		A				C	
T853		A					0°	50	100	114		A	B	B	B	C	
T854		A					5°	50	100	24				D	D		
T855		B					5°	0	0	18				D	D		
T856		B					0°	50	100	20			D	D		C	
T857		B					0°	0	0	21			D	D		C	
T858		0°		150	180		0°	0	0	20			D	D	D	C	
T859		A		22	135		0°	0	0	20	E						
T860		A					0°	100	100	8	E						
T861		A					0°	100	0	20	E						
T862	(CANARD OFF)	B					0°	0	0	9	F			F		C	
T863	(CANARD AND TRIPS OFF)	B					0°	0	0	6	F			F			

NOTES: (1)-Characters A through I refer to booster body, upper wing, lower wing, canard, & base, and orbiter body, upper wing, lower wing, & base, respectively.
(2)-Characters 1 through 5 refer to angles of attack of -10, -5, 0, +5, & +10 degrees, respectively.

α or β SCHEDULES
A(α)= -10, -5, 0, +5, +10
B(α)= -5, 0, +5

TABLE I (Continued)

TEST AEDC 1163 PRESSURE DATASET COLLATION SHEET

☐ PRETEST
☒ POSTTEST

DATASET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	P_o PSIA	T_o °F	PARAMETER VALUES M	PARAMETER VALUES α_i	PARAMETER VALUES PWR_B	PARAMETER VALUES PWR_C	NO. OF RUNS	DELTAZ .105	DELTAZ .112	DELTAZ .120	DELTAZ .151	DELTAZ .228	DELTAZ .408	
(1) T831 (2)	BOOSTER/ORBITER	A	0°	11.5	120	3.0	0°	50	100	70			D	D	D	G	Refer to page 14 for DELTAX schedules.
T832		A					0°	0	0	55			D	D	D	G	
T833		A					0°	0	0	15	H						
(1) T821 (2)	BOOSTER/ORBITER	A	0°	7.5	120	2.0	0°	50	100	55			D	D	D	G	
T822		A					0°	0	0	55			D	D	D	G	
T823		A					0°	0	0	15	H						
T824		B					5°	50	100	18				D	D		
T825		B					5°	0	0	18				D	D		
T826		A					0°	100	0	15	H						
T827		A					0°	100	100	5	I						
(1) T8013	BOOSTER/ORBITER	0°	0°	-	-	0.0	5°	0	100	12				B	B		
T8023		0°	0°	-	-	0.0	5°	0	100	6				B			

NOTES: (1)-Characters A through I refer to booster body, upper wing, lower wing, canard, & base, and orbiter body, upper wing, lower wing, & base, respectively.
(2)-Characters 1 through 5 refer to angles of attack of -10, -5, 0, +5, & +10 degrees, respectively.

α or β SCHEDULES
A(α)= -10, -5, 0, +5, +10
B(α)= -5, 0, +5

TABLE I (Continued)

DELTAX Schedules

DELTAX Schedule \ DELTAX Value	0.520	0.350	0.227	0.165	0.104	0.041	-0.020	-0.144	-0.291	-0.391
A		X		X	X	X				
B		X	X		X		X	X		X
C	X									
D			X		X			X		
E				X	X	X			X	
F					X					
G	X									X
H				X	X	X				
I									X	

TABLE II

ORBITER PRESSURE TAP LOCATIONS

Tap No.	TAP LOCATION			Tap No.	TAP LOCATION		
	$(x/L)_o$	$(y/b/2)_o$	Surface		$(x/L)_o$	$(y/b/2)_o$	Surface
1	0	0	Lower Body	28	.498	.231	Lower Body
2	.019	↓	↓	29	.586	↓	↓
3	.066	↓	↓	30	.674	↓	↓
4	.145	↓	↓	31	.762	↓	↓
5	.233	↓	↓	32	.854	↓	↓
6	.321	↓	↓	33	.944	↓	↓
7	.409	↓	↓	34	.674	.400	Lower Wing
8	.498	↓	↓	35	.762	↓	↓
9	.586	↓	↓	36	.854	↓	↓
10	.676	↓	↓	37	.942	↓	↓
11	.765	↓	↓	38	.764	.569	↓
12	.854	↓	↓	39	.854	↓	↓
13	.943	↓	↓	40	.942	↓	↓
14	.981	↓	↓	41	.852	.738	↓
15	.149	.077	↓	42	.942	↓	↓
16	.233	↓	↓	43	↓	0	Upper Base
17	.321	↓	↓	44	↓	.138	Lower Base
18	.409	↓	↓	45	.981	-.007	Upper Wing
19	.498	↓	↓	46	.981	.289	↓
20	.586	↓	↓	47	.939	↓	↓
25	.233	.191	↓	48	.851	↓	↓
26	.321	.221	↓	49	.981	.400	↓
27	.409	.231	↓	50	.939	↓	↓

x = Distance from orbiter nose

y = Distance from orbiter centerline

L = Orbiter length 27.153 cm (10.690 in.)

b/2 = Orbiter wing semi-span 8.255 cm (3.250 in.)

TABLE III

BOOSTER PRESSURE TAP LOCATIONS

Tap No.	TAP LOCATION $(x/L)_B$	$(y/b/2)_B$	Surface	Tap No.	TAP LOCATION $(x/L)_B$	$(y/b/2)_B$	Surface
1	.004	0	Body ℄, $\theta = 0^\circ$	30	.243	.092	Body, $\theta = 24^\circ$
2	.014			31	.305		
3	.025			32	.367		
4	.062			33	.490		
5	.120			34	.613		
6	.181			35	.737		
7	.243			36	.798		
8	.305			37	.860		
9	.366			38	.921		
10	.490			39	.983		
11	.613			40	.062	.155	Body, $\theta = 45^\circ$
12	.737			41	.124		
13	.799			42	.185		
14	.859			43	.247		
15	.921			44	.309		
16	.983			45	.371		
17	.062	.018	Nose Section	46	.494		
18	.120	.037		47	.618		
19	.181	.046		48	.741		
20	.243			49	.988	.220	Body, $\theta = 90^\circ$
21	.309	.220	Body, $\theta = 90^\circ$	93	.998	0	Base, $\theta = 0^\circ$
22	.371			94		.193	90°
23	.494			95		-.193	270°
24	.618			96		0	180°
25	.741			97	.803		Body, $\theta = 180^\circ$
26	.803			98	.865		
27	.851			99	.927		
28	.896			100	.988		
29	.942						

x = Distance from booster nose

y = Distance from booster centerline

L = Booster length 41.107 cm (16.184 in.)

b/2 = Booster semi-span 13.805 cm (5.435 in.)

TABLE III (Continued)

BOOSTER PRESSURE TAP LOCATIONS

Tap No.	TAP LOCATION			Tap No.	TAP LOCATION		
	$(x/c)_B$	$(y/b/2)_B$	Surface		$(x/c)_B$	$(y/b/2)_B$	Surface
53	.098	.221	Upper Wing	71	.718	.635	Upper Wing
54	.320			72	.926		
55	.542			73	.066	.773	
56	.763			74	.275		
57	.985			75	.484		
58	.101	.359		76	.696		
59	.320			77	.896		
60	.542			83	.195	.565	Upper Canard
61	.762			84	.716		
62	.970			85	.195	.879	
63	.103	.497		86	.716		
64	.319			87	.514	.230	Lower Wing
65	.528			88	.737		
66	.741			89	.960		
67	.948			90	.496	.368	
68	.081	.635		91	.718		
69	.292			92	.940		
70	.507						

x = Distance from airfoil leading edge

y = Distance from booster centerline

c = Local airfoil chord

b/2 = Booster wing semi-span 13.805 cm (5.435 in.) for wing taps

b/2 = Booster canard semi-span 6.071 cm (2.390 in.) for canard taps

TABLE III (Concluded)

BOOSTER PRESSURE TAP LOCATIONS

Surface	$(y/b/2)_B$	Local Chord, cm	Local Chord, in.
Wing	.221	8.387	3.302
↓	.359	7.640	3.008
	.497	6.962	2.741
	.635	6.116	2.408
	.773	5.301	2.087
	.230	8.336	3.282
	.368	7.564	2.978
Canard	.565	4.877	1.923
↓	.879	4.877	1.923

TABLE IV. DIMENSIONAL DATA

MODEL COMPONENT: BODY - MDAC Orbiter

GENERAL DESCRIPTION: Basic fuselage contours including canopy with modified aft fuselage cross sections; cross-sectional shape constant from station 1500 to end of fuselage - model scale 1/180.

DRAWING NUMBER: 255 BJ 00060, Rev. B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length	156.4	.869
Max. Width	27.1	.150
Max. Depth	30.3	.168
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE IV. (CONTINUED)

MODEL COMPONENT: Wing - MDAC Orbiter

GENERAL DESCRIPTION: Model Scale 1/180

DRAWING NUMBER: 255 BJ 00050, Rev. B

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, ft^2		
Planform		
Wetted	5330.0	.164
Span (equivalent), FT	97.5	.542
Aspect Ratio	1.79	1.79
Rate of Taper		
Taper Ratio	.230	.230
Diehedral Angle, degrees	10.0	10.0
Incidence Angle, degrees	2.0	2.0
Aerodynamic Twist, degrees	0	0
Sweep Back Angles, degrees		
Leading Edge	55.0	55.0
Trailing Edge	0	0
0.25 Element Line	47.0	47.0
Chords:		
Root (Wing Sta. 0.0), INCHES	1084.8	6.027
Tip, (equivalent), INCHES	249.6	1.387
MAC, inches	754.8	4.193
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root (B.L. 162)	0010-64	0010-64
Tip (B.L. 540)	0009-64	0009-64
EXPOSED DATA		
Area, FT^2	3147.3	.097
Span, (equivalent), FT	70.5	.392
Aspect Ratio	1.58	1.58
Taper Ratio		
Chords		
Root, inches	855.0	4.750
Tip, inches	249.6	1.387
MAC	607.2	3.373
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE IV. (CONTINUED)

MODEL COMPONENT: Vertical Tail - MDAC Orbiter

GENERAL DESCRIPTION: Model Scale 1/180

DRAWING NUMBER: 255 BJ 00050, Rev. B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, ft^2		
Planform	580.0	.018
Wetted		
Span (equivalent), ft.	27.5	.153
Aspect Ratio		
Rate of Taper		
Taper Ratio	.638	.638
Diehedral Angle, degrees		
Incidence Angle, degrees		
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	30.0	30.0
Trailing Edge	13.4	13.4
0.25 Element Line	26.2	26.2
Chords:		
Root, inches	309.6	1.720
Tip, (equivalent), inches	196.8	1.093
MAC, inches	21.4	.119
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	0009-64	0009-64
Tip	0009-64	0009-64
EXPOSED DATA		
Area, ft^2	580.0	.018
Span, (equivalent), ft	27.5	.153
Aspect Ratio		
Taper Ratio	.638	.638
Chords		
Root, inches	309.6	1.720
Tip, inches	196.8	1.093
MAC, inches	21.4	.119
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE IV. (CONTINUED)

MODEL COMPONENT: BODY - MDAC Booster

GENERAL DESCRIPTION: Configuration 19A fuselage without base flare and boattail
Model Scale 1/180

DRAWING NUMBER: 256-19-0001, Rev. A

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
Length (Ft)	241.7	1.343
Max. Width (Ft)	34.0	.189
Max. Depth (Ft)	34.0	.189
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE IV. (CONTINUED)

MODEL COMPONENT: Wing - MDAC Booster

GENERAL DESCRIPTION: Configuration 19A Wing

Model Scale 1/180

DRAWING NUMBER:

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, ft^2		
Planform	6020.0	.186
Wetted		
Span (equivalent), ft.	146.0	.811
Aspect Ratio	3.54	3.54
Rate of Taper		
Taper Ratio	.435	.435
Diehedral Angle, degrees	7.67	7.67
Incidence Angle, degrees	3.0	3.0
Aerodynamic Twist, degrees	0	0
Sweep Back Angles, degrees		
Leading Edge	44.0	44.0
Trailing Edge		
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0), inches	690.0	3.833
Tip, (equivalent)	300.0	1.667
MAC, inches	520.0	2.889
Fus. Sta. of .25 MAC, inches	3625	20.139
W.P. of .25 MAC, inches		
B.L. of .25 MAC, inches	380	2.111
Airfoil Section		
Root	0010-64	0010-64
Tip	0010-64	0010-64
EXPOSED DATA		
Area, ft^2	4190.0	.129
Span, (equivalent), ft.		
Aspect Ratio		
Taper Ratio		
Chords		
Root, inches	594.0	3.300
Tip, inches	300.0	1.667
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE IV. (CONTINUED)

MODEL COMPONENT: Vertical Tails - MDAC Booster

GENERAL DESCRIPTION: Configuration 17 Vertical Tails

Model Scale 1/180

DRAWING NUMBER: 256-17-0001, Rev. A

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
TOTAL DATA (Values for one)		
Area		
Planform (True)	438	.014
(Side Projection)	397	.012
Span (equivalent), inches	276	1.533
Aspect Ratio	1.21	1.21
Rate of Taper		
Taper Ratio	.520	.520
Toe-In Angle	0	0
Cant Angle	25	25
Sweep Back Angles, degrees		
Leading Edge	40	40
Trailing Edge		
0.25 Element Line		
Chords:		
Root	300	1.667
Tip, (equivalent), inches	156	.867
MAC, inches	236	1.311
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	NACA 64A-009	NACA 64A-009
Tip	NACA 64A-009	NACA 64A-009
EXPOSED DATA		
Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE IV. (CONTINUED)

MODEL COMPONENT: Canard - MDAC Booster

GENERAL DESCRIPTION: Configuration 19A Canard

Model Scale 1/180

DRAWING NUMBER: 256-19-001, Rev. A

DIMENSIONS:		FULL-SCALE		MODEL SCALE
Theo. Area, Ft^2		1660		.051
Exp Area, Ft^2		1215		.038
Aspect Ratio		3.0		3.0
Chord (Incl. Flap), Ft		23.625		.131
Airfoil (360 In. Theo Chord)	NACA	63-018	NACA	63-018

TABLE V. INDEX OF MODEL FIGURES

Figure	Title	Page
1	Pressure Tap Layout - Orbiter	28
2	Pressure Tap Layout - Booster	29
3	Modifications to Orbiter Model	30
4	Modifications to Booster Model	31
5	General Arrangement of Models in Tunnel	32
6	Separation Nomenclature and Center of Gravity Locations	33
7	Photograph of MDAC Booster and Orbiter Models	34
8	Photograph of Side View of Models and Separation Hardware	35
9	Photograph of Top View of Models and Associated Separation Hardware	36
10	Photograph of Booster and Orbiter Sting-Nozzle Hardware	37
11	Photograph of Booster Nozzle Hardware	38
12	Photograph of Orbiter Nozzle Hardware	39

TABLE VI. INDEX OF DATA FIGURES

VOLUME 4

TITLE	VEHICLE SECTION	TYPE PLOT	CONDITIONS VARYING	PAGES
Longitudinal Distribution of Orbiter Fuselage Pressures-Mach 3	Fuselage	CP vs. X/L	DELTAX, DELTAZ, Y/B, α_B	1-90
Longitudinal Distribution of Orbiter Upper wing Pressures-Mach 3	Upper Wing	CP vs. X/L	DELTAX, DELTAZ, Y/B, α_B	91-180
Longitudinal Distribution of Orbiter Lower Wing Pressures-Mach 3	Lower Wing	CP vs. X/L	DELTAX, DELTAZ, Y/B, α_B	181-360
Radial Distribution of Orbiter Base Pressures-Mach 3	Base	CP vs. θ	DELTAX, DELTAZ, α_B	361-405

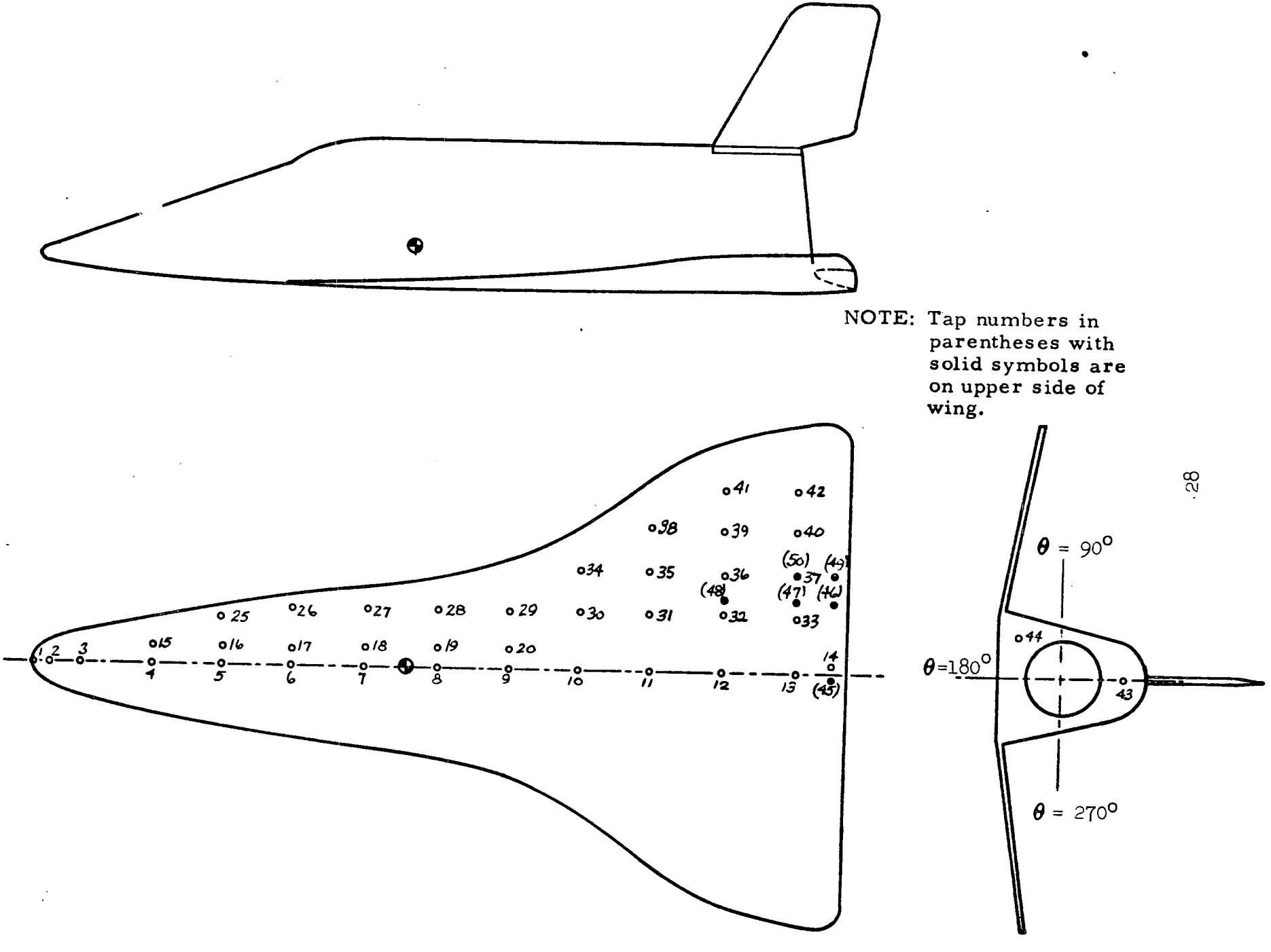


Fig. 1.- Pressure Tap Layout - Orbiter

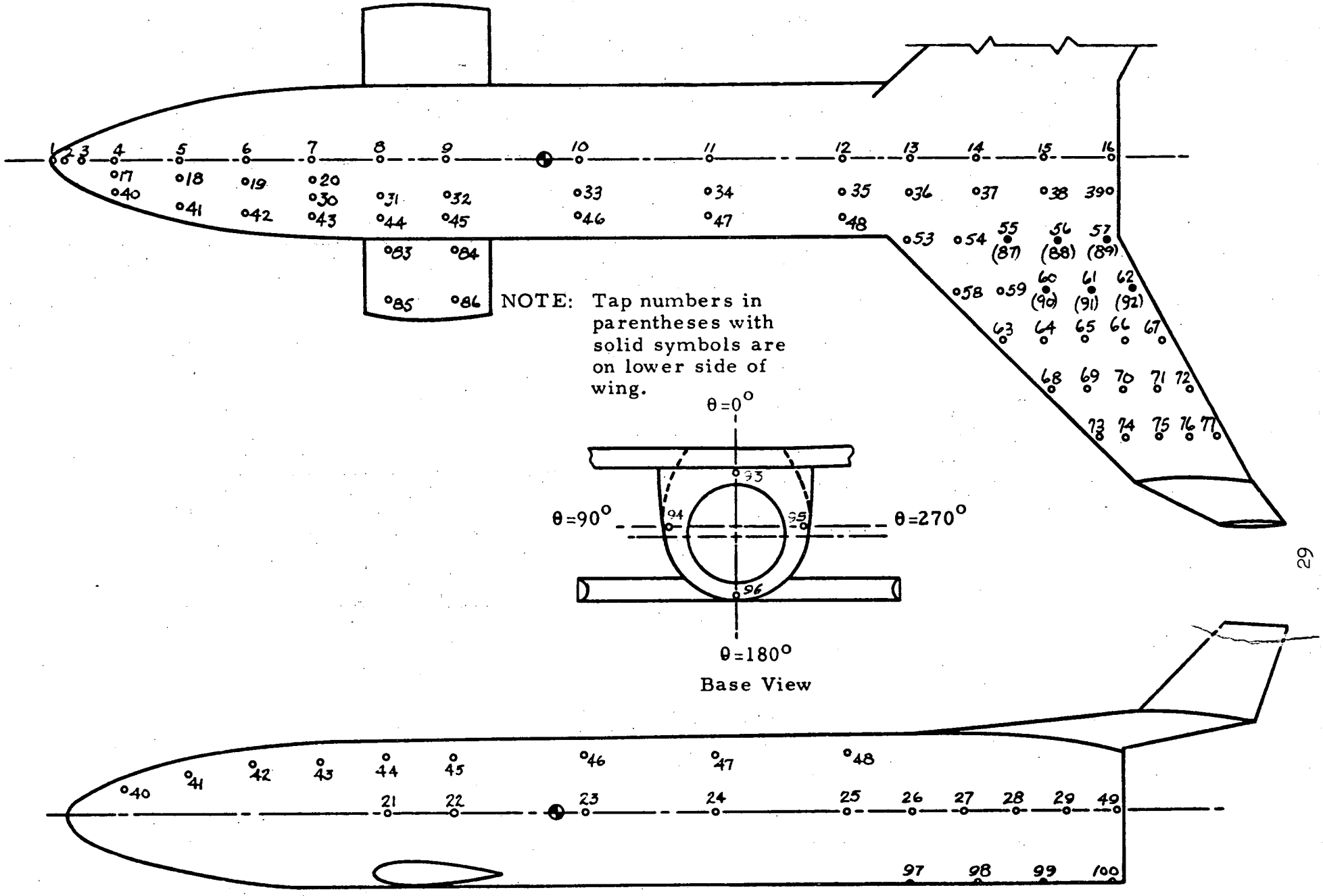


Fig. 2 - Pressure Tap Layout - Booster

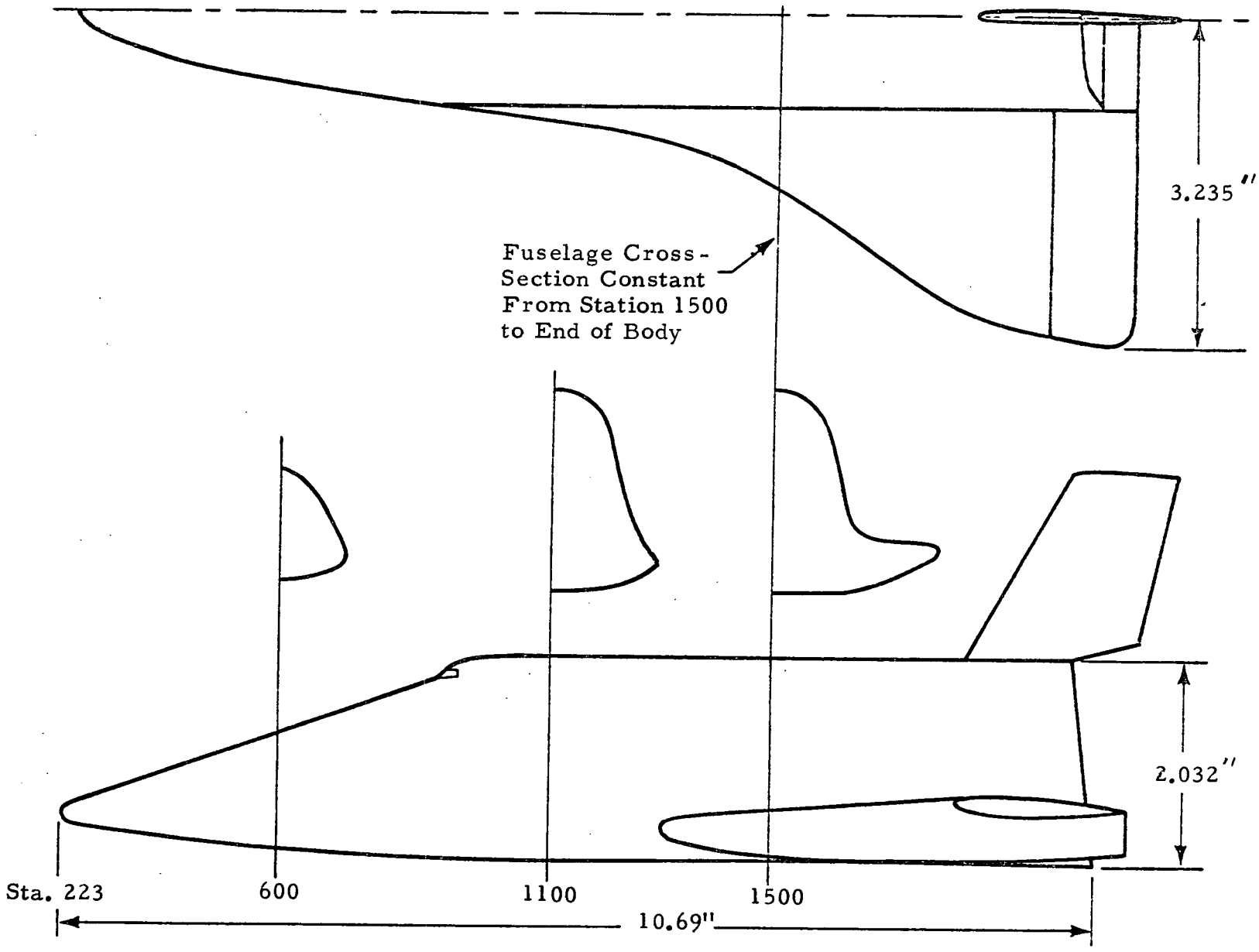


Fig. 3 - Modifications to Orbiter Model

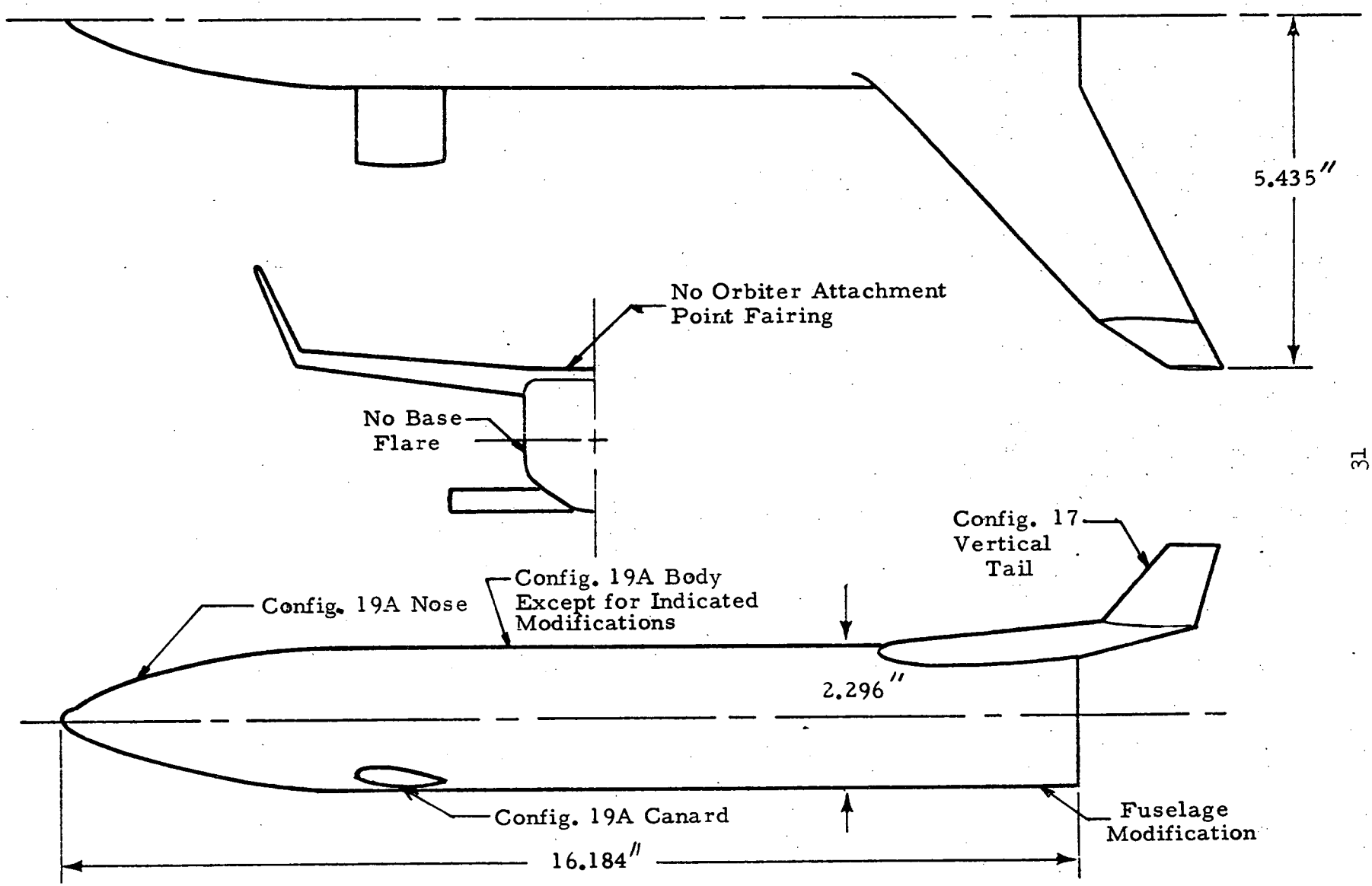


Fig. 4 - Modifications to Booster Model

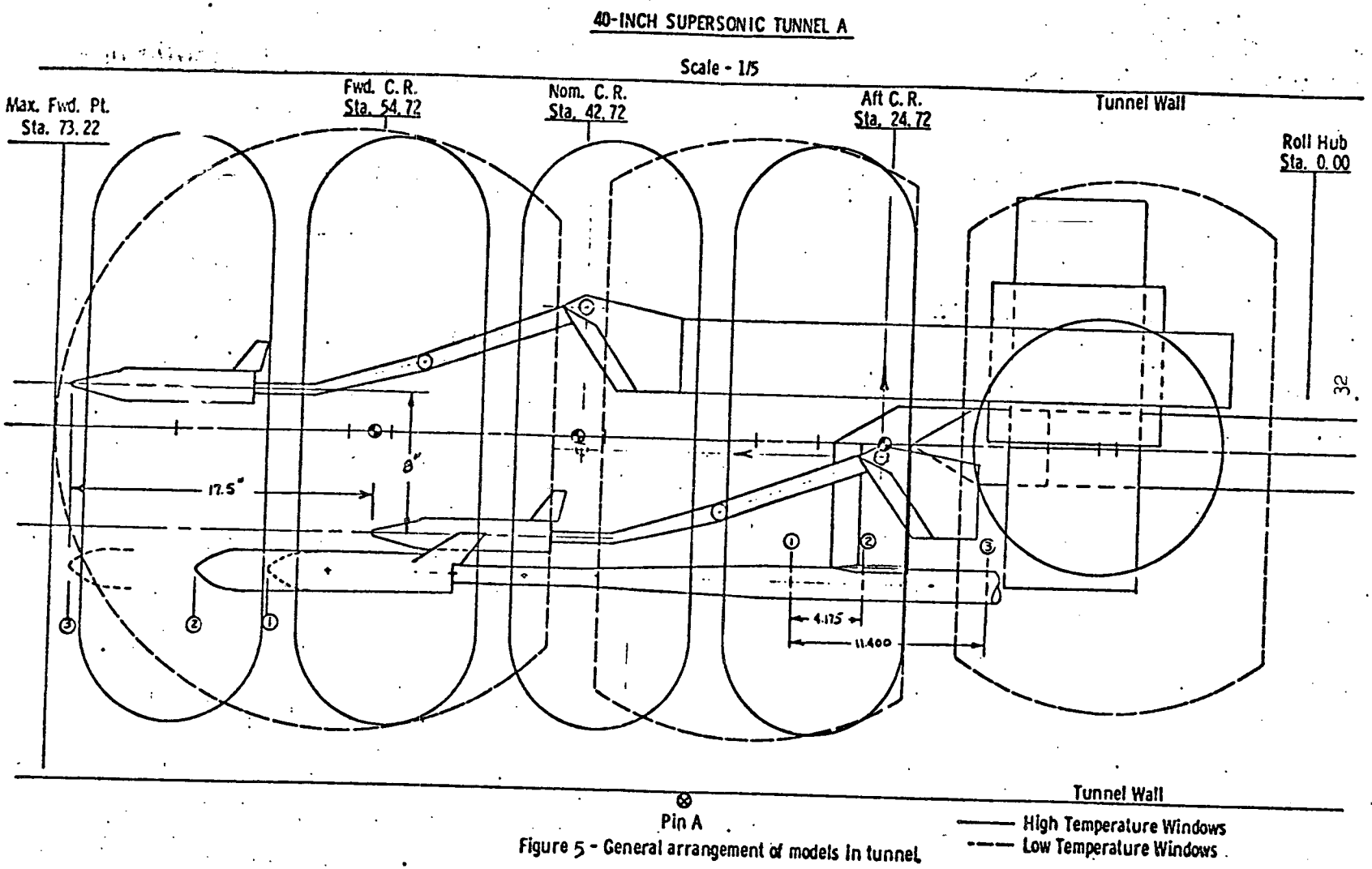
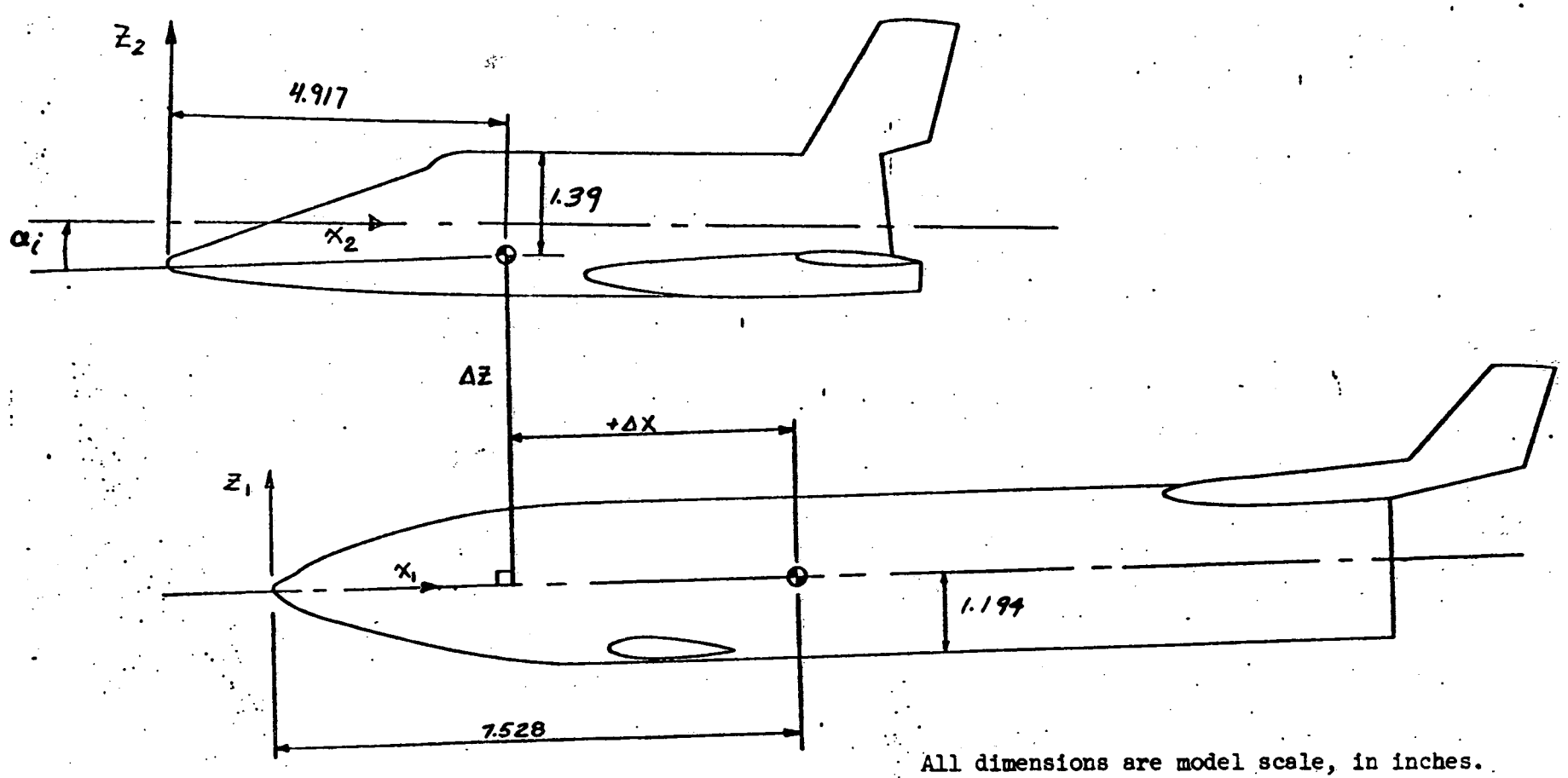


Figure 5 - General arrangement of models in tunnel



All dimensions are model scale, in inches.

Figure 6. Separation Nomenclature and Center of Gravity Locations

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

Not cleared for public release without prior written approval of the responsible Air Force Office of Information.

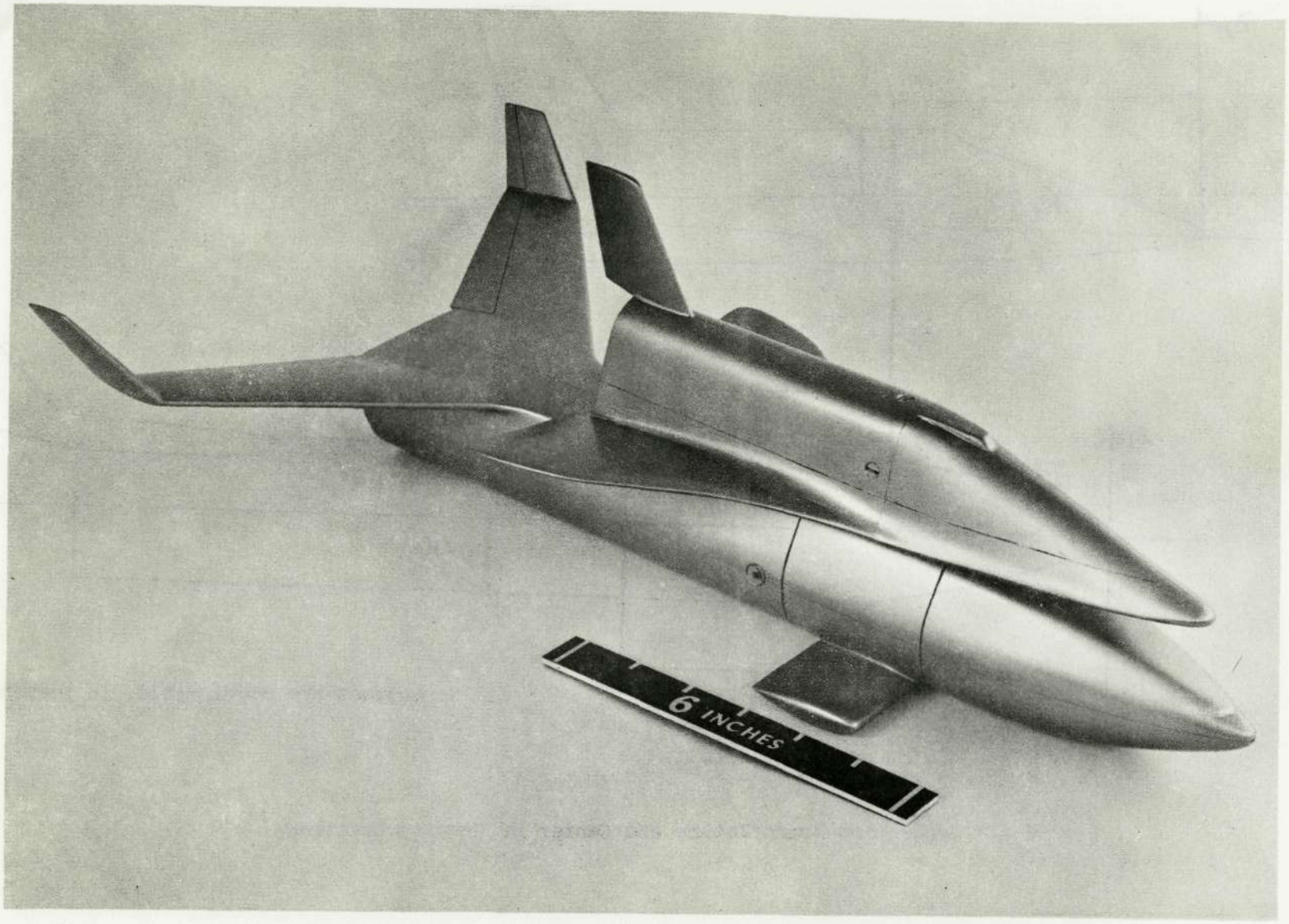


Figure 7. Photograph of MDAC Booster and Orbiter Models

1974 (3-22-71) VA1163 NASA - SPACE SHUTTLE

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

Not cleared for public release without prior written approval of the responsible Air Force Office of Information.

Reproduced from best available copy.

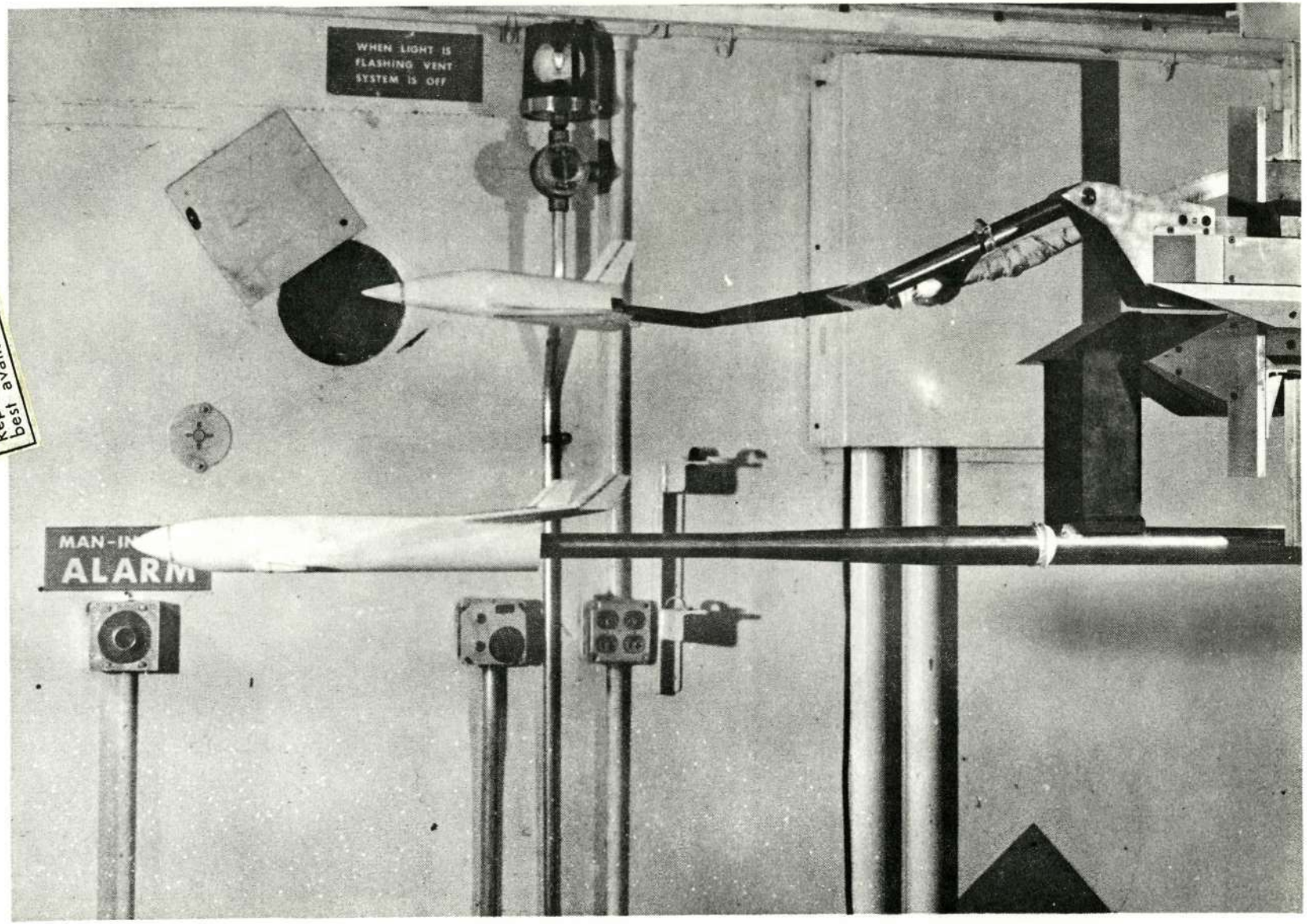


Figure 8. Photograph of Side View of Models and Separation Hardware

3197 (4-27-71) VA1163 NASA 515

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

Not cleared for public release without prior written approval of the responsible Air Force Office of Information.

Reproduced from best available copy.

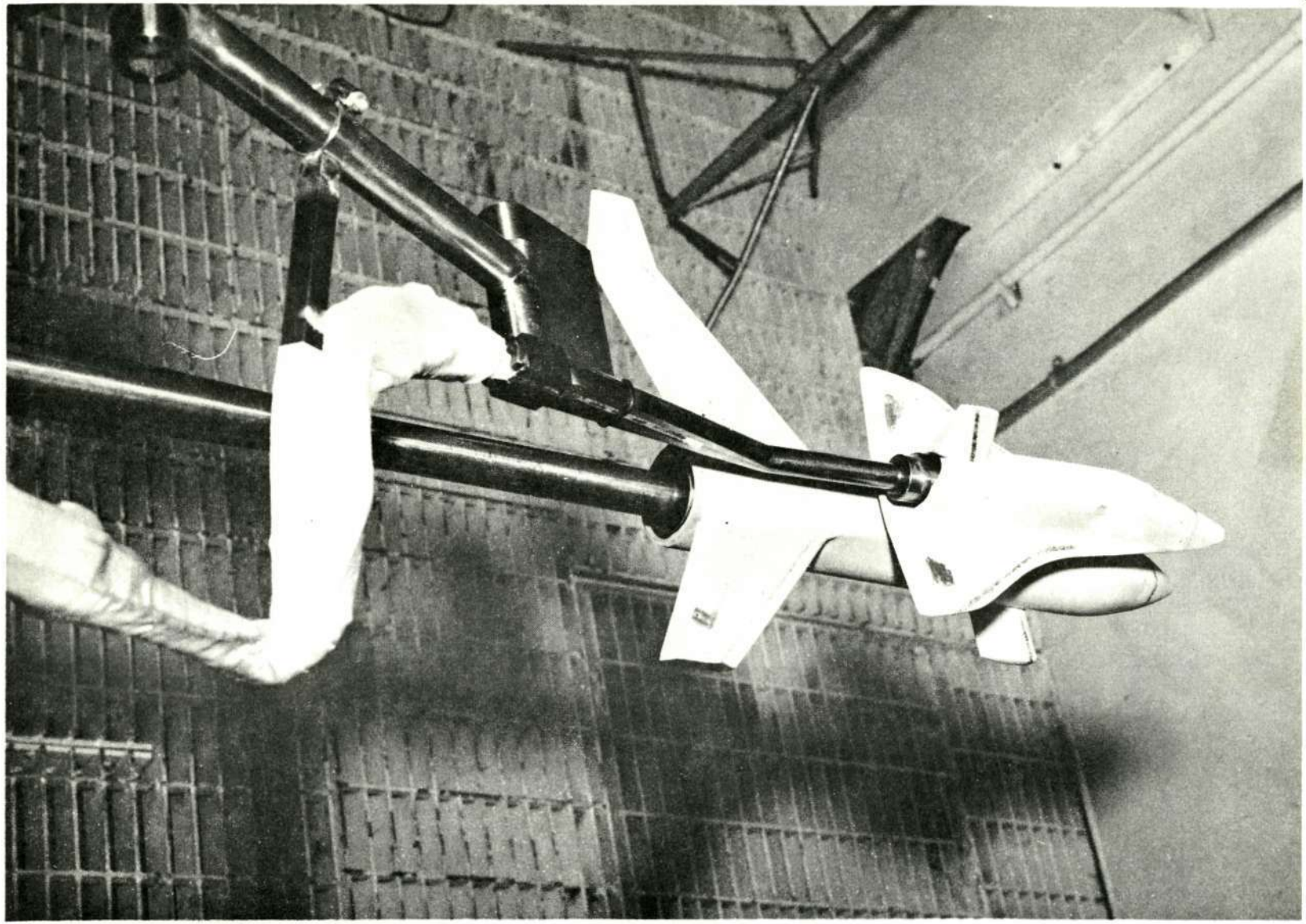
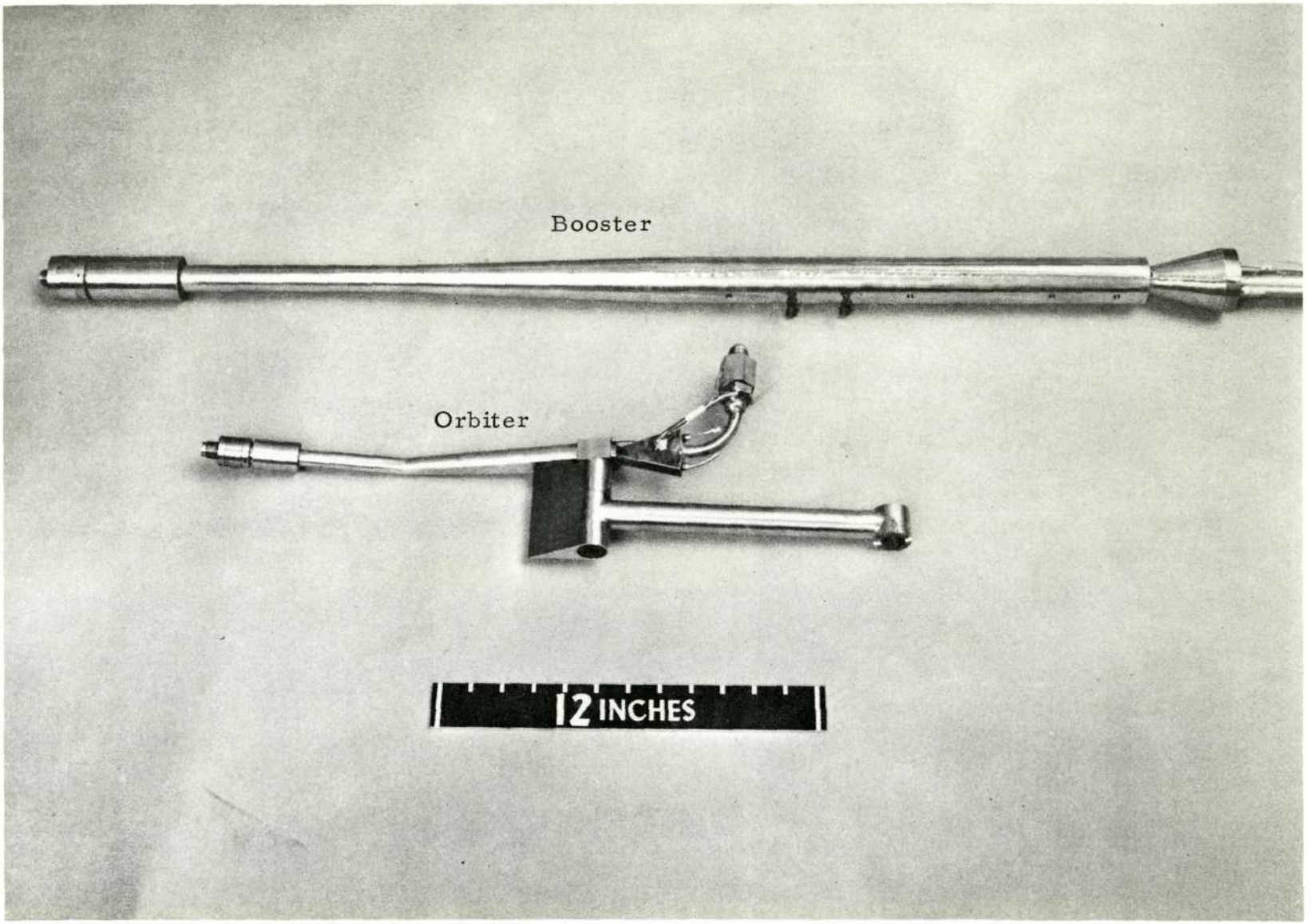


Figure 9. Photograph of Top View of Models and Associated Separation Hardware

3199 (4-27-71) VA1163 NASA STS

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

Not cleared for public release without
prior written approval of the responsible
Air Force Office of Information.

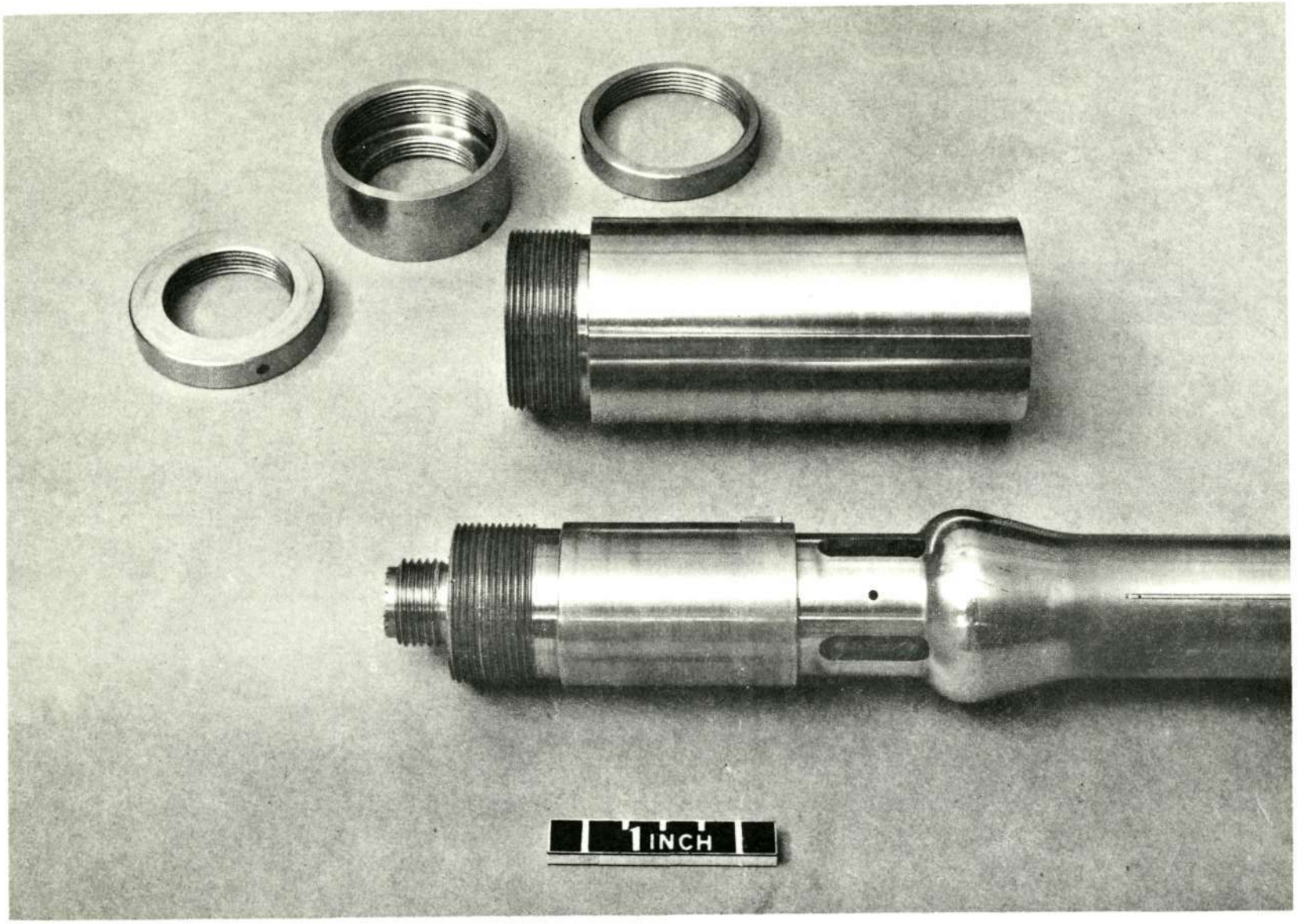


3901 (5-14-71) VA1163 SPACE SHUTTLE NOZZLES

Figure 10. Photograph of Booster and Orbiter Sting Nozzle Hardware

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

Not cleared for public release without
prior written approval of the responsible
Air Force Office of Information.

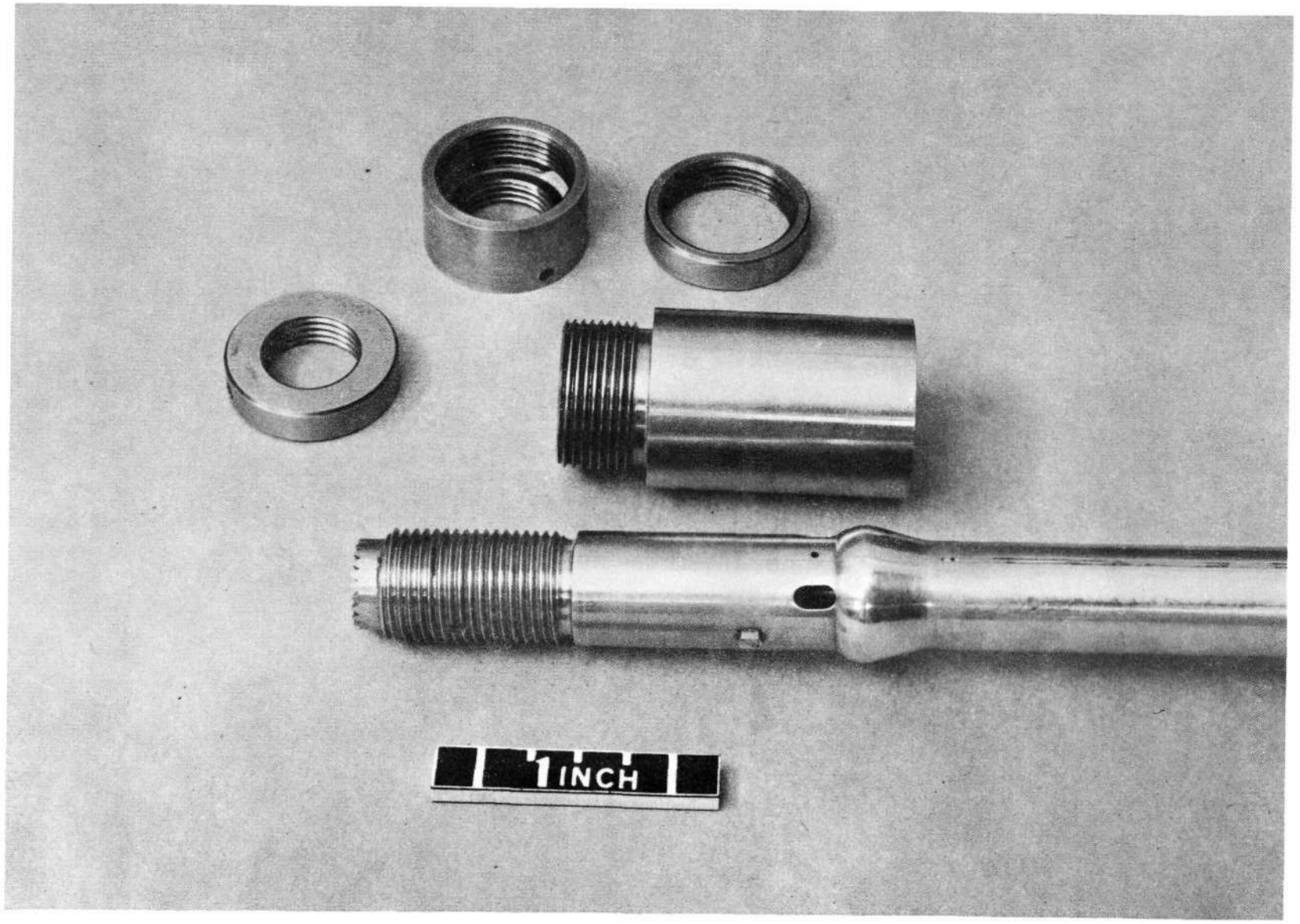


3895 (5-14-71) VA1163 SPACE SHUTTLE NOZZLES

Figure 11. Photograph of Booster Nozzle Hardware

U.S. AIR FORCE PHOTO-AEDC
ARO INC. OPERATING CONTRACTOR
ARNOLD A.F. STATION TENN.

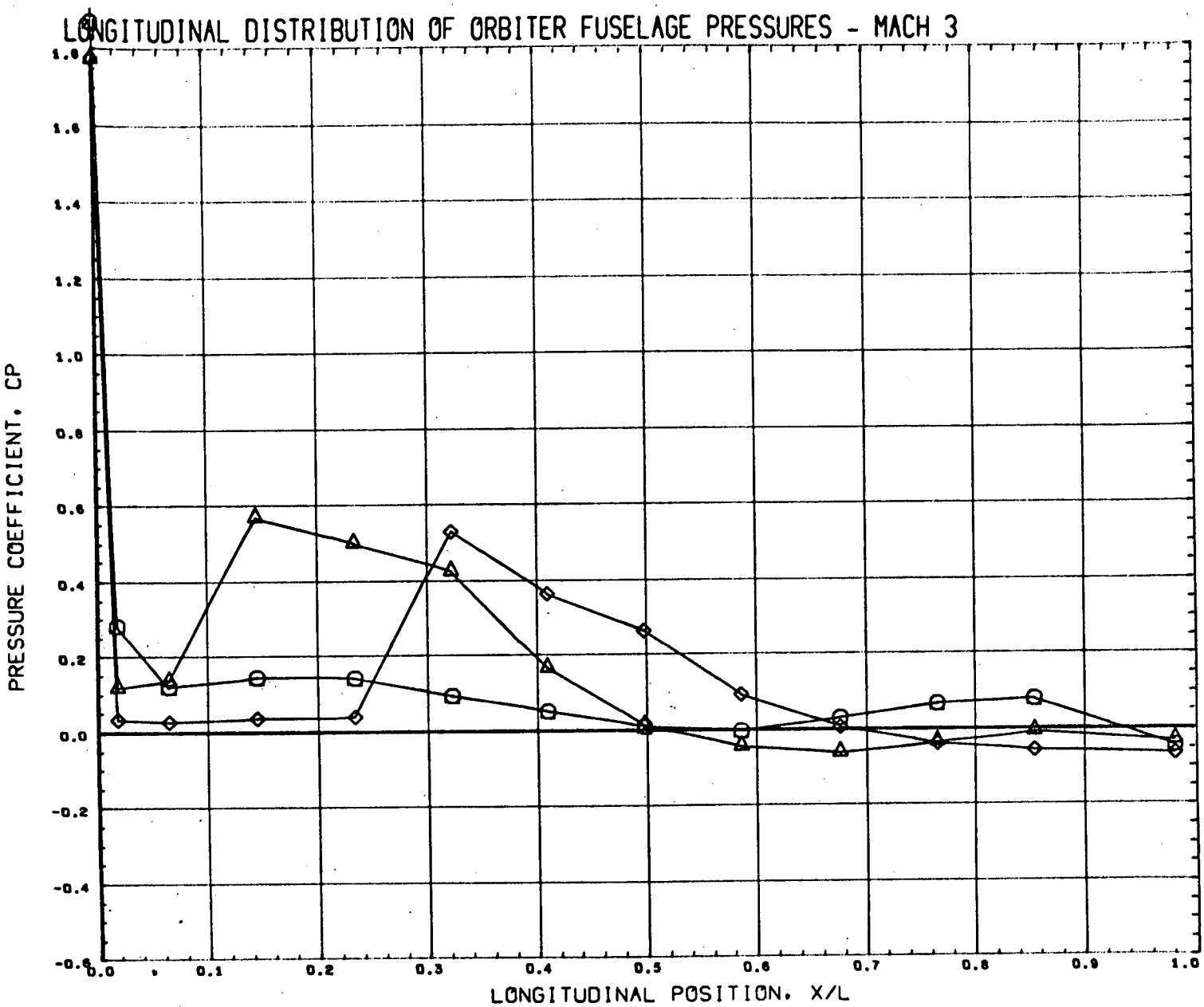
Not cleared for public release without prior written approval of the responsible Air Force Office of Information.



3896 (5-14-71) VA1163 SPACE SHUTTLE NOZZLES Figure 12. Photograph of Orbiter Nozzle Hardware

D A T A F I G U R E S

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



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

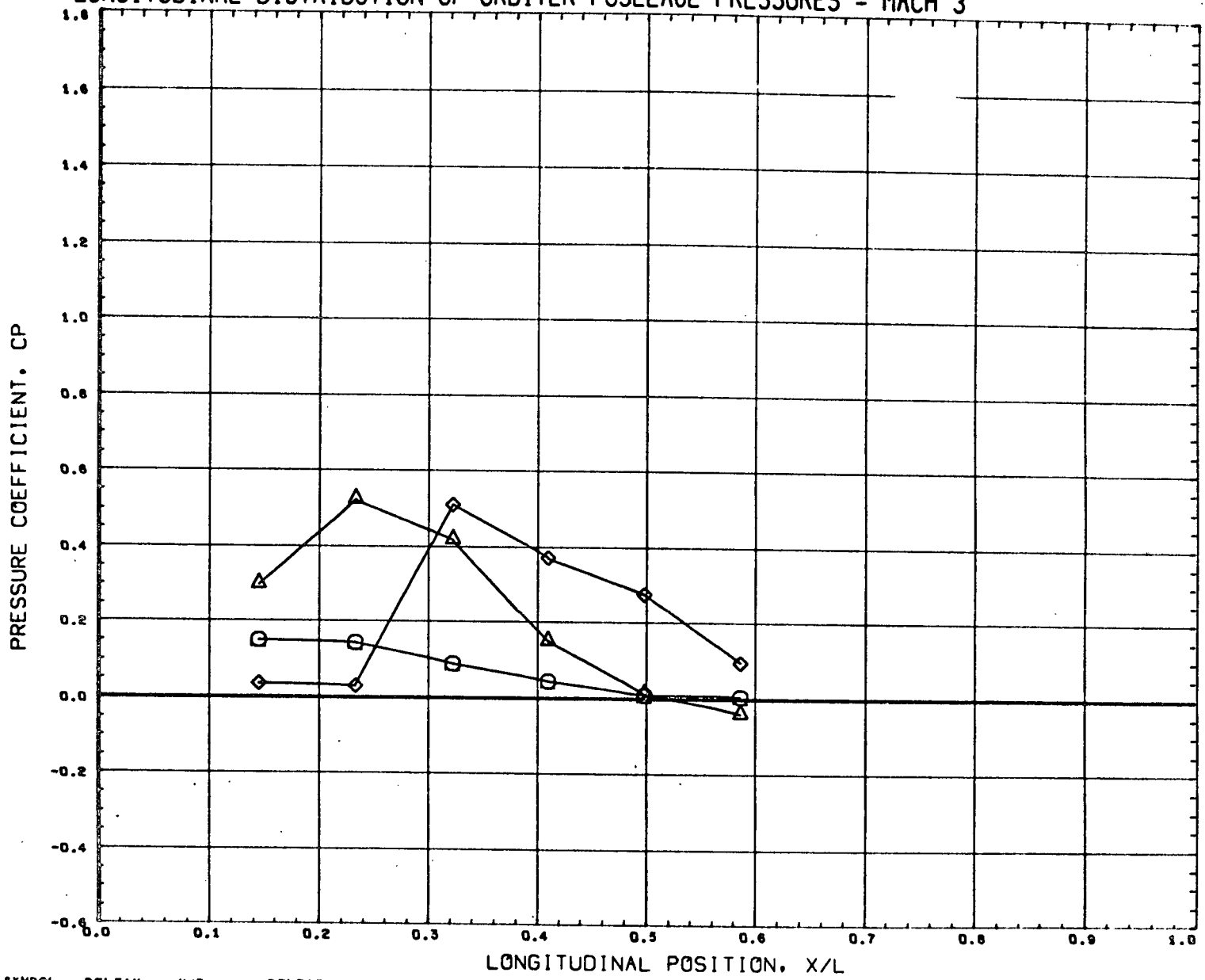
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



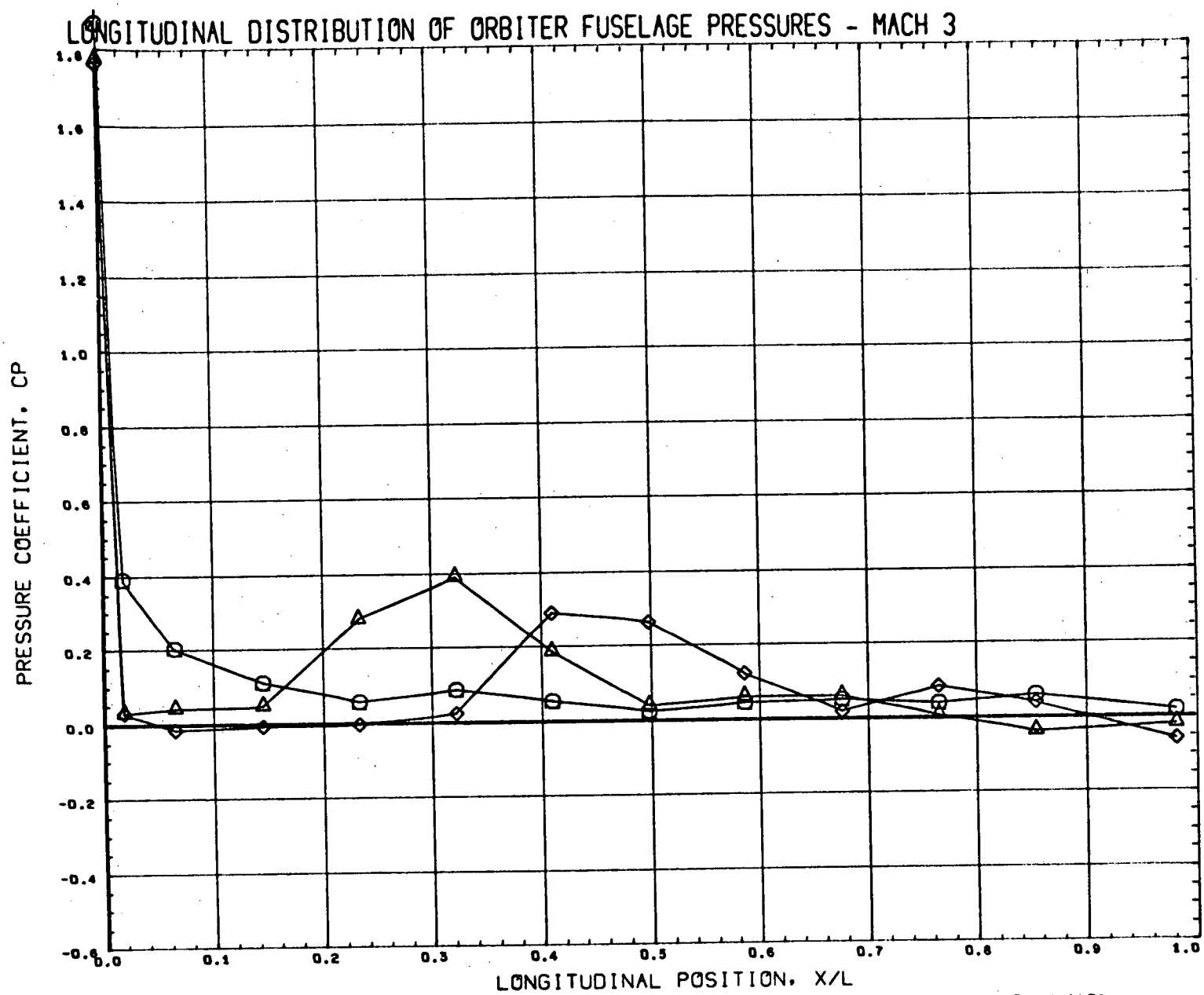
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

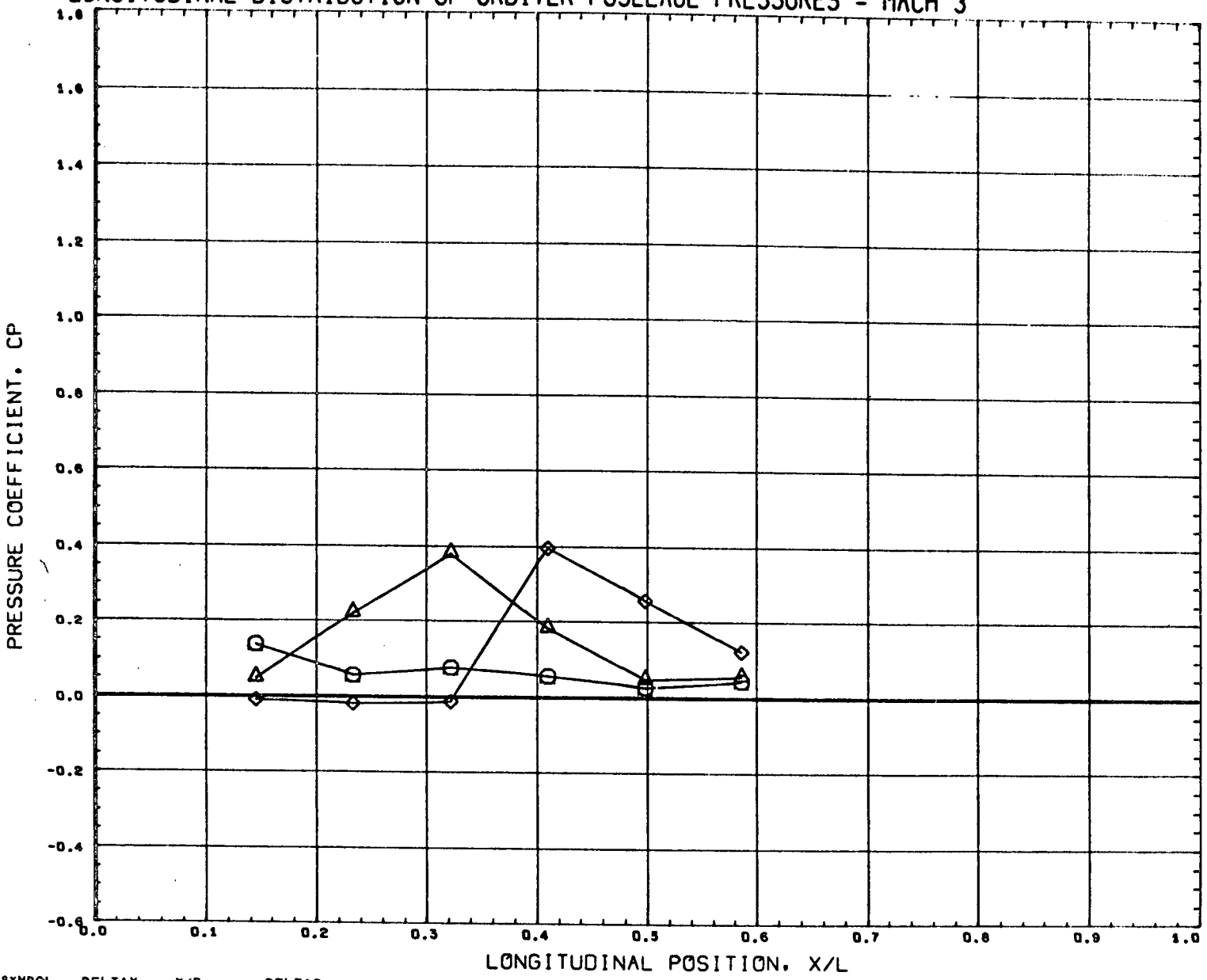
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

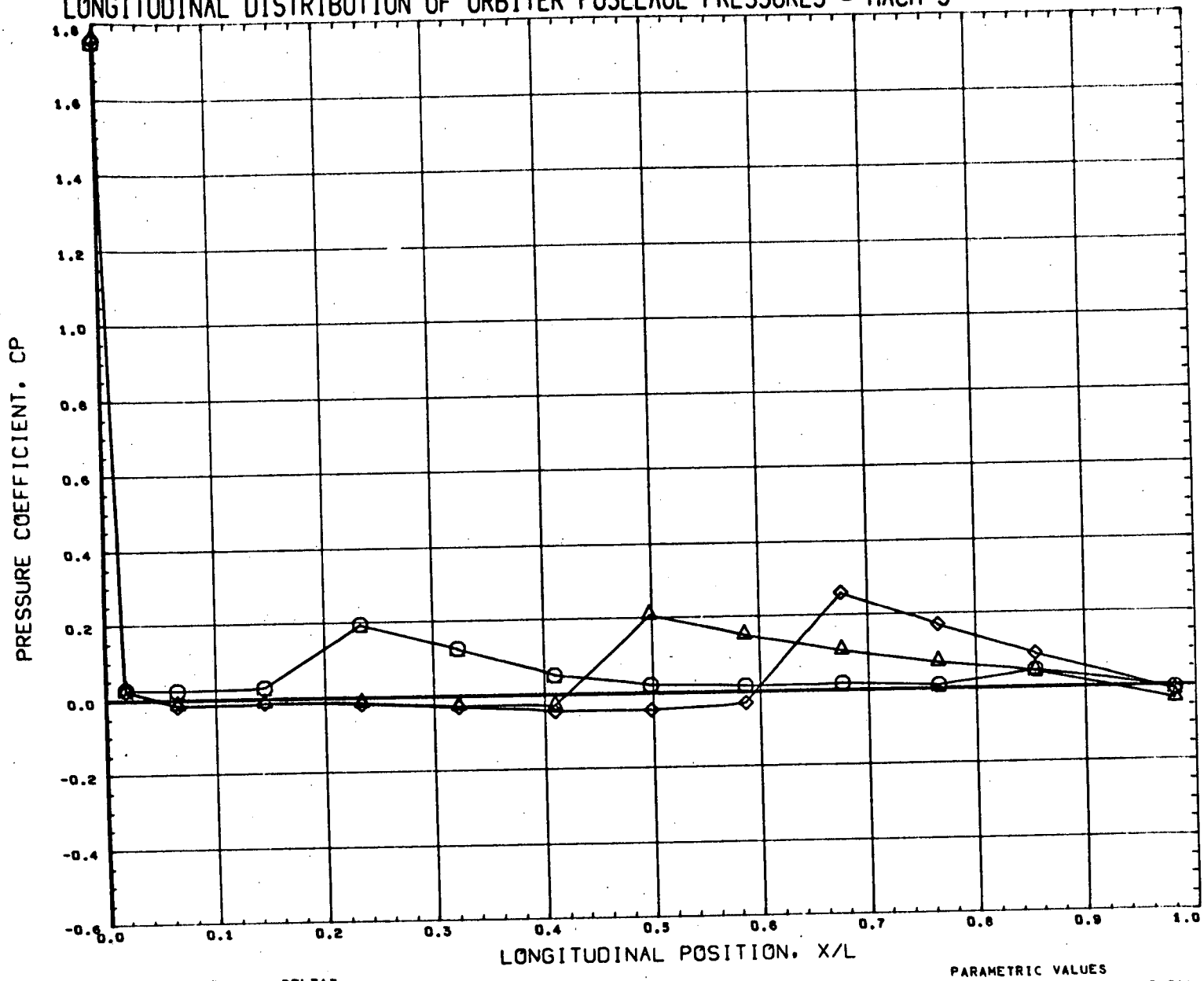
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

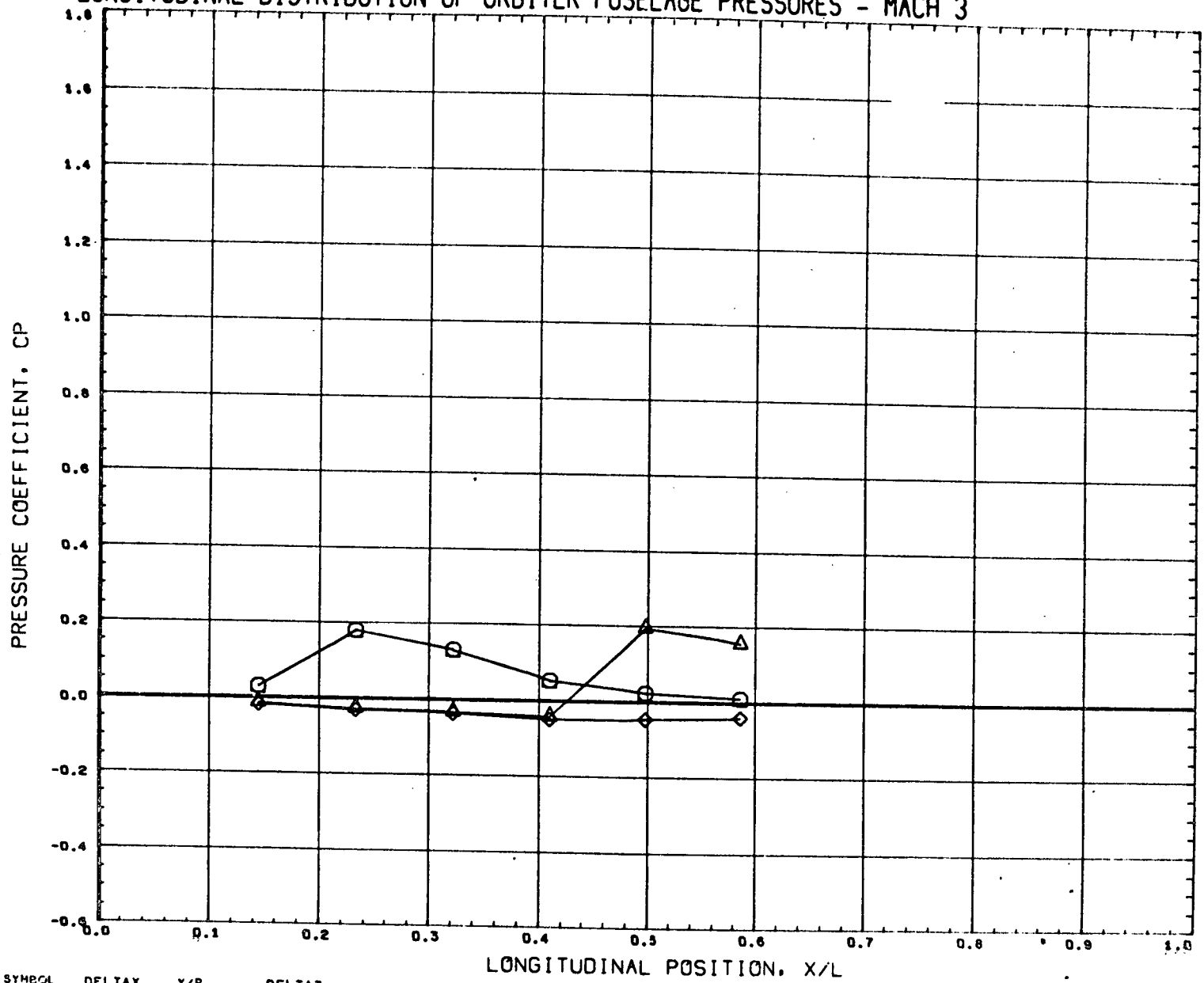
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.228
△	0.103		
◇	0.226		

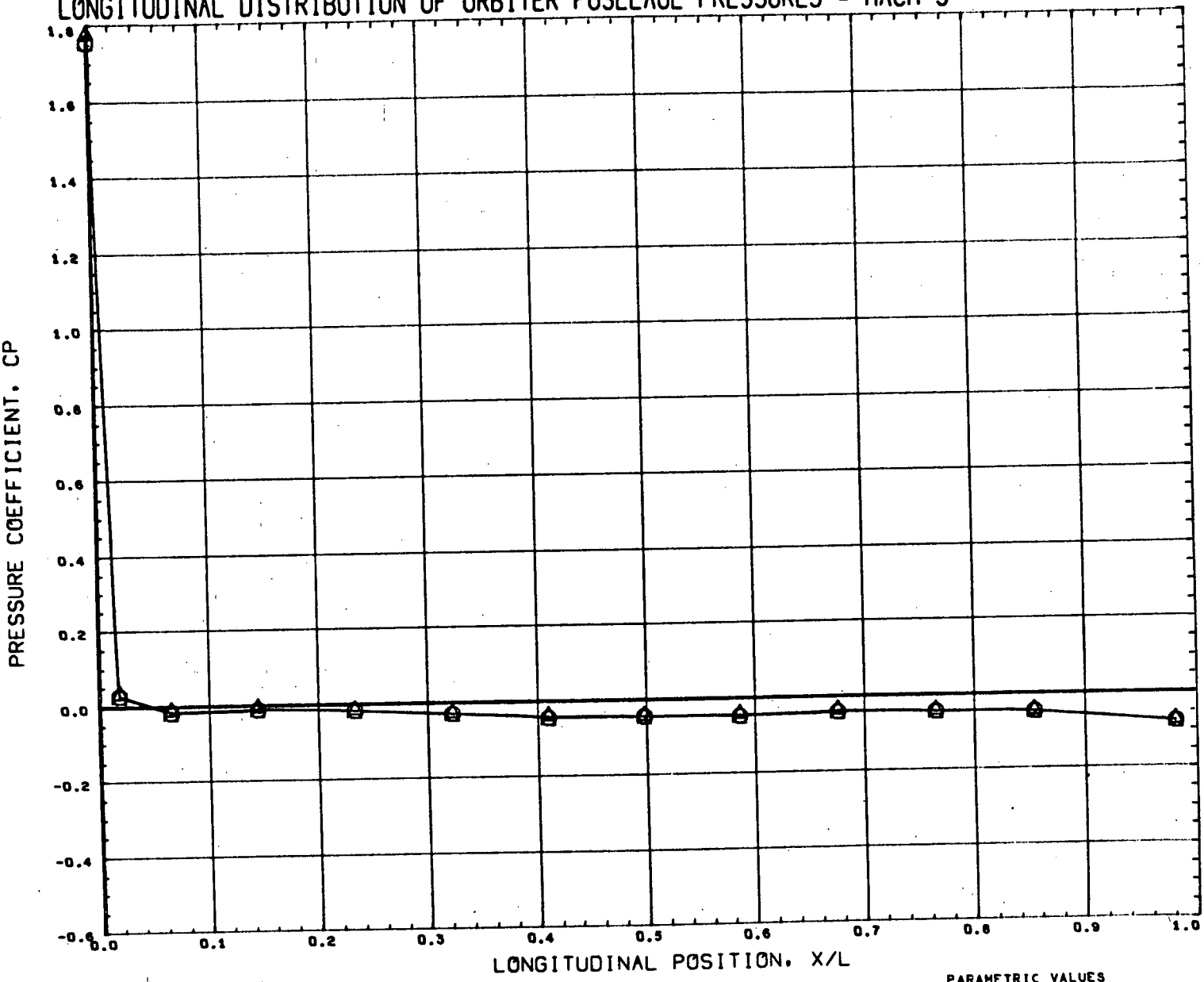
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.000	0.908
△	0.480		

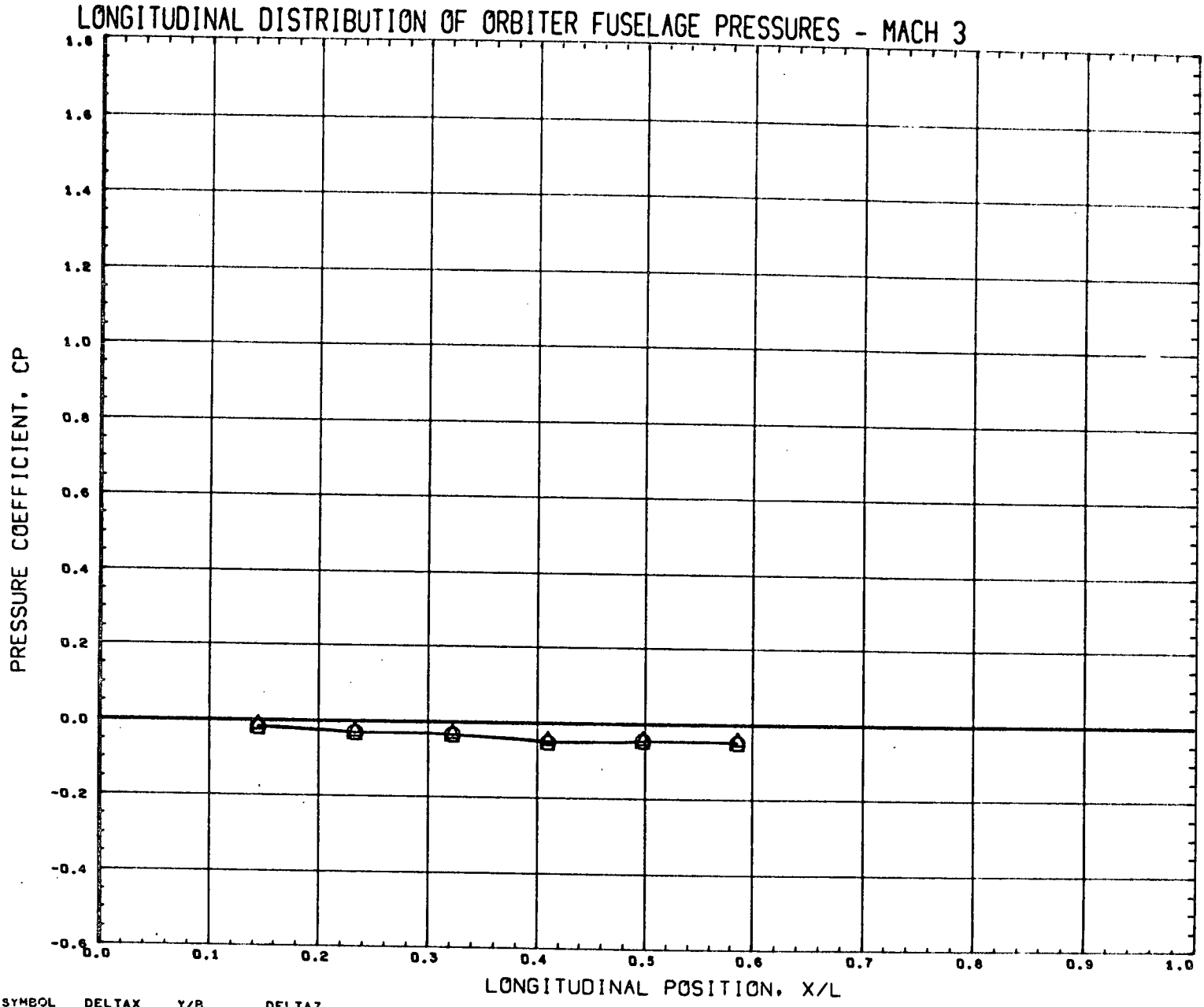
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8311•



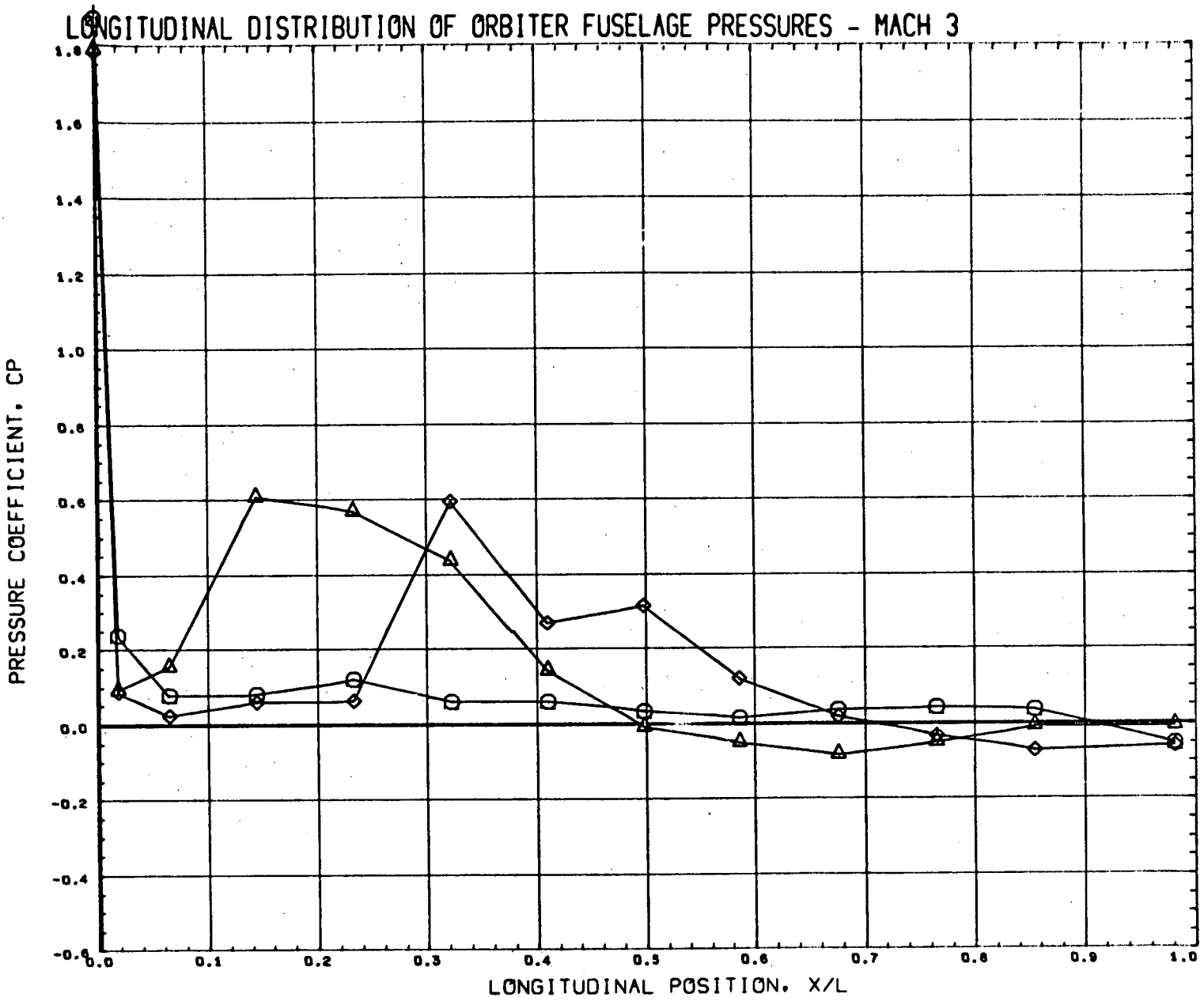
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.076	0.908
△	0.480		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



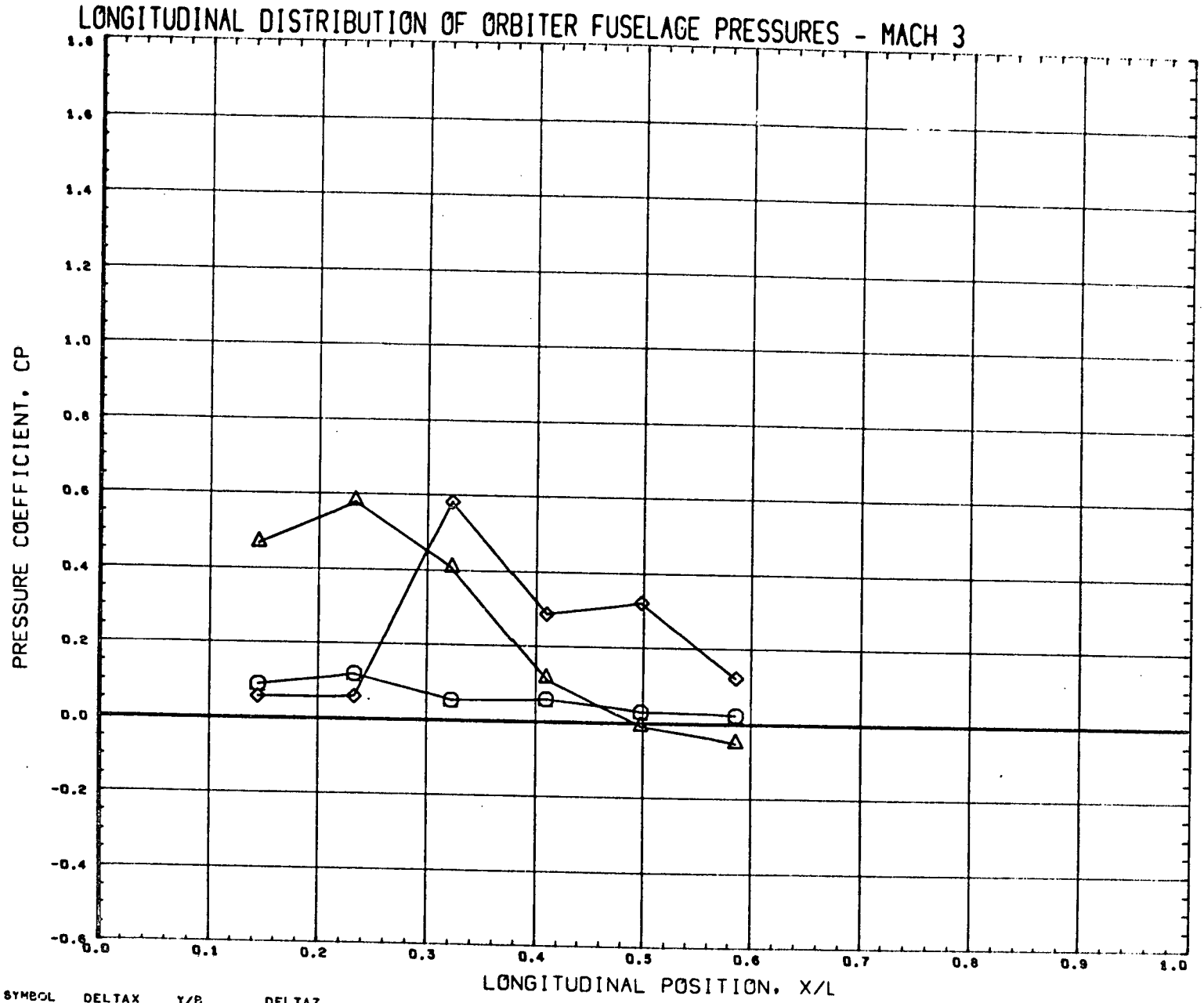
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.120
△	0.103		
◇	0.228		

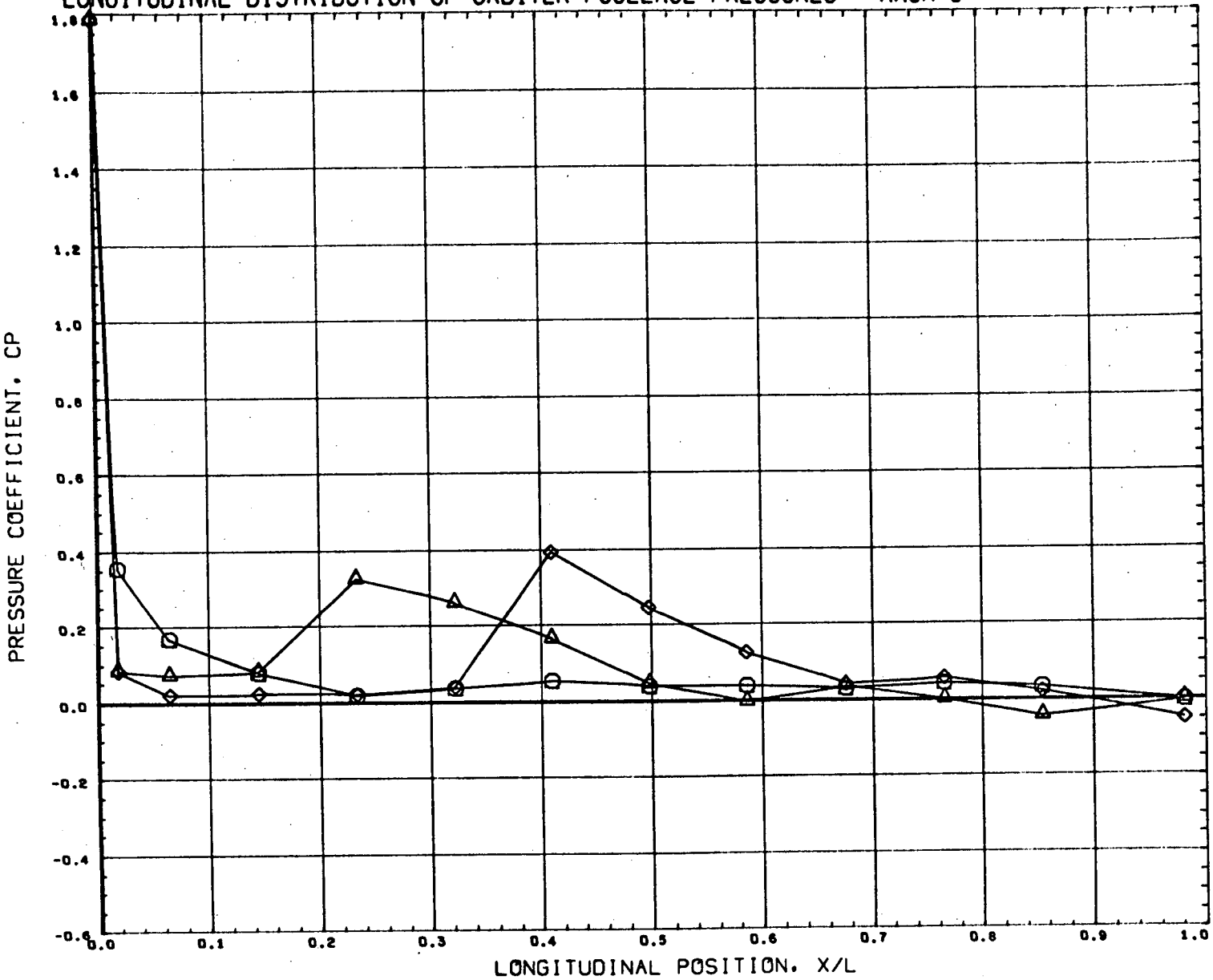
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL		DELTAX	Y/B	DELTAZ
○	-	0.143	0.000	0.151
△		0.103		
◇		0.227		

PARAMETRIC VALUES

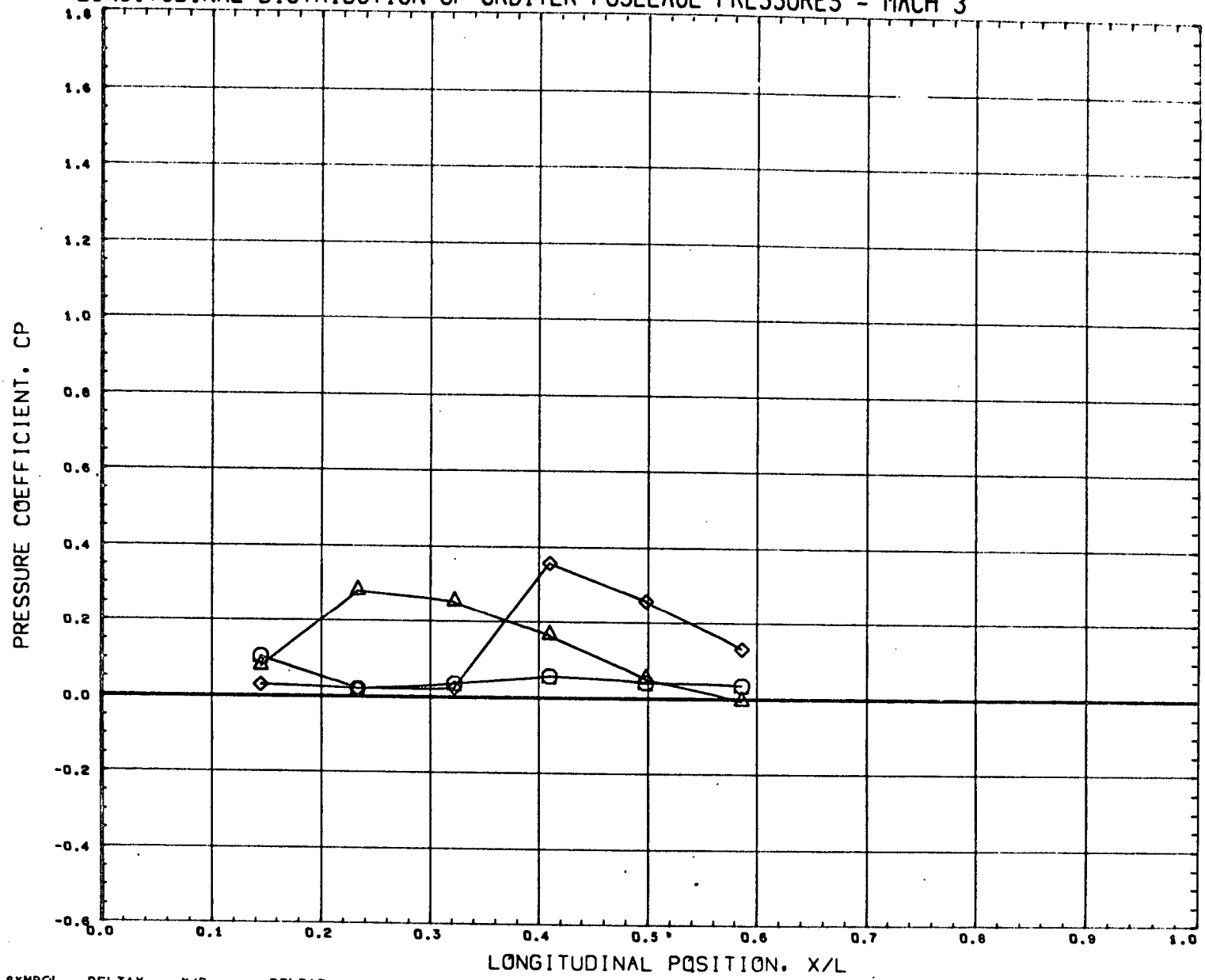
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.151
△	0.103		
◇	0.227		

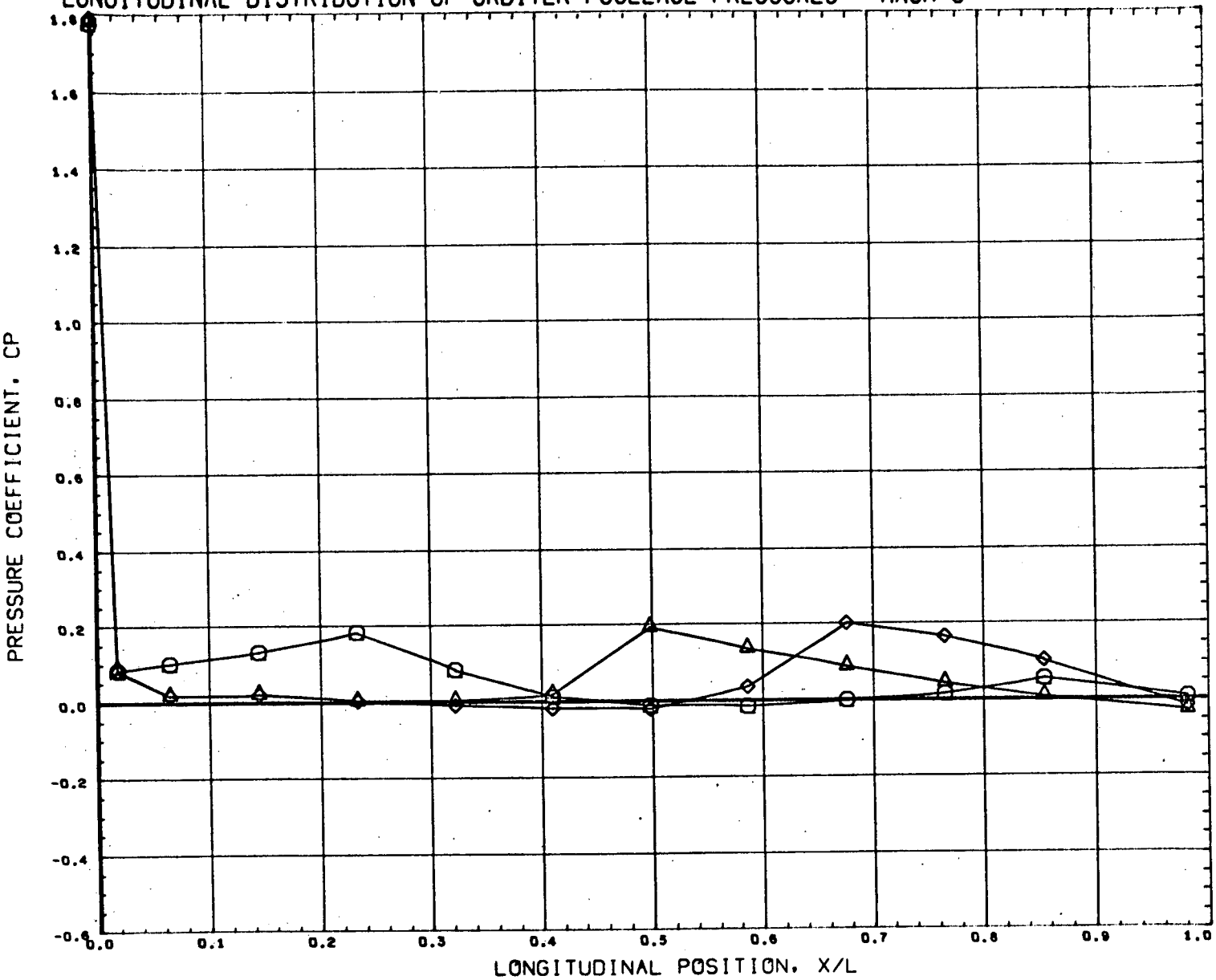
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.000	0.226
△	0.103		
◇	0.226		

PARAMETRIC VALUES

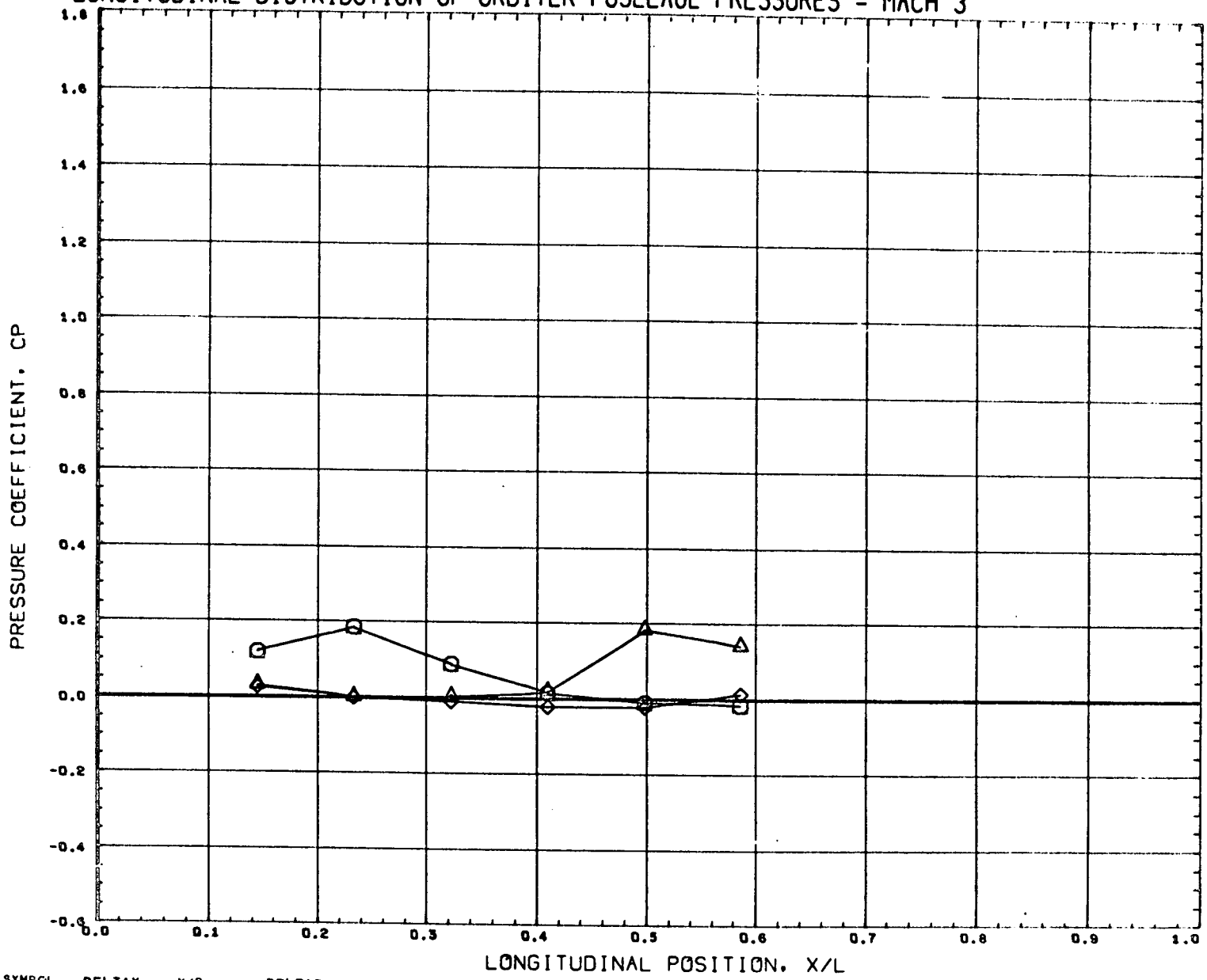
ALPHAB -	4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.228
△	0.103		
◇	0.226		

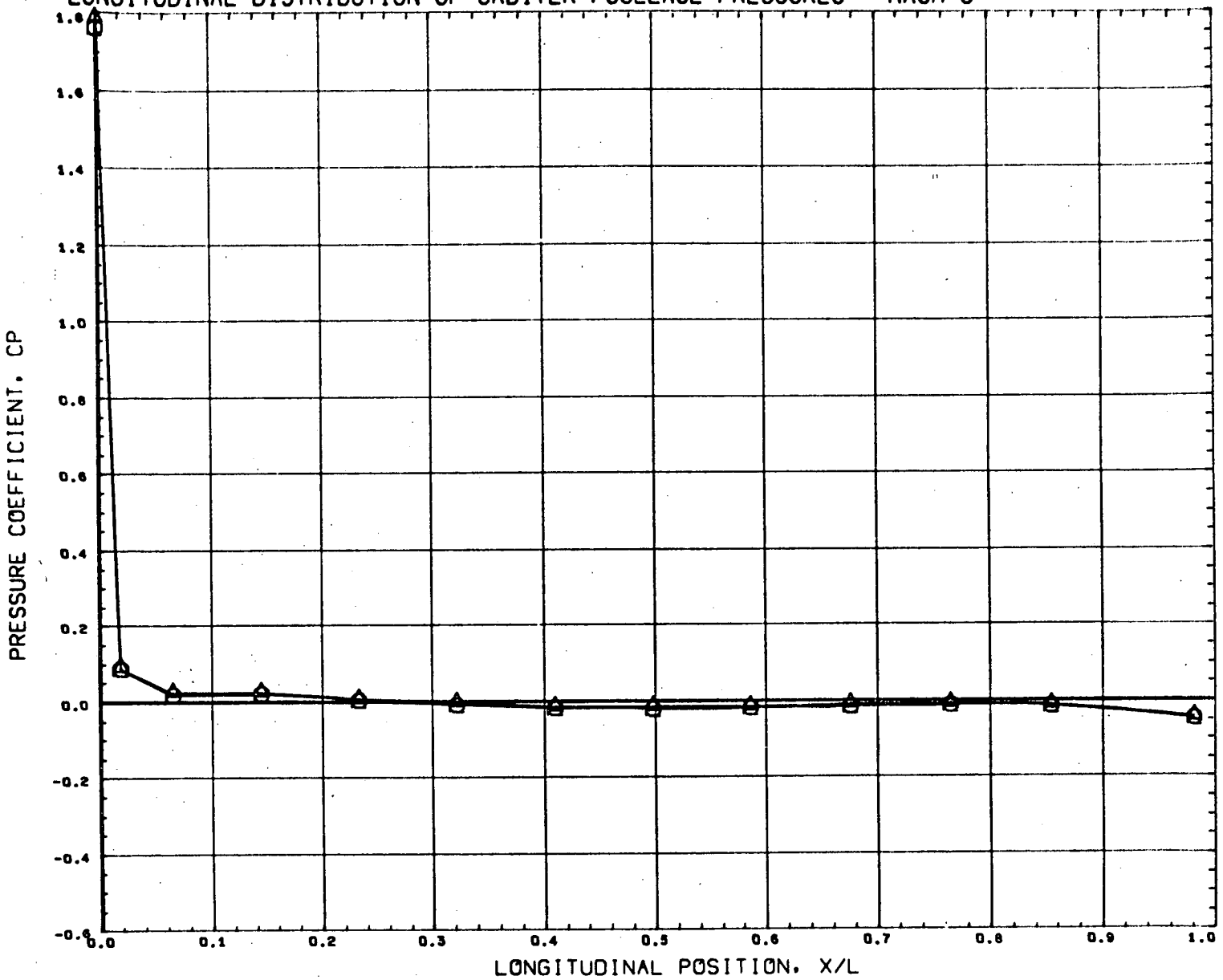
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.000	0.908
△	0.478		

PARAMETRIC VALUES

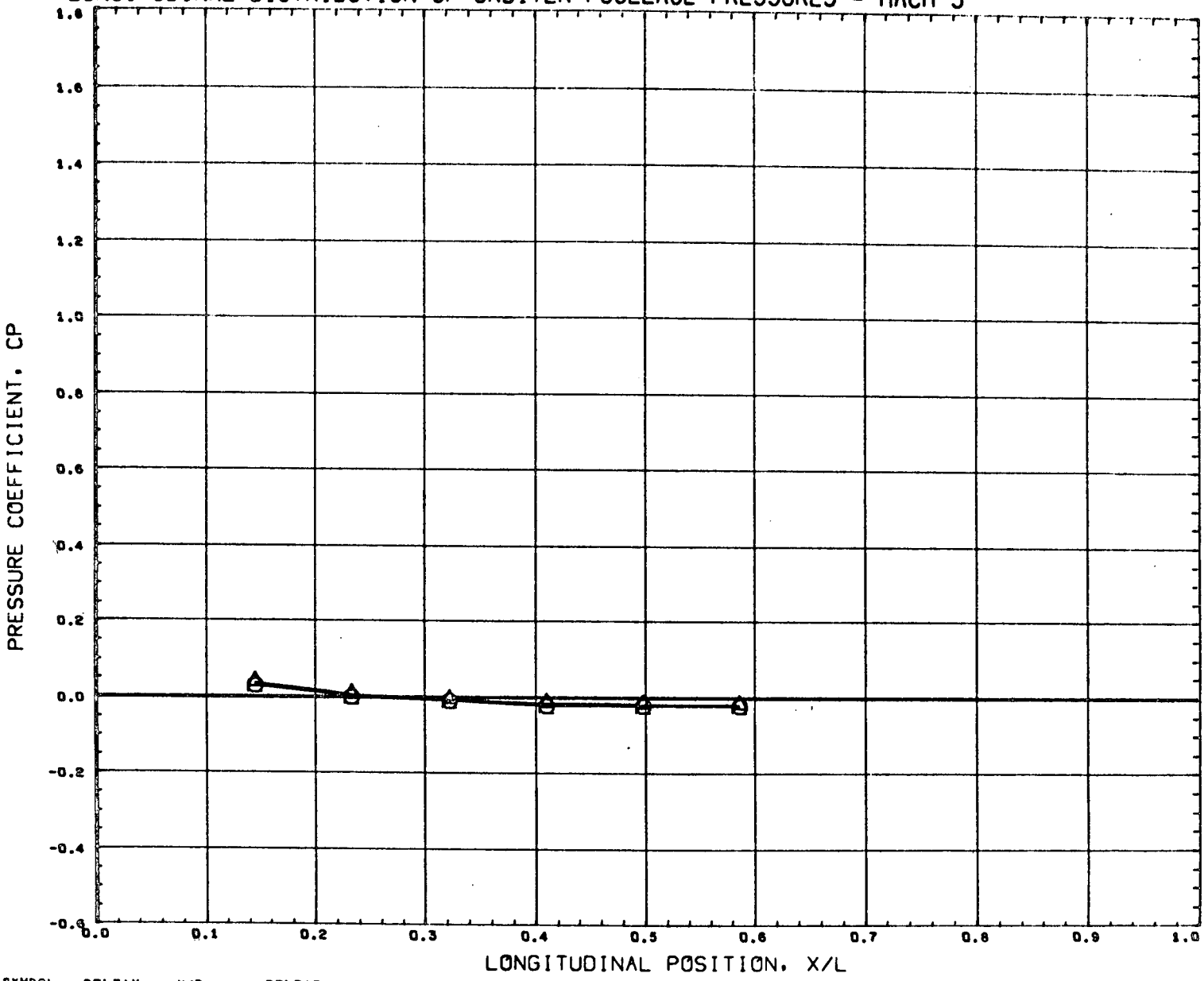
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.076	0.908
△	0.478		

PARAMETRIC VALUES

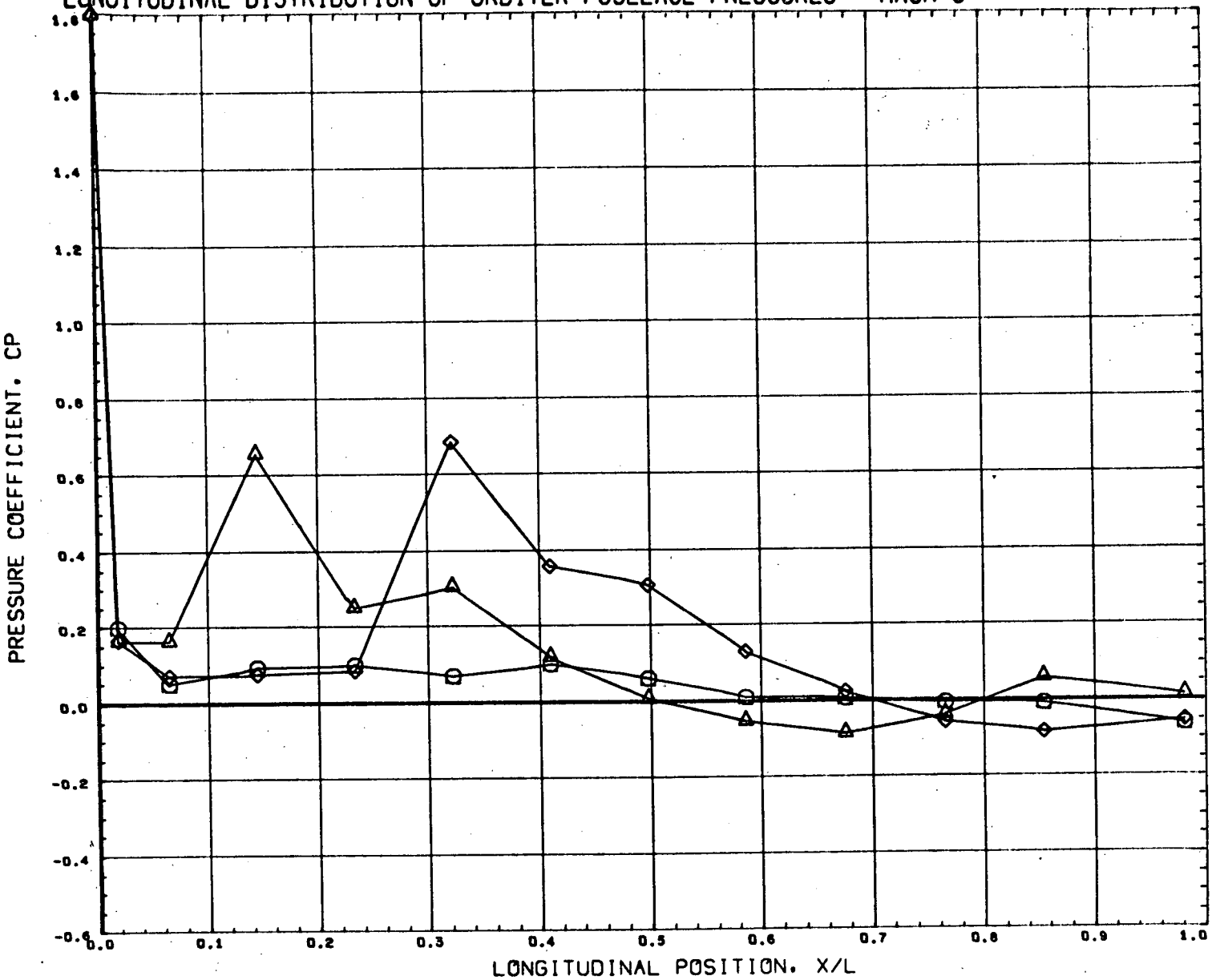
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.000	0.120
△	0.102		
◇	0.228		

PARAMETRIC VALUES

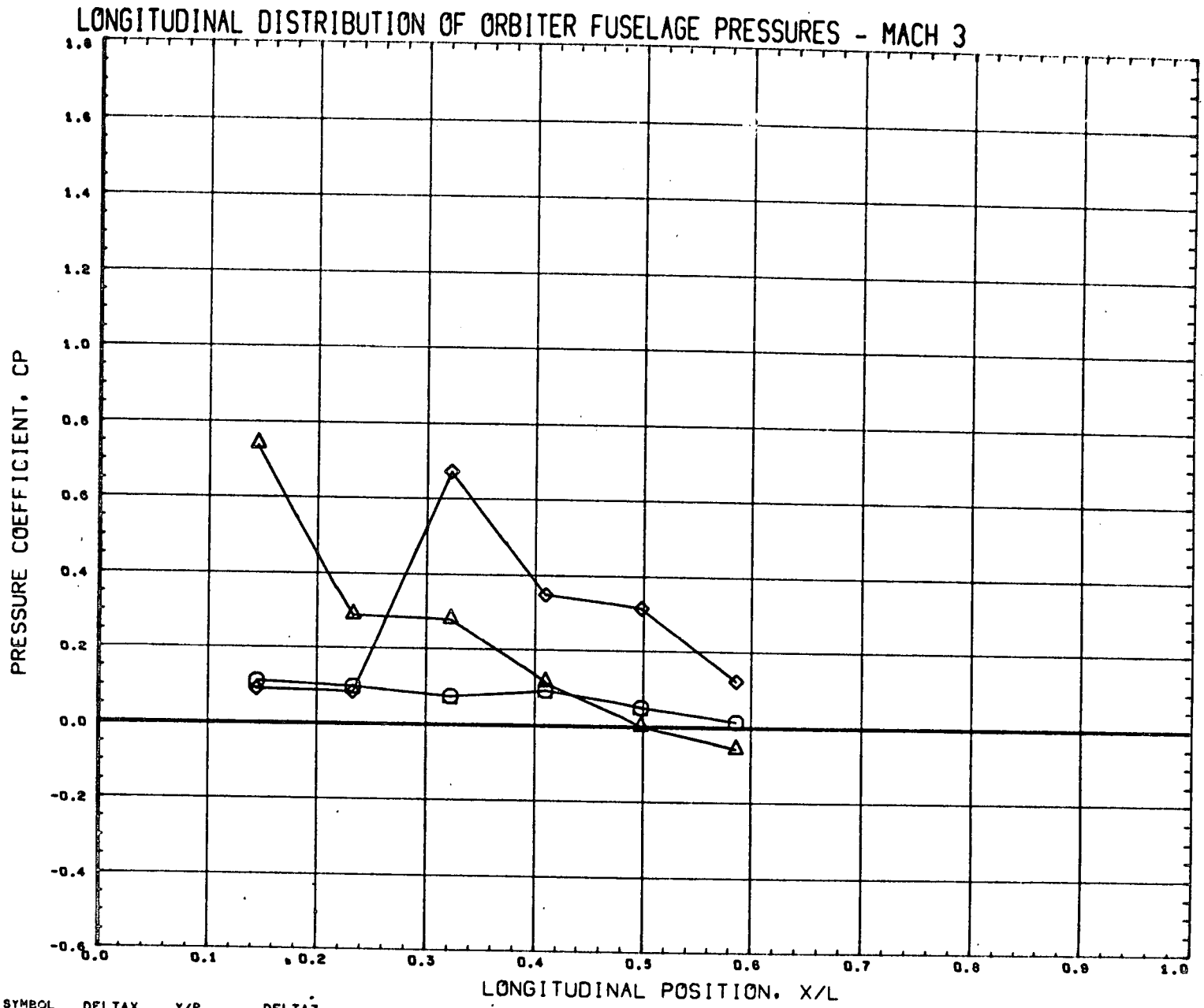
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•

2/8



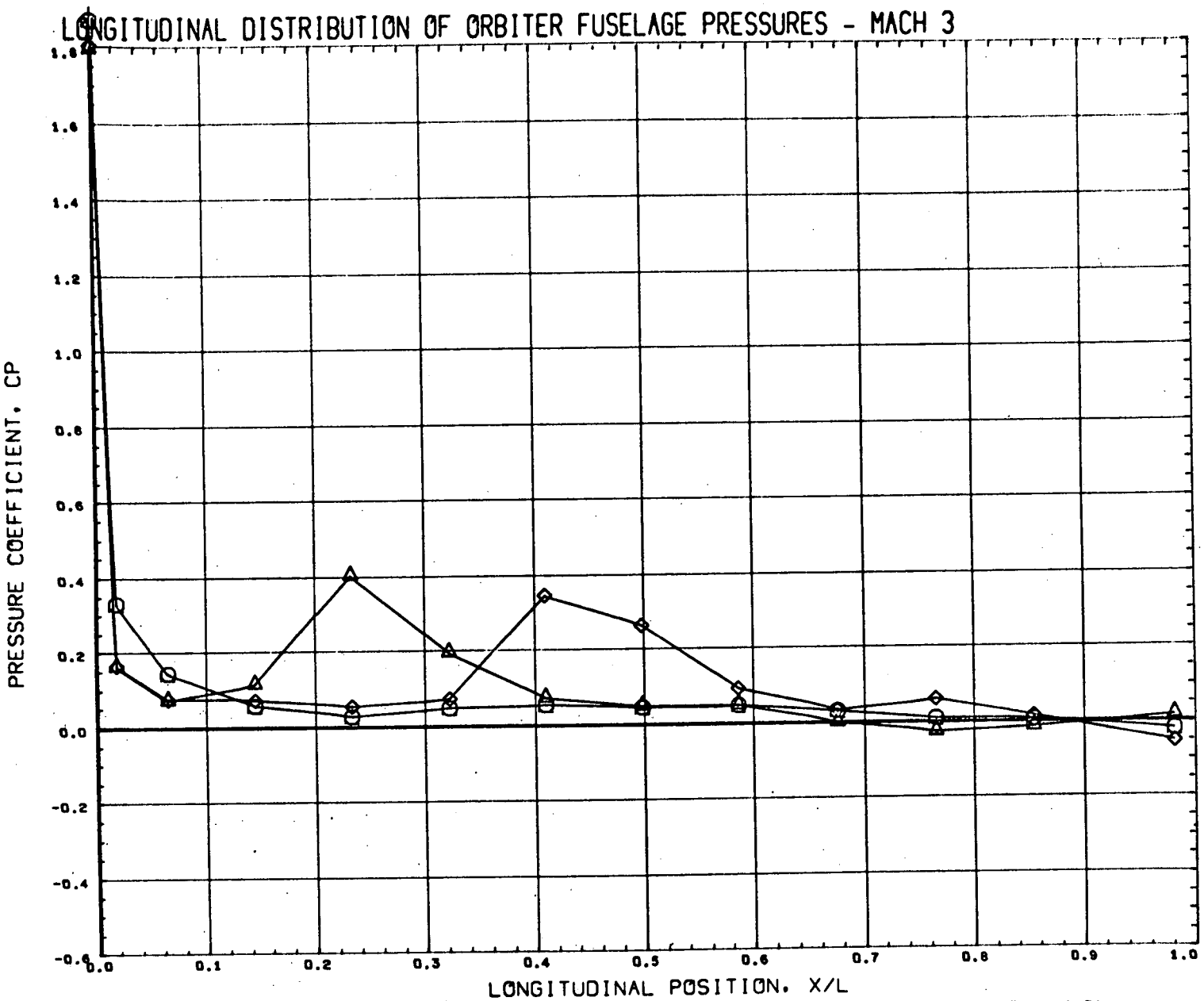
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.120
△	0.102		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

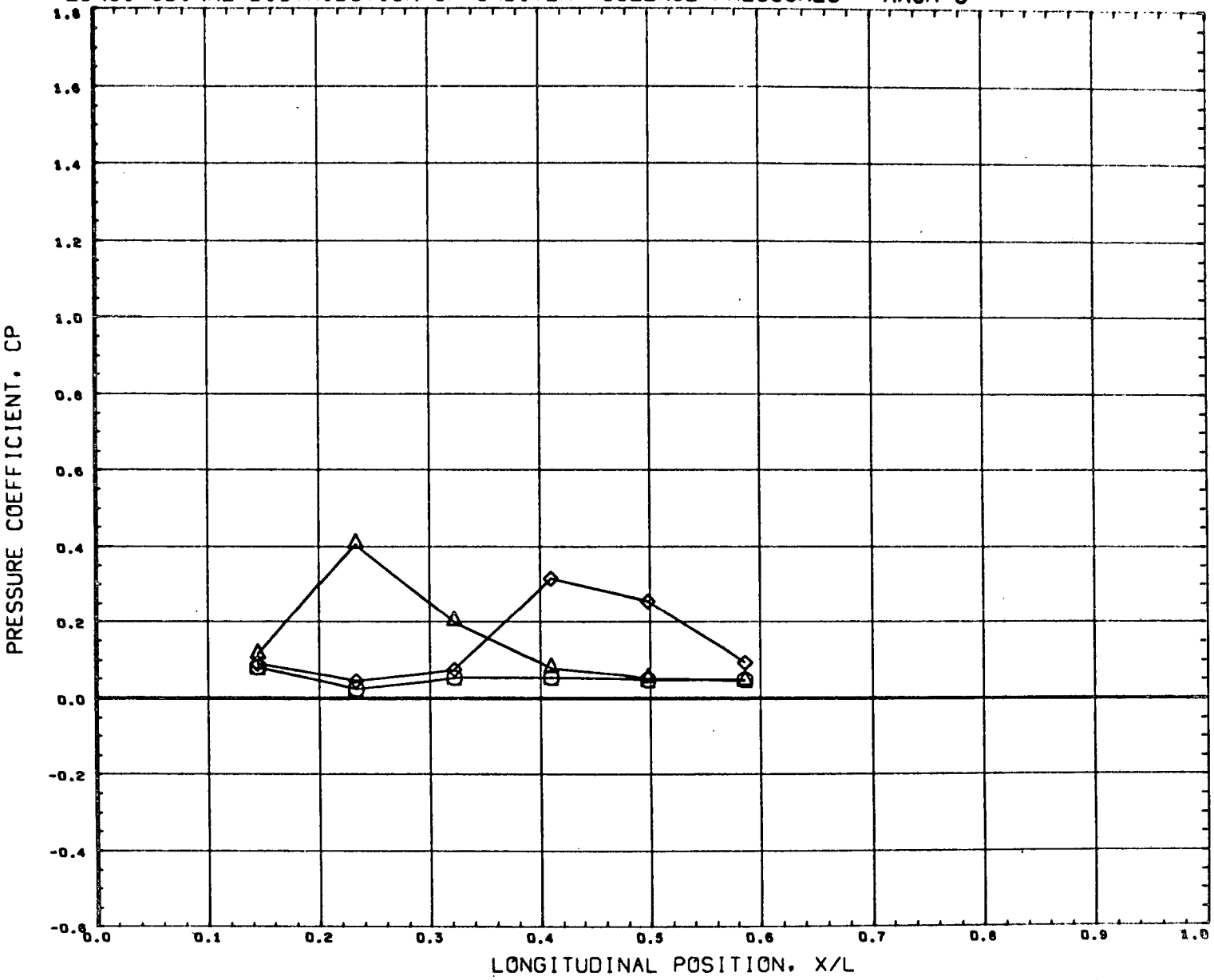
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.076	0.151
△	0.103		
◇	0.225		

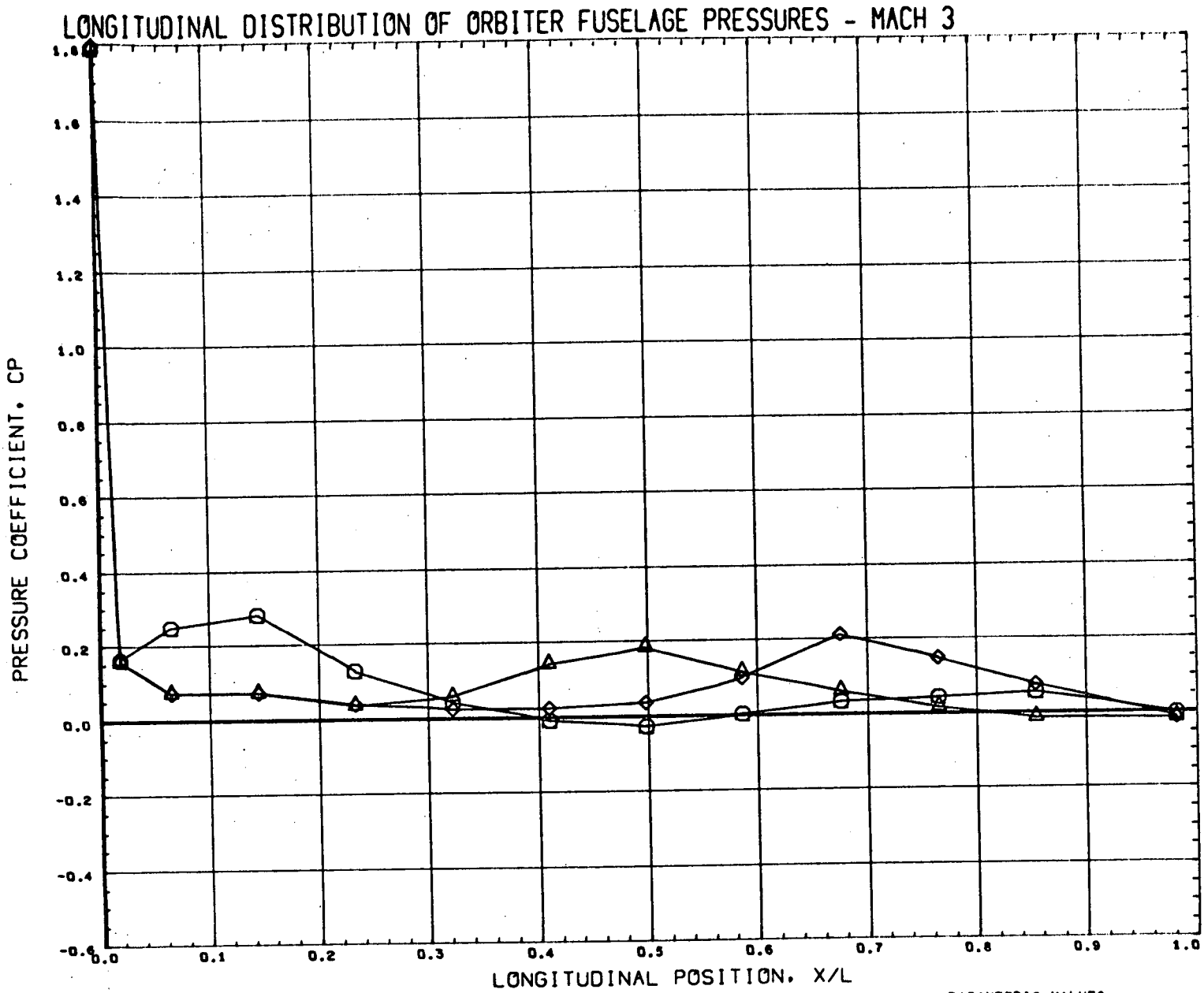
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

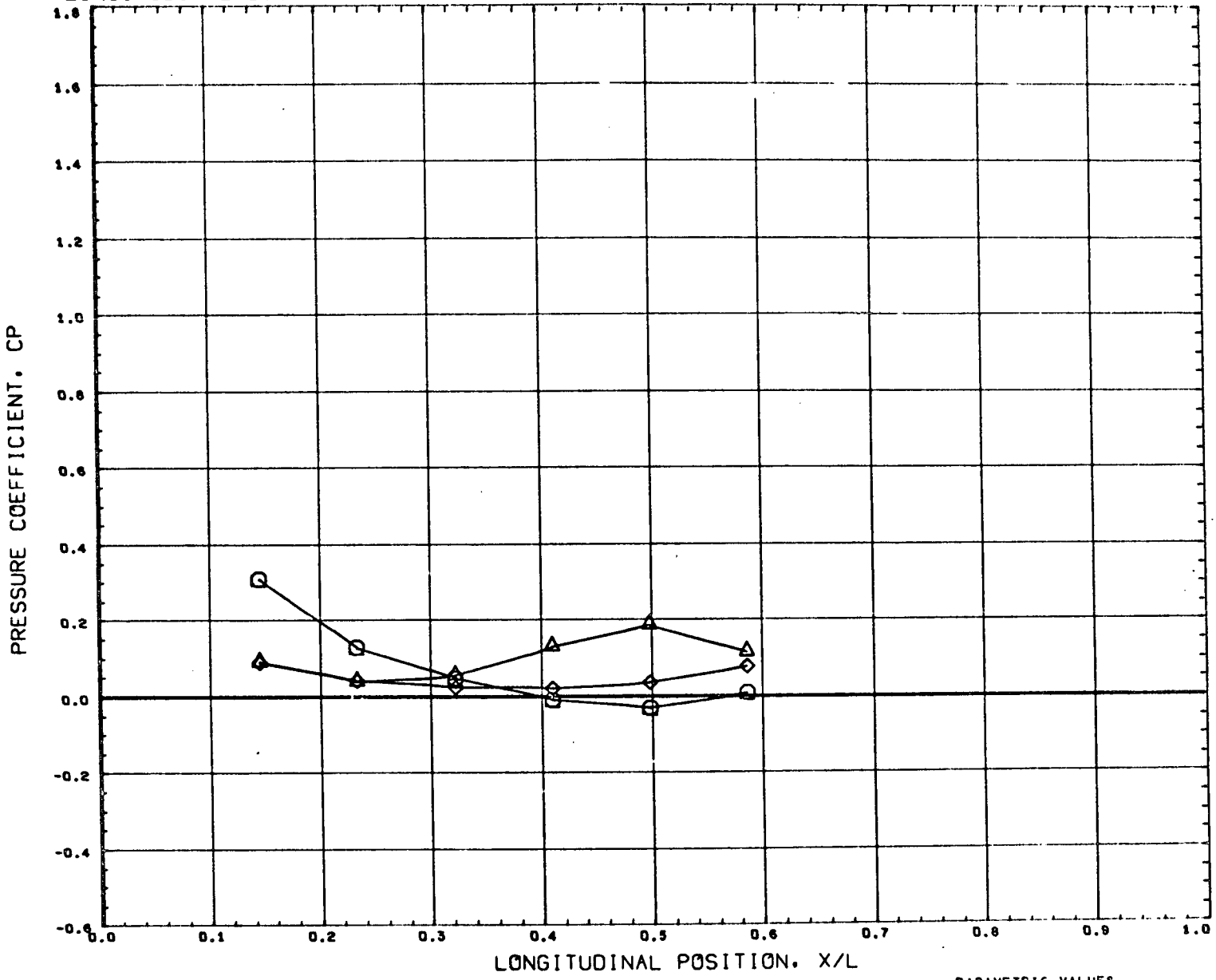
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3

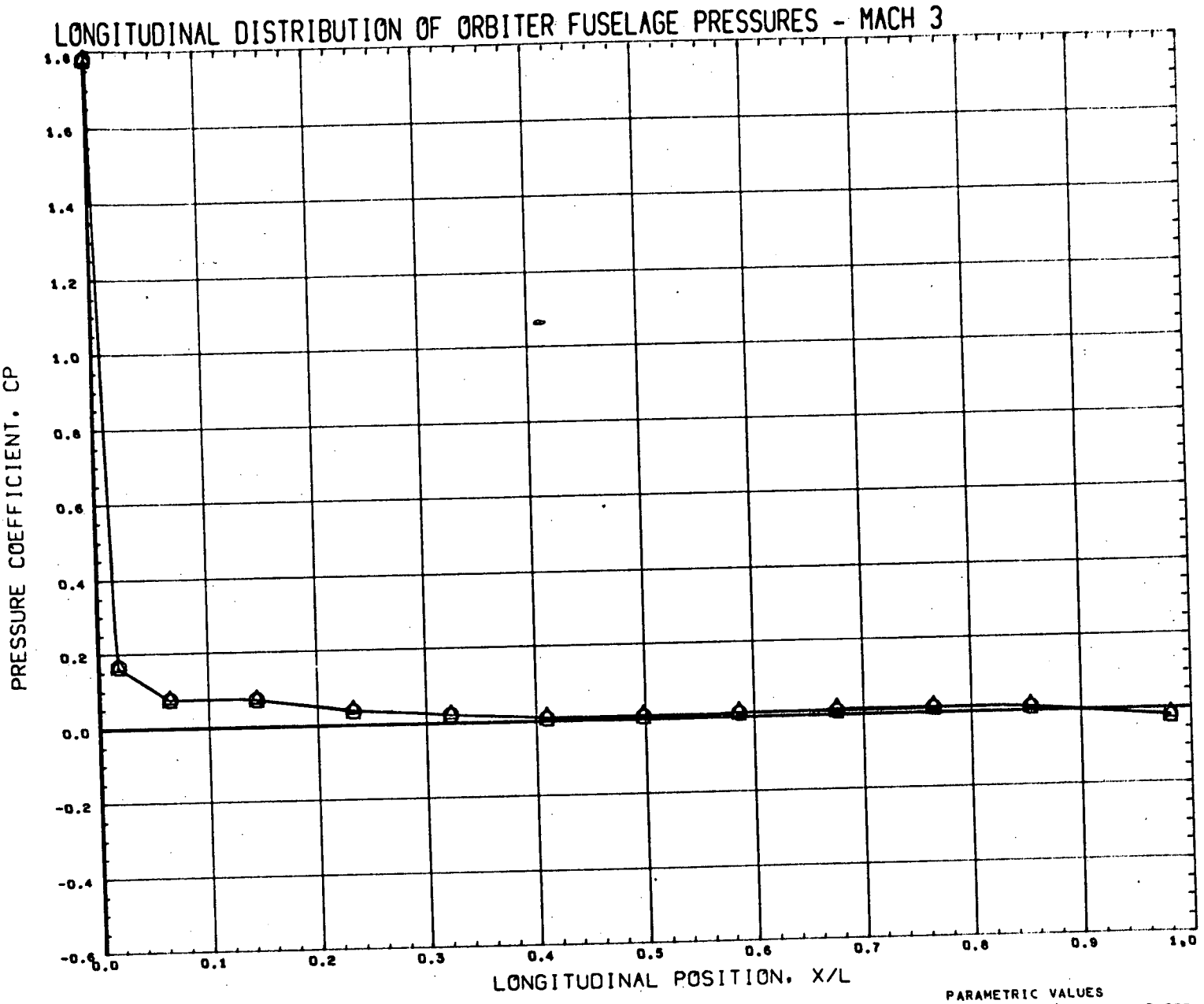


SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.076	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.000	0.908
△	0.479		

PARAMETRIC VALUES

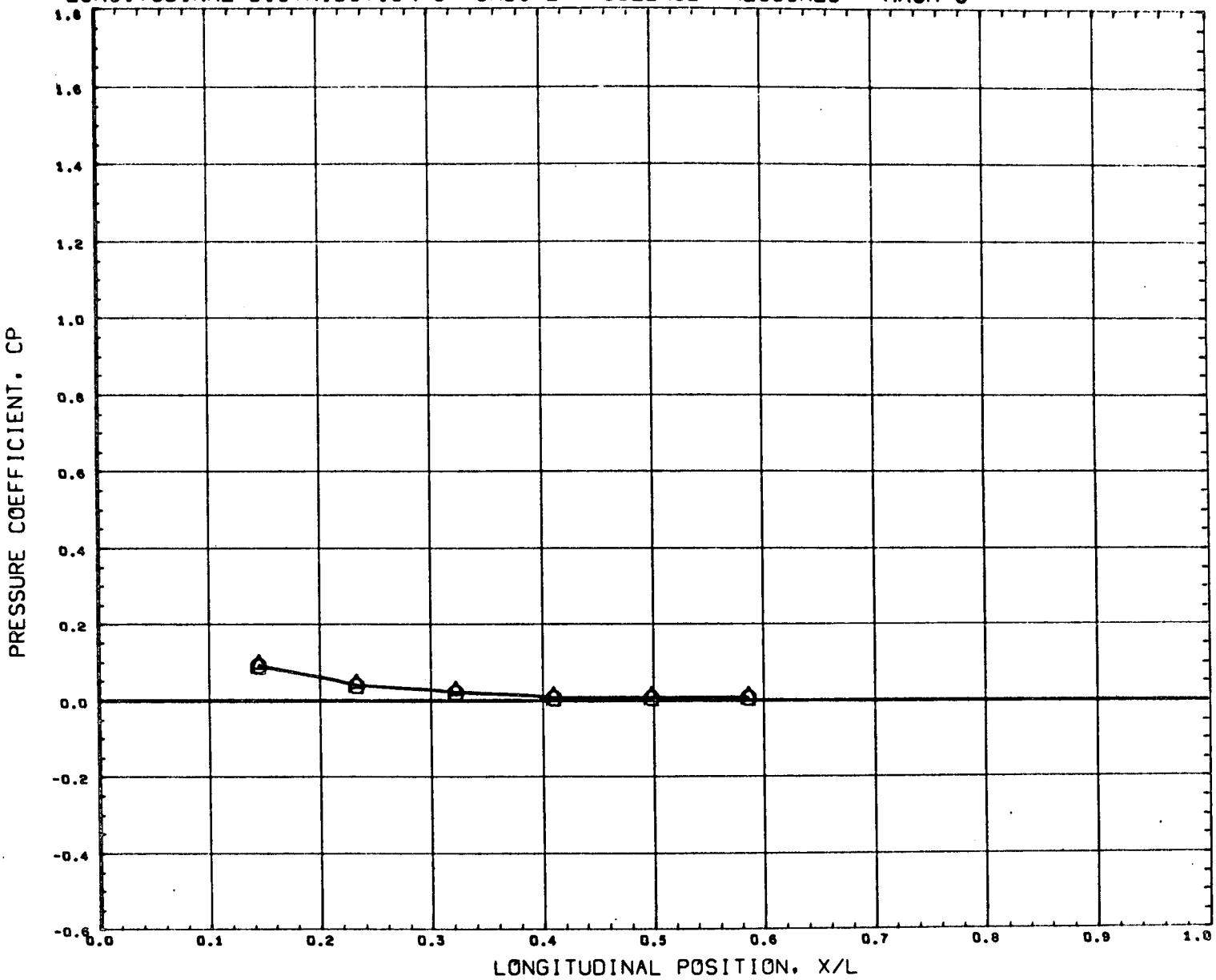
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.076	0.908
△	0.479		

PARAMETRIC VALUES

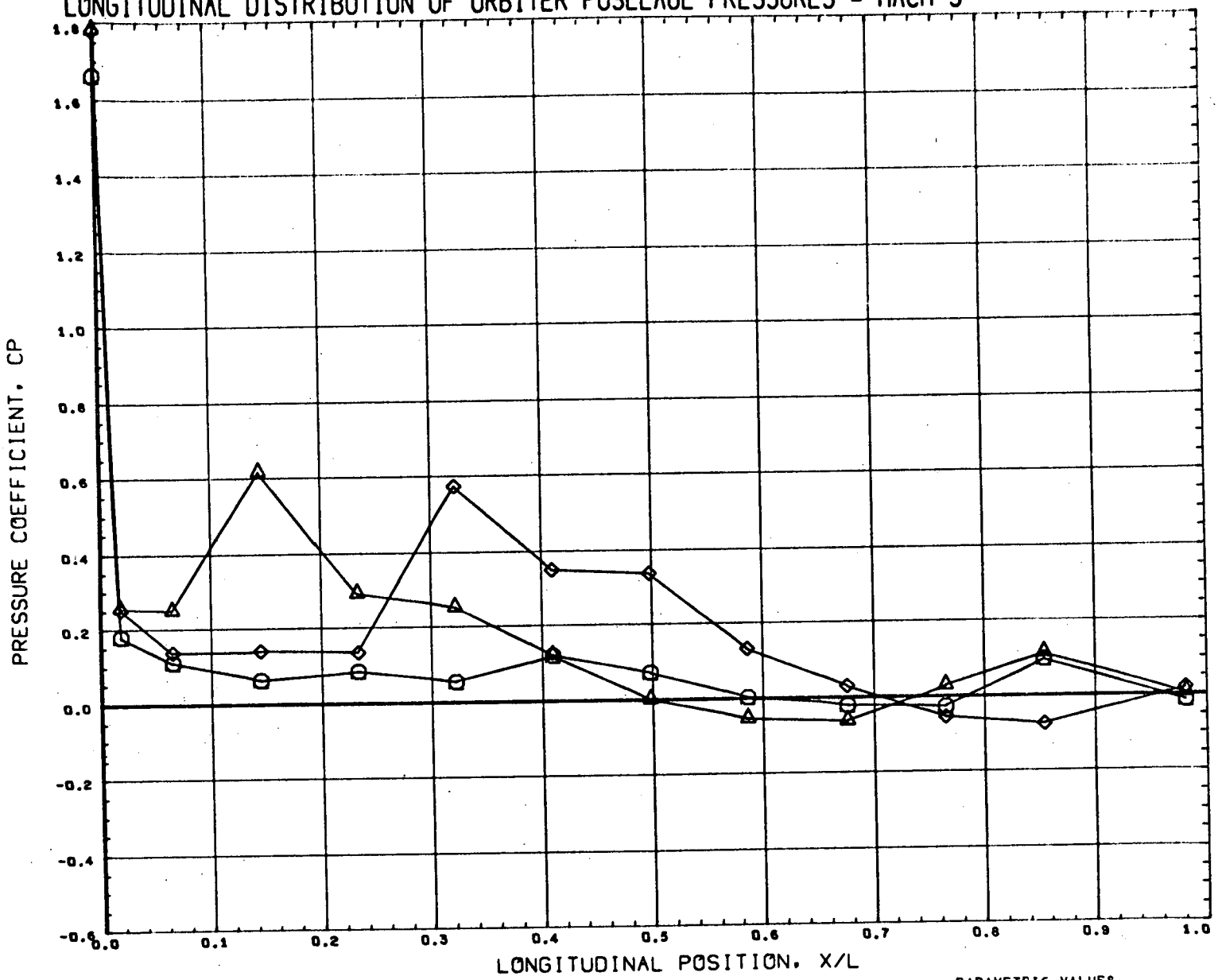
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

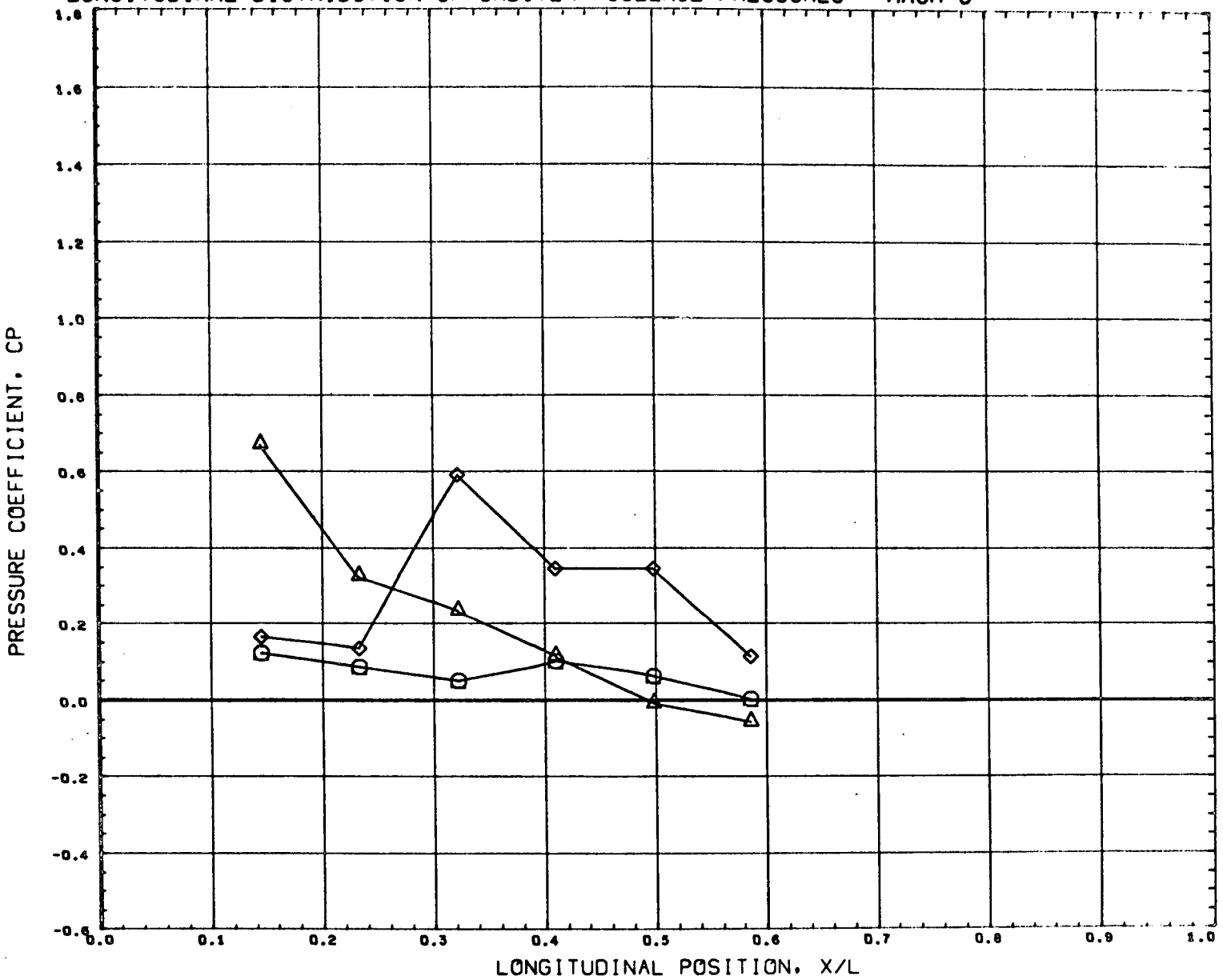
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.076	0.120
△	0.103		
◇	0.226		

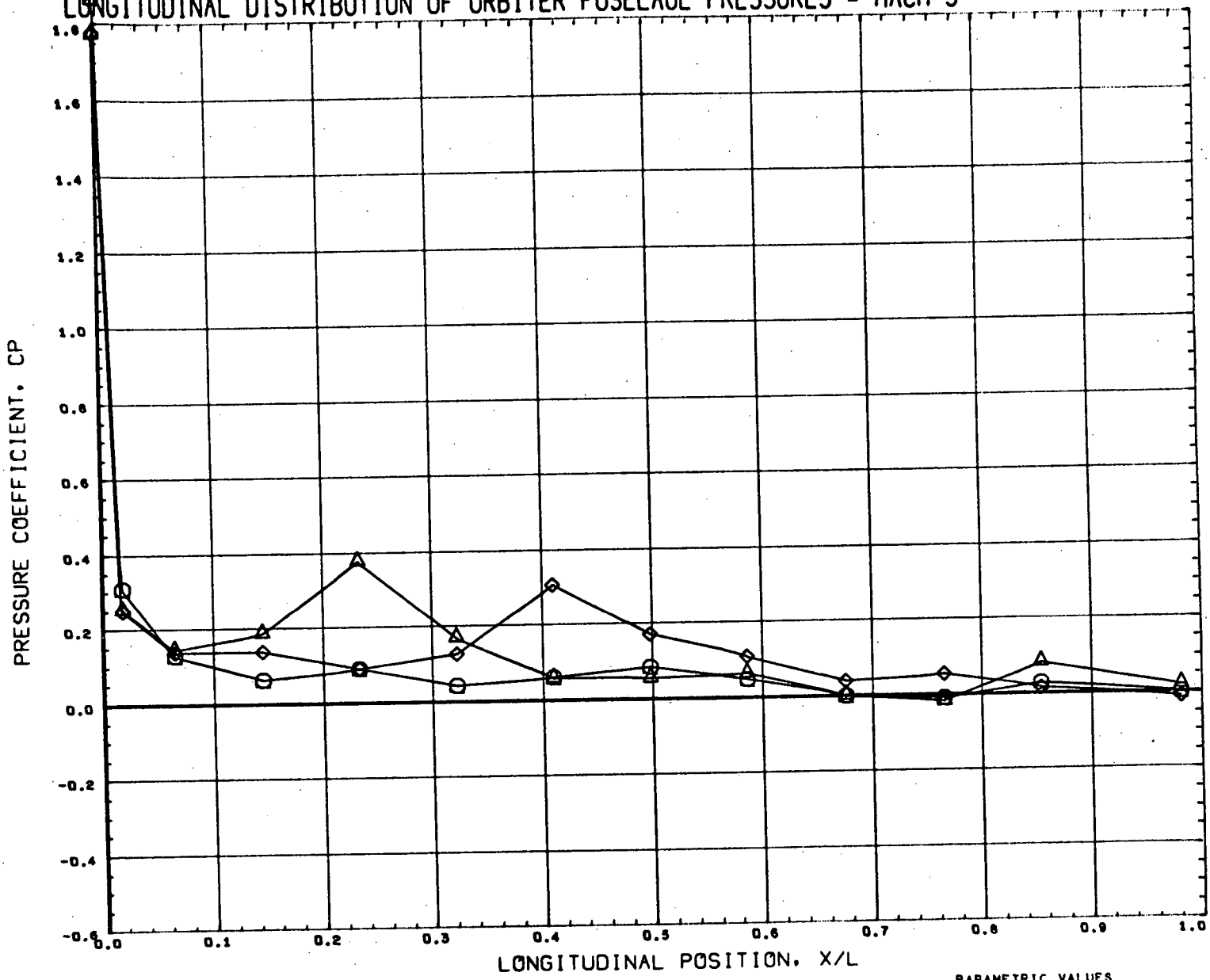
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY) •FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

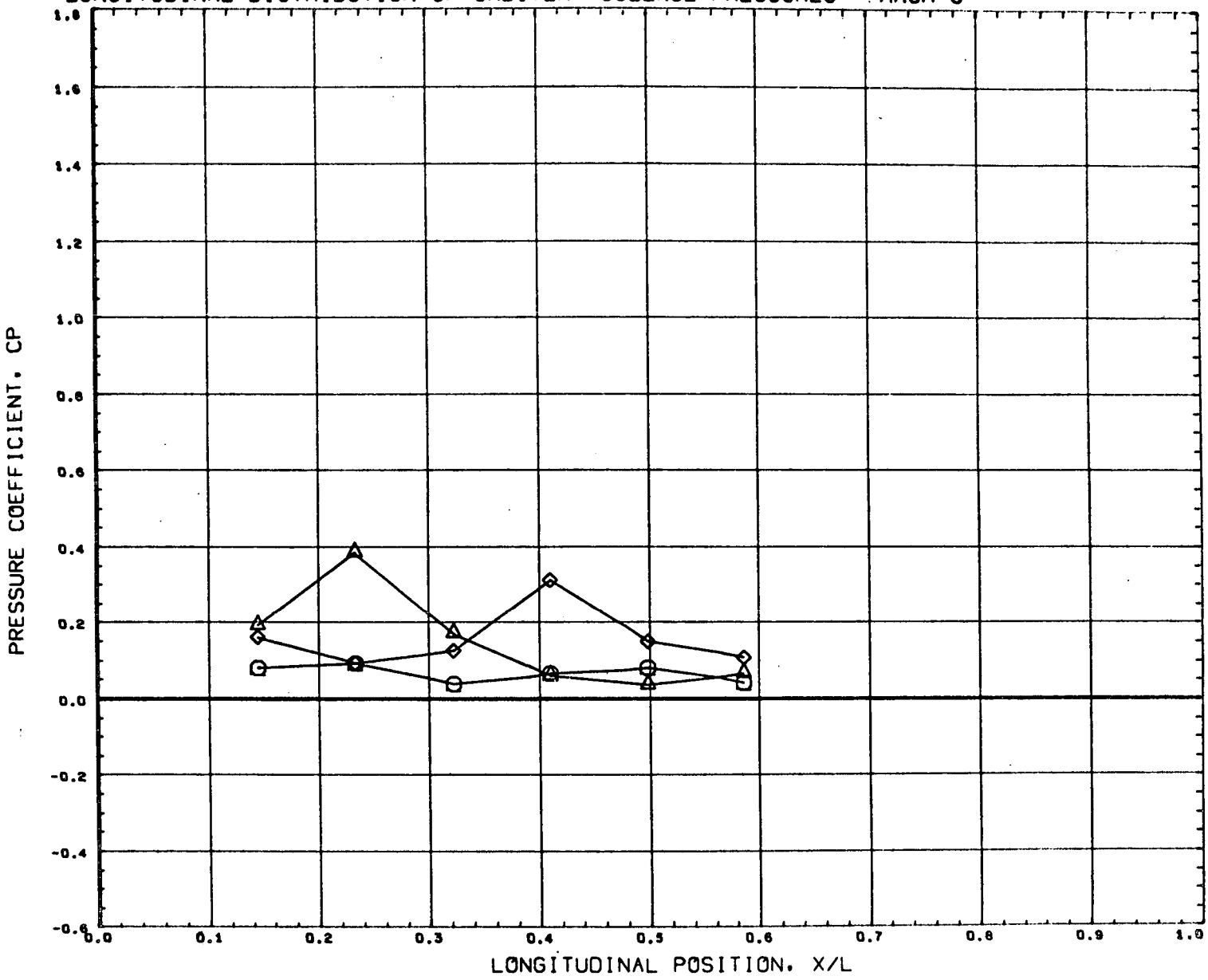
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.076	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

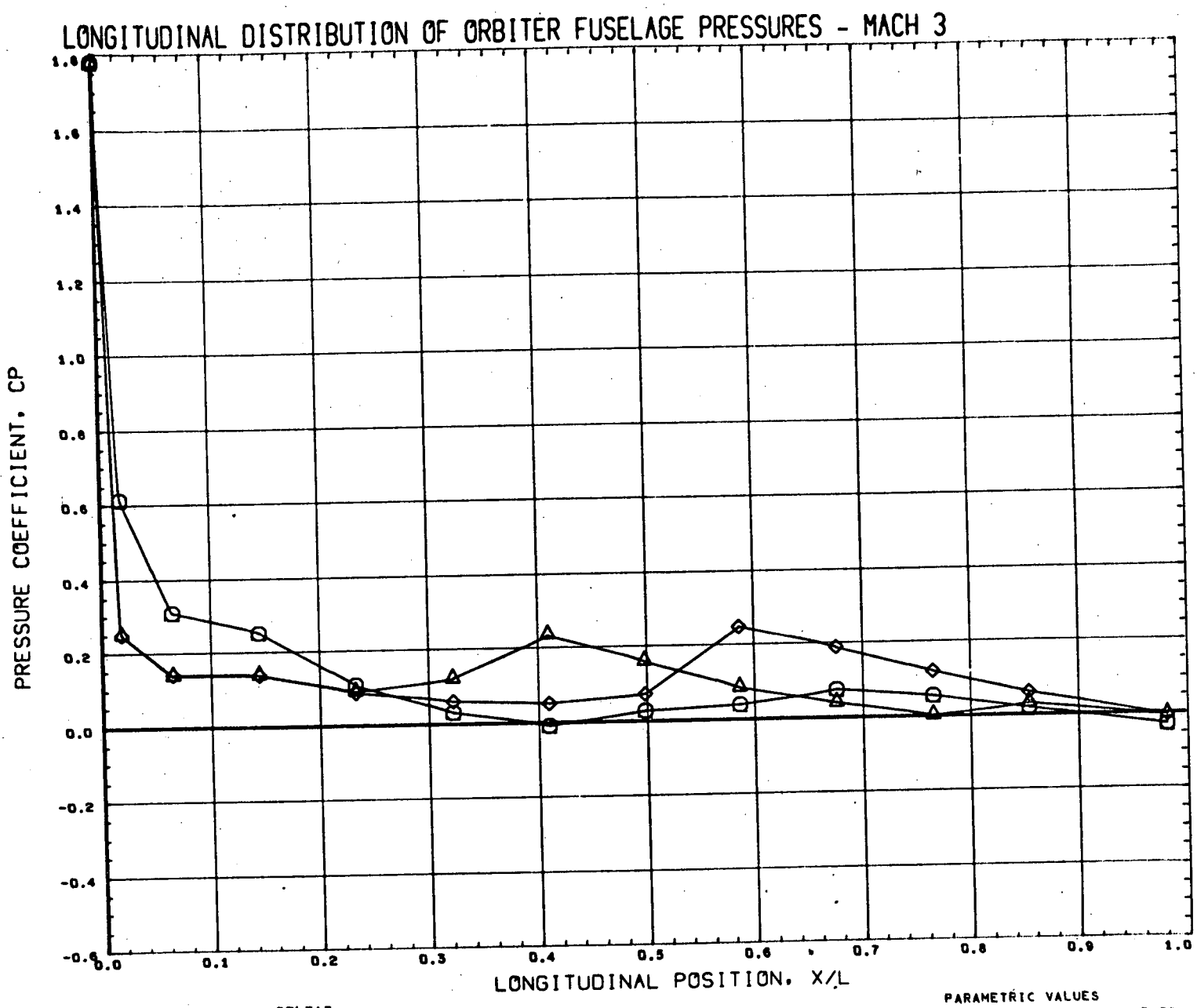
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

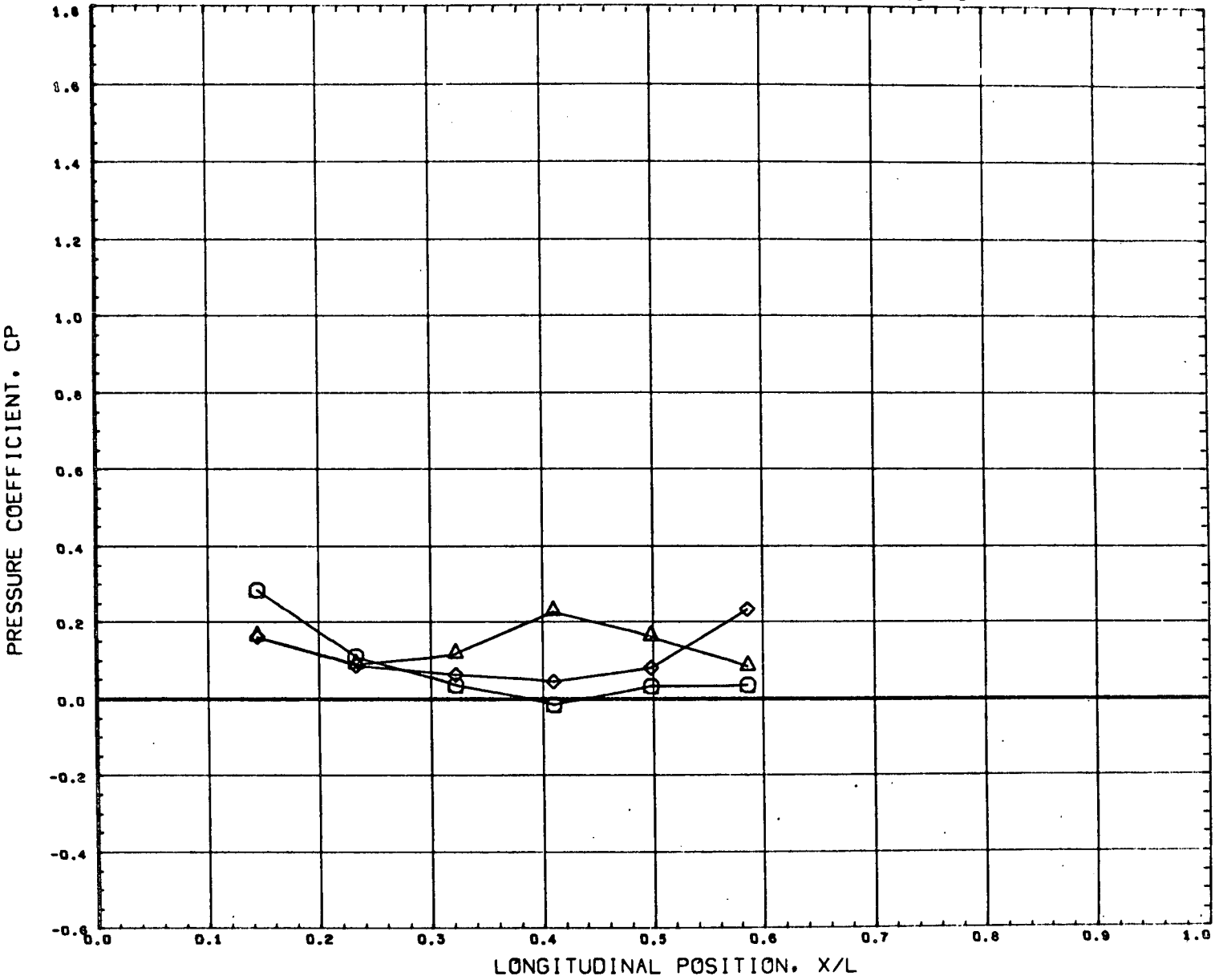
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.076	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

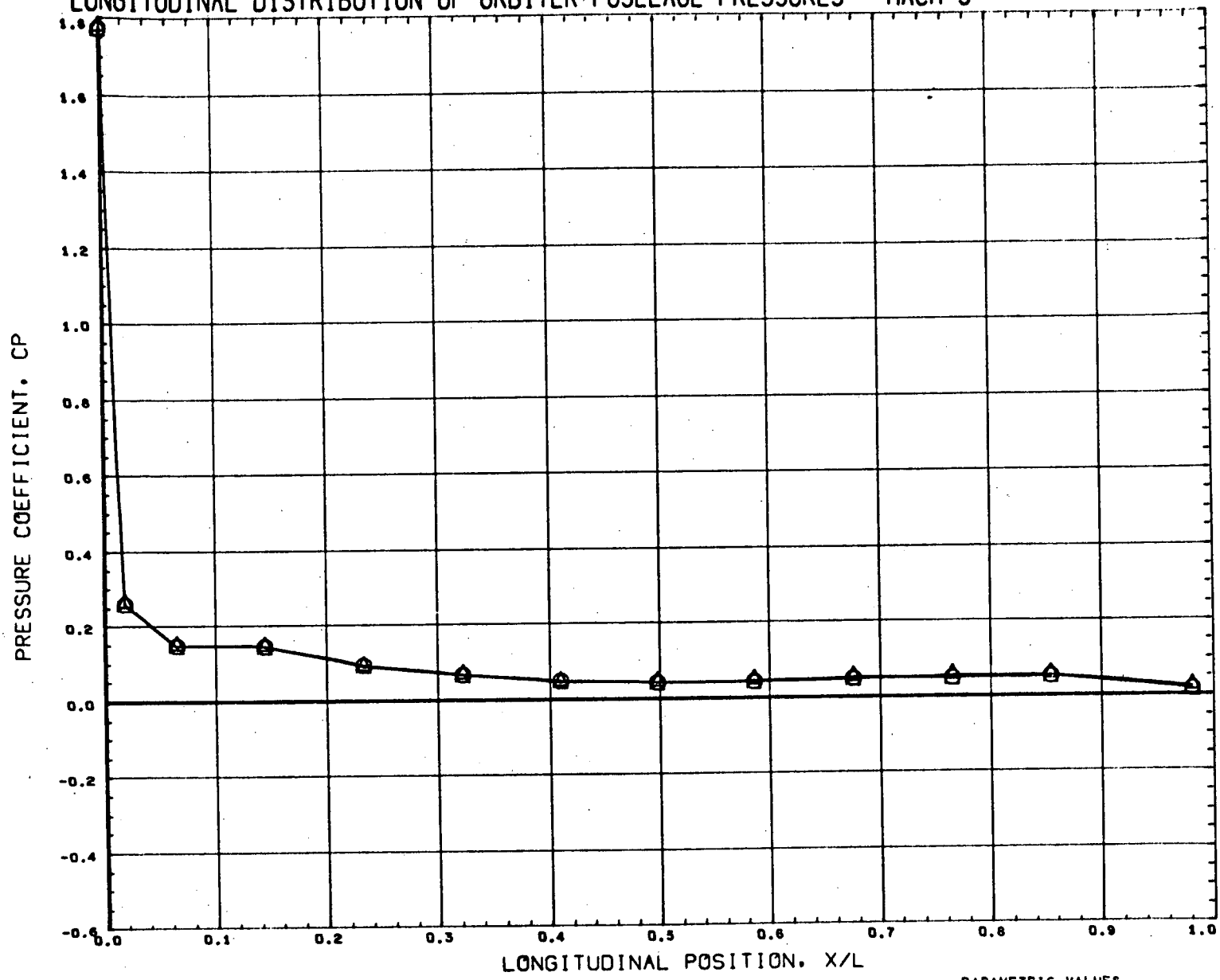
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.000	0.908
△	0.521		

PARAMETRIC VALUES

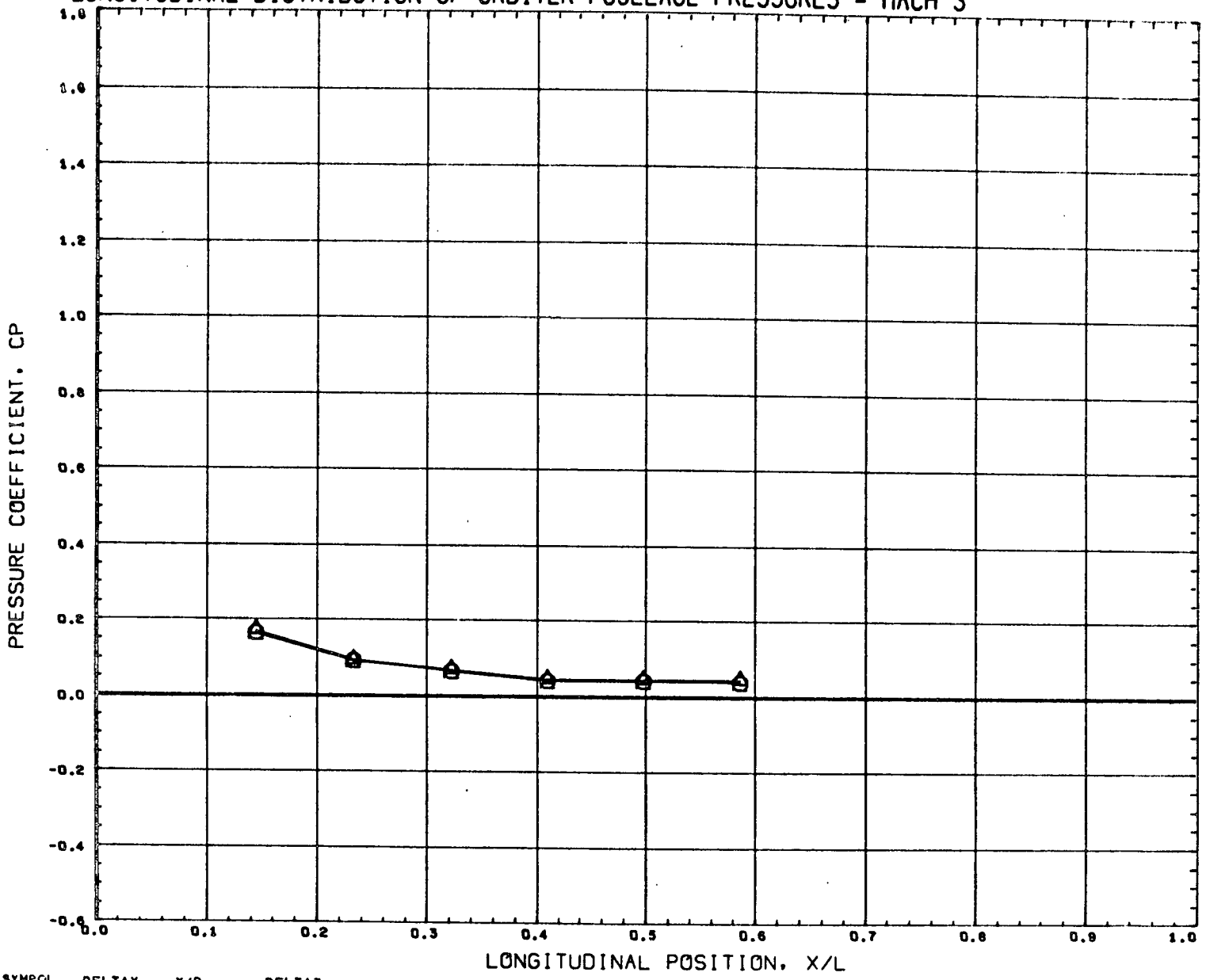
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



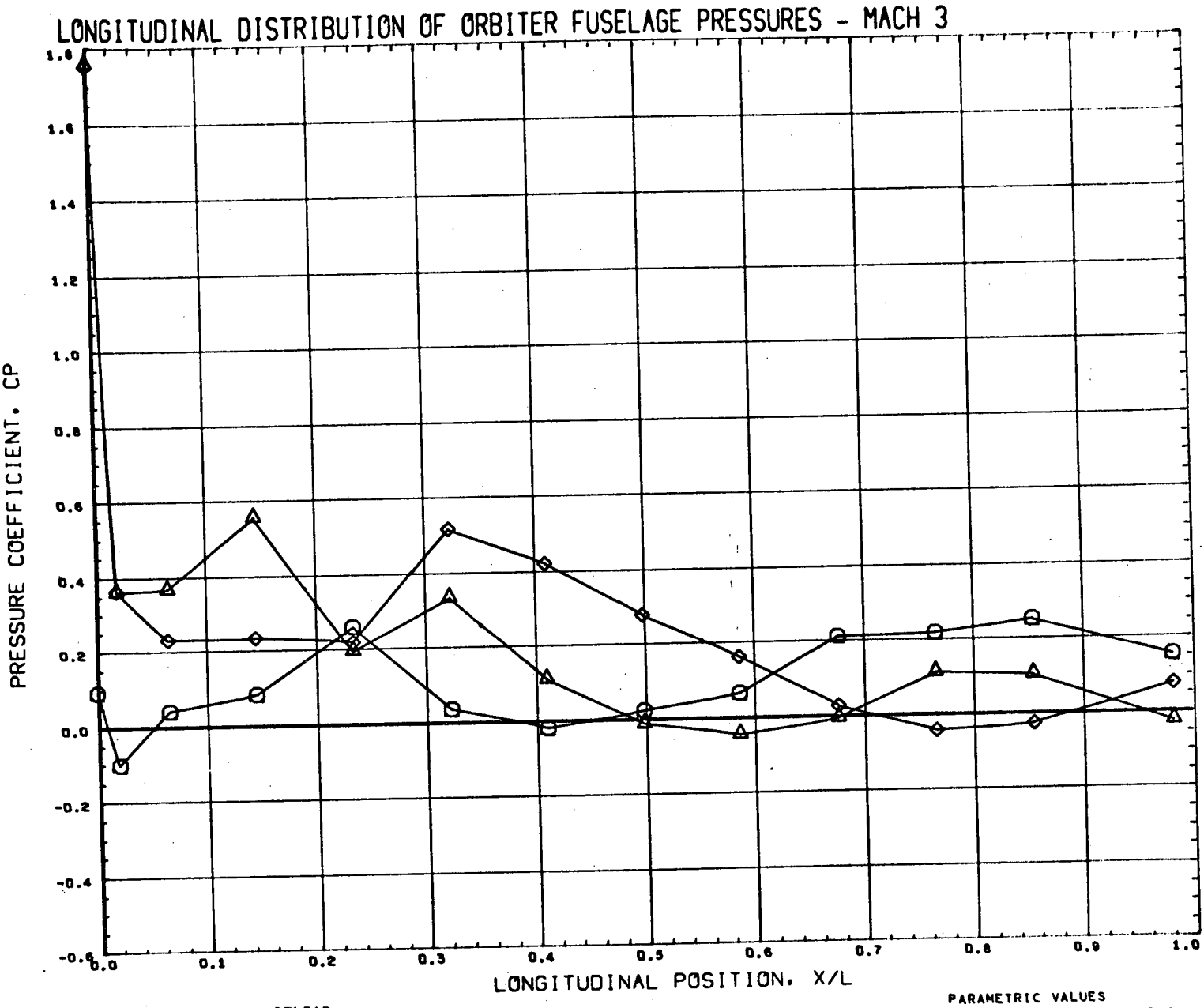
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.076	0.908
△	0.521		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

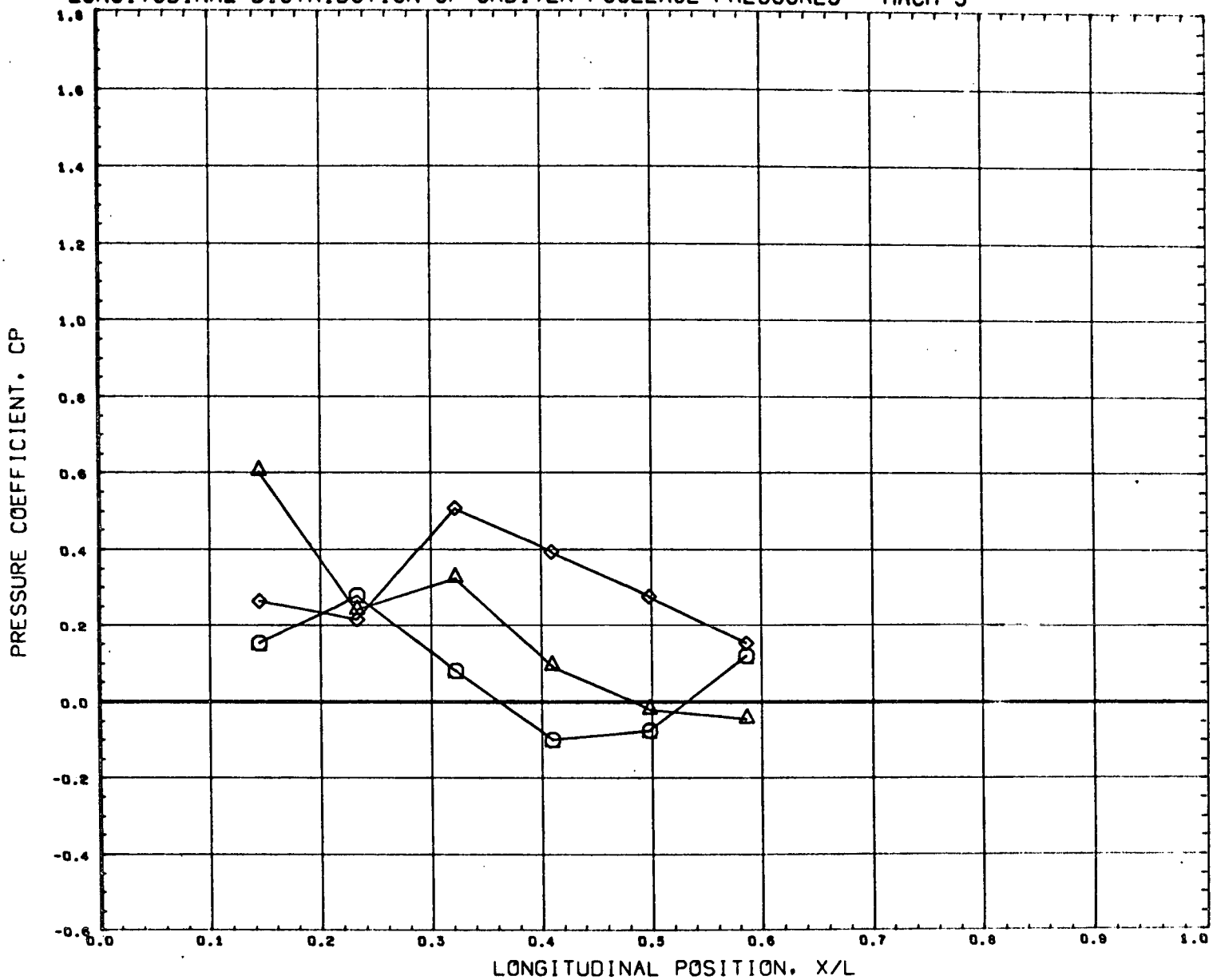
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



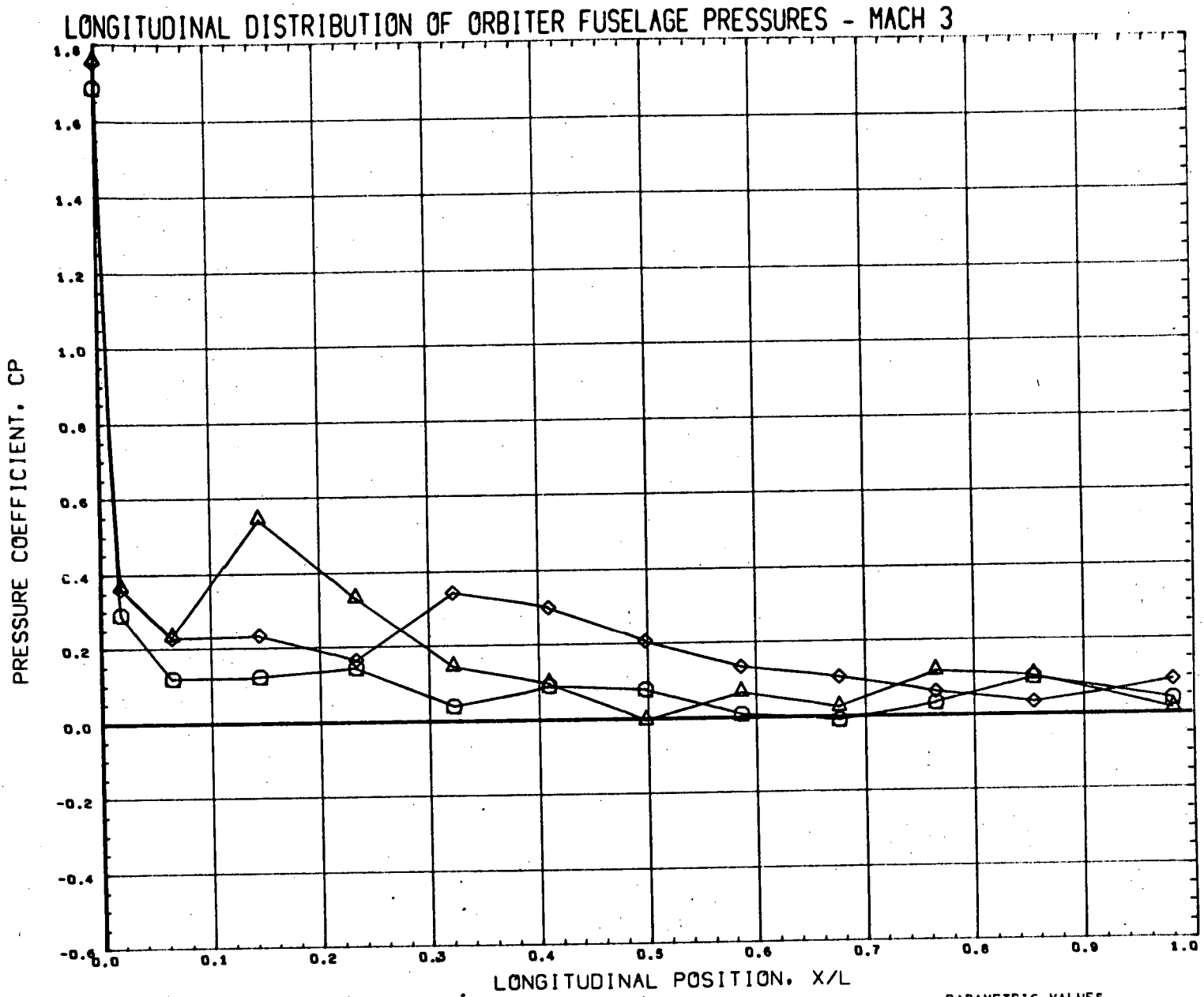
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.076	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY) •FT8315• PAGE 34



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

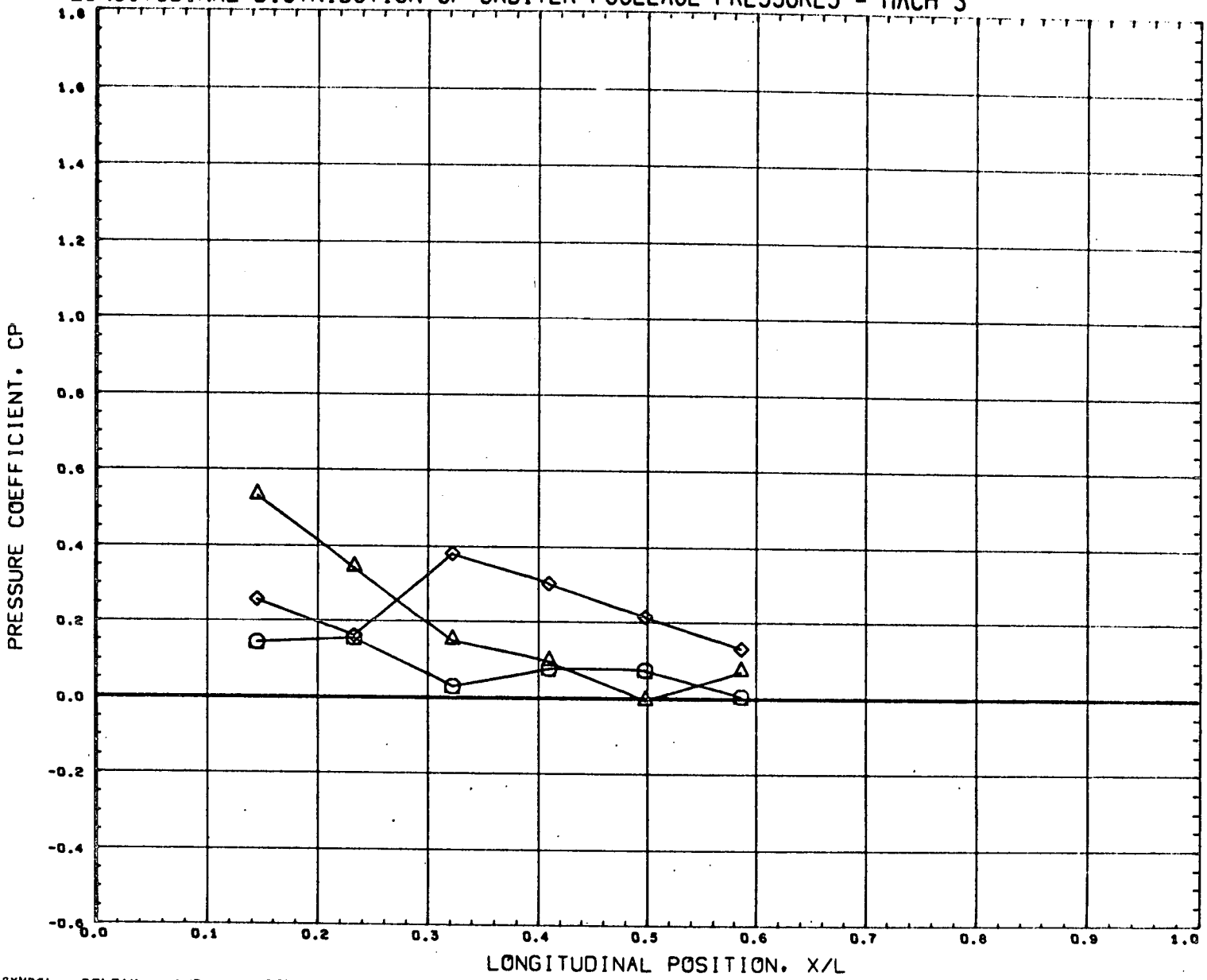
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



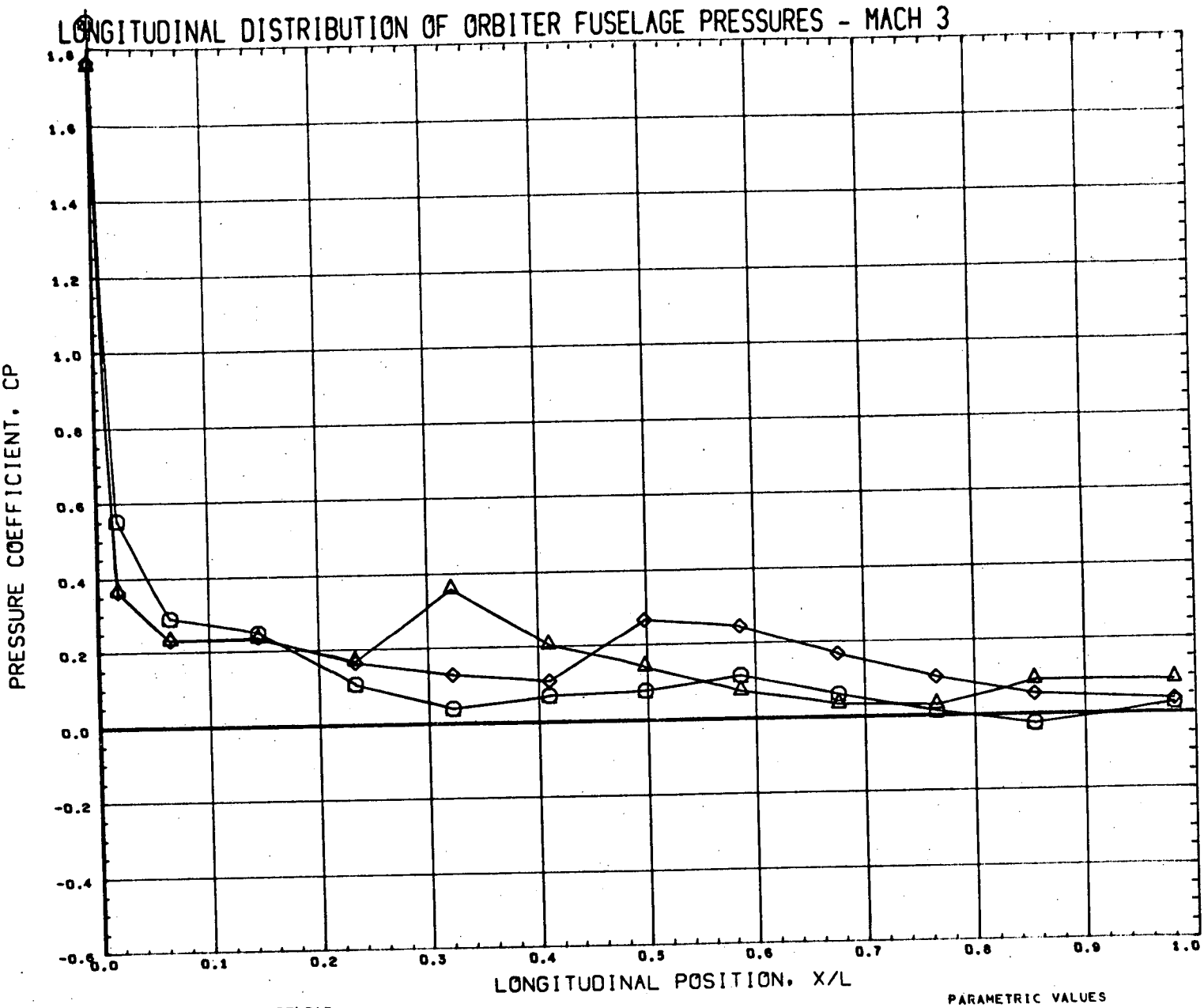
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

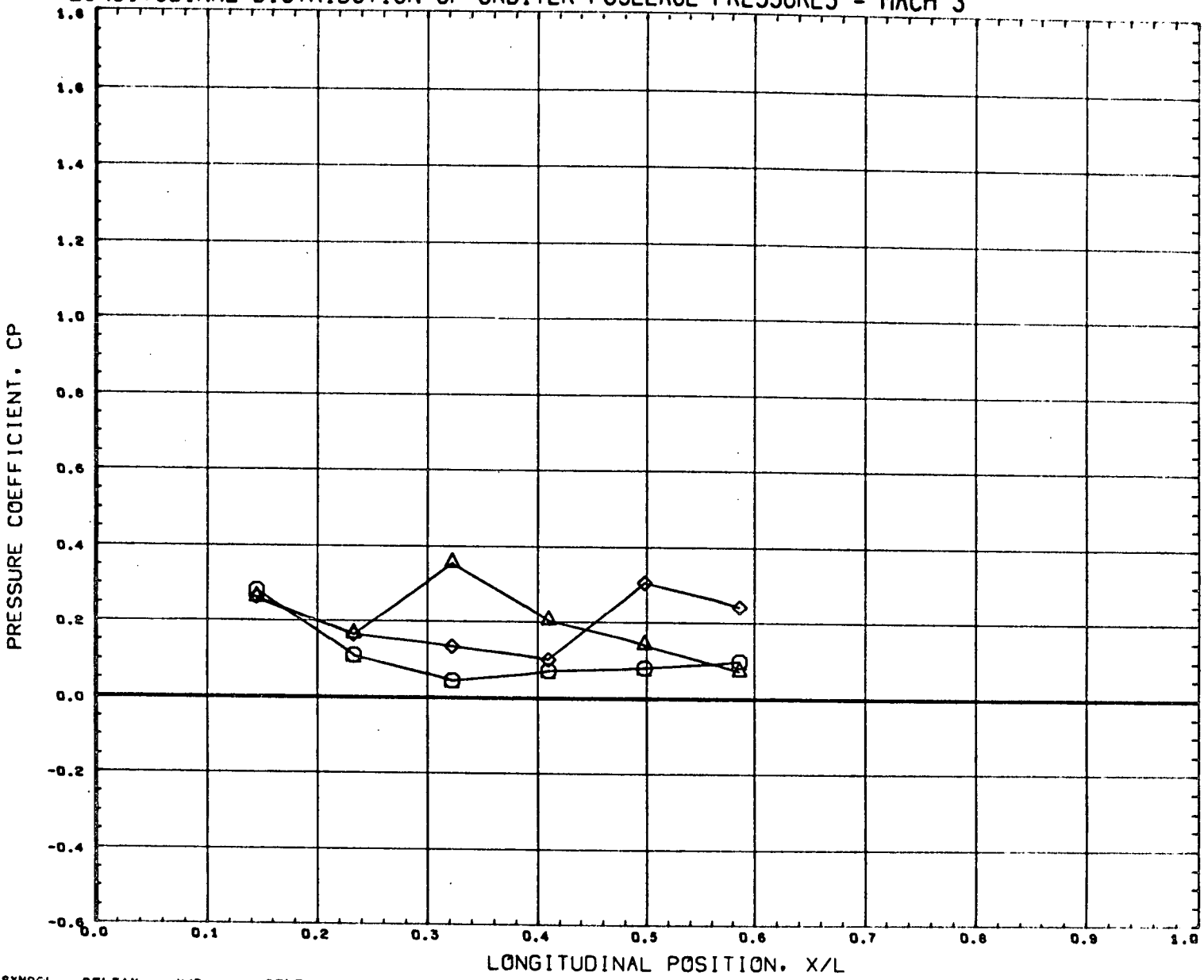
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



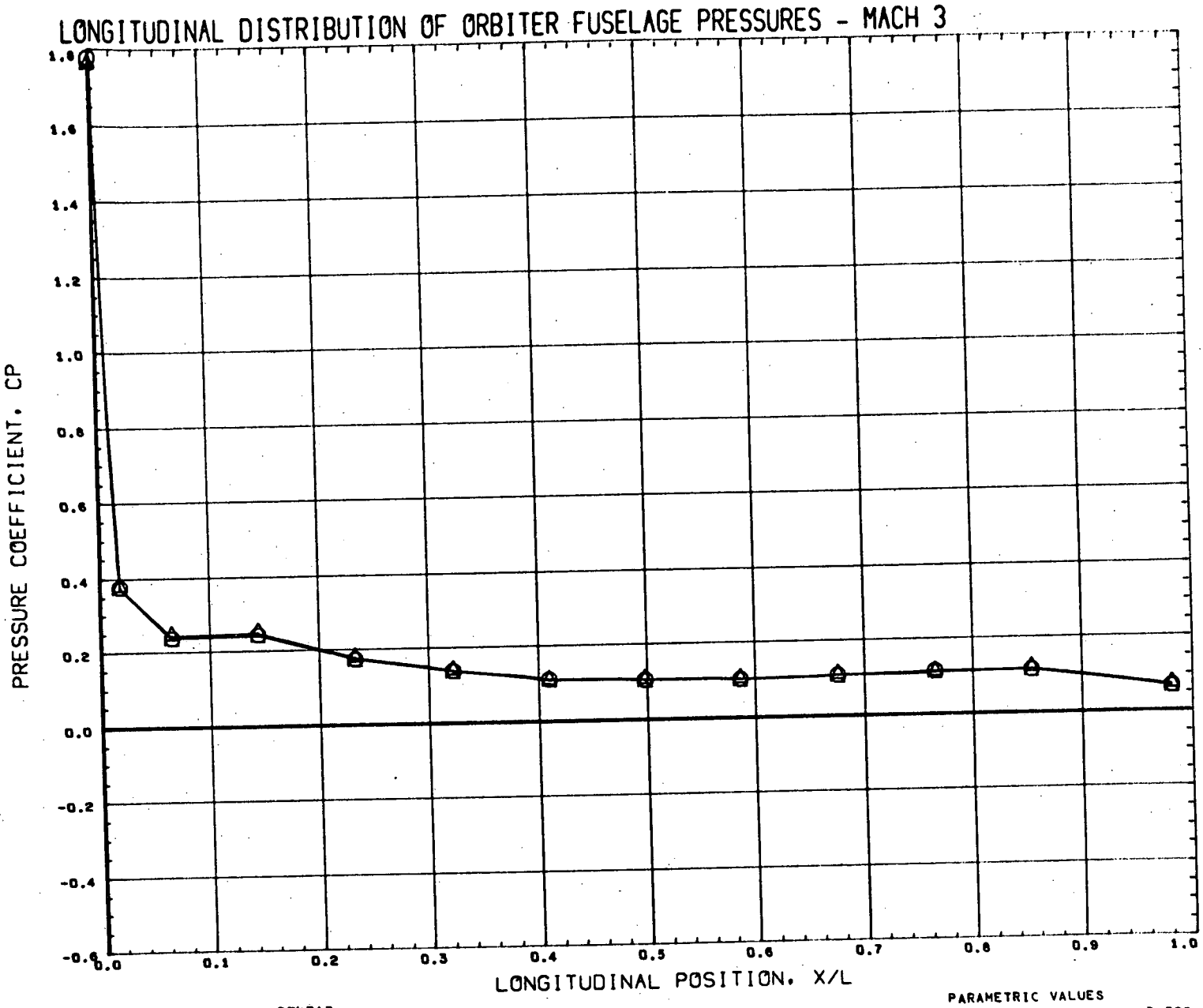
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.076	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.000	0.908
△	0.518		

PARAMETRIC VALUES

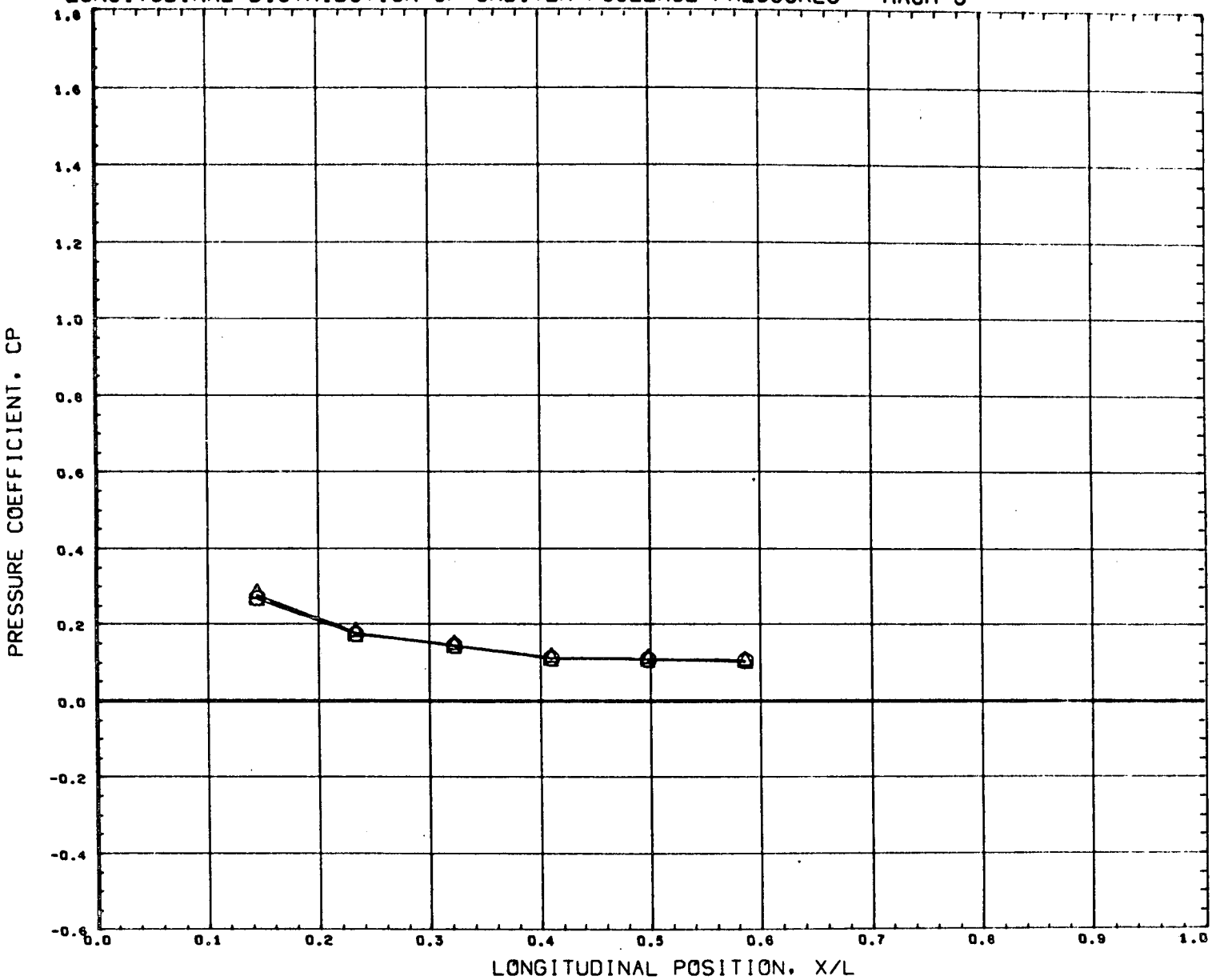
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3

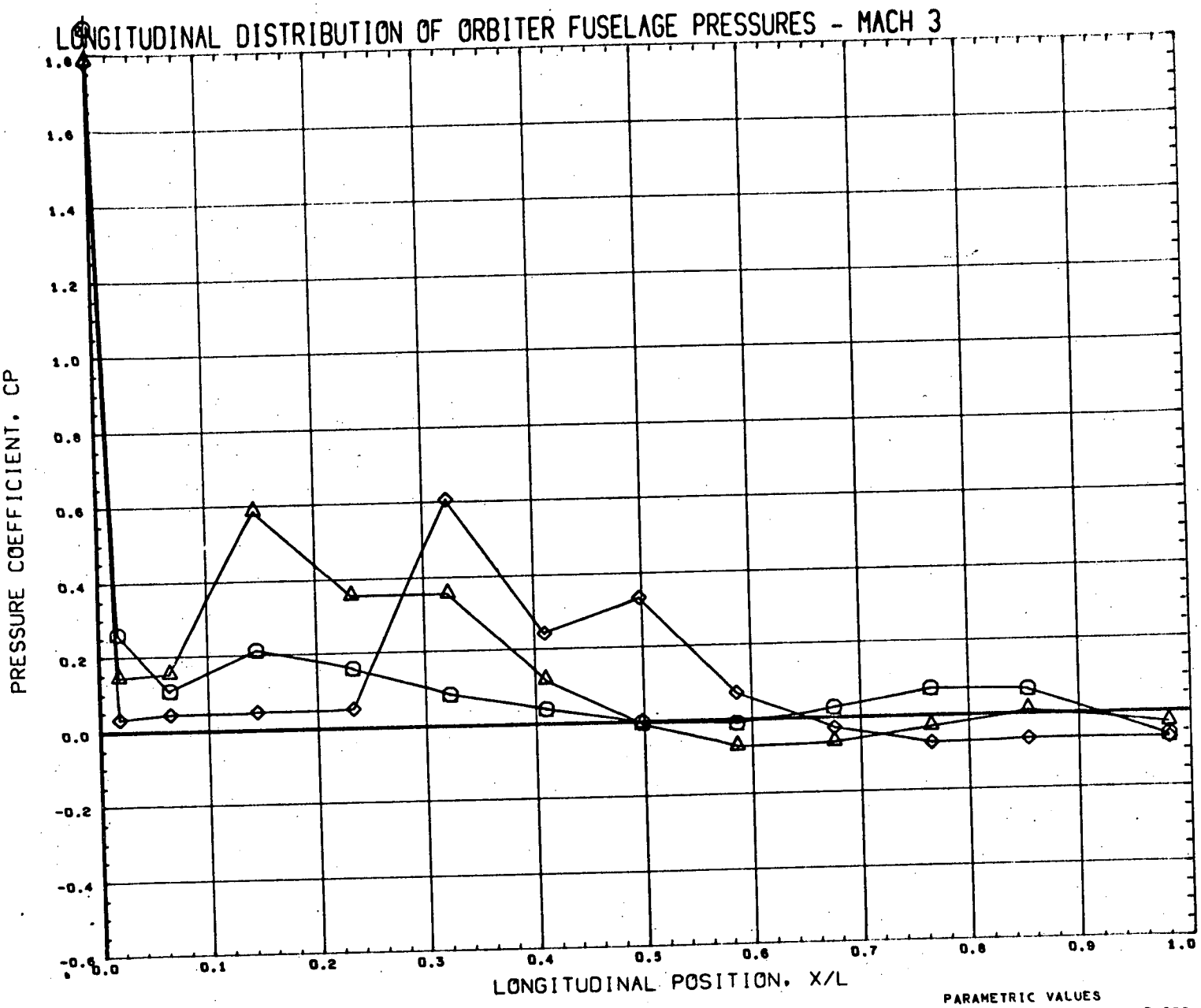


SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.076	0.908
△	0.518		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

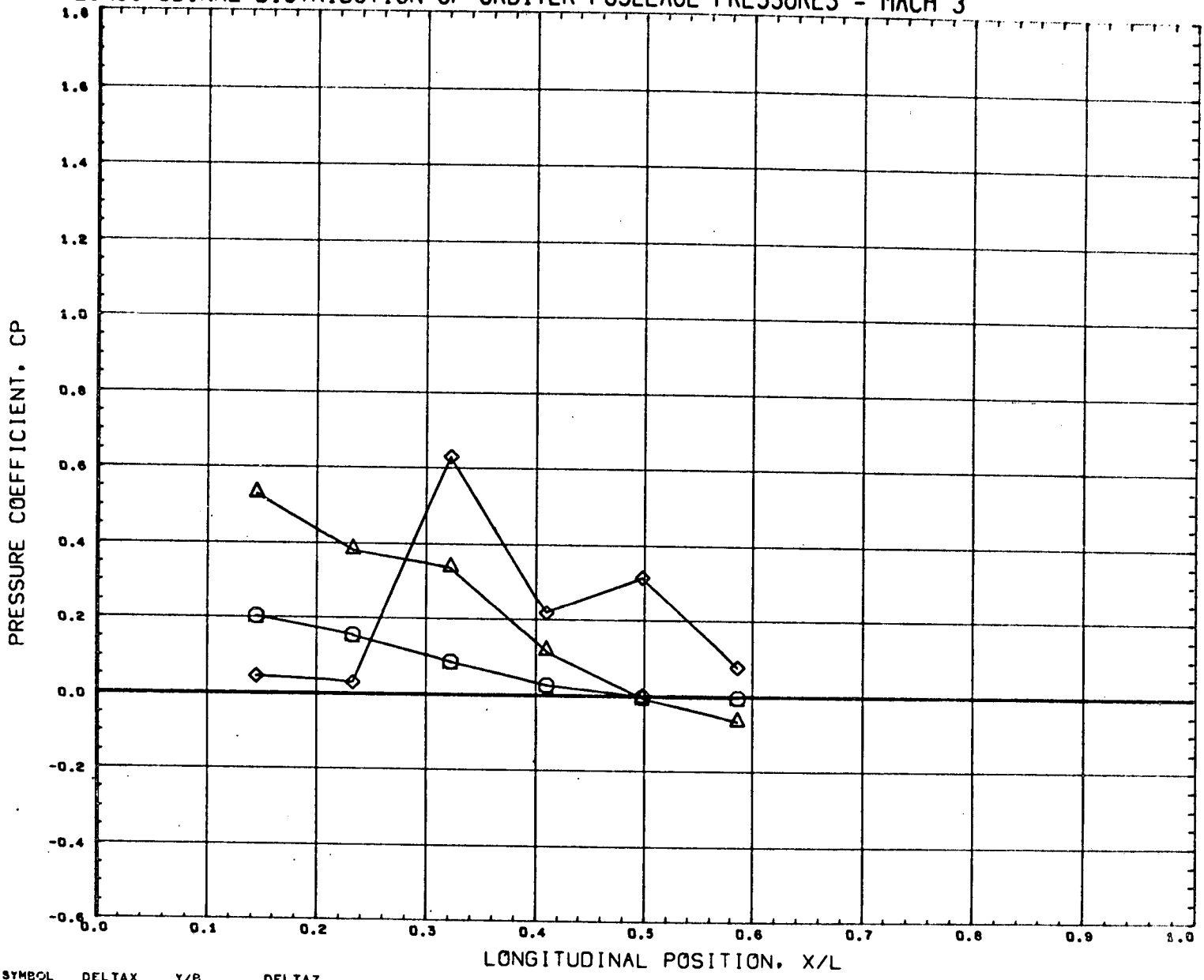
ALPHAB	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



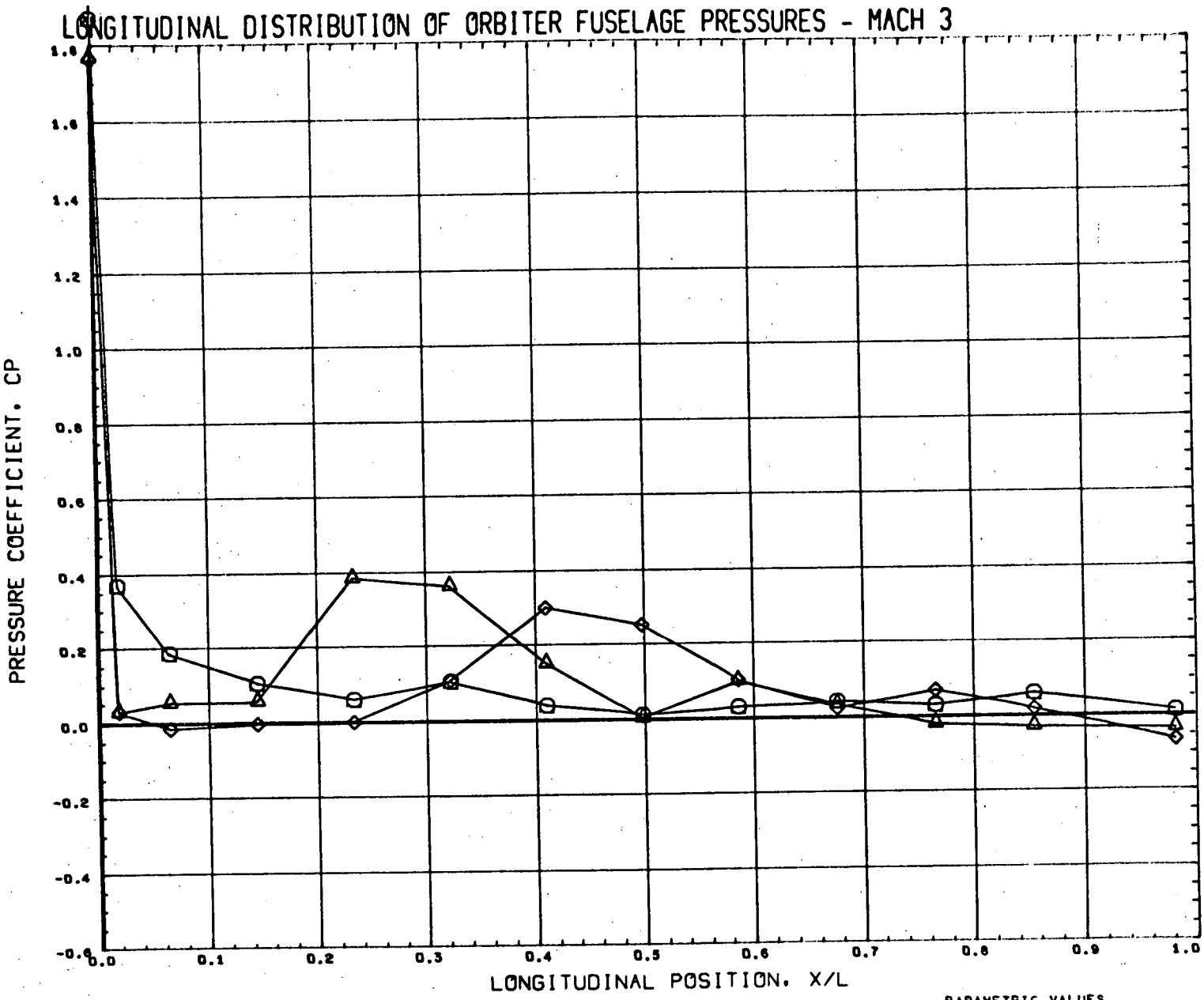
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

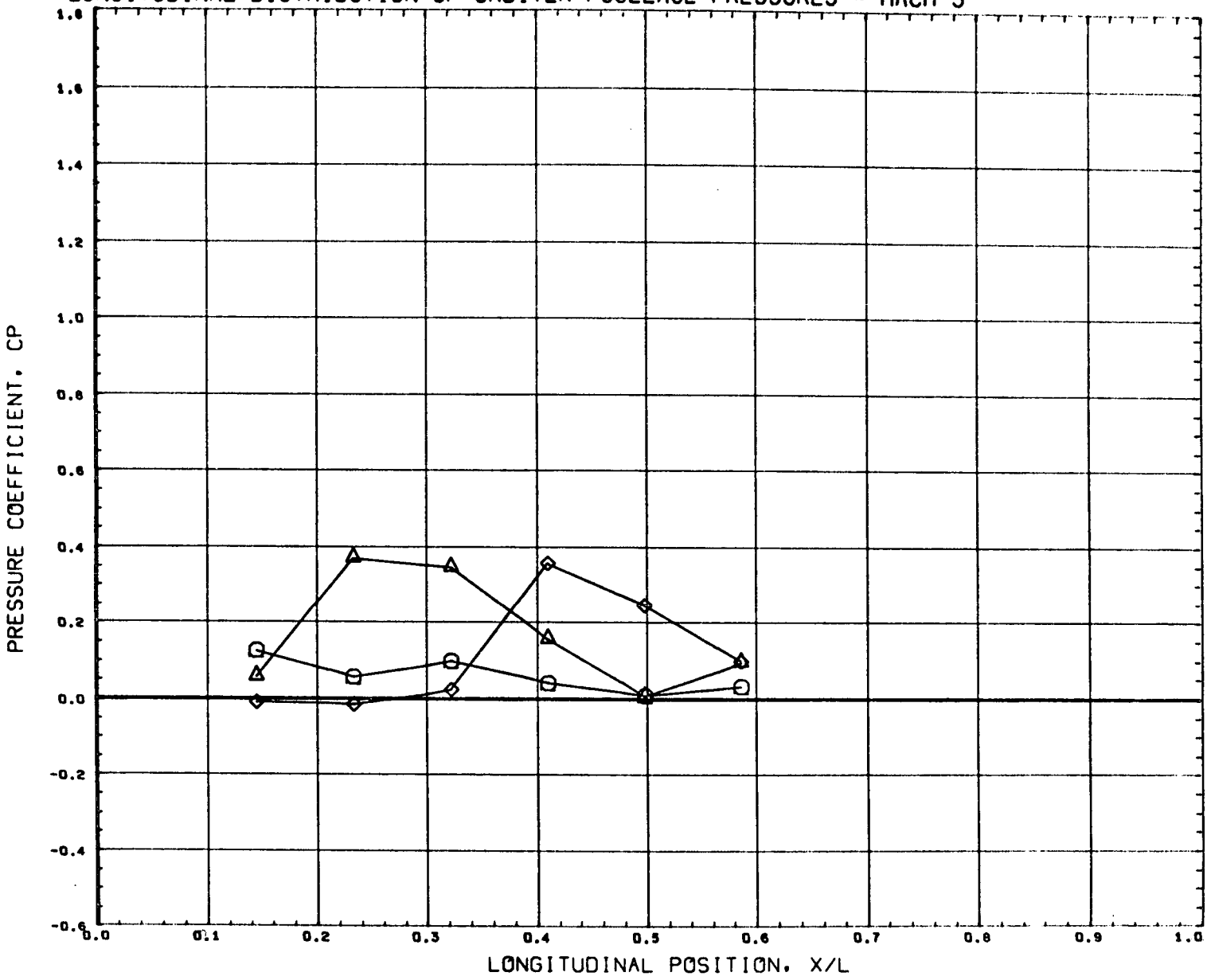
ALPHAB	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.076	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

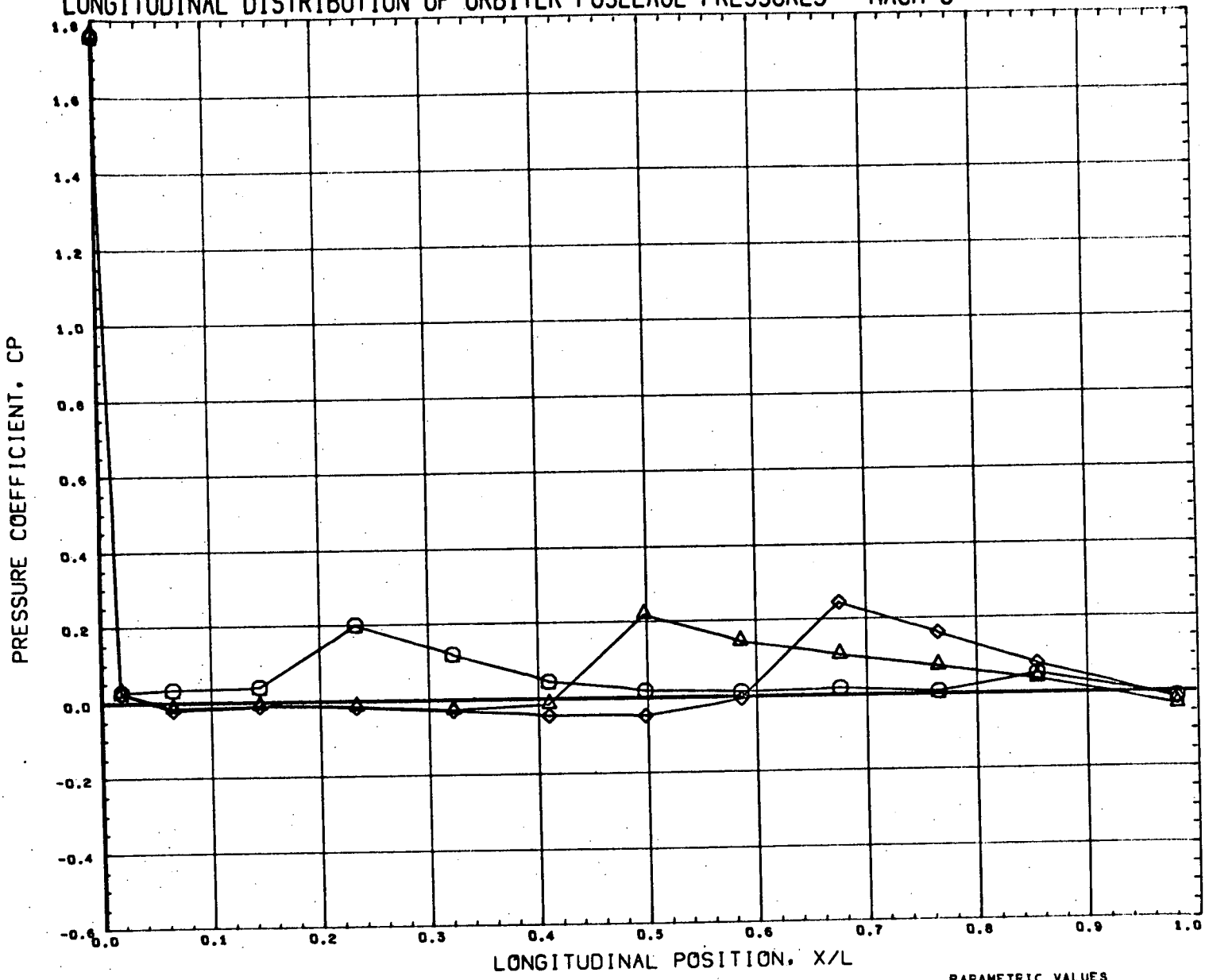
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

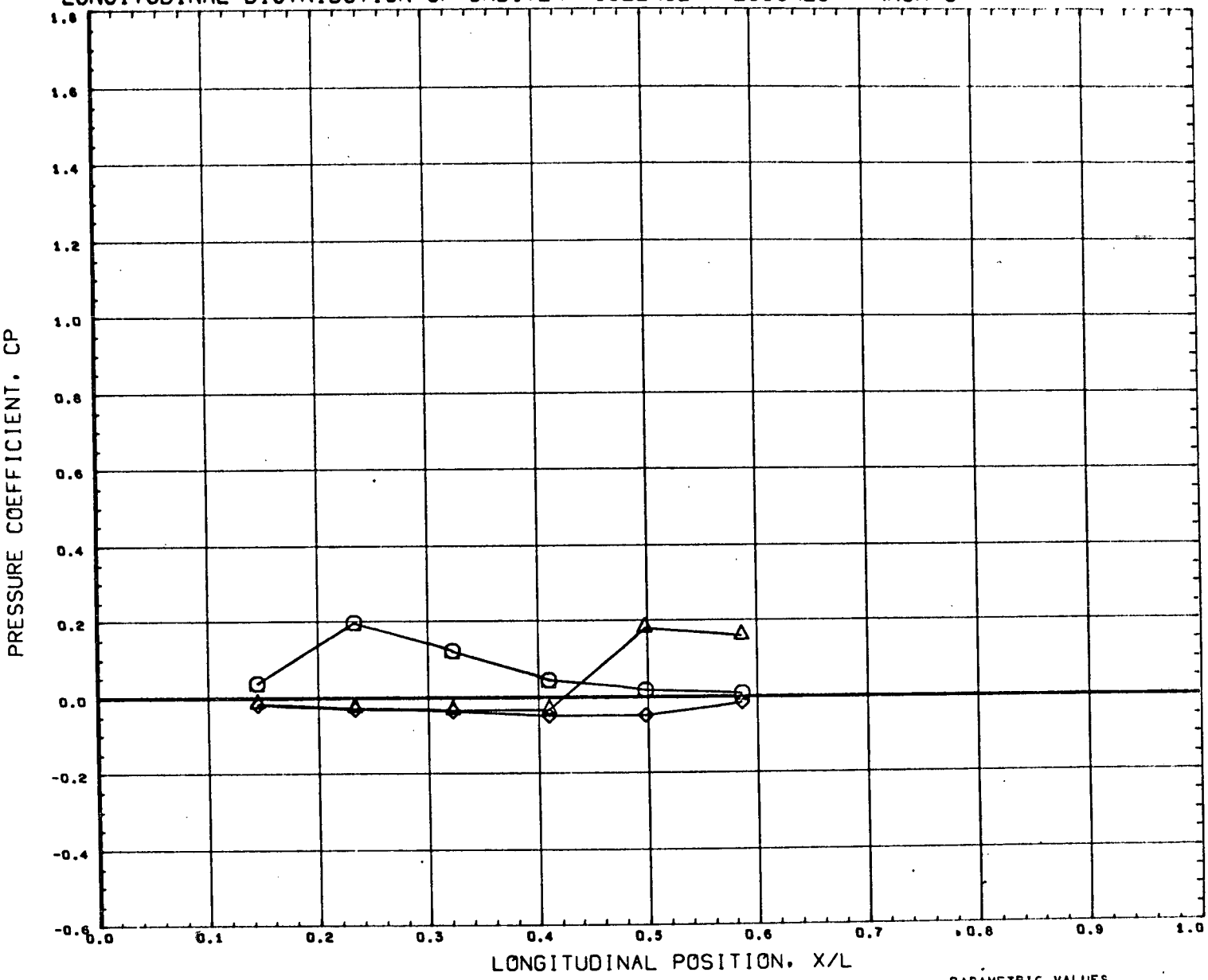
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (BODY)

•FT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.228
△	0.103		
◇	0.226		

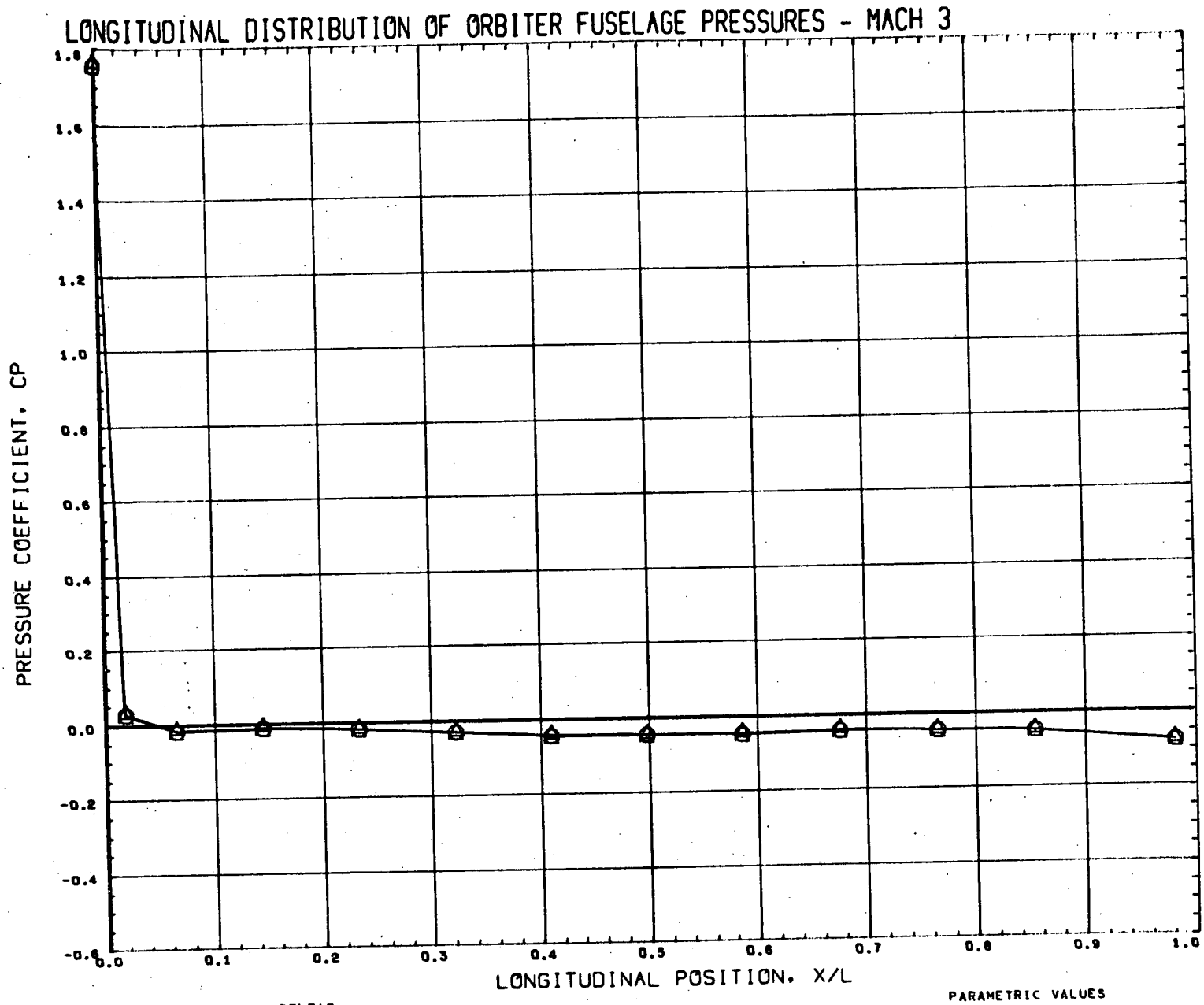
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8321•



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.000	0.908
△	0.516		

PARAMETRIC VALUES

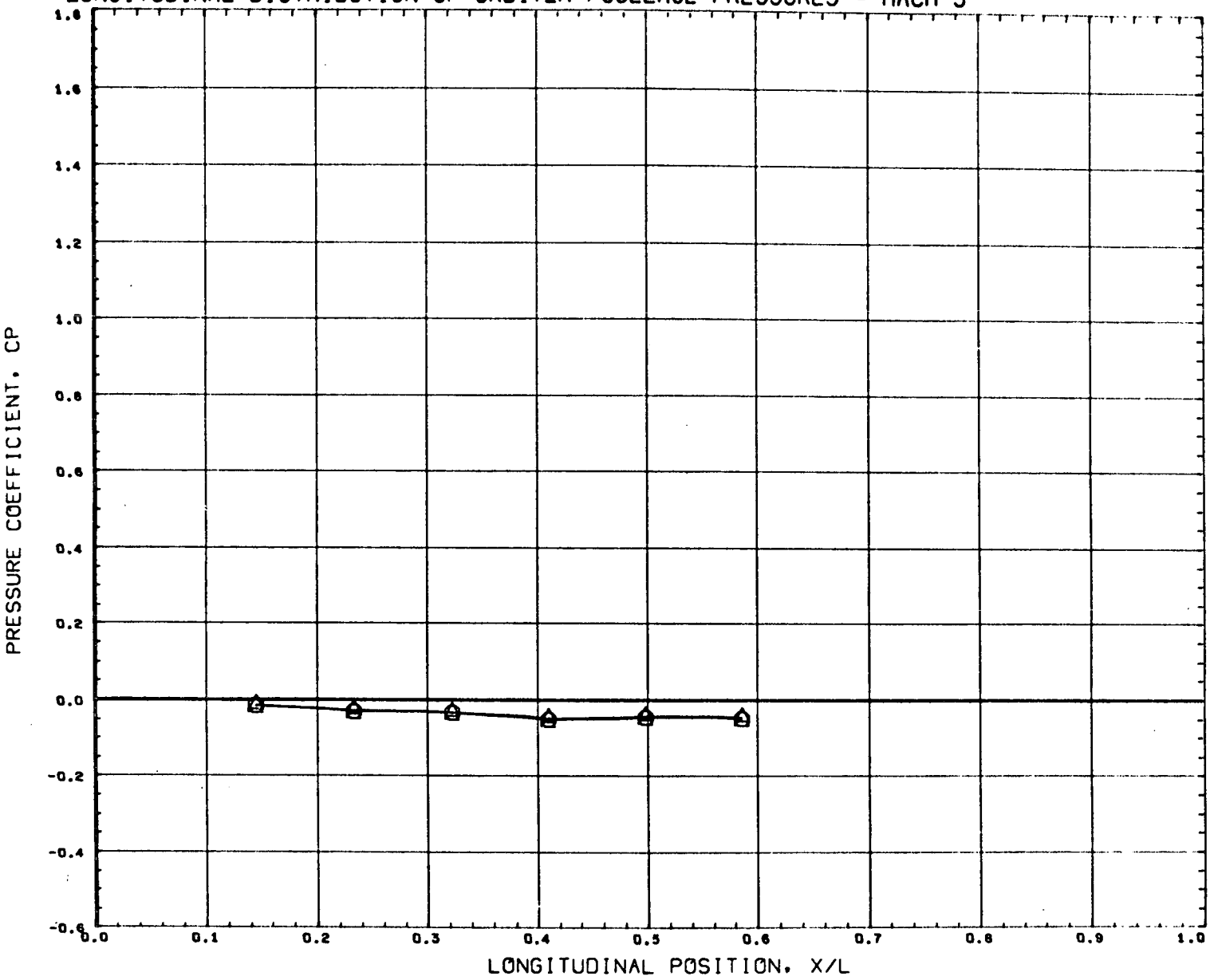
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



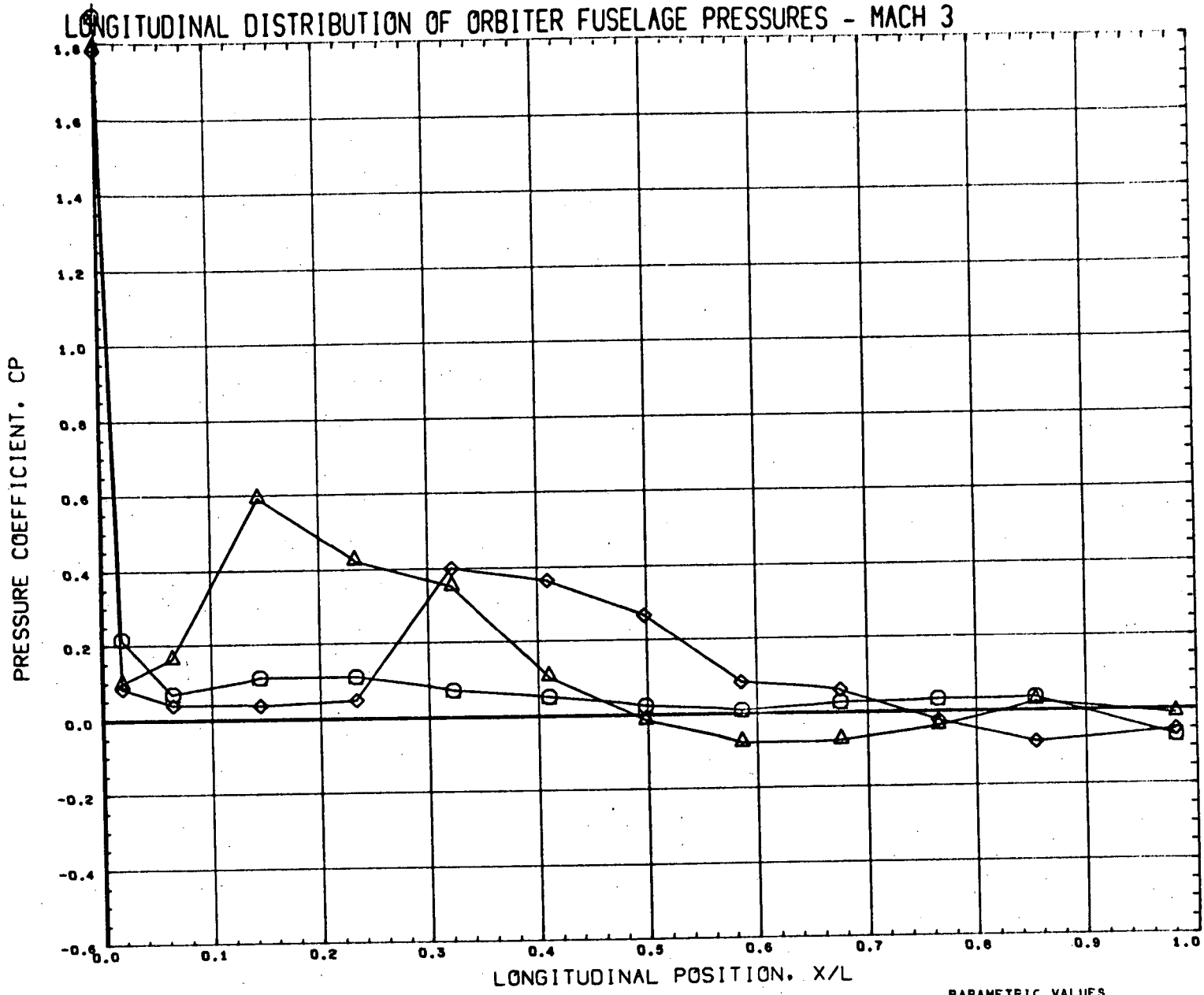
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.076	0.908
△	0.516		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

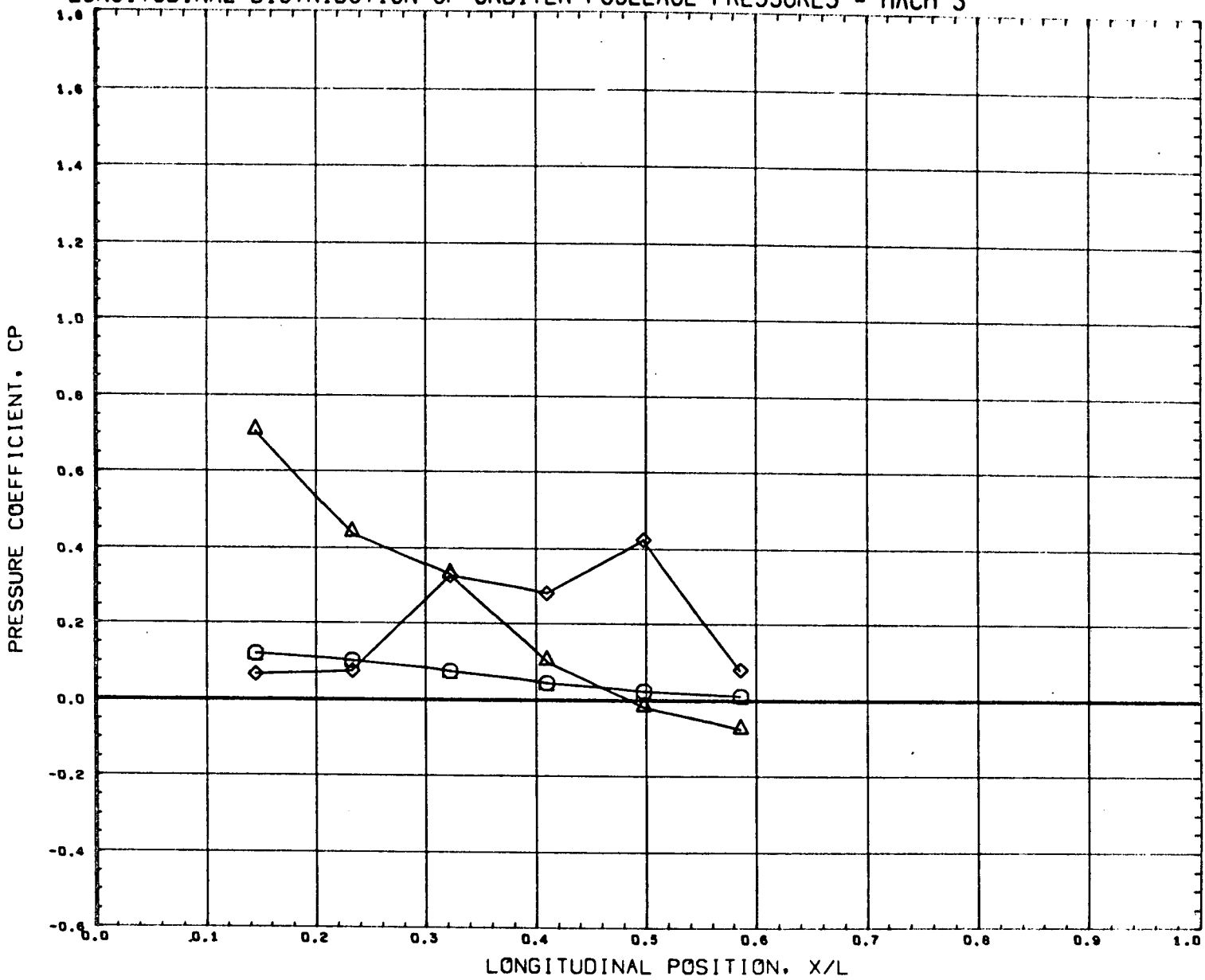
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



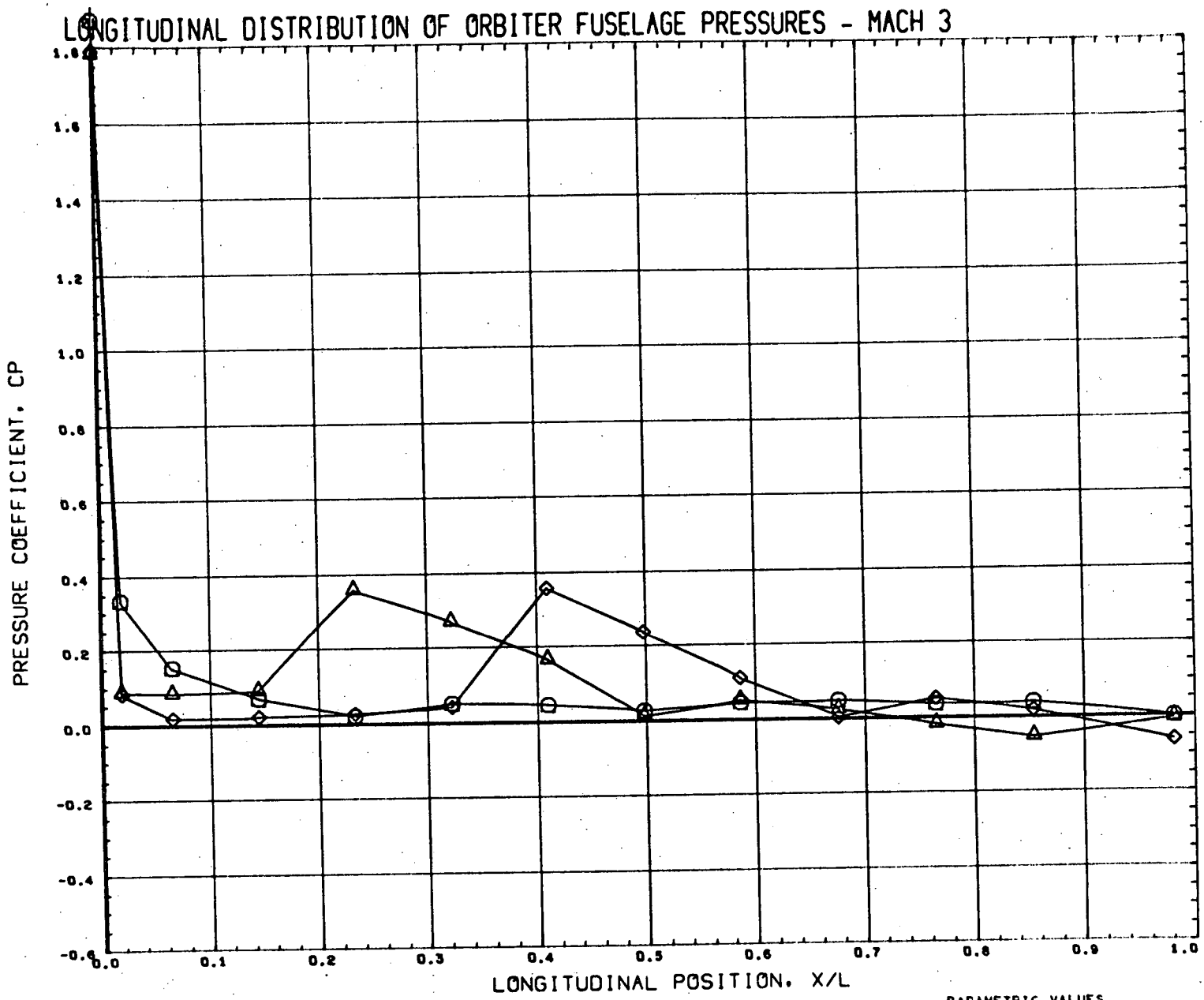
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.000	0.151
△	0.101		
◇	0.226		

PARAMETRIC VALUES

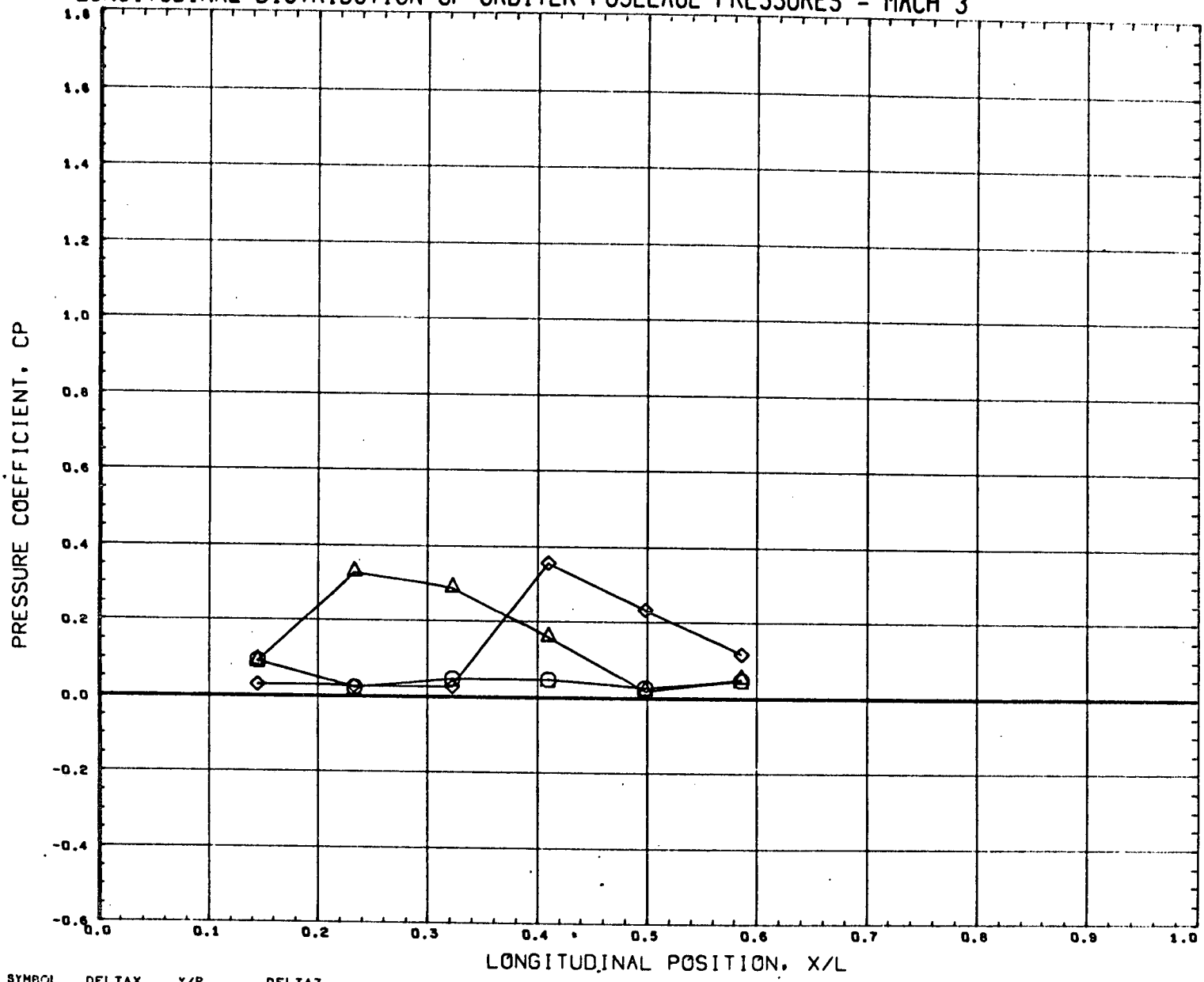
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



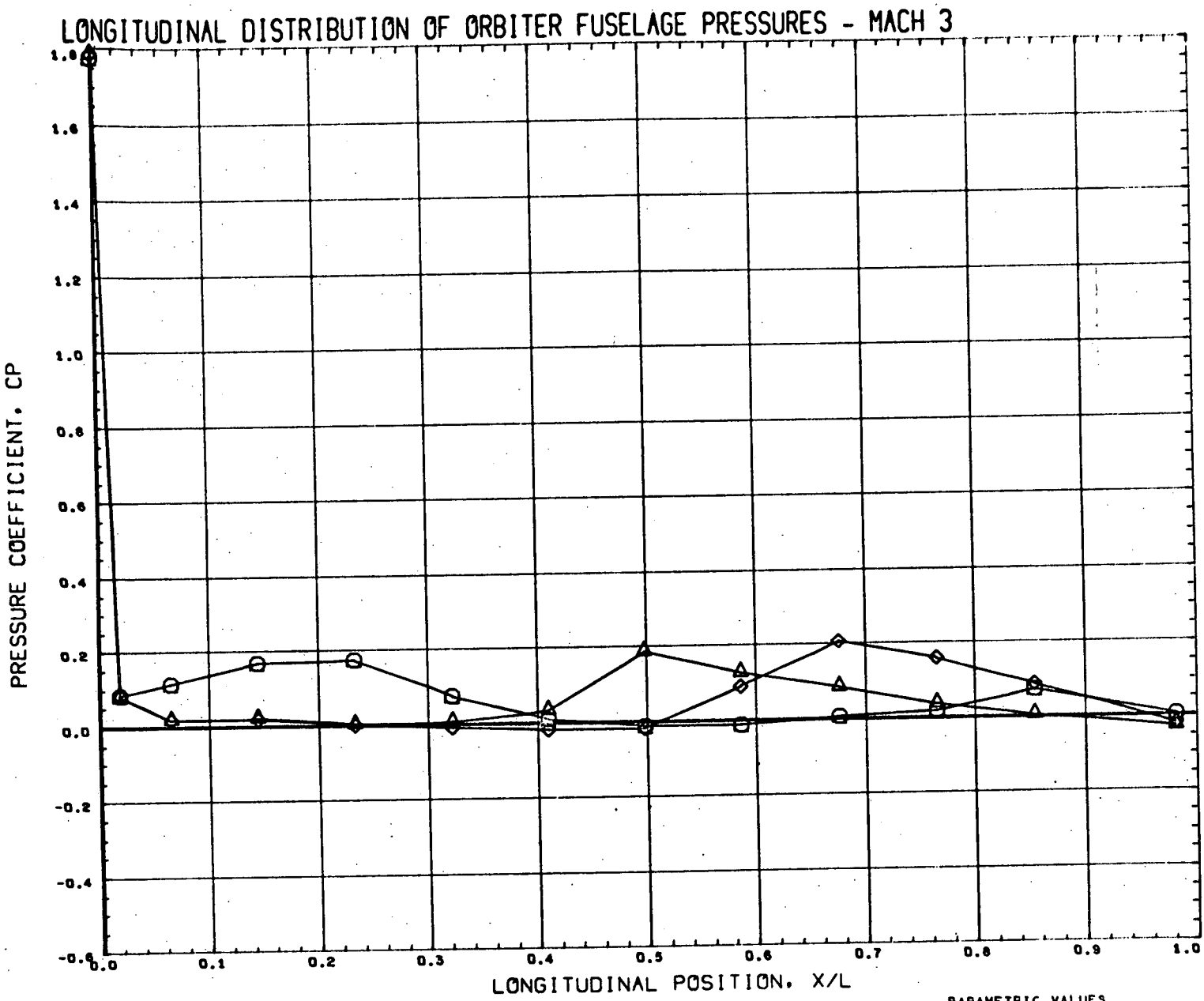
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.076	0.151
△	0.101		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

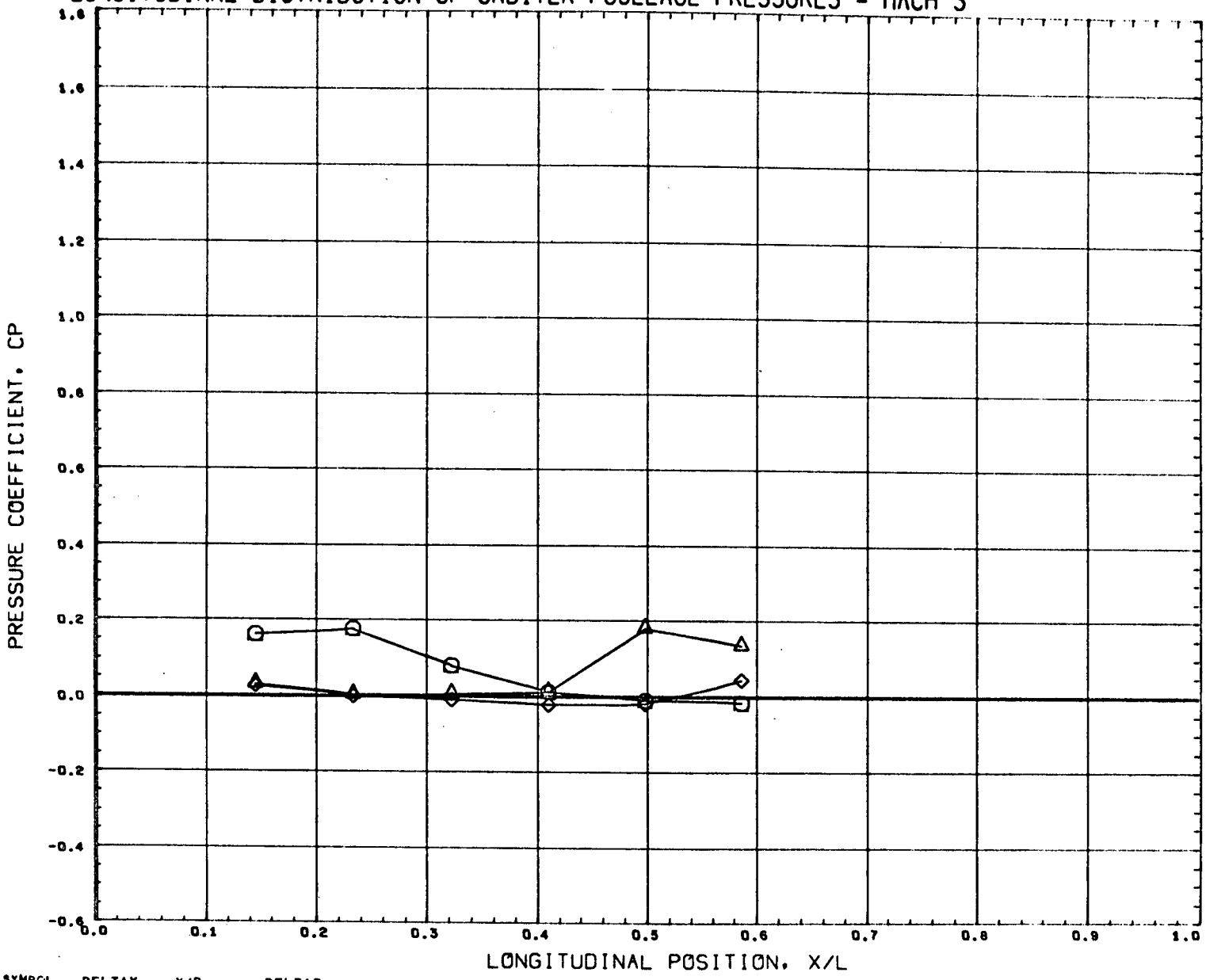
ALPHAB	4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.228
△	0.104		
◇	0.227		

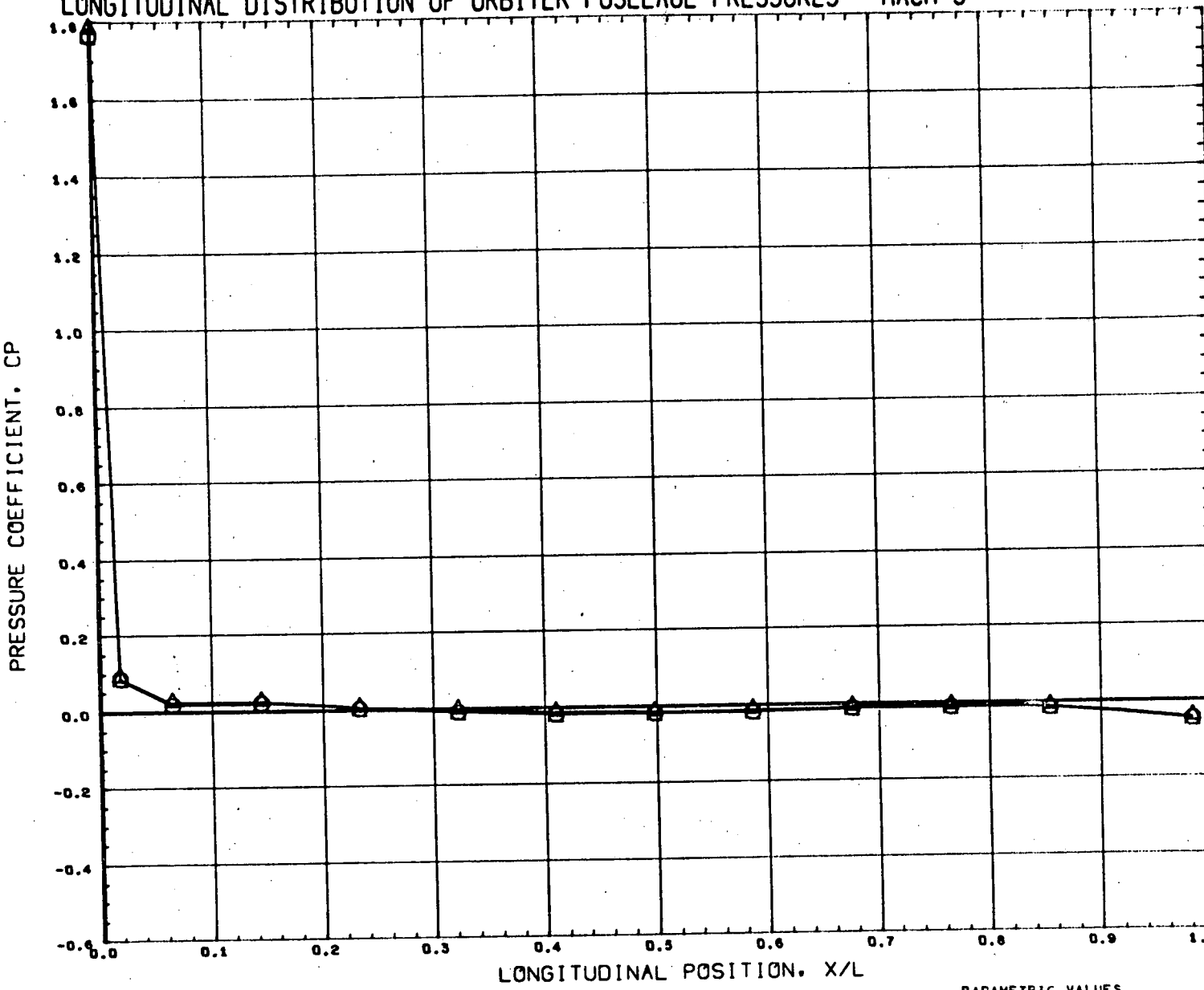
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.000	0.908
△	0.516		

PARAMETRIC VALUES

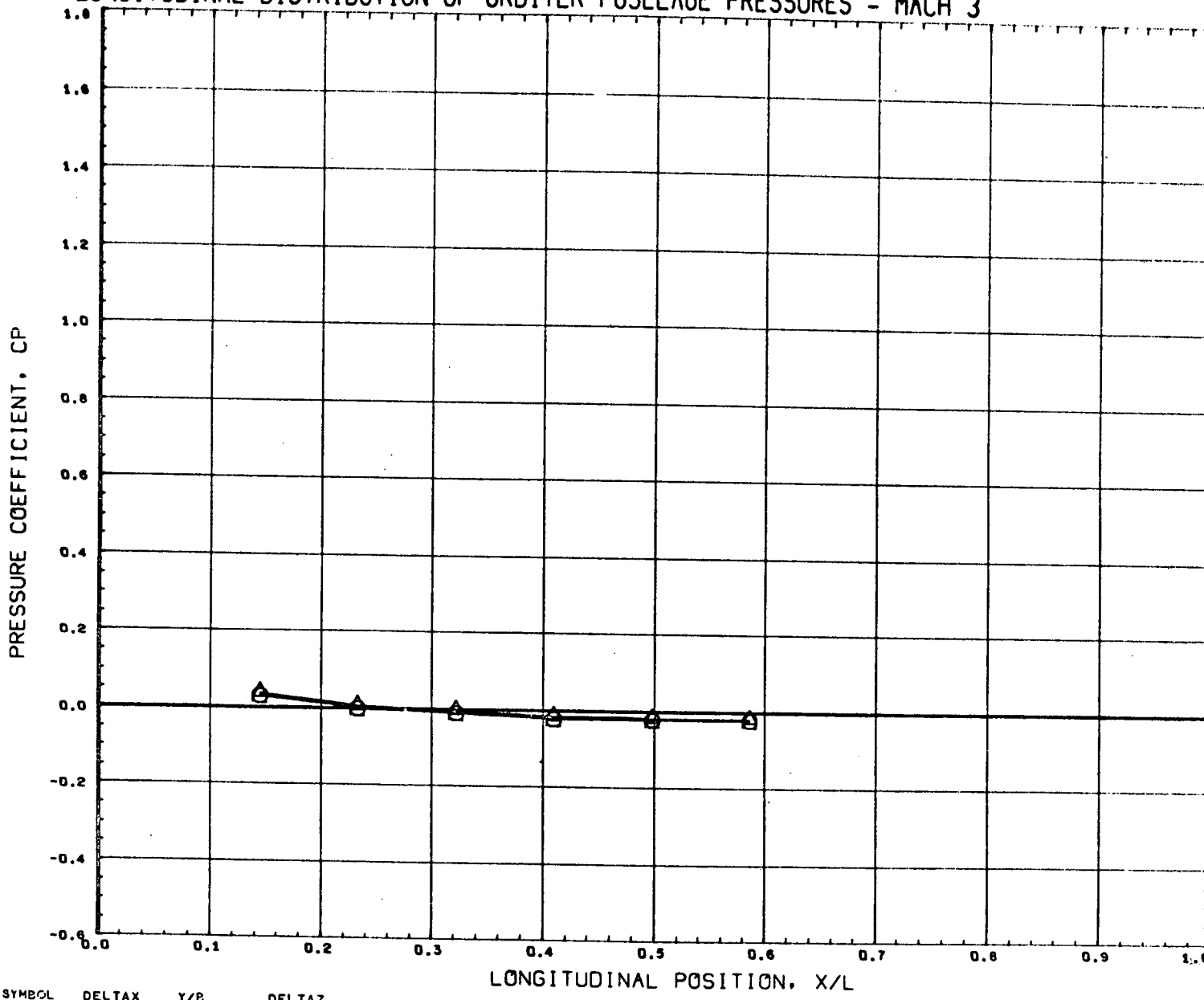
ALPHAB -	4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.076	0.908
△	0.516		

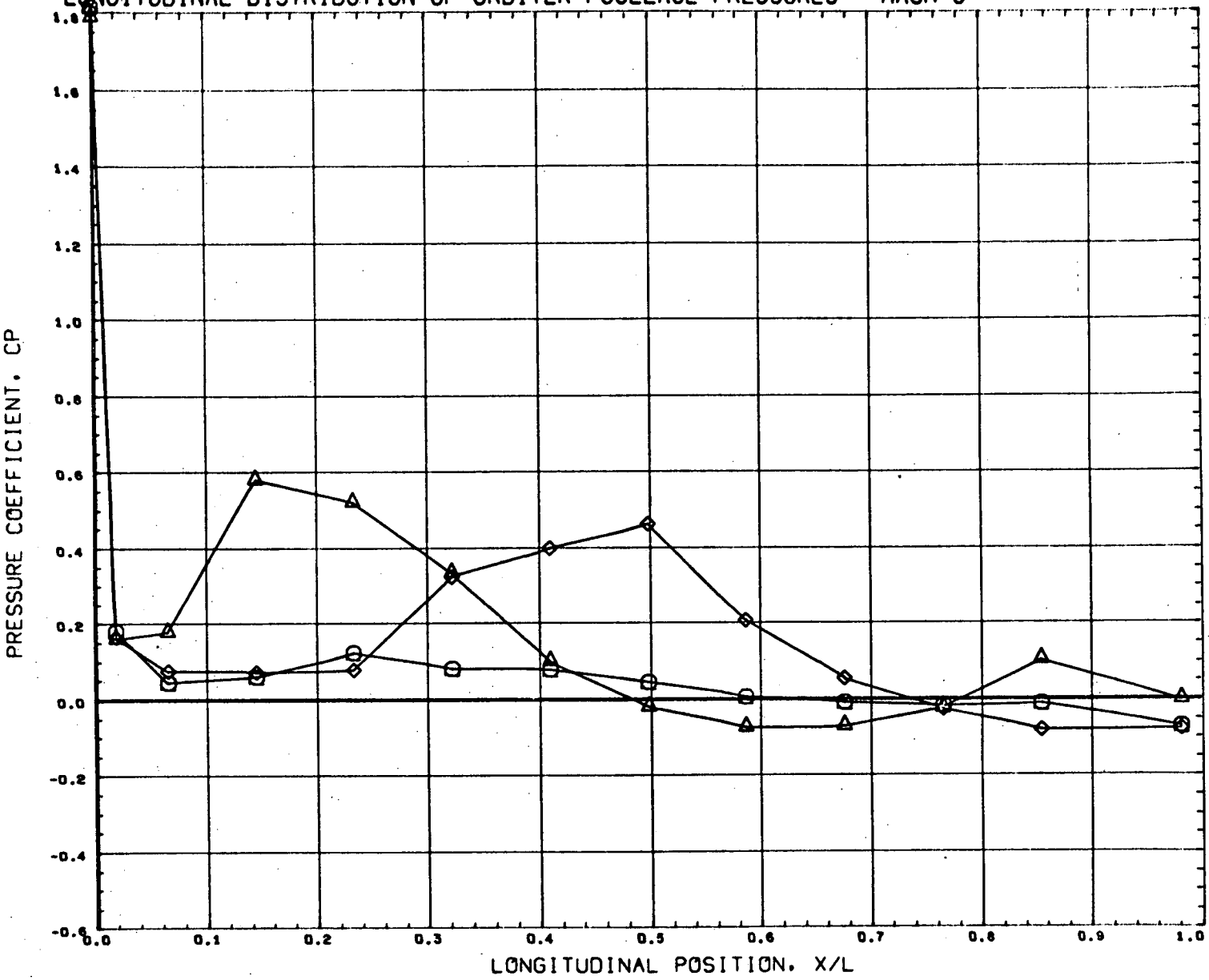
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



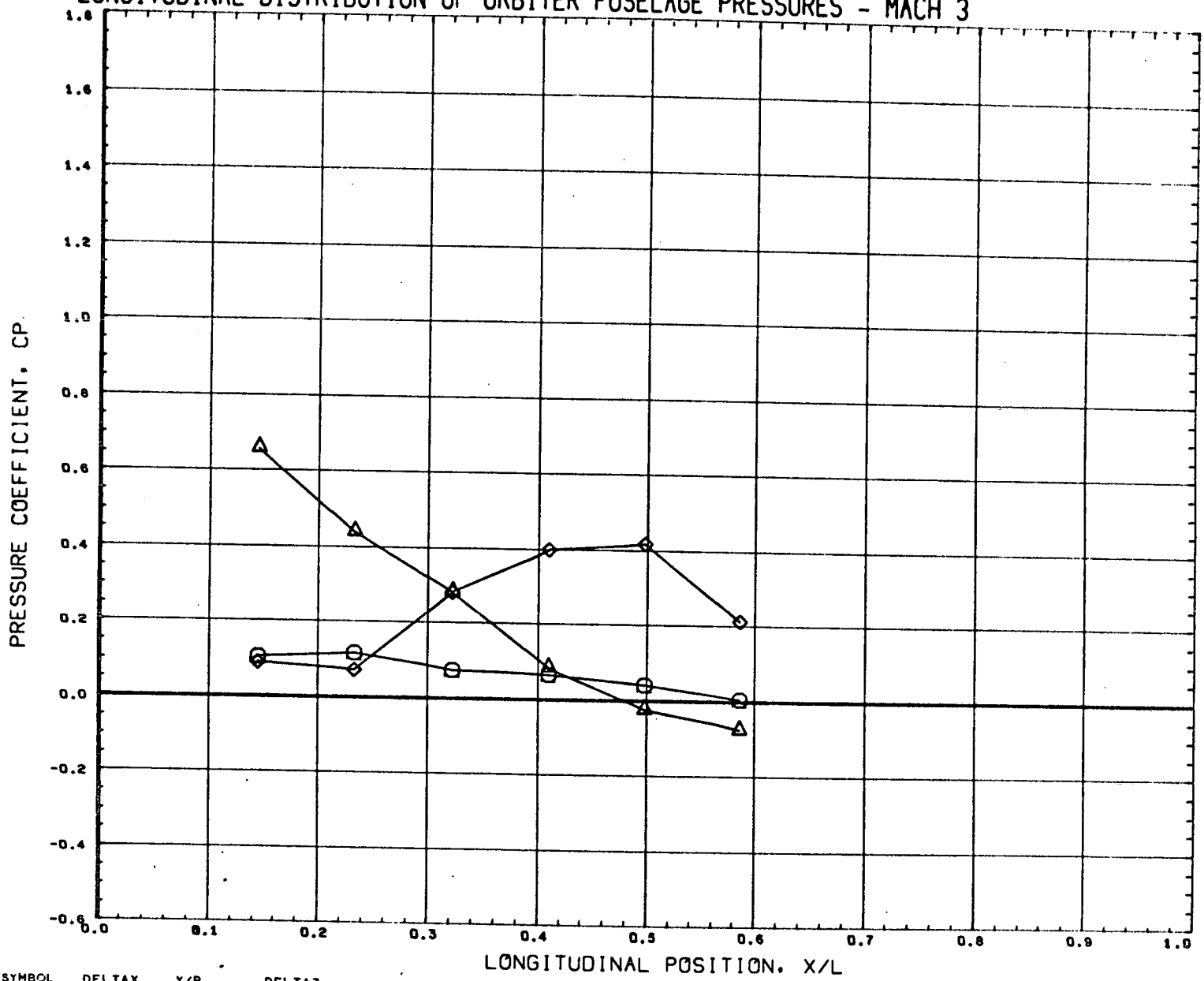
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



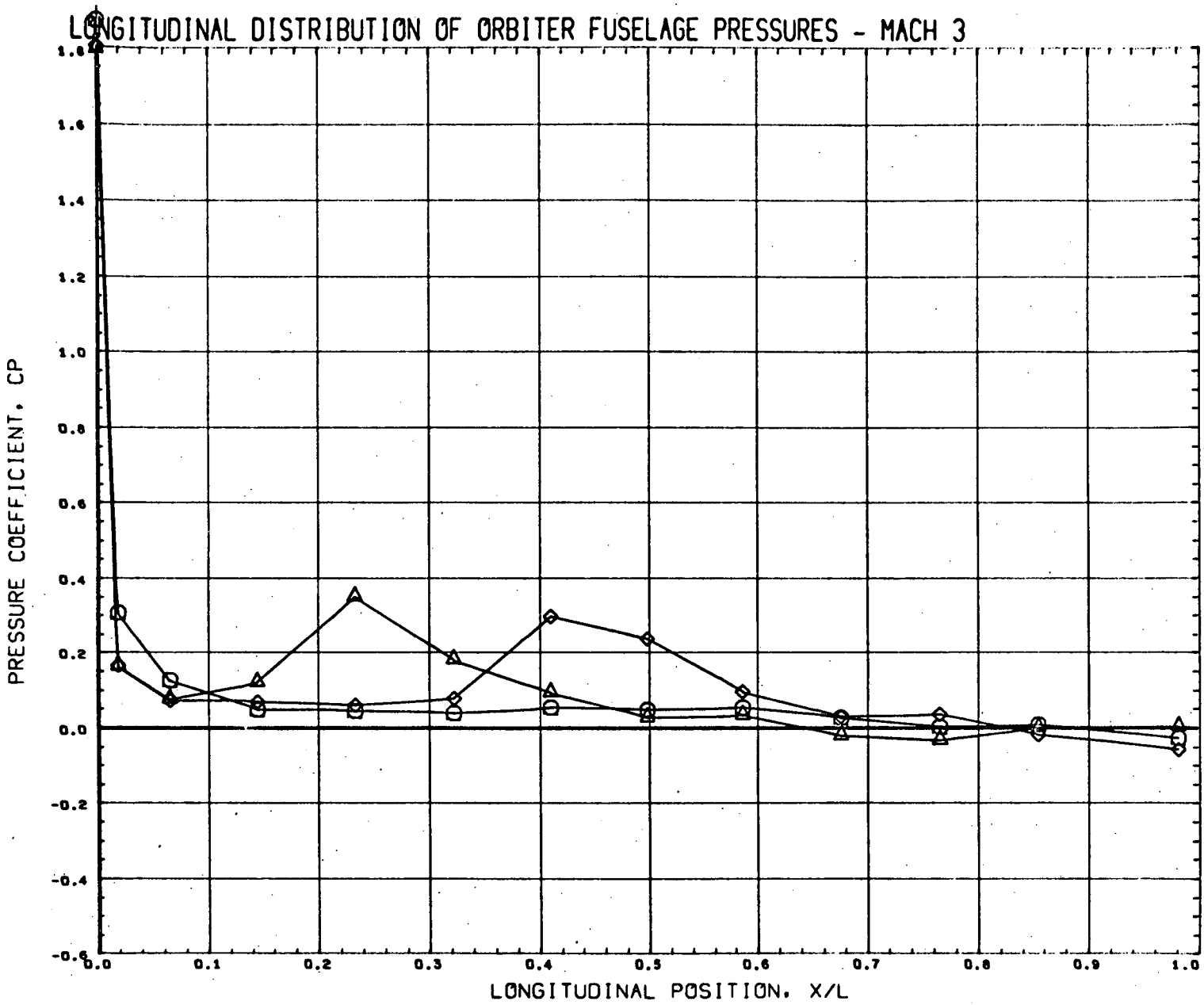
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



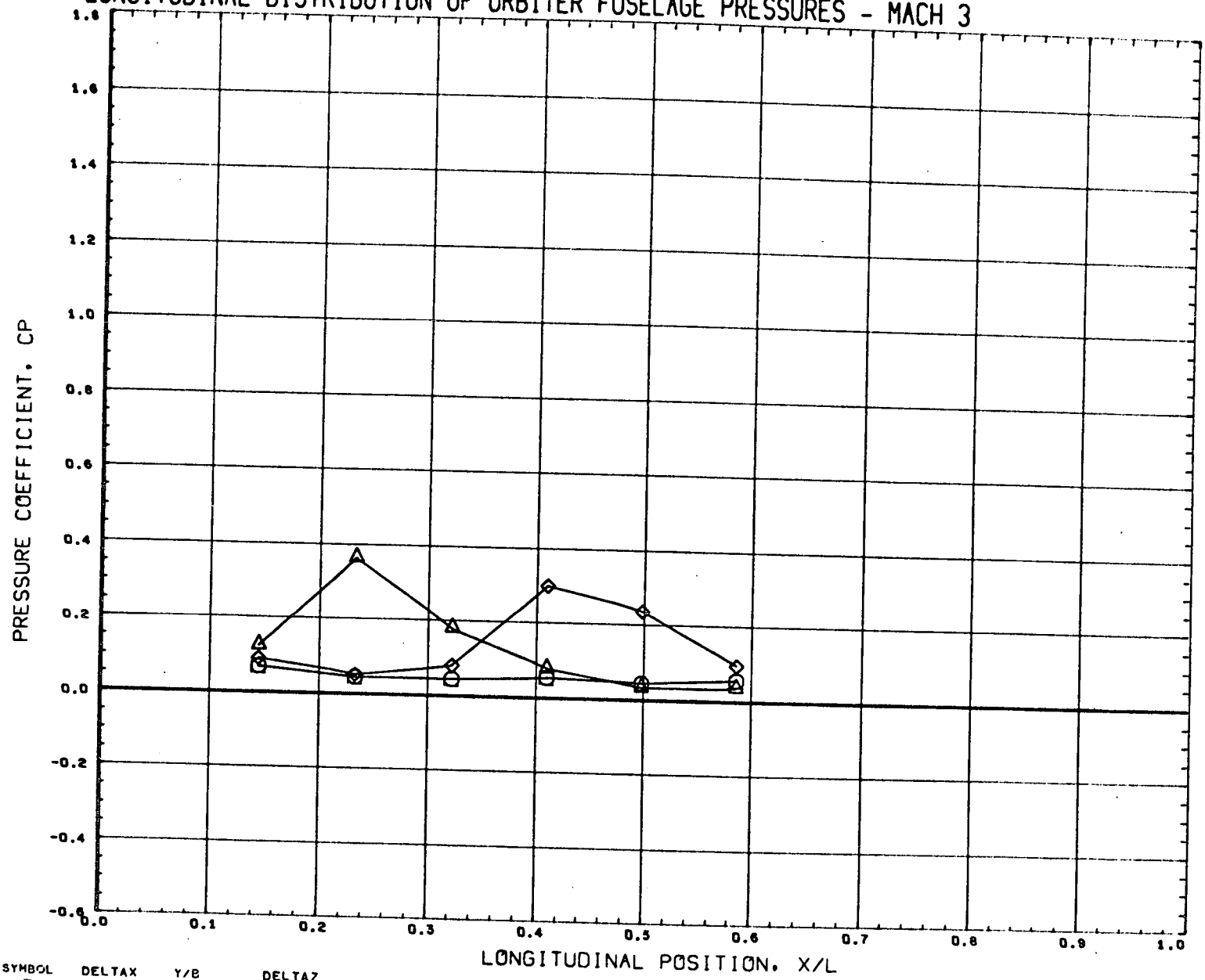
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.000	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.076	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

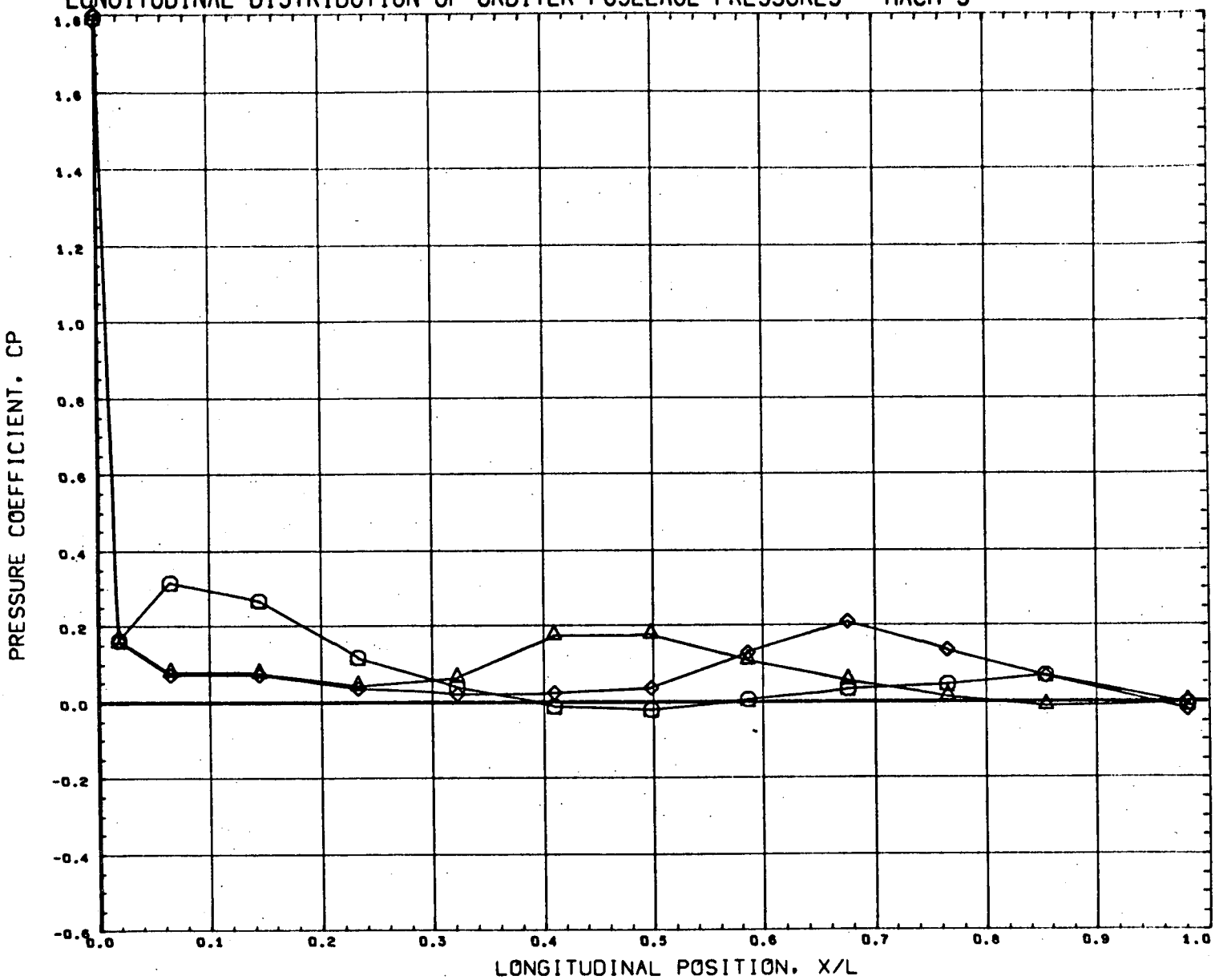
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3

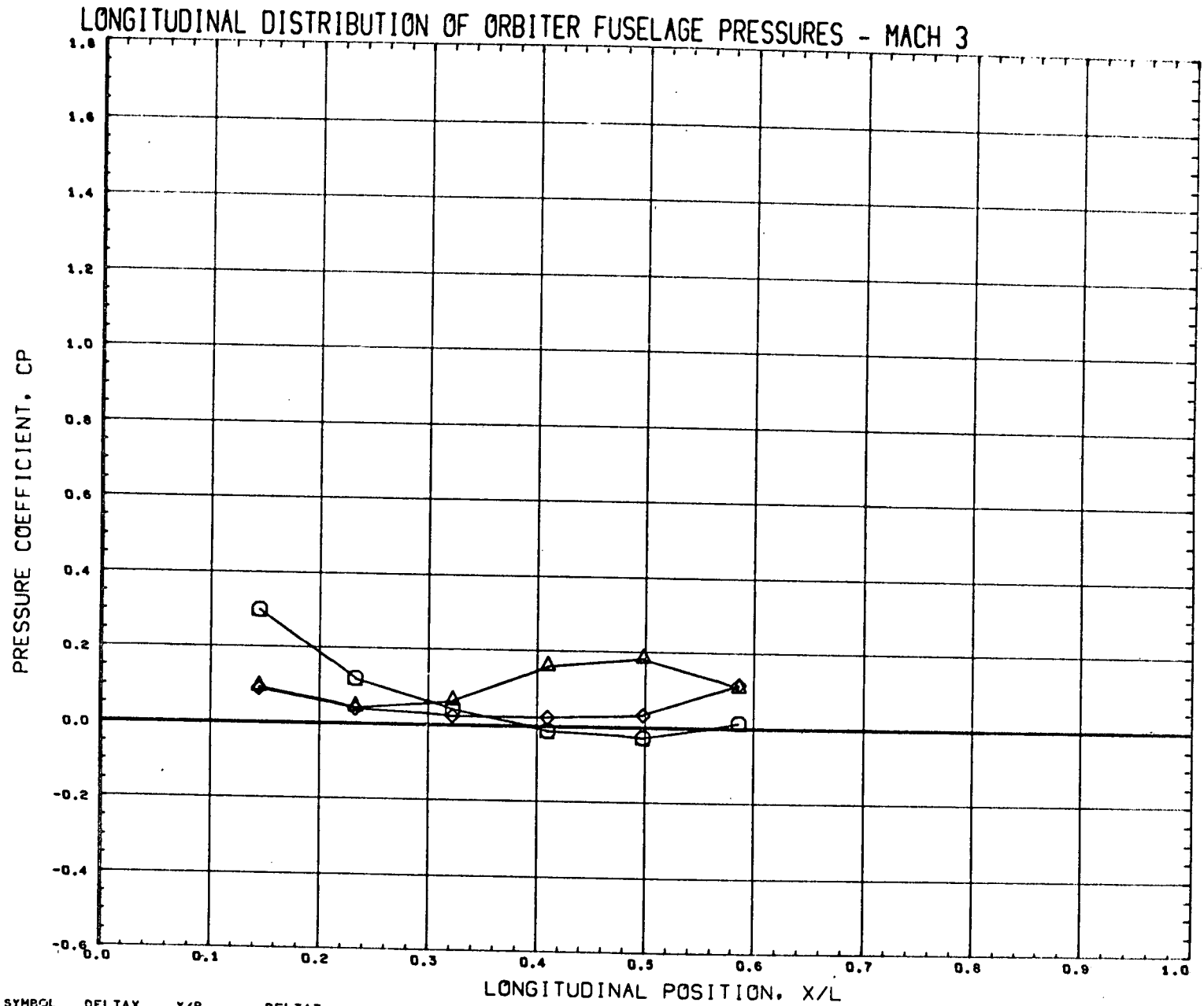


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.228
△	0.103		
◇	0.227		

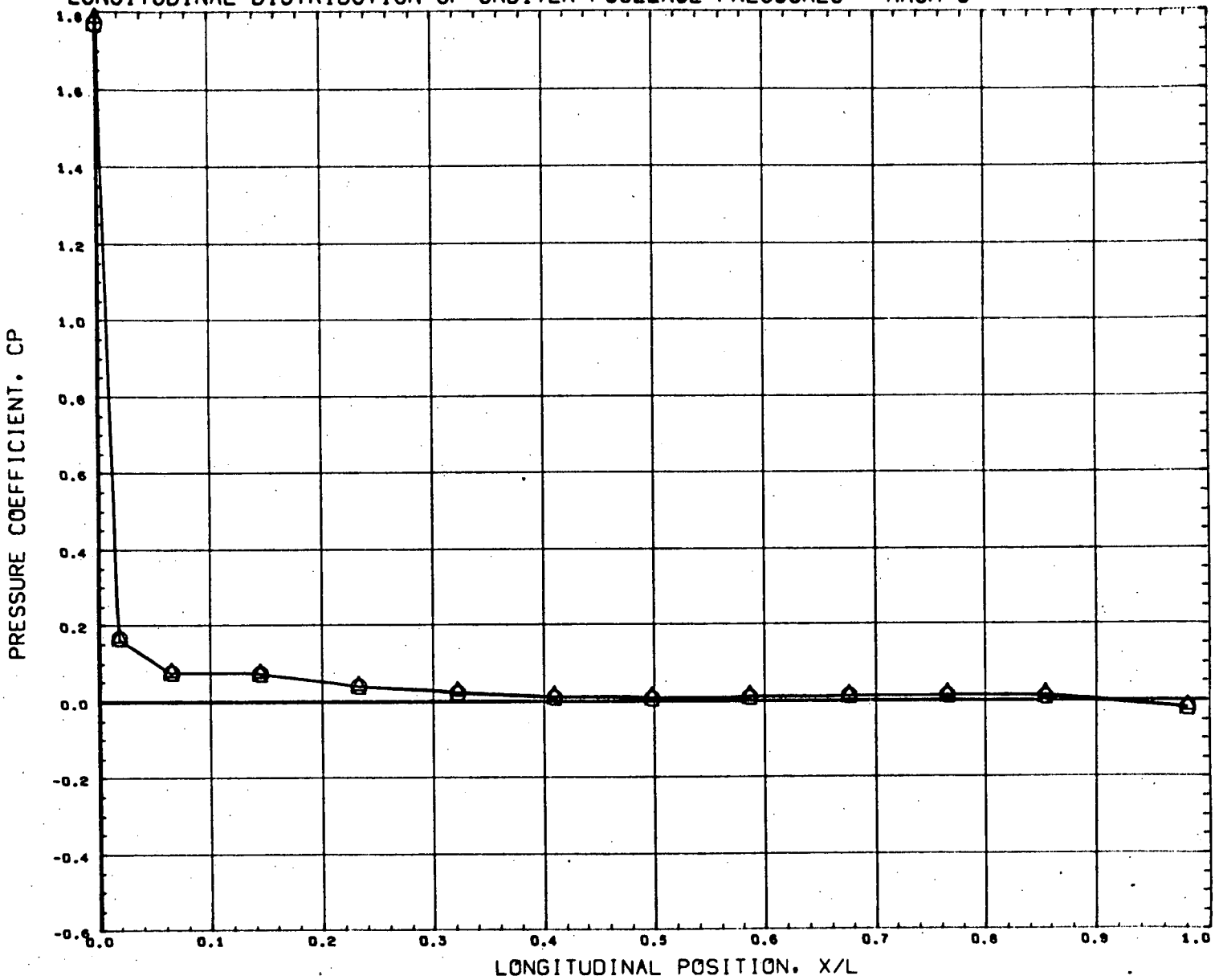
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.000	0.908
△	0.514		

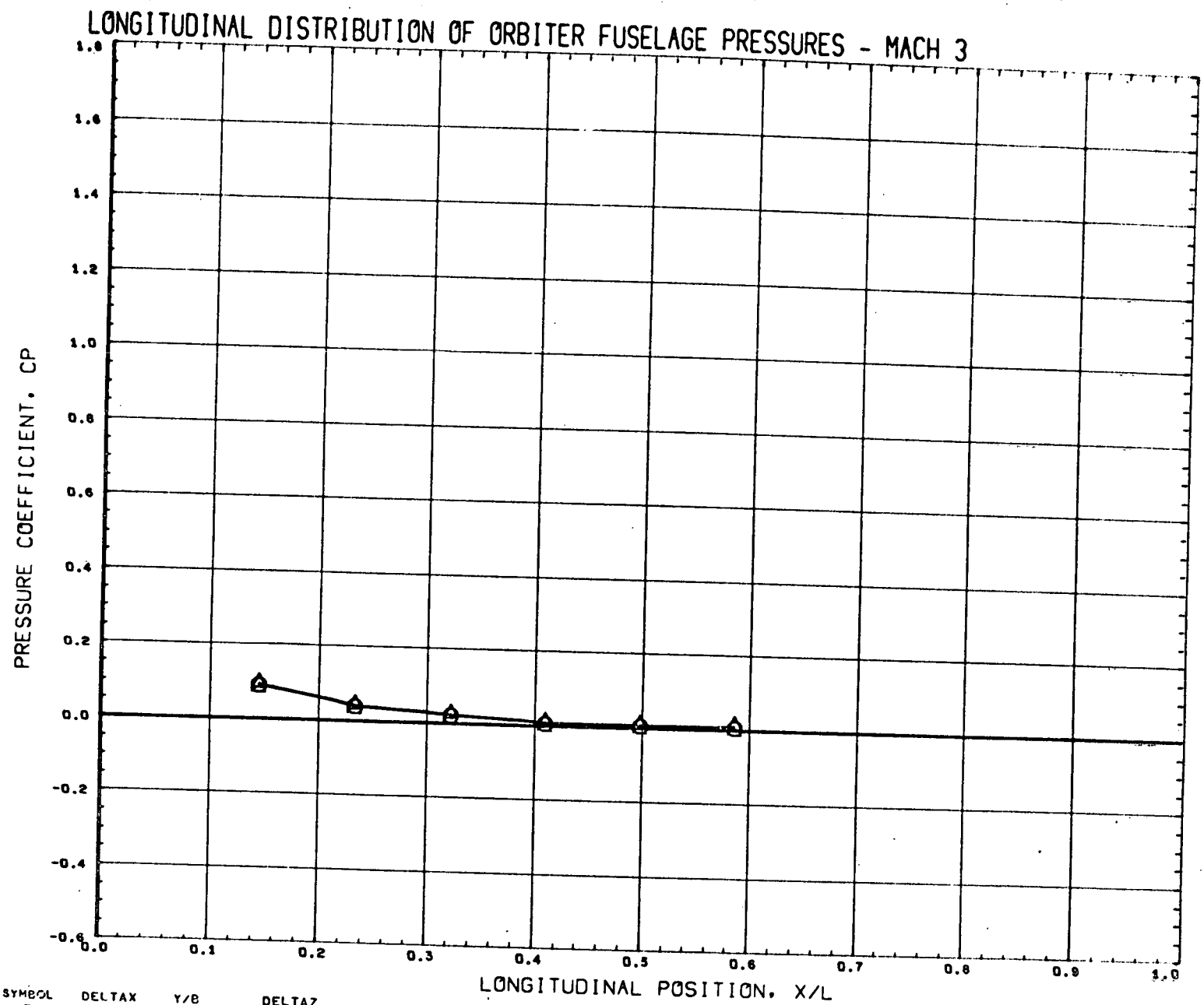
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8323•



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.076	0.908
△	0.514		

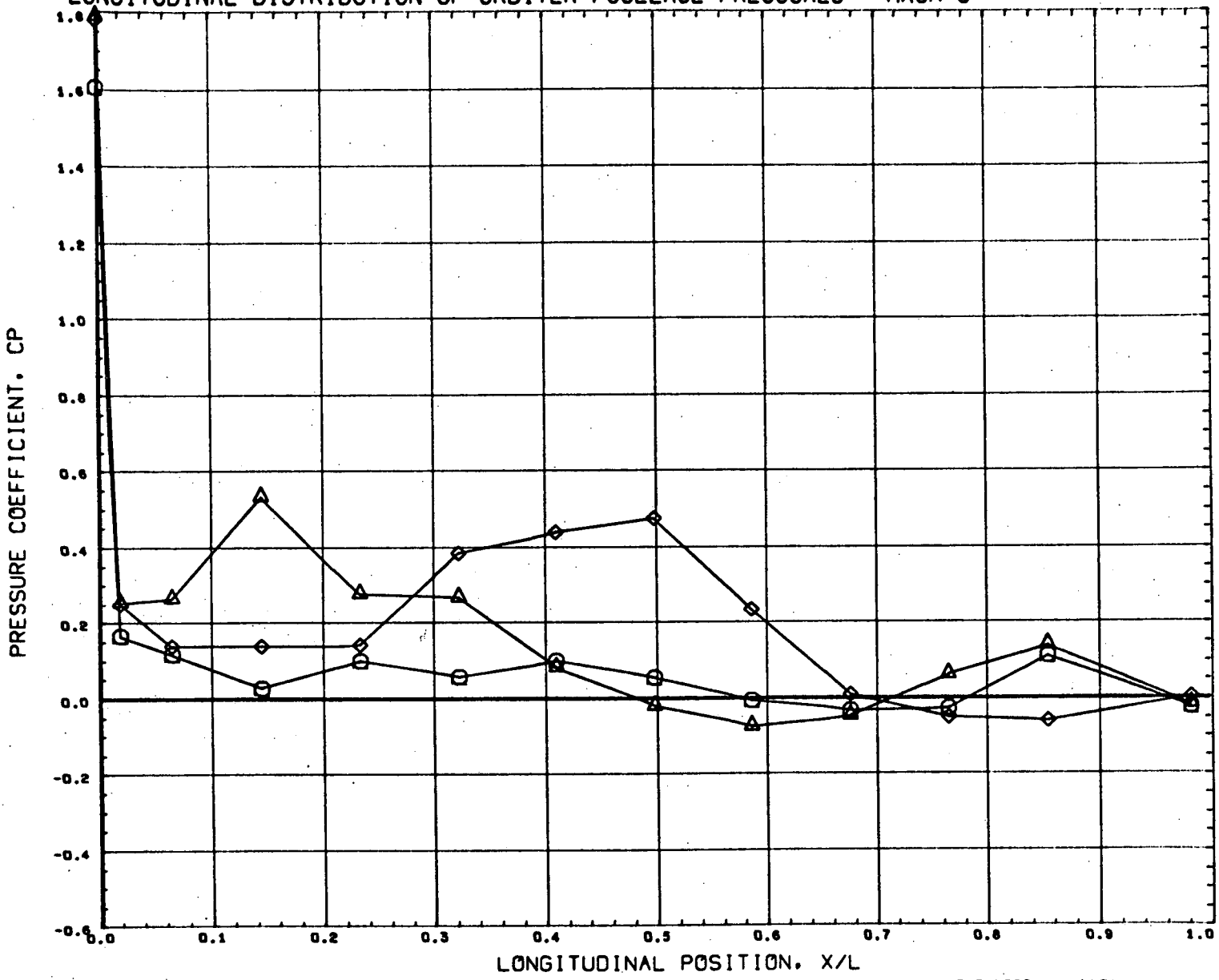
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3

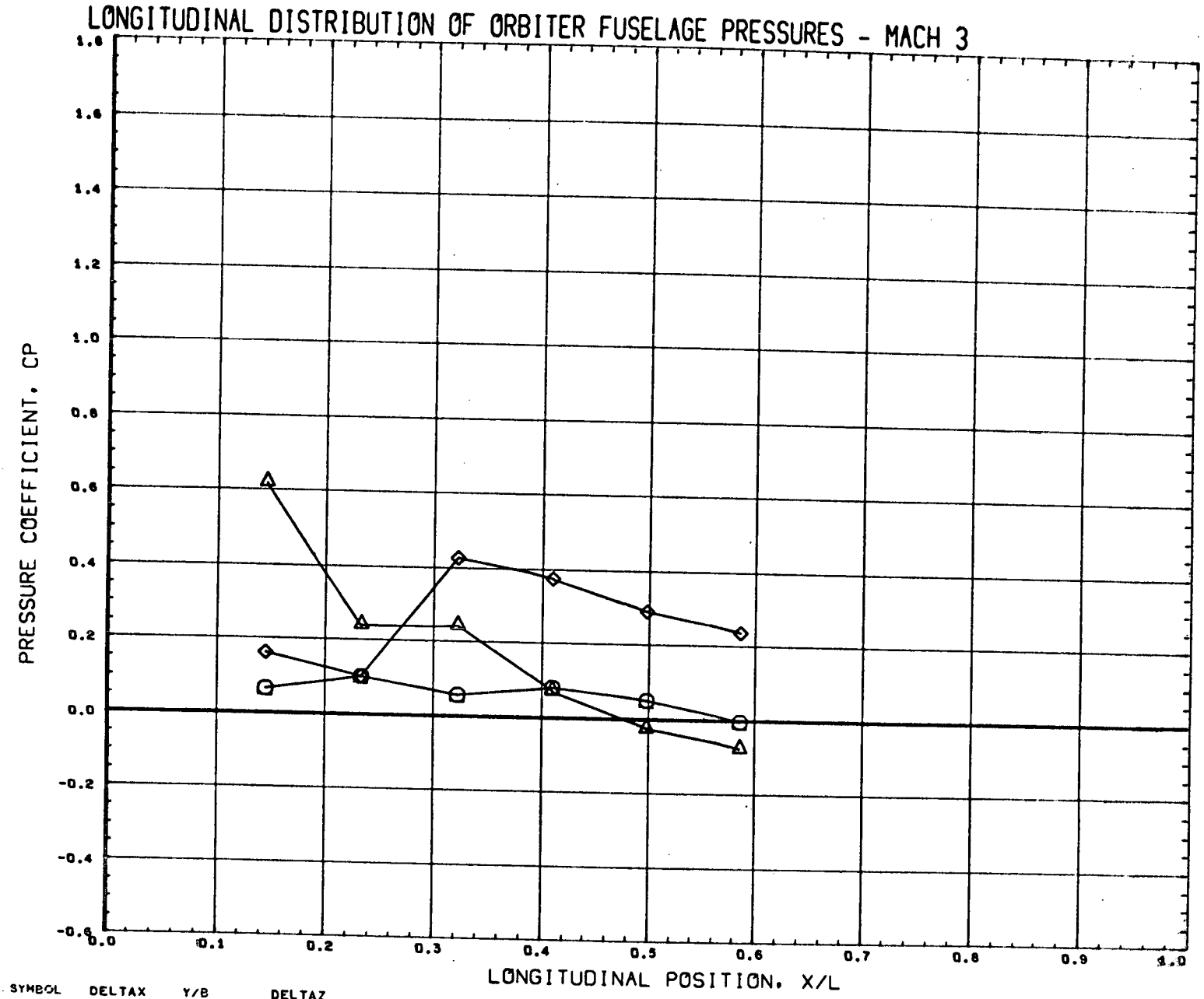


SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.120
△	0.103		
◇	0.226		

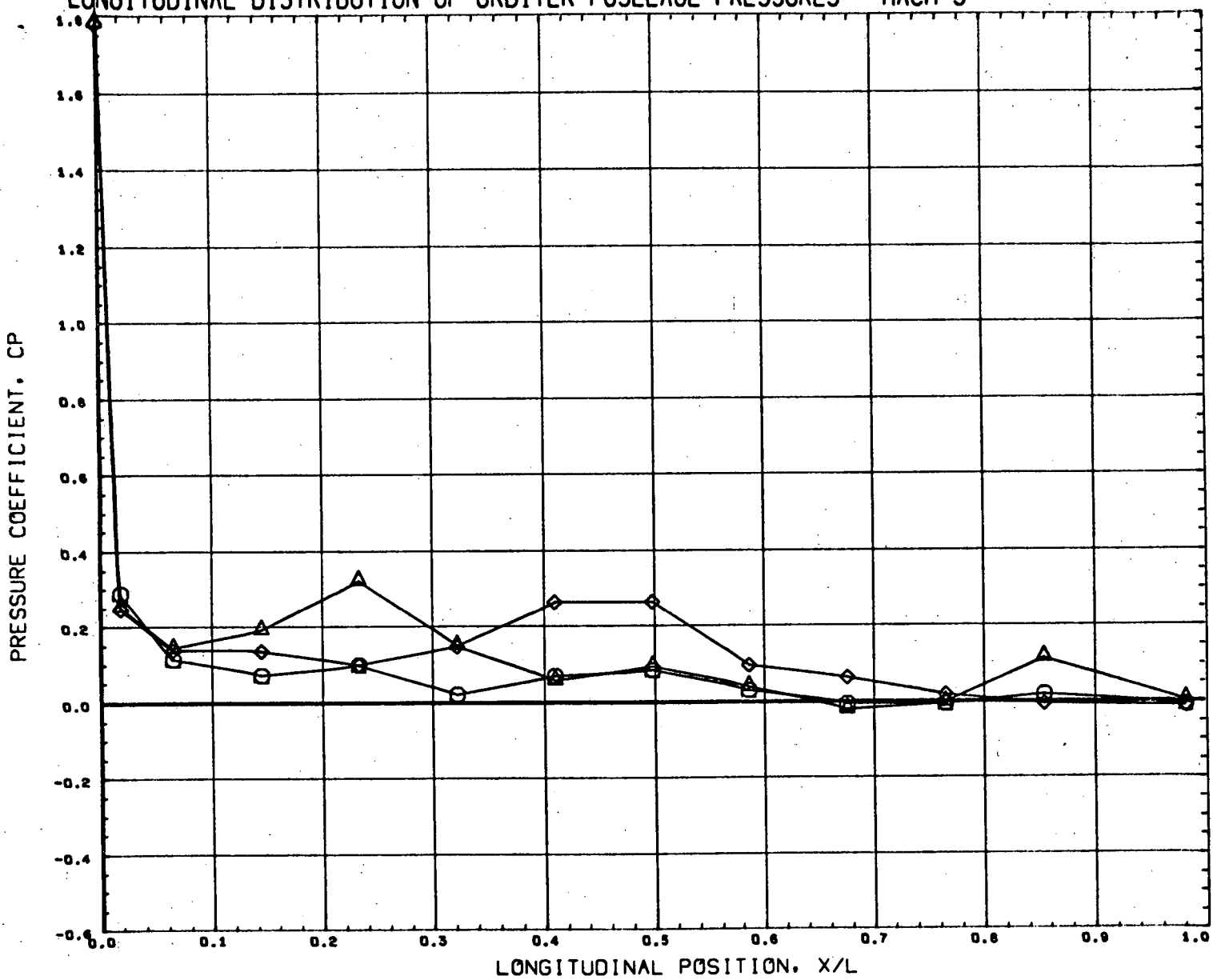
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.151
△	0.103		
◇	0.227		

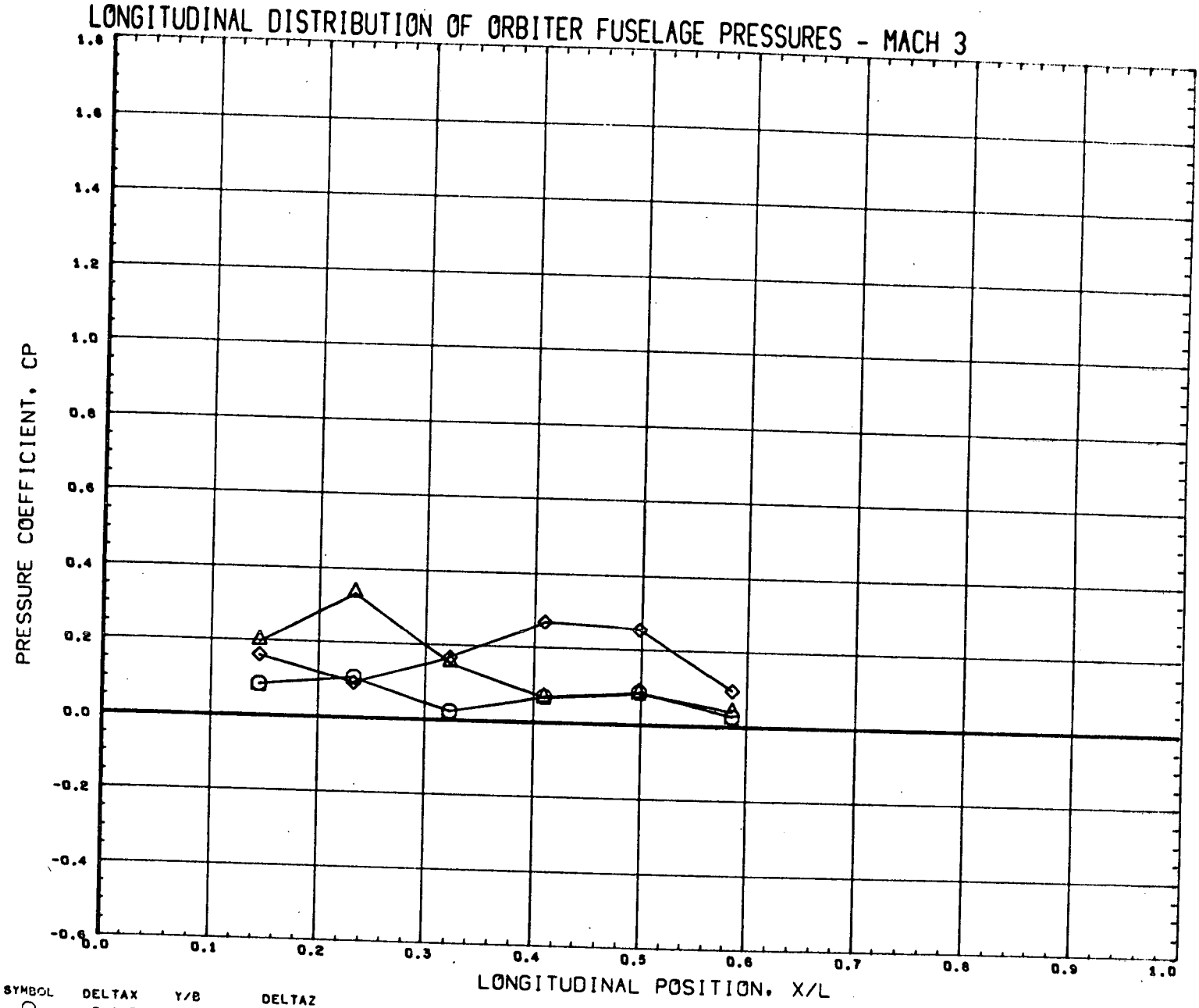
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8324•



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.151
△	0.103		
◇	0.227		

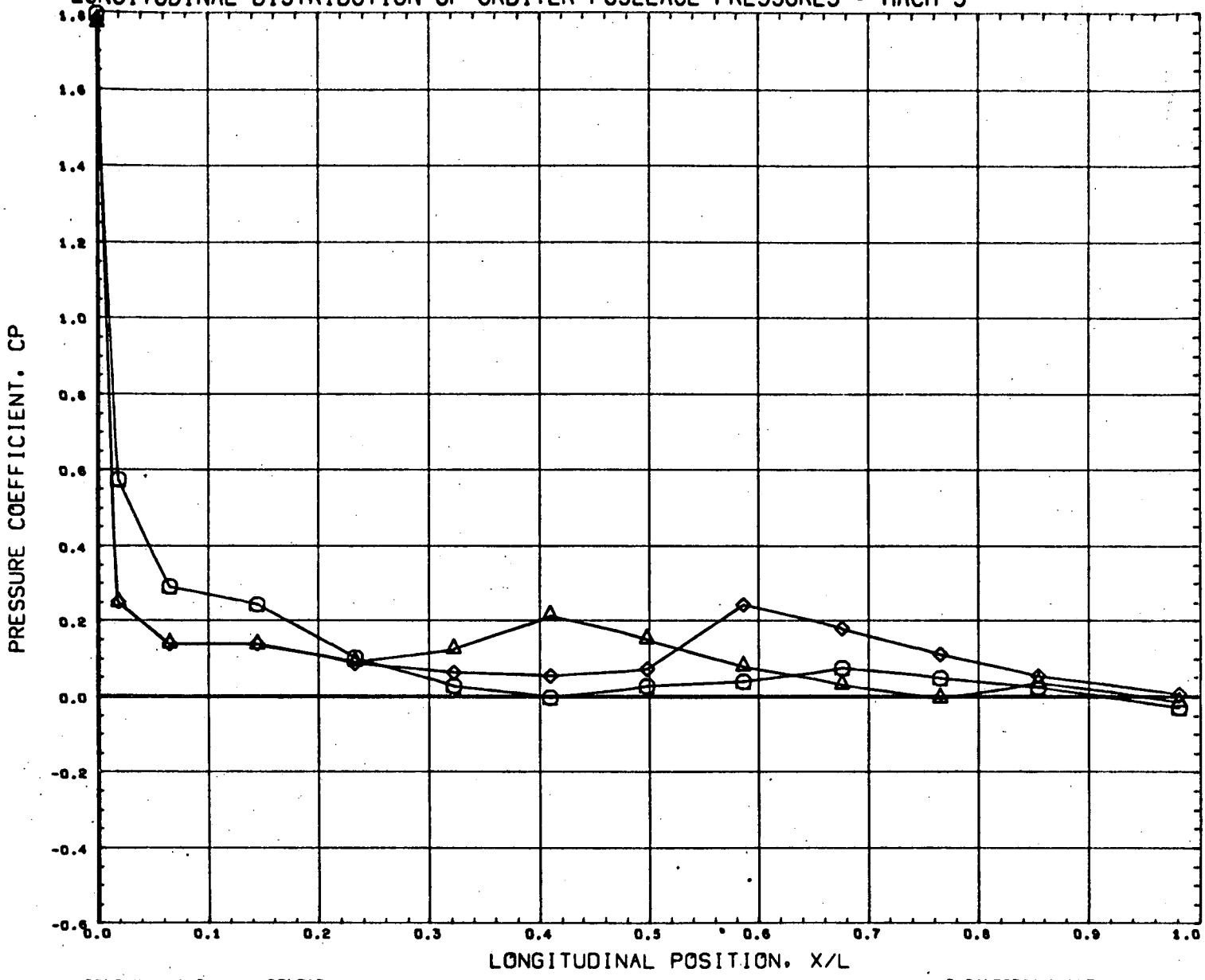
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



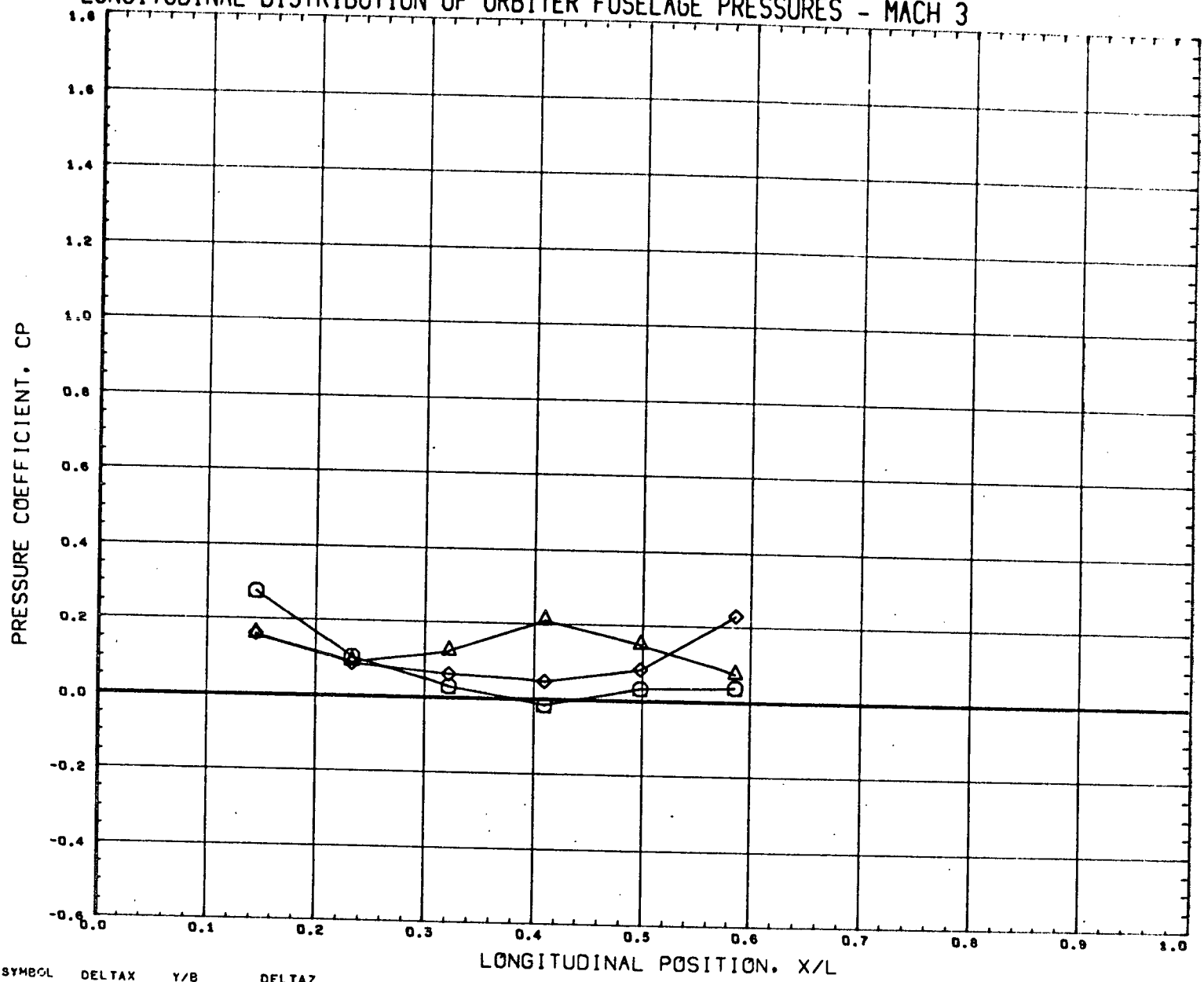
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.228
△	0.103		
◇	0.228		

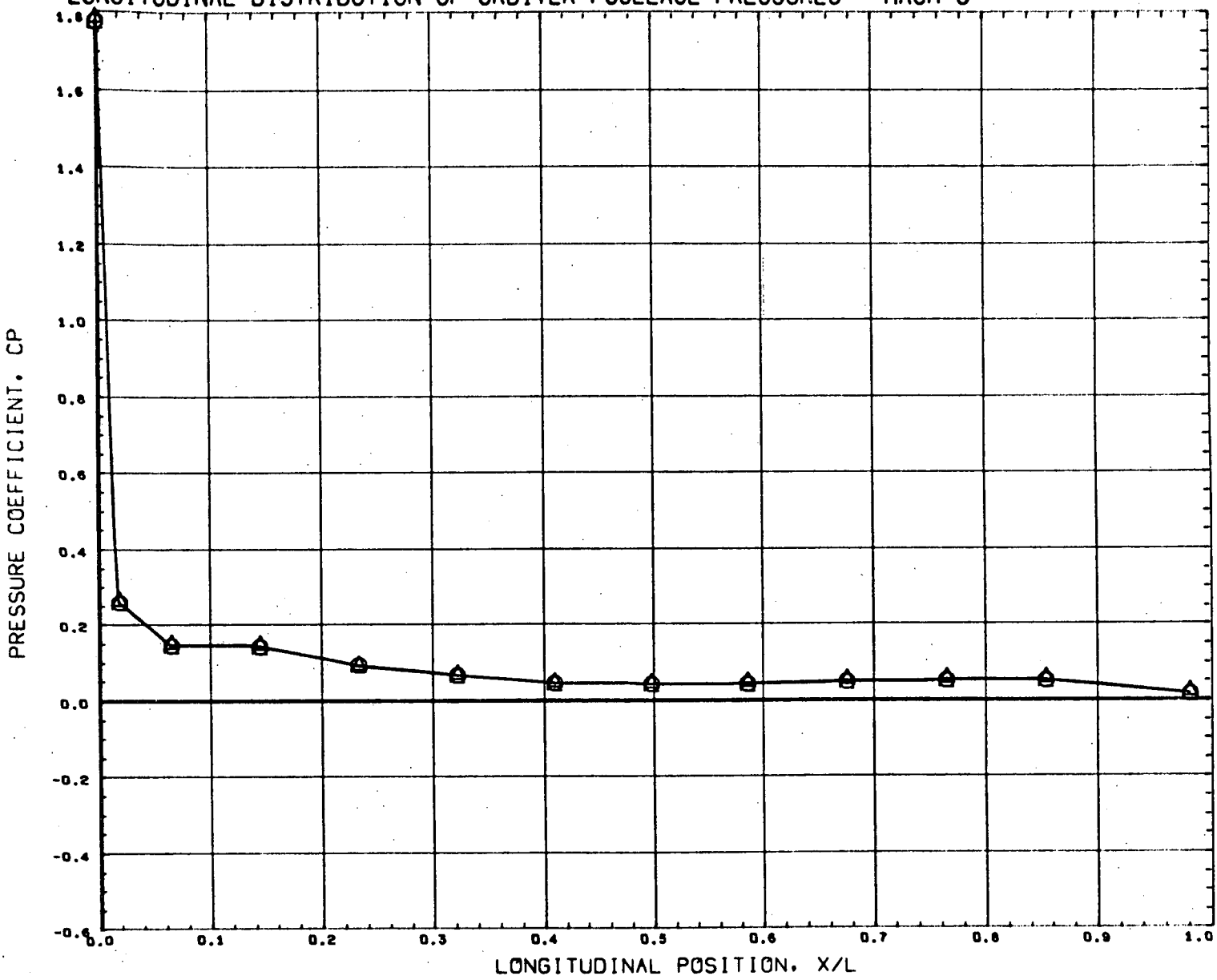
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.000	0.908
△	0.511		

PARAMETRIC VALUES

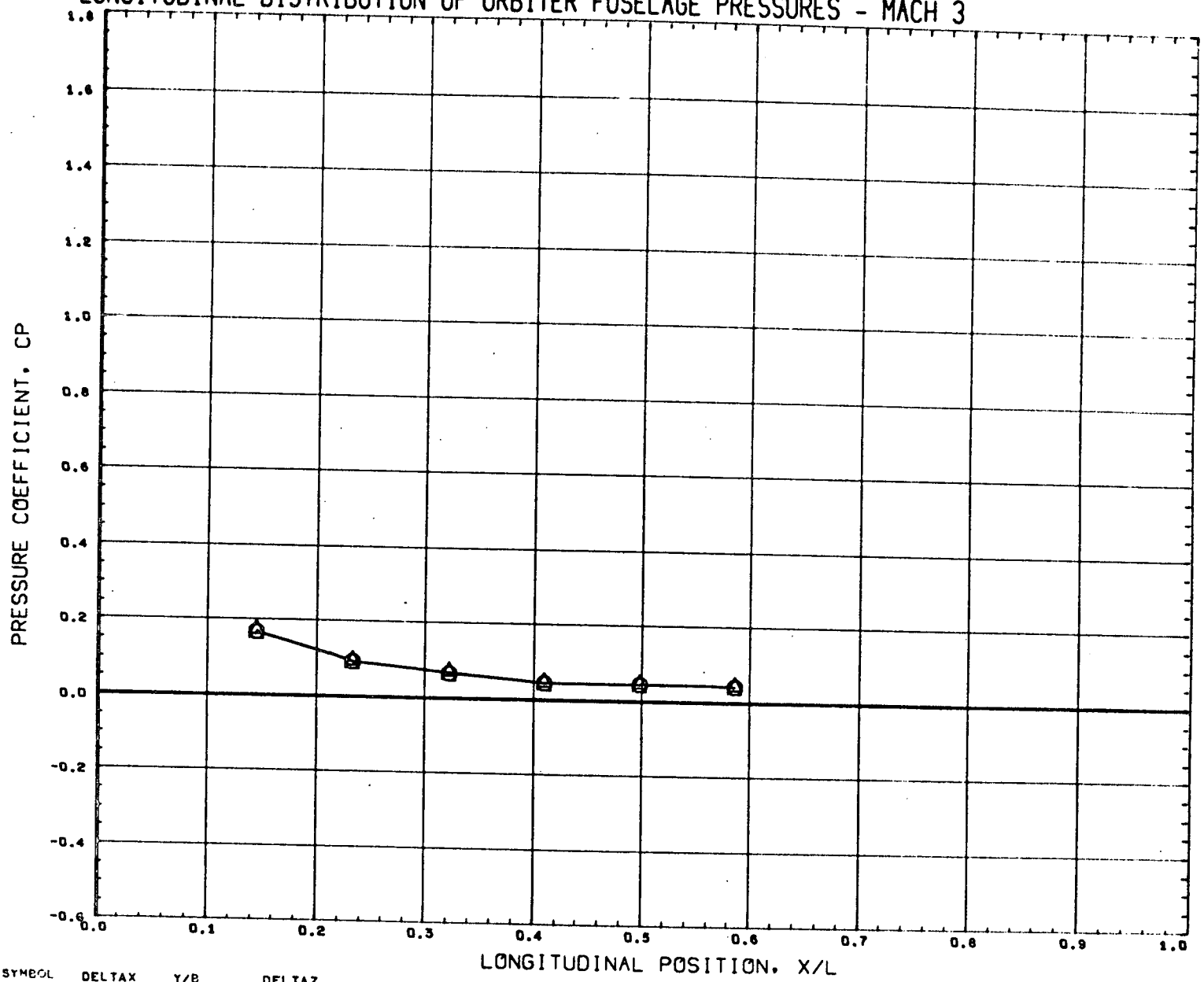
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.076	0.908
△	0.511		

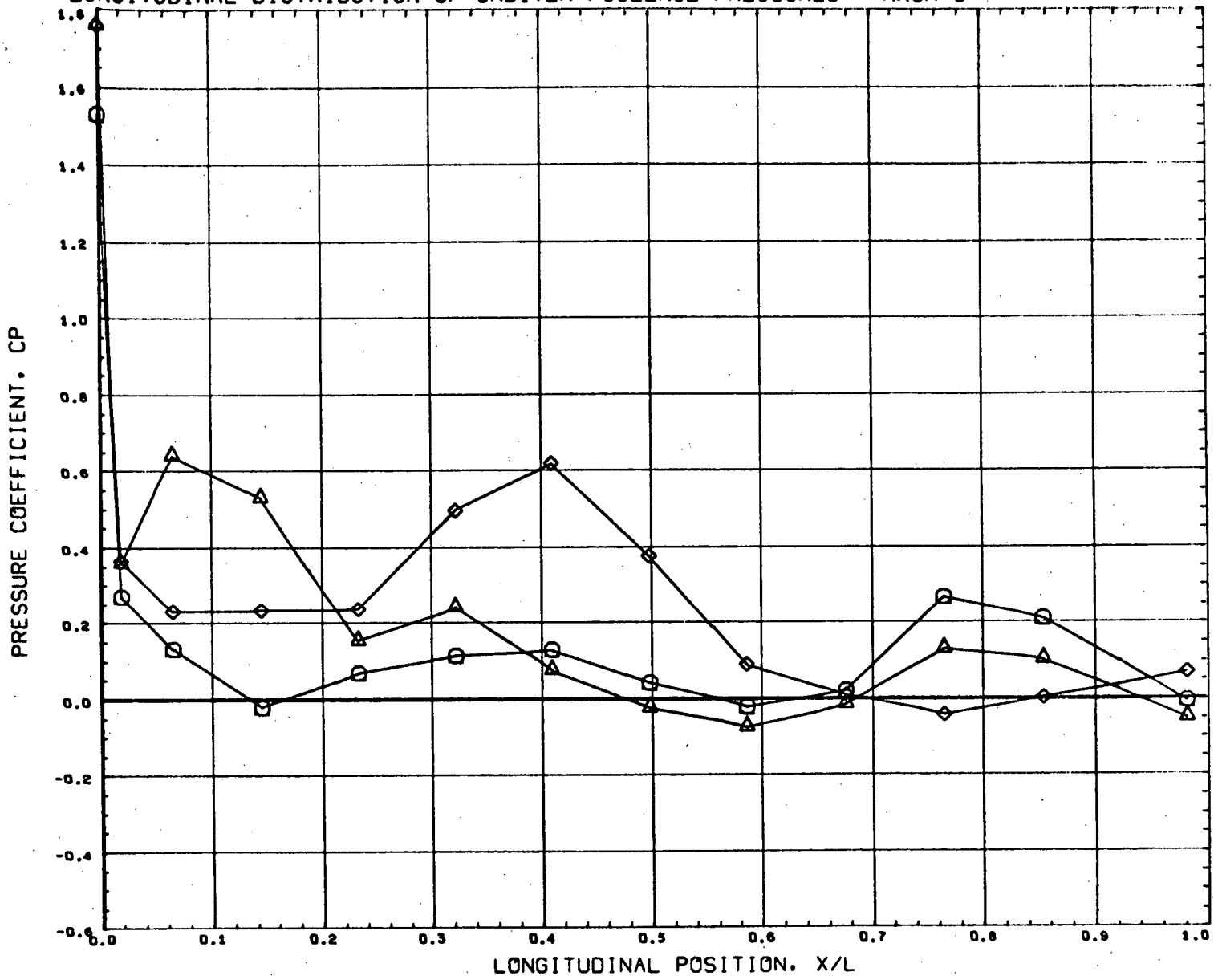
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

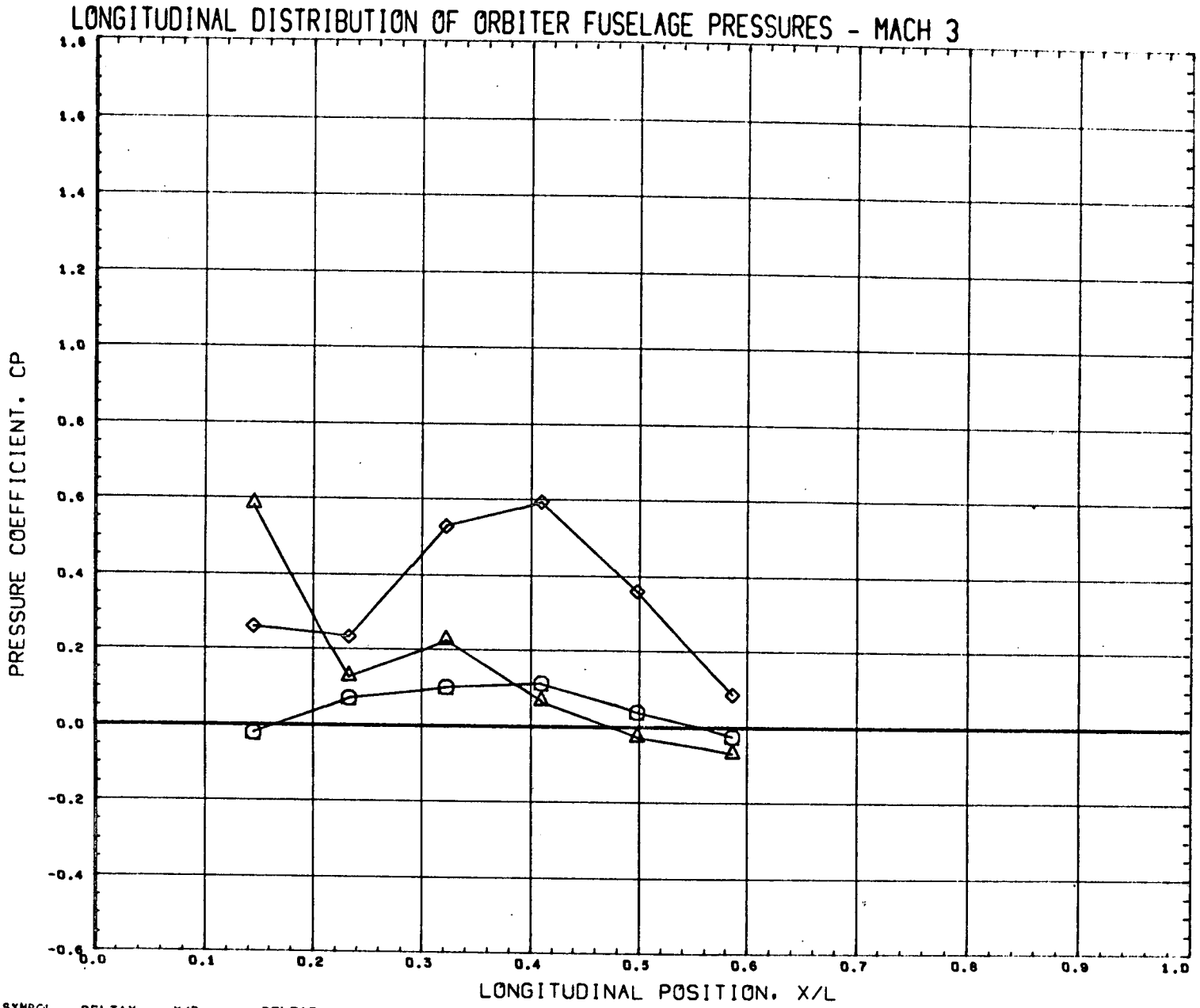
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.076	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

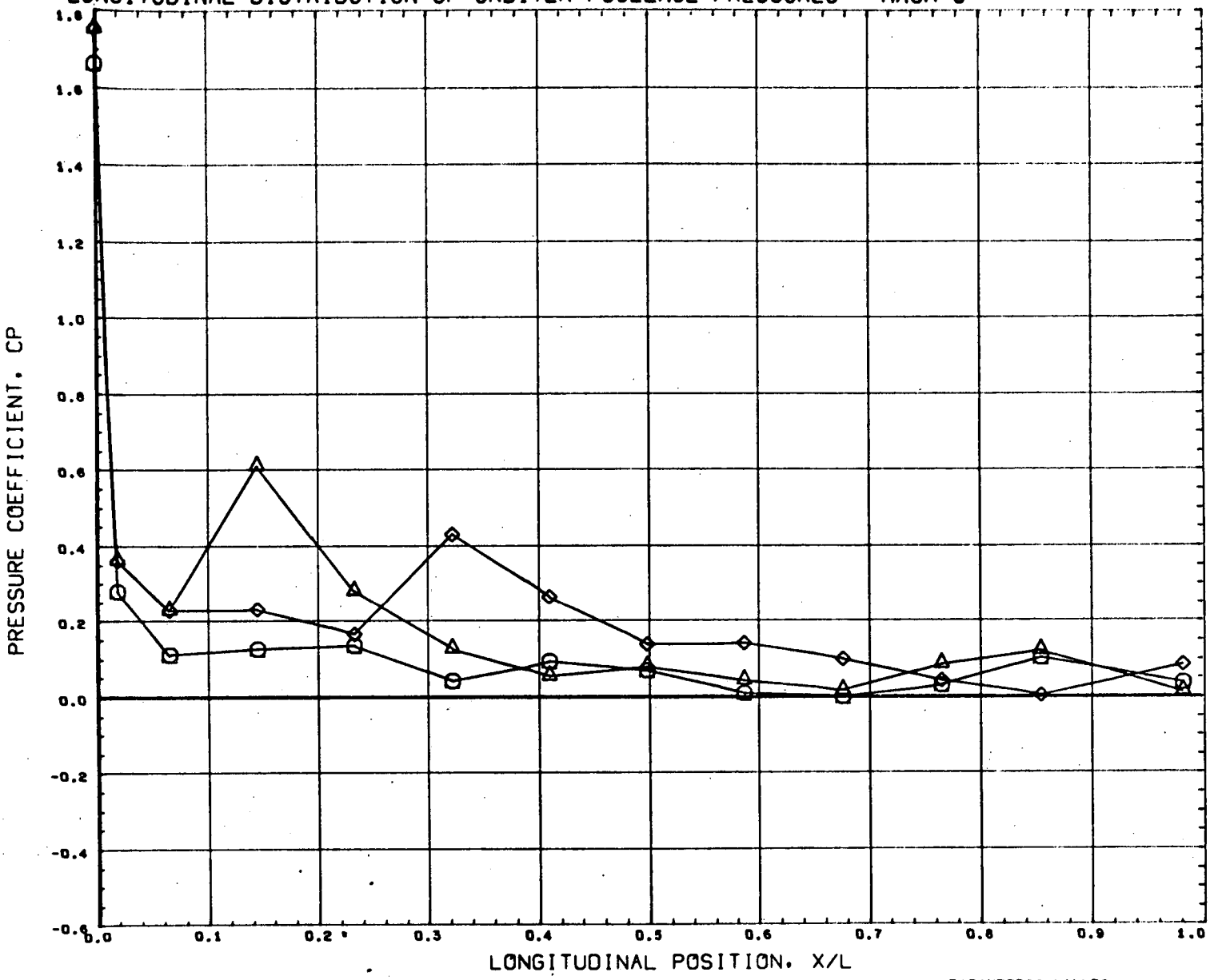
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



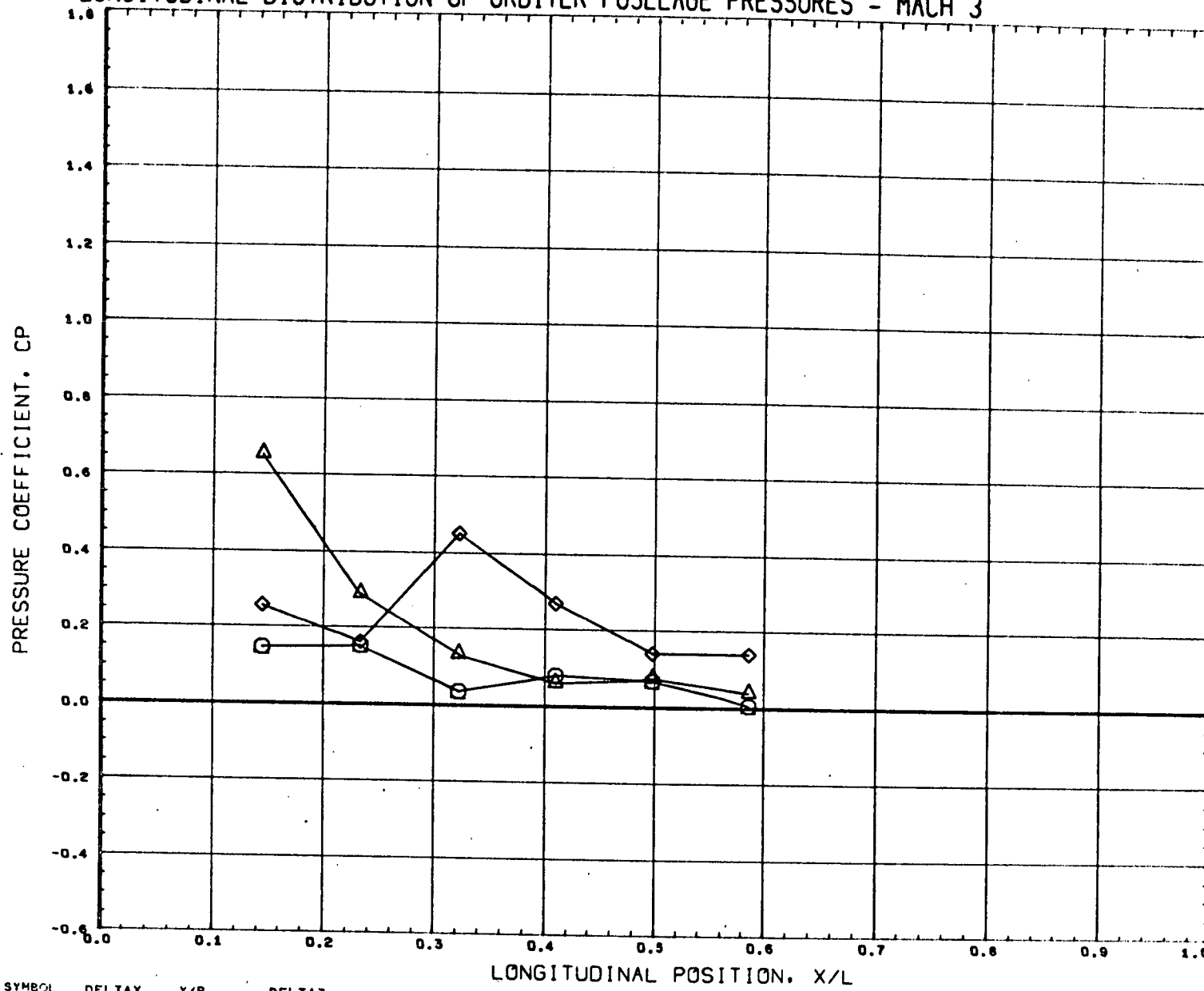
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.000	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.076	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

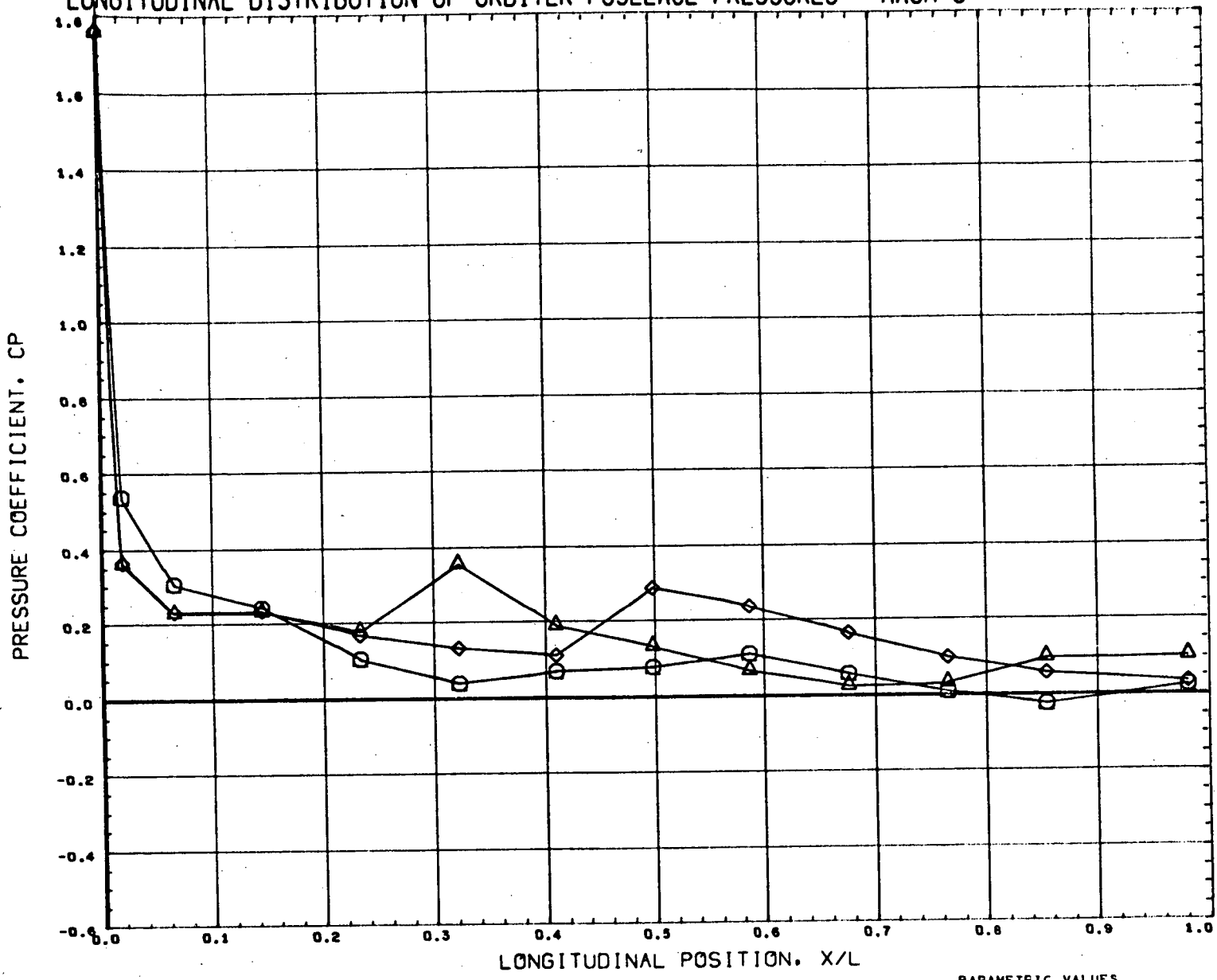
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

3/8

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



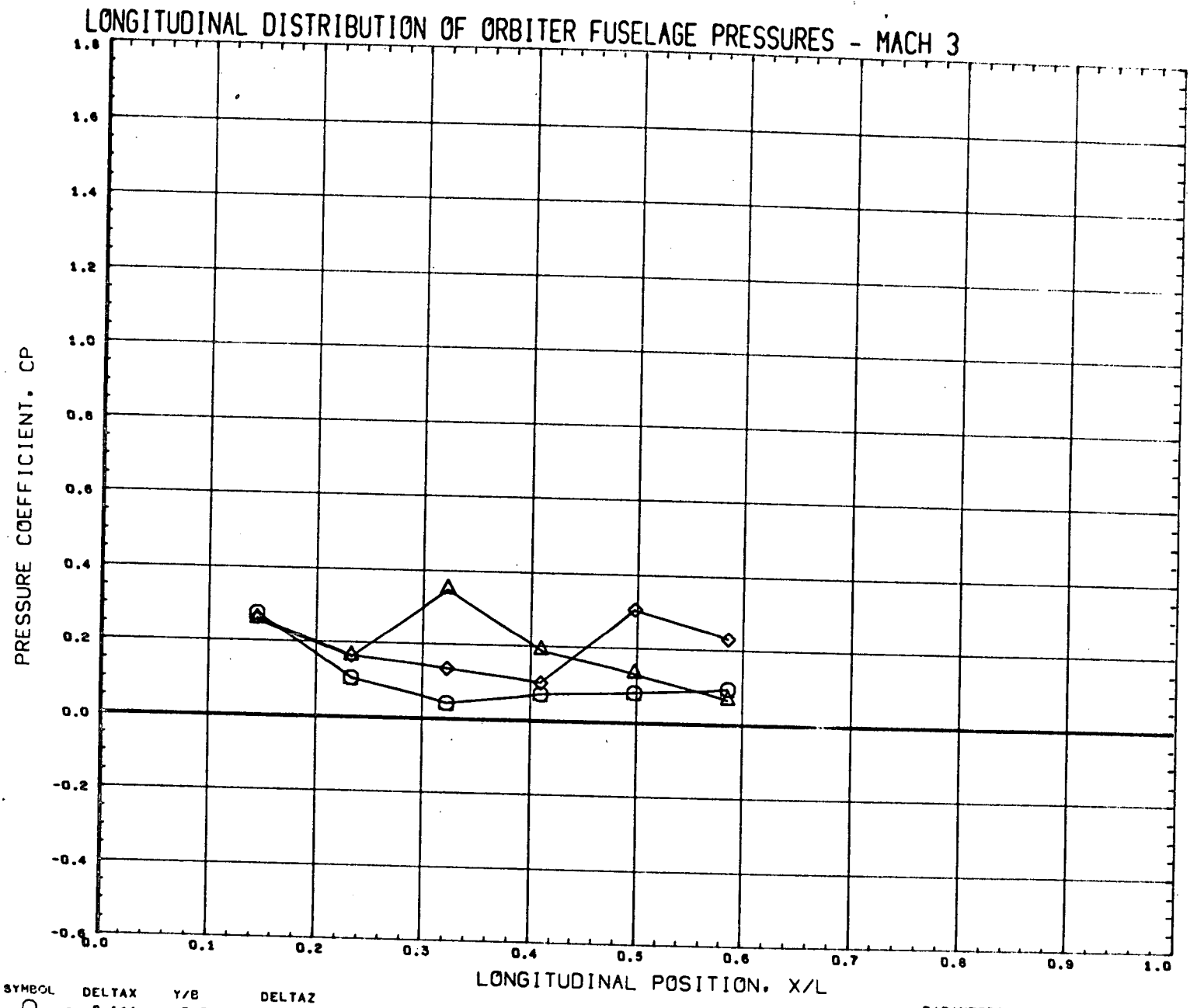
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.076	0.228
△	0.103		
◇	0.226		

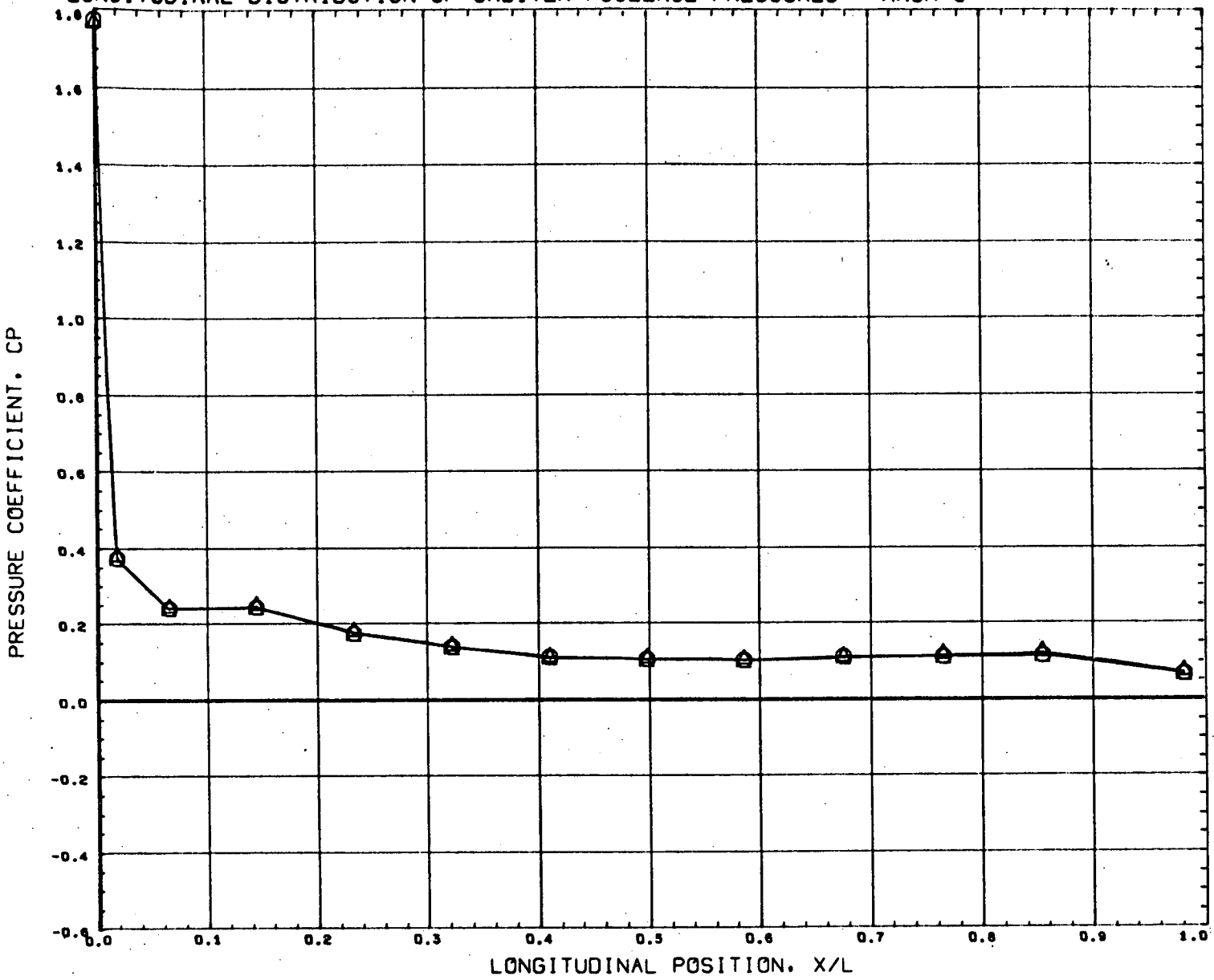
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



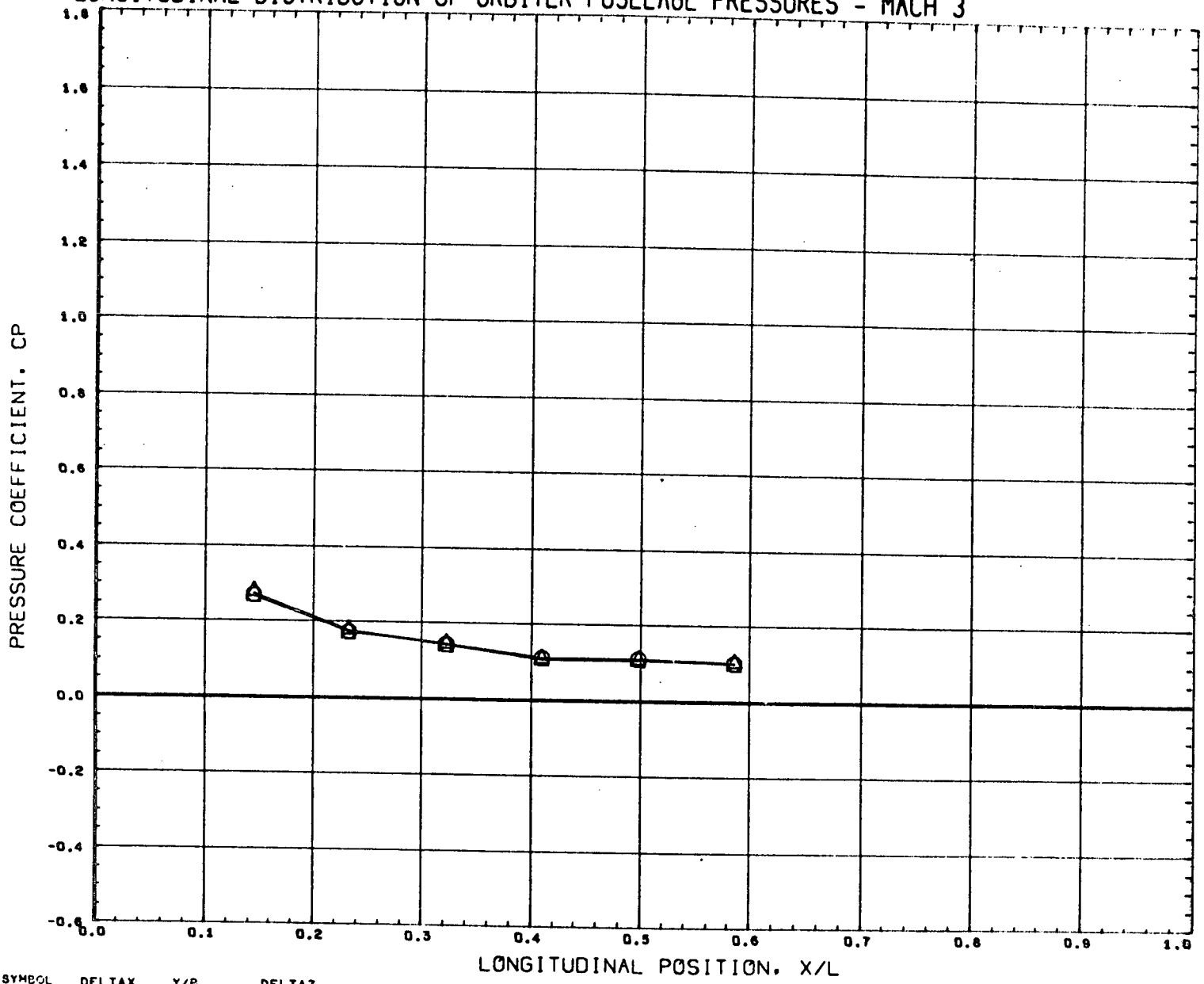
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.000	0.908
△	0.481		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



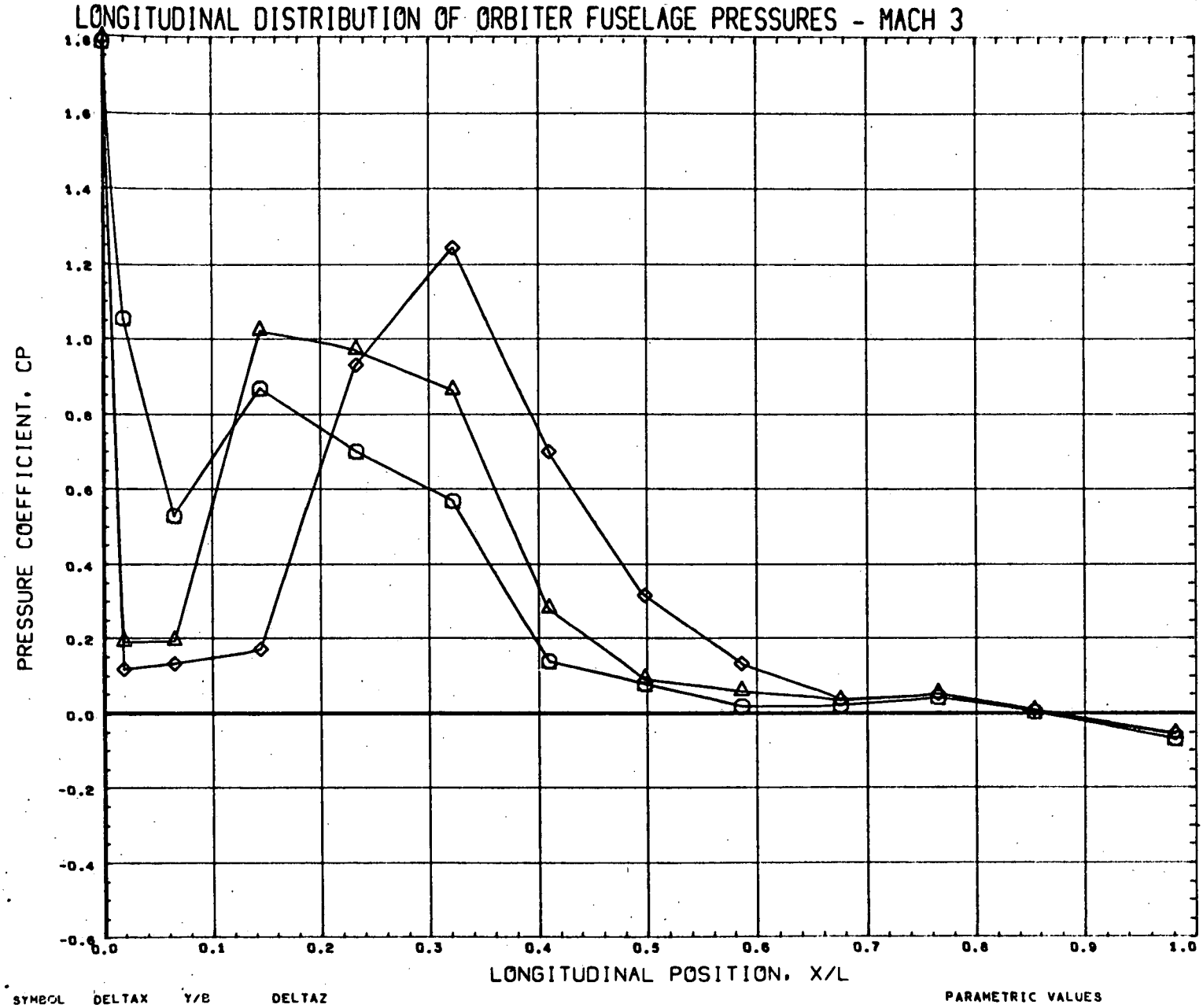
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.076	0.908
△	0.481		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

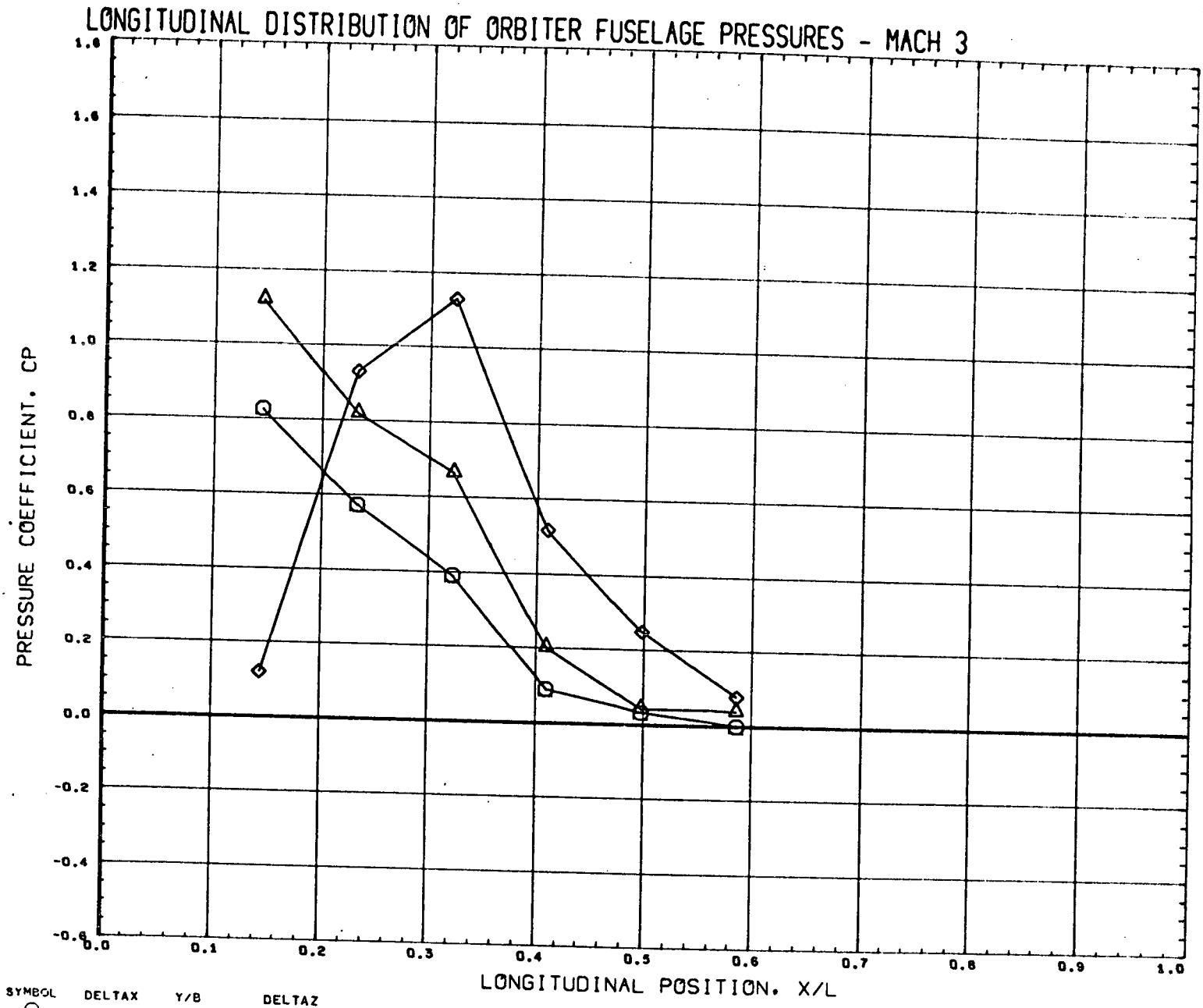


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.000	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.076	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

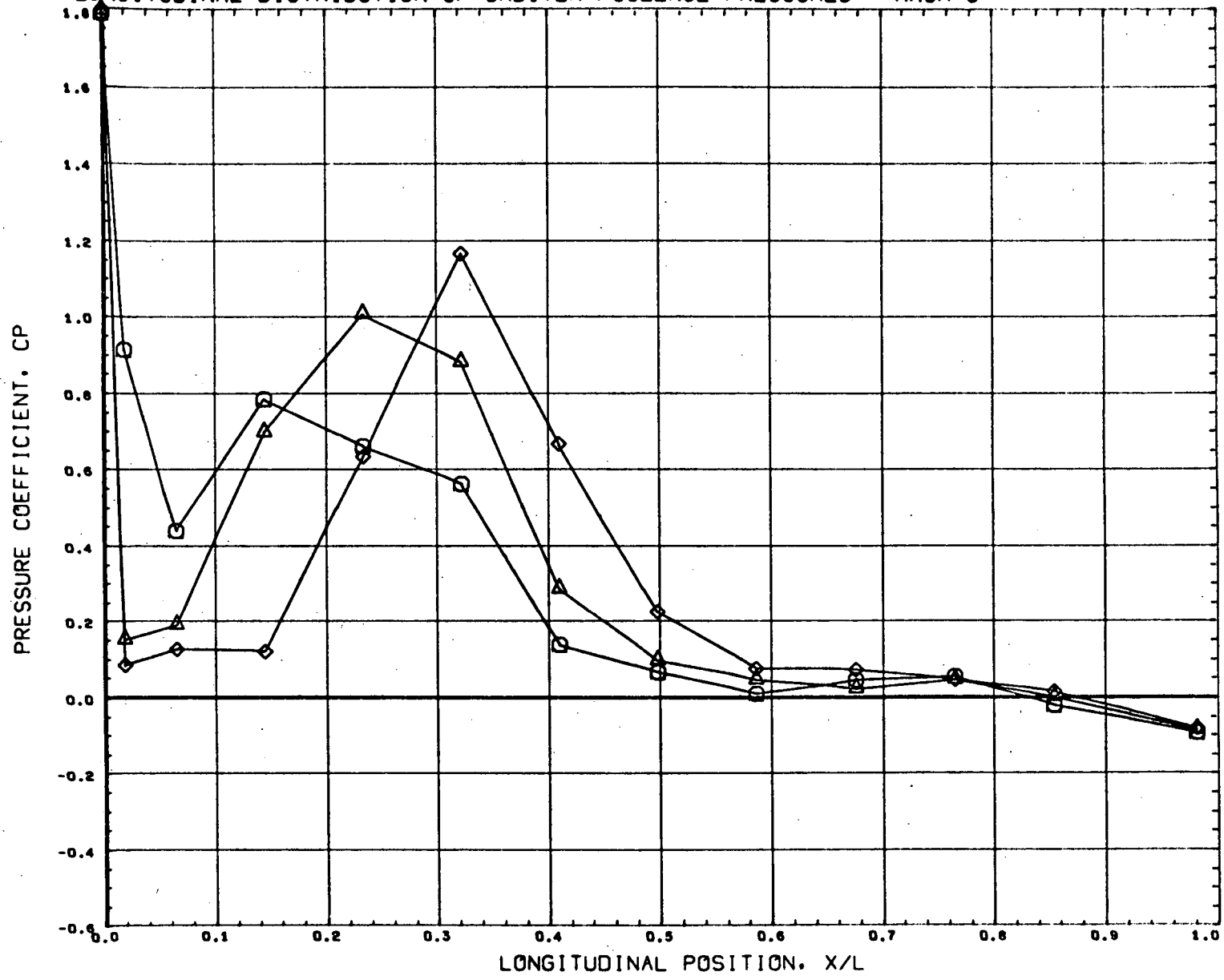
ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8331•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3

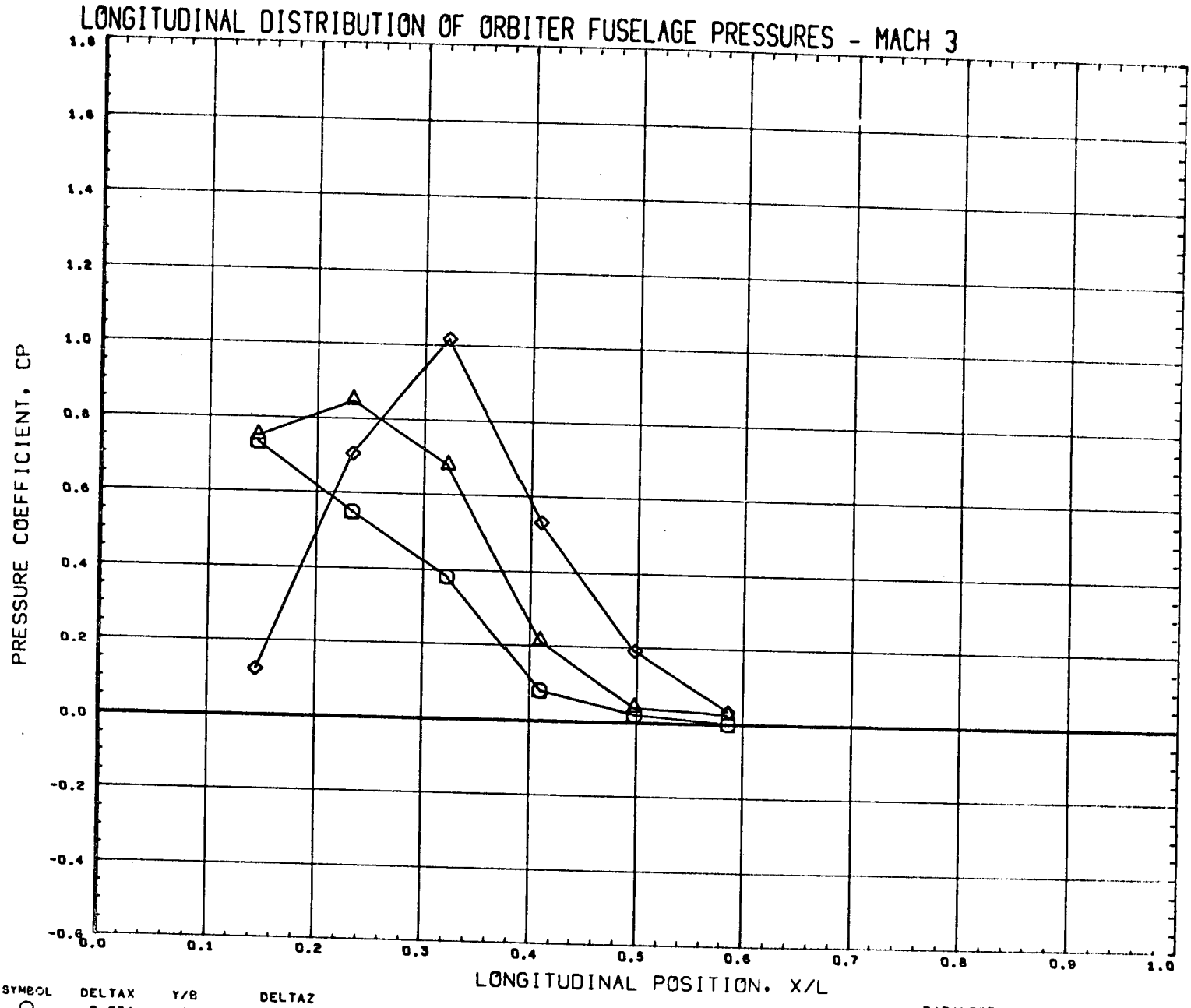


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.000	0.105
△	0.101		
◇	0.161		

PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



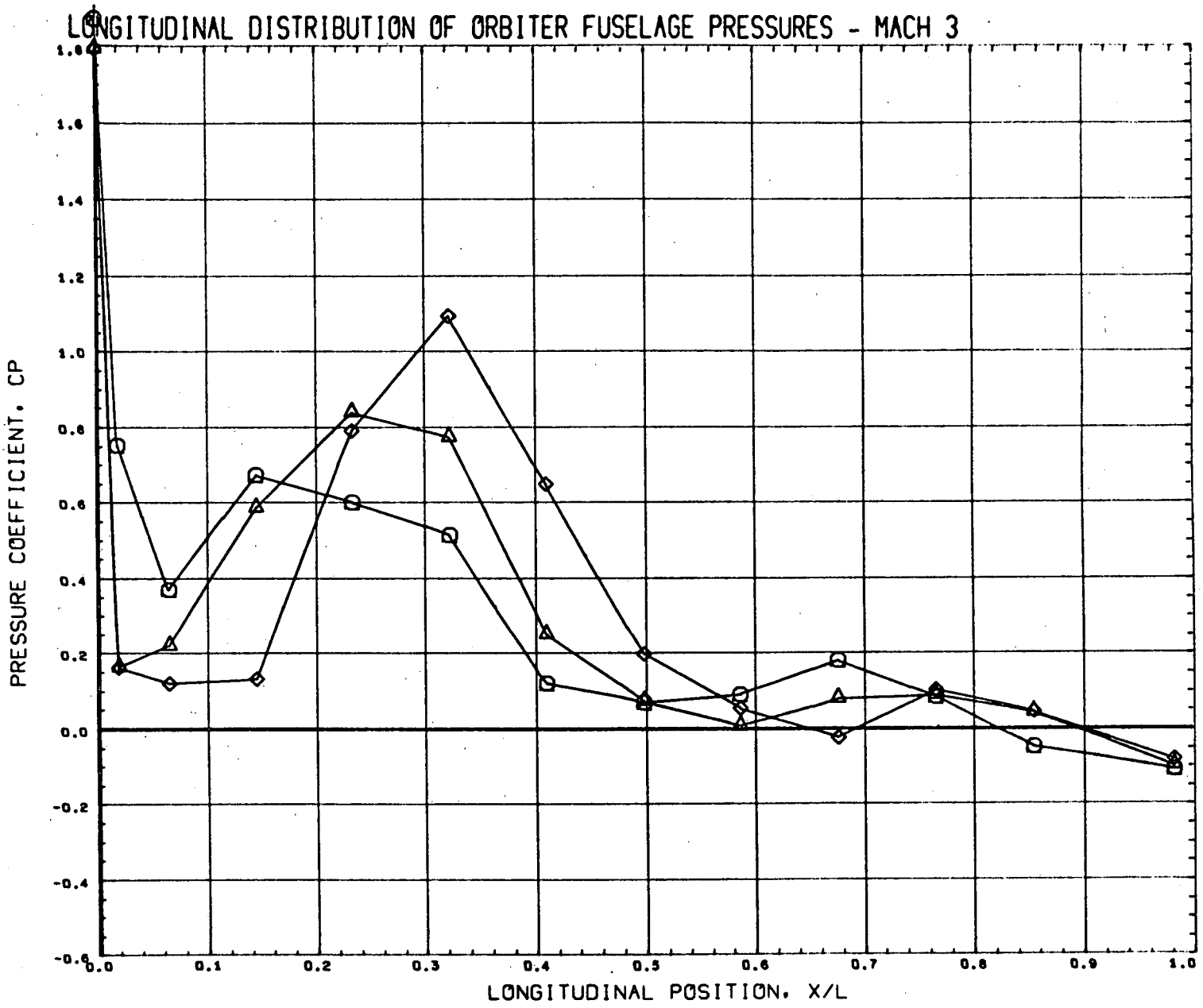
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.076	0.105
△	0.101		
◇	0.161		

PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.000	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

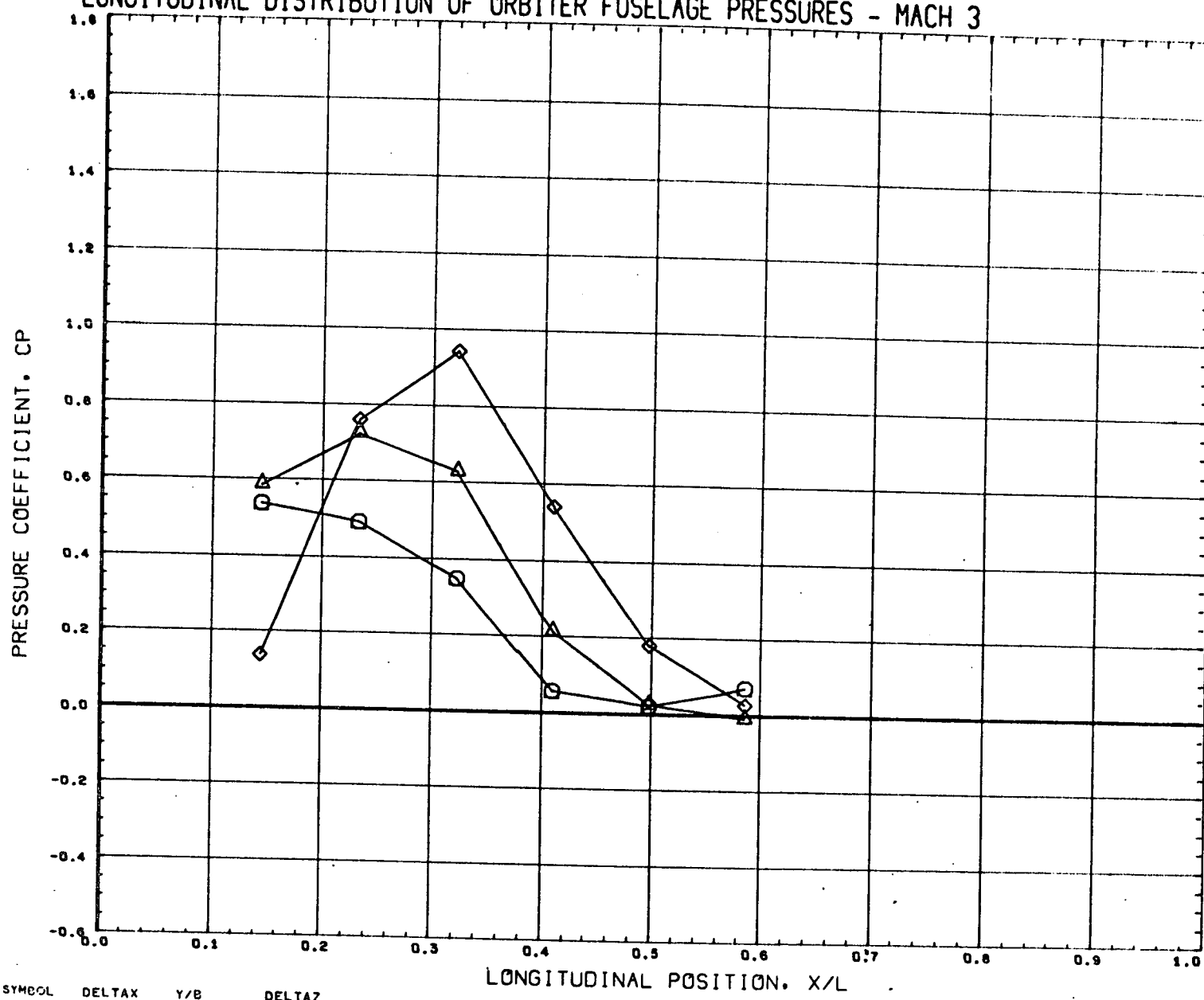
ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8333•

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.076	0.105
△	0.104		
◇	0.167		

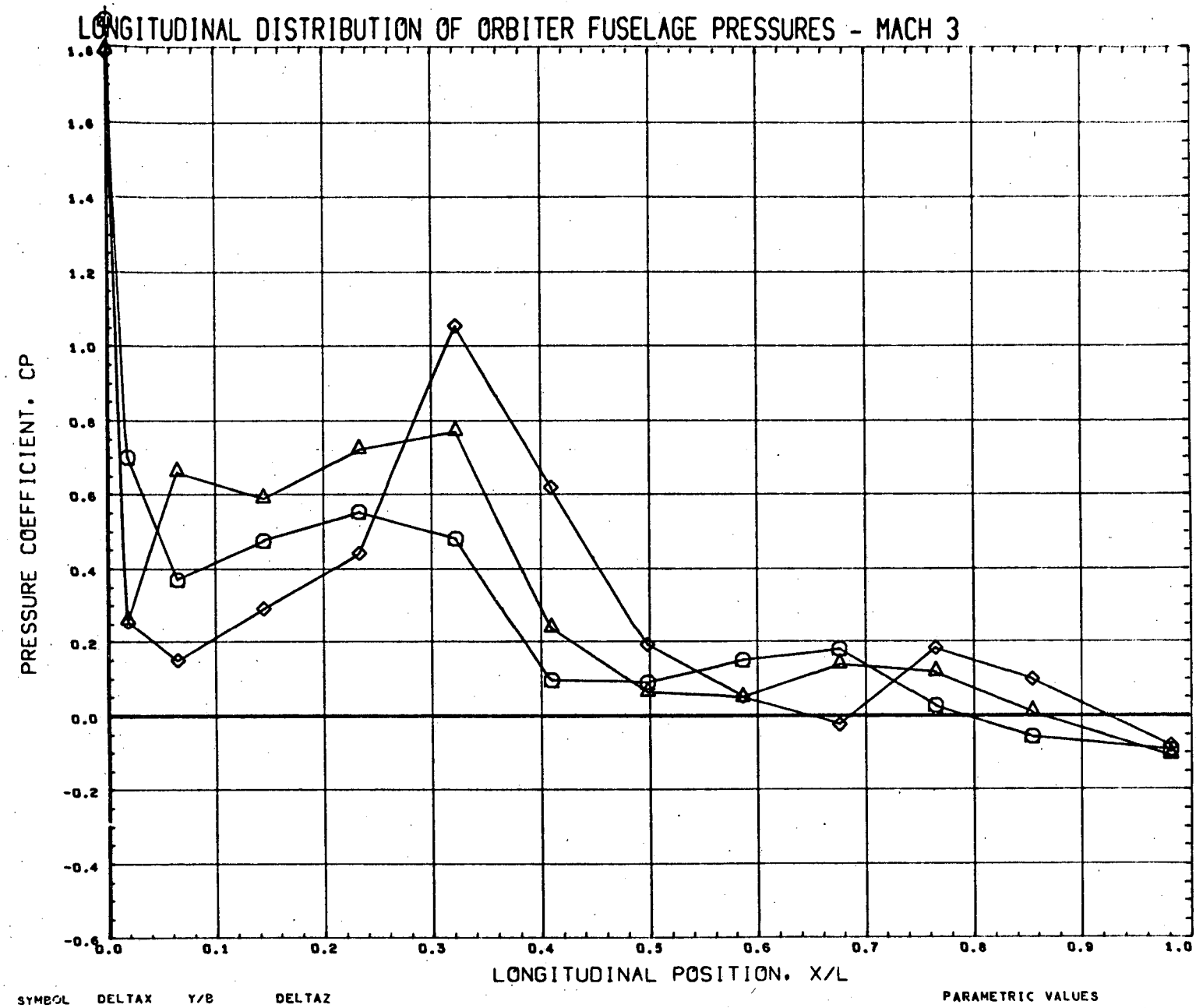
PARAMETRIC VALUES

ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8333•



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.000	0.105
△	0.099		
◇	0.162		

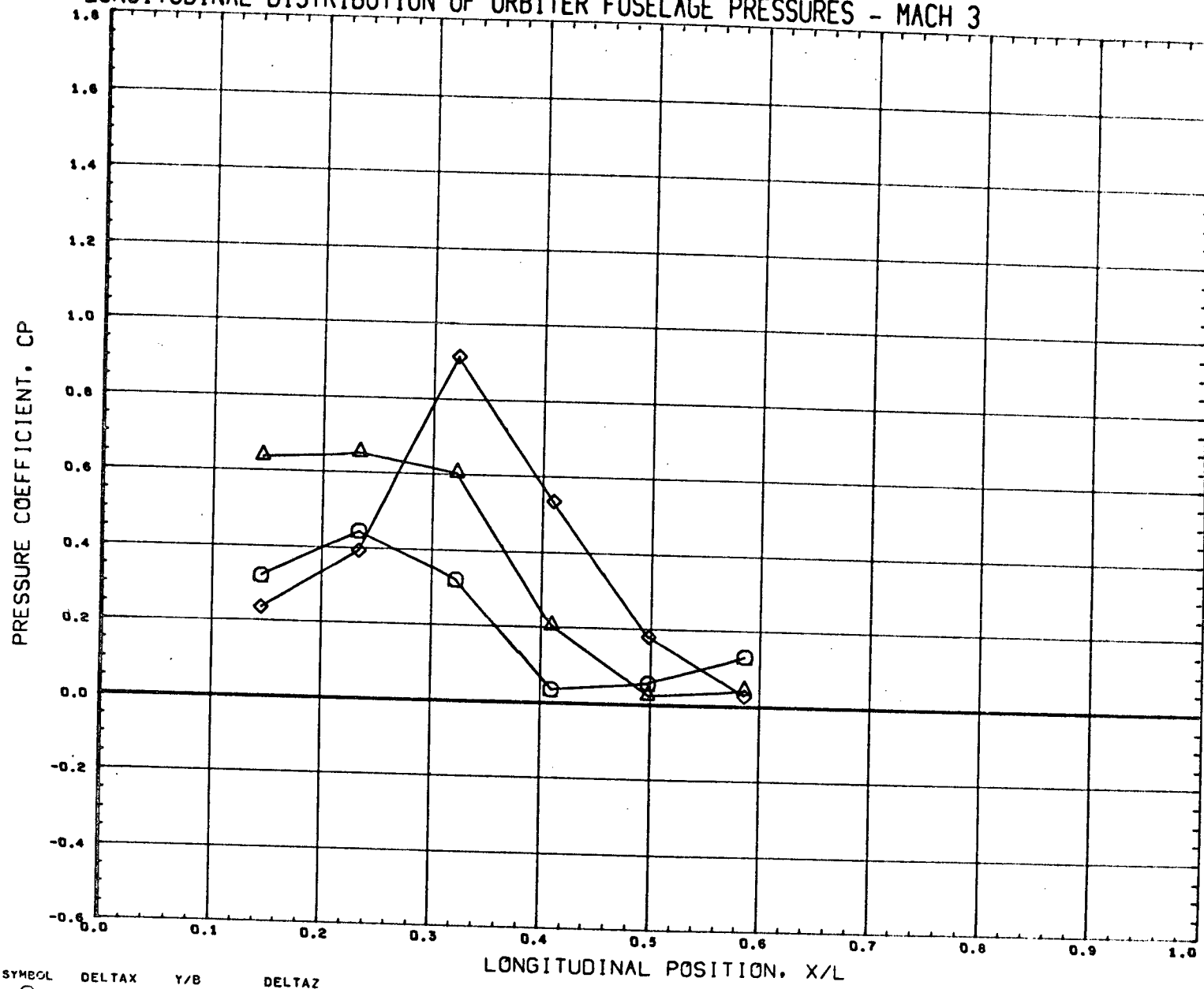
PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES - MACH 3



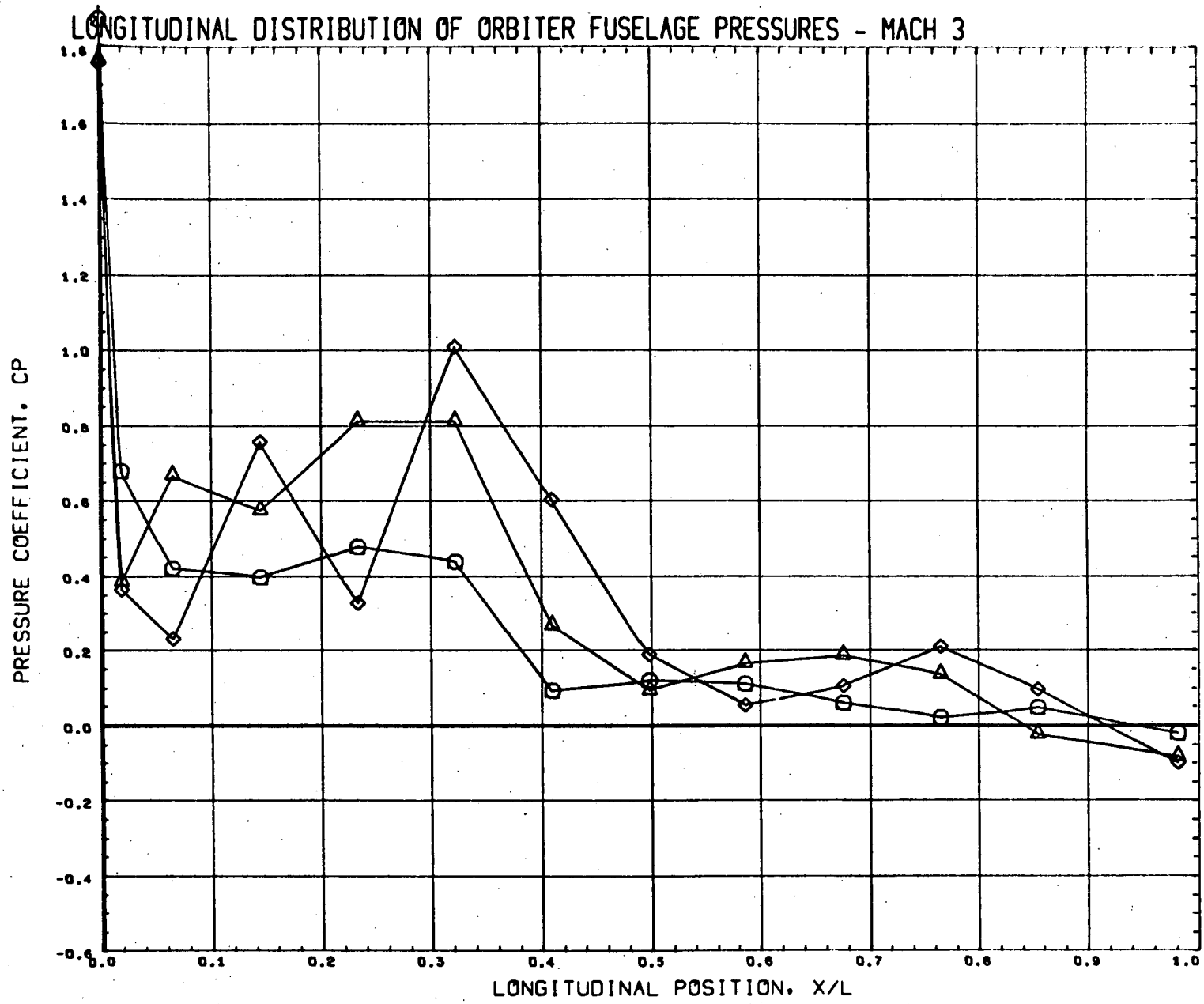
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.076	0.105
△	0.099		
◇	0.162		

PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.000	0.105
△	0.104		
◇	0.165		

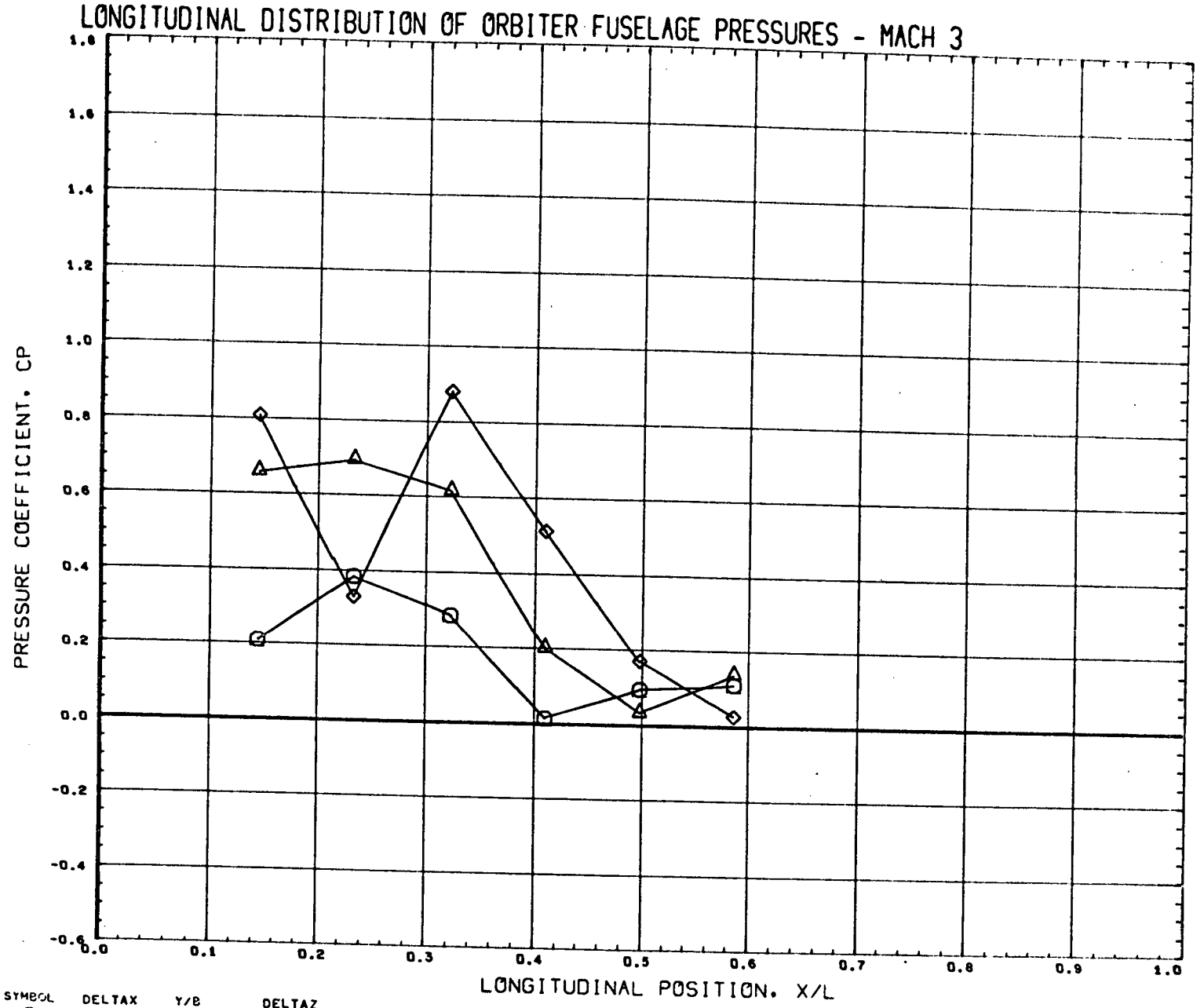
PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

•FT8335•



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.076	0.105
△	0.104		
◇	0.165		

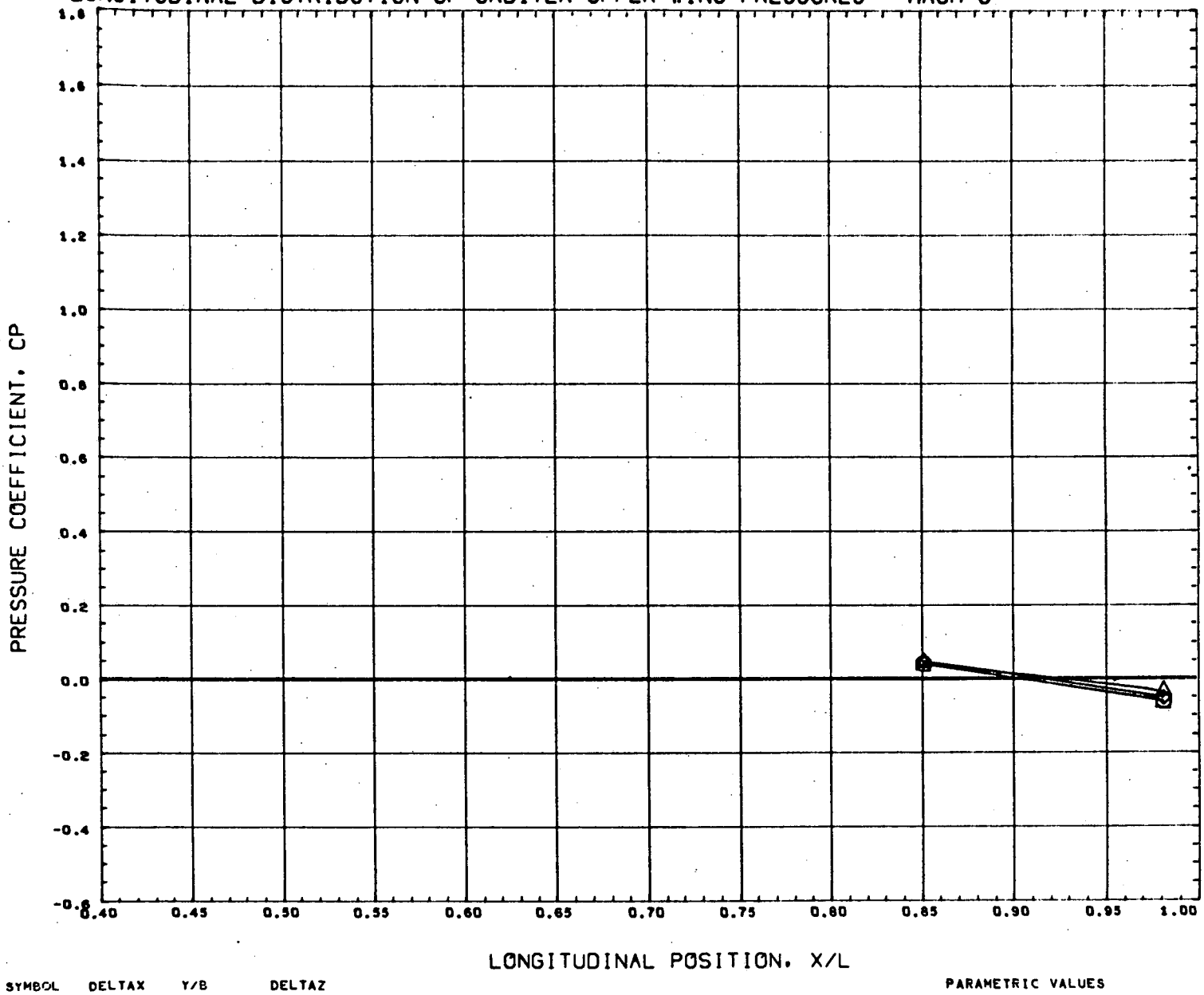
PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BODY)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.269	0.120
△	0.103		
◇	0.226		

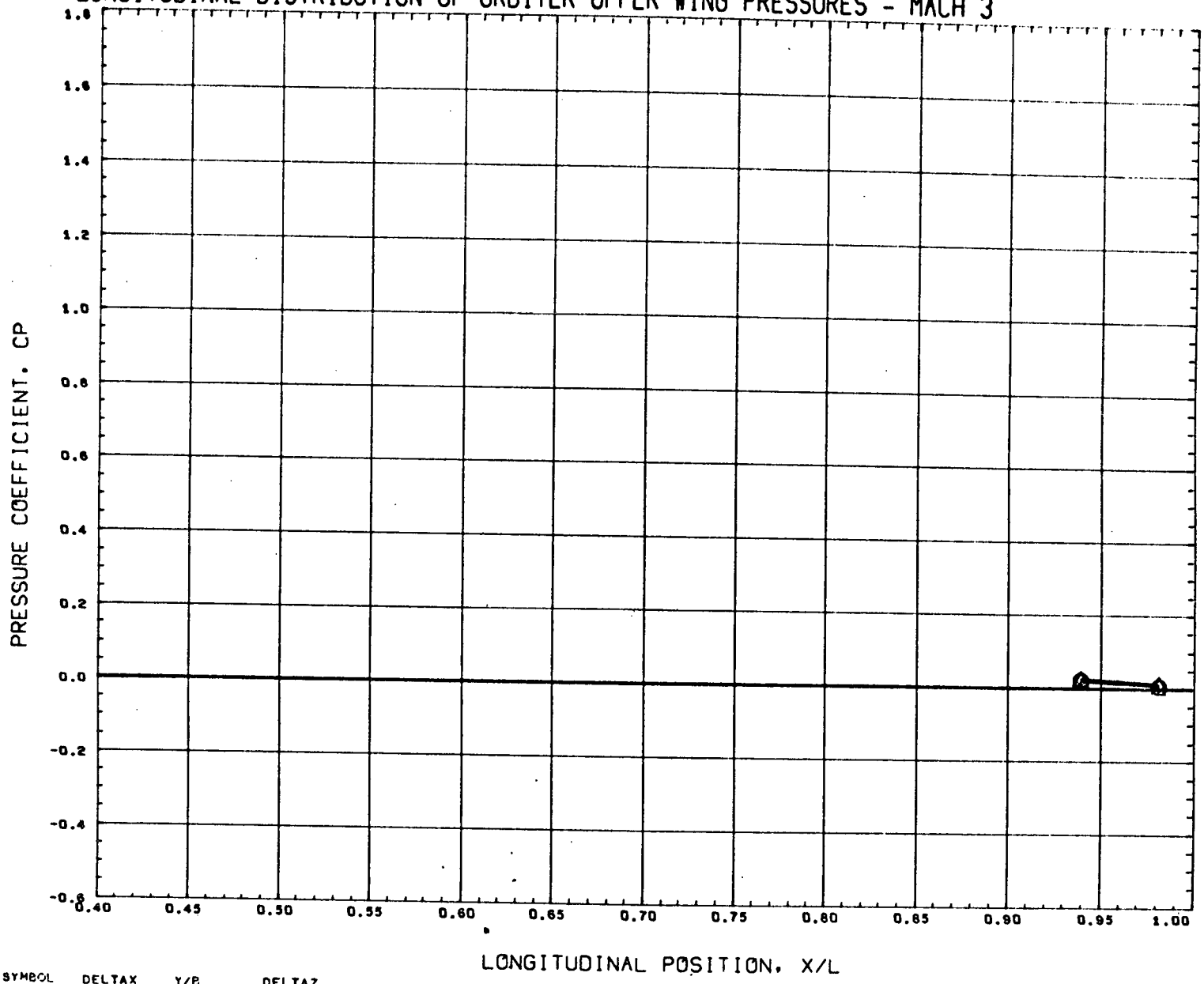
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8311• PAGE 91

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

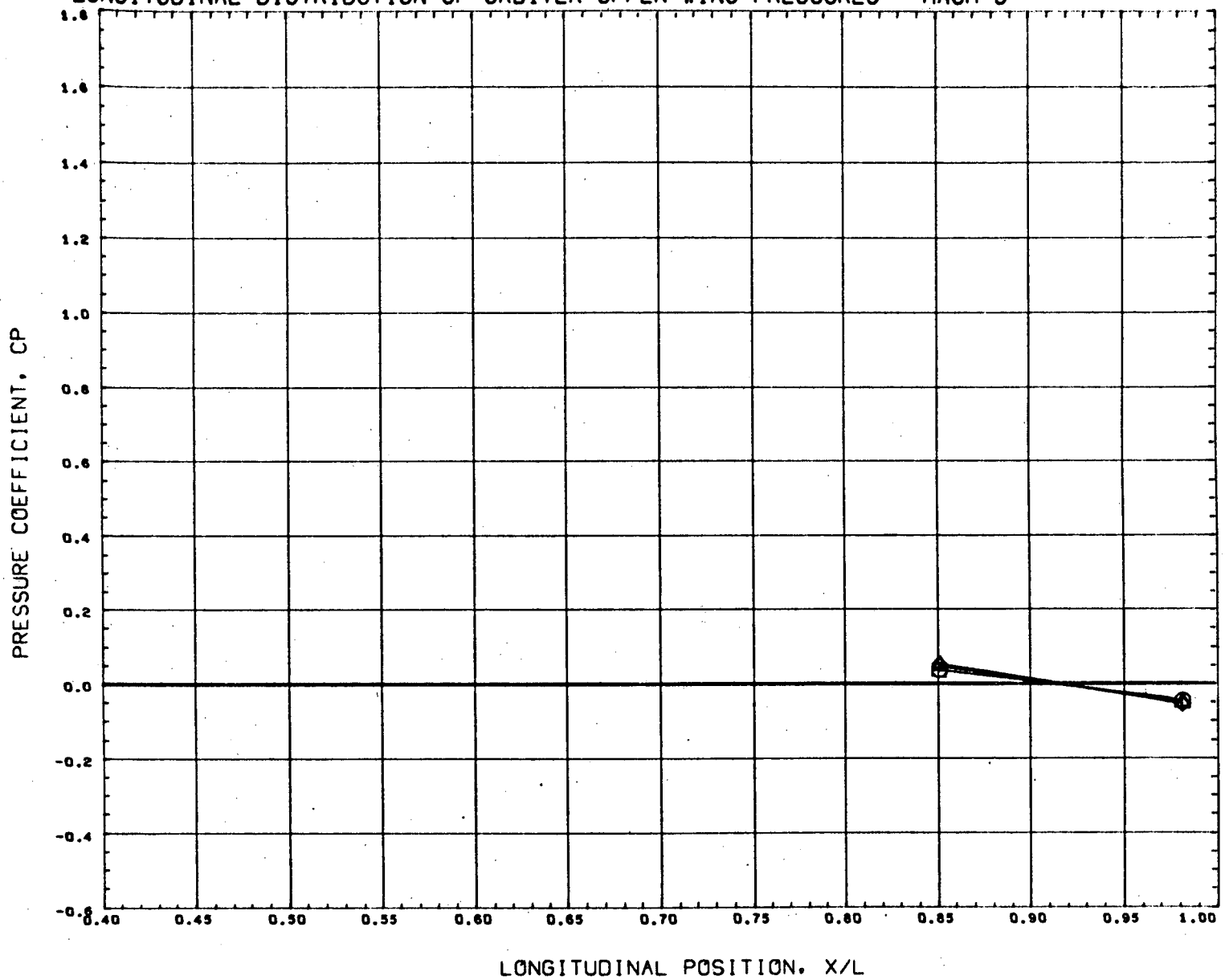
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



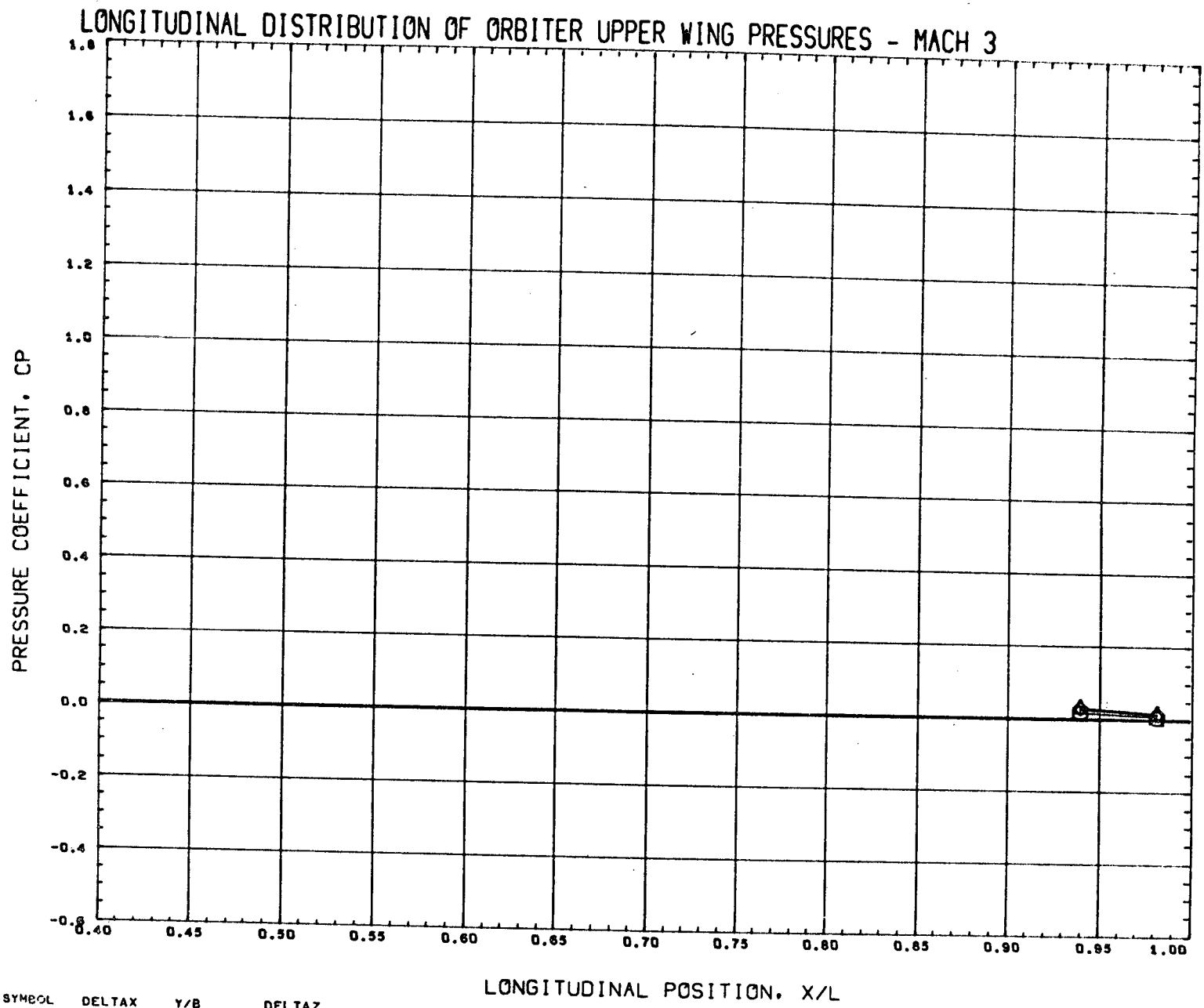
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.269	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

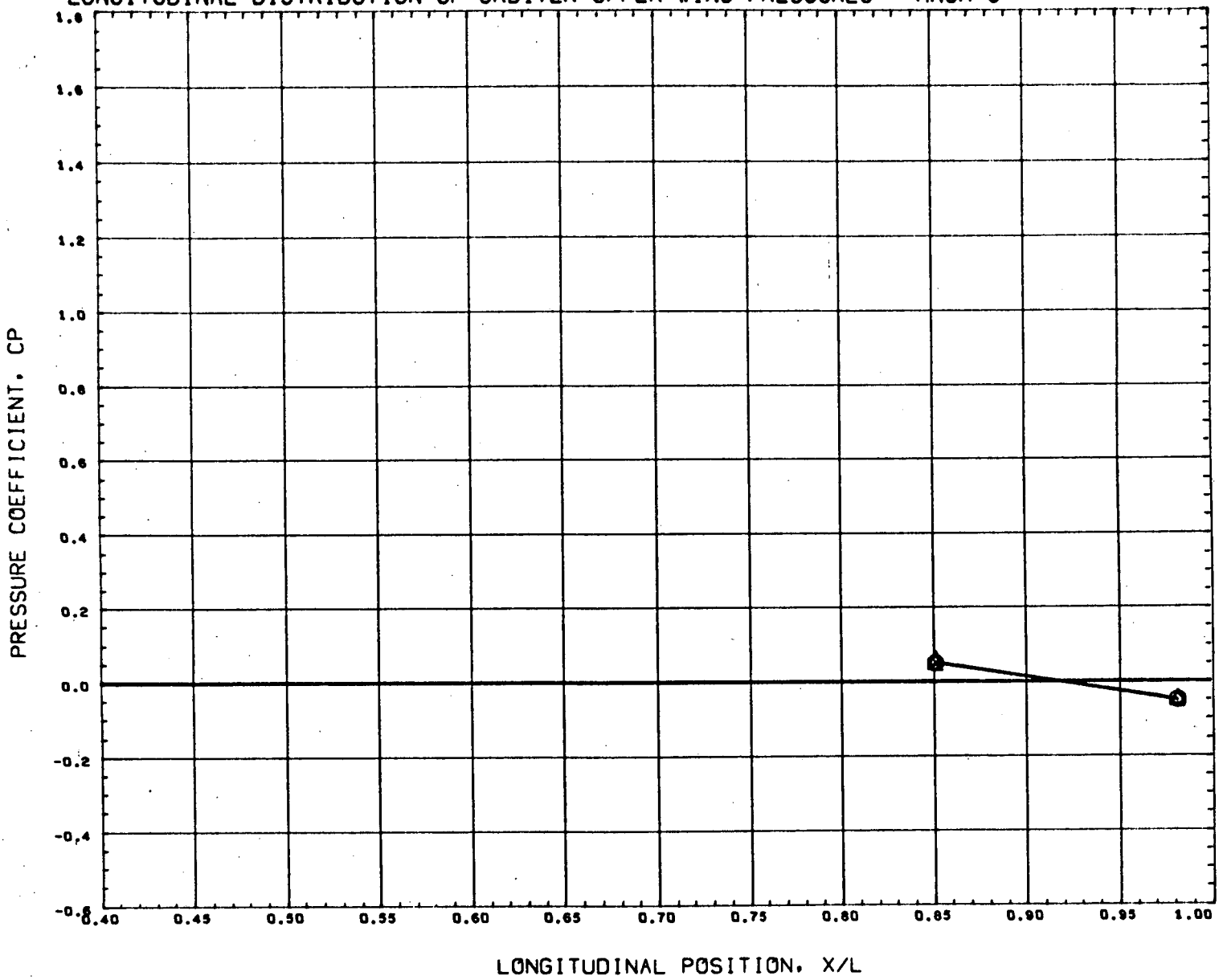
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.228
△	0.103		
◇	0.226		

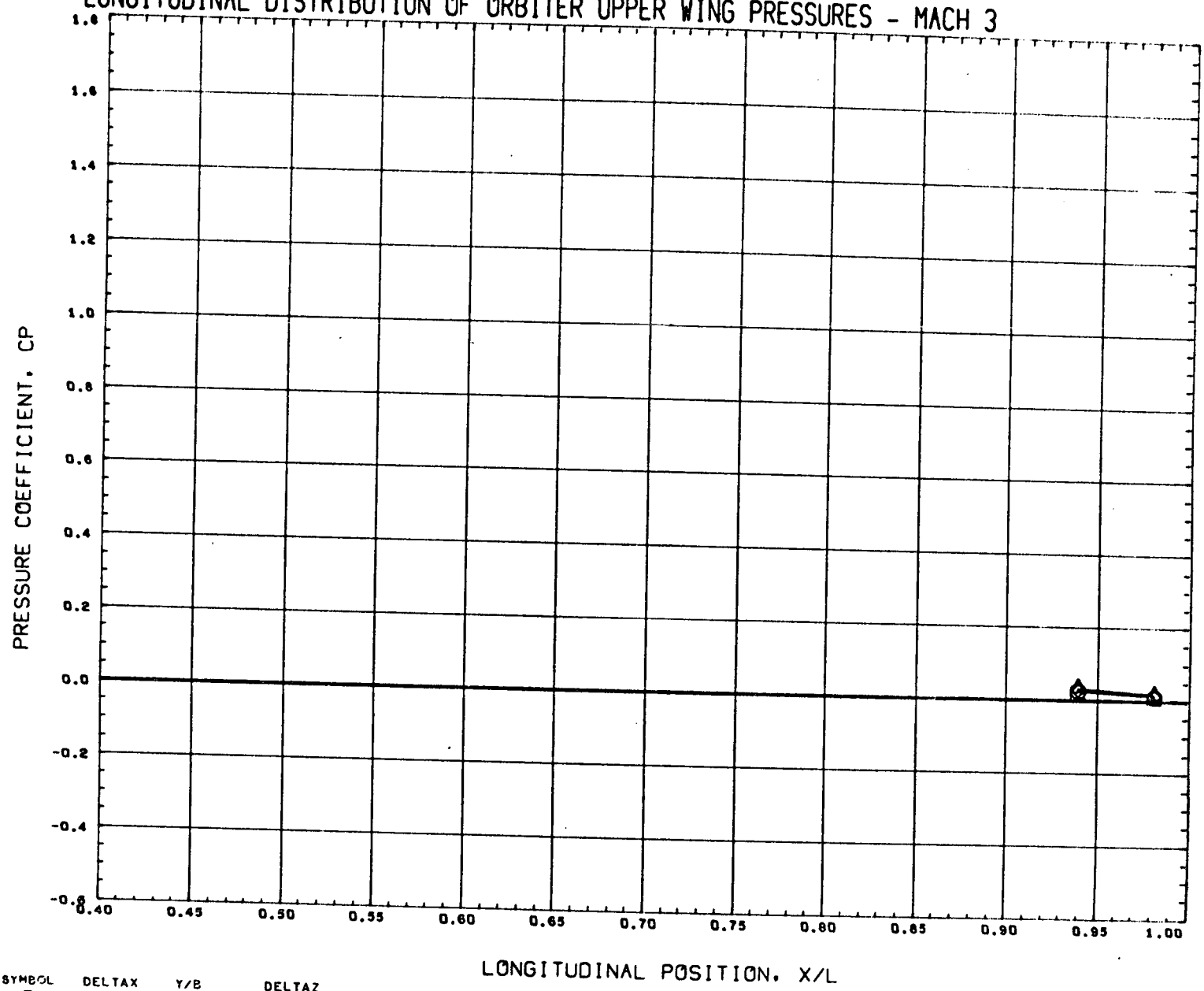
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

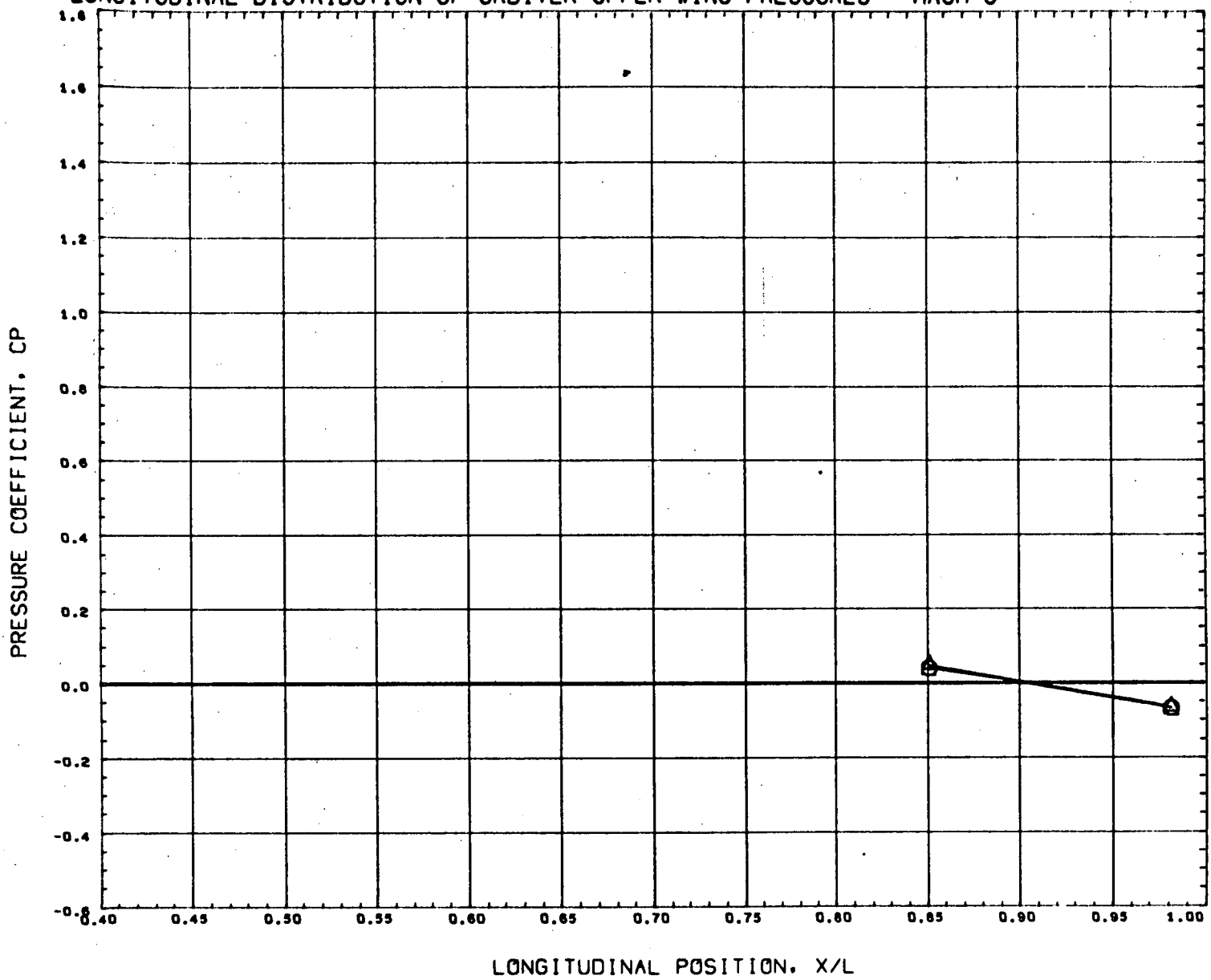
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3

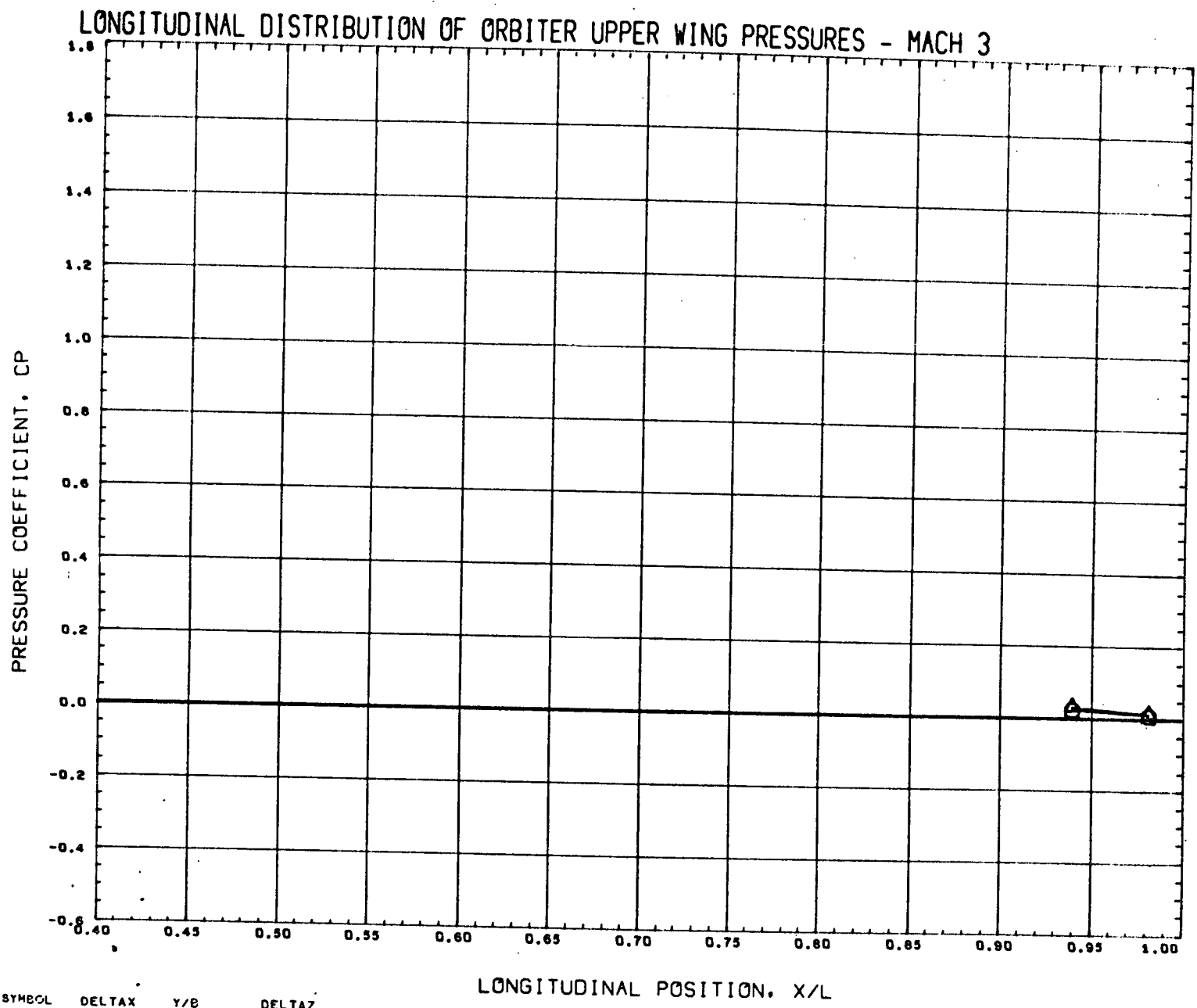


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.289	0.908
△	0.480		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	30.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.460		

PARAMETRIC VALUES

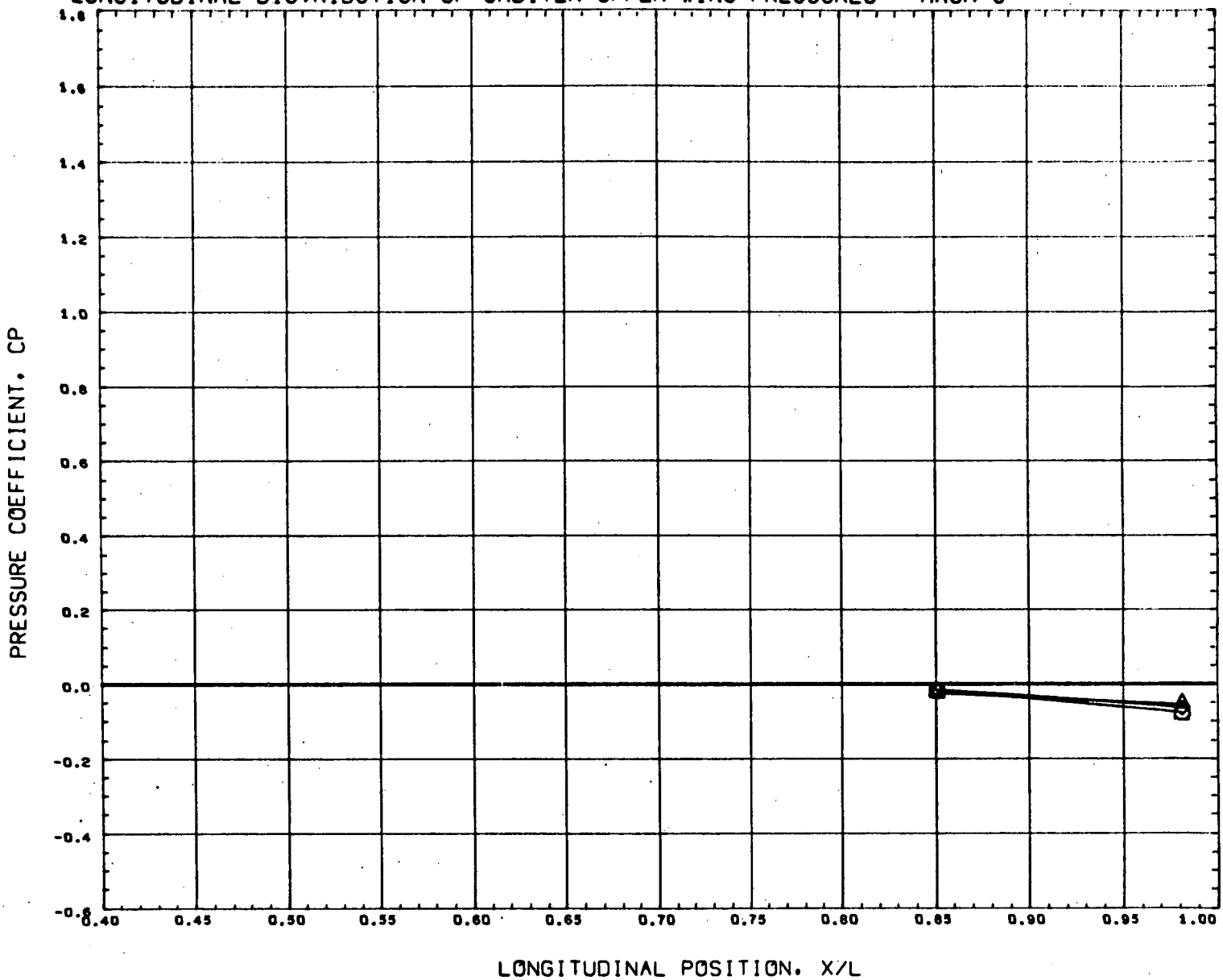
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



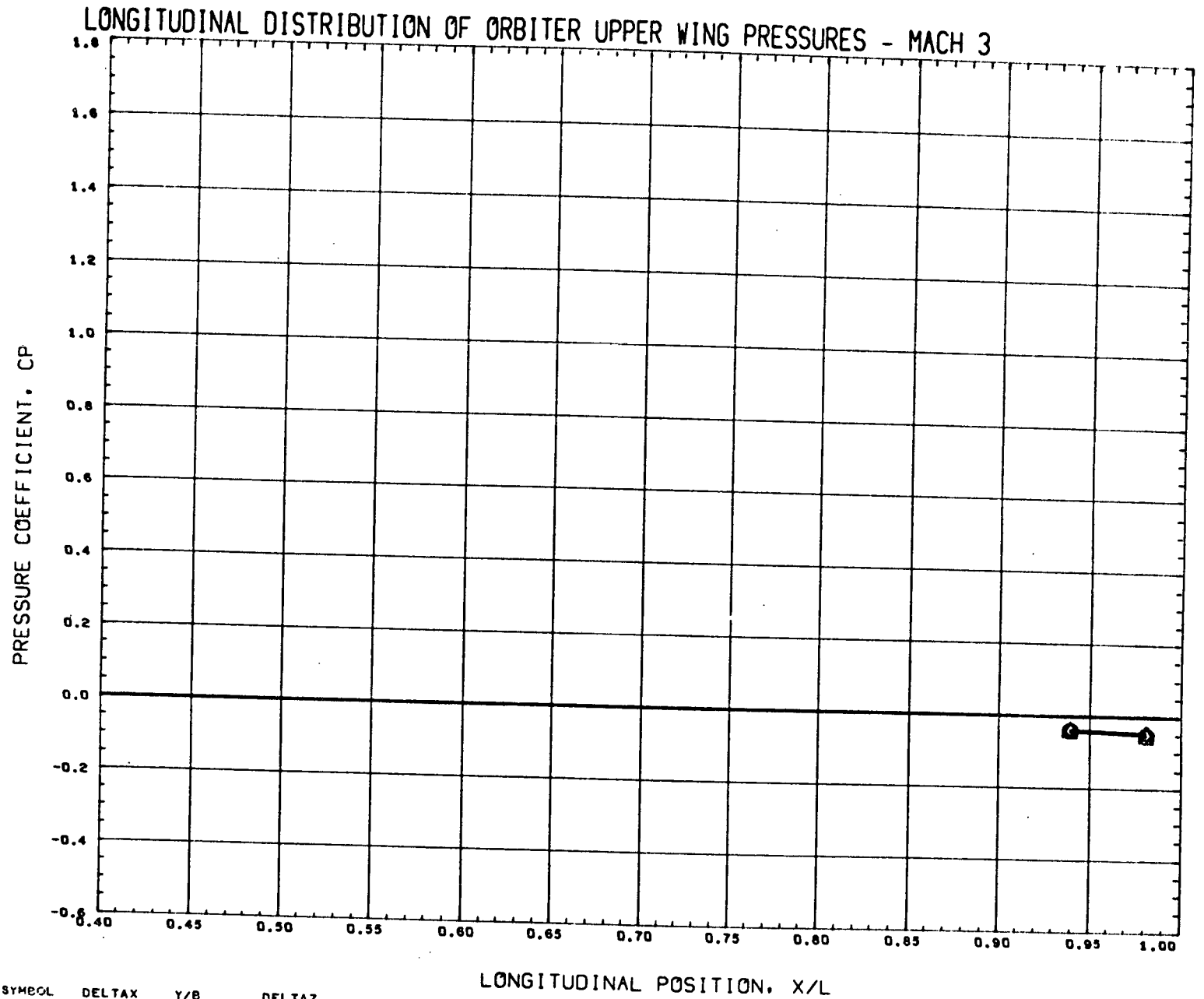
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

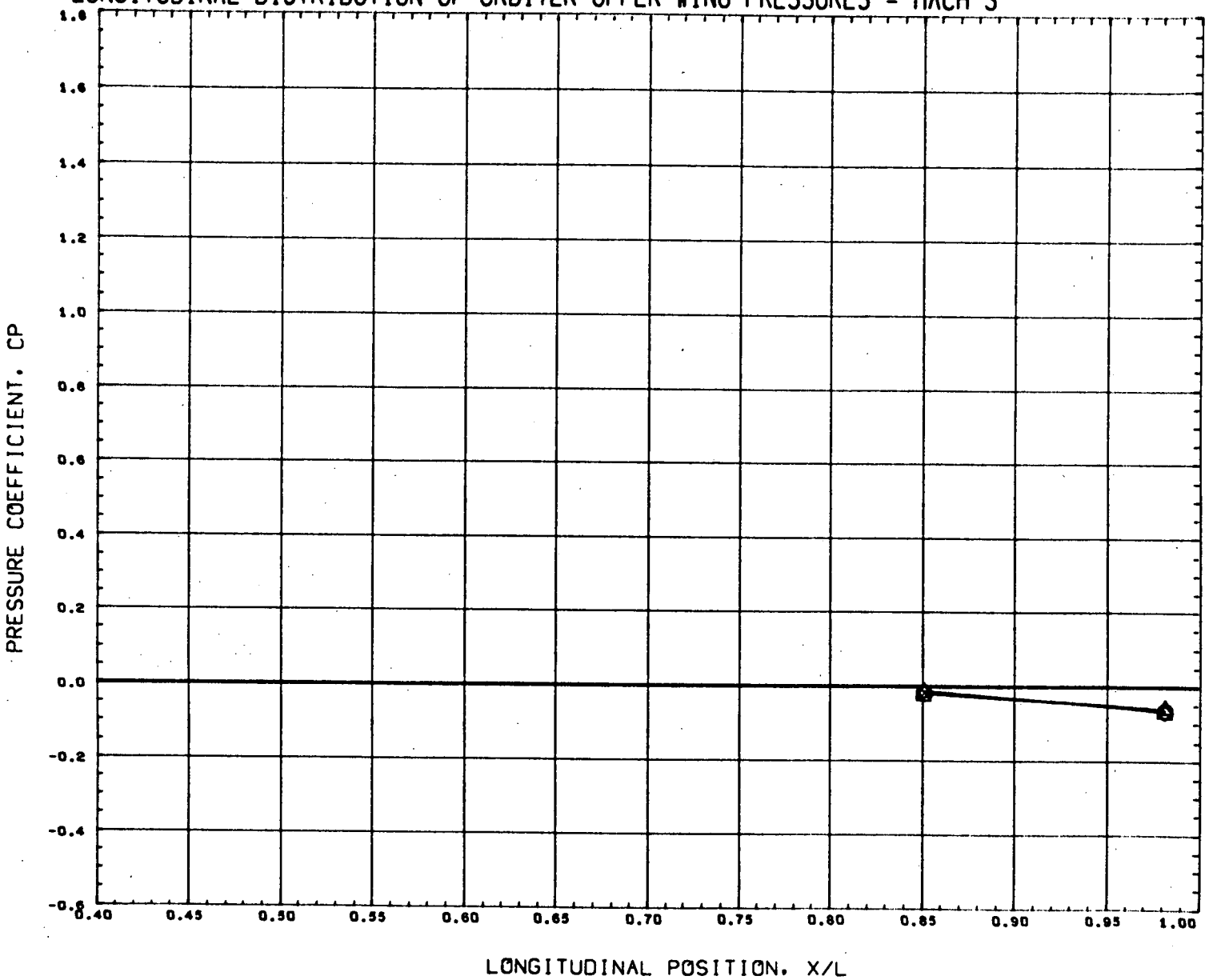
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.151
△	0.103		
◇	0.227		

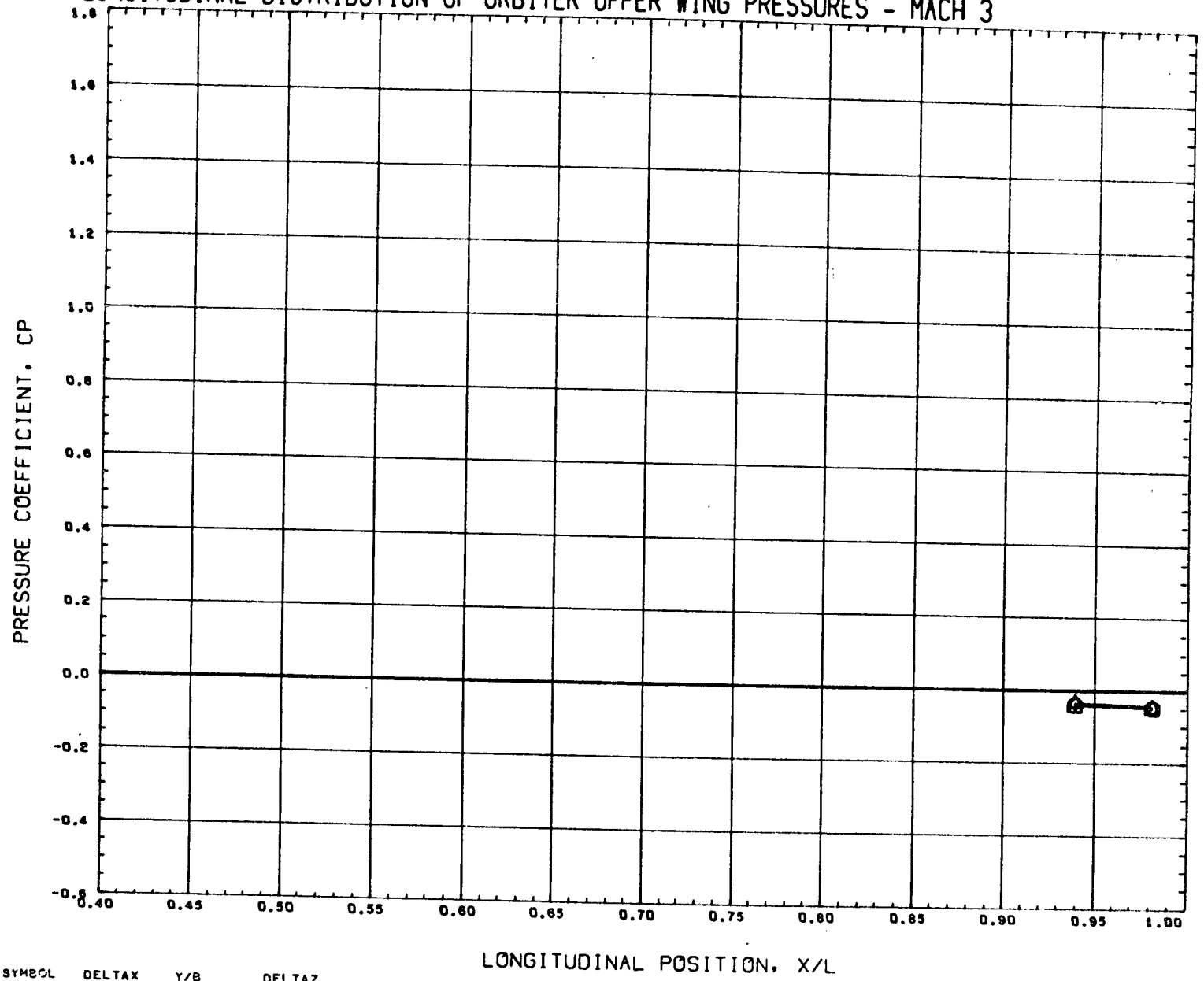
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8312• PAGE 101

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

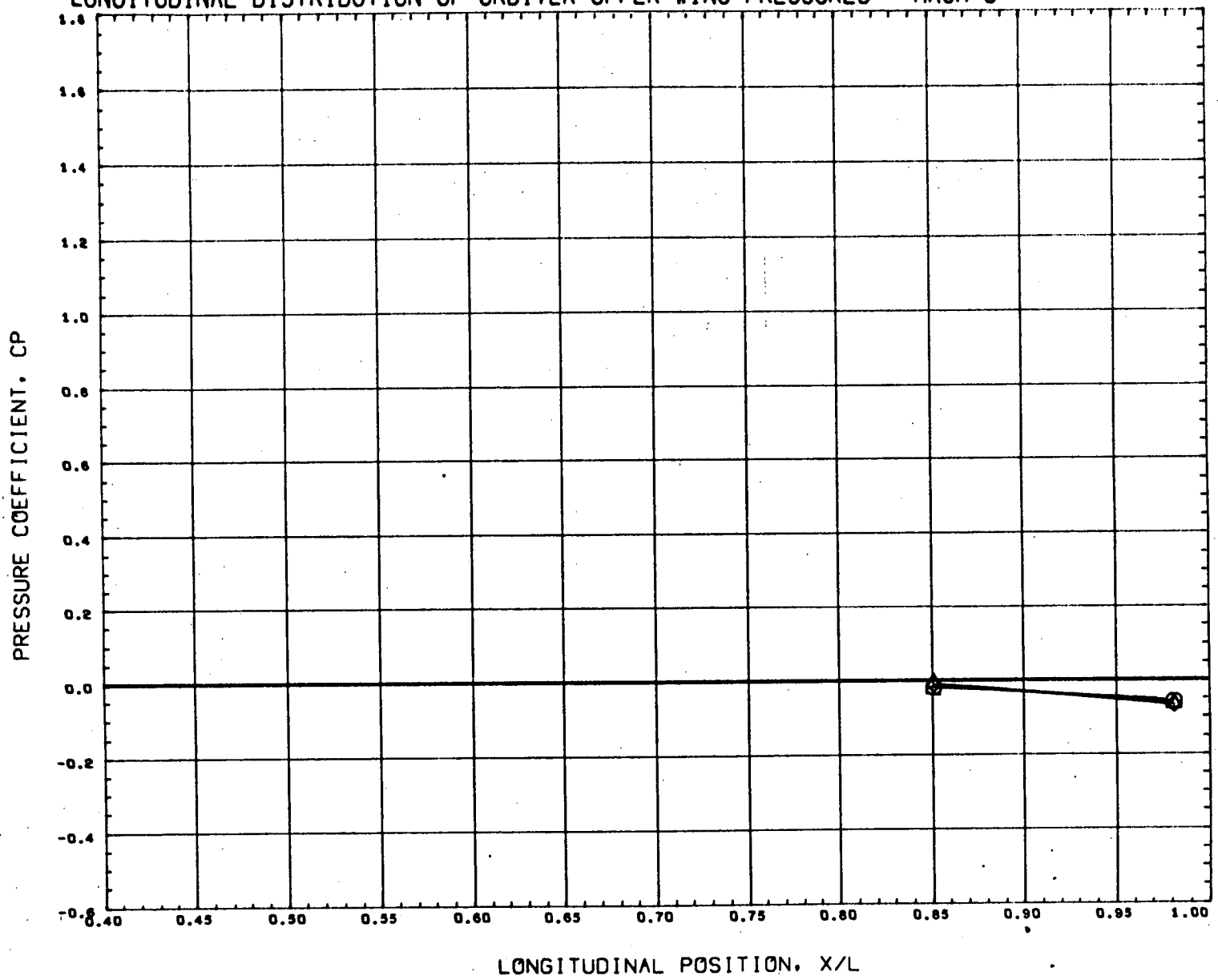
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3

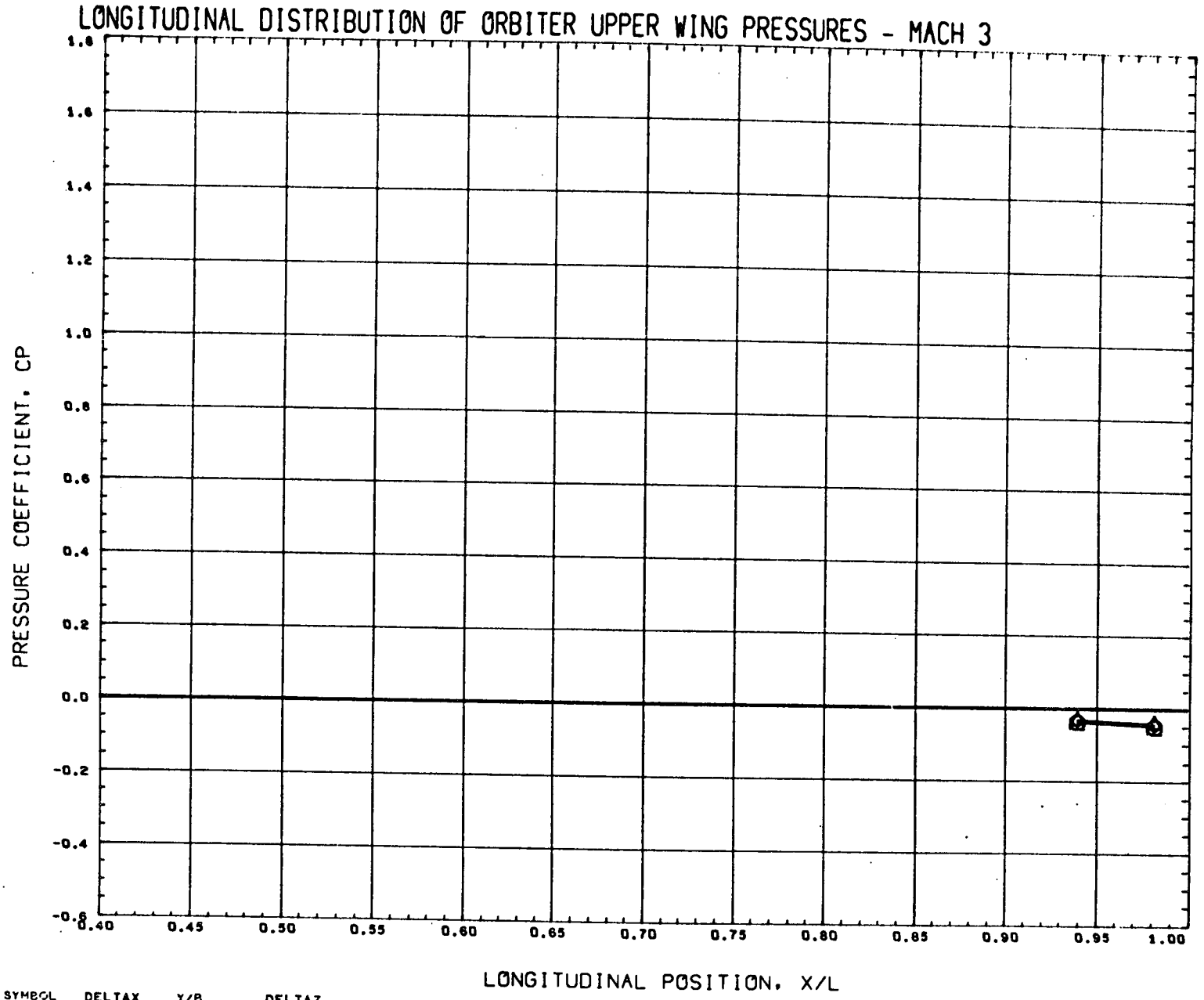


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

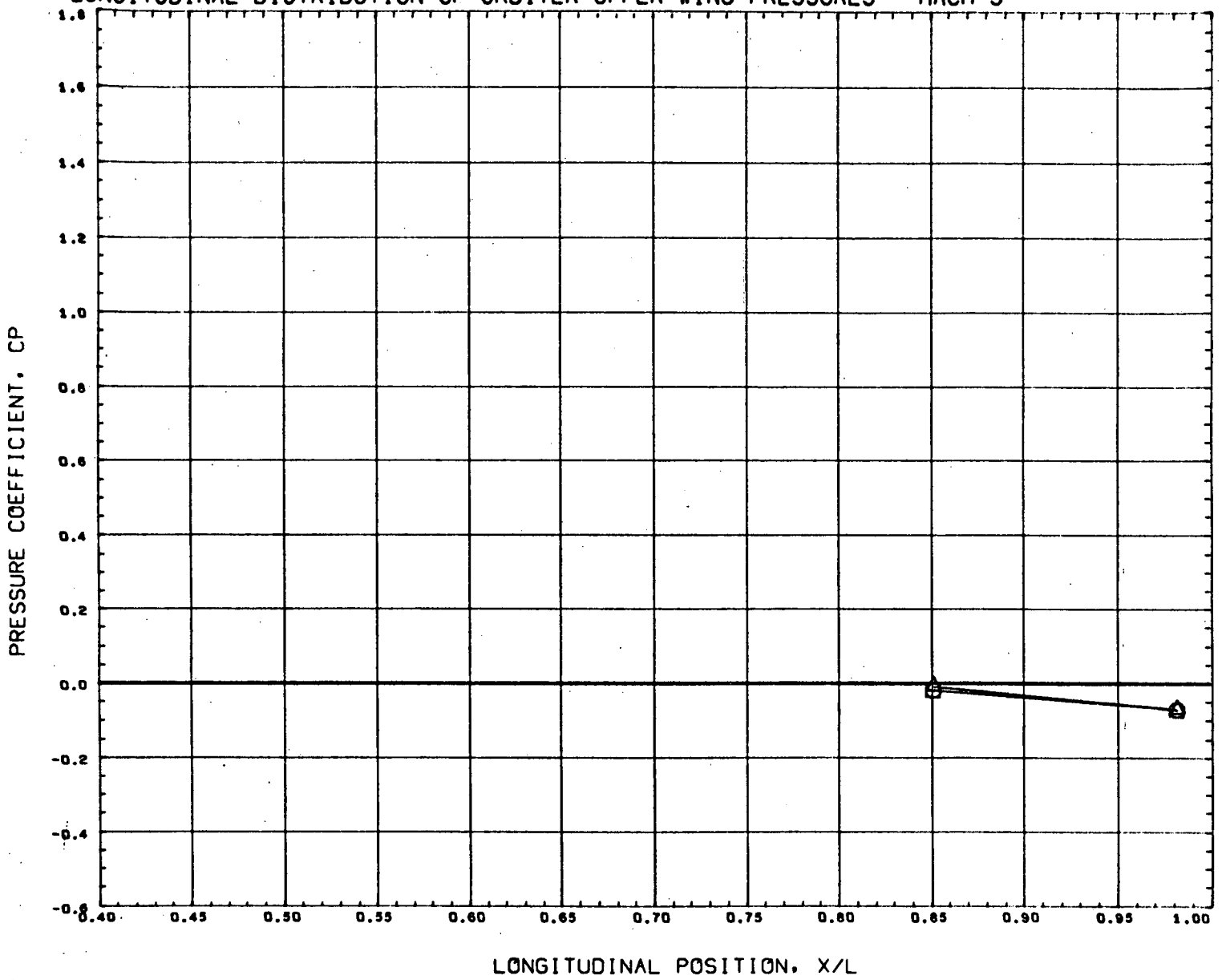
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



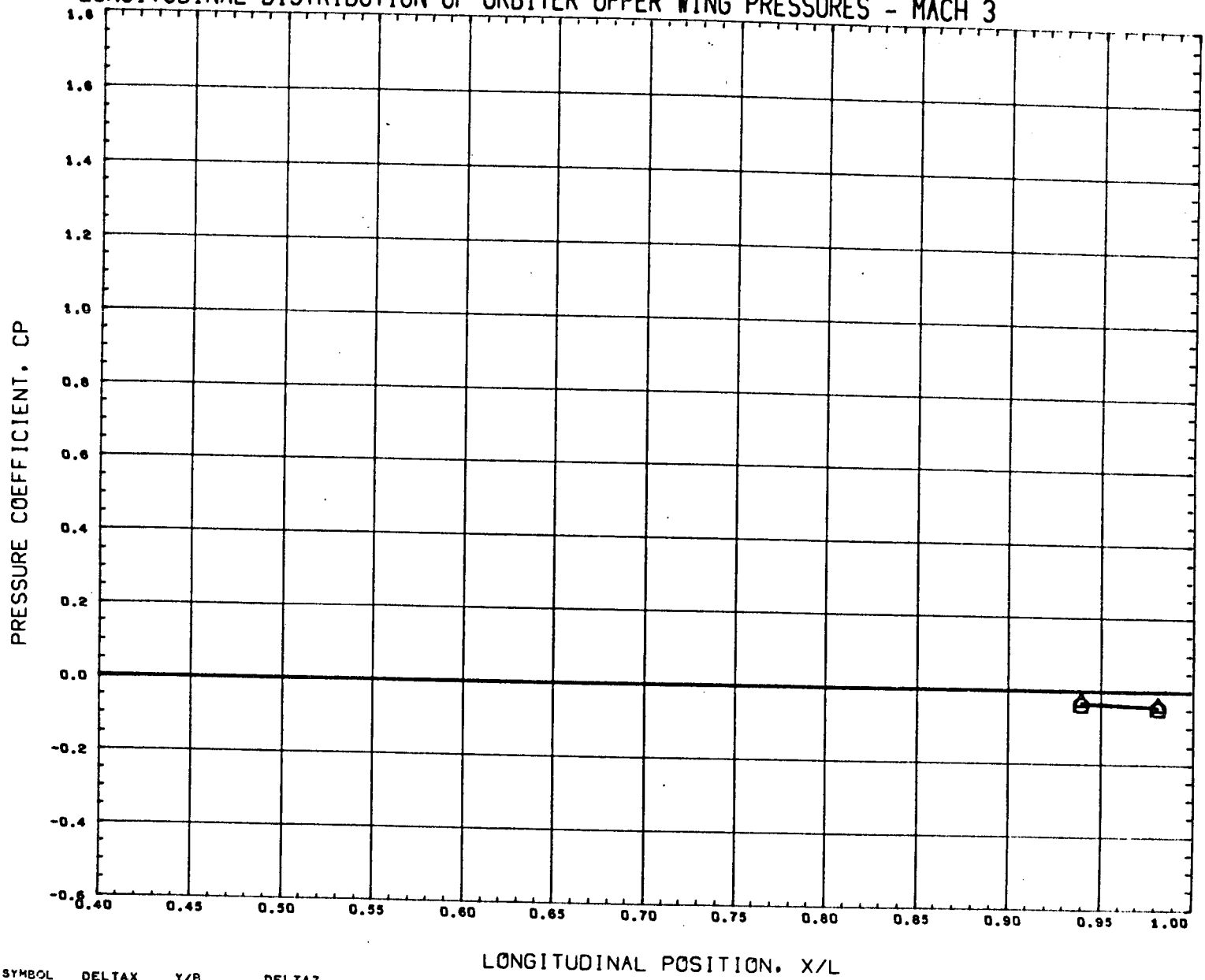
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.289	0.908
△	0.478		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.478		

PARAMETRIC VALUES

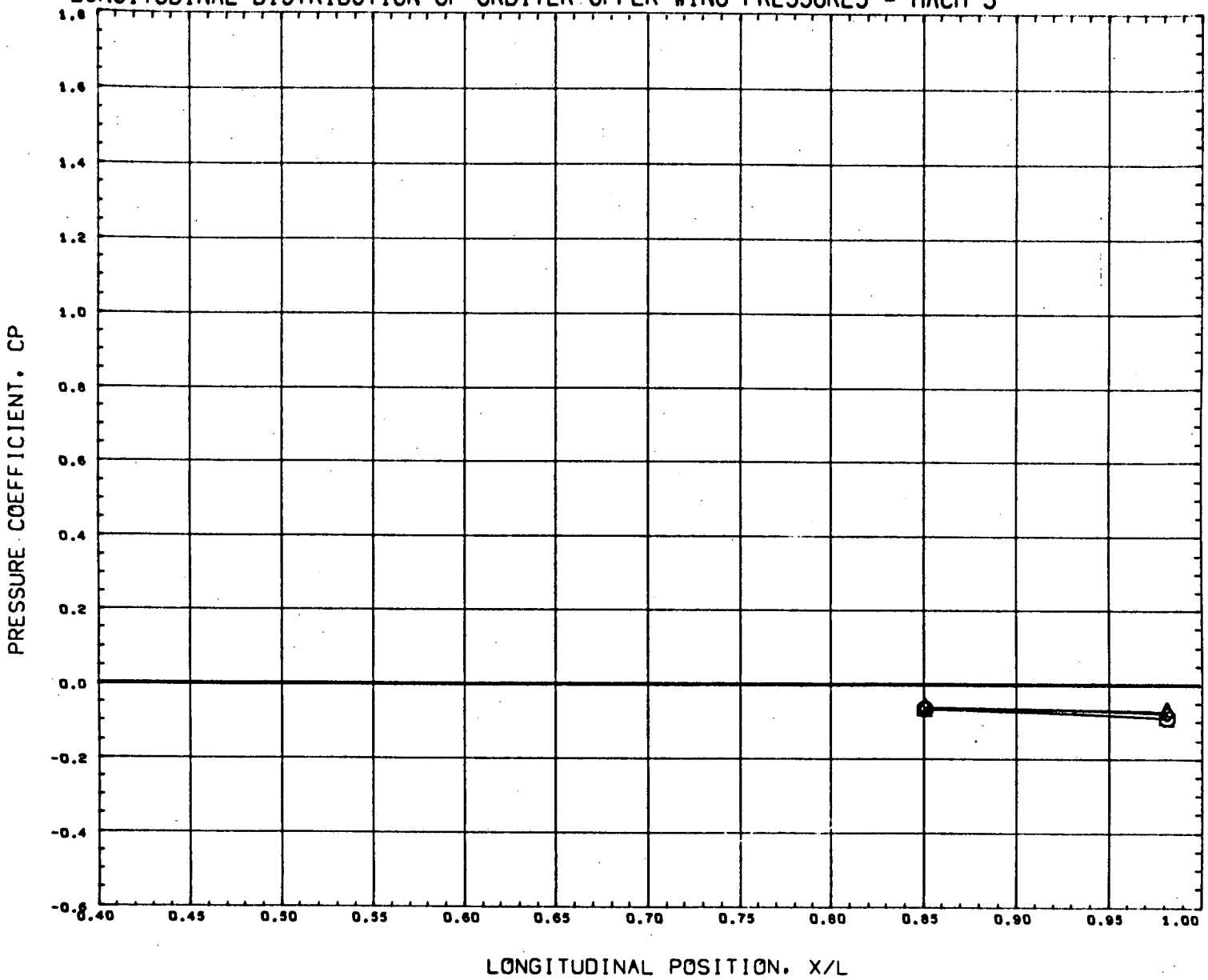
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.289	0.120
△	0.102		
◇	0.228		

PARAMETRIC VALUES

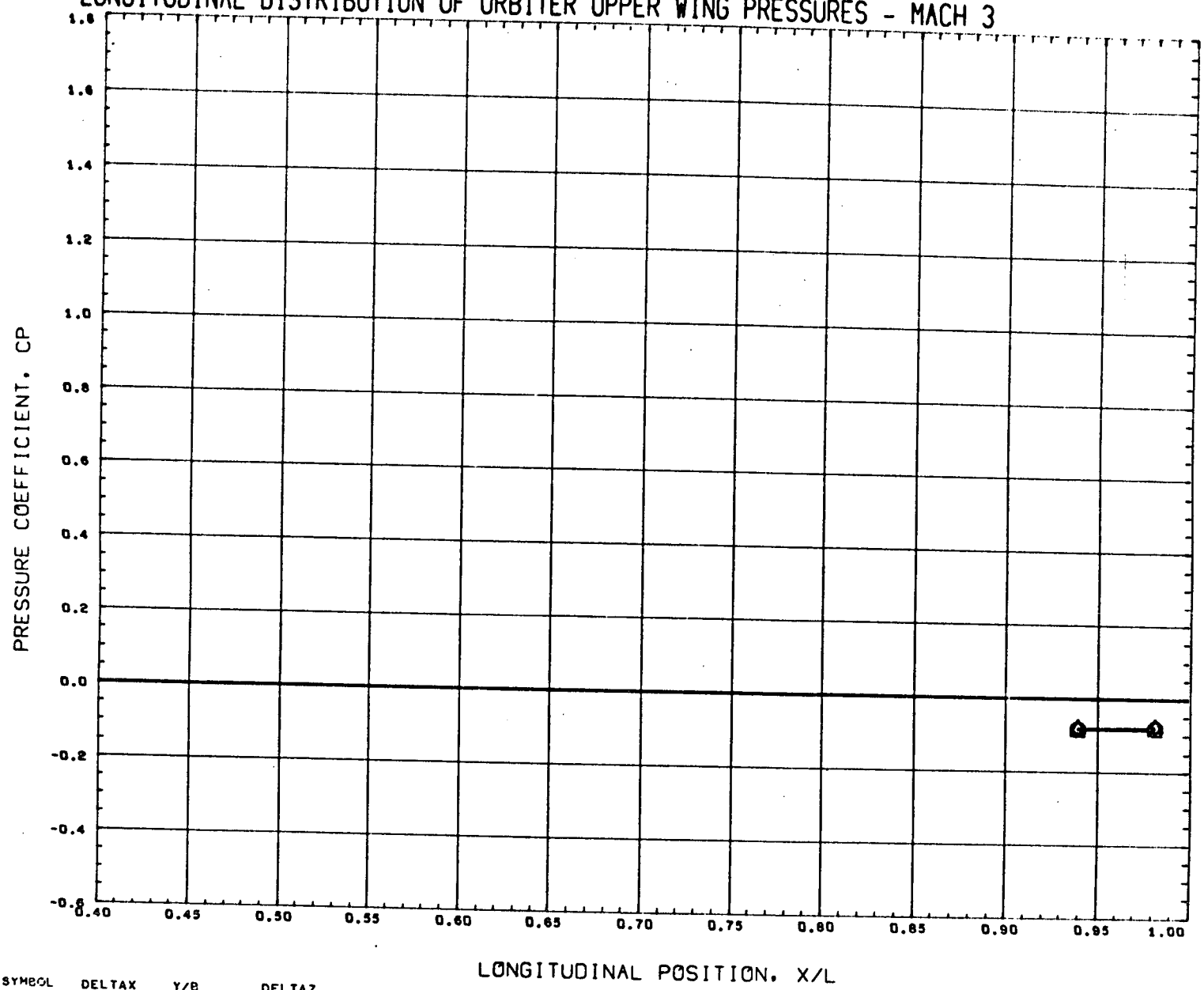
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.102		
◇	0.228		

PARAMETRIC VALUES

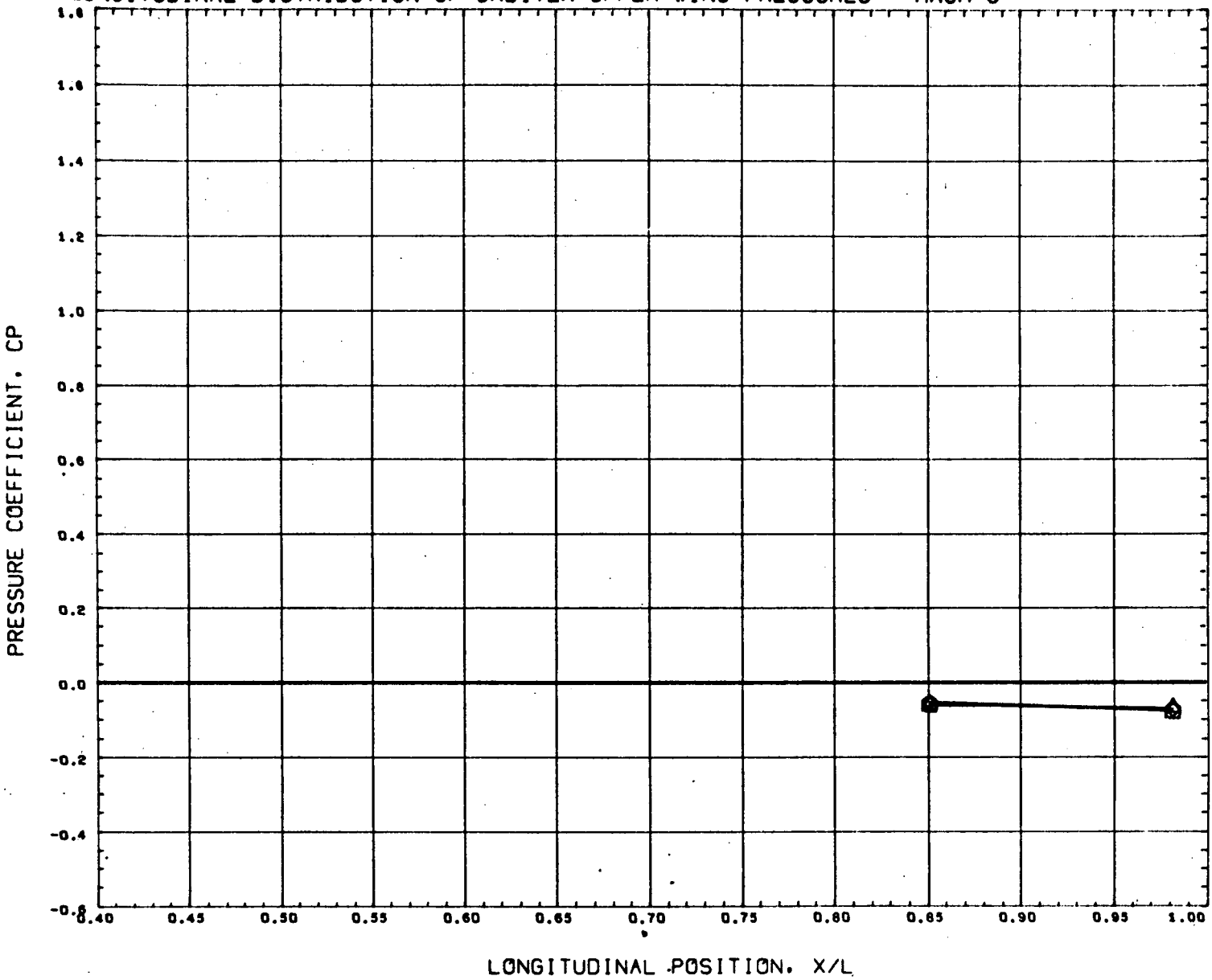
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (UPPER WING)

•GT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



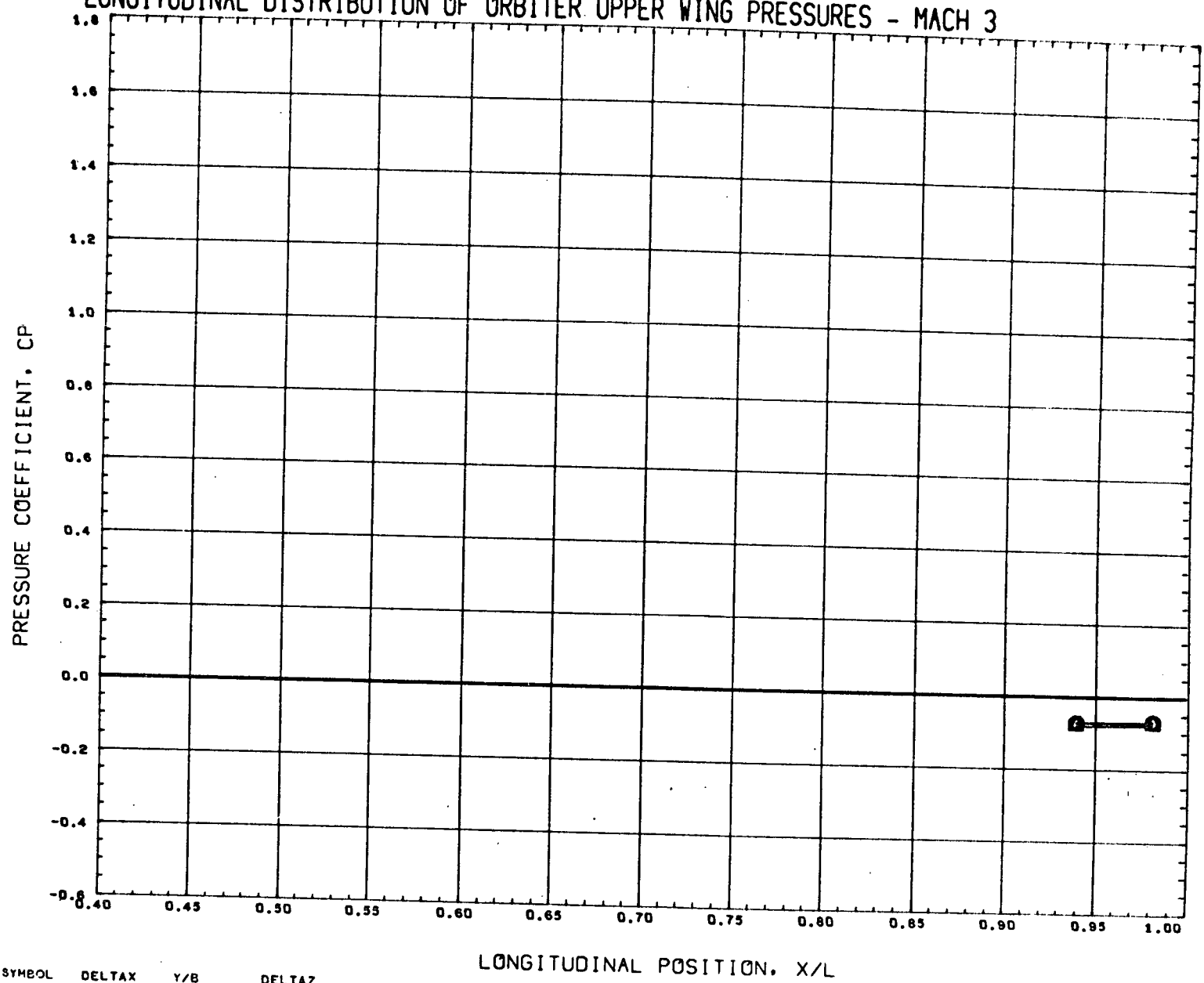
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.289	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.399	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

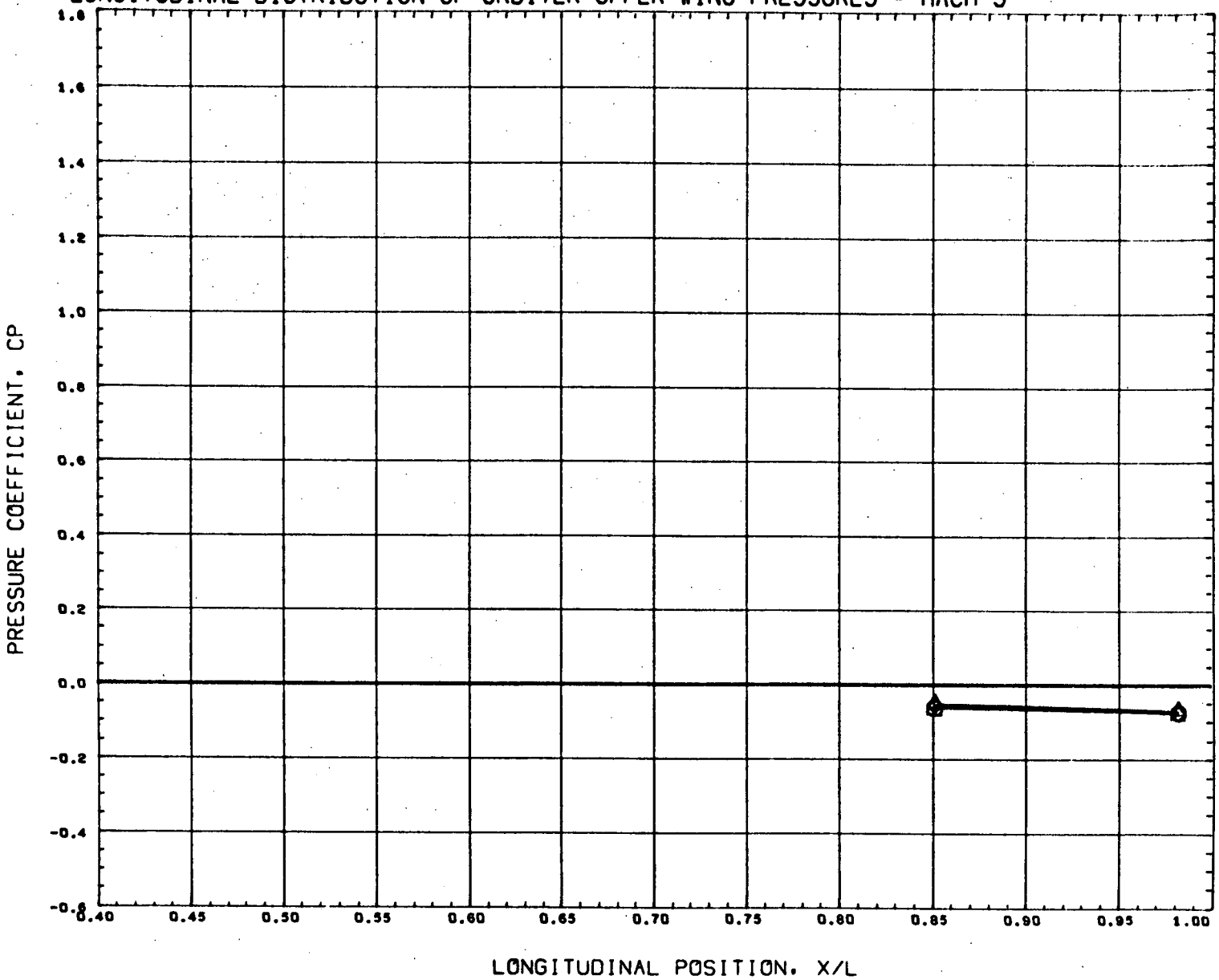
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



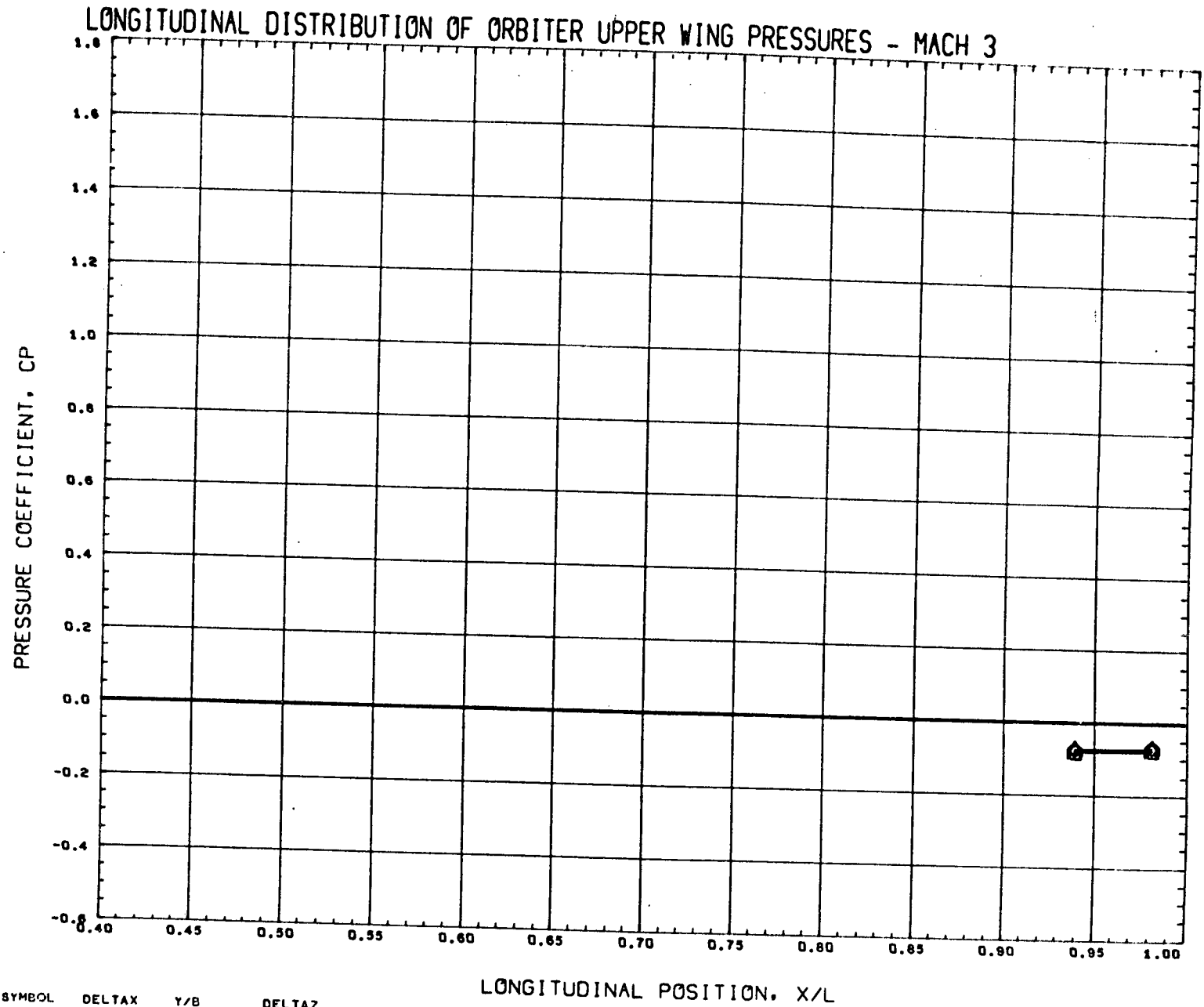
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.289	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8313• PAGE 111



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

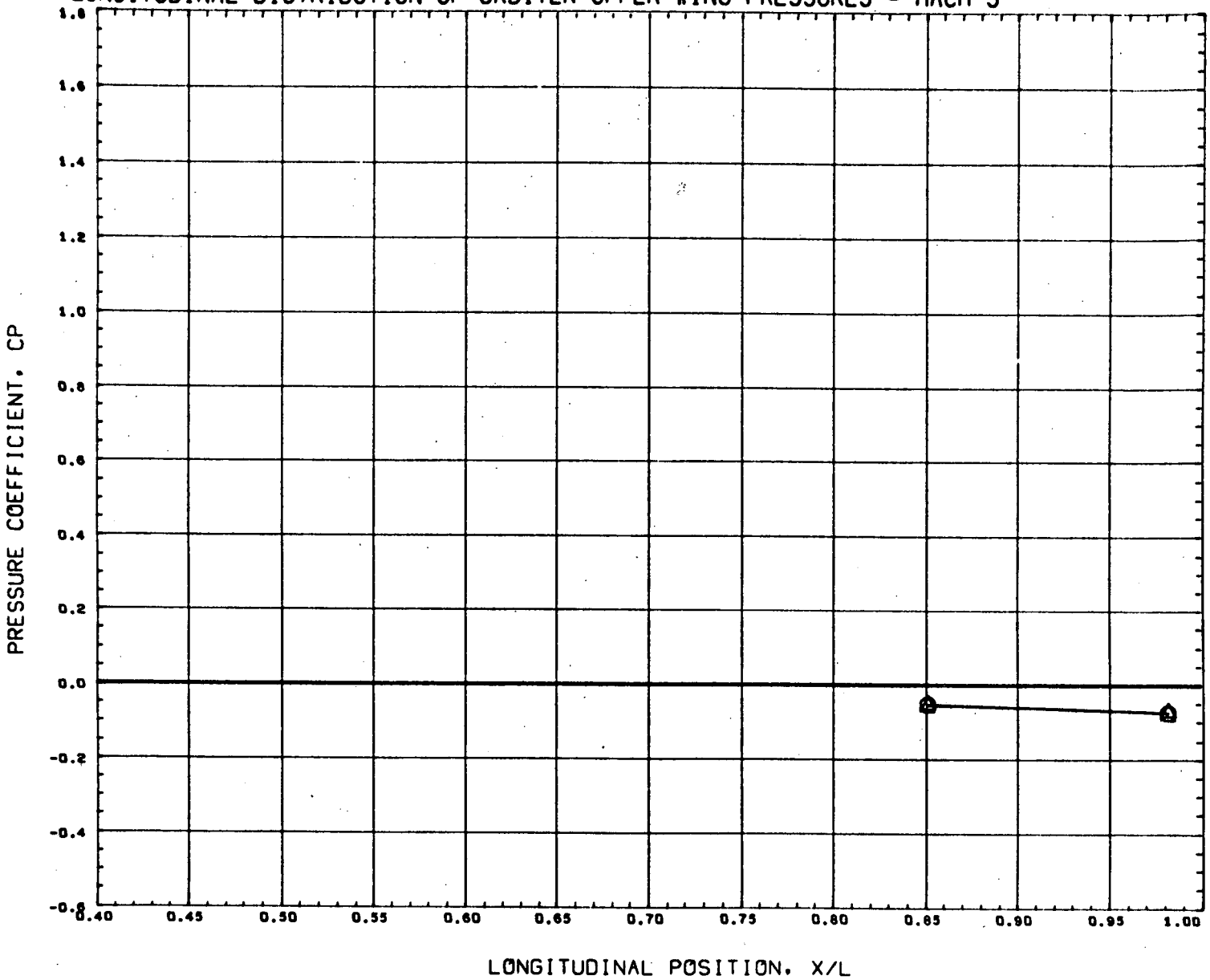
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.289	0.908
△	0.479		

PARAMETRIC VALUES

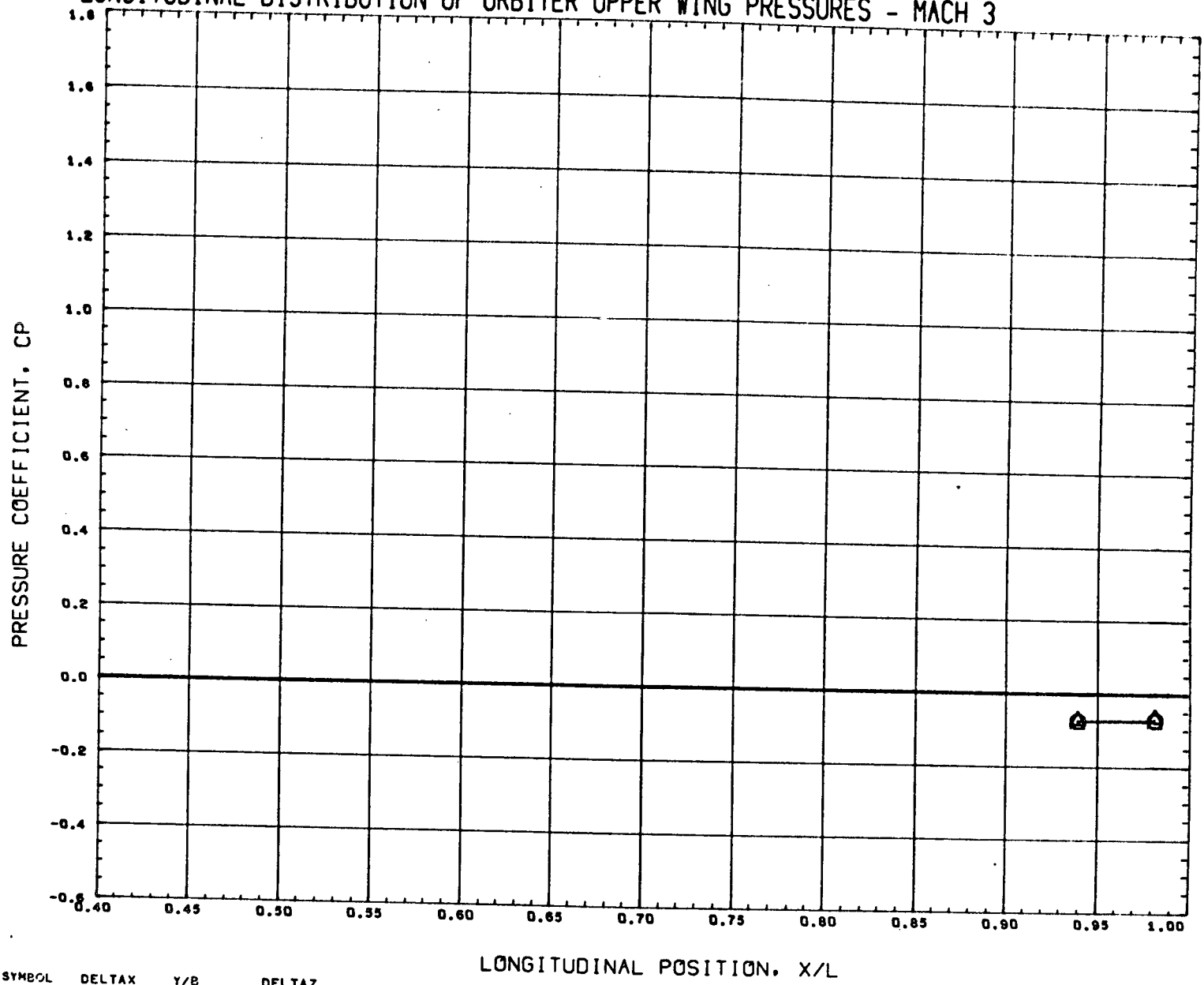
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.399	0.908
△	0.479		

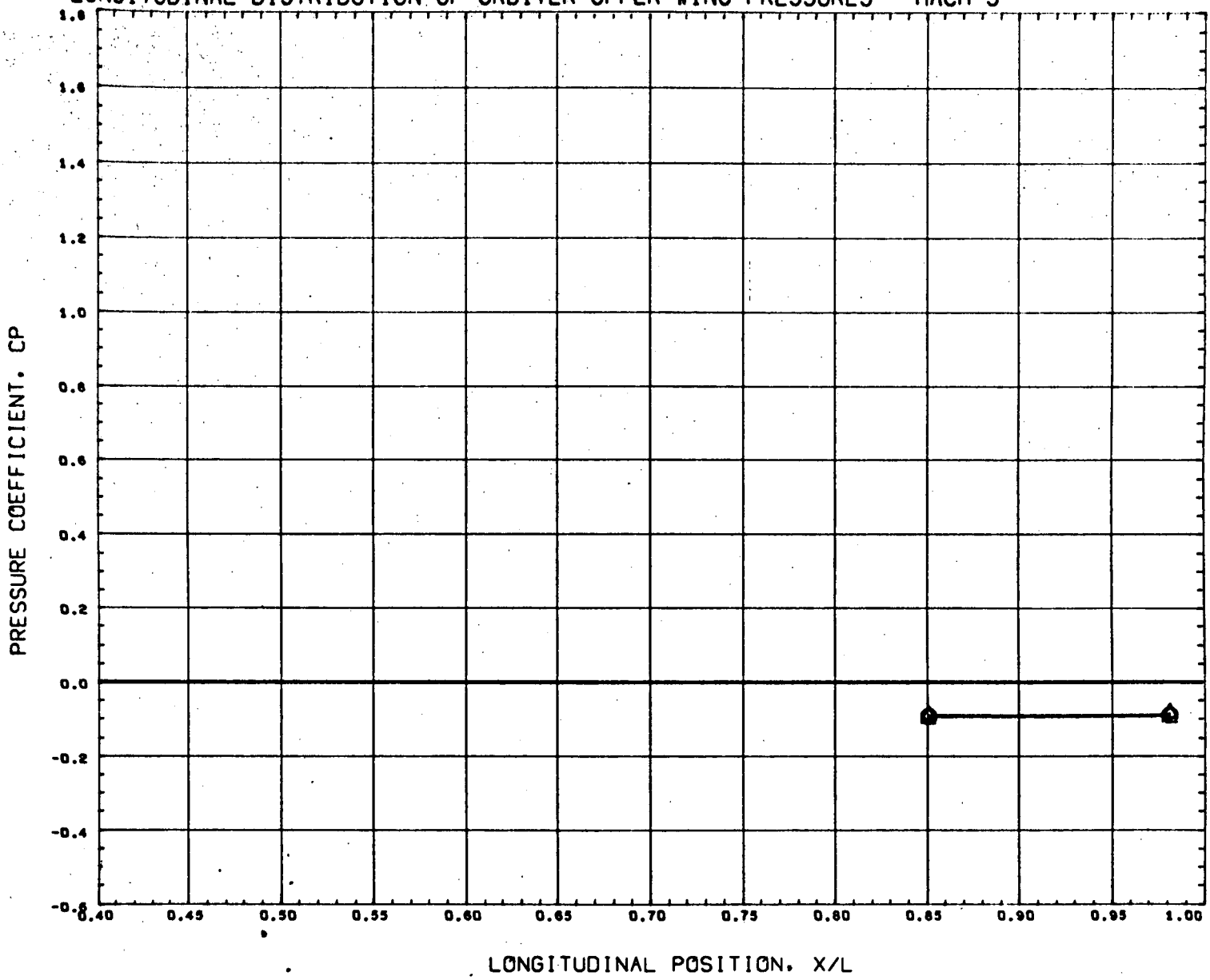
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



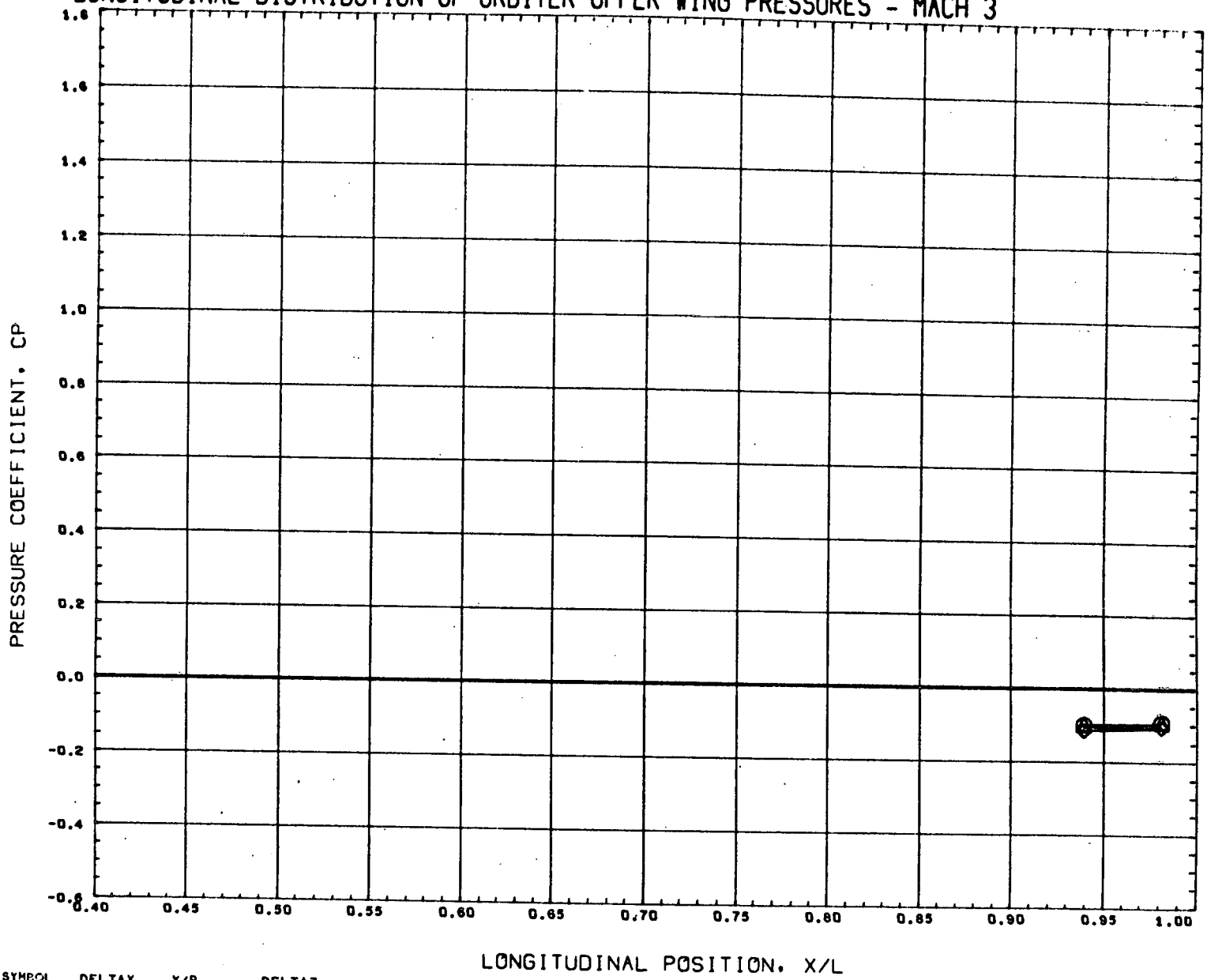
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

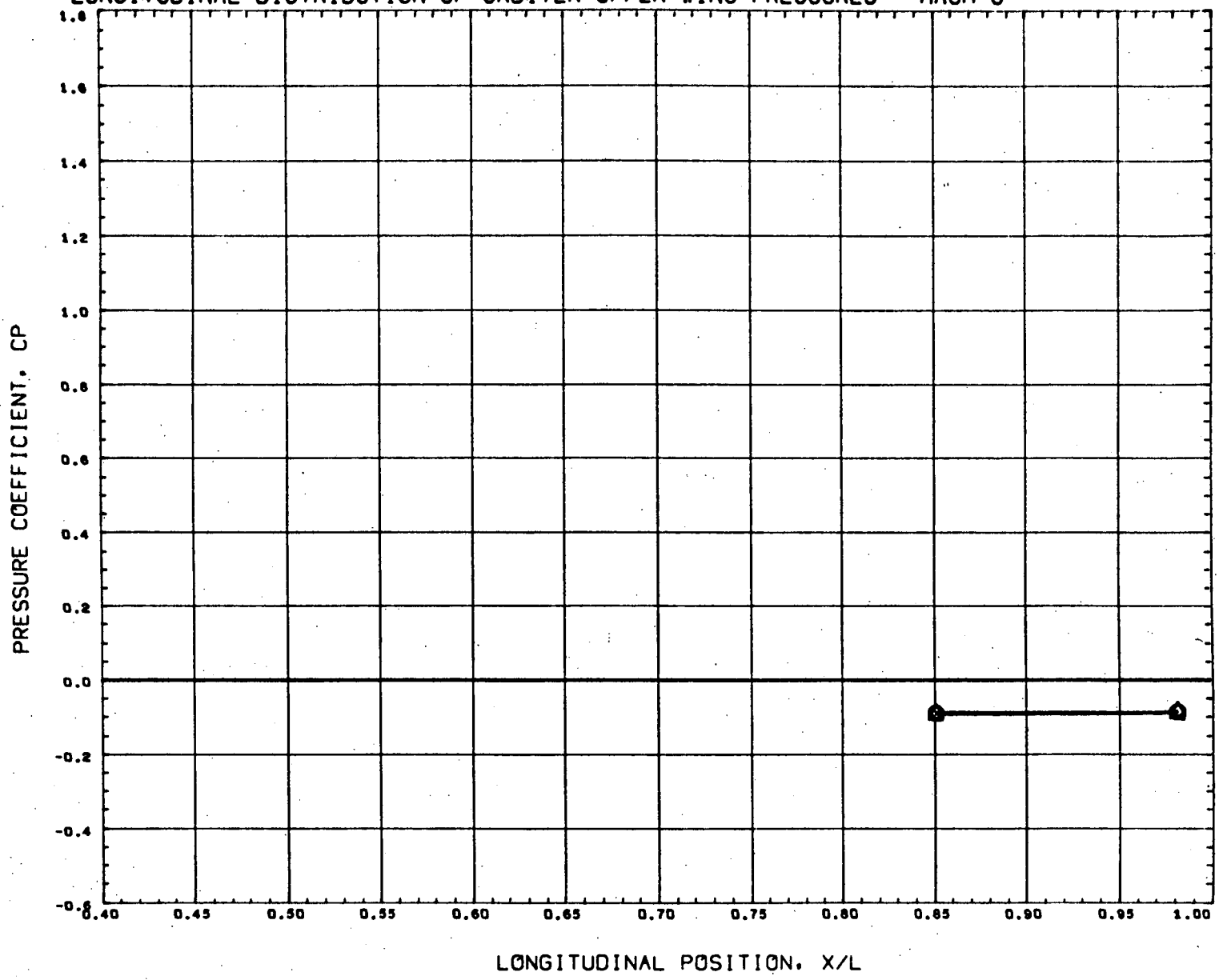
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



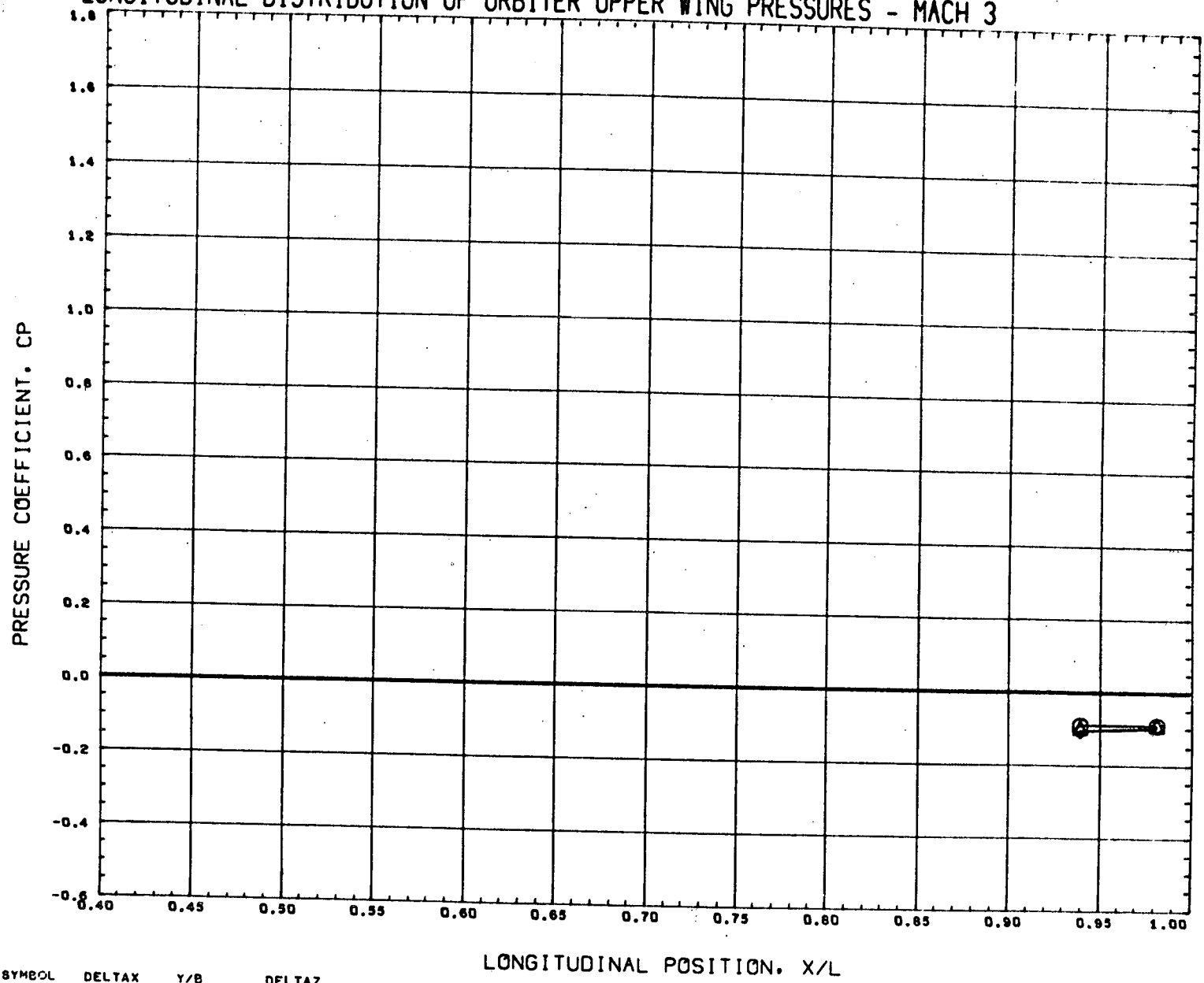
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.289	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

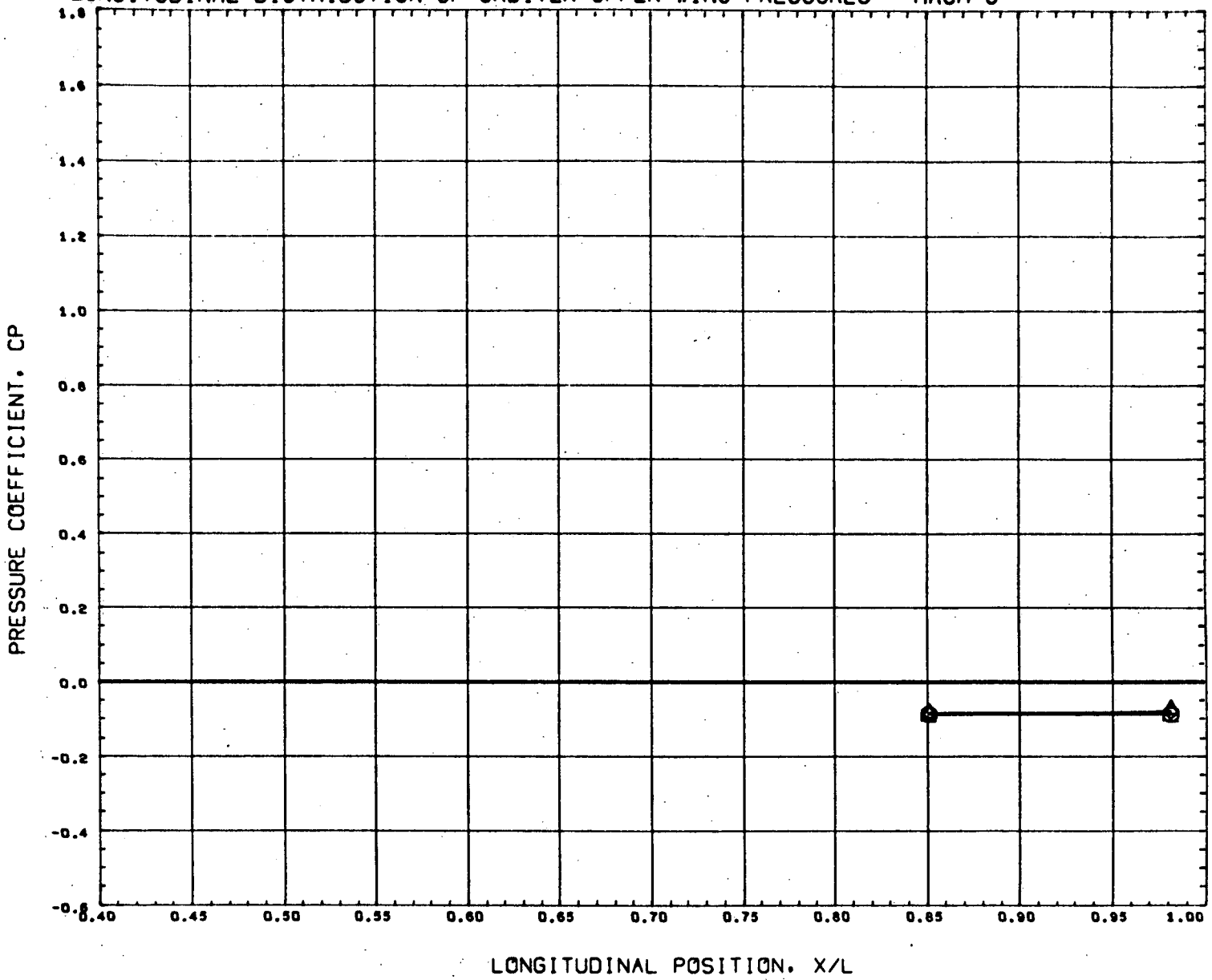
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



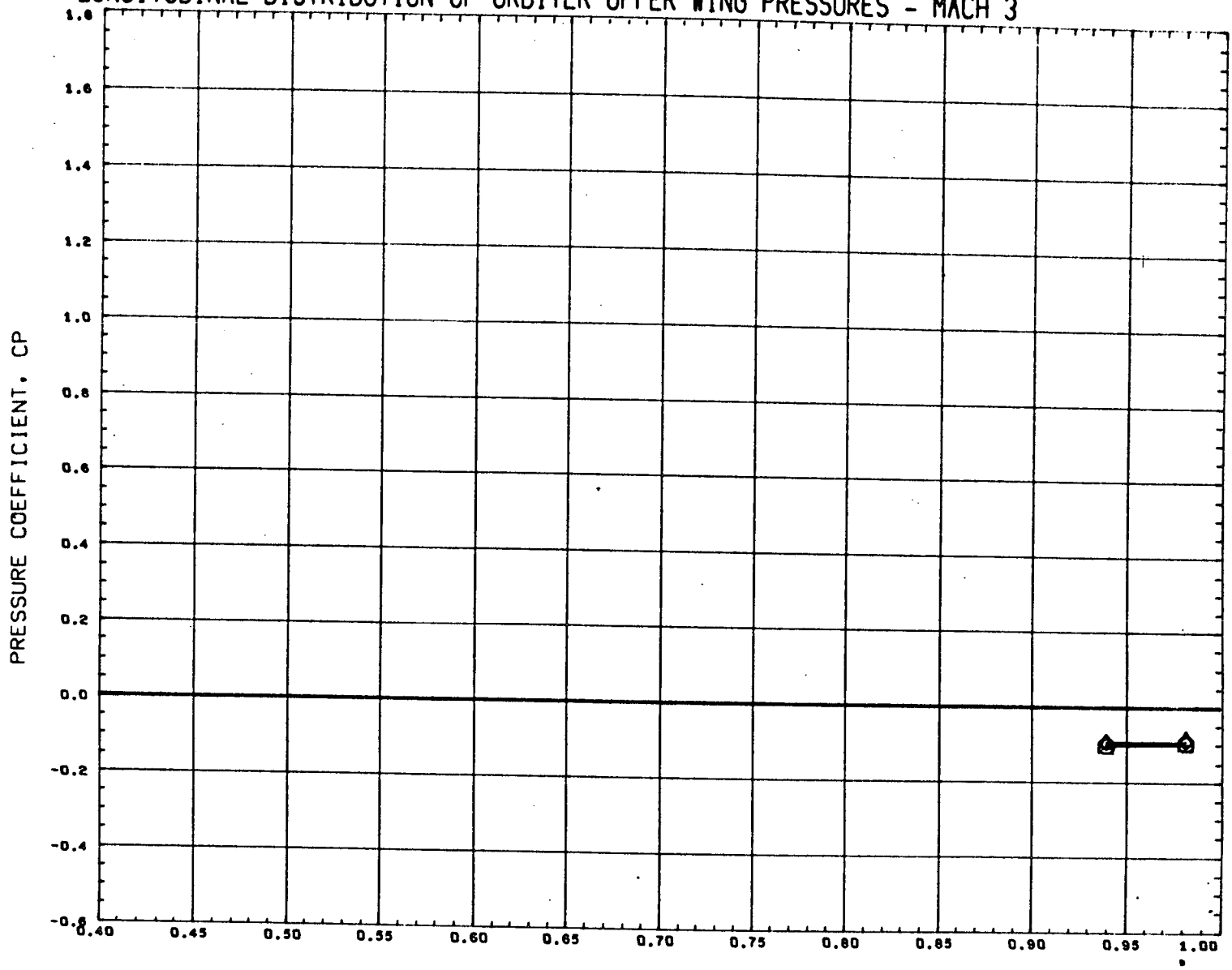
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.269	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

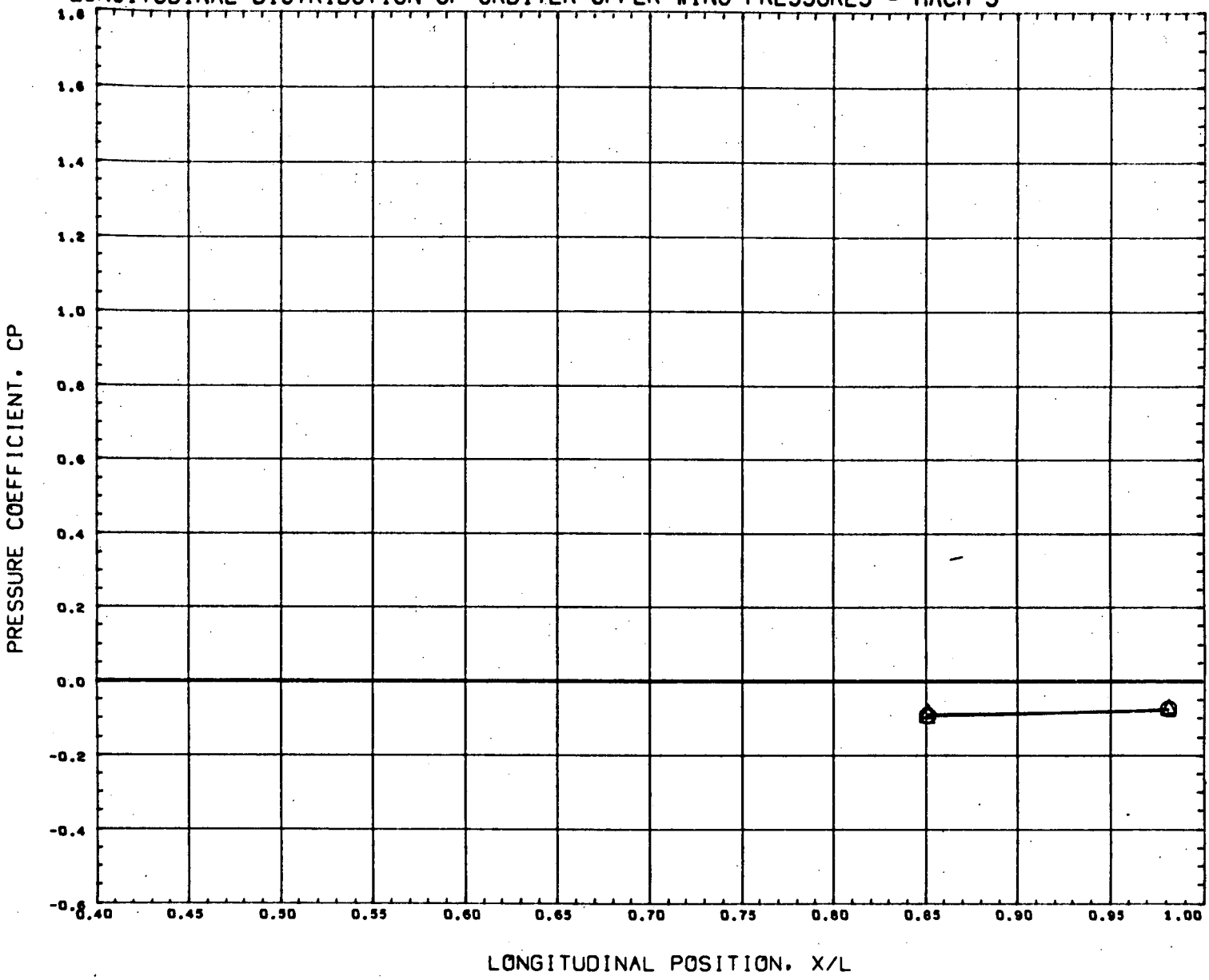
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



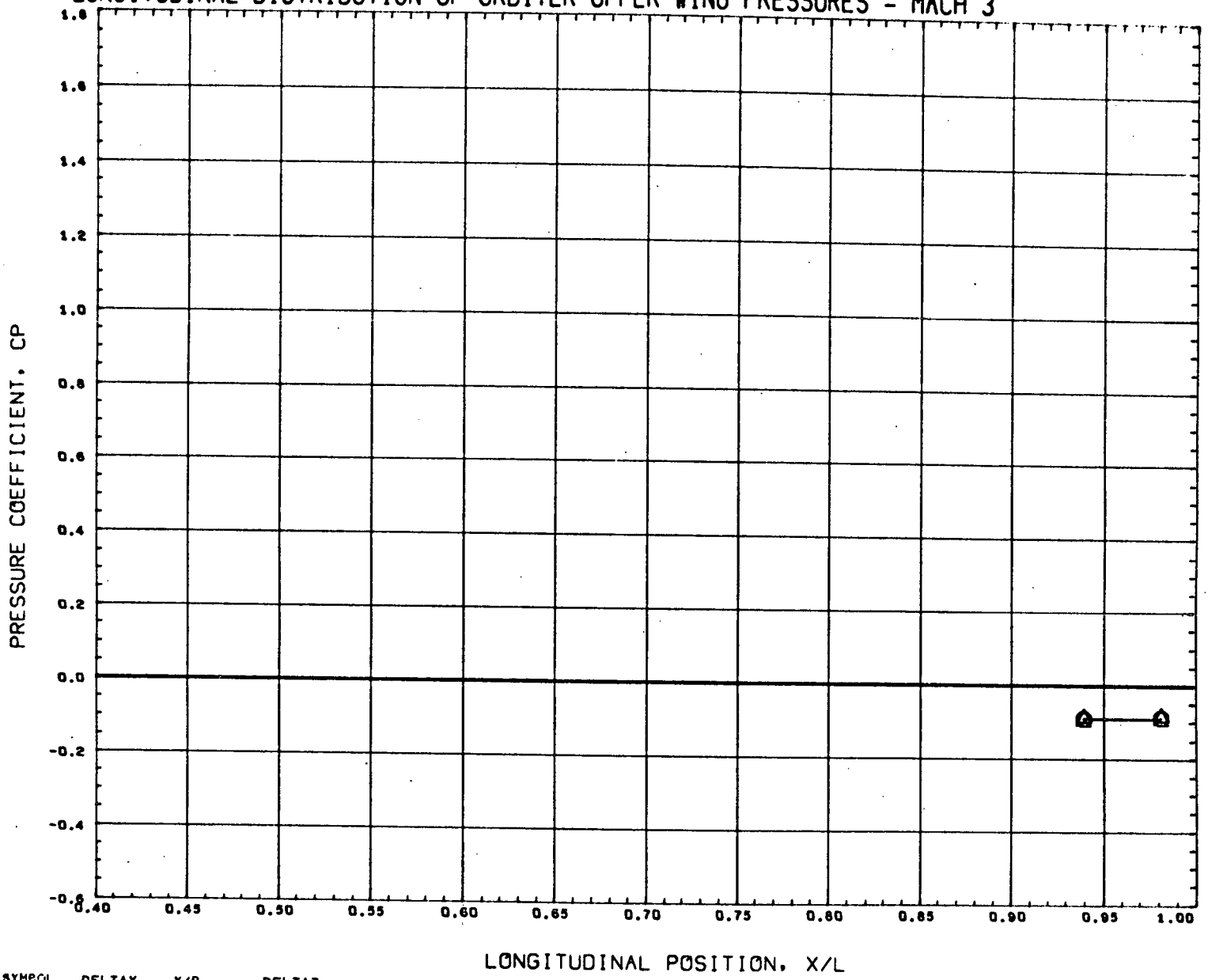
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.269	0.908
△	0.521		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.399	0.908
△	0.521		

PARAMETRIC VALUES

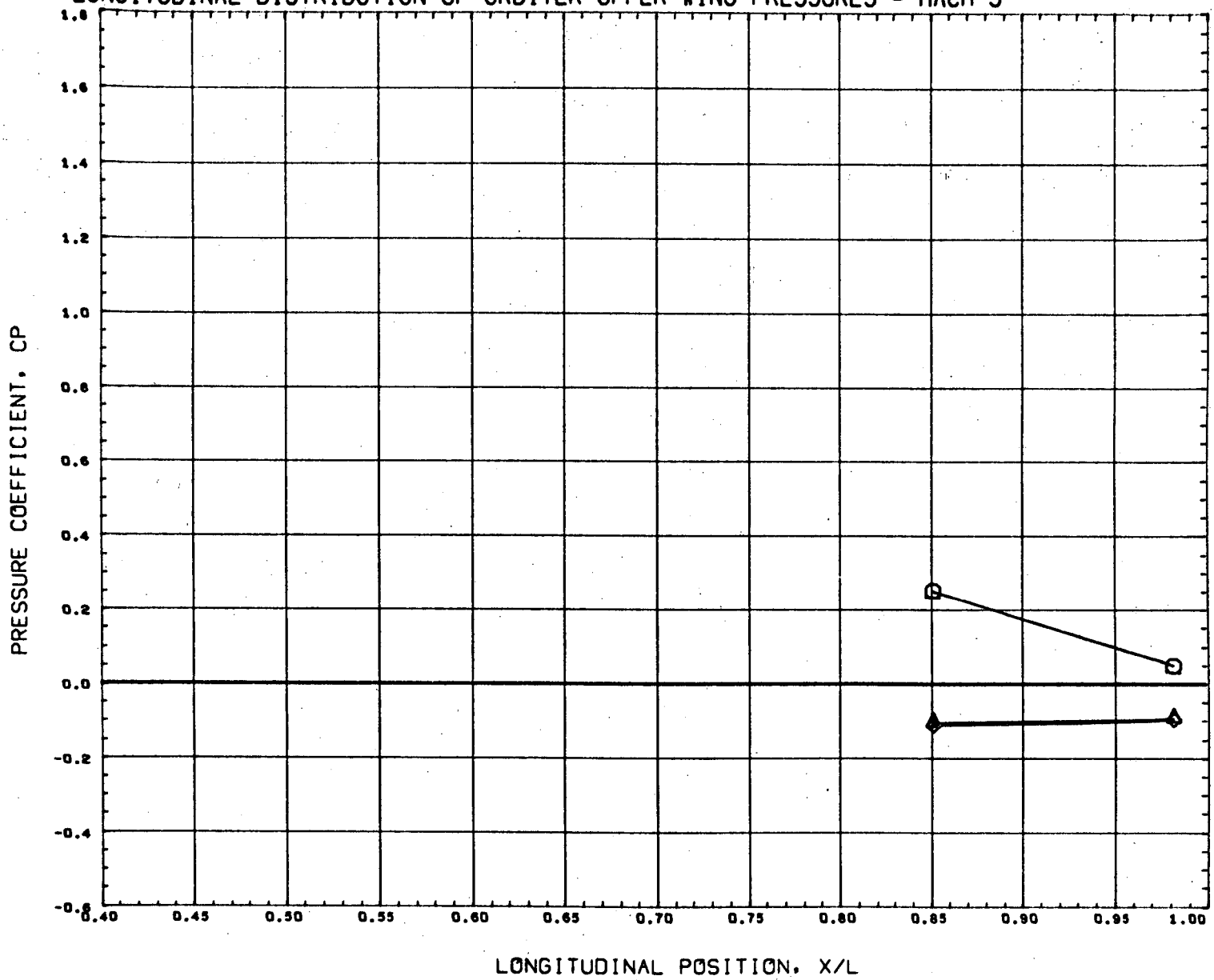
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



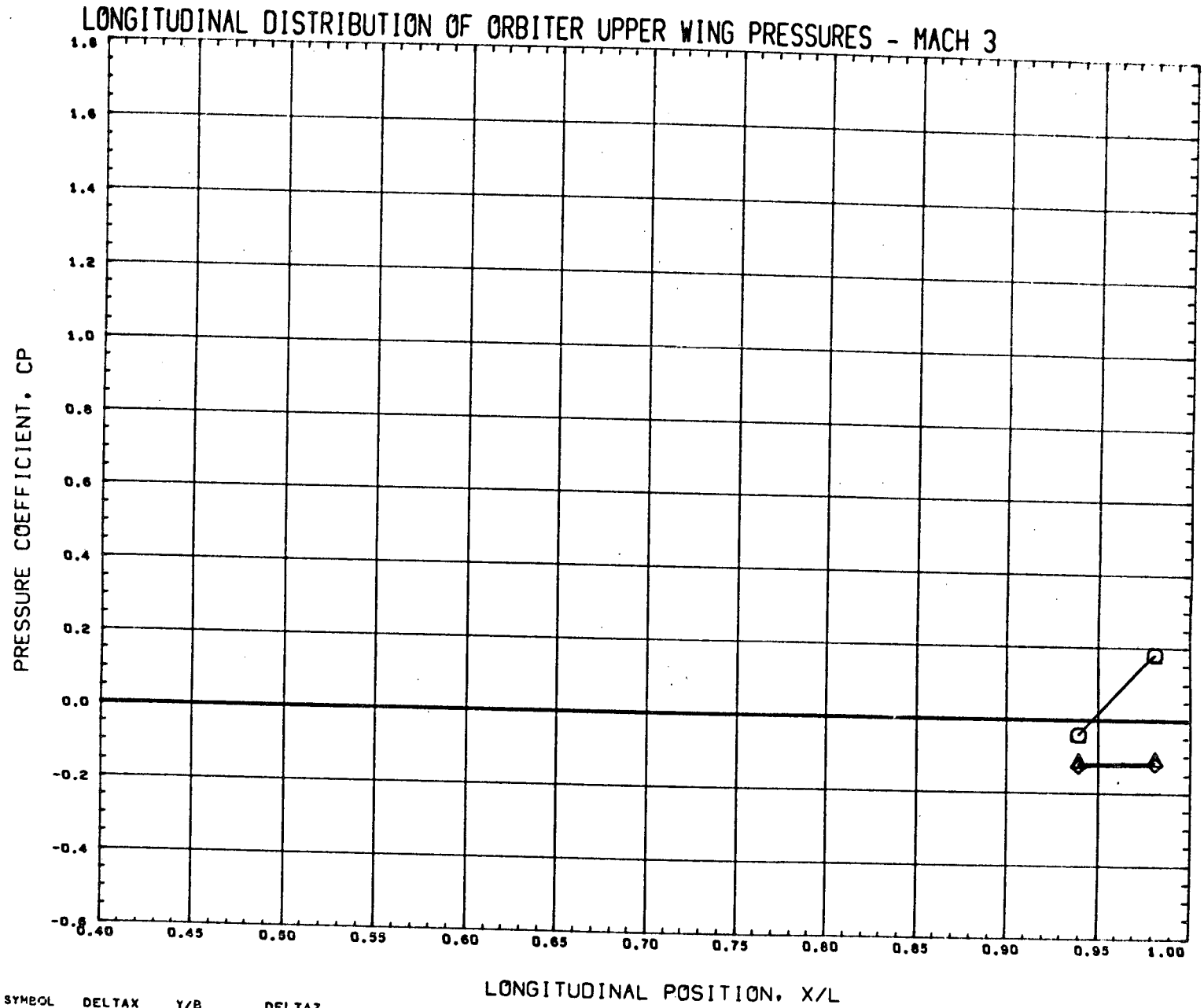
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.289	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8315•



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

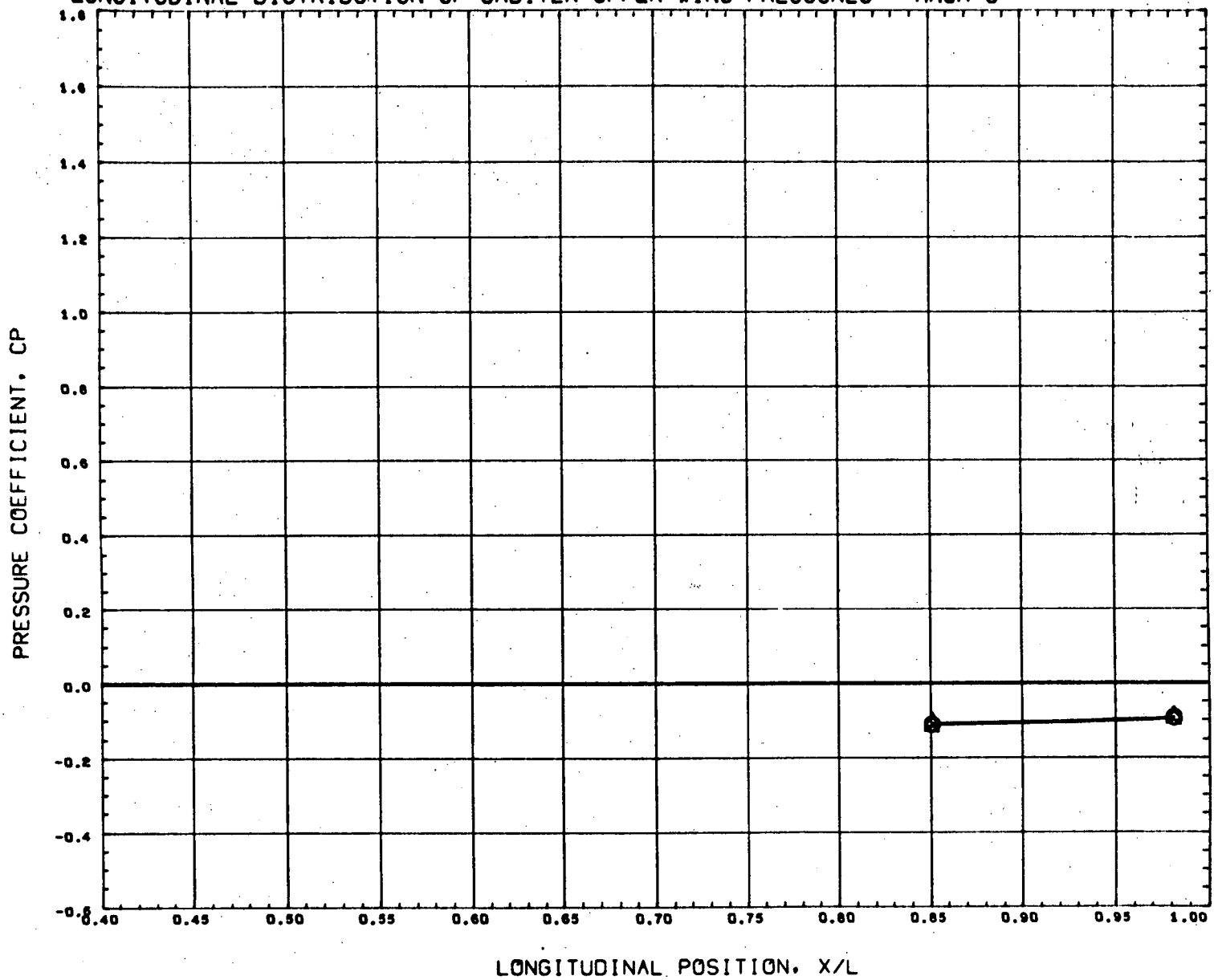
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



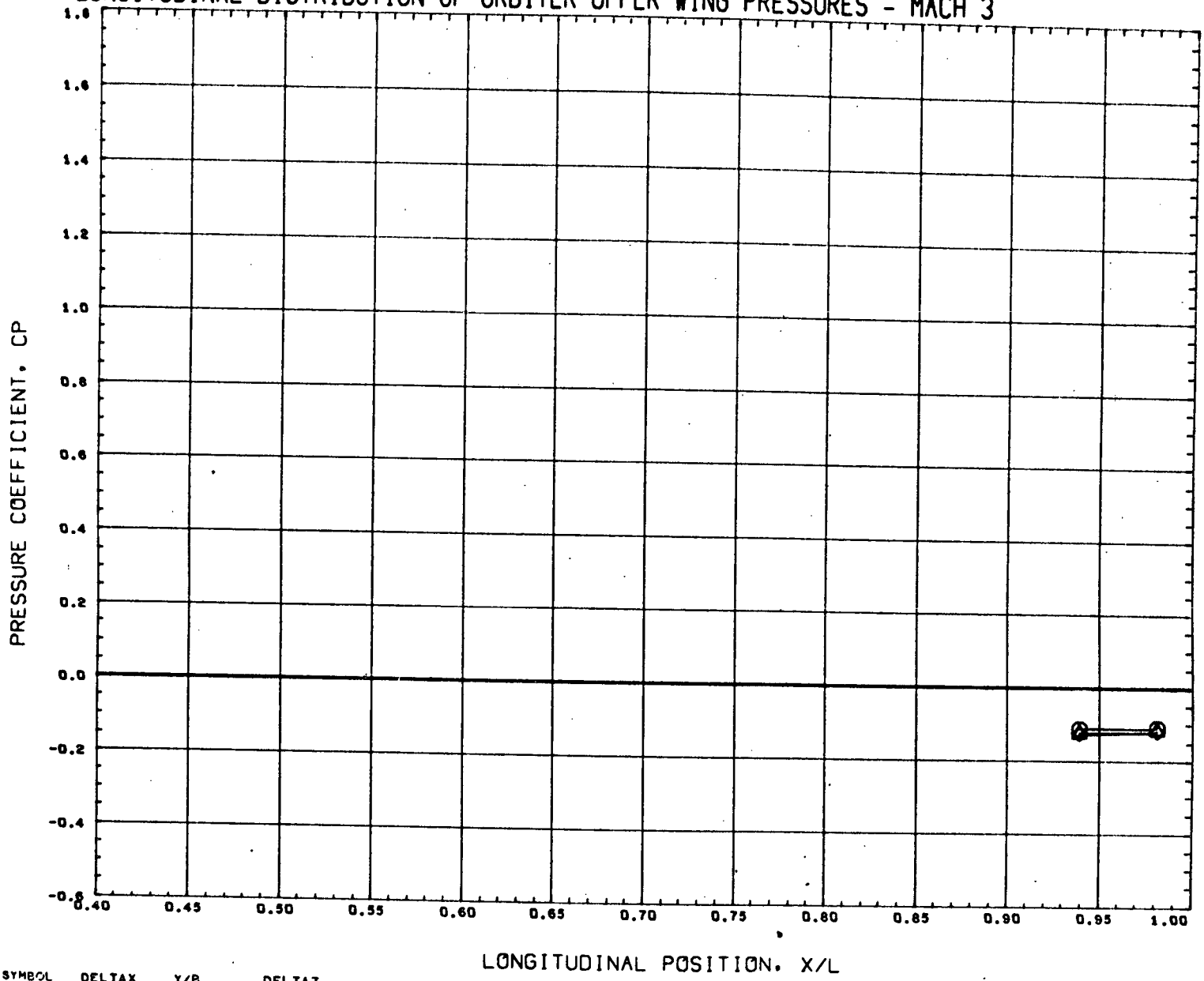
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.289	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

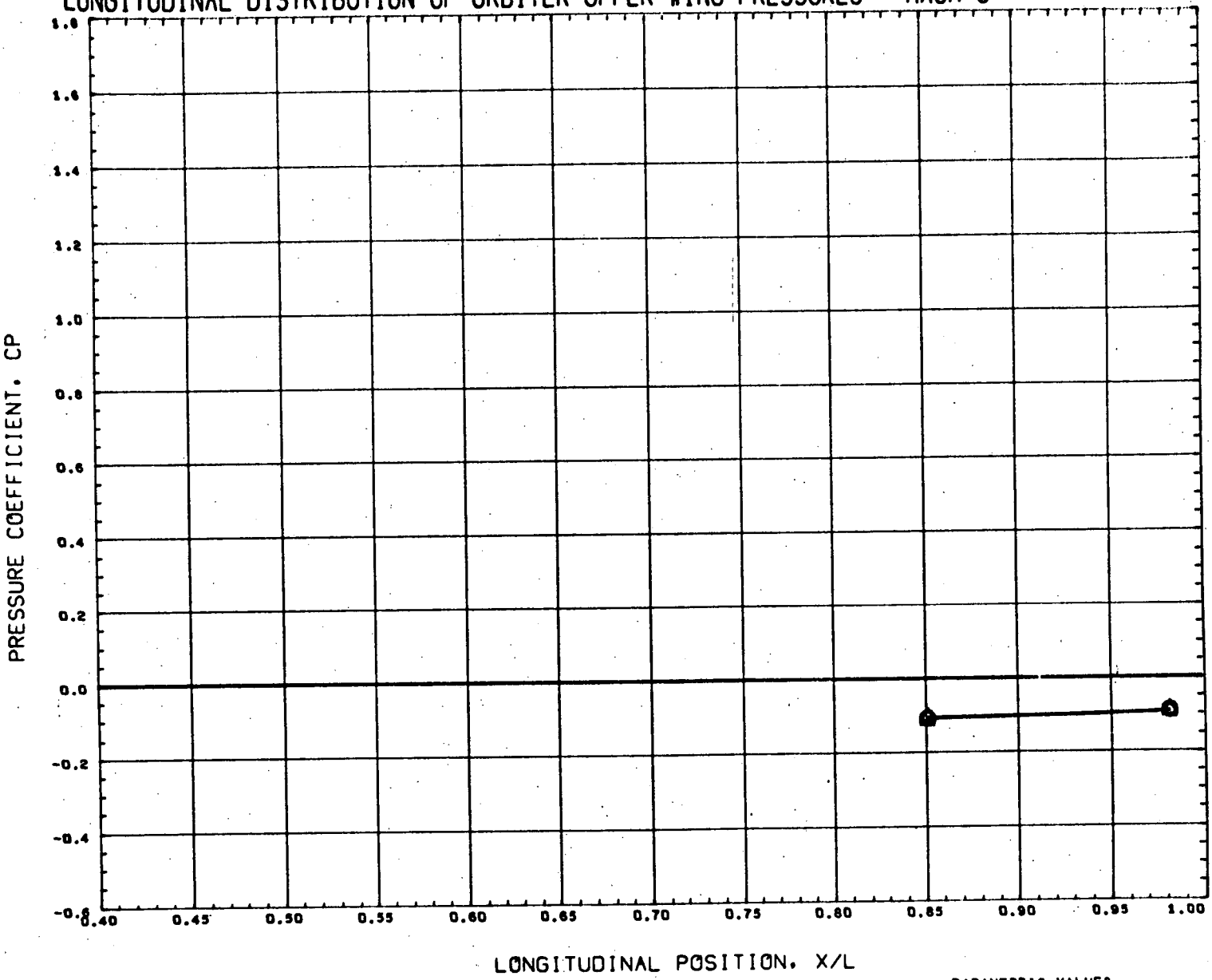
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.289	0.228
△	0.103		
◇	0.226		

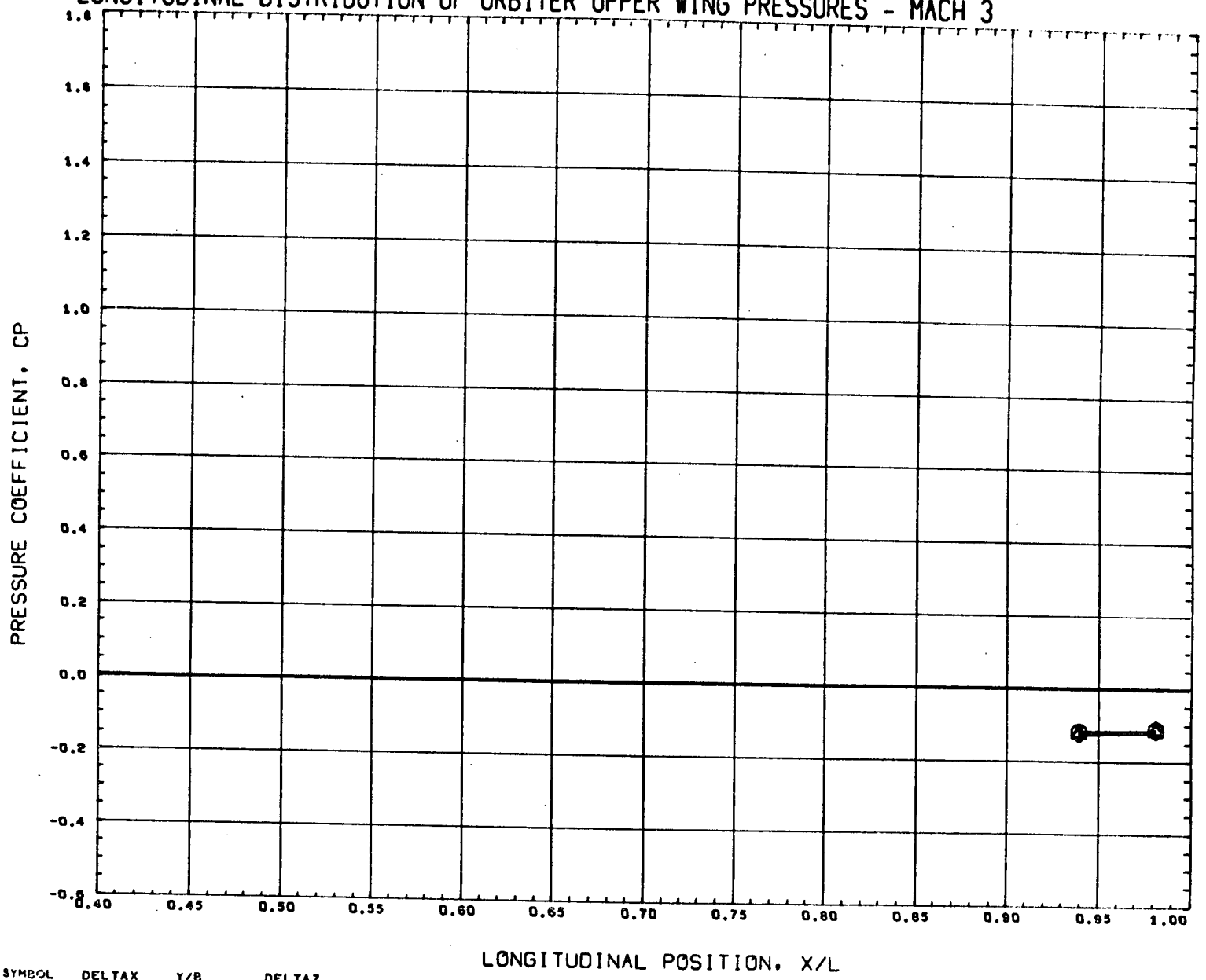
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

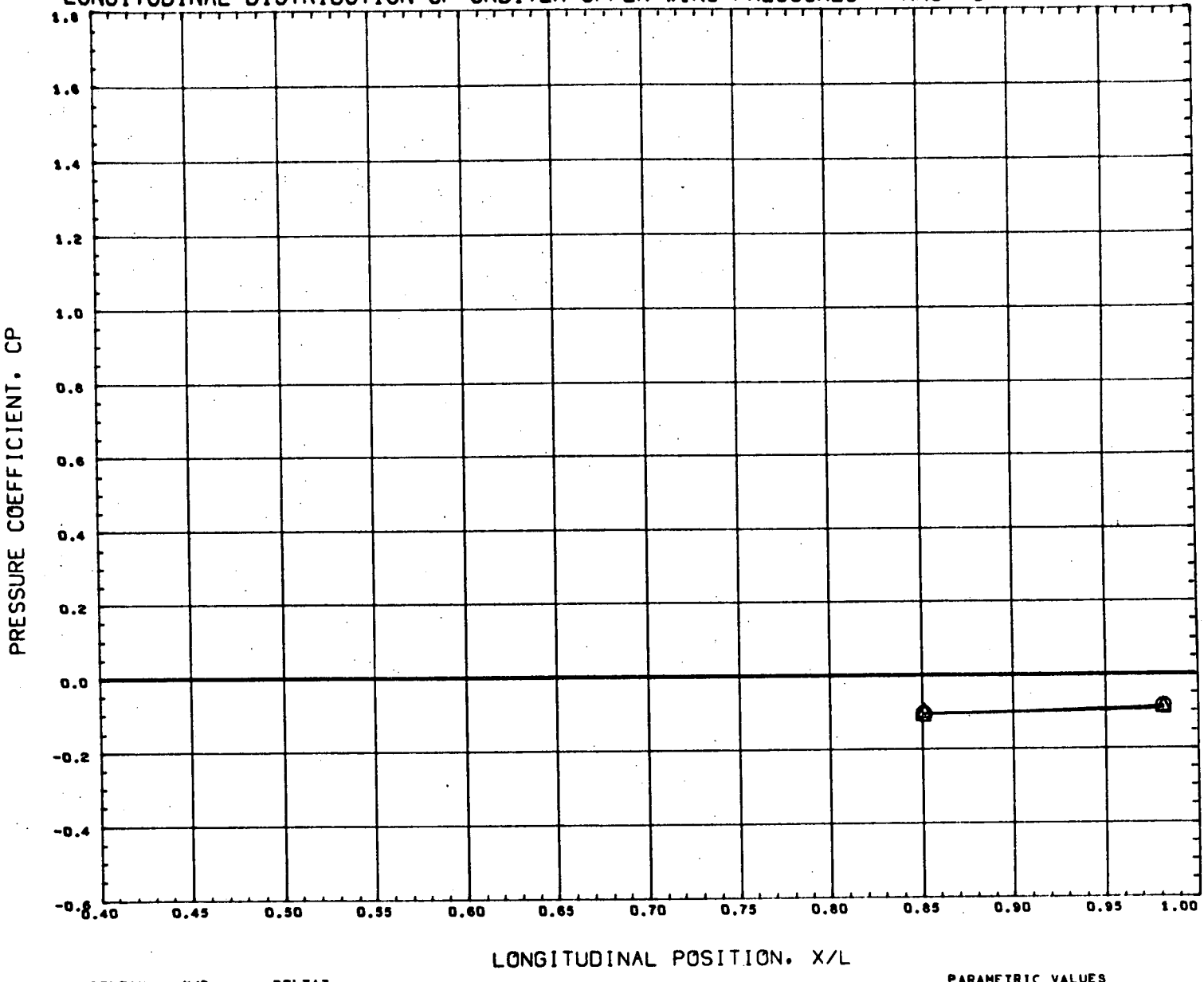
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8315• PAGE 128

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



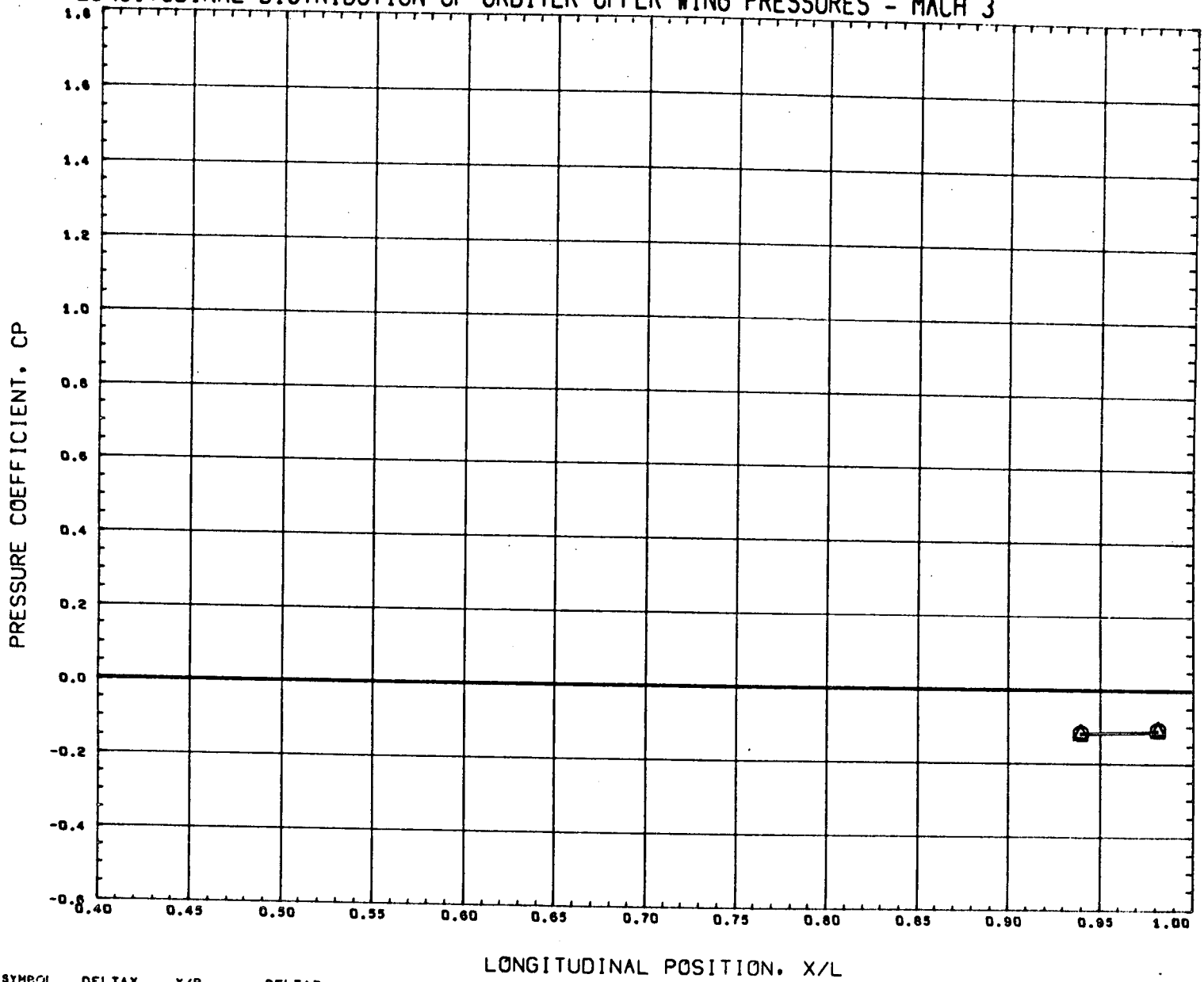
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.289	0.908
△	0.518		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.399	0.908
△	0.518		

PARAMETRIC VALUES

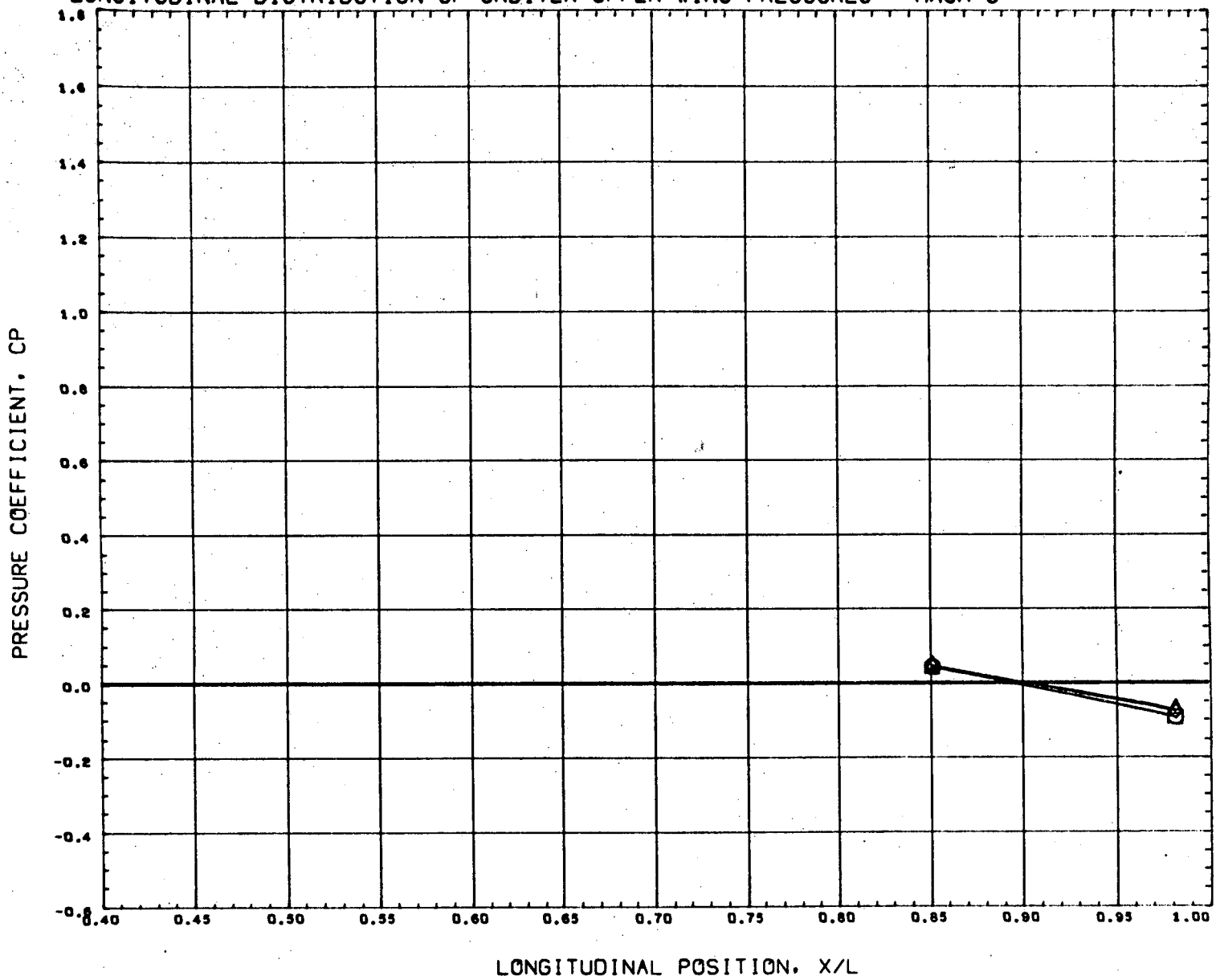
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



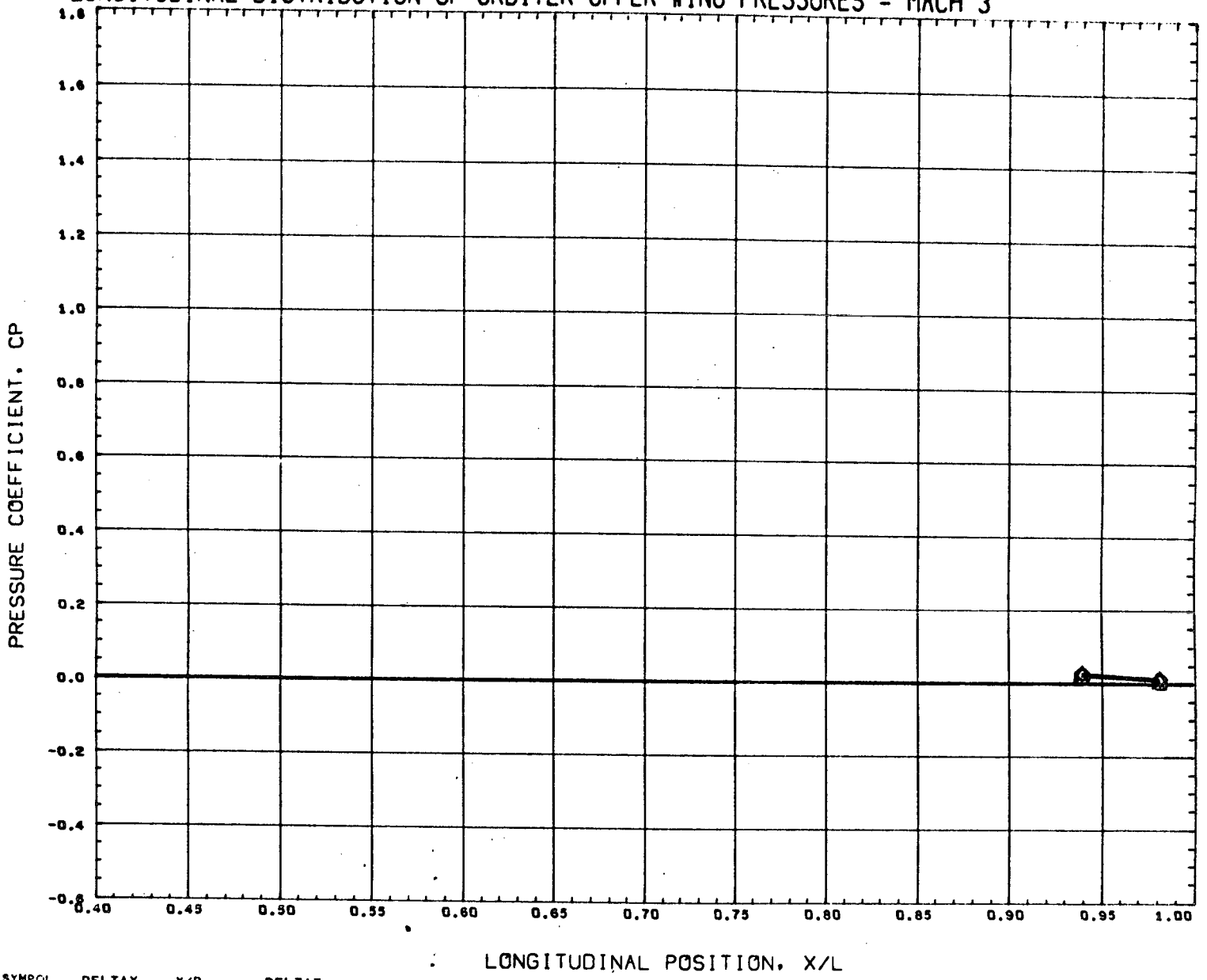
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB -	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW -	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



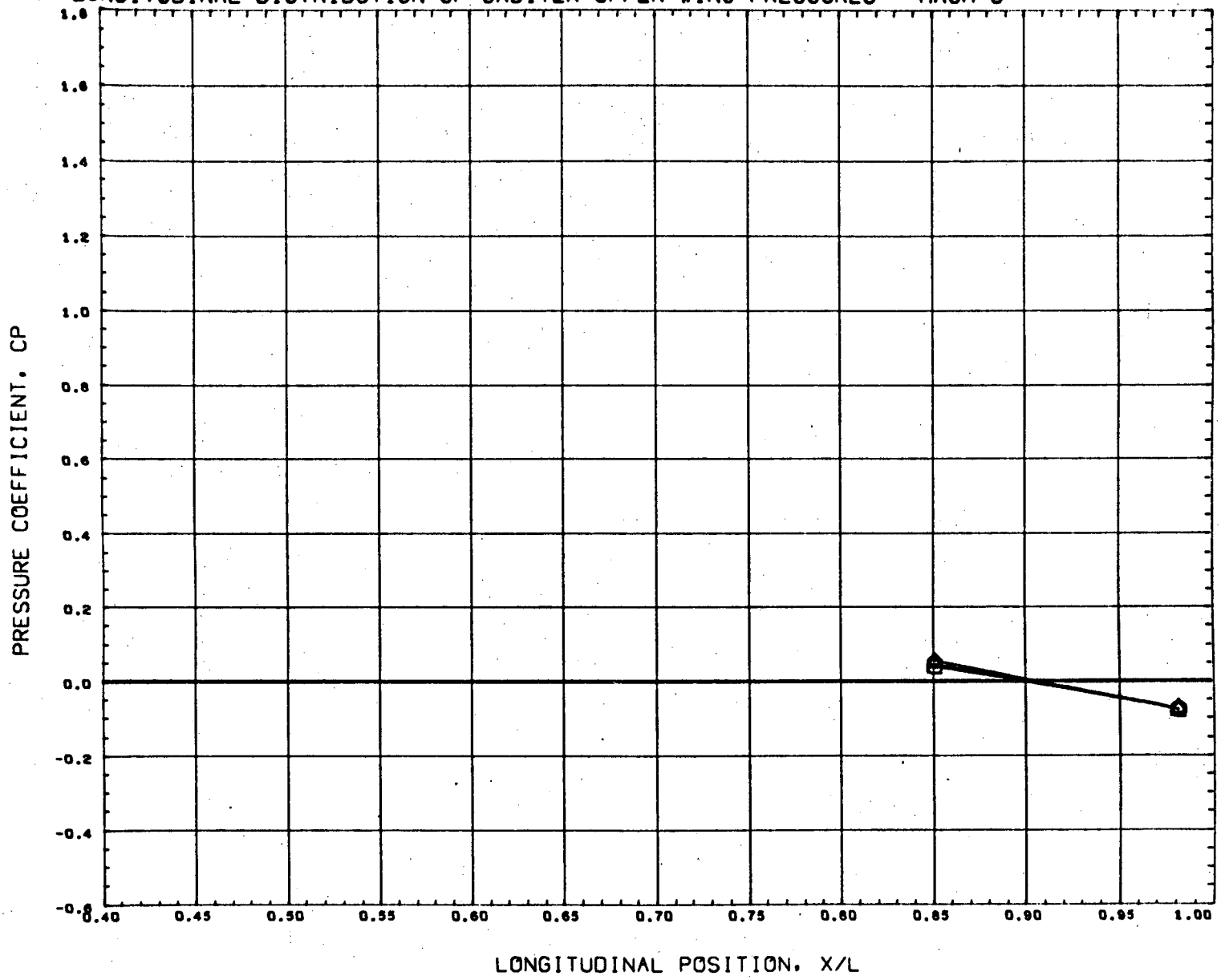
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



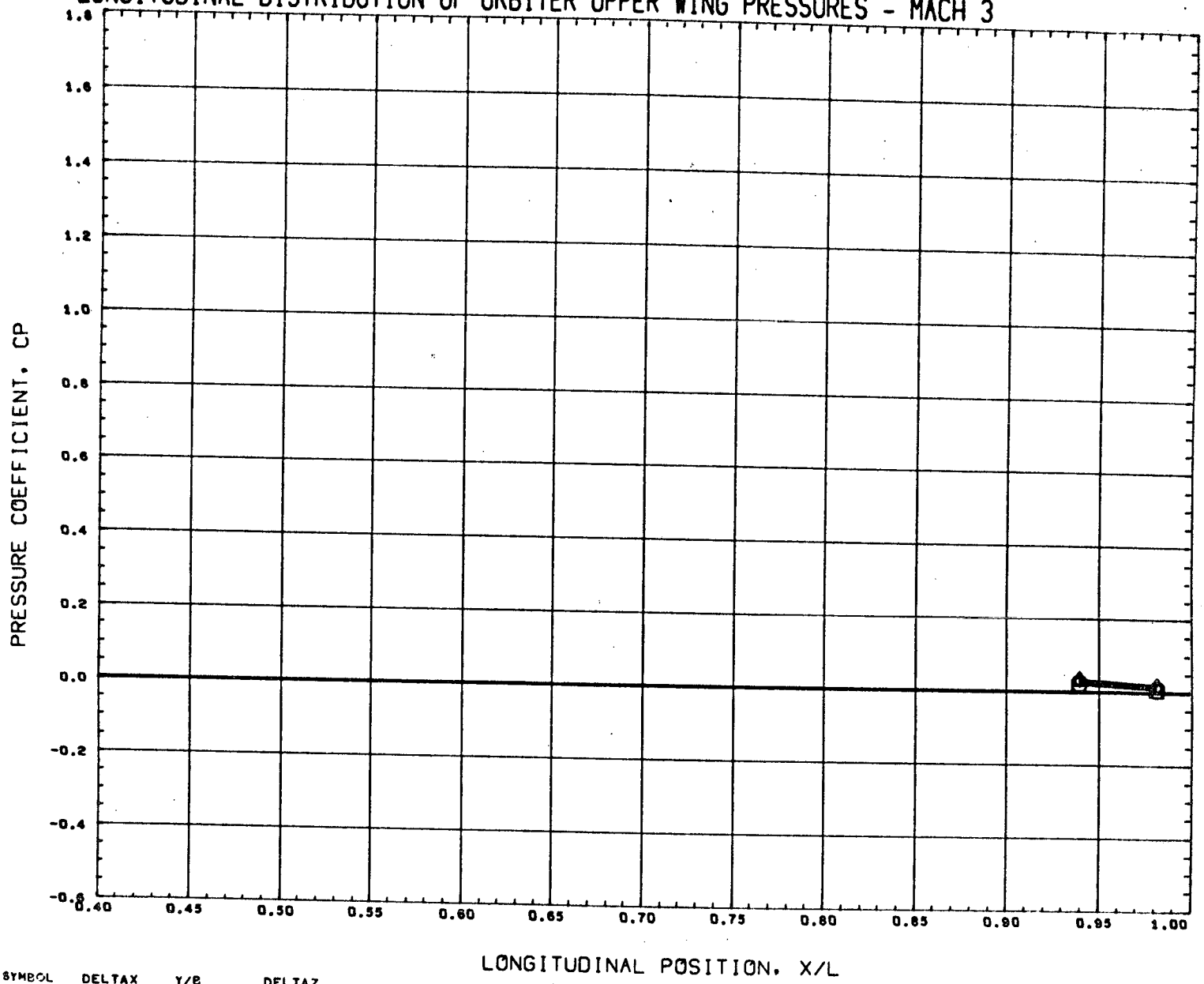
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.269	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.103		
◇	0.227		

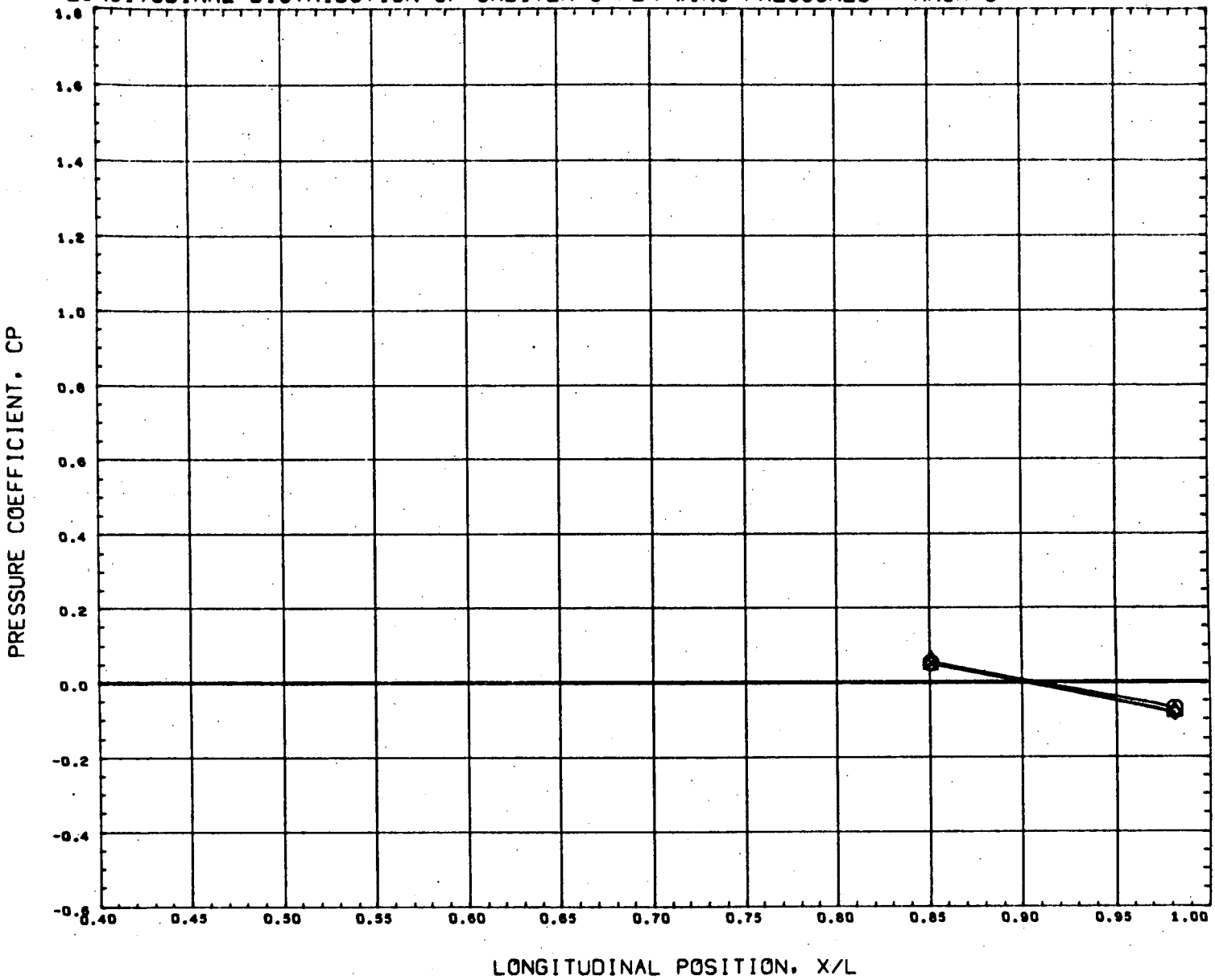
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

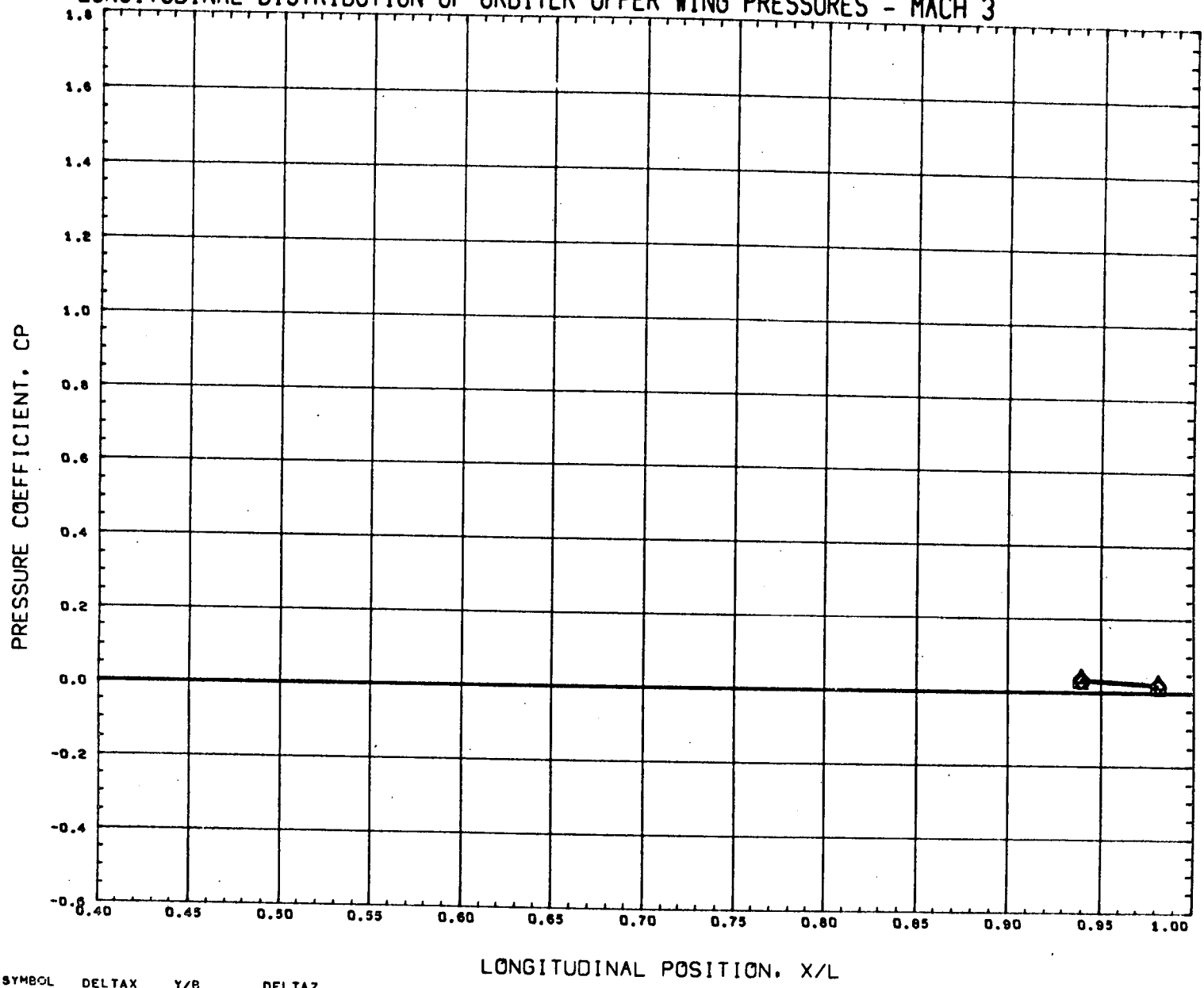
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8321• PAGE 135

4/8

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

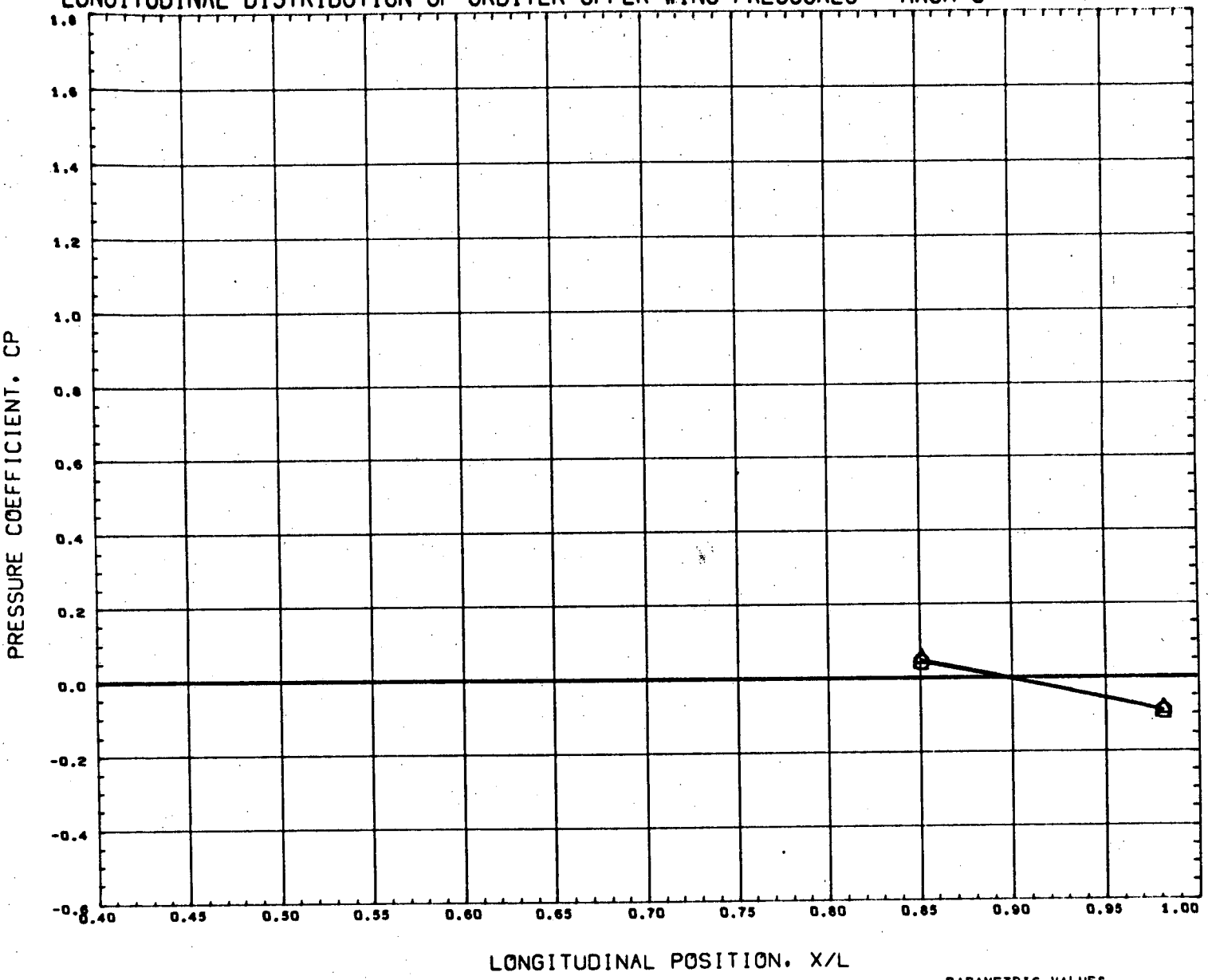
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.289	0.908
△	0.516		

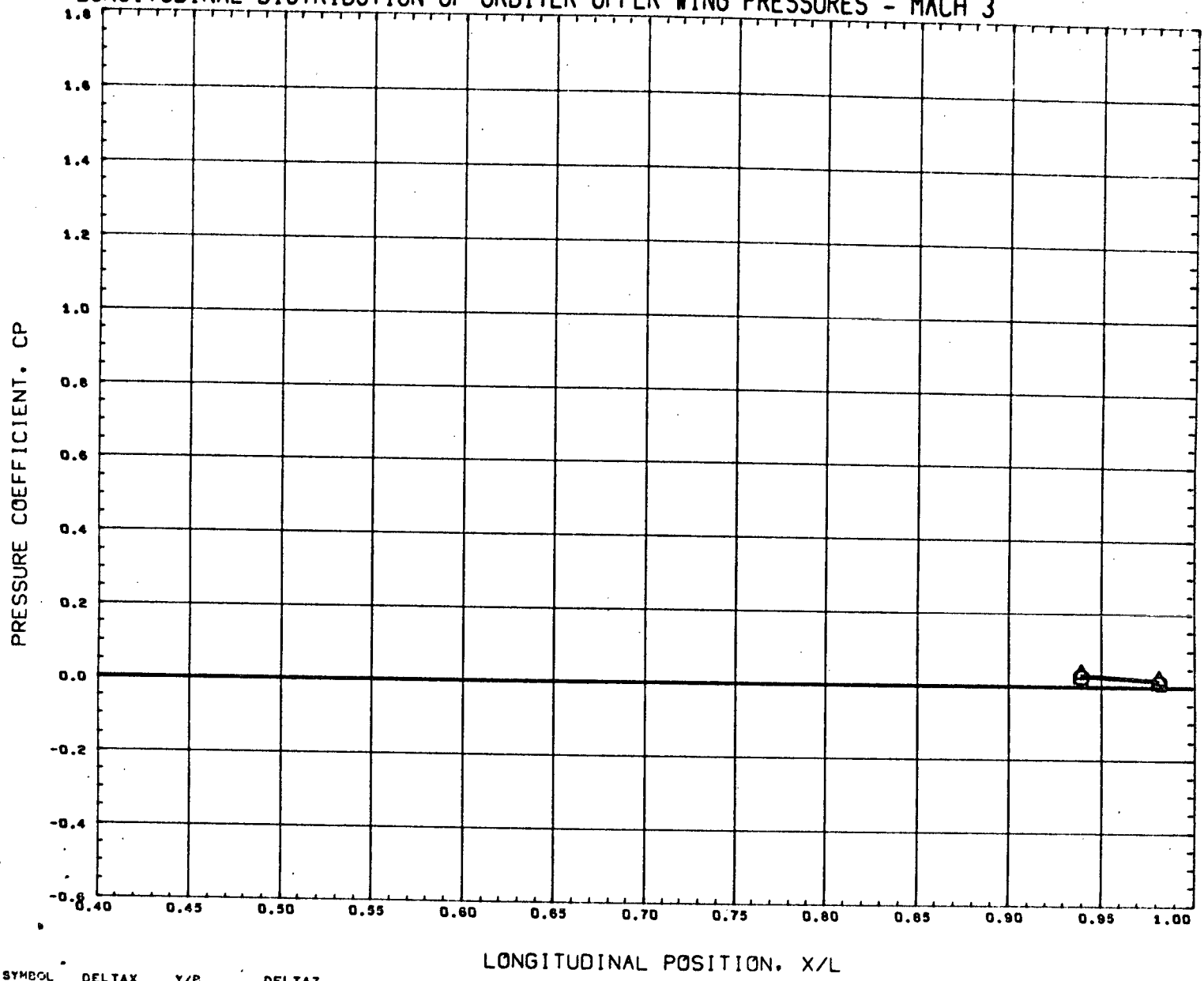
PARAMETRIC VALUES

ALPHAB -	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.399	0.908
△	0.516		

PARAMETRIC VALUES

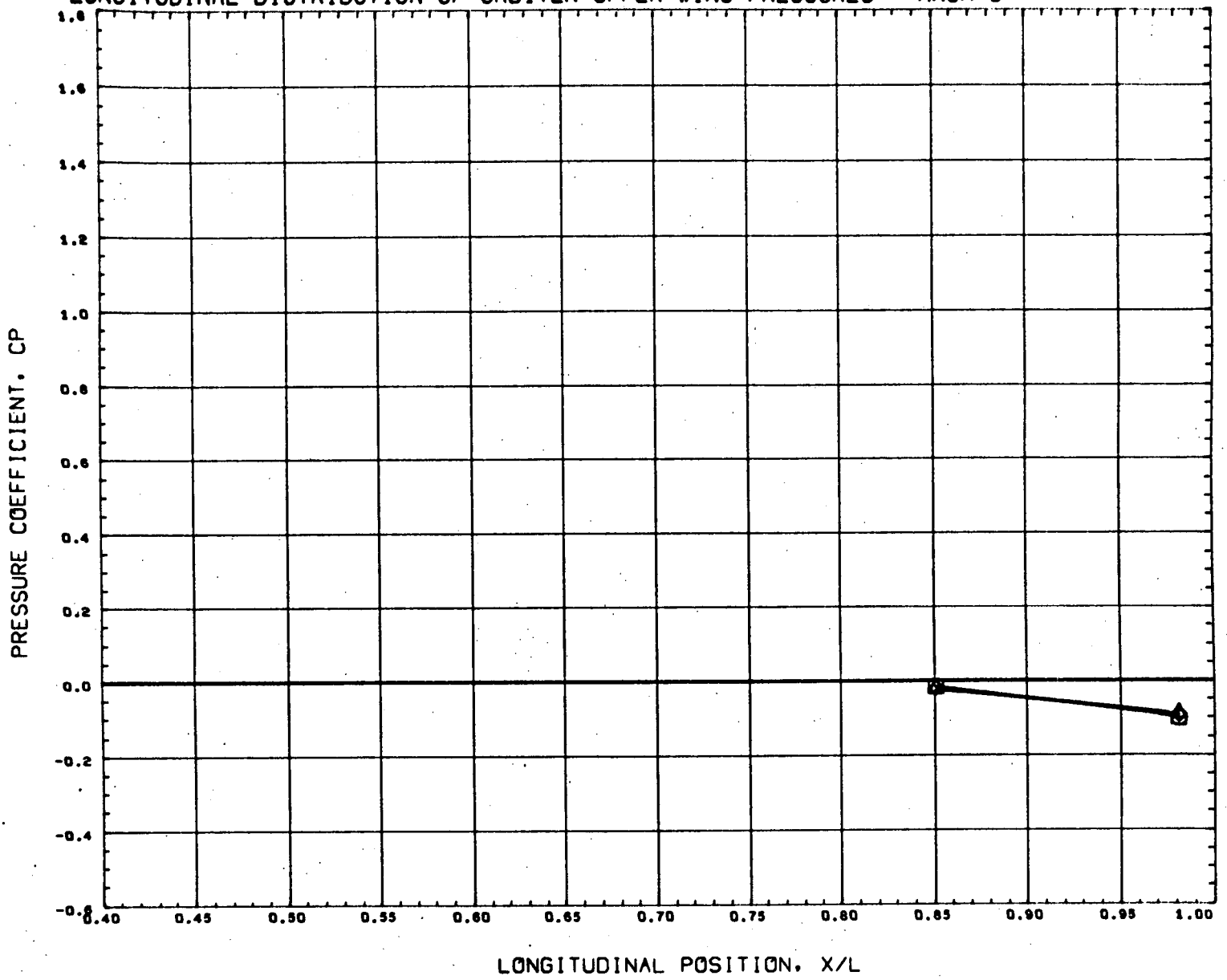
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



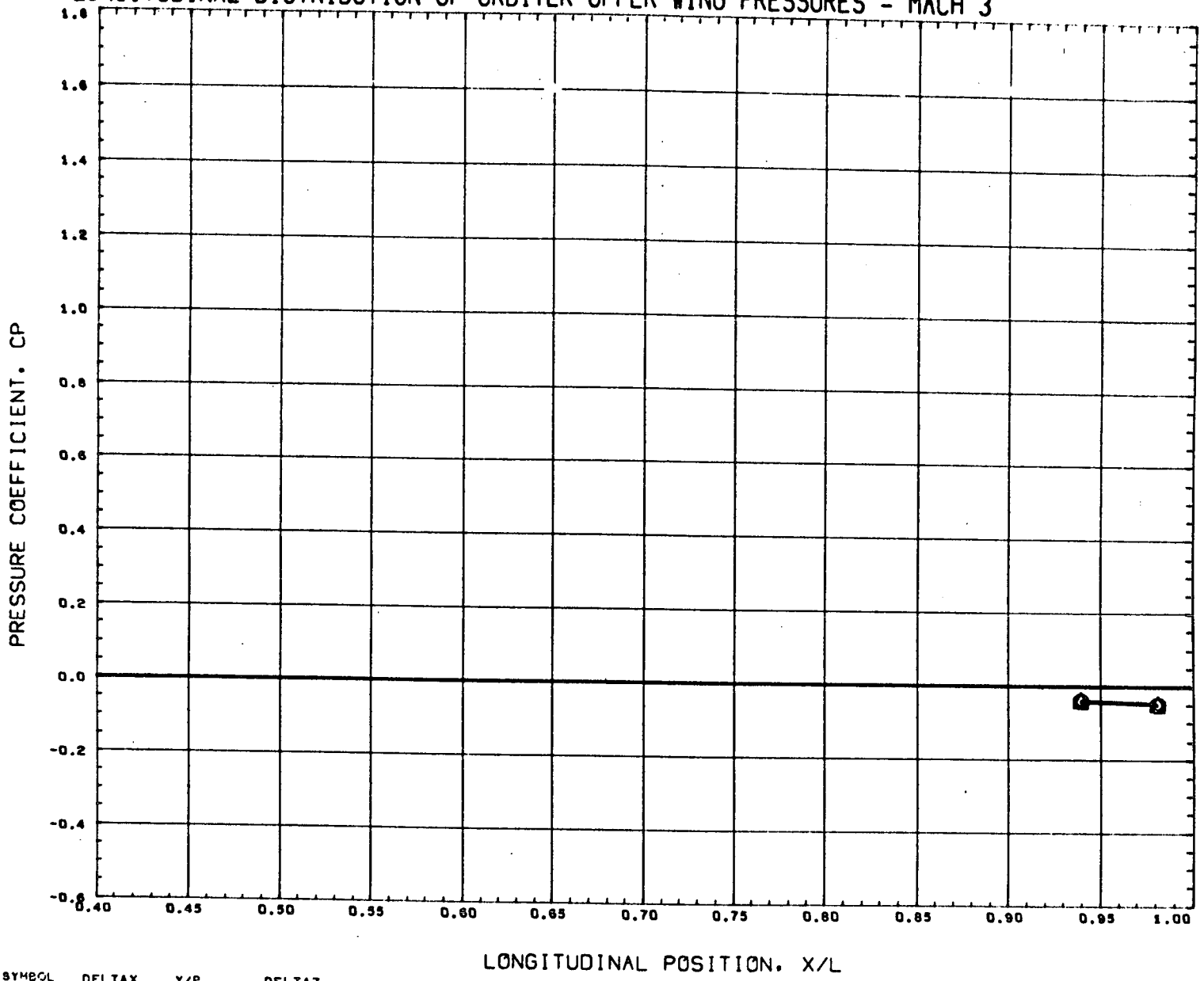
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

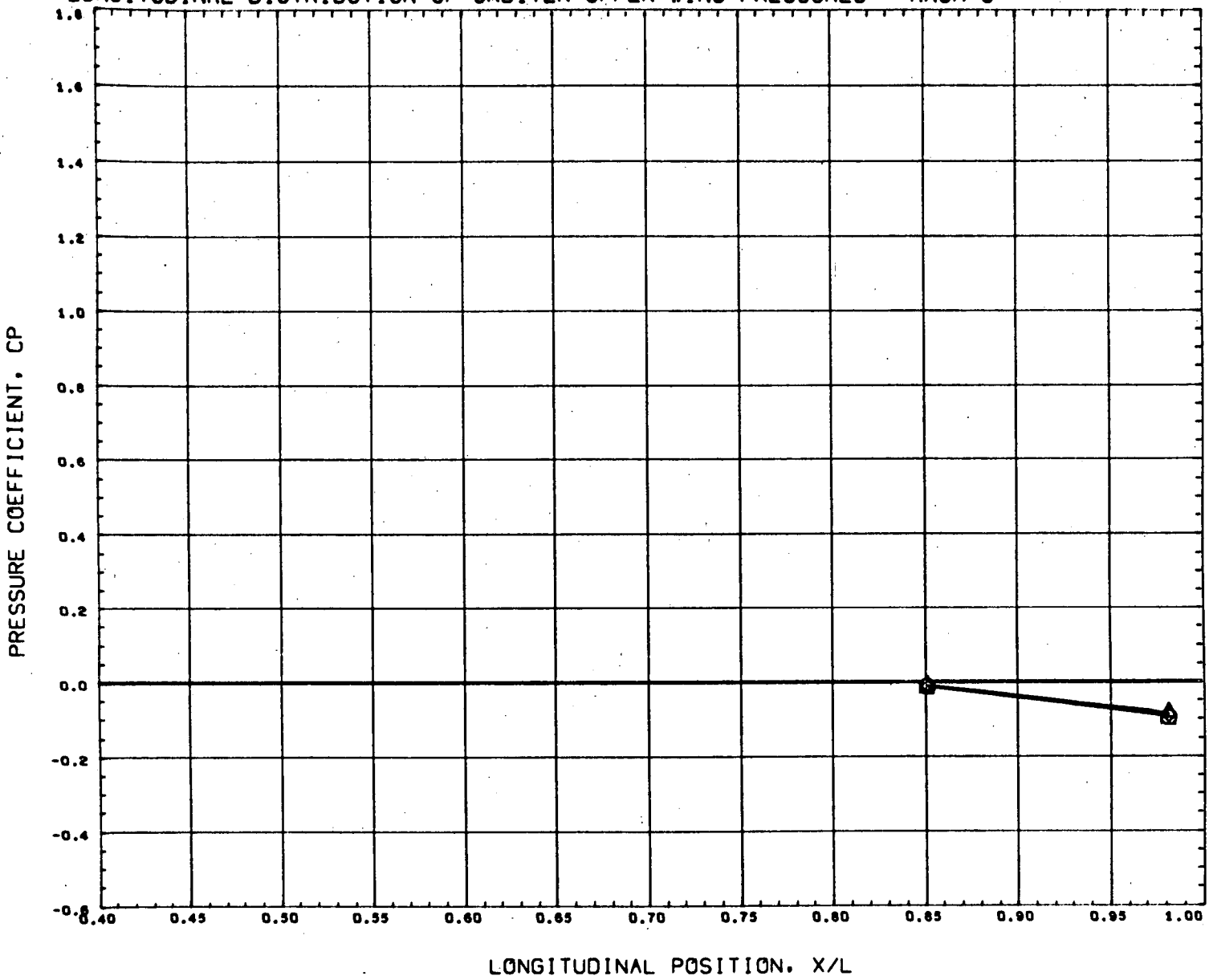
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



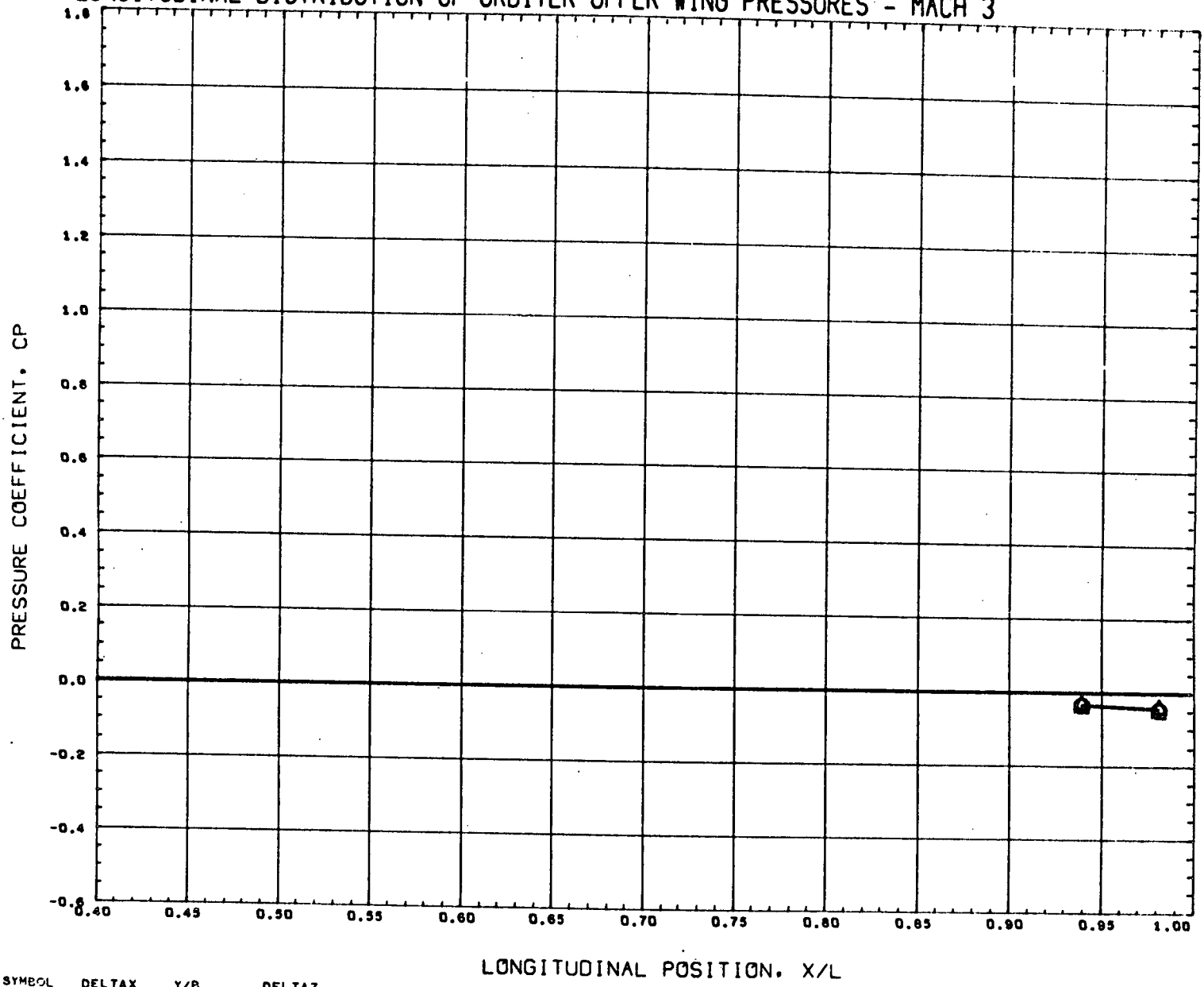
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.289	0.151
△	0.101		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.101		
◇	0.226		

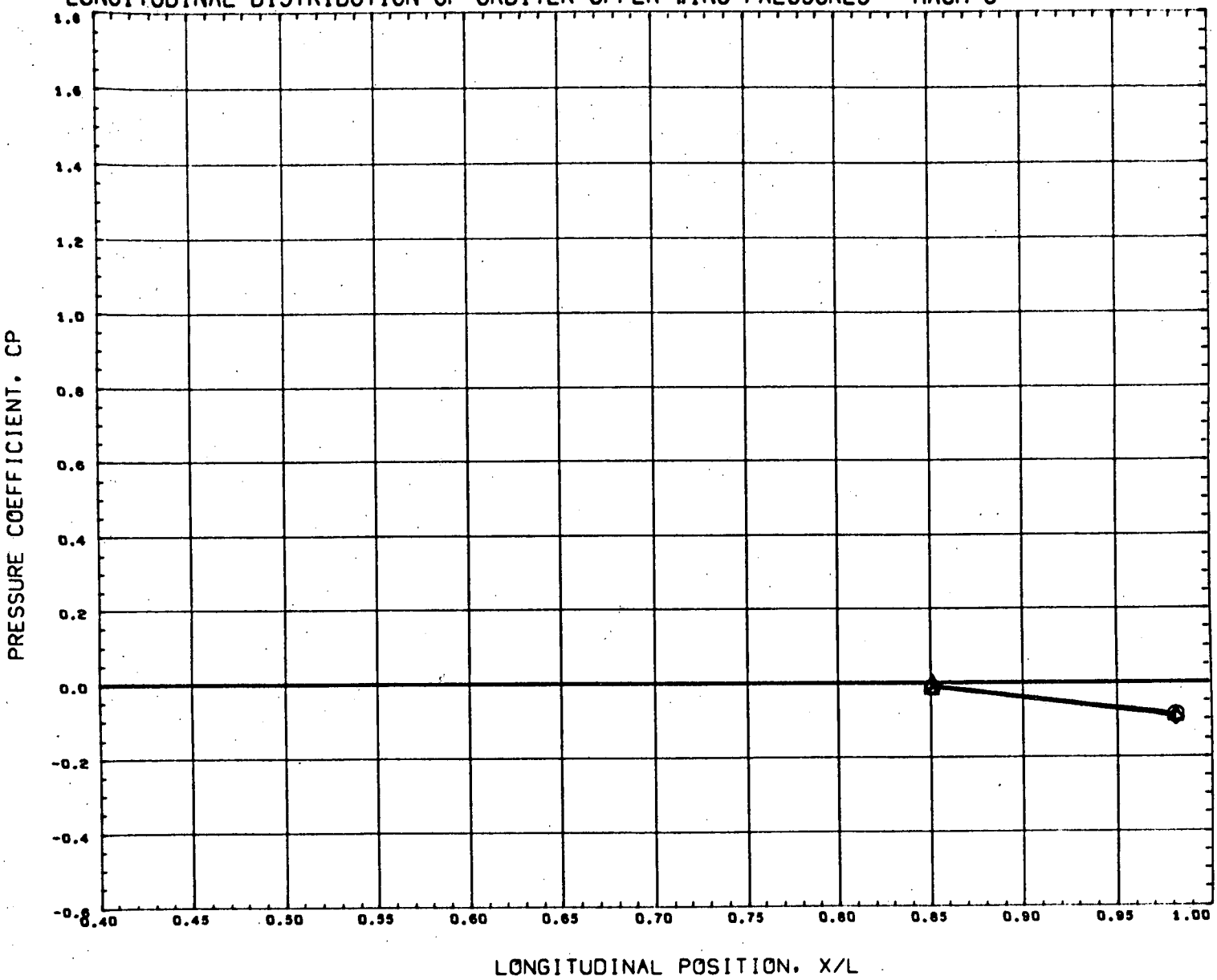
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



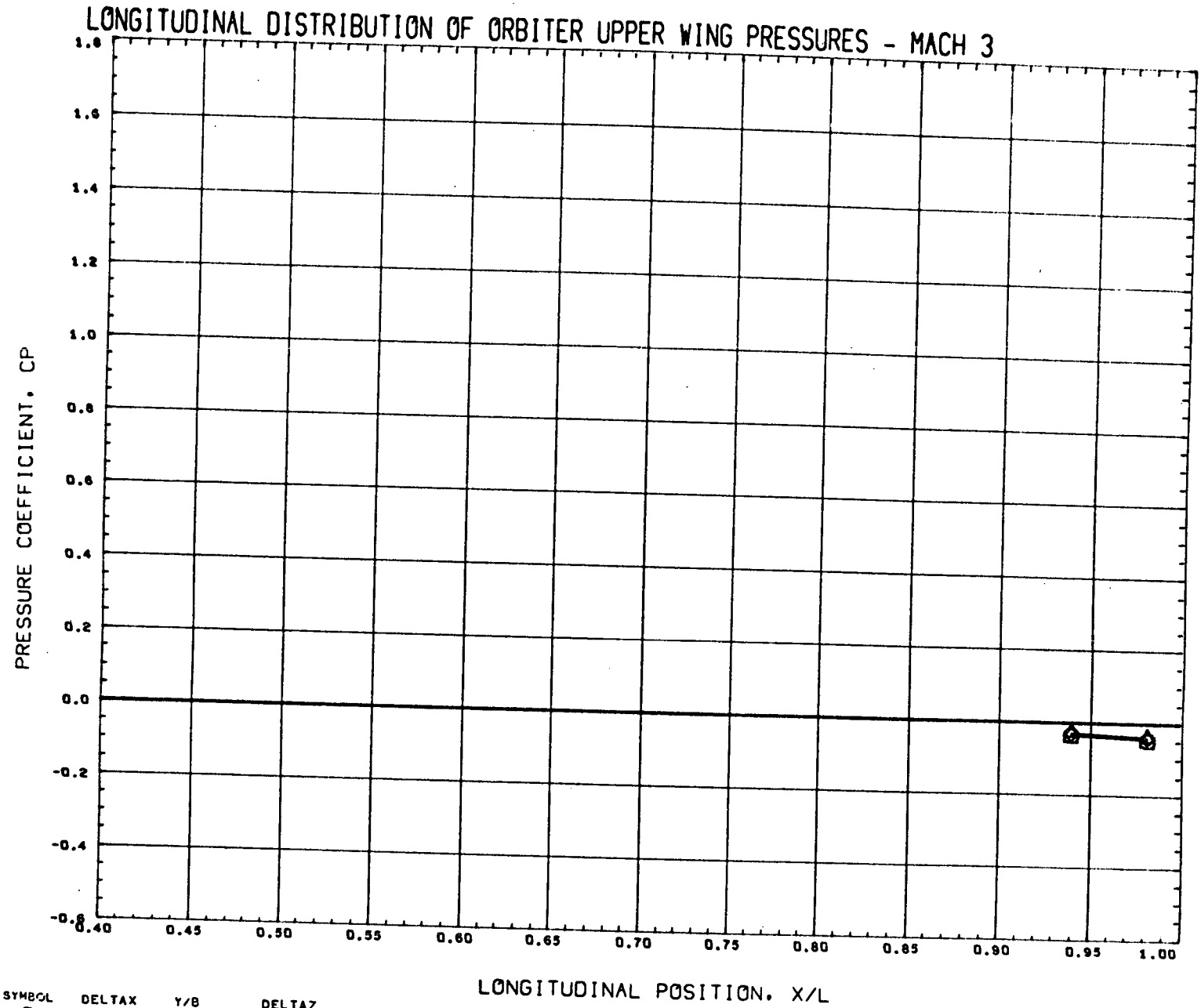
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.289	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

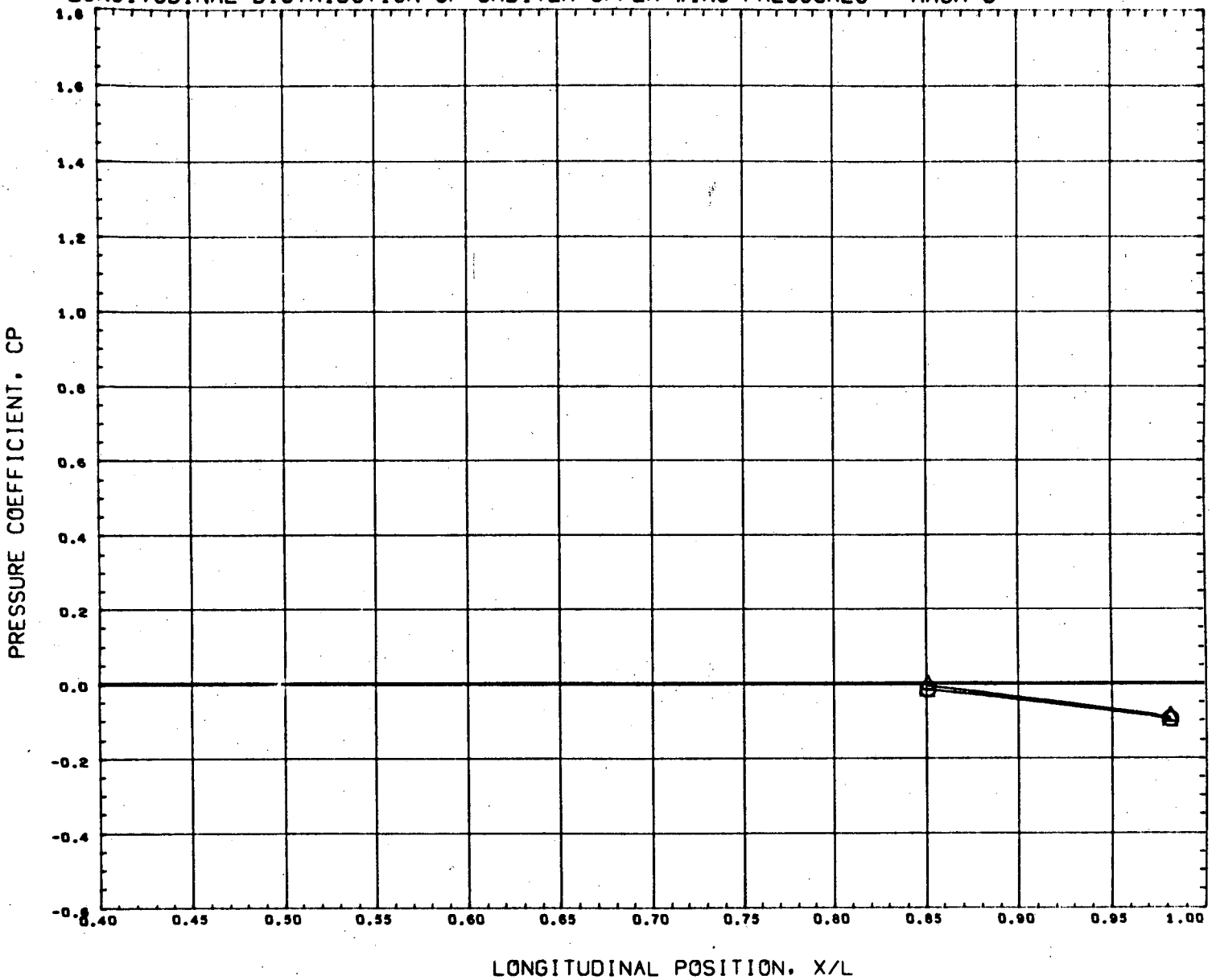
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



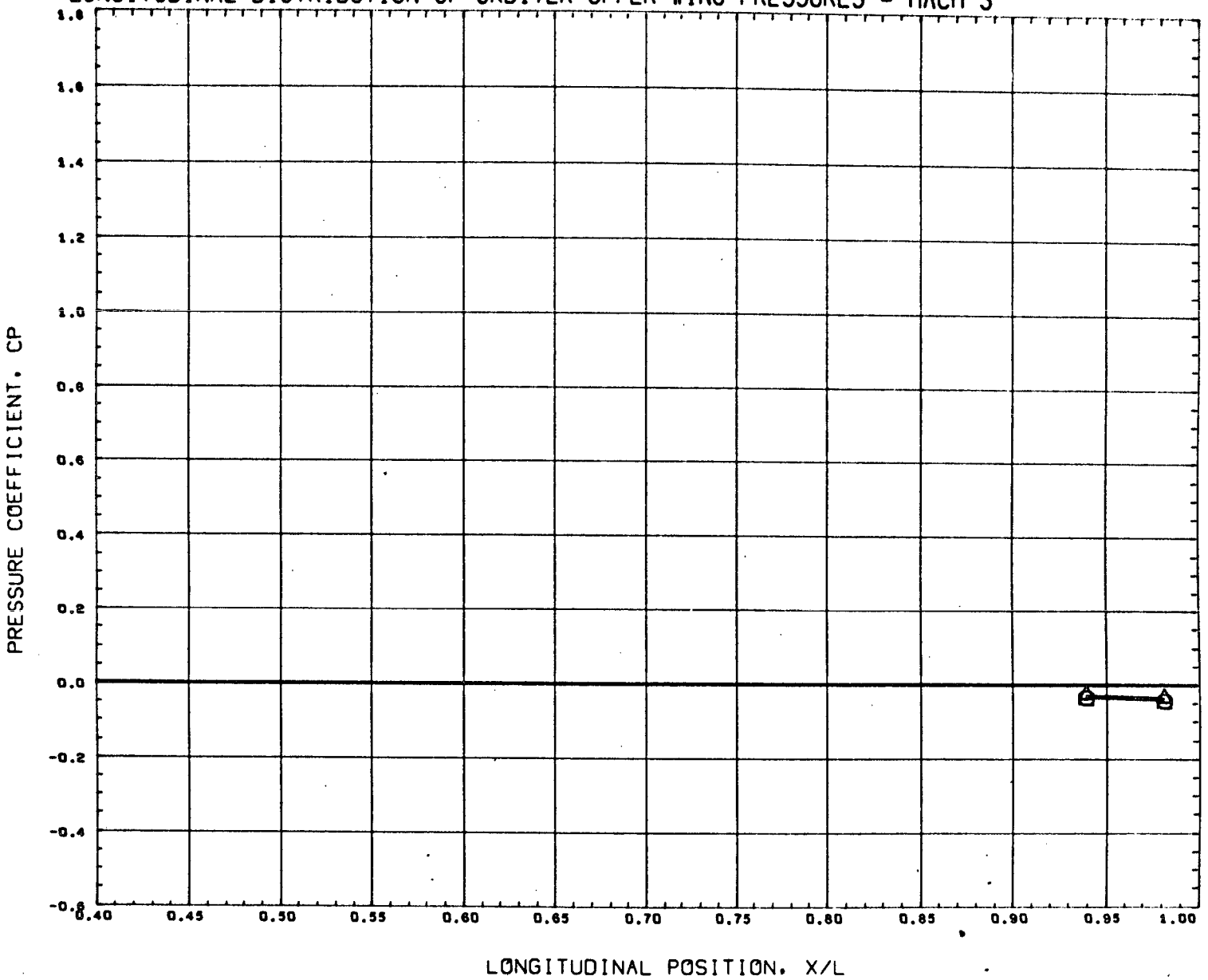
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.289	0.908
△	0.516		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



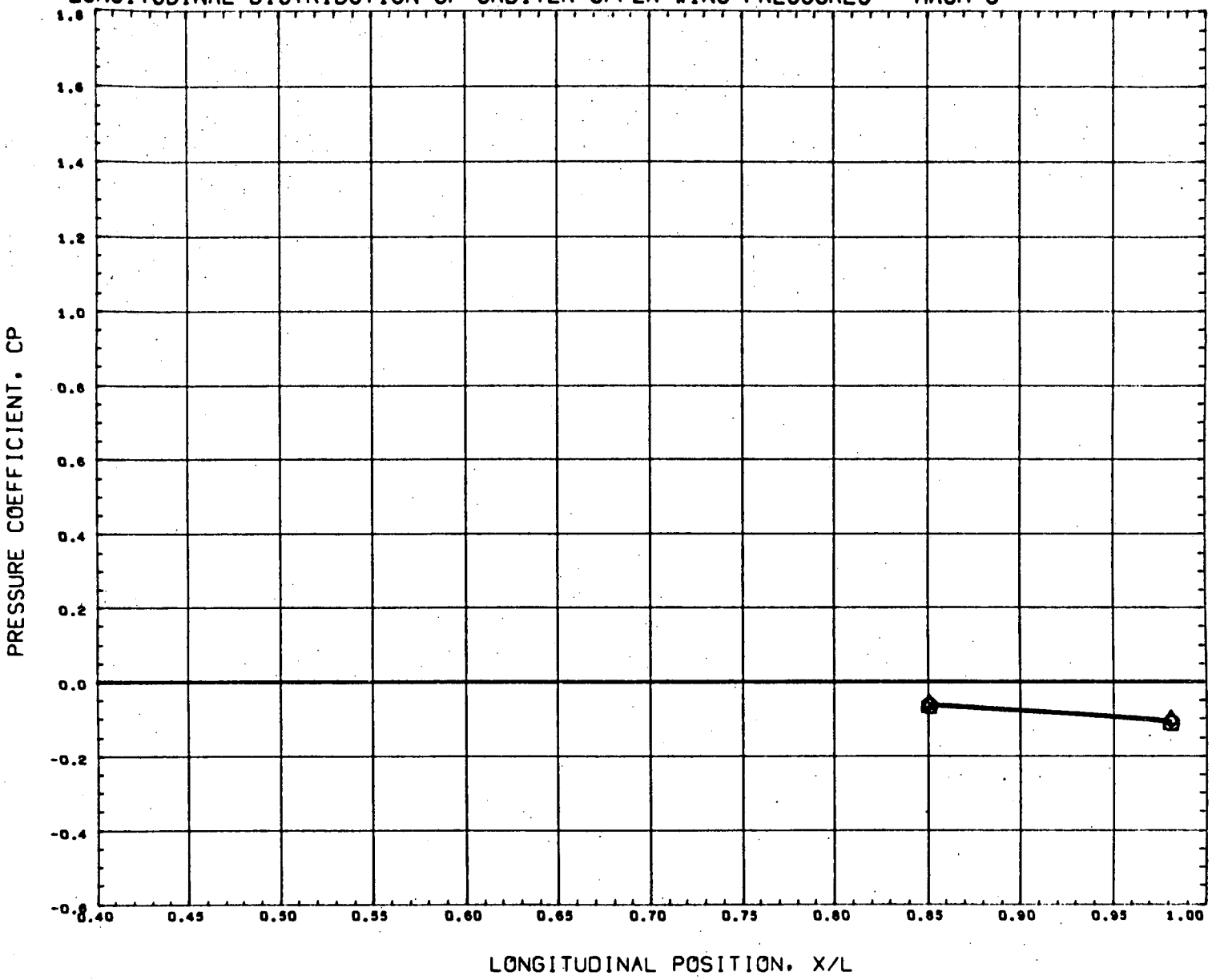
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.399	0.908
△	0.516		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



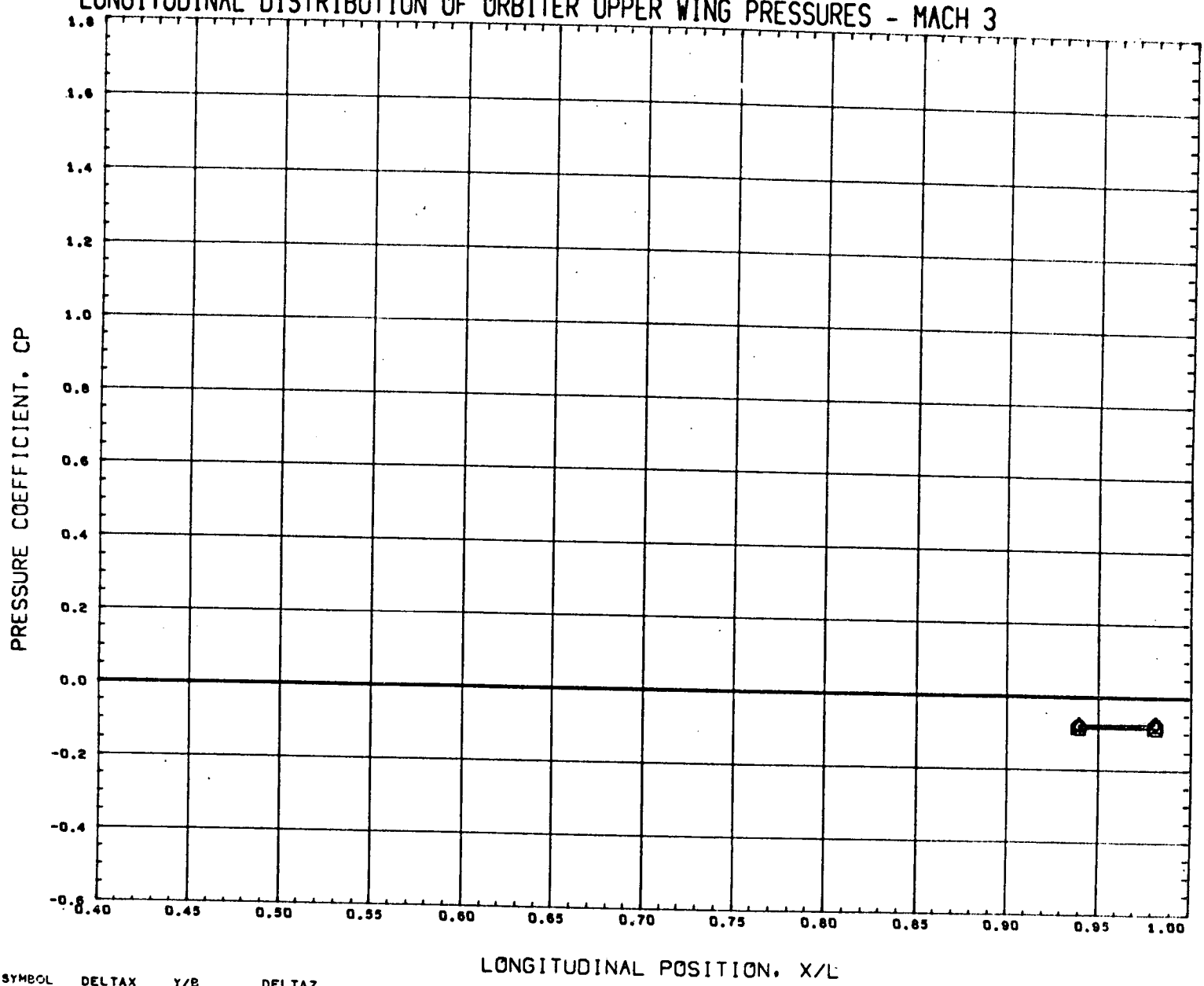
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

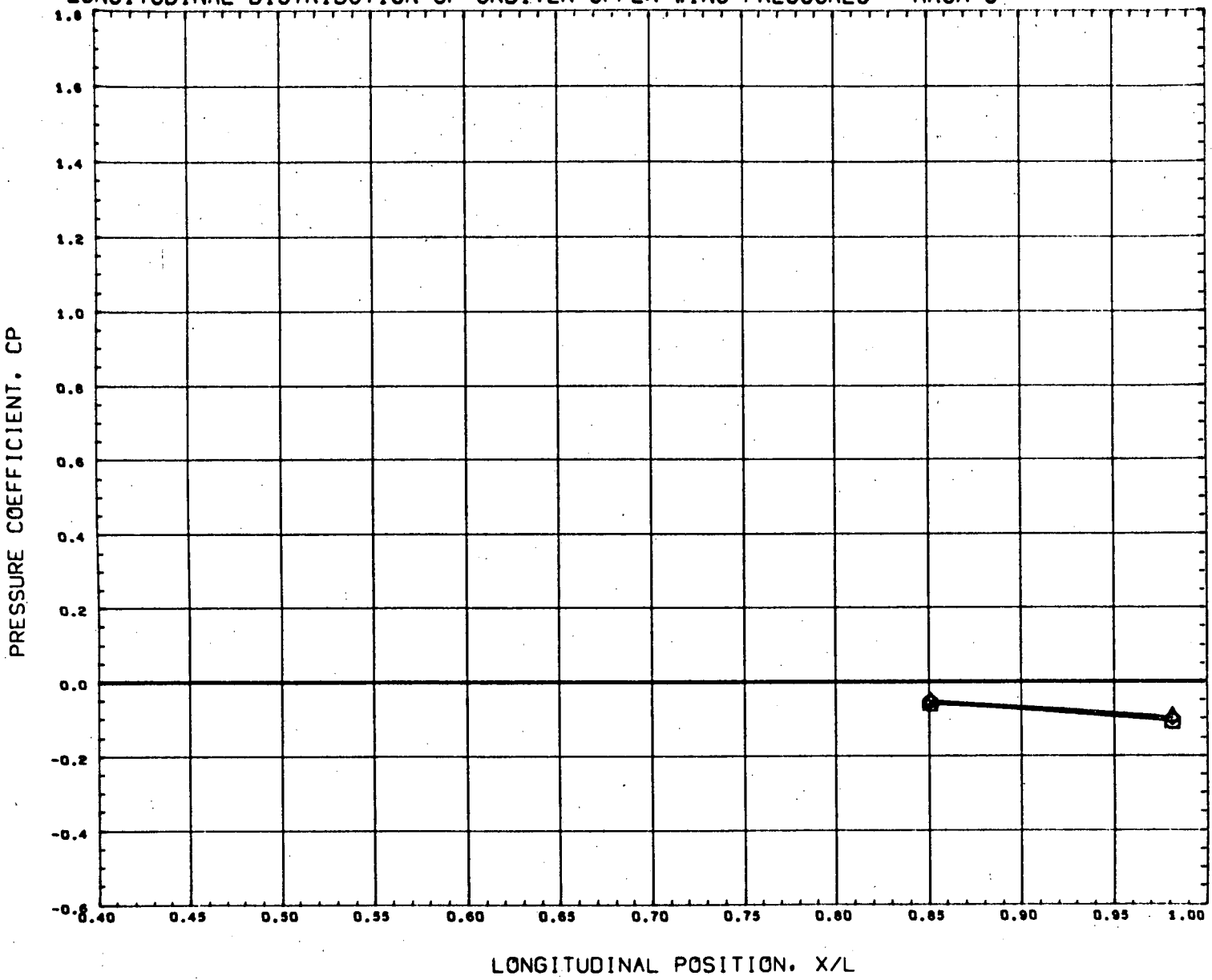
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



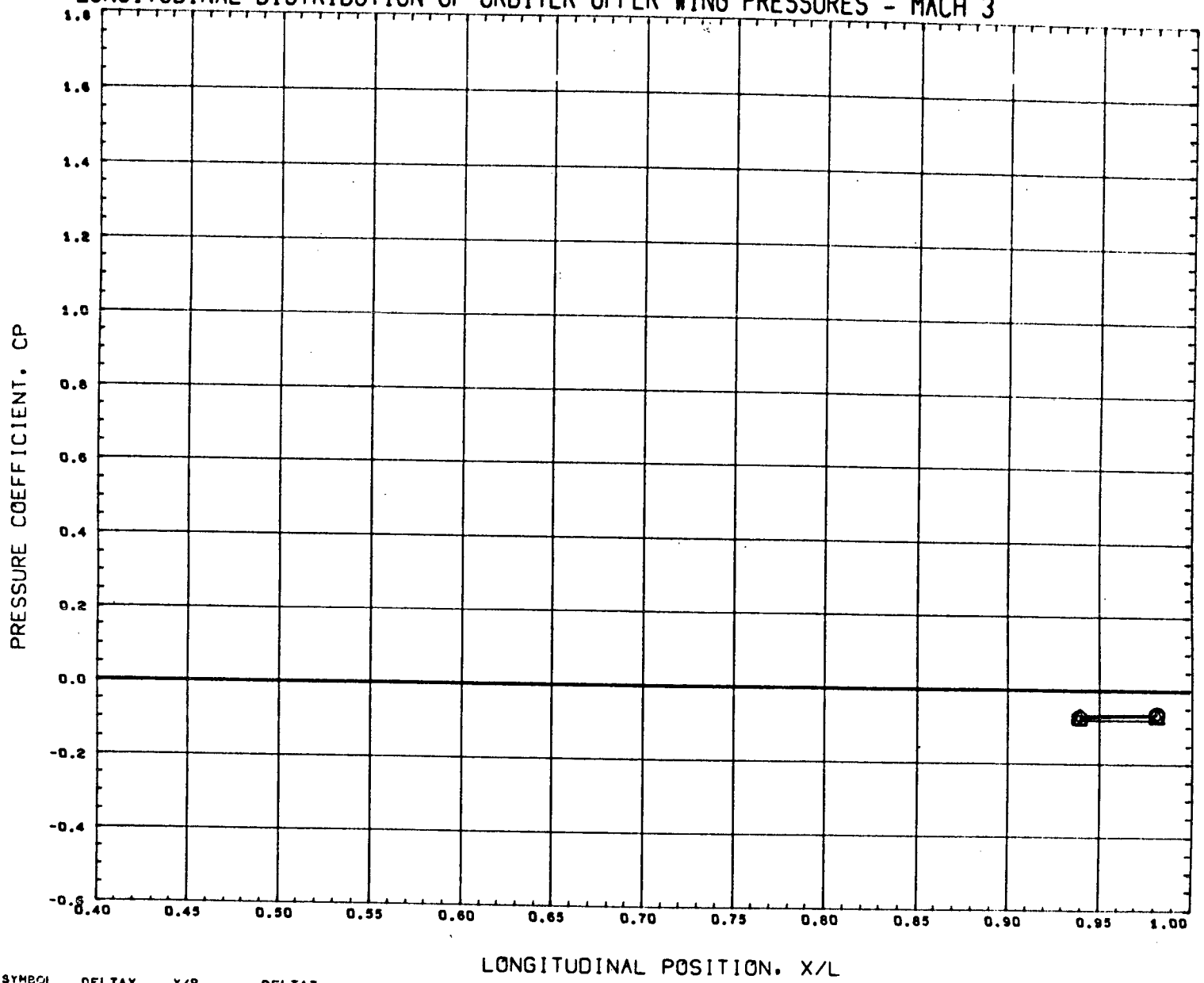
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.289	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.151
△	0.104		
◇	0.227		

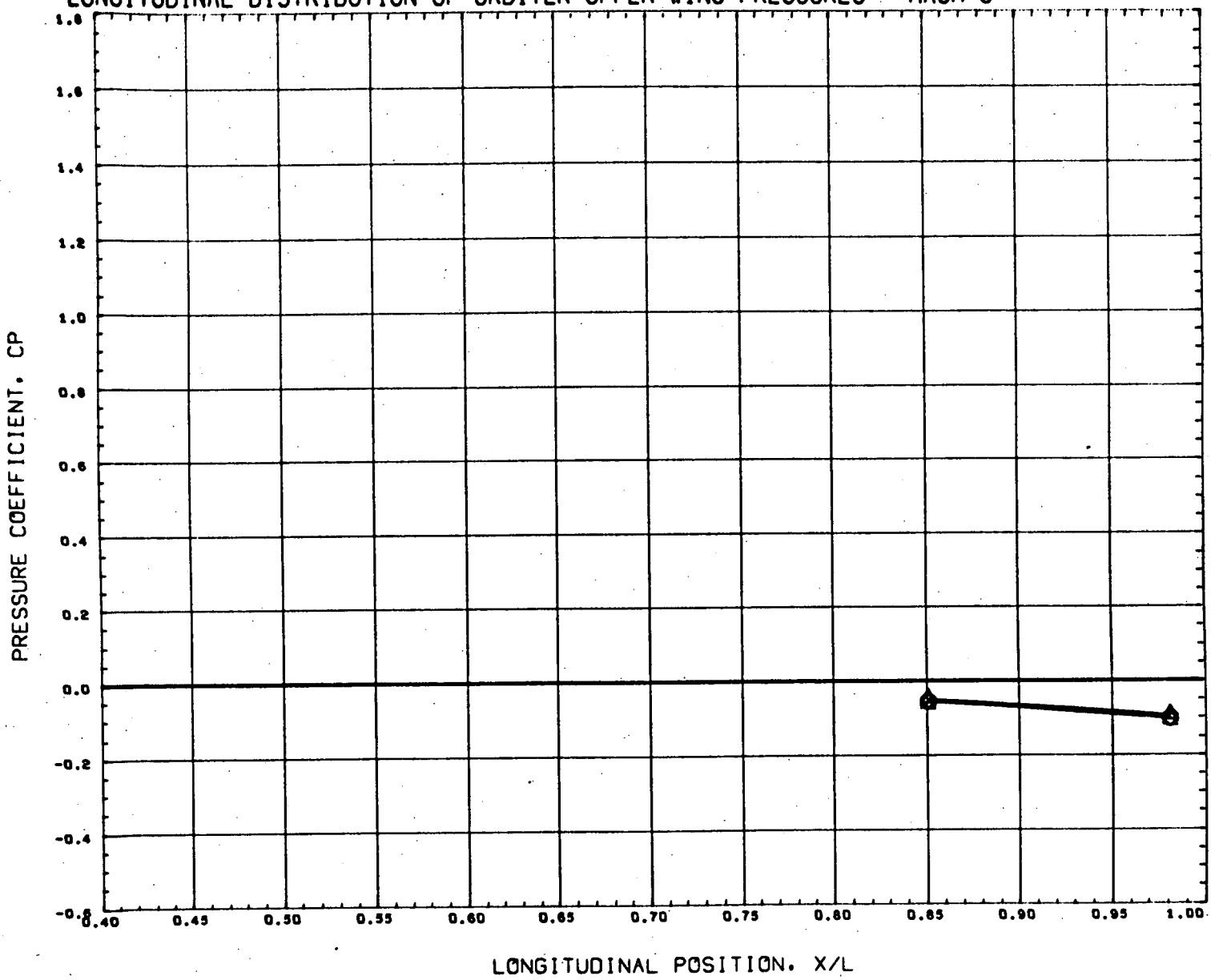
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



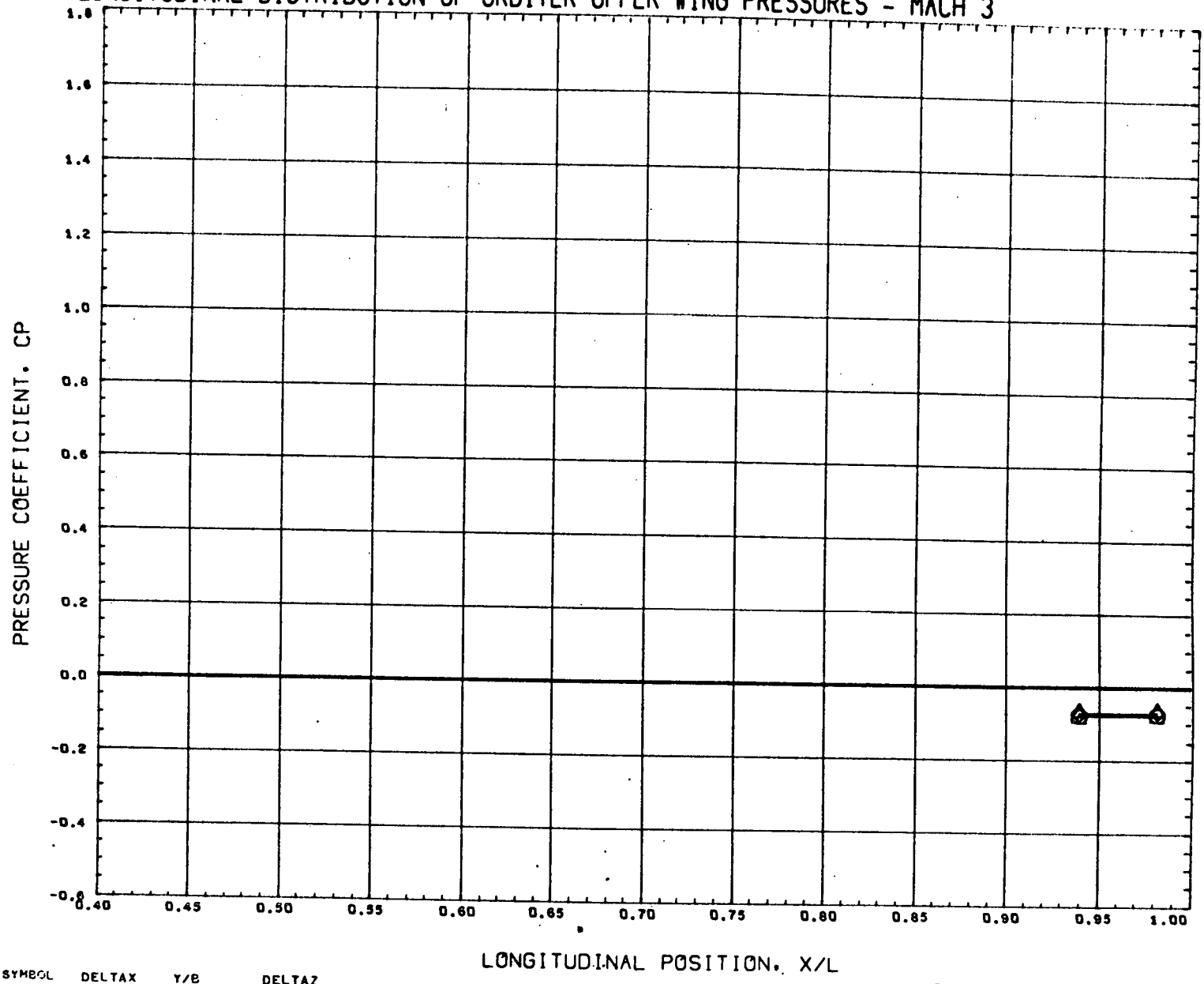
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.269	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.226
△	0.103		
◇	0.227		

PARAMETRIC VALUES

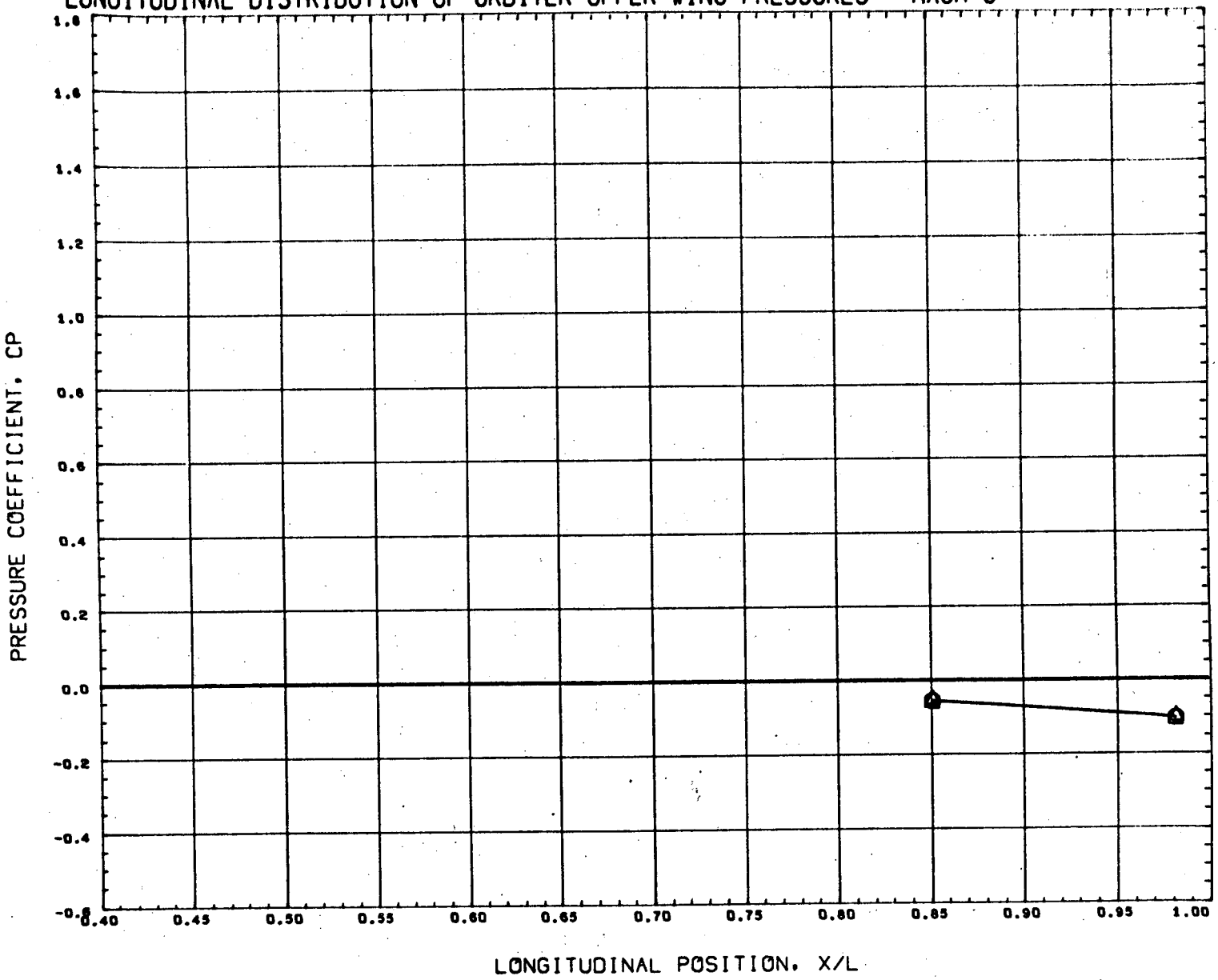
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.269	0.908
△	0.514		

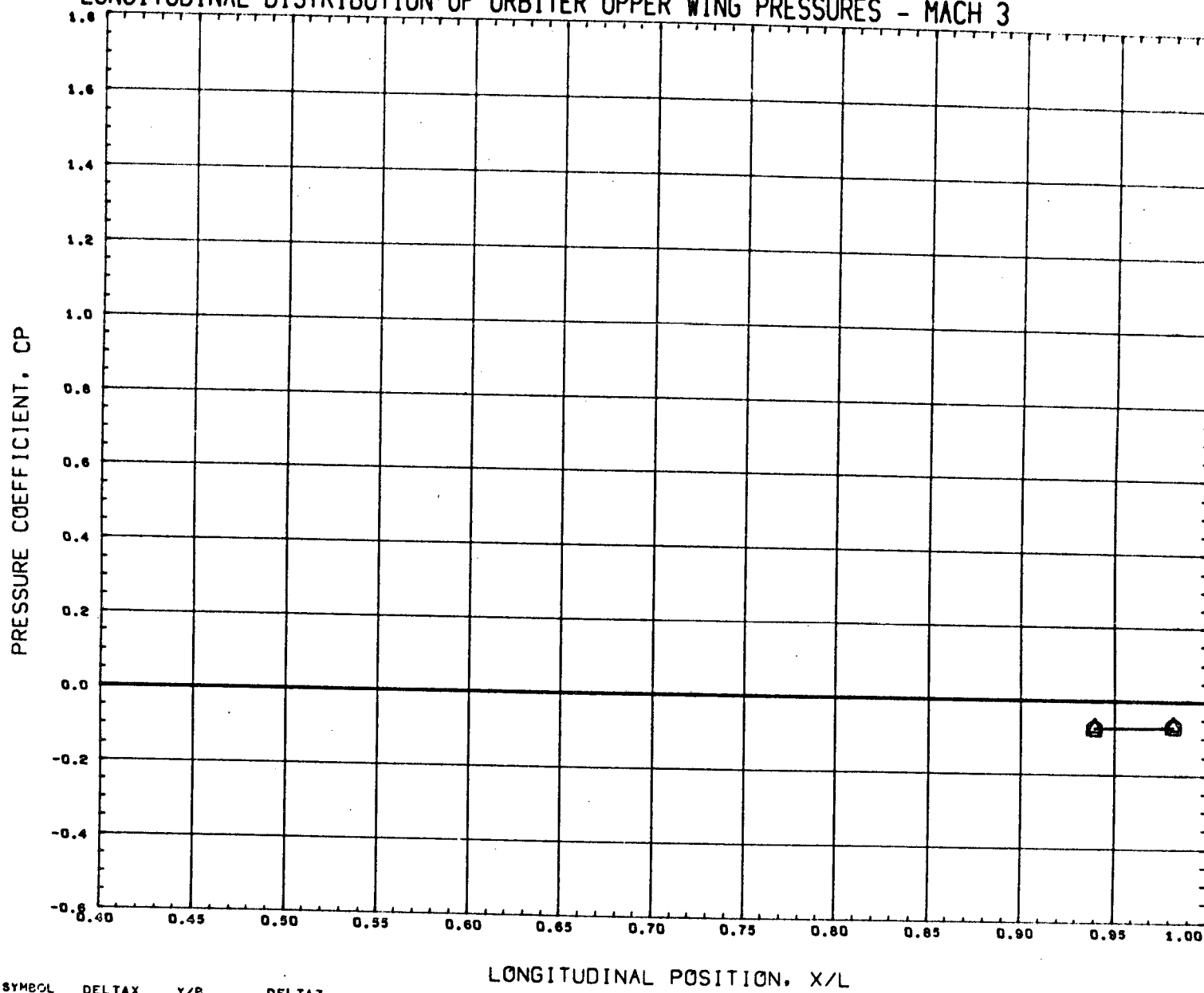
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.399	0.908
△	0.514		

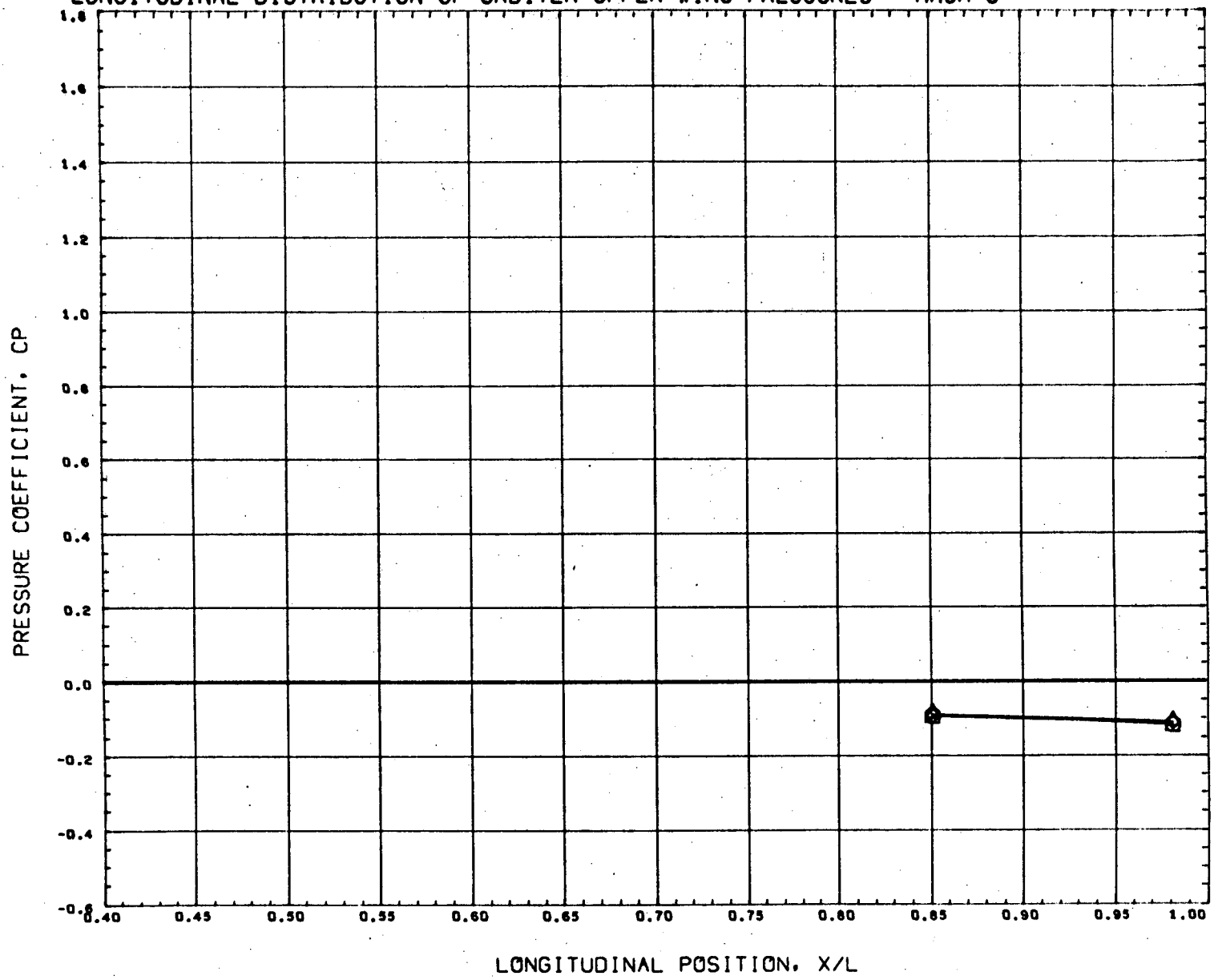
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



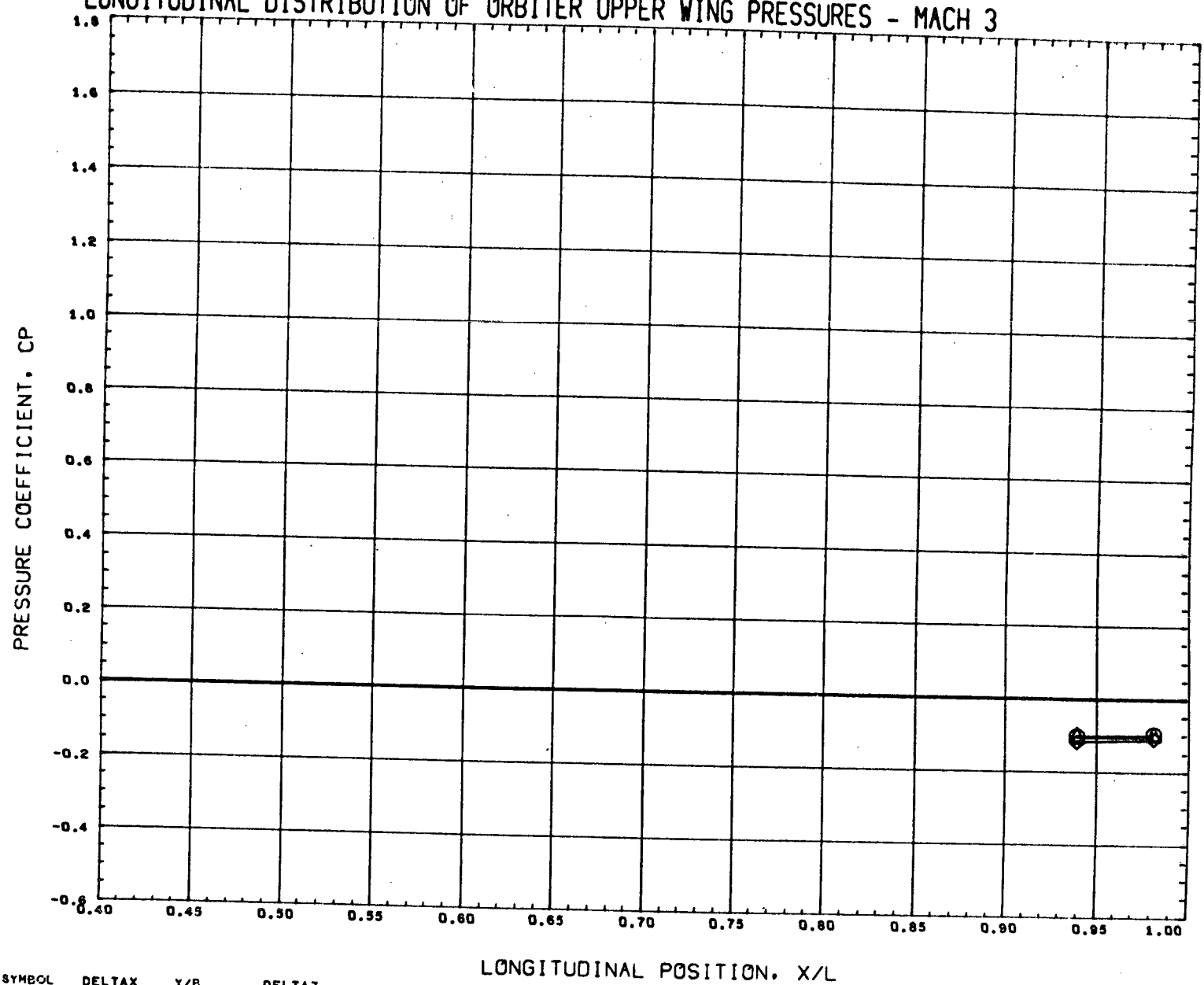
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

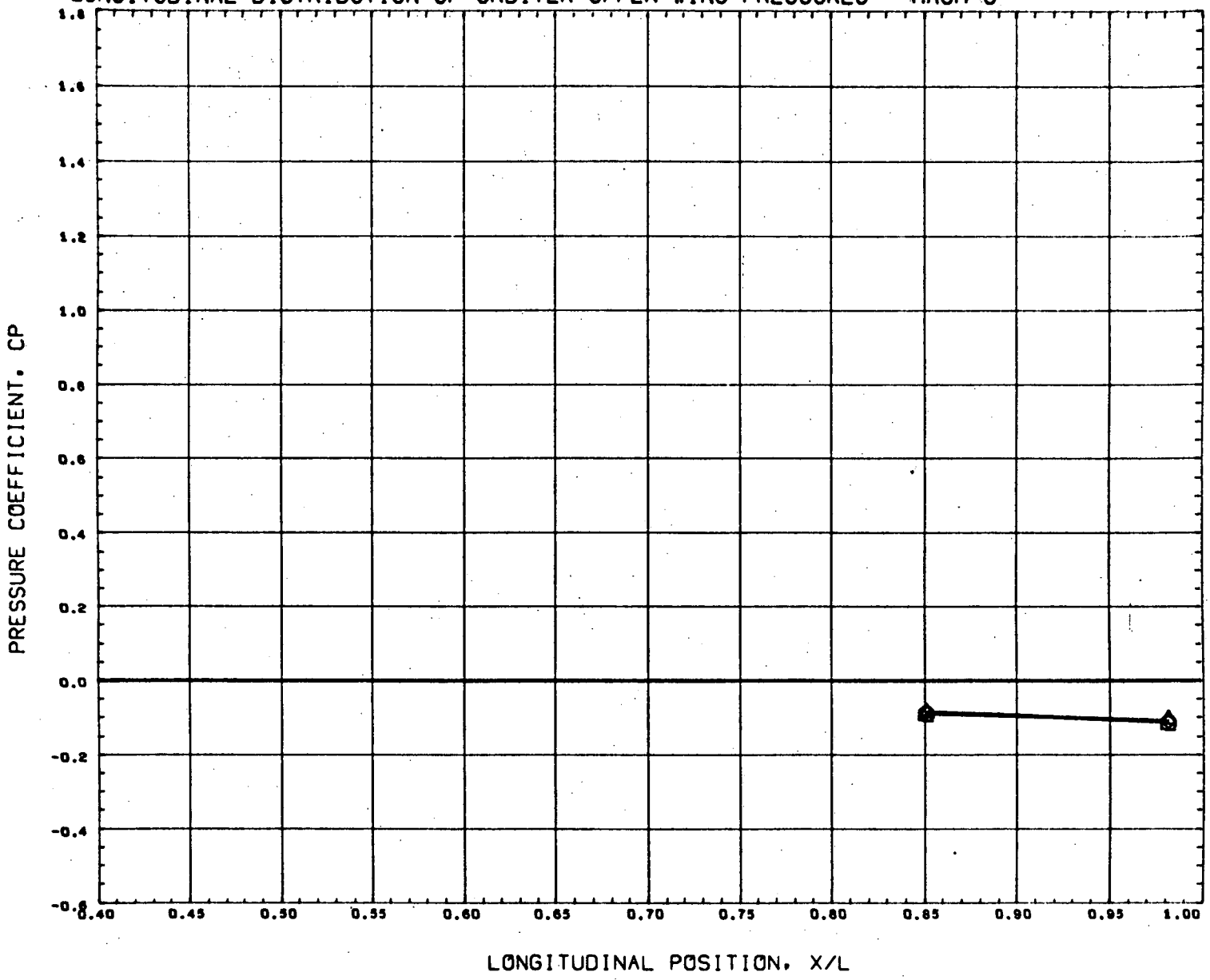
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



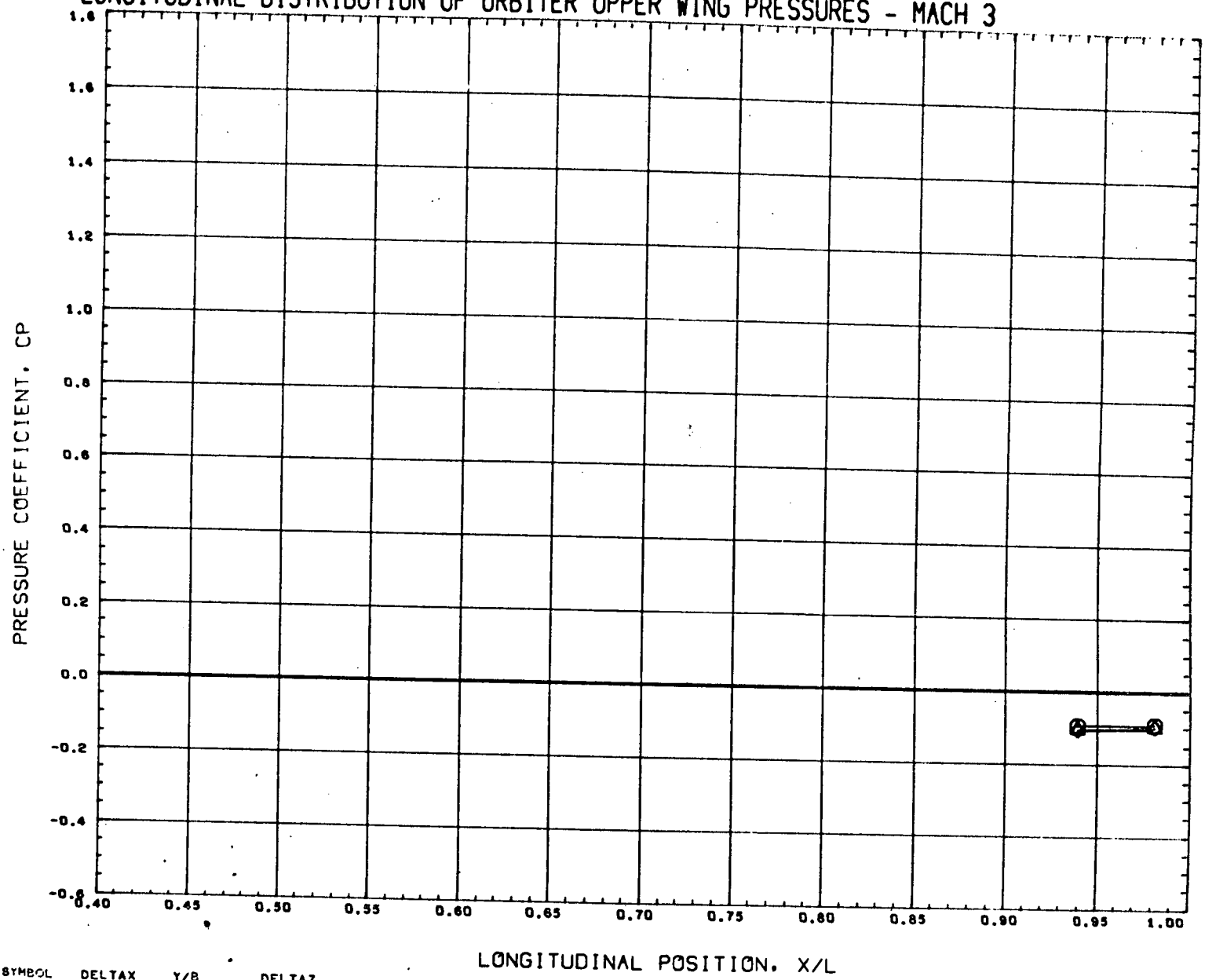
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.269	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

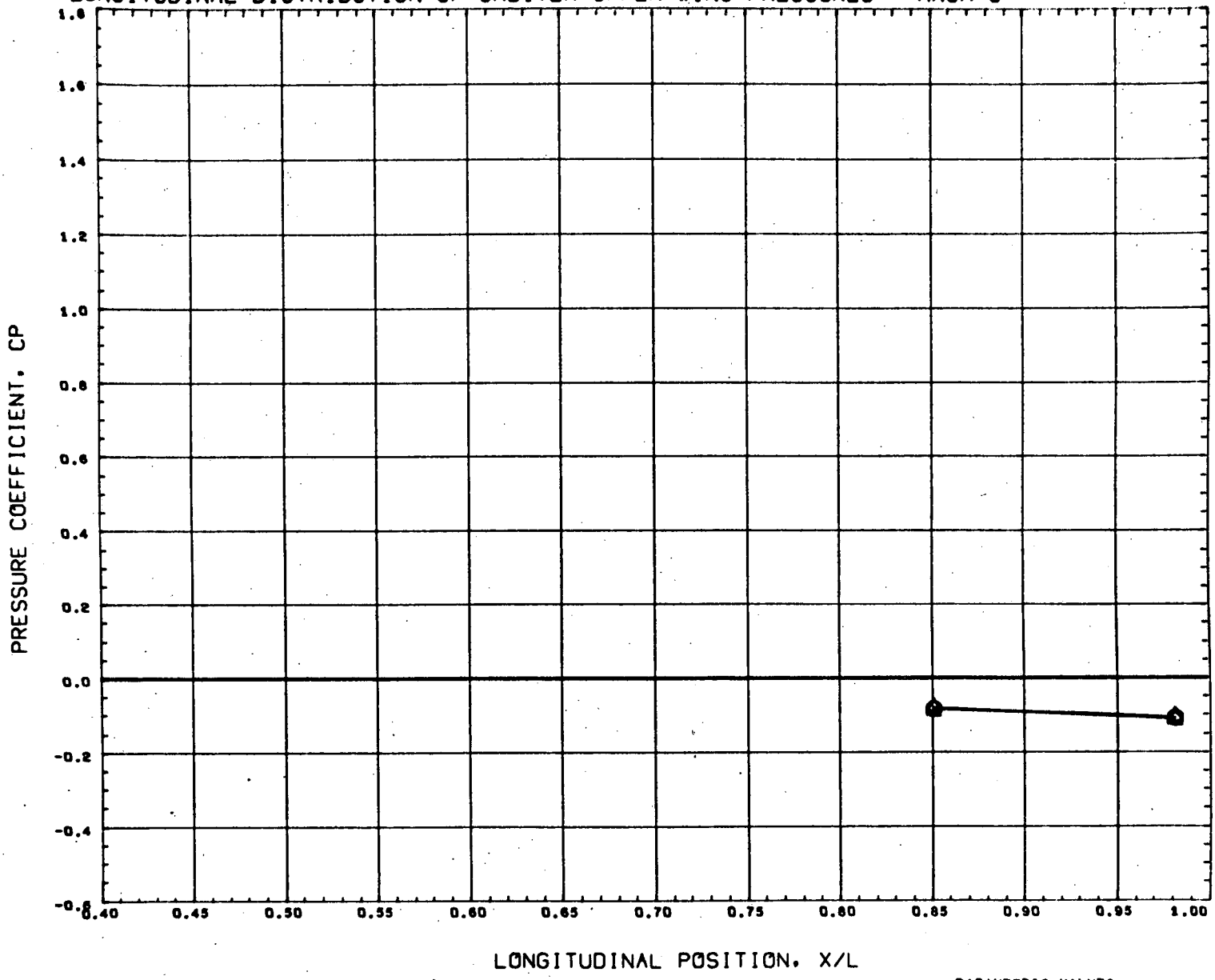
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



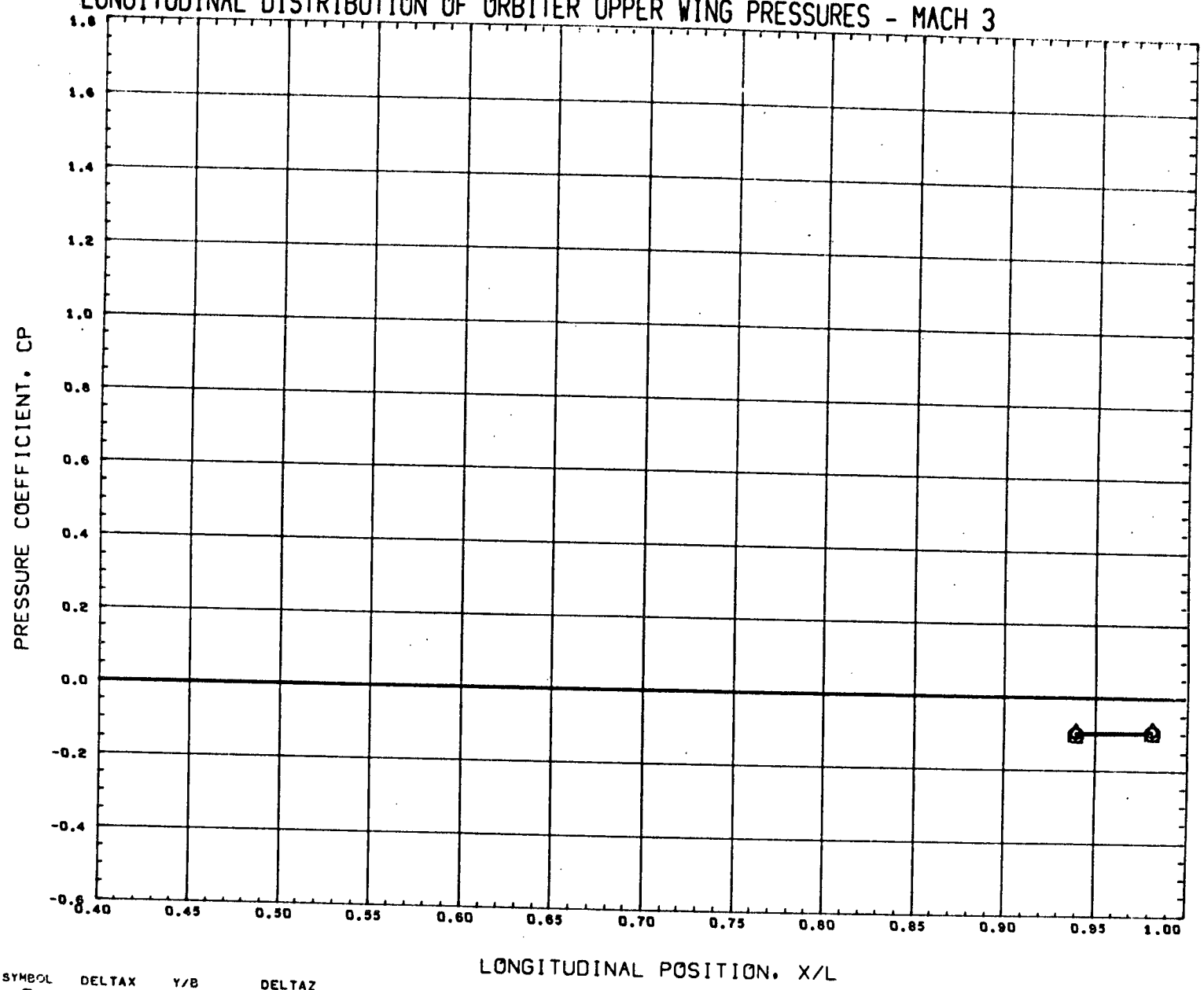
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

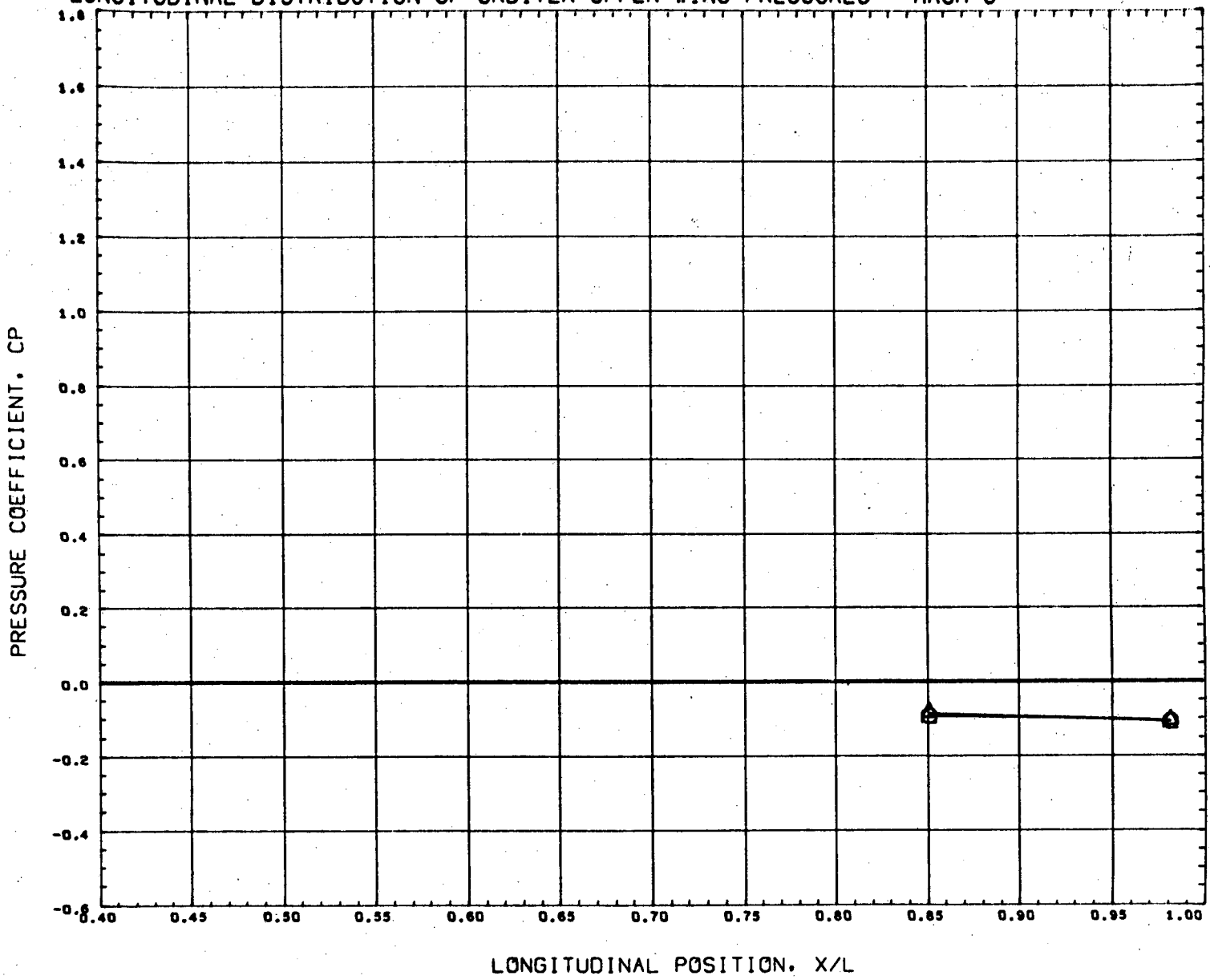
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.289	0.908
△	0.511		

PARAMETRIC VALUES

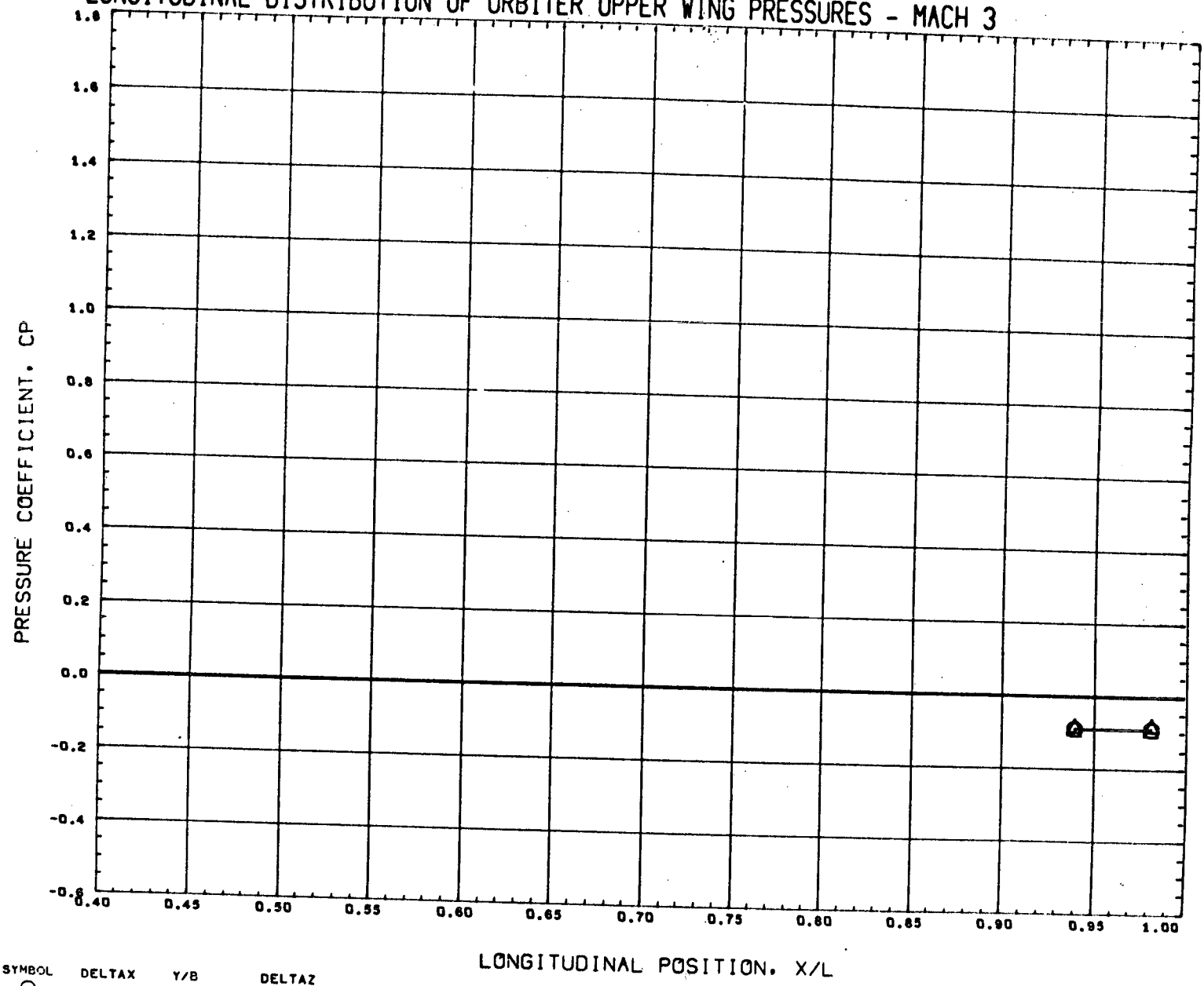
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.399	0.908
△	0.511		

PARAMETRIC VALUES

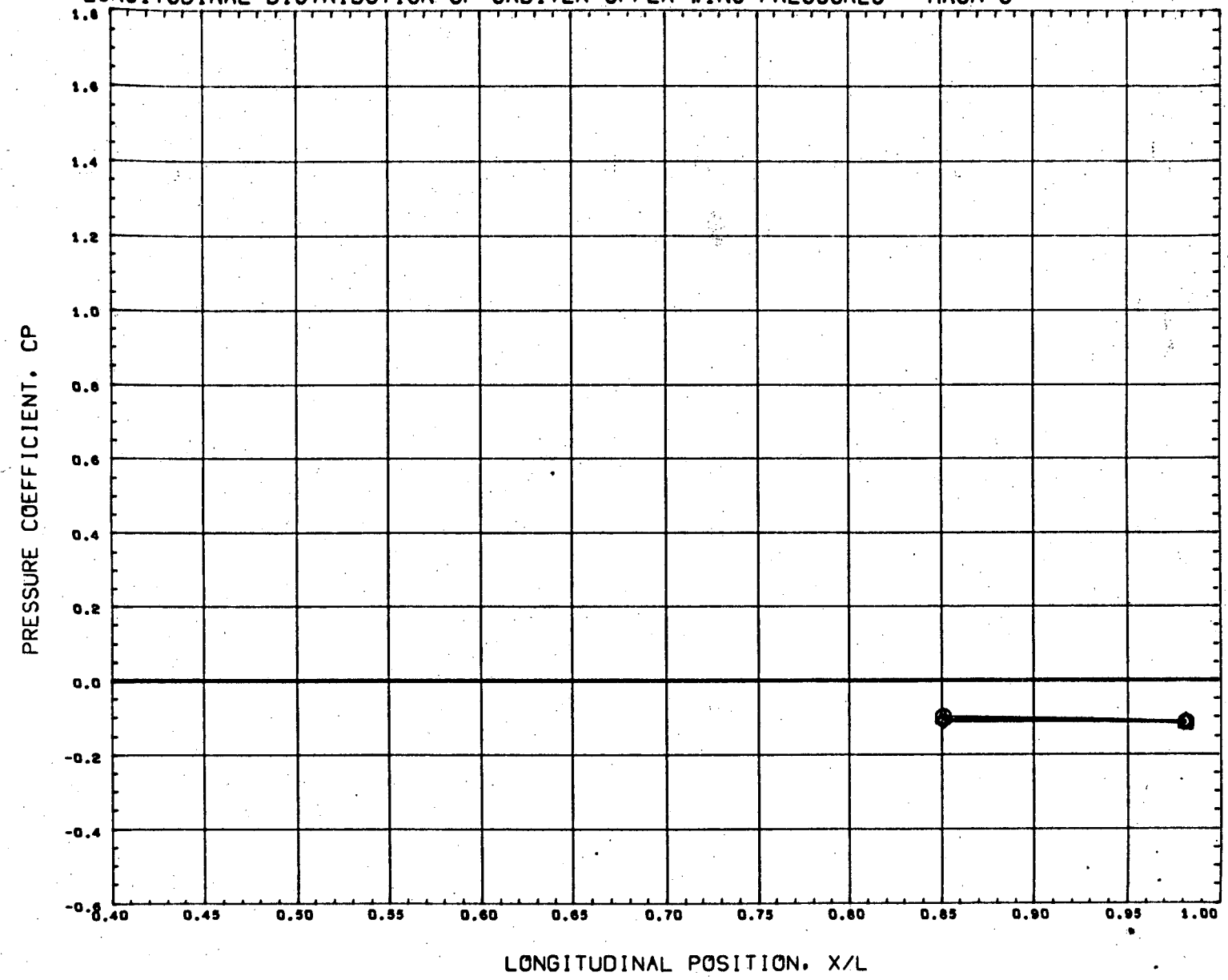
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.120
△	0.101		
◇	0.226		

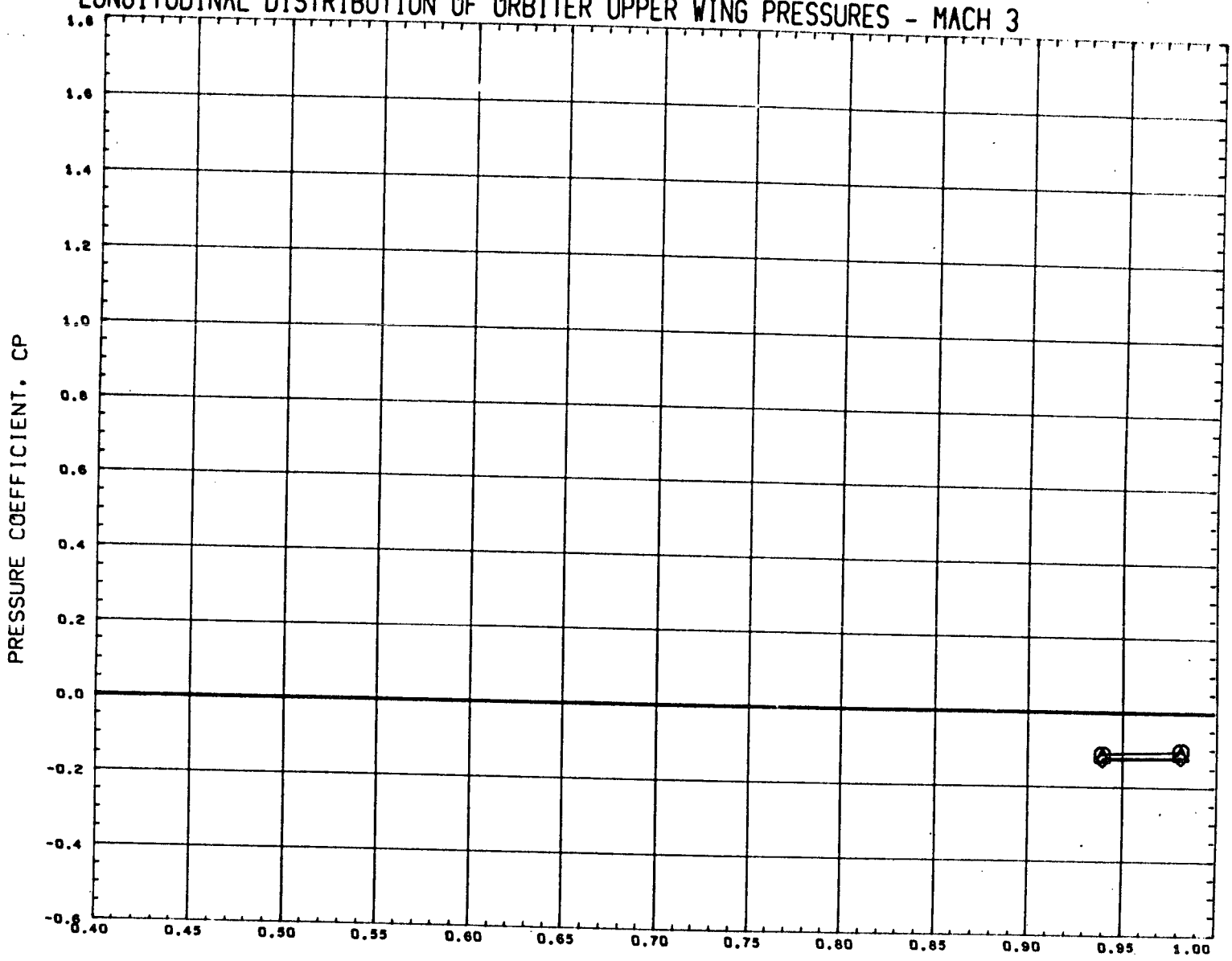
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

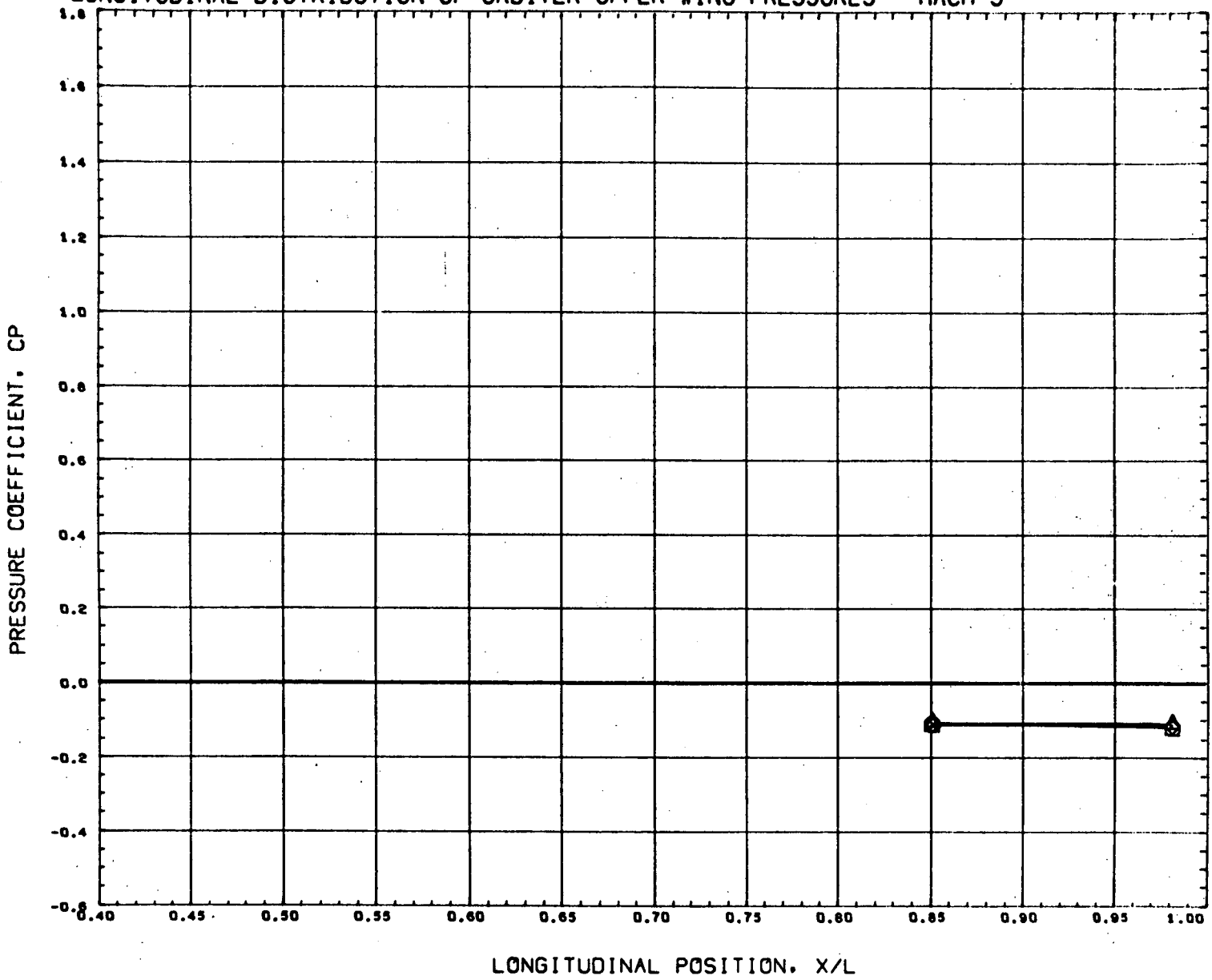
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (UPPER WING)

•GT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



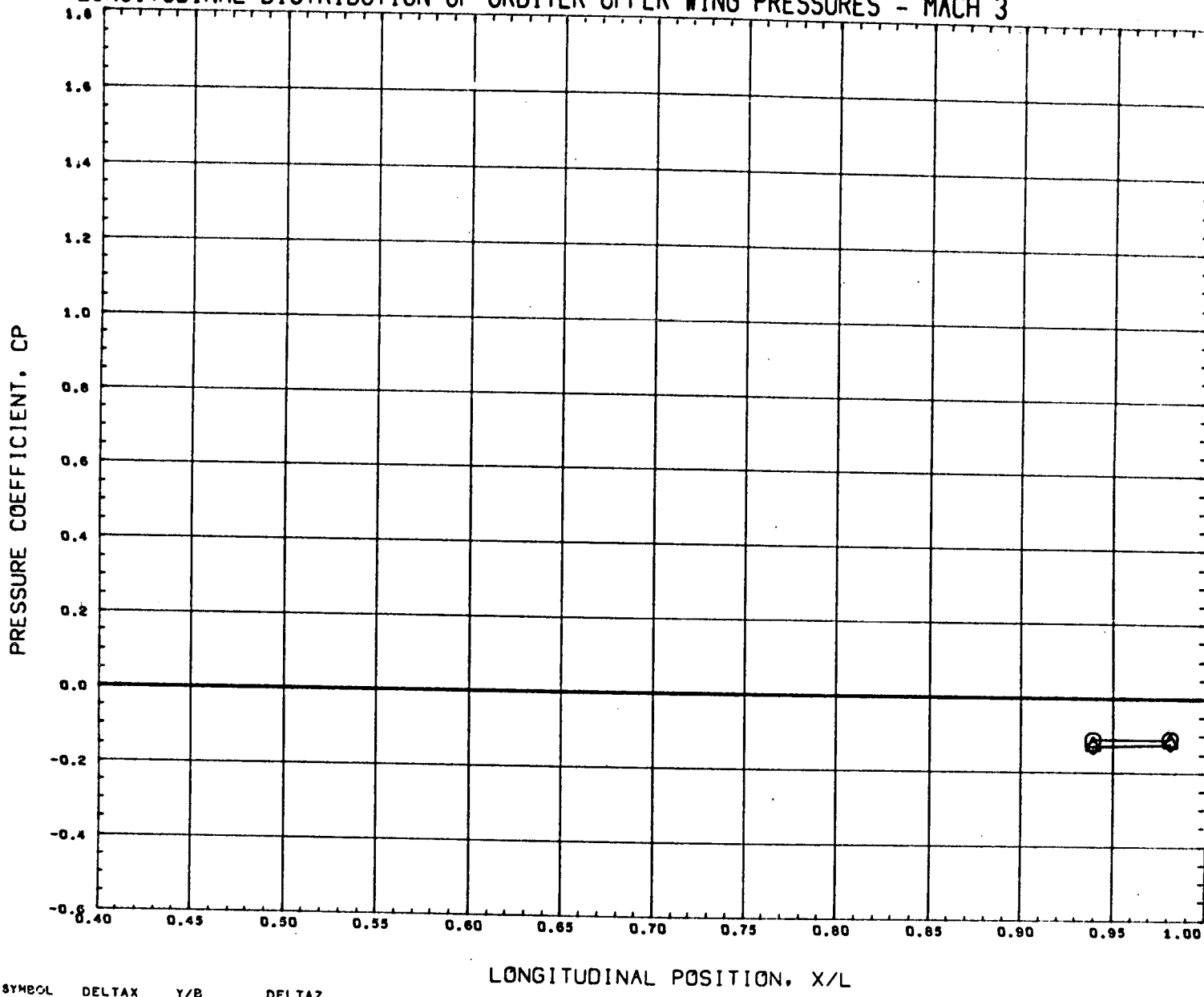
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.289	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

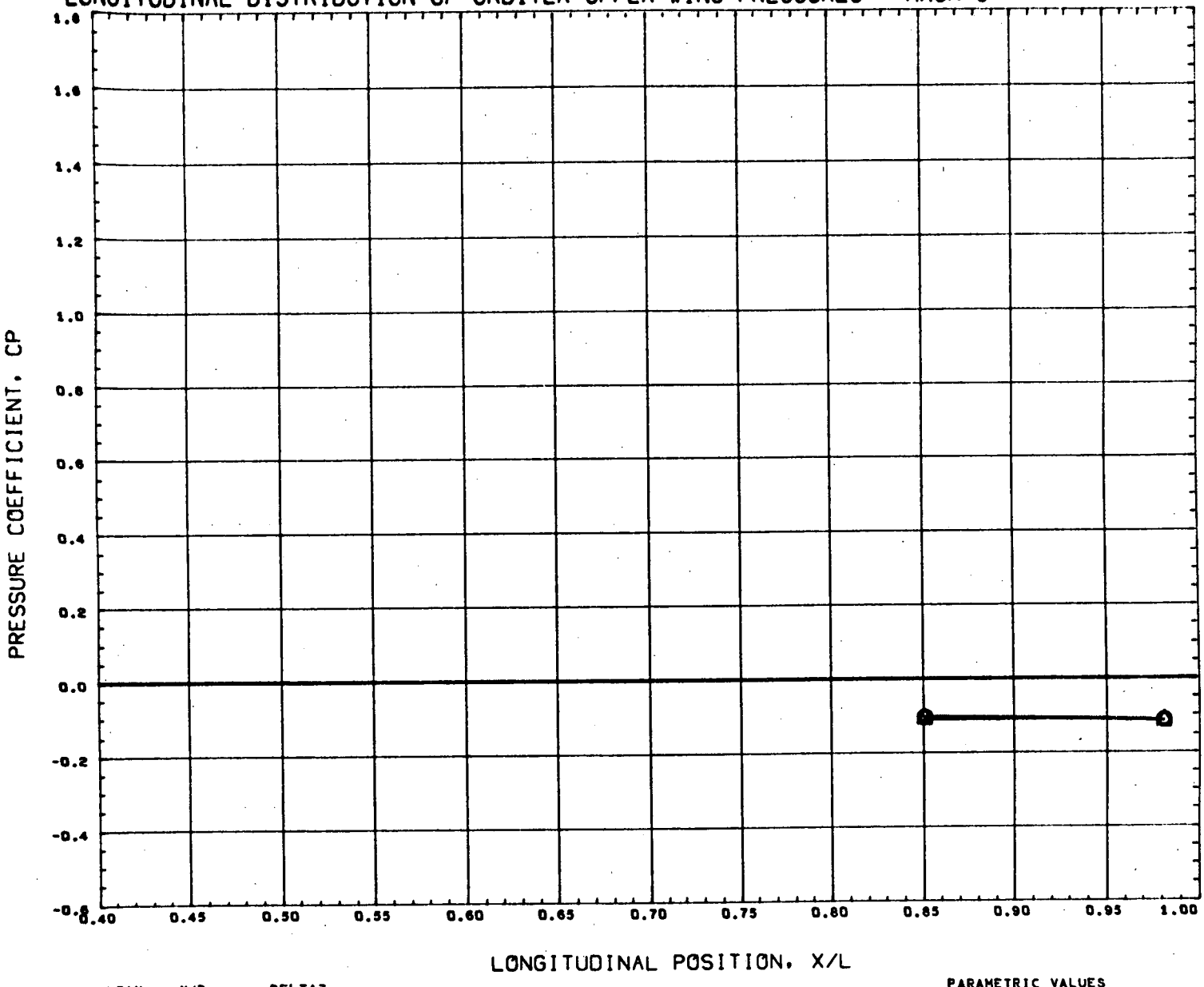
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.289	0.228
△	0.103		
◇	0.226		

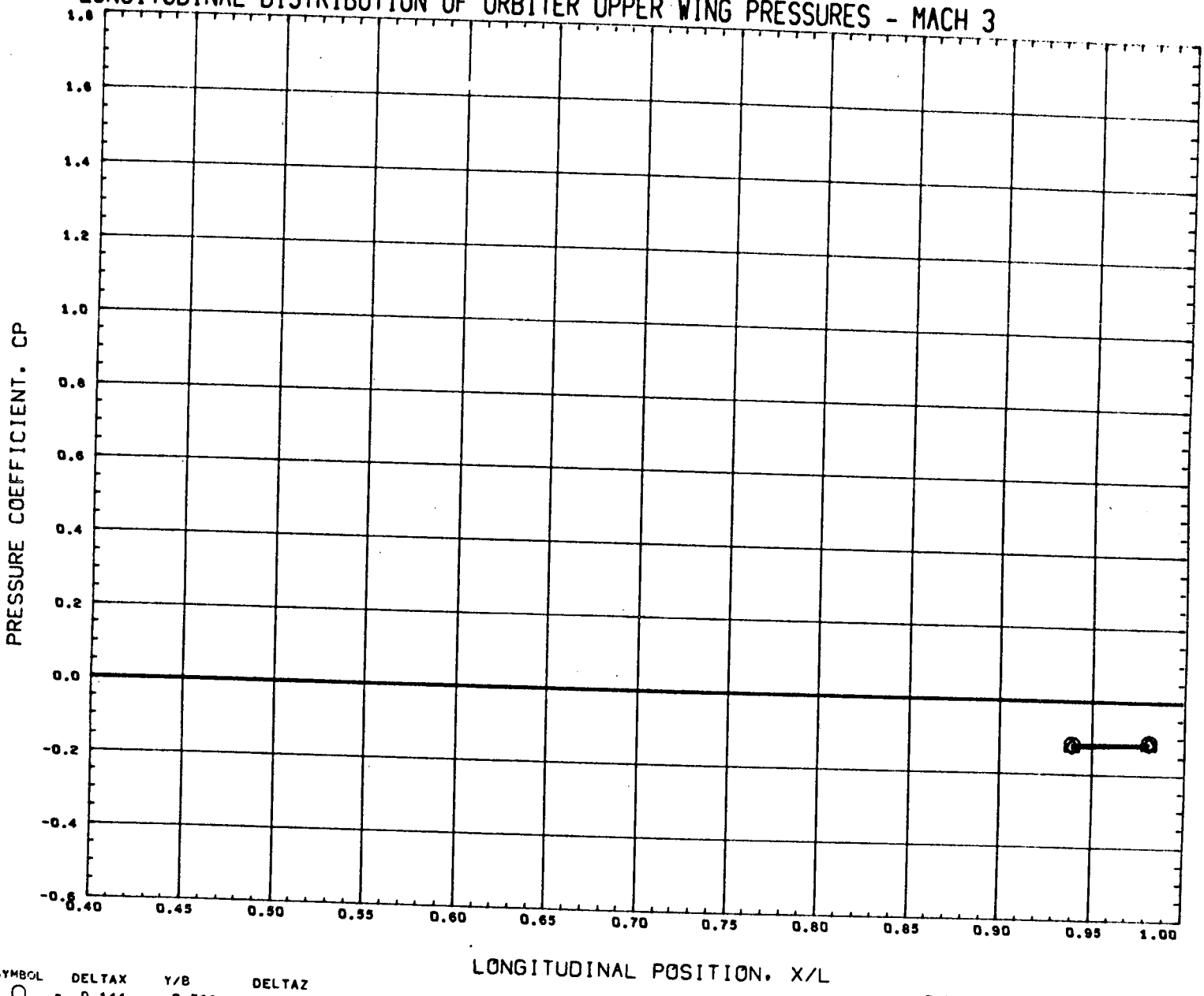
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.228
△	0.103		
◇	0.226		

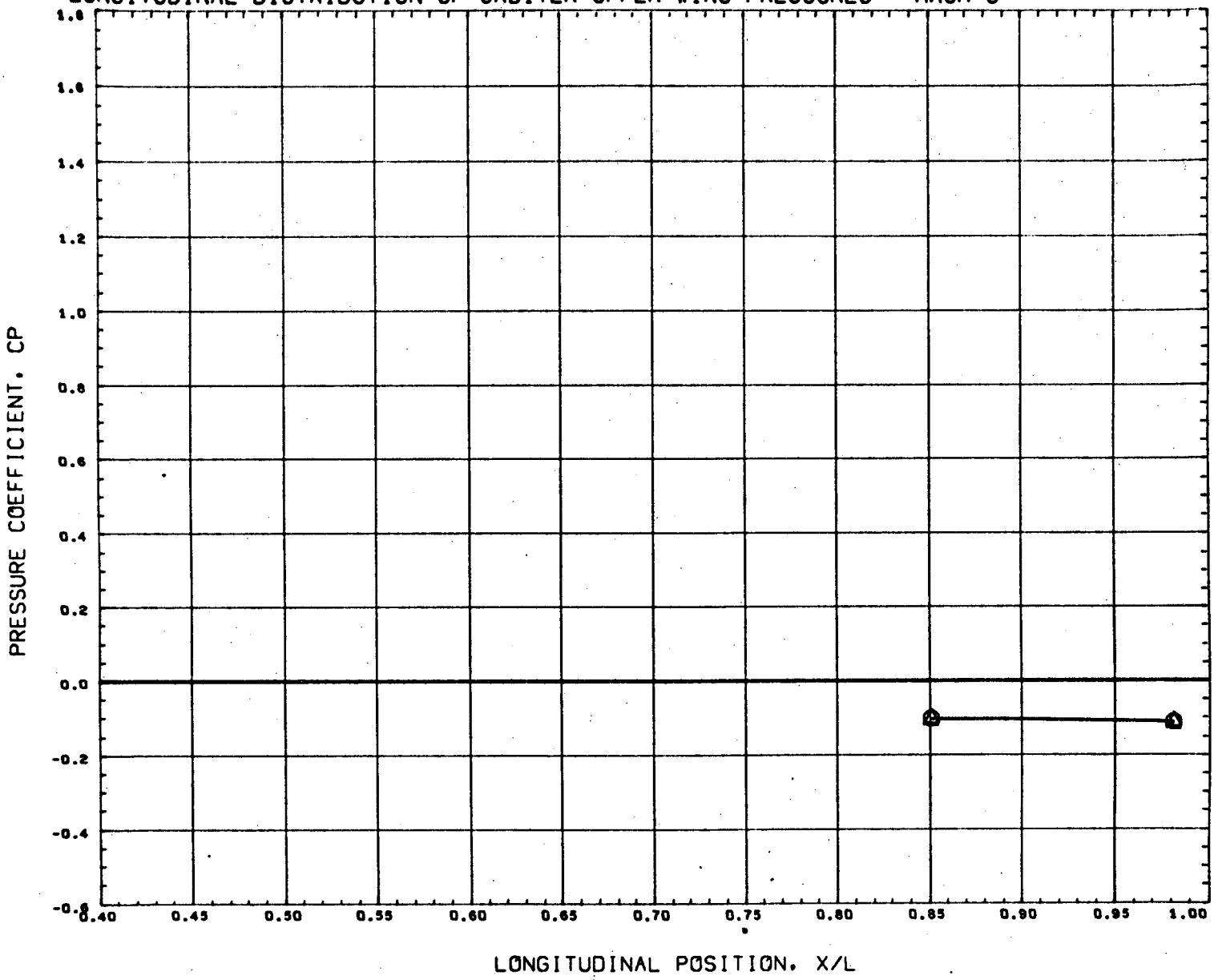
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



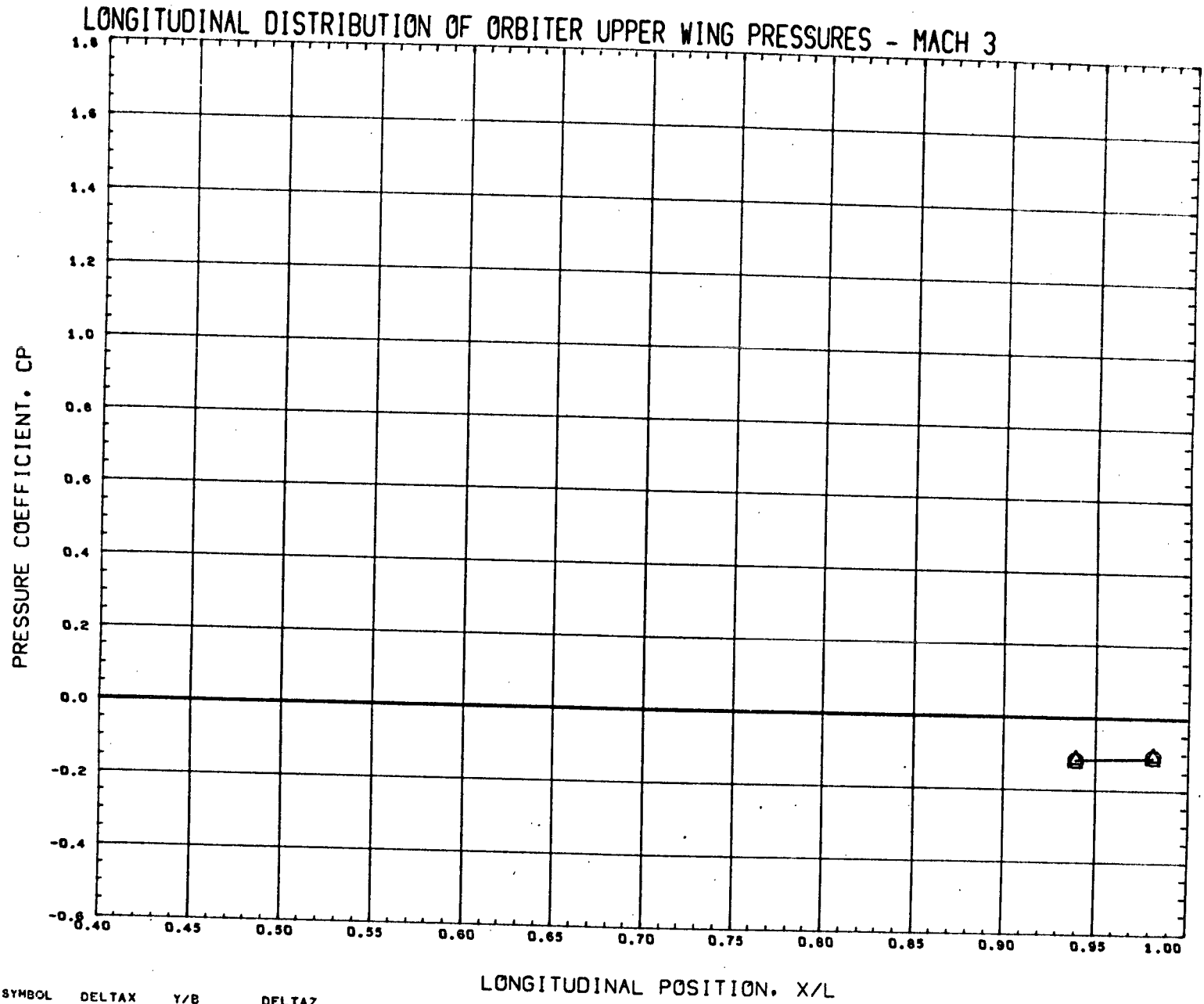
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.289	0.908
△	0.481		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.481		

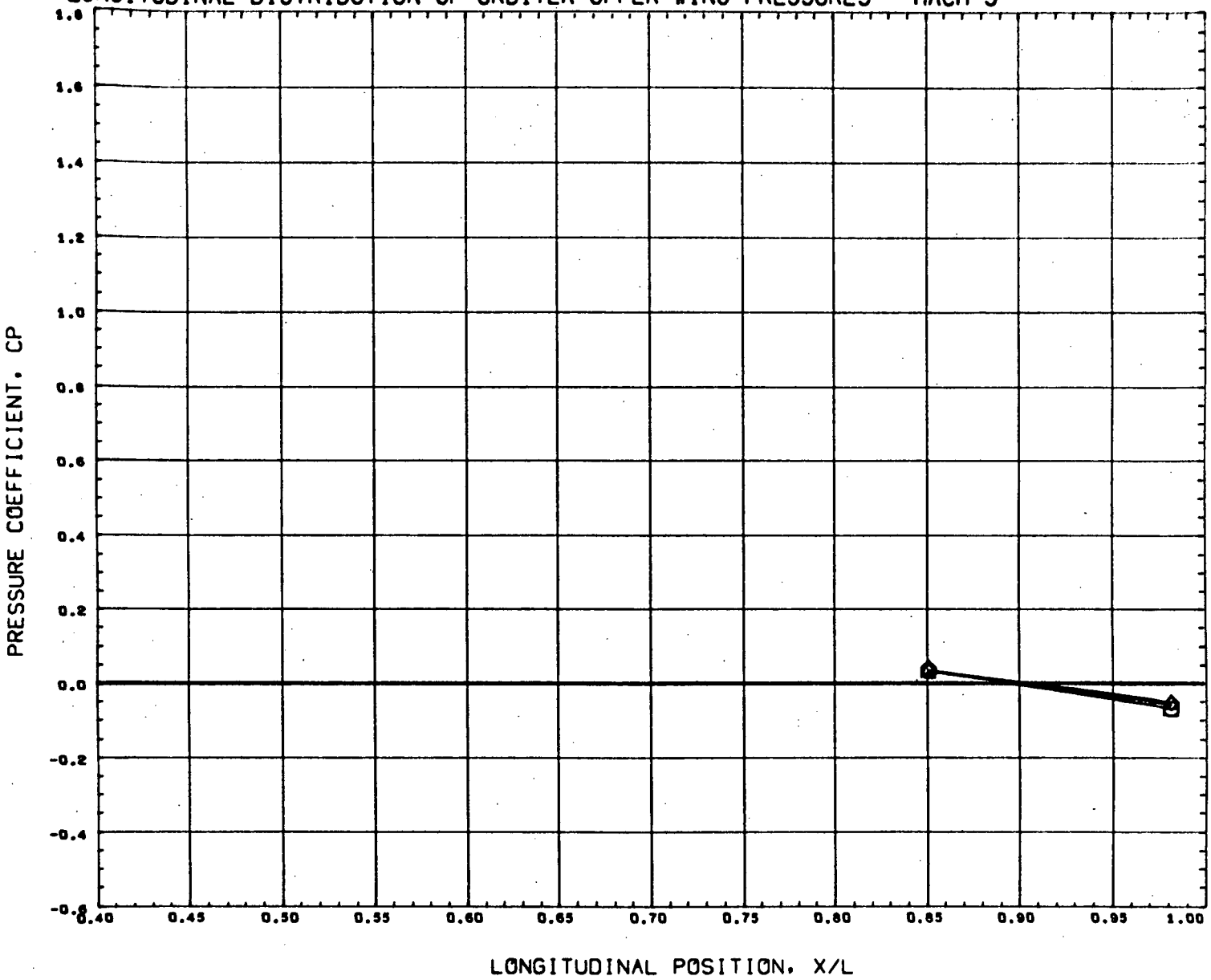
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8325• PAGE 170

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



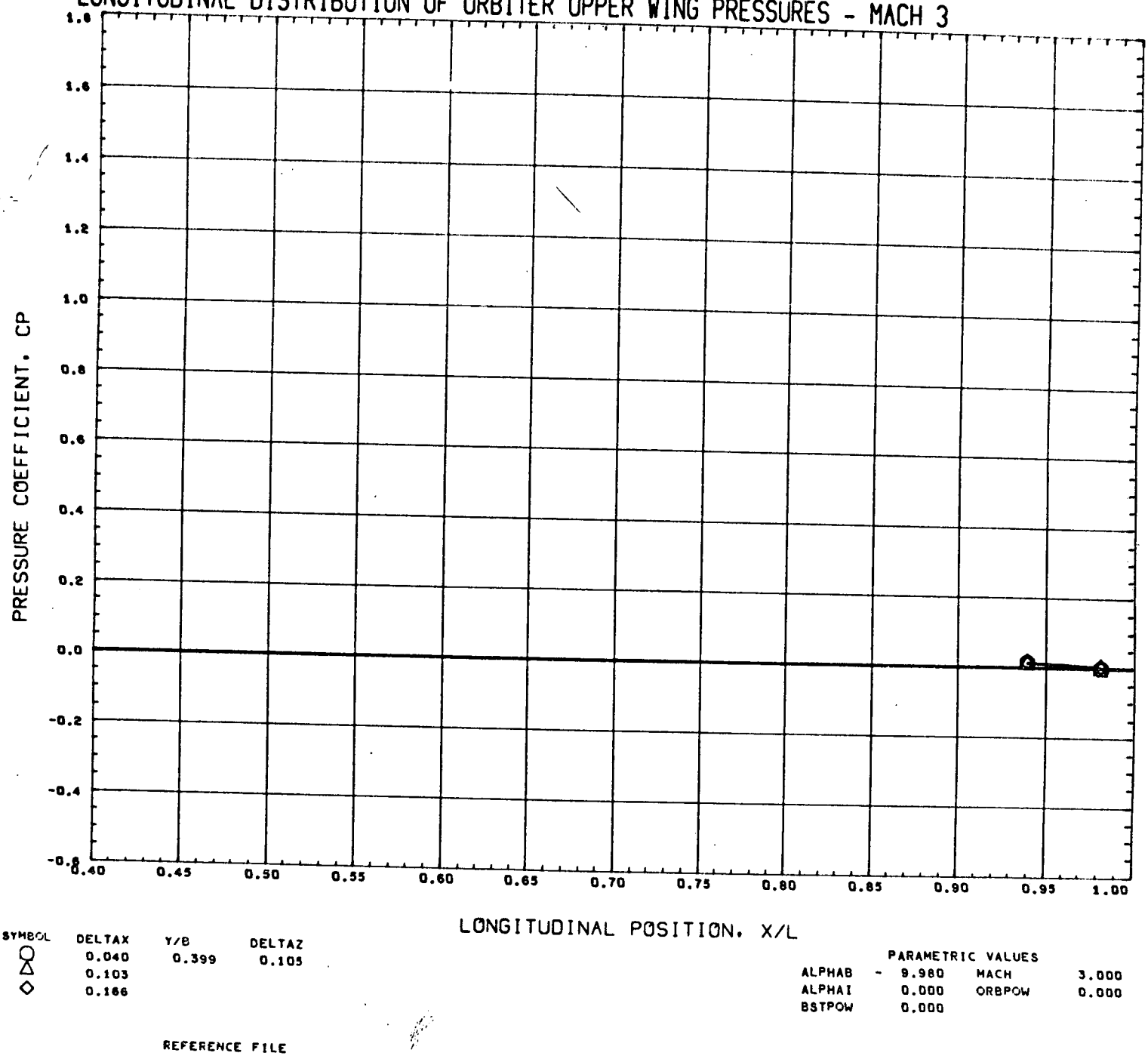
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.269	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.399	0.105
△	0.103		
◇	0.166		

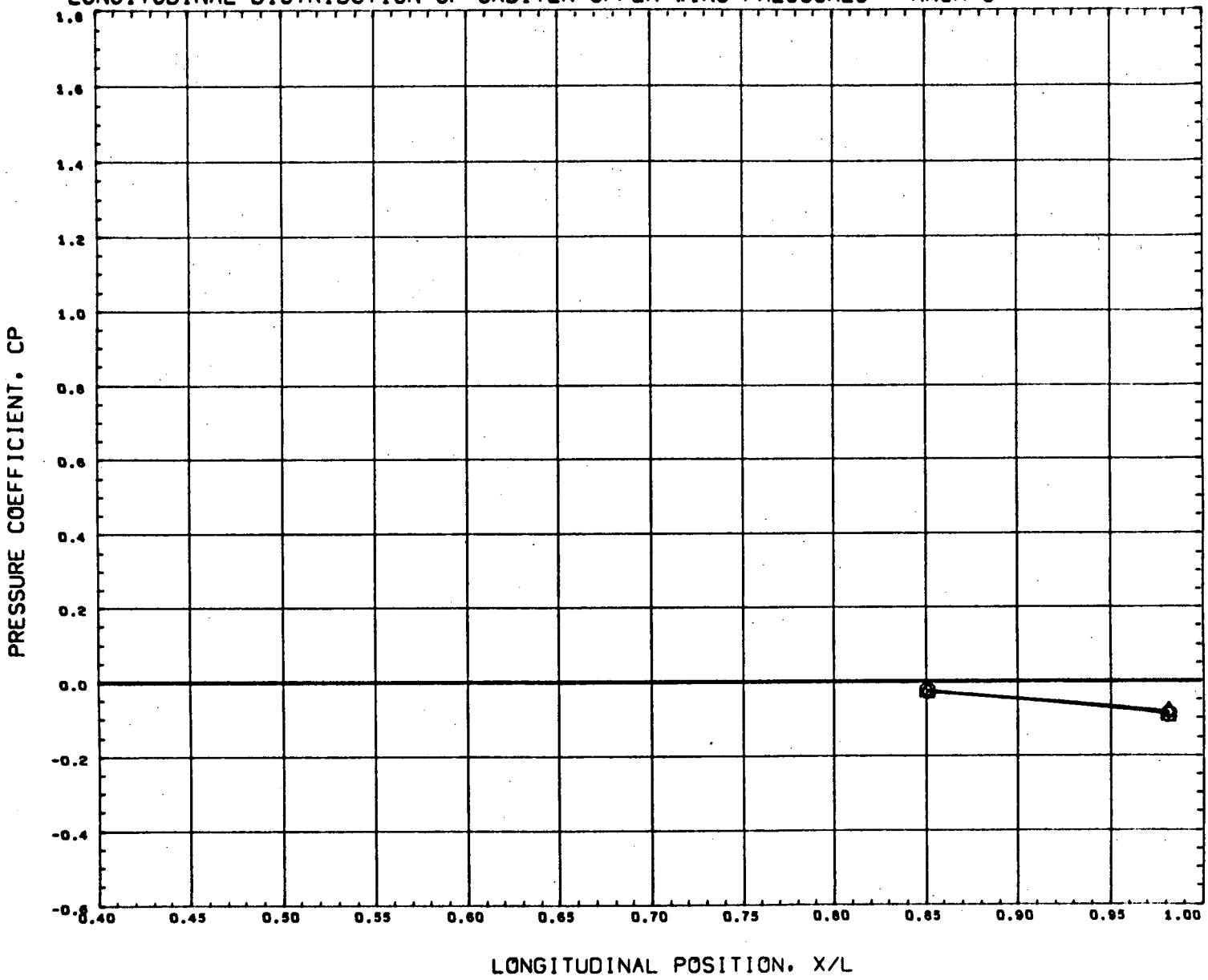
PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



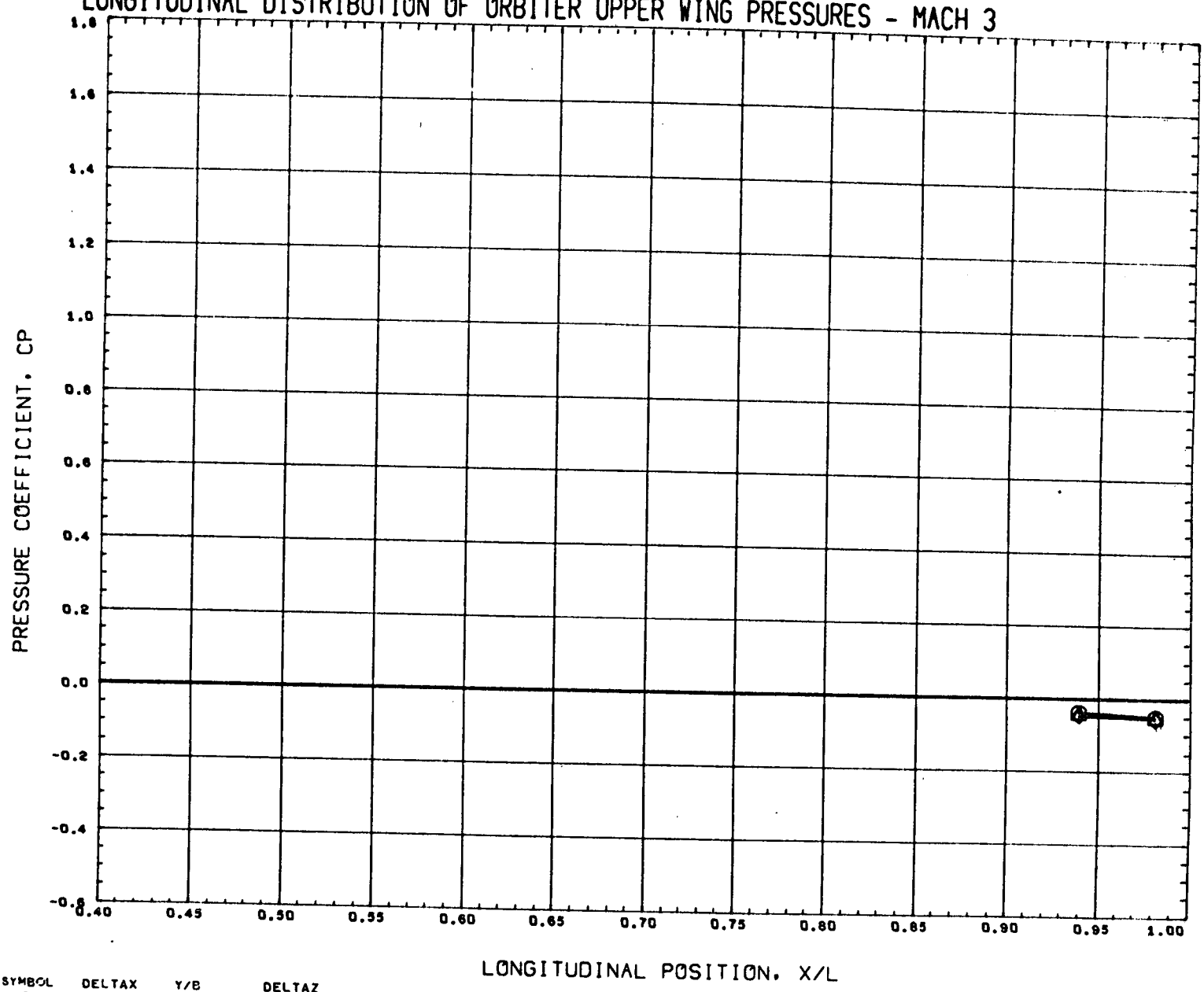
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.289	0.105
△	0.101		
◇	0.161		

PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.399	0.105
△	0.101		
◇	0.161		

PARAMETRIC VALUES

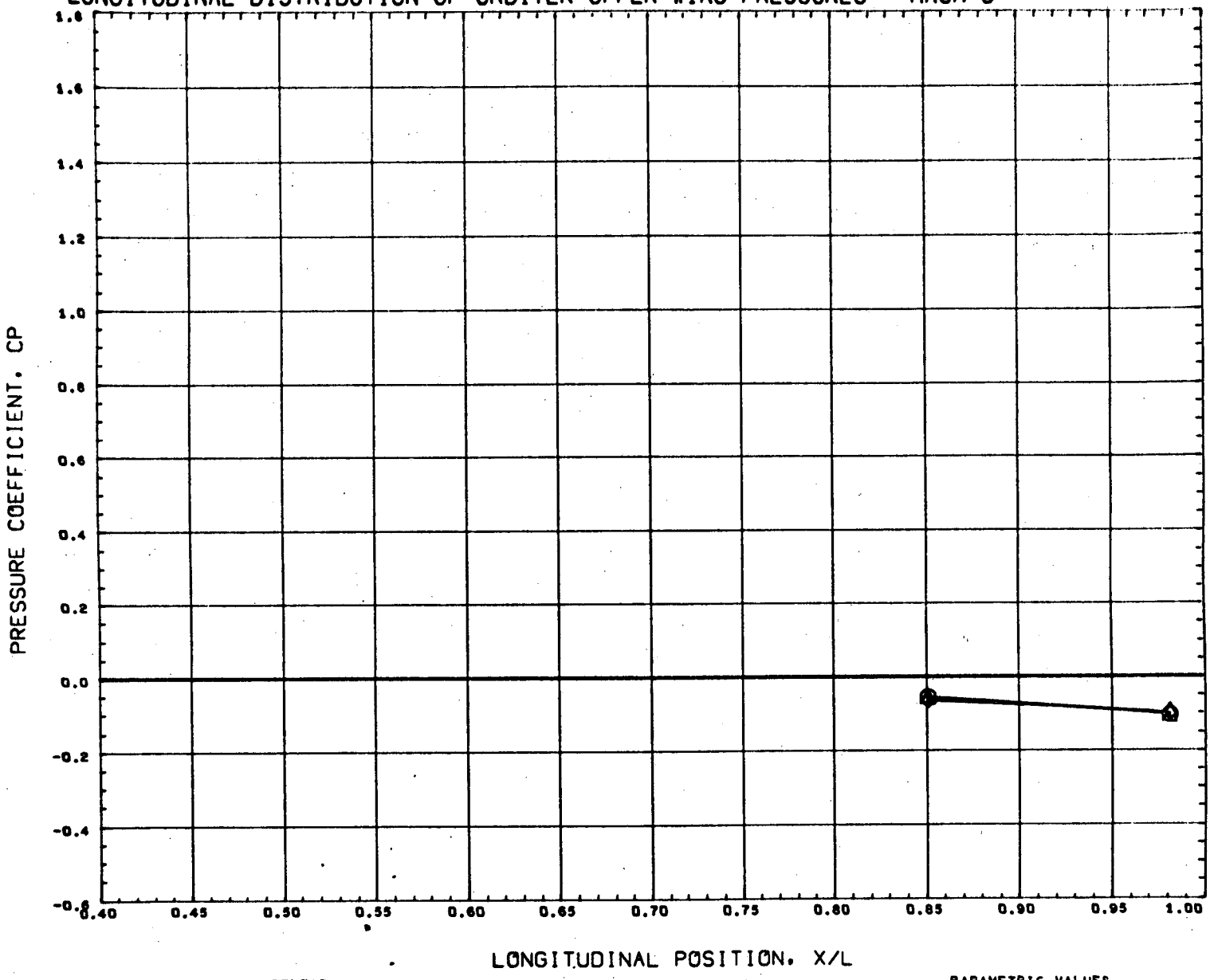
ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8332•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.289	0.105
△	0.104		
◇	0.167		

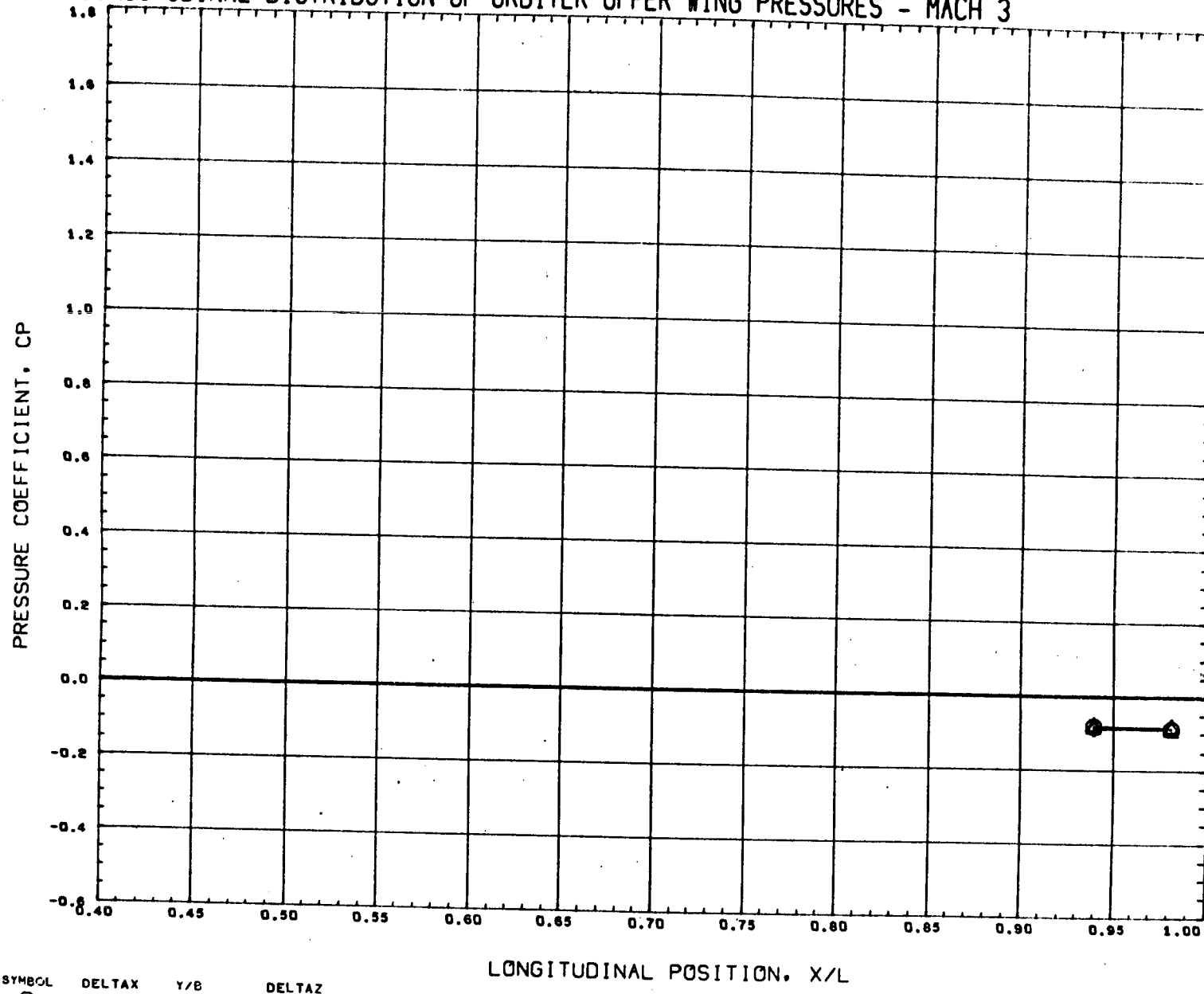
PARAMETRIC VALUES

ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8333•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.399	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

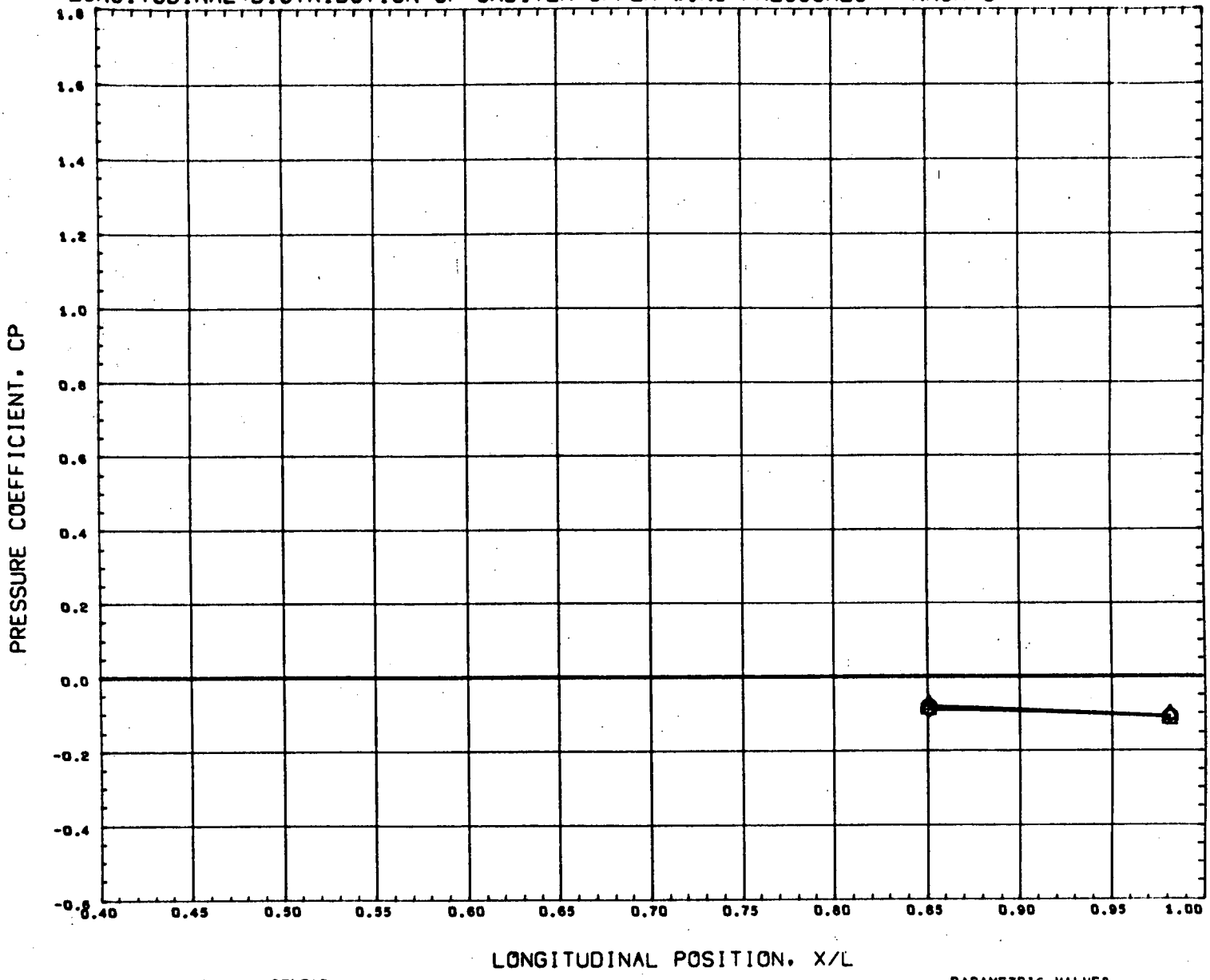
ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8333•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.289	0.105
△	0.099		
◇	0.162		

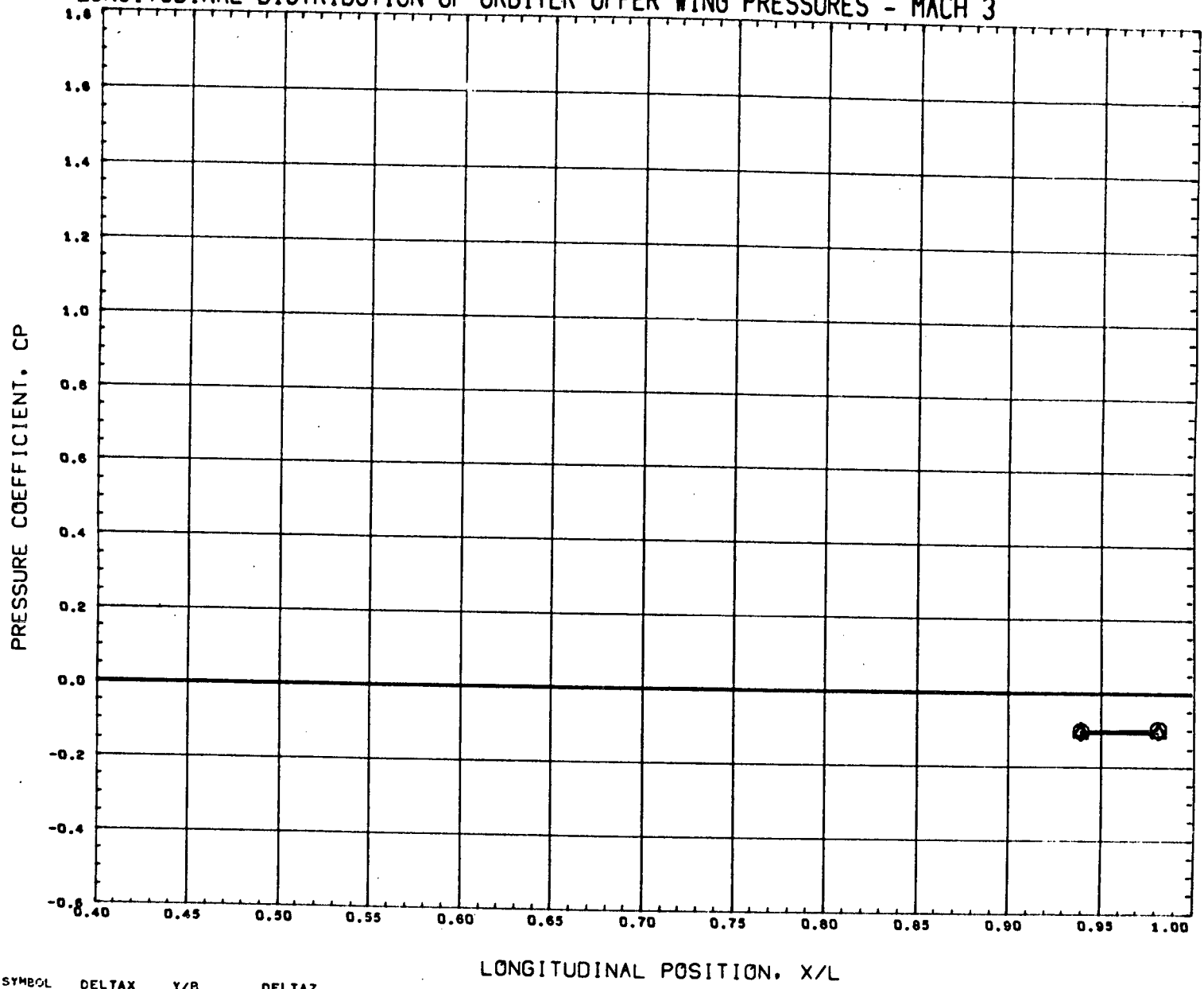
PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING) •GT8334•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.036	0.399	0.105
△	0.099		
◇	0.162		

PARAMETRIC VALUES

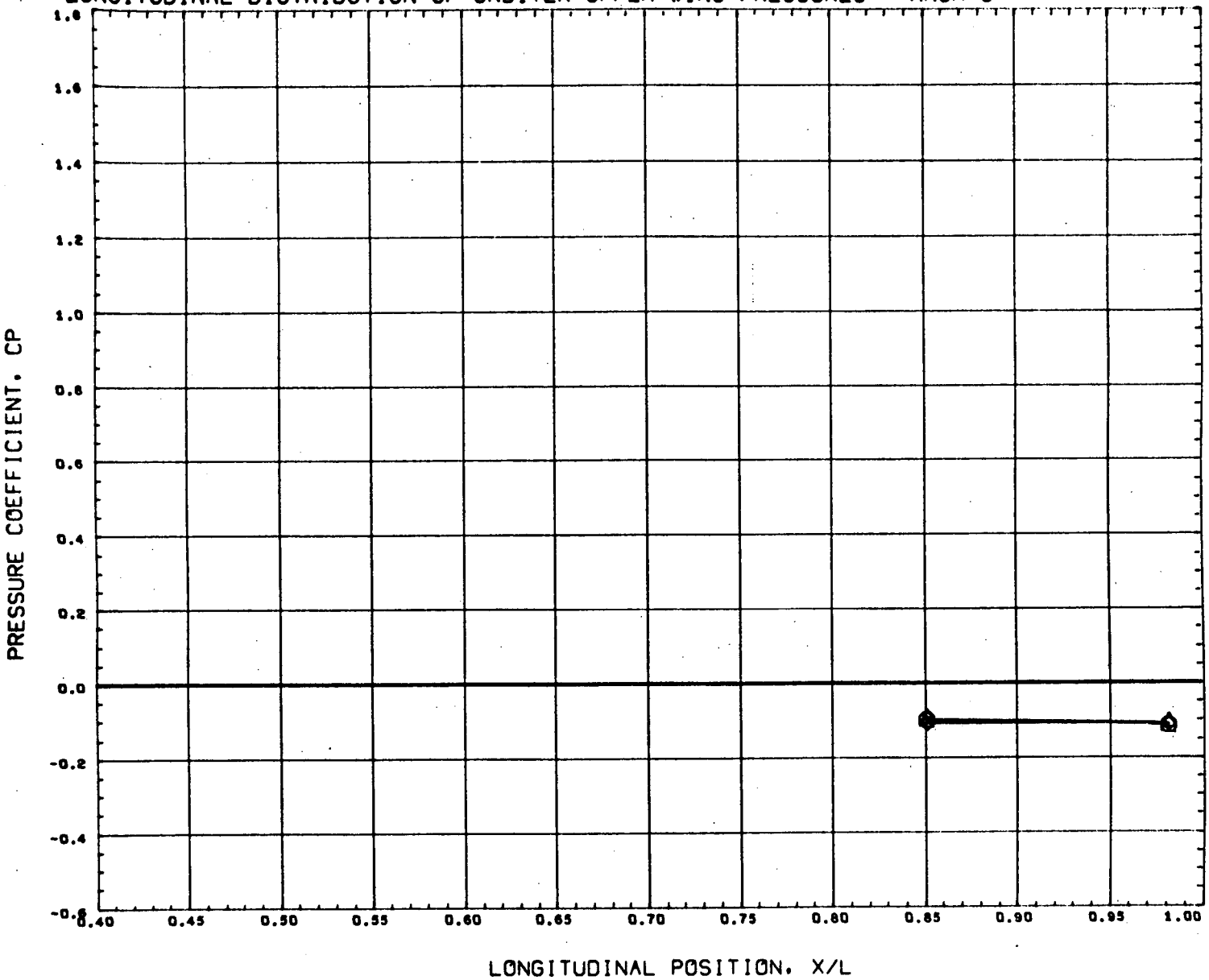
ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (UPPER WING)

•GT8334•

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



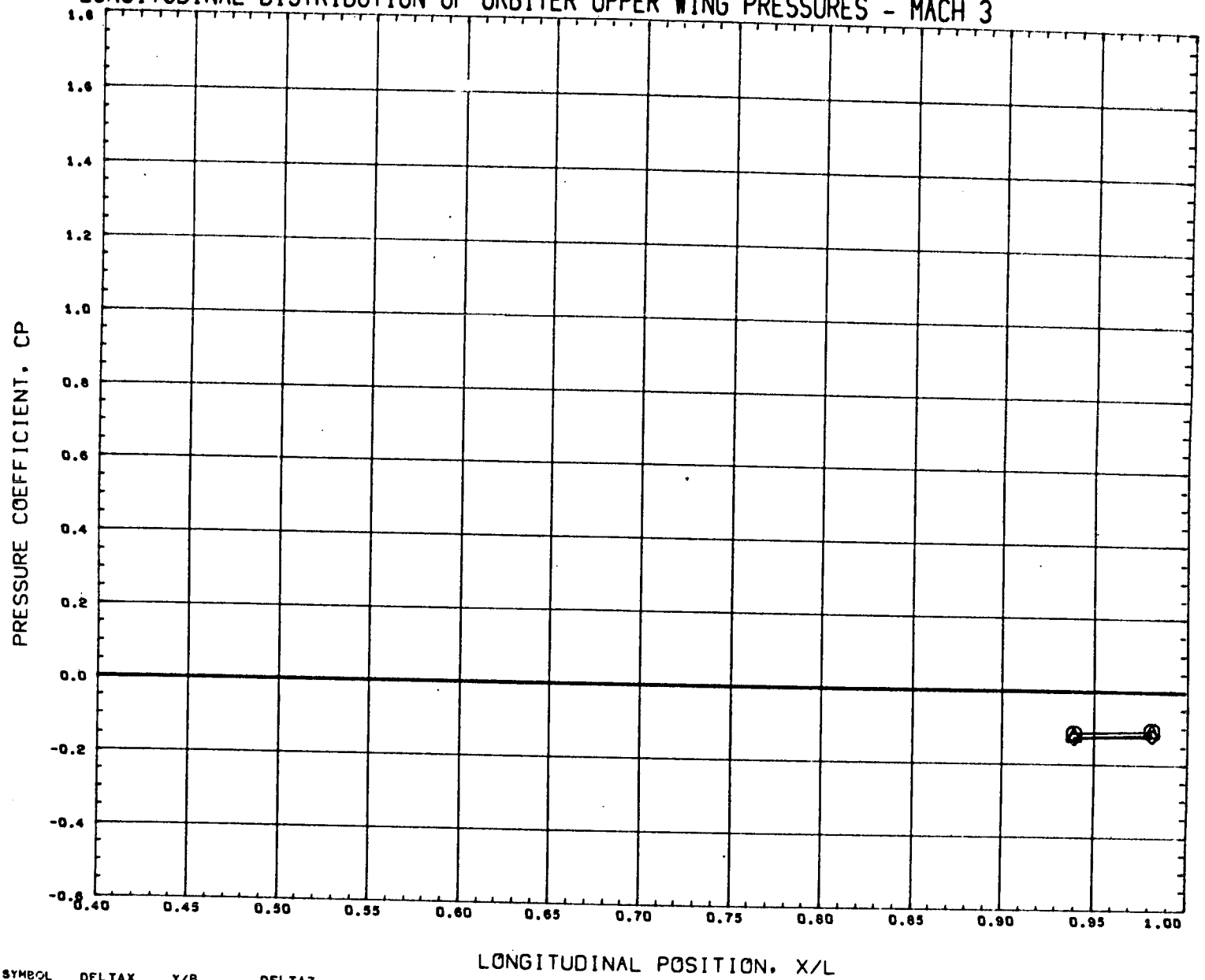
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.269	0.105
△	0.104		
◇	0.165		

PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER UPPER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.399	0.105
△	0.104		
◇	0.165		

PARAMETRIC VALUES

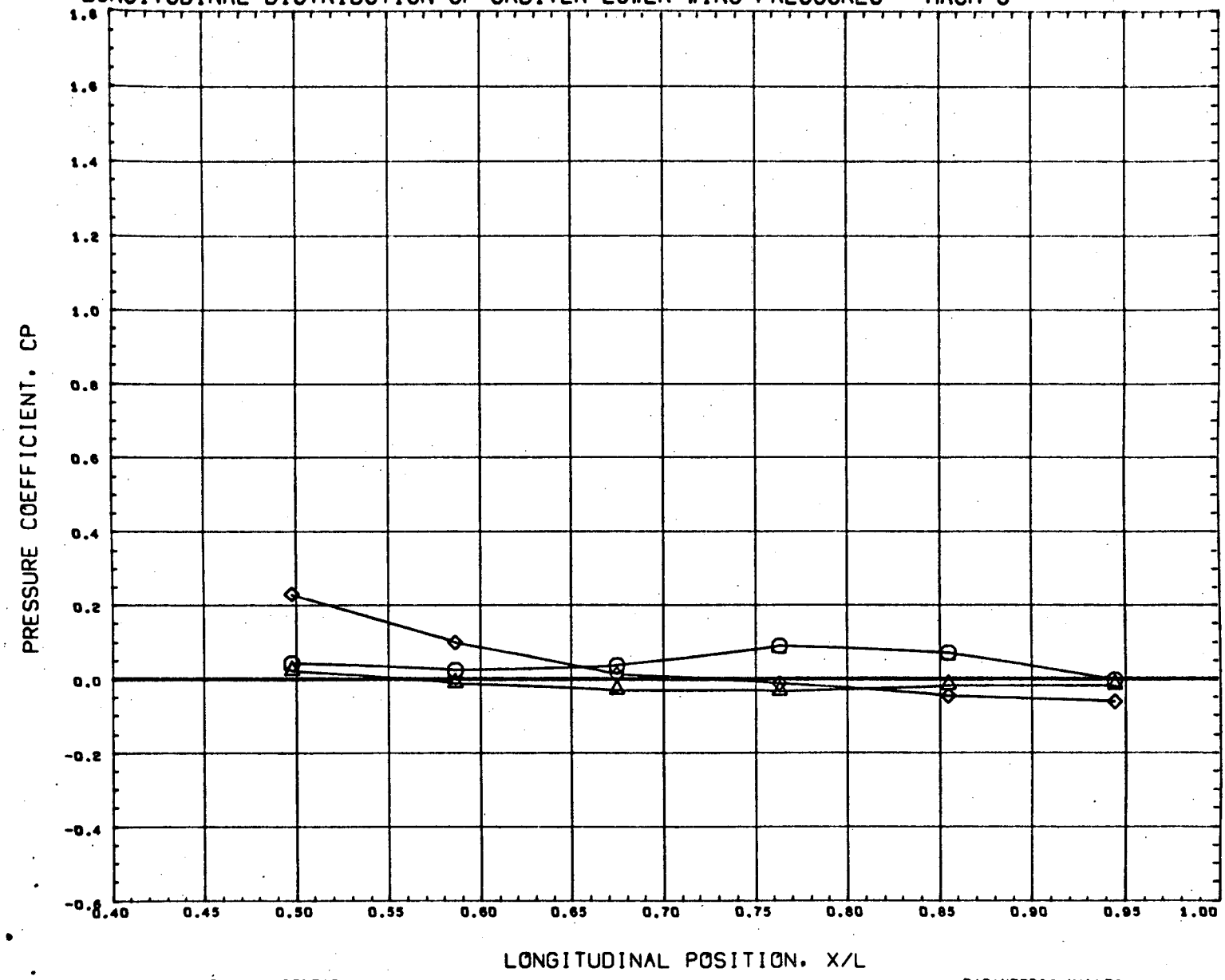
ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (UPPER WING)

•GT8335•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



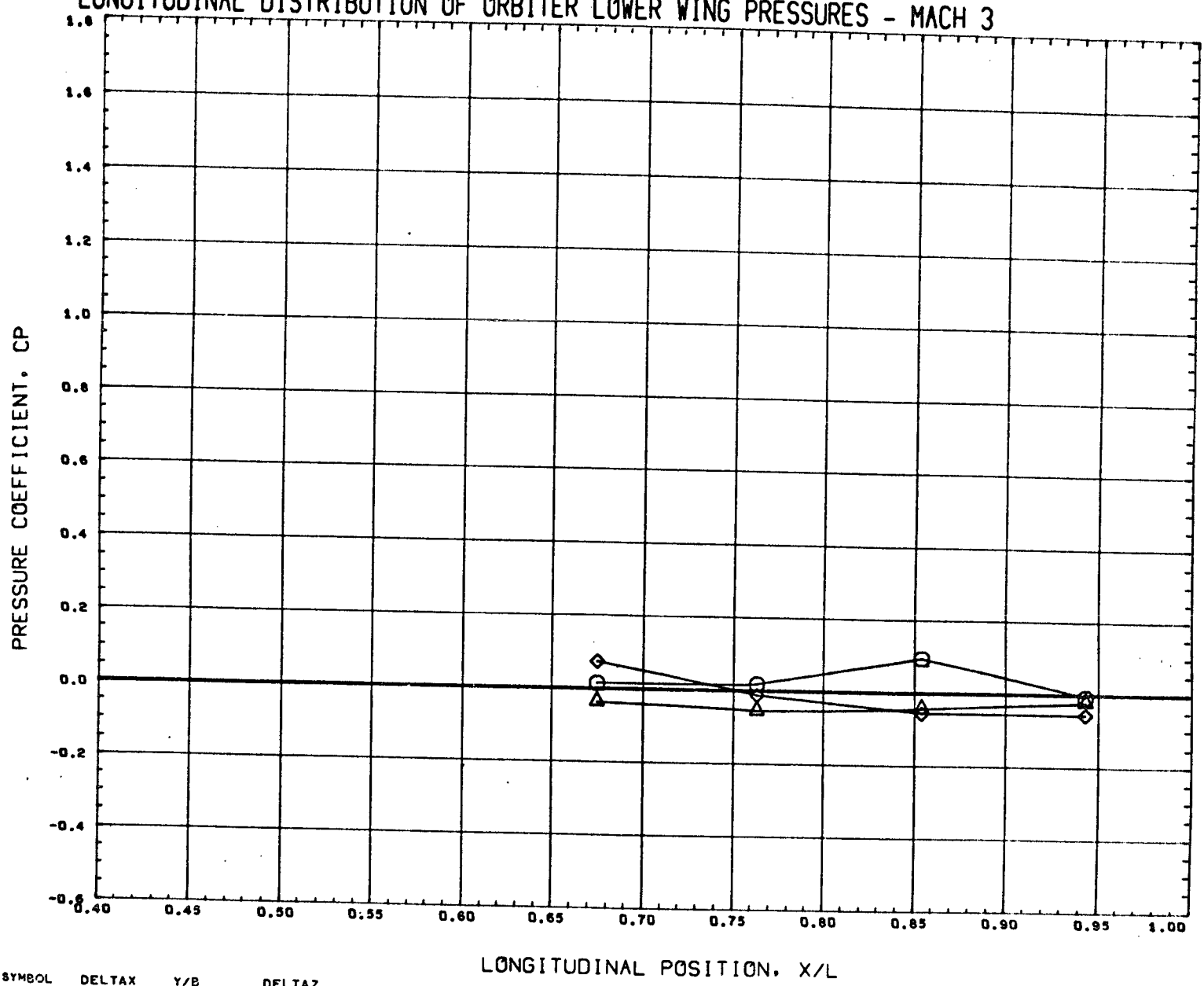
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.228		

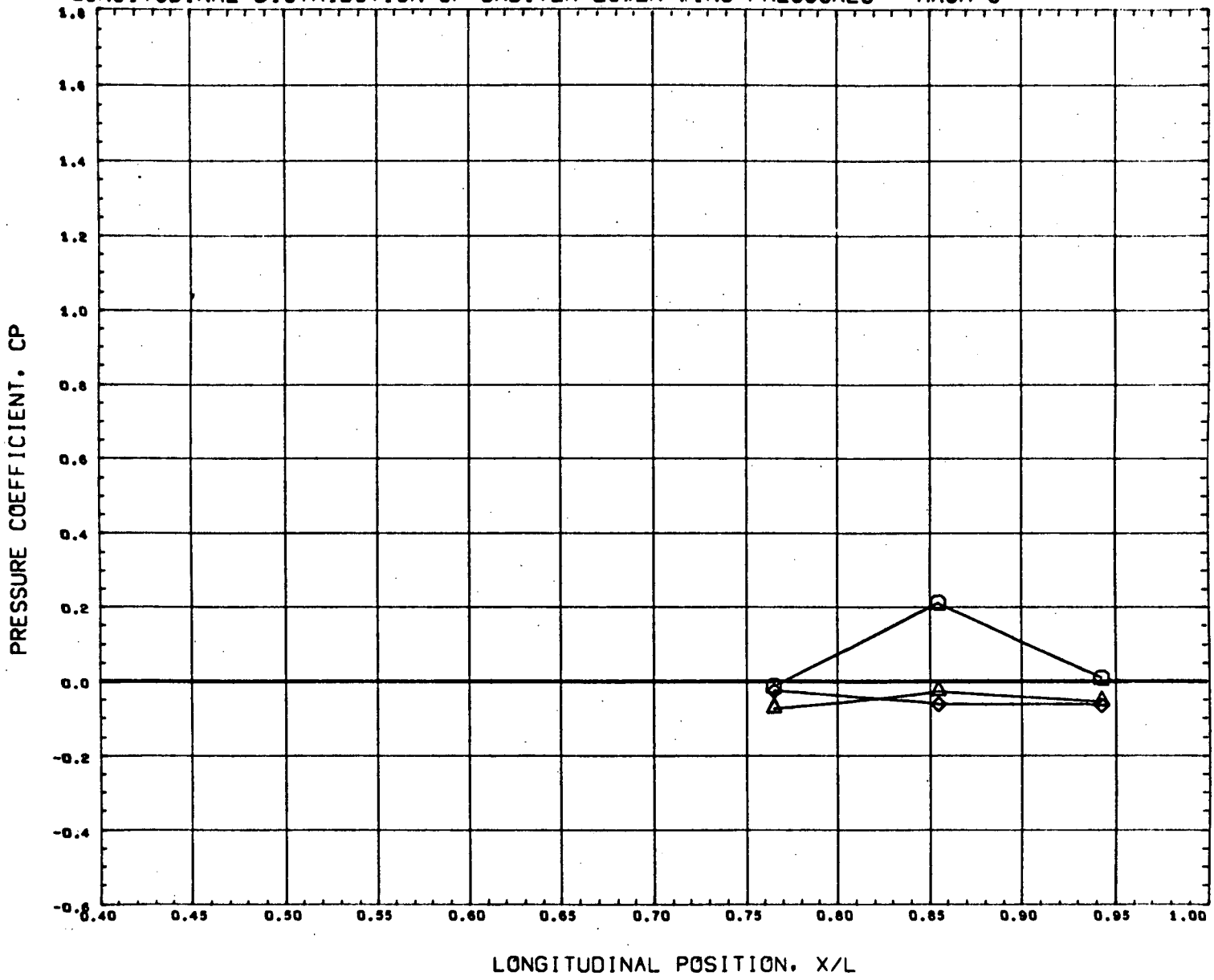
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



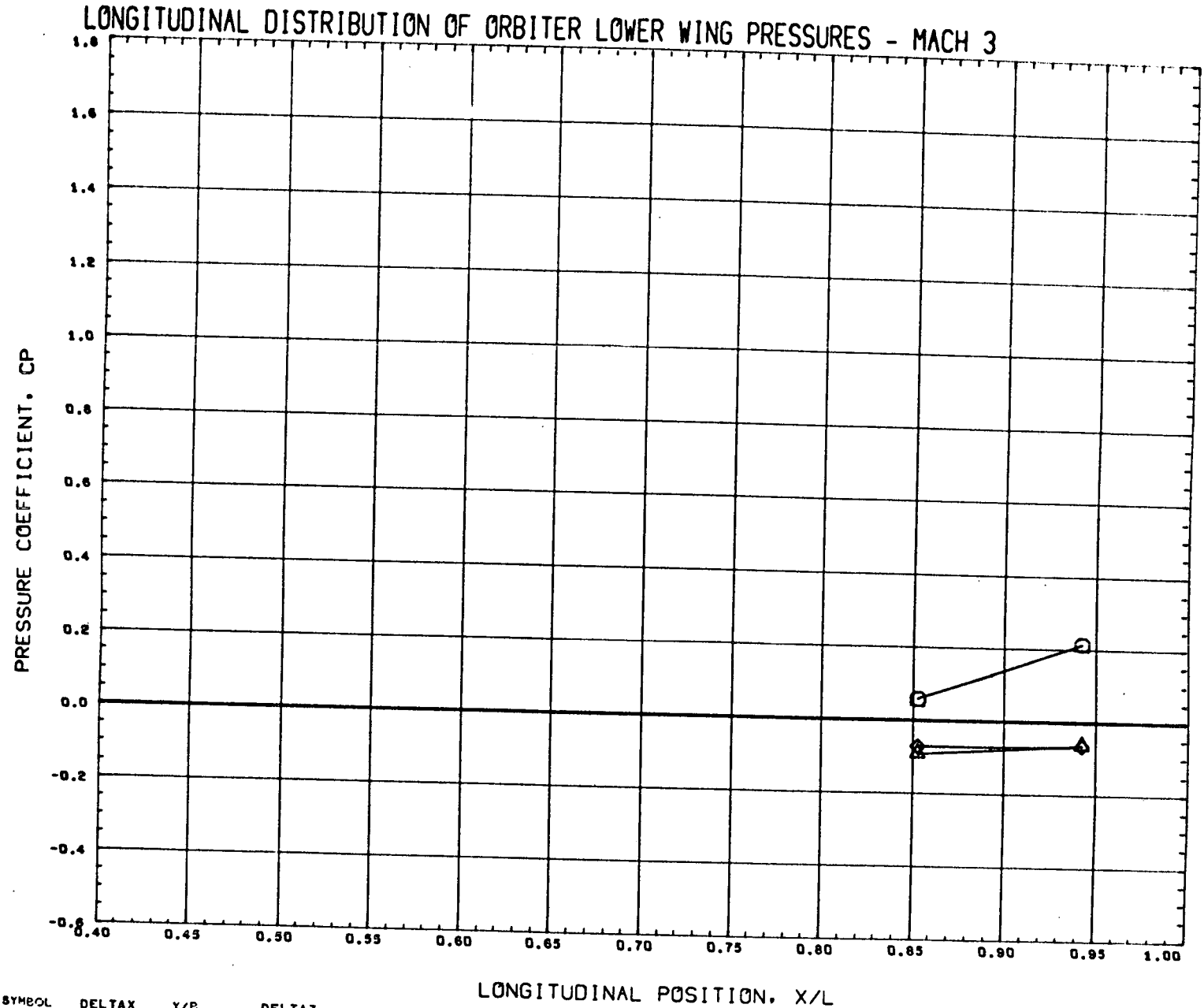
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

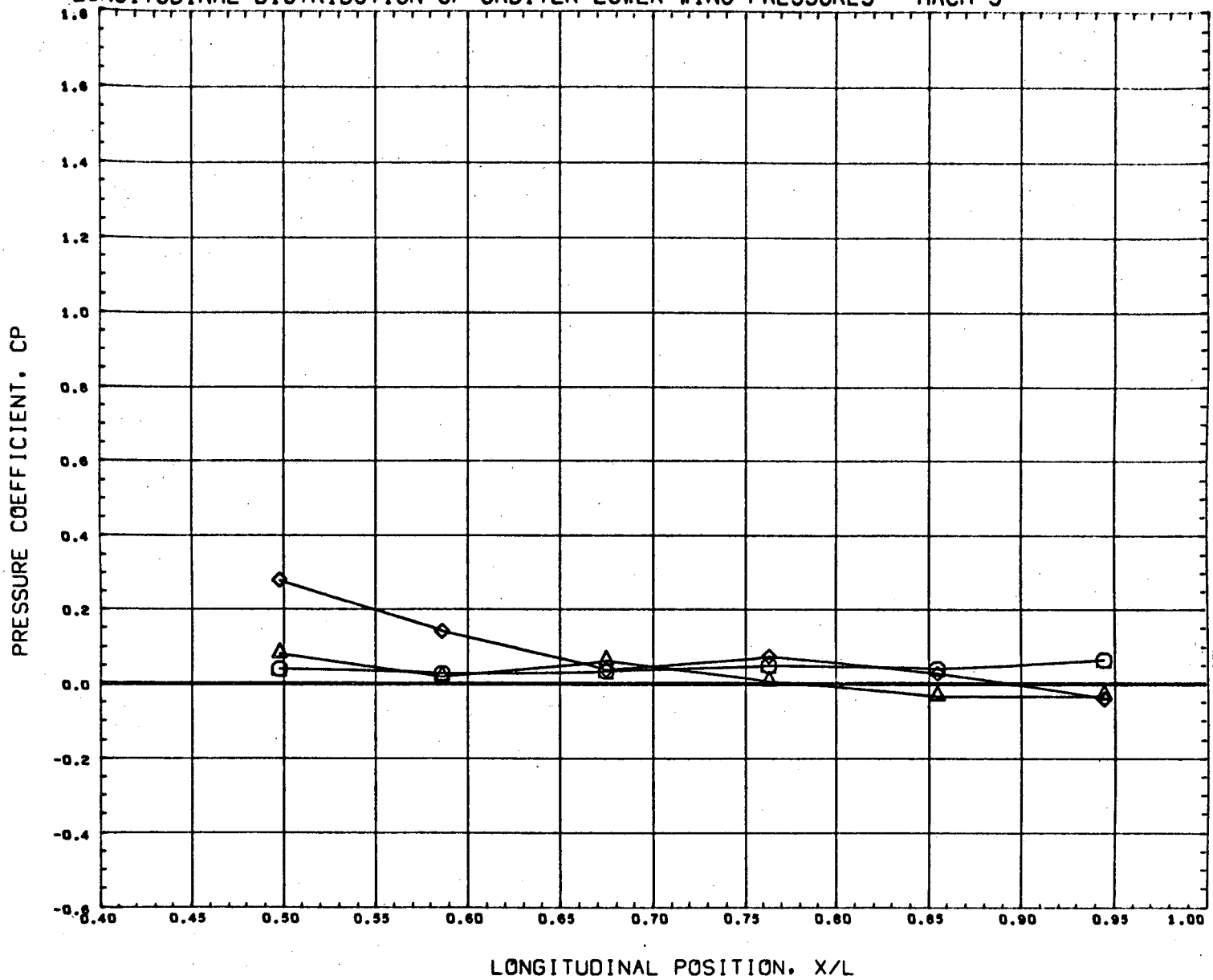
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



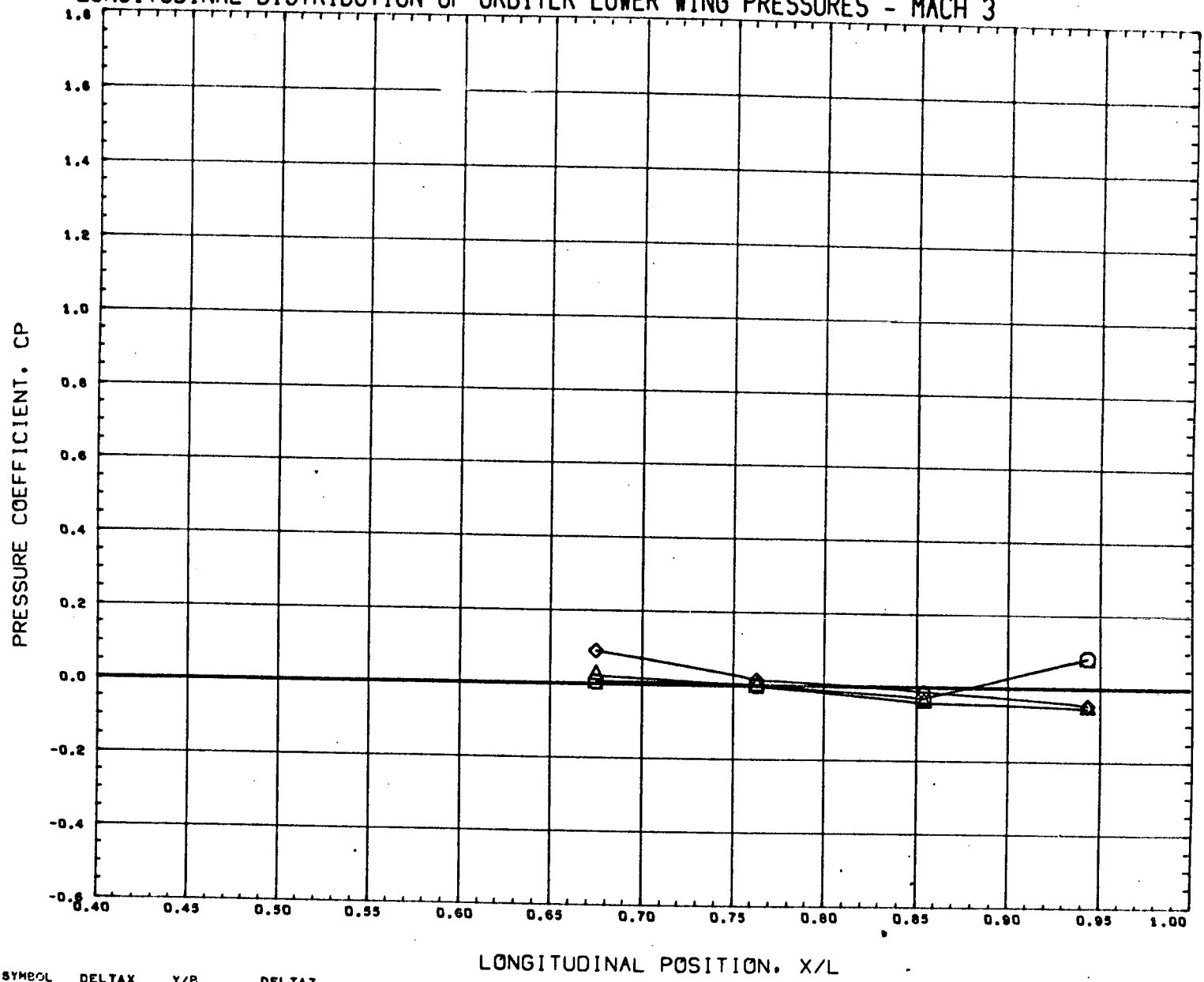
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.104		
◇	0.226		

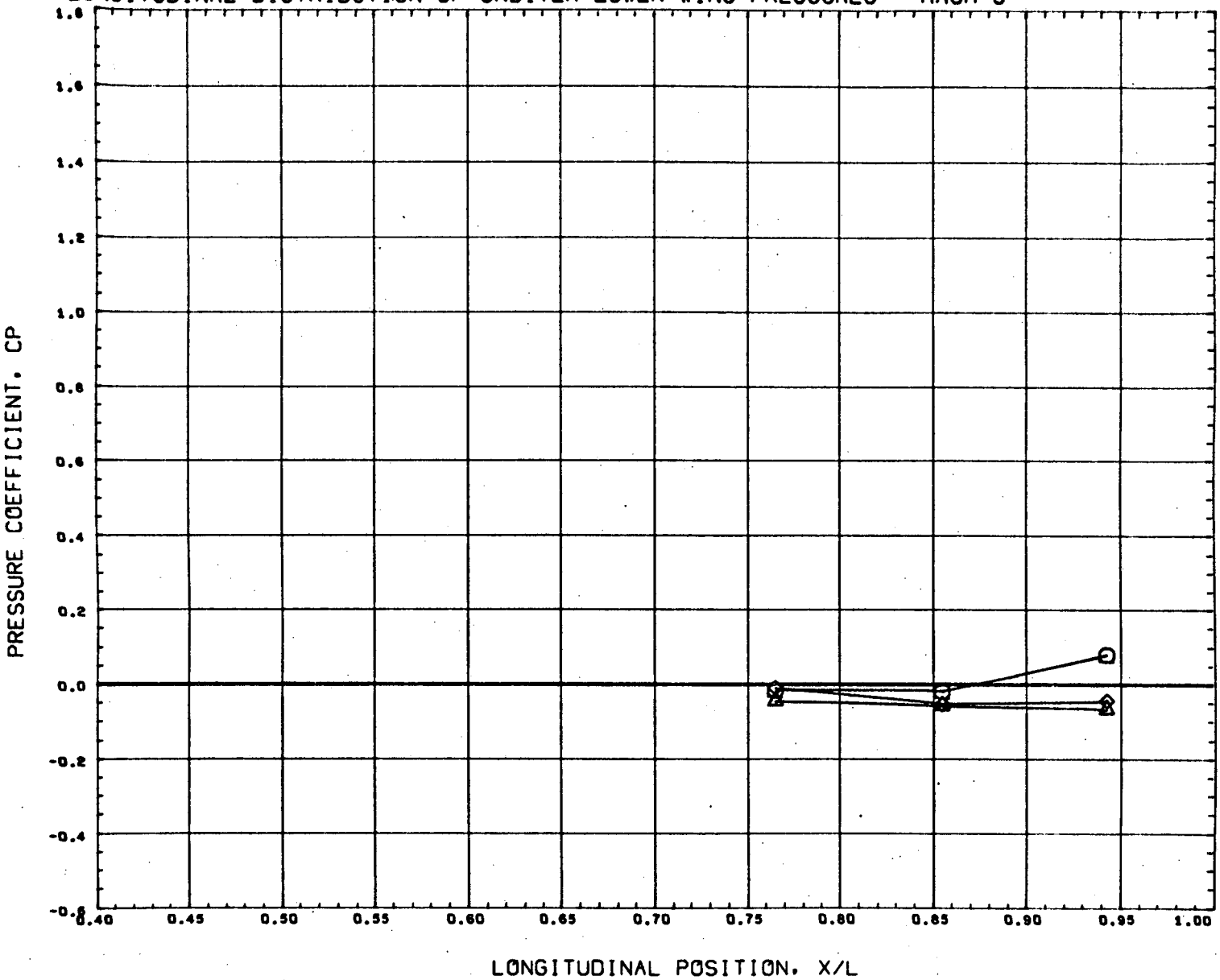
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

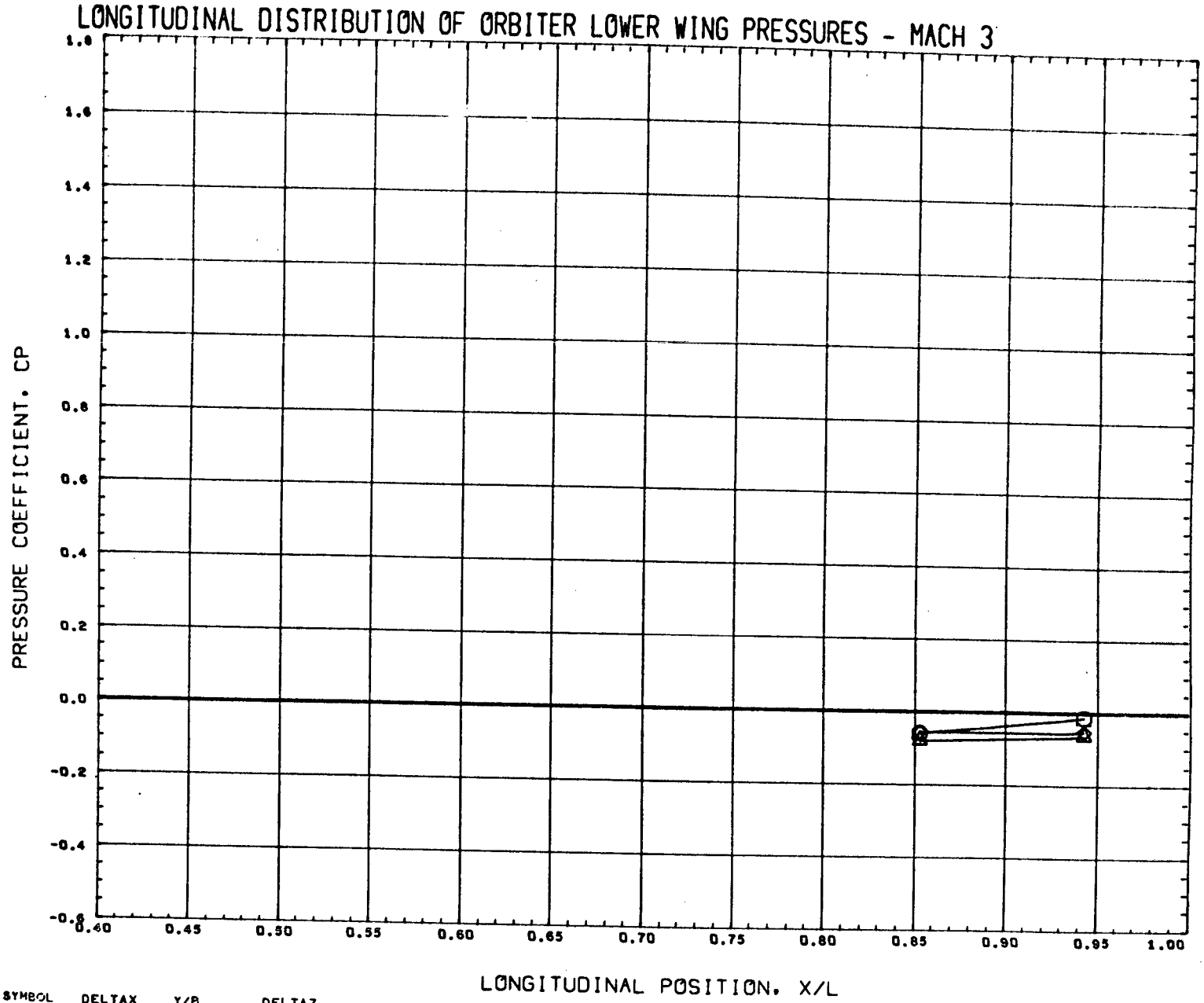


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.151
△	0.104		
◇	0.226		

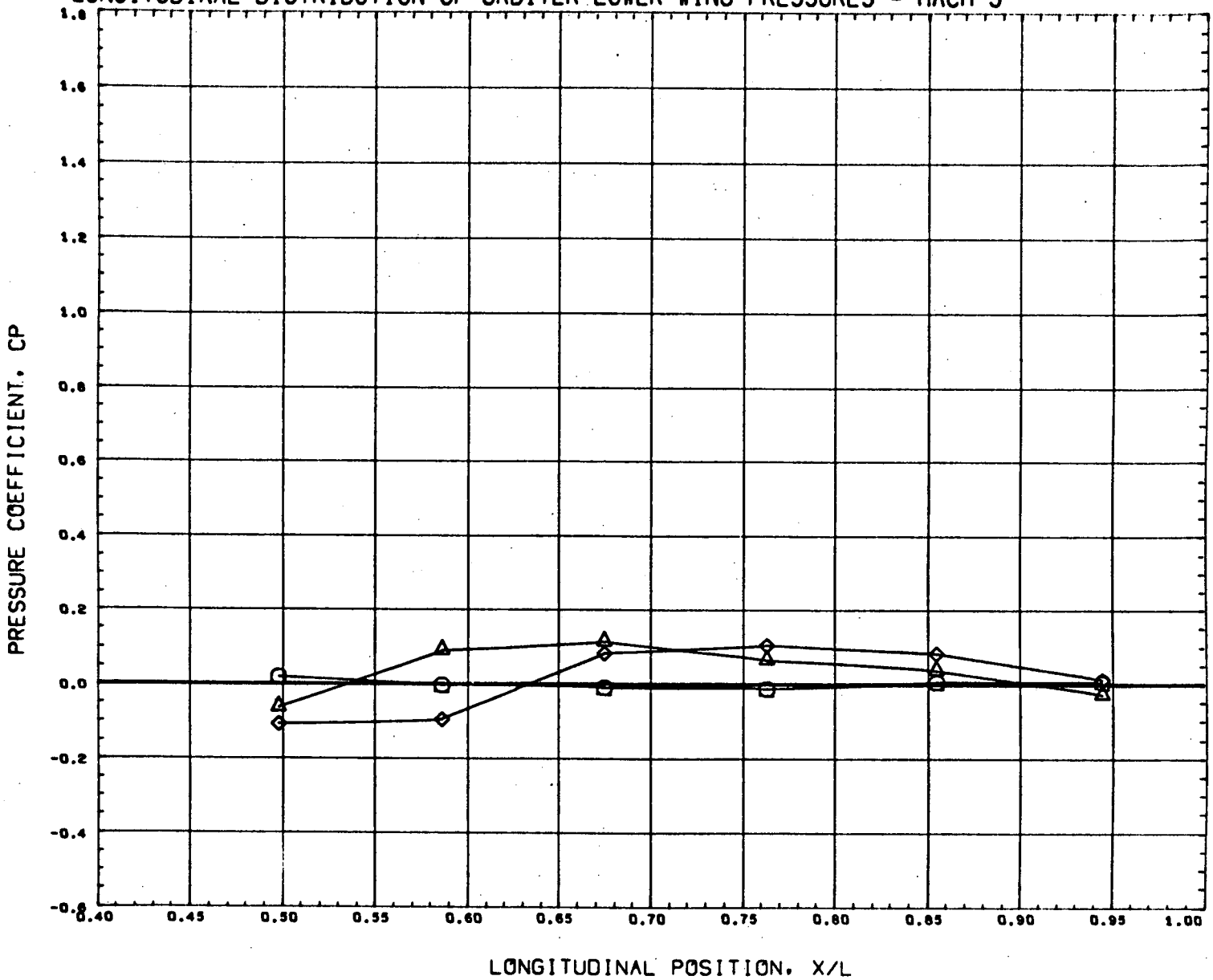
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



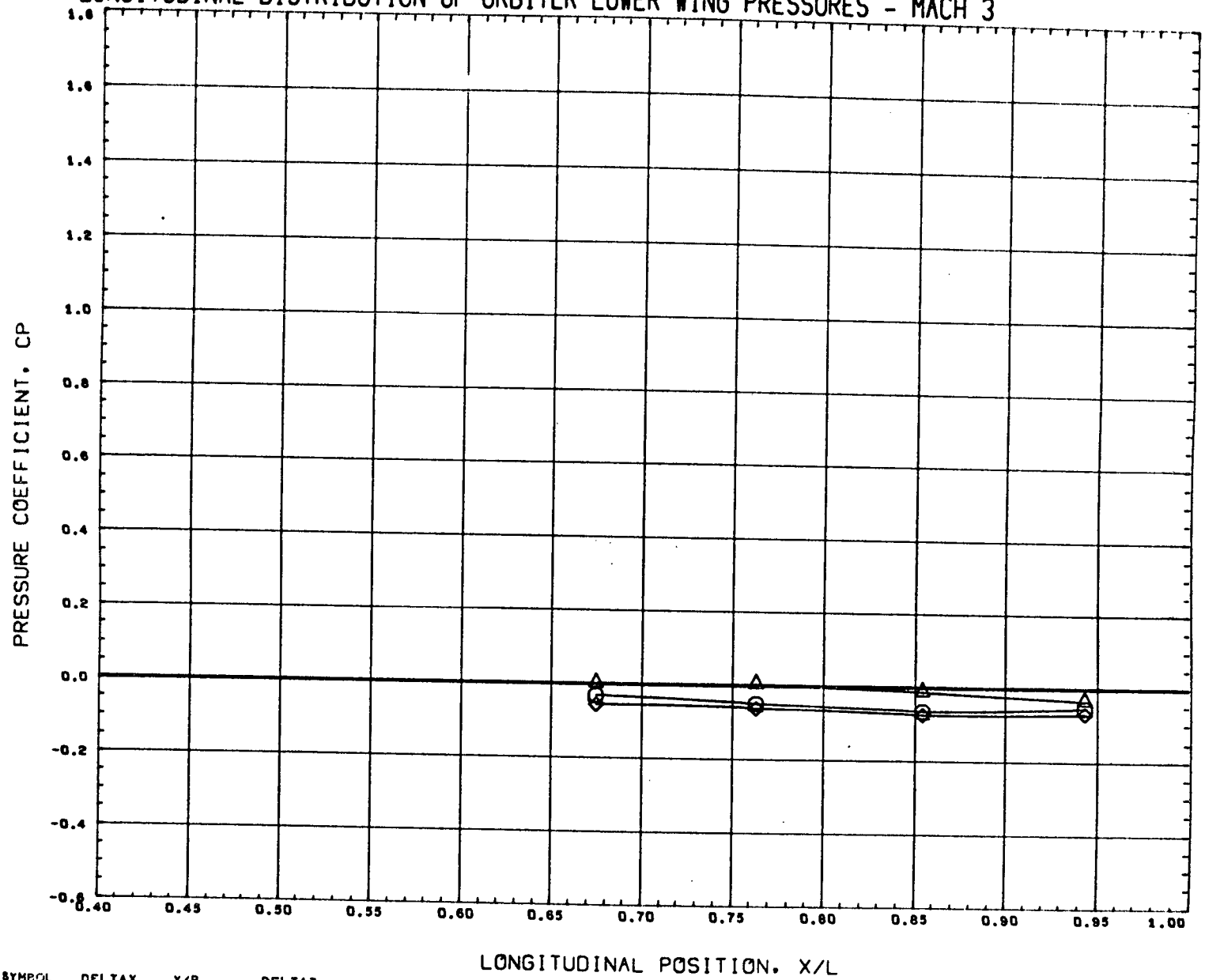
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.226
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

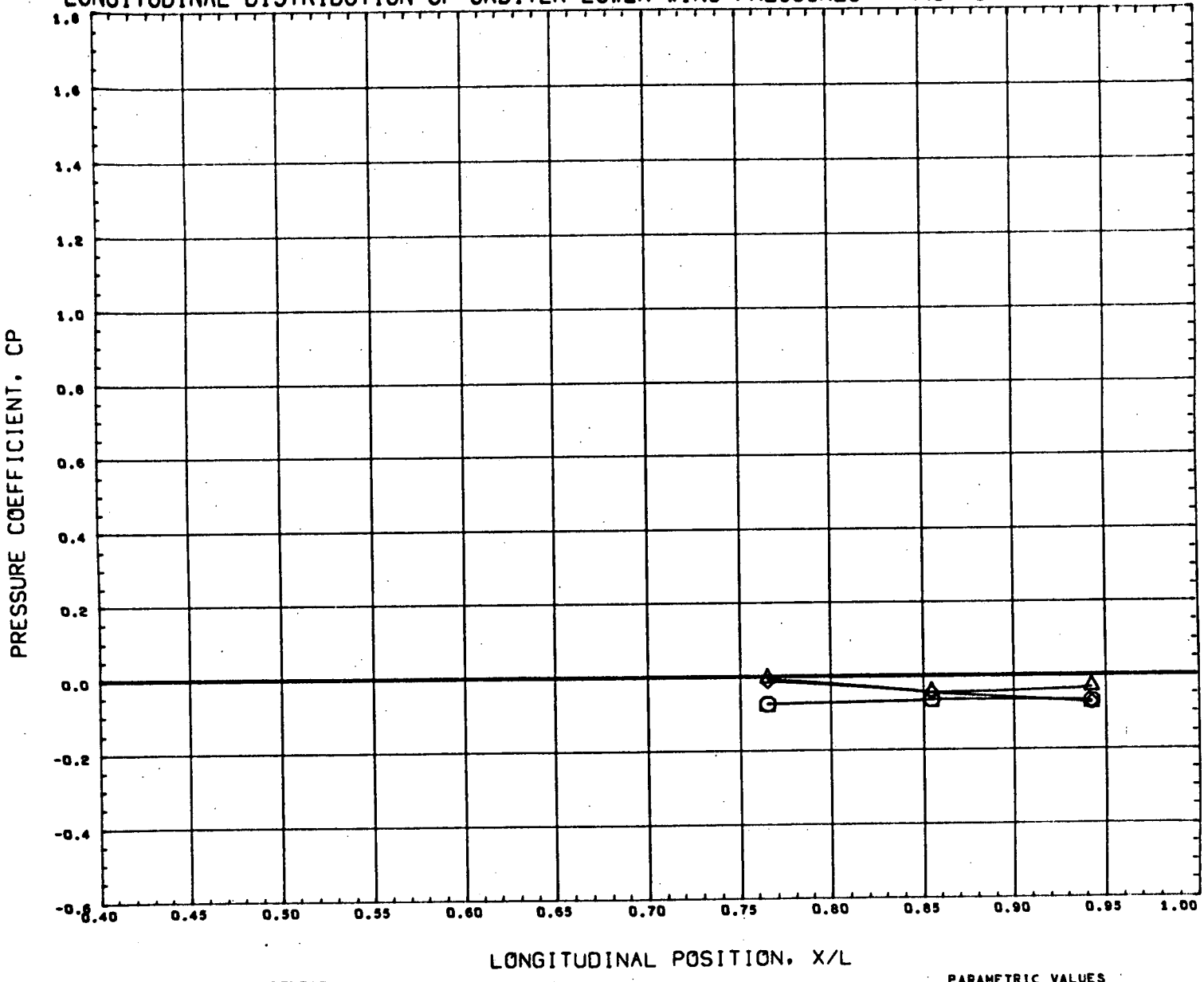
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



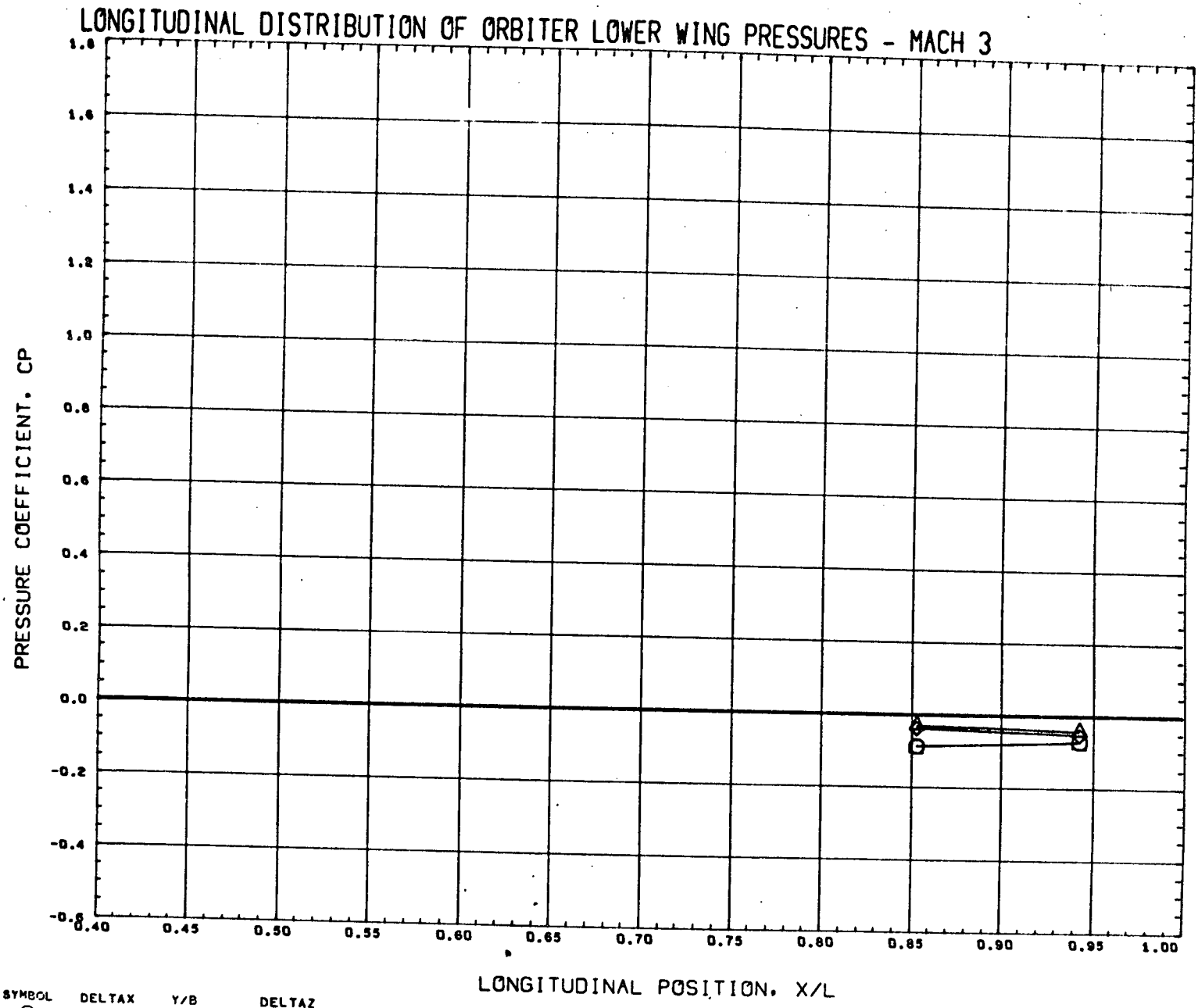
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8311•



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

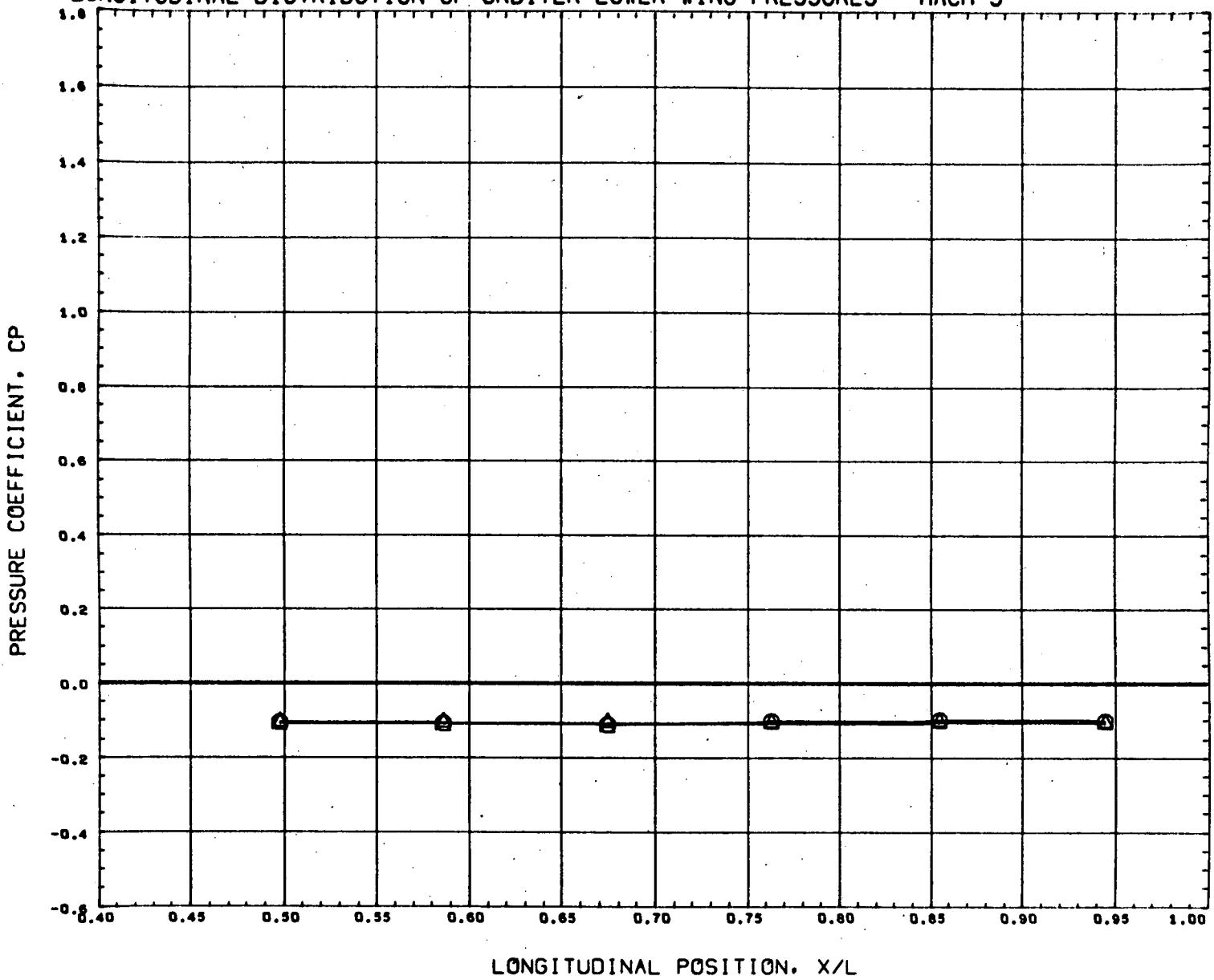
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



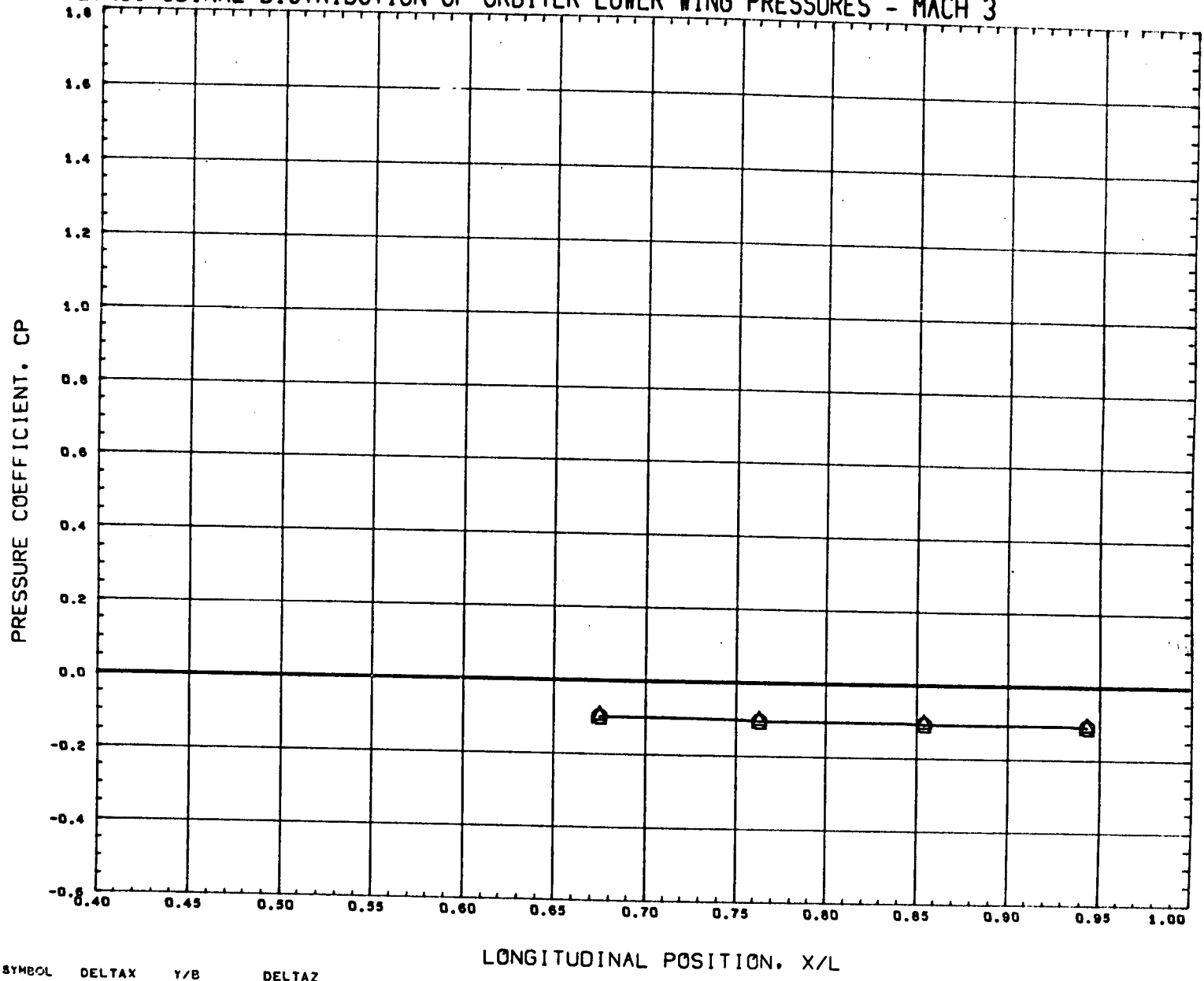
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.230	0.908
△	0.480		

PARAMETRIC VALUES

ALPHAB -	9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.480		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

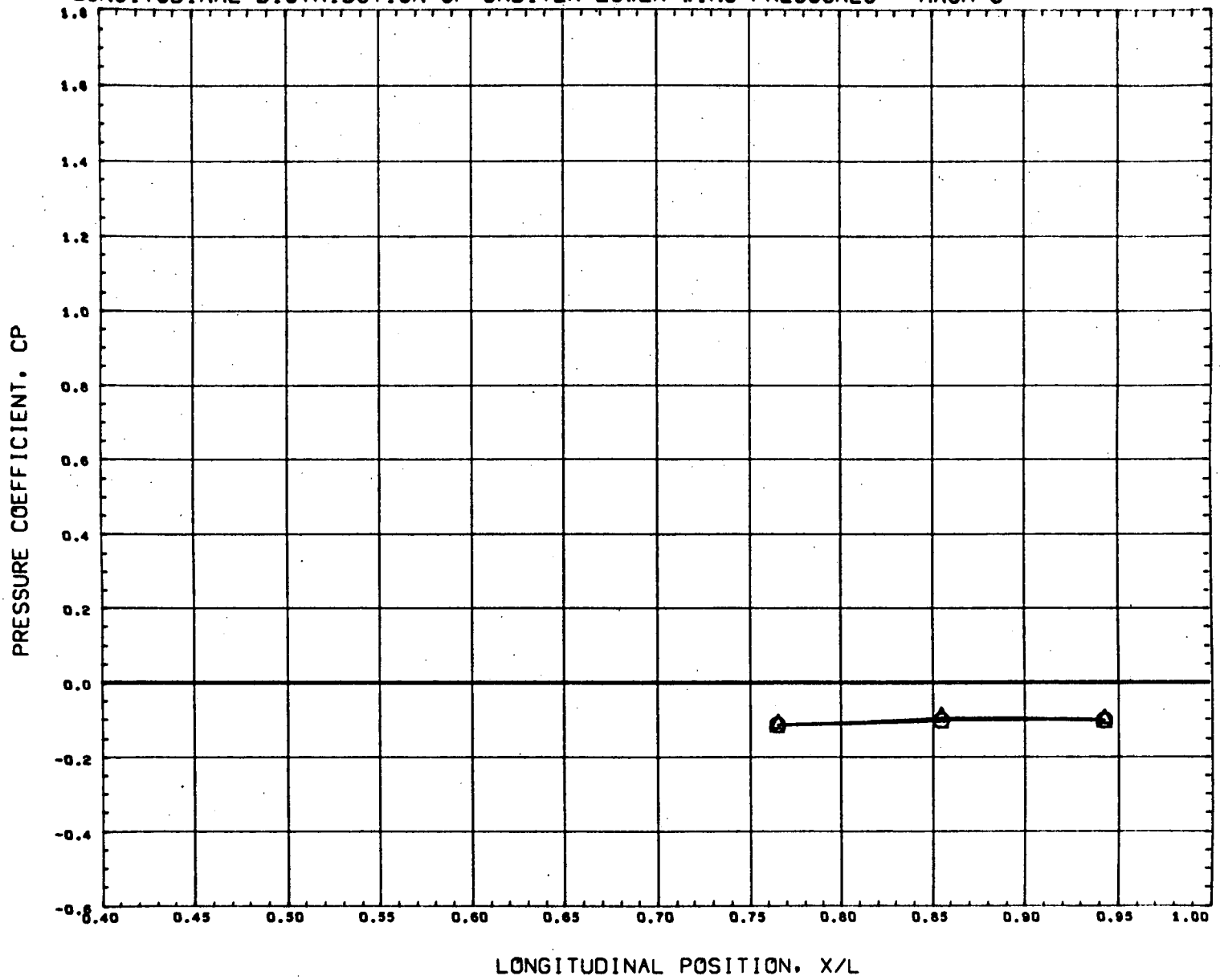
REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8311•

5/8

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

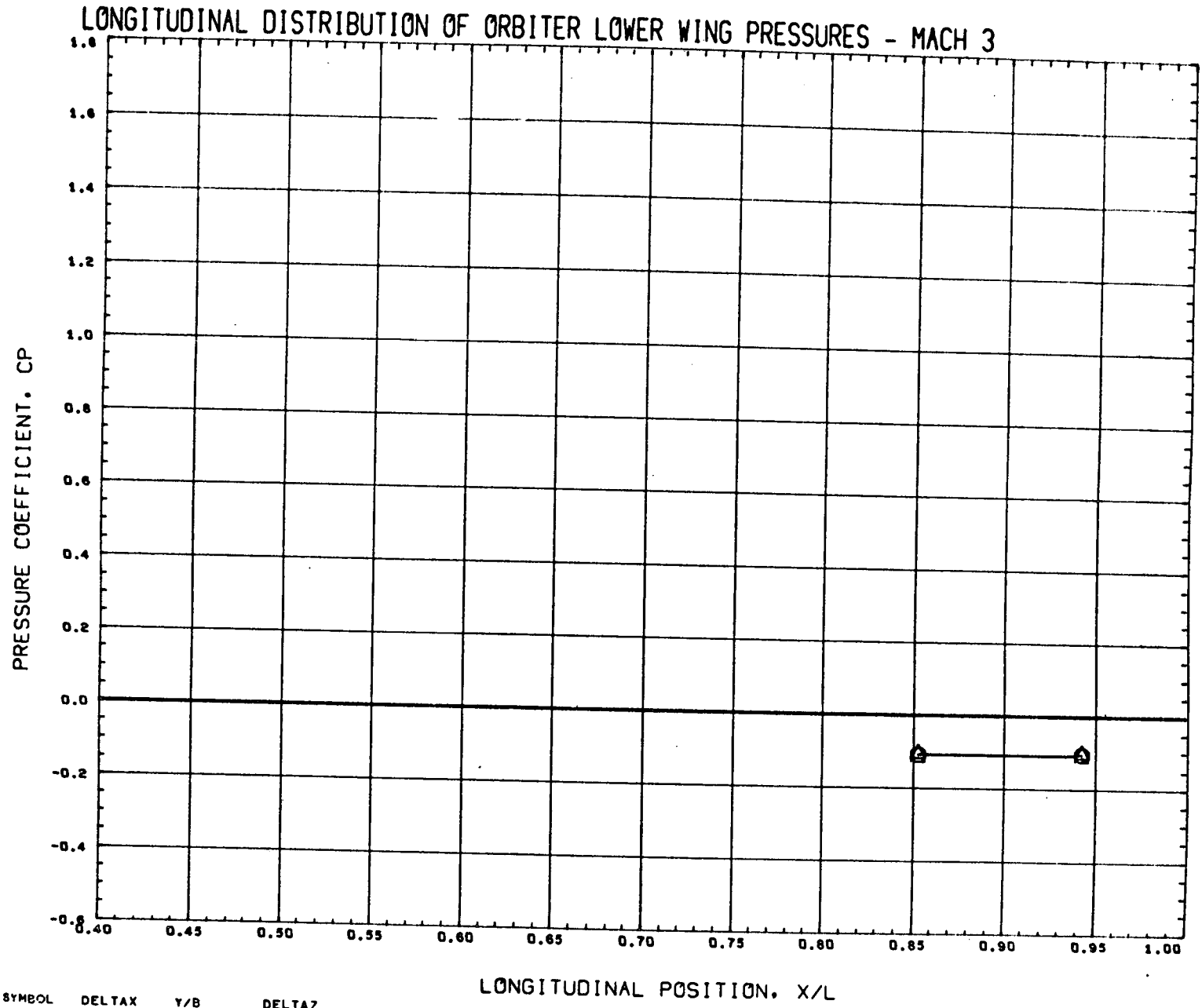


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.568	0.908
△	0.480		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.738	0.908
△	0.460		

PARAMETRIC VALUES

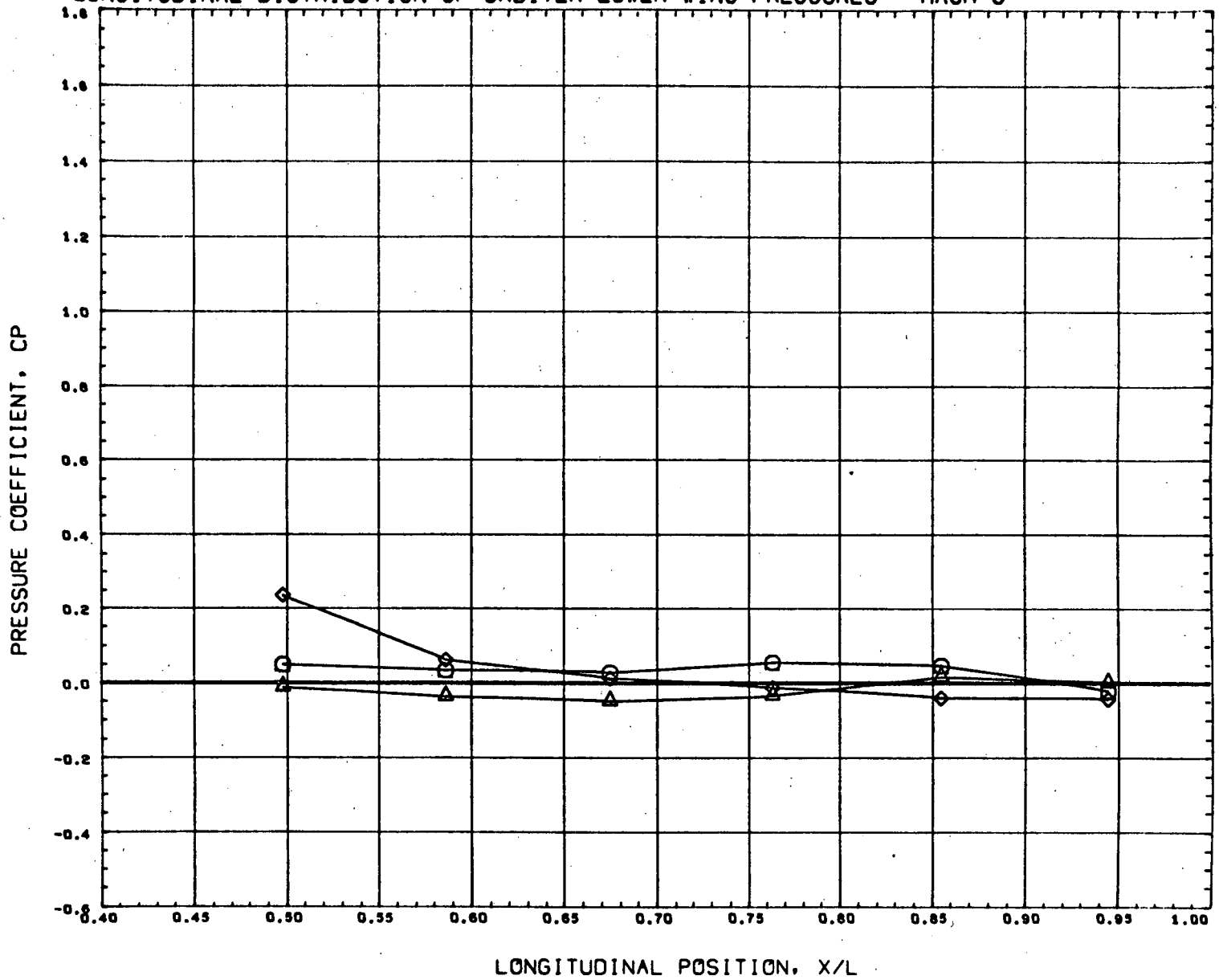
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8311•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



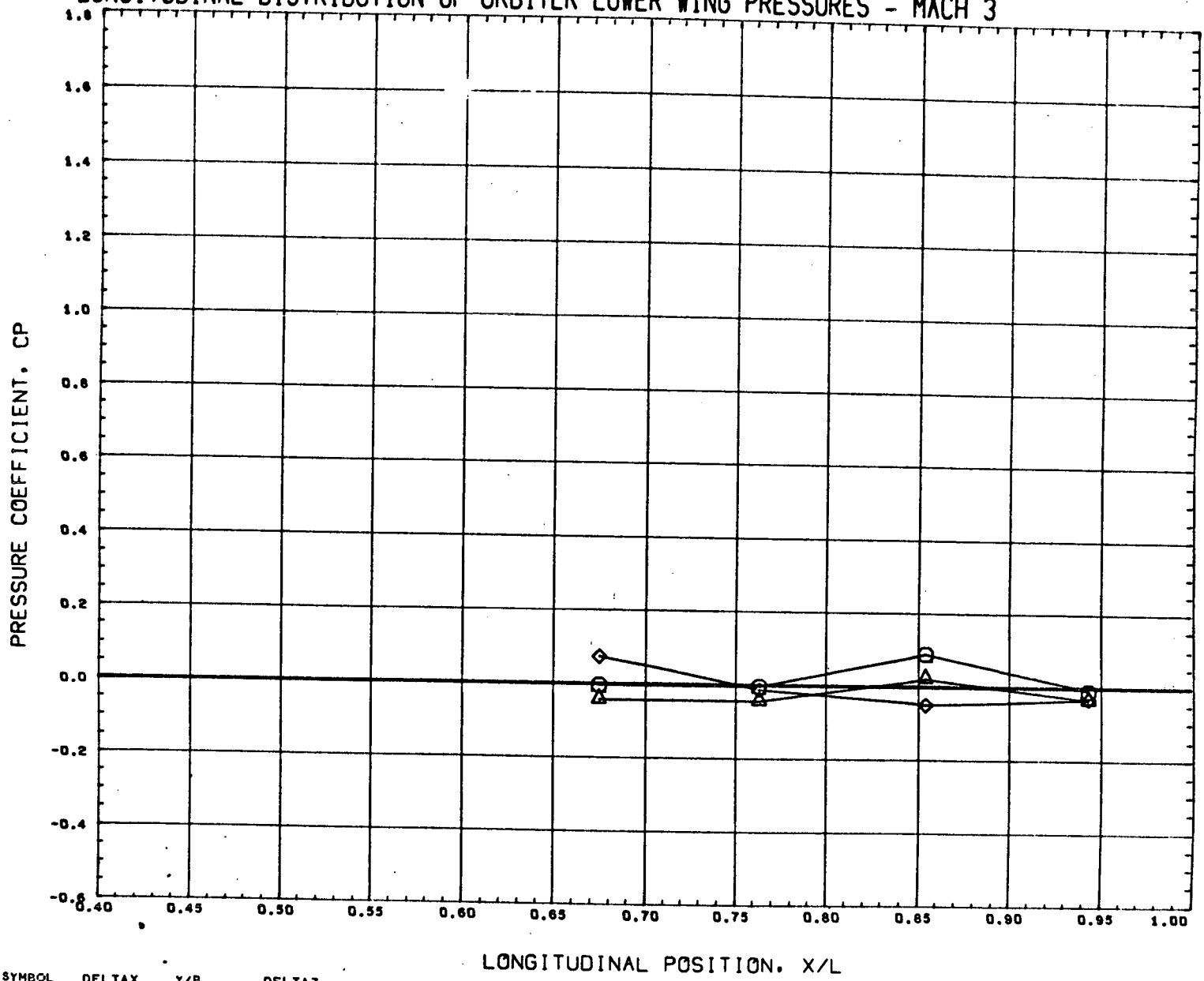
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.228		

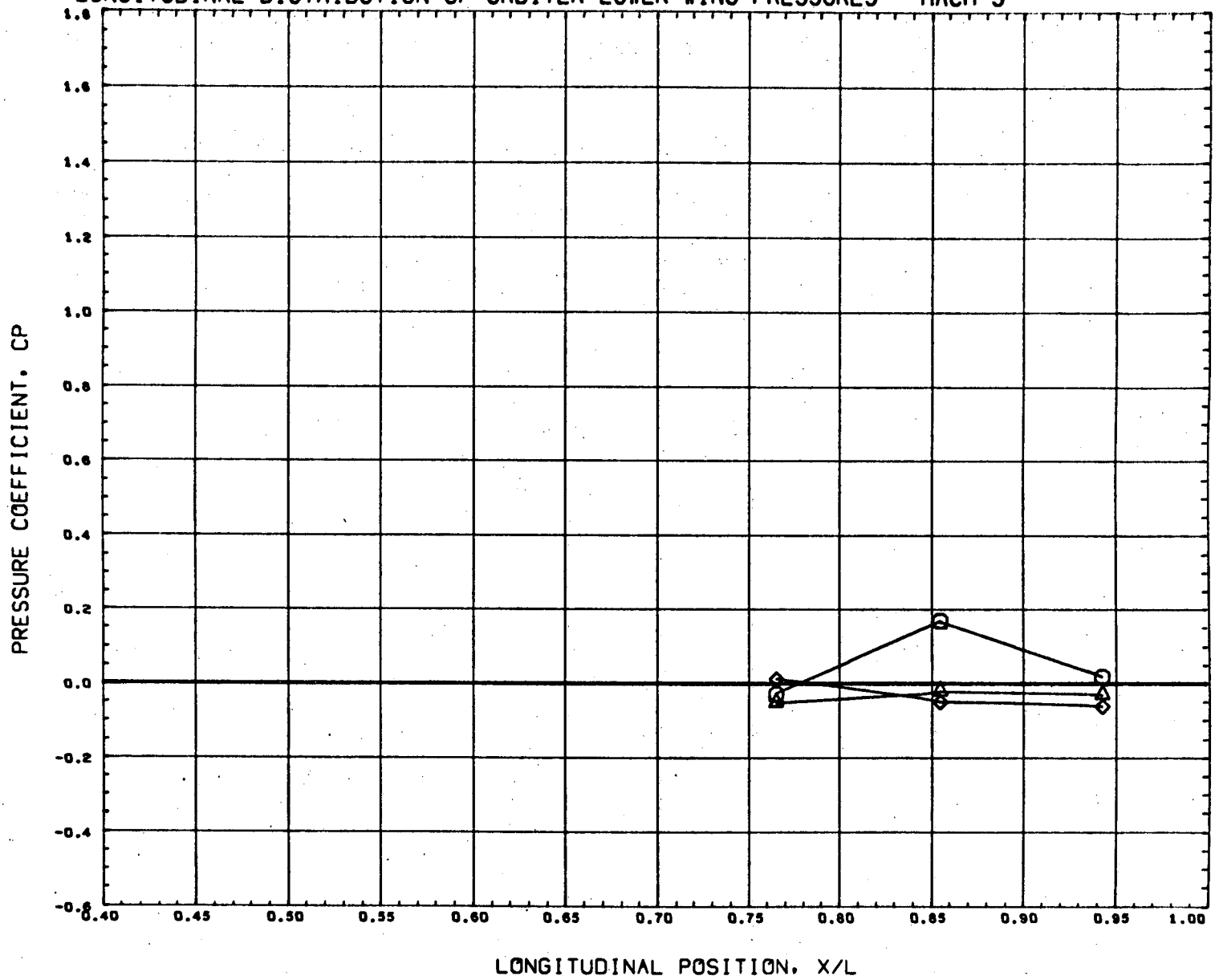
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



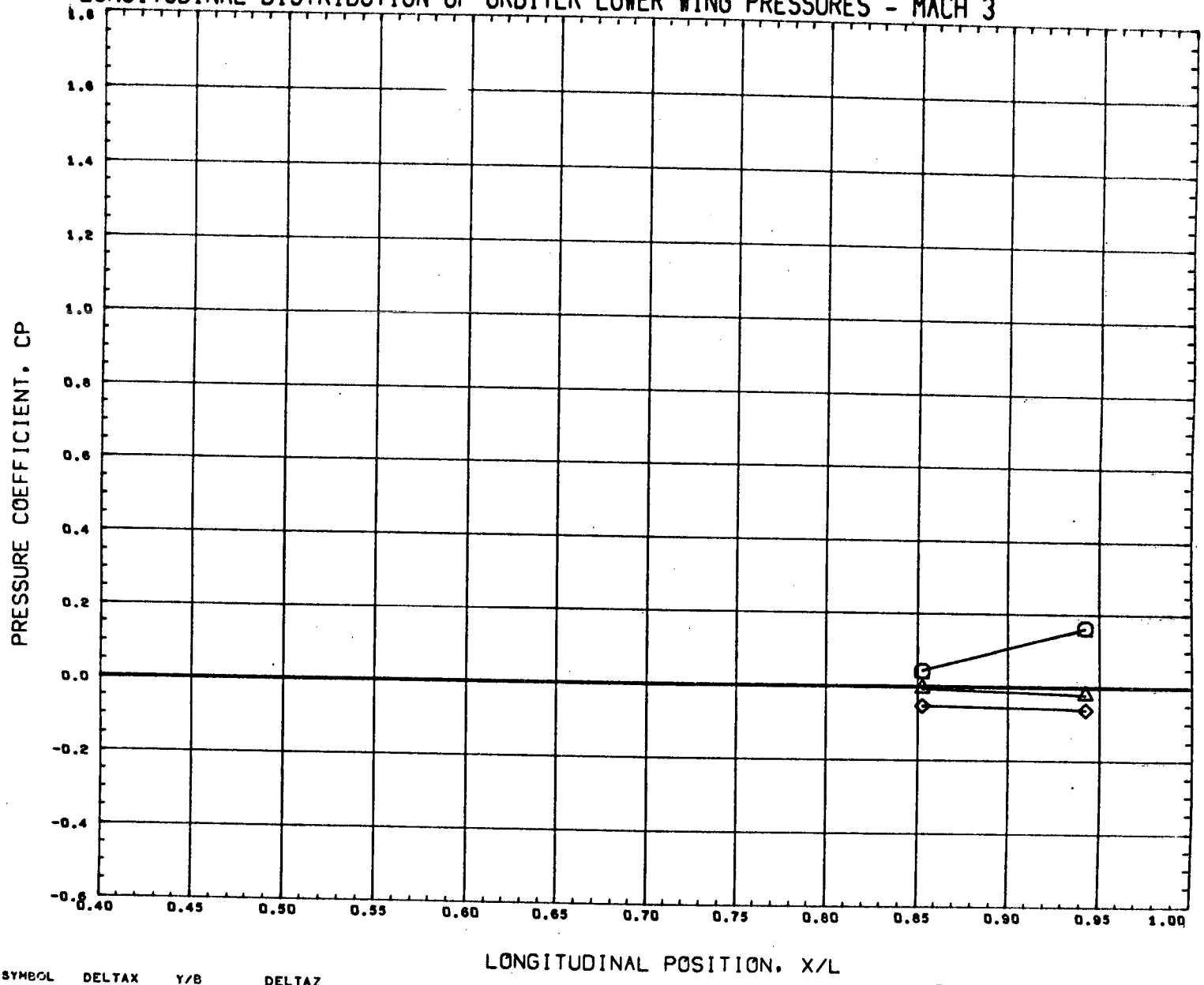
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.103		
◇	0.228		

PARAMETRIC VALUES

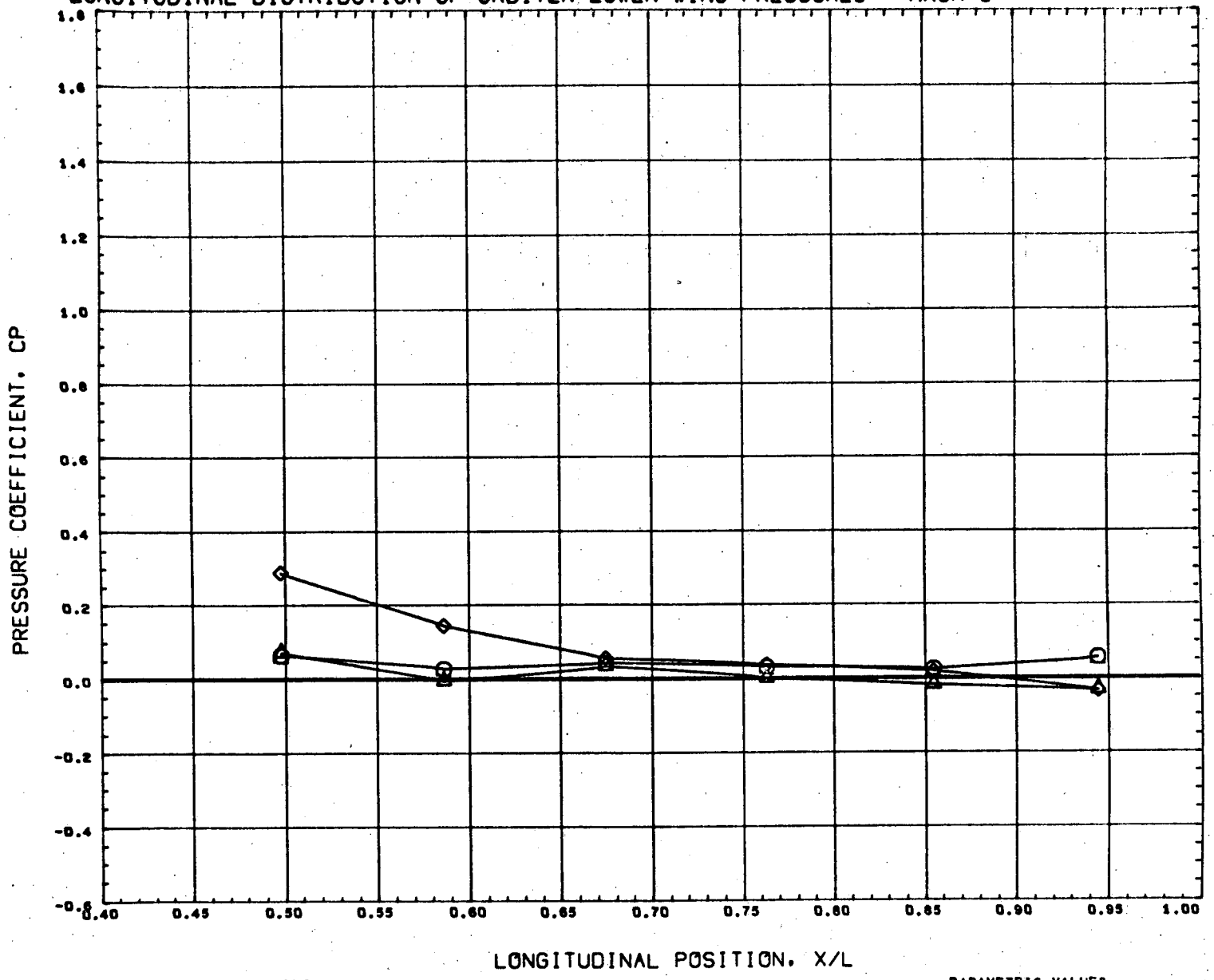
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.151
△	0.103		
◇	0.227		

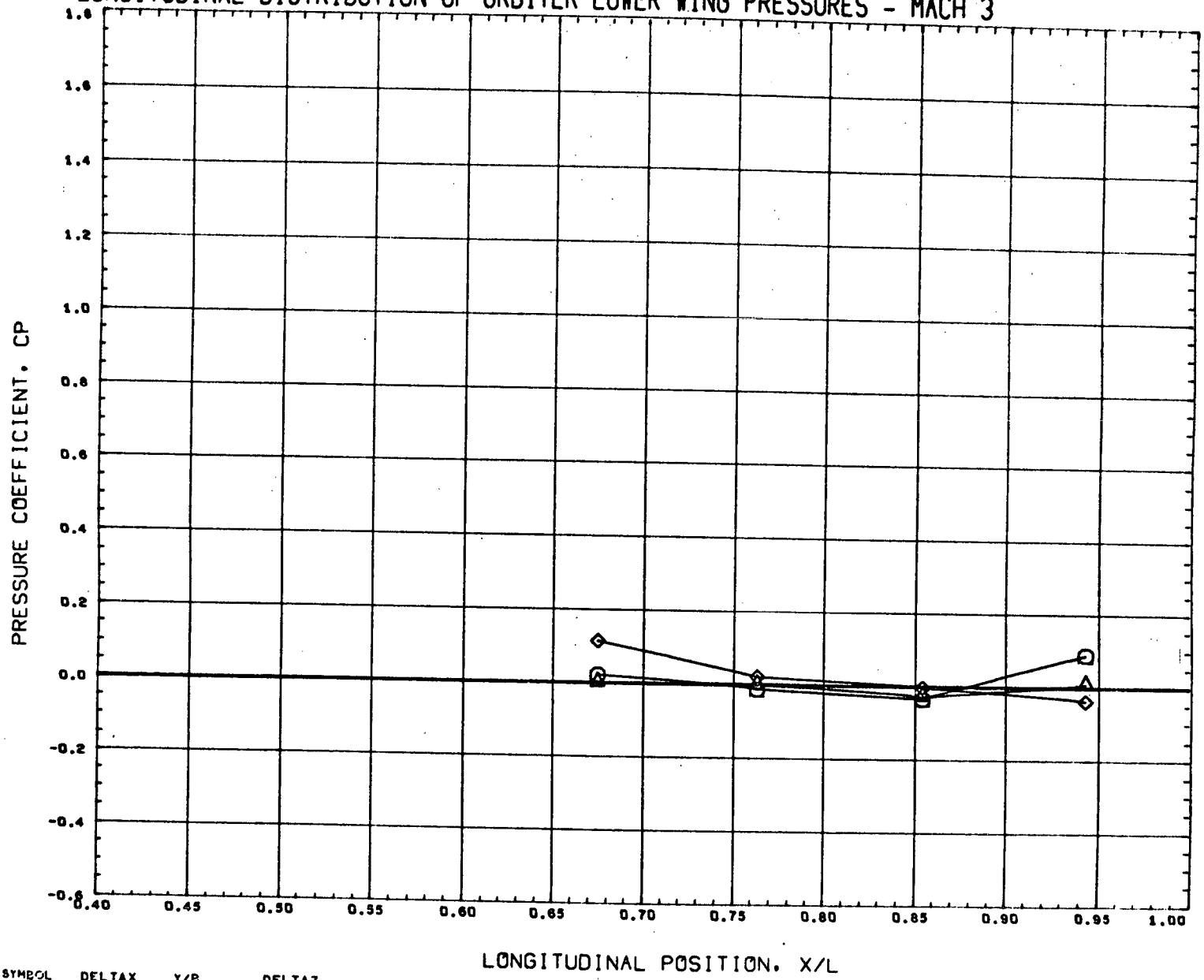
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8312• PAGE 201

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.103		
◇	0.227		

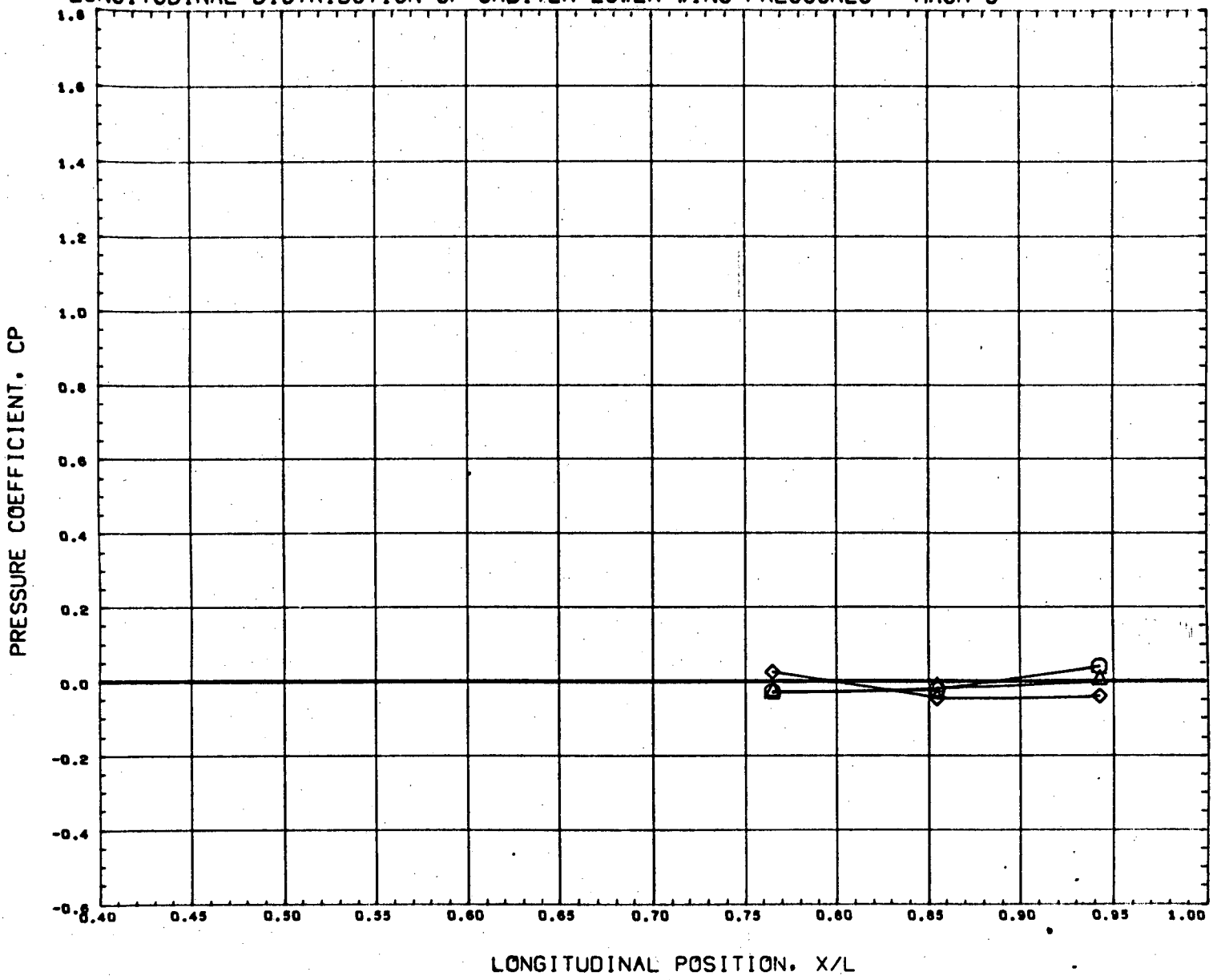
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



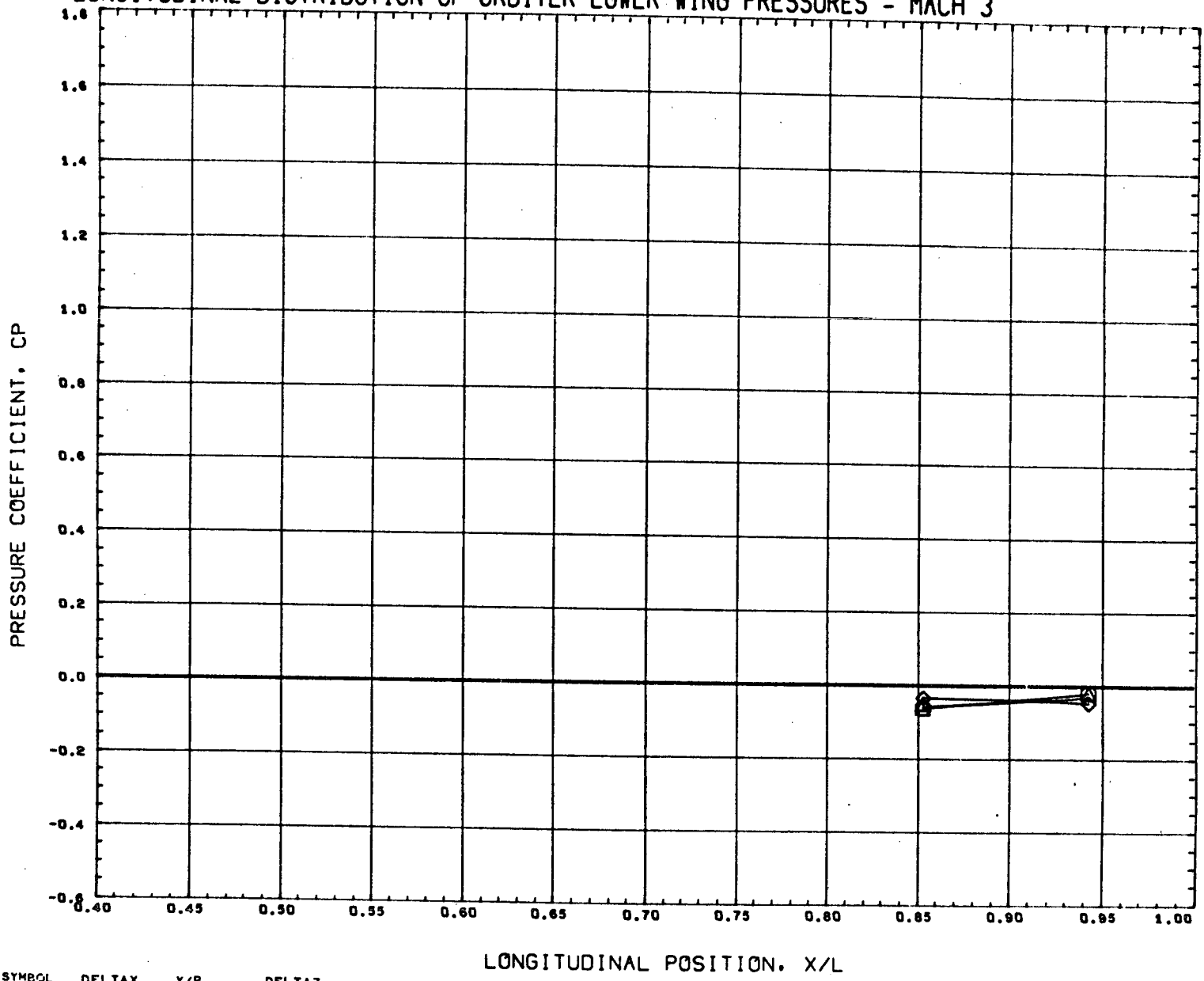
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



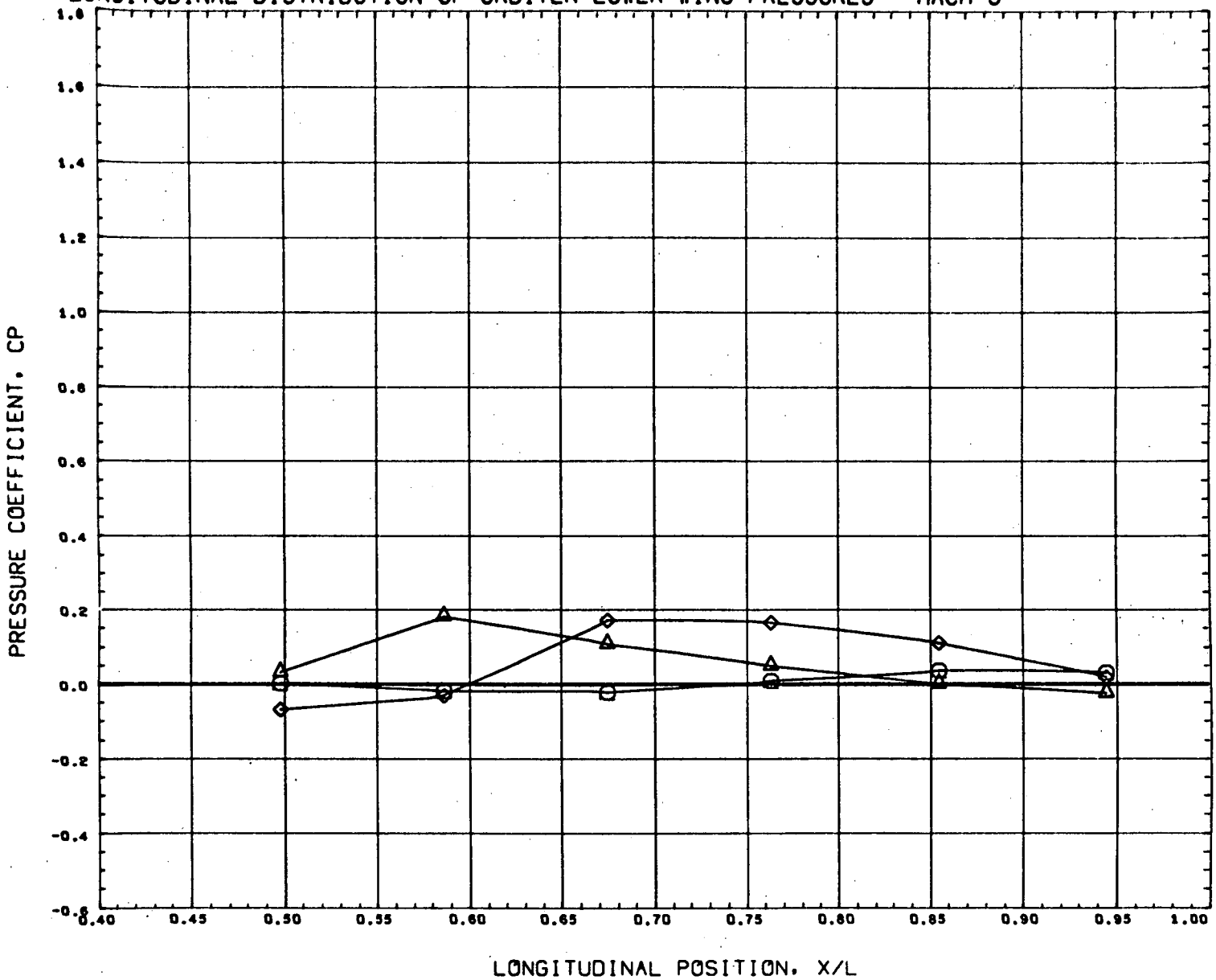
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.228
△	0.103		
◇	0.226		

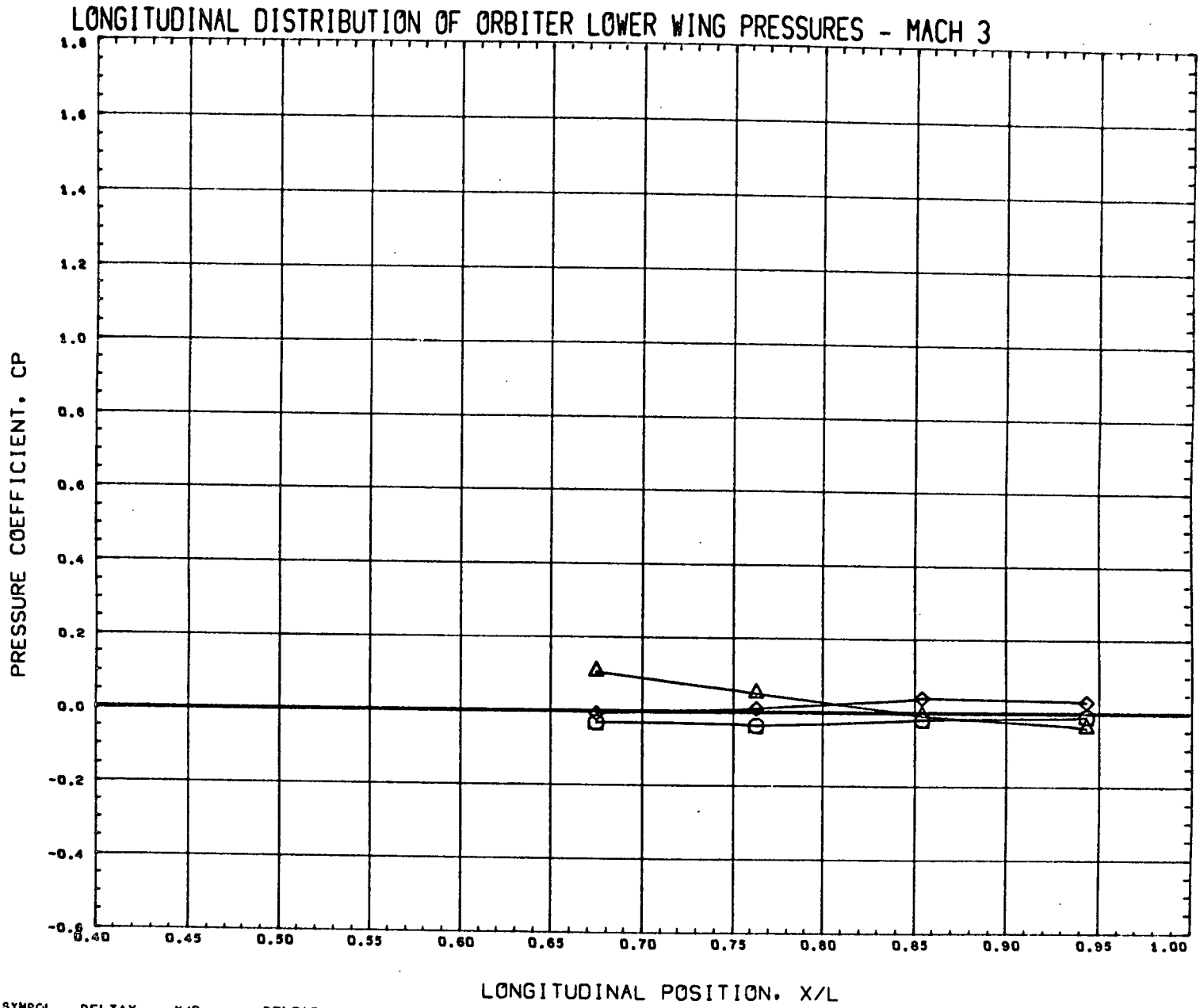
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8312• PAGE 205

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

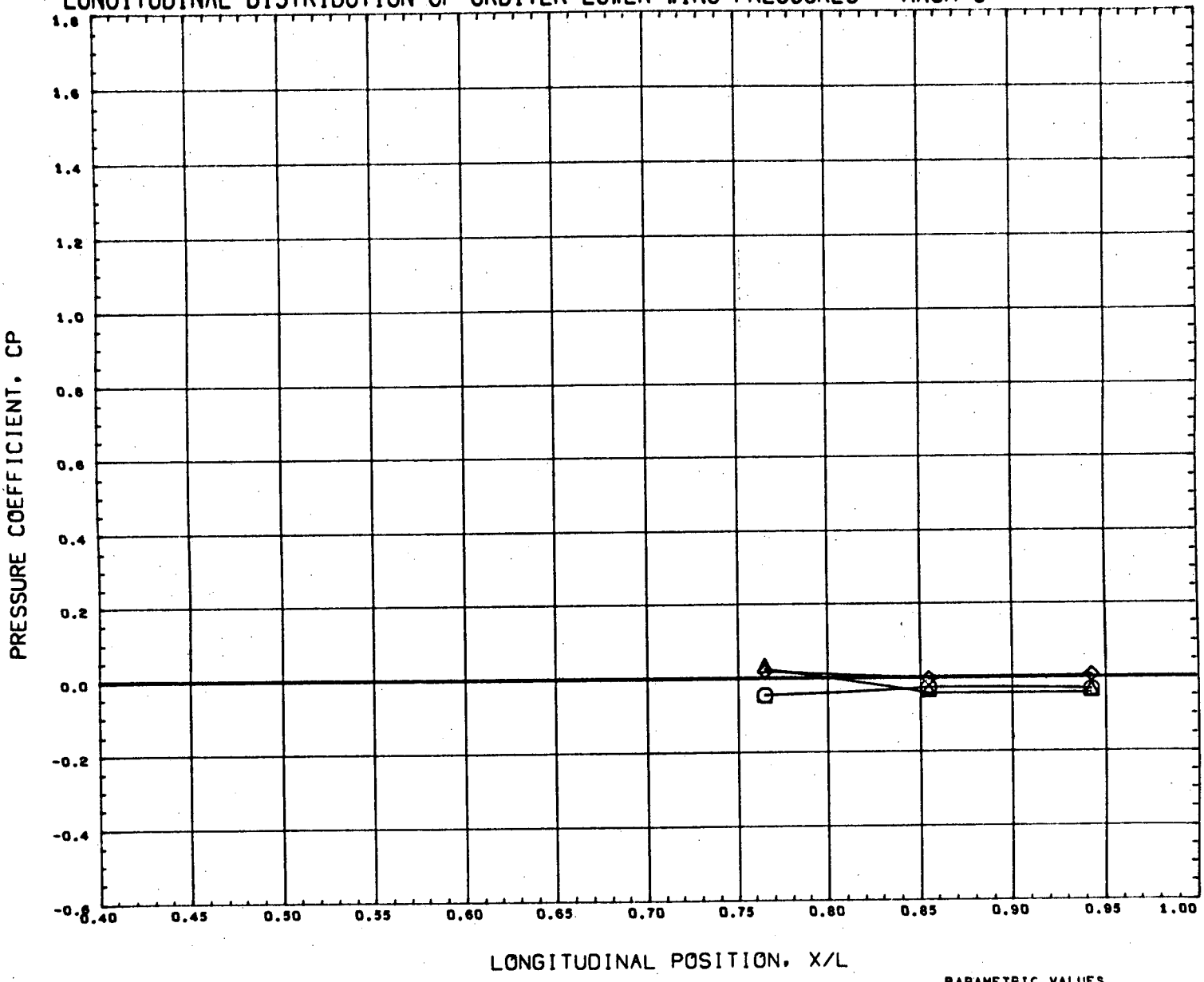
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8312• PAGE 206

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.228
△	0.103		
◇	0.226		

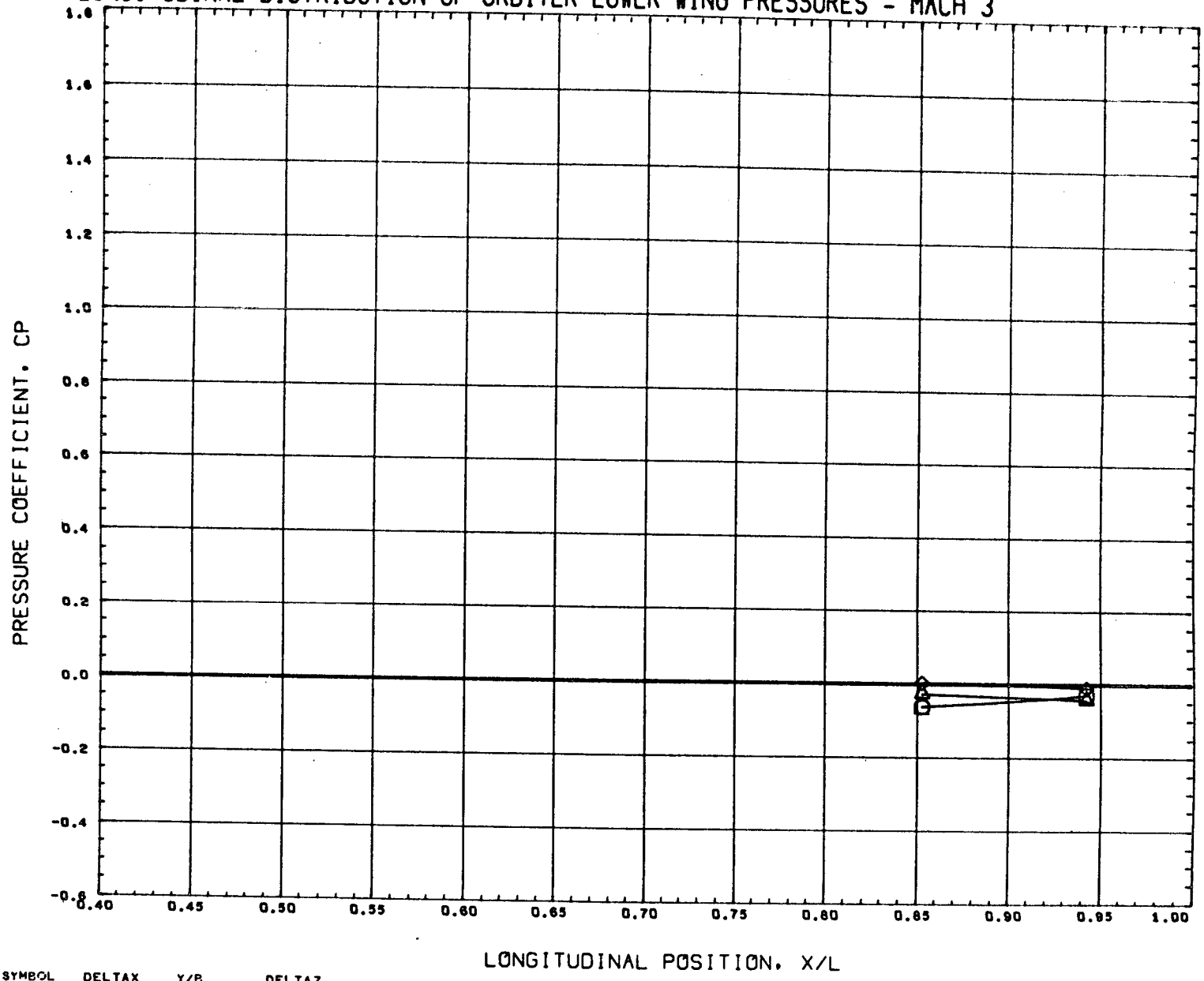
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8312•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.226		

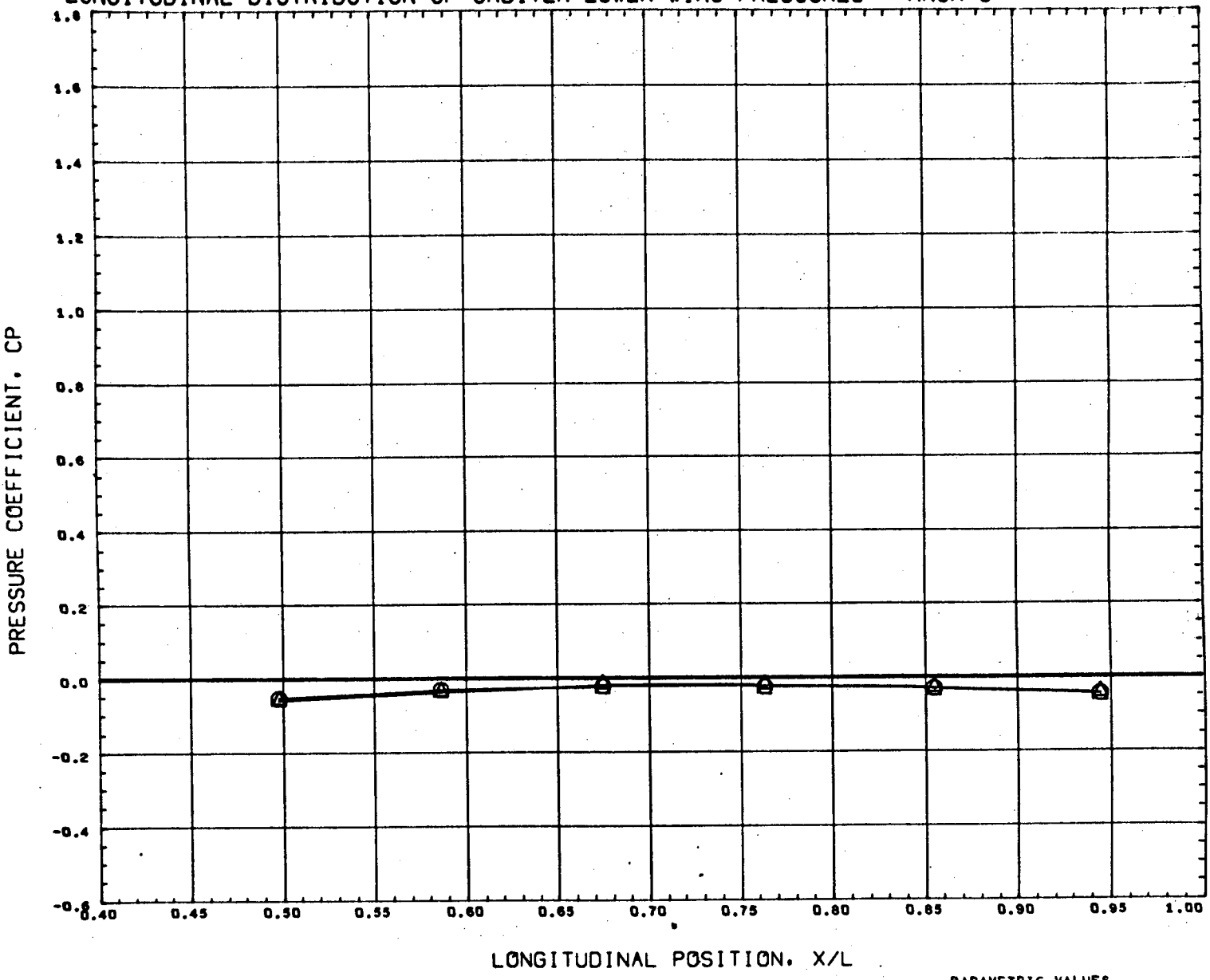
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



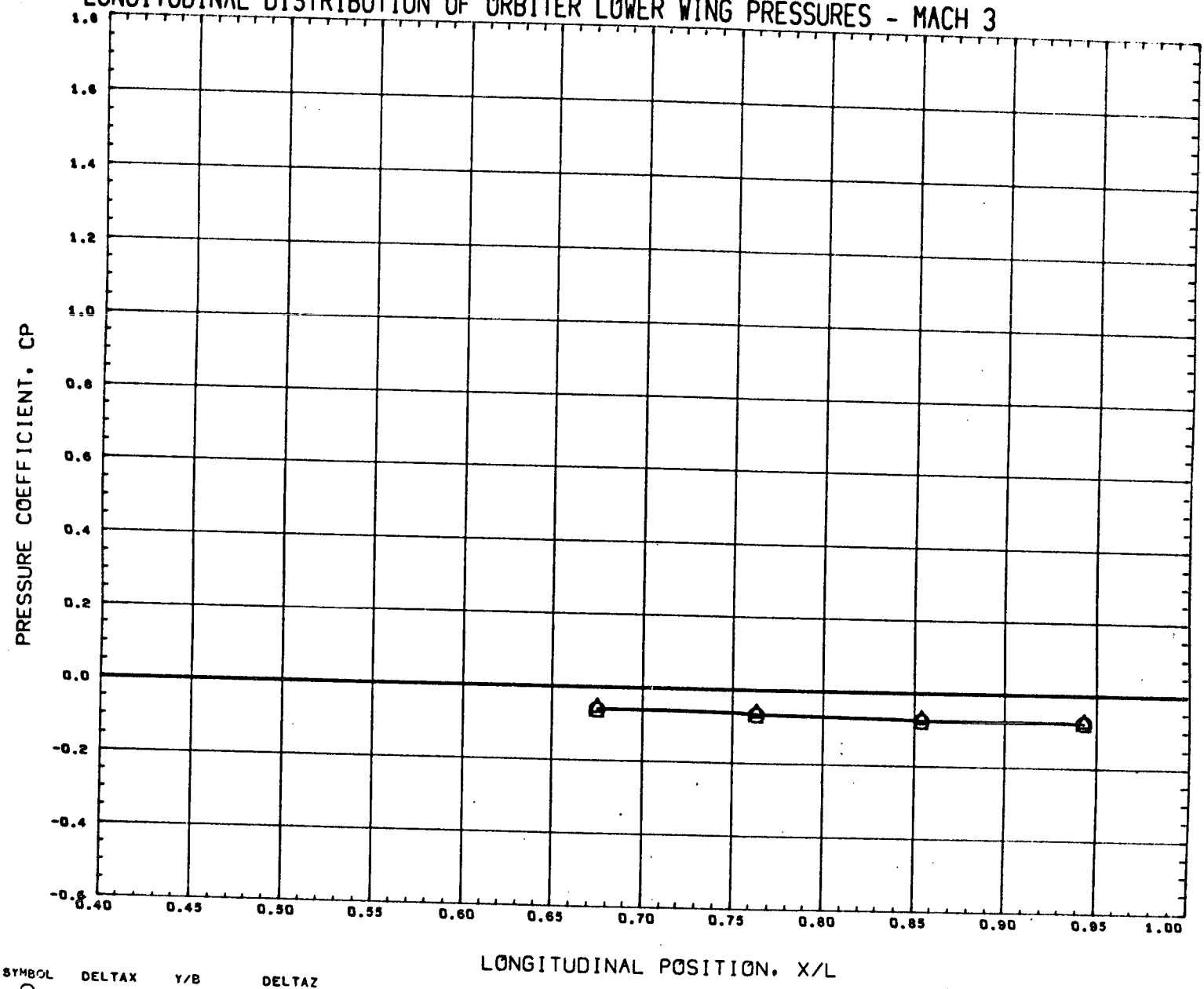
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.230	0.908
△	0.478		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.478		

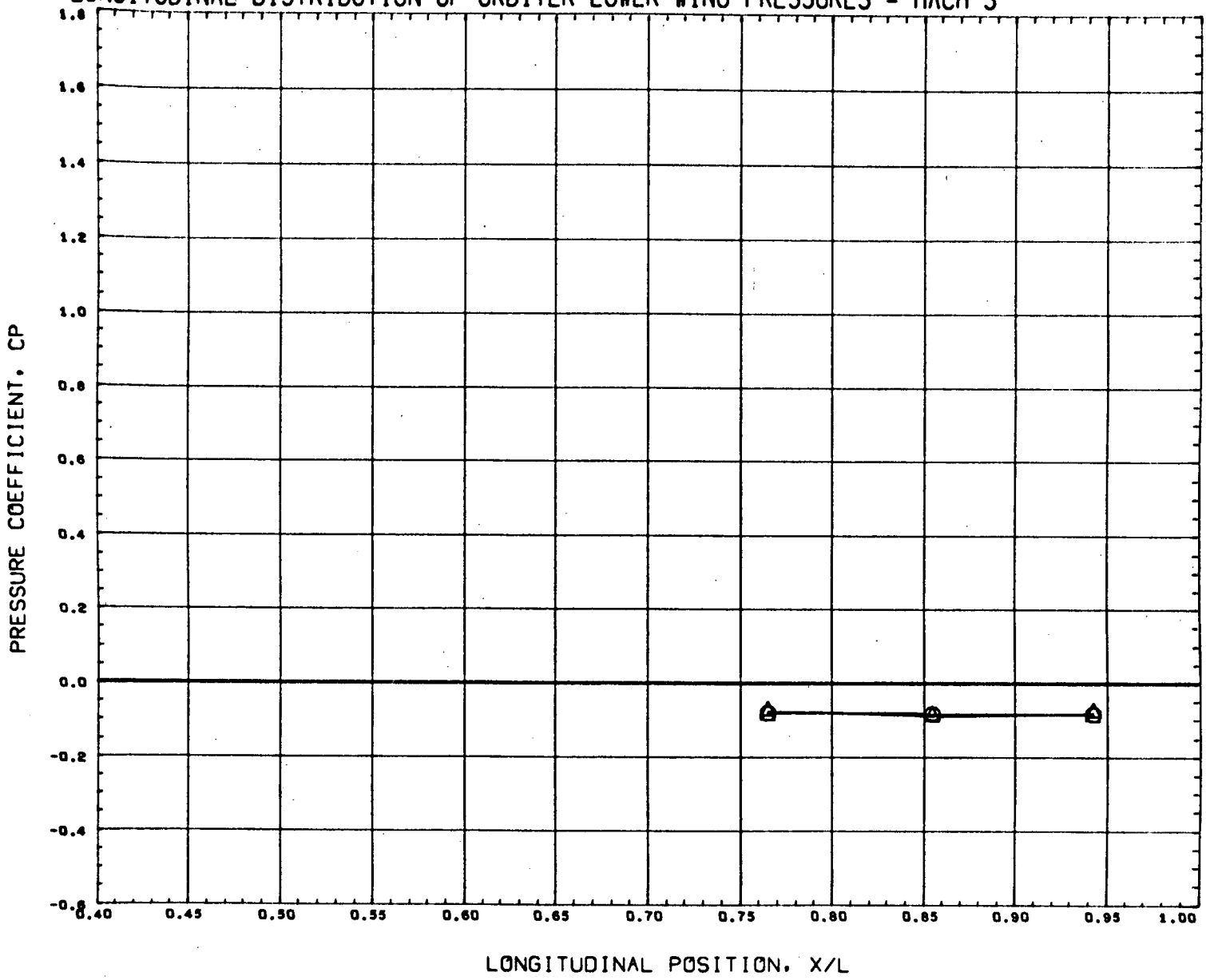
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.568	0.908
△	0.478		

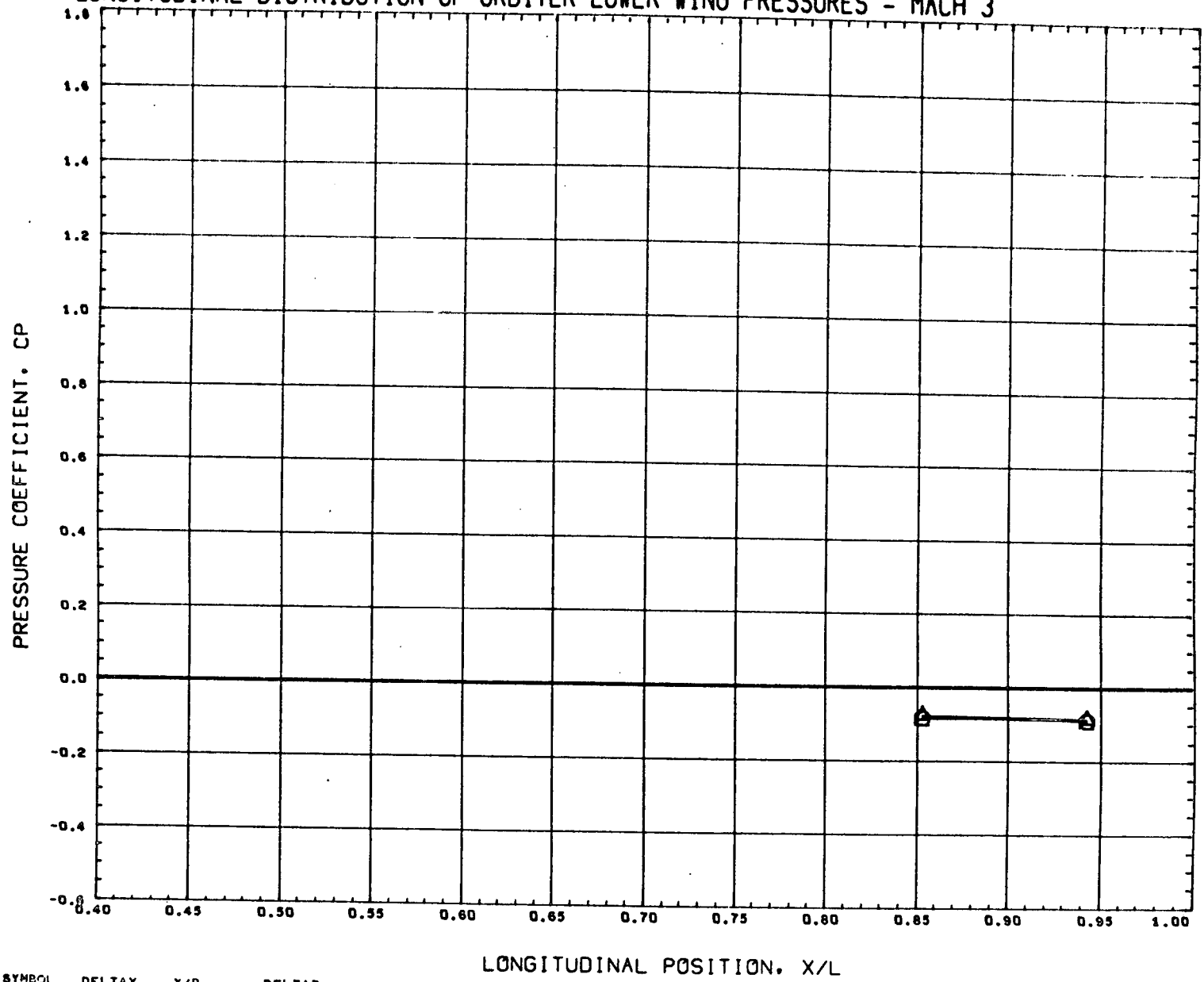
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8312• PAGE 211

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.738	0.908
△	0.478		

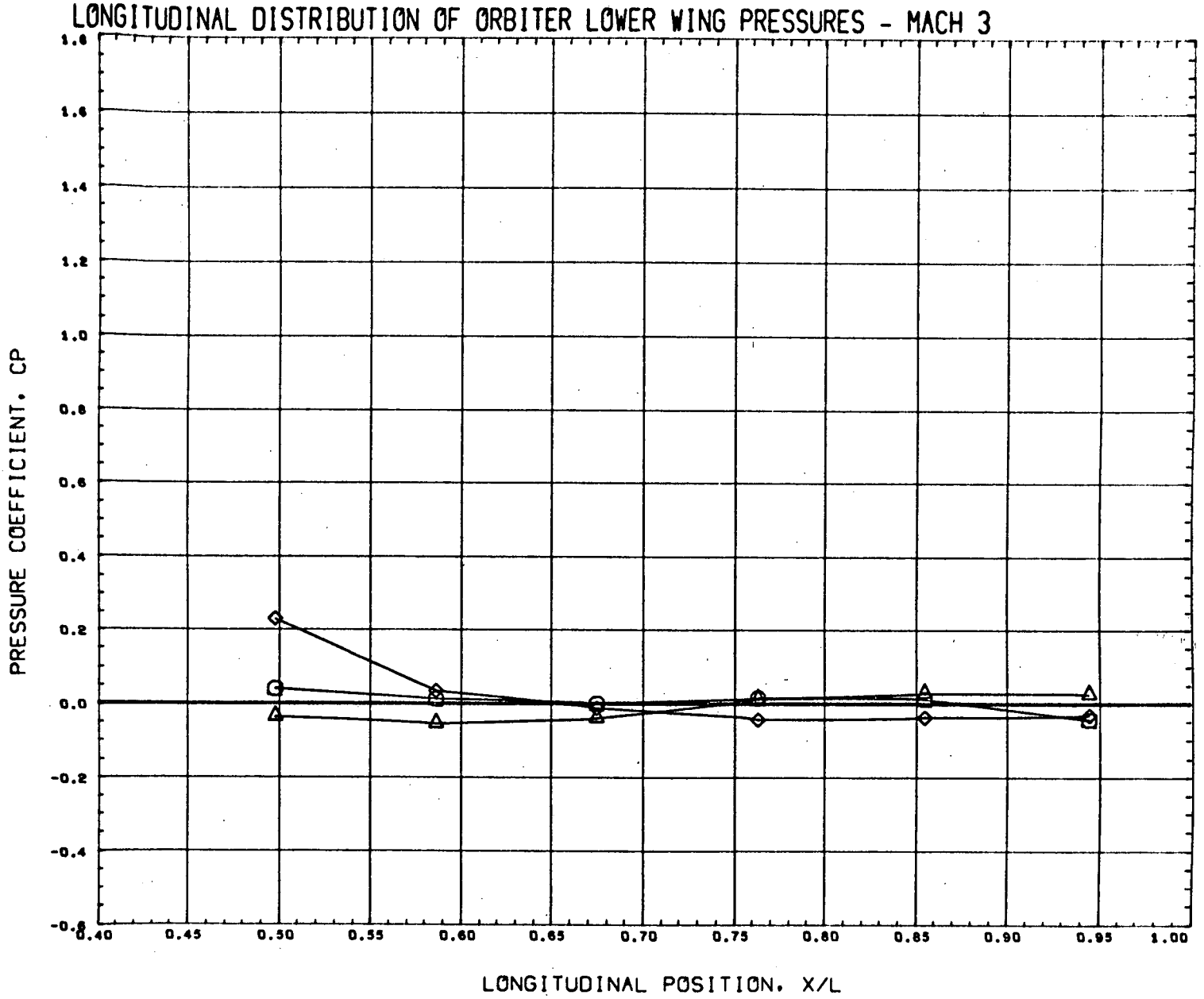
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8312•



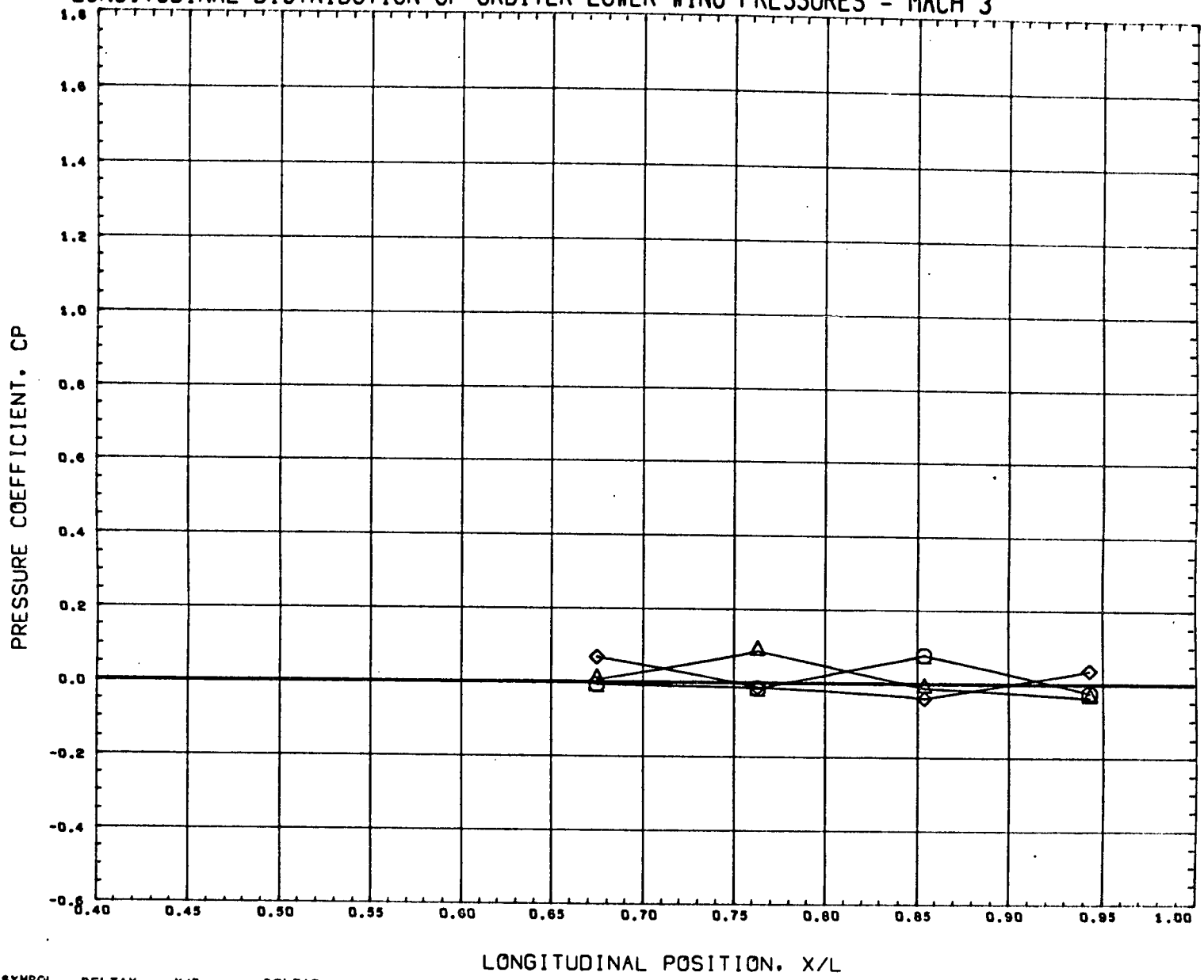
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.120
△	0.102		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.102		
◇	0.226		

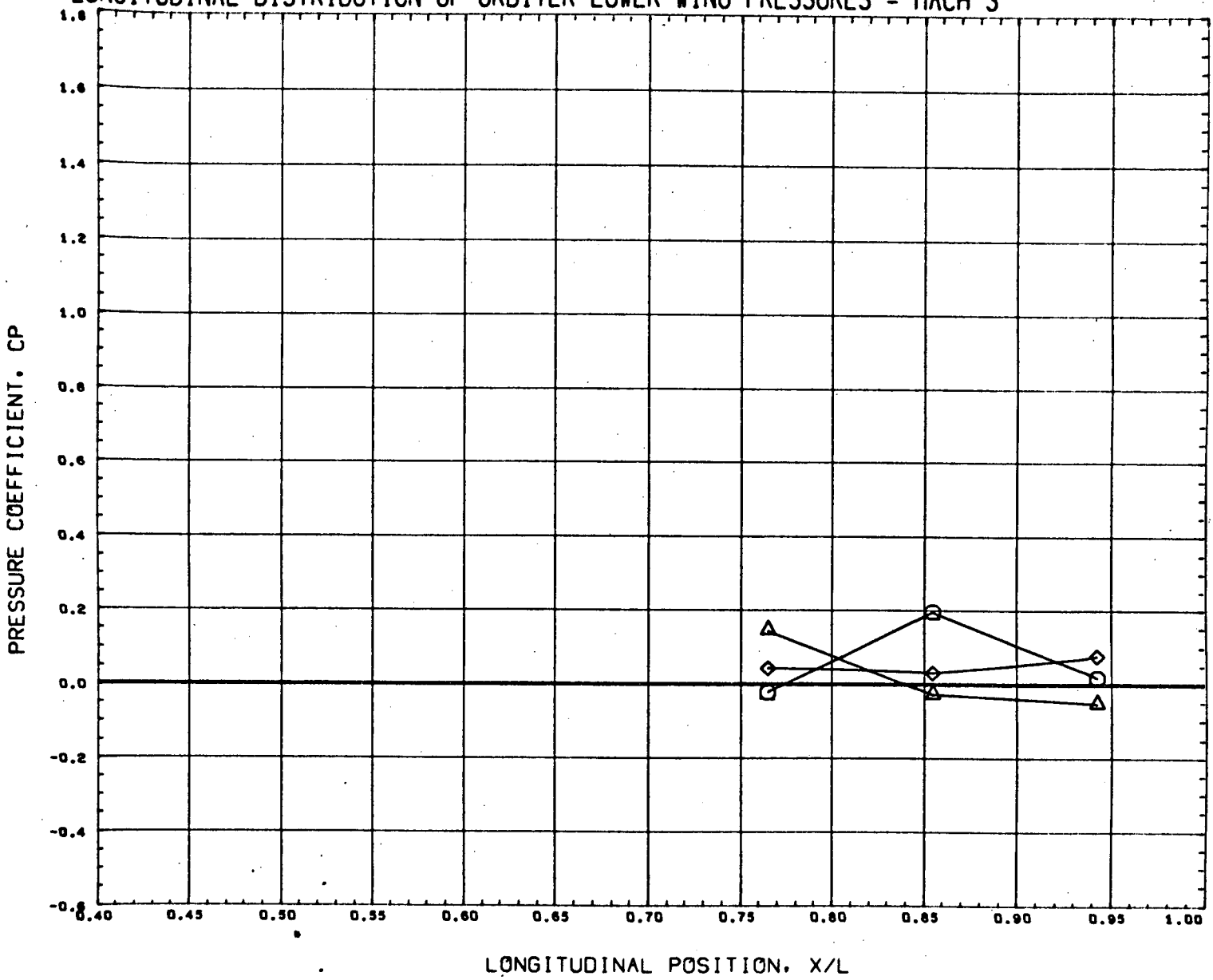
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



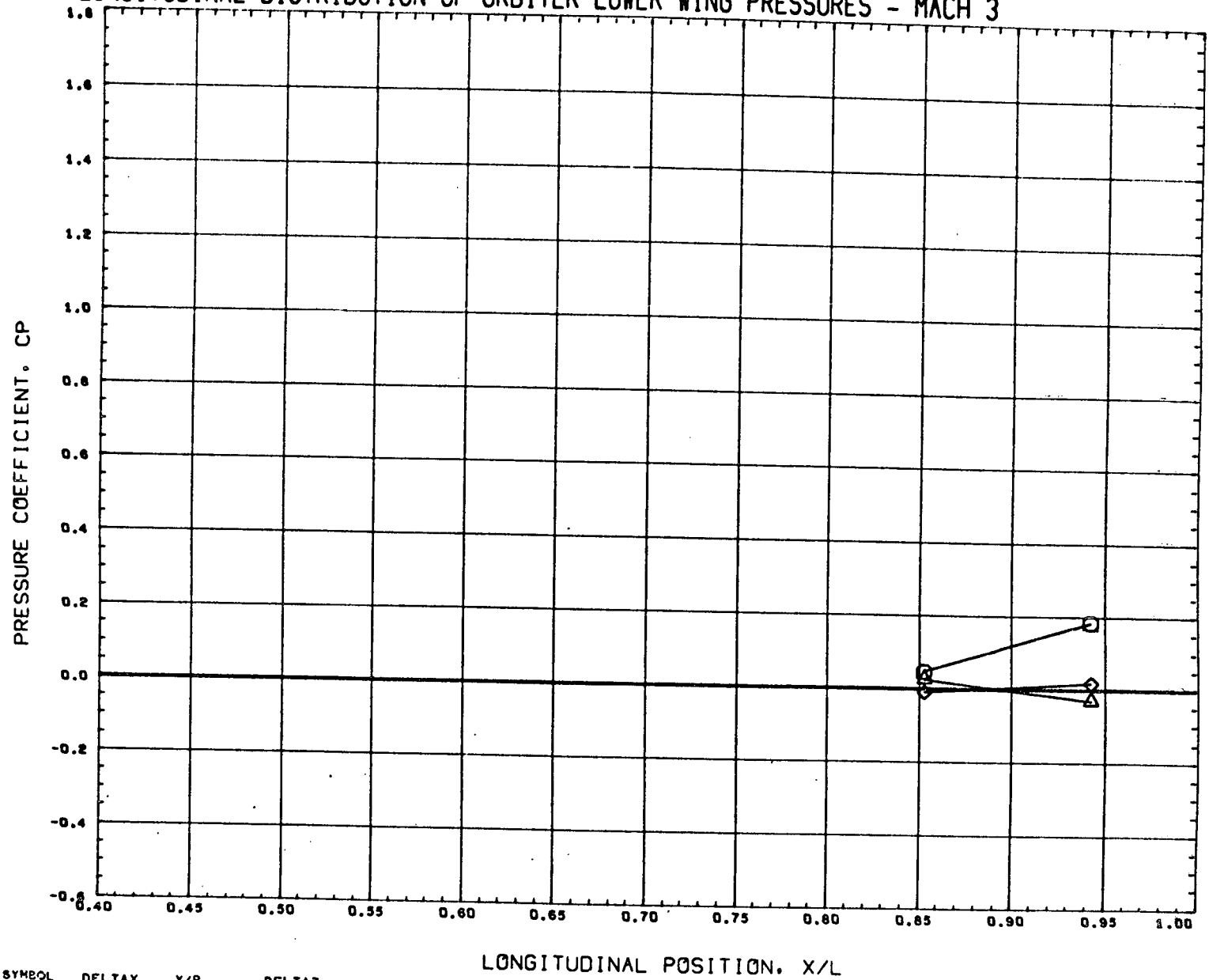
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.120
△	0.102		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.102		
◇	0.228		

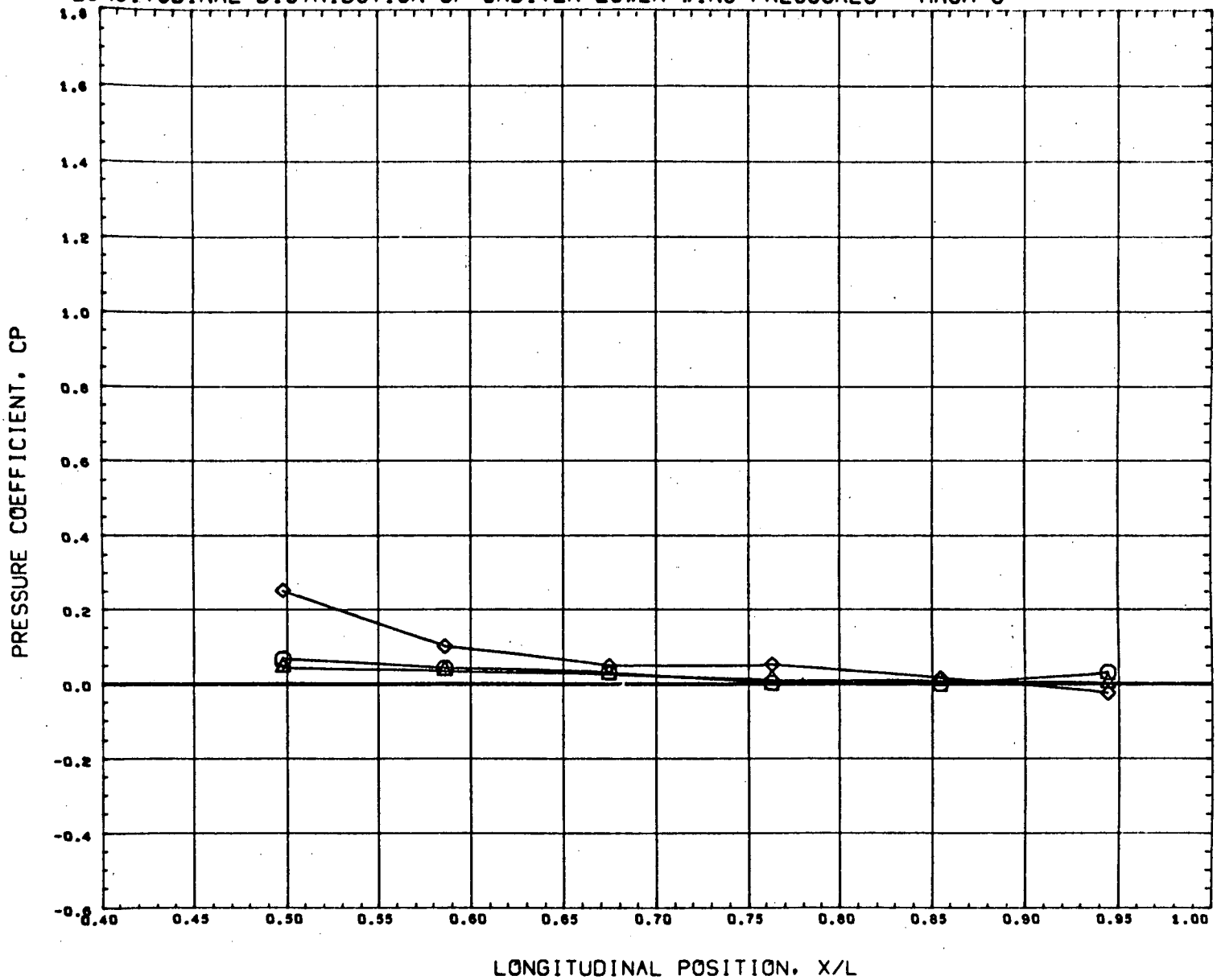
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



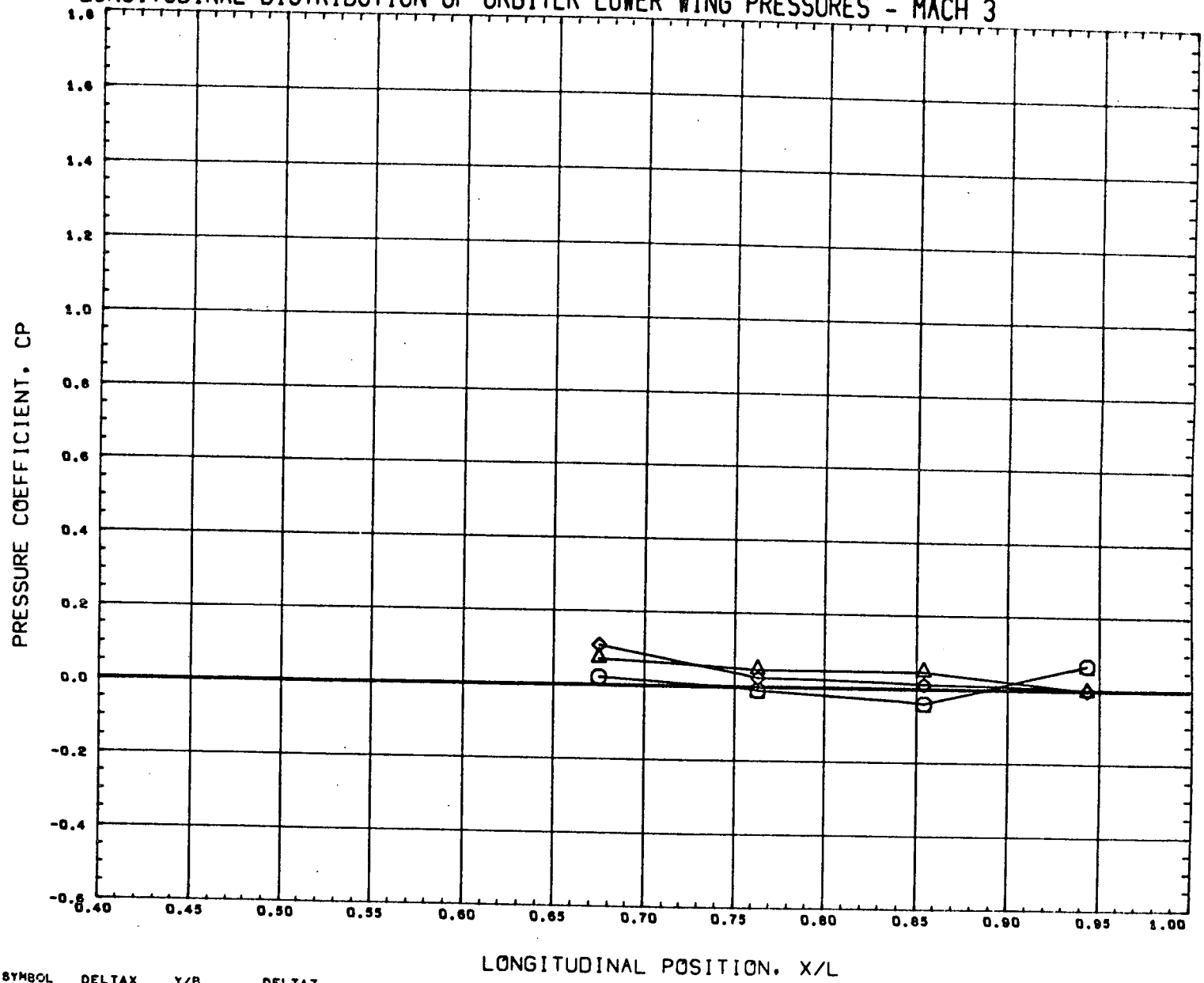
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.230	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

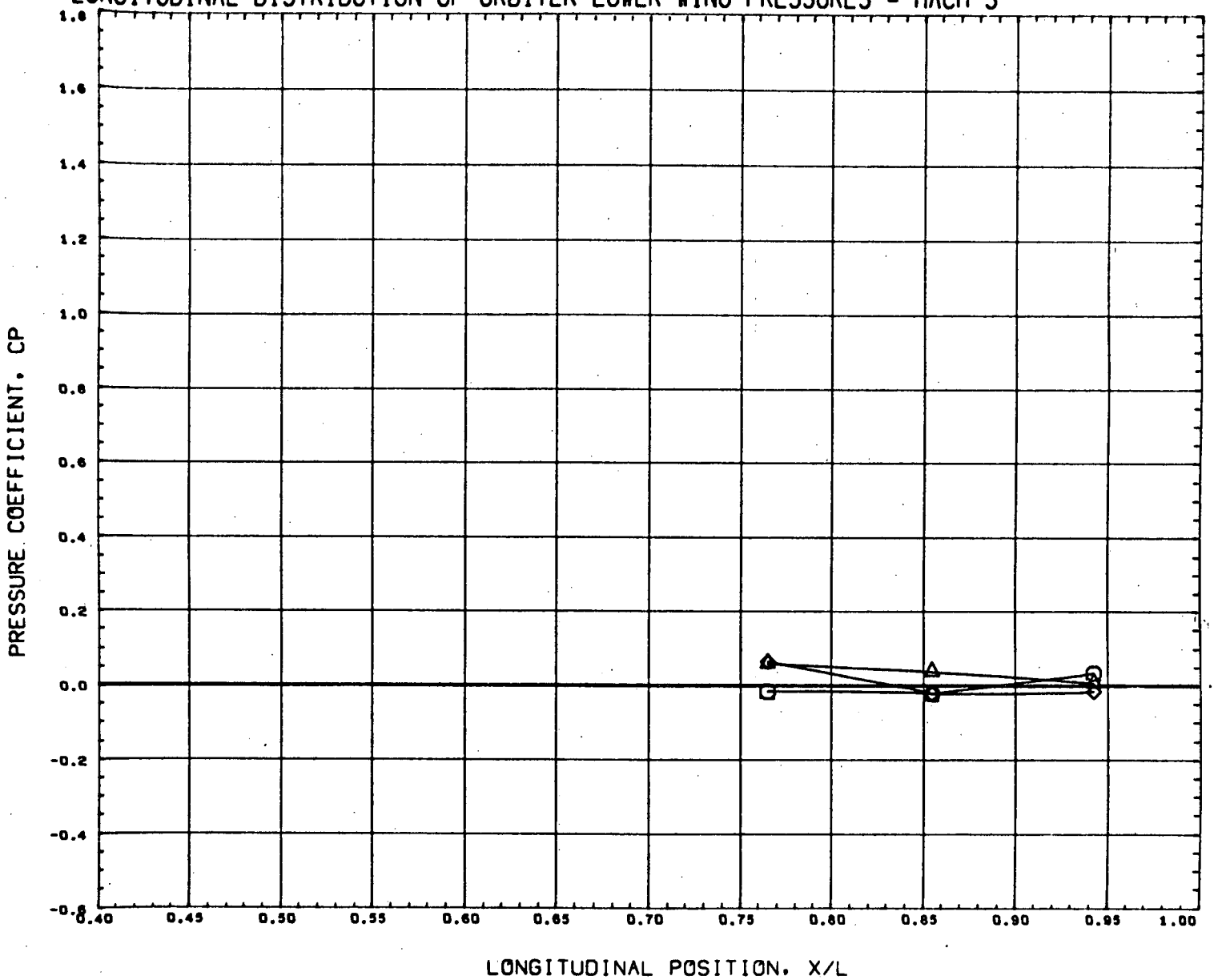
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.568	0.151
△	0.103		
◇	0.225		

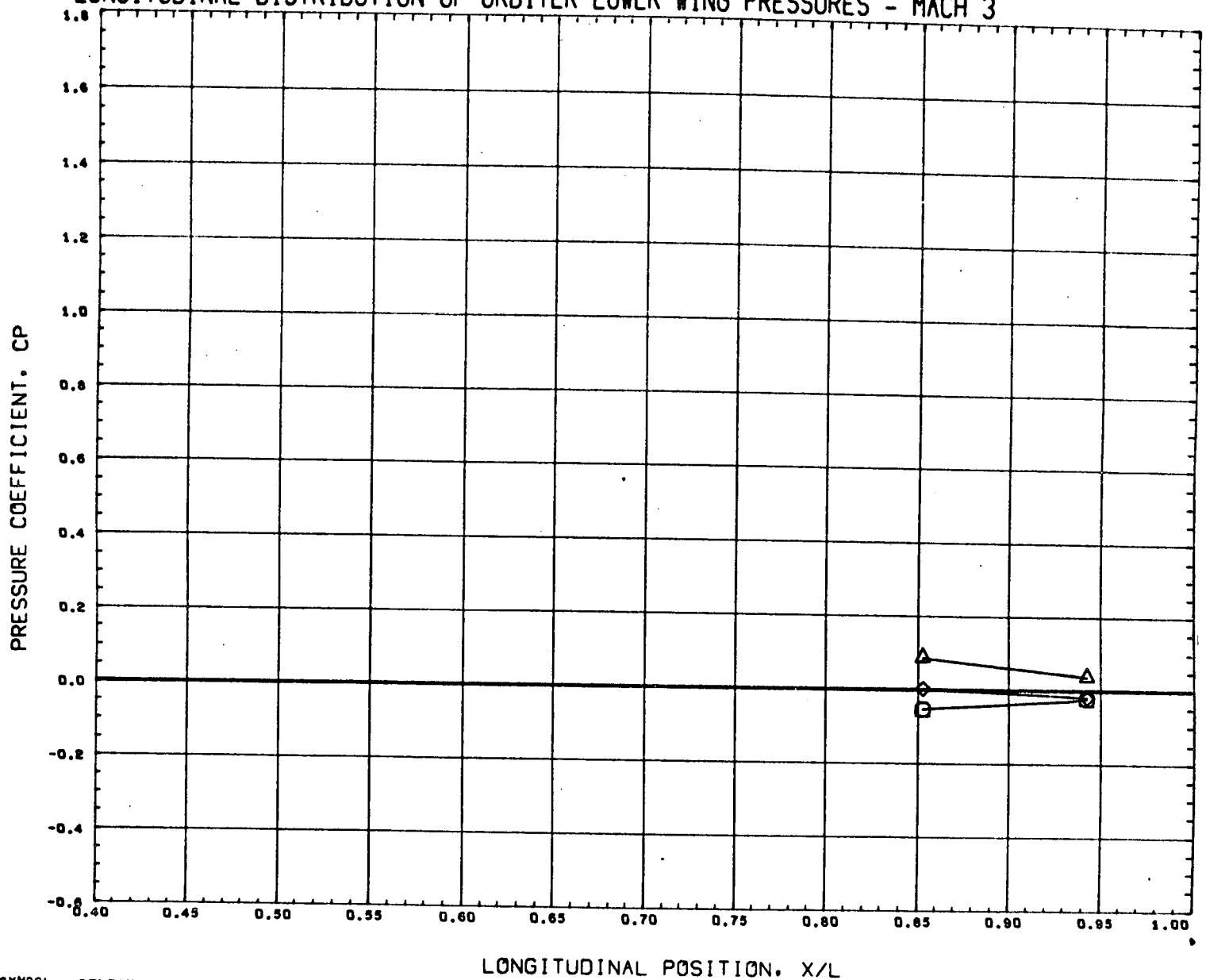
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.738	0.151
△	0.103		
◇	0.225		

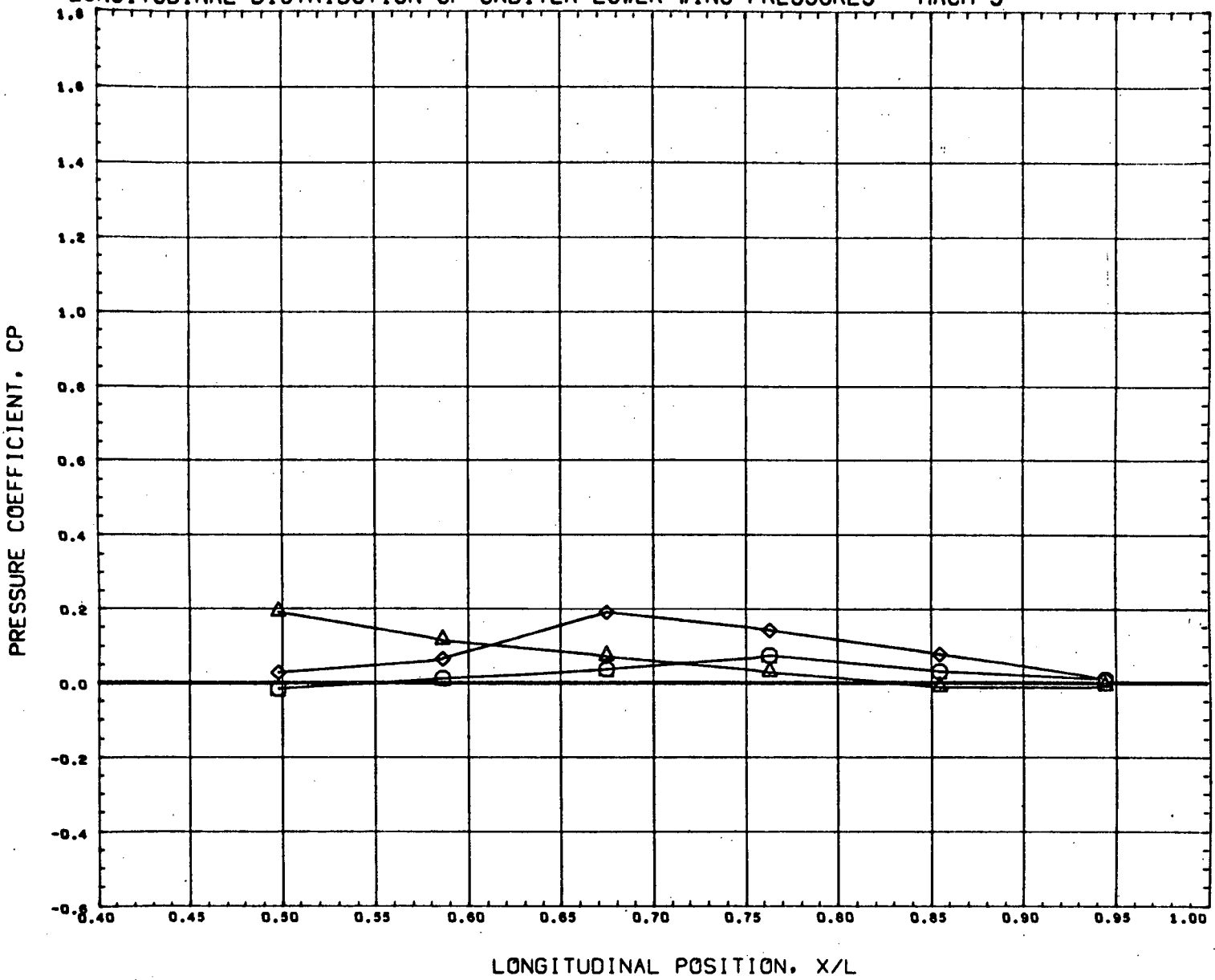
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8313• PAGE 220

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



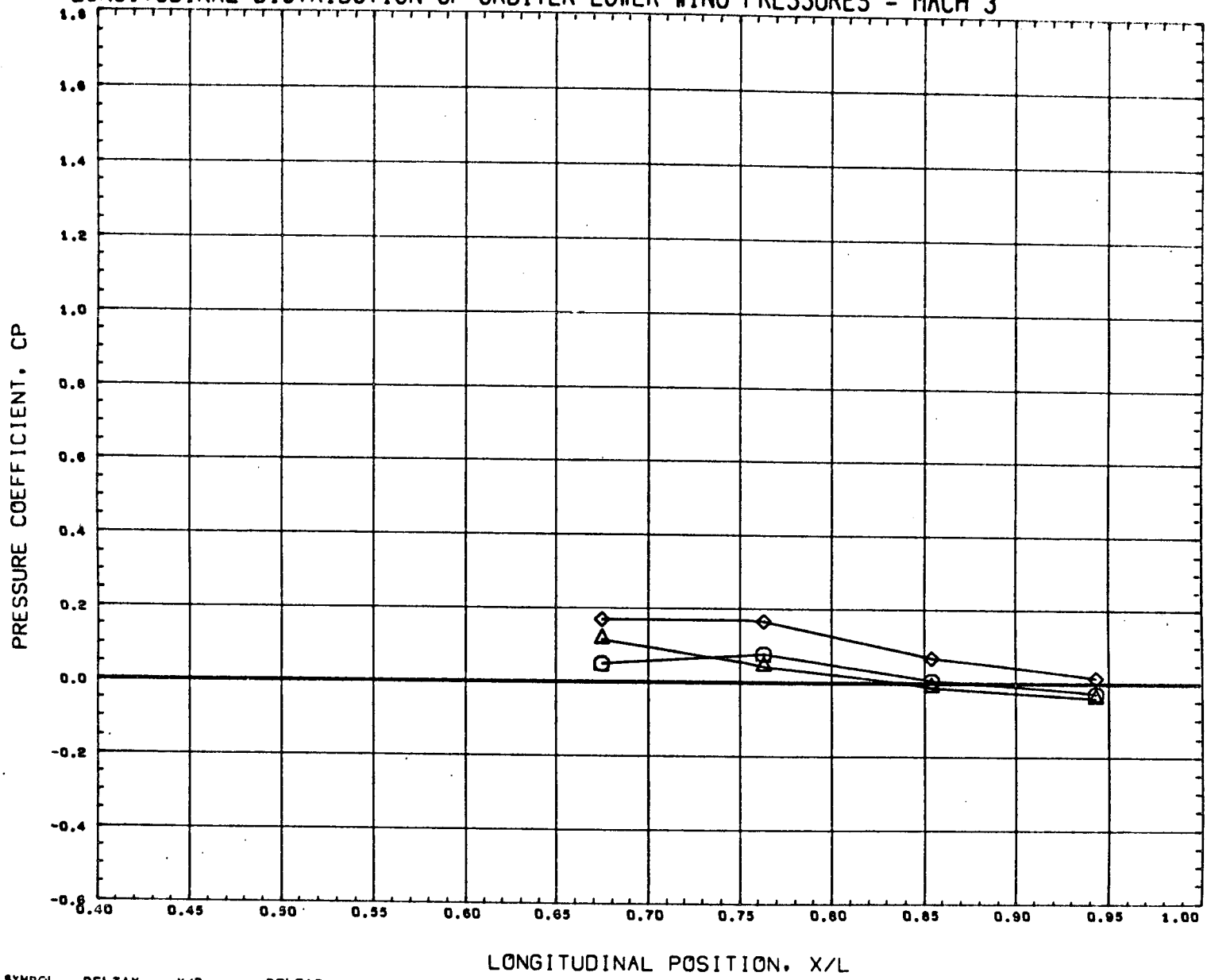
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.230	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

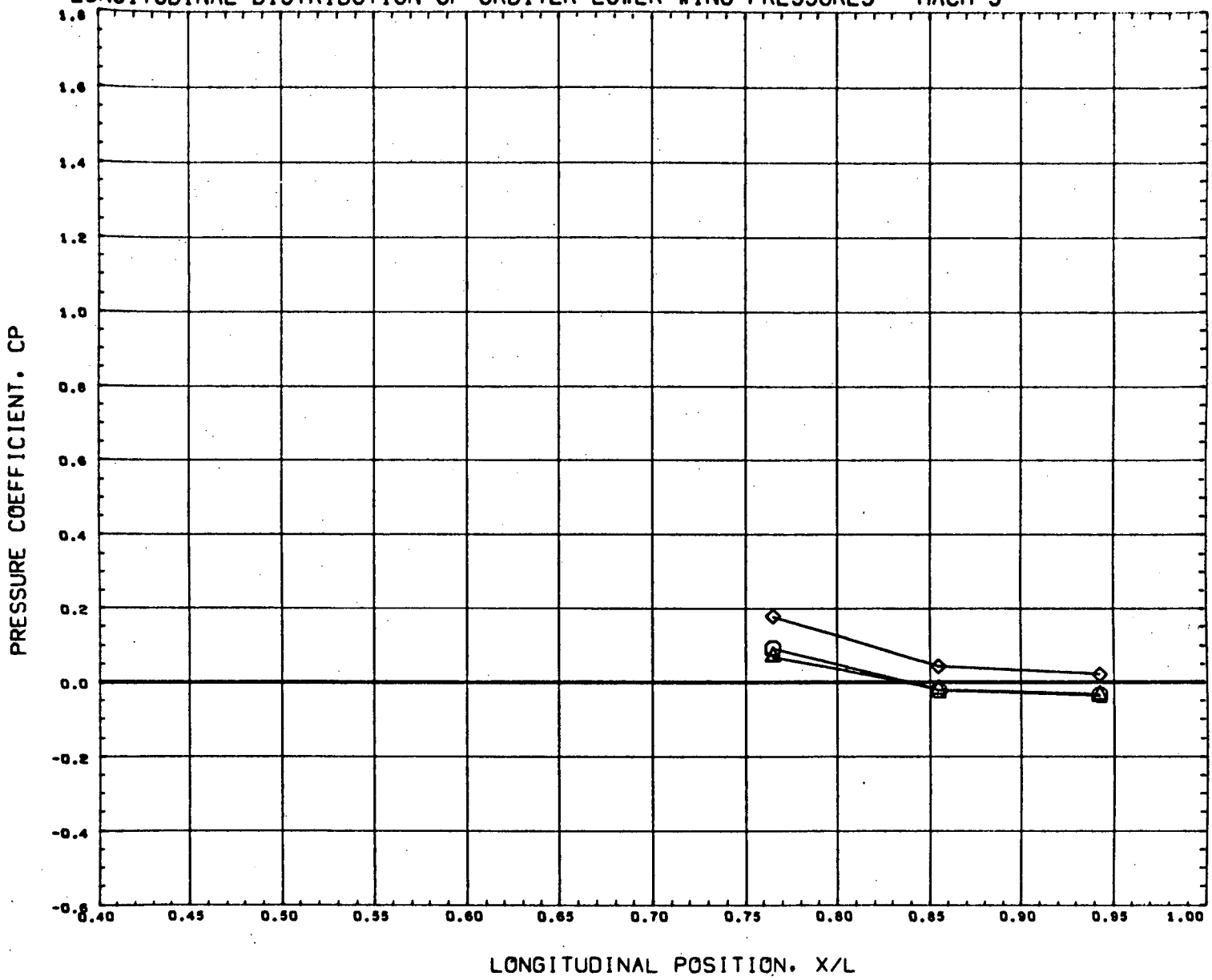
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



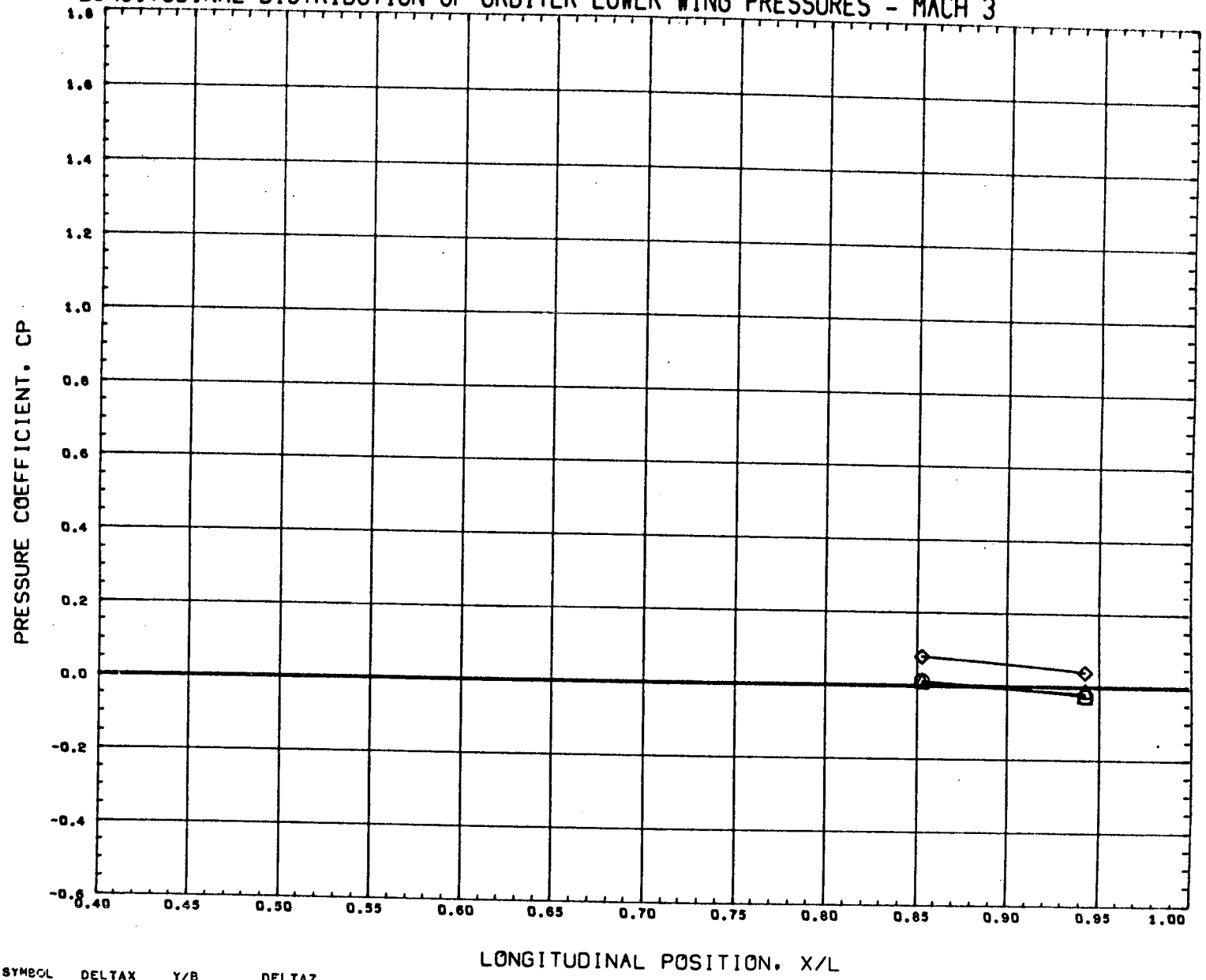
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.568	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.738	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

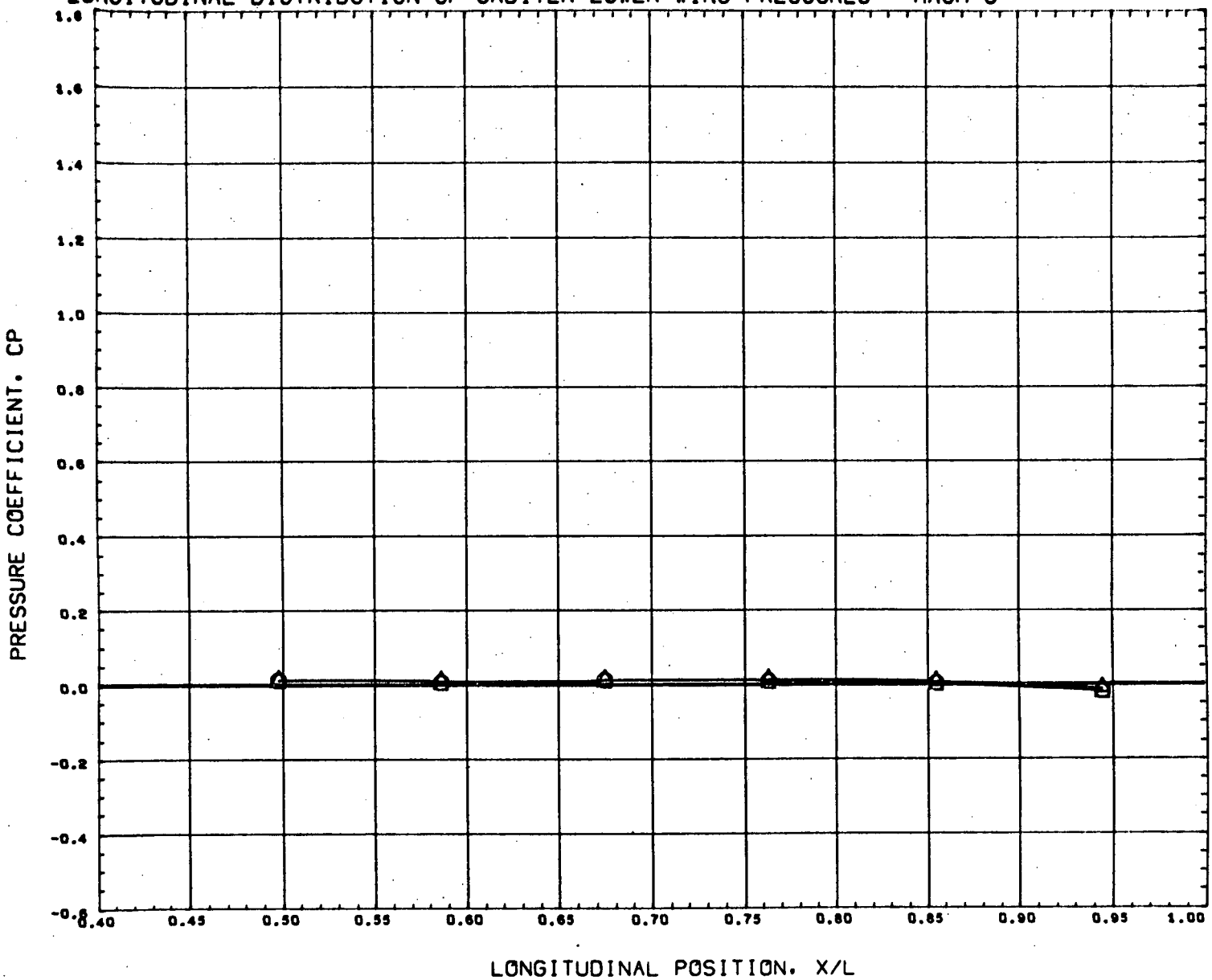
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.230	0.908
△	0.479		

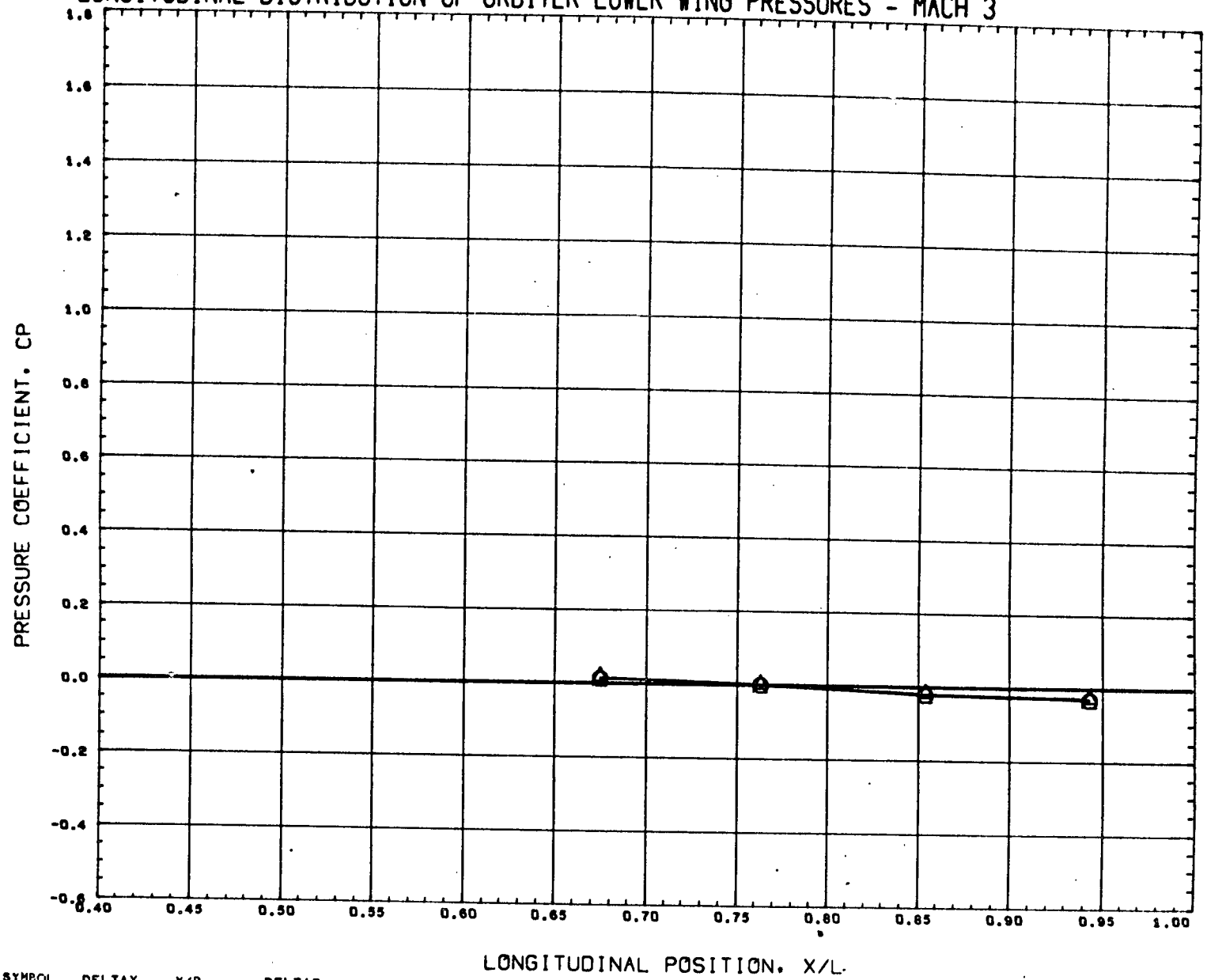
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.399	0.908
△	0.479		

PARAMETRIC VALUES

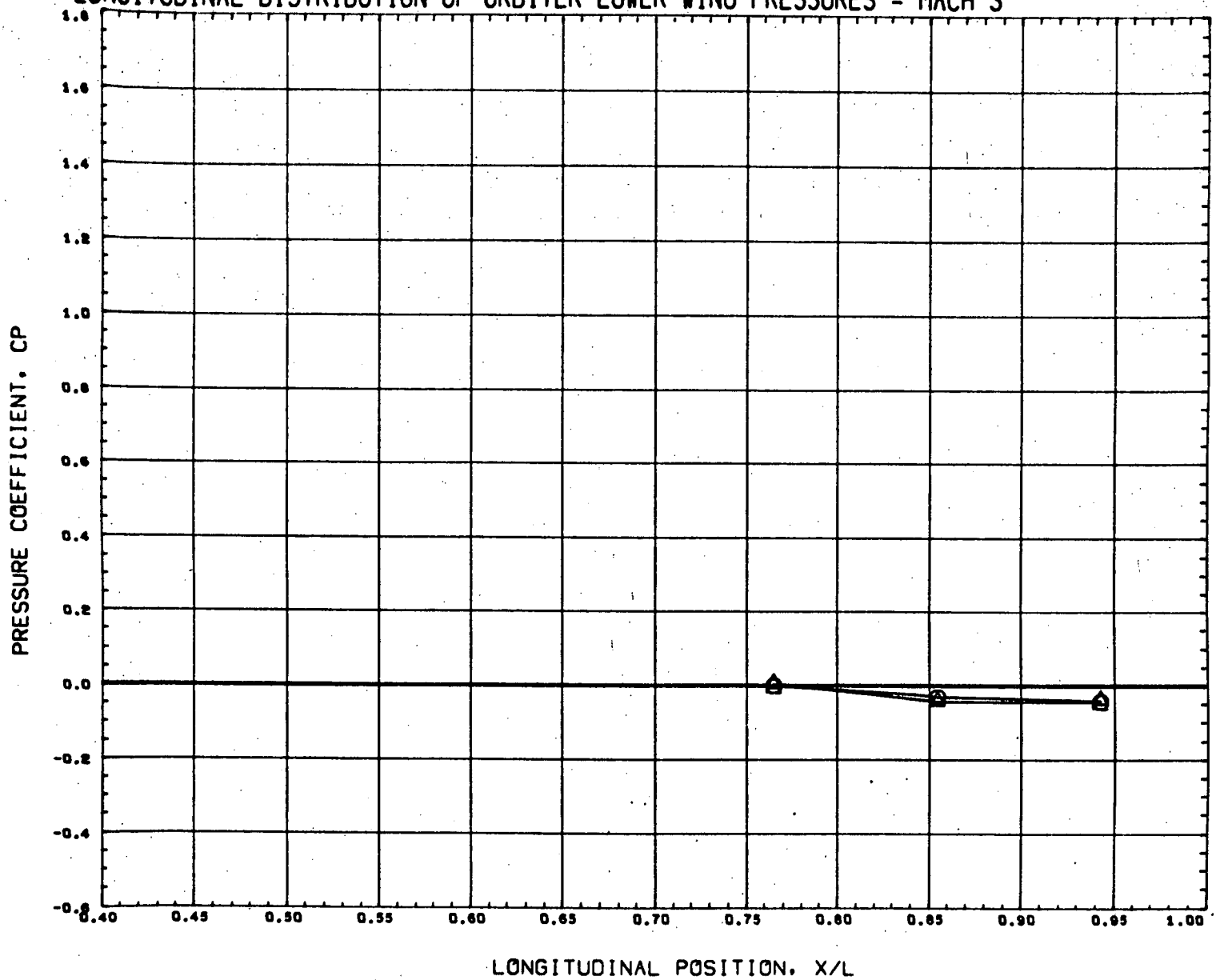
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8313•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



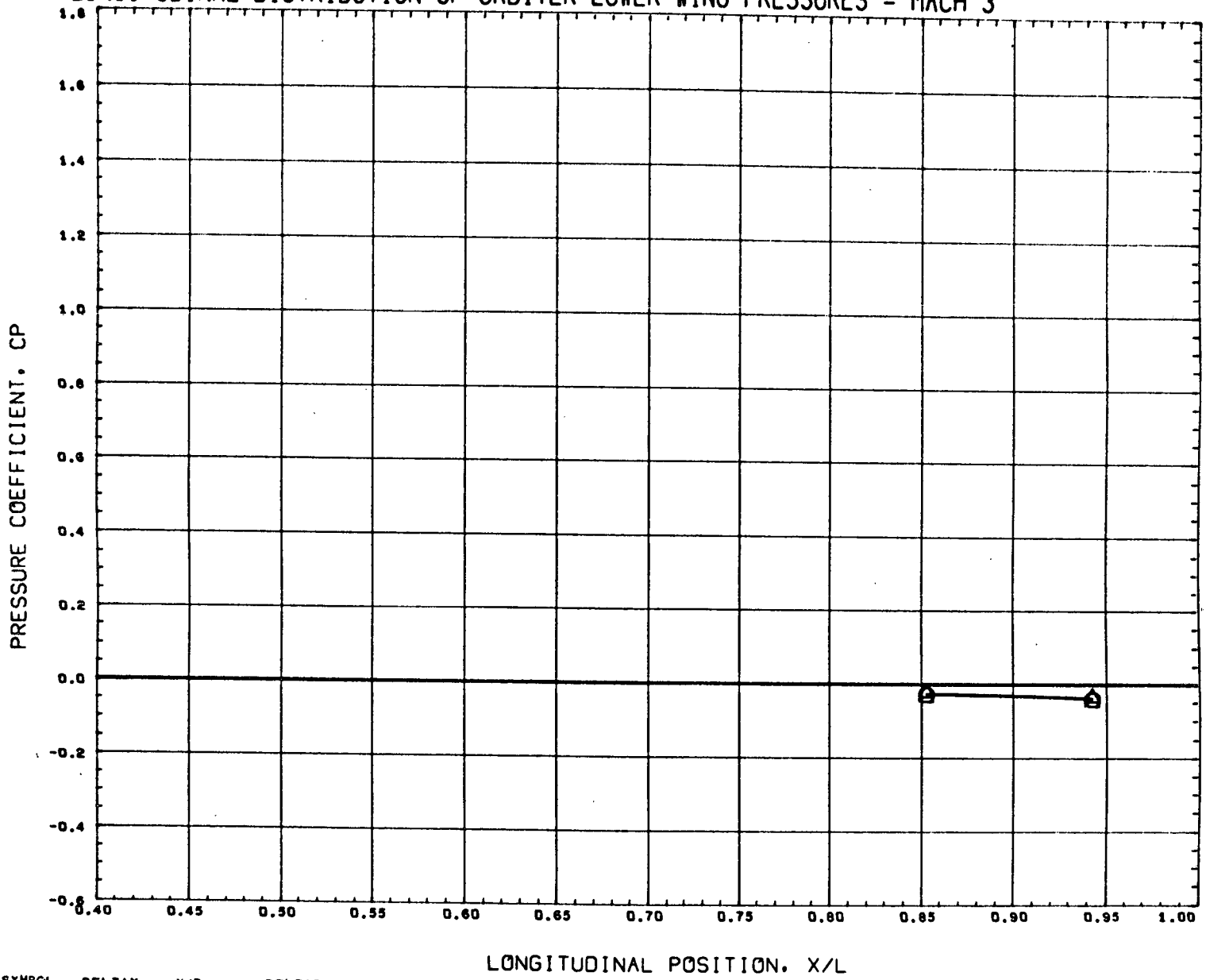
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.568	0.908
△	0.479		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



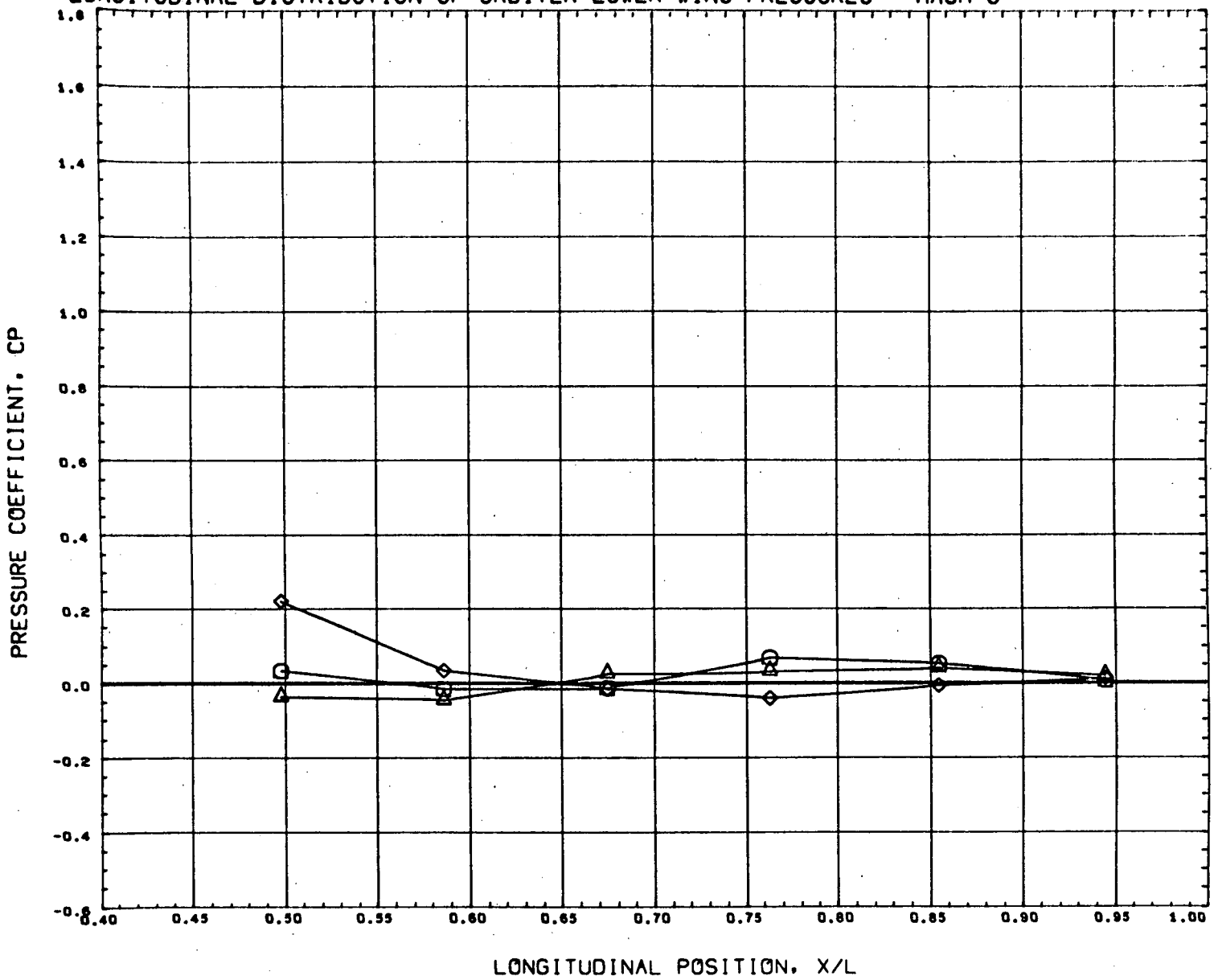
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.738	0.908
△	0.479		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.120
△	0.103		
◇	0.226		

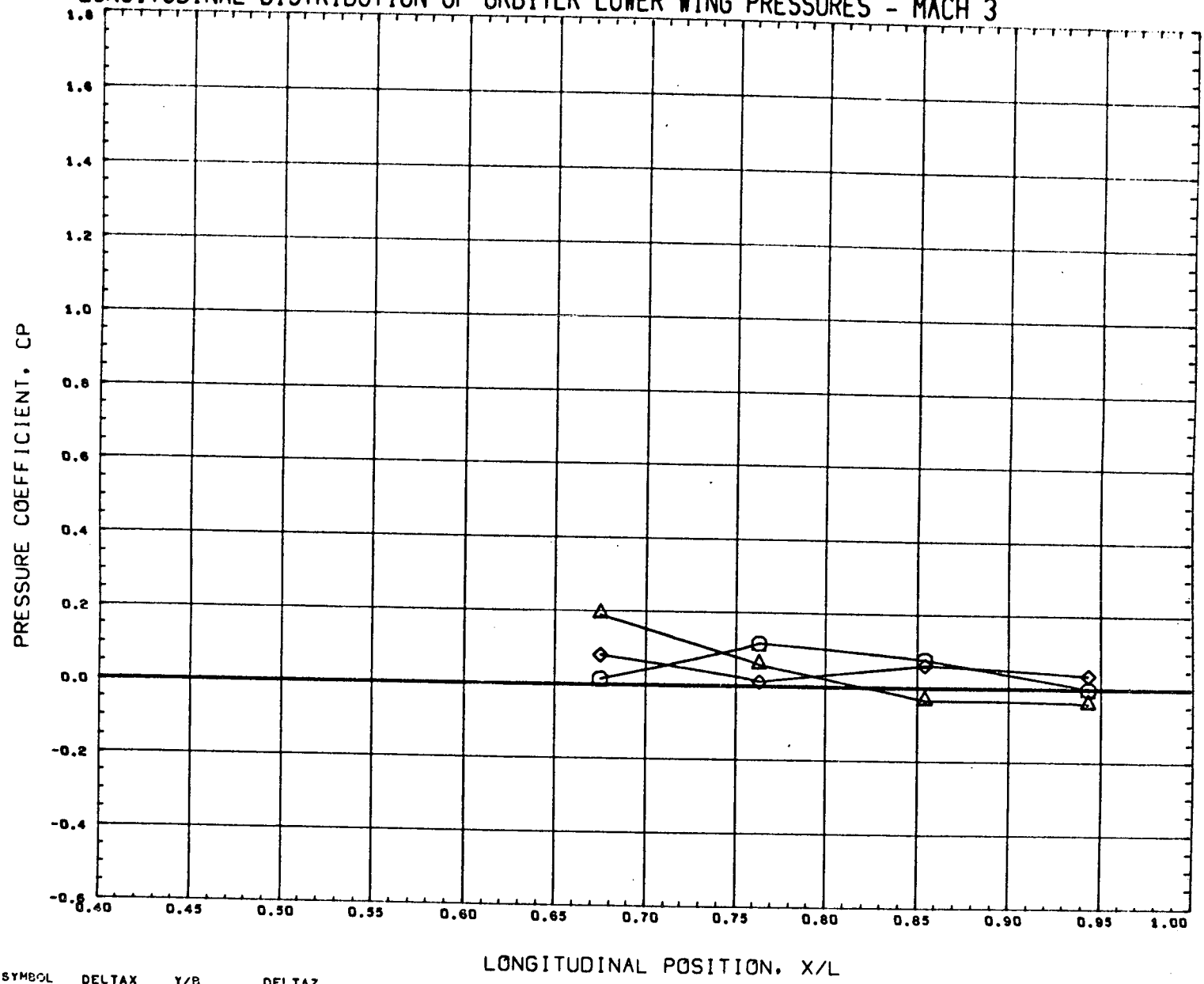
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.103		
◇	0.226		

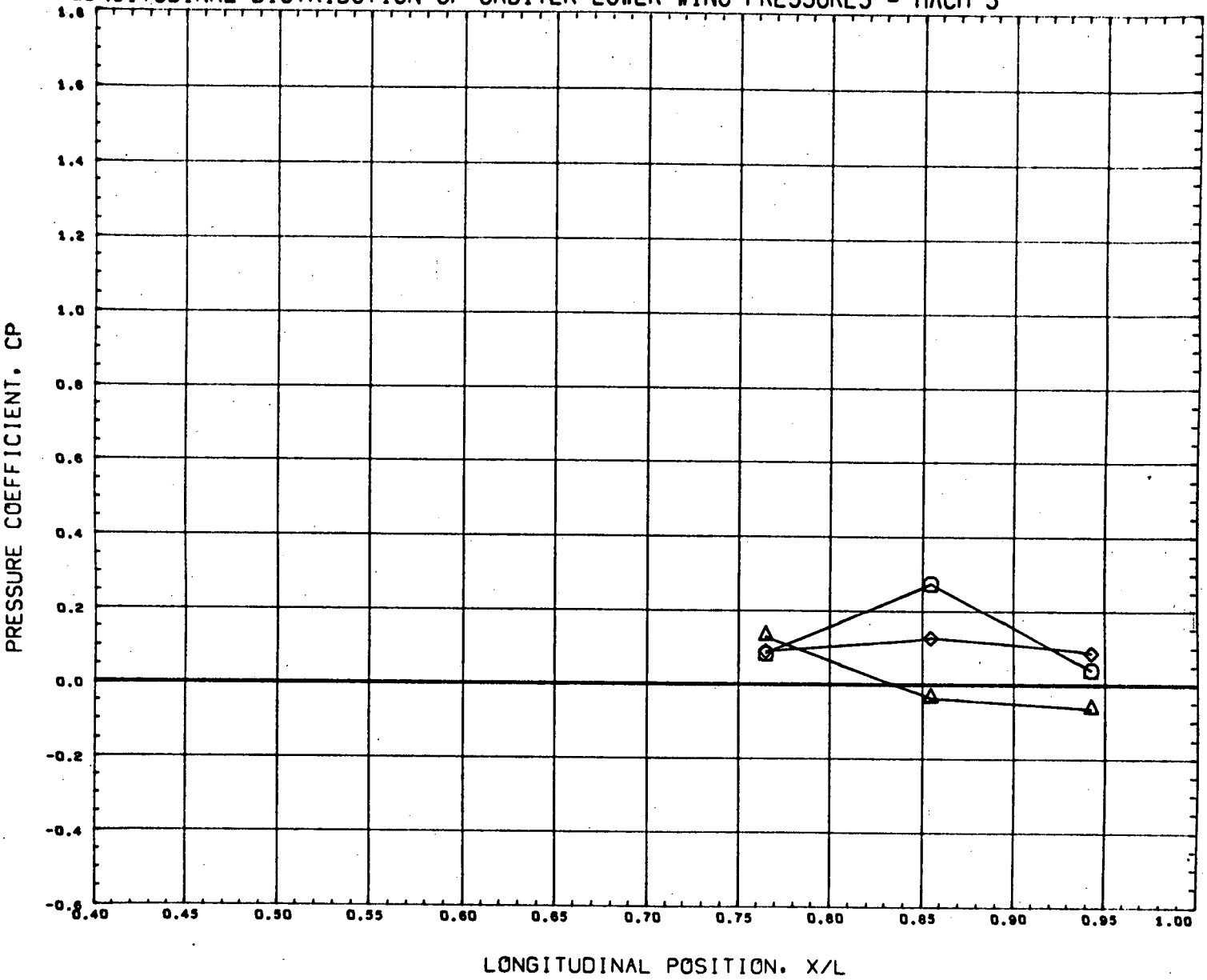
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

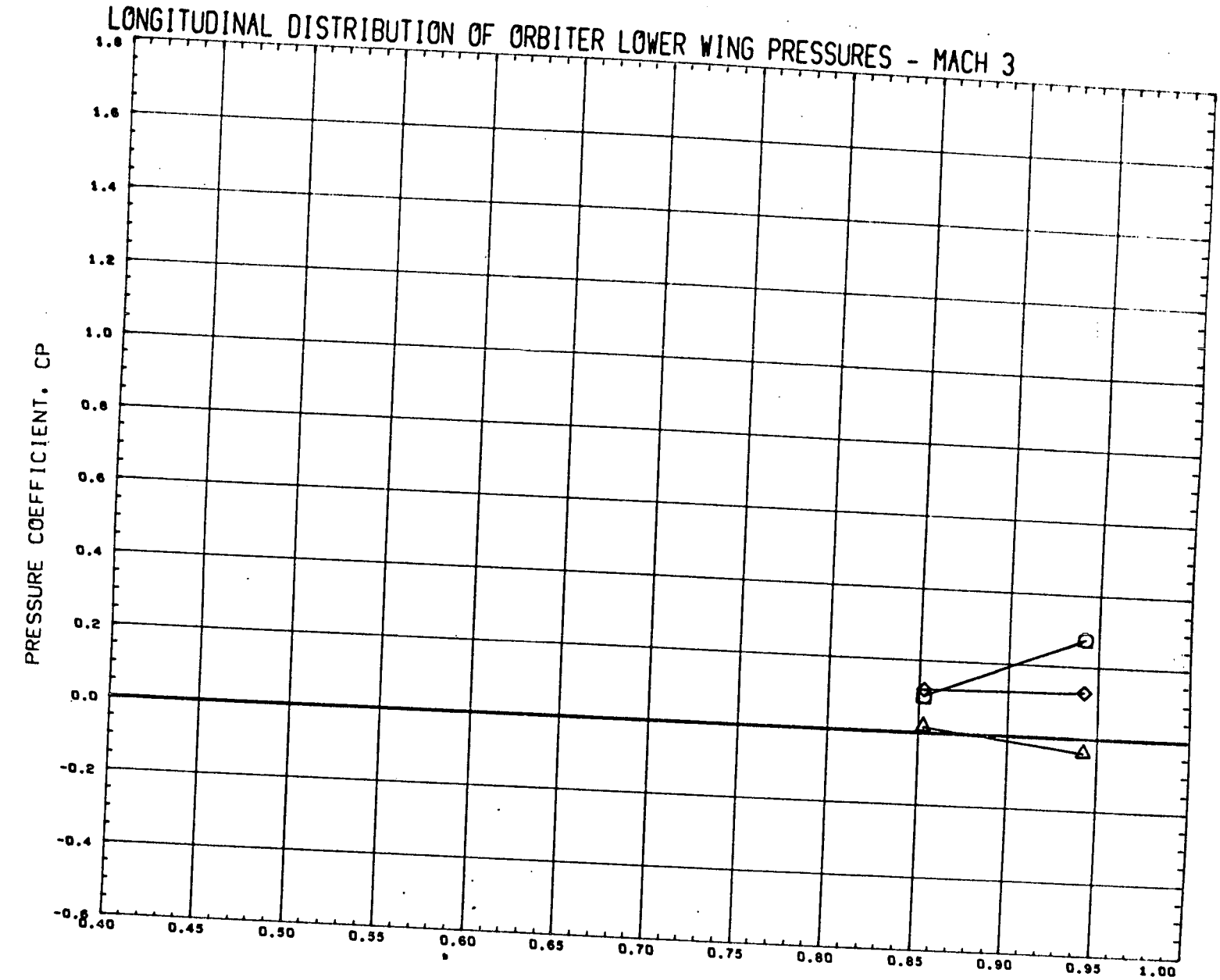


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

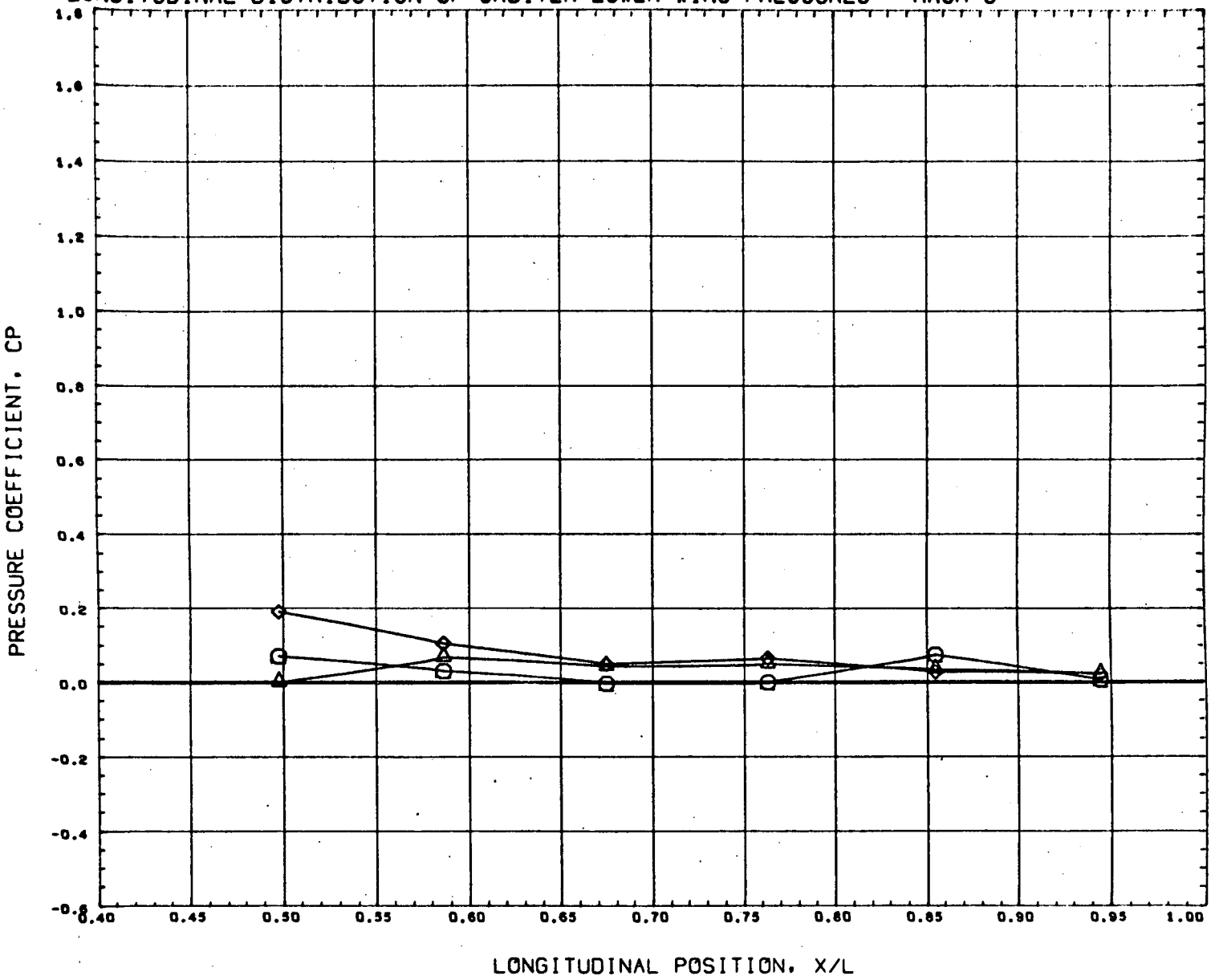
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

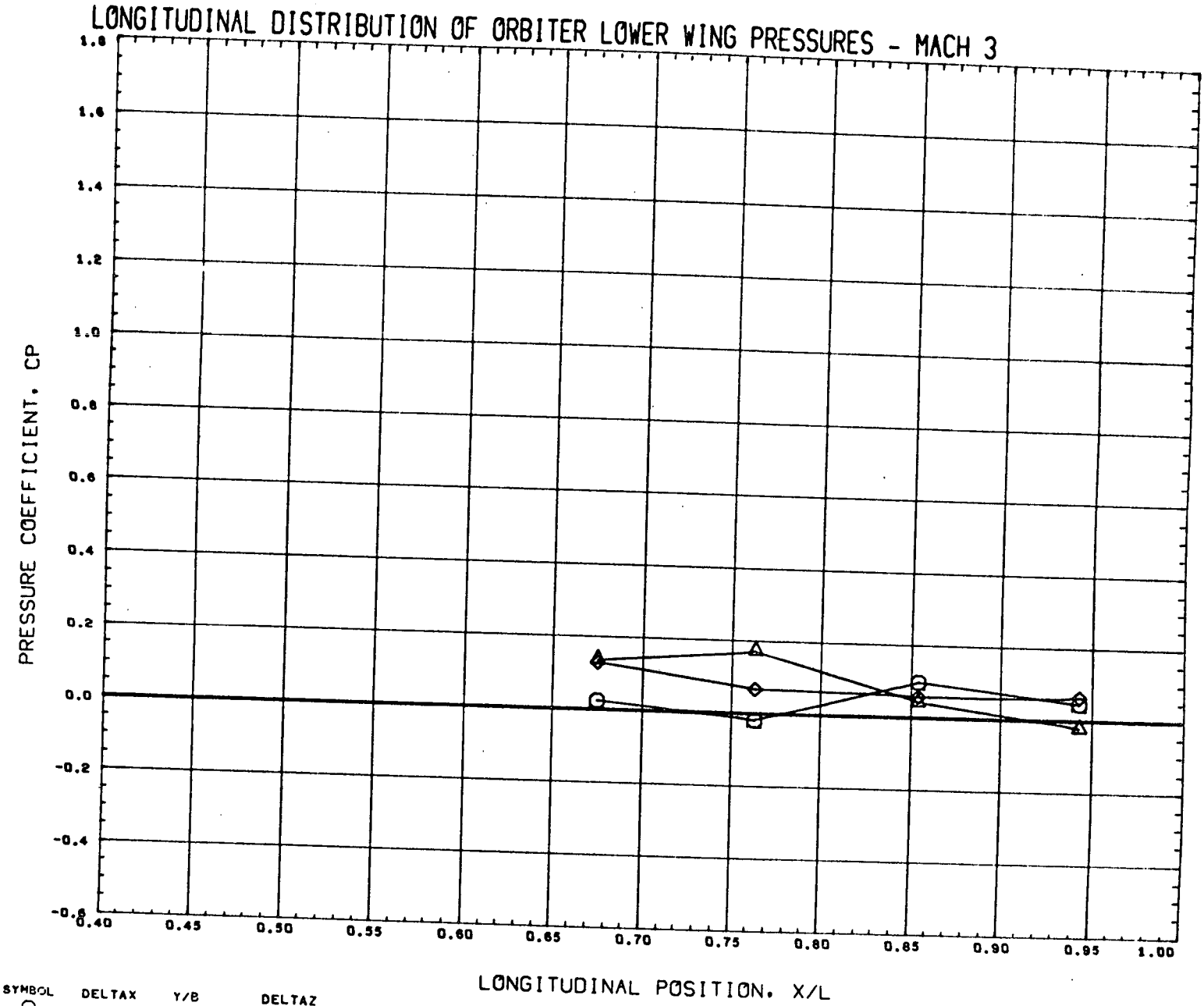


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.230	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

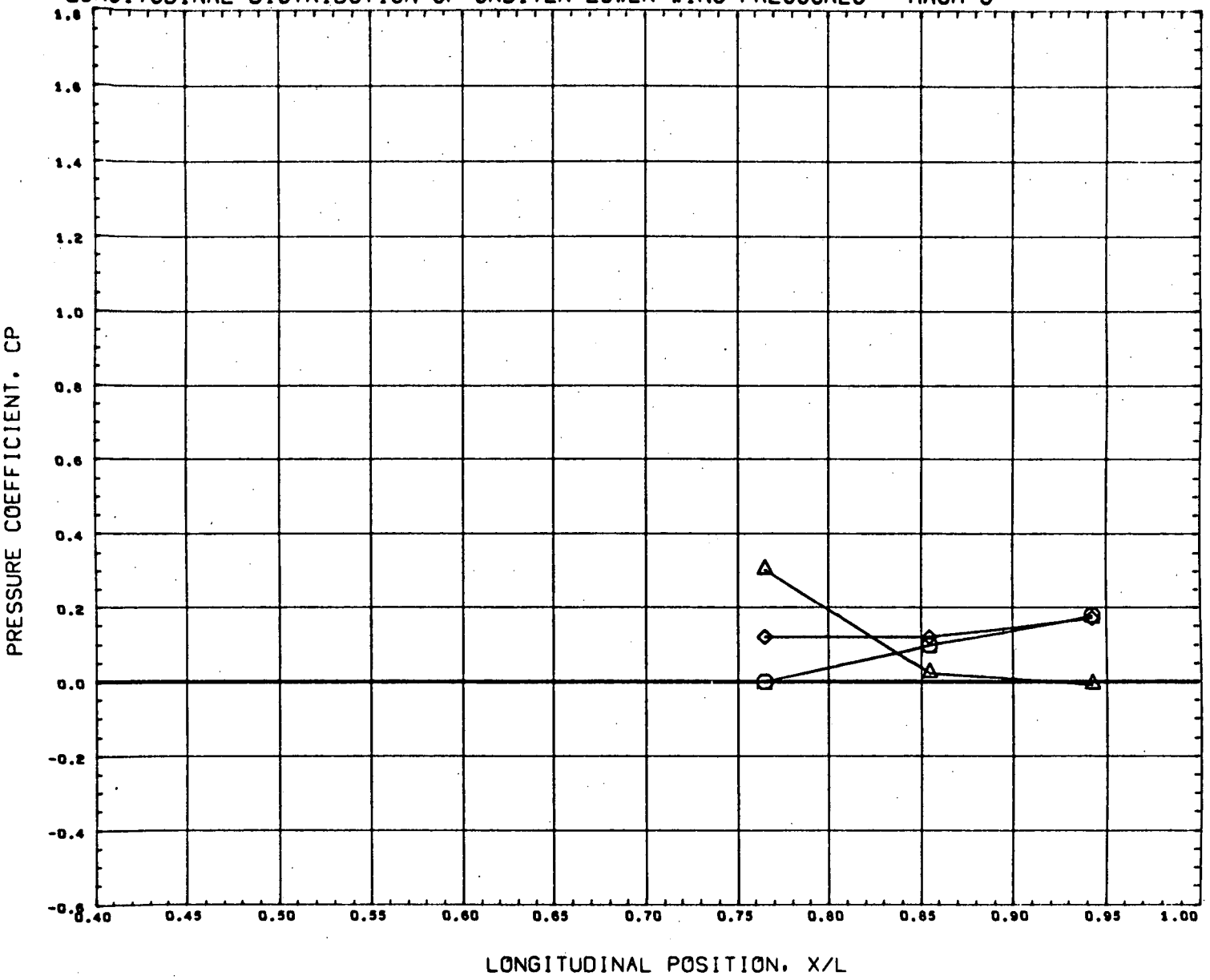
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.568	0.151
△	0.103		
◇	0.226		

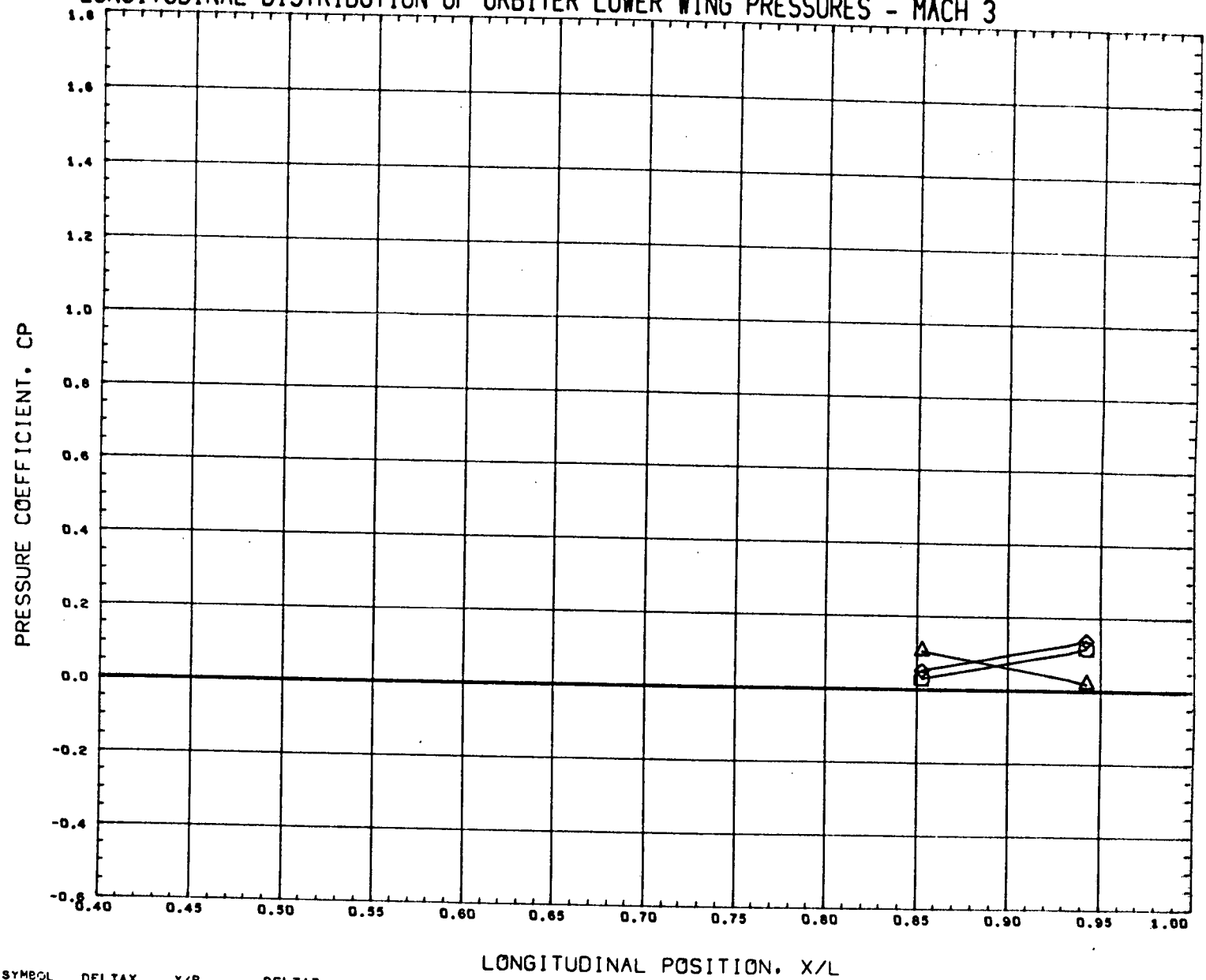
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.738	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

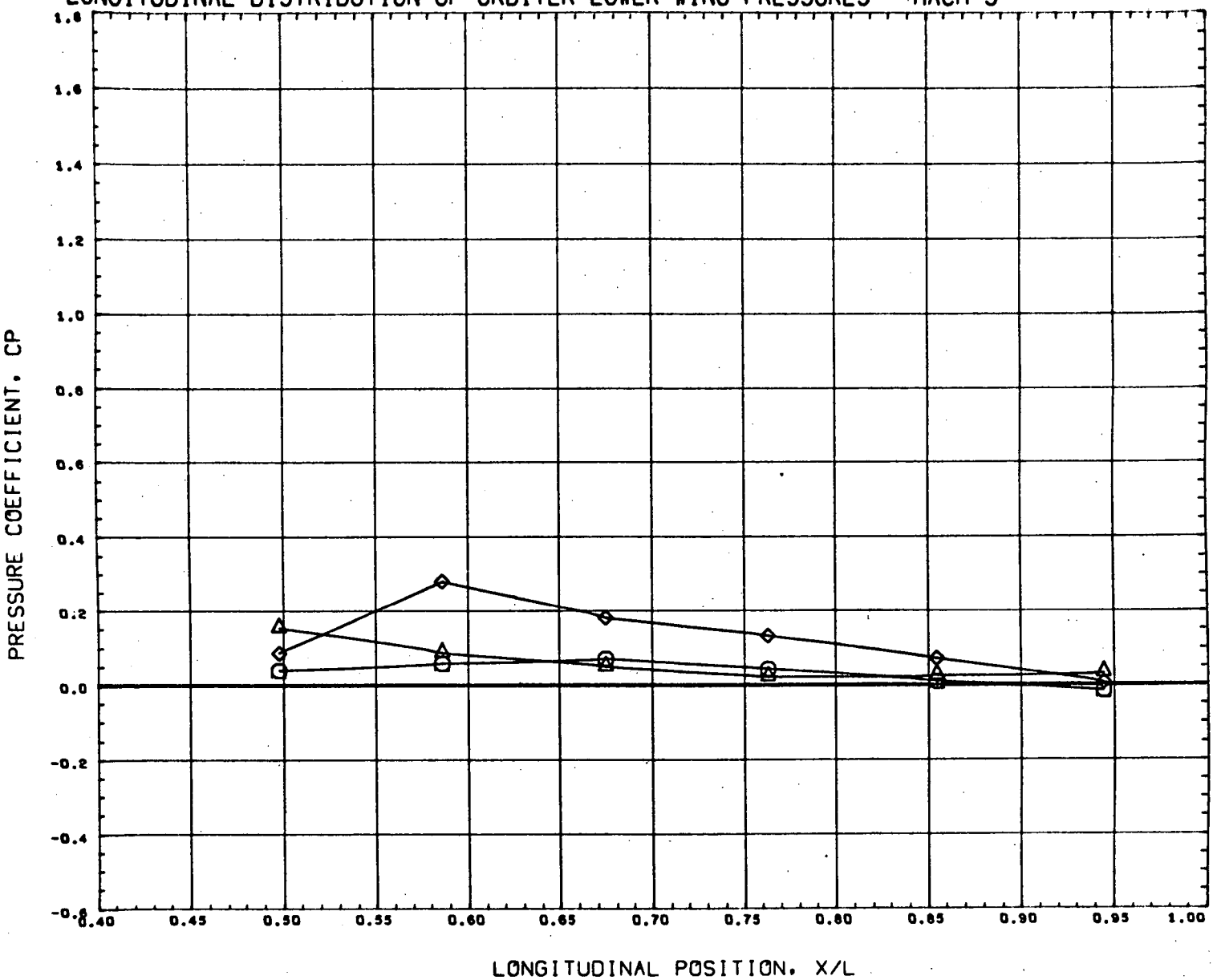
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.230	0.228
△	0.103		
◇	0.227		

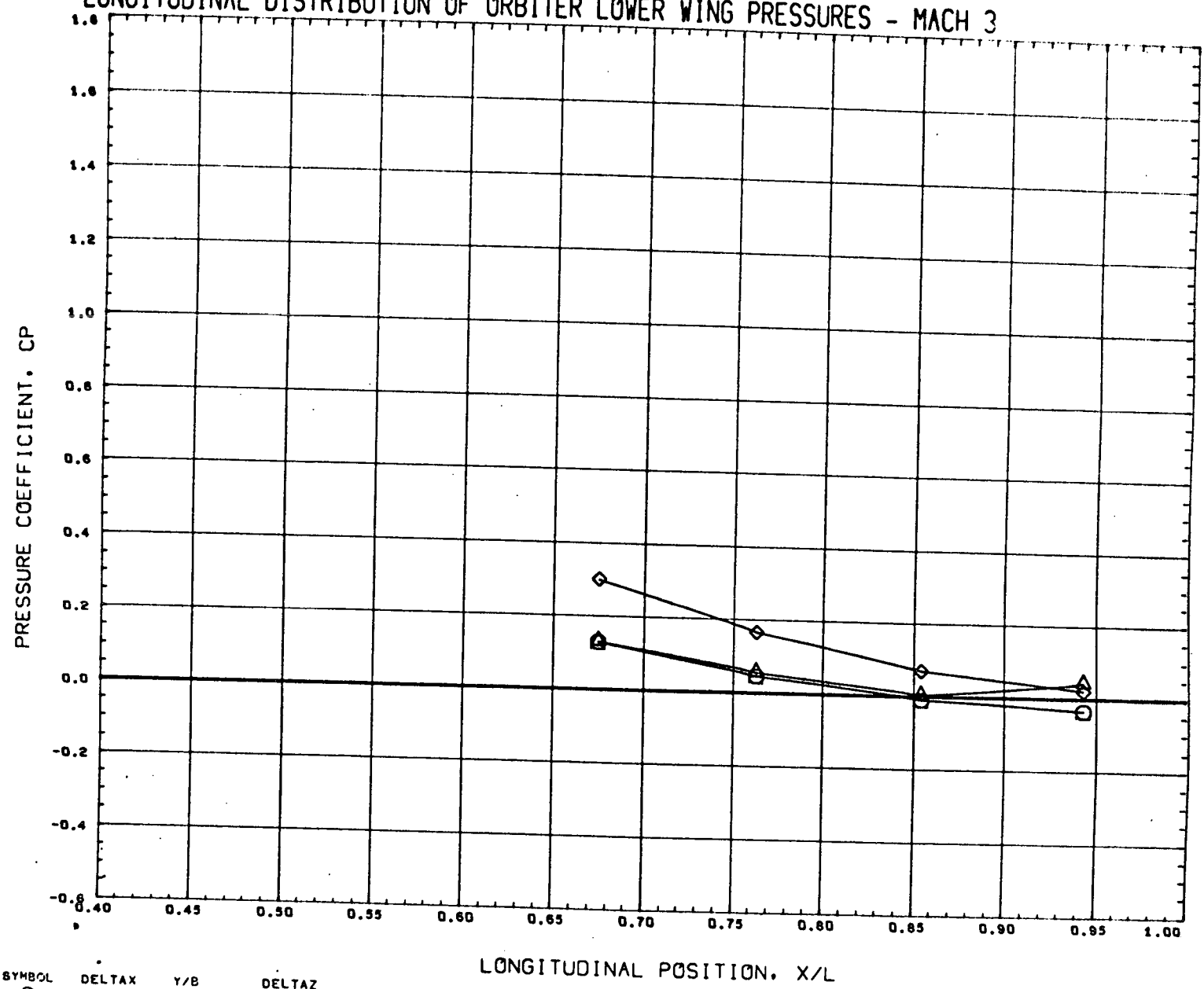
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8314• PAGE 237

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.399	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

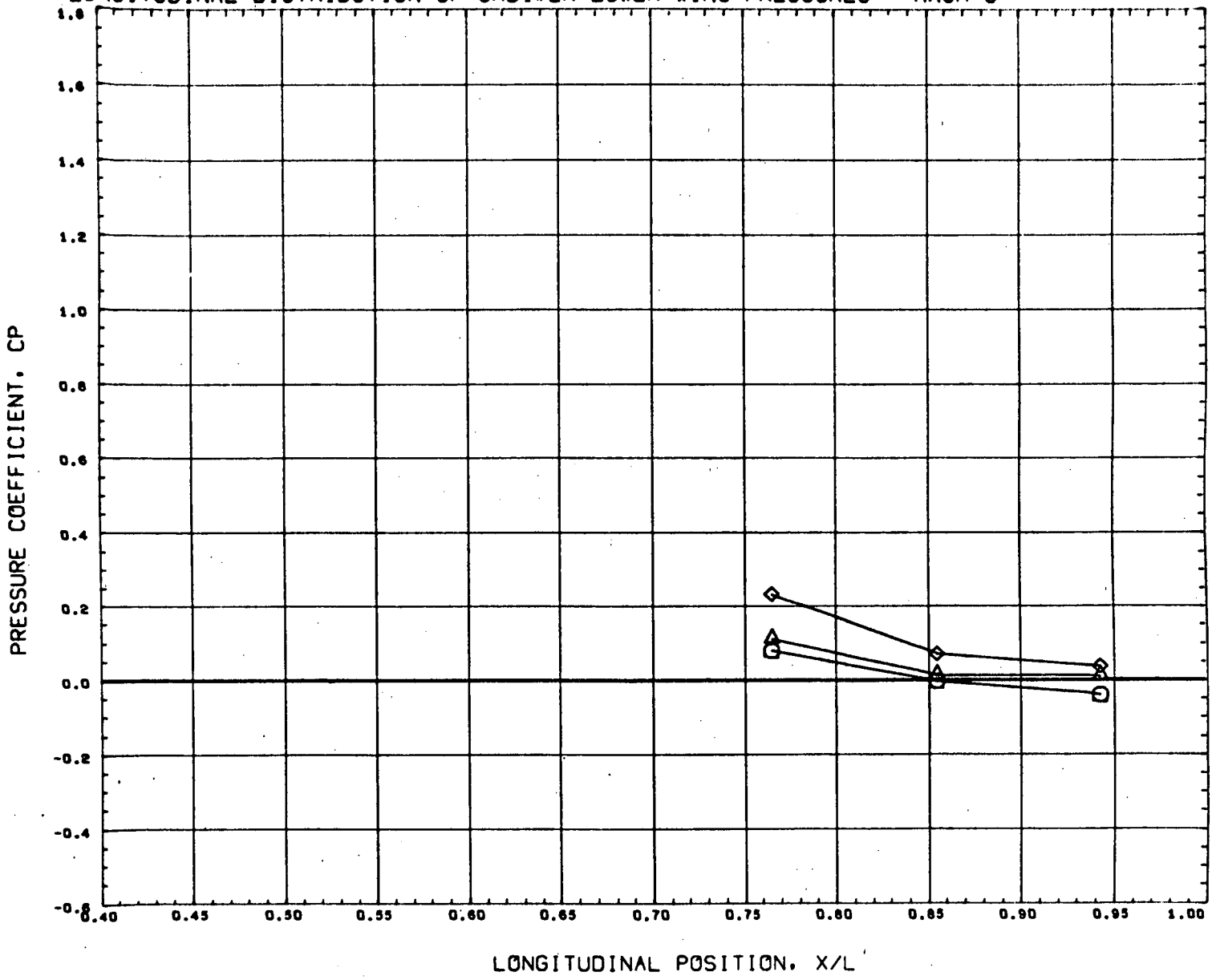
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

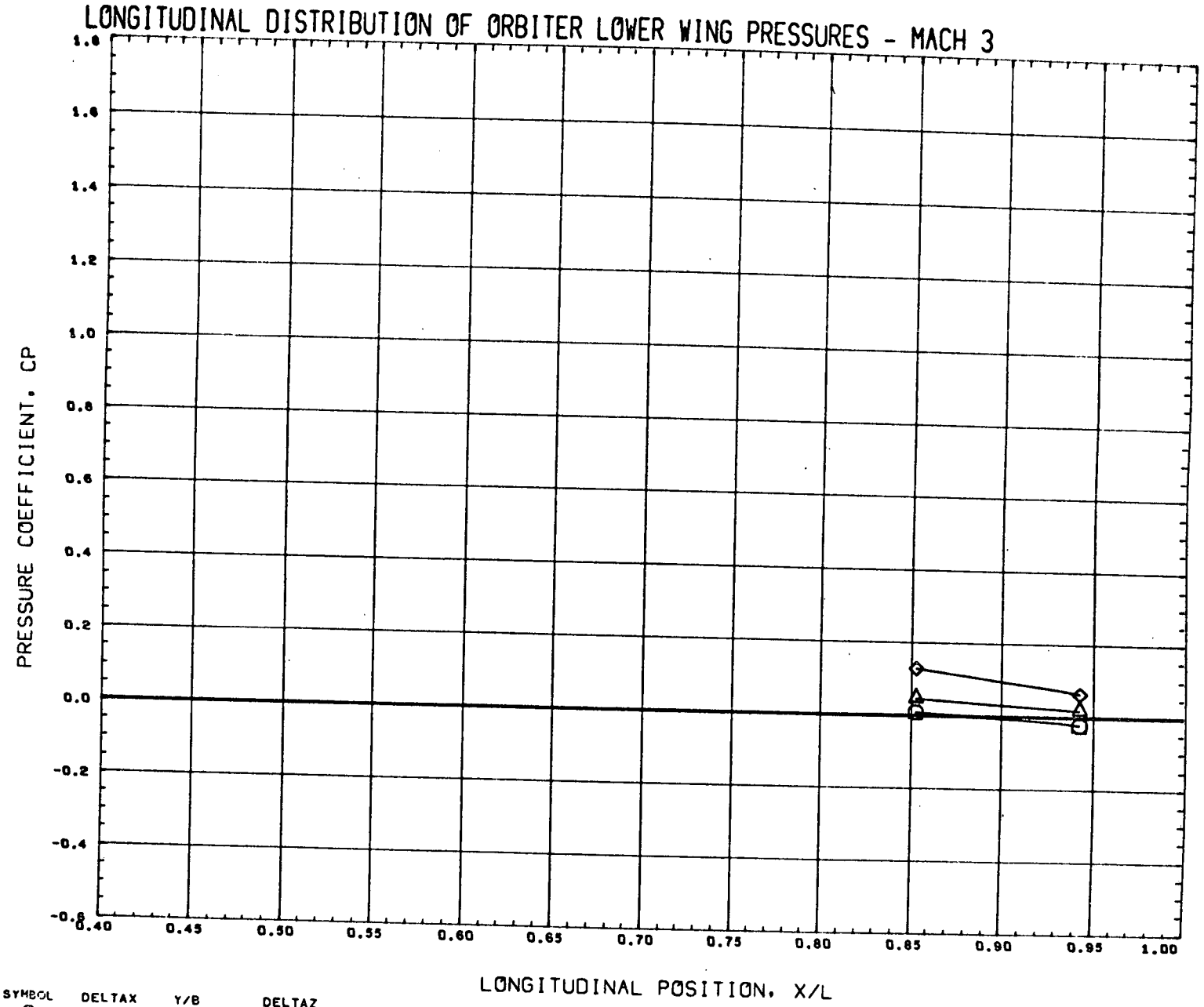


SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.568	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.738	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

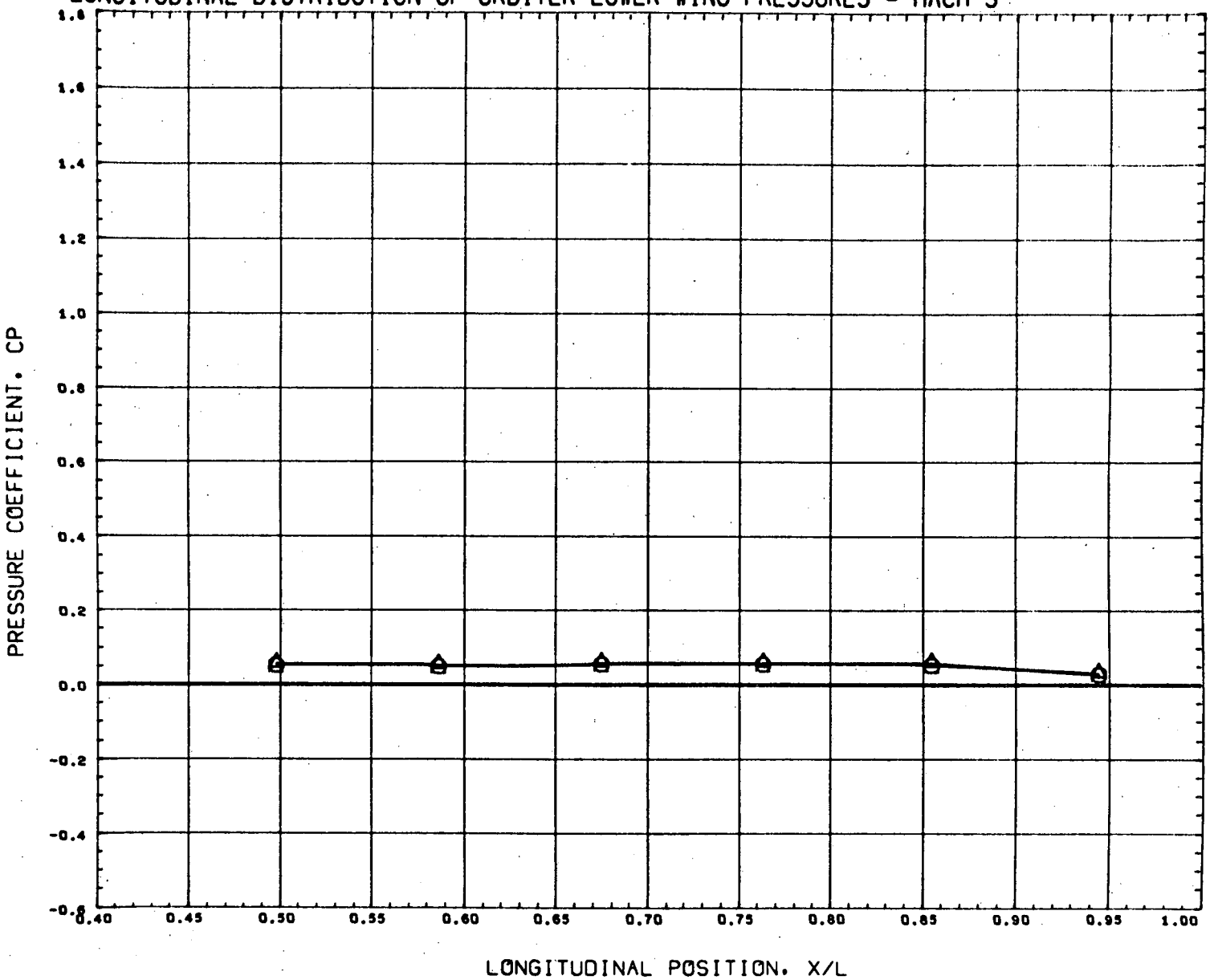
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



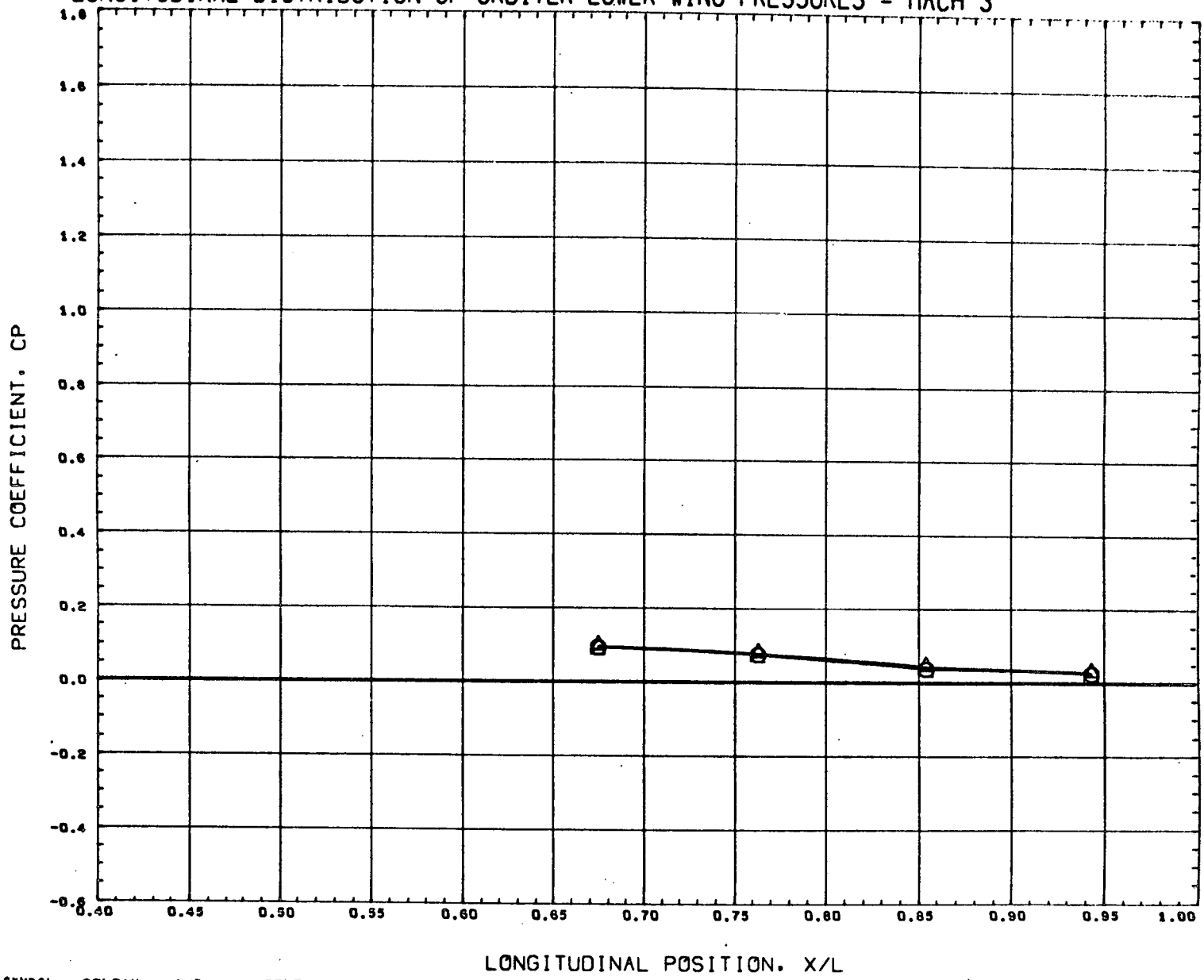
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.230	0.908
△	0.521		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



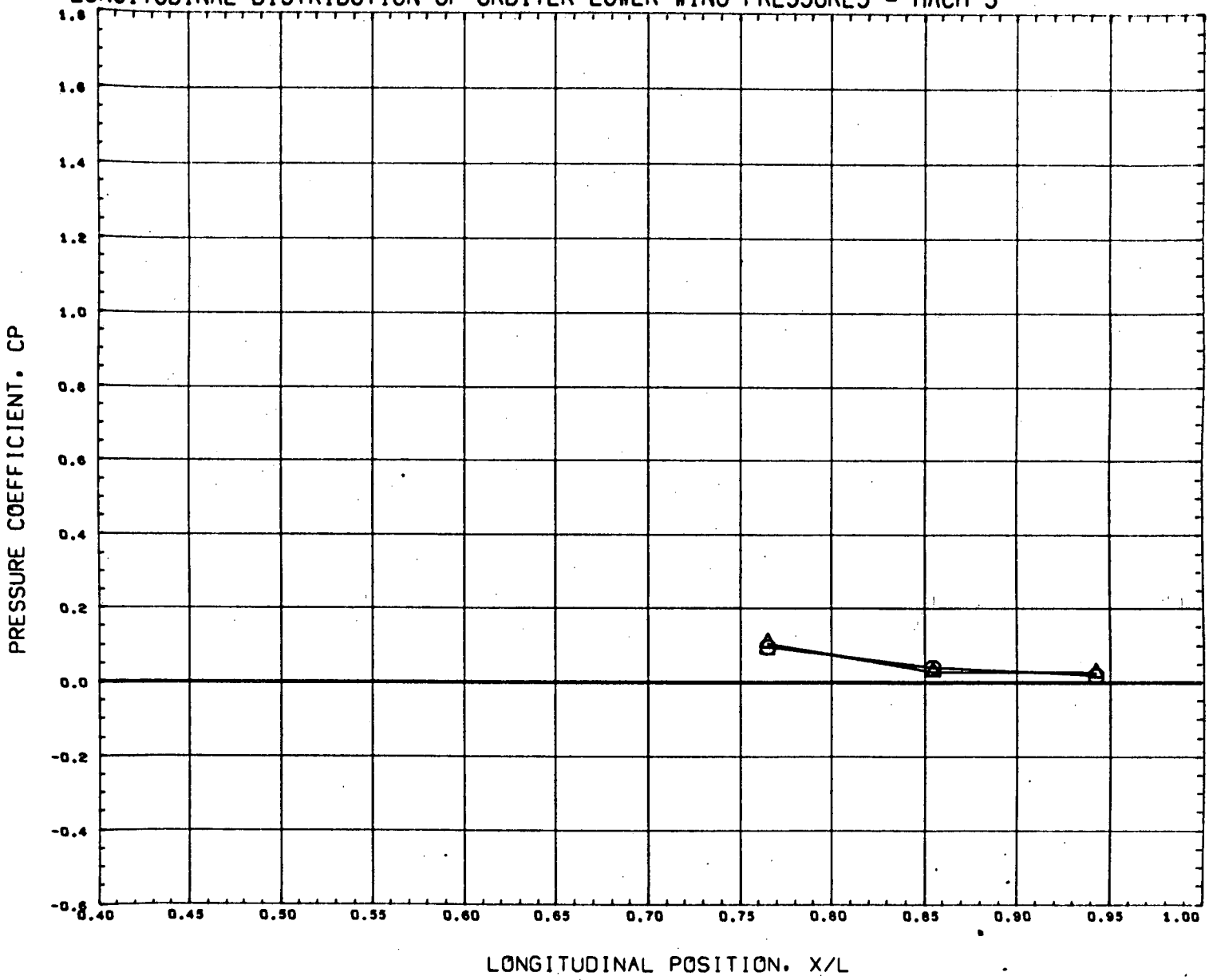
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.399	0.908
△	0.521		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



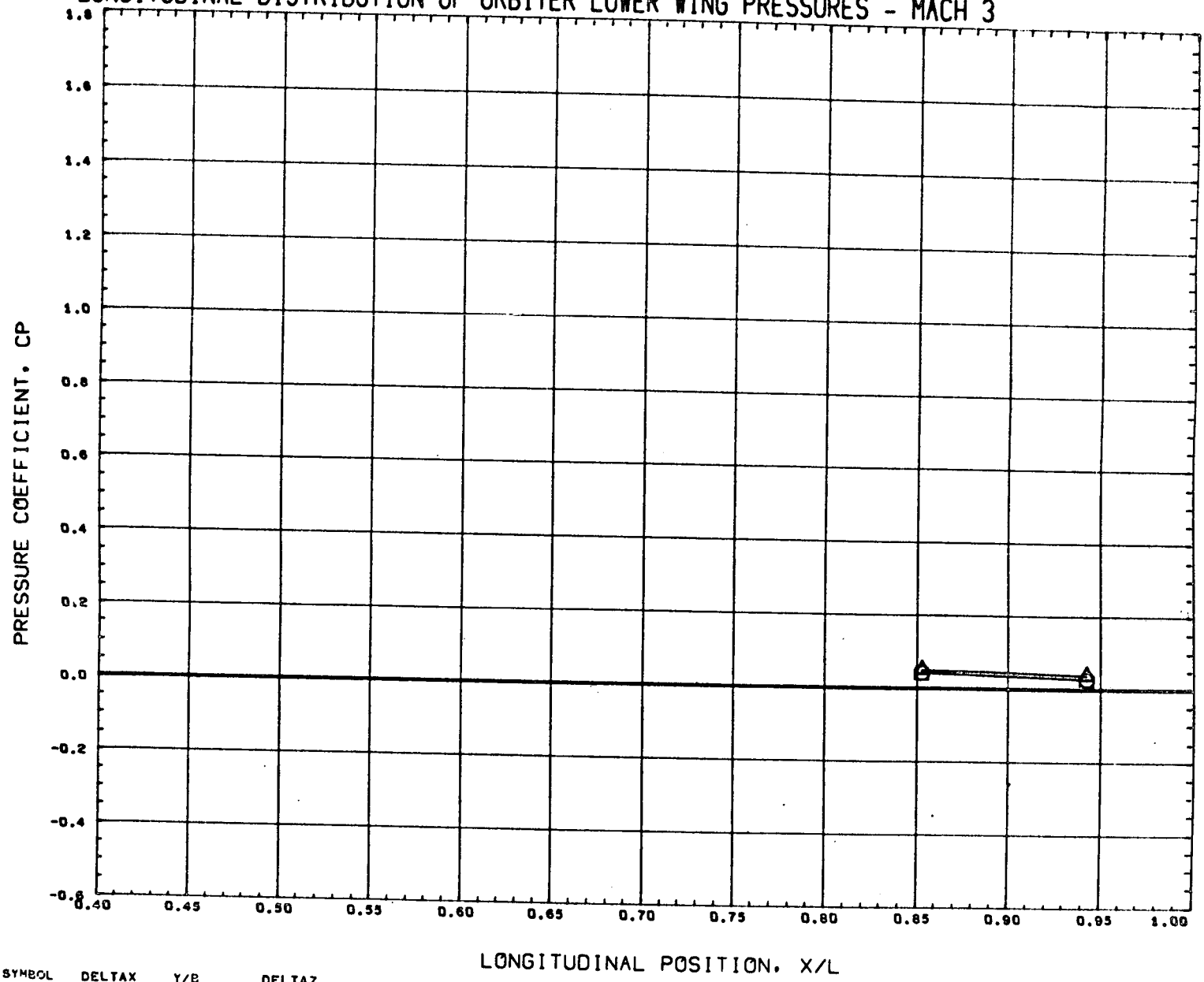
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.568	0.908
△	0.521		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.738	0.908
△	0.521		

PARAMETRIC VALUES

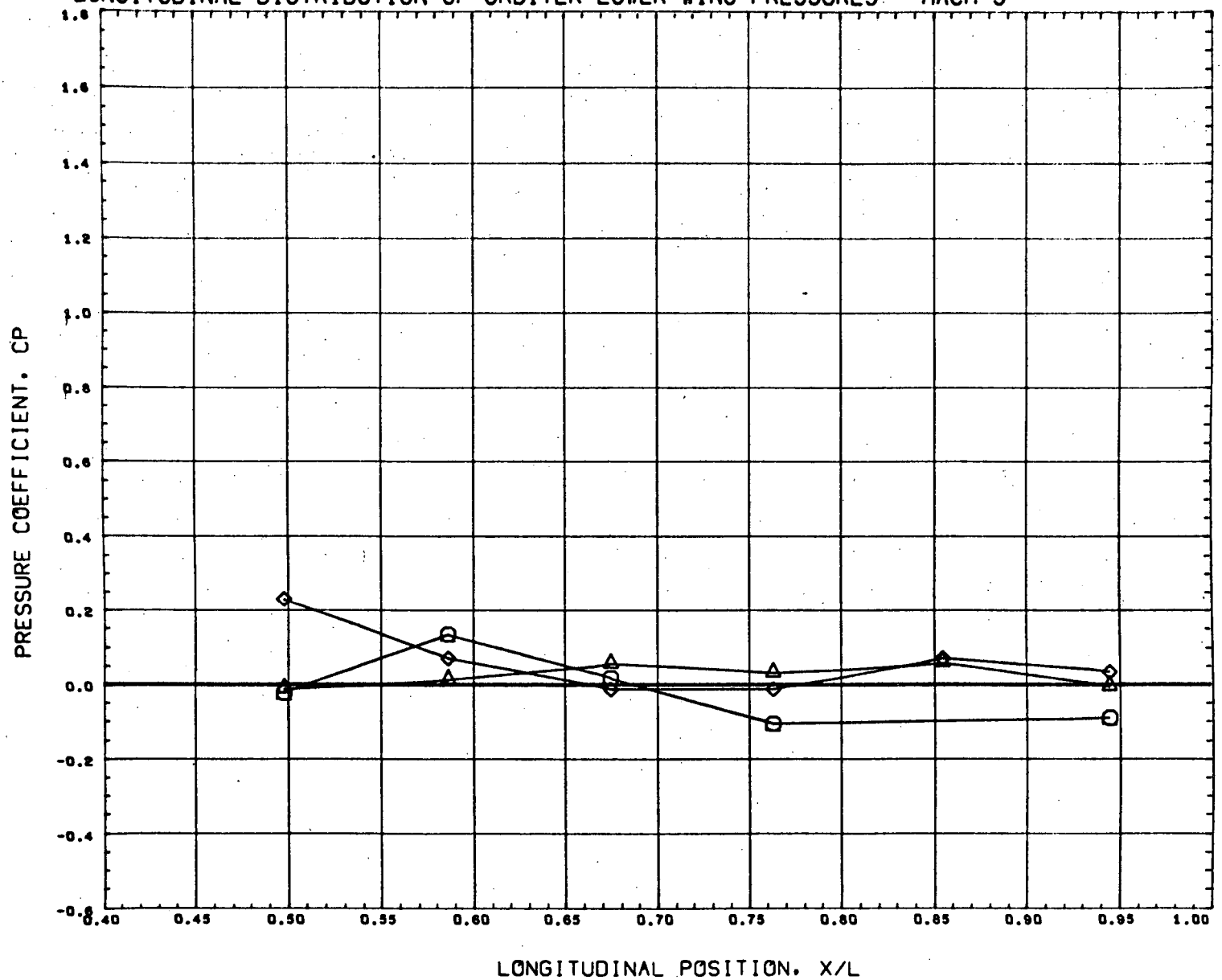
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8314•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

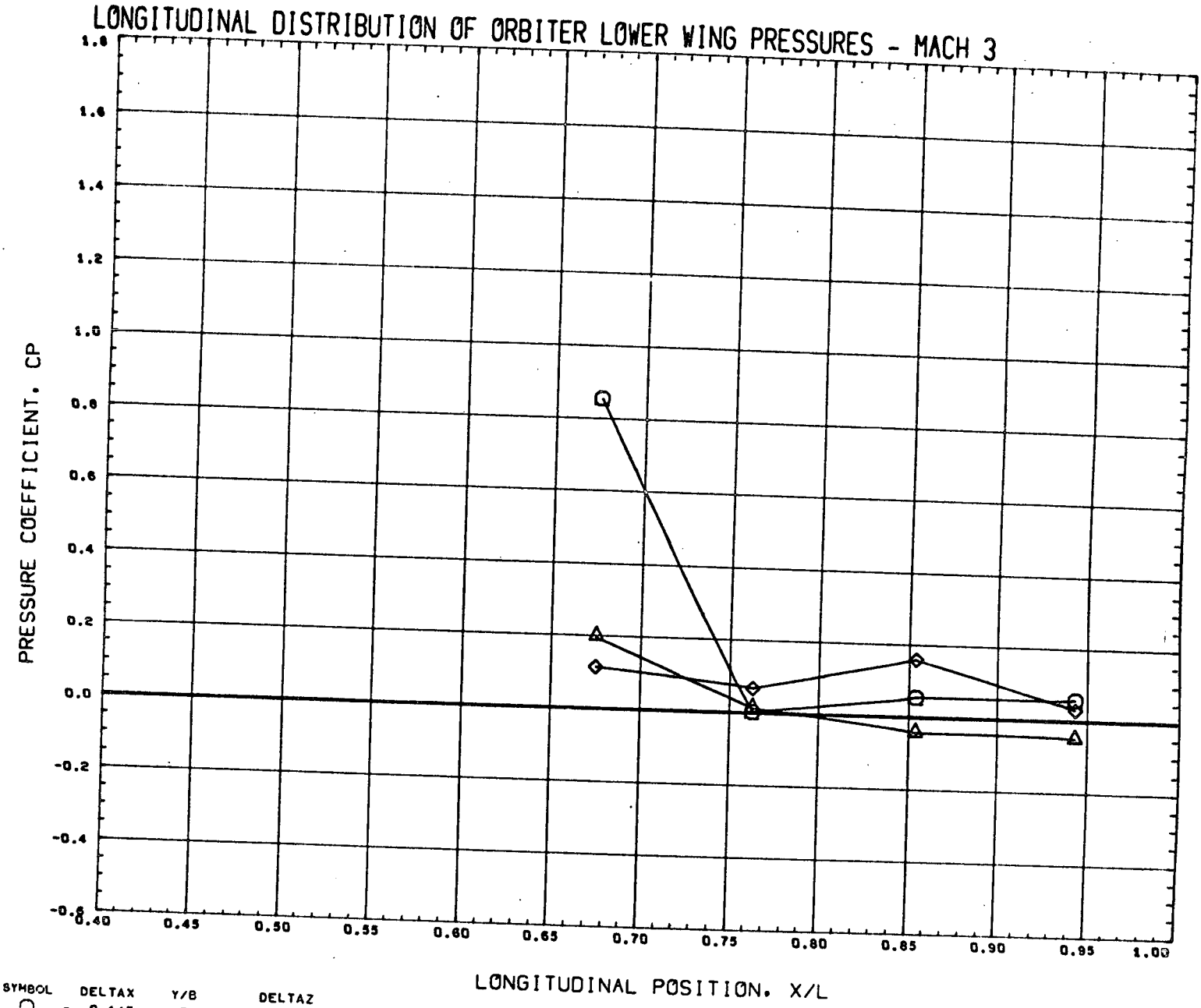


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.103		
◇	0.227		

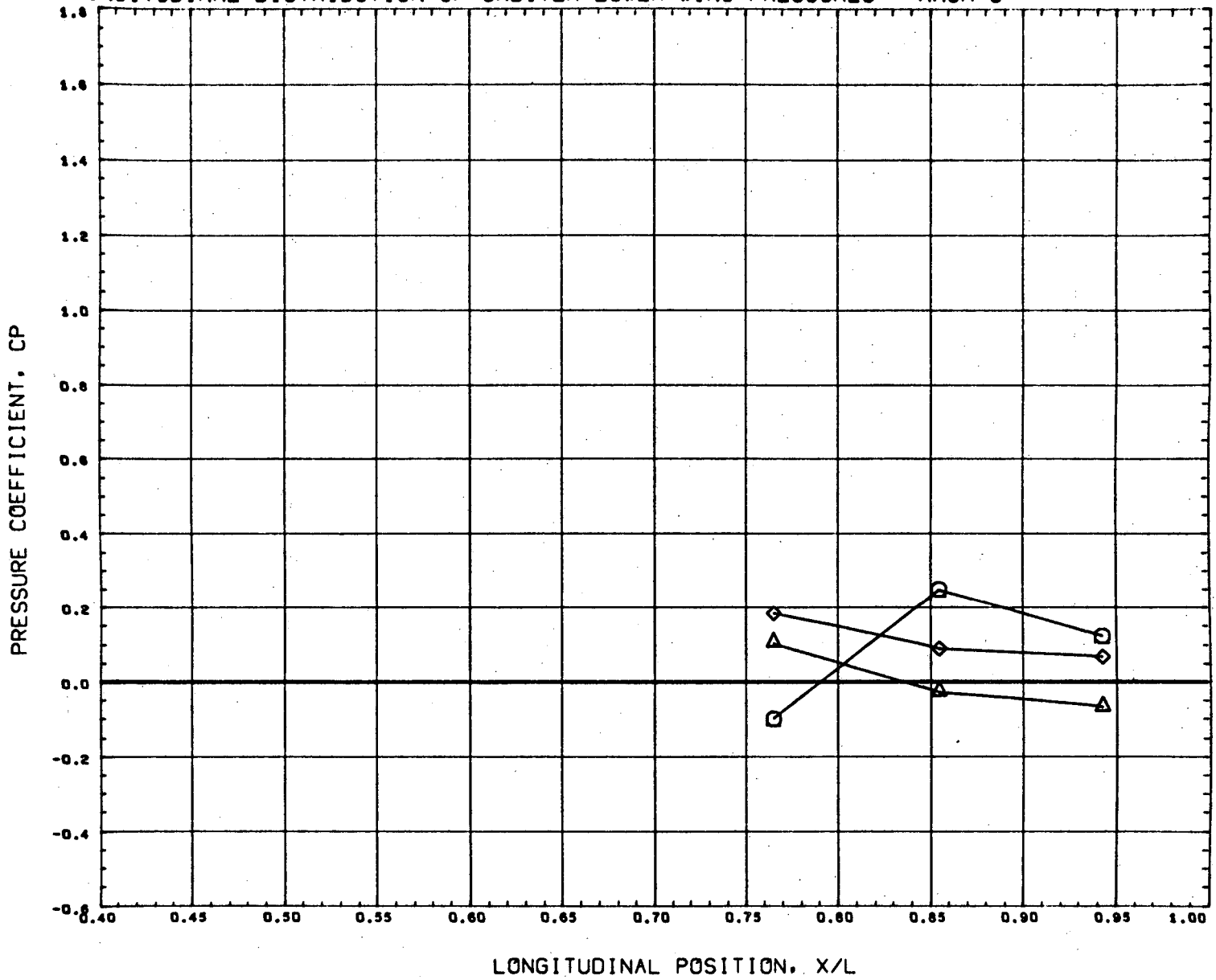
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



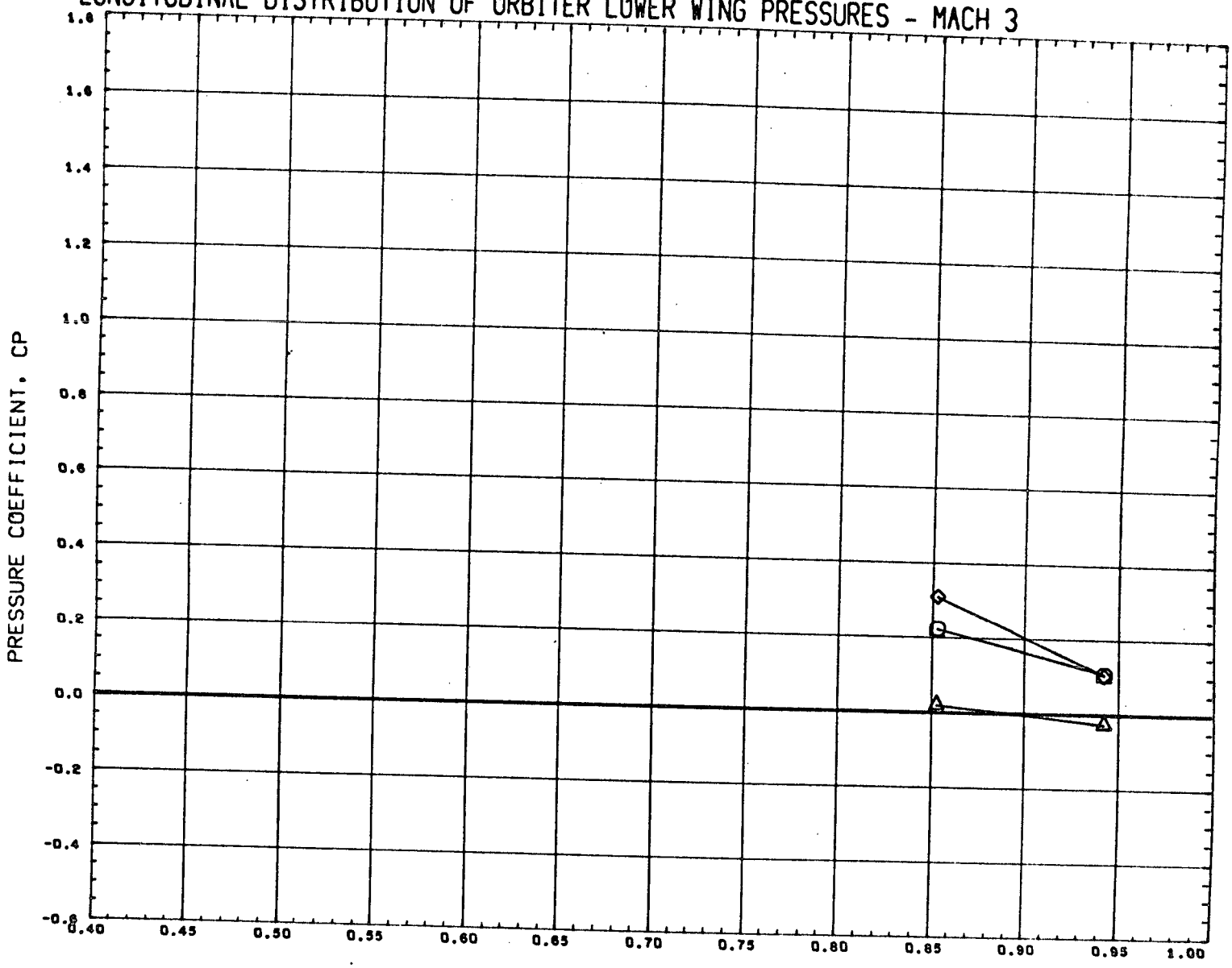
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.568	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

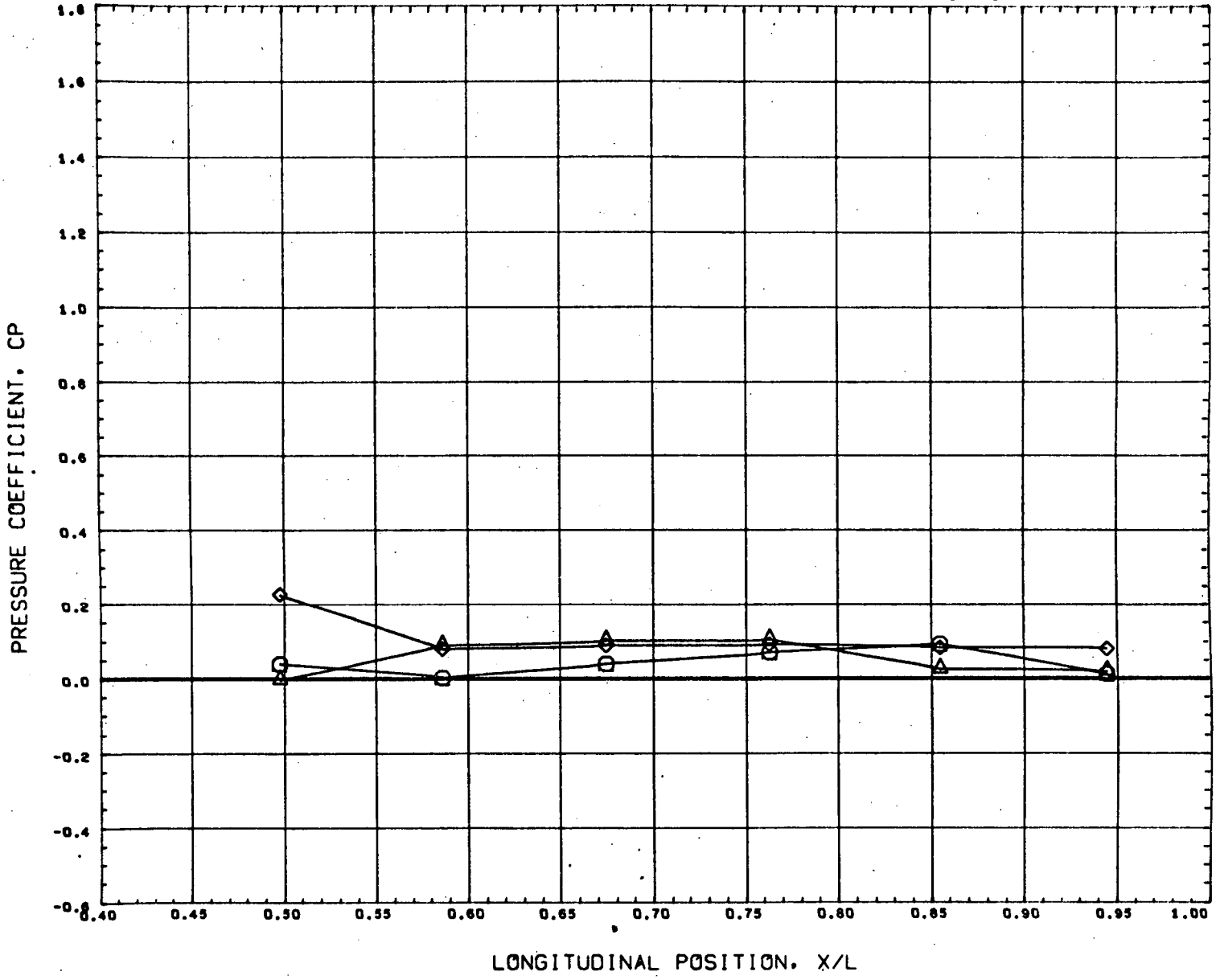
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.151
△	0.104		
◇	0.226		

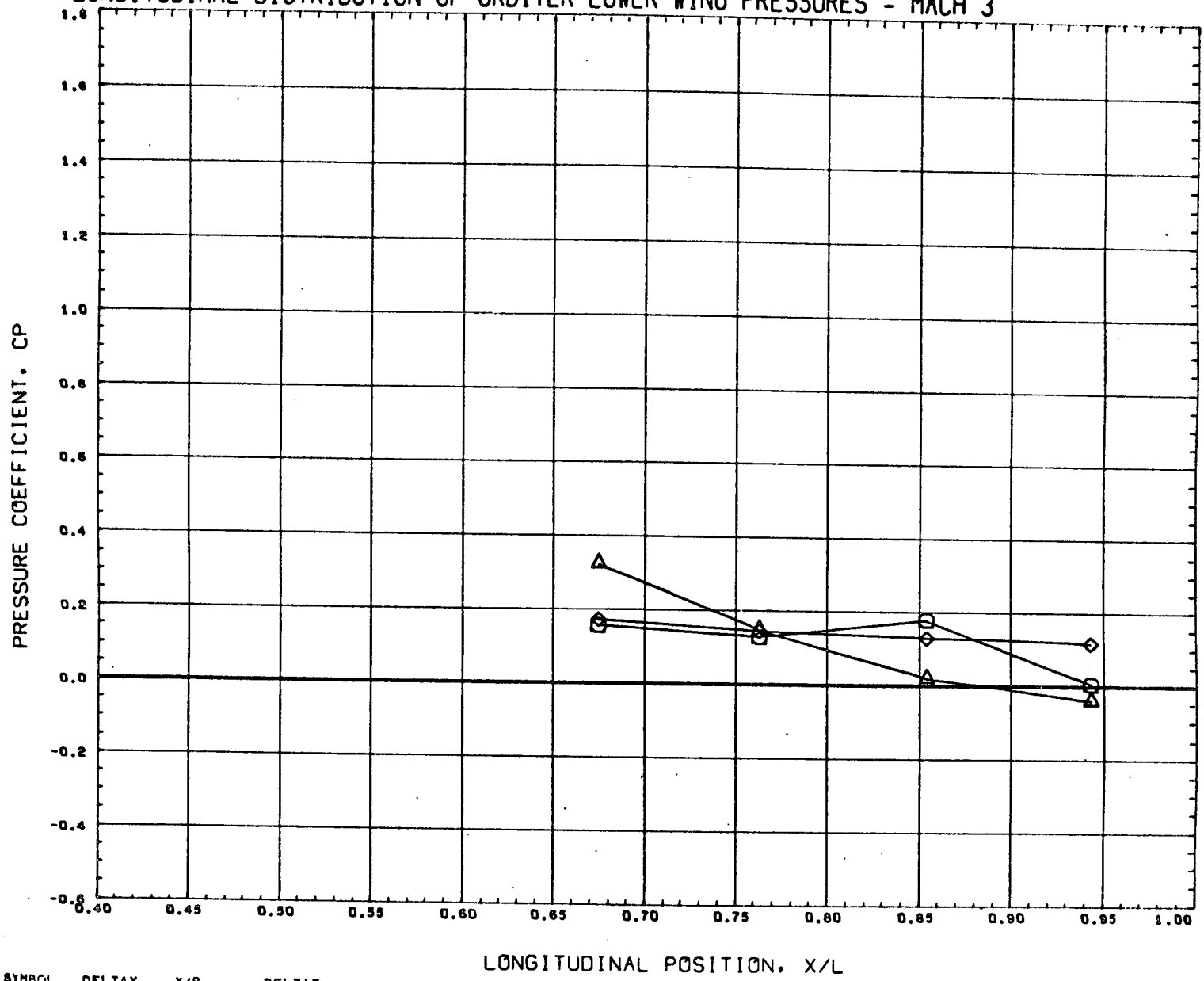
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8315• PAGE 249

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



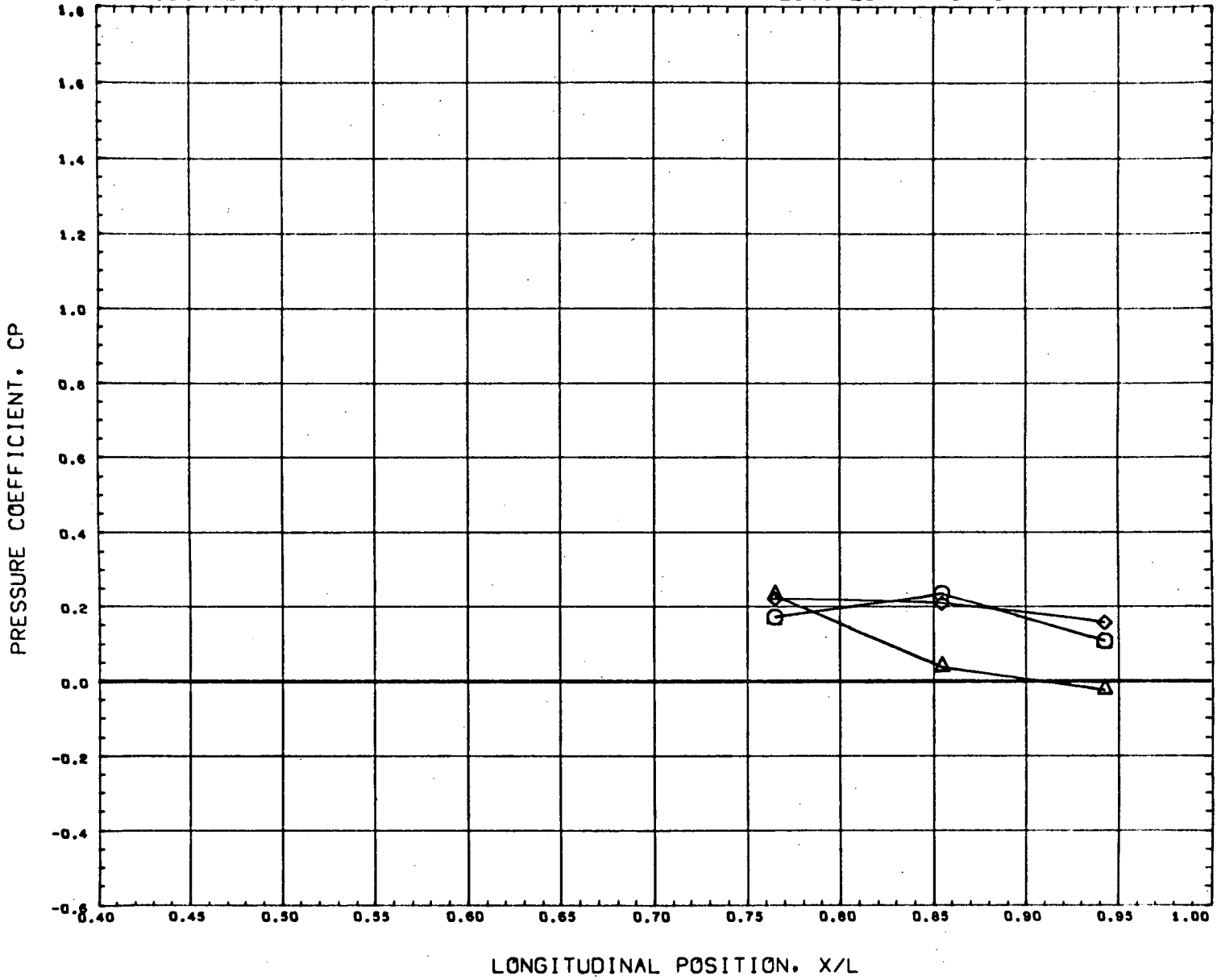
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



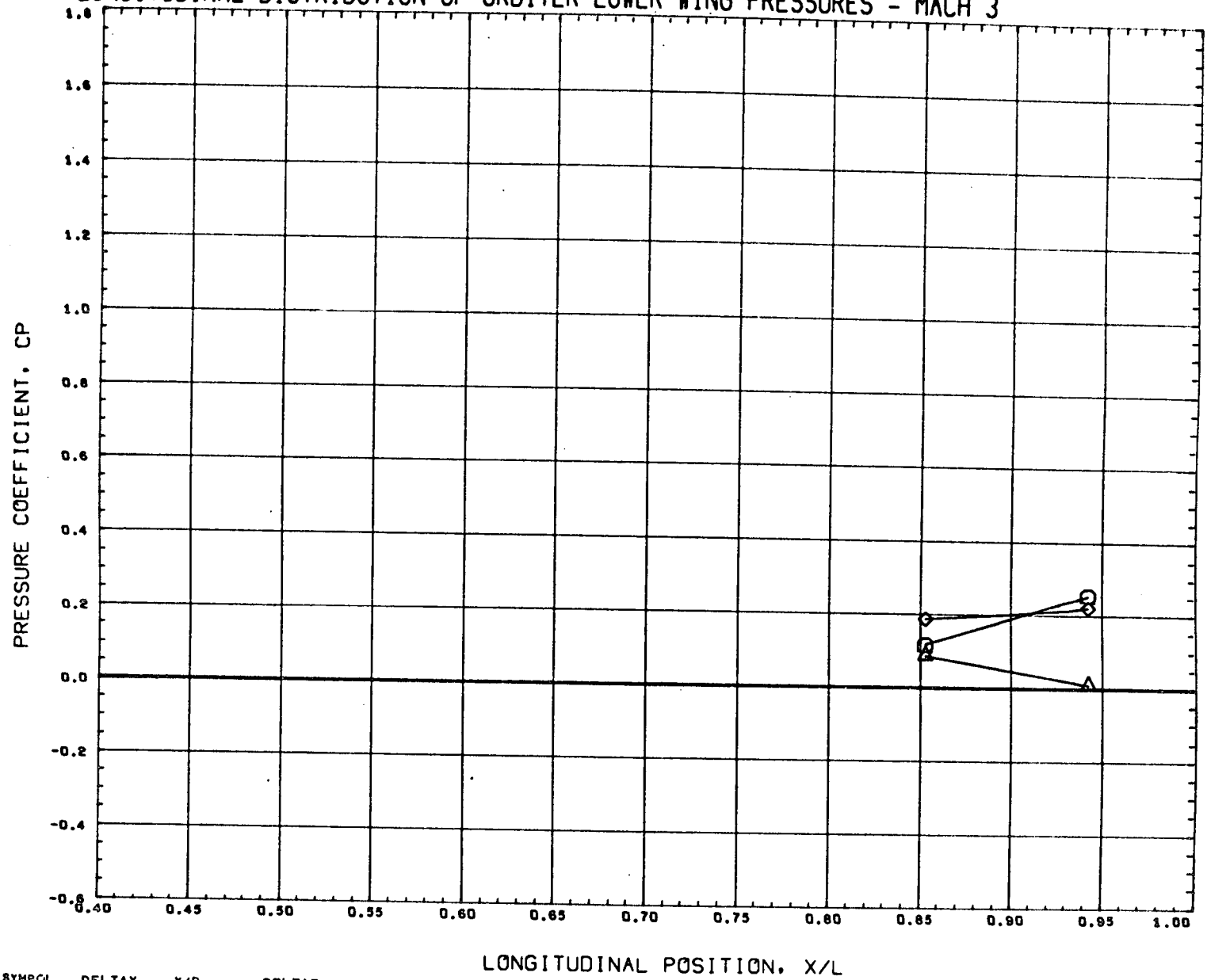
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

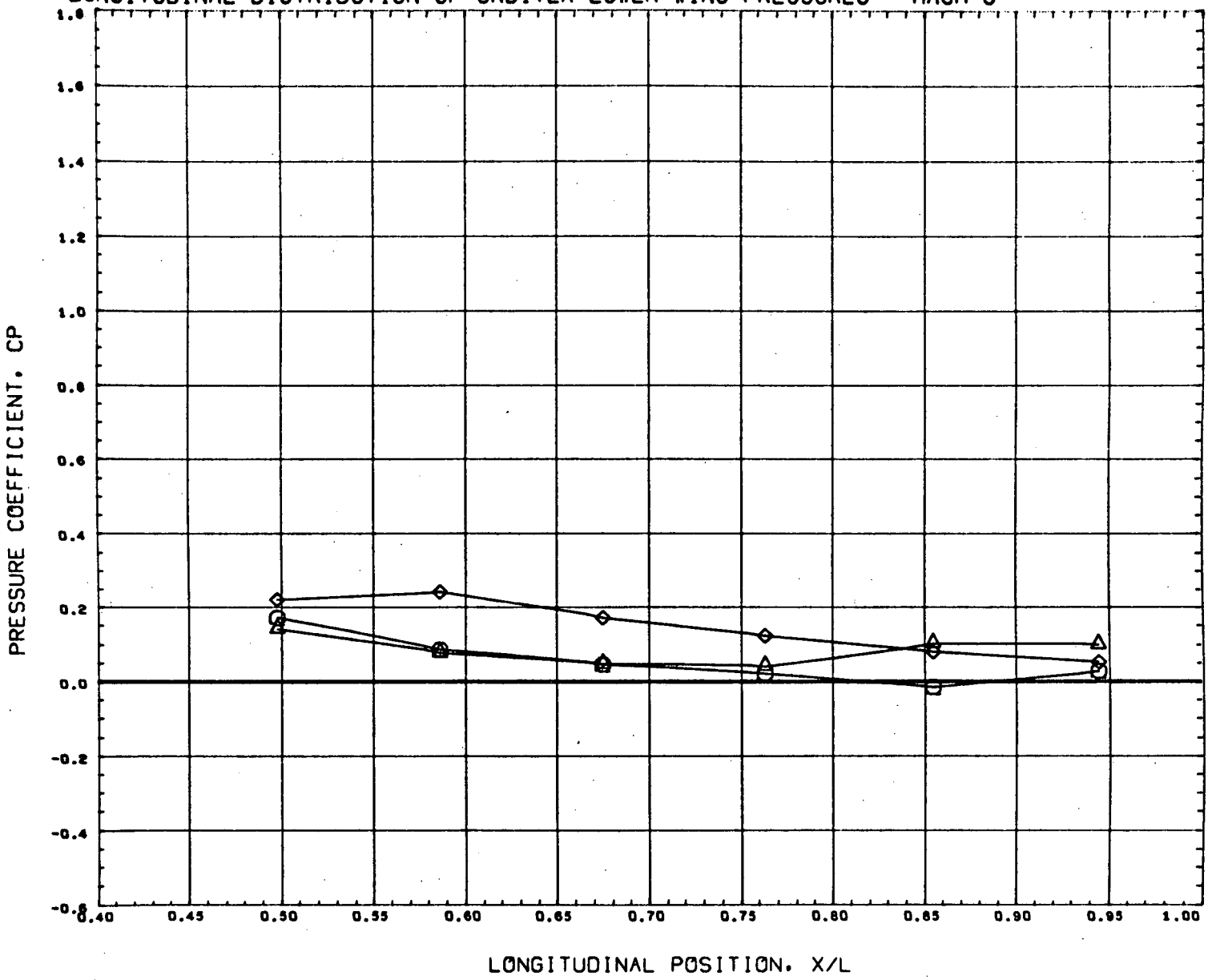
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (LOWER WING)

•HT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

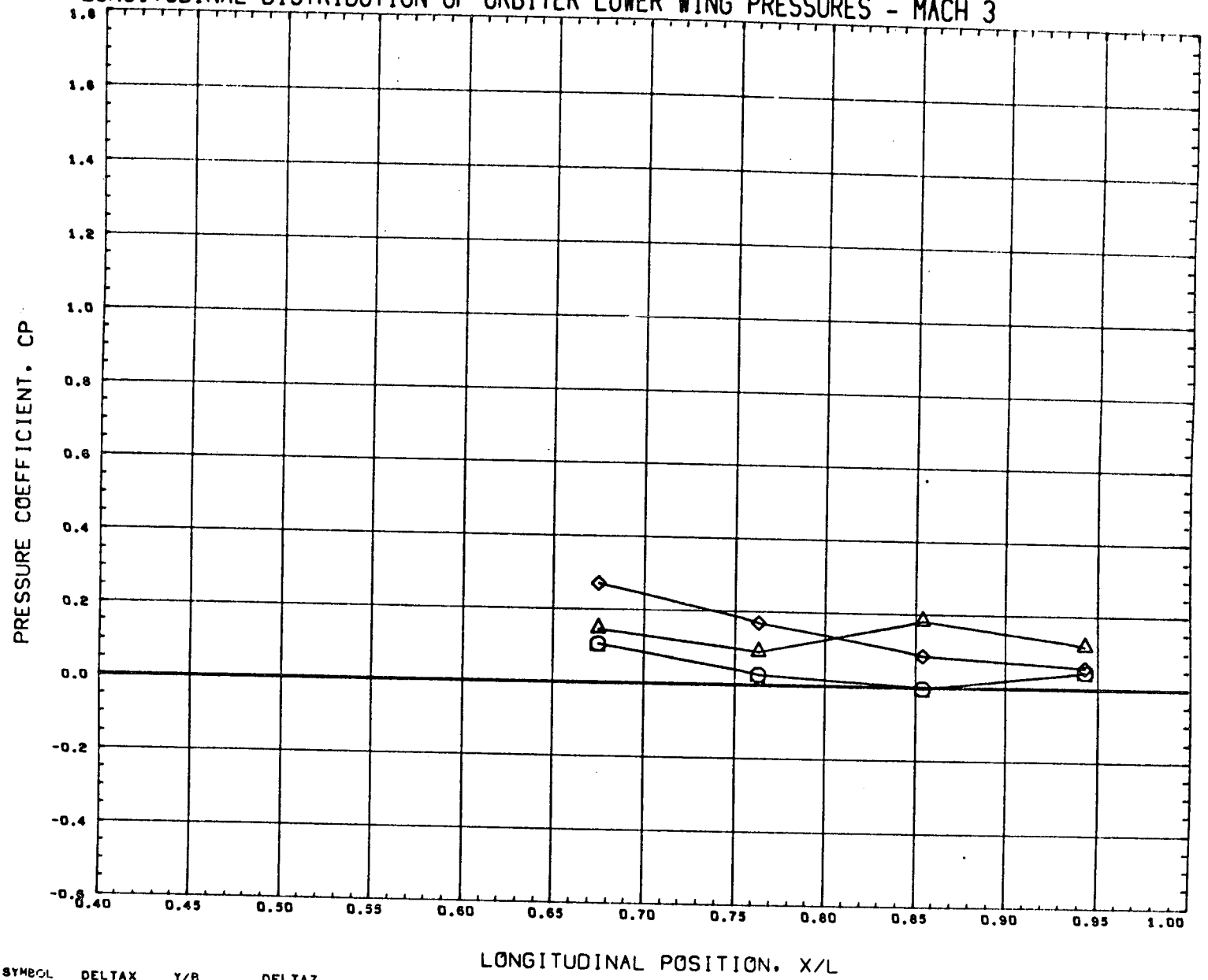
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8315• PAGE 253

6/8

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

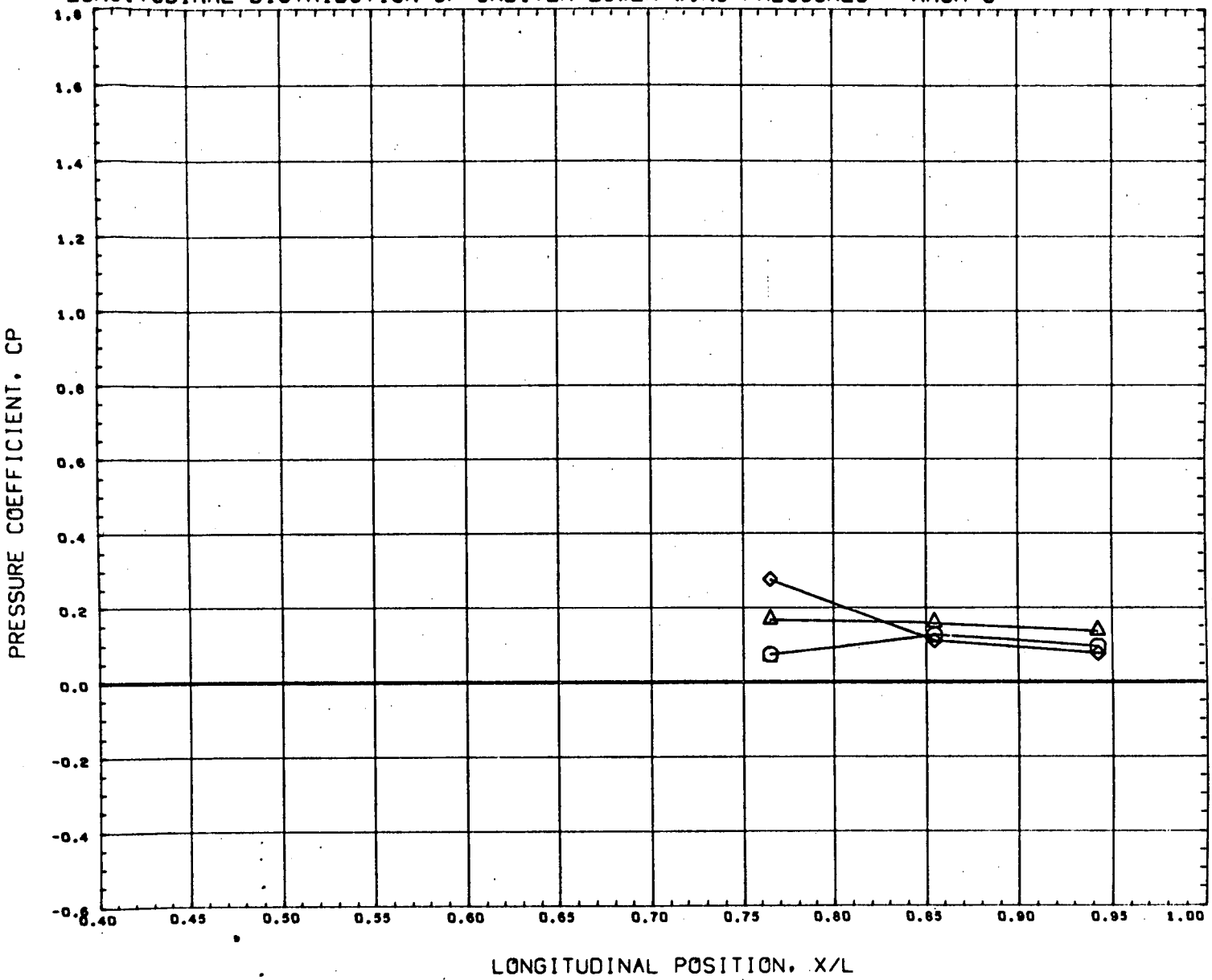
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



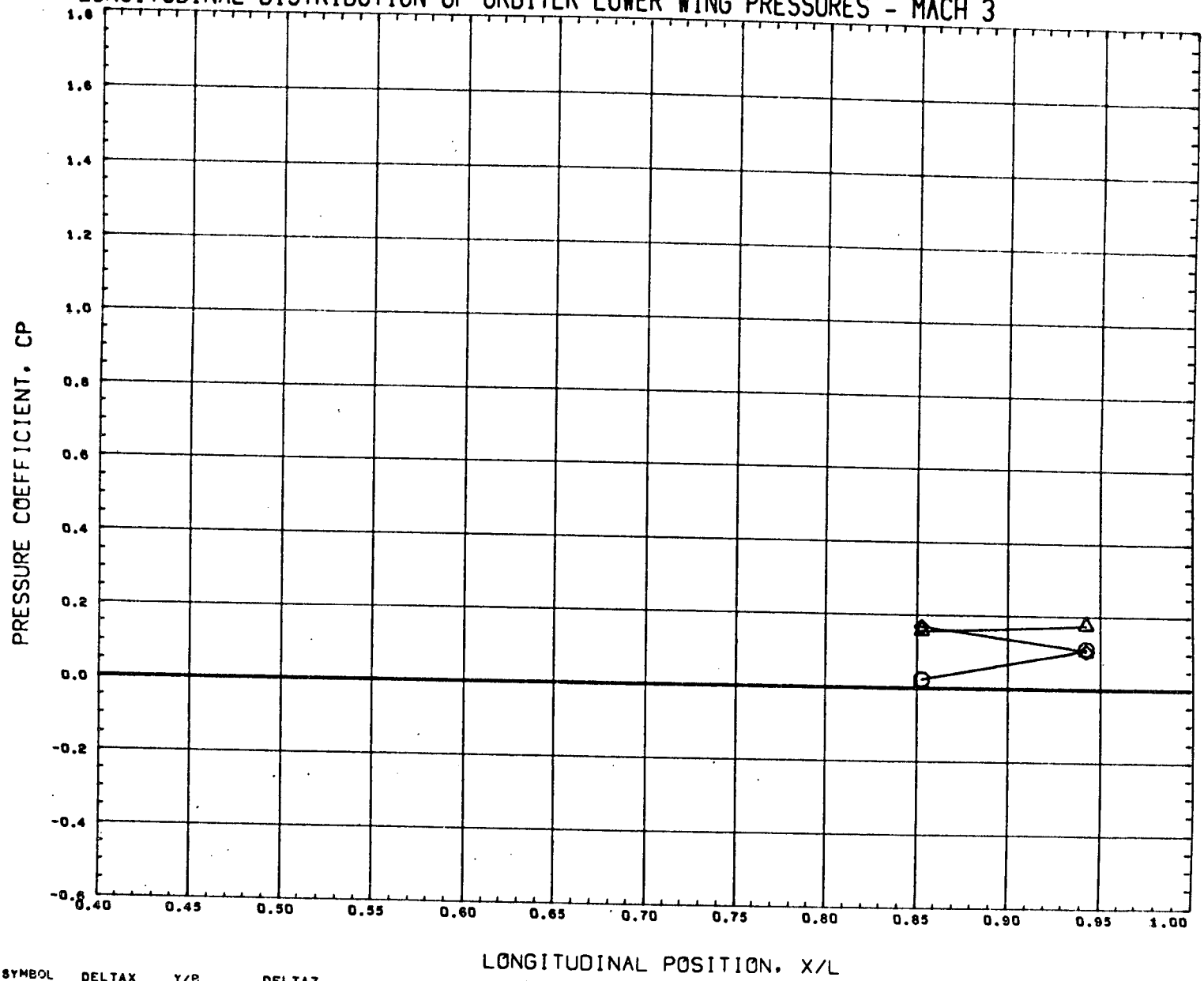
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

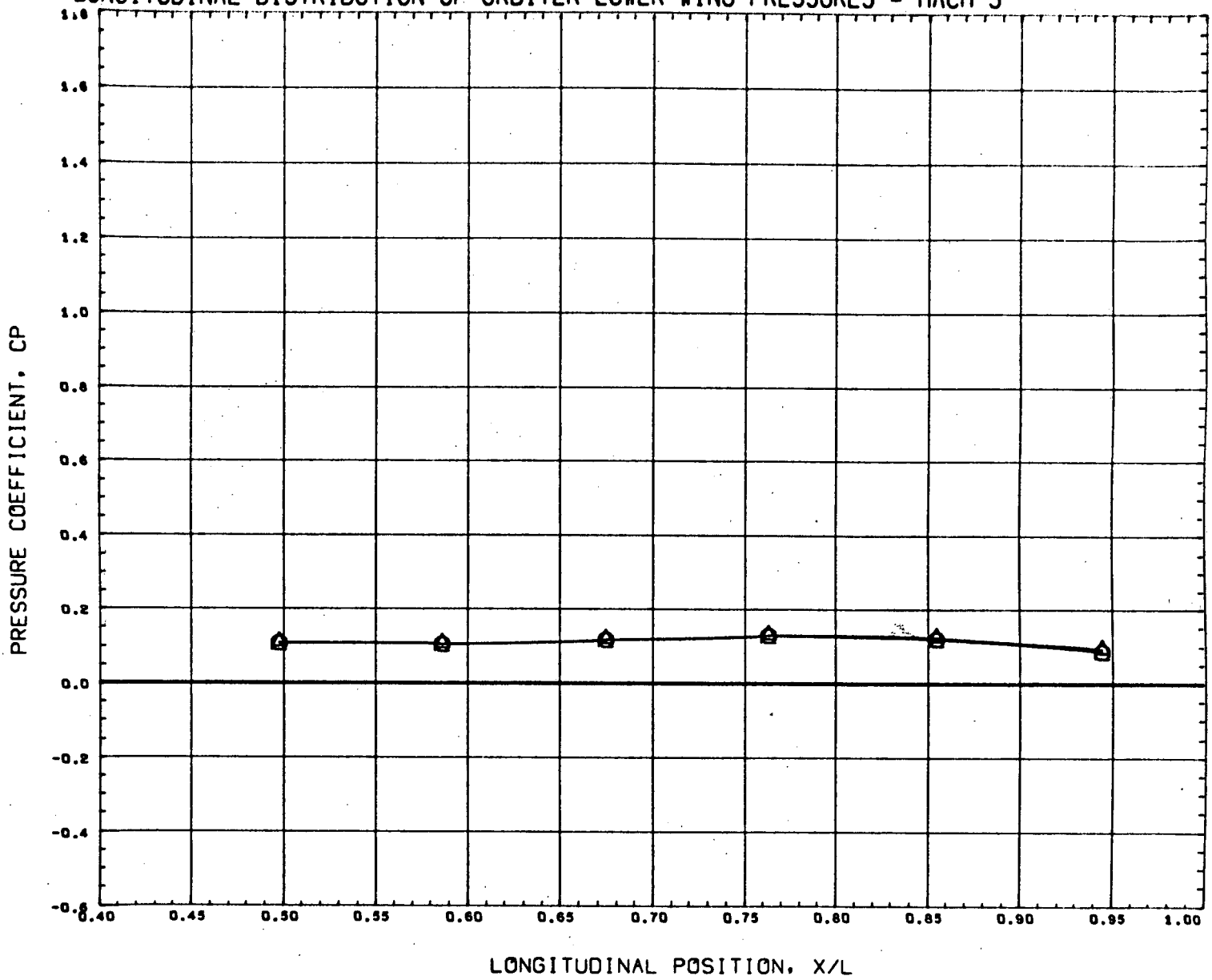
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MOAC ORBITER (LOWER WING)

•HT8315•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.230	0.908
△	0.518		

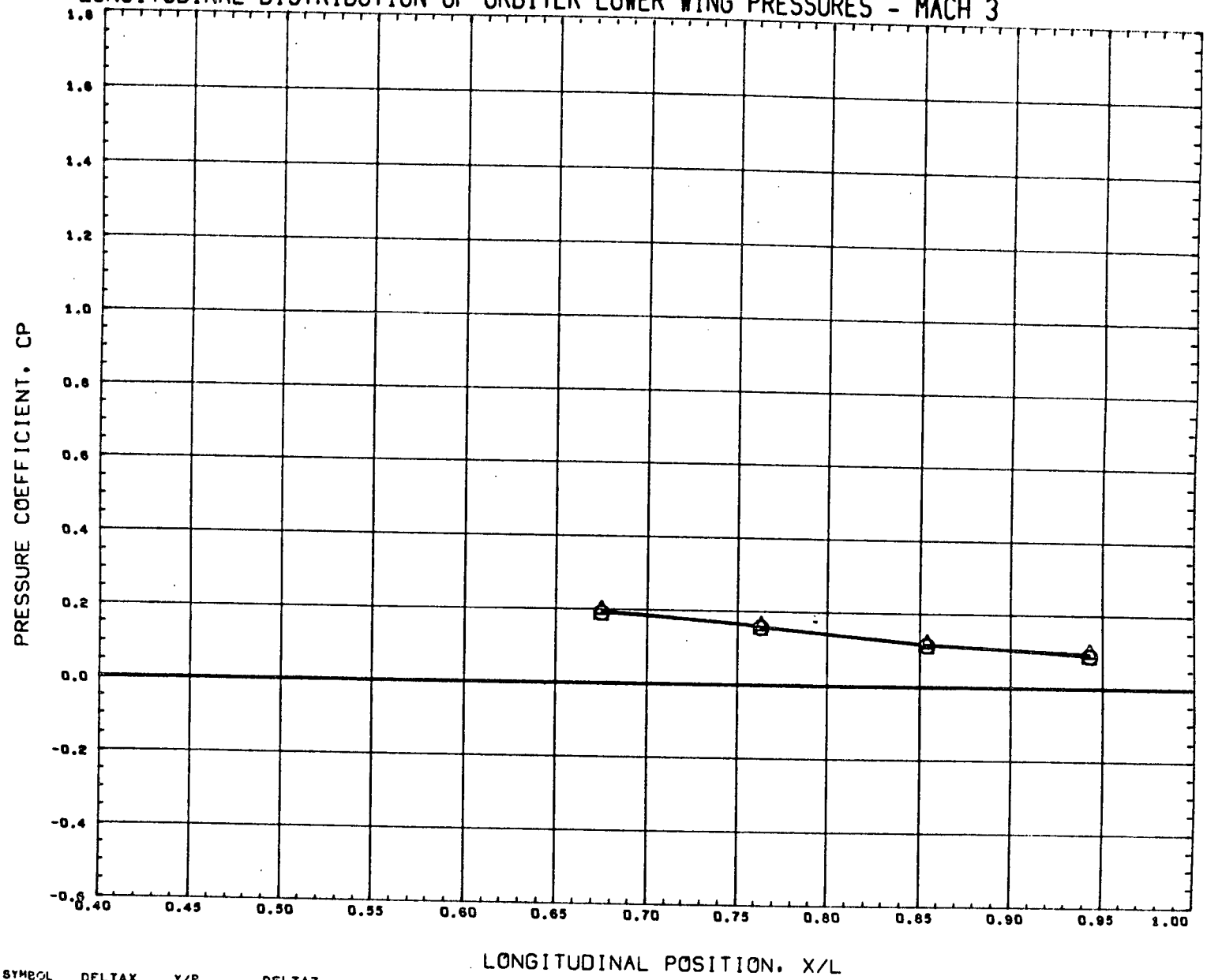
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8315• PAGE 257

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.399	0.908
△	0.518		

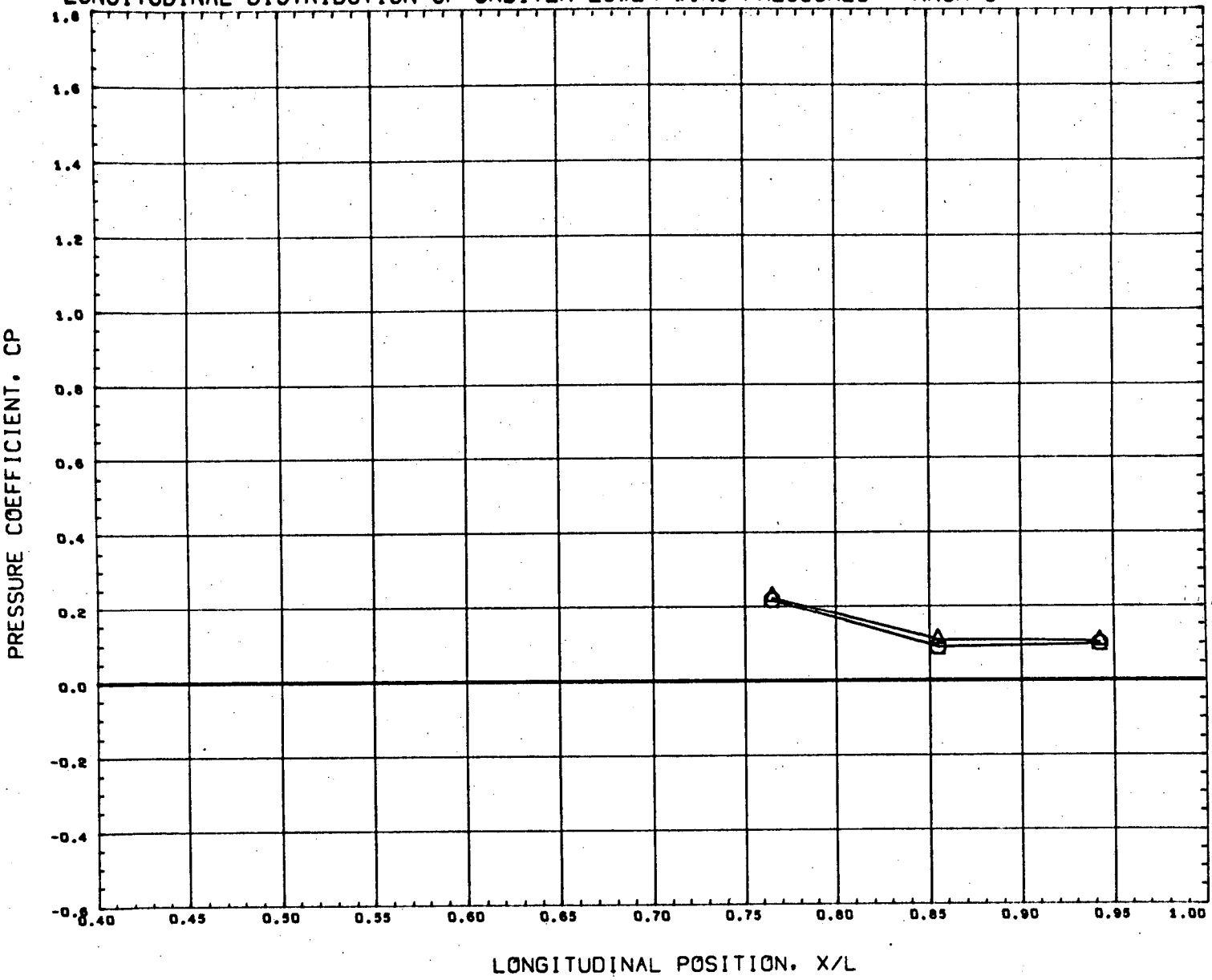
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



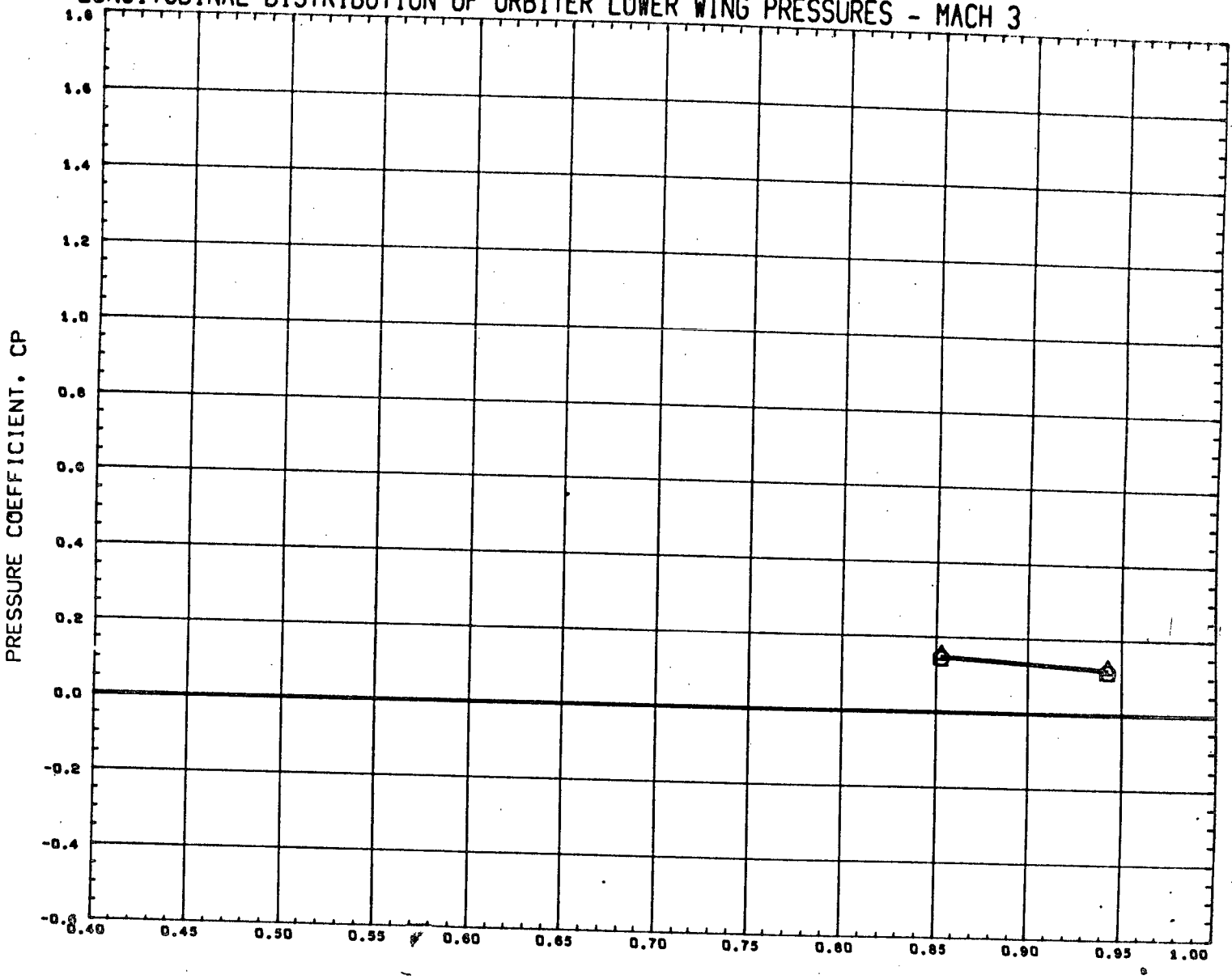
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.568	0.908
△	0.518		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.738	0.908
△	0.518		

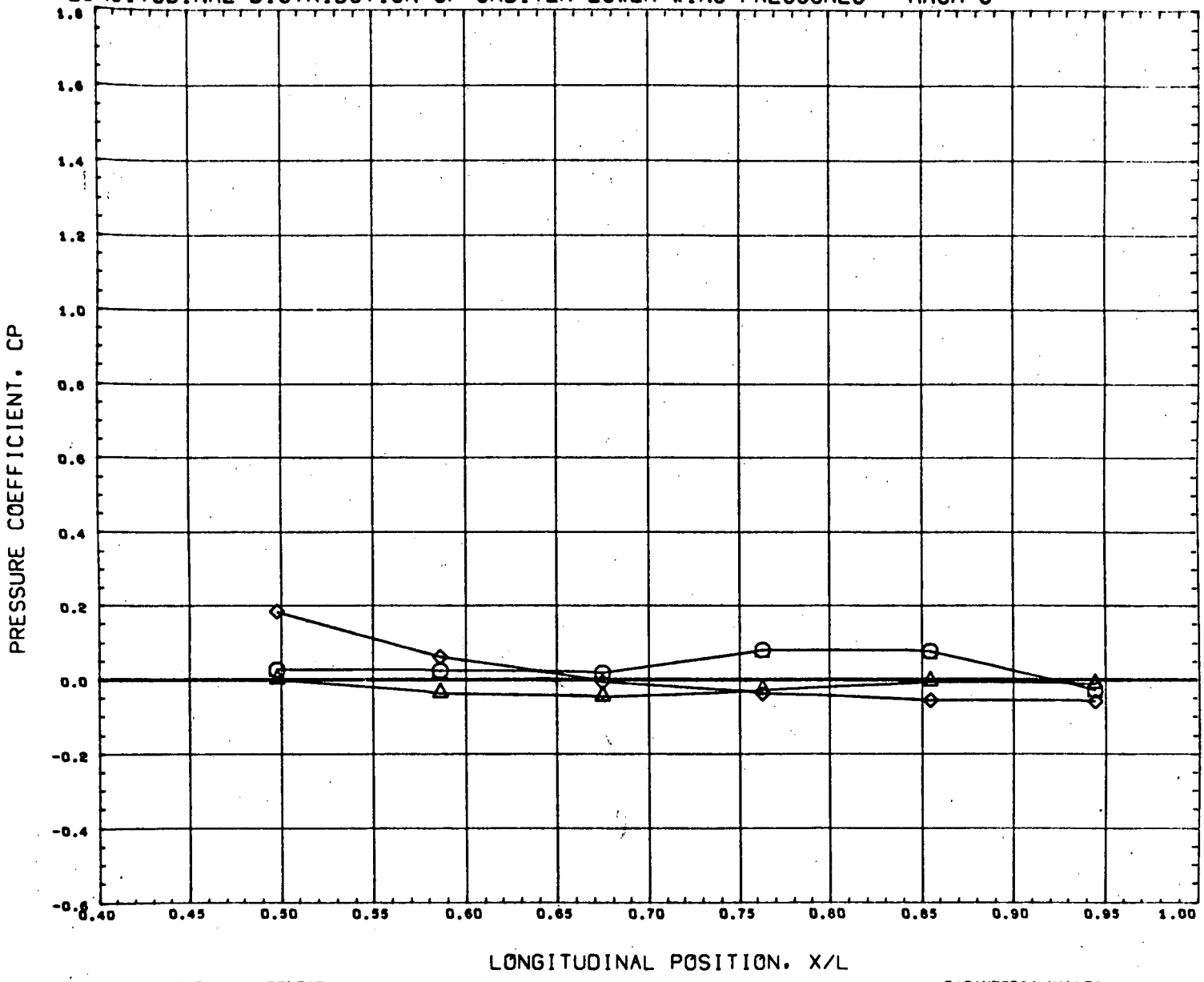
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



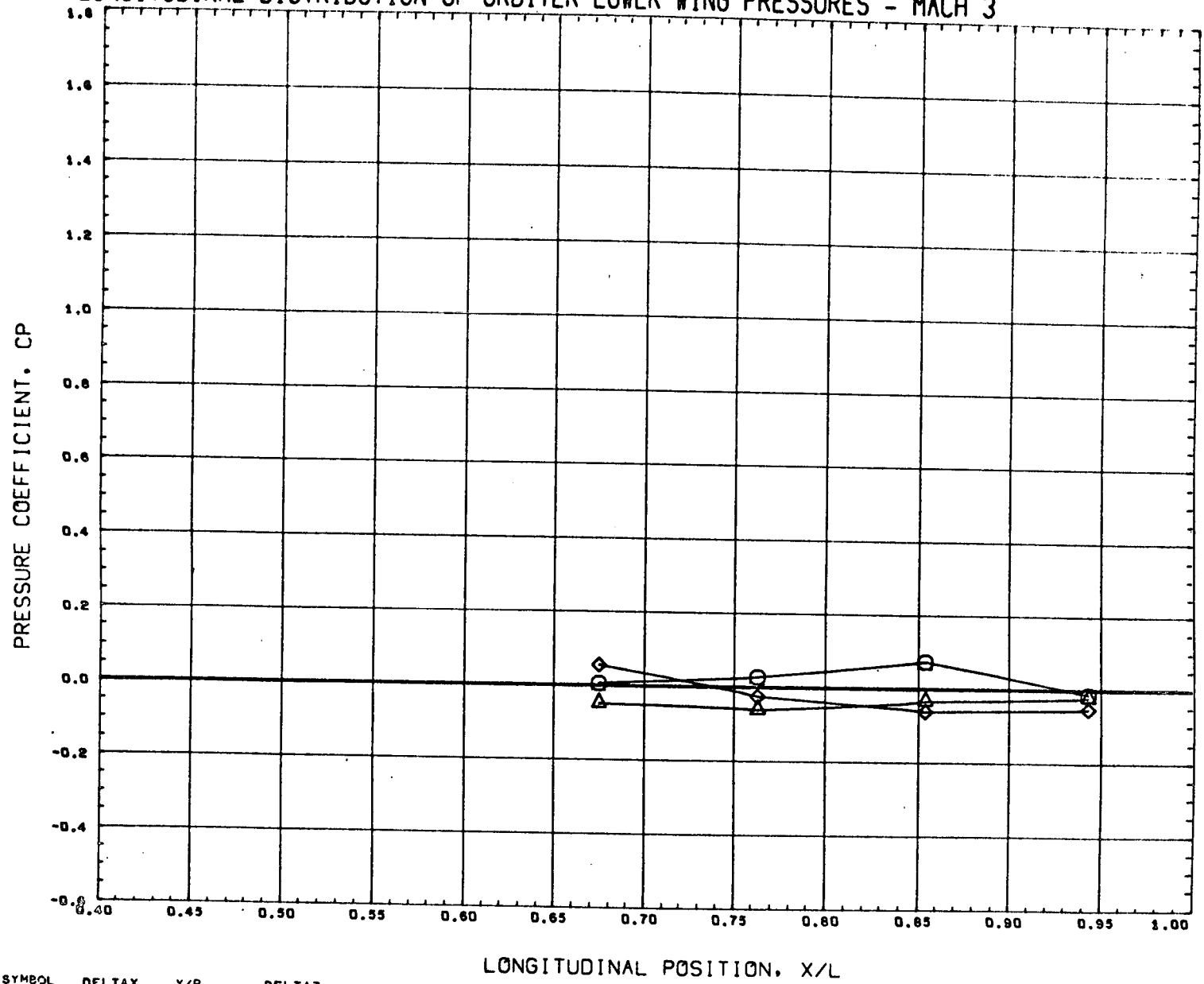
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

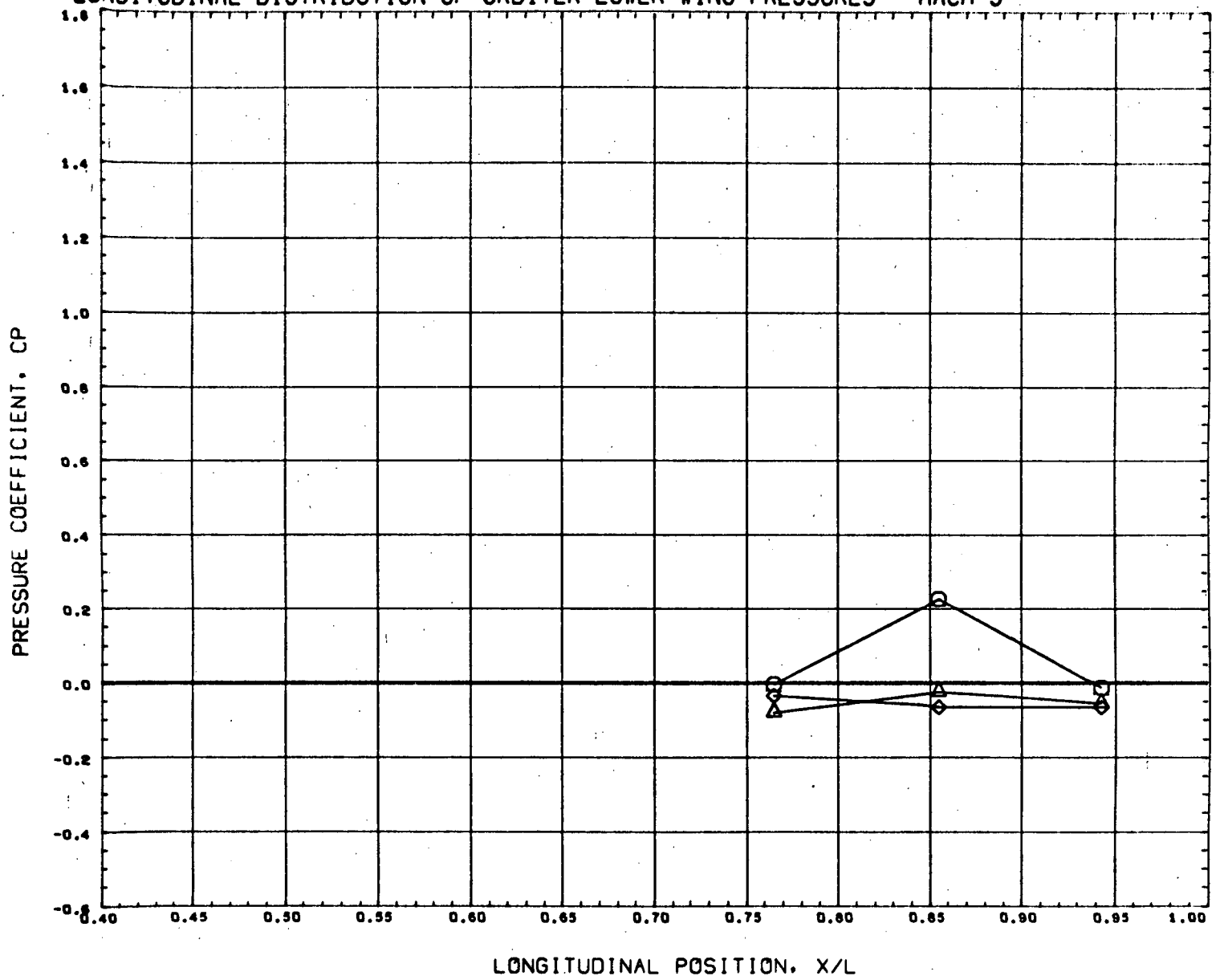
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

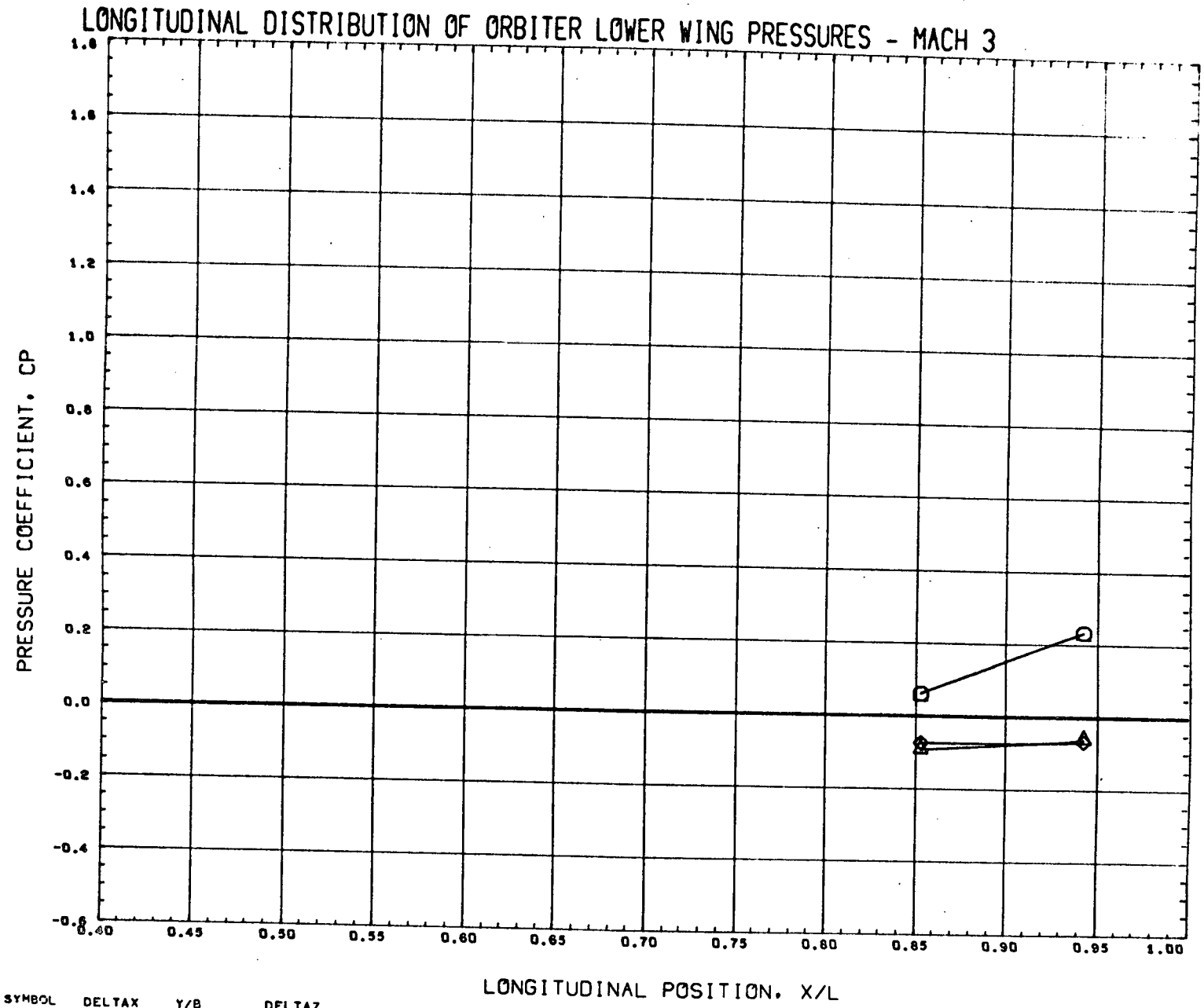


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.103		
◇	0.227		

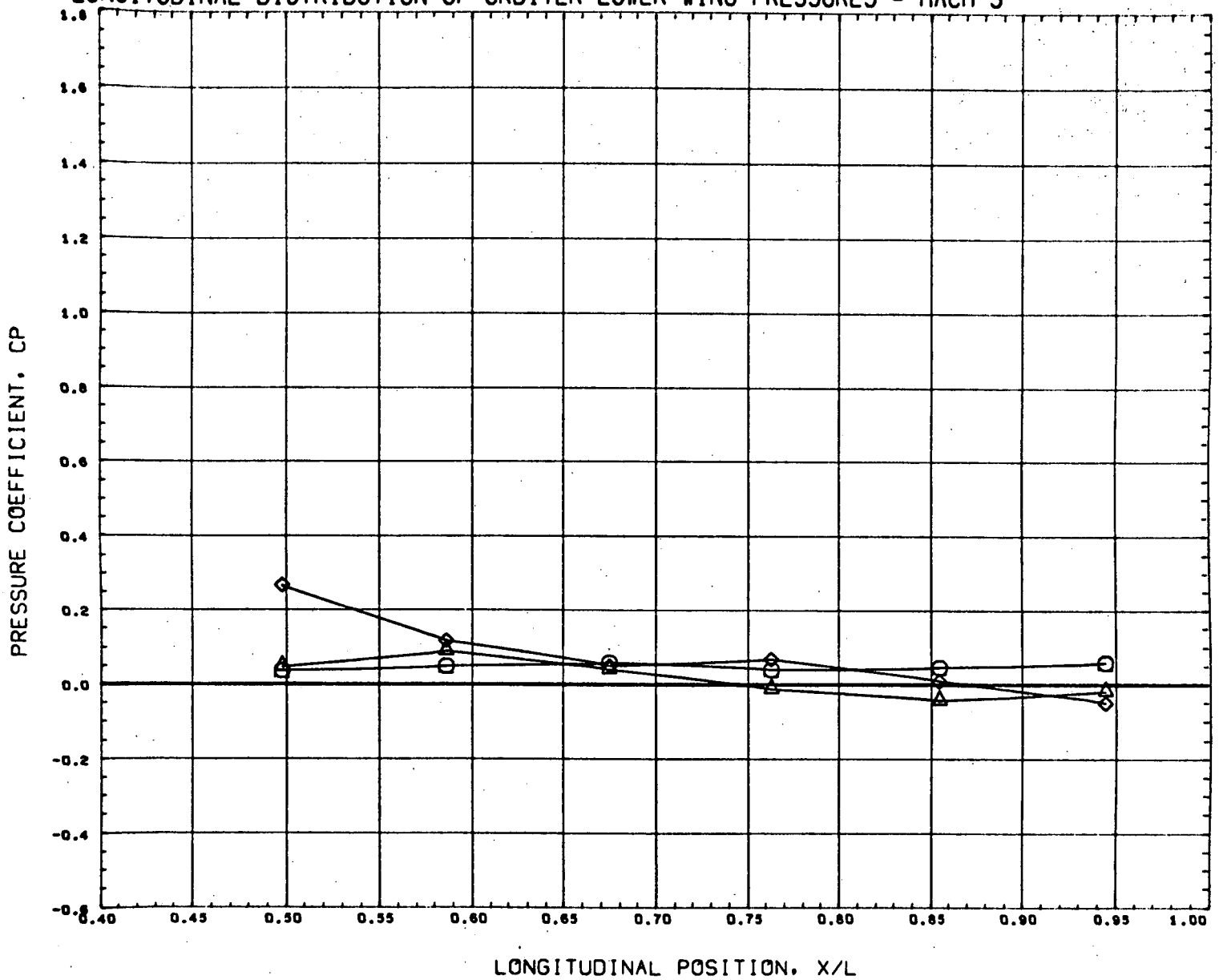
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

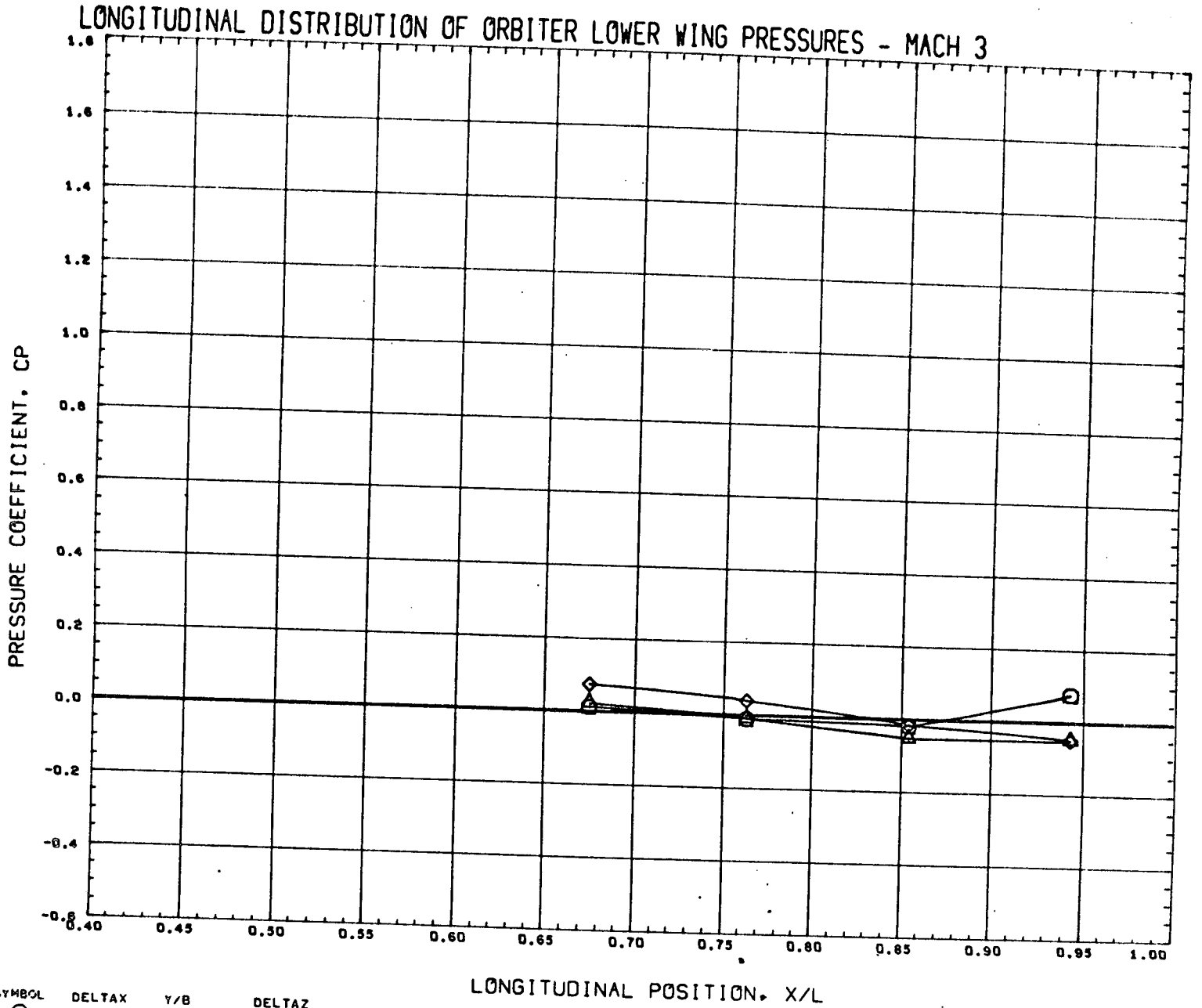


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.230	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

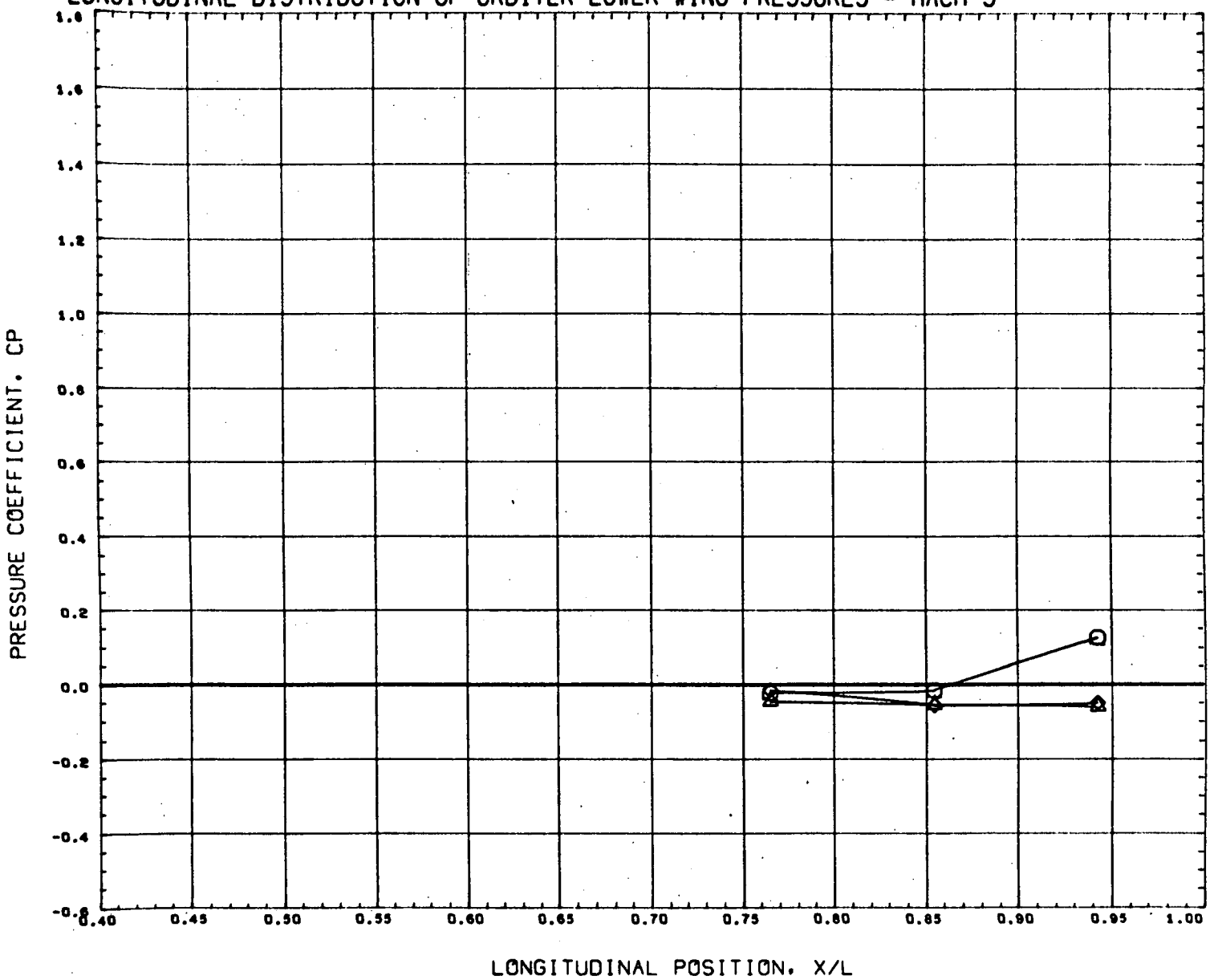
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



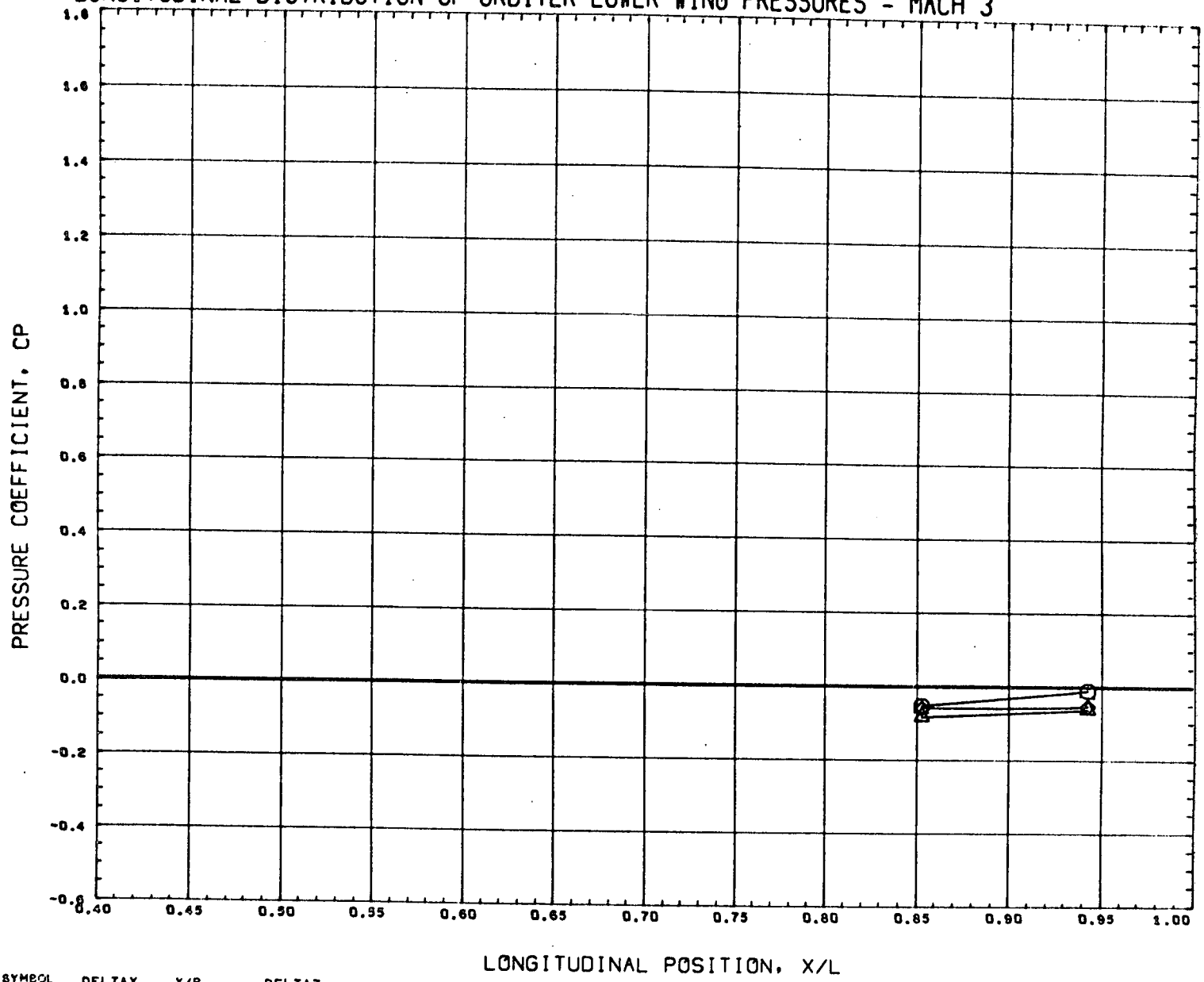
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.568	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.738	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

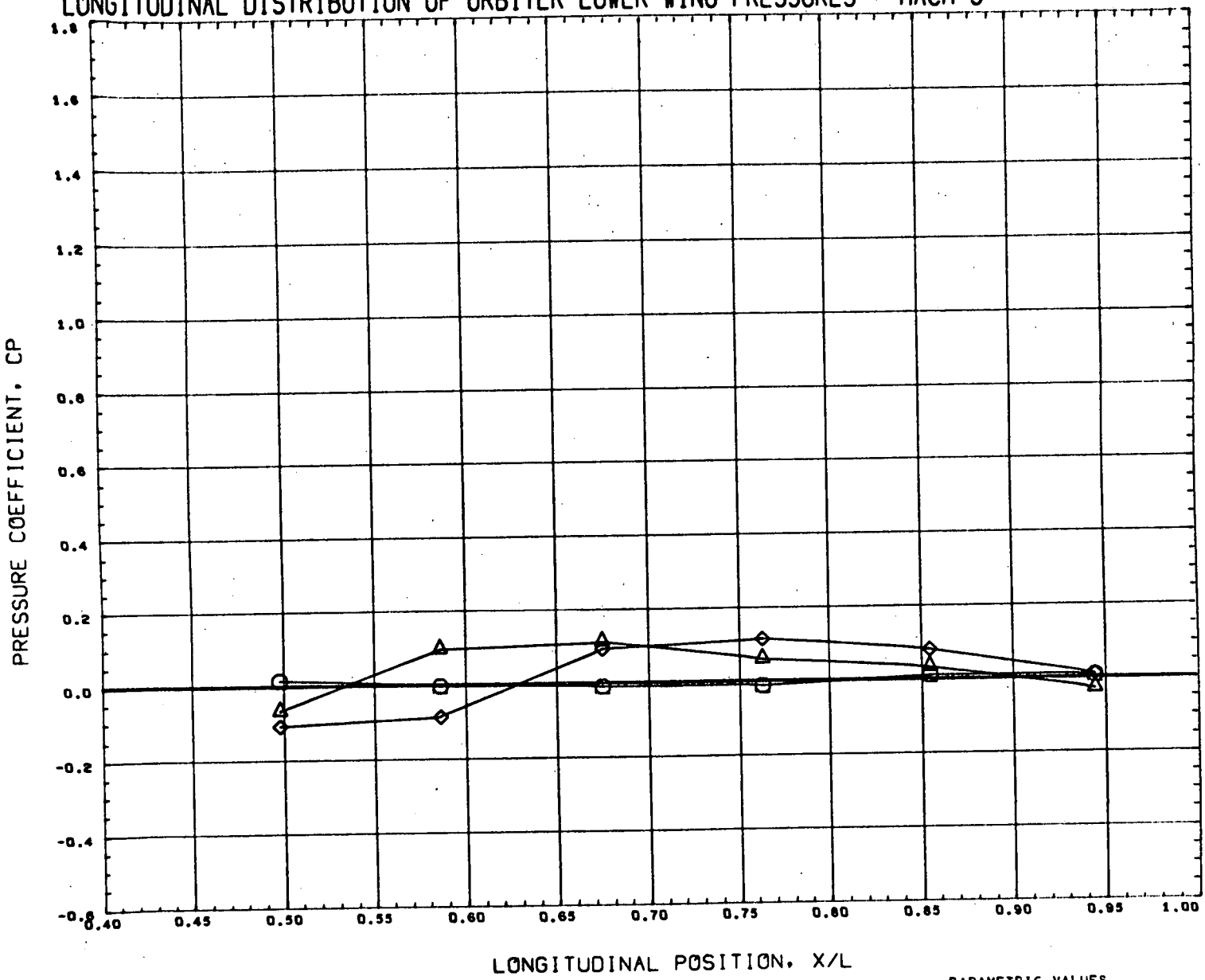
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.228
△	0.103		
◇	0.226		

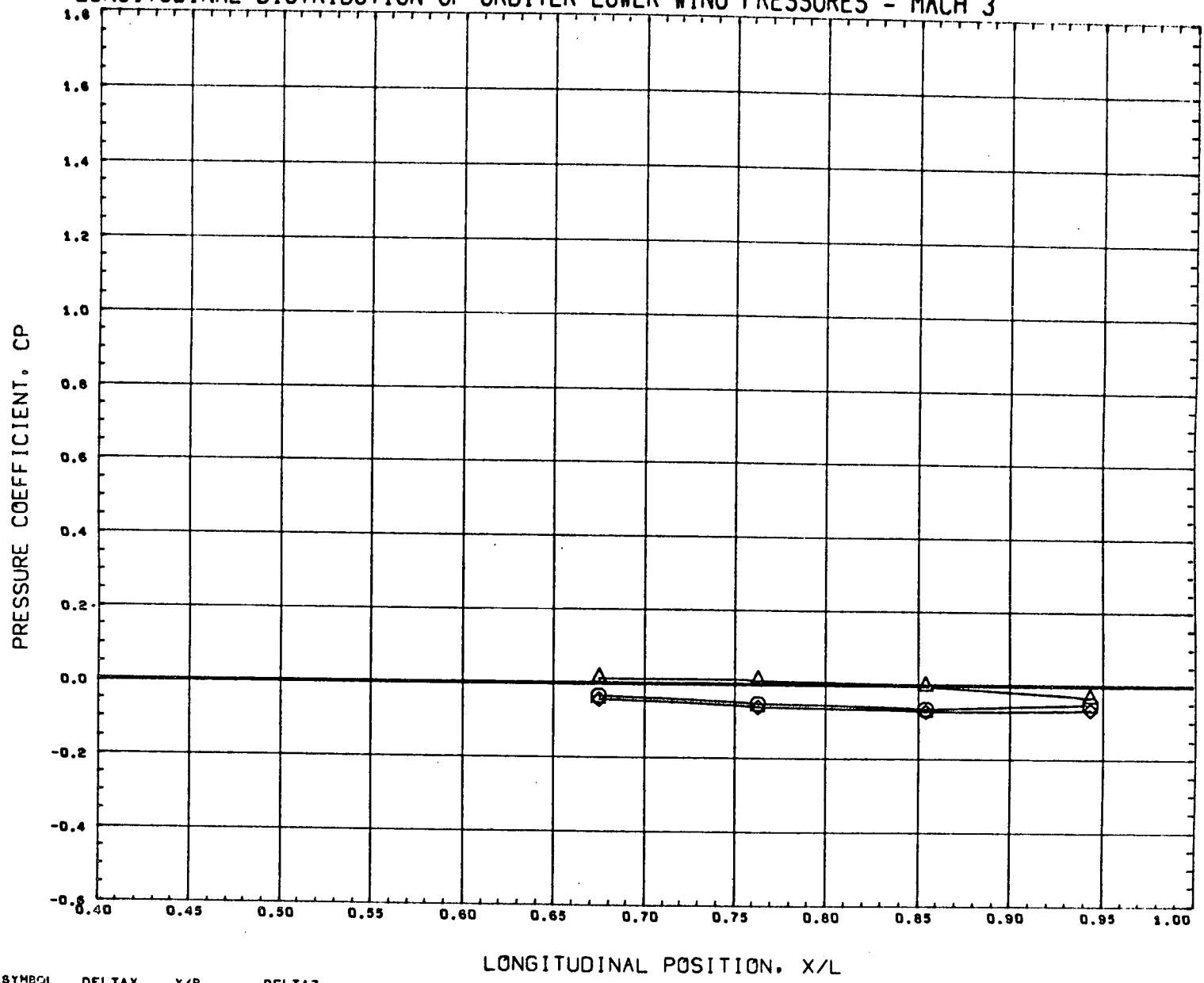
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

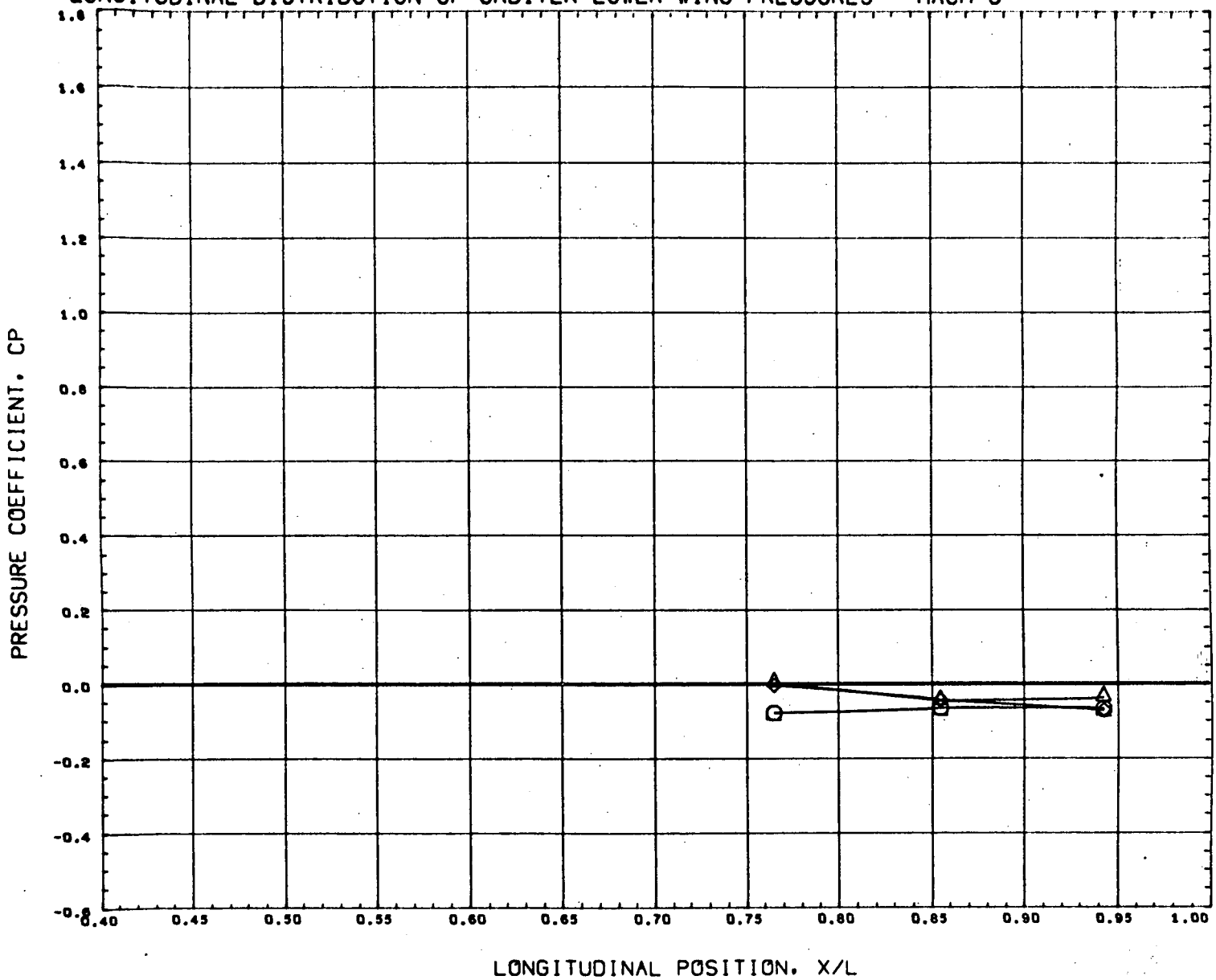
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.566	0.228
△	0.103		
◇	0.226		

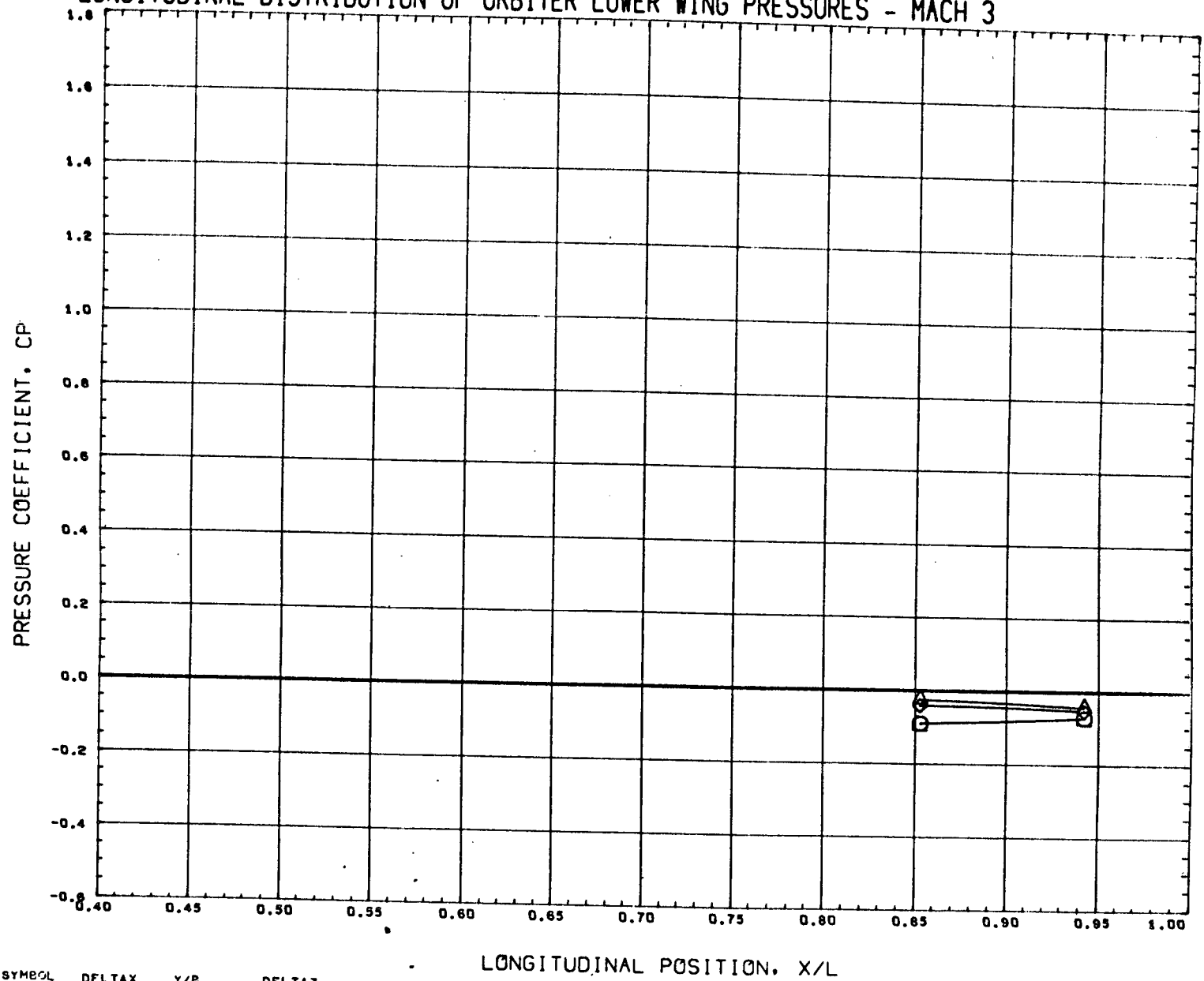
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8321• PAGE 271

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.226		

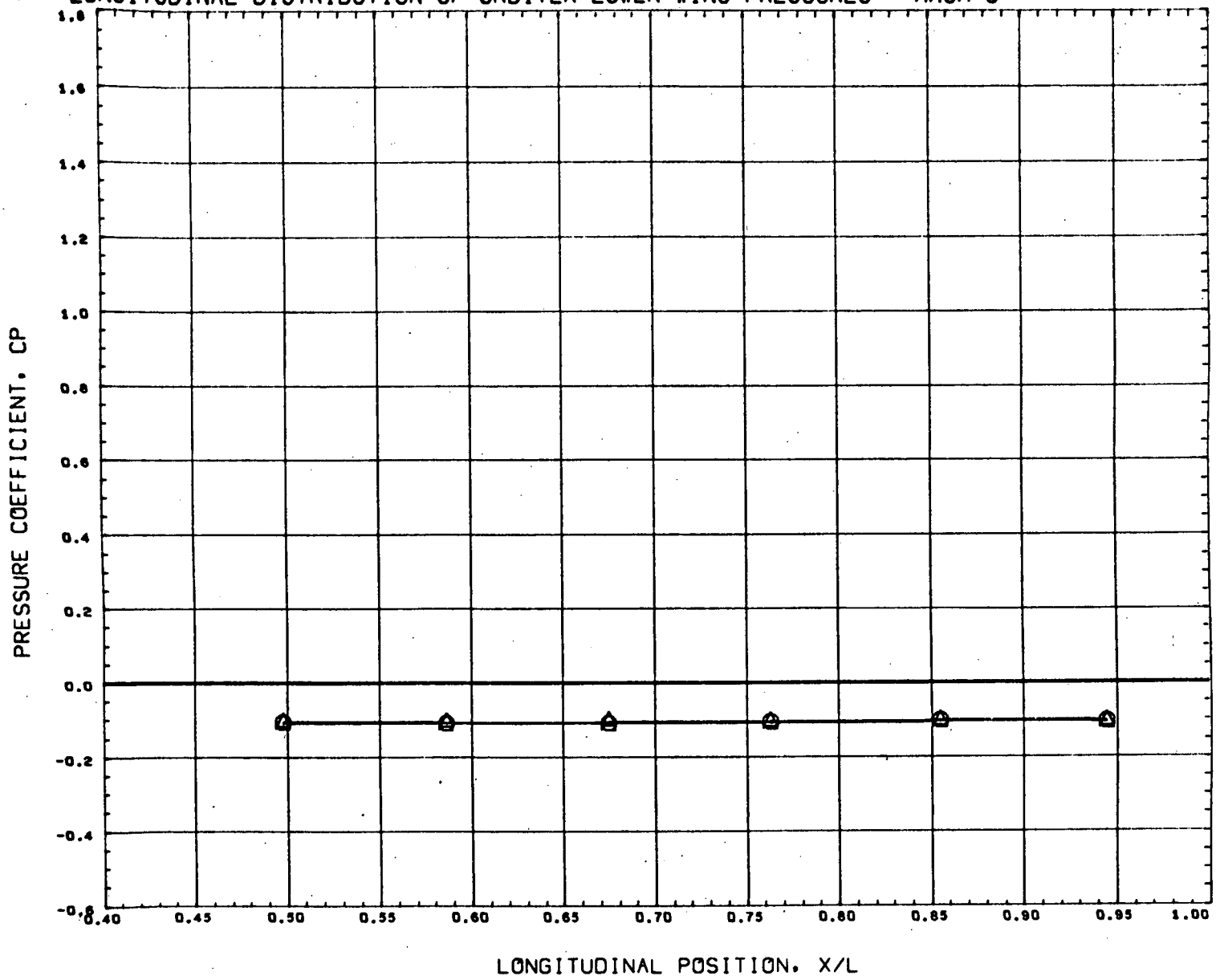
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



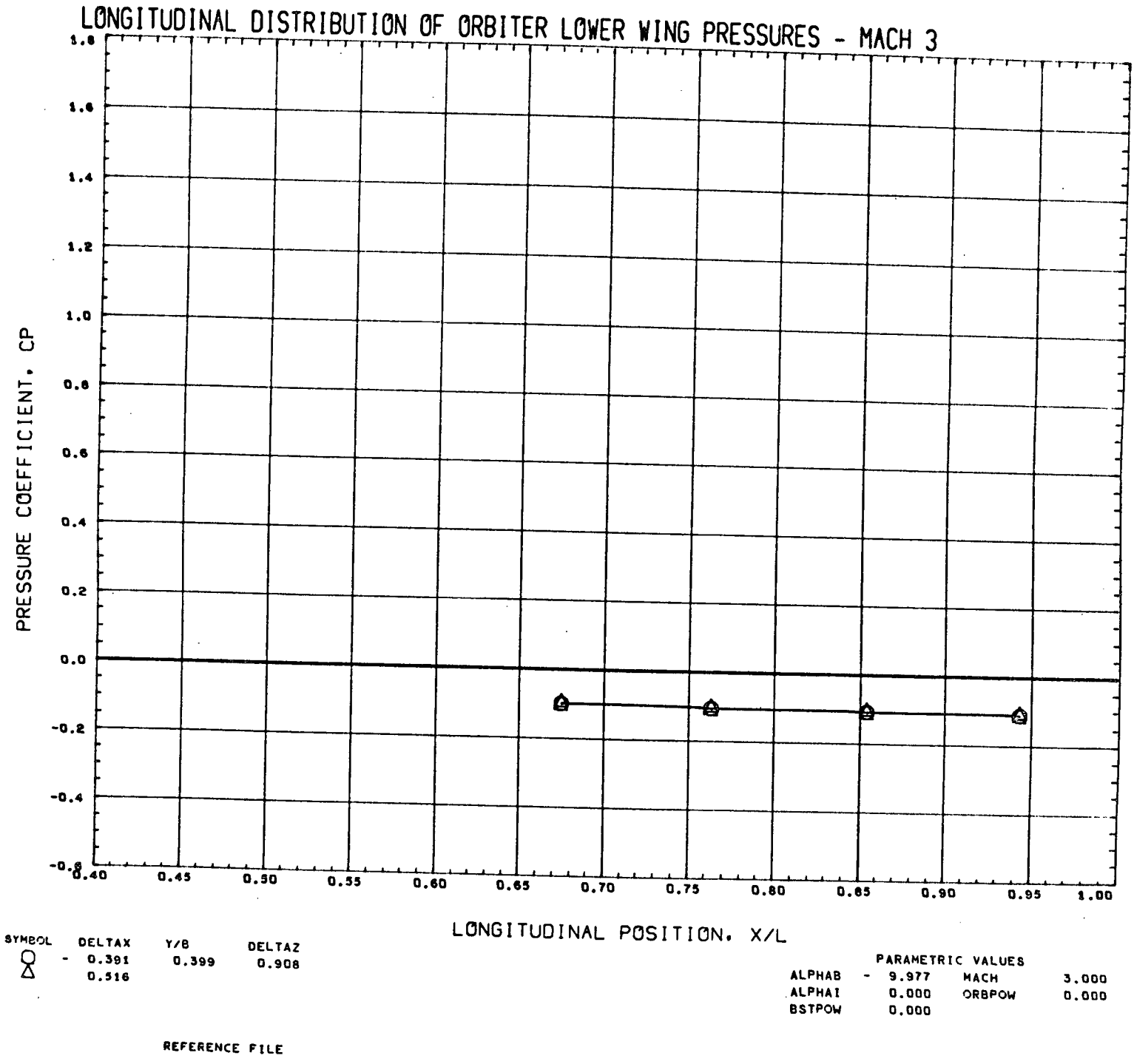
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.230	0.908
△	0.516		

PARAMETRIC VALUES

ALPHAB -	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8321•



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.399	0.908
△	0.516		

PARAMETRIC VALUES

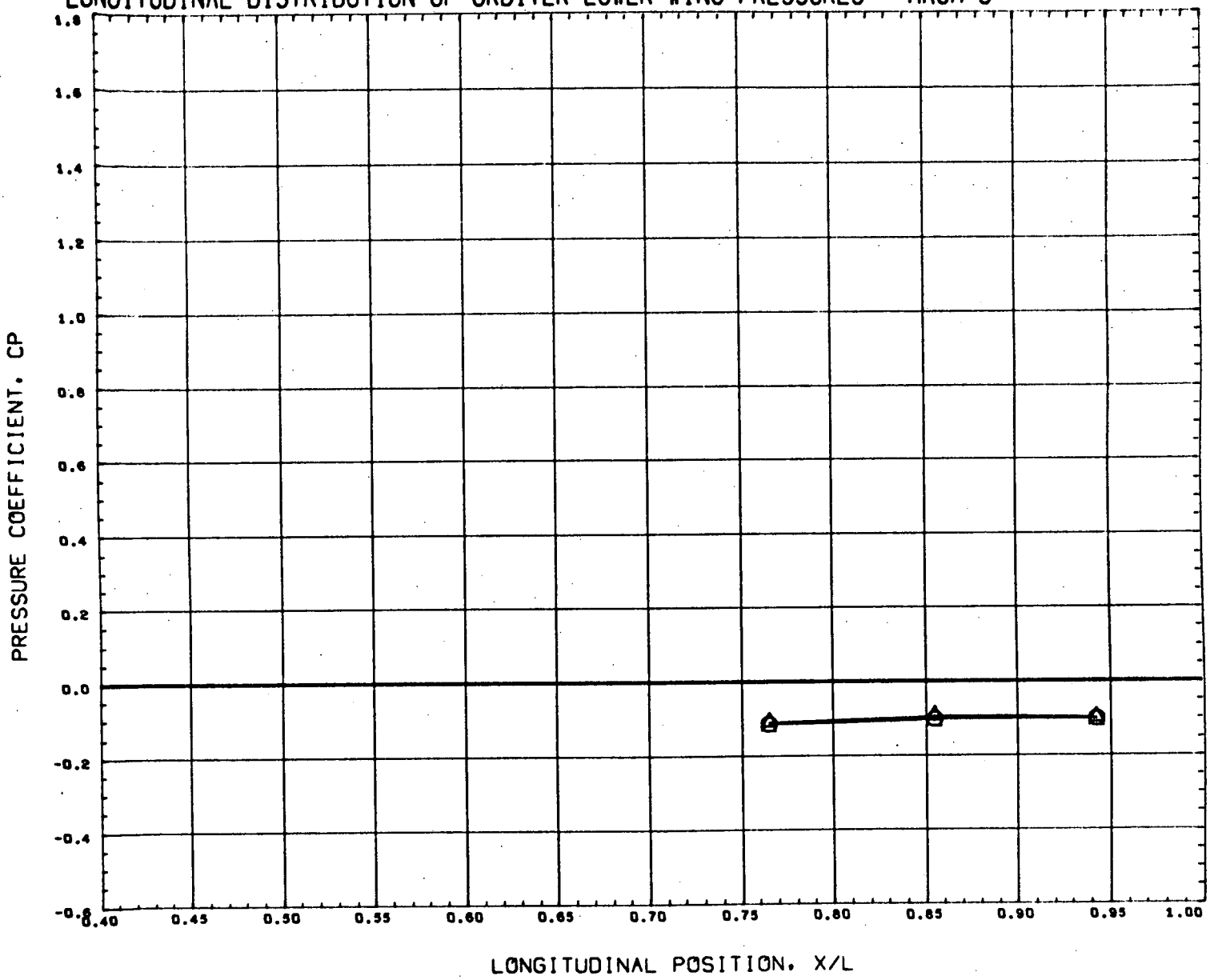
ALPHAB -	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



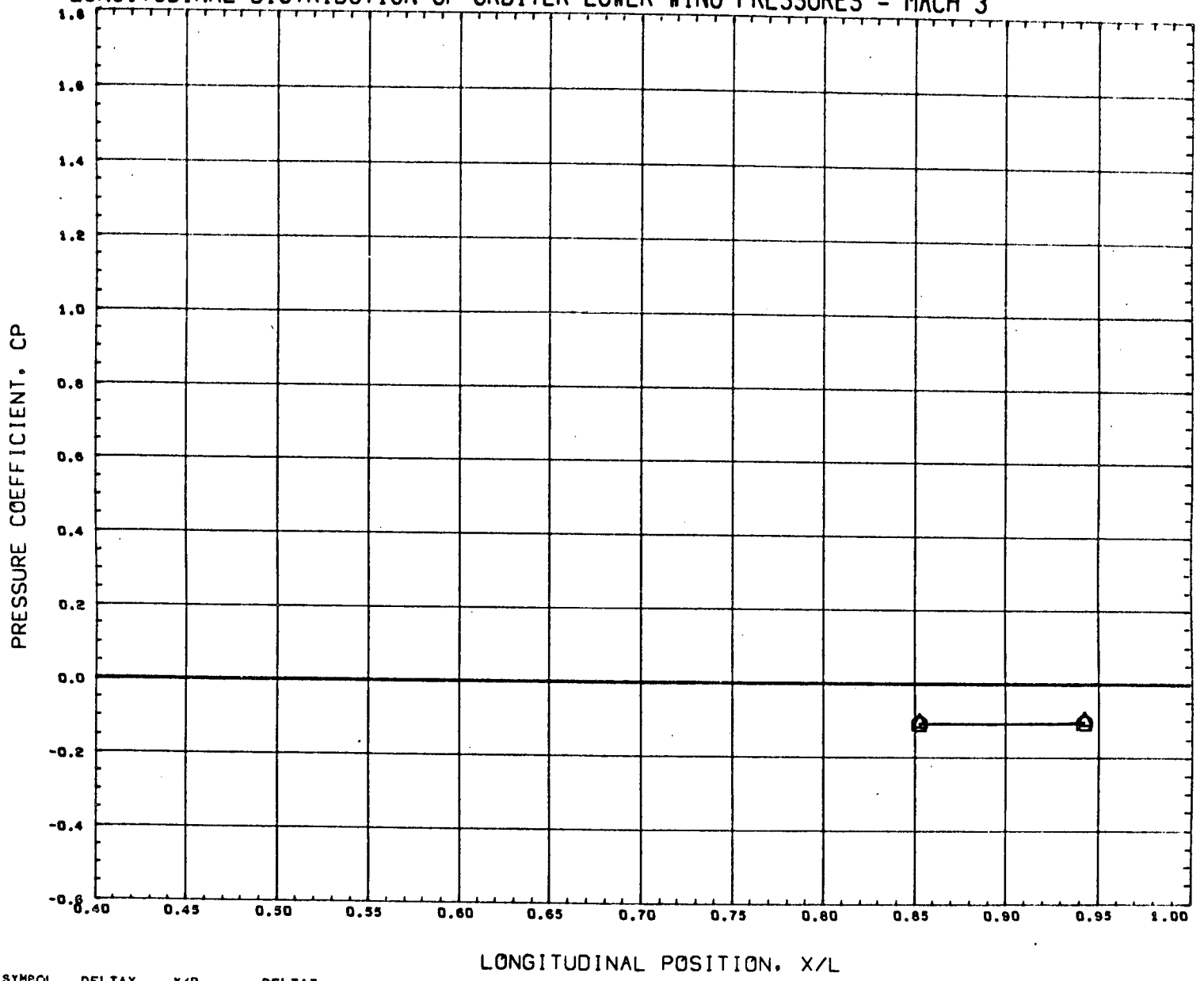
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.568	0.908
△	0.516		

PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.738	0.908
△	0.516		

PARAMETRIC VALUES

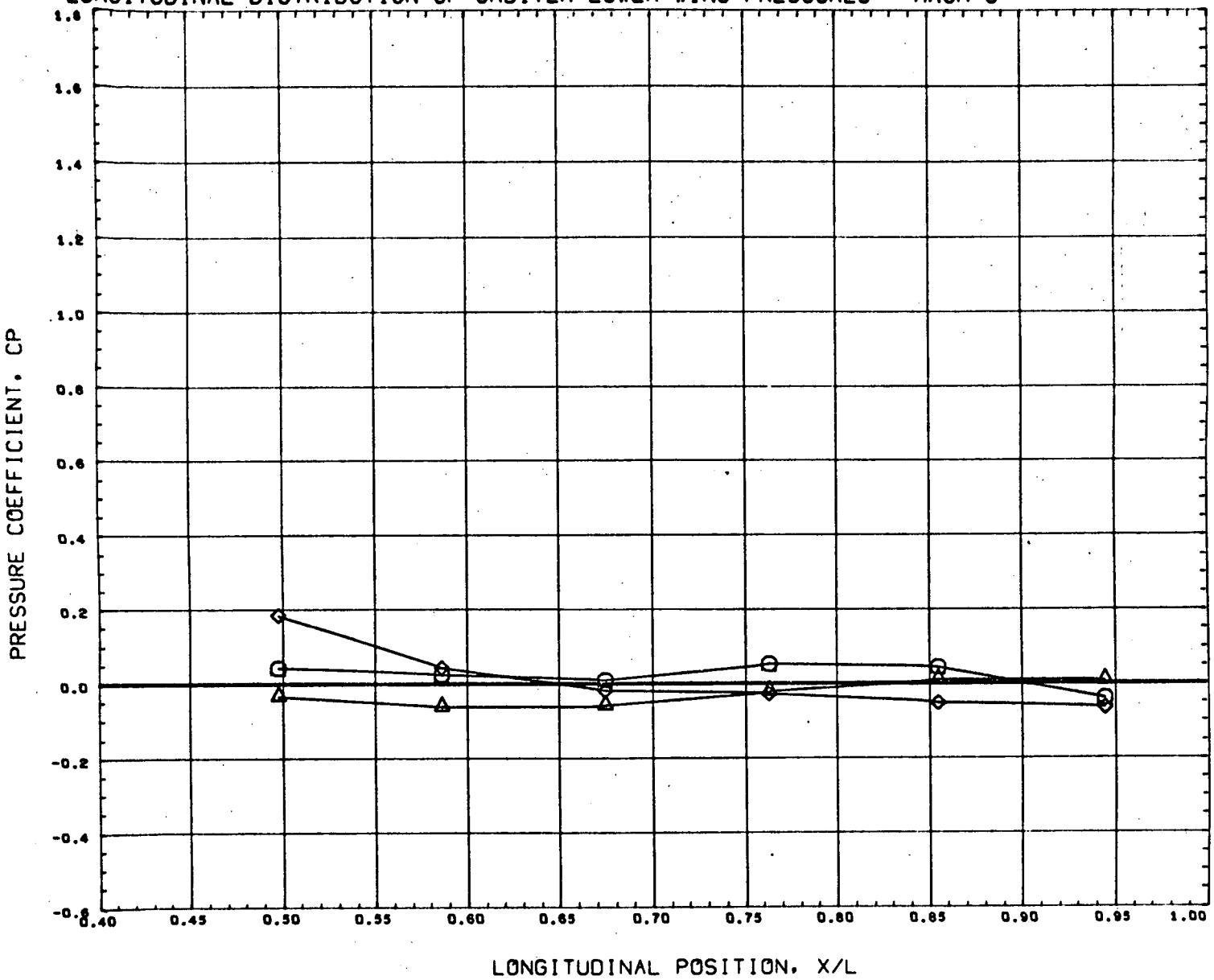
ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8321•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



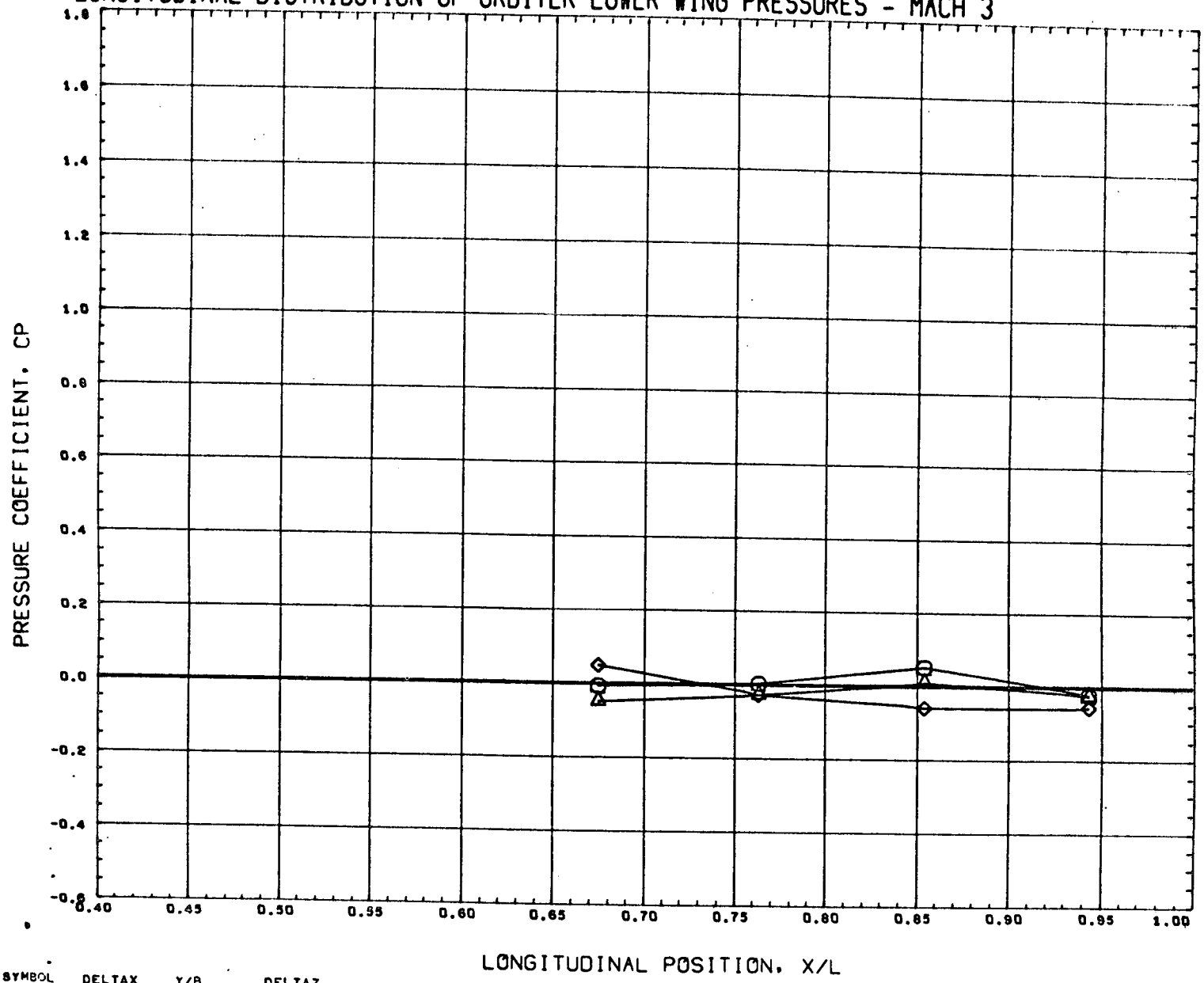
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

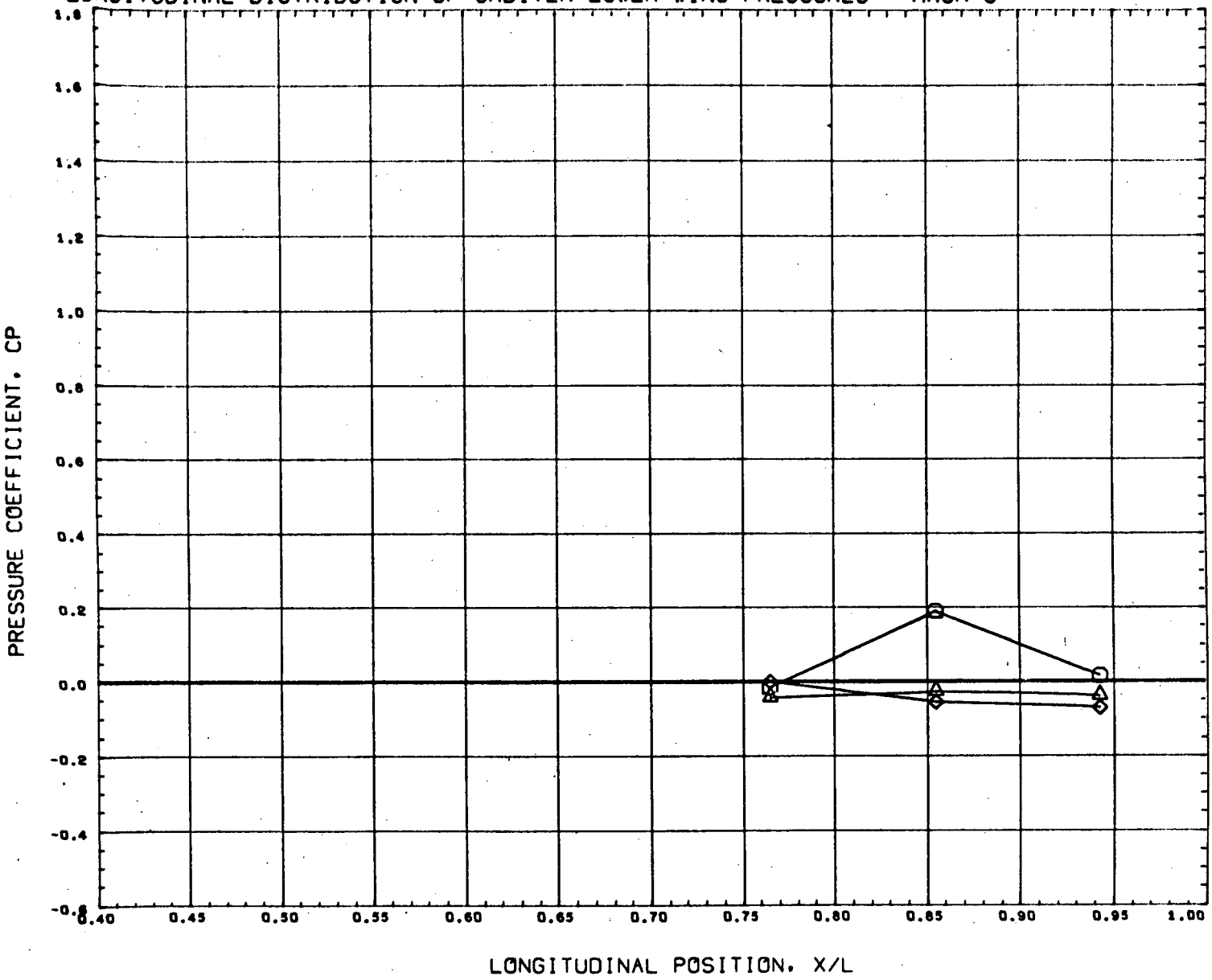
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



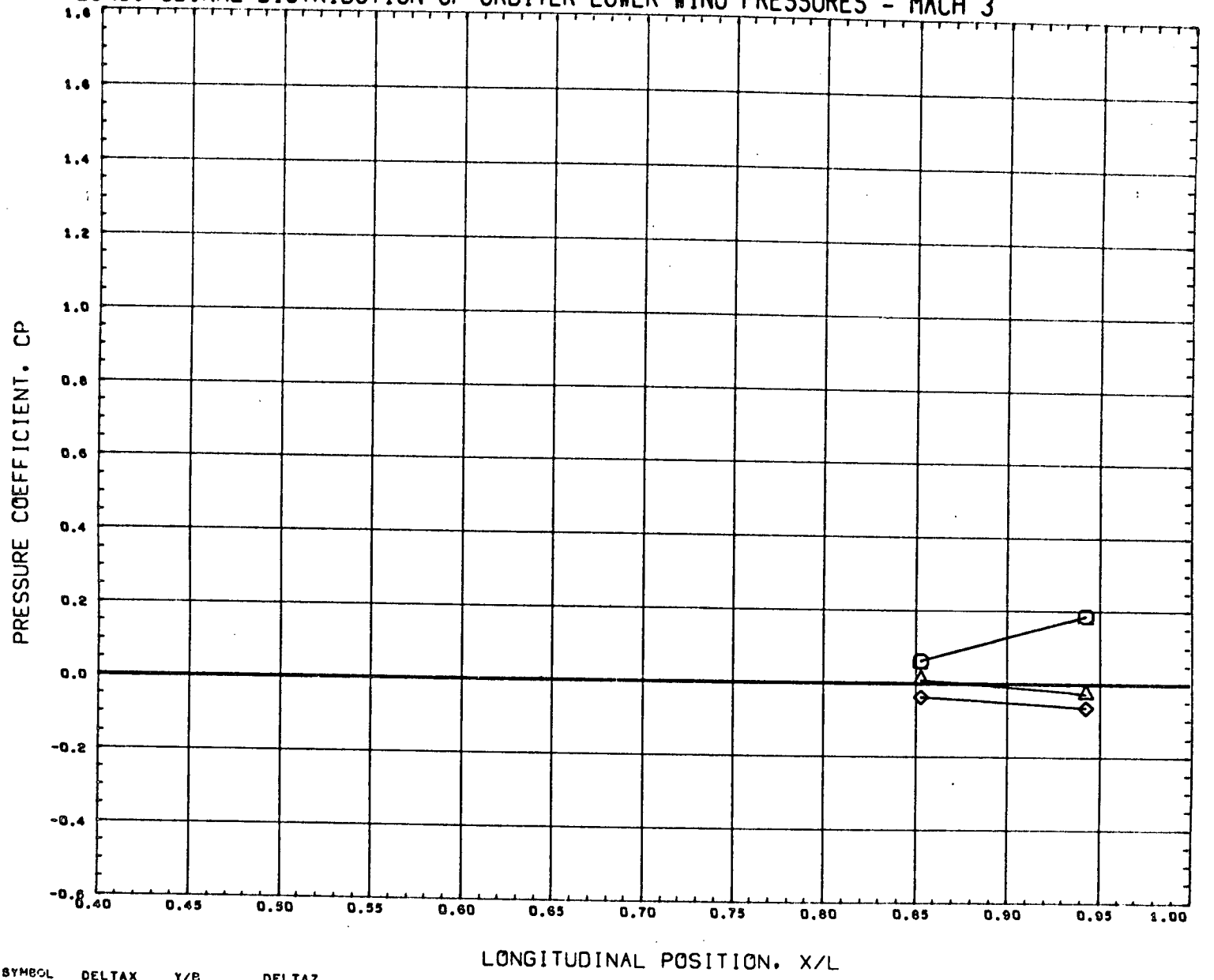
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.103		
◇	0.226		

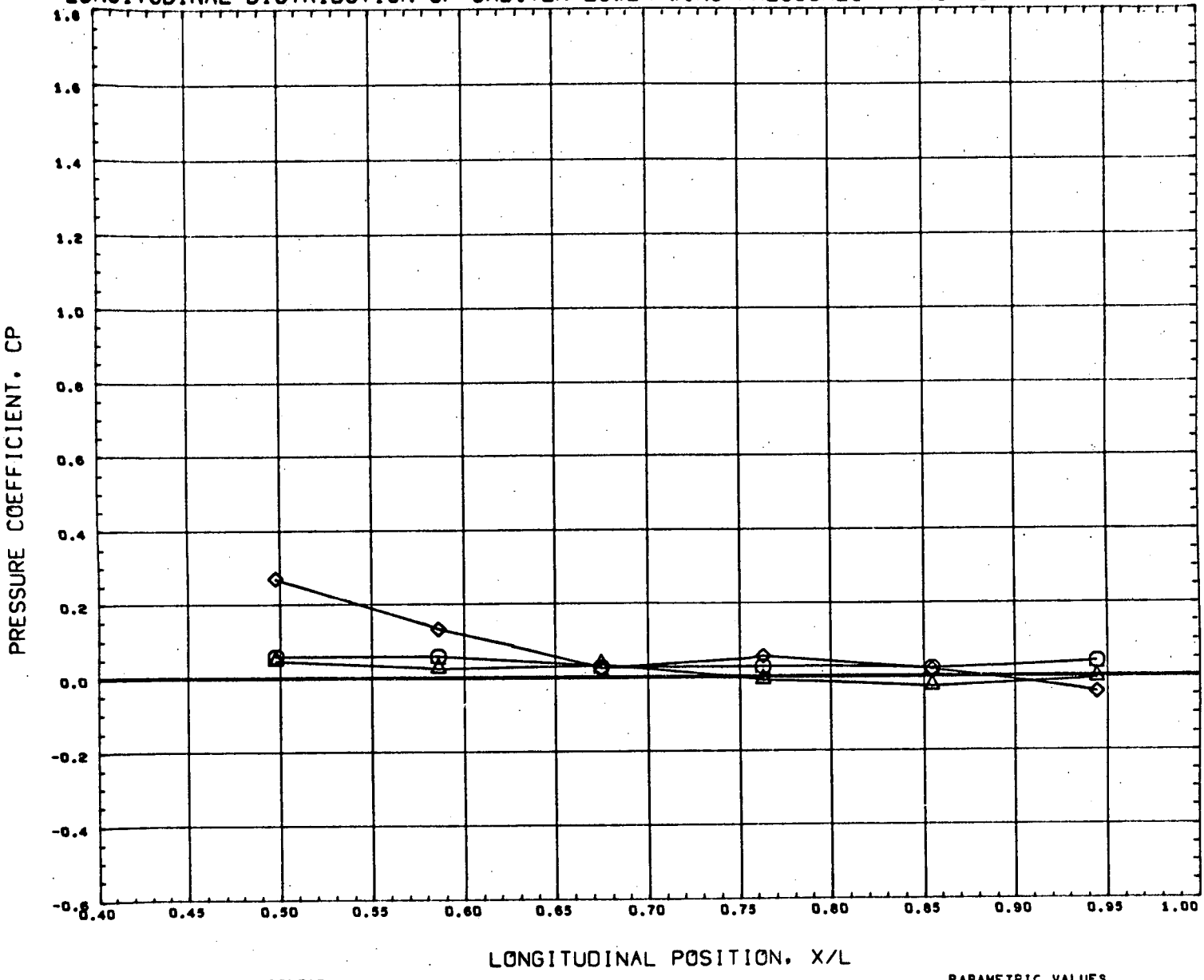
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8322• PAGE 280

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

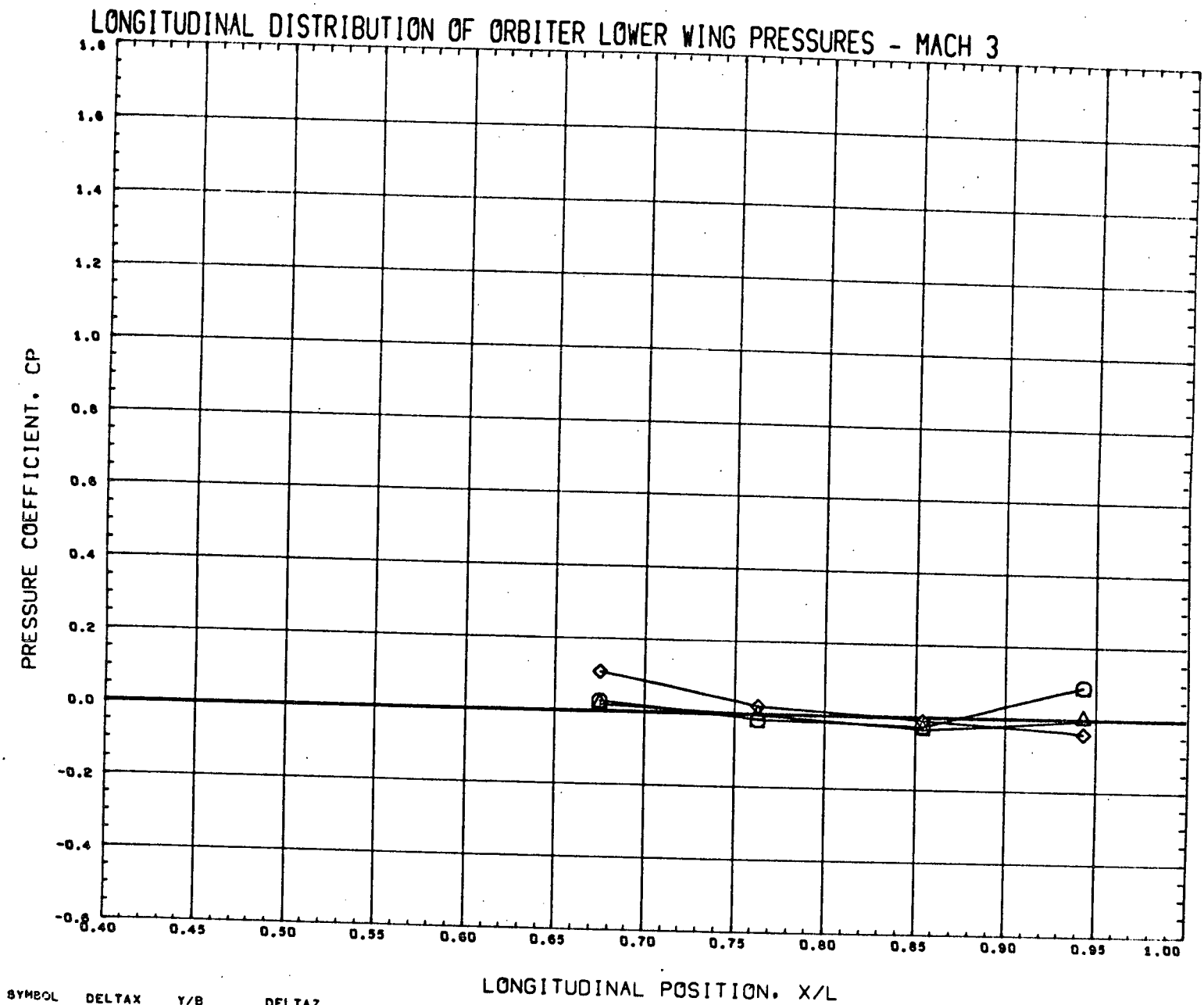


SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.230	0.151
△	0.101		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.101		
◇	0.226		

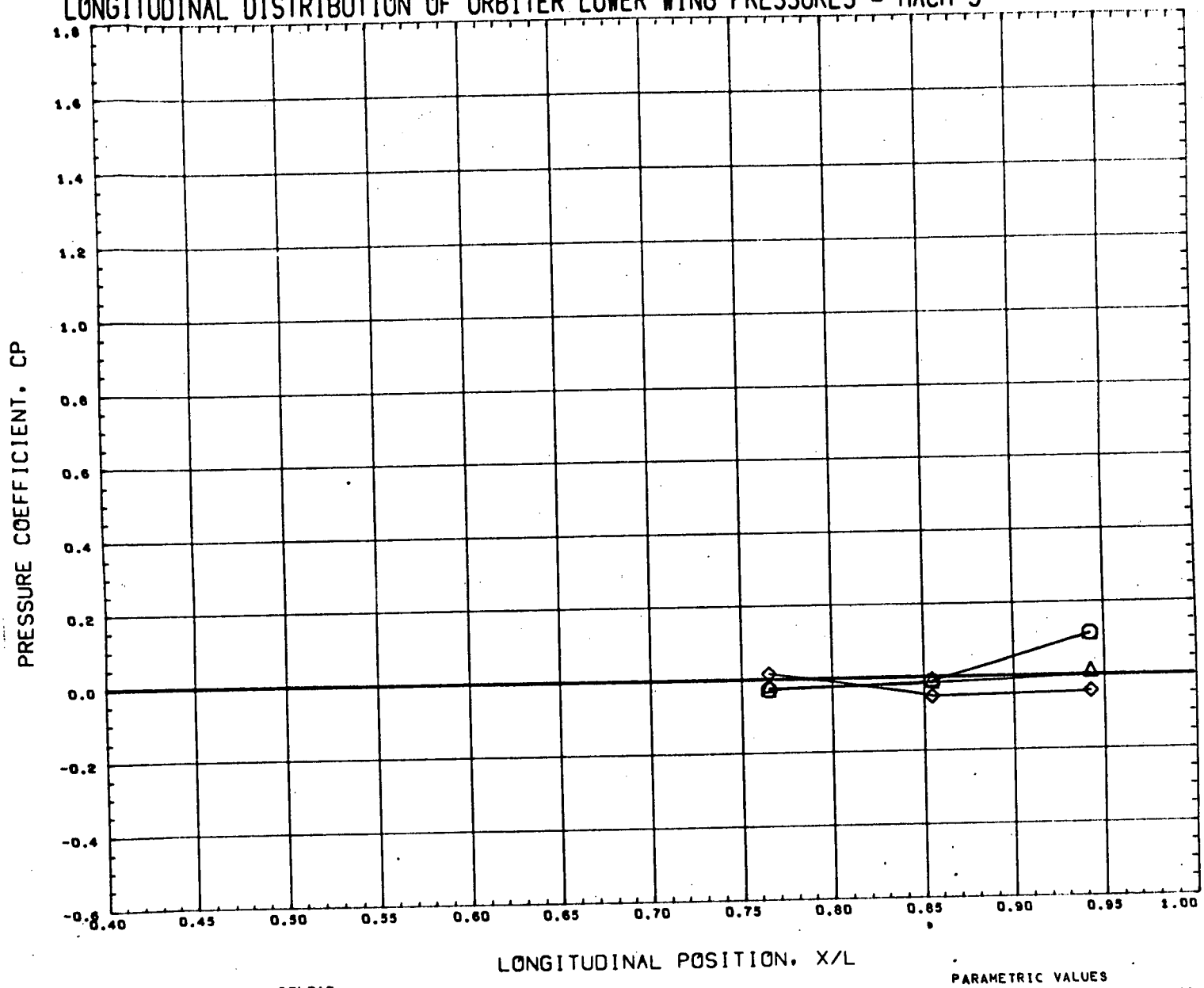
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.568	0.151
△	0.101		
◇	0.226		

PARAMETRIC VALUES

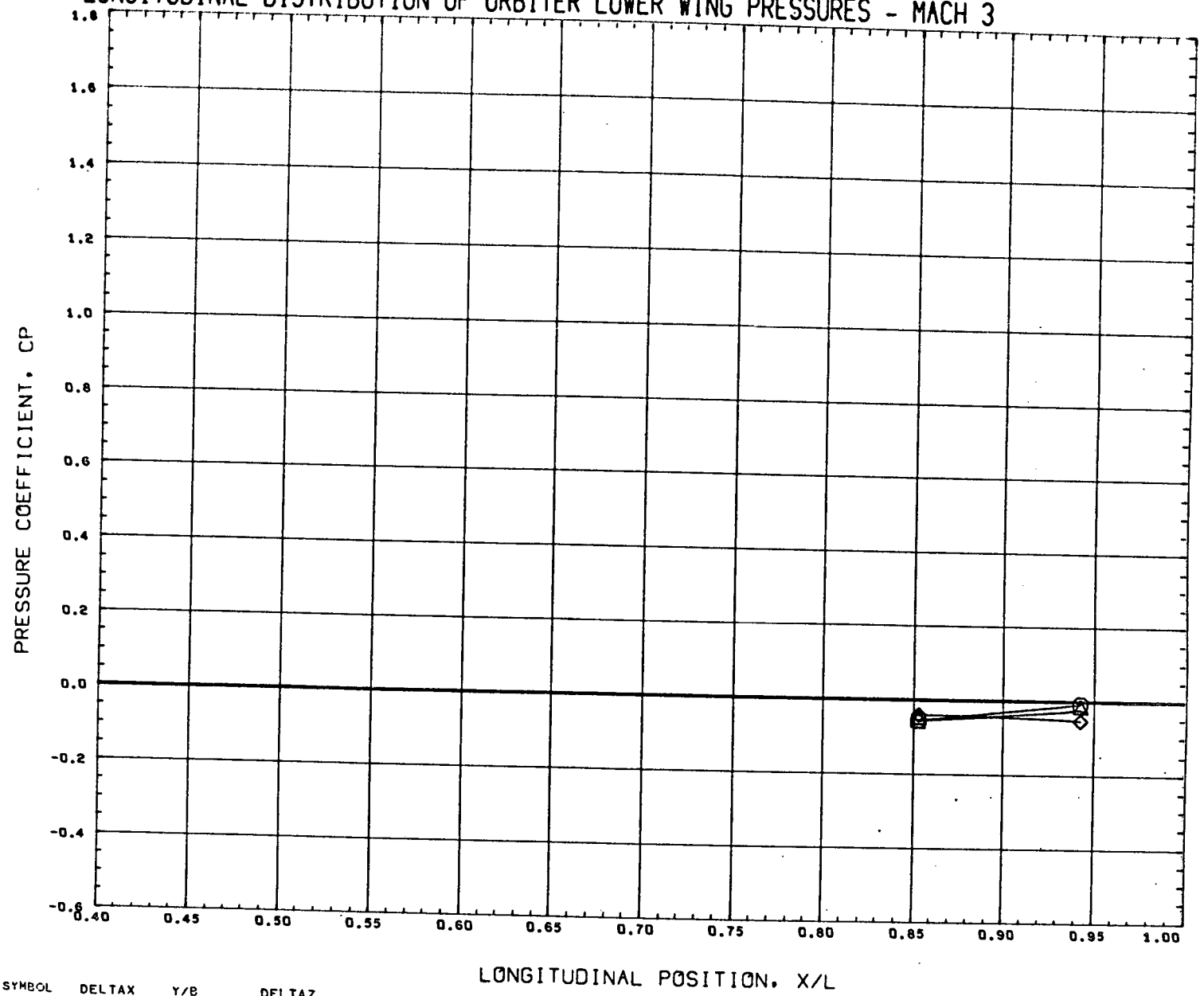
ALPHAB	4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.738	0.151
△	0.101		
◇	0.226		

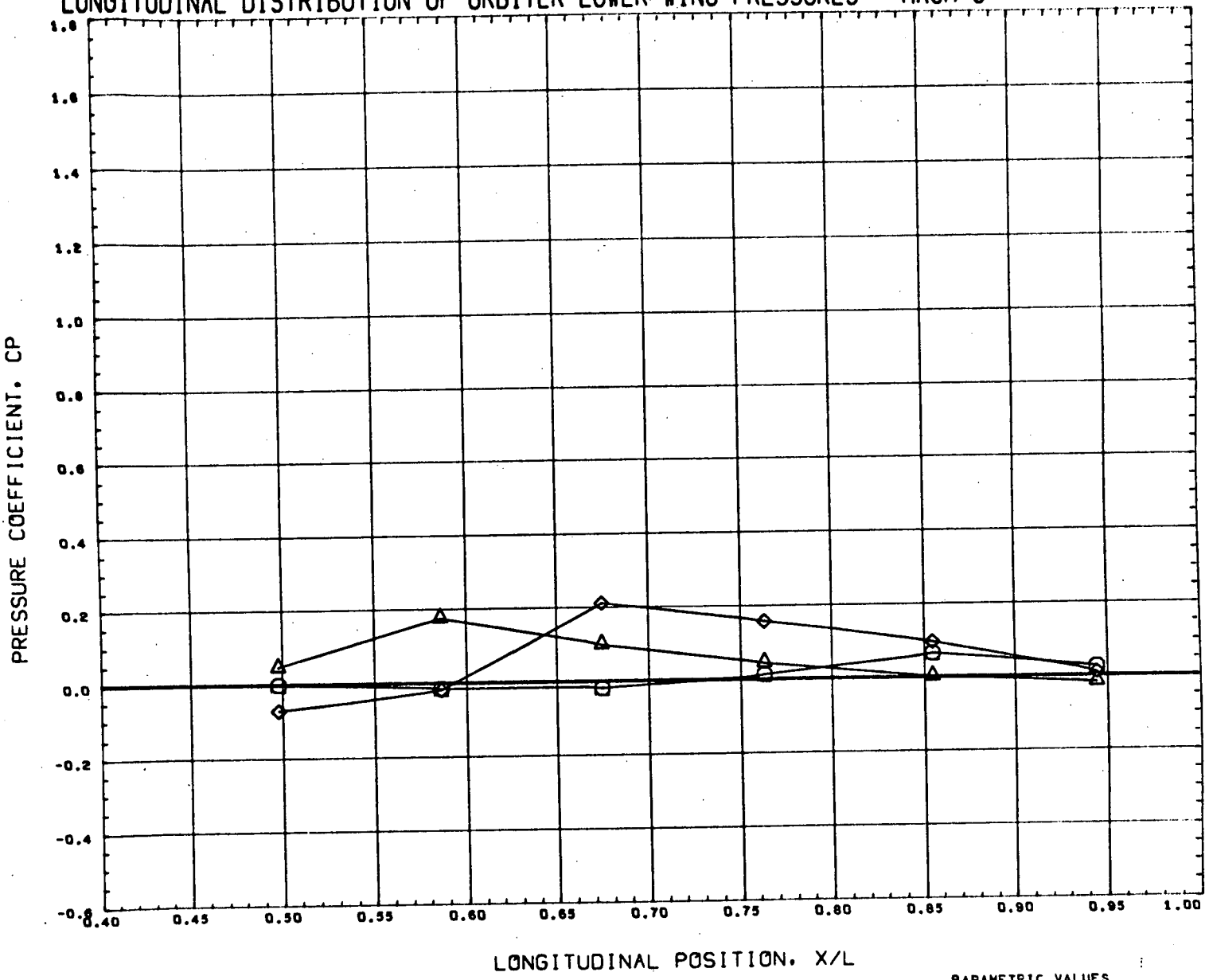
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.230	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

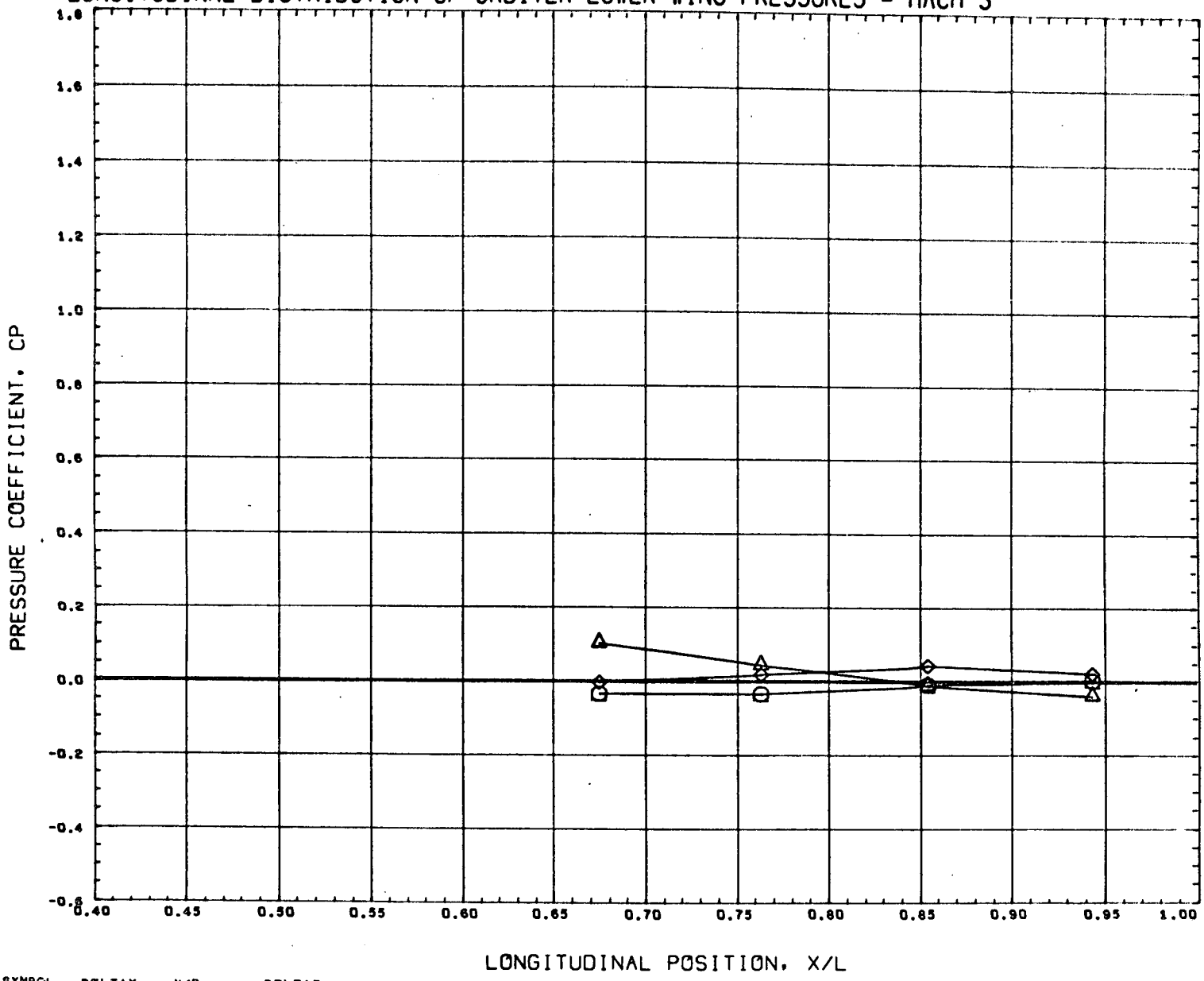
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

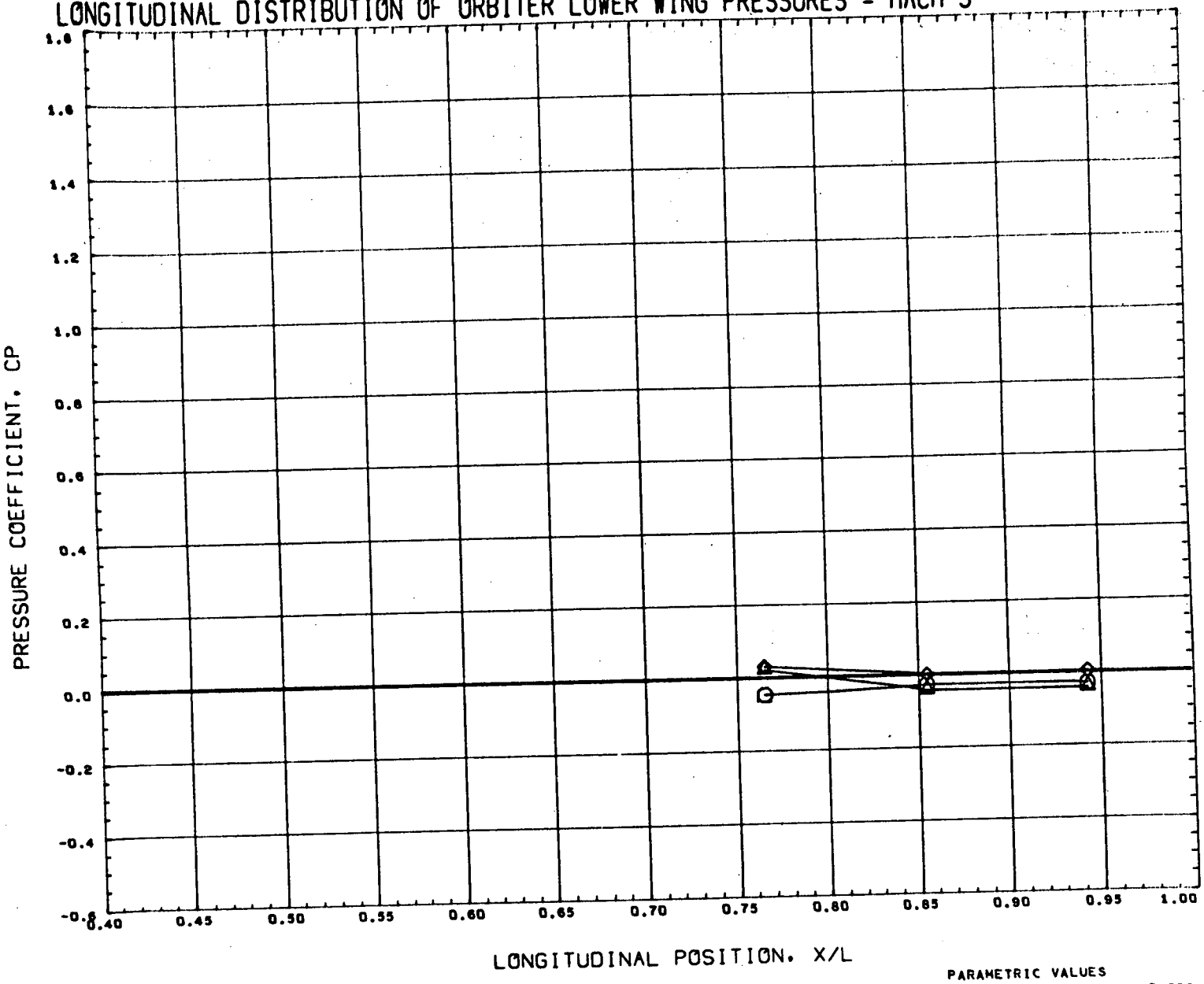
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.568	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

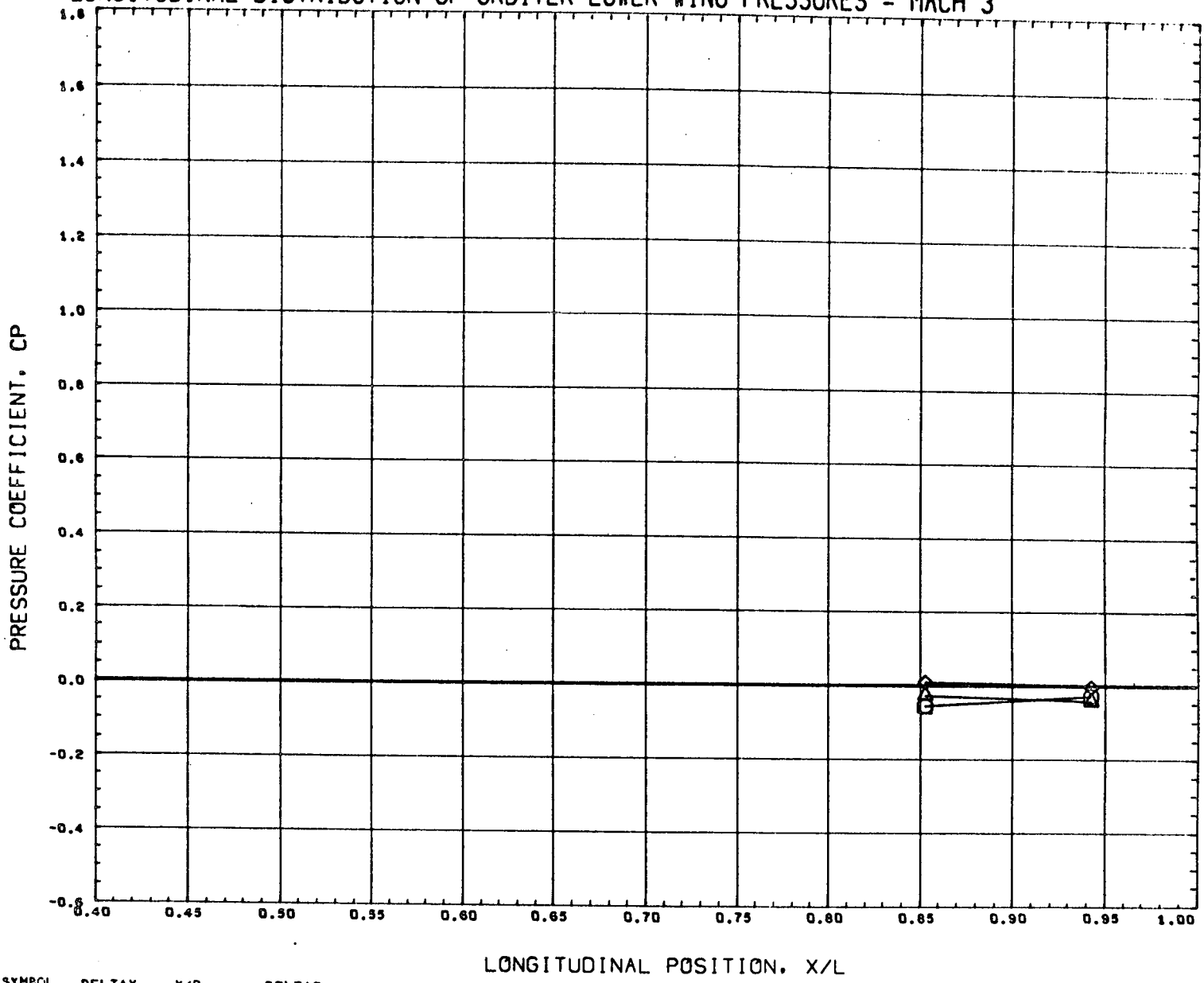
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.104		
◇	0.227		

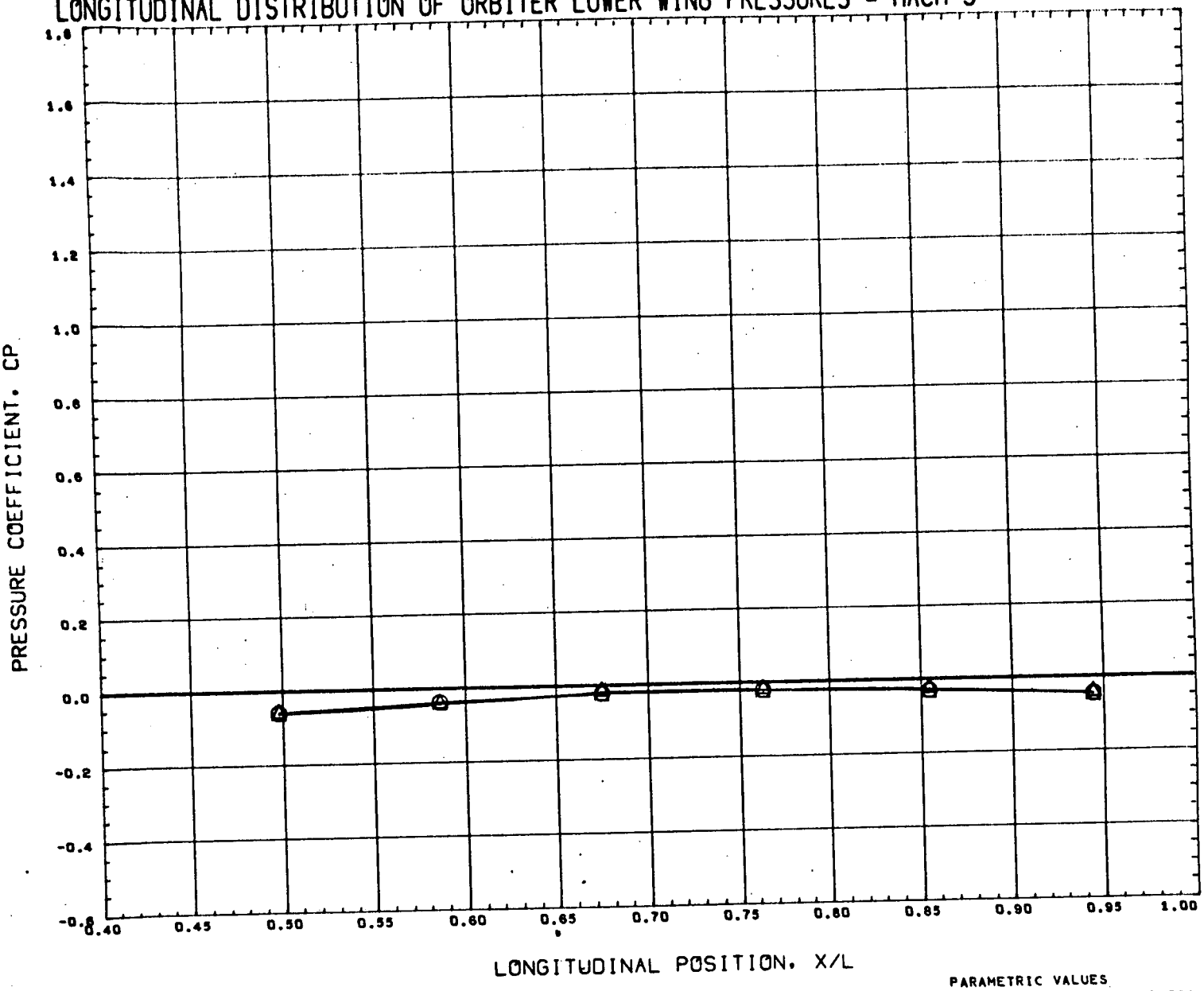
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8322• PAGE 288

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.230	0.908
△	0.516		

PARAMETRIC VALUES

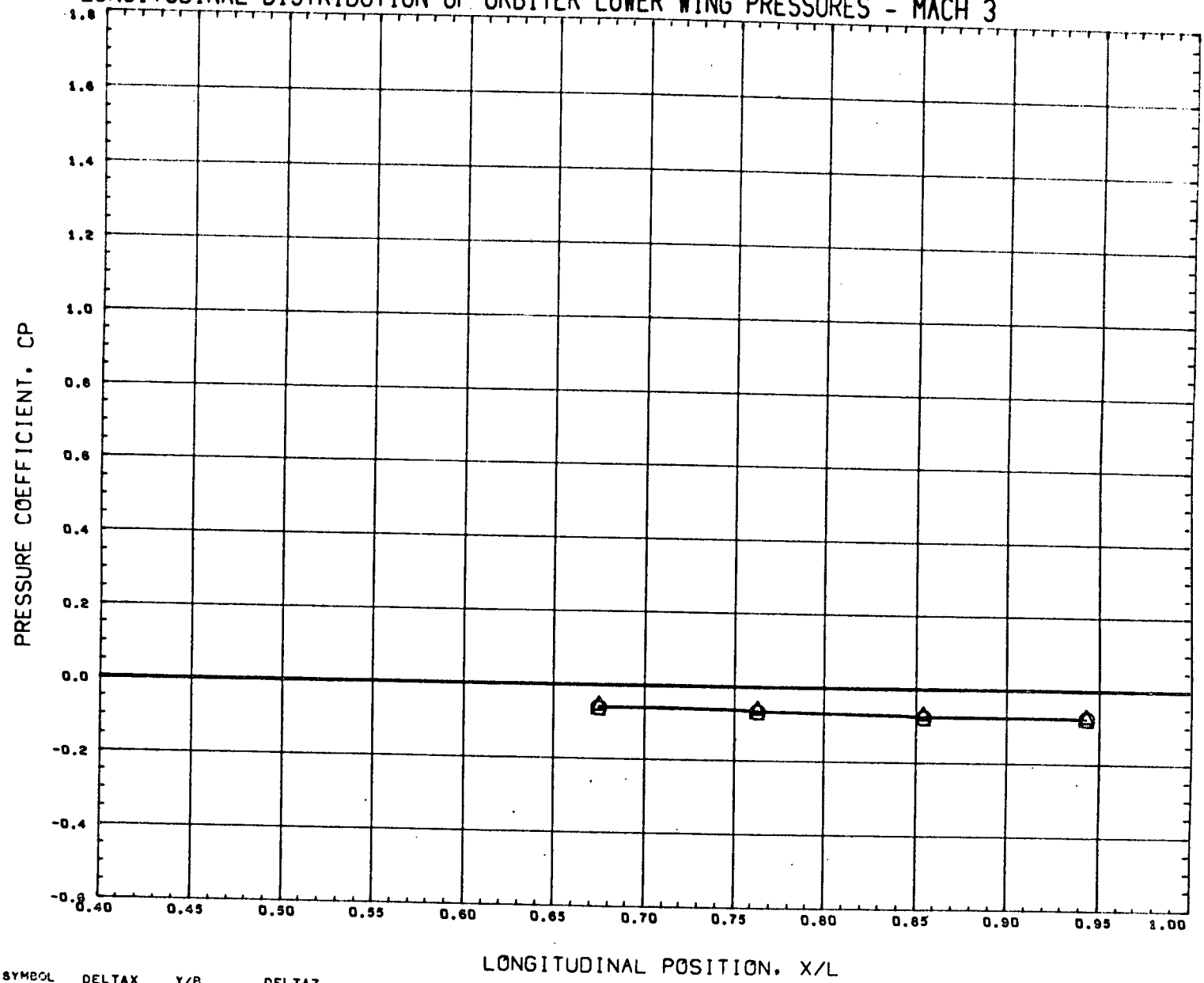
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.399	0.908
△	0.316		

PARAMETRIC VALUES

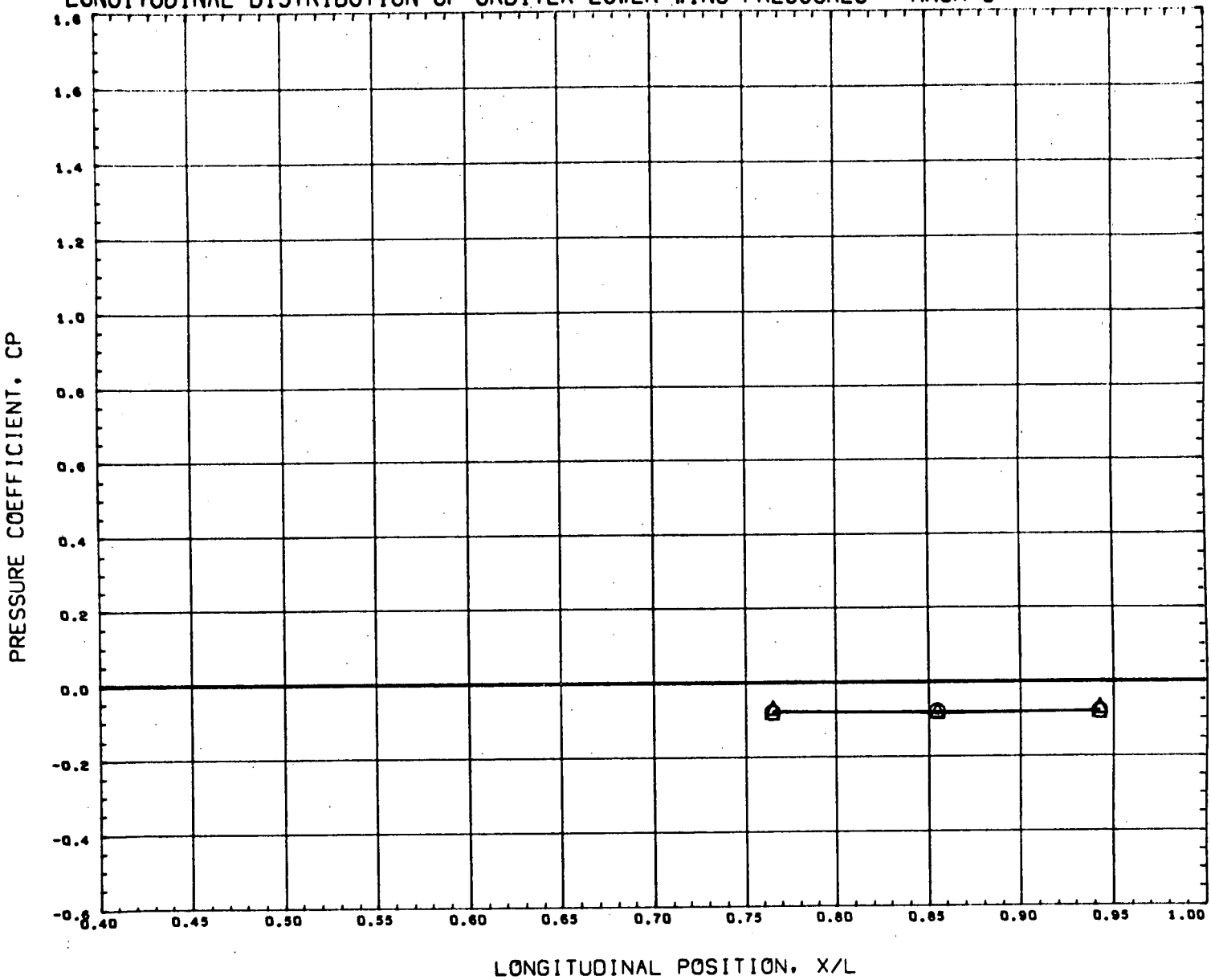
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.568	0.908
△	0.516		

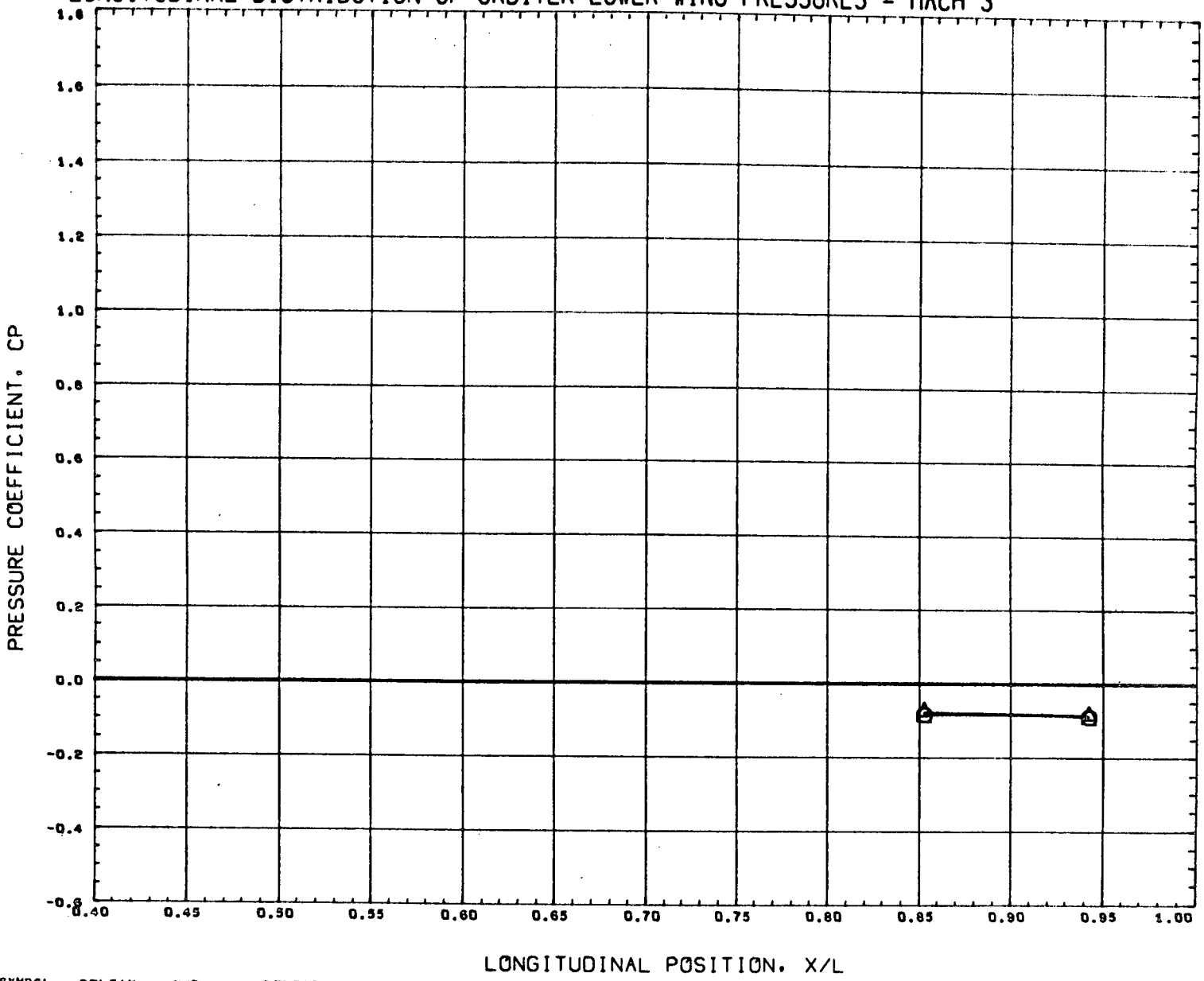
PARAMETRIC VALUES

ALPHAB -	4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.738	0.908
△	0.516		

PARAMETRIC VALUES

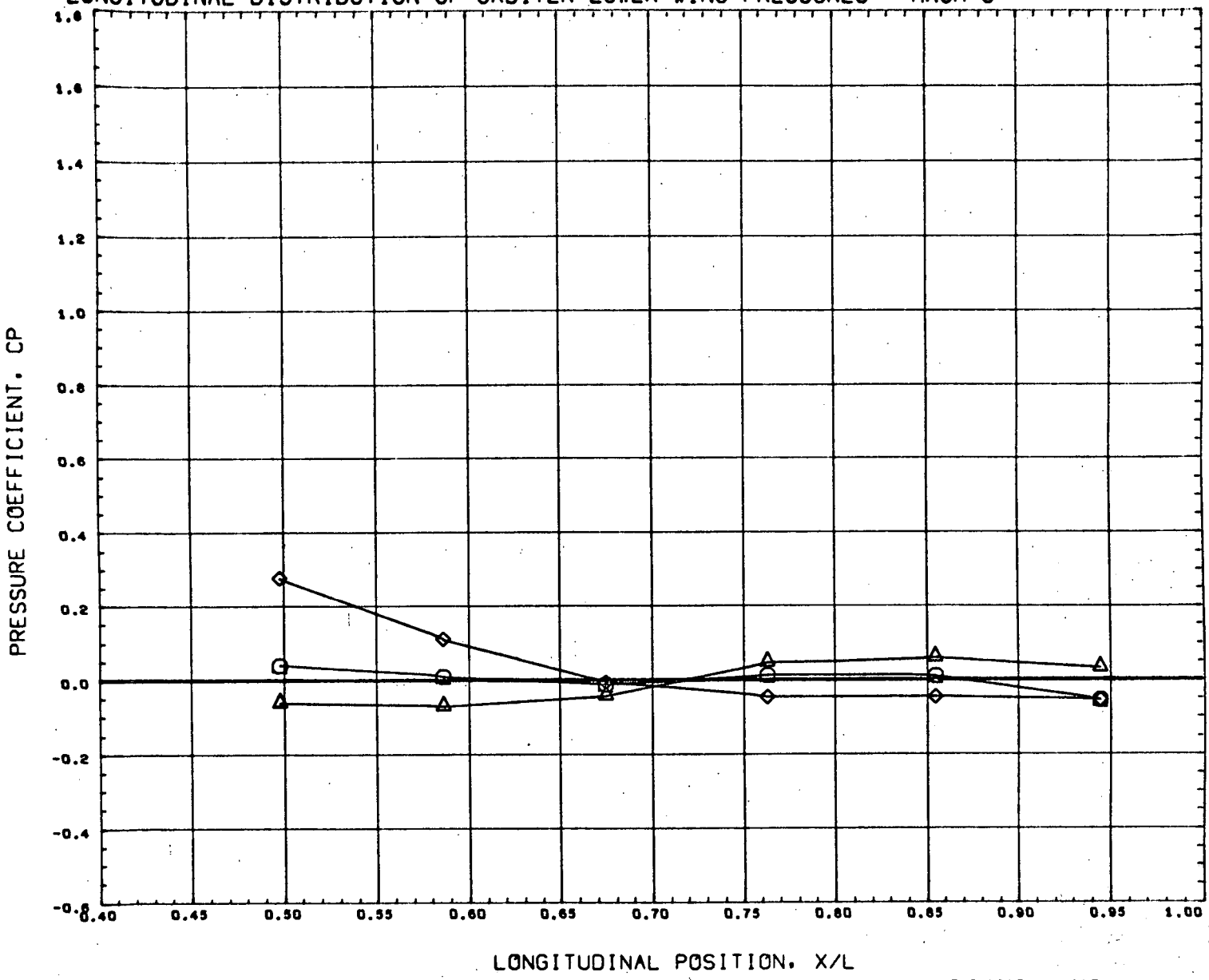
ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8322•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



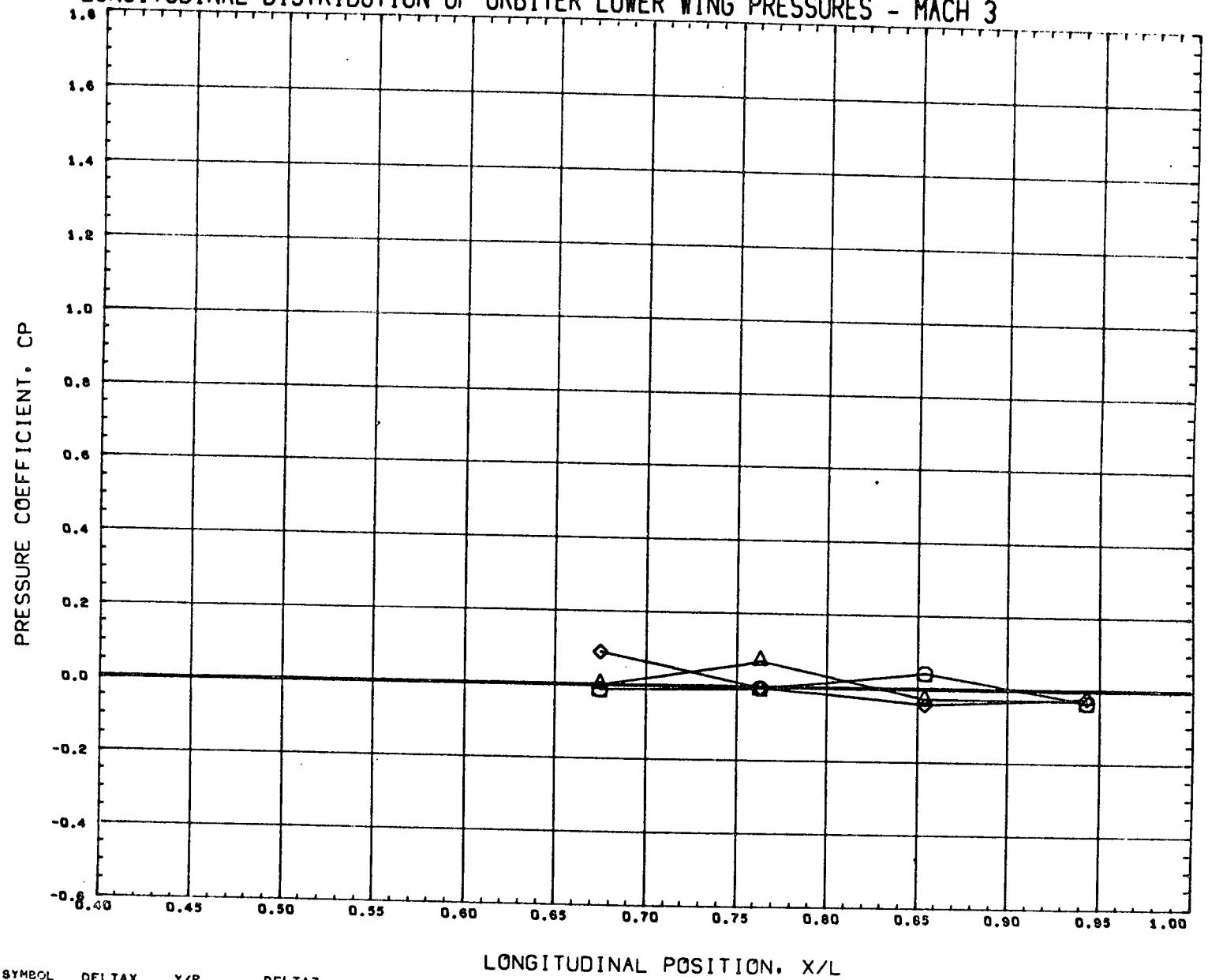
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.230	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

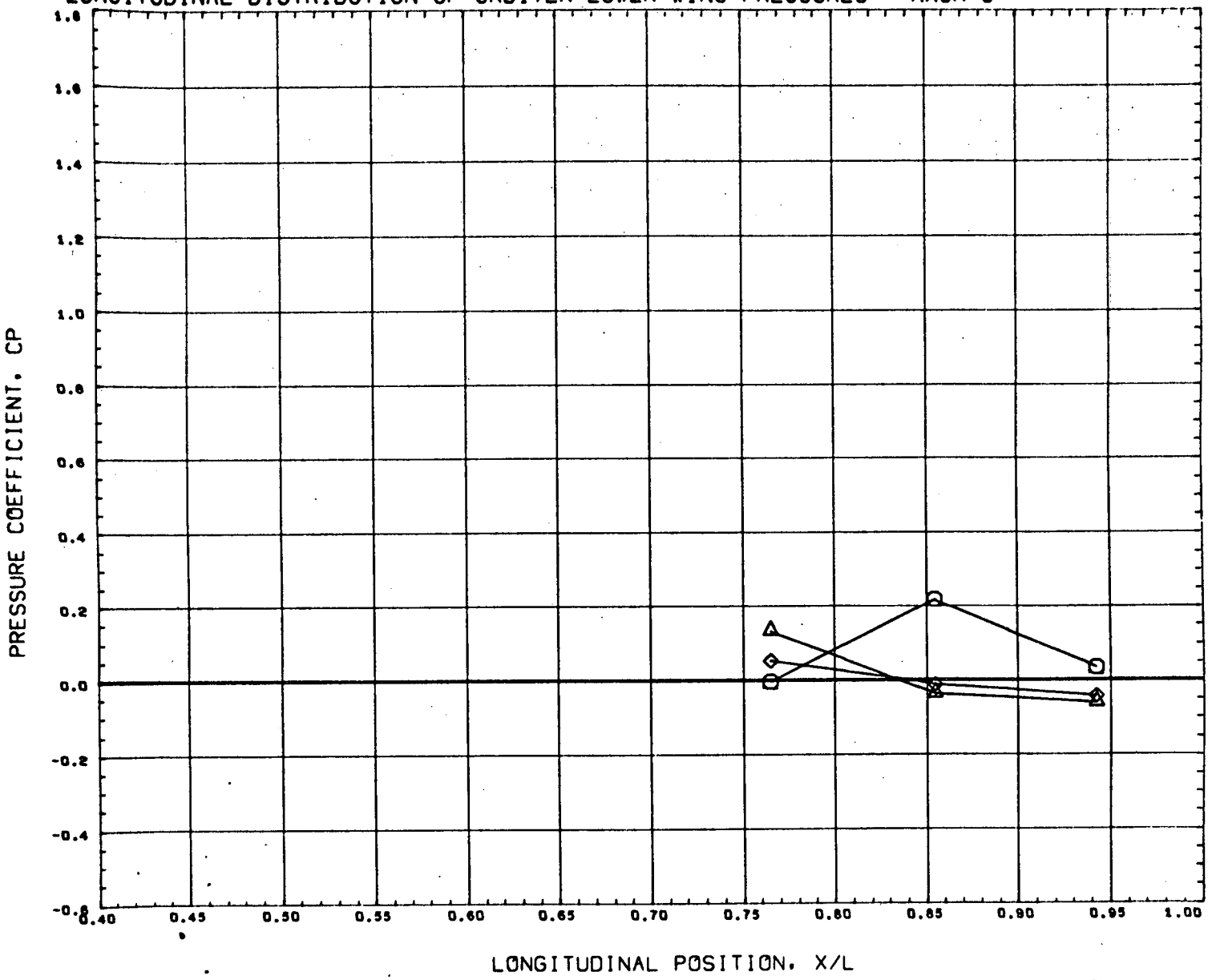
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



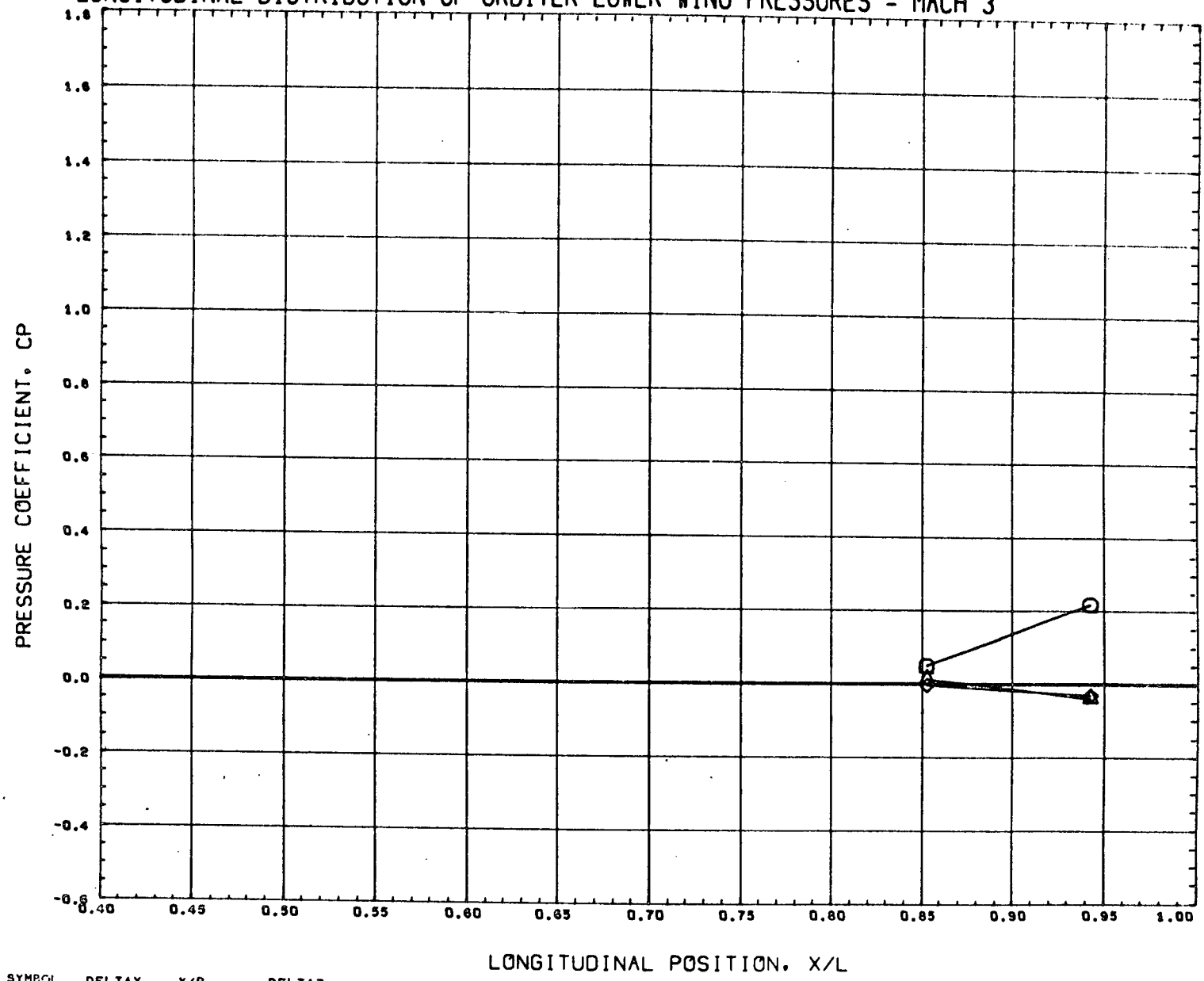
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.120
△	0.103		
◇	0.226		

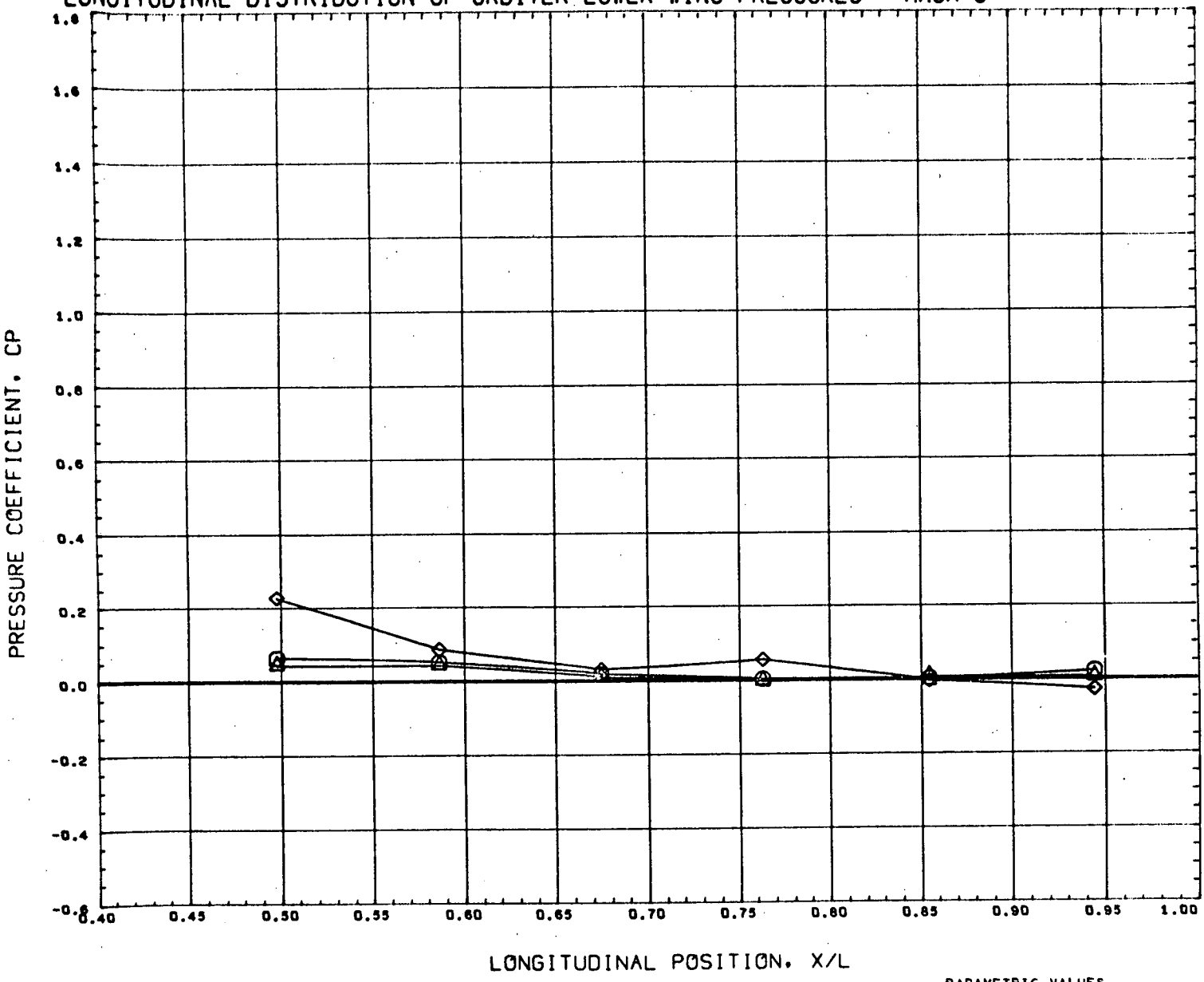
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323• PAGE 296

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.144	0.230	0.151
△	0.104		
◇	0.227		

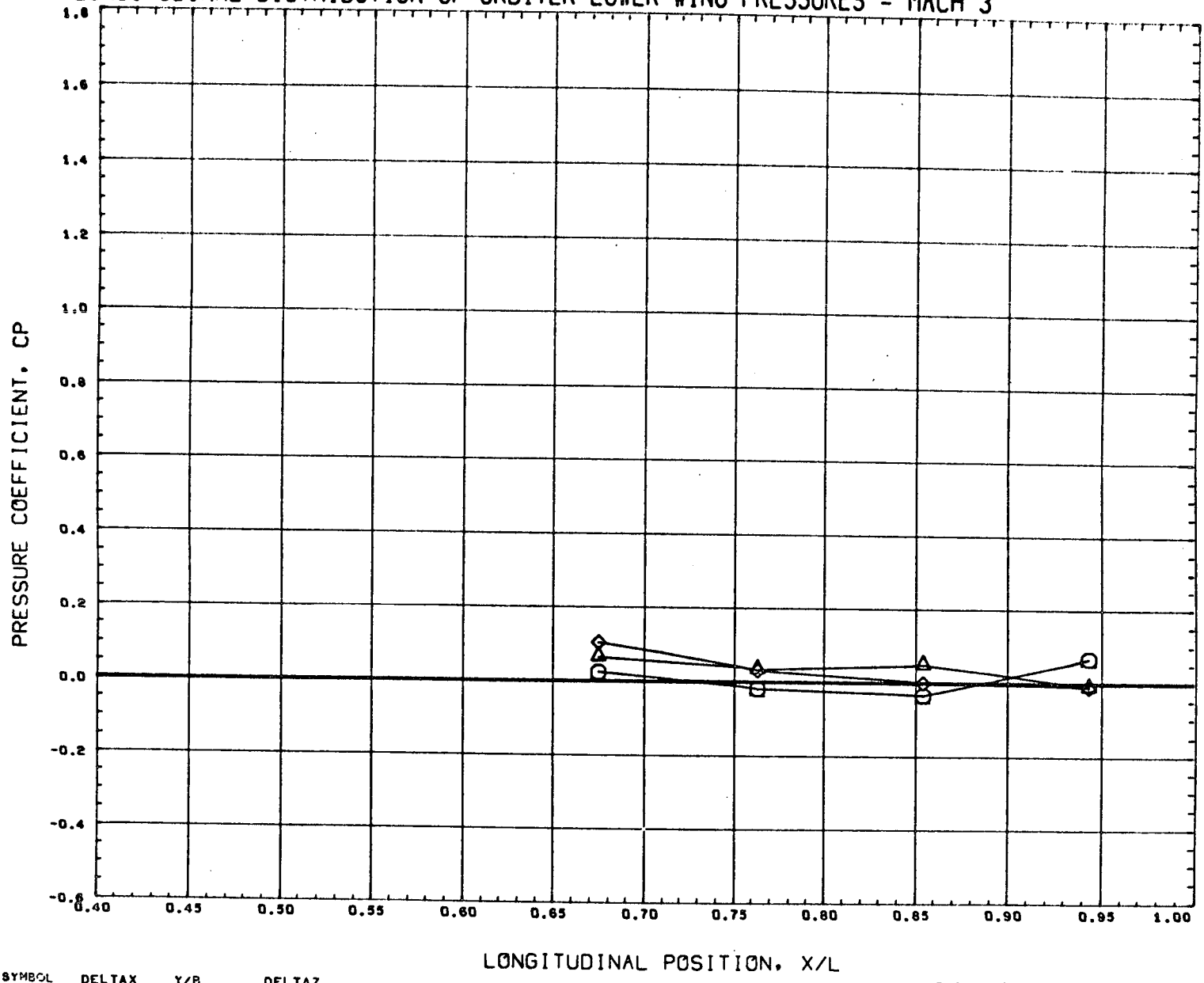
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

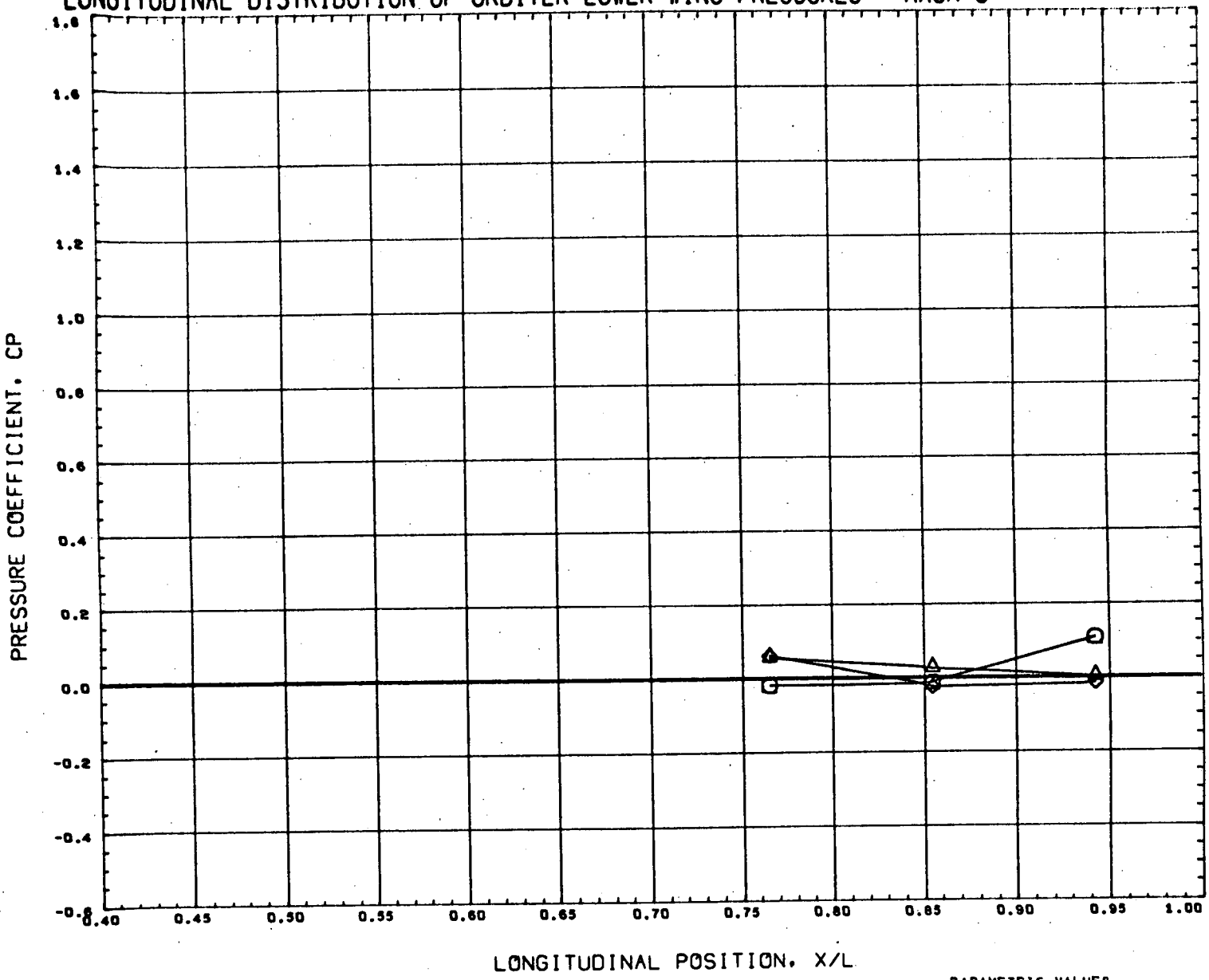
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3

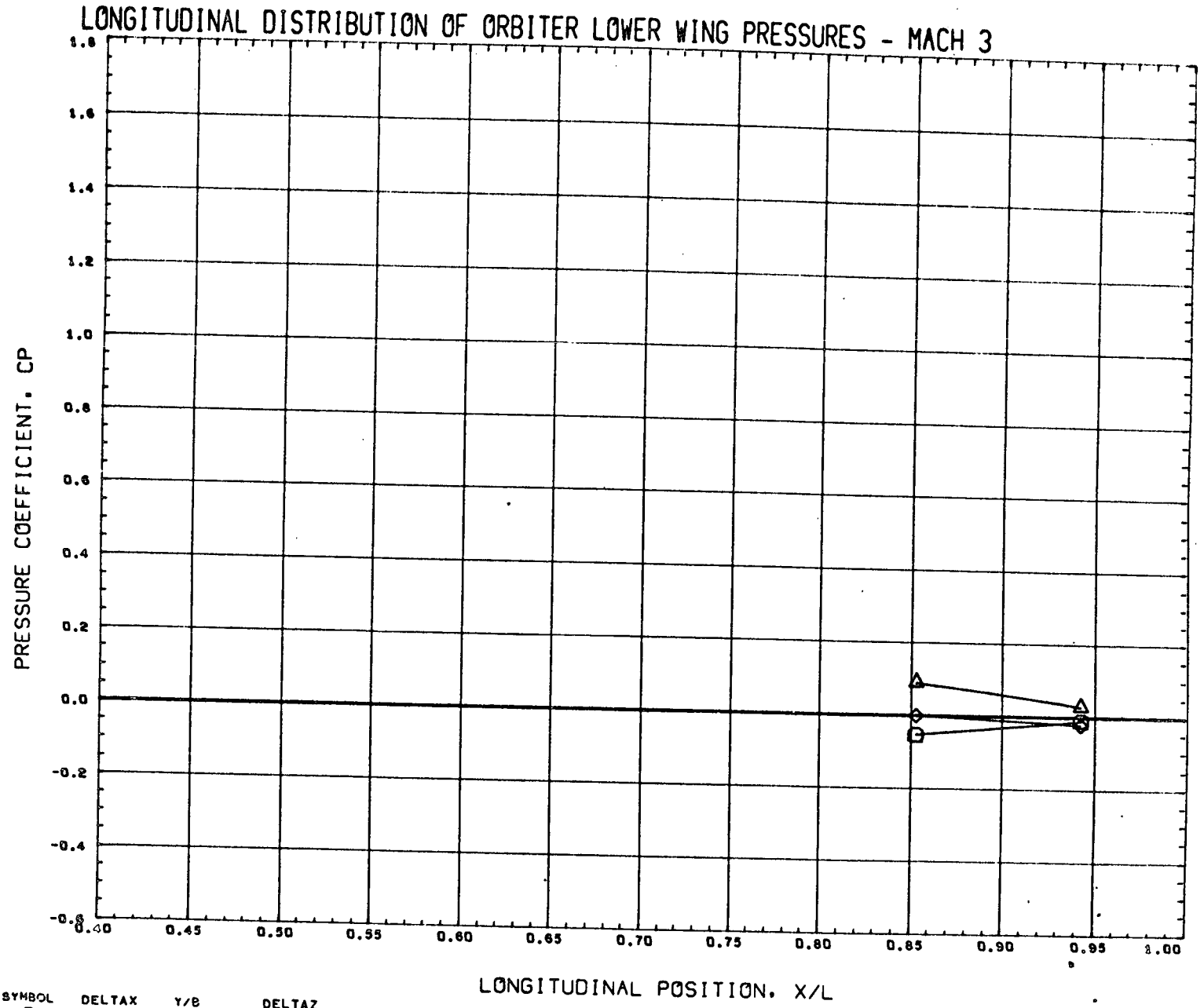


SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.568	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.738	0.151
△	0.104		
◇	0.227		

PARAMETRIC VALUES

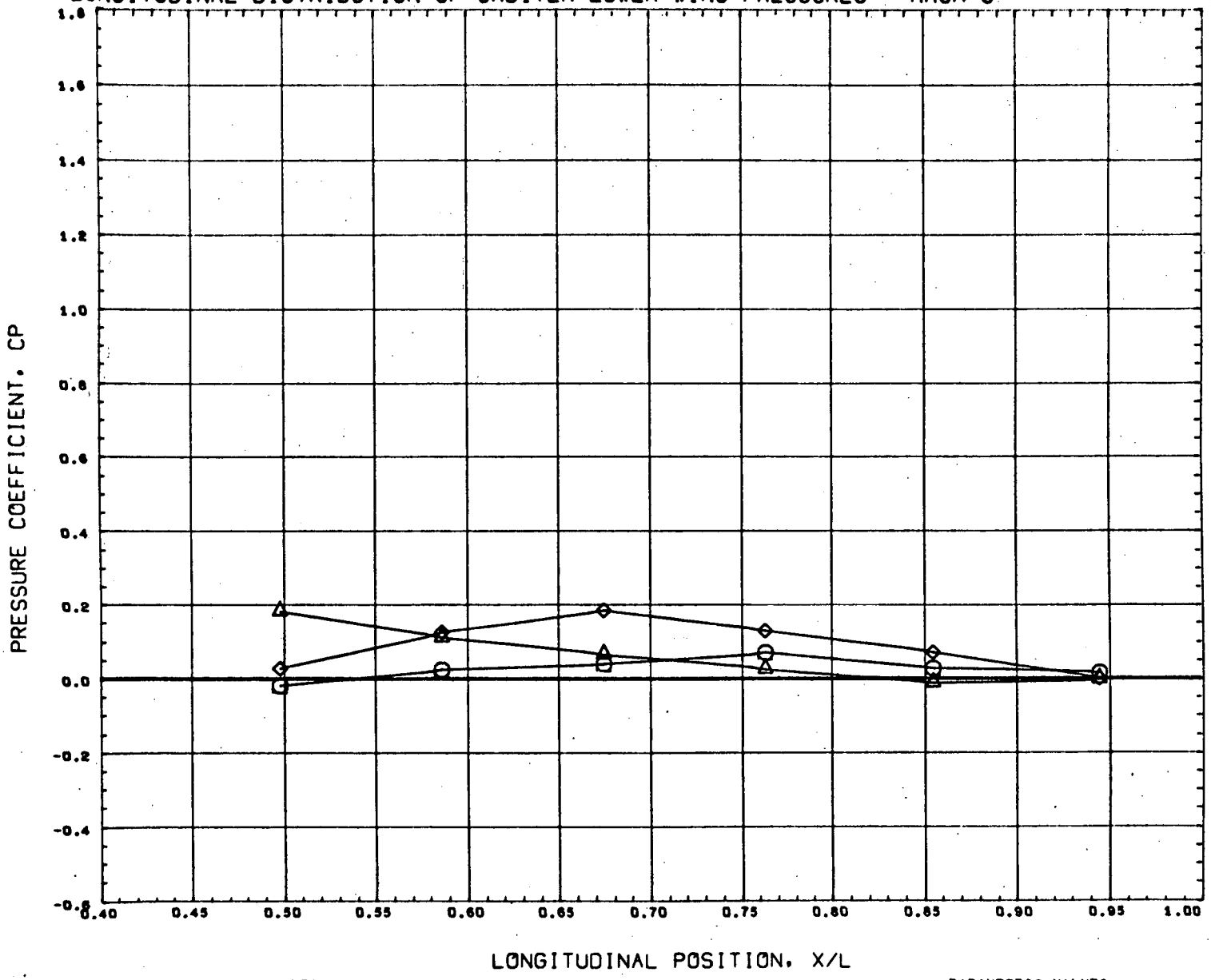
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.228
△	0.103		
◇	0.227		

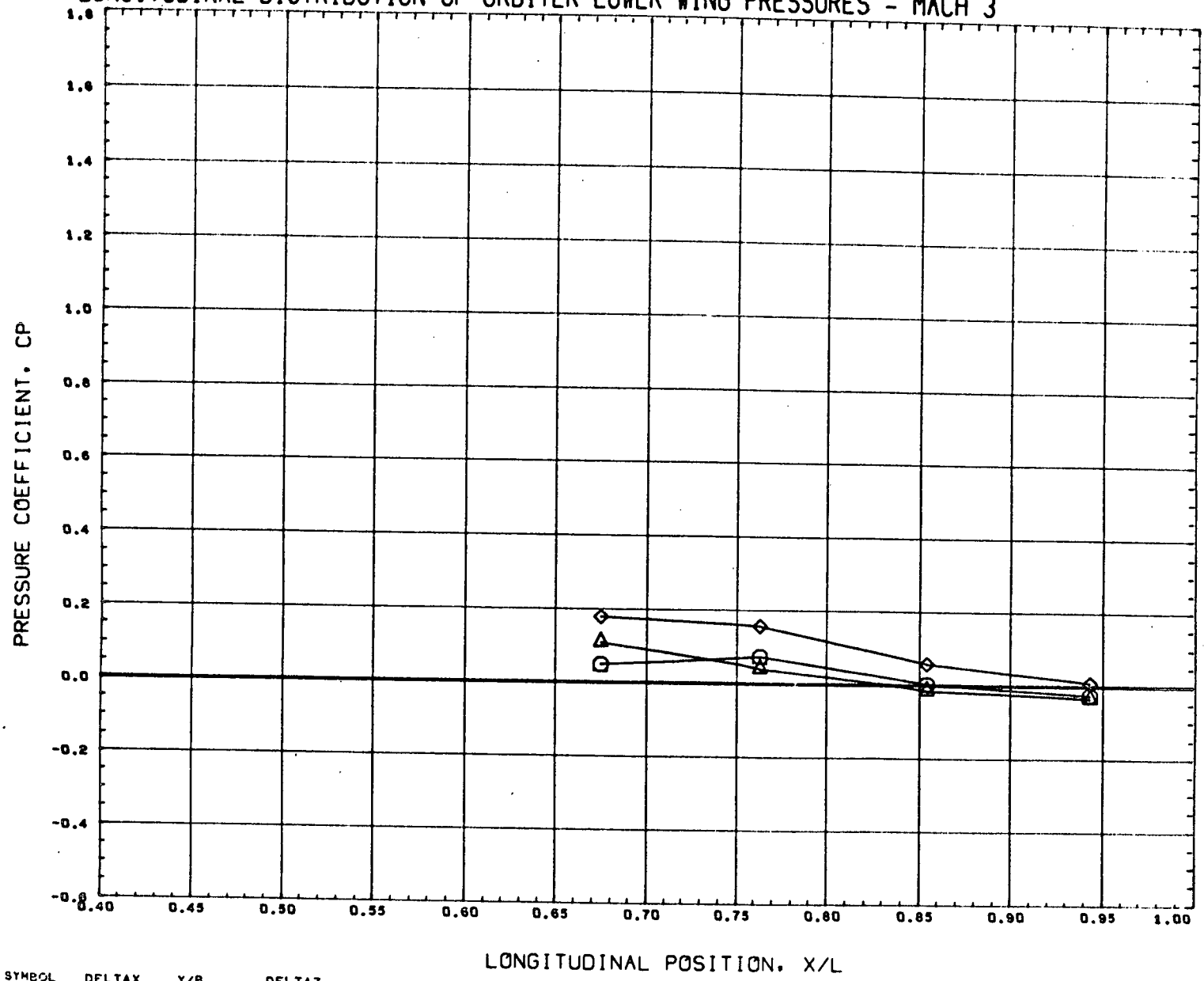
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323• PAGE 301

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

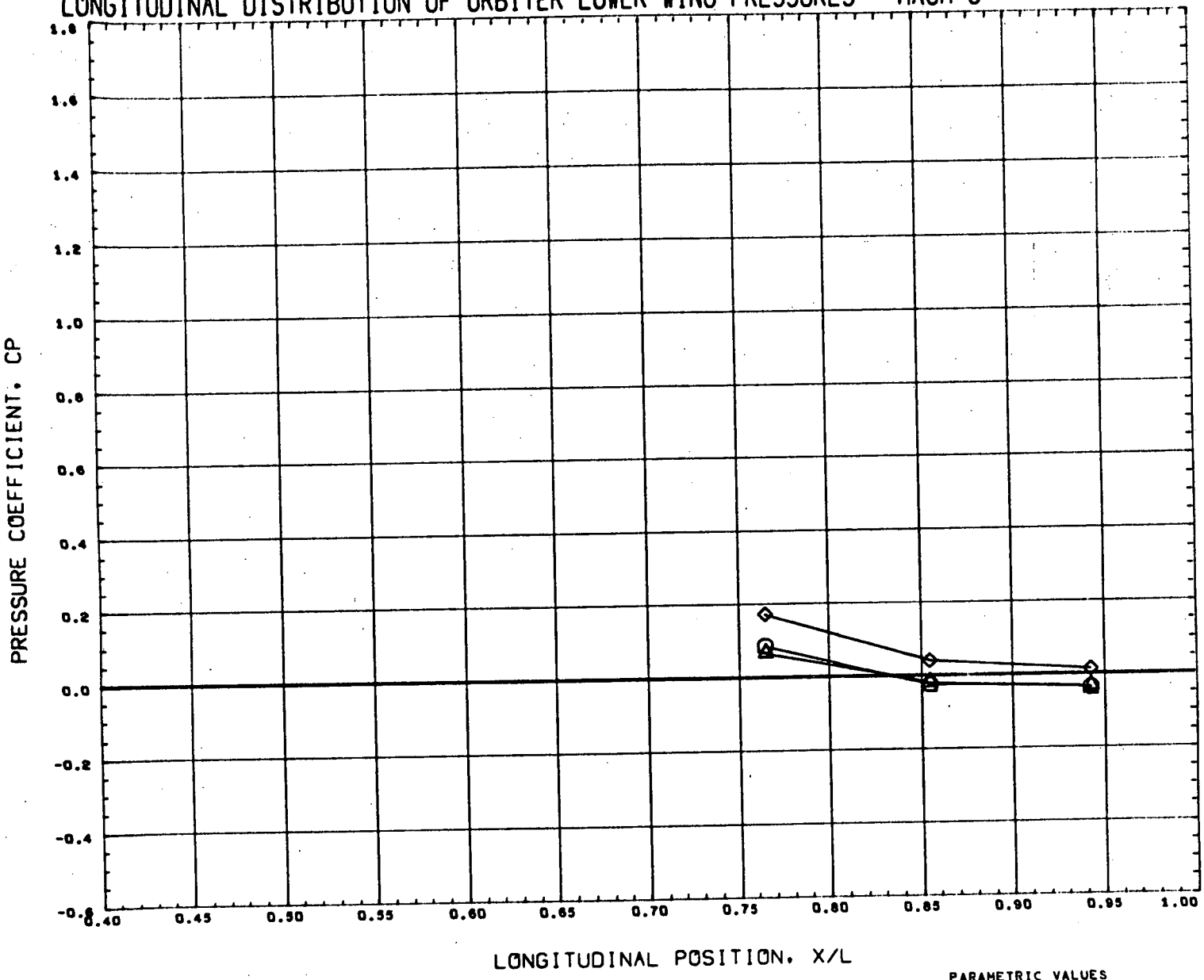
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.228
△	0.103		
◇	0.227		

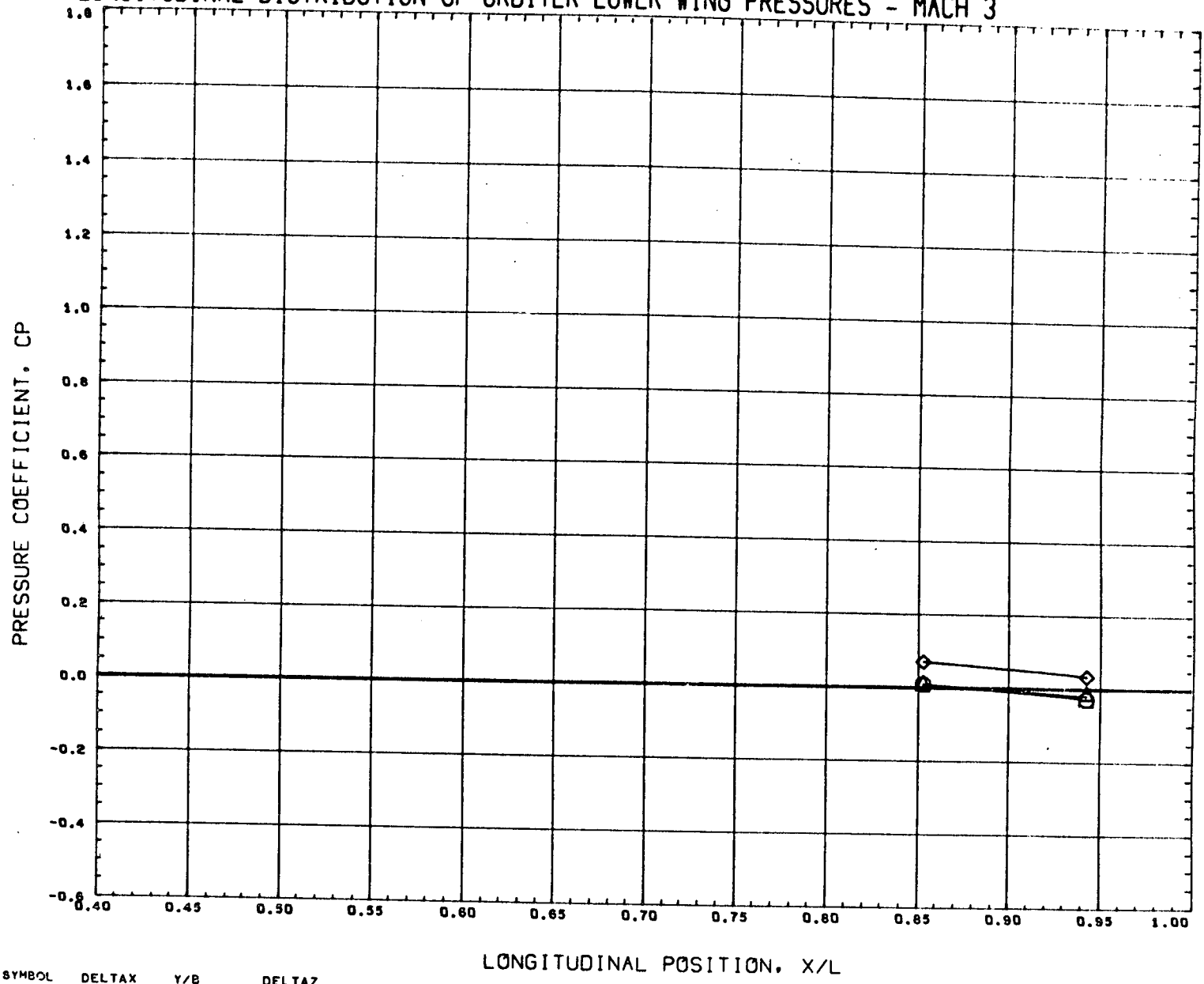
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

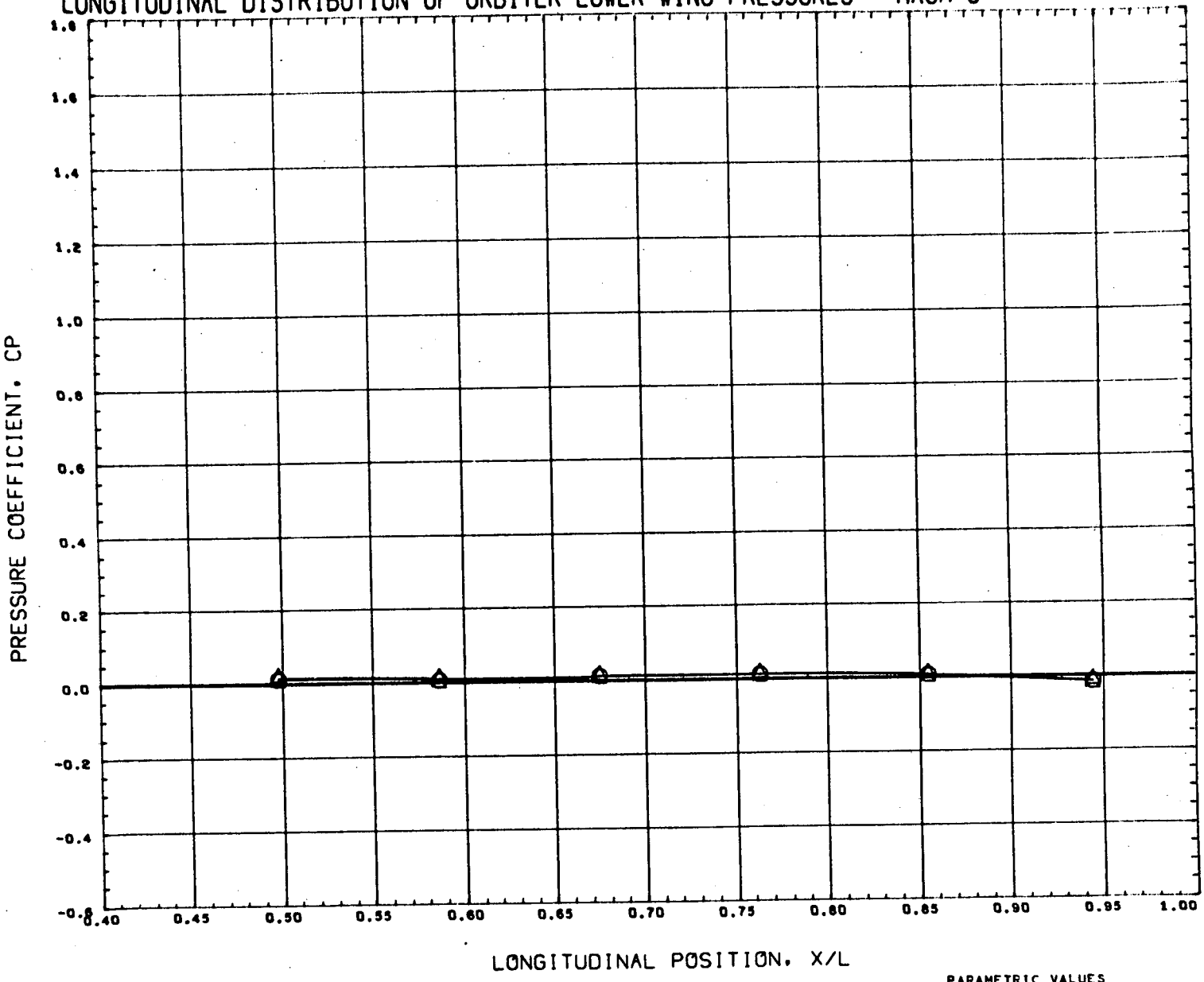
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.391	0.230	0.908
△	0.514		

PARAMETRIC VALUES

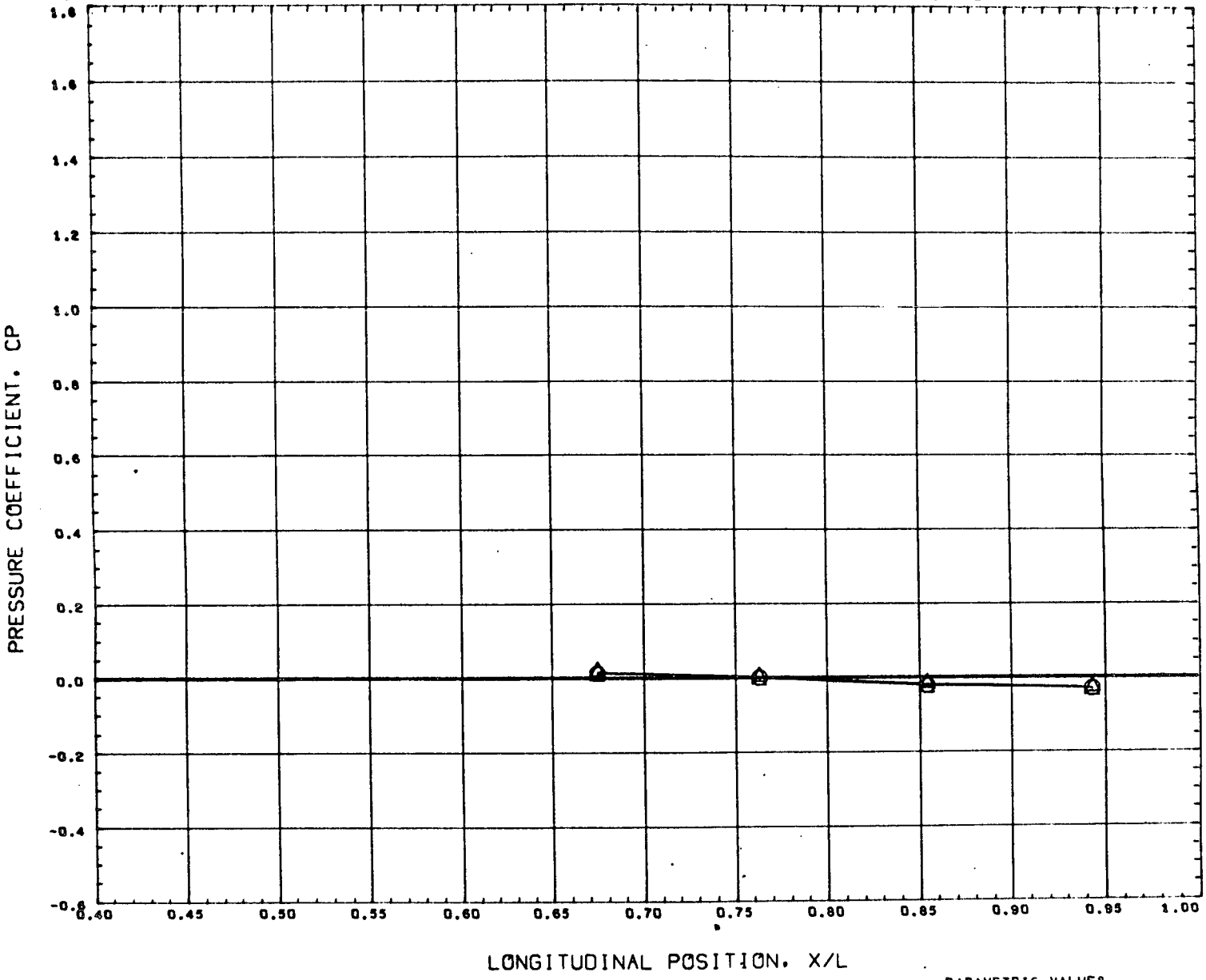
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.399	0.908
△	0.514		

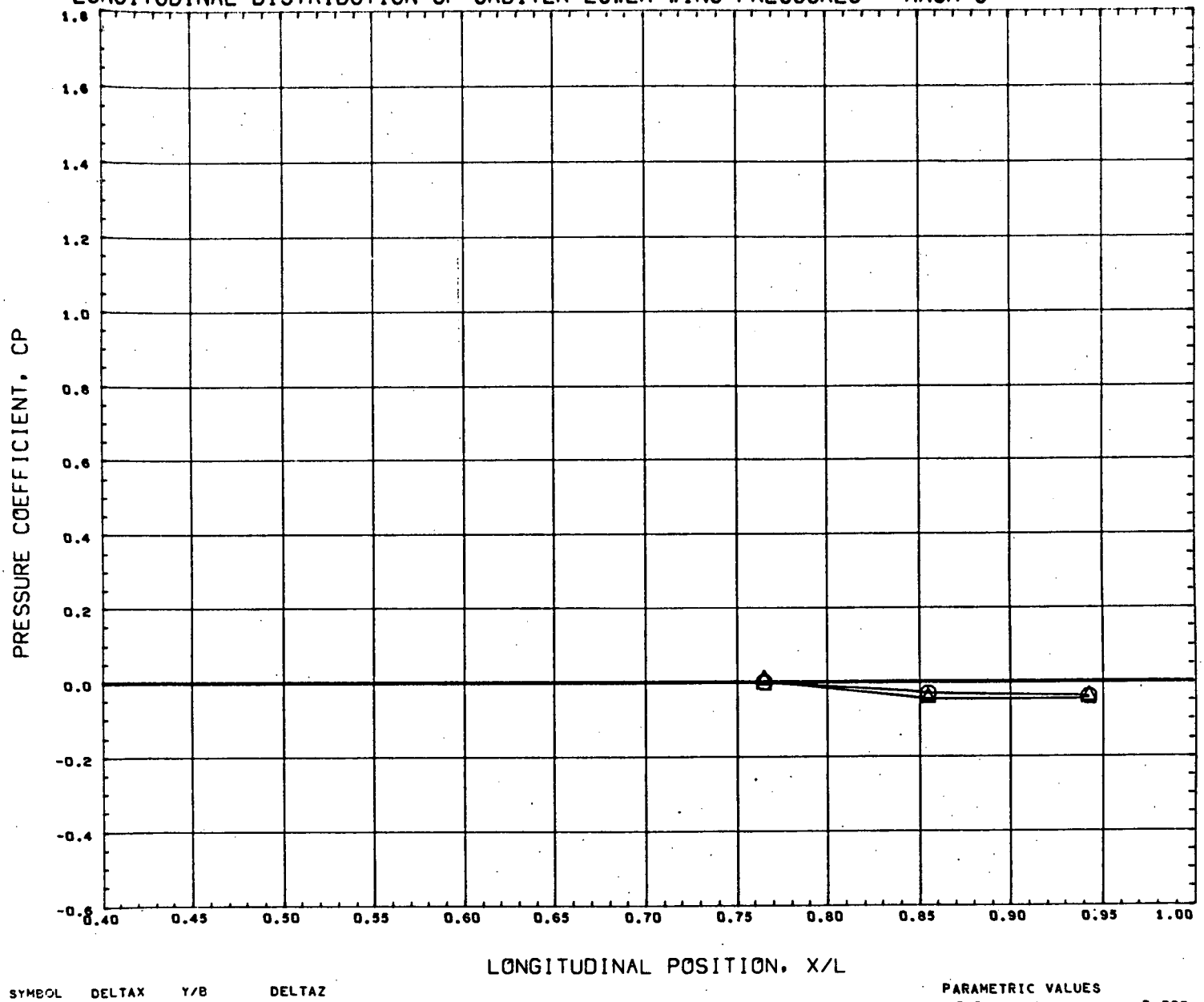
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.391	0.568	0.908
△	0.514		

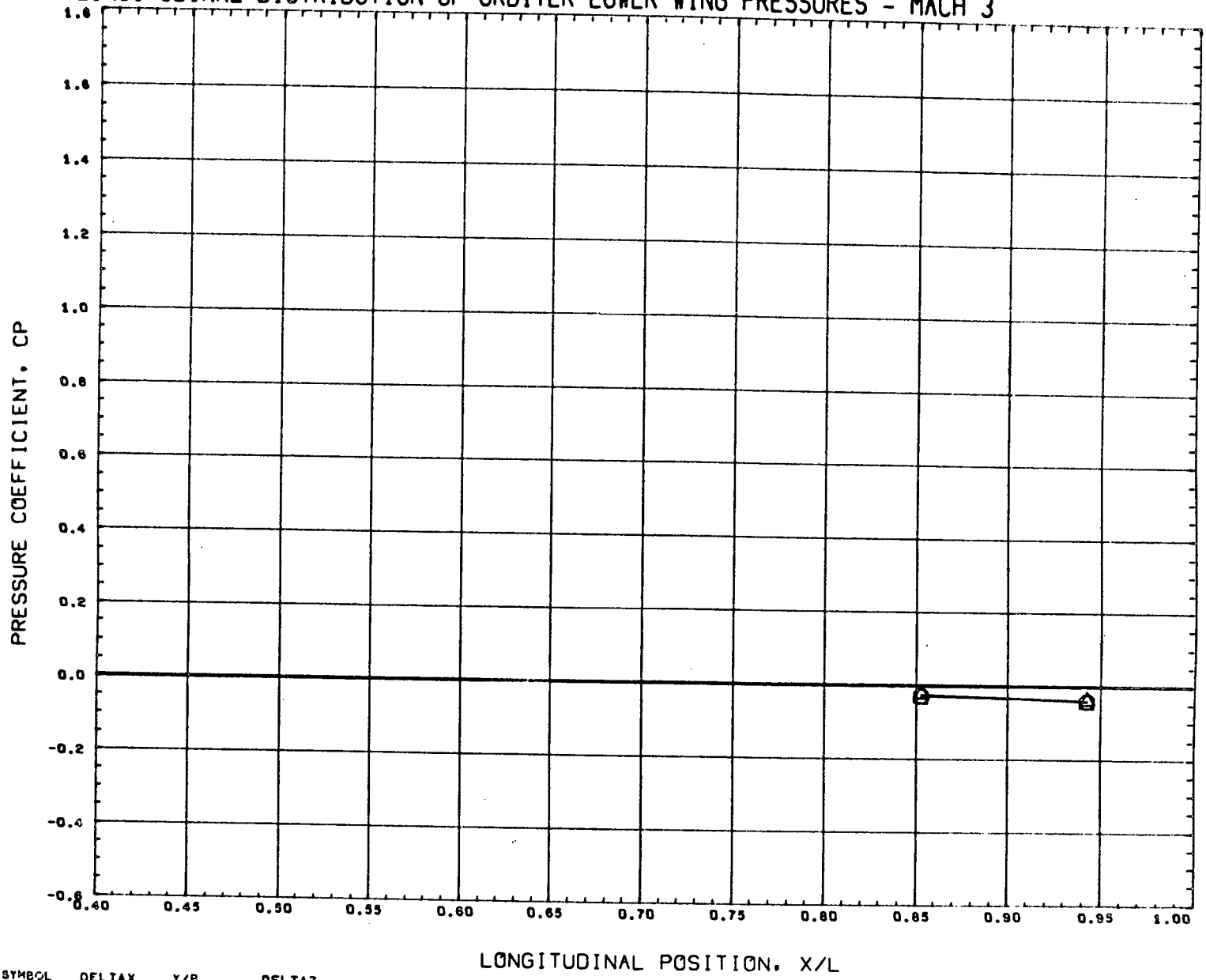
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8323•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.391	0.738	0.908
△	0.514		

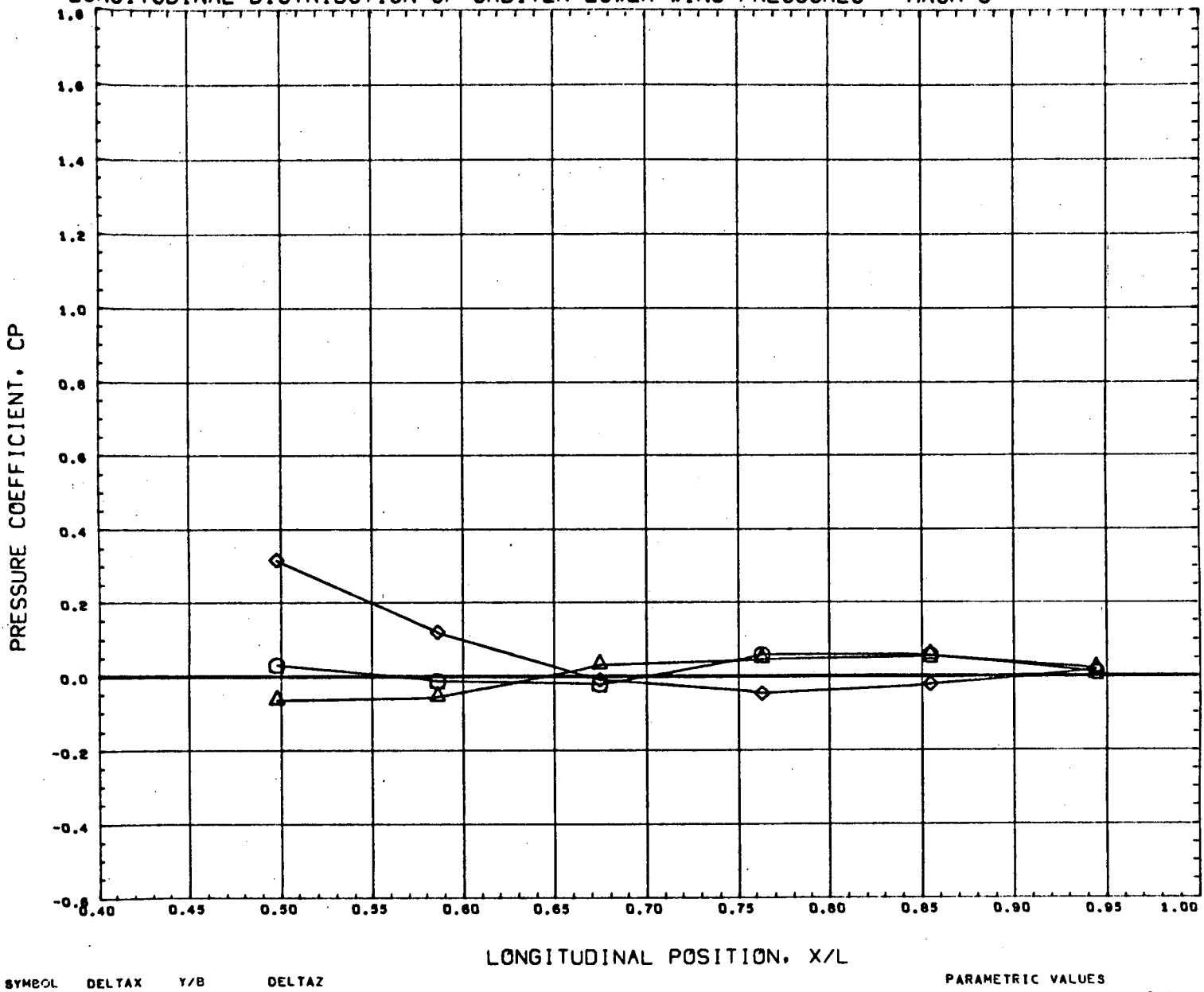
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.230	0.120
△	0.103		
◇	0.226		

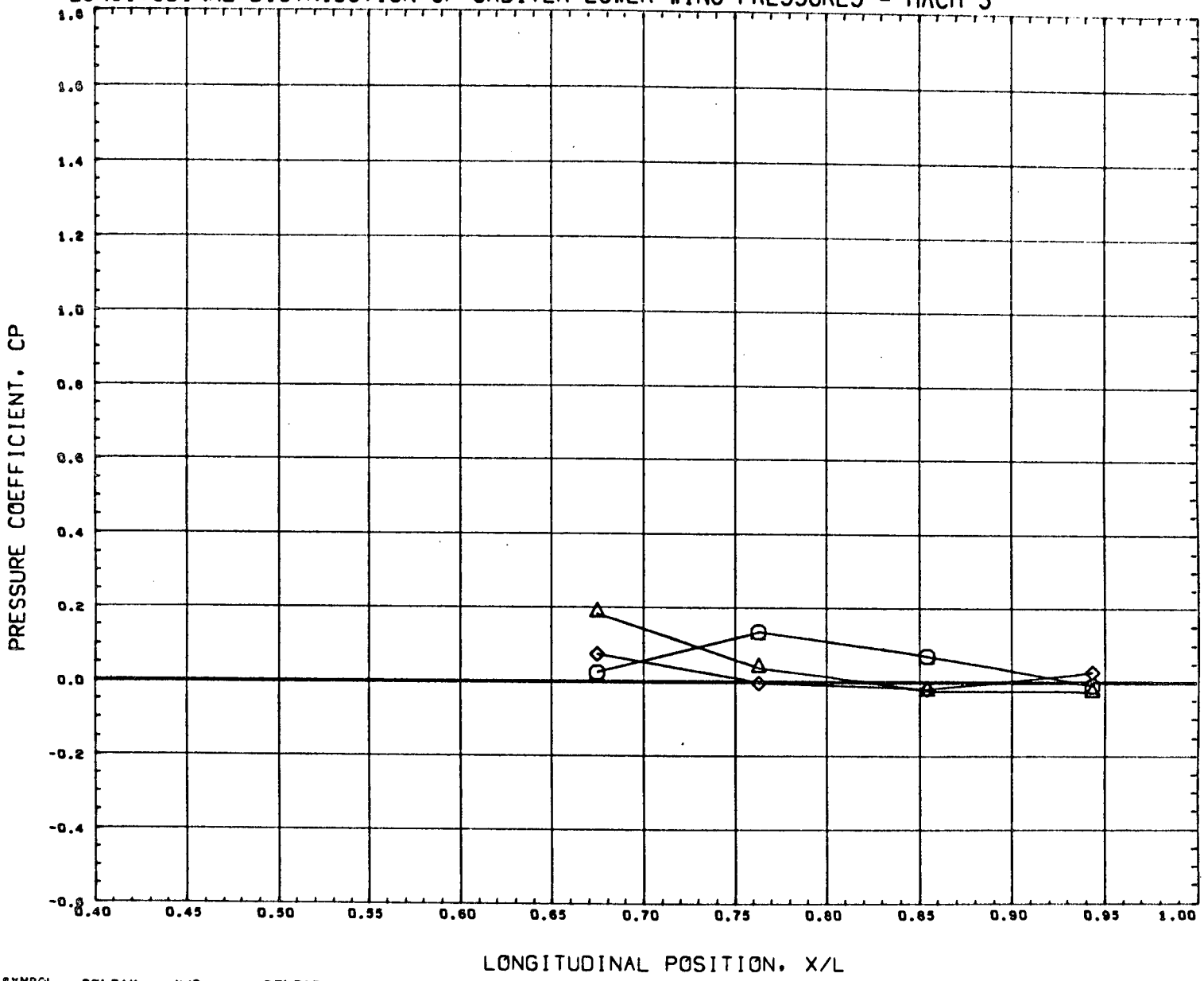
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324• PAGE 309

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.120
△	0.103		
◇	0.226		

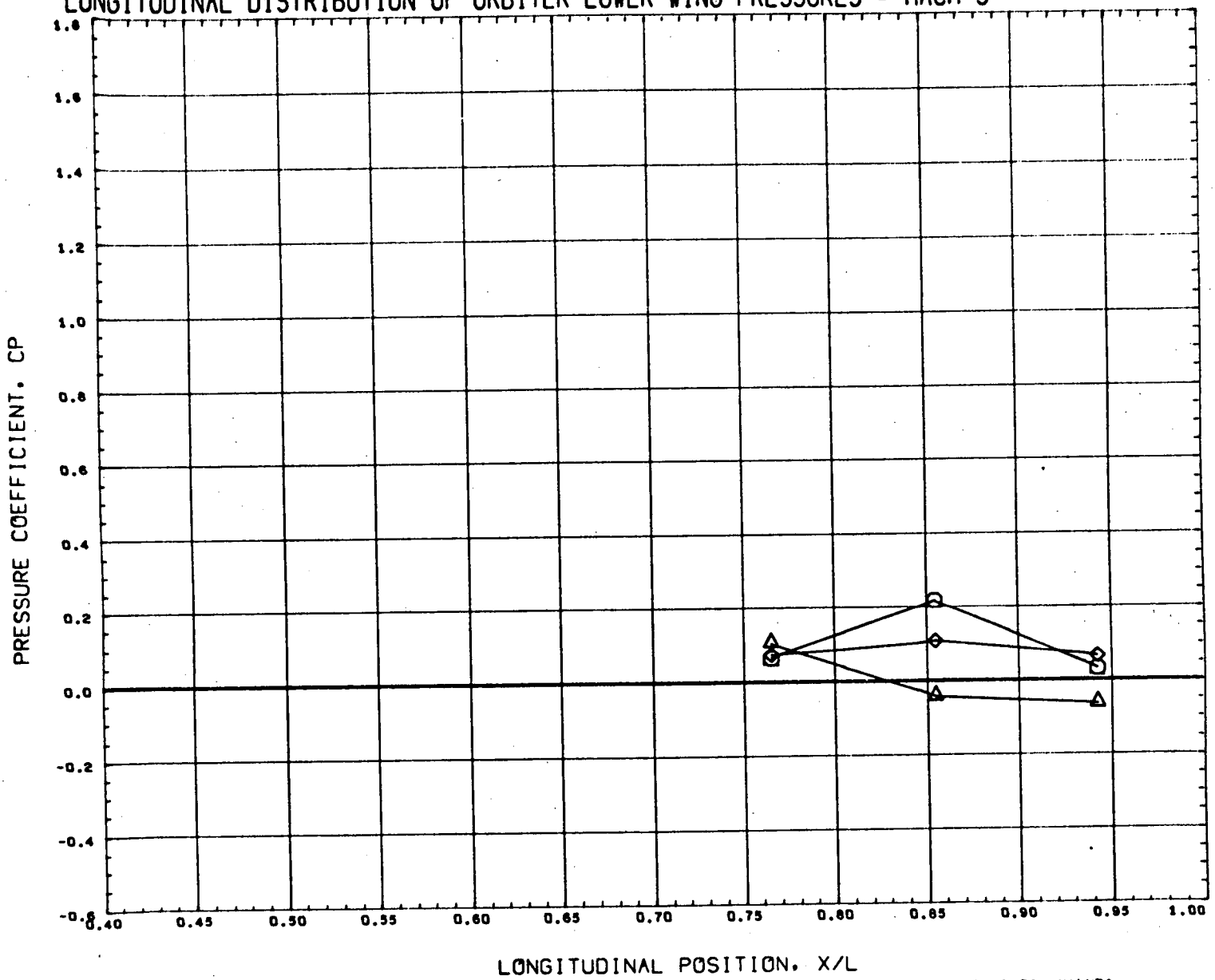
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324• PAGE 310

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

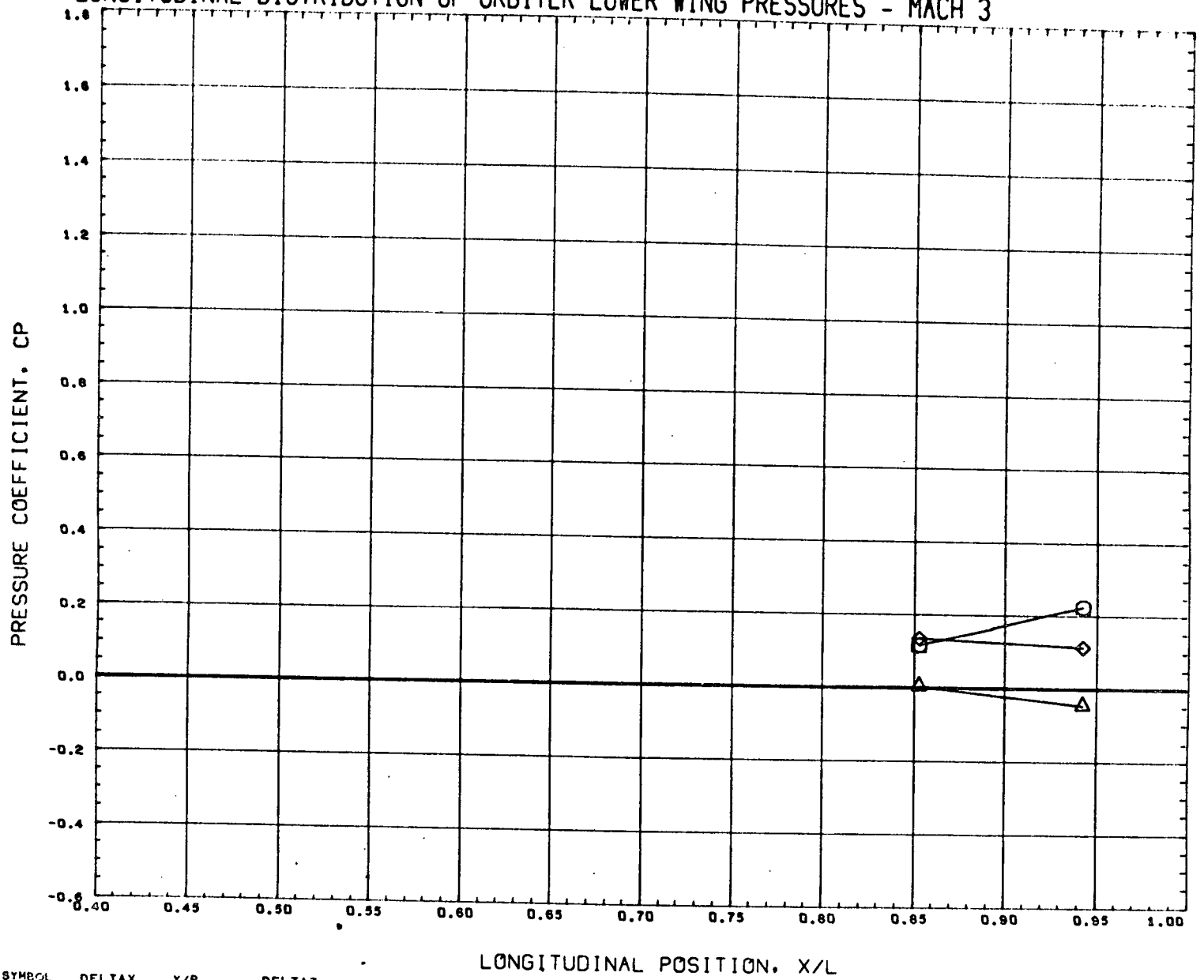
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

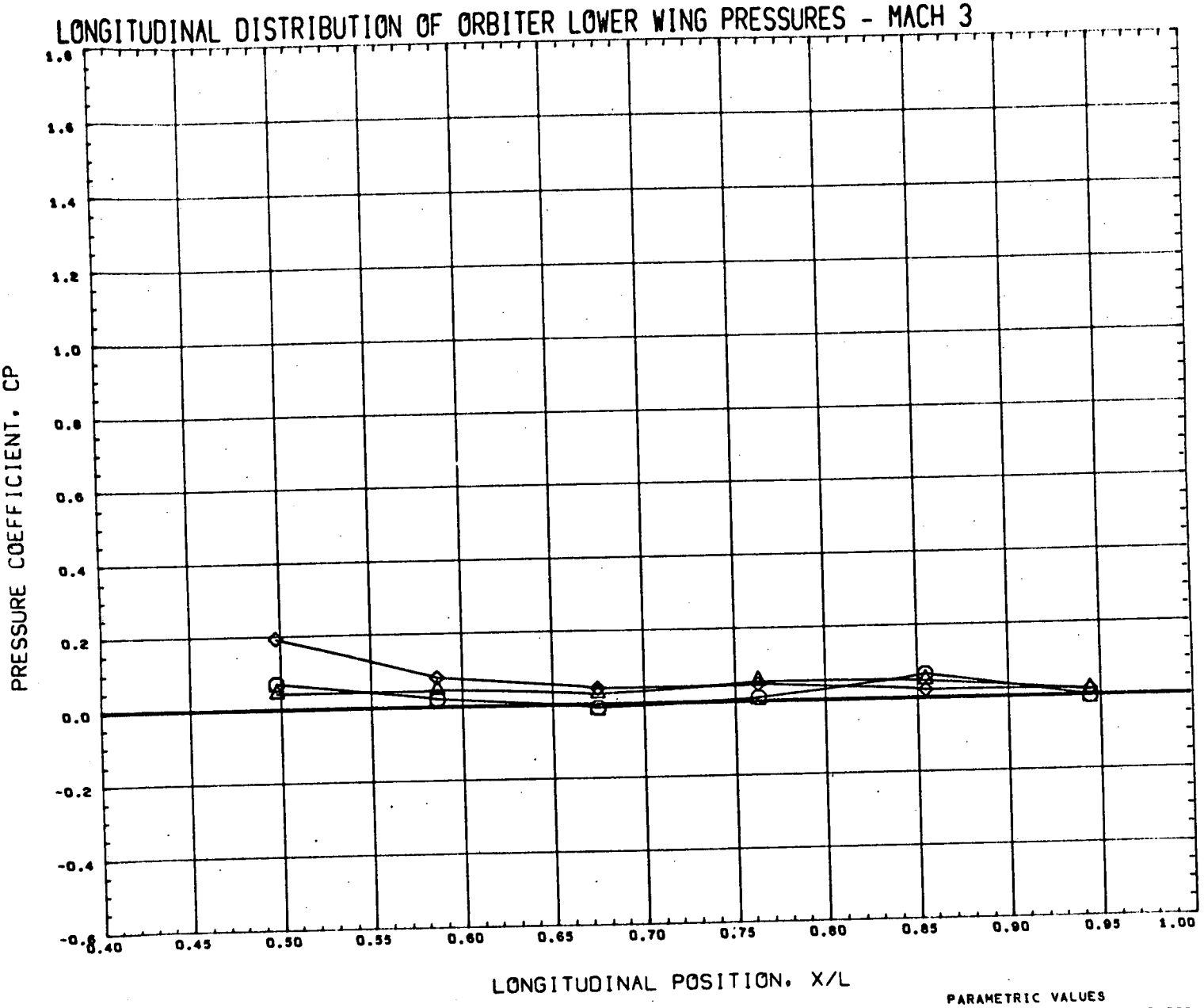
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8324•

2/8



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

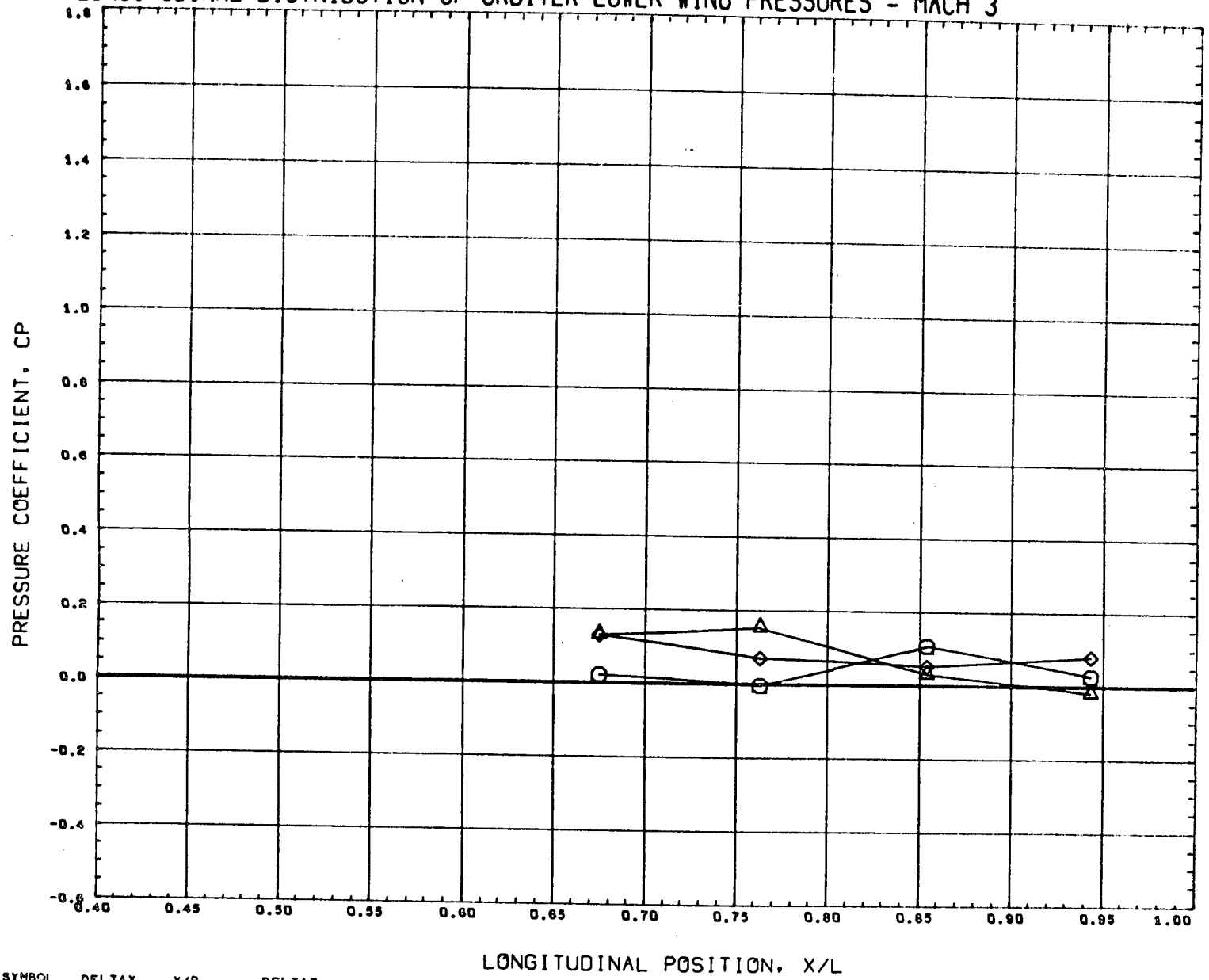
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.151
△	0.103		
◇	0.227		

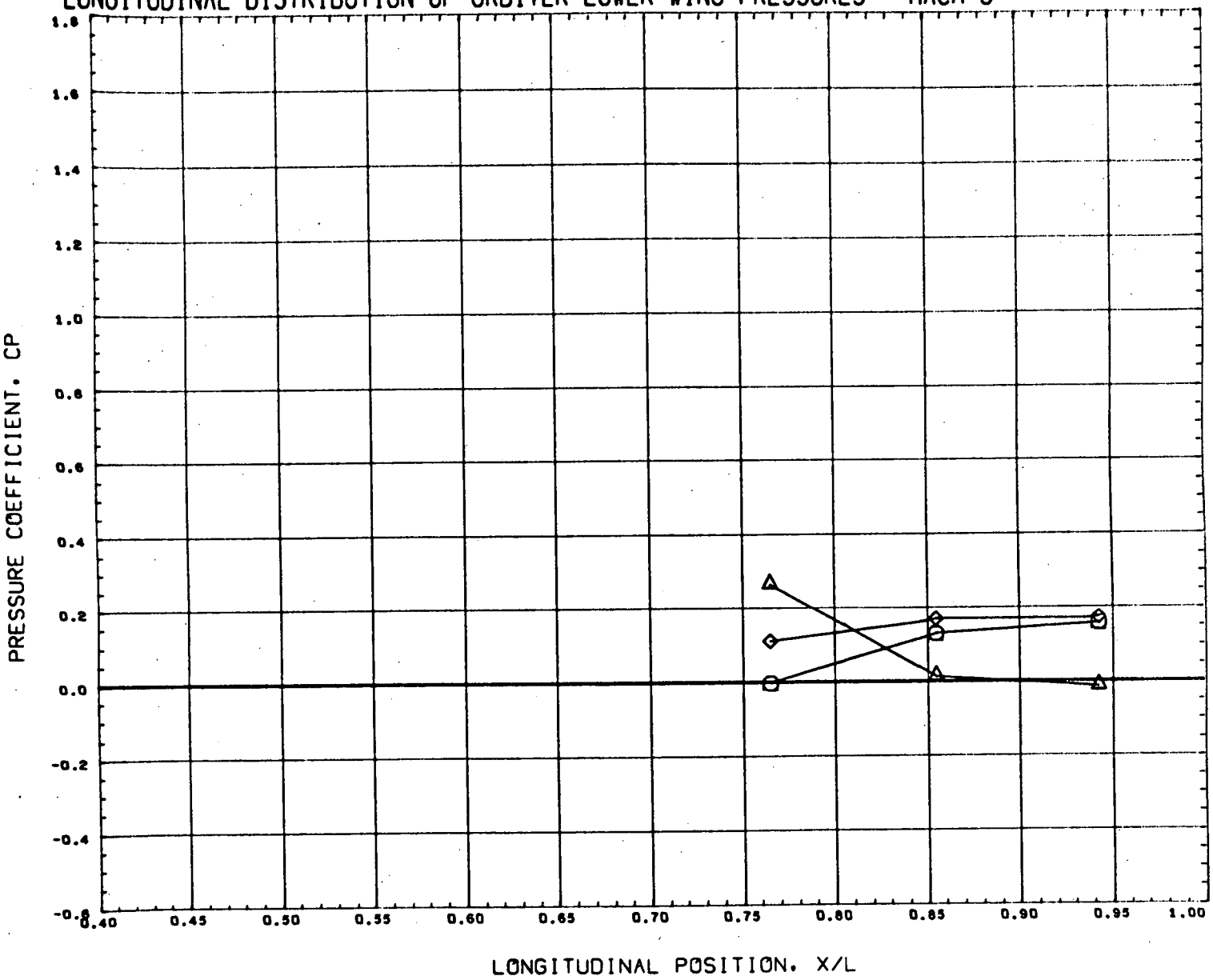
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.151
△	0.103		
◇	0.227		

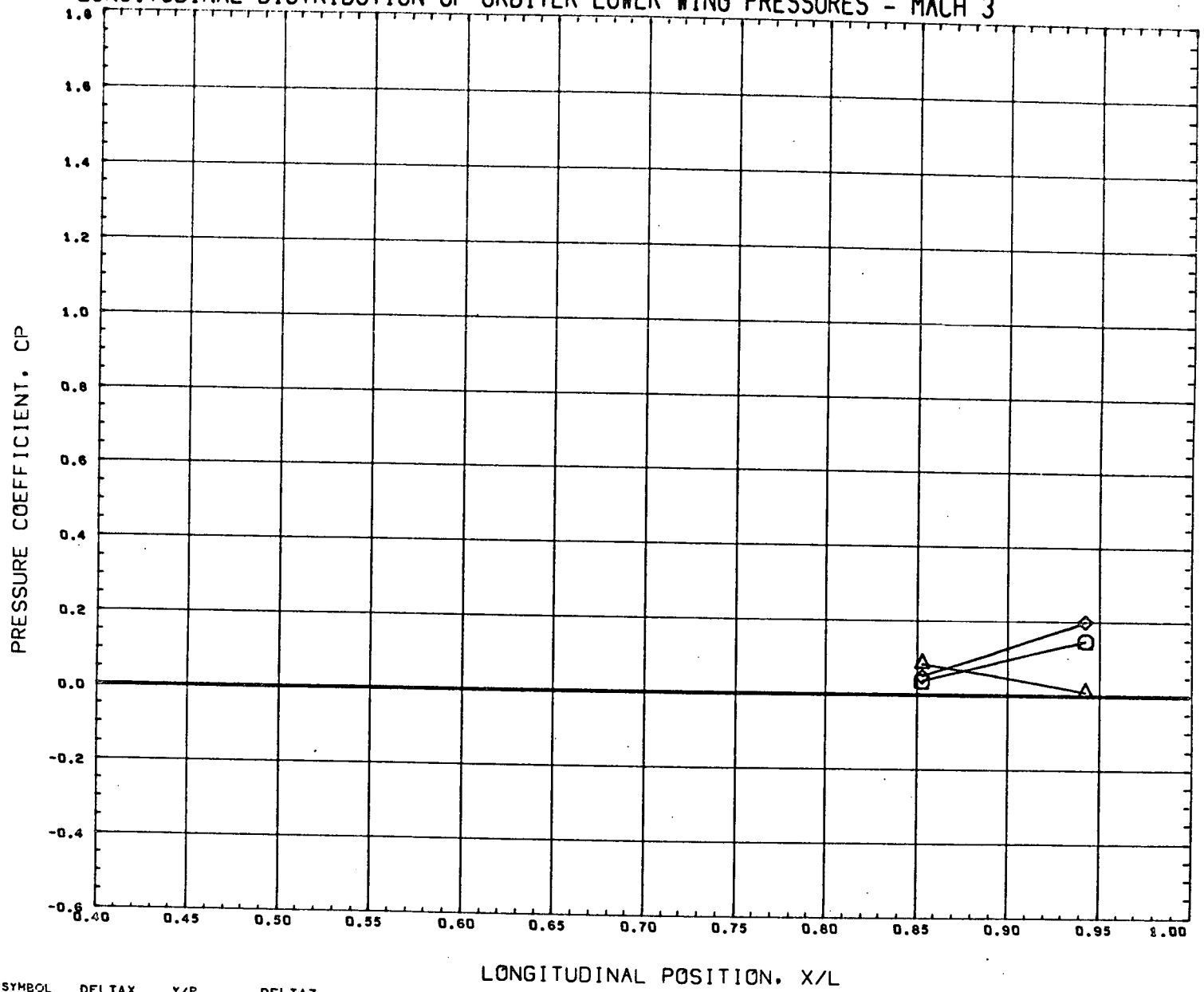
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.151
△	0.103		
◇	0.227		

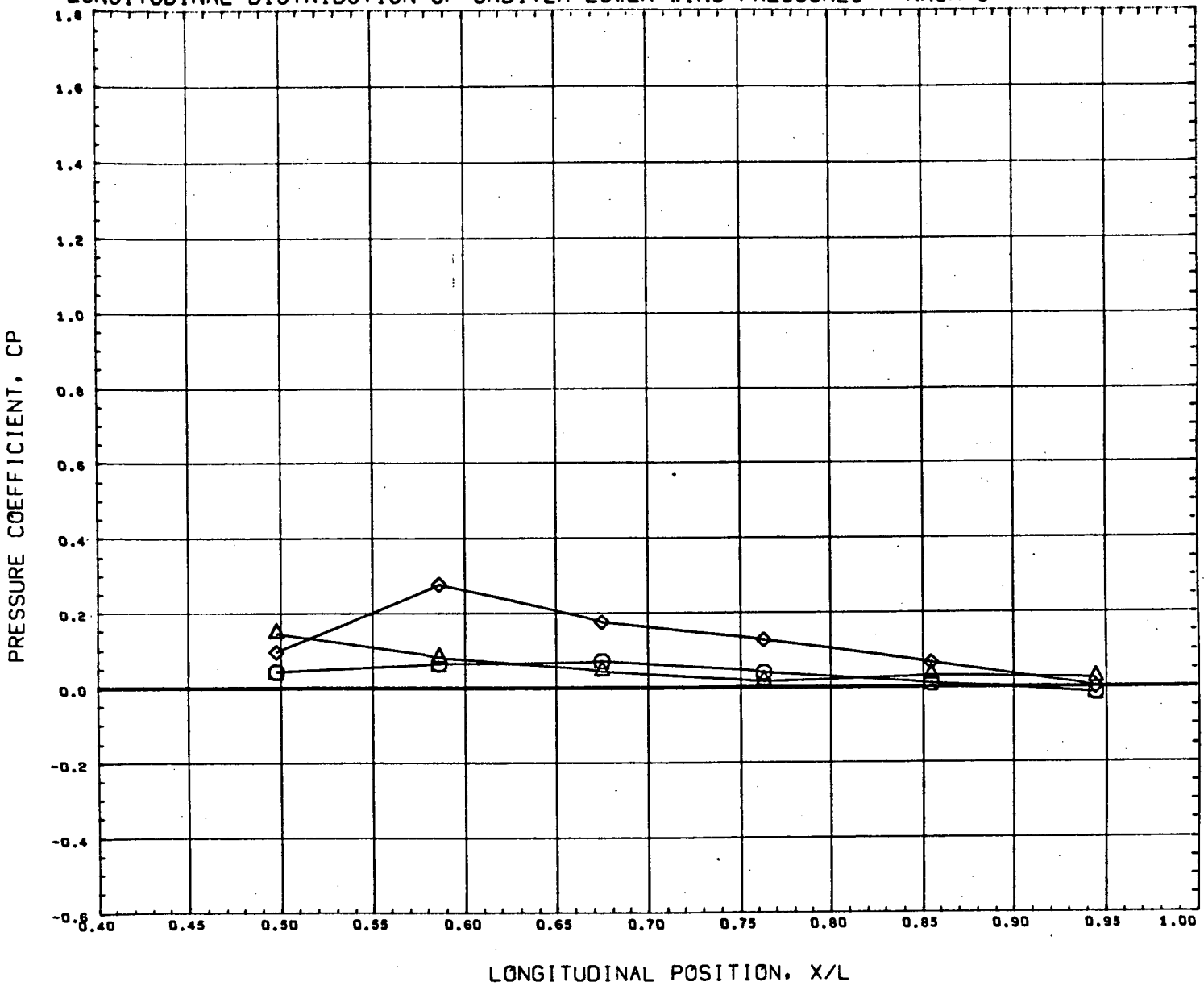
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



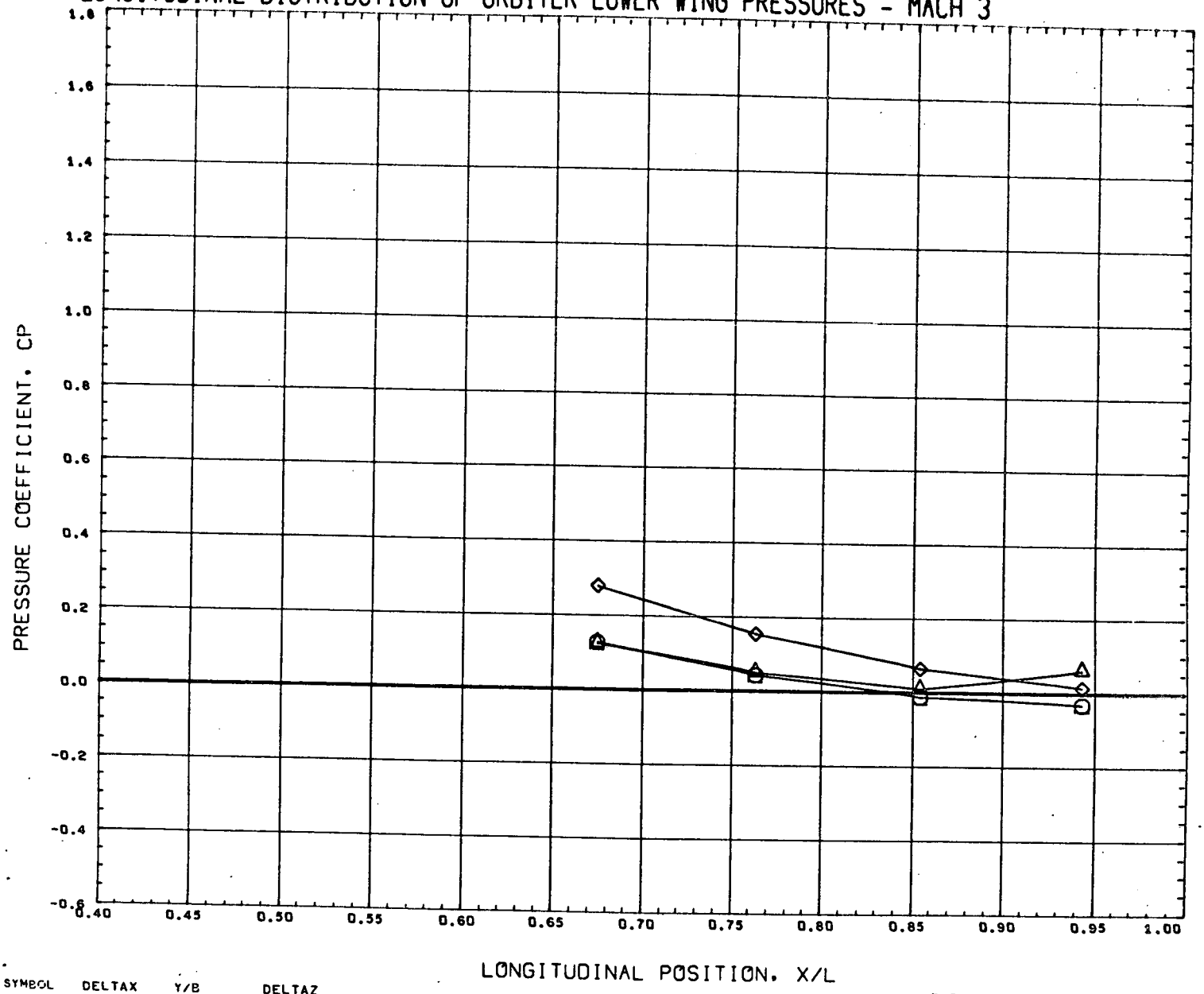
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.399	0.228
△	0.103		
◇	0.228		

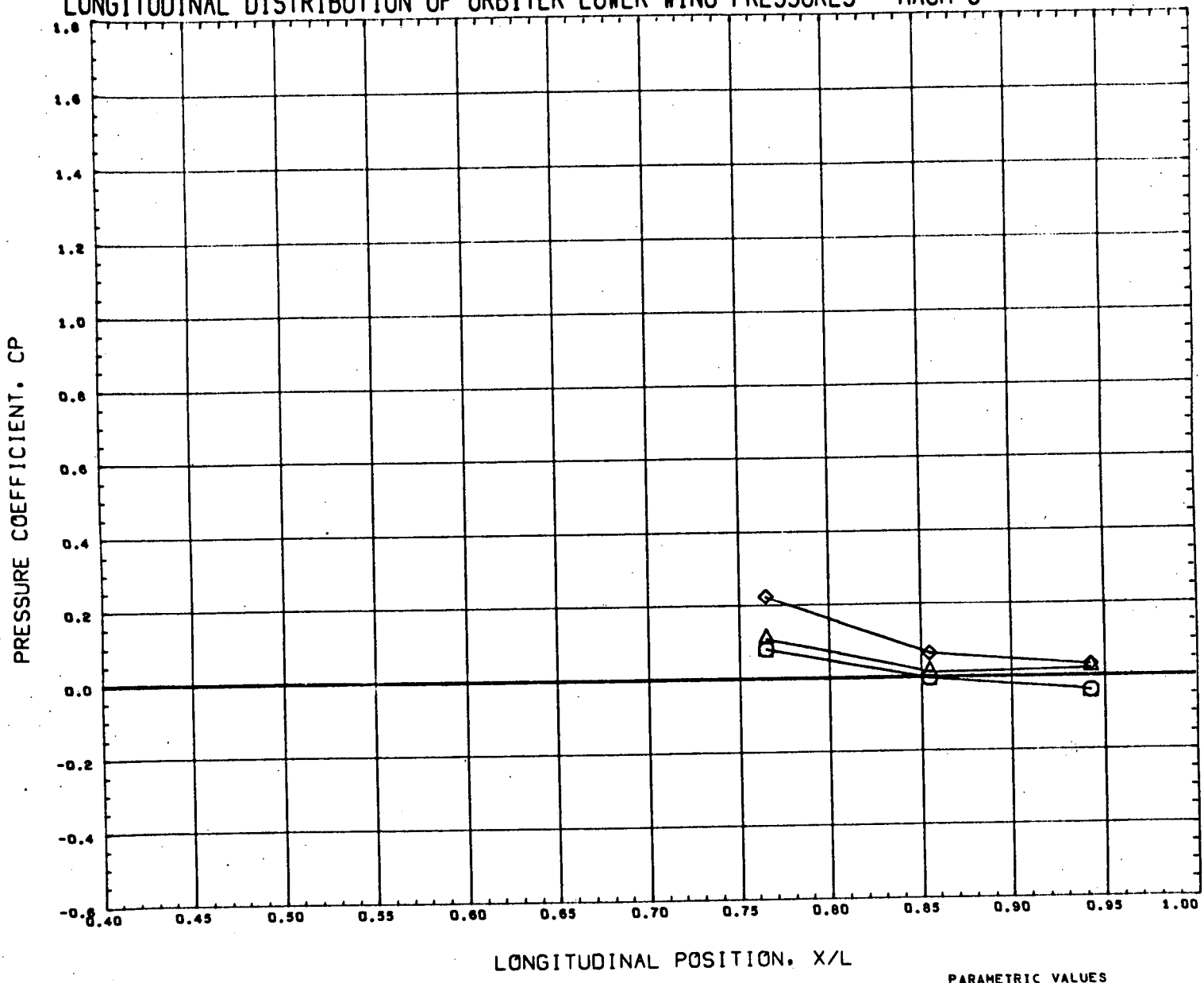
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.568	0.228
△	0.103		
◇	0.228		

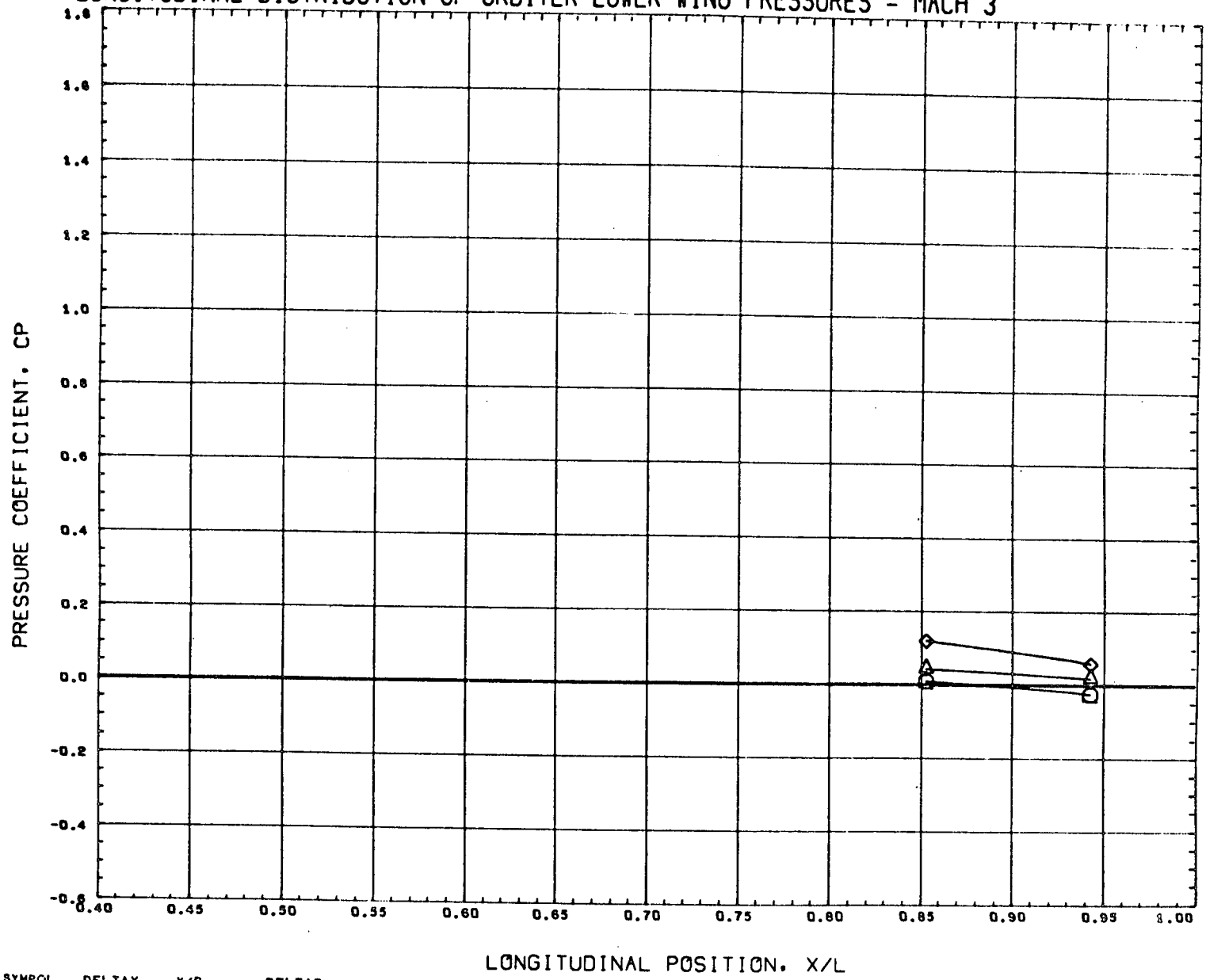
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.143	0.738	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

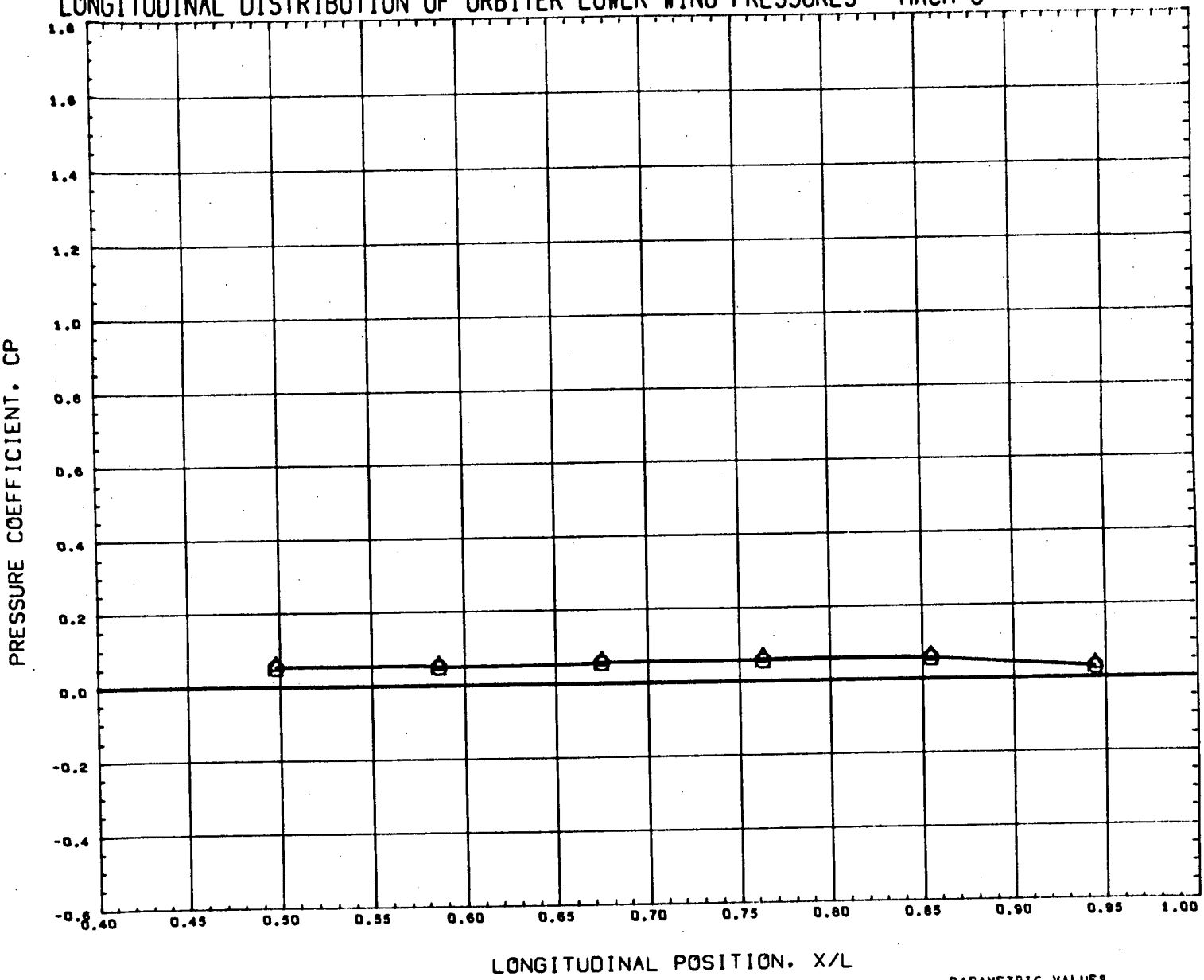
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.230	0.908
△	0.511		

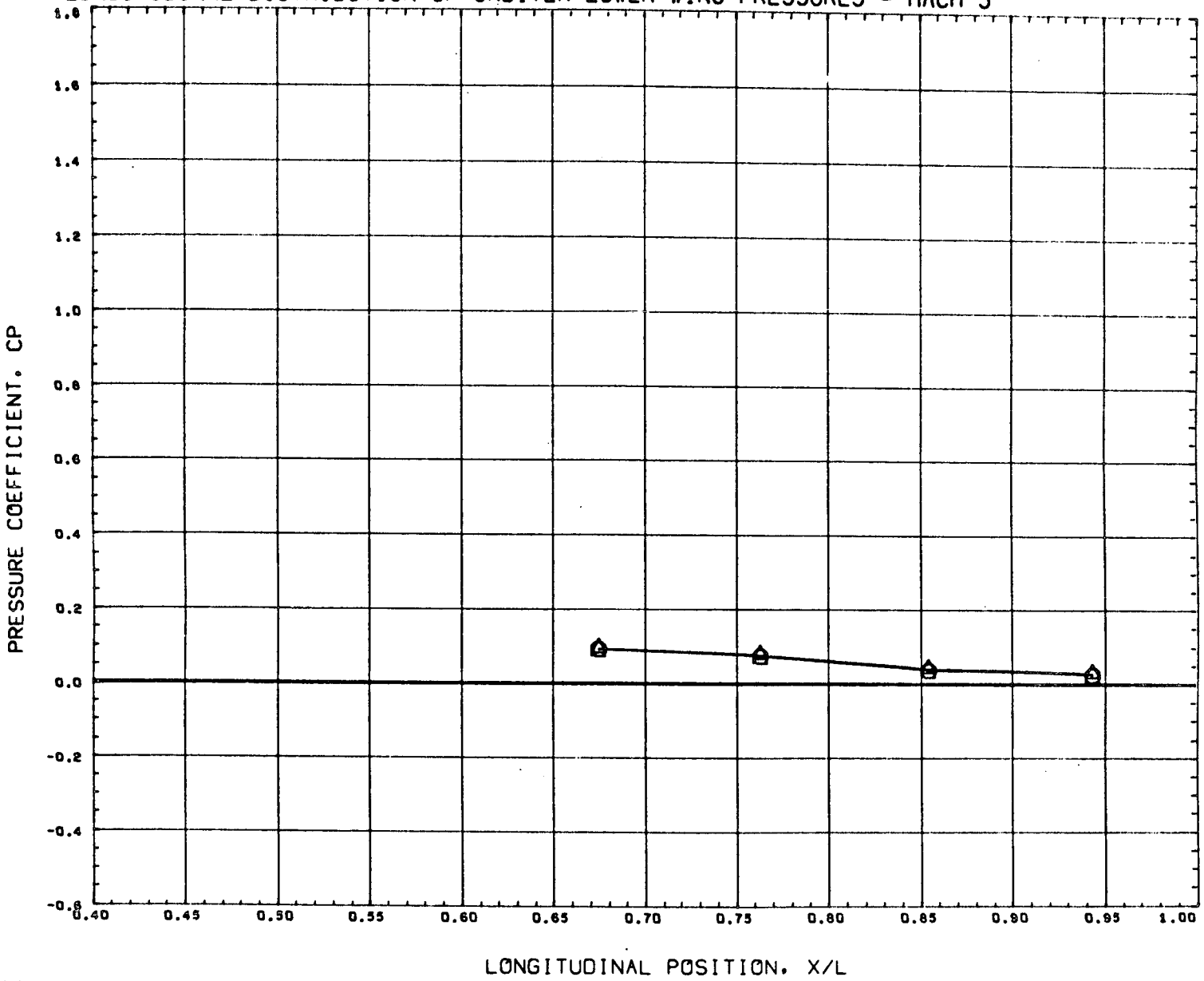
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



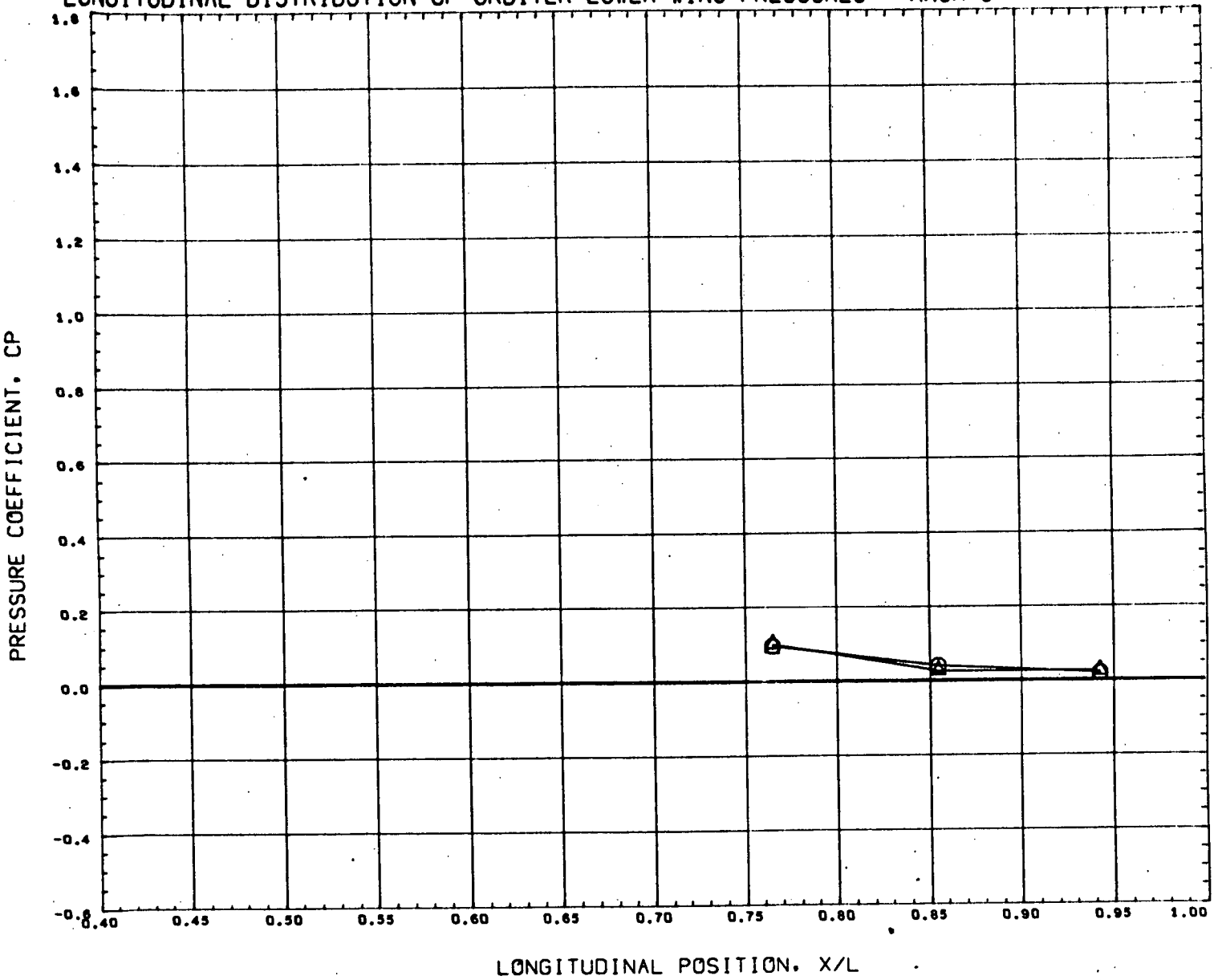
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.399	0.908
△	0.511		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



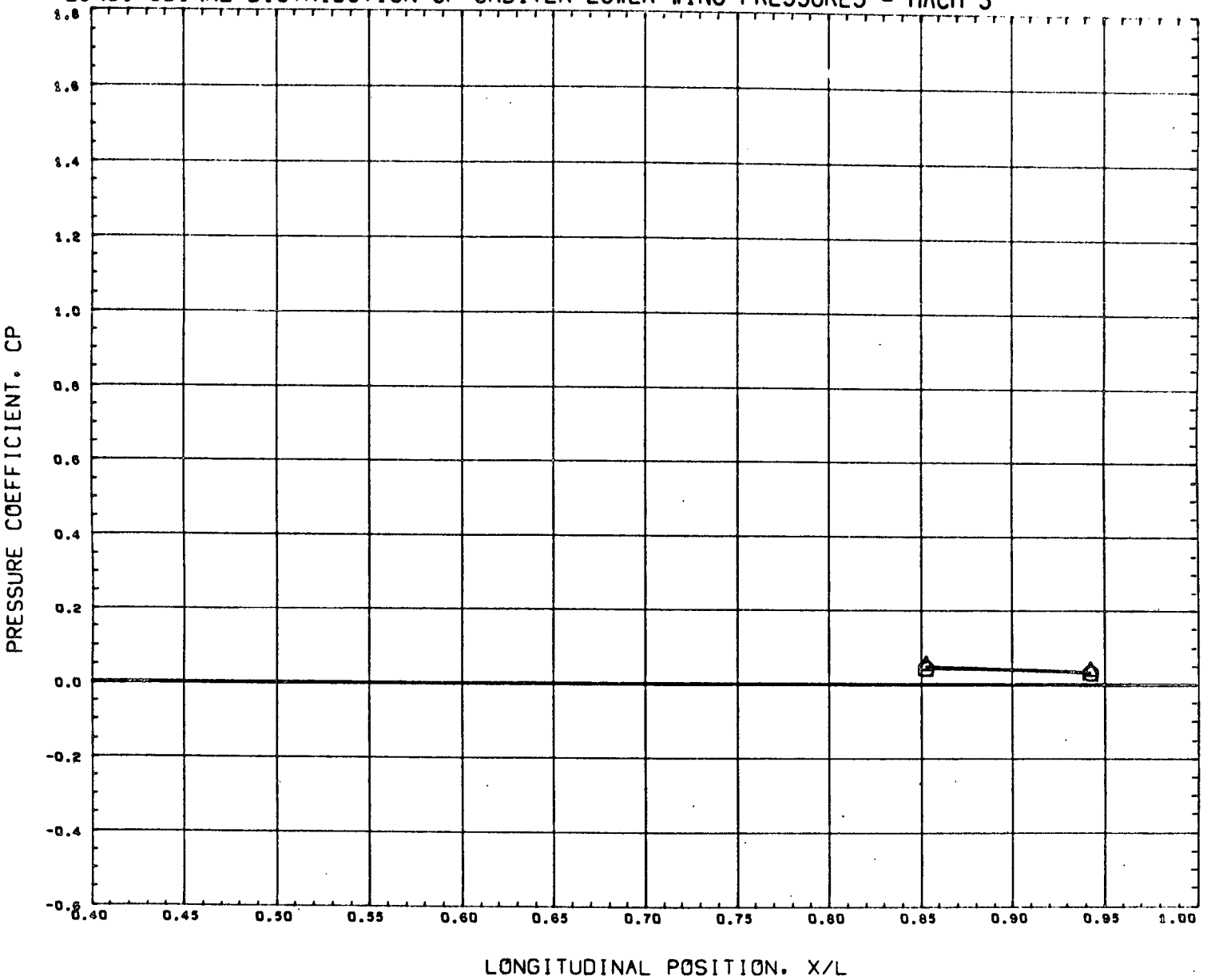
SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.568	0.908
△	0.511		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.738	0.908
△	0.511		

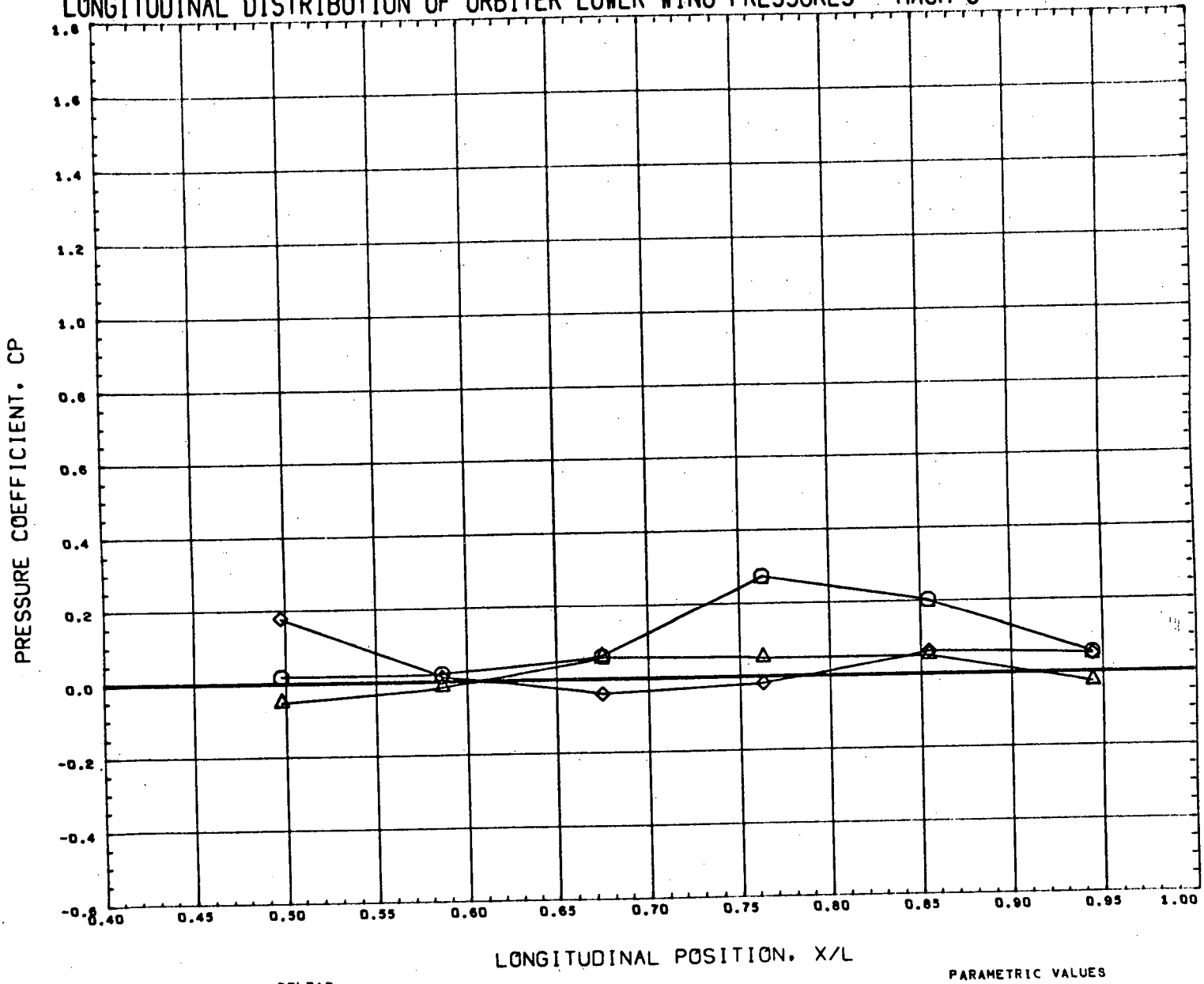
PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8324• PAGE 324

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

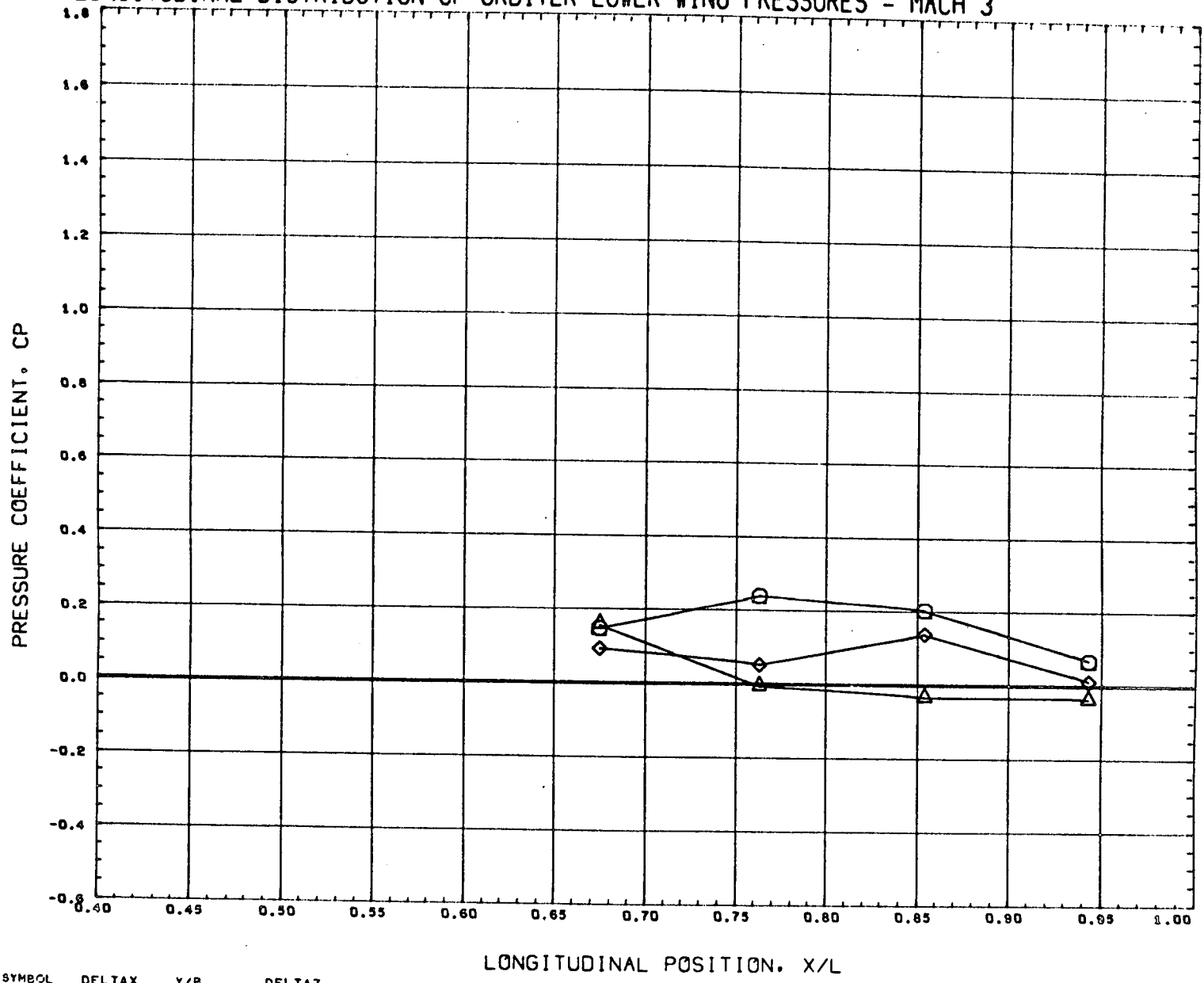
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

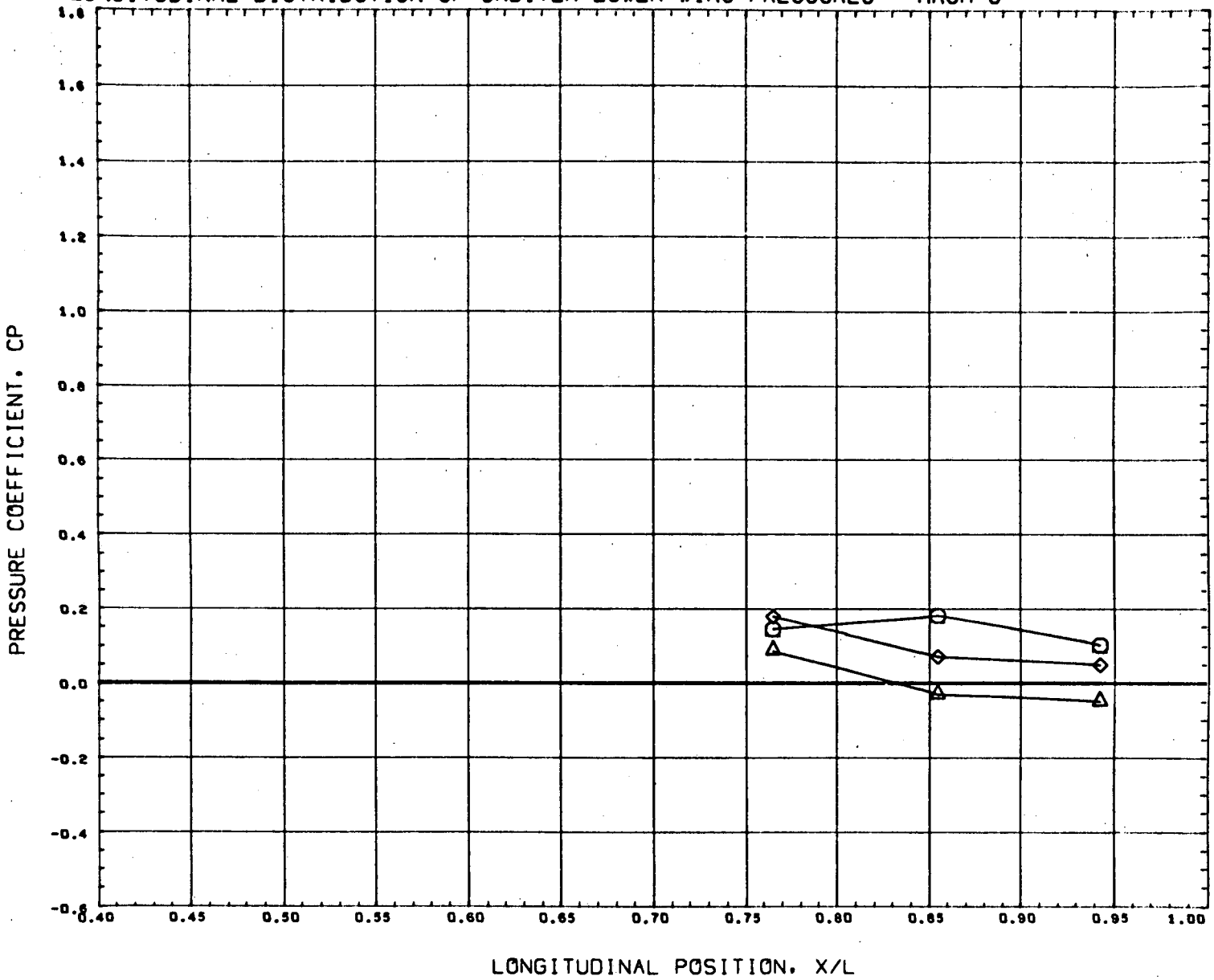
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



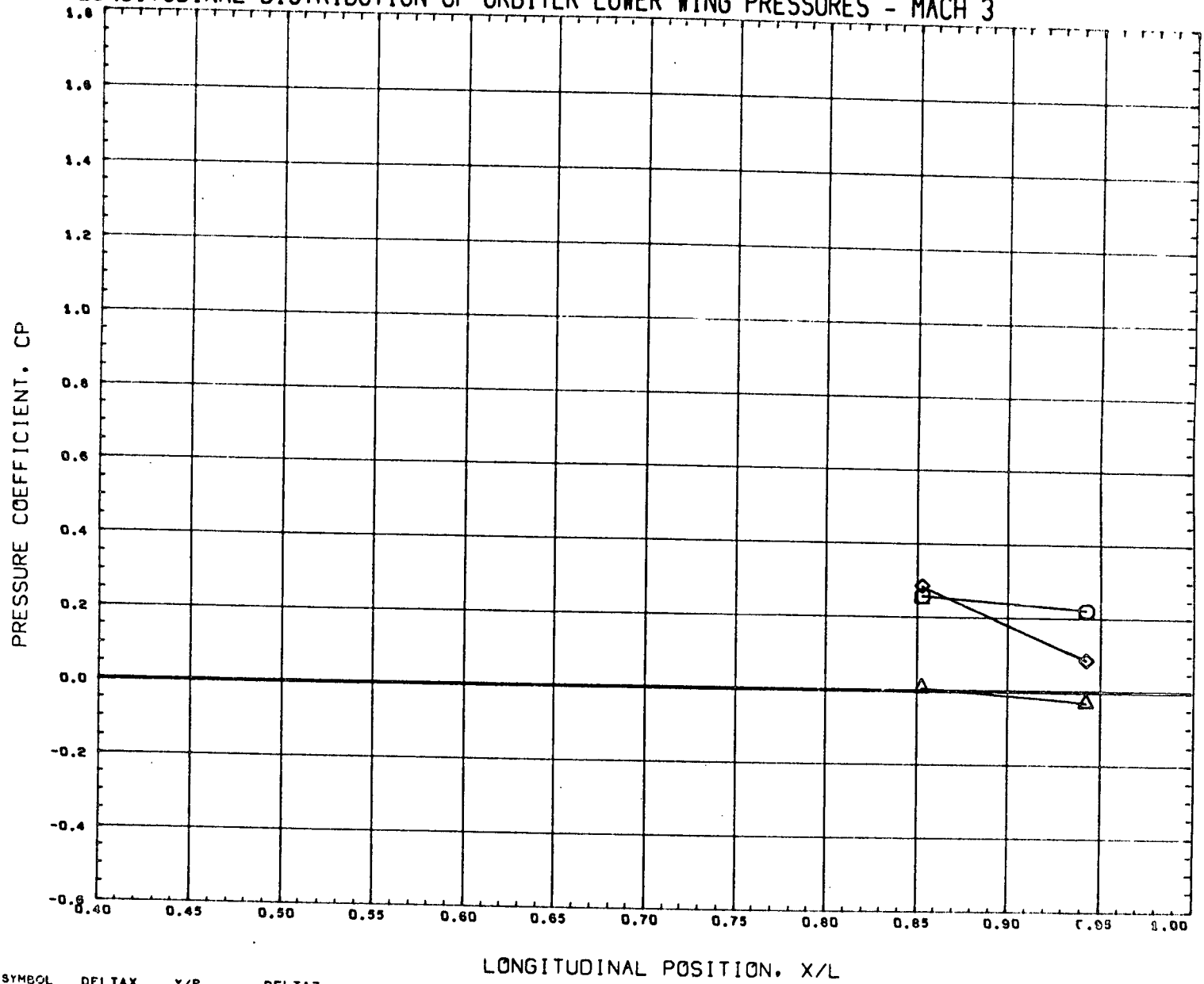
SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.143	0.568	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

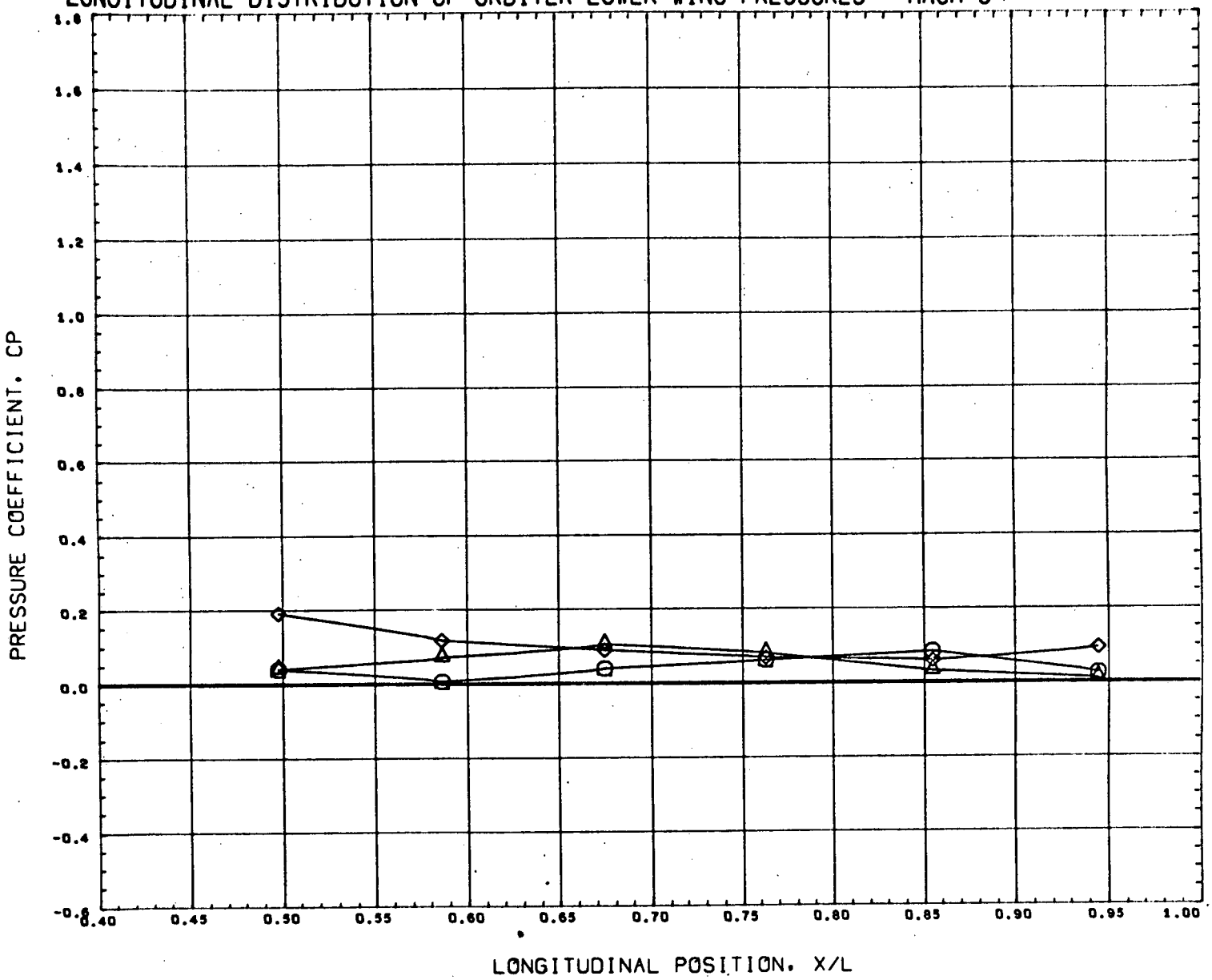
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.230	0.151
△	0.103		
◇	0.226		

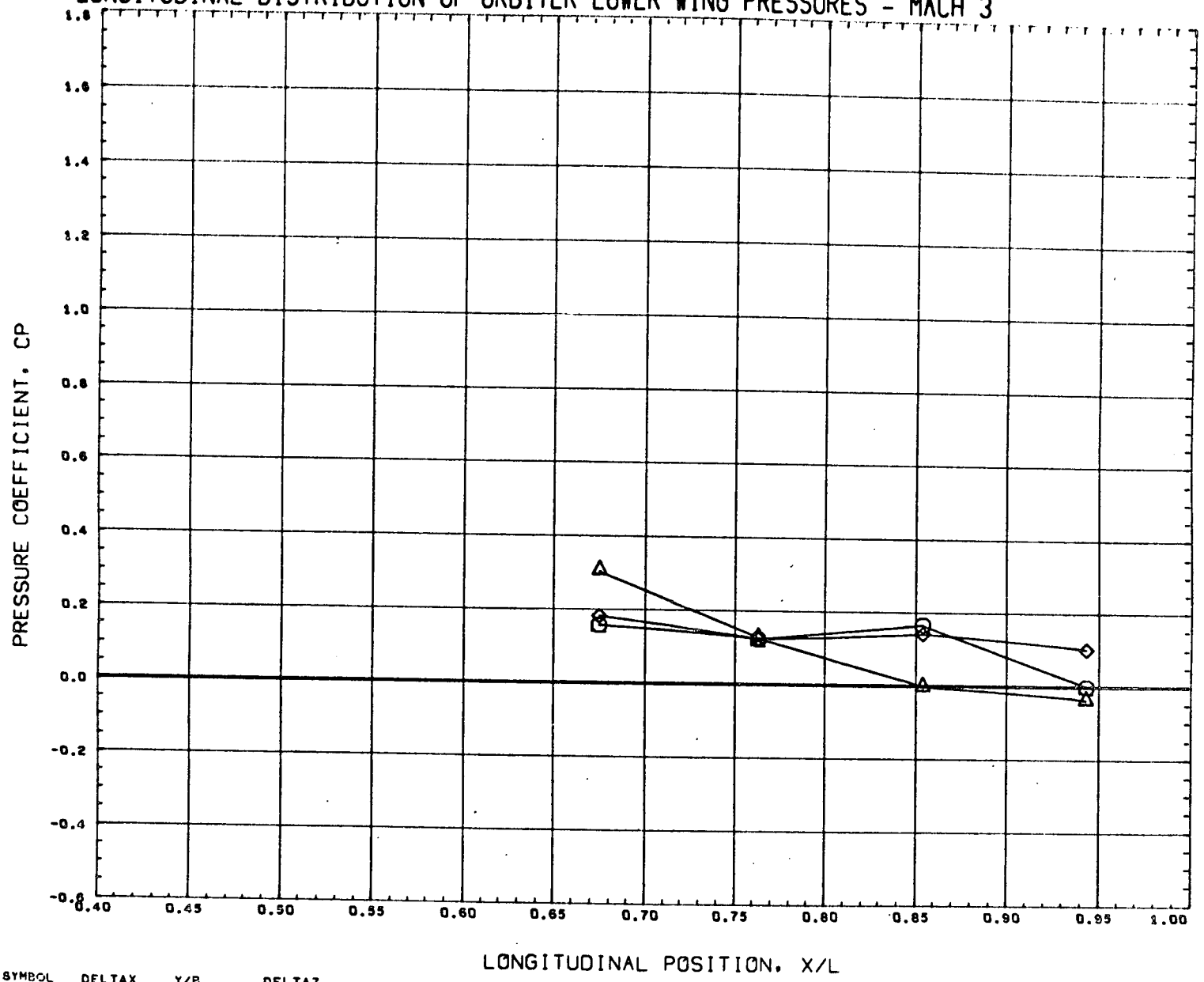
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.399	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

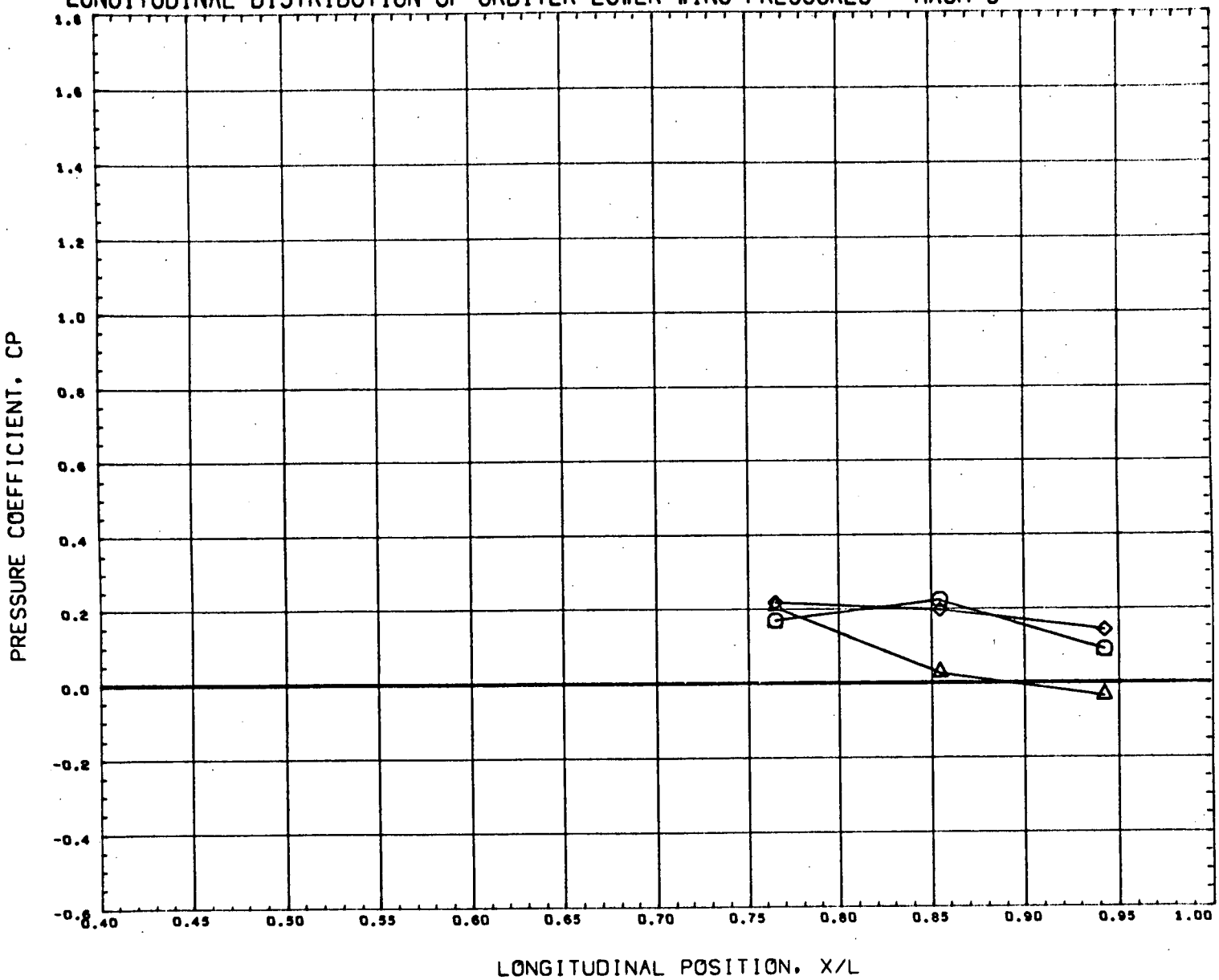
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.568	0.151
△	0.103		
◇	0.226		

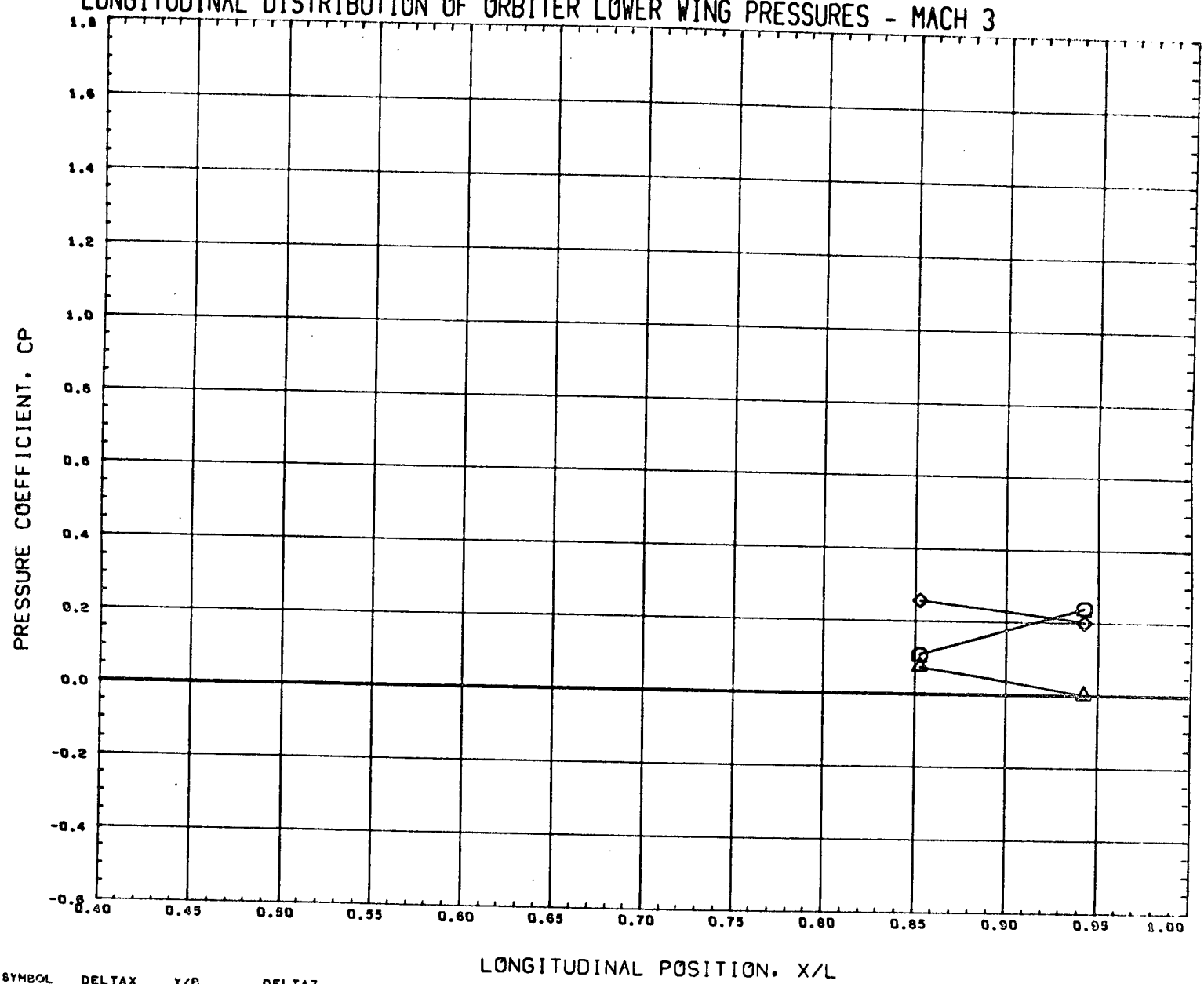
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.143	0.738	0.151
△	0.103		
◇	0.226		

PARAMETRIC VALUES

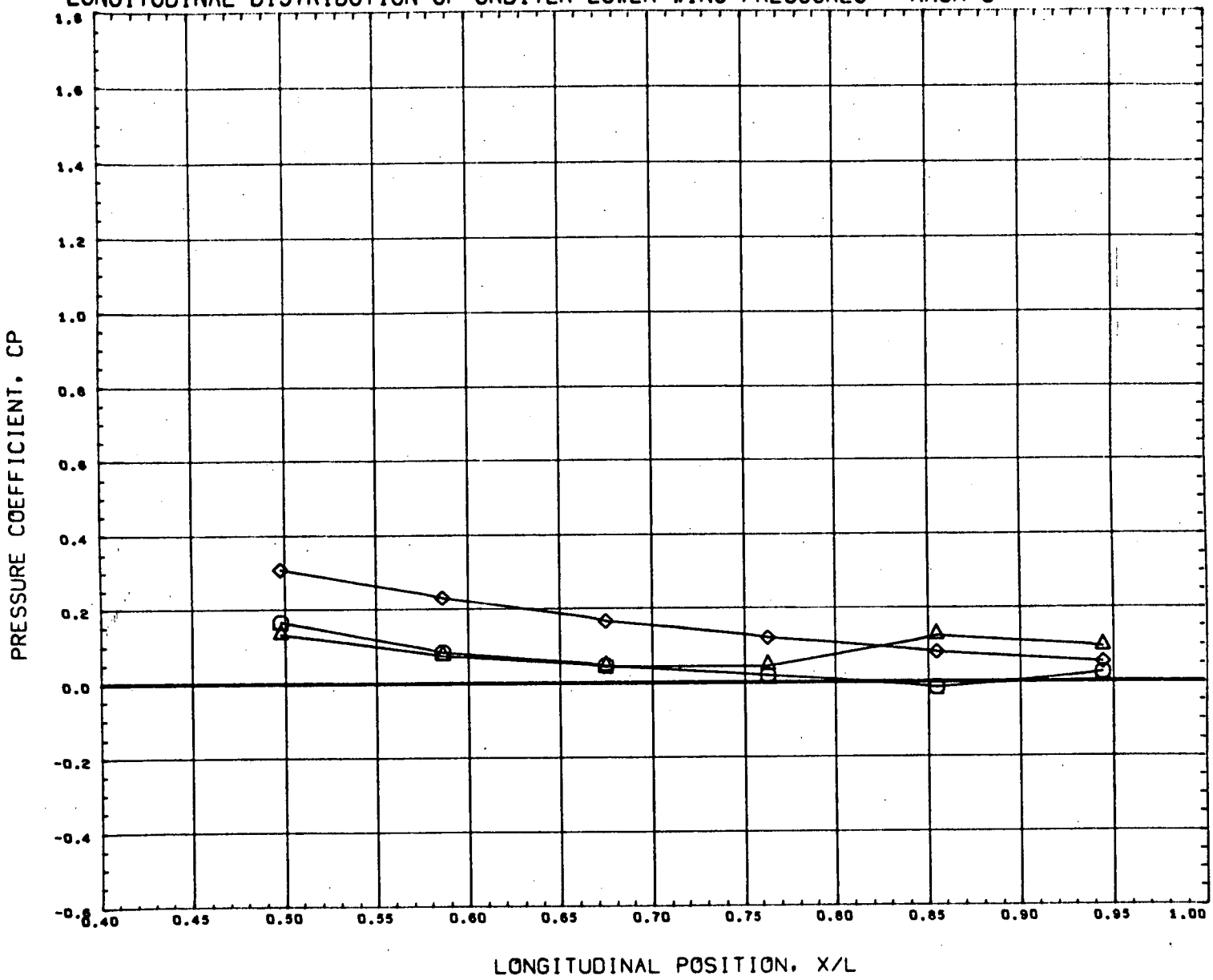
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.230	0.226
△	0.103		
◇	0.226		

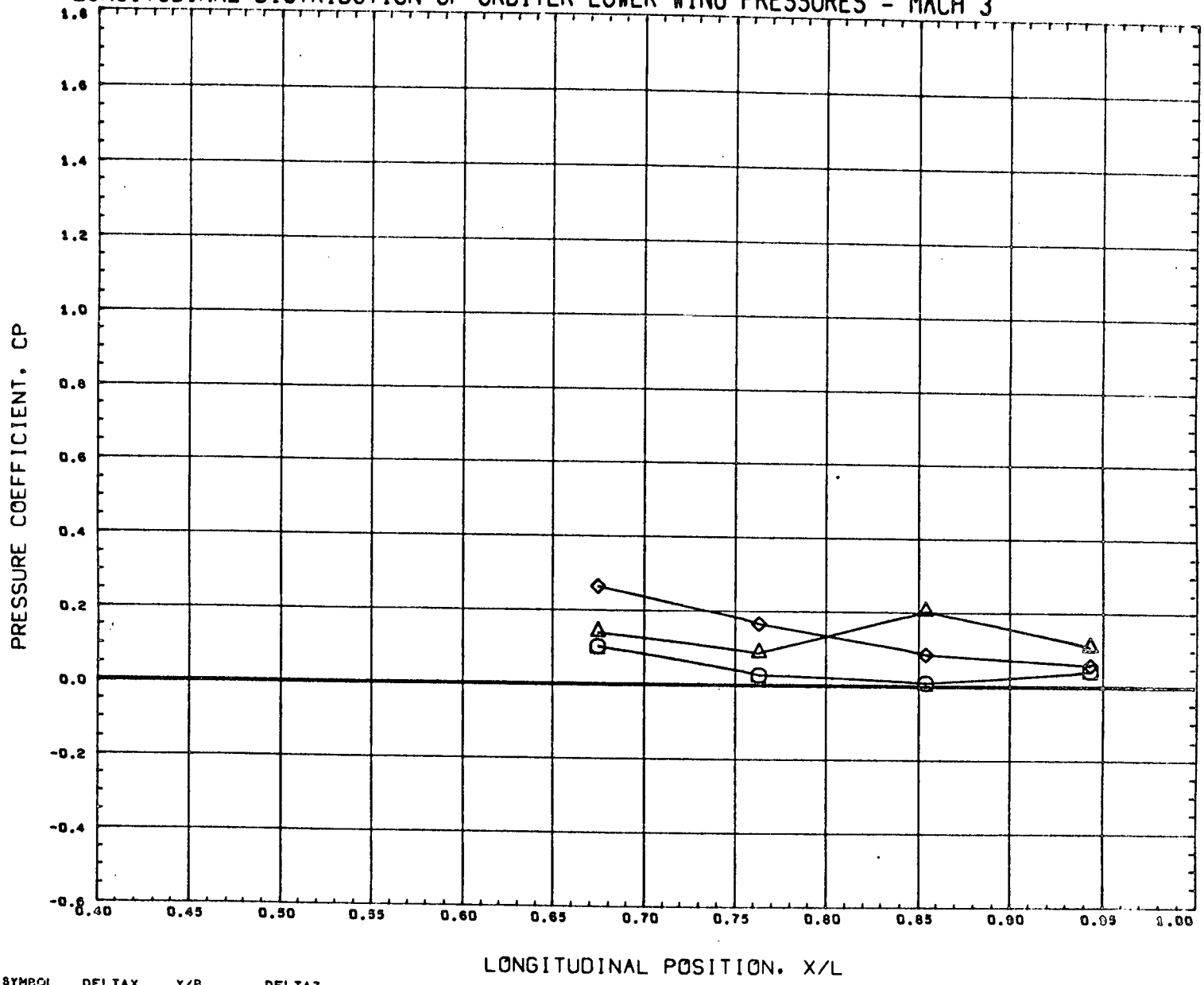
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.399	0.228
△	0.103		
◇	0.226		

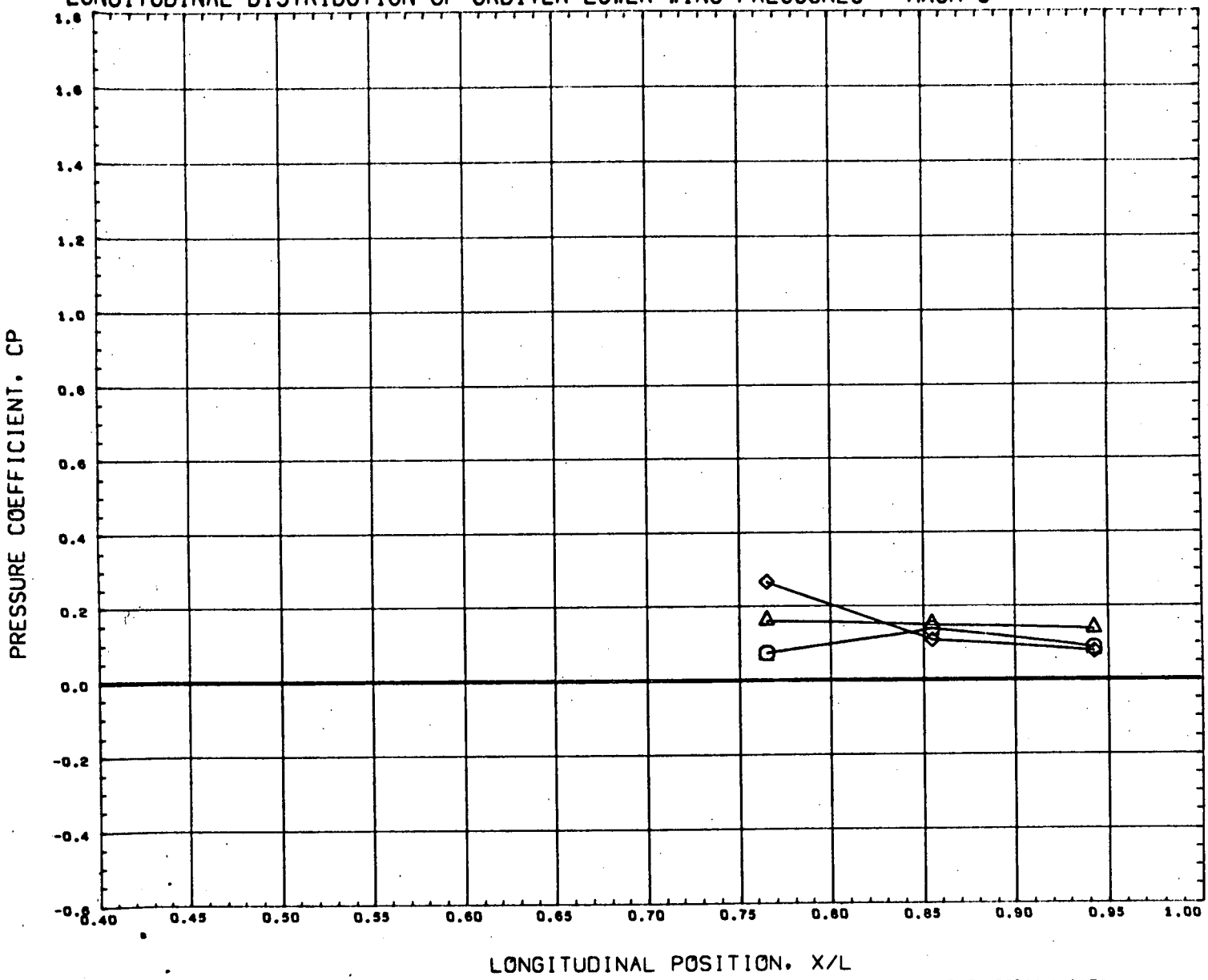
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.144	0.568	0.226
△	0.103		
◇	0.226		

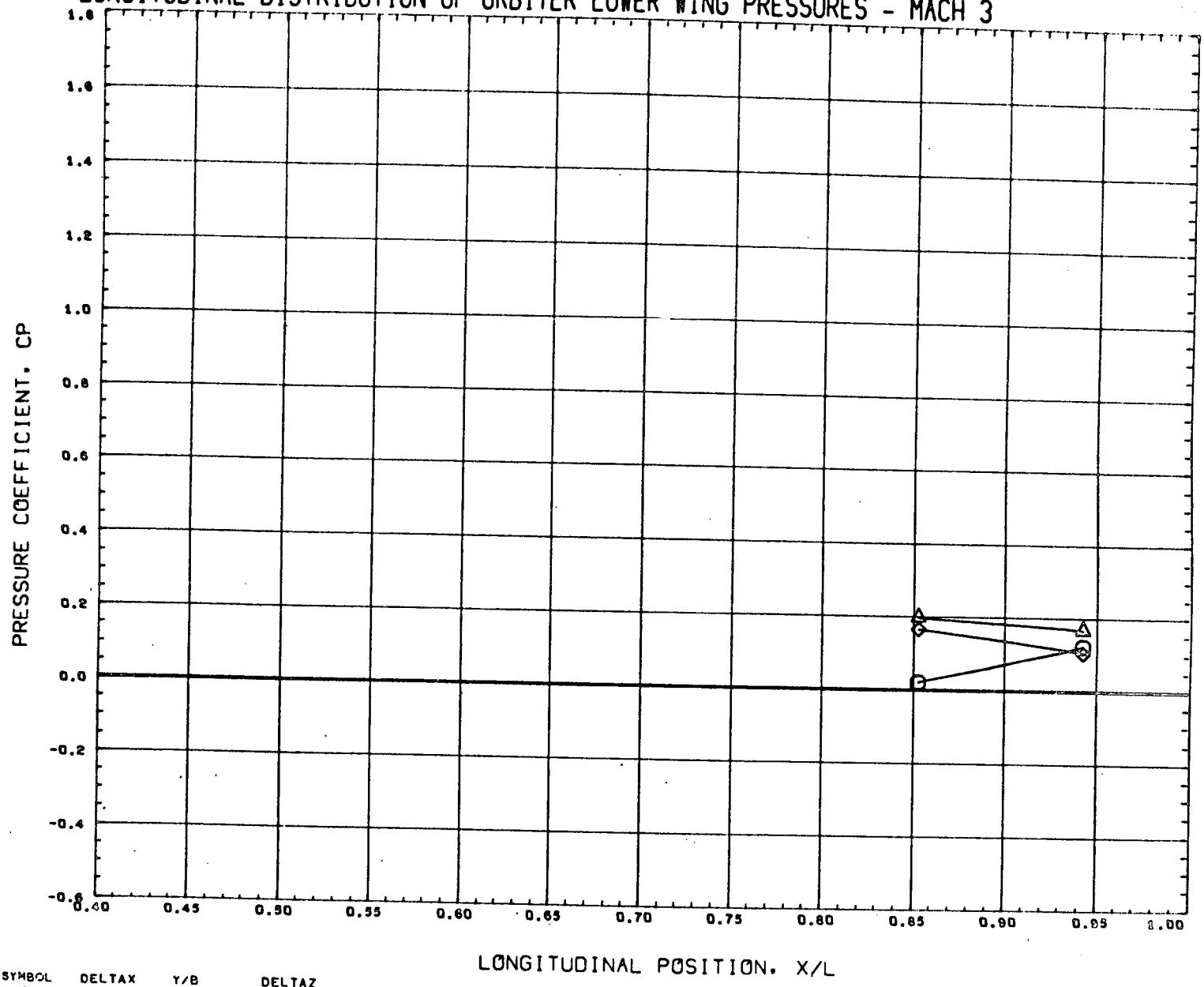
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.144	0.738	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

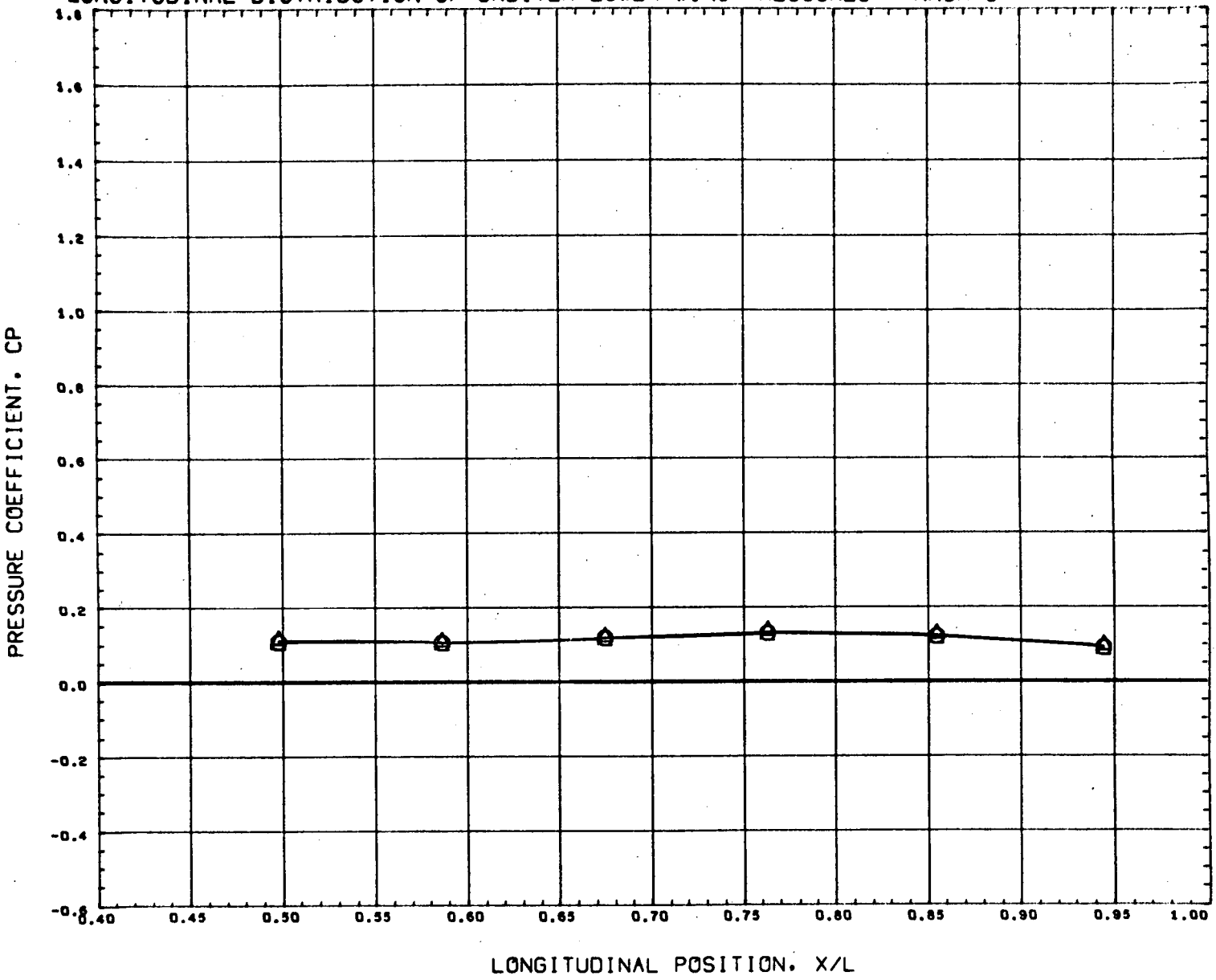
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



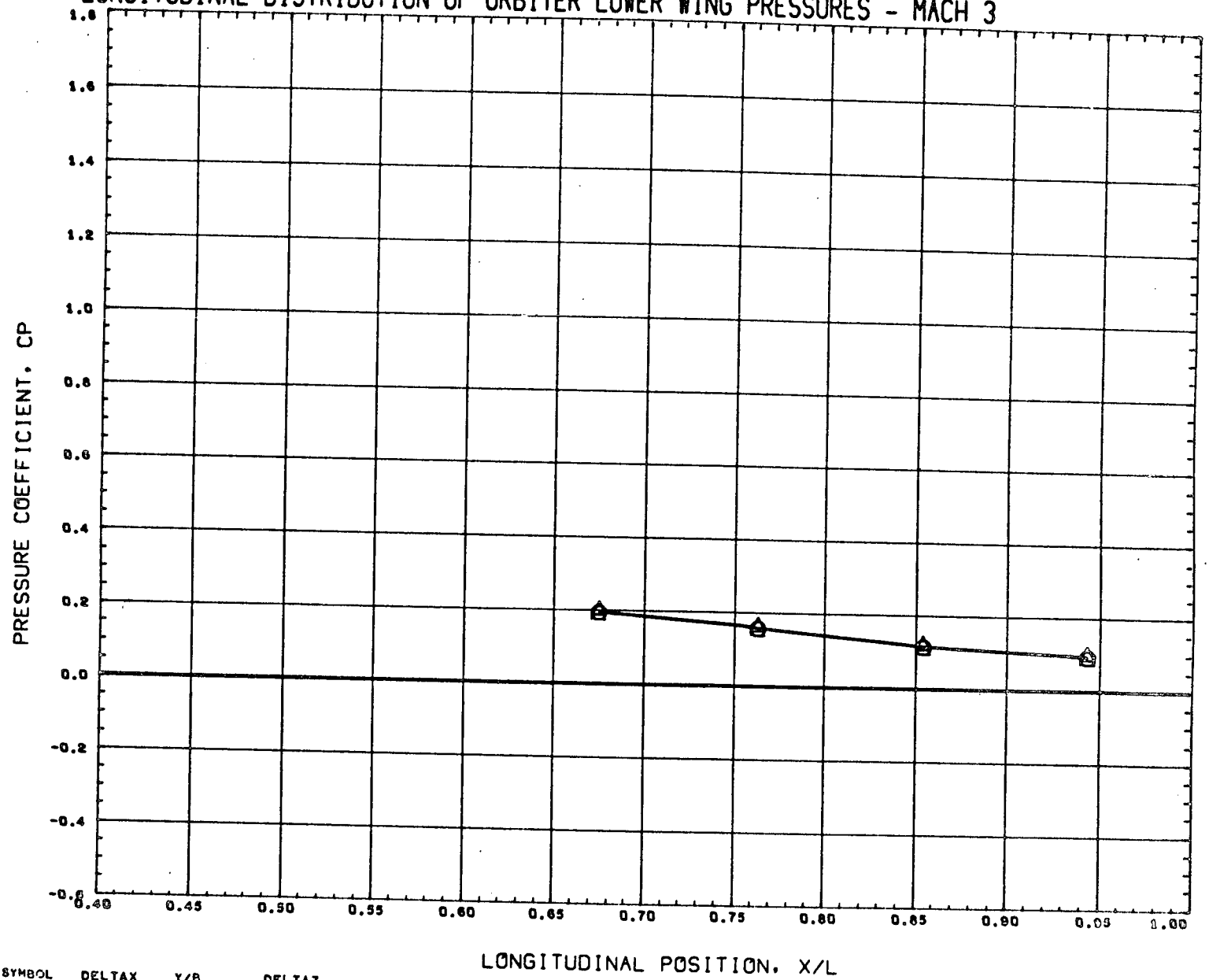
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.230	0.908
△	0.481		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	- 0.390	0.399	0.908
△	0.481		

PARAMETRIC VALUES

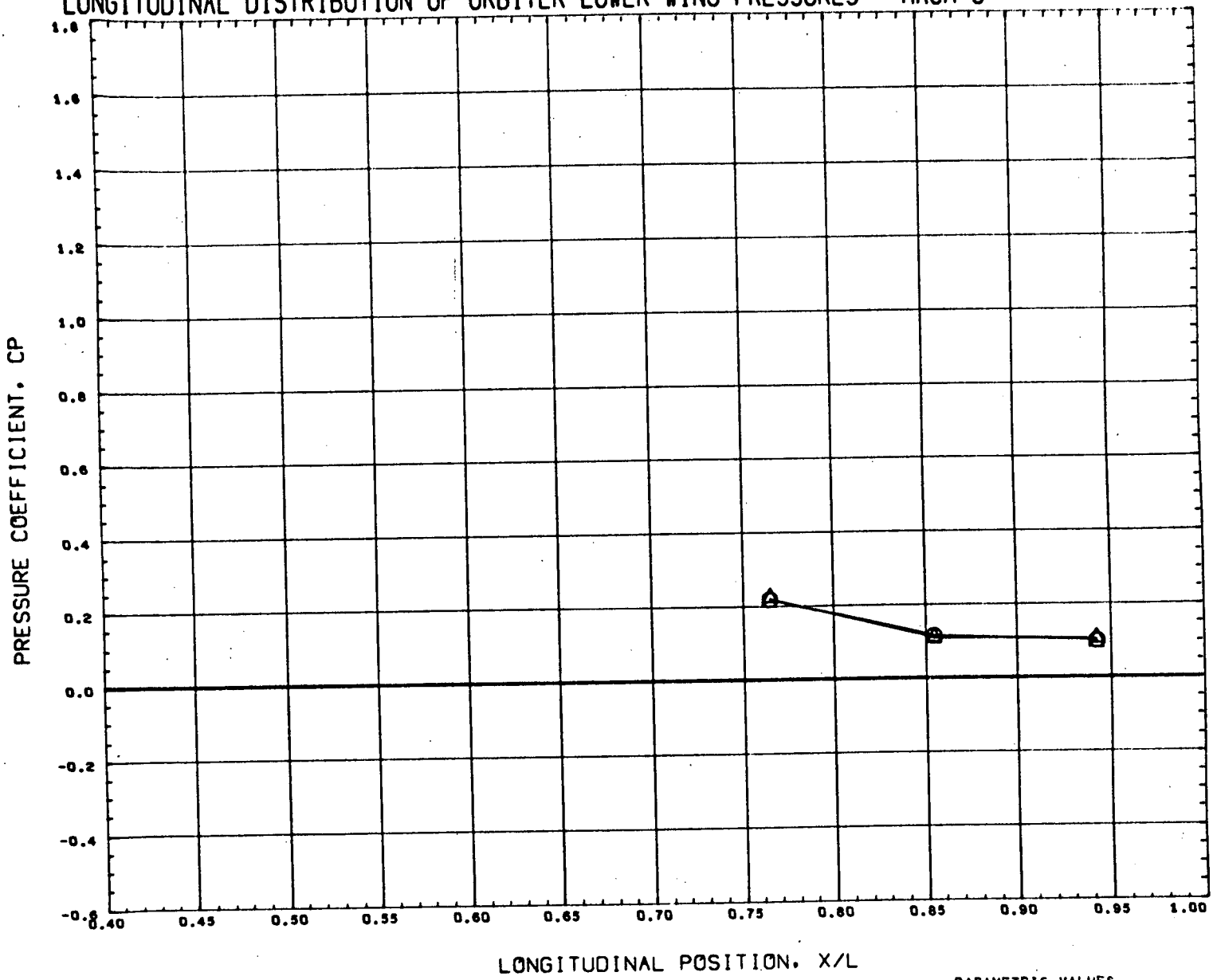
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○ -	0.390	0.568	0.908
△	0.461		

PARAMETRIC VALUES

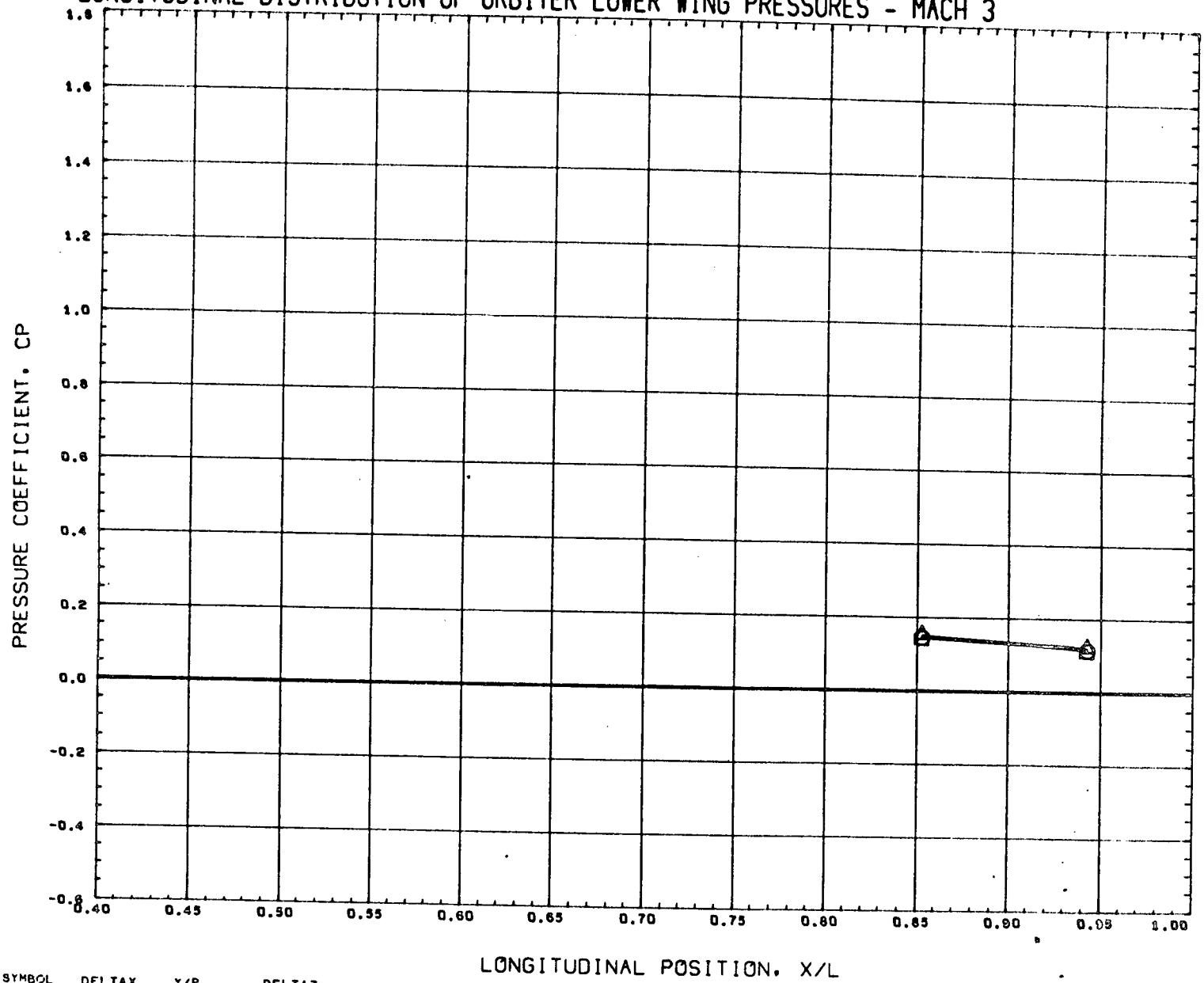
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.390	0.738	0.908
△	0.481		

PARAMETRIC VALUES

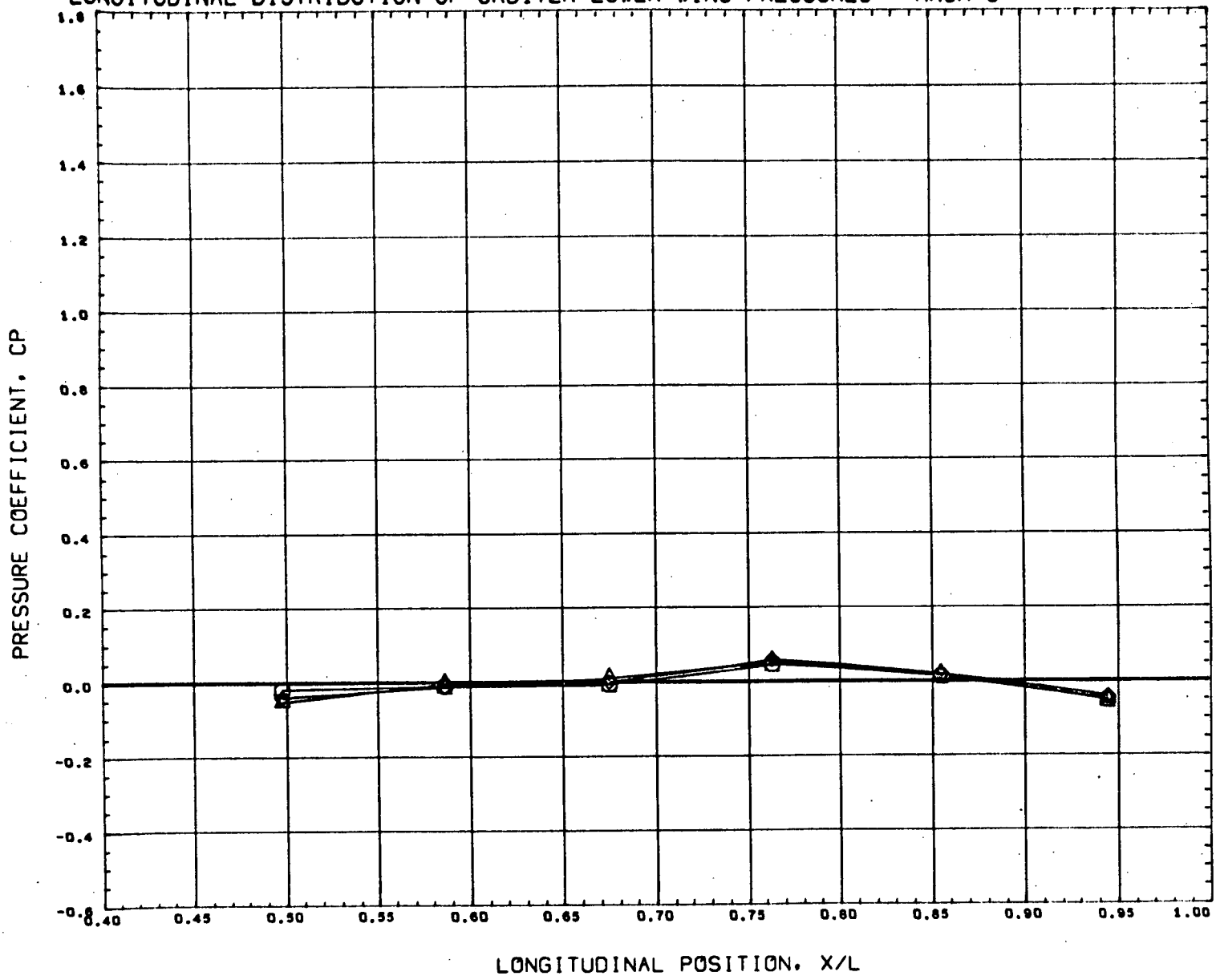
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8325•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.230	0.105
△	0.103		
◇	0.166		

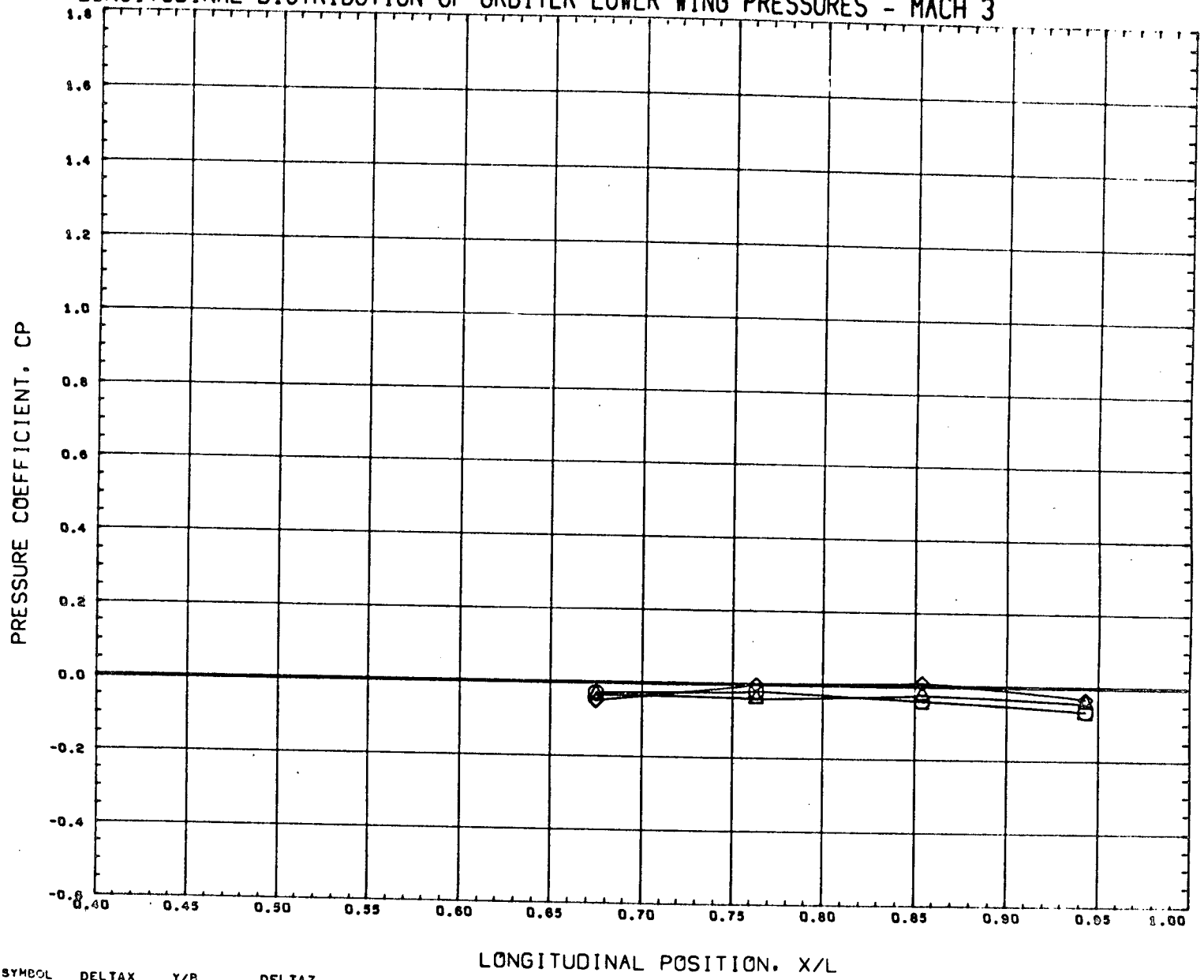
PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8331• PAGE 341

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.399	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

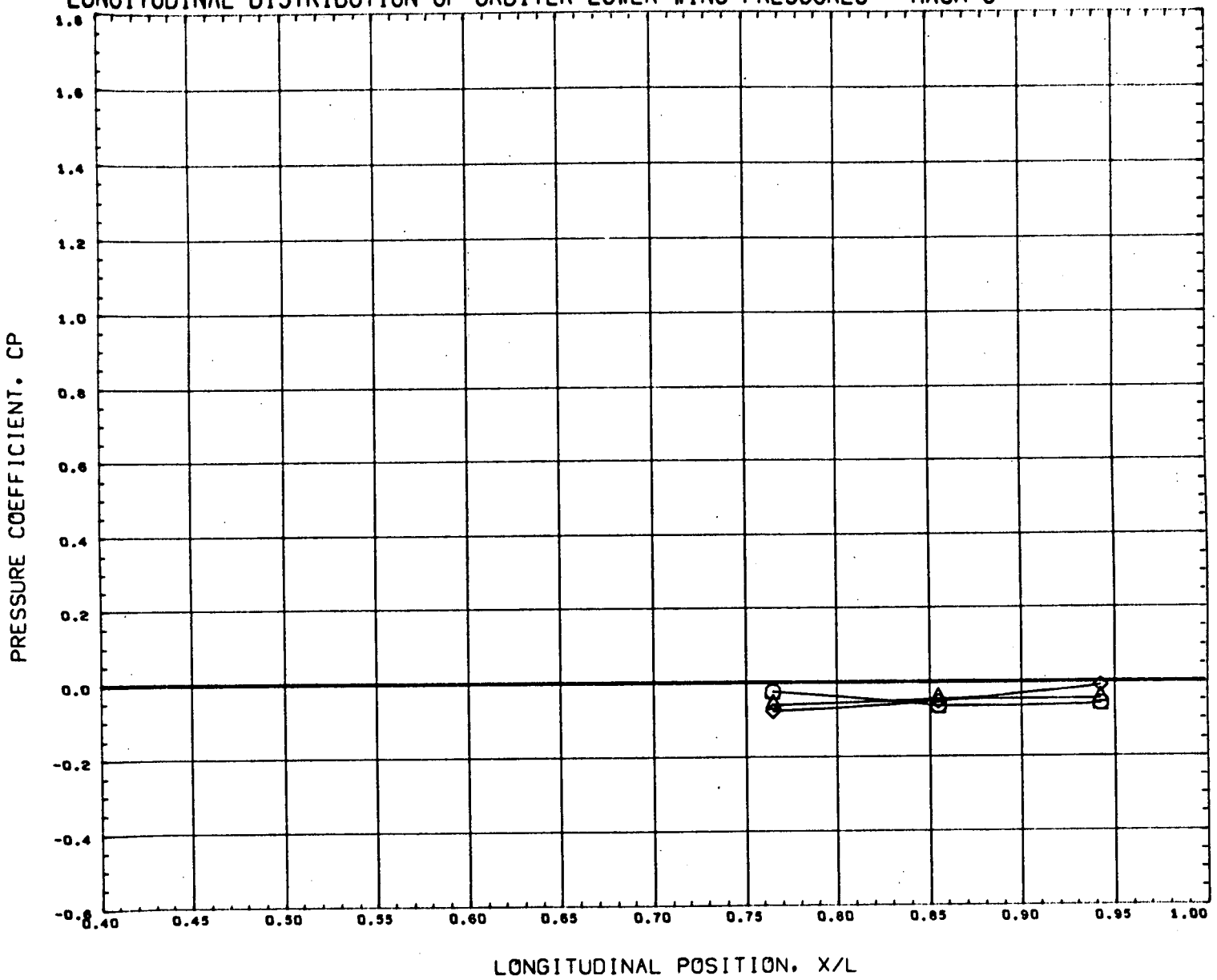
ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8331•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.568	0.105
△	0.103		
◇	0.166		

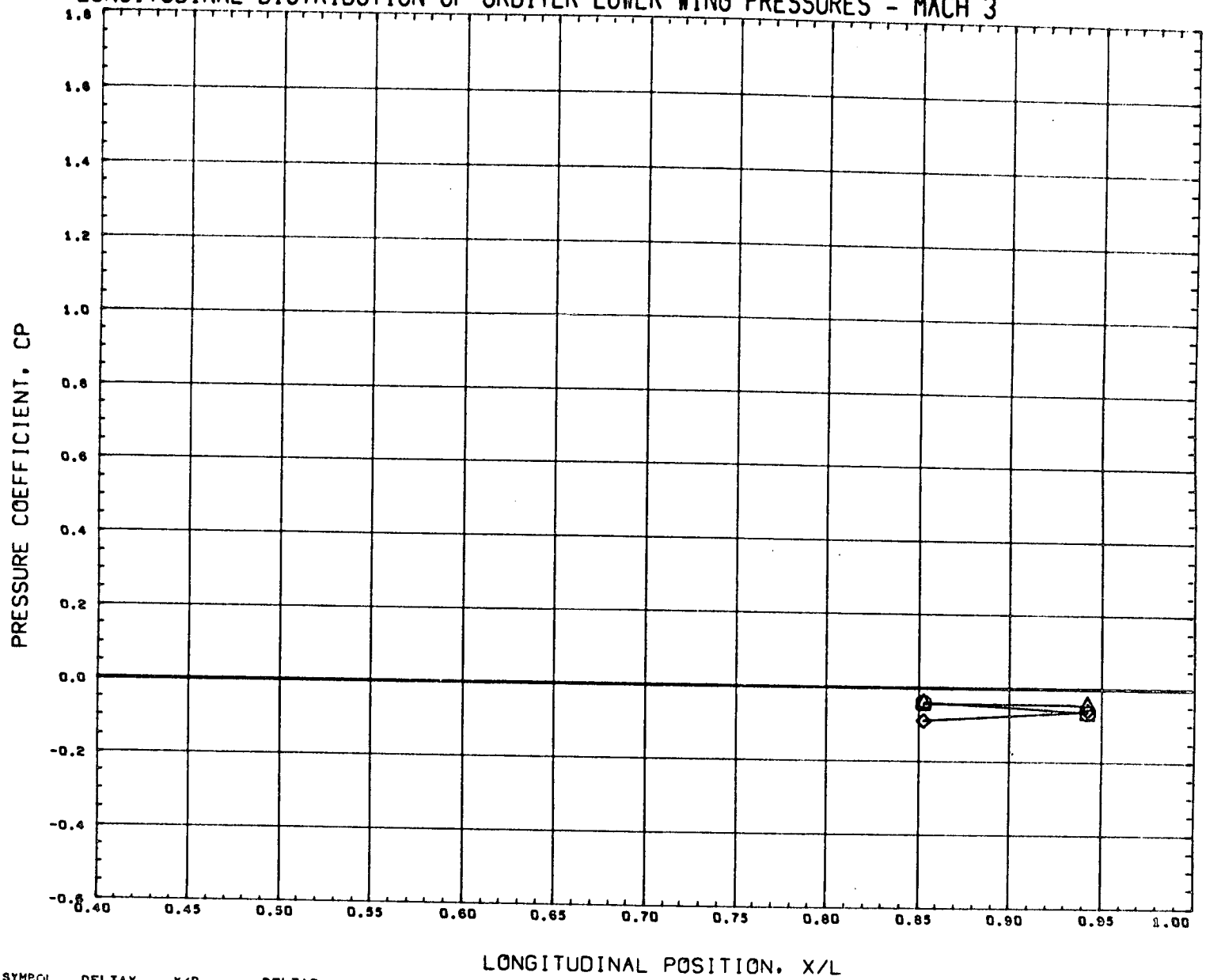
PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8331• PAGE 343

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.738	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

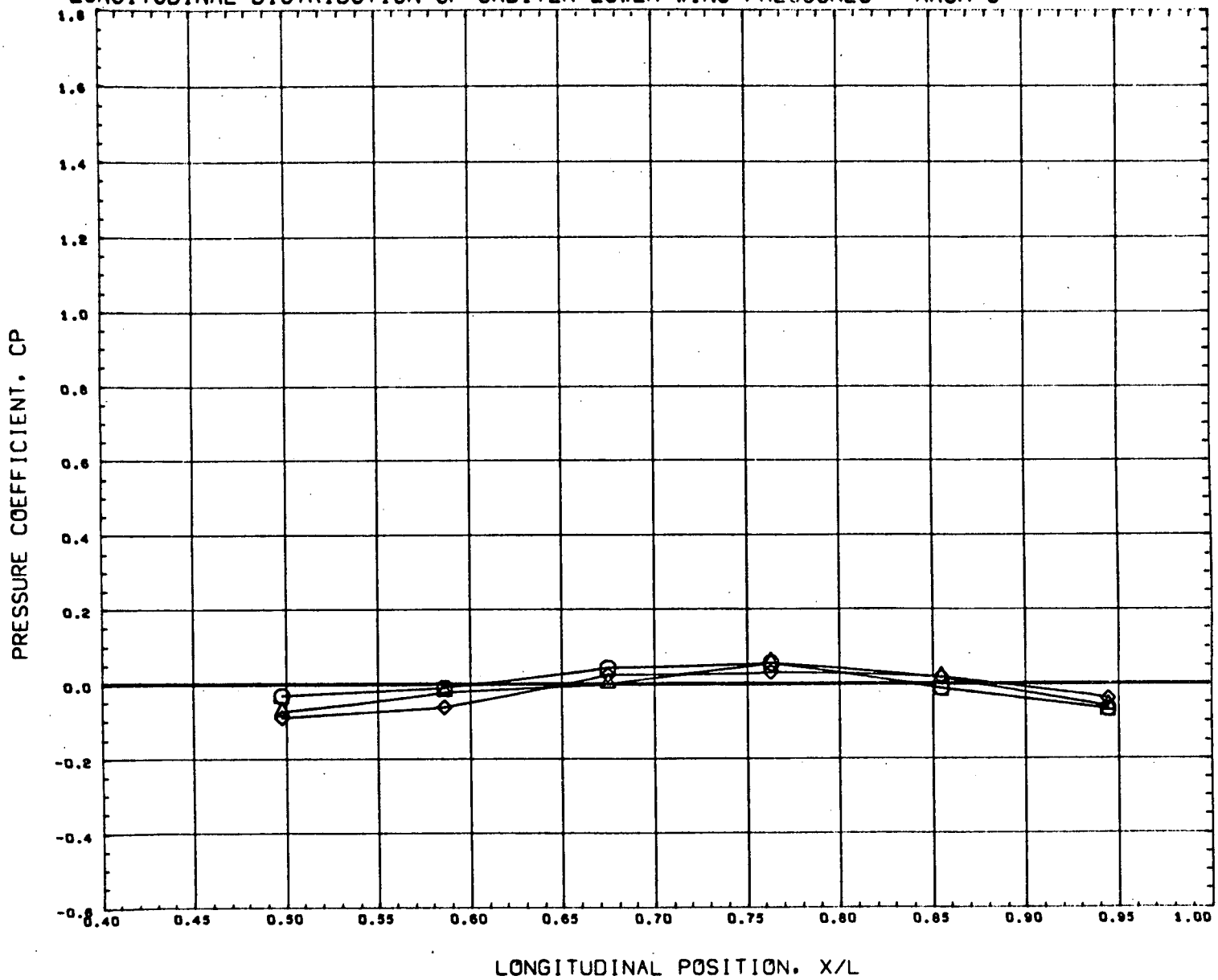
ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8331•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



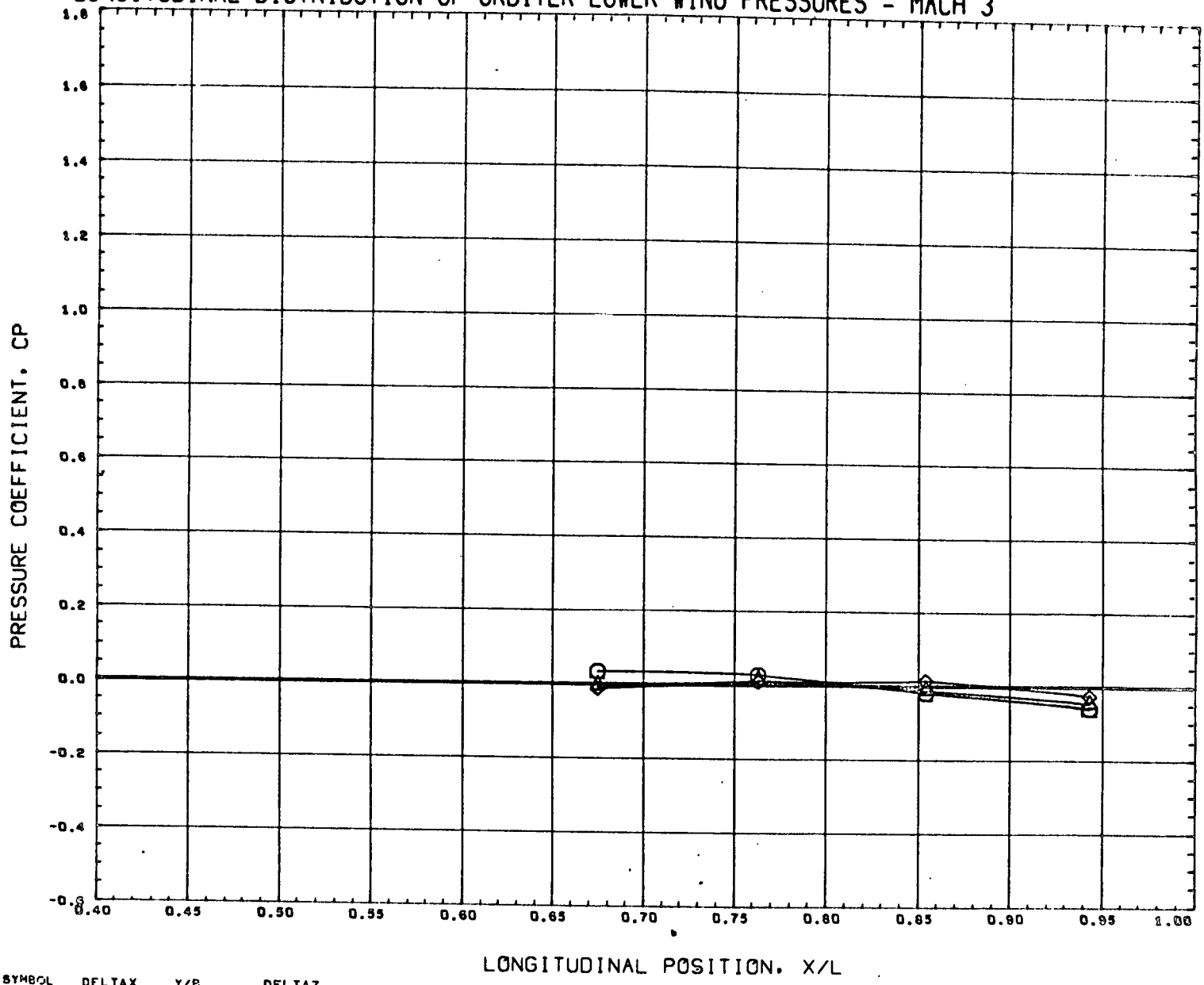
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.036	0.230	0.105
△	0.101		
◇	0.161		

PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.399	0.105
△	0.101		
◇	0.161		

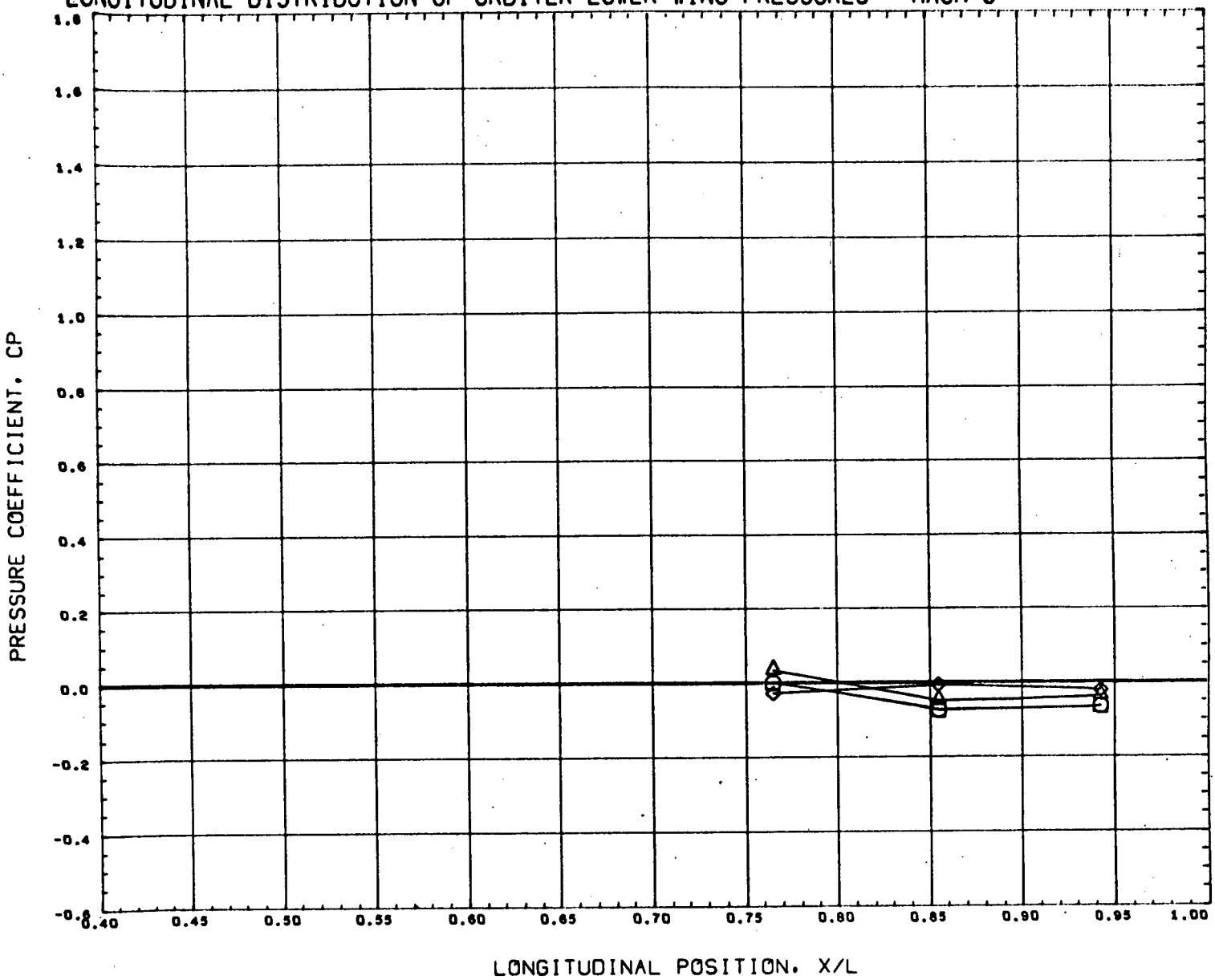
PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8332•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.568	0.105
△	0.101		
◇	0.161		

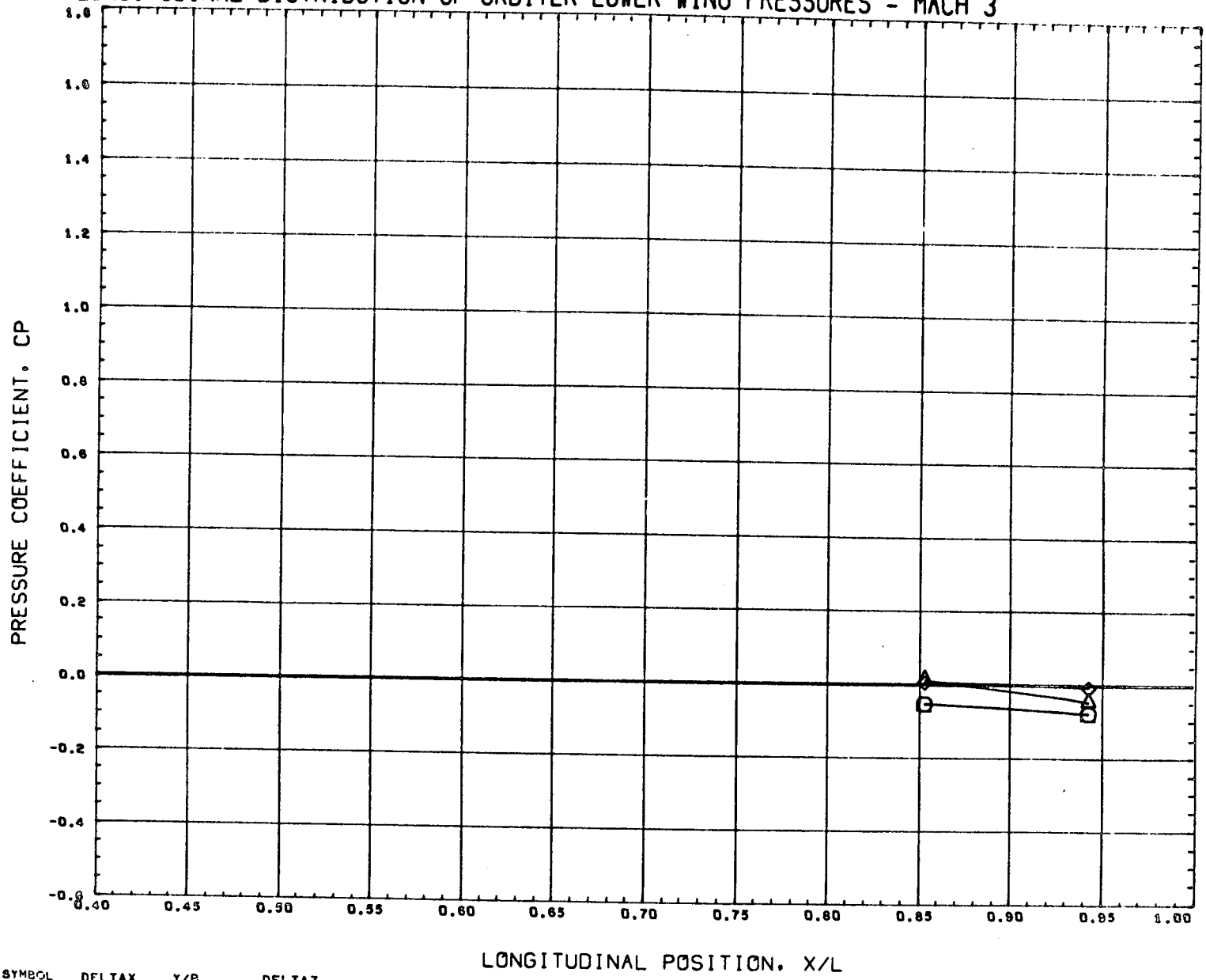
PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8332•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.738	0.105
△	0.101		
◇	0.161		

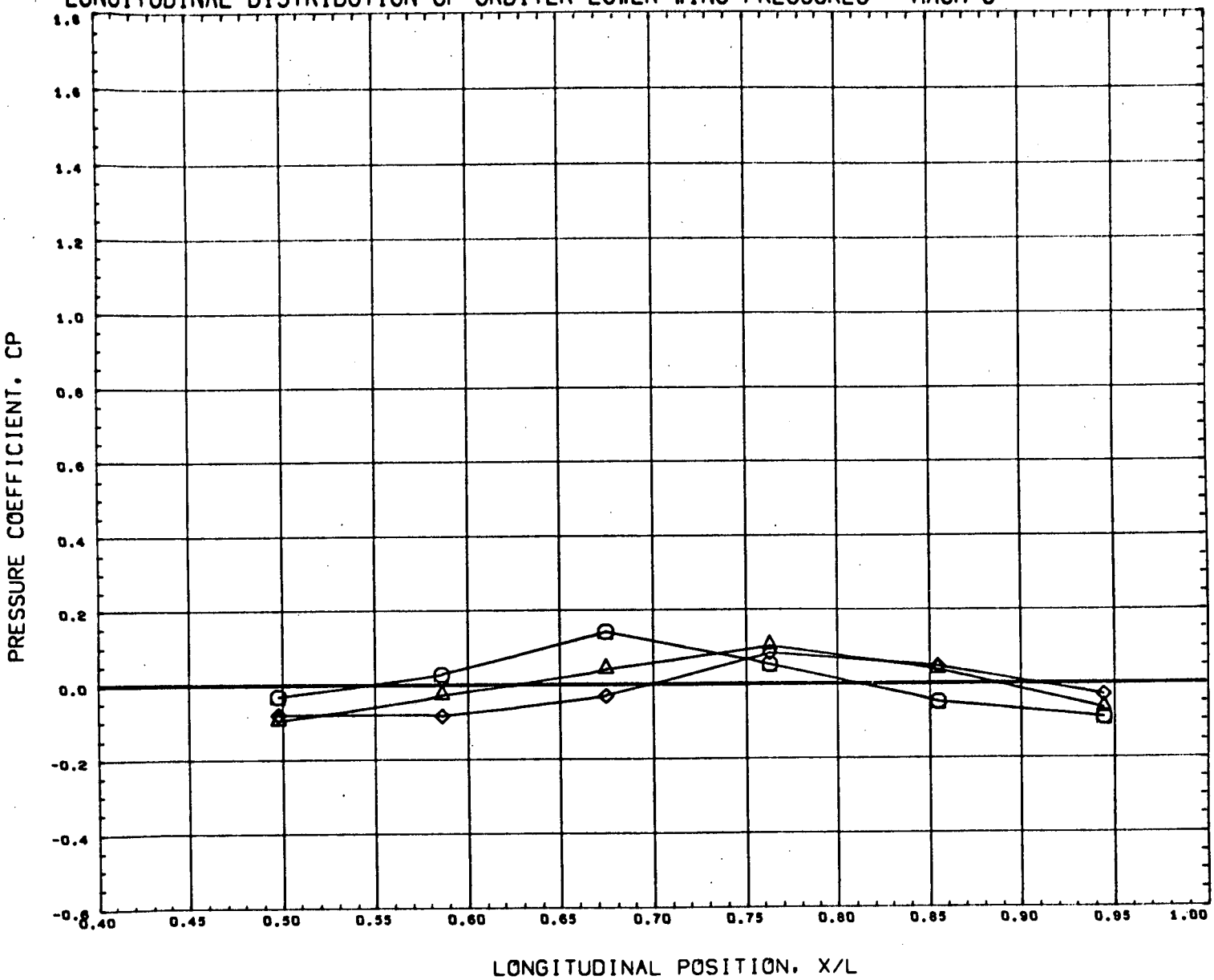
PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



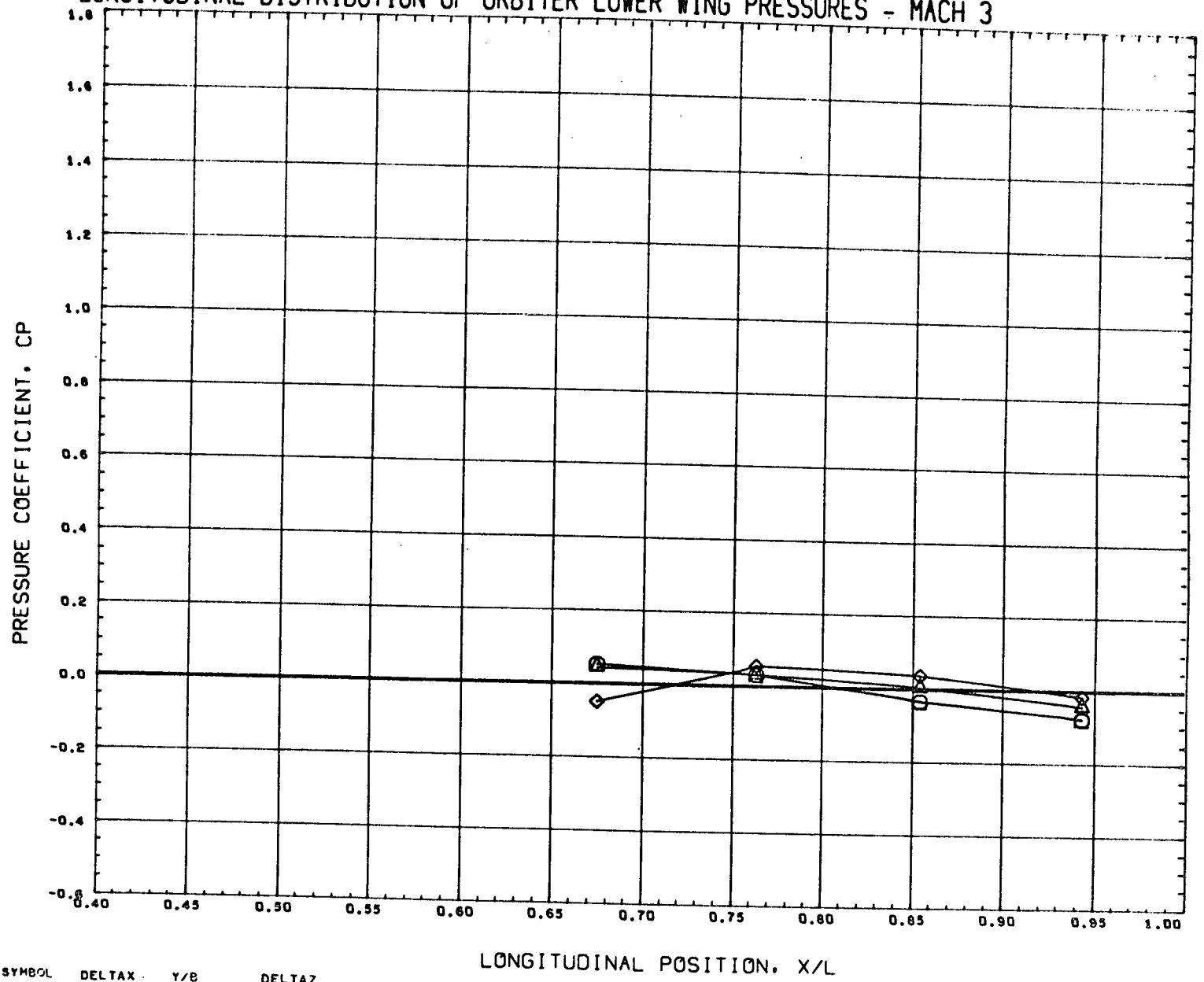
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.230	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.399	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

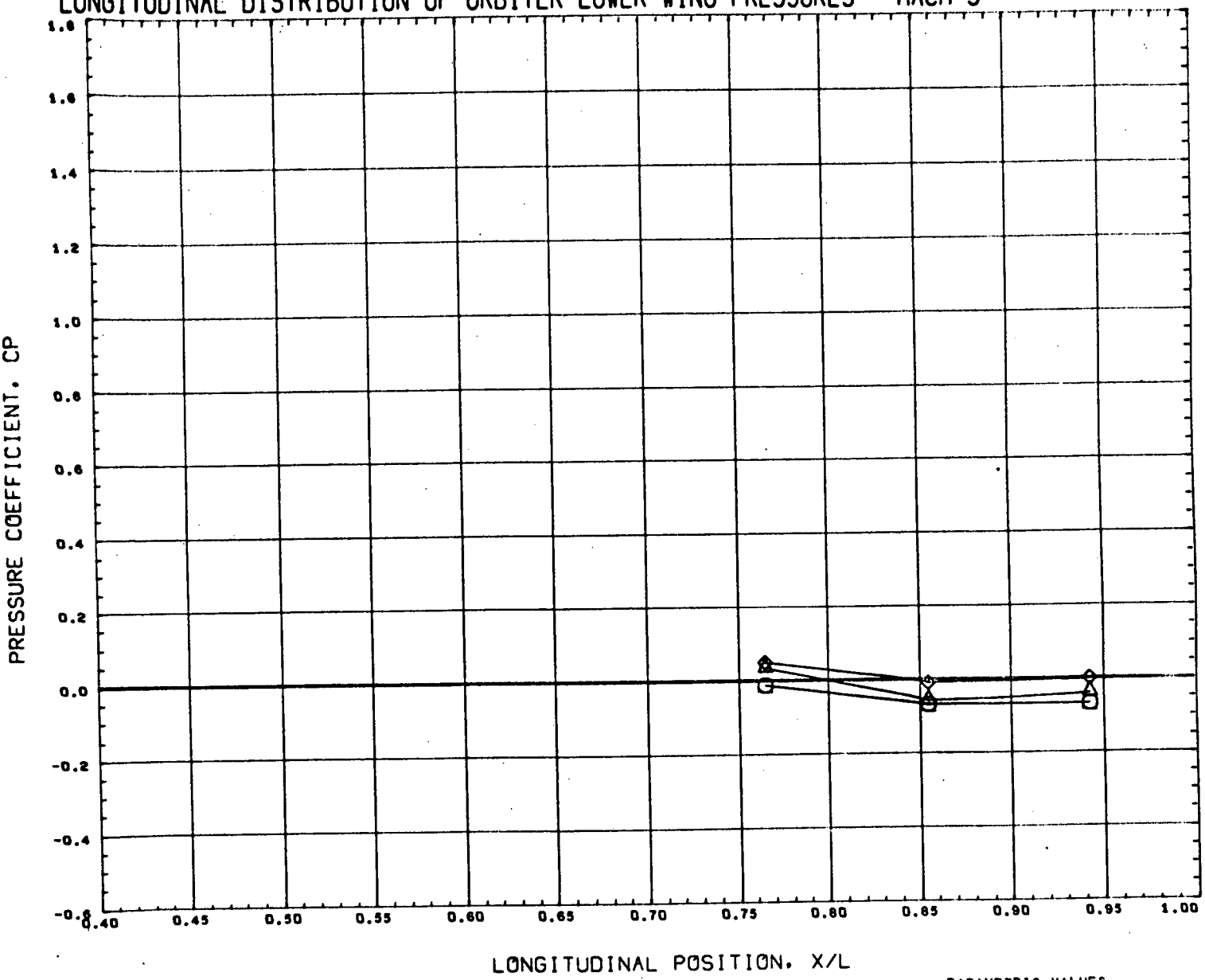
ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8333•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.568	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

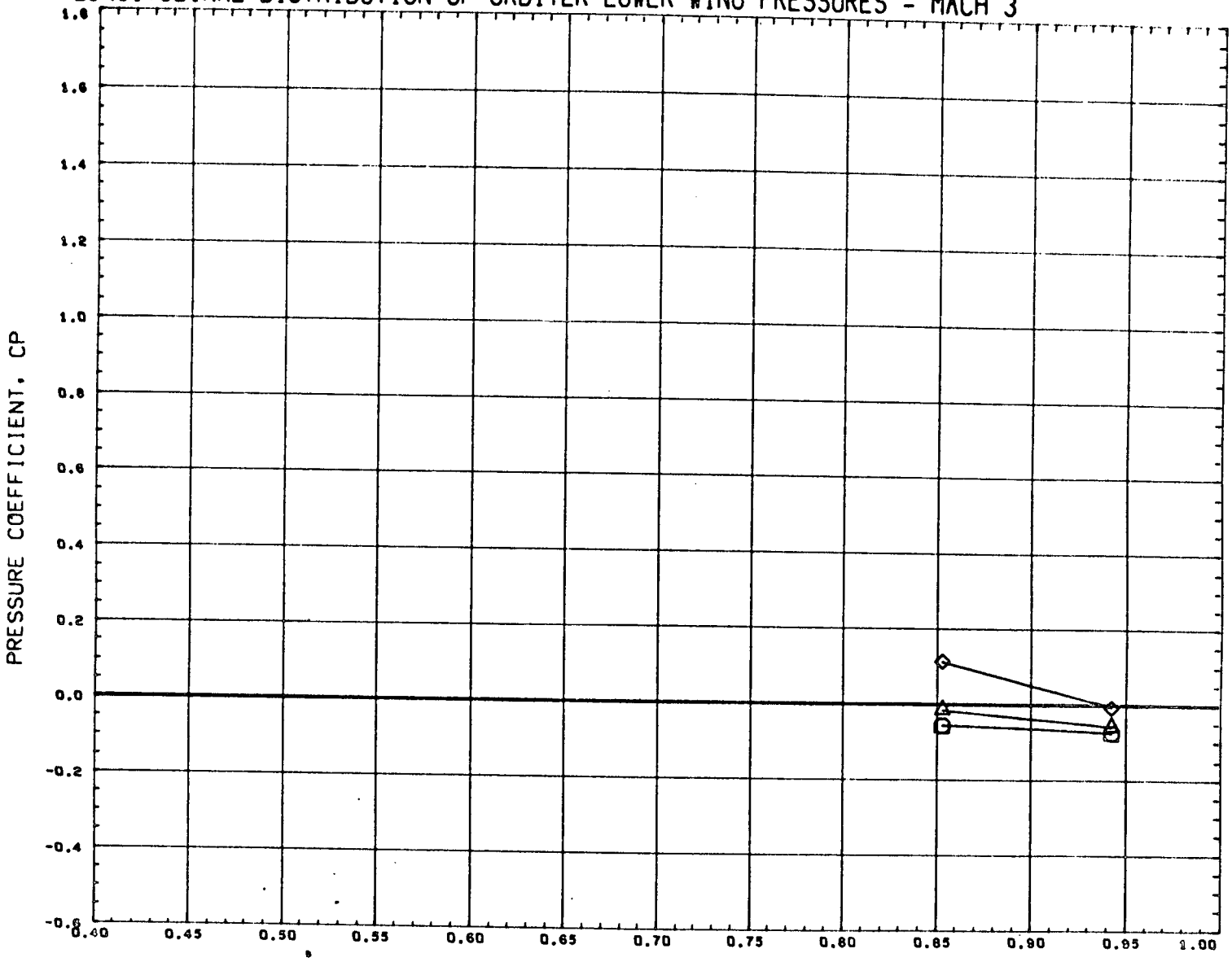
ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8333•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.040	0.738	0.105
△	0.104		
◇	0.167		

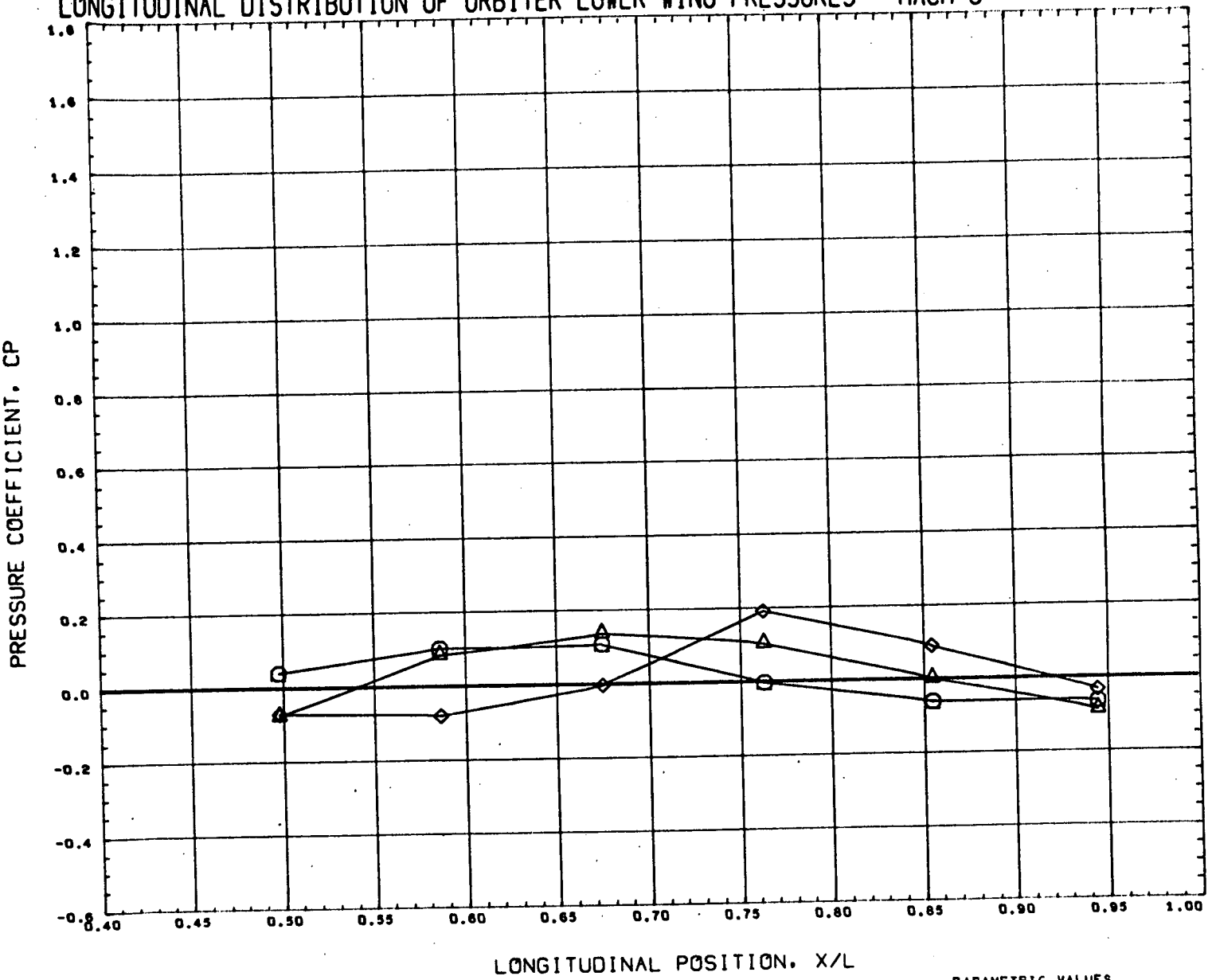
PARAMETRIC VALUES

ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.230	0.105
△	0.099		
◇	0.162		

PARAMETRIC VALUES

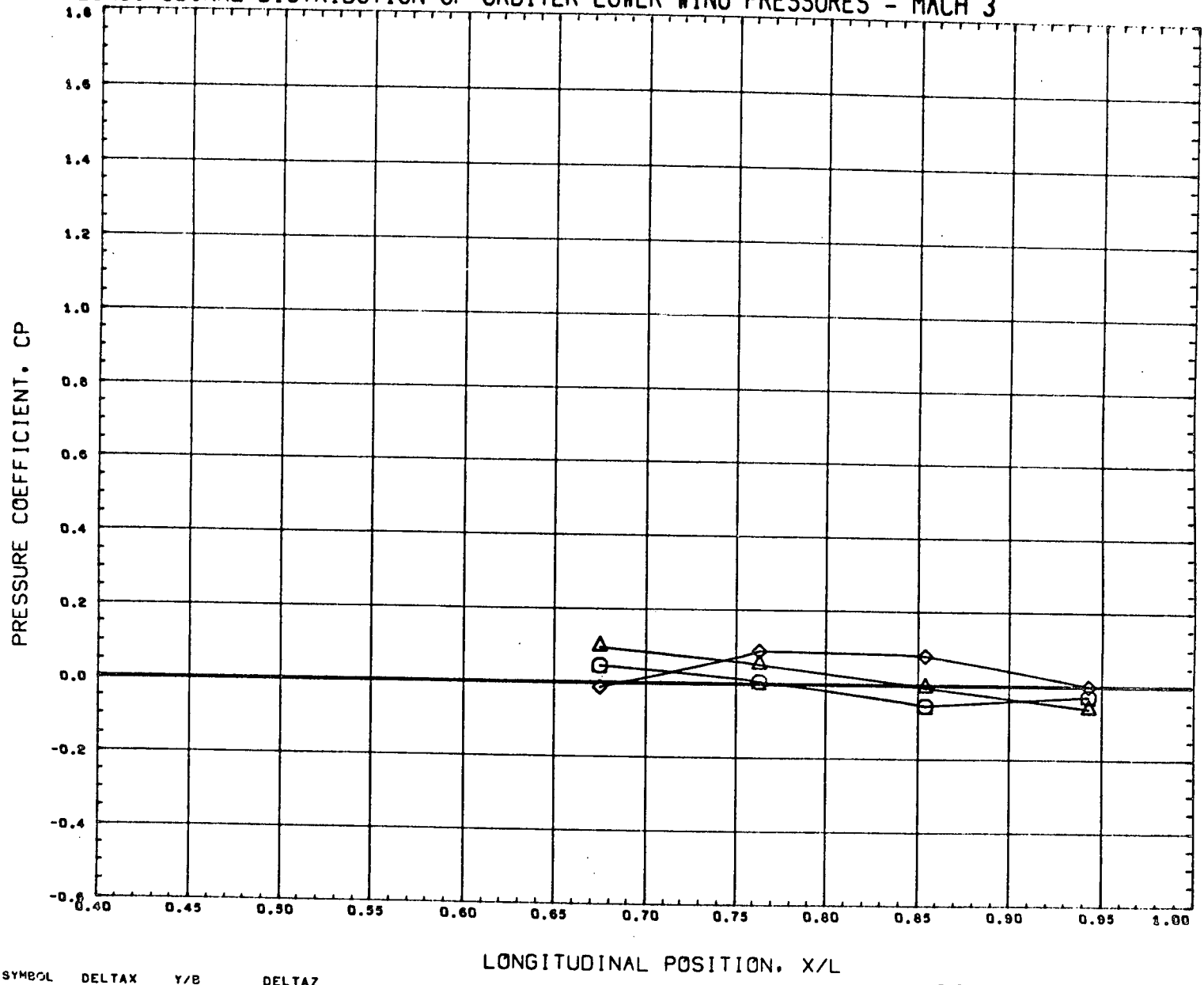
ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8334•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.399	0.105
△	0.099		
◇	0.162		

PARAMETRIC VALUES

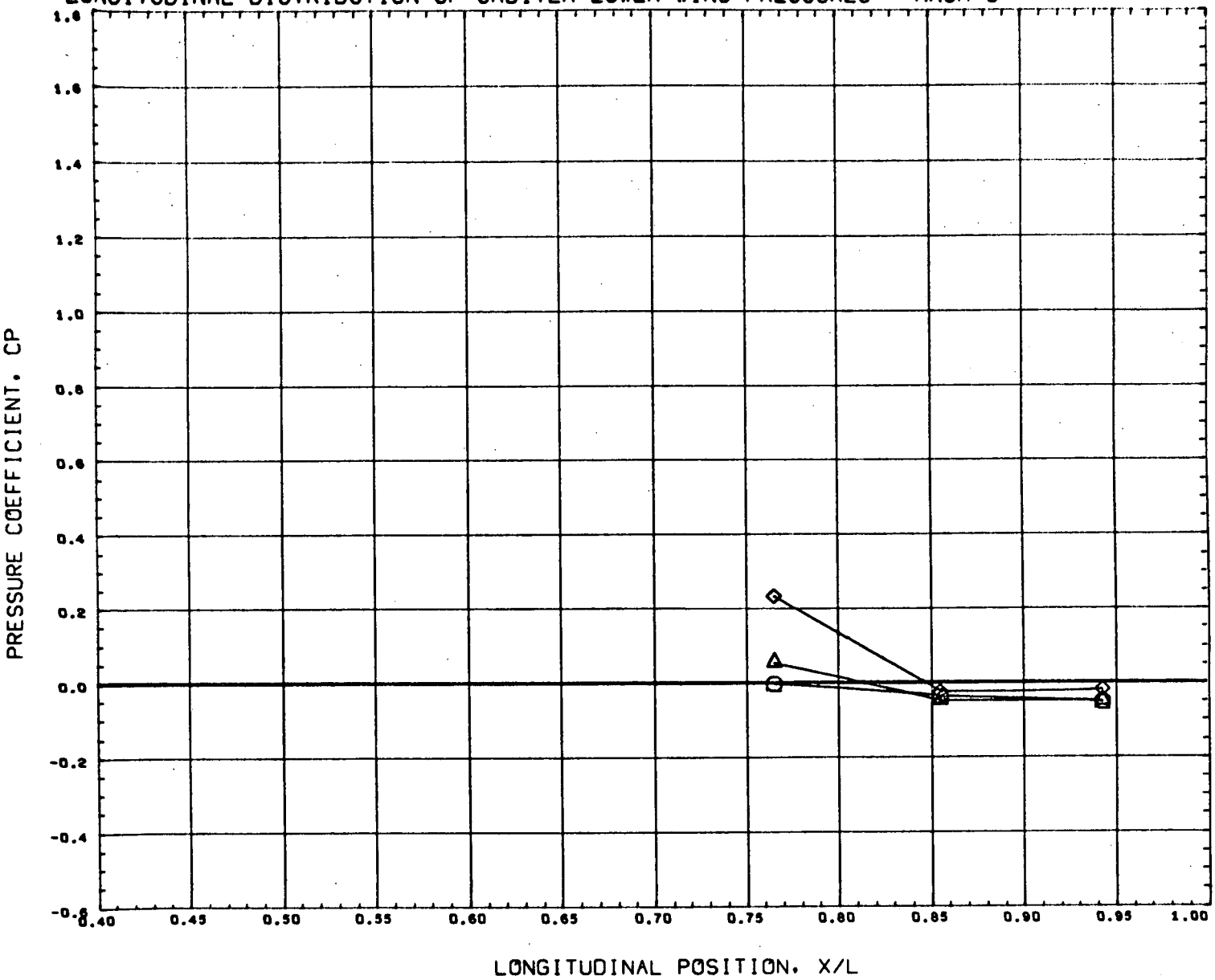
ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8334•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



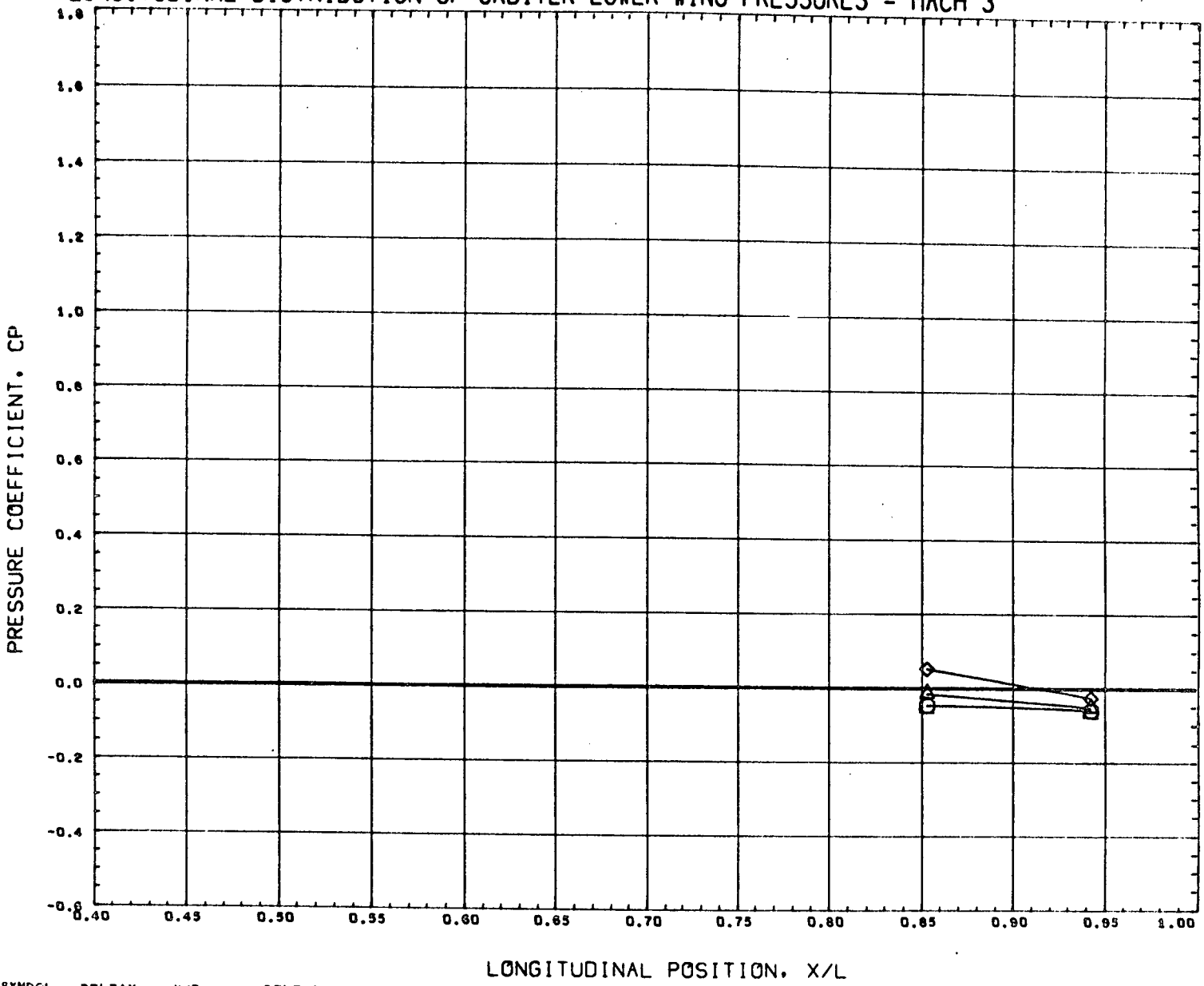
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.568	0.105
△	0.099		
◇	0.162		

PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.038	0.738	0.105
△	0.099		
◇	0.162		

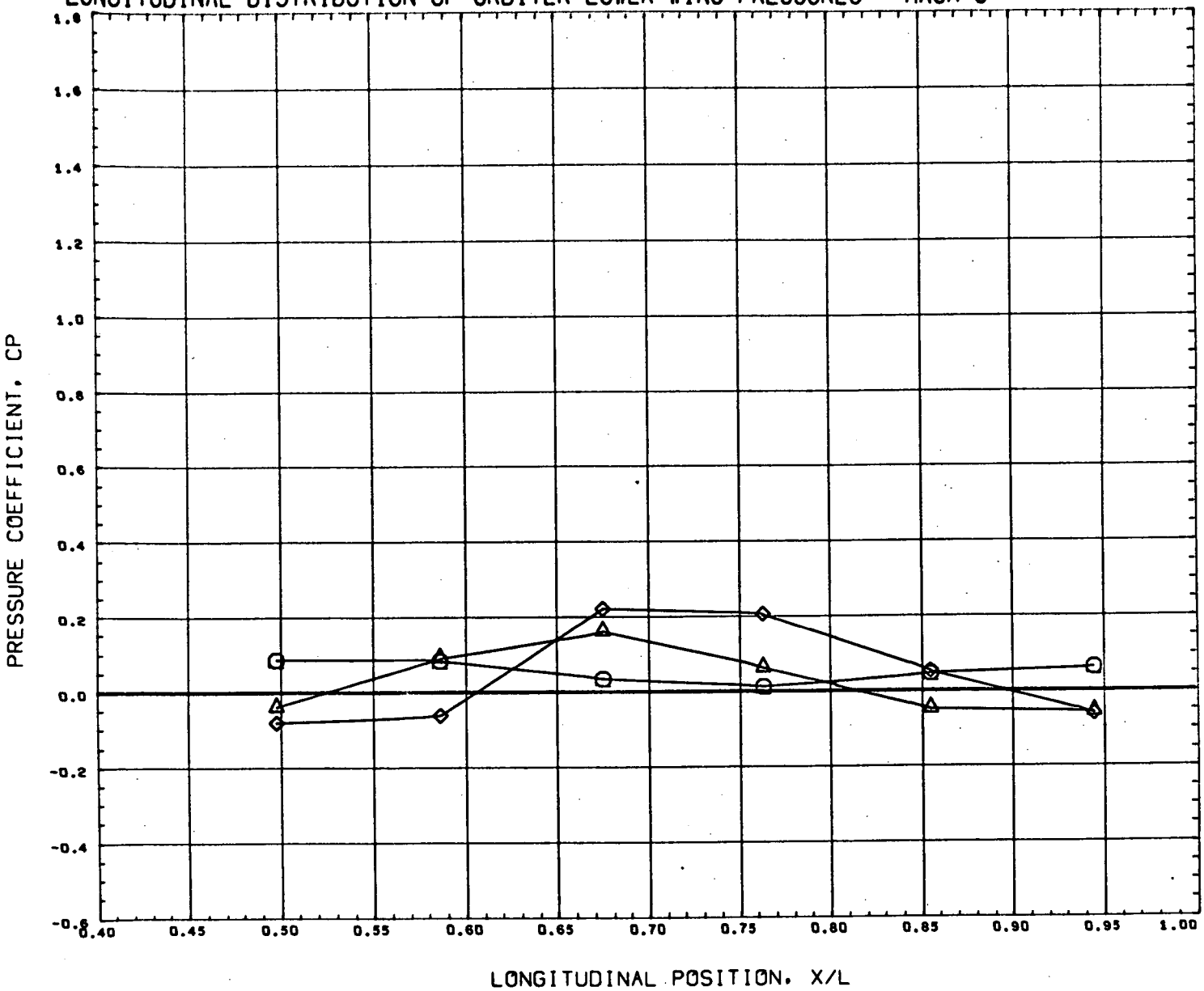
PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8334•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



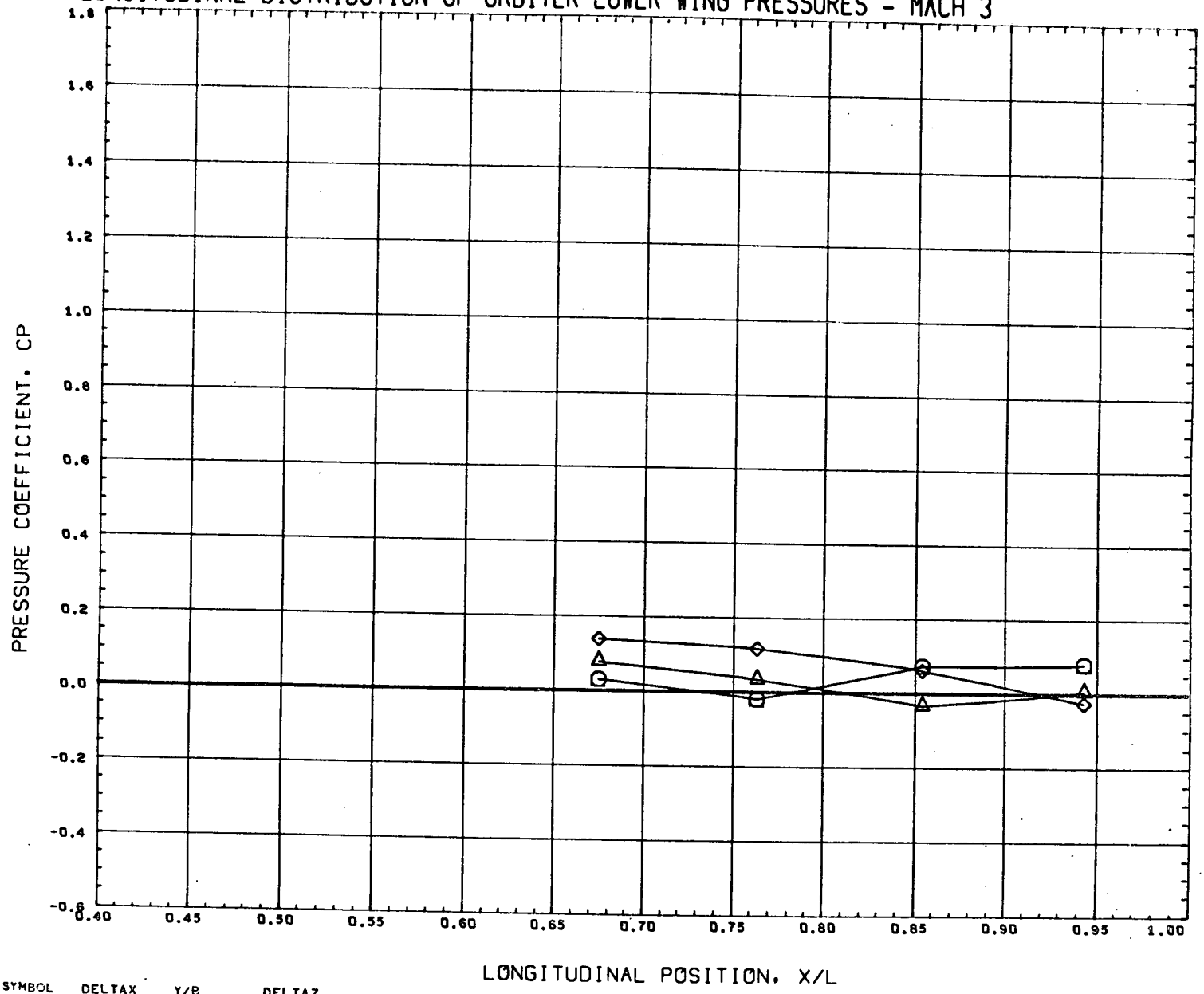
SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.230	0.105
△	0.104		
◇	0.165		

PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.399	0.105
△	0.104		
◇	0.165		

PARAMETRIC VALUES

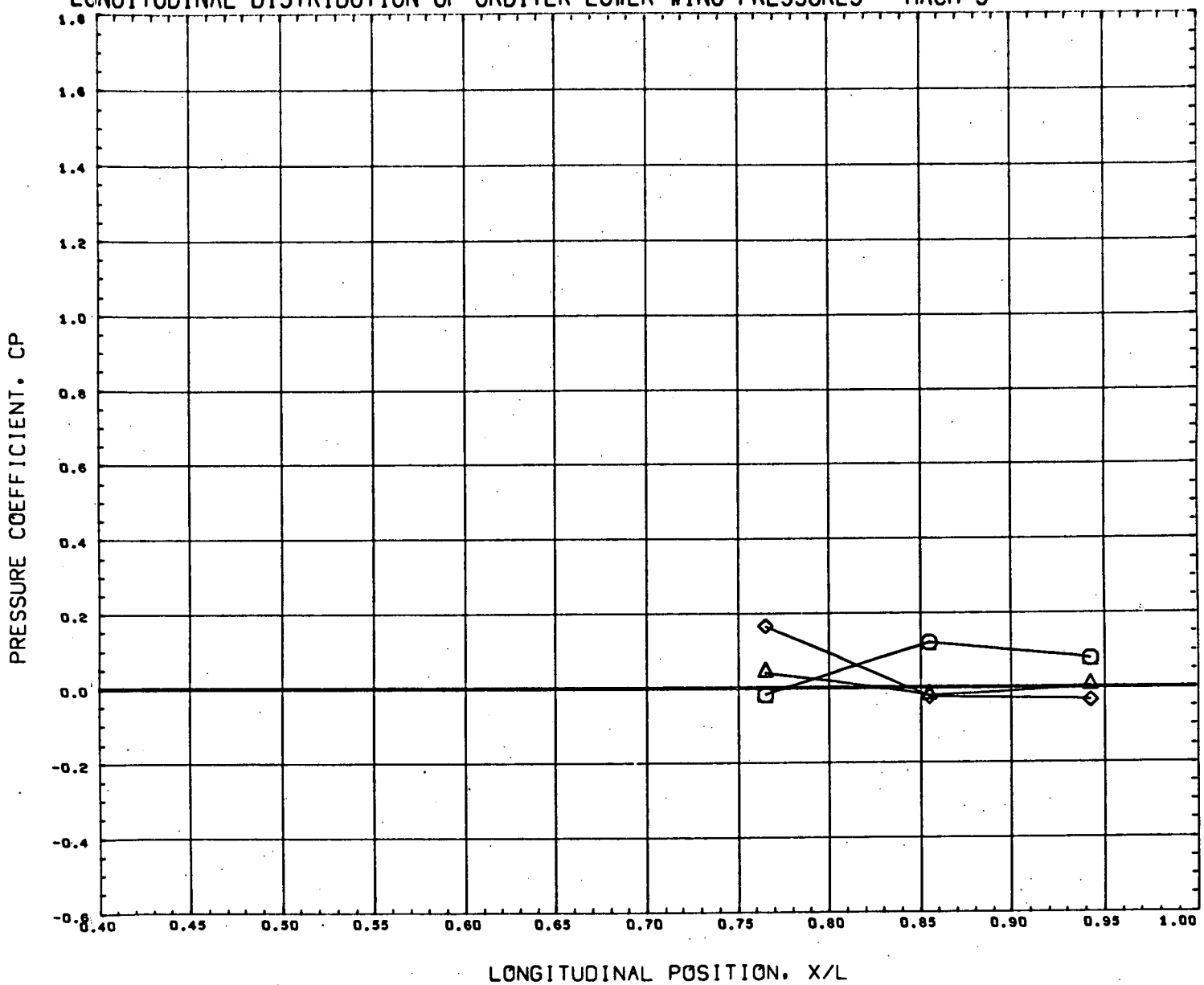
ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING)

•HT8335•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.568	0.105
△	0.104		
◇	0.165		

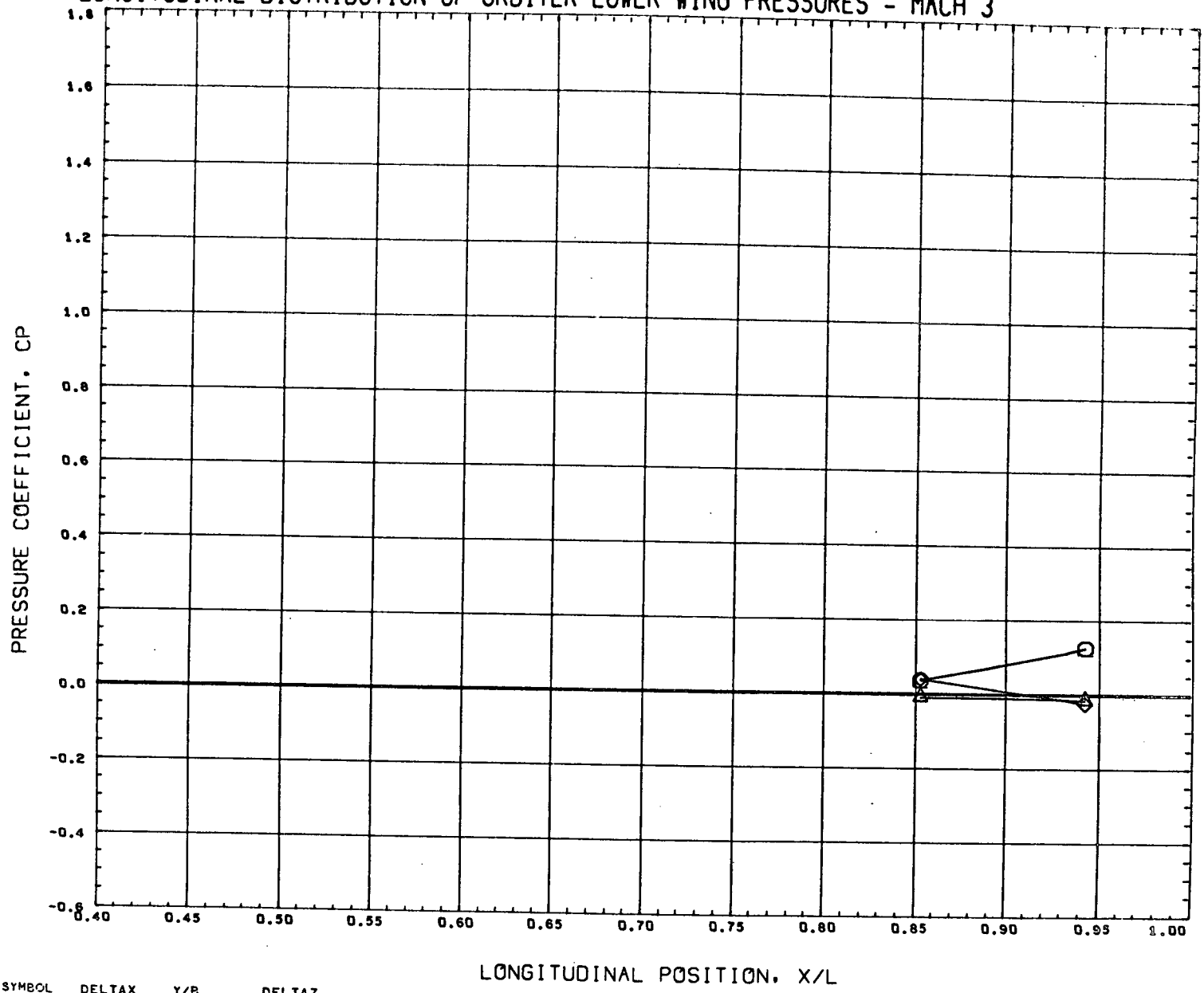
PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8335•

LONGITUDINAL DISTRIBUTION OF ORBITER LOWER WING PRESSURES - MACH 3



SYMBOL	DELTAX	Y/B	DELTAZ
○	0.042	0.738	0.105
△	0.104		
◇	0.165		

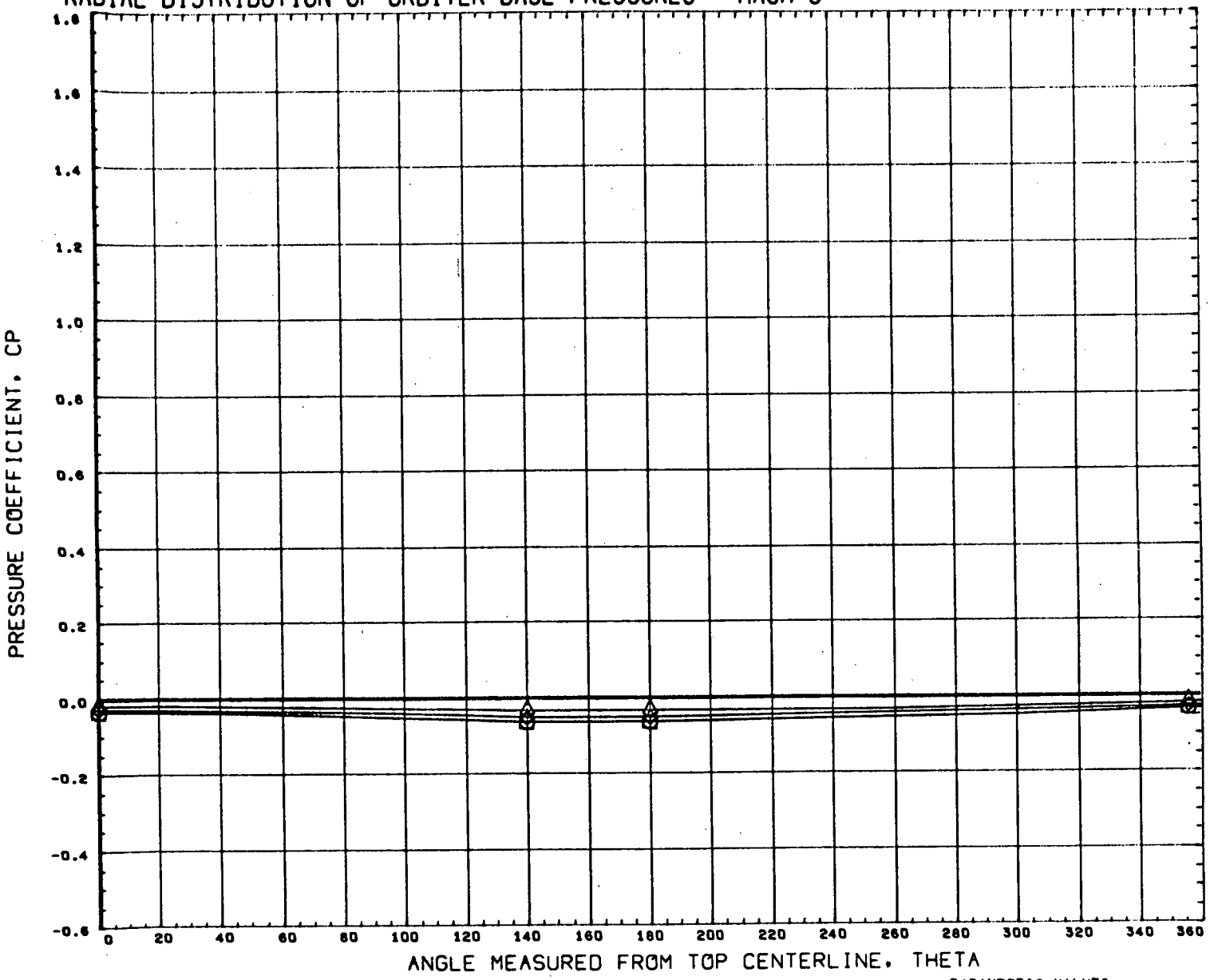
PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (LOWER WING) •HT8335•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



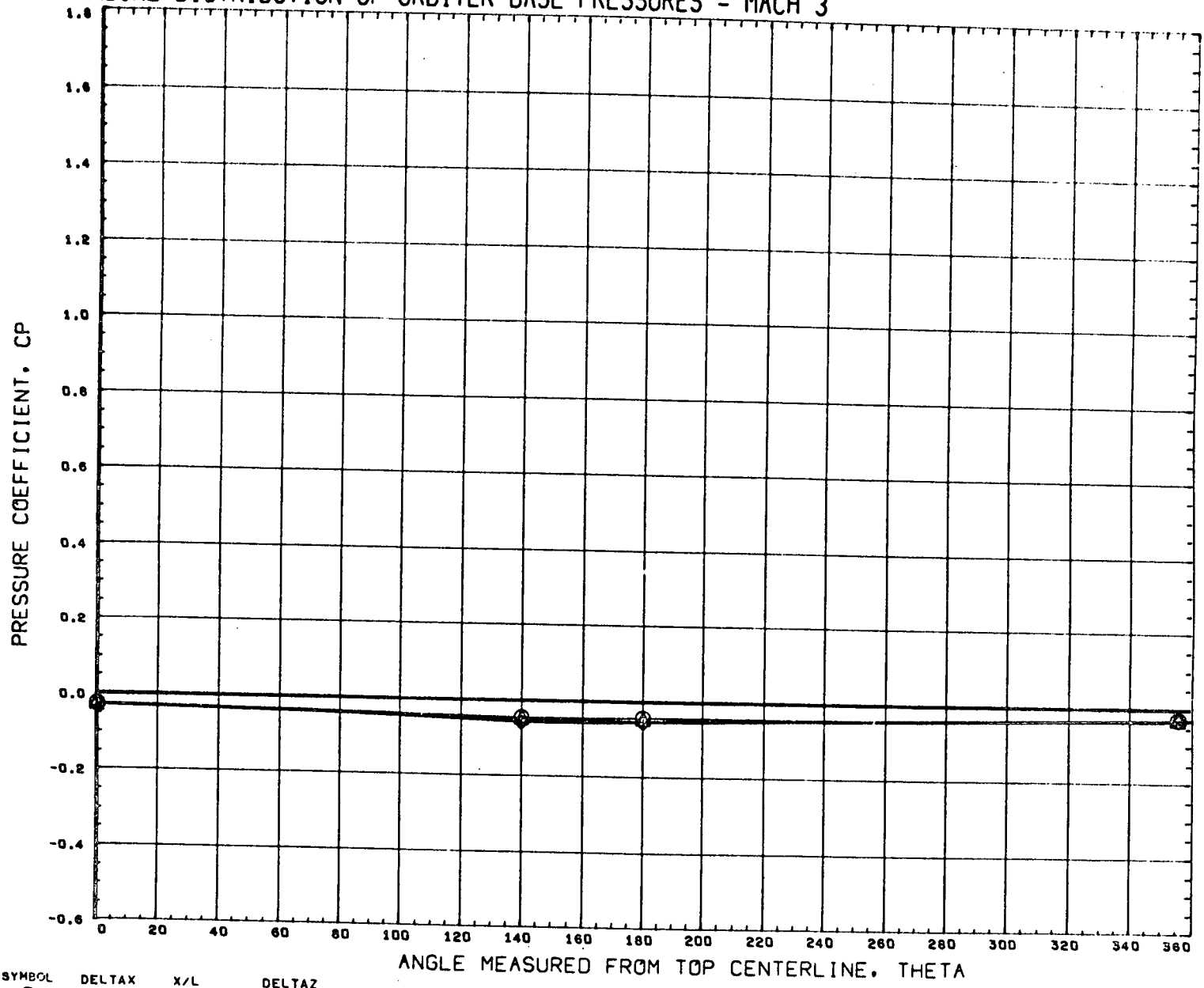
SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.151
△	0.104		
◇	0.226		

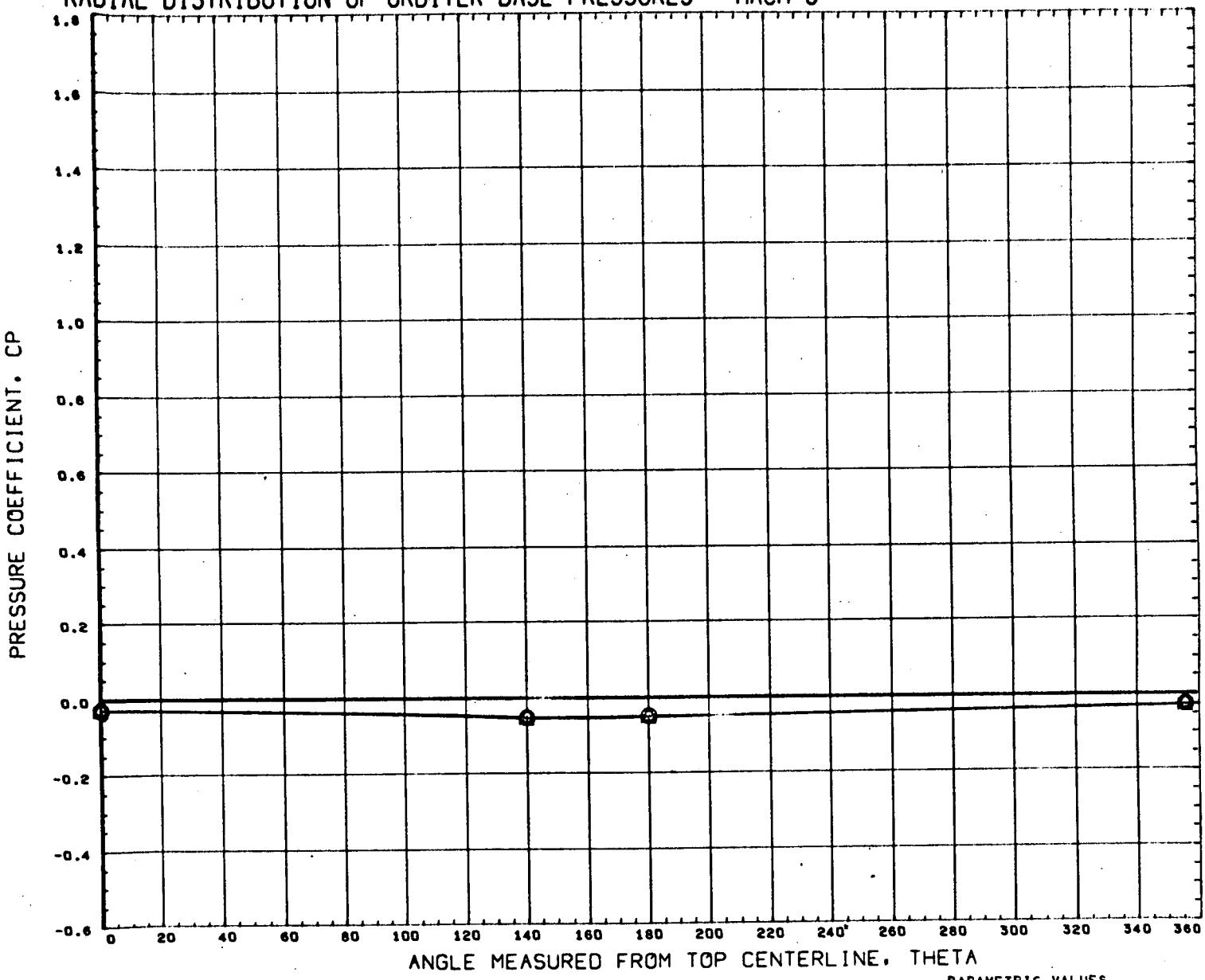
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

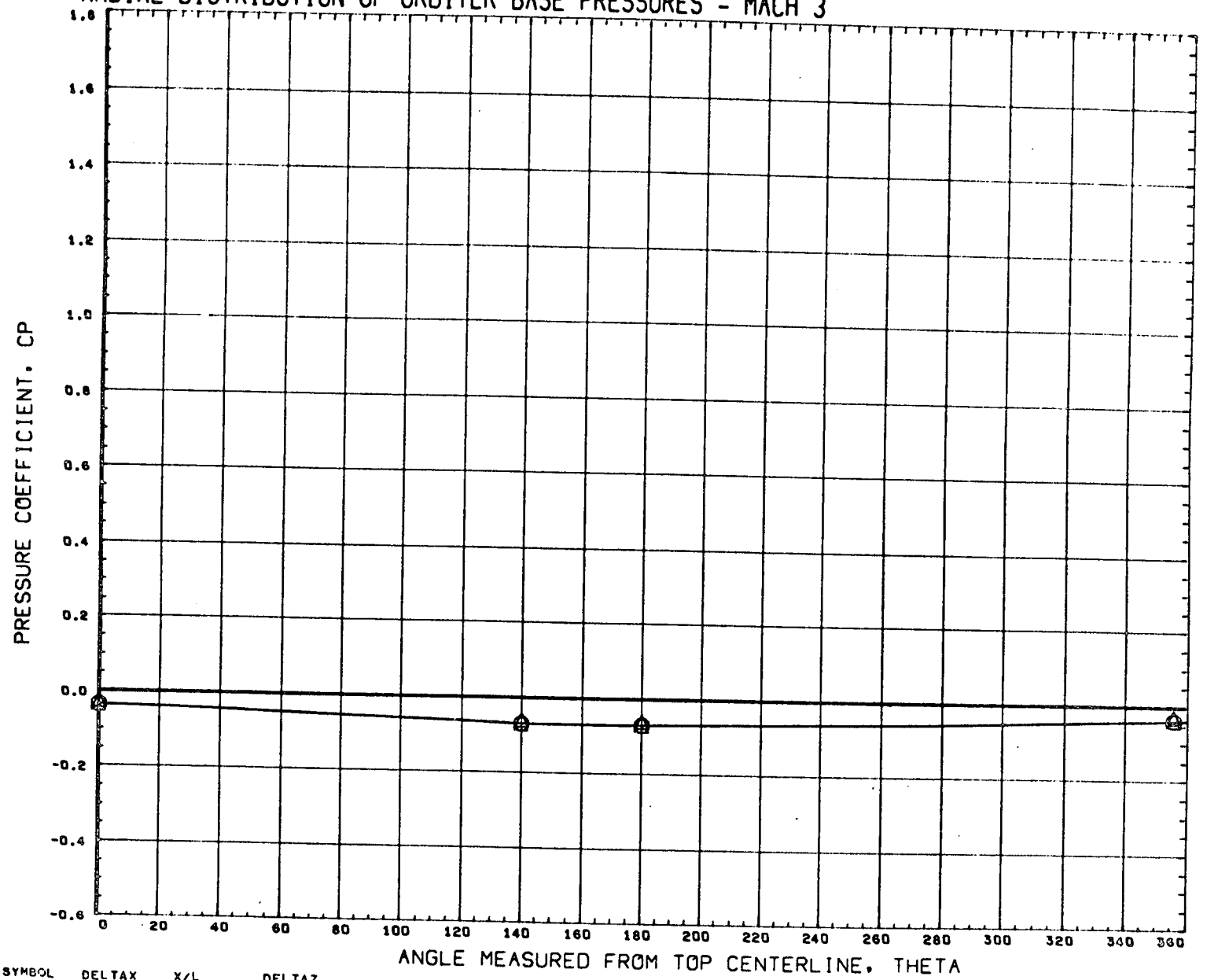
ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8311•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.390	1.000	0.908
△	0.480		

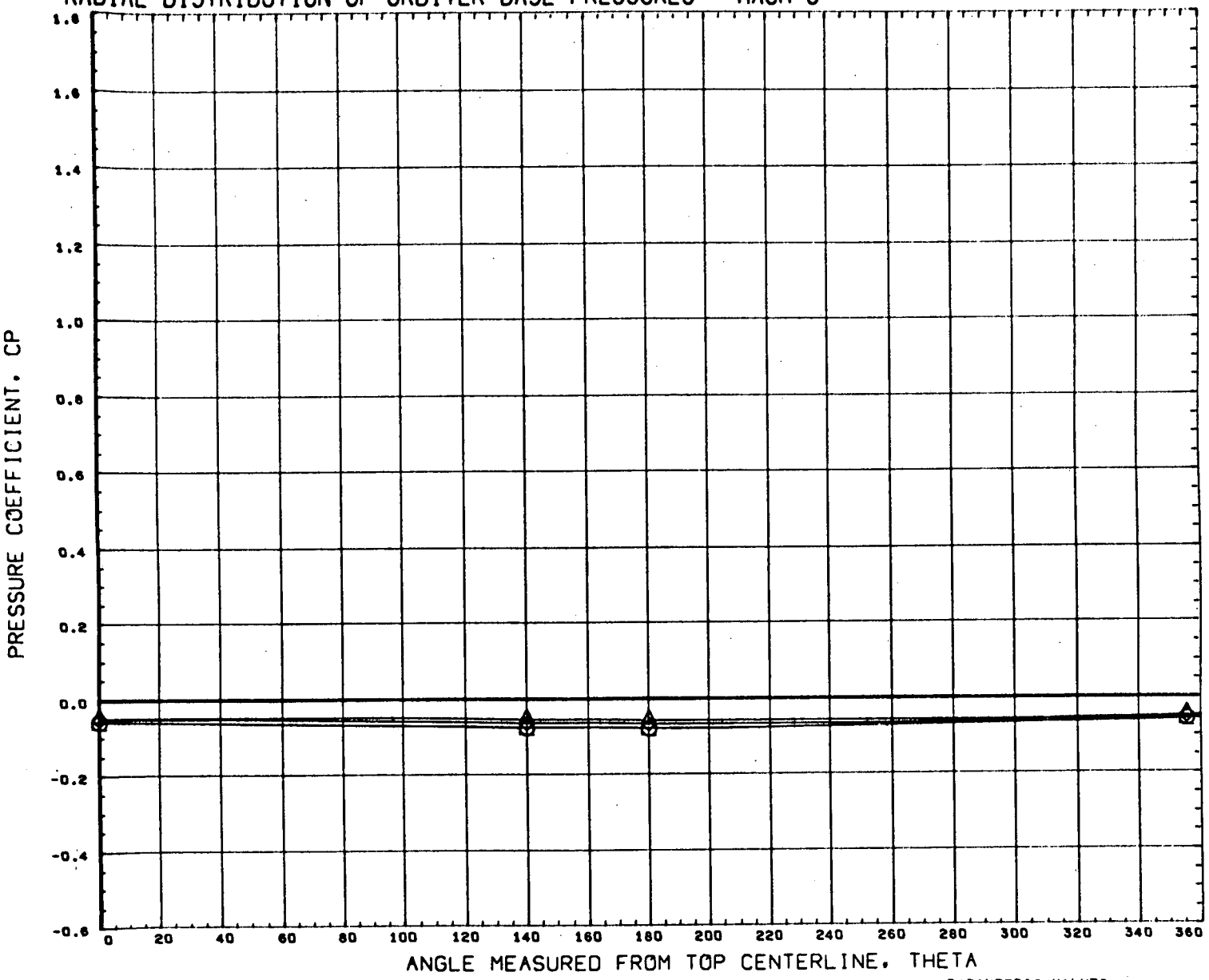
PARAMETRIC VALUES

ALPHAB	- 9.979	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



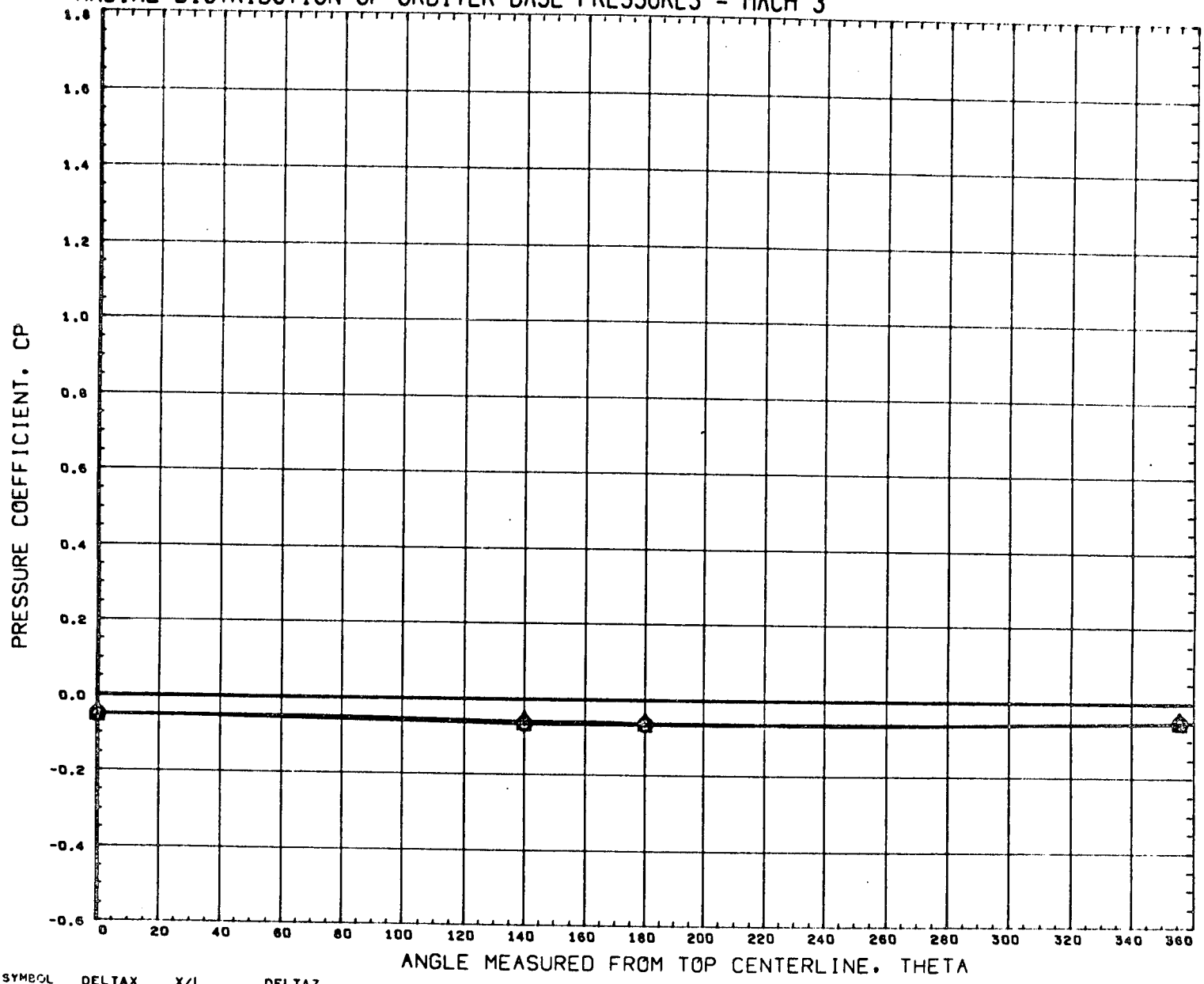
SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.151
△	0.103		
◇	0.227		

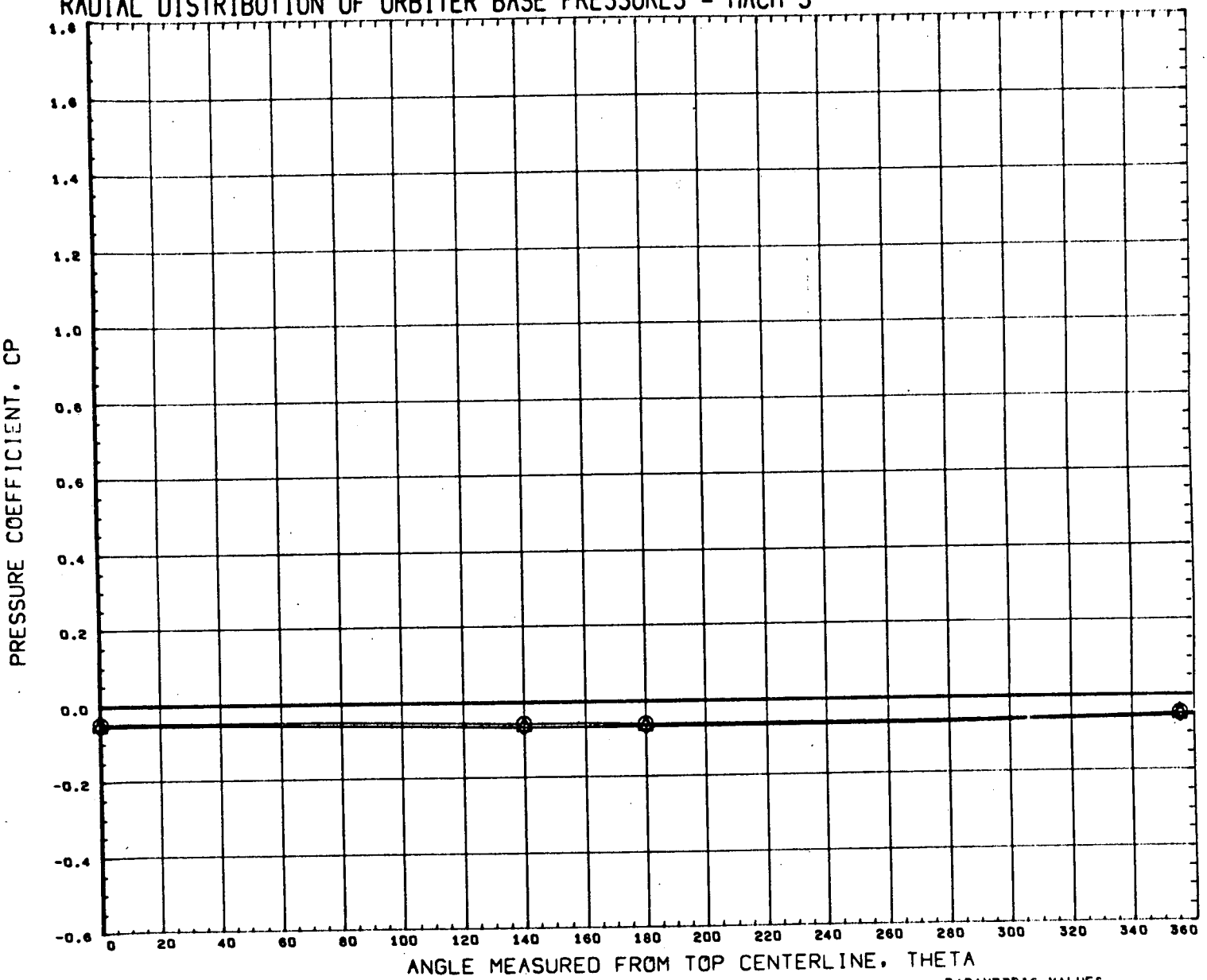
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

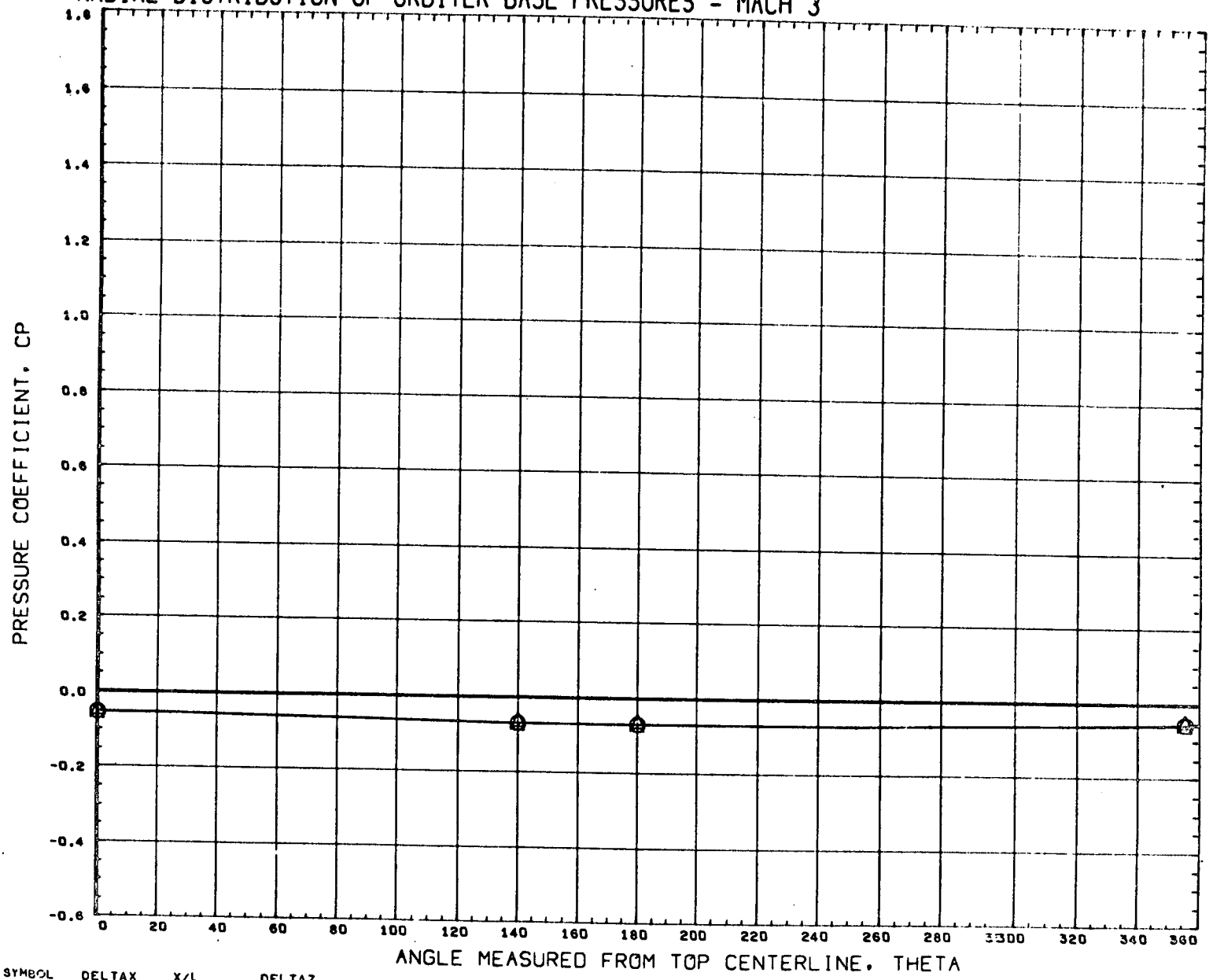
ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8312•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.390	1.000	0.908
△	0.478		

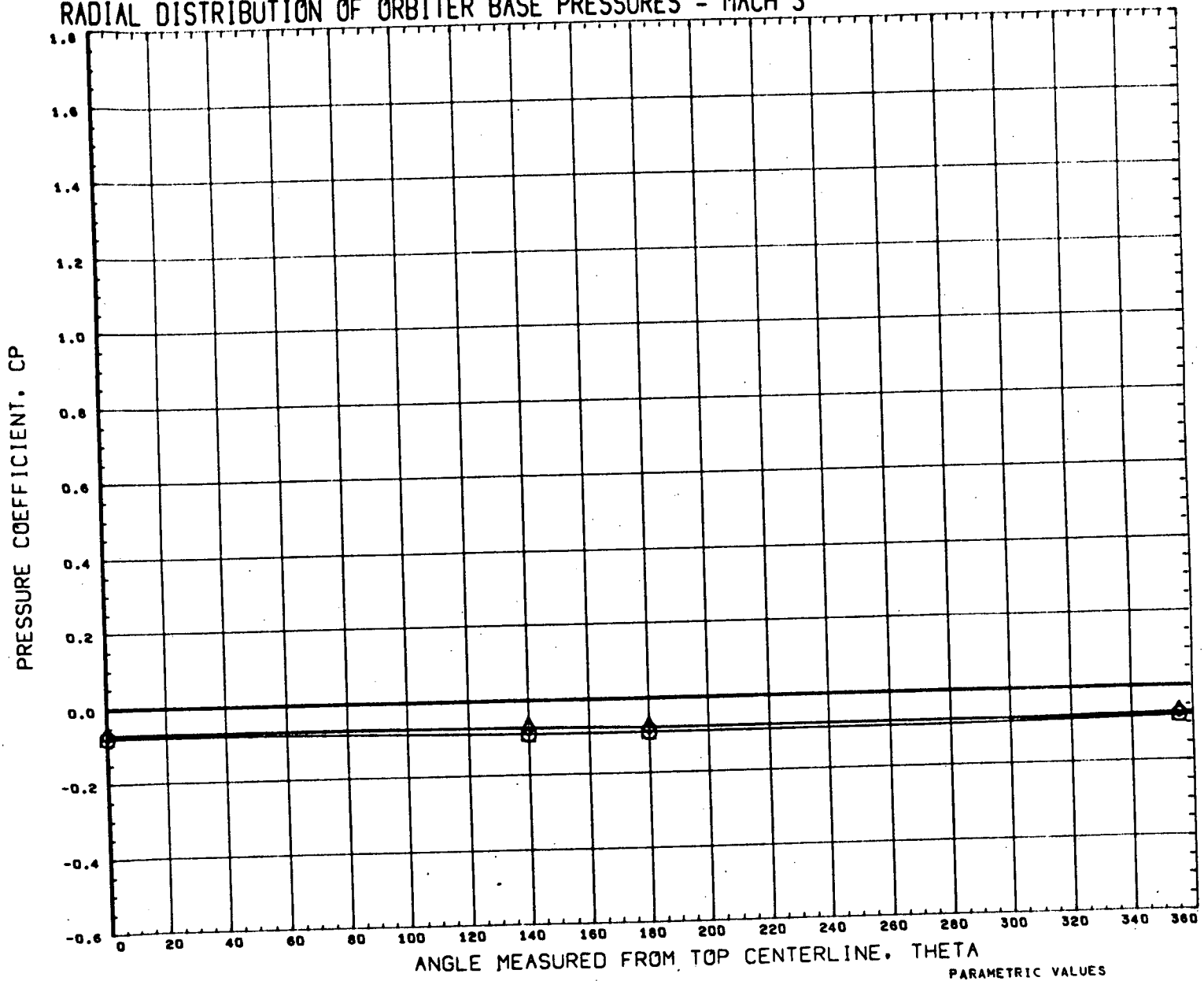
PARAMETRIC VALUES

ALPHAB	- 4.945	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.120
△	0.102		
◇	0.226		

PARAMETRIC VALUES

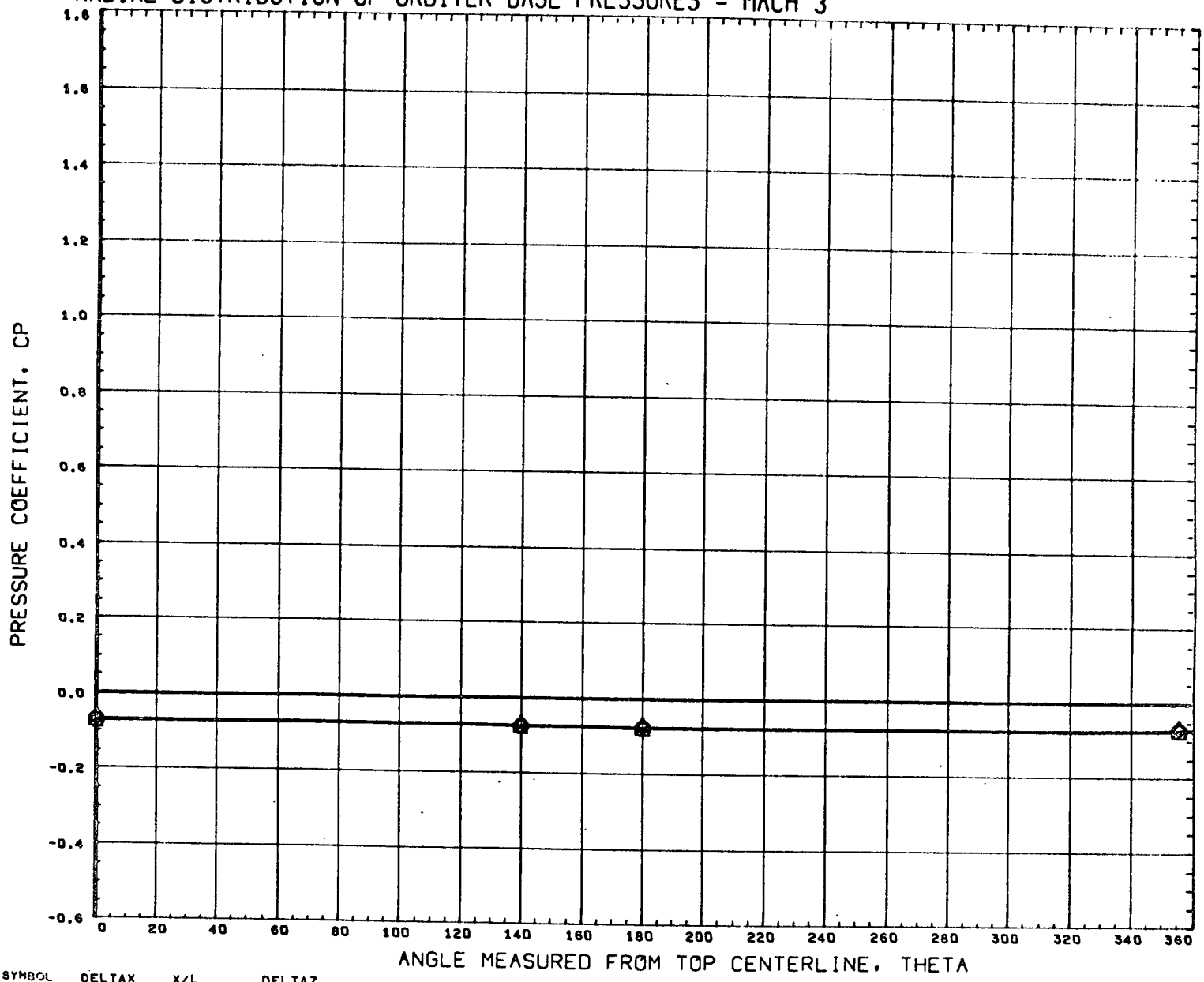
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8313•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.144	1.000	0.151
△	0.103		
◇	0.225		

PARAMETRIC VALUES

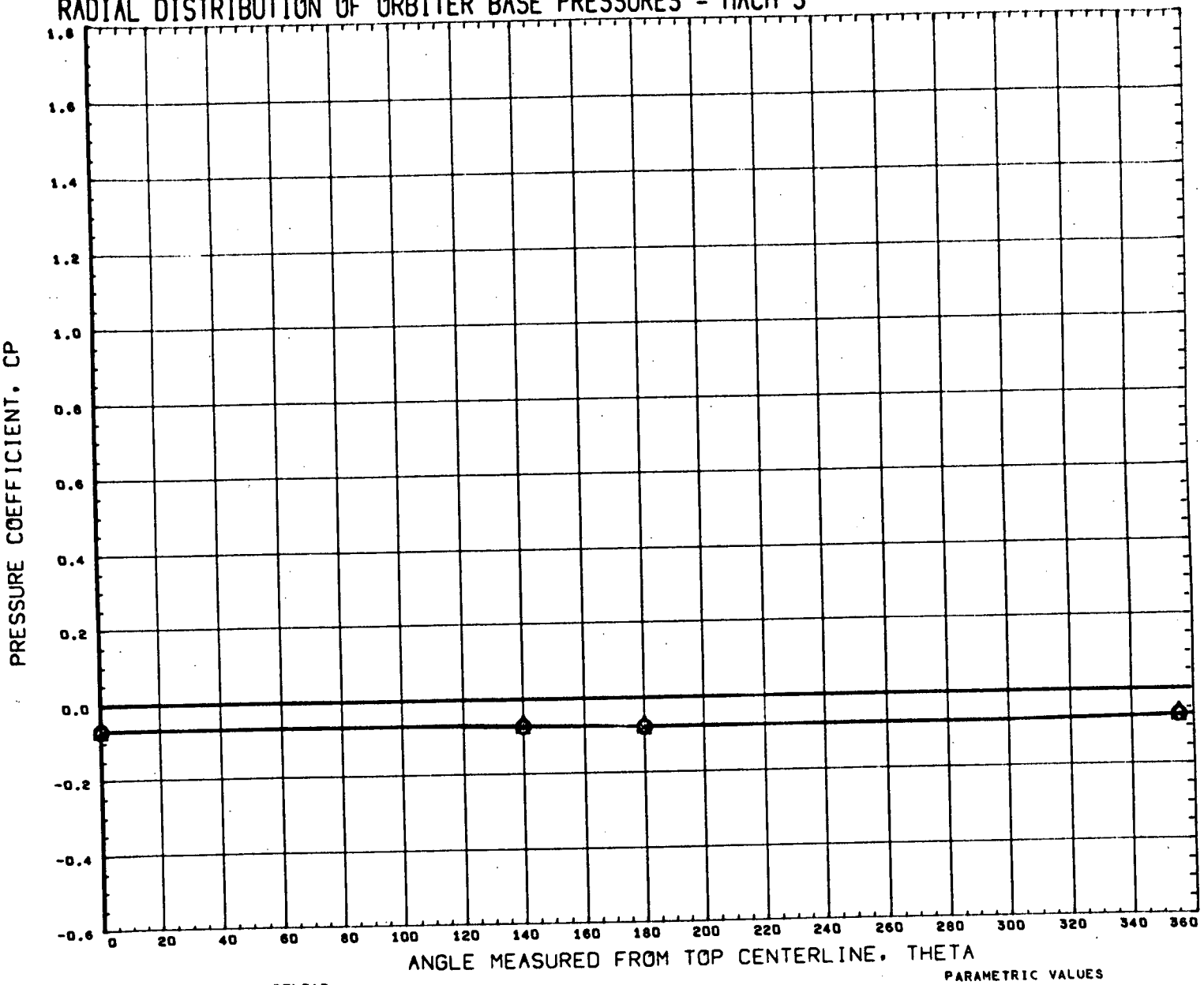
ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8313•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.144	1.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

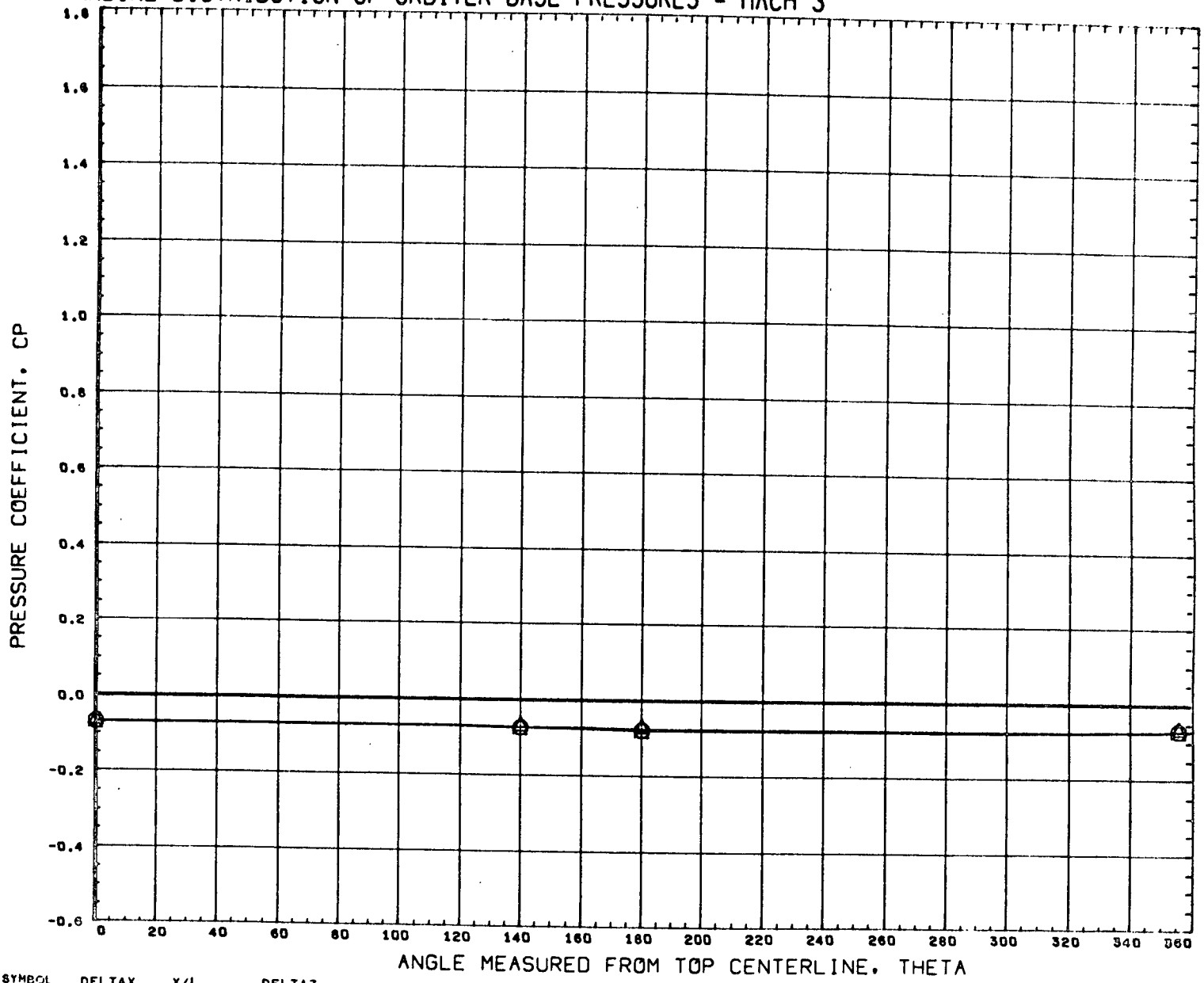
REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8313•

8/8

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.390	1.000	0.908
△	0.479		

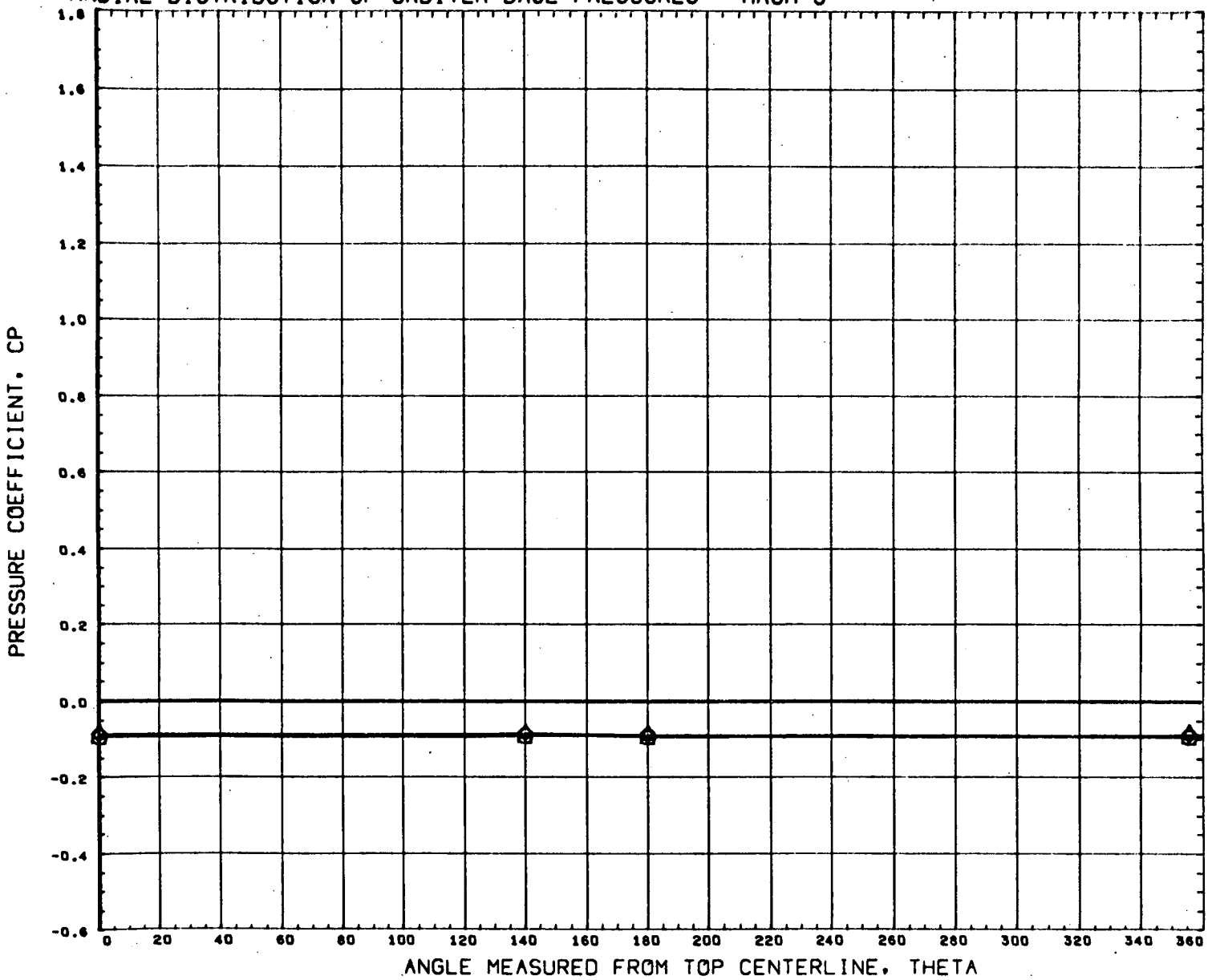
PARAMETRIC VALUES

ALPHAB	0.008	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



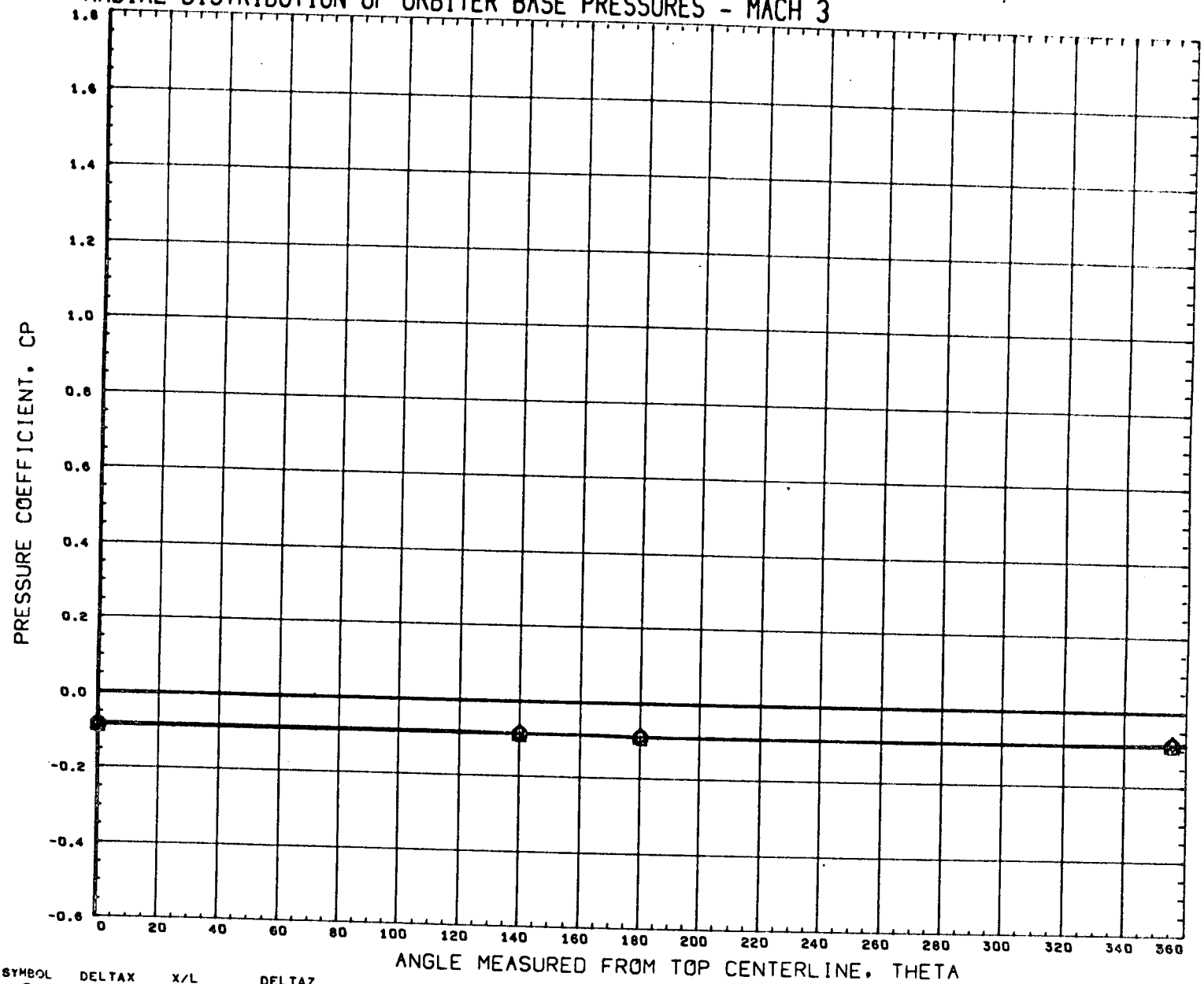
SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.143	1.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.144	1.000	0.151
△	0.103		
◇	0.226		

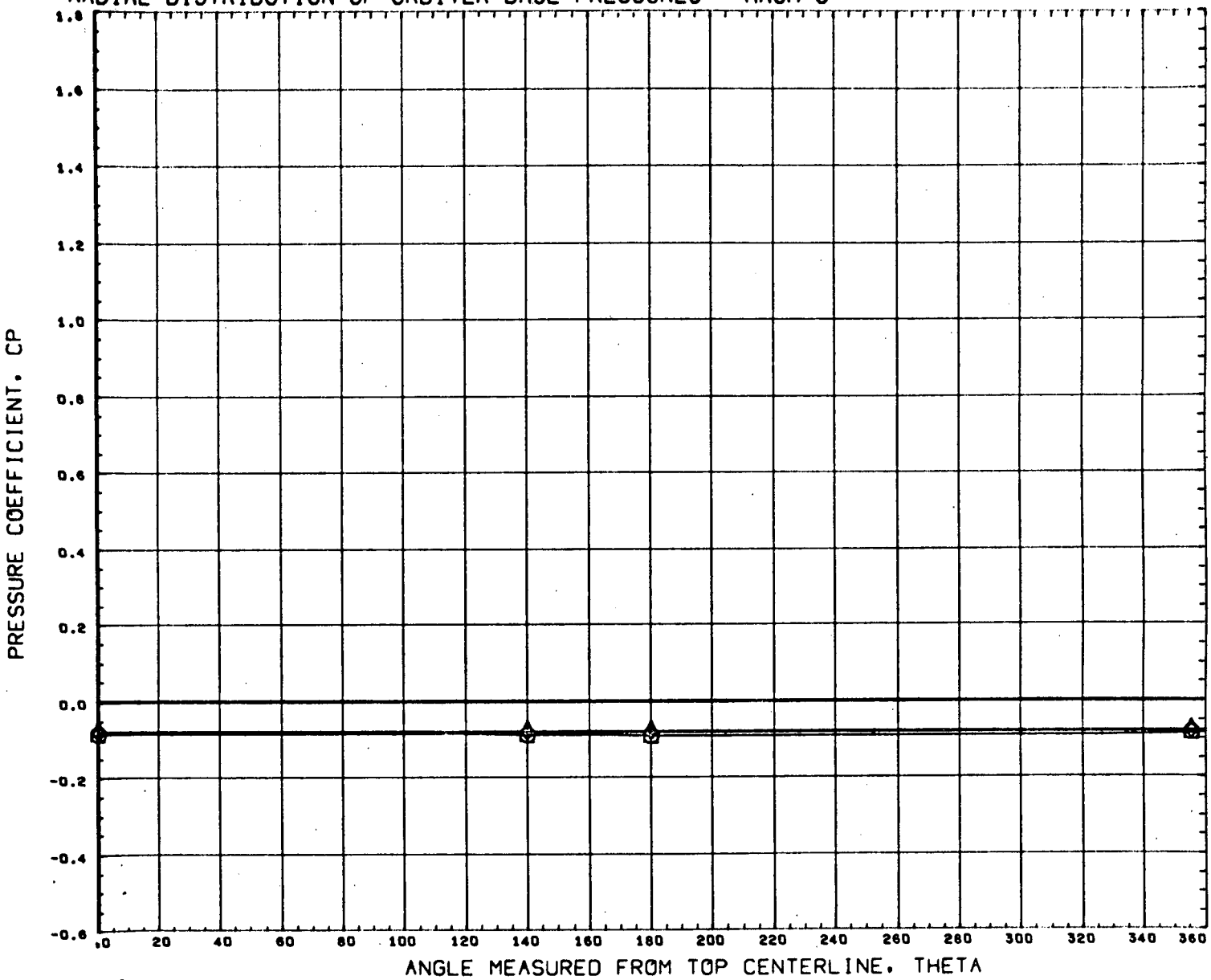
PARAMETRIC VALUES

ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.144	1.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

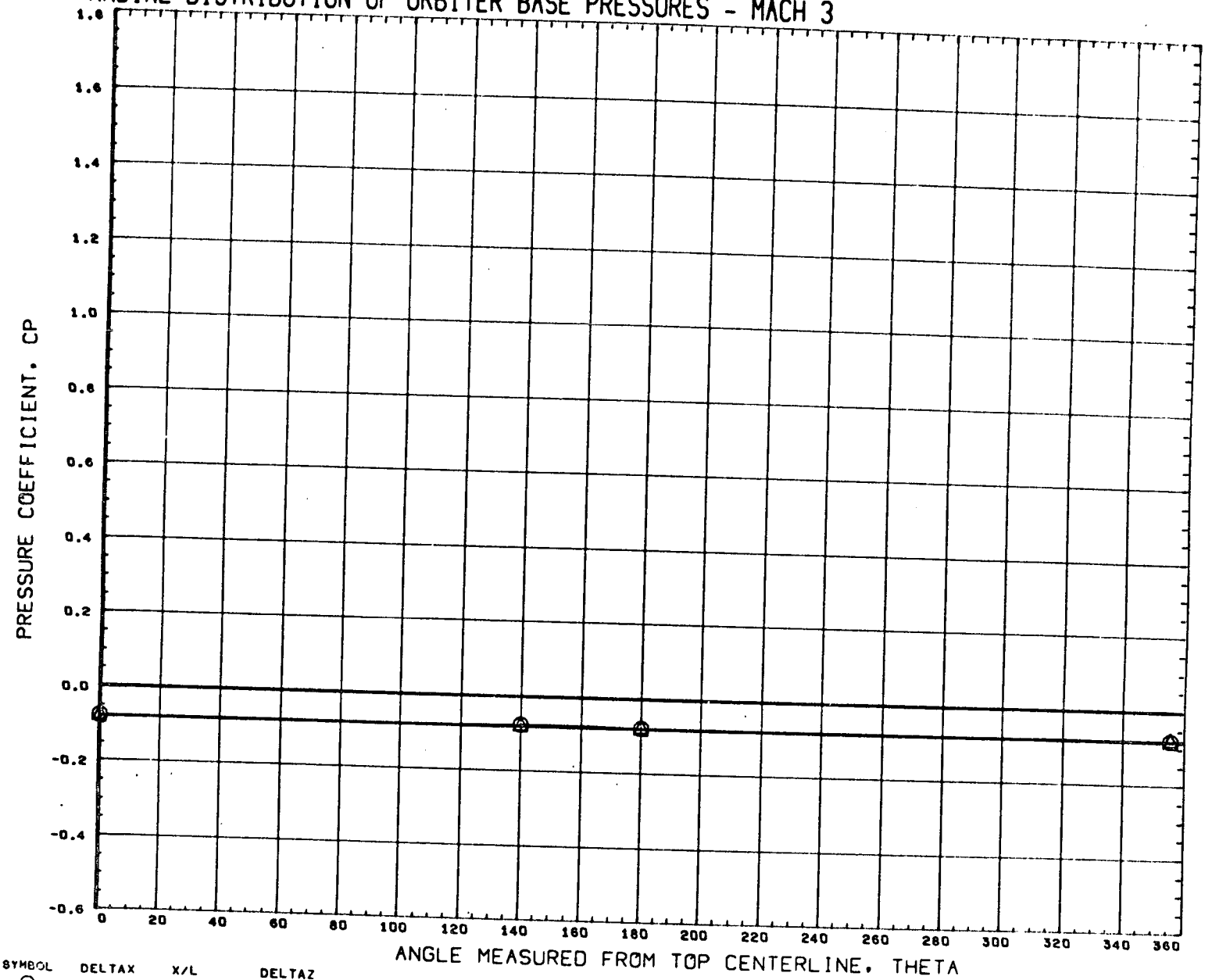
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8314•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.390	1.000	0.908
△	0.521		

PARAMETRIC VALUES

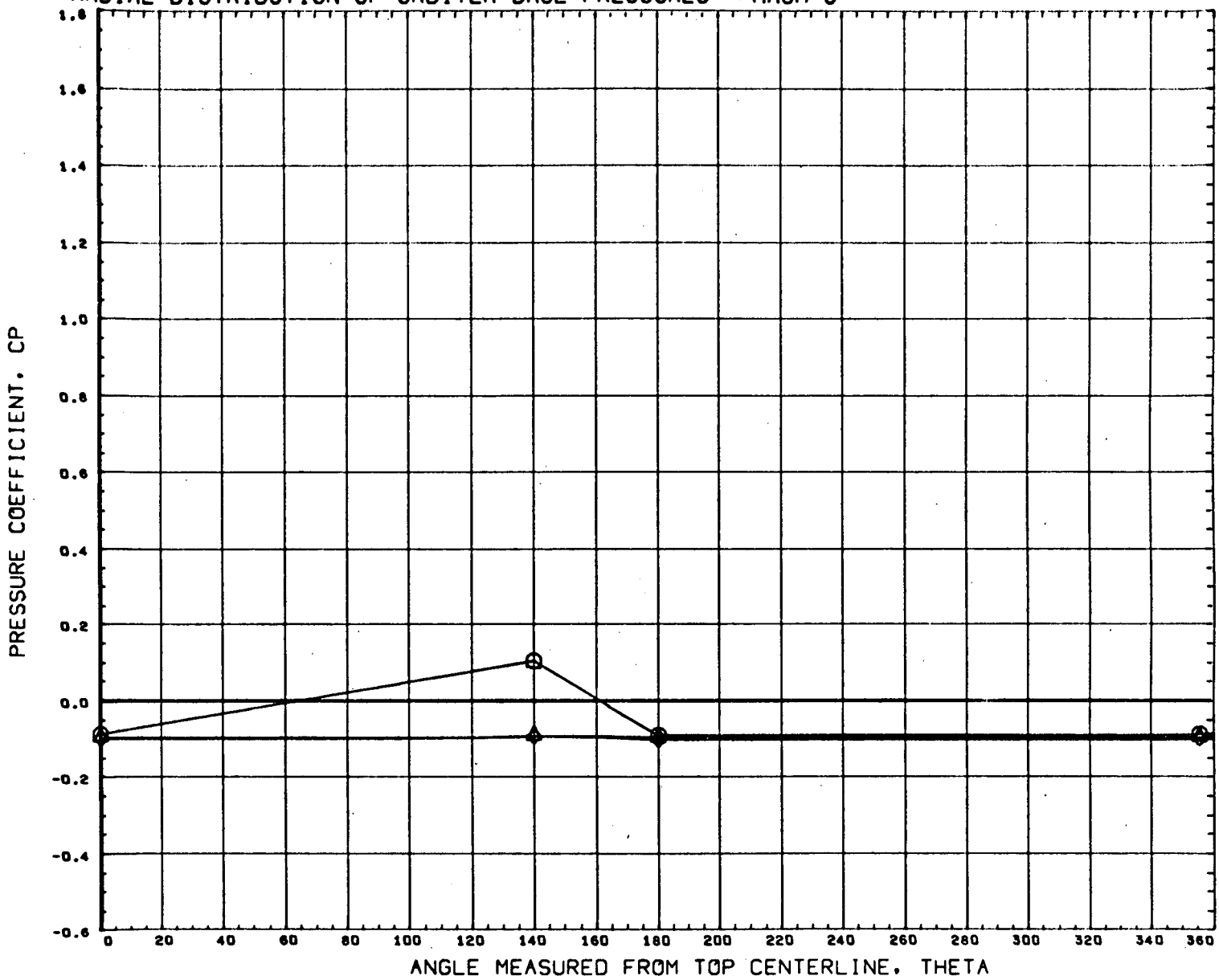
ALPHAB	5.017	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8314•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



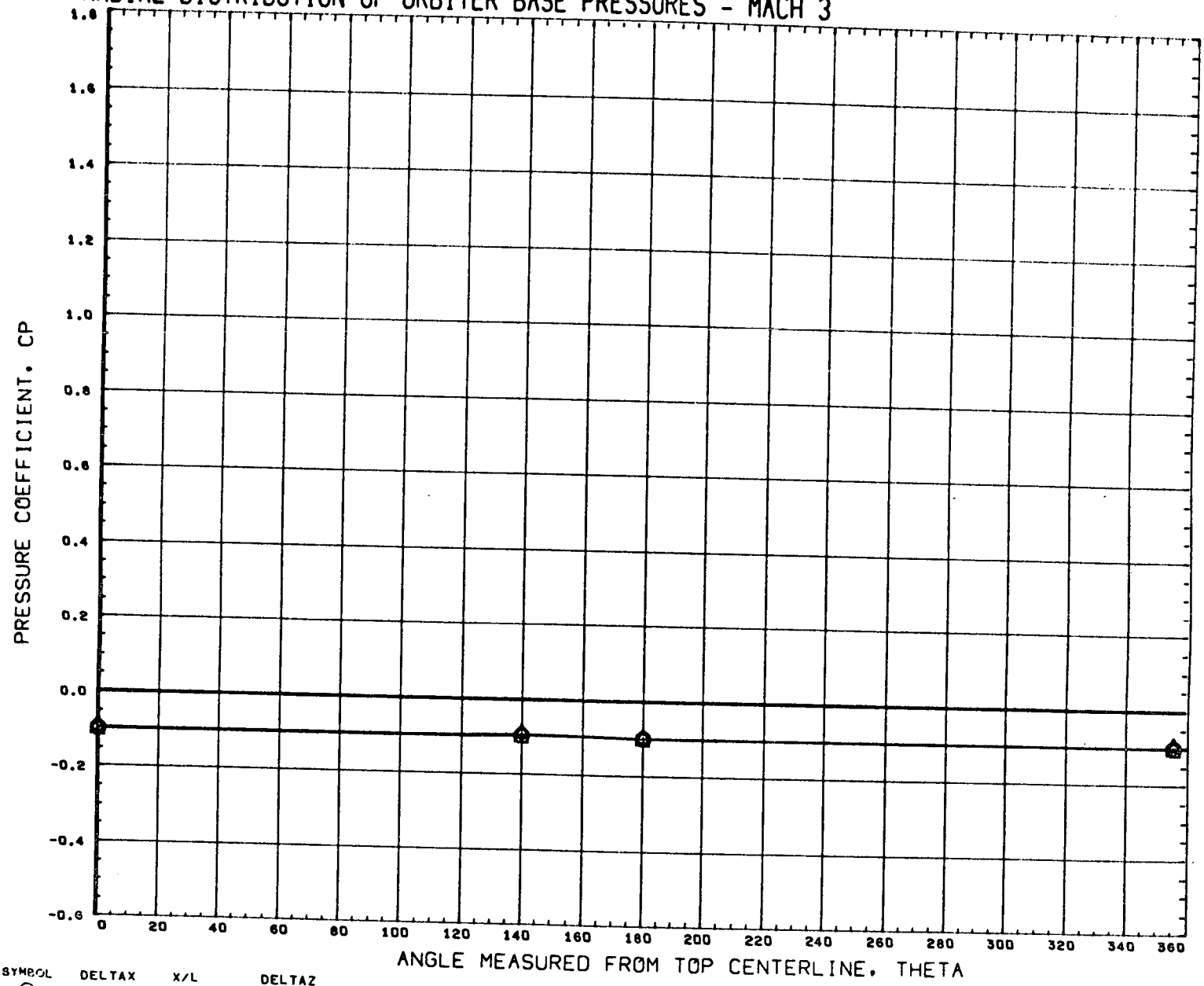
SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.151
△	0.104		
◇	0.226		

PARAMETRIC VALUES

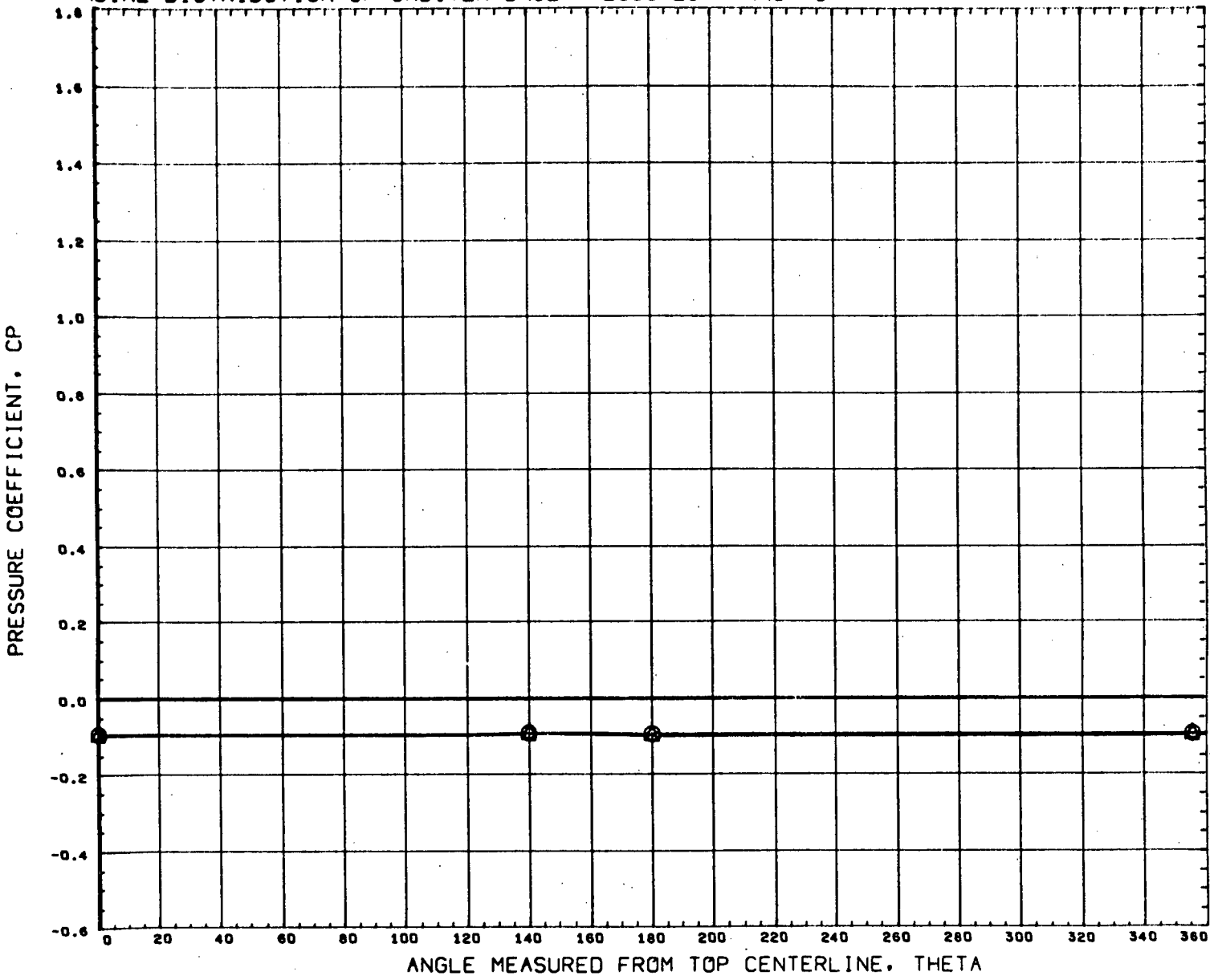
ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8315•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



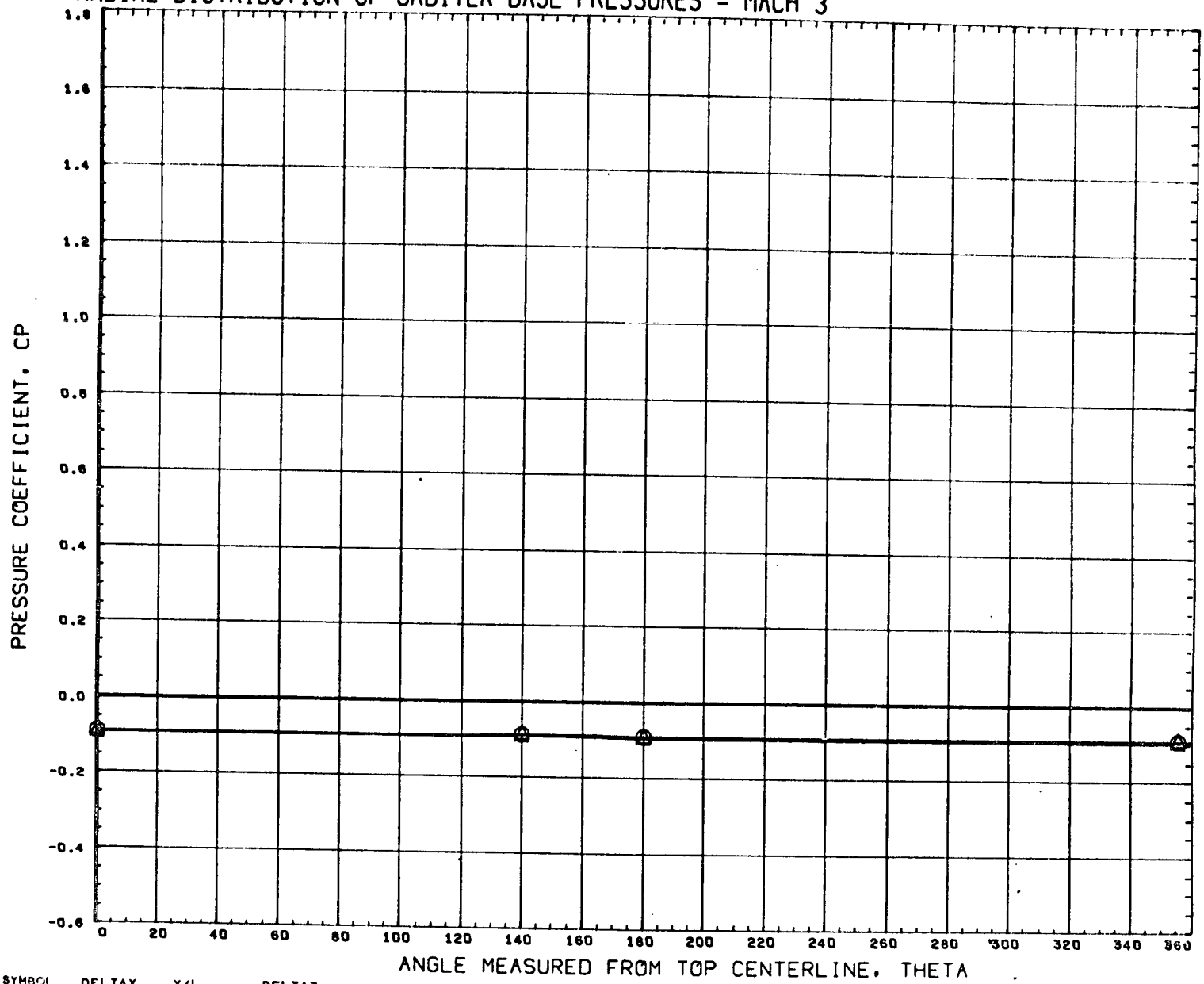
SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.228
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.391	1.000	0.908
△	0.518		

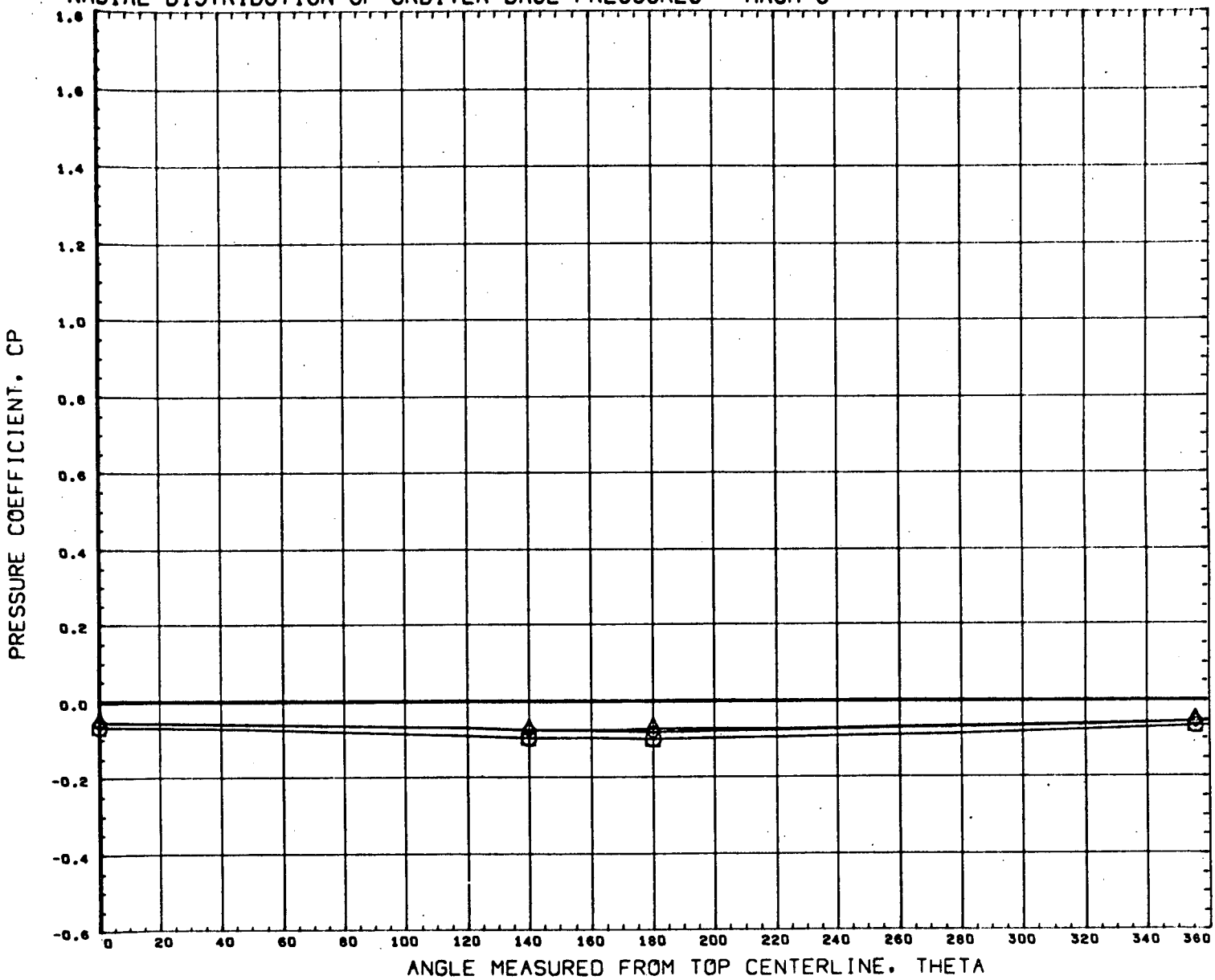
PARAMETRIC VALUES

ALPHAB	10.003	MACH	3.000
ALPHAI	0.000	ORBPOW	100.000
BSTPOW	50.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



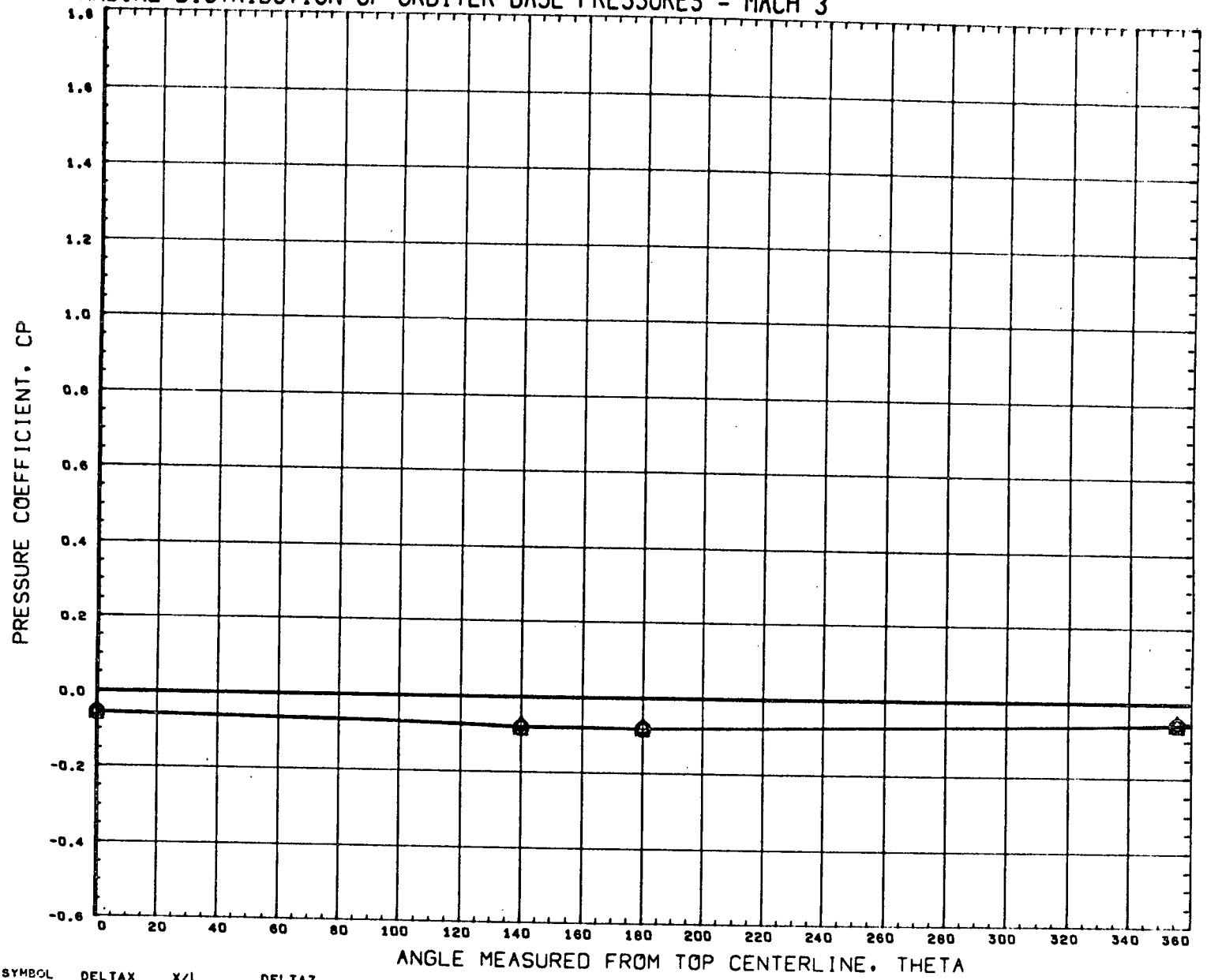
SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.143	1.000	0.120
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB -	9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.144	1.000	0.151
△	0.103		
◇	0.227		

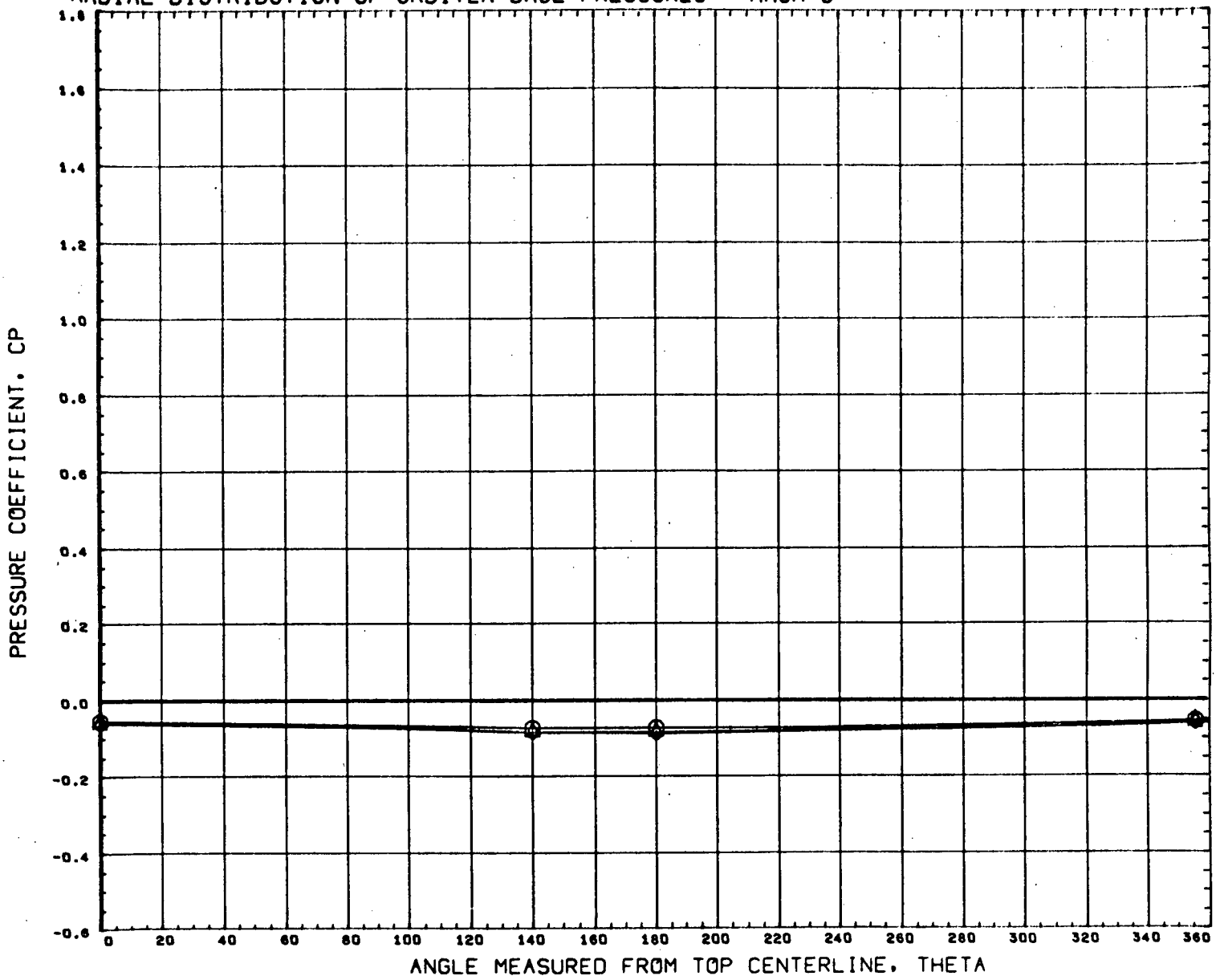
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



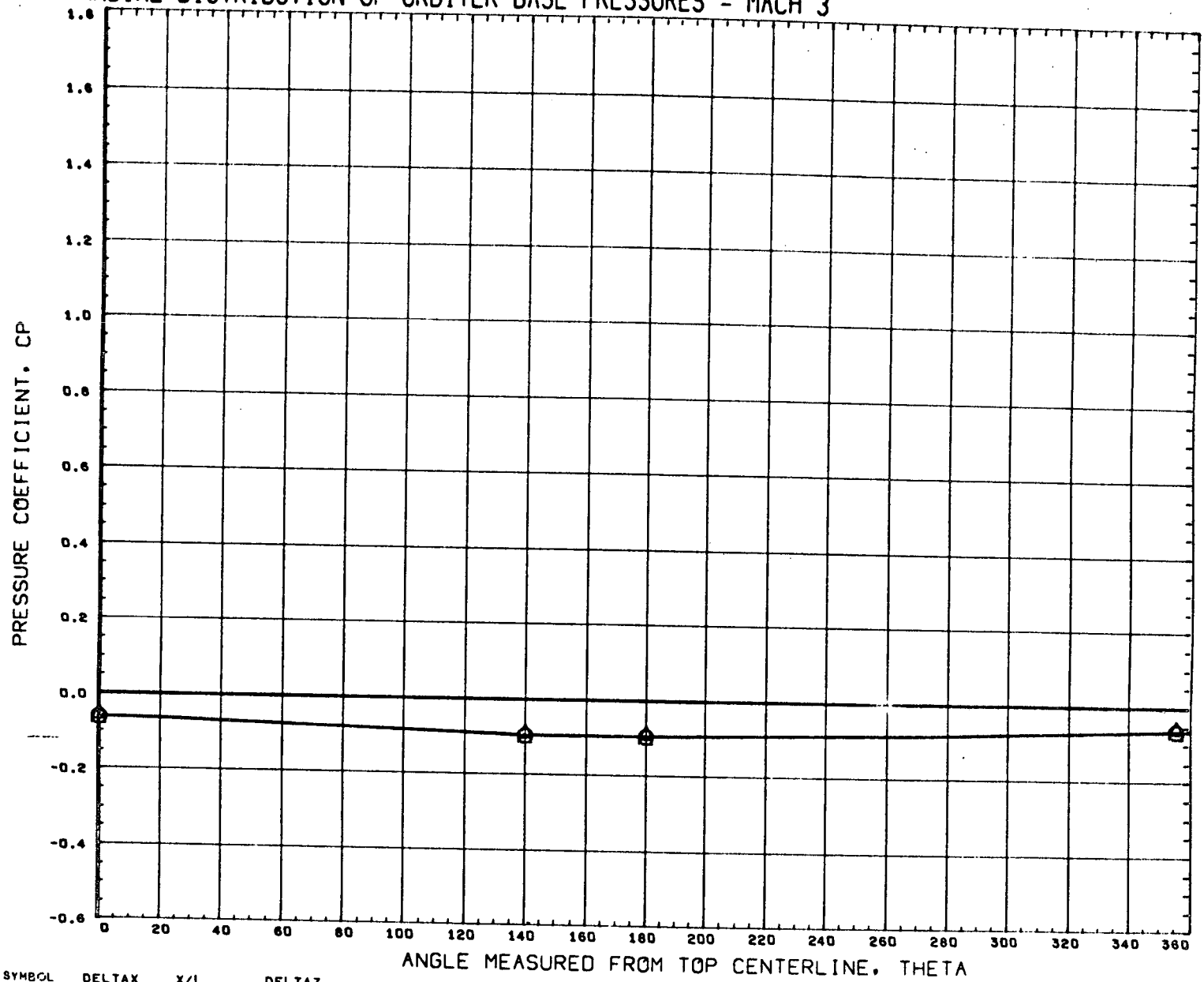
SYMBOL		DELTAX	X/L	DELTAZ
○	-	0.143	1.000	0.228
△		0.103		
◇		0.226		

PARAMETRIC VALUES

ALPHAB	-	9.977	MACH	3.000
ALPHAI		0.000	ORBPOW	0.000
BSTPOW		0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.391	1.000	0.908
△	0.516		

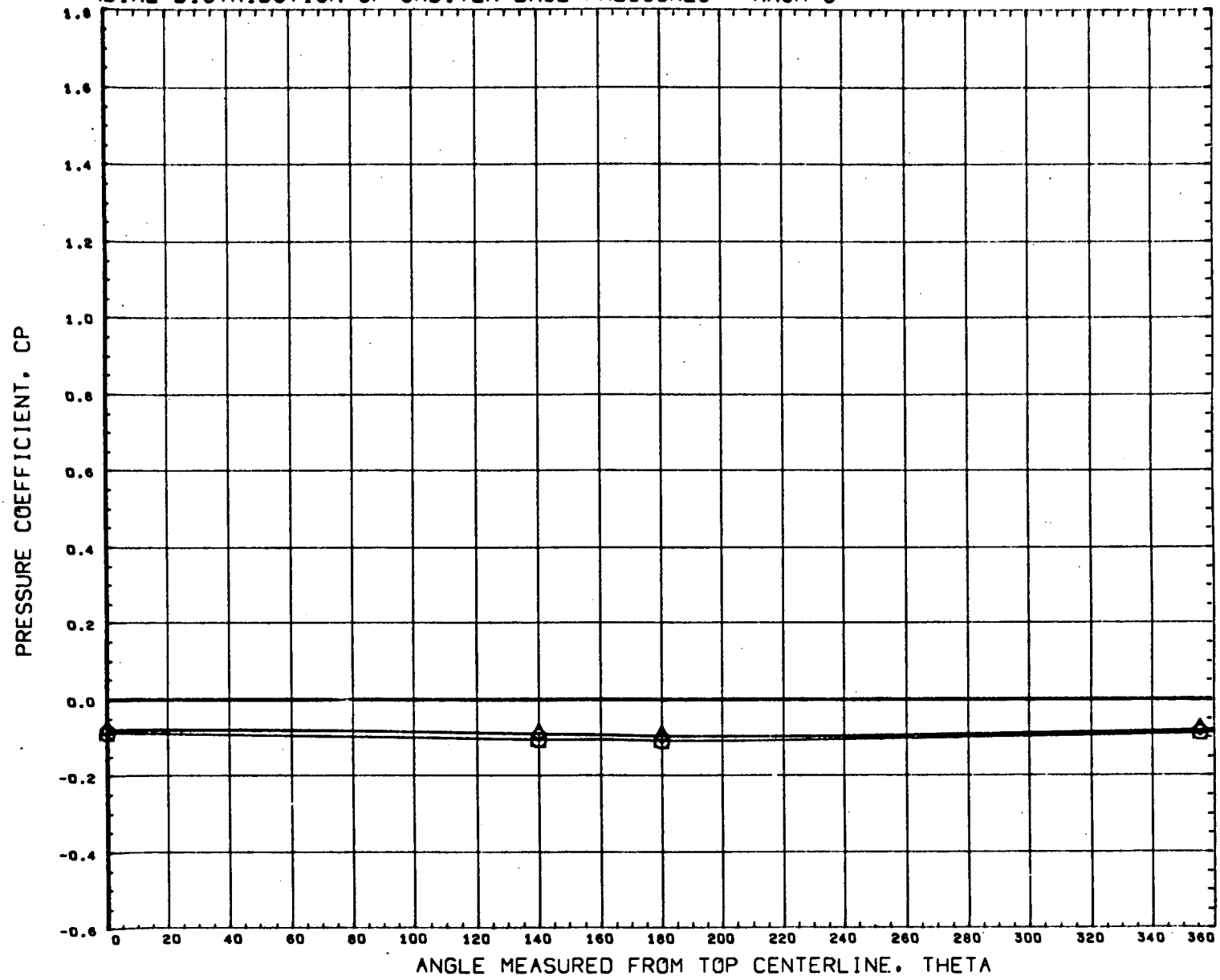
PARAMETRIC VALUES

ALPHAB	- 9.977	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.120
△	0.103		
◇	0.226		

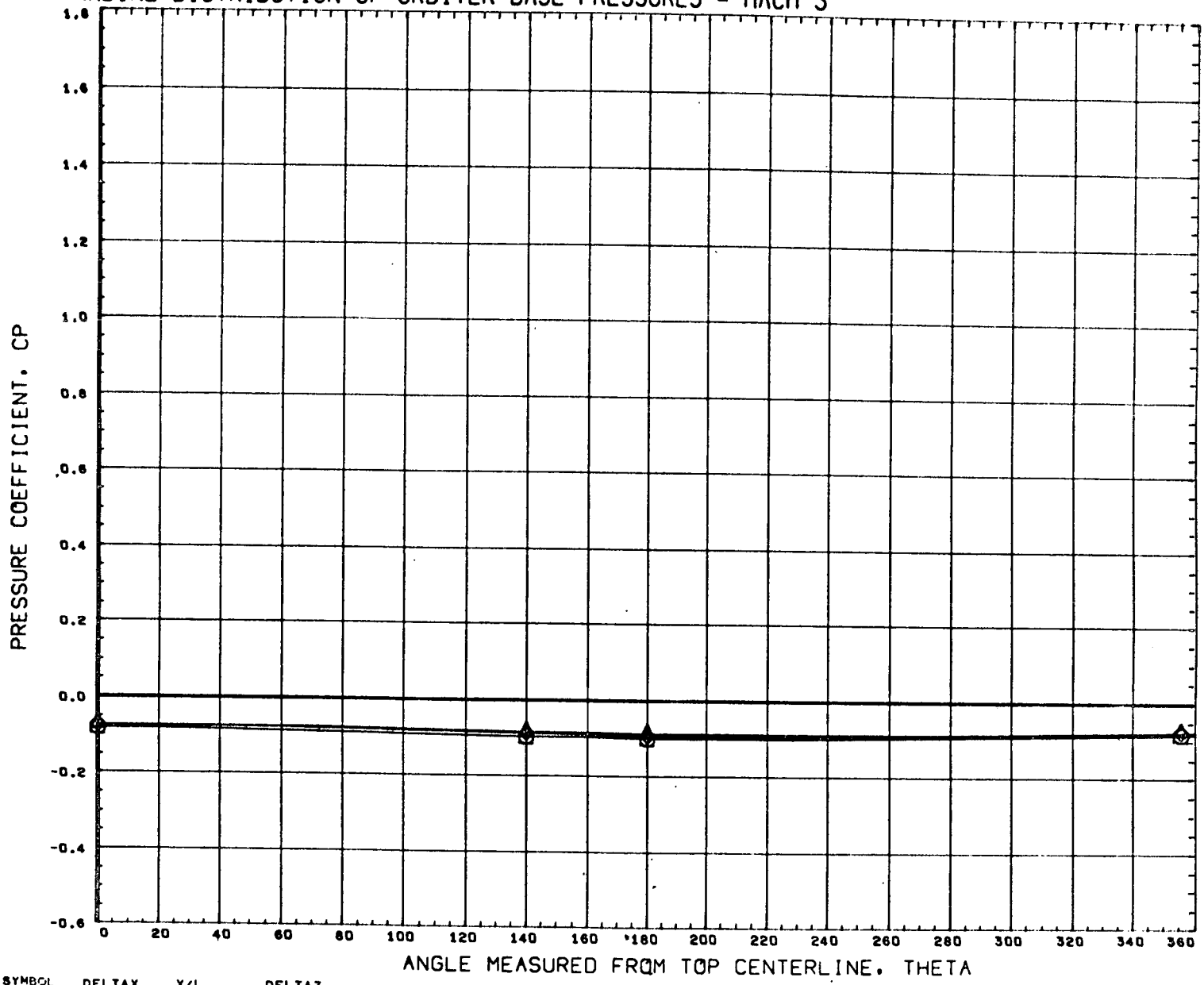
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE) •IT8322• PAGE 385

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.144	1.000	0.151
△	0.101		
◇	0.226		

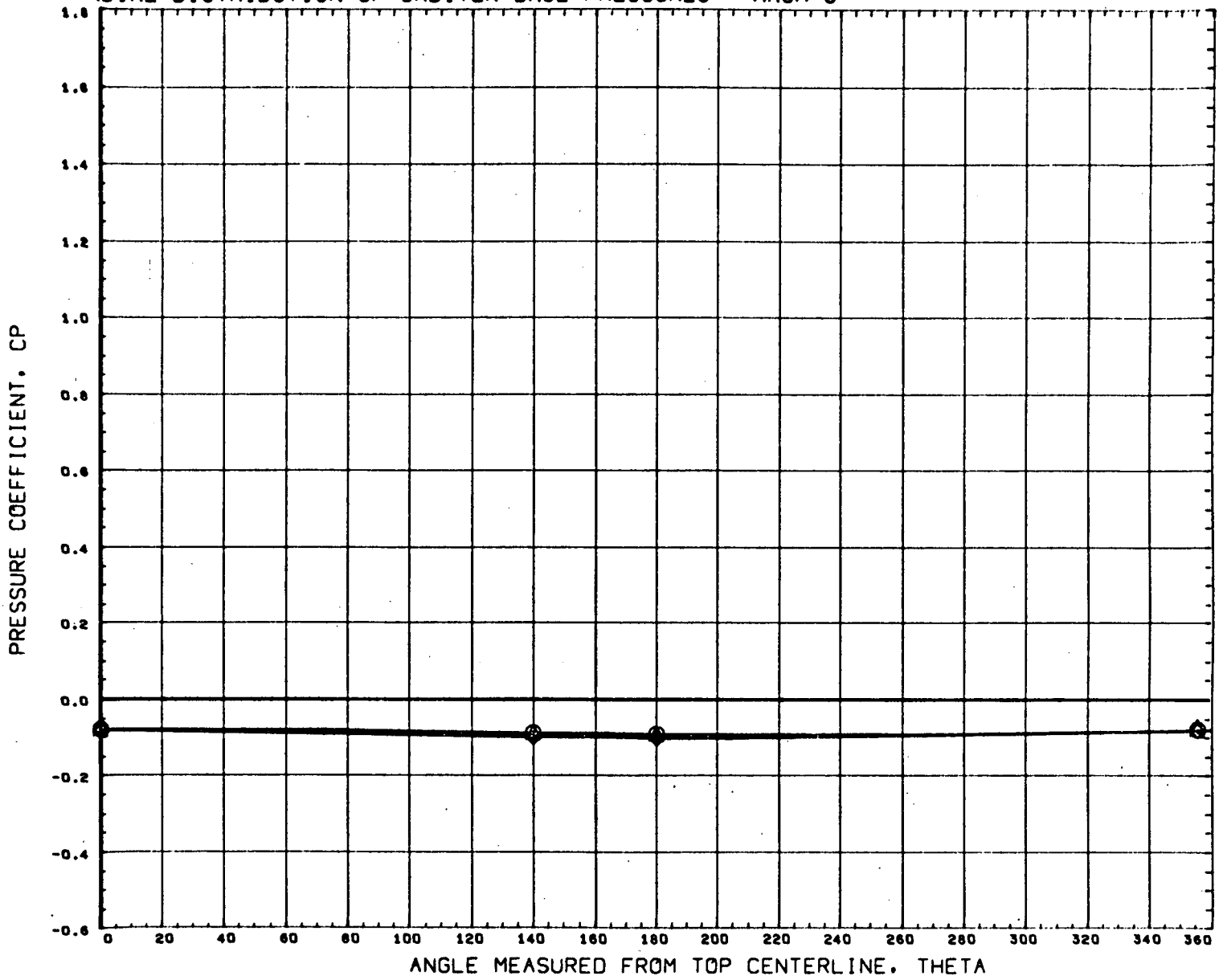
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



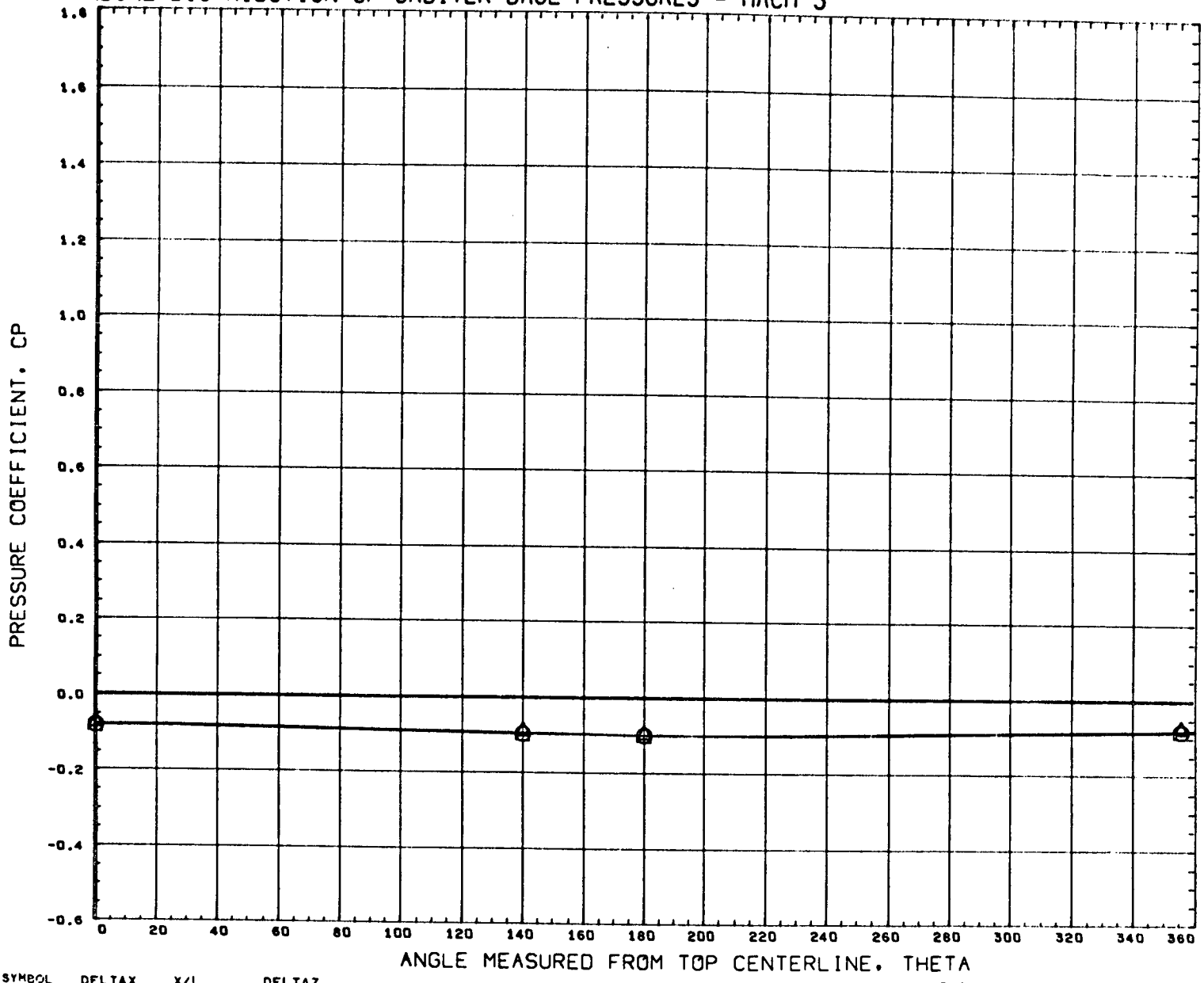
SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.228
△	0.104		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.391	1.000	0.908
△	0.516		

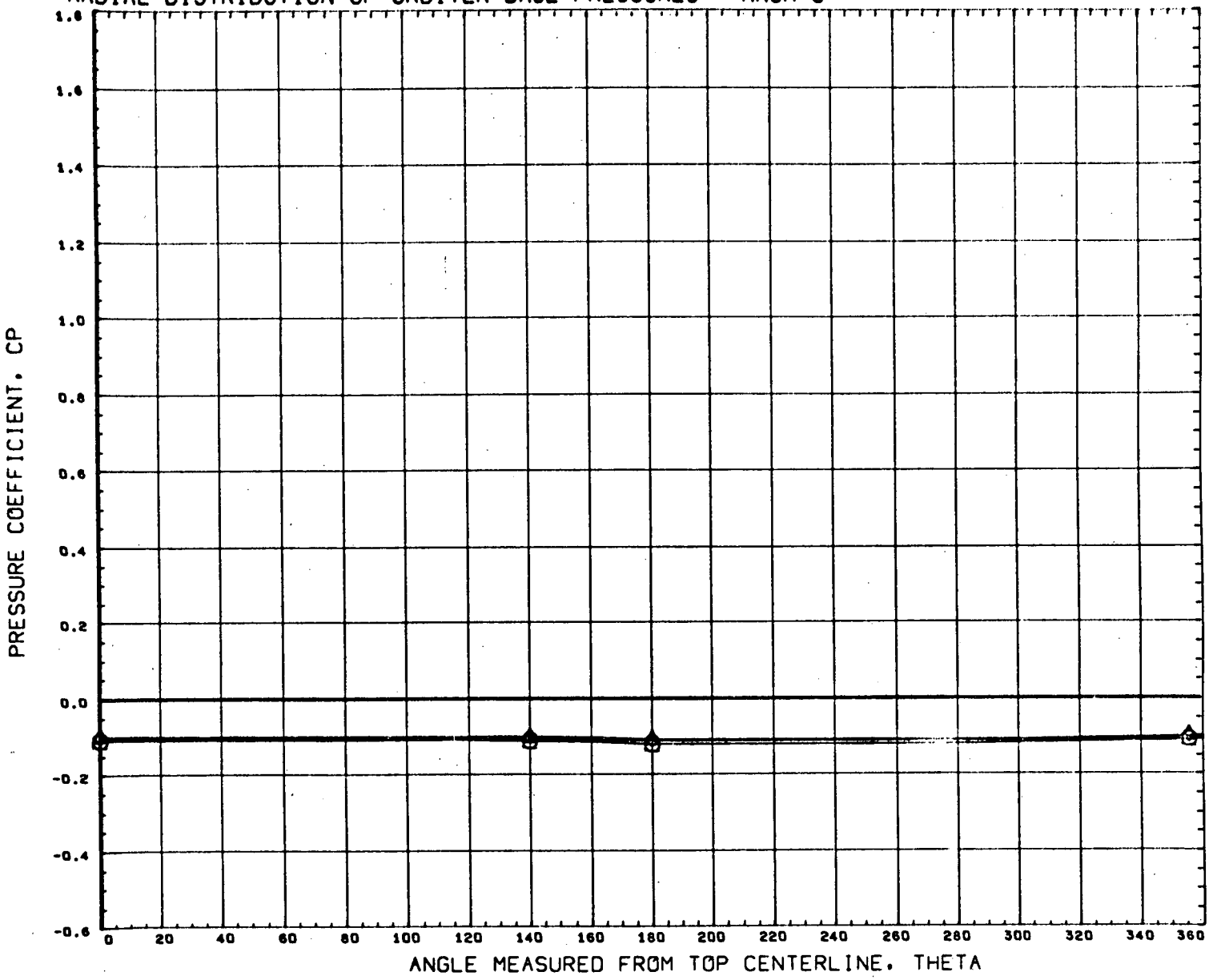
PARAMETRIC VALUES

ALPHAB	- 4.939	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



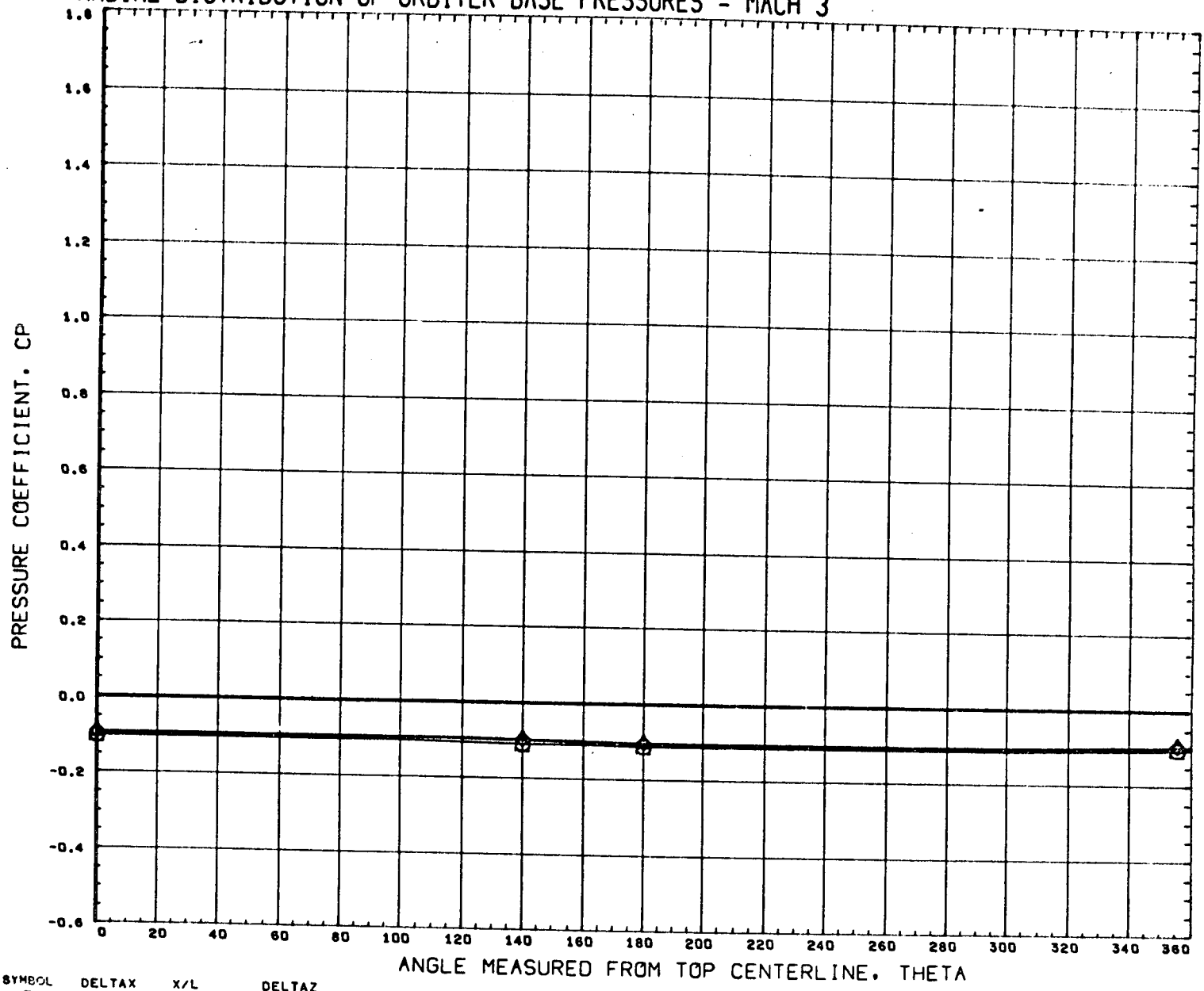
SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.143	1.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.144	1.000	0.151
△	0.104		
◇	0.227		

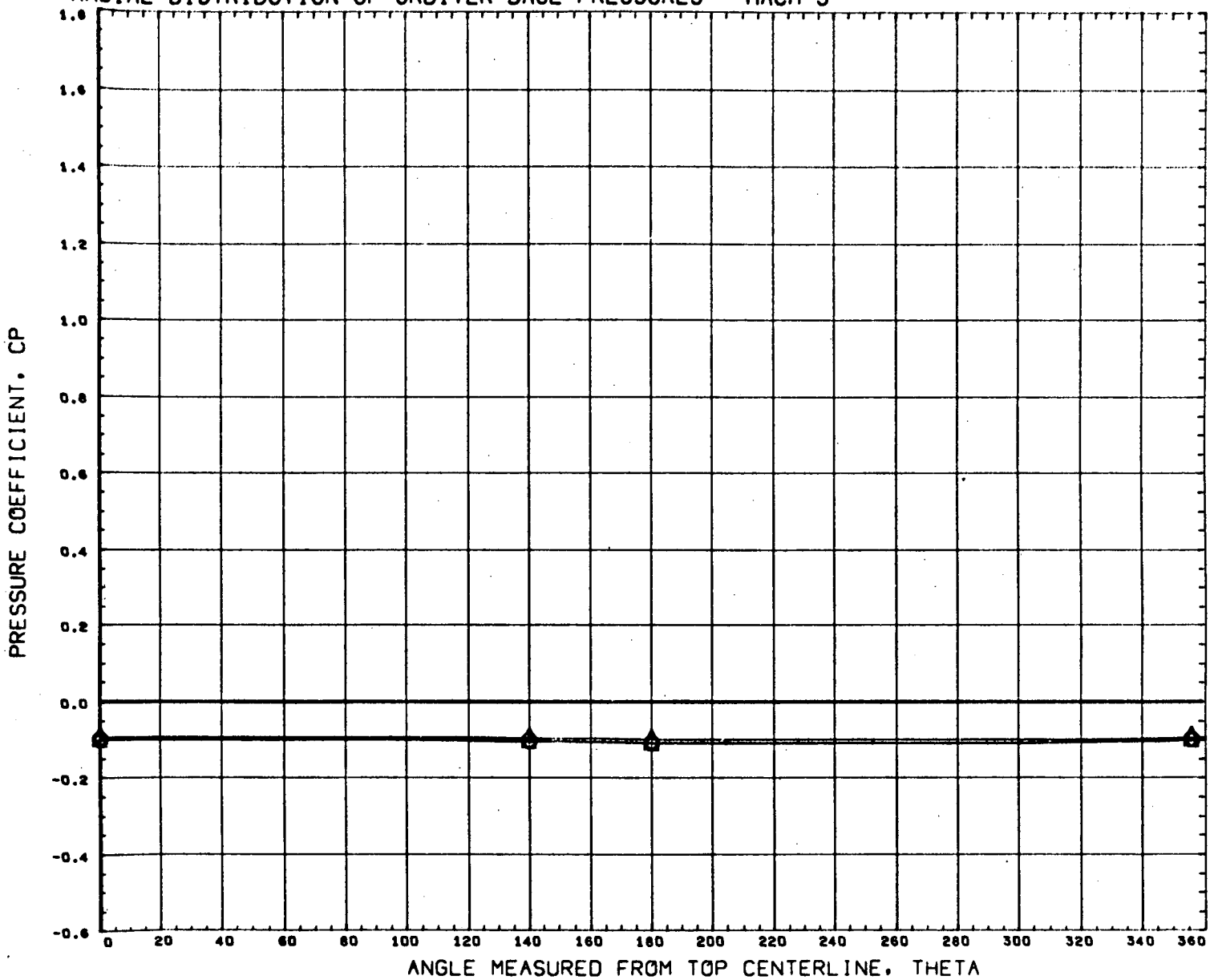
PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



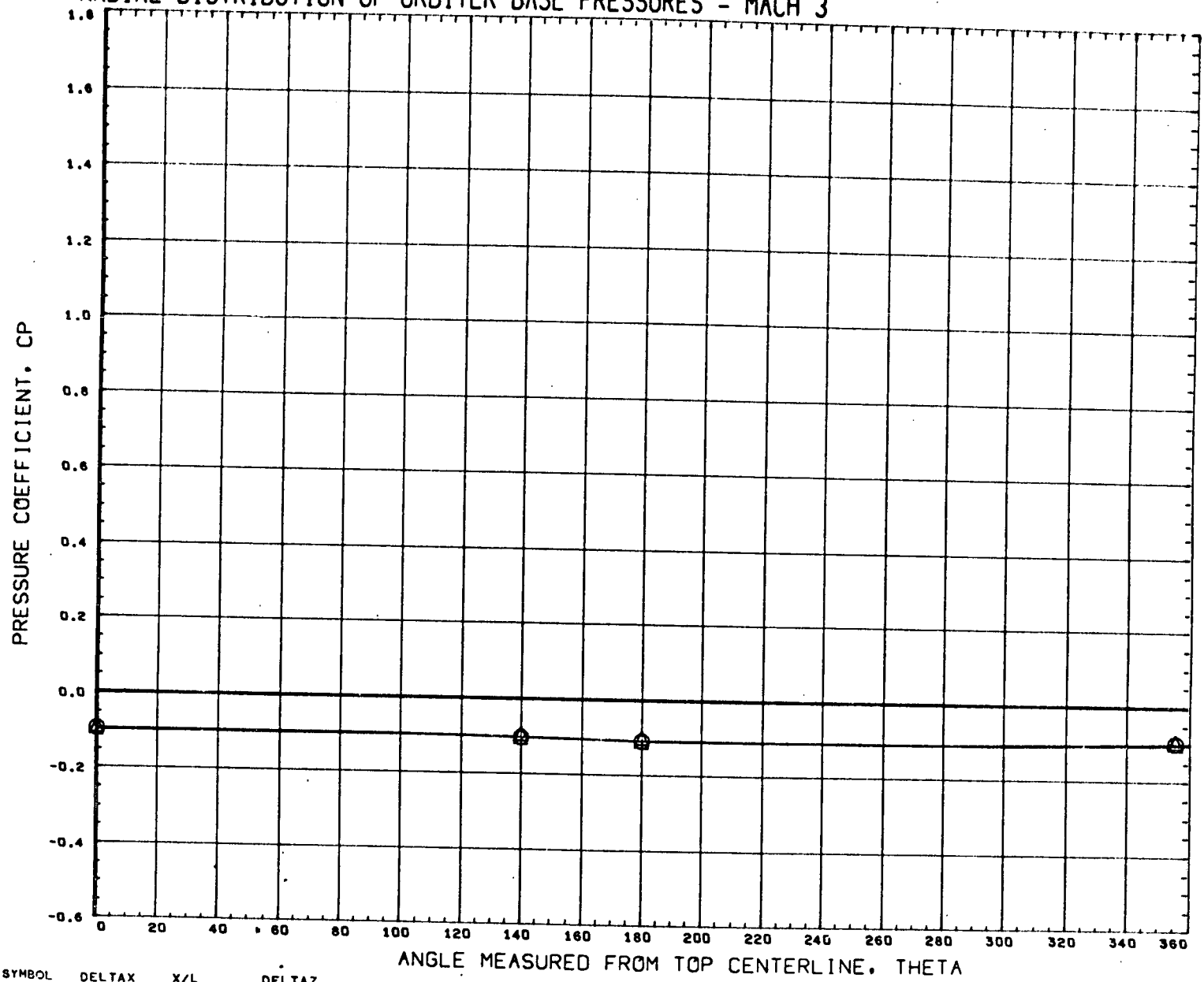
SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.228
△	0.103		
◇	0.227		

PARAMETRIC VALUES

ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.391	1.000	0.908
△	0.514		

PARAMETRIC VALUES

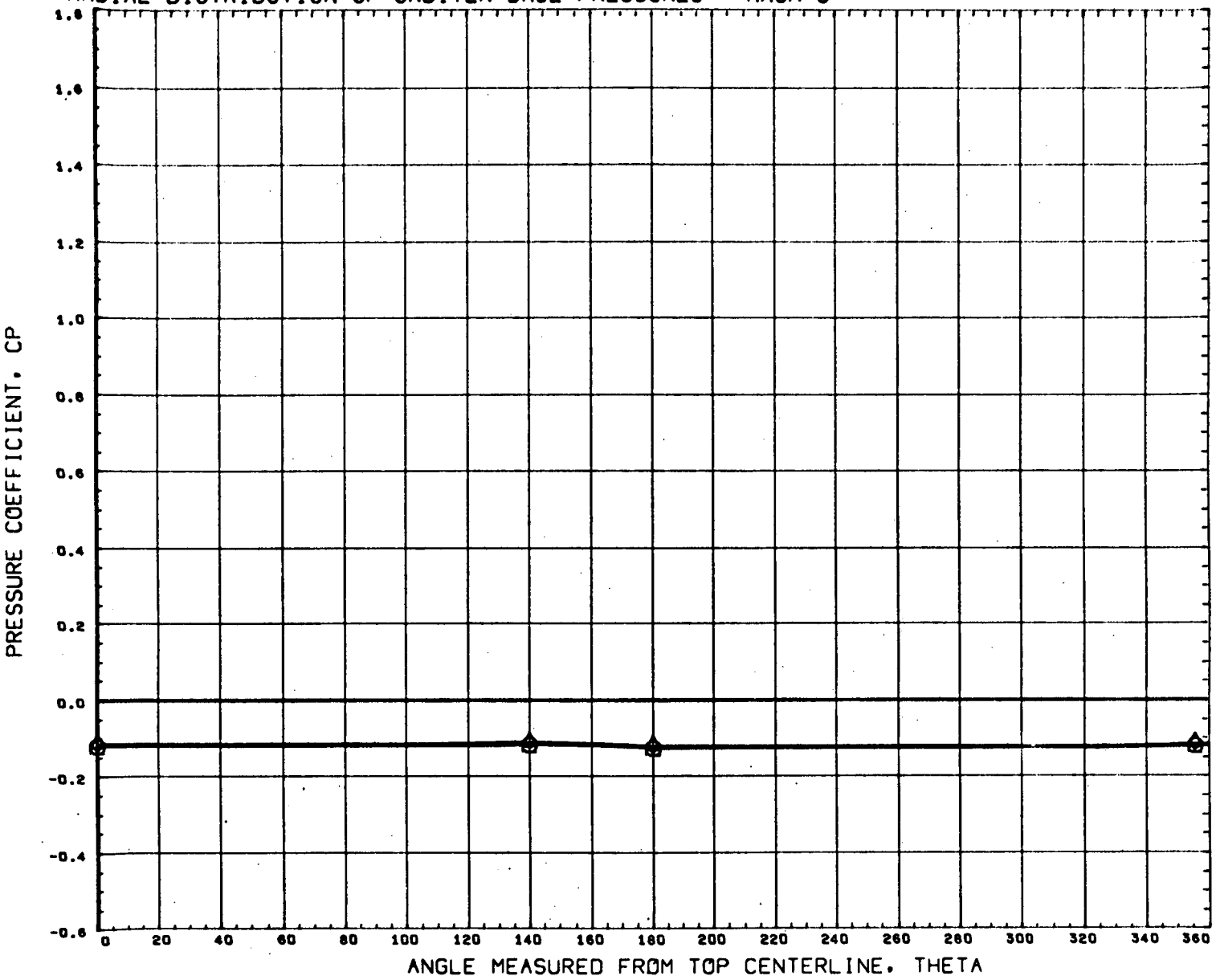
ALPHAB	0.019	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8323•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.143	1.000	0.120
△	0.103		
◇	0.226		

PARAMETRIC VALUES

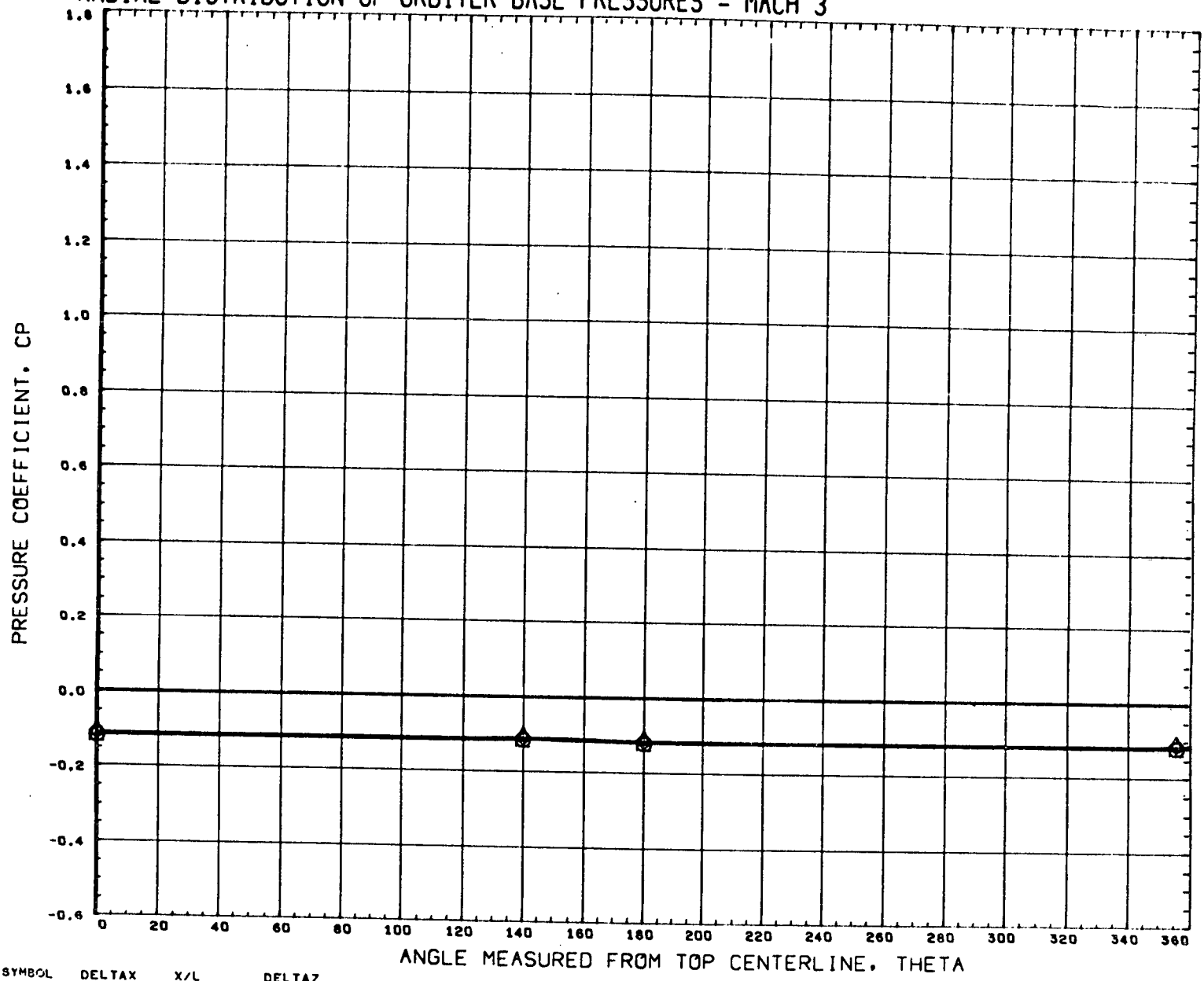
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8324•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.151
△	0.103		
◇	0.227		

PARAMETRIC VALUES

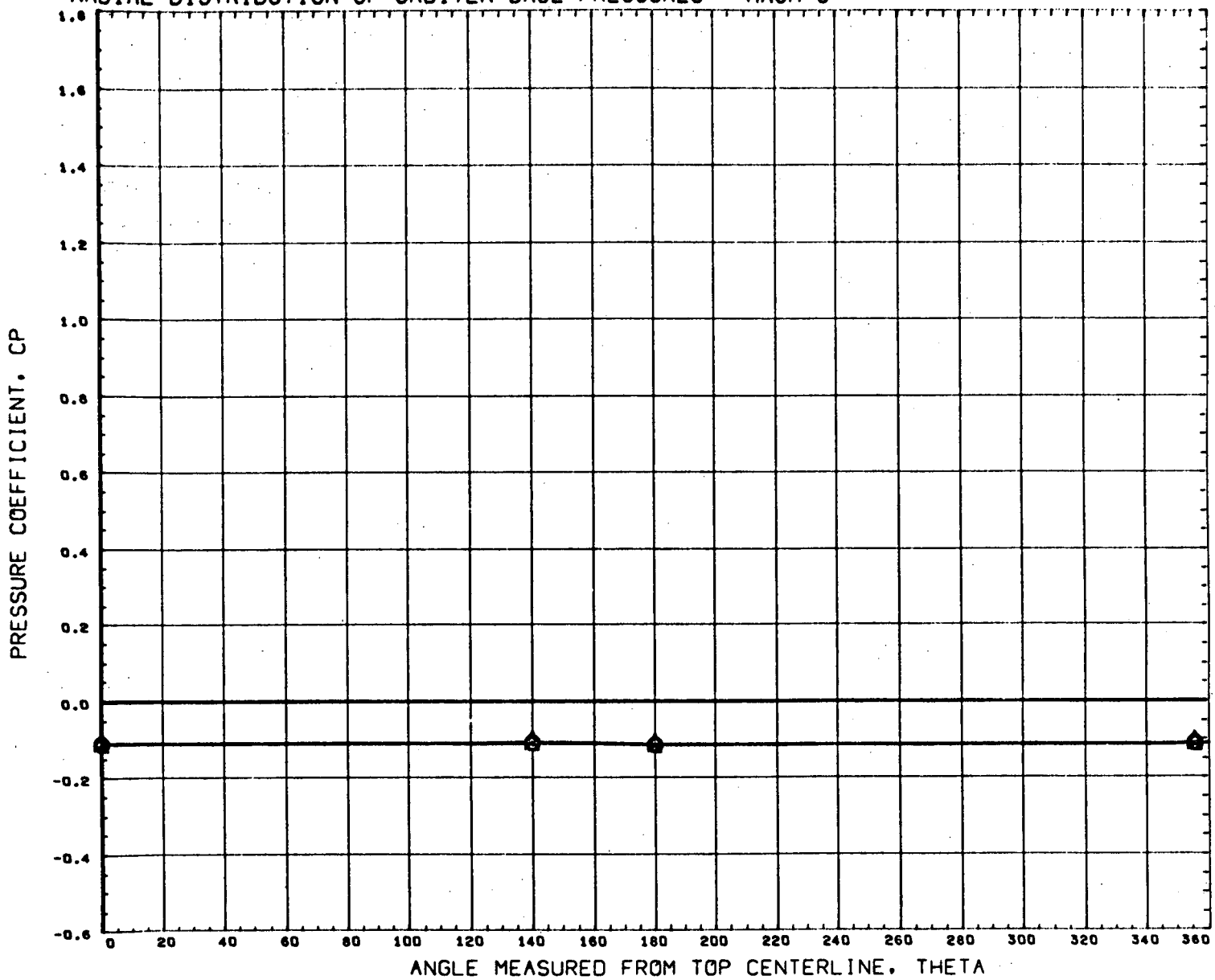
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8324•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



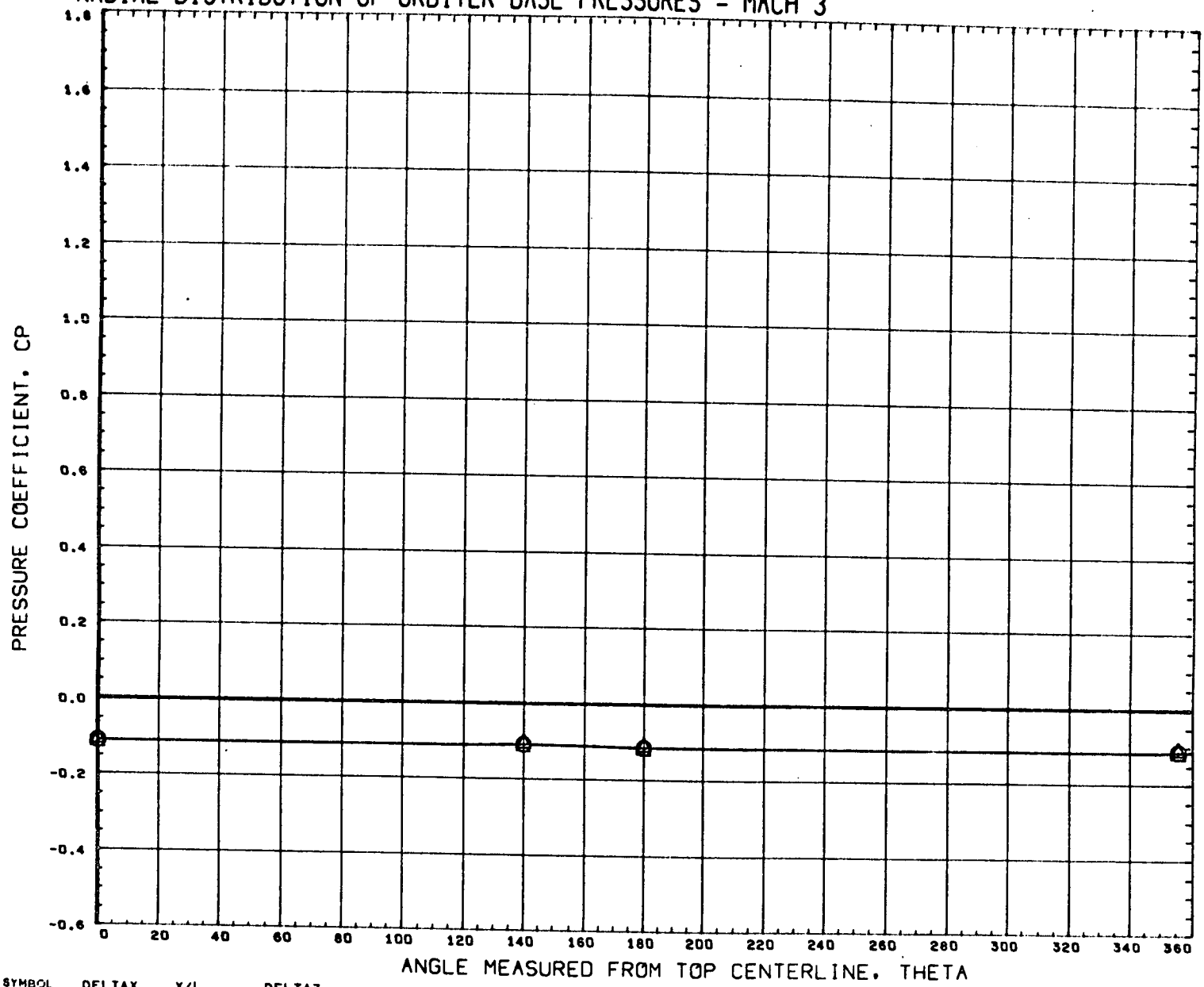
SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.228
△	0.103		
◇	0.228		

PARAMETRIC VALUES

ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.390	1.000	0.908
△	0.511		

PARAMETRIC VALUES

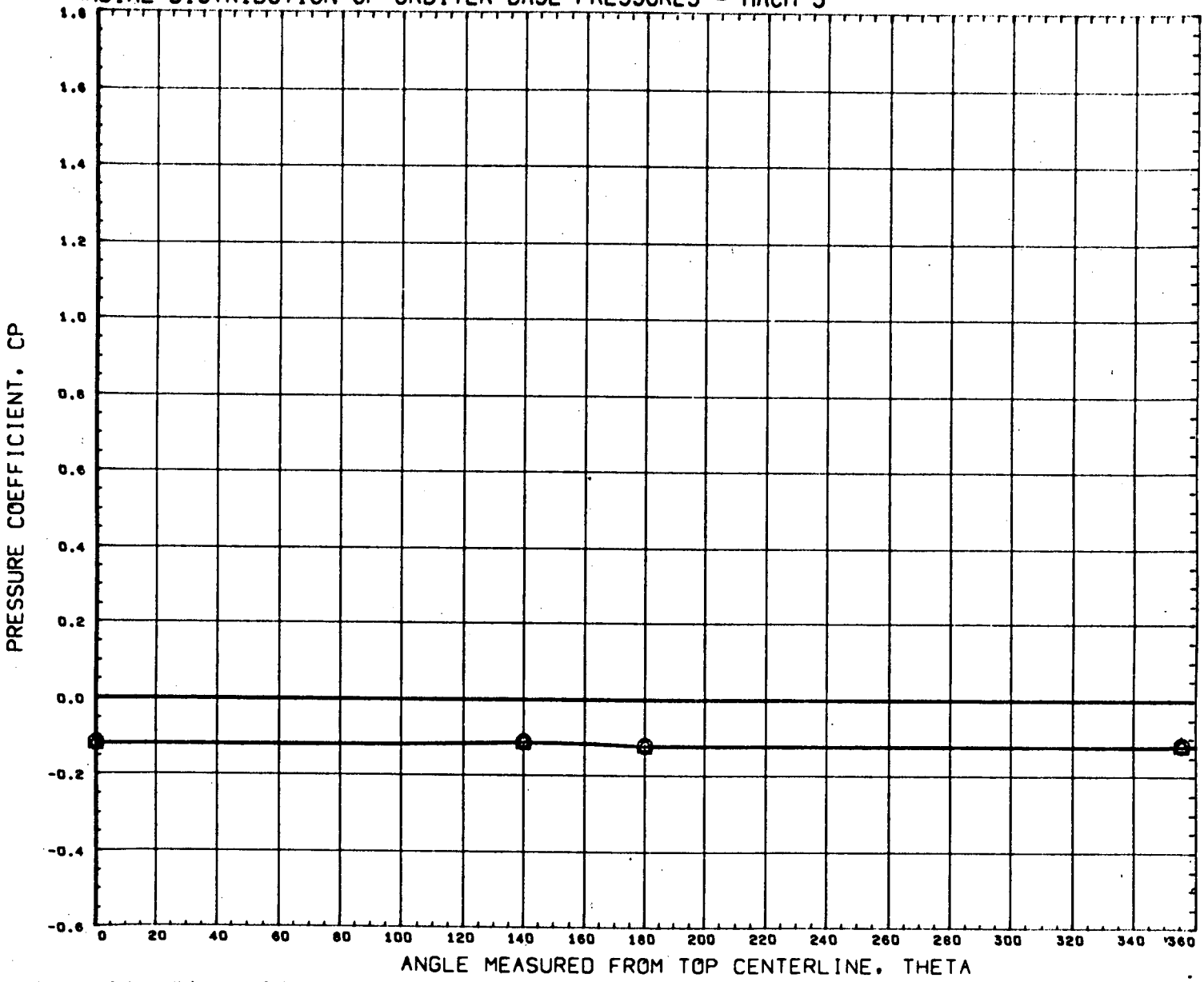
ALPHAB	5.020	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8324•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



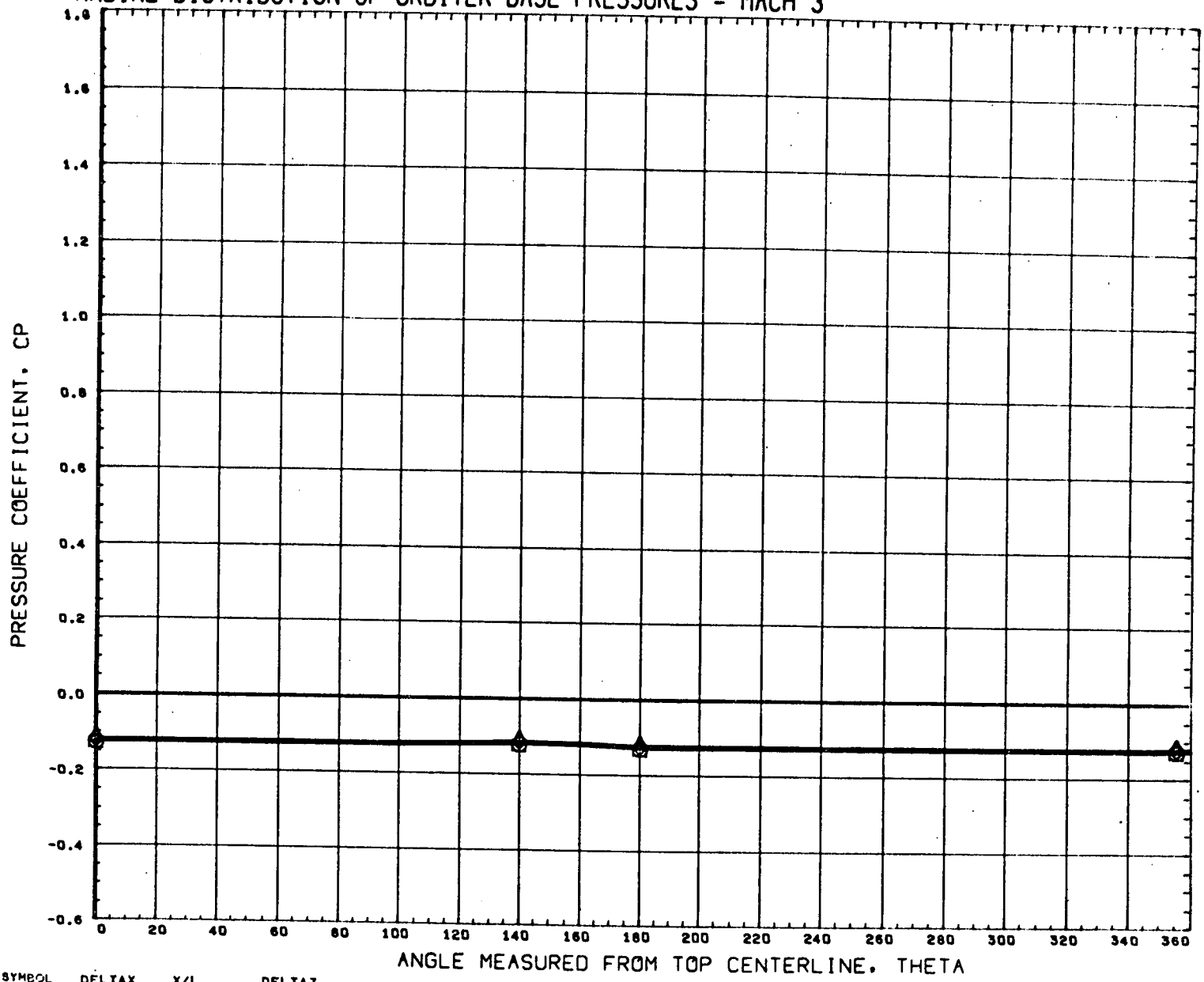
SYMBOL	DELTAX	X/L	DELTAZ
○	0.143	1.000	0.120
△	0.101		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.143	1.000	0.151
△	0.103		
◇	0.226		

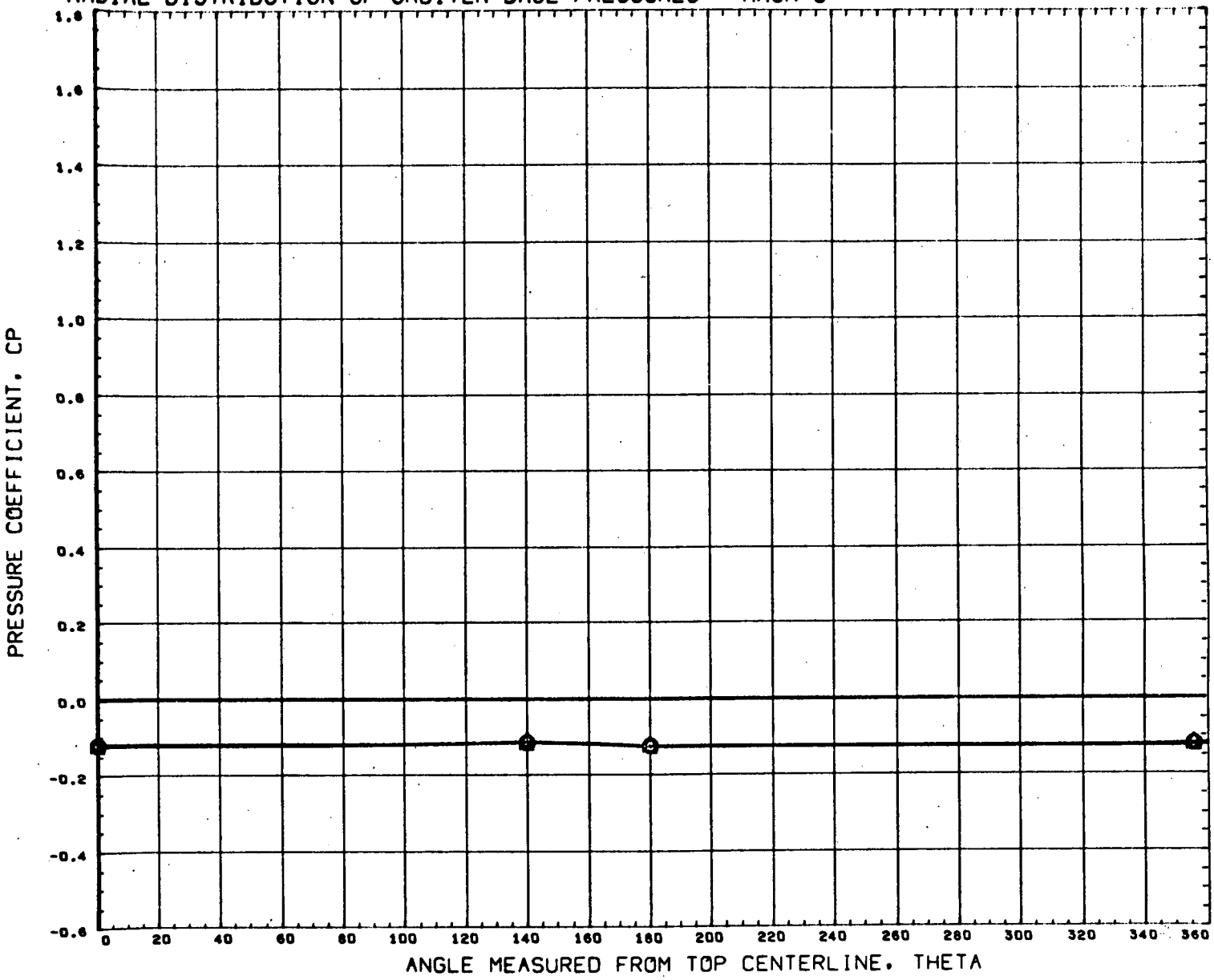
PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



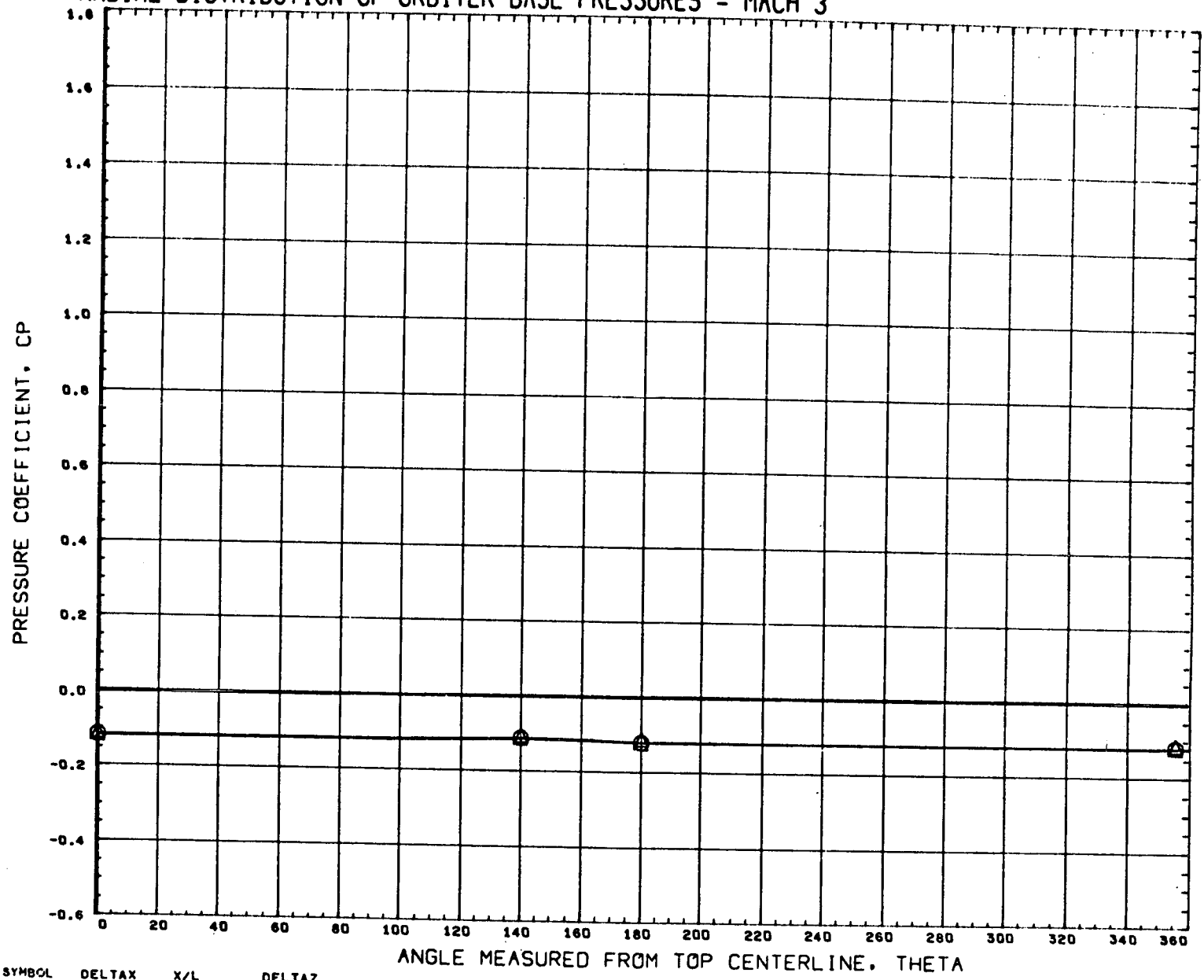
SYMBOL	DELTAX	X/L	DELTAZ
○ -	0.144	1.000	0.226
△	0.103		
◇	0.226		

PARAMETRIC VALUES

ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	- 0.390	1.000	0.908
△	0.481		

PARAMETRIC VALUES

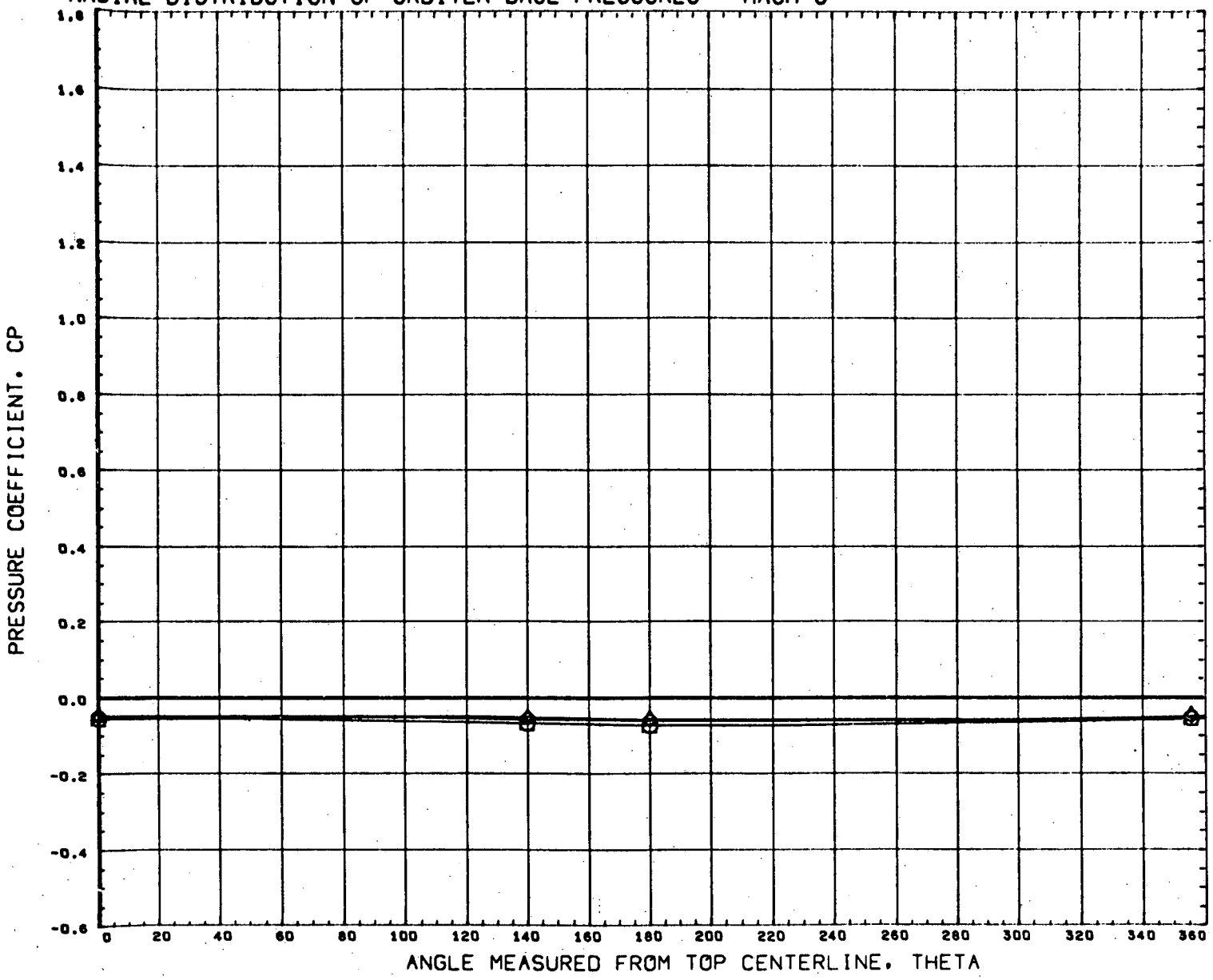
ALPHAB	10.004	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

•IT8325•

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



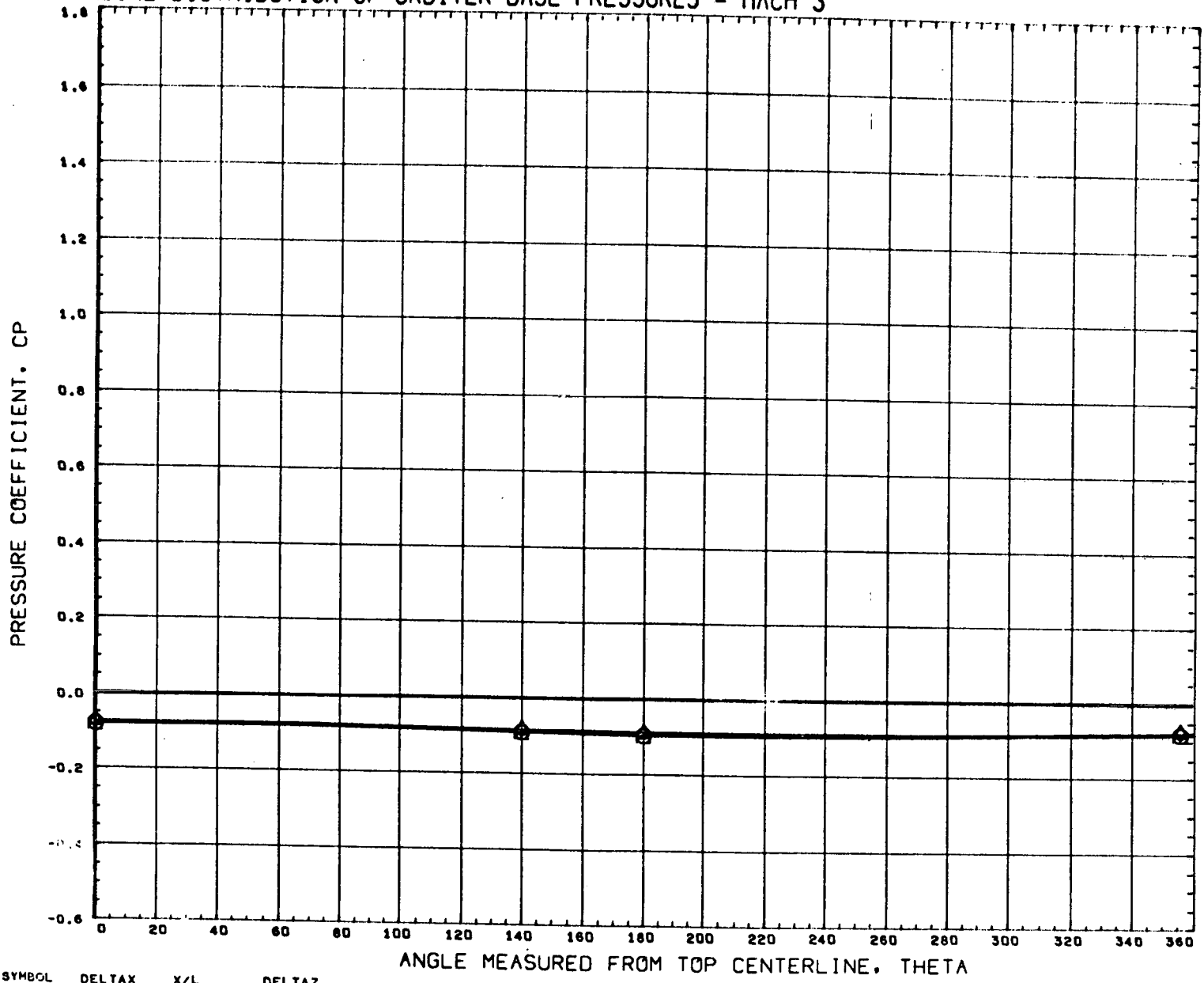
SYMBOL	DELTAX	X/L	DELTAZ
○	0.040	1.000	0.105
△	0.103		
◇	0.166		

PARAMETRIC VALUES

ALPHAB	- 9.980	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.038	1.000	0.105
△	0.101		
◇	0.161		

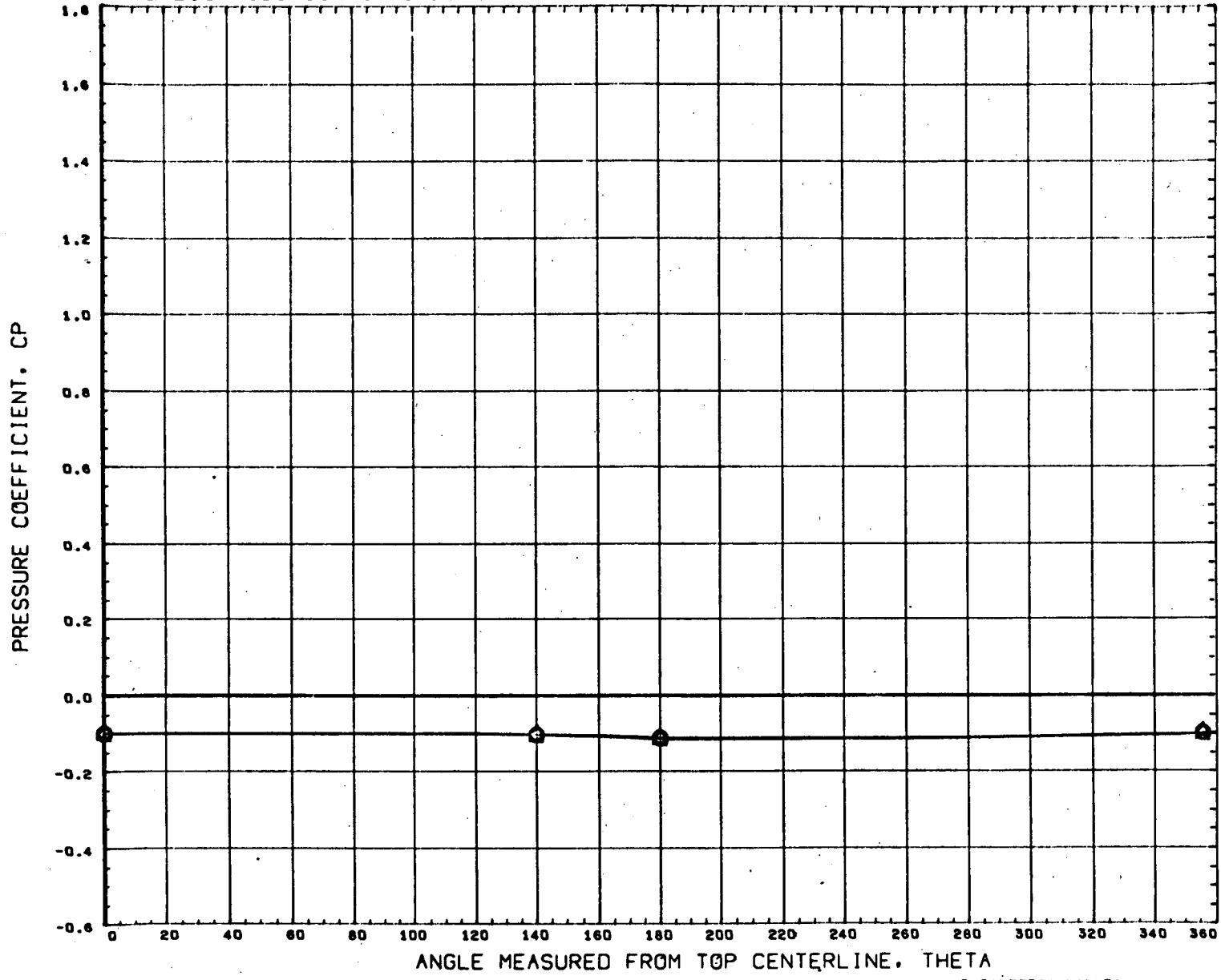
PARAMETRIC VALUES

ALPHAB	- 4.950	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



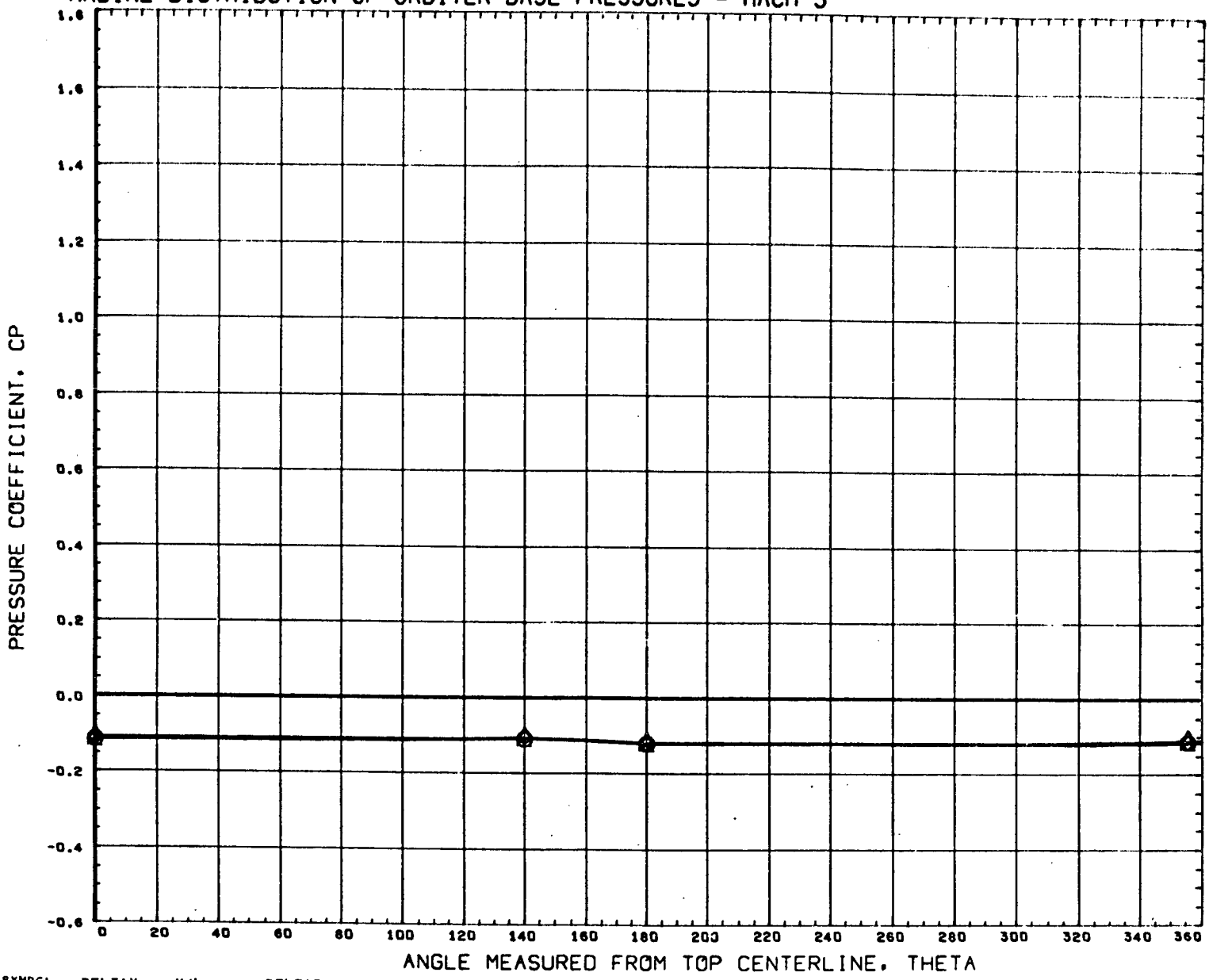
SYMBOL	DELTAX	X/L	DELTAZ
○	0.040	1.000	0.105
△	0.104		
◇	0.167		

PARAMETRIC VALUES

ALPHAB	0.003	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.038	1.000	0.105
△	0.099		
◇	0.162		

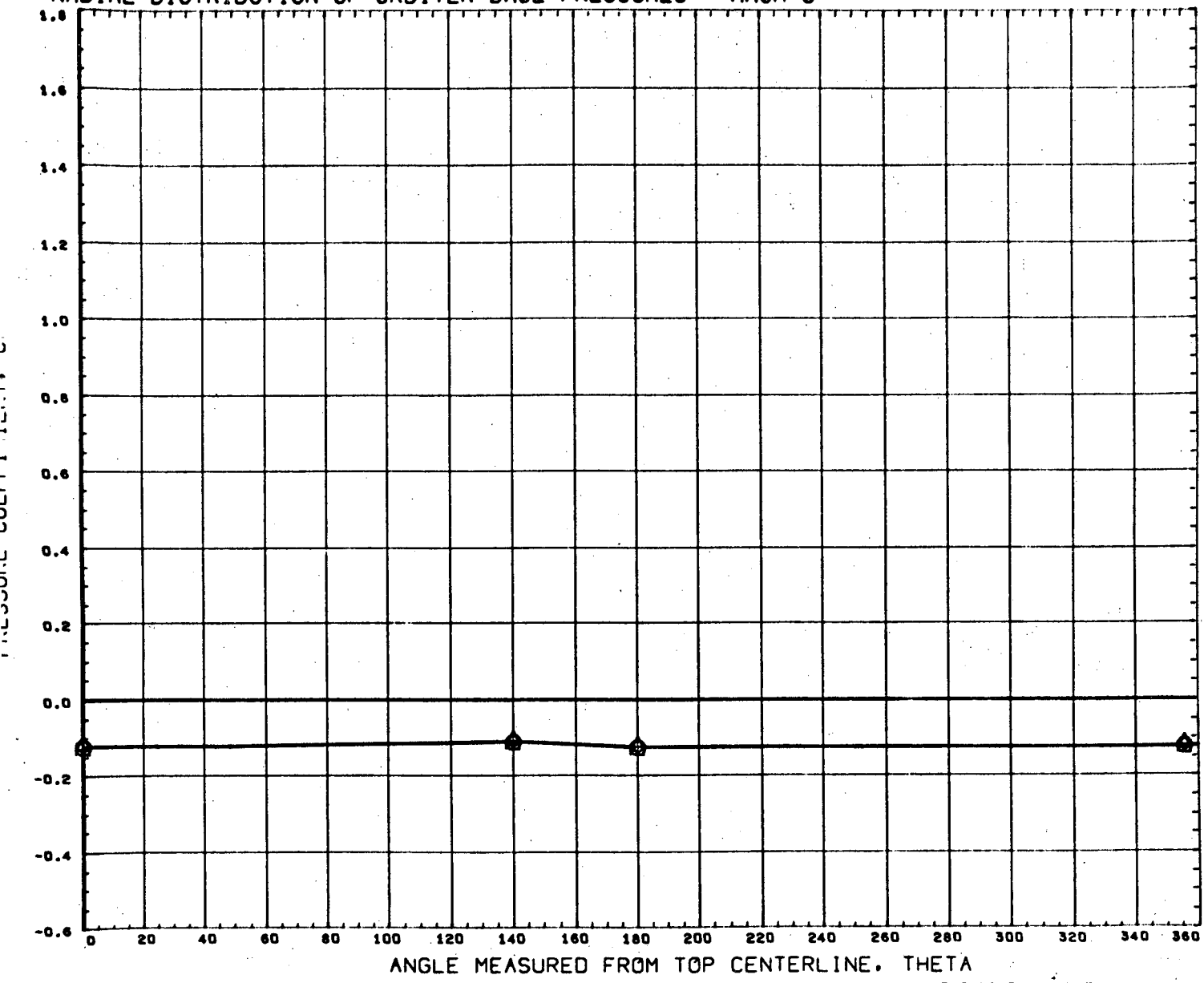
PARAMETRIC VALUES

ALPHAB	5.040	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE

AEDC VA1163 MDAC ORBITER (BASE)

RADIAL DISTRIBUTION OF ORBITER BASE PRESSURES - MACH 3



SYMBOL	DELTAX	X/L	DELTAZ
○	0.042	1.000	0.105
△	0.104		
◇	0.165		

PARAMETRIC VALUES

ALPHAB	10.000	MACH	3.000
ALPHAI	0.000	ORBPOW	0.000
BSTPOW	0.000		

REFERENCE FILE