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VOLUME 3 OF 5

RESULTS OF AN INVESTIGATION OF THE 0.003-SCALE SPACE SHUTTLE EXTERNAL TANK MSFC MODEL 460 IN THE NASA/MSFC 14 X 14-INCH TRISONIC WIND TUNNEL TO DETERMINE STATIC PRESSURE DISTRIBUTIONS DURING REENTRY (TA2F)

by

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Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	MSFC TWT 596
NASA Series Number:	TA2F
Model Number:	460
Test Dates:	July 20-23, 1974
Occupancy Hours:	104

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RESULTS OF AN INVESTIGATION OF AN 0.003-SCALE SPACE SHUTTLE EXTERNAL TANK MSFC MODEL 460 IN THE NASA/MSFC 14 x 14-INCH TRISONIC WIND TUNNEL TO DETERMINE STATIC PRESSURE DISTRIBUTIONS DURING REENTRY (TA2F)

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ABSTRACT

Objective of the test was to obtain static pressure distributions for the ET at reentry conditions. Basic configuration of the model was the MCR 0200 ET modified to include a rectangular crossbar at the aft ET/orbiter attach point. Mach numbers were 1.96, 3.48, and 4.96. Reynolds number per foot at these Mach numbers were 6.95 million, 6.42 million, and 4.95 million, respectively. Angle of attack range was -8 to 100 degrees and roll angle was 0 to 315 degrees. Occupancy hours were 104.

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SCHEDULE OF COEFFICIENTS PLOTTED:

A) CP vs. X/LB

B) CP vs. THETA

C) DCNM/D(X/LB) vs. X/LB

D) DCYM/D(X/LB) vs. X/LB

E) CNM vs. ALPHA
CLMM
CYM
CYNM

NOMENCLATURE

Symbol	Plot Symbol	Definition	Units
a		speed of sound	m/sec, ft/sec
A_b		base area; cross-sectional area of the cylindrical ET	in.^{2}
b_{ref}	BREF	reference span; diameter of the cylindrical section of the model	in.
ET		external tank	
F_A		axial force (AF), positive in the negative direction of x_m	lb
F_N		normal force (NF), positive in the negative direction of z_m	lb
F_Y		side force (SF), positive in the positive direction of y_m	lb
ℓ_B	LBODY	length of the ET	in.
ℓ_{ref}	LREF	reference length; diameter of the cylindrical section of the model	in.
M	MACH	Mach number; V/a	
MRP	MRP	moment reference point located in the x_m, y_m, z_m axes by XMRP, YMRP, and ZMRP (See Data Reduction section)	
M_x		rolling moment (RM); a moment about the x_m axis (a positive rolling moment tends to rotate the positive y_m axis toward the positive z_m axis)	in.-lb
M_y		pitching moment (PM); a moment about the y_m axis (a positive pitching moment tends to rotate the positive z_m axis toward the positive x_m axis)	in.-lb
c.g		center of gravity	

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition	Units
M_z		yawing moment (YM); a moment about the z_m axis (a positive yawing moment tends to rotate the positive x_m axis toward the positive y_m axis)	in.-lb
p_∞	P	pressure, freestream	psi
p_o	PO	stagnation pressure	psi
q_∞	Q(PSI)	free stream dynamic pressure	psi
S_{ref}	SREF	reference area; cross-sectional area of the cylindrical section of the model	in.^{2}
RN/L	RN/L	unit Reynolds number	per m, per ft
SRB		solid rocket booster	
V		velocity	m/sec, ft/sec
x_m, y_m, z_m		missile axis system (see Data Reduction section)	
X		distance from nose of ET model in the negative x_m direction	in.
X_T, Y_T, Z_T		model stations; (see figure 2a)	in.
X_{CP}/ℓ_B	XCP/L	longitudinal position of the center of pressure, expressed as a fraction of the ET length, measured from the ET nose $\frac{X_{CP}}{\ell_B} = \frac{XMRP}{\ell_B} - \frac{C_{m_m}}{C_{N_m}} \frac{\ell_{ref}}{\ell_B}$	
$\bar{c}$		aerodynamic chord	m,ft
COEFFICIENTS			
C_{A_m}	CA	axial force coefficient; $F_A/q\ S_{ref}$	

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition	Units
$C_{A_{b_m}}$	CAB	base axial force coefficient; $(p_\infty - p_b)\ A_B/q\ S_{ref}$	
C_{A_f}	CAF	forebody axial force coefficient; $C_{A_m} - C_{A_{b_m}}$	
C_{ℓ_m}	CBL	rolling moment coefficient; $M_x/q\ S_{ref}\ b_{ref}$	
C_{m_m}	CLMM	pitching moment coefficient; $M_y/q\ S_{ref}\ \ell_{ref}$	
C_{N_m}	CNM	normal force coefficient; $F_N/q\ S_{ref}$	
C_{n_m}	CYNM	yawing moment coefficient; $M_z/q\ S_{ref}\ b_{ref}$	
C_p	CP	pressure coefficient; $(p - p_\infty)/q$	
C_{Y_m}	CYM	side force coefficient; $F_y/q\ S_{ref}$	
C_{N_m}'	DCN/DX	local normal force coefficient; $\partial C_N/\partial(X/D)$	
C_{Y_m}'	DCY/DX	local side force coefficient; $\partial C_Y/\partial(X/D)$	

SYMBOLS

α	ALPHA	angle of attack	deg.
β	BETA	angle of sideslip	deg.
ϕ	PHI	angle of roll	deg.
ψ	PSI	angle of yaw	deg.

NOMENCLATURE (Concluded)

Symbol	Plot Symbol	Definition	Units
θ	THETA	circumferential location	deg.
ρ		mass density	kg/m^3, $slugs/ft^3$
ref		reference conditions	
∞		free stream conditions	
b		base	
c		cavity	
t		total conditions	
B		model body	
T		external tank	
m		missile axis system	
l		local	
s		static conditions	
	MOUNT	1.0 indicates tail mounted (T_1) 2.0 indicates side mounted (T_2)	

INTRODUCTION

After the solid rocket boosters and the external tank separate from the orbiter, the ET will reenter the earth's atmosphere at high supersonic or even hypersonic Mach numbers. This test is the second of two tests conducted in the NASA-MSFC 14-inch Trisonic Wind Tunnel to obtain force and pressure data on the 324-inch diameter ET at typical reentry angles of attack.

Model (MSFC No. 460) configuration is a 0.003-scale representation of the ET with fuel lines and forward and aft SRB and orbiter attach hardware. Also included is the ET/orbiter rectangular crossbar attach structure.

Pressure taps (192 total) were used to obtain data for evaluating the load distribution on the ET. Further evaluation of the ET aerodynamic characteristics can be made by comparing data from this test with data from TWT 583 (reference 4).

Pressure data were taken at three Mach numbers: 1.96, 3.48, and 4.96. Angle of attack range was -8 to 100 degrees, which was obtained by using two ET model mountings. Range -8 to 30 degrees used a tail-mounted model (T_1) for each of eight roll positions, 0 to 315 degrees. This model had attach structure and protuberances. For the range of 51 to 100 degrees, a side-mounted model (T_2) at 0° roll position was used.

MODEL DESCRIPTION

The model is a 0.003-scale of the MCR 0200 space shuttle ET configuration modified to include a crossbar at the aft orbiter/ET attach points. General arrangement of the model is shown in figure 2a. The model is designated MSFC #460, and it consists of two ET models (one tail-mounted and one side-mounted); protuberances simulating fuel lines, attachment hardware, etc.; and model adapters which allowed the tanks to be supported in the tunnel on RI stings #1 and #3. The models were built by NASA to conform to the configuration specified by Rockwell International drawing VL78-000041B (Reference Drawing 6) and Martin-Marietta memo SA-A-74-9 (Reference Report 2).

Both ET models were made of stainless steel and contained 192 pressure orifices each. From these orifices, stainless steel and annealed 0.032-inch OD tubing was routed out the base (or the side) of the model. Four feet of 0.050-inch OD tubing was brazed onto each of the 0.032-inch tubes as close to the exit cavity as possible.

When placed in the tunnel test section, the tubing bundle from the model was secured along the sting and routed down the sector through the tunnel floor. At this point, Tygon tubing was used to connect the steel tubing to quick disconnects, which were connected to the scanivalves. Installation photographs for the tail mounted (T_1) and side mounted (T_2) models are in figures 3a and 3b, respectively.

Model stations are sometimes used to describe locations of various components of the model. When used, these stations will be given in

inches model scale and the zero reference points will be same as in Rockwell International drawing VL72-000088"D" (Reference Drawing 2). Zero reference points are shown in figure 2a.

CONFIGURATIONS INVESTIGATED

Two ET configurations investigated are defined as follows:

T_1--MCR 0200 tail-mounted, modified to include crossbar configuration with protuberances.

T_2--MCR 0200 side-mounted, "clean" configuration (without protuberances).

Each of the configurations consists of the following model components:

T_1--T_{12} AT_5 AT_6 AT_7 AT_8 AT_9 PT_1 PT_2 PT_3 FL_1 FL_2 FR_6

T_2--T_{12}

Brief descriptions of each component are below. Refer to table III for dimensional data.

T_{12}	Baseline 324-inch diameter external oxygen-hydrogen tank
AT_5	Forward orbiter/ET attach structure
AT_6	Left rear orbiter/ET attach structure
AT_7	Right rear orbiter/ET attach structure
AT_8	Forward SRB/ET attach structure
AT_9	Aft SRB/ET attach structure
PT_1	LOX vent line fairing
PT_2	LOX feed line
PT_3	LH_2 feed line
FL_1	LOX feed line
FL_2	LH_2 feed line
FR_6	Aft ET/orbiter crossbar

TEST FACILITY DESCRIPTION

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

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

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

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° (±10°). Sting offsets are available for obtaining various maximum angles of attack up to 95°.

TEST FACILITY DESCRIPTION (Concluded)

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

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

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

TEST PROCEDURE

First part of the test was conducted using a side-mounted, "clean" configuration (T_2 without protuberances). Since it was a "clean" configuration, the roll angle was considered to always be 0 degrees. Angle of attack range was from 51 to 100 degrees in increments of 3 degrees. Data were obtained at Mach numbers of 1.96, 3.48, and 4.96.

Second part of the test consisted of using a tail-mounted model with attach hardware, fuel lines, and electrical tunnel. Angle of attack range was from -8 to 30 degrees in increments of 4 degrees. Data were obtained at eight roll positions, 0 to 315 degrees in 45-degree increments. All orifices and tubing were checked for leakage at the beginning of the test and after each roll position change. A leak check after rolling the model insured that correct measurements were being received from the orifices. Response time for the scanivalve function was within the one-second intervals allowed each scanivalve.

List of average test conditions is in table I. Dataset run number collation summary is in table II.

DATA REDUCTION

Location of each pressure orifice and the numbering system are presented in tables IV and V. Also special identification of blocked or inoperative pressure orifices is made for both tail-mounted and side-mounted models in these tables. Locations of these orifices are shown in figure 2b.

Sting deflections were measured outside the tunnel by using check weights. Sting deflections versus load curve for the pressure test (TWT 596) was found to be the same, within allowable accuracy, as that of the force test (TWT 583). The same ET configuration and only slightly different support hardware were used in both force and pressure tests. Increments of α due to sting bending in the force test were added to the nominal α's for the pressure test. This gave reasonably accurate values of angle of attack, accuracy comparable to force test, when the pressure model was tested at the same Mach number and tunnel total pressure as the force model.

Pressure data were reduced to coefficient form and are tabulated along with wind tunnel parameters, configuration, and run number in the appendix. Plots are presented for both longitudinal and circumferential pressure distributions (C_p vs X/ℓ_B and C_p vs θ). These plots are shown for each Mach number, angle of attack, and roll position at which tests were conducted. In addition, the pressure coefficients were integrated to obtain the following missile axis force and moment coefficients:

C_{N_m}	$= F_N/q\ S_{ref}$	normal force coefficient
C_{Y_m}	$= F_Y/q\ S_{ref}$	side force coefficient
C_{m_m}	$= M_Y/q\ S_{ref}\ \ell_{ref}$	pitching moment coefficient
C_{n_m}	$= M_Z/q\ S_{ref}\ b_{ref}$	yawing moment coefficient
$C_{N_m'}$	$= \partial C_N/\partial(X/D)$	local normal force coefficient
$C_{Y_m'}$	$= \partial C_Y/\partial(X/D)$	local side force coefficient

Force and moment coefficients obtained from the integration of pressures are for comparison with the results from the force test.

Model reference dimensions used in the data reduction are presented in table VI. The axis system diagram is presented in figure 1. The missile axis system (x_m, y_m, z_m) is a non-rolling body axis system that is frequently used in wind tunnel tests and studies of missile flight dynamics. It is a system of axes that rotates with a missile or wind tunnel model through angles of sideslip and angles of attack but never through angles of roll; i.e., it never rotates about the missile or model longitudinal axis. The orientation of the missile axis coefficients is defined in figure 1. The missile axis system is identical with the body axis system at zero roll angle.

Moment reference point (MRP) for the 0.003-scale model is taken to be at the dry weight center of gravity of the ET. For the full-scale ET, the center of gravity is located at X_T = 1395.4 inches. Thus, the MRP for the 0.003-scale ET model is 3.259 inches from the model nose, on the centerline (figure 2a).

REFERENCES

1. NASA TMX-53185, "The George C. Marshall Space Flight Center's 14 x 14 Inch Trisonic Wind Tunnel Technical Handbook," Simon, Erwin; December 1964.

2. SA-A-74-9, "Space Shuttle External Tank Entry Force and Moment Wind Tunnel Test Requirements," Michna, D. J., Michoud Operations, Martin Marietta Corporation, February 1974.

3. NSI-M-9230-74-270, "A Pre-test Report for MSFC TWT 596, An Investigation to Determine the Static Pressure Distributions During Reentry of a 0.003-scale Modified MCR 200 Space Shuttle External Tank Model in the NASA-MSFC 14 x 14-Inch Trisonic Wind Tunnel," Robertson, M, K. and Winkler, G. W., April 1974.

4. DMS-DR-2145, NASA CR-134,420, "Static Stability Characteristics of the Space Shuttle External Tank (MSFC Model 458) During Reentry in the MSFC 14-inch TWT (TA1F)," by Ramsey, Paul E., Robertson, Michael K., and Winkler, Gary W. October 1974.

REFERENCE DRAWINGS

1. VL72-000106, 8-6-73; SRB to ET Aft Attach, Approved Link Concept, Shuttle Study; Rockwell International.

2. VL72-000088 "D", 8-3-73; Shuttle Configuration Control, MCR 0200 Baseline Rev. III, Dated 7-2-73; Rockwell International.

3. VL78-000031 "A", 6-29-73; Thermal Protection-External Tank MCR 0200 Baseline Dated 4-11-73; Rockwell International.

4. VL77-000051 "A", 9-10-73; SRB Single PT.-Fwd Thrust Fitting (MCR 0190 Rev. 3 Baseline 8-13-73); Rockwell International.

5. SS-A01176 (Wind Tunnel Model Group); Details - .015 Scale EOHT Attachments (140 A/B) (67-OTS) 11-20-73; Rockwell International.

6. VL78-000041 "B", 5-30-73; External Tank Configuration Control MCR 0200 Revision 1 Dated 5-16-73; Rockwell International.

Table I.

TEST: MSFC TWT 596 | DATE: Aug 1974

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq.inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)	STAGNATION PRESSURE (pounds/sq.inch)
1.96	6.95×10^6	10.2	104	28.0
3.48	6.42×10^6	6.9	143	60.0
4.96	4.95×10^6	3.1	143	90.0

BALANCE UTILIZED: None - Pressure Test; 50 PSIA Transducers

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

COMMENTS: Transducer capacity of 50 psia, accuracy of ±.25 psi, and coefficient tolerance of ±.025 @ q = 10 psi.

MSFC - Form 263-1 (Rev. April 1973)

TABLE II.

TEST: MSFC TWT 596 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES SEP-SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES φ		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A001	T, (TAIL MOUNTED	-8	0	0	TAIL	0		3	86	140	139								
002	E.T. WITH	-4						3	87	137	138								
003	PROTUBERANCES)	0						5	88	136	135								
004		4						3	89	133	134								
005		8						5	90	132	131								
006		12		20				3	85	141	142								
007		16						3	84	144	143								
008		20						3	83	145	146								
009		24						3	82	148	147								
010		28						3	81	149	150								
011		-8		0		90		3	80	170	169								
012		-4						3	79	167	168								
013		0						3	78	166	165								
014		4						3	77	163	164								
015		8						3	76	162	161								
016		12		20				3	75	159	160								
017		16						3	74	158	157								
R1A018		20						3	73	155	156								

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

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

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF-SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES φ		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A 019	T_1 (TAIL-MOUNTED	24	0	20	TAIL	90		3	72	154	153								
020	ET WITH	28						3	71	151	152								
021	PROTUBERANCES)	-8		0		135		2		179	180								
022		-4						2		178	177								
023		0						2		175	176								
024		4						2		173	172								
025		8						2		174	171								
026		12		20				2		190	189								
027		16						2		187	188								
028		20						2		186	185								
029		24						2		183	184								
030		28						2		182	181								
031		-8		0		180		3	61	210	209								
032		-4						3	62	207	208								
033		0						3	63	206	205								
034		4						3	64	203	204								
035		8						3	65	202	201								
R1A 036		12		20				3	66	199	200								

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

CP

COEFFICENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596 | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF-SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES Ø		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A 037	T, (TAIL-MOUNTED	16	0	20	TAIL	180		3	67	198	197								
038	E.T. WITH	20						3	68	195	196								
039	PROTUBERANCES)	24						3	69	194	193								
040		28						3	70	191	192								
041		-8		0		225		2		255	126								
042		-4						2		254	127								
043		0						2		253	128								
044		4						2		252	129								
045		8						2		251	130								
046		12		20				2		260	121								
047		16						2		259	122								
048		20						2		258	123								
049		24						2		257	124								
050		28						2		256	125								
051		-8		0		270		3	96	101	102								
052		-4						3	97	104	103								
053		0						3	98	105	106								
R1A 054		4						3	99	108	107								

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

CP

COEFFICENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: JULY 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF-SET	PARAMETERS/VALUES φ			NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96							
R1A055	T, (TAIL-MOUNTED	8	0	TAIL	270			3	100	109	110							
056	ET WITH	12						3	95	120	119							
057	PROTUBERANCES)	16						3	94	117	118							
058		20						3	93	116	115							
059		24						3	92	113	114							
R1A060		28						3	91	112	111							

TEST RUN NUMBERS

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

C.P.

COEFFICENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES φ	PARAMETERS/VALUES STING COMB	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A 061	T_2 (SIDE-MOUNTED	51	0	60	SIDE	0	C	3	60	1/1	2								
062	ET WITHOUT	54						3	59	4	3								
063	PROTUBERANCES)	57						3	58	5	6								
064		60						3	57	8	7								
065		63						3	56	9	10								
066		66						3	55	12	11								
067		69						3	54	13	14								
068		70		80			D	3	53	16/1	15								
069		72						3	52	17	18								
070		75						3	51	20	19								
071		78						3	50	21	22								
072		80		90			E	3	49	24	23								
073		82						3	48	25	26								
074		85						3	47	28	27								
075		88						3	46	29	30								
076		90						3	45	32	31								
077		92						3	44	33	34								
R1A 078		95						3	43	36	35								

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

CP

COEFFICENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

α C: 50° → 70°

α D: 70° → 90°

α E: 80° → 100°

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES Ø	PARAMETERS/VALUES STING COMB	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A079	T_2 (SIDE-MOUNTED	98	0	90	SIDE	0	E	3	42	37	38								
R1A080	ET WITHOUT	100	0	90	SIDE	0	E	3	41	40	39								
	PROTUBERANCES)																		

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

CP

COEFFICENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Continued)

TEST: MSFC TWT 596 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: July [illegible]

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES φ	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96	TEST RUN NUMBERS
R1A 081	T, (TAIL-MOUNTED	-8	0	0	TAIL	45	2		219	220	
082	ET WITH	-4					2		218	217	
083	PROTUBERANCES)	0					2		215	216	
084		4					2		214	213	
085		8					2		211	212	
086		12		20			2		230	229	
087		16					2		227	228	
088		20					2		226	225	
089		24					2		223	224	
090		28					2		222	221	
091		-8		0		315	2		250	249	
092		-4					2		247	248	
093		0					2		246	245	
094		4					2		243	244	
095		8					2		242	241	
096		12		20			2		239	240	
097		16					2		238	237	
R1A 098		20					2		235	236	

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

CP

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

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE II. (Concluded)

TEST: MSFC TWT 596 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: July 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES OFF SET	PARAMETERS/VALUES MT.	PARAMETERS/VALUES φ		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) 1.96	3.48	4.96								TEST RUN NUMBERS
R1A099		24	0	20	TAIL	315		2		234	233								
R1A100		28	0	20	TAIL	315		2		231	232								

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

CP

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

α OR β SCHEDULES

MSFC - Form 263-2 (Rev. May 1973)

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT: EXTERNAL TANK - T_{12}

GENERAL DESCRIPTION: EXTERNAL OXYGEN - HYDROGEN TANK WITH OGIVE NOSE AND SEMI-ELIPTICAL TAIL. BEGINNING AT MODEL TANK STATION 0.927 AND ENDING AT STATION 6.522

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000041B

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE
Length	1865 in.	5.595 in.
Max. Width	324 in.	0.972 in.
Fineness Ratio	5.756 in.	5.756 in.
Max. Cross-Sectional	572.555 ft^2	0.742 $in.^2$
Base	572.555 ft^2	0.742 $in.^2$
WL OF TANK CENTERLINE	400 in.	1.200 in.

TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_5

GENERAL DESCRIPTION: FORWARD ORBITER/ET ATTACH STRUCTURE

(2 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL72-000088D

ALL DIMENSIONS IN INCHES MODEL SCALE

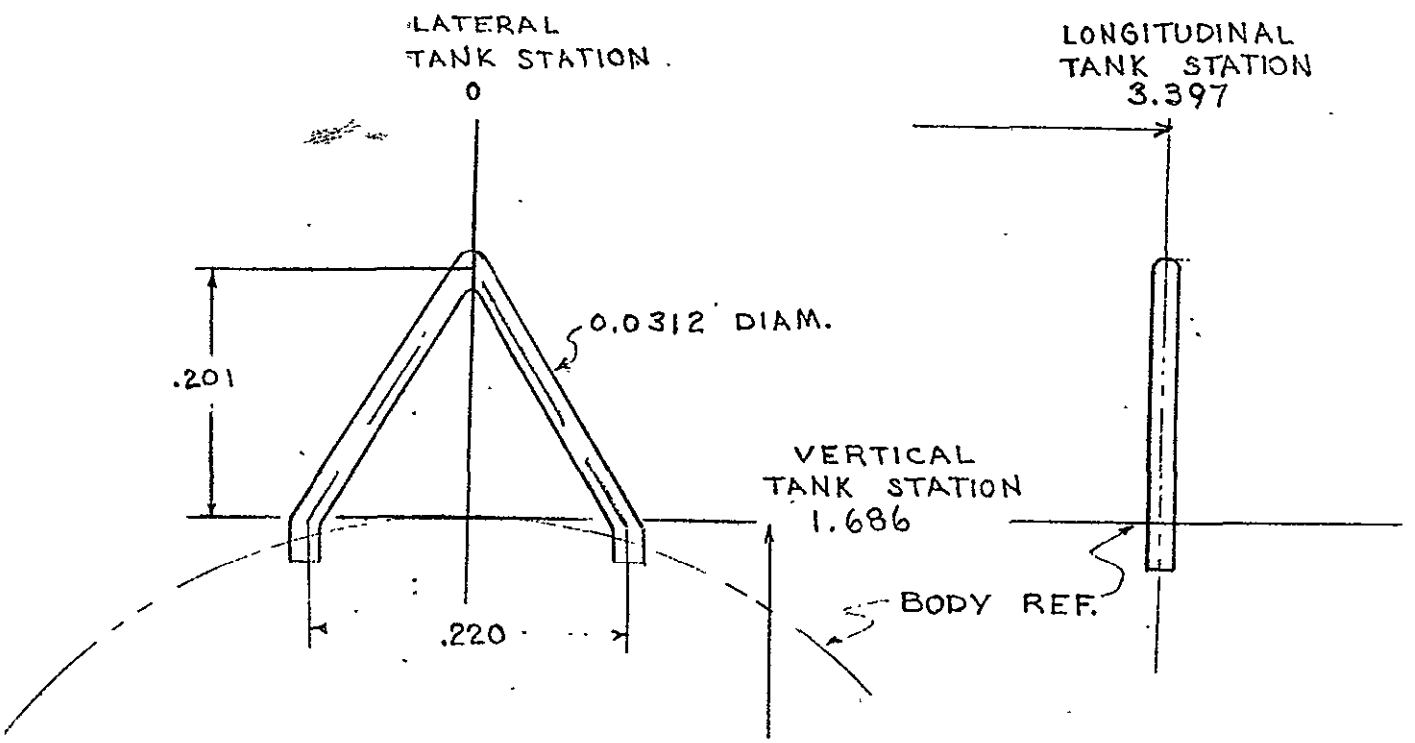


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_6

GENERAL DESCRIPTION: LEFT REAR ORBITER/ET ATTACH STRUCTURE (2 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

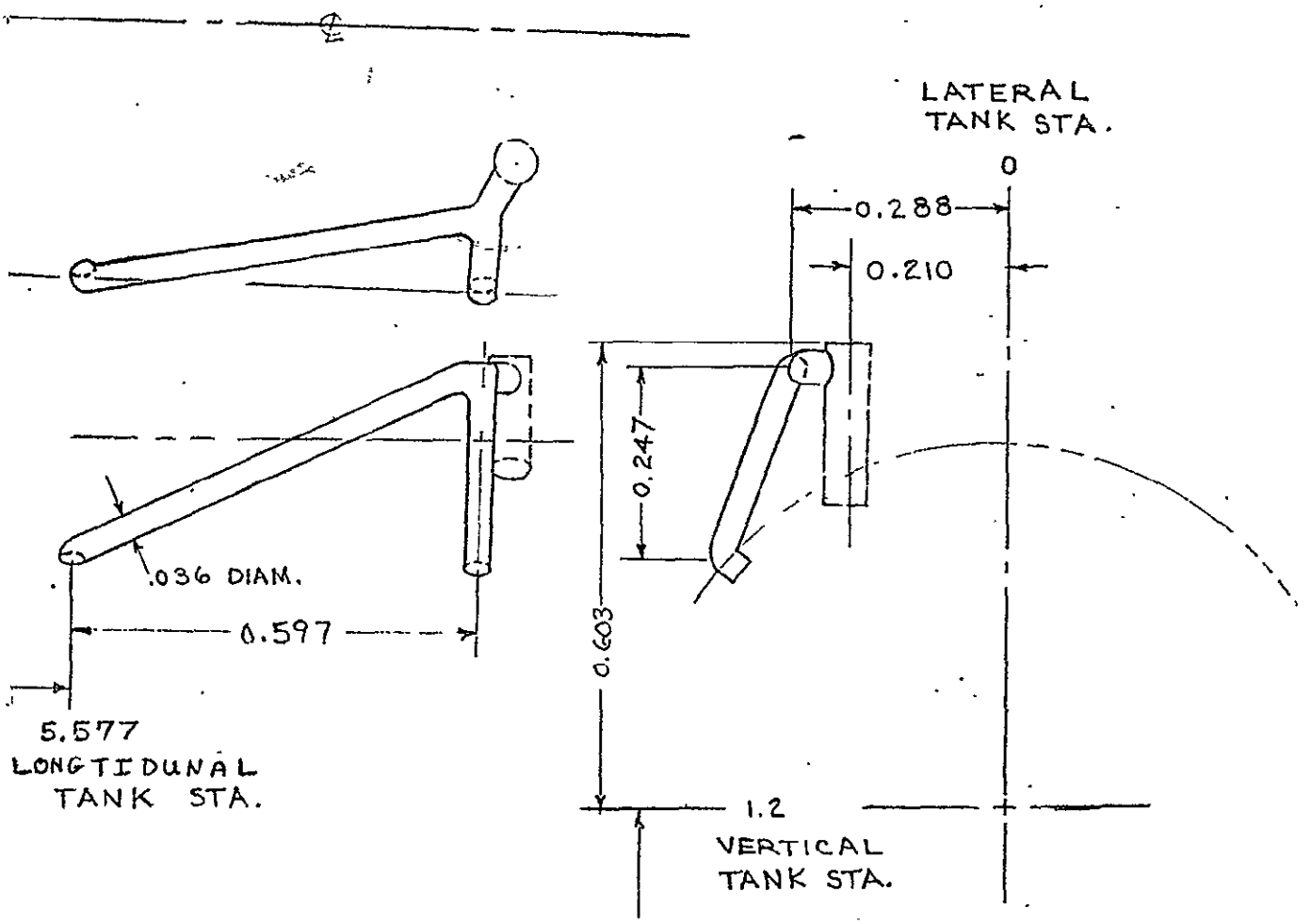


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_7

GENERAL DESCRIPTION: RIGHT REAR ORBITER/ET ATTACH STRUCTURE (3 MEMBERS)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

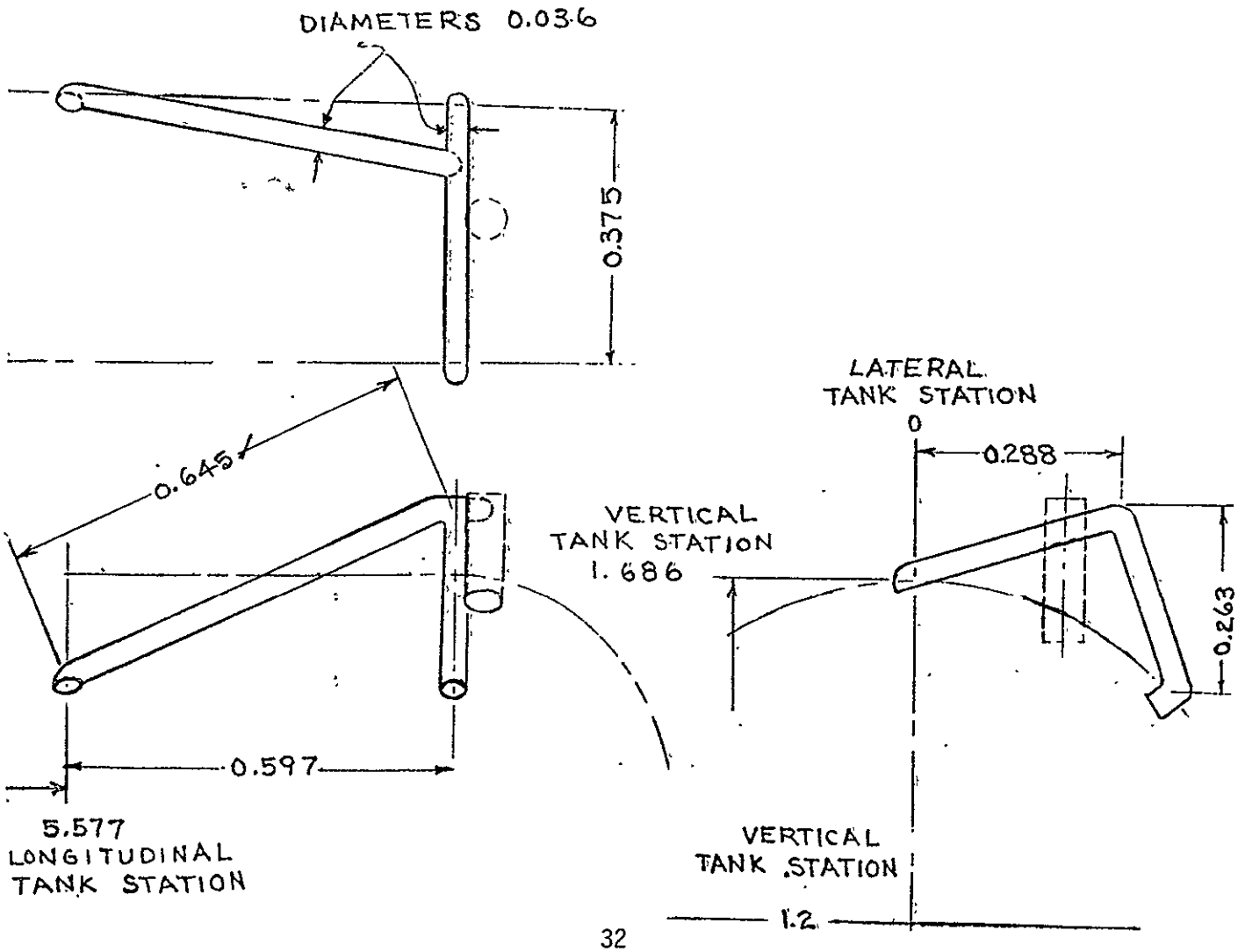


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_8

GENERAL DESCRIPTION: FORWARD SRB/ET ATTACH STRUCTURE (ET PORTION TESTED ONLY)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL77-000051A

ALL DIMENSIONS IN INCHES MODEL SCALE

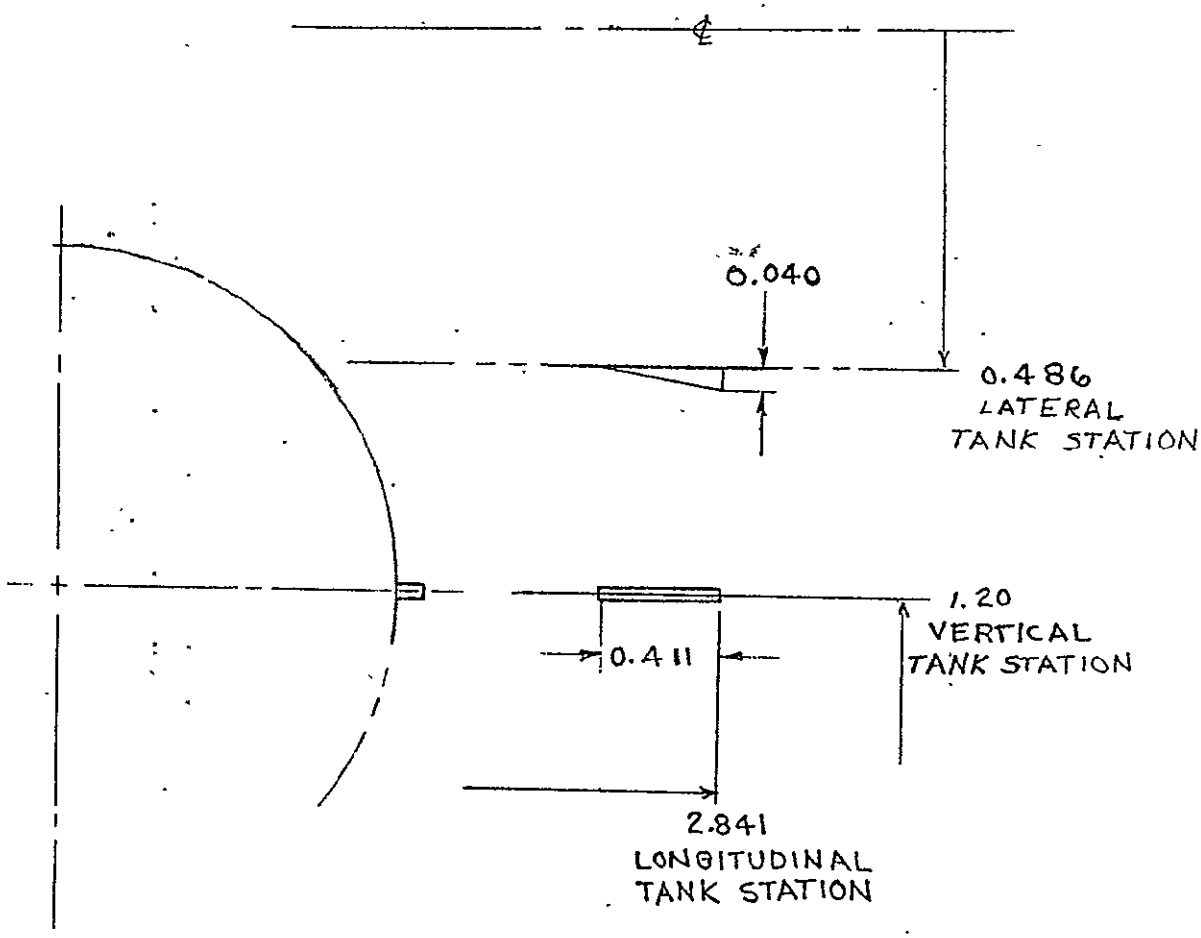


TABLE III. (Continued)

MODEL COMPONENT: ATTACH STRUCTURE - AT_9

GENERAL DESCRIPTION: AFT SRB/ET ATTACH STRUCTURE (3 MEMBERS) (ET PORTION TESTED ONLY)

MODEL SCALE: 0.003

REFERENCE DRAWING: VL72-000106

ALL DIMENSIONS IN INCHES MODEL SCALE

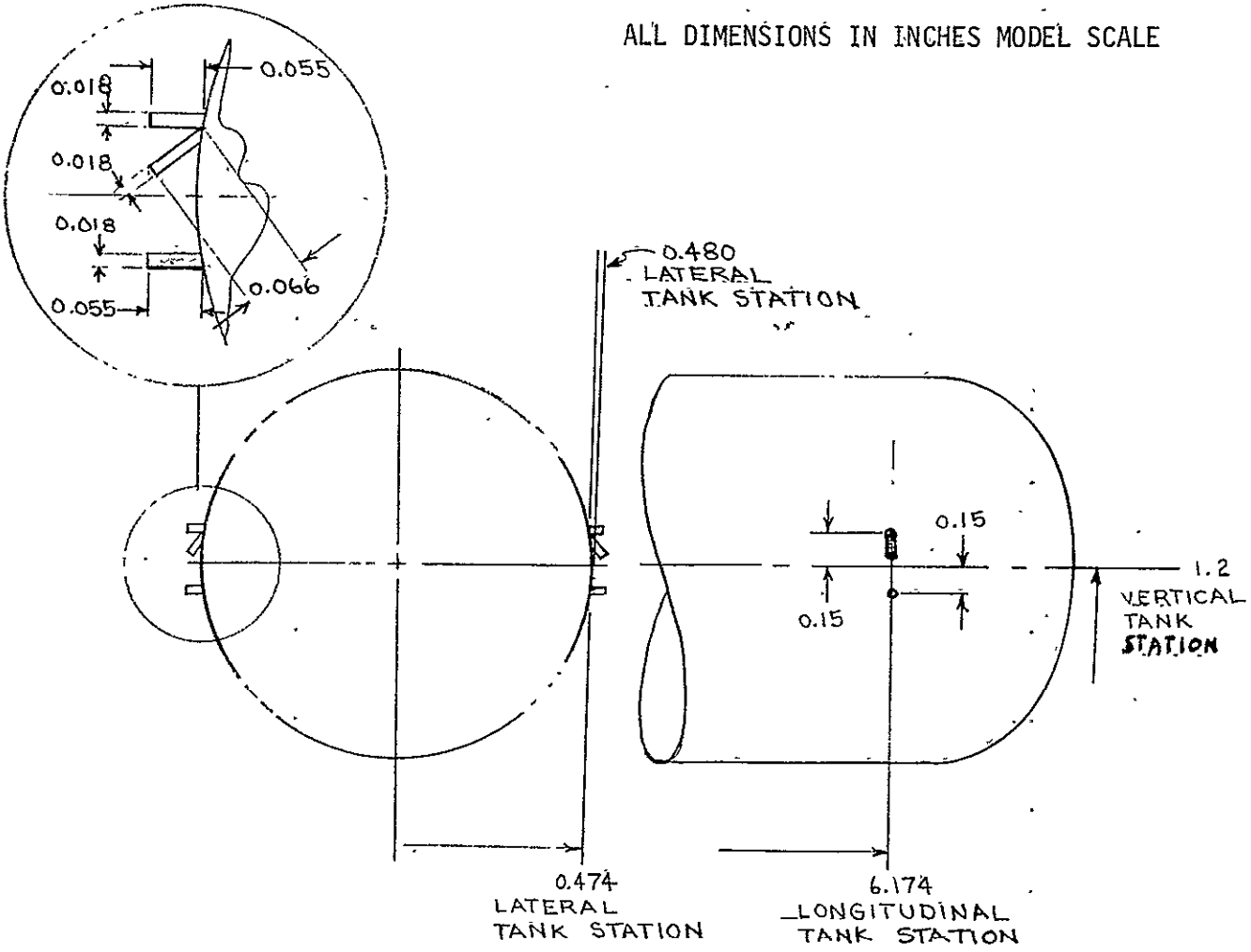


TABLE III. (Continued)

MODEL COMPONENT: LOX VENT LINE FAIRING - PT_T

GENERAL DESCRIPTION: VENT LINE ALONG UPPER RIGHT SIDE OF ET OGIVE NOSE BEGINNING AT MODEL STATIONS X_T = 0.927, Y_T = 0, AND Z_T = 1.2; TERMINATING AT X_T = 2.841, Y_T = 0.162, Z_T = 1.658

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE
Length	638 in.	1.914 in.
Max. Width	17.7 in.	0.053 in.
Max. Depth	9.3 in.	0.028 in.
Radial Position	19 1/2°	19 1/2°

TABLE III. (Continued)

MODEL COMPONENT: LOX FEED LINE - PT_2

GENERAL DESCRIPTION: LONGITUDINAL FUEL LINE ALONG UPPER RIGHT SIDE OF ET BEGINNING AT MODEL STATIONS X_T = 2.841, $-Y_T$ = 0.194, AND Z_T = 1.645; TERMINATING AT X_T = 6.116, $-Y_T$ = 0.194, AND Z_T = 1.645

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE
Length	1092 in.	3.275 in.
Max. Width	30.7 in.	0.092 in.
Max. Height	28 in.	0.084 in.
Radial Position	23 1/2°	23 1/2°

TABLE III. (Continued)

MODEL COMPONENT: LH_2 FEED LINE - PT_3

GENERAL DESCRIPTION: LONGITUDINAL FUEL LINE ALONG UPPER LEFT SIDE OF ET

BEGINNING AT MODEL STATIONS X_T = 2.841, Y_T = 0.275, AND Z_T = 1.601

TERMINATING AT STATIONS X_T = 6.116, Y_T = 0.275, AND Z_T = 1.601

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000031A

DIMENSIONS:	THEORETICAL FULL-SCALE	THEORETICAL MODEL SCALE
Length	1092 in.	3.275 in.
Max. Width	25.7 in.	0.077 in.
Max. Depth	14.7 in.	0.044 in.
Radial Position	-33°	-33°

TABLE III. (Continued)

MODEL COMPONENT: LOX FEED LINE - FL_1

GENERAL DESCRIPTION: 18-INCH DIAMETER VERTICAL FUEL LINE AT AFT END OF ET ON RIGHT

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

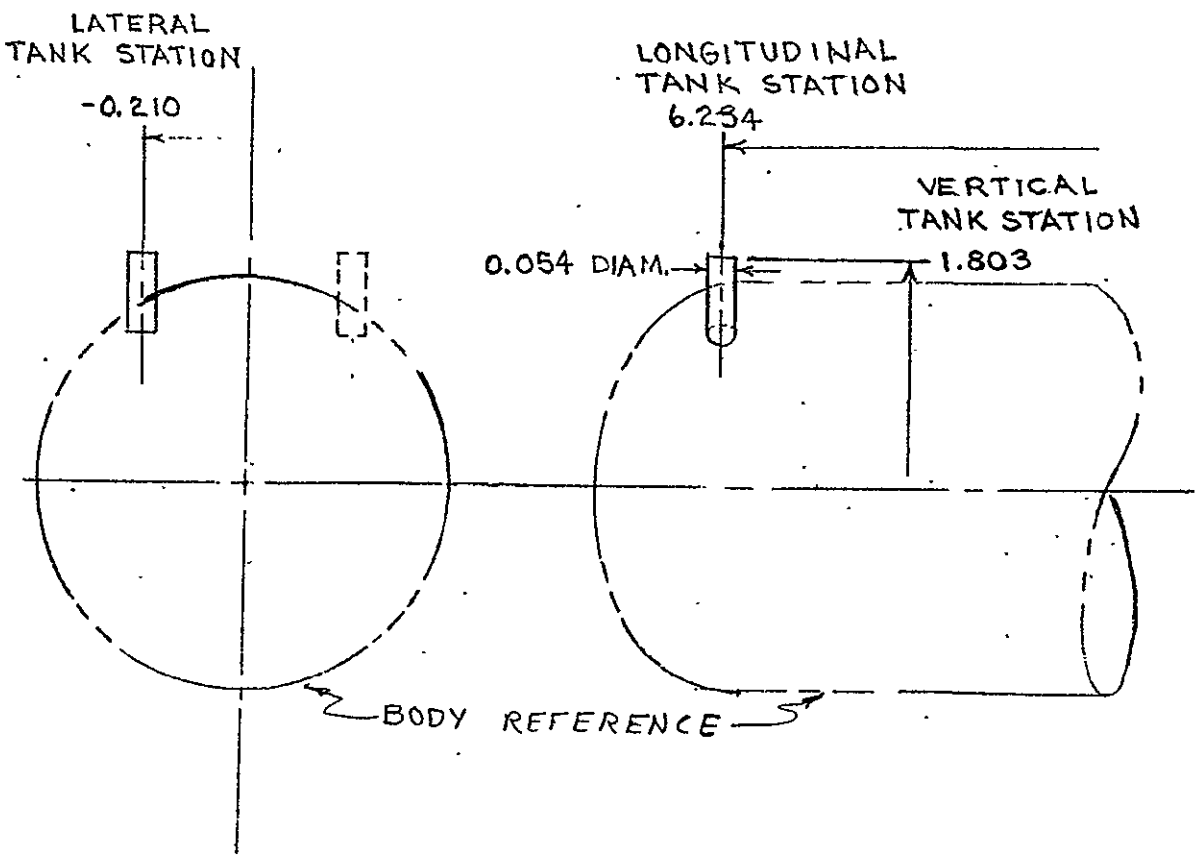


TABLE III. (Continued)

MODEL COMPONENT: LH_2 FEED LINE - FL_2

GENERAL DESCRIPTION: 18-INCH DIAMETER VERTICAL FUEL LINE AT AFT END OF ET ON LEFT

MODEL SCALE: 0.003

REFERENCE DRAWING: VL78-000050

ALL DIMENSIONS IN INCHES MODEL SCALE

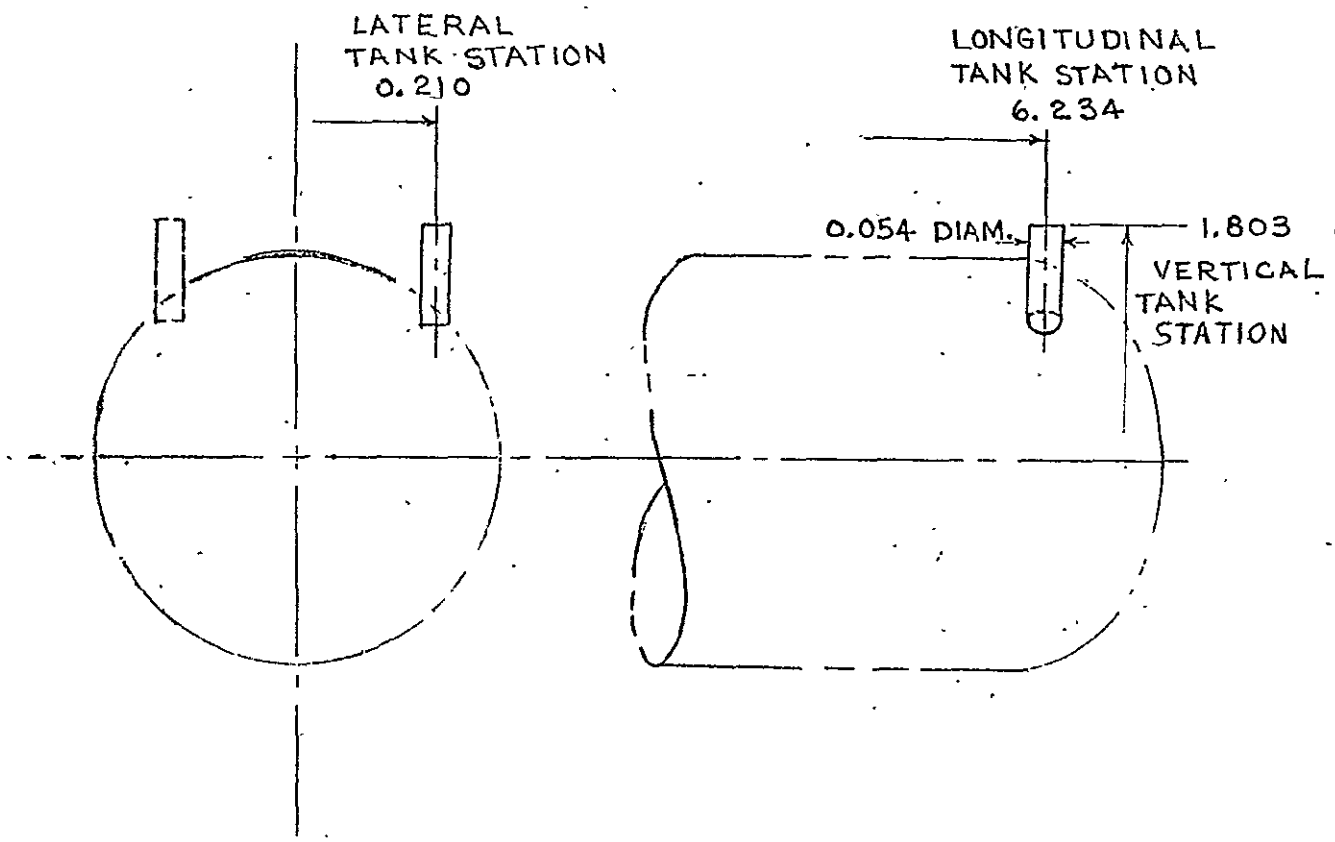


TABLE III. (Concluded)

MODEL COMPONENT: ATTACH STRUCTURE - FR_6

GENERAL DESCRIPTION: AFT ET/ORBITER CROSS MEMBER (CROSS SECTION 11 IN. x 15 IN.)

LOCATED AT ET-STATION 2050.5

MODEL SCALE: 0.003

REFERENCE DRAWING: FIGURE 3, MARTIN MARIETTA MEMO SA-A-74-9

ALL DIMENSIONS IN INCHES MODEL SCALE

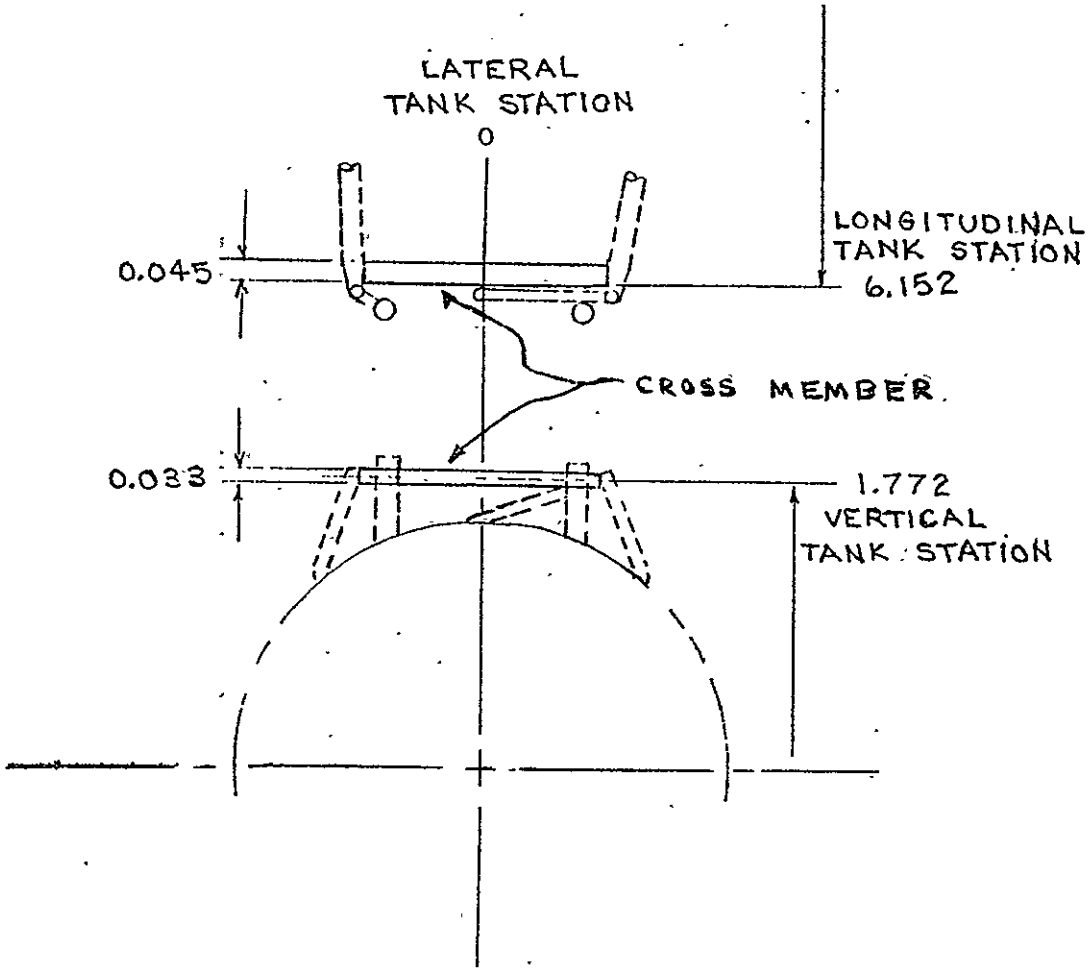


TABLE IV. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL

*inoperable orifice

SIDE-MOUNTED ET (T_2 CONFIGURATION)

RADIAL LOCATION θ (deg.)	RADIAL ROW NO.	LONG STA. NO.	LONG. STA. X (in.)	X/ℓ_B											
				0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
				0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335
				1	2	3	4	5	6	7	8	9	10	11	12
0	A			1	2	3	4	5	*6	*7	8	9	10	11	12
14	B				13	14	15	16	*17	*18	19	20	21	22	23
24	C											24	25	26	27
45	D			28	29	30	31	32	33	34	35	36	37	38	39
67½	E				40	41	42	43	44	45	46	47	48	49	50
90	F			51	52	53	54	55	56	57	58	59	60	61	62
112½	G				63	64	65	66	67	68	69	70	71	72	73
135	H			74	75	76	77	78	79	80	81	82	83	84	85
157½	I				86	87	88	89	90	91	92	93	94	95	96
180	J			97	98	99	100	101	102	103	104	105	106	107	108
202½	K				109	110	111	112	113	114	115	116	117	118	119
225	L			120	121	122	123	124	125	126	127	128	129	130	131
247½	M				132	133	134	135	136	137	138	139	140	141	142
270	N			143	144	145	146	147	148	149	150	151	152	153	154
292½	O				155	156	157	158	159	160	161	162	163	164	165
315	P			166	167	168	169	170	171	172	173	174	175	176	177
326	Q											178	179	180	181
346	R				182	183	184	185	*186	*187	188	189	190	191	192

TABLE IV. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL (CONCLUDED)

SIDE-MOUNTED ET (T_2 CONFIGURATION)

*inoperable orifice

LONG. STA. X (in.) / X/L		0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
LONG. STA. No.		0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335
CIRCUM. ROW		1	2	3	4	5	6	7	8	9	10	11	12
CIRCUM. STA θ (deg.)													
0	A	1	2	3	4	5	*6	*7	8	9	10	11	12
14	B	X	13	14	15	16	*17	*18	19	20	21	22	23
24	C	X	X	X	X	X	X	X	X	24	25	26	27
45	D	28	29	30	31	32	33	34	35	36	37	38	39
67½	E	X	40	41	42	43	44	45	46	47	48	49	50
90	F	51	52	53	54	55	56	57	58	59	60	61	62
112½	G	X	63	64	65	66	67	68	69	70	71	72	73
135	H	74	75	76	77	78	79	80	81	82	83	84	85
157½	I	X	86	87	88	89	90	91	92	93	94	95	96
180	J	97	98	99	100	101	102	103	104	105	106	107	108
202½	K	X	109	110	111	112	113	114	115	116	117	118	119
225	L	120	121	122	123	124	125	126	127	128	129	130	131
247½	M	X	132	133	134	135	136	137	138	139	140	141	142
270	N	143	144	145	146	147	148	149	150	151	152	153	154
292½	O	X	155	156	157	158	159	160	161	162	163	164	165
315	P	166	167	168	169	170	171	172	173	174	175	176	177
326	Q	X	X	X	X	X	X	X	X	178	179	180	181
346	R	X	182	183	184	185	*186	*187	188	189	190	191	192

TABLE V. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL

inoperable orifice

TAIL-MOUNTED ET (T_1 CONFIGURATION)

RADIAL LOCATION θ (deg.)	RADIAL ROW NO.	LONG. STA. NO.	LONG. STA. X (in.)	X/ℓ_B											
					0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
					0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335
					1	2	3	4	5	6	7	8	9	10	11	12
0	A				1	2	3	4	5	6	7	8	9	10	11	12
14	B					13	14	15	16	17	18	19	20	21	22	23
24	C												24	25	26	27
45	D				28	29	30	31	32	33	34	35	36	37	38	39
67½	E					40	41	42	43	44	45	46	47	48	49	50
90	F				51	52	53	54	*55	56	57	58	59	60	61	62
112½	G					63	64	65	66	67	68	69	70	71	72	73
135	H				74	75	76	77	78	79	80	81	* 82	83	84	85
157½	I					86	87	88	89	90	91	92	93	94	95	96
180	J				97	98	99	100	101	102	103	104	105	106	107	108
202½	K					109	110	111	112	113	114	115	116	117	118	119
225	L				120	121	122	123	124	125	126	127	128	129	130	131
247½	M					132	133	134	135	136	137	138	139	140	141	142
270	N				143	144	145	146	*147	148	149	150	151	152	153	154
292½	O					155	156	157	158	159	160	161	162	163	164	165
315	P				166	167	168	169	170	171	172	173	174	175	176	177
326	Q												178	179	180	181
346	R					182	183	184	185	186	187	188	189	190	191	192

TABLE V. TABULATED DATA PRINT-OUT FORMAT AND CORRELATION BETWEEN TUBE NUMBER, ORIFICE NUMBER, AND ORIFICE LOCATION ON MODEL (CONCLUDED)

TAIL-MOUNTED ET (T_1 CONFIGURATION)

*inoperable orifice

X/L		0.055	0.108	0.162	0.216	0.322	0.518	0.610	0.735	0.860	0.892	0.923	0.954
LONG. STA. X (in.)		0.305	0.605	0.905	1.205	1.800	2.900	3.410	4.110	4.810	4.985	5.160	5.335
LONG. STA. No.		1	2	3	4	5	6	7	8	9	10	11	12
CIRCUM. STA. θ (deg.)	CIRCUM. ROW												
0	A	1	2	3	4	5	6	7	8	9	10	11	12
14	B	X	13	14	15	16	17	18	19	20	21	22	23
24	C	X	X	X	X	X	X	X	X	24	25	26	27
45	D	28	29	30	31	32	33	34	35	36	37	38	39
67½	E	X	40	41	42	43	44	45	46	47	48	49	50
90	F	51	52	53	54	*55	56	57	58	59	60	61	62
112½	G	X	63	64	65	66	67	68	69	70	71	72	73
135	H	74	75	76	77	78	79	80	81	*82	83	84	85
157½	I	X	86	87	88	89	90	91	92	93	94	95	96
180	J	97	98	99	100	101	102	103	104	105	106	107	108
202½	K	X	109	110	111	112	113	114	115	116	117	118	119
225	L	120	121	122	123	124	125	126	127	128	129	130	131
247½	M	X	132	133	134	135	136	137	138	139	140	141	142
270	N	143	144	145	146	*147	148	149	150	151	152	153	154
292½	O	X	155	156	157	158	159	160	161	162	163	164	165
315	P	166	167	168	169	170	171	172	173	174	175	176	177
326	Q	X	X	X	X	X	X	X	X	178	179	180	181
346	R	X	182	183	184	185	186	187	188	189	190	191	192

Table VI.

0.003-SCALE 324-INCH ET REFERENCE DIMENSIONS

DIMENSION	FULL SCALE	MODEL SCALE
Reference Area, S_{ref} (cross-sectional area of ET)	572.555 FT^2	0.742 $IN.^2$
Reference Length, ℓ_{ref} (ET diameter)	324 IN.	0.972 IN.
Reference Span, b_{ref} (ET diameter)	324 IN.	0.972 IN.
Moment Reference Point, MRP (dry weight c.g.)		
XMRP (from nose)	1086.4 IN.	3.259 IN.
YMRP	0	0
ZMRP (model centerline)	400 IN.	1.2 IN.
Base Area, A_b (cross-sectional area of ET)	572.555 FT^2	0.742 $IN.^2$

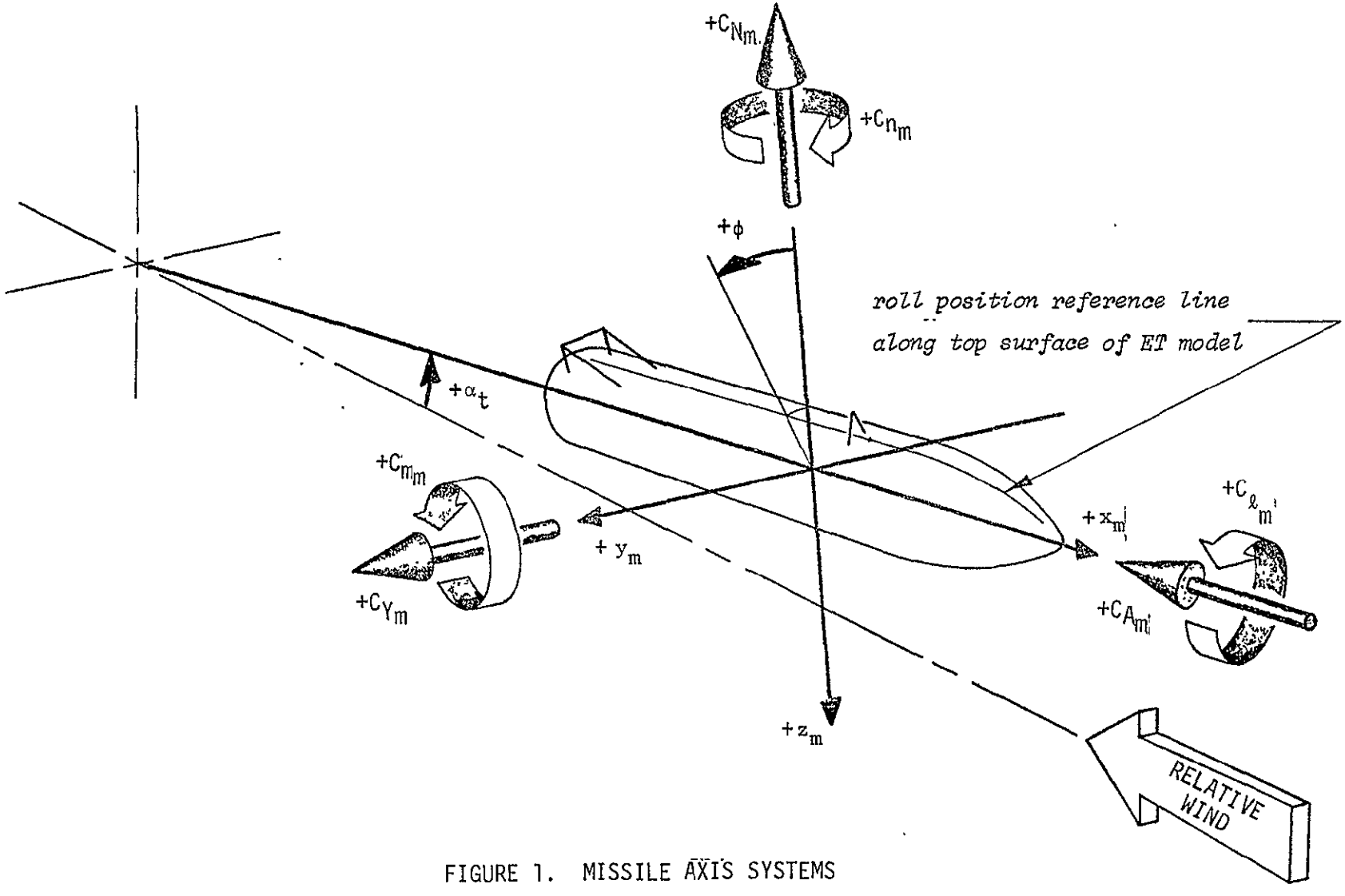
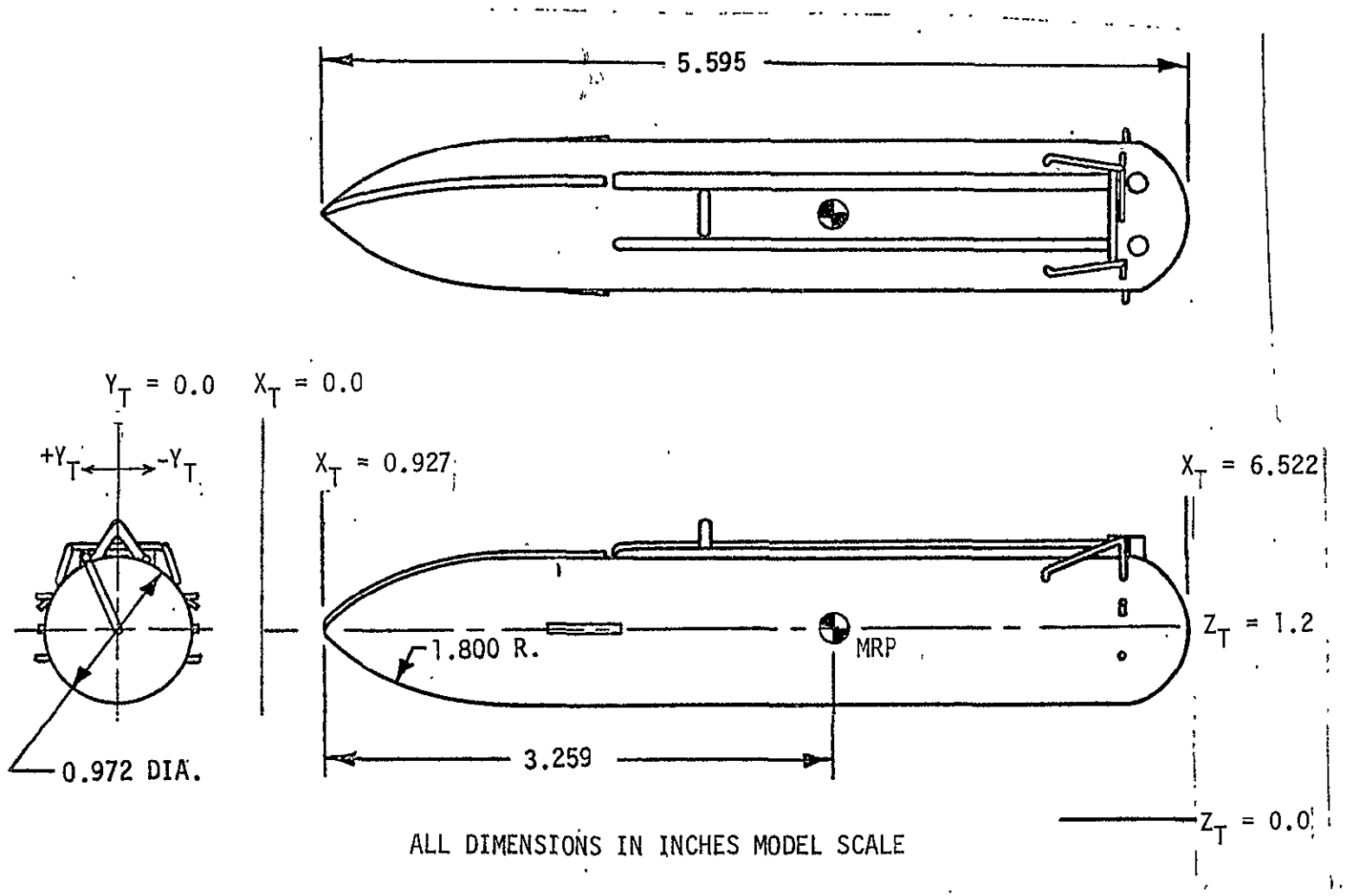
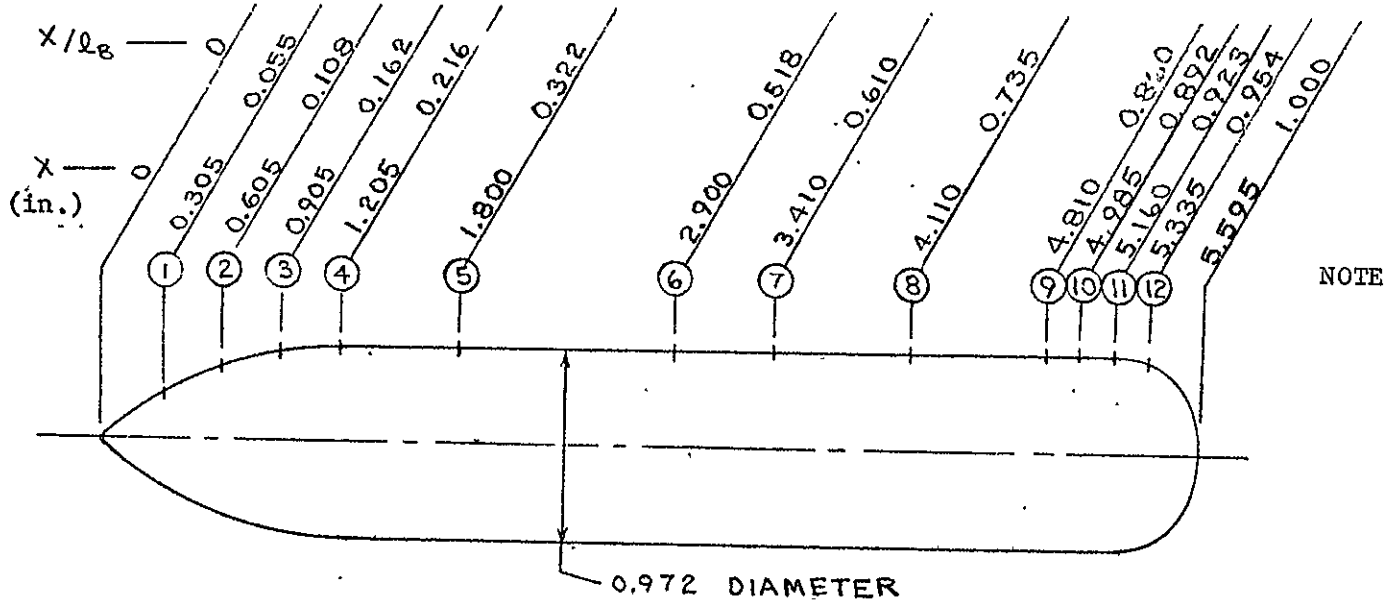


FIGURE 1. MISSILE AXIS SYSTEMS

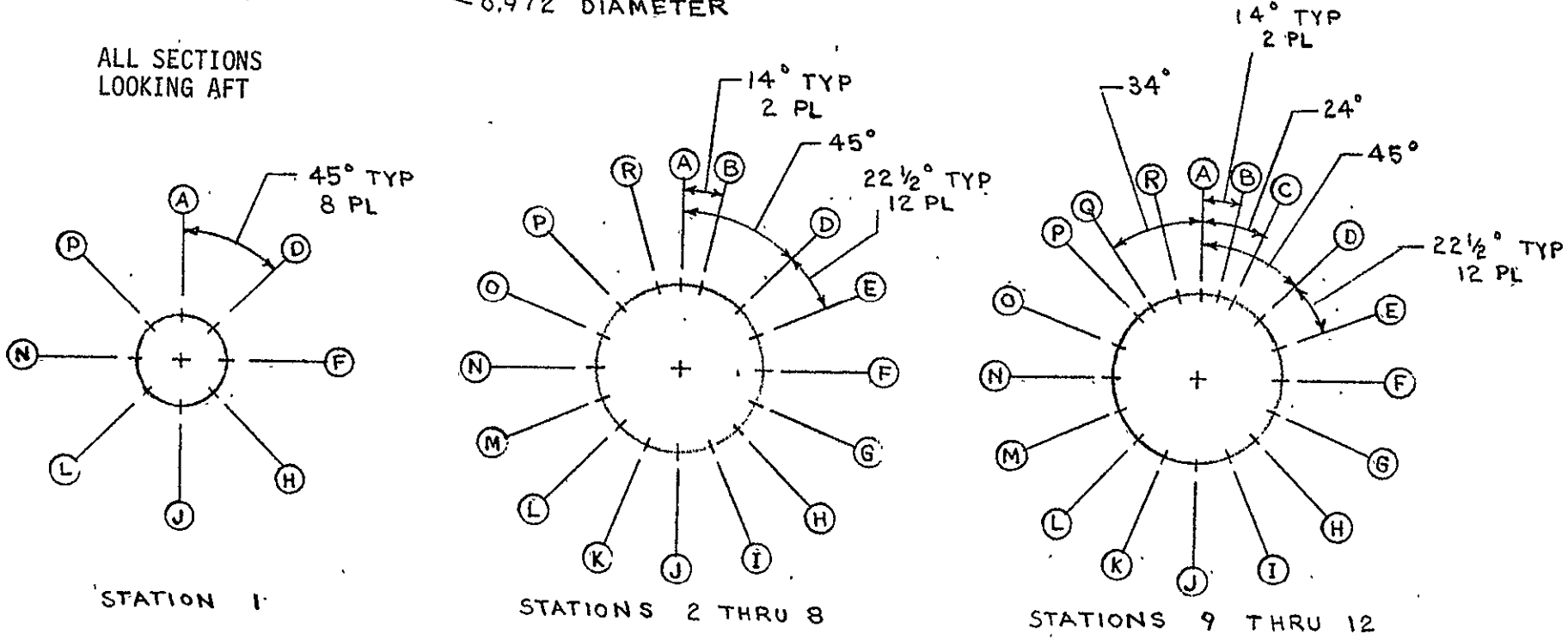


a. GENERAL ARRANGEMENT OF MSFC MODEL NO. 460, CONFIGURATION T_1 EXTERNAL TANK WITH PROTUBERANCES

Figure 2. MODEL SKETCHES

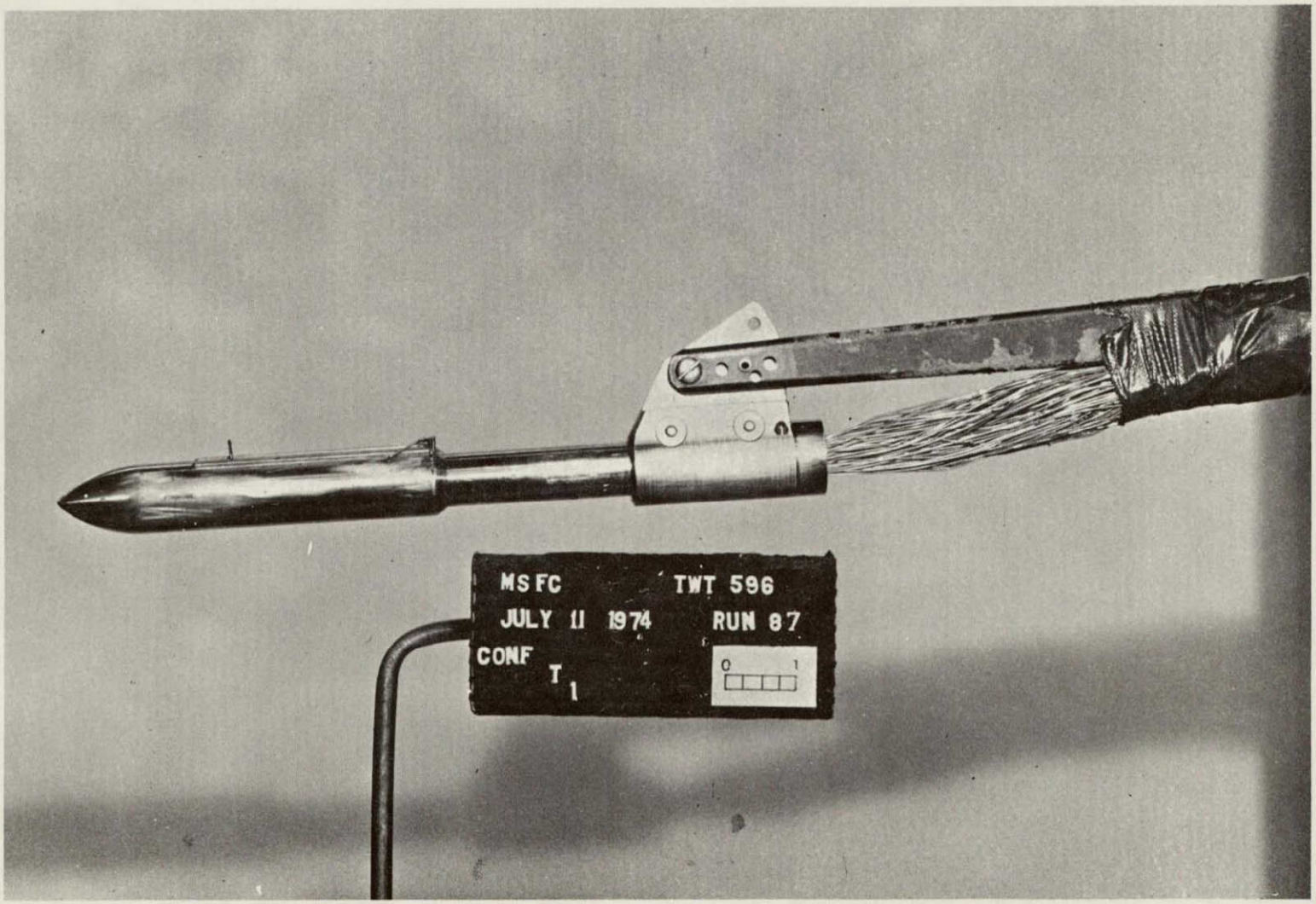


NOTE: ○ Denotes longitudinal and radial location of orifices. (192 total, though some may be missing due to sting cavities or protuberances.



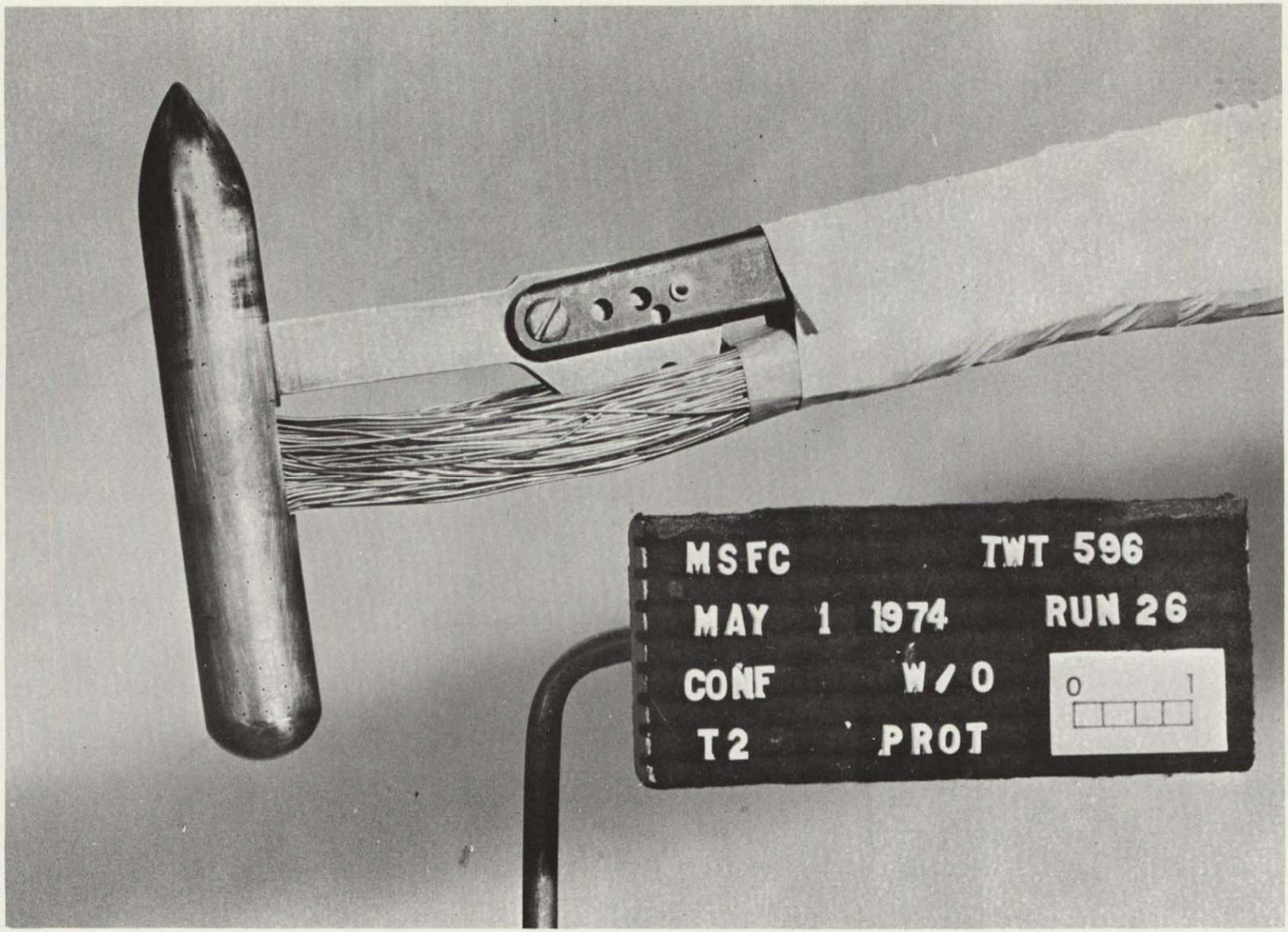
b. EXTERNAL TANK MODEL PRESSURE ORIFICE LOCATIONS

Figure 2. CONCLUDED



EXTERNAL TANK MODEL NO. 460, CONFIGURATION T_1 TAIL-MOUNTED WITH PROTUBERANCES

Figure 3. MODEL PHOTOGRAPHS



b. EXTERNAL TANK MODEL NO. 460, CONFIGURATION T_2 SIDE-MOUNTED WITHOUT PROTUBERANCES

Figure 2. CONCLUDED

DATA FIGURES

VOLUME 1--Pages 1-720
VOLUME 2--Pages 721-1200
VOLUME 3--Pages 1201-2000
VOLUME 4--Pages 2001-2740

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.380	1.960
□	.108		
	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

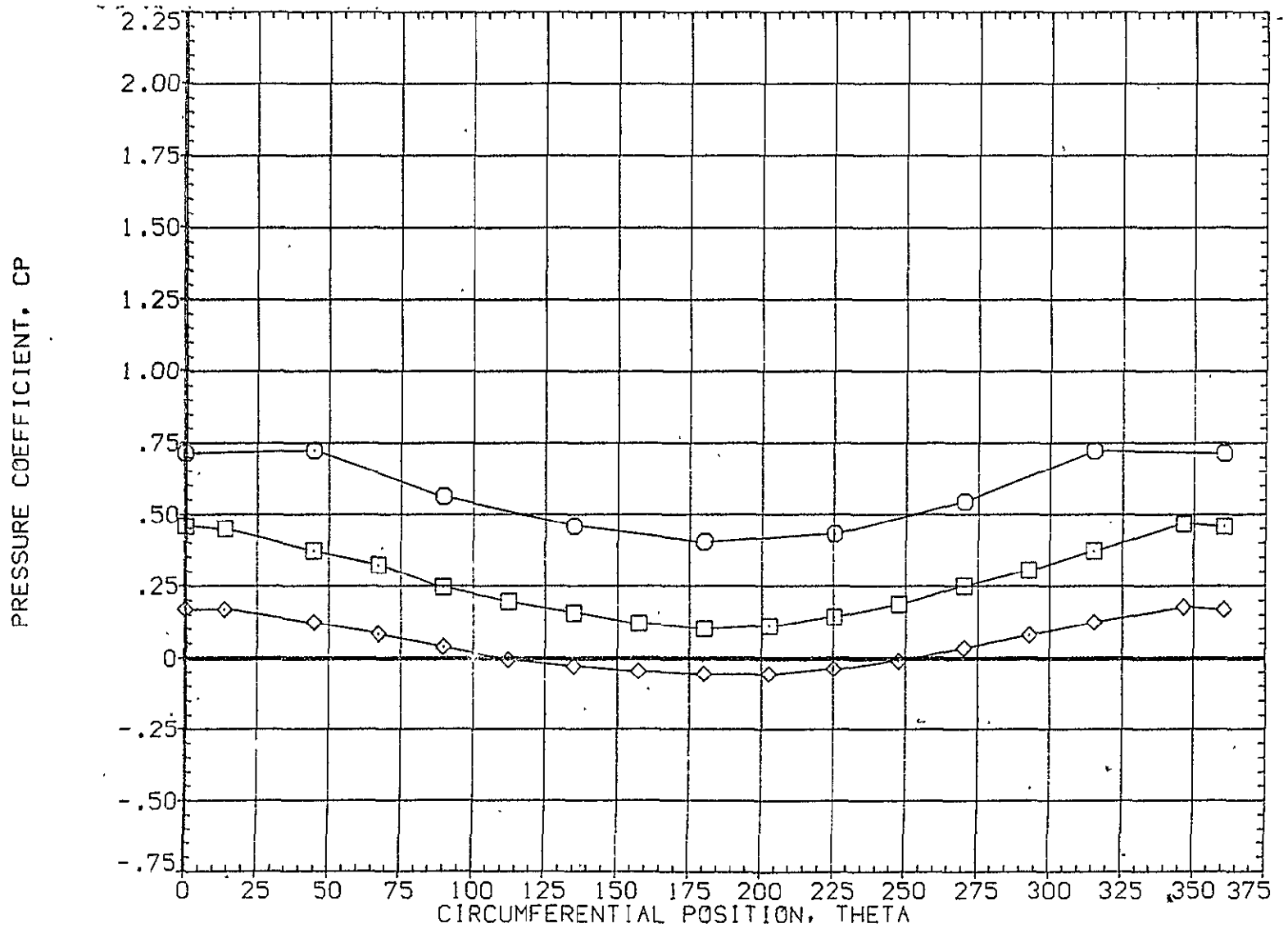


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.380	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

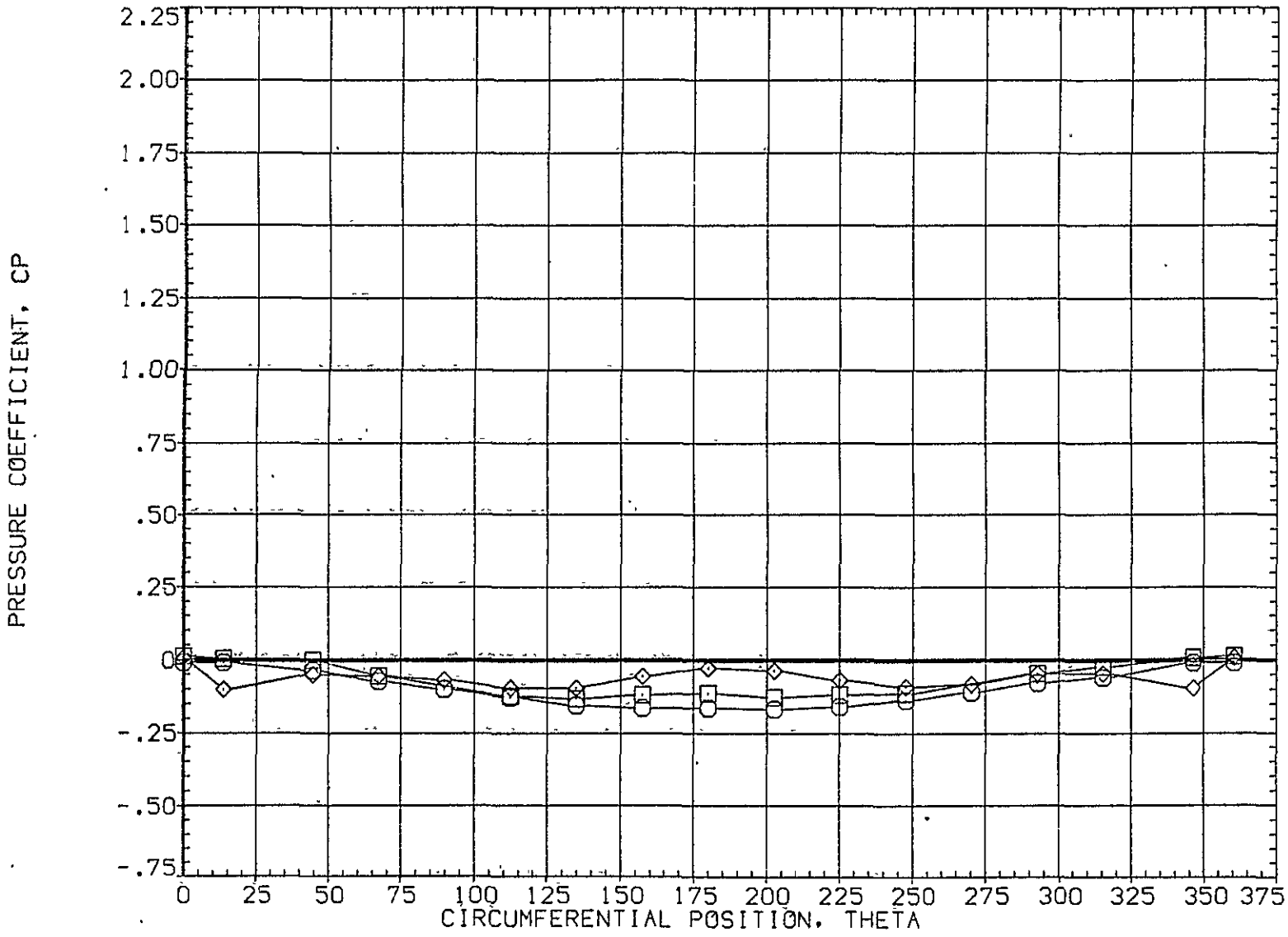

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.380	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

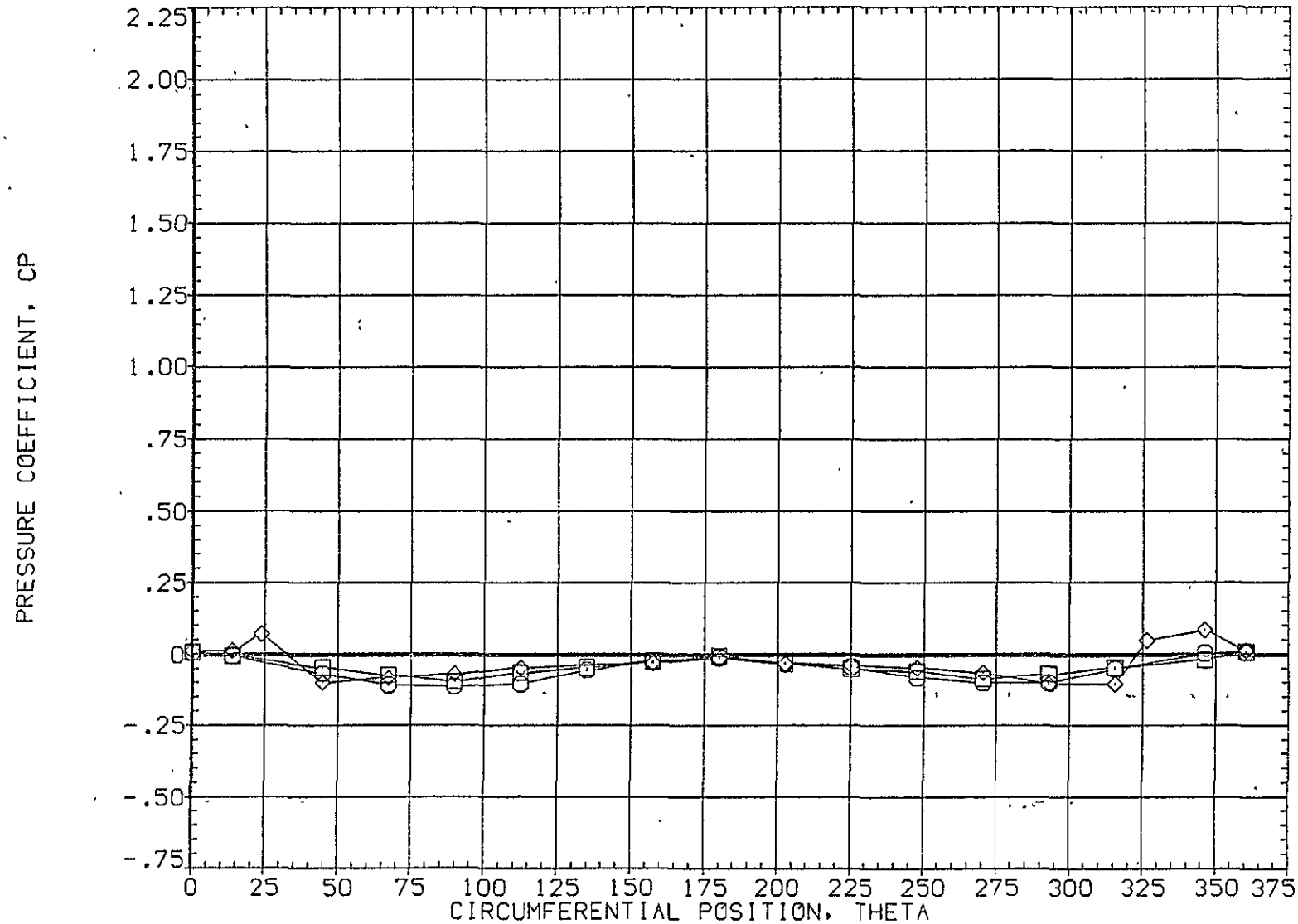

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.380	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

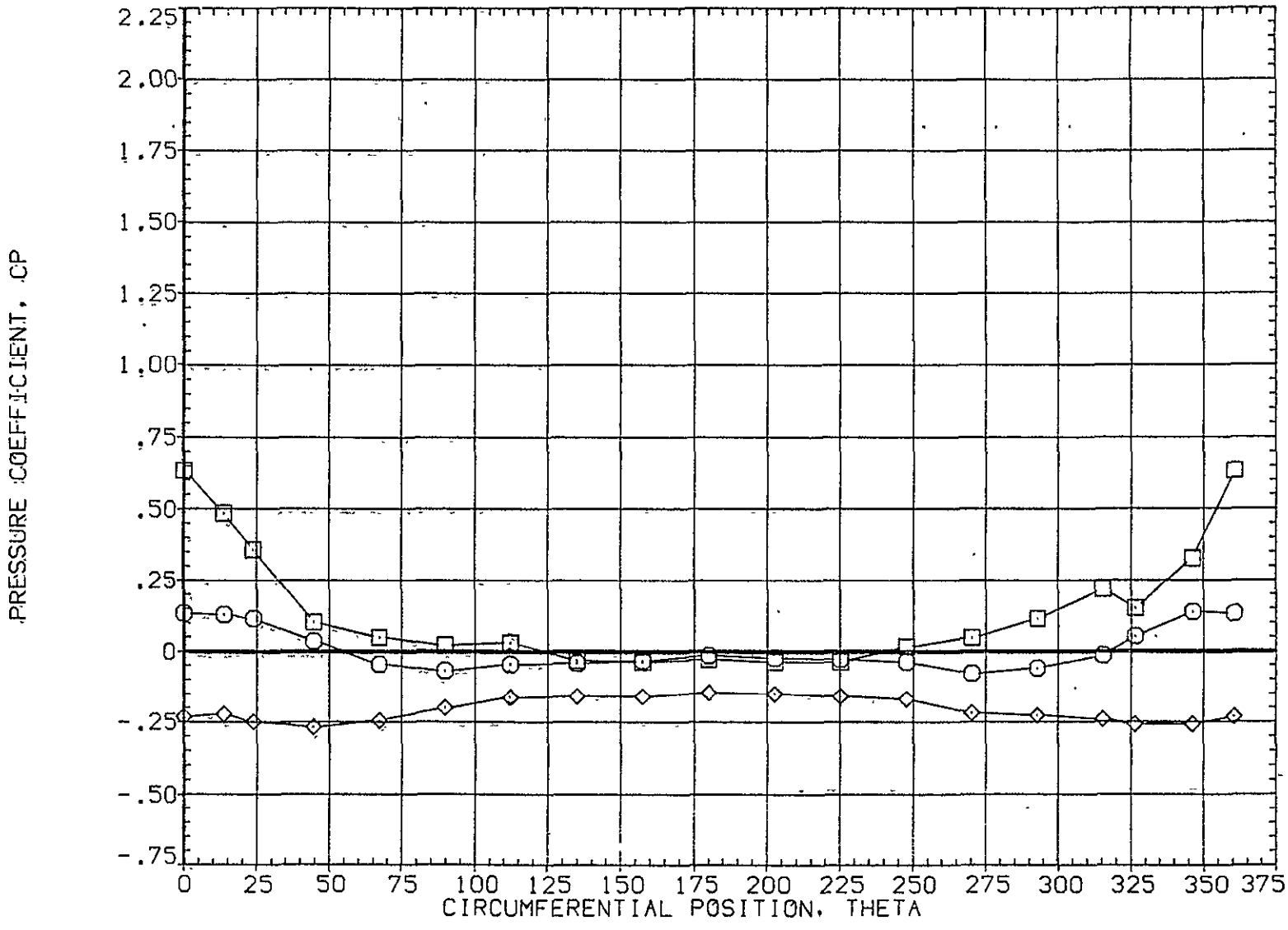

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

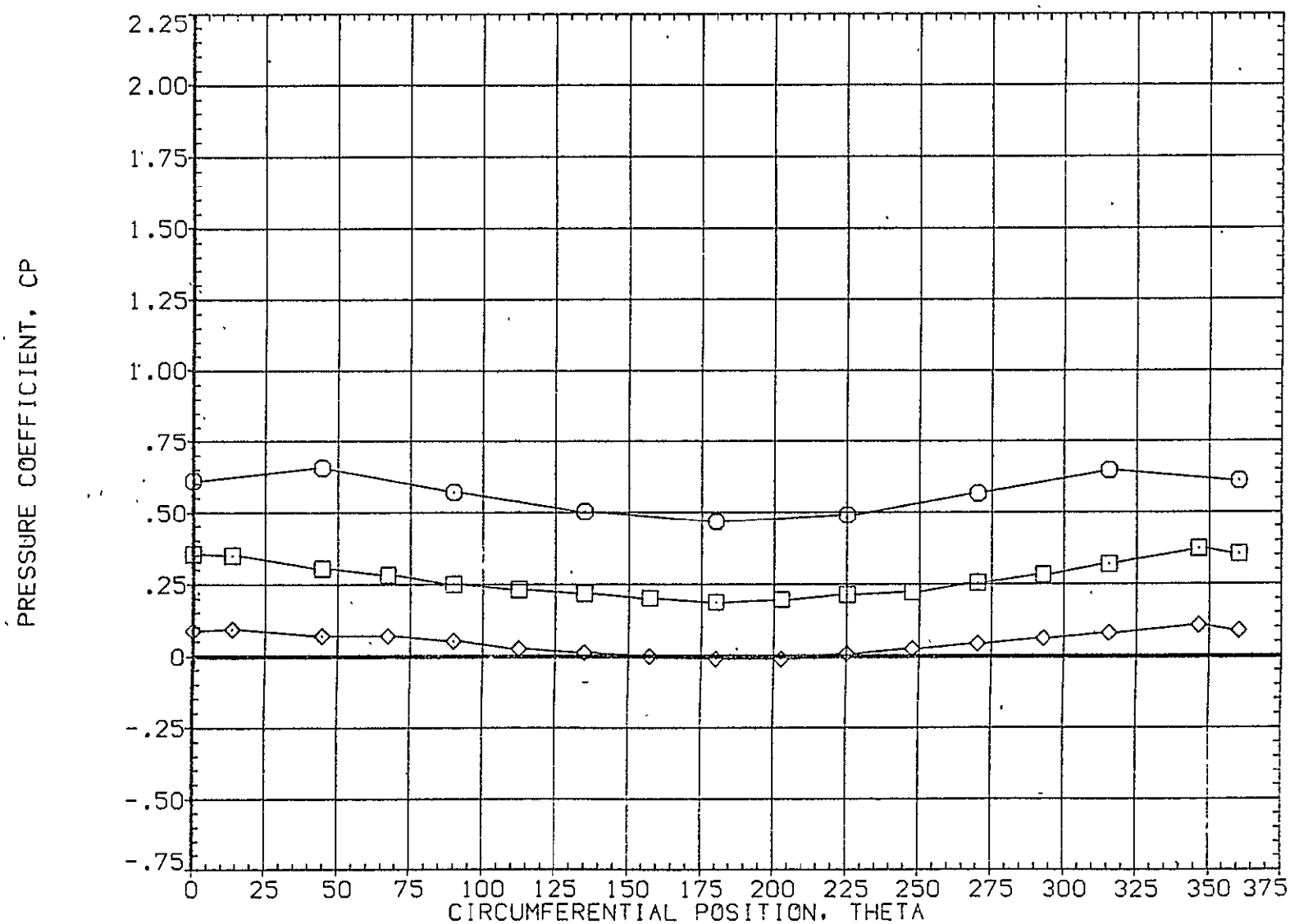

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

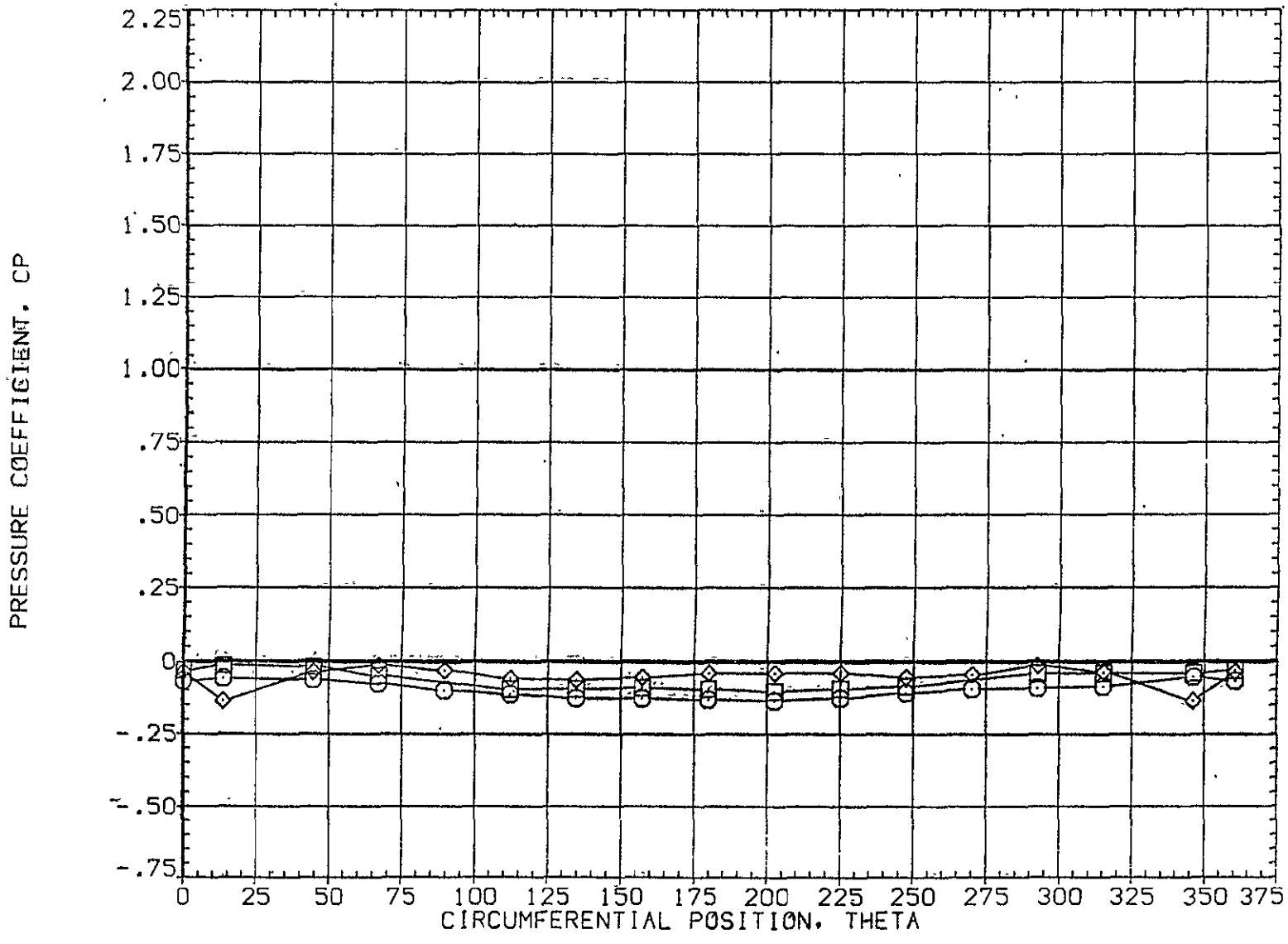

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

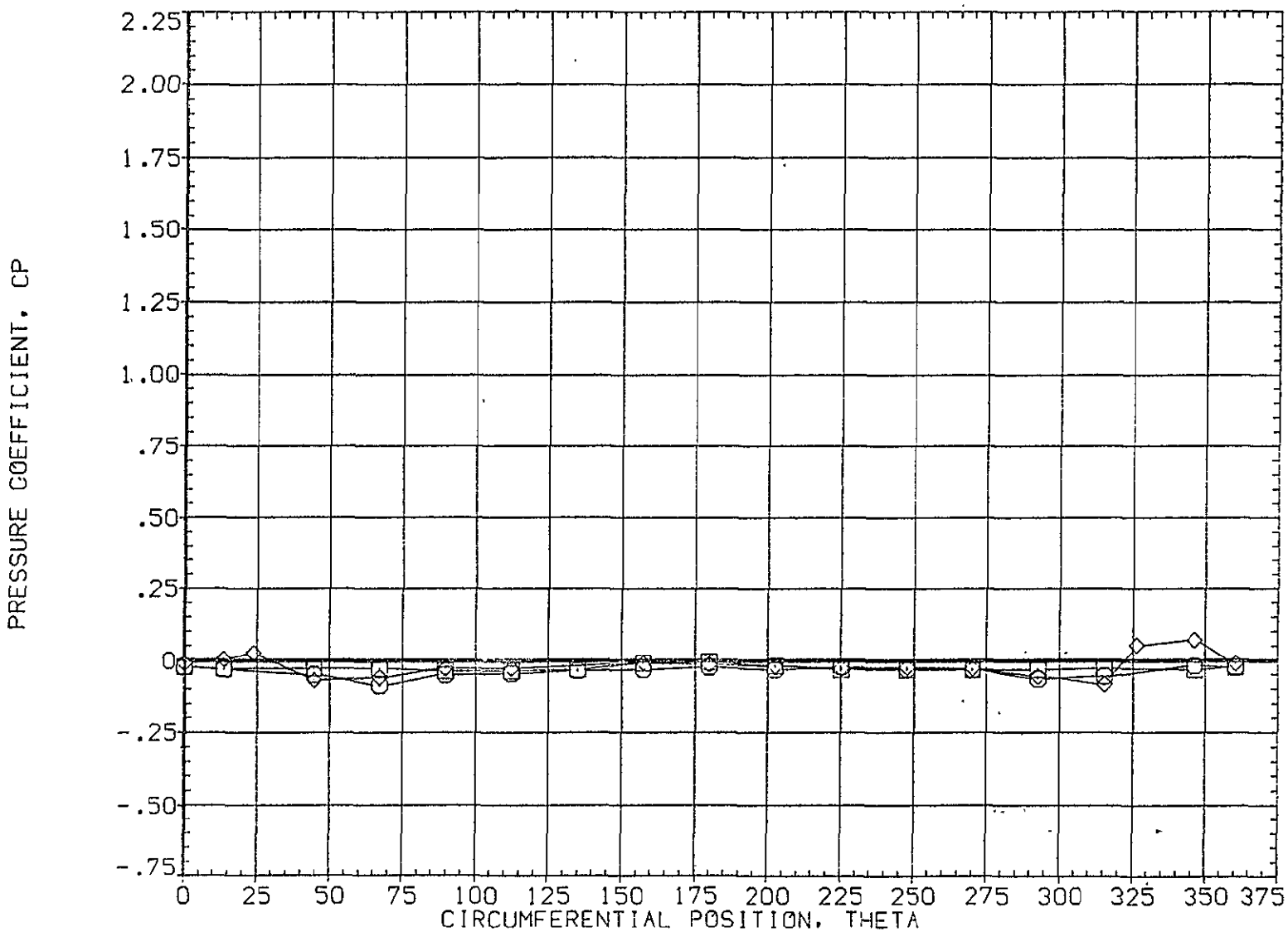

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES.

MSFC 596 (TA-2F) MCRØ200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

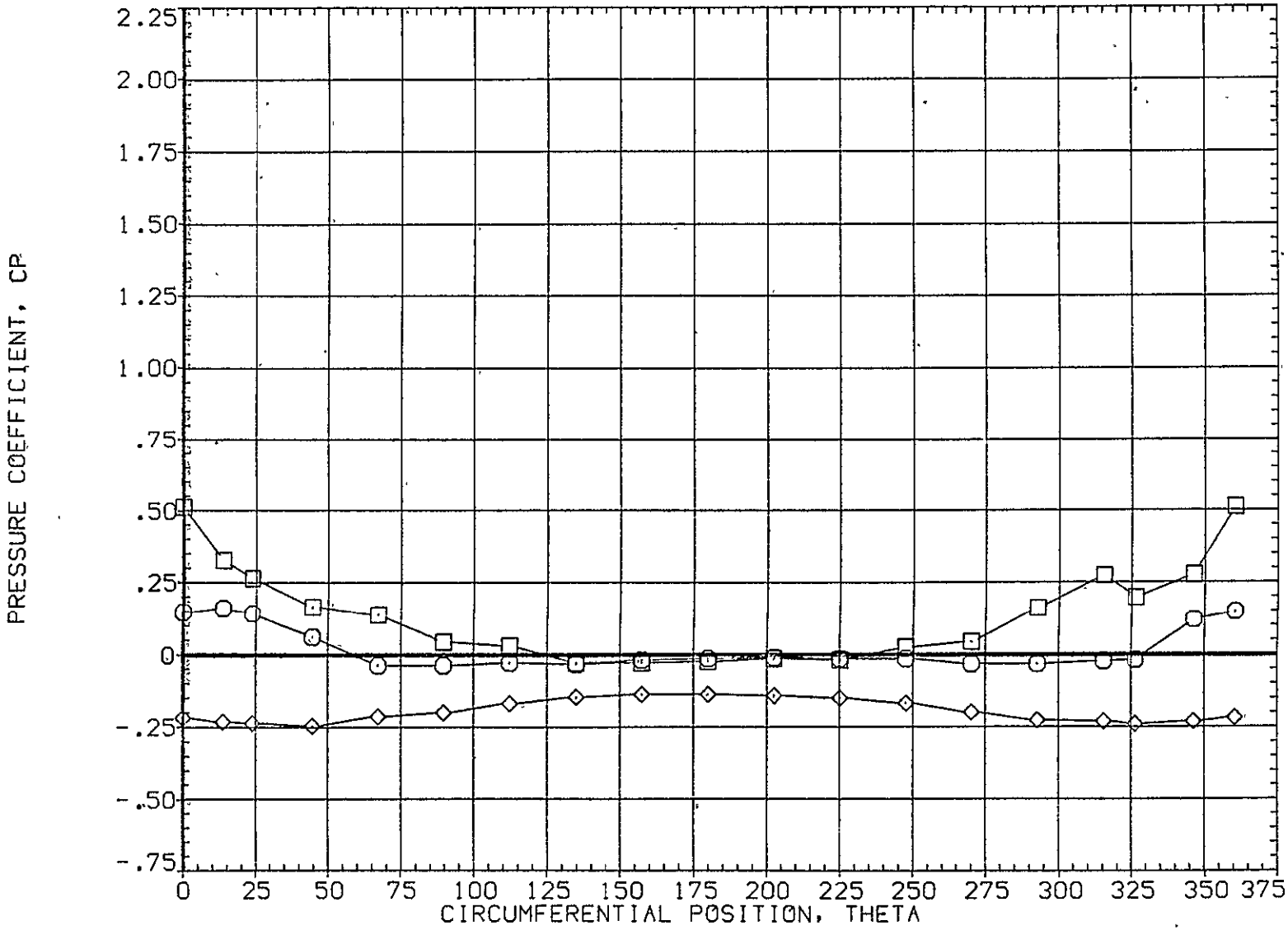

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

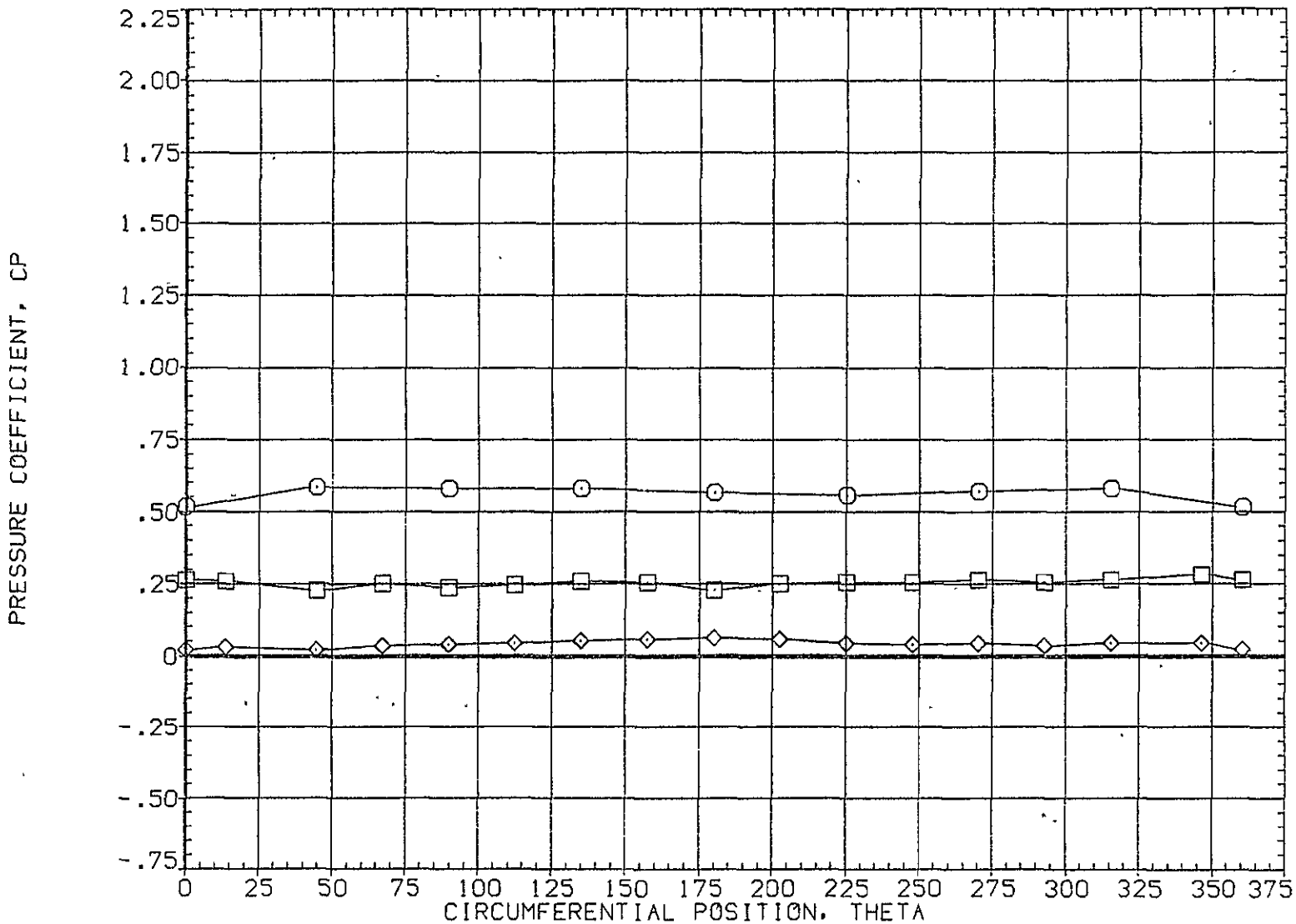

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

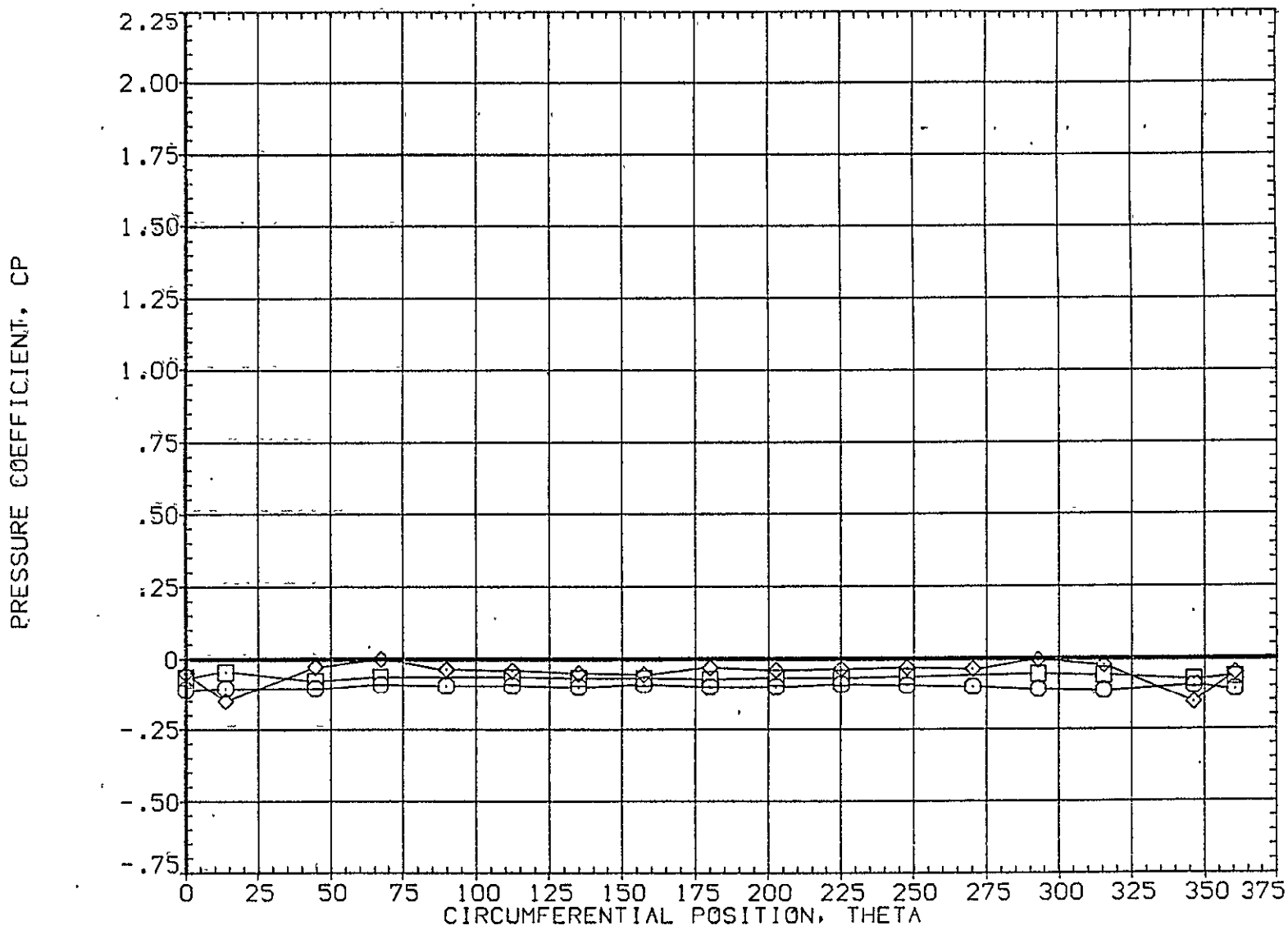

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

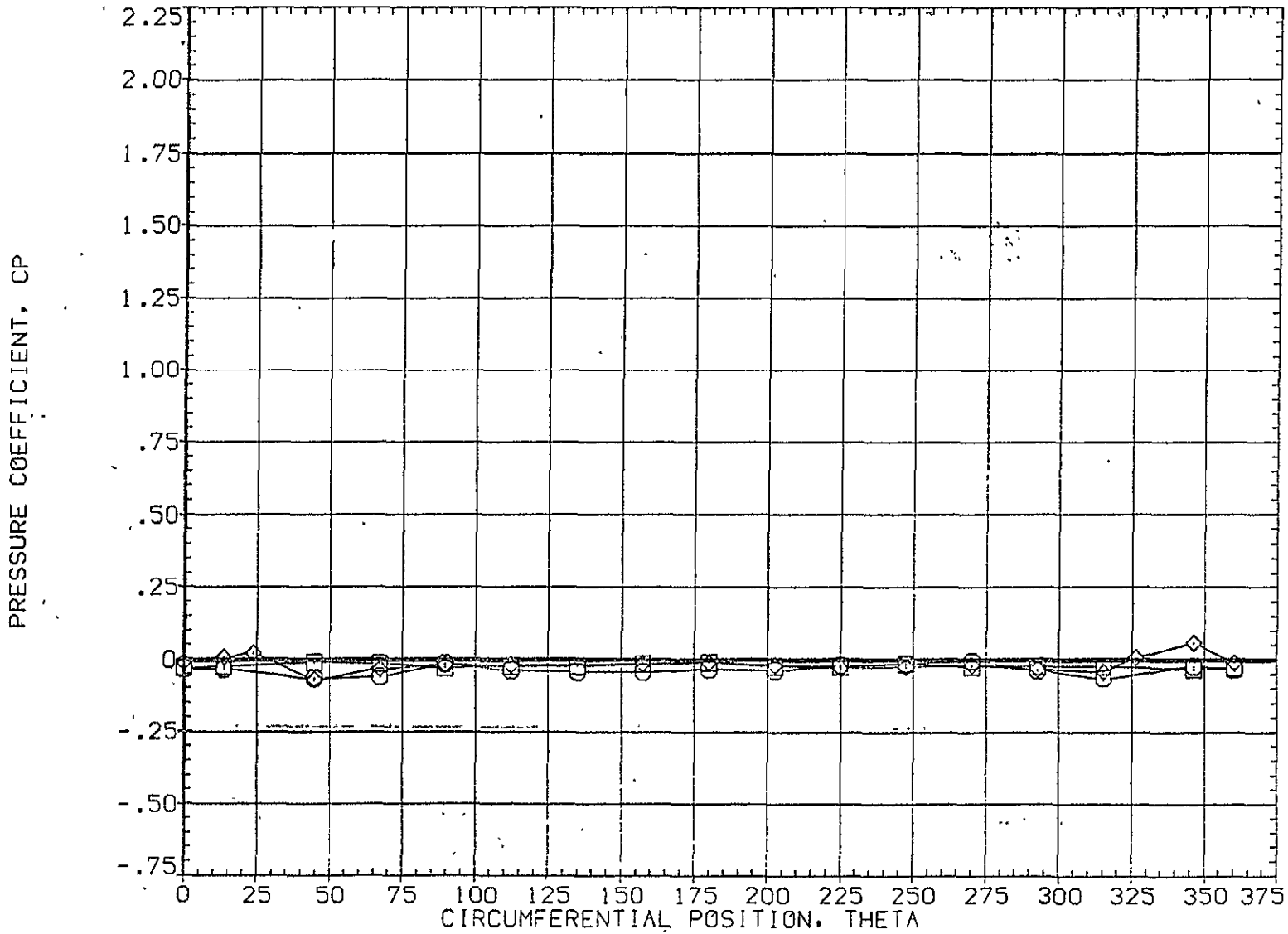

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A0003)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

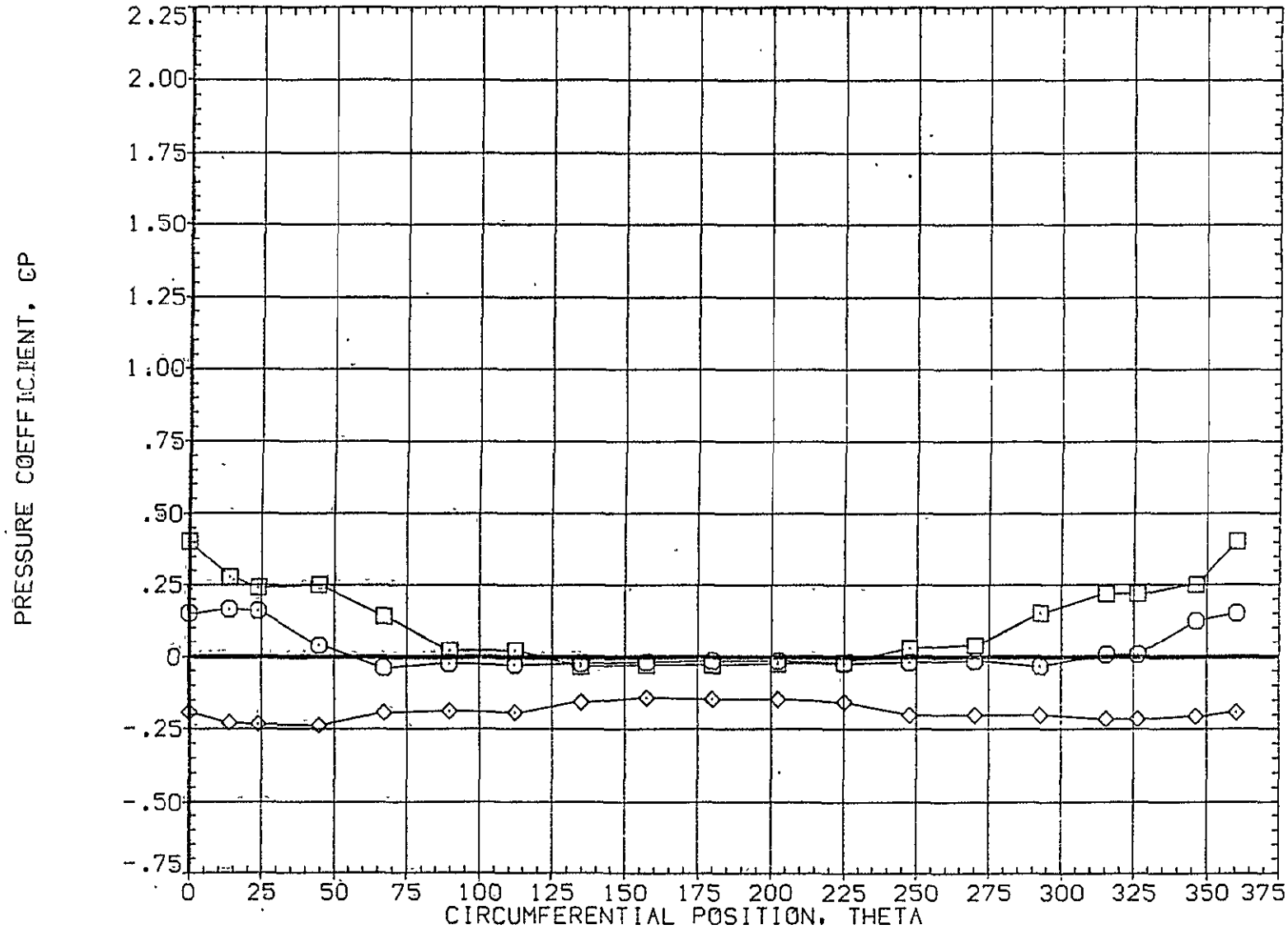

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.790	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

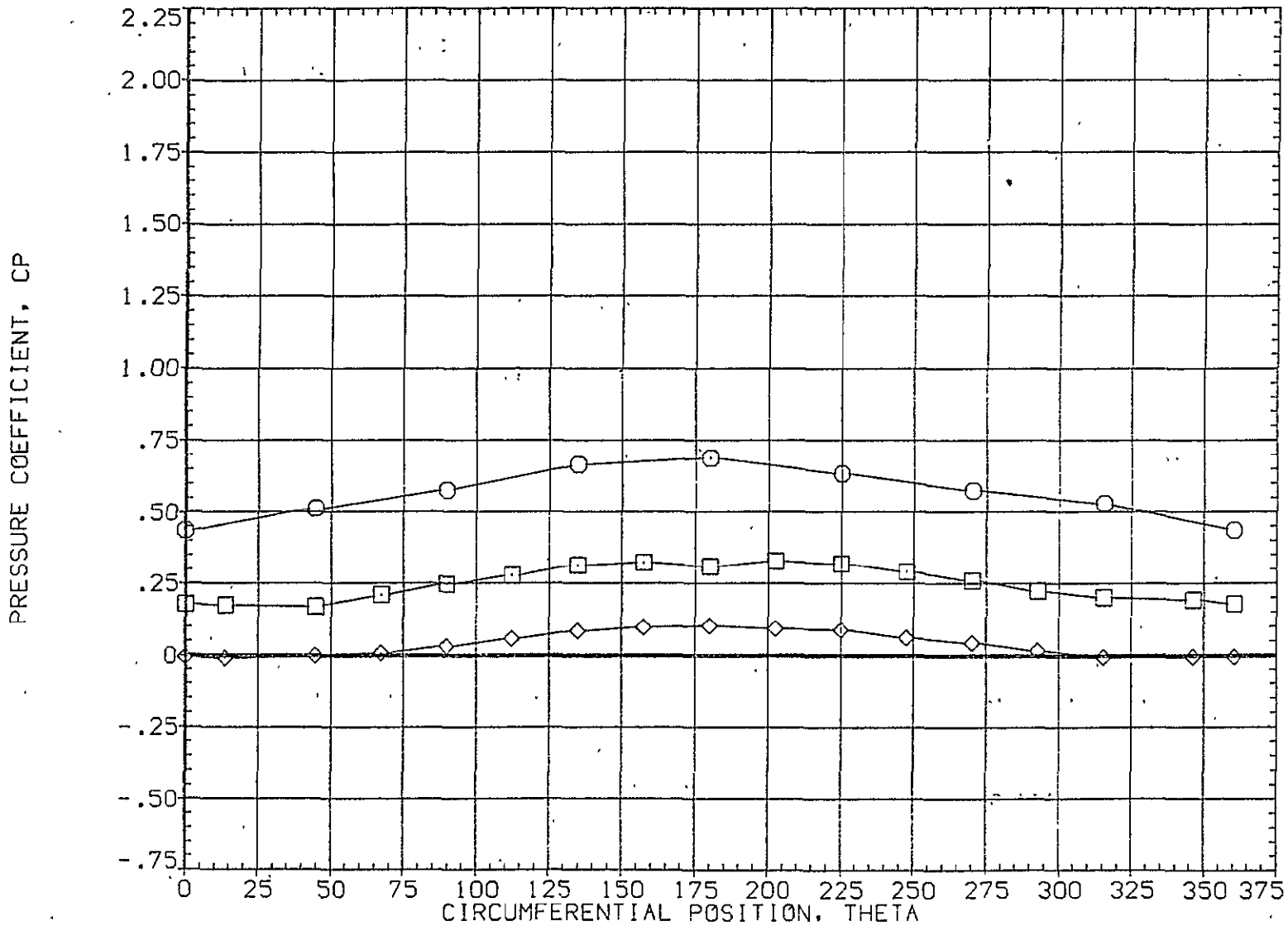

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.790	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

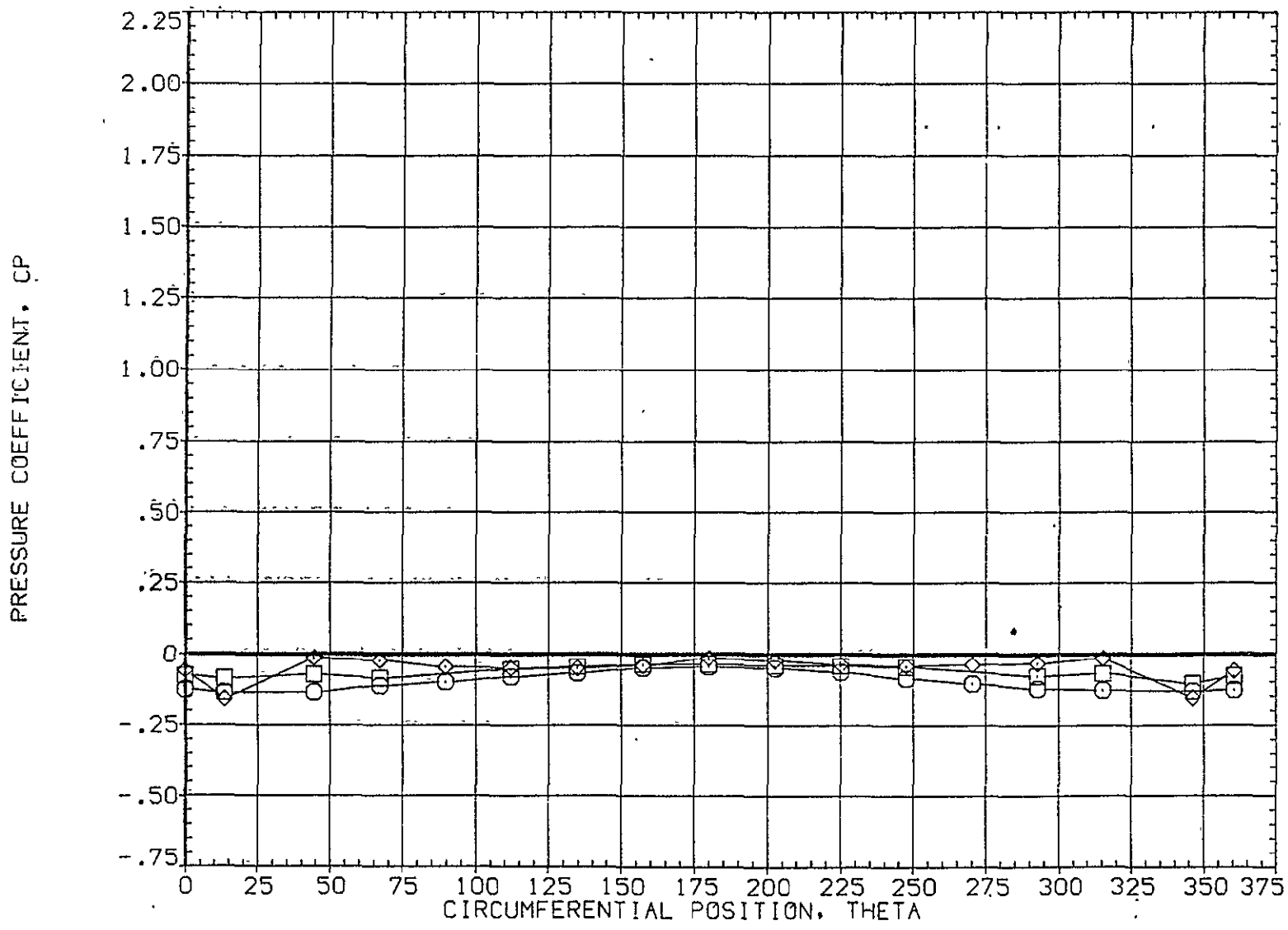

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.790	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

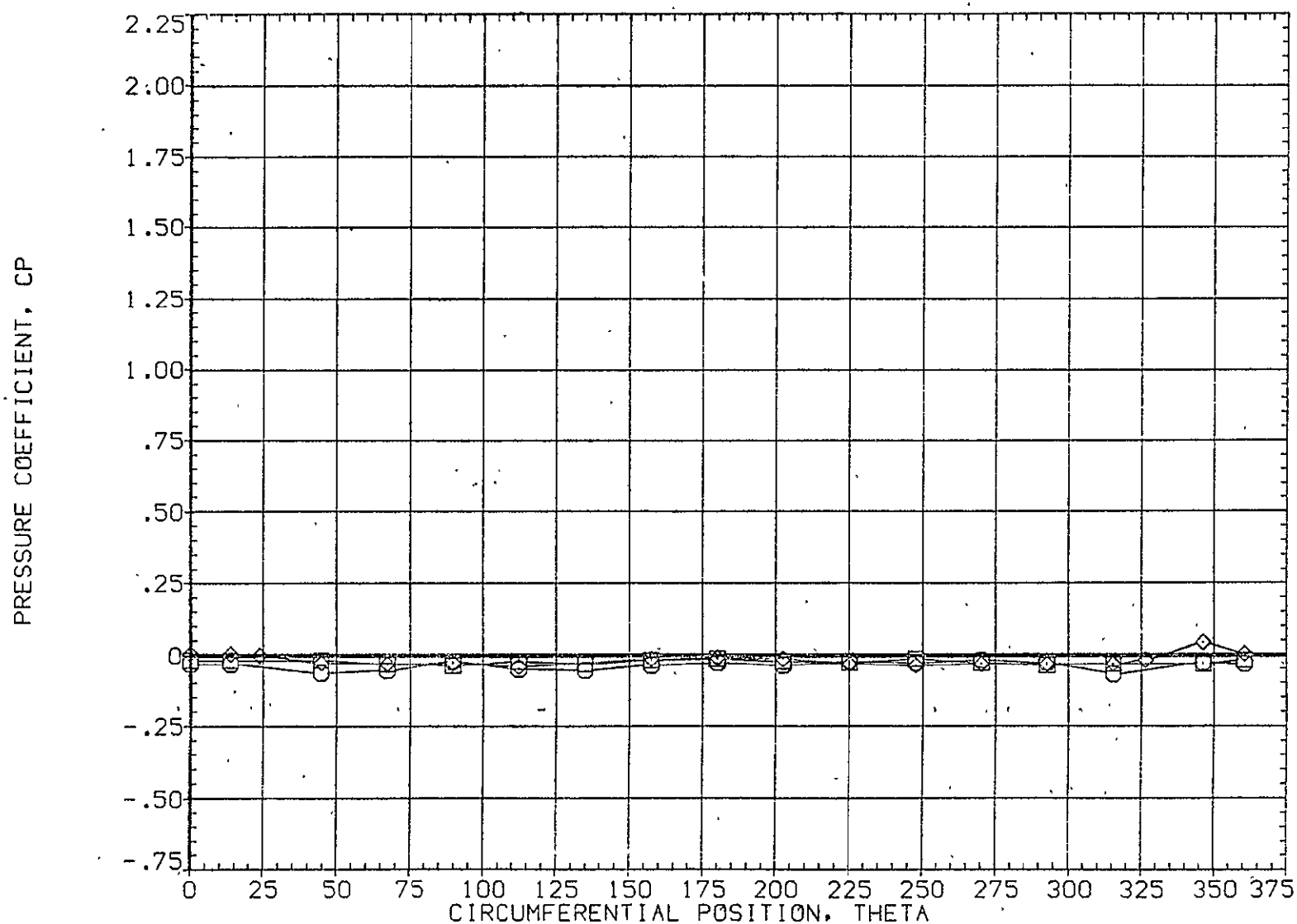

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.790	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

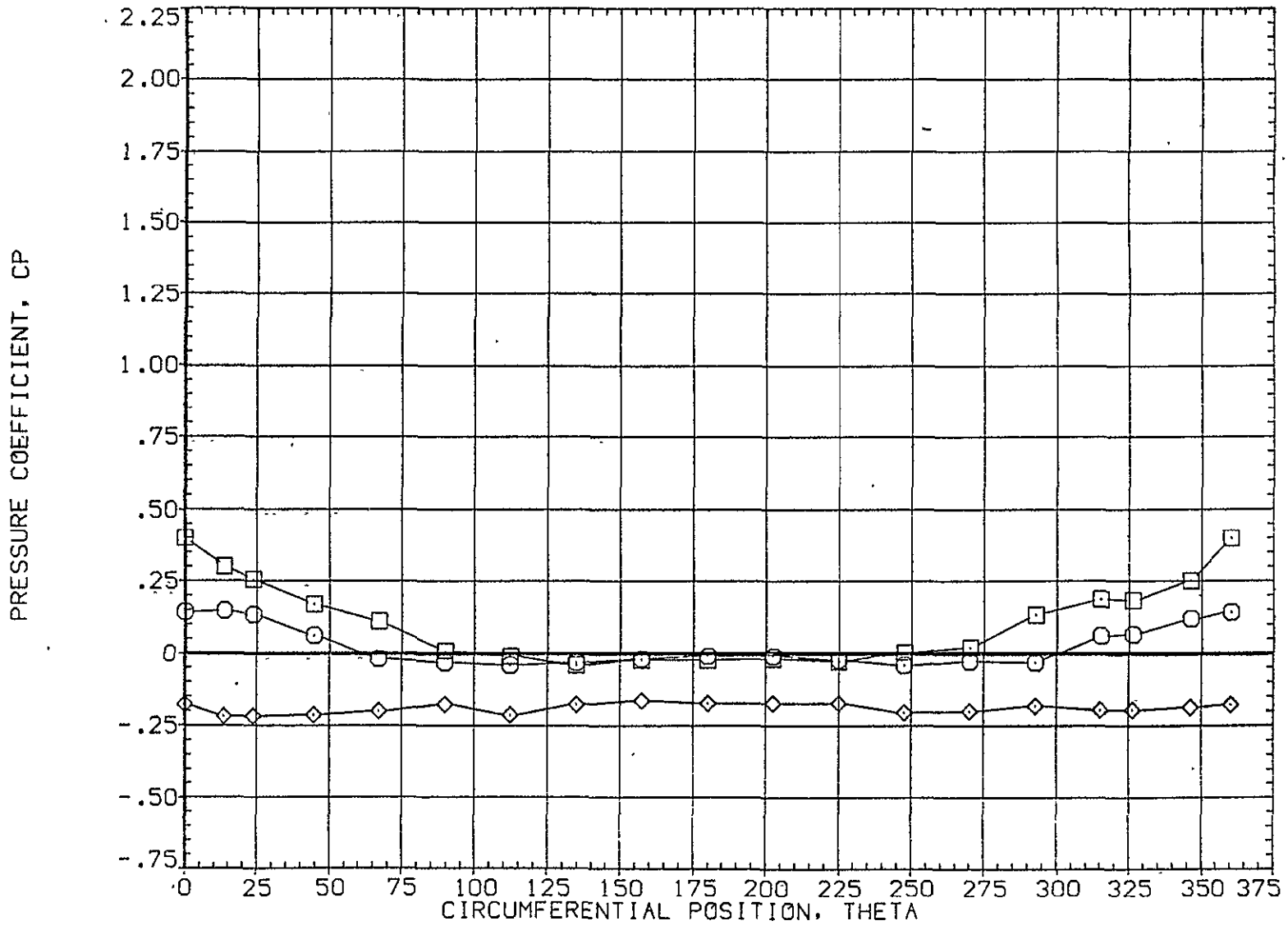

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.860	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

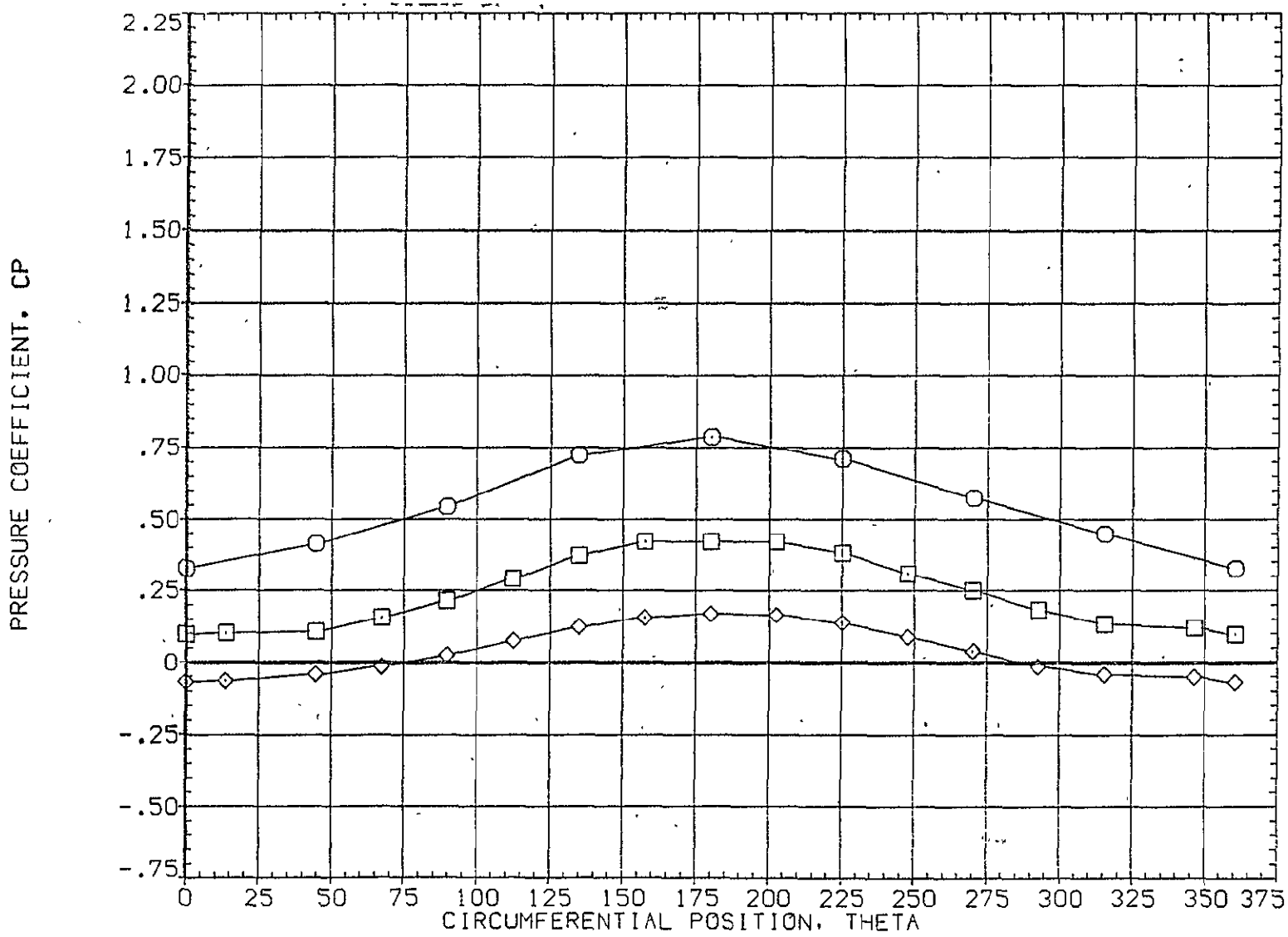

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.860	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

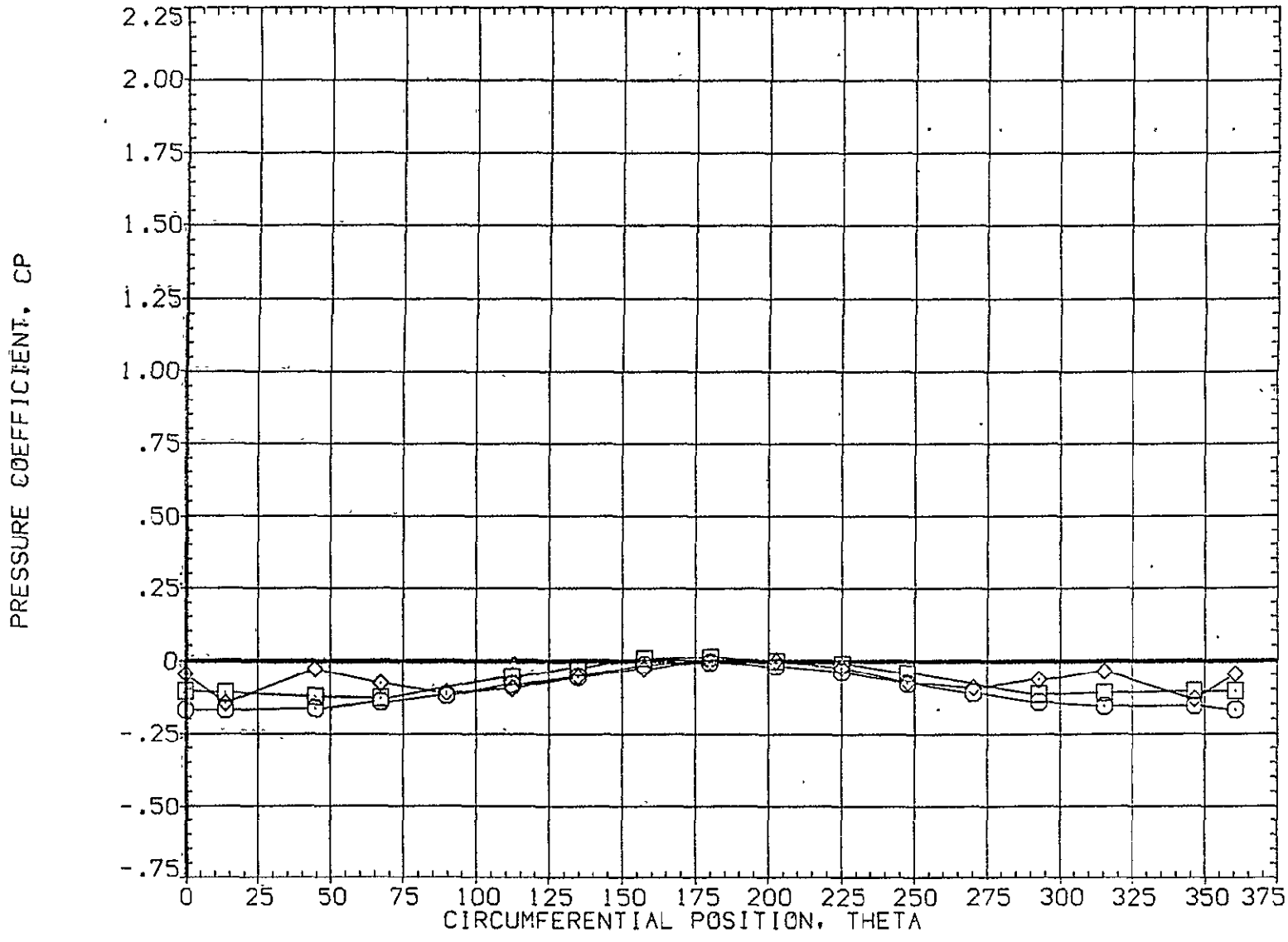

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.860	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

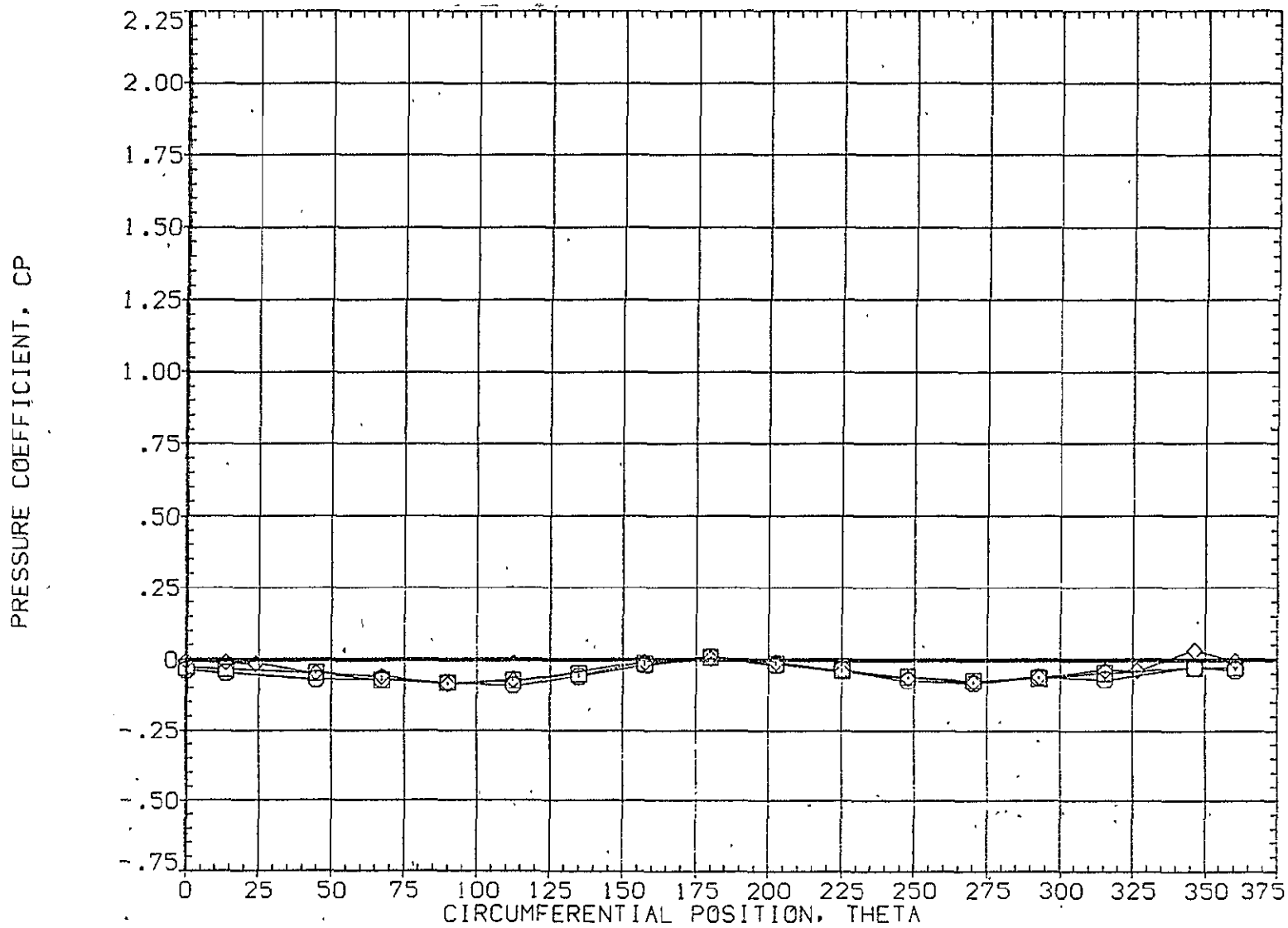

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.860	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

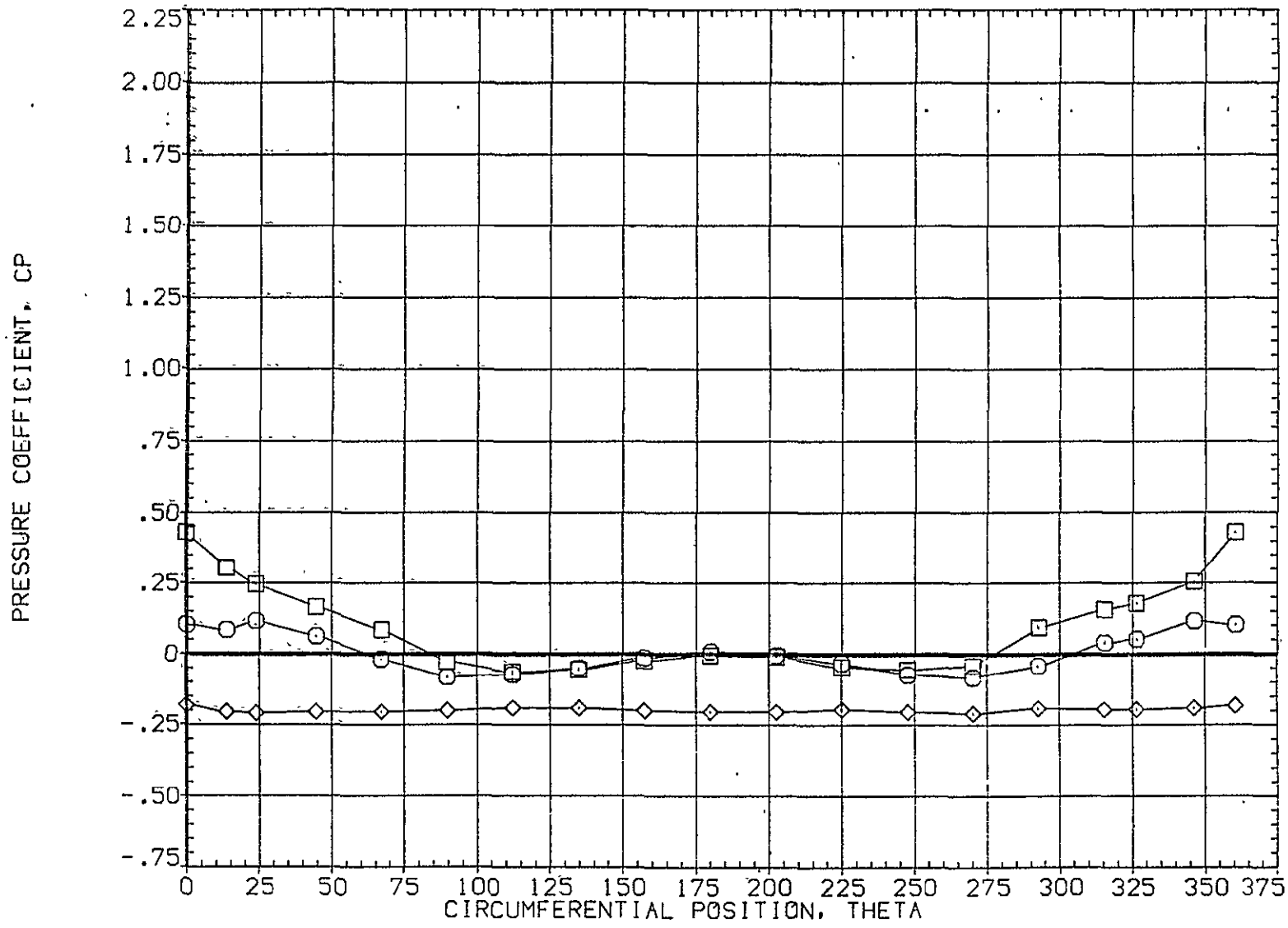

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.570	1.970
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

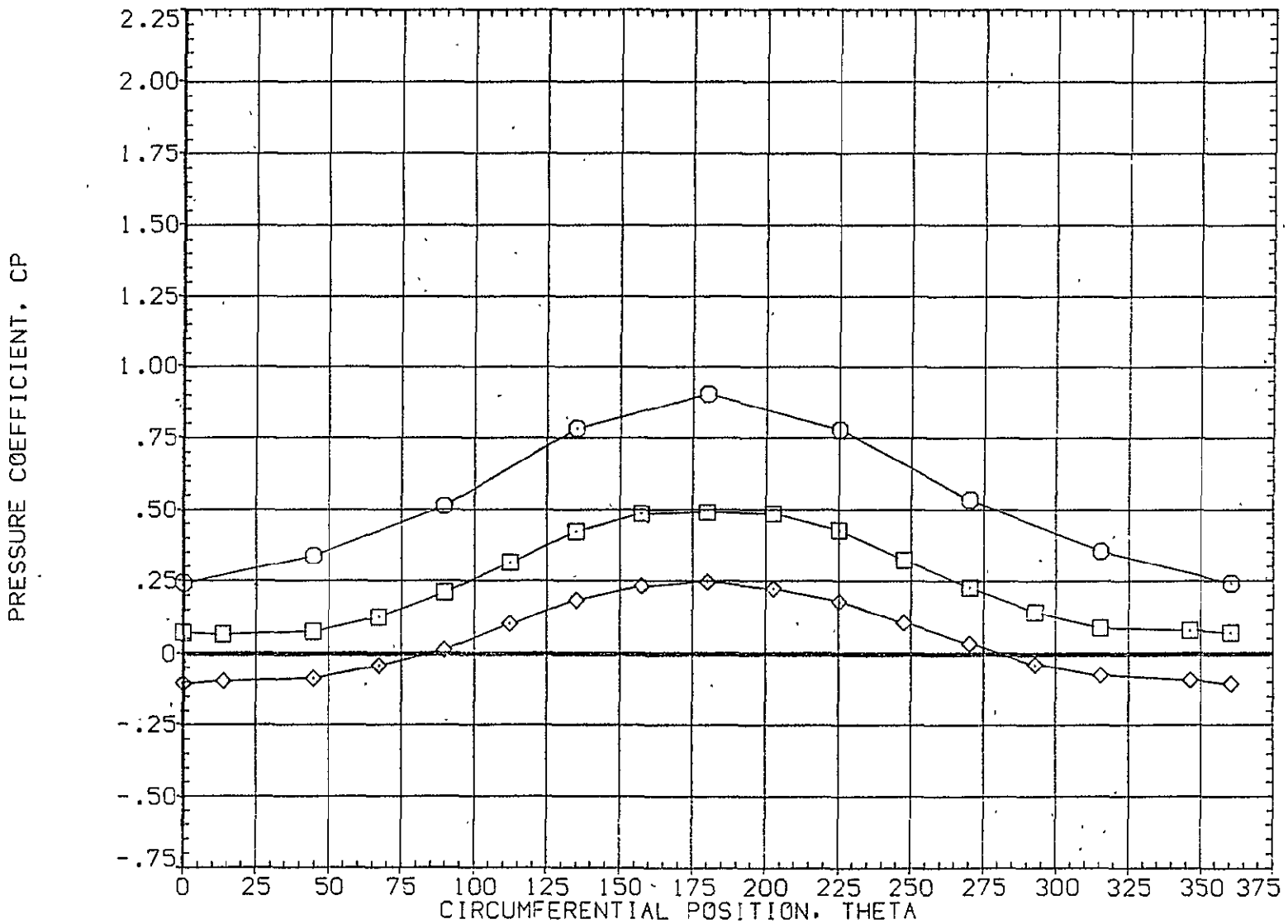

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.570	1.970
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

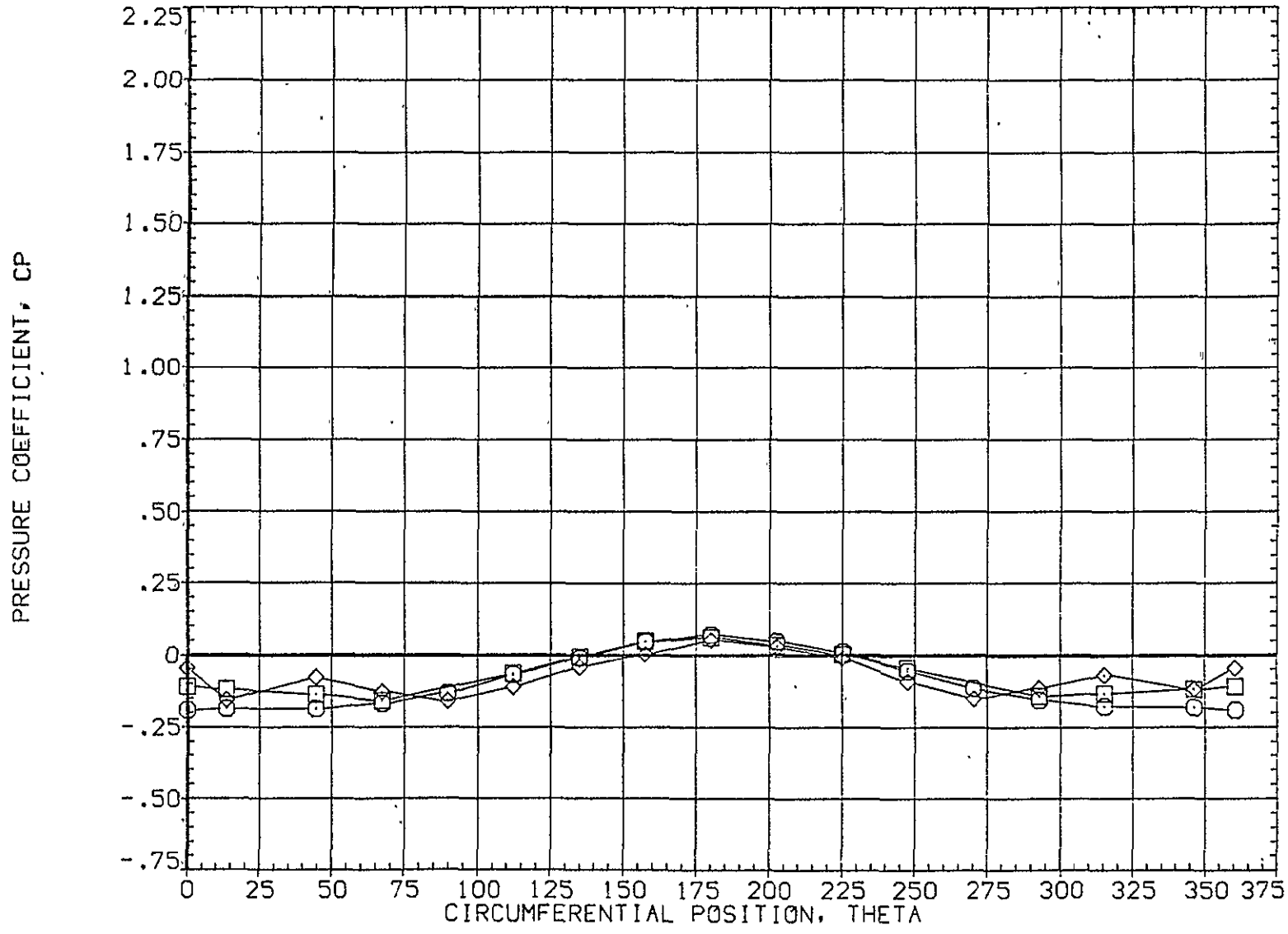

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.570	1.970
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

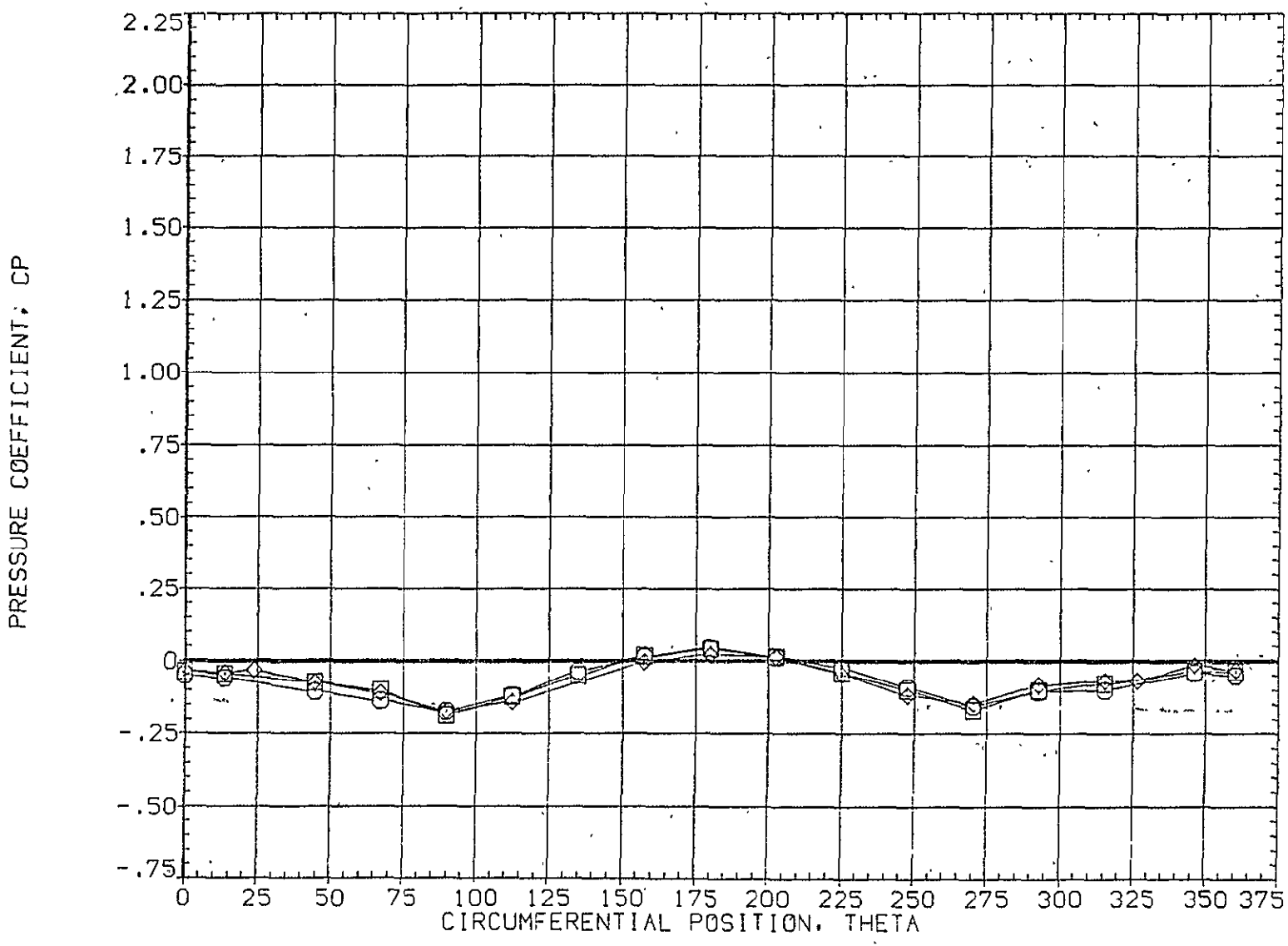

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (PTA006)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.570	1.970
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

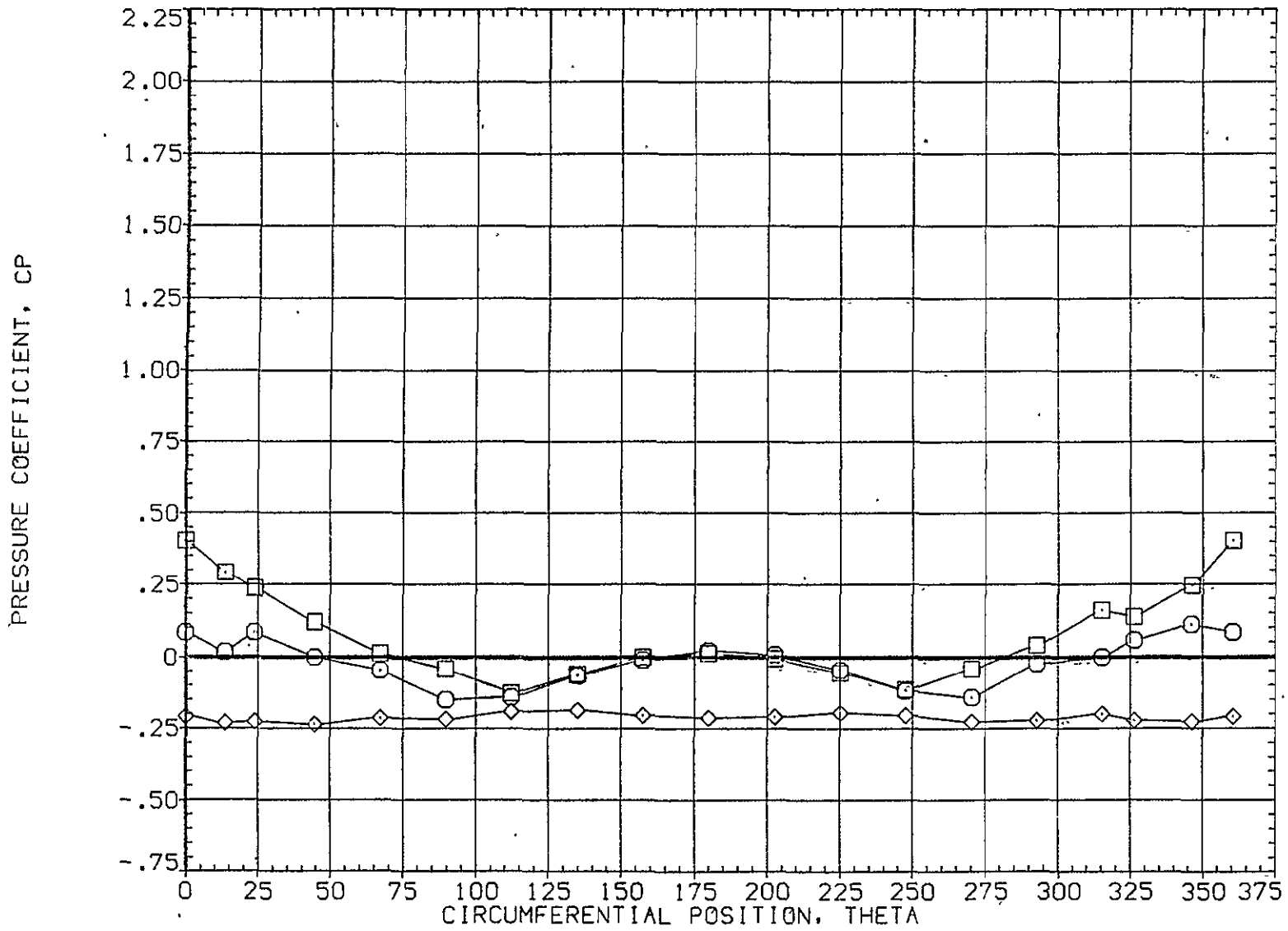

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.660	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

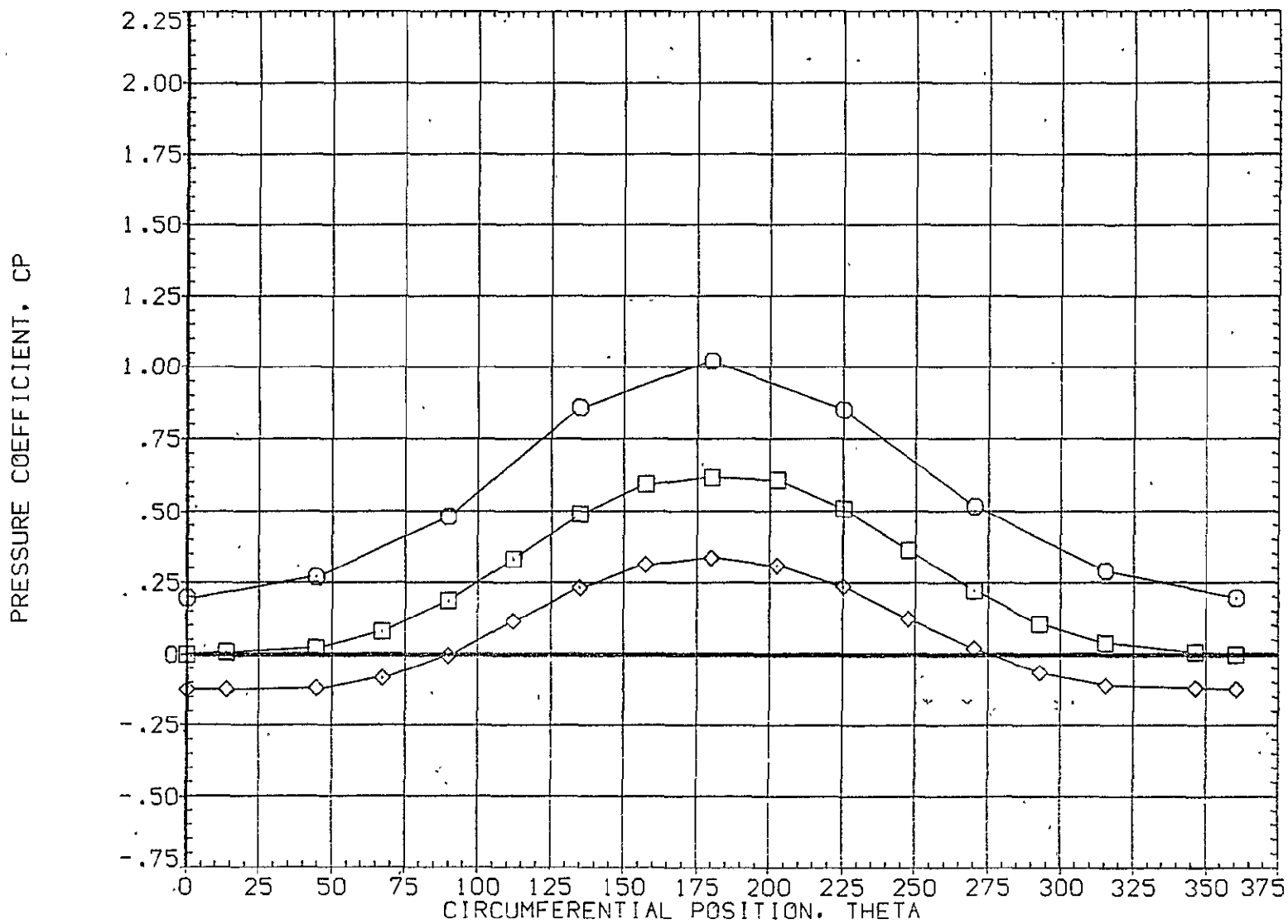

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.660	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

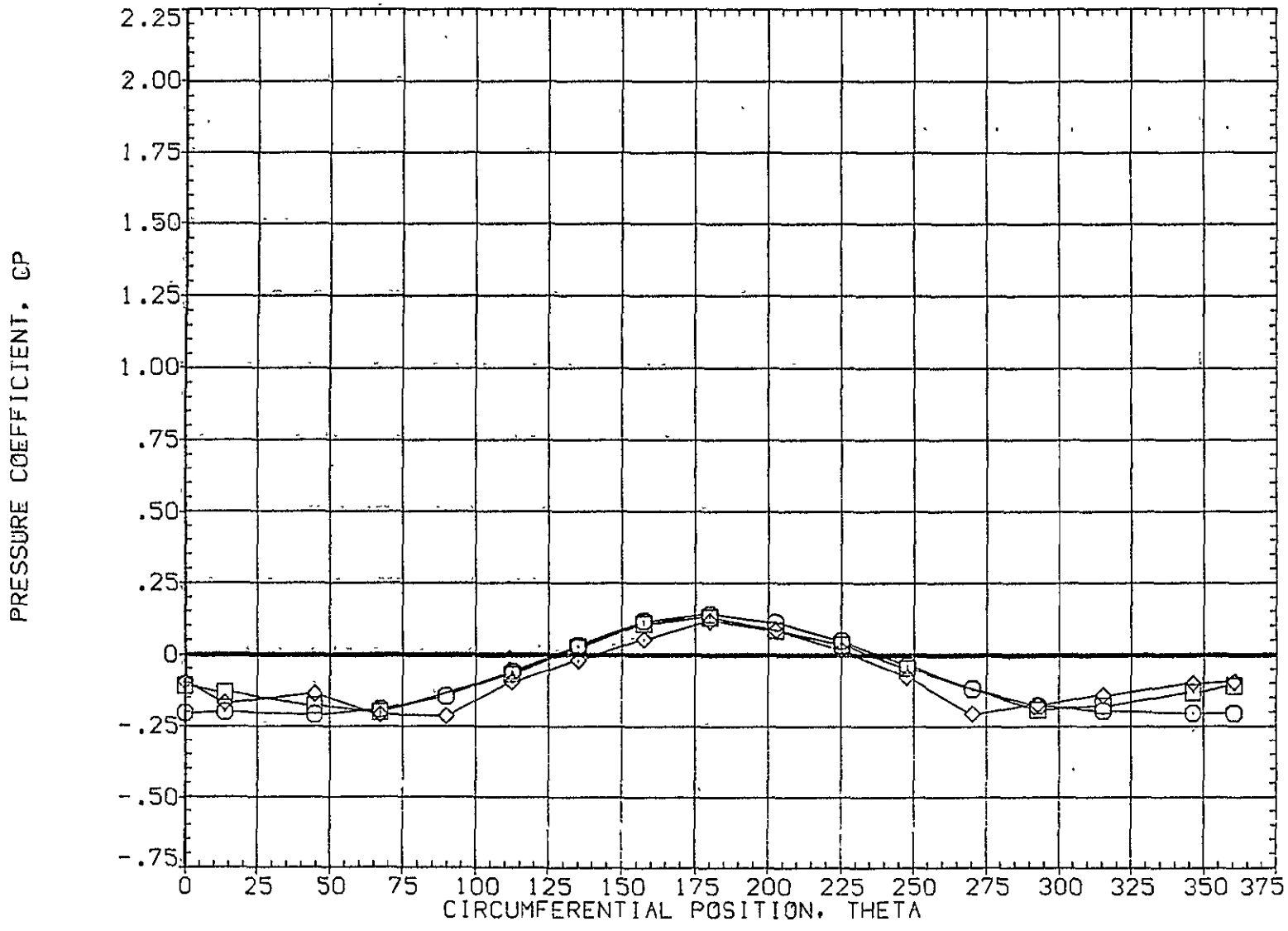

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.660	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

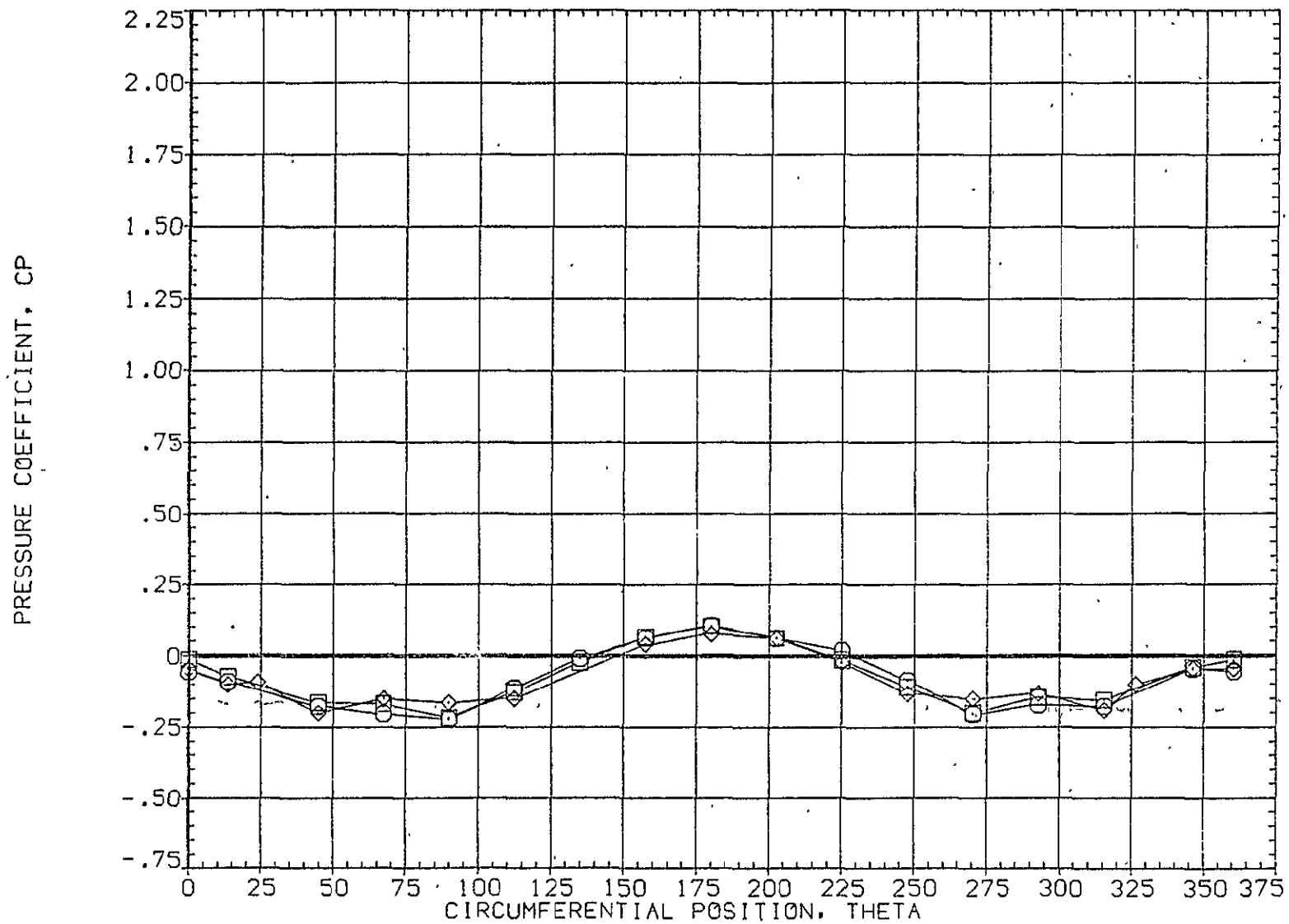

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.660	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

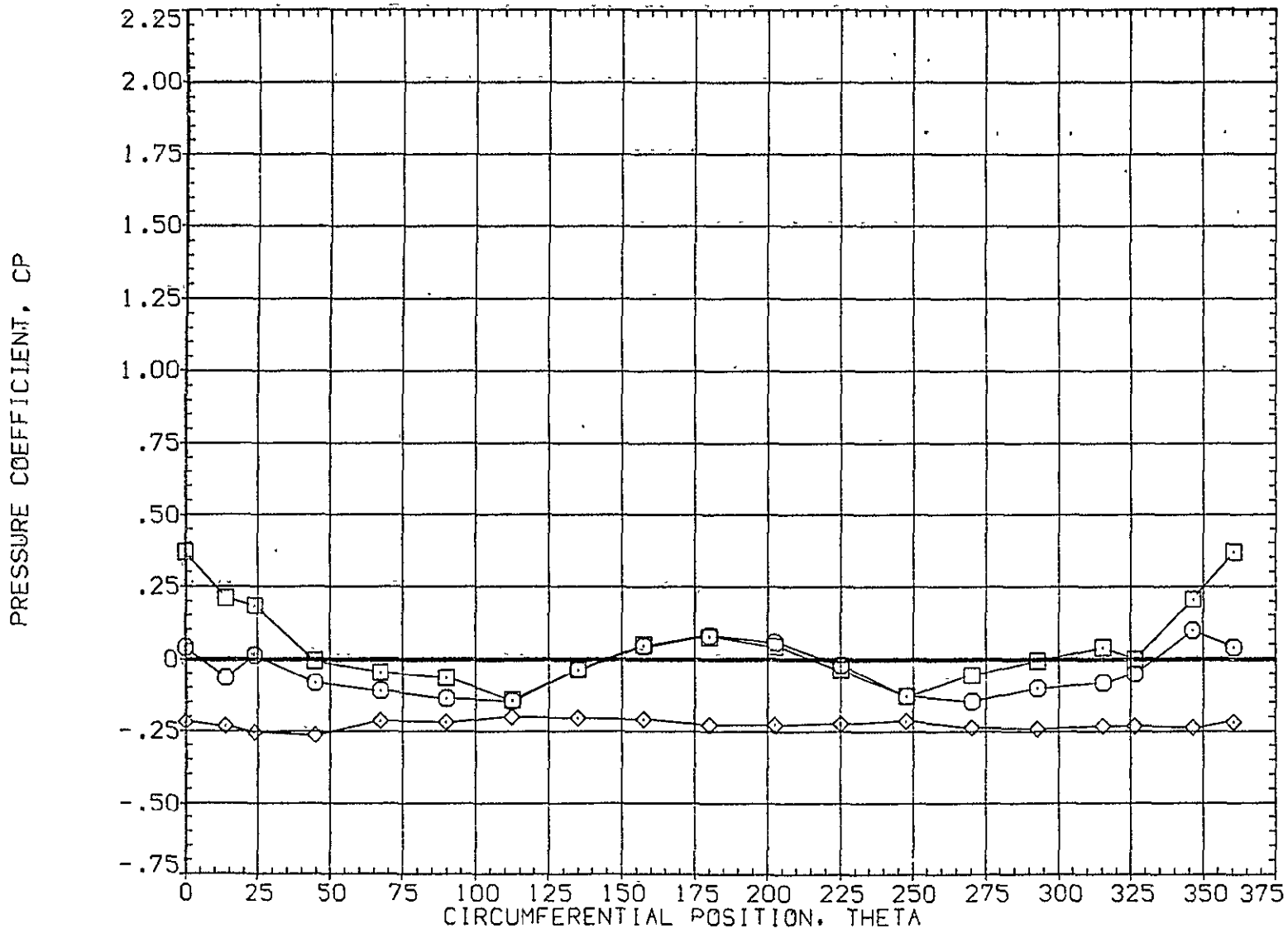

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200. EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.740	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

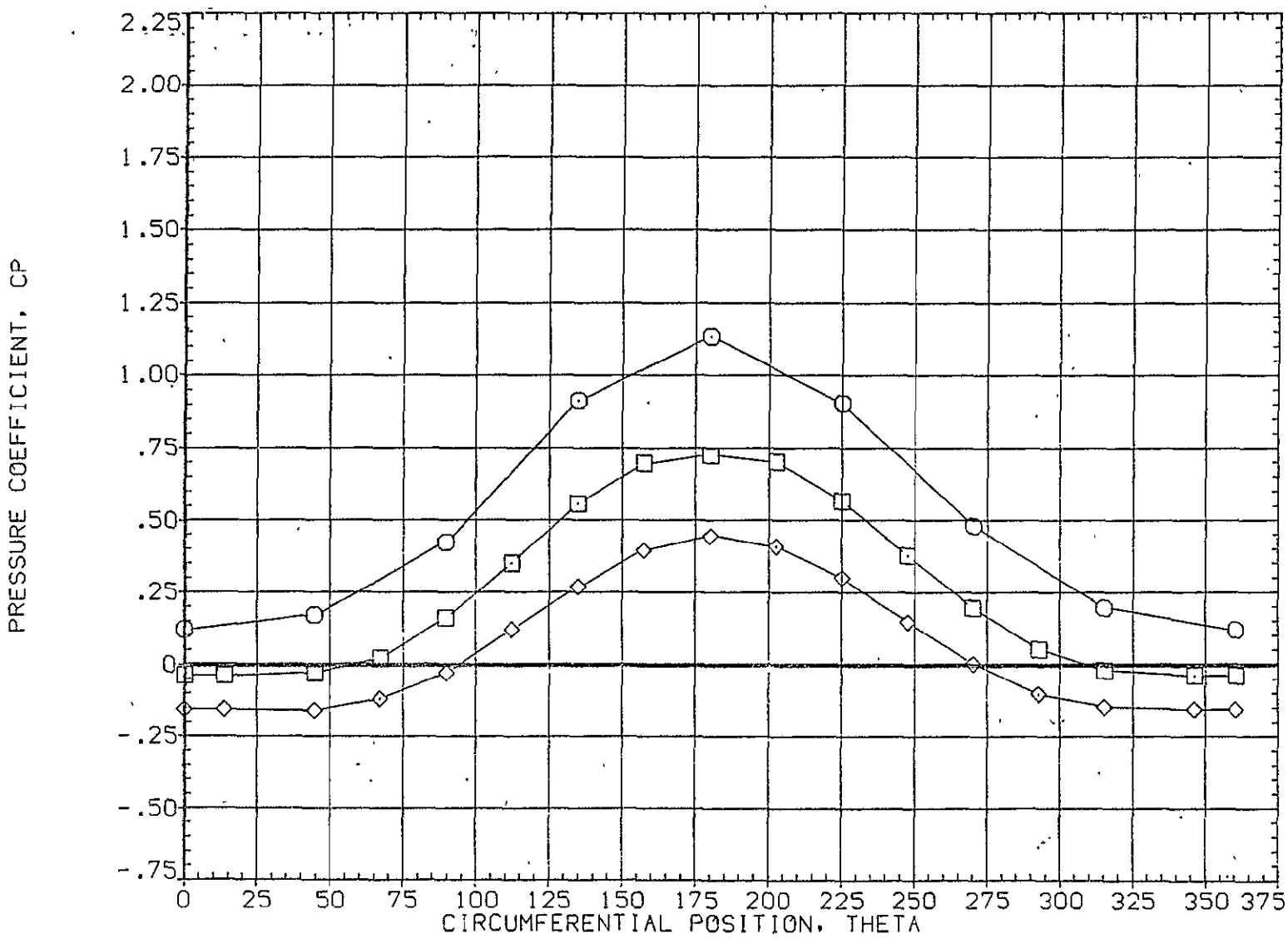

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.740	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

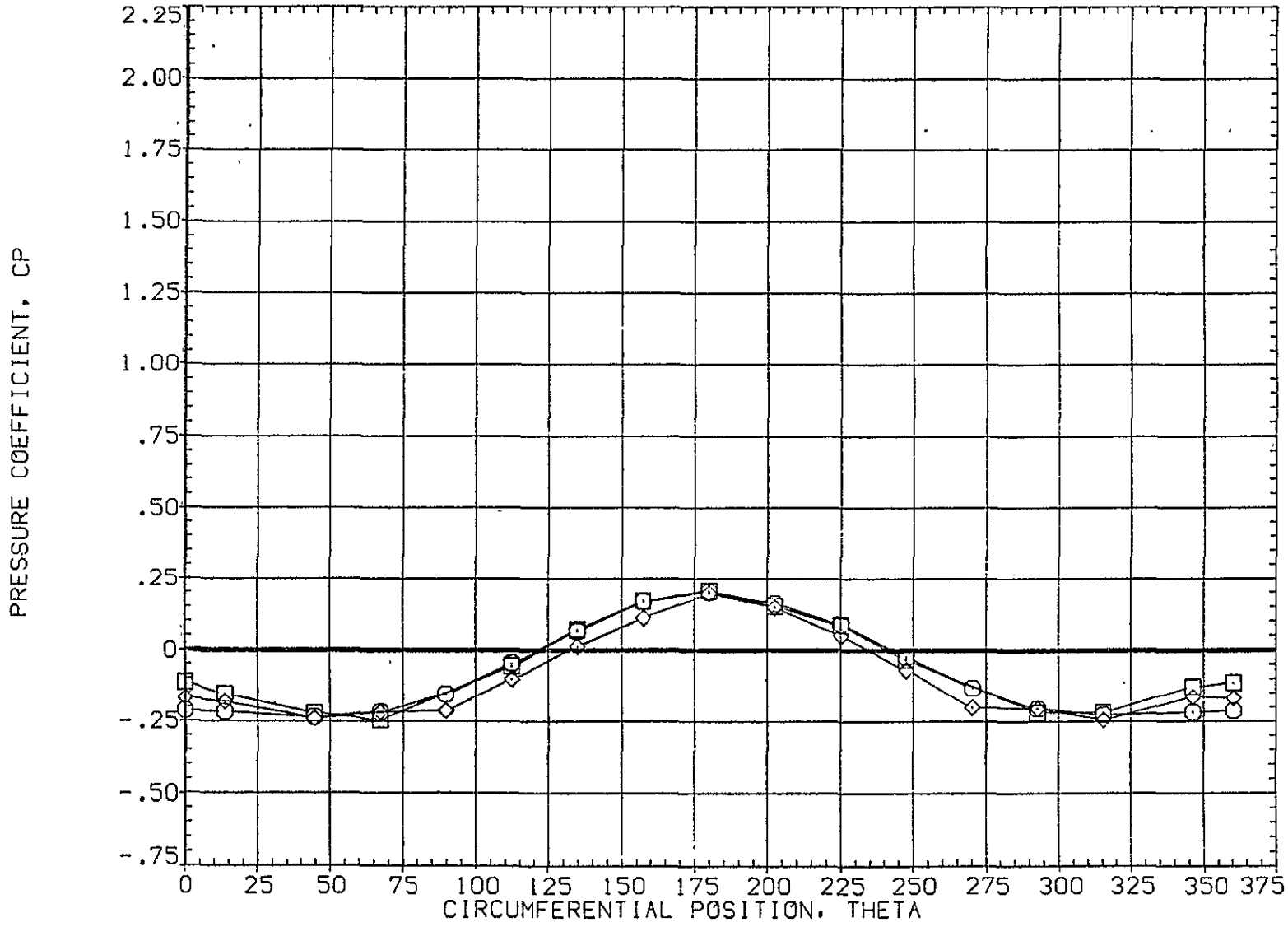

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

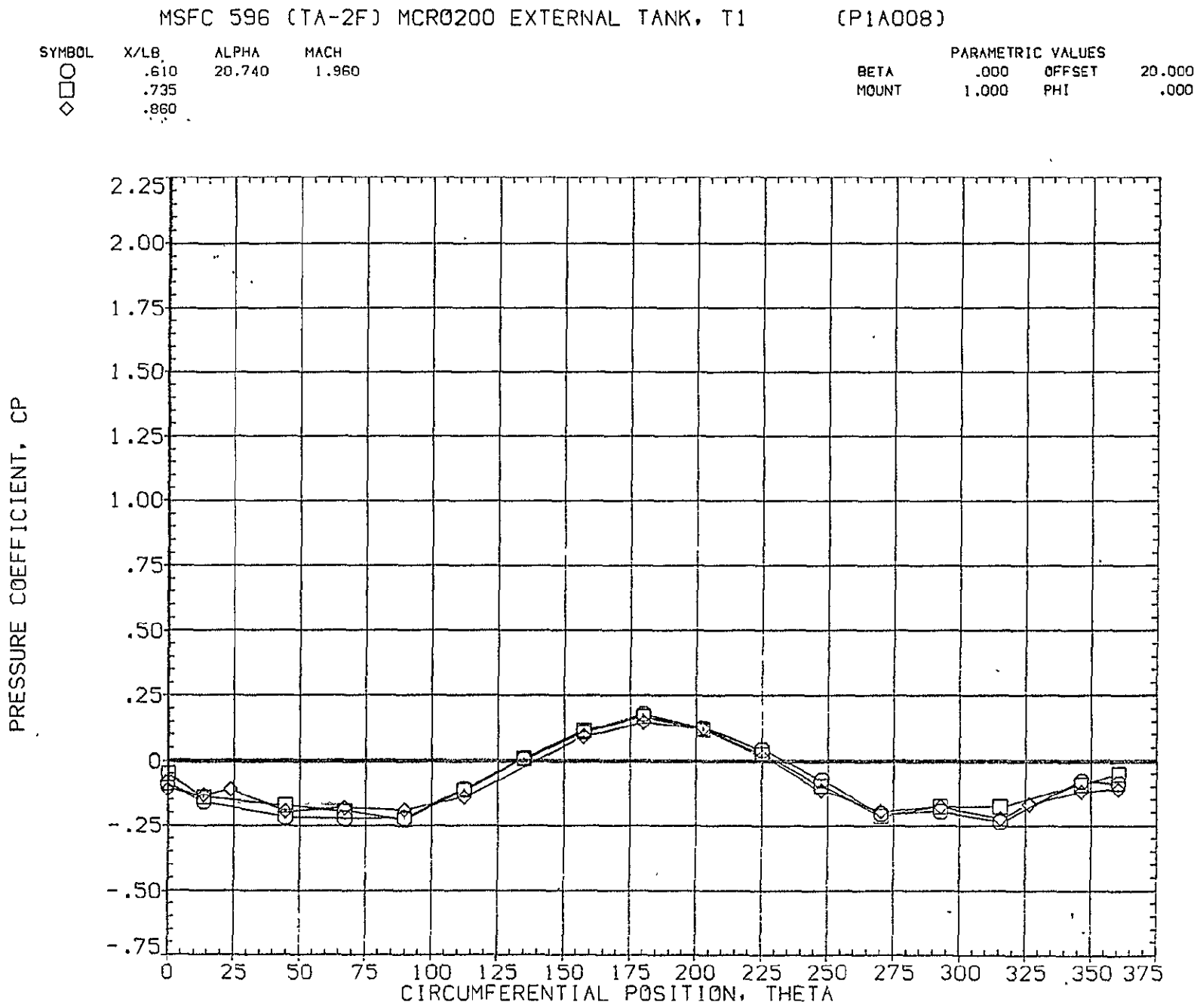

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.740	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

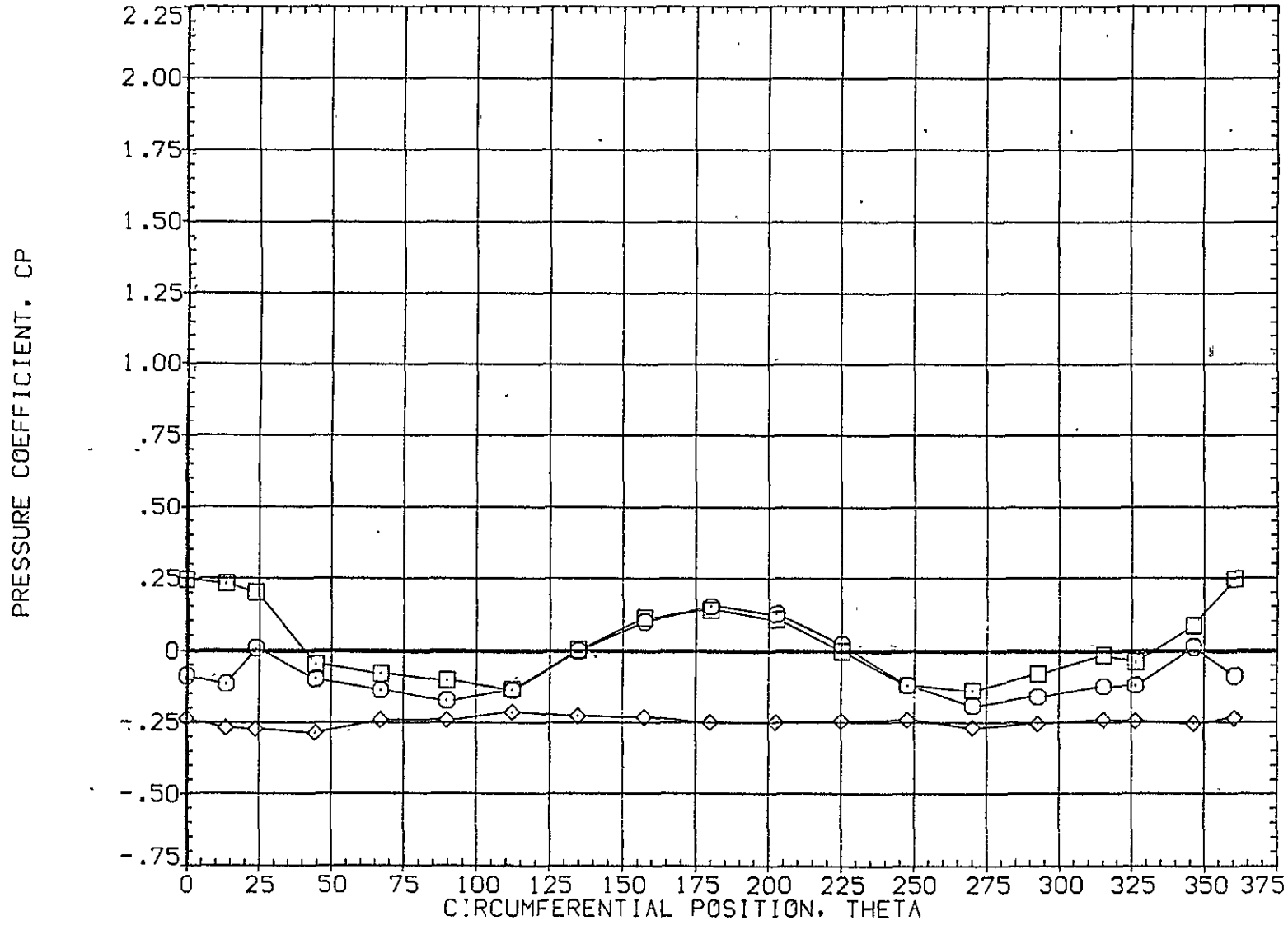

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

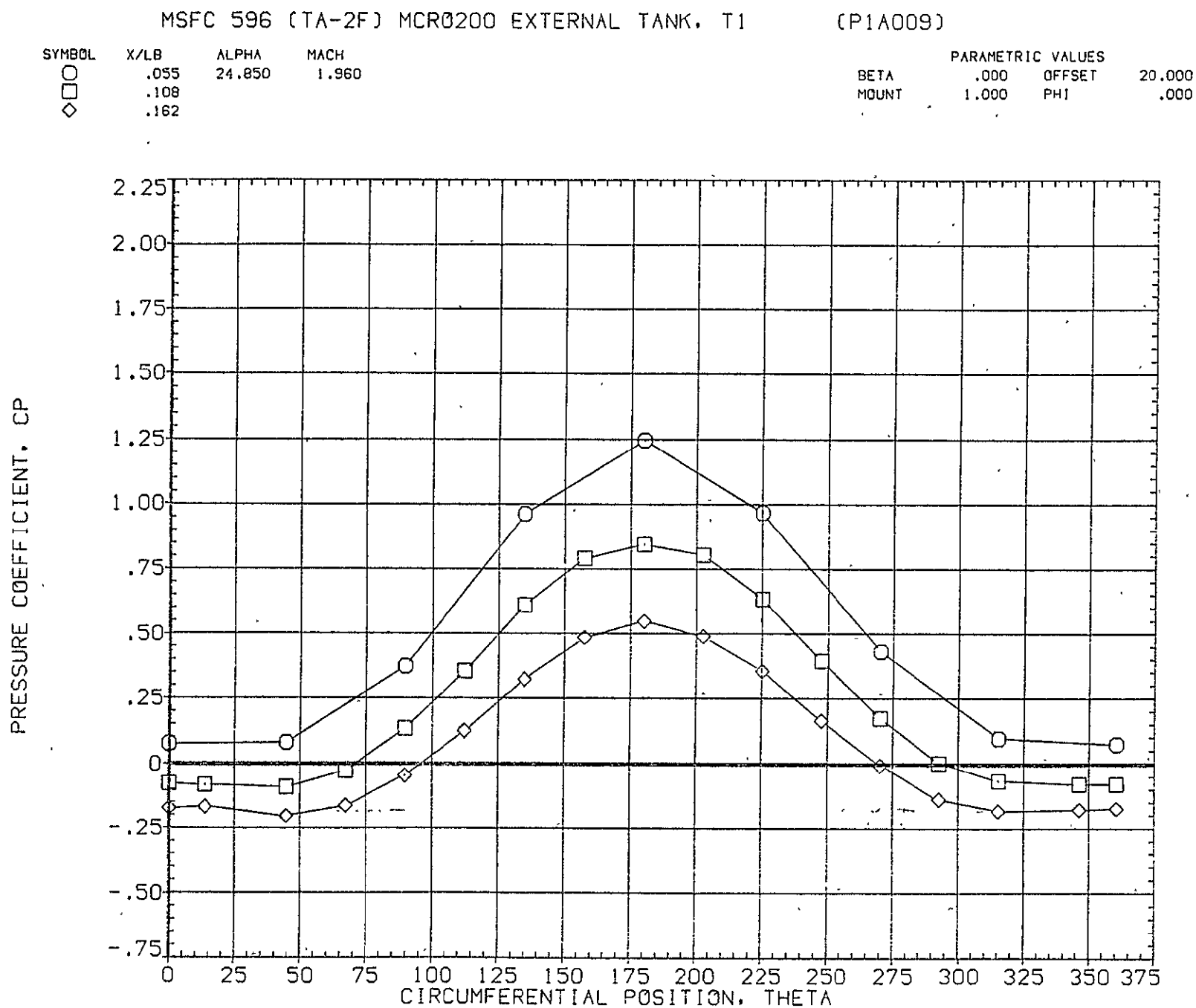

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.850	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.00C

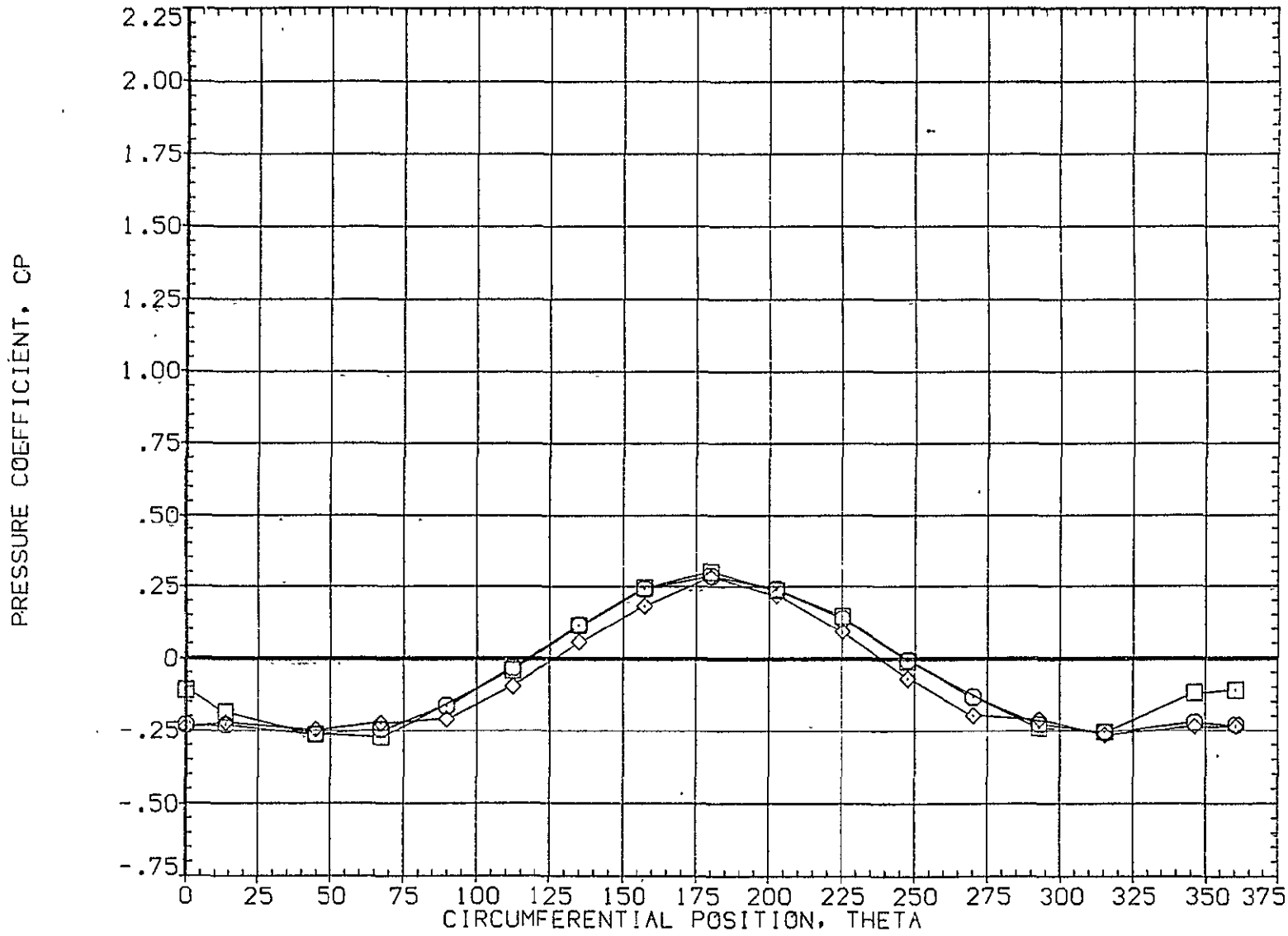

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.850	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

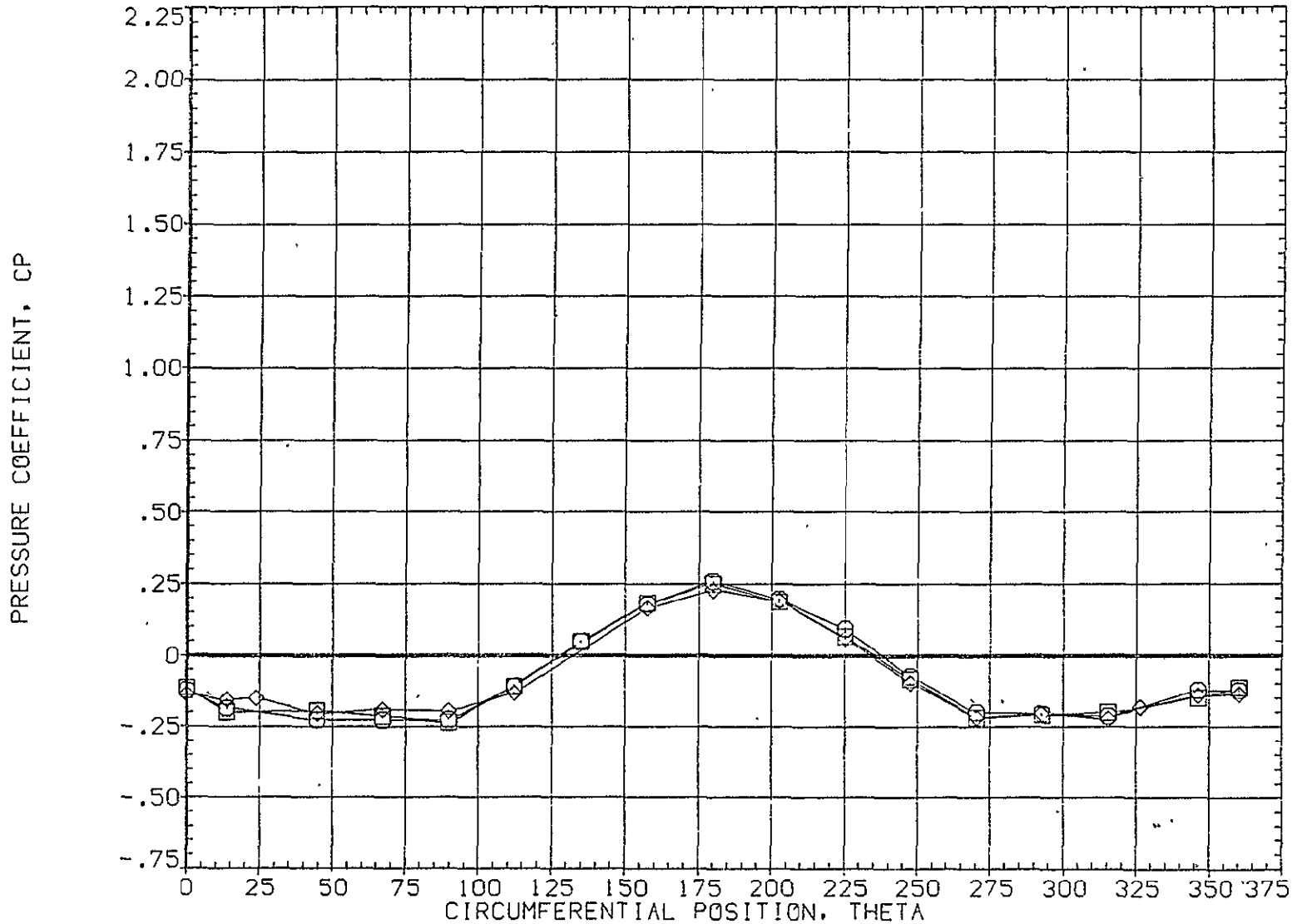

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

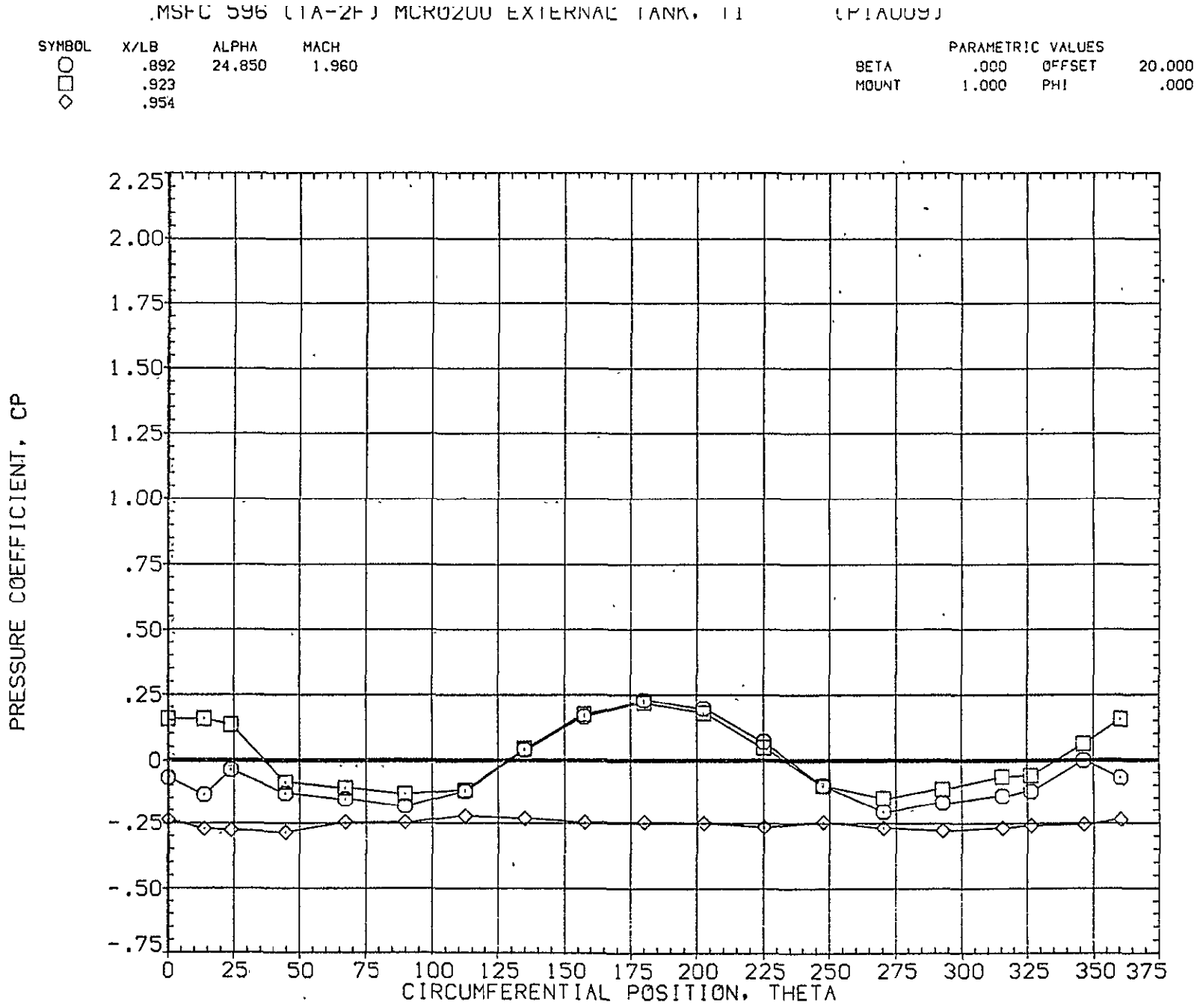

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

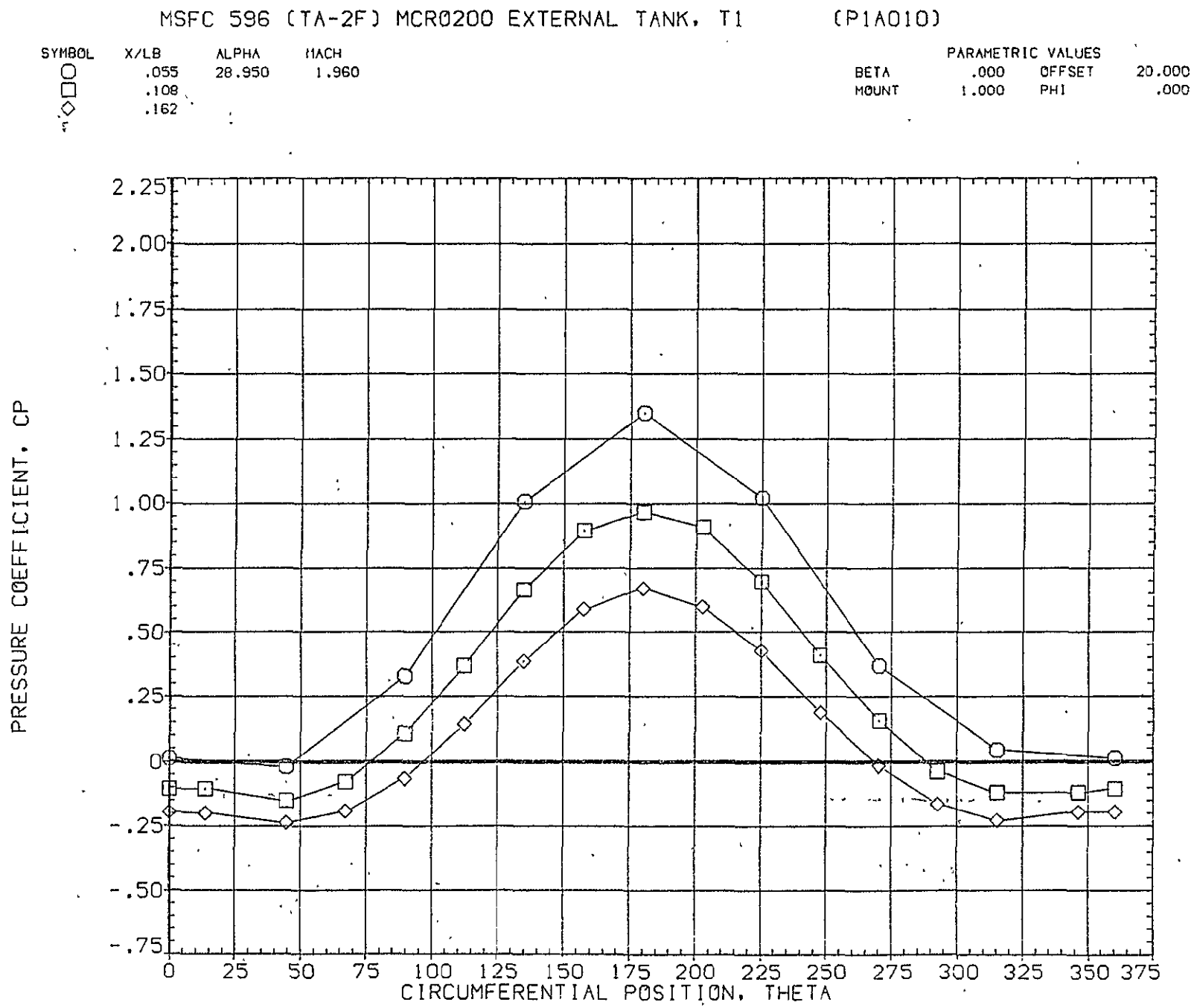

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.950	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

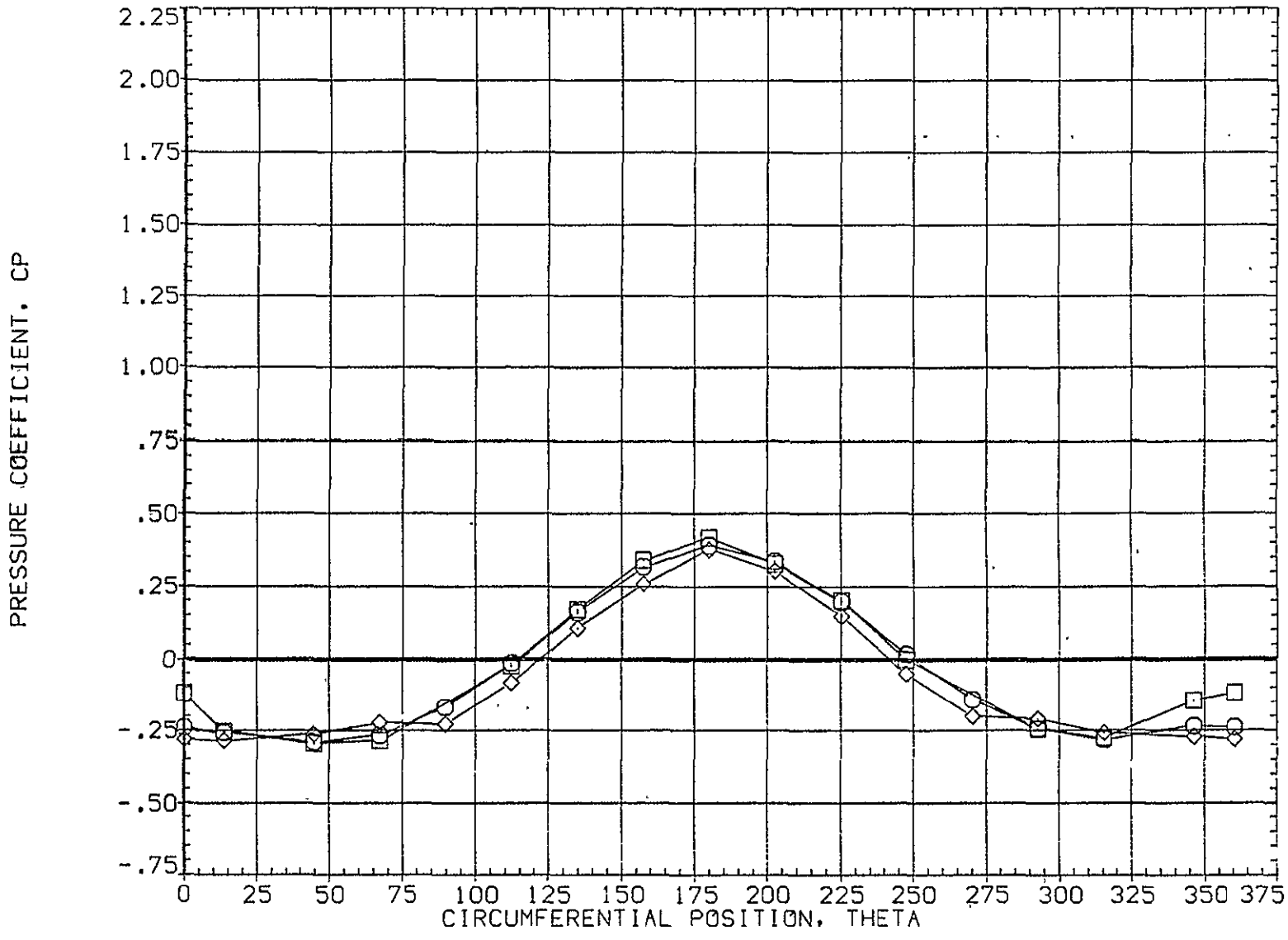

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.950	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

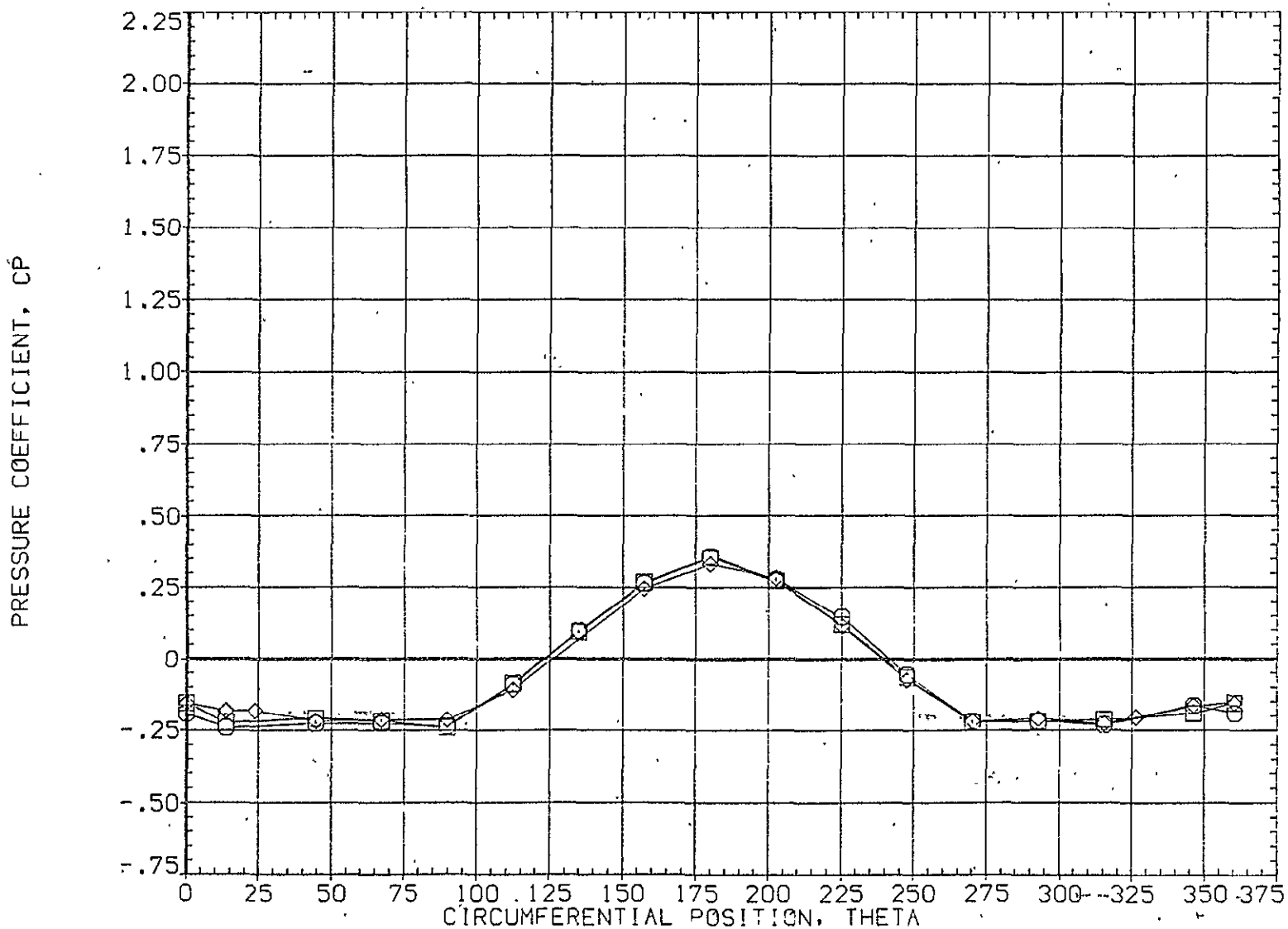

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.950	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

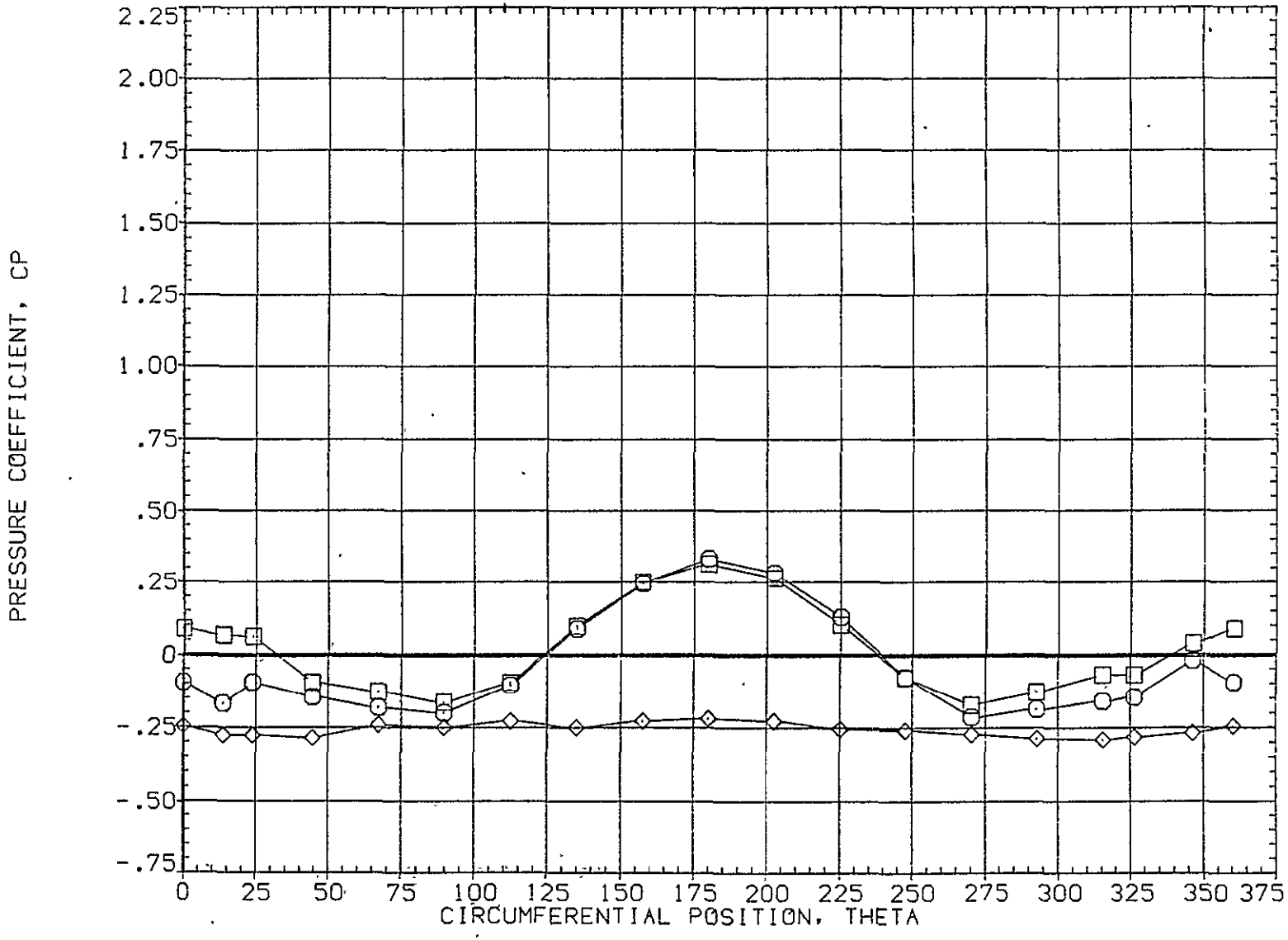

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.380	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

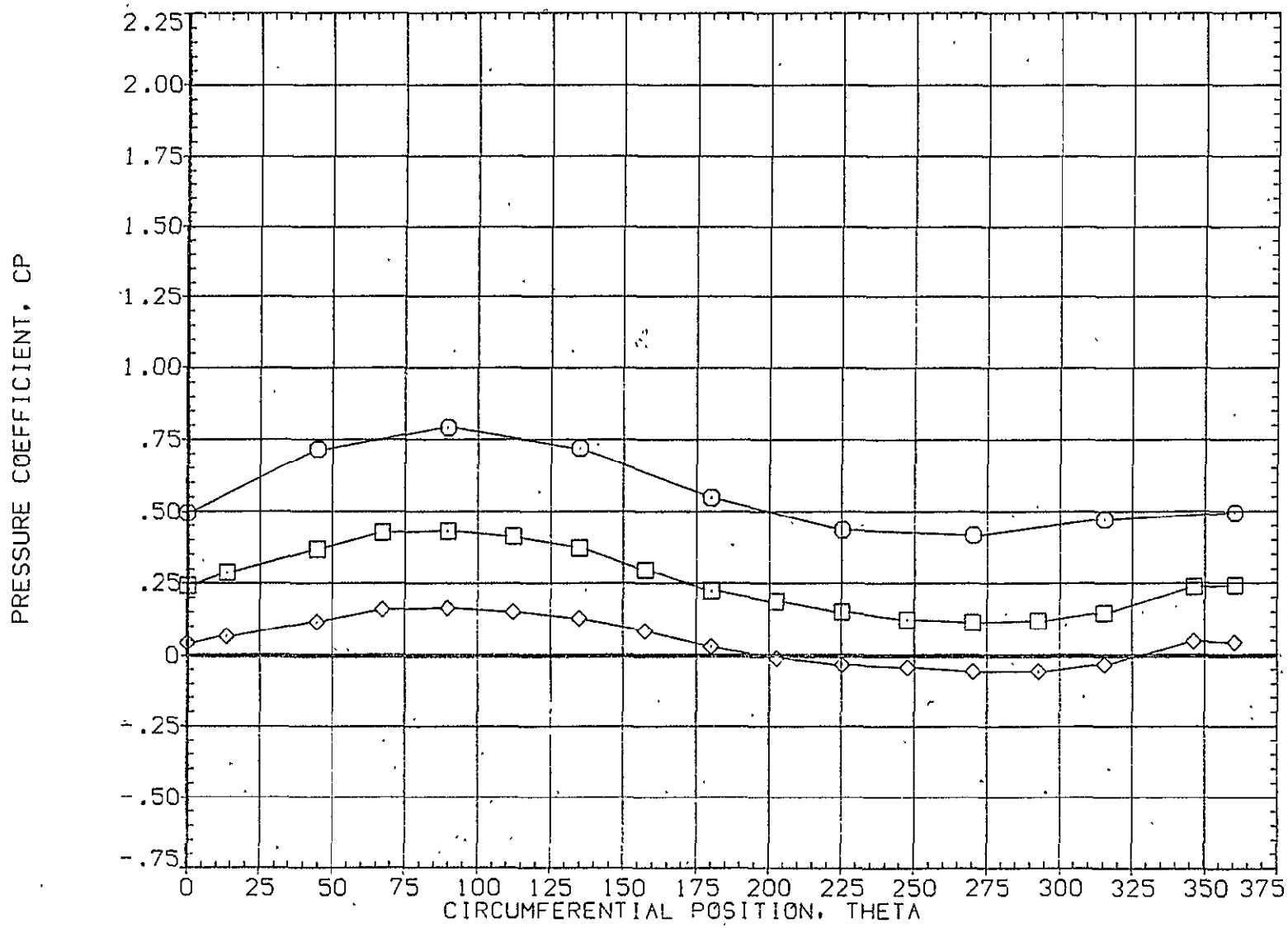

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER-ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.380	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

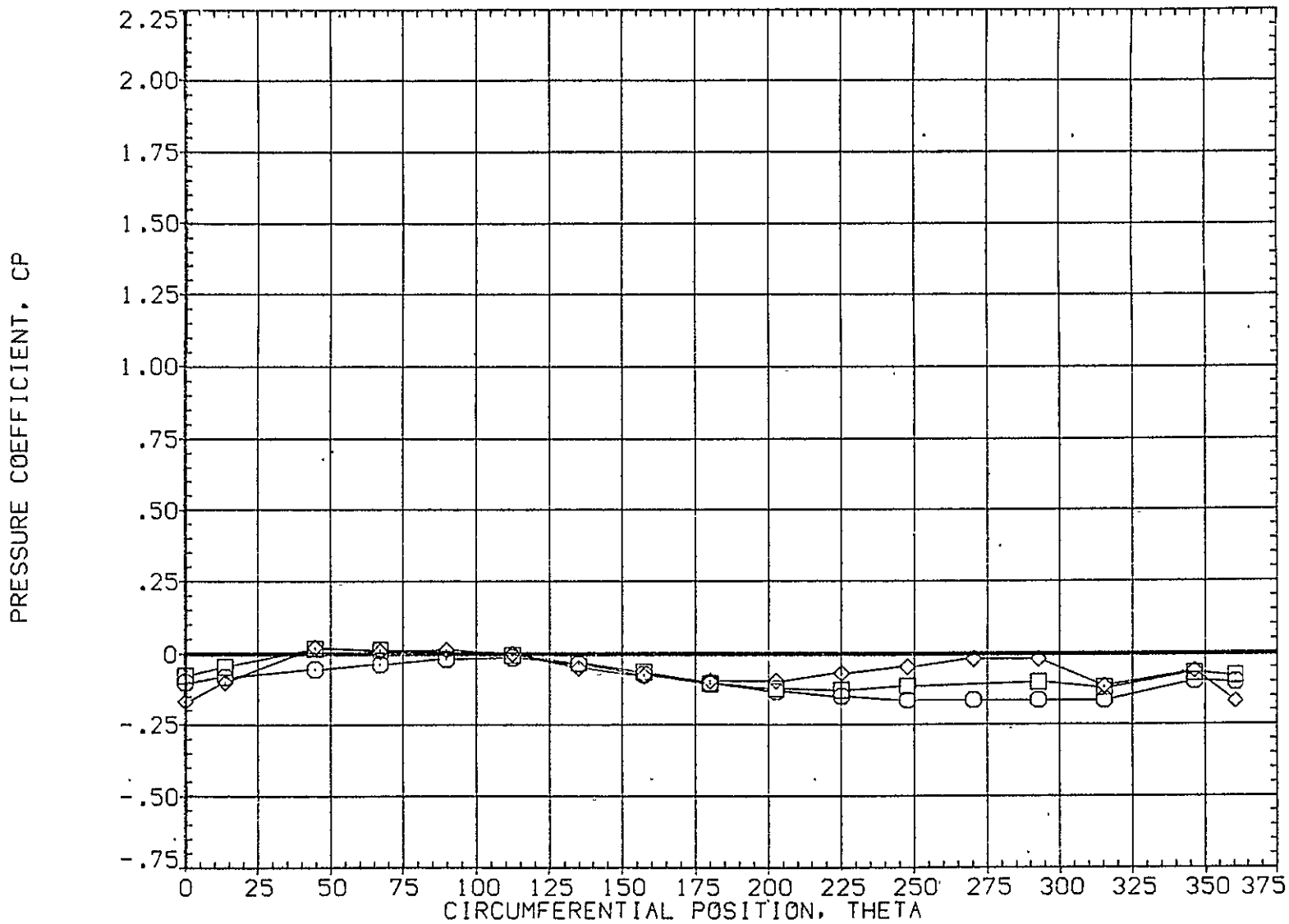

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

C.2

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.380	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

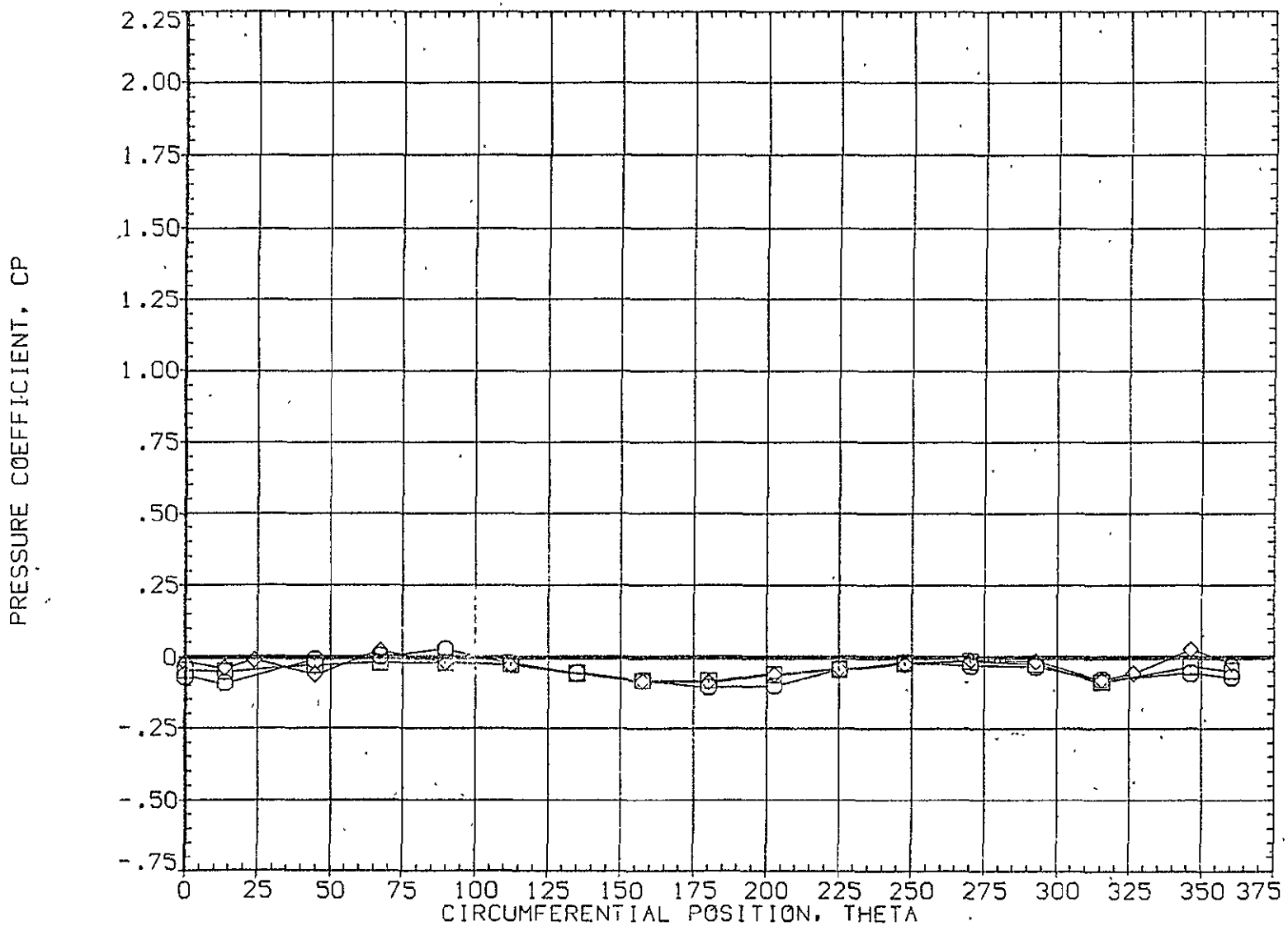

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.380	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

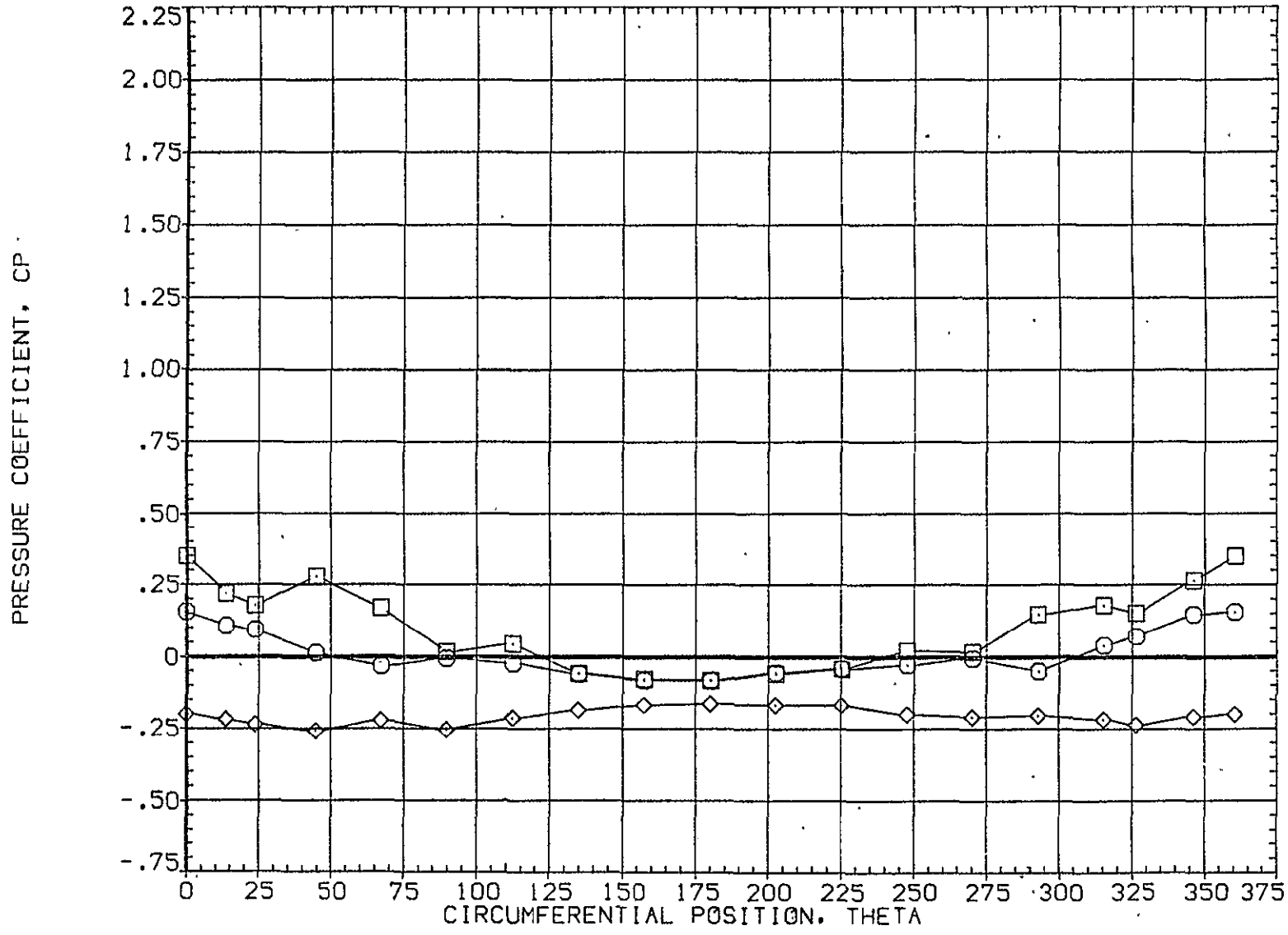

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

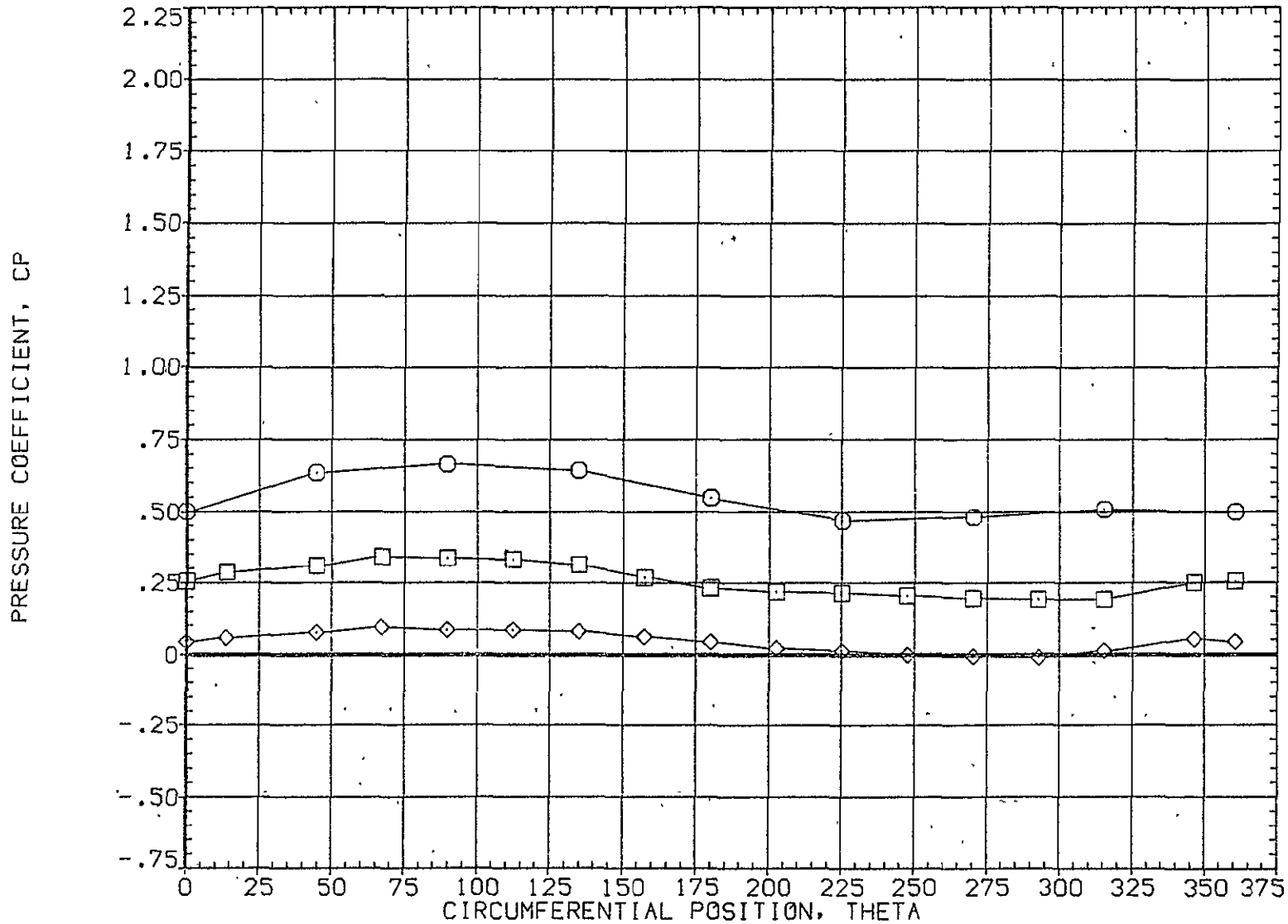

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

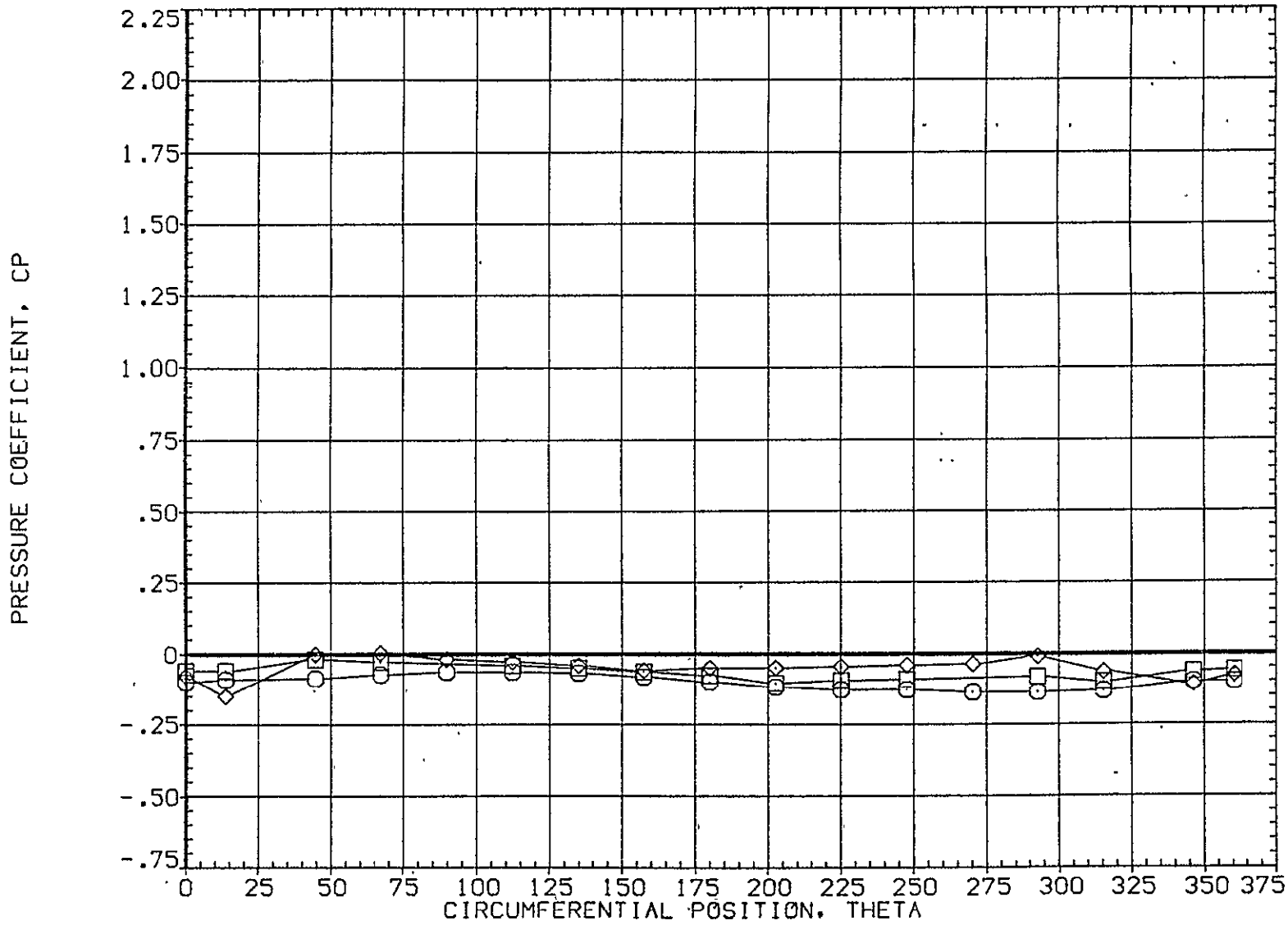

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT.	1.000	PHI	90.000

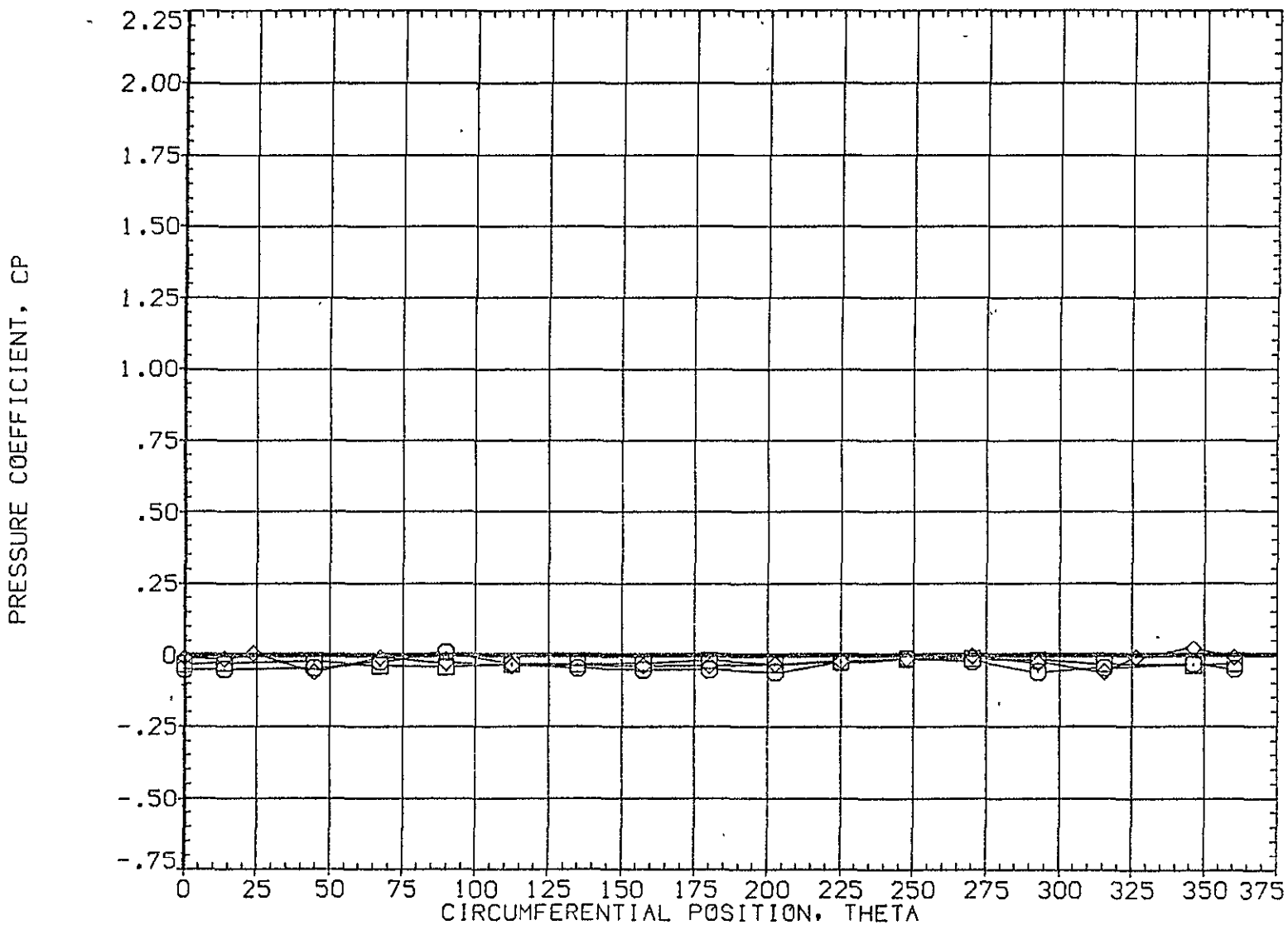

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

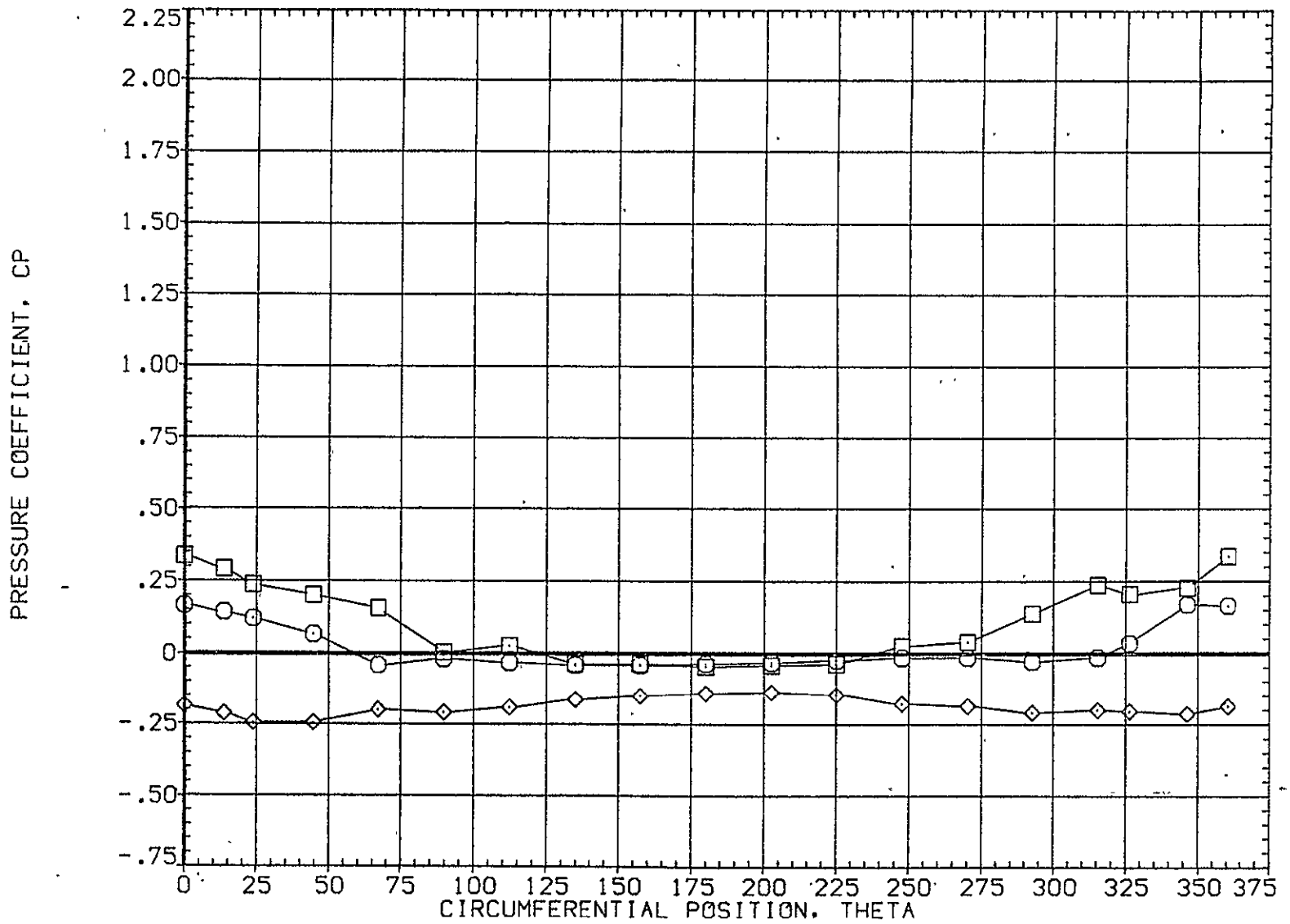

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	1.970
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

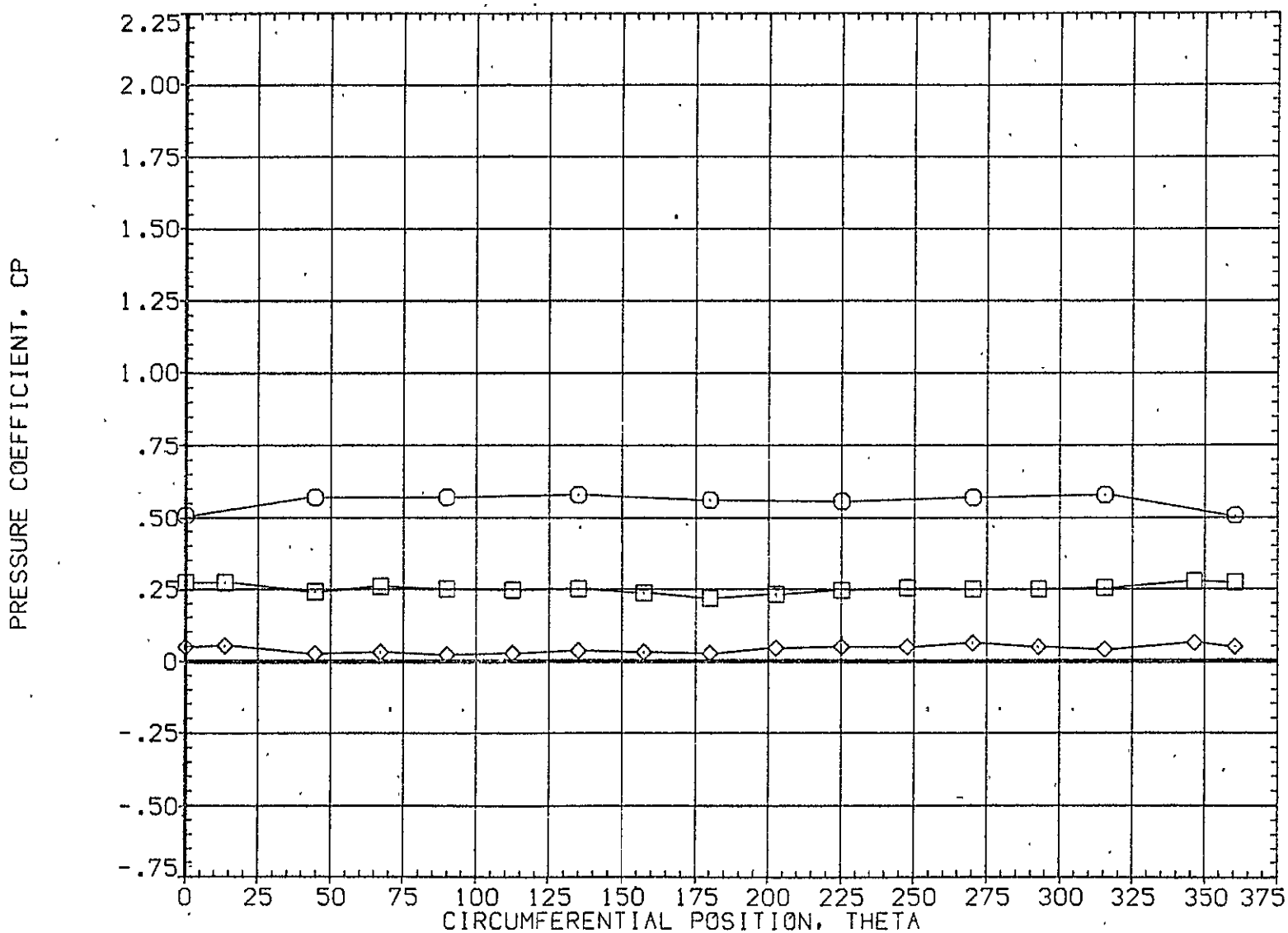

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	1.970
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

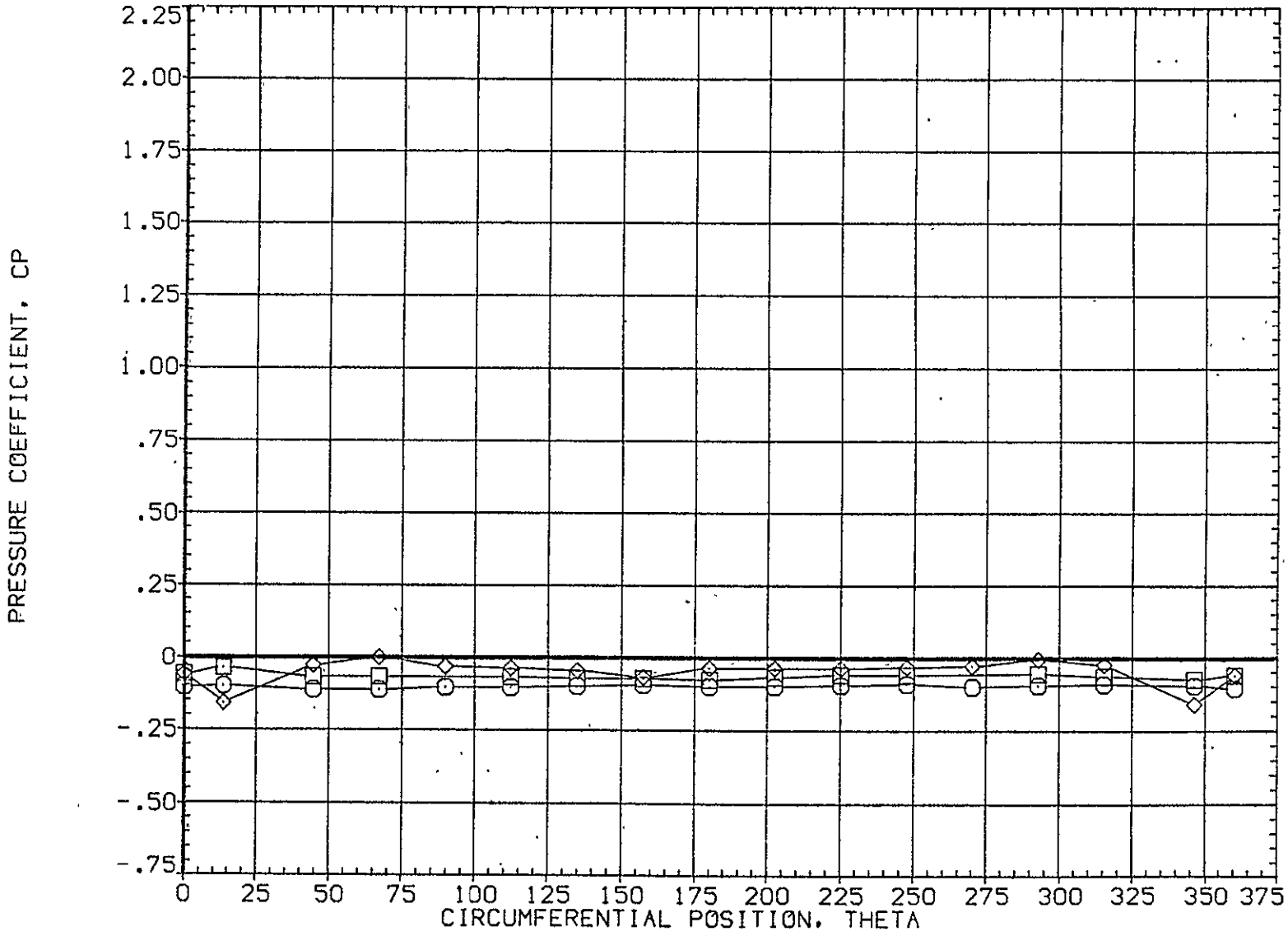

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	1.970
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

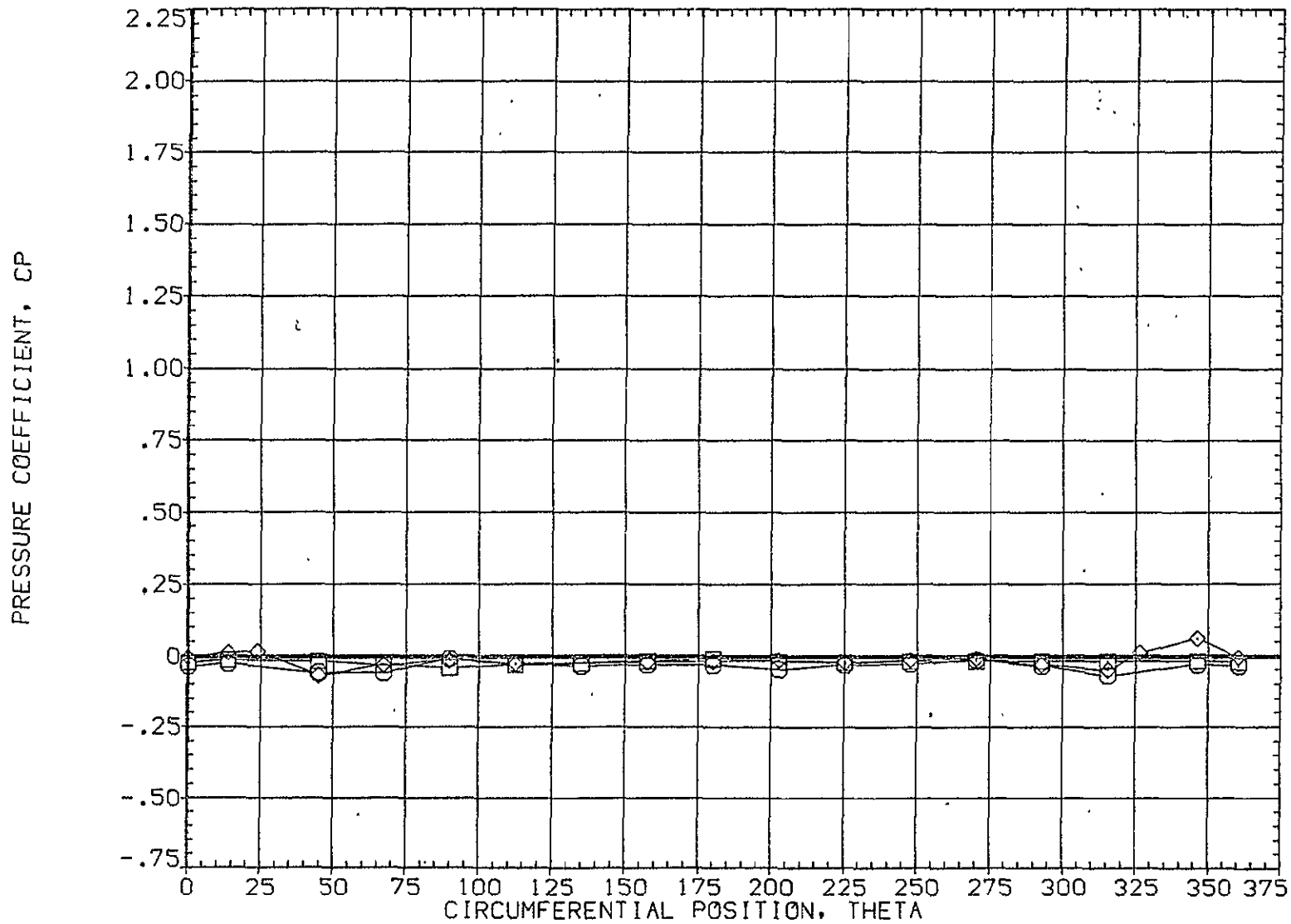

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	1.970
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

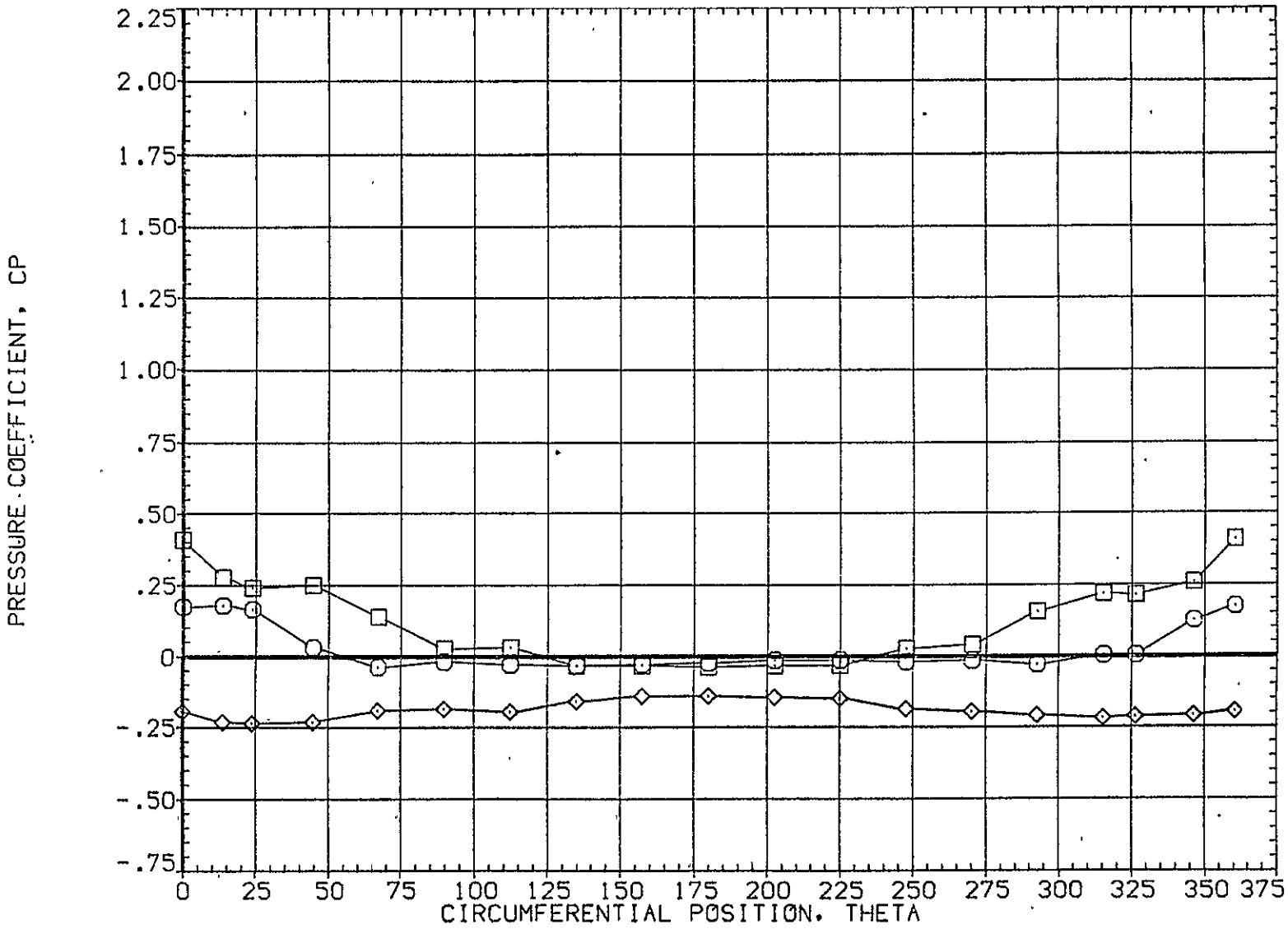

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.790	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI.	90.000

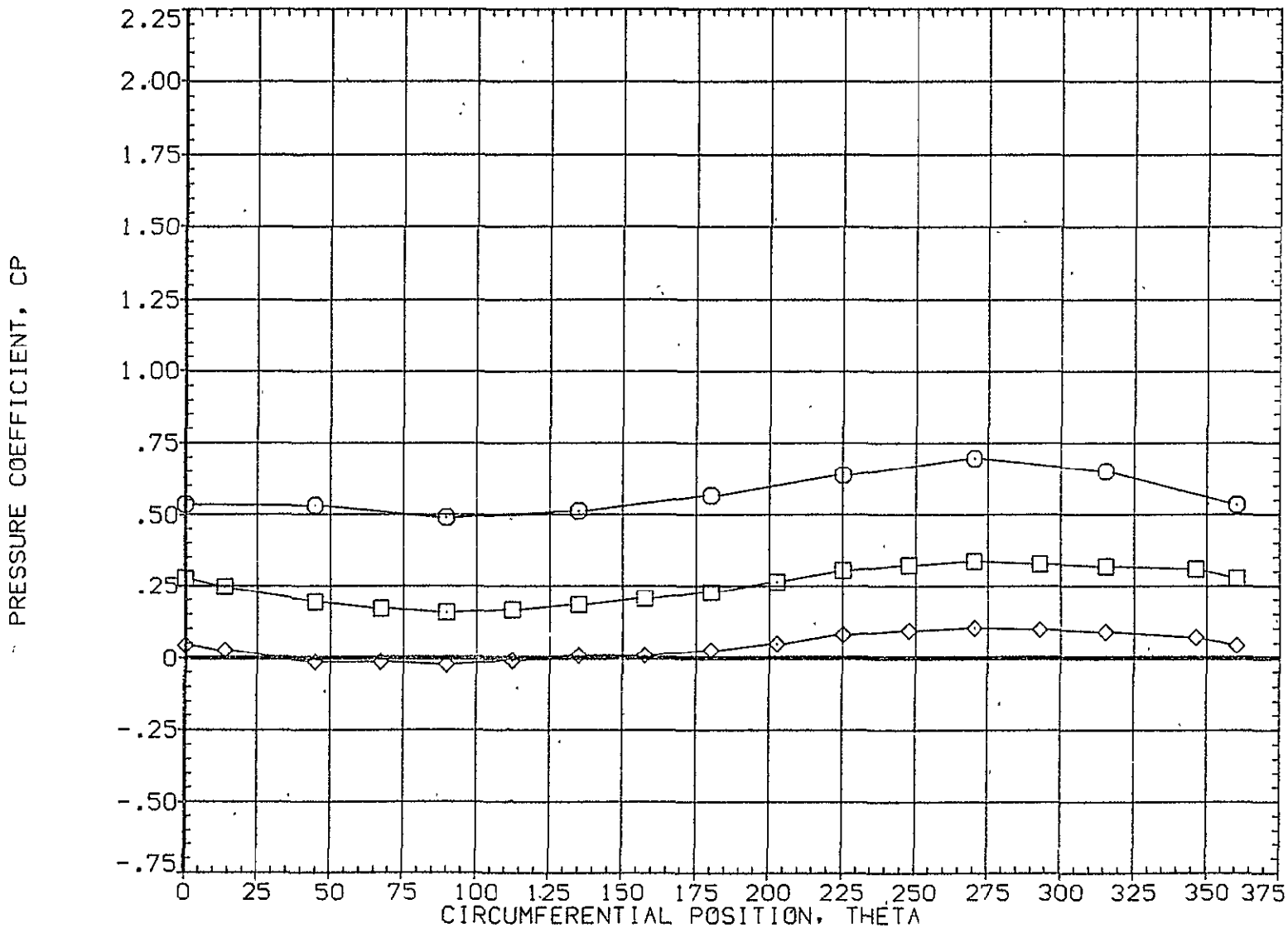

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.790	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

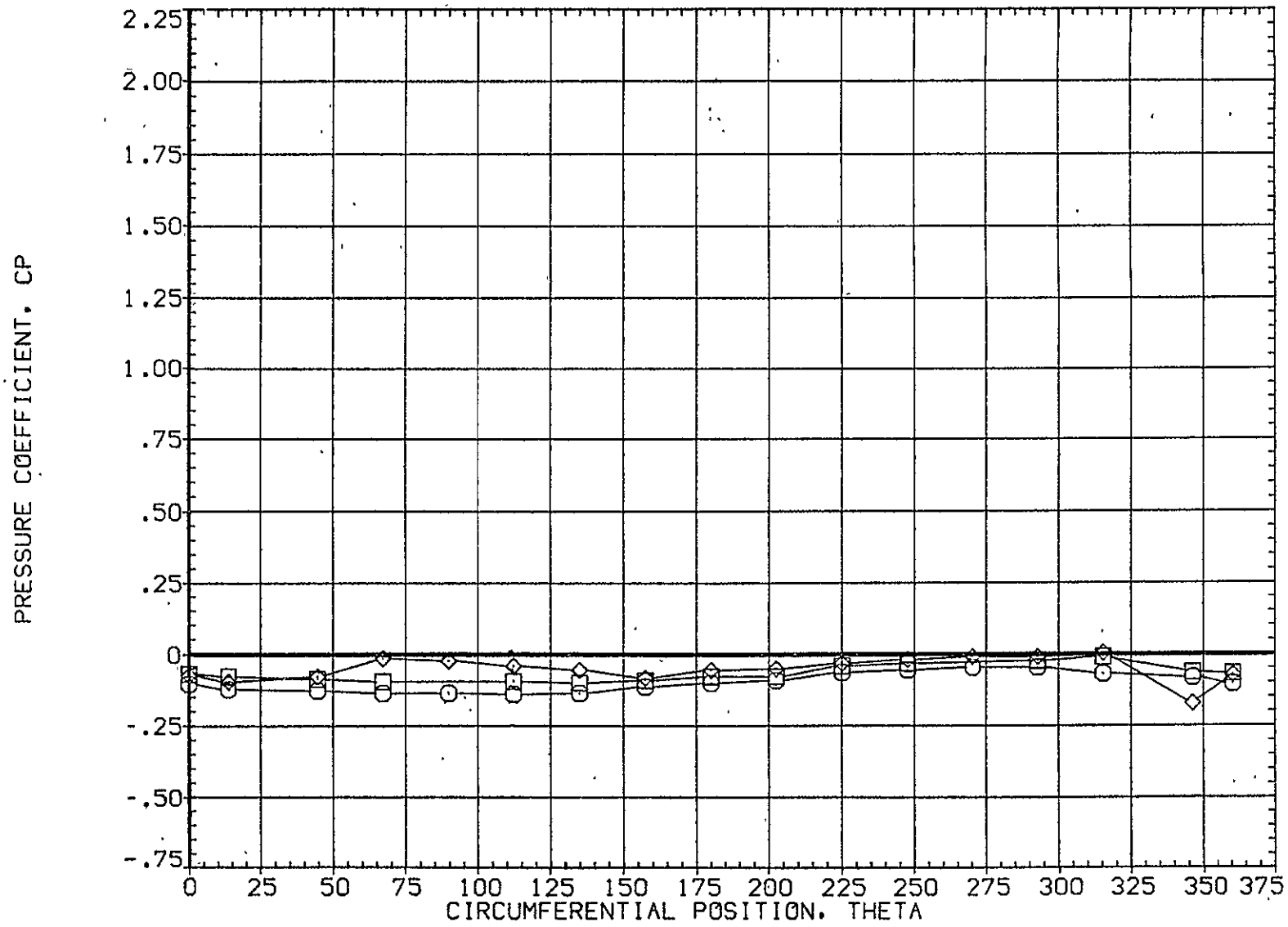

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.790	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

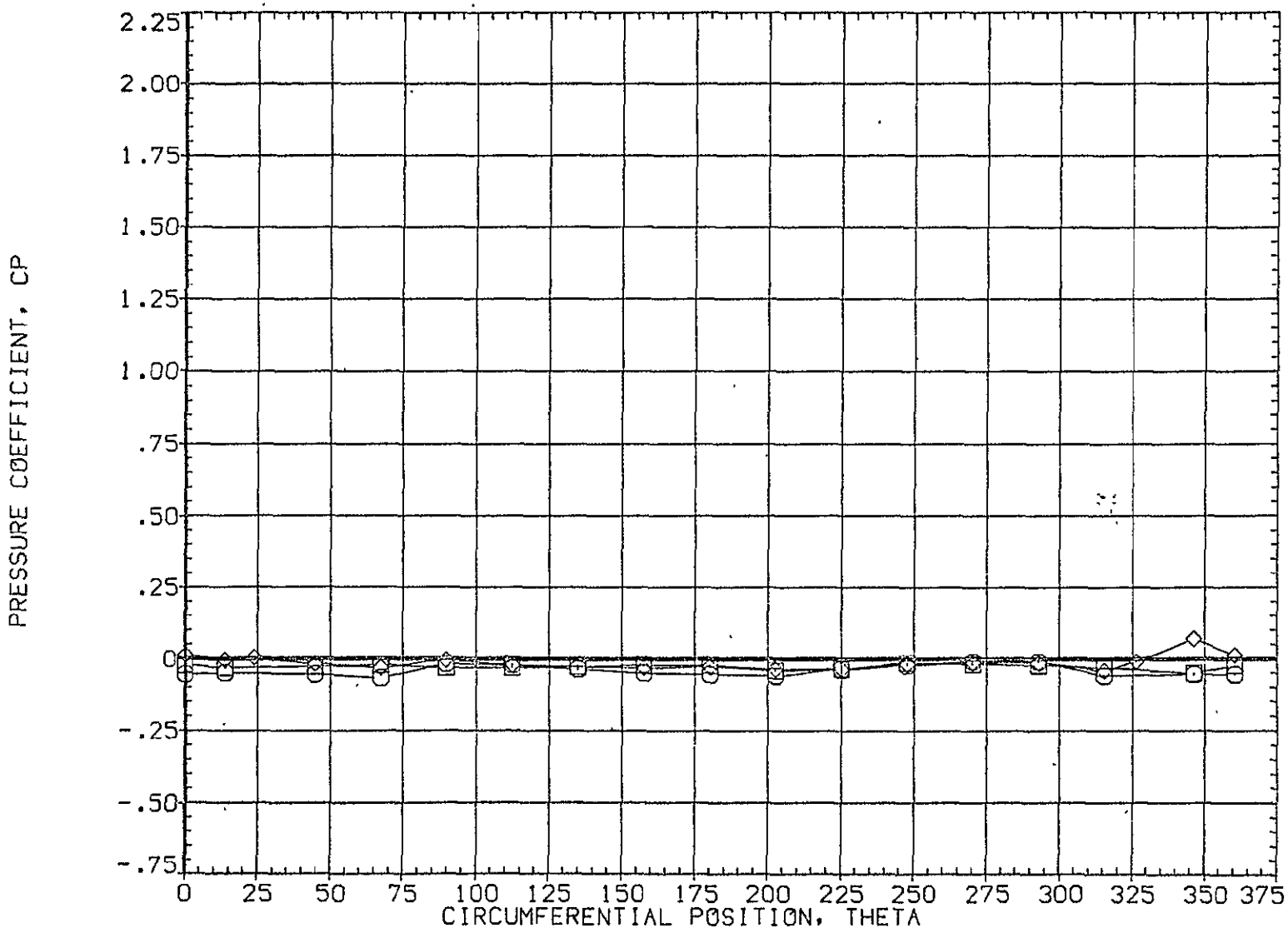

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.790	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

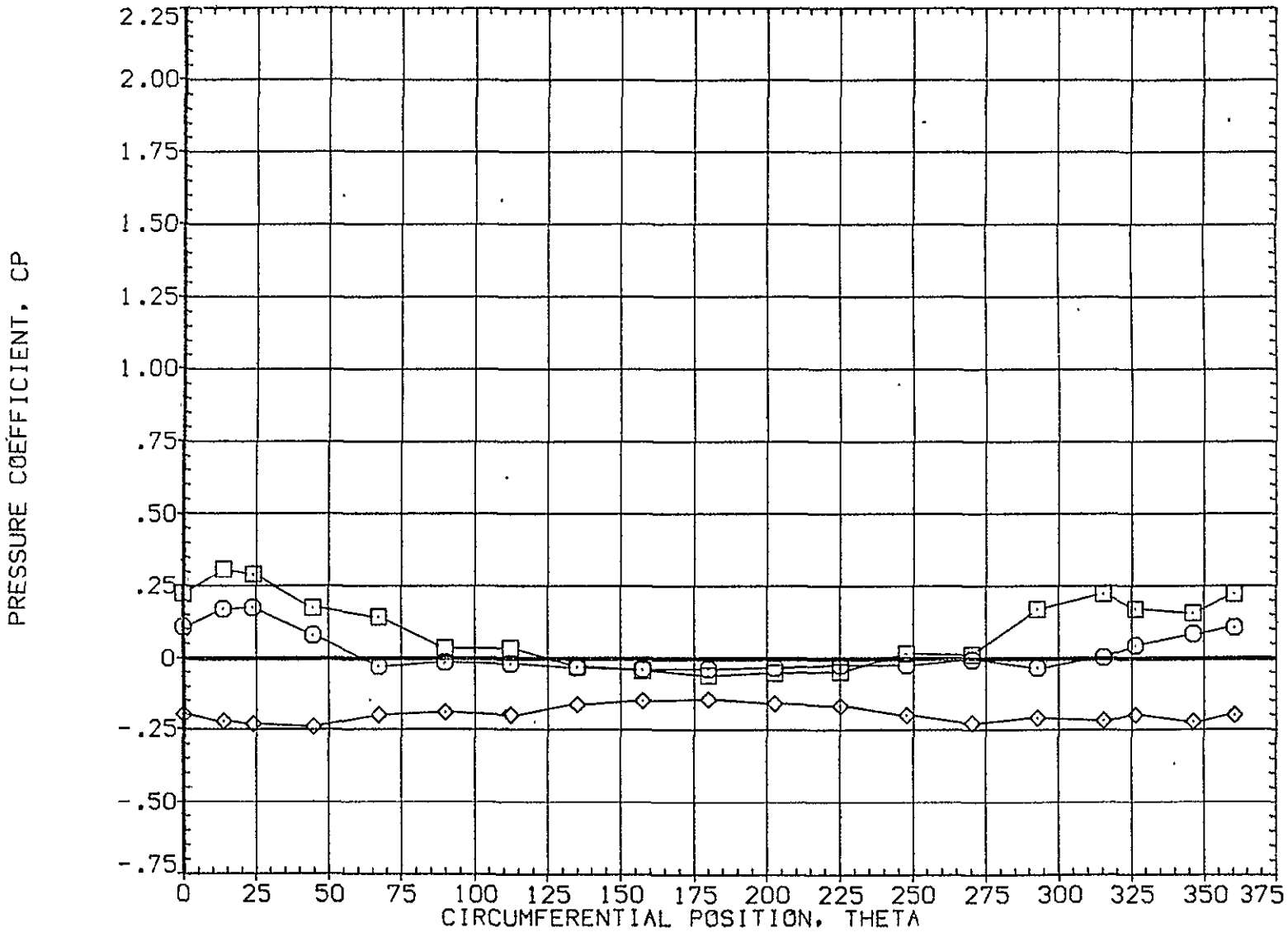

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.840	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

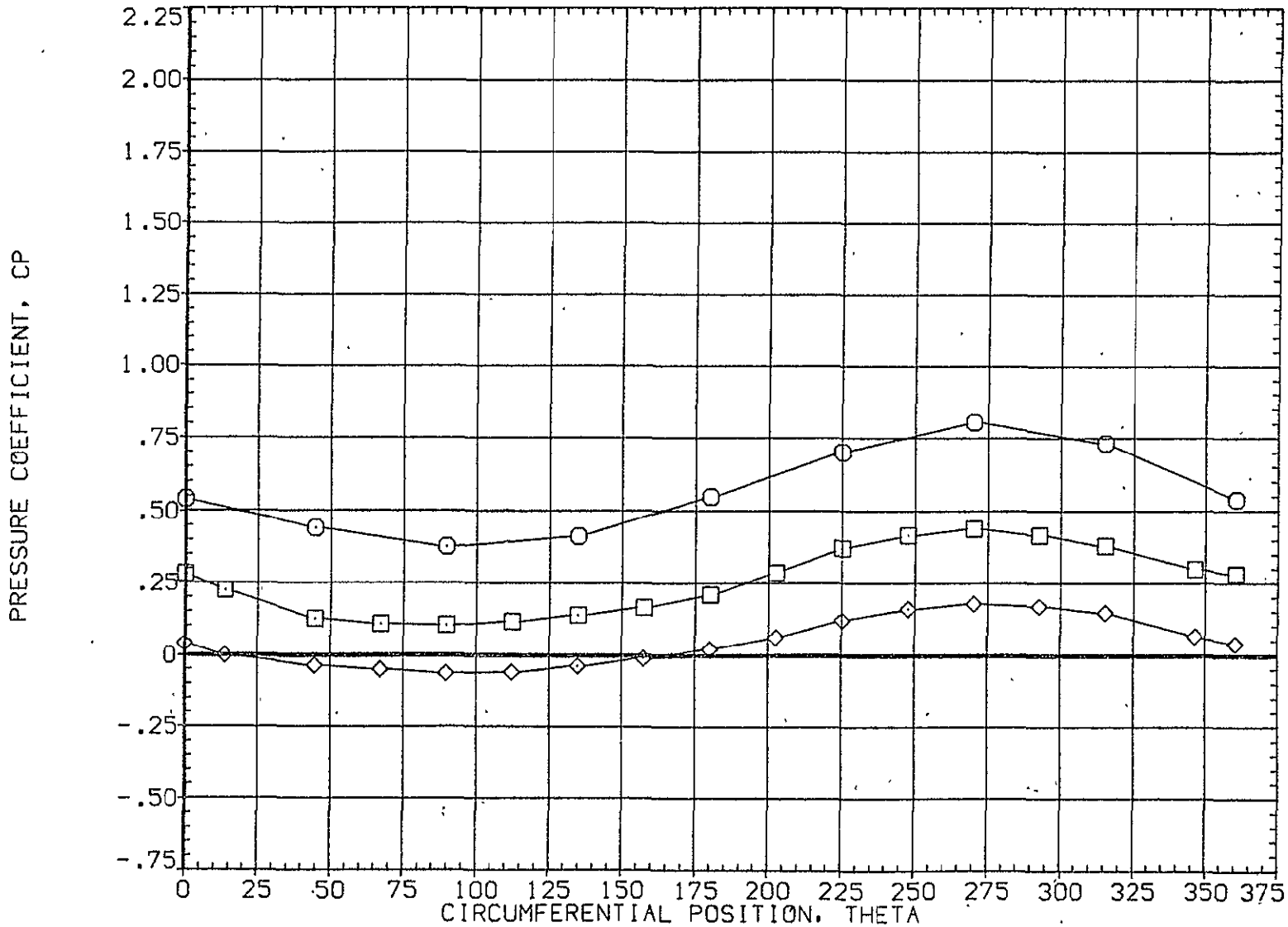

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.840	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

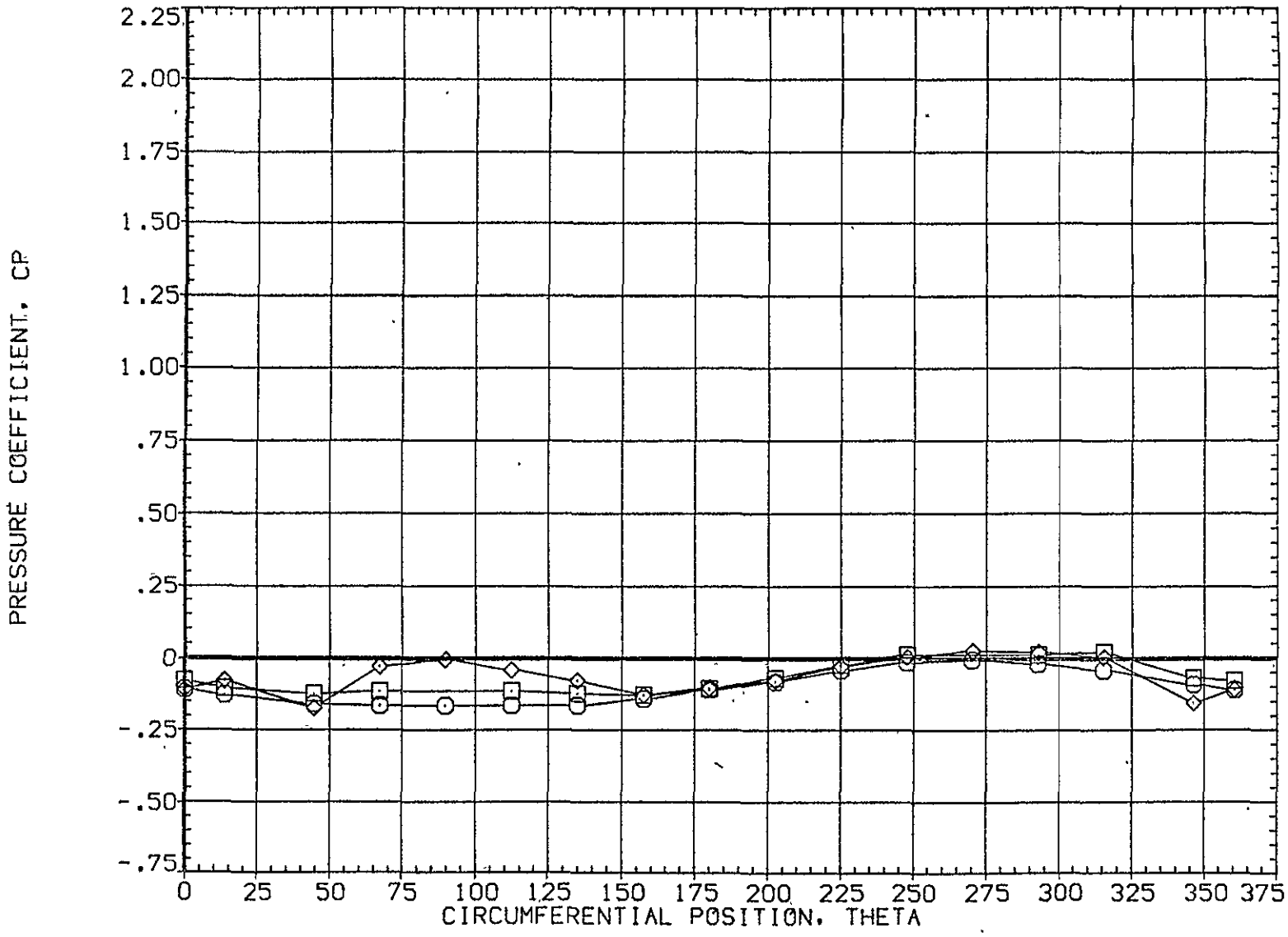

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.840	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

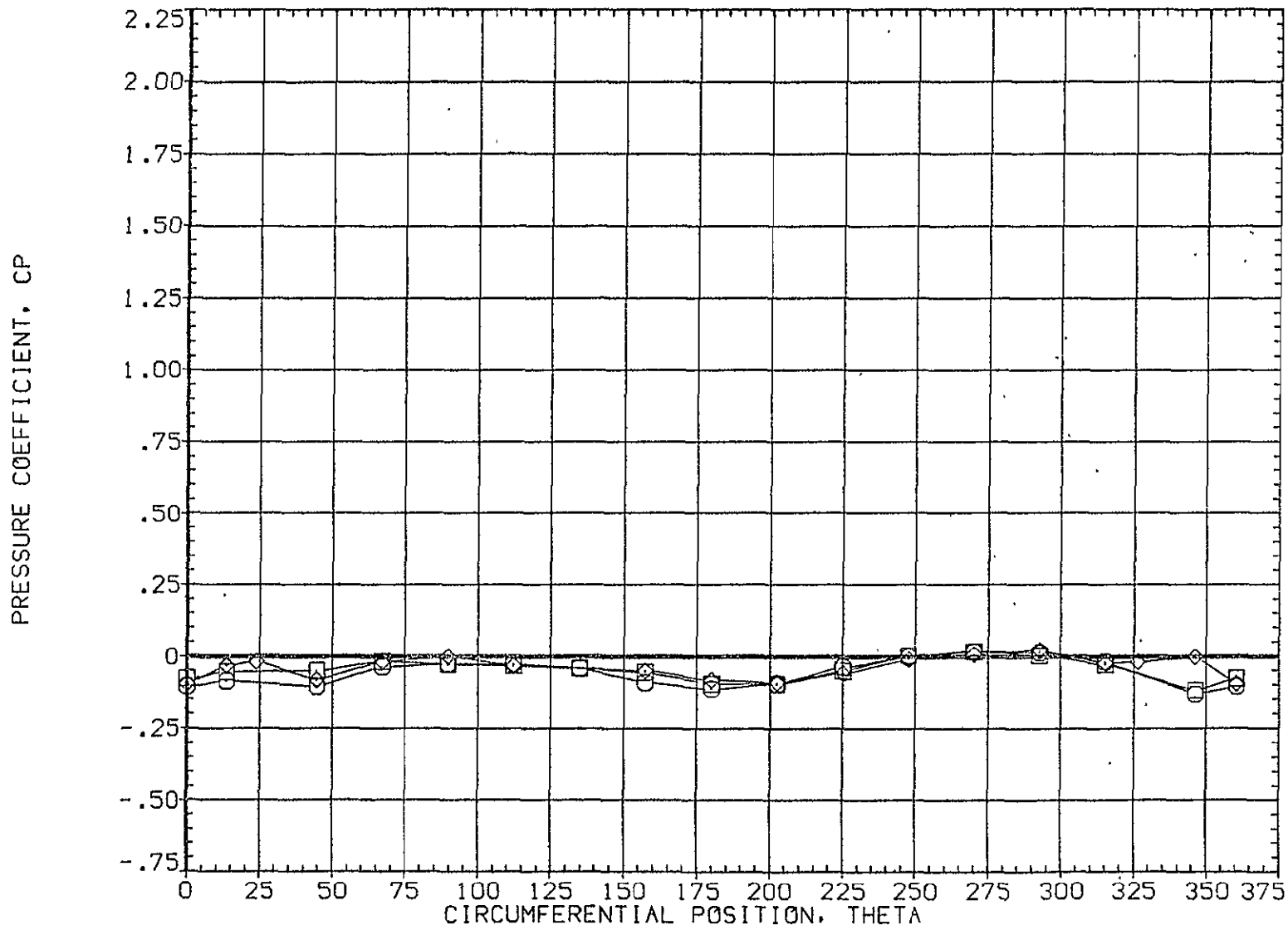

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.840	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

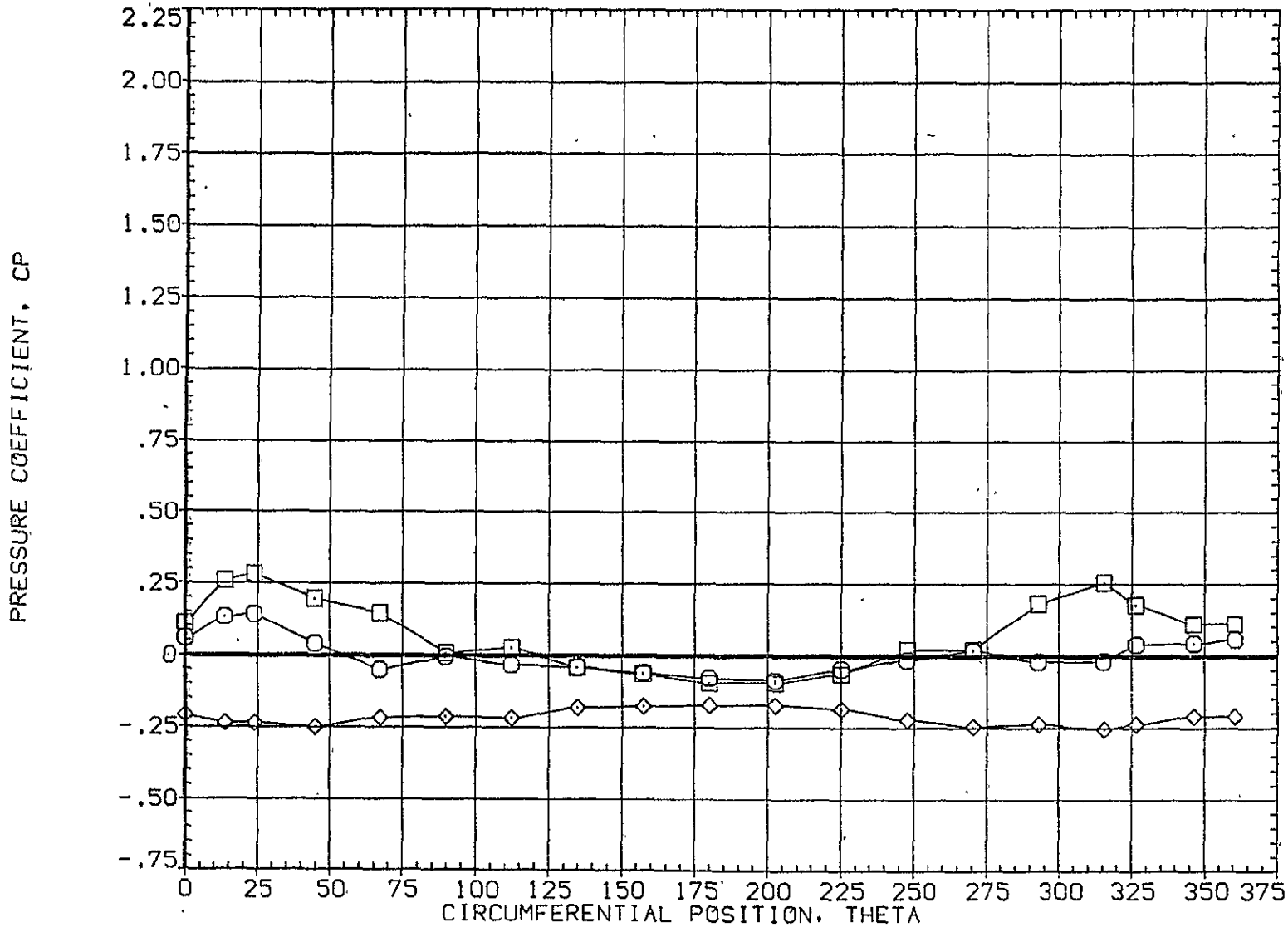

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.550	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

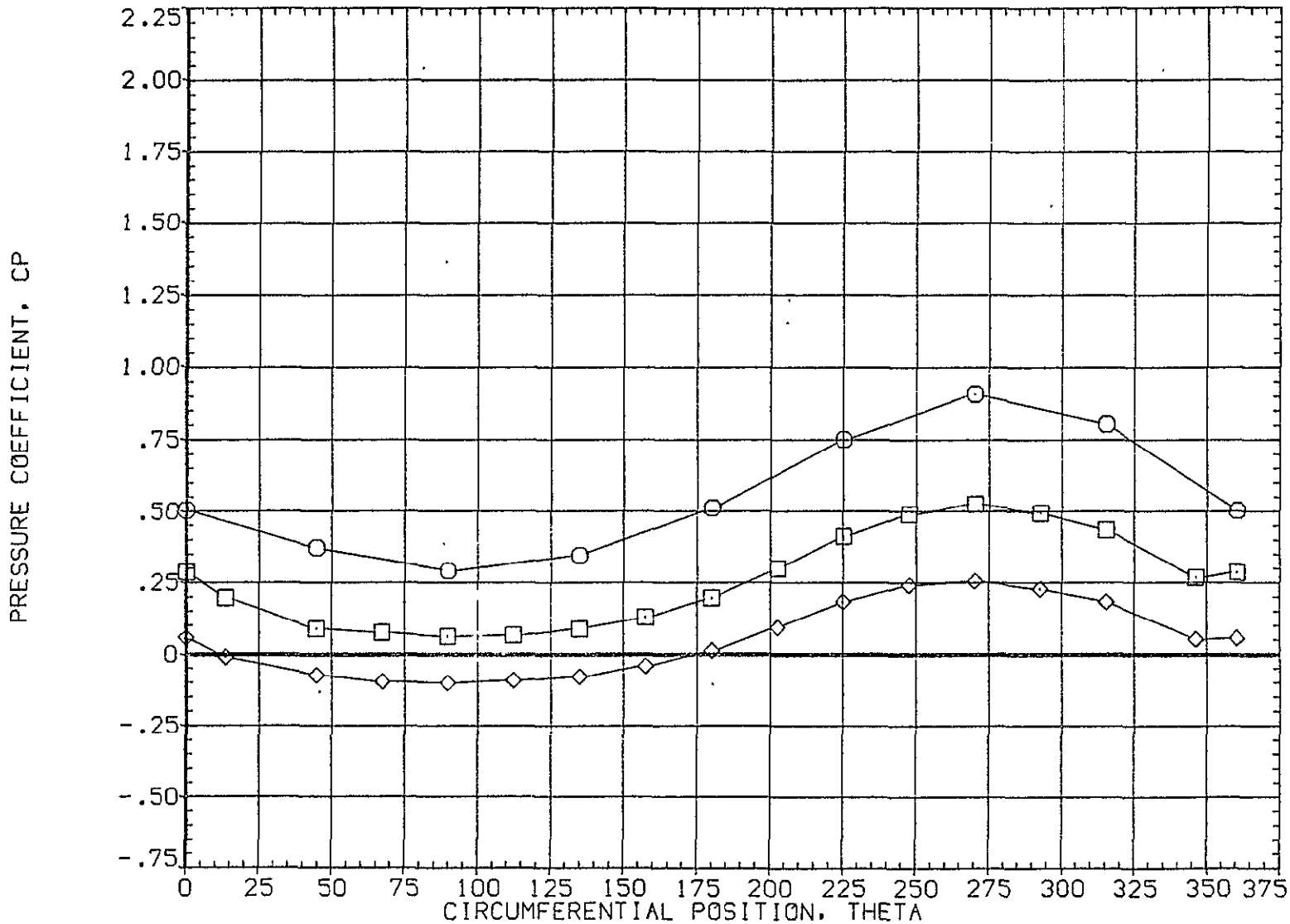

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.550	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

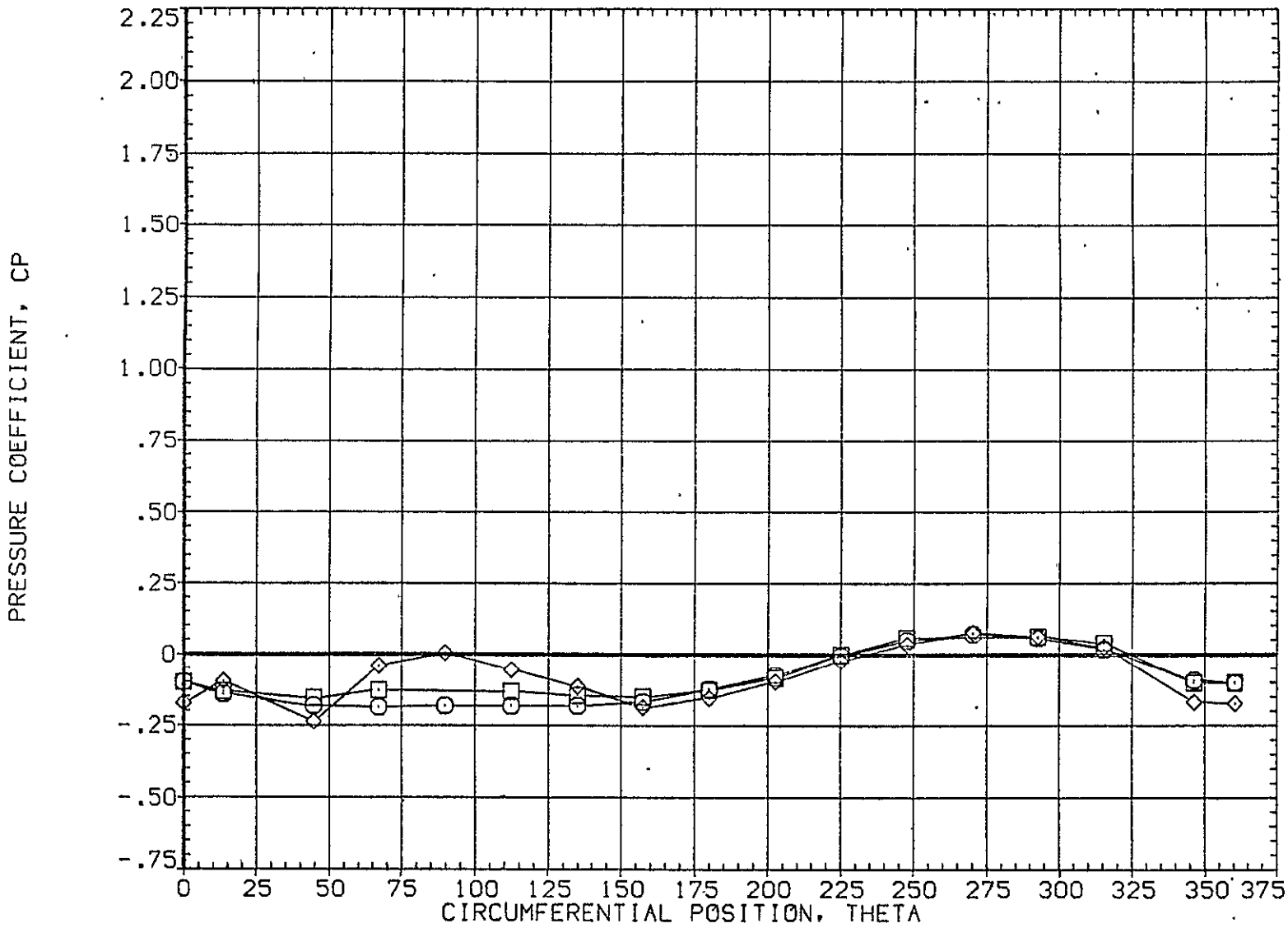

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.550	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

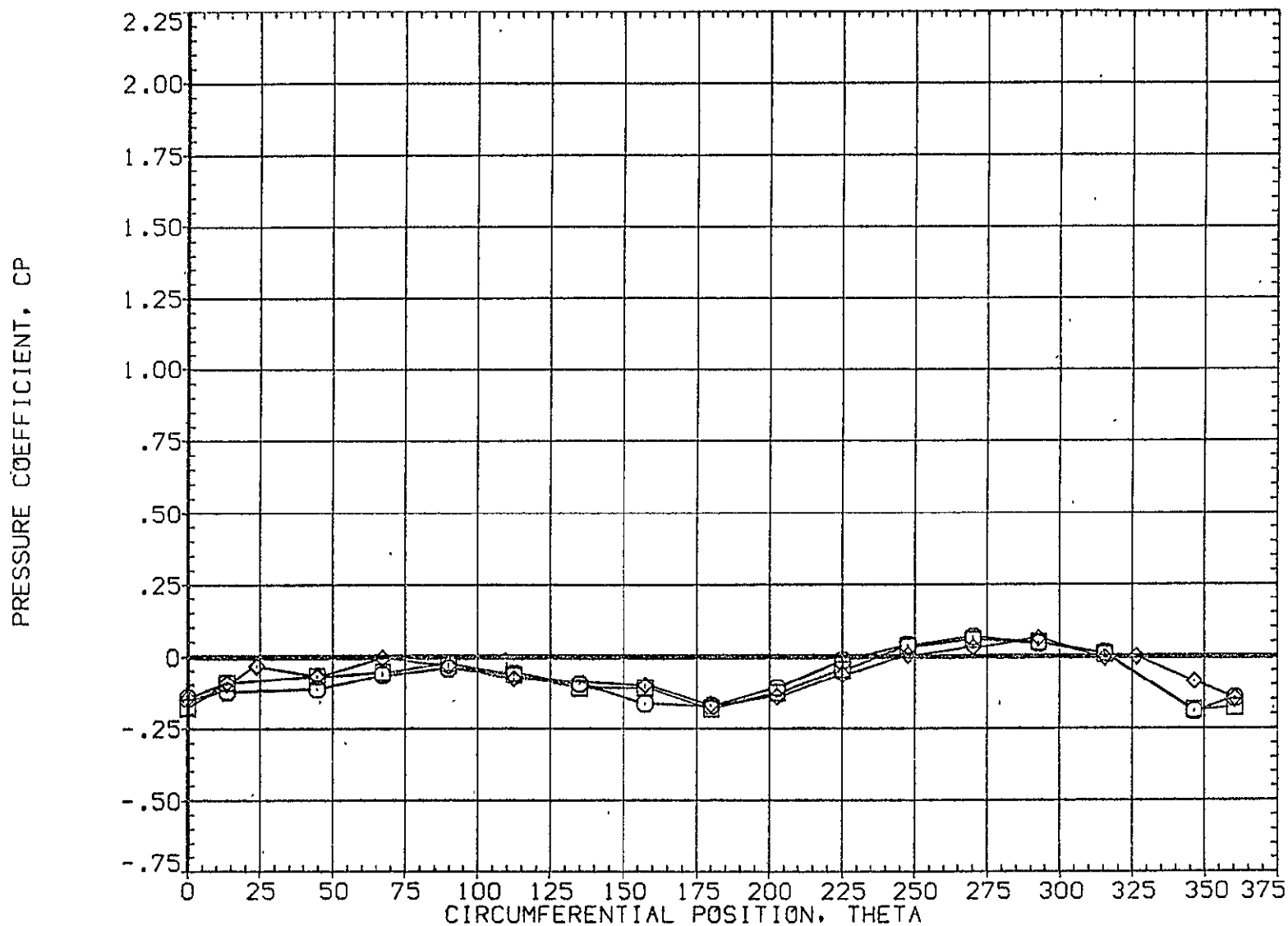

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.550	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

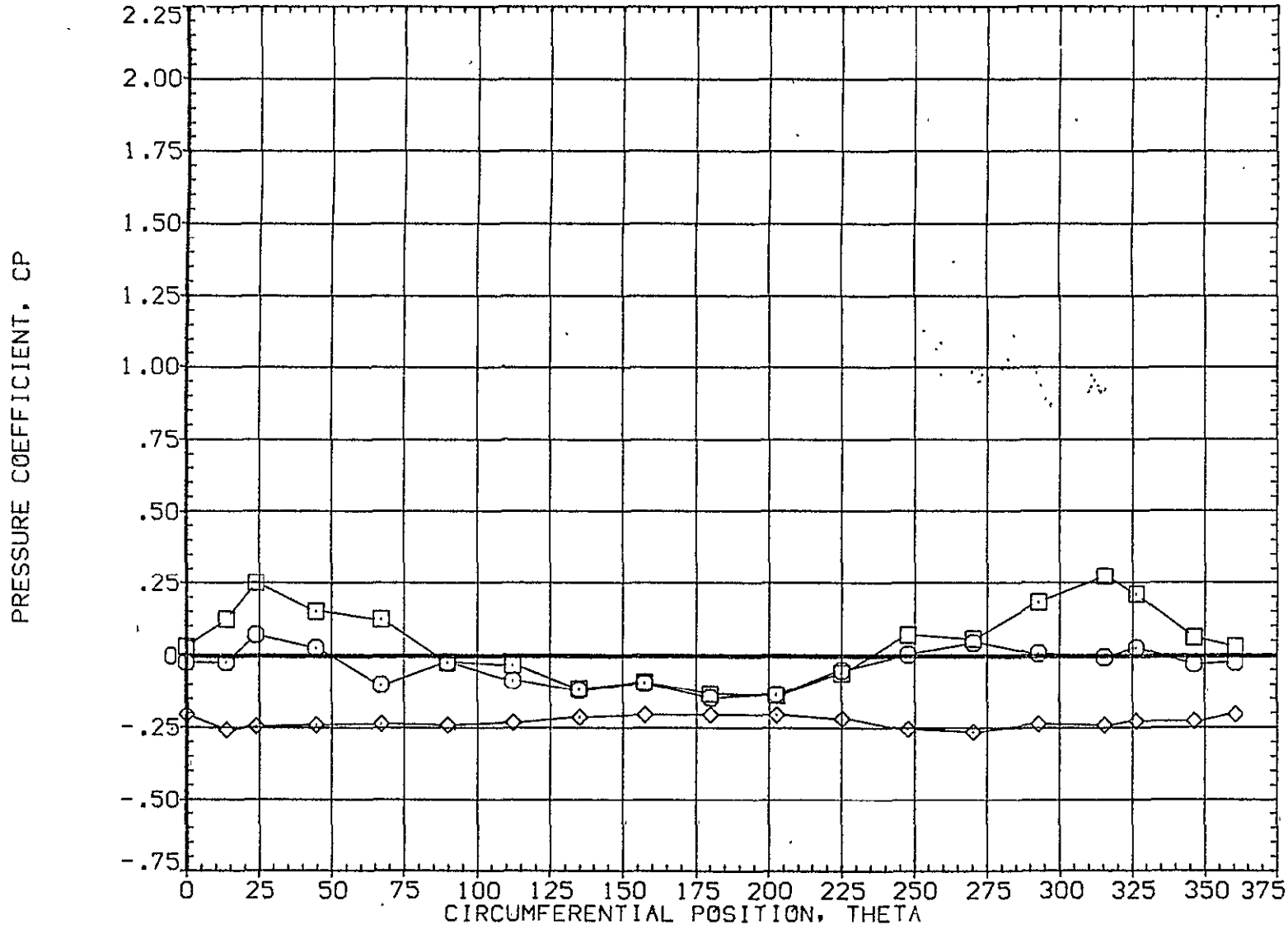

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.660	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

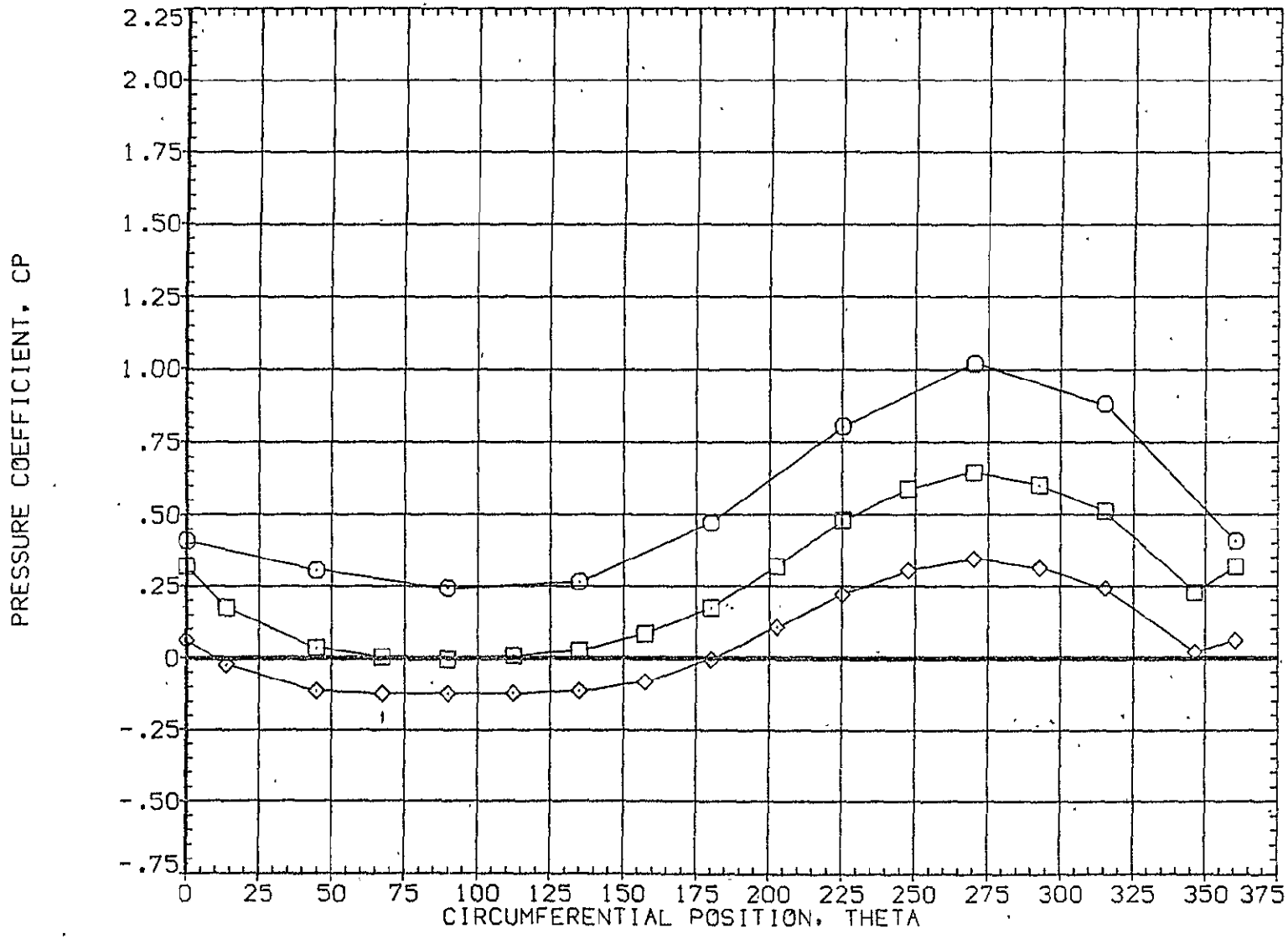

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.660	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

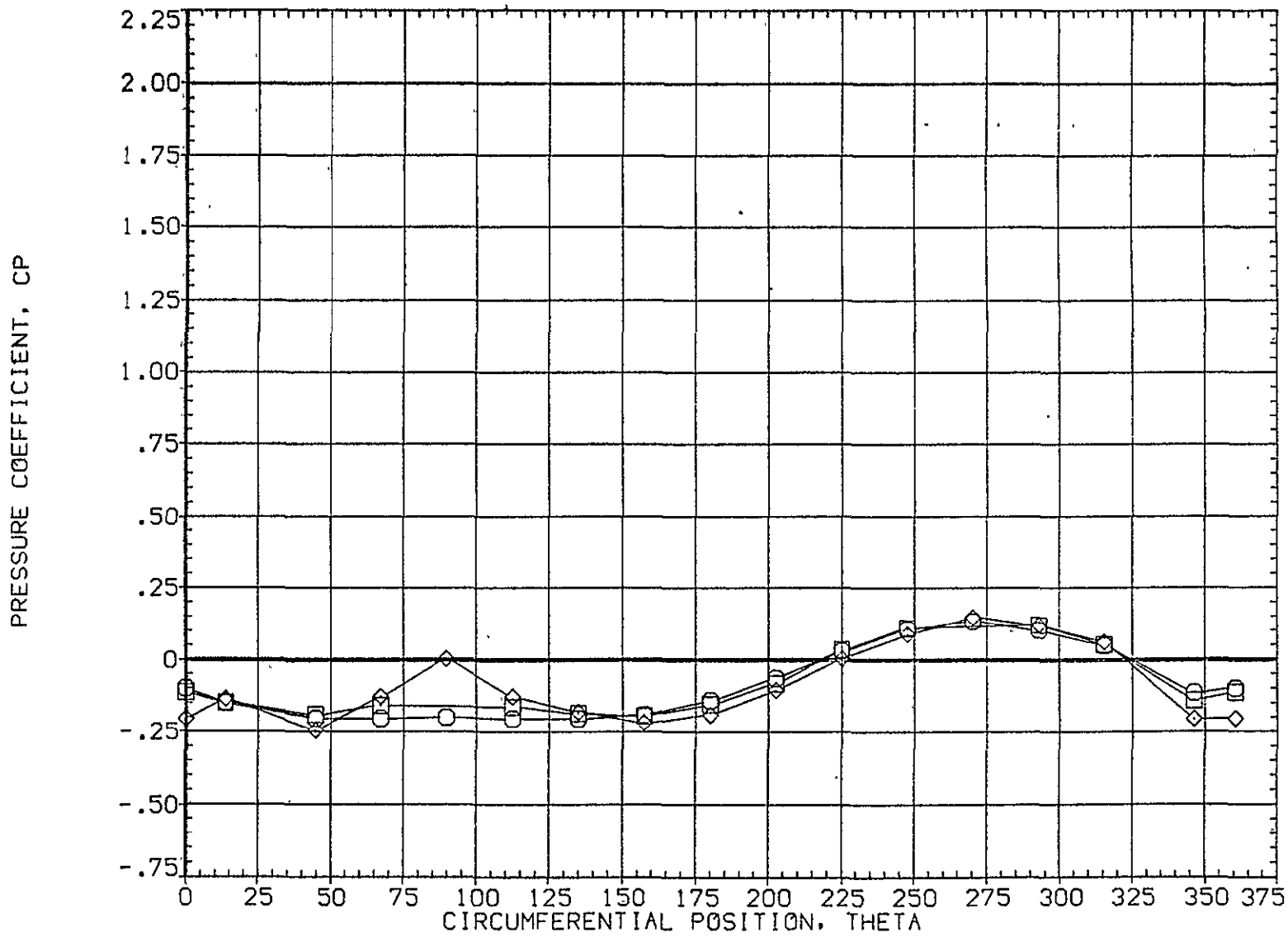

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.660	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

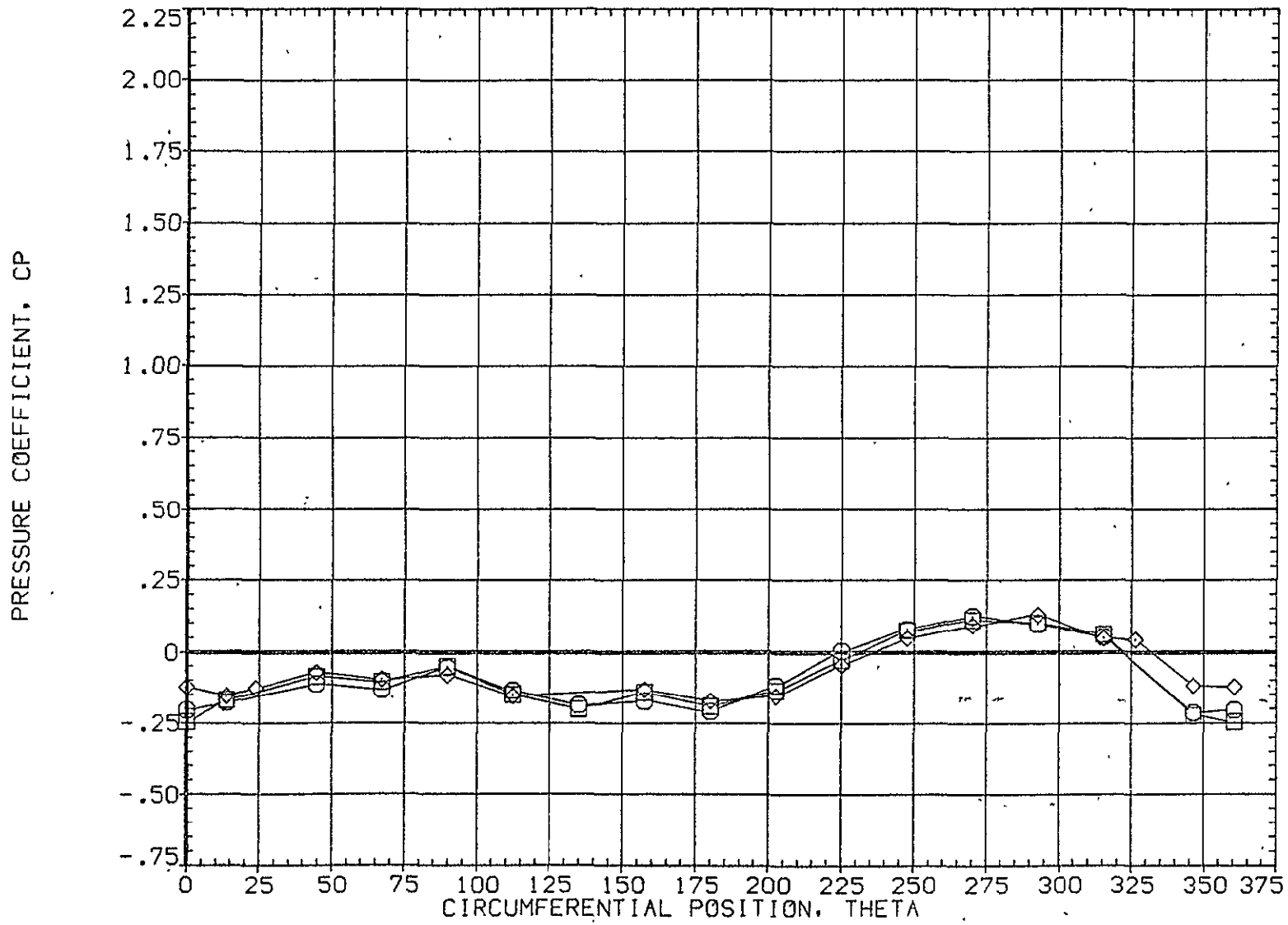

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.660	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

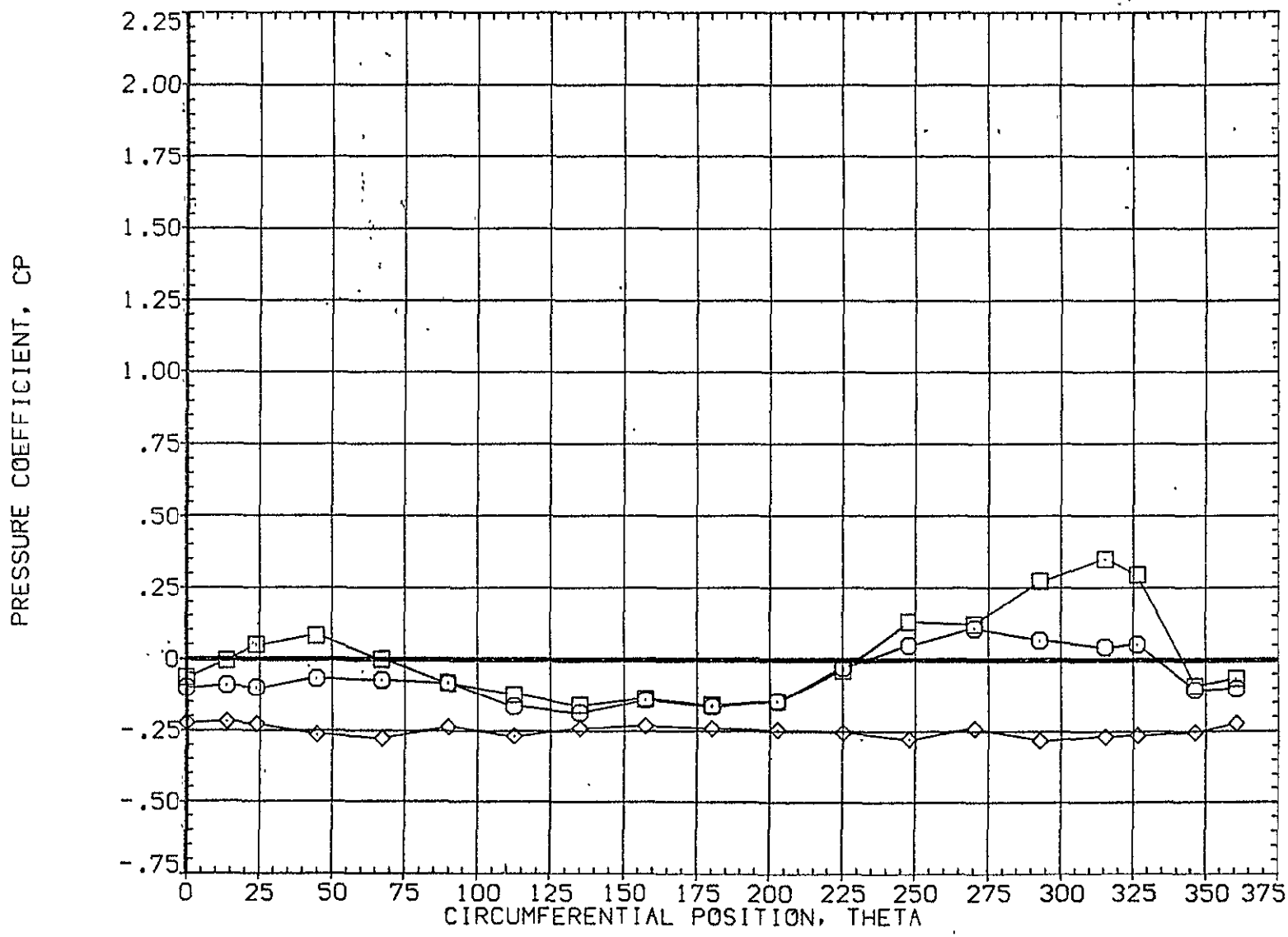

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.740	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

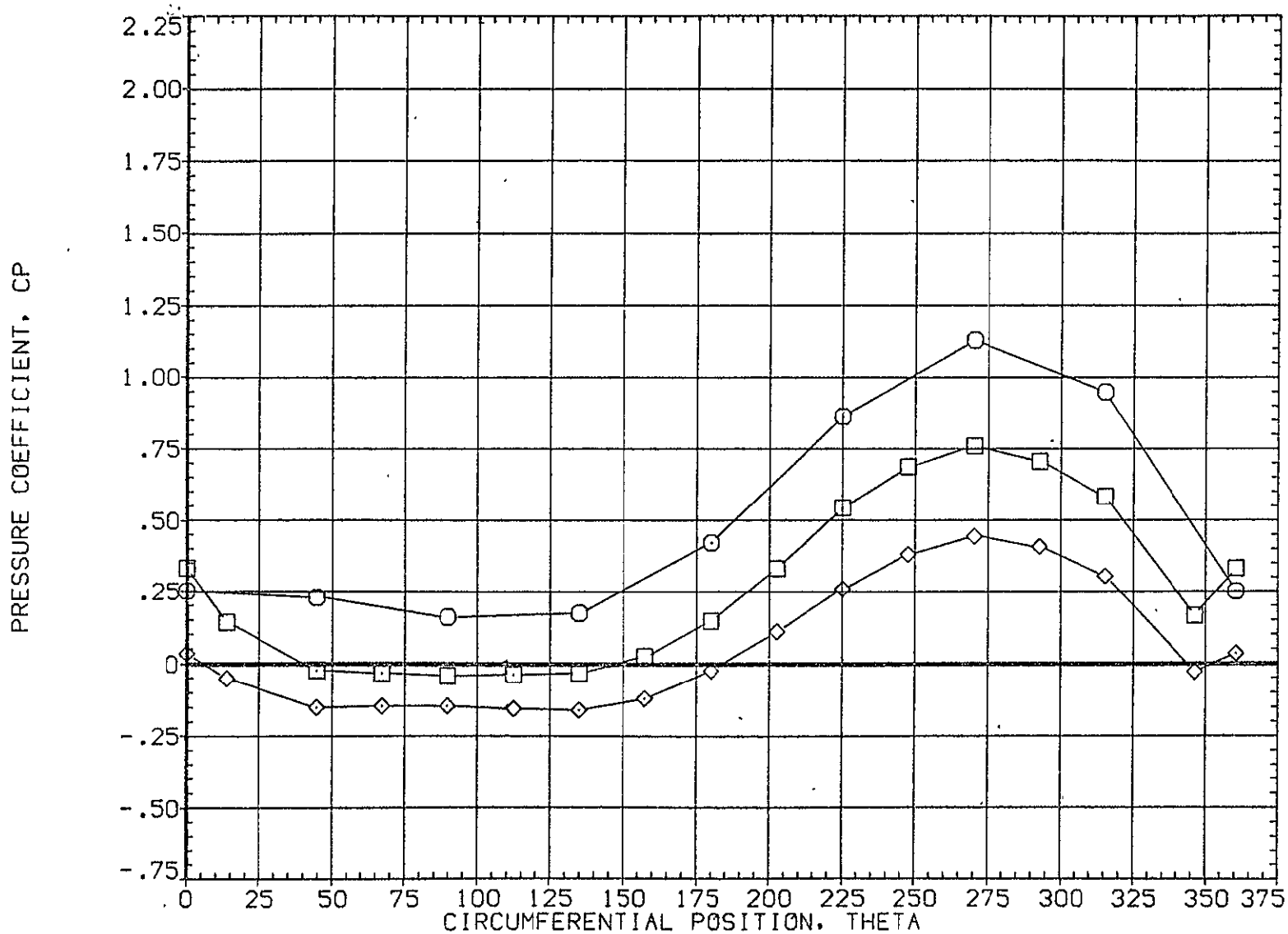

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.740	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

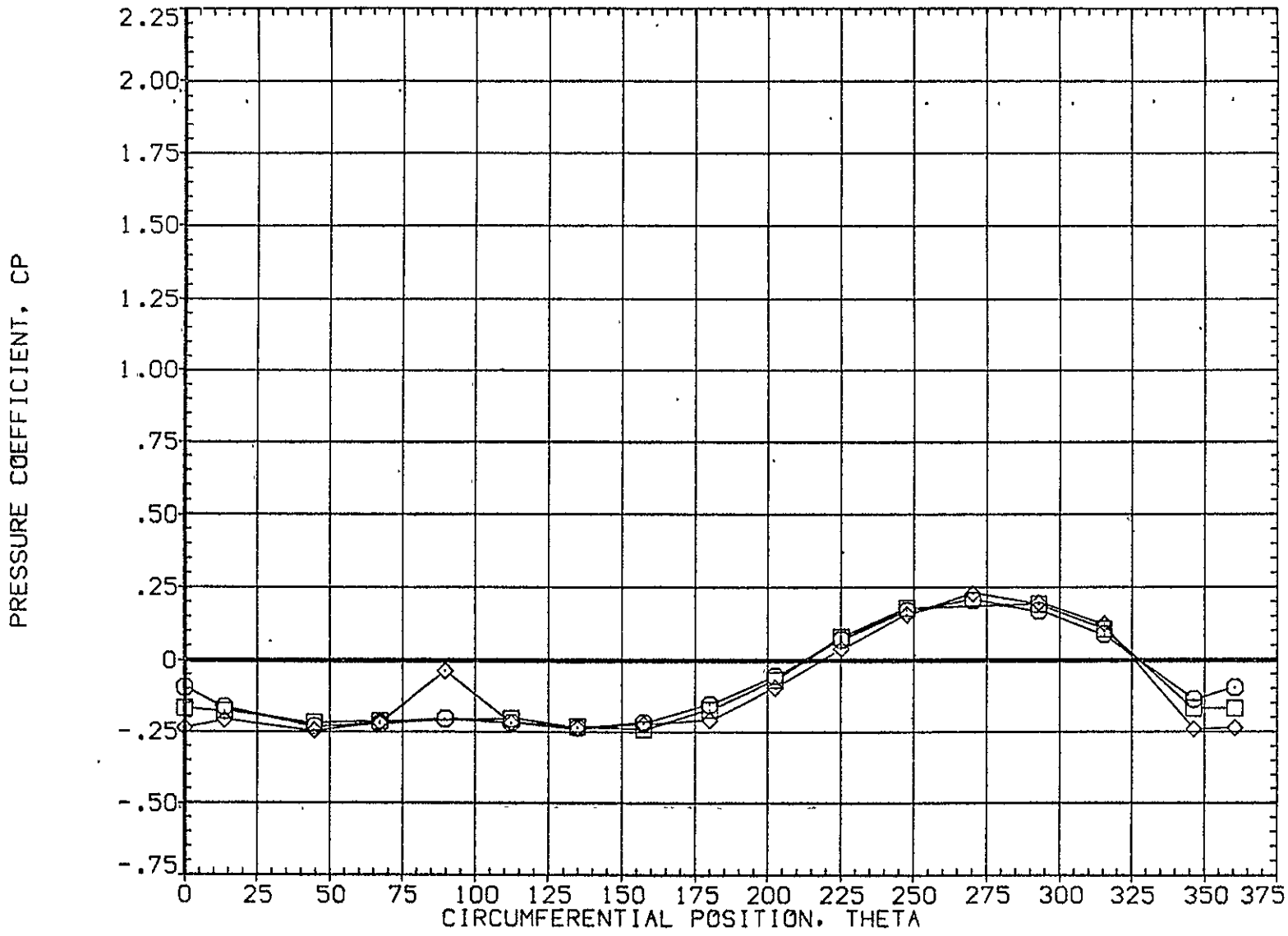

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.740	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

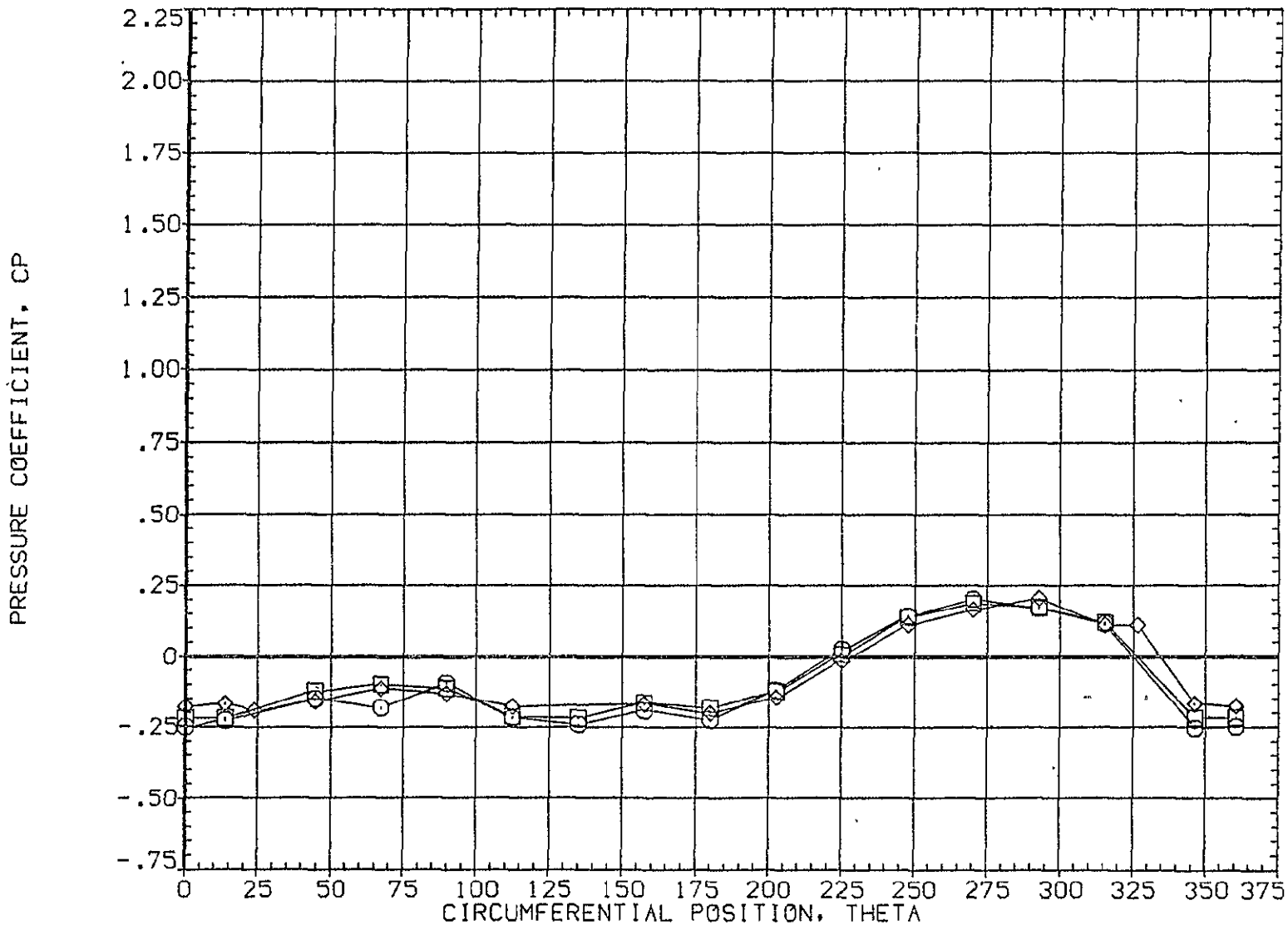

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.740	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

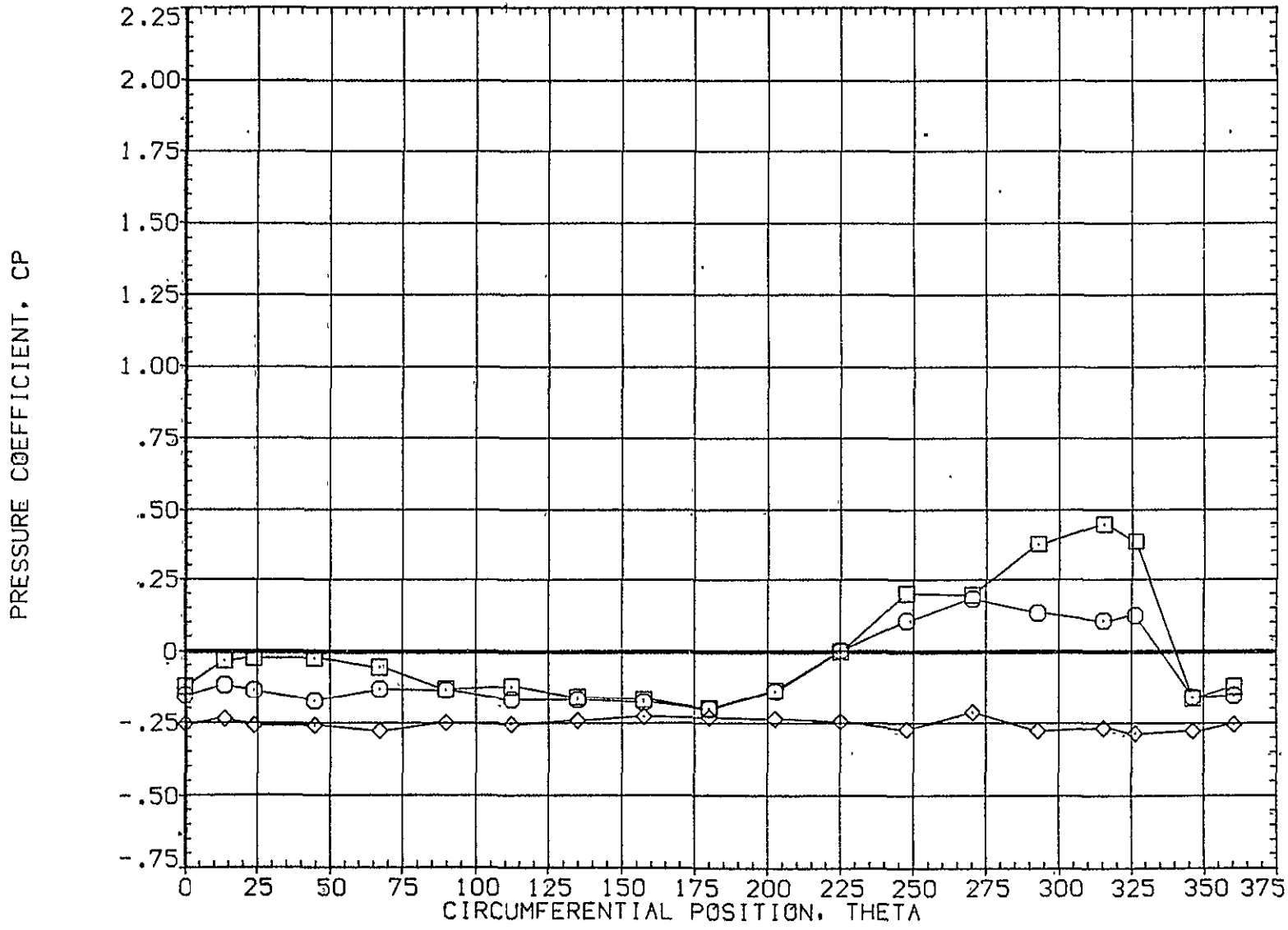

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.850	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

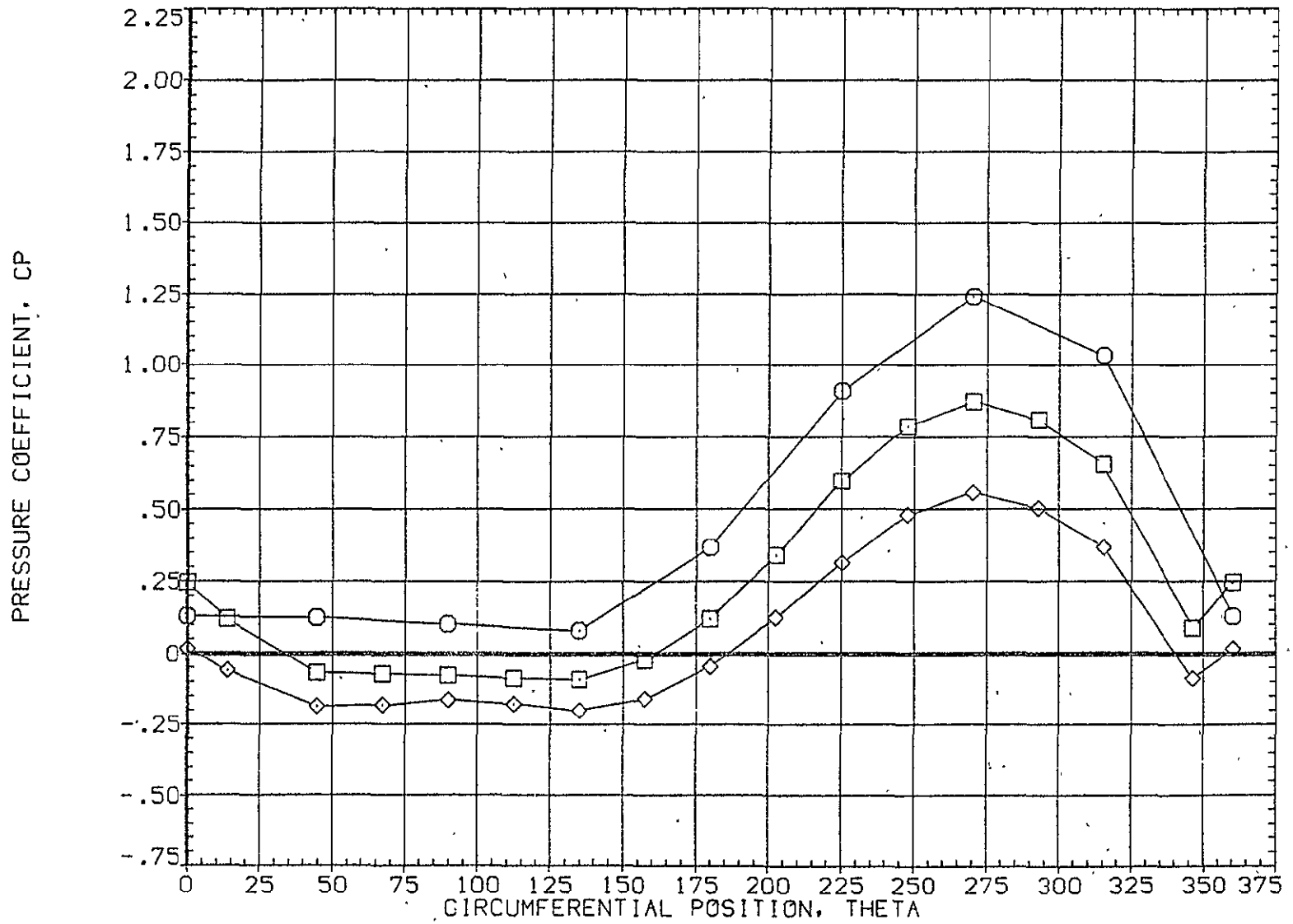

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.850	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

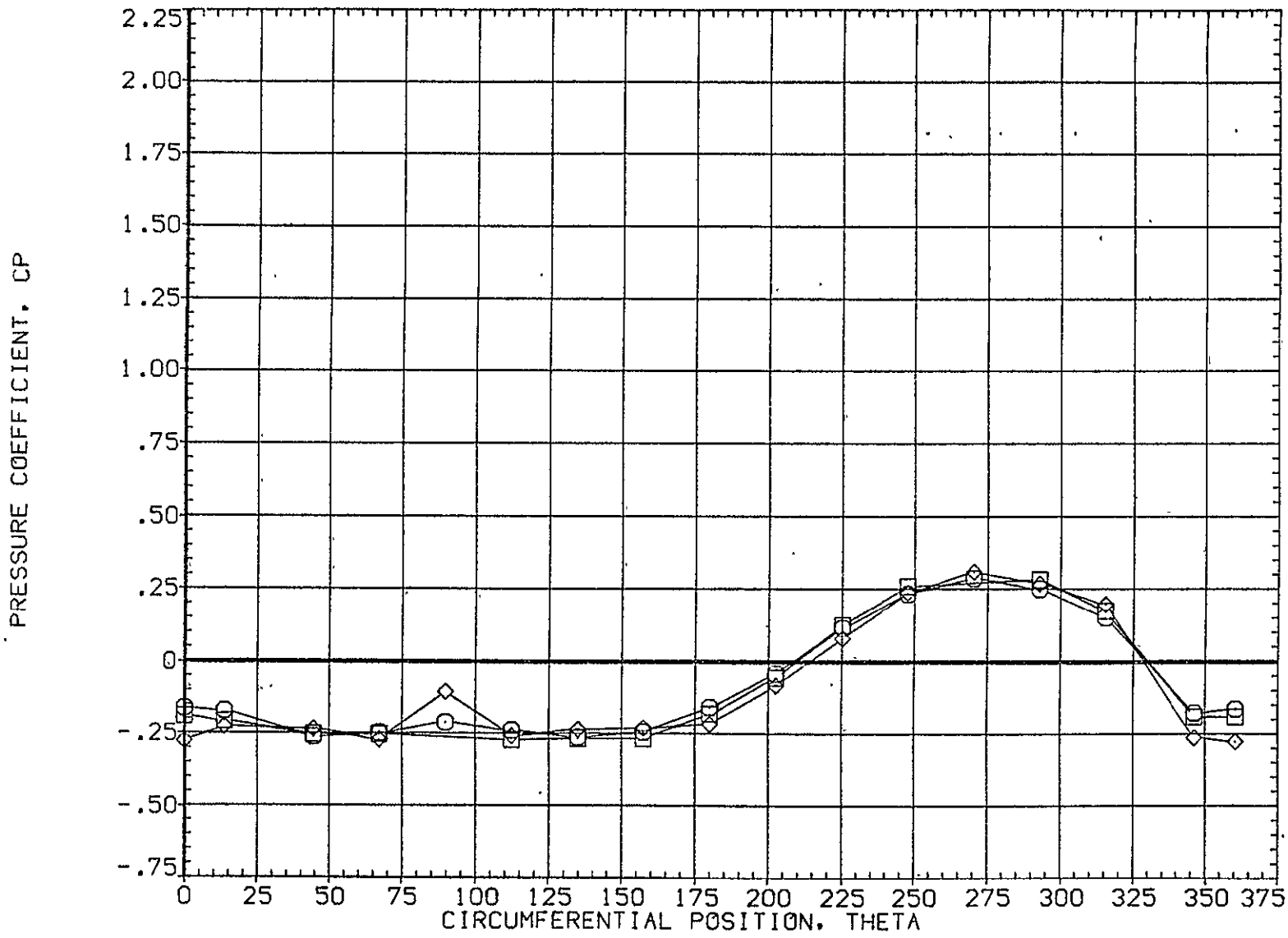

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.850	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

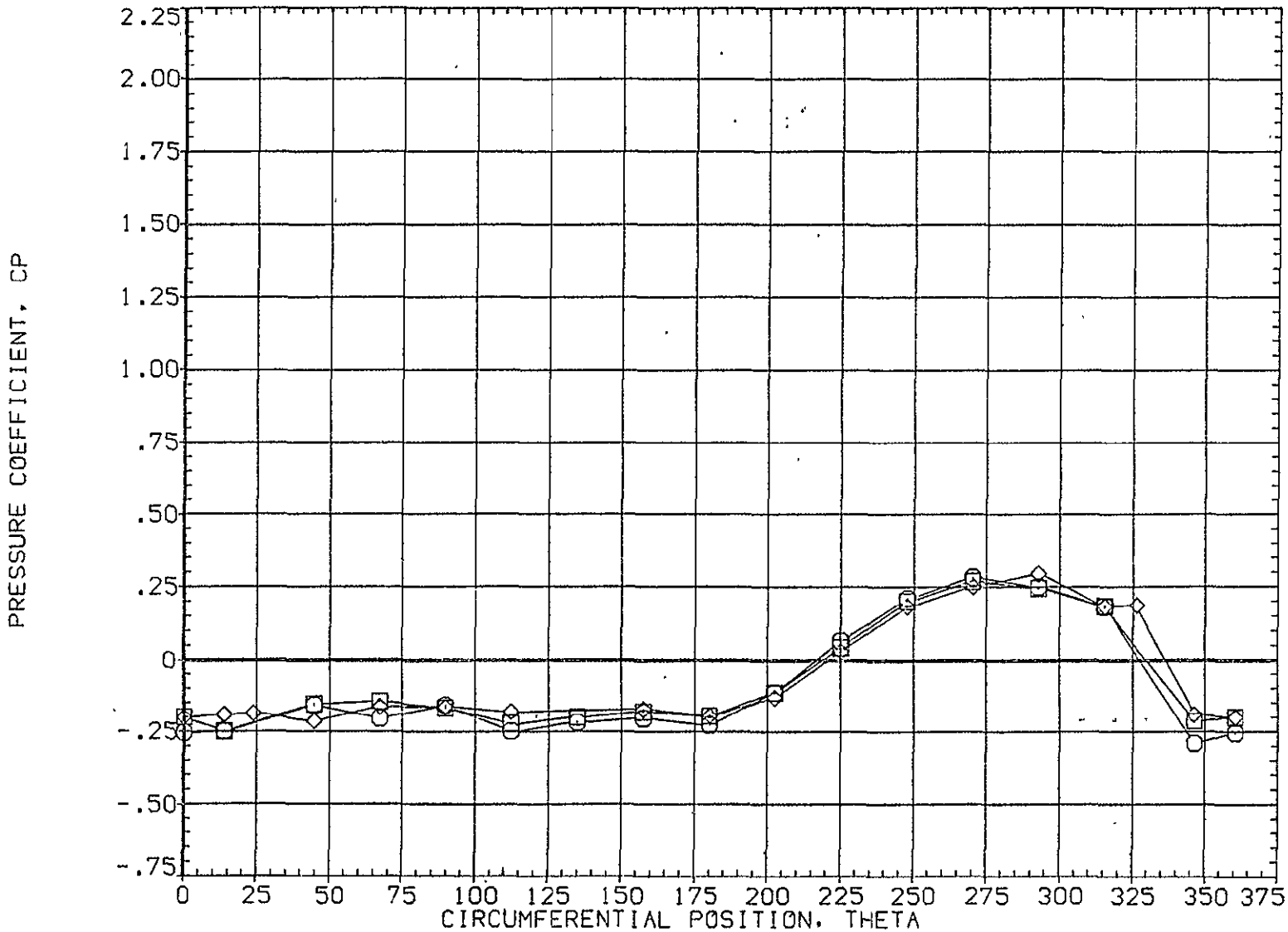

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.850	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

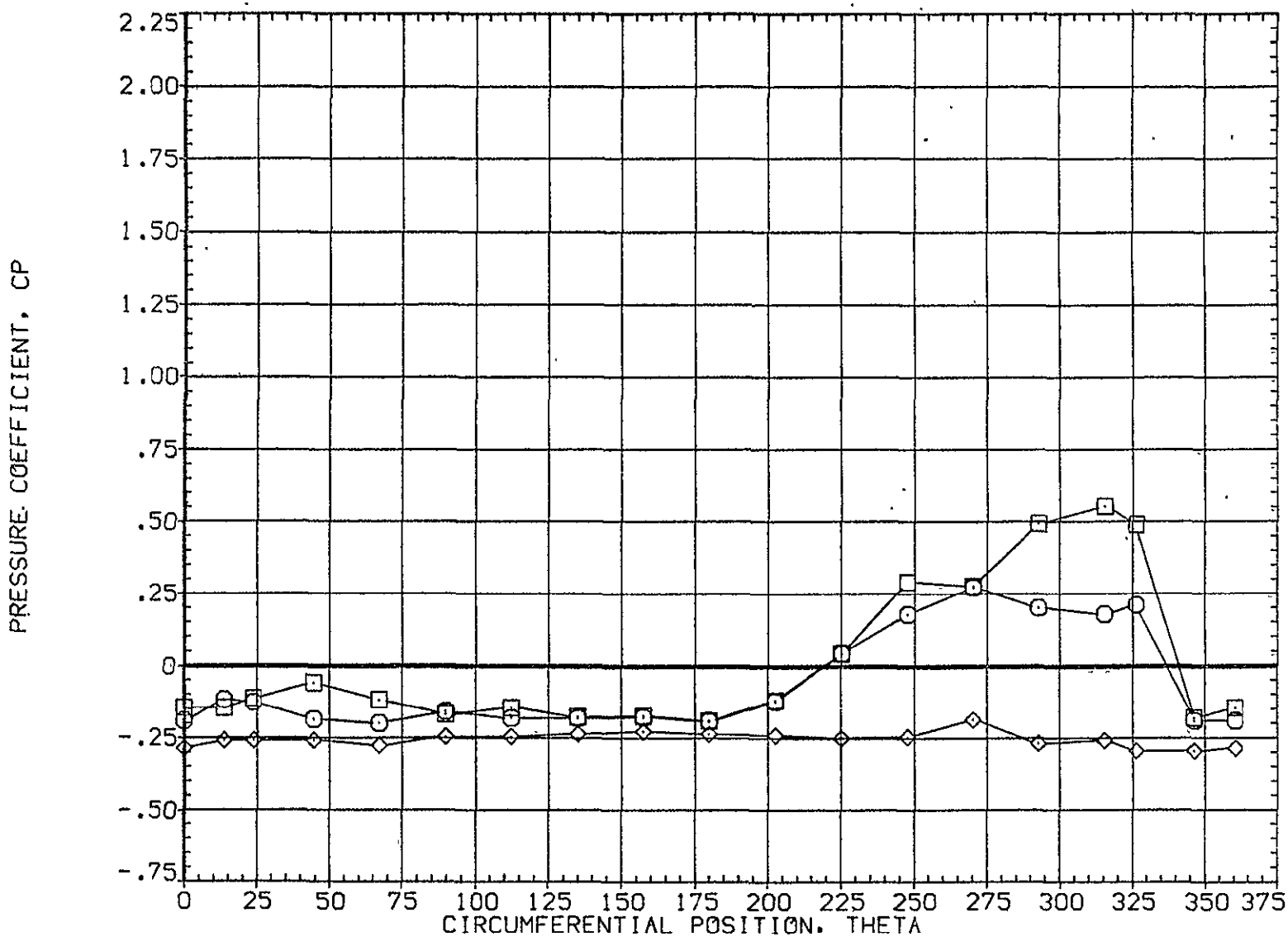

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.930	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

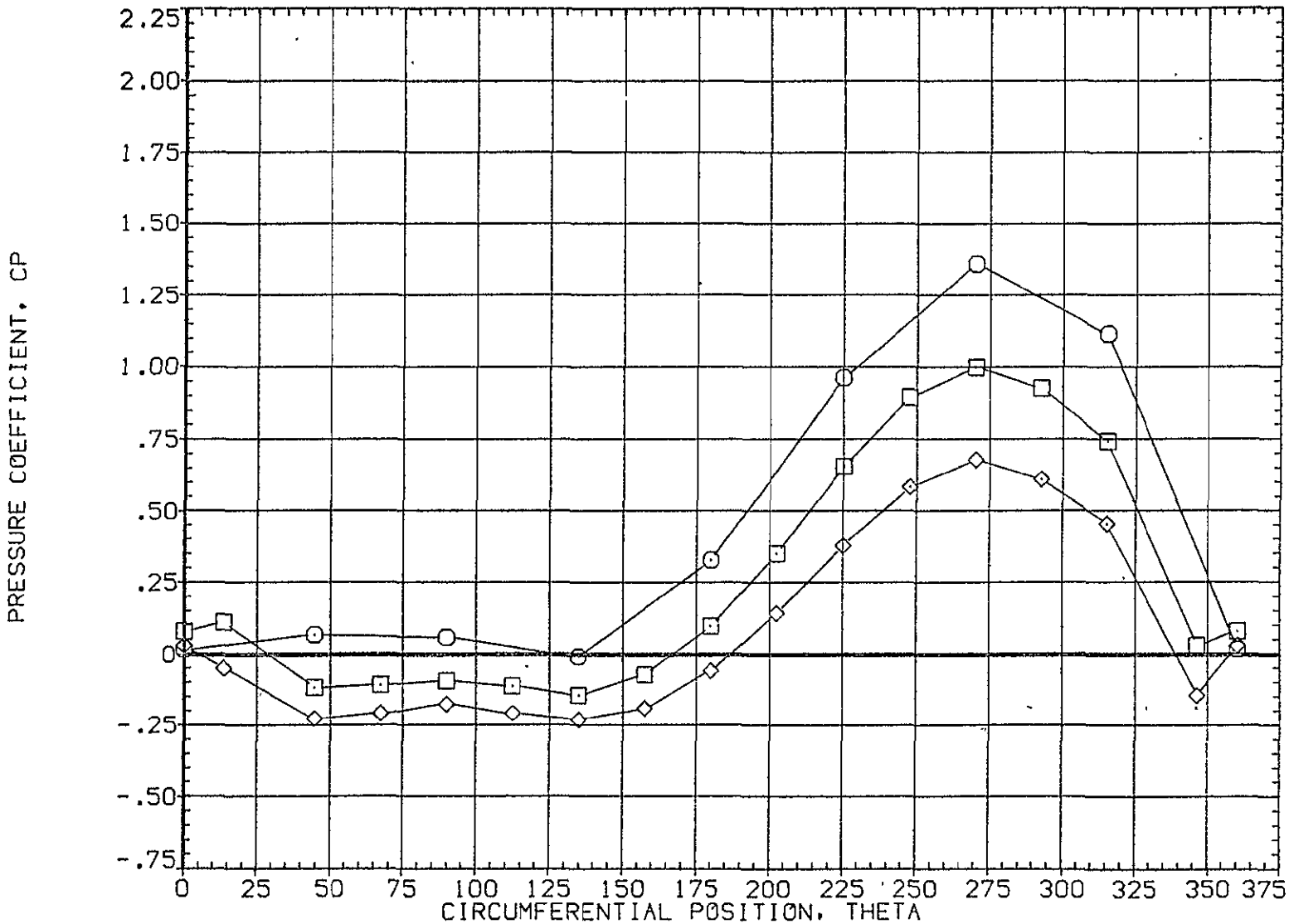

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU20)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.930	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

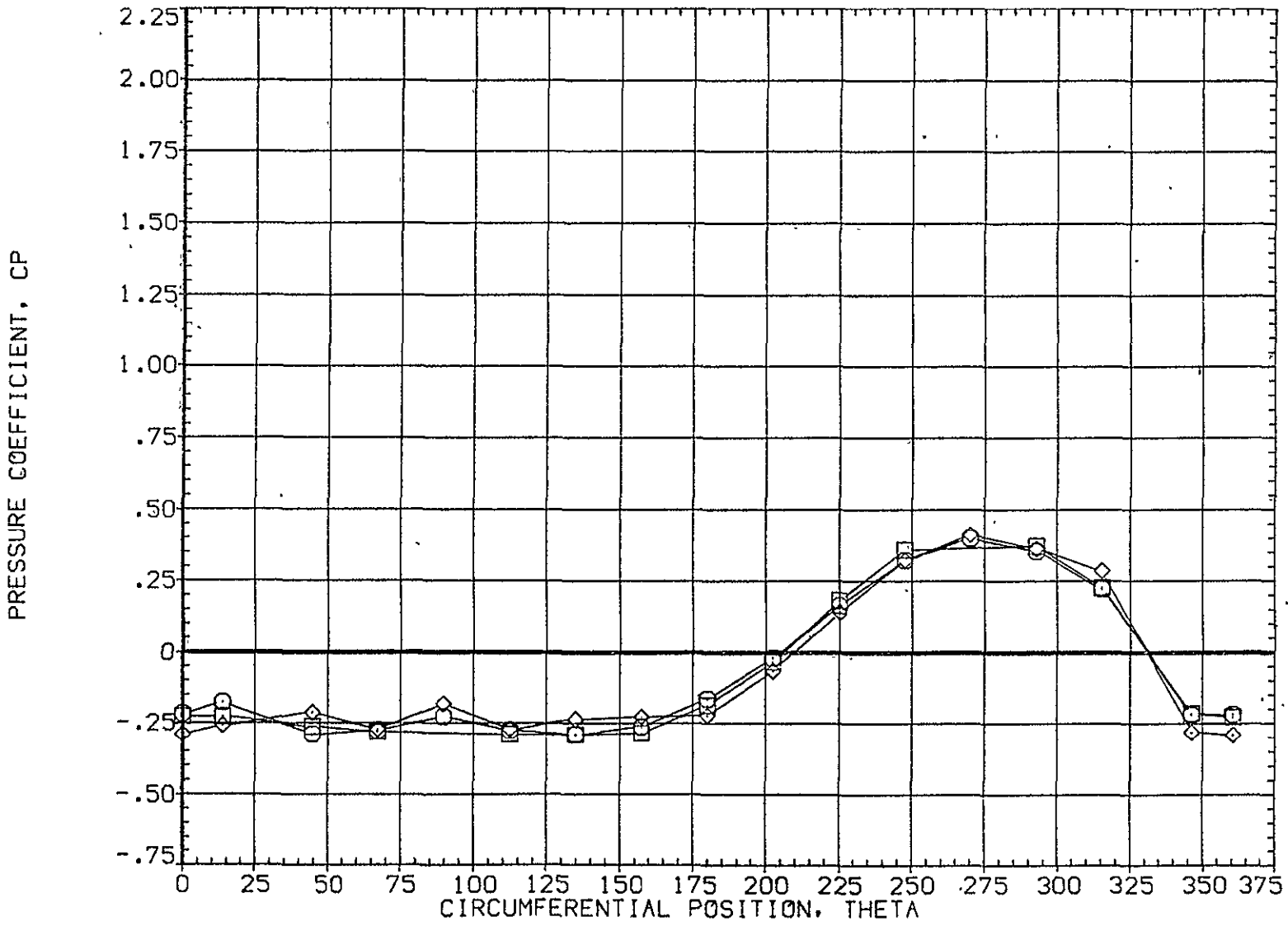

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.930	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

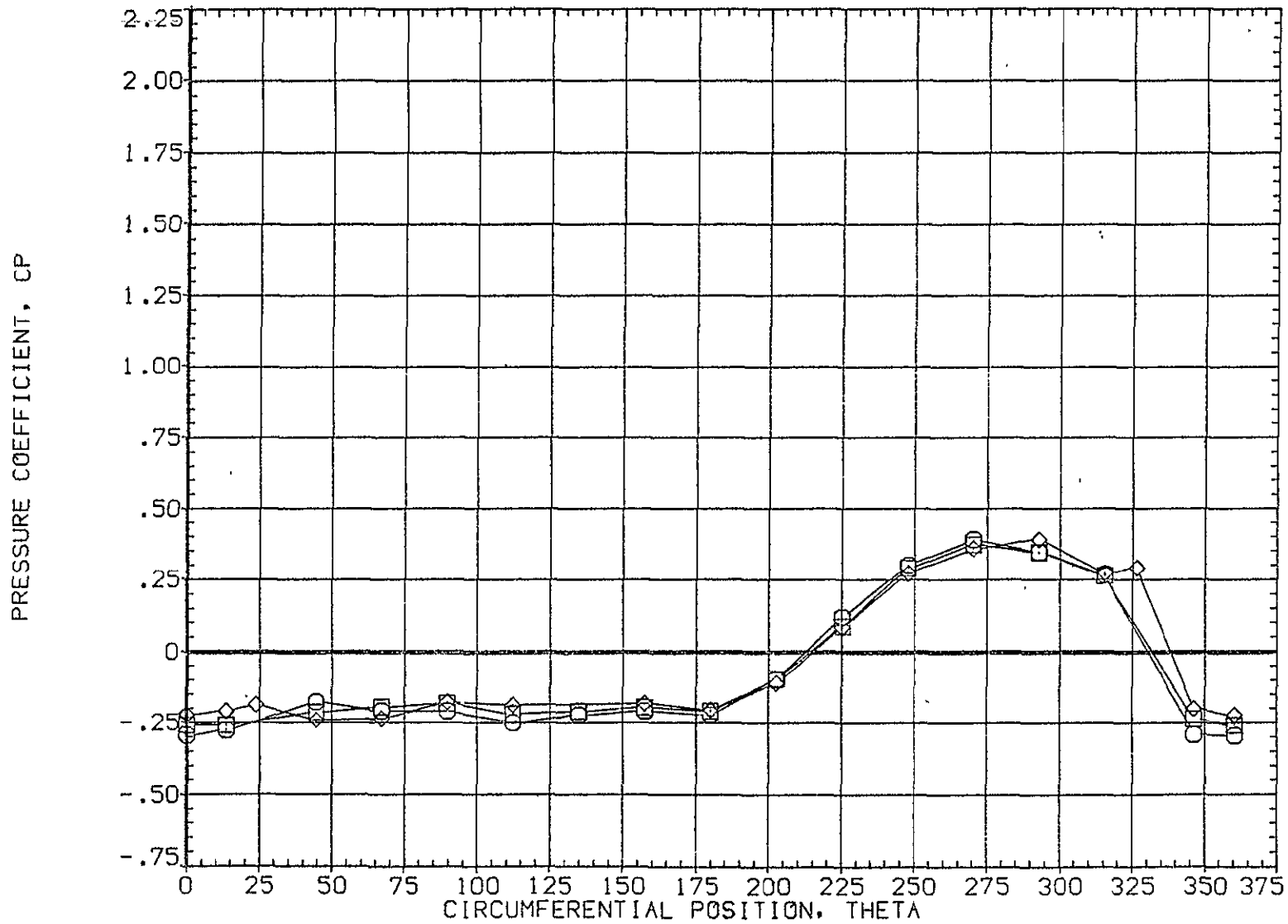

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU2U)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.930	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

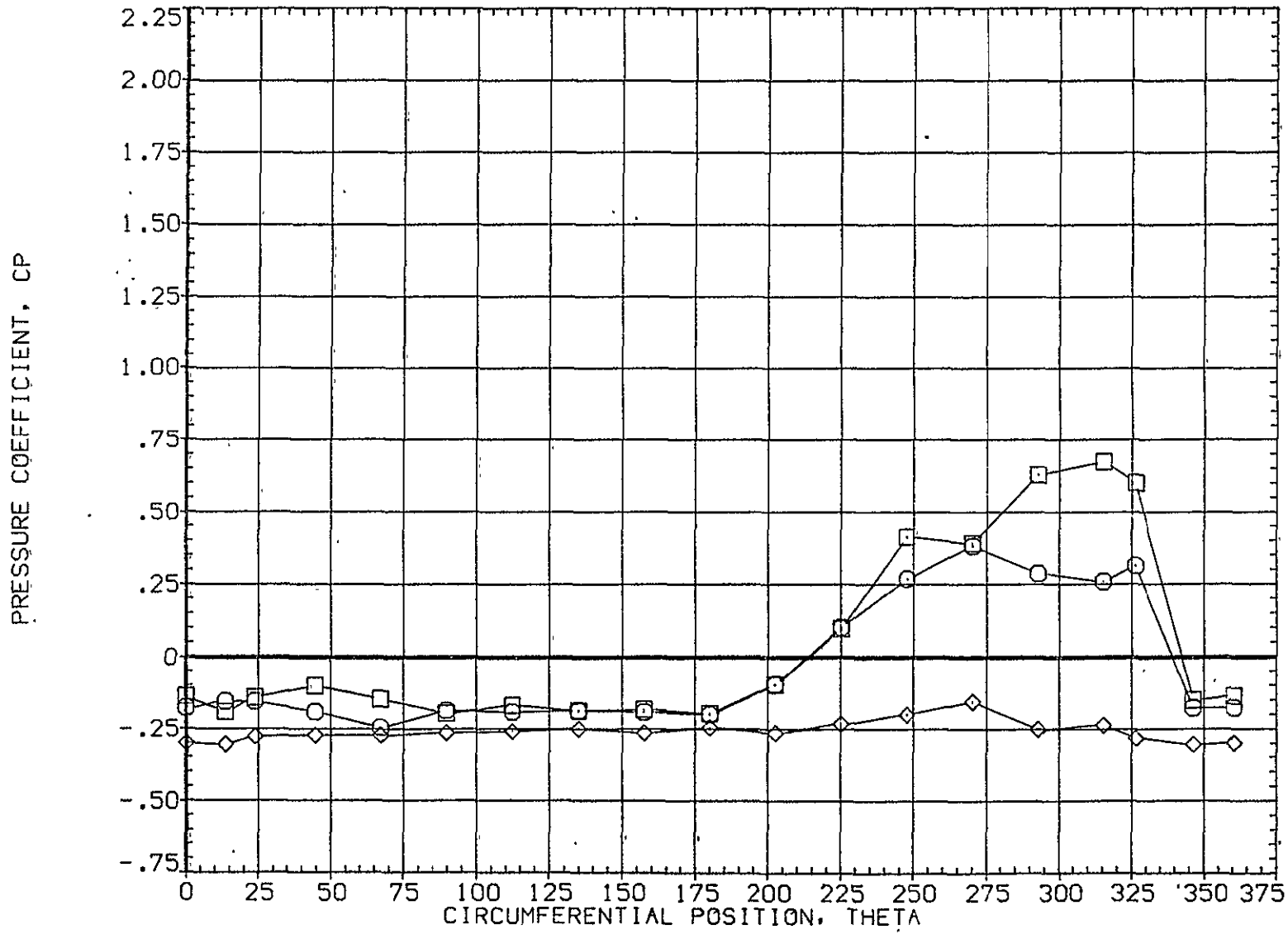

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.380	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

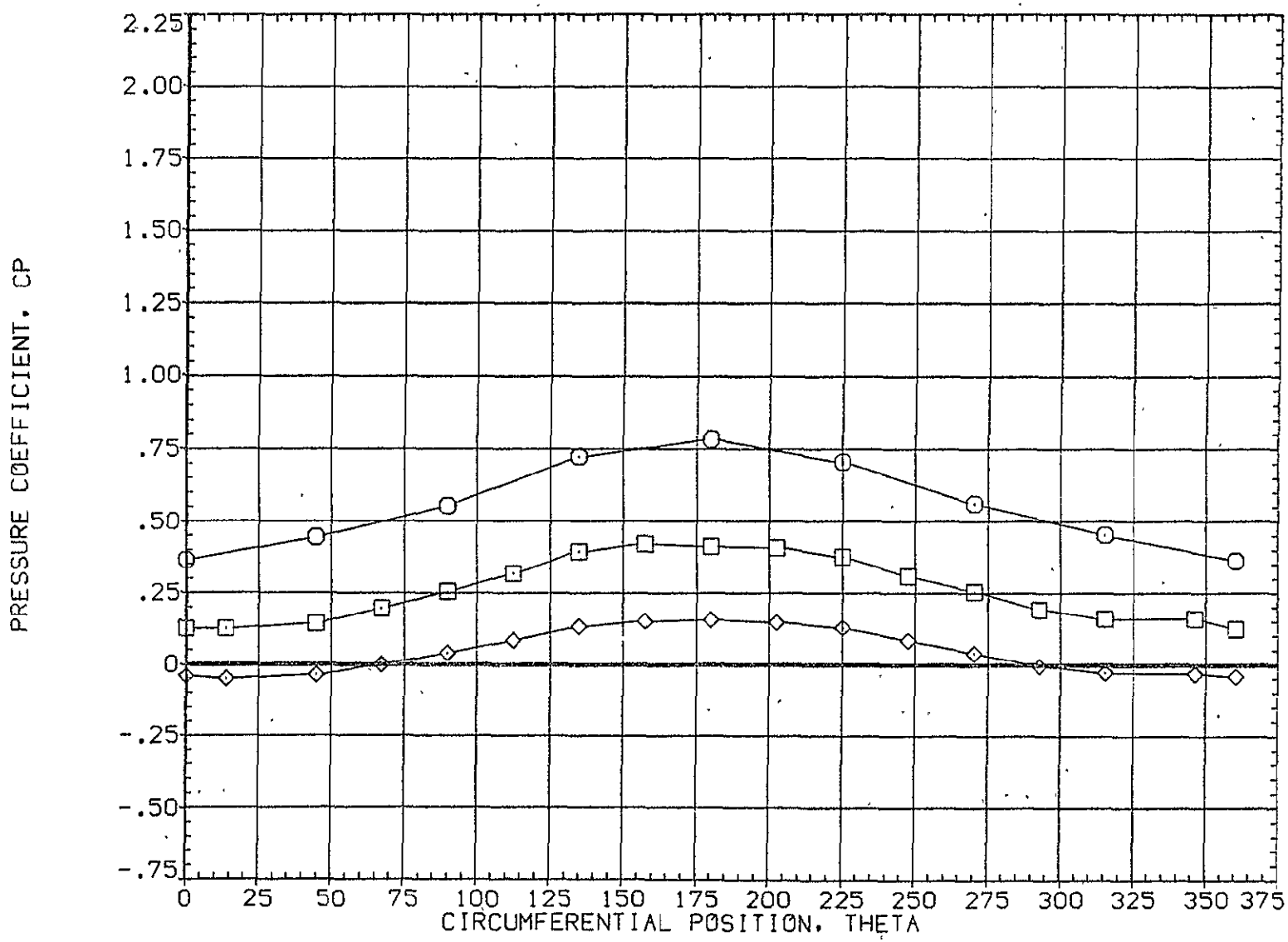

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.380	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

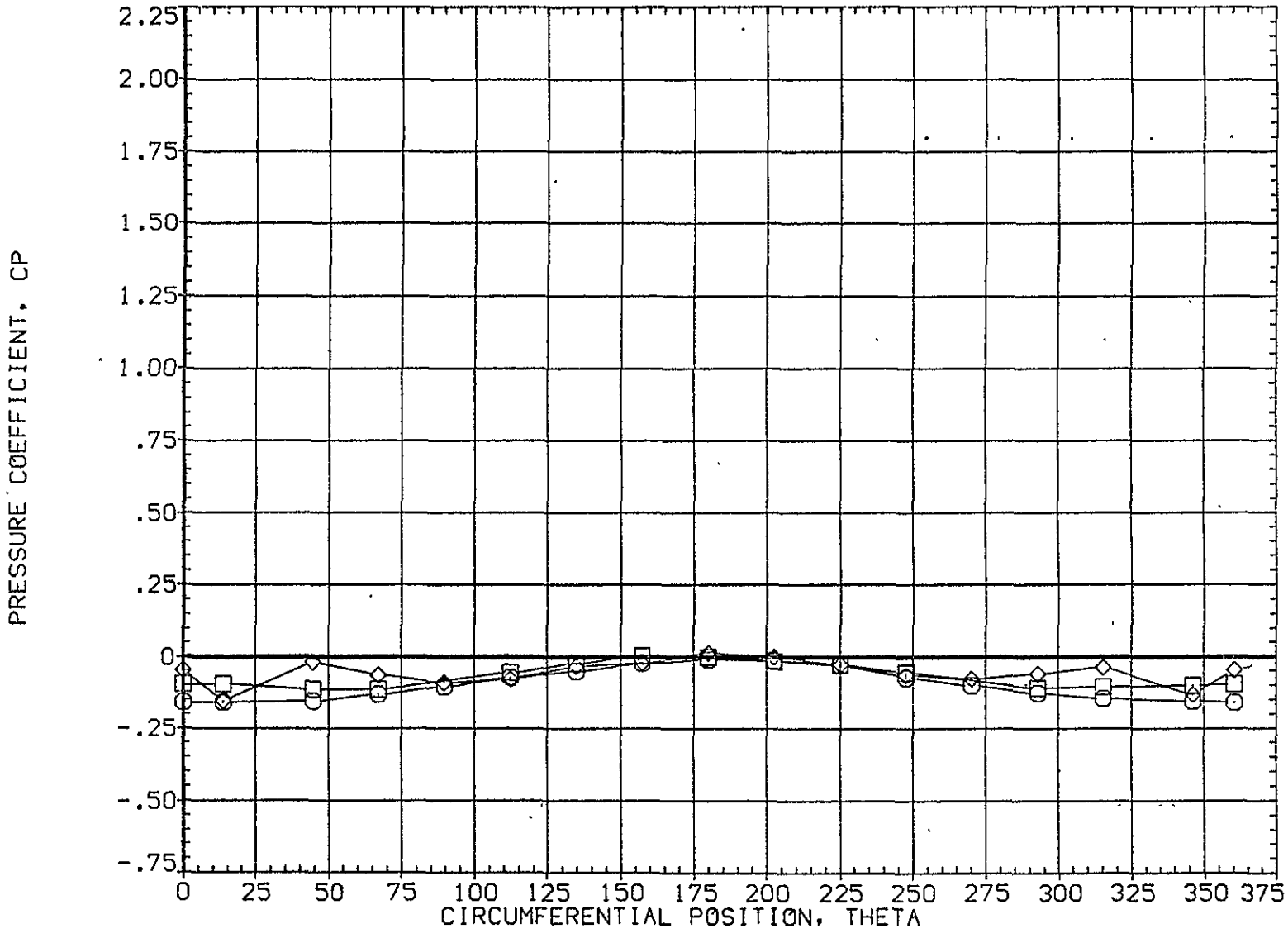

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.380	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

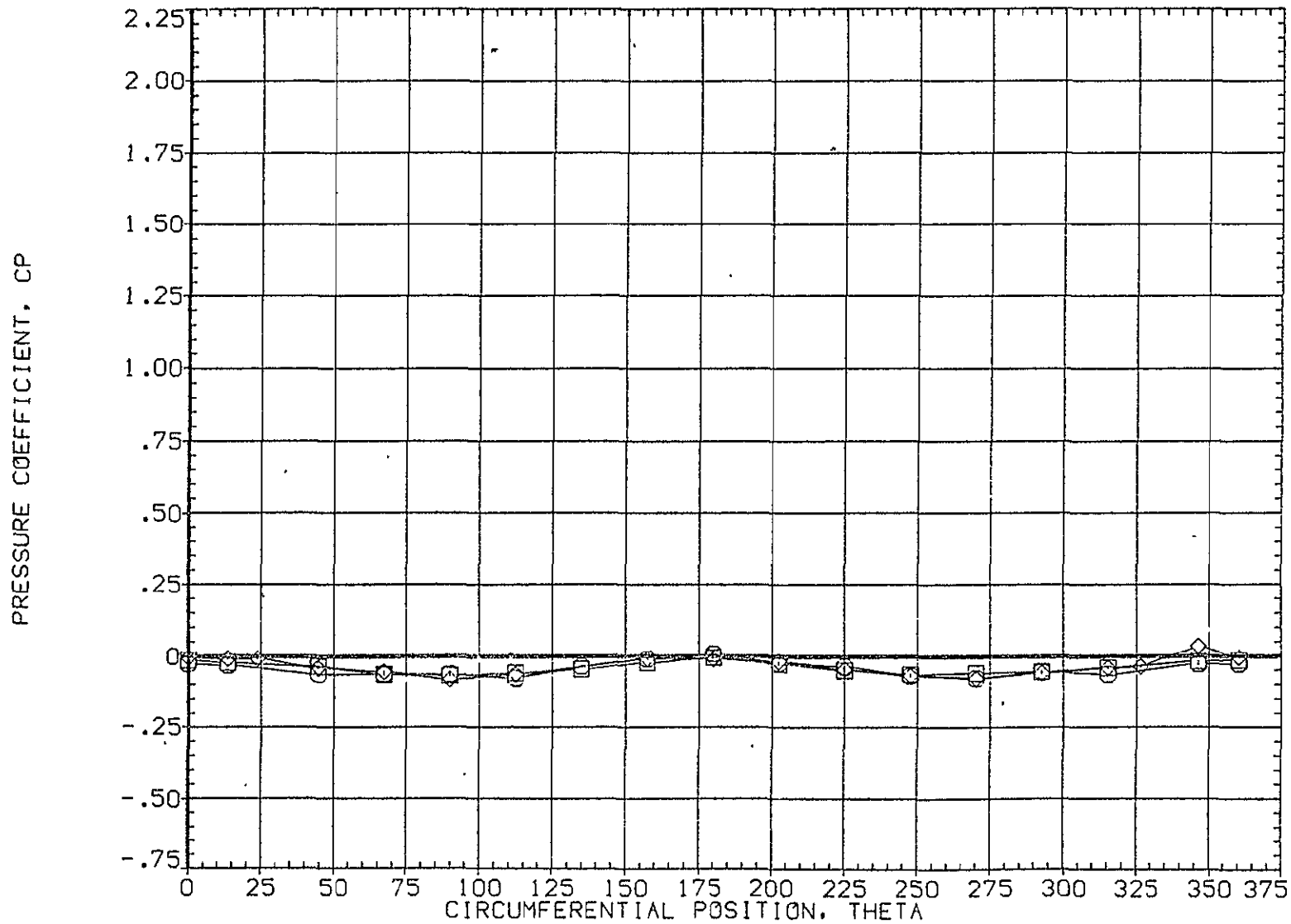

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU31)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.380	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

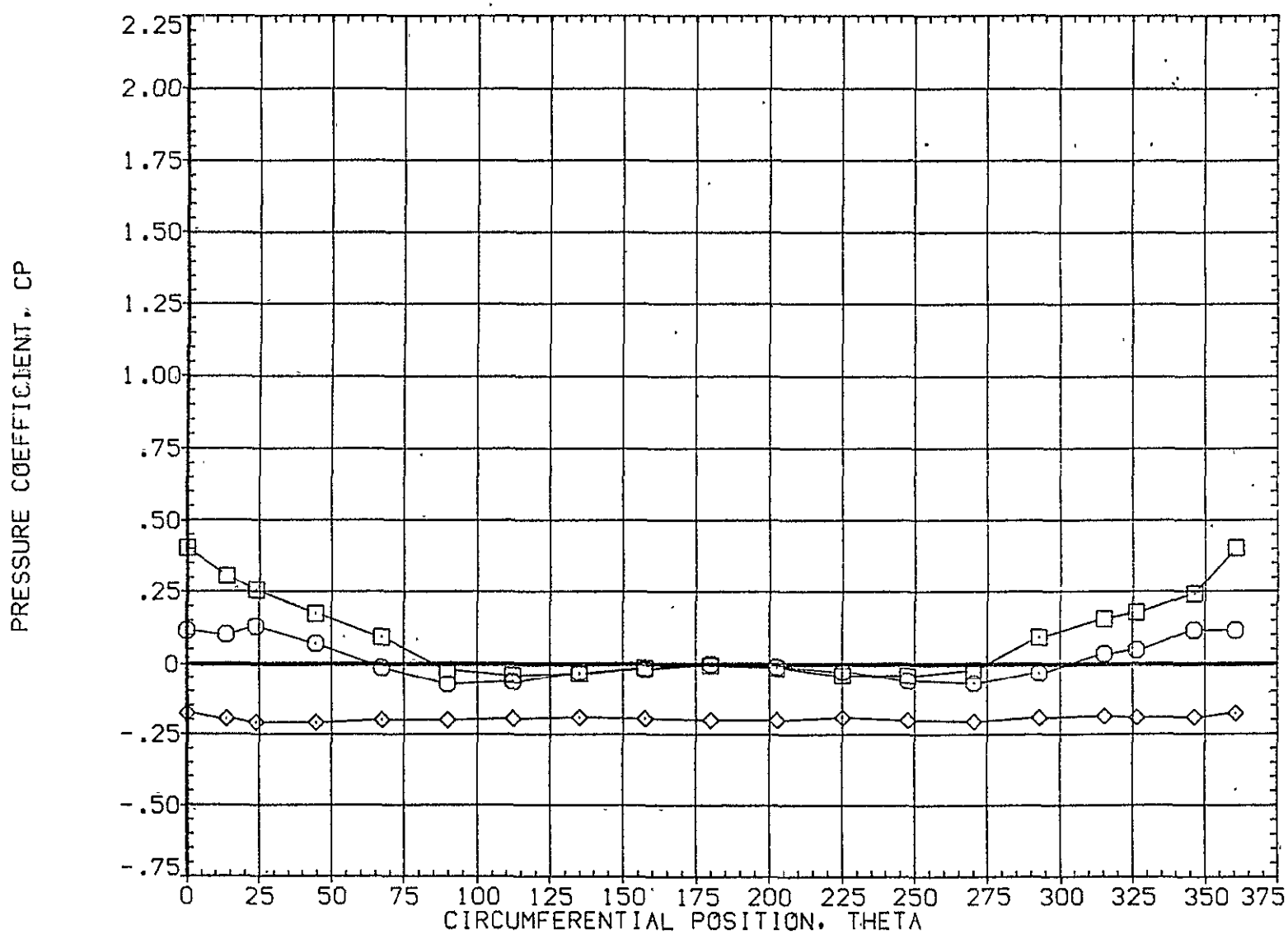

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

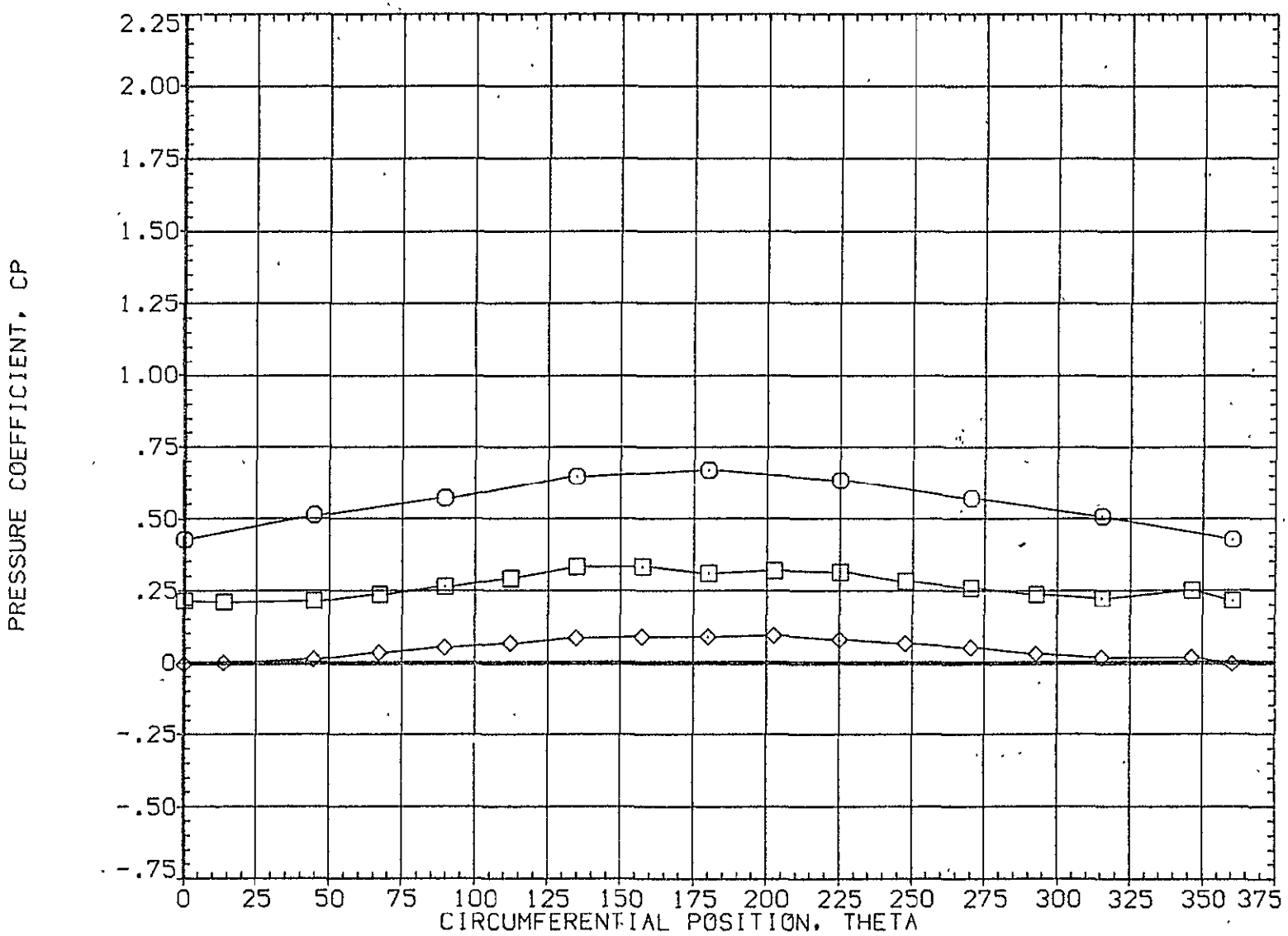

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

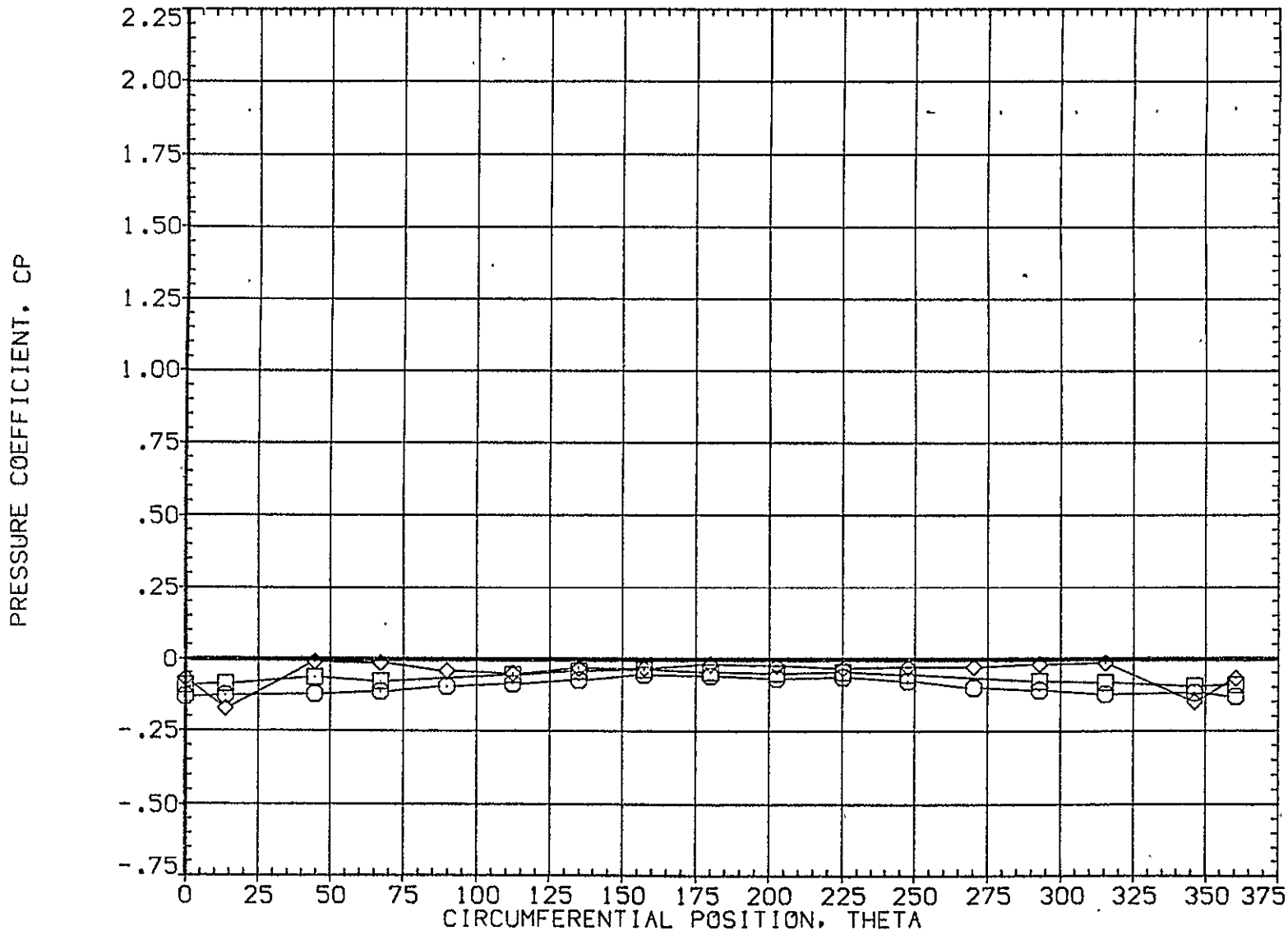

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

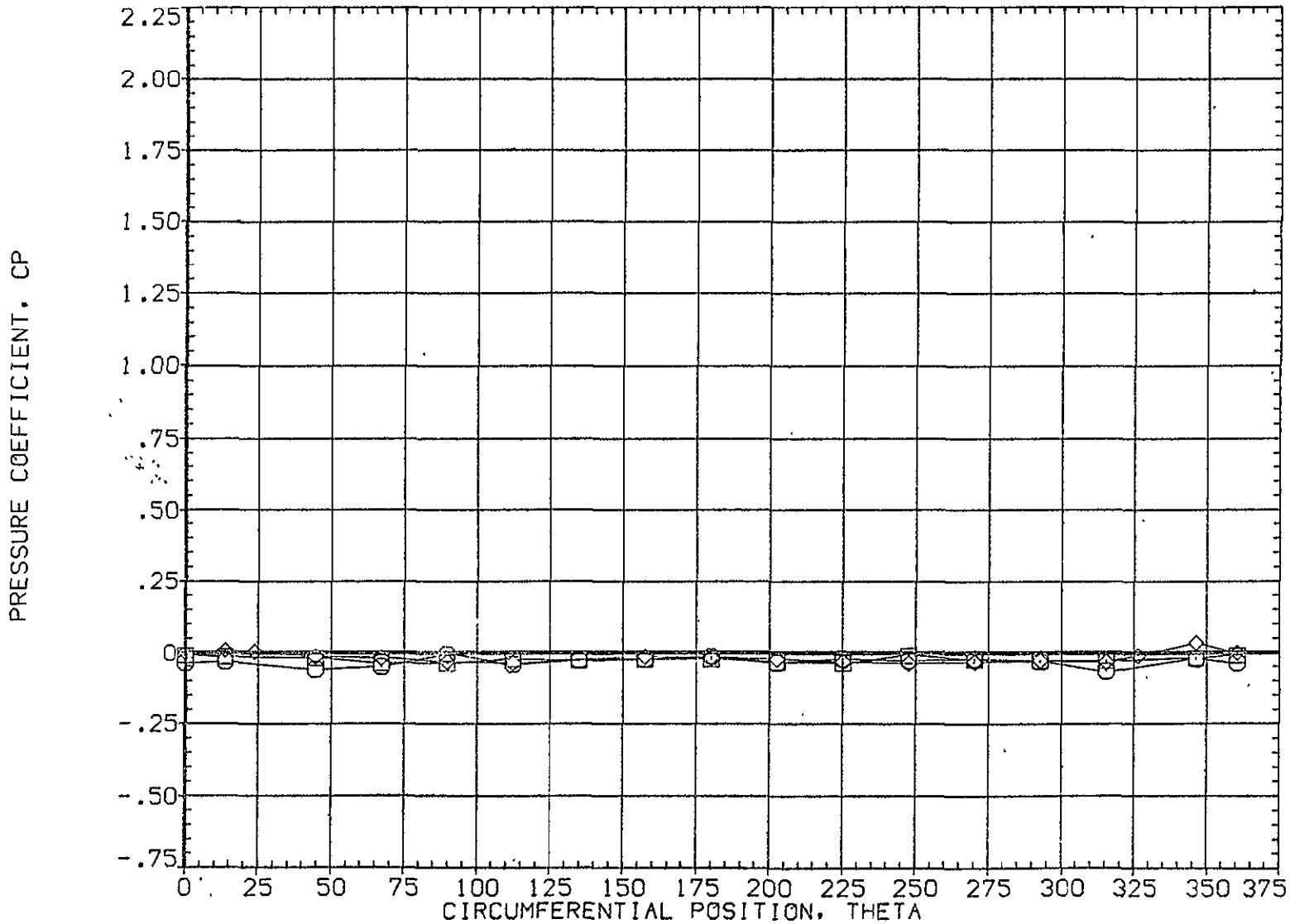

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

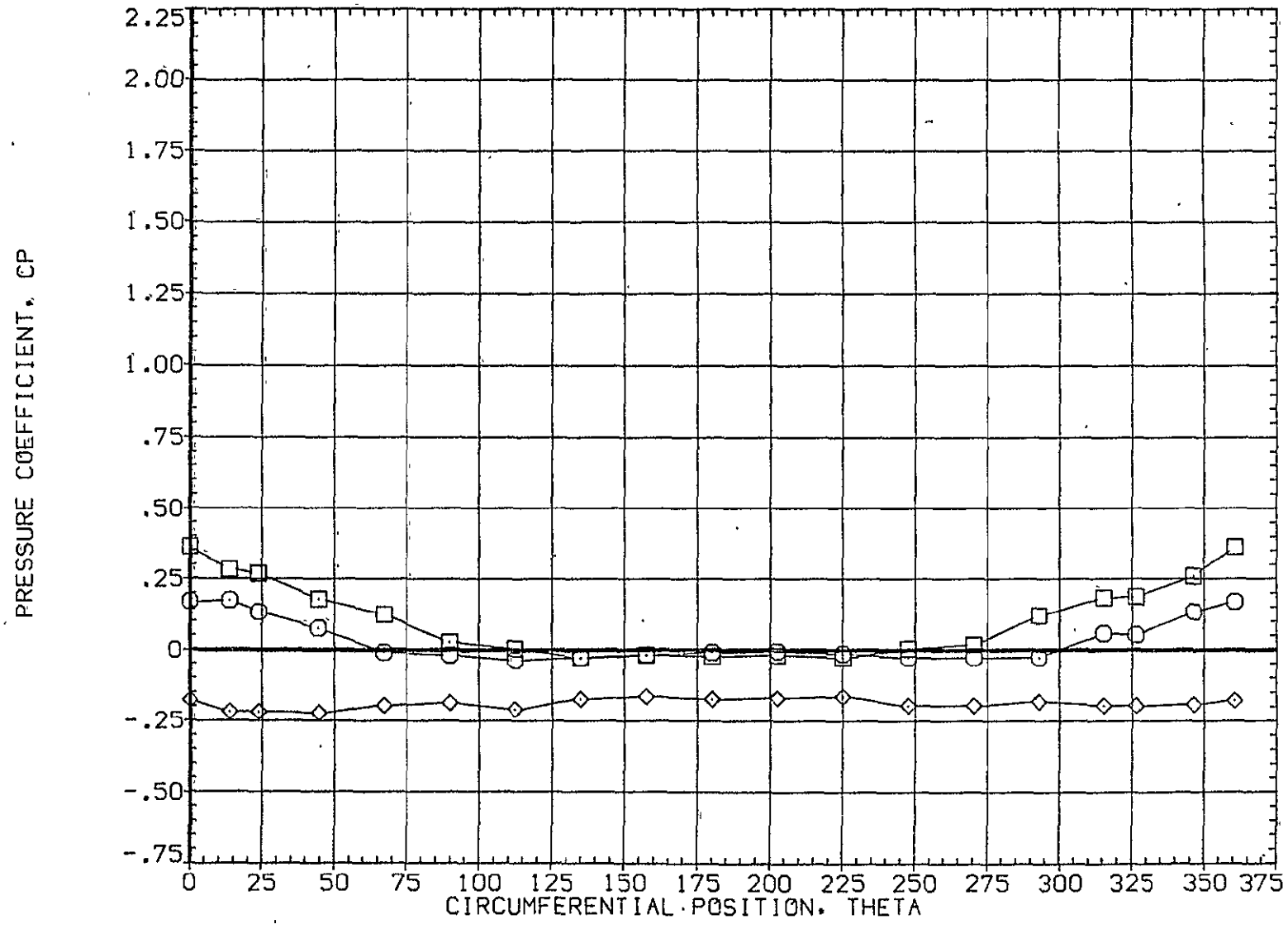

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

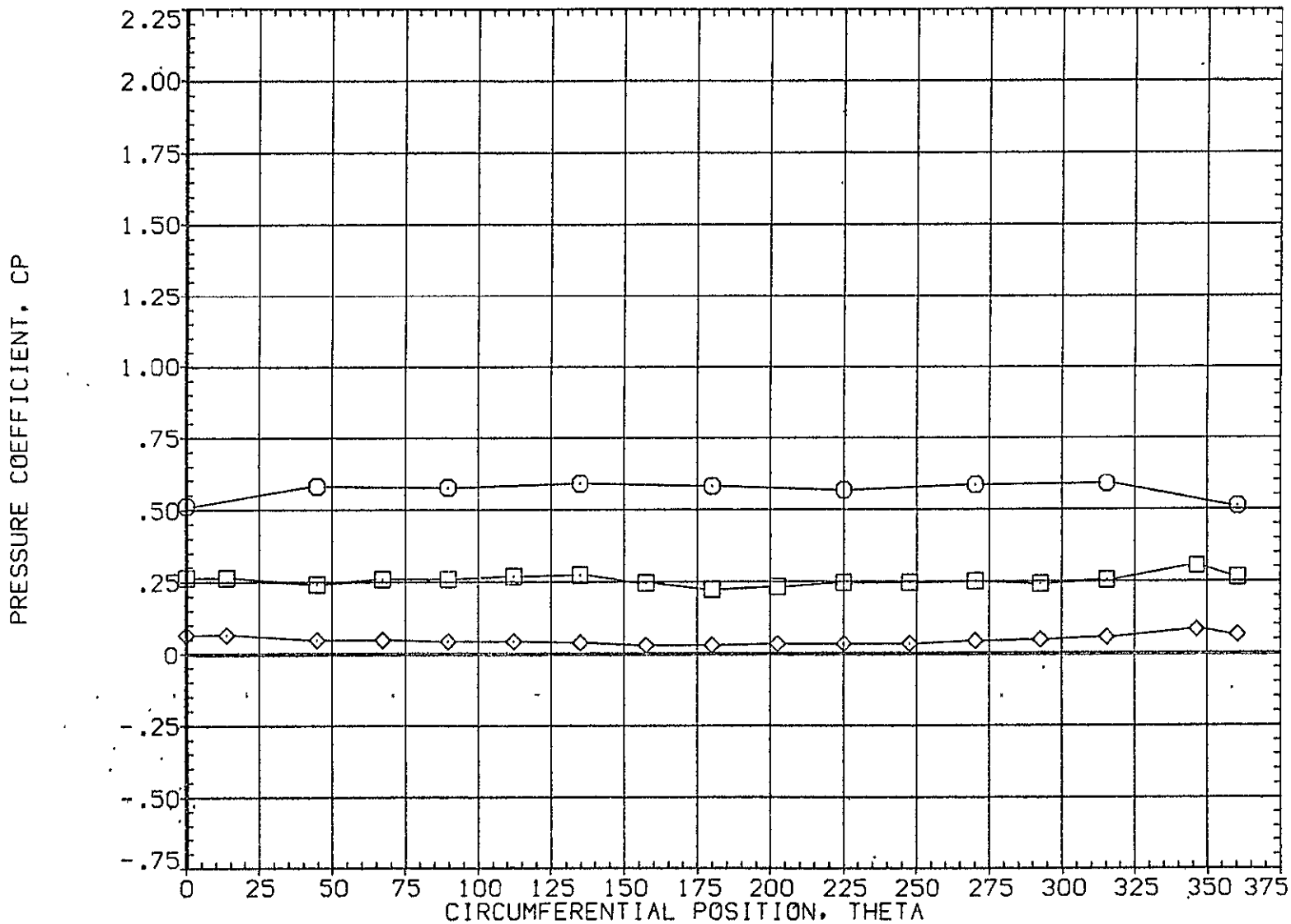

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

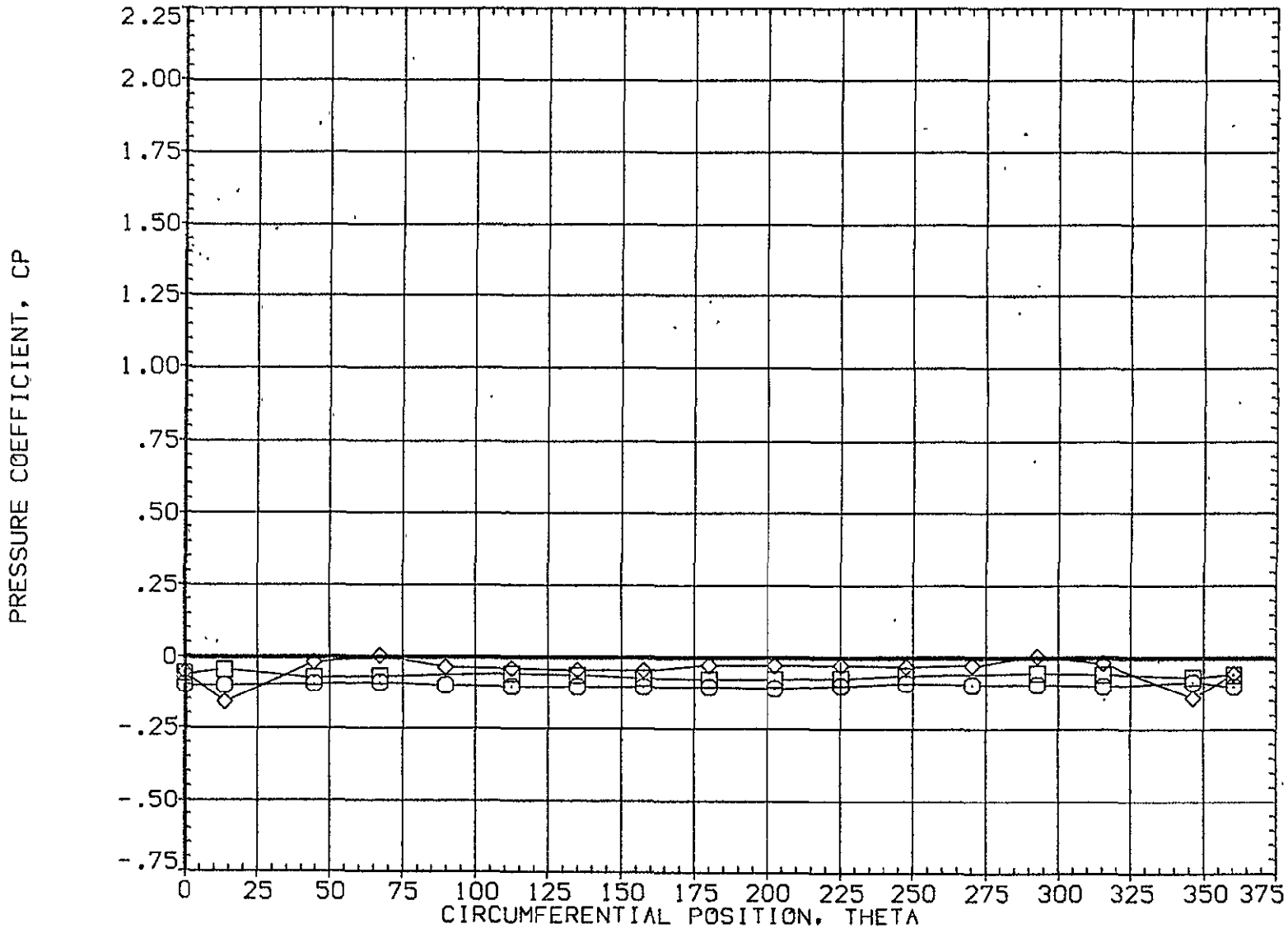

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

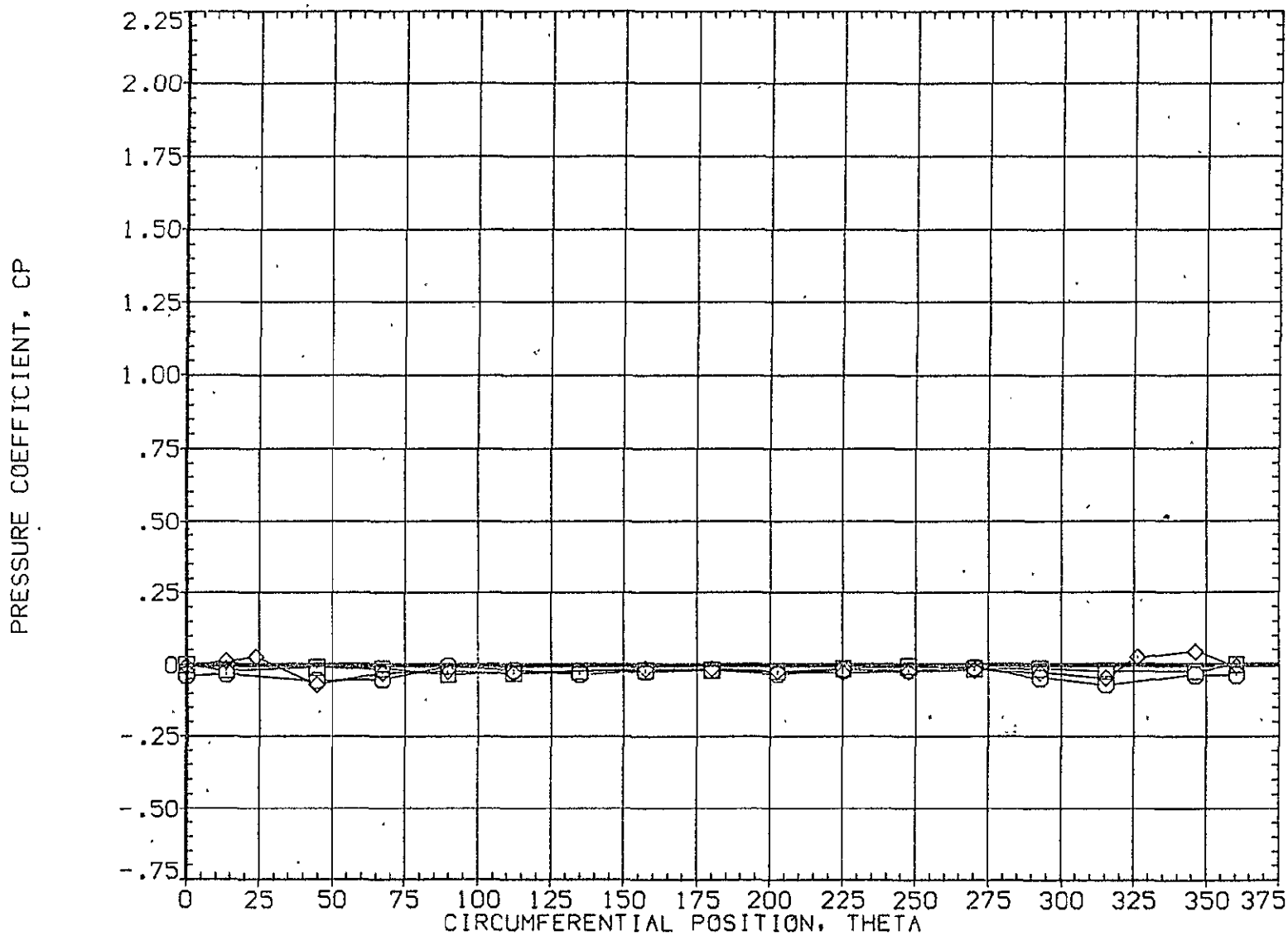

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

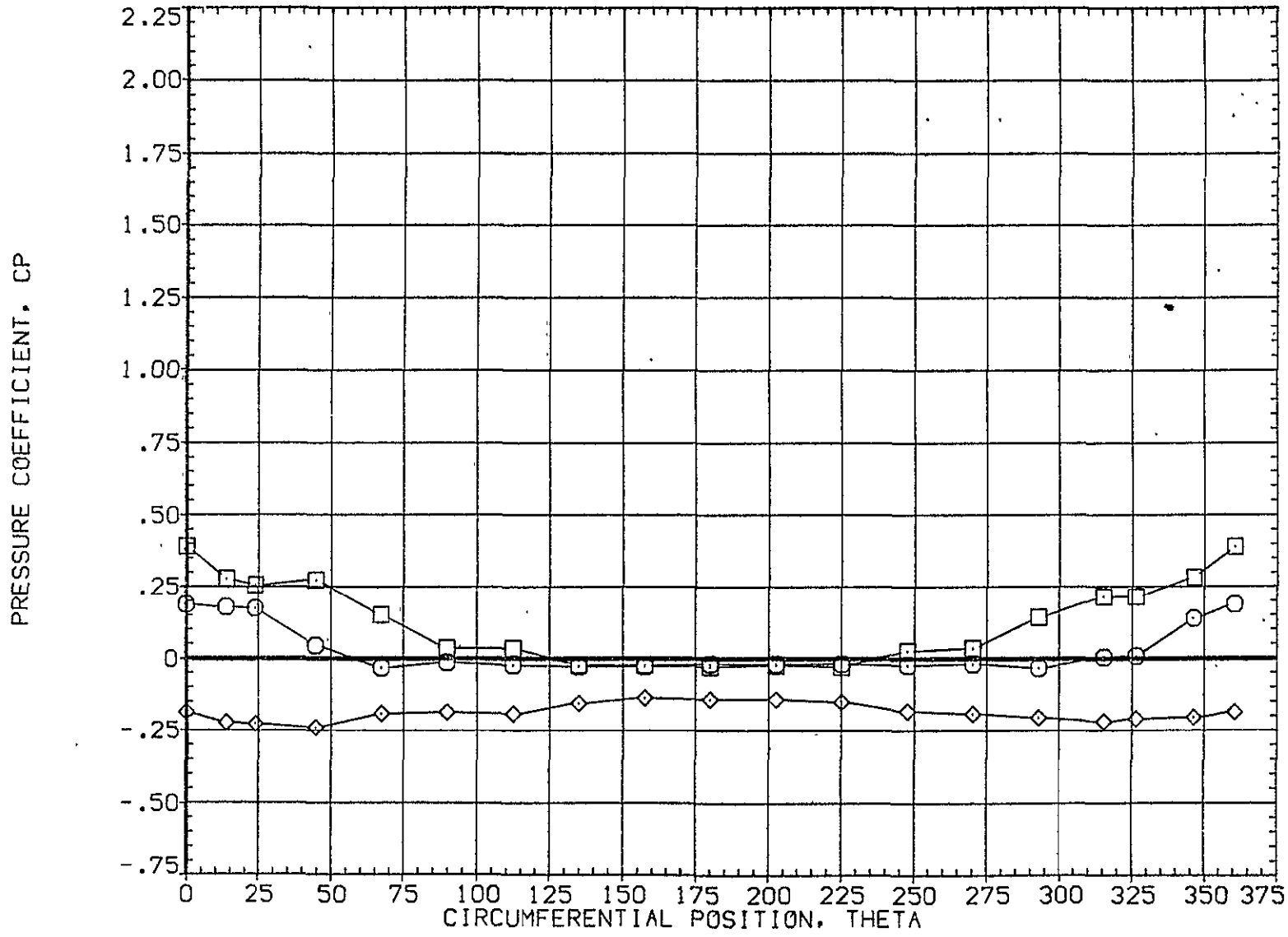

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

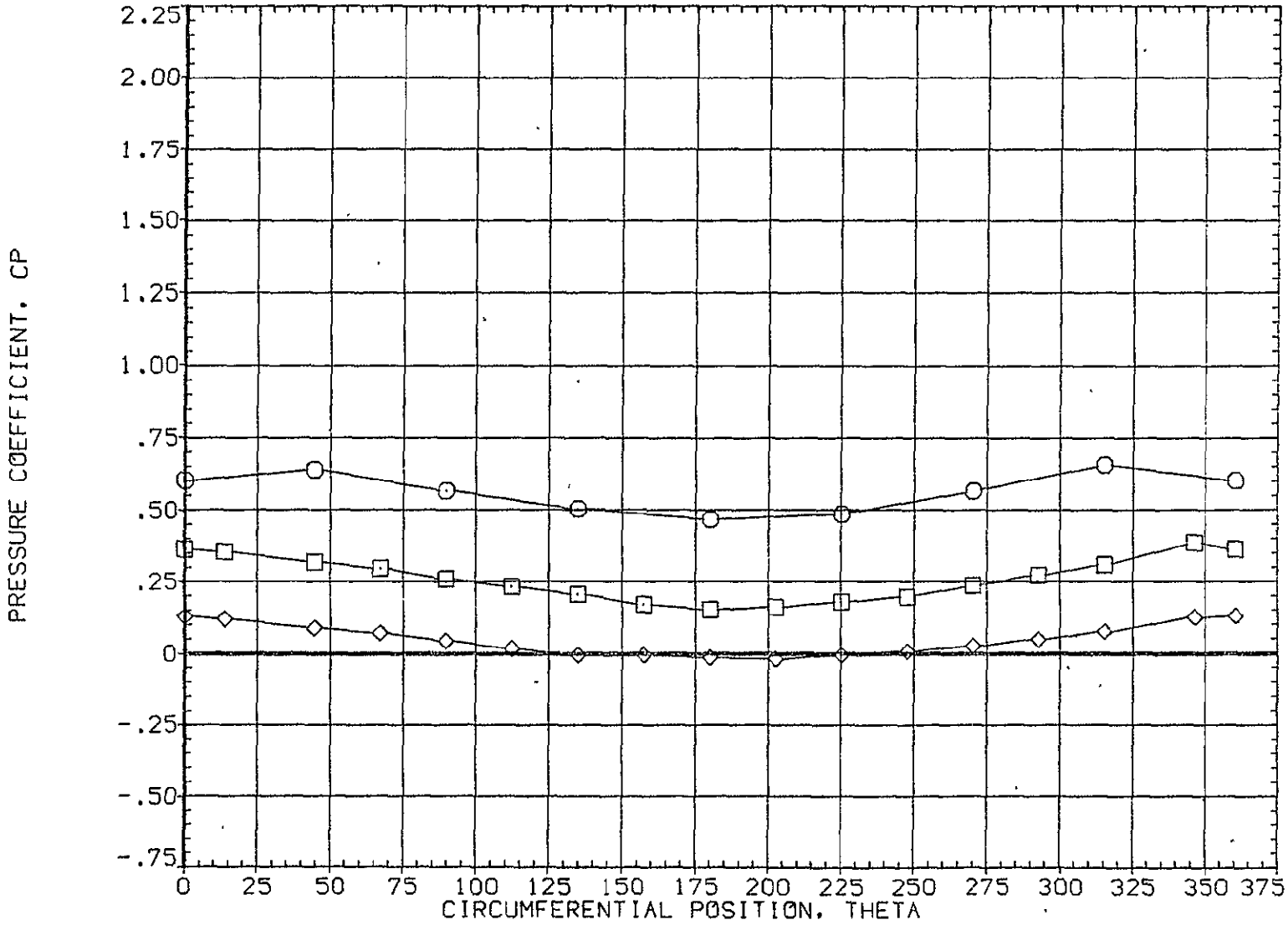

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

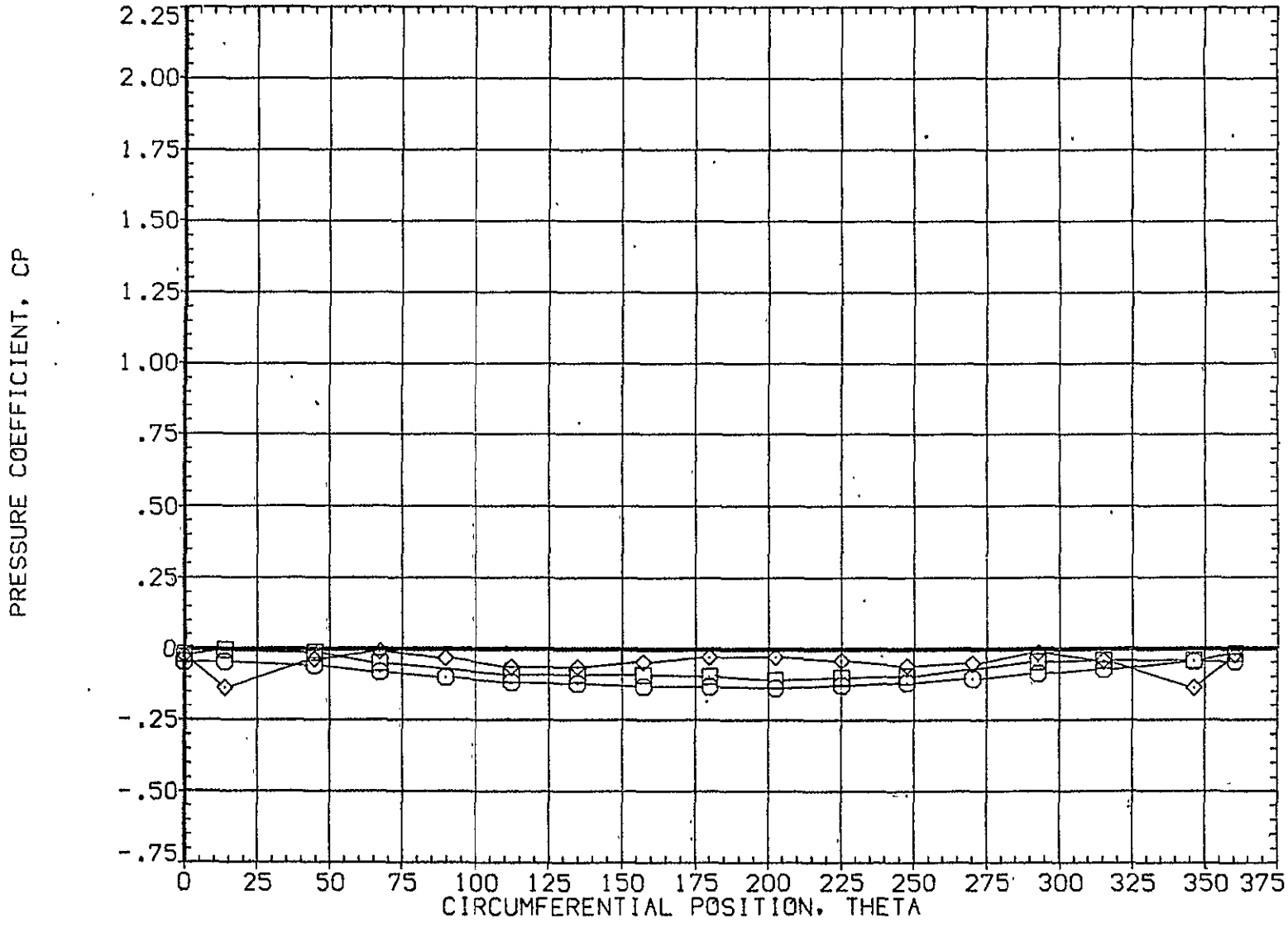

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

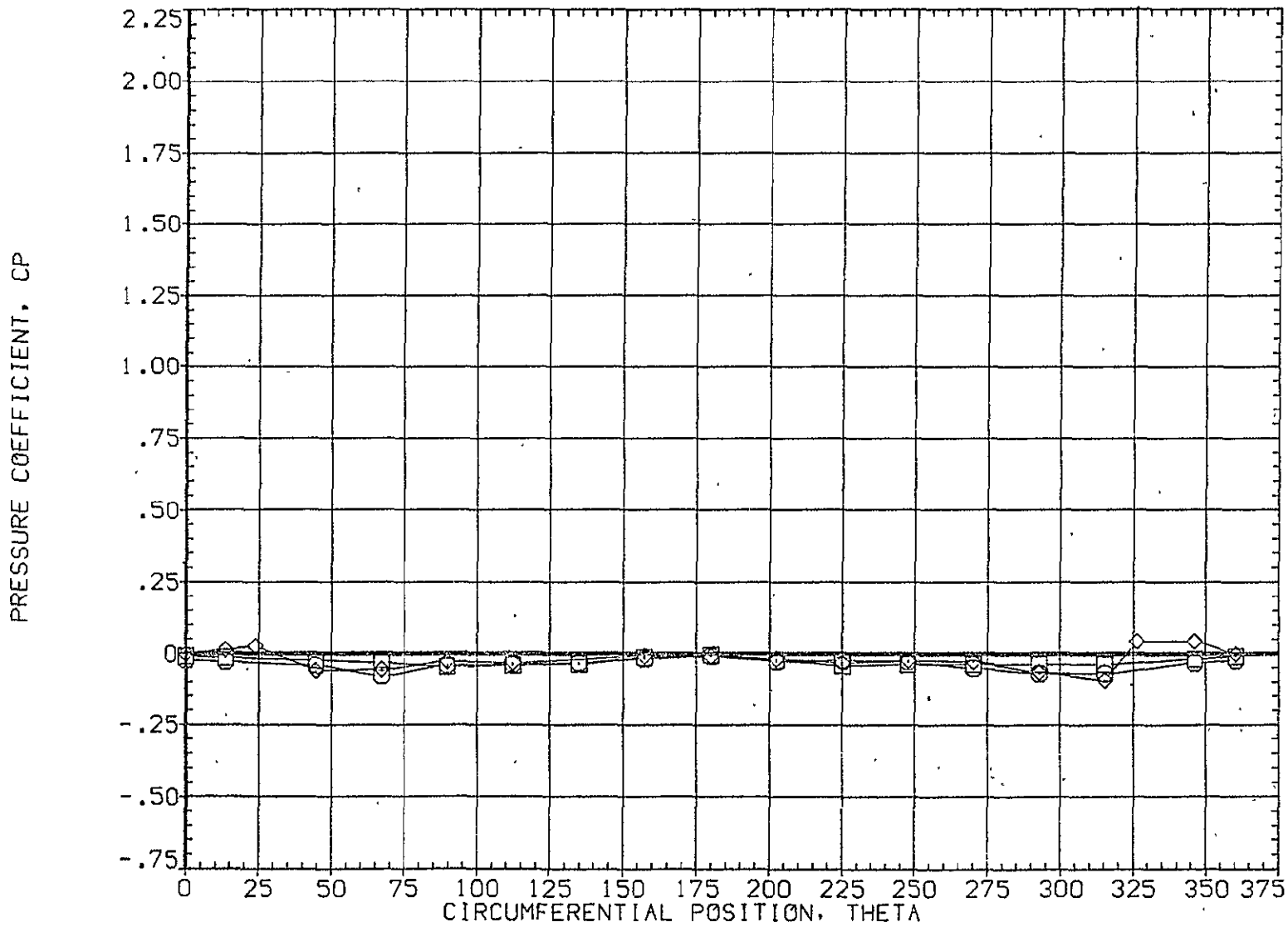

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

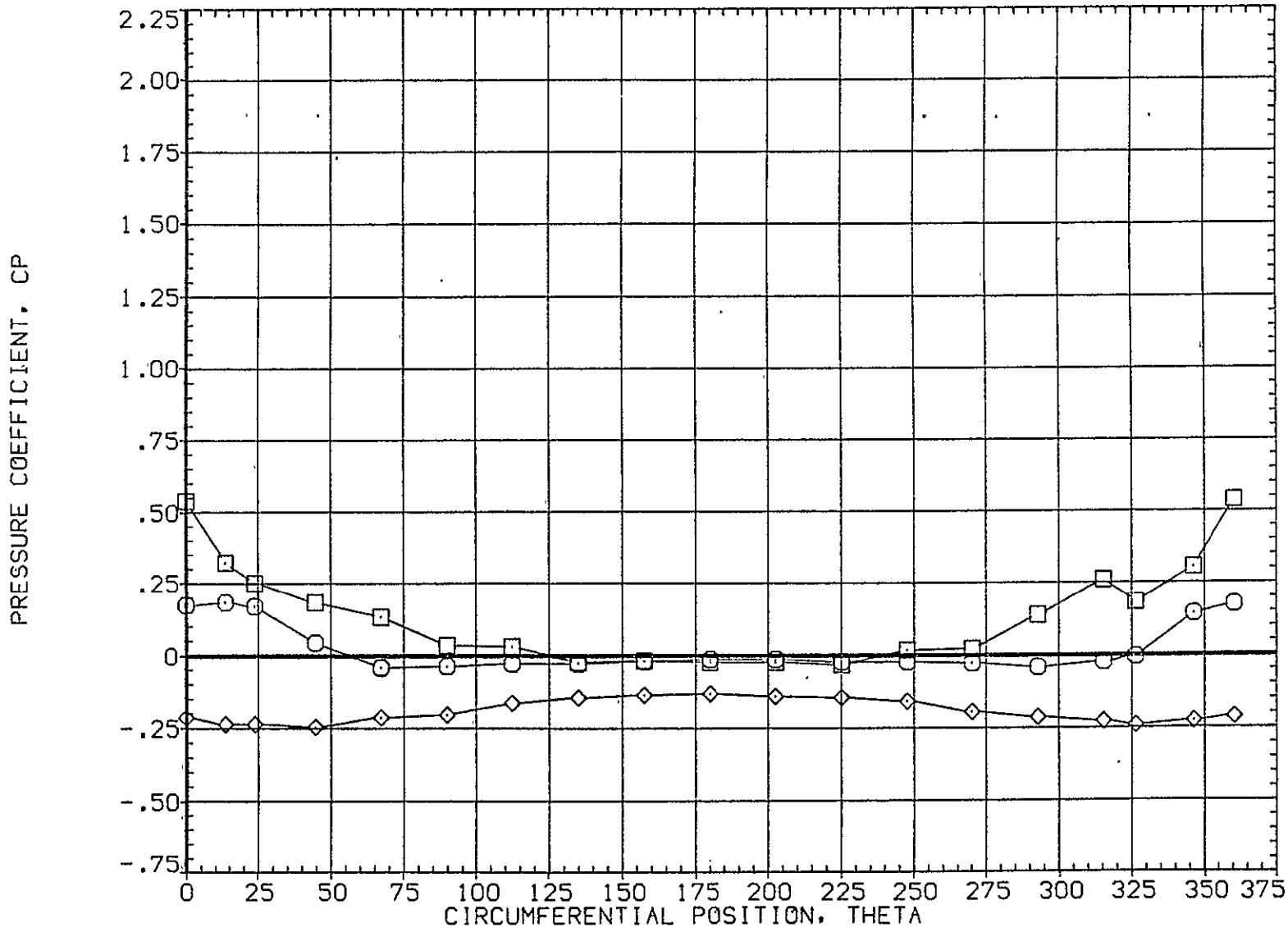

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.820	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

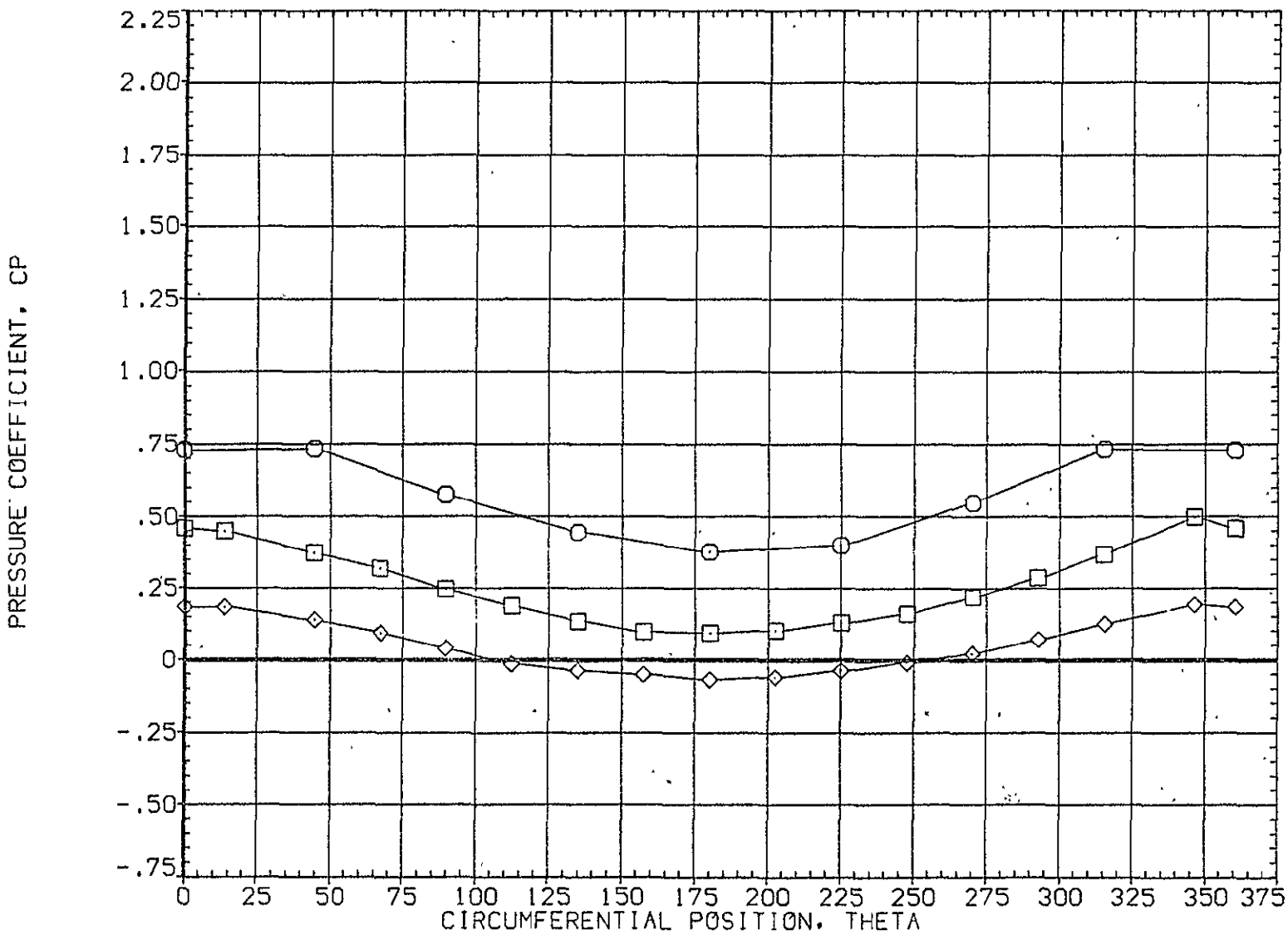

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.820	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

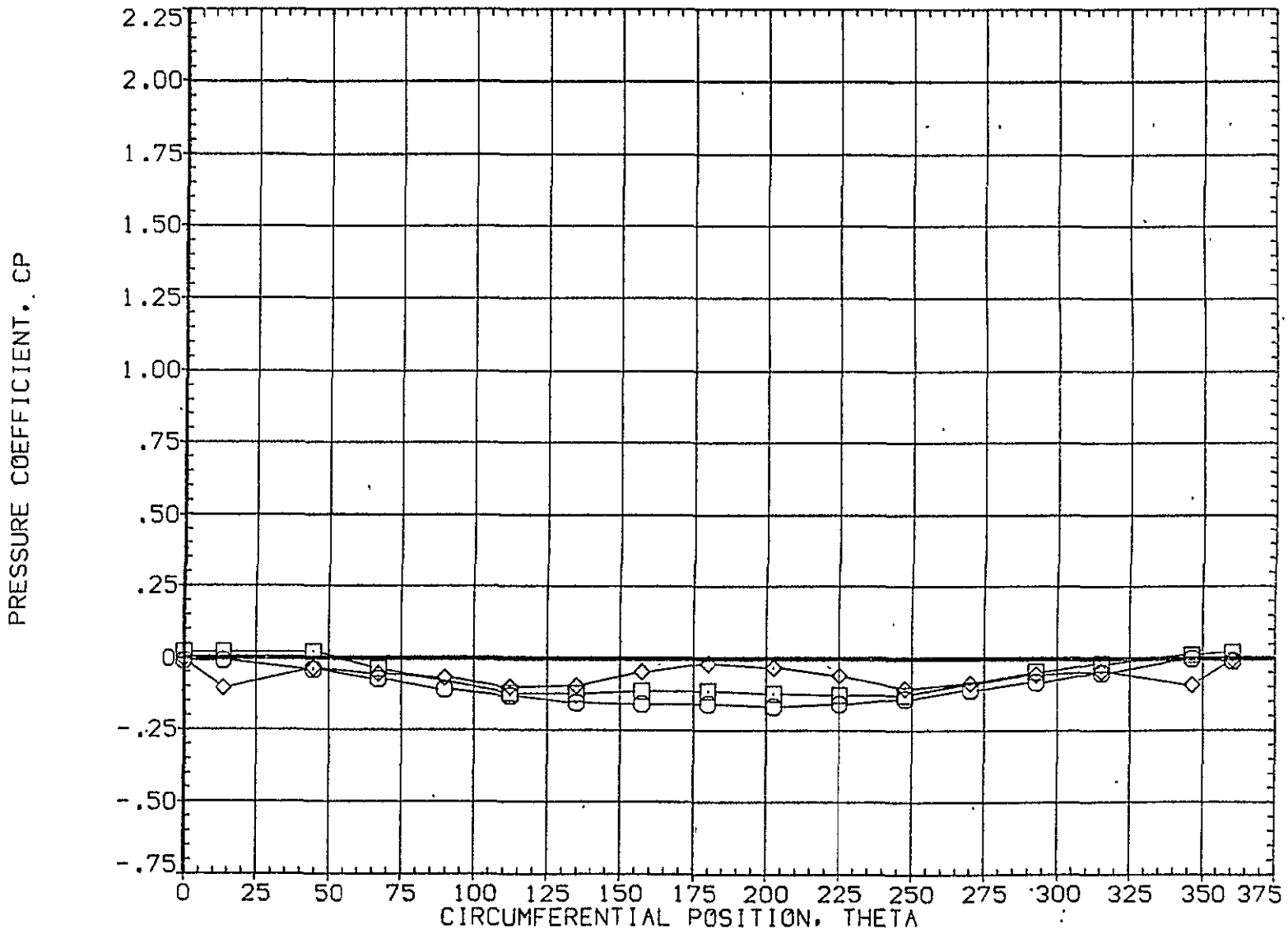

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.820	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

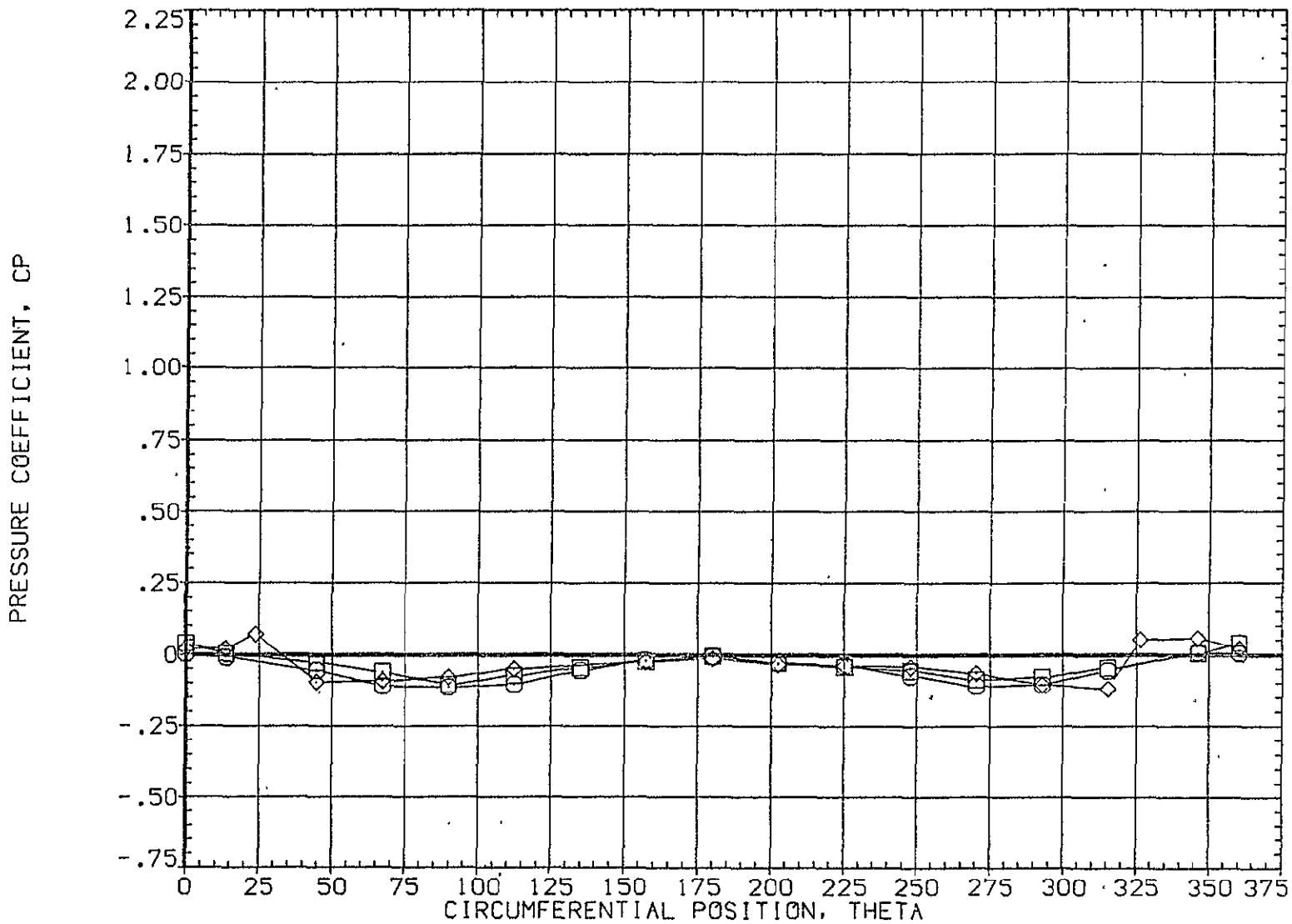

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.820	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

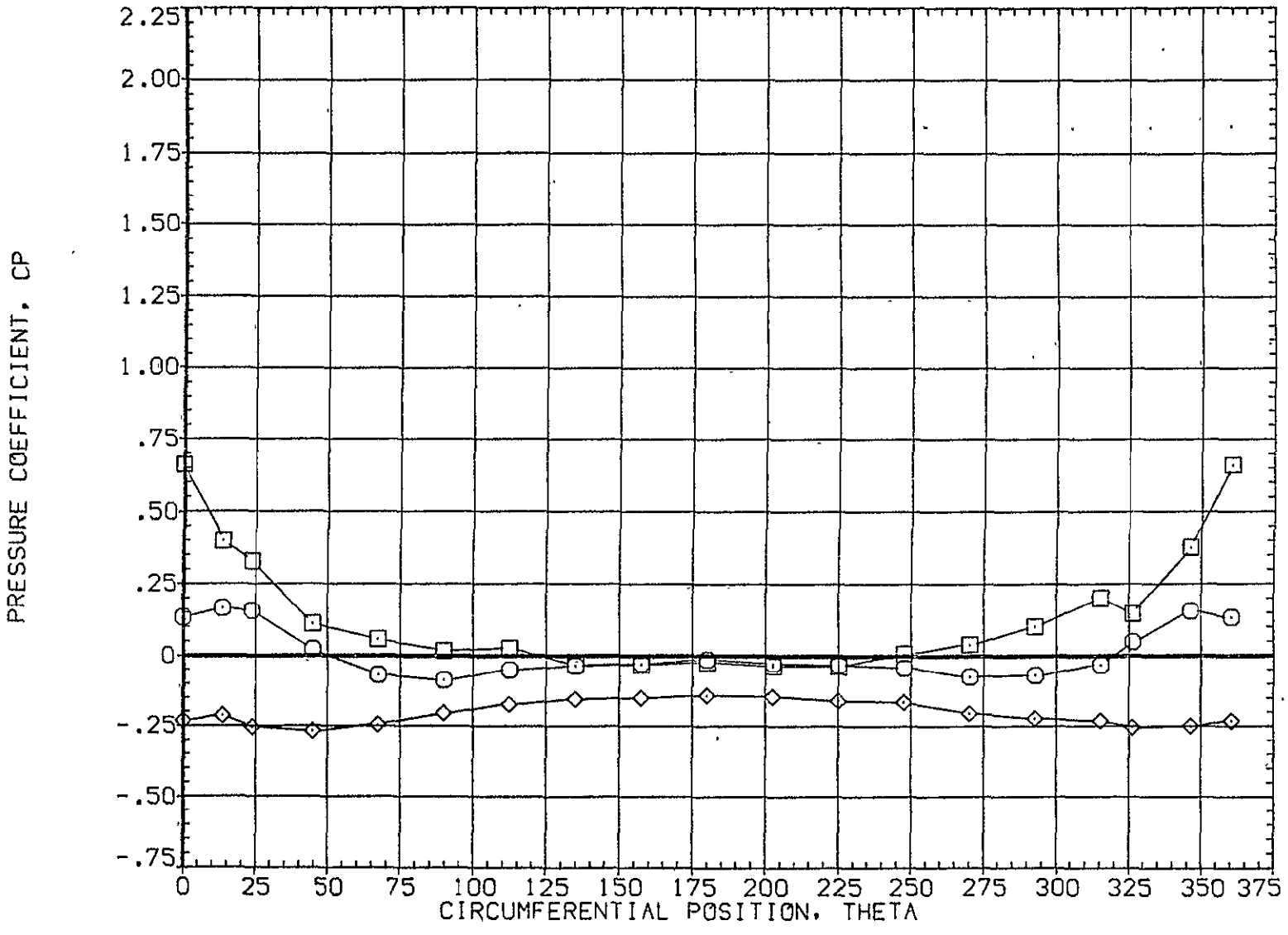

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.570	1.970
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

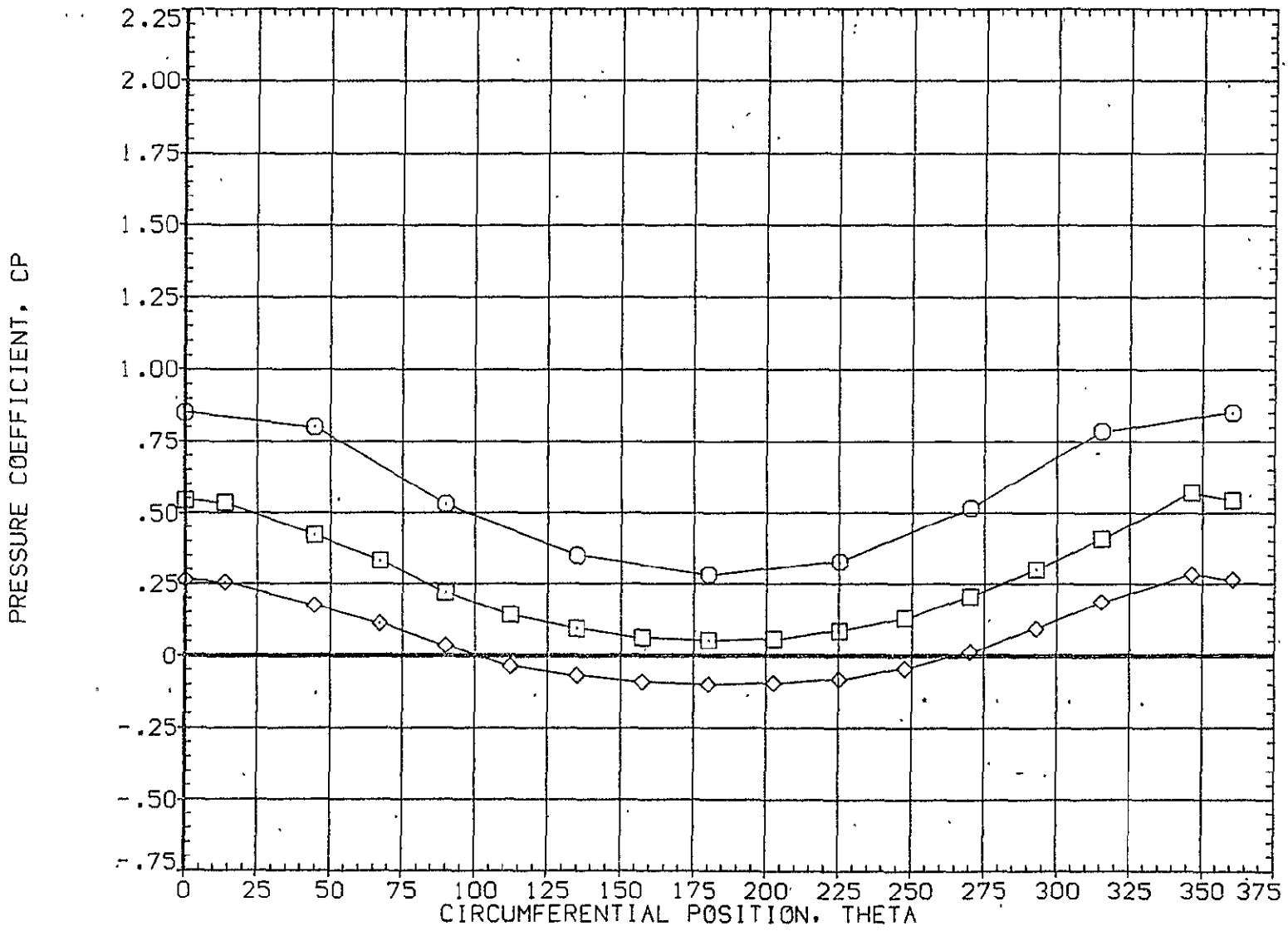

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.570	1.970
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

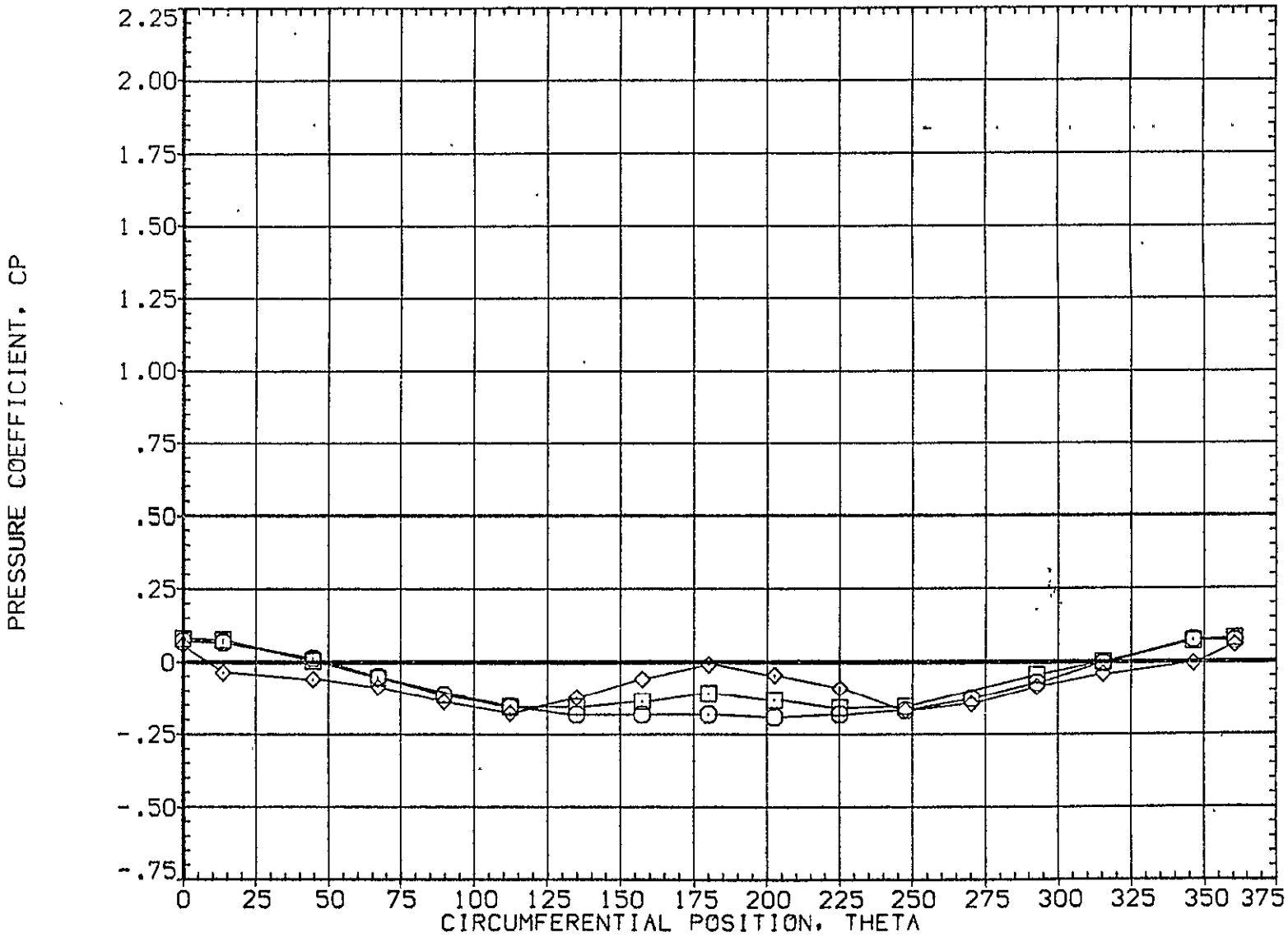

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.570	1.970
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

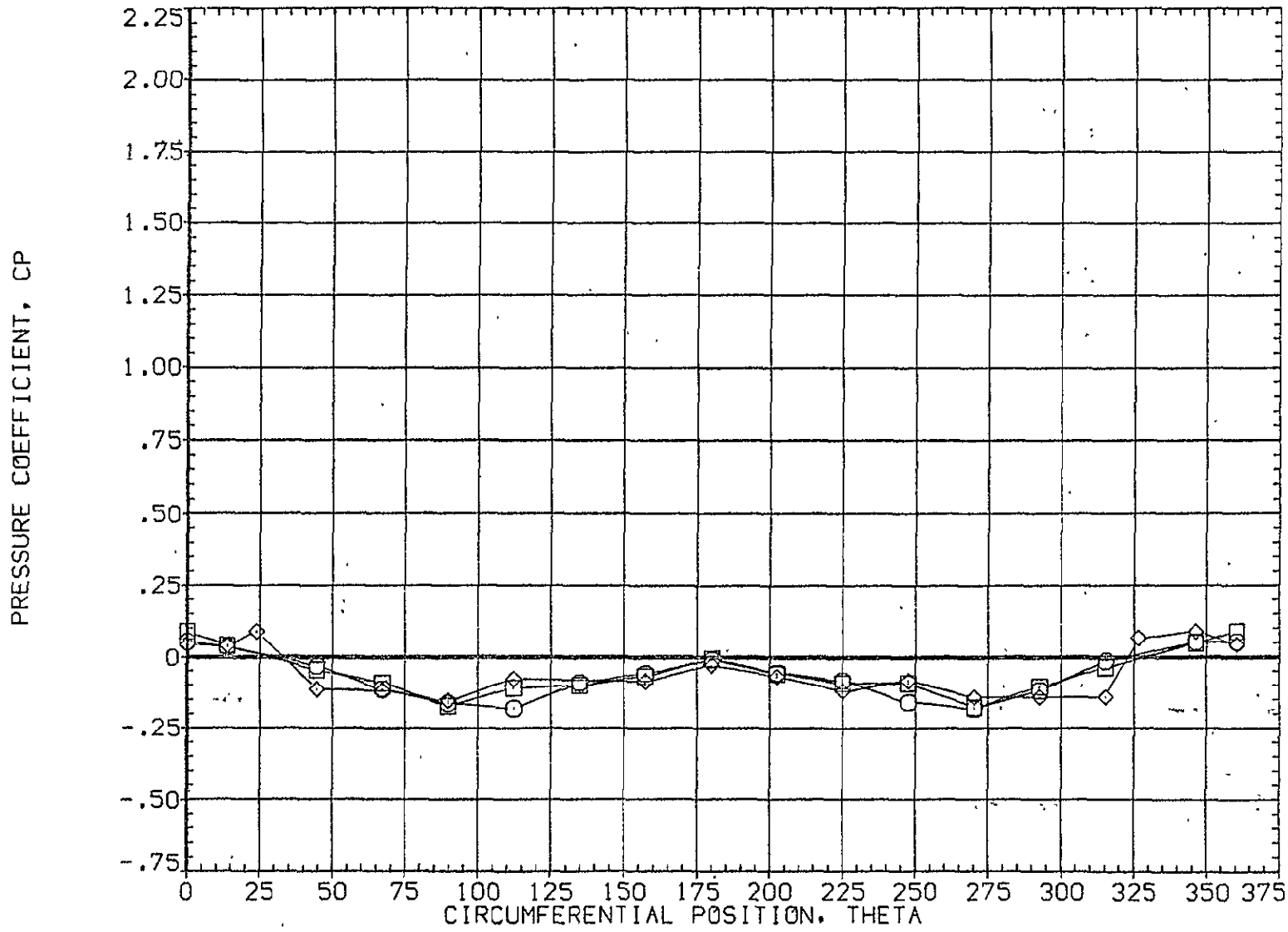

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.570	1.970
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

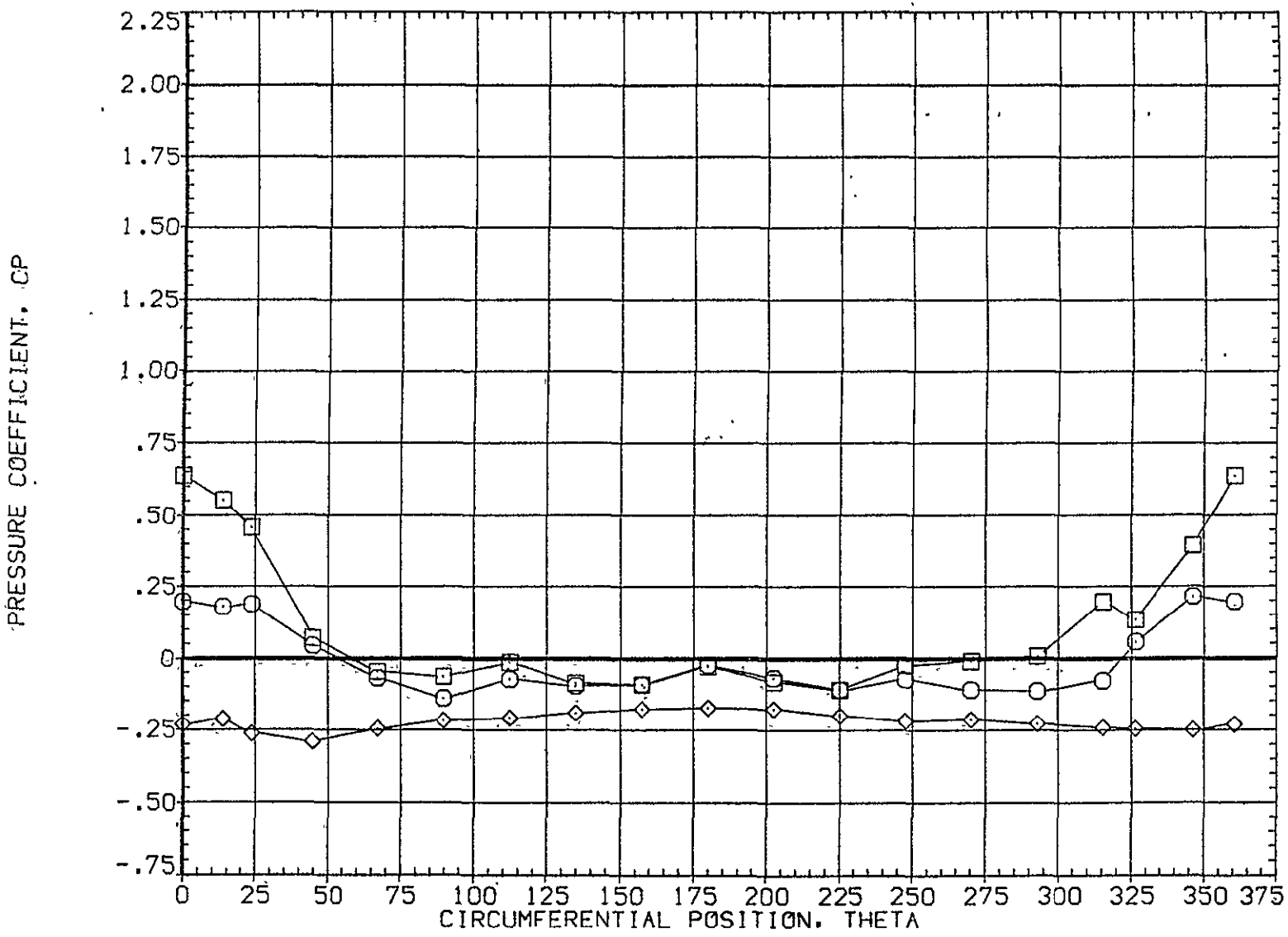

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.660	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

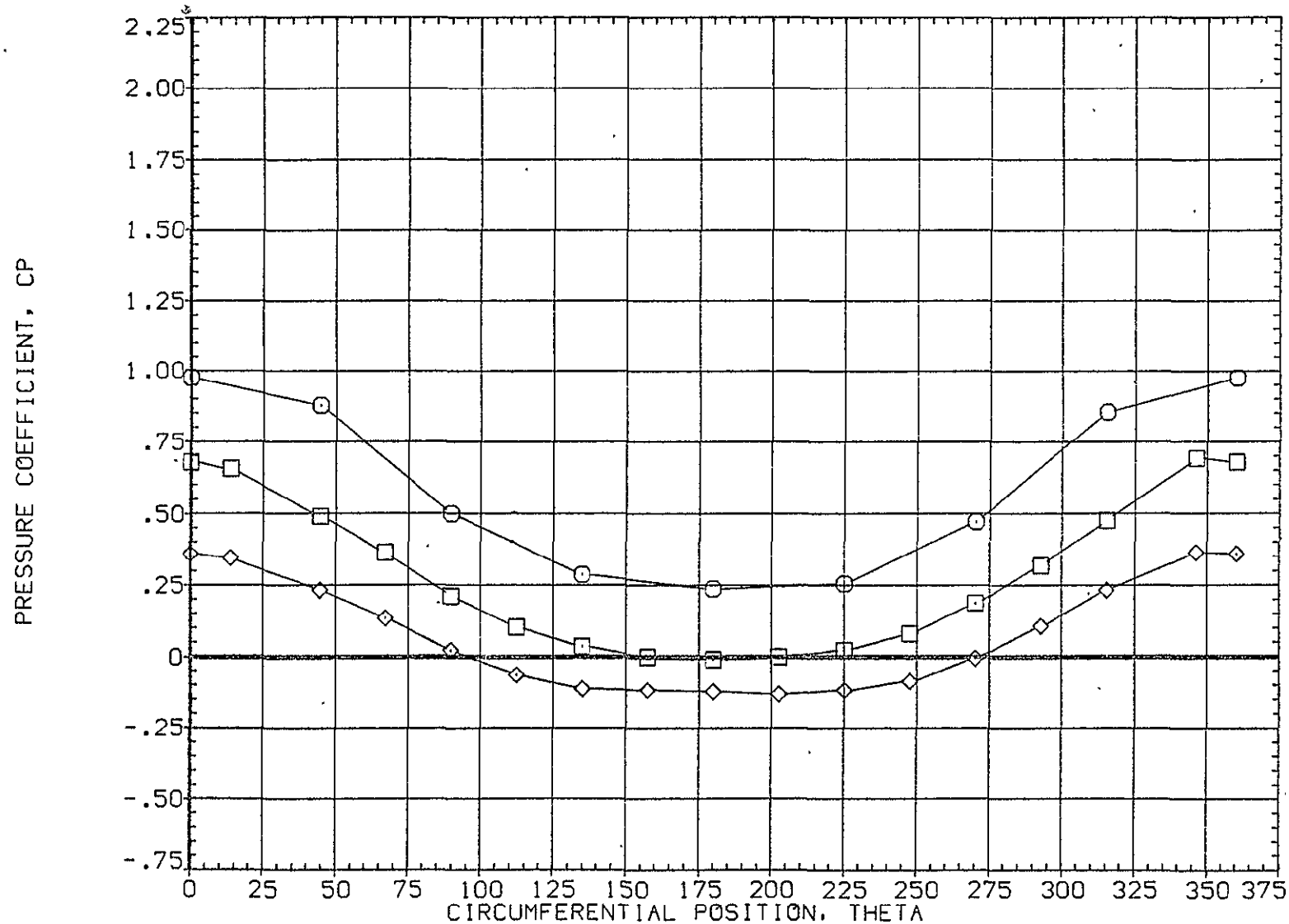

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.660	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

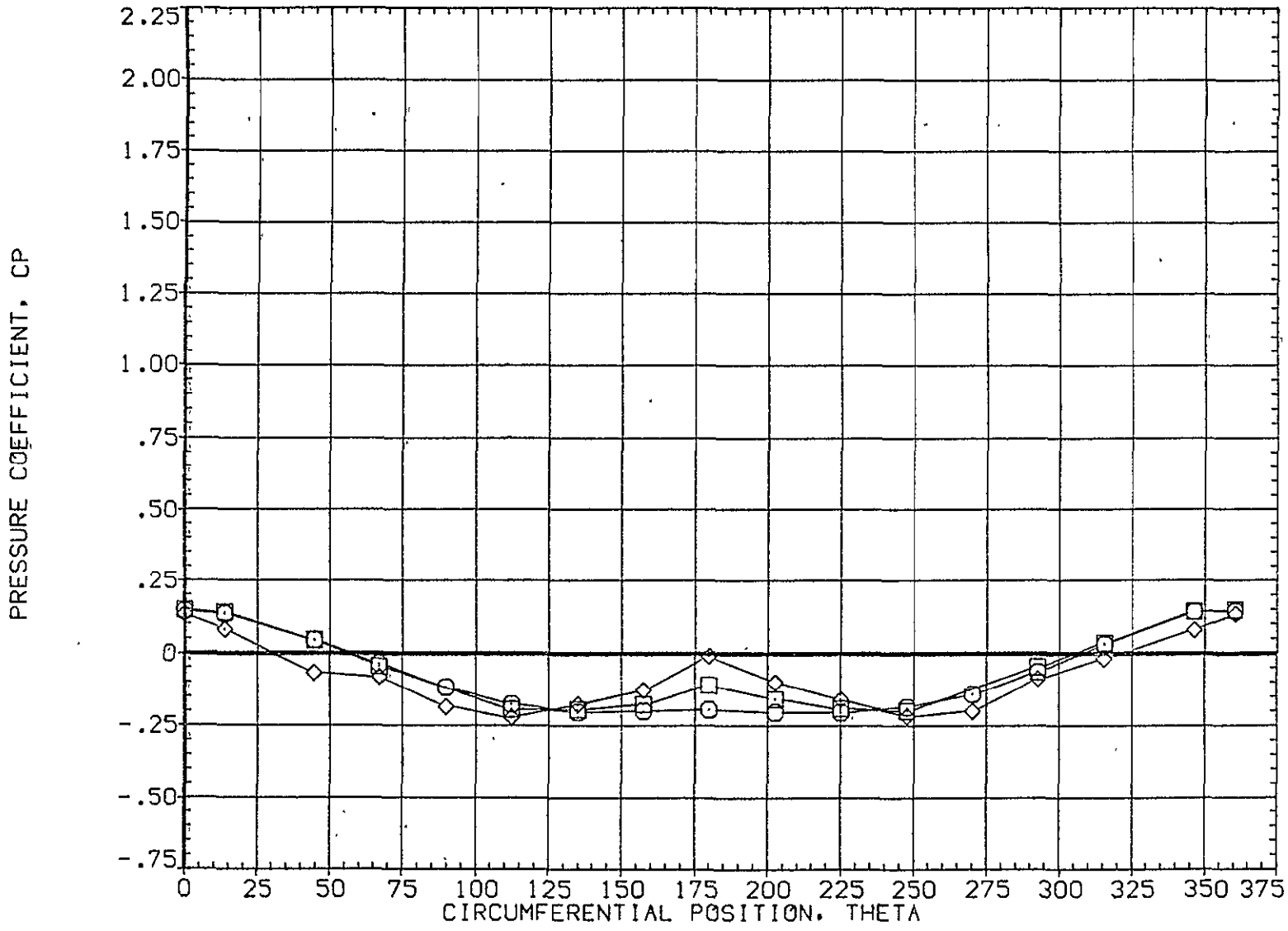

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.660	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

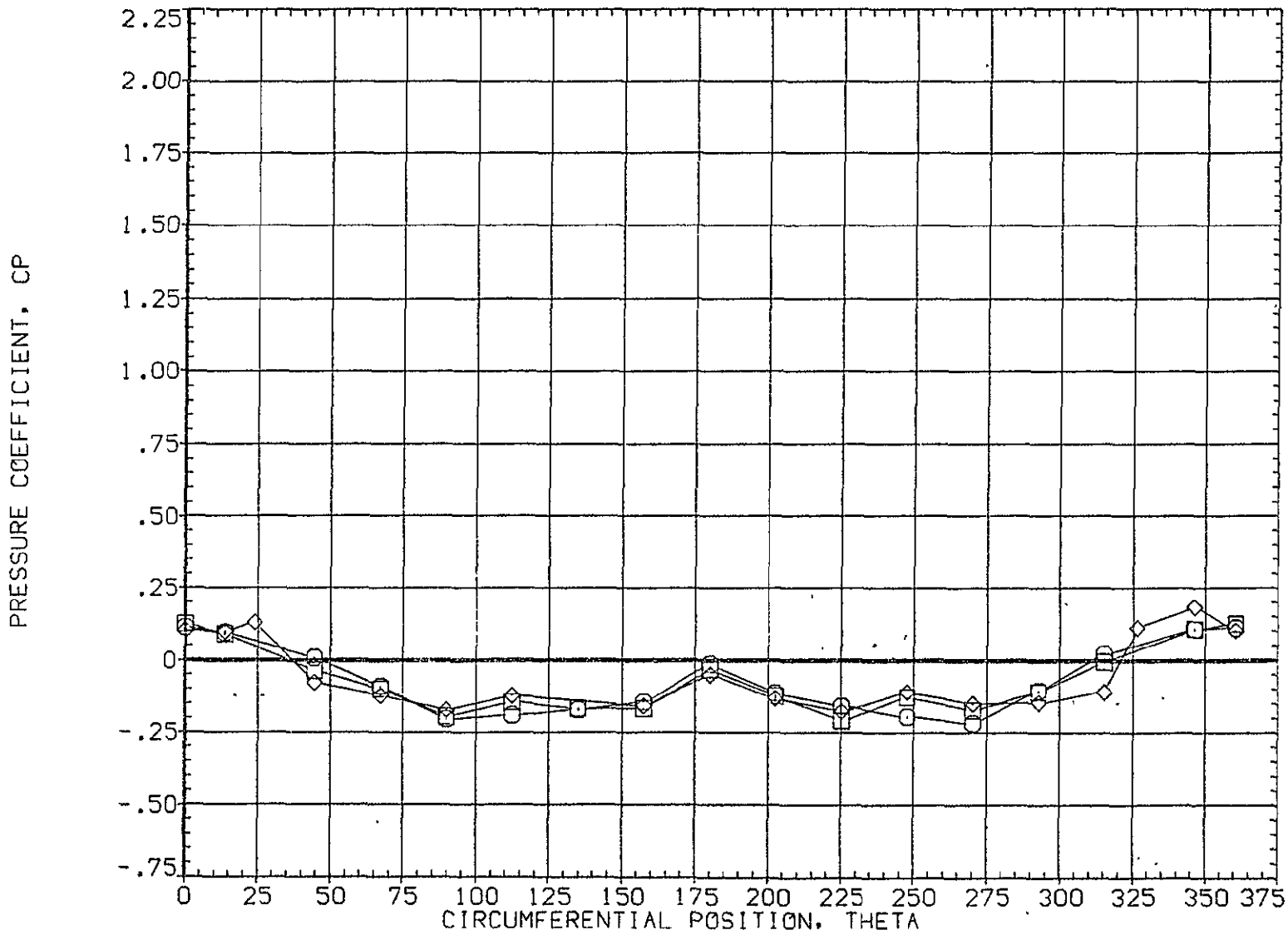

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.660	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET :	20.000
MOUNT	1.000	PHI	180.000

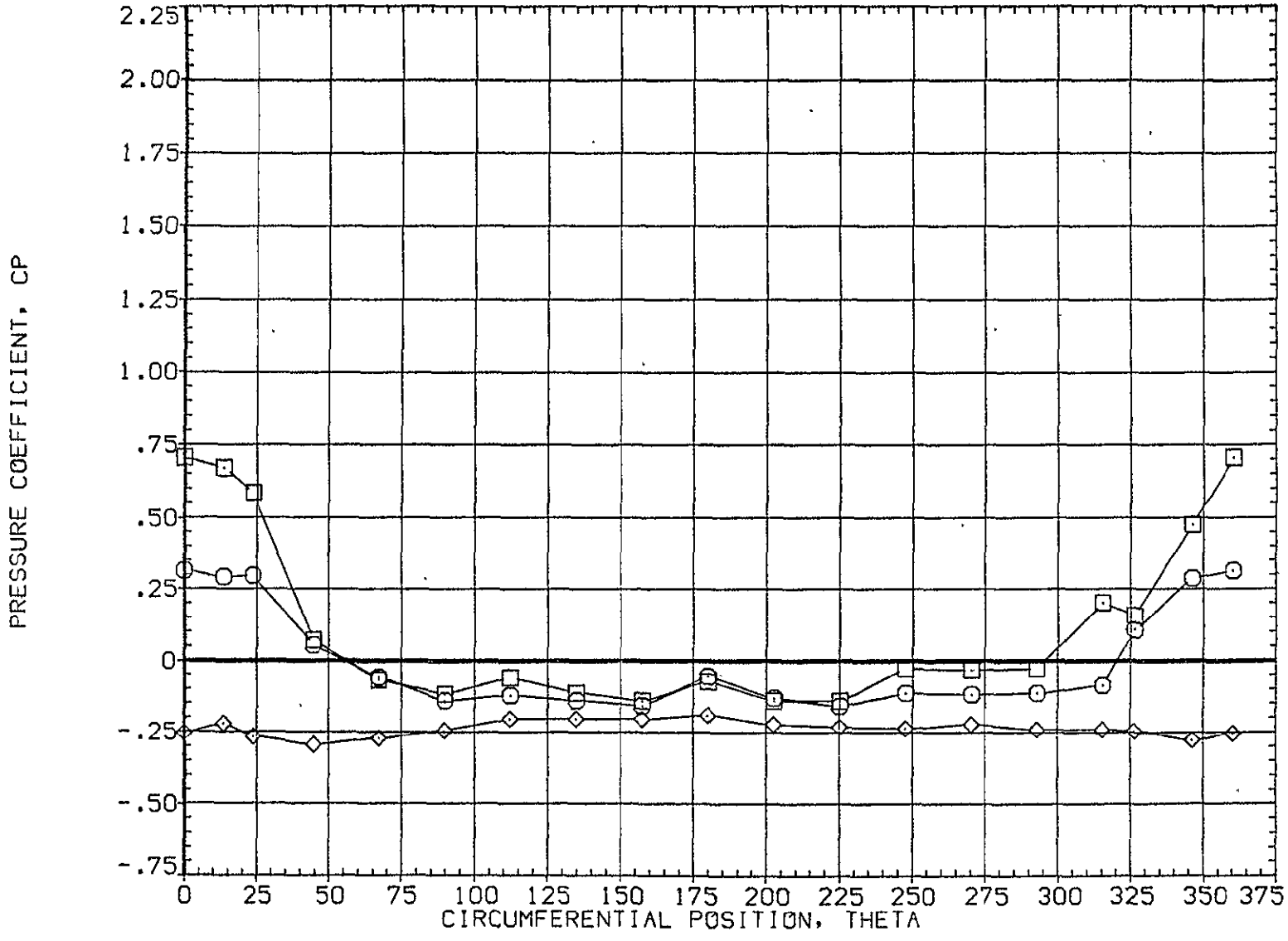

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.740	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

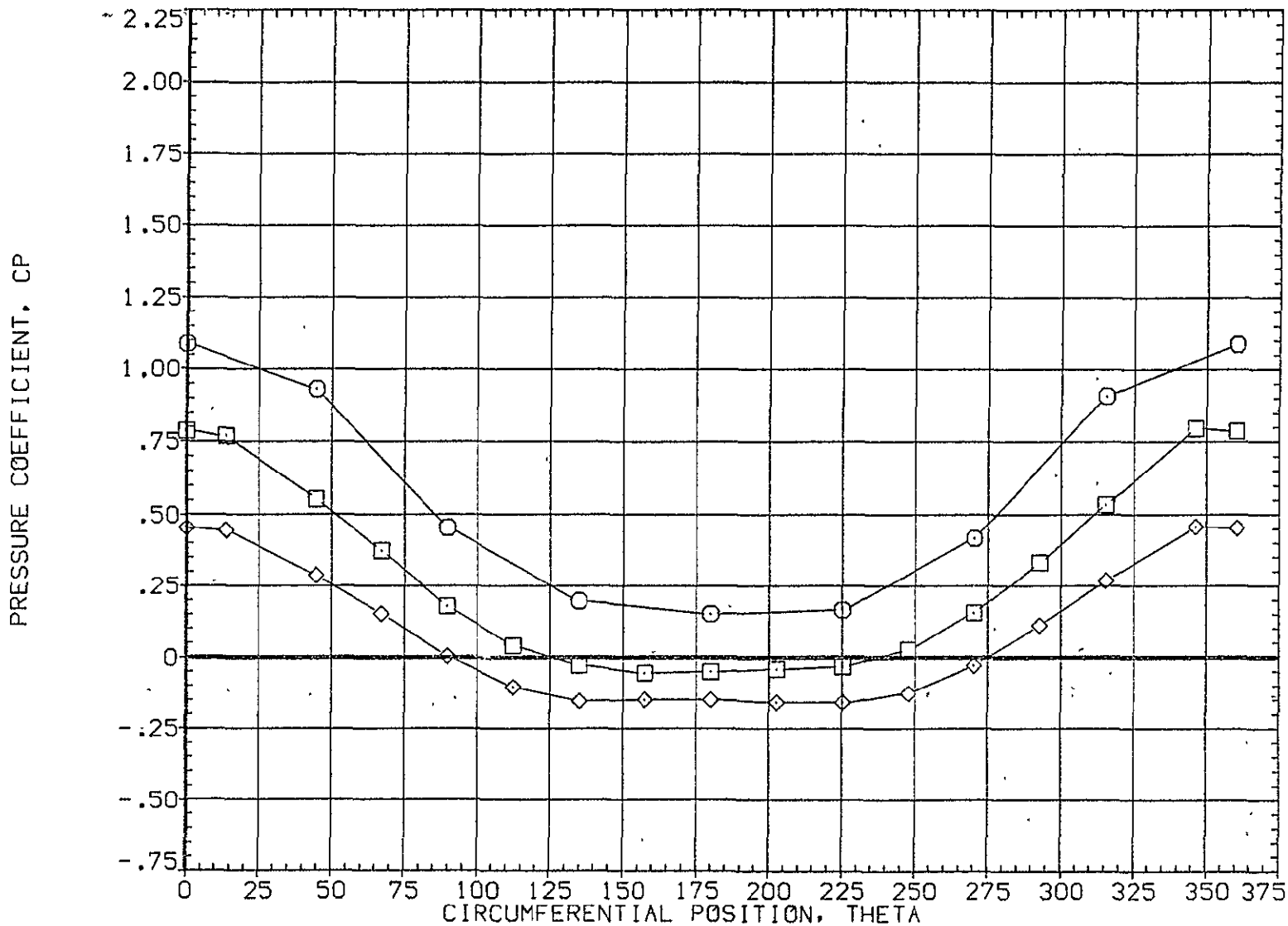

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.740	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

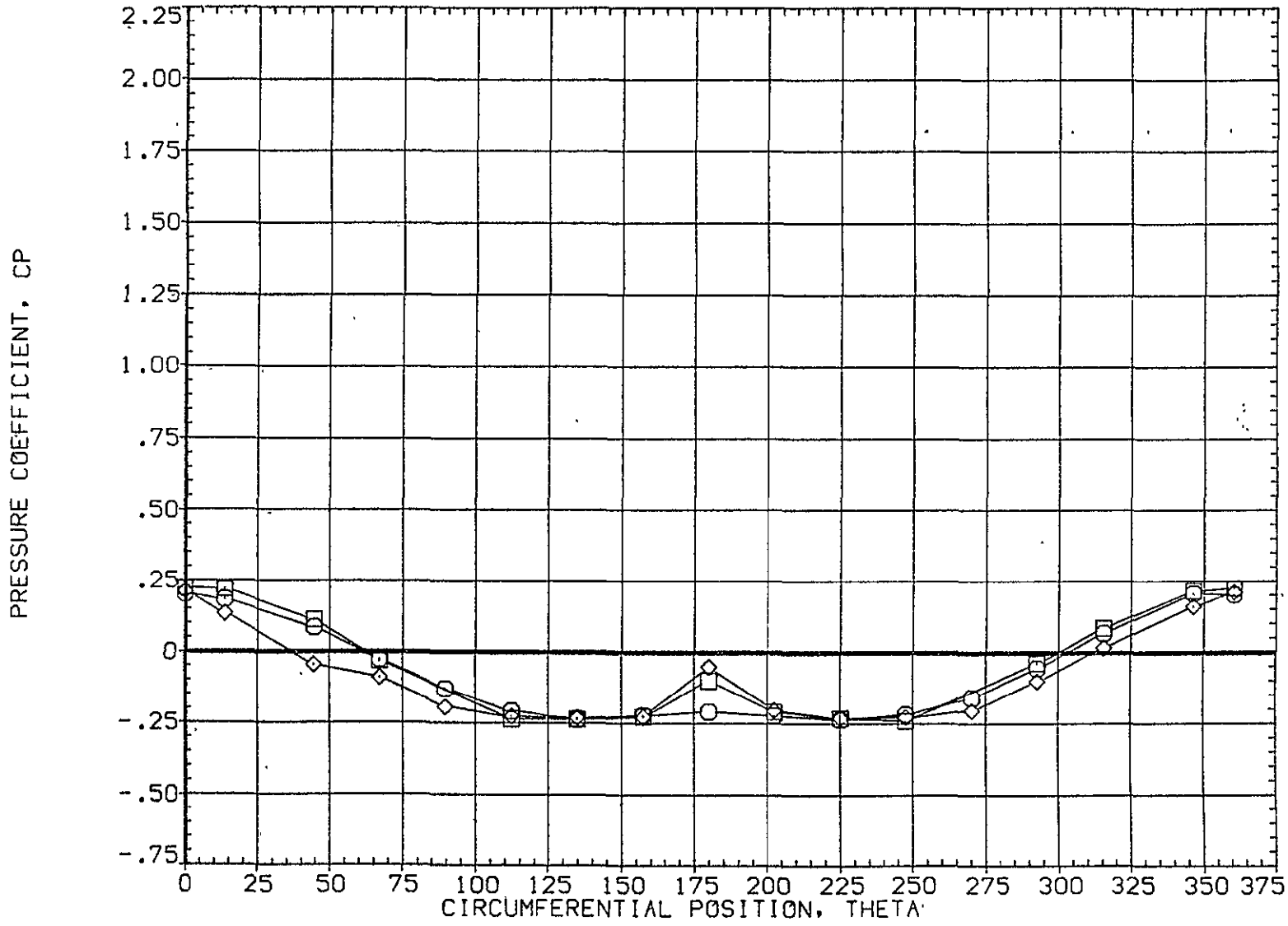

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.740	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

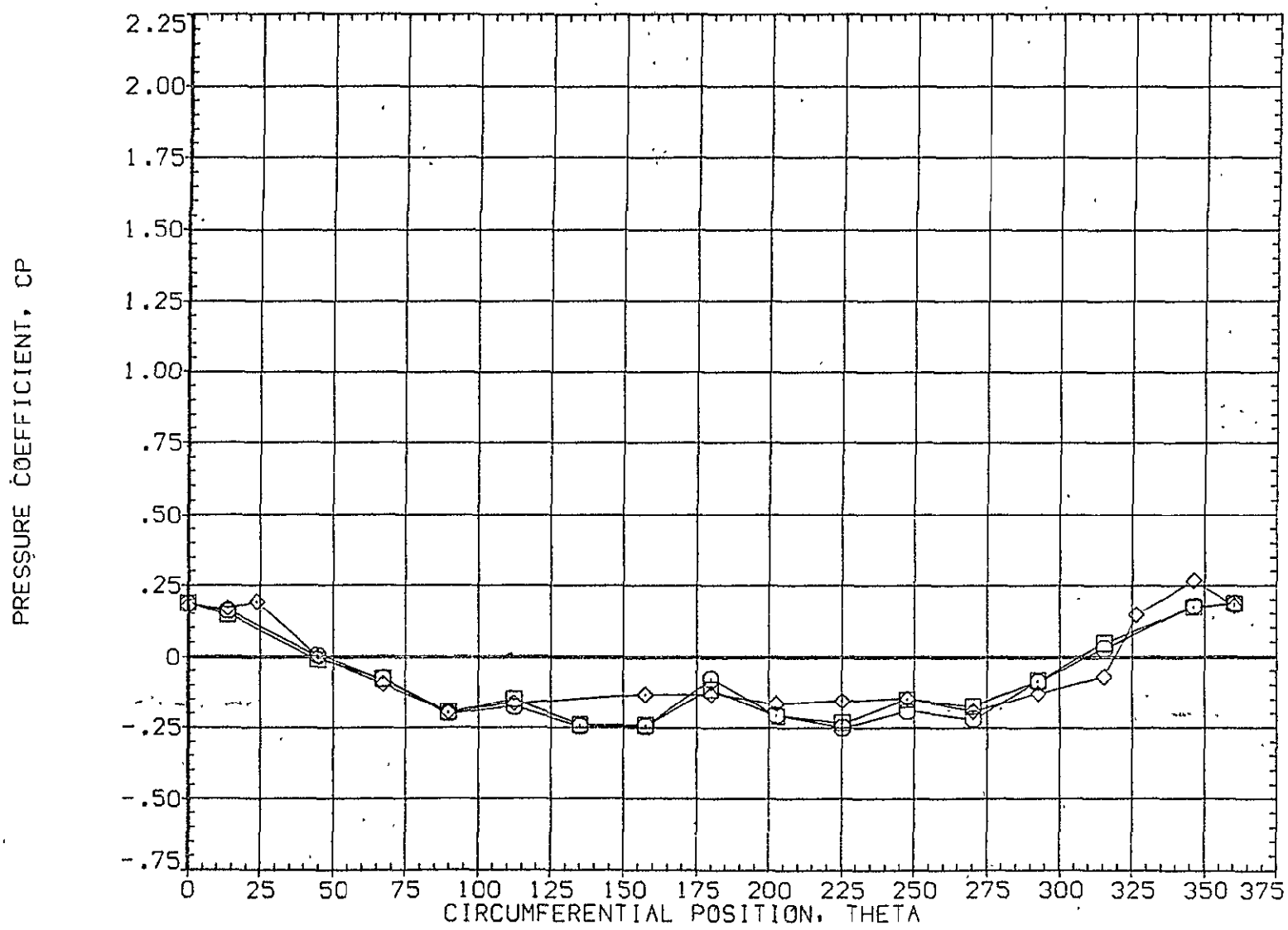

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.740	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

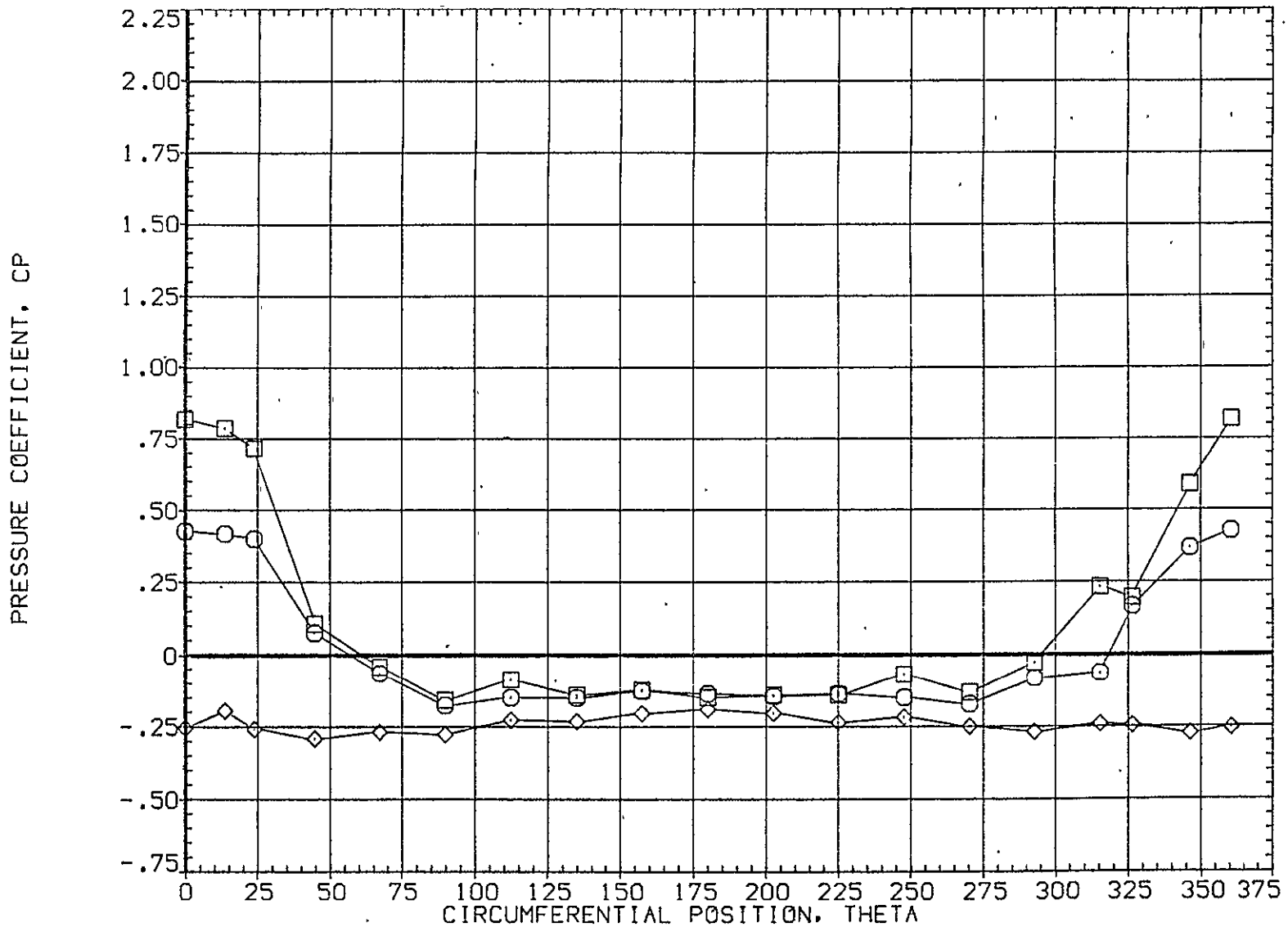

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.870	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

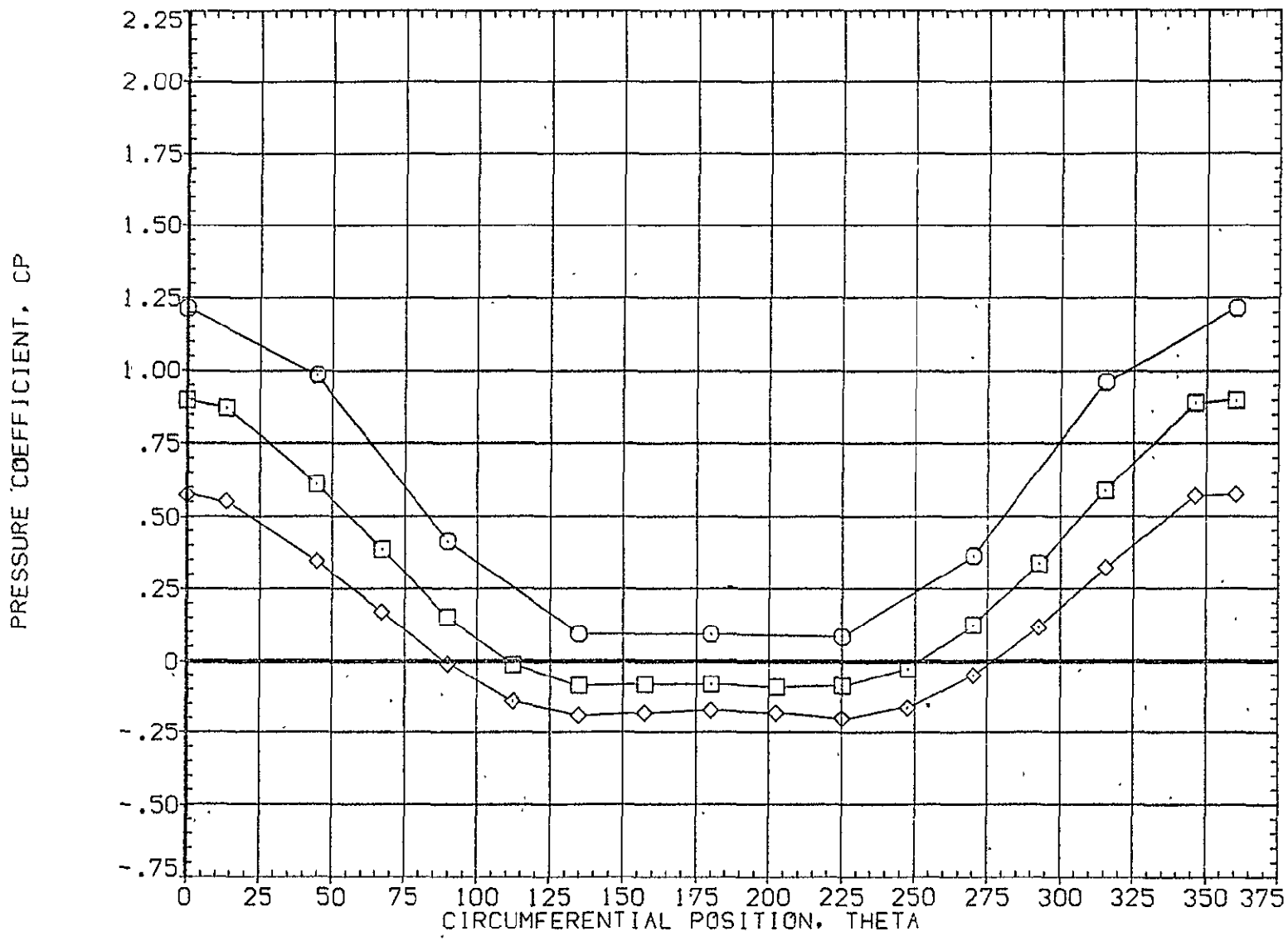

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.870	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

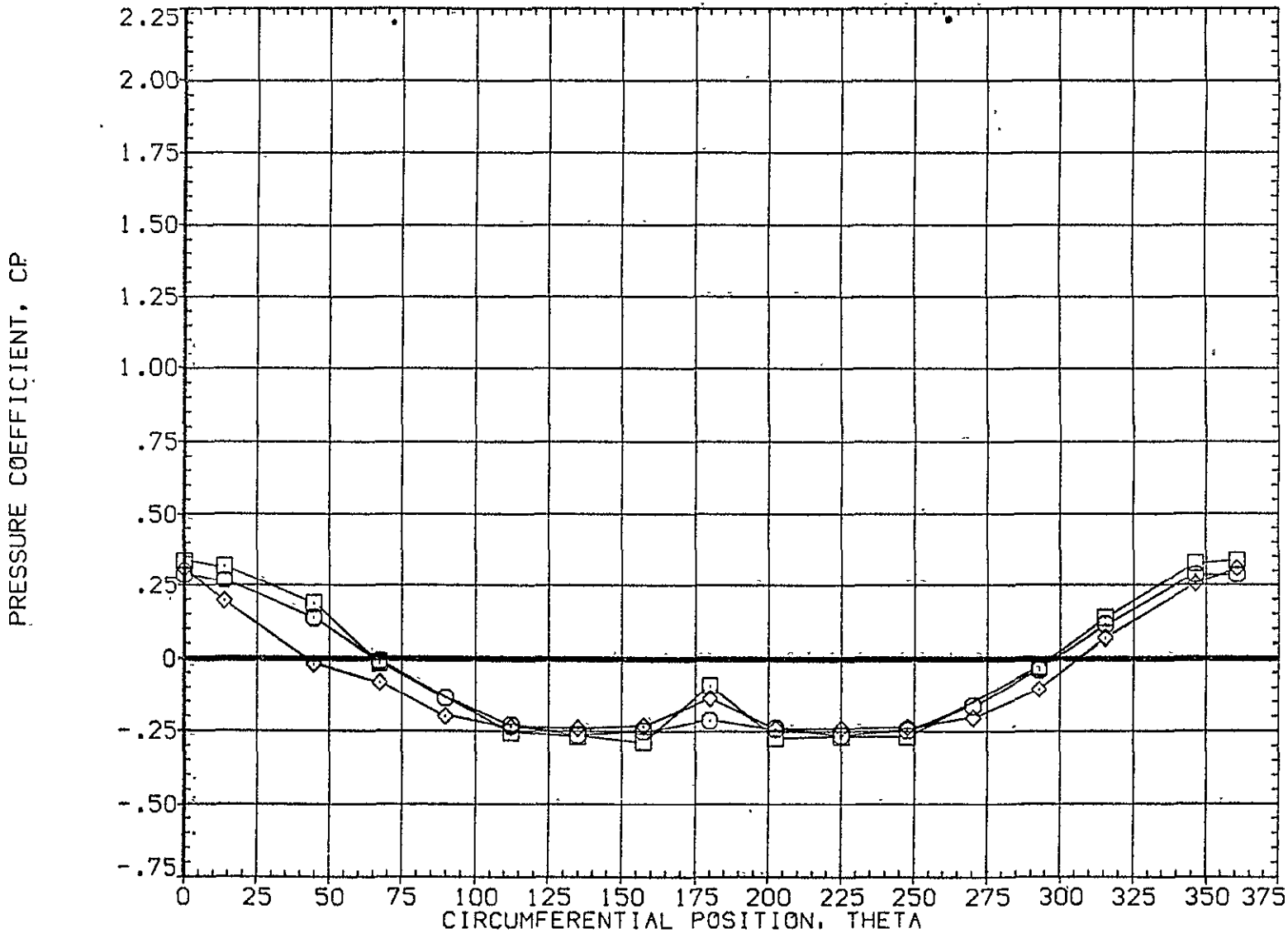

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.870	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

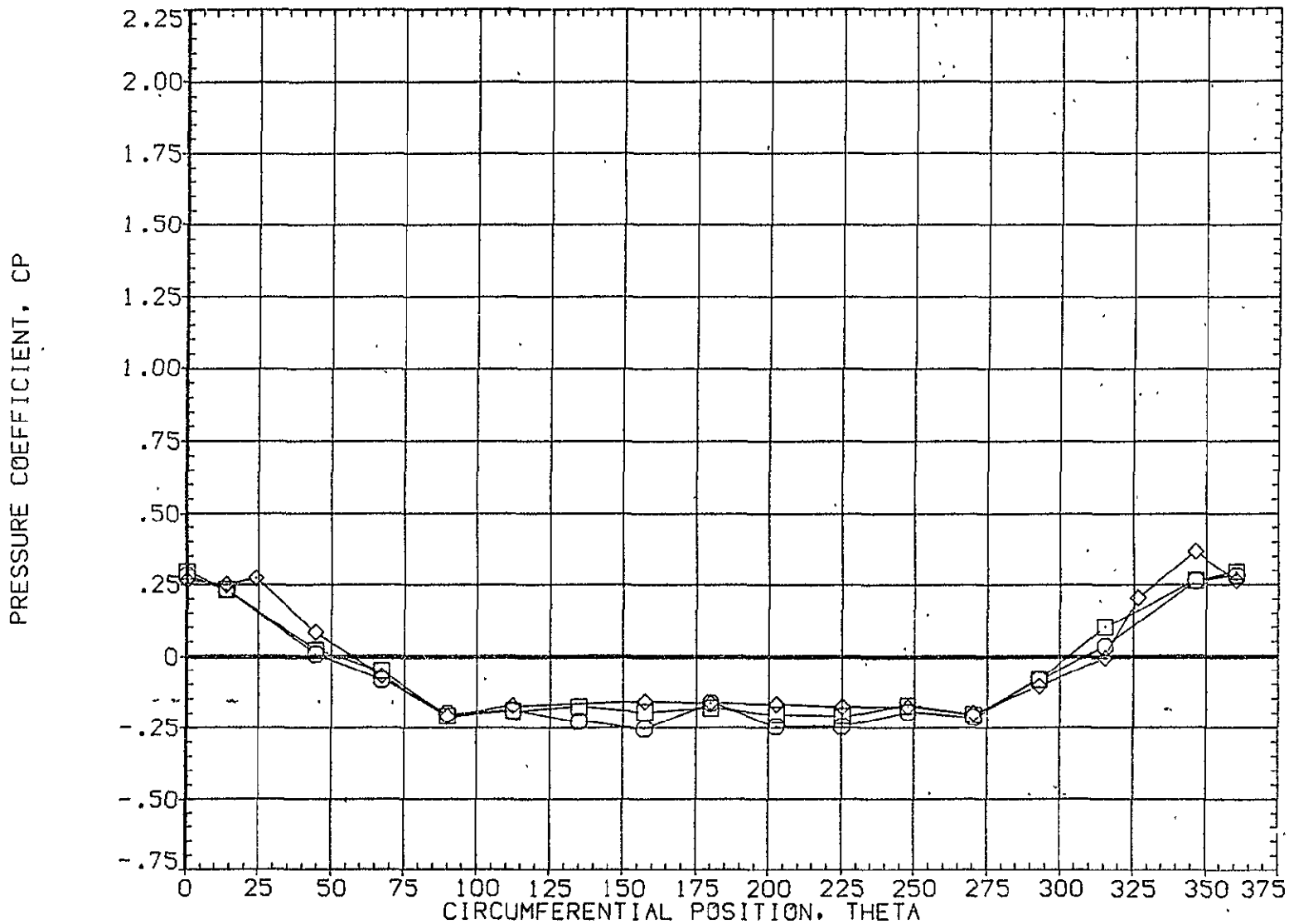

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.870	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

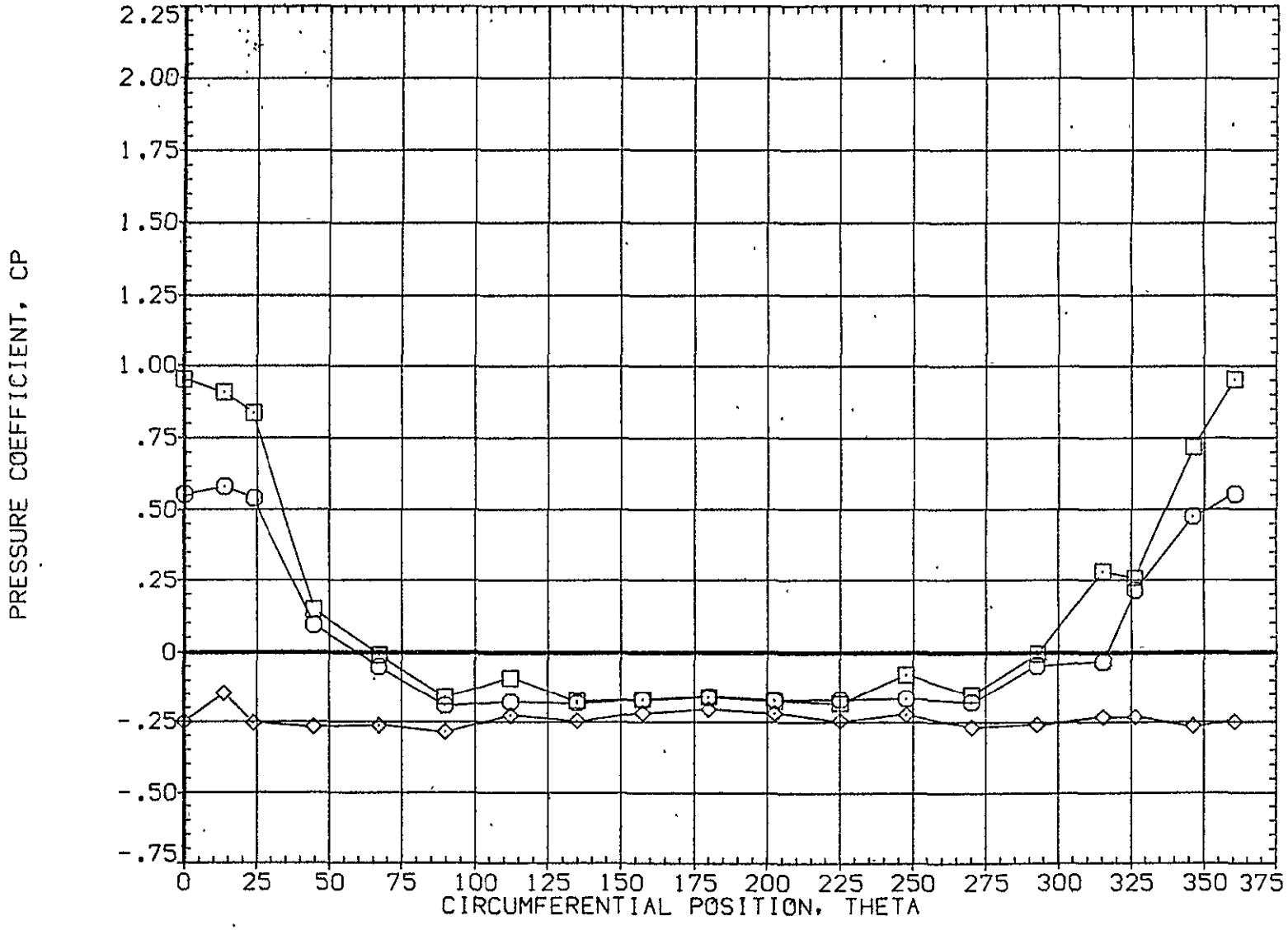

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.930	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

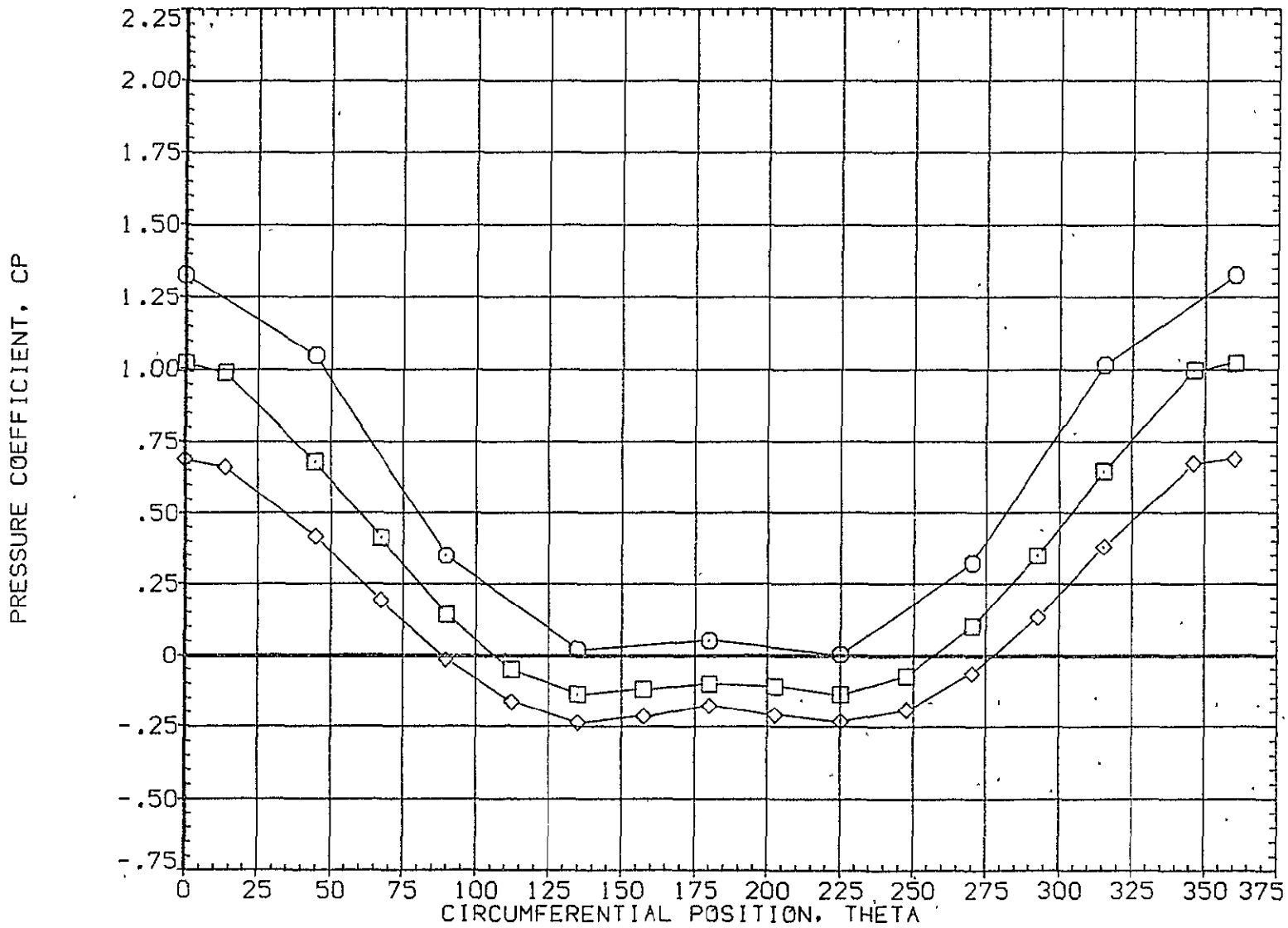

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.930	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

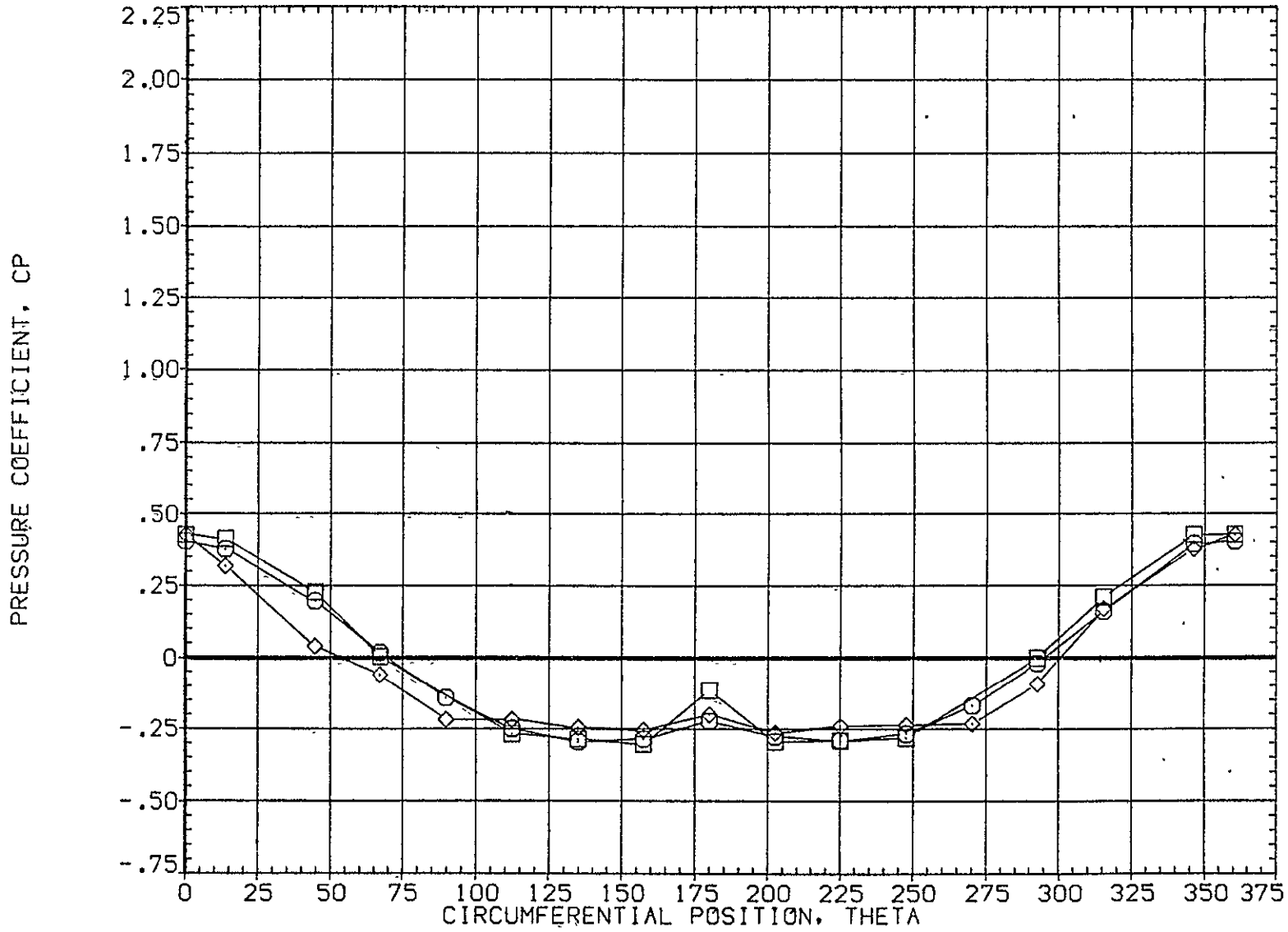

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.930	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

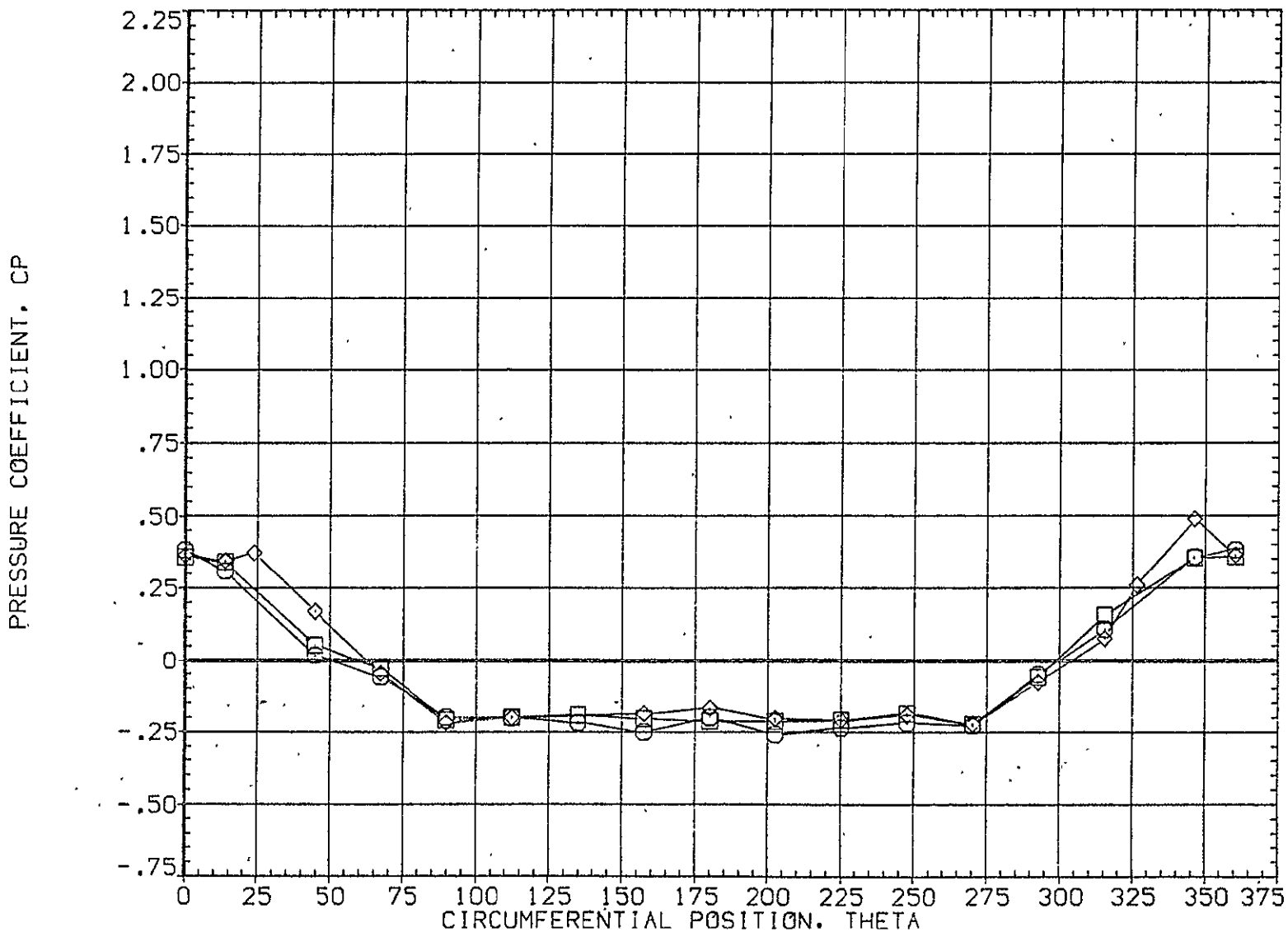

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.930	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

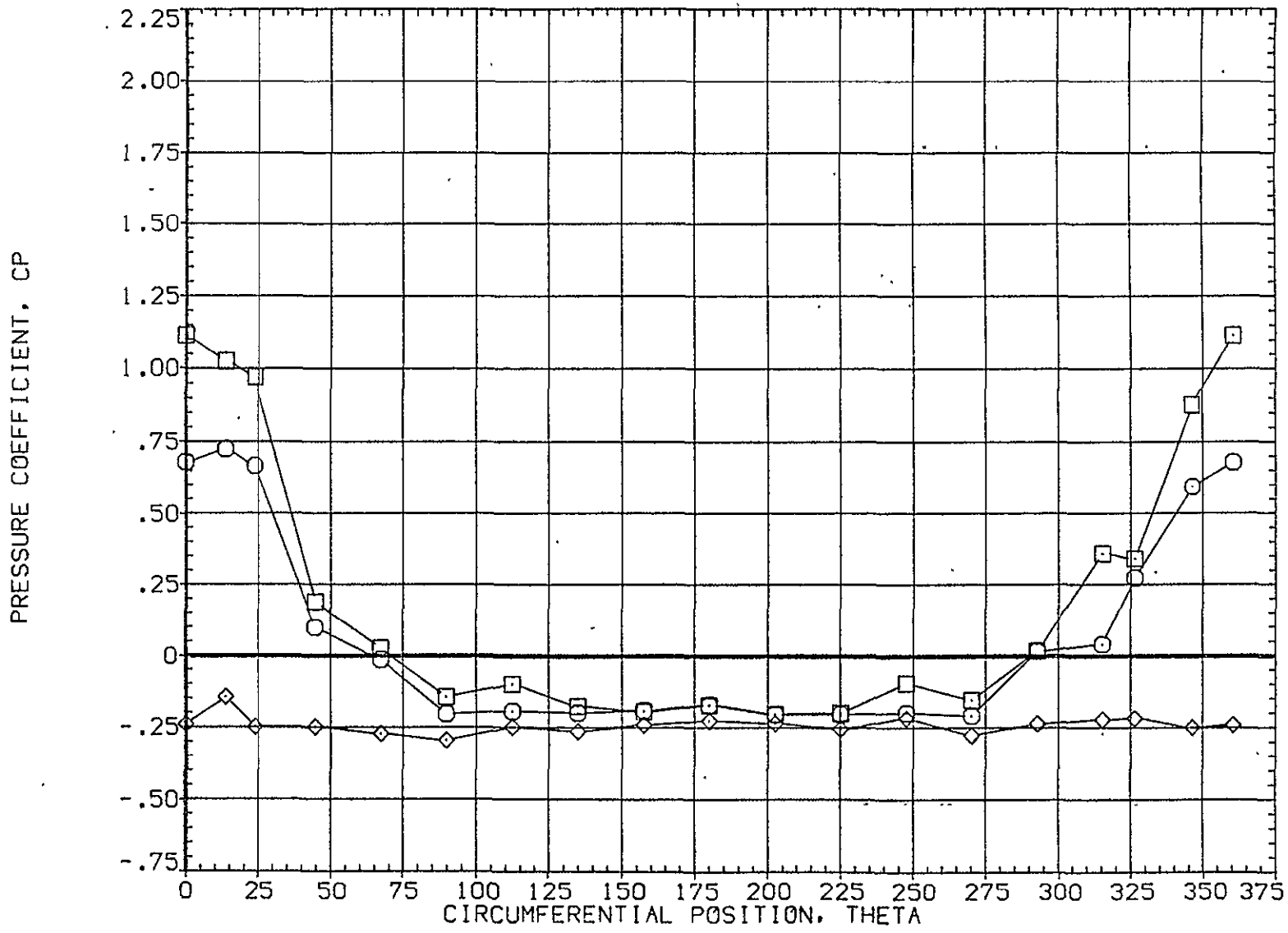

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.380	1.950
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

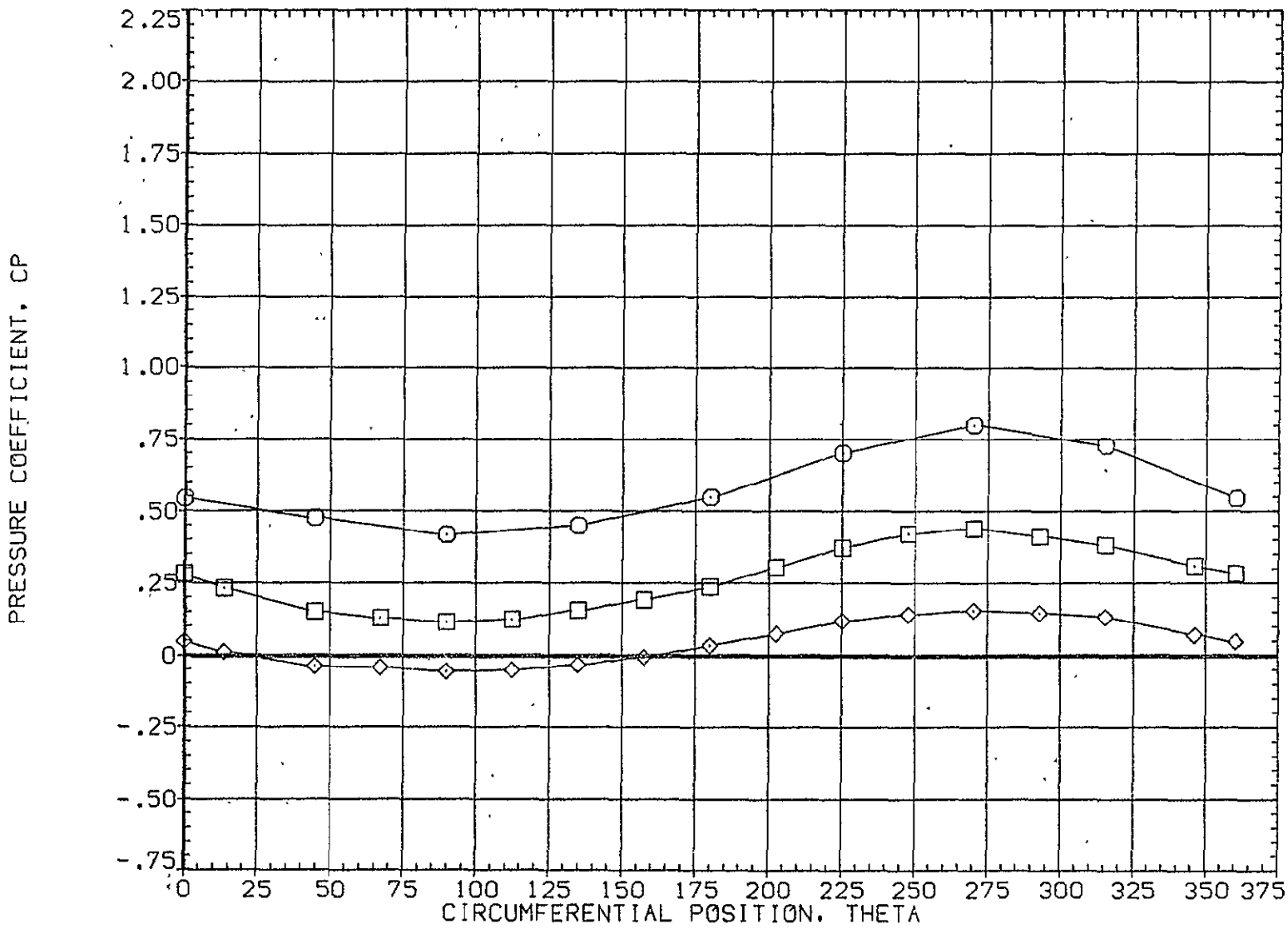

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB.	ALPHA	MACH
○	.216	-8.380	1.950
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

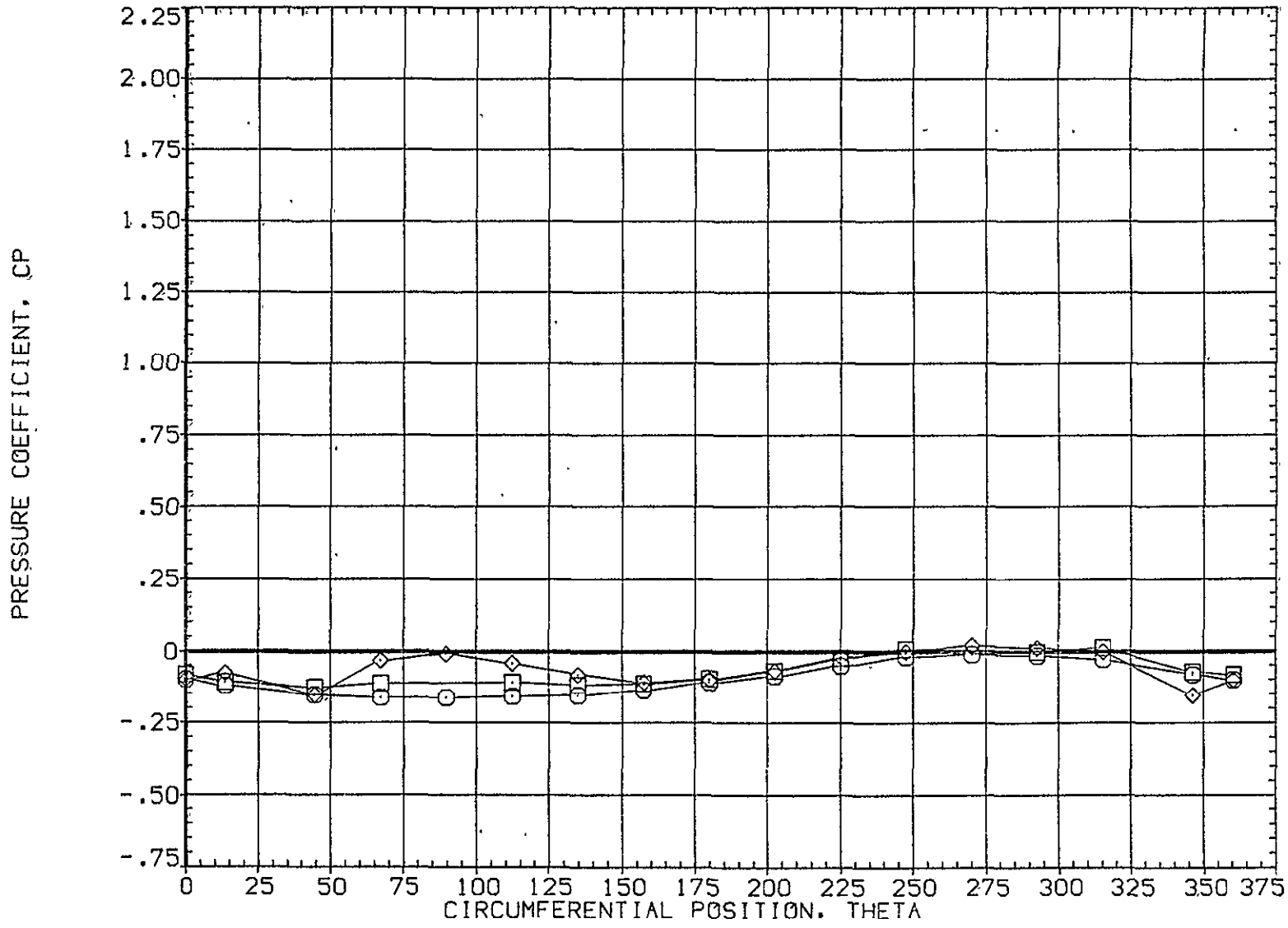

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.380	1.950
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

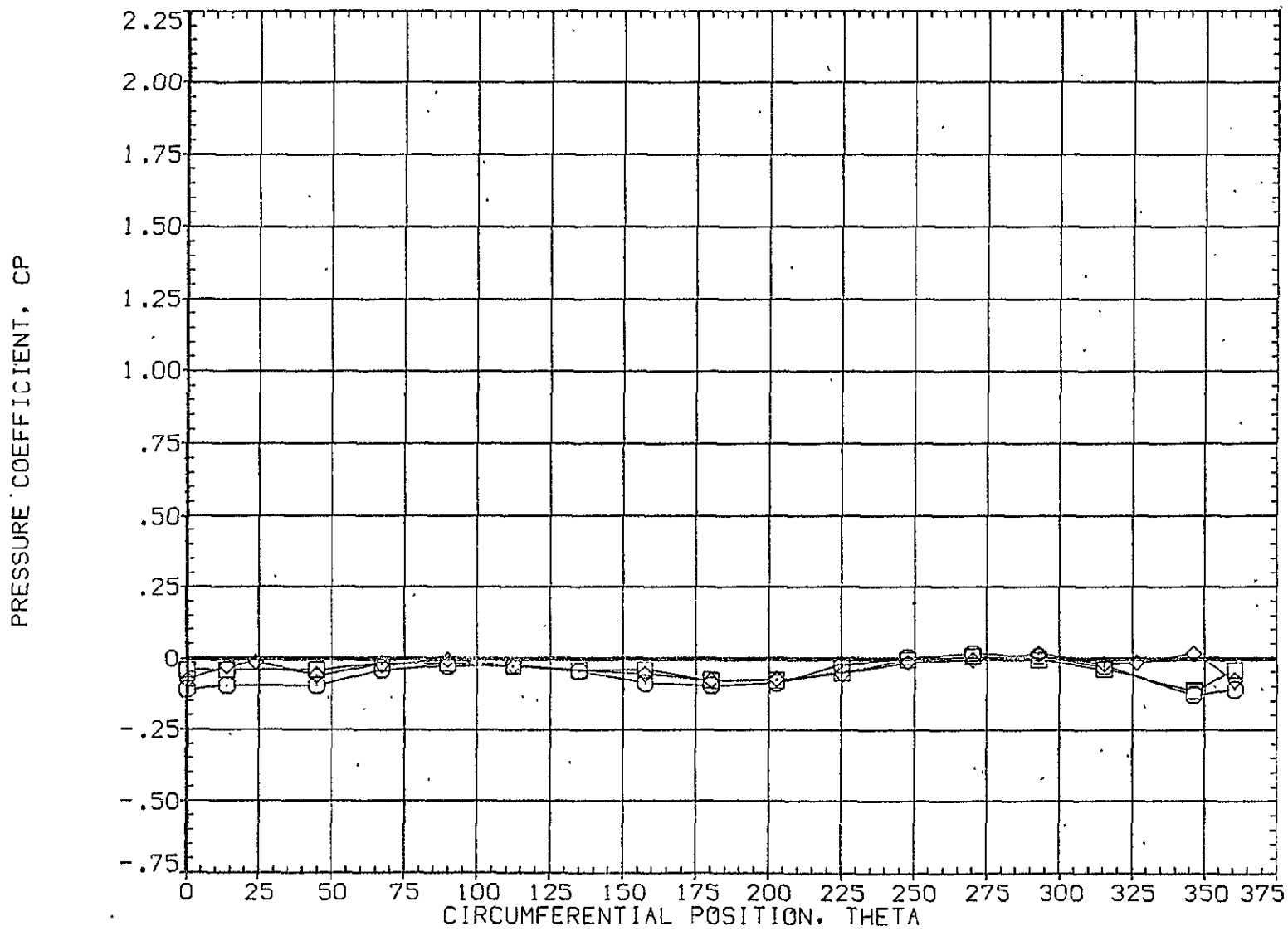

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.380	1.950
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

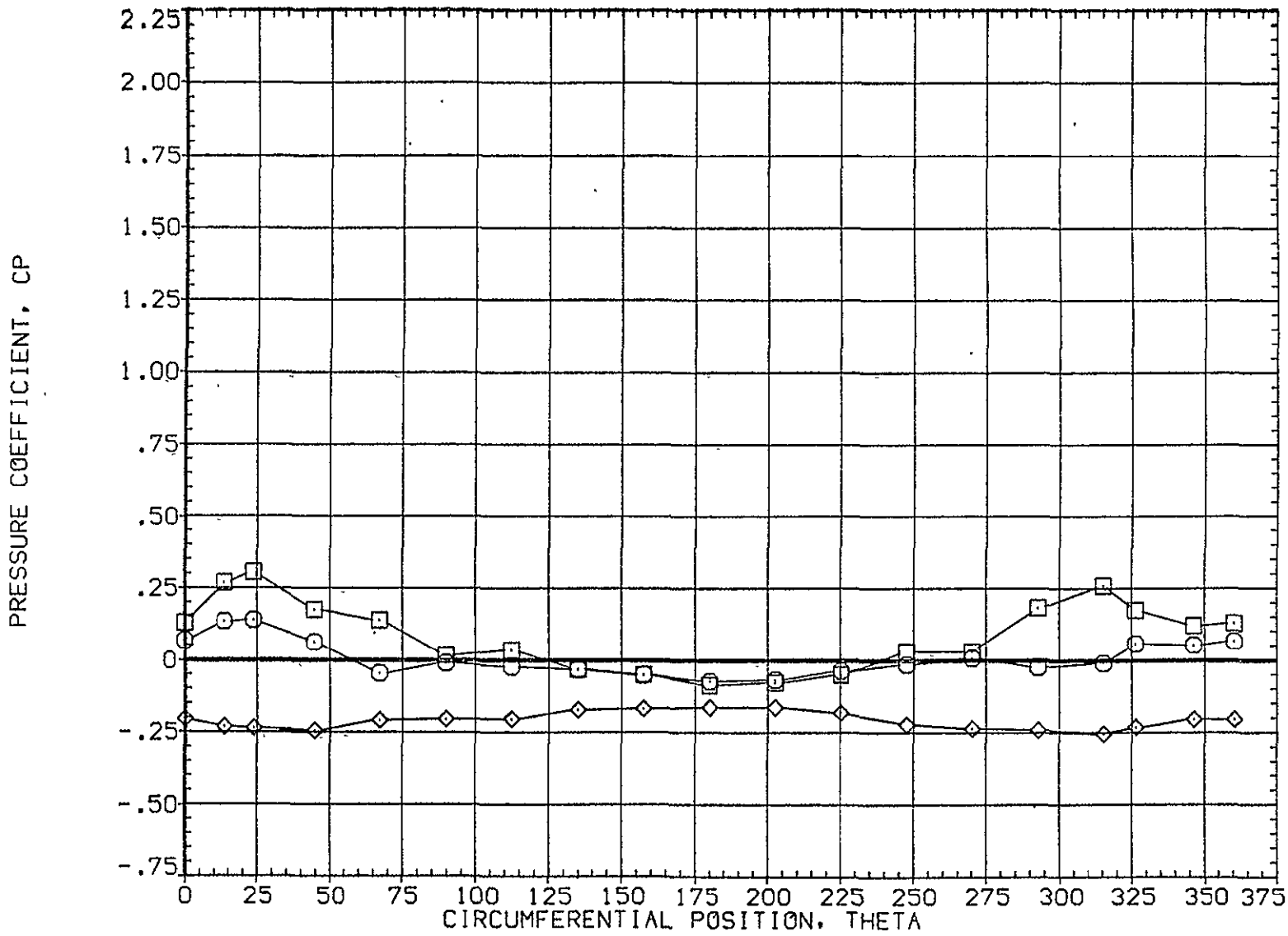

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.350	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

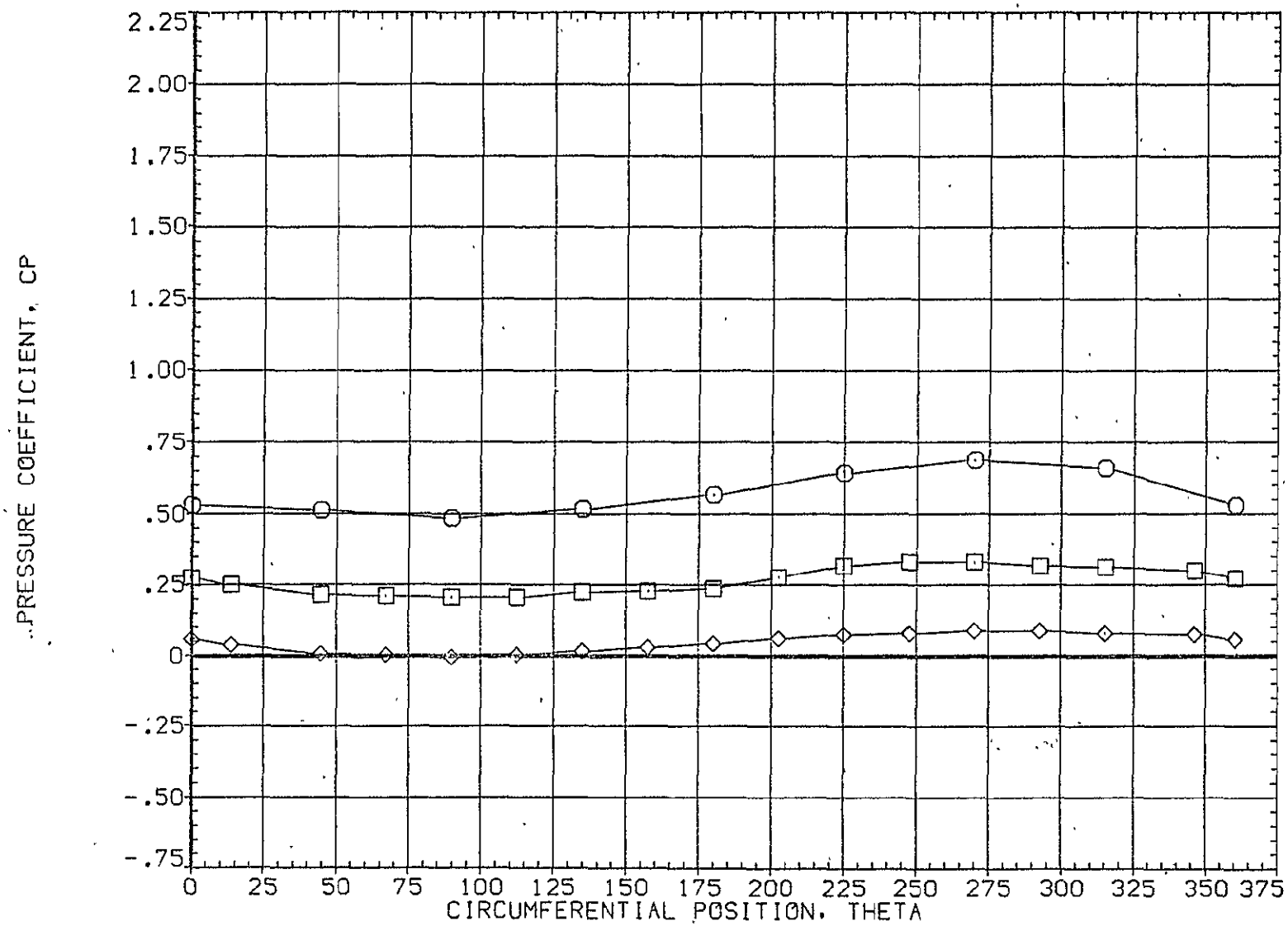

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, 1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.350	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

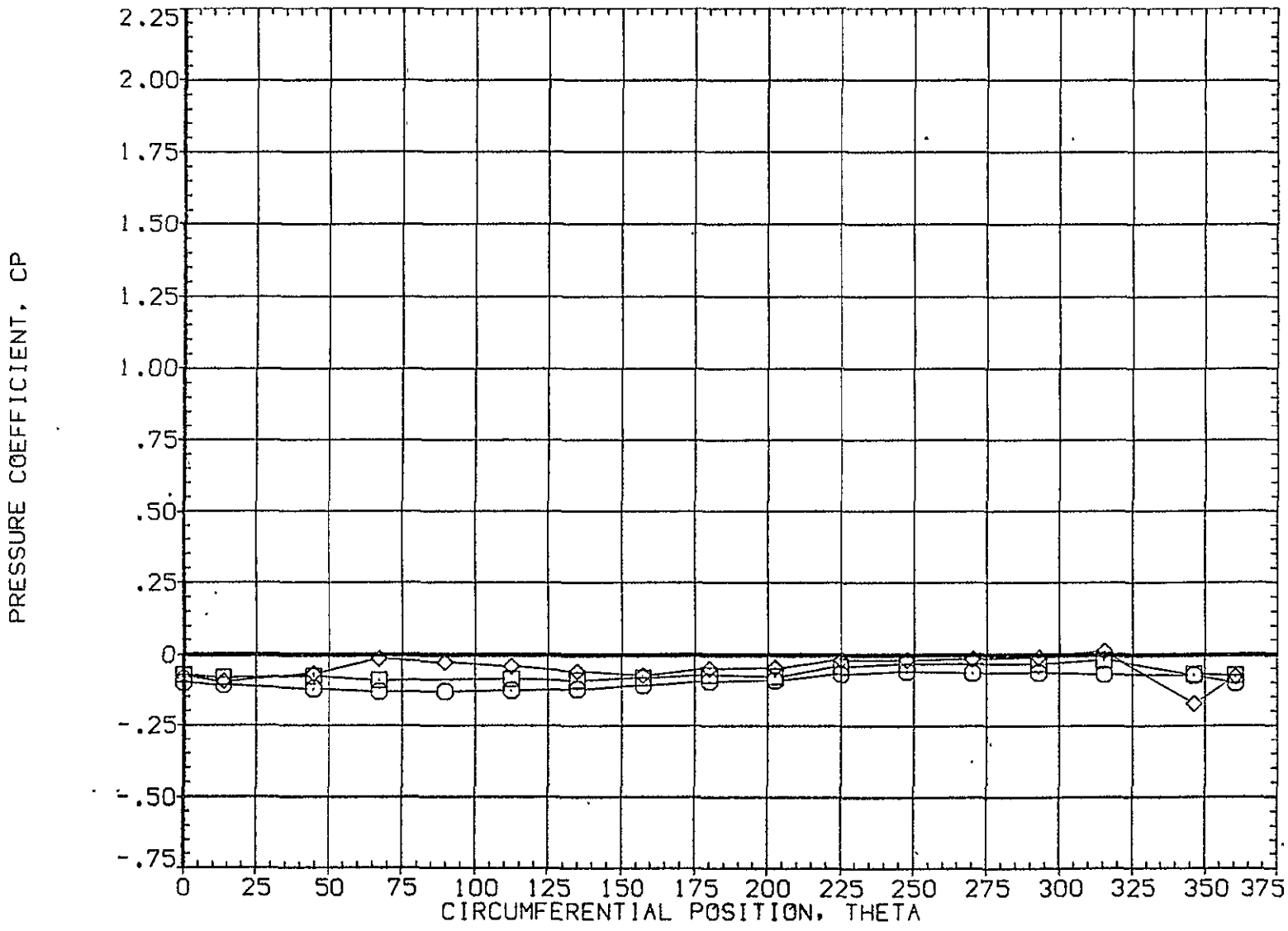

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.350	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

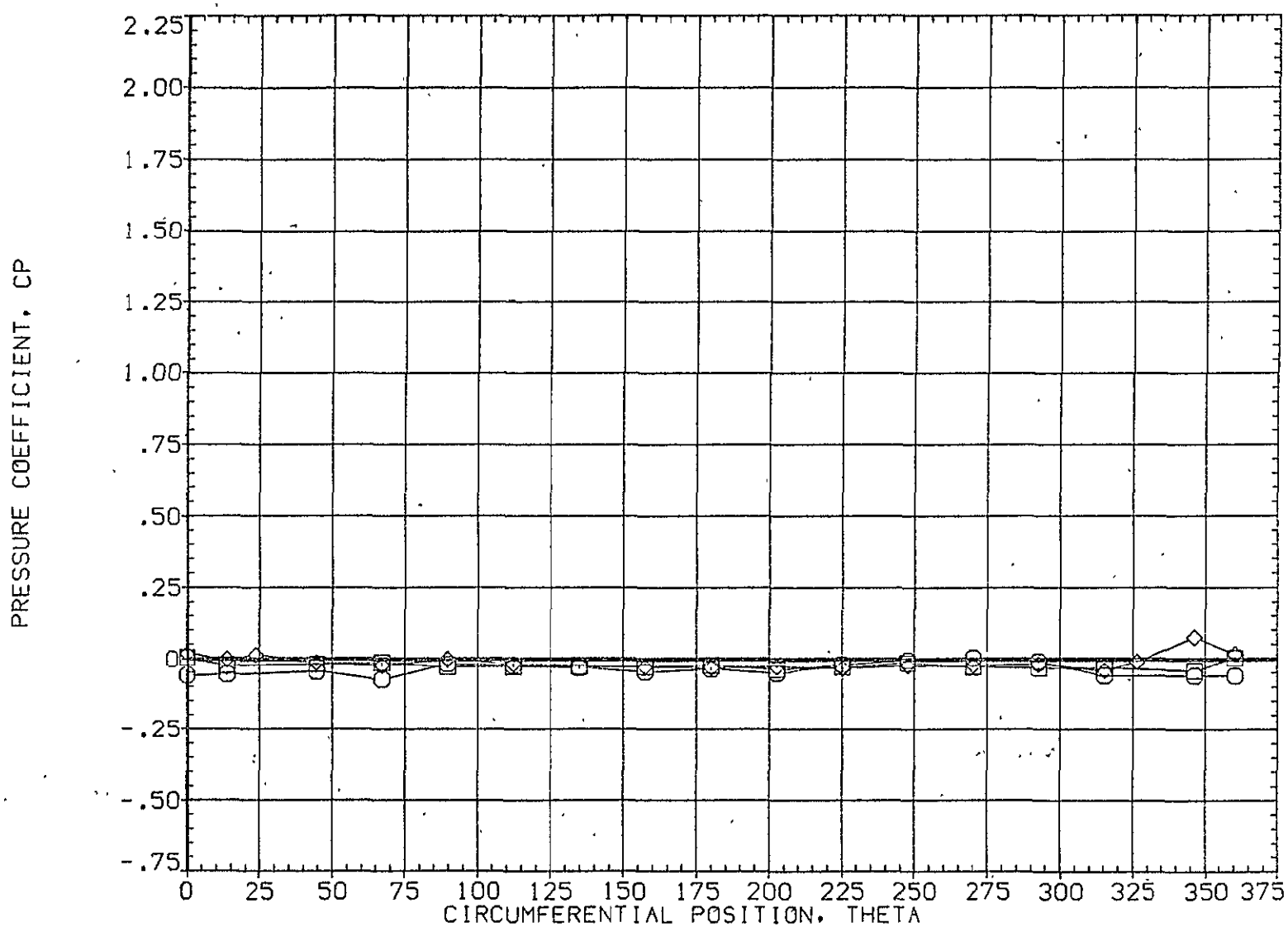

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.350	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

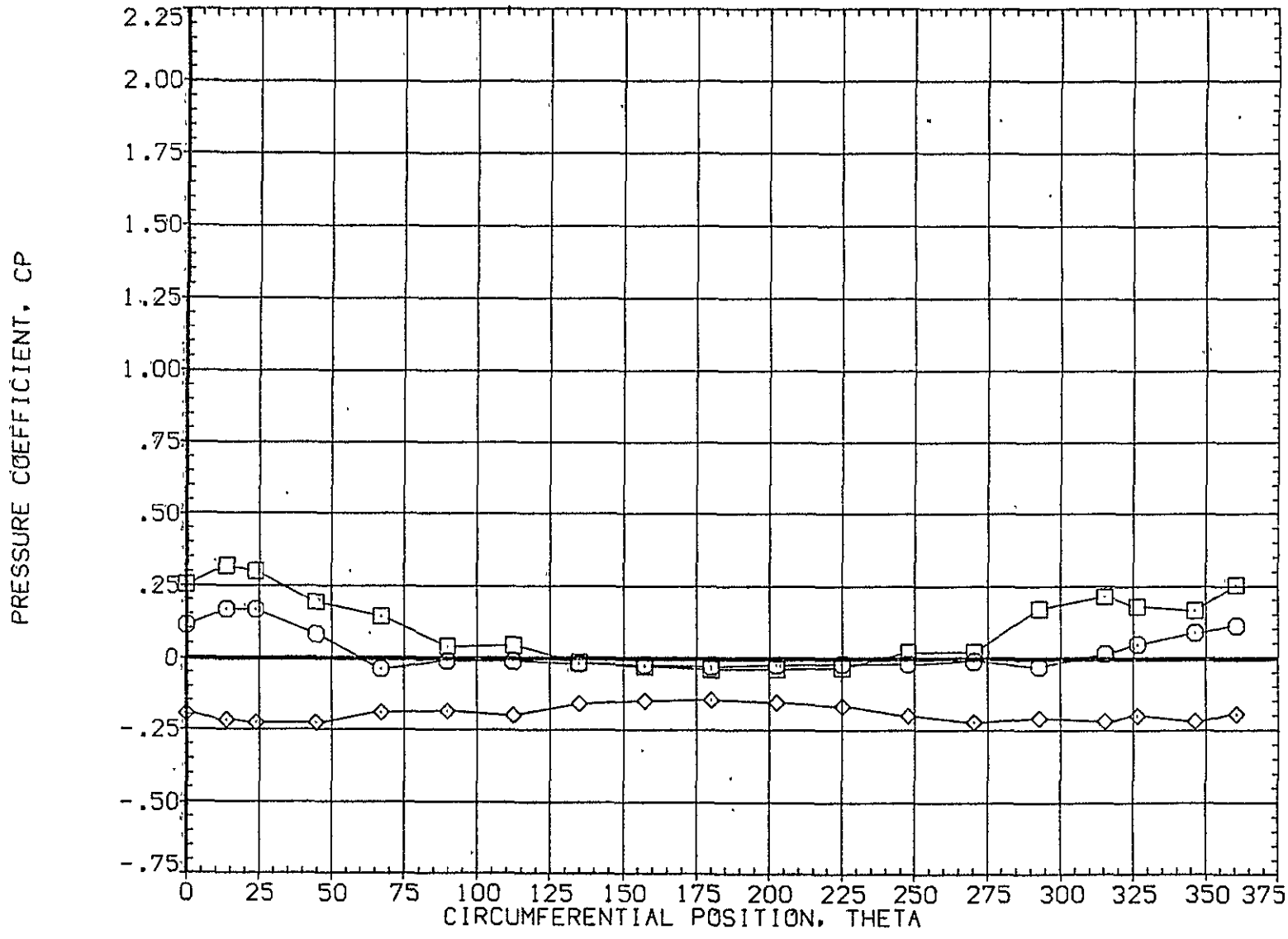

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

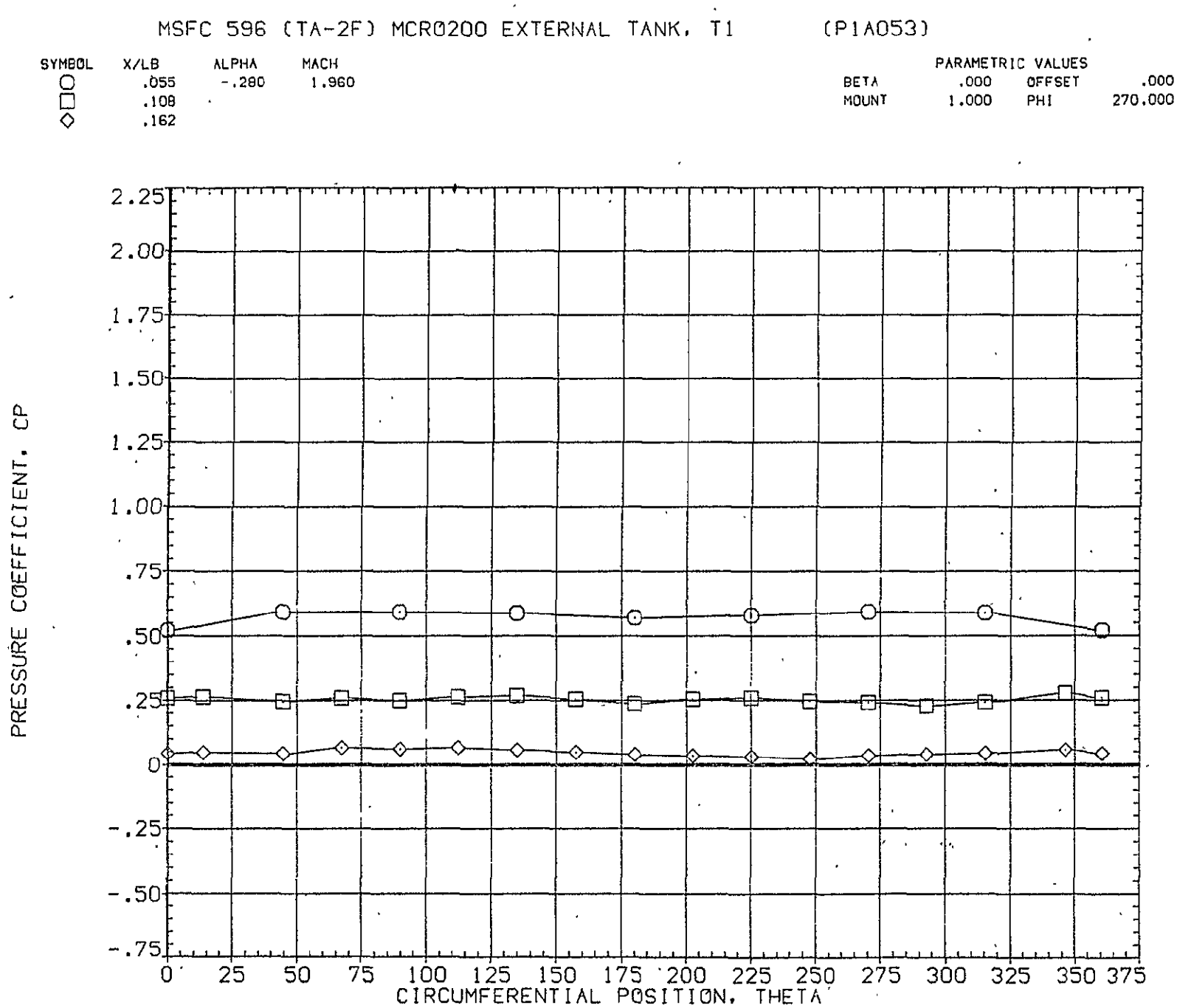

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

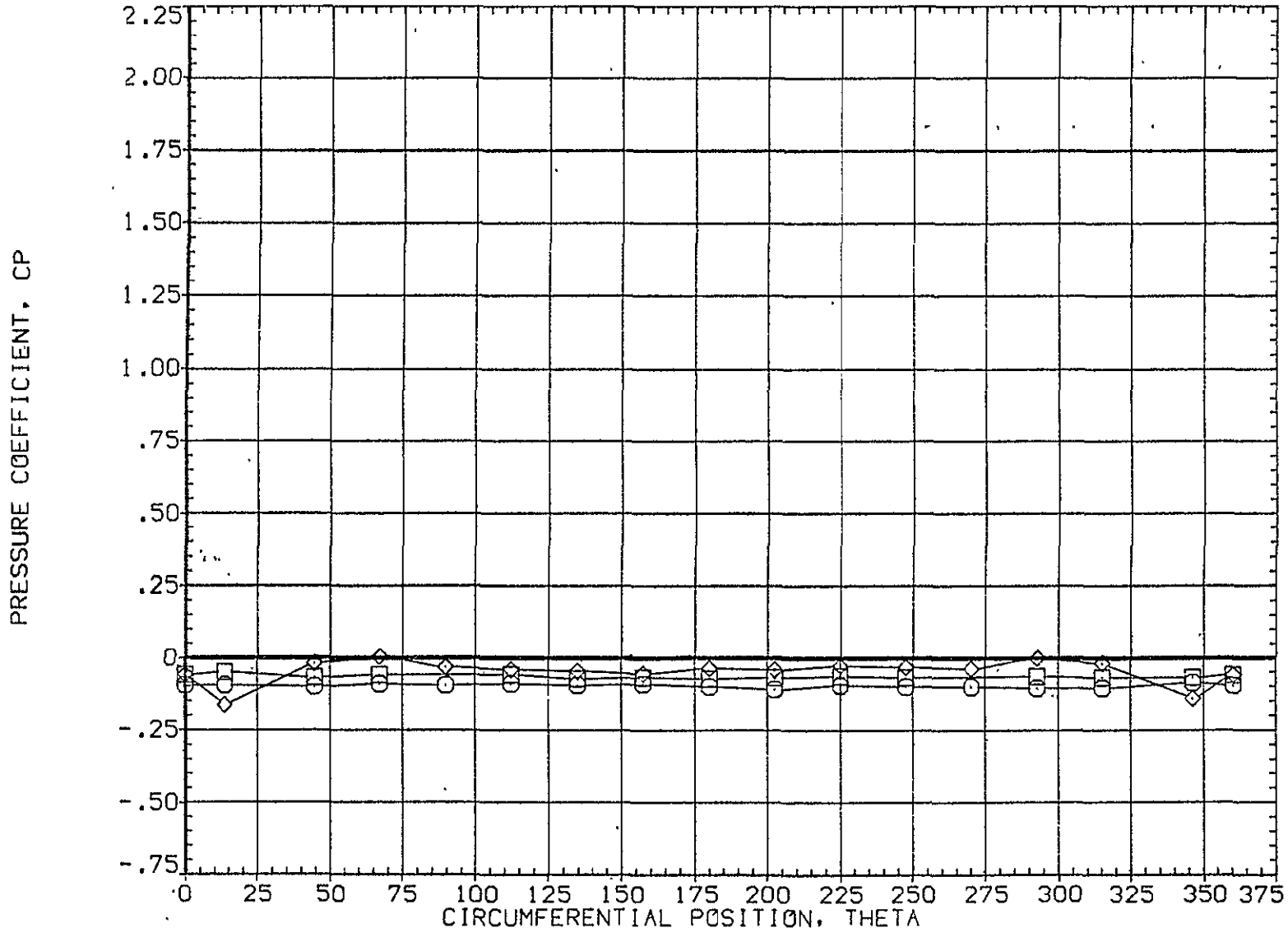

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

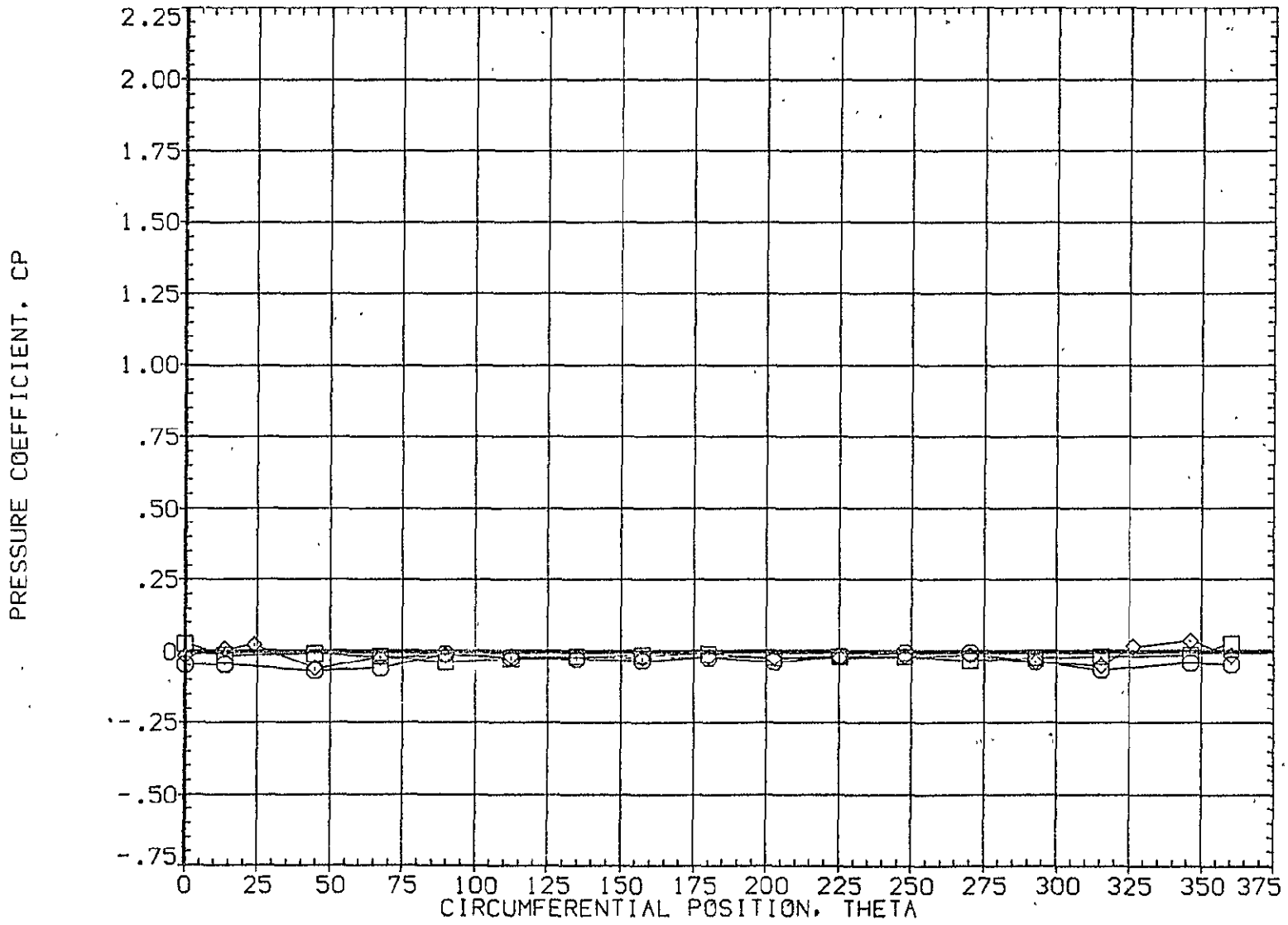

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

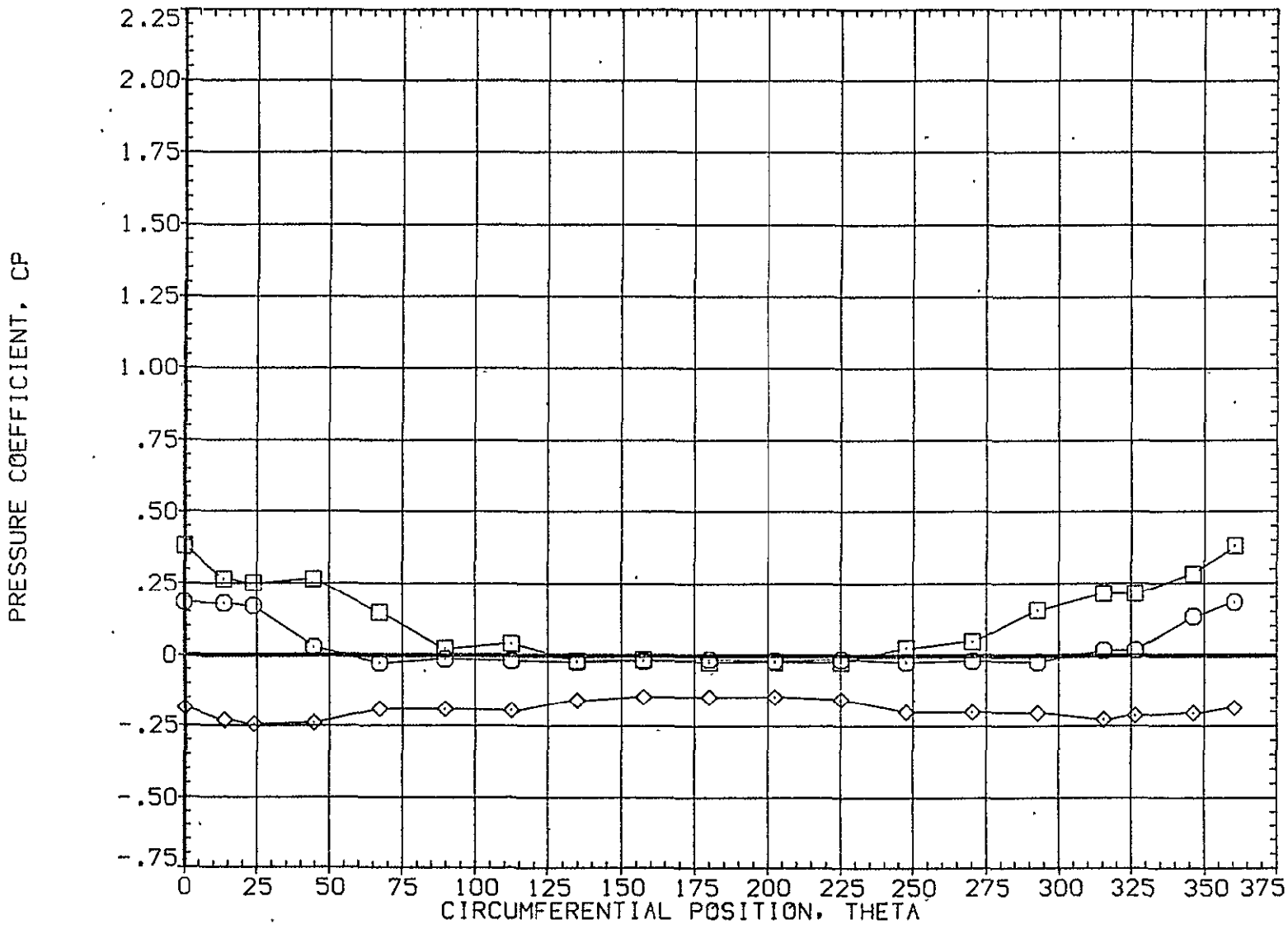

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

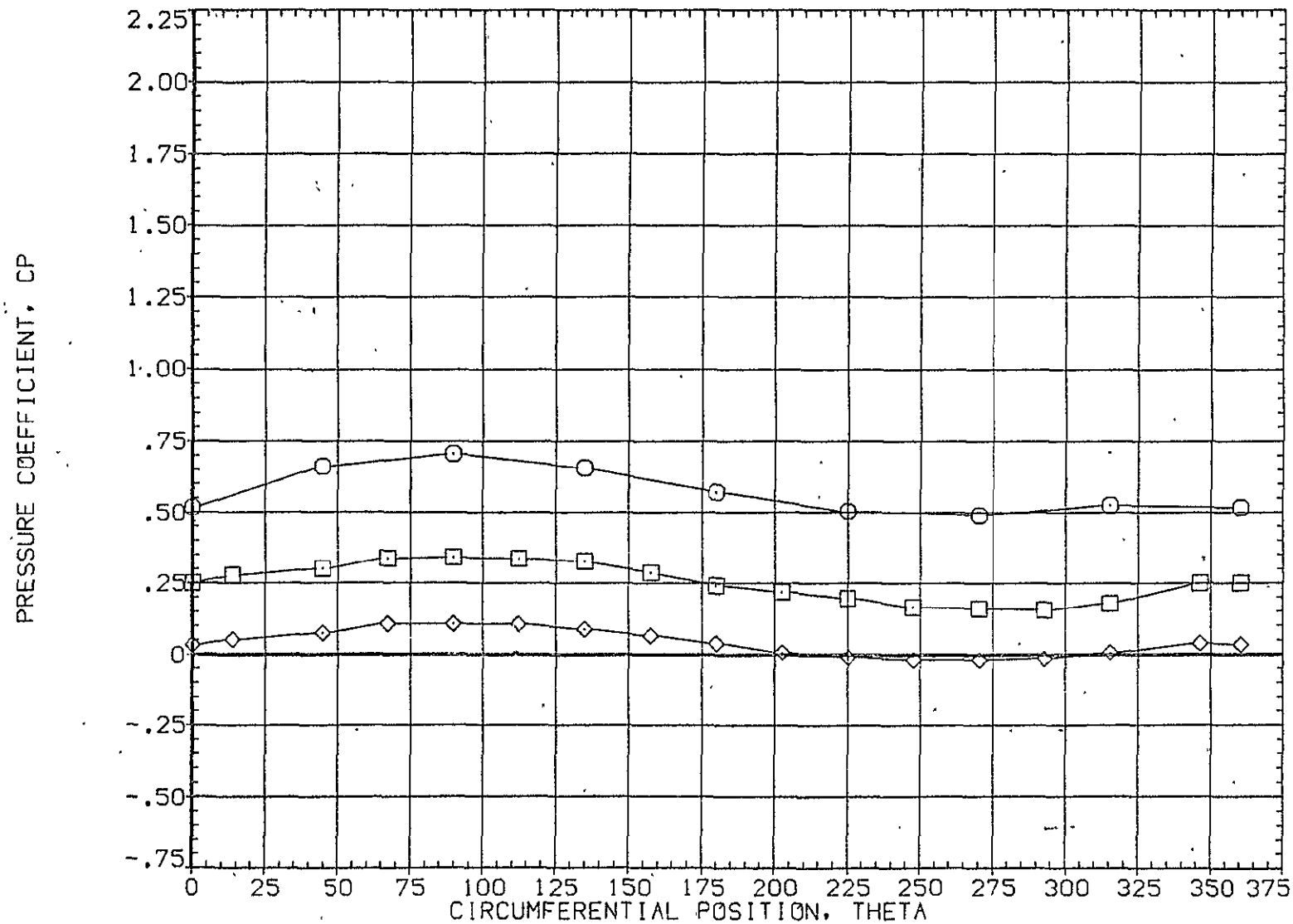

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

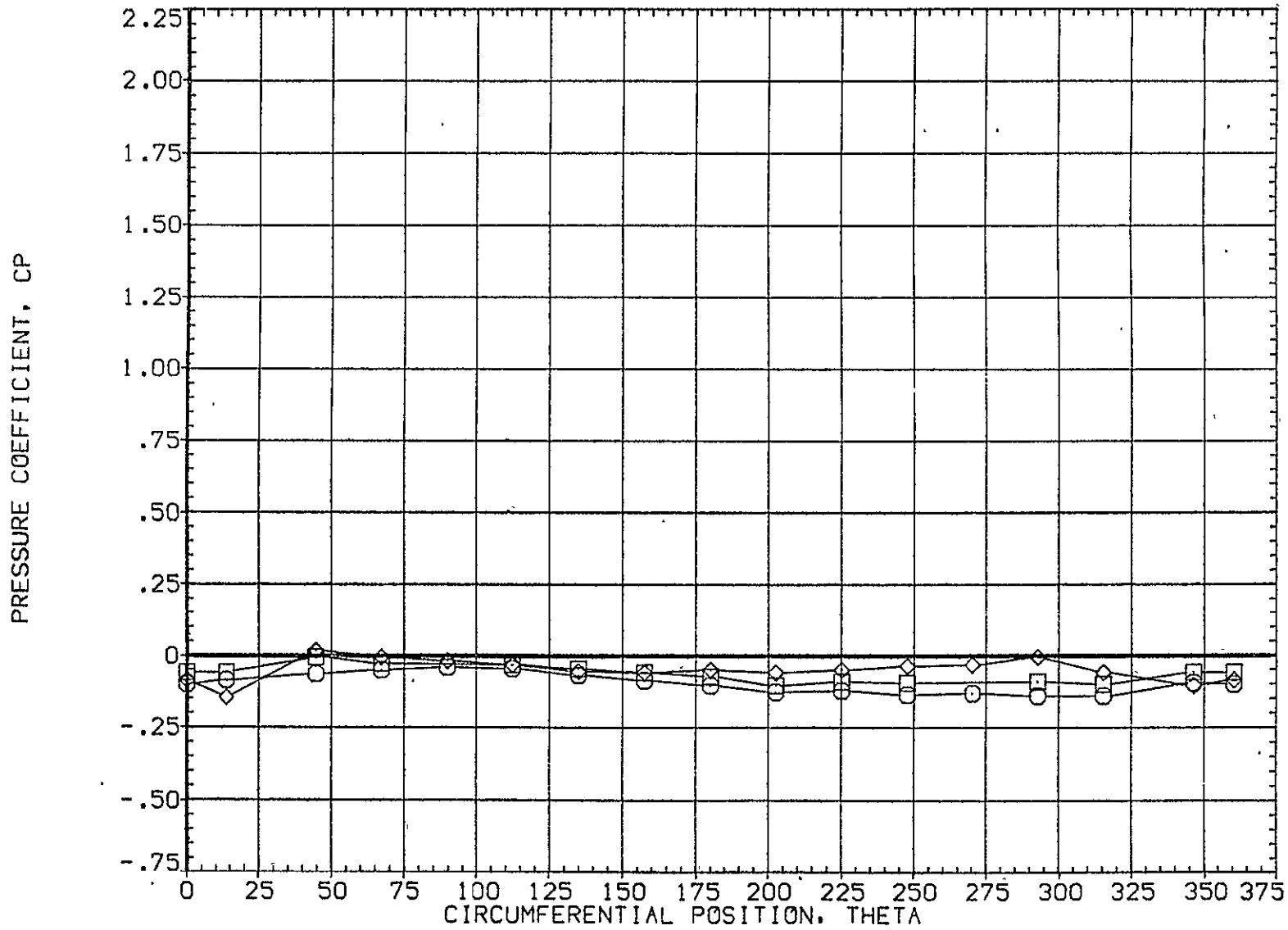

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

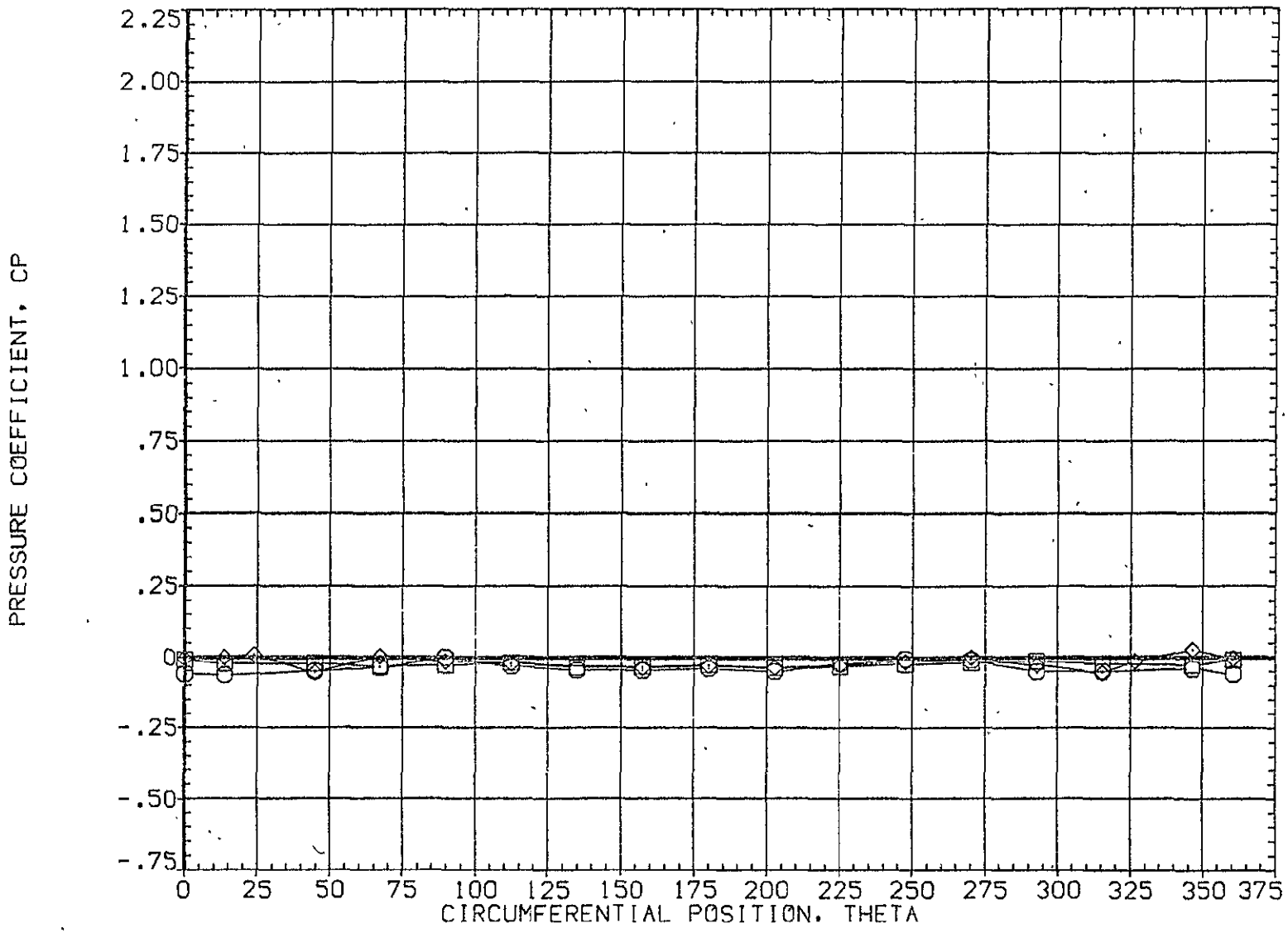

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

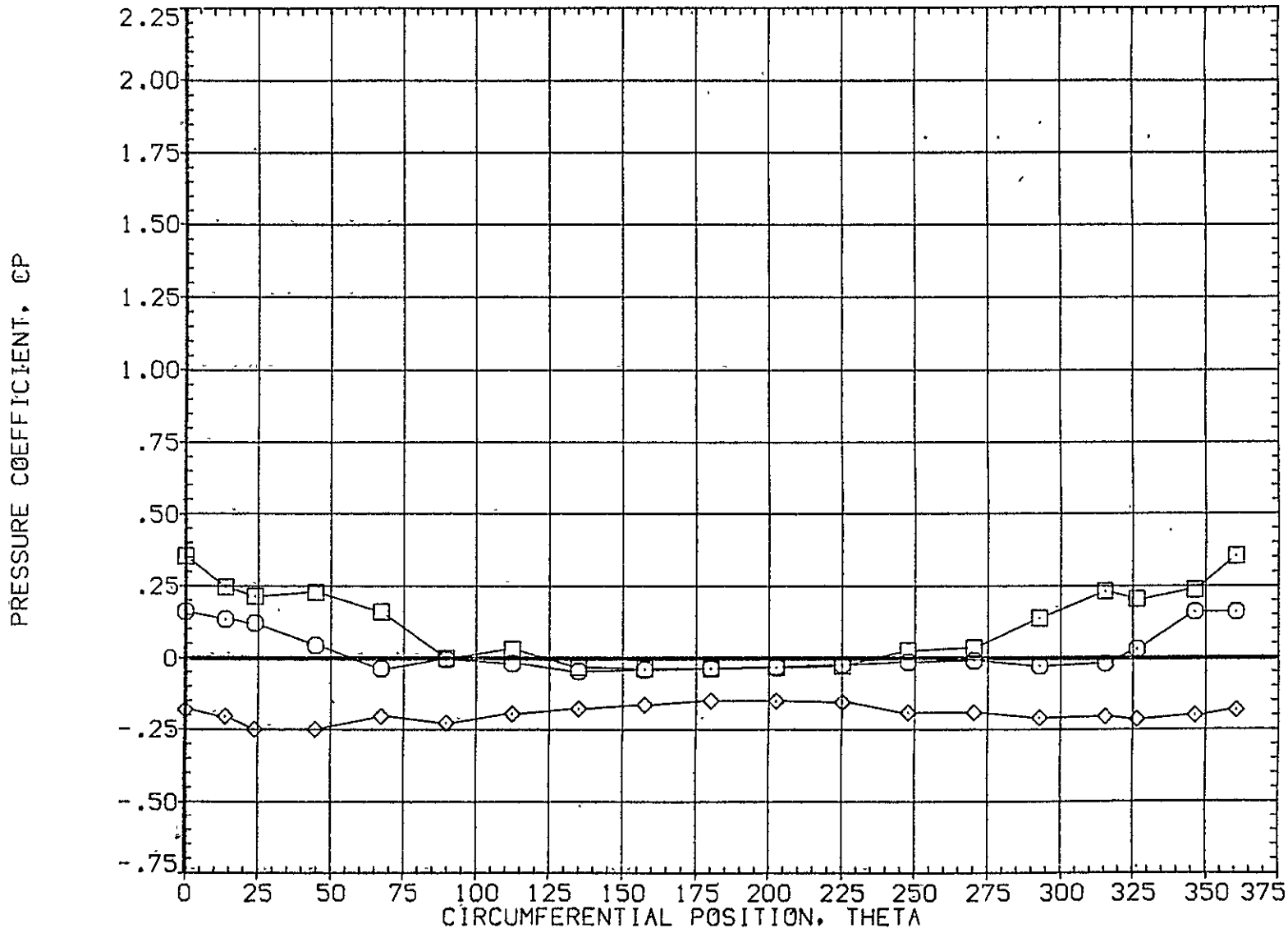

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.860	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

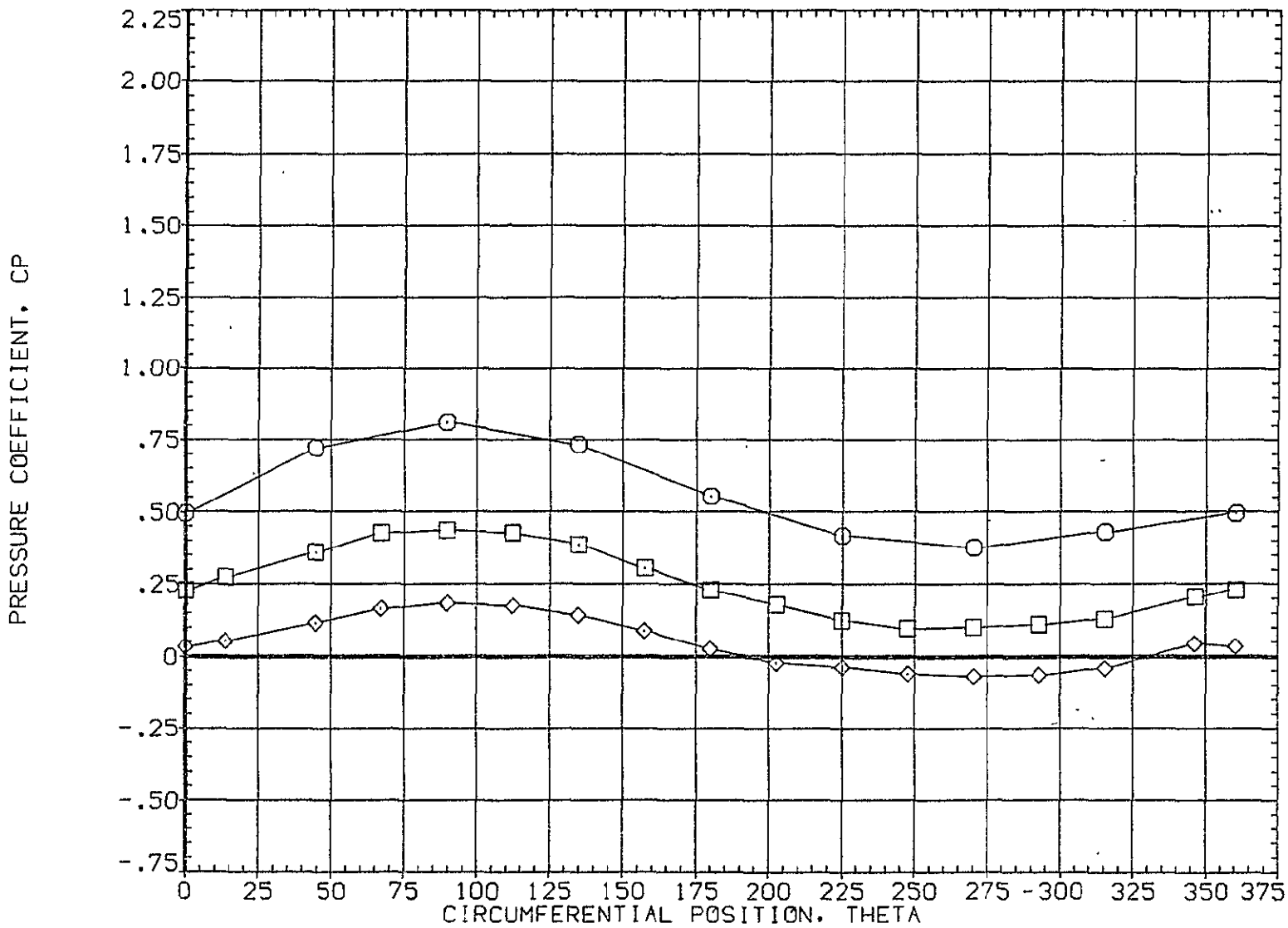

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.860	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

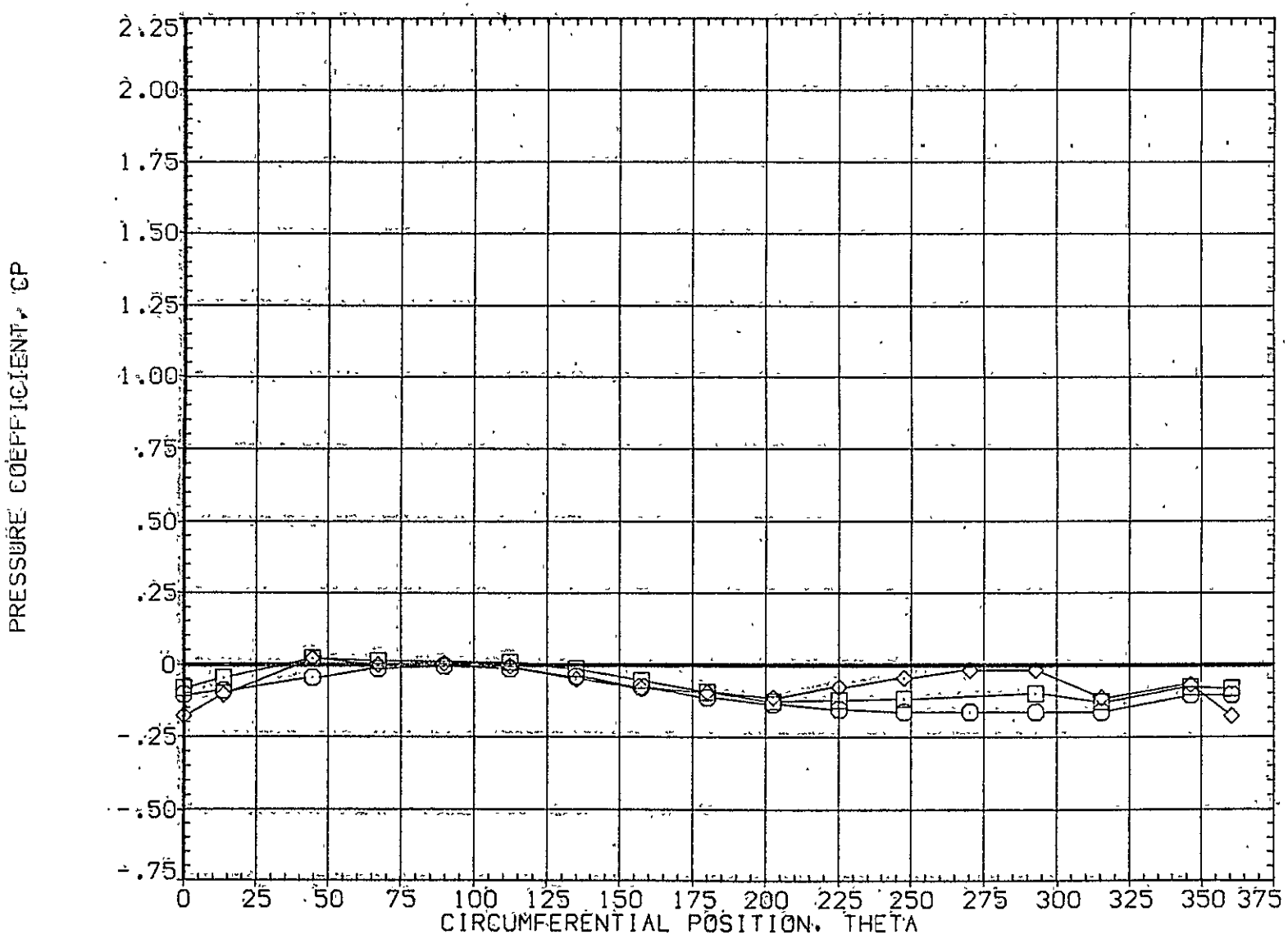

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.860	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

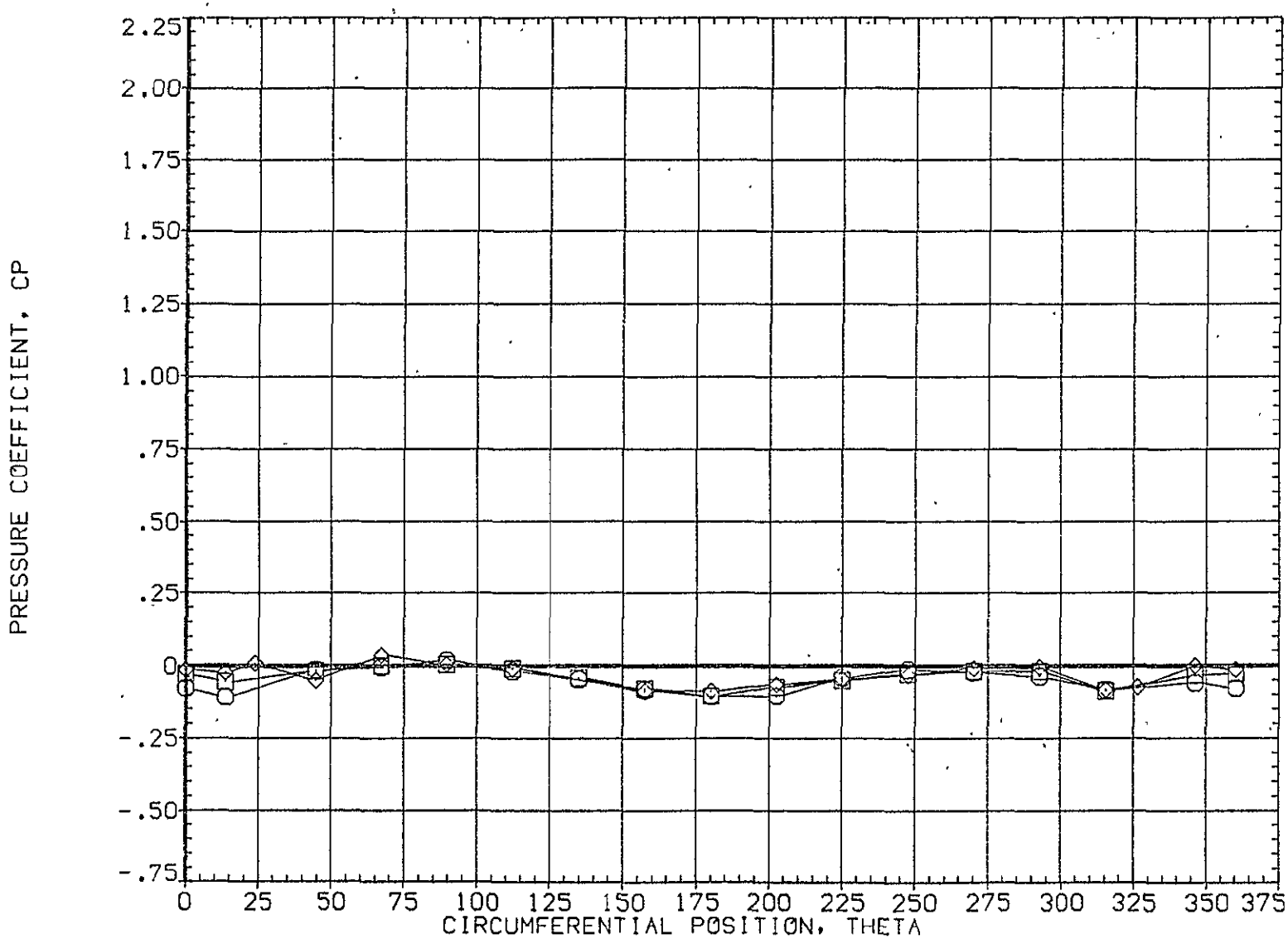

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.860	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

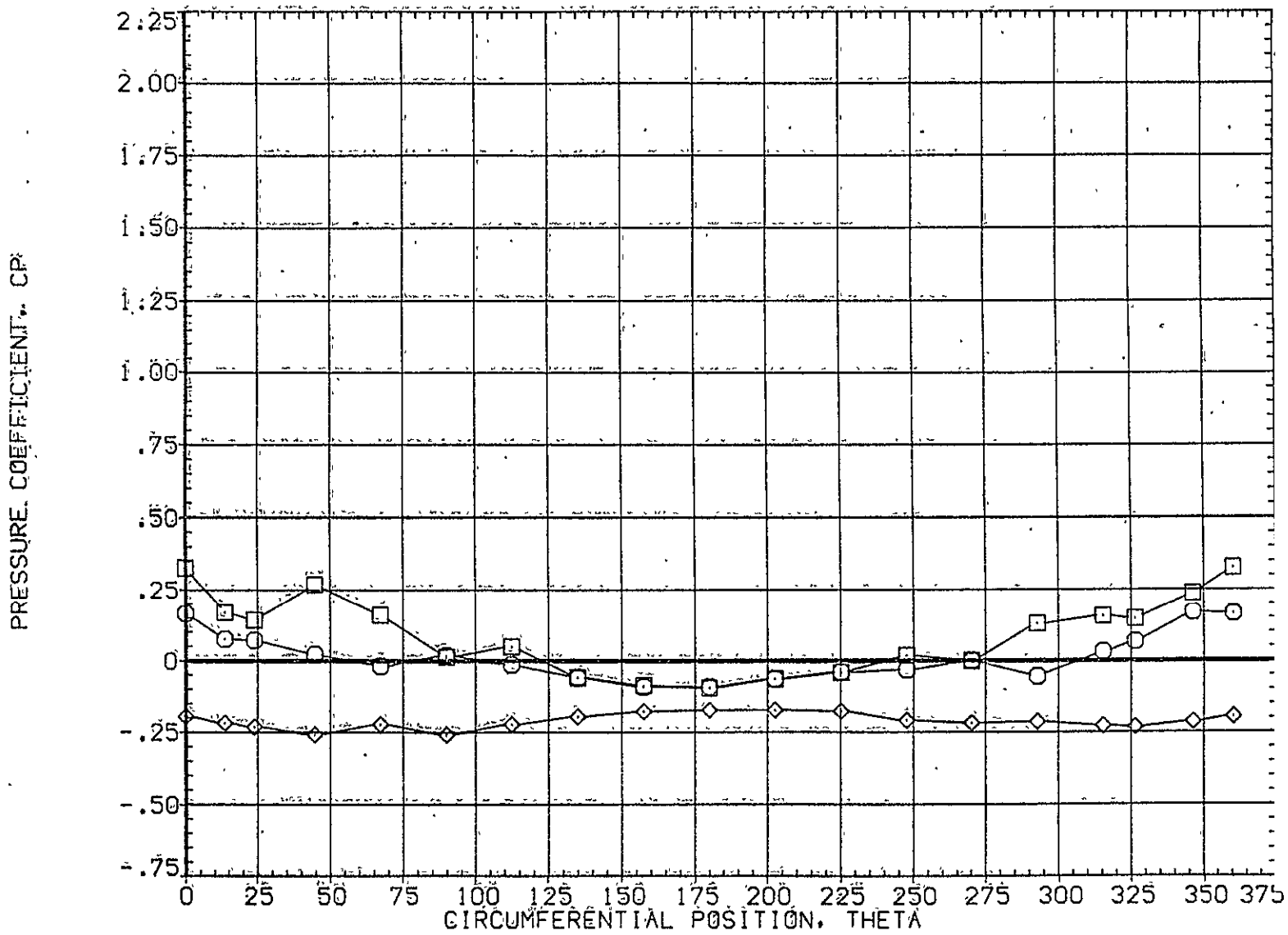

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.570	1.970
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

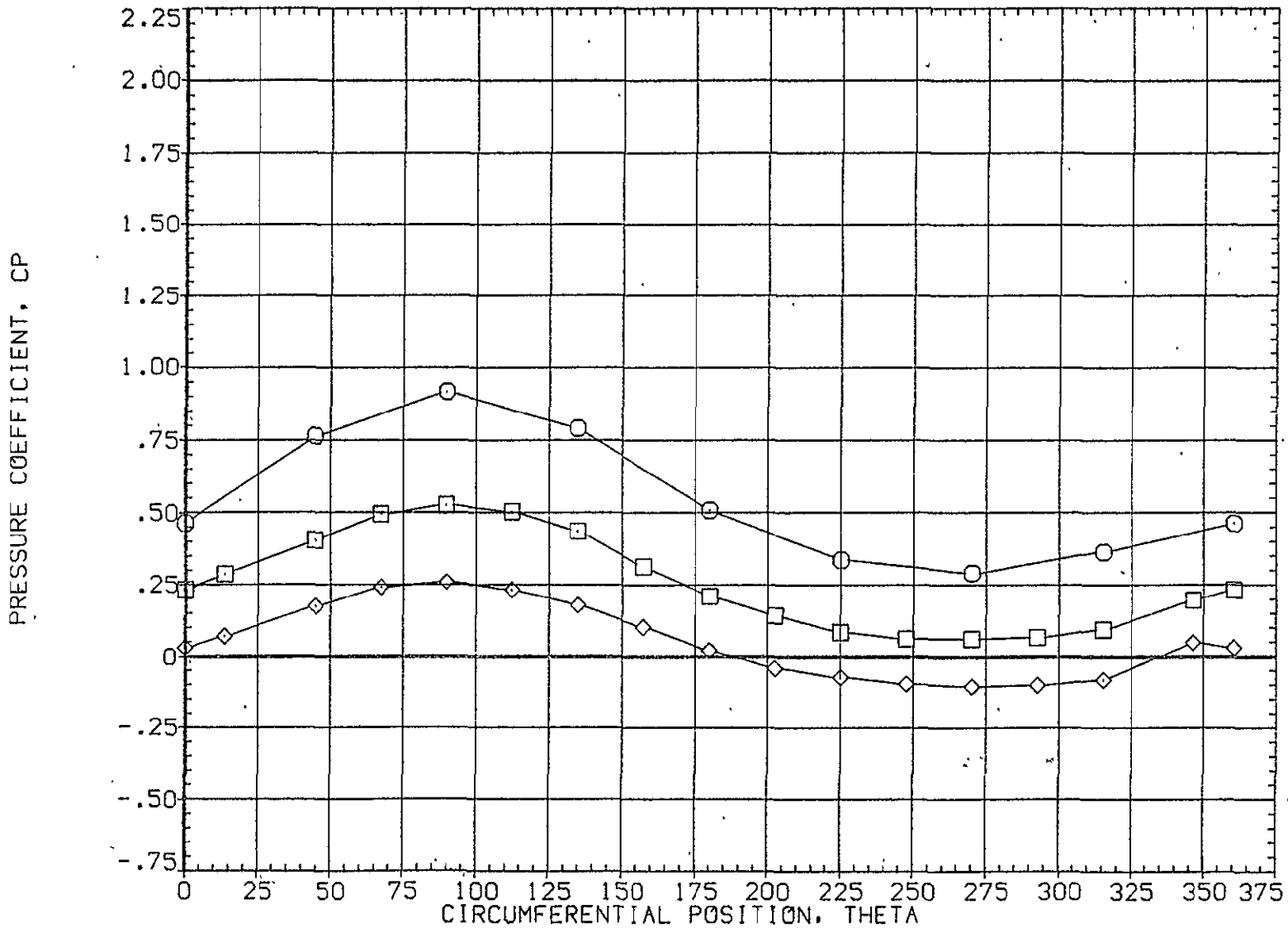

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.570	1.970
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

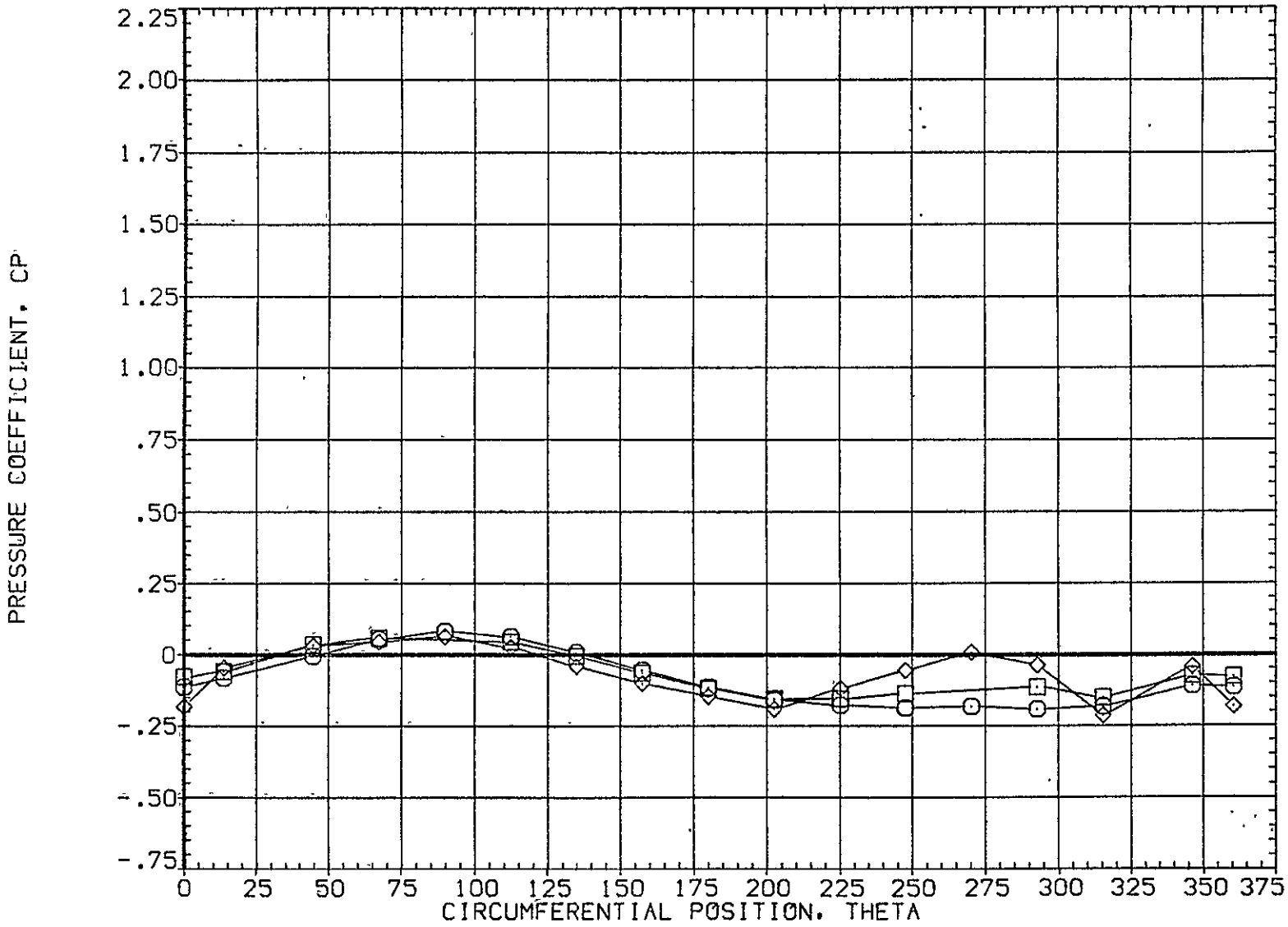

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.570	1.970
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

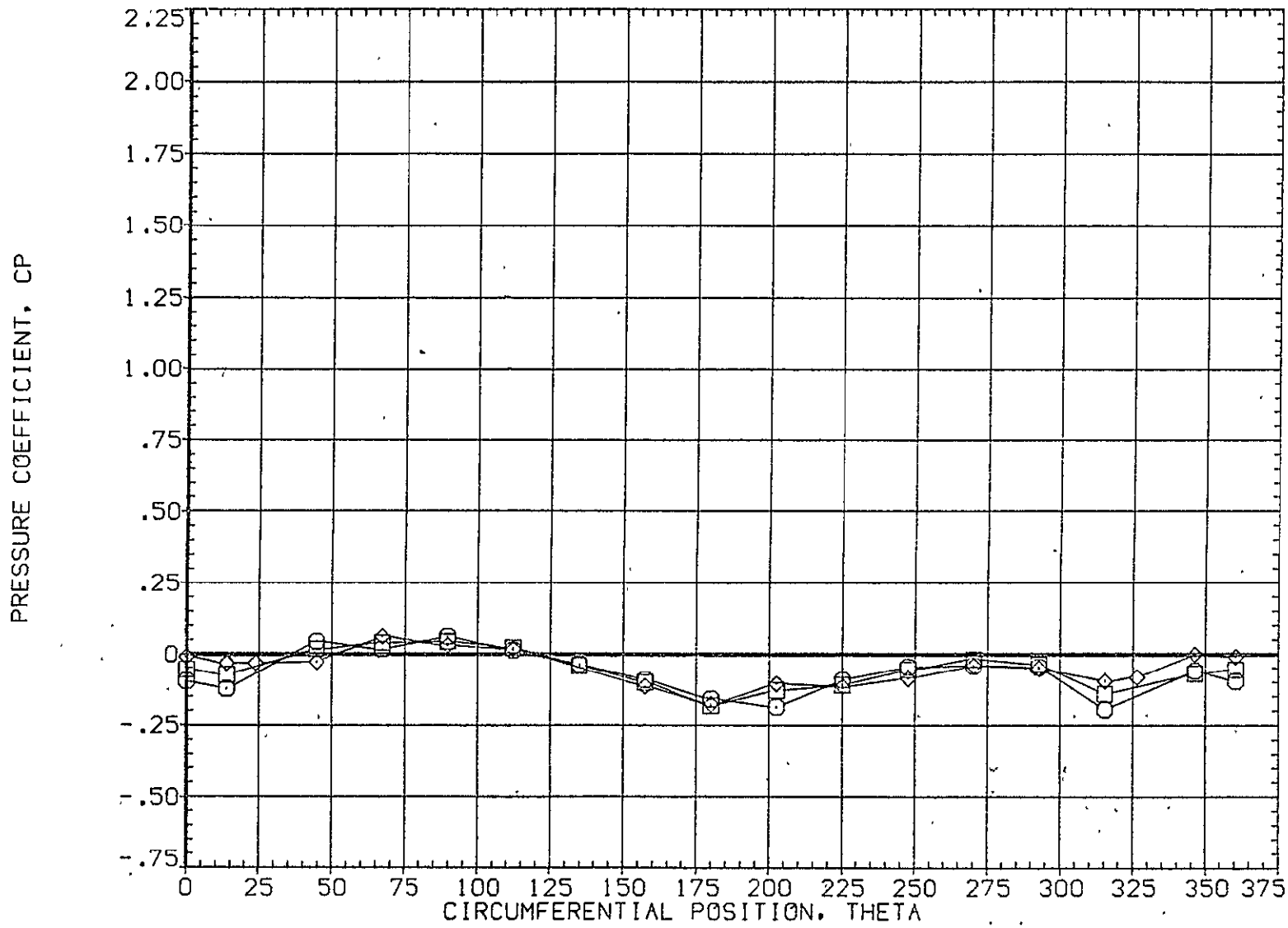

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.570	1.970
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

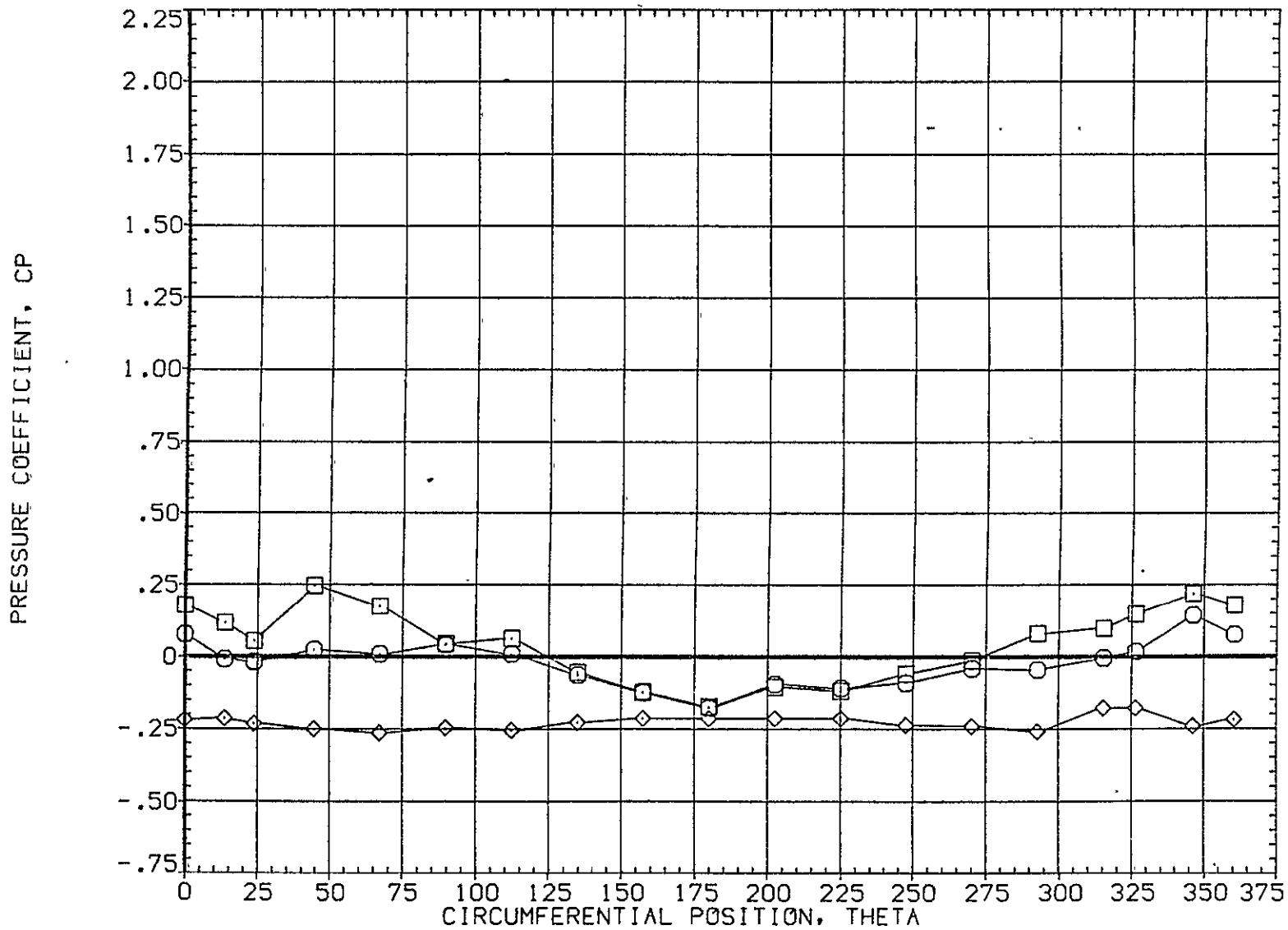

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.640	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

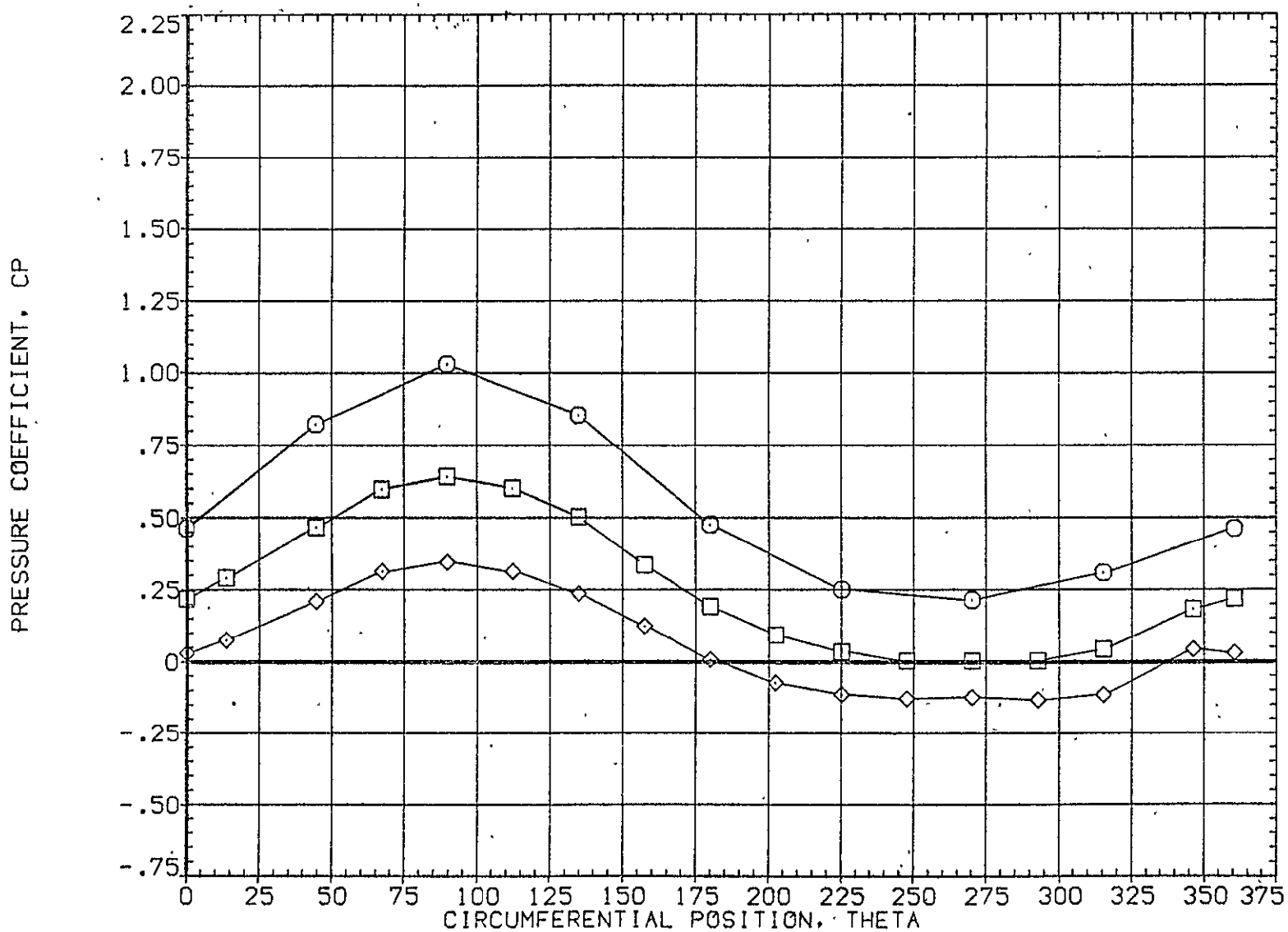

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.640	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

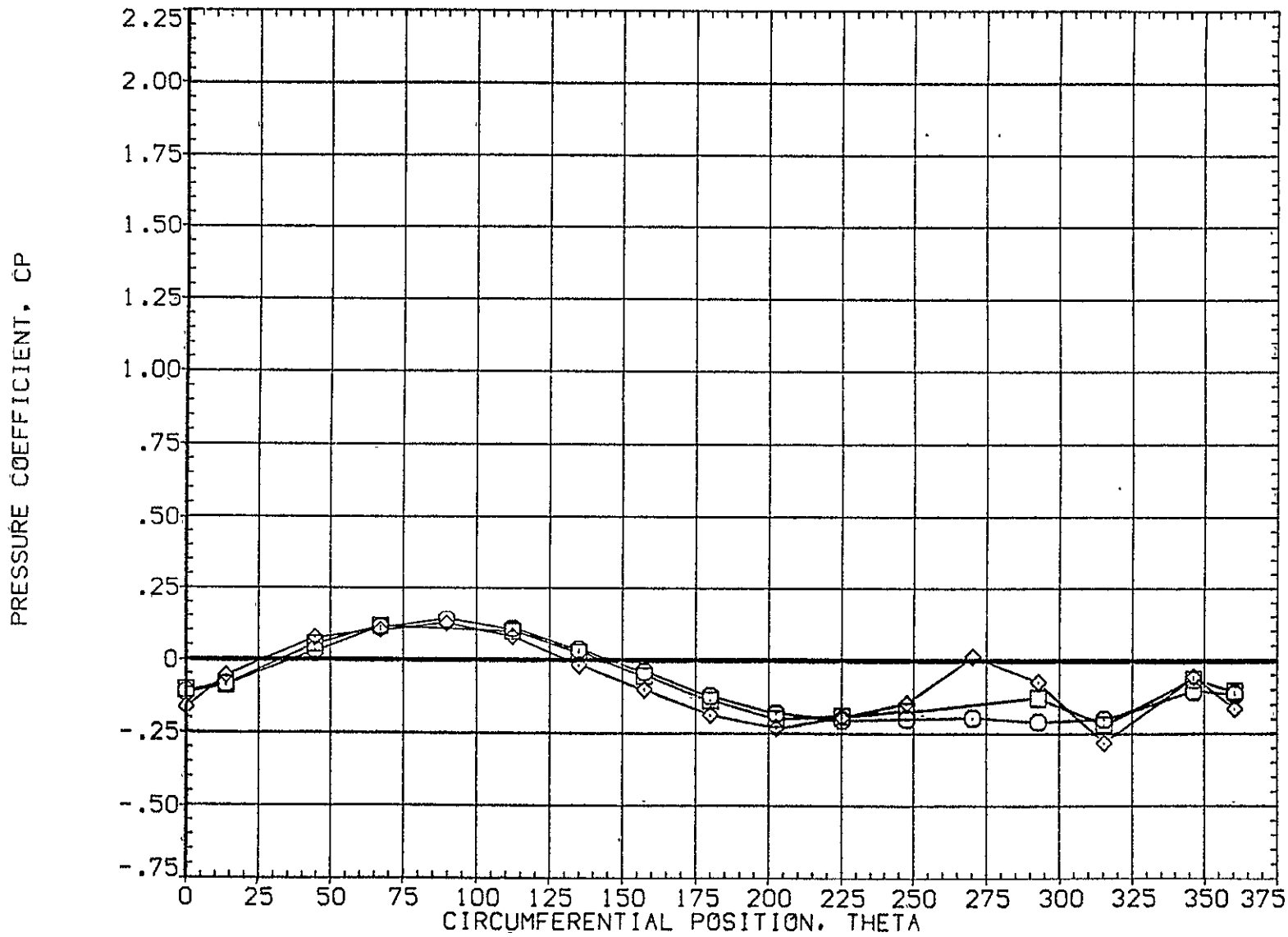

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.640	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

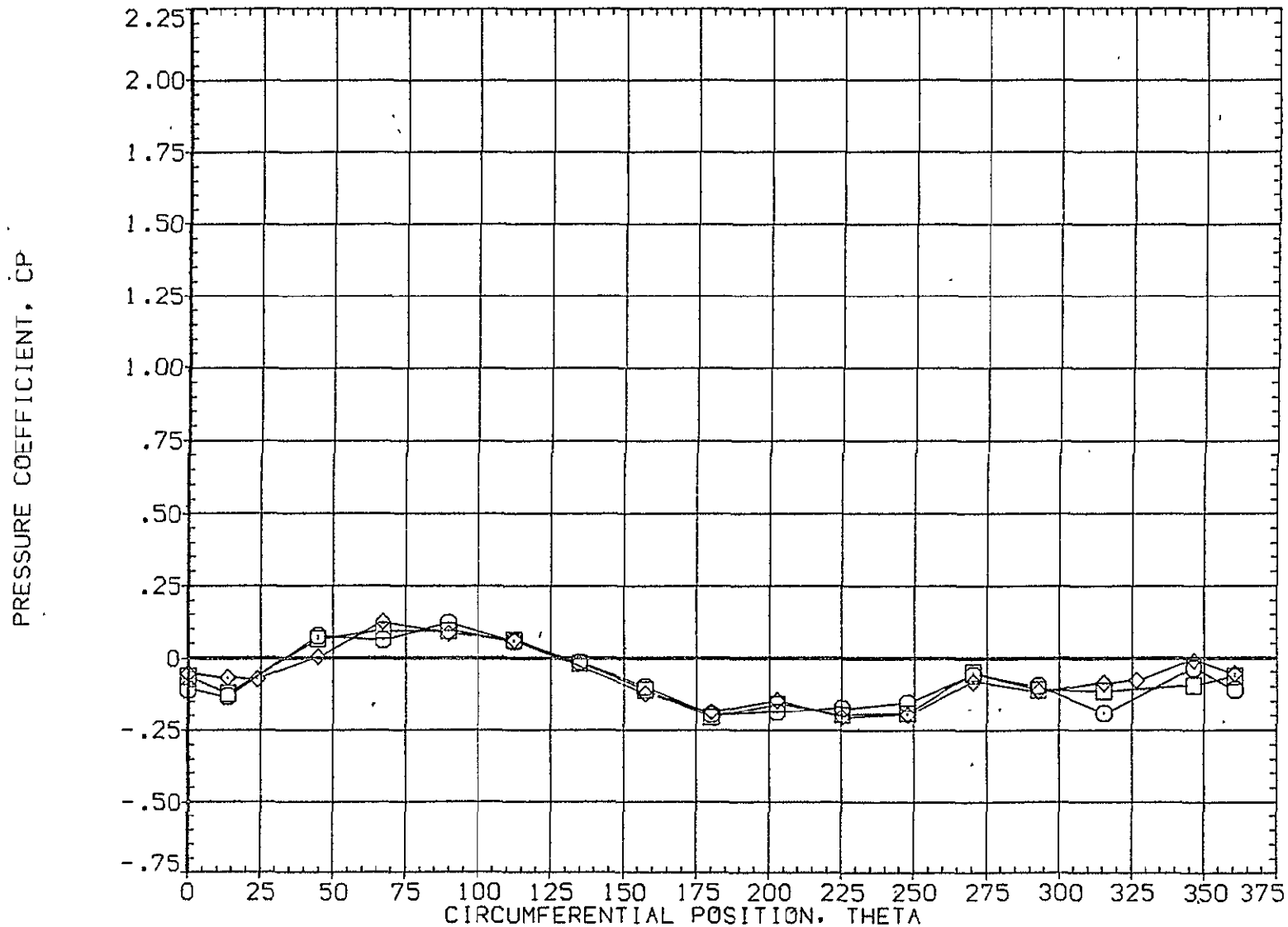

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.640	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

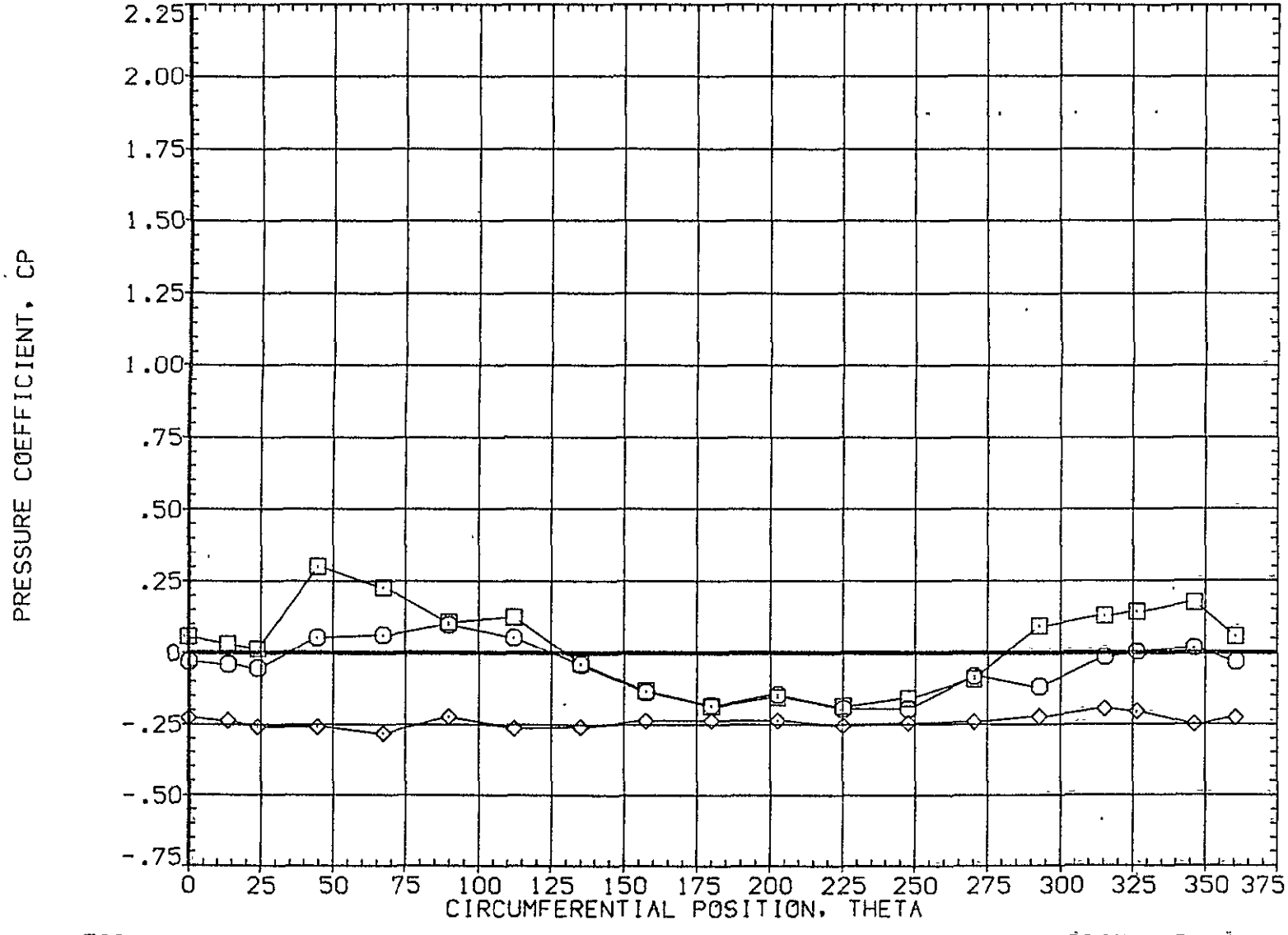

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.740	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

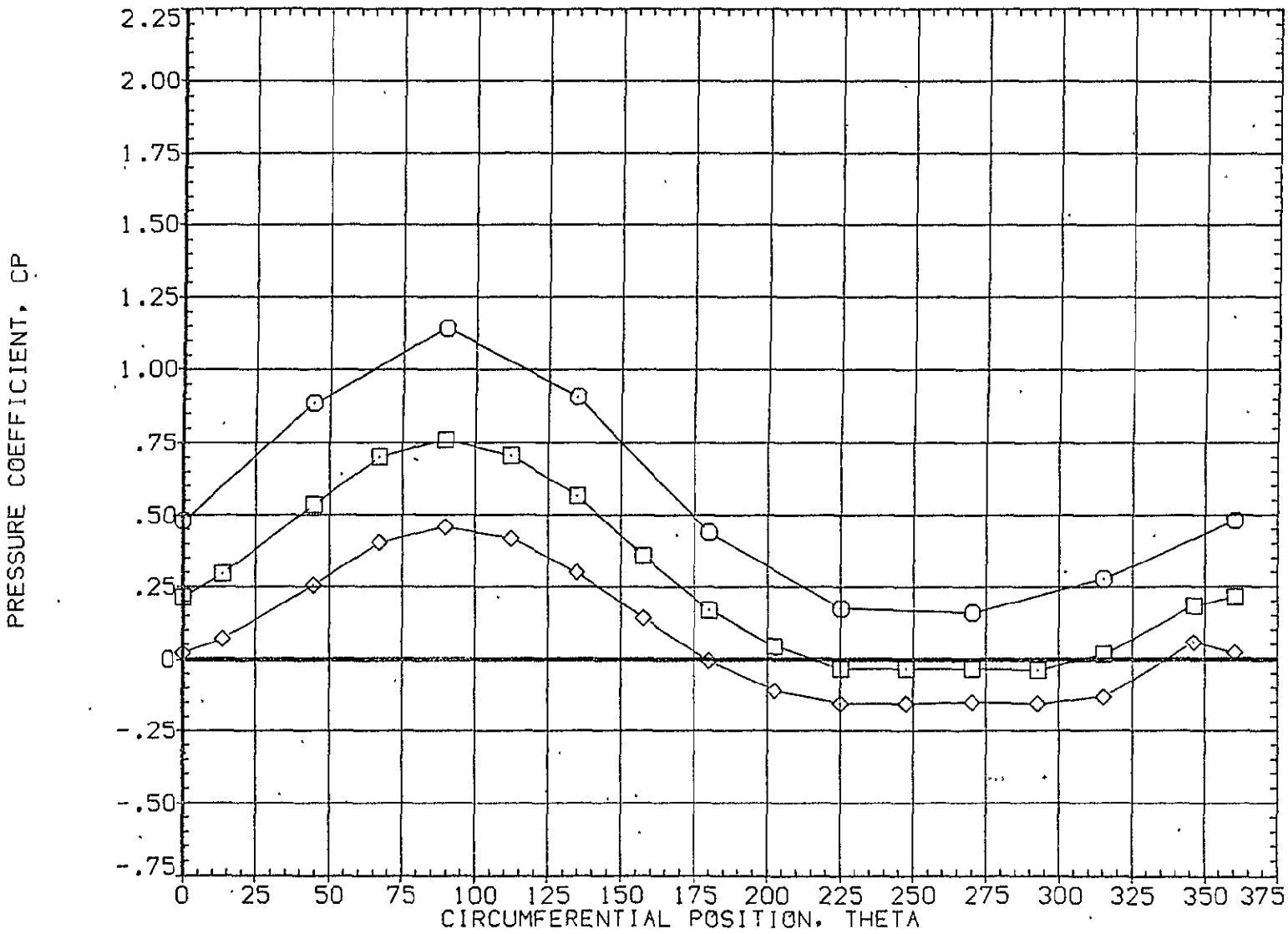

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU58)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.740	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

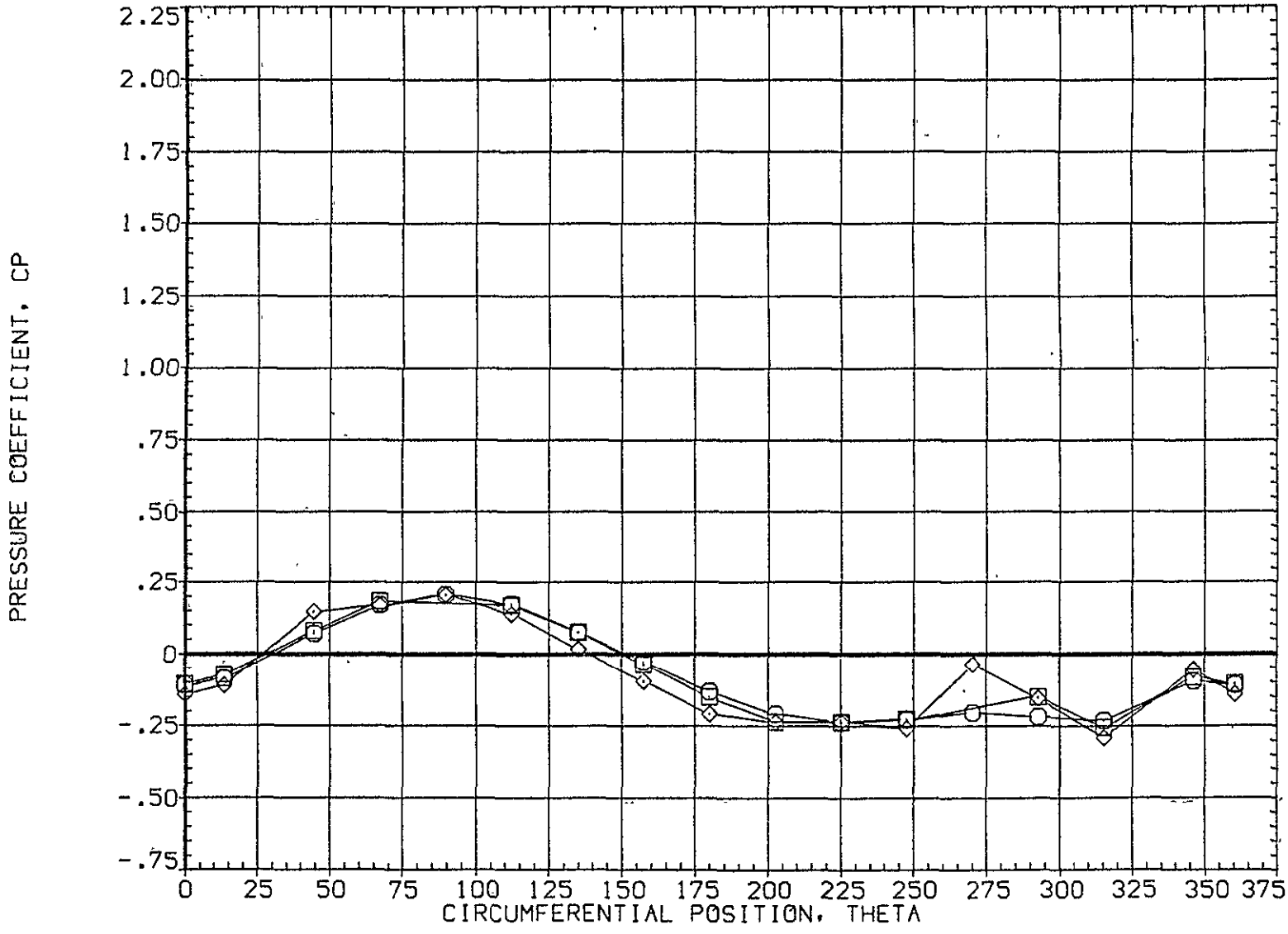

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.740	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

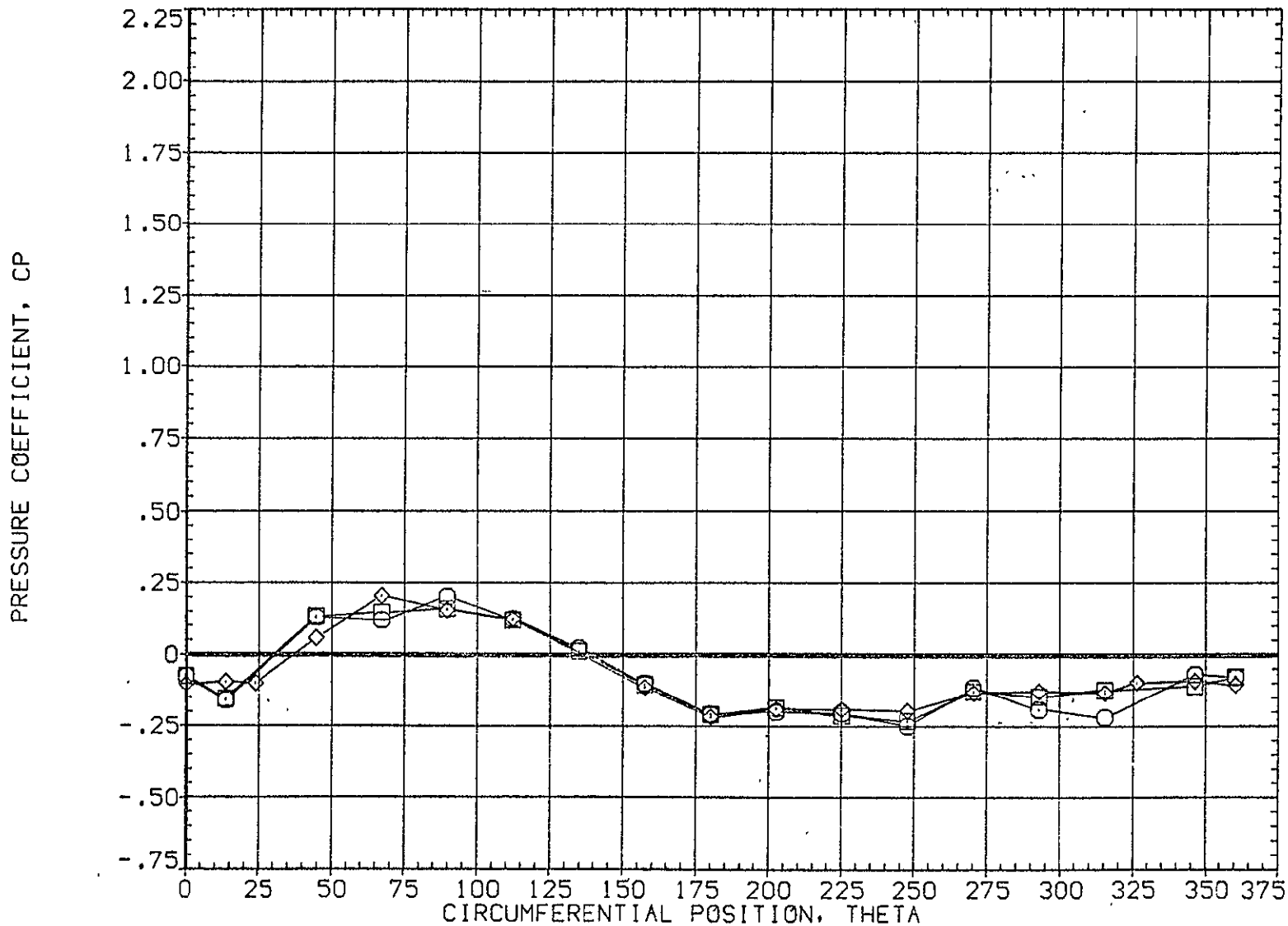

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.740	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

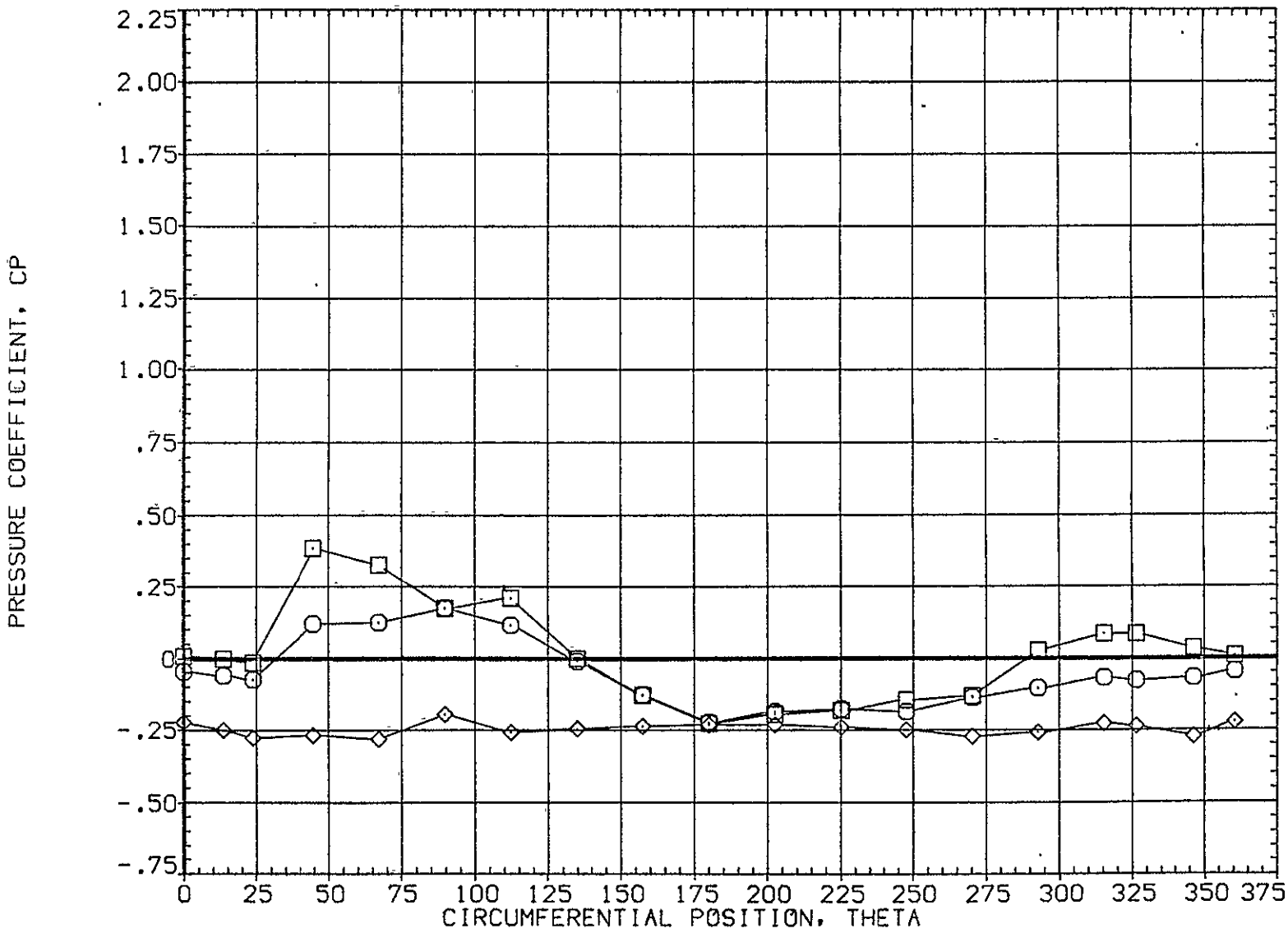

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.850	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

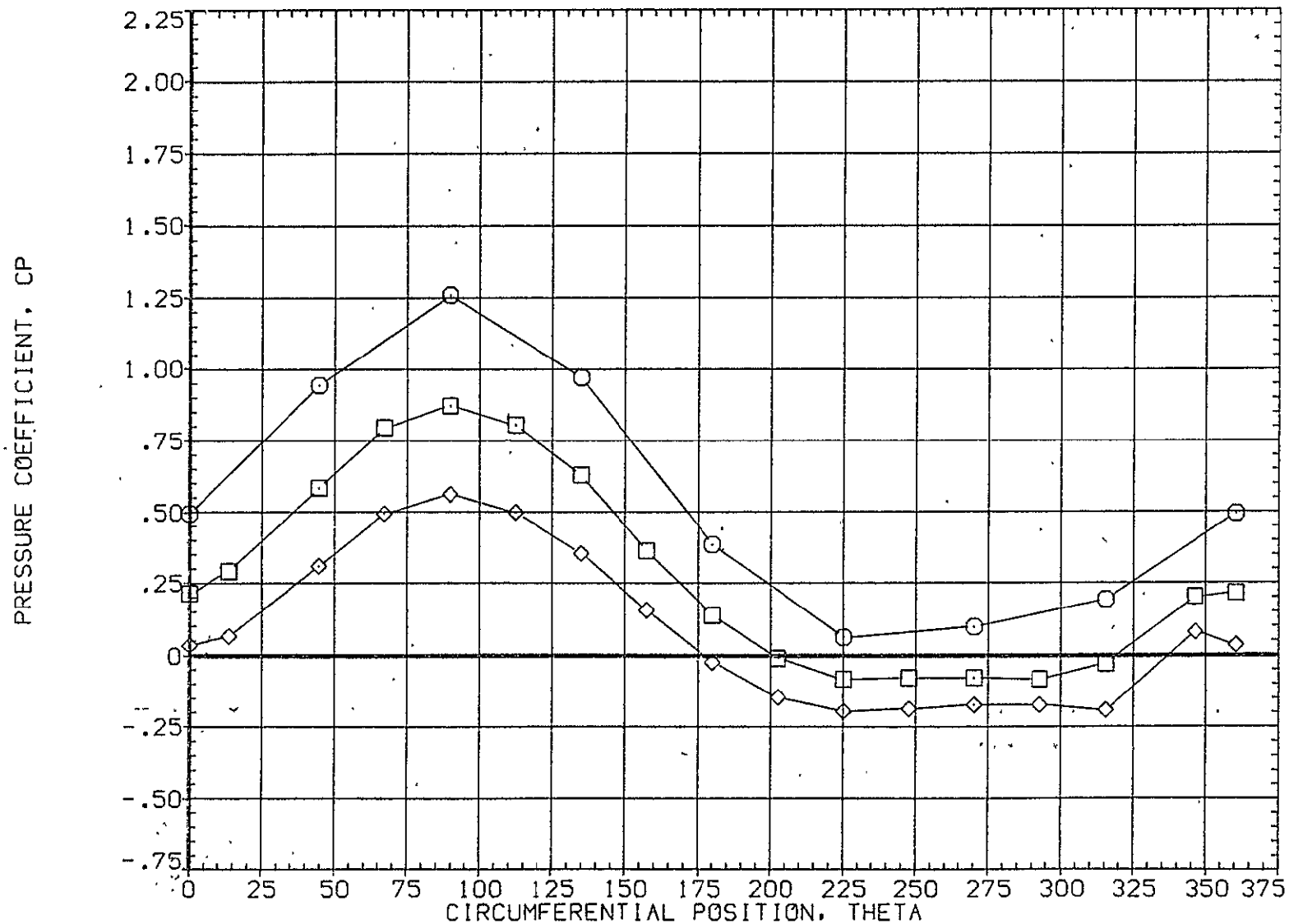

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.850	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

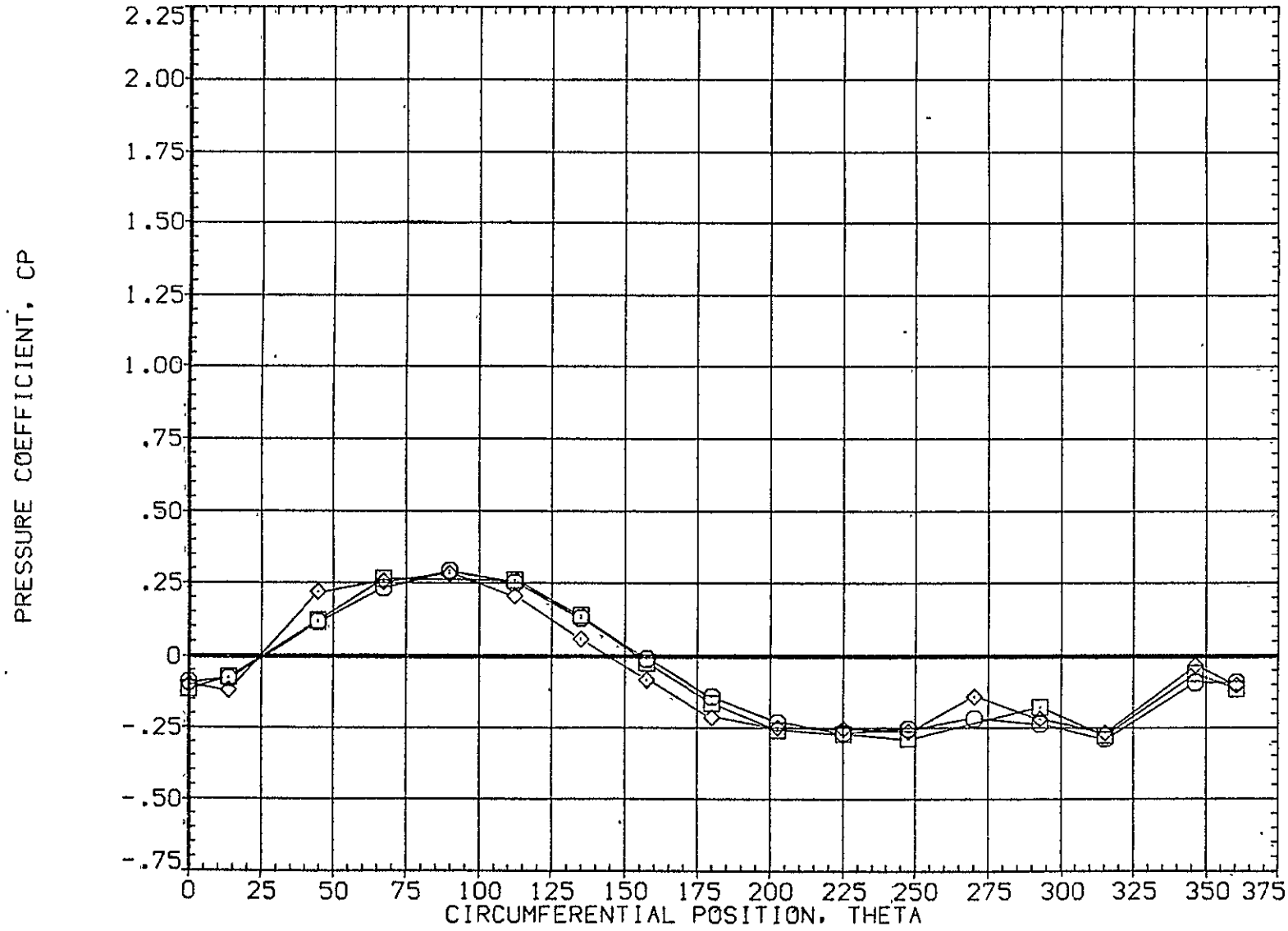

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.850	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

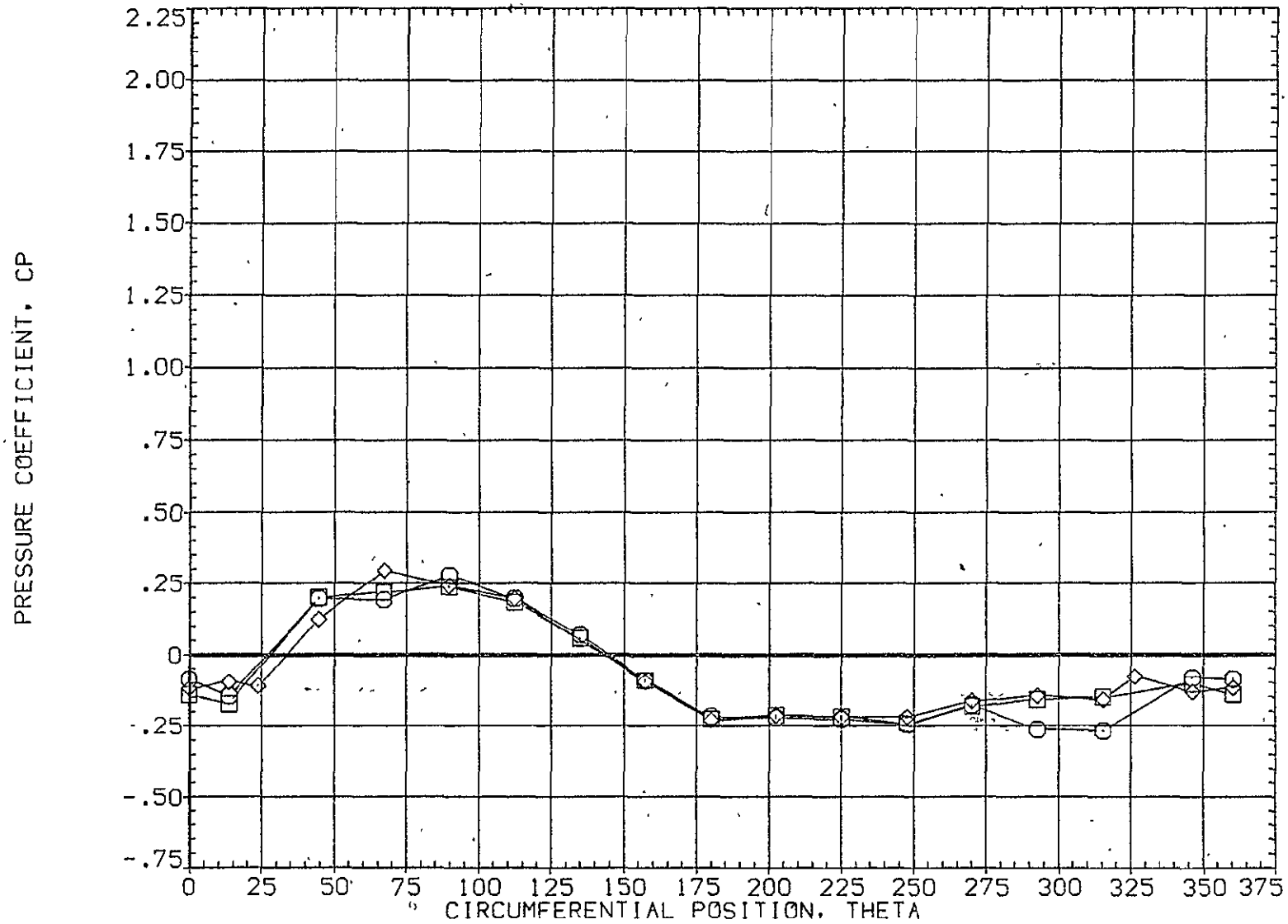

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.850	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

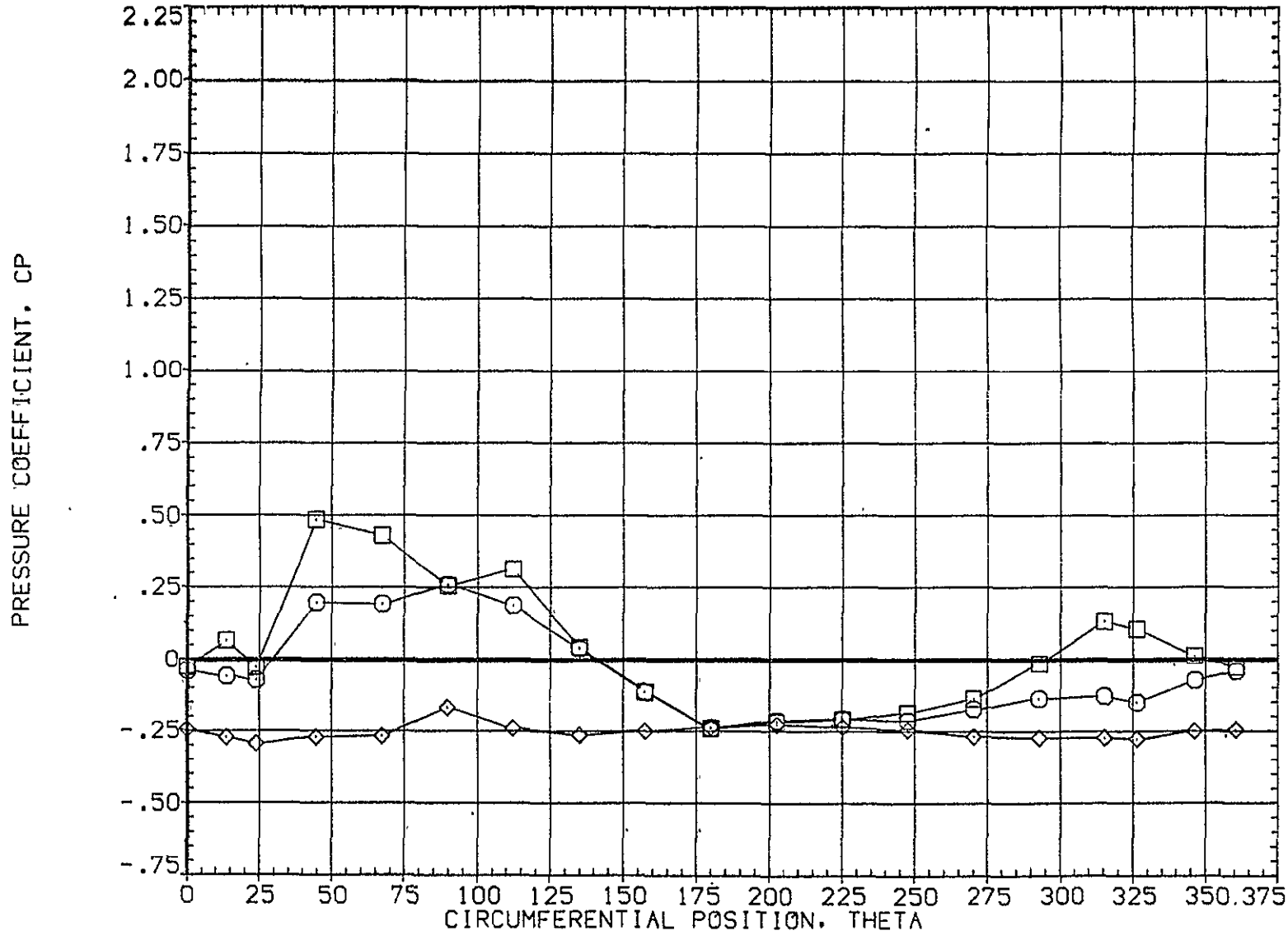

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.930	1.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

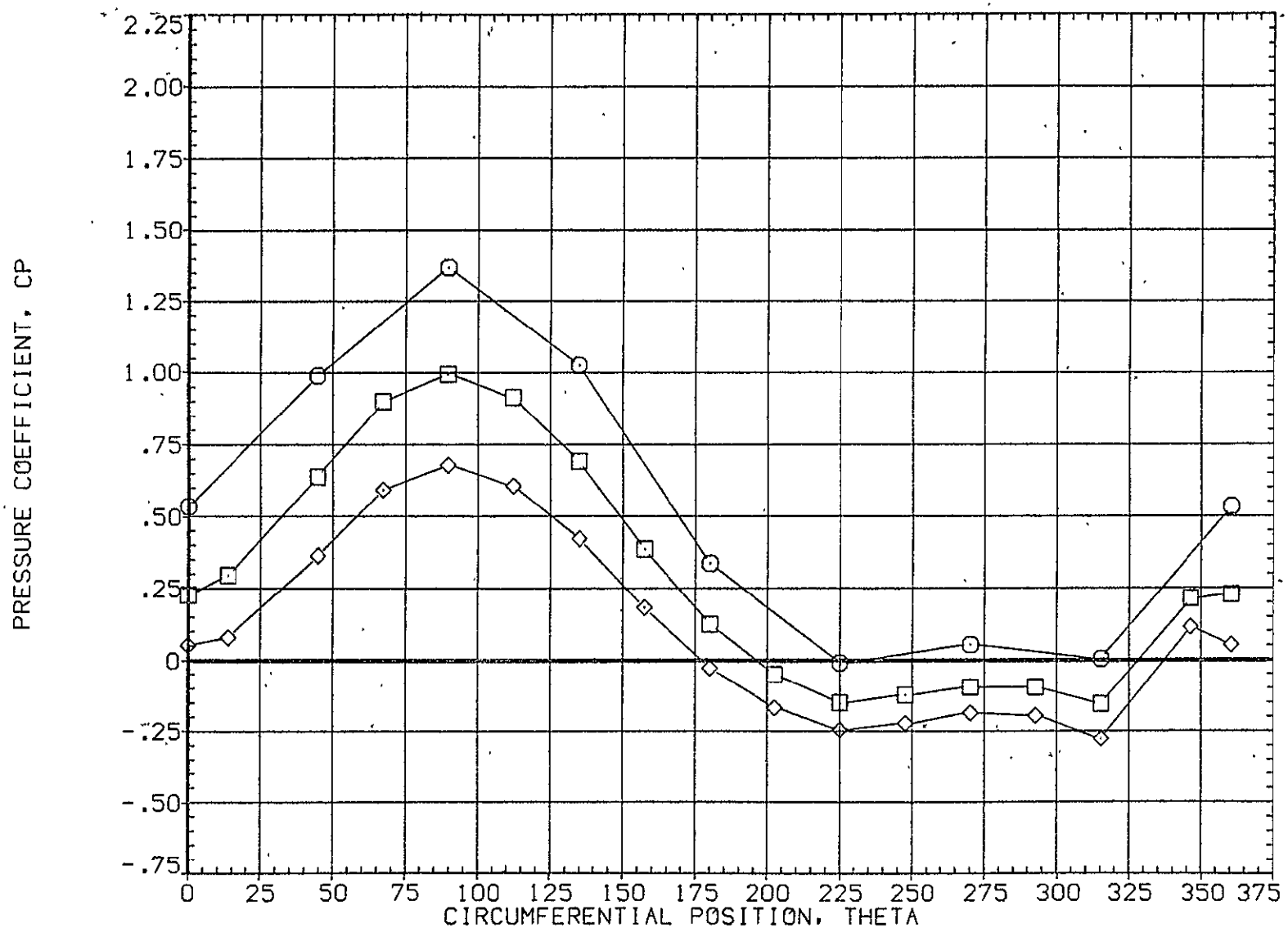

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.930	1.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

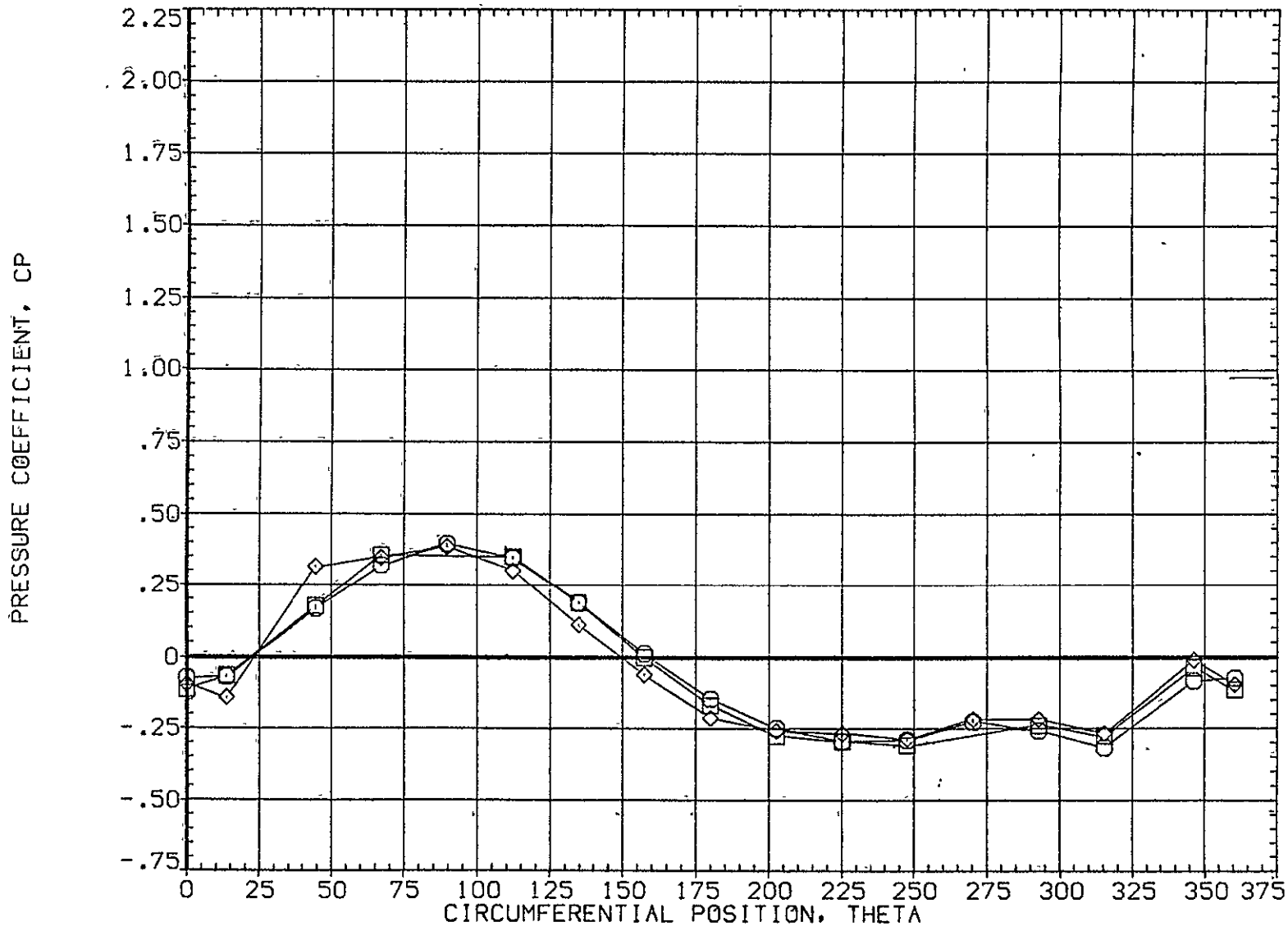

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.930	1.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

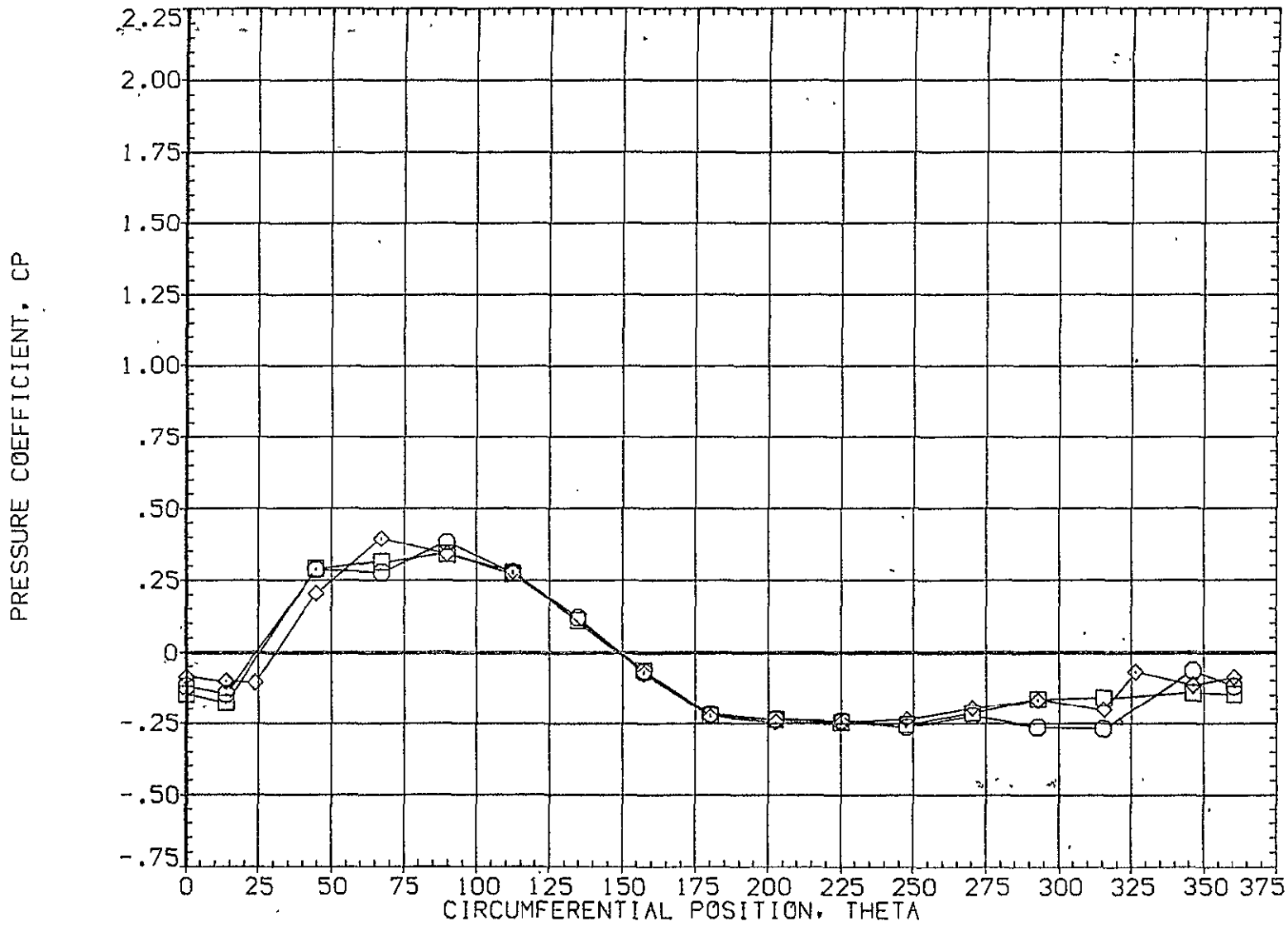

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.930	1.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

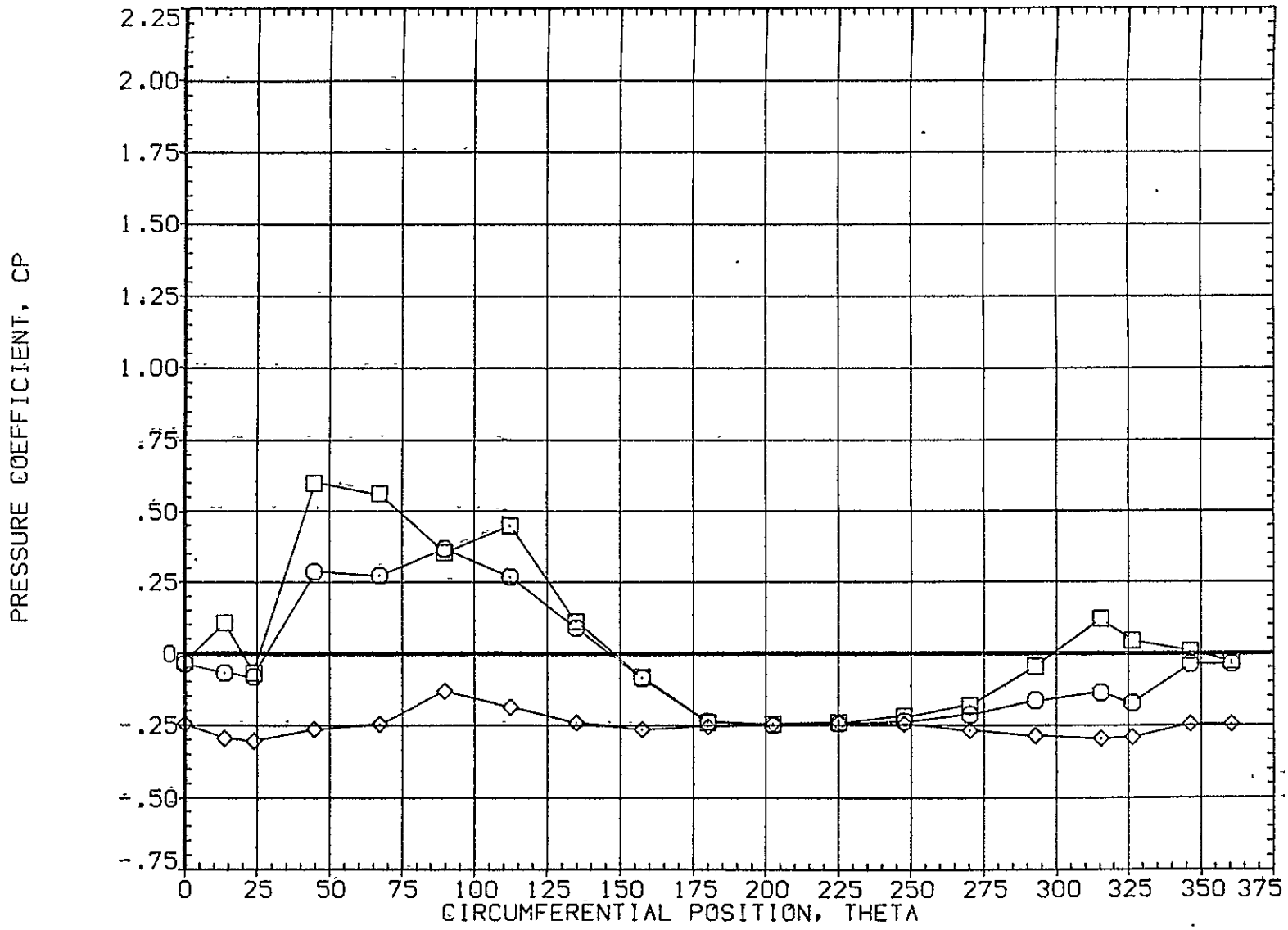

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

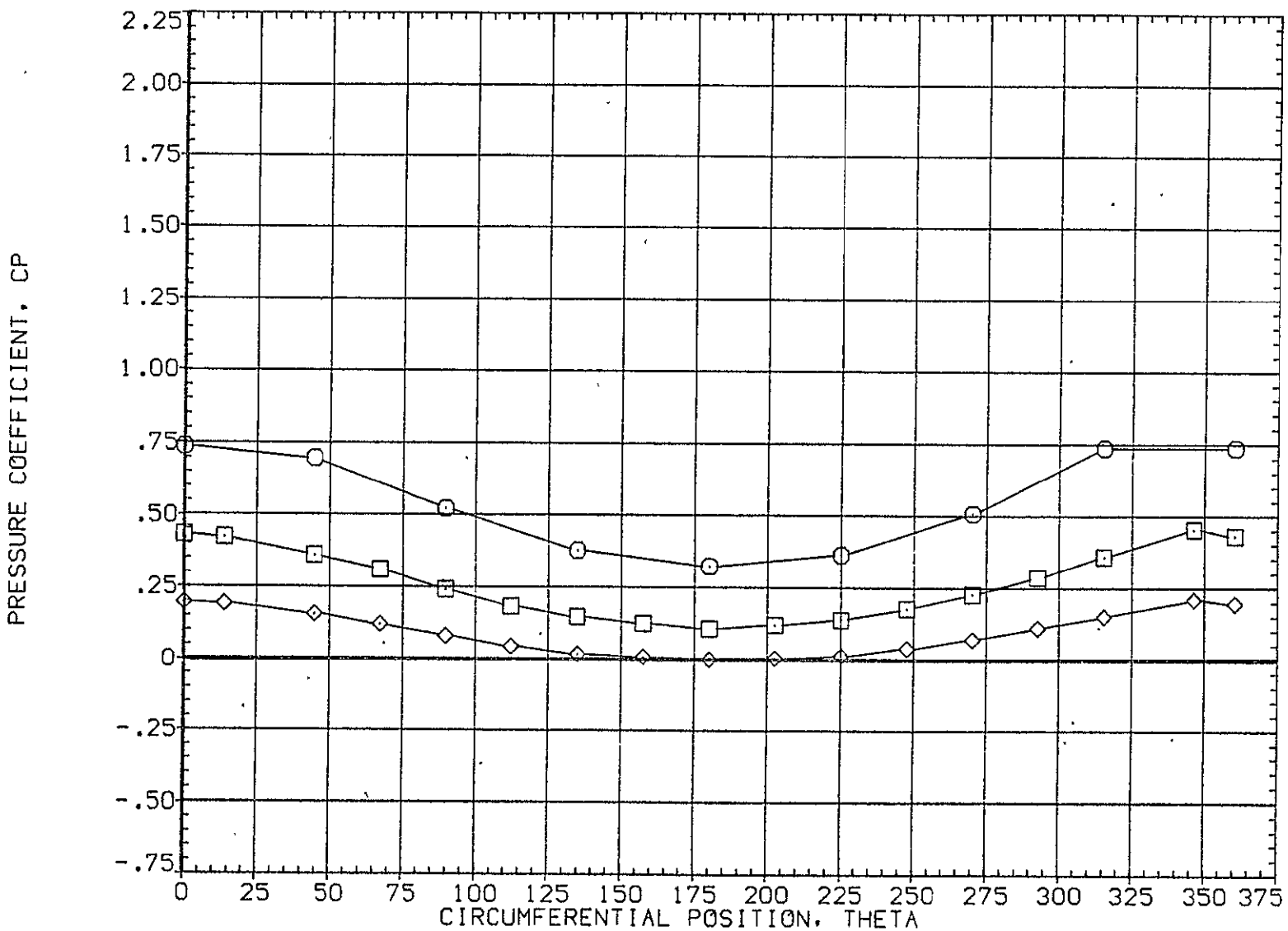

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU01)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

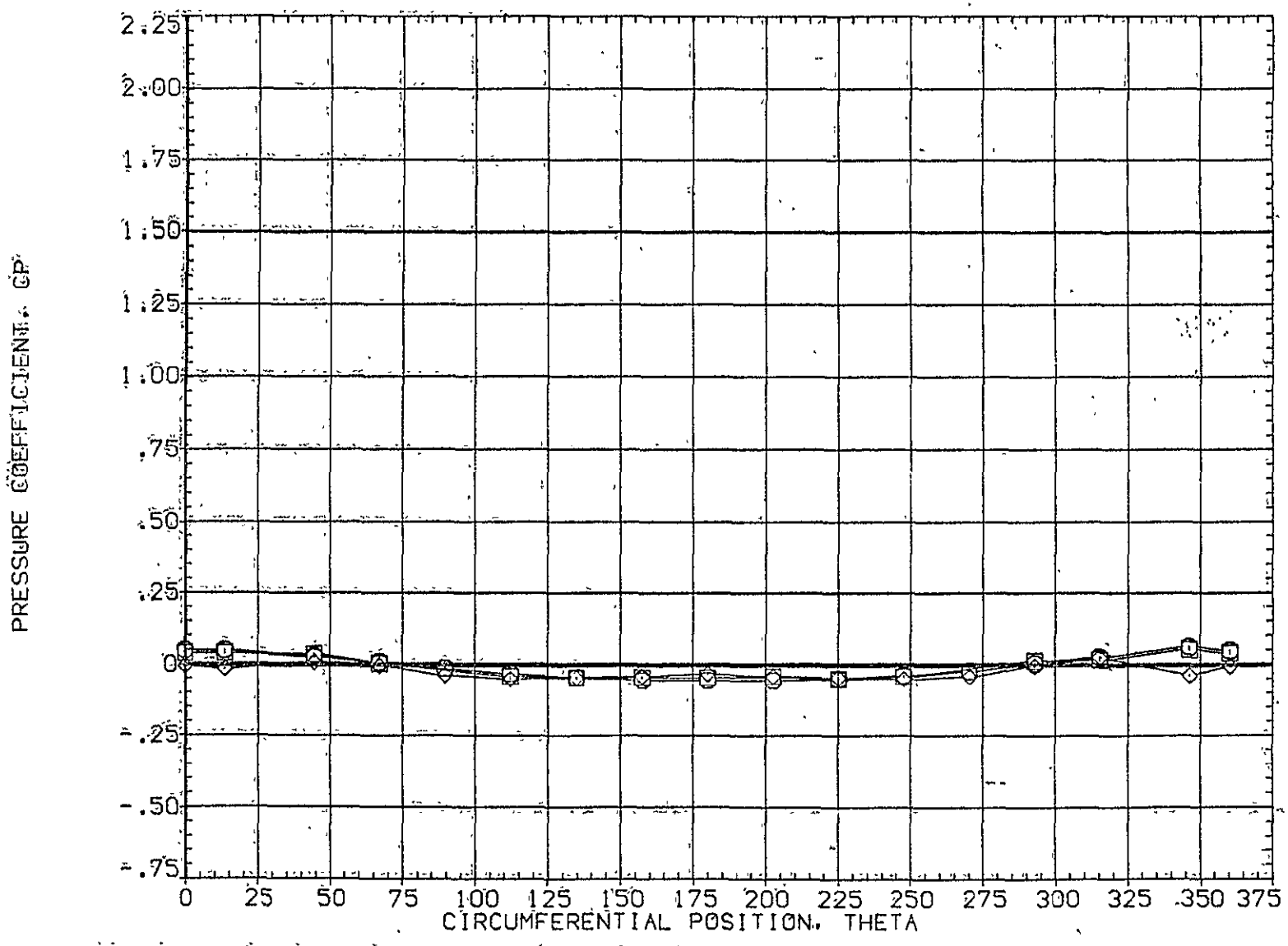

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

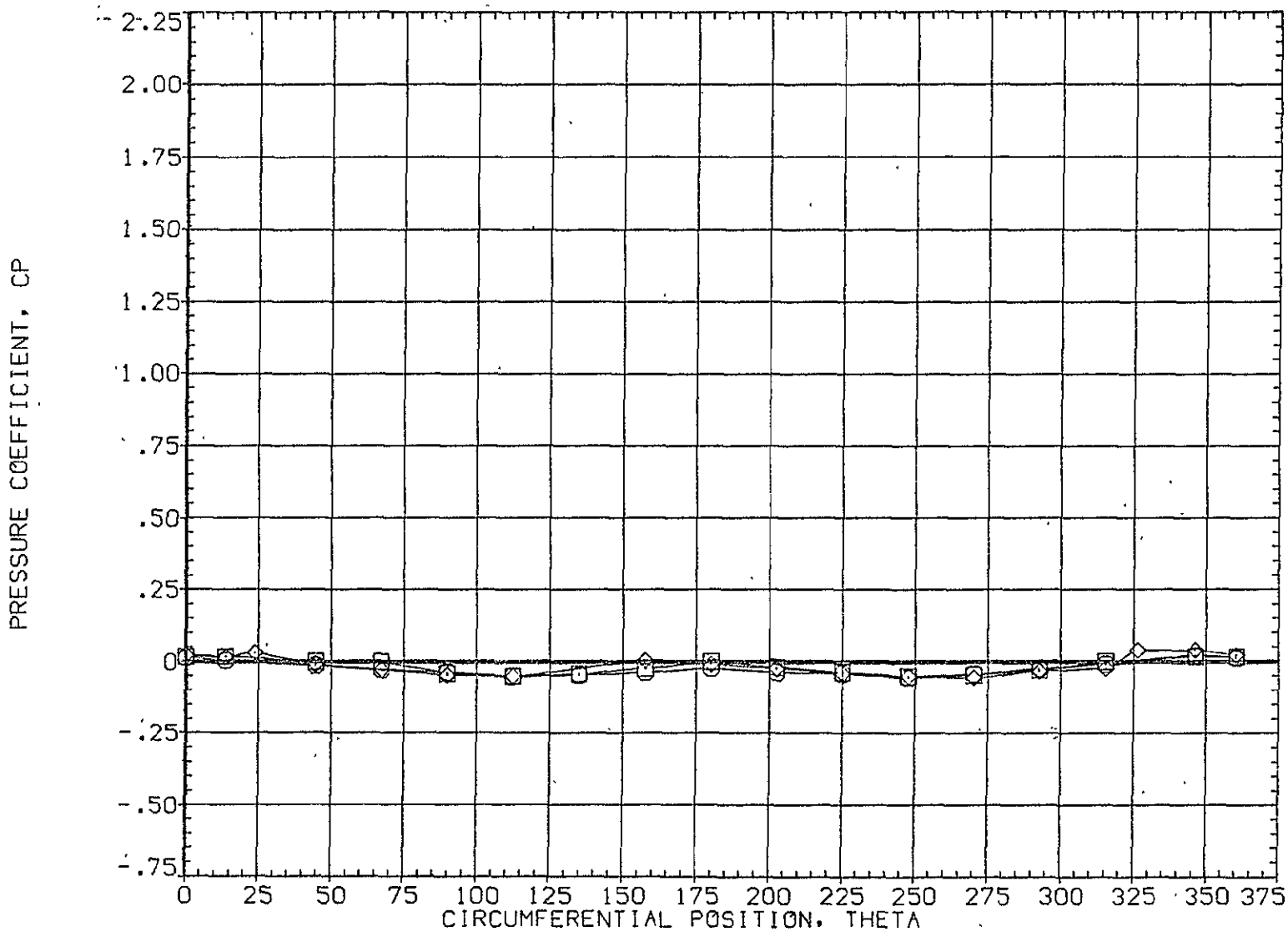

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU01)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

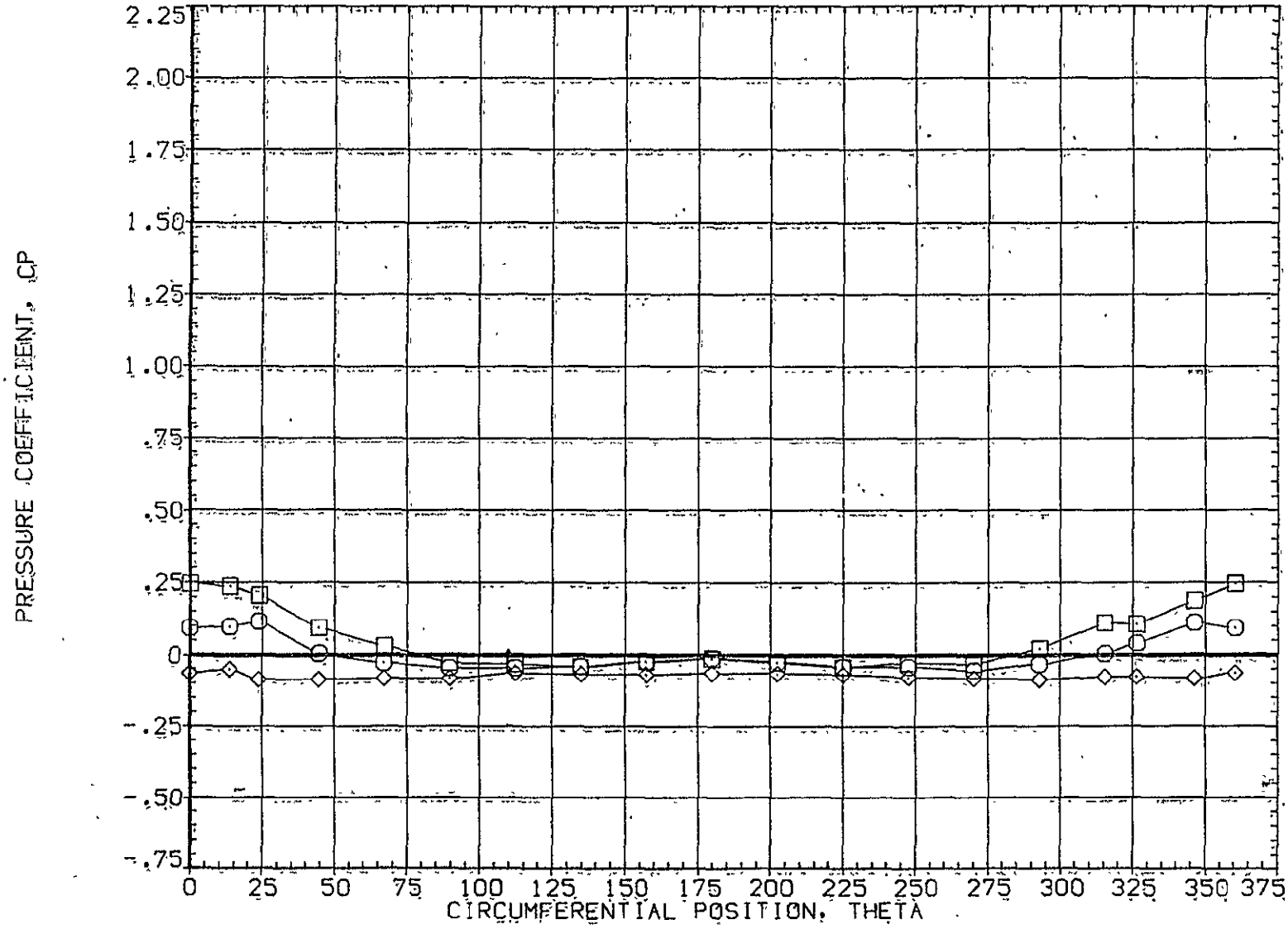

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

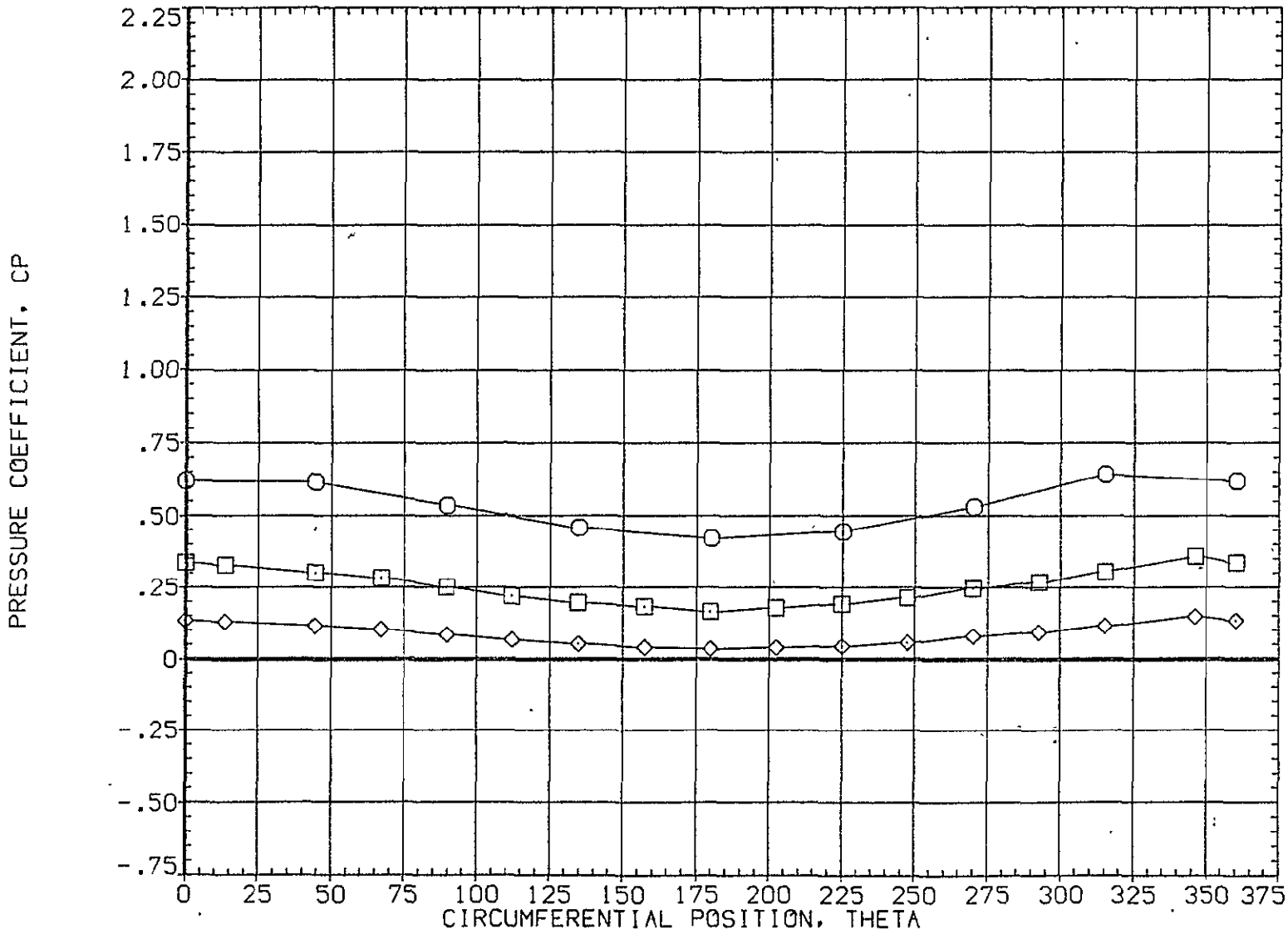

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

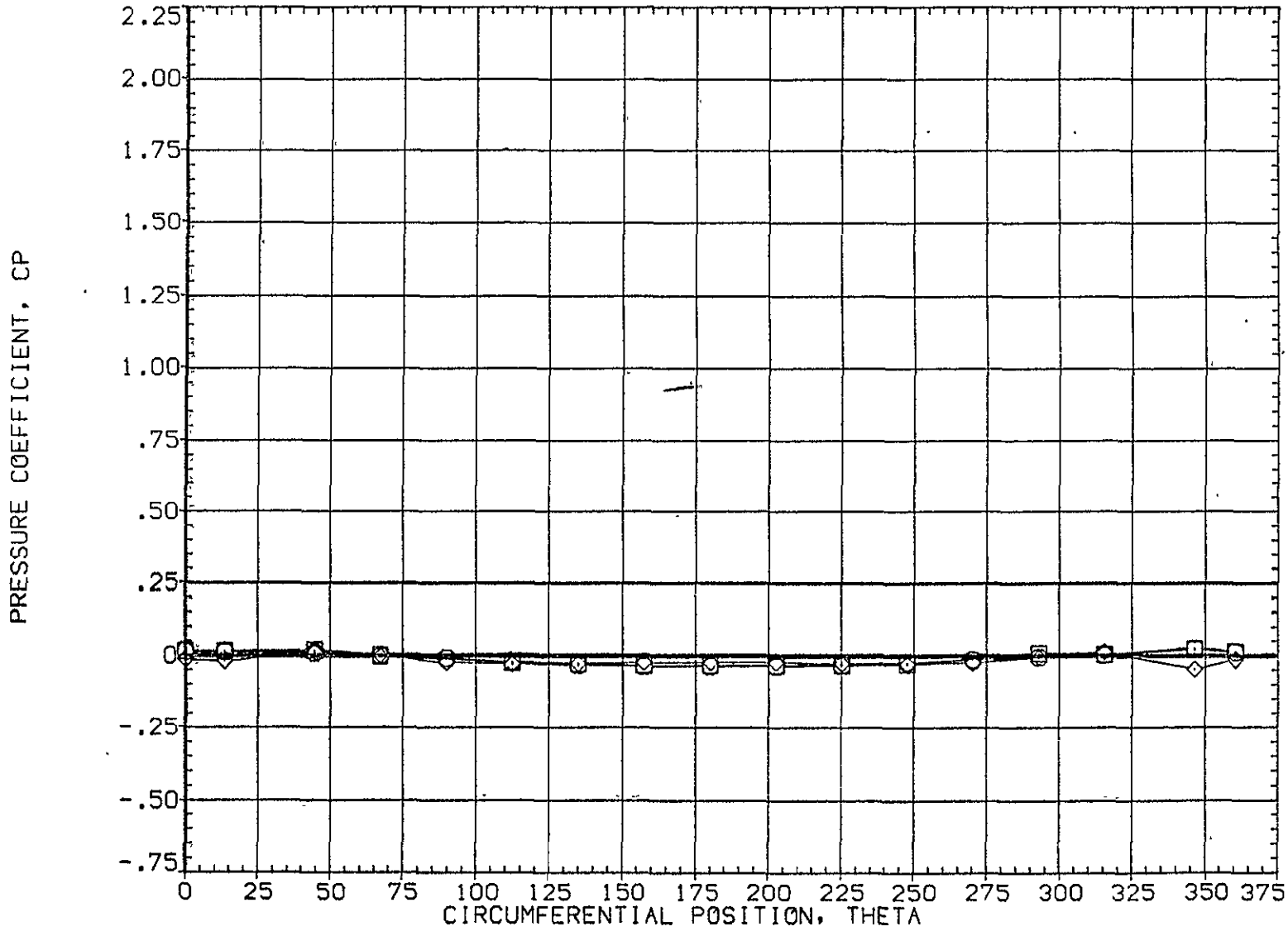

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

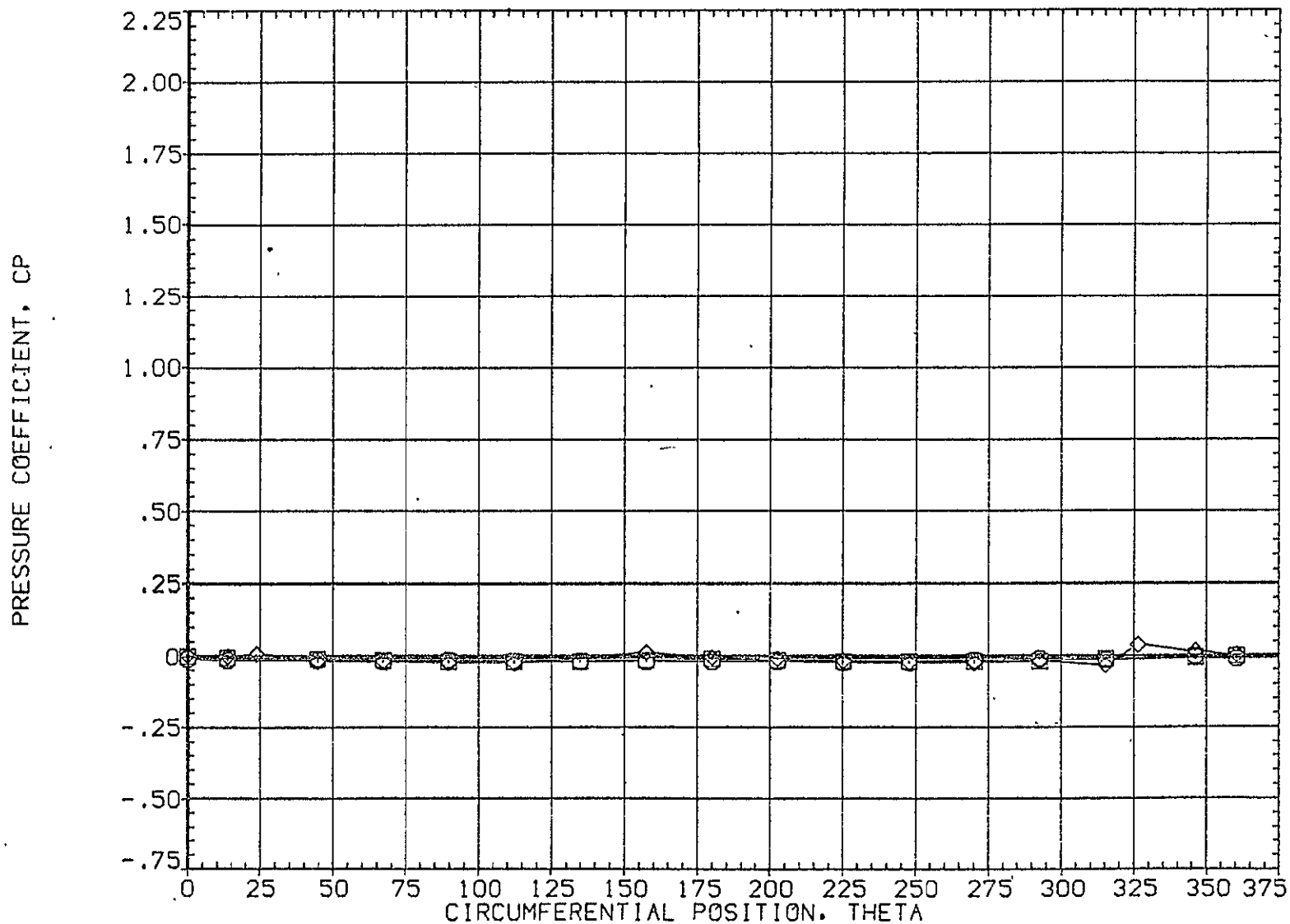

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

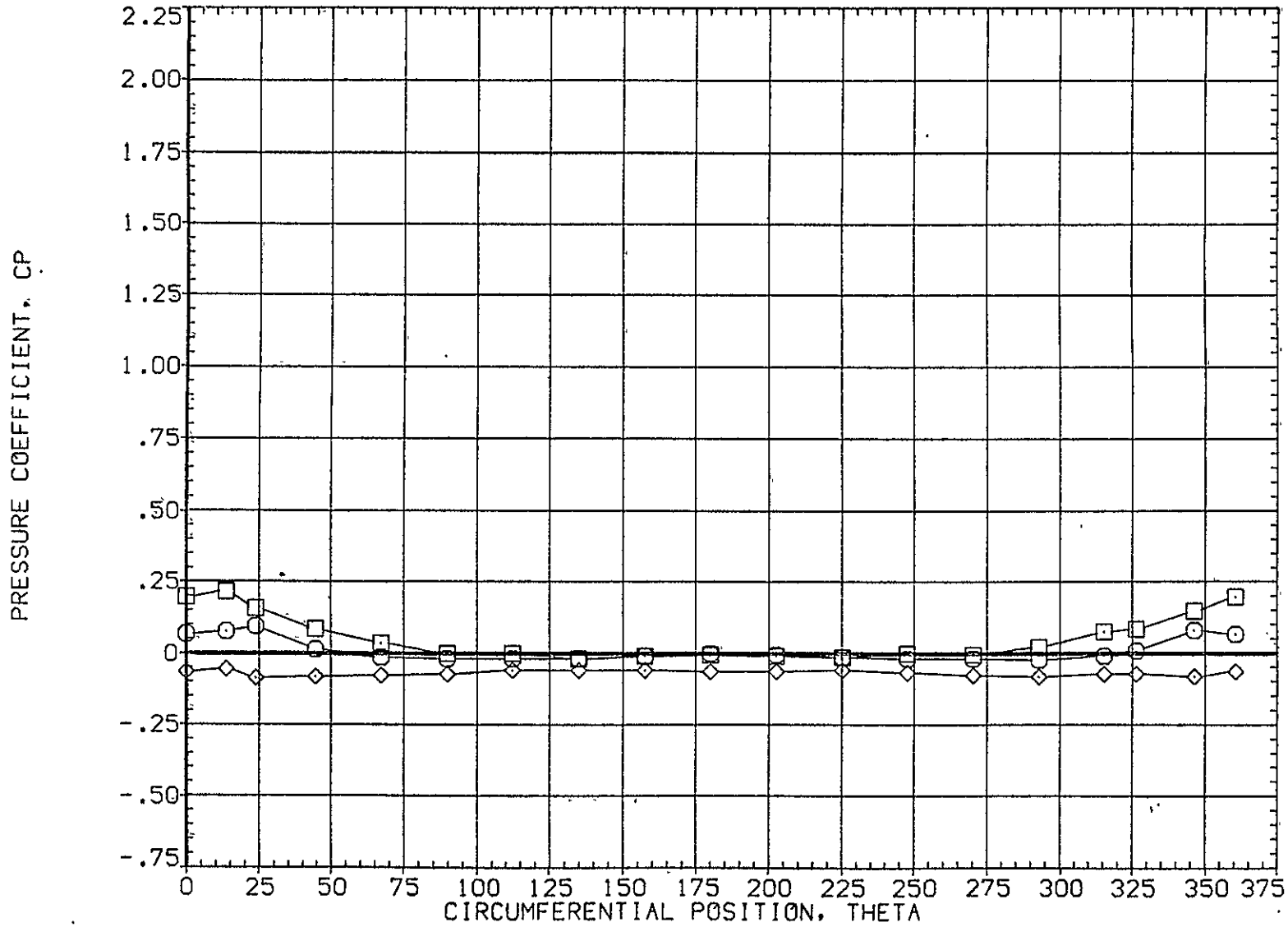

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

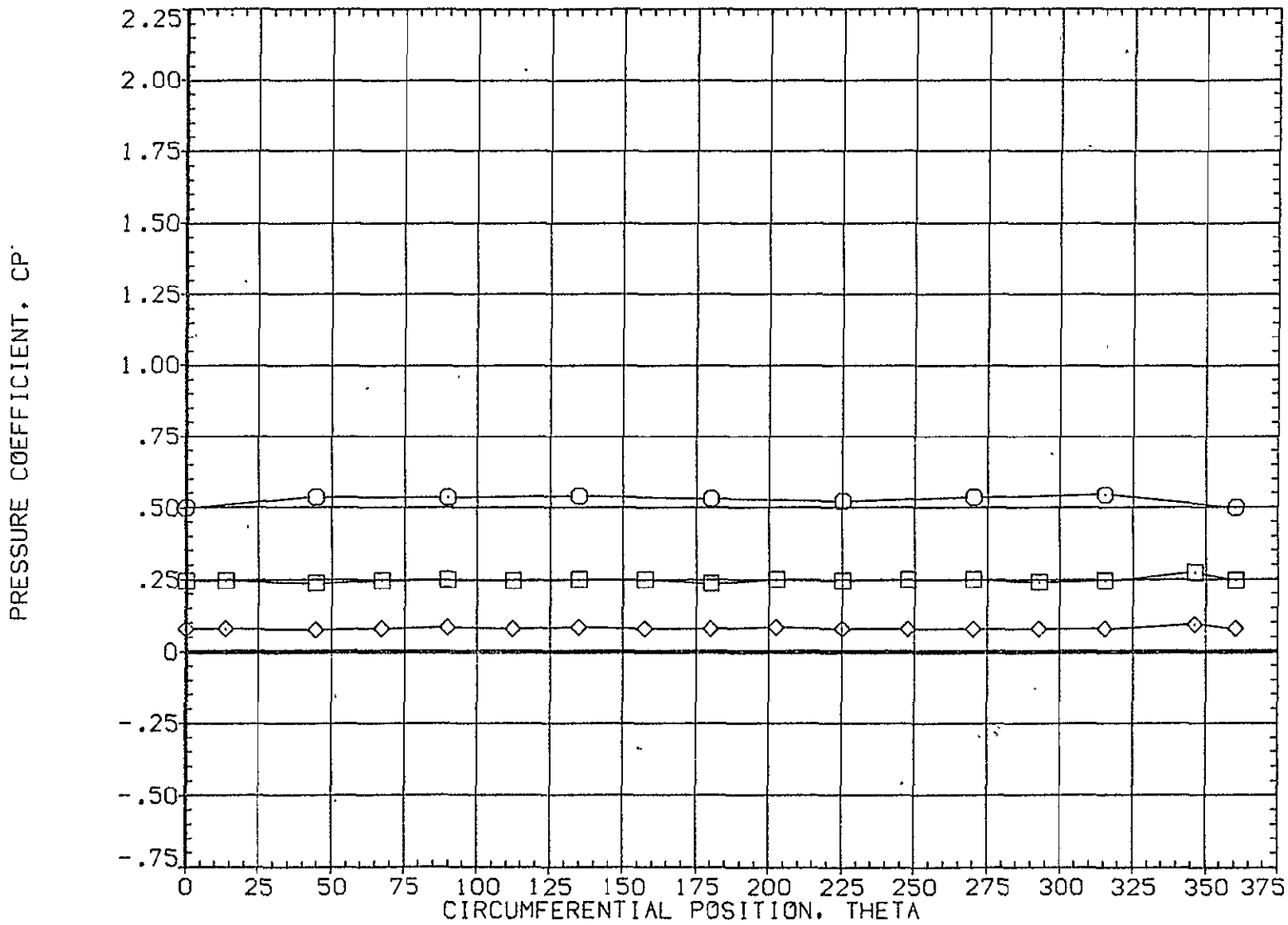

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

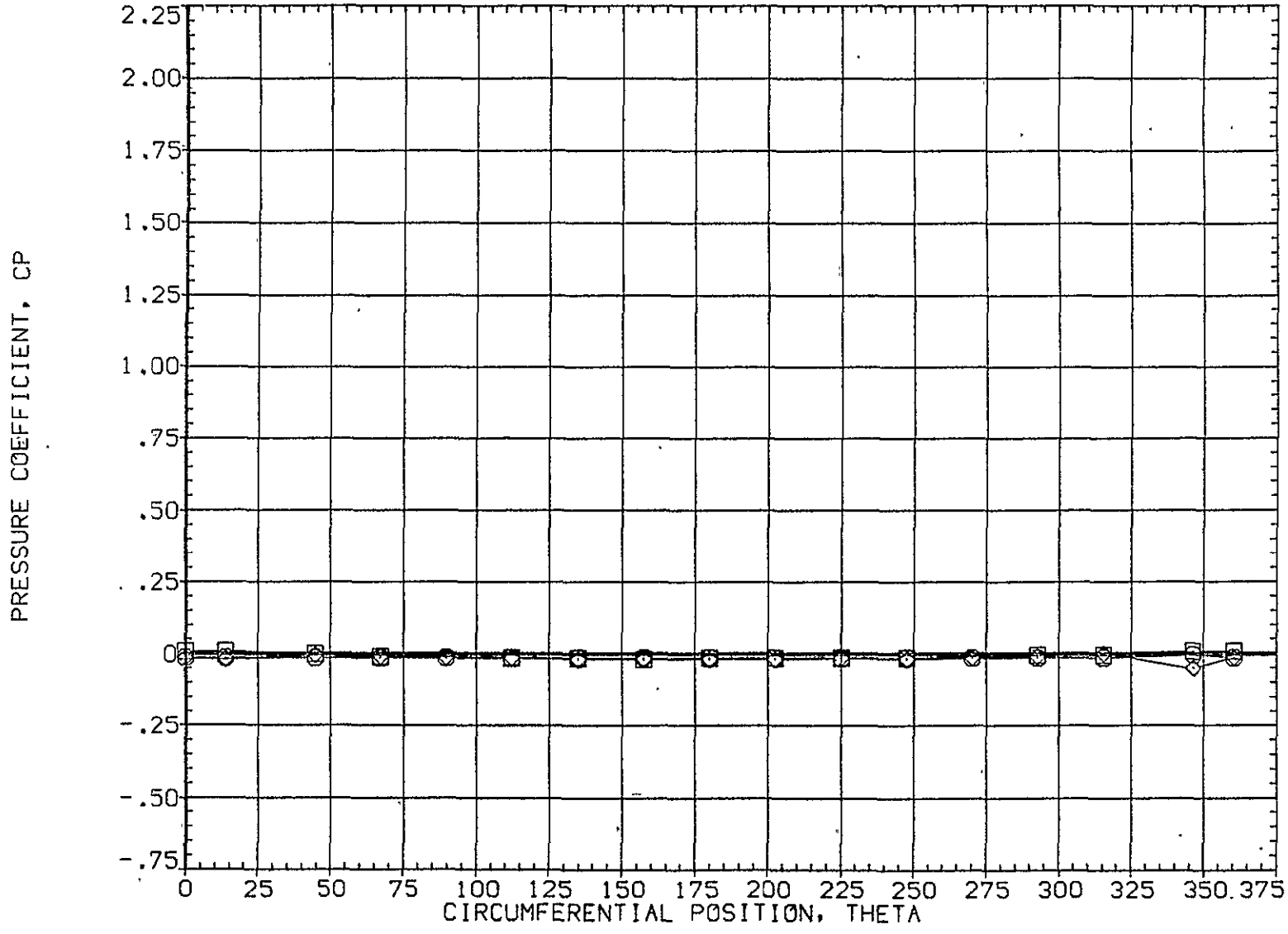

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

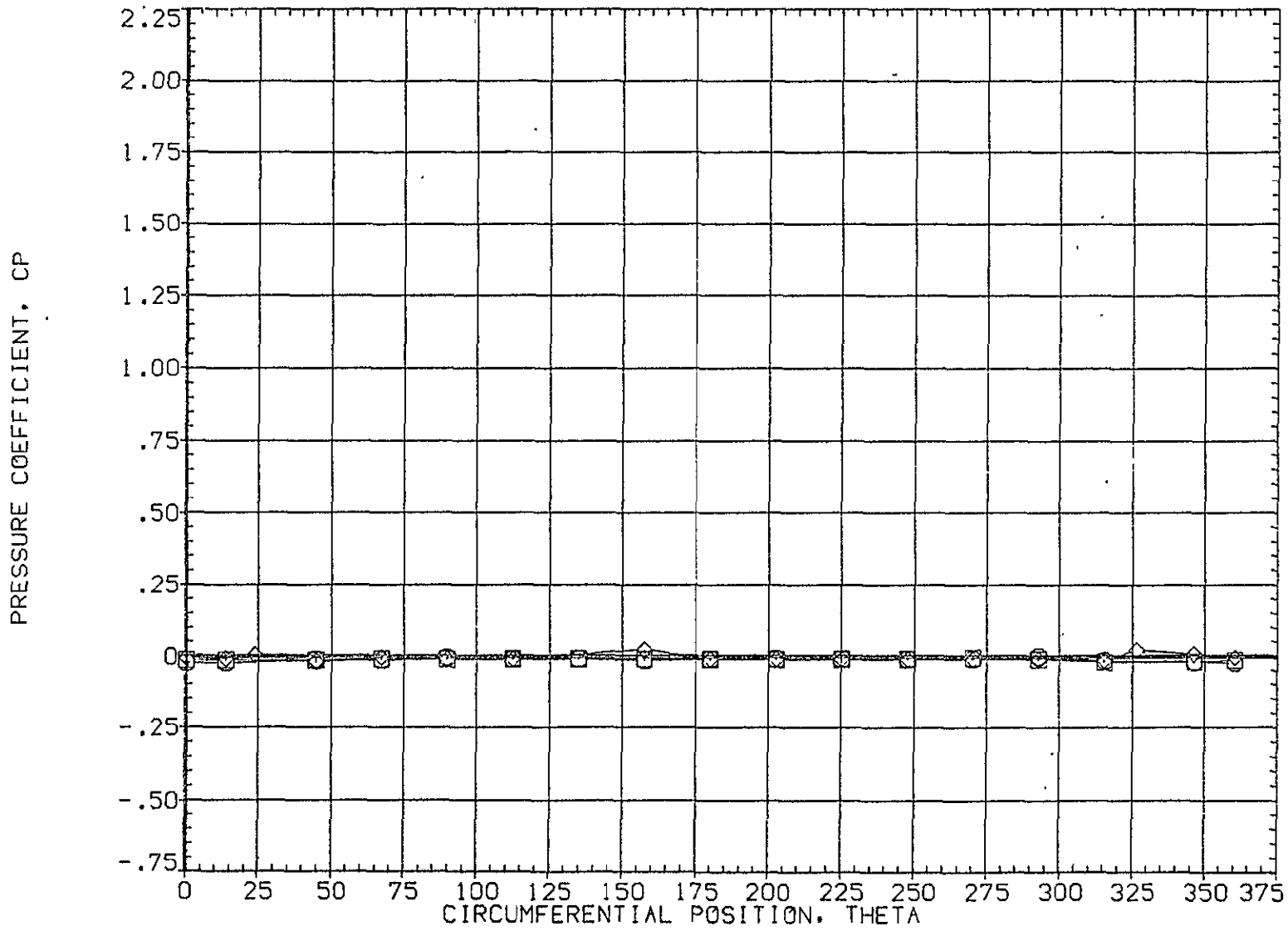

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

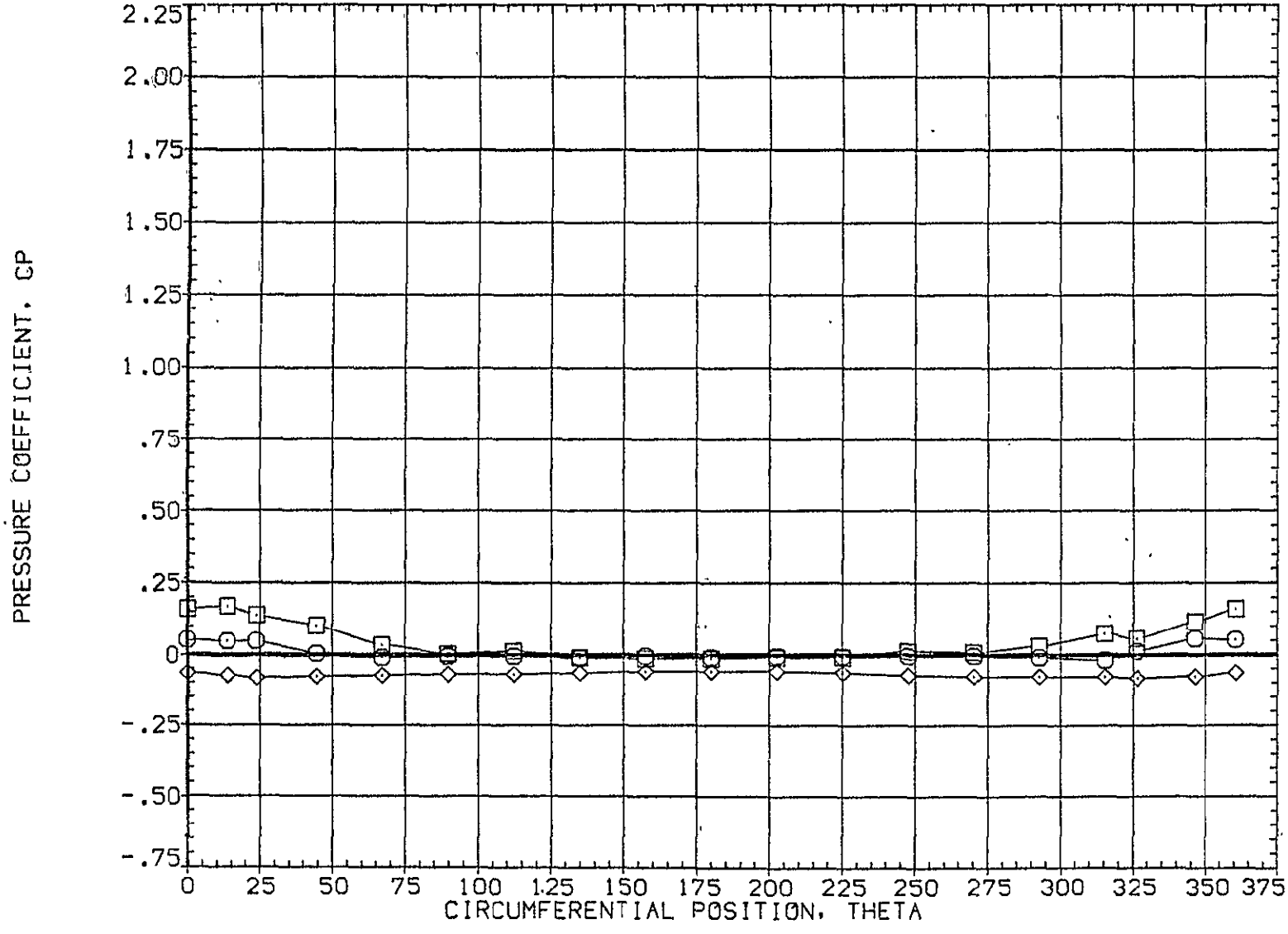

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

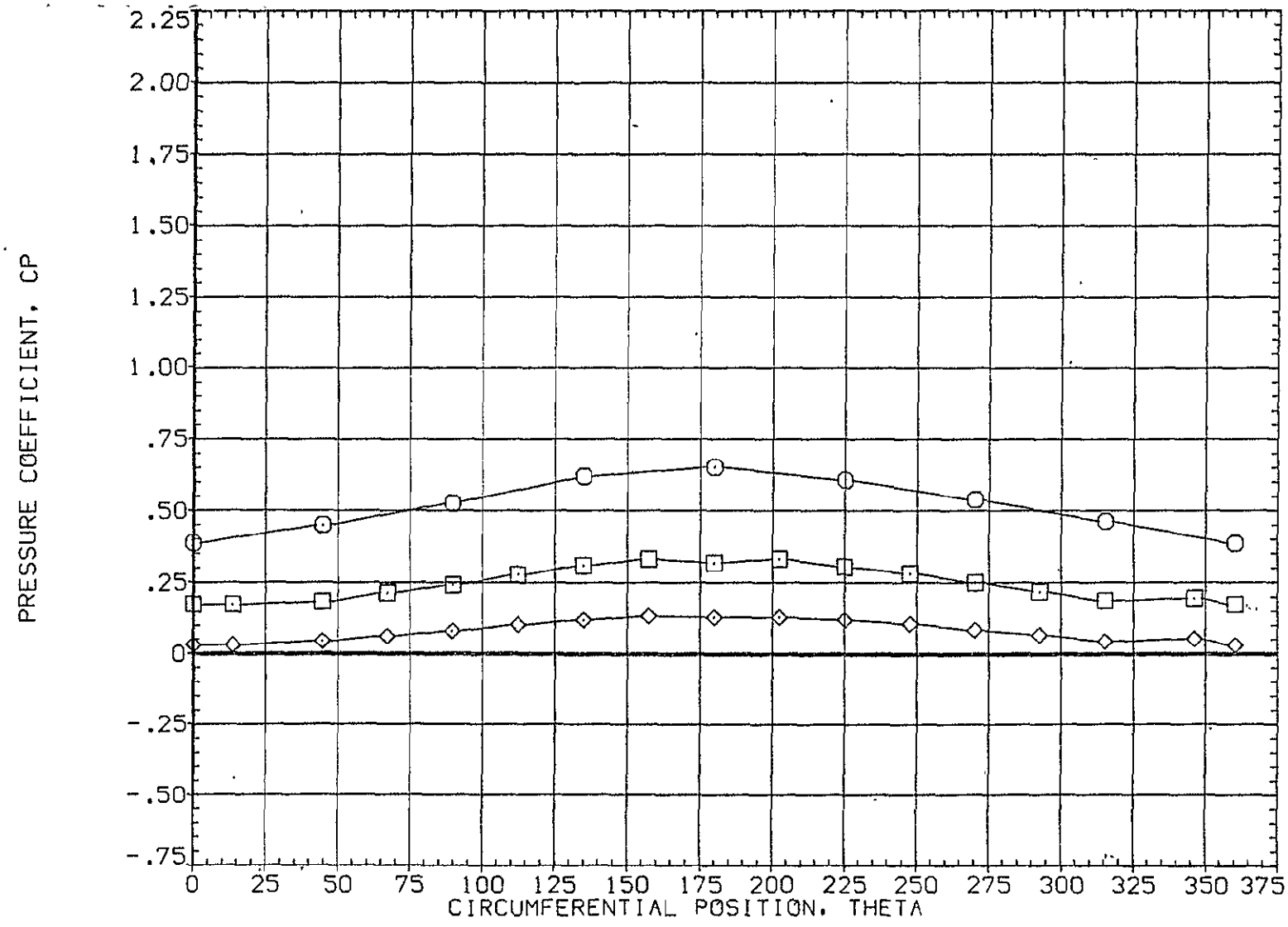

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

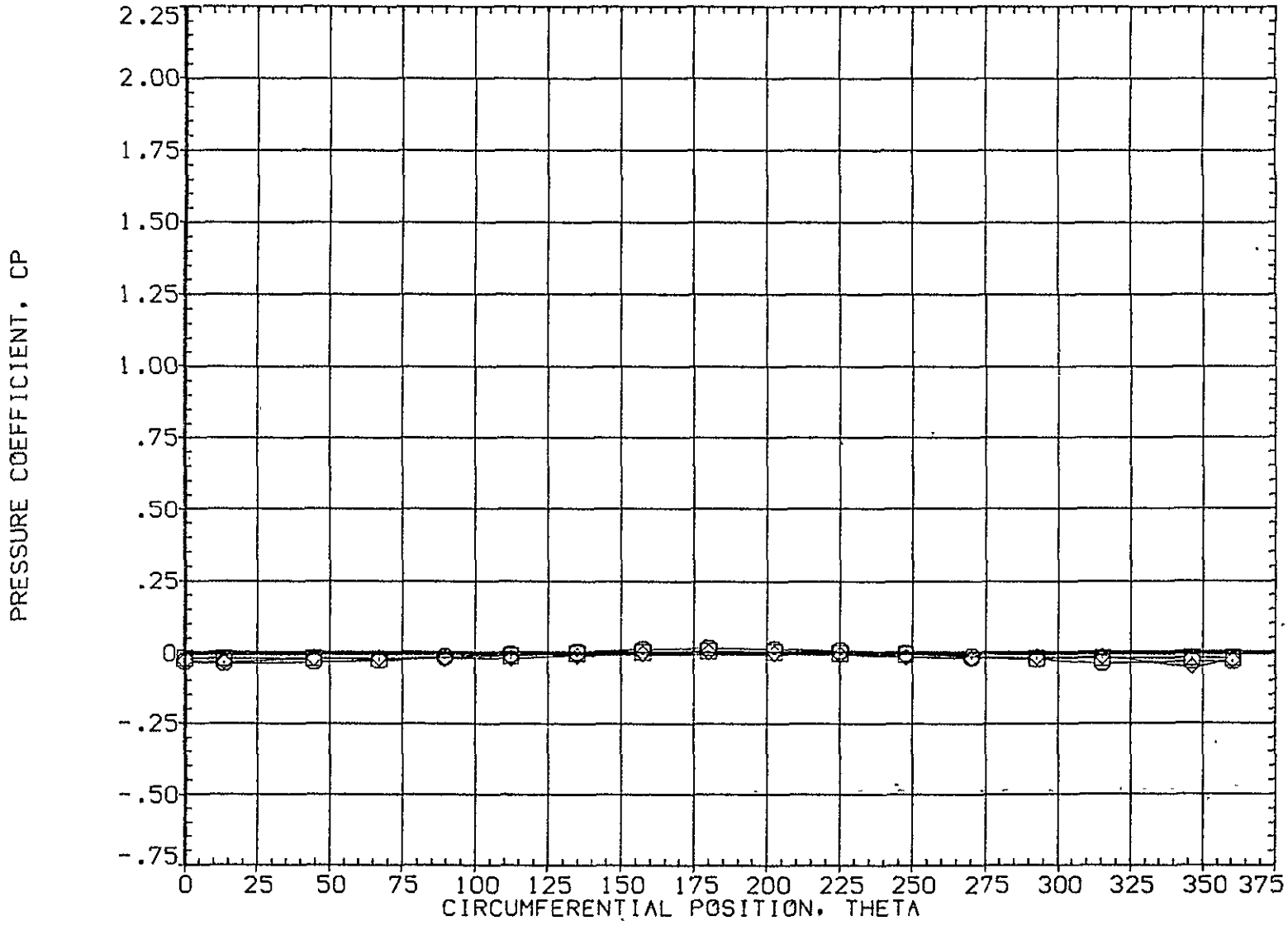

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

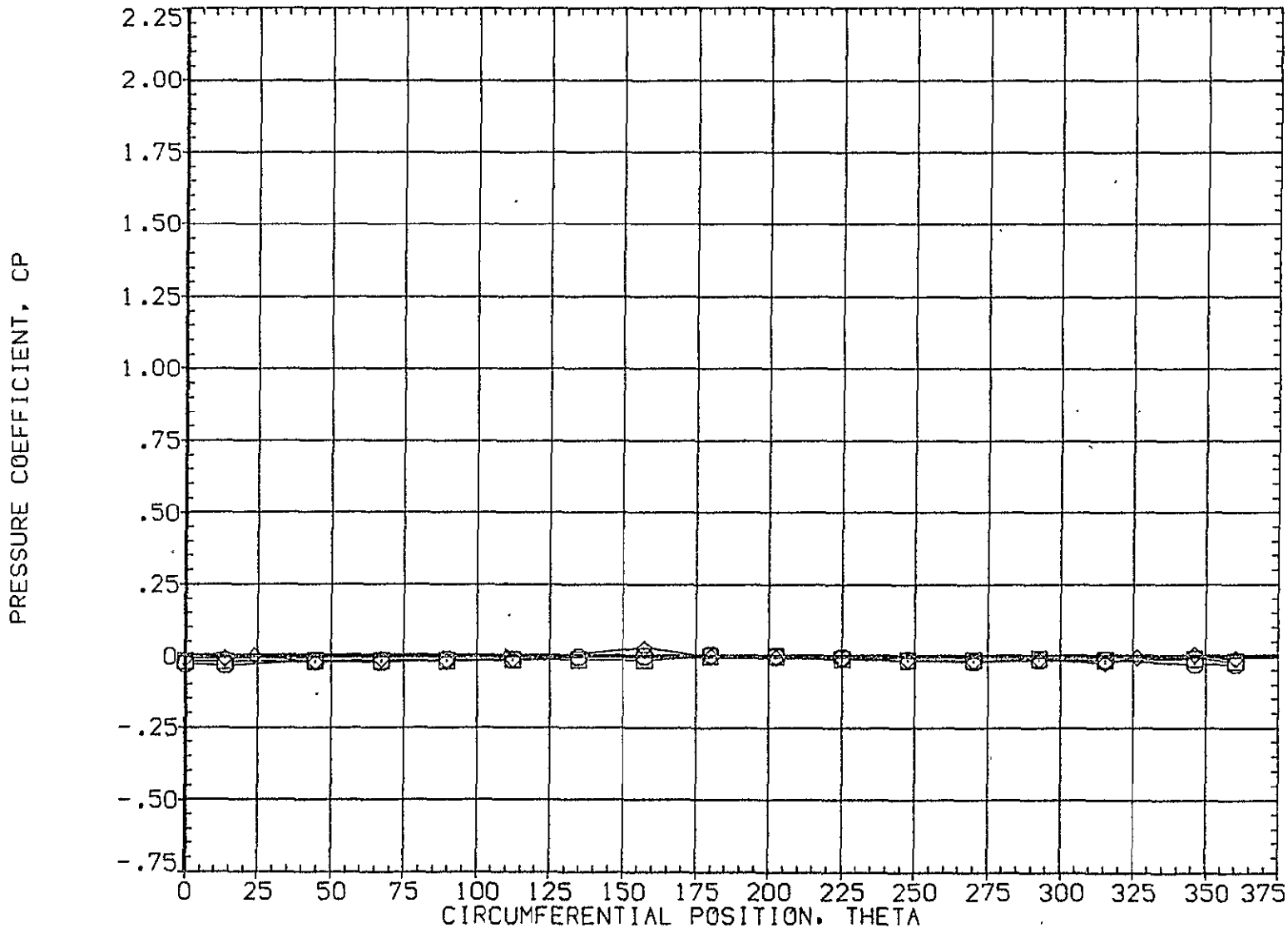

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

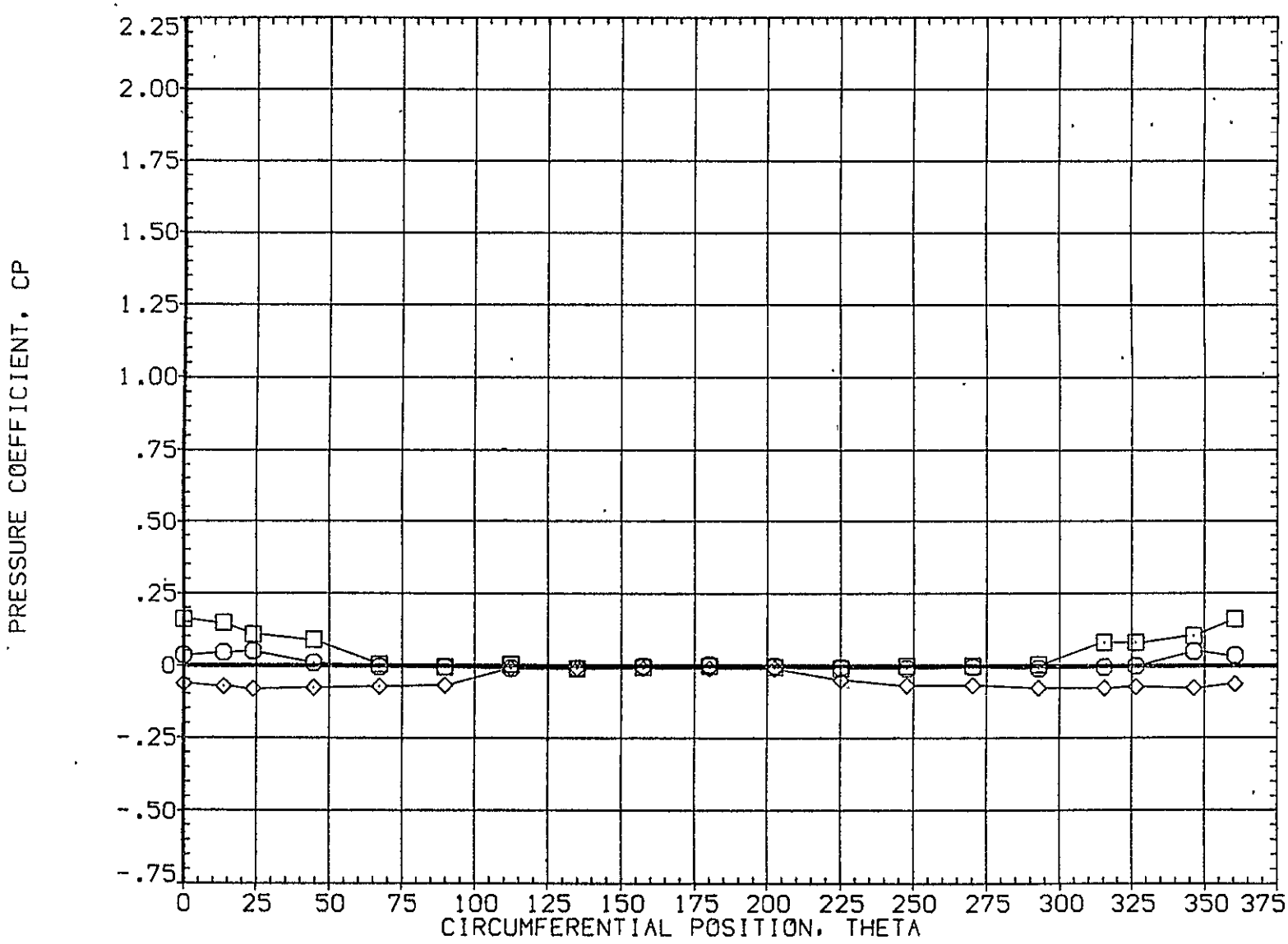

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

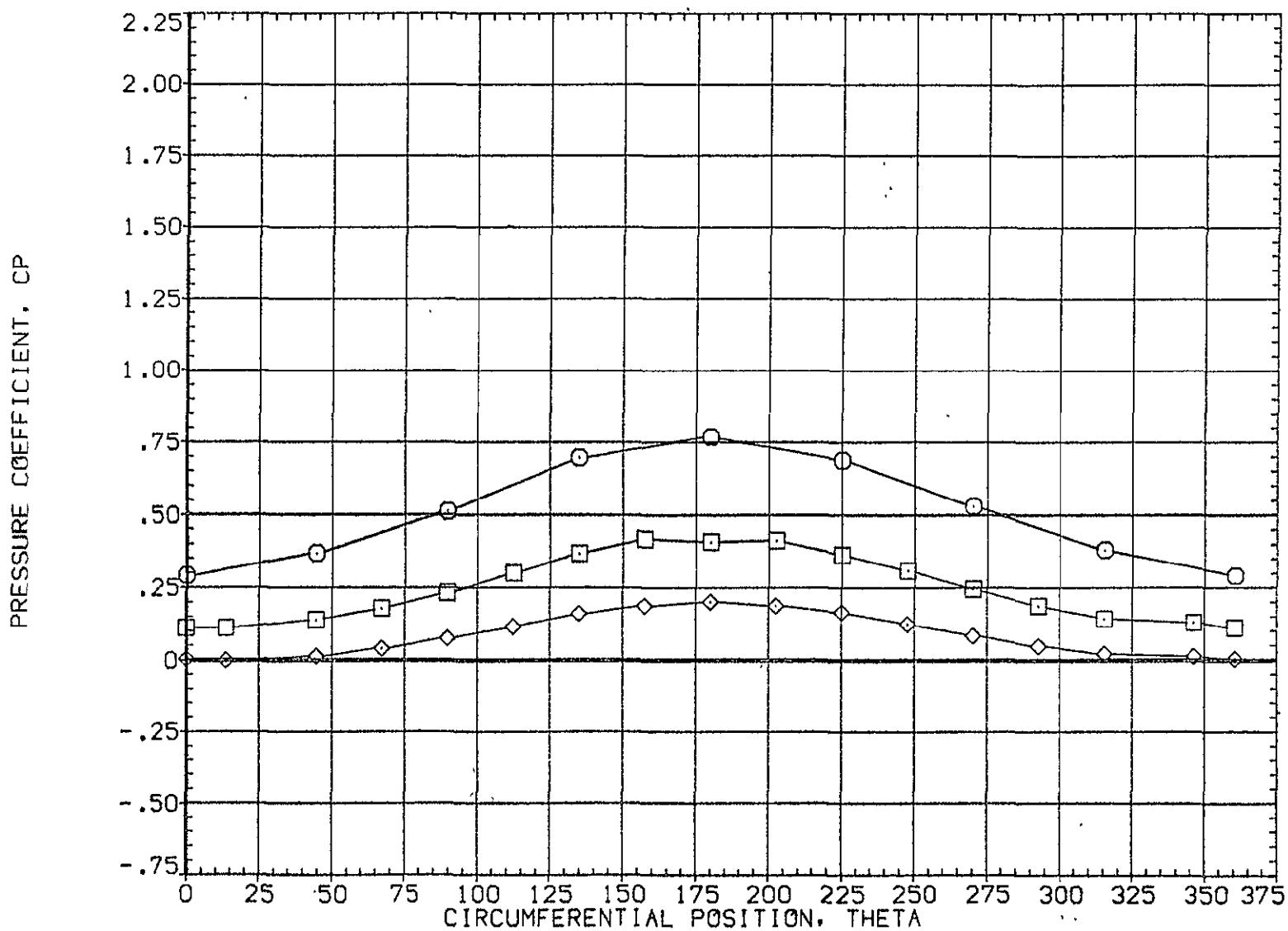

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

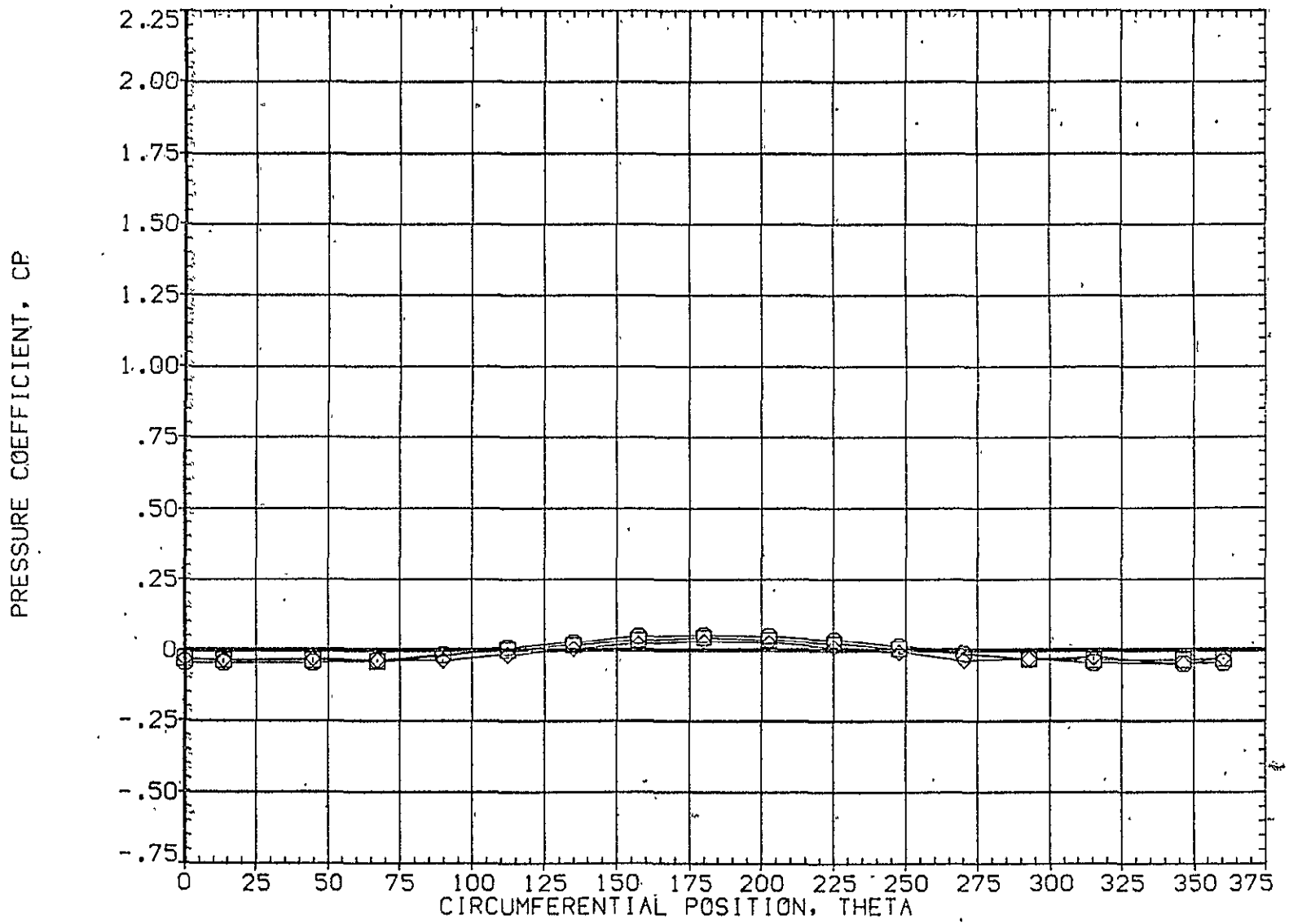

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

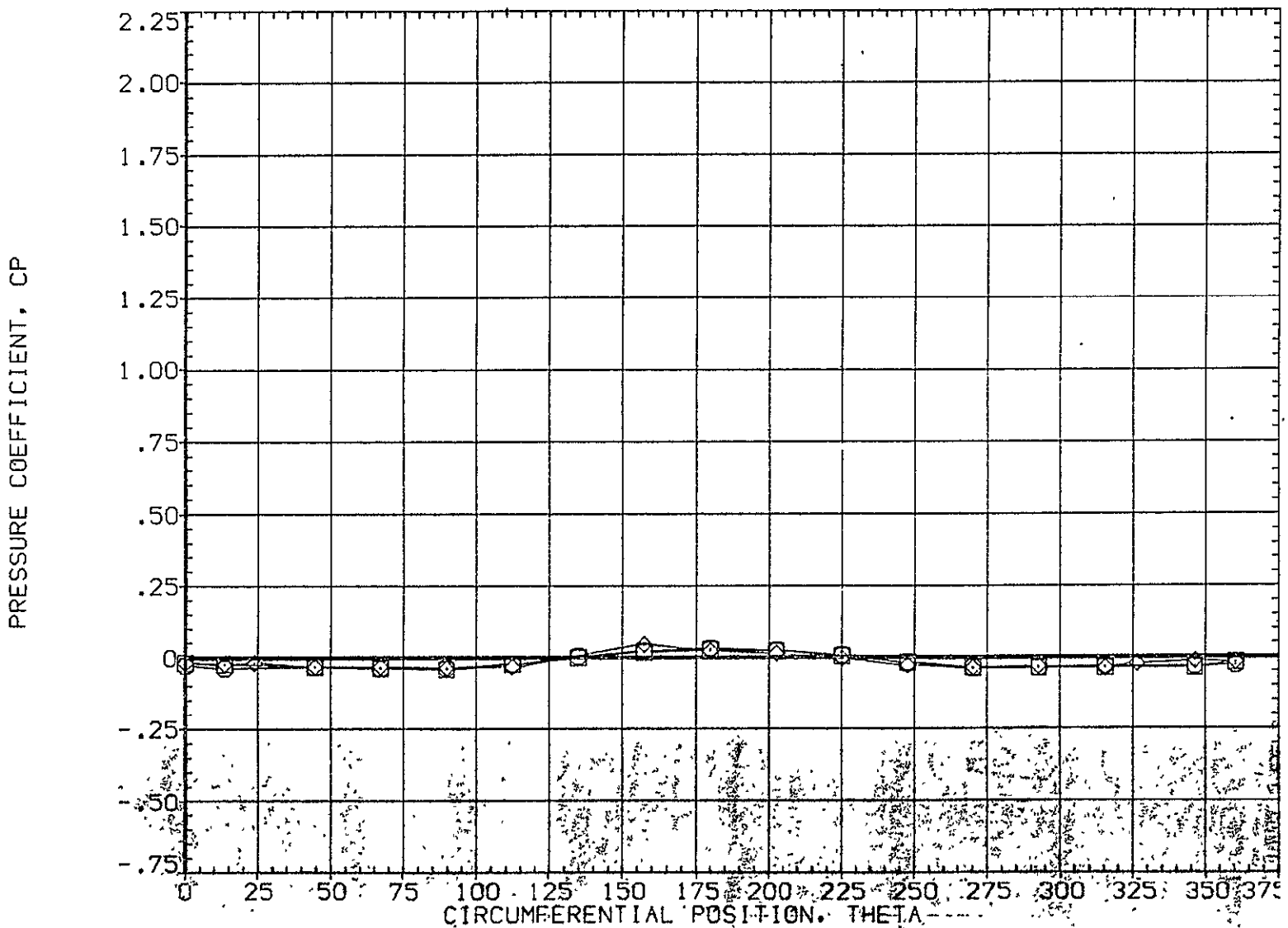

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A0035)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

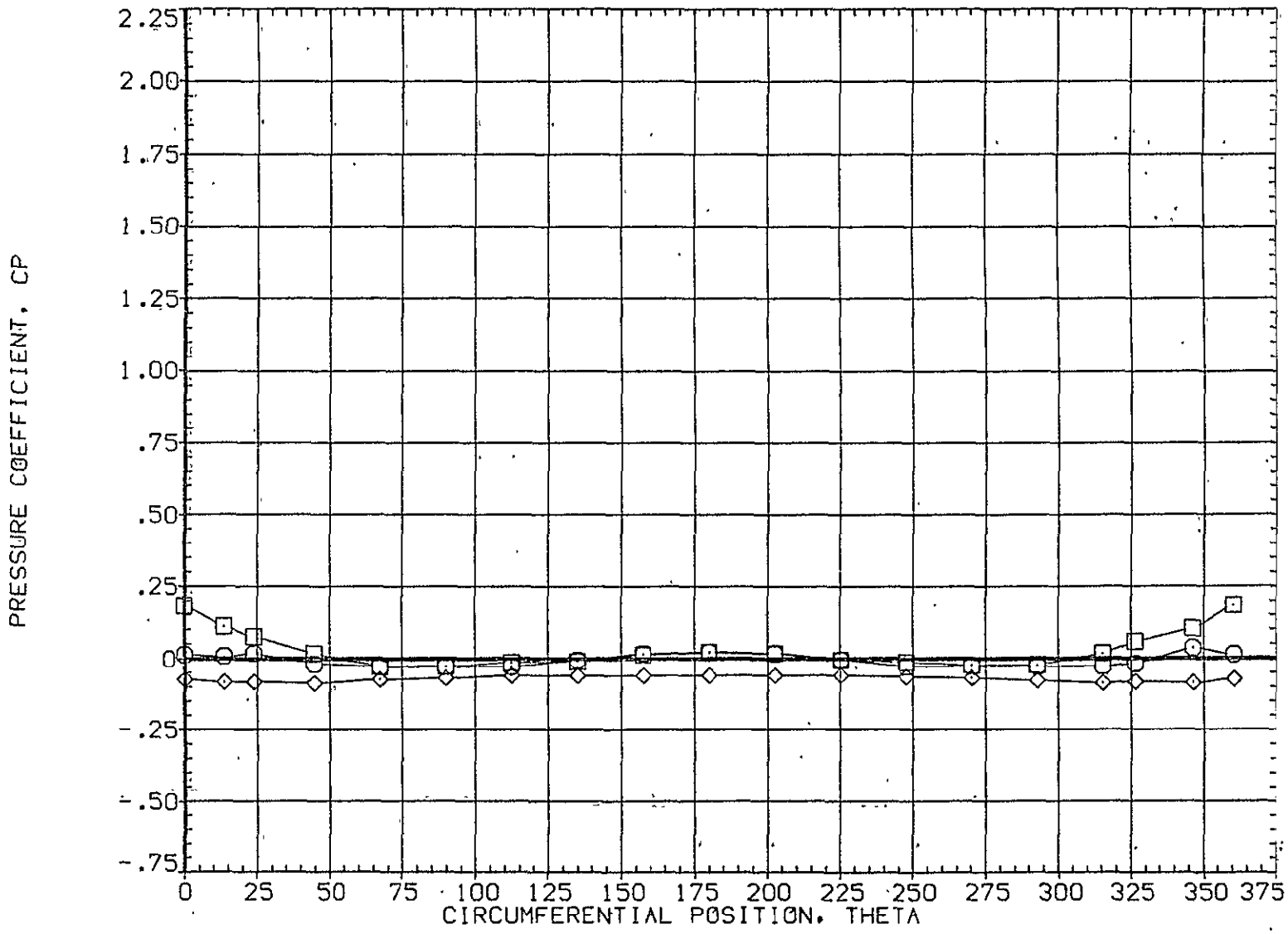

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

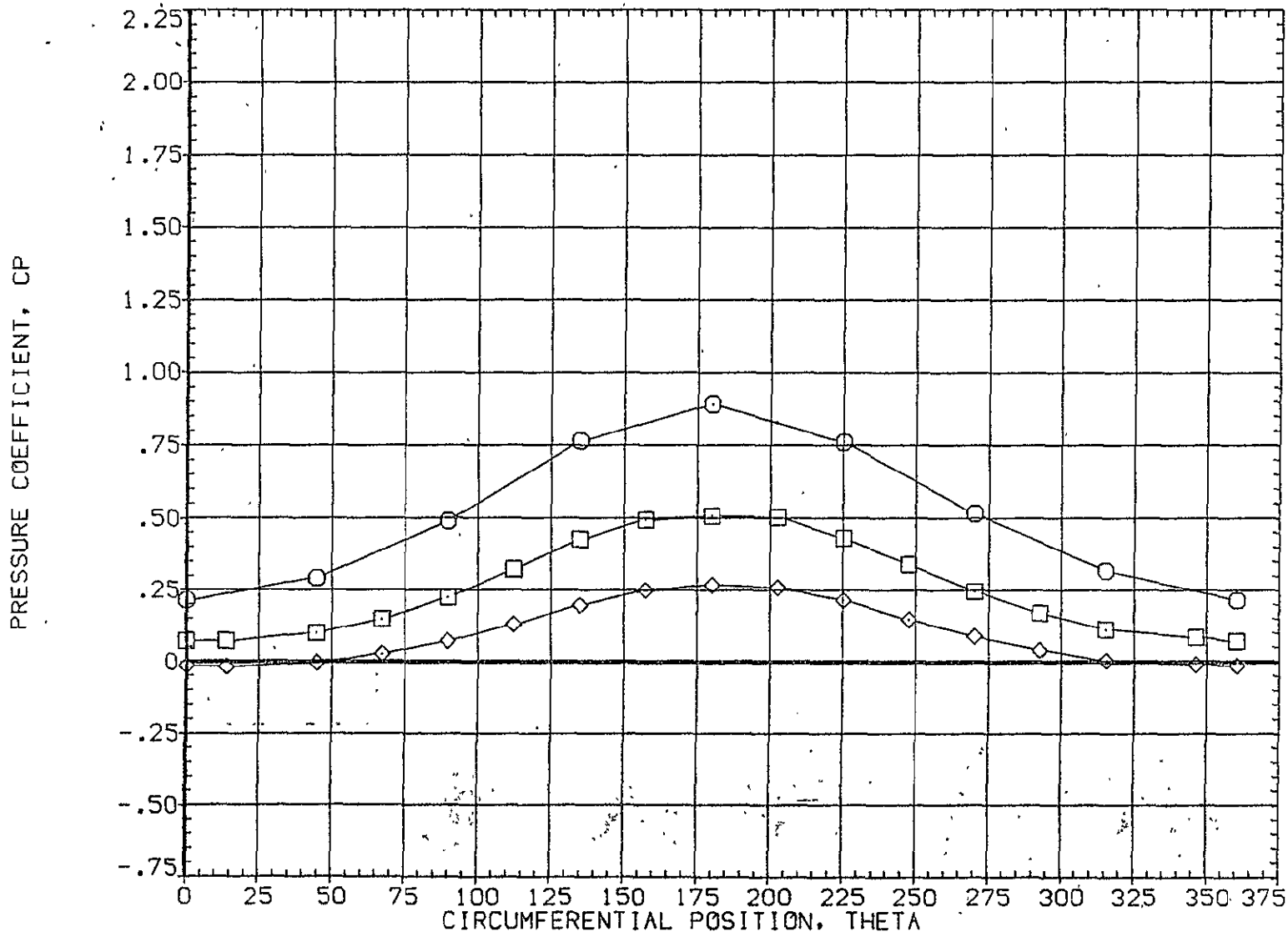

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

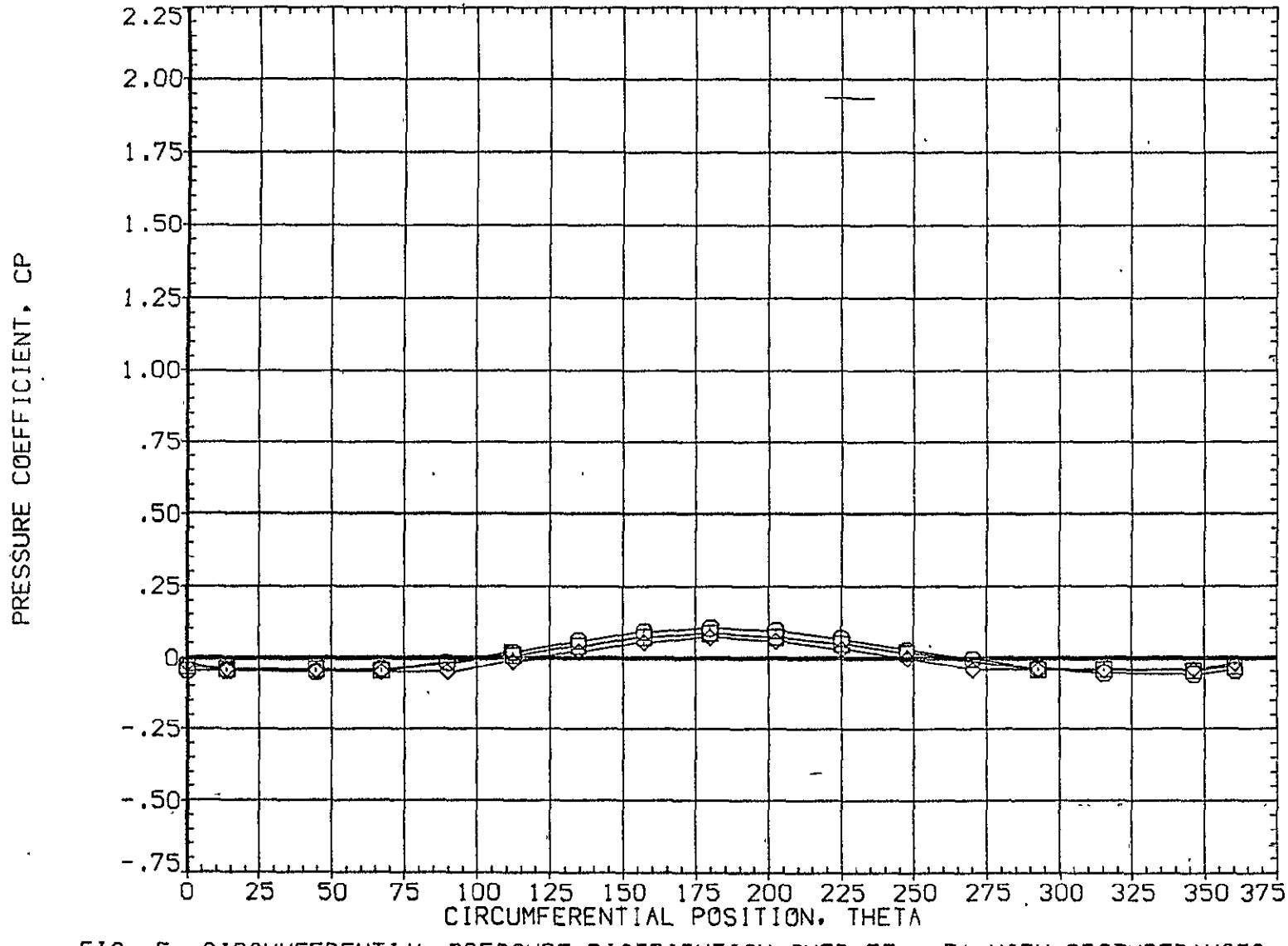

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.520	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

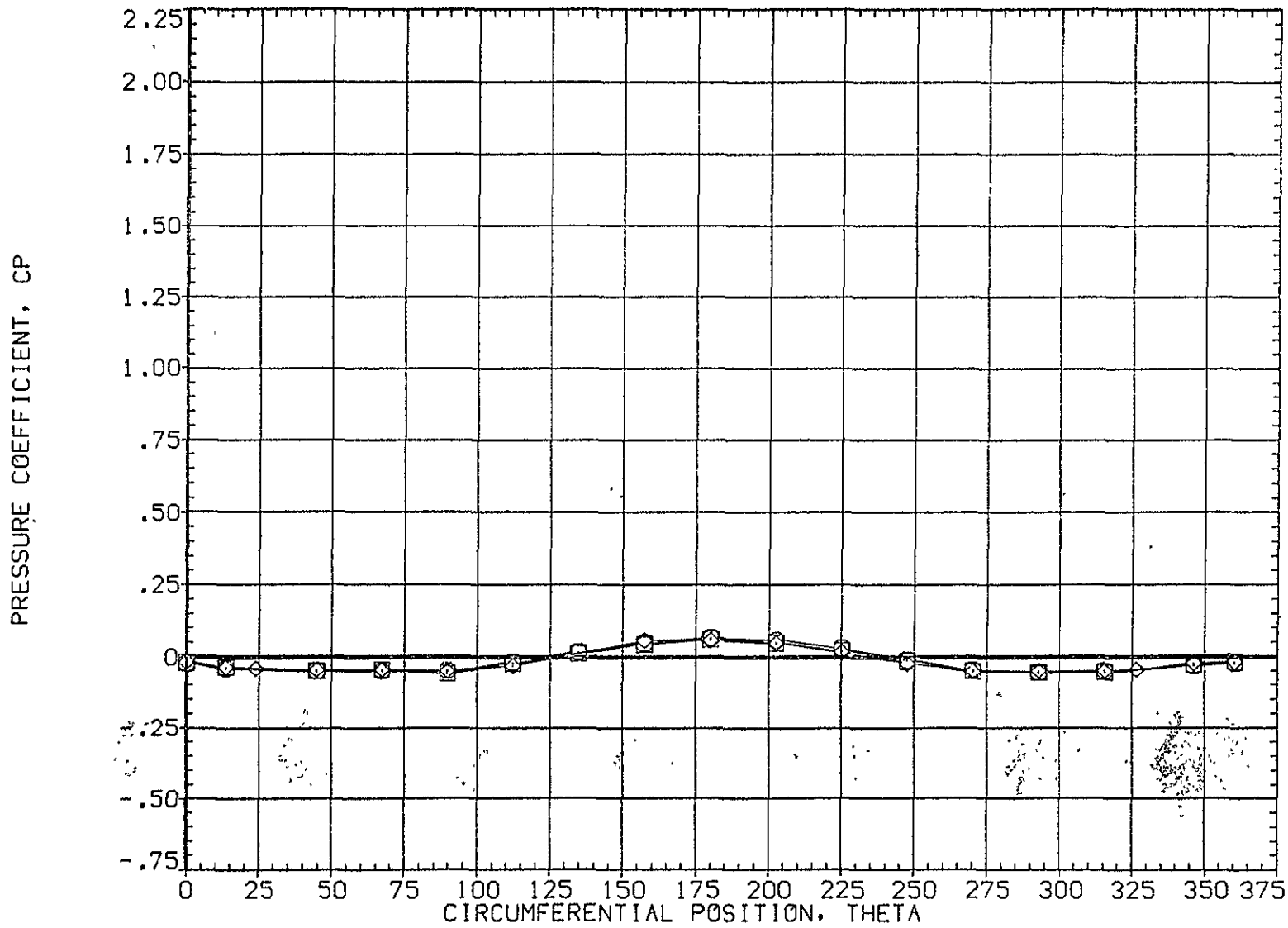

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

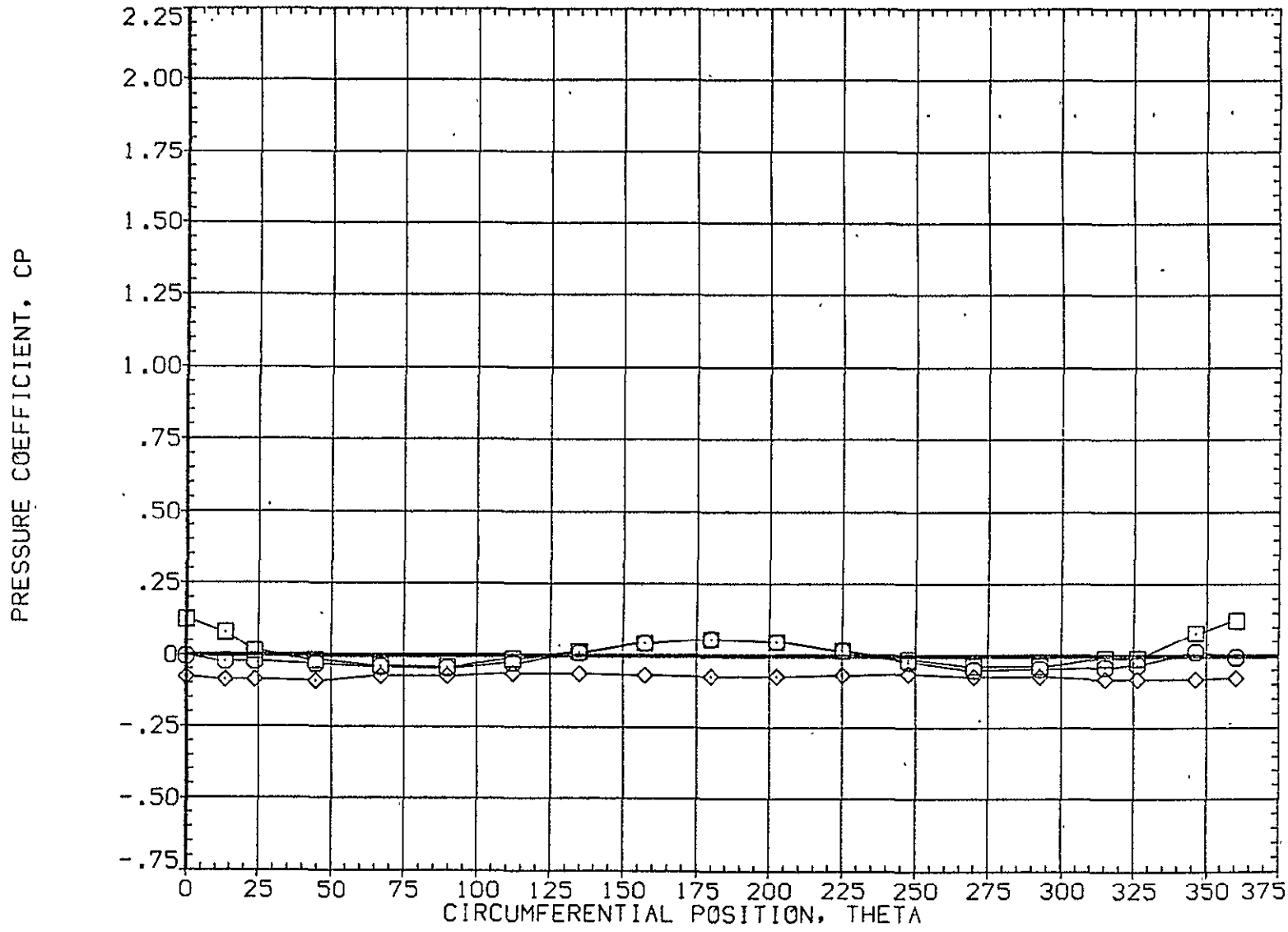

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

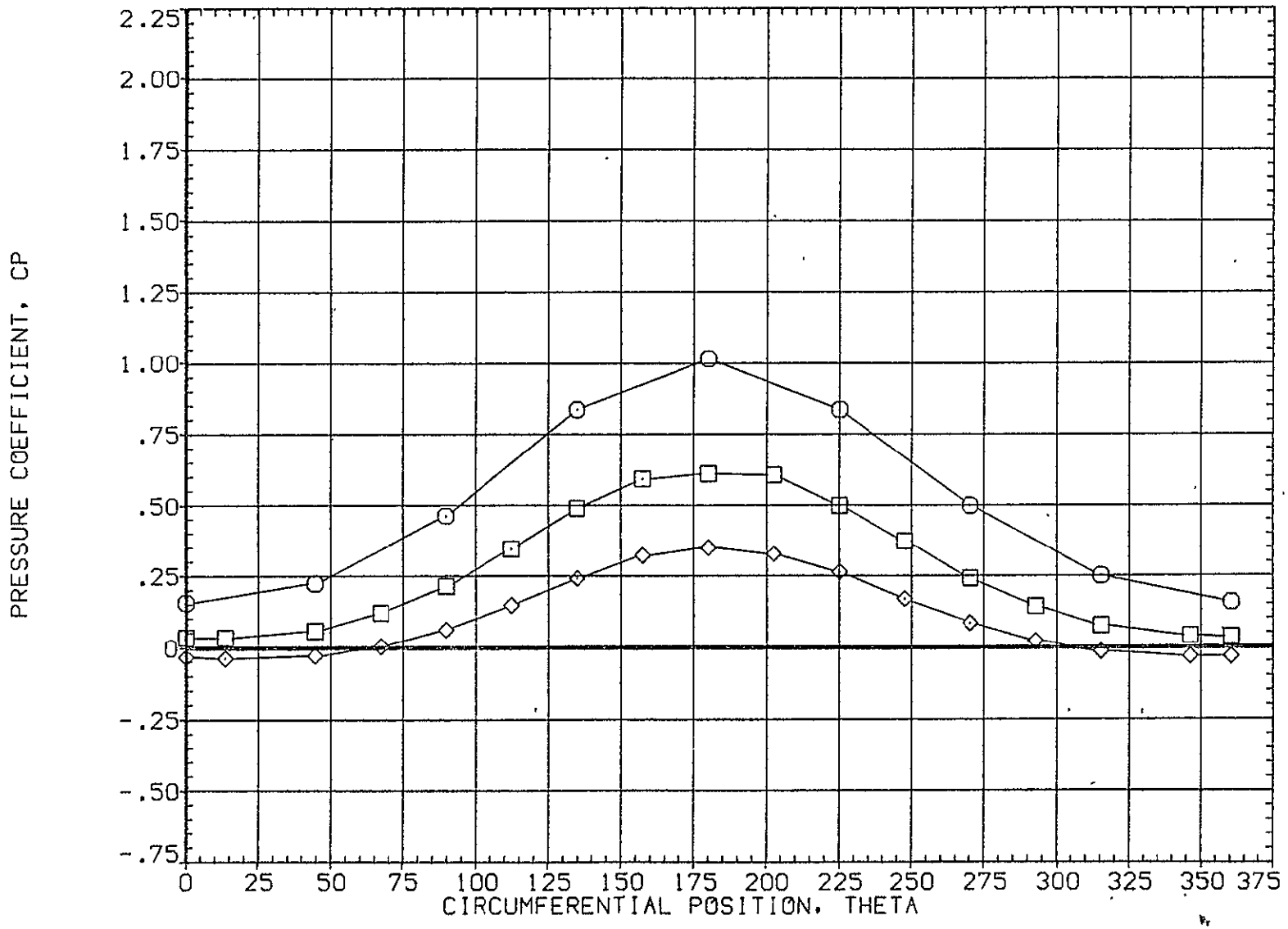

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

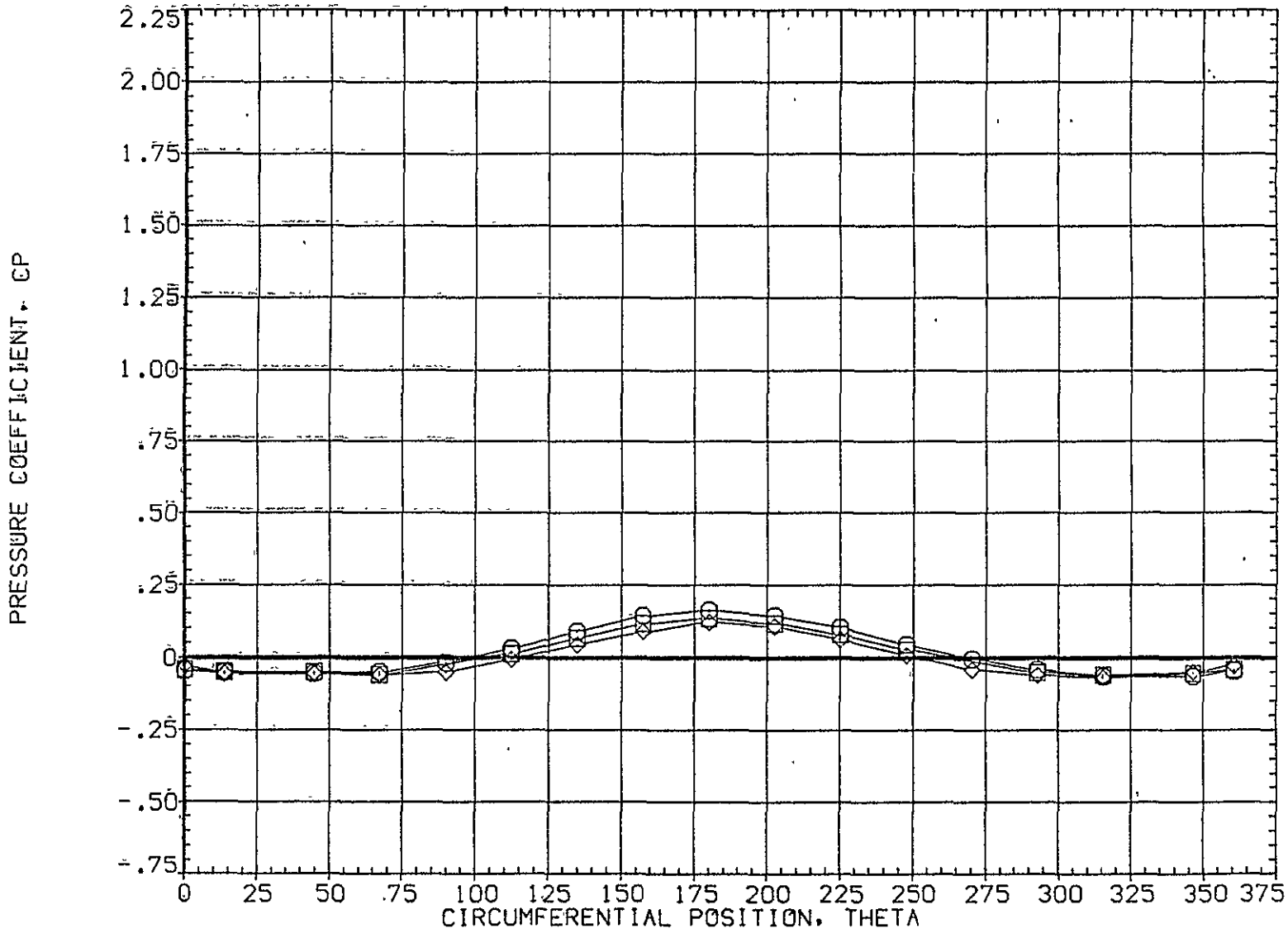

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

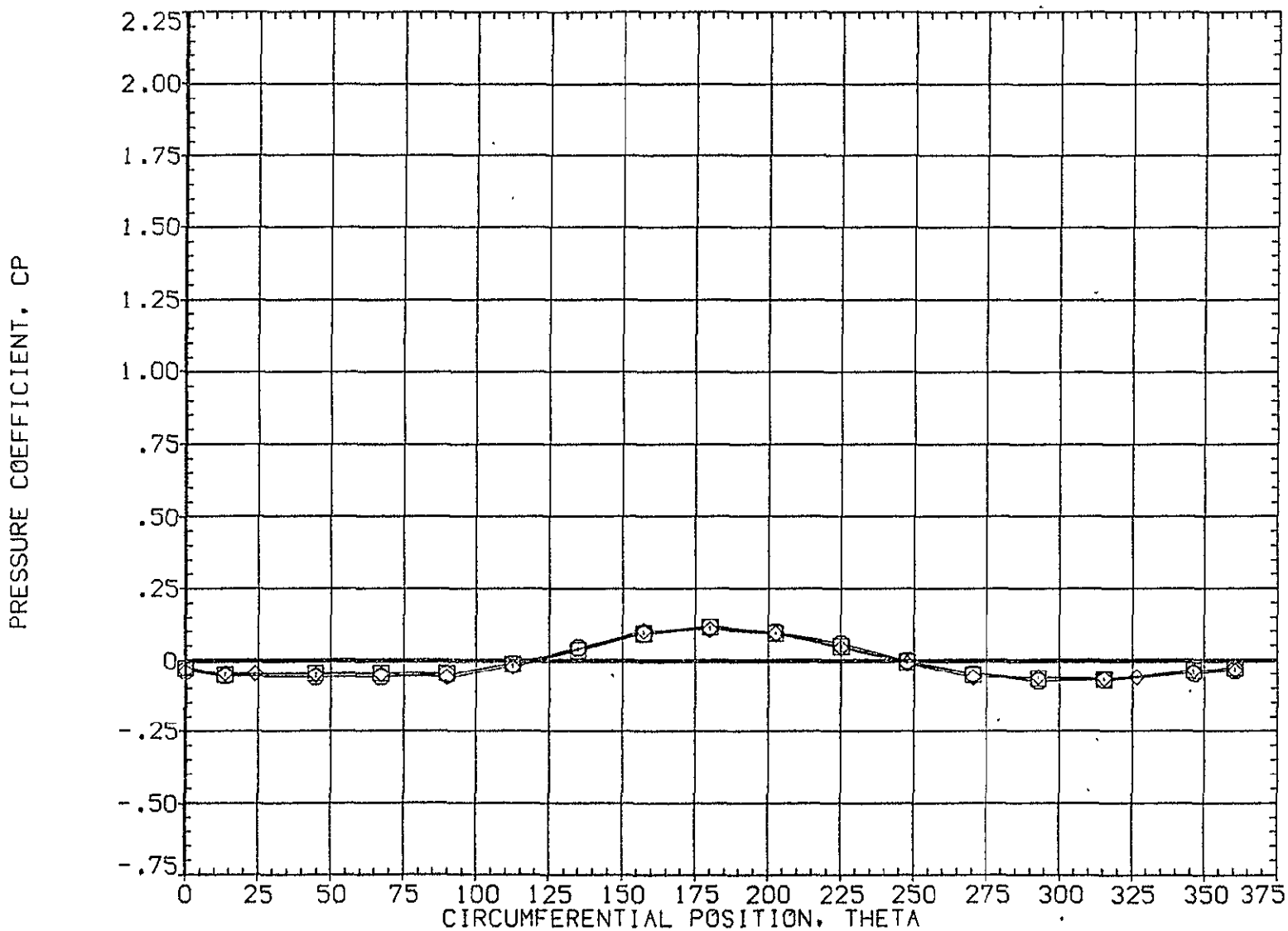

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

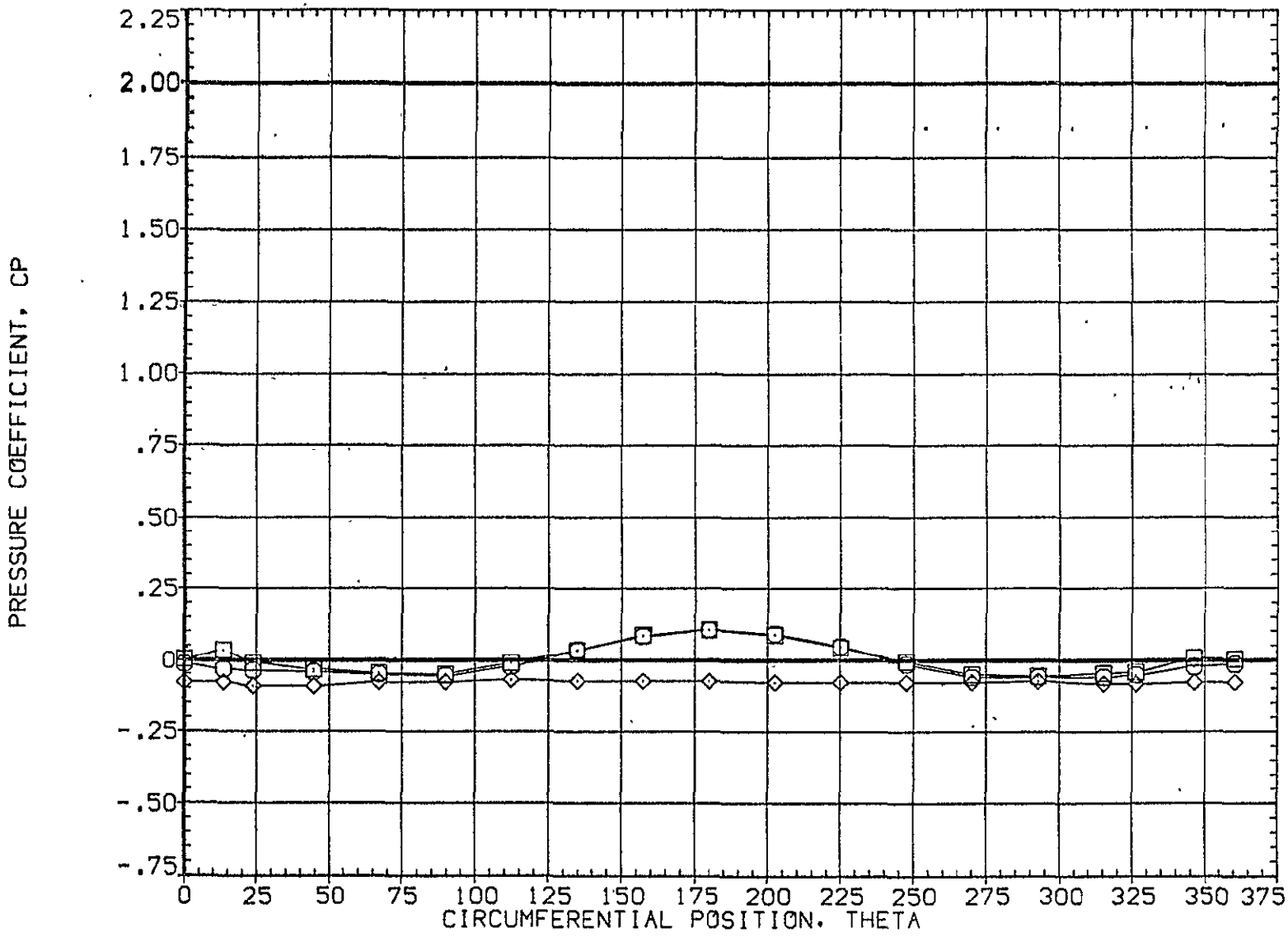

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

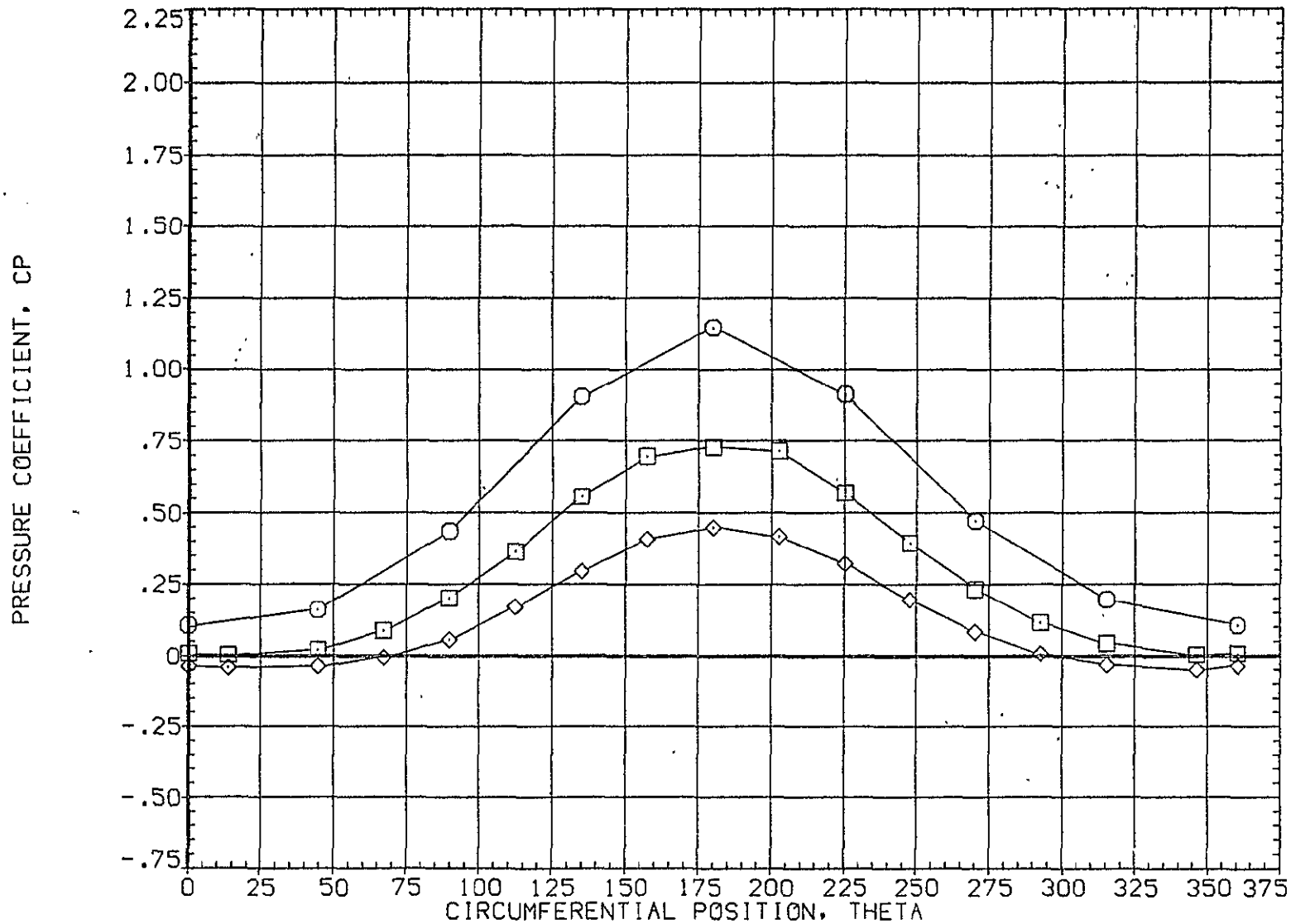

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

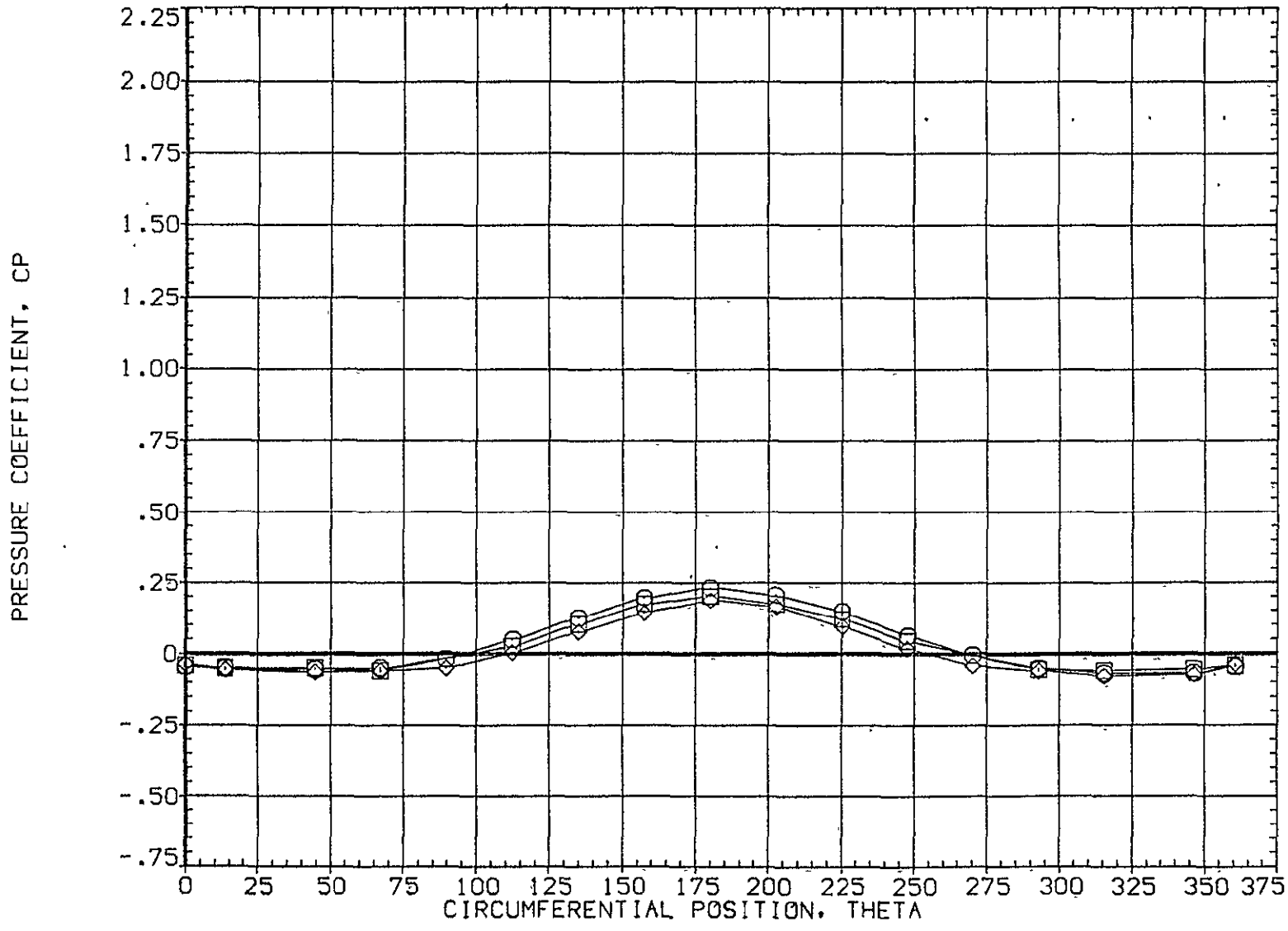

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

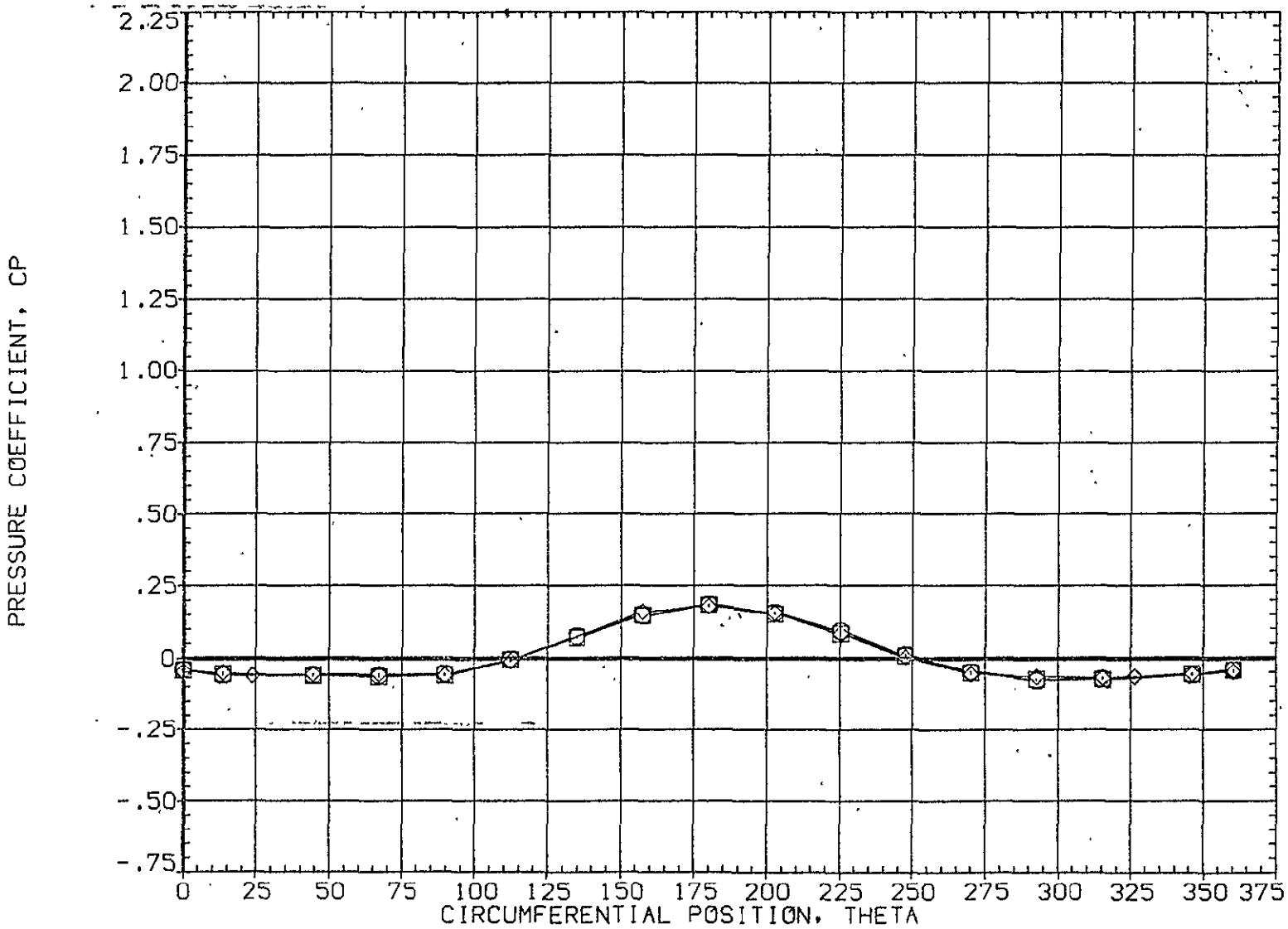

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

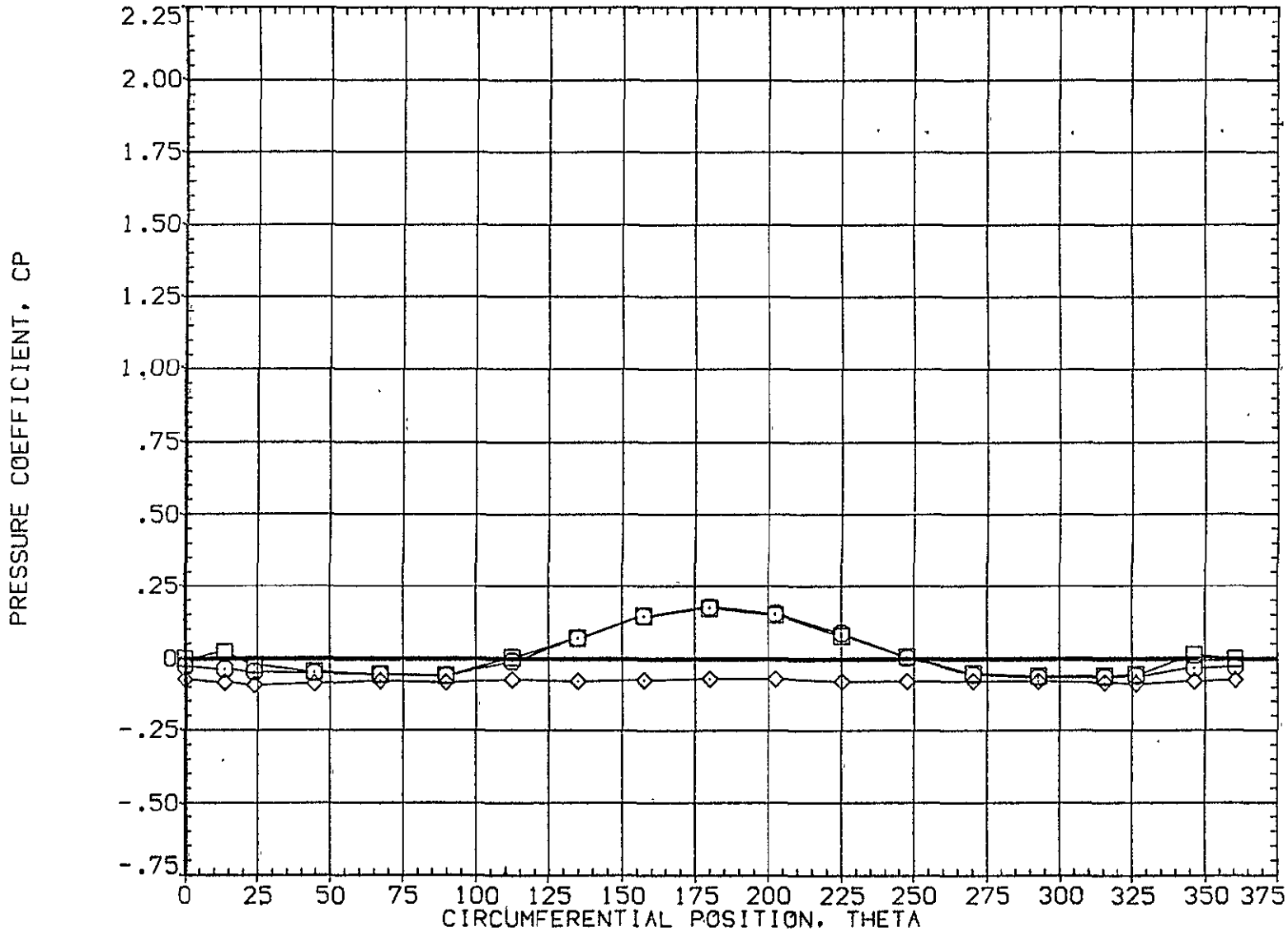

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

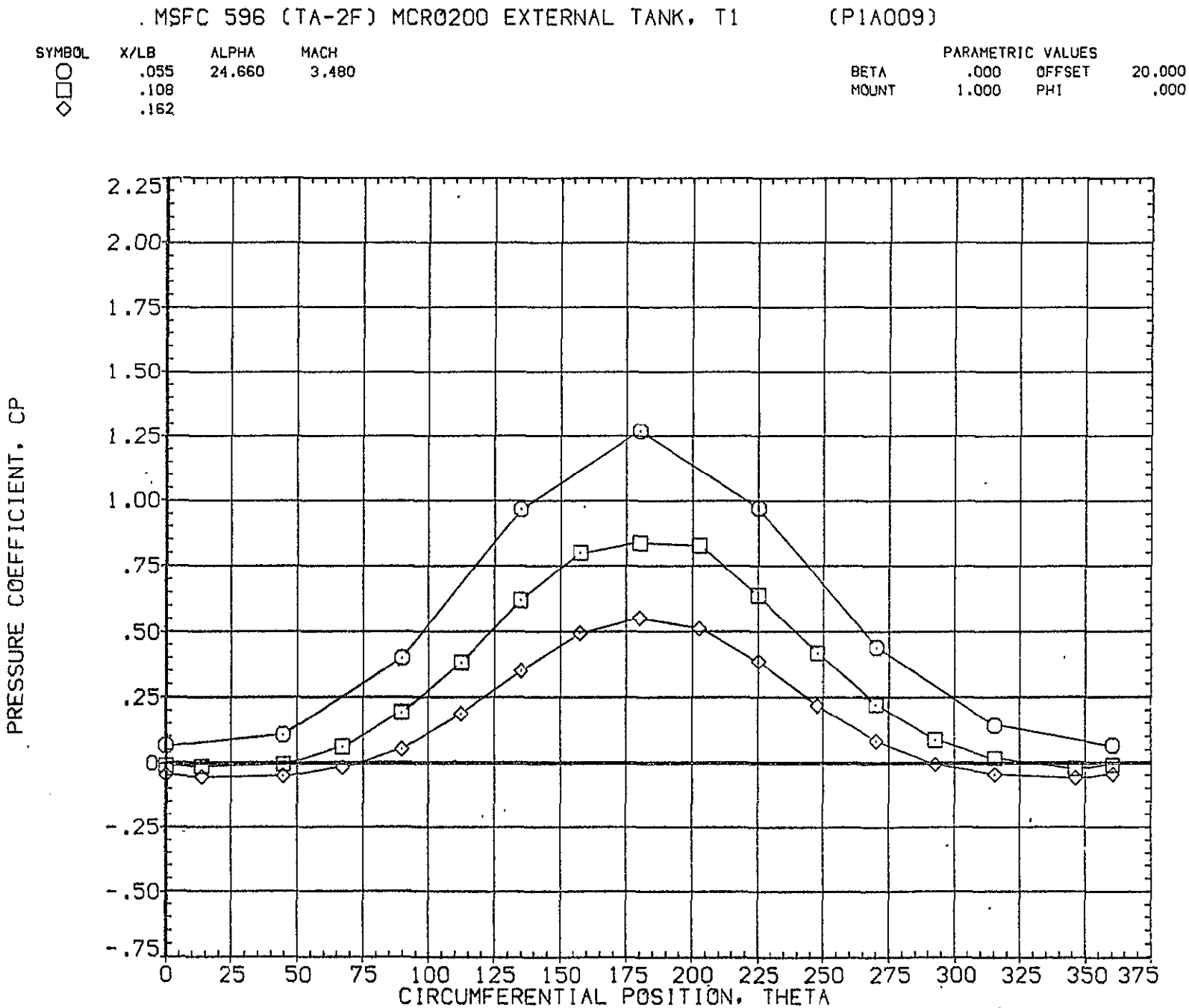

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

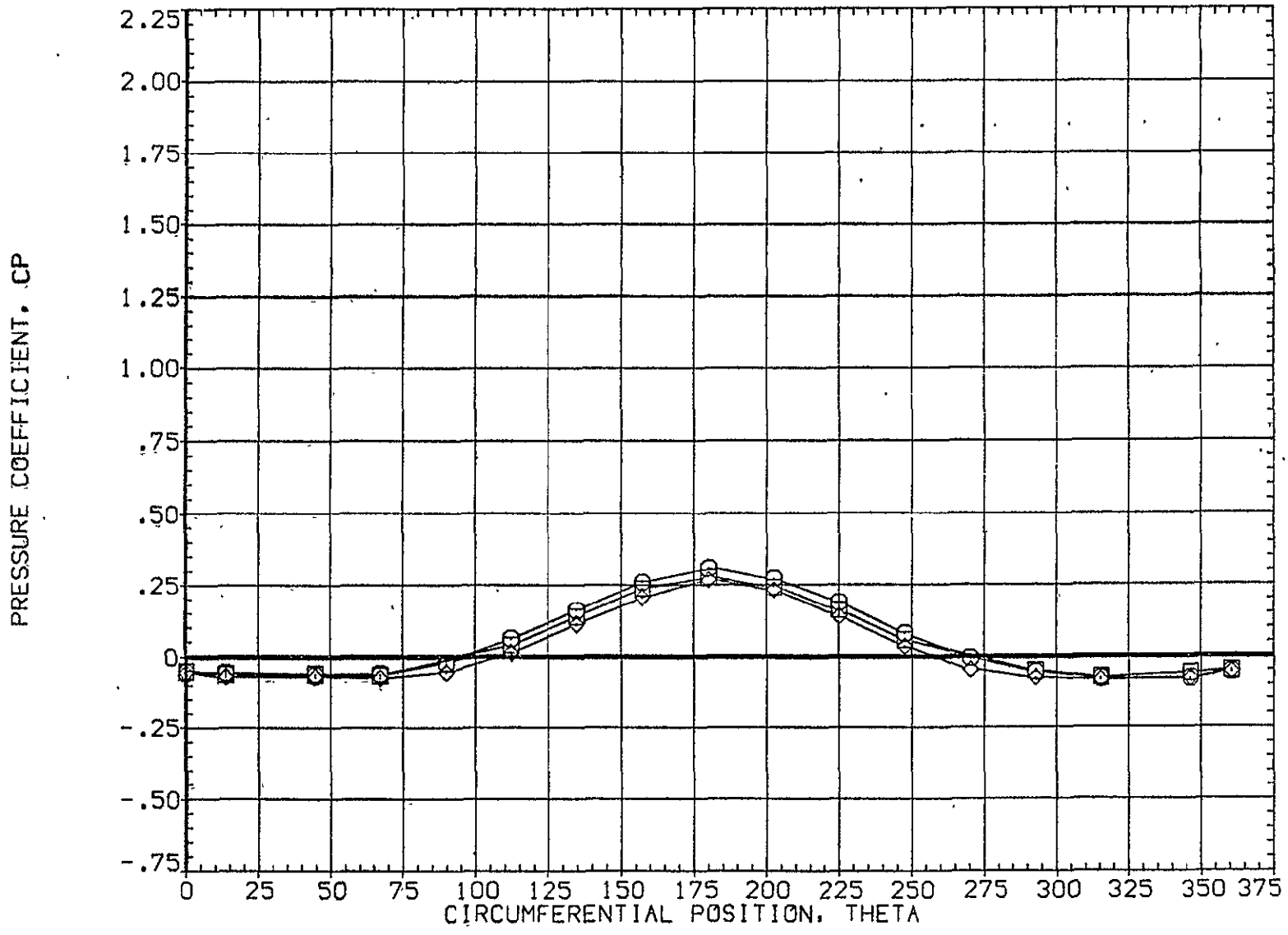

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

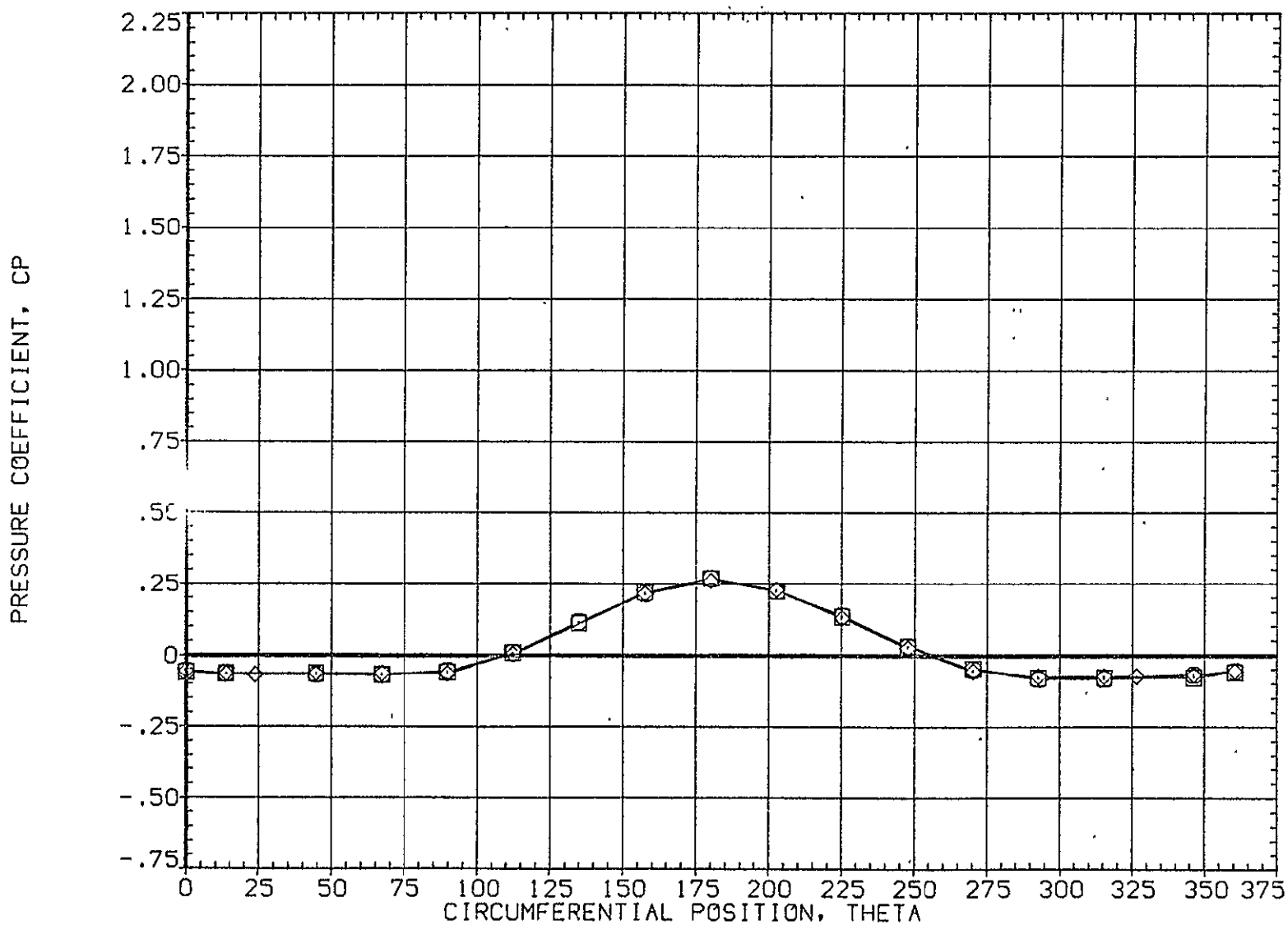

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

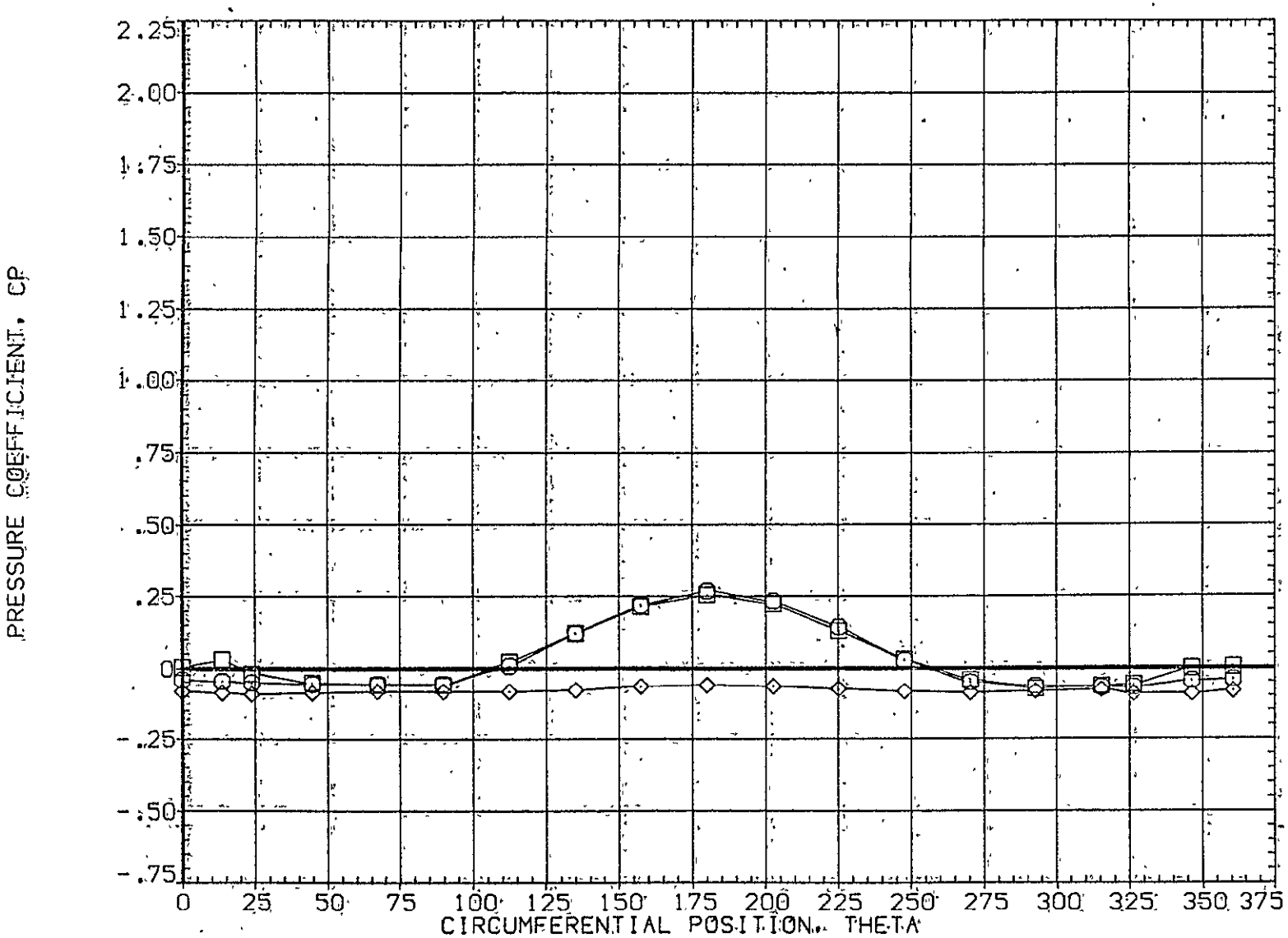

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

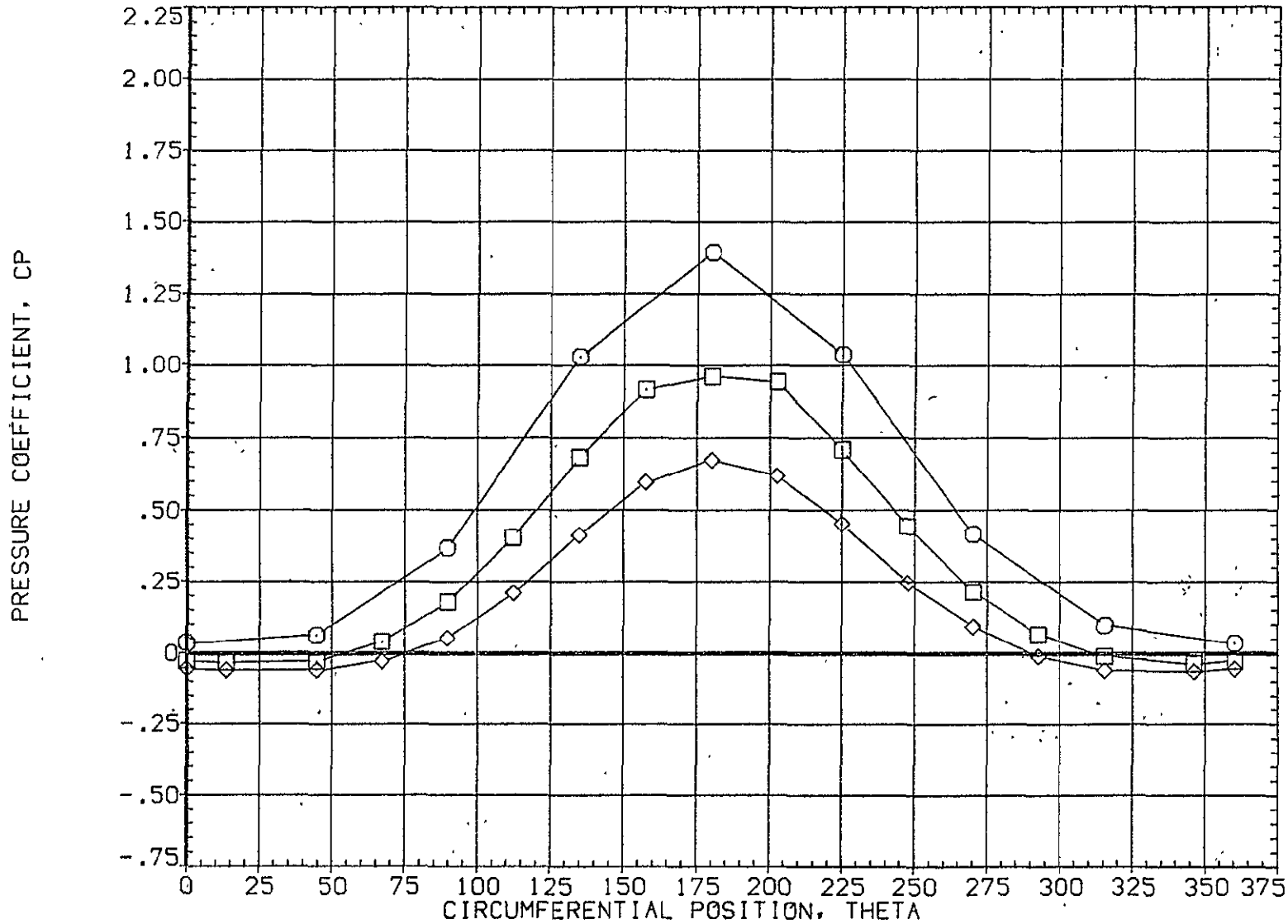

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

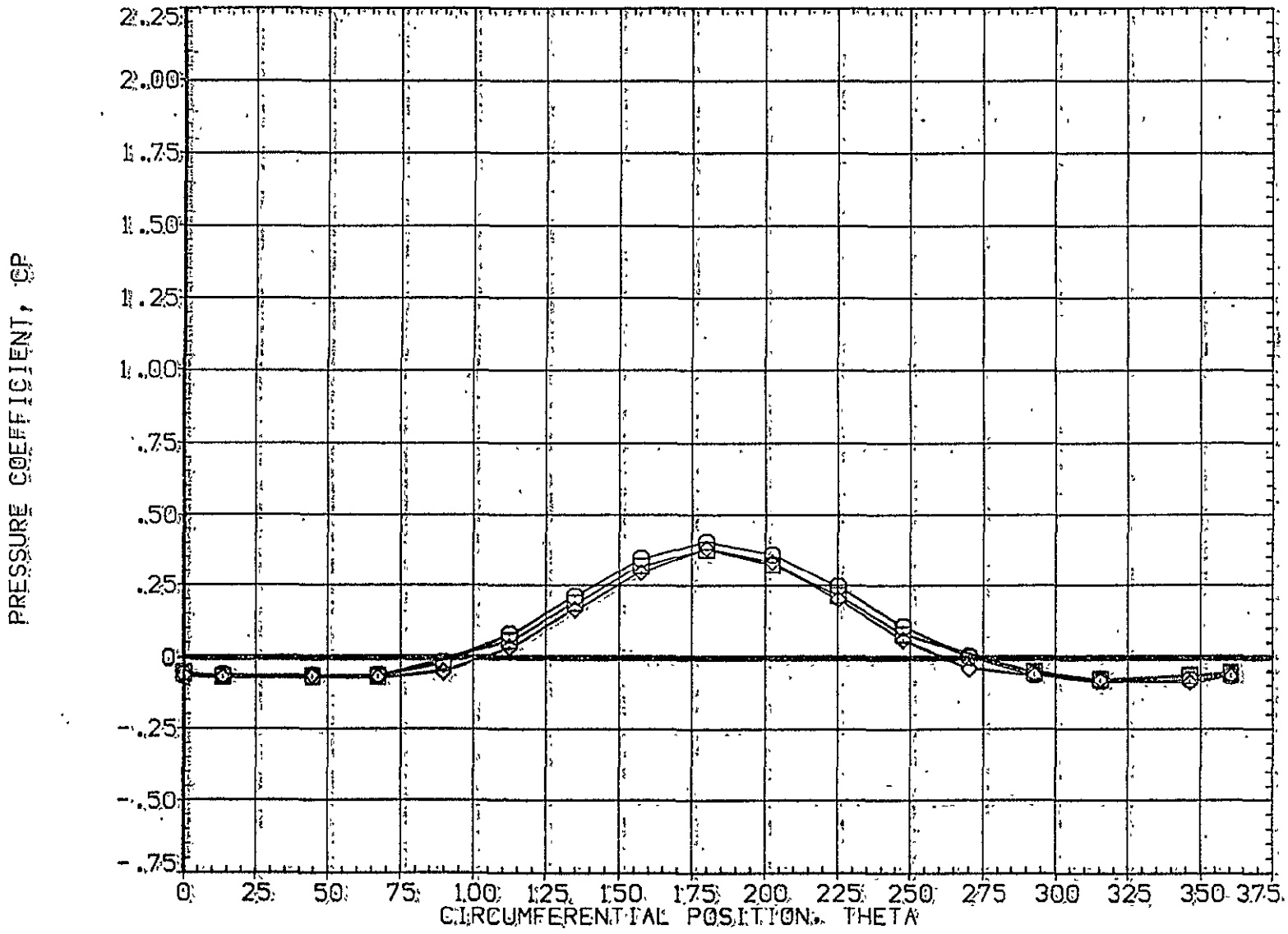

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

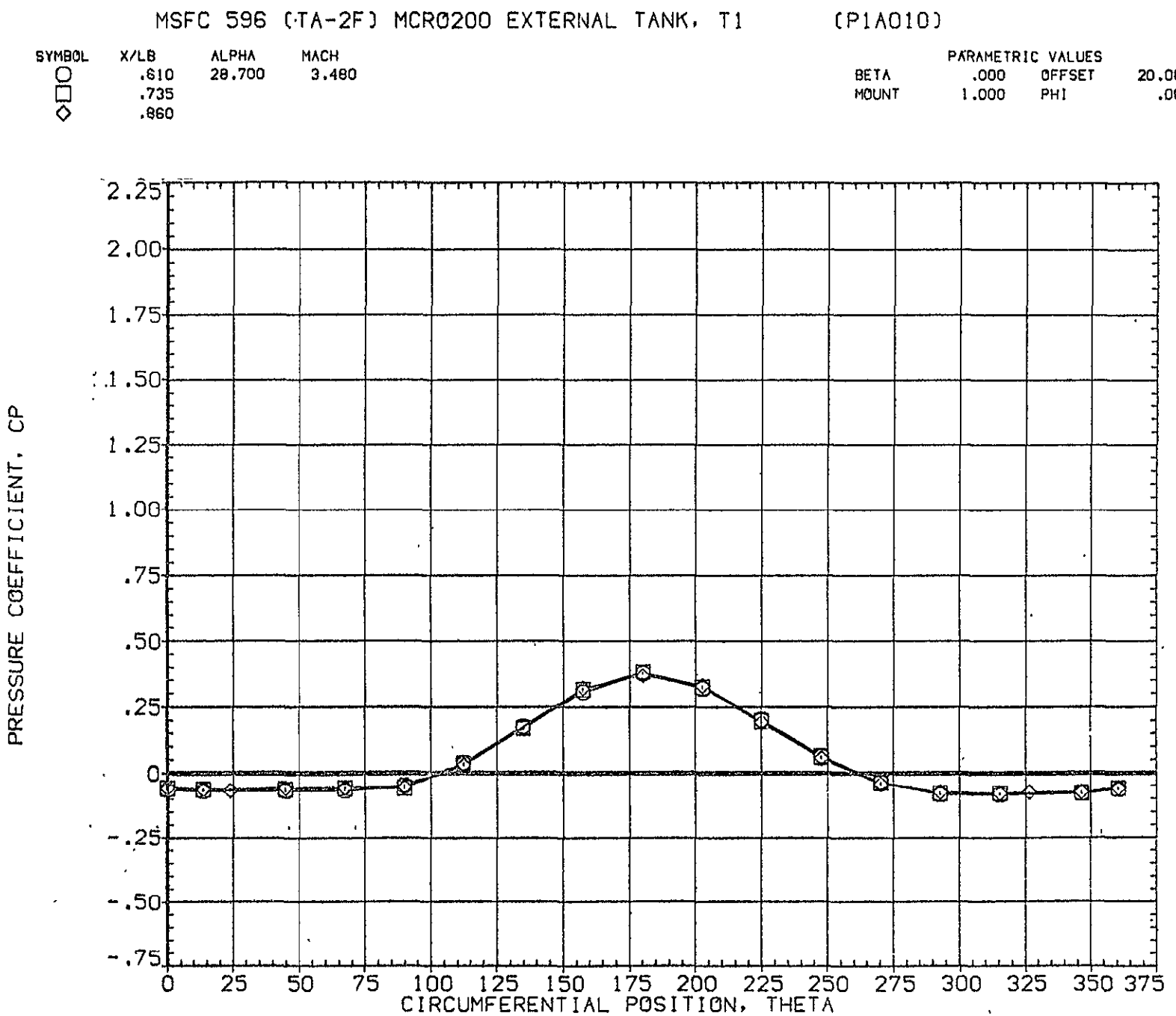

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

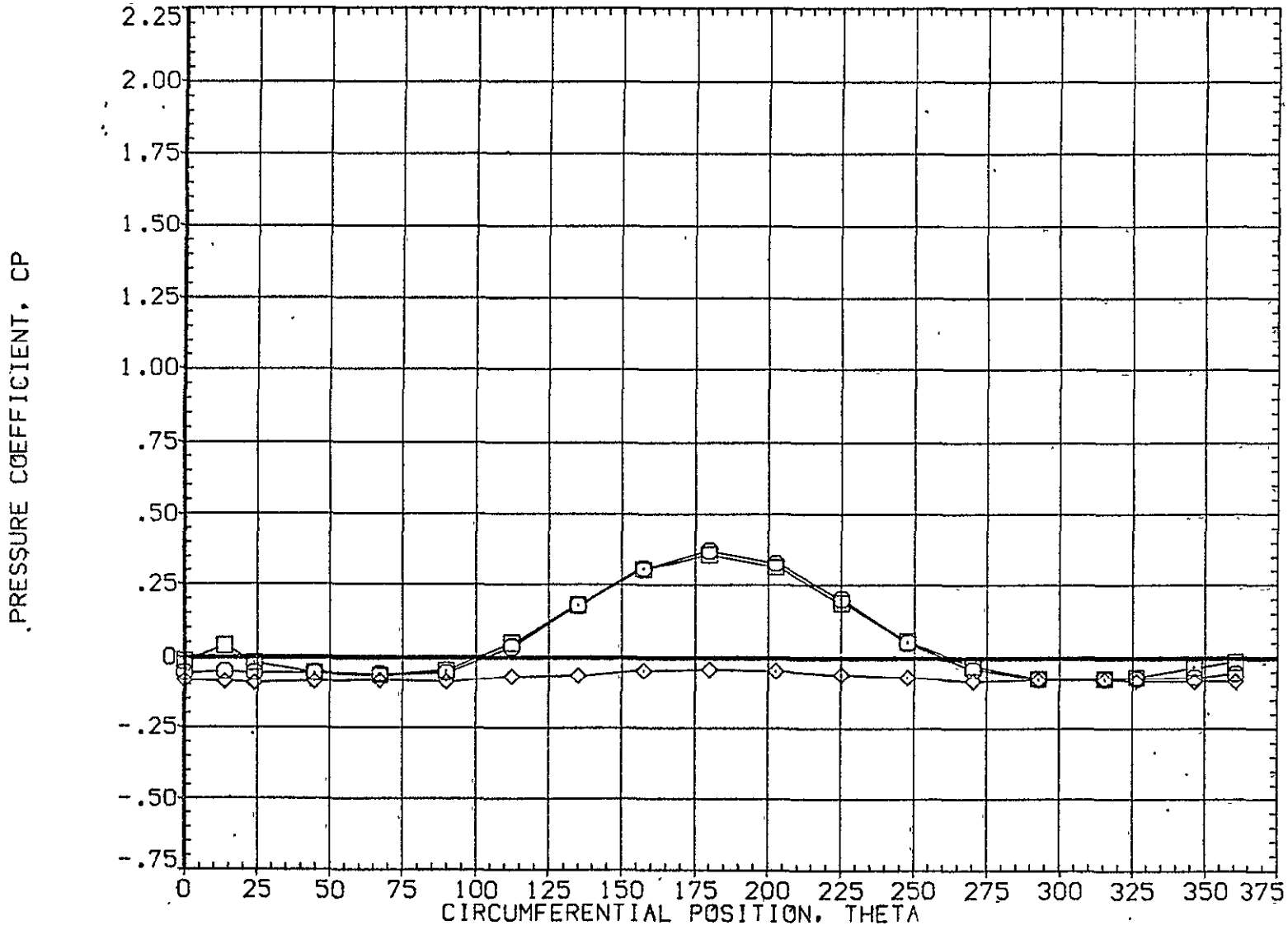

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.380	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

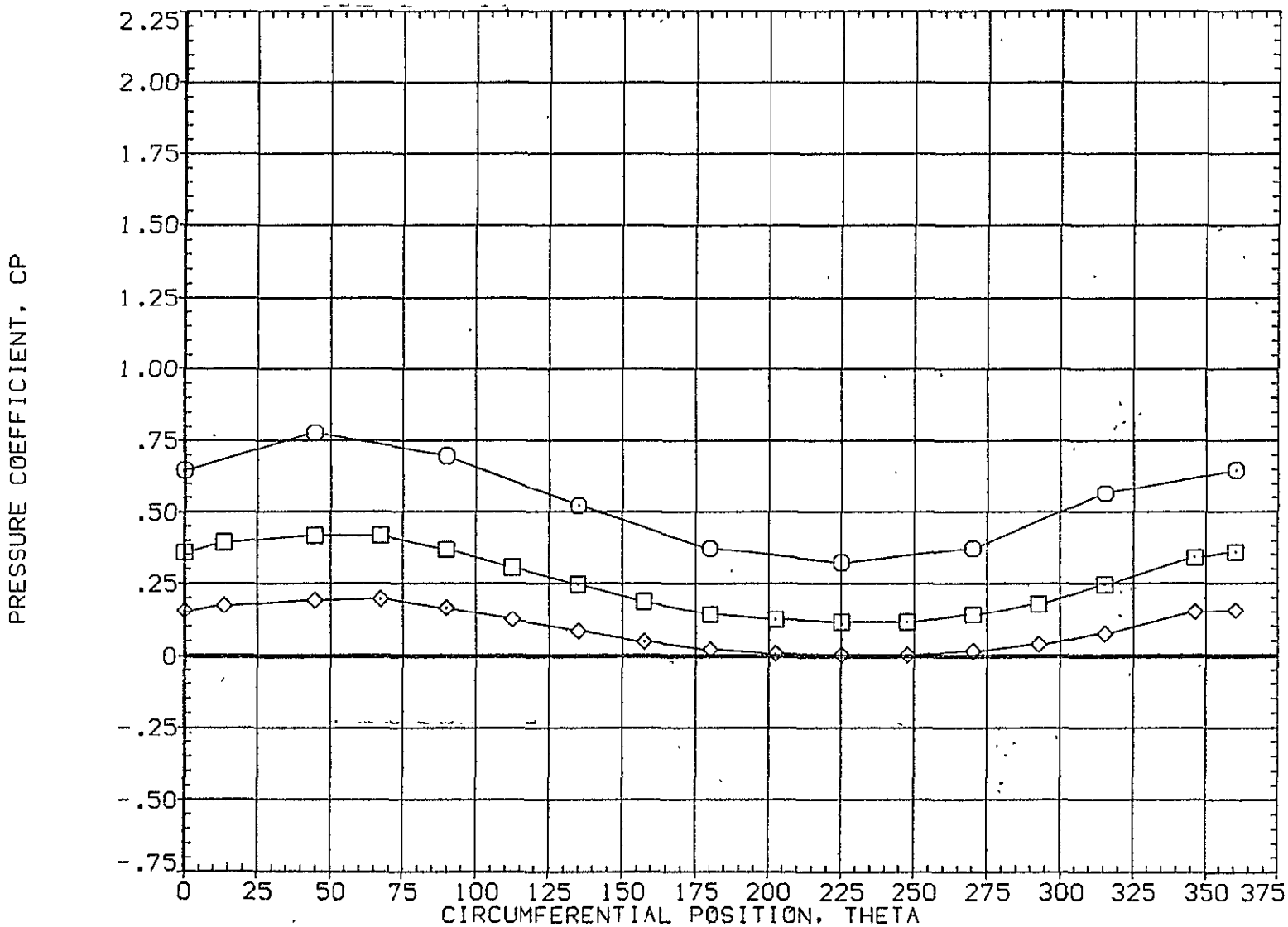

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.380	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

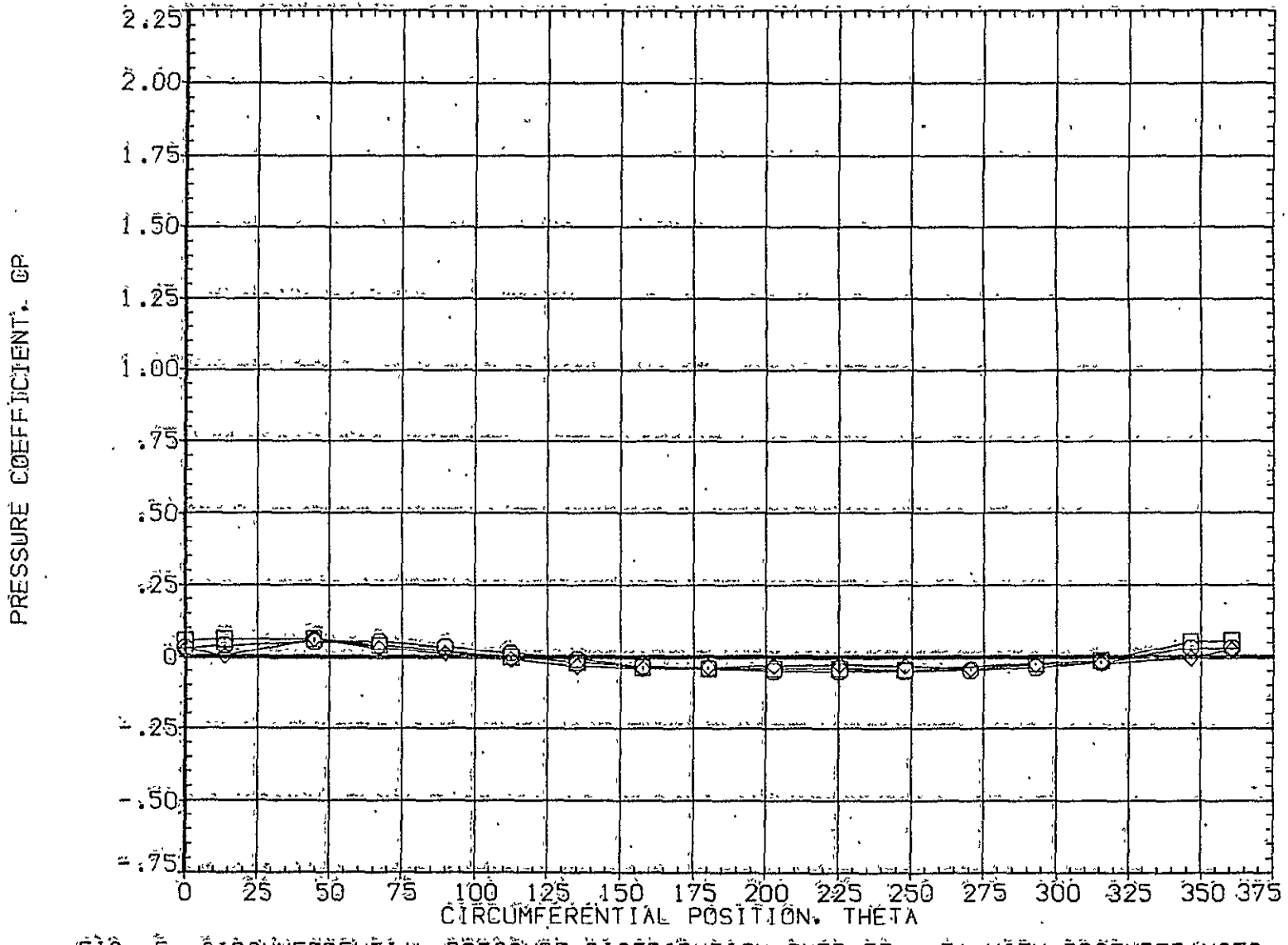

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-0.380	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

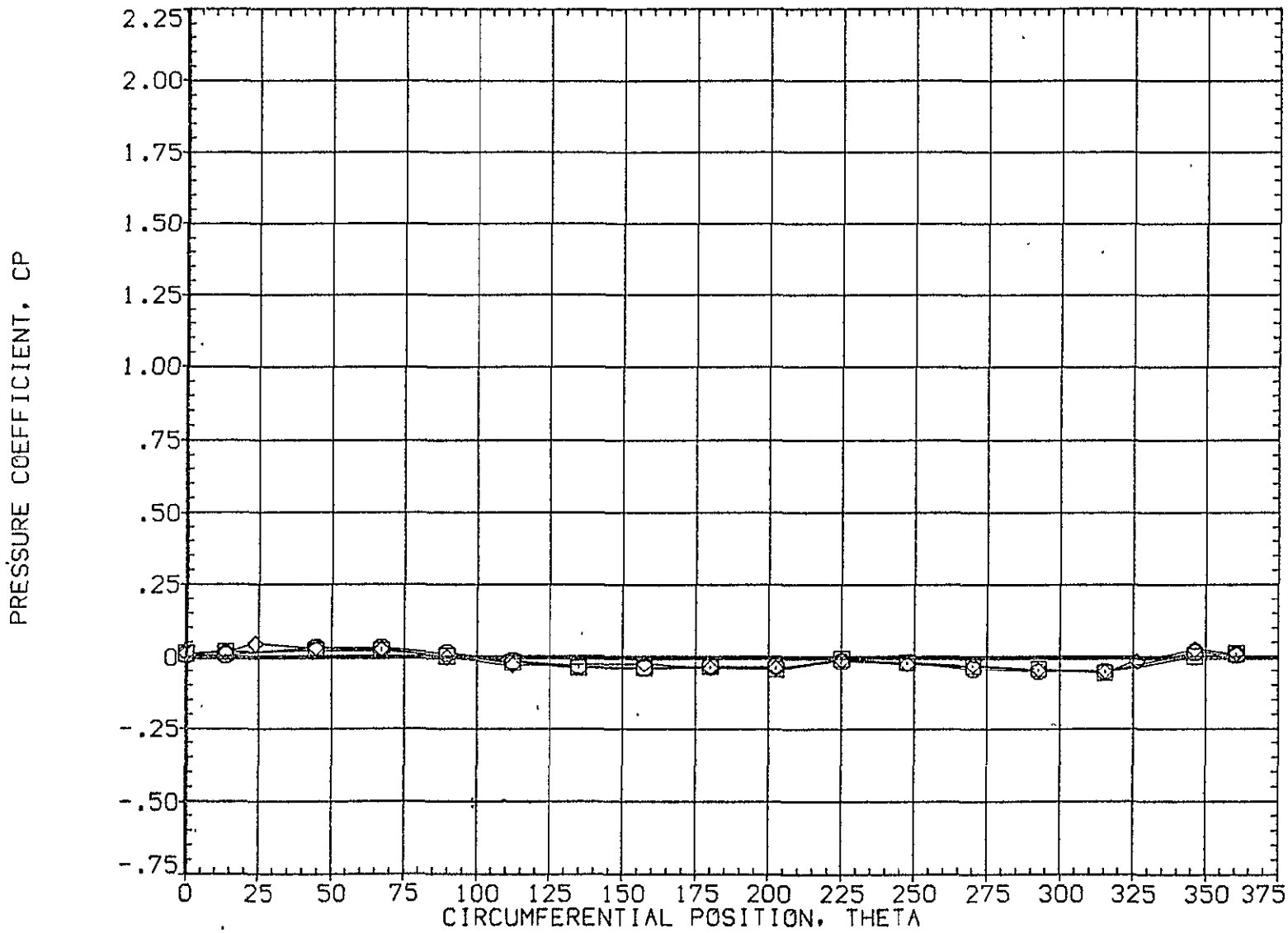

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.380	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

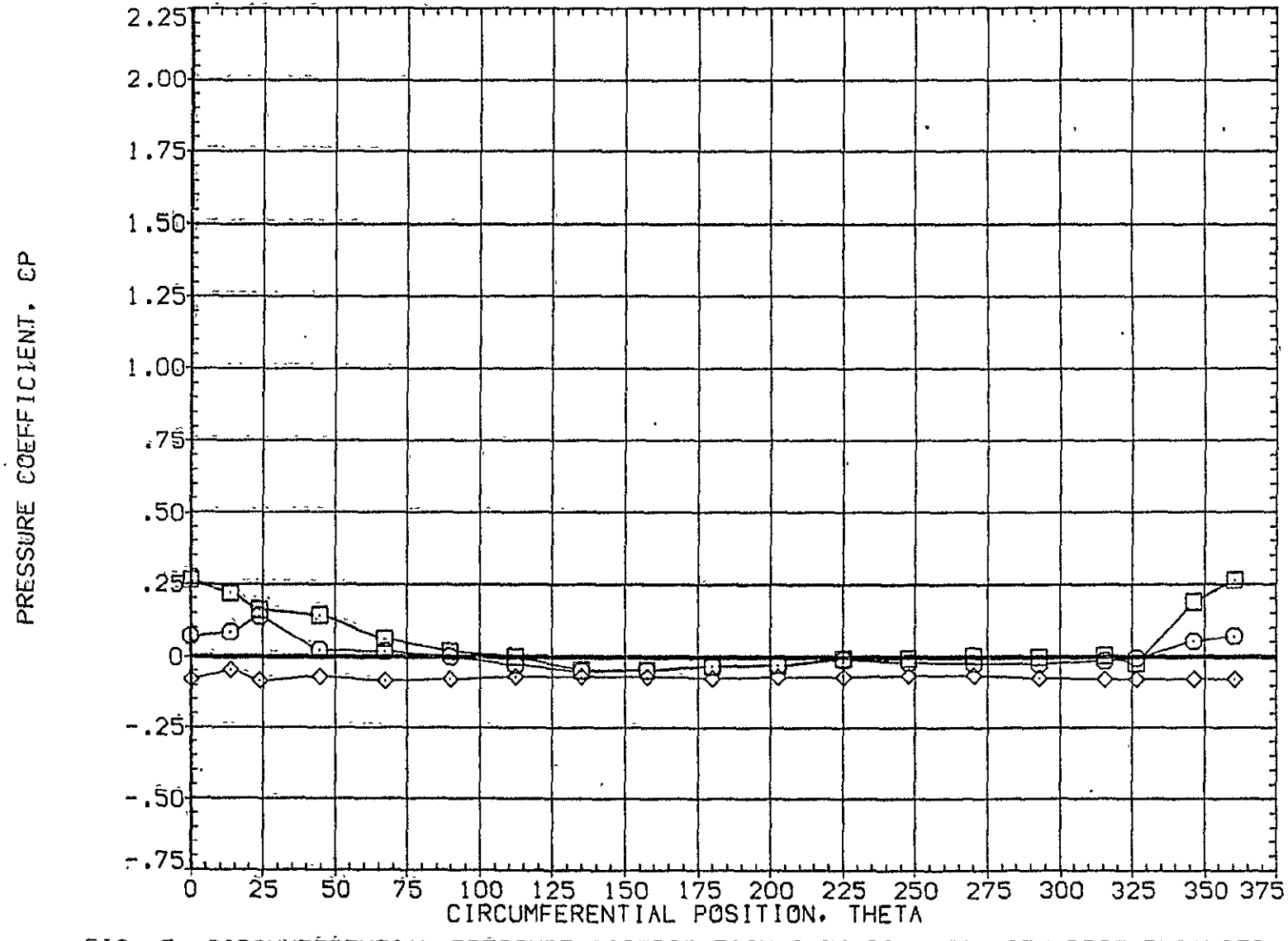

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

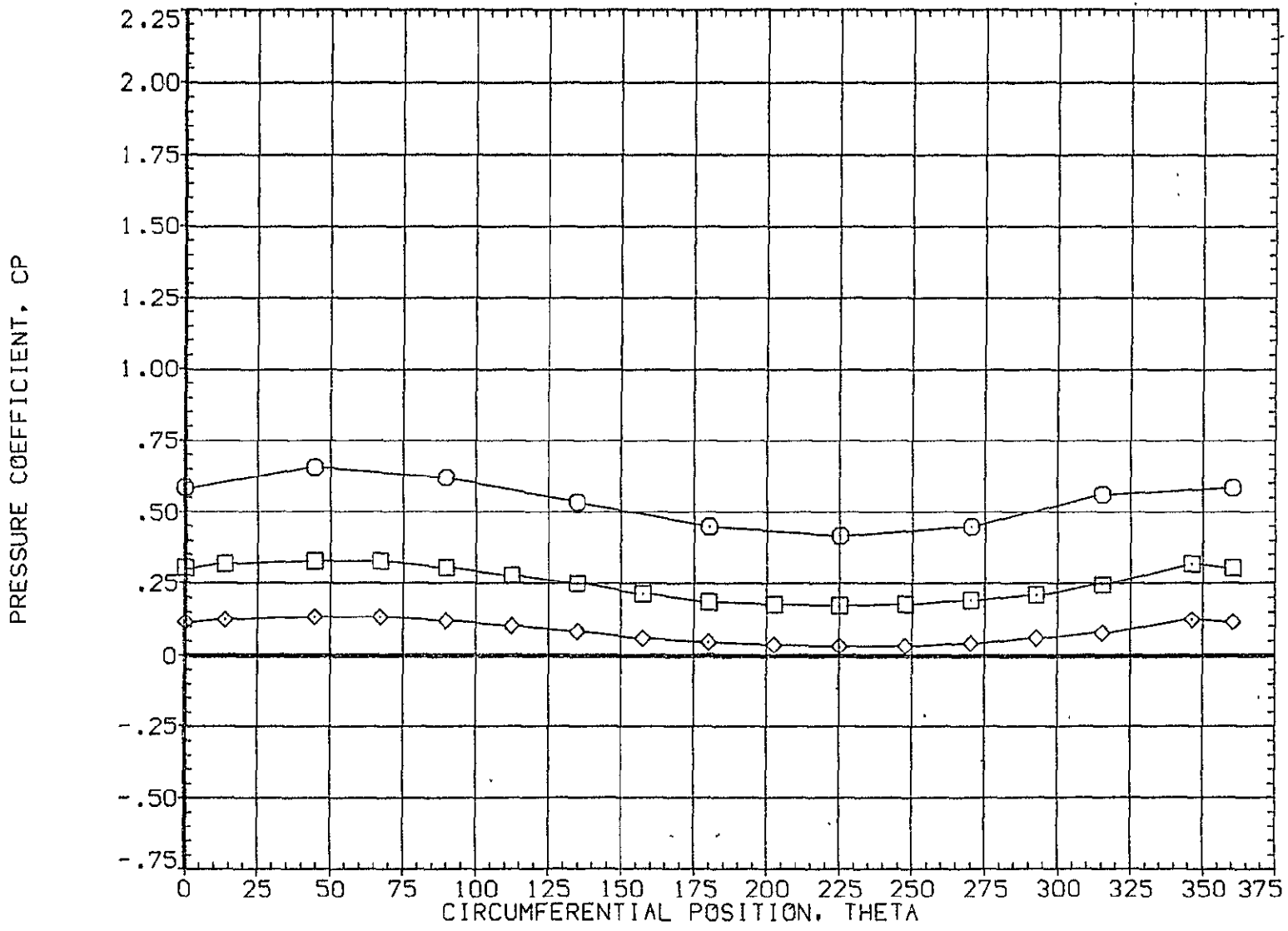

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

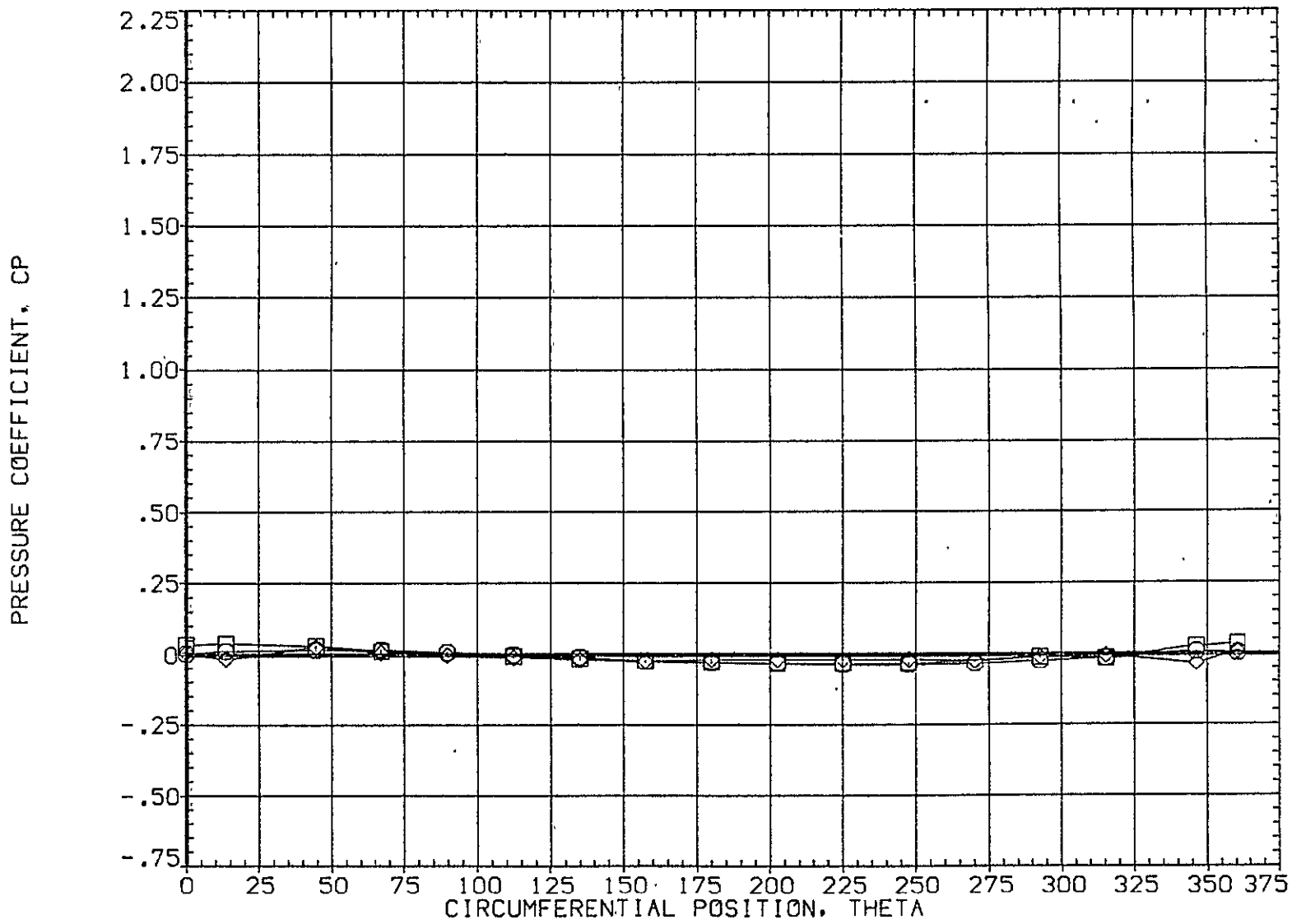

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

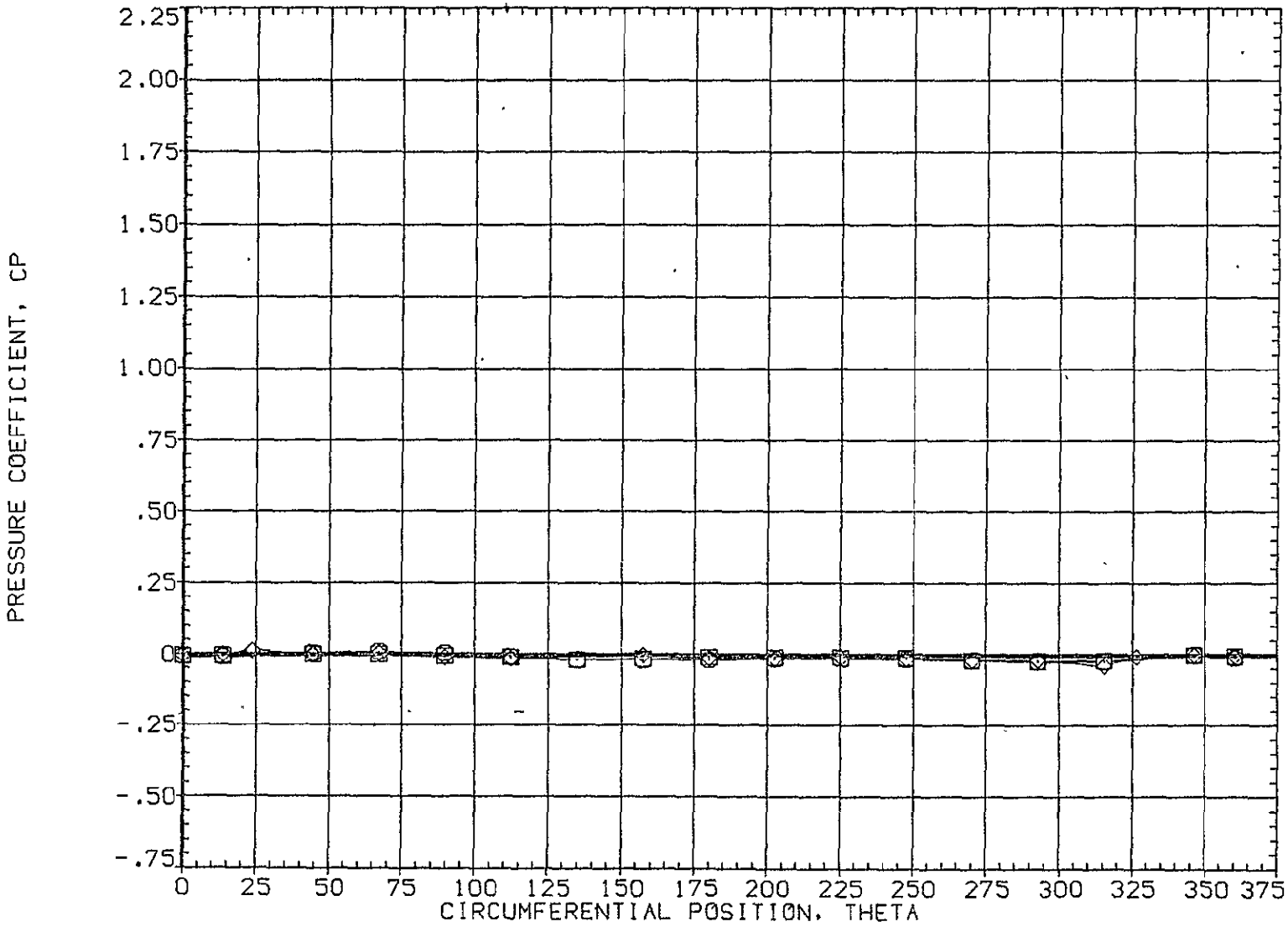

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

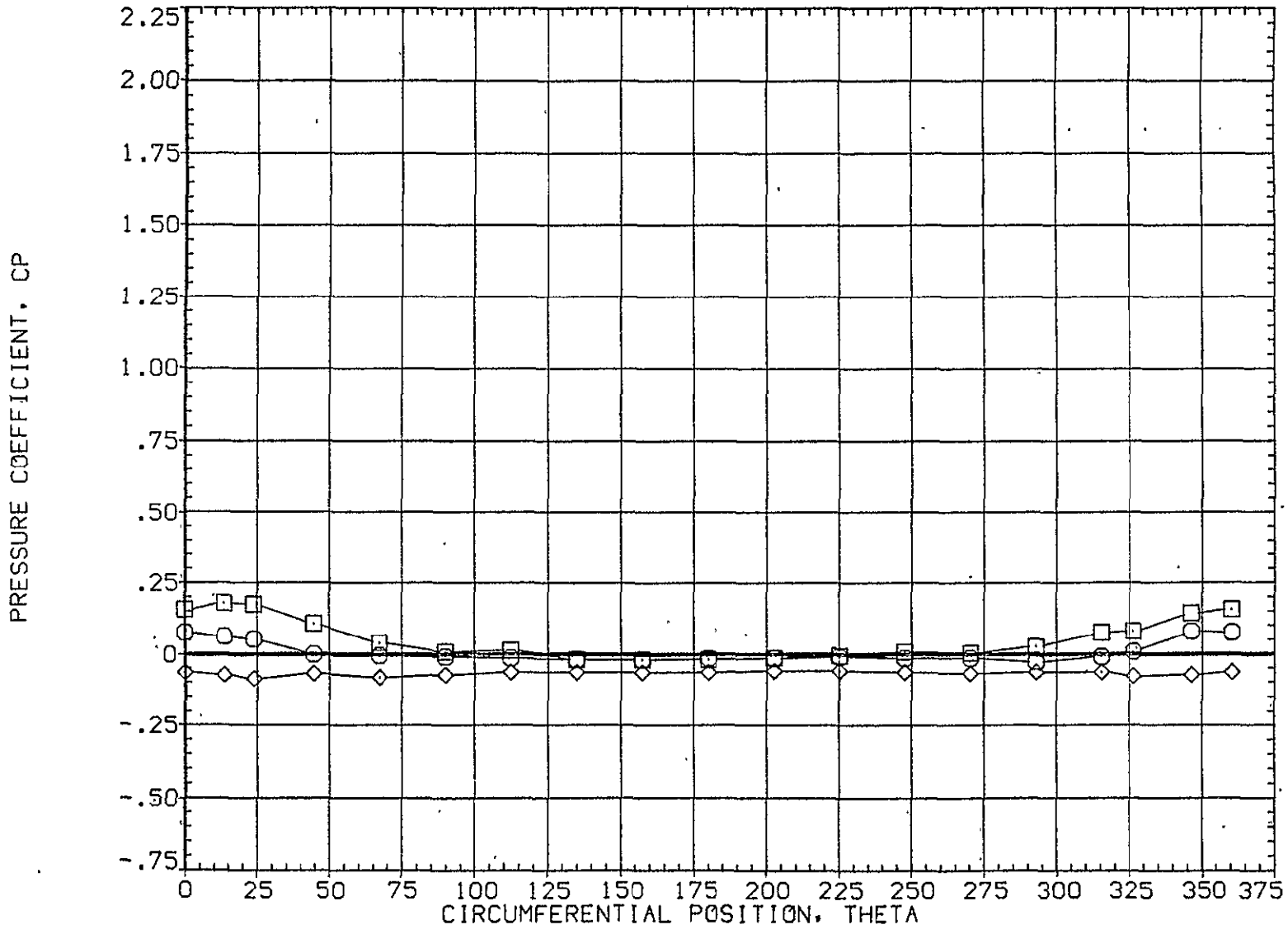

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

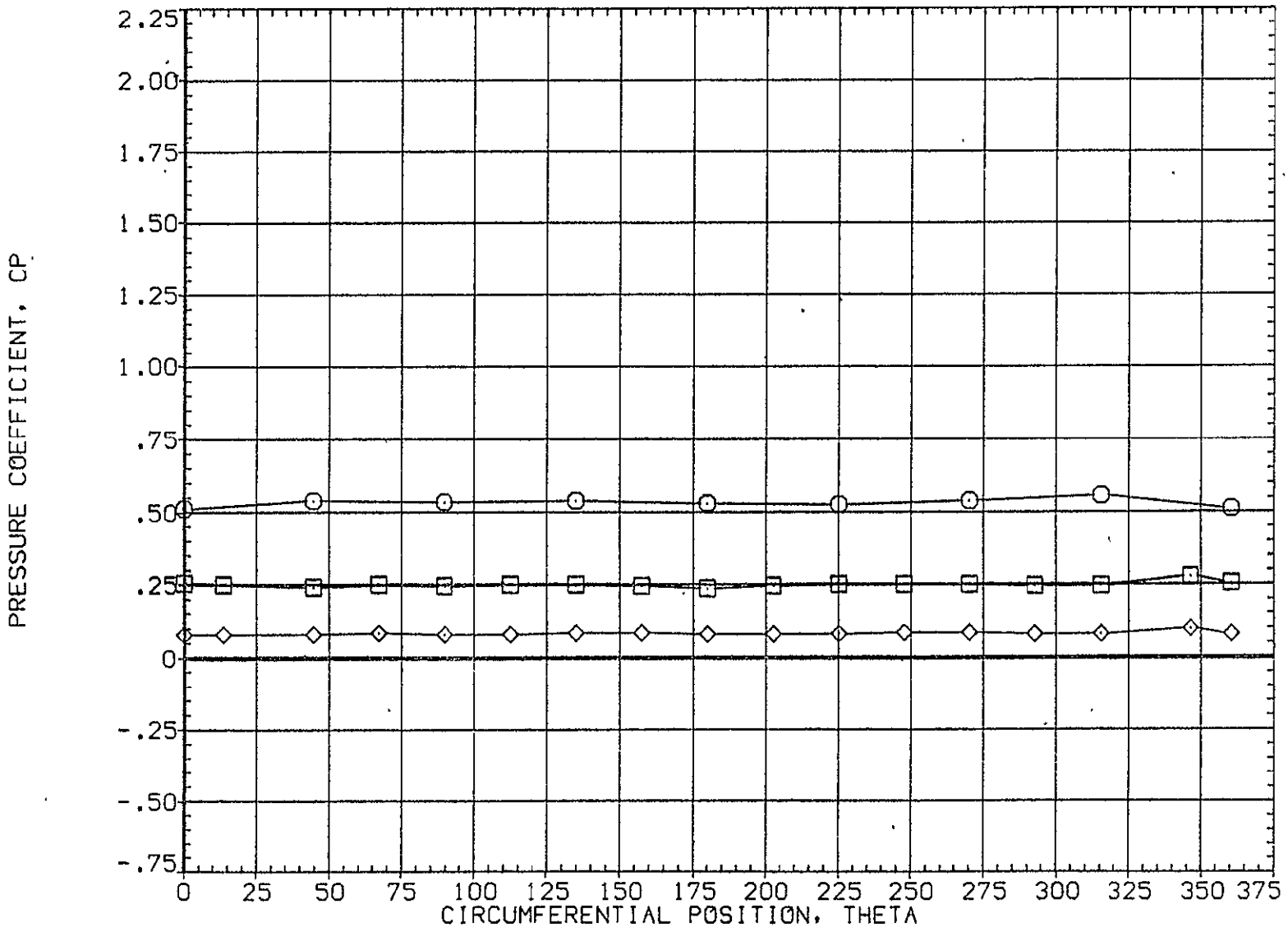

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

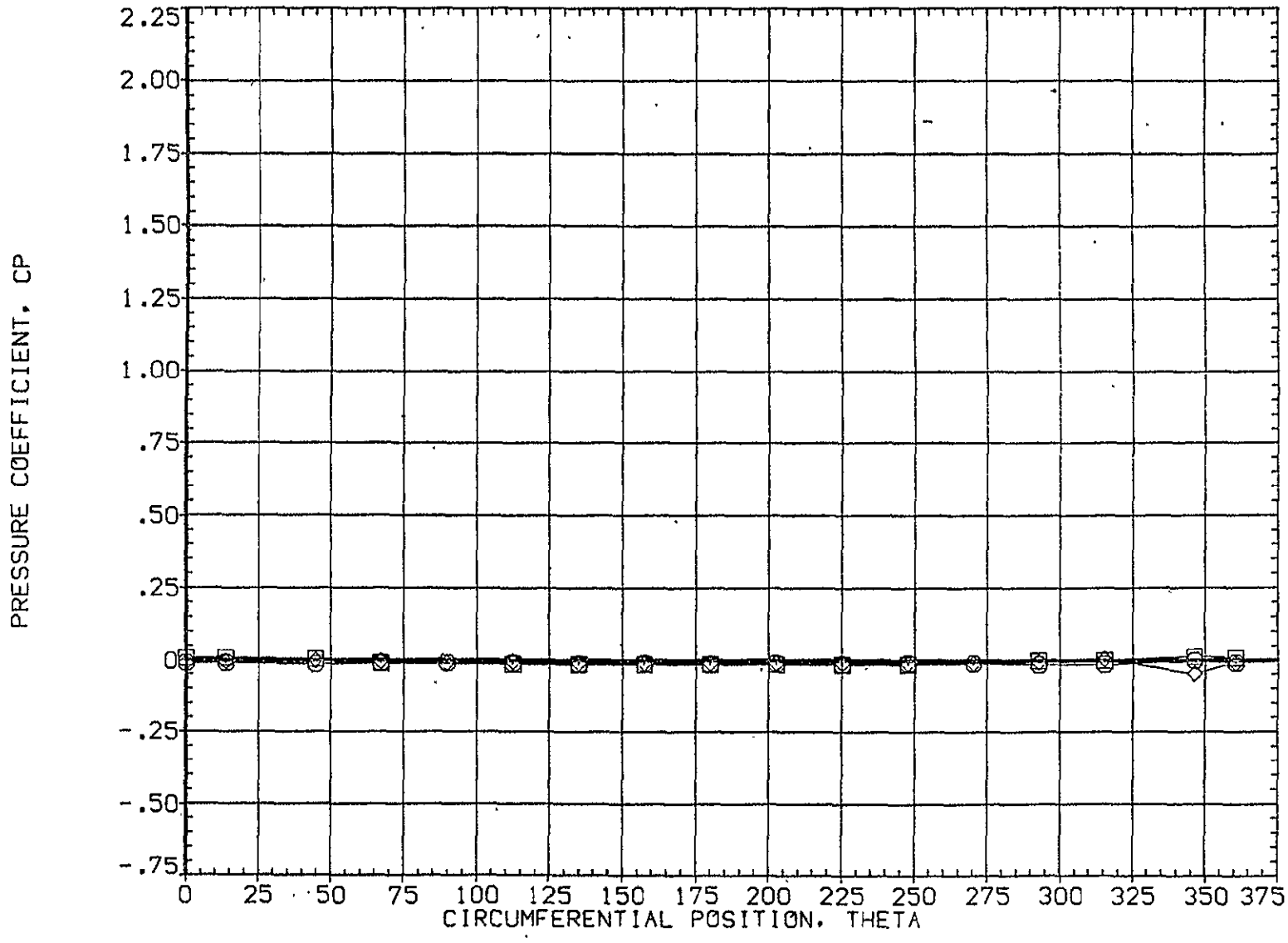

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

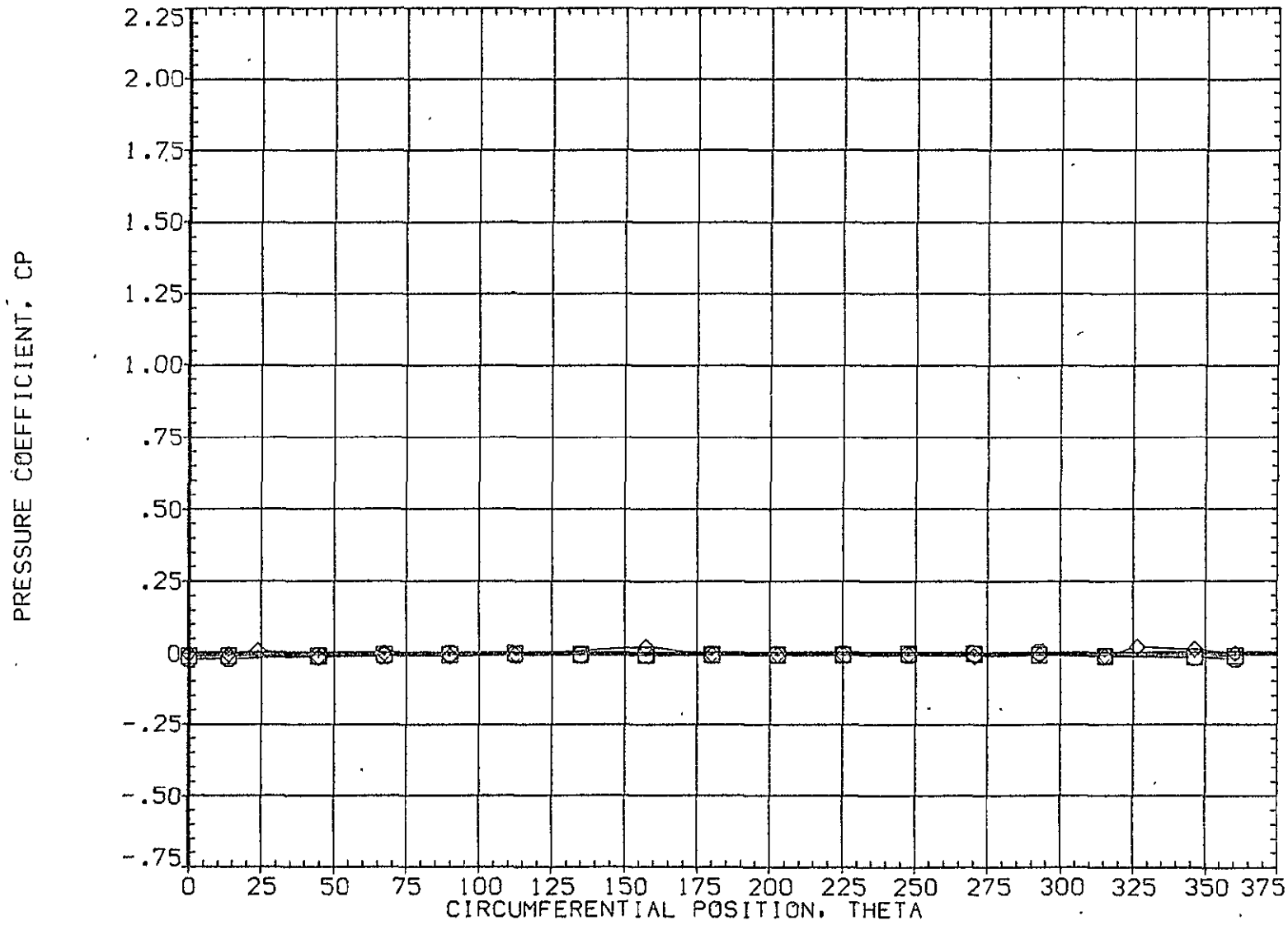

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

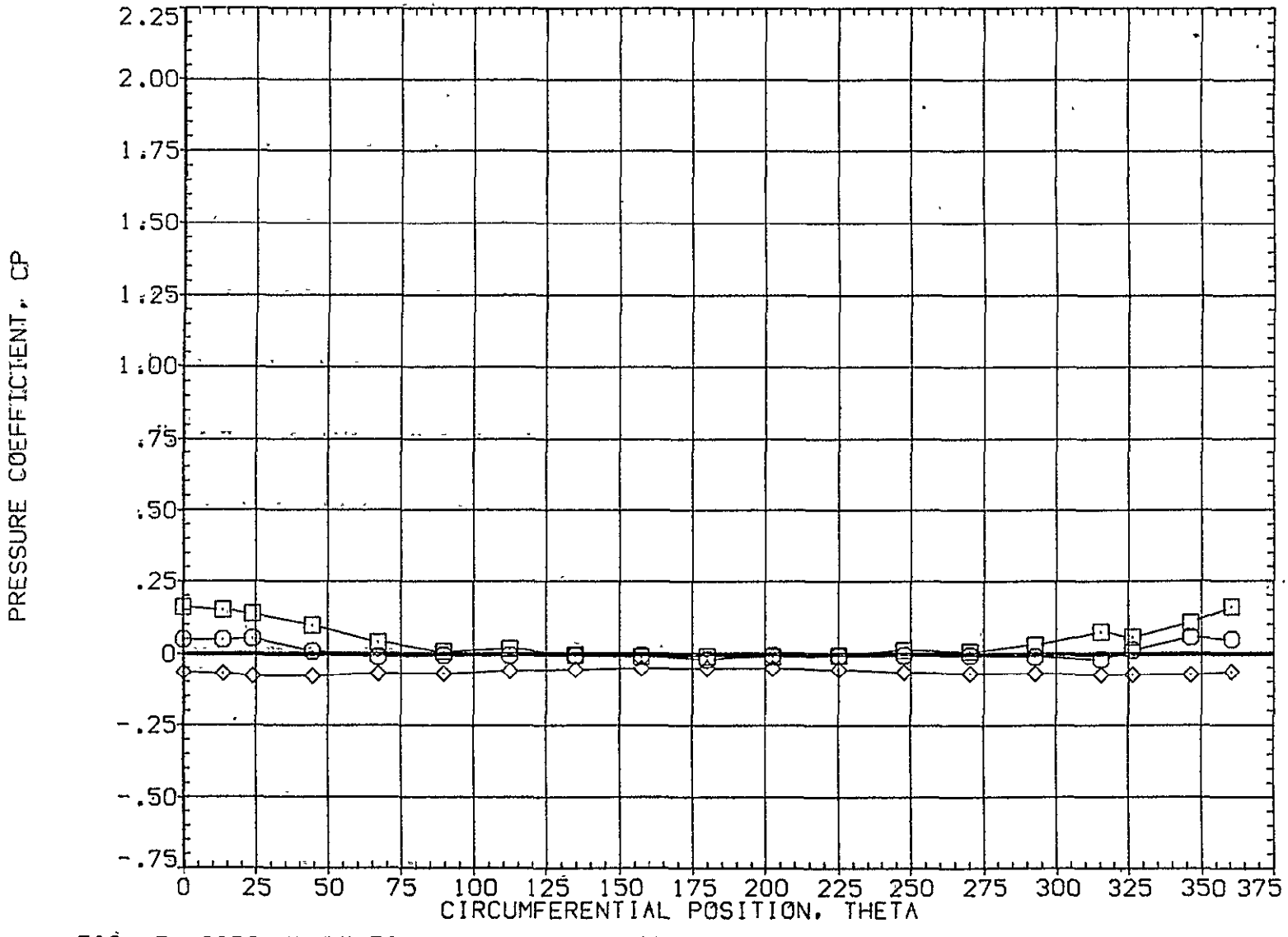

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

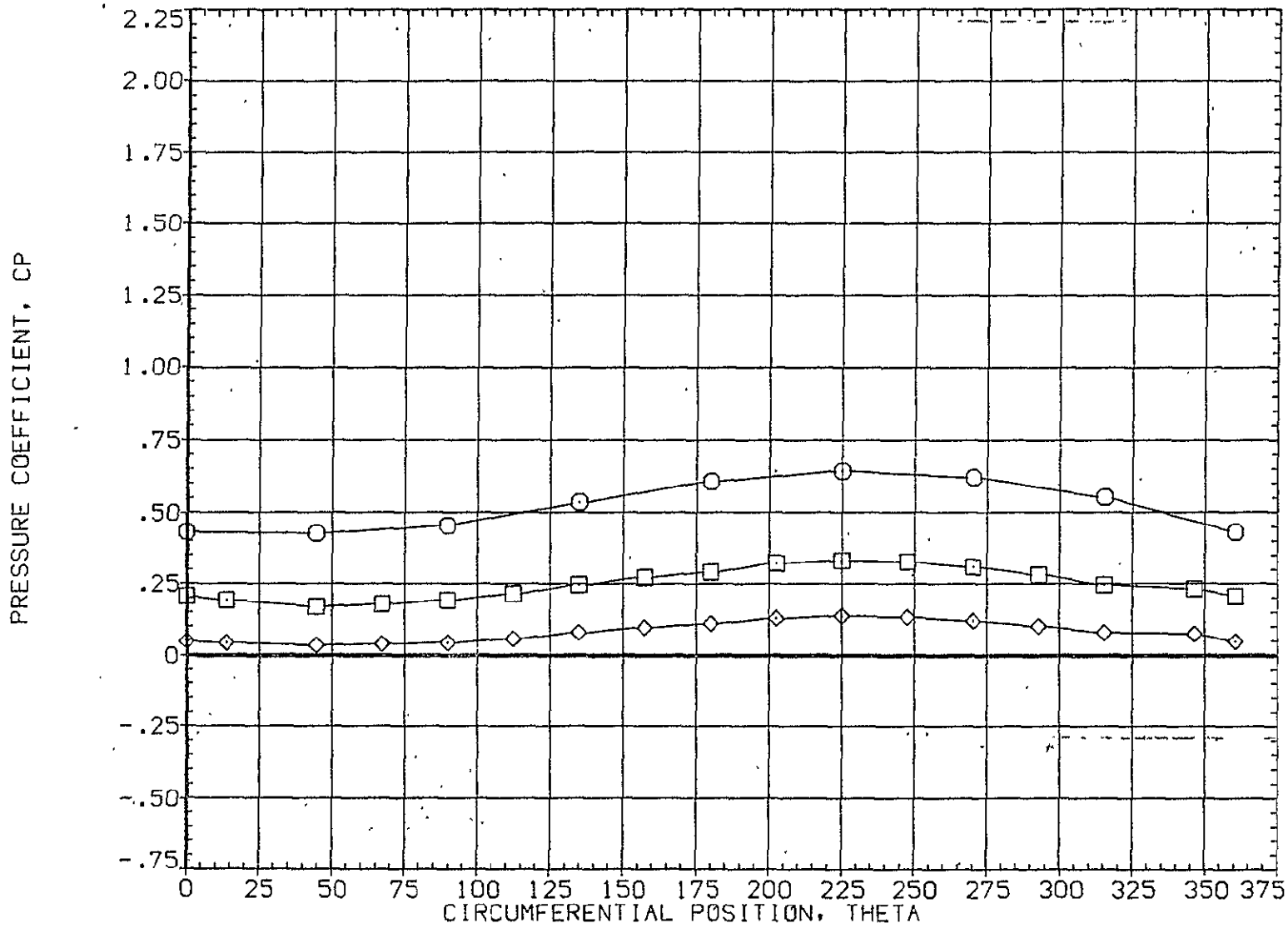

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

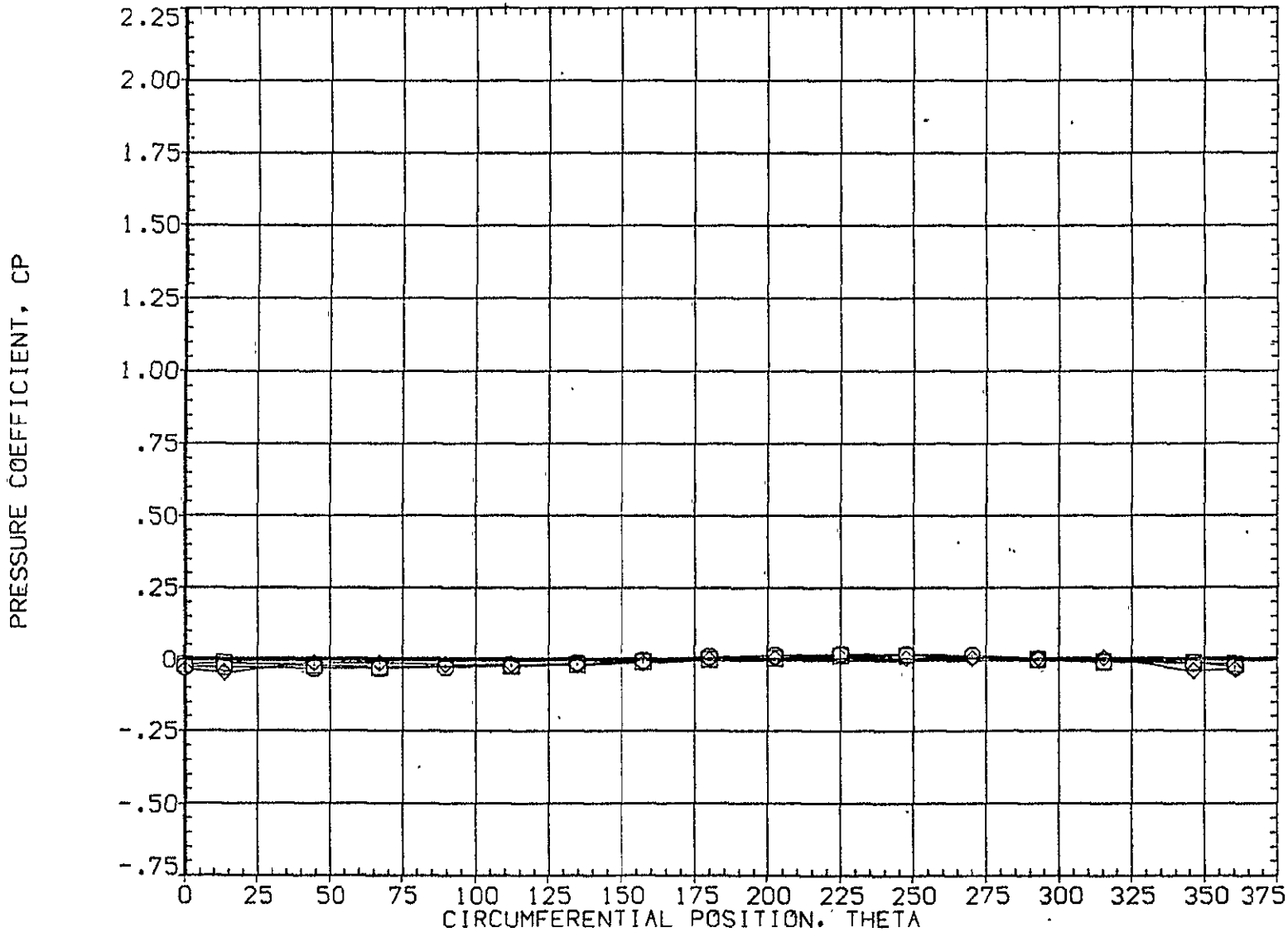

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

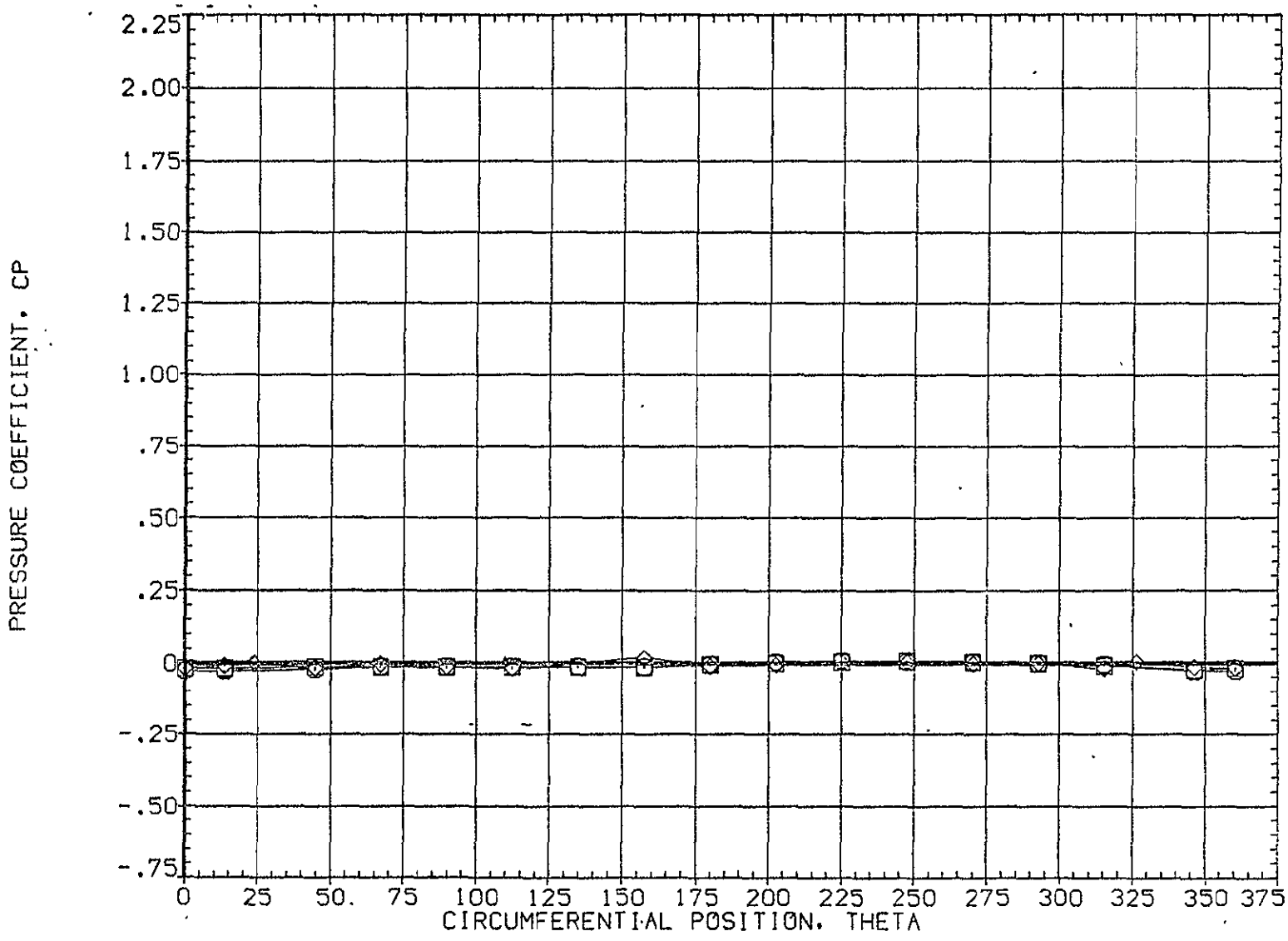

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

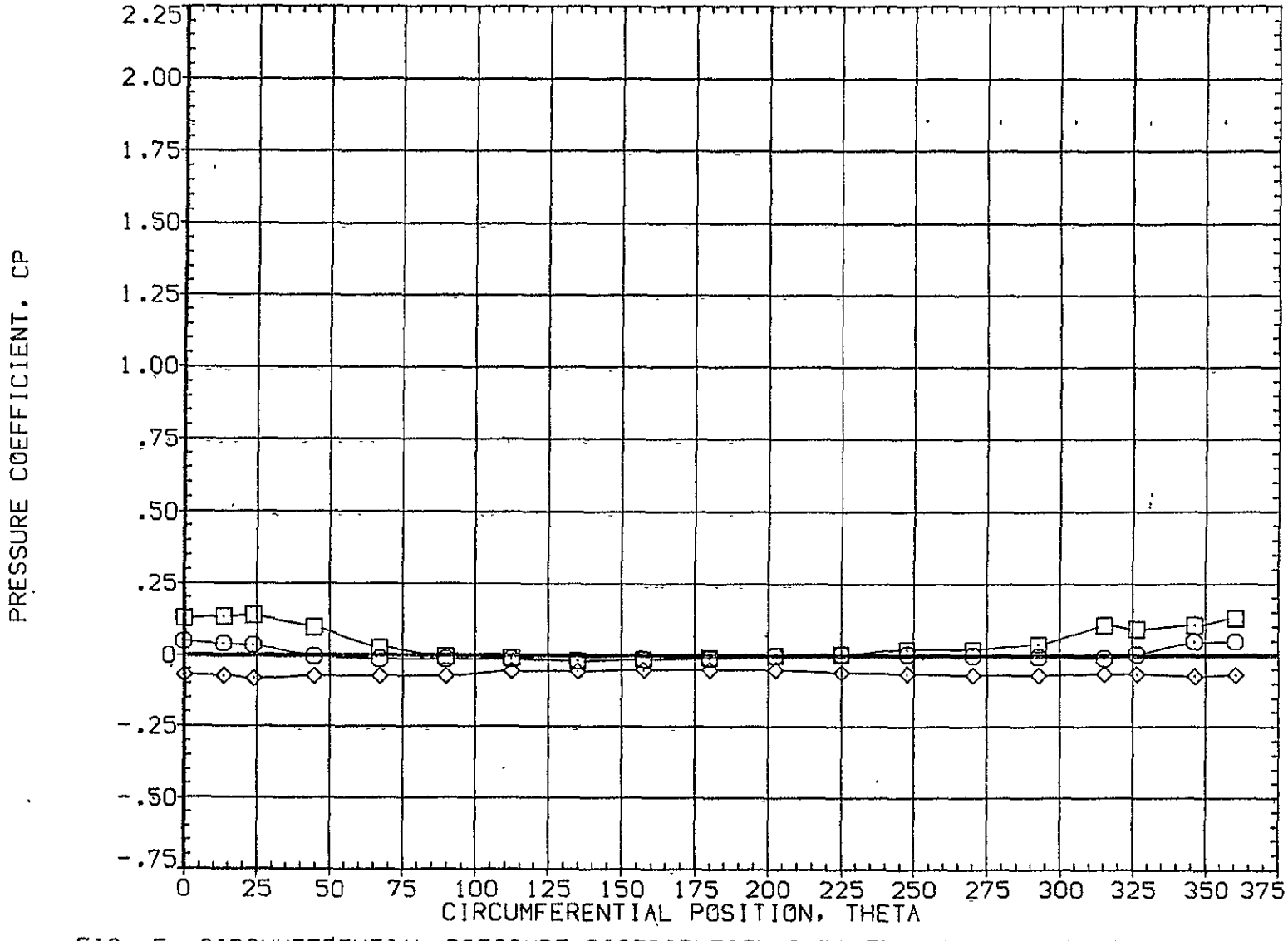

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

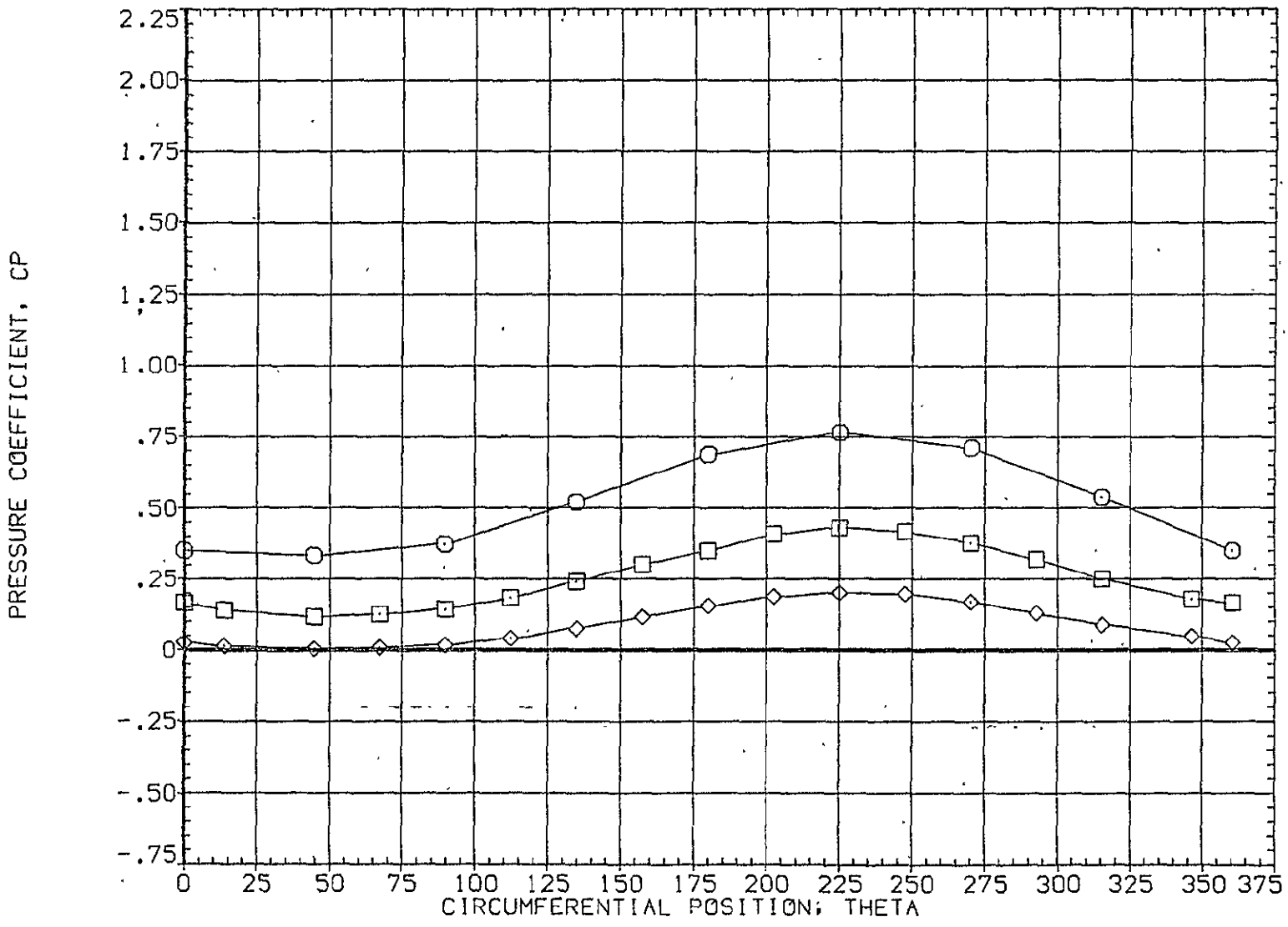

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

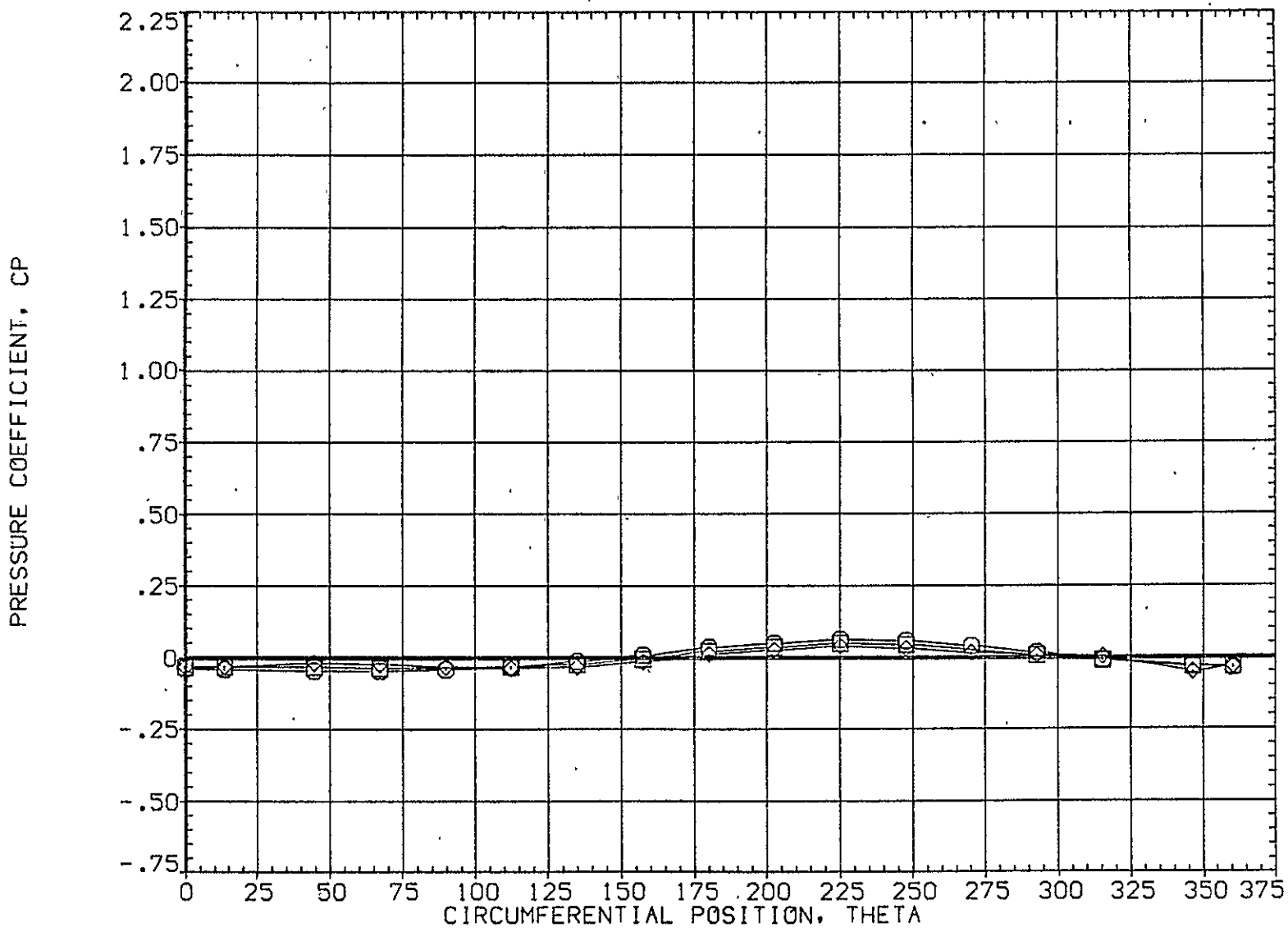

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

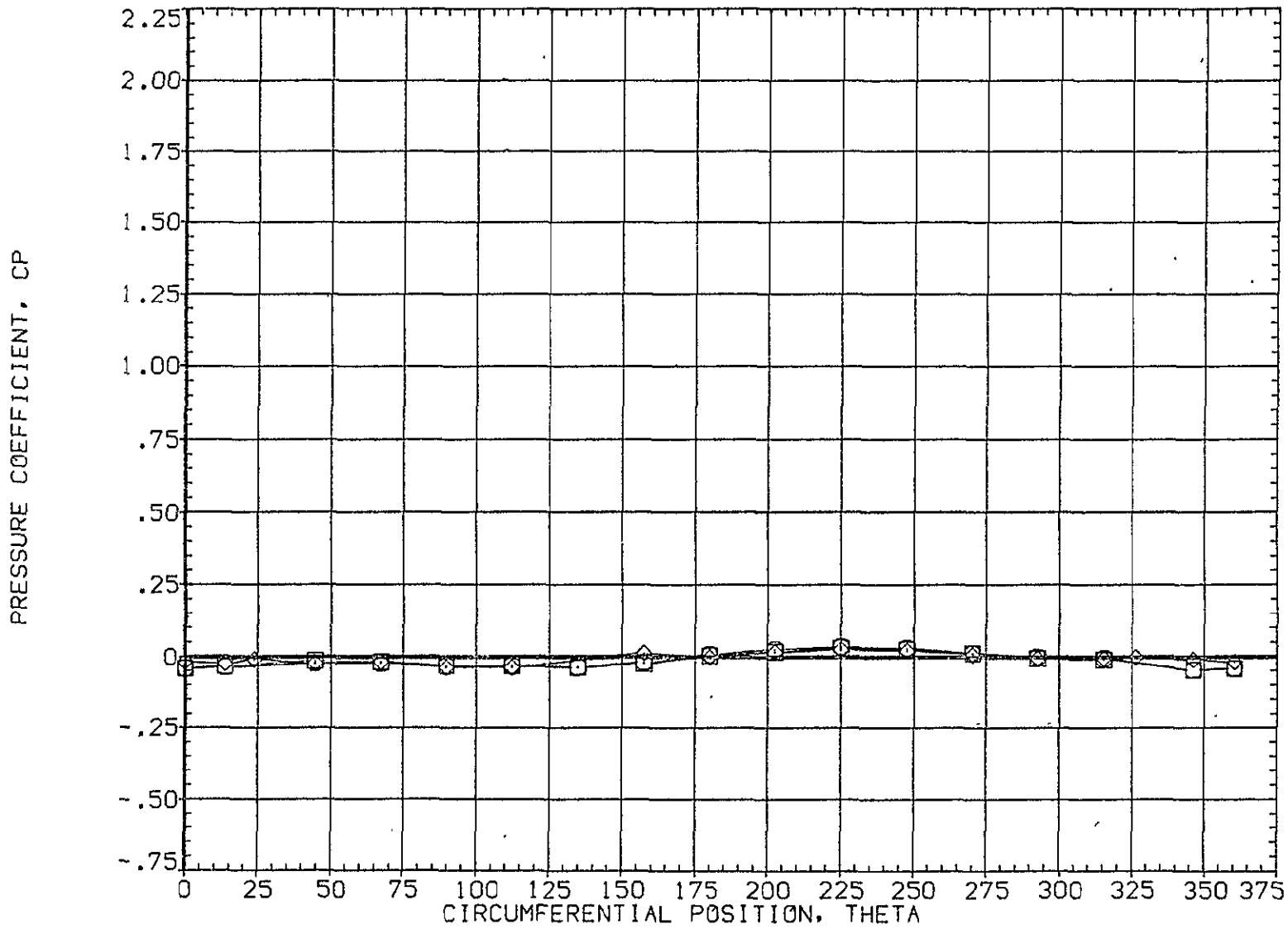

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

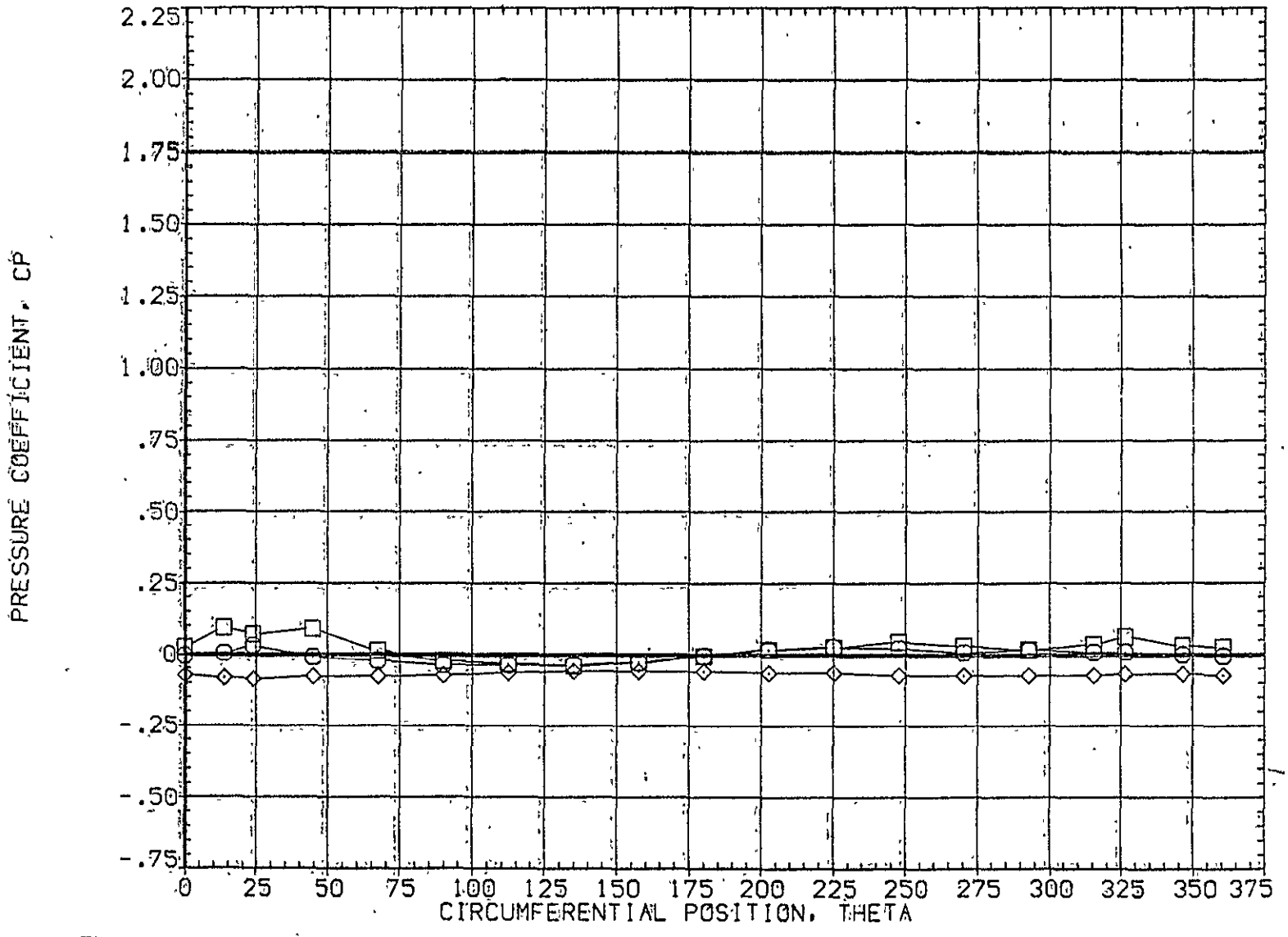

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

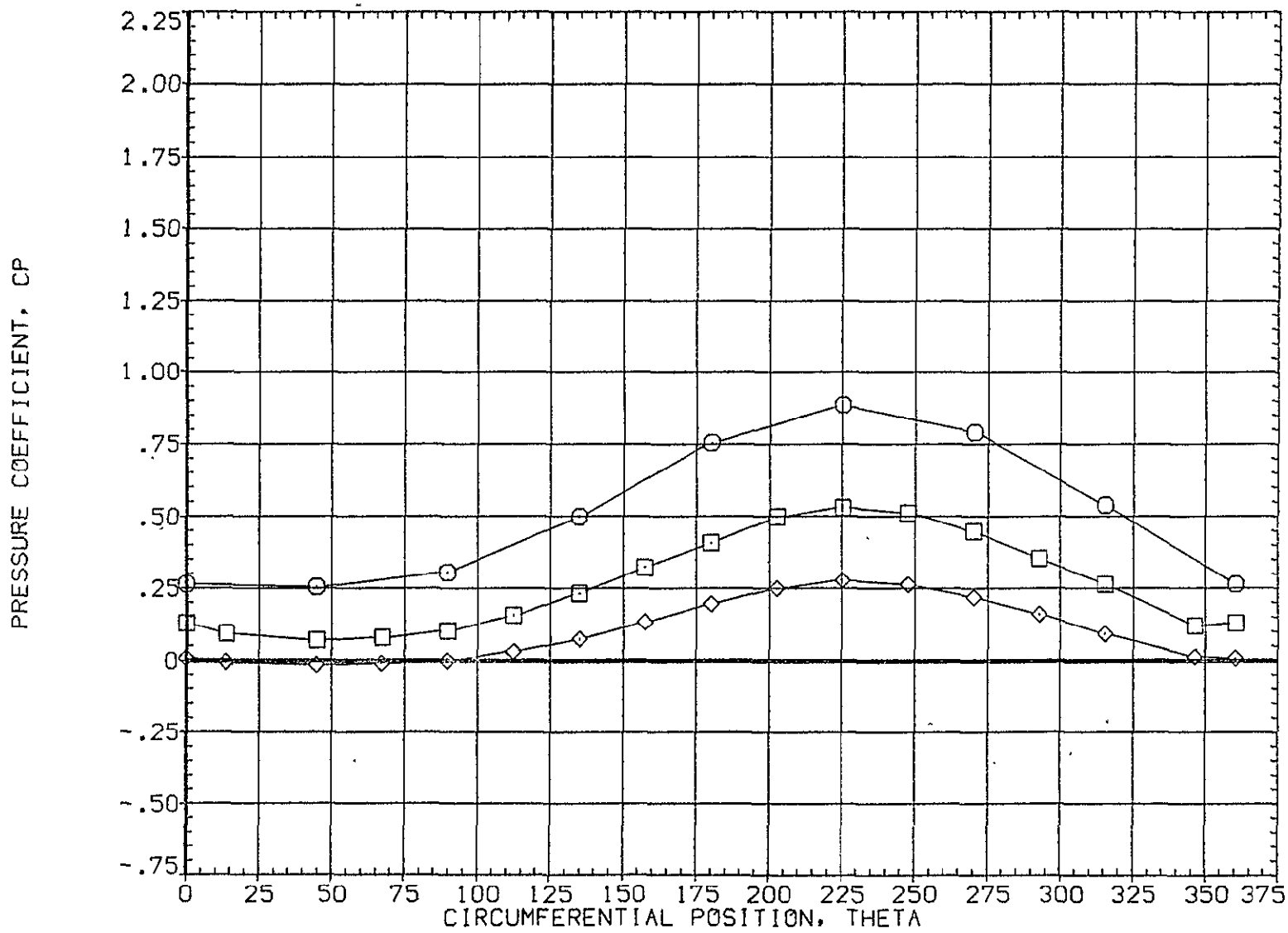

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

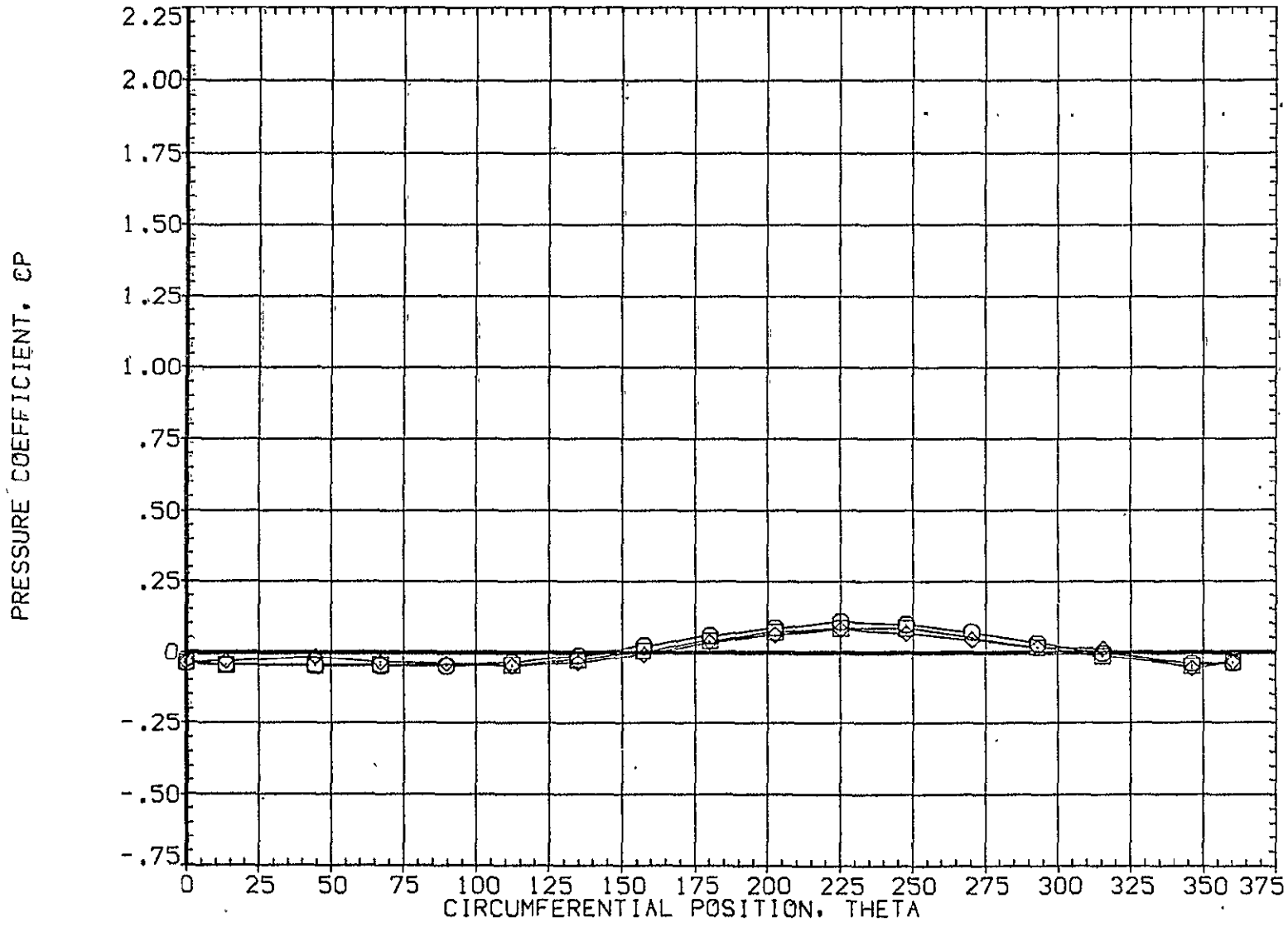

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.520	3.480.
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

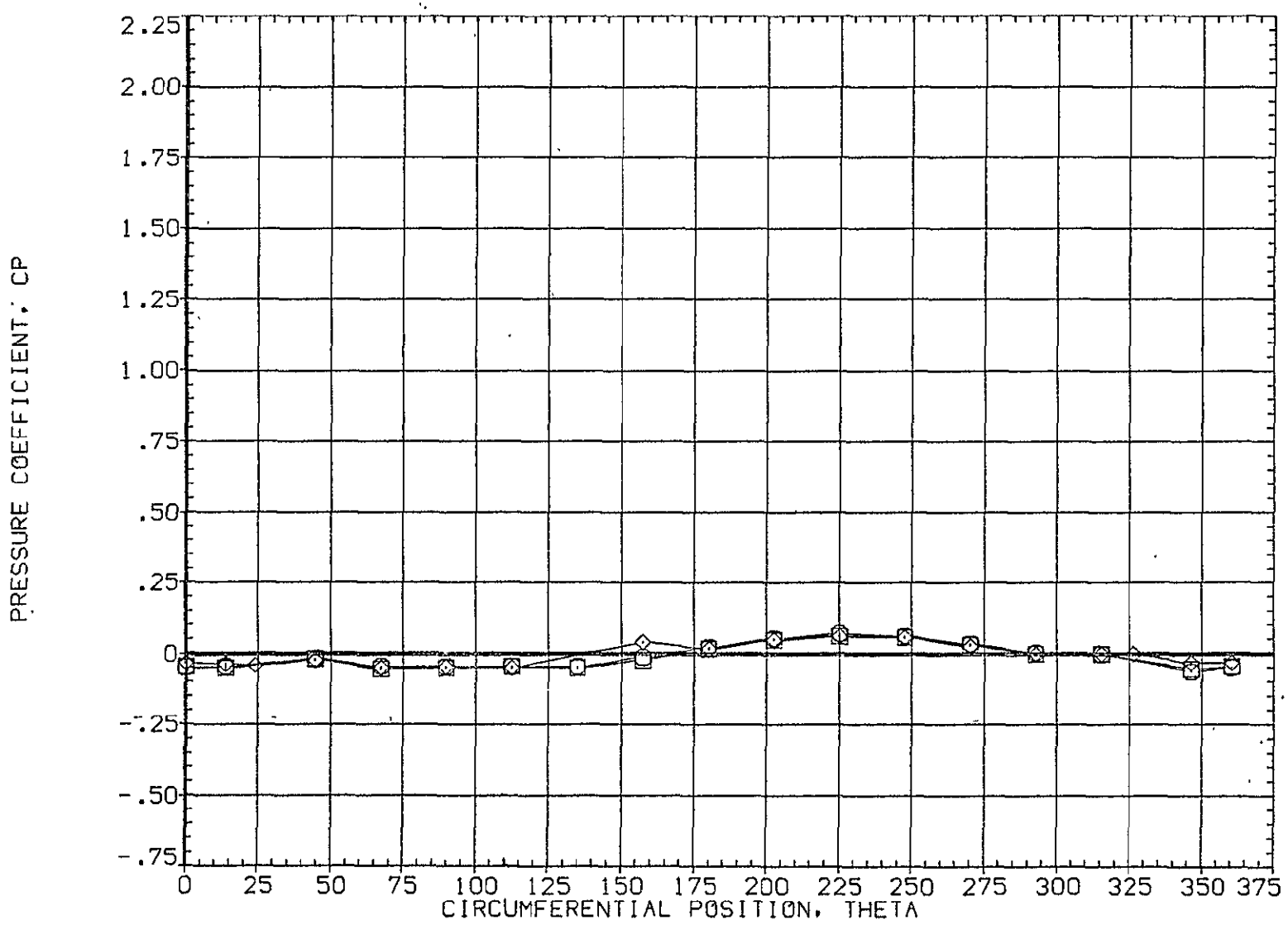

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

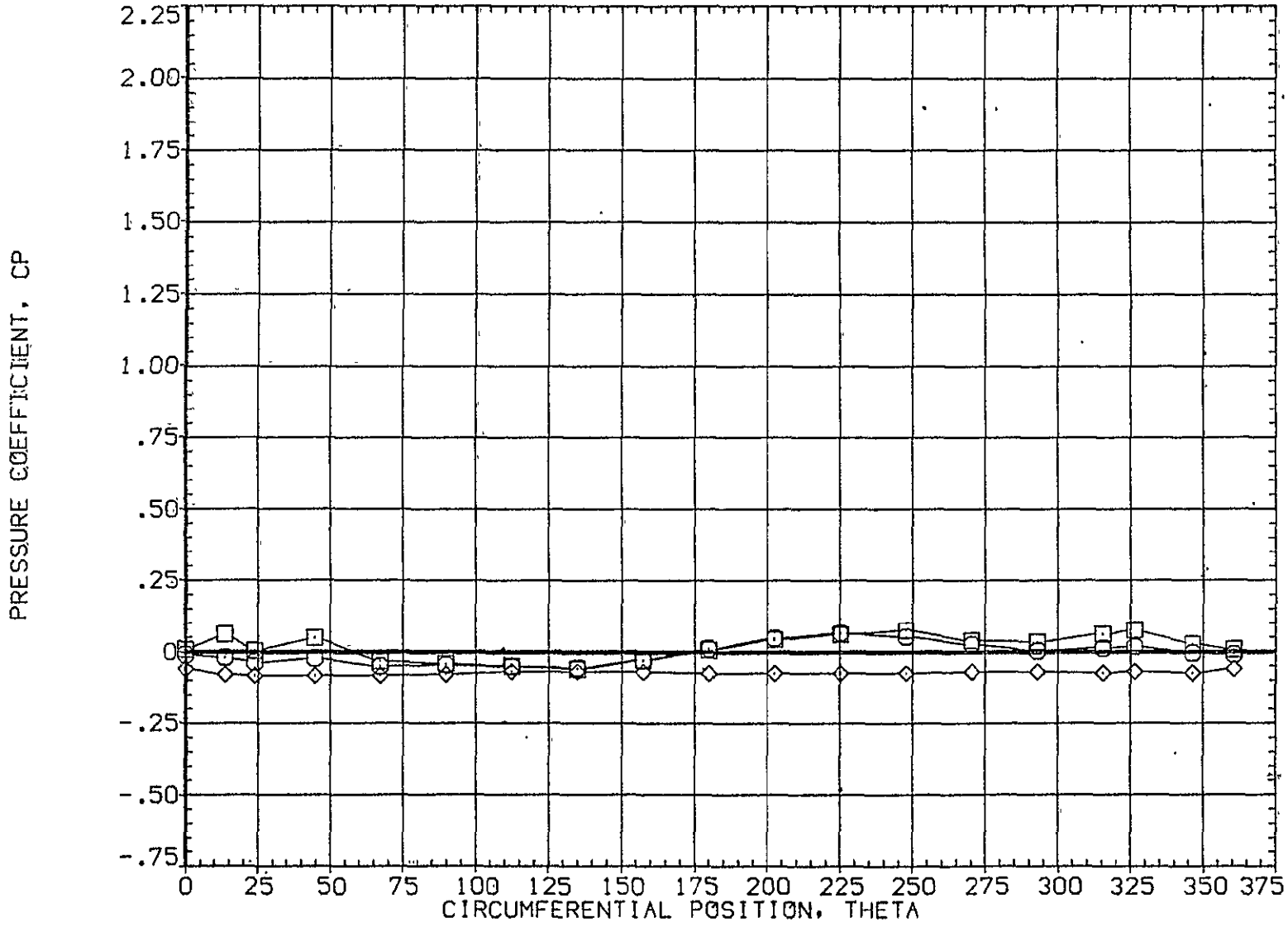

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

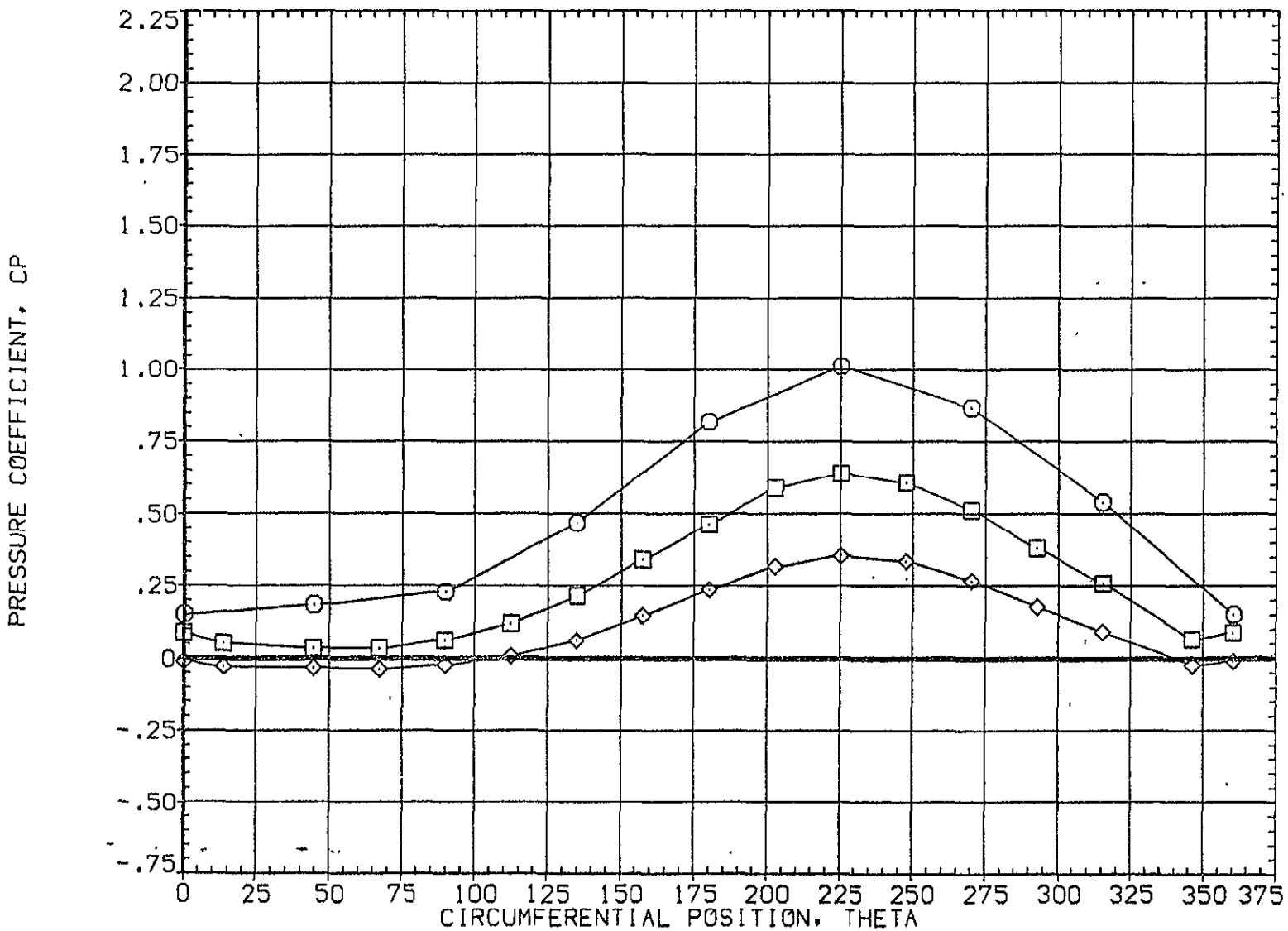

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

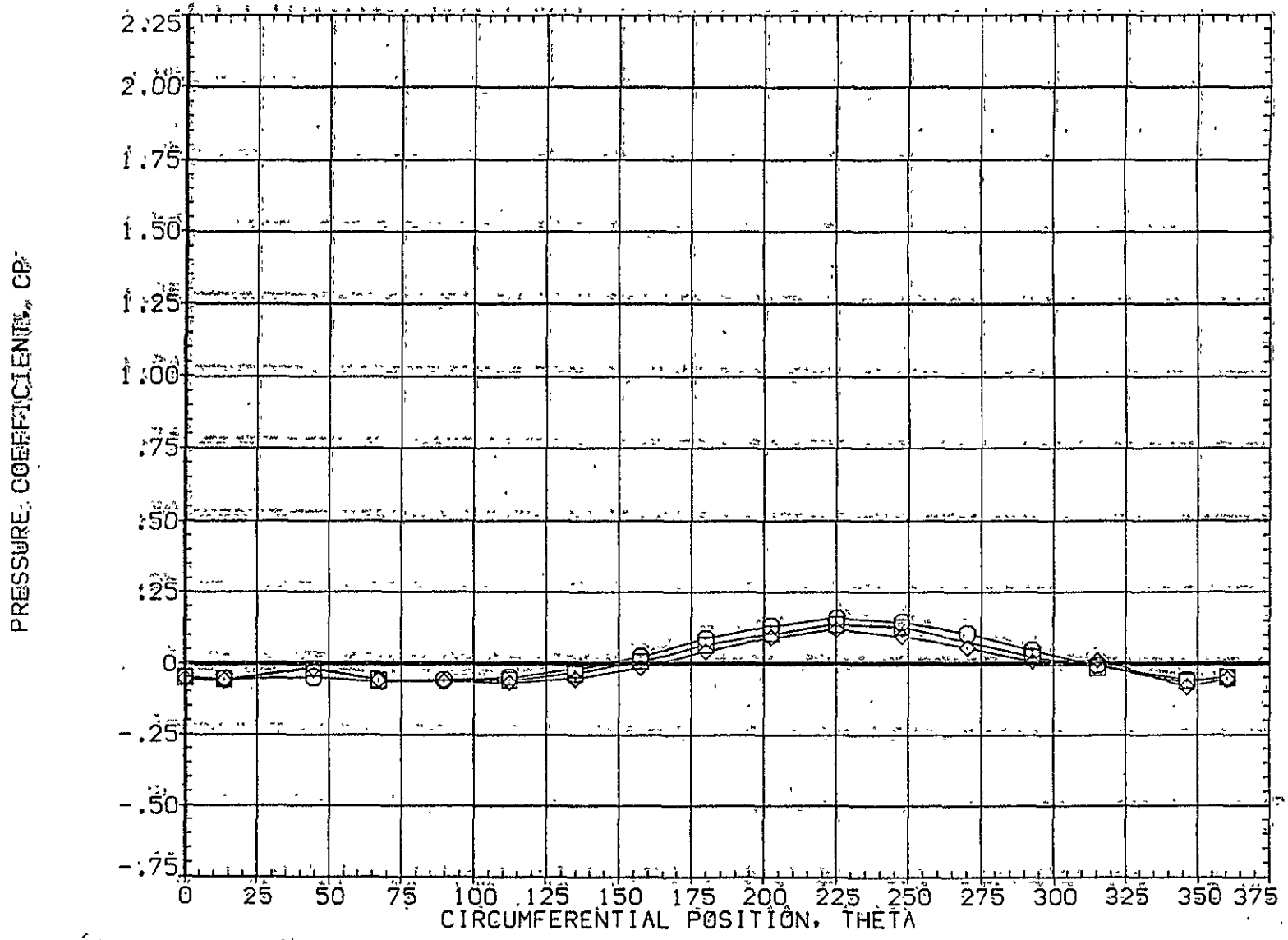

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

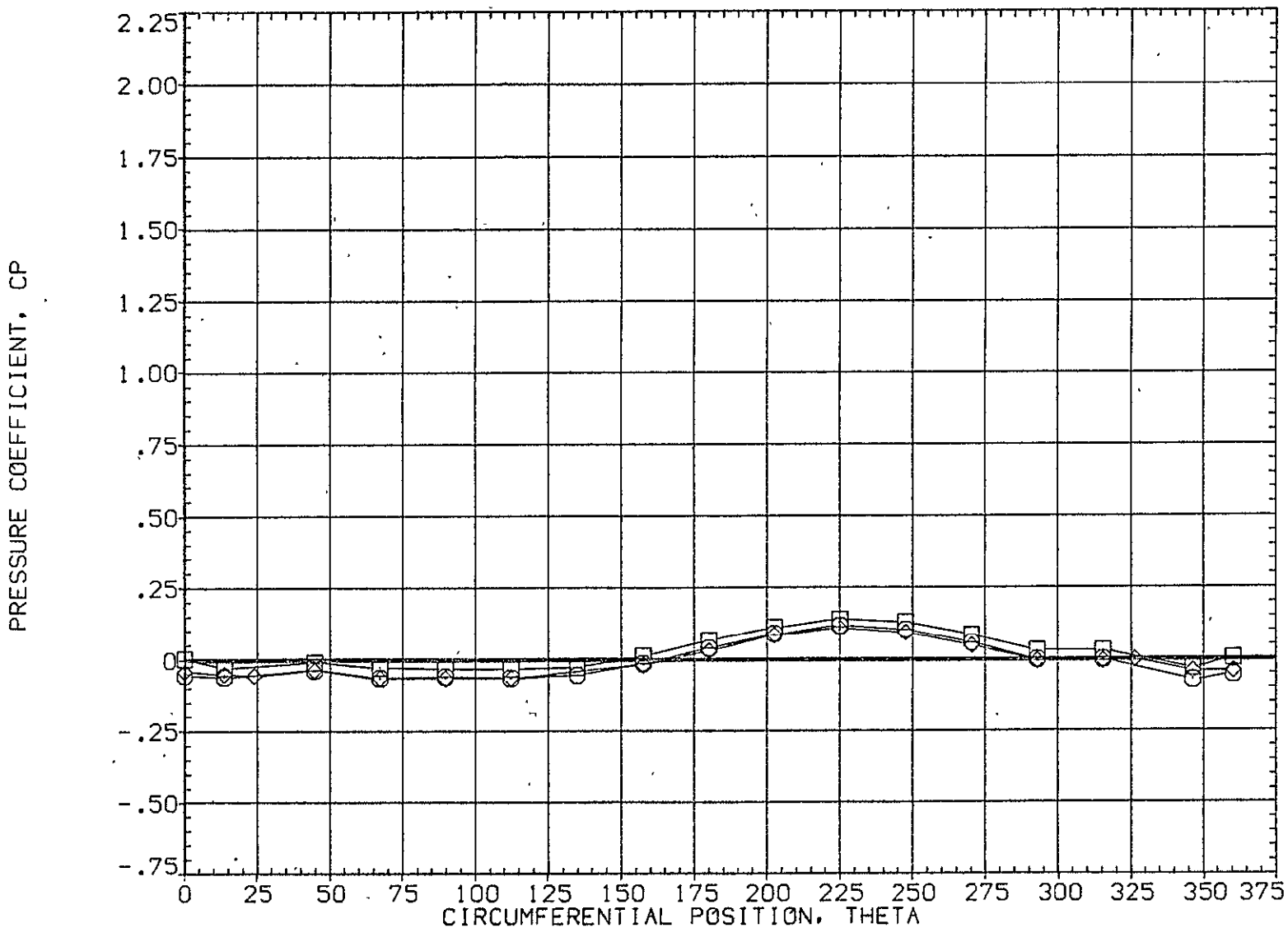

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

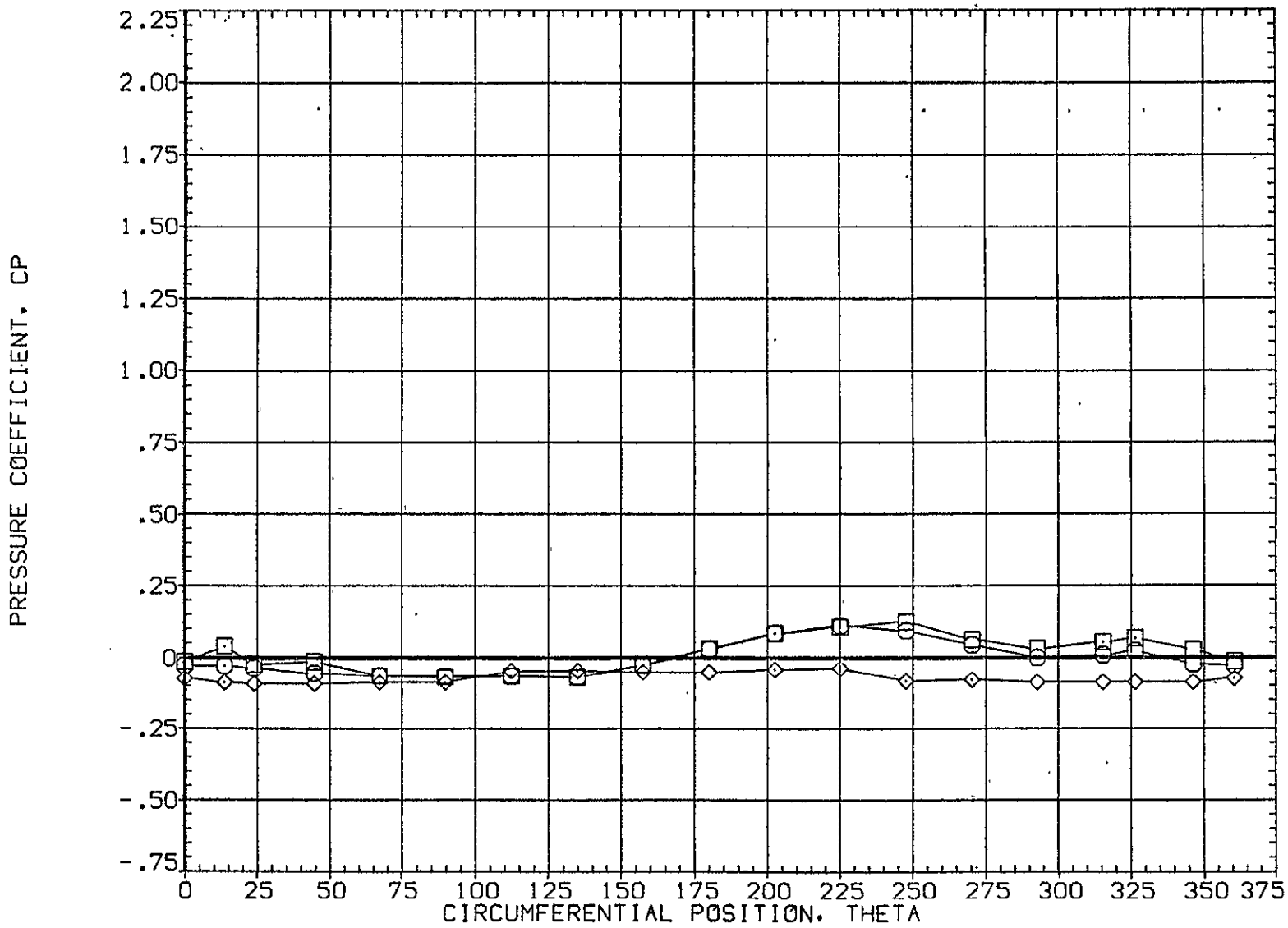

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

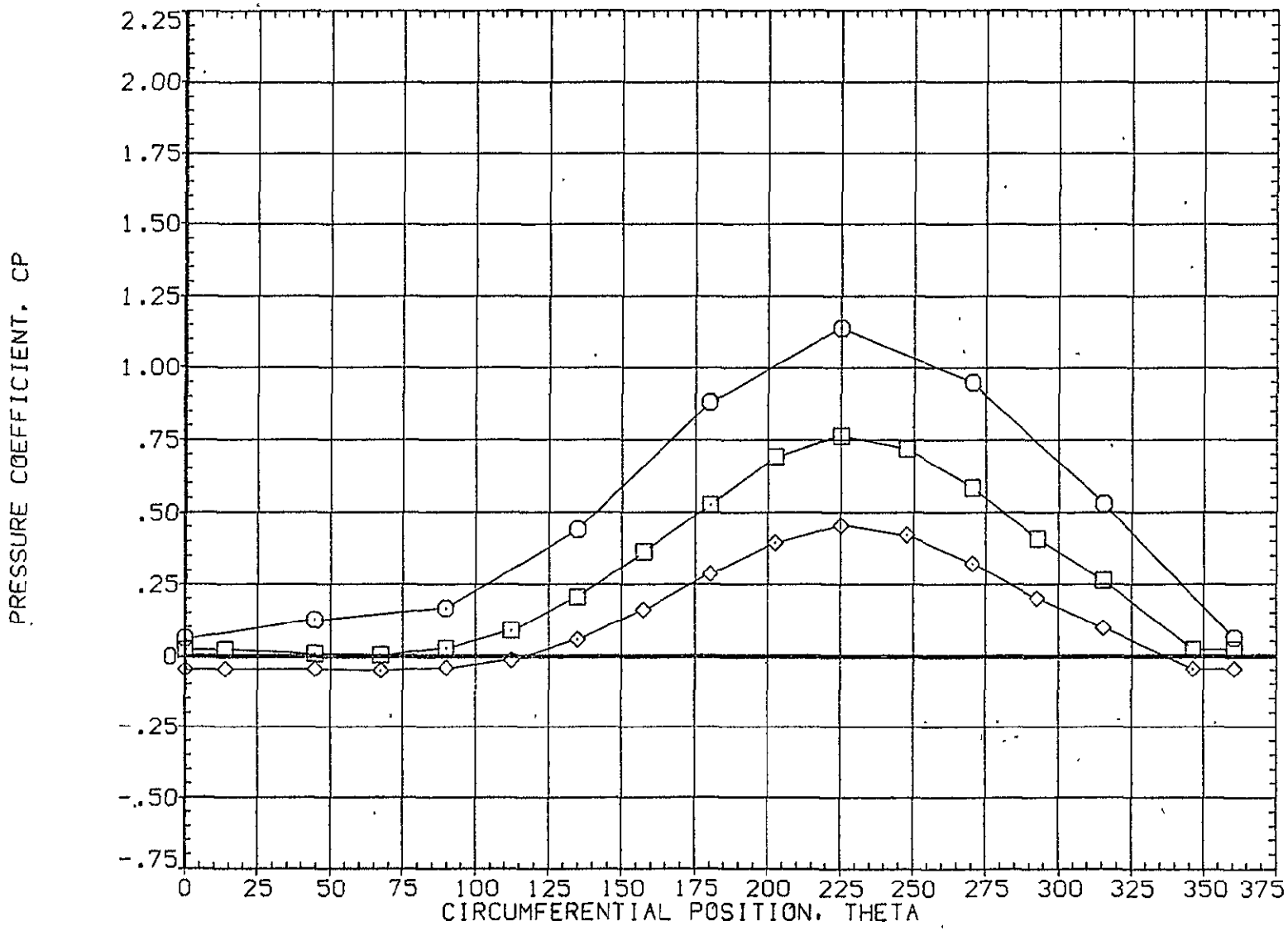

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

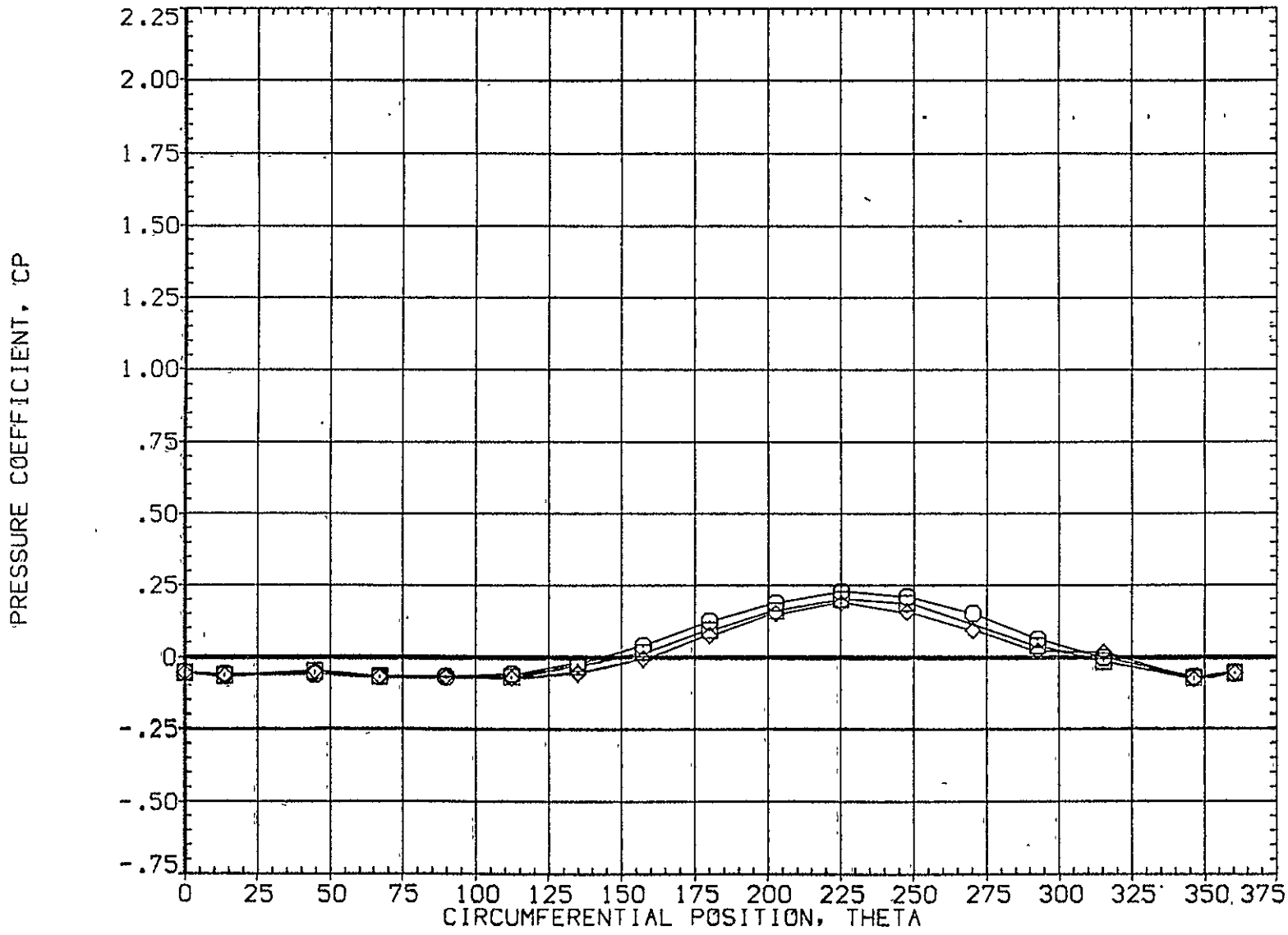

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

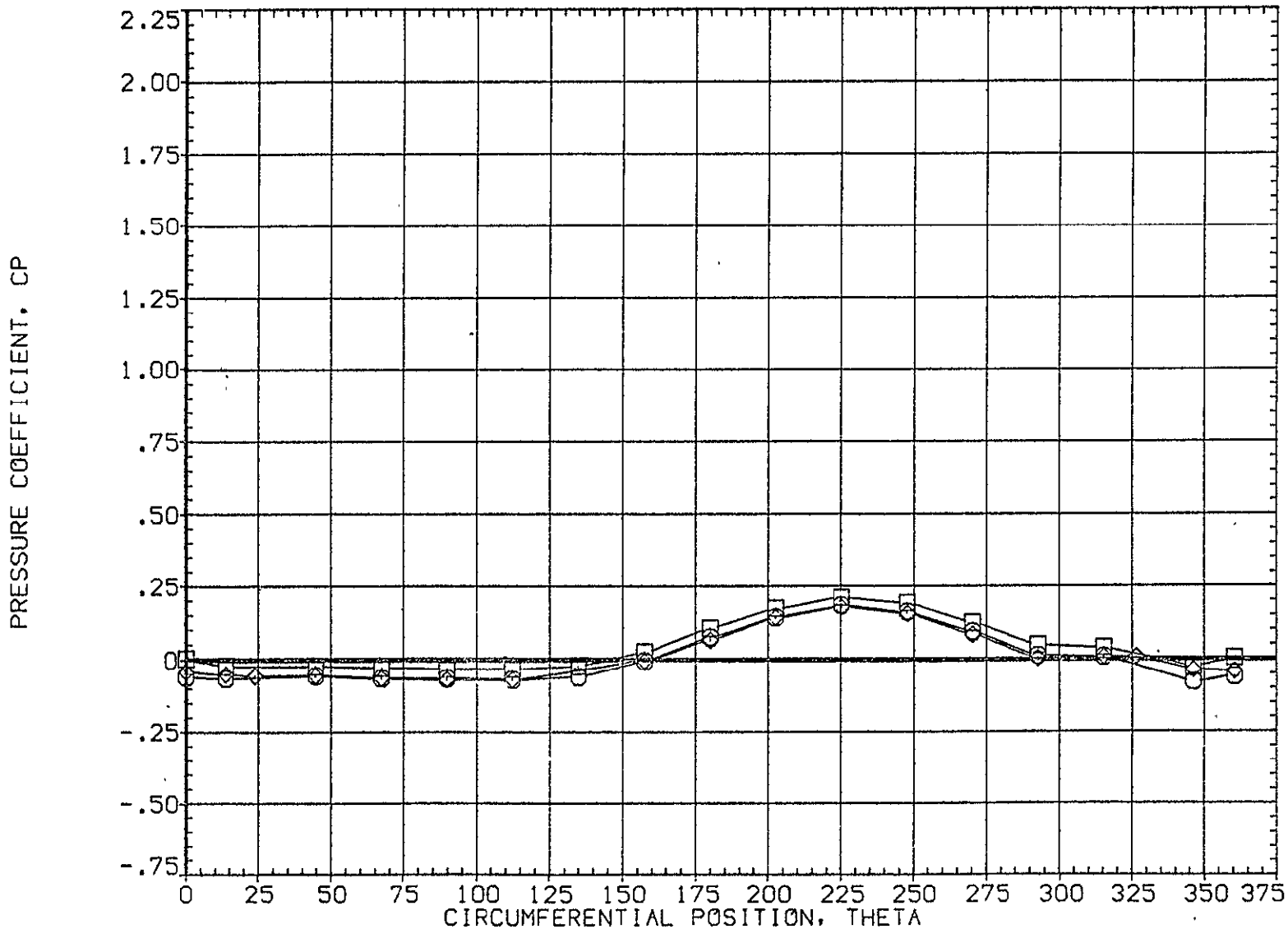

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

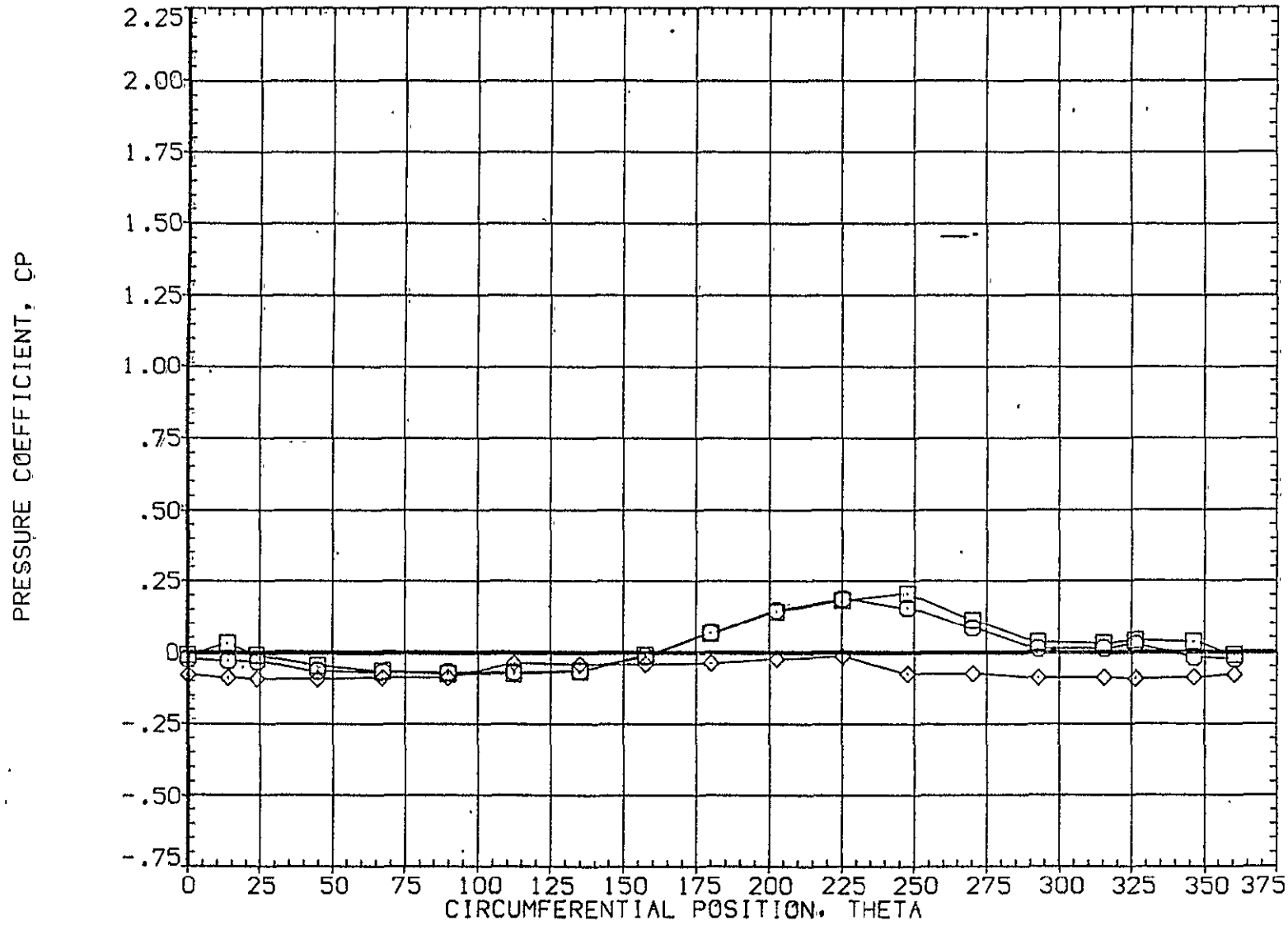

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.660	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

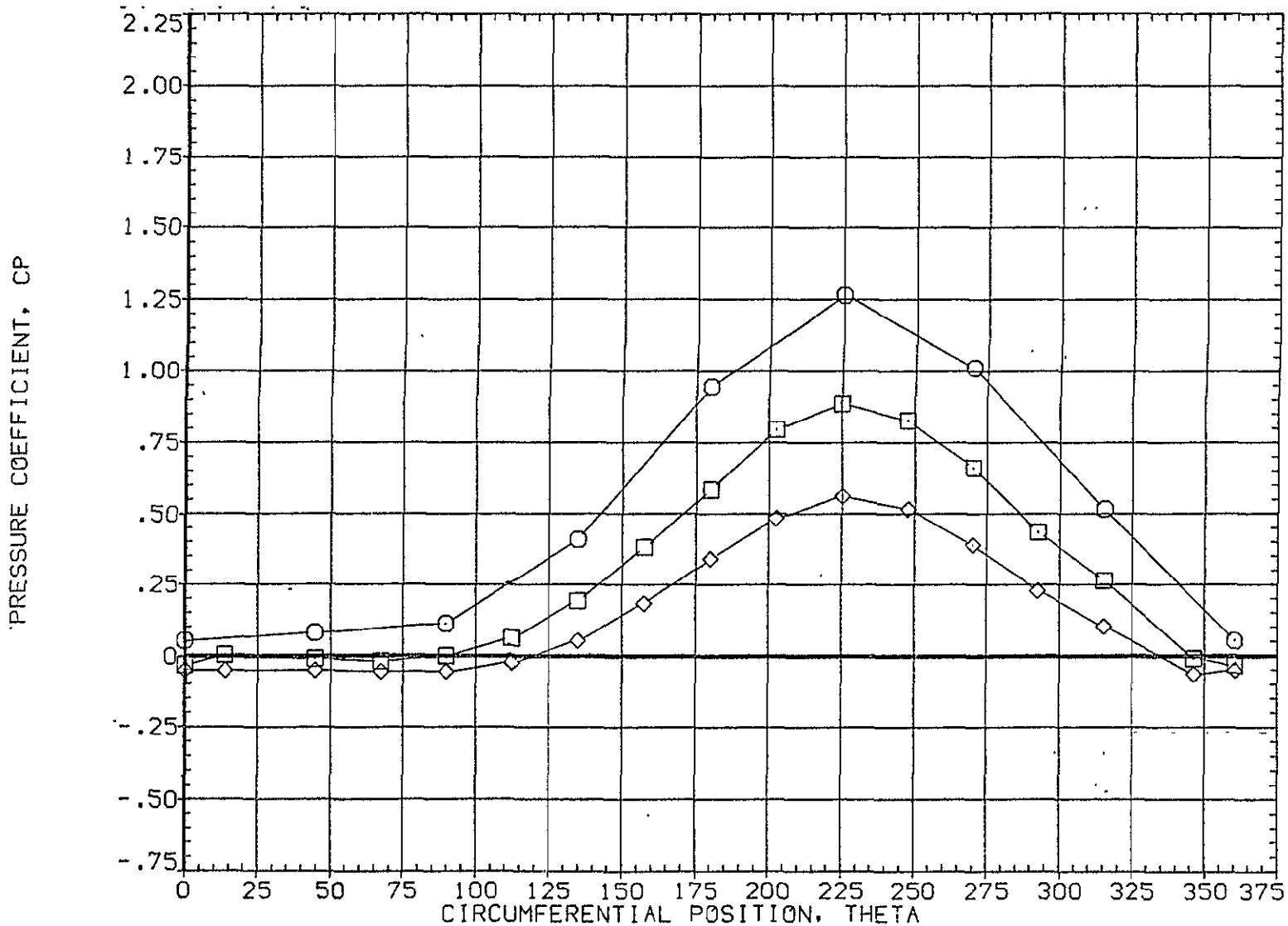

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

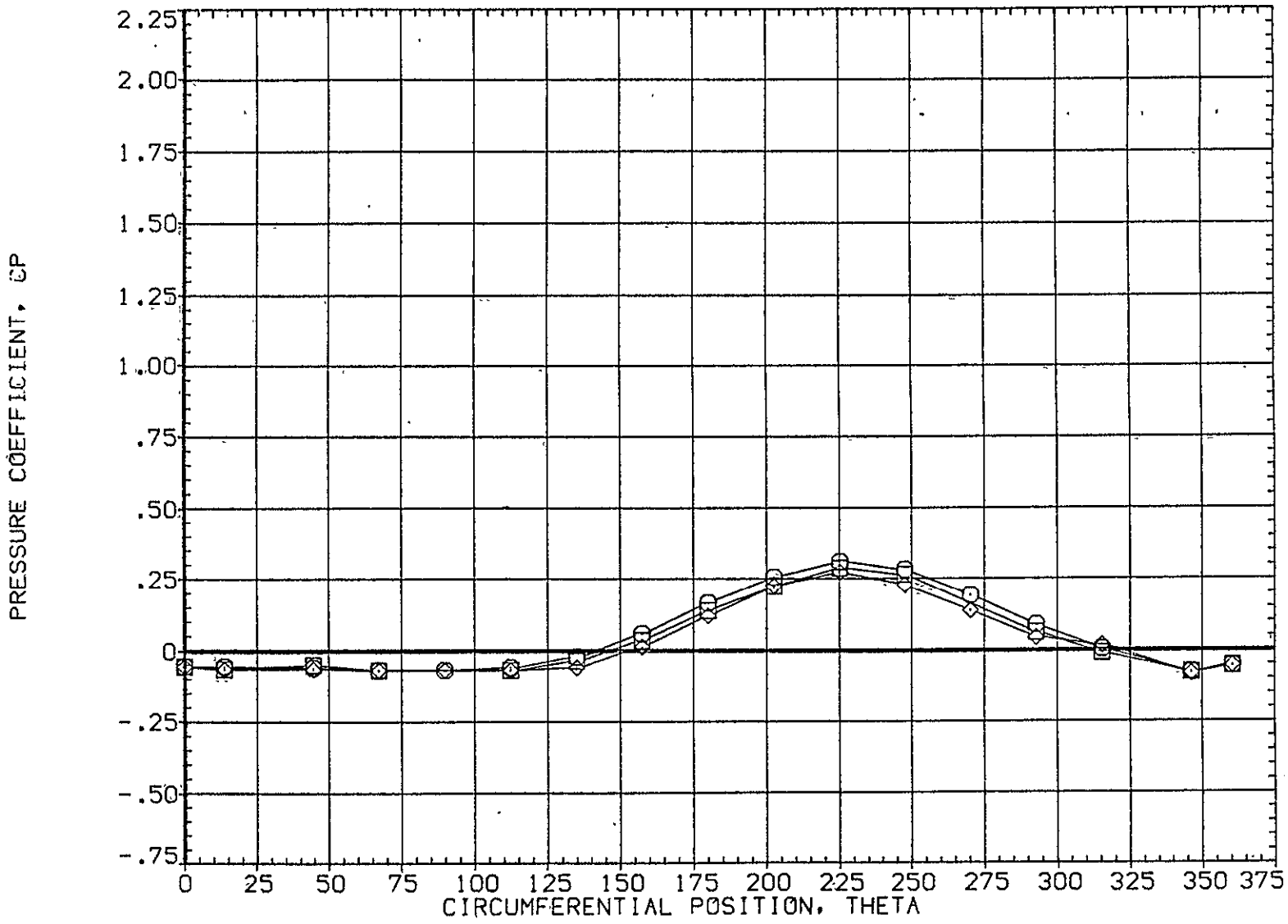

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

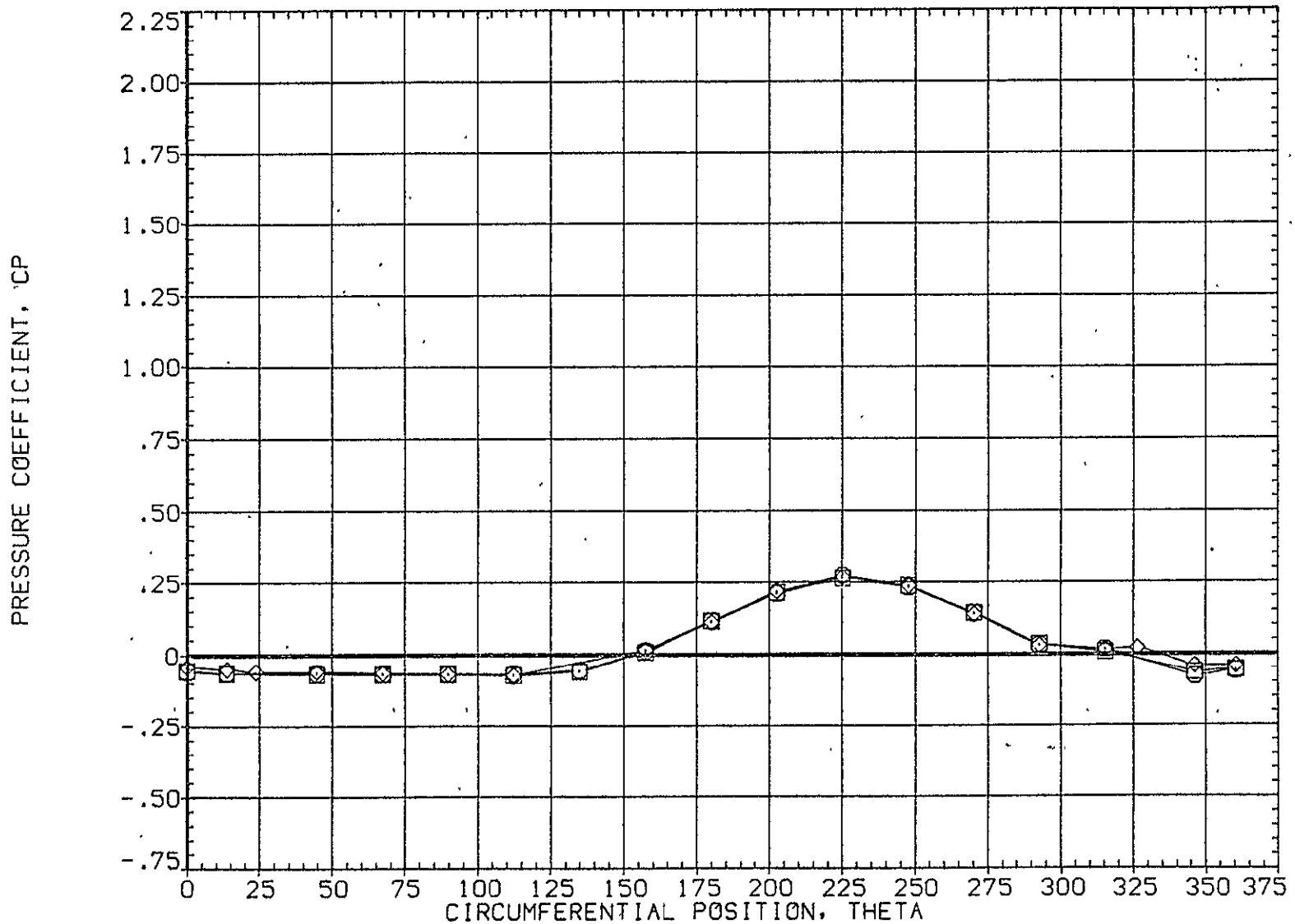

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

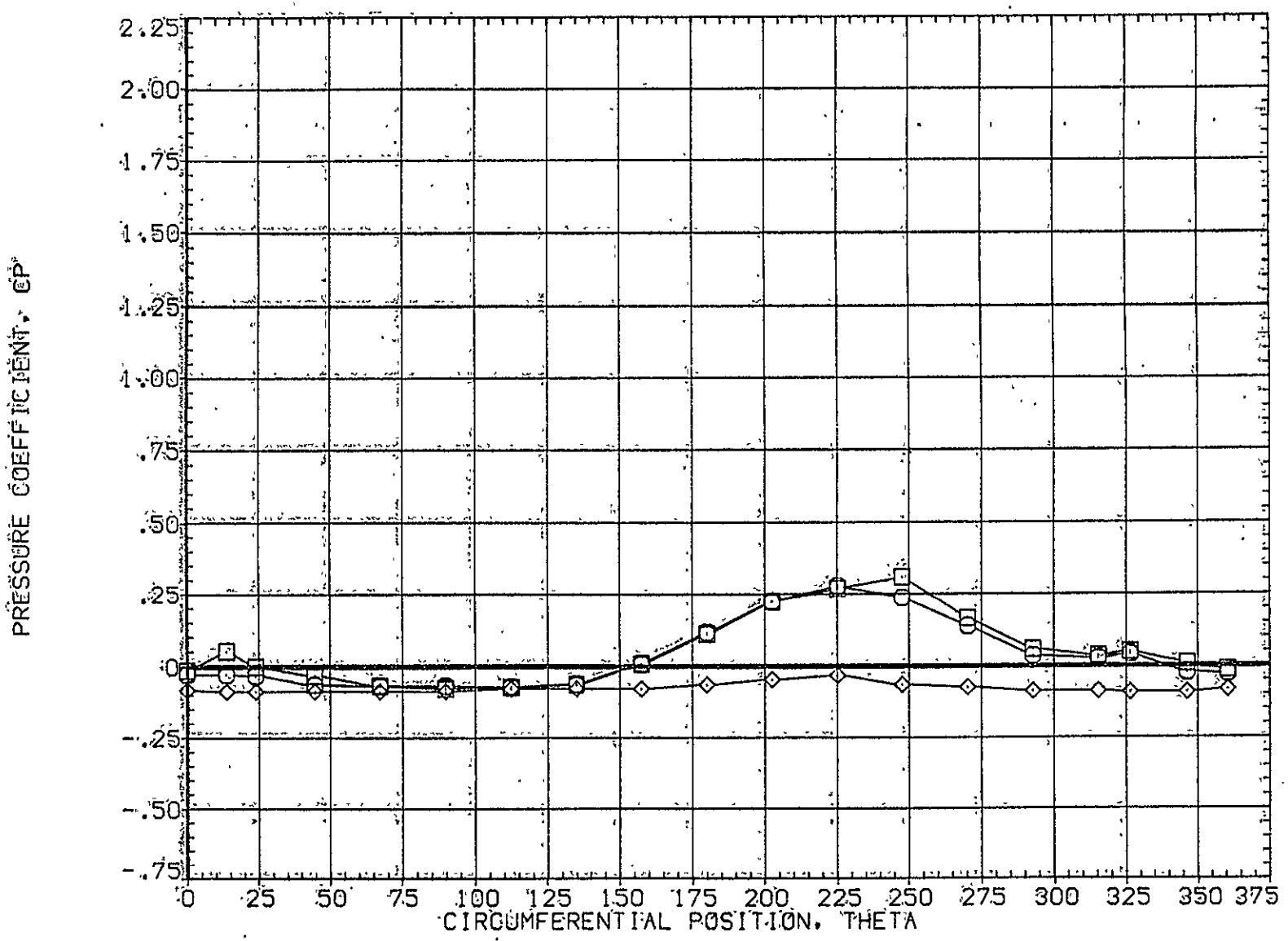

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

C-4

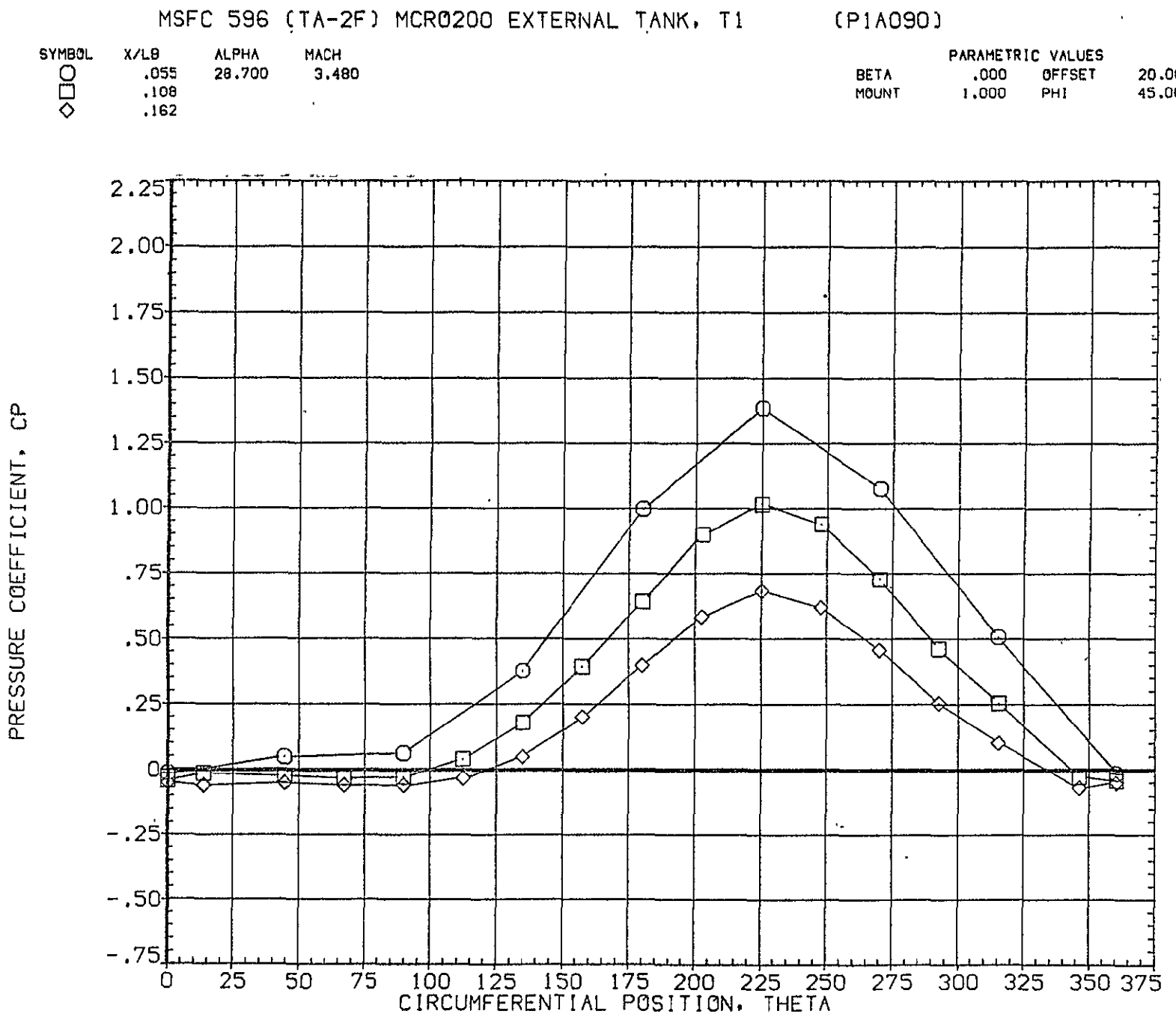

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

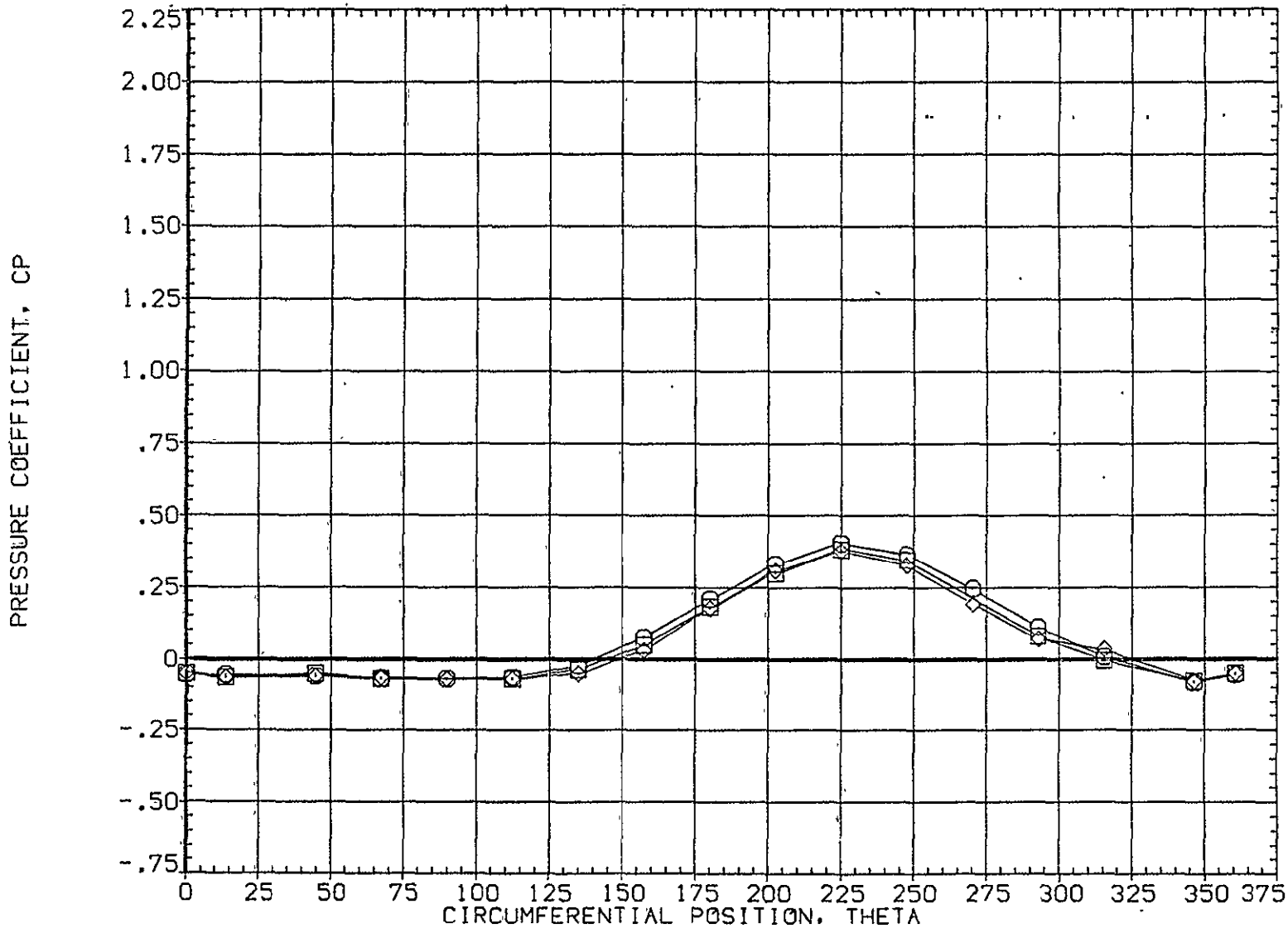

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

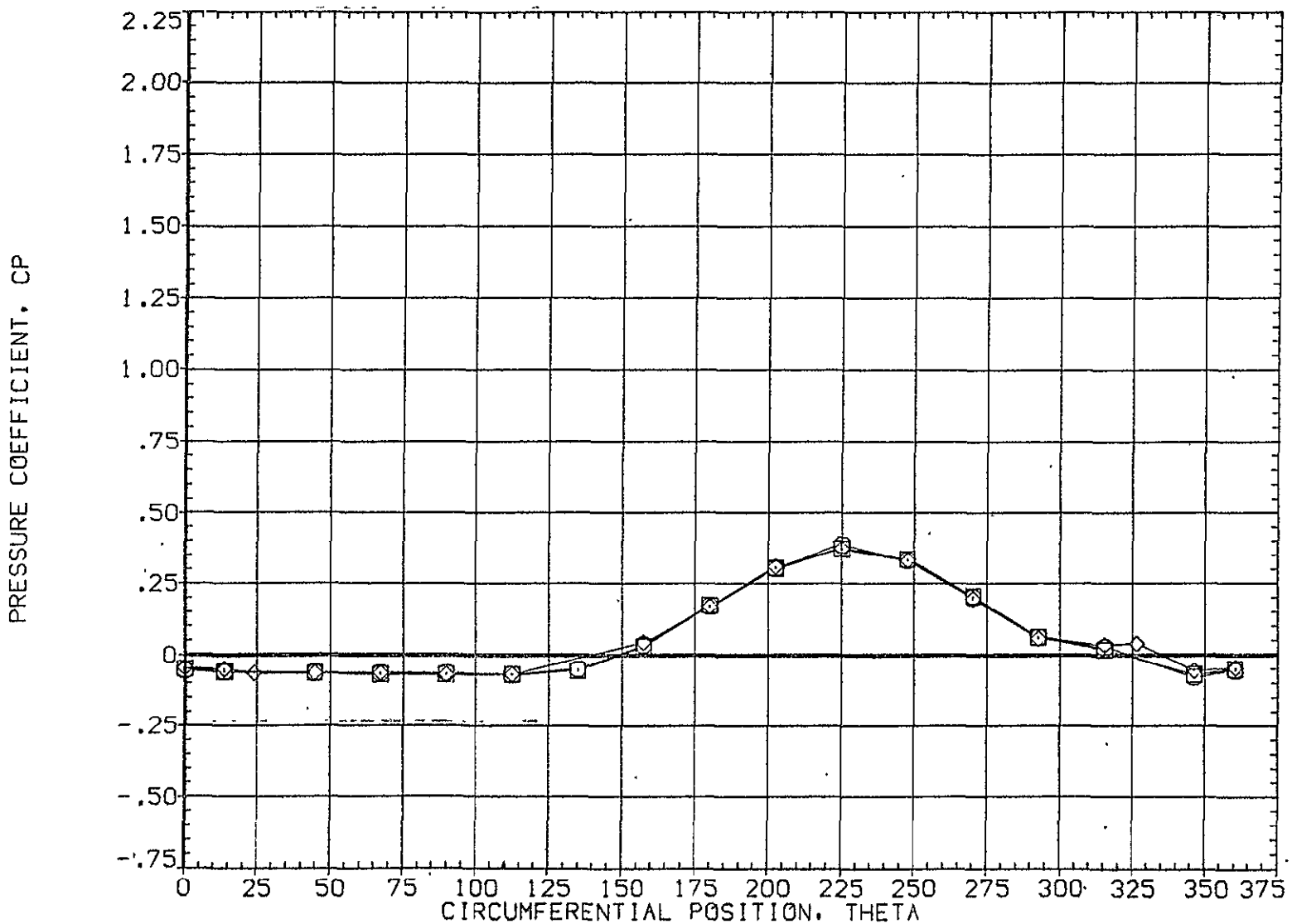

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

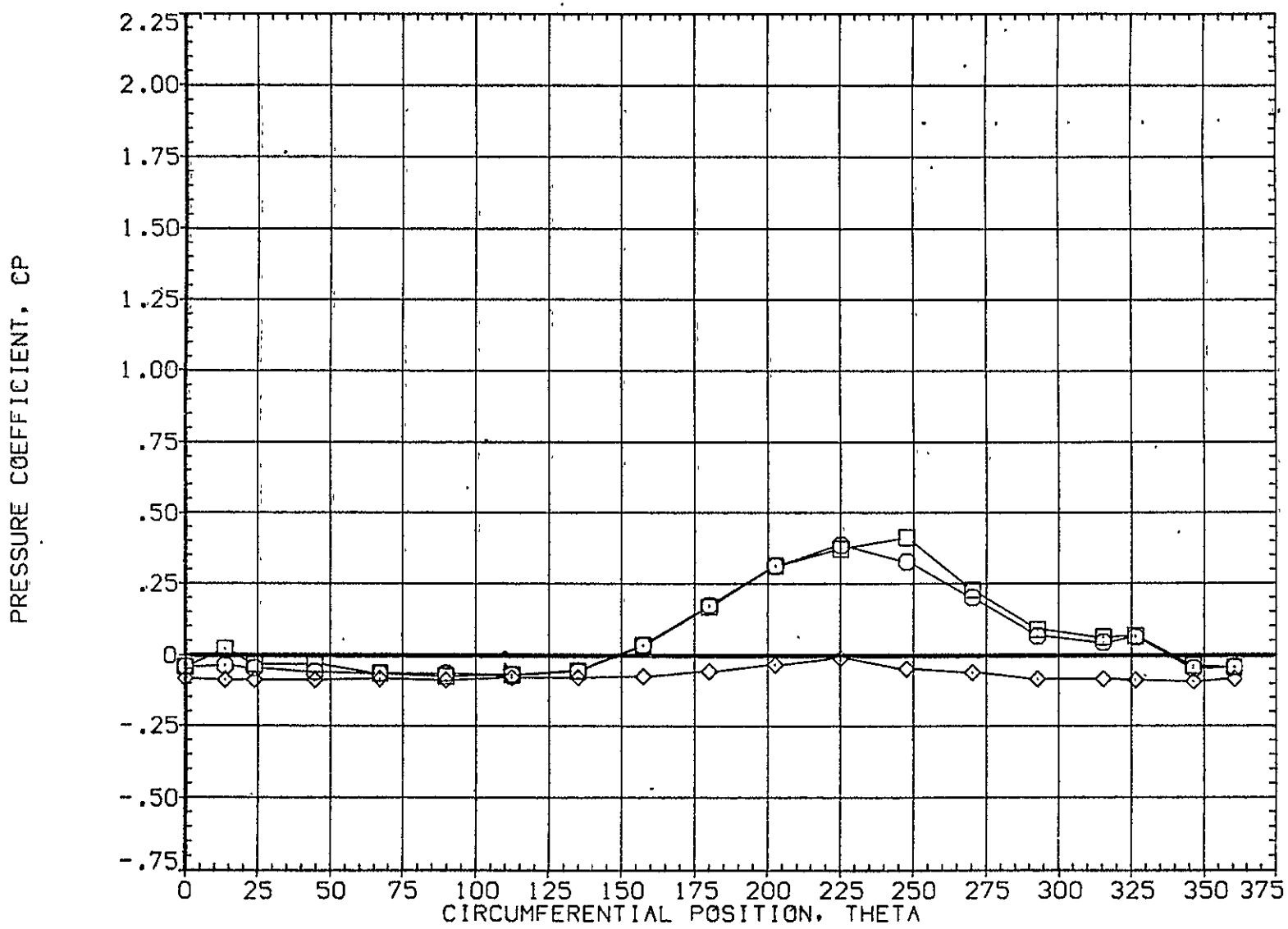

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

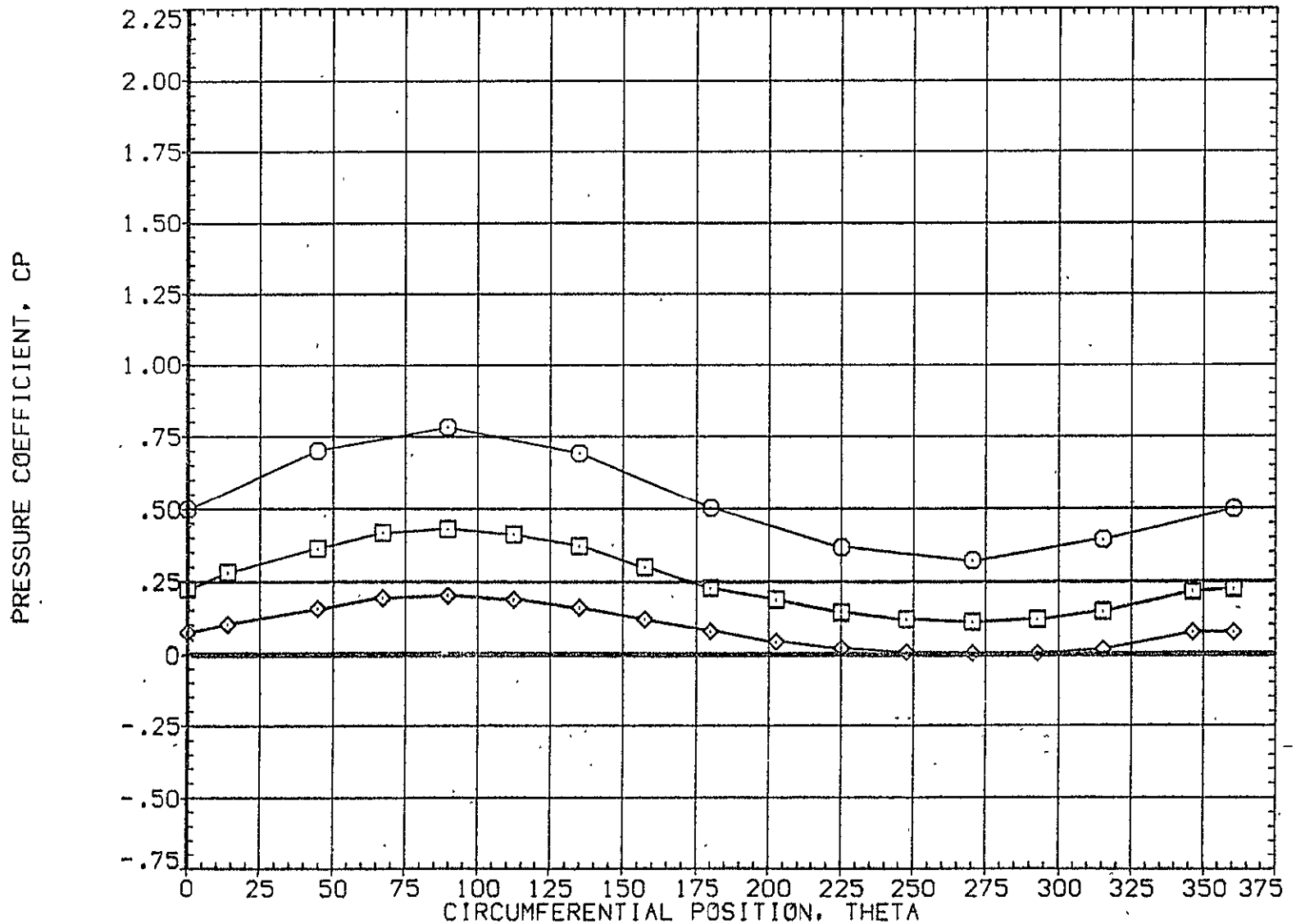

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

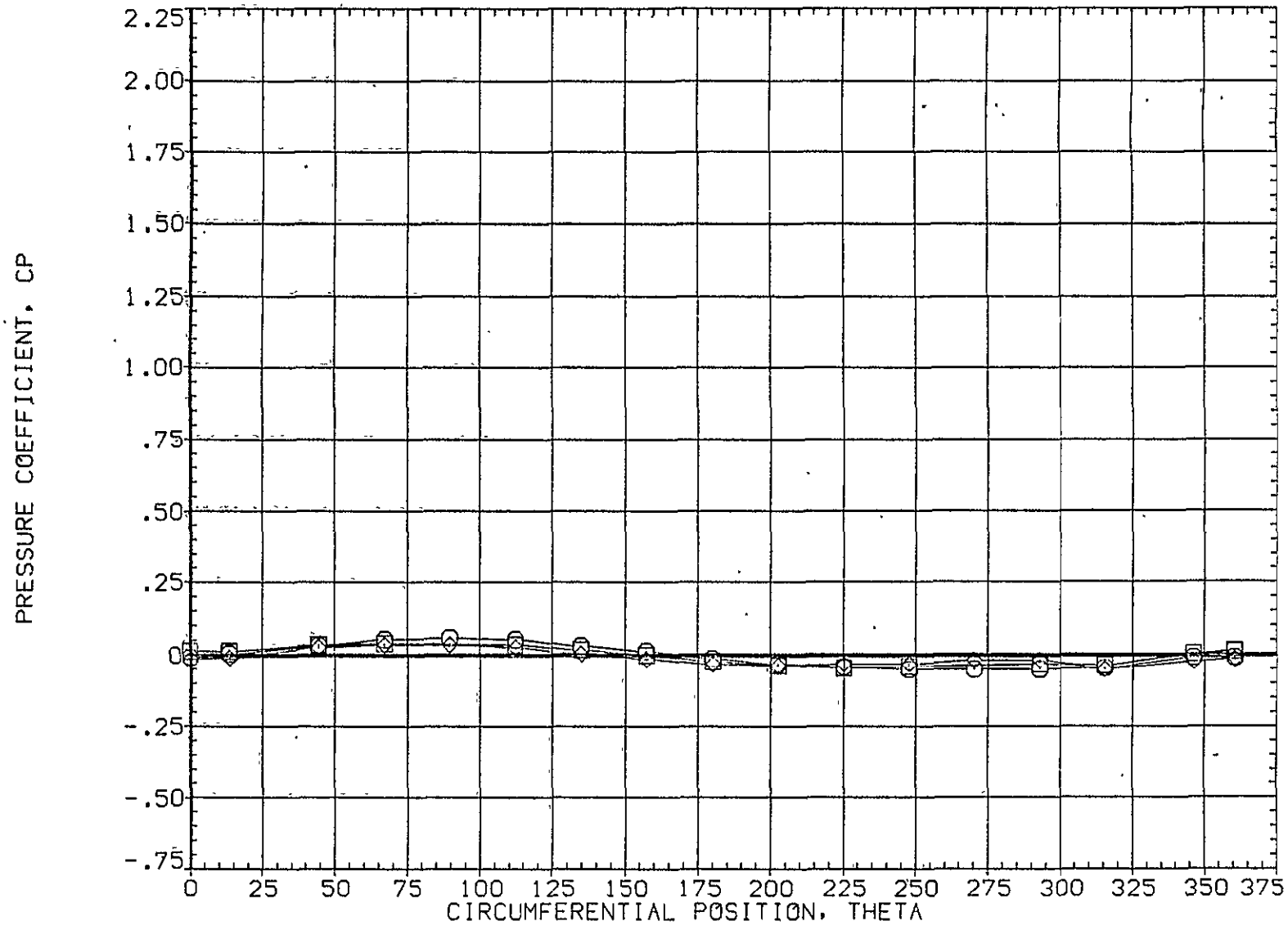

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

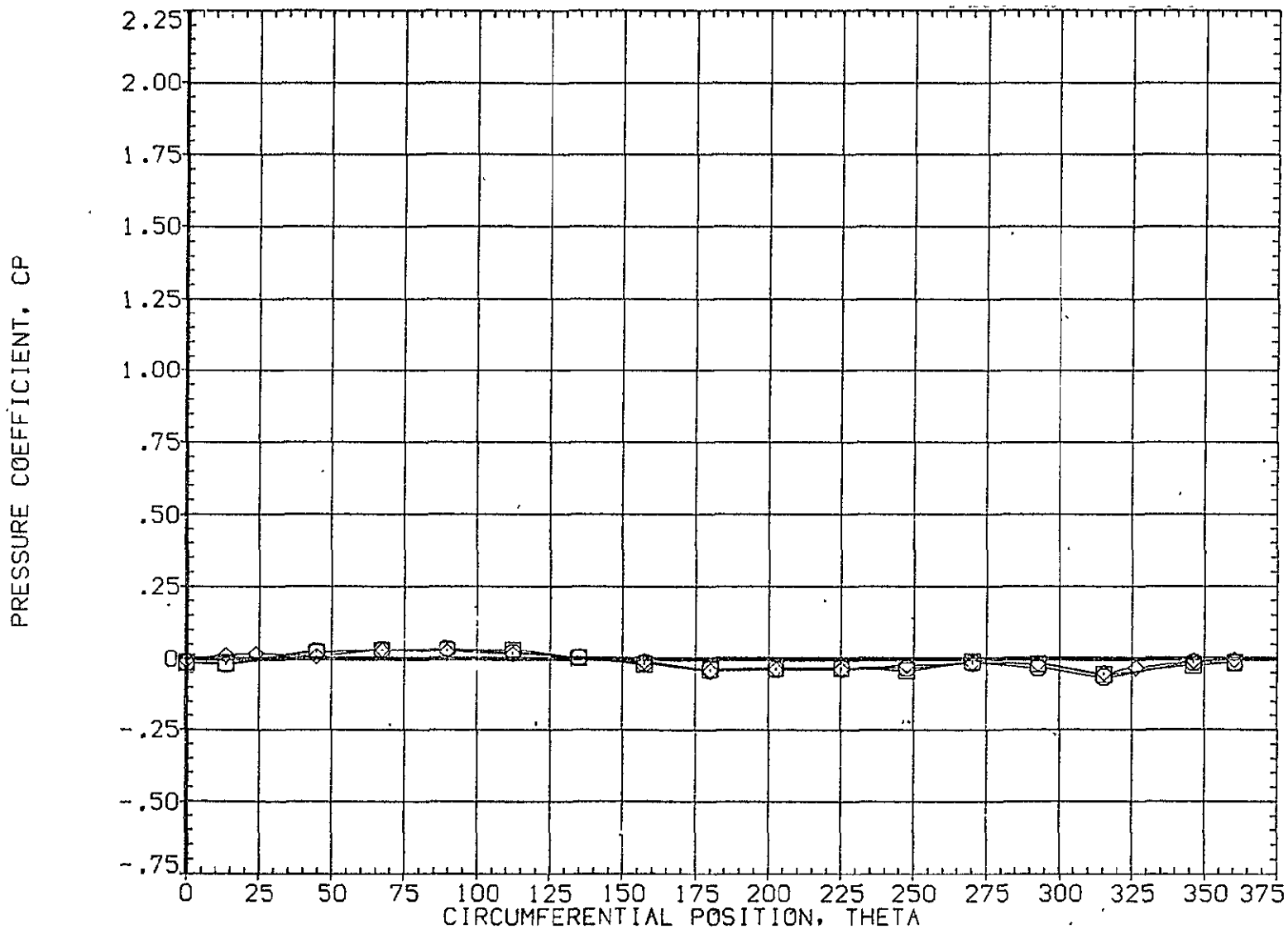

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

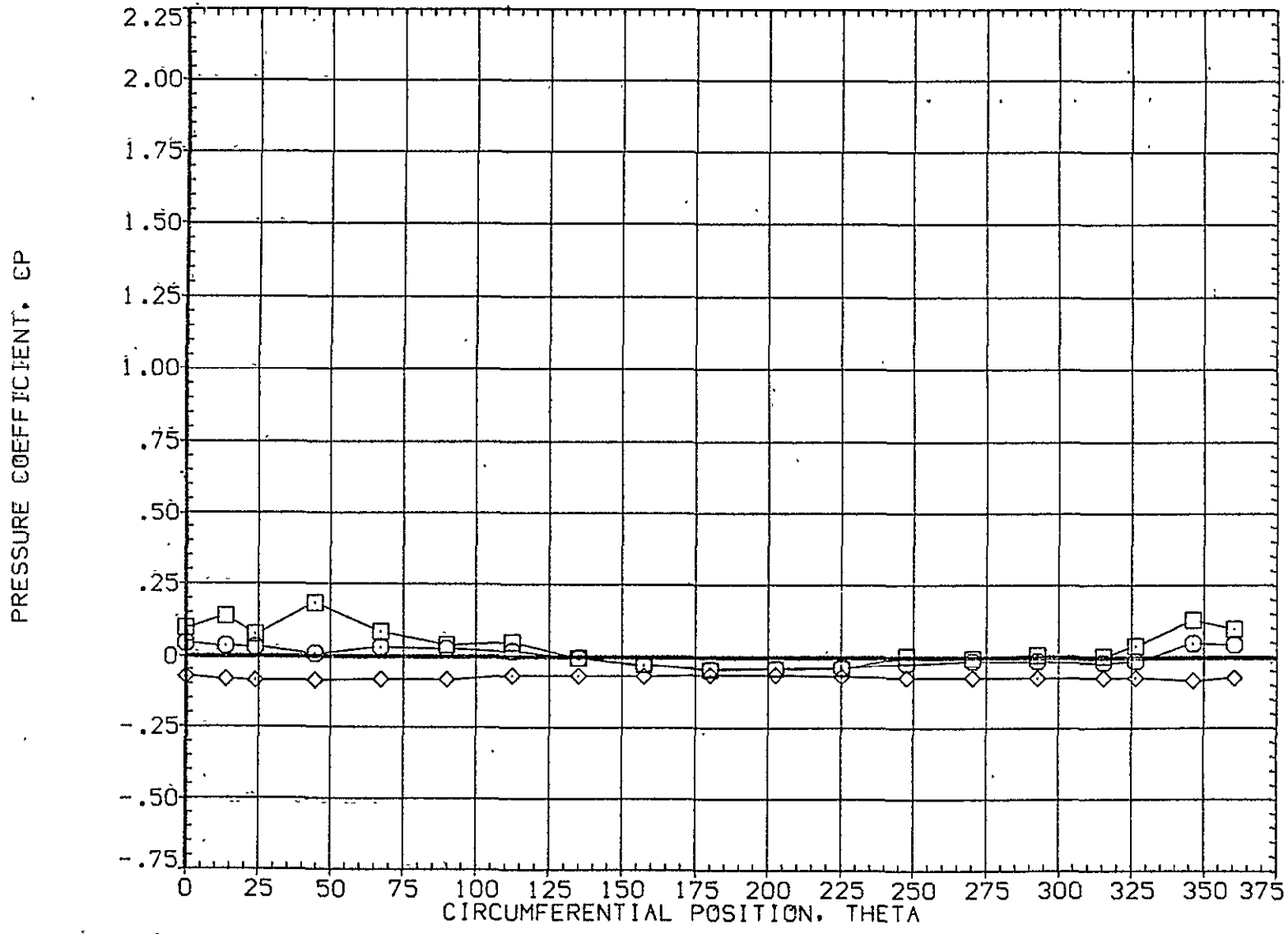

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

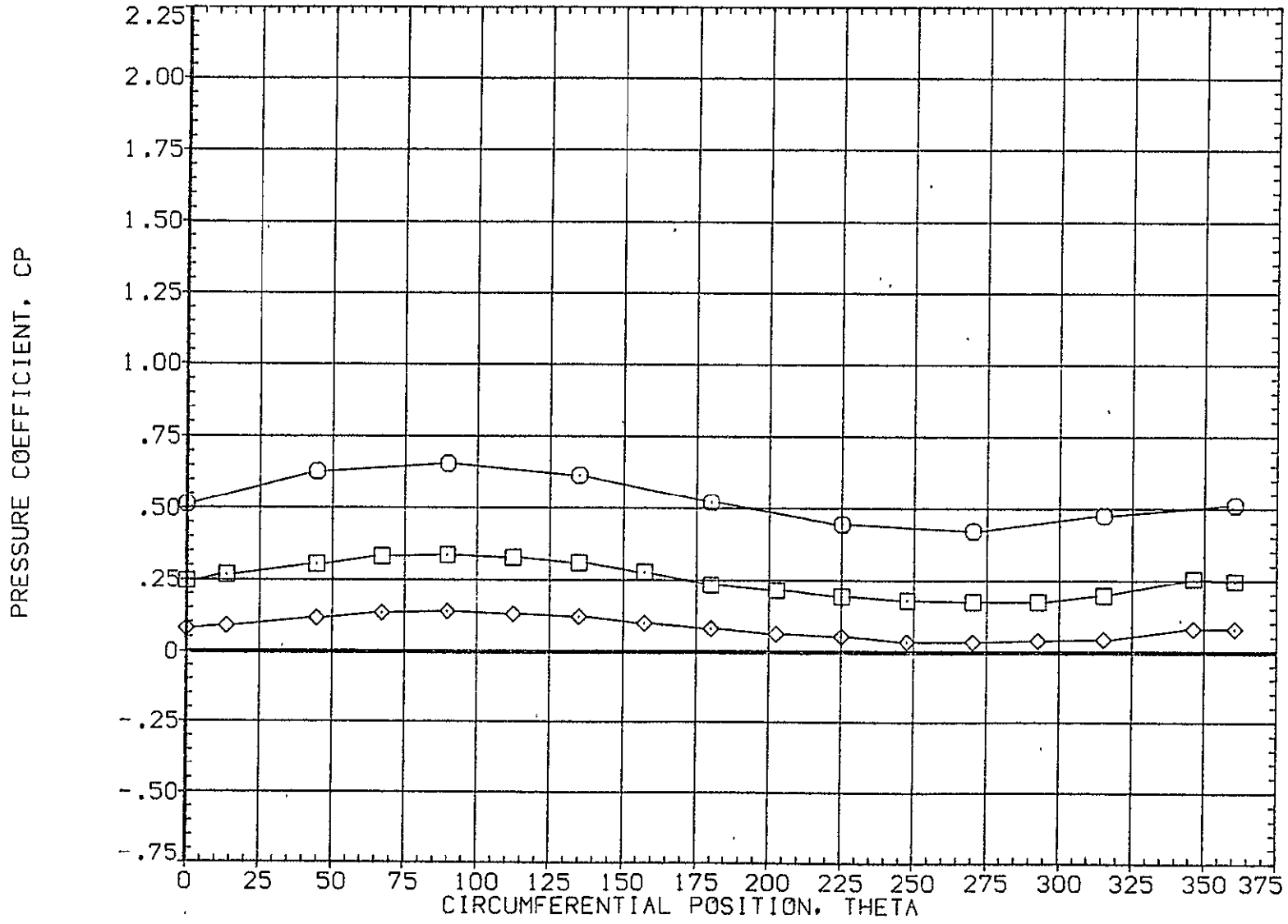

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.00(
MOUNT	1.000	PHI	90.00(

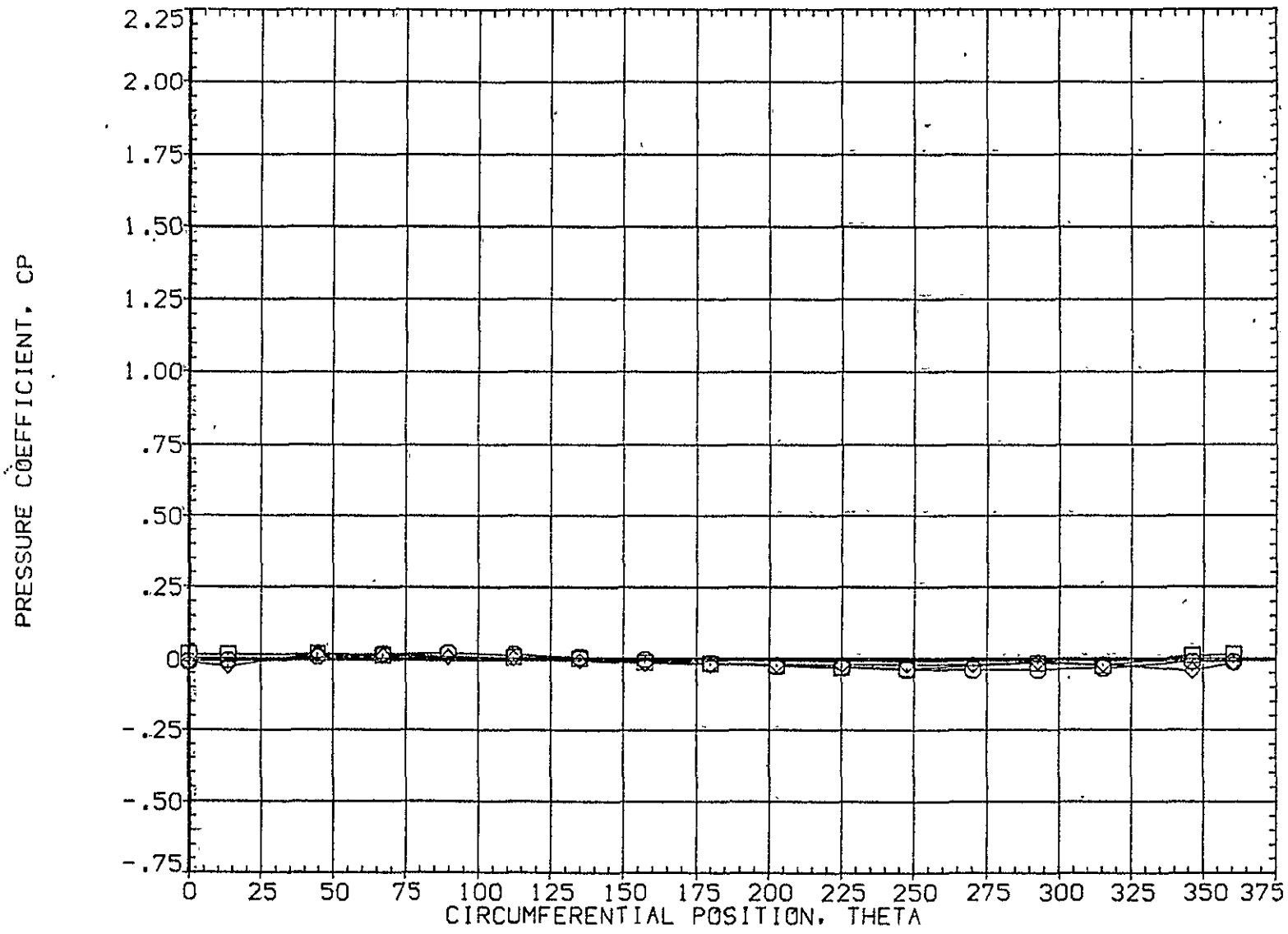

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

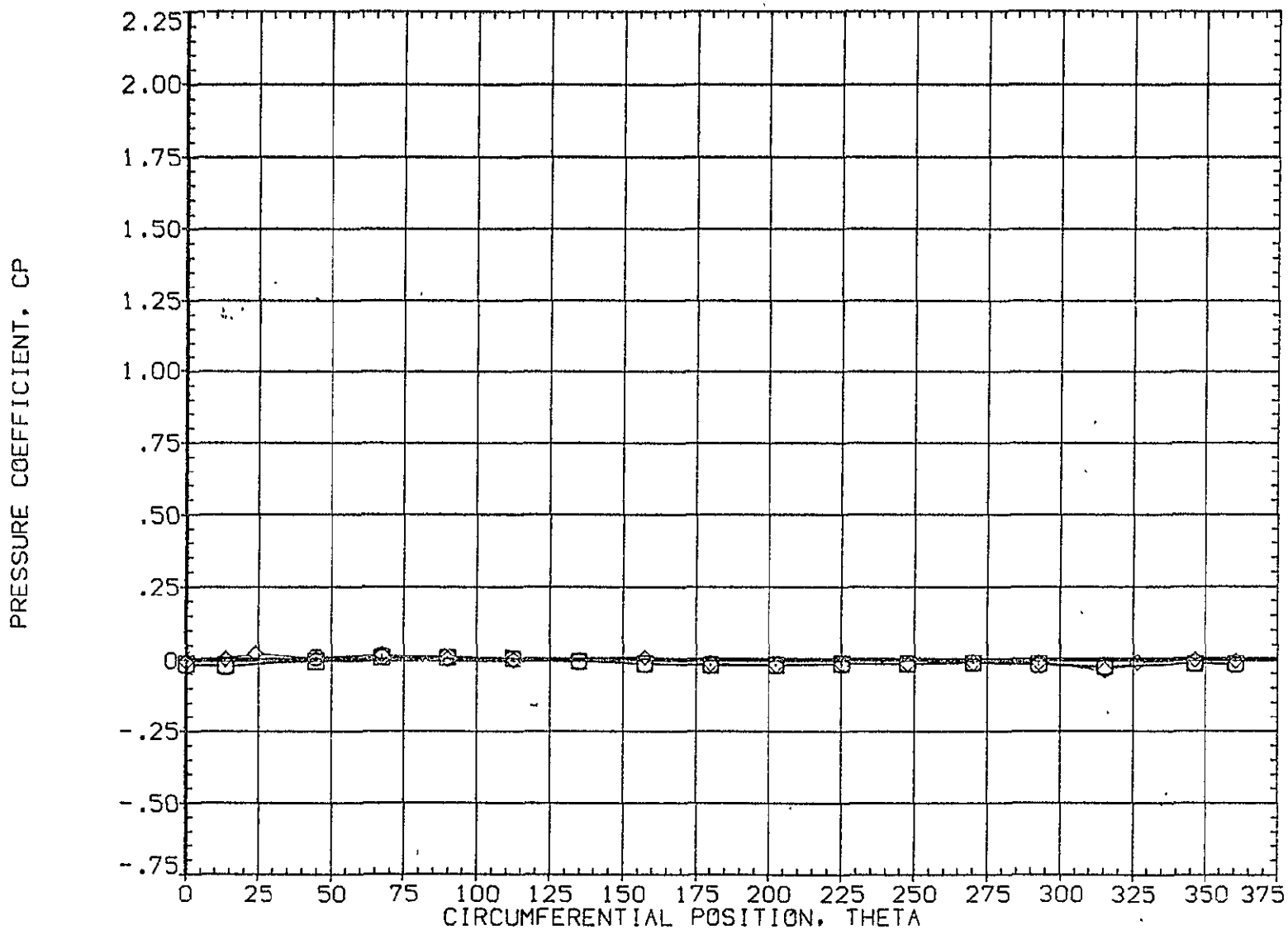

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

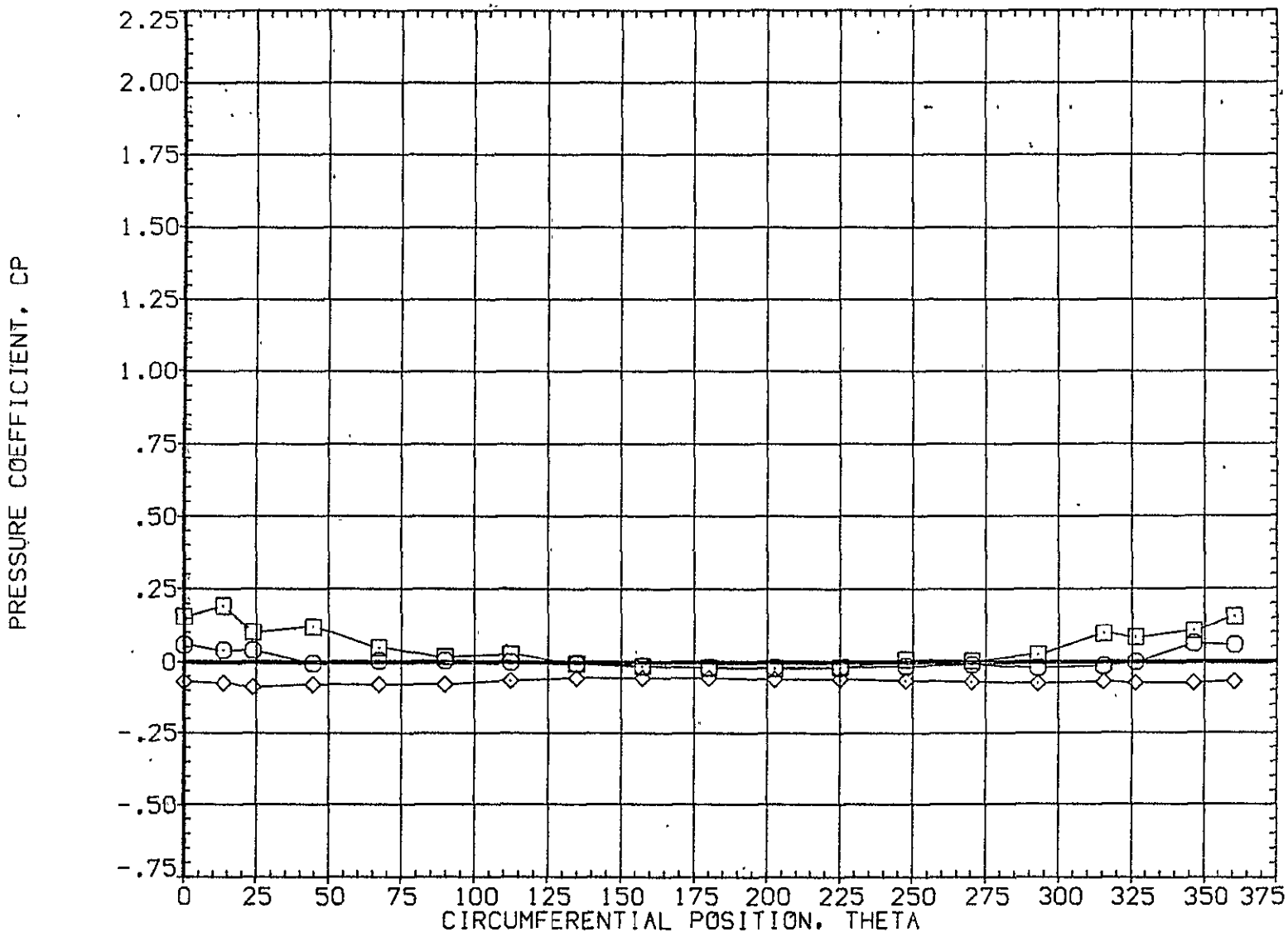

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

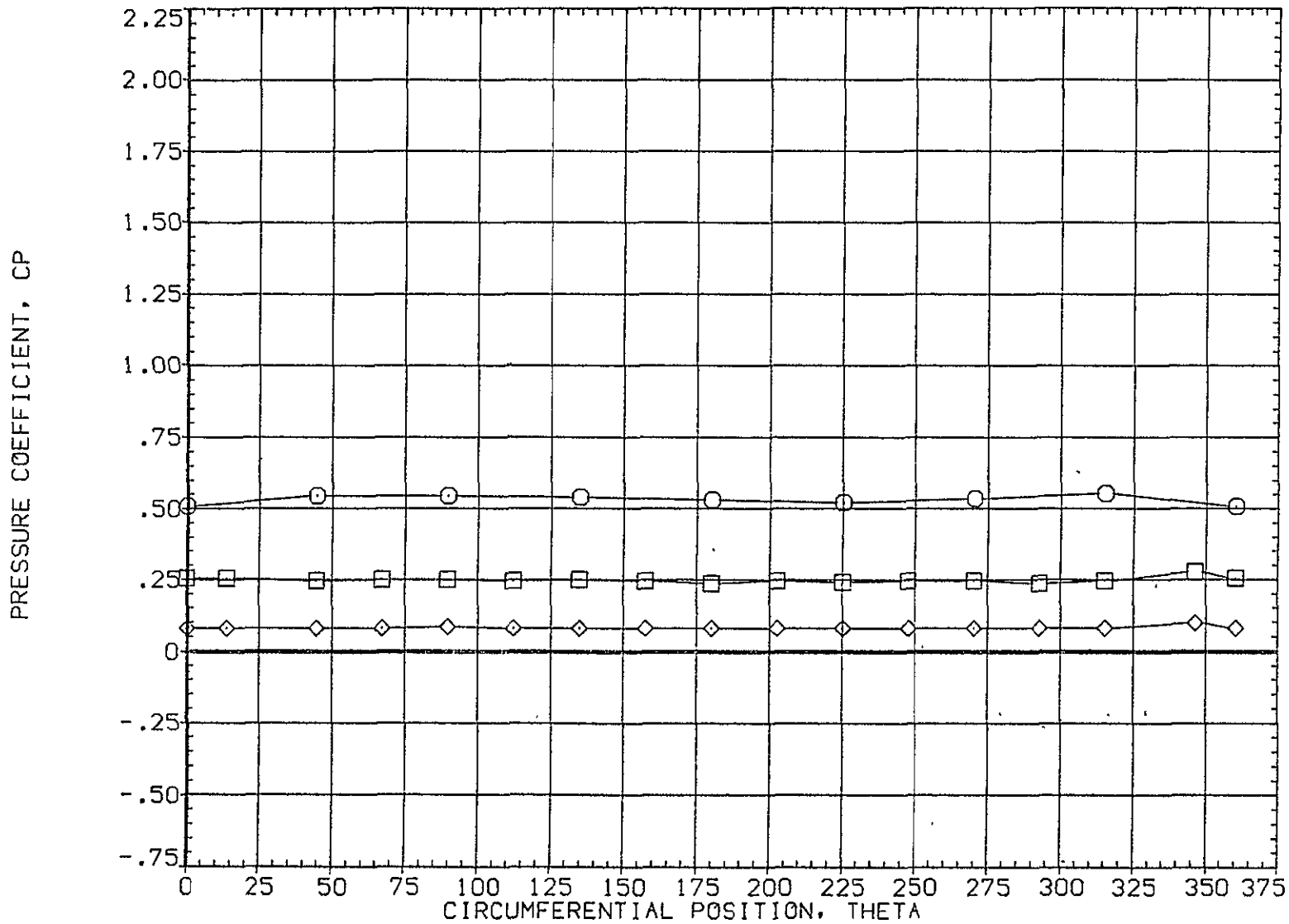

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

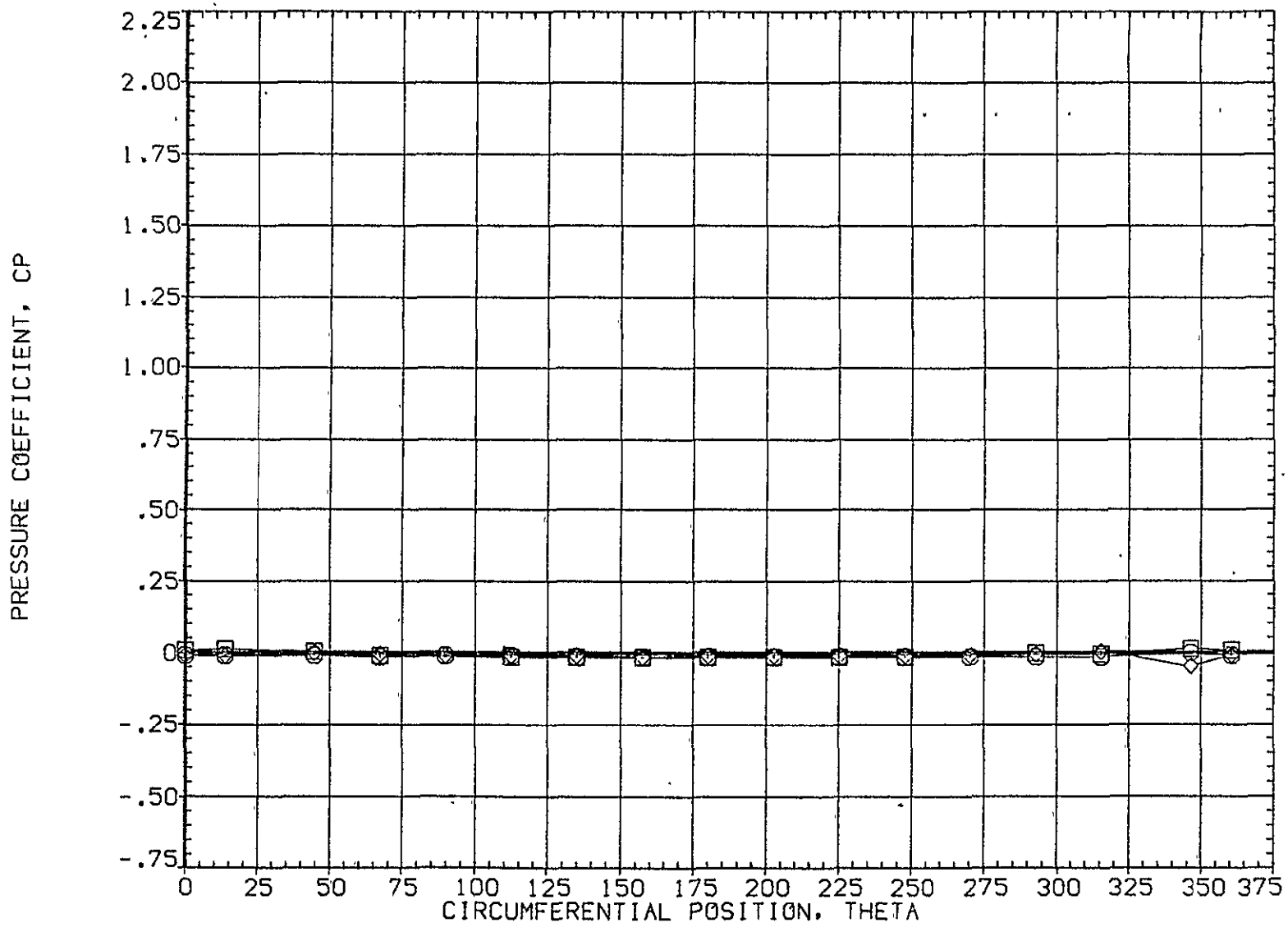

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

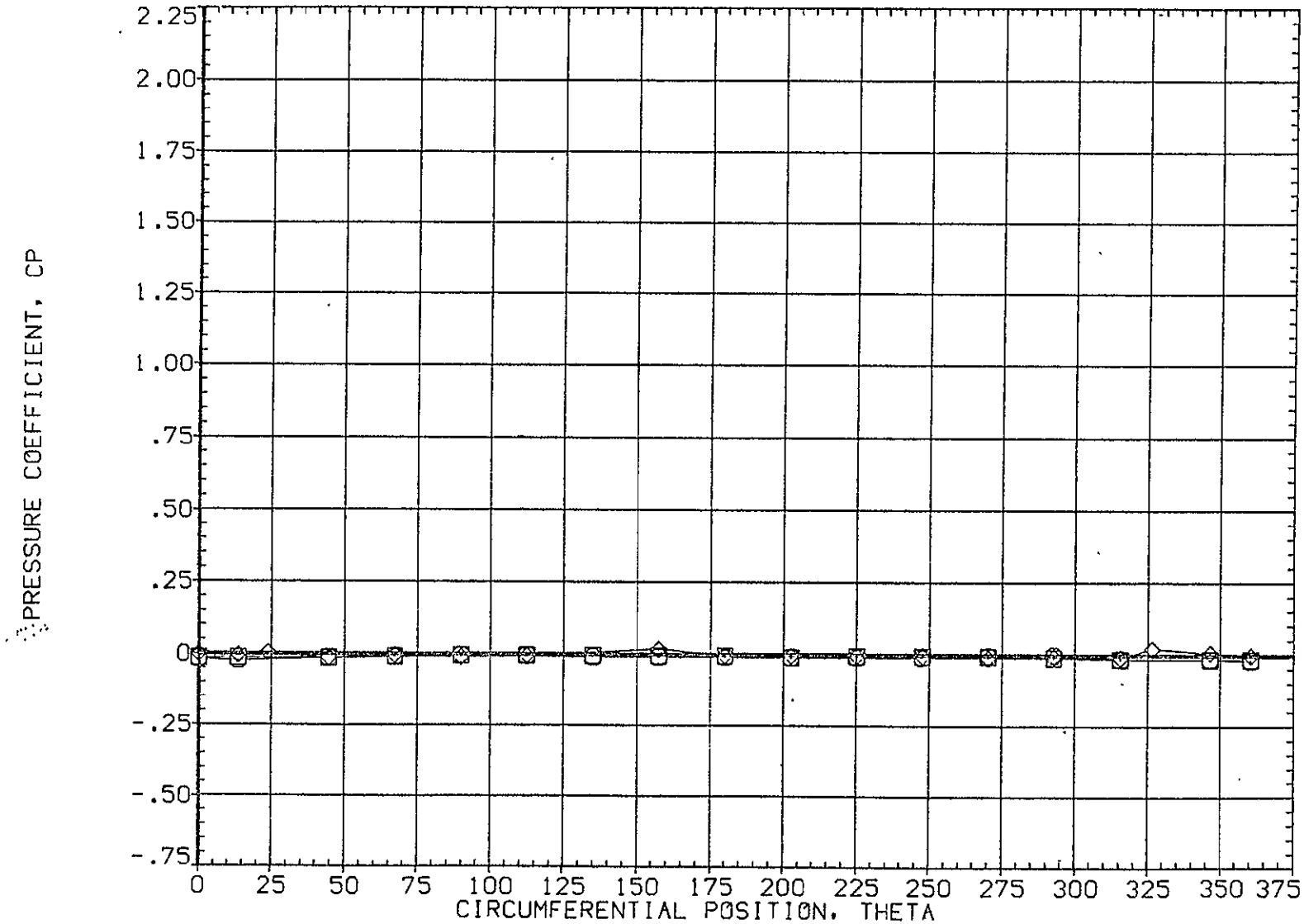

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

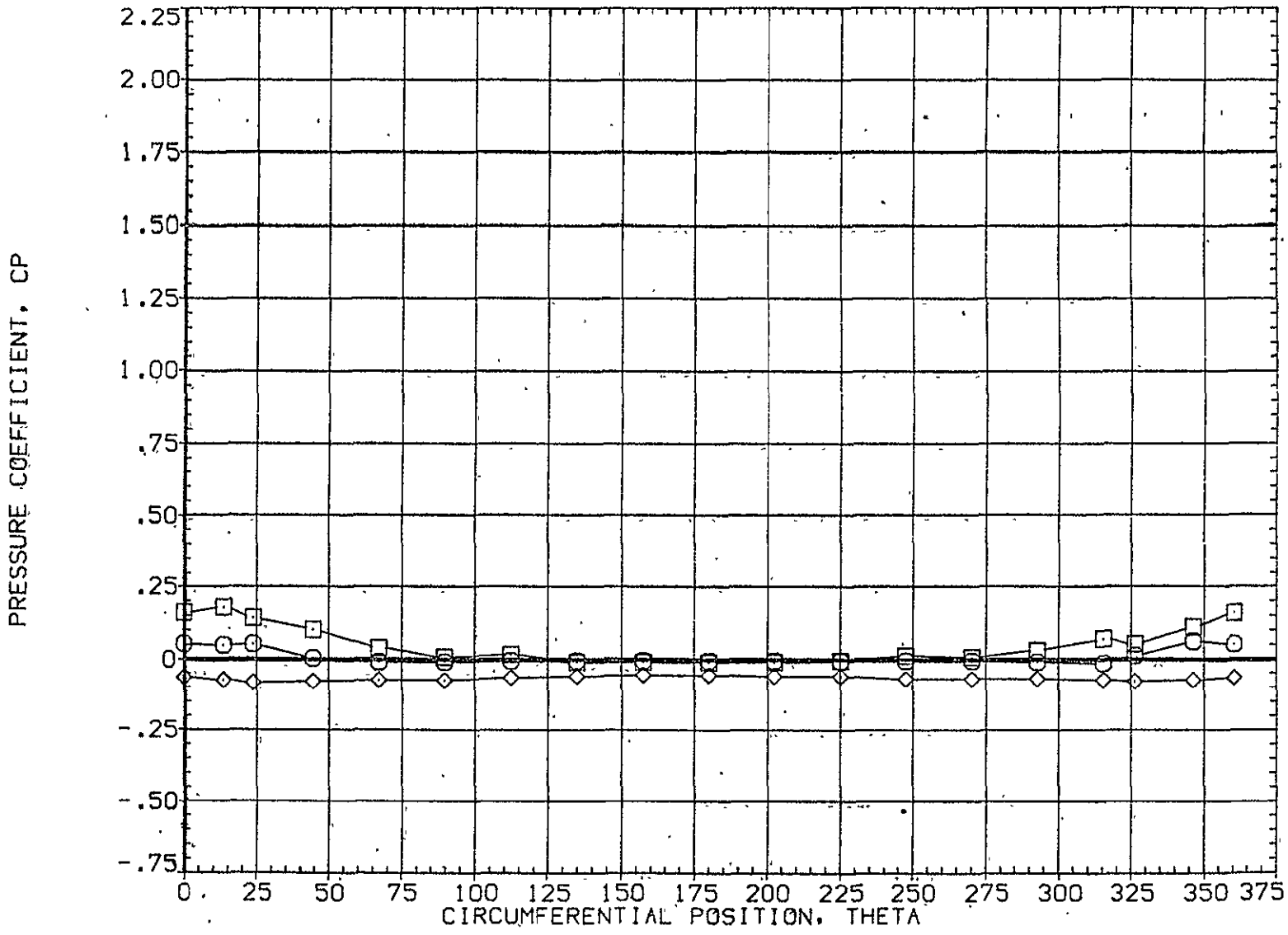

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

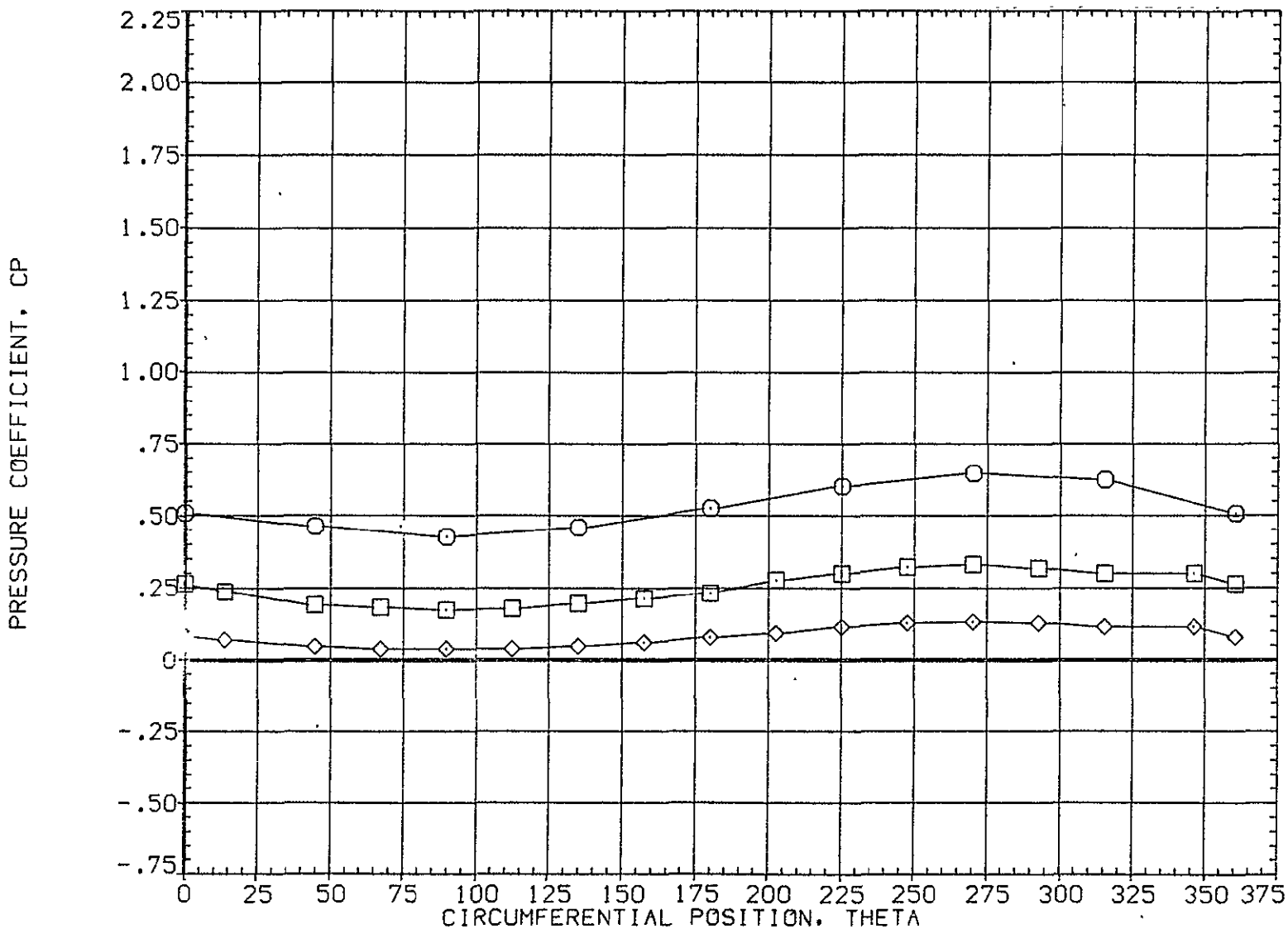

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

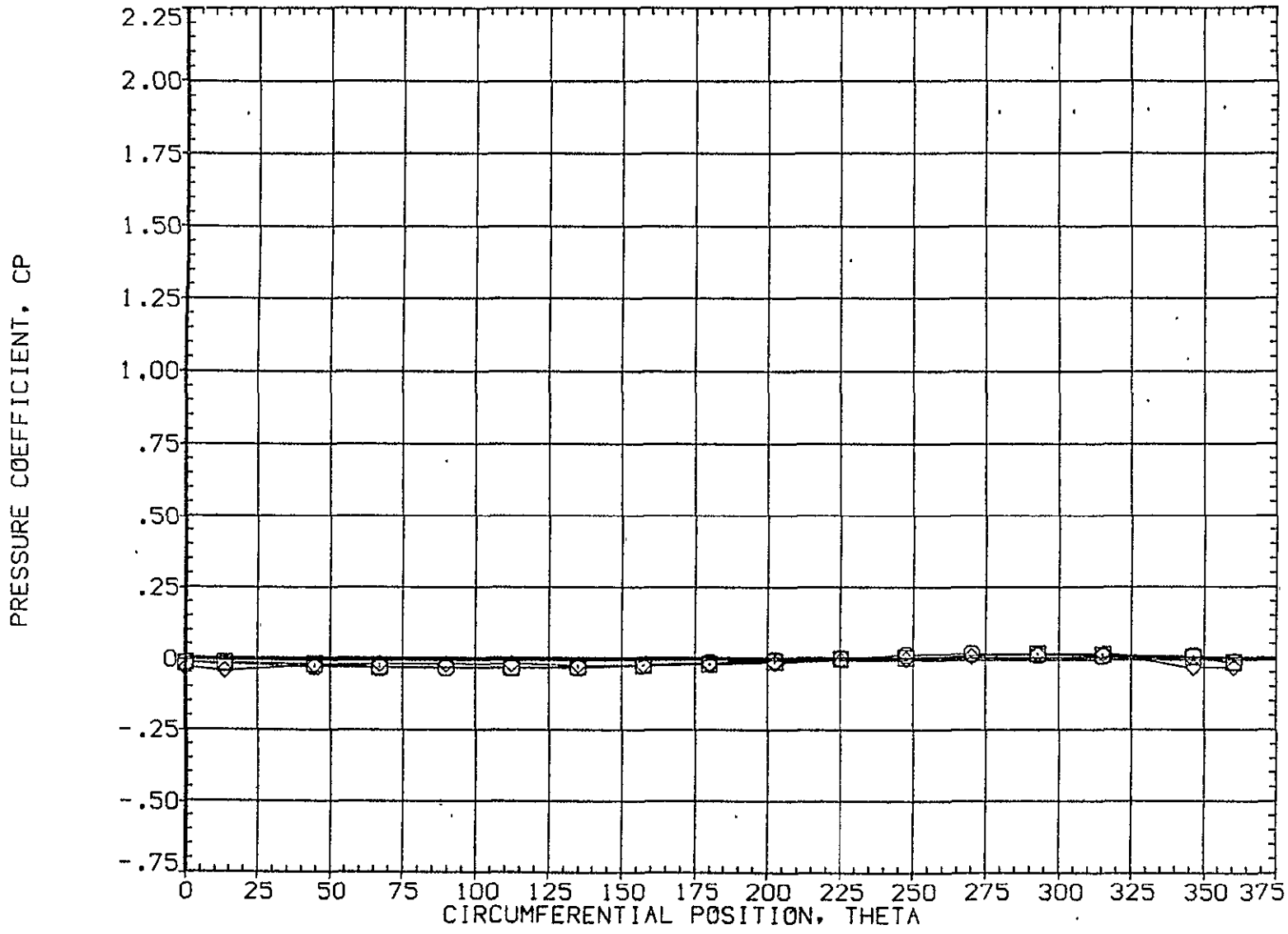

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

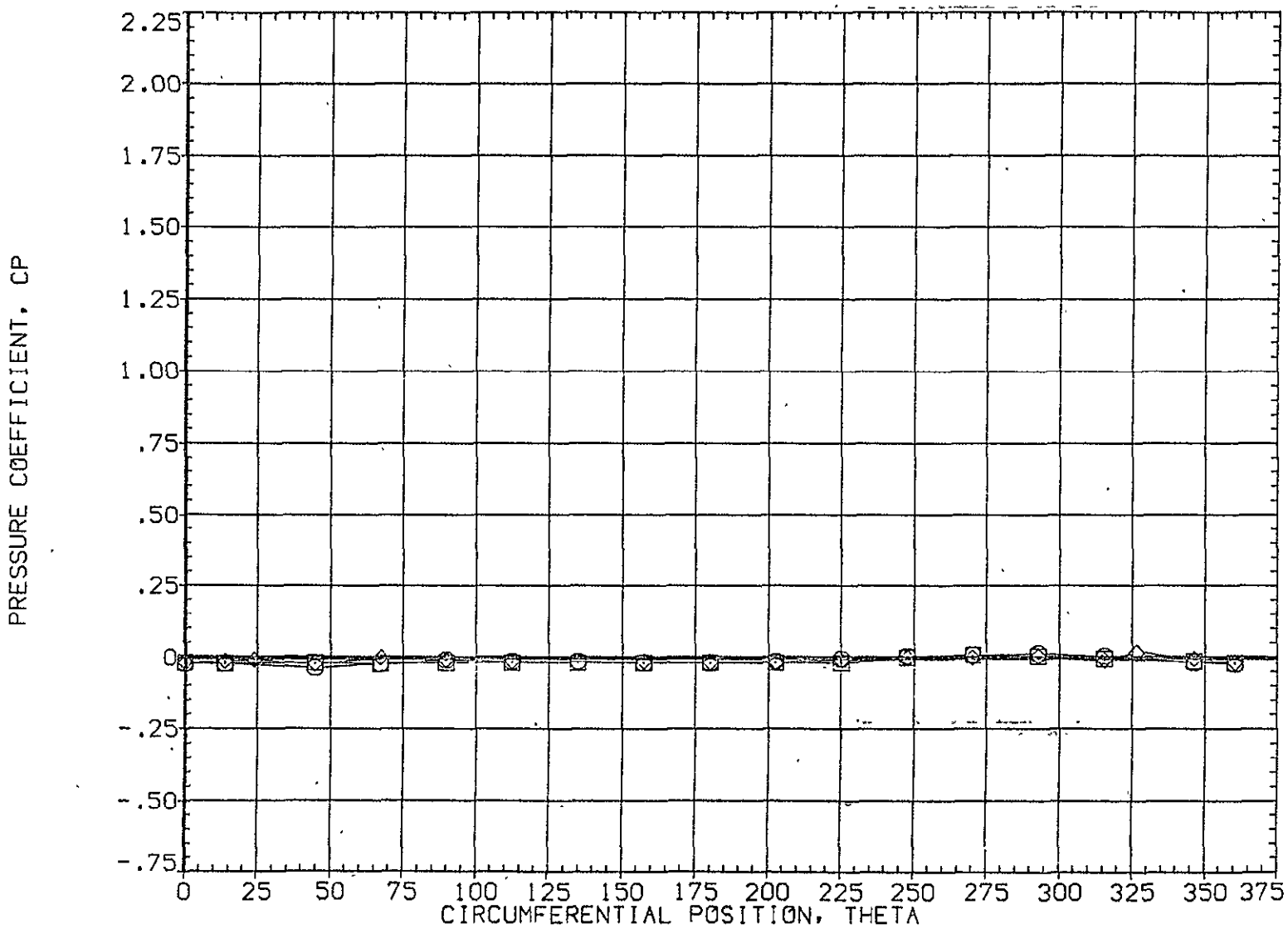

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

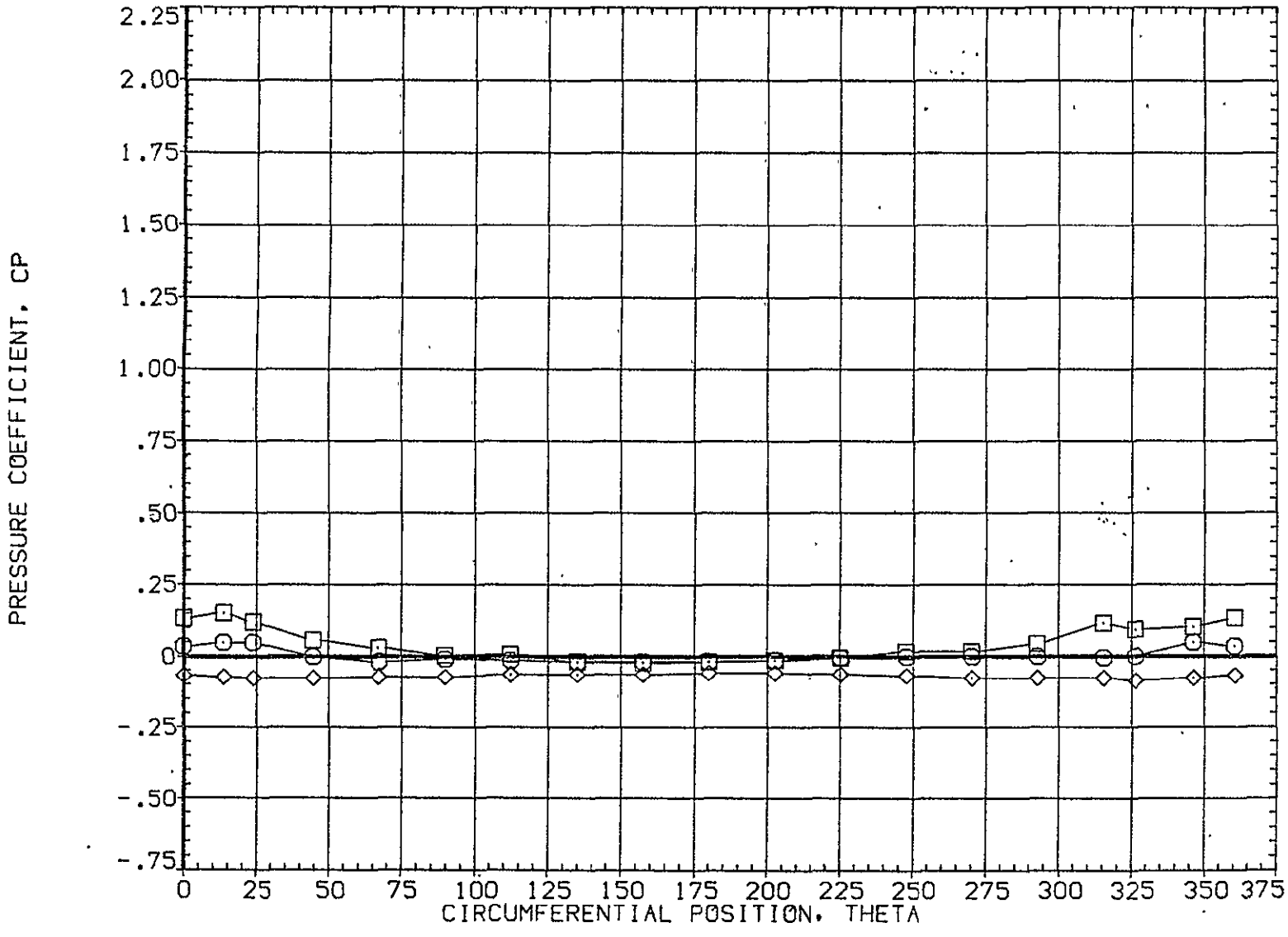

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

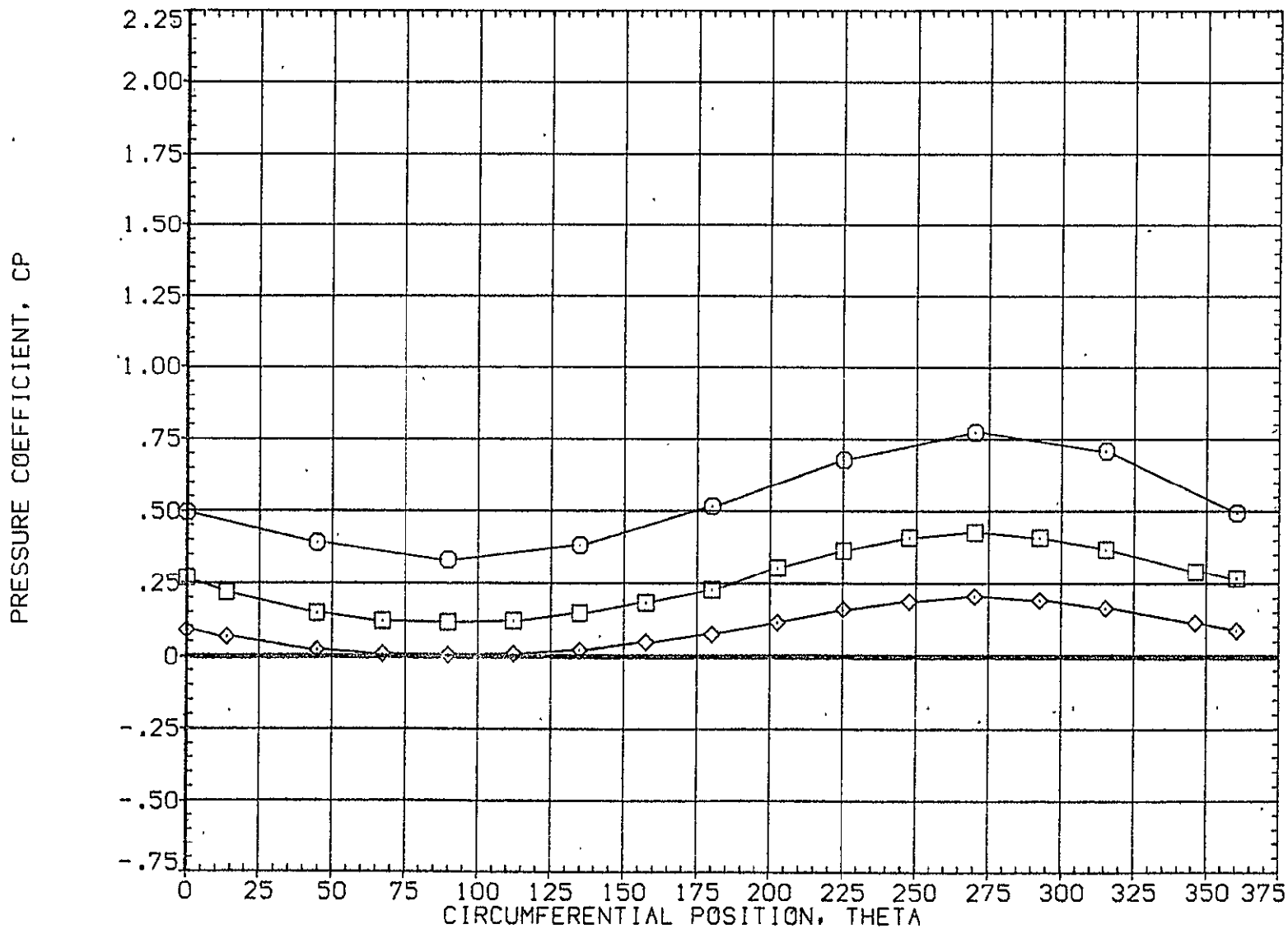

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

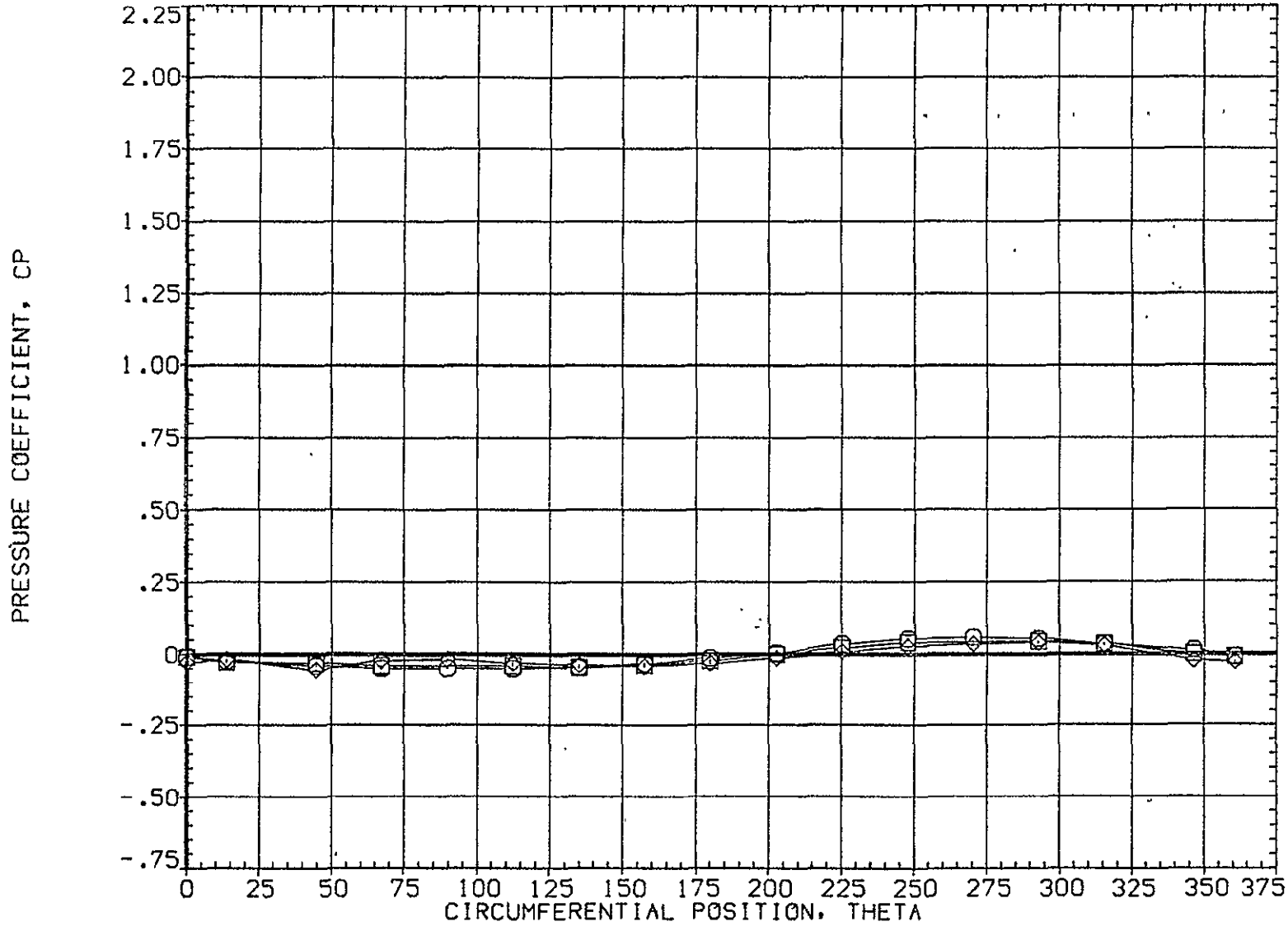

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

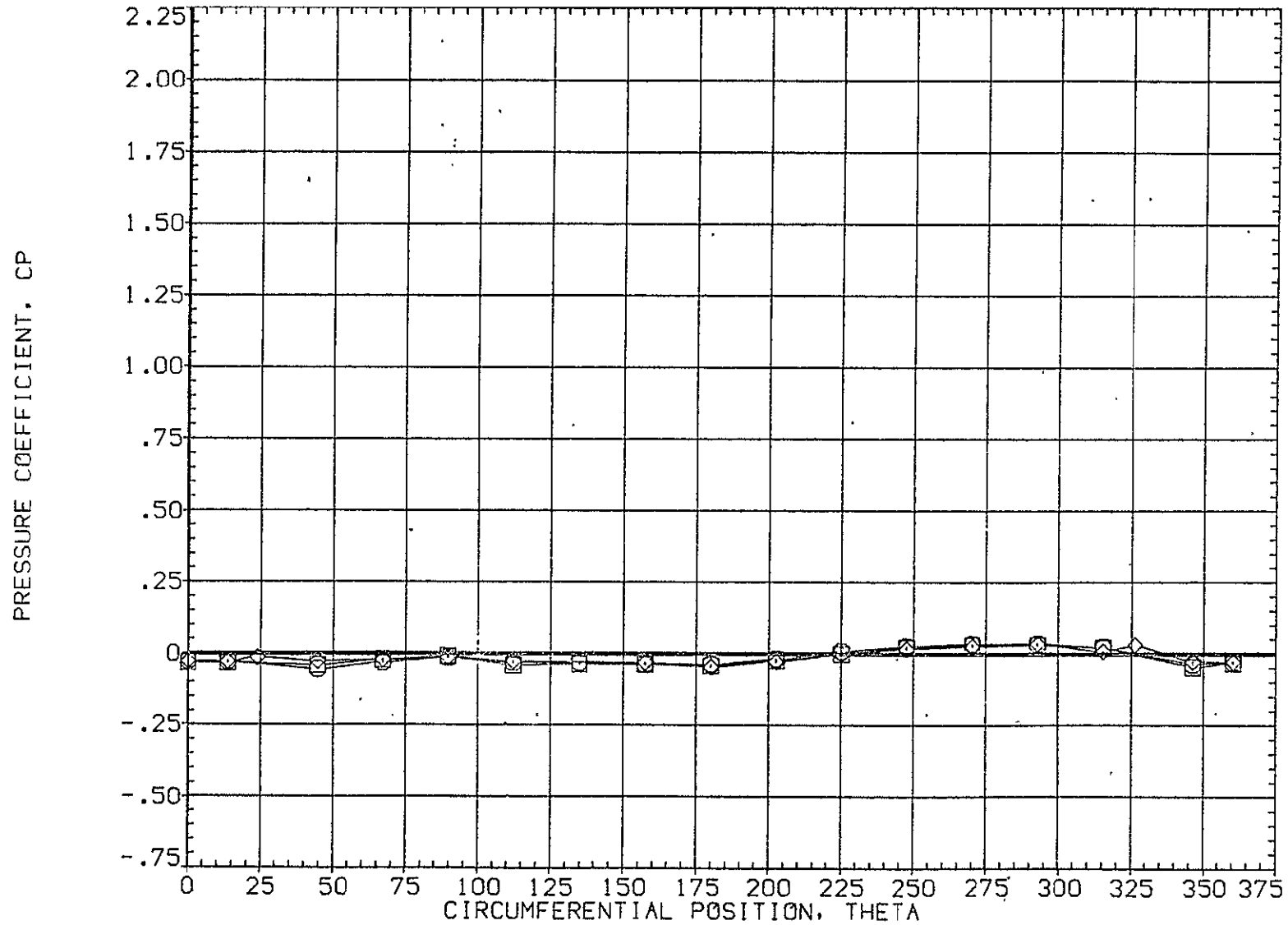

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

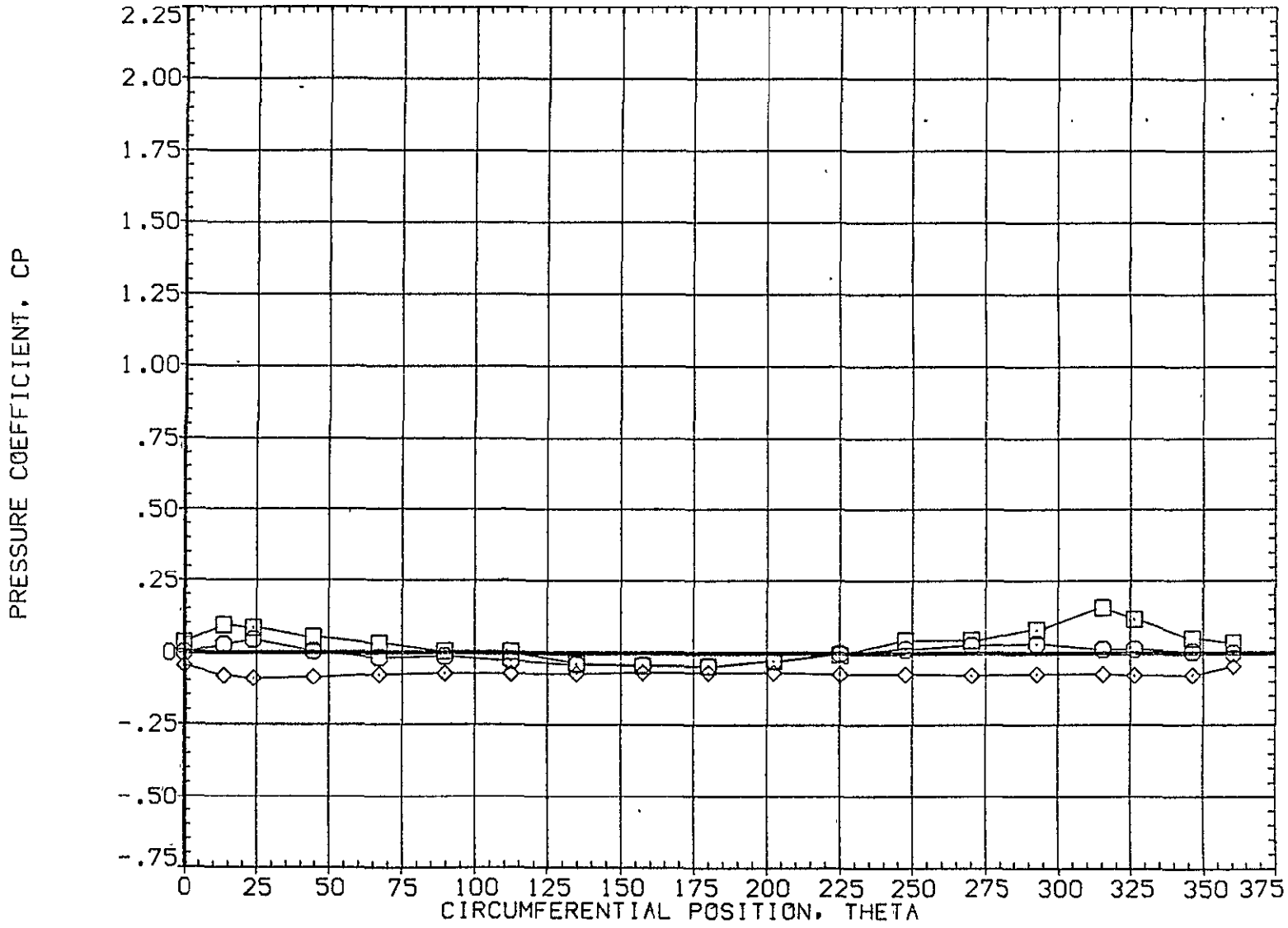

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

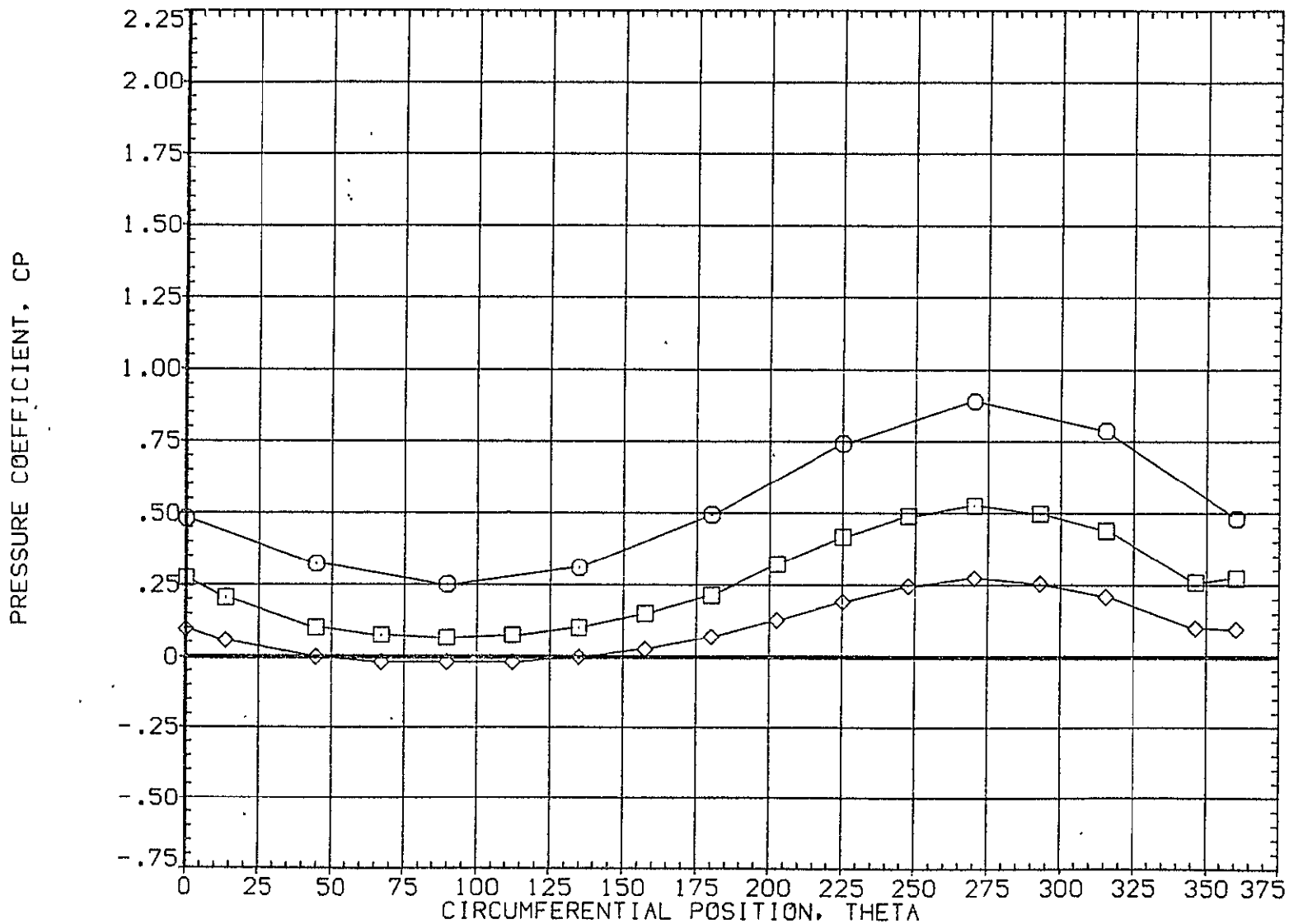

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

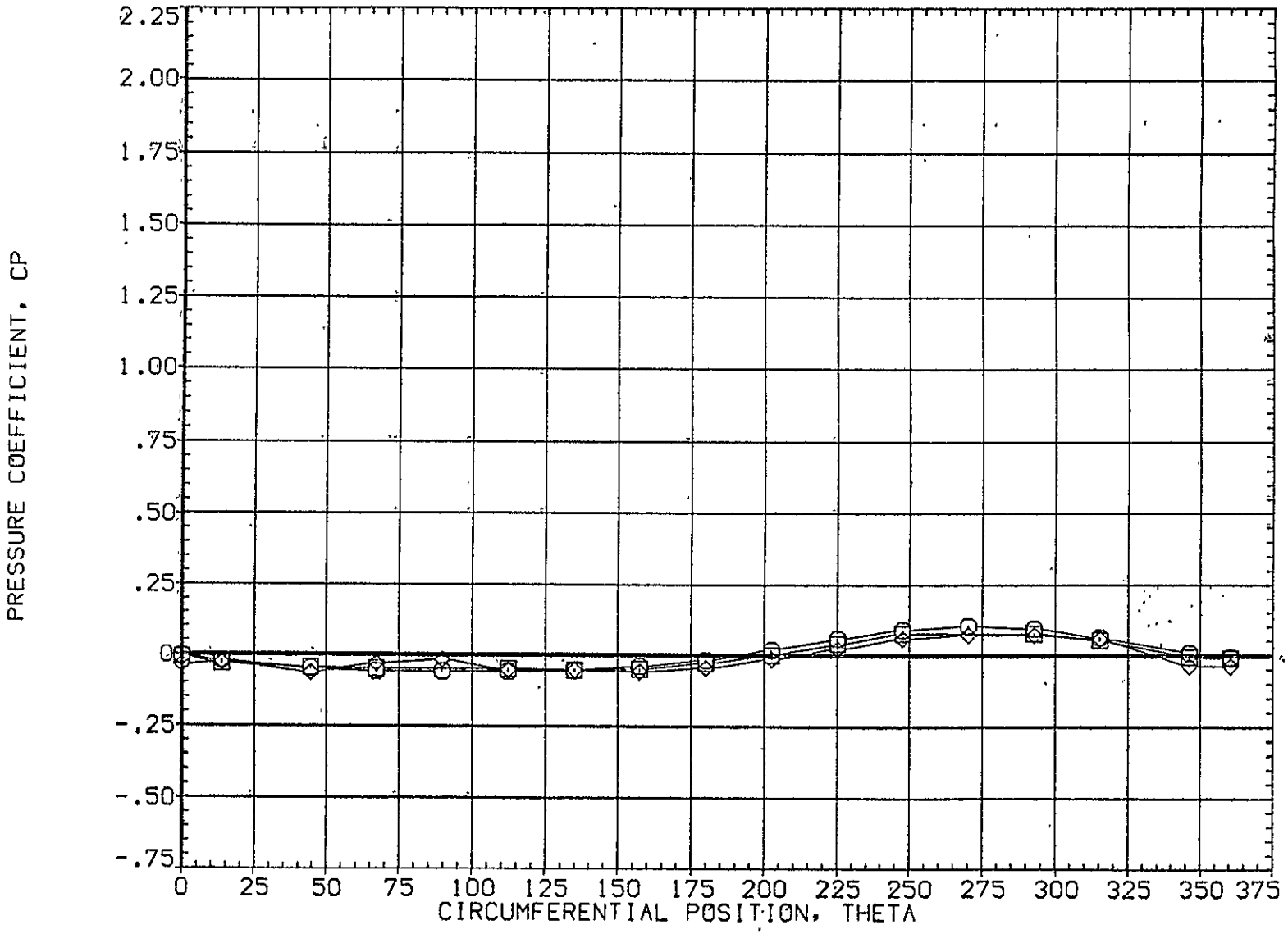

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.520	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

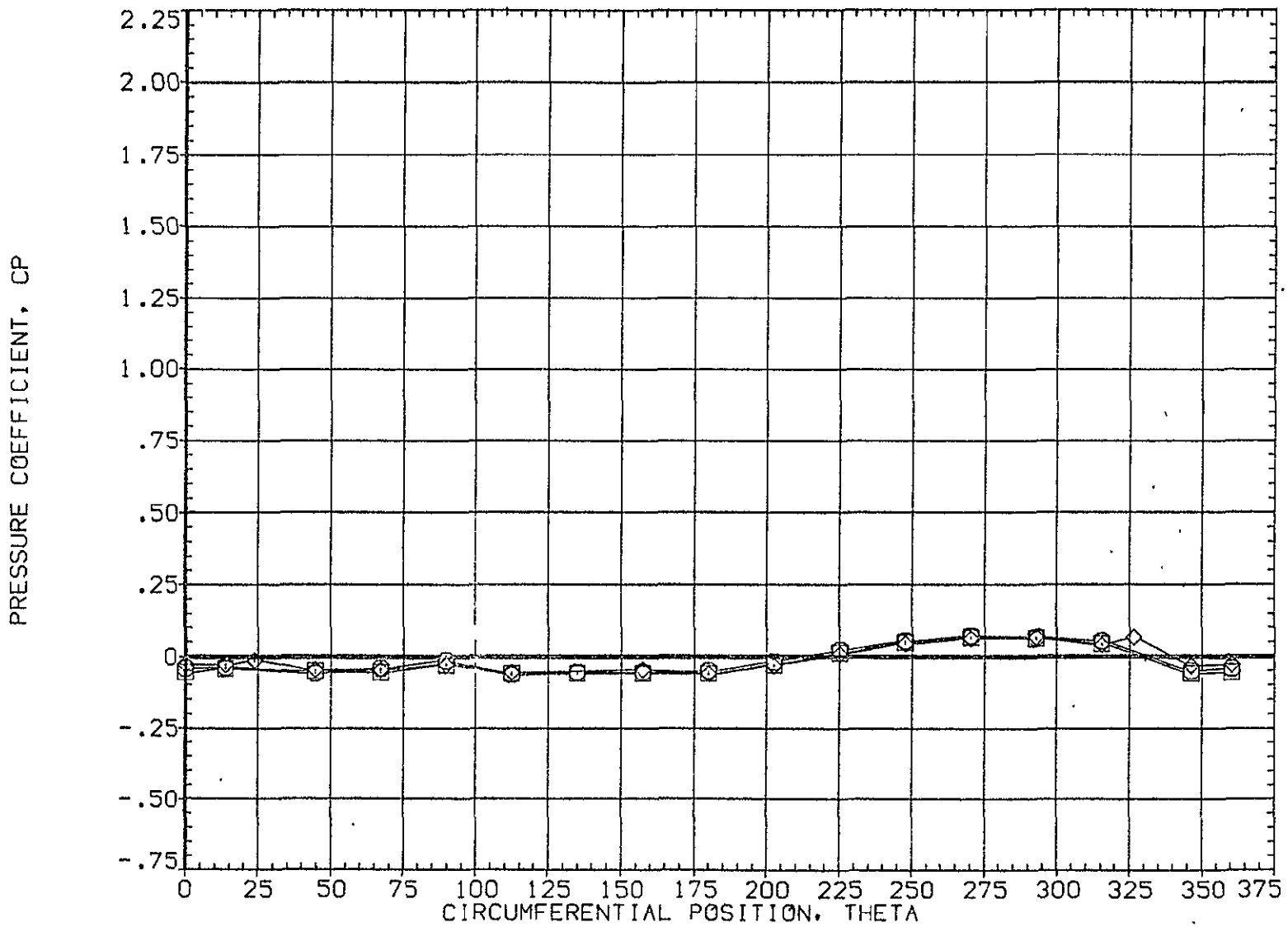

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

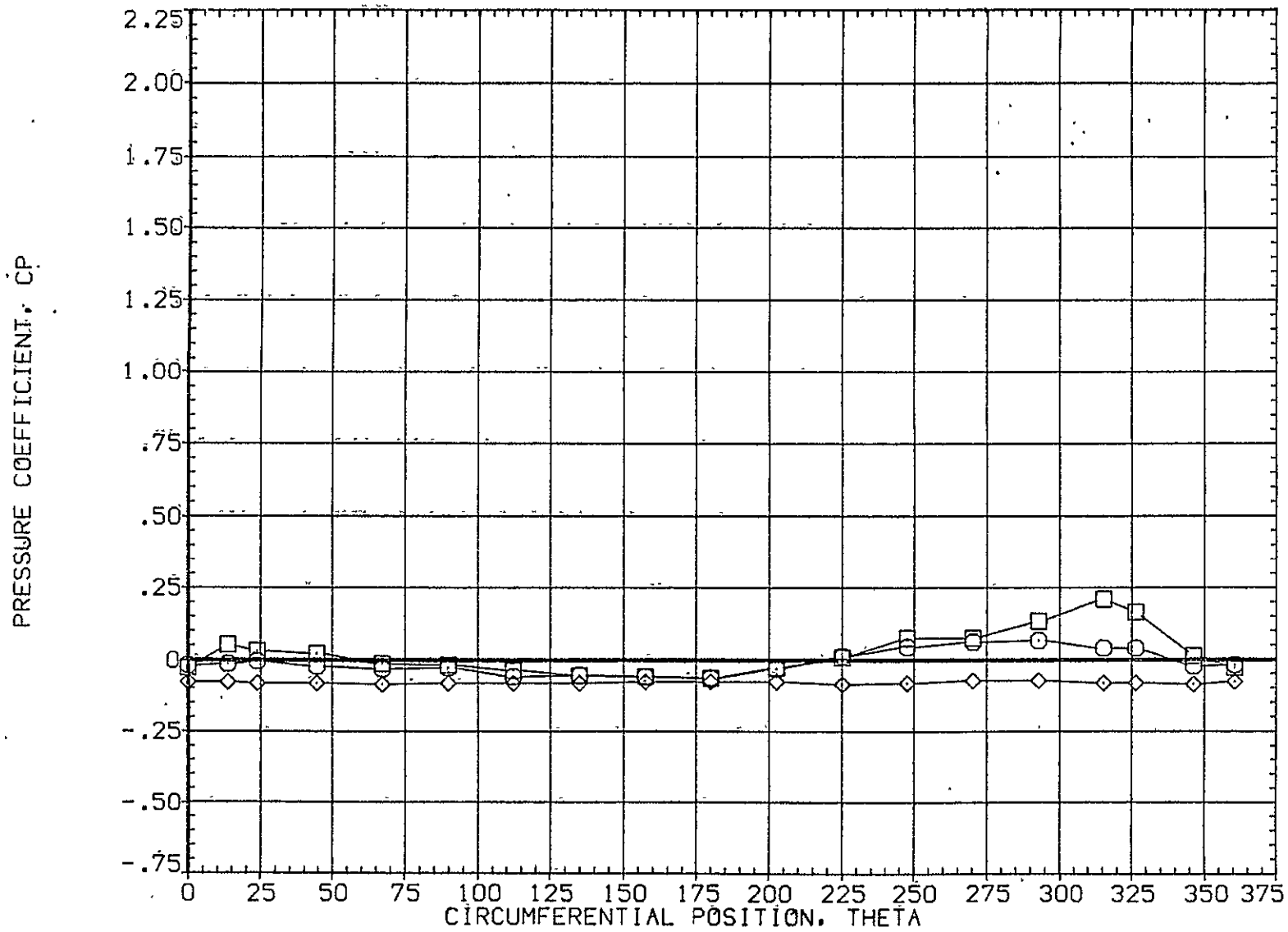

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

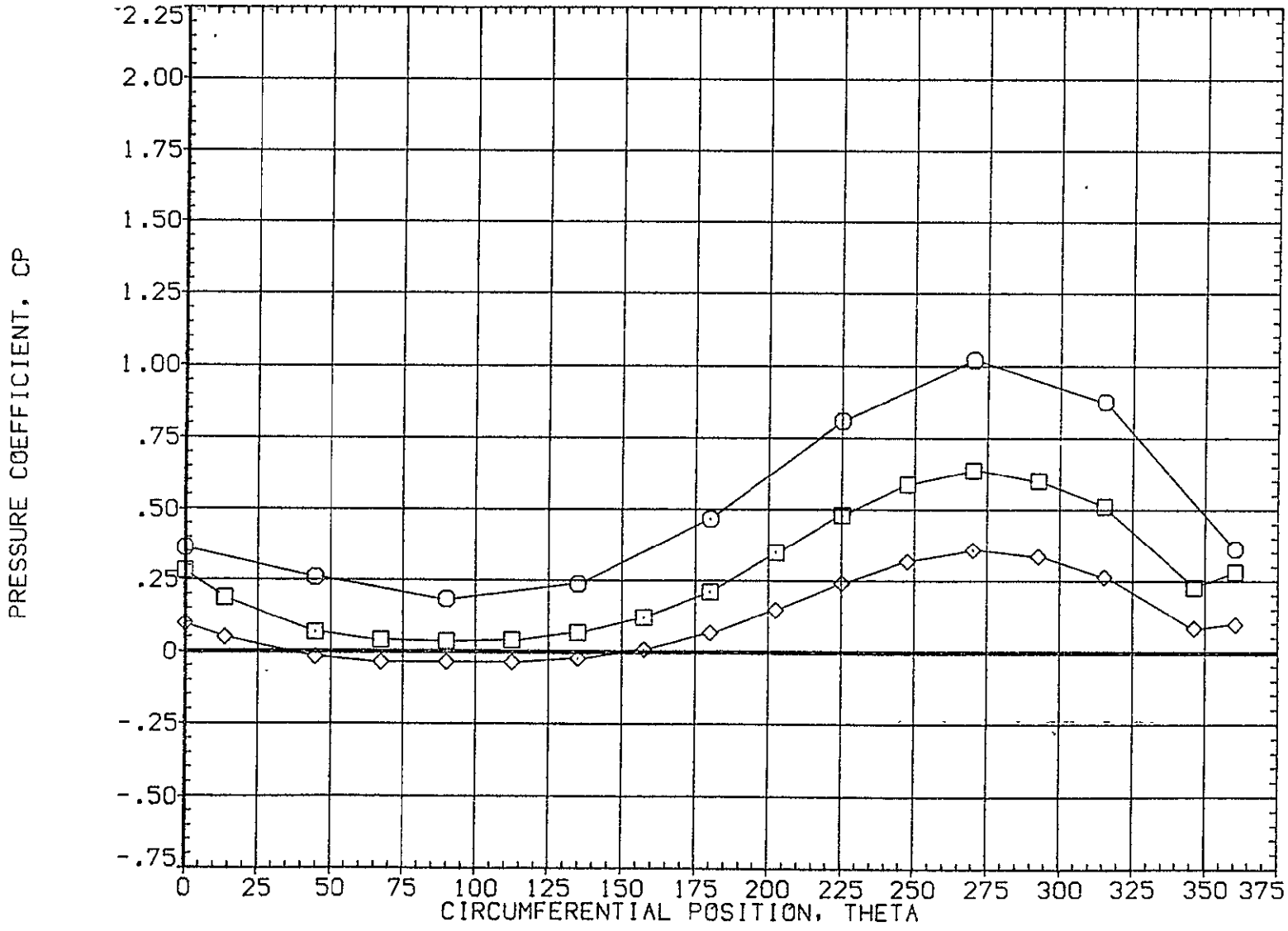

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

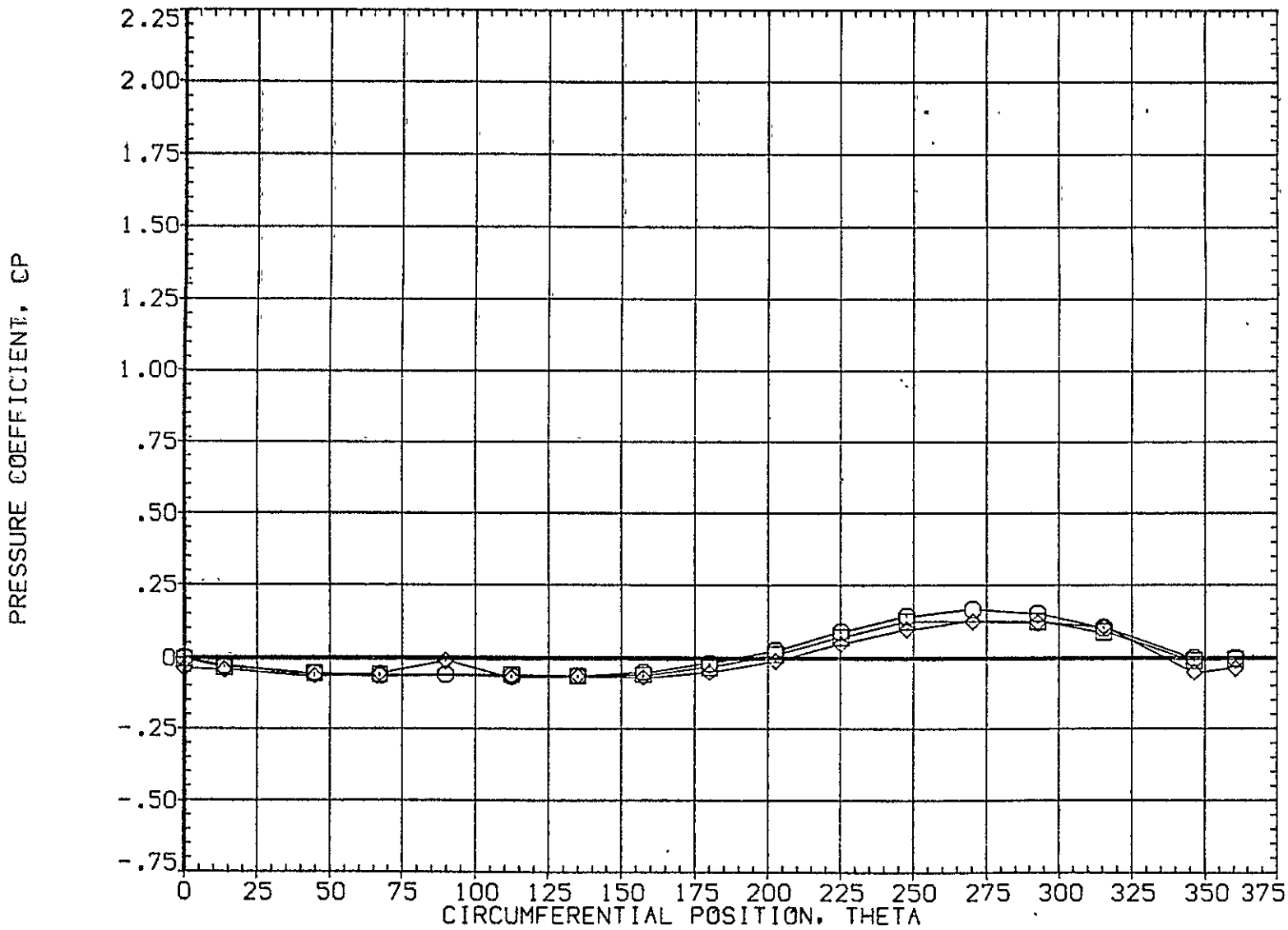

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

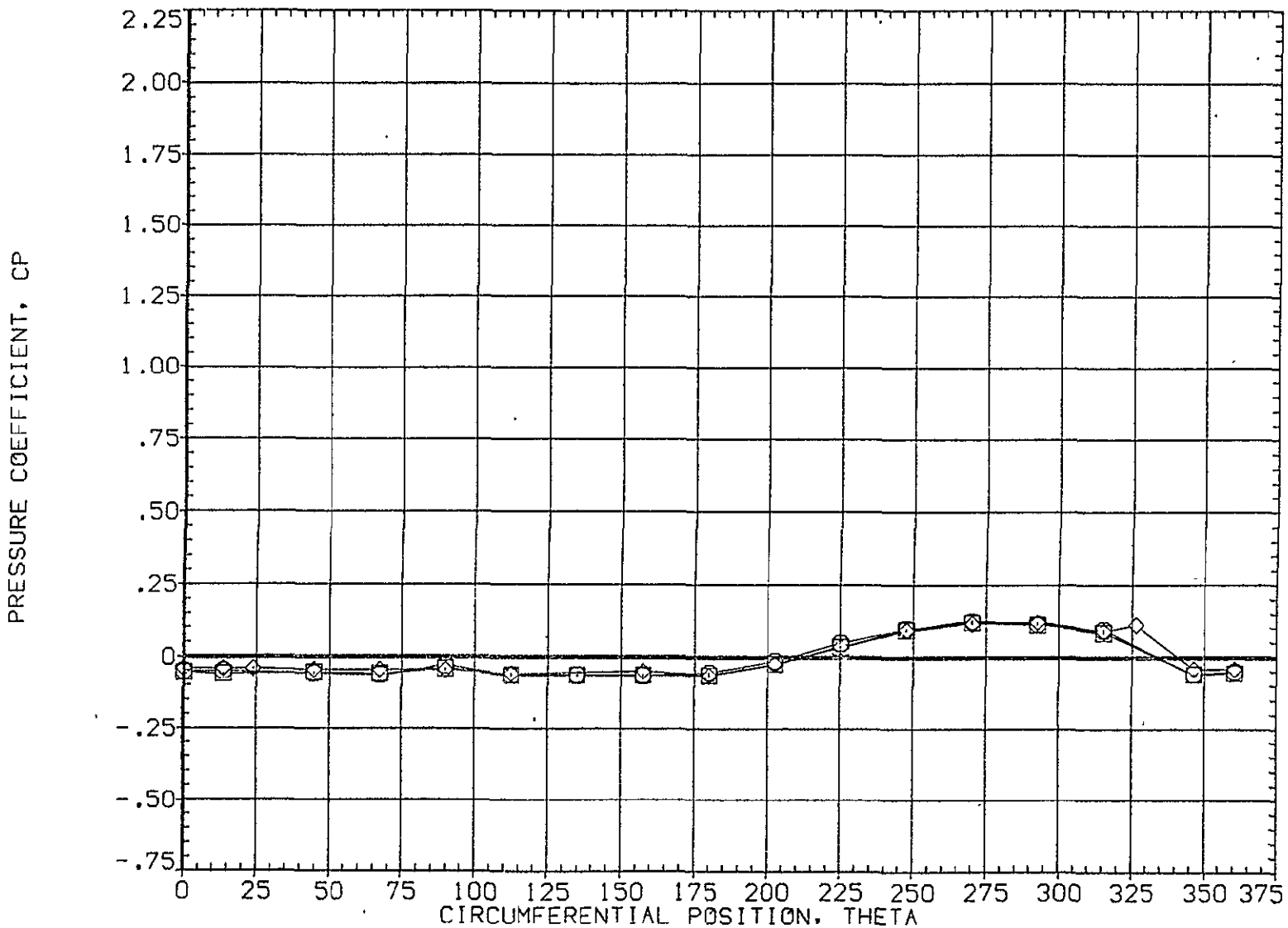

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

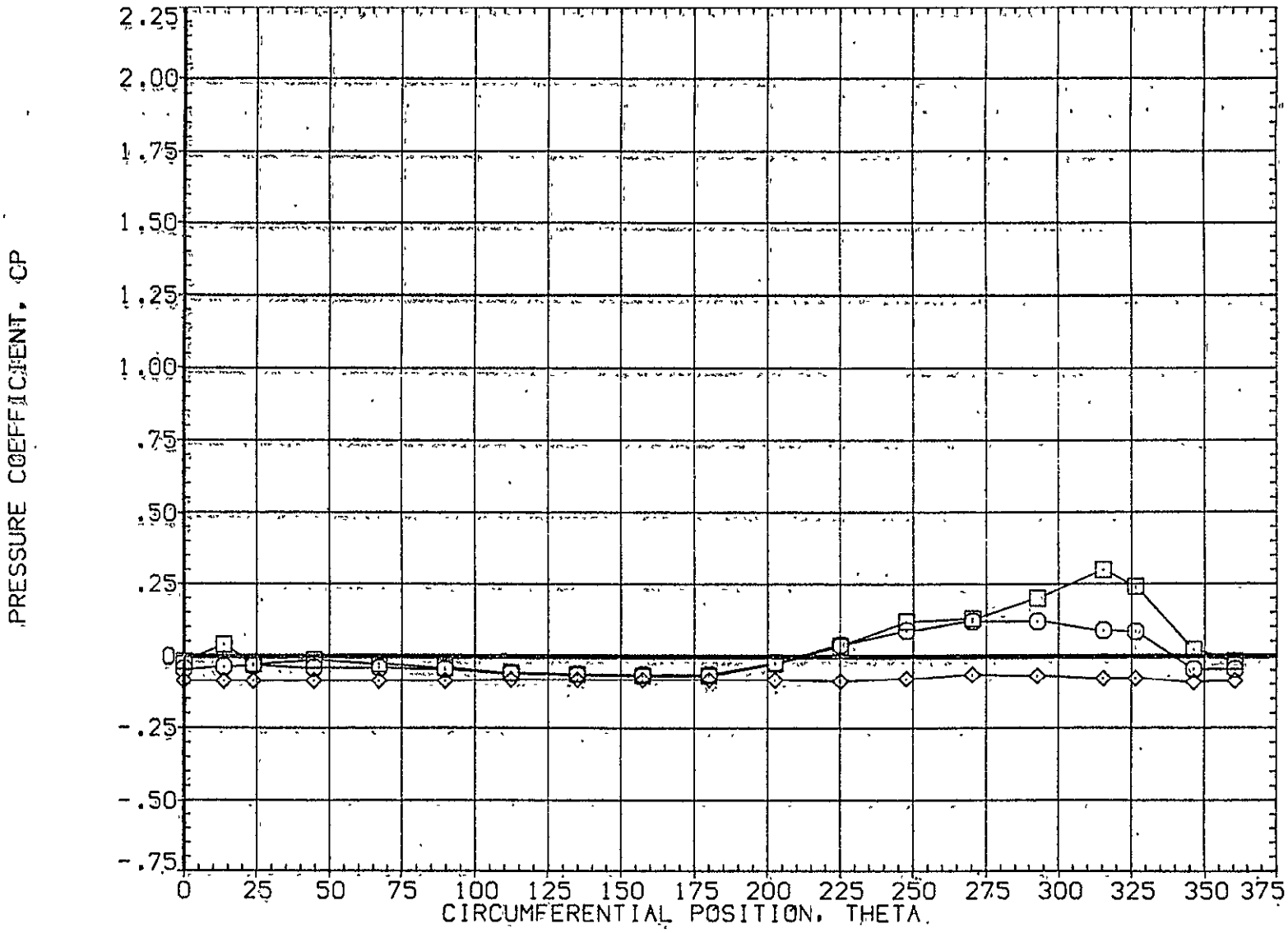

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

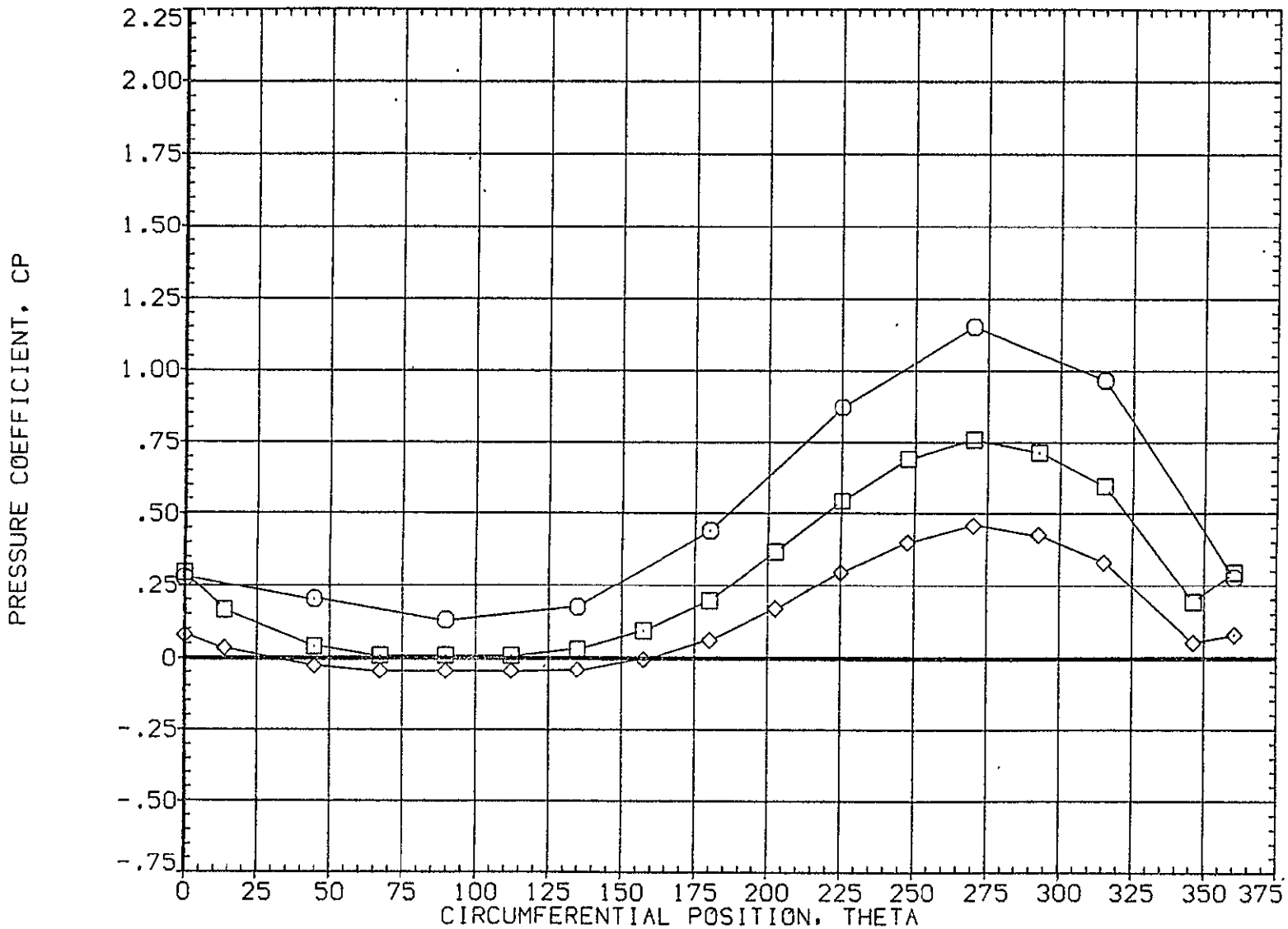

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

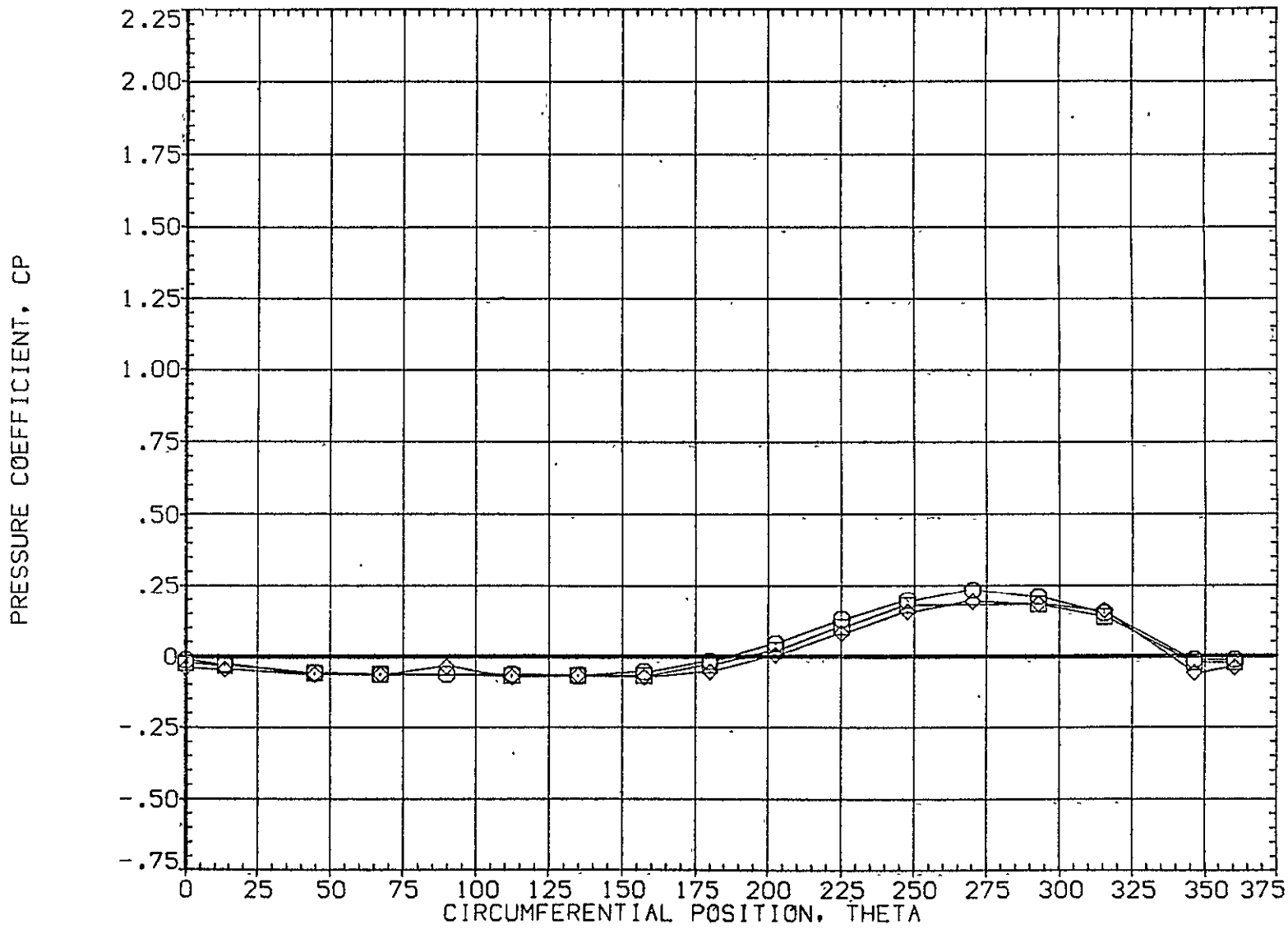

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

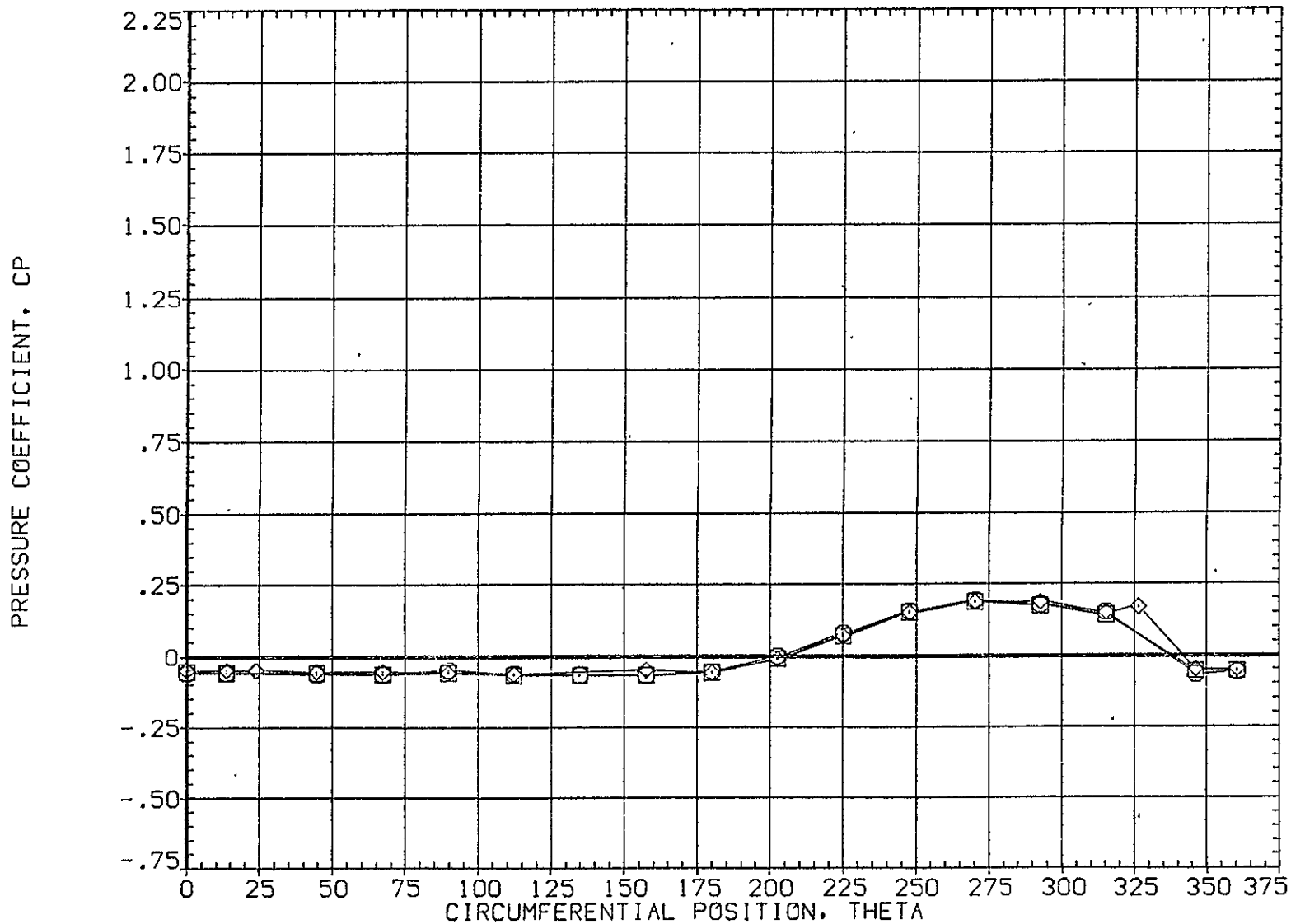

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

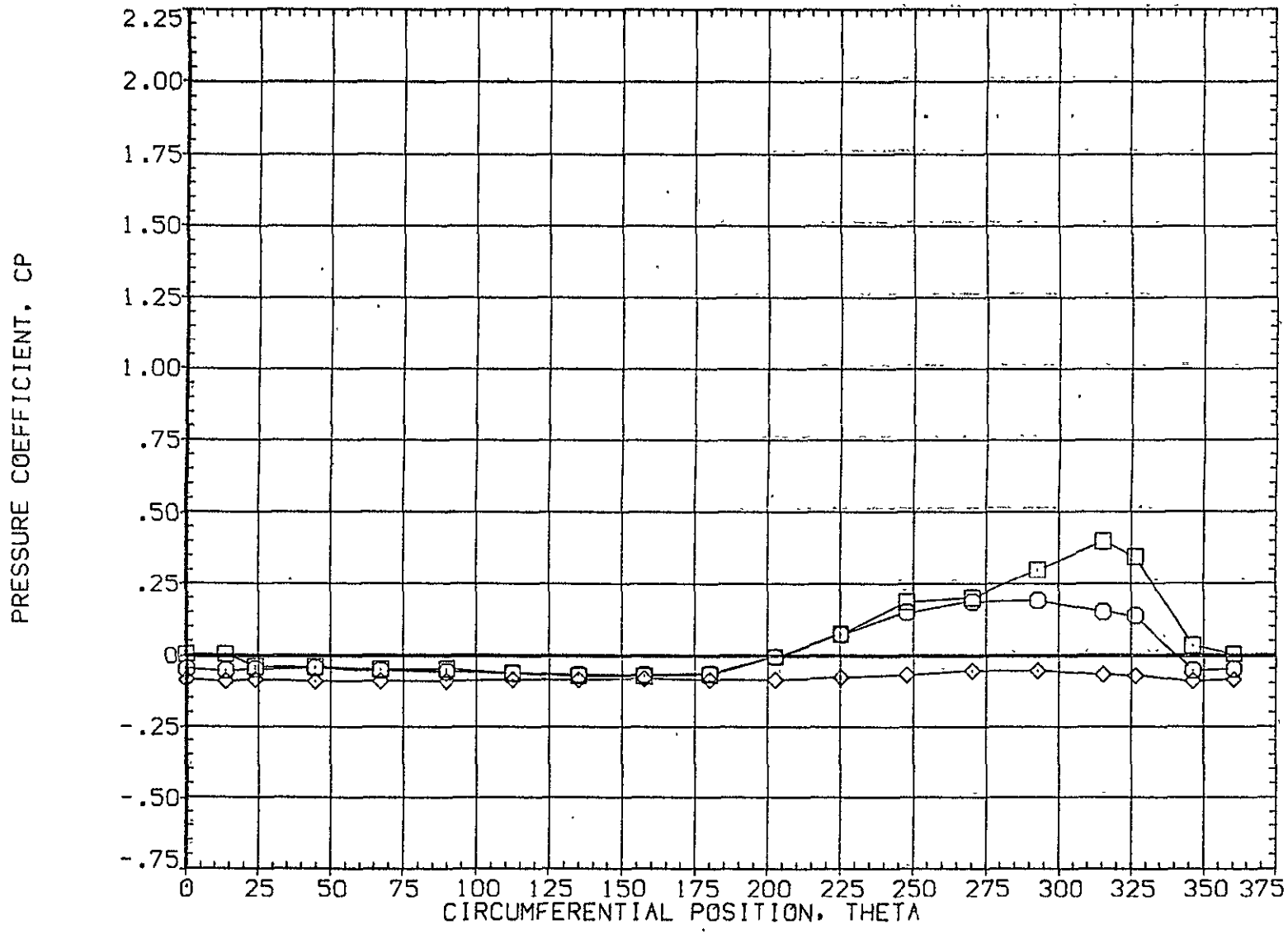

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.660	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

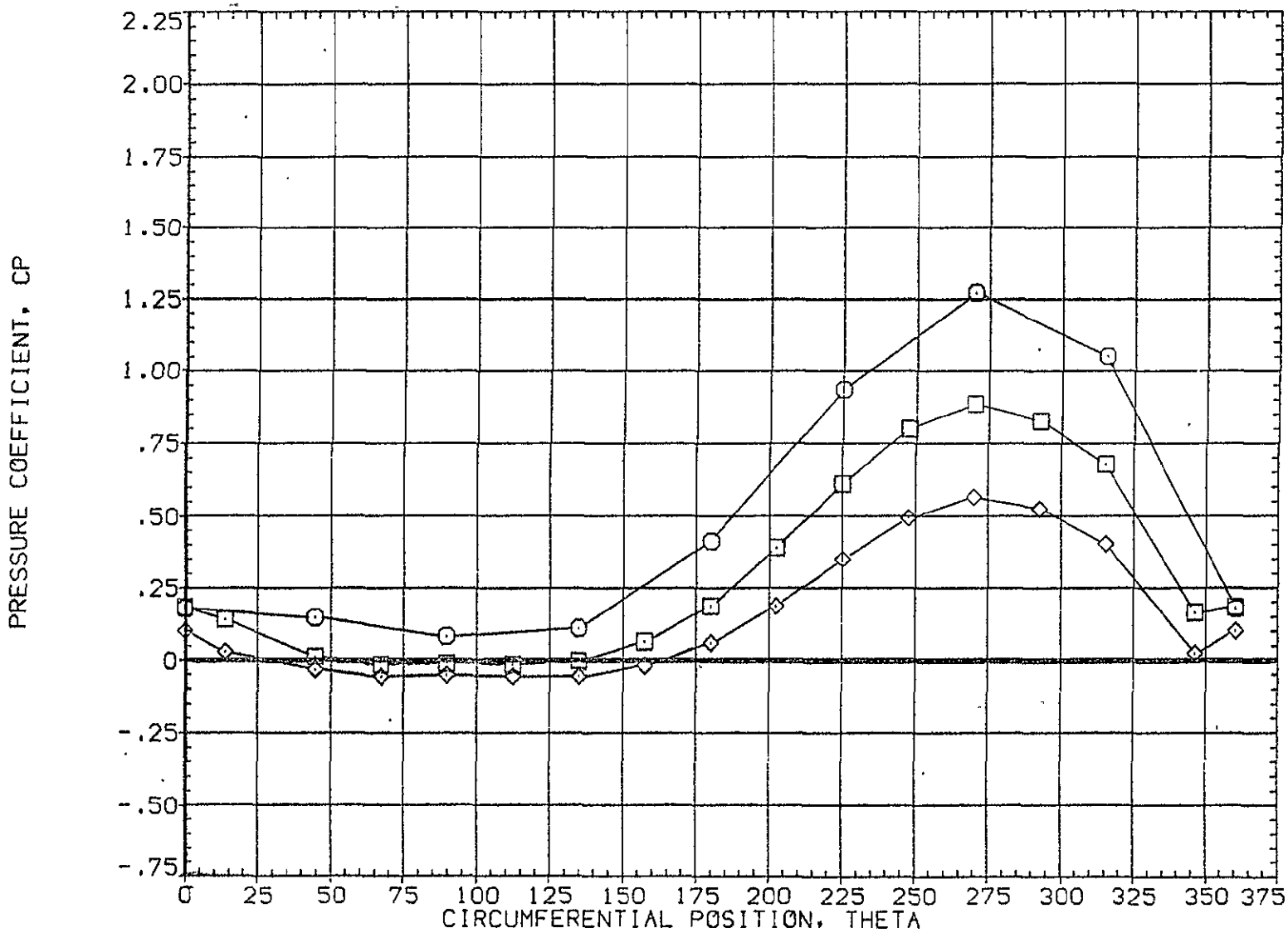

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

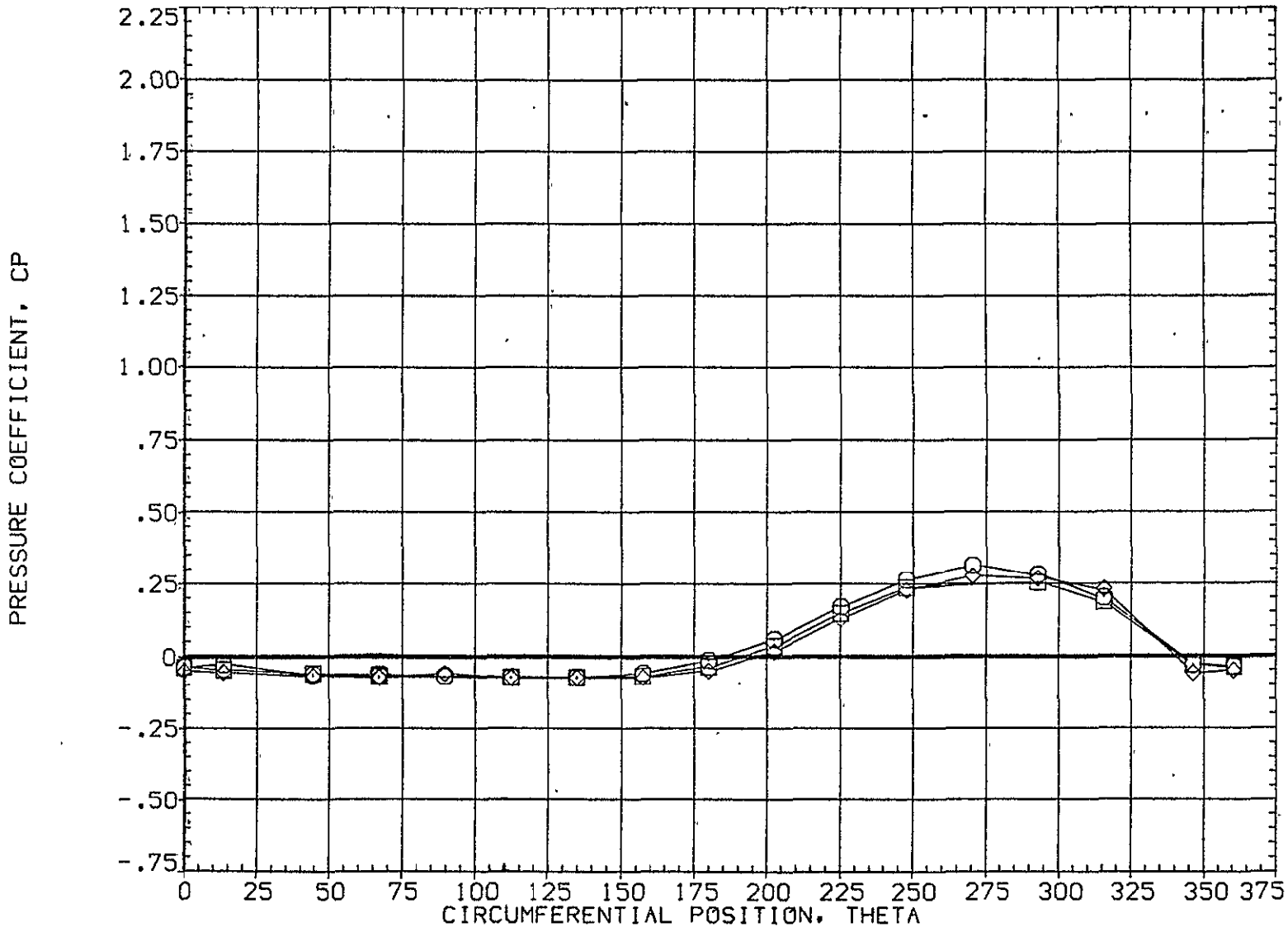

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

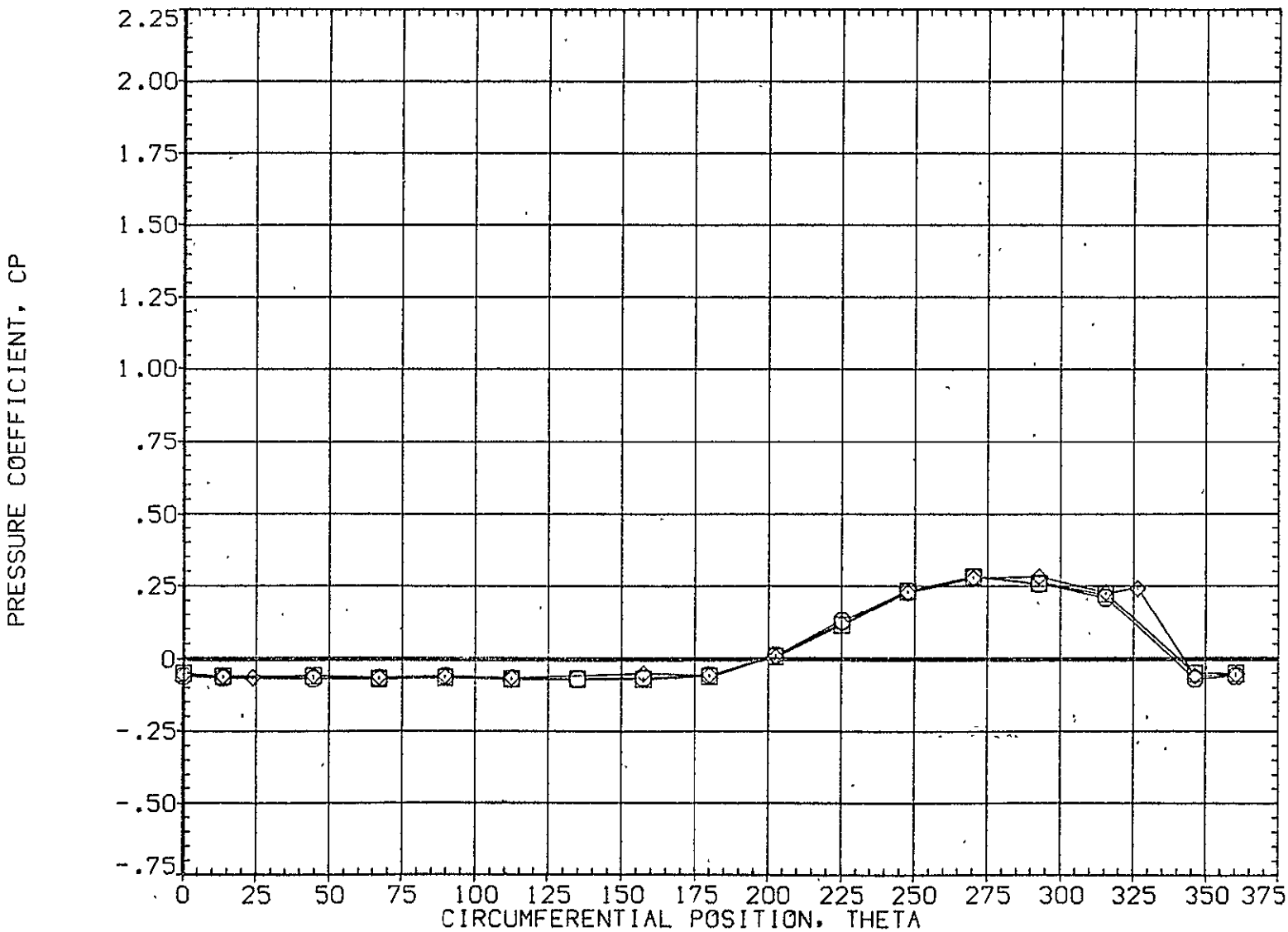

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

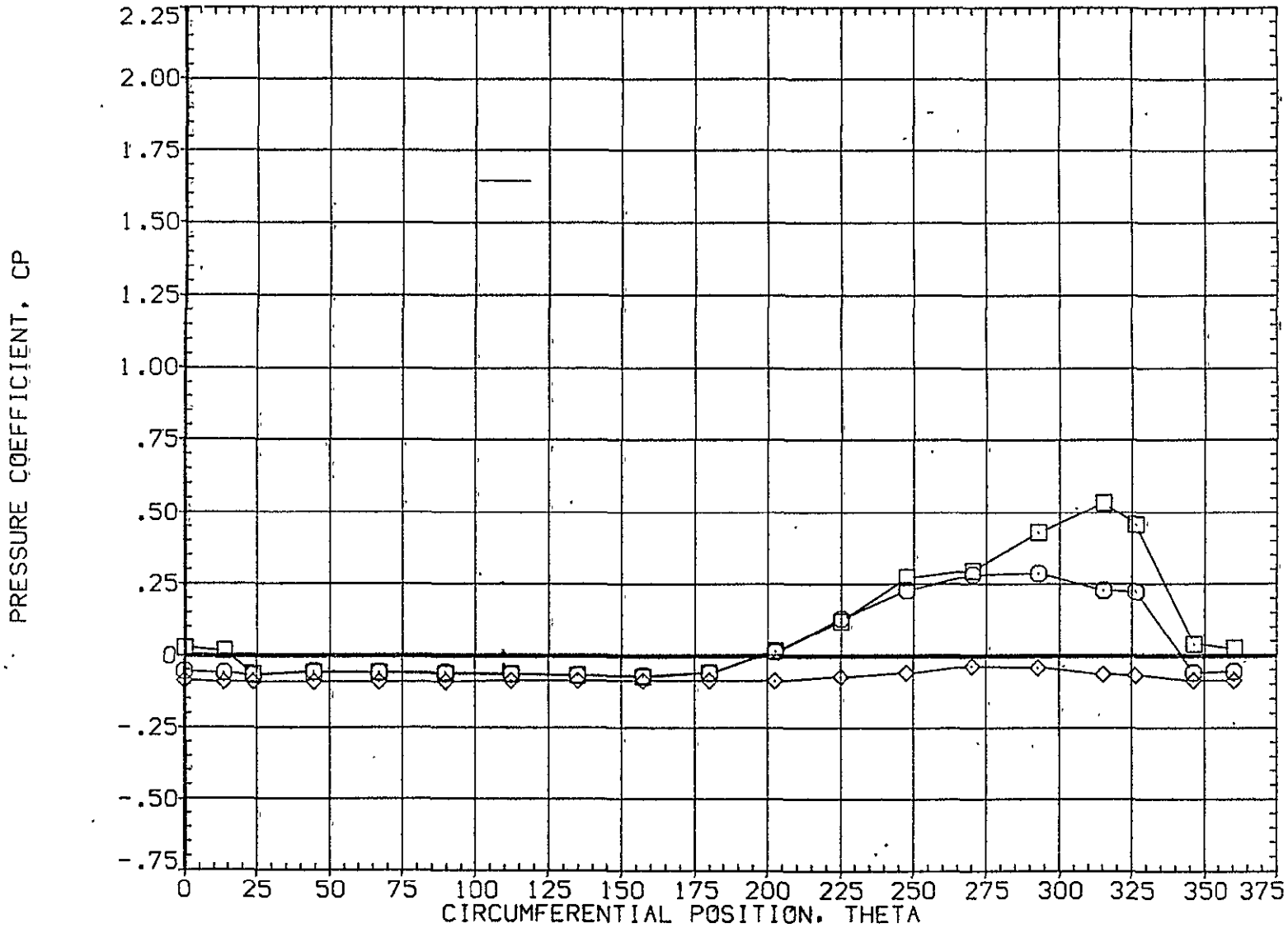

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

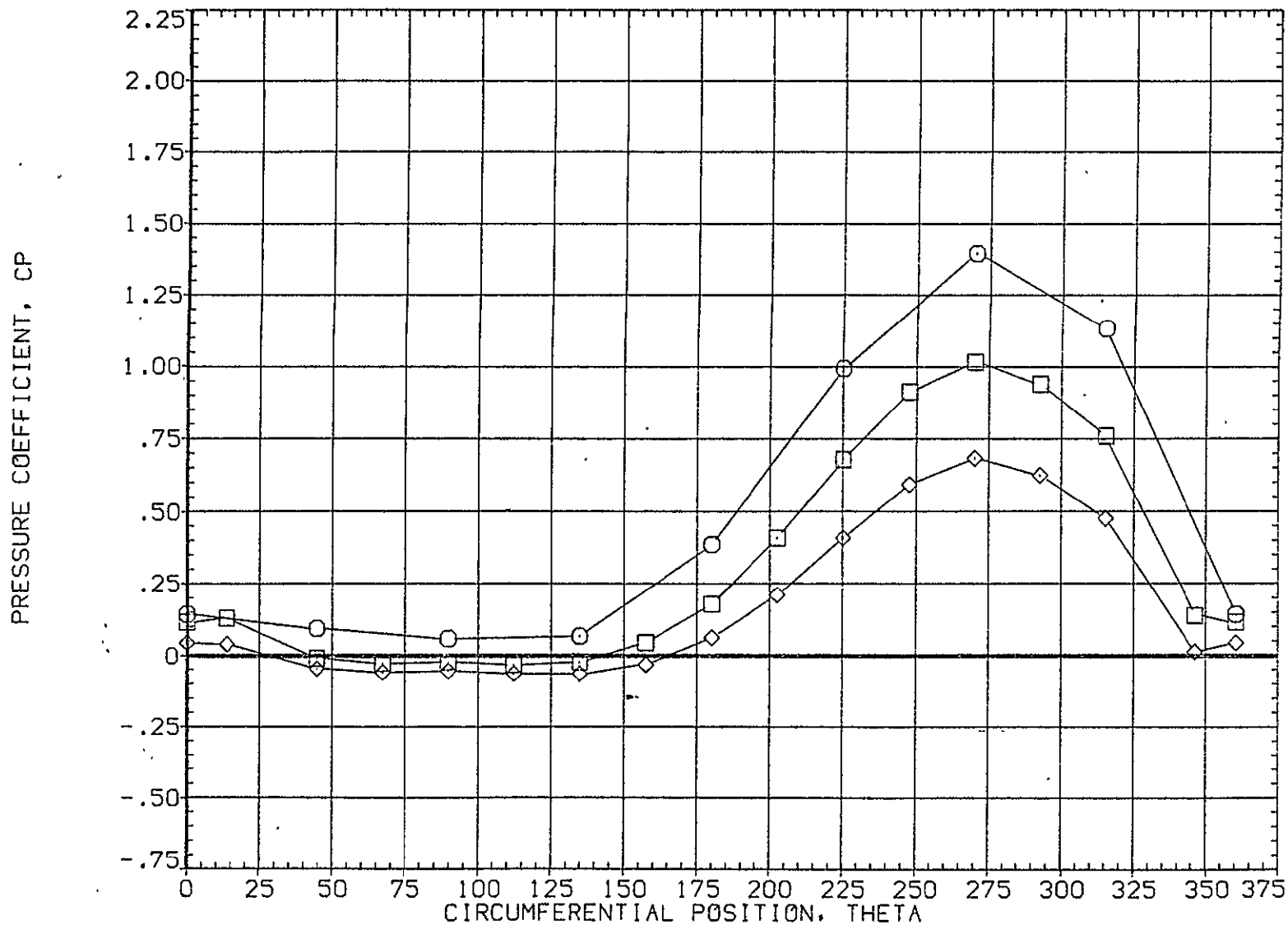

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

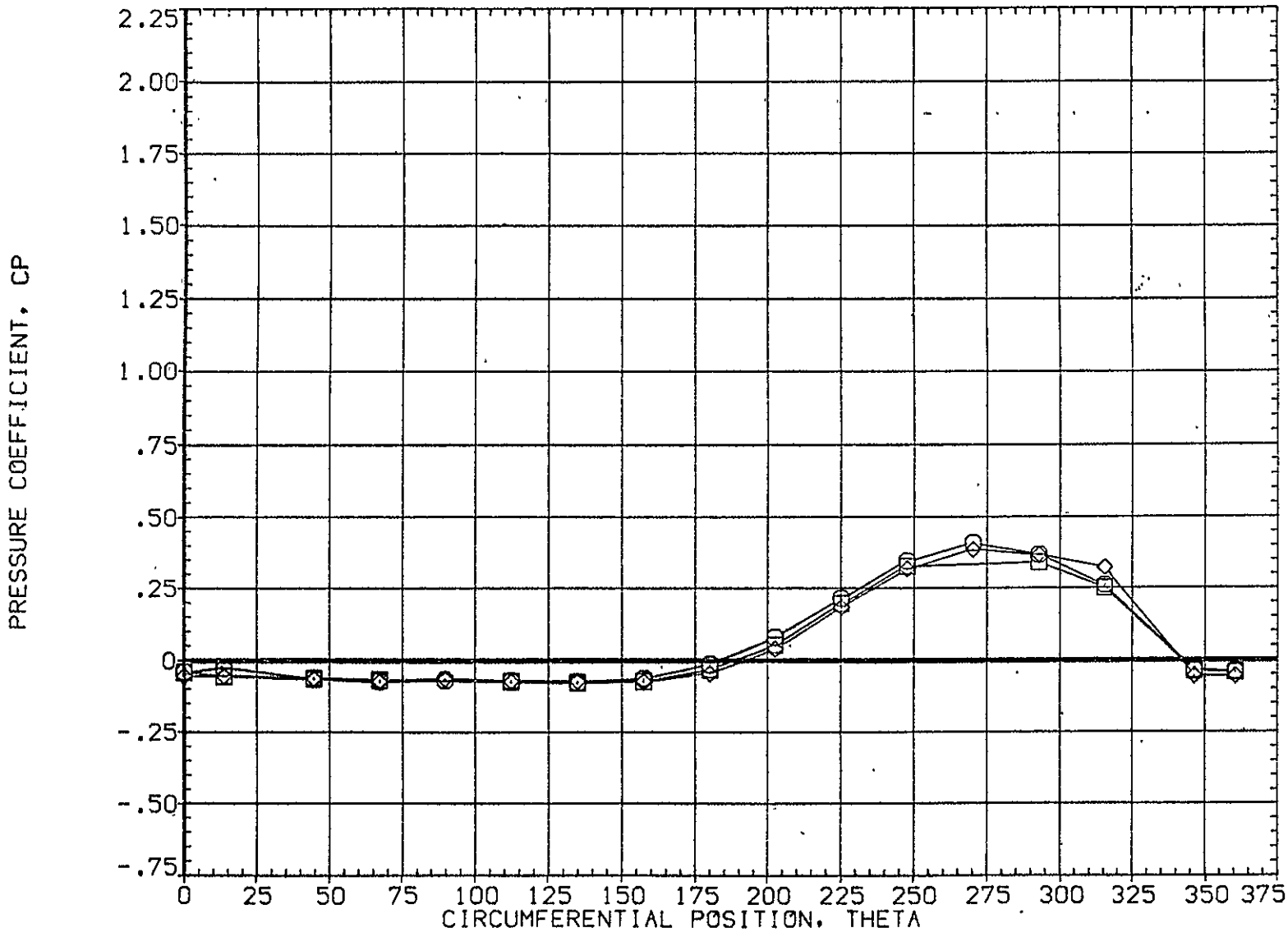

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

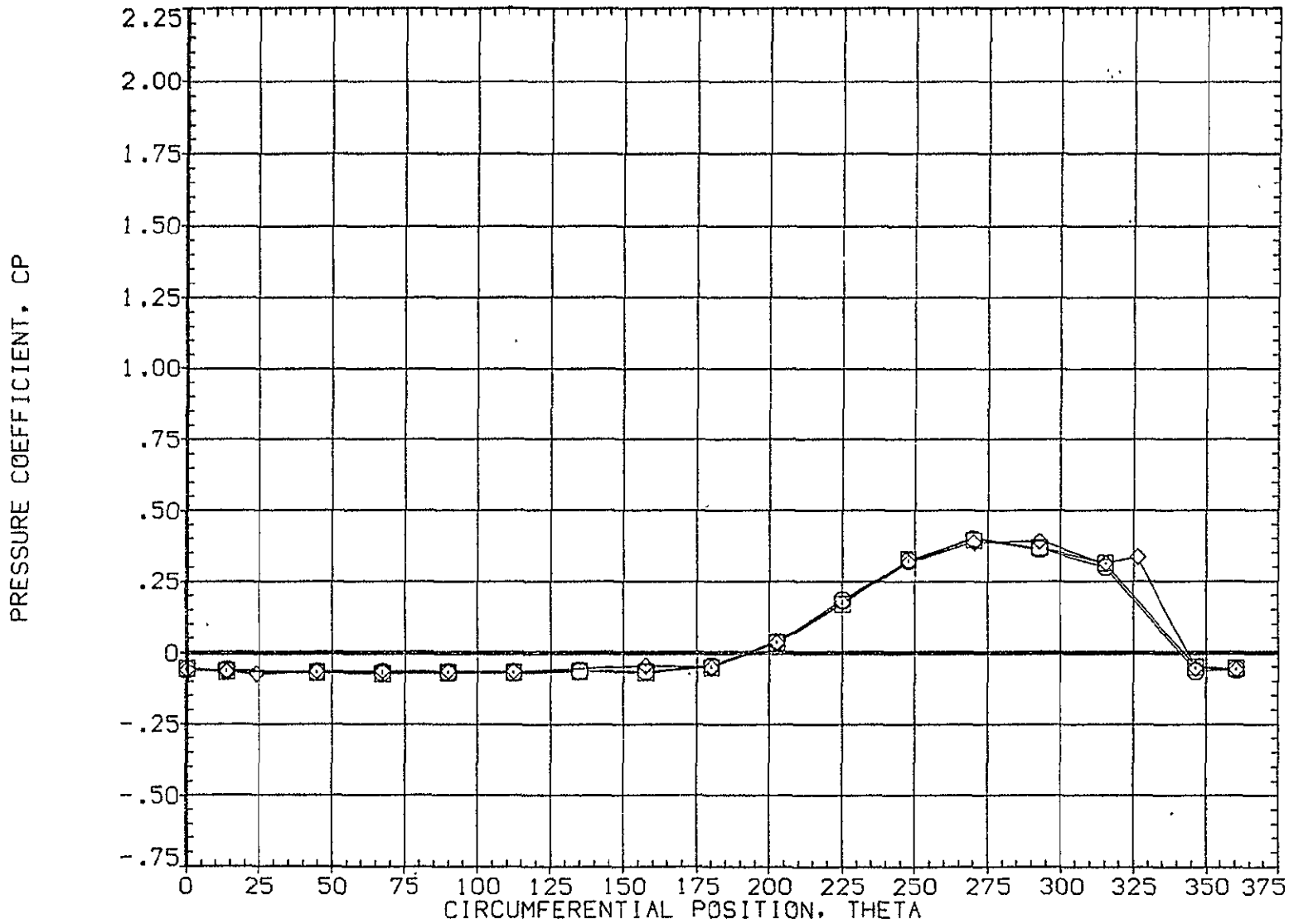

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

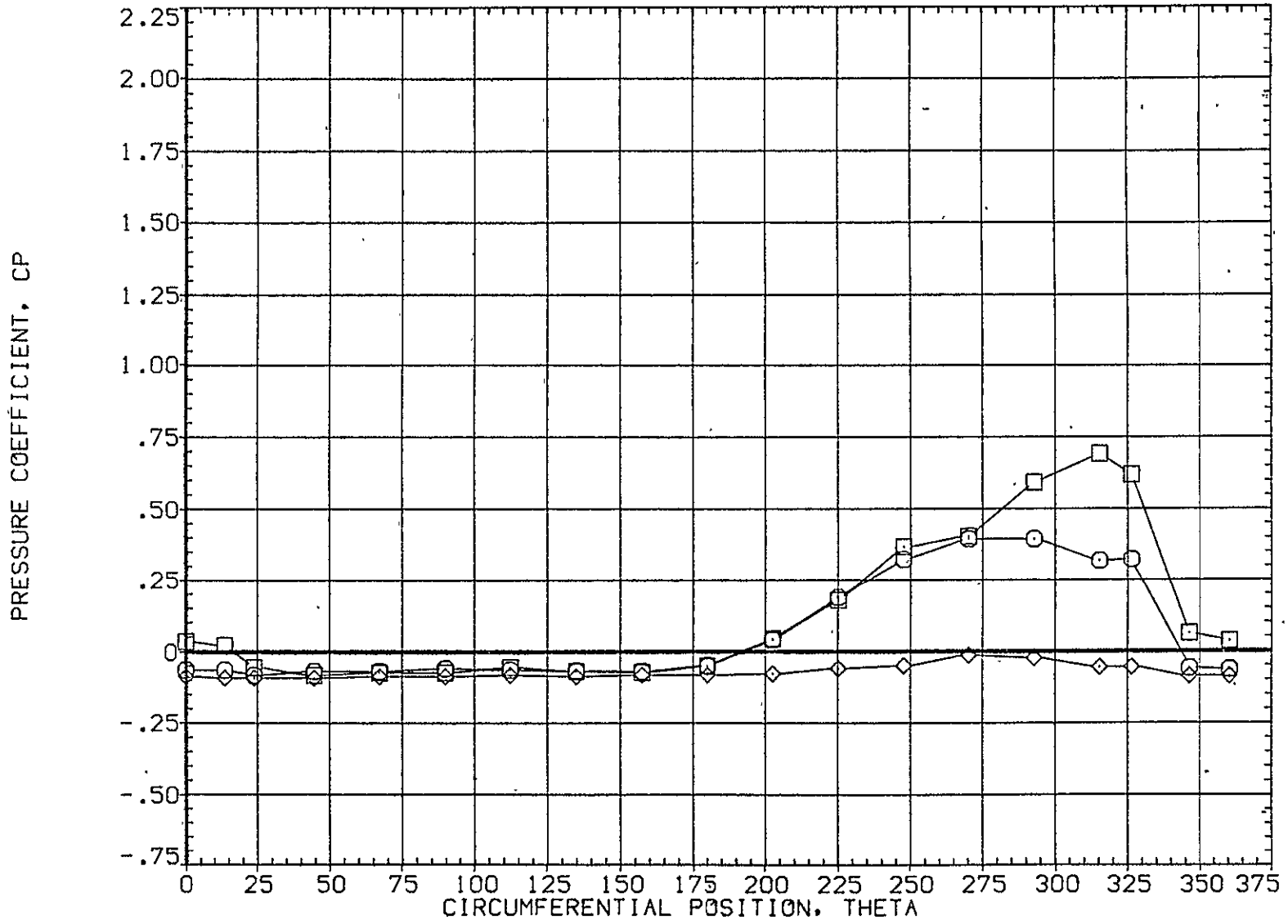

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

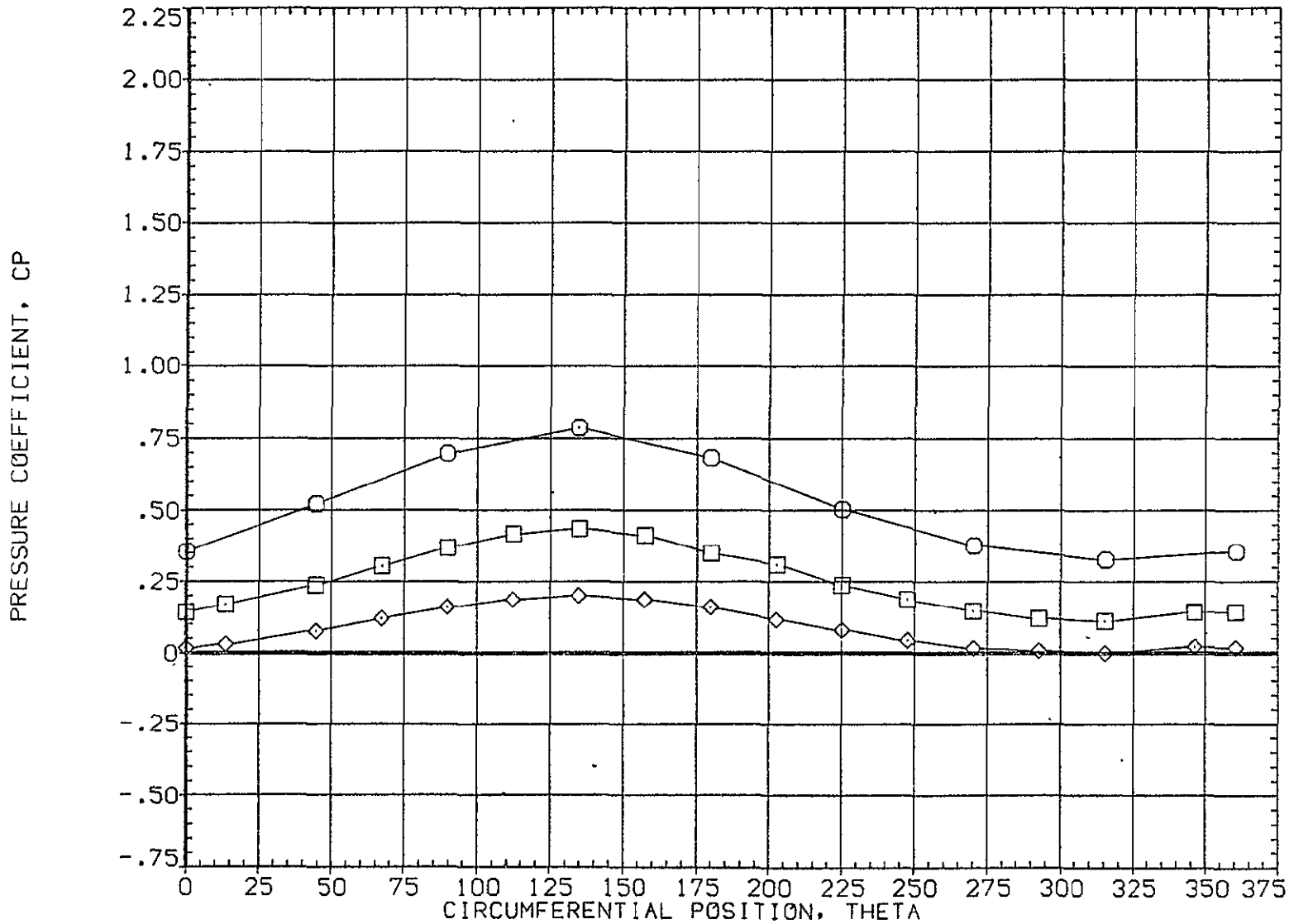

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

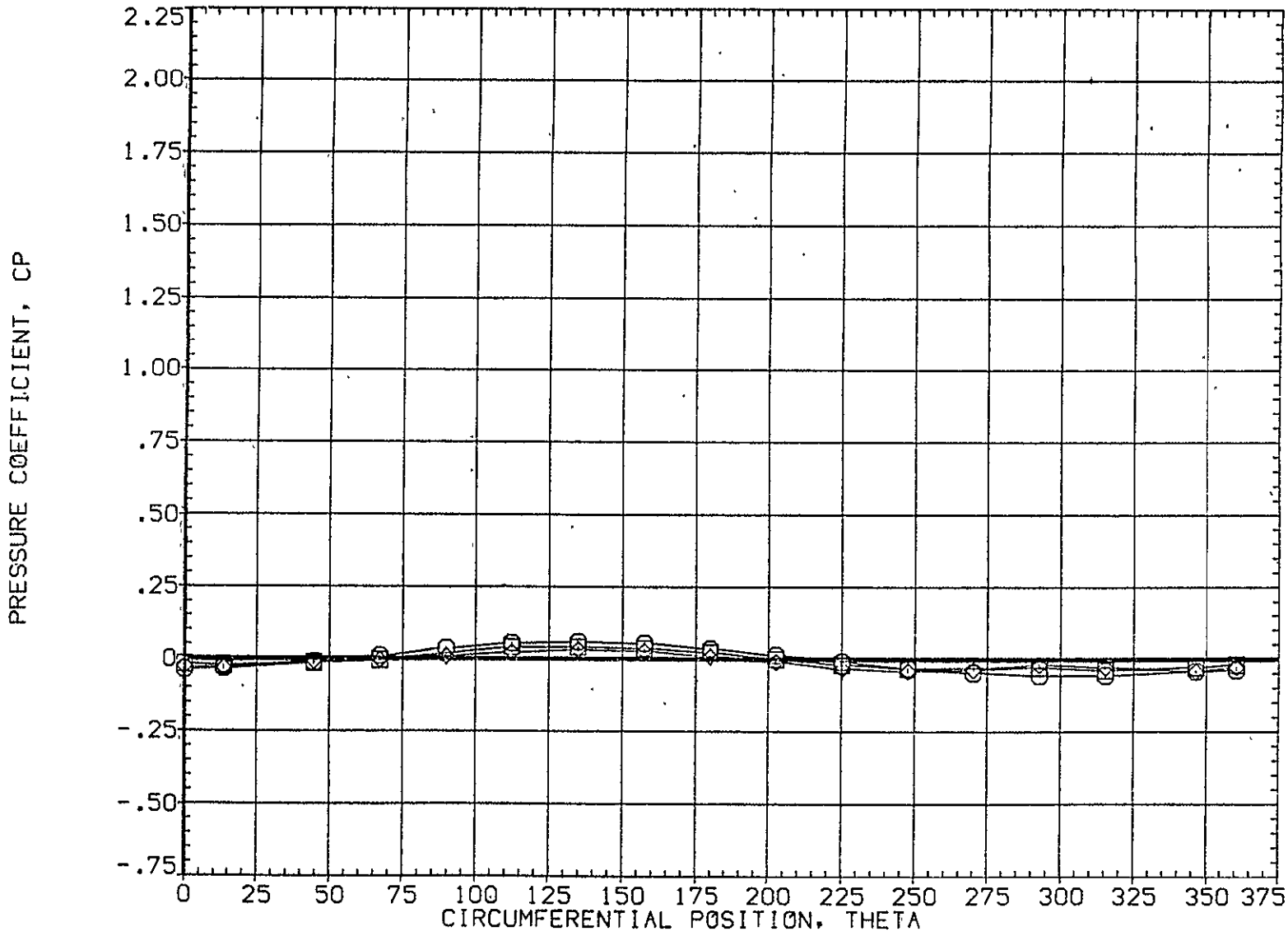

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT.	1.000	PHI	135.000

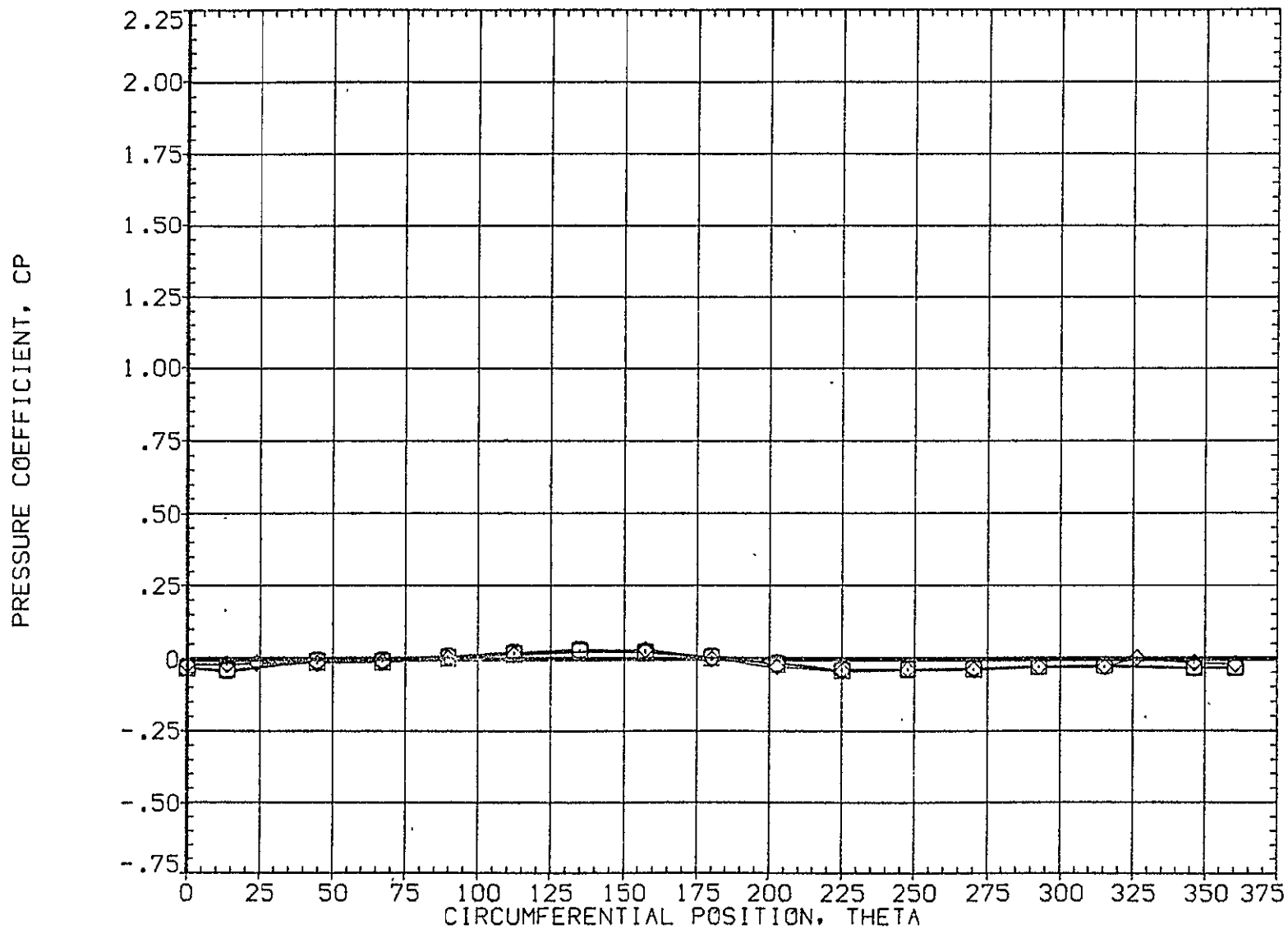

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

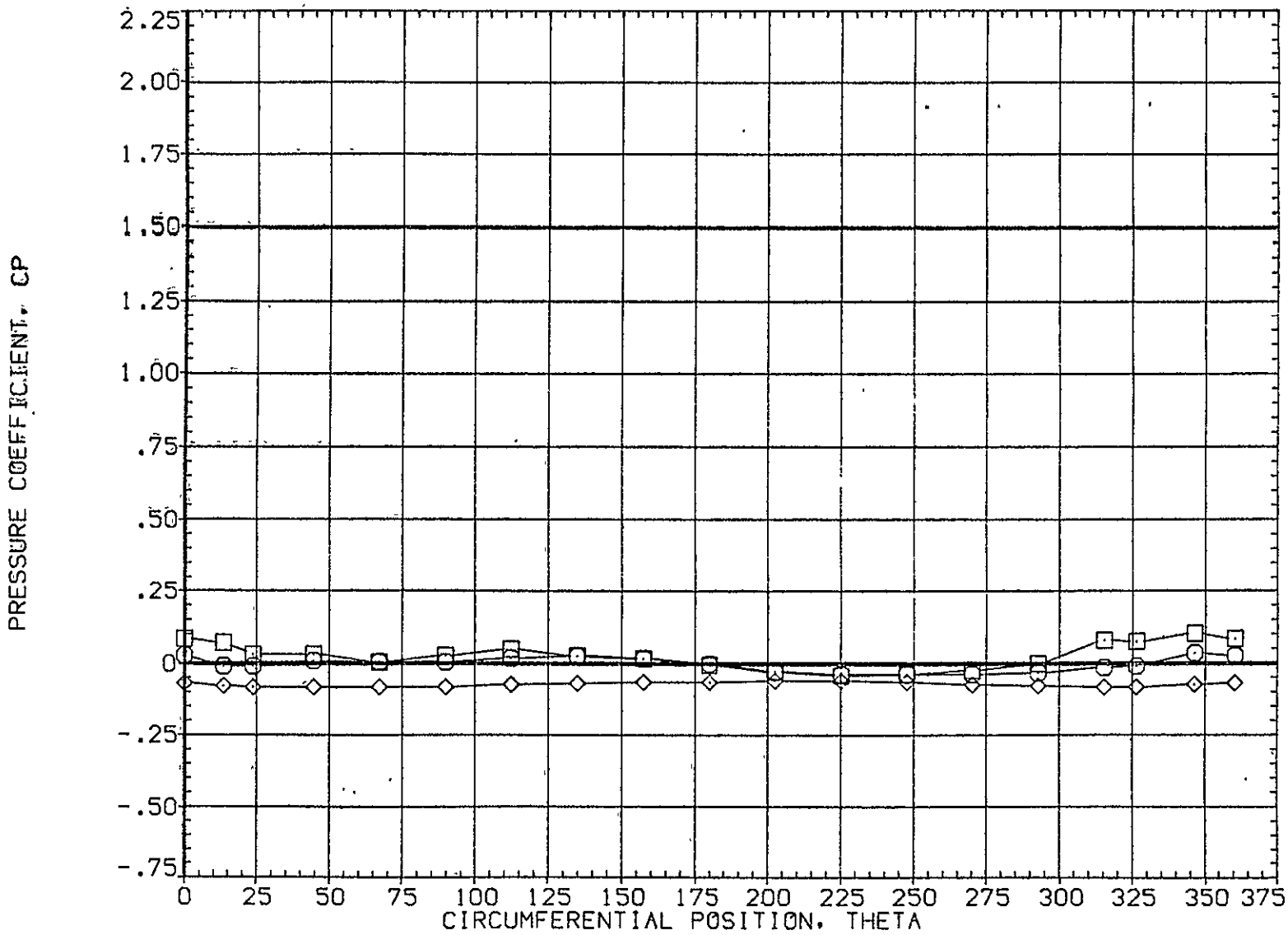

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

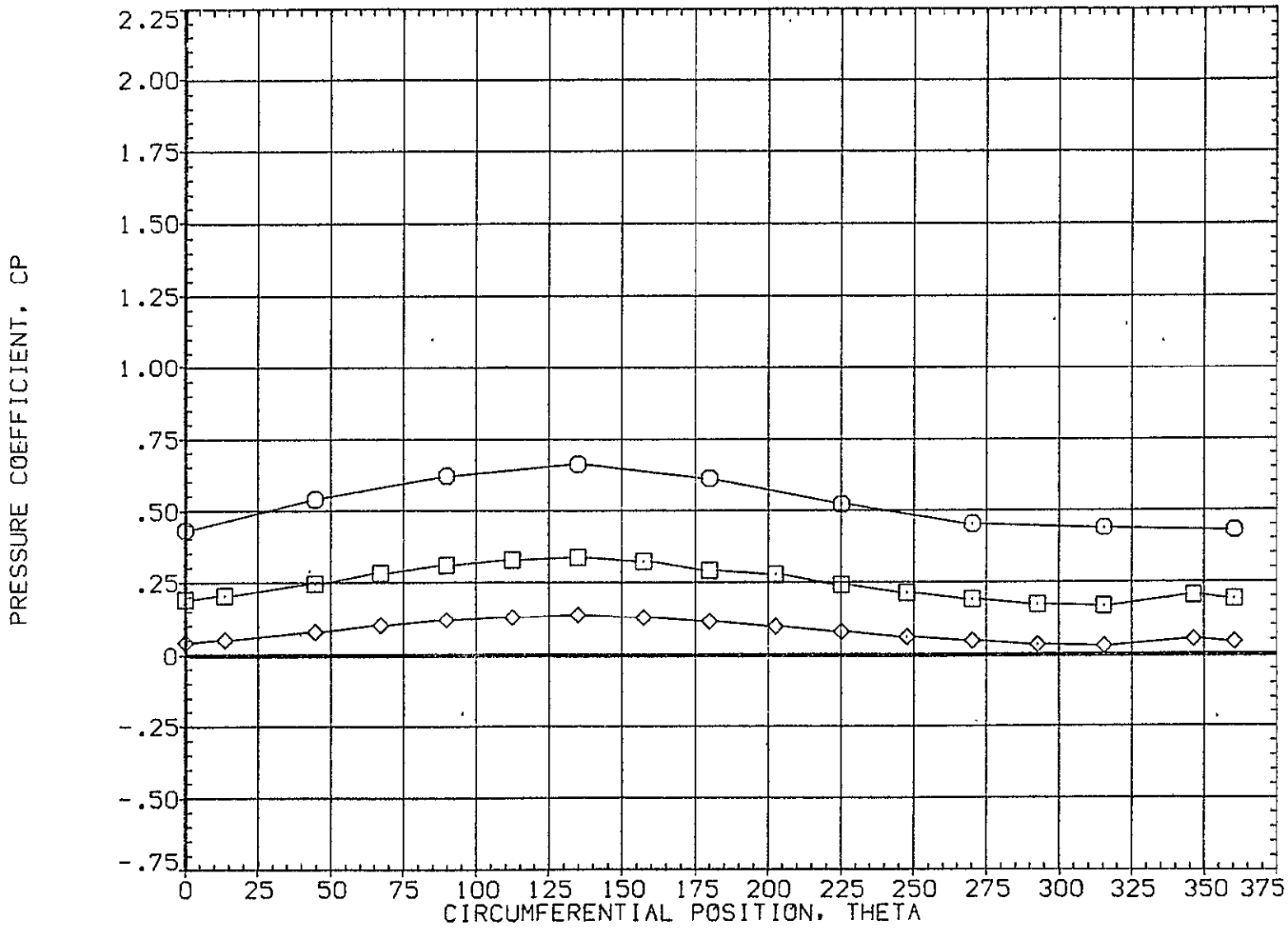

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

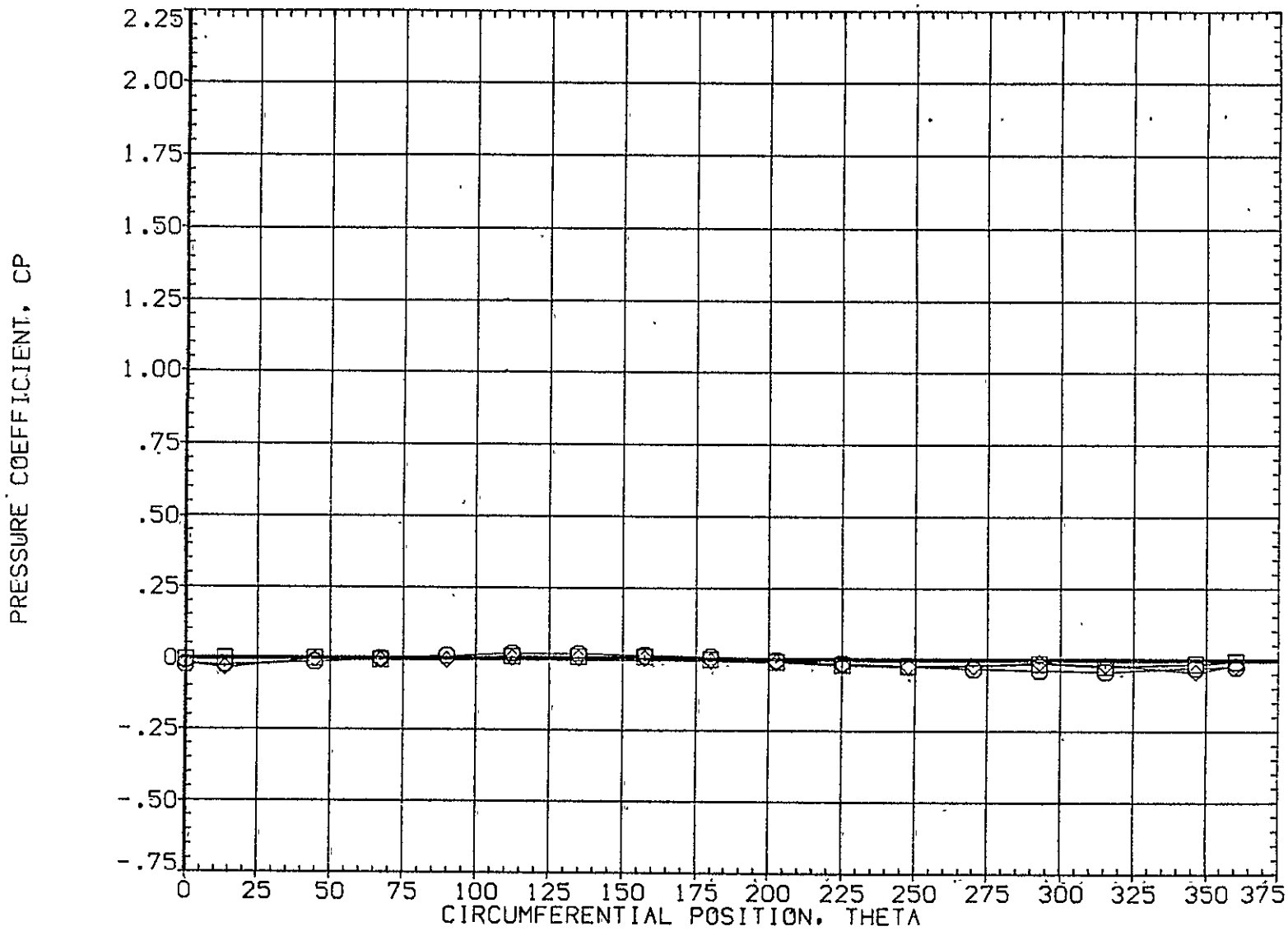

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA.	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

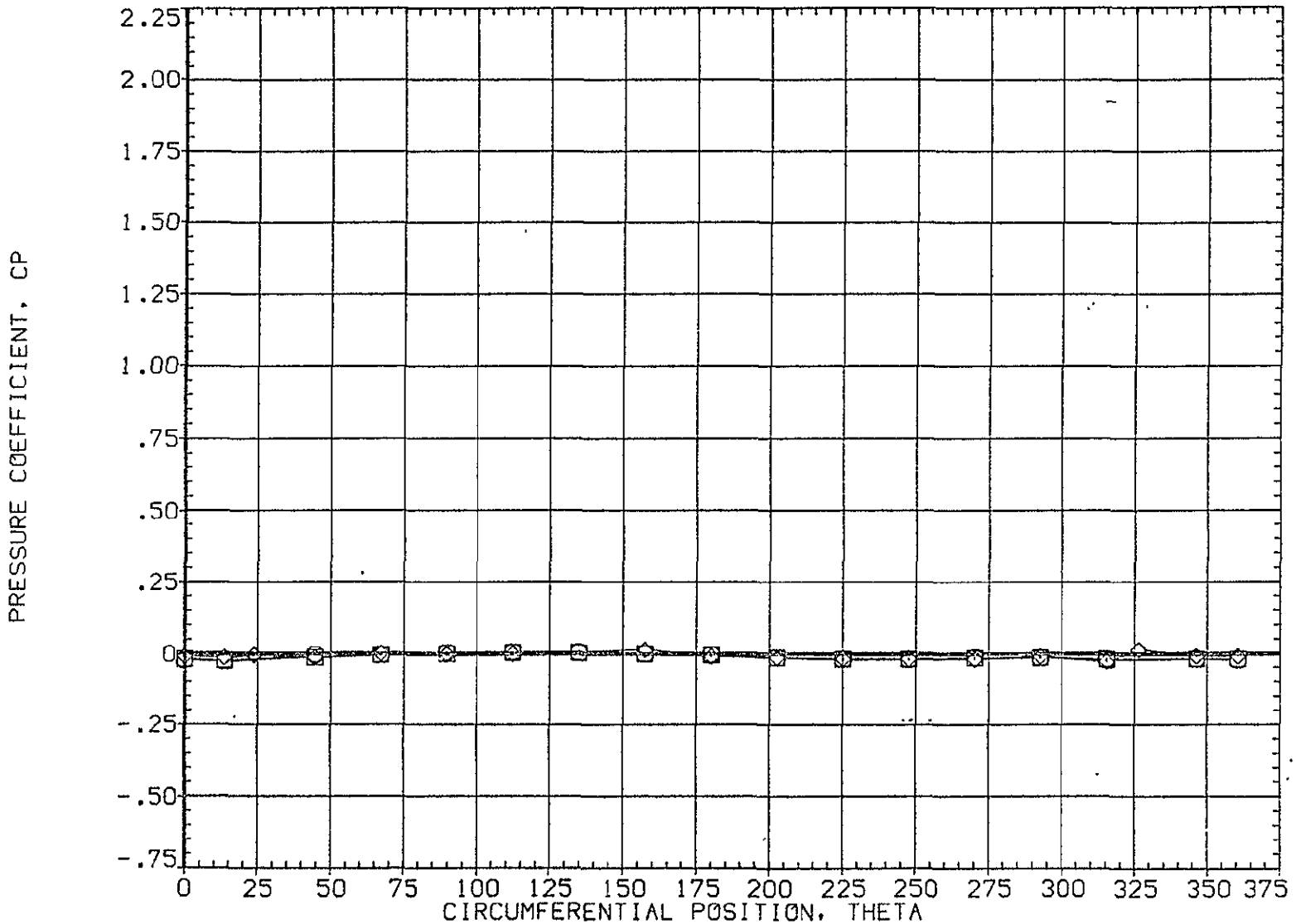

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

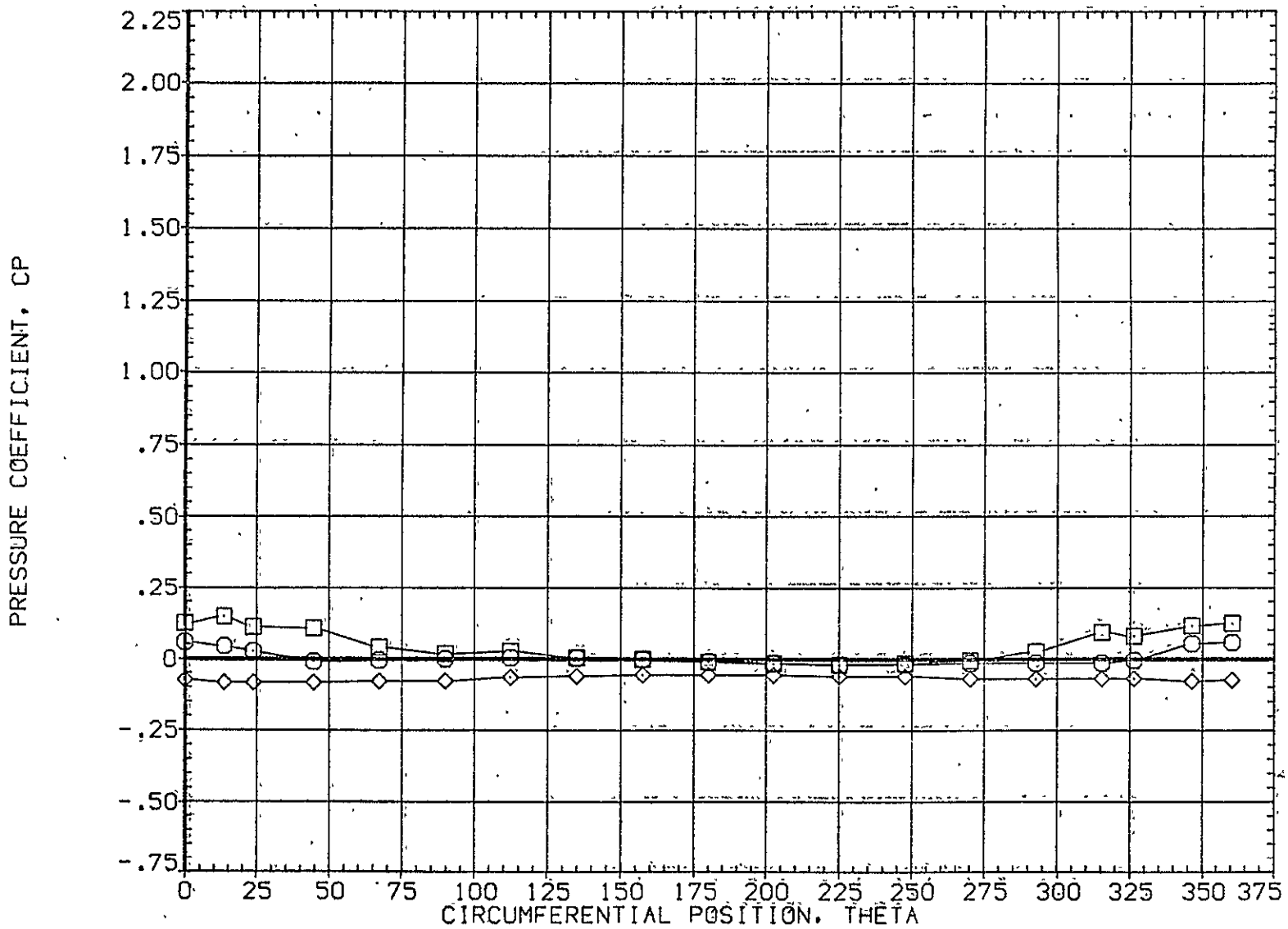

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

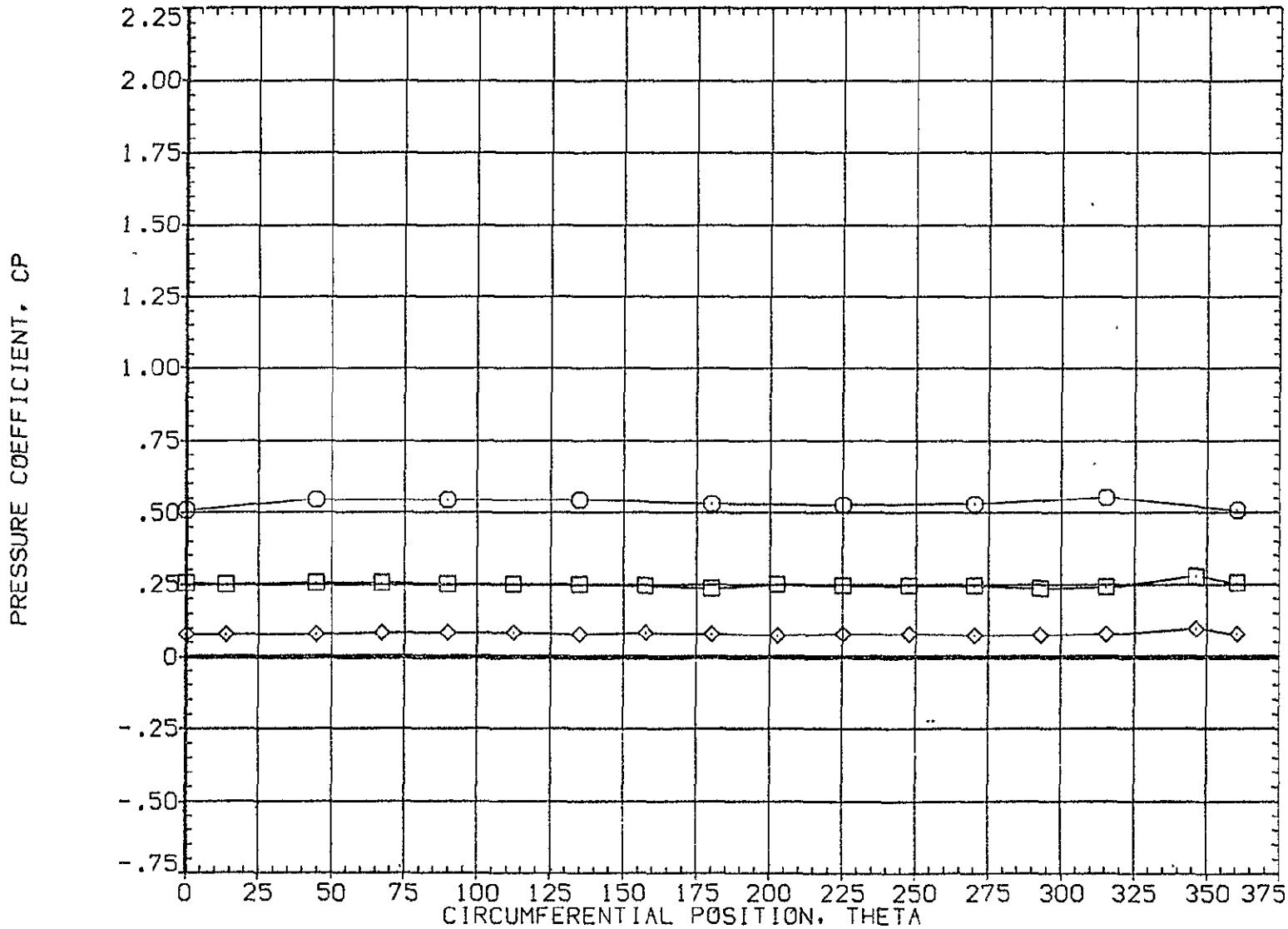

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

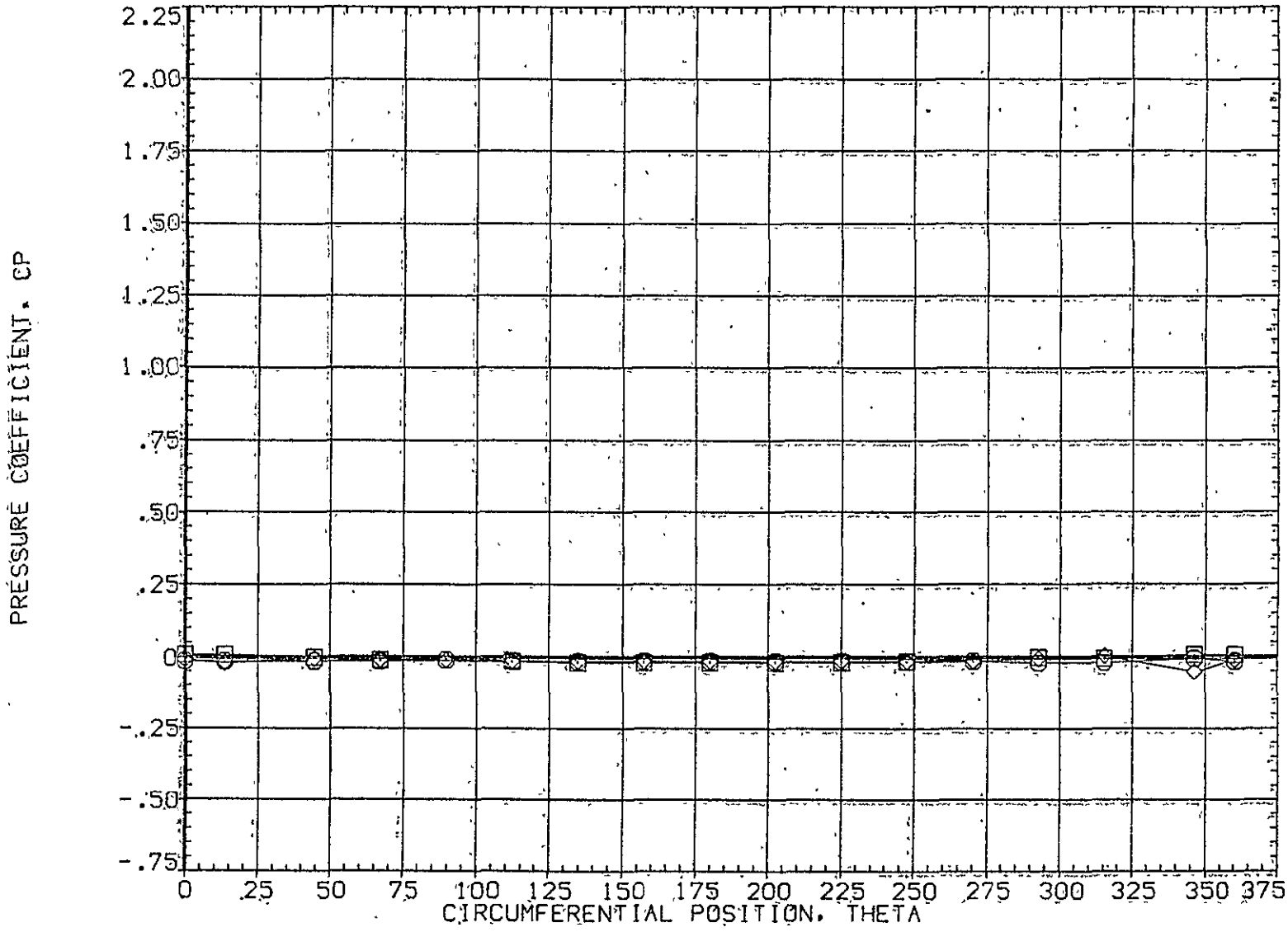

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

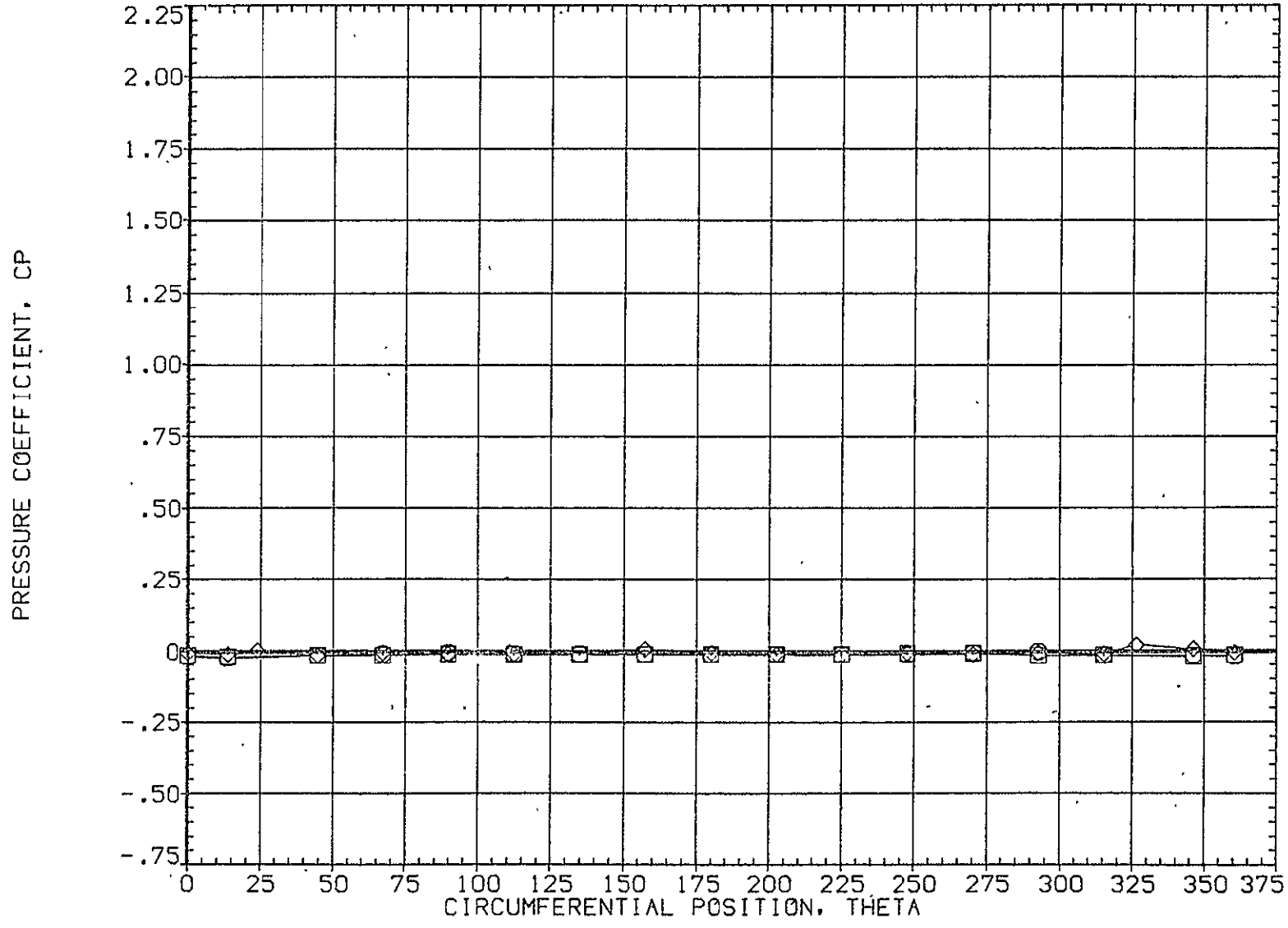

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

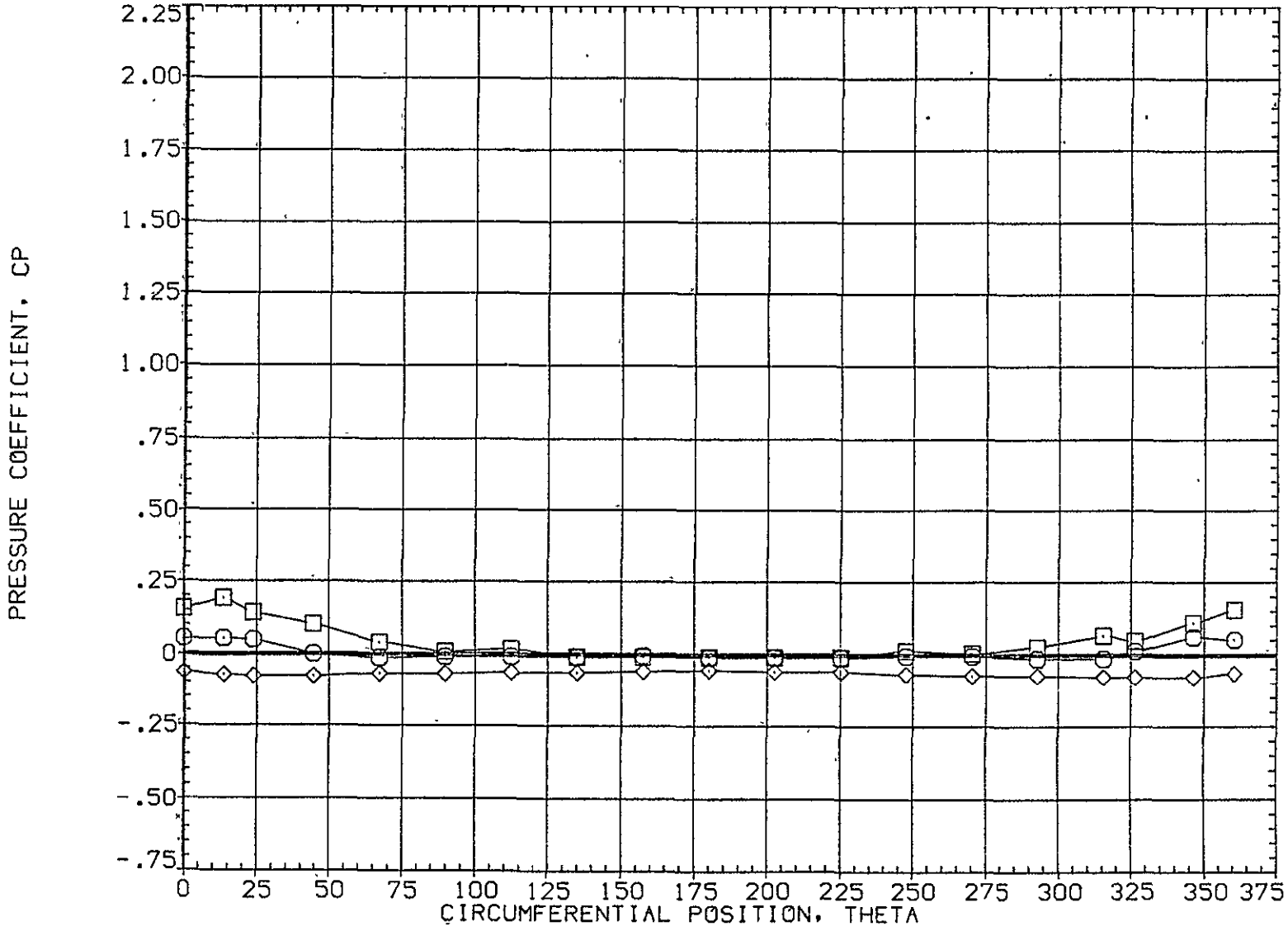

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.720	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

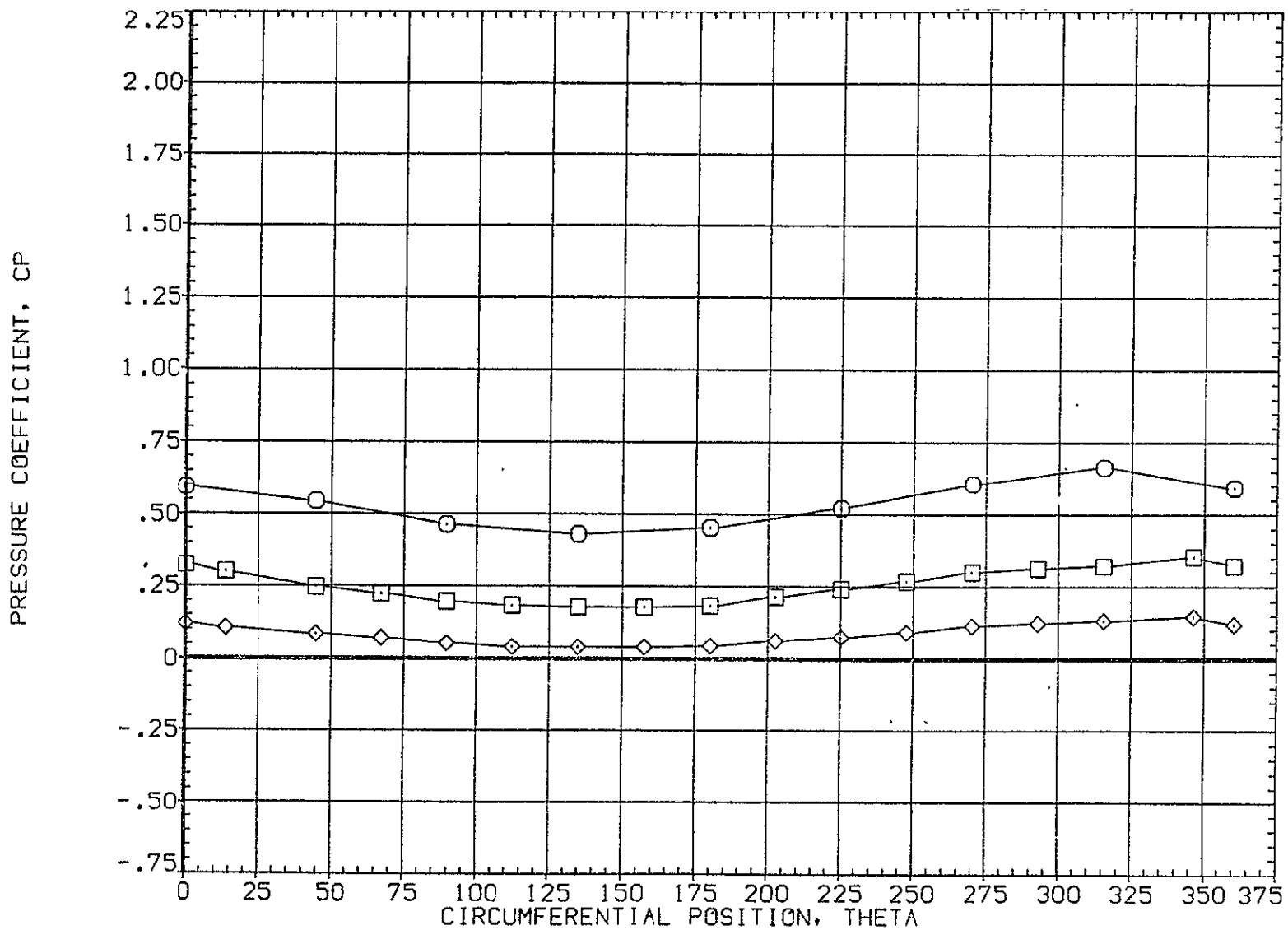

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.720	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

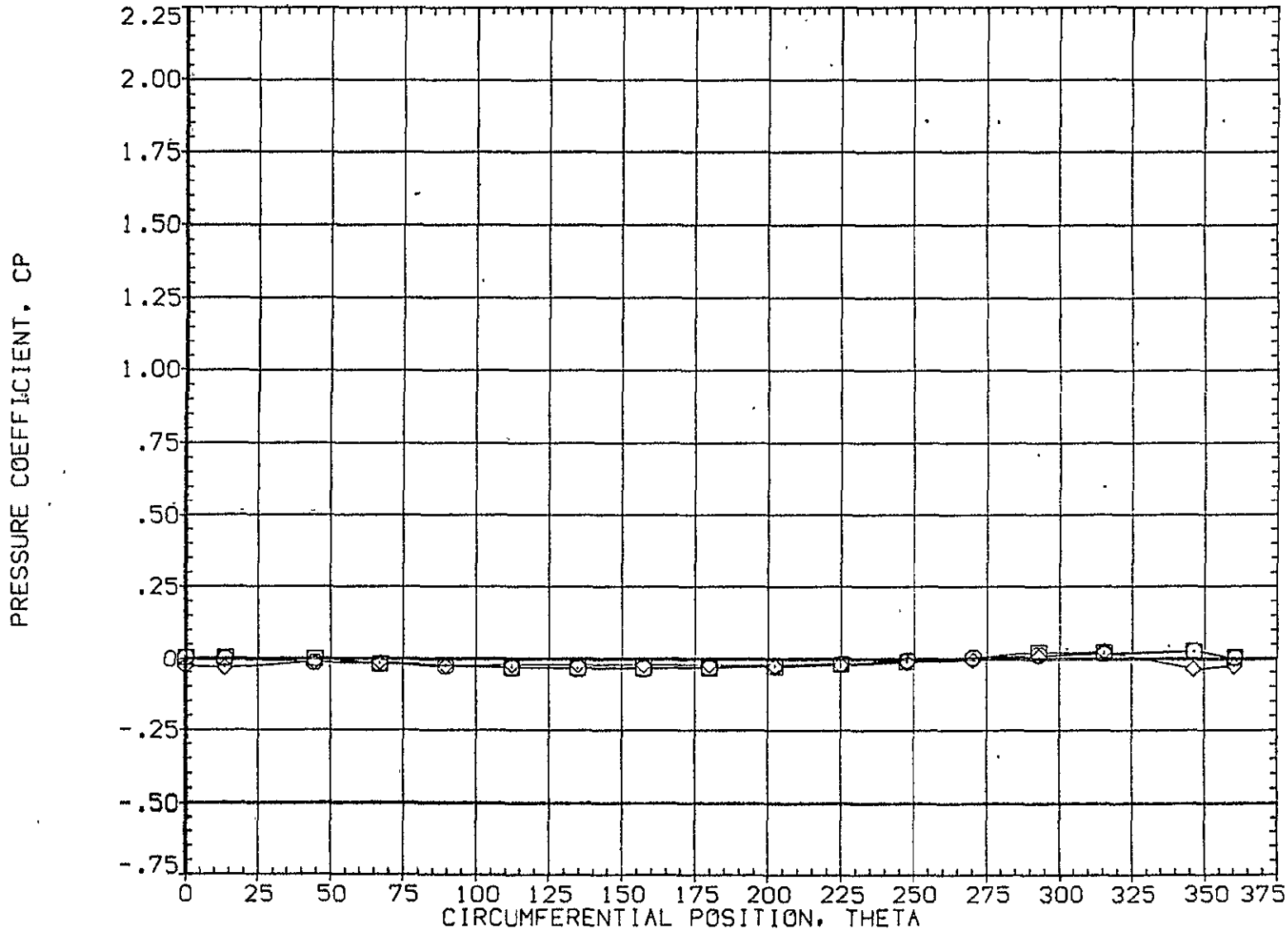

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.720	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

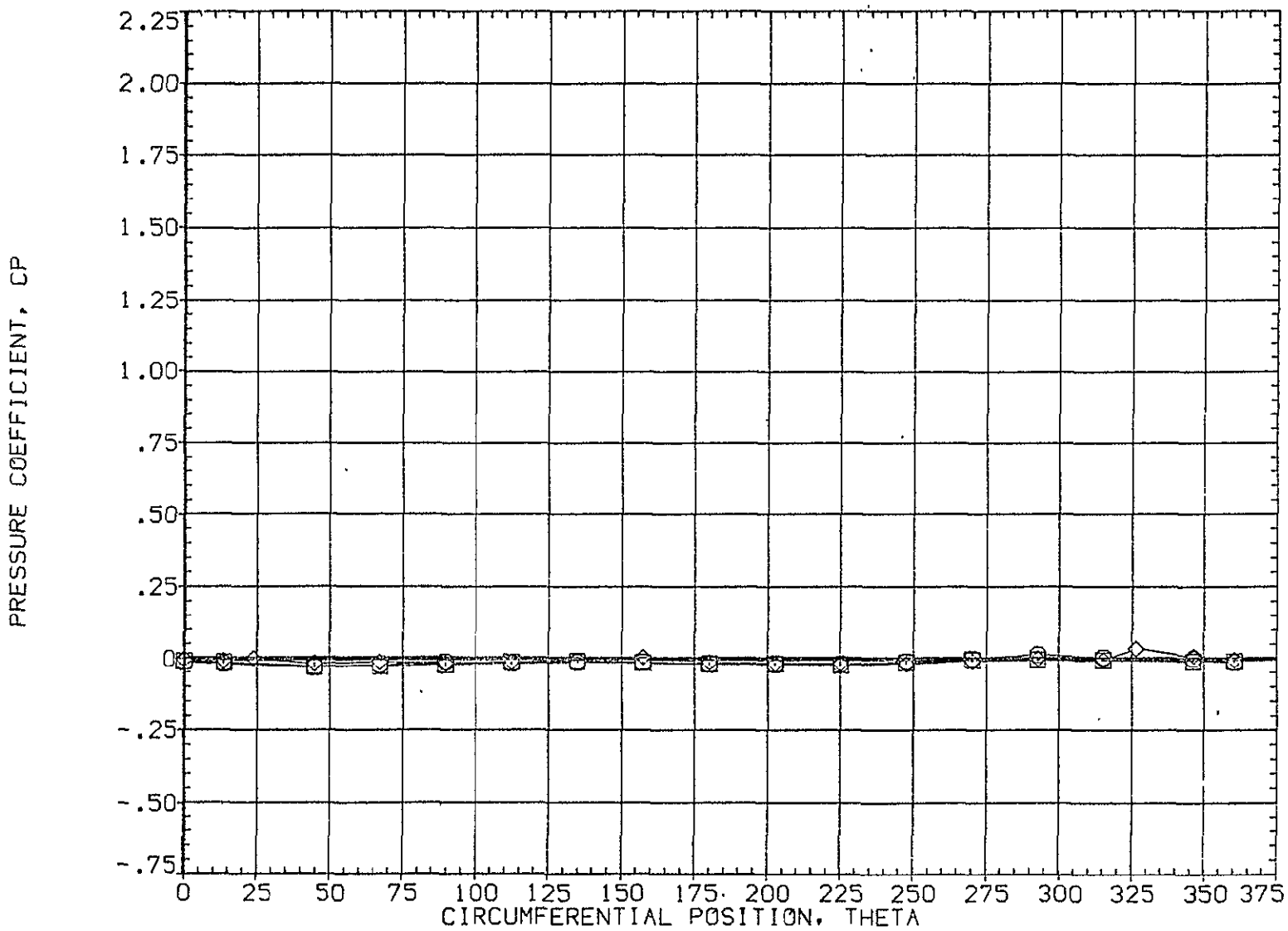

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.720	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

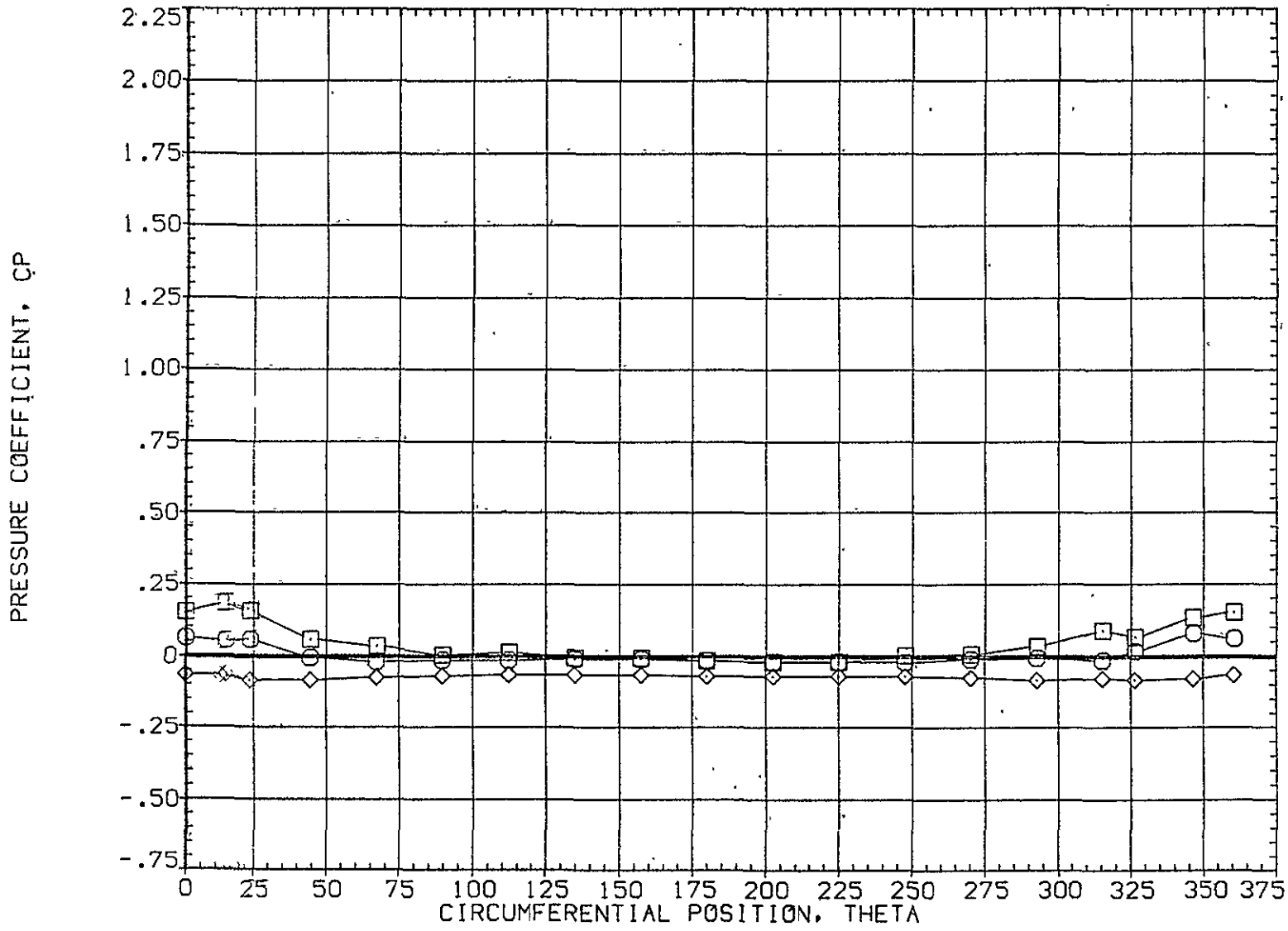

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.710	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

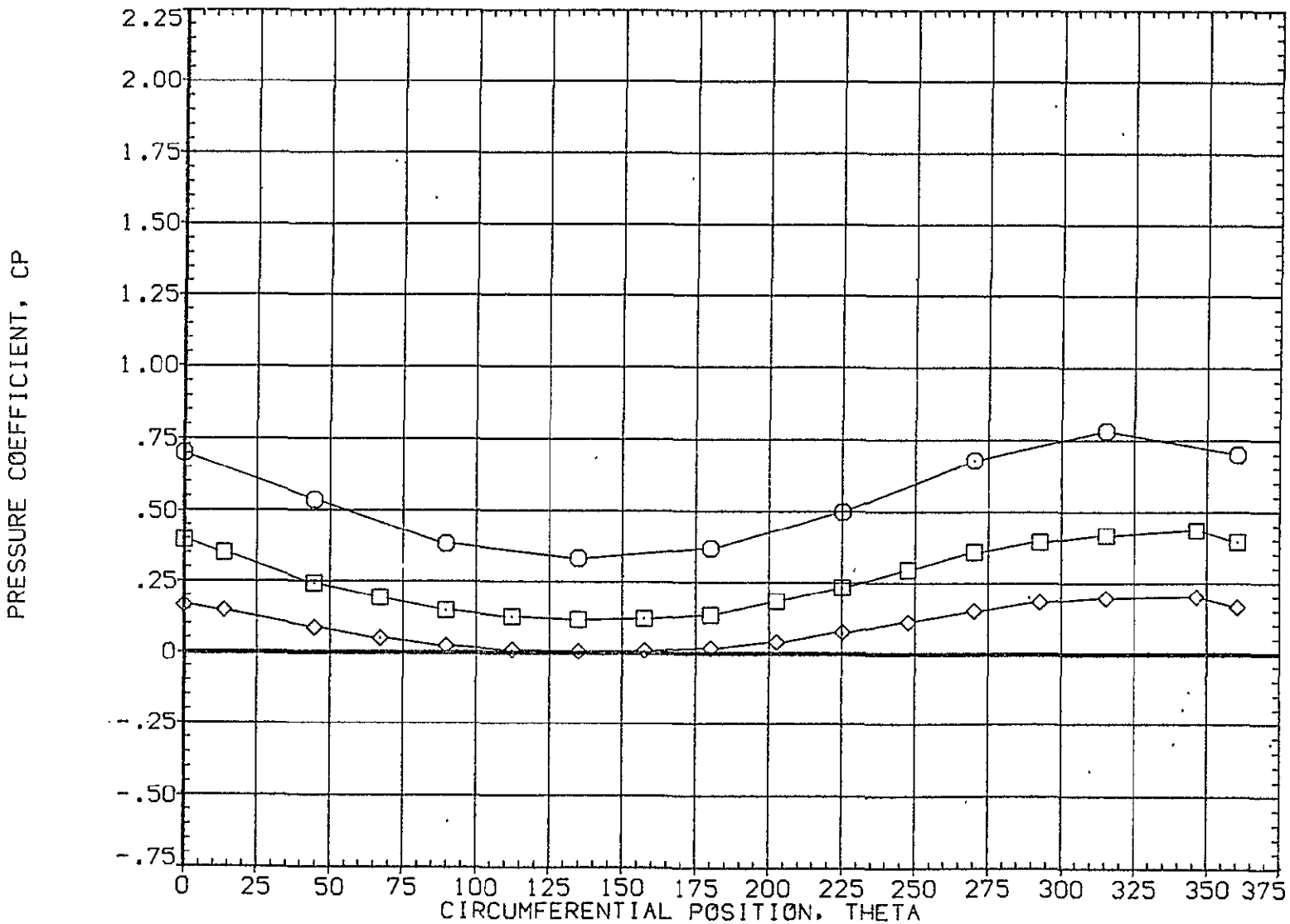

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.710	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

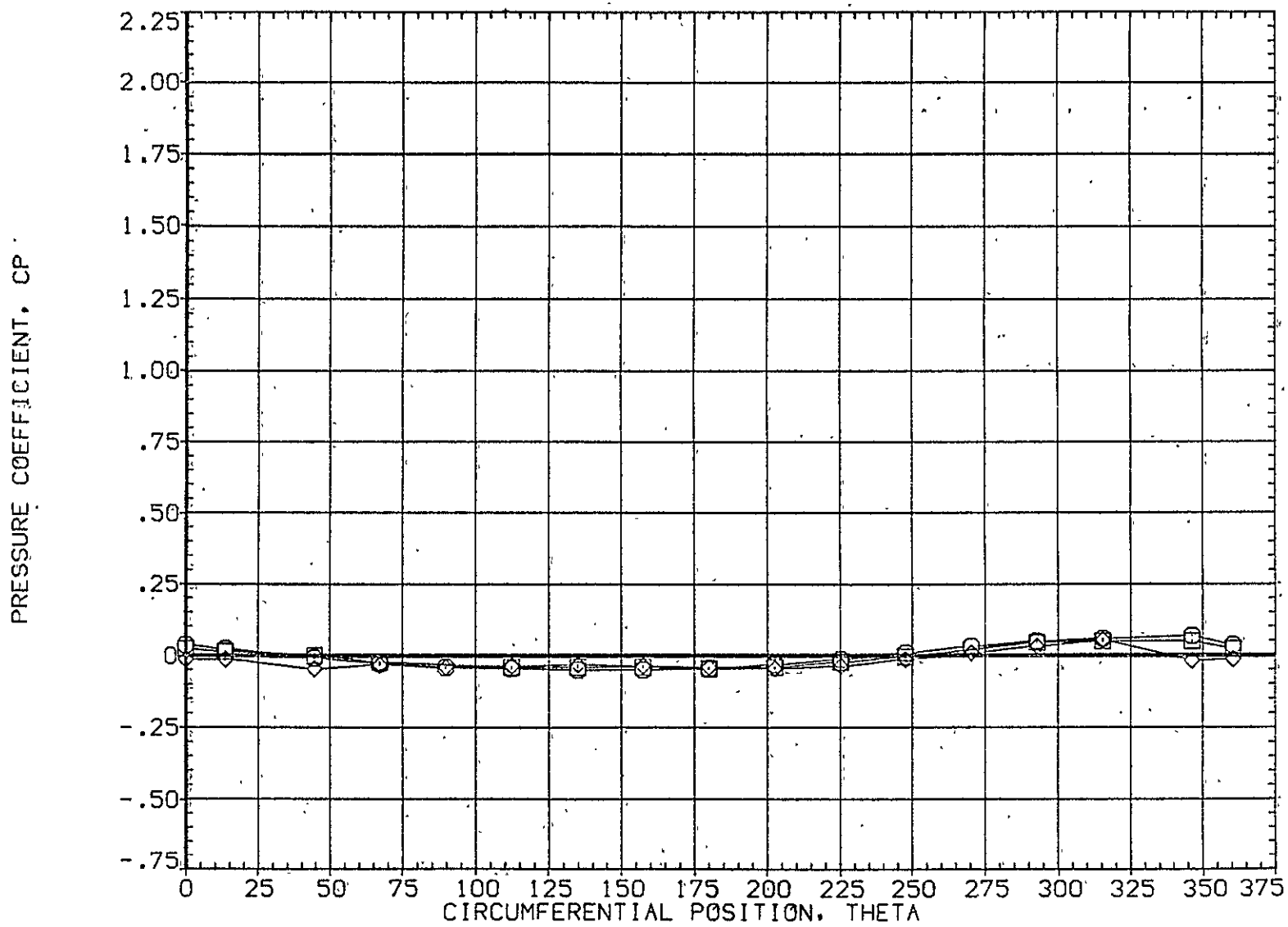

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.710	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

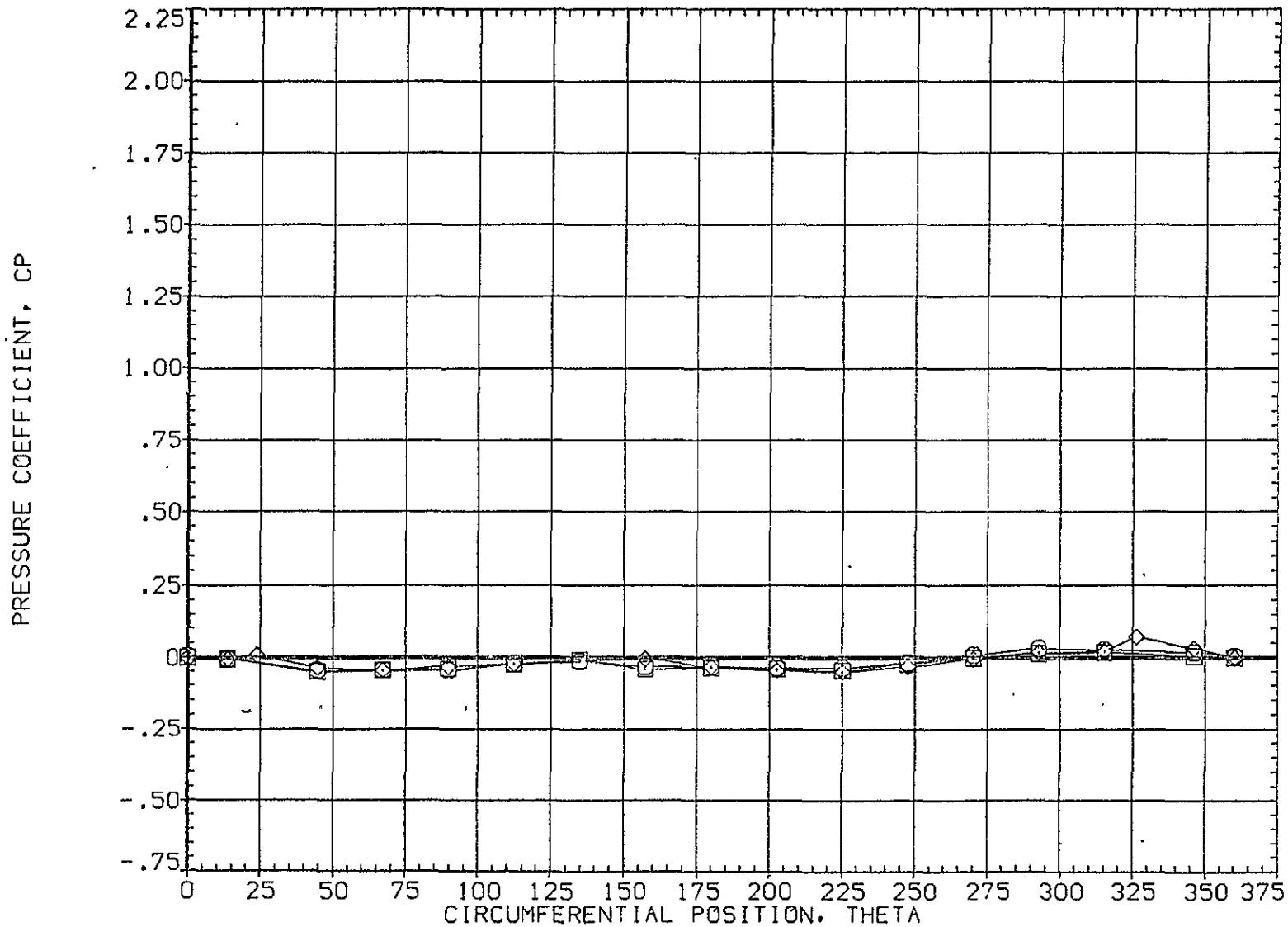

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.710	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

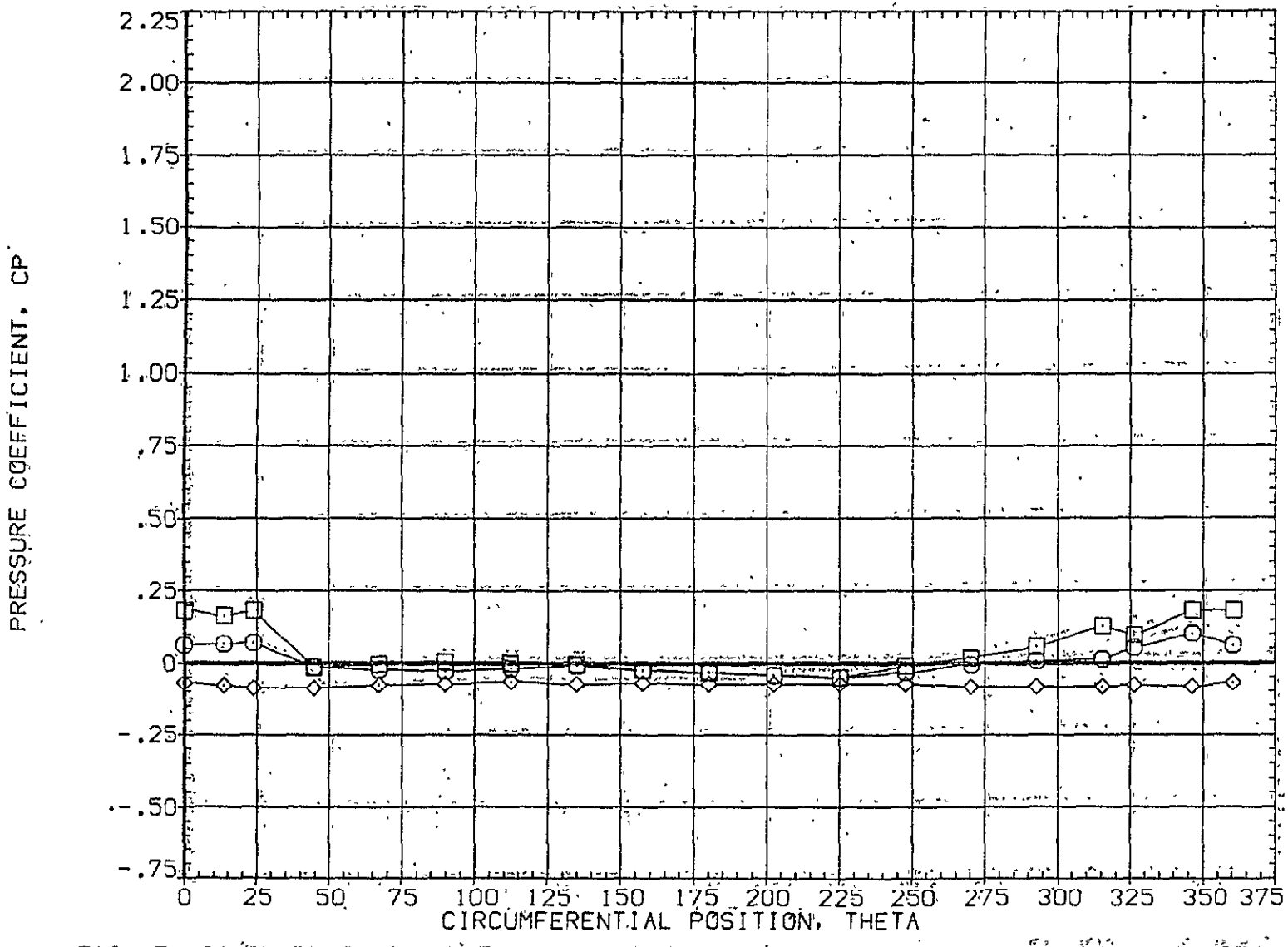

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

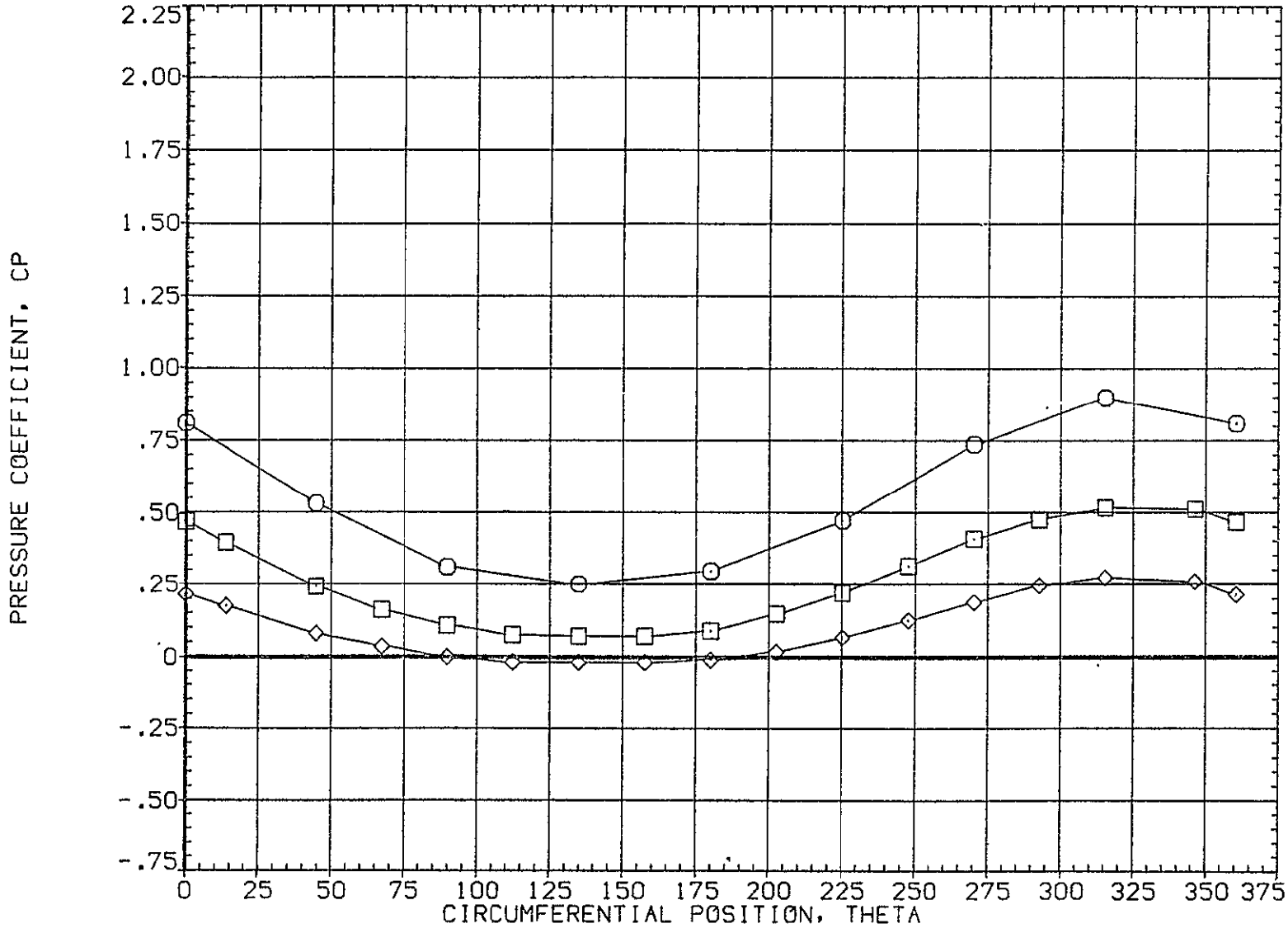

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

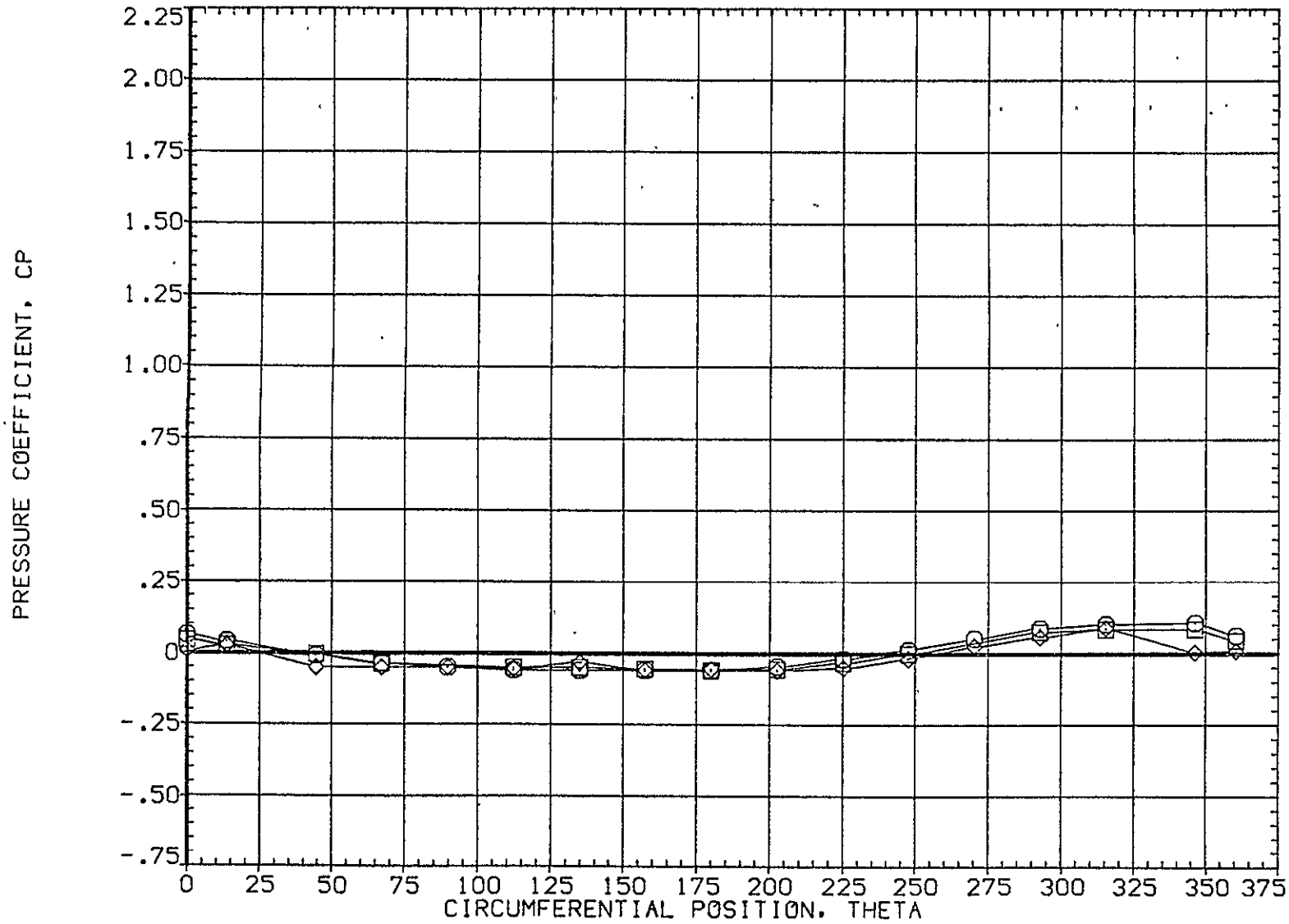

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

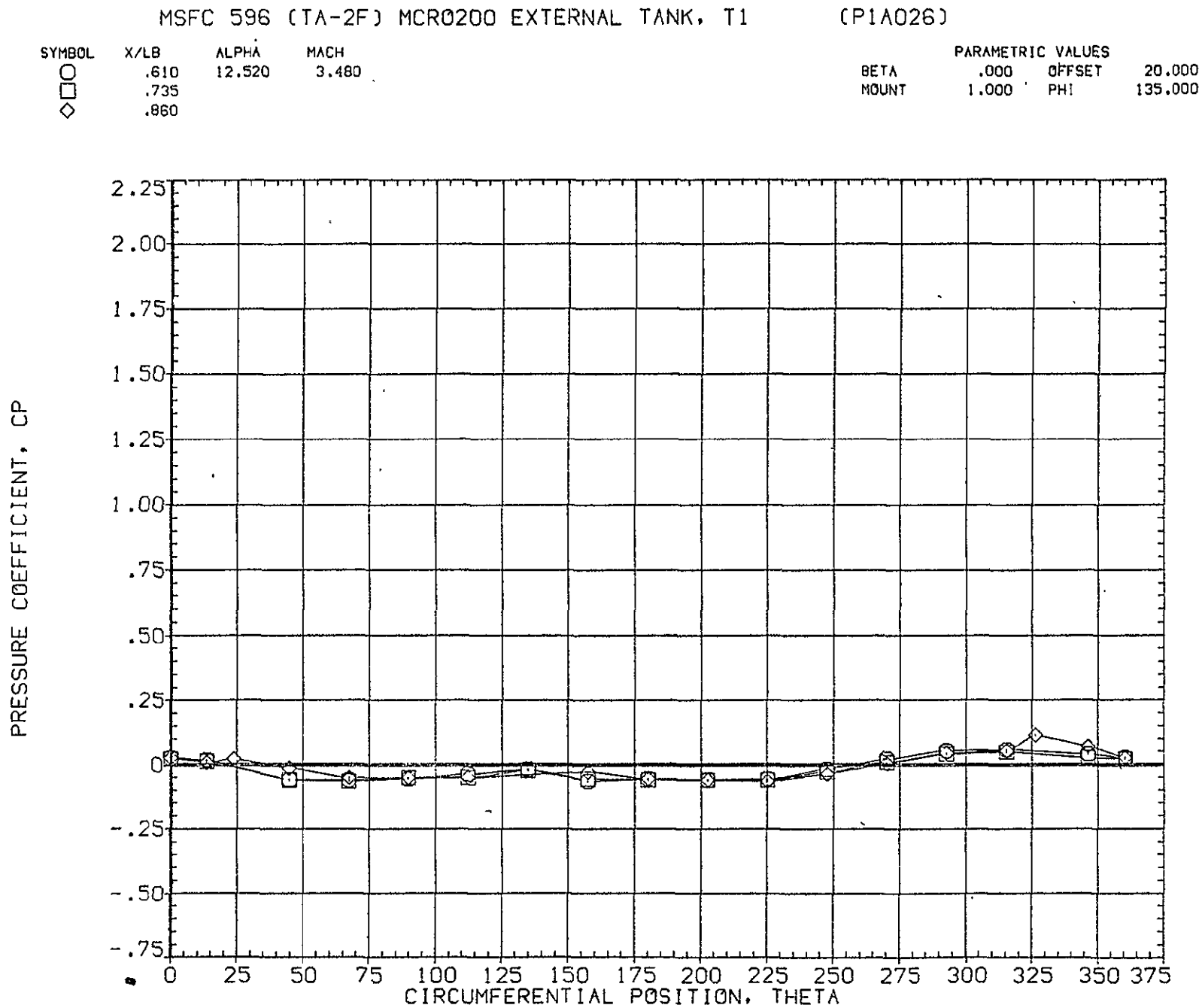

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000.

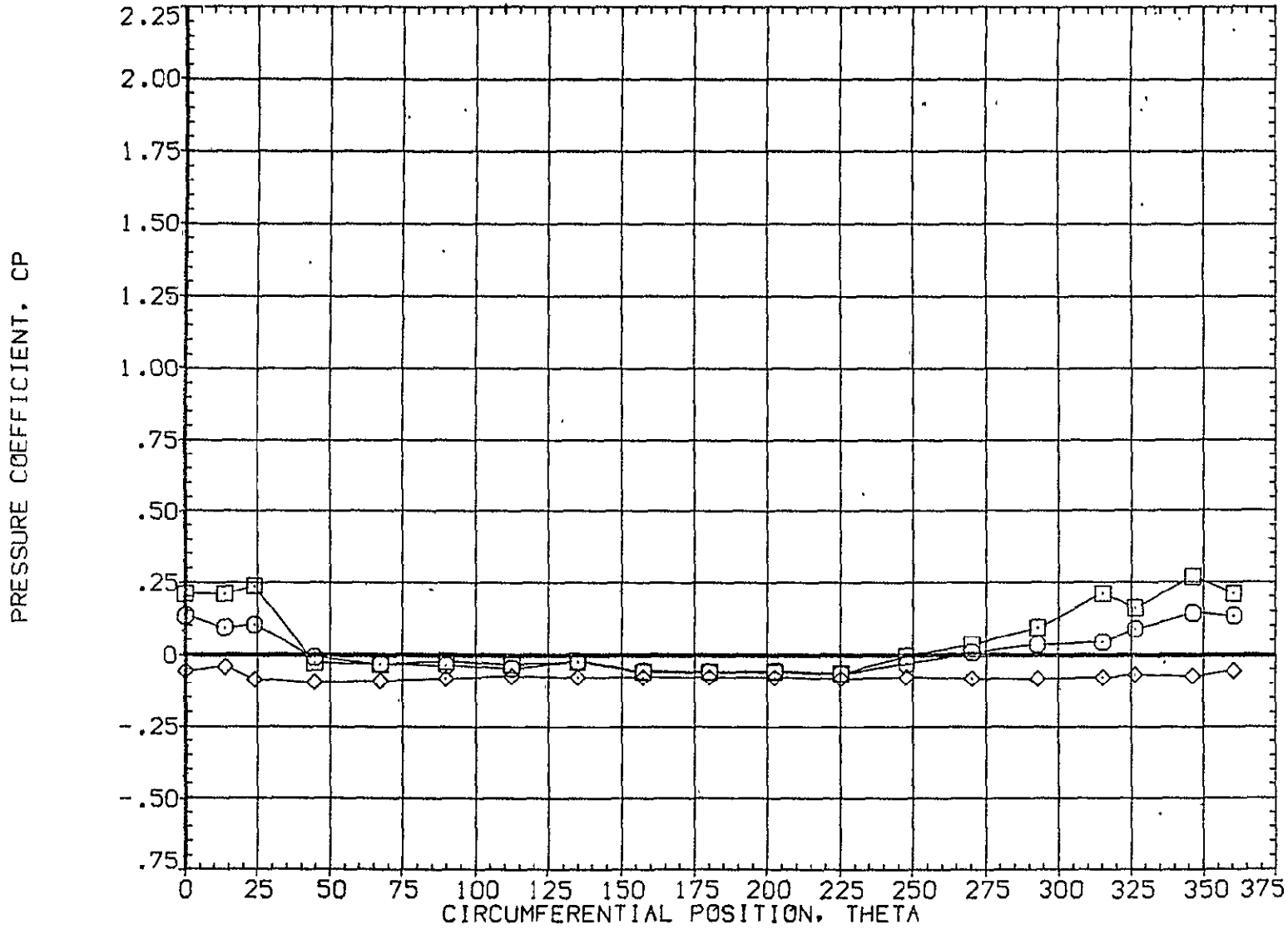

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.540	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

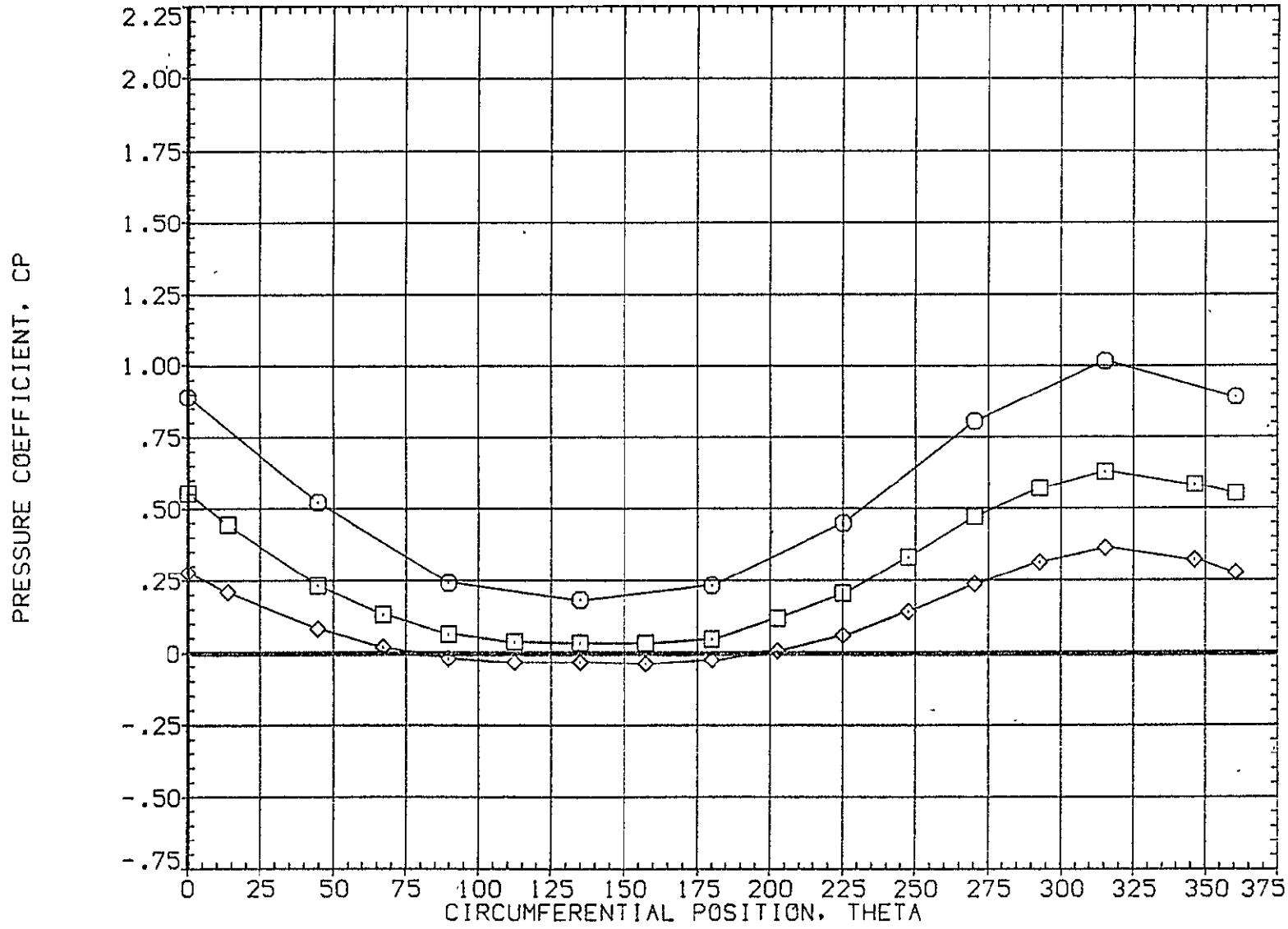

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.540	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

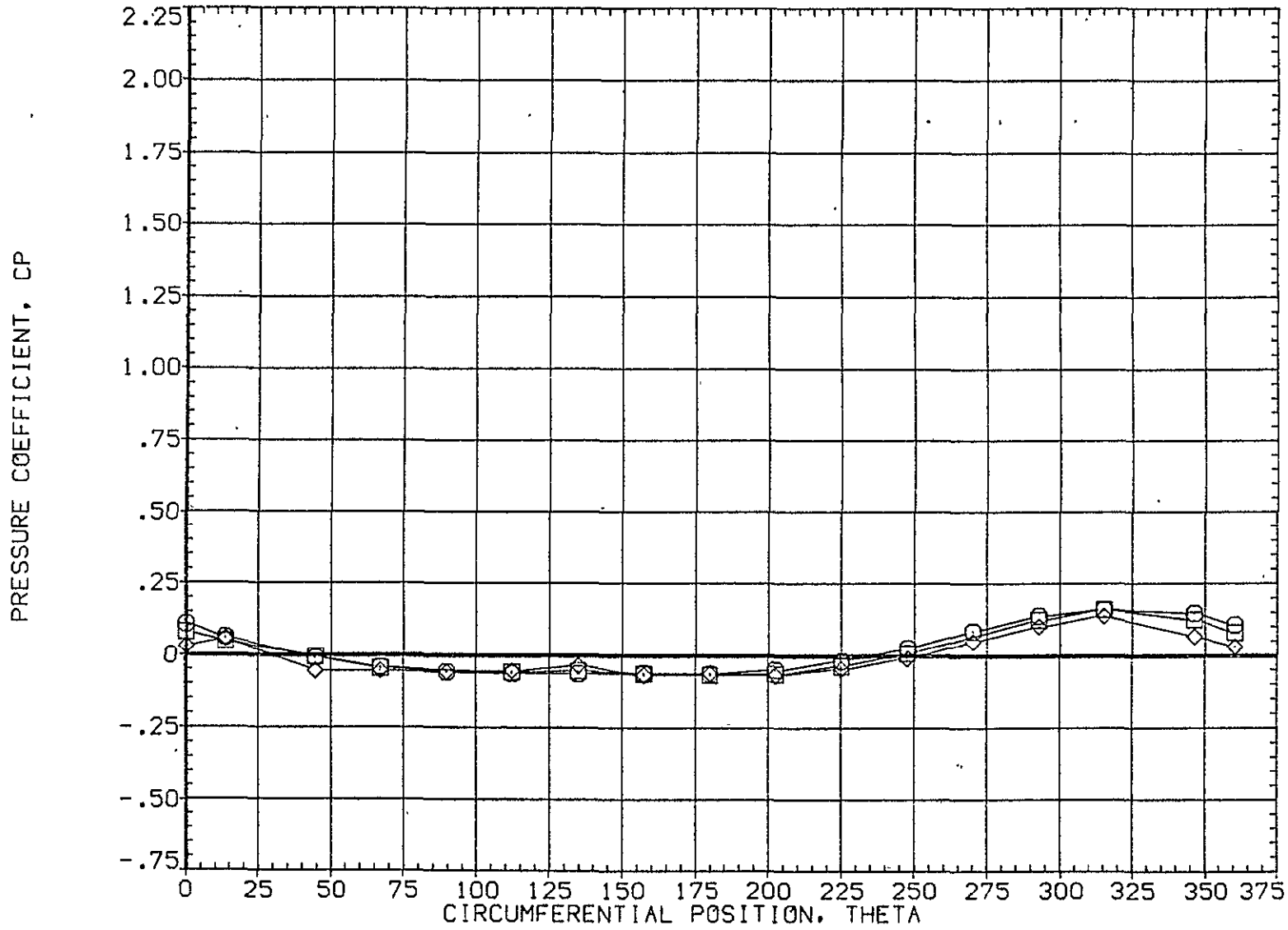

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.540	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

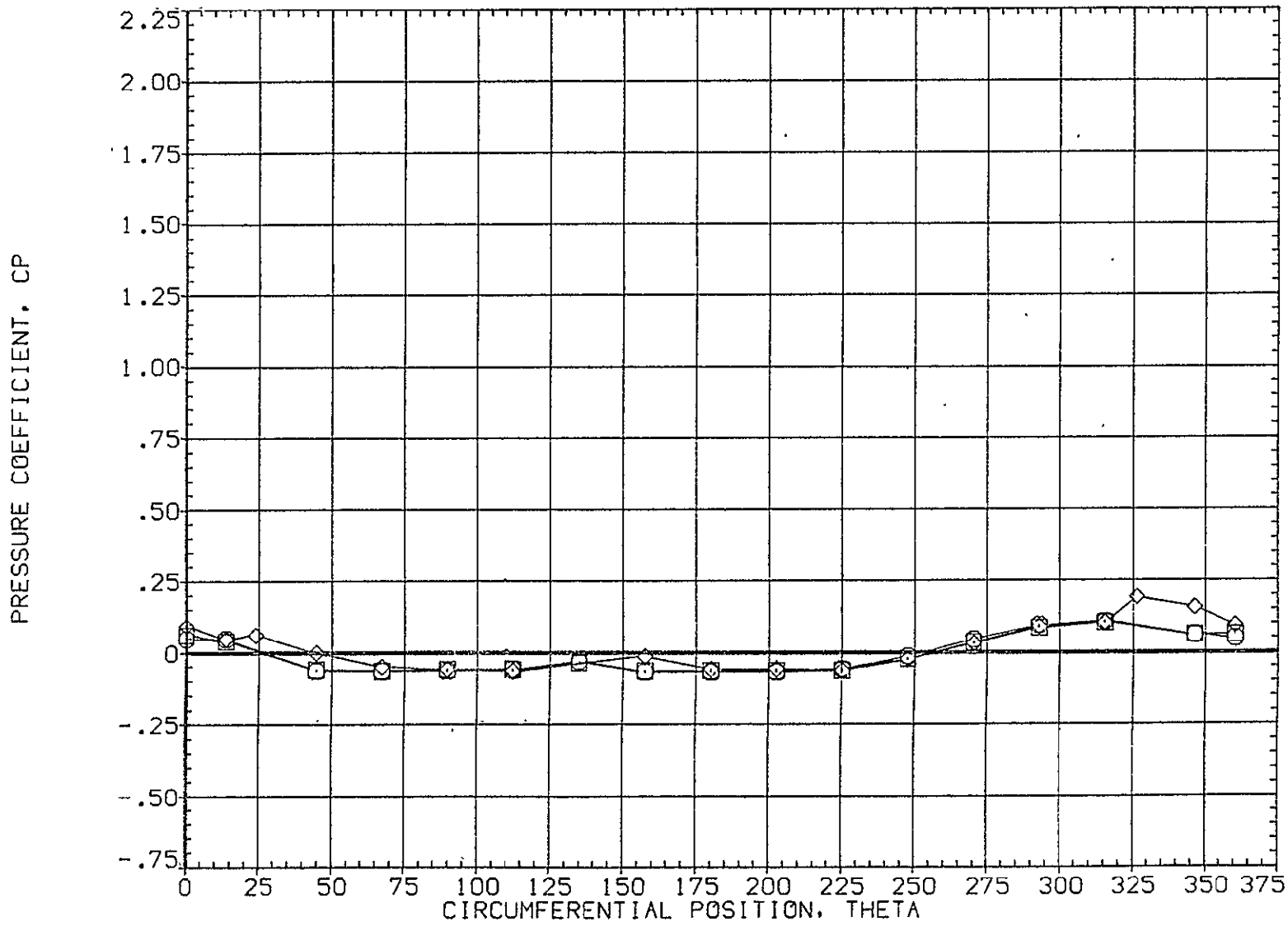

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.540	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

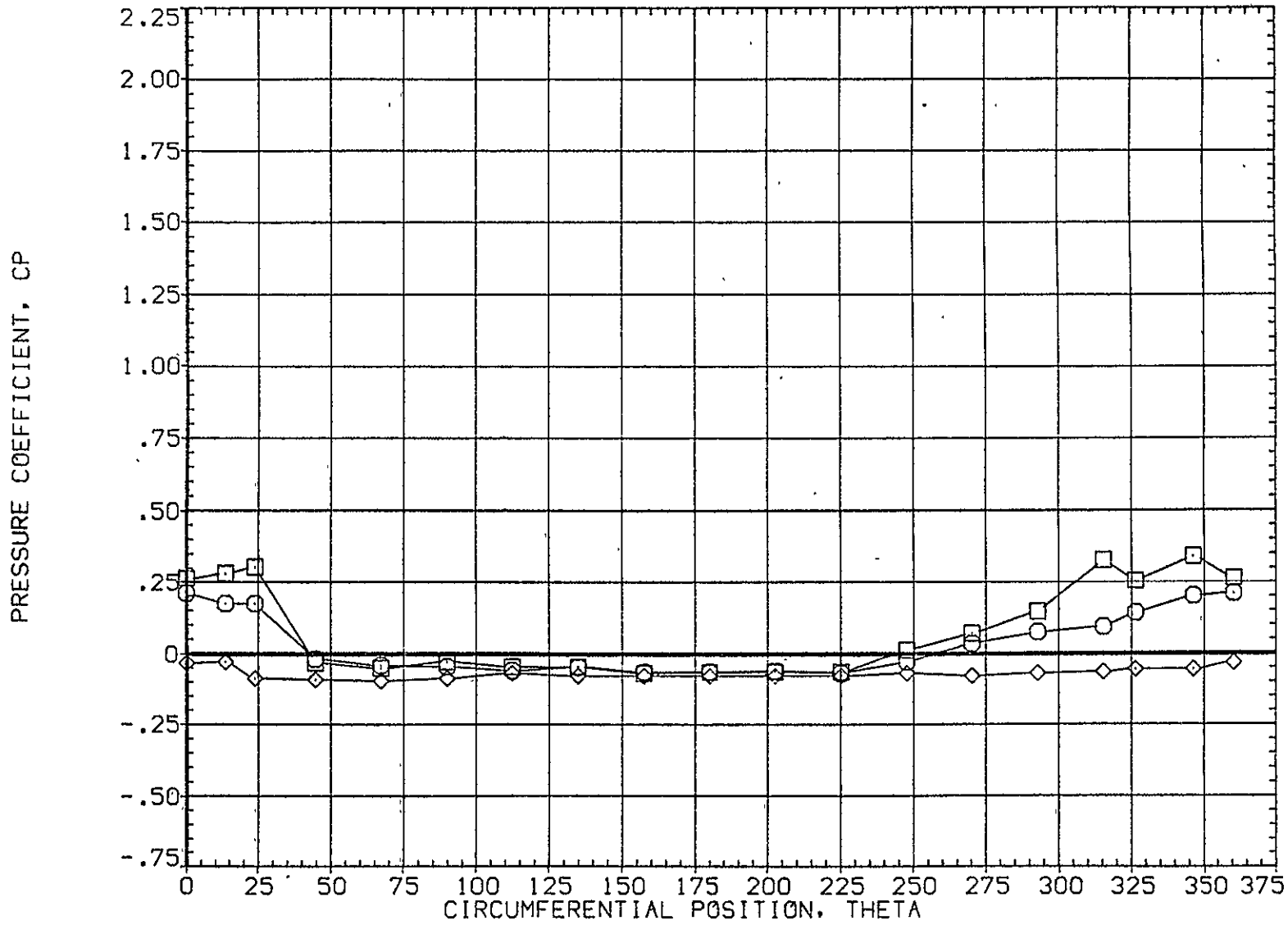

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

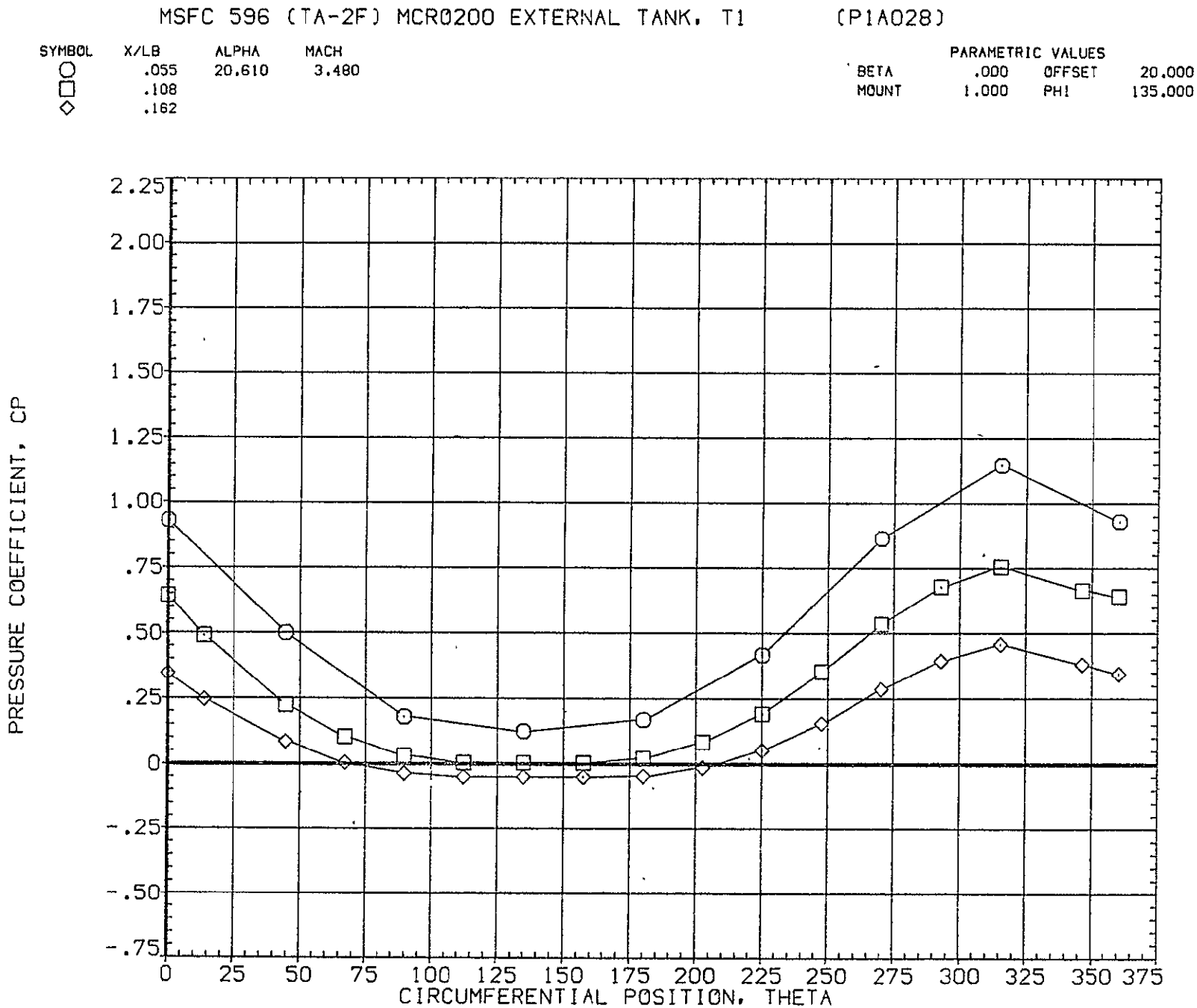

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

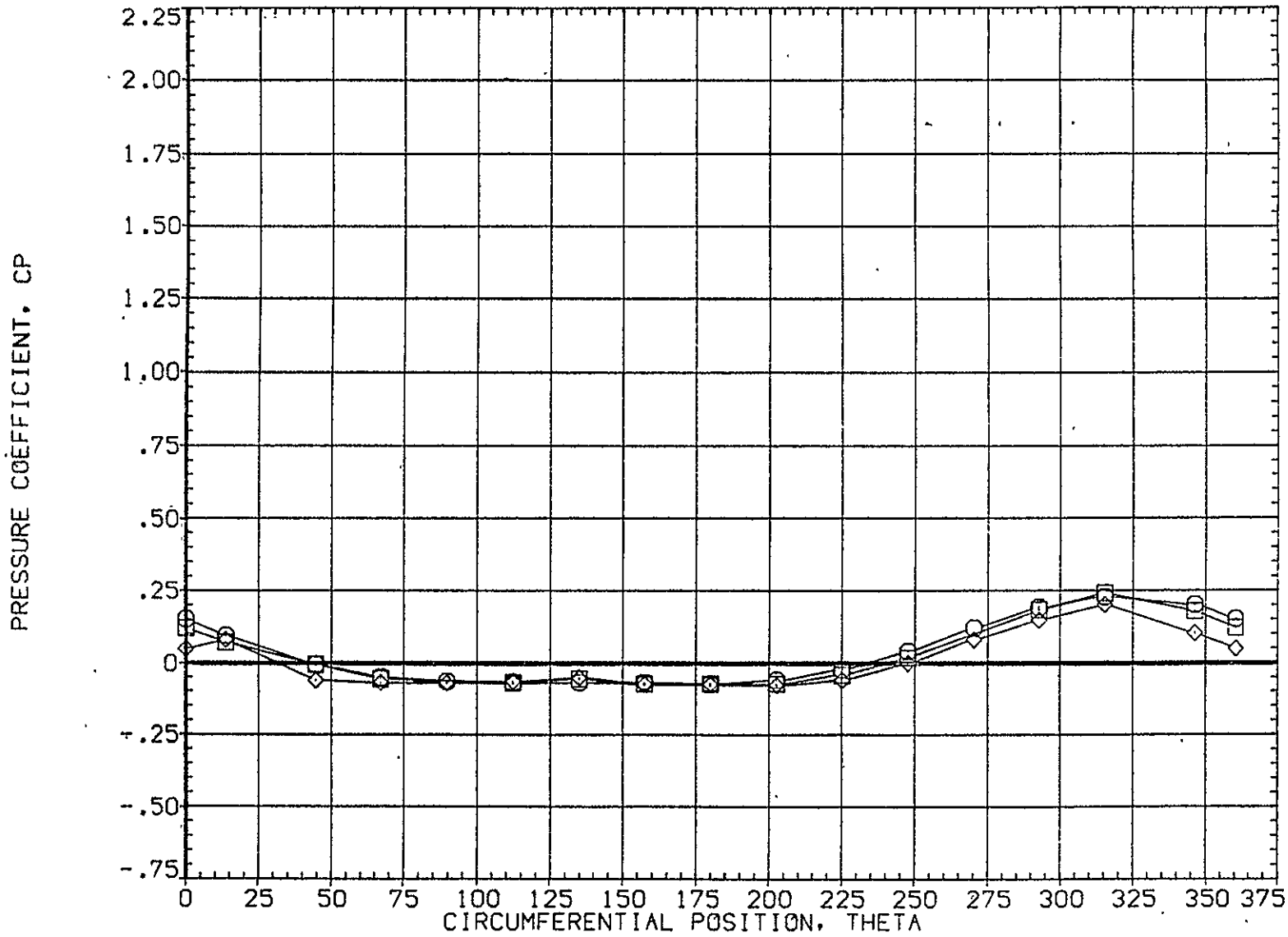

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

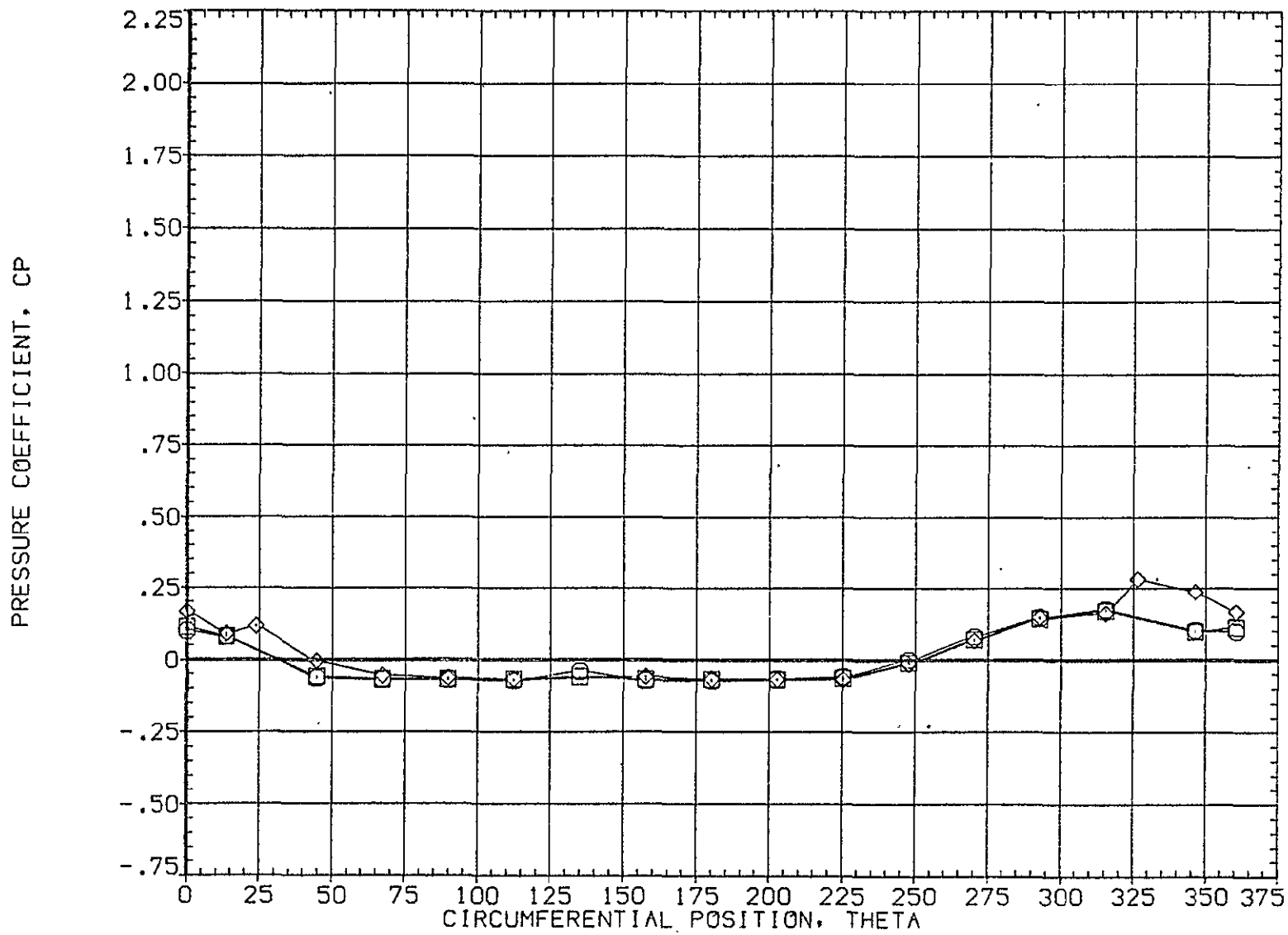

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

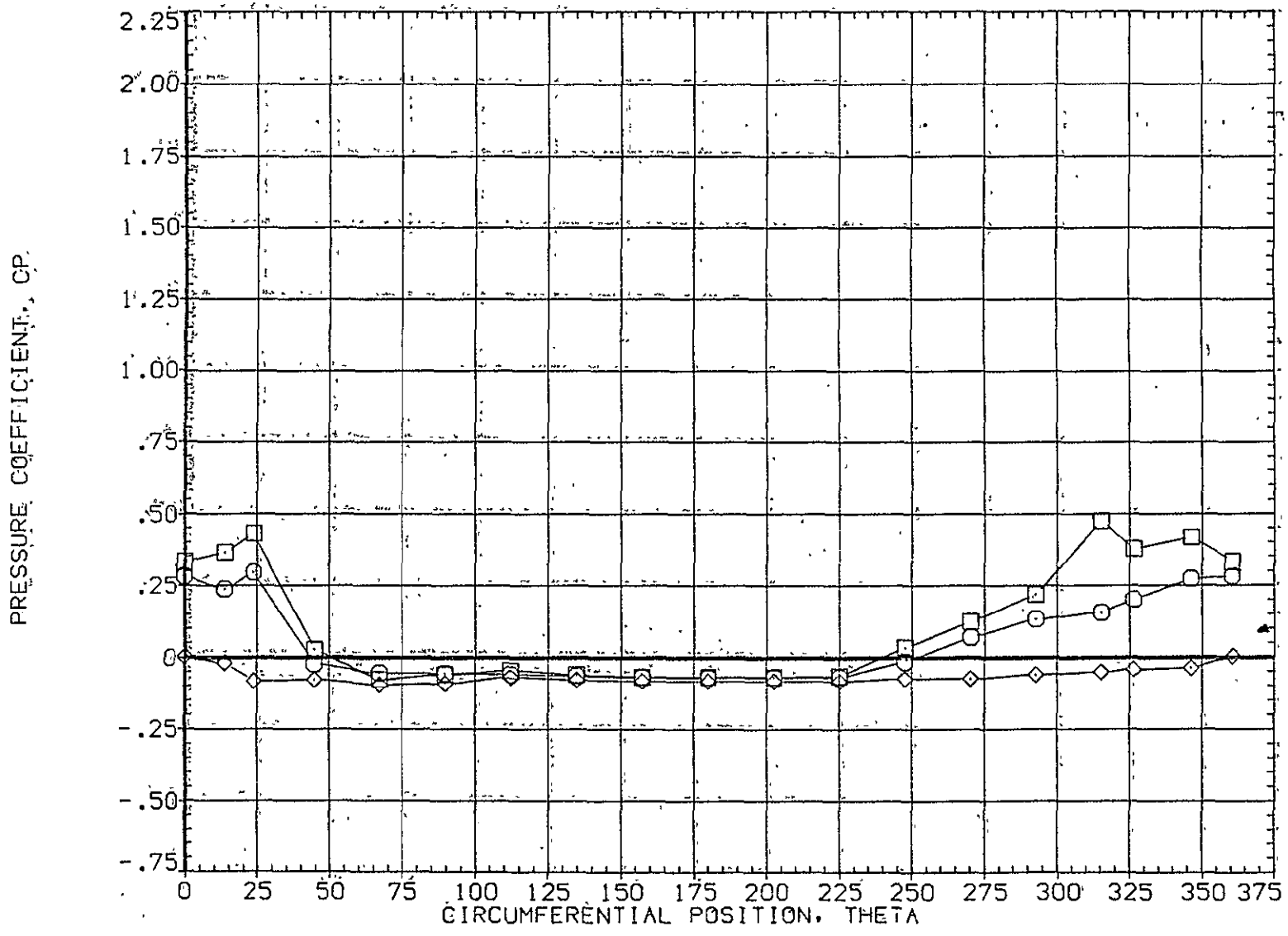

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.660	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

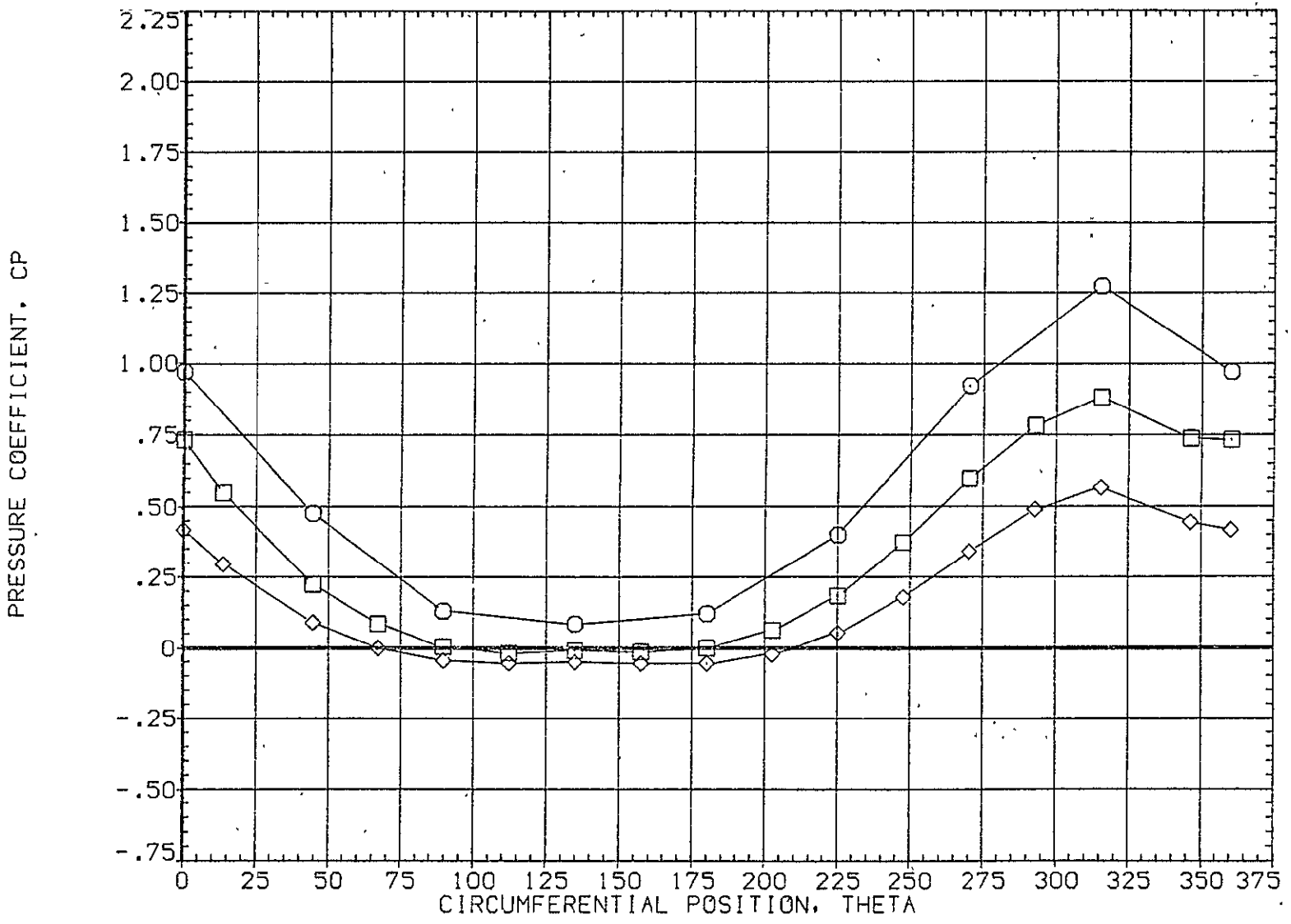

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

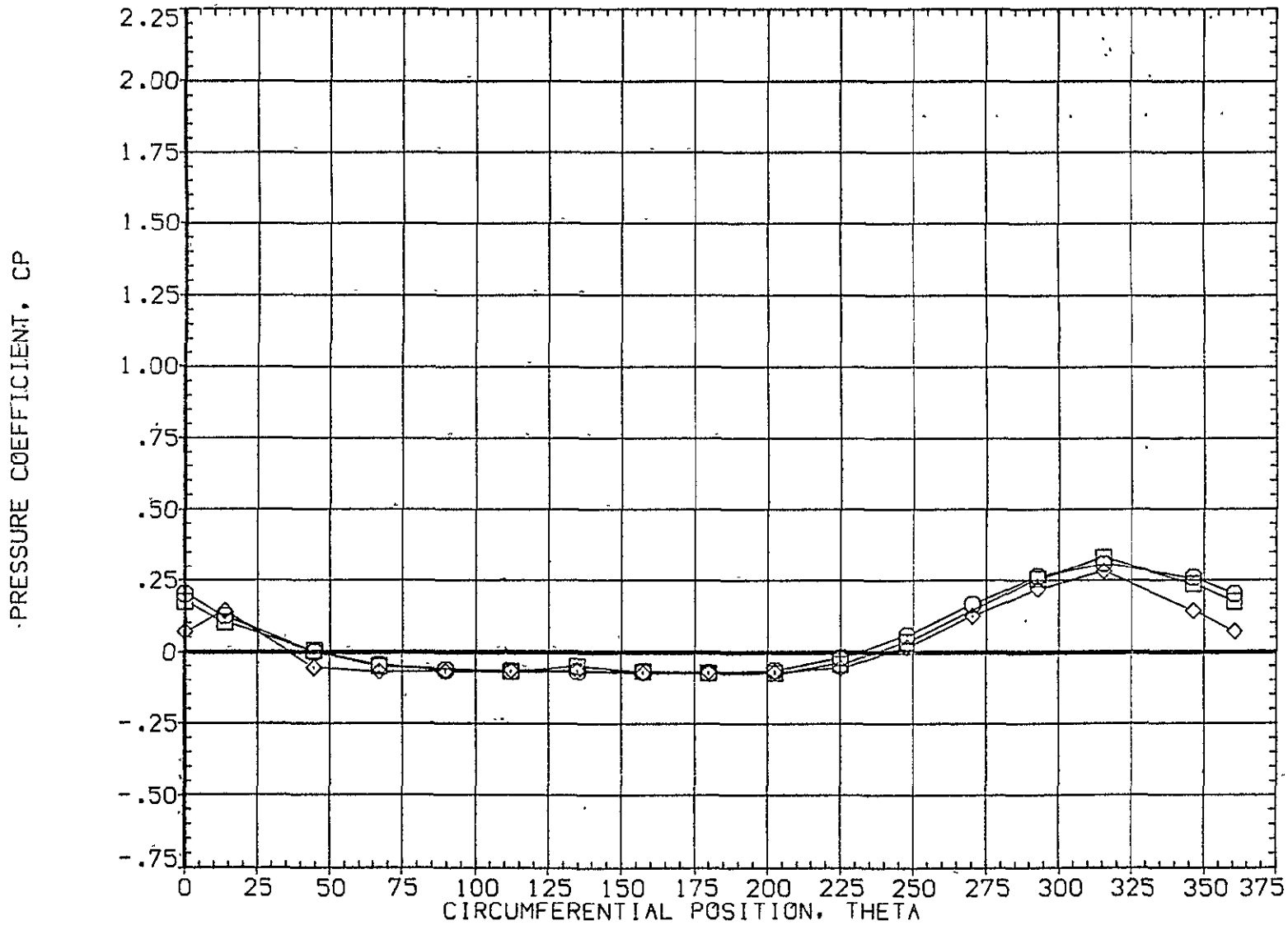

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

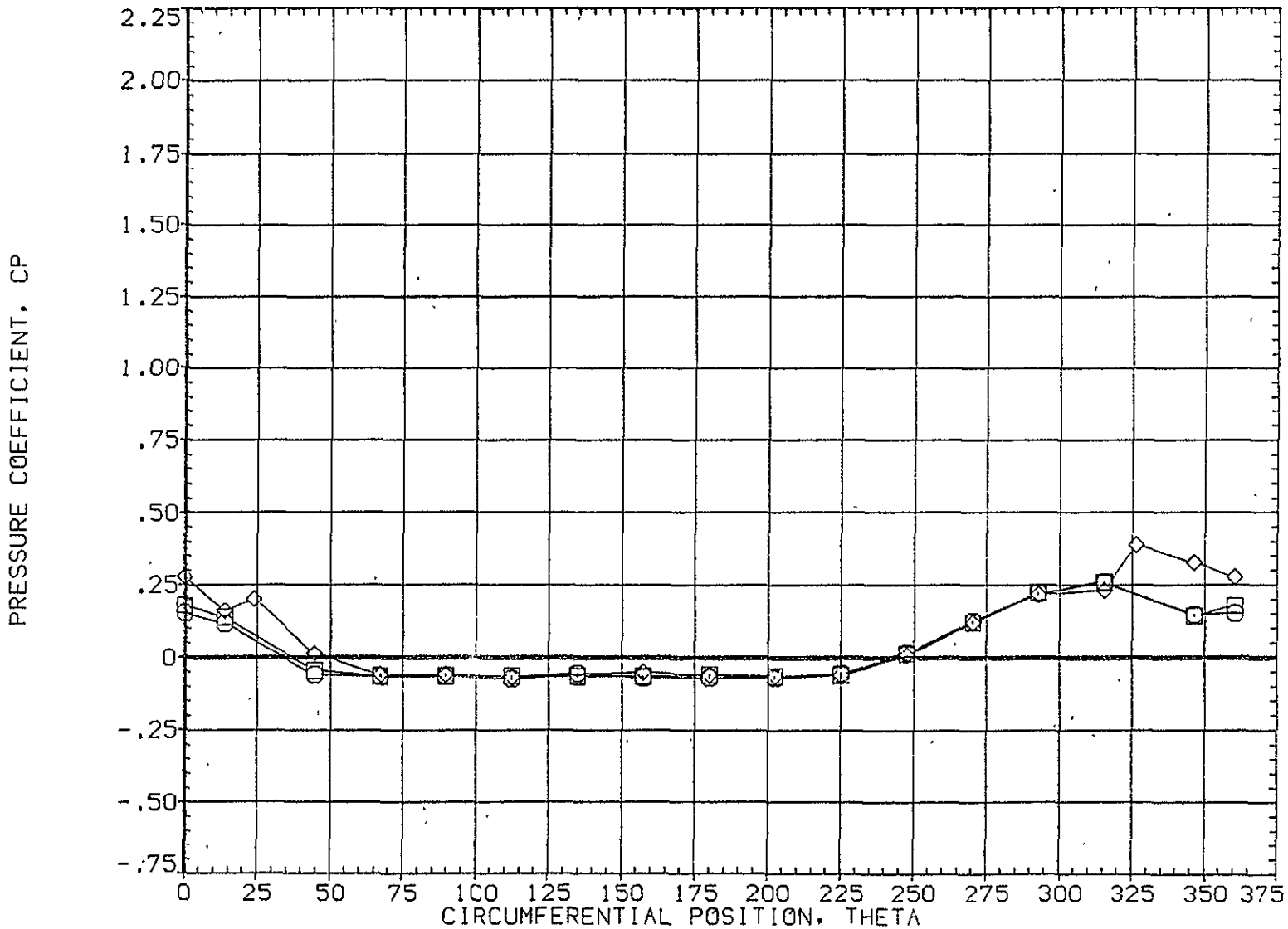

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

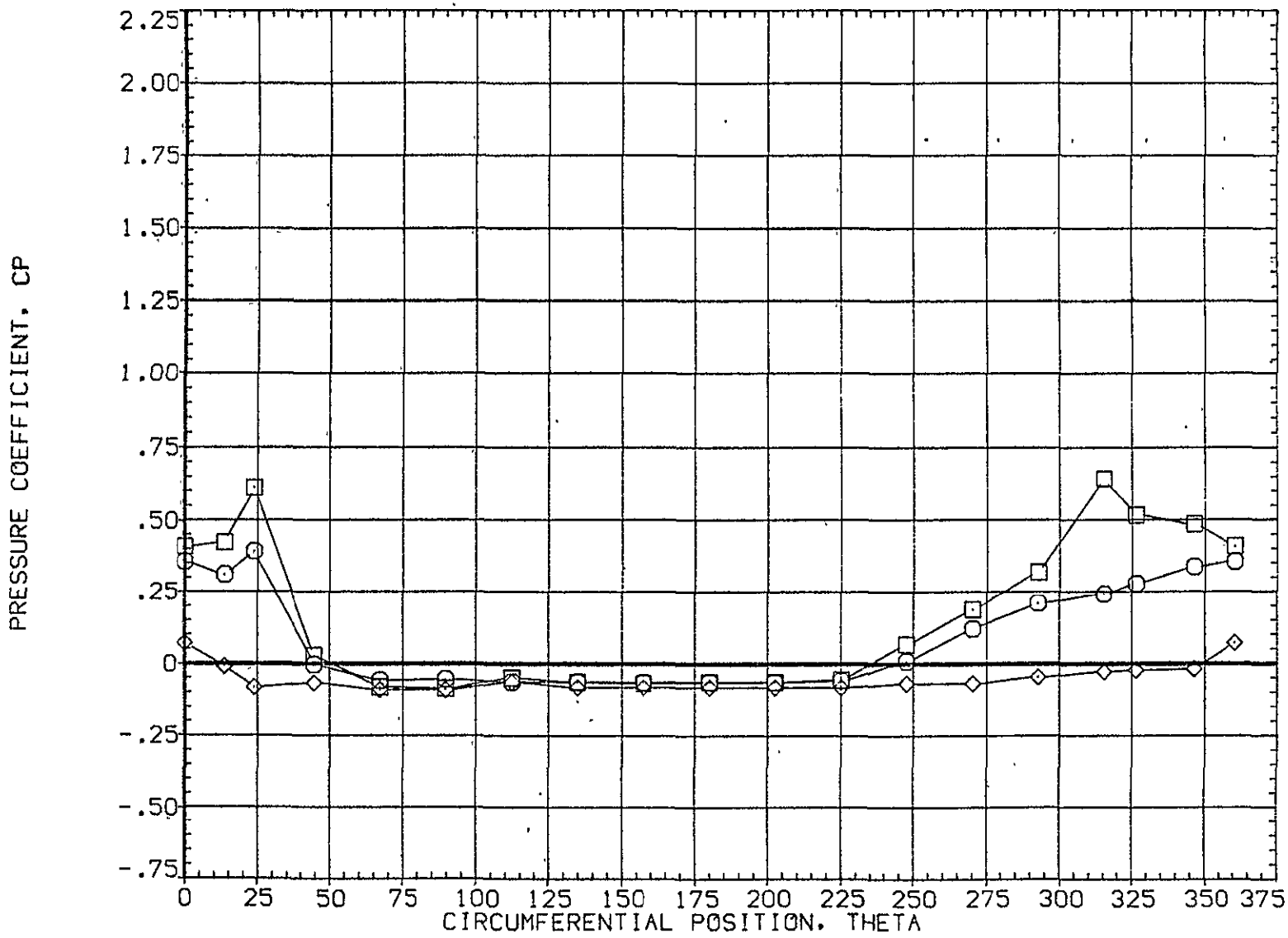

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

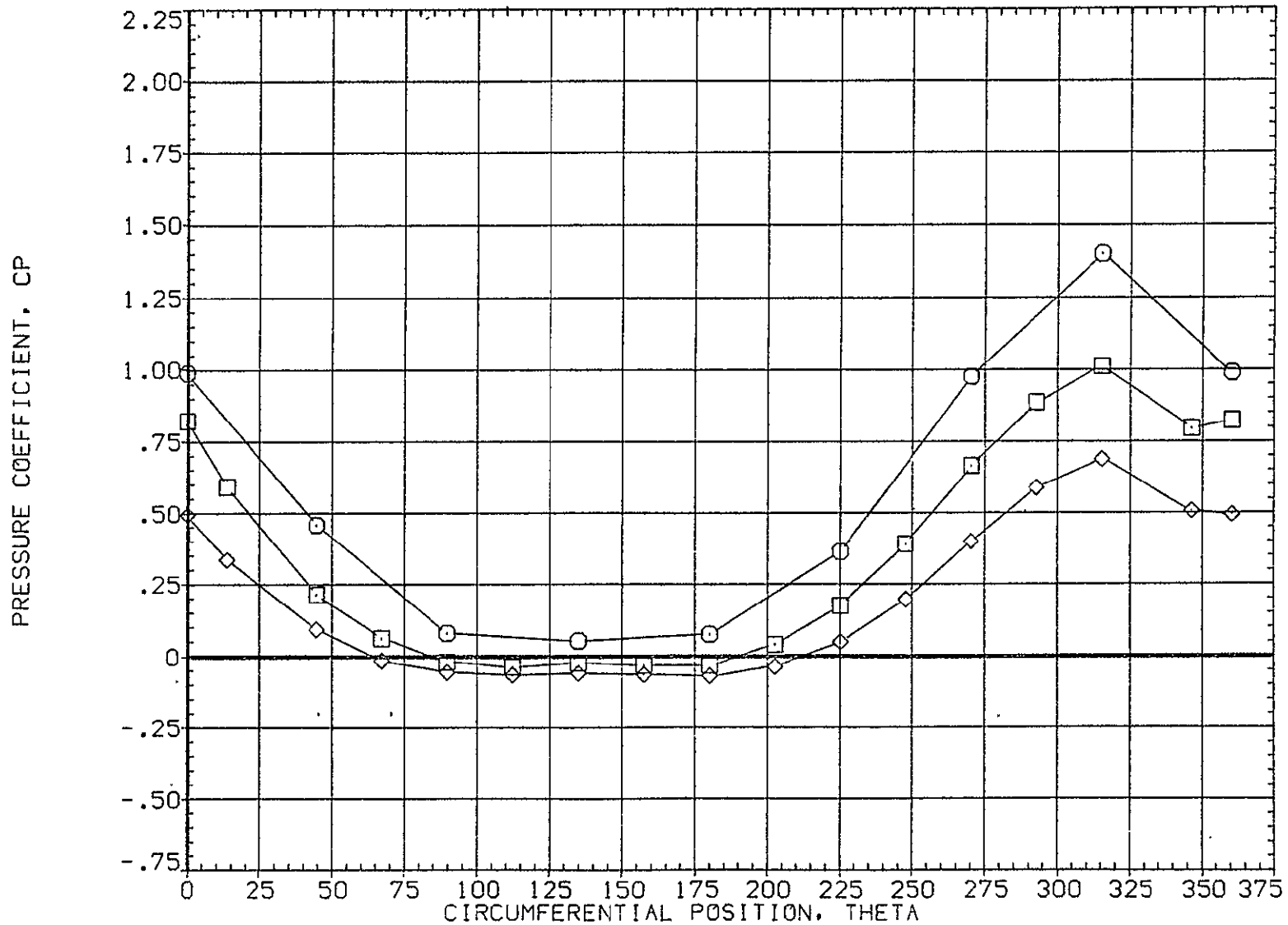

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

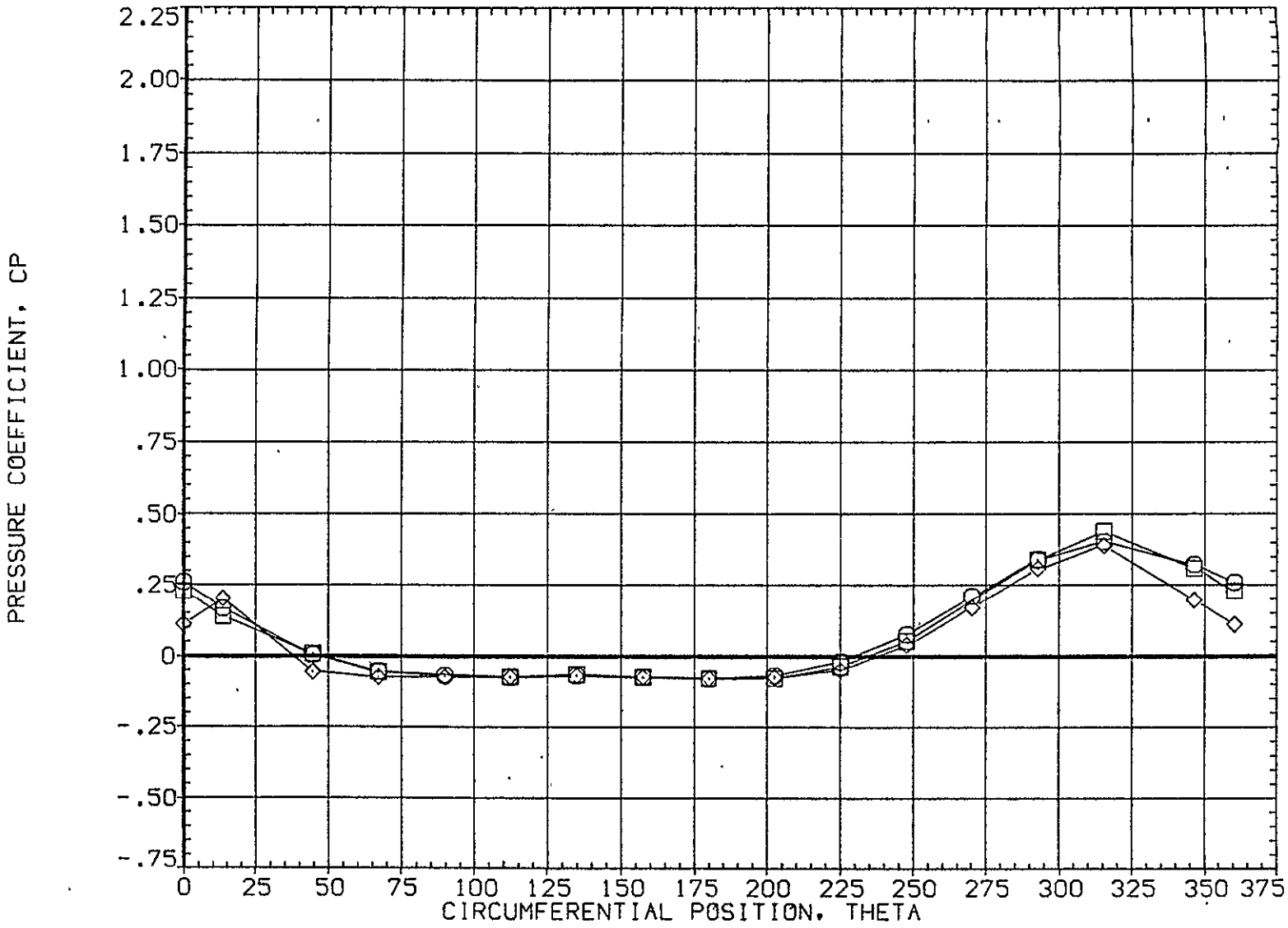

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET = T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

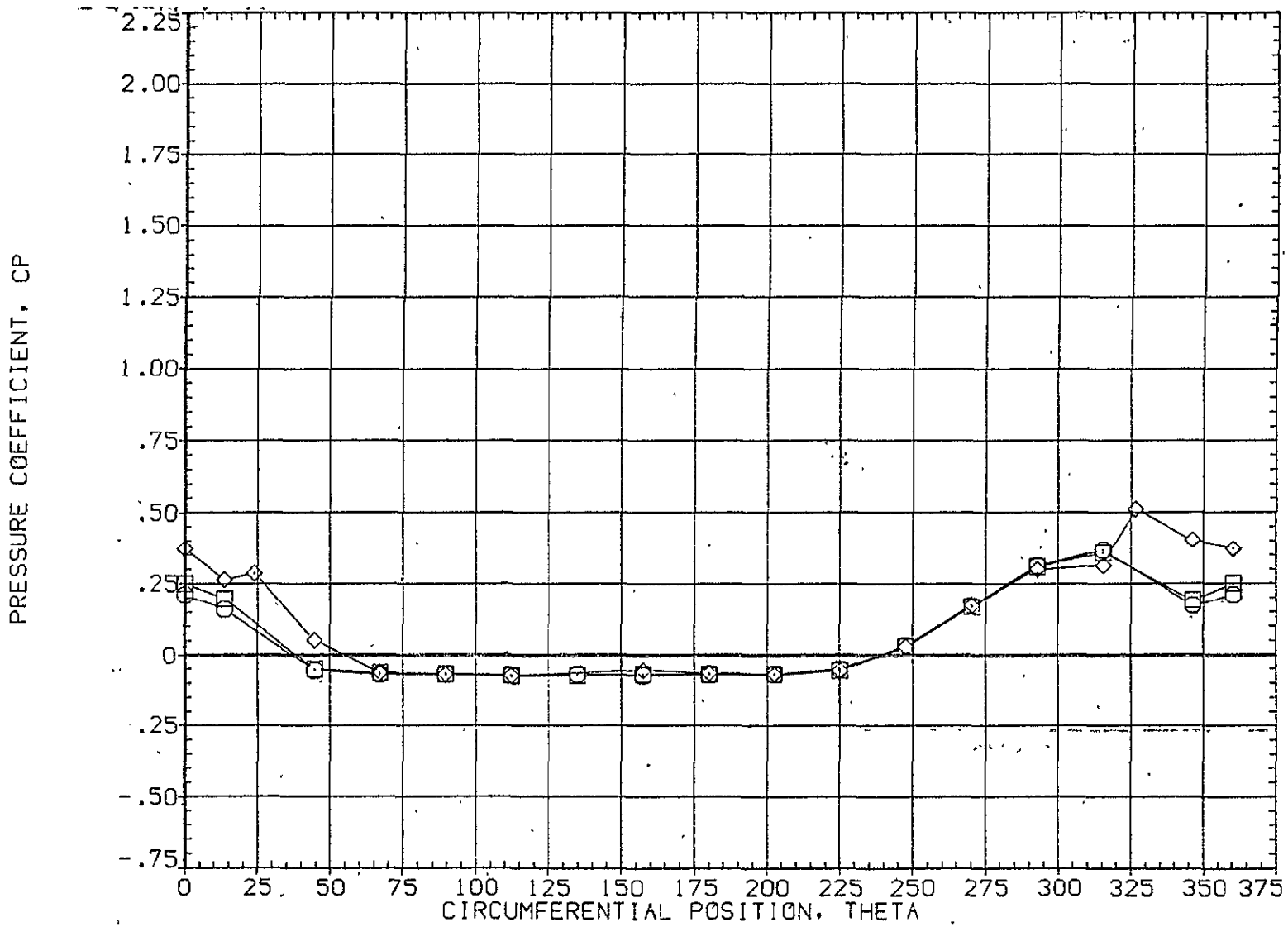

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

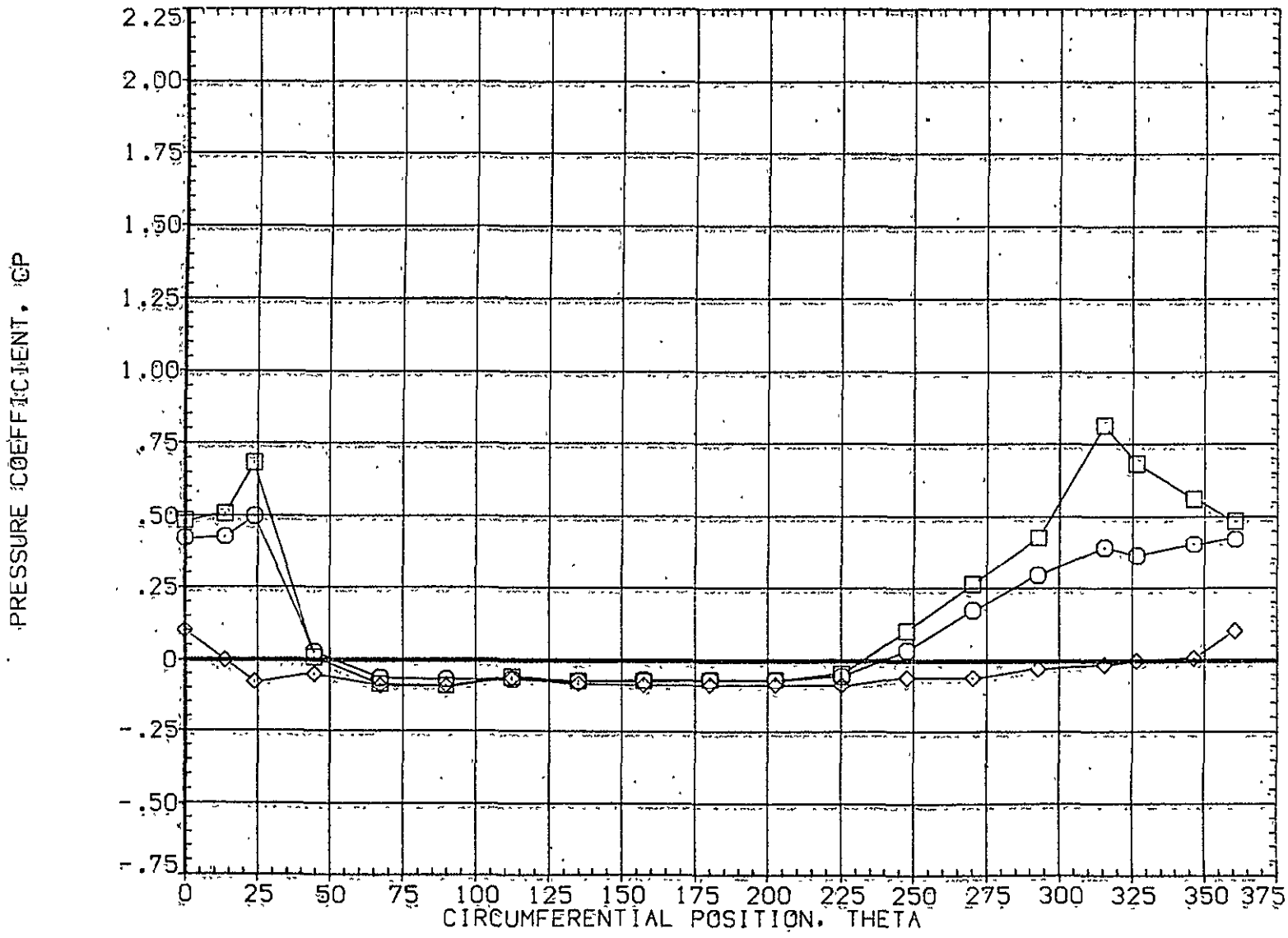

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

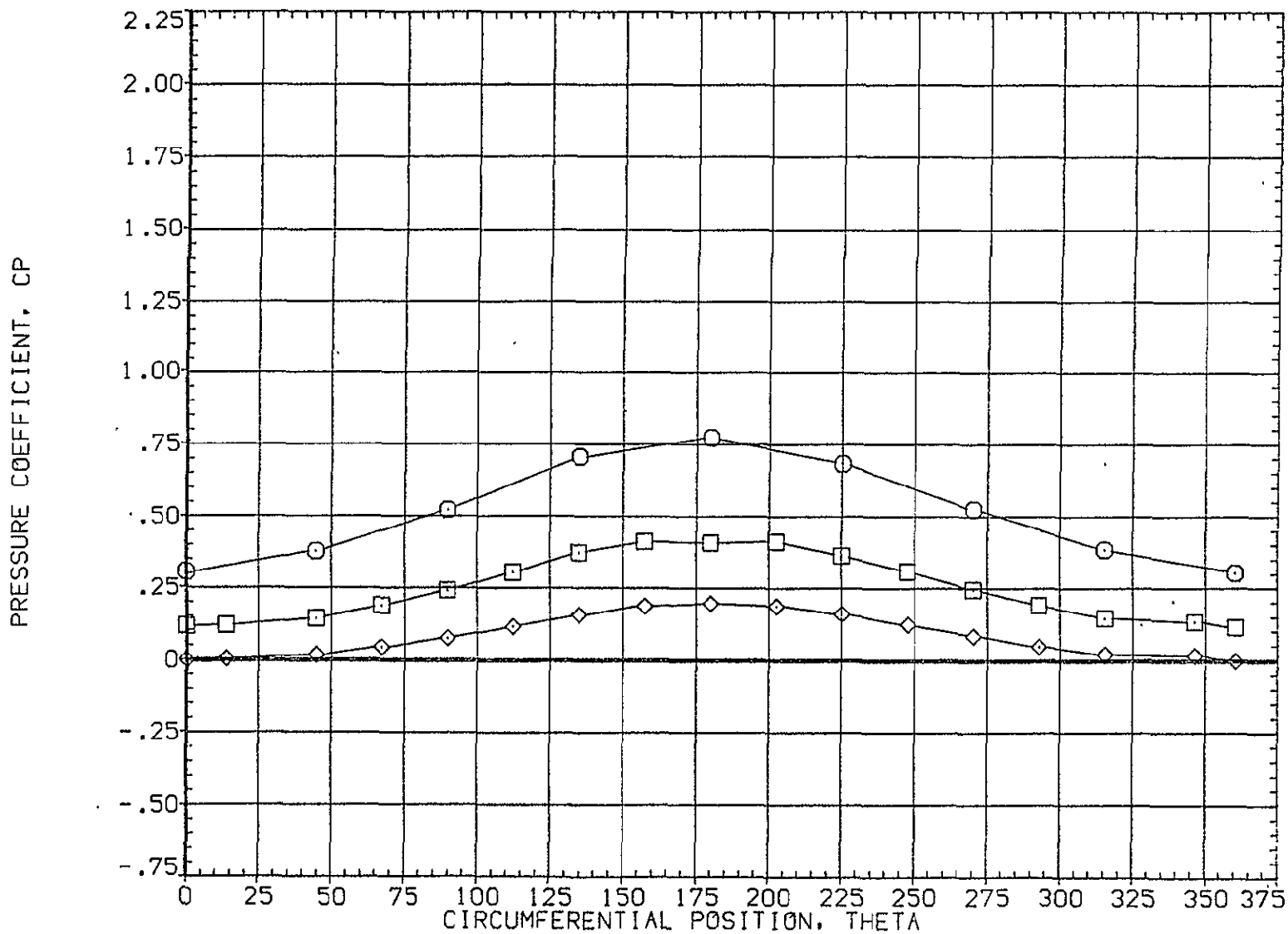

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

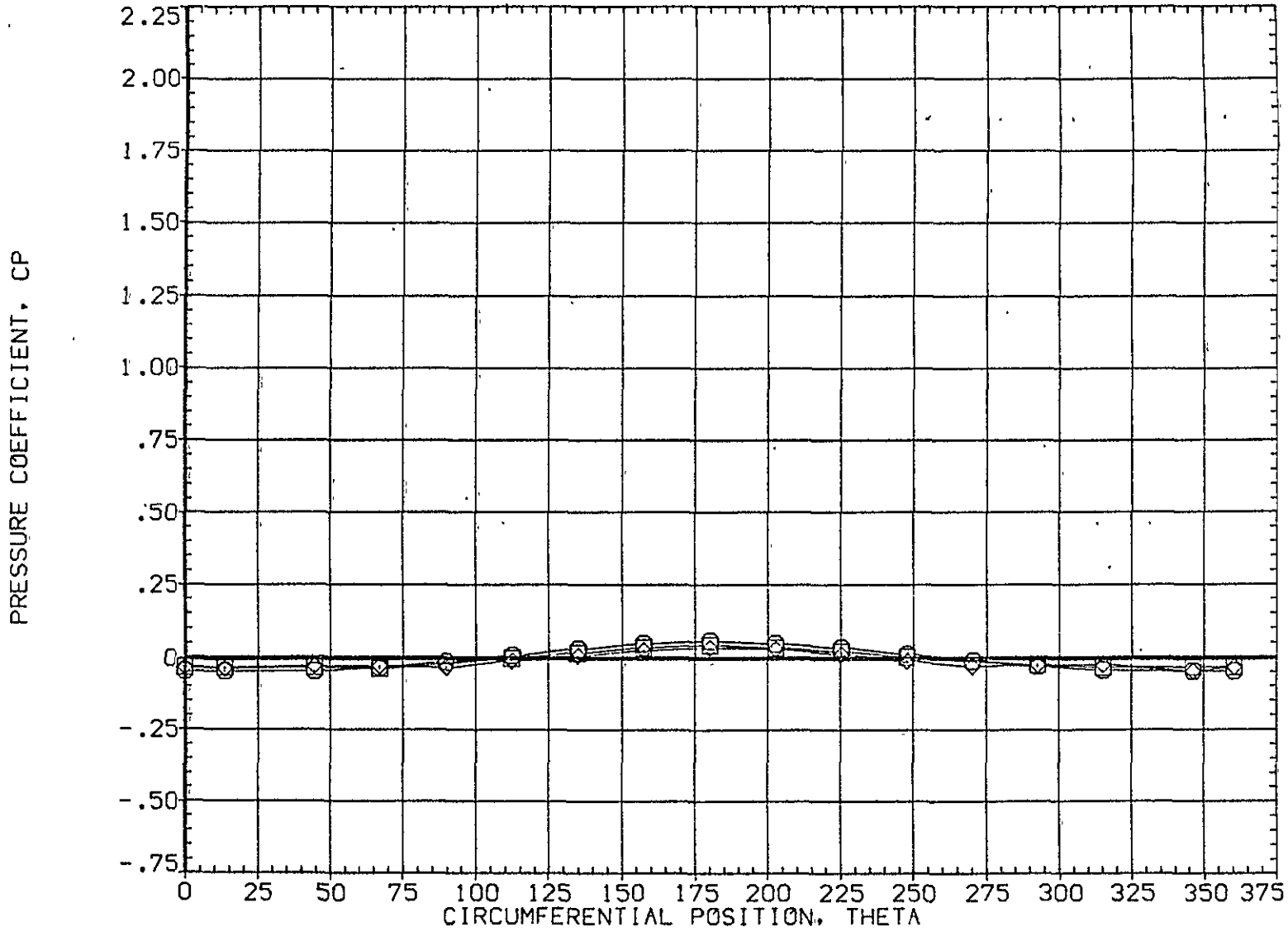

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

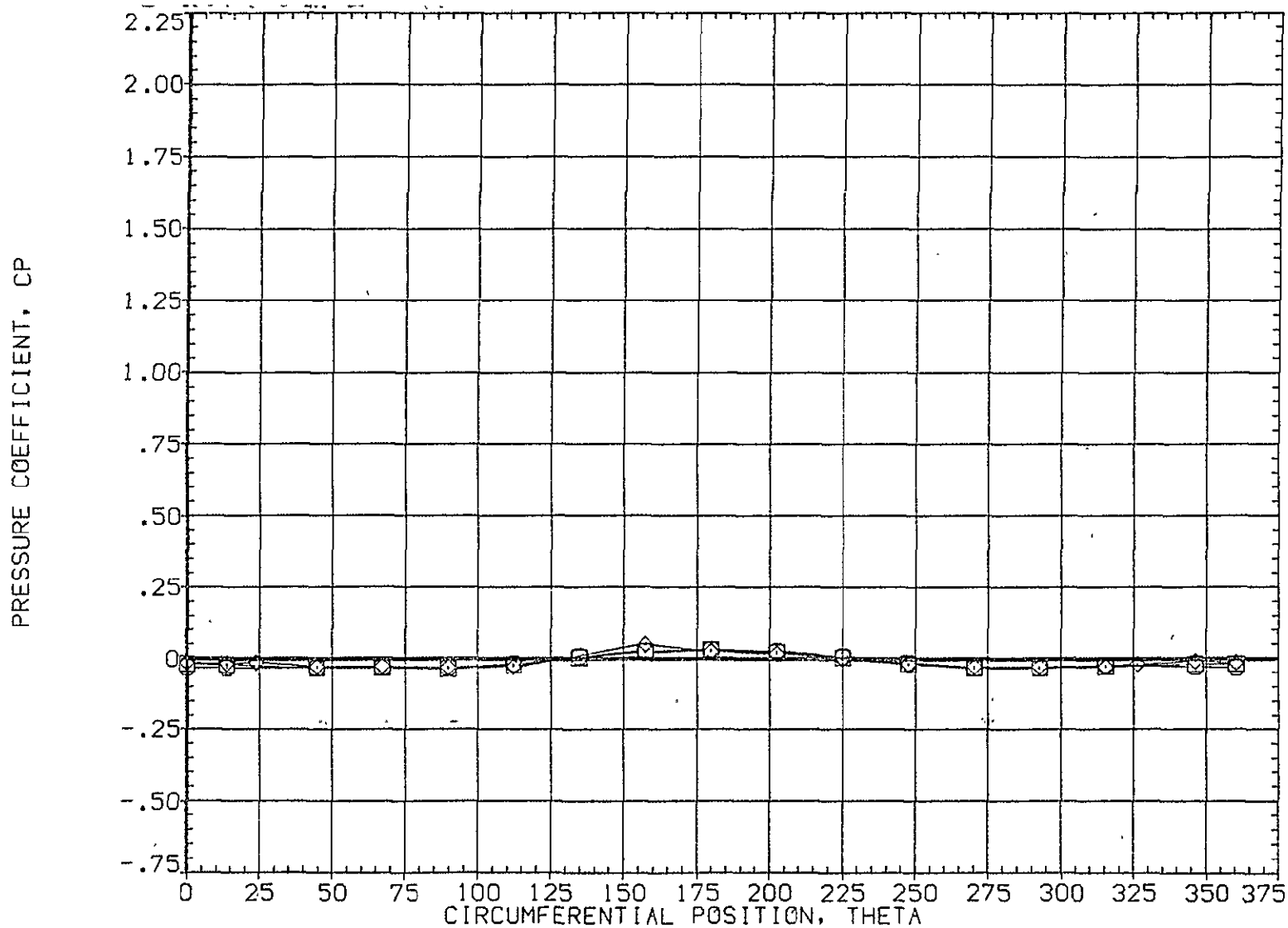

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

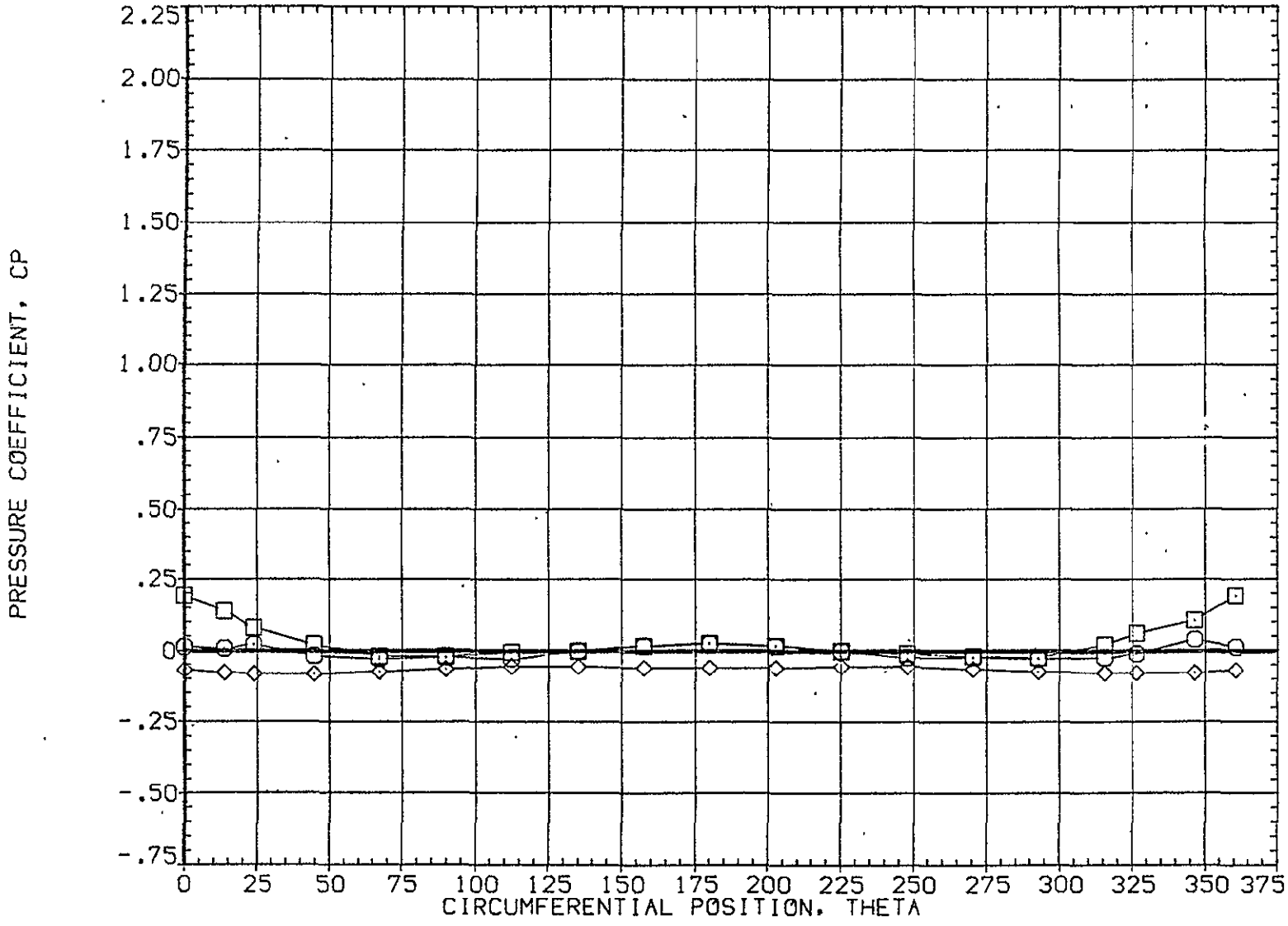

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

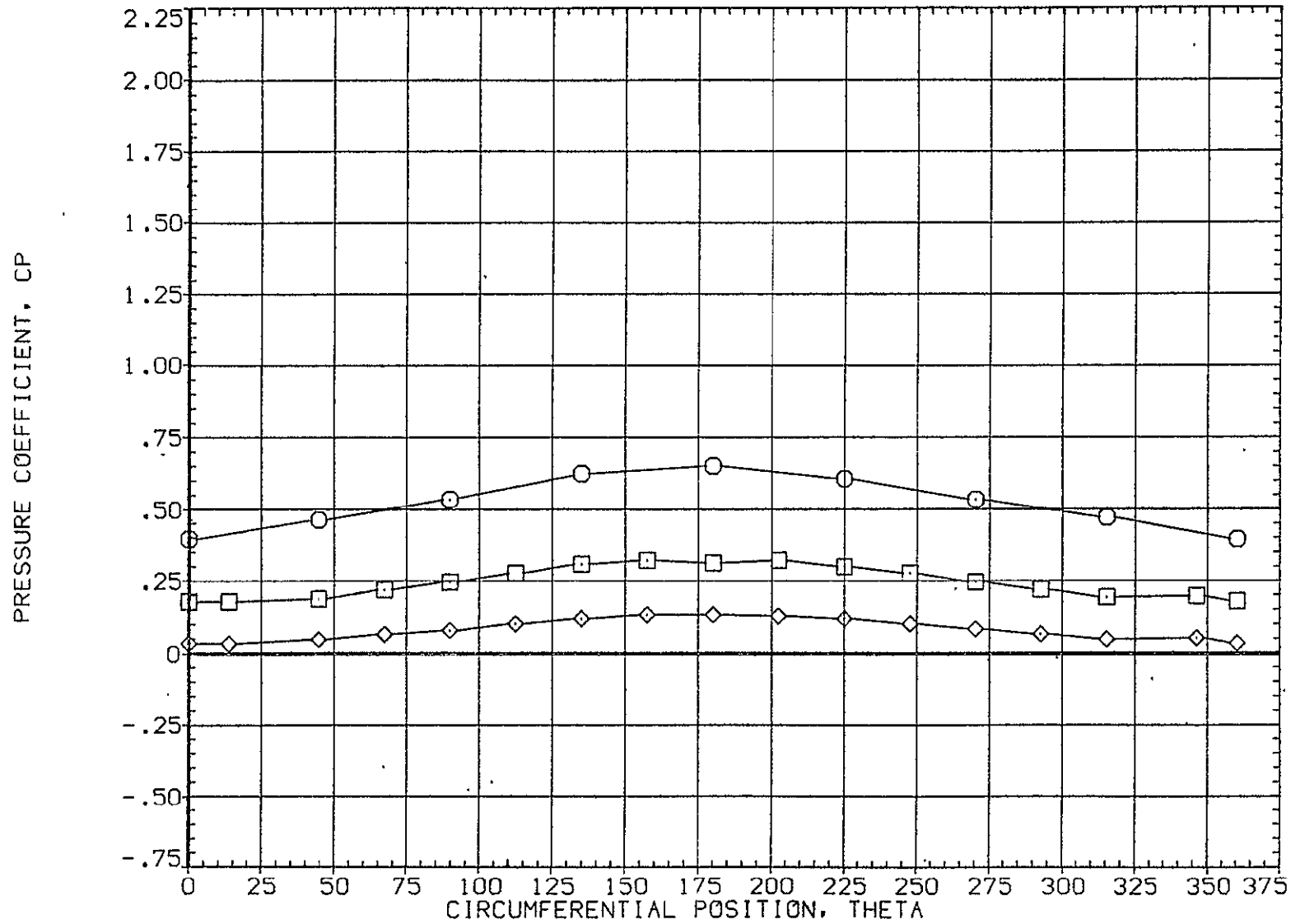

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

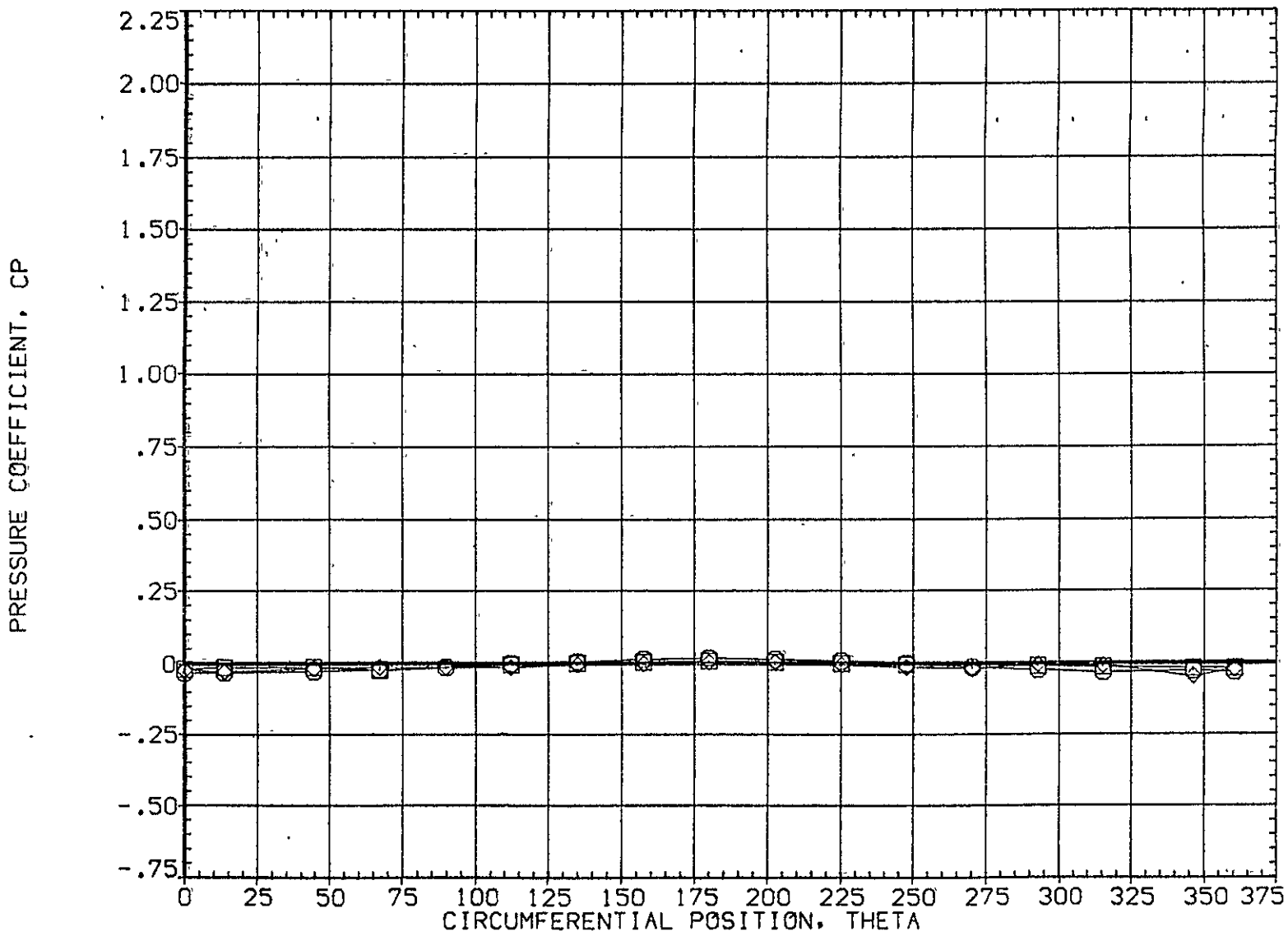

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

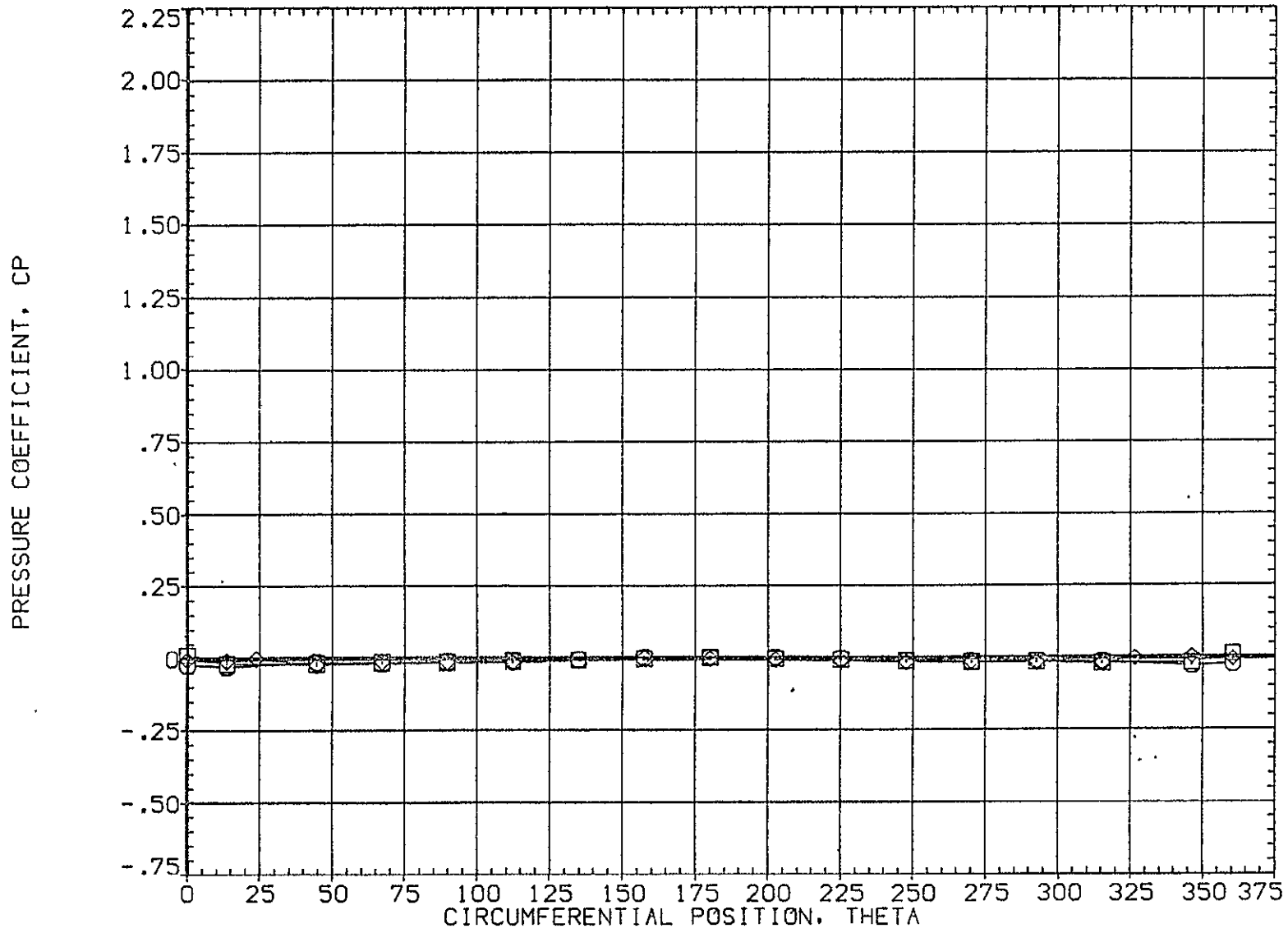

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

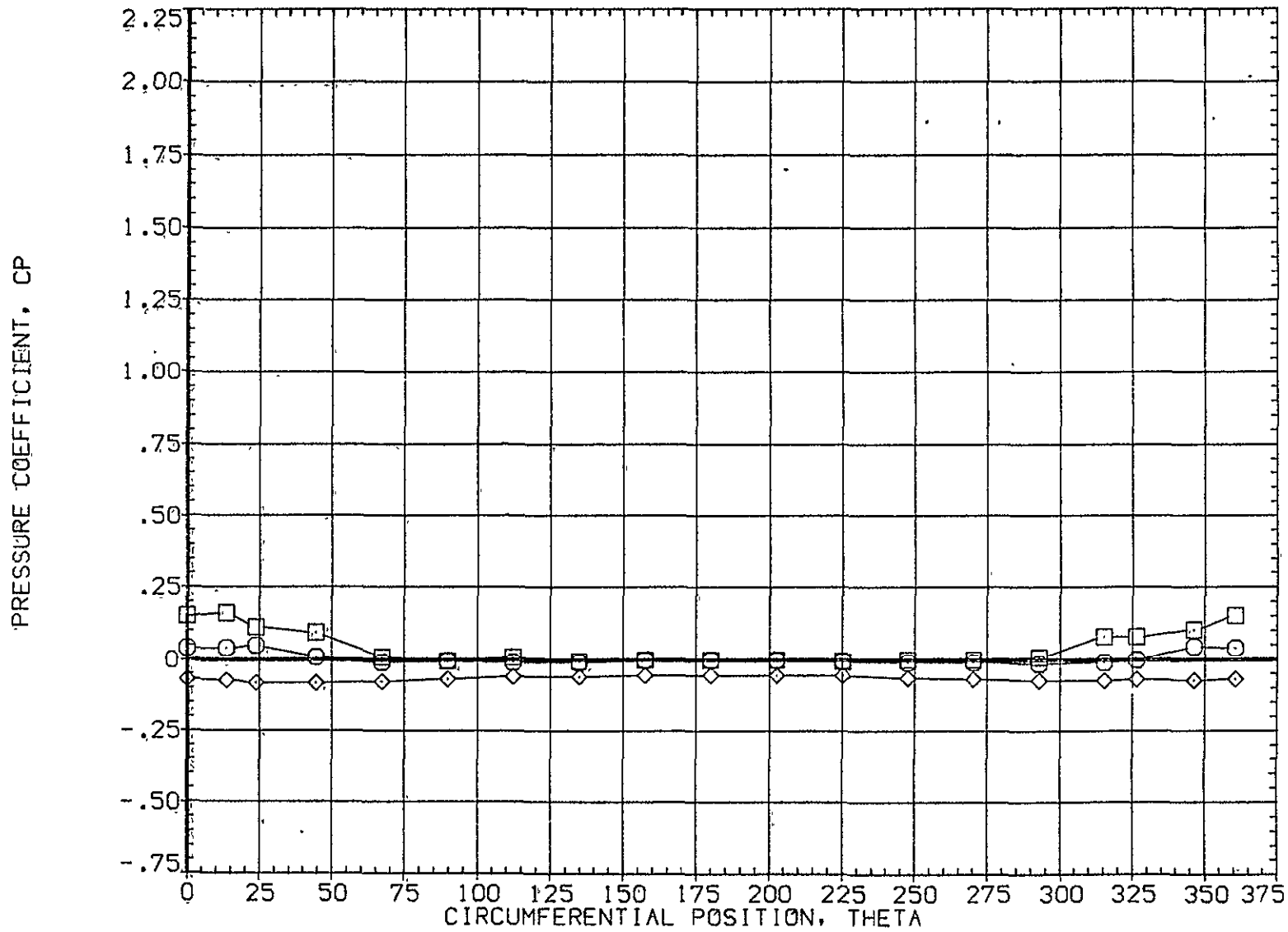

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

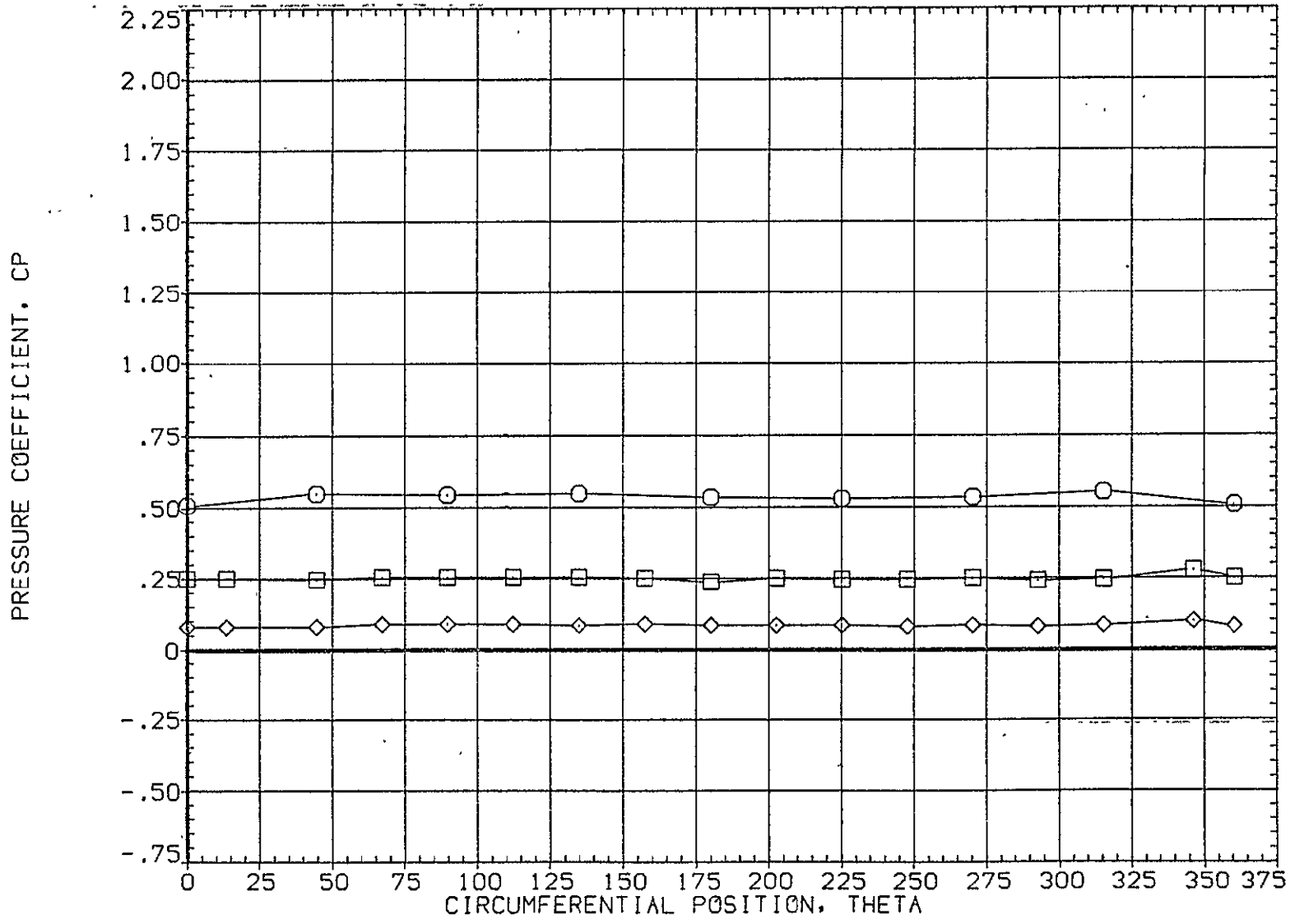

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

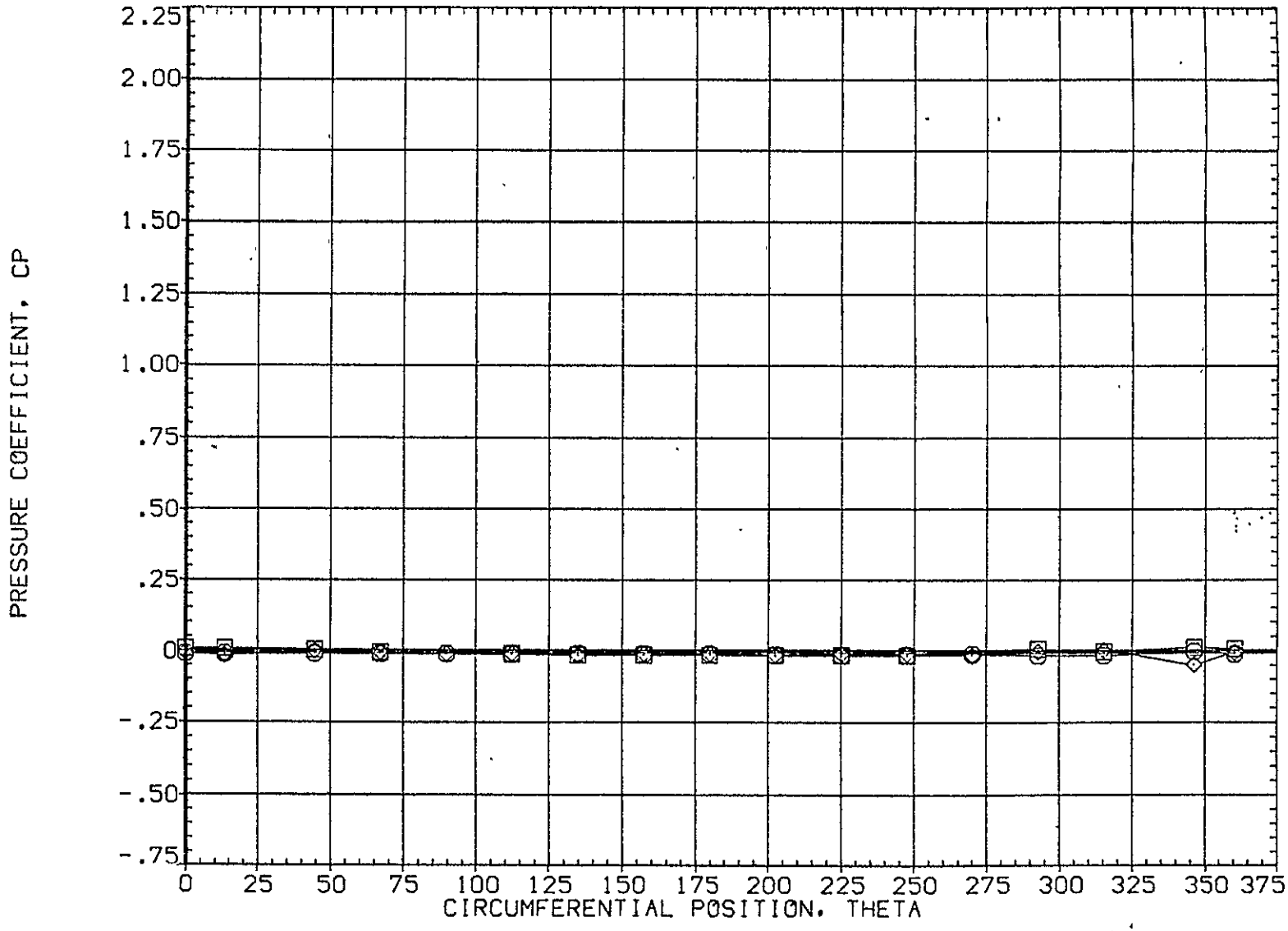

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

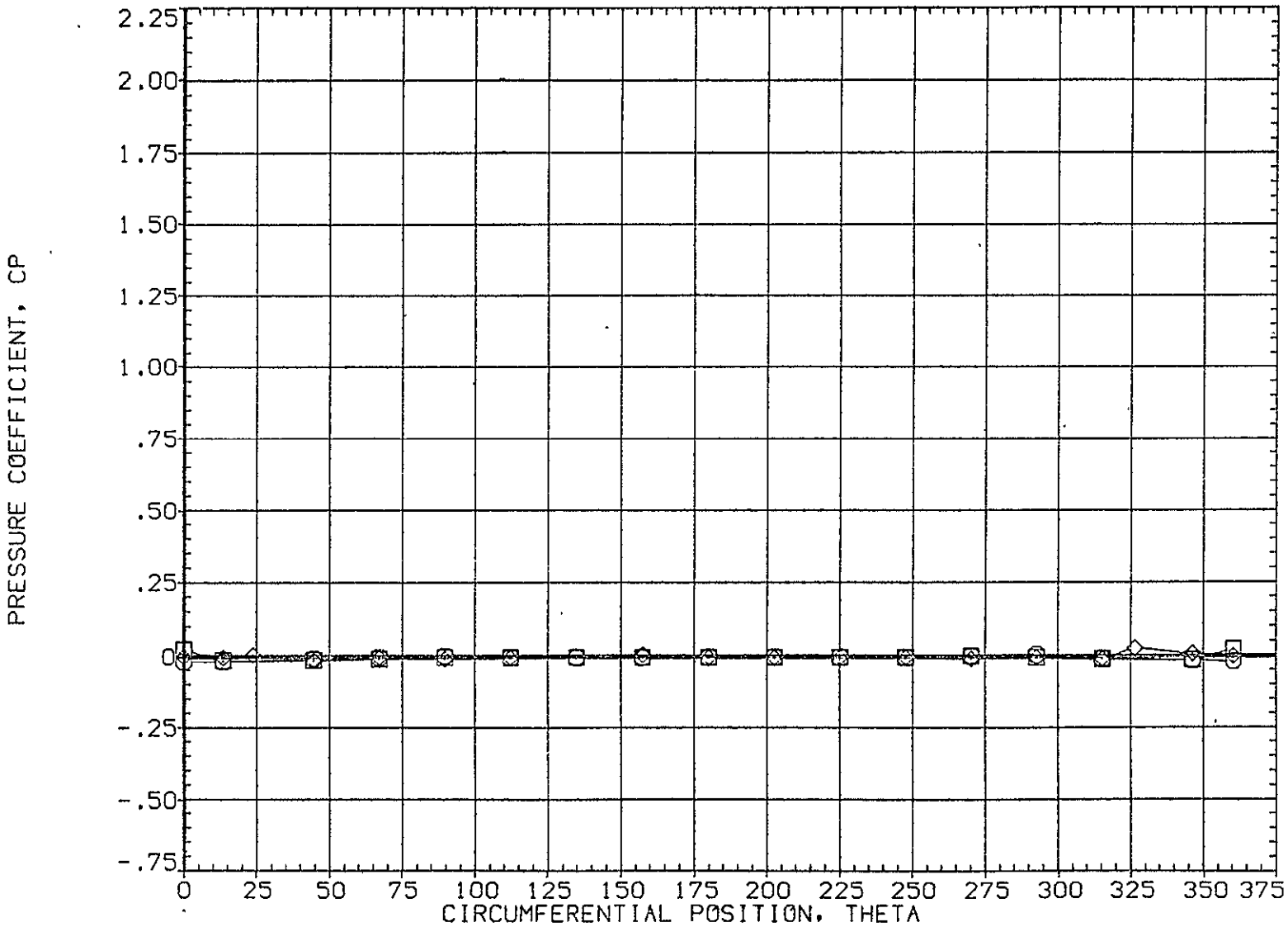

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

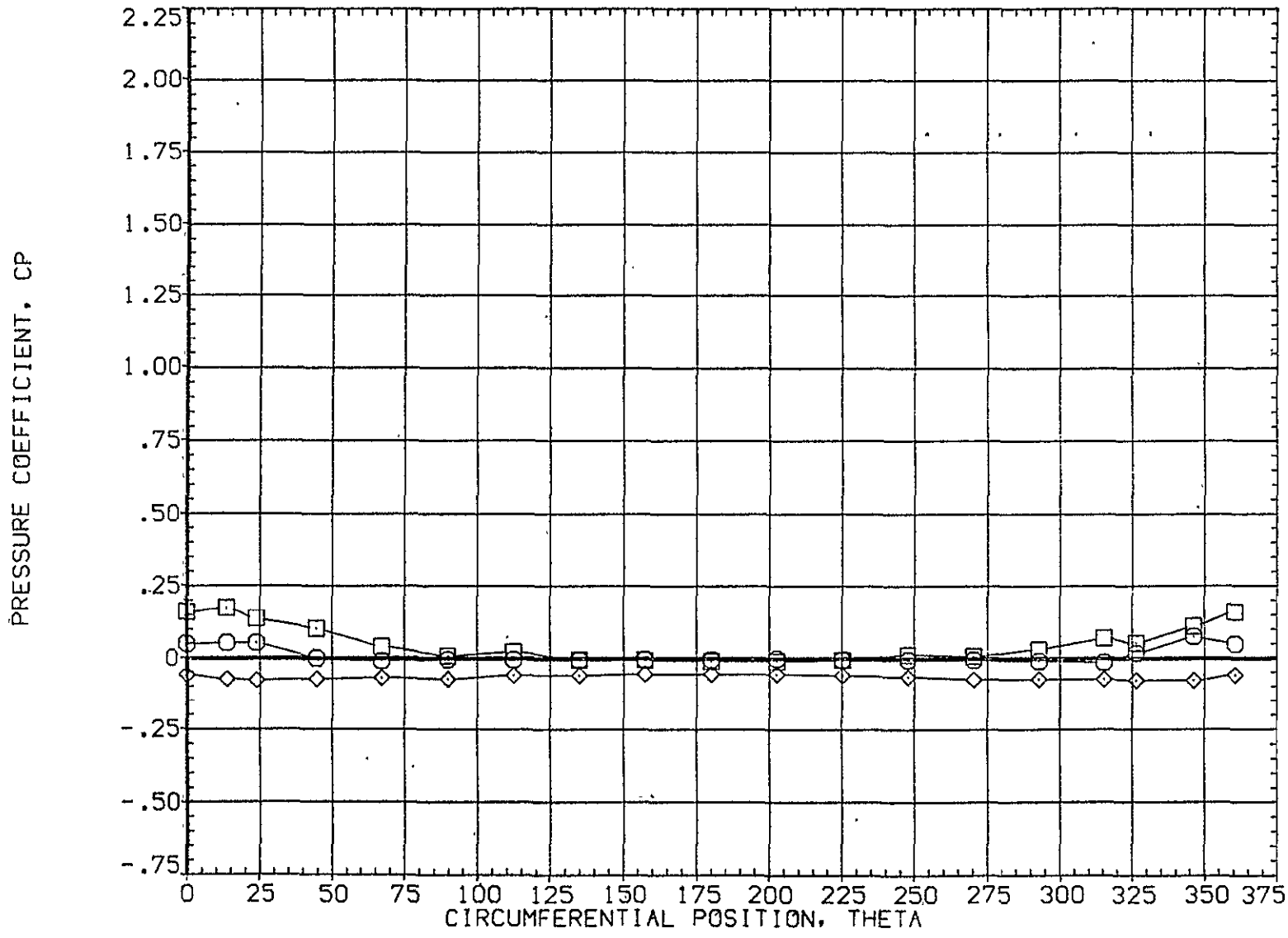

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

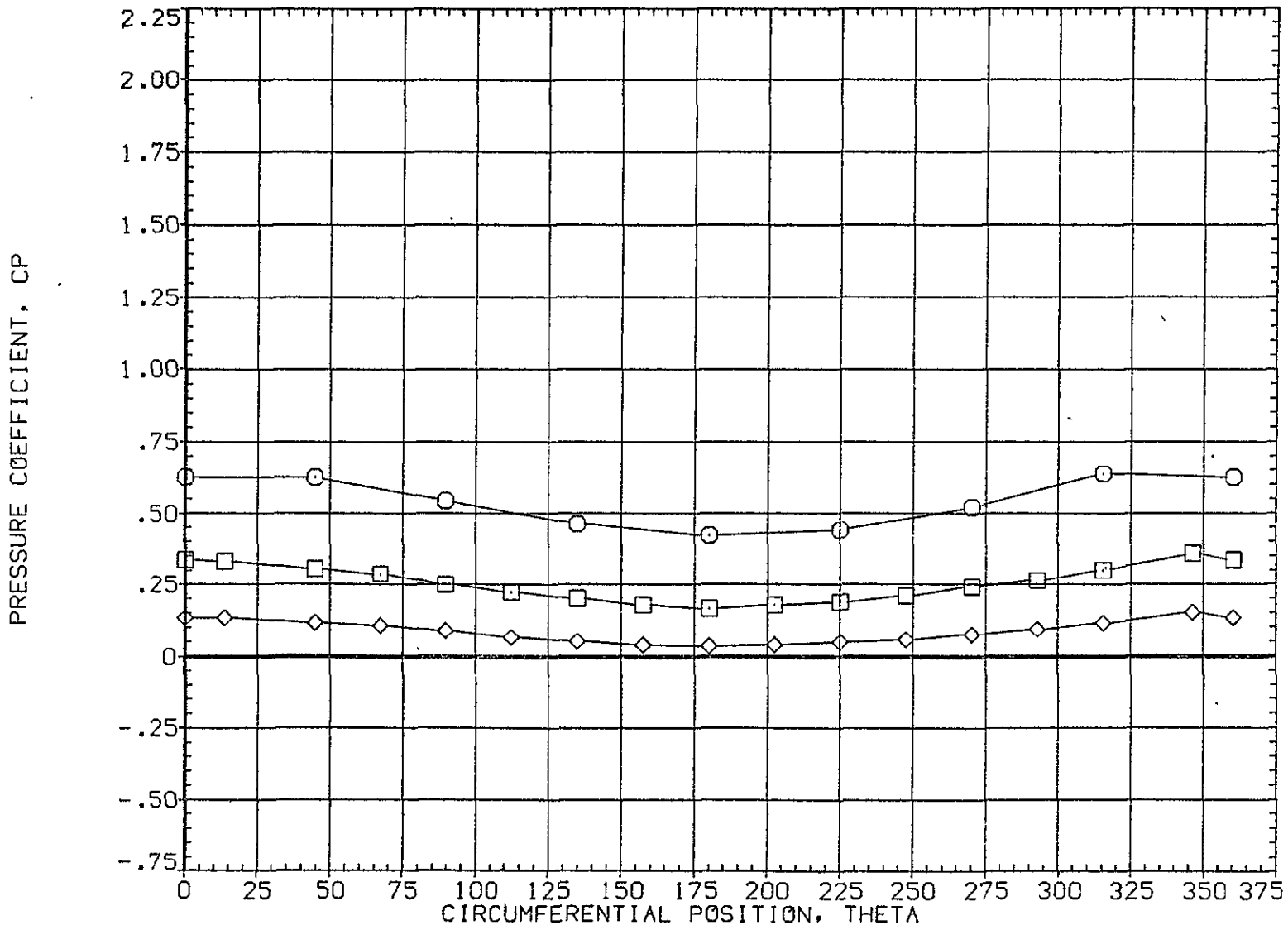

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

C-5

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

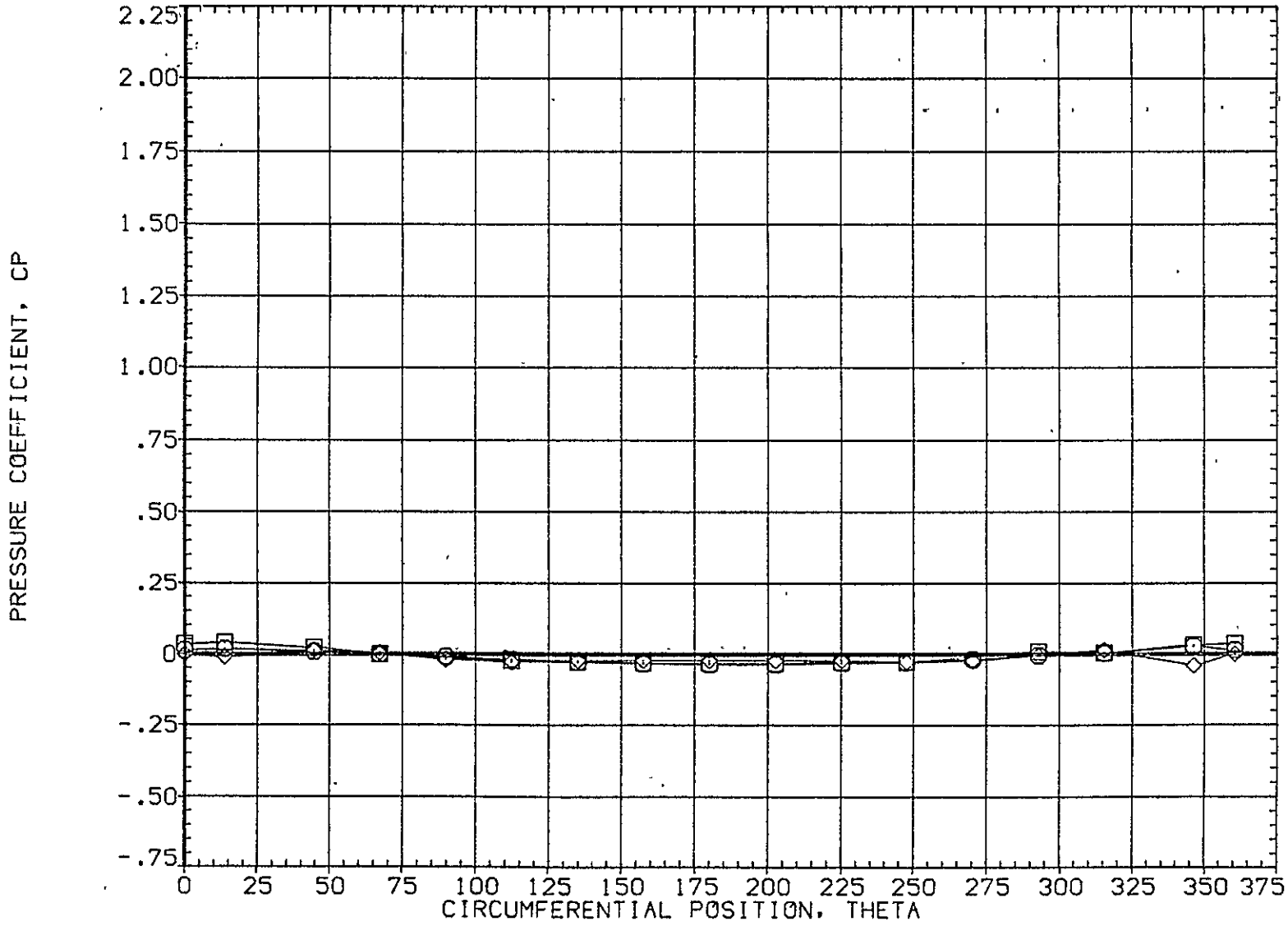

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

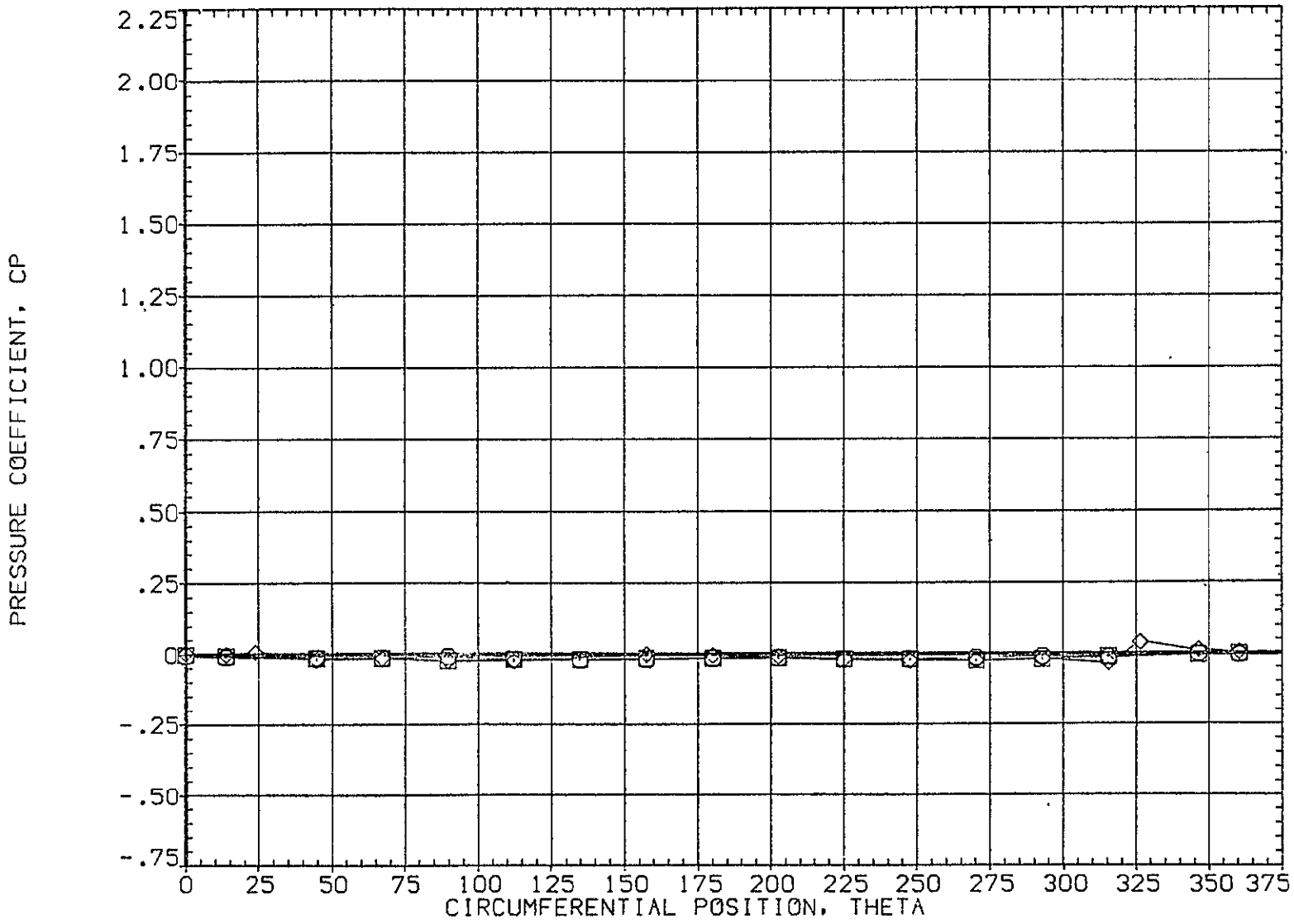

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○'	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

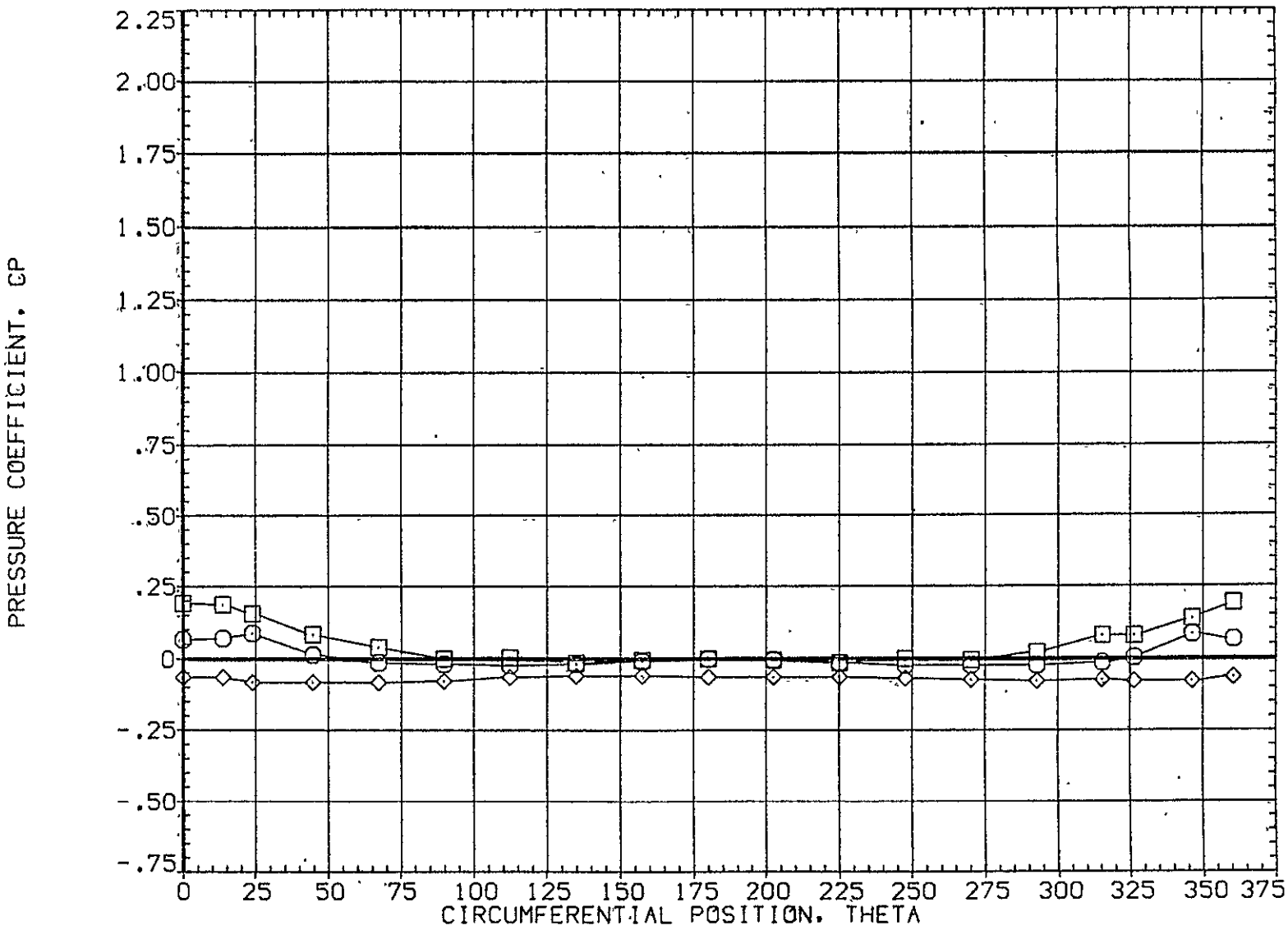

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

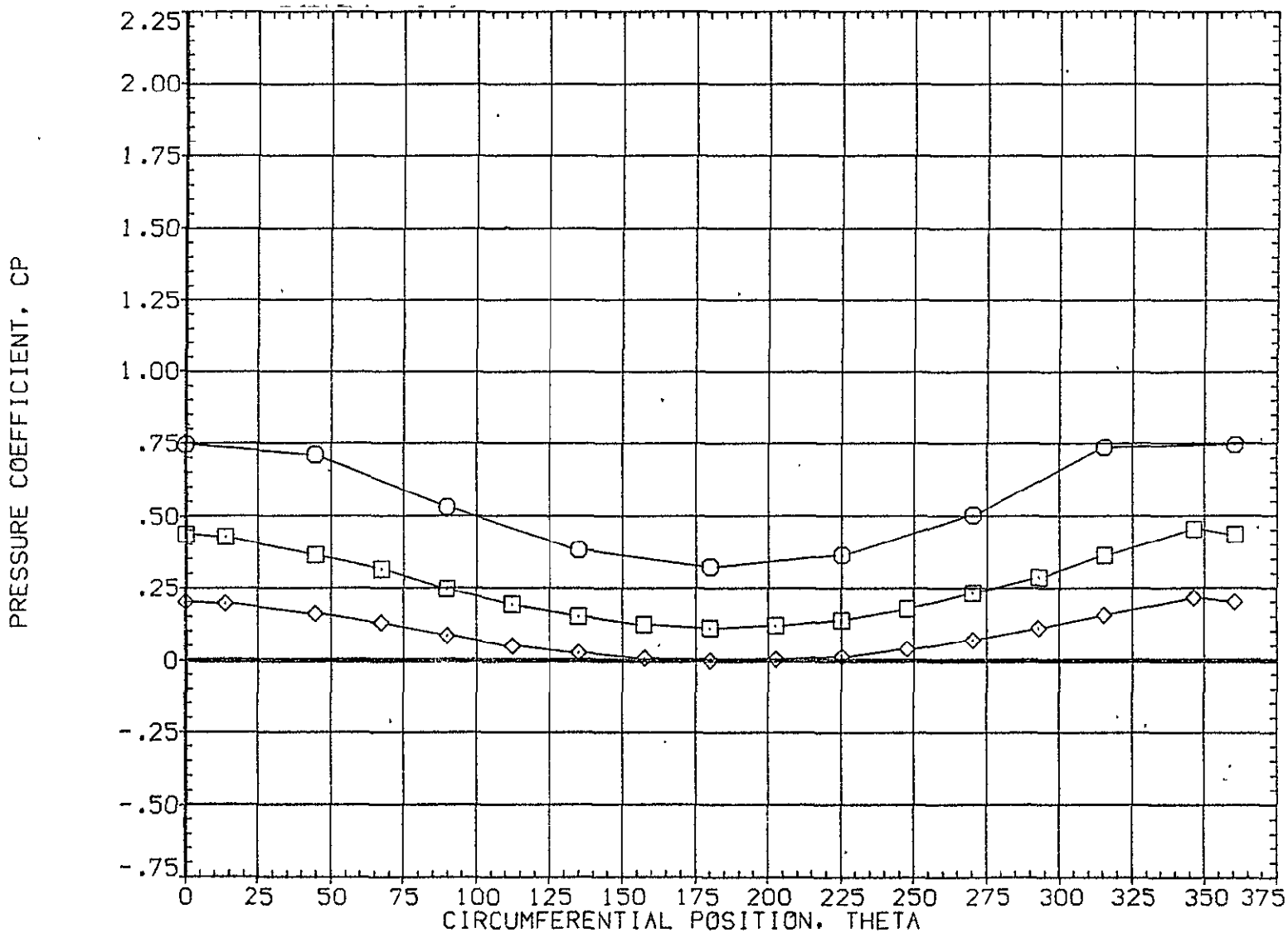

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

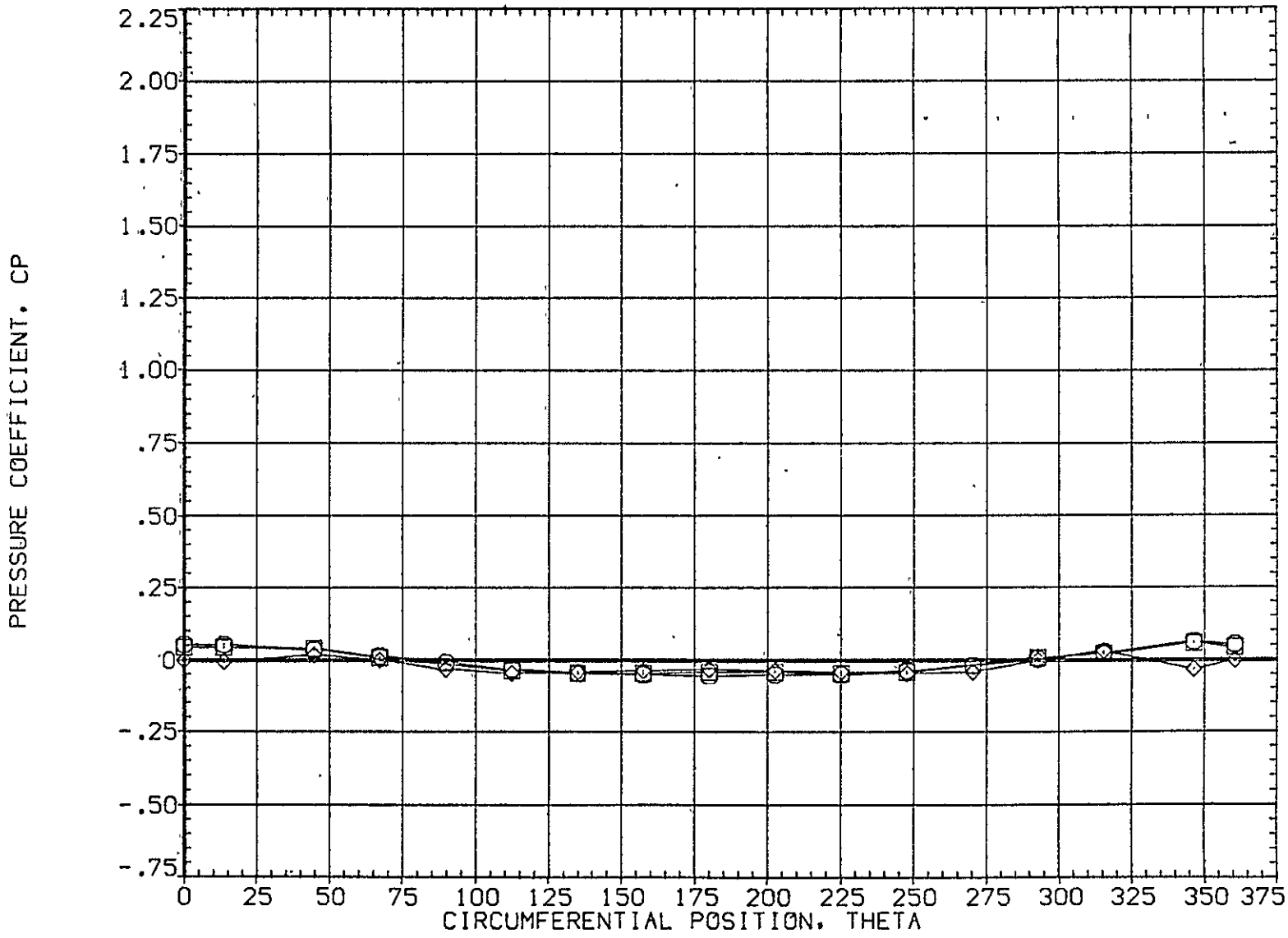

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

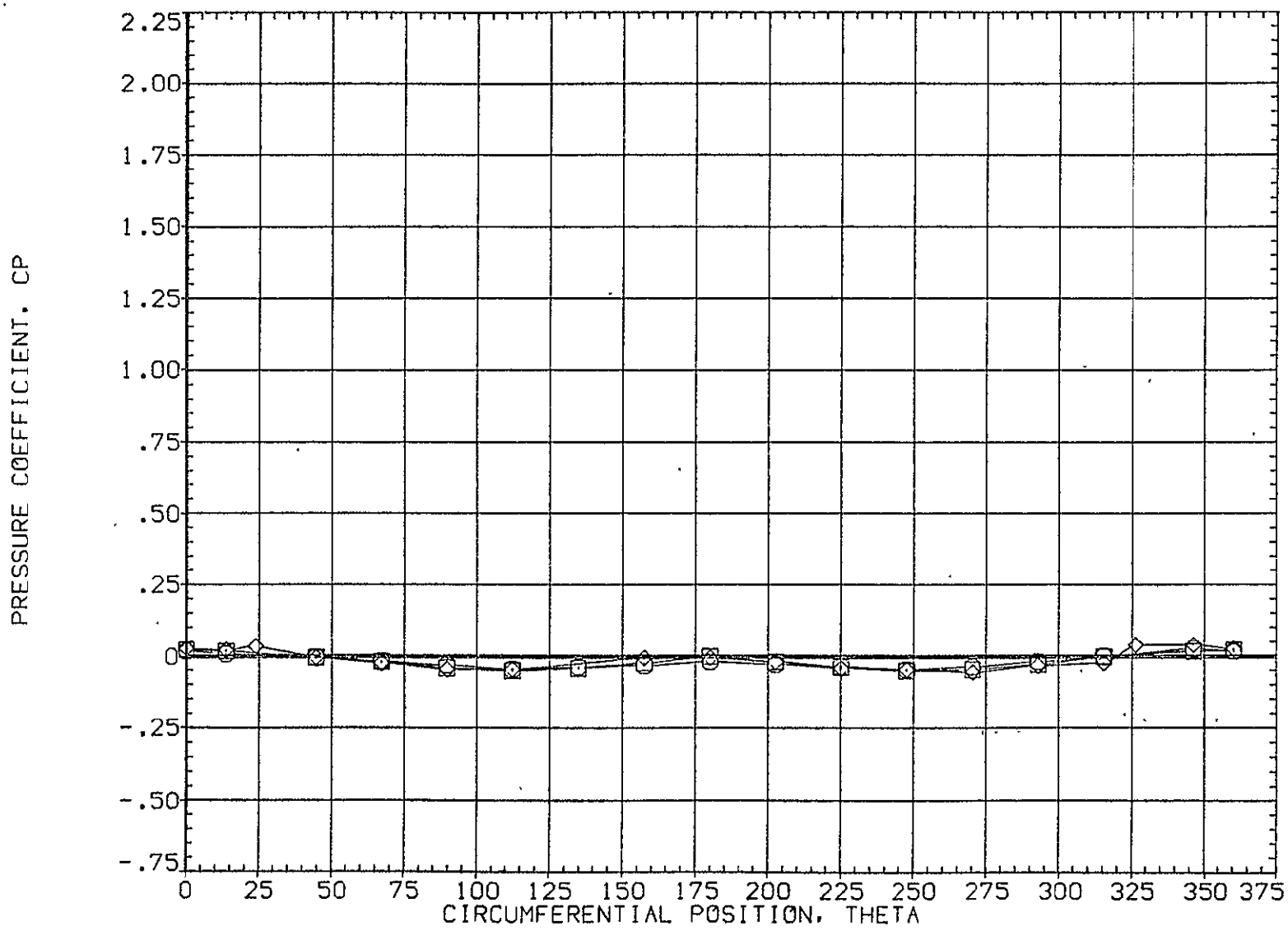

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

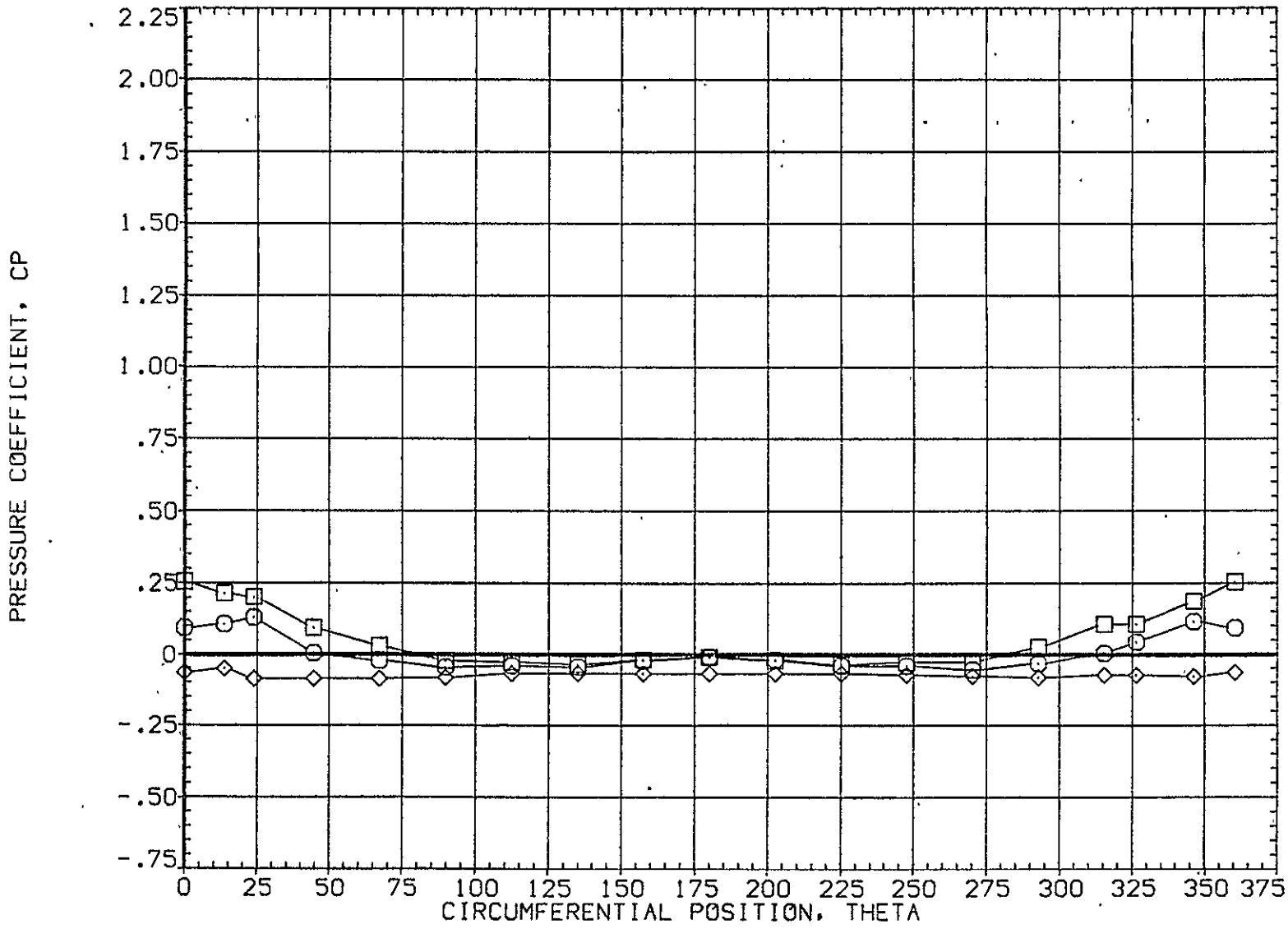

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.540	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

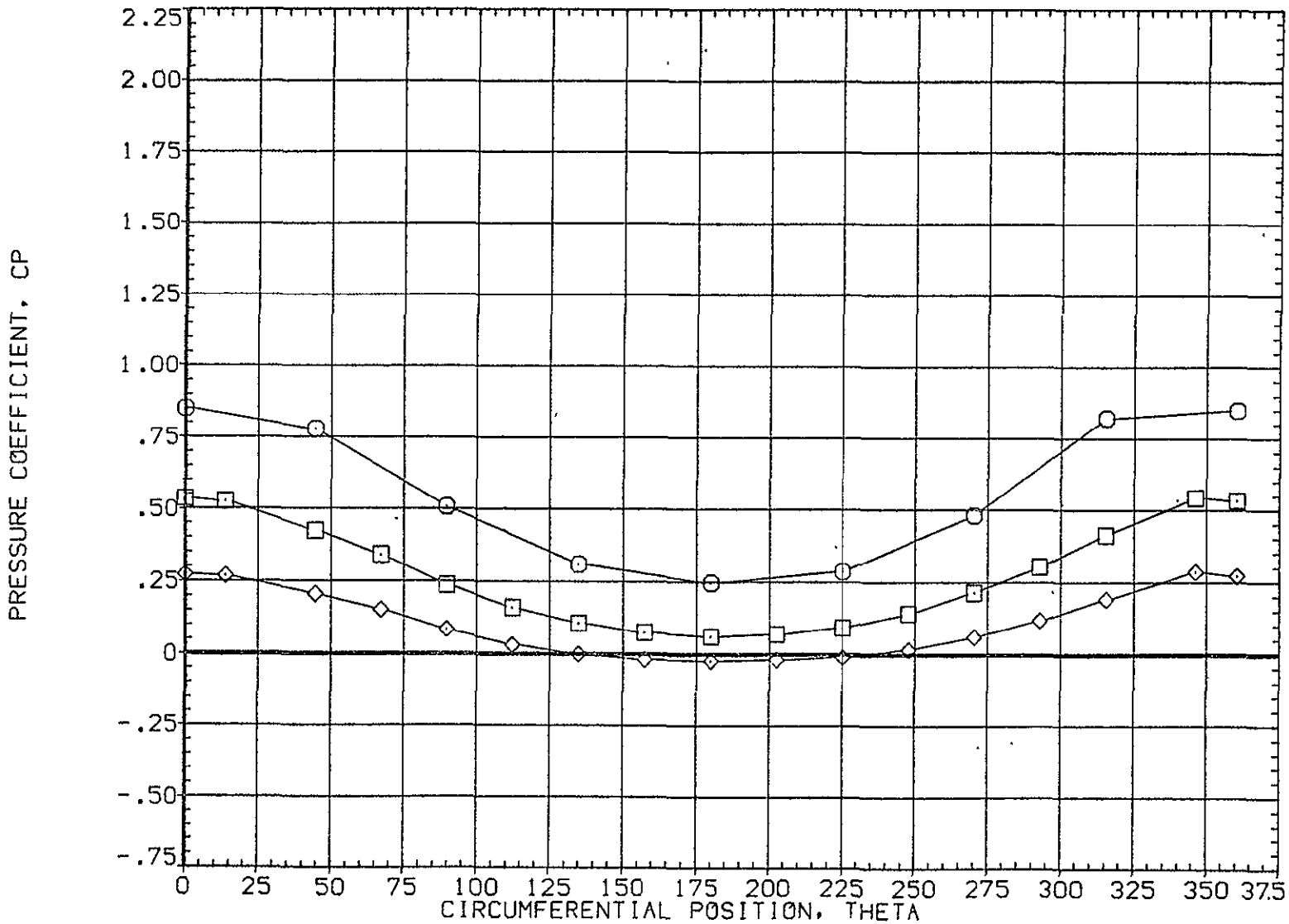

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.540	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

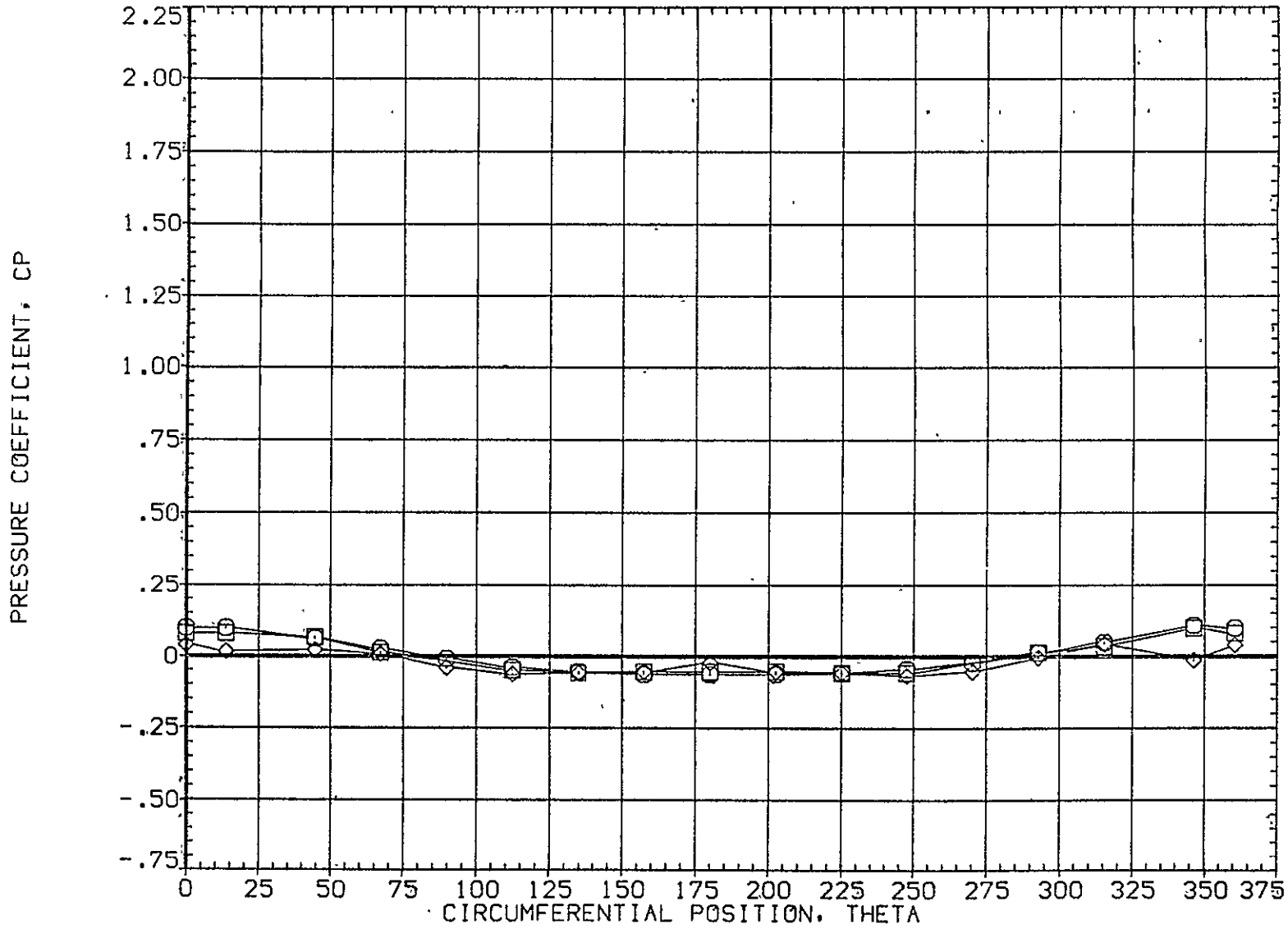

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.540	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

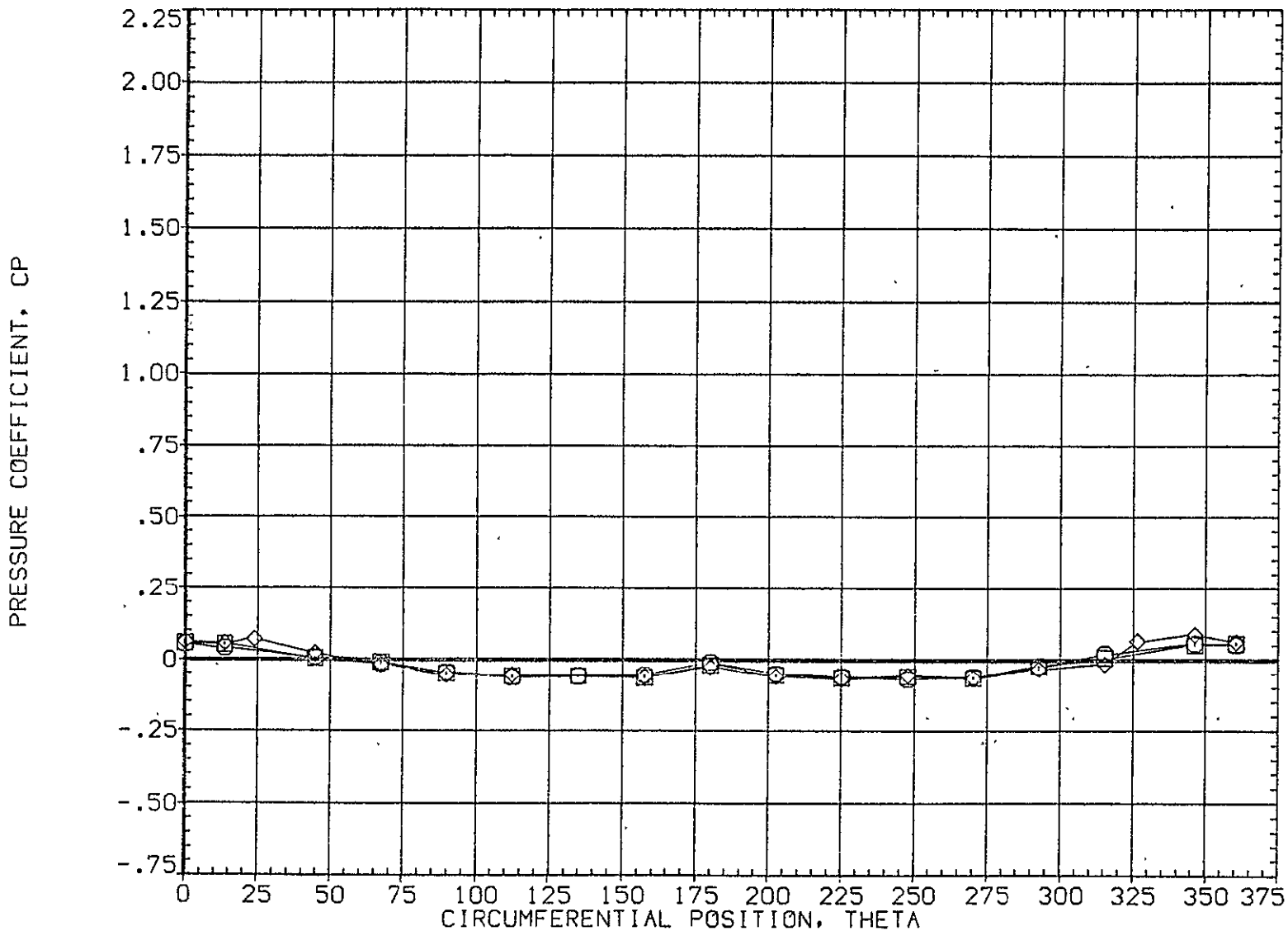

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.540	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

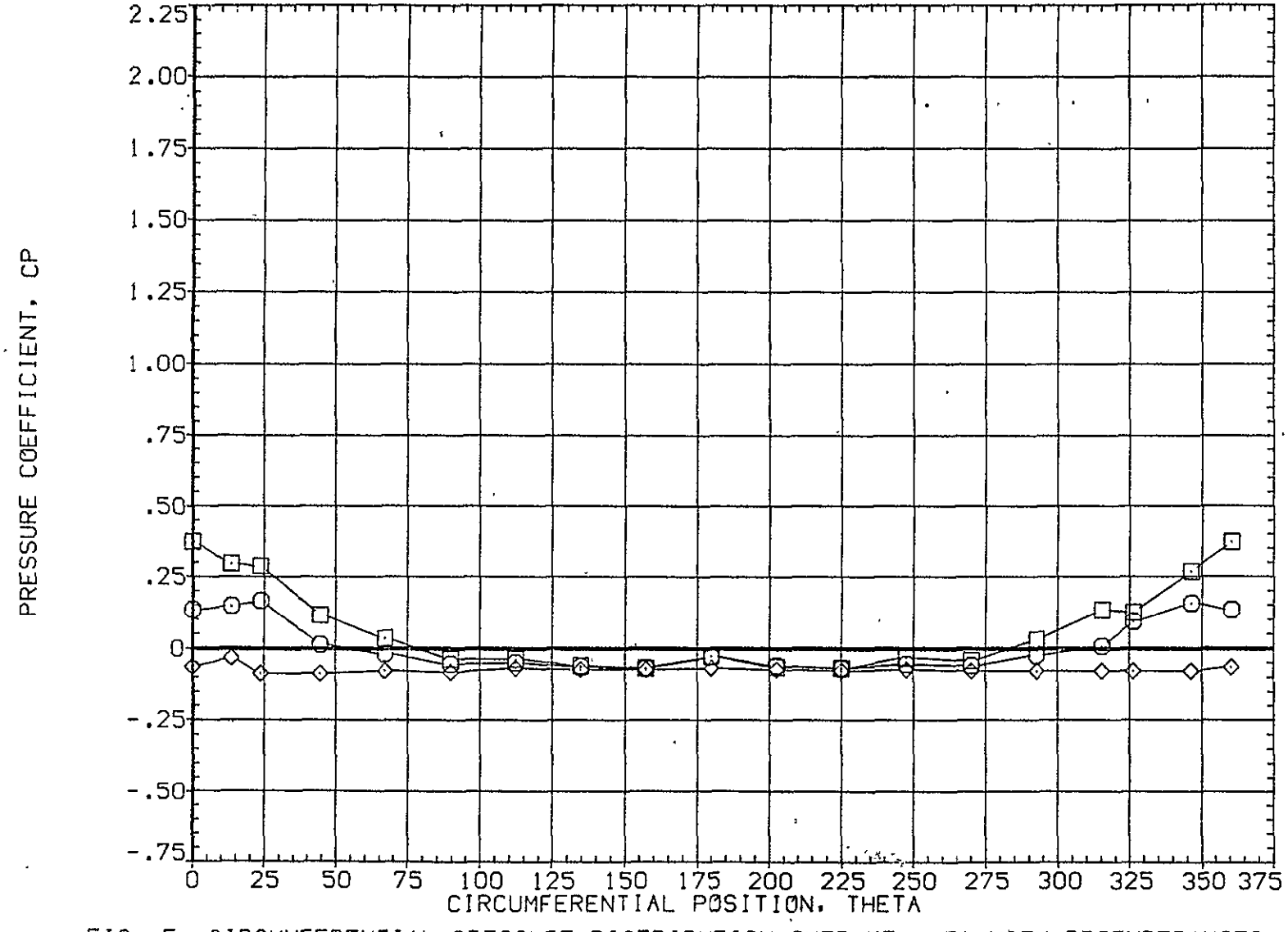

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

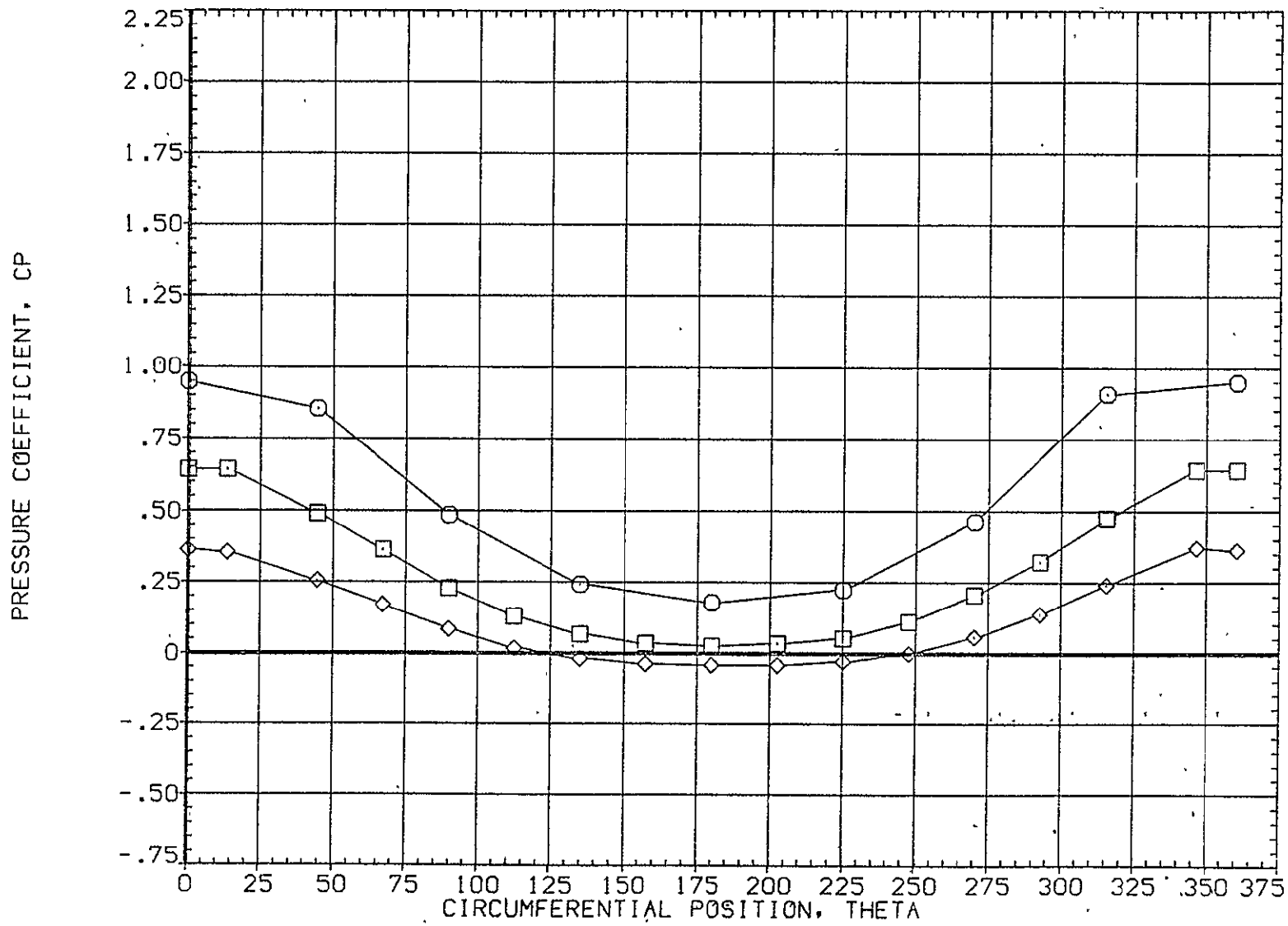

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES-

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

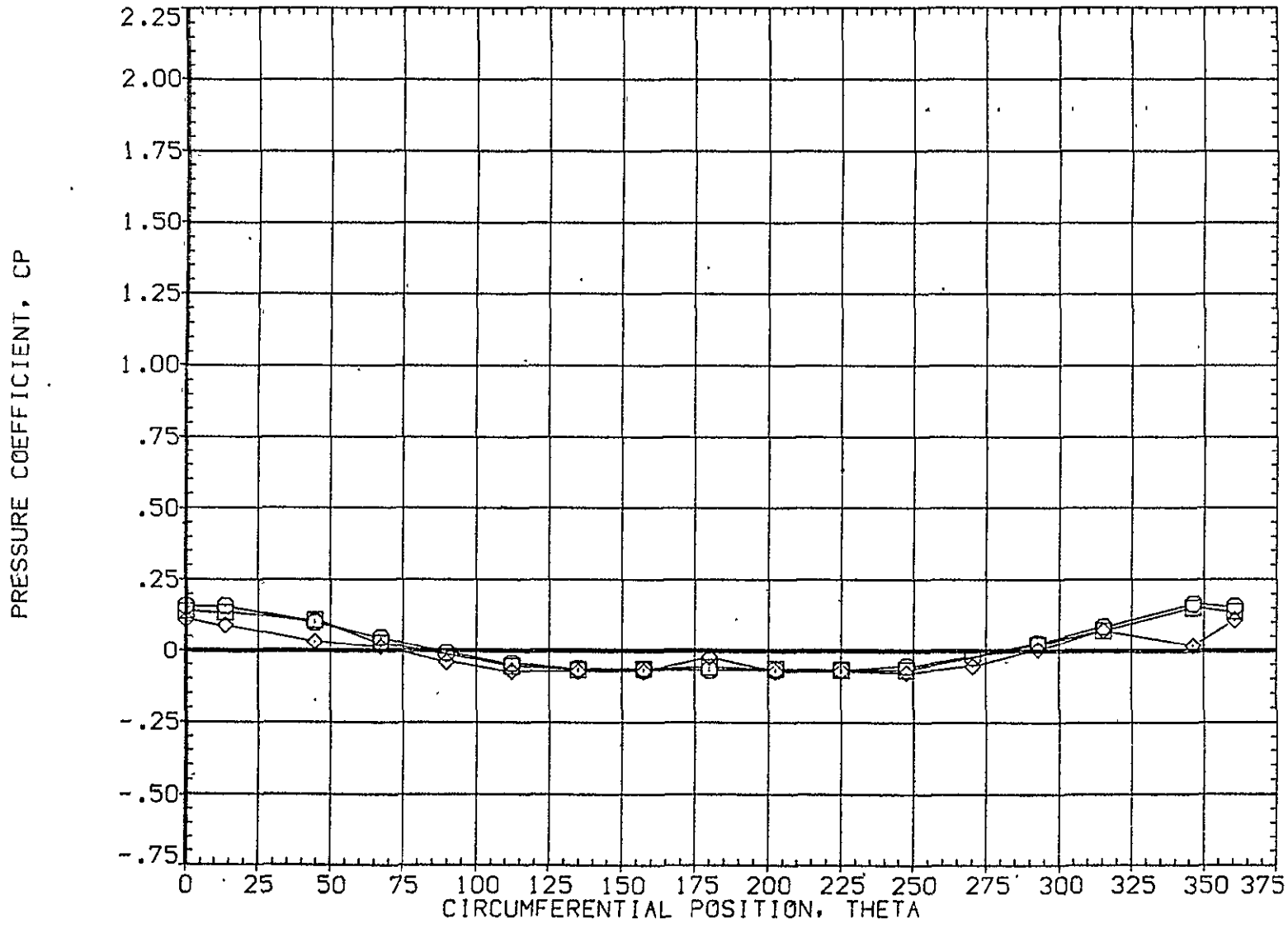

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

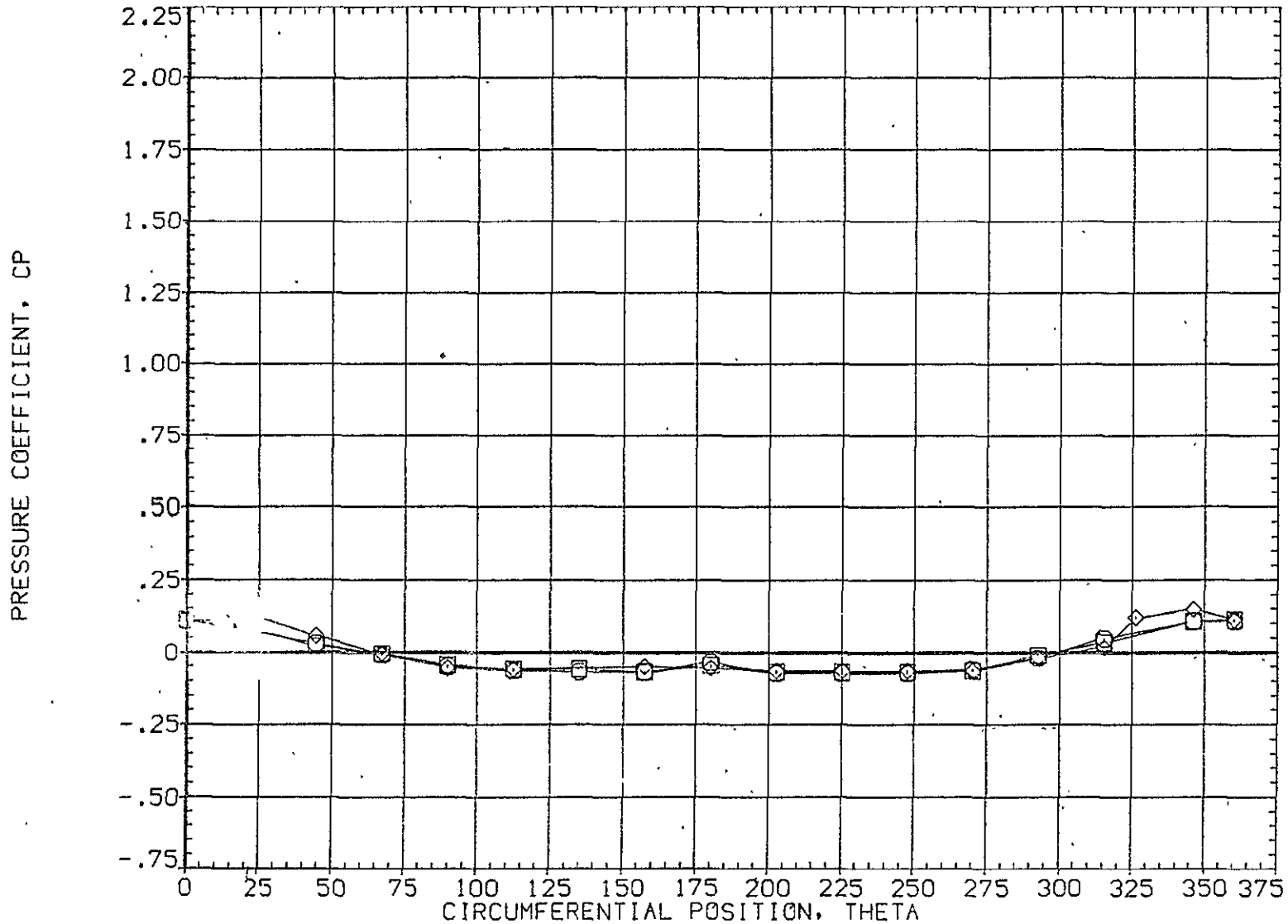

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

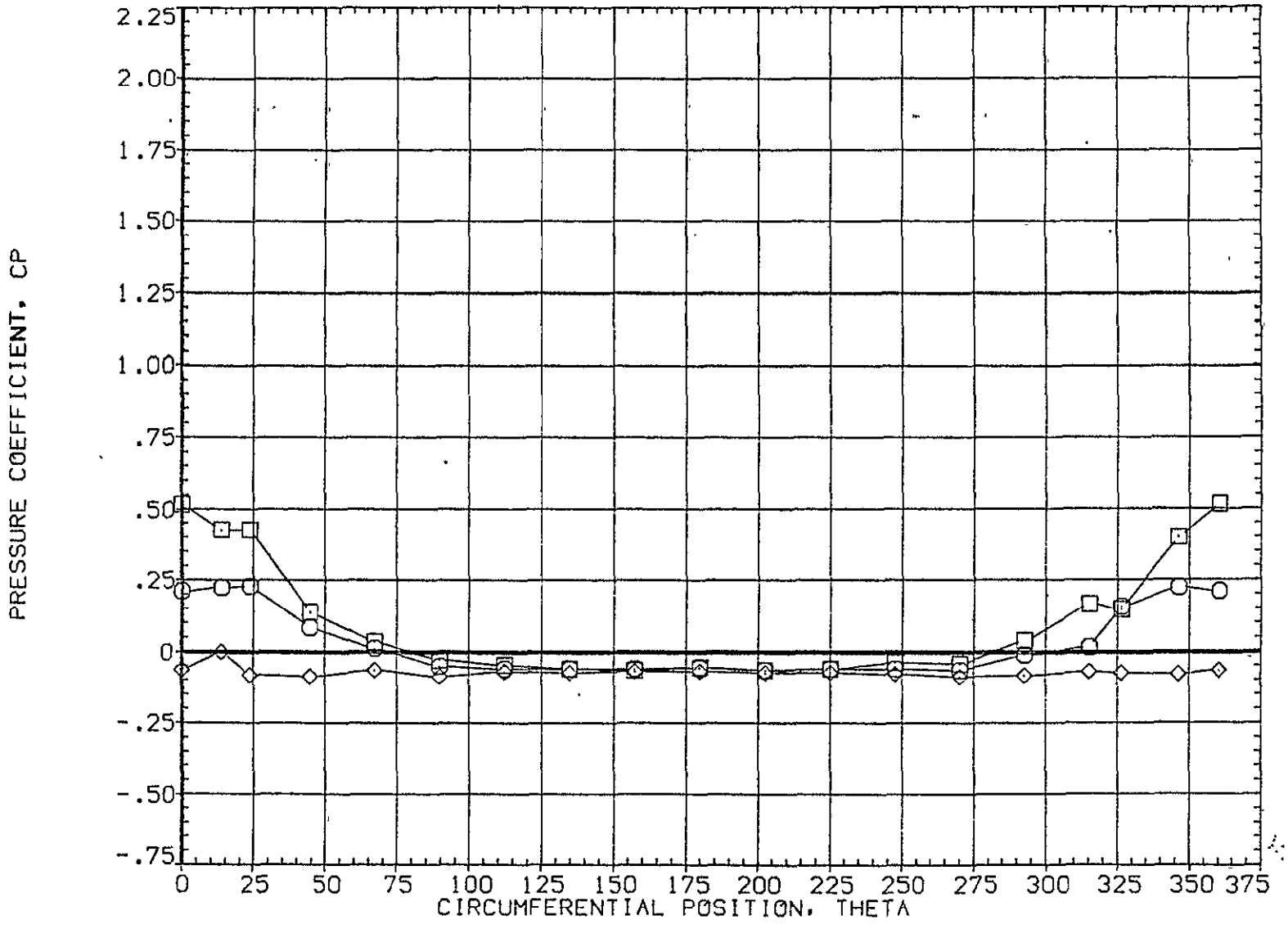

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

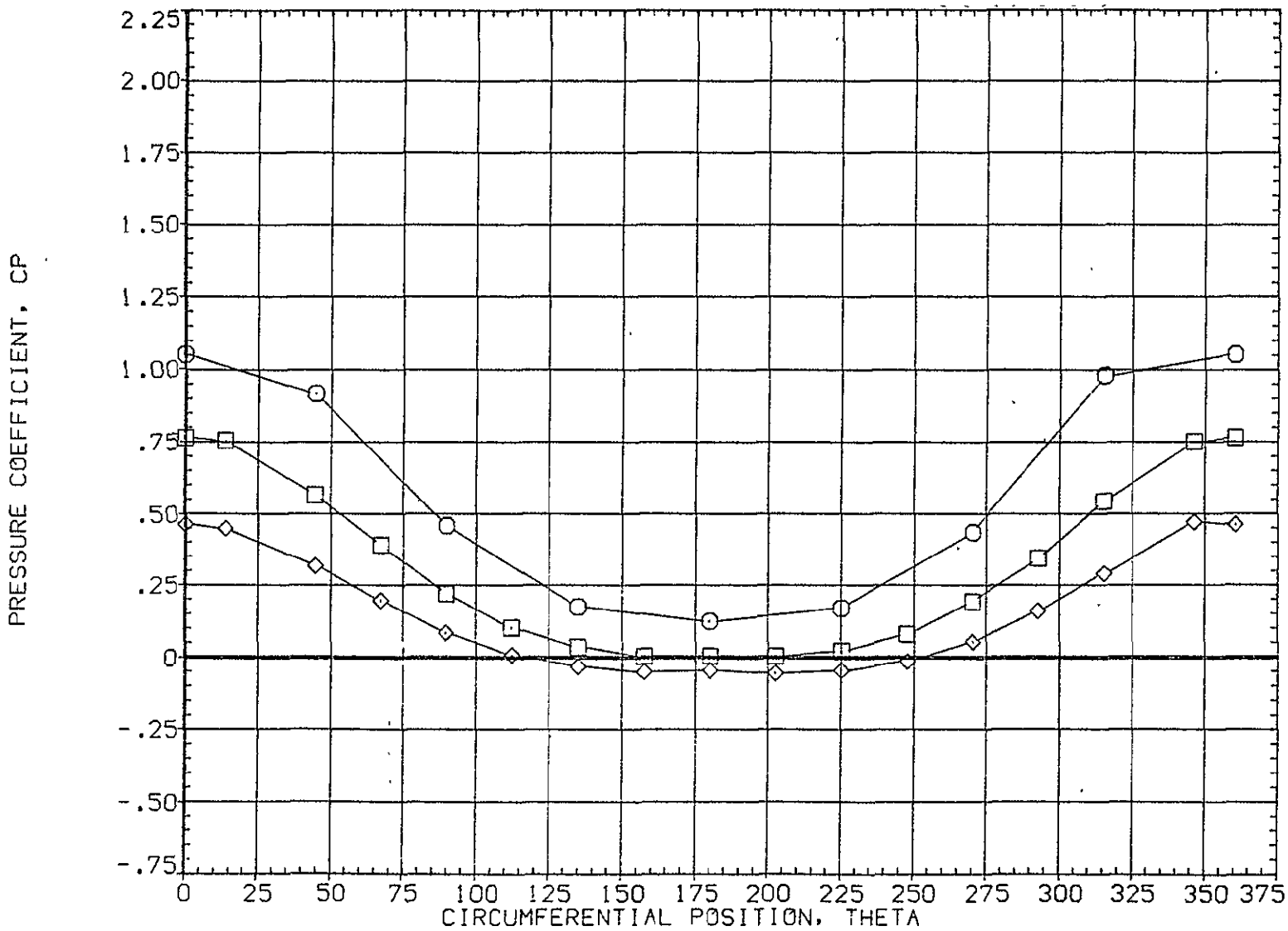

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

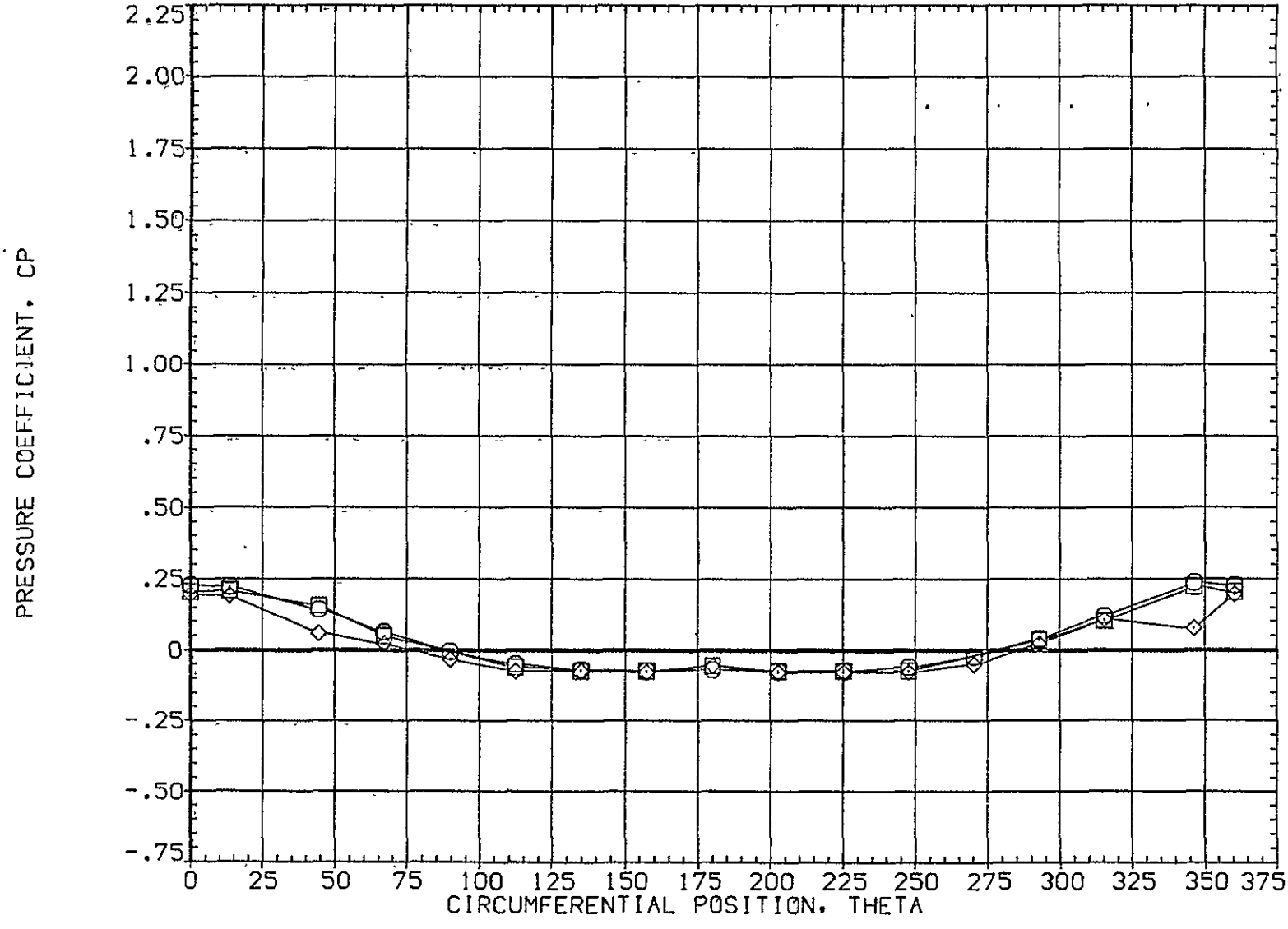

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

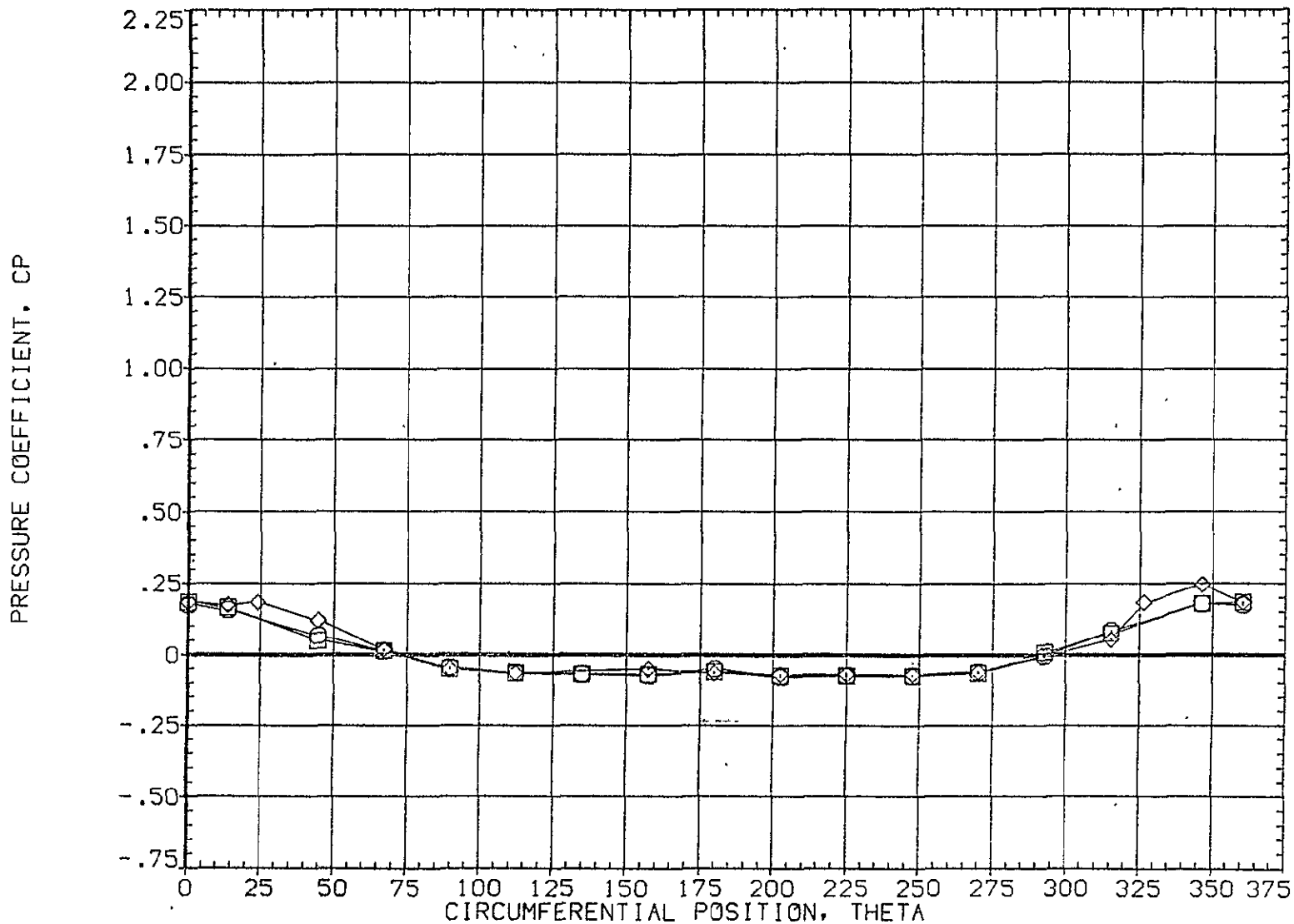

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

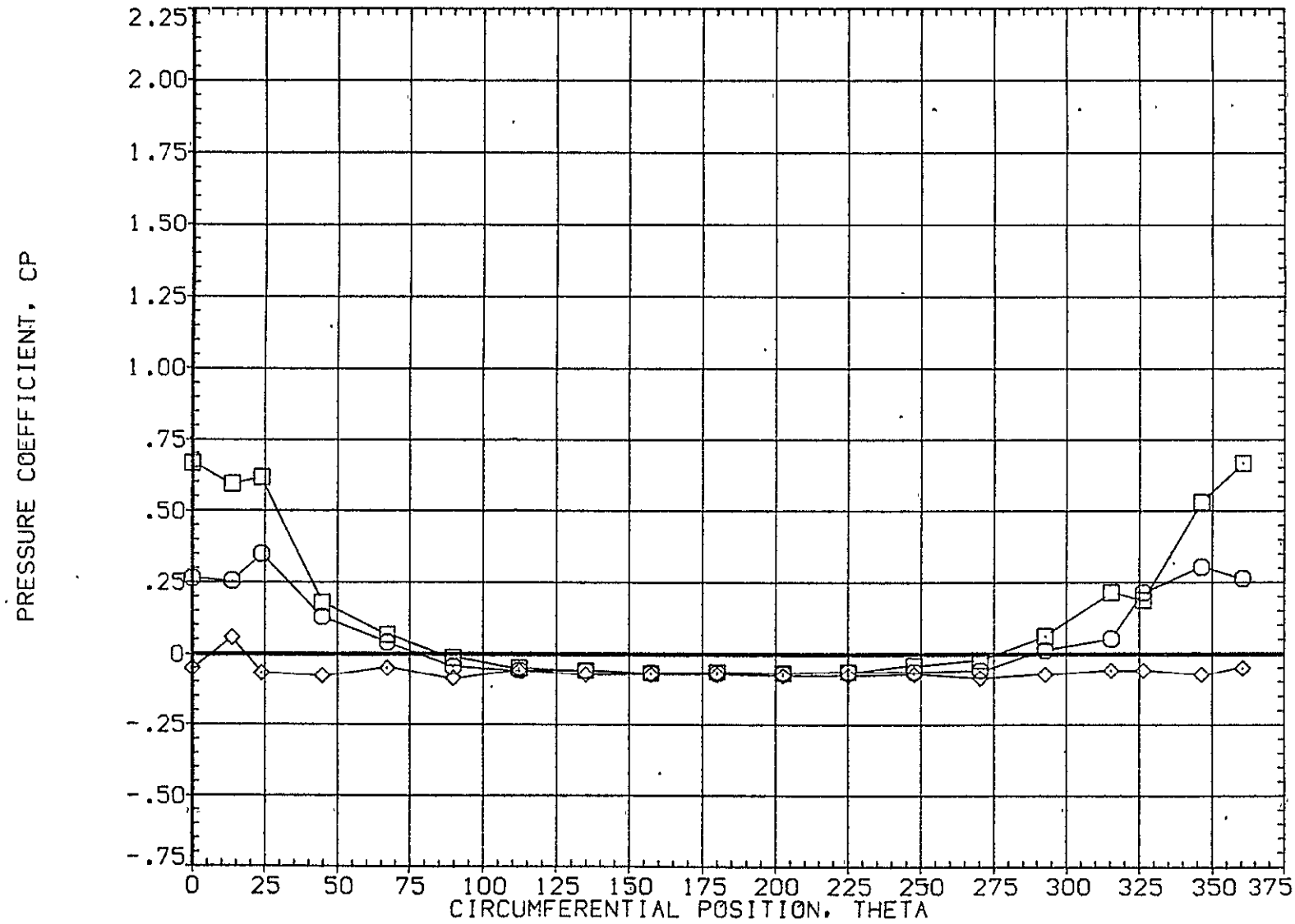

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.660	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

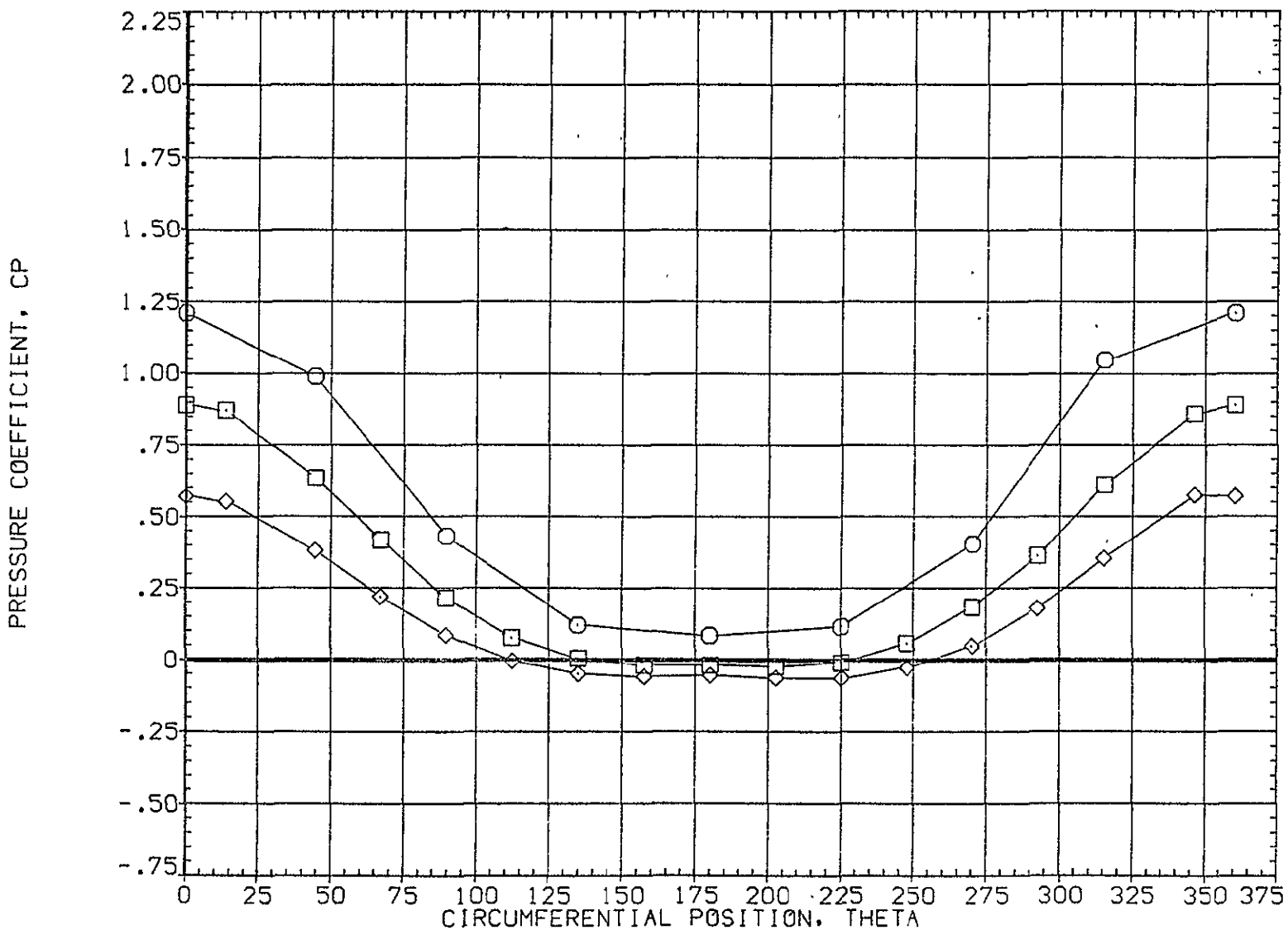

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

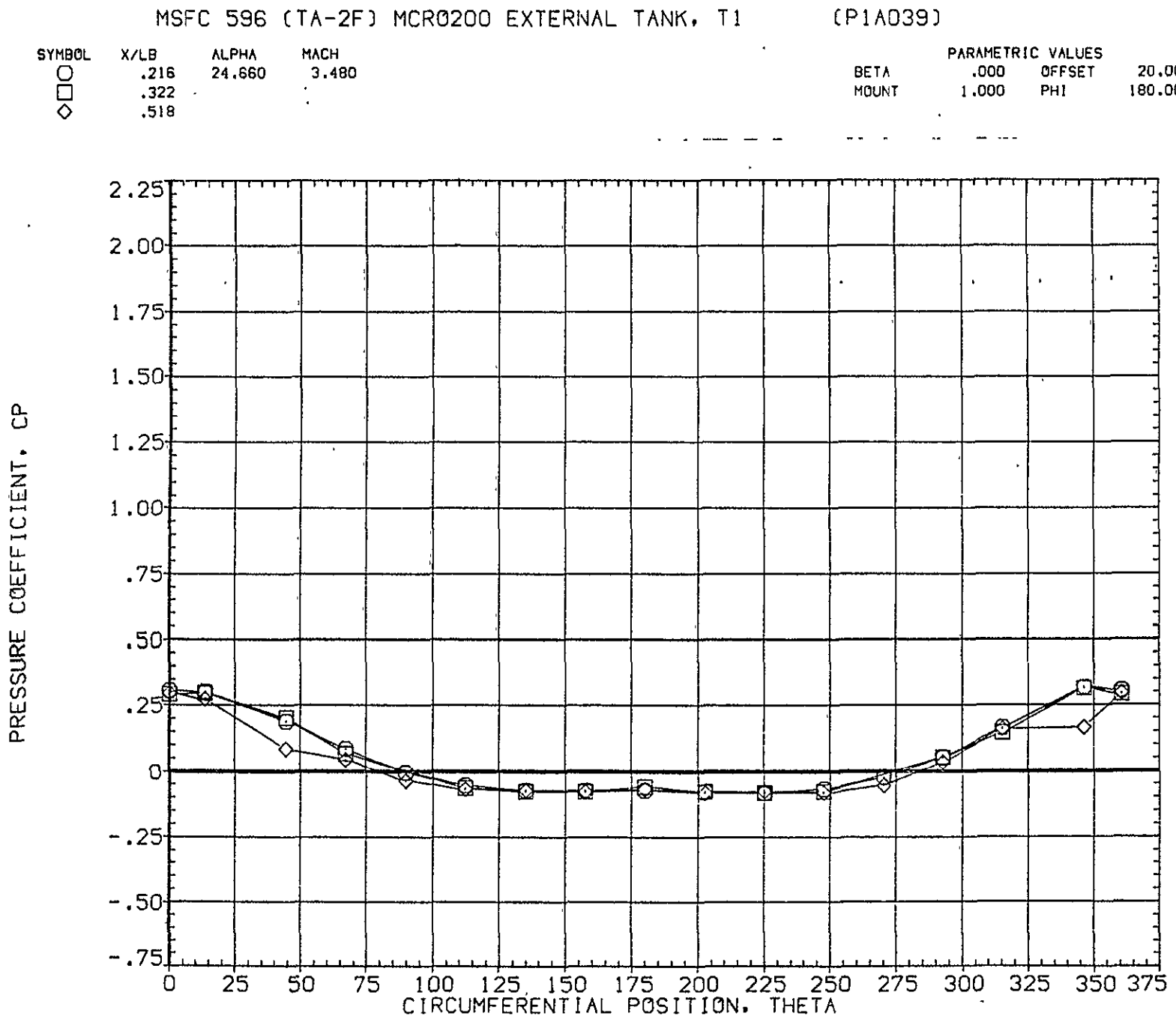

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

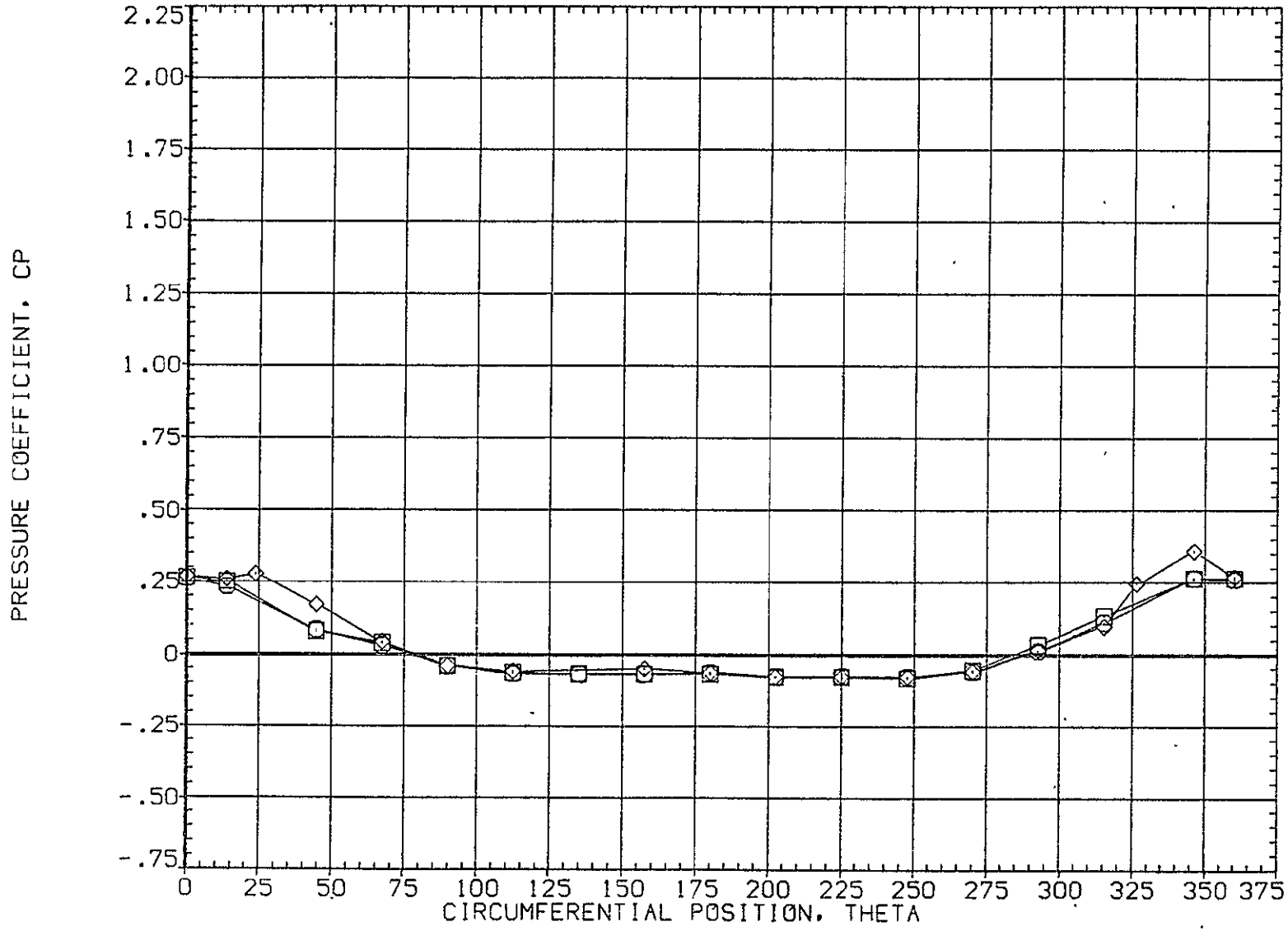

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

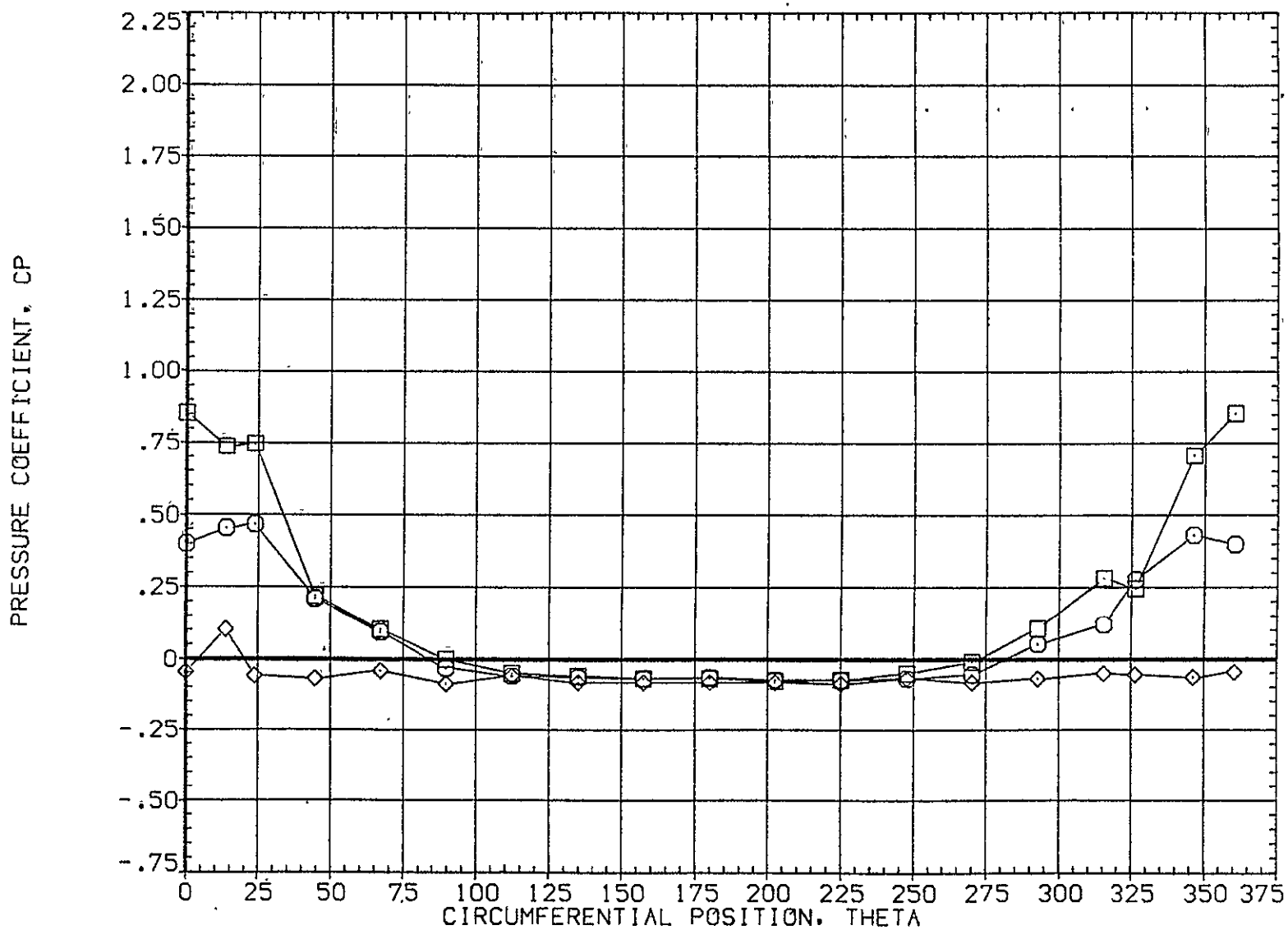

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

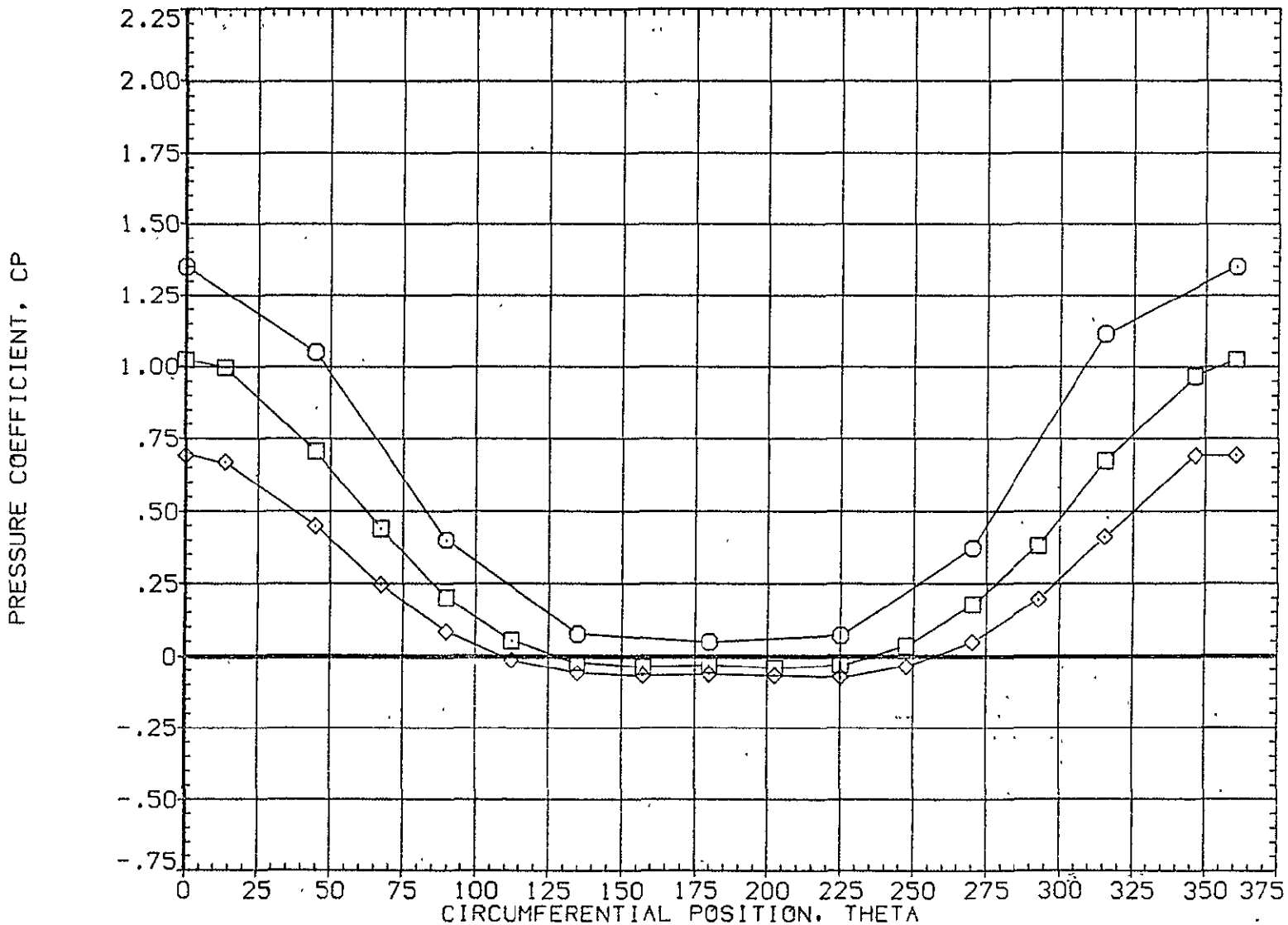

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

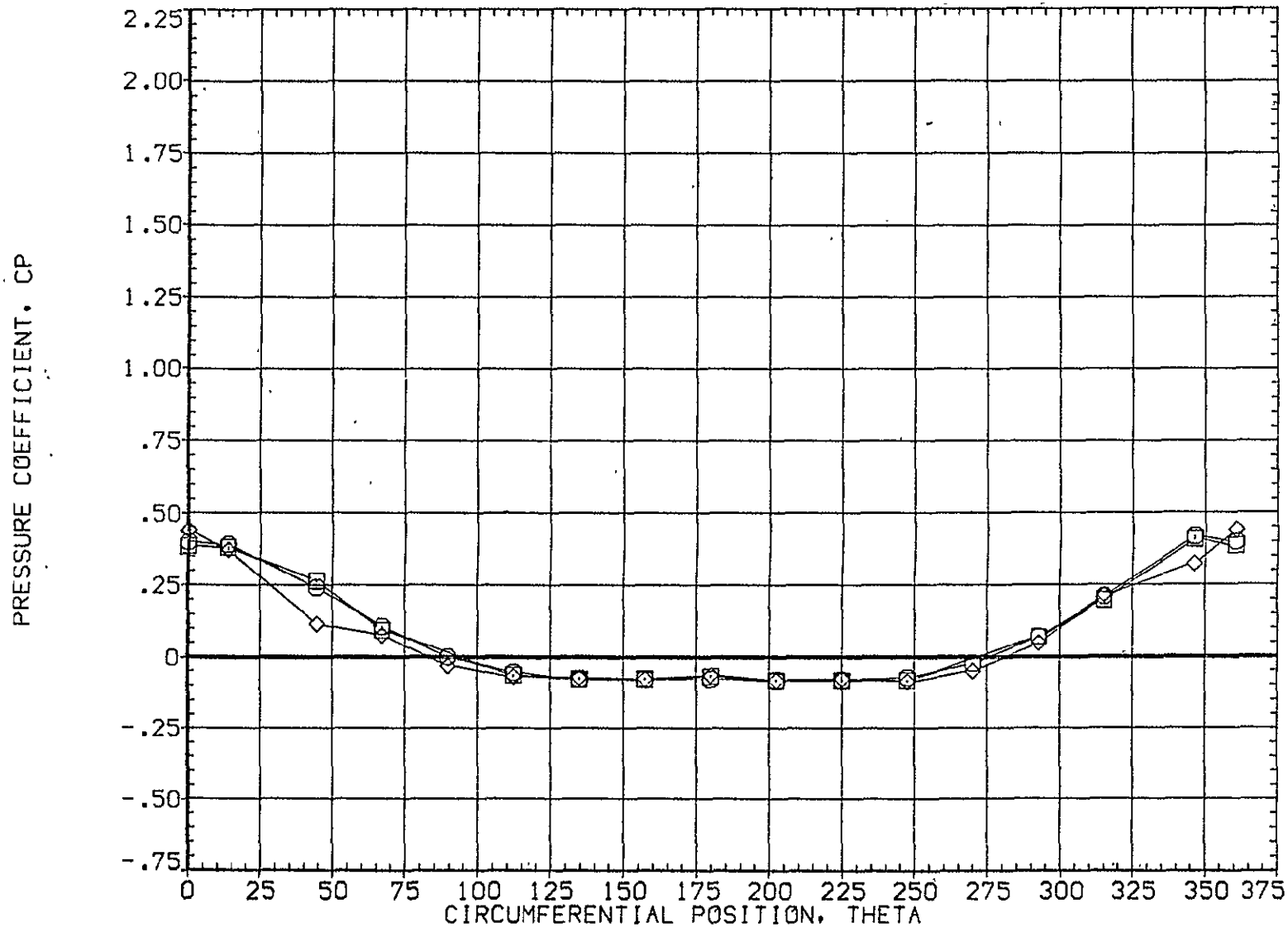

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

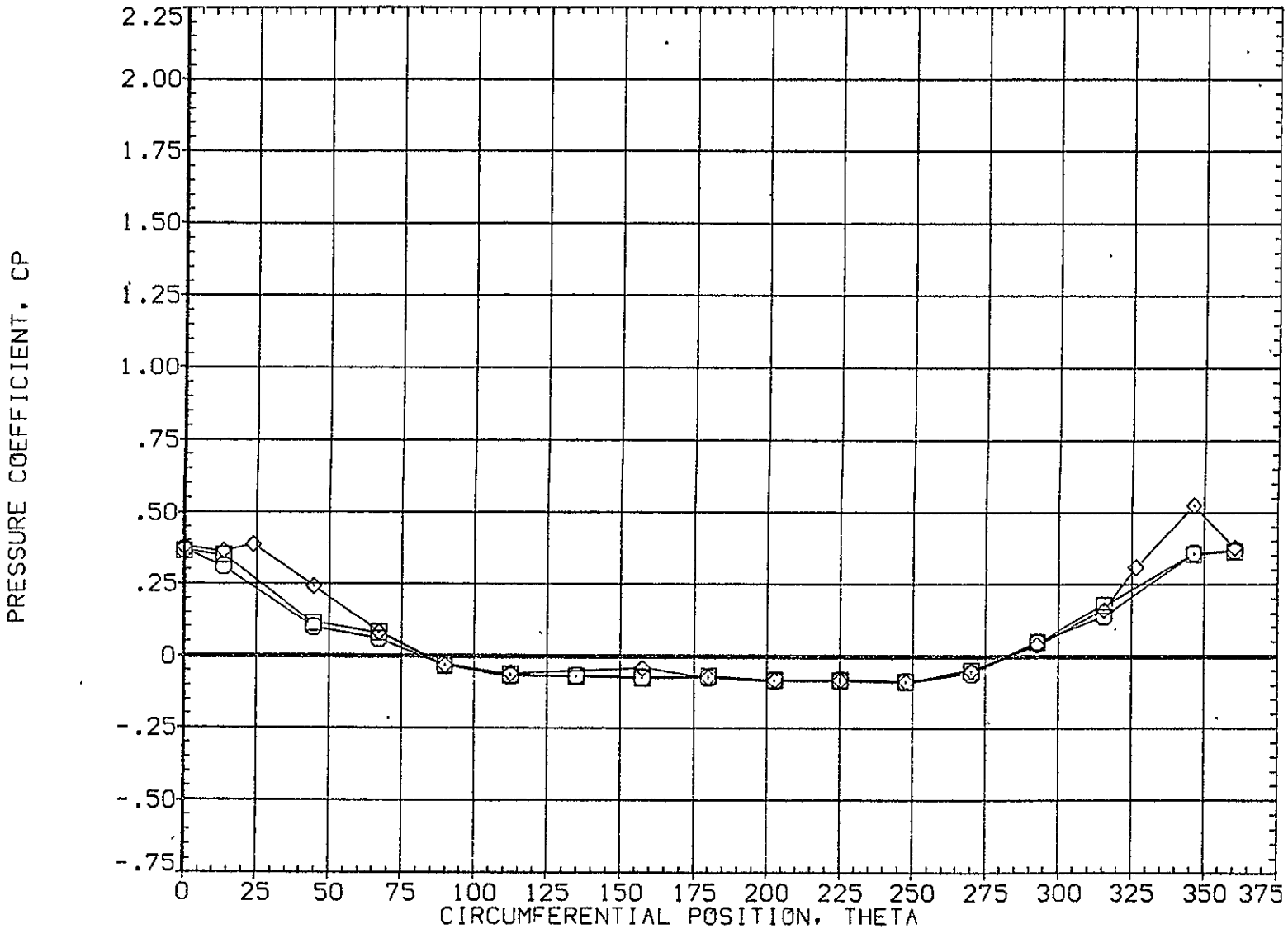

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

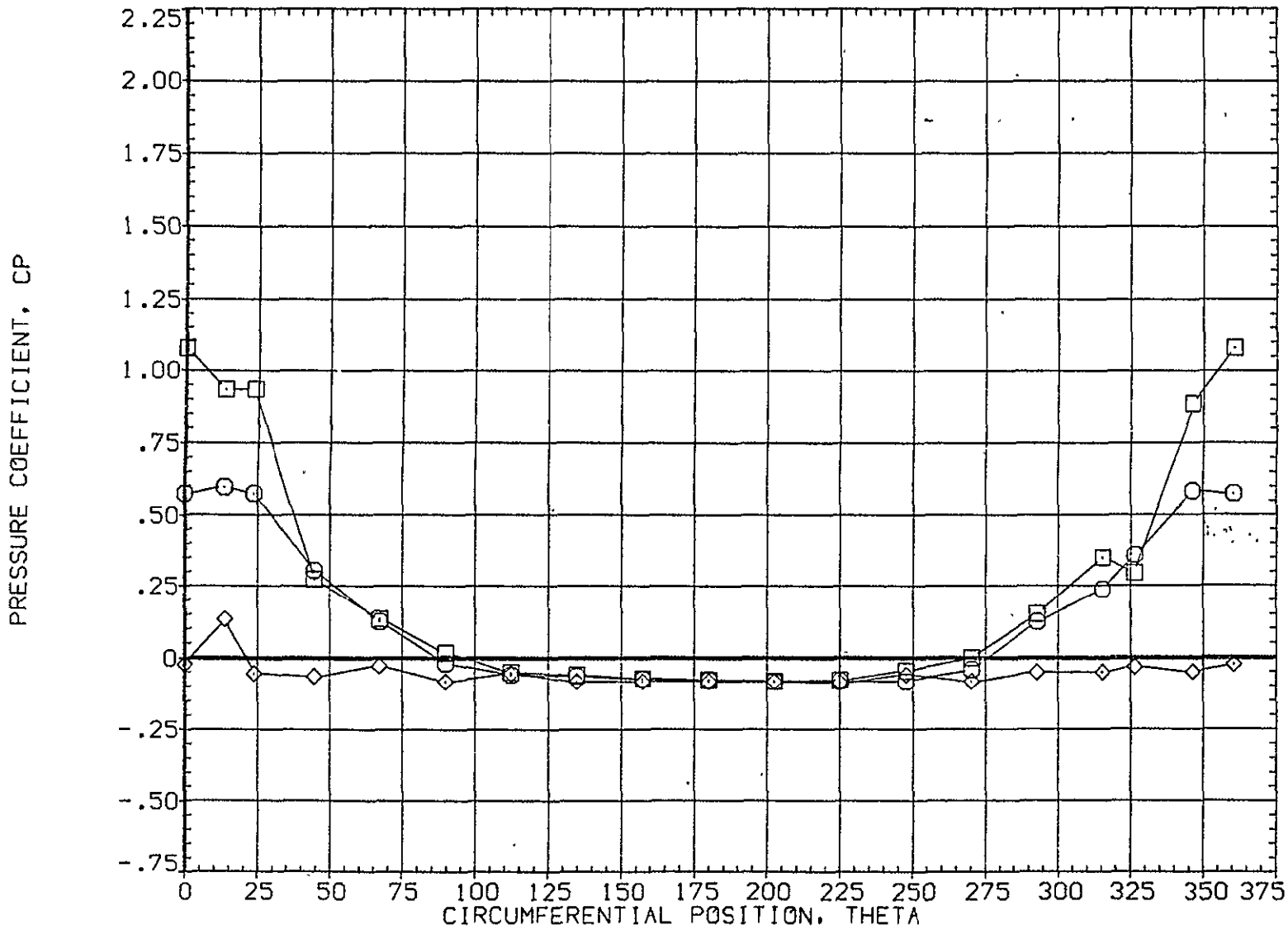

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

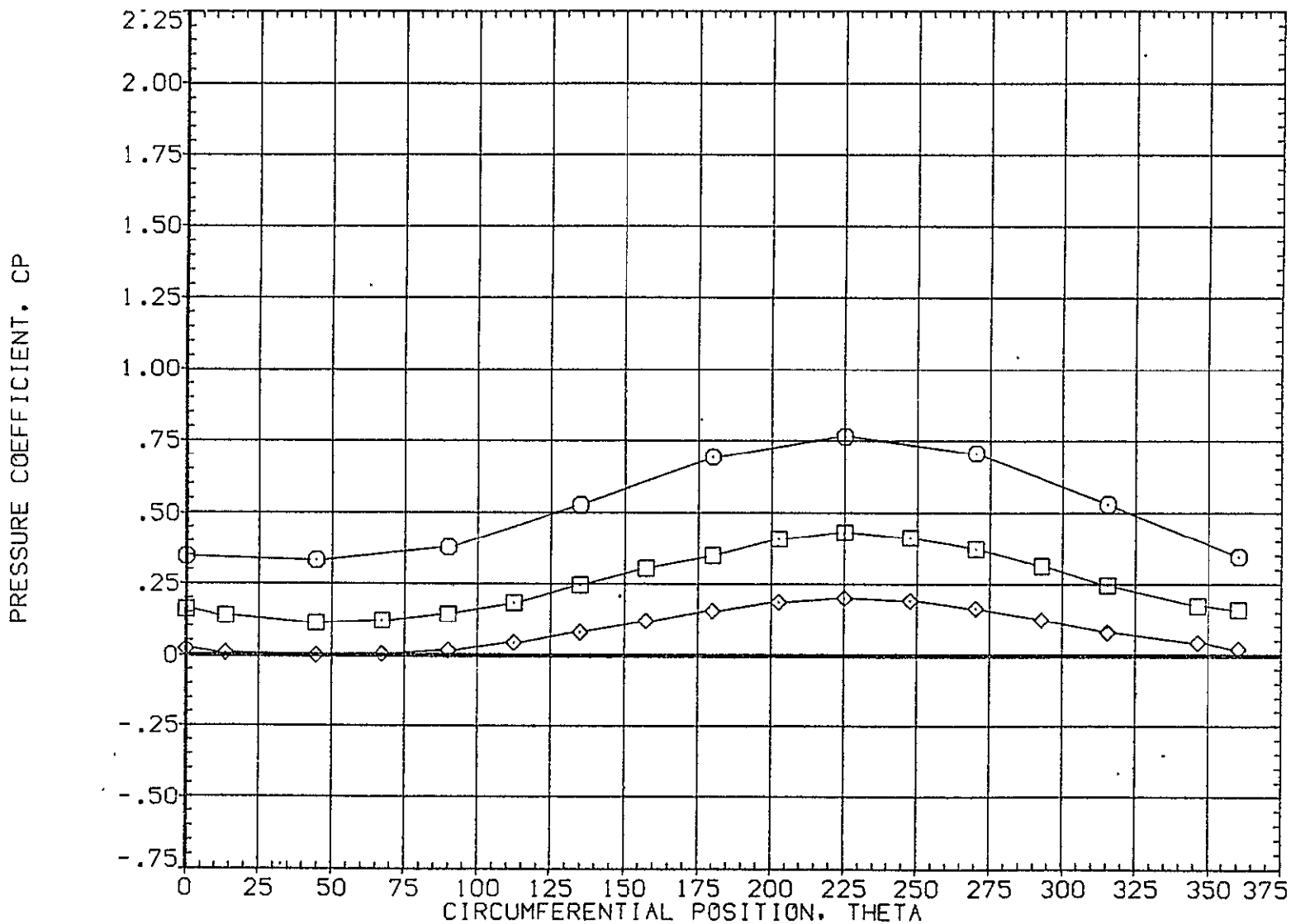

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

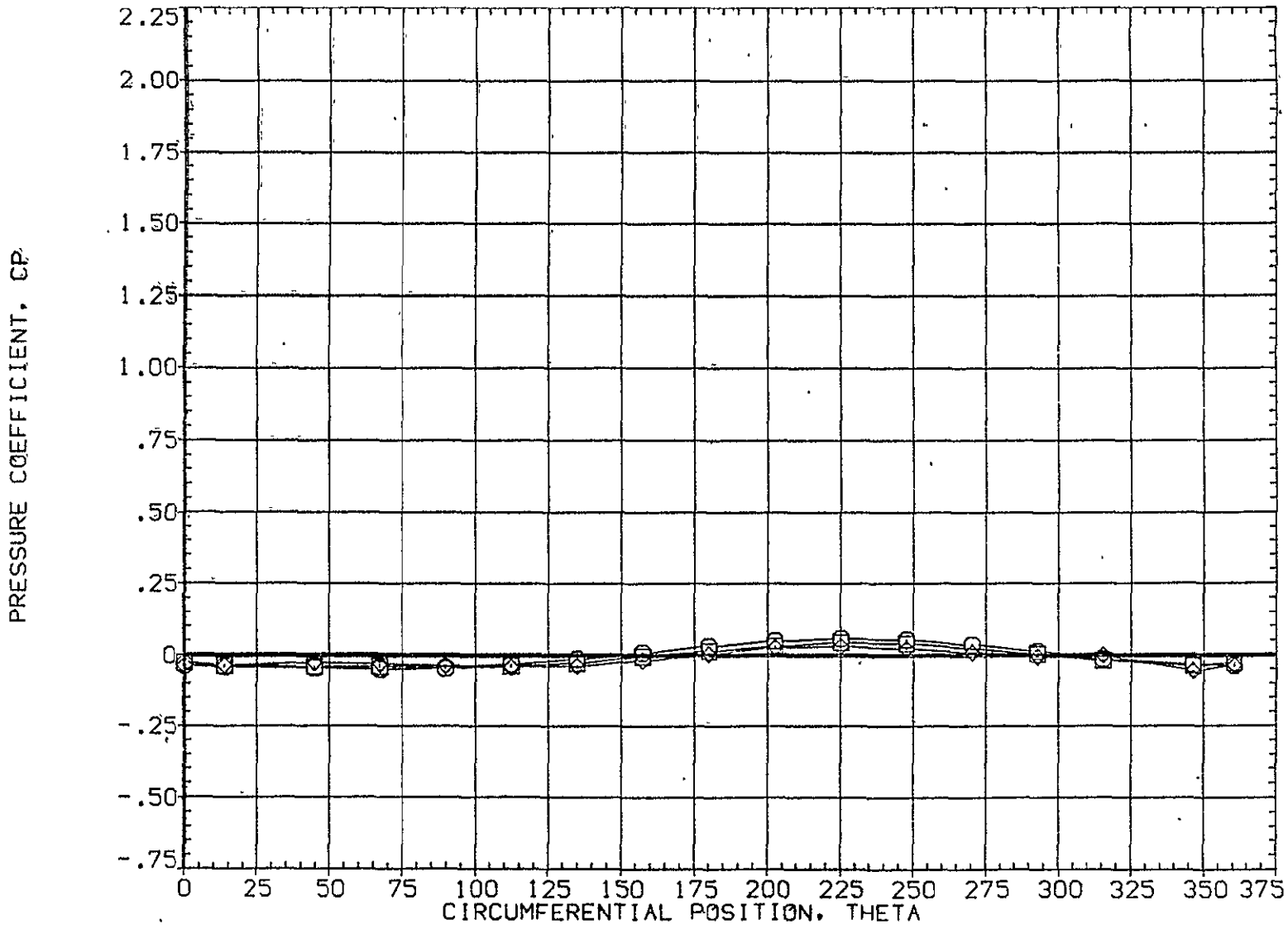

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

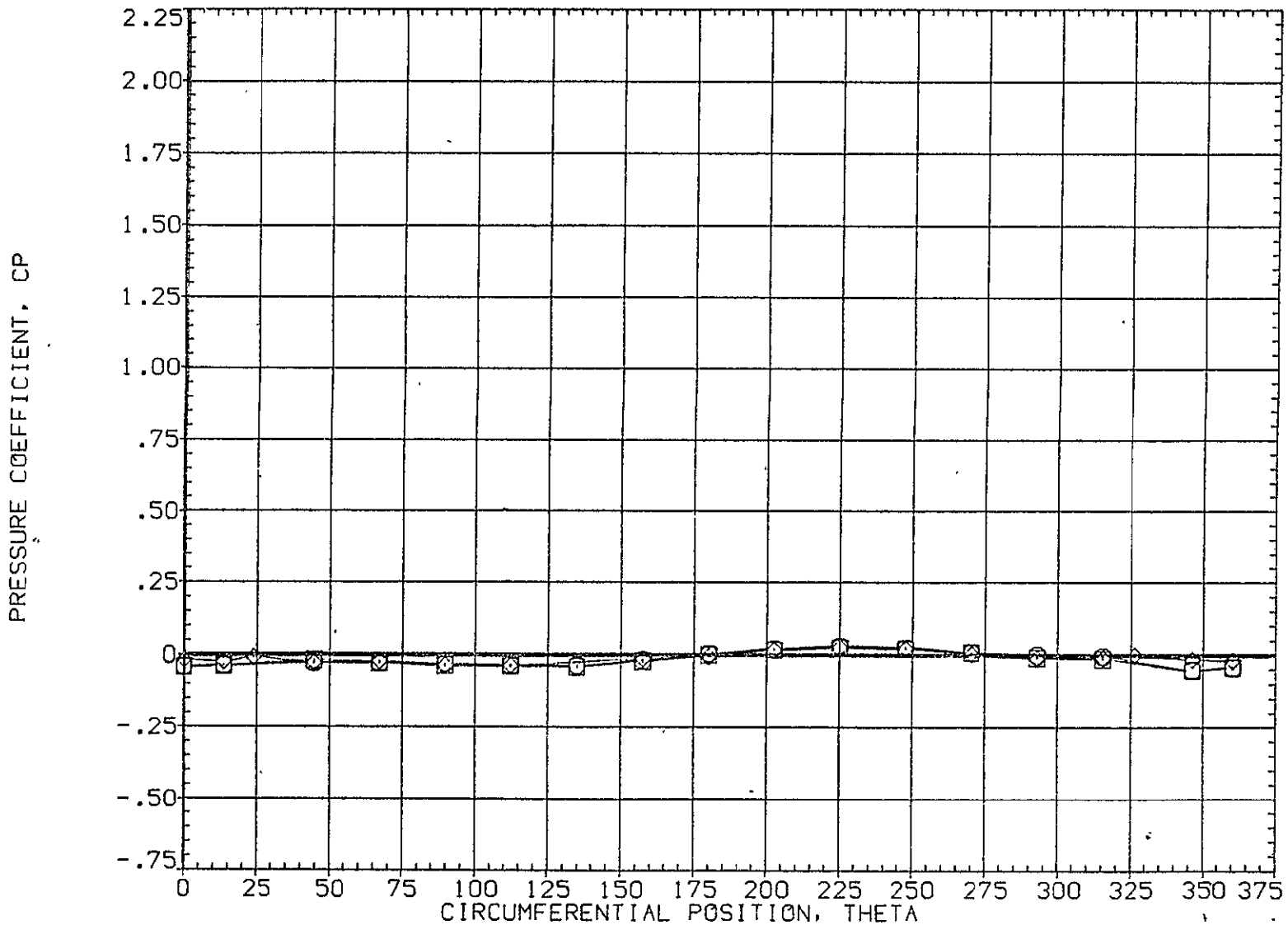

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

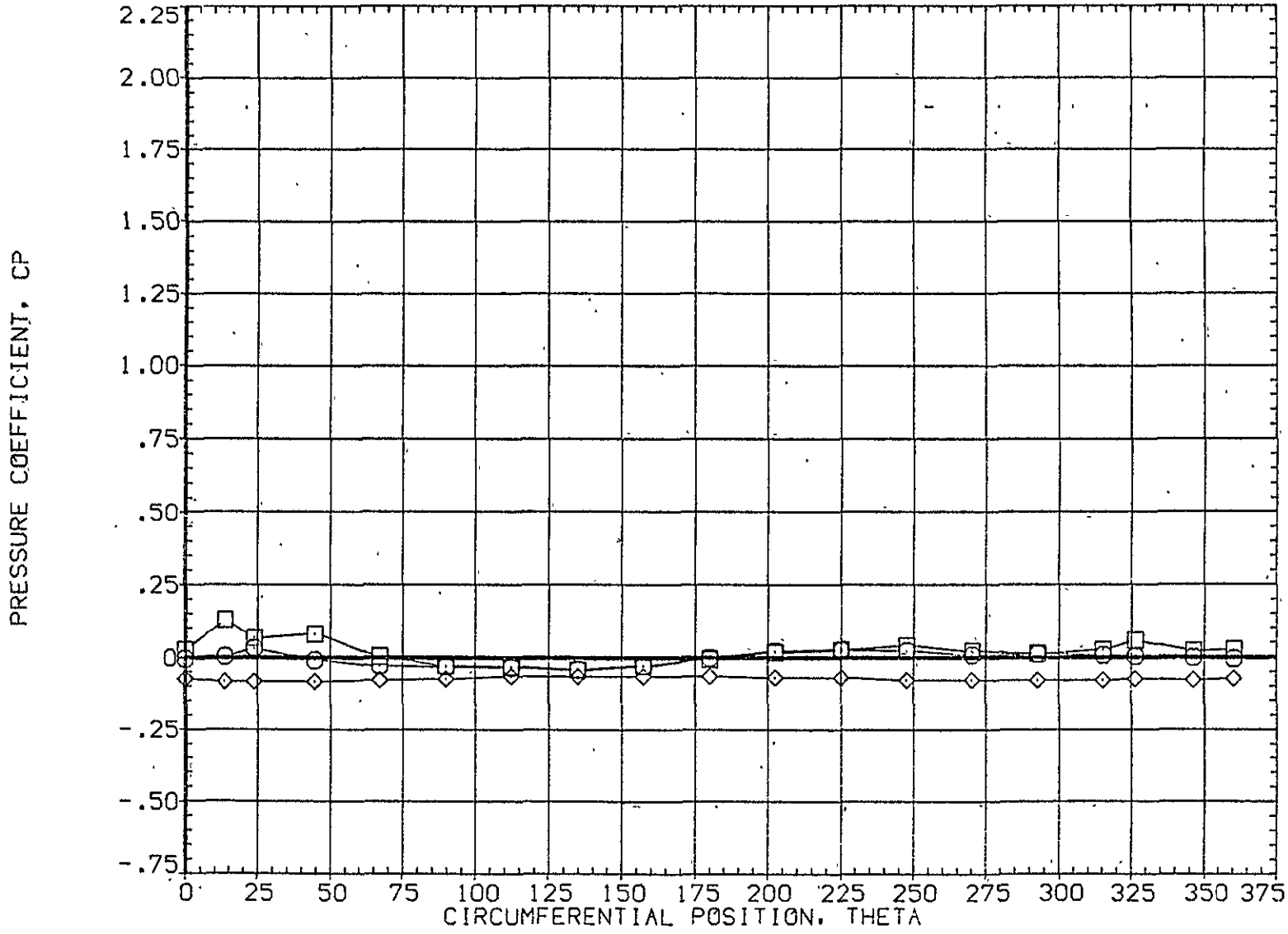

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

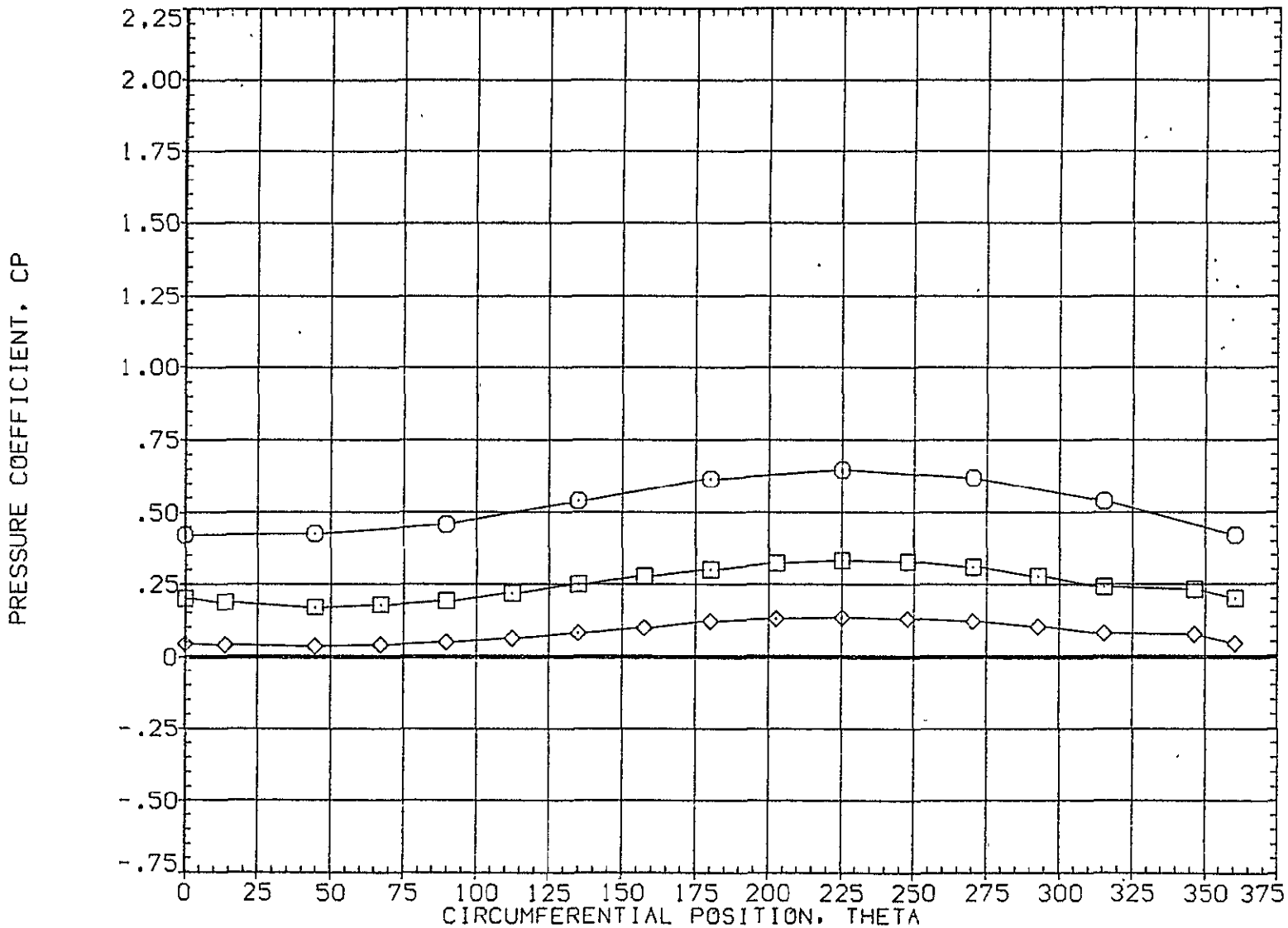

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

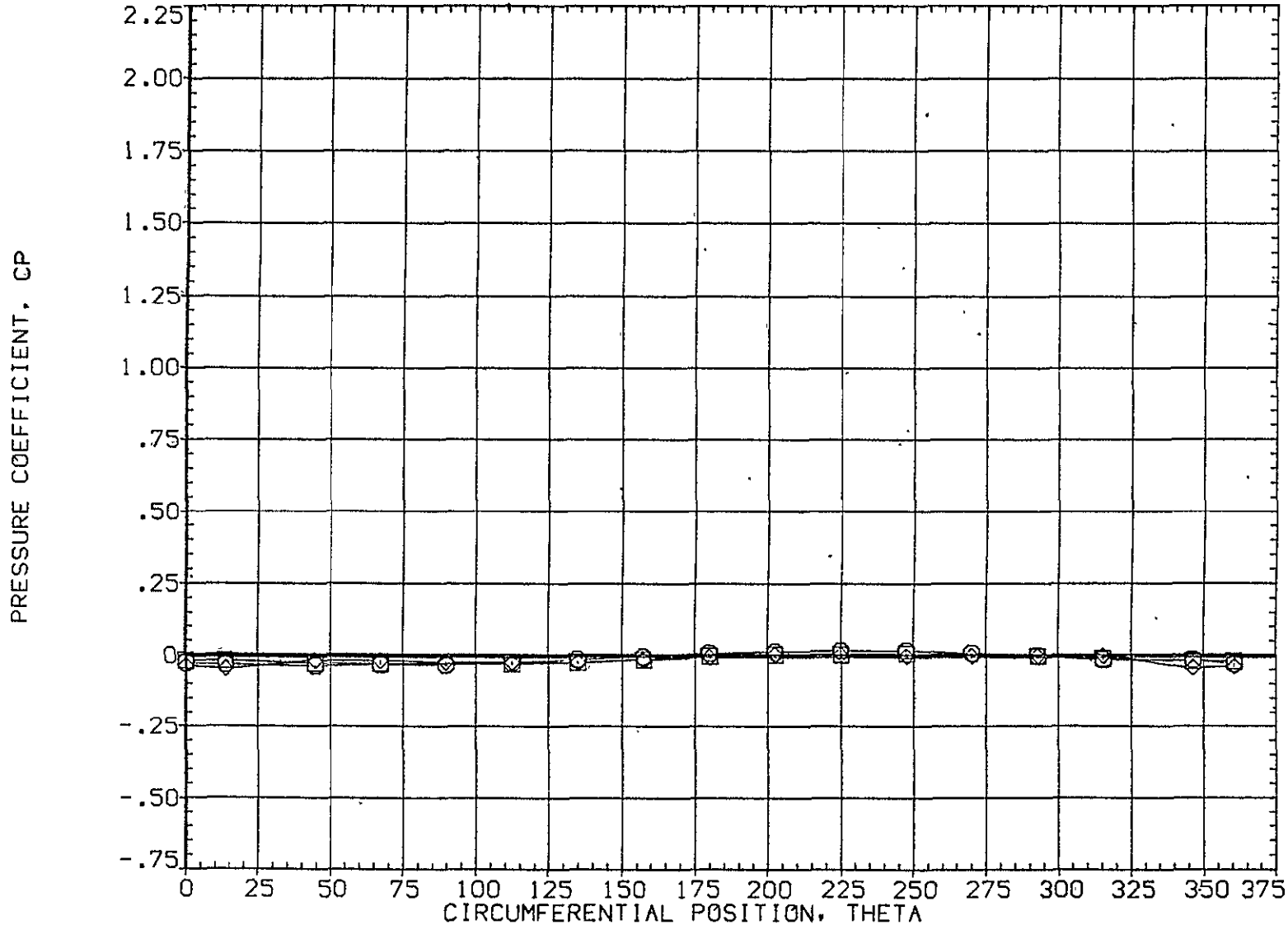

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

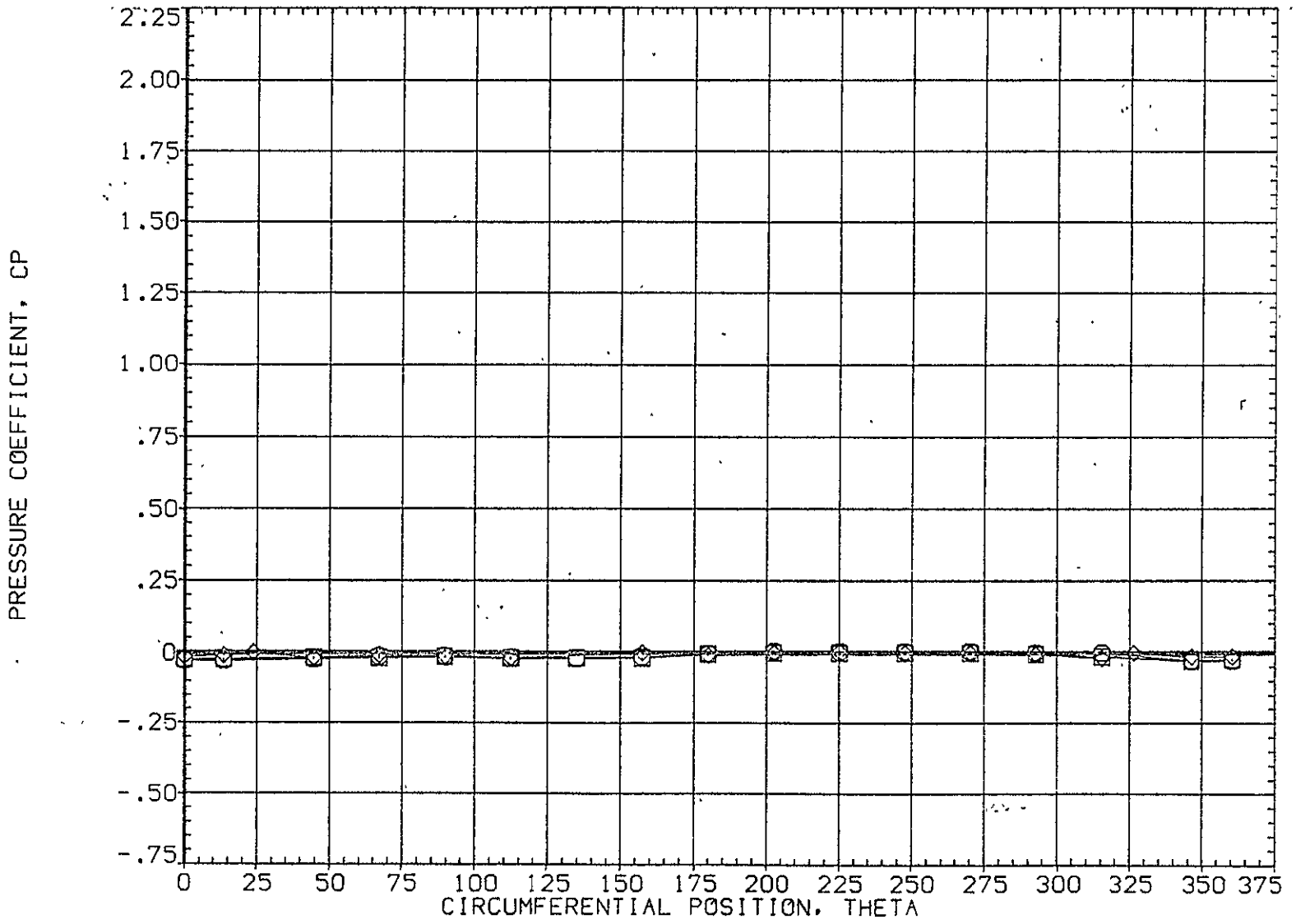

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

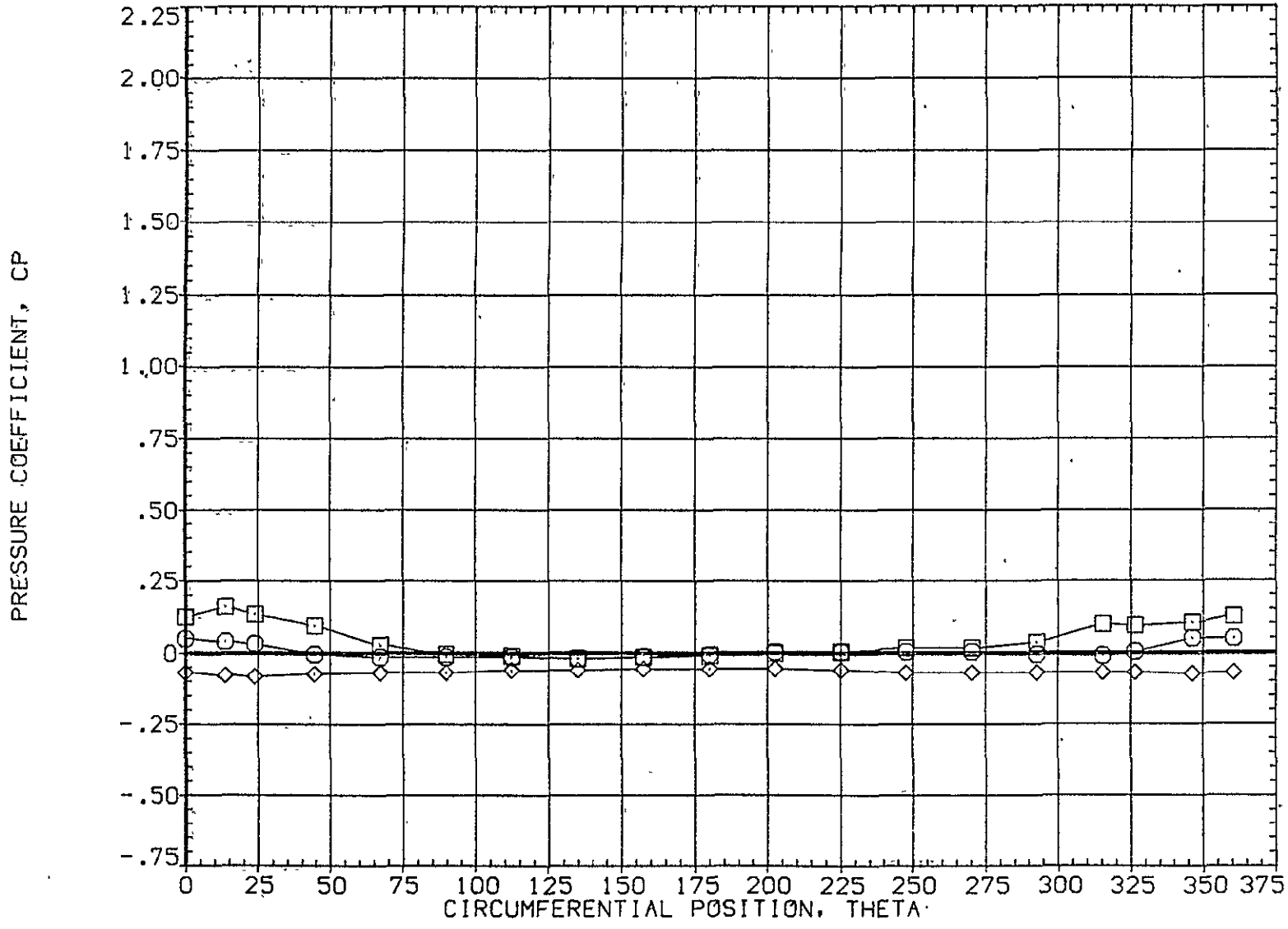

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

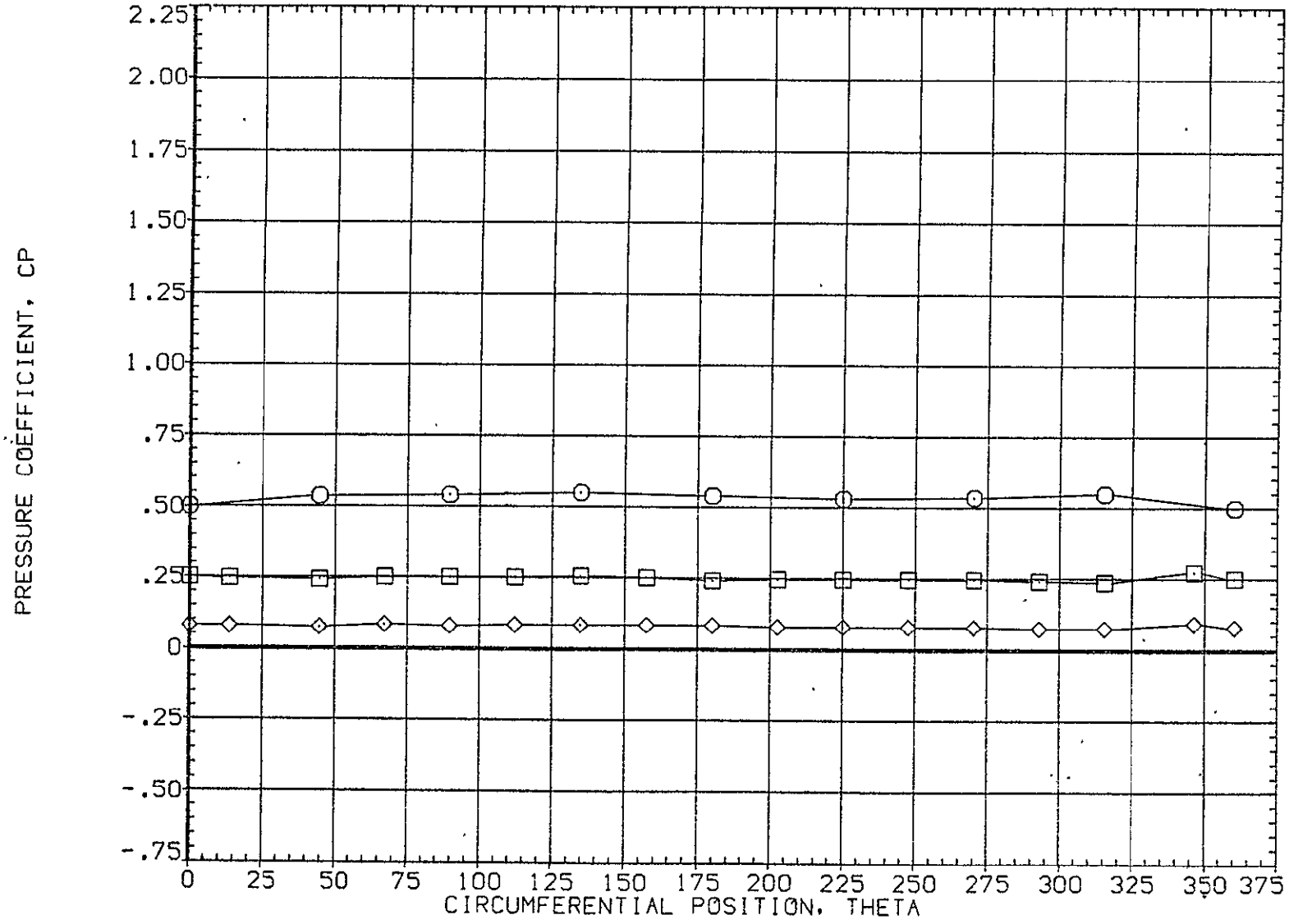

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

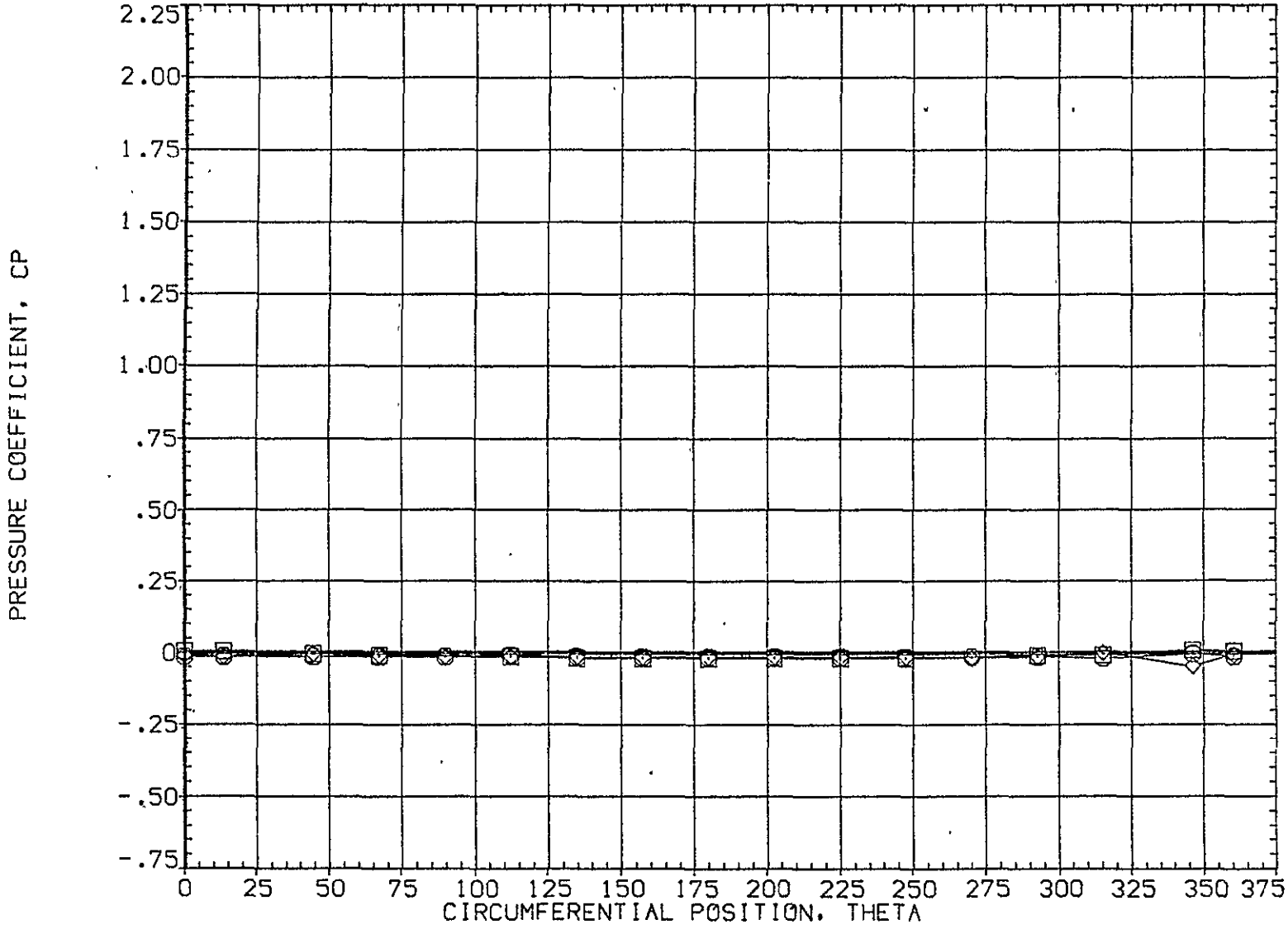

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

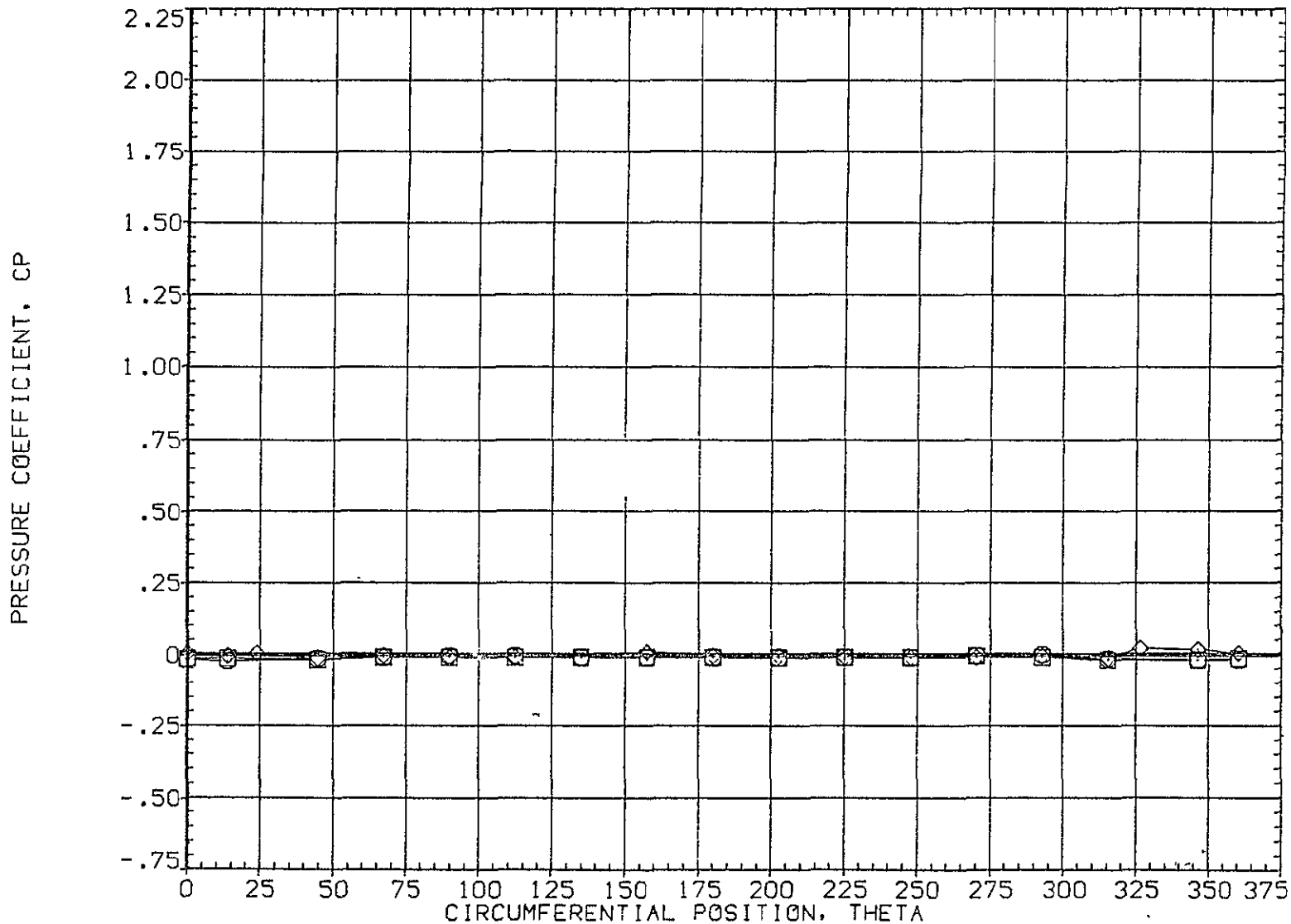

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

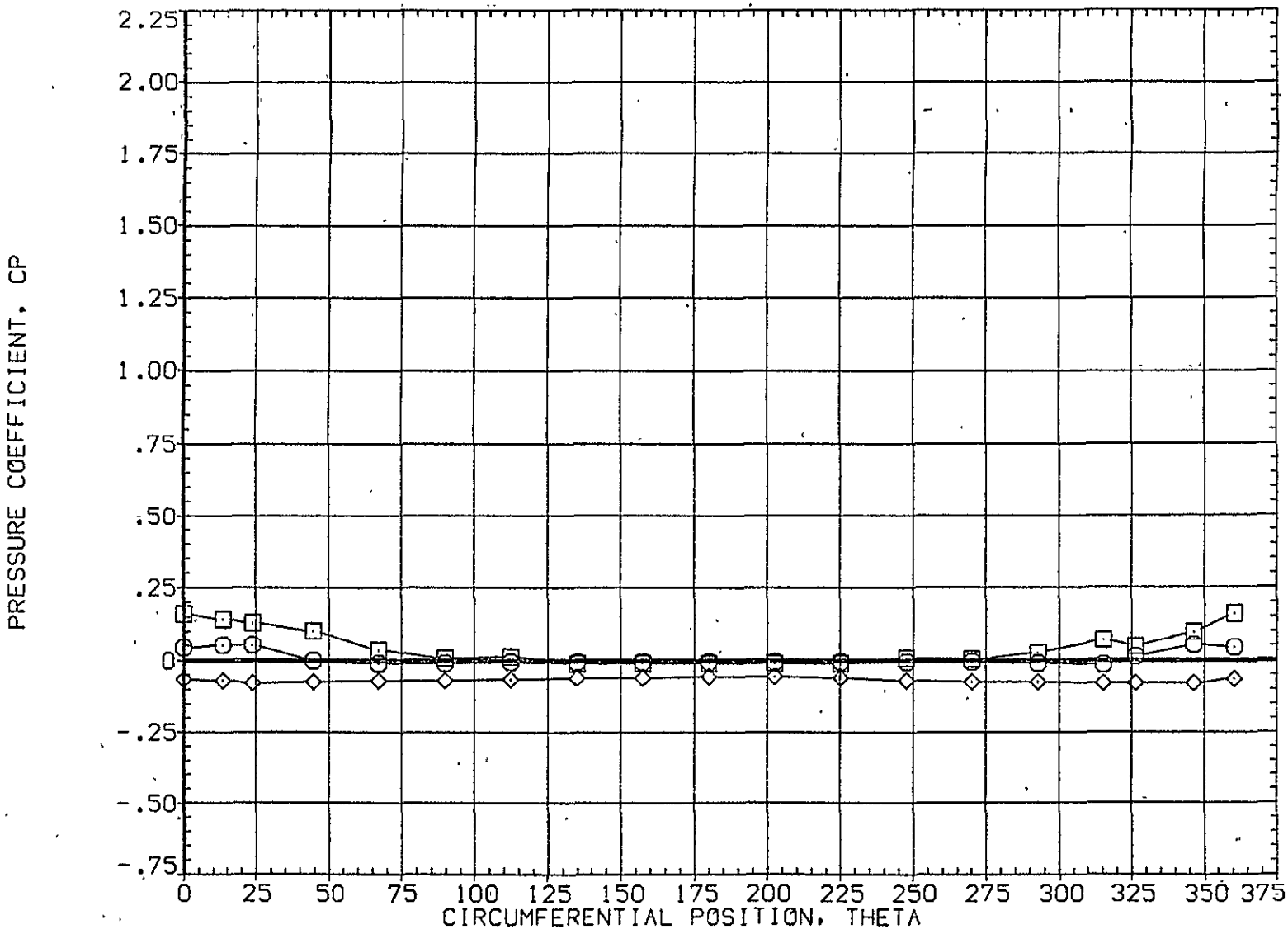

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

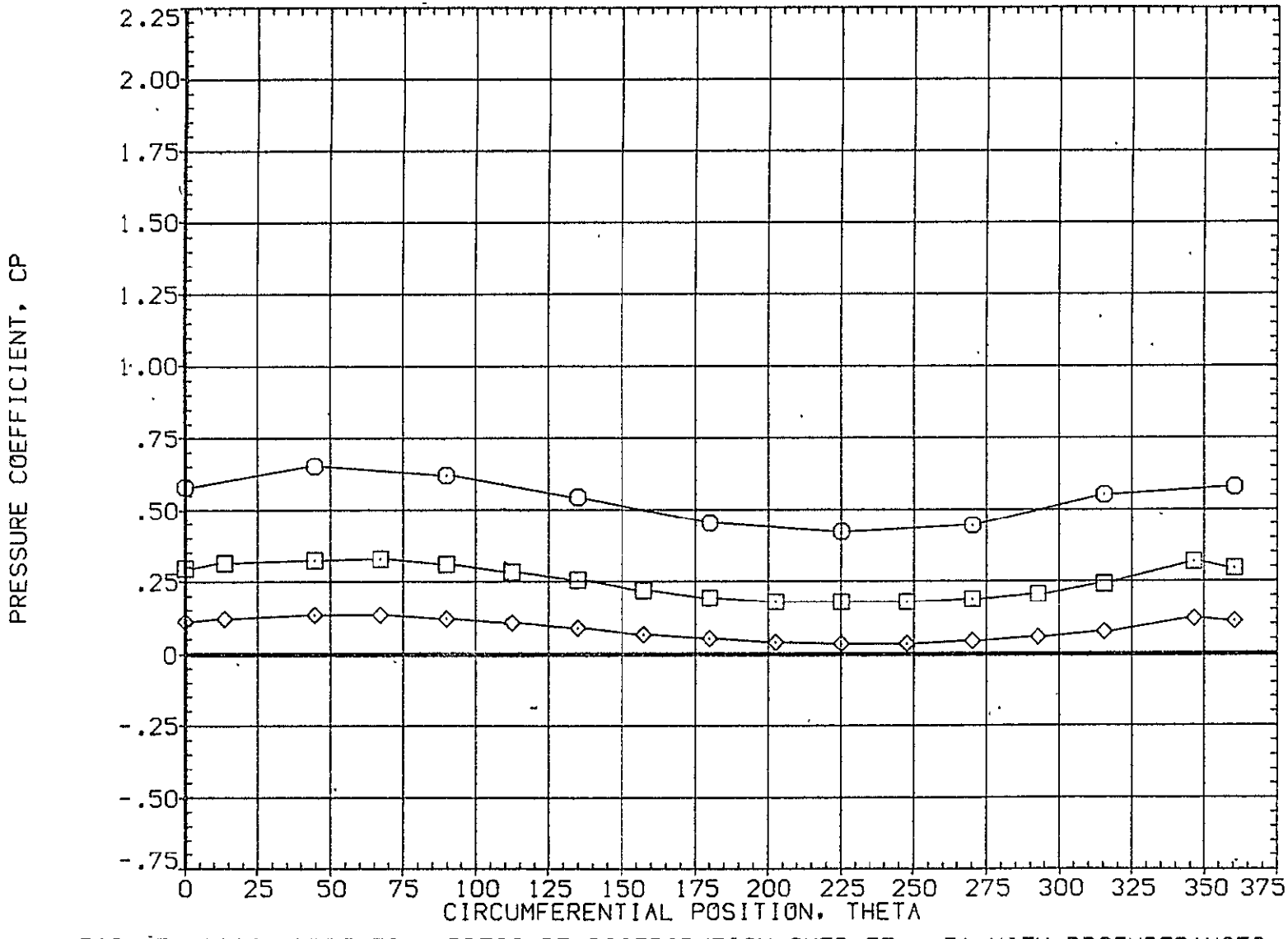

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

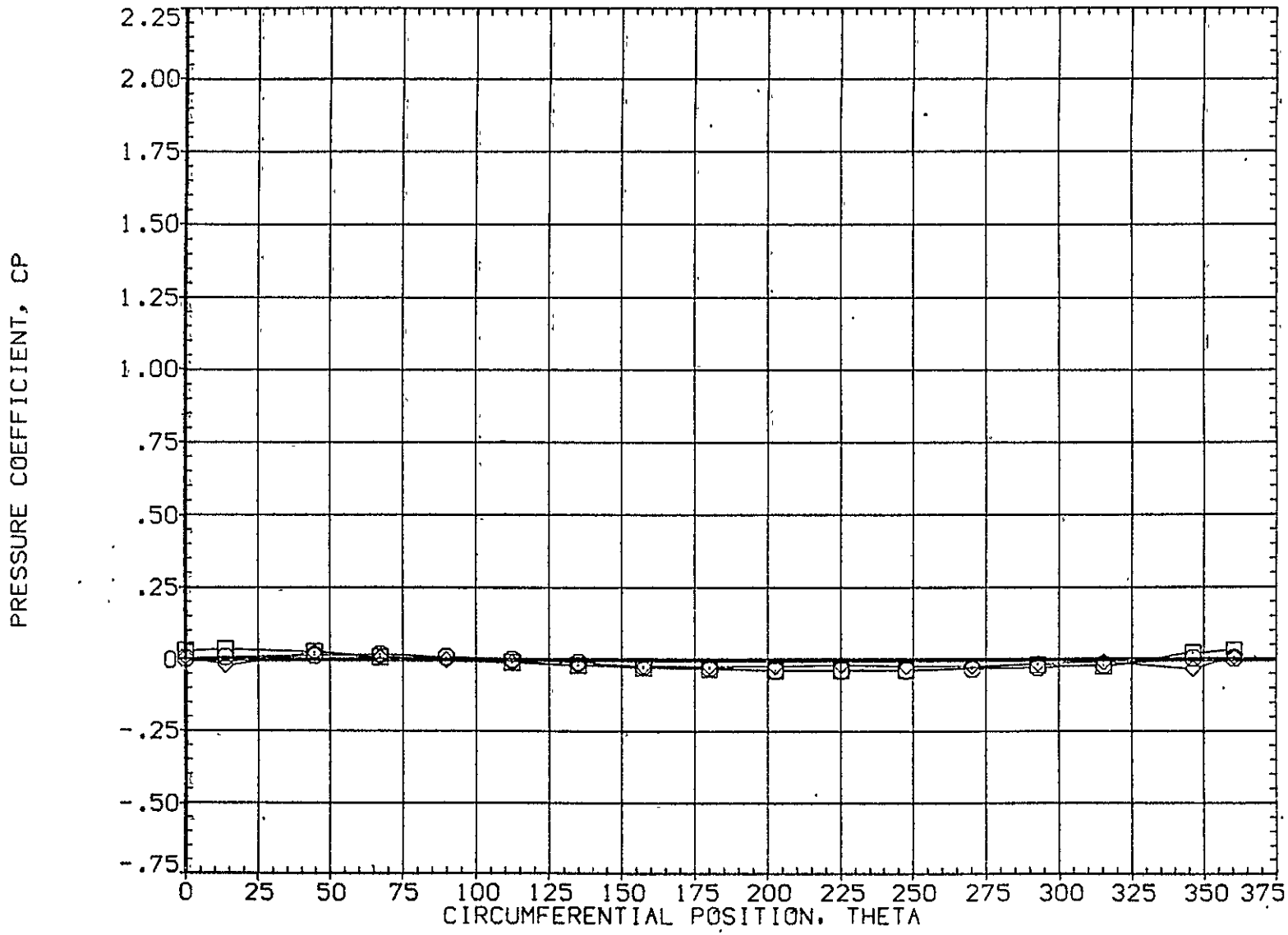

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

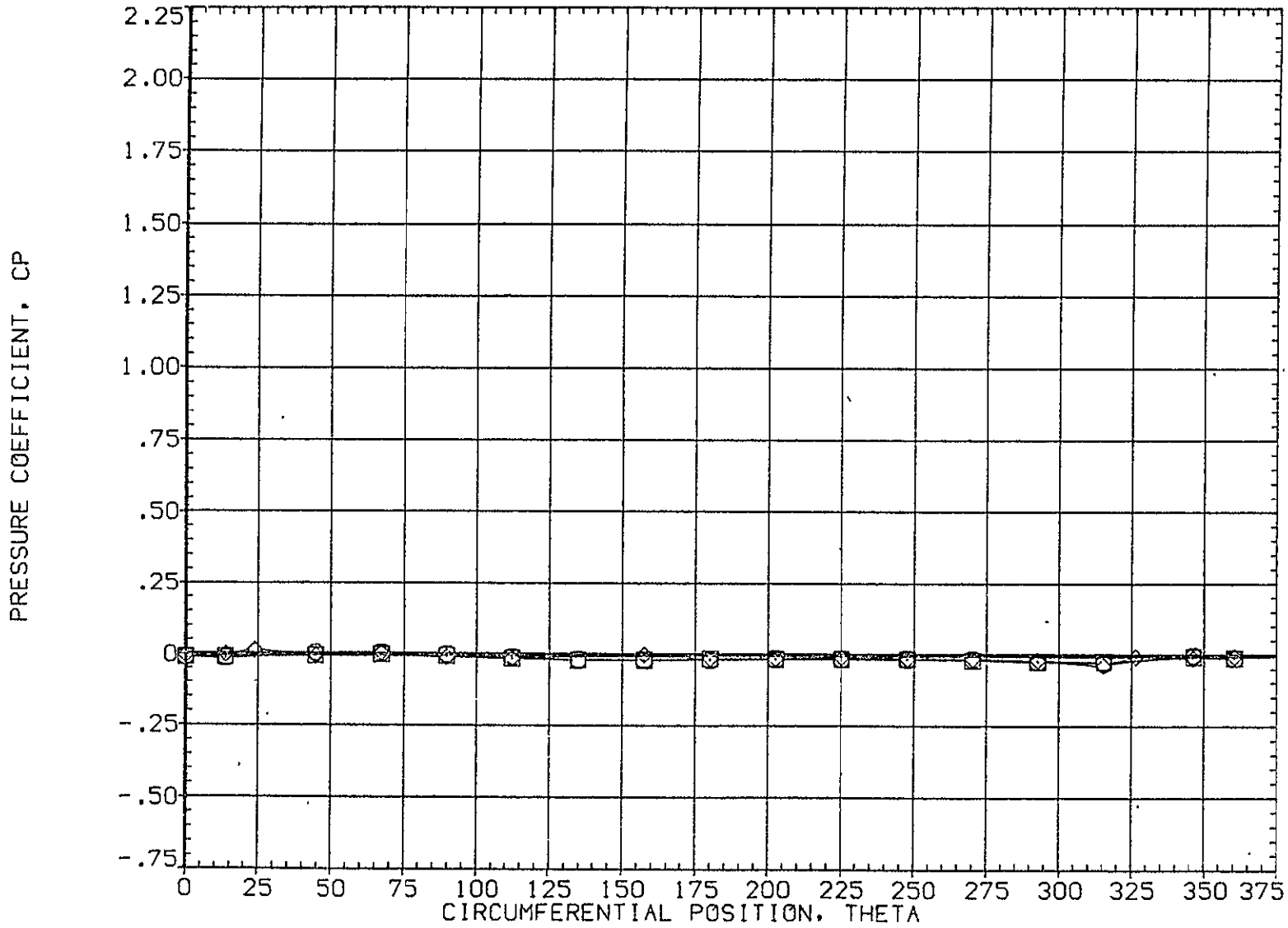

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

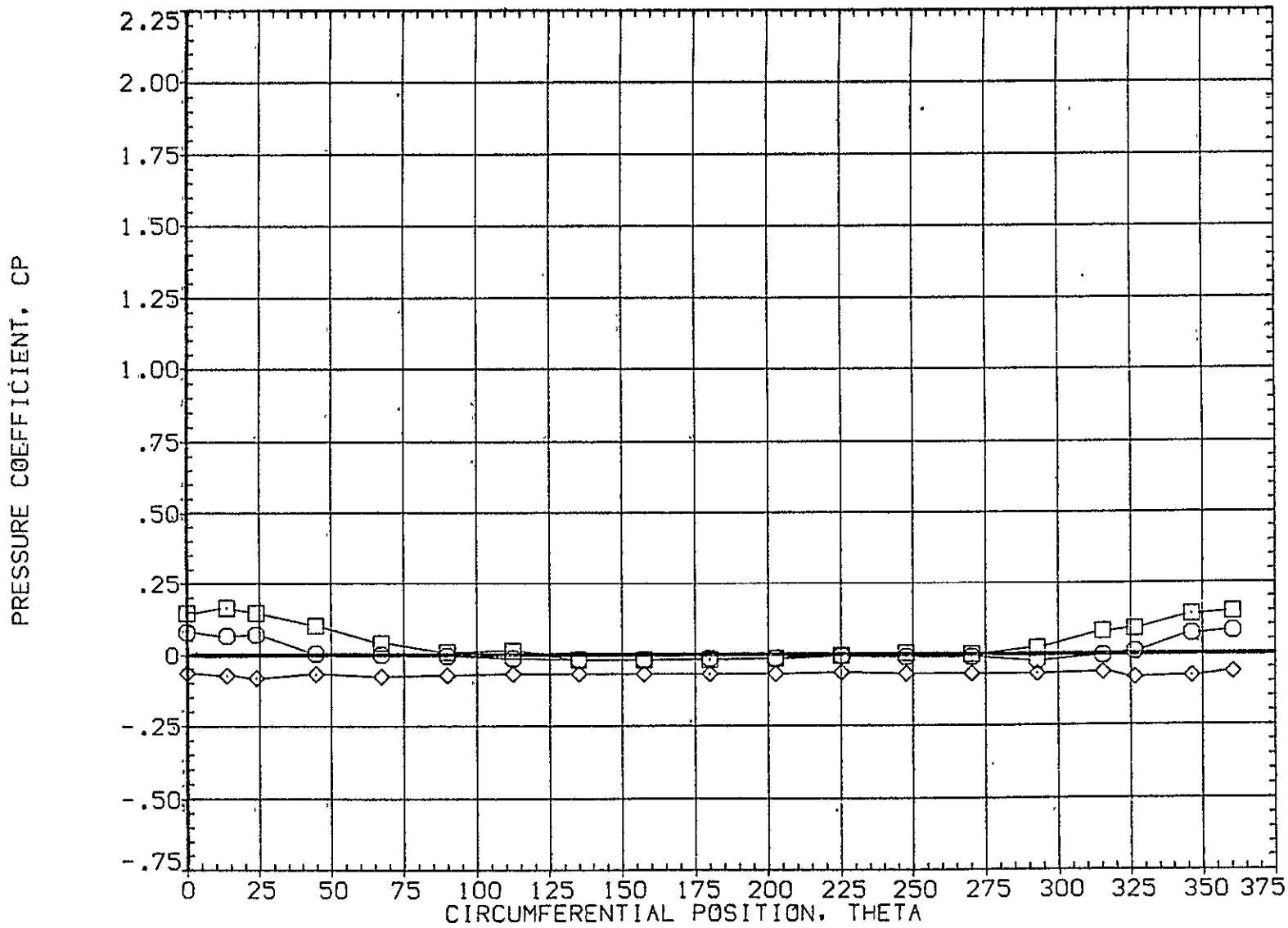

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

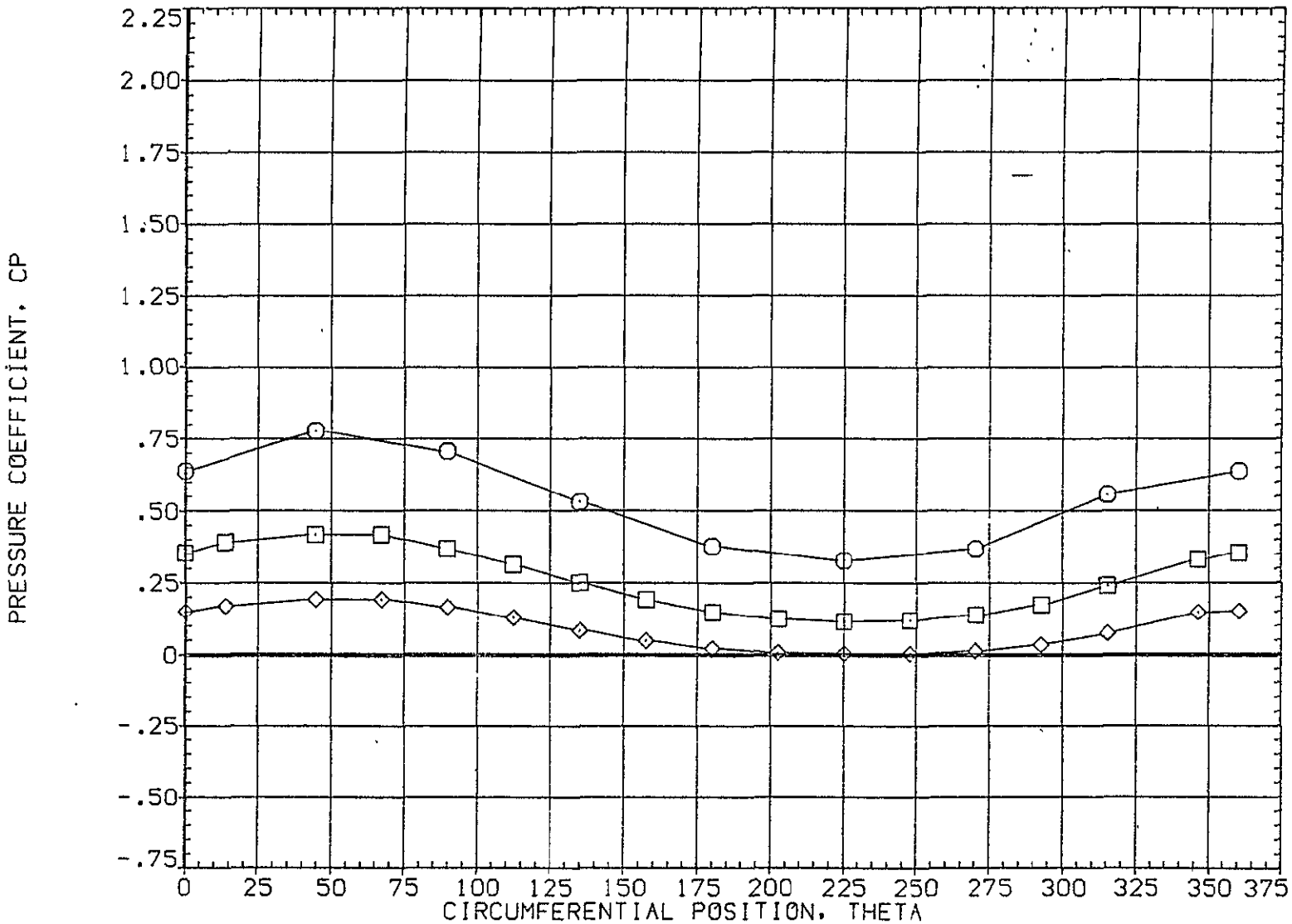

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

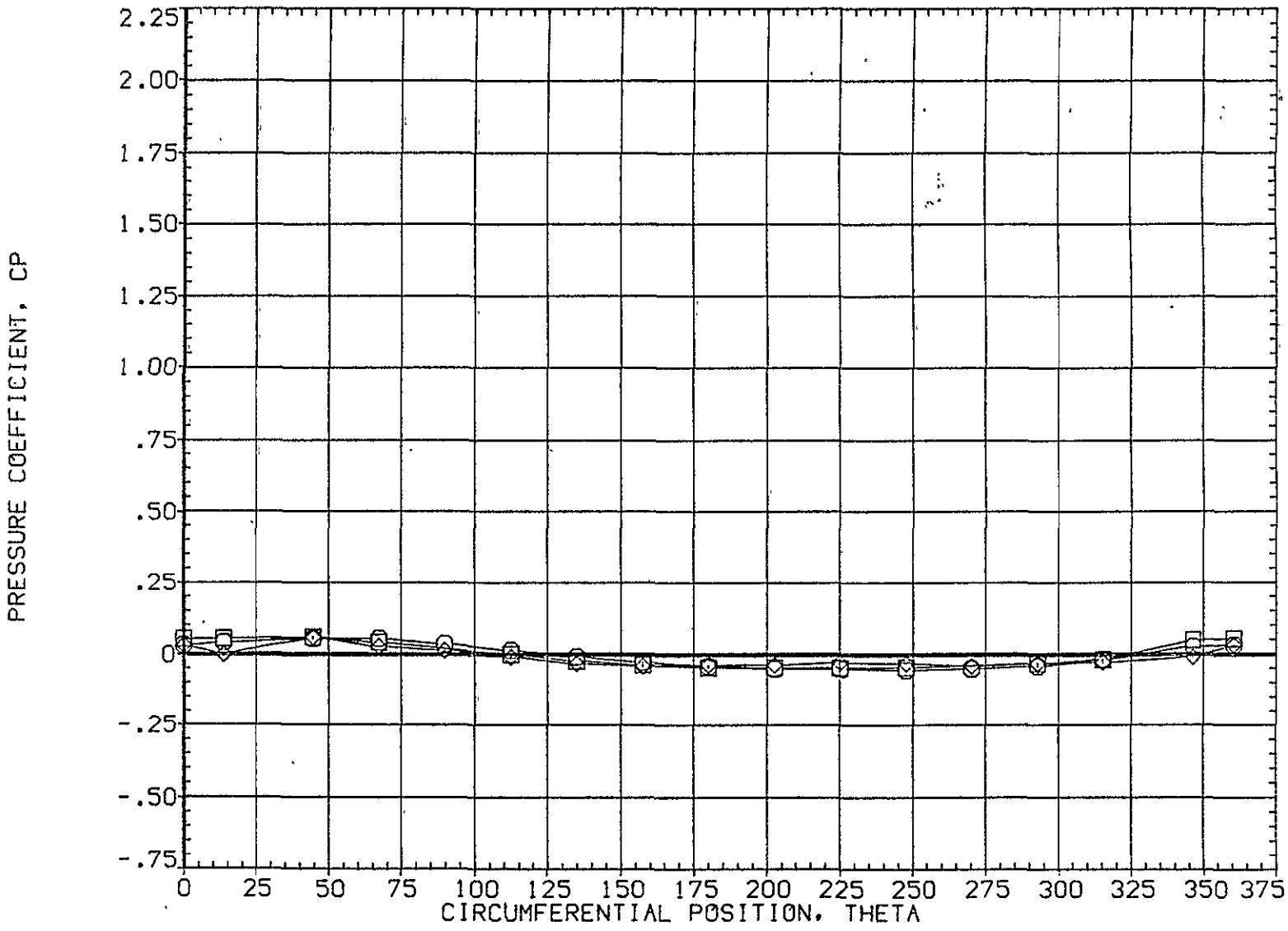

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

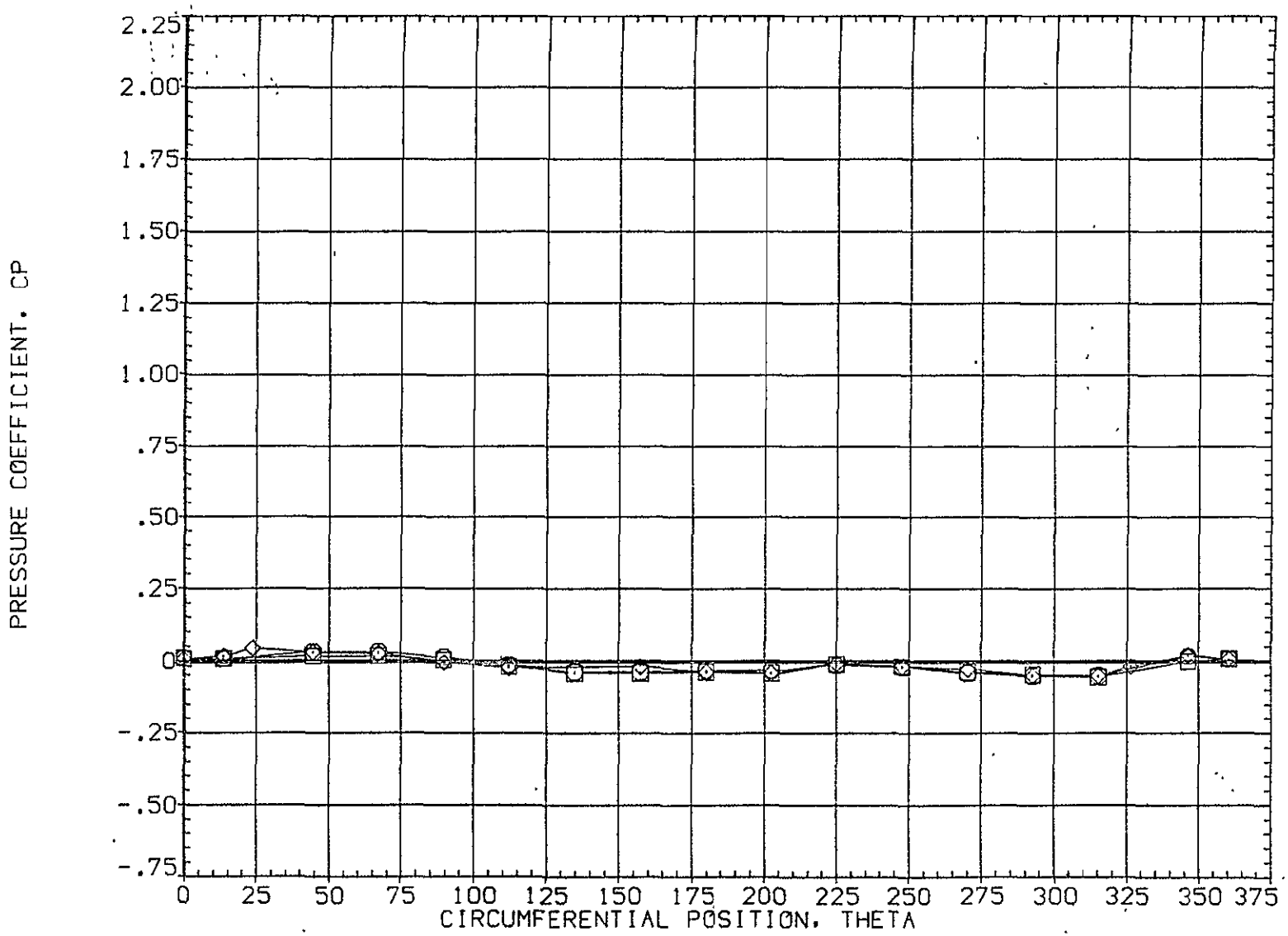

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

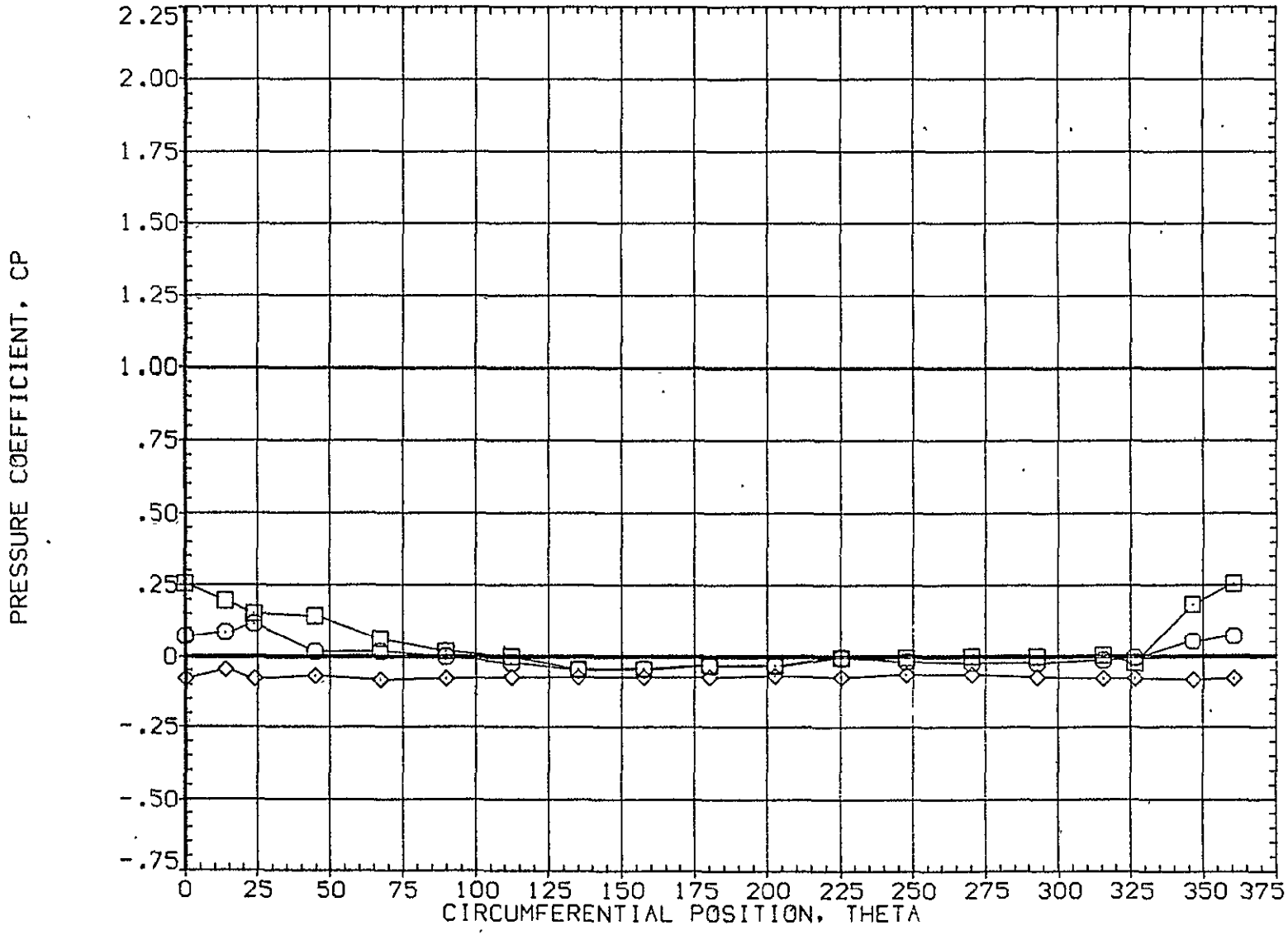

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

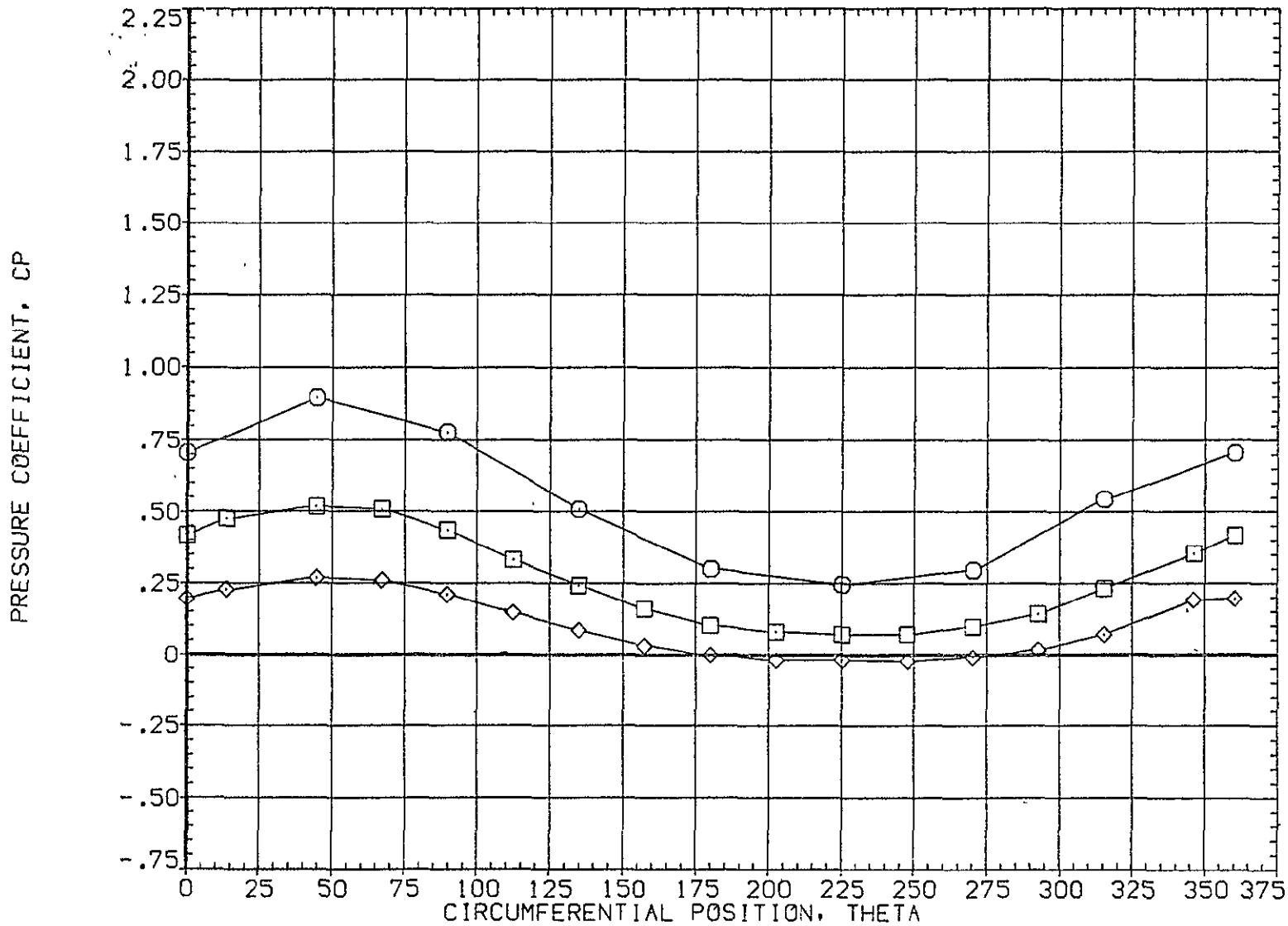

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

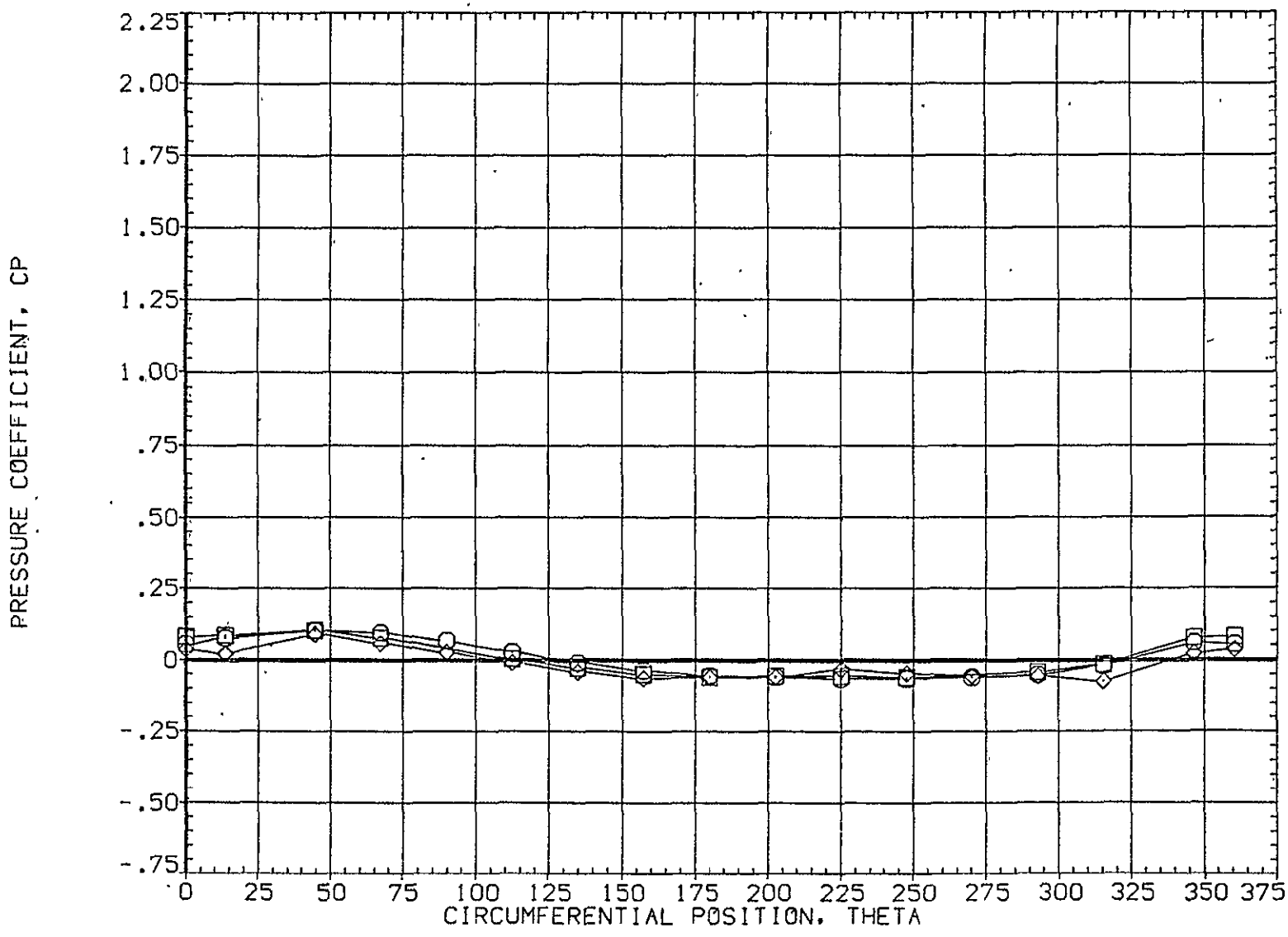

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.520	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

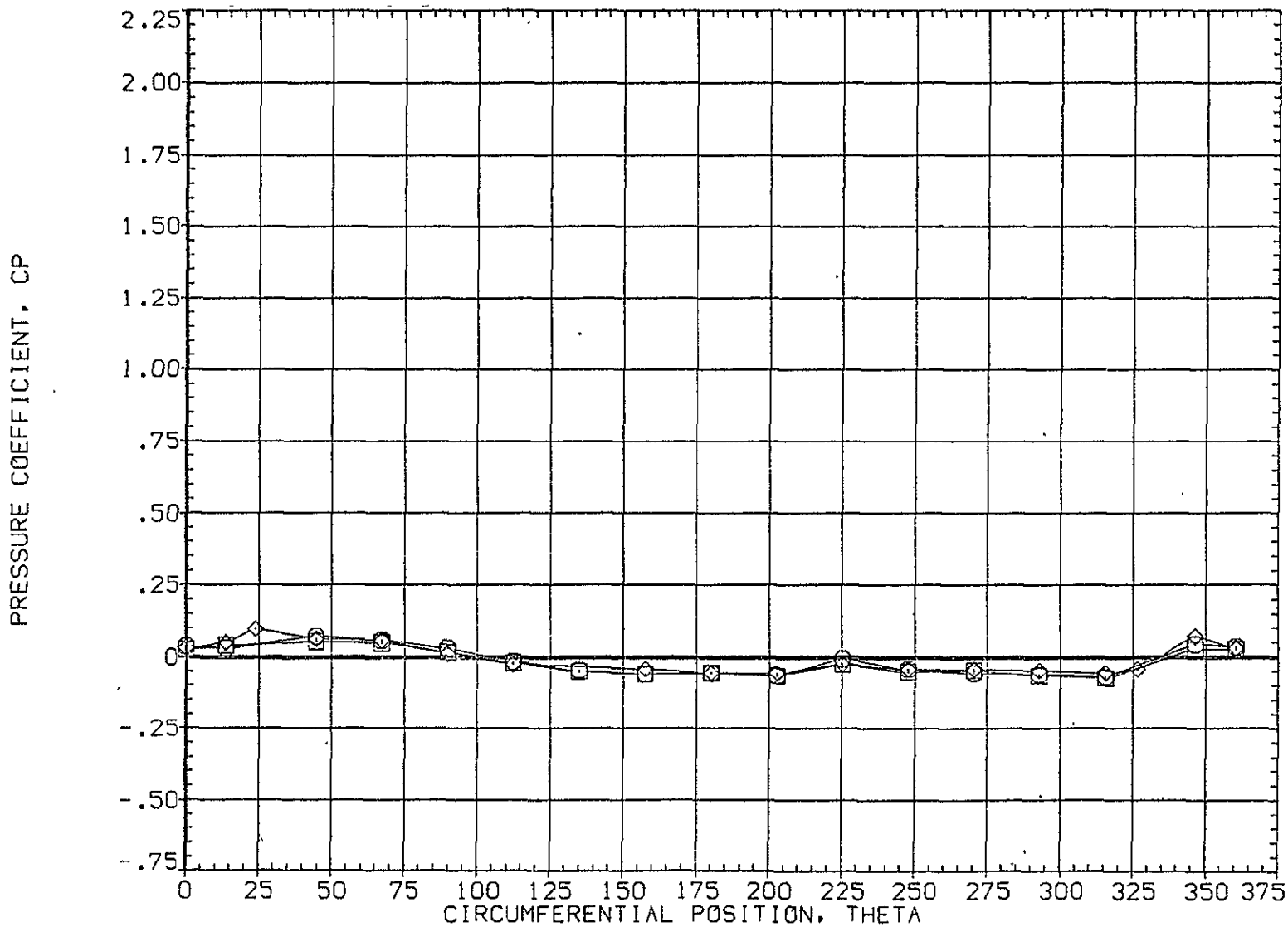

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

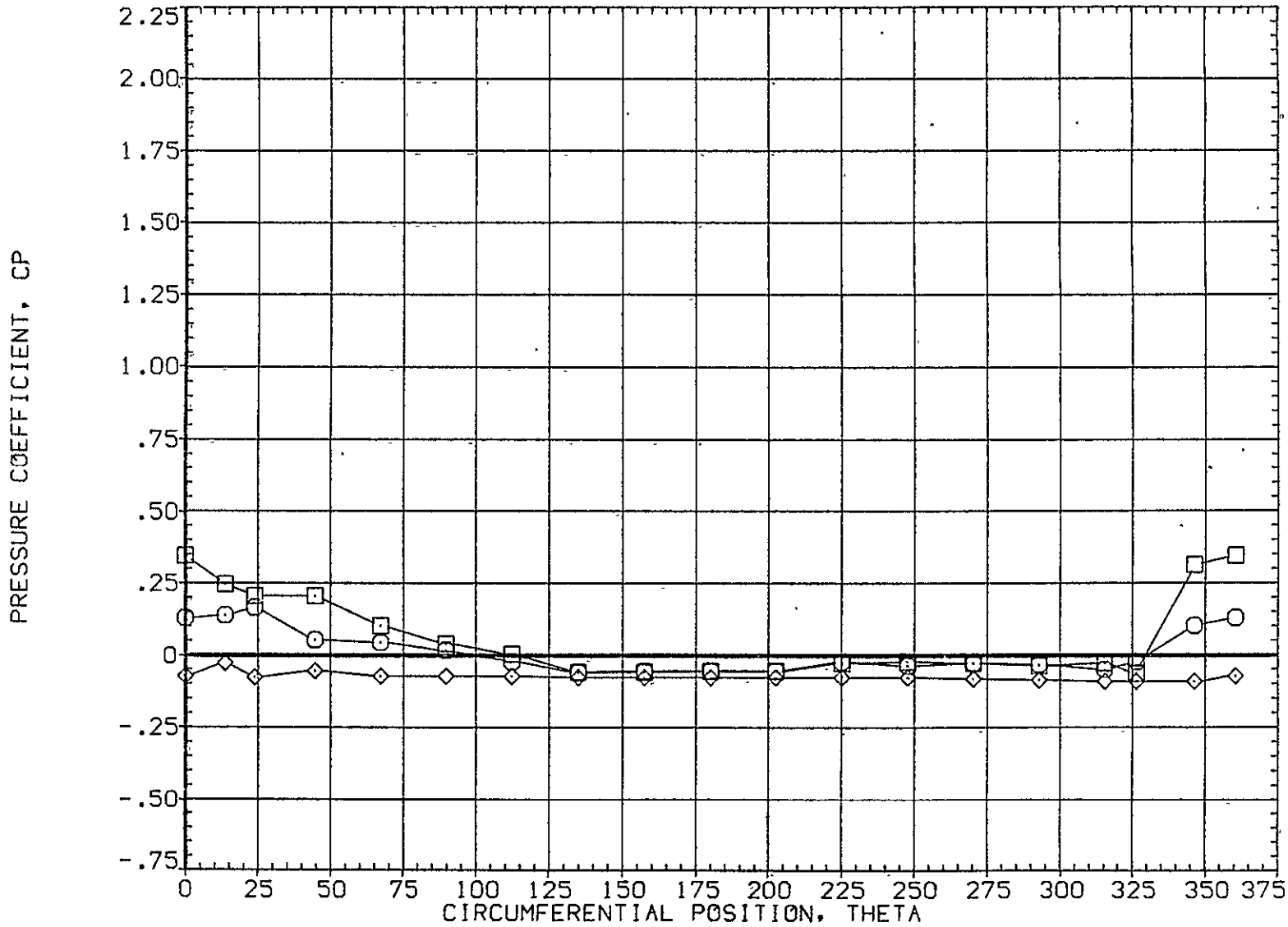

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

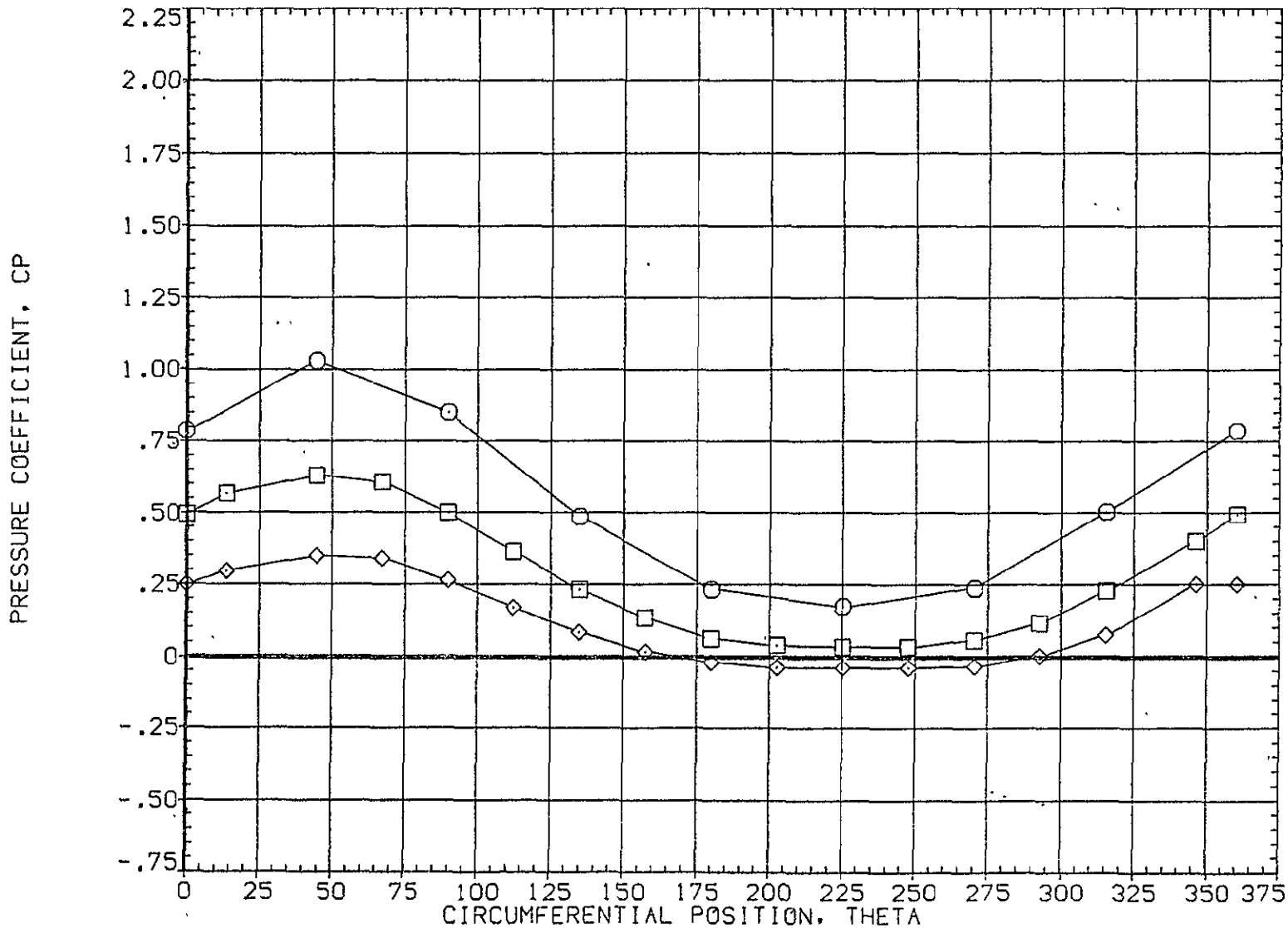

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

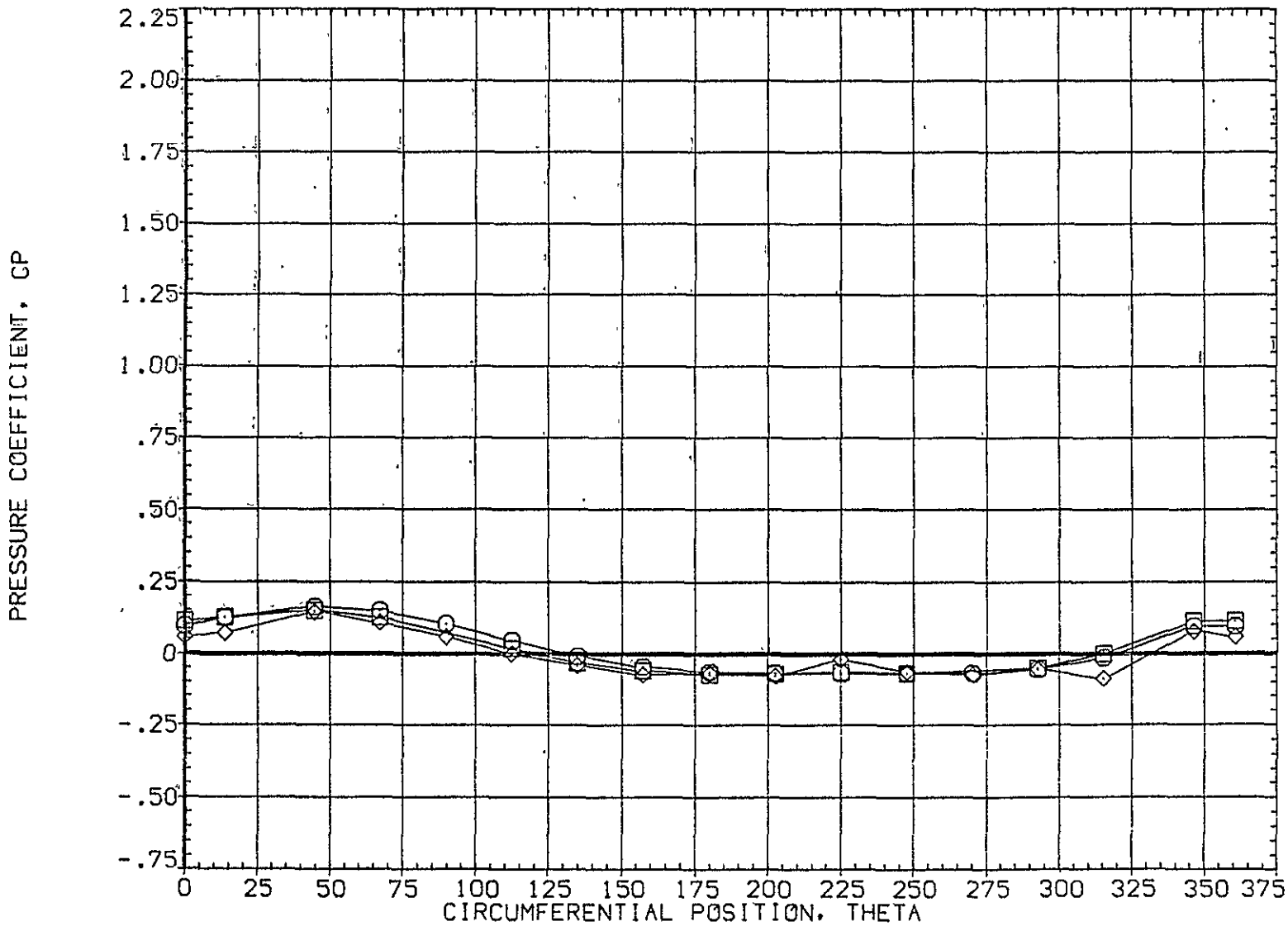

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

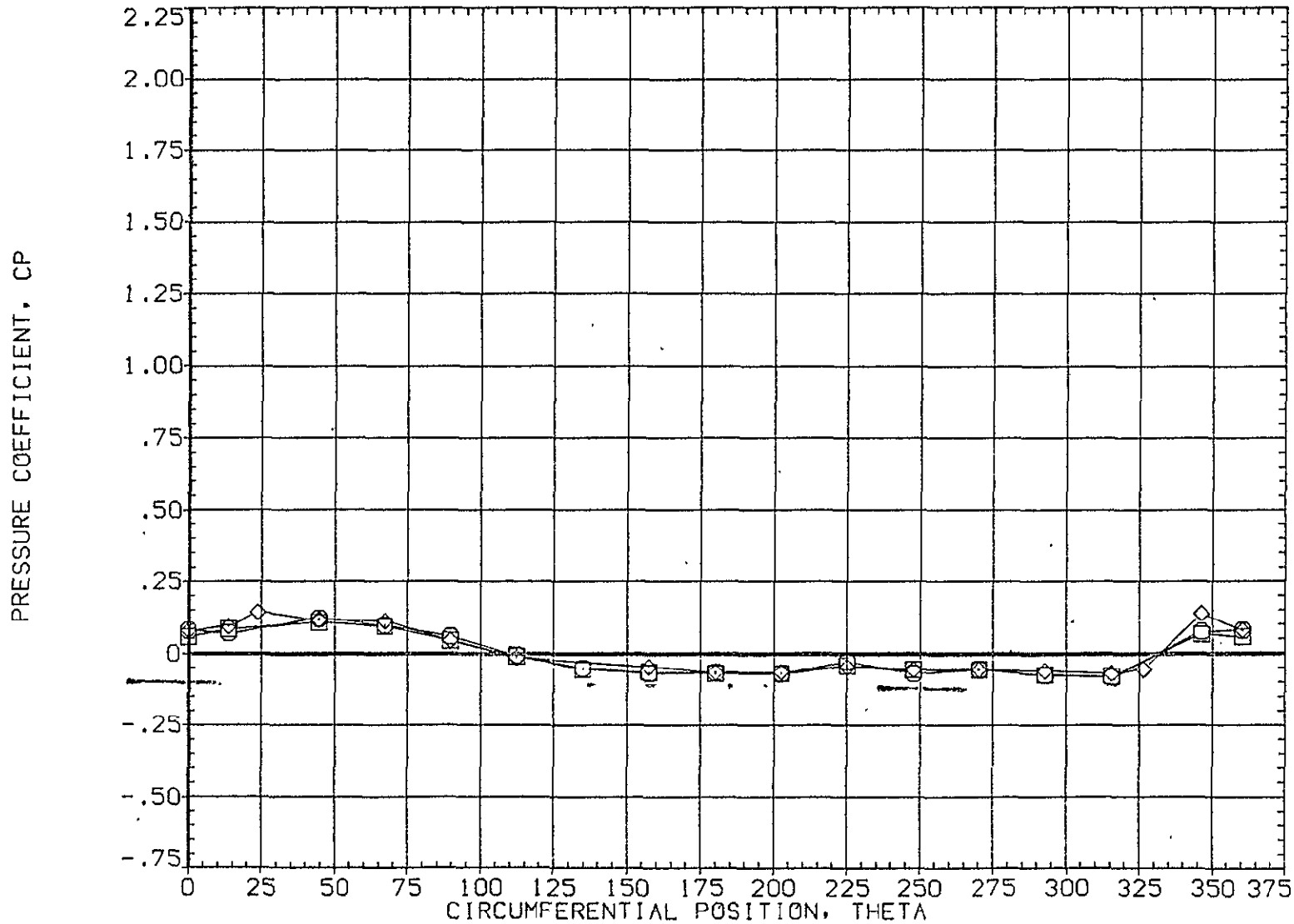

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

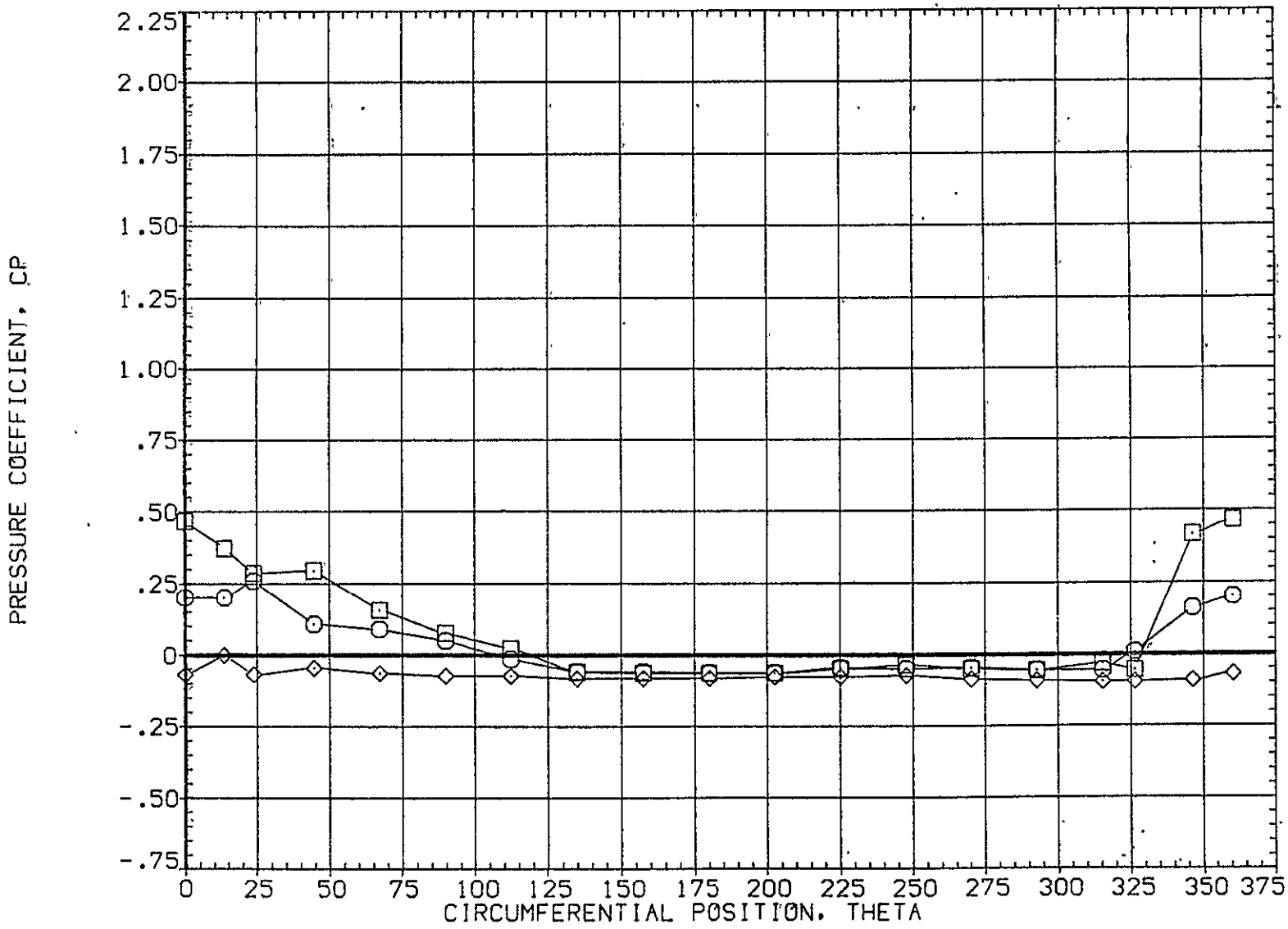

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

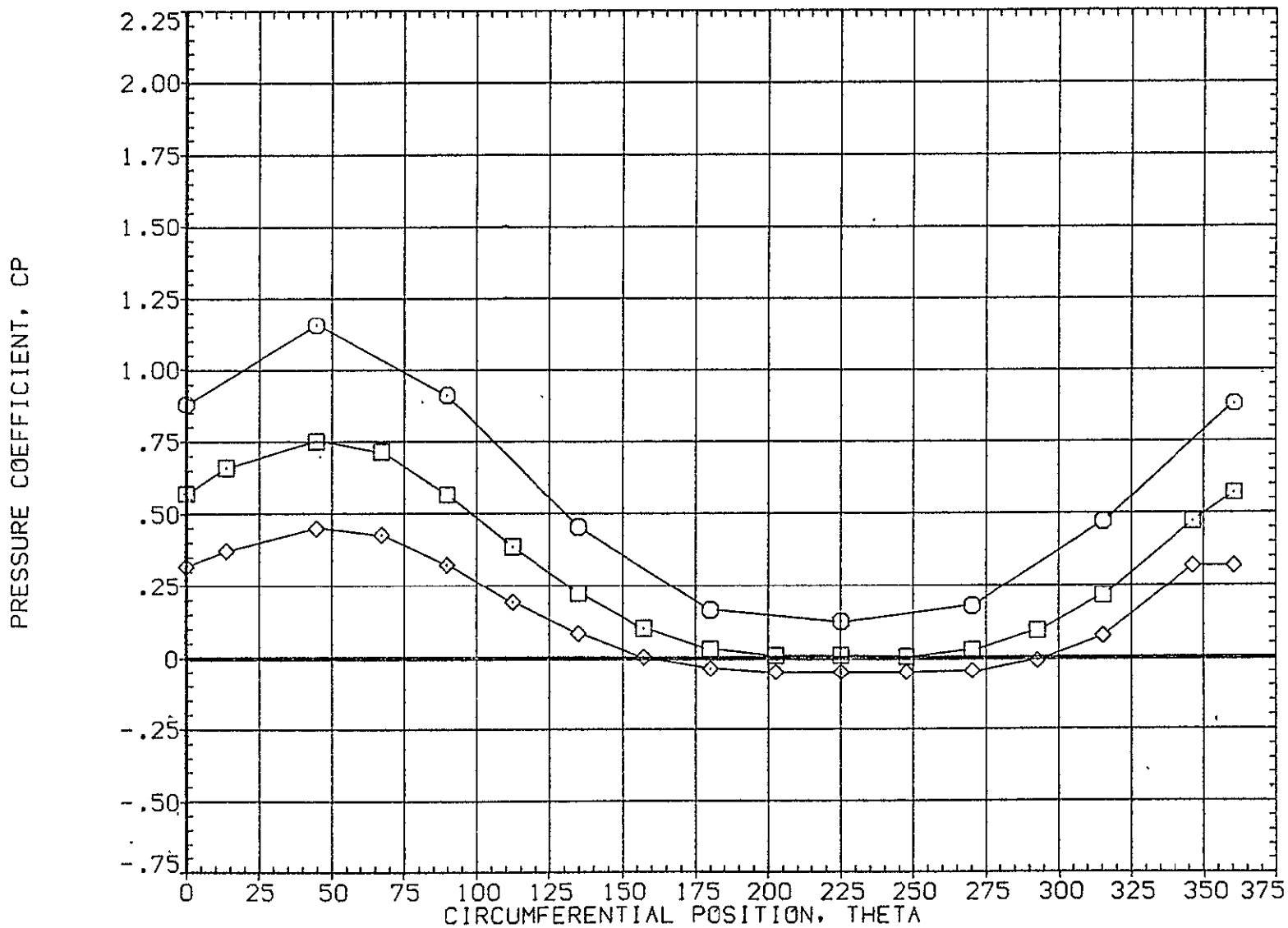

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

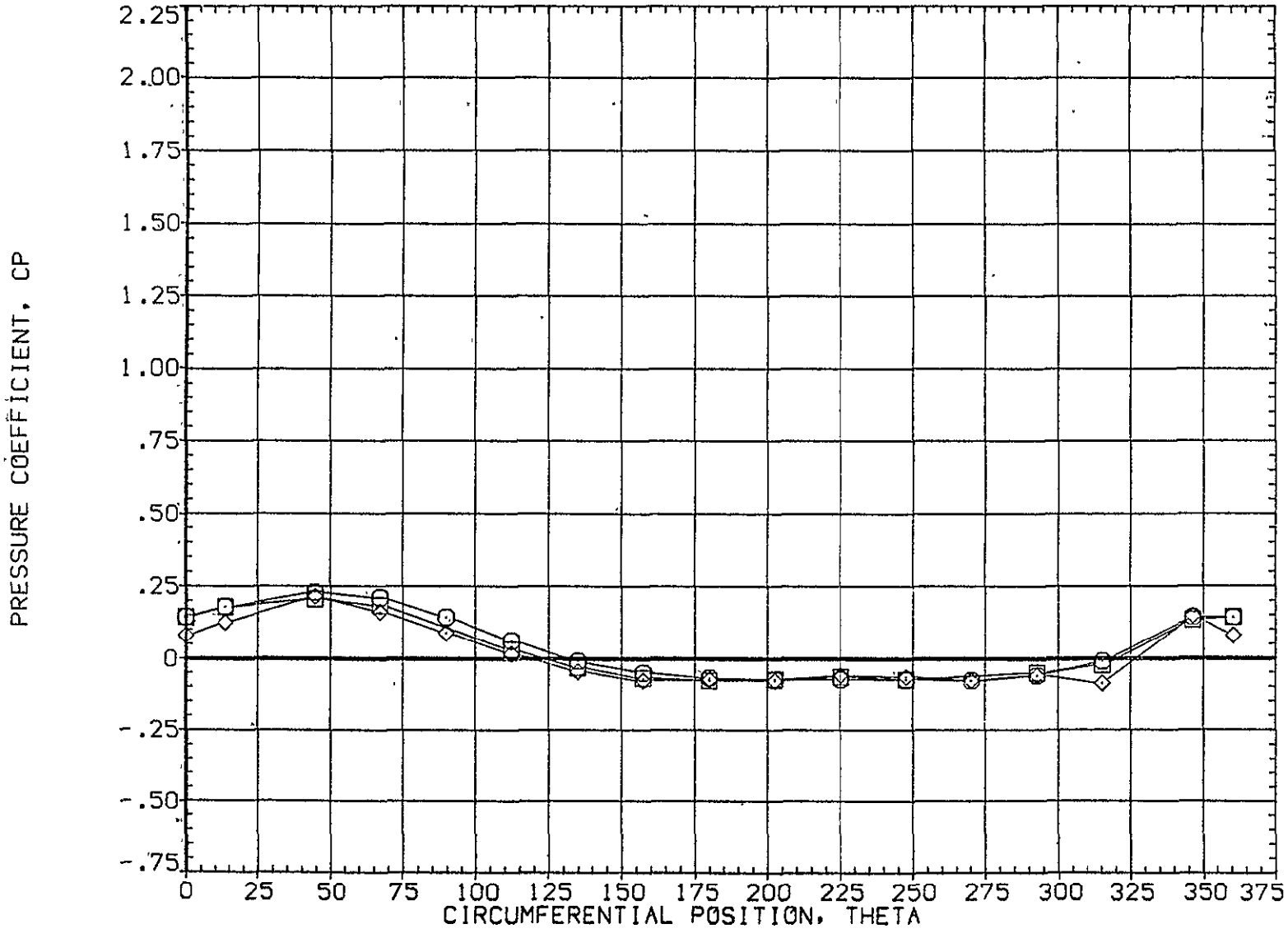

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

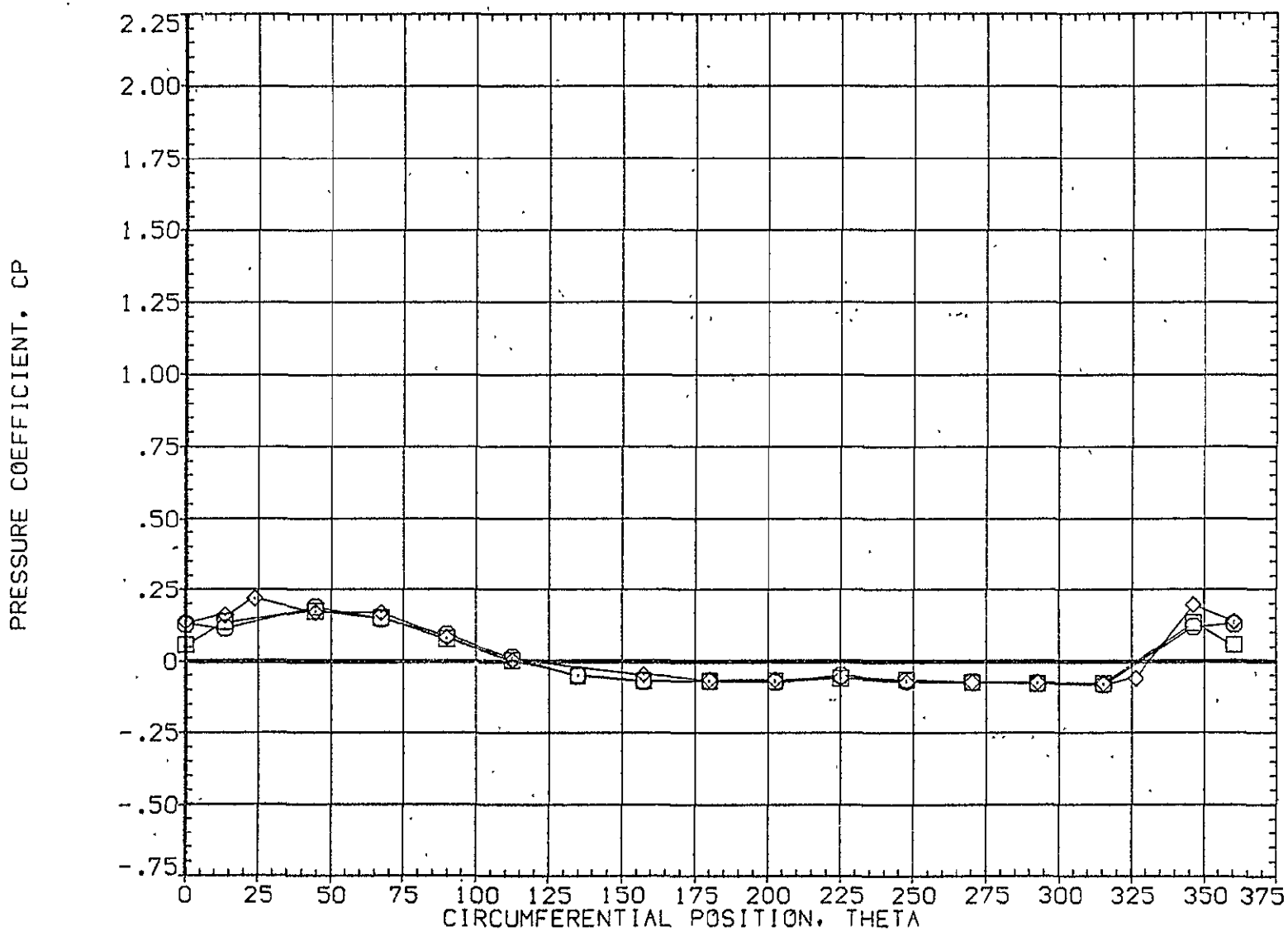

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

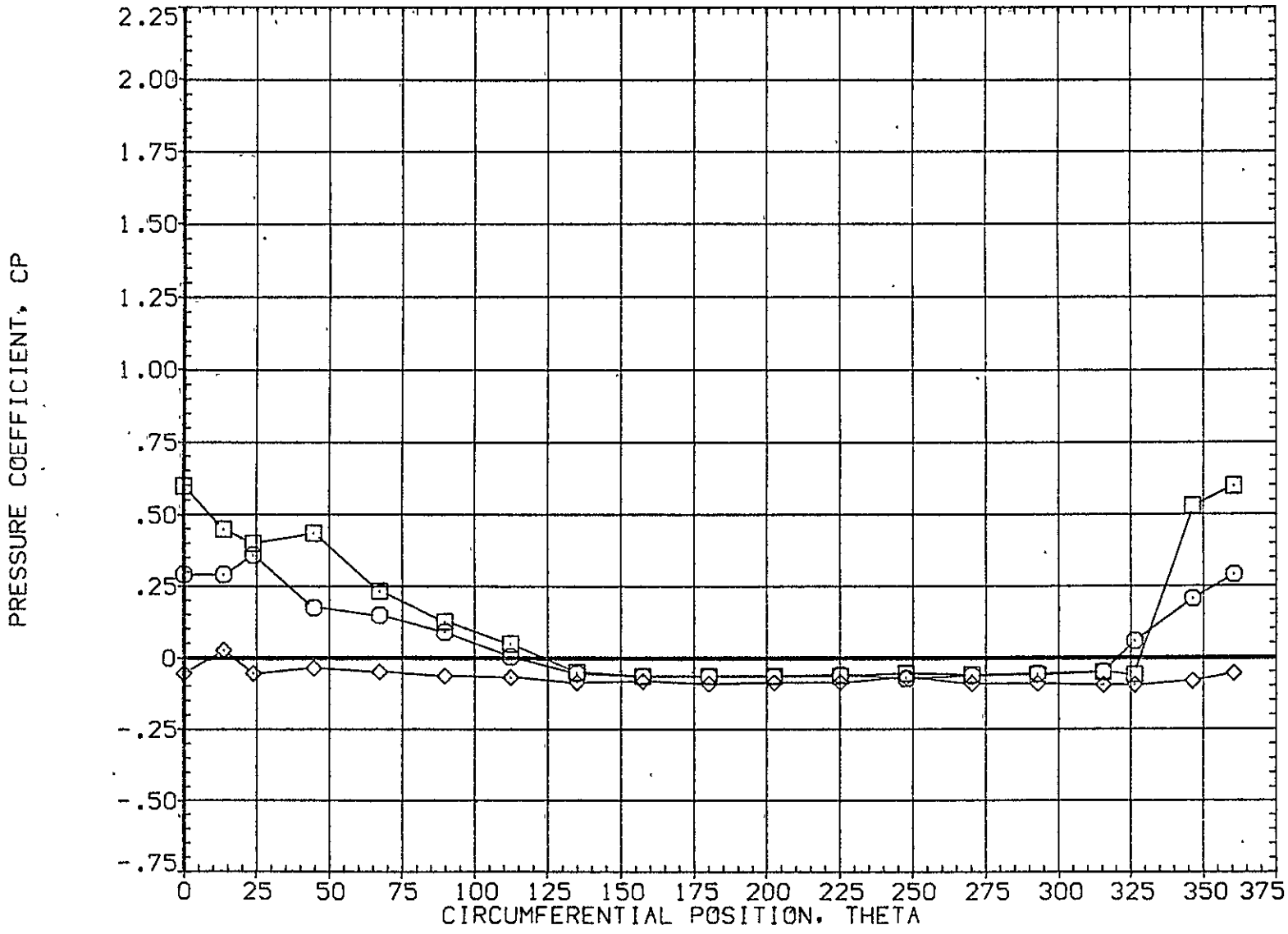

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

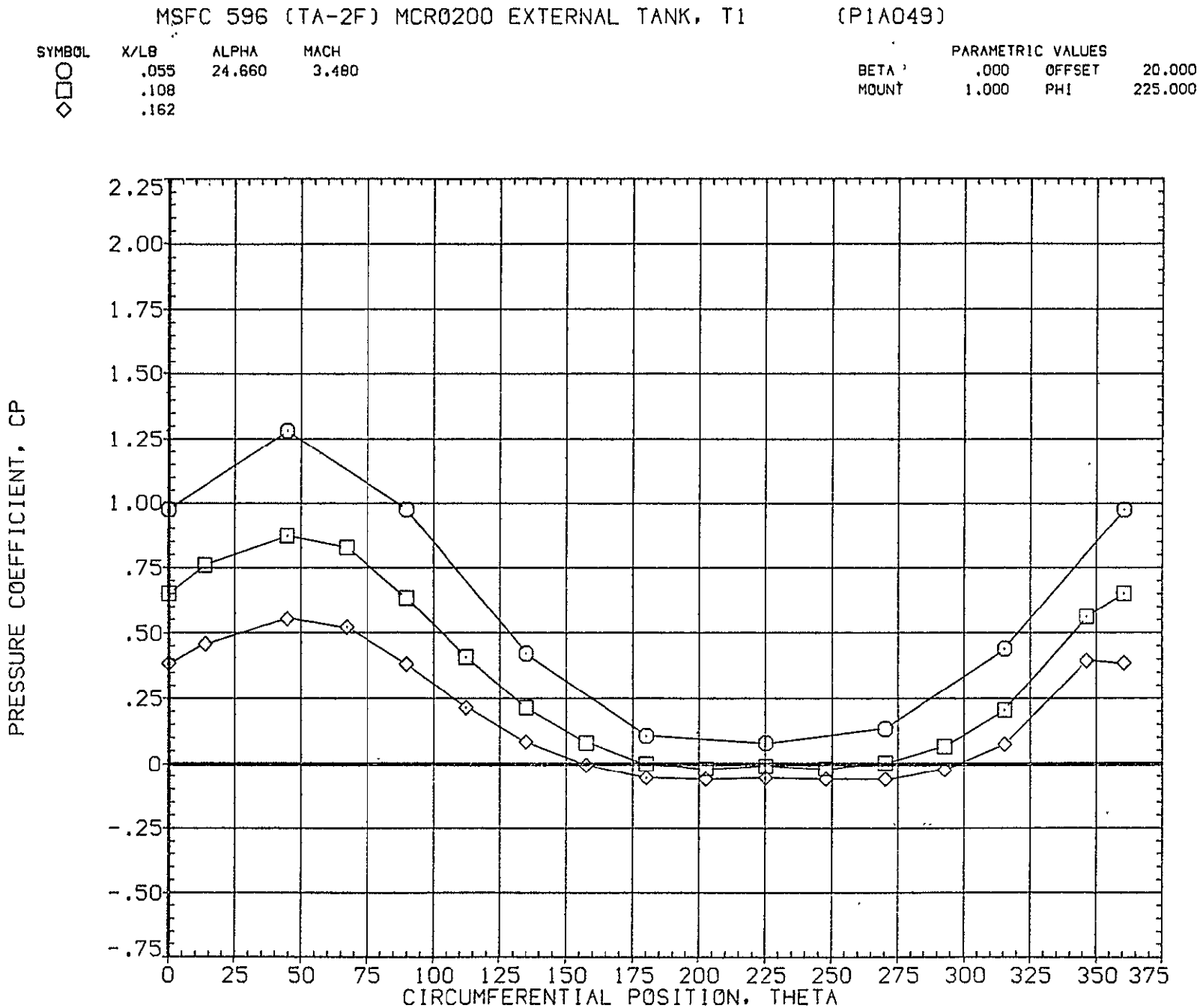

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

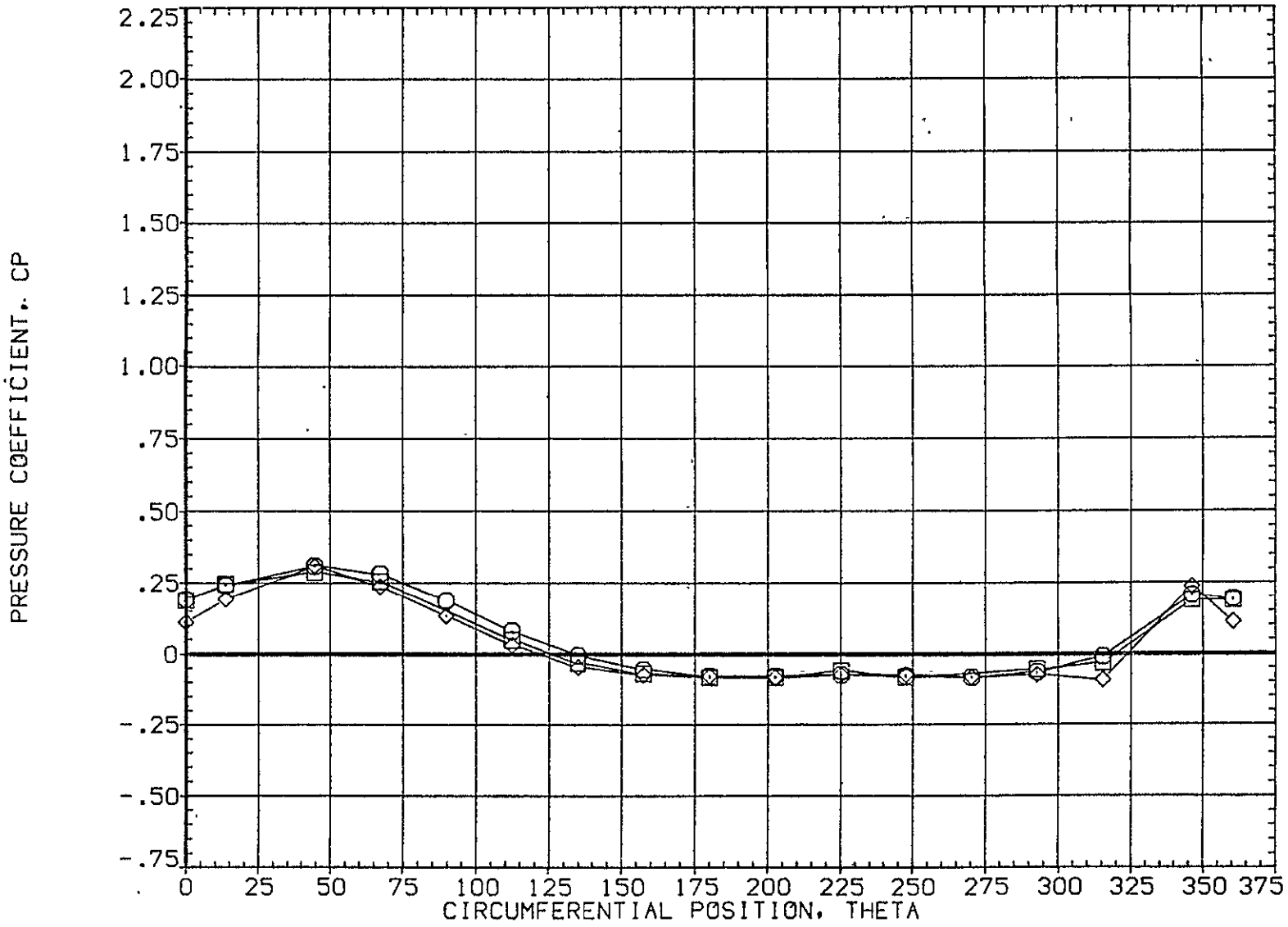

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

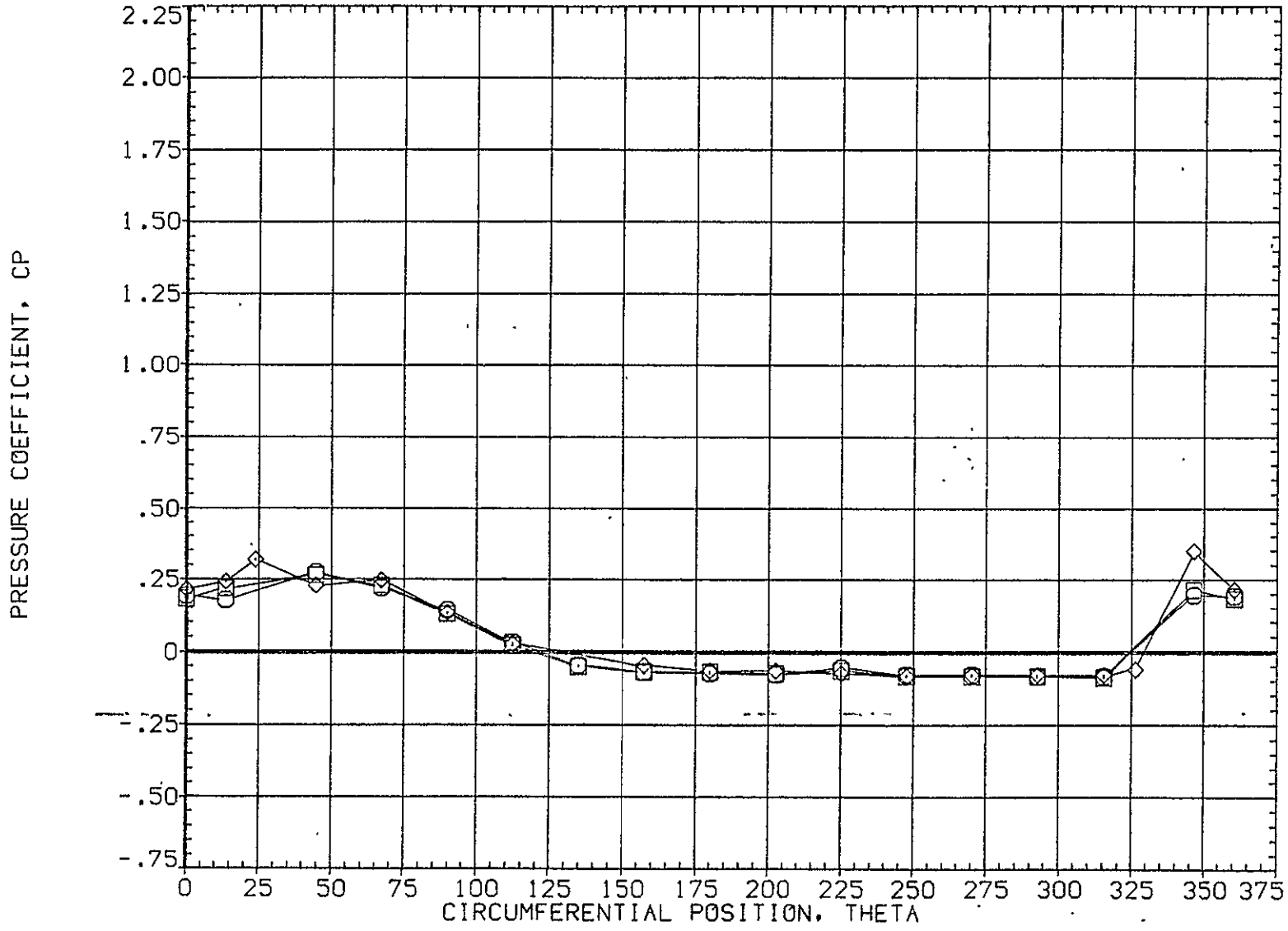

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

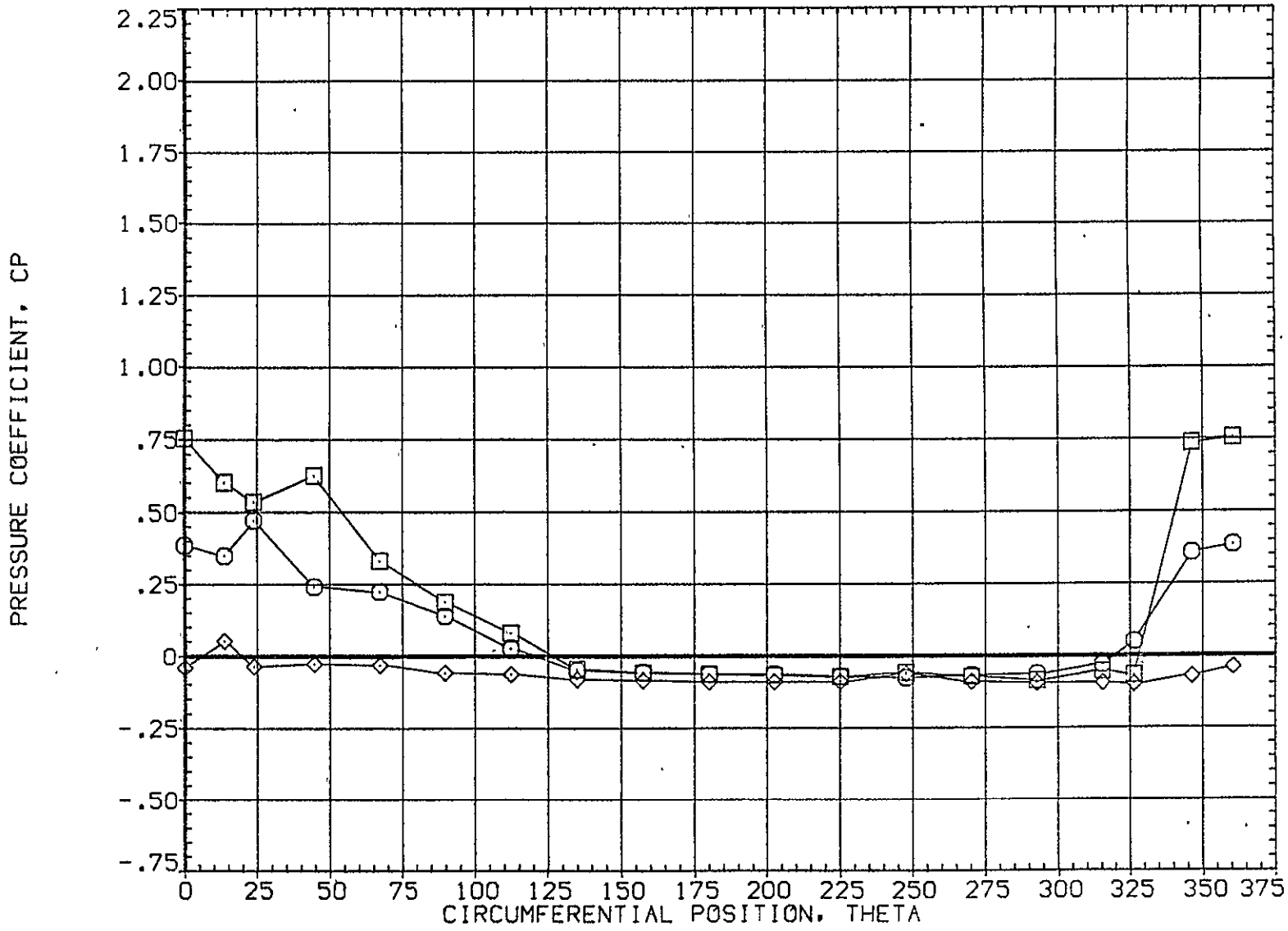

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.720	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

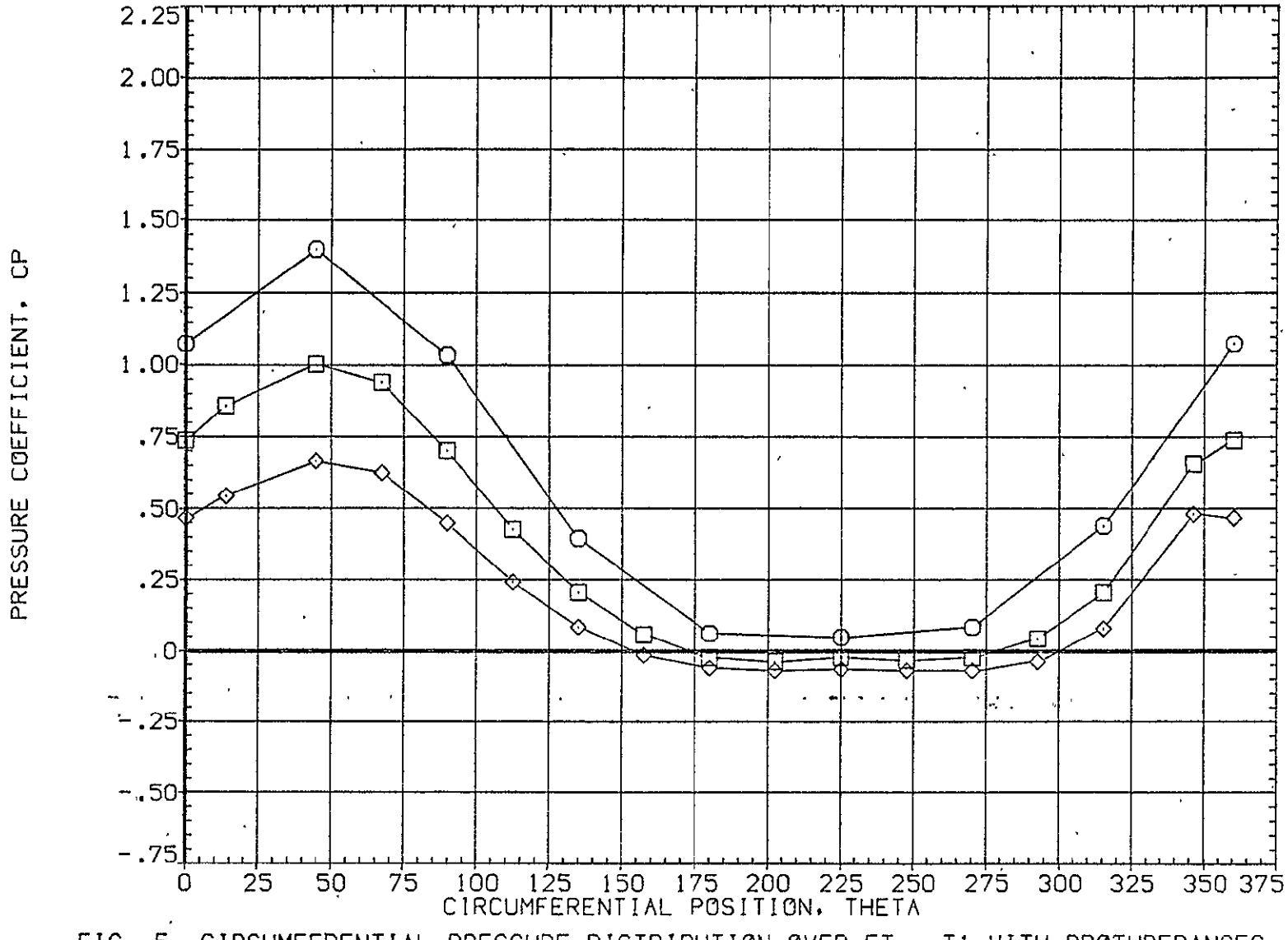

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.720	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

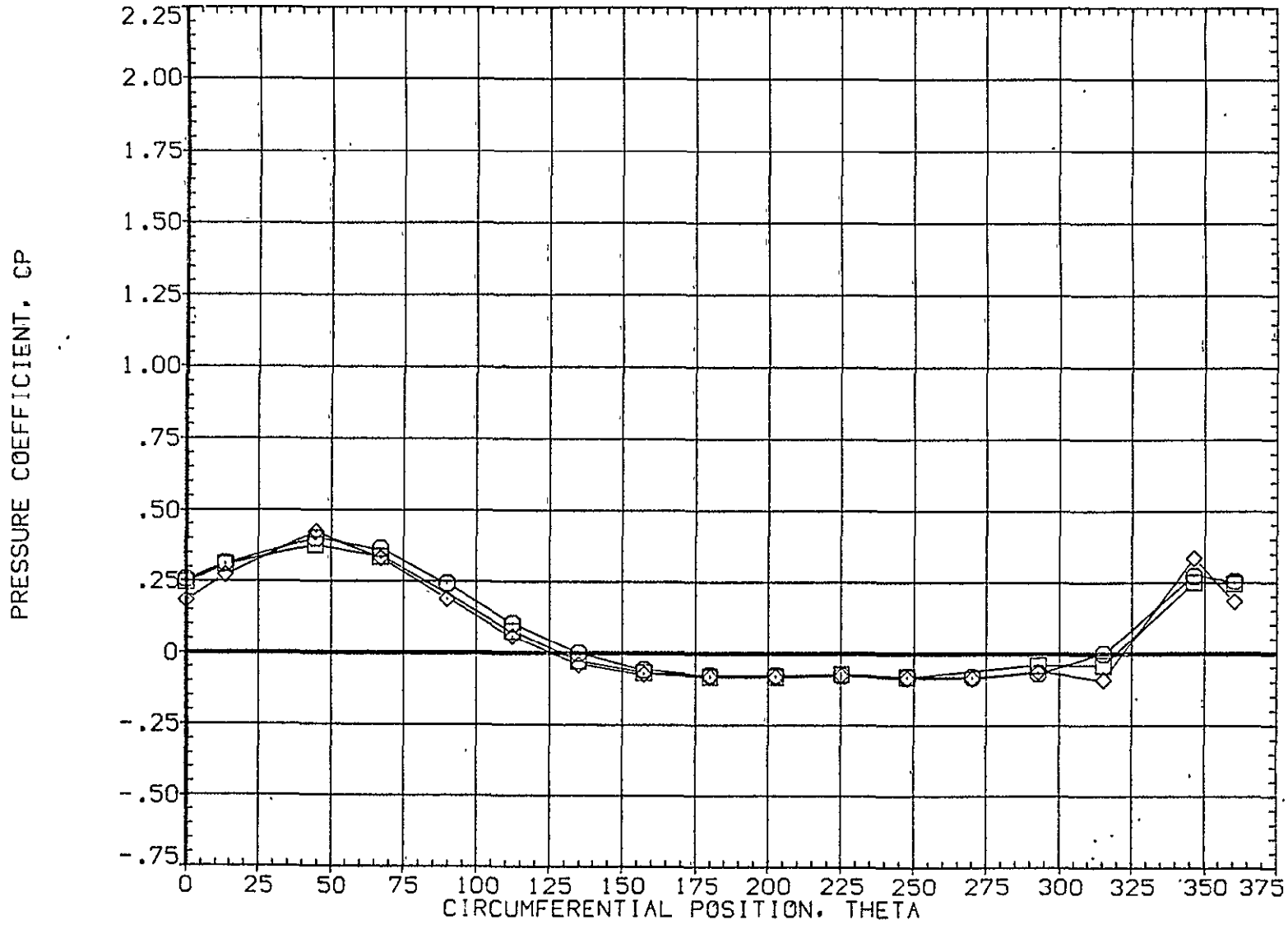

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.720	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

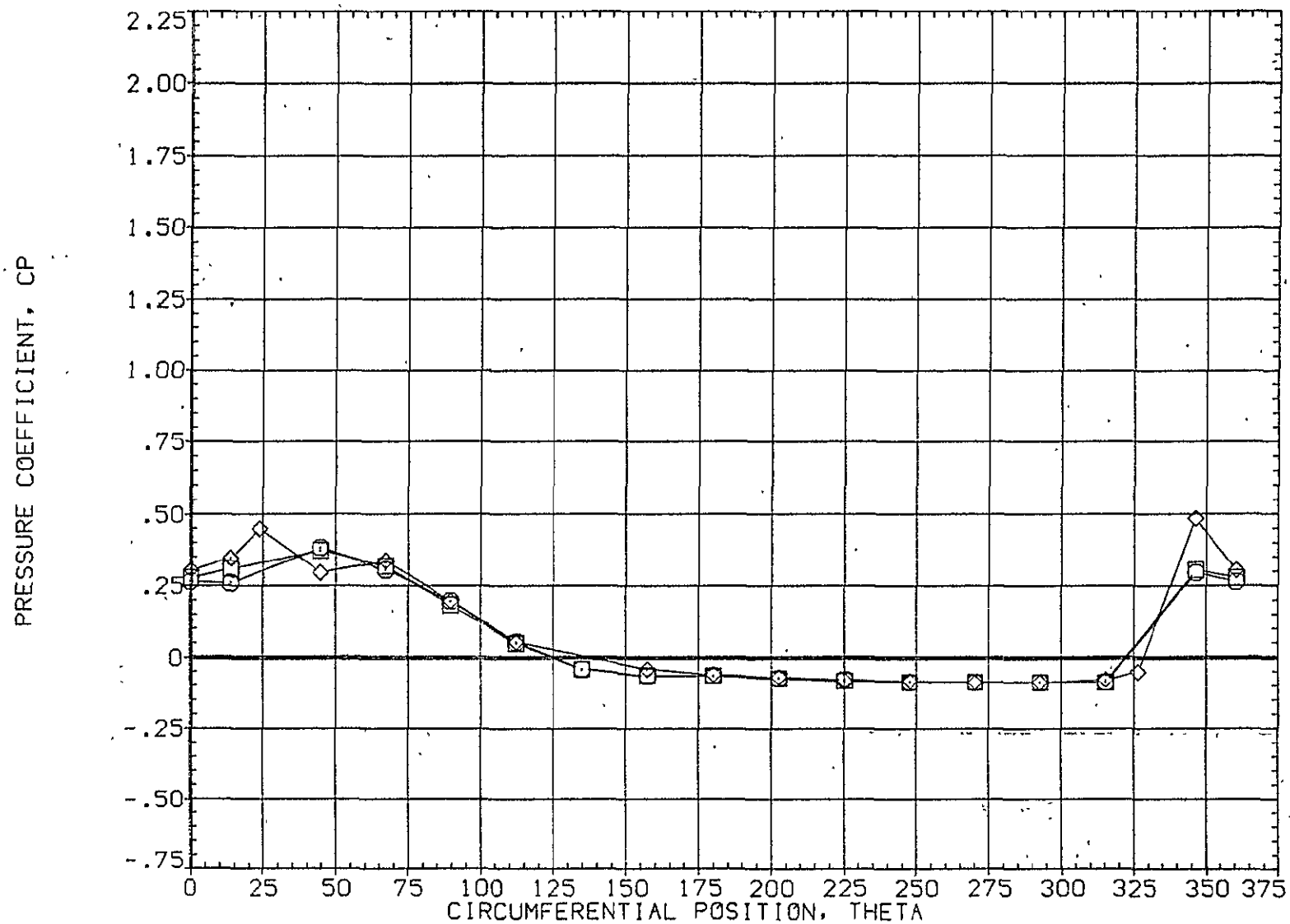

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.720	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

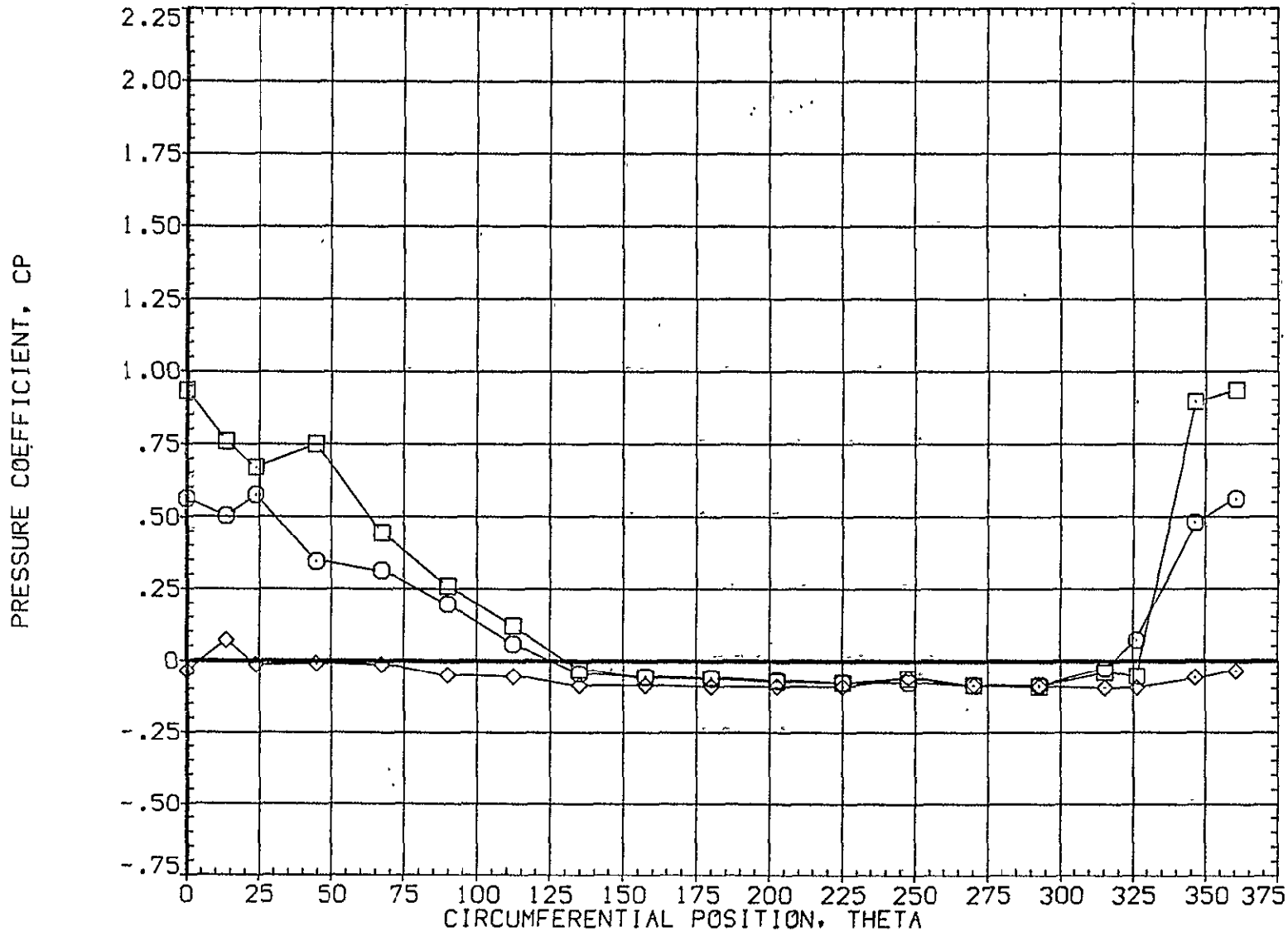

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

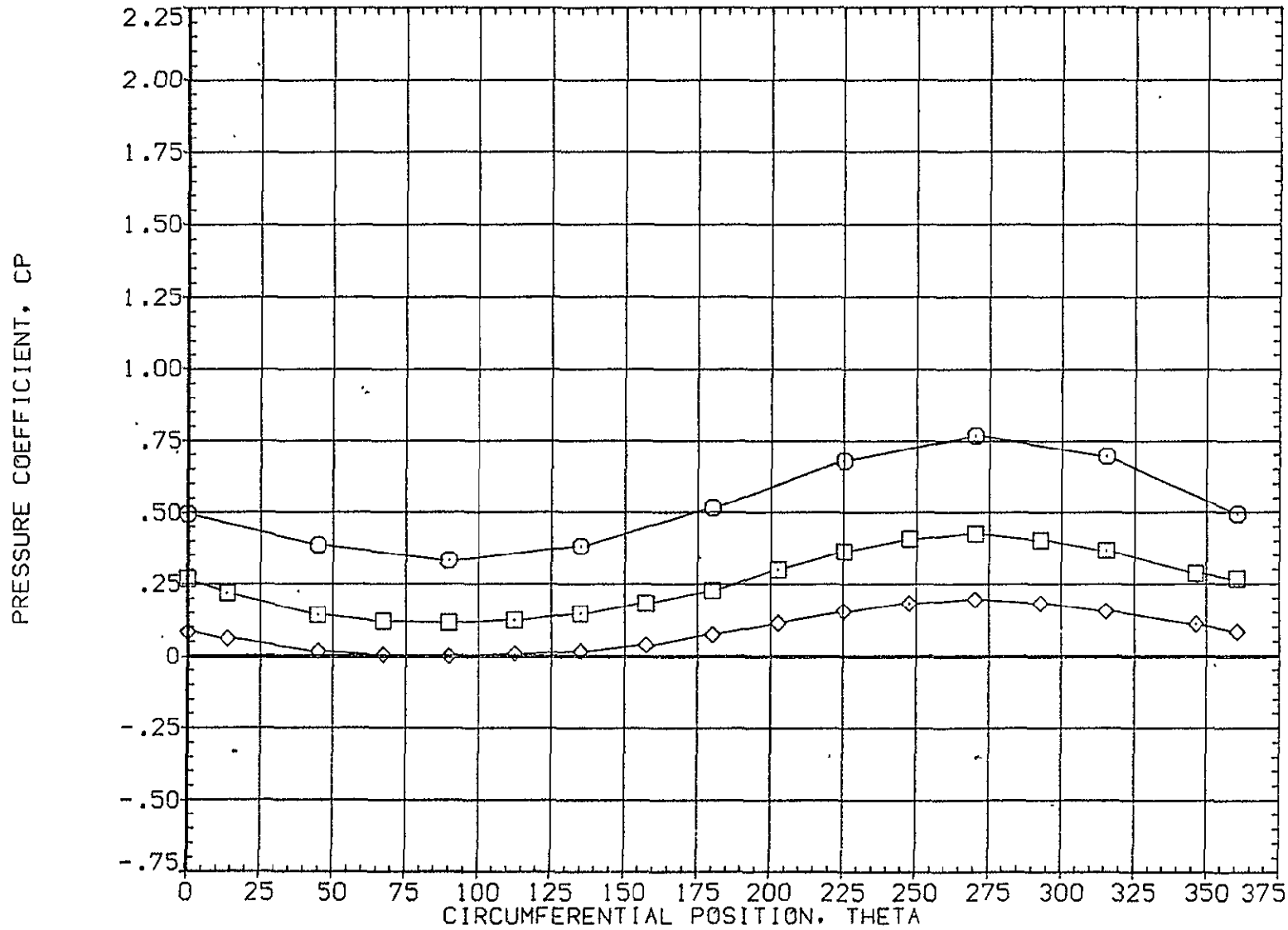

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

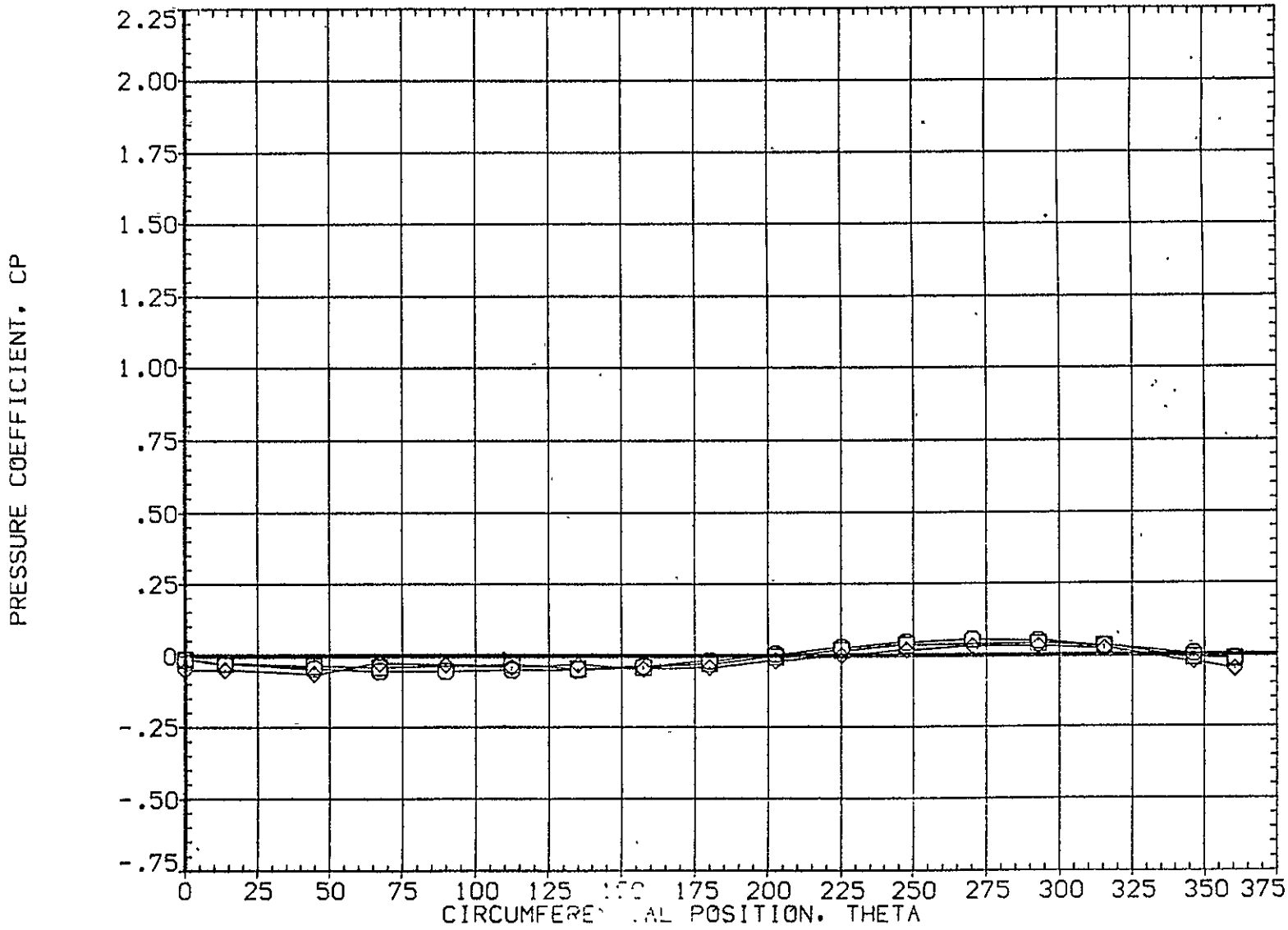

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

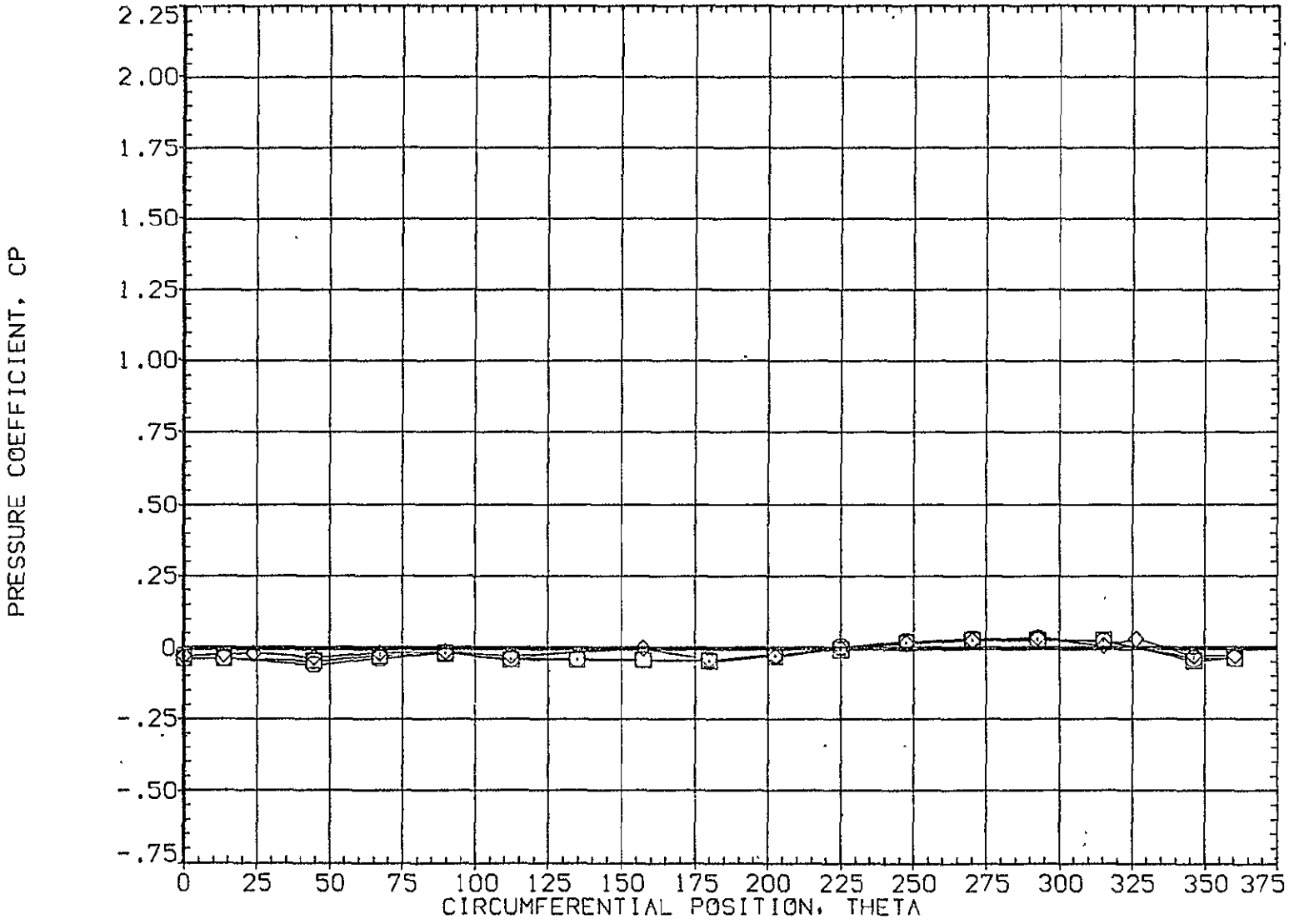

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

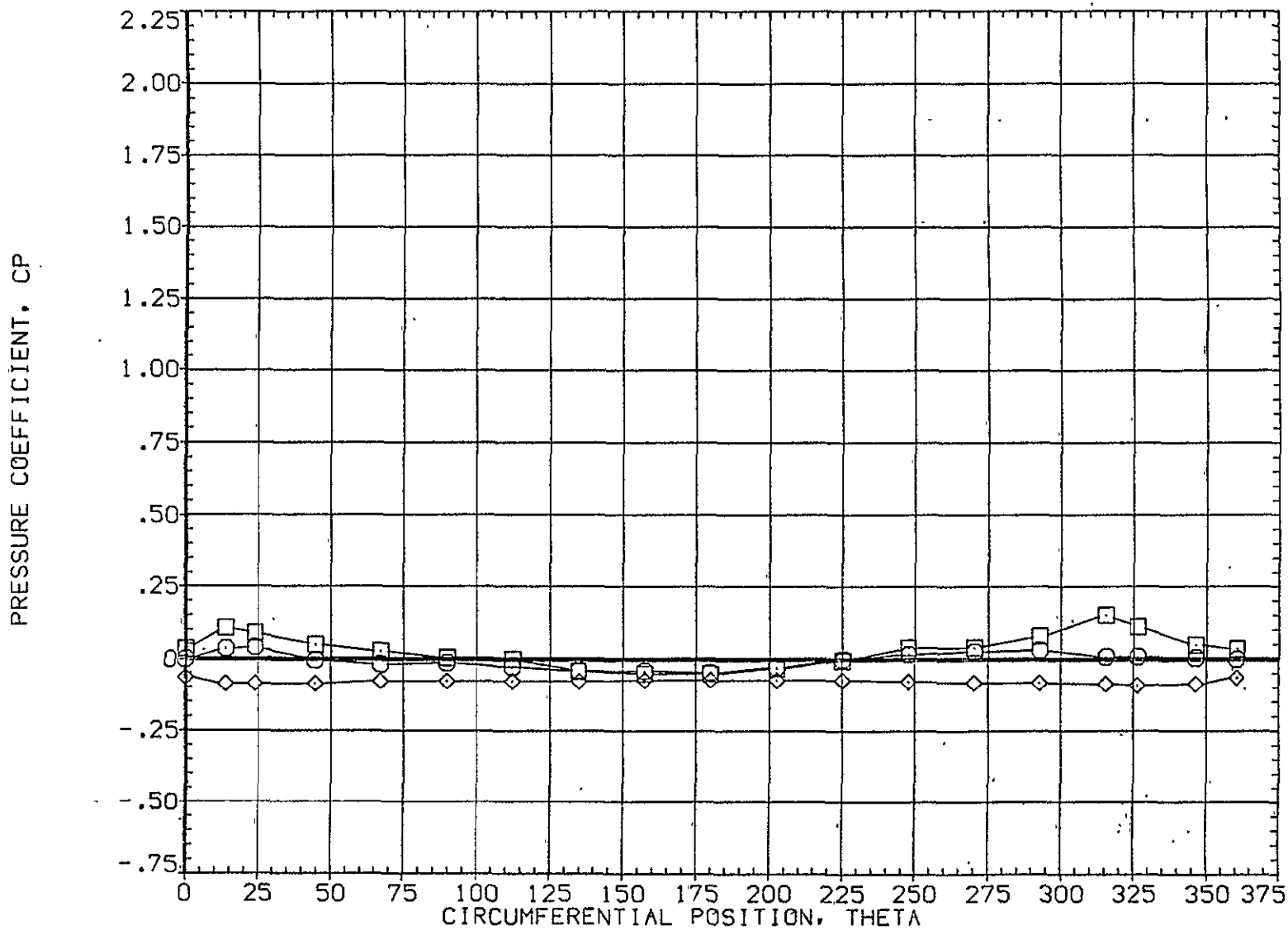

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

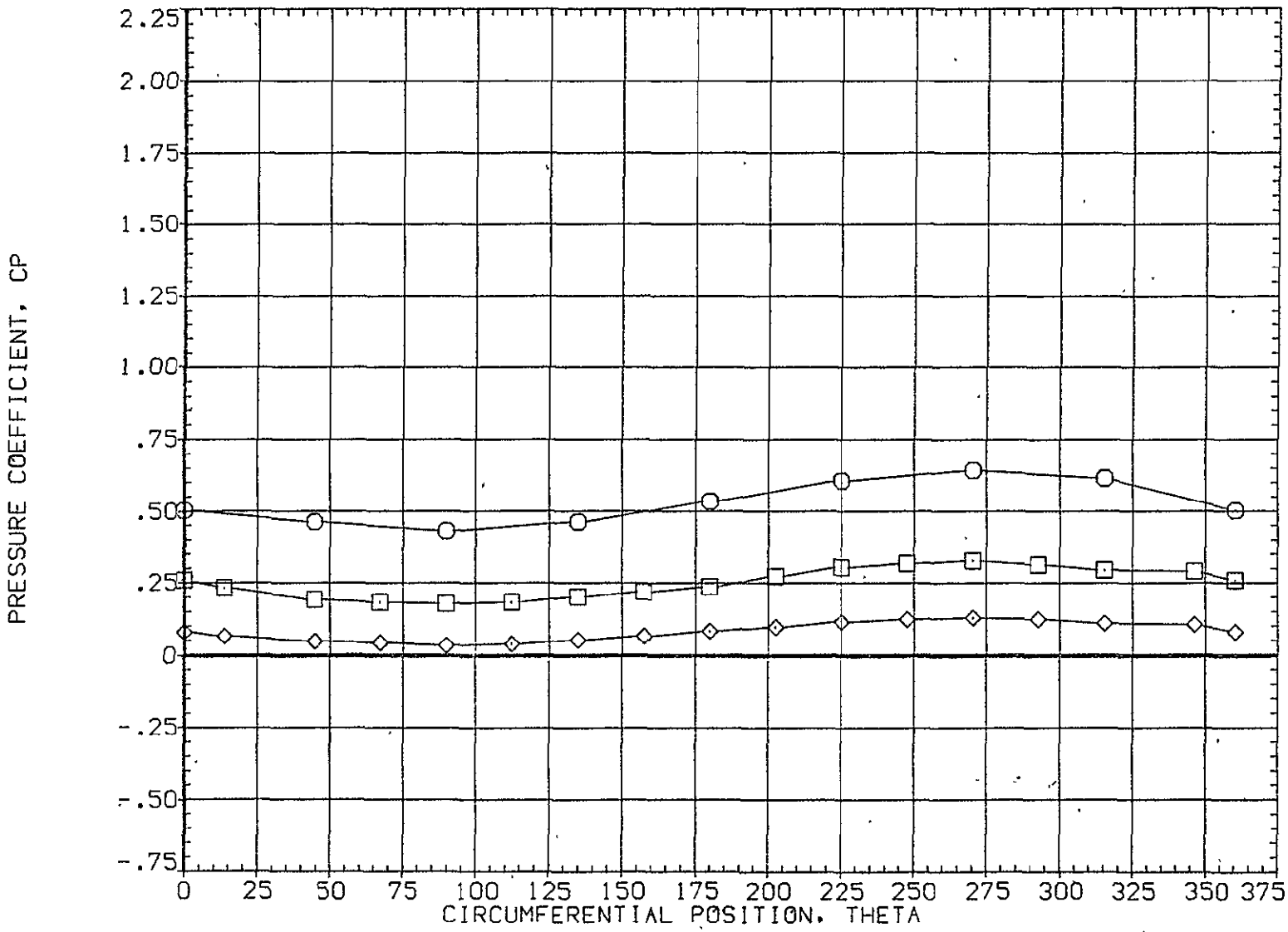

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

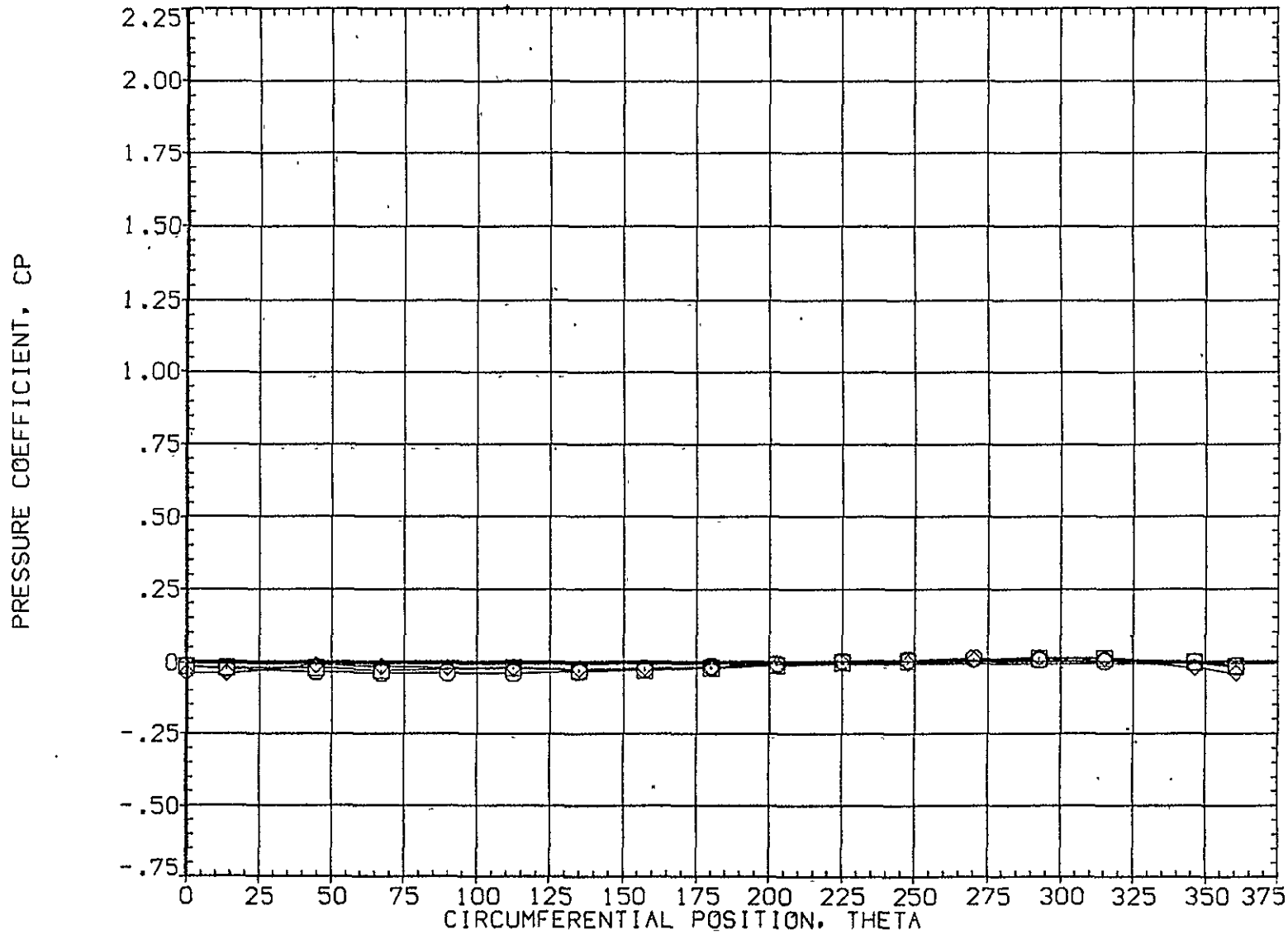

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

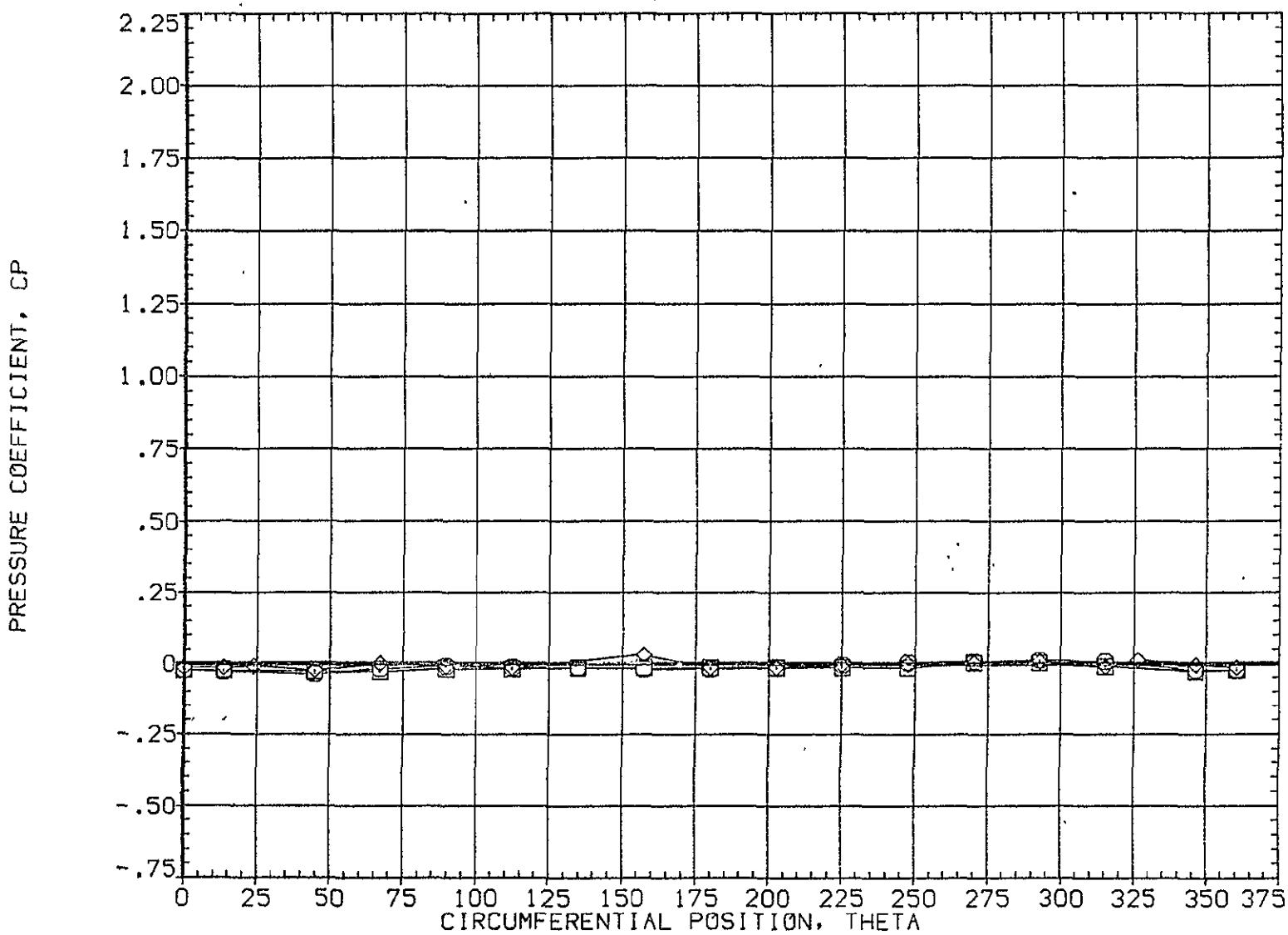

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

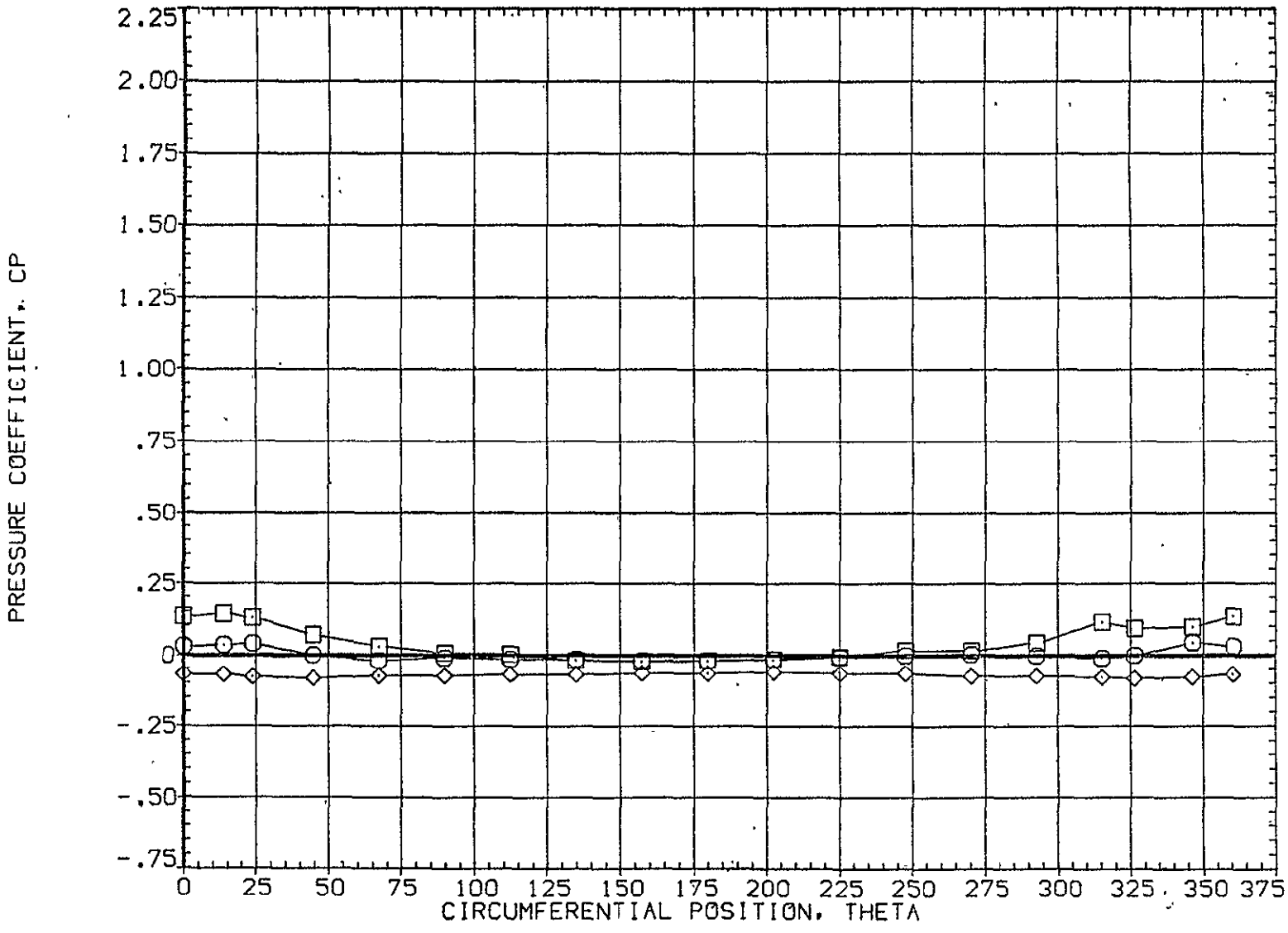

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

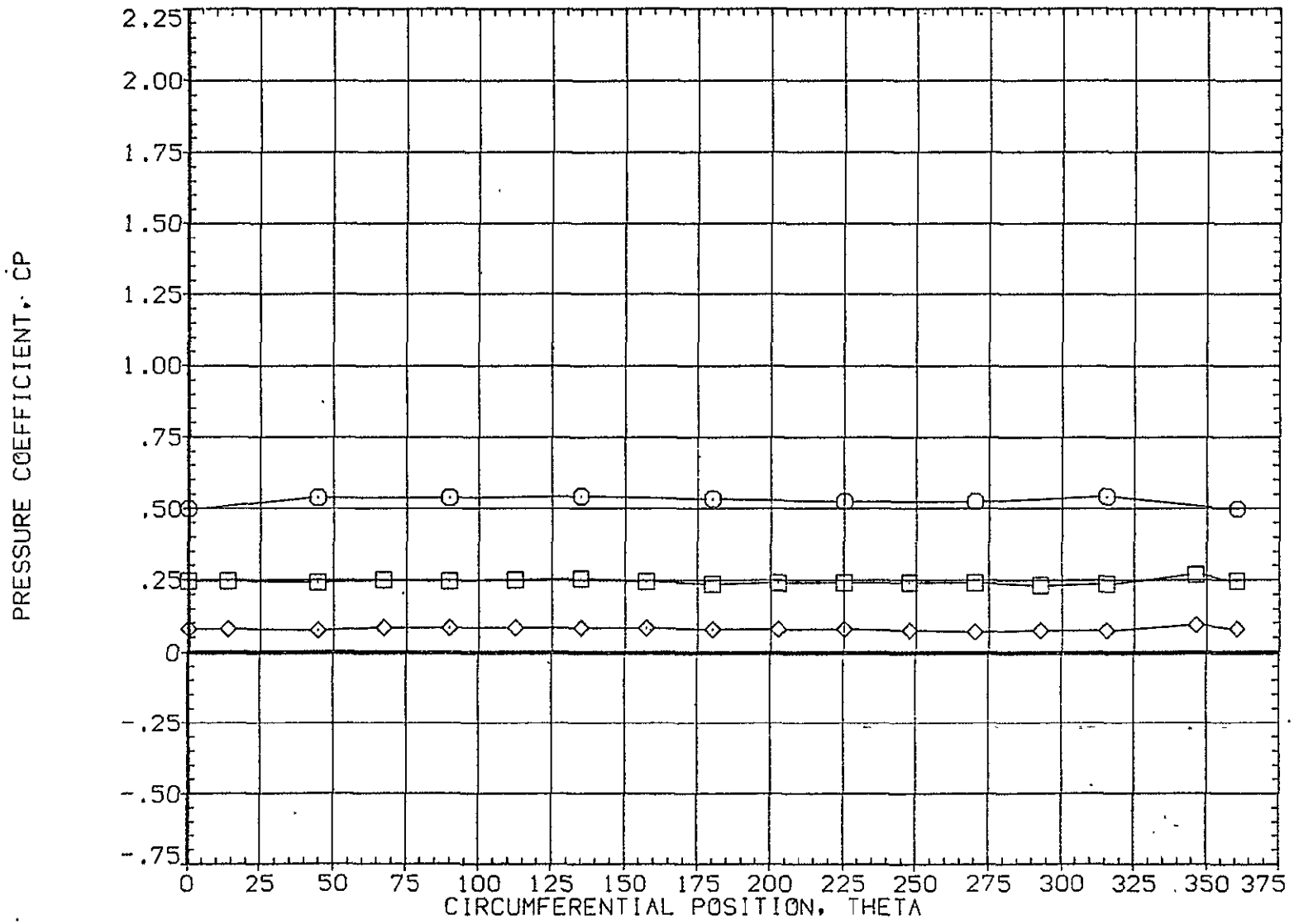

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

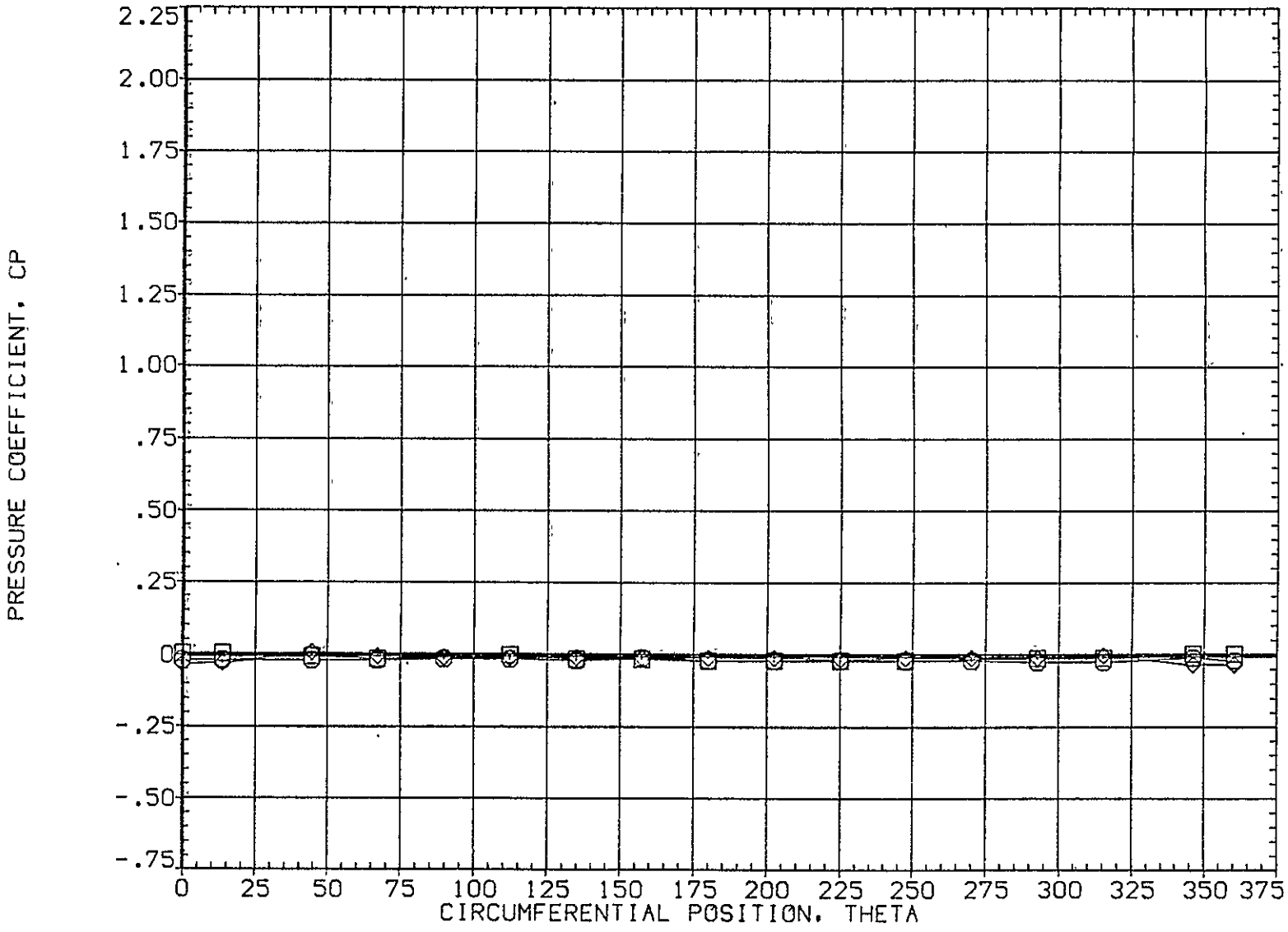

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

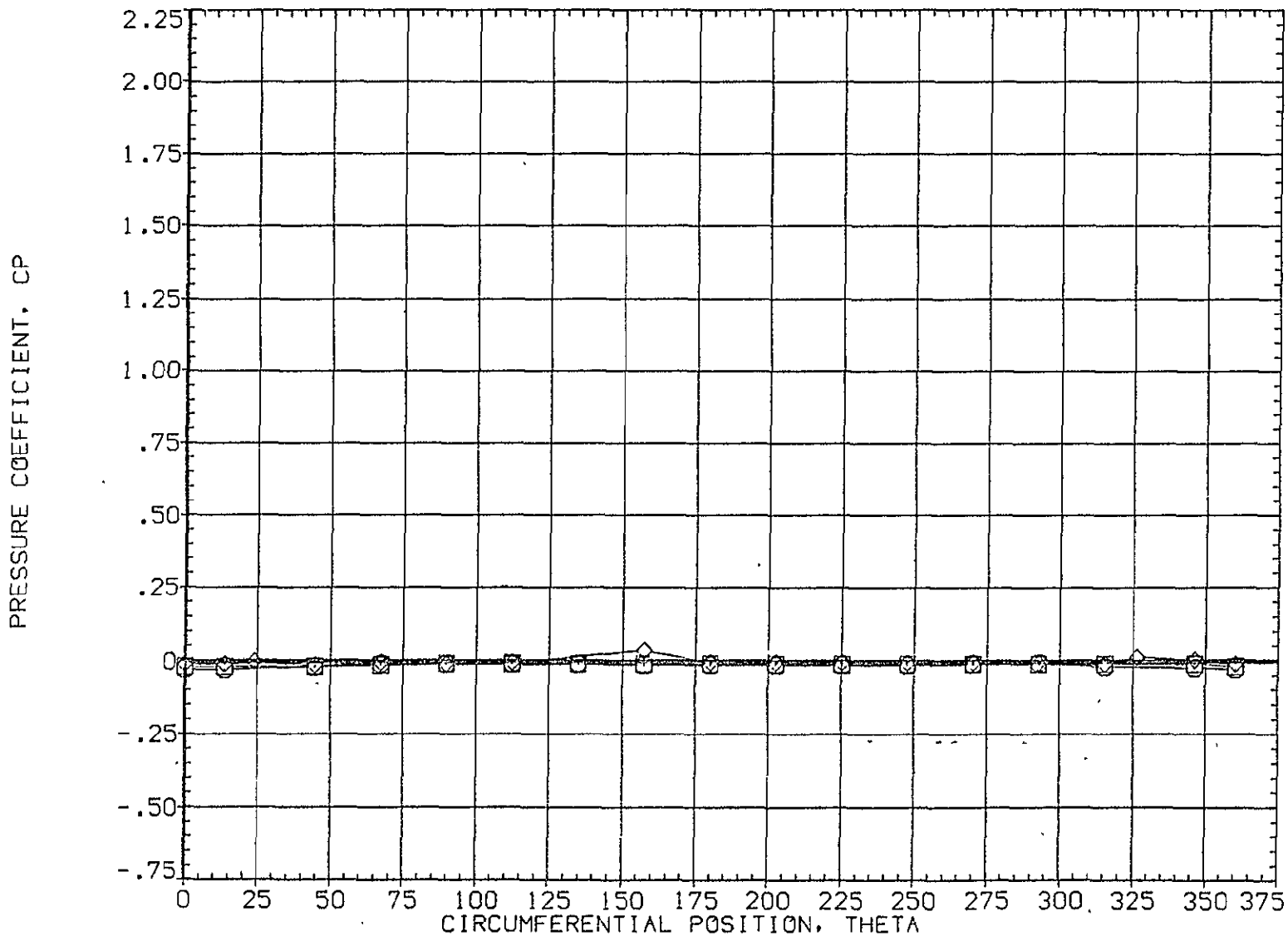

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

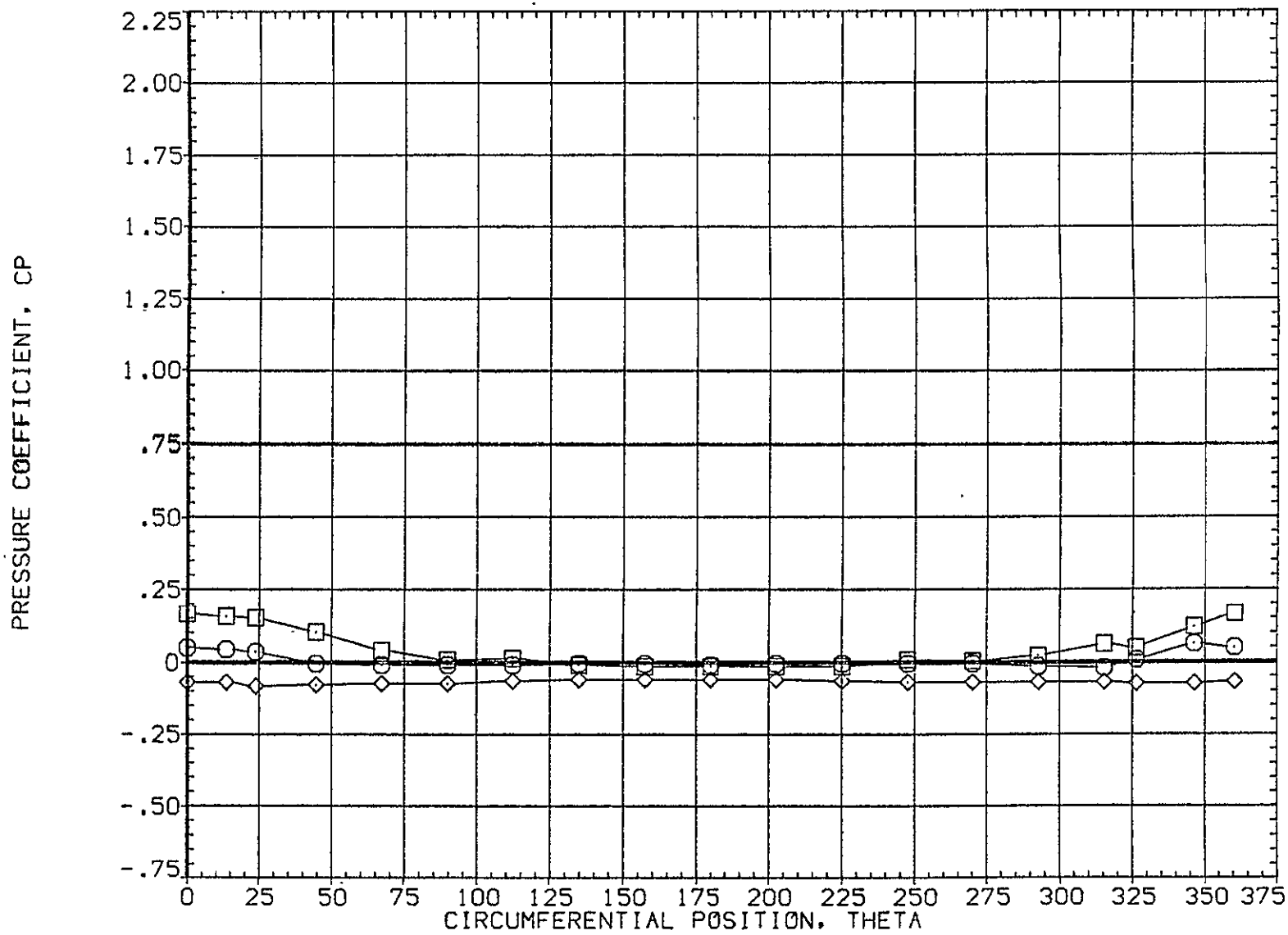

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.790	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

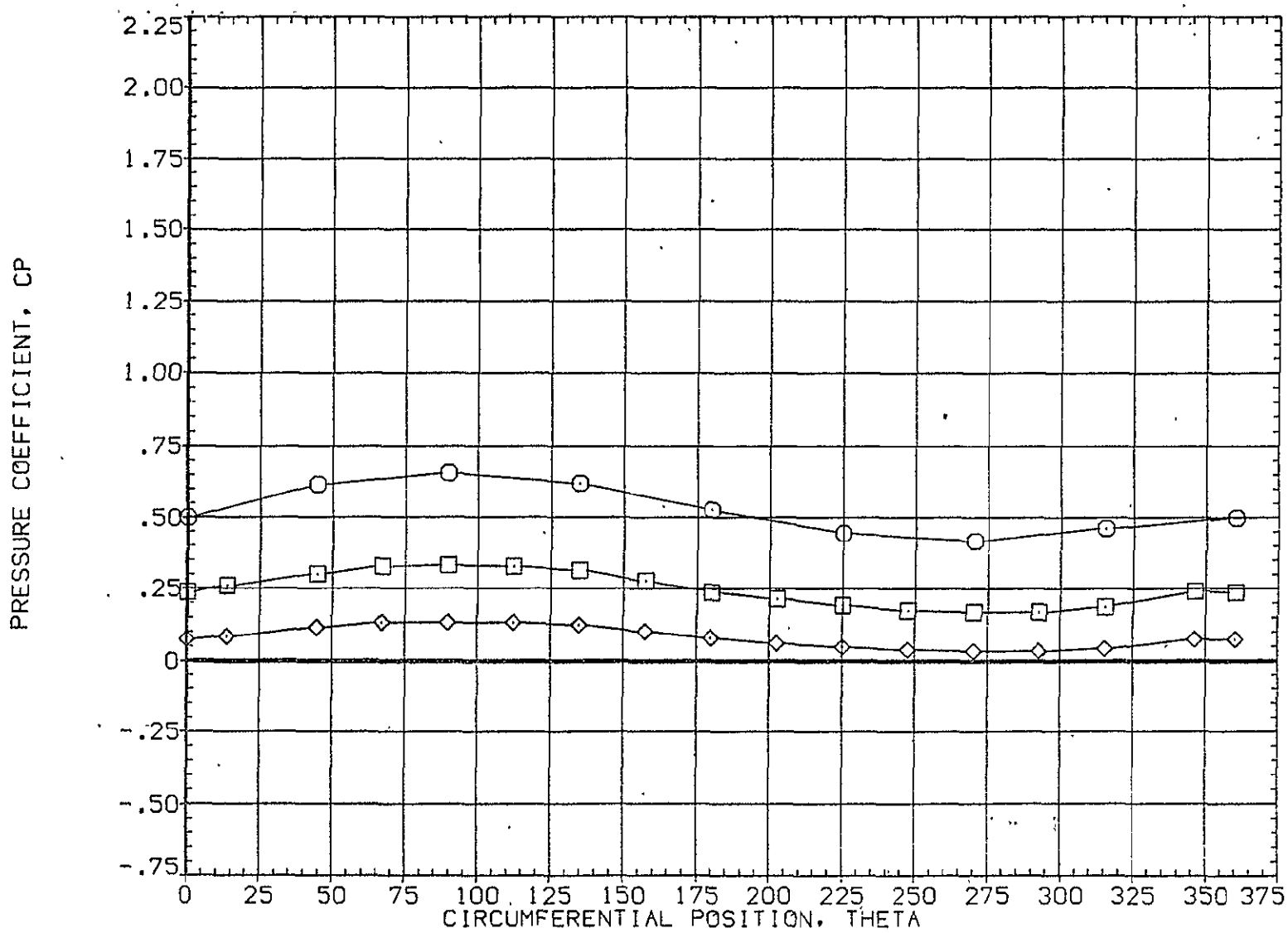

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.790	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

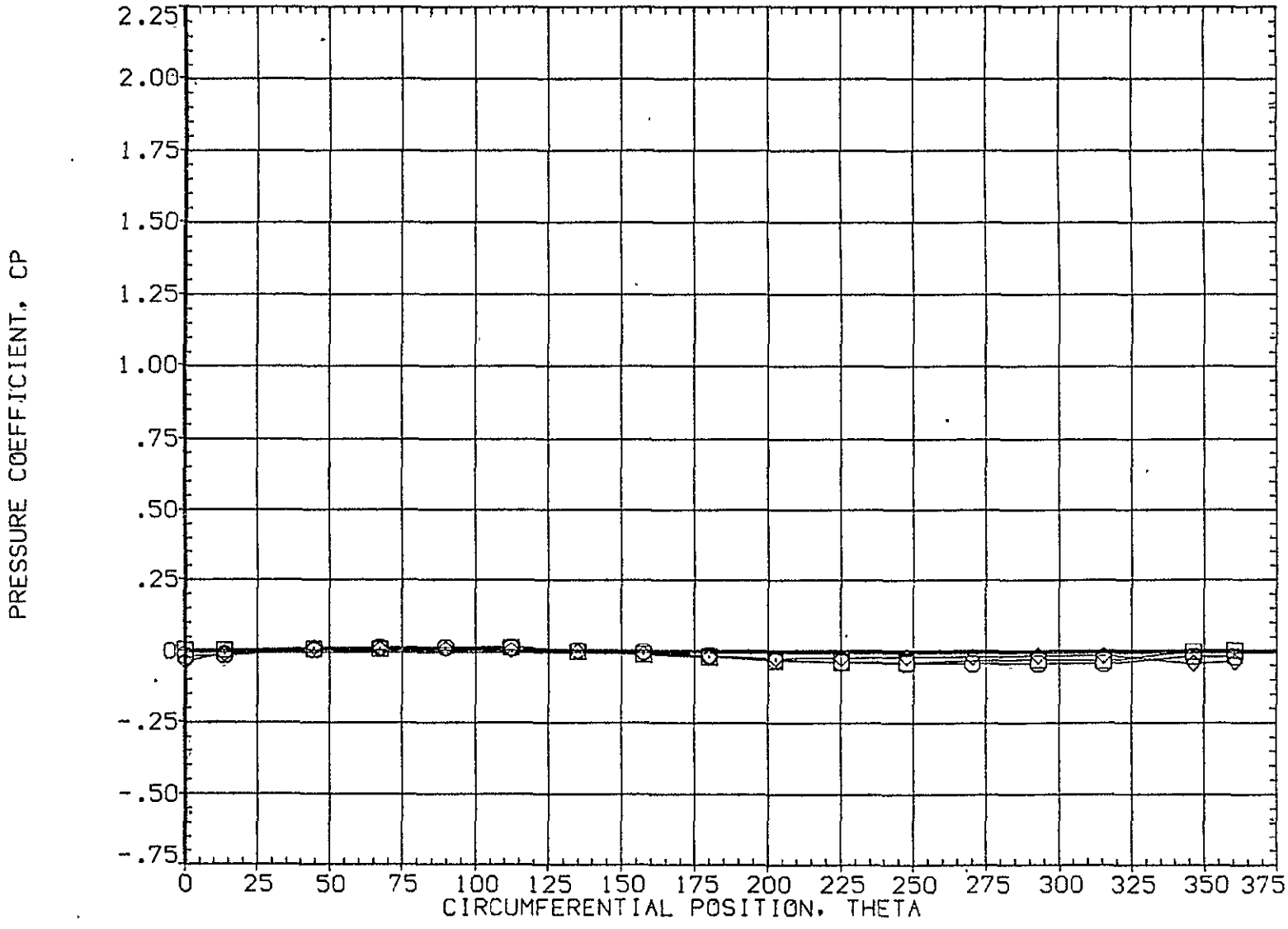

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.790	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

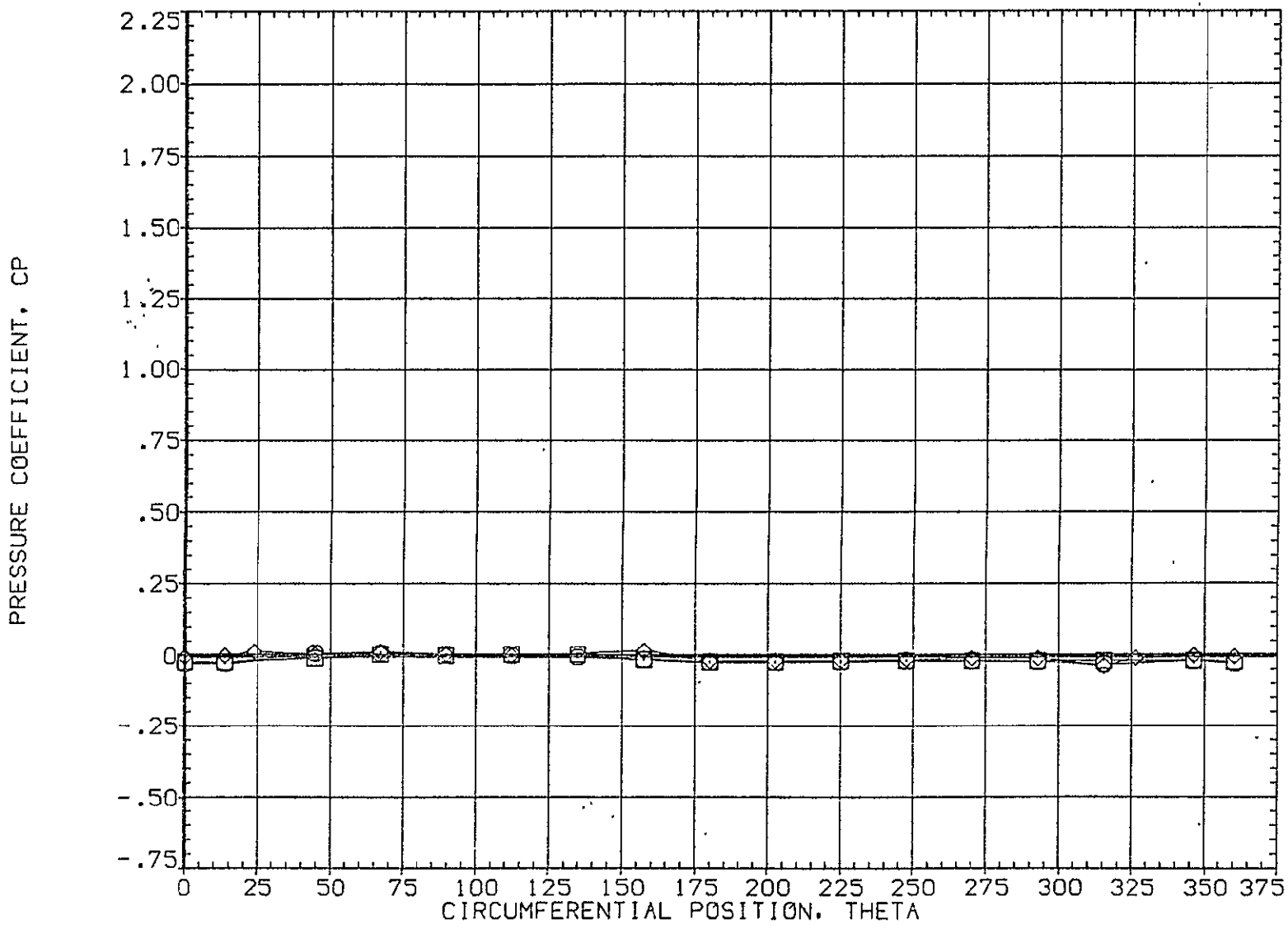

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.790	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

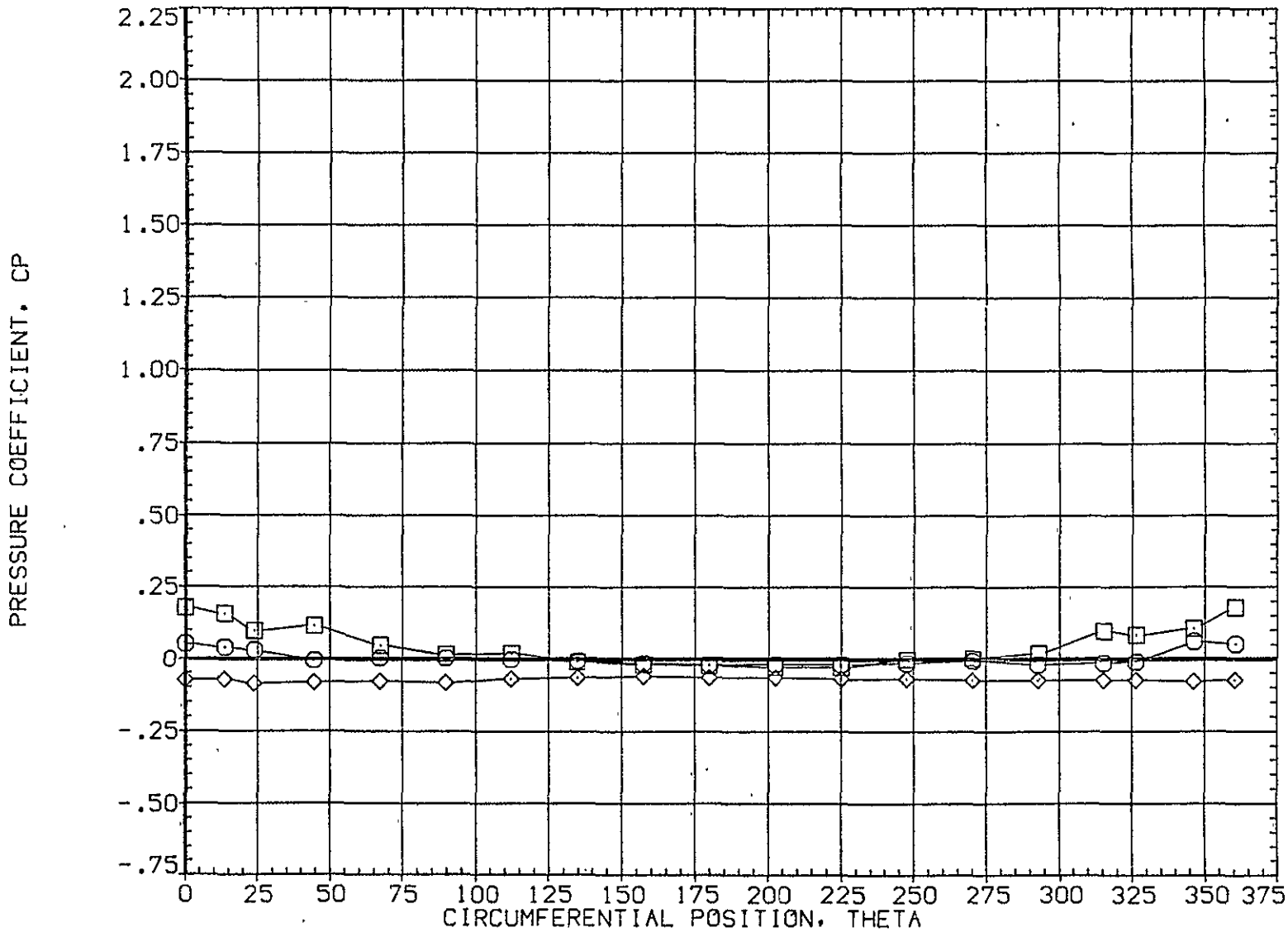

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

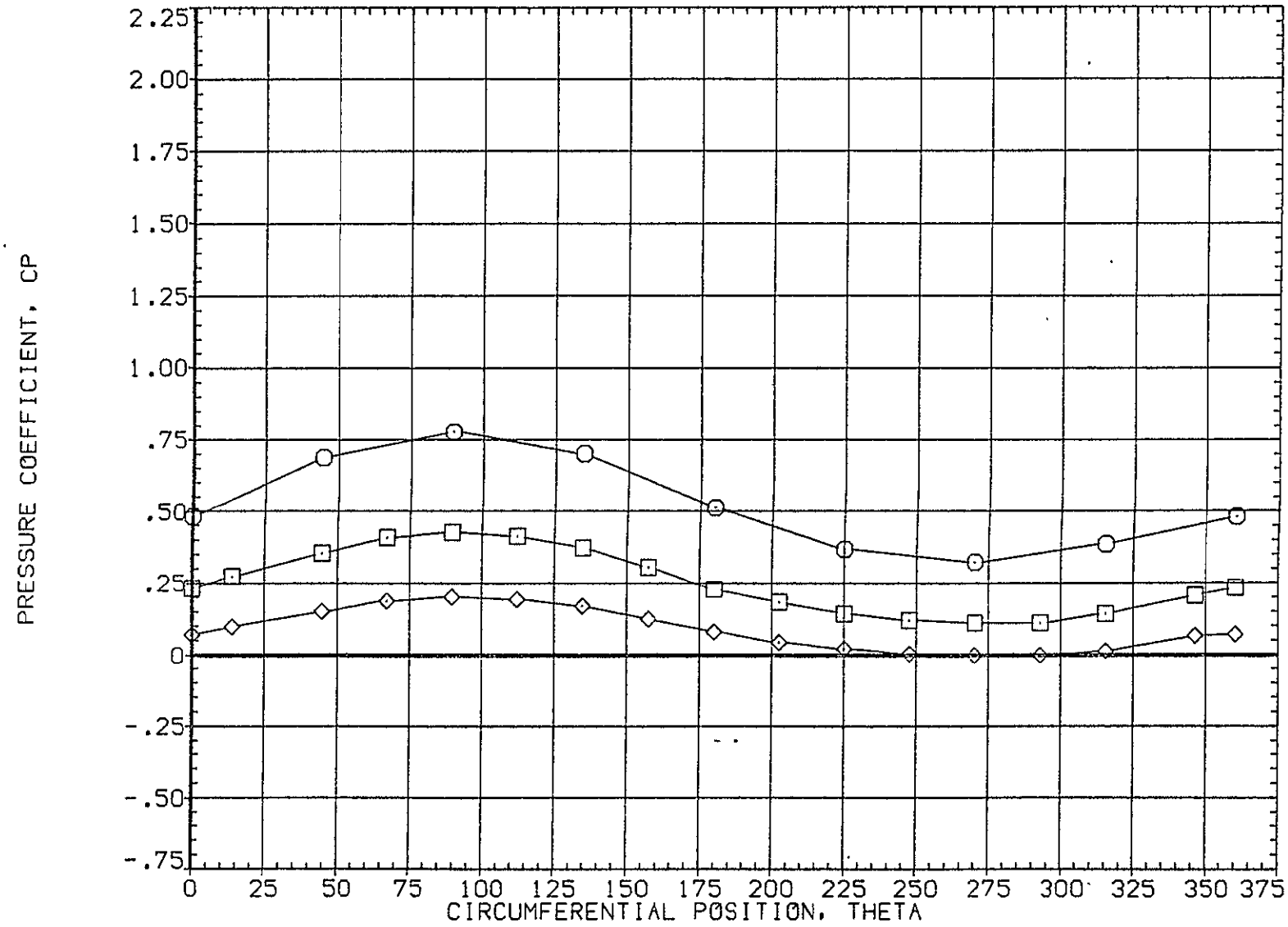

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

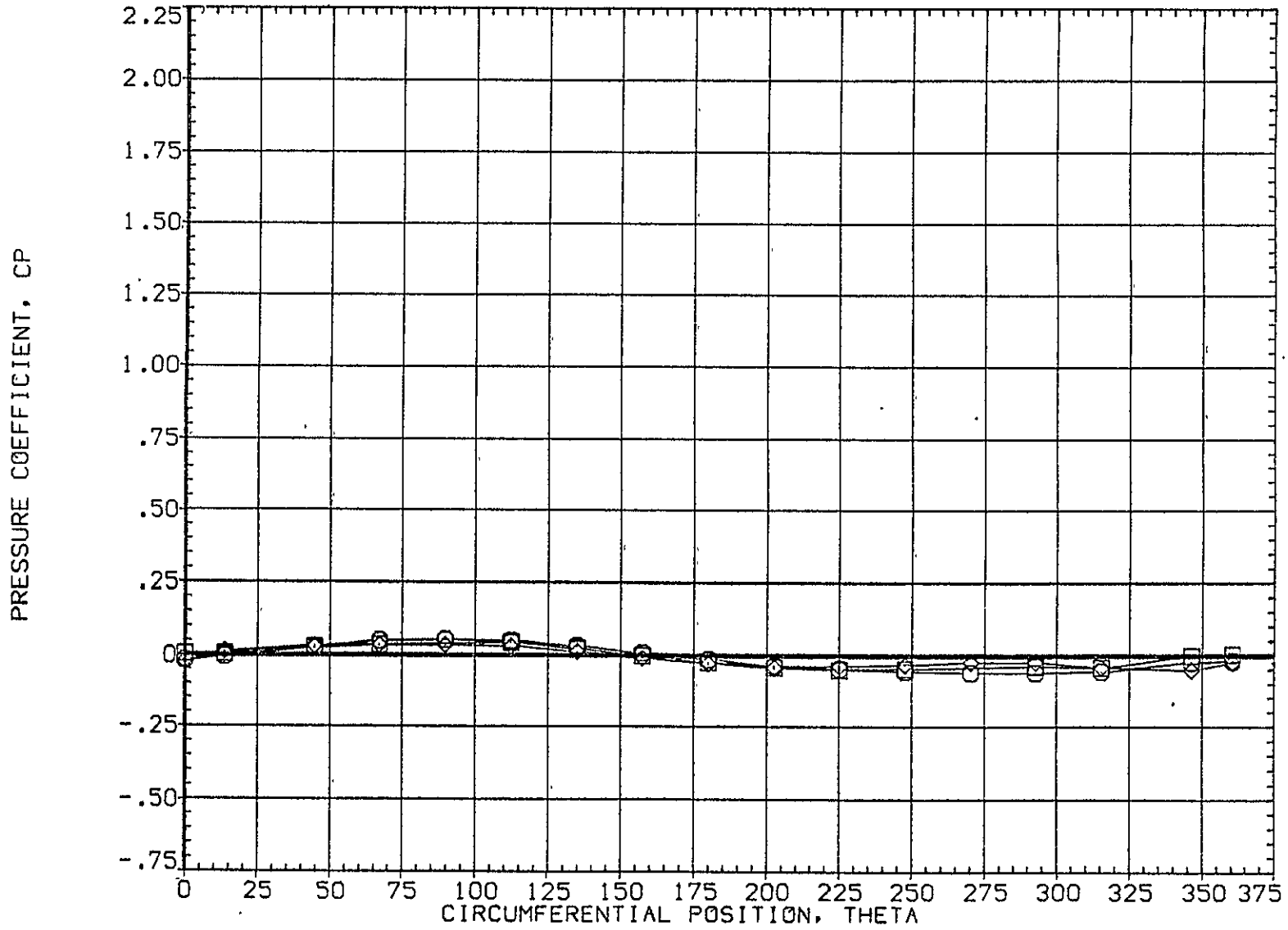

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

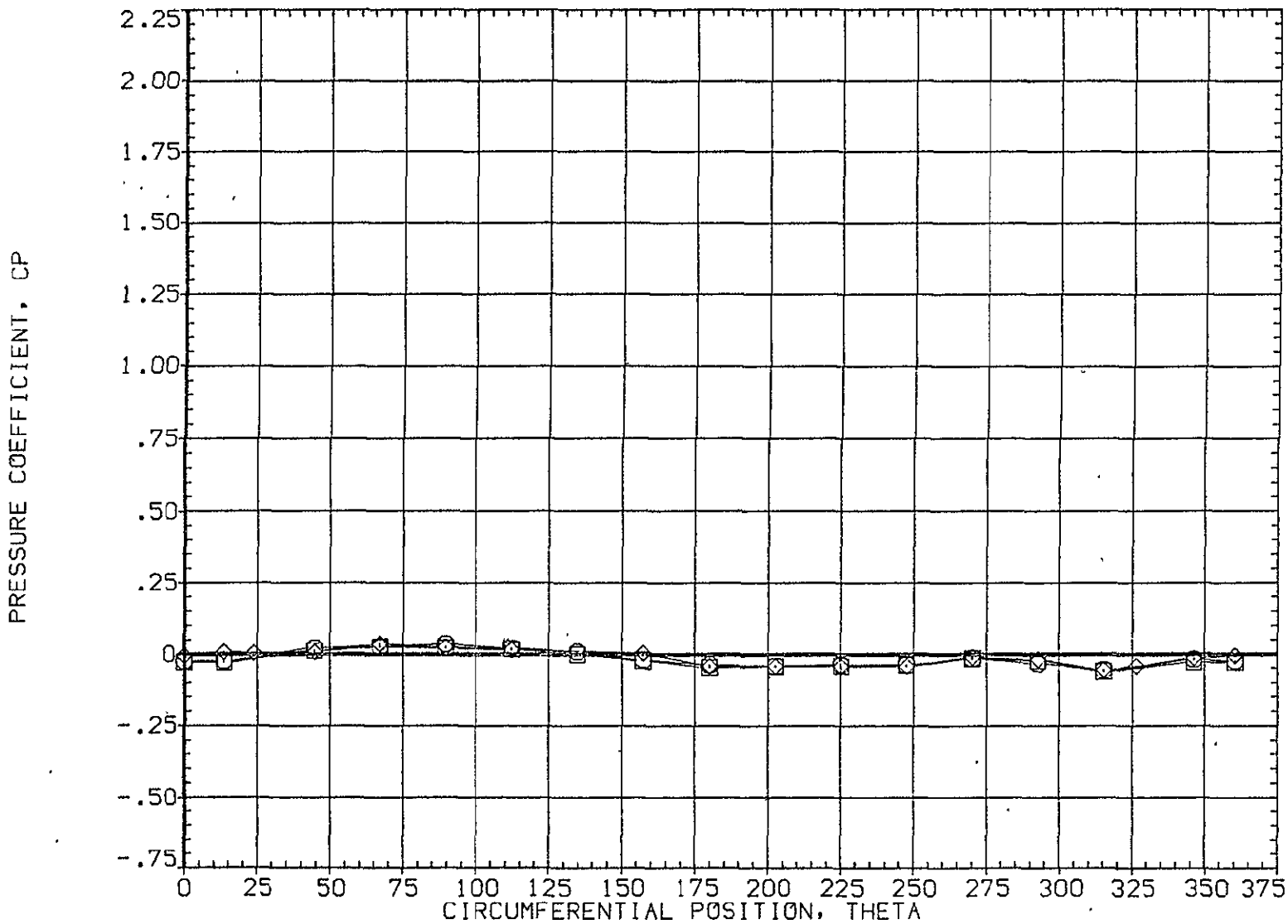

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

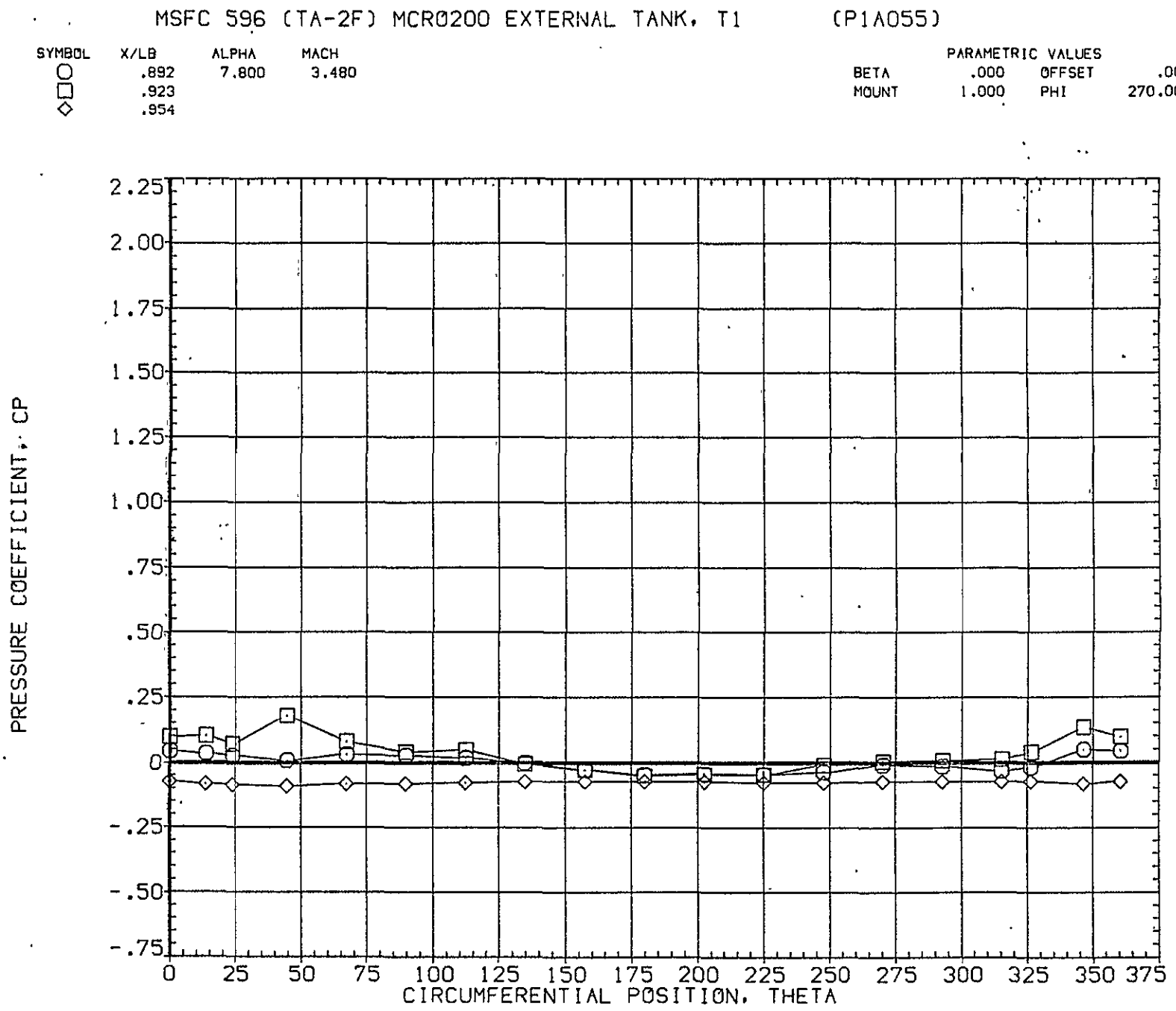

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.520	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

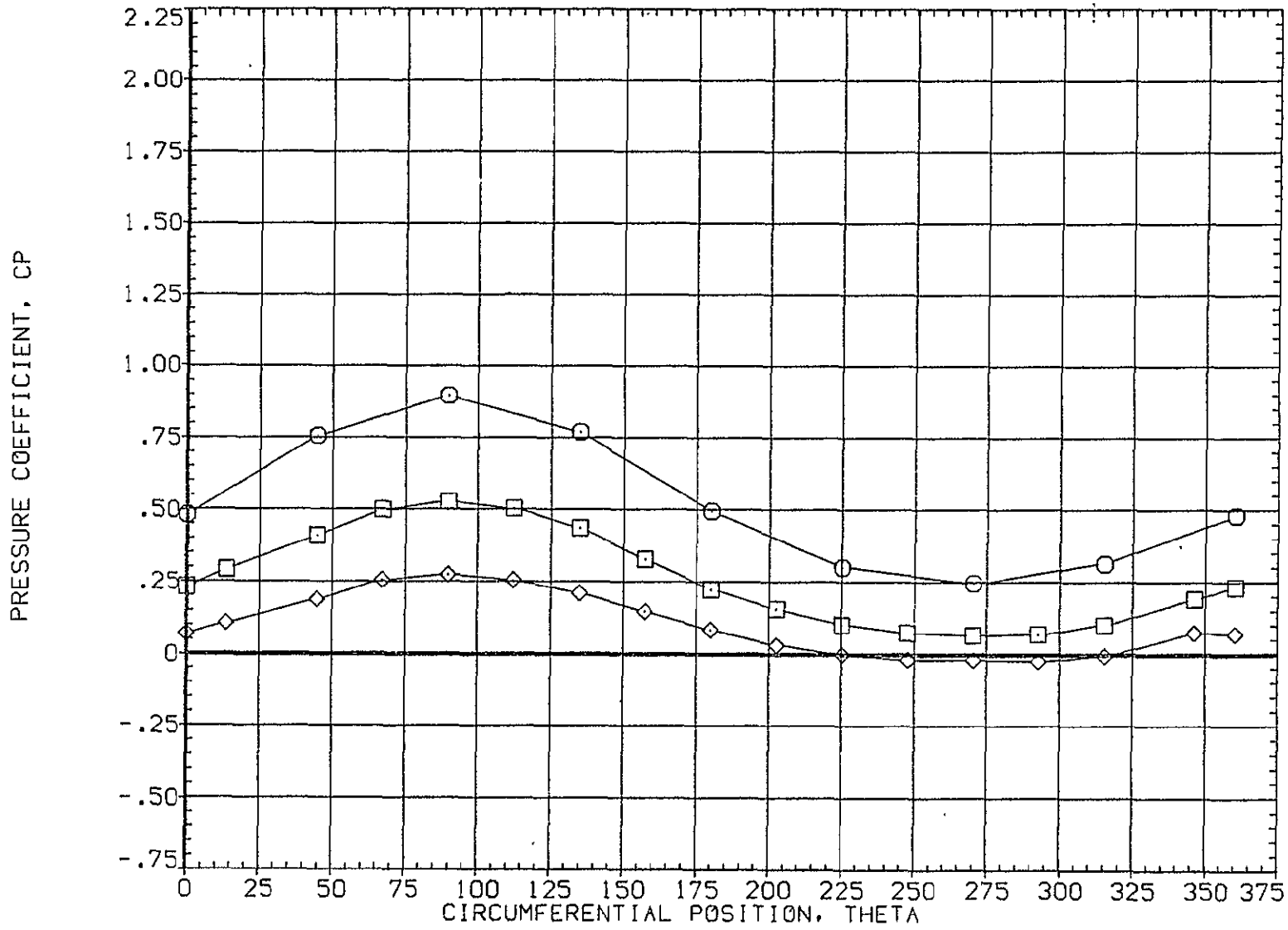

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.520	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

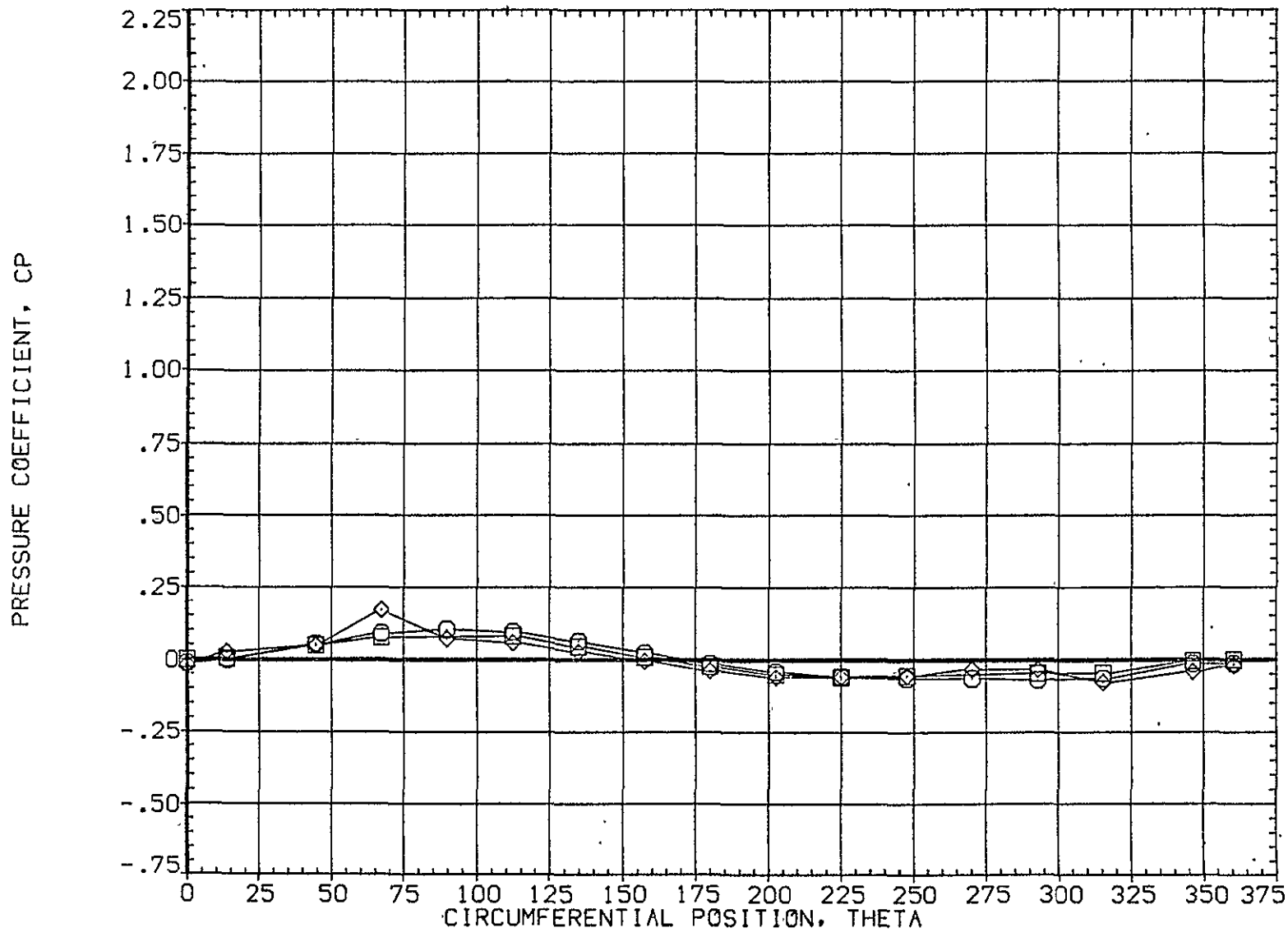

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.520	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

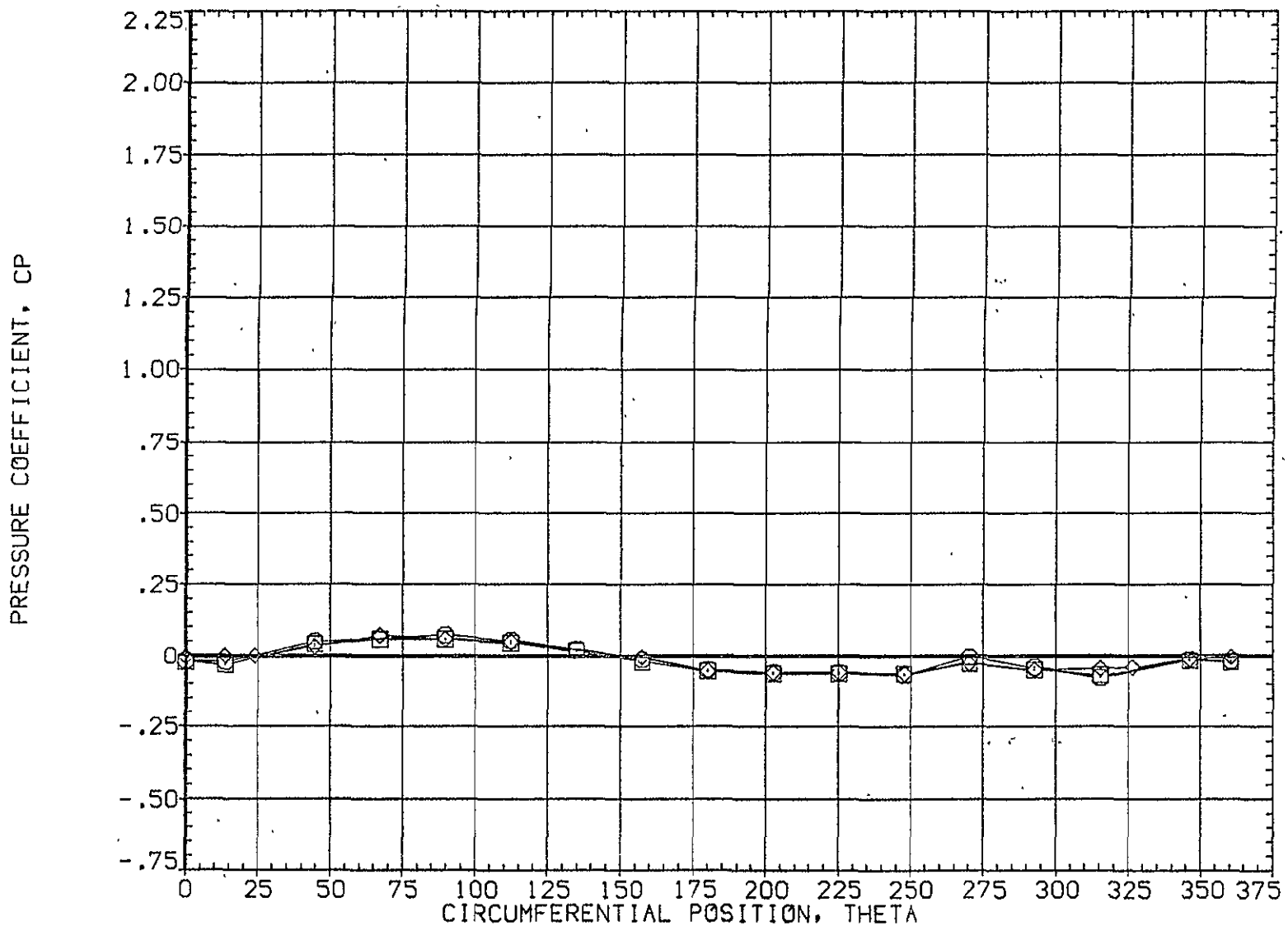

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.520	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

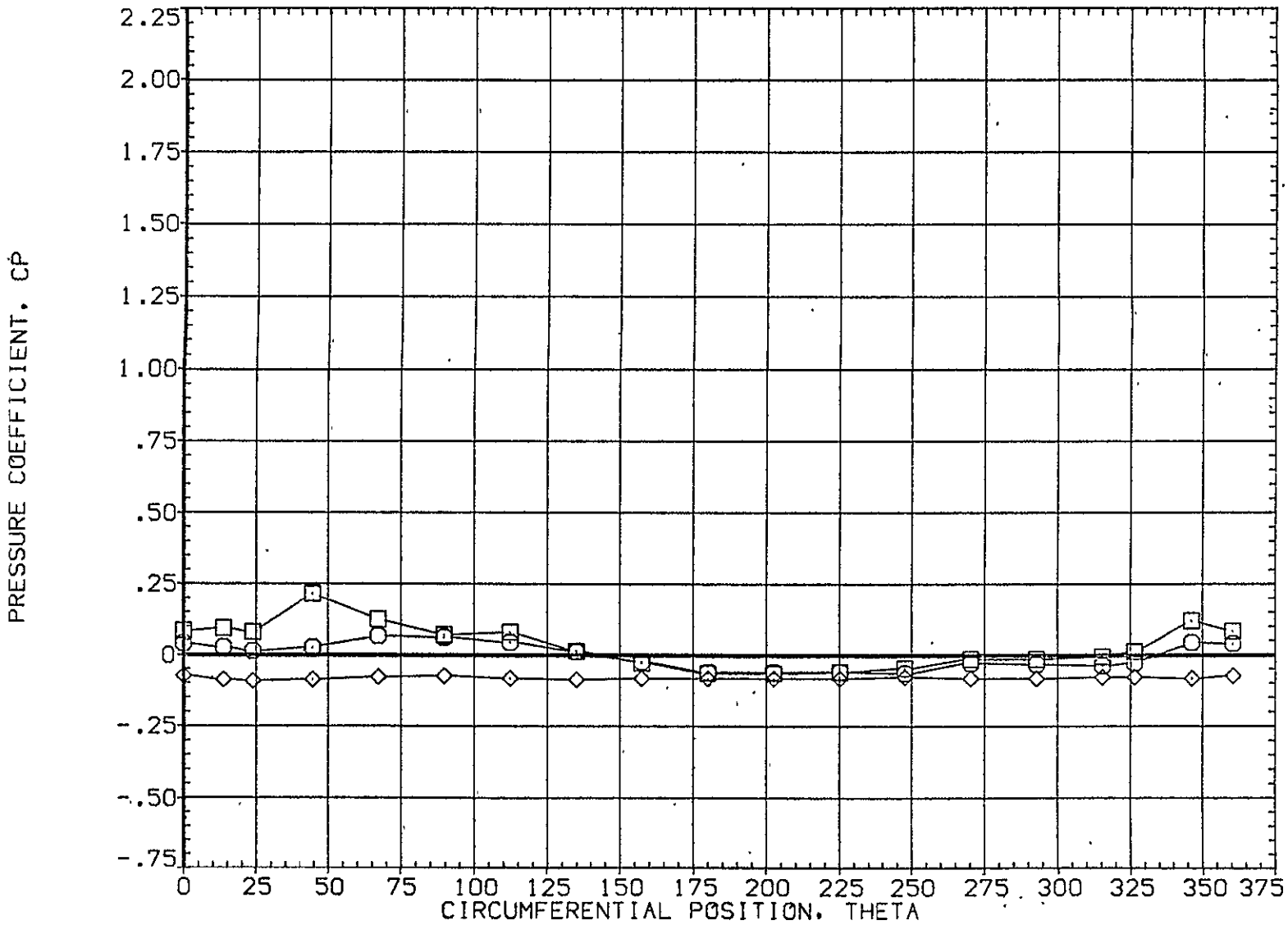

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

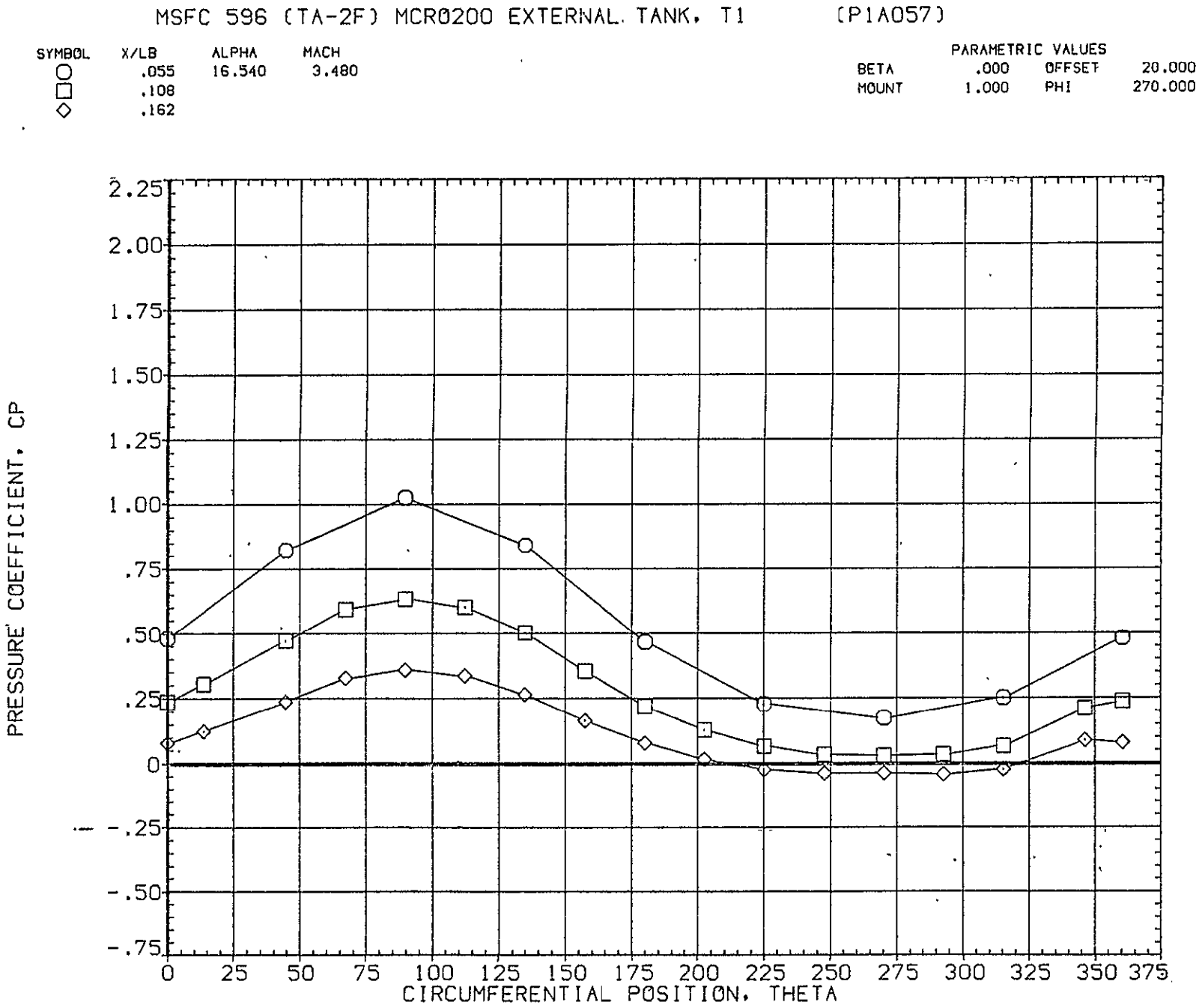

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.540	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

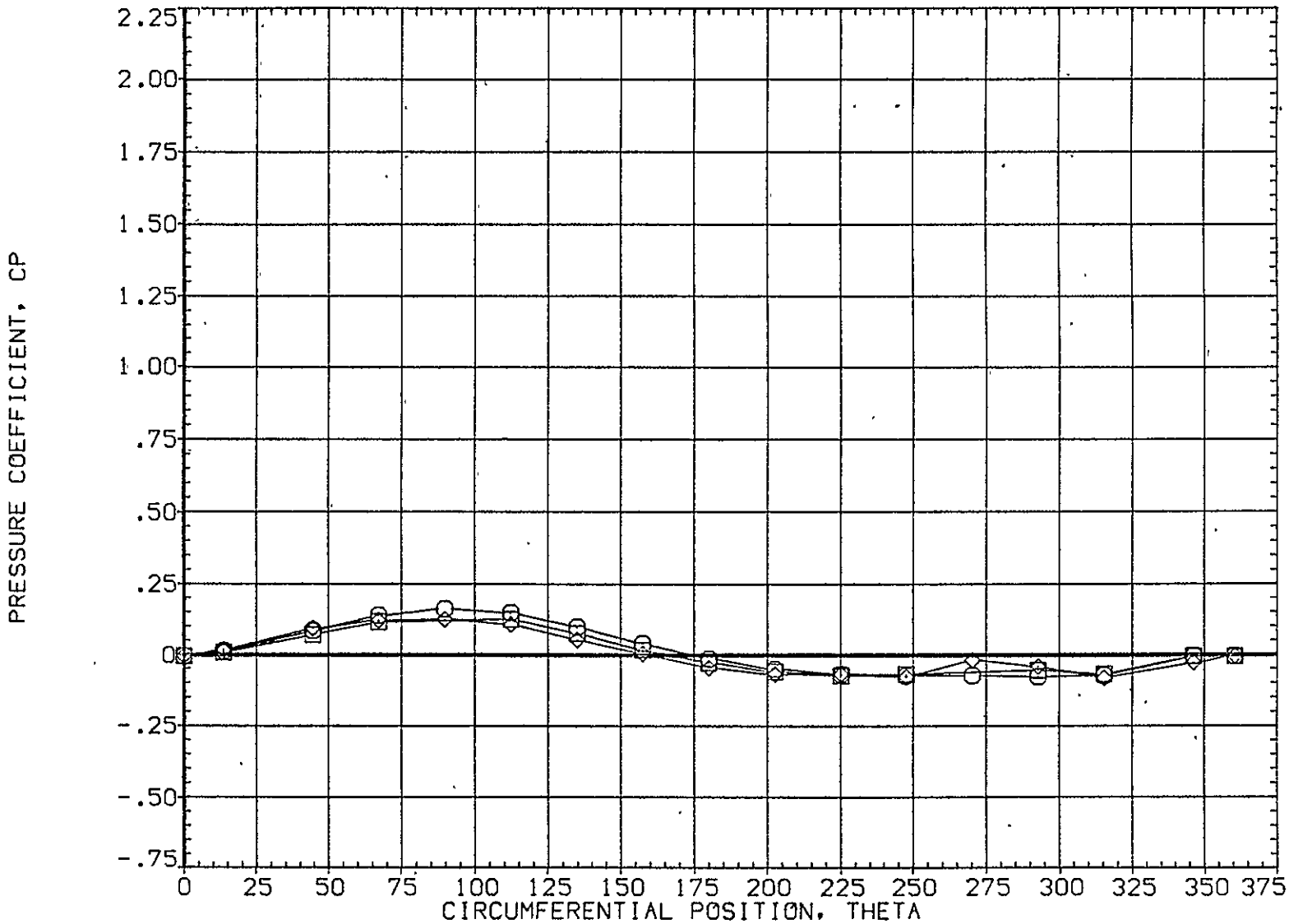

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.540	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

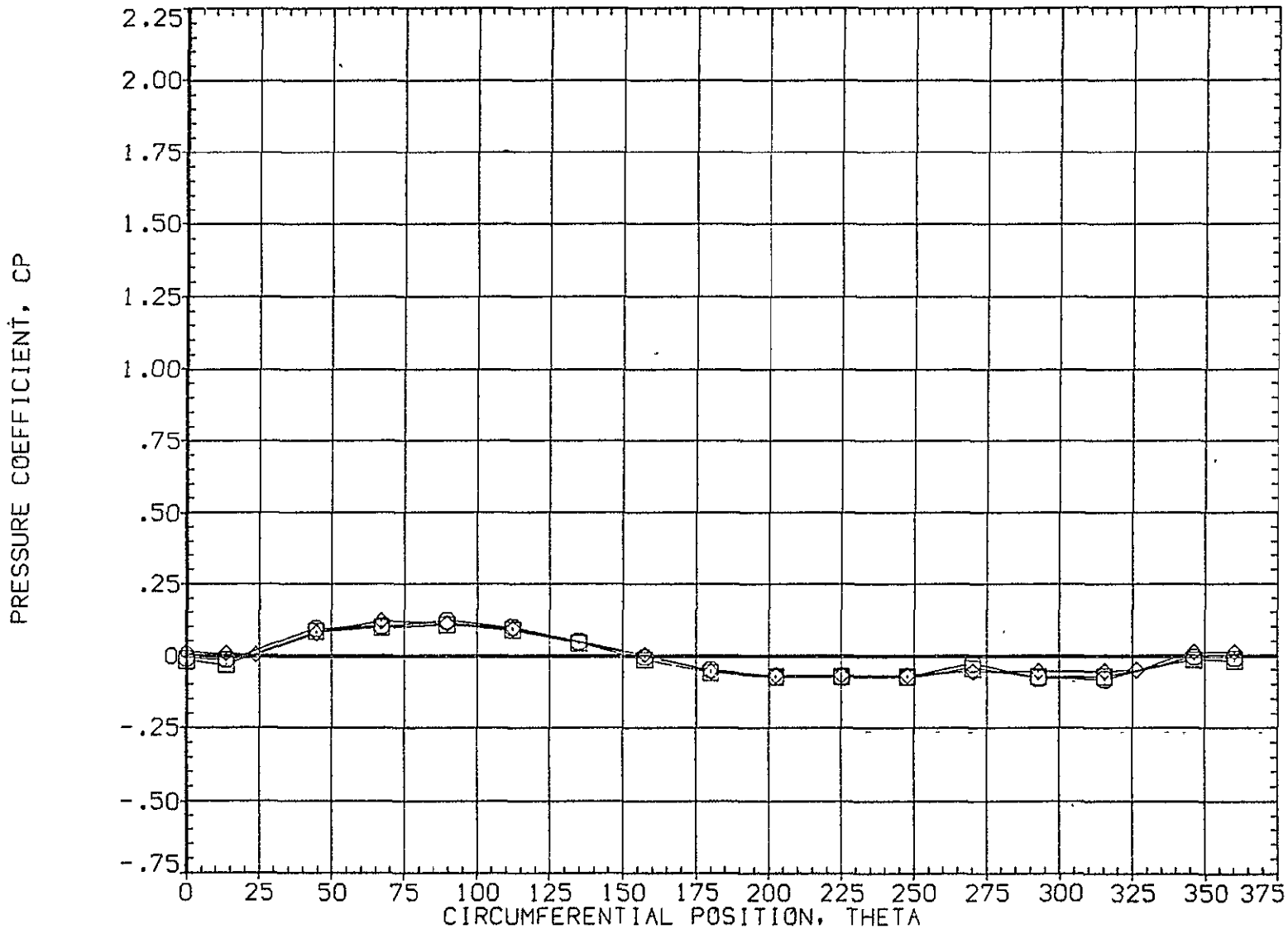

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.540	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

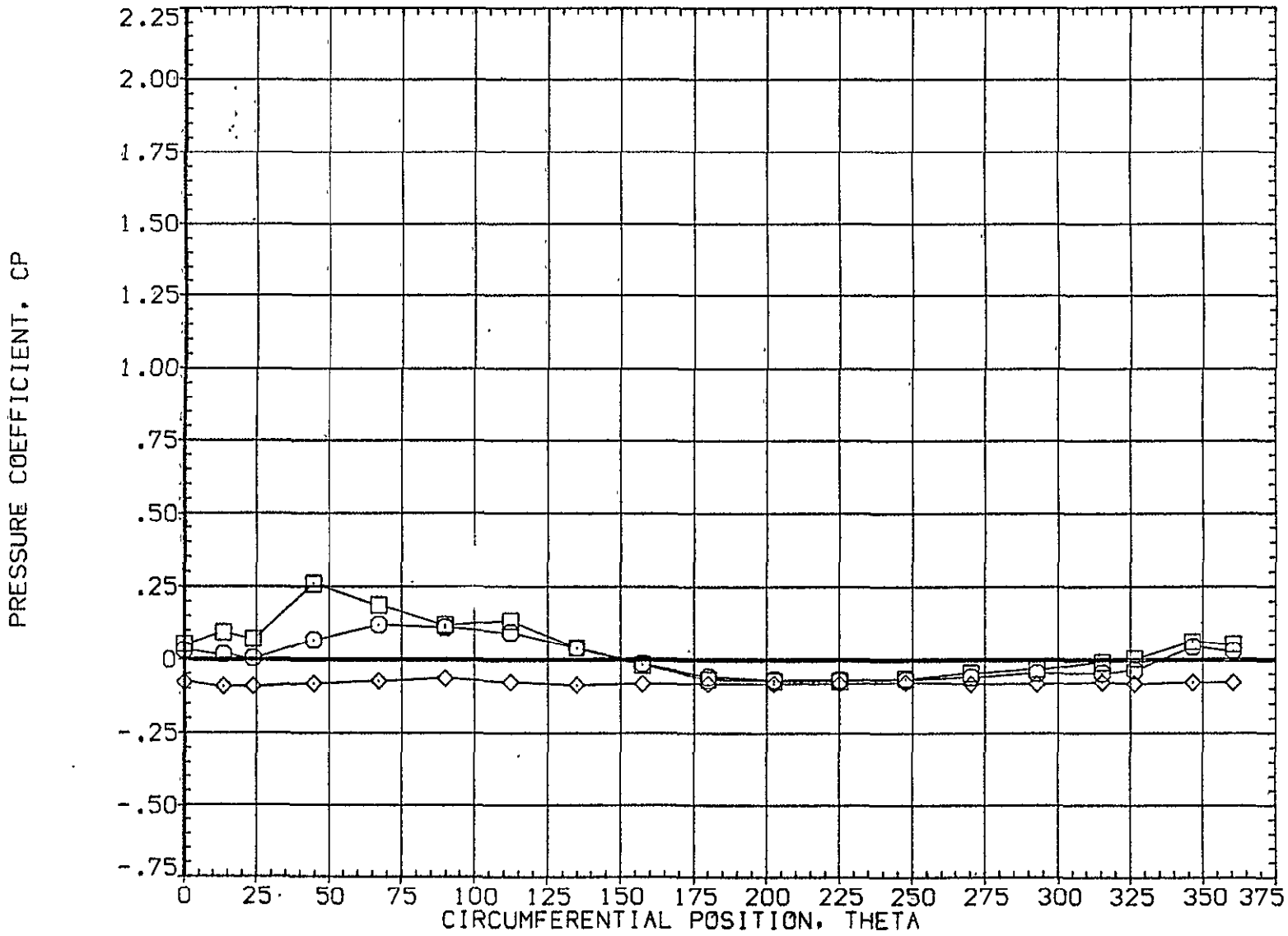

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

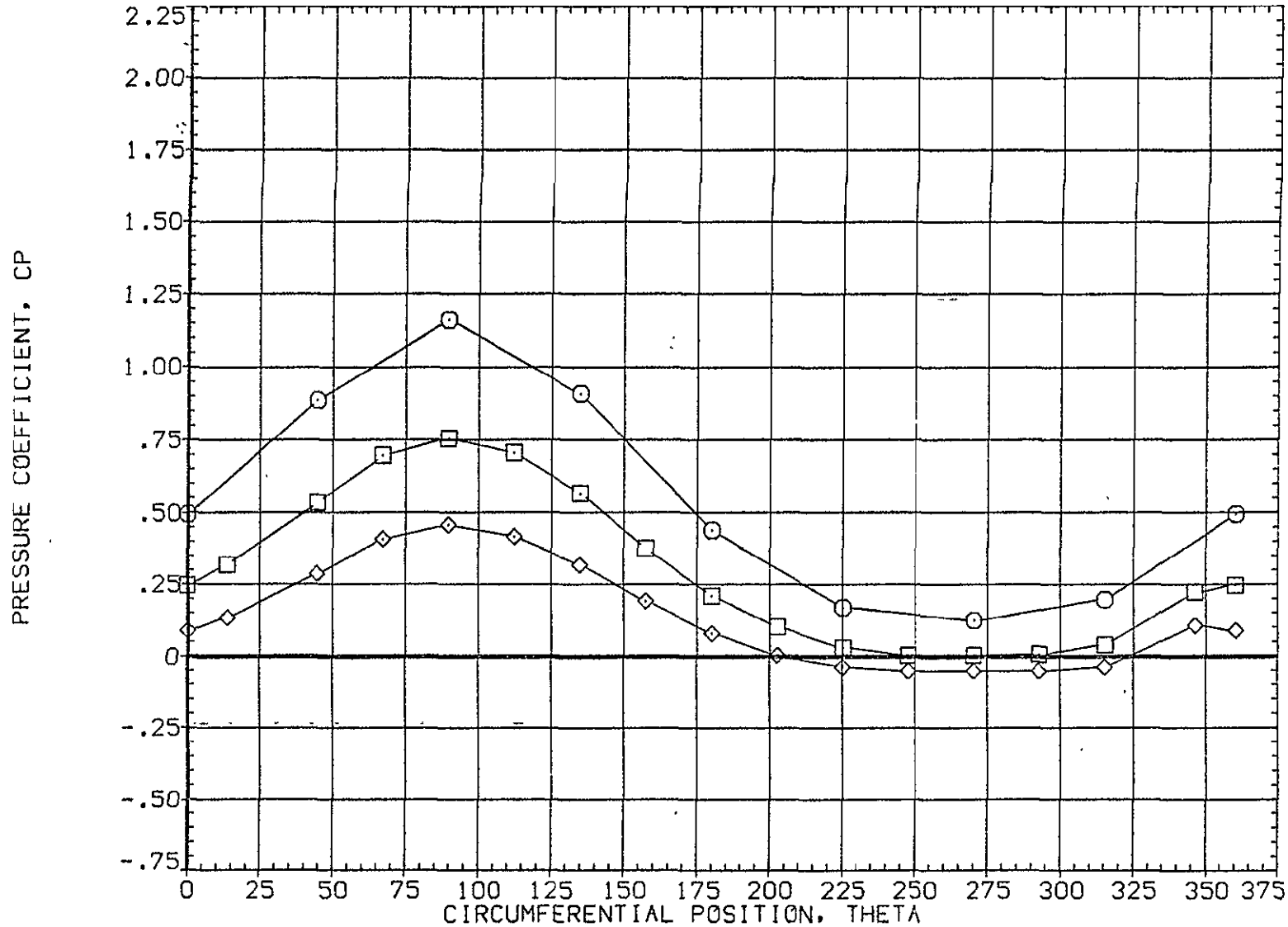

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

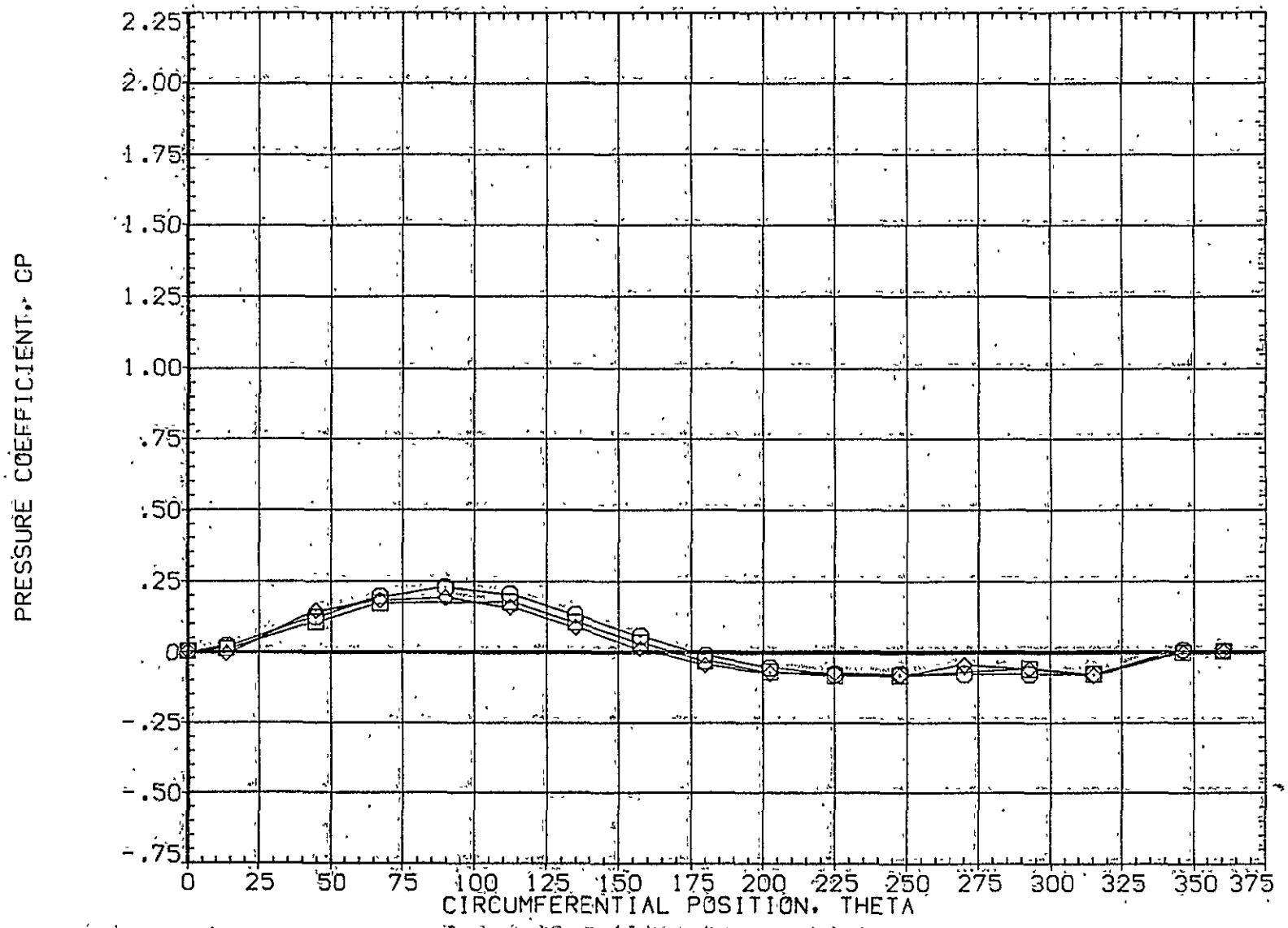

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

C.8

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

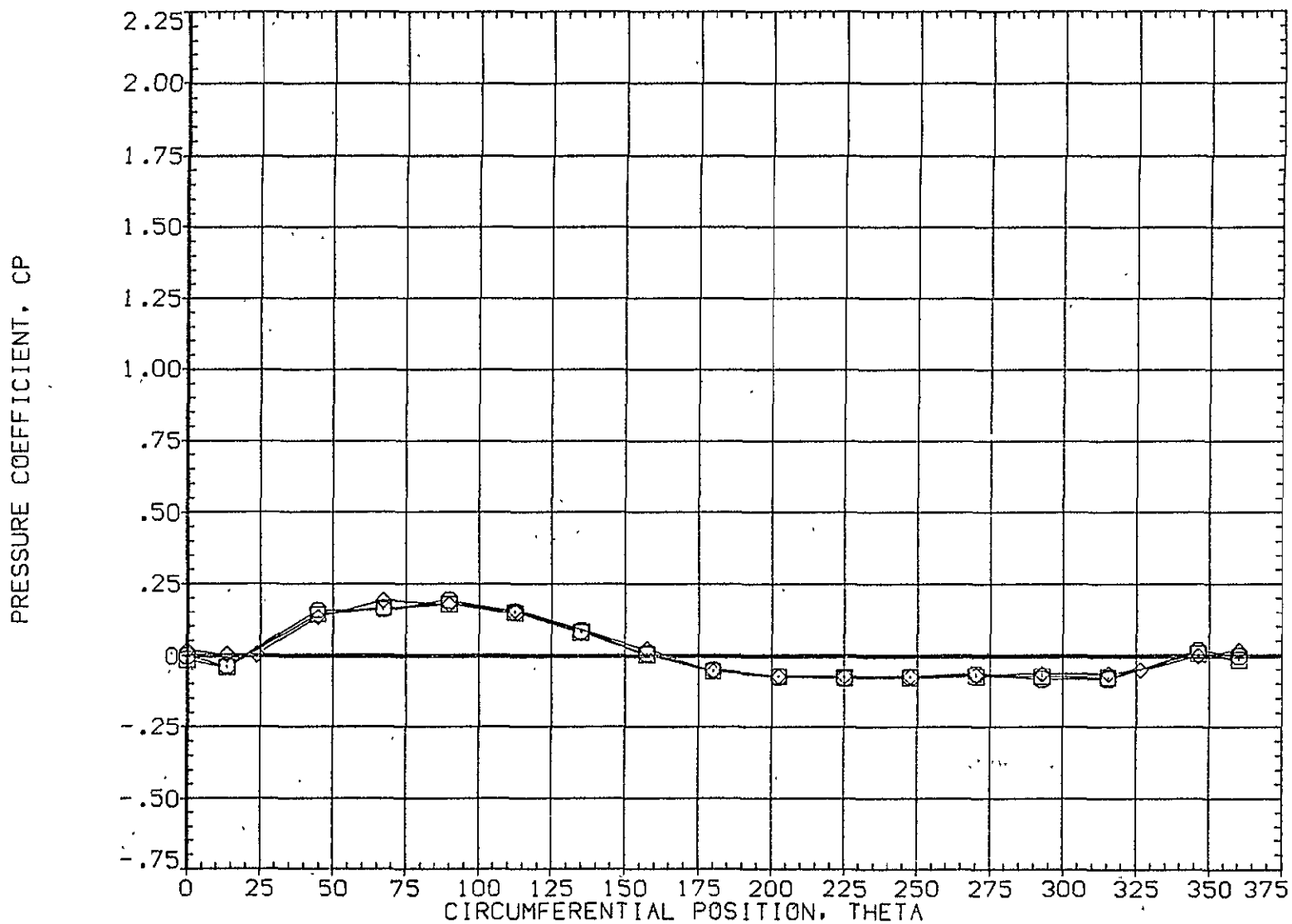

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

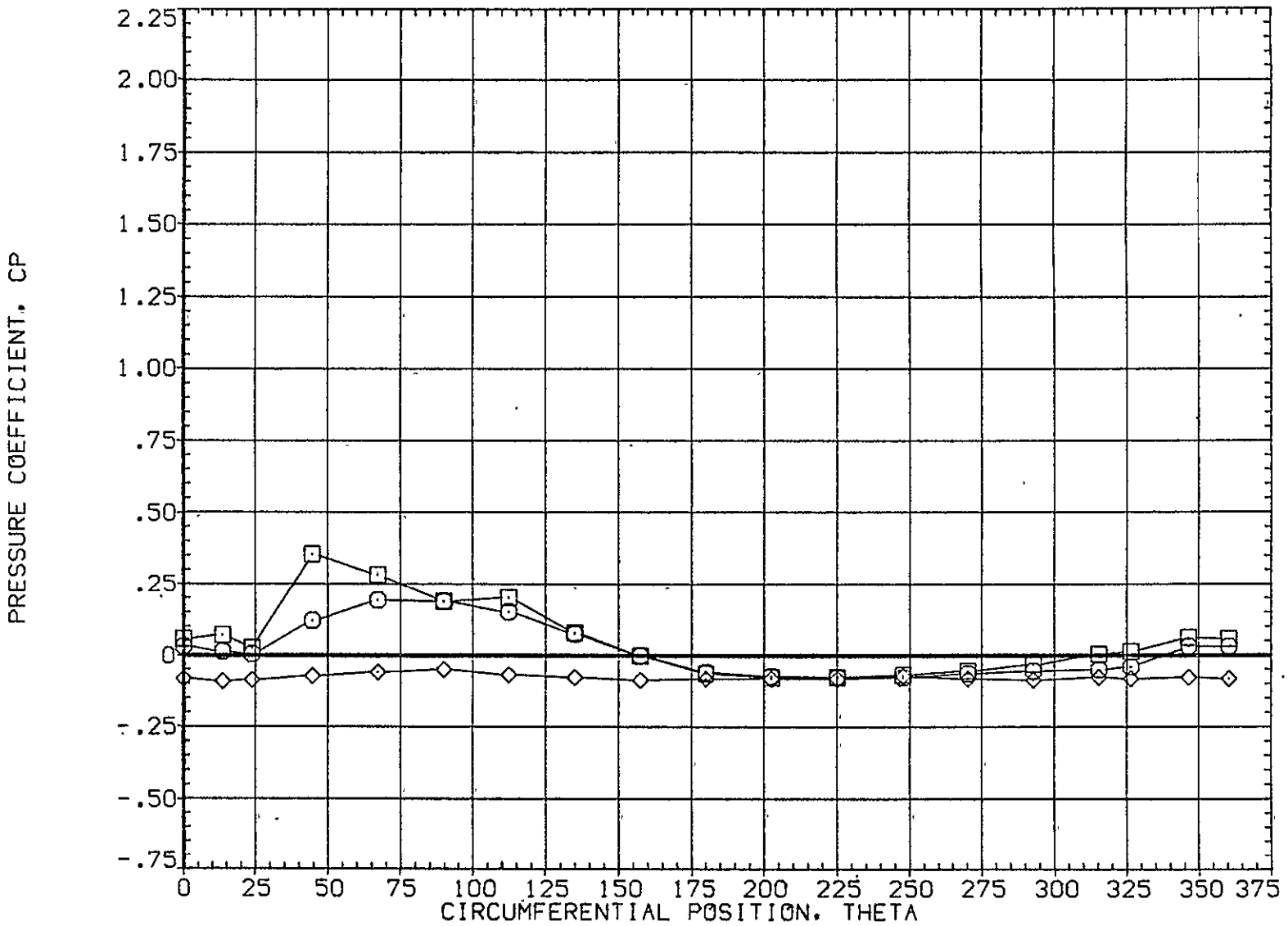

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.680	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

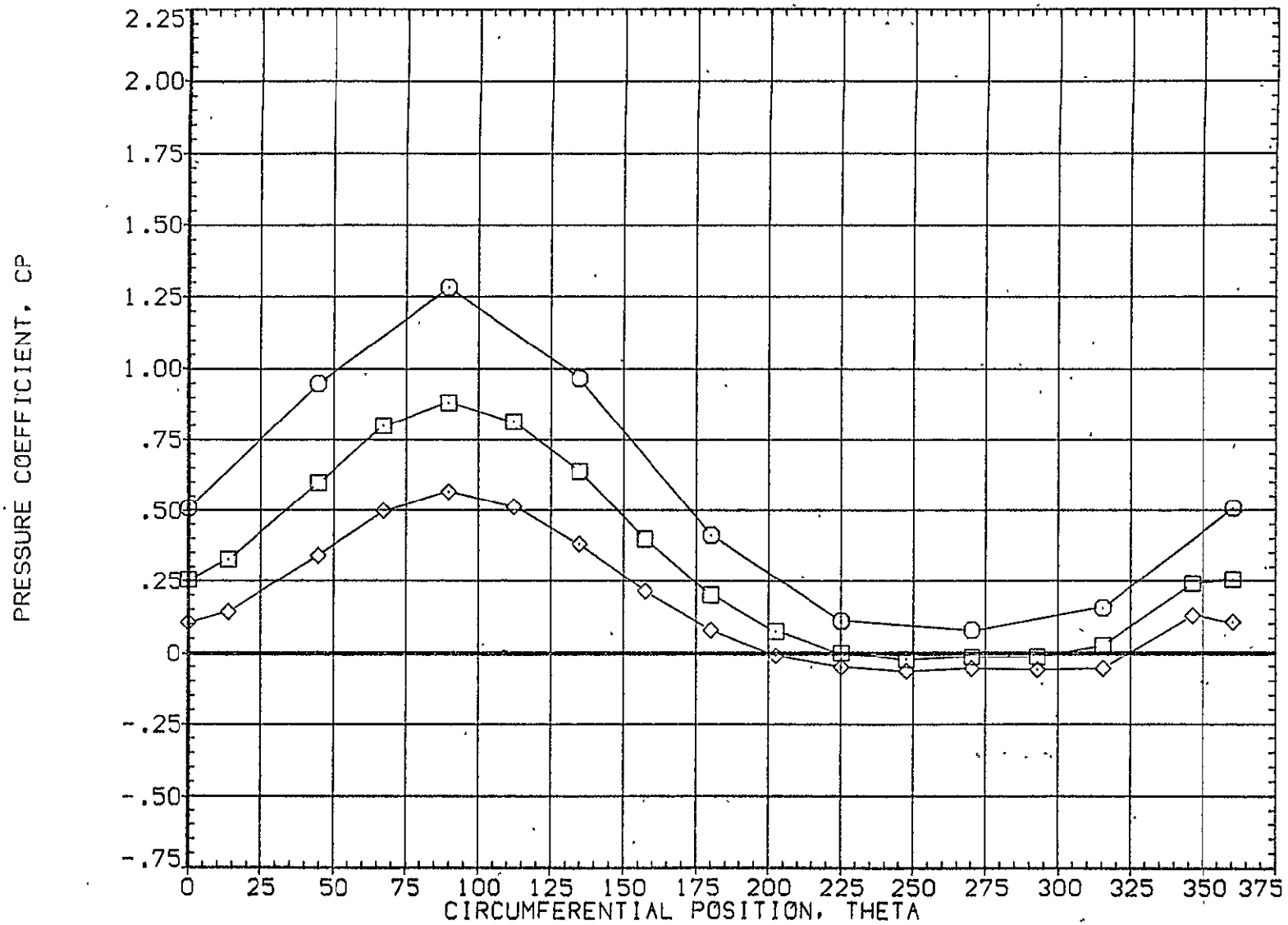

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.680	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

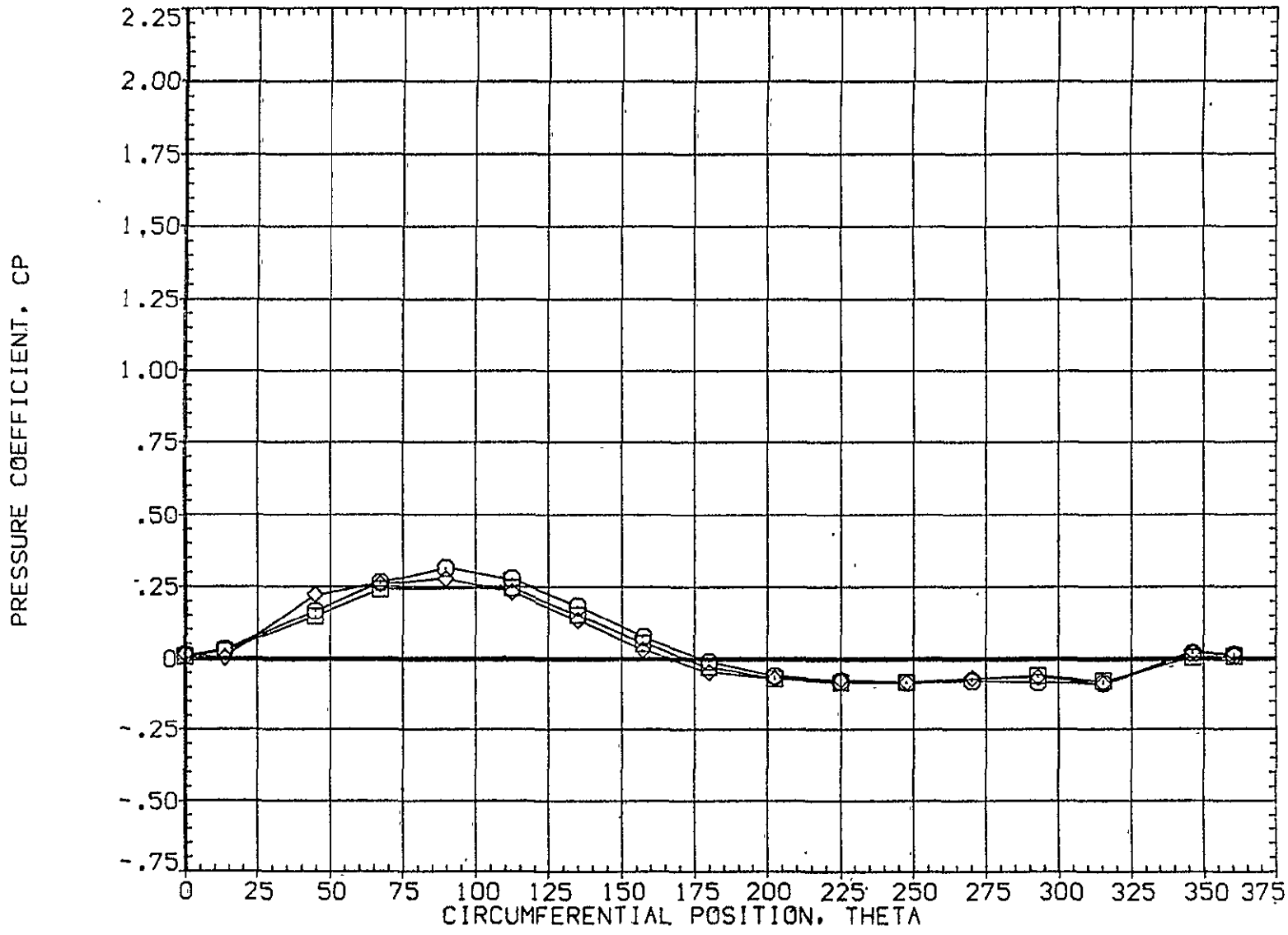

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.680	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

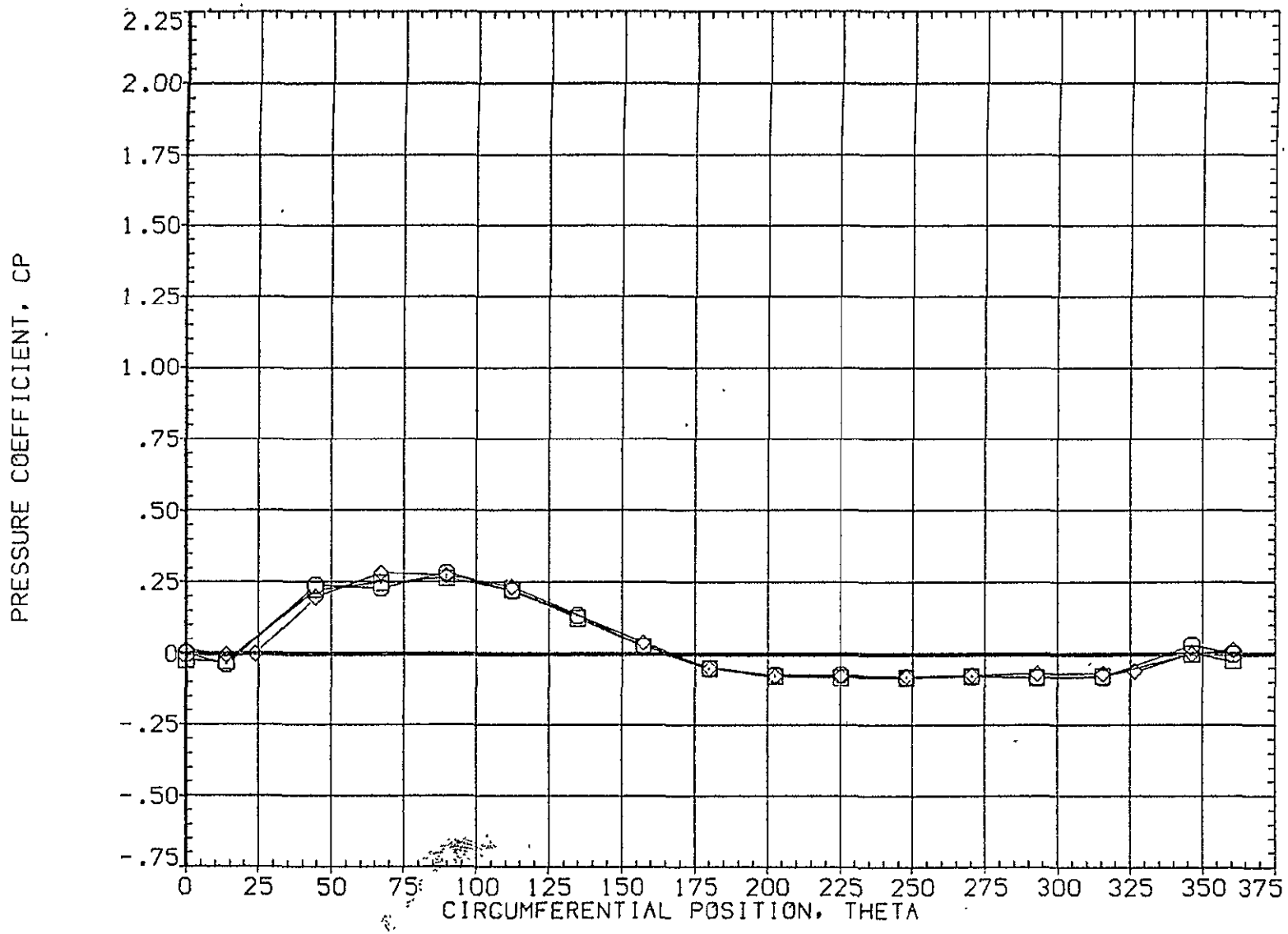

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

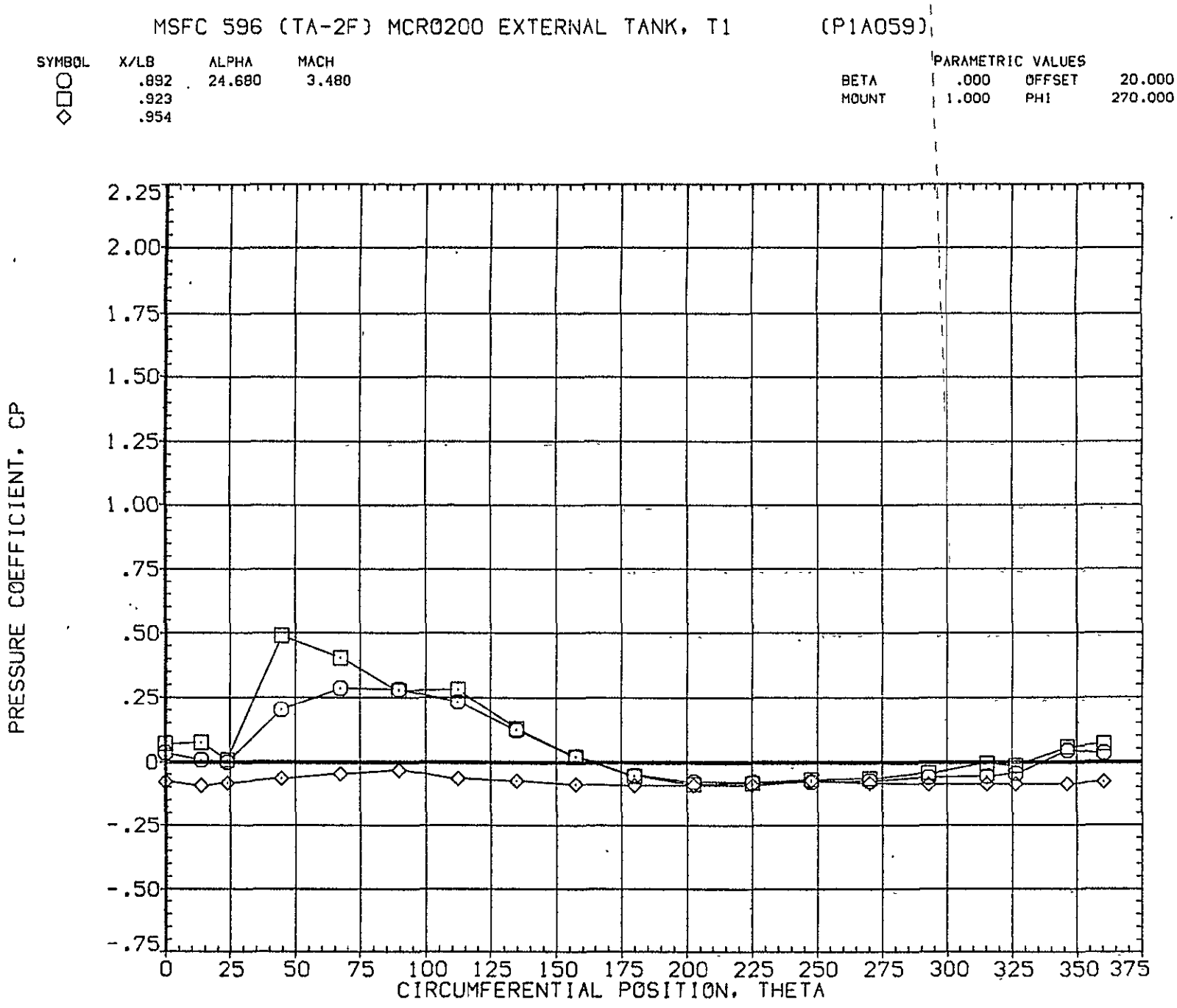

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC.596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

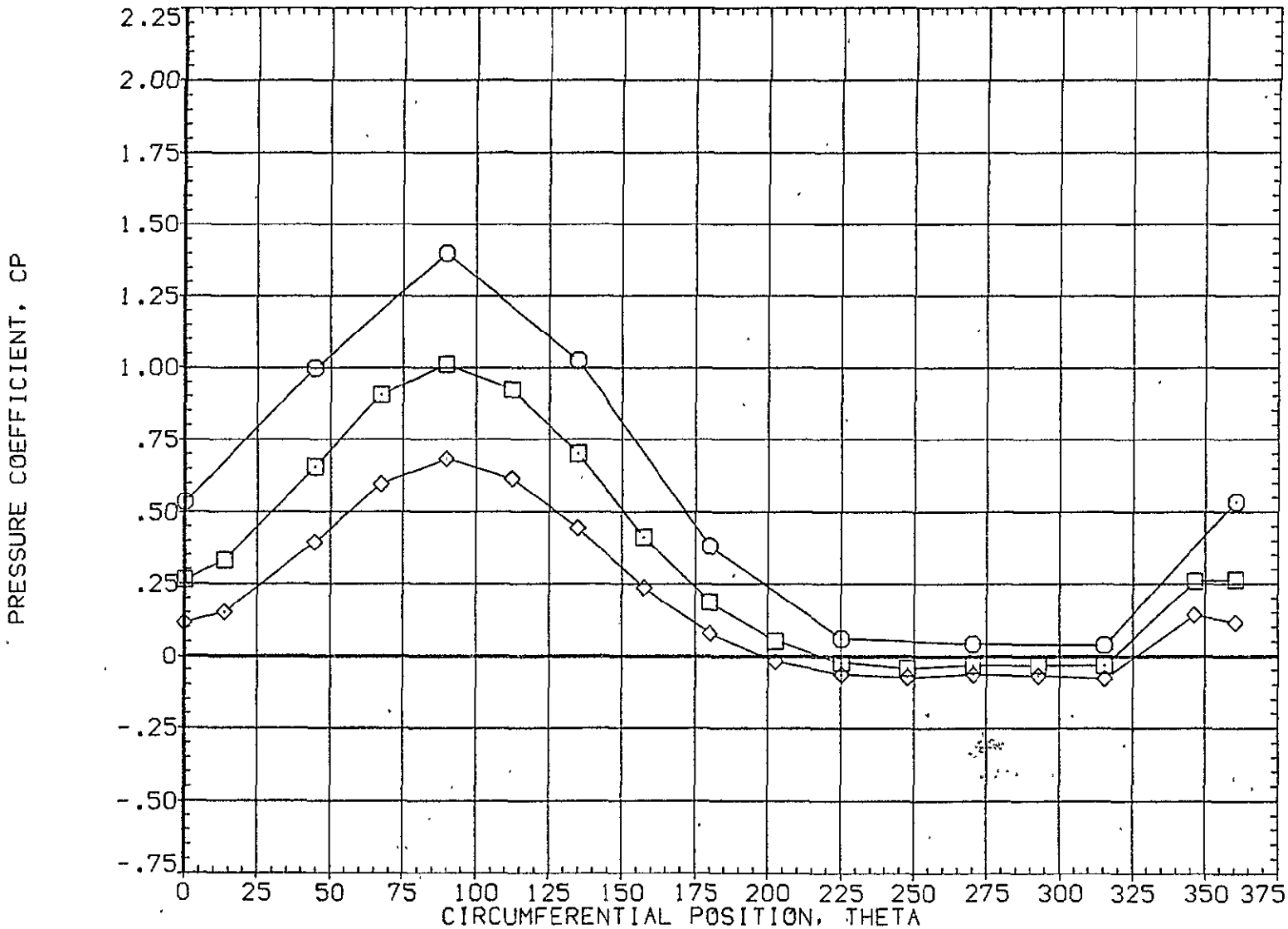

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

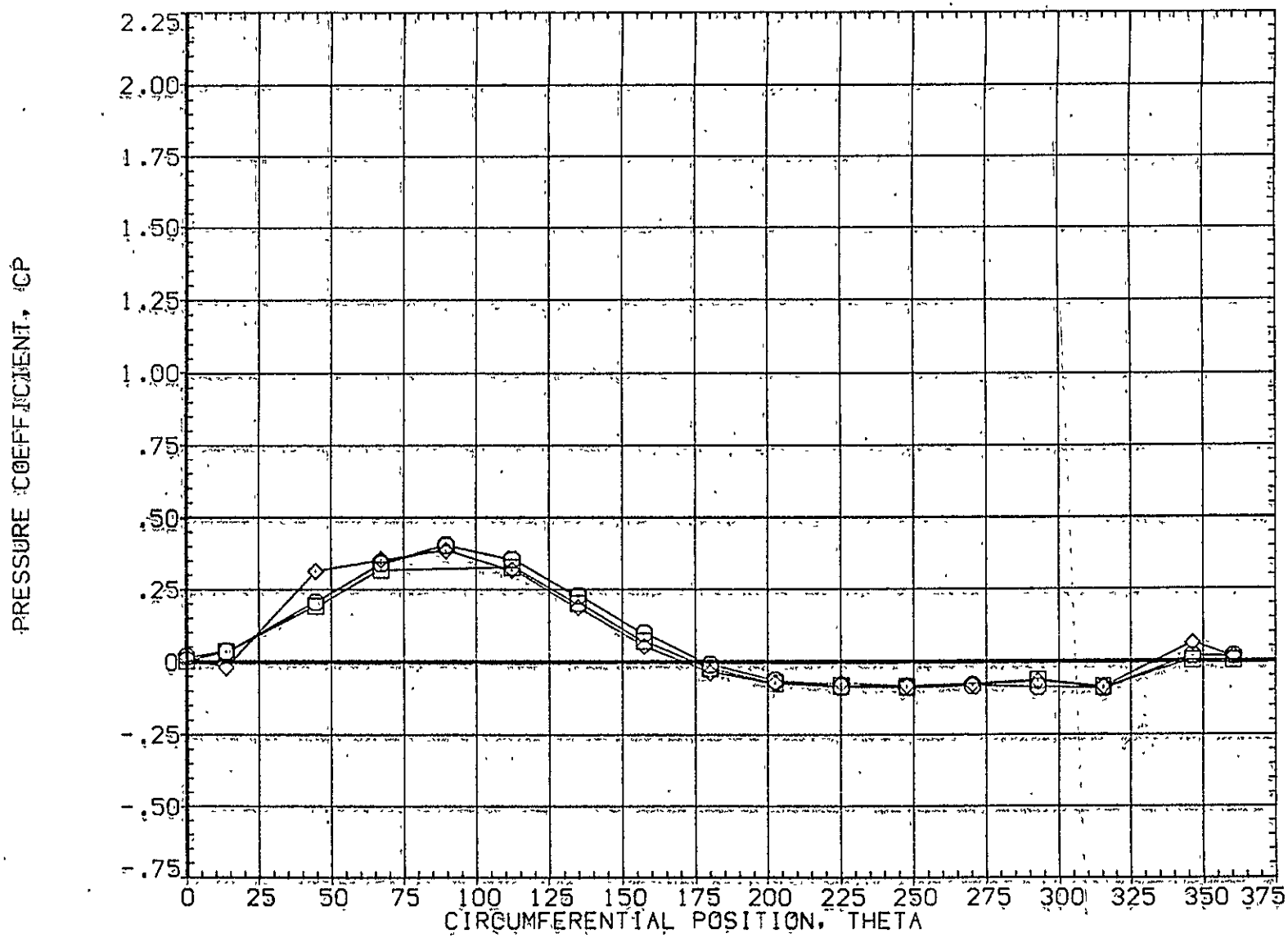

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

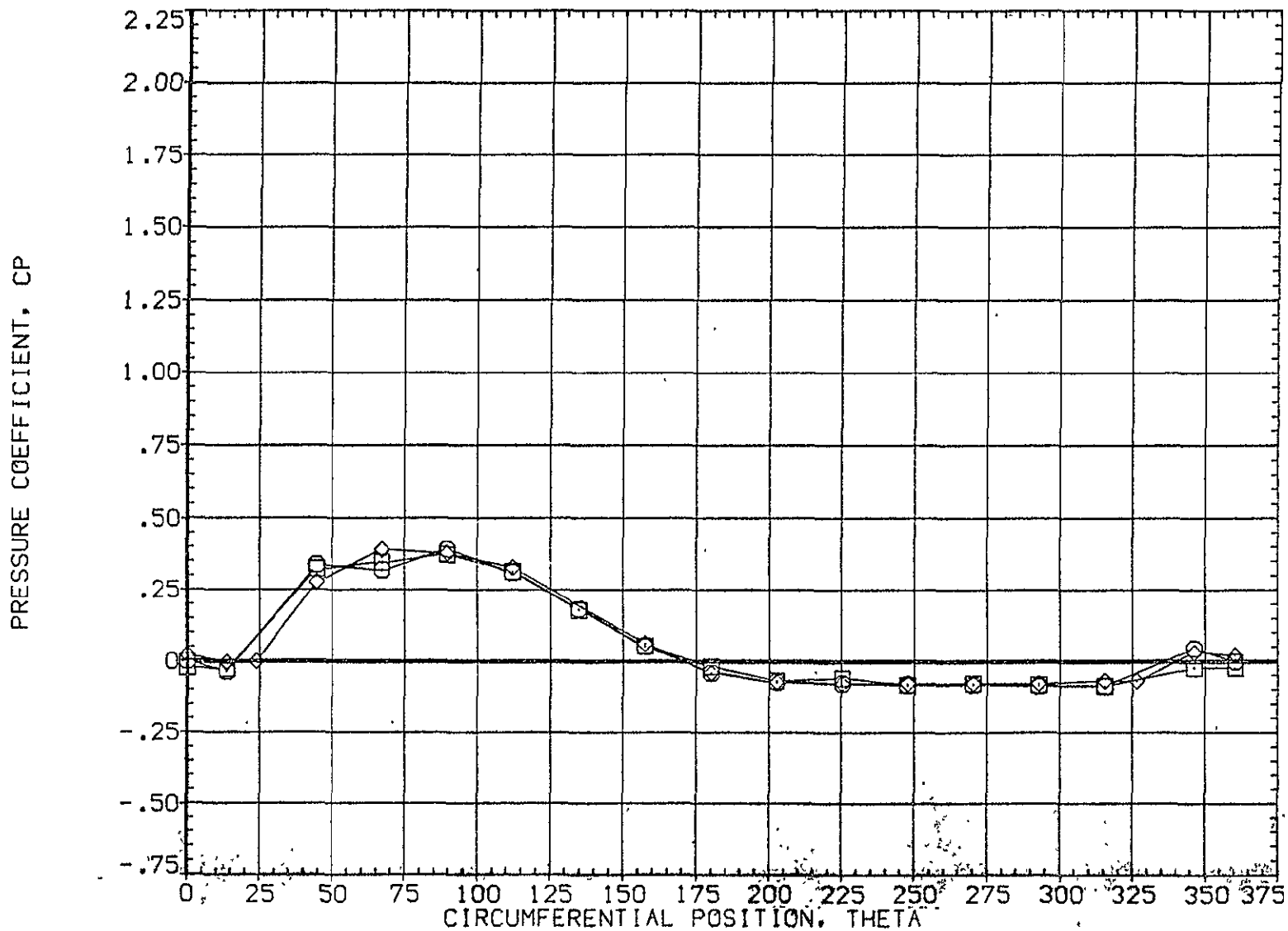

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

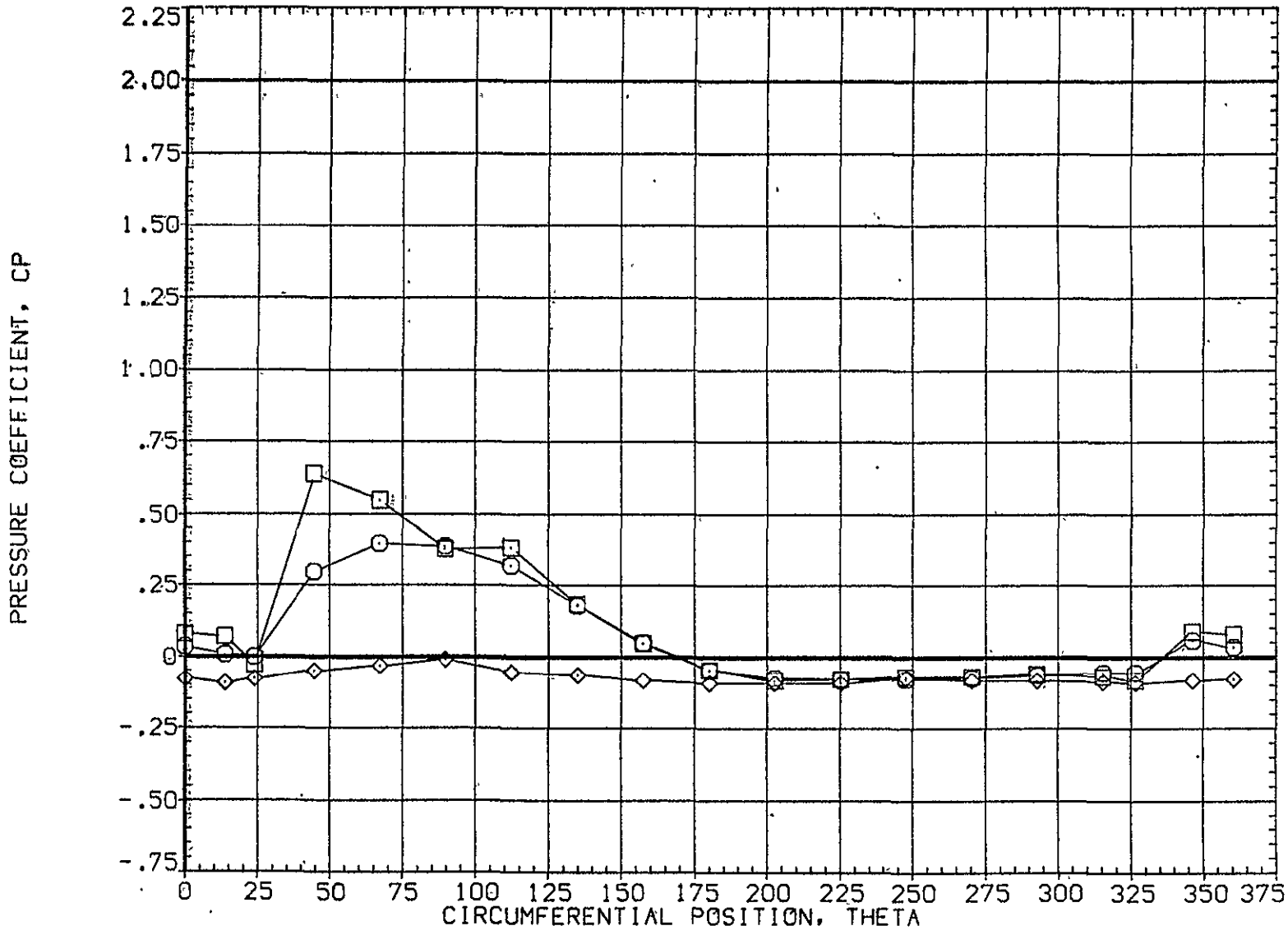

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.360	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

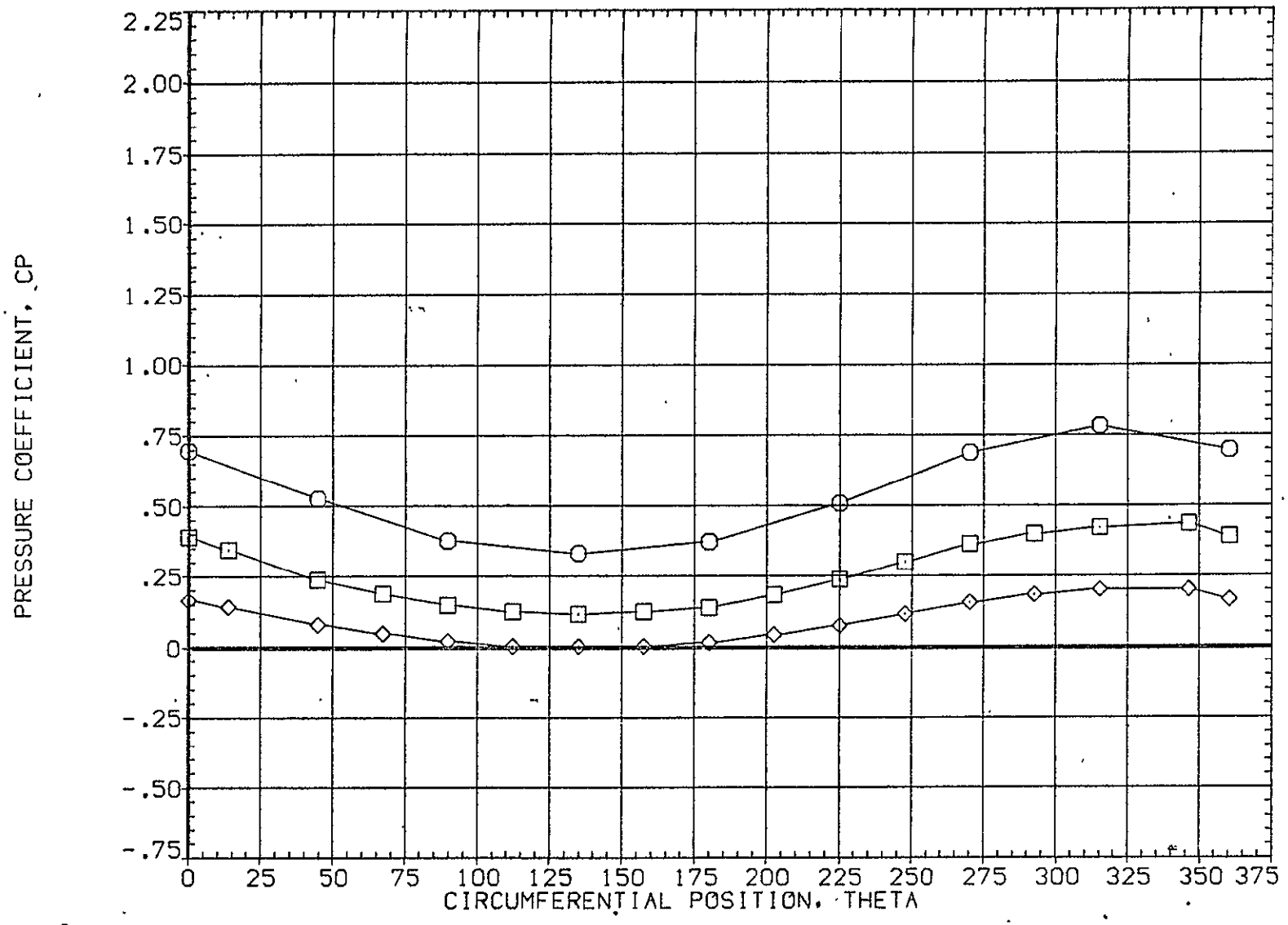

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.360	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

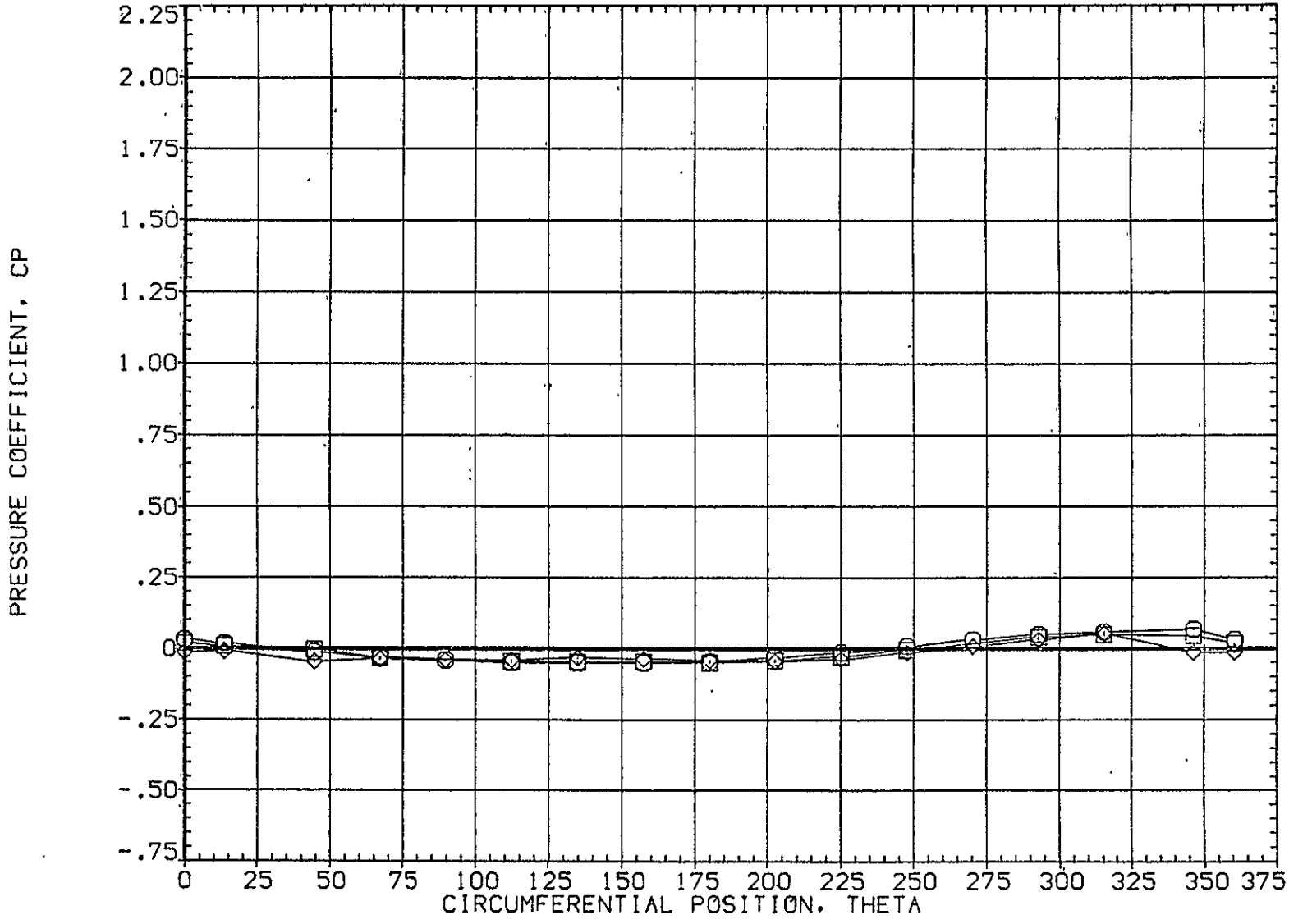

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.360	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

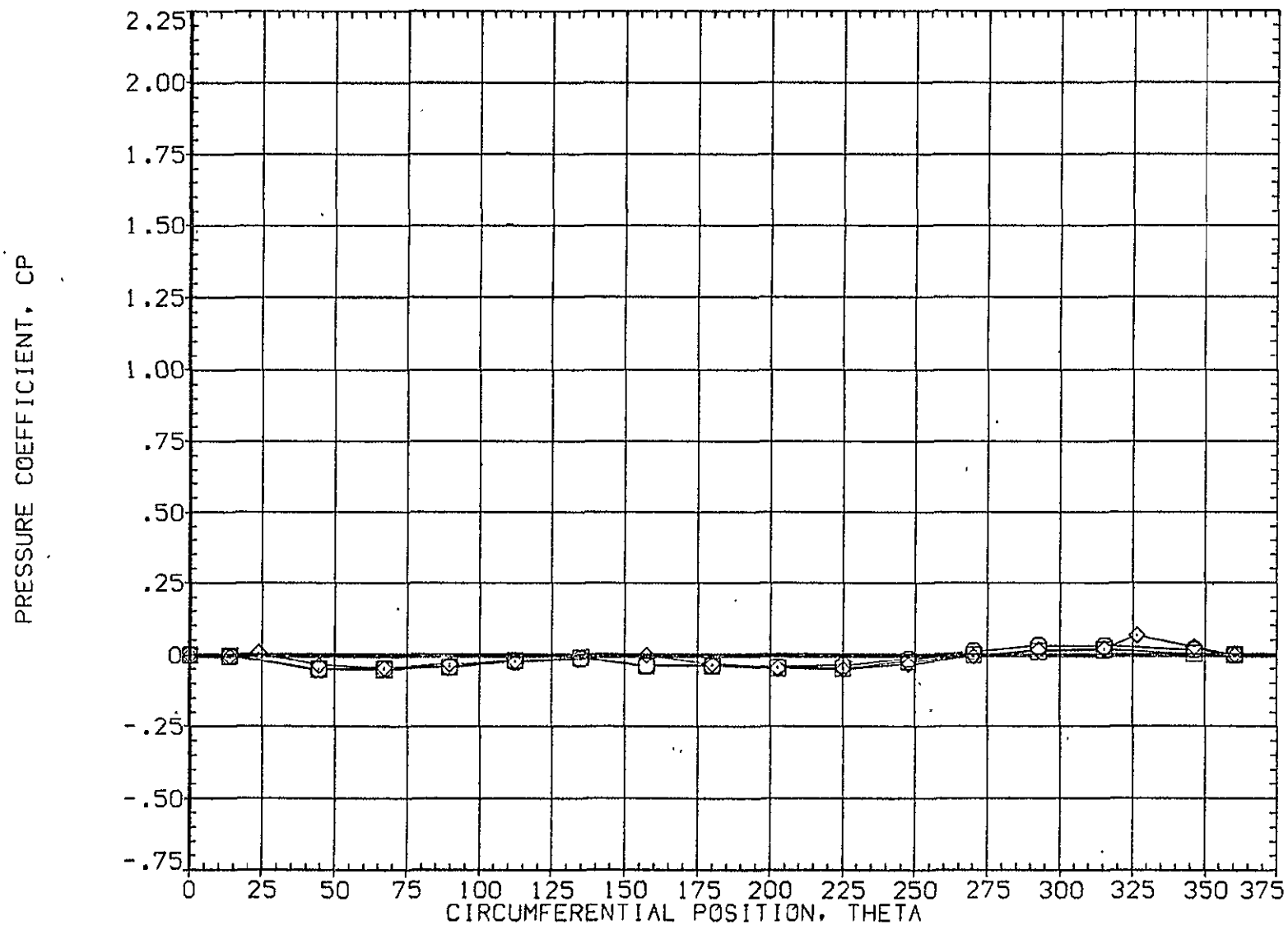

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 - (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.360	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

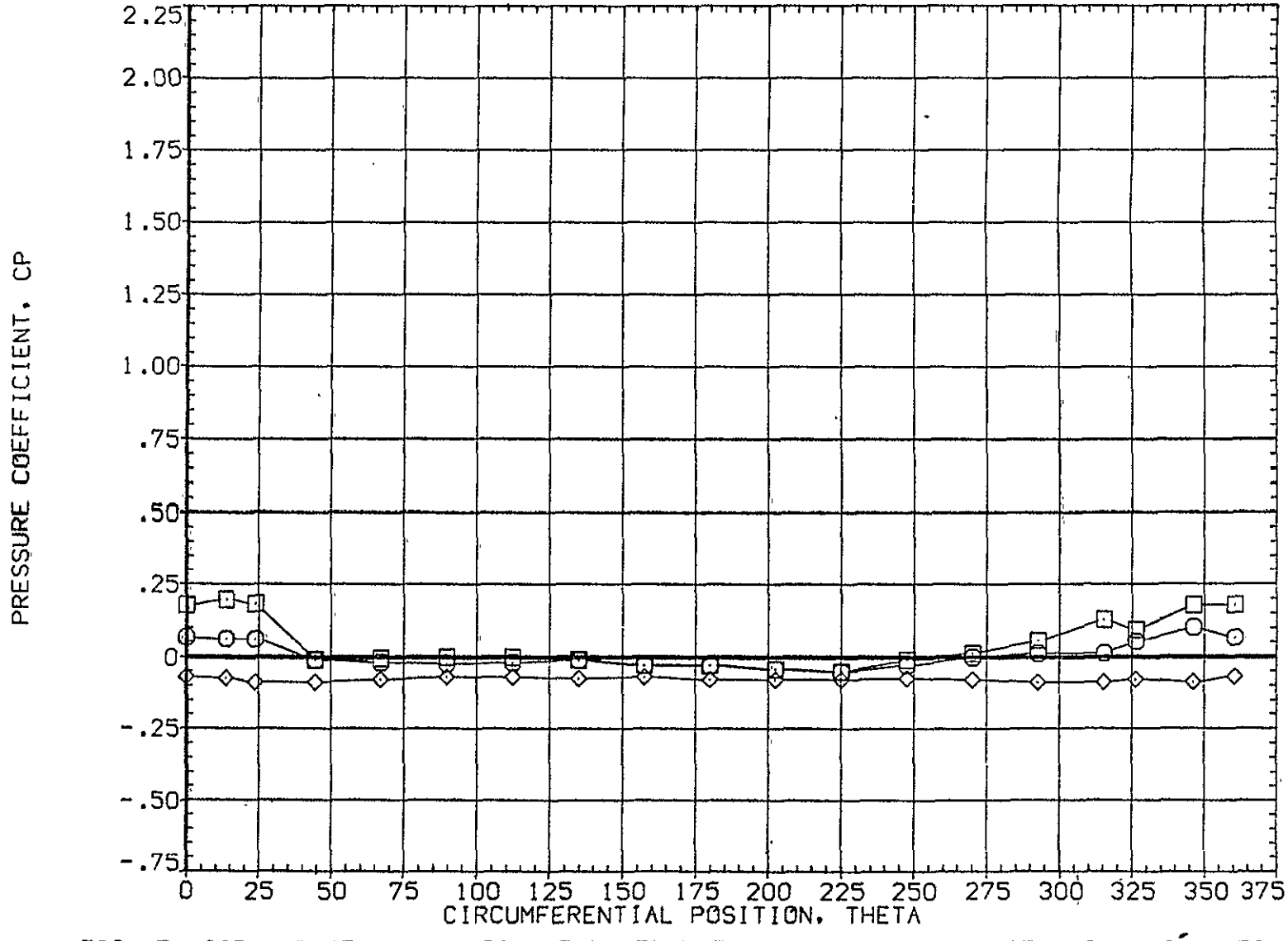

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.330	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

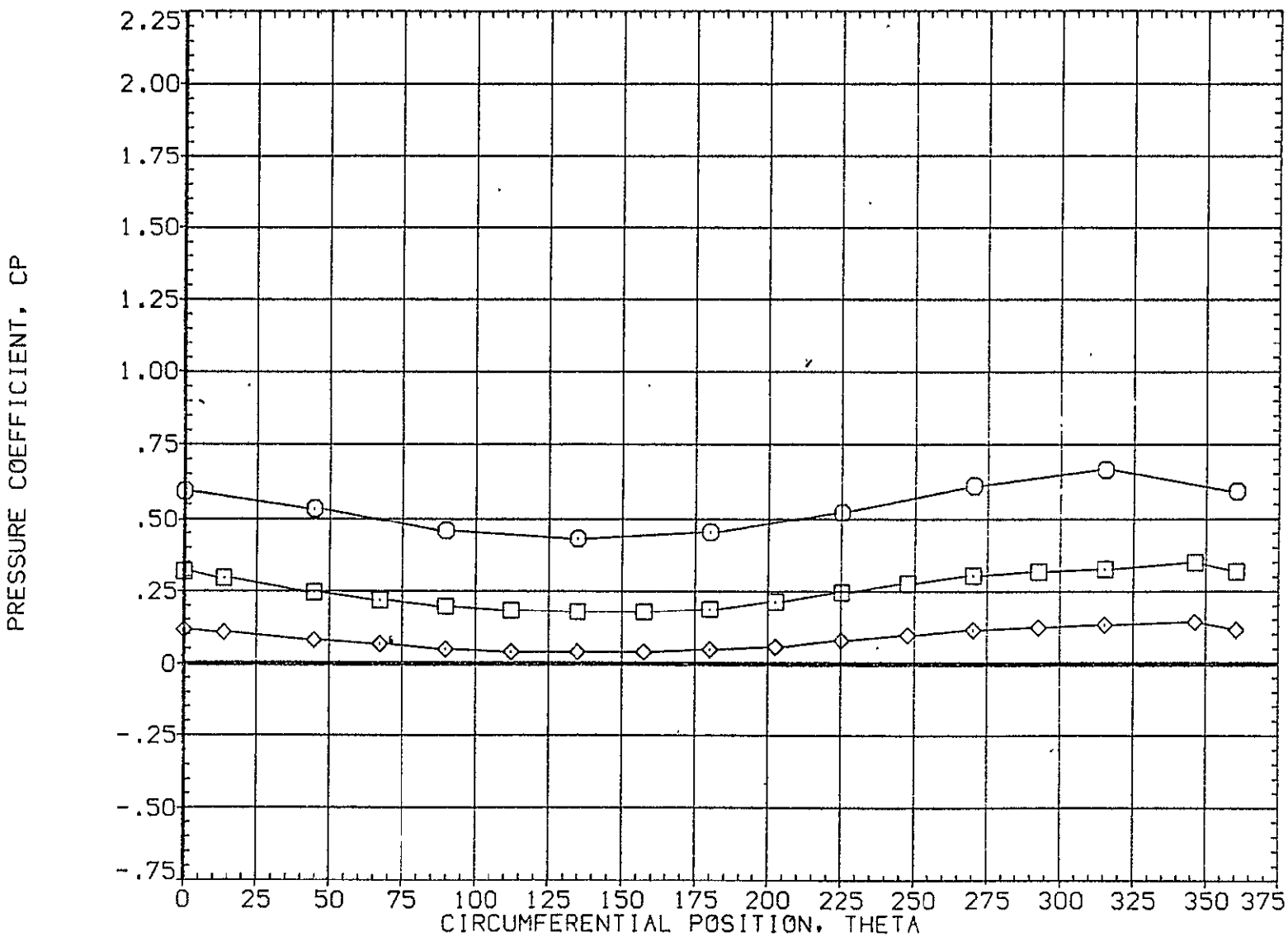

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.330	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

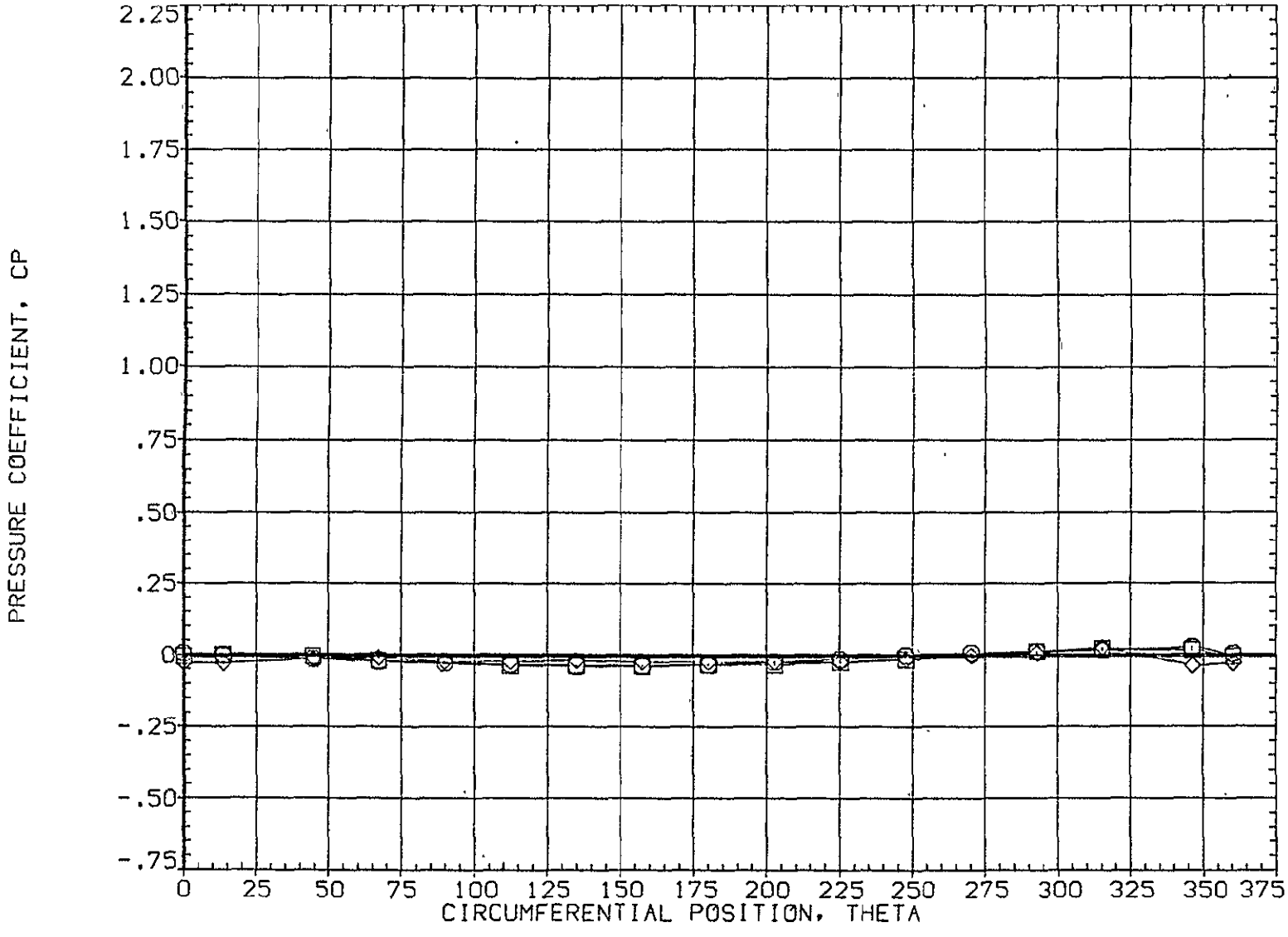

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.330	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

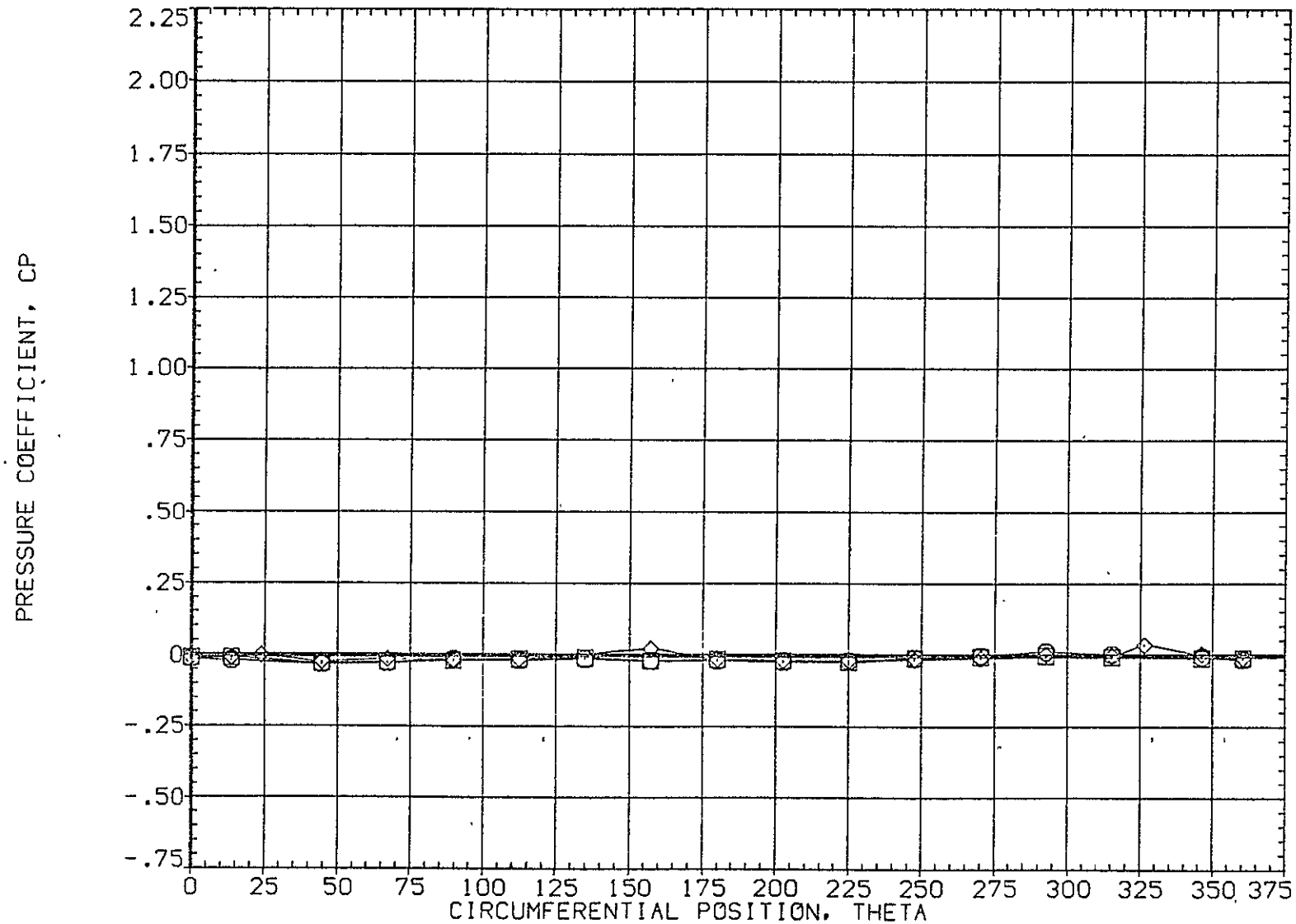

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.330	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

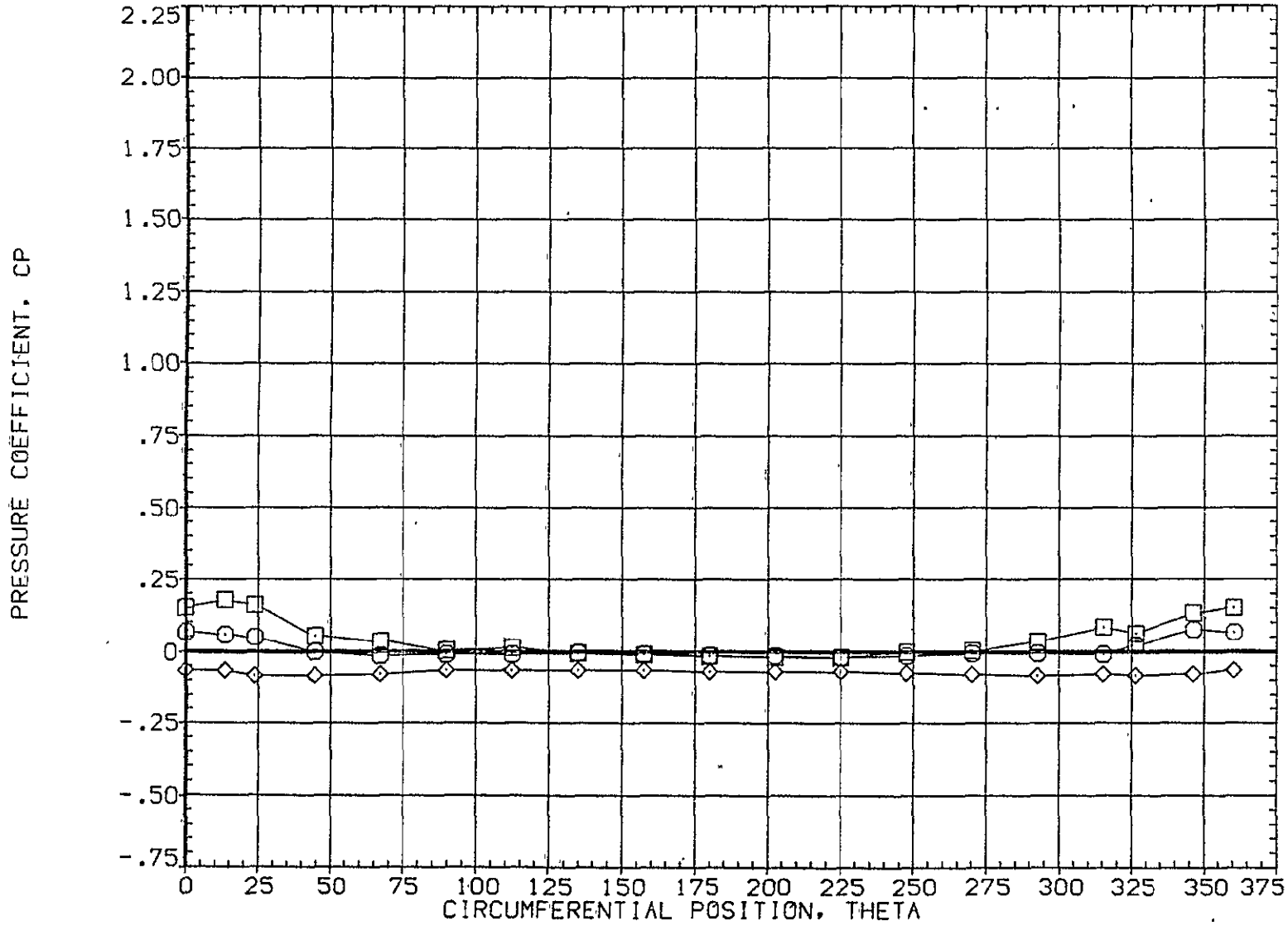

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

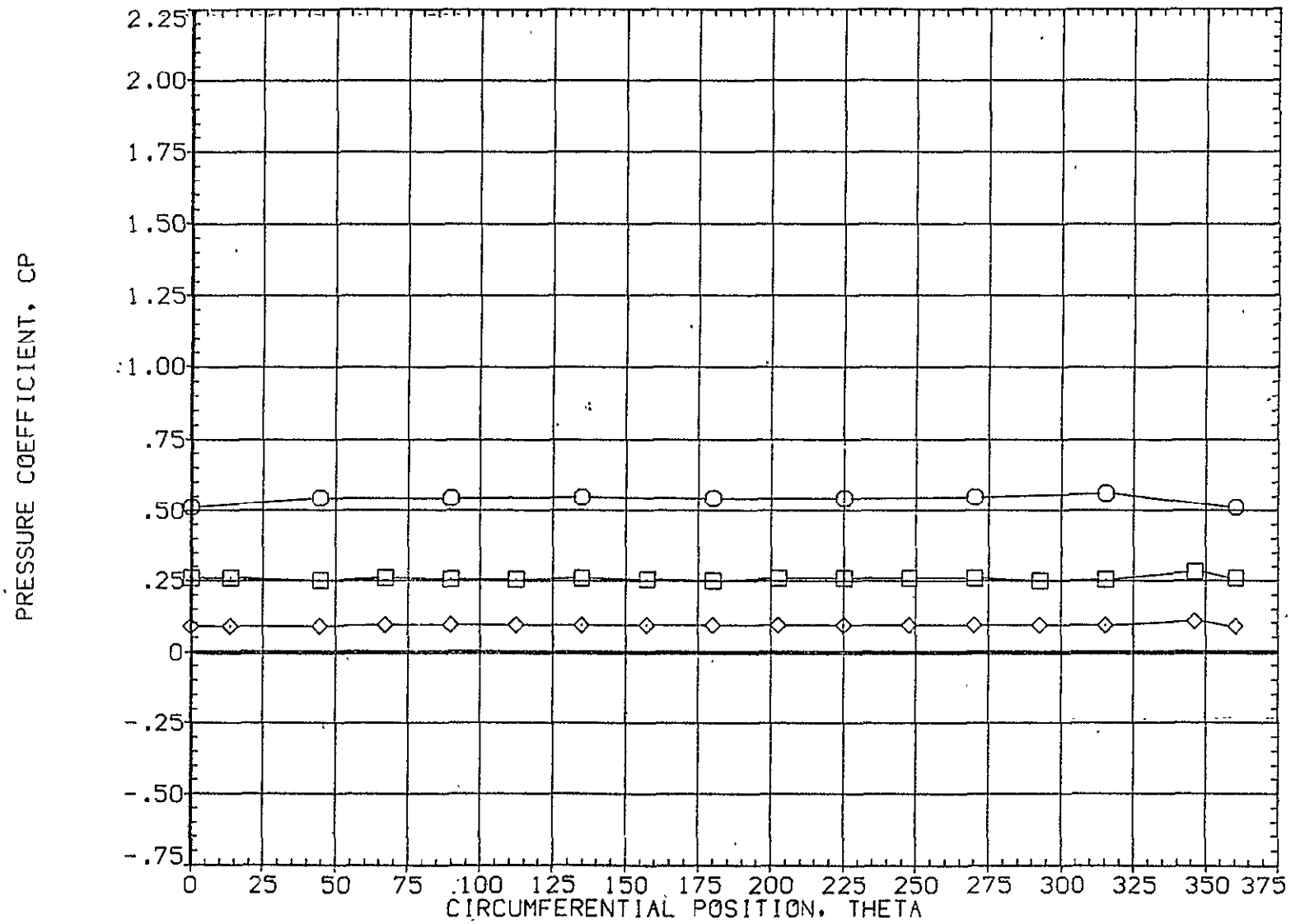

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

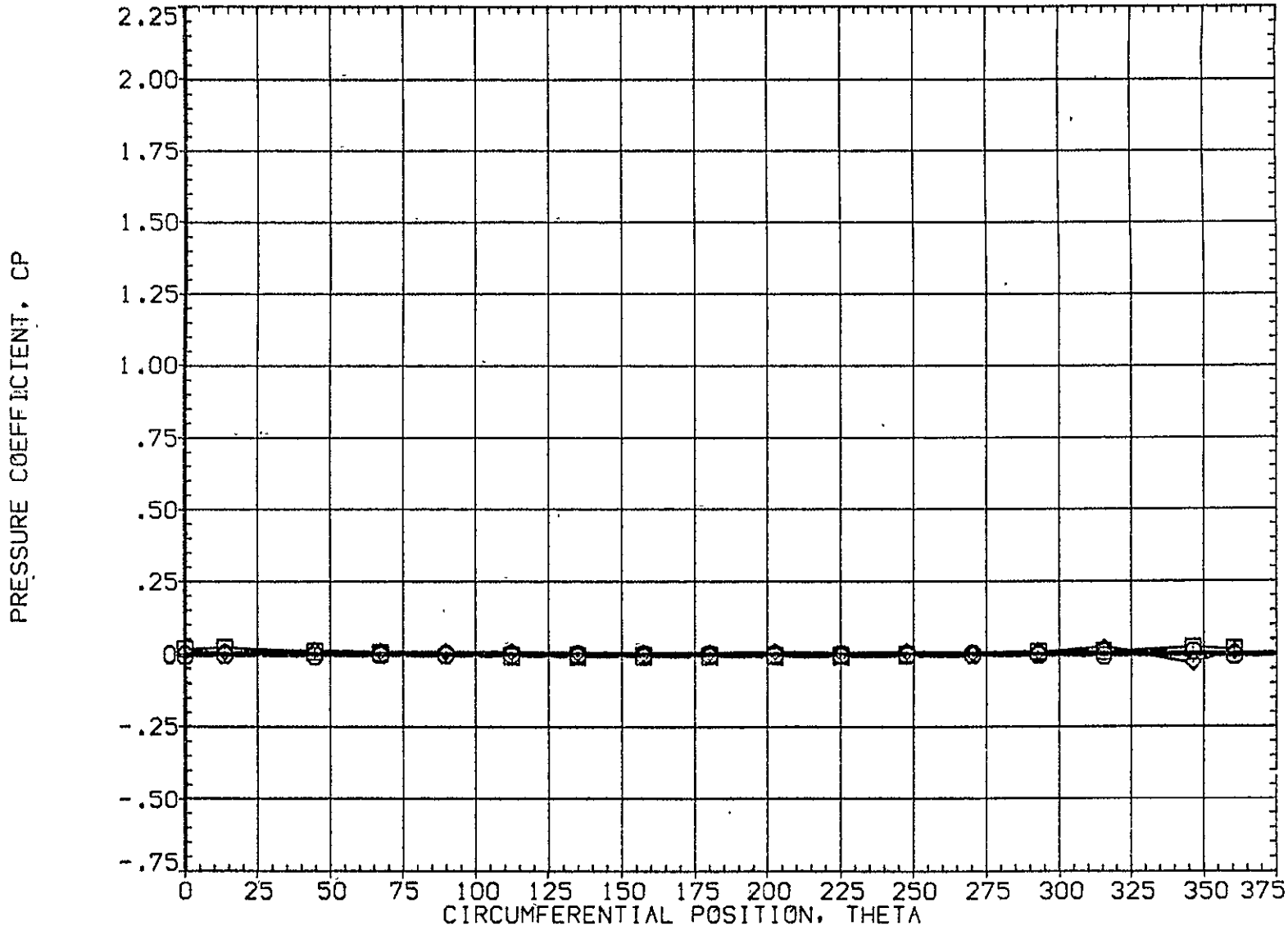

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

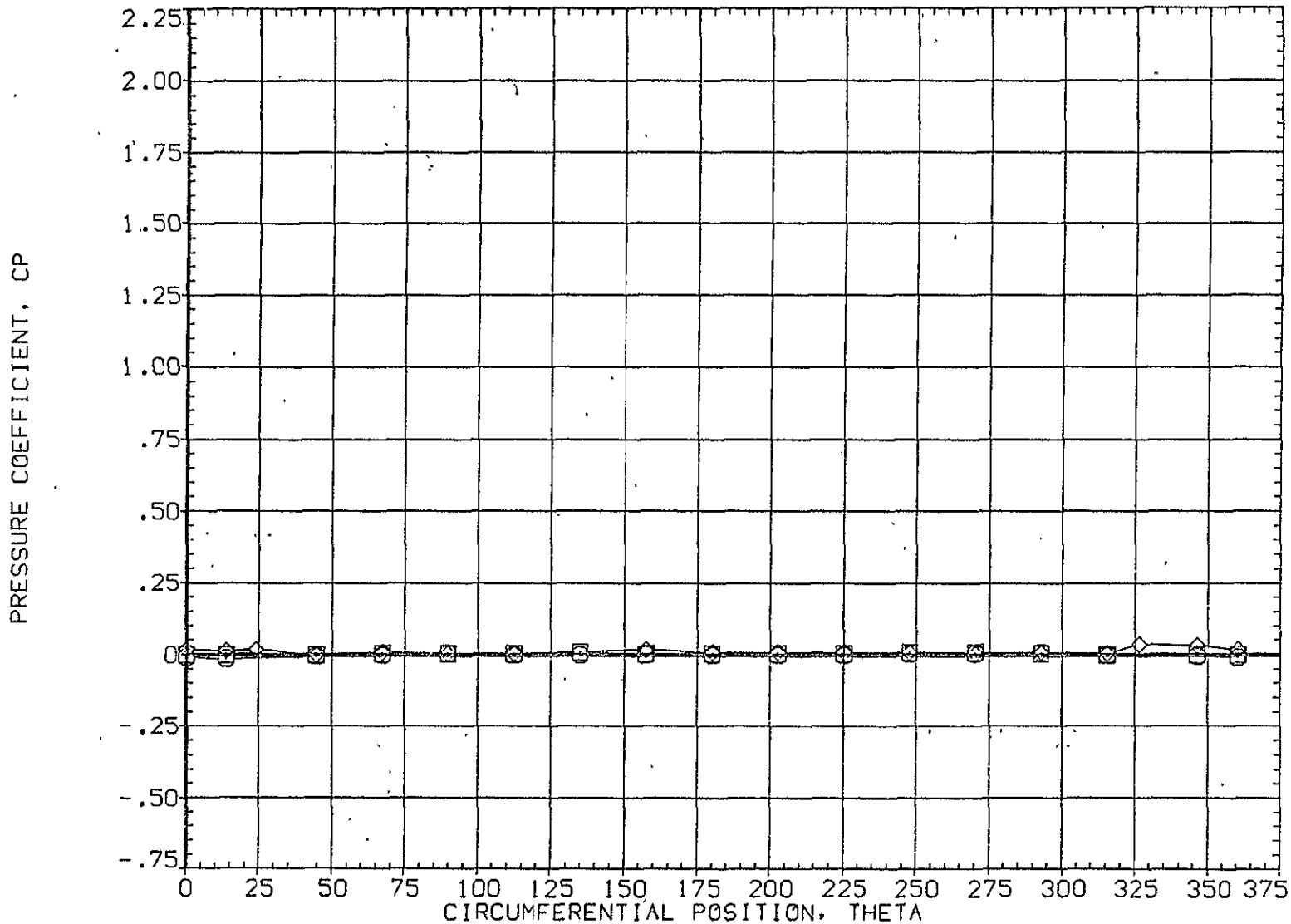

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

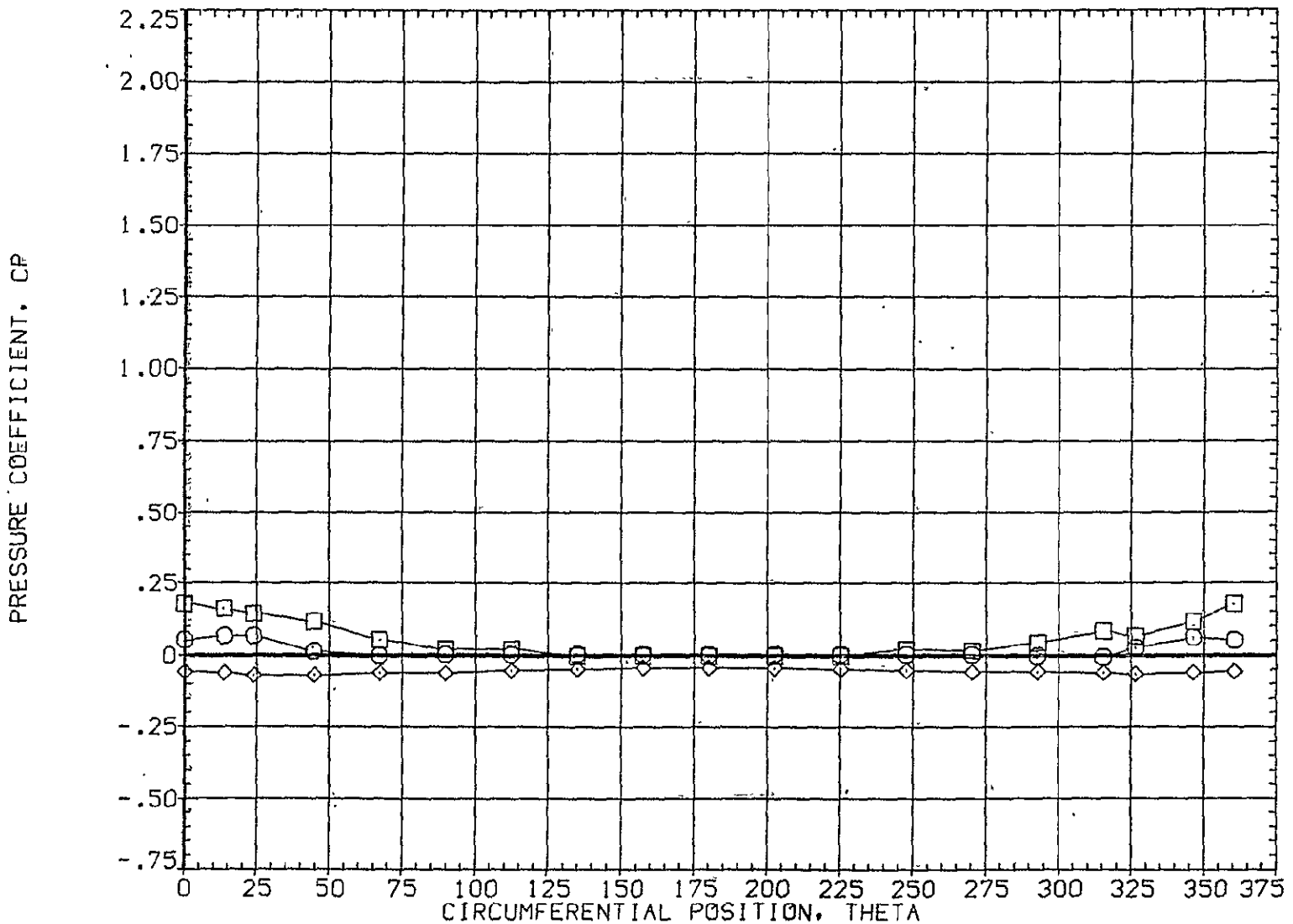

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.770	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

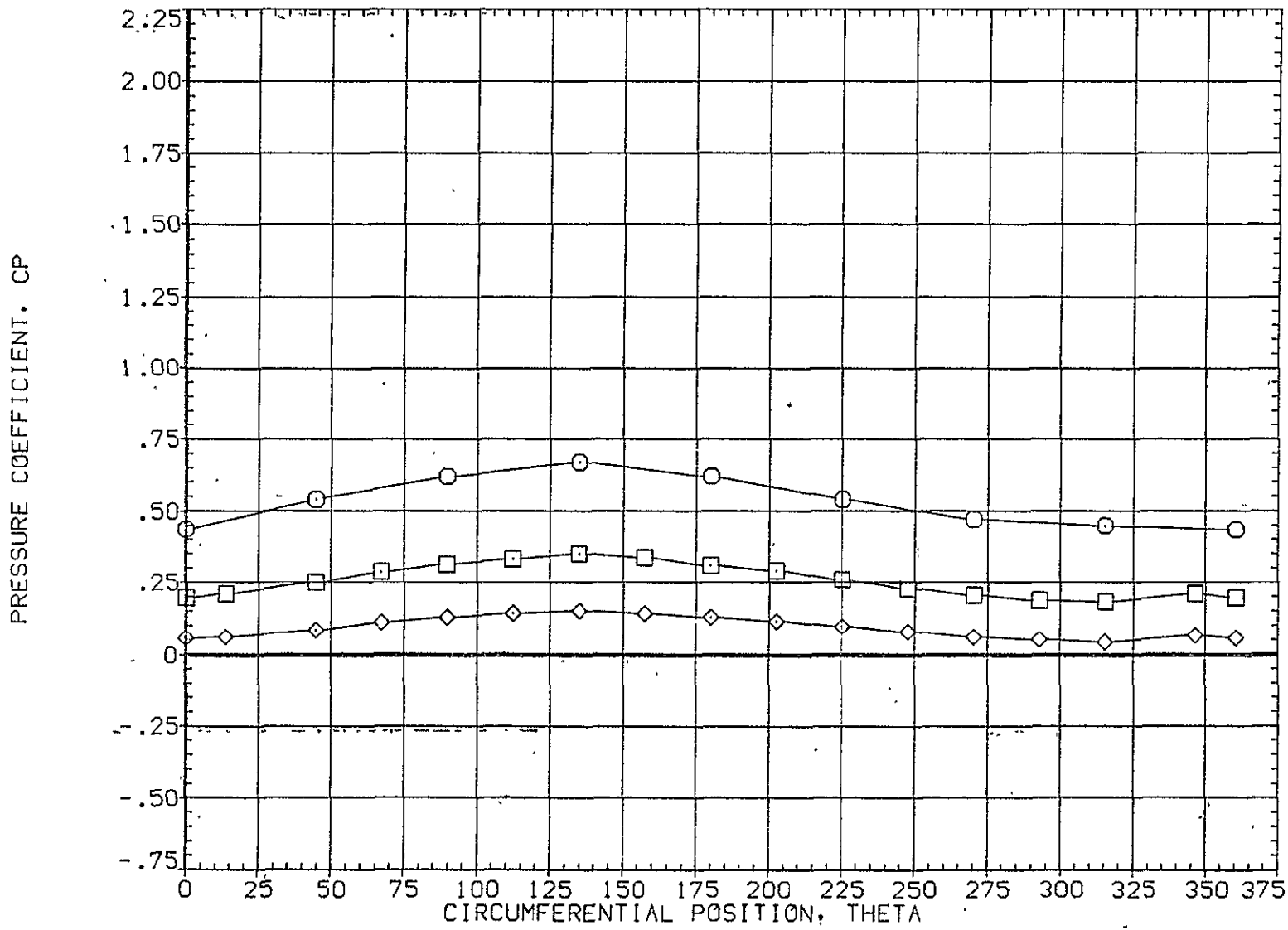

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.770	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

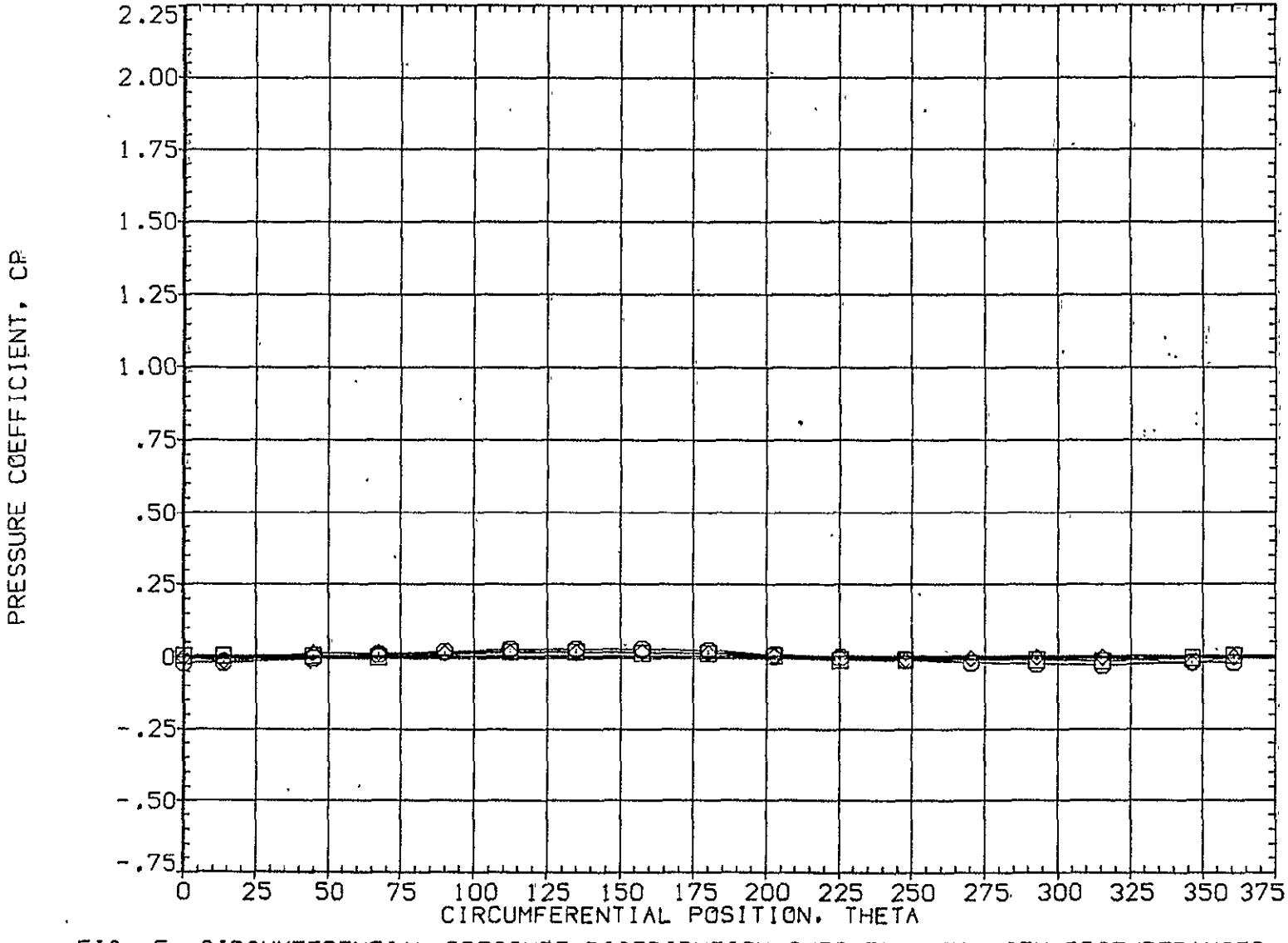

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.770	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

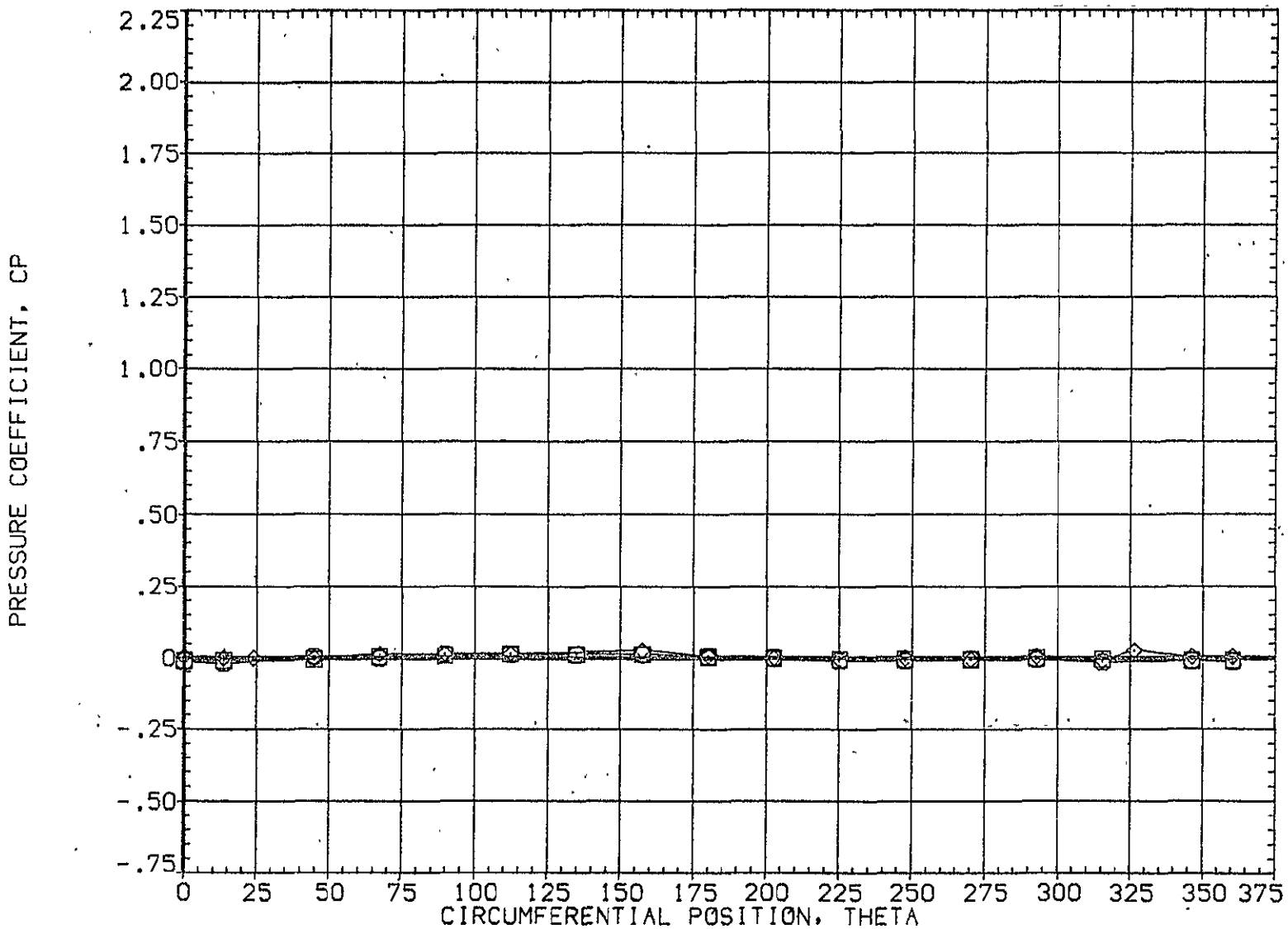

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.770	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

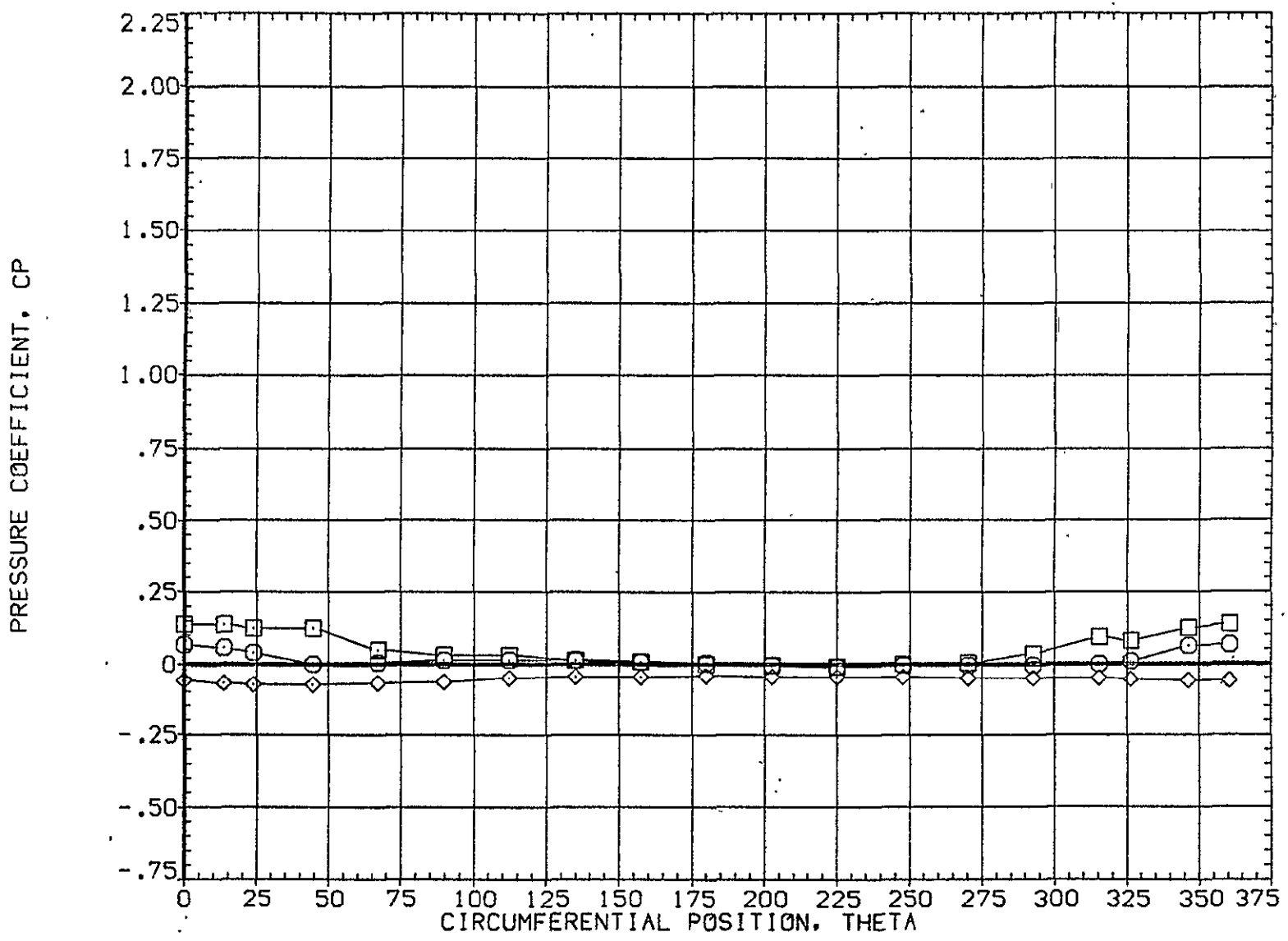

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.800	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

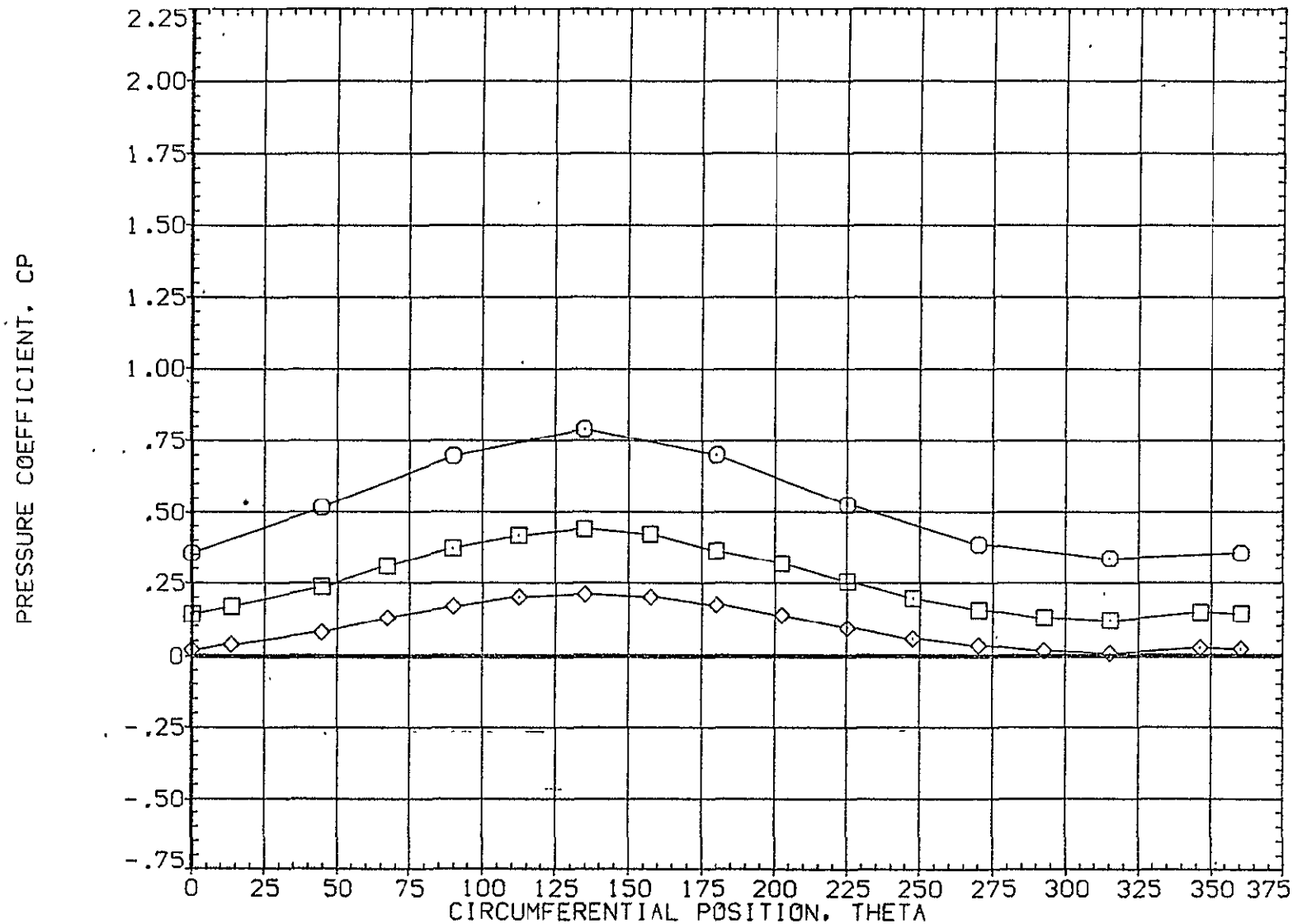

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.800	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

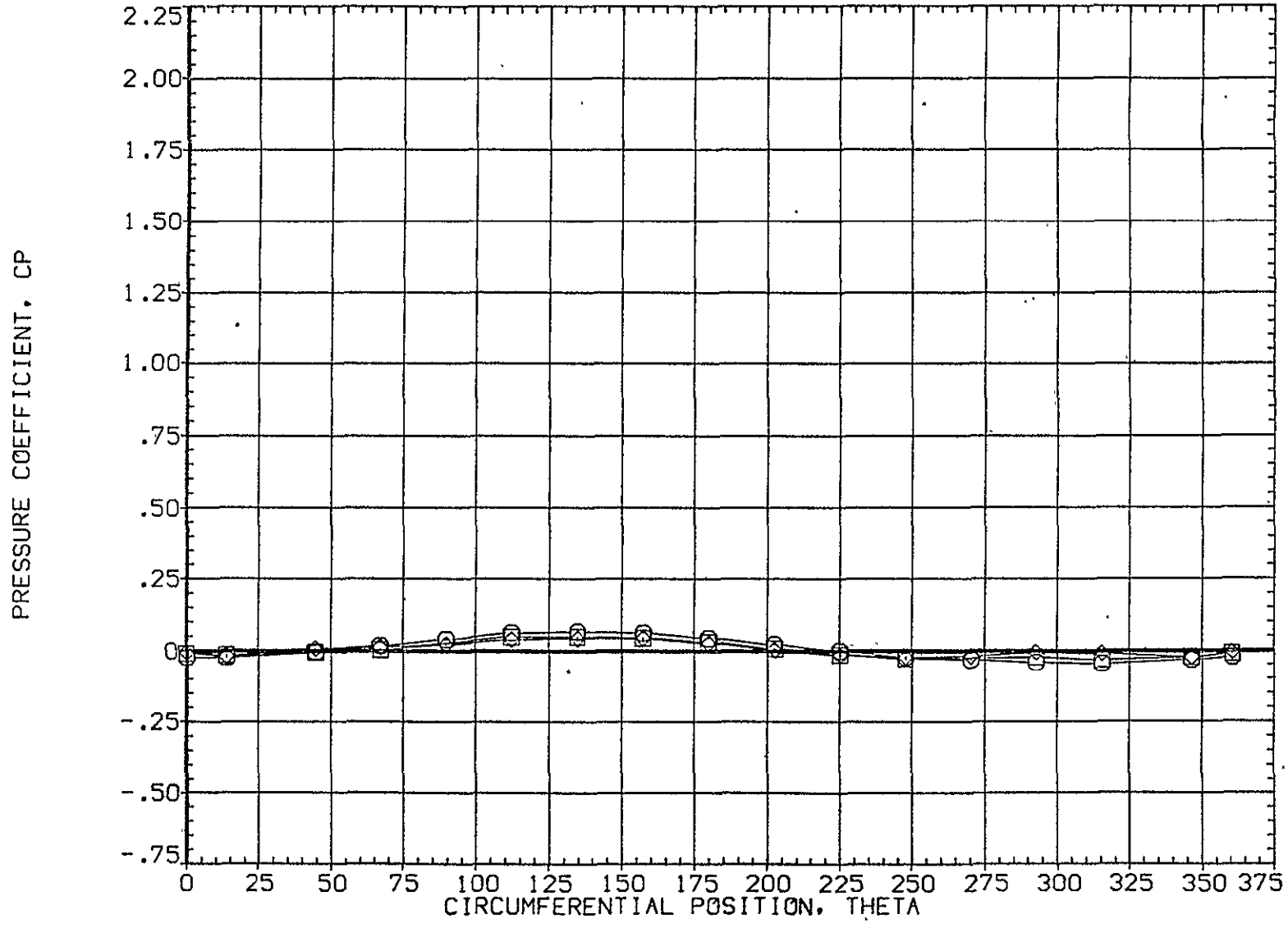

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.800	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

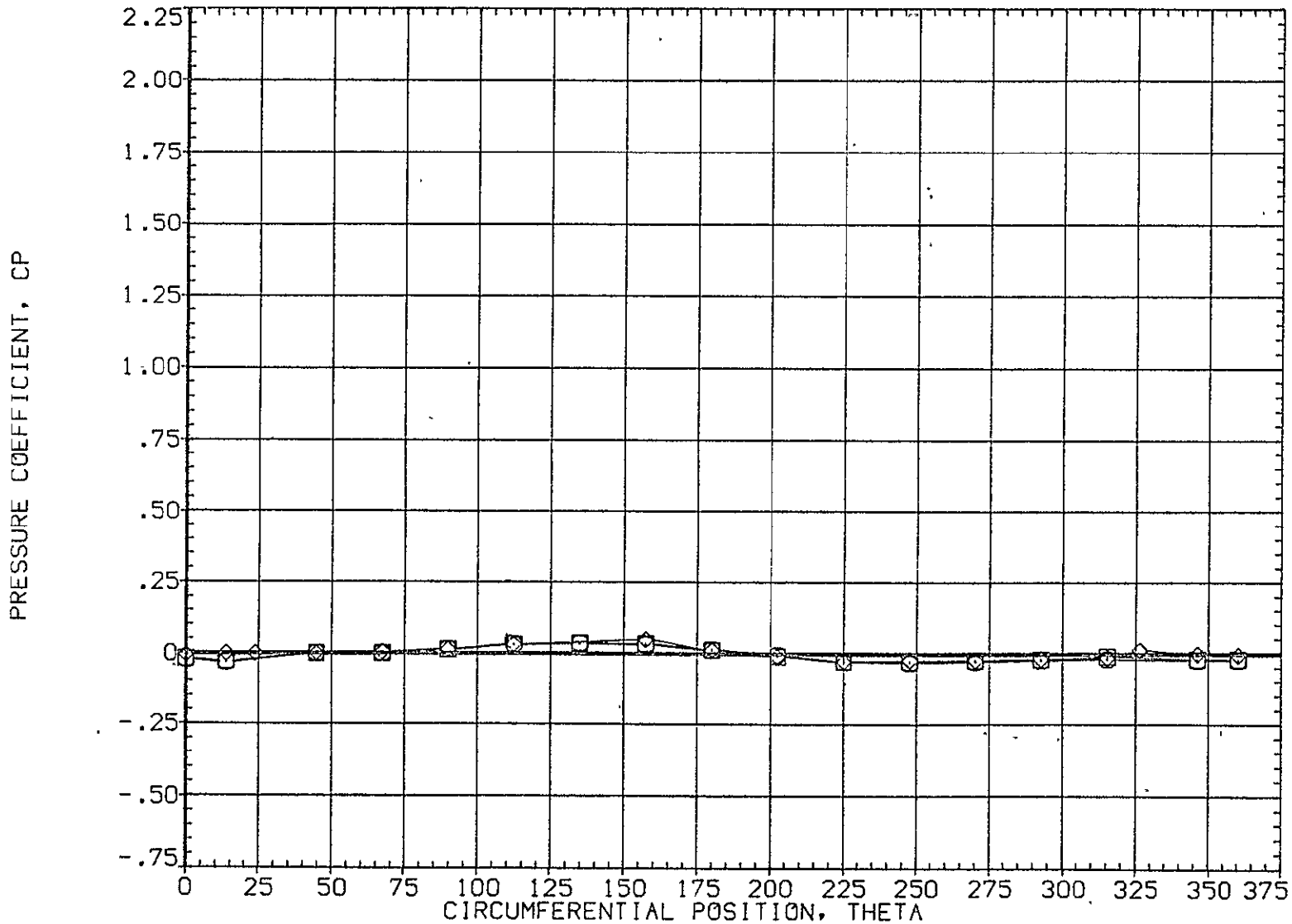

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.800	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

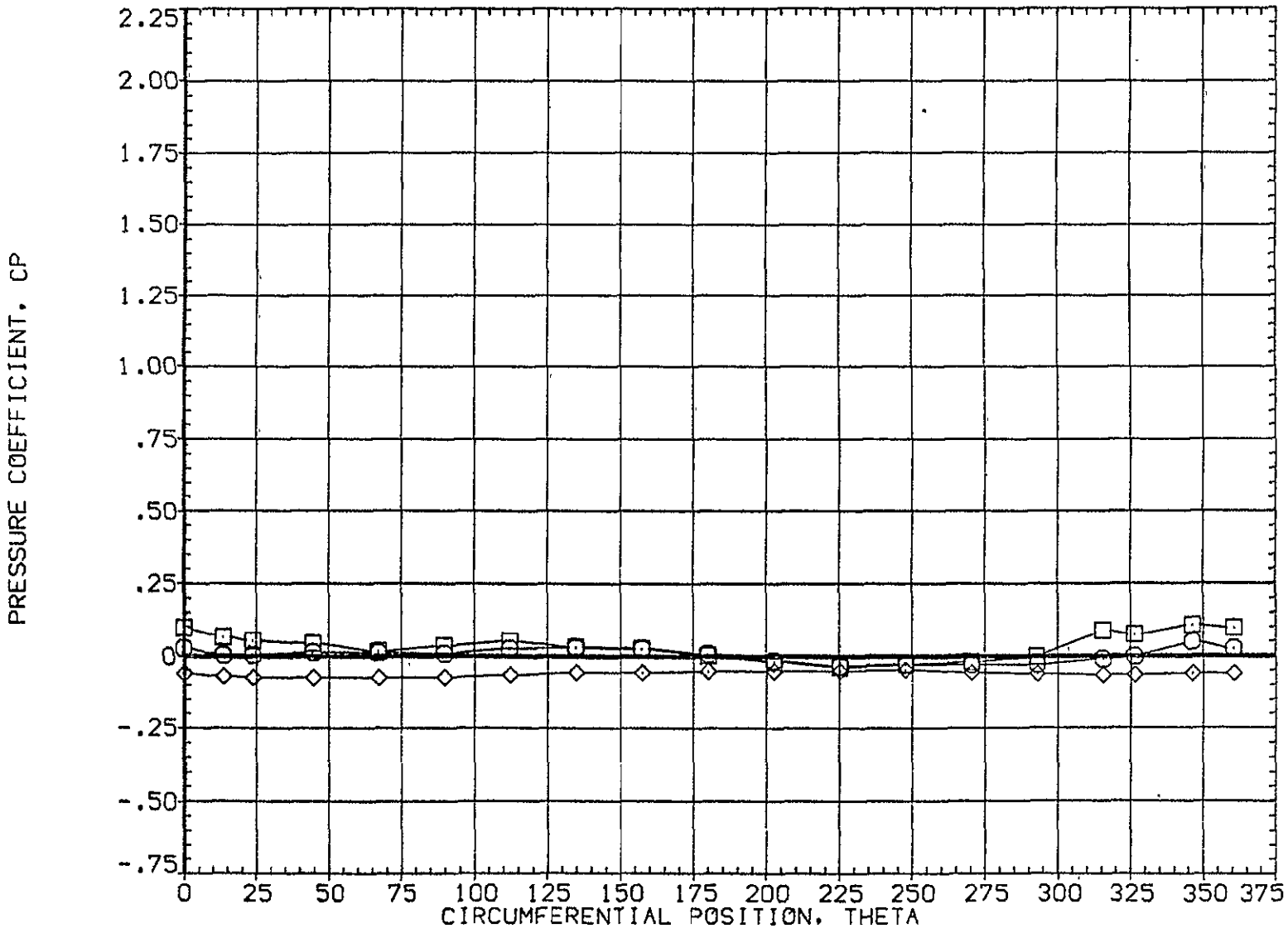

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.500	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

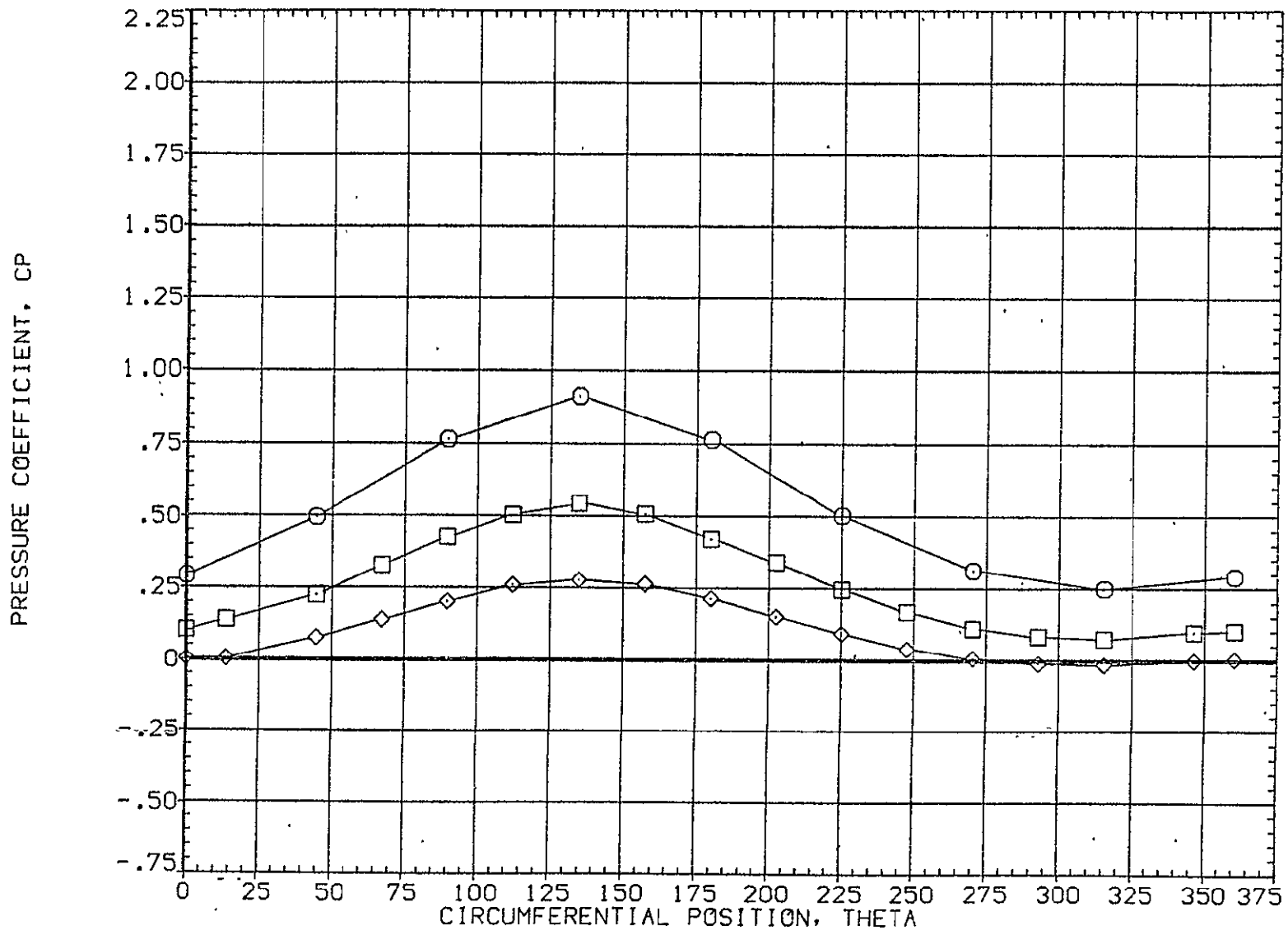

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.500	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

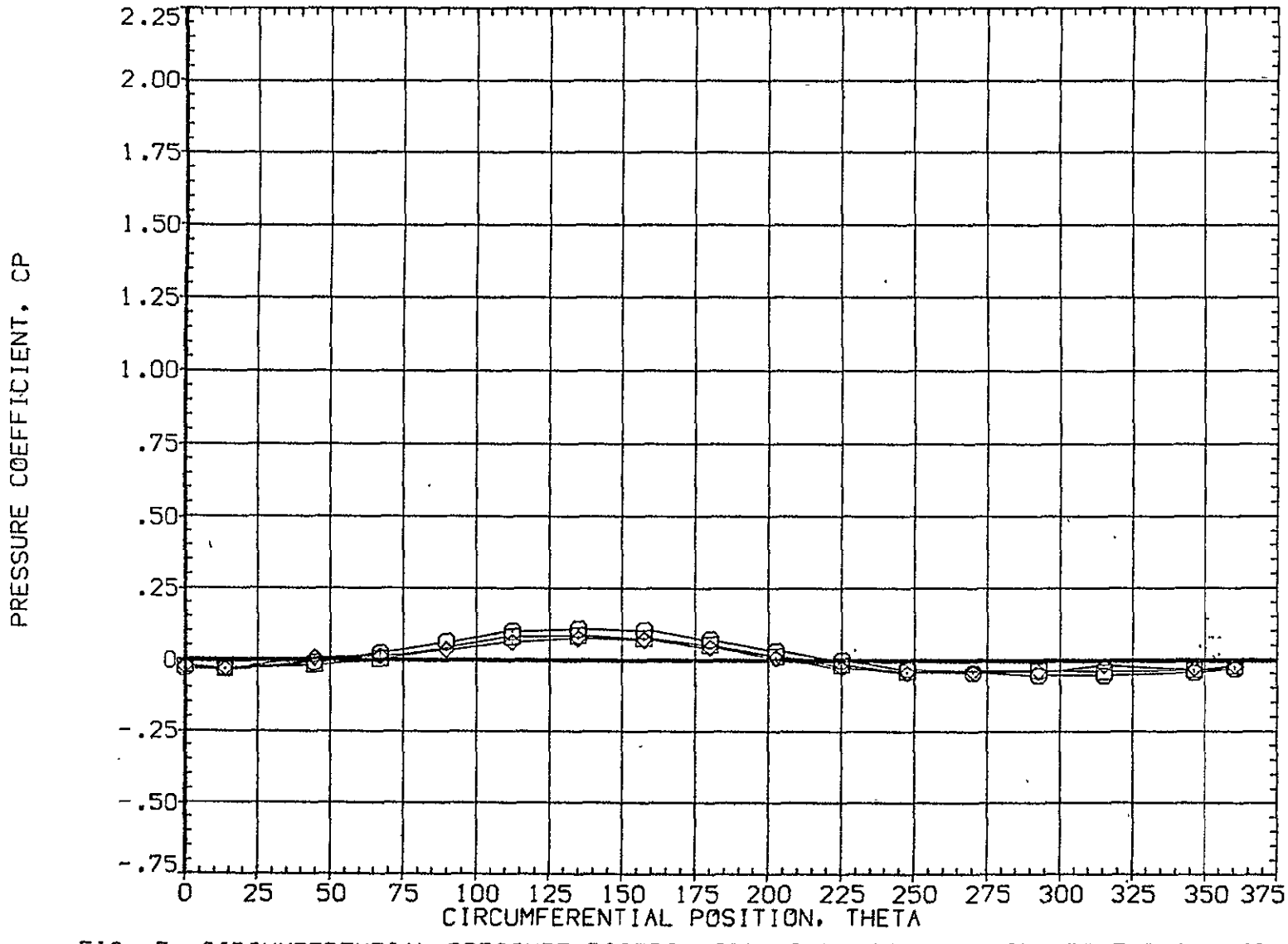

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.500	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

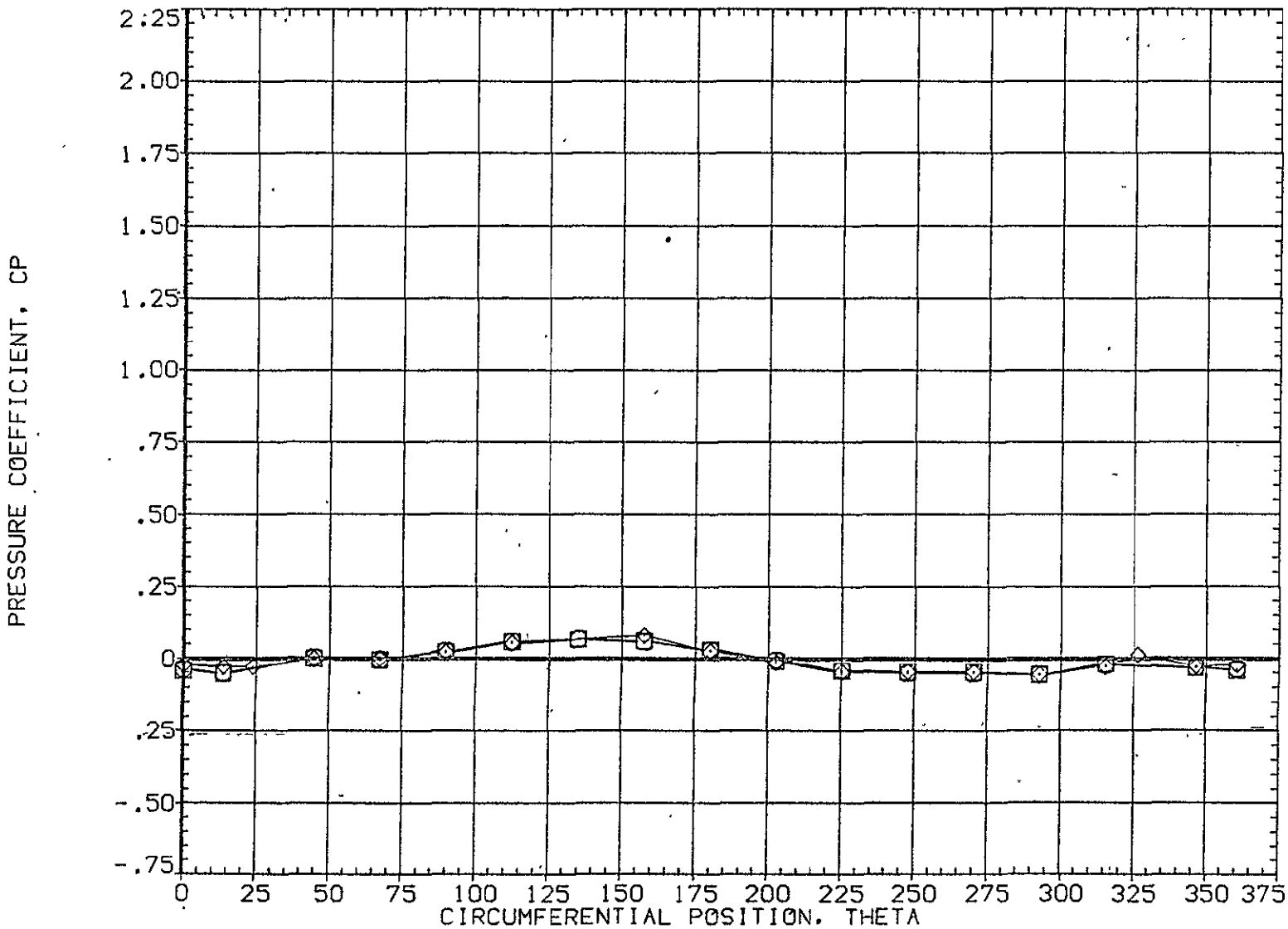

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.500	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

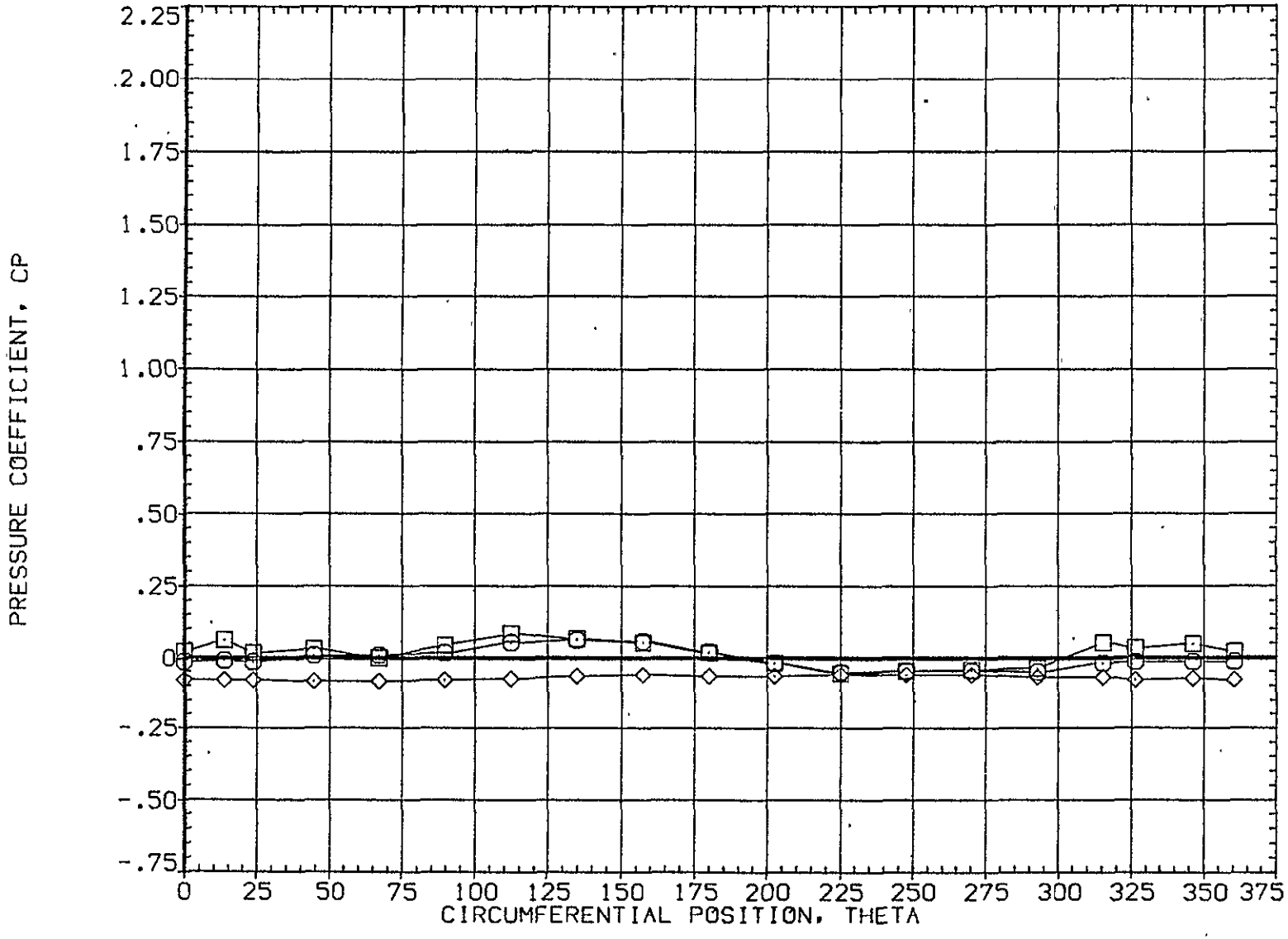

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.560	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

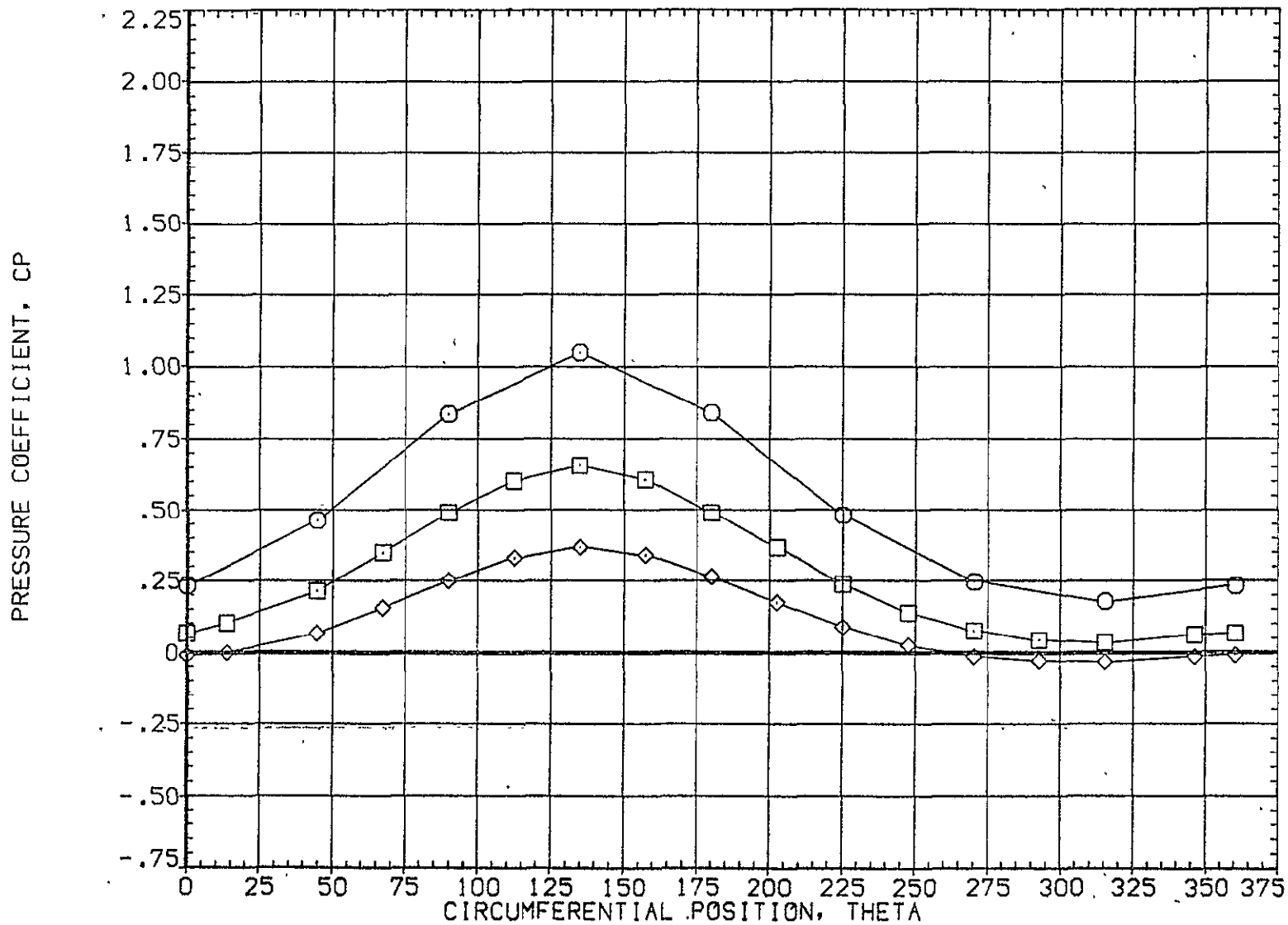

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.560	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

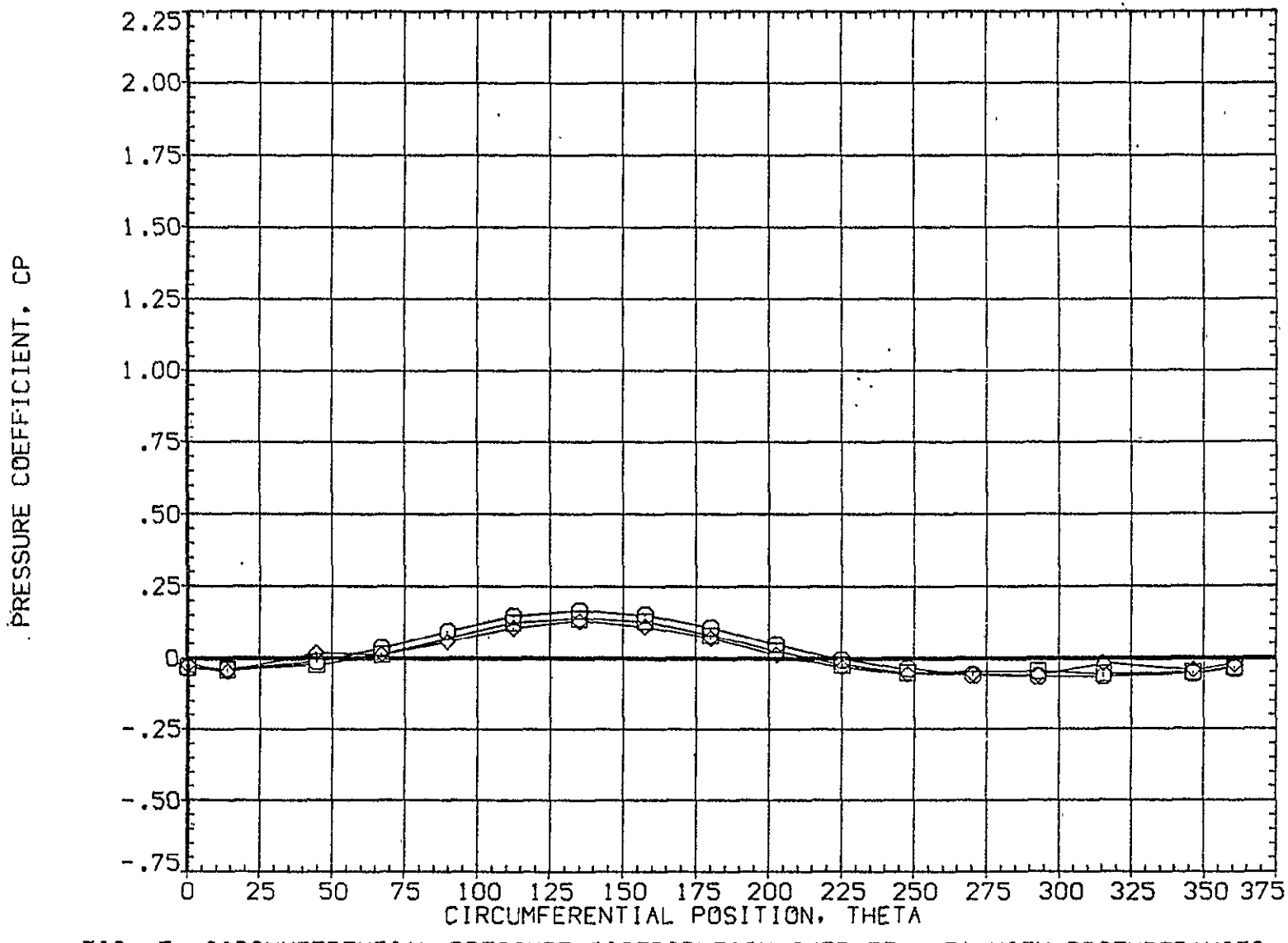

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.560	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

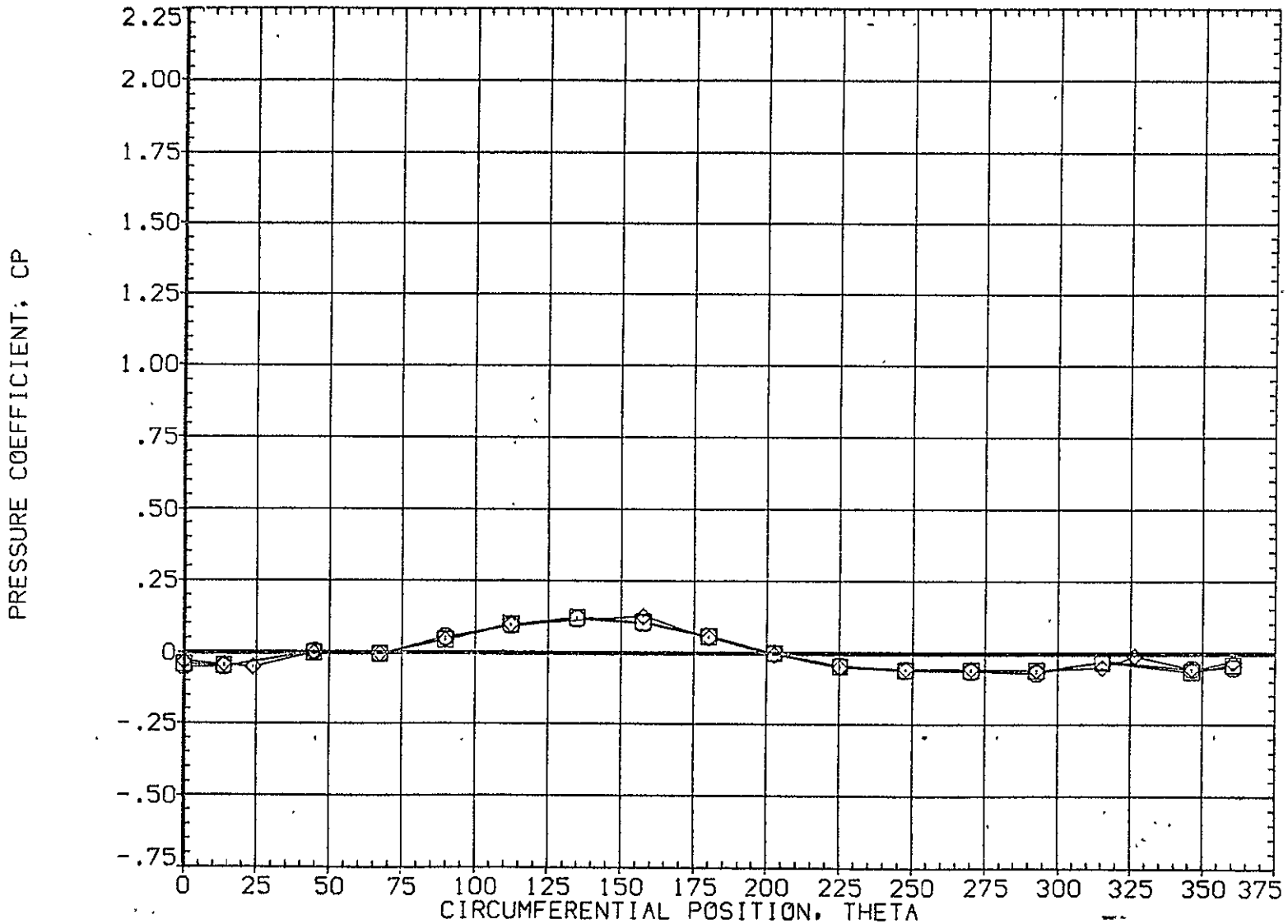

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.560	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

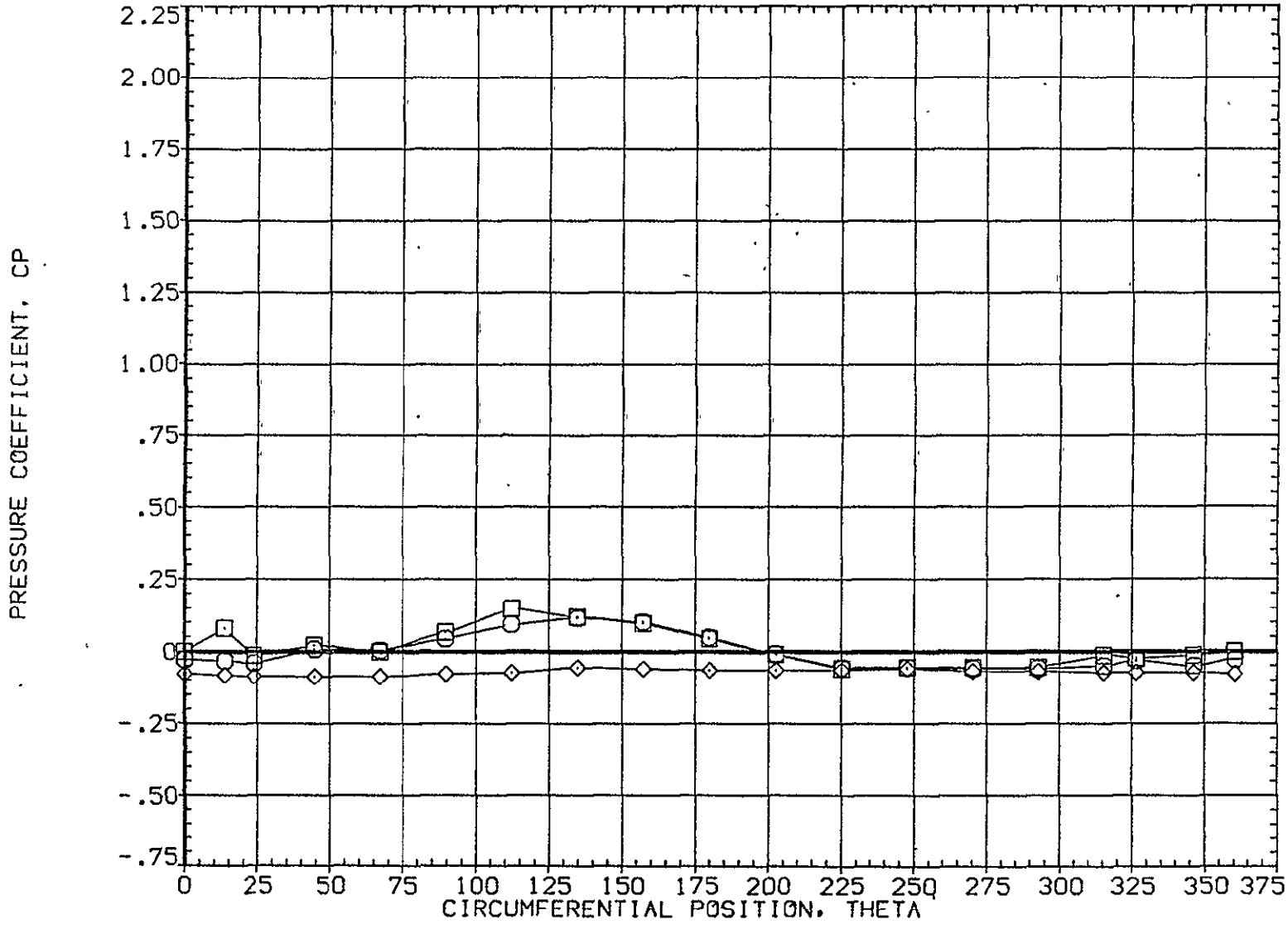

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.610	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

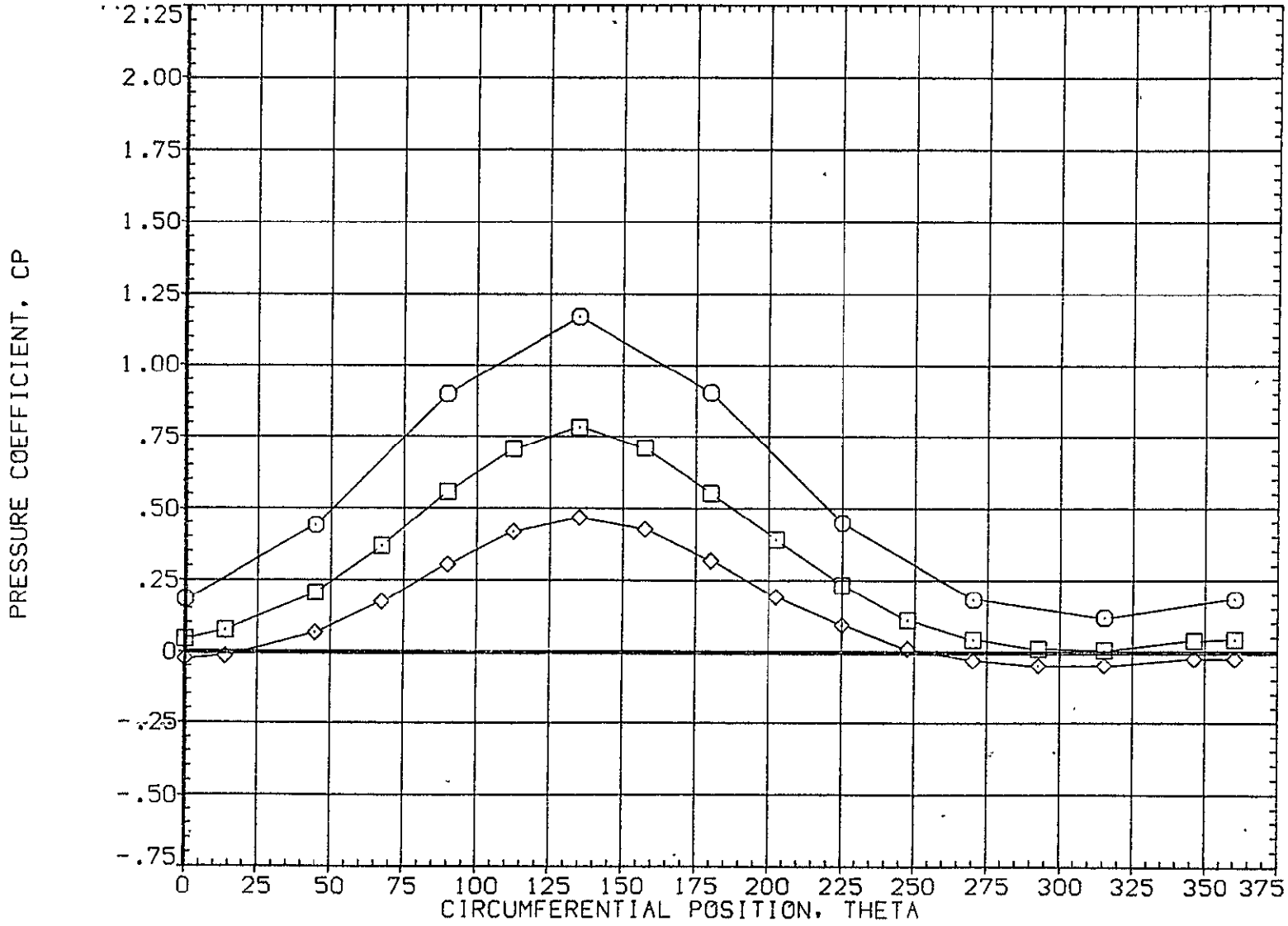

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.610	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

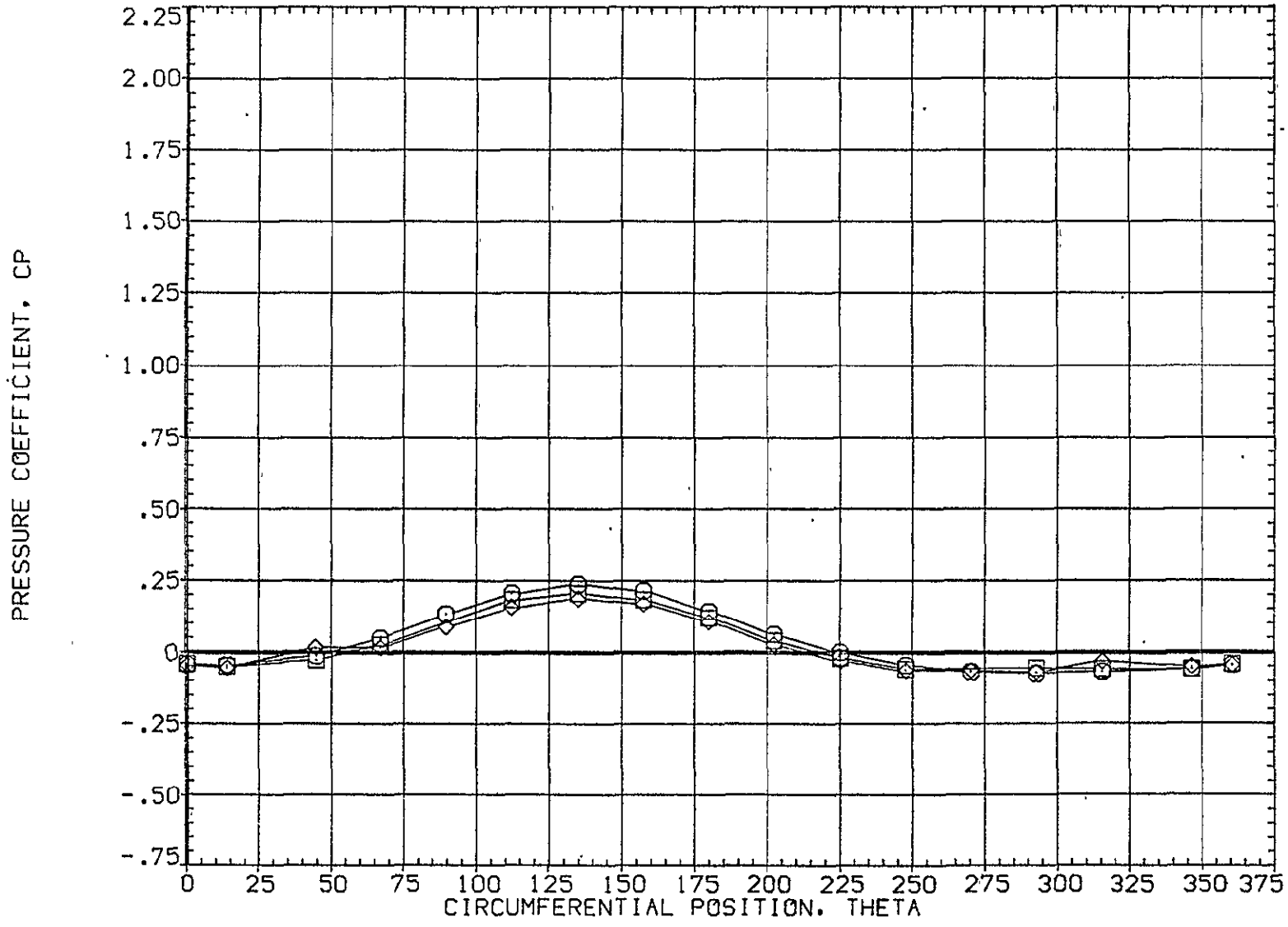

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.610	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

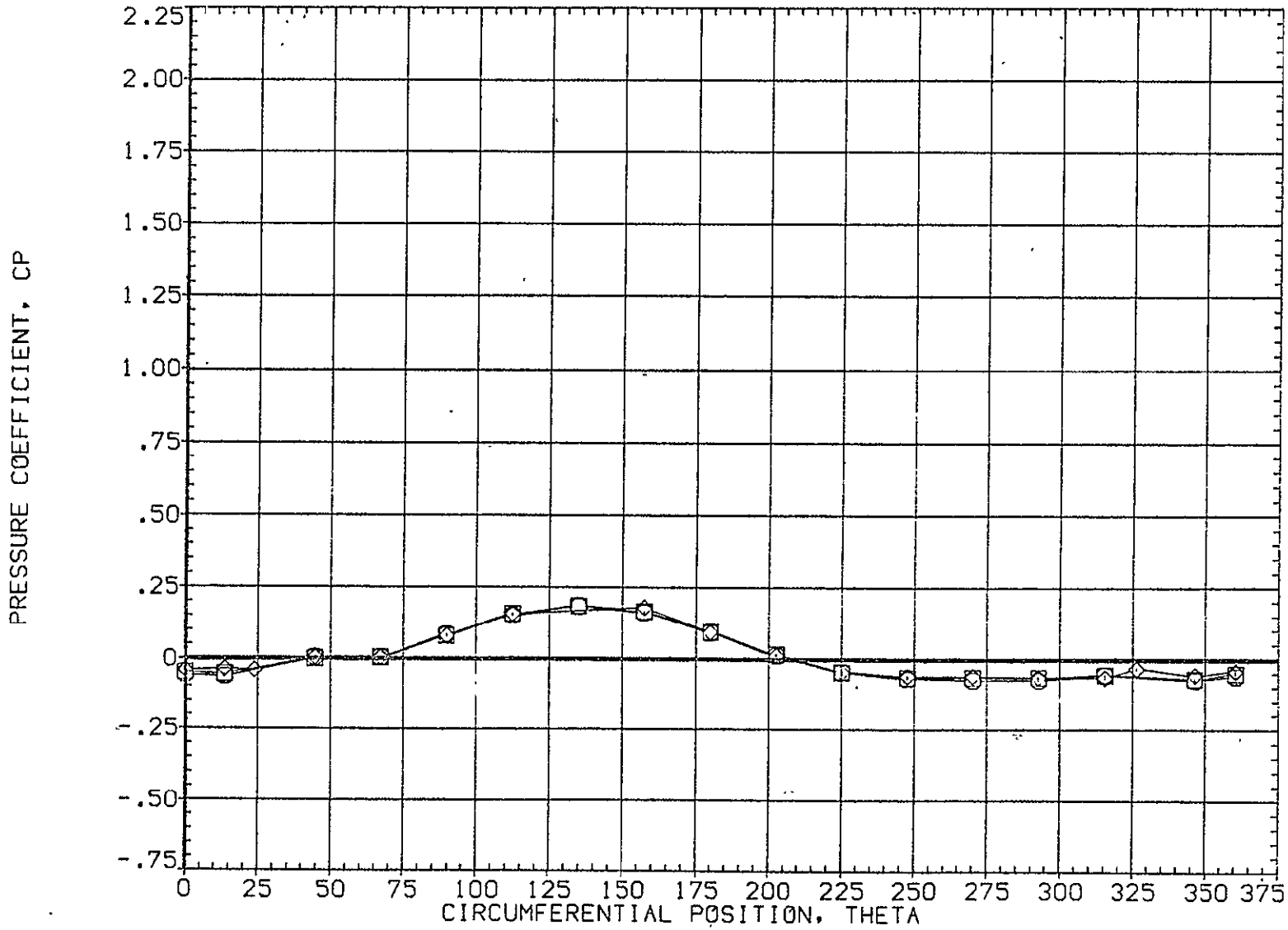

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.610	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

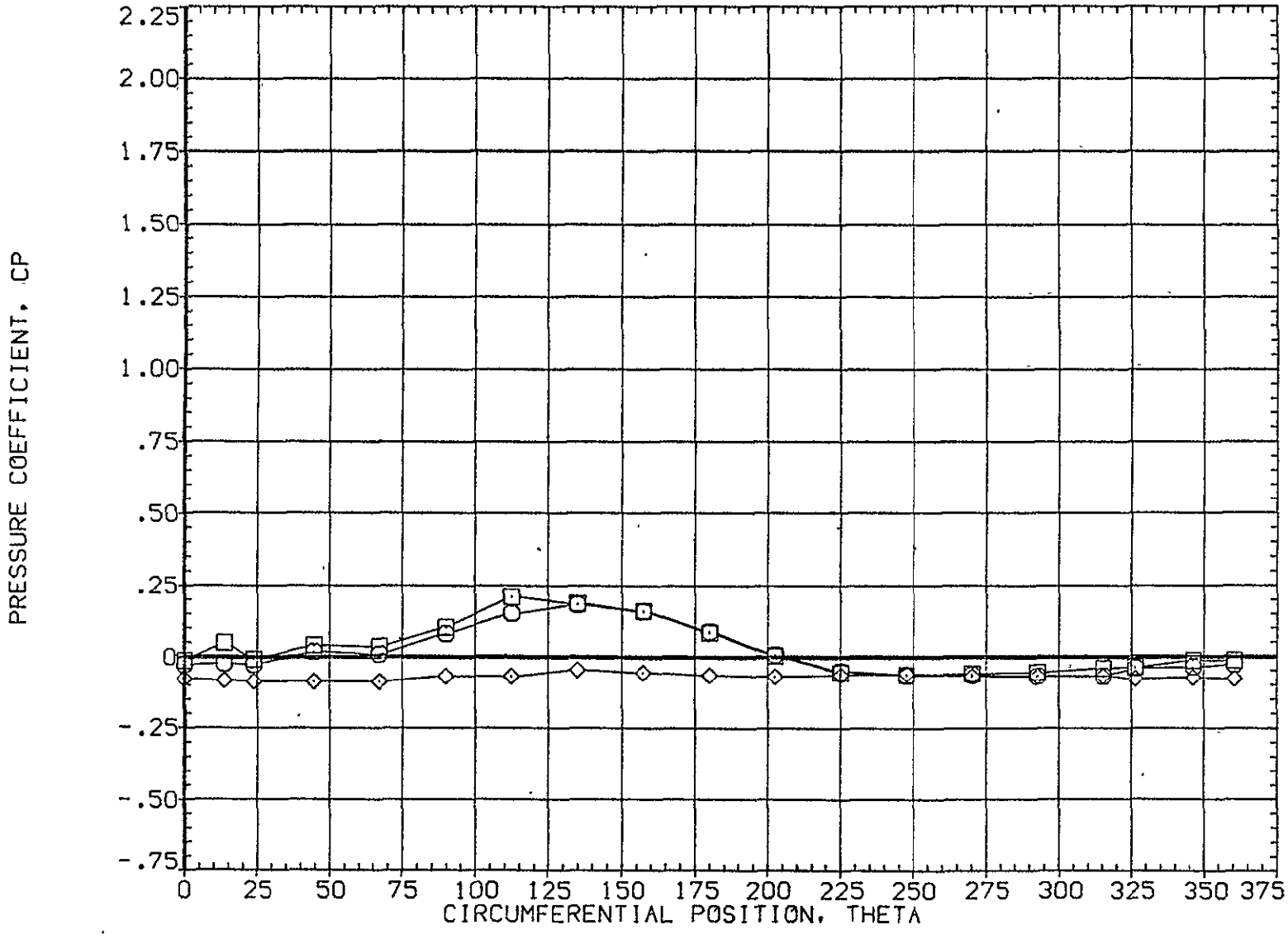

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.660	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

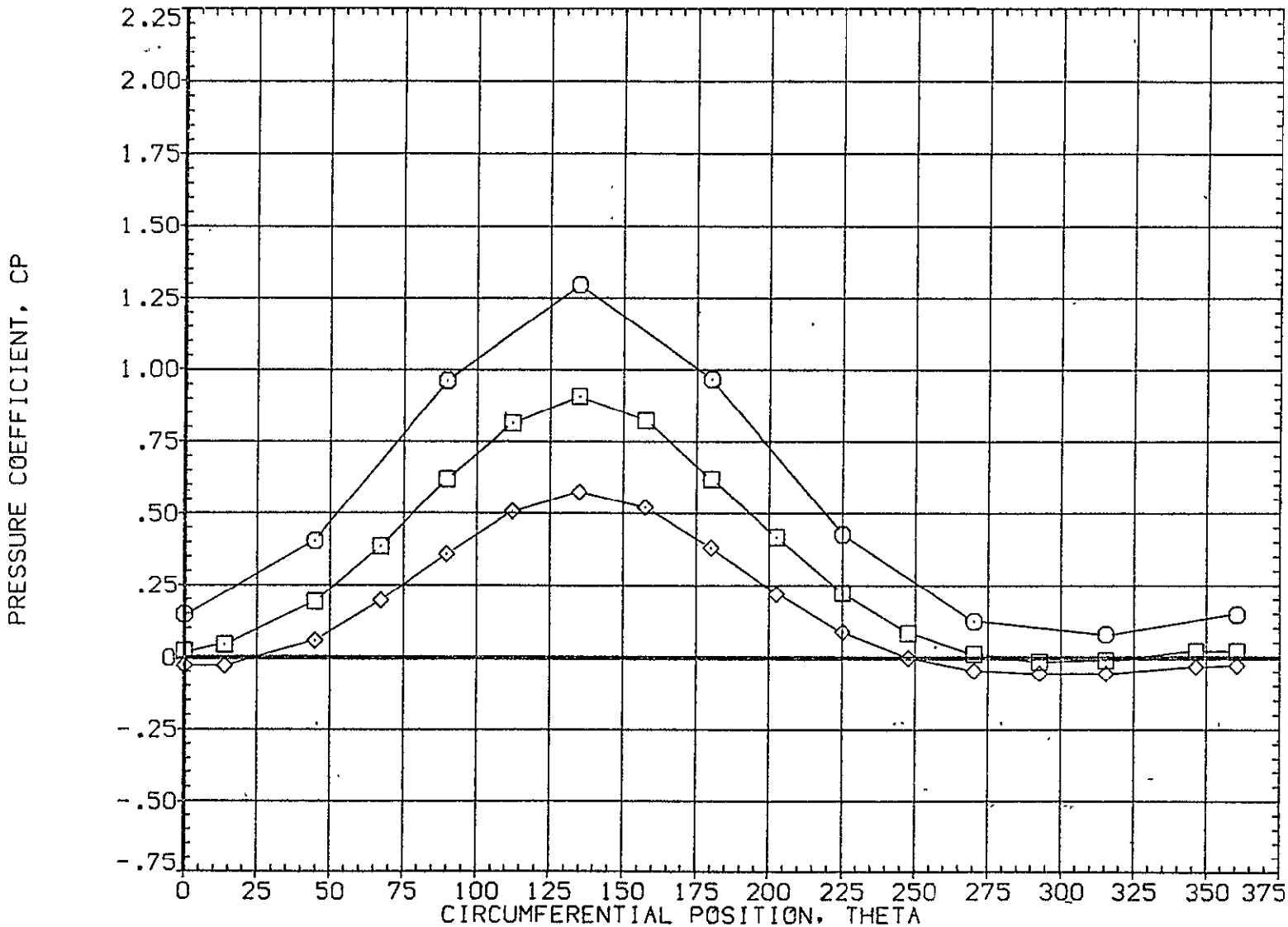

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.660	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

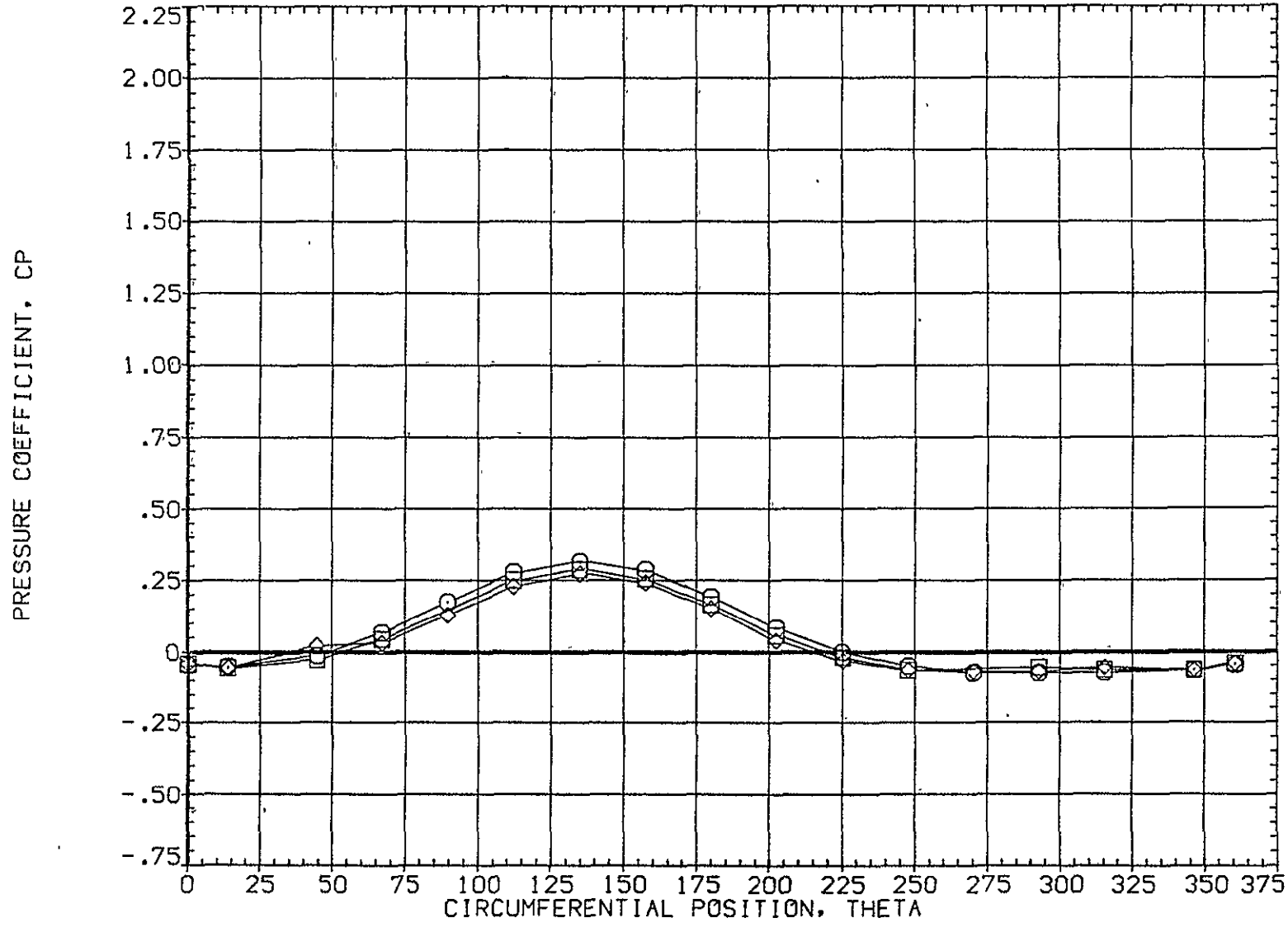

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.660	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

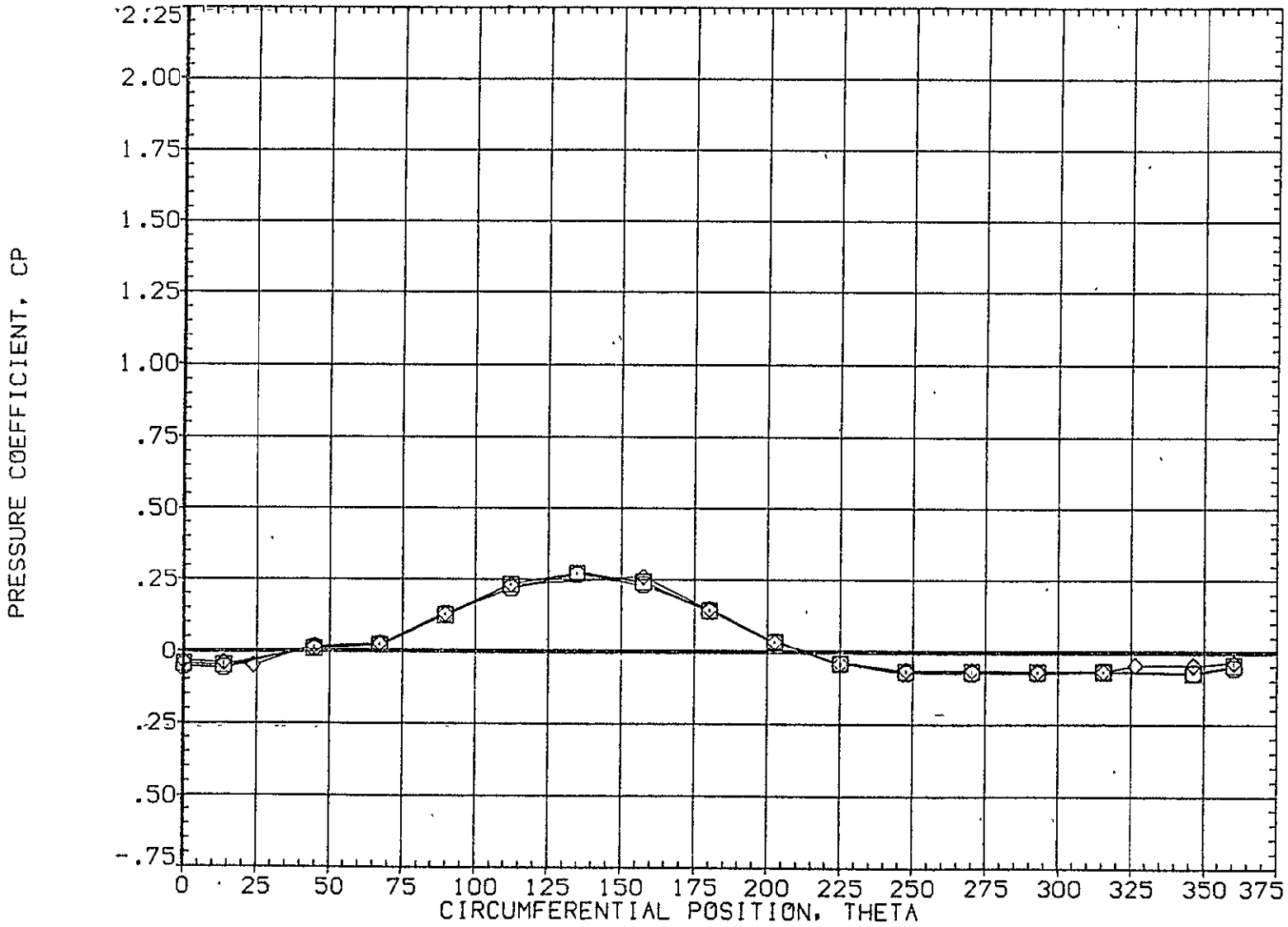

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.660	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

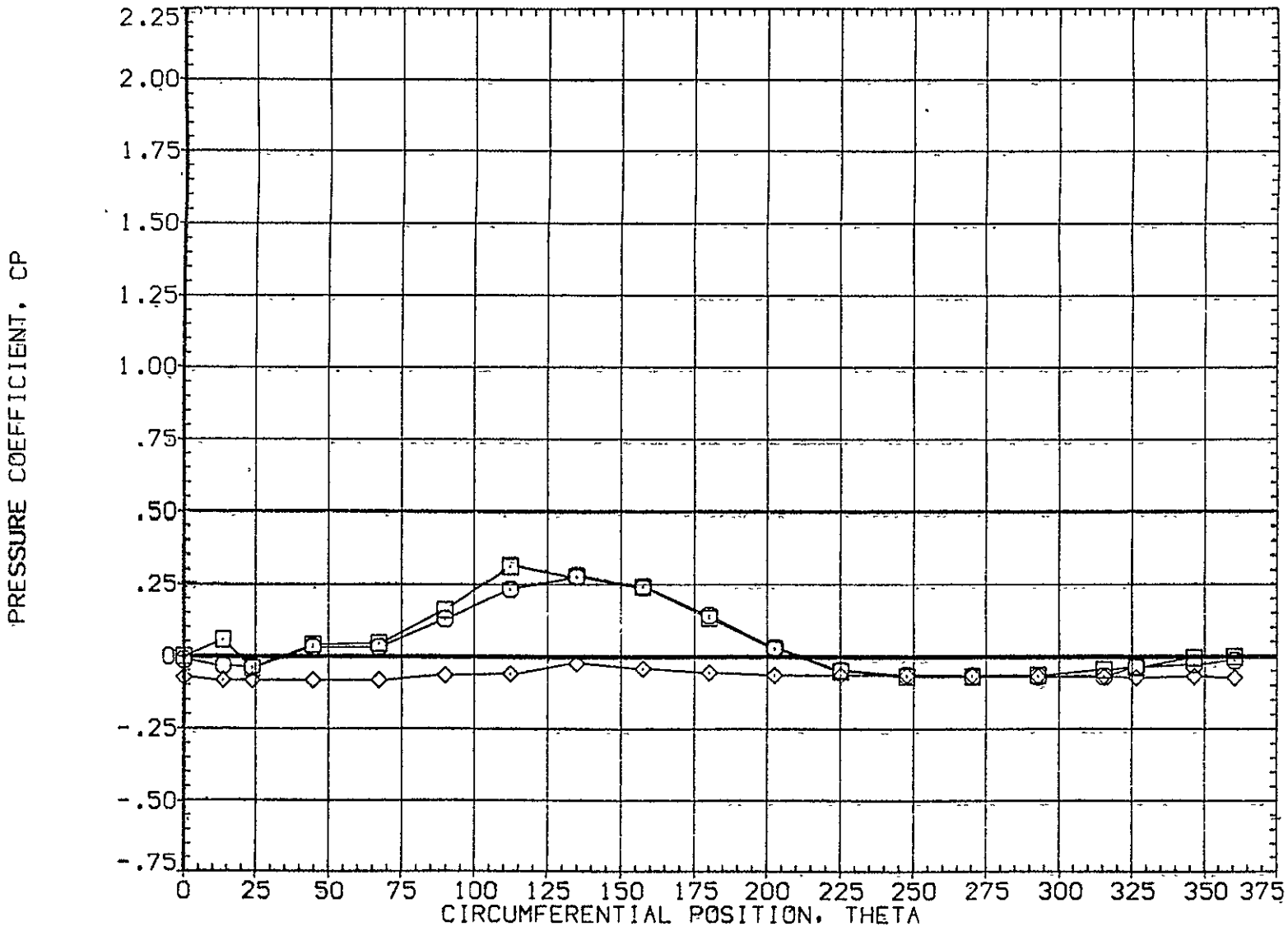

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.700	3.480
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

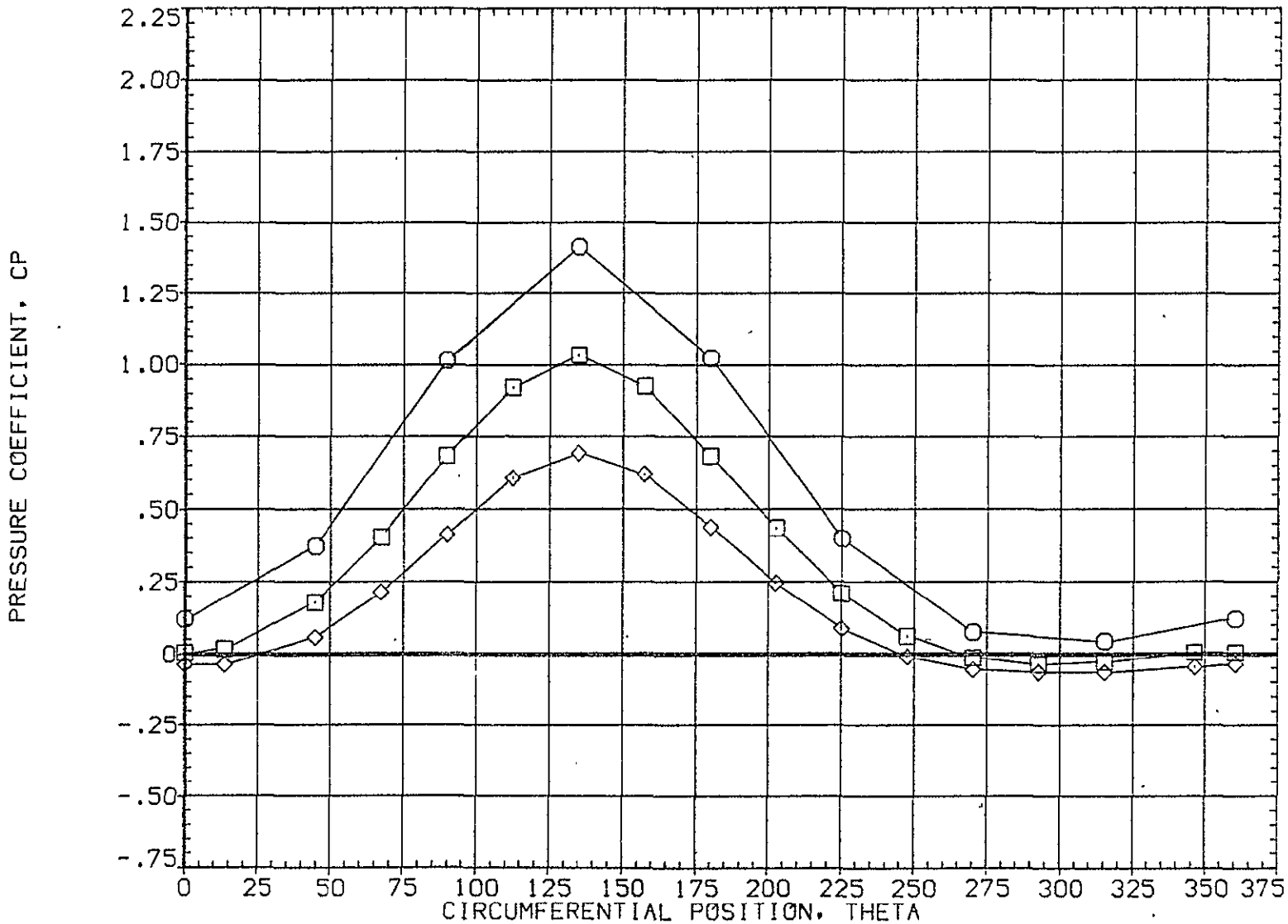

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.700	3.480
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

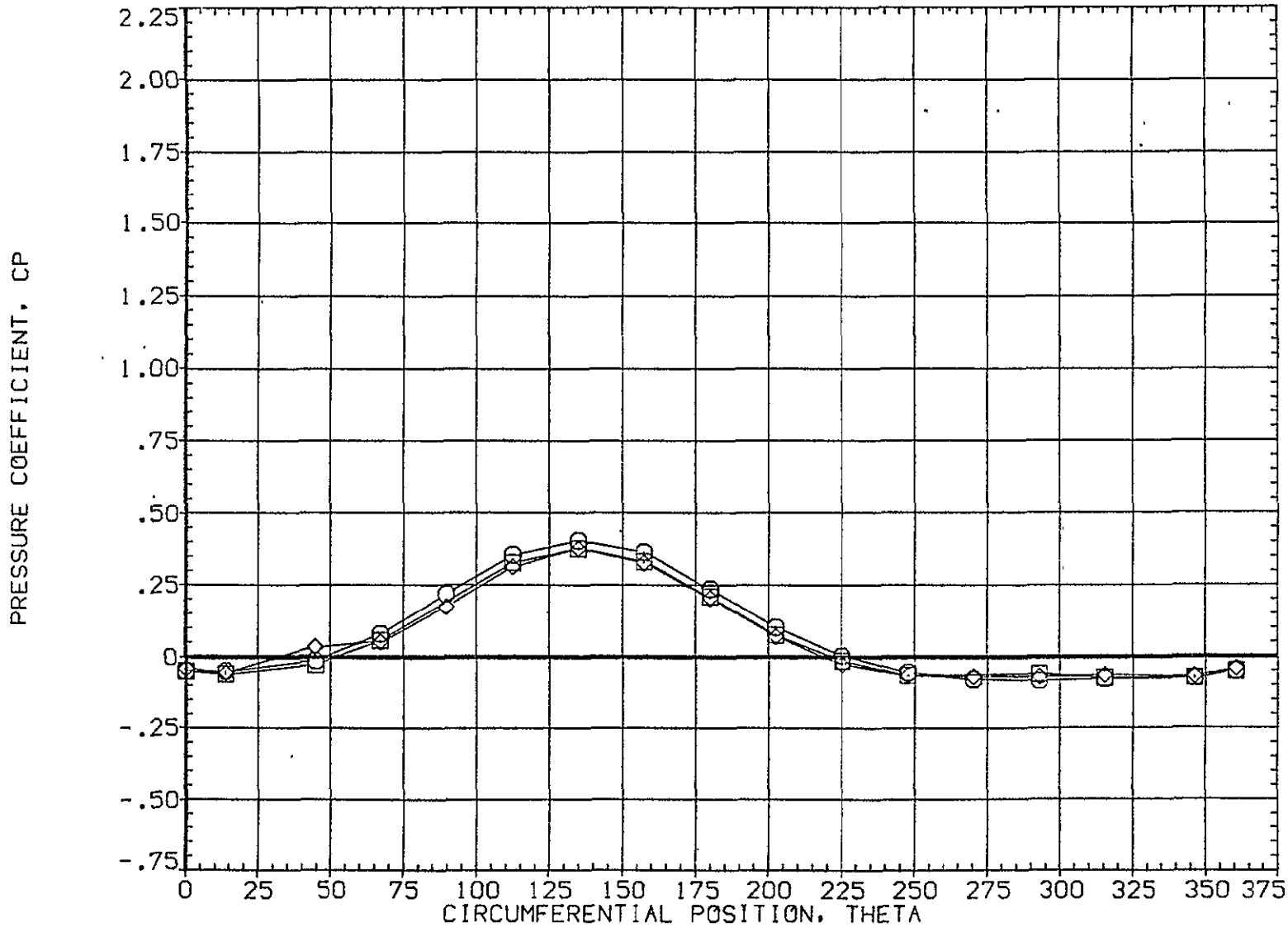

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.700	3.480
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

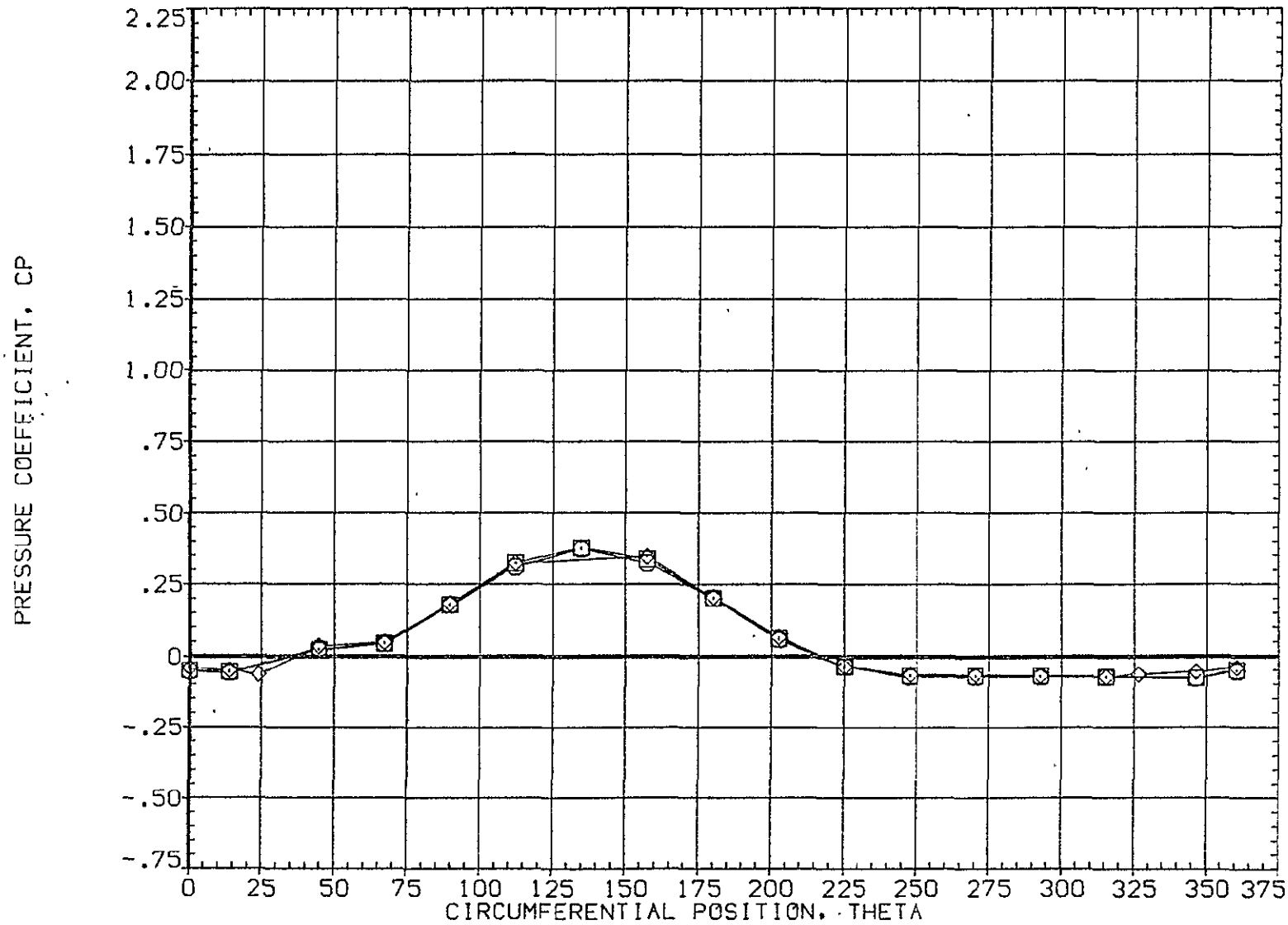

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.700	3.480
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

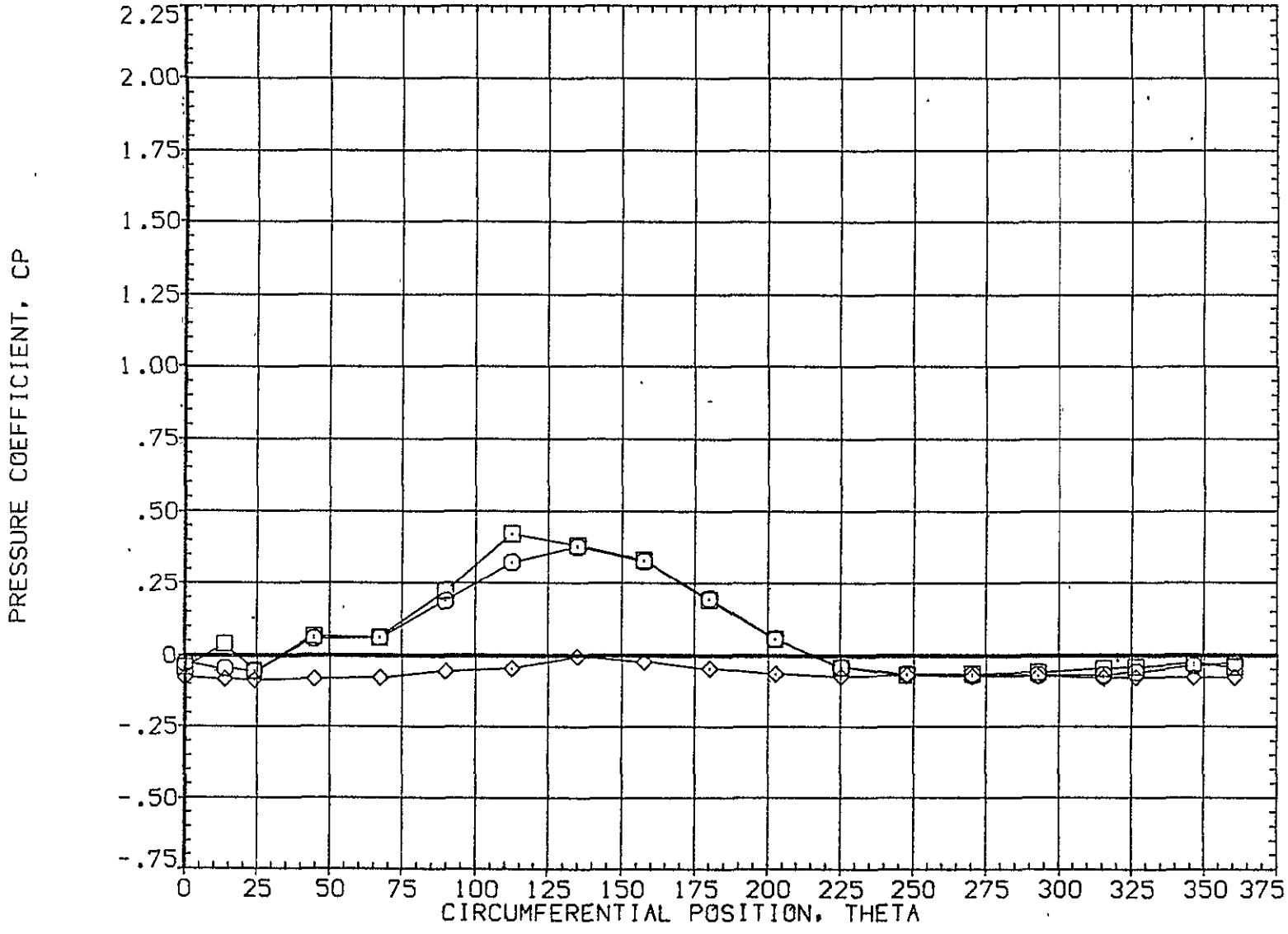

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

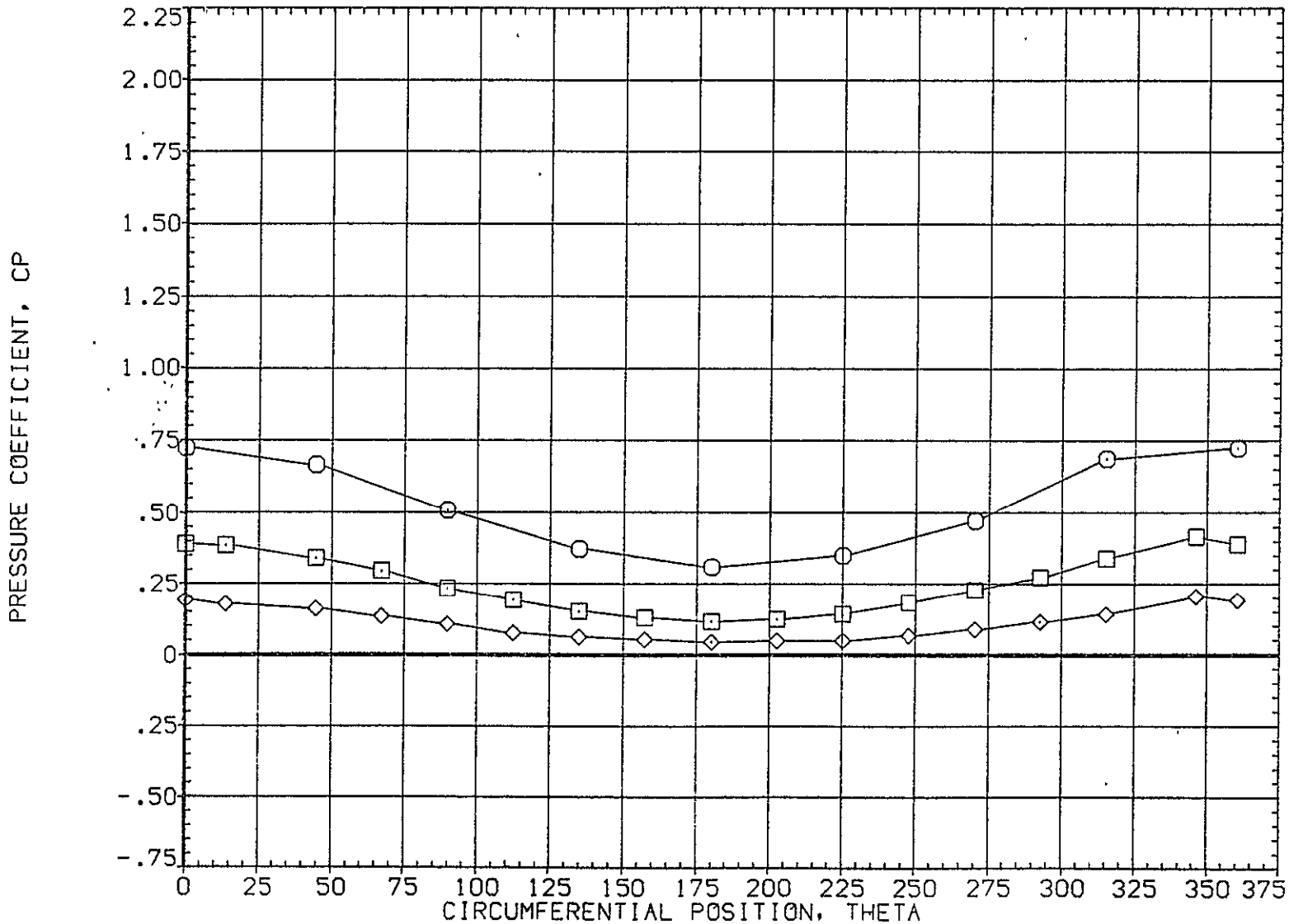

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

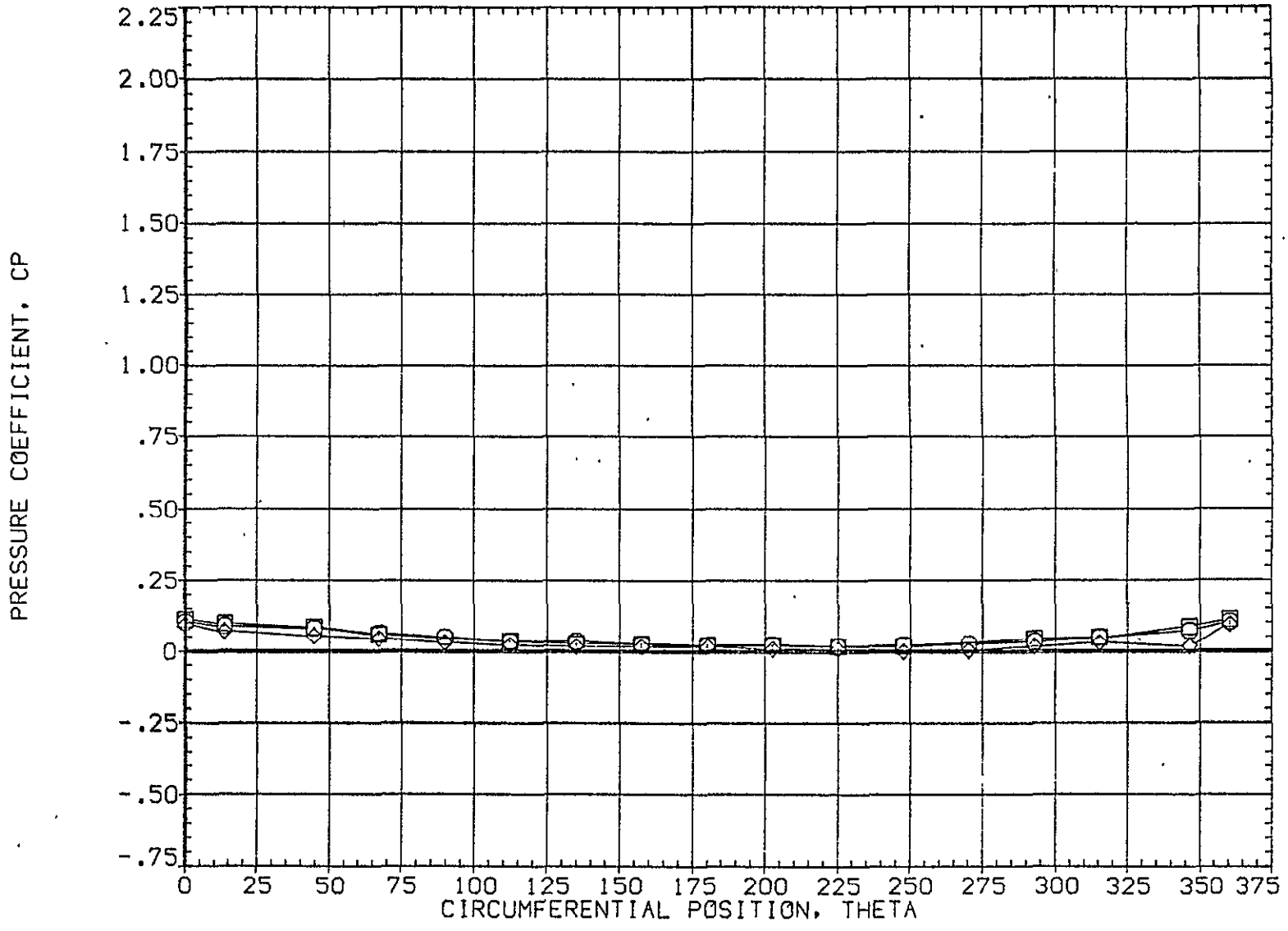

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

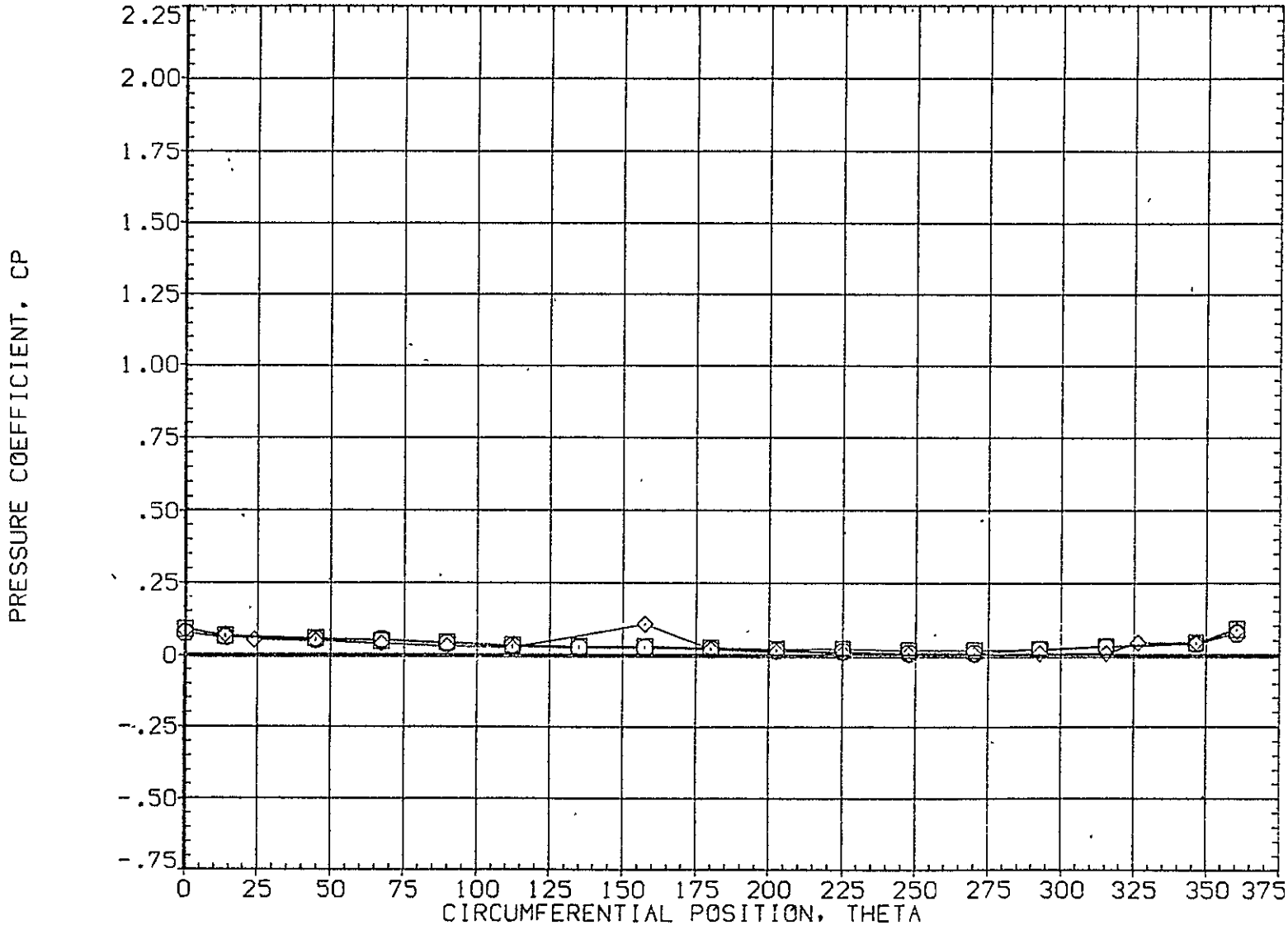

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A001)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

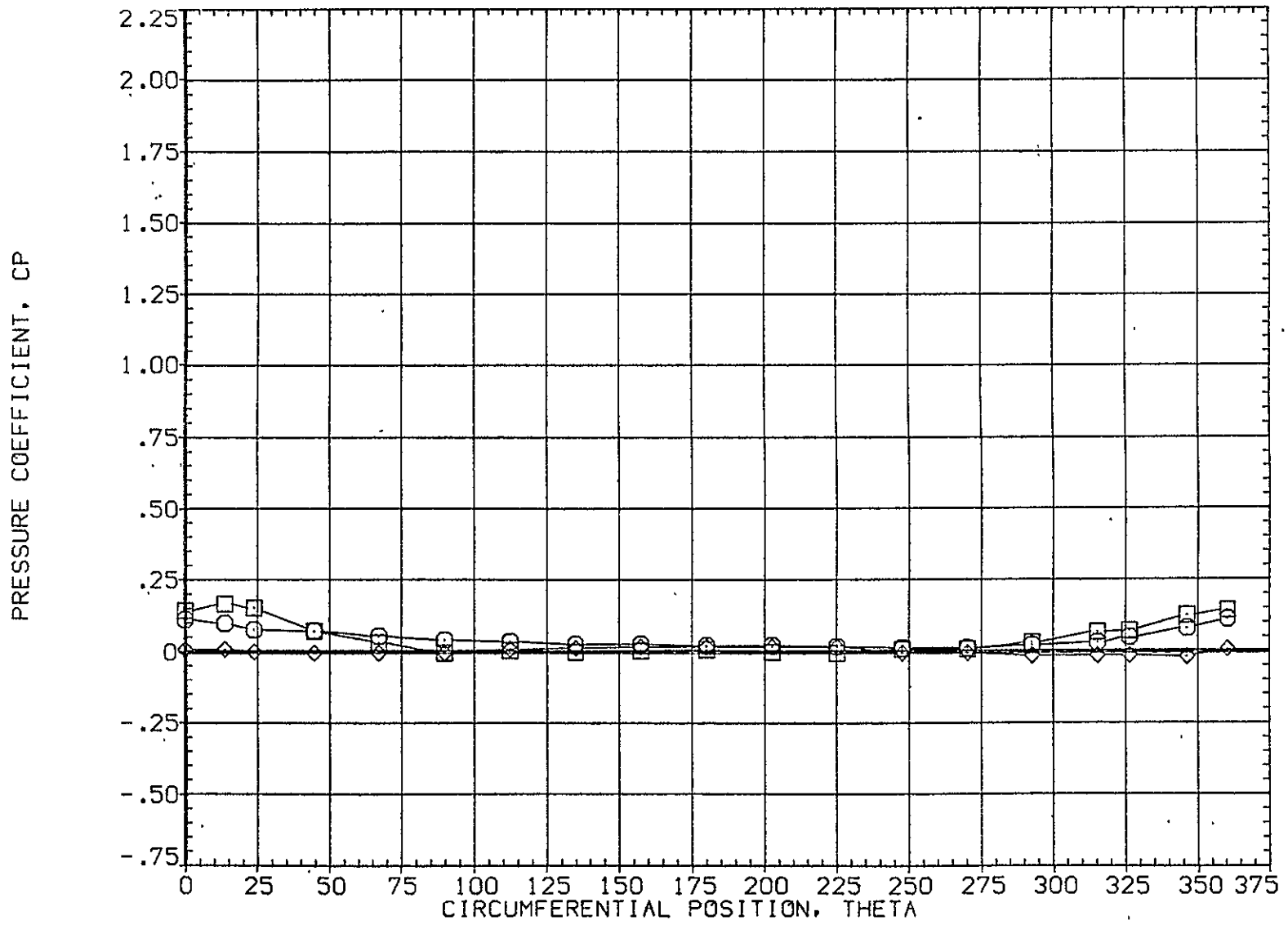

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

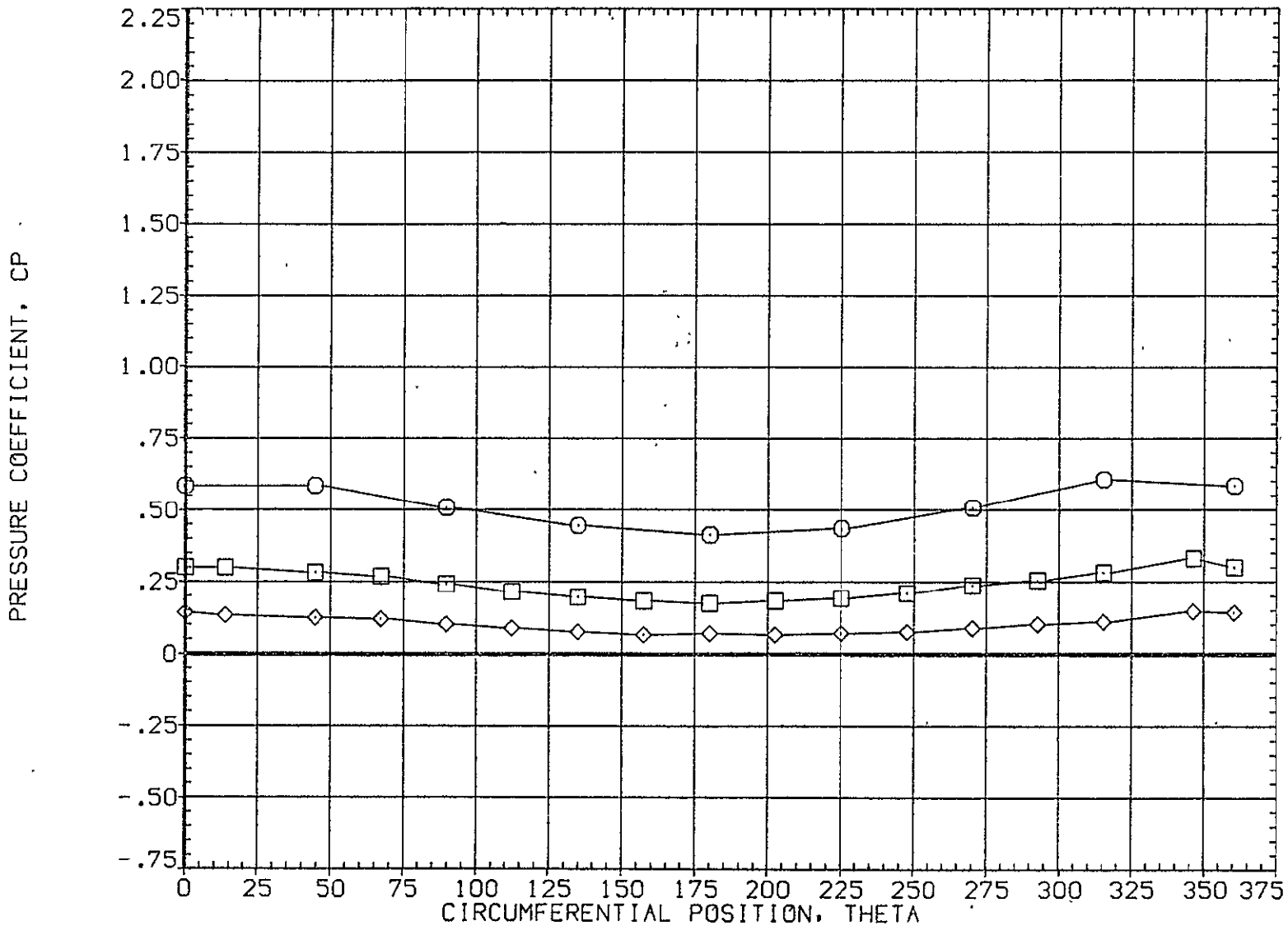

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

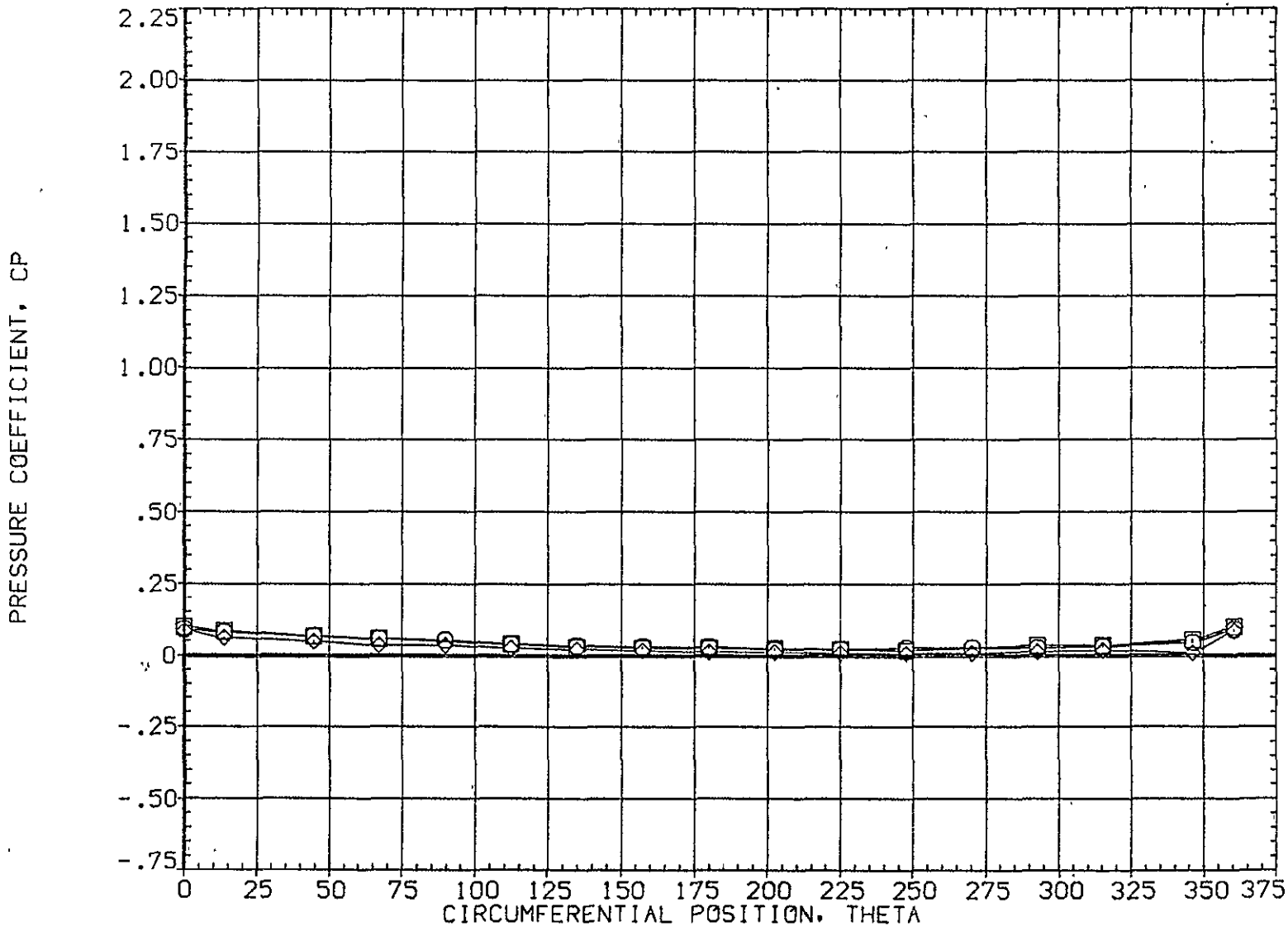

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

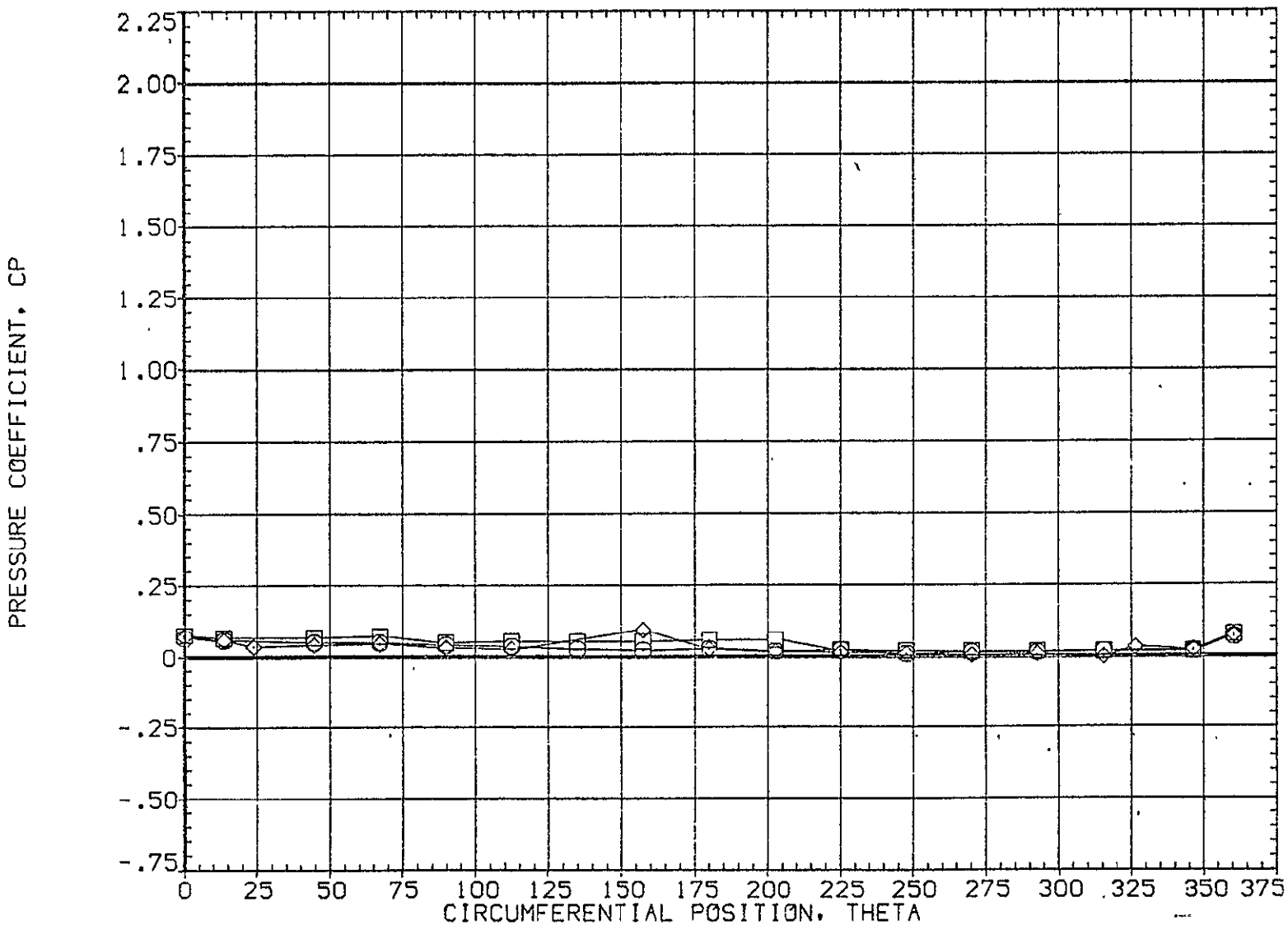

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A002)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

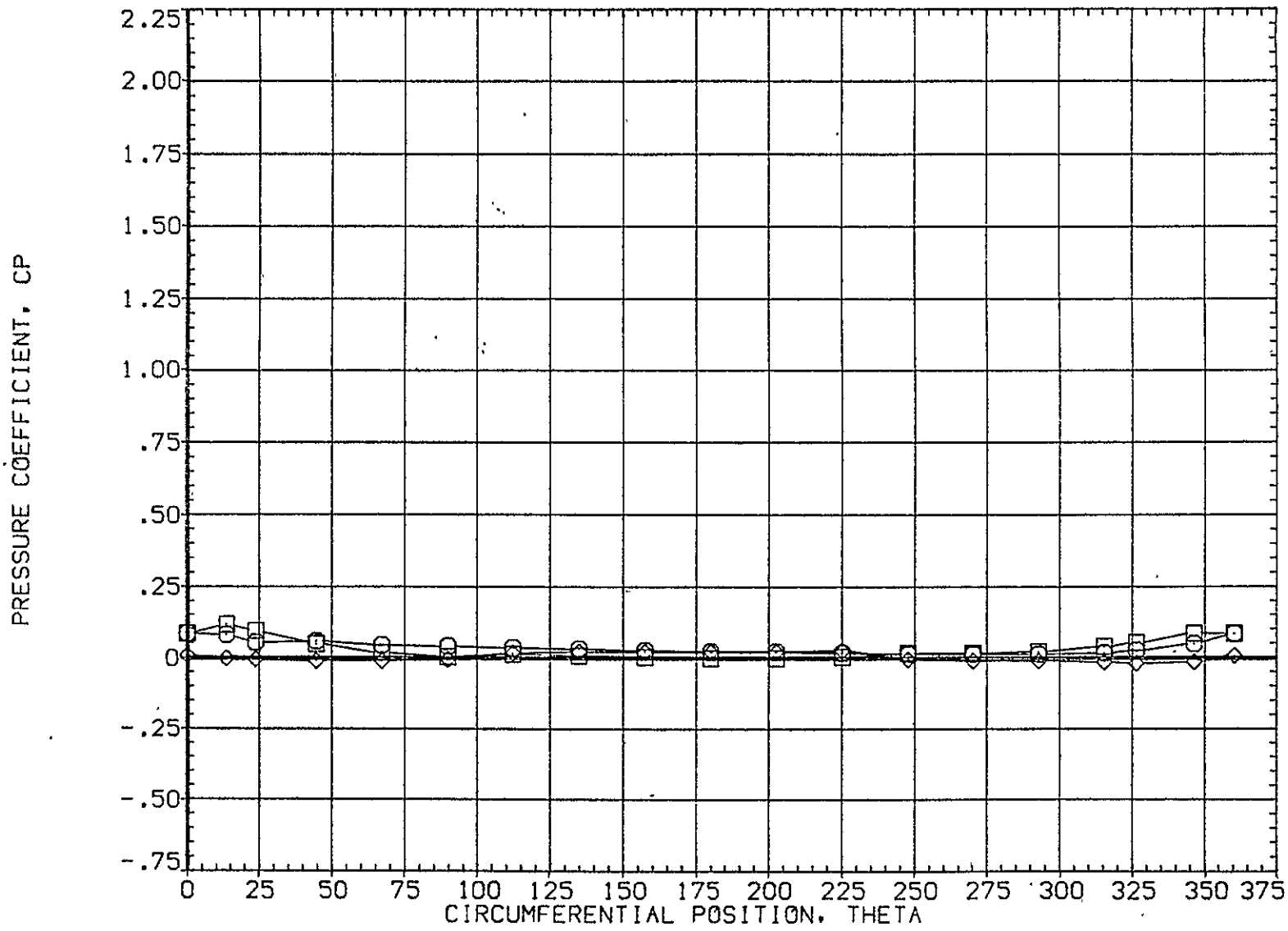

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

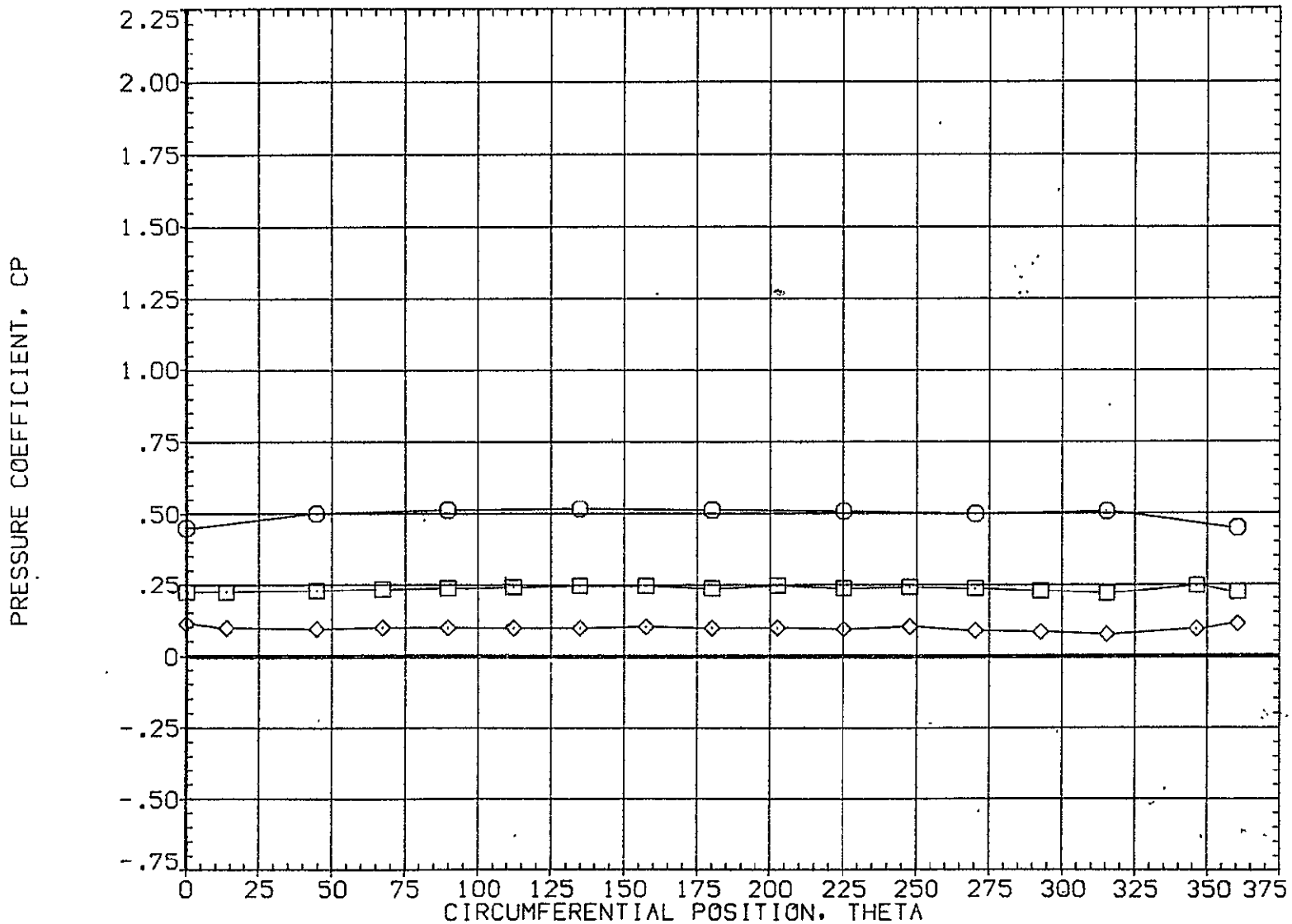

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

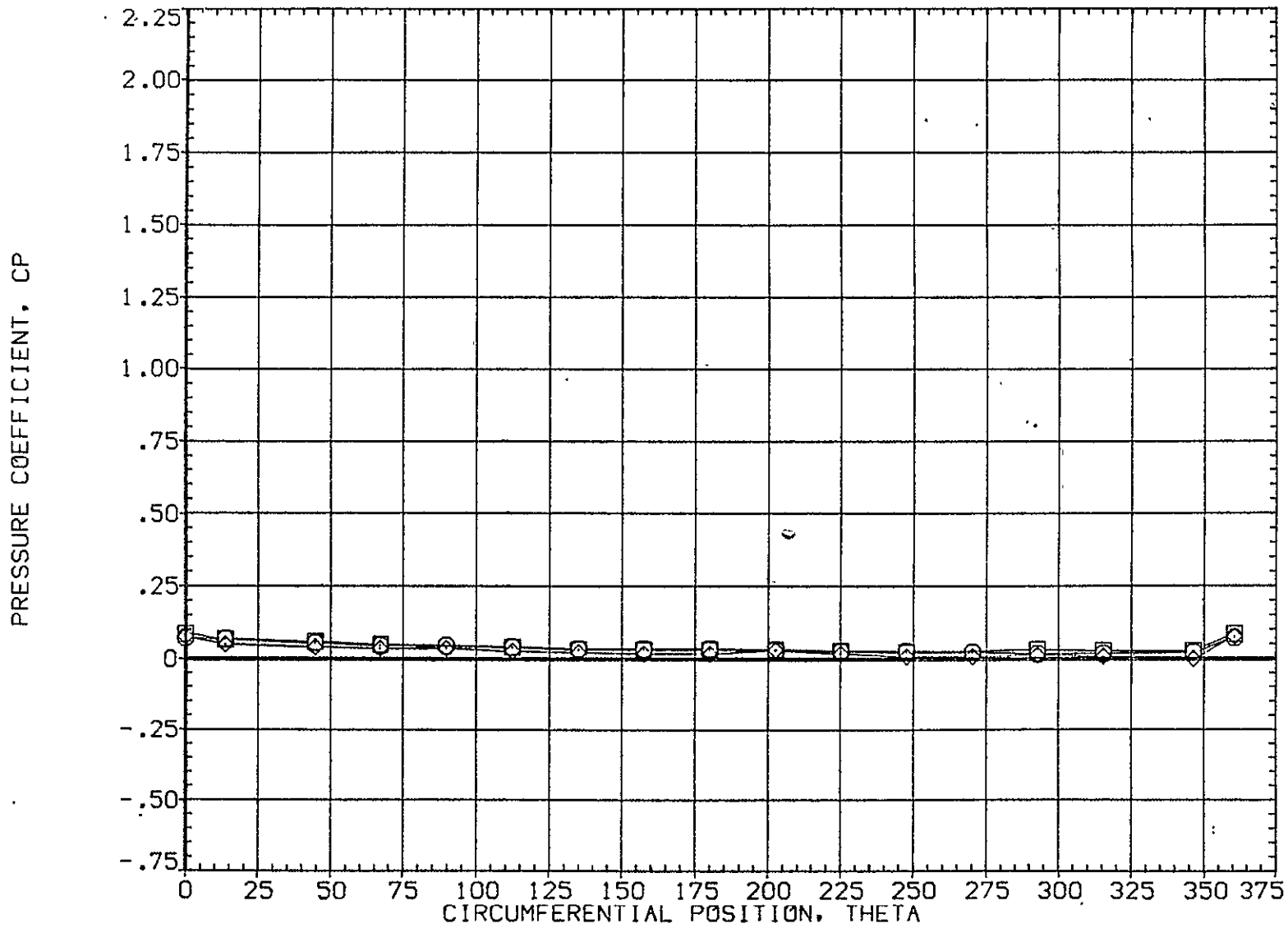

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

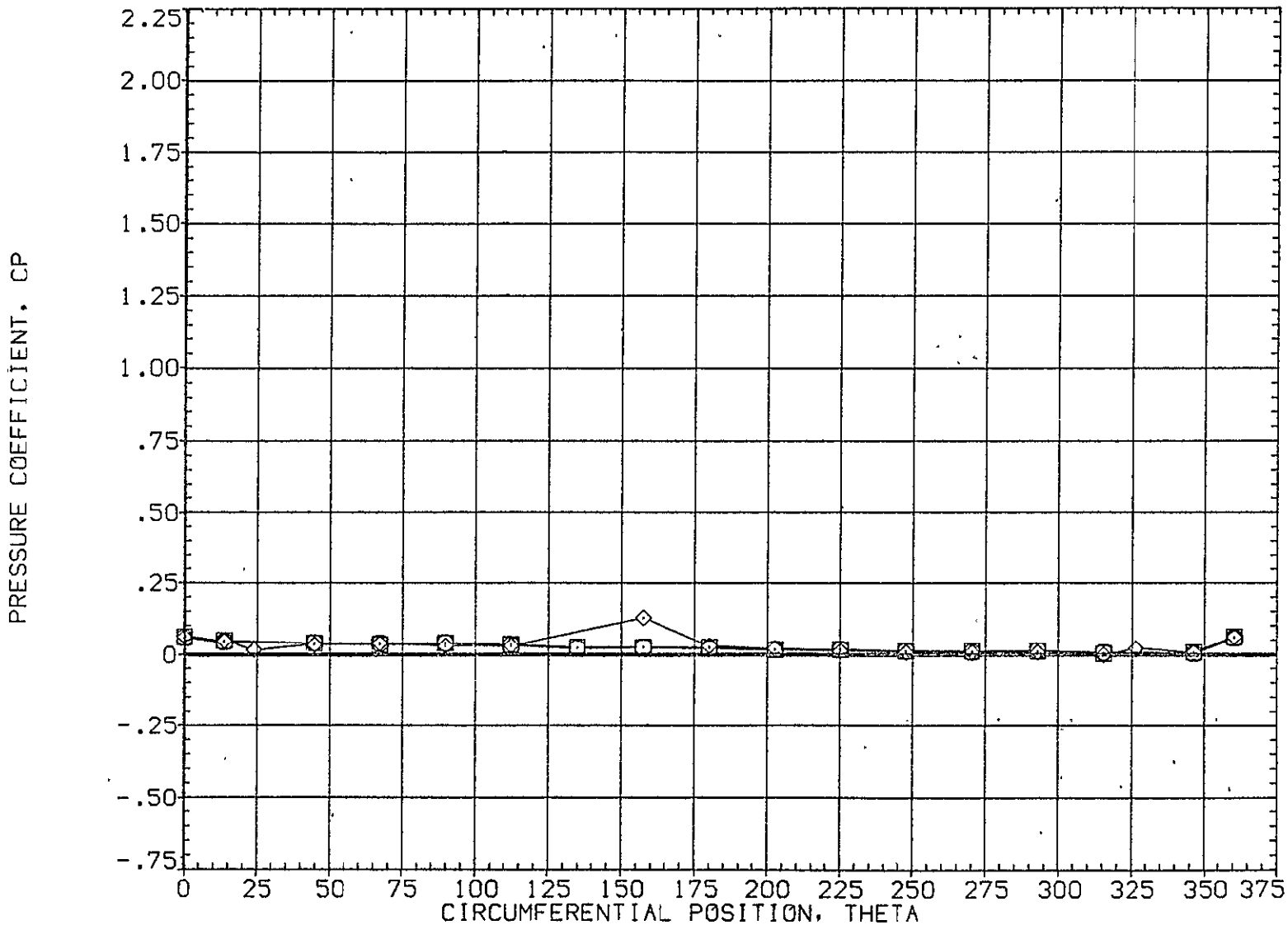

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A003)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

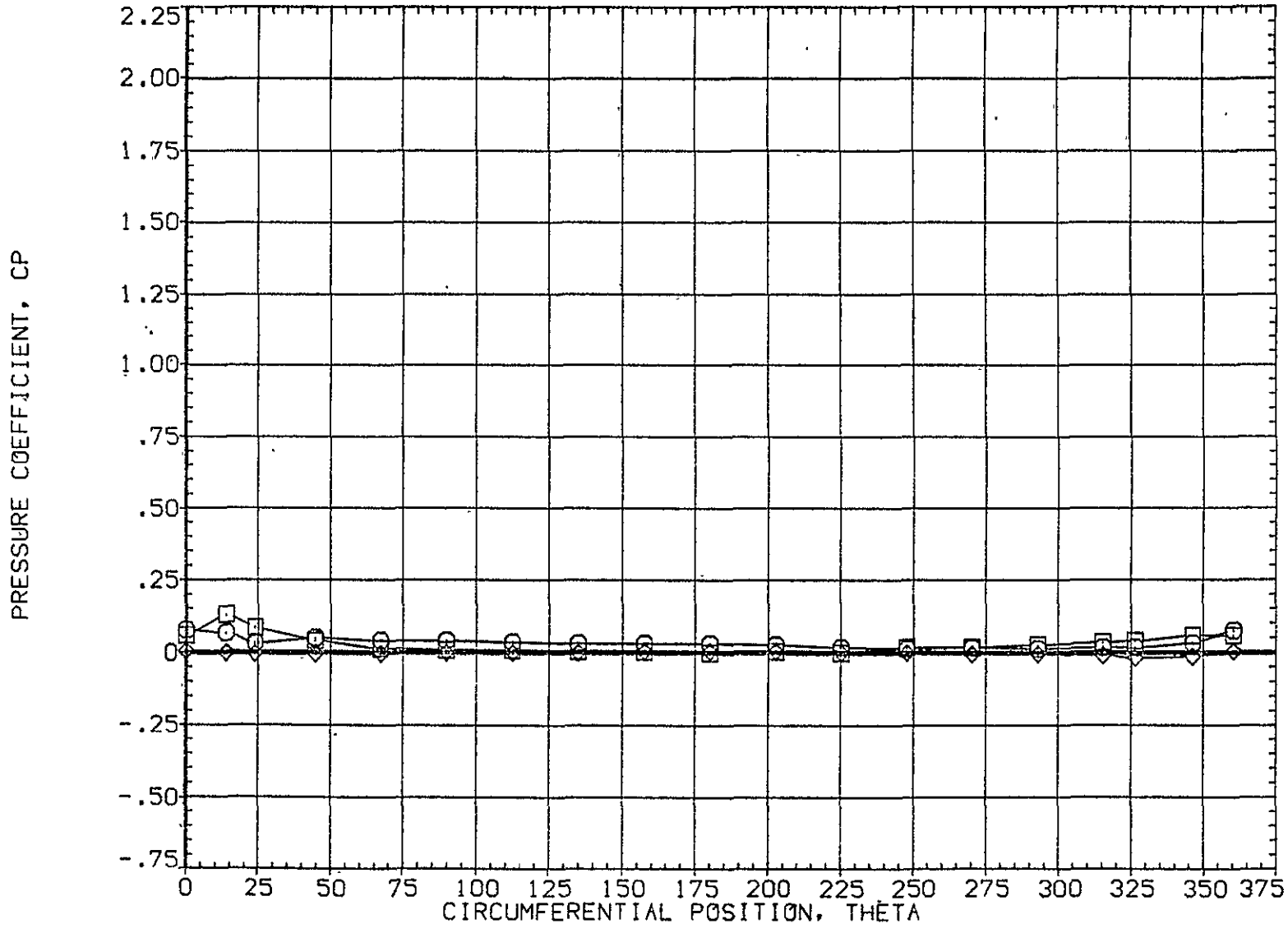

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

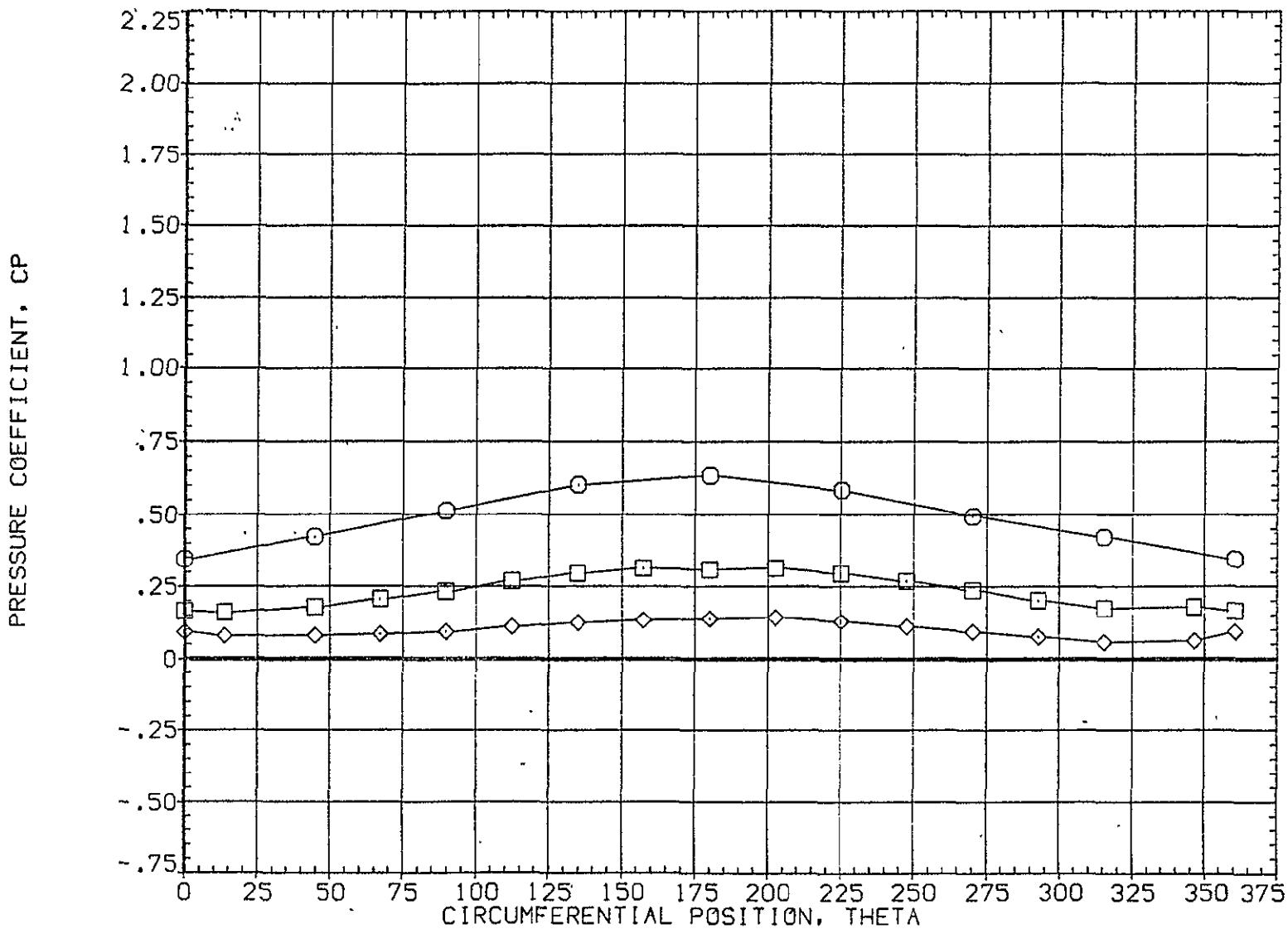

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

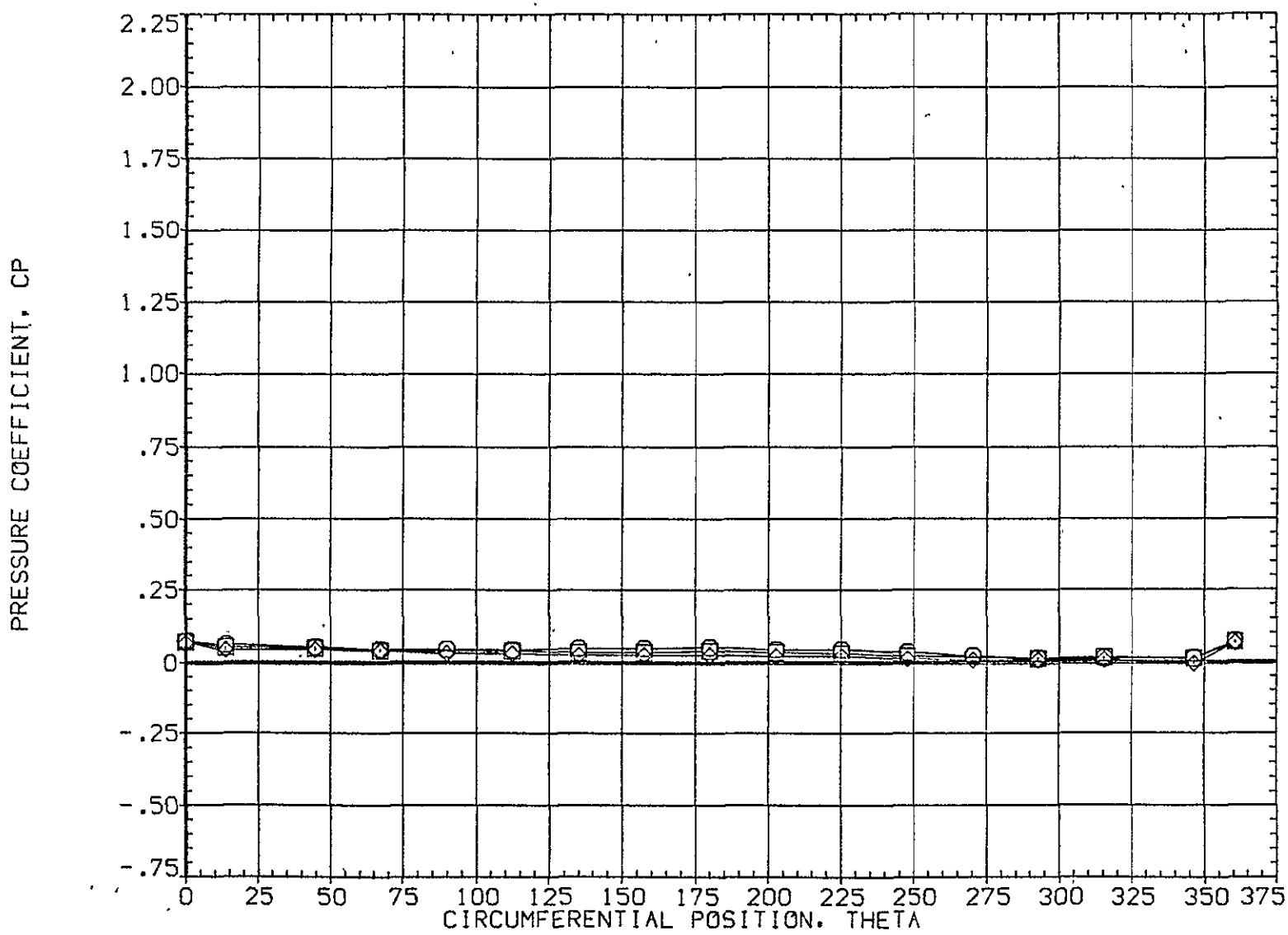

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

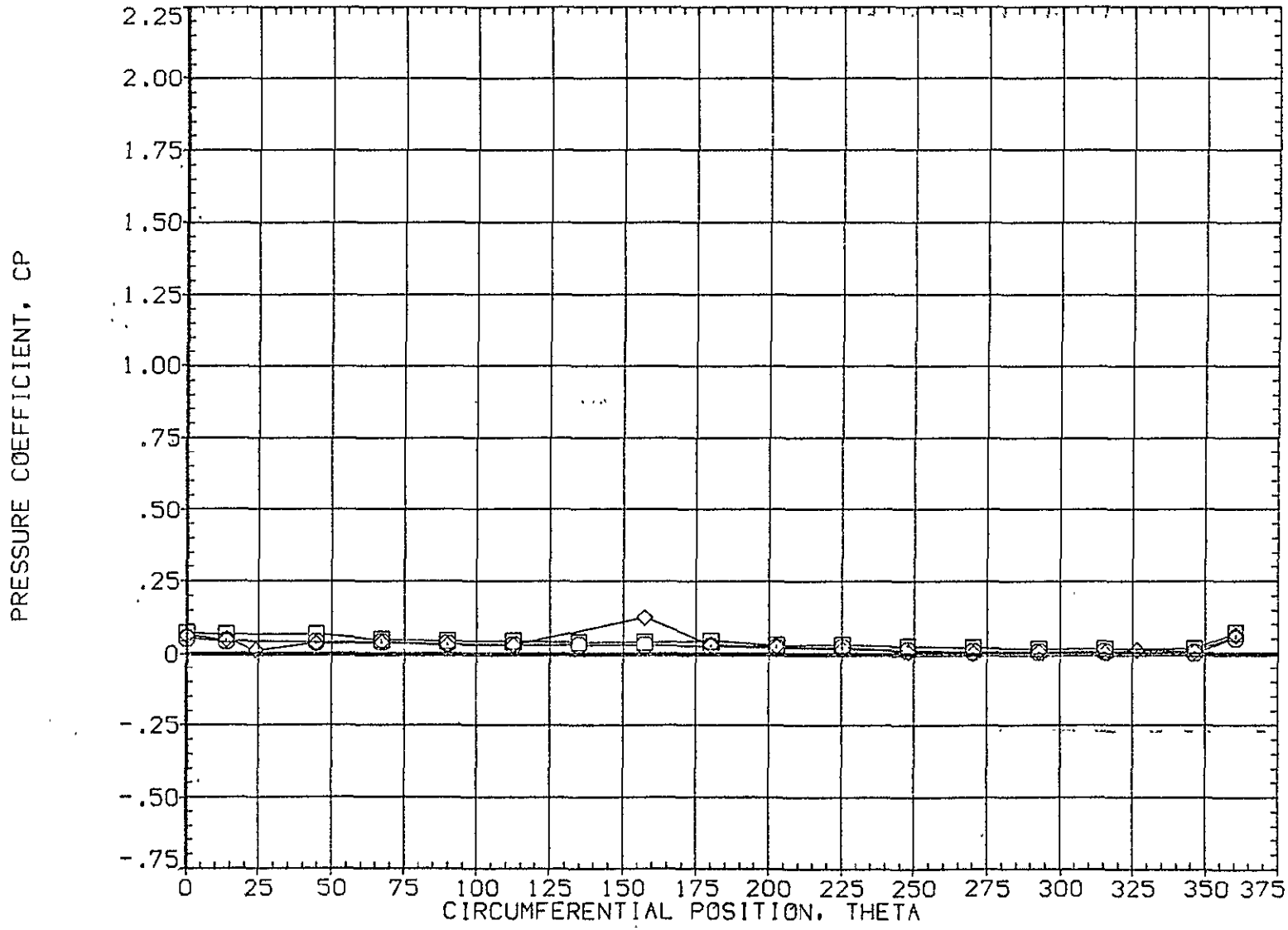

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T (P1A004)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

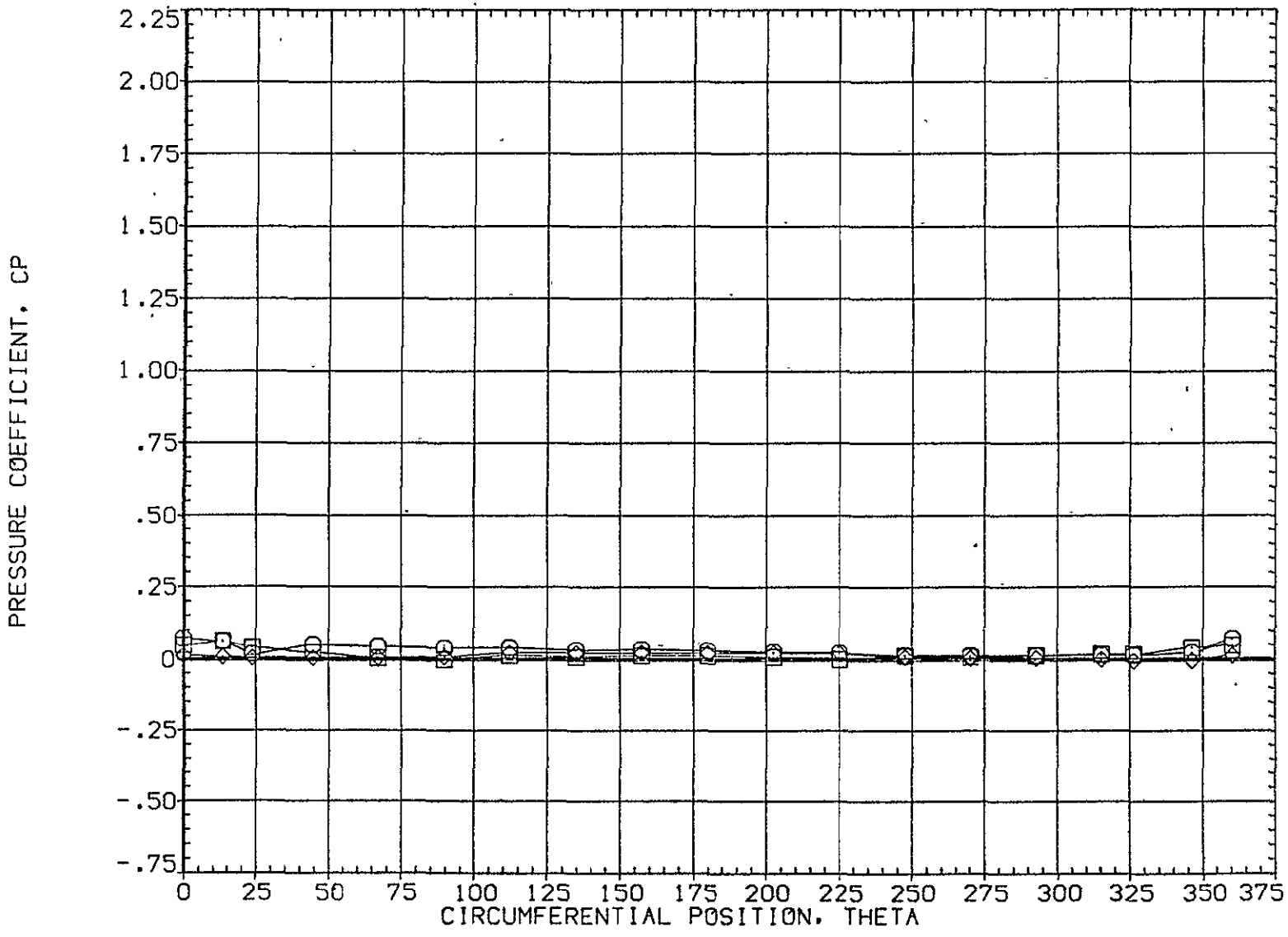

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

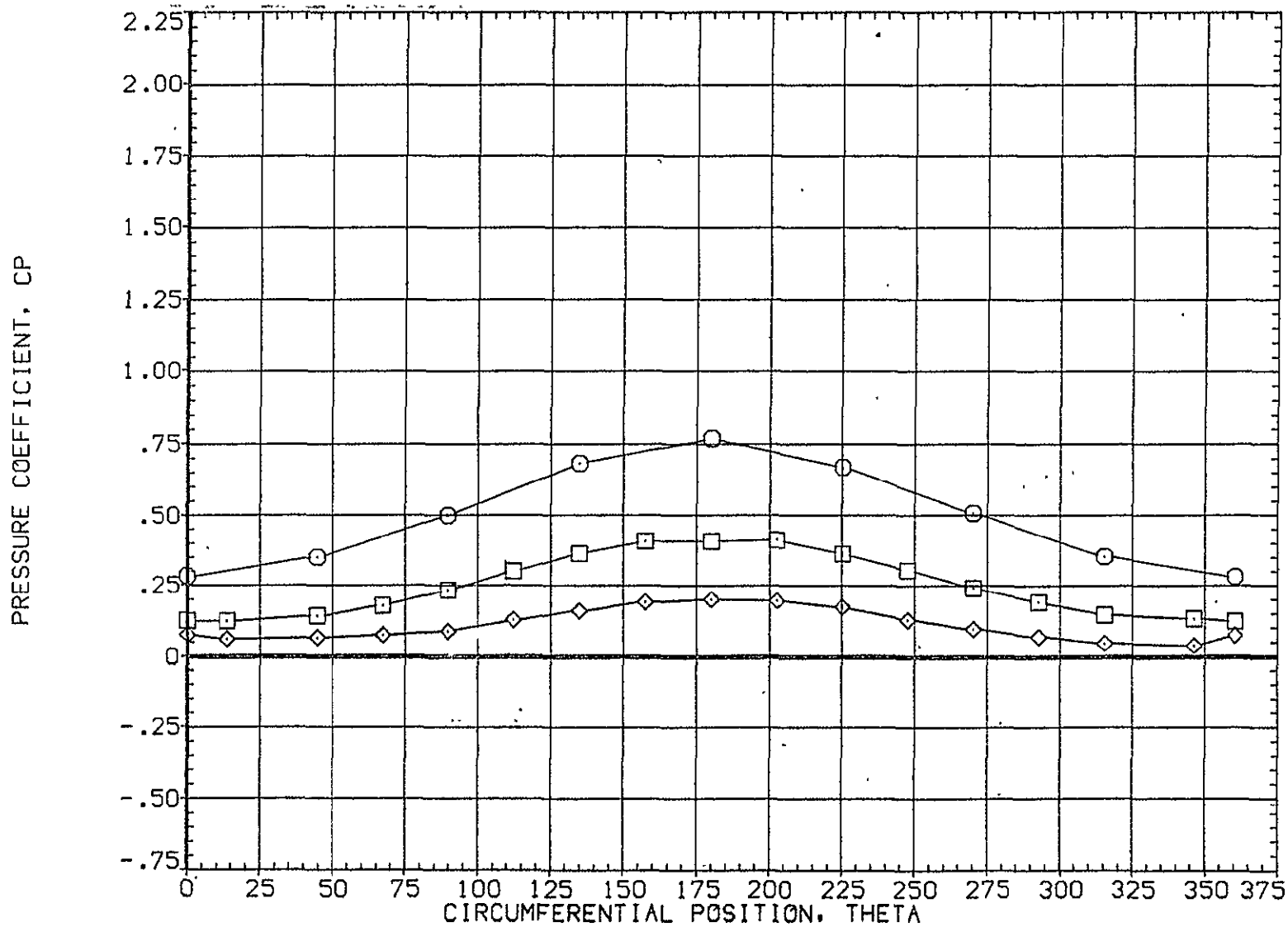

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

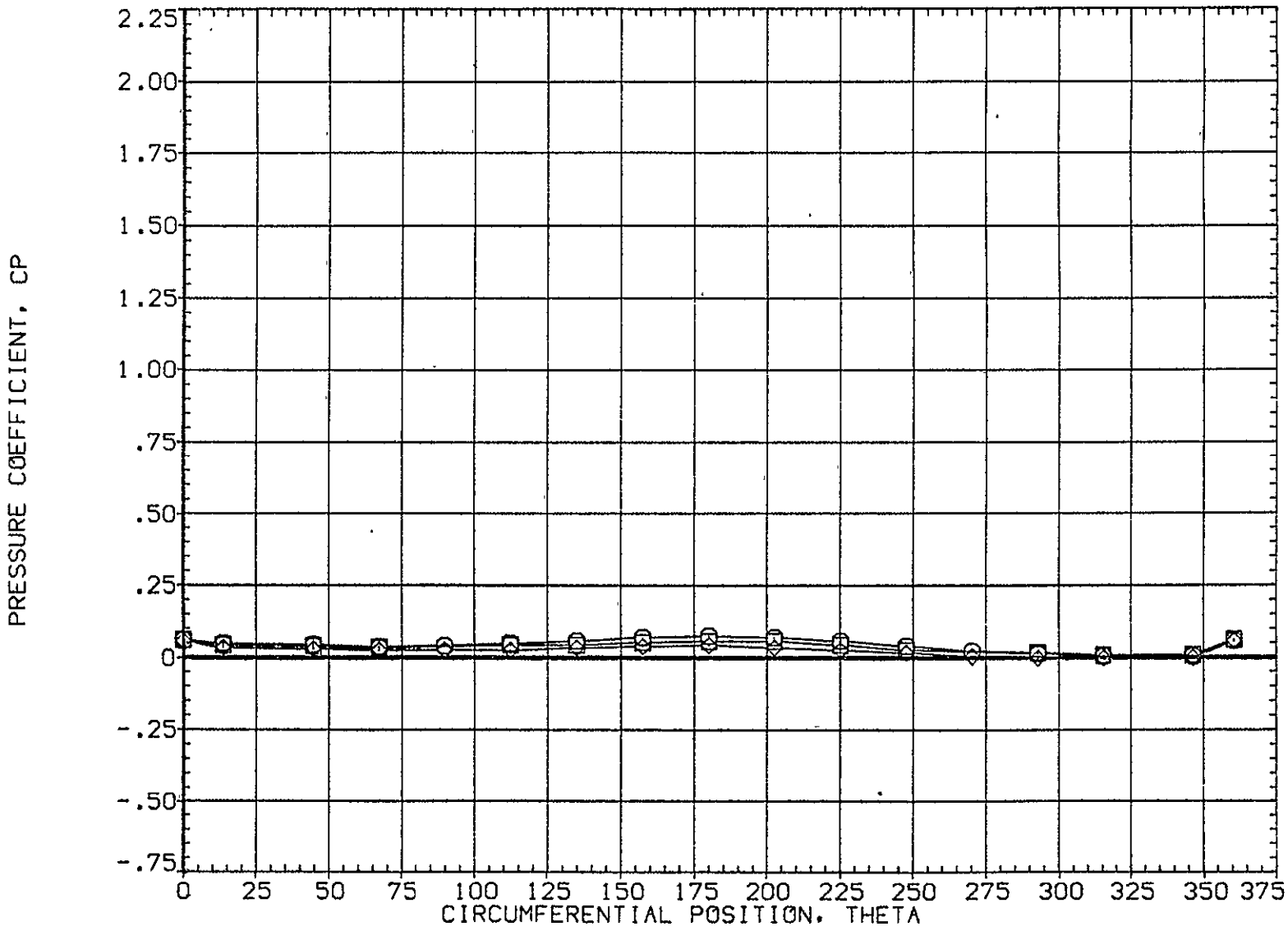

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

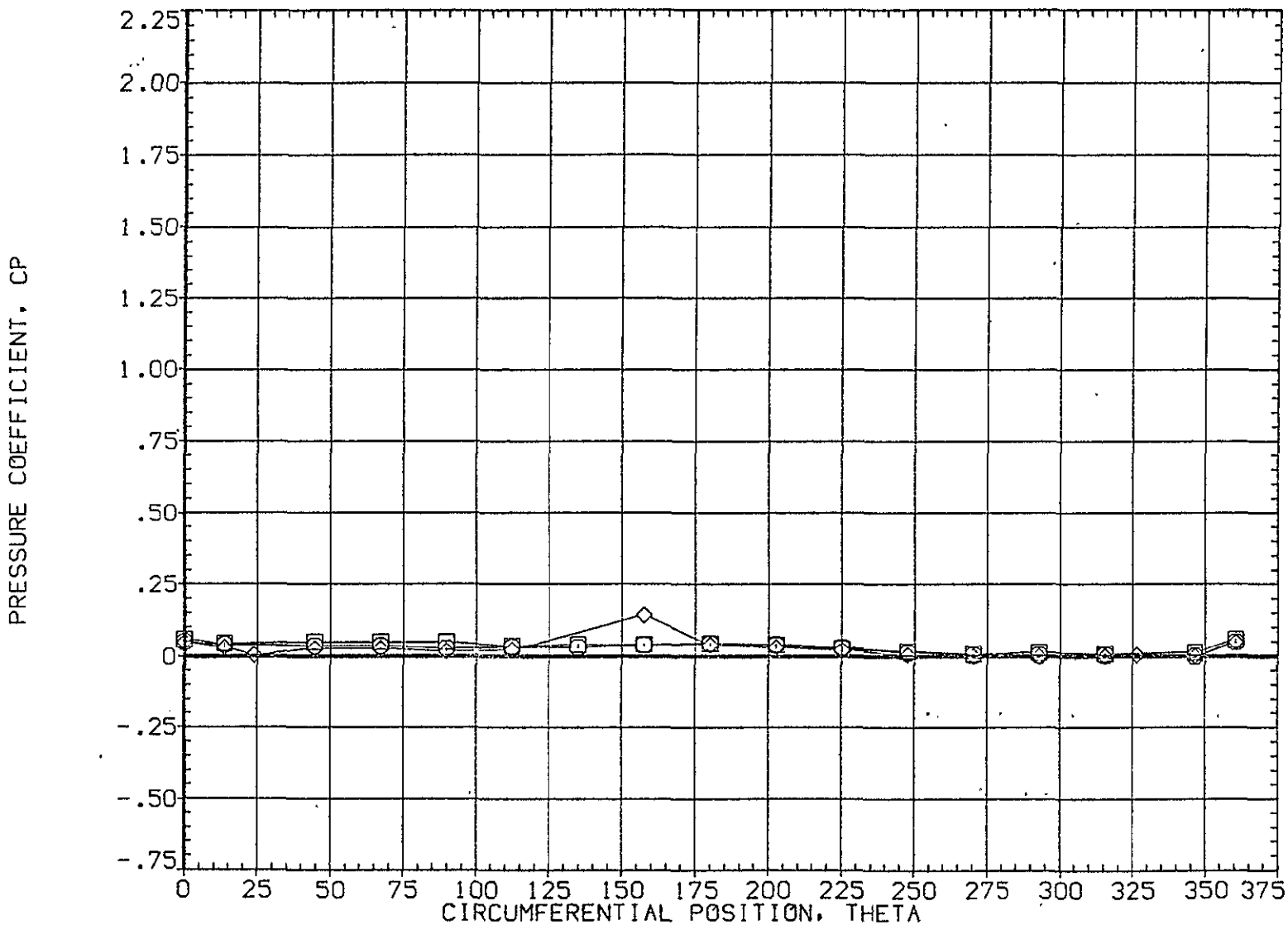

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A005)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	.000

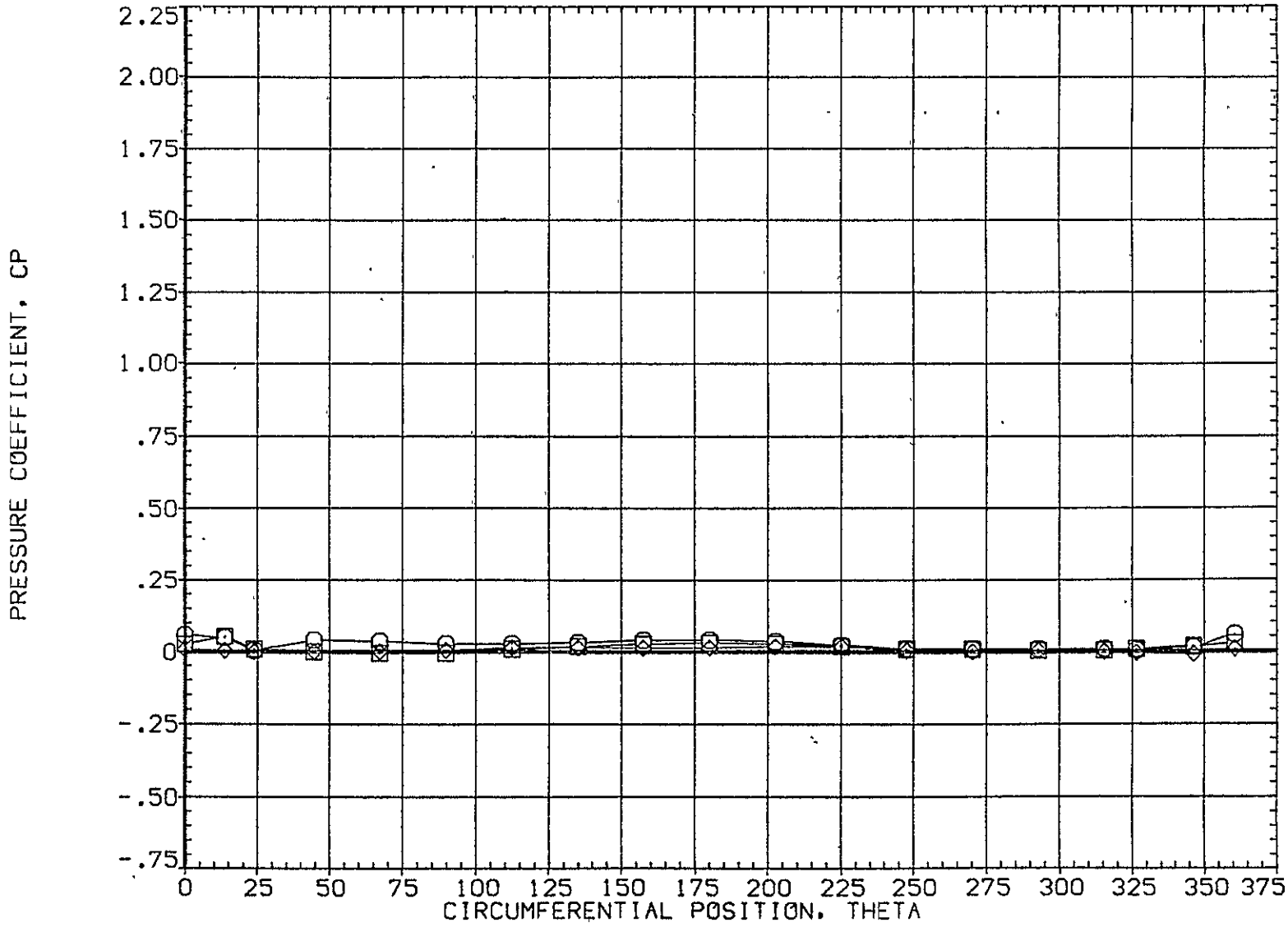

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

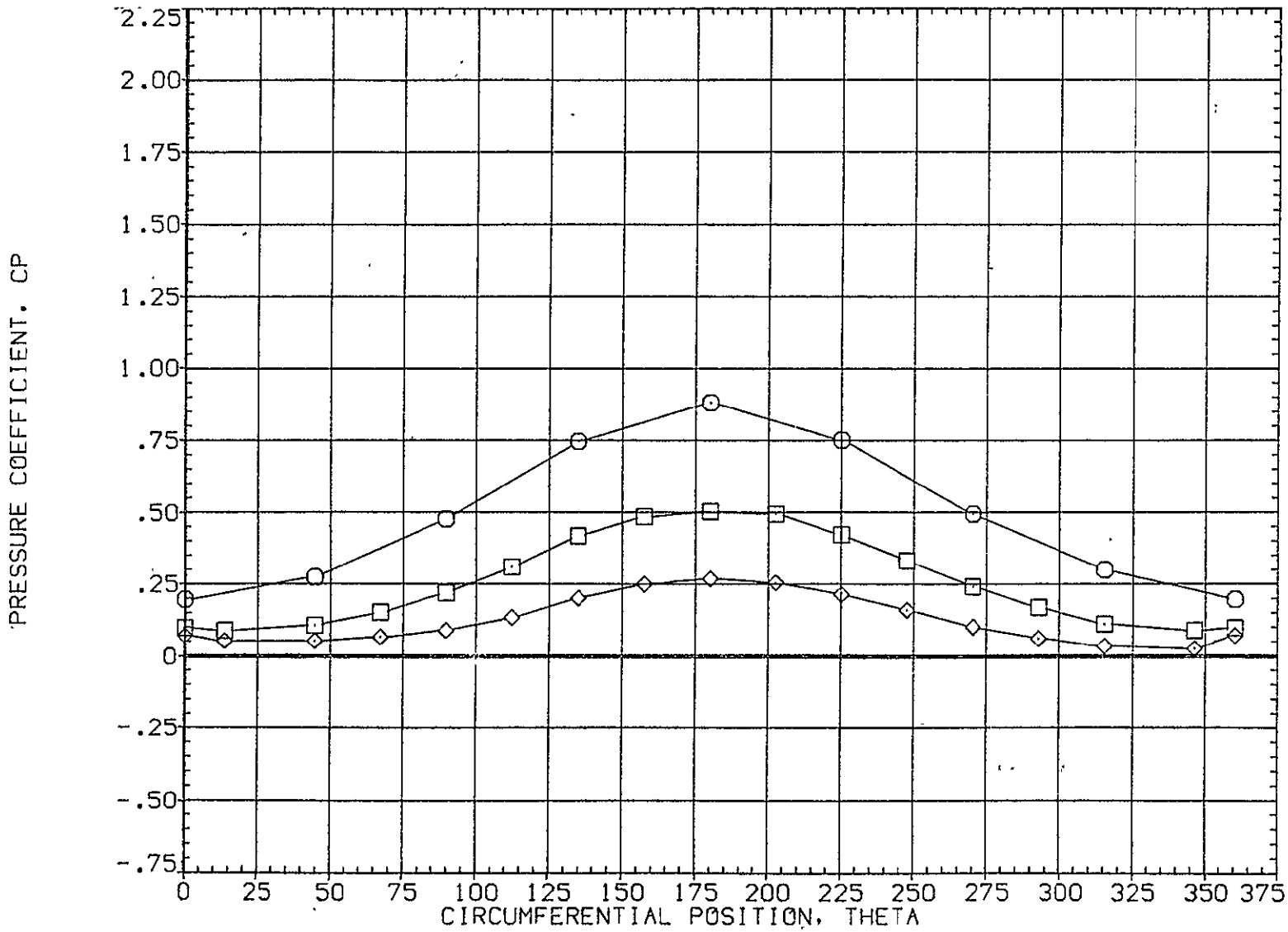

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

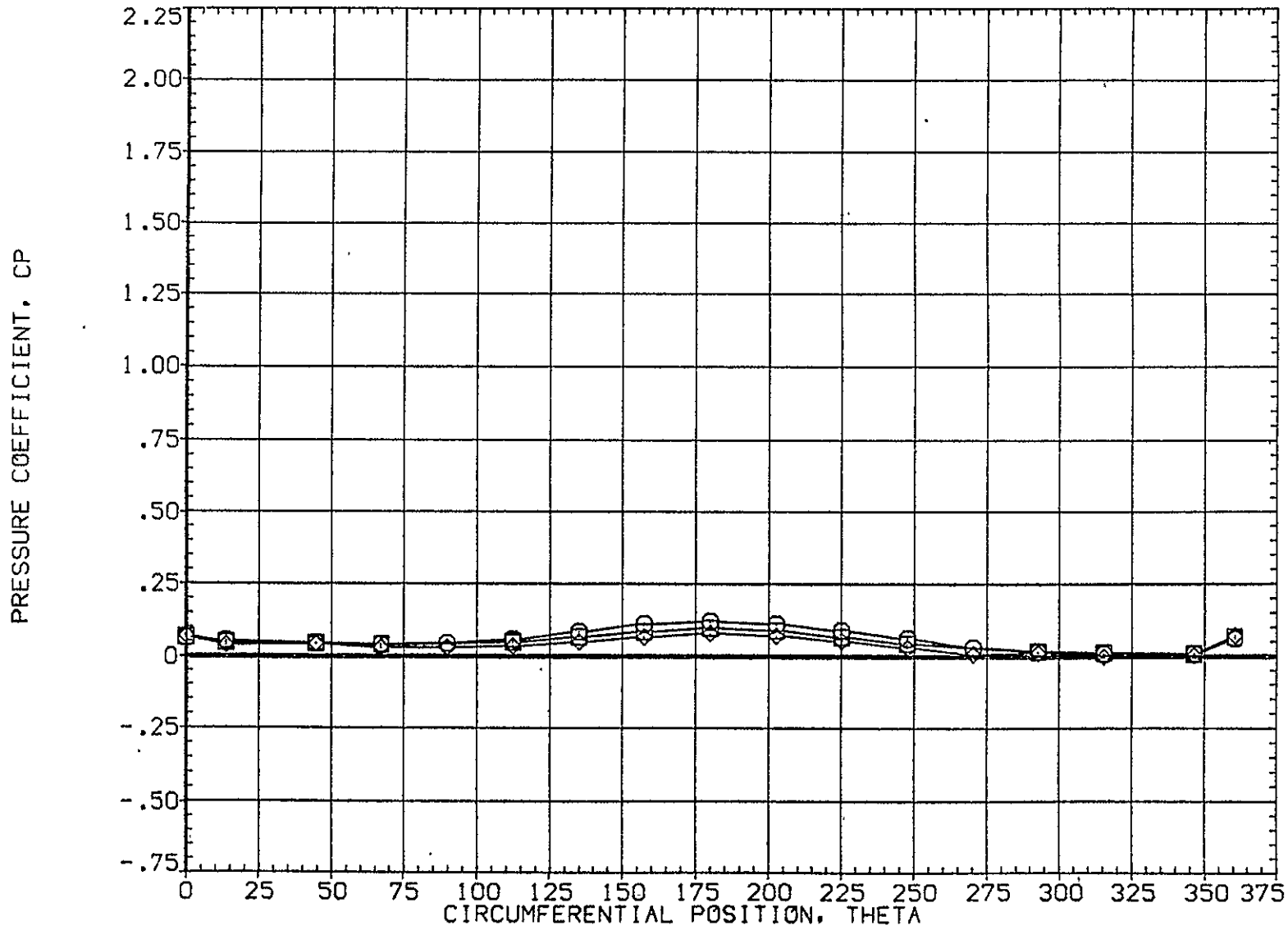

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

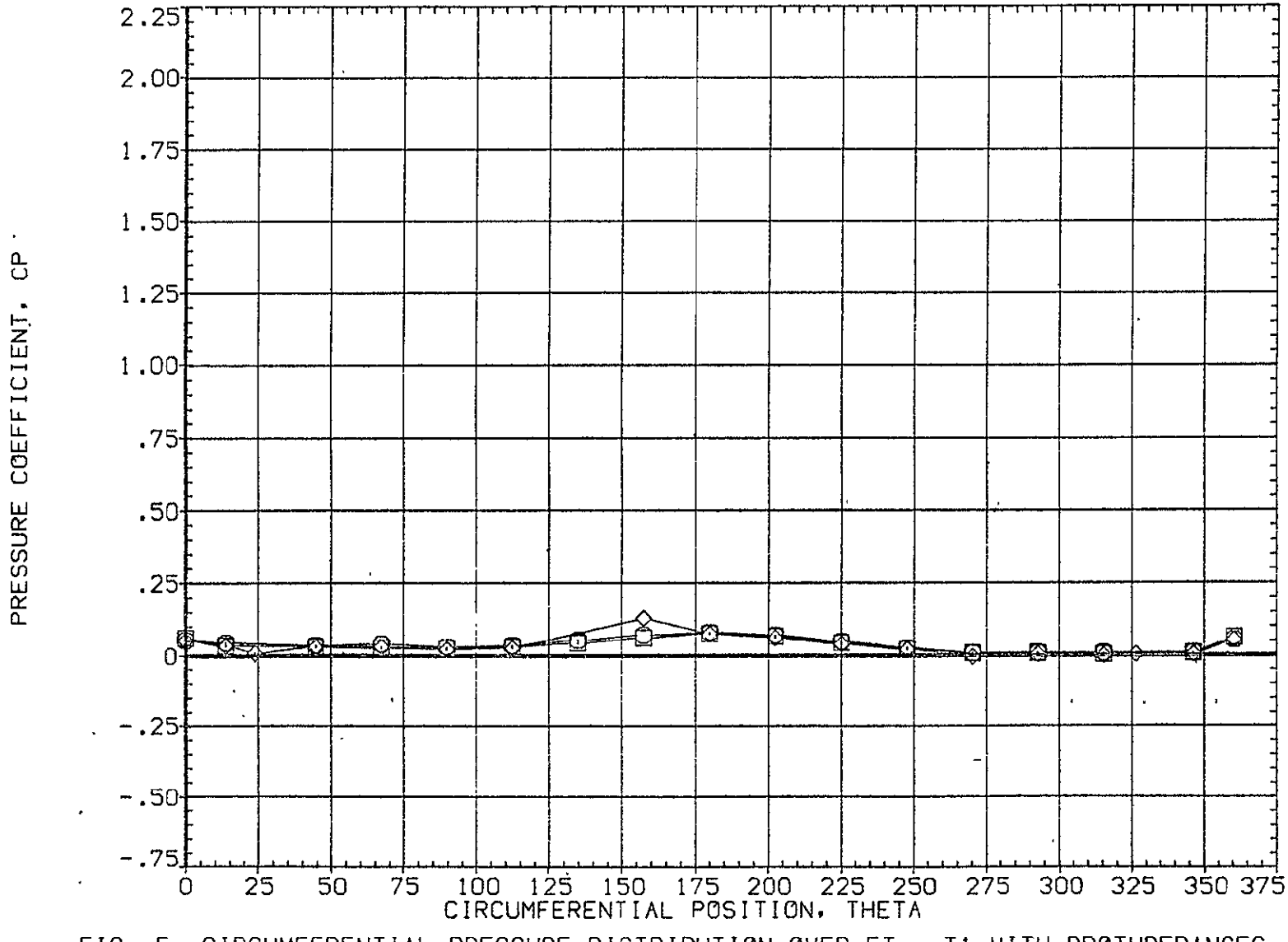

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A006)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

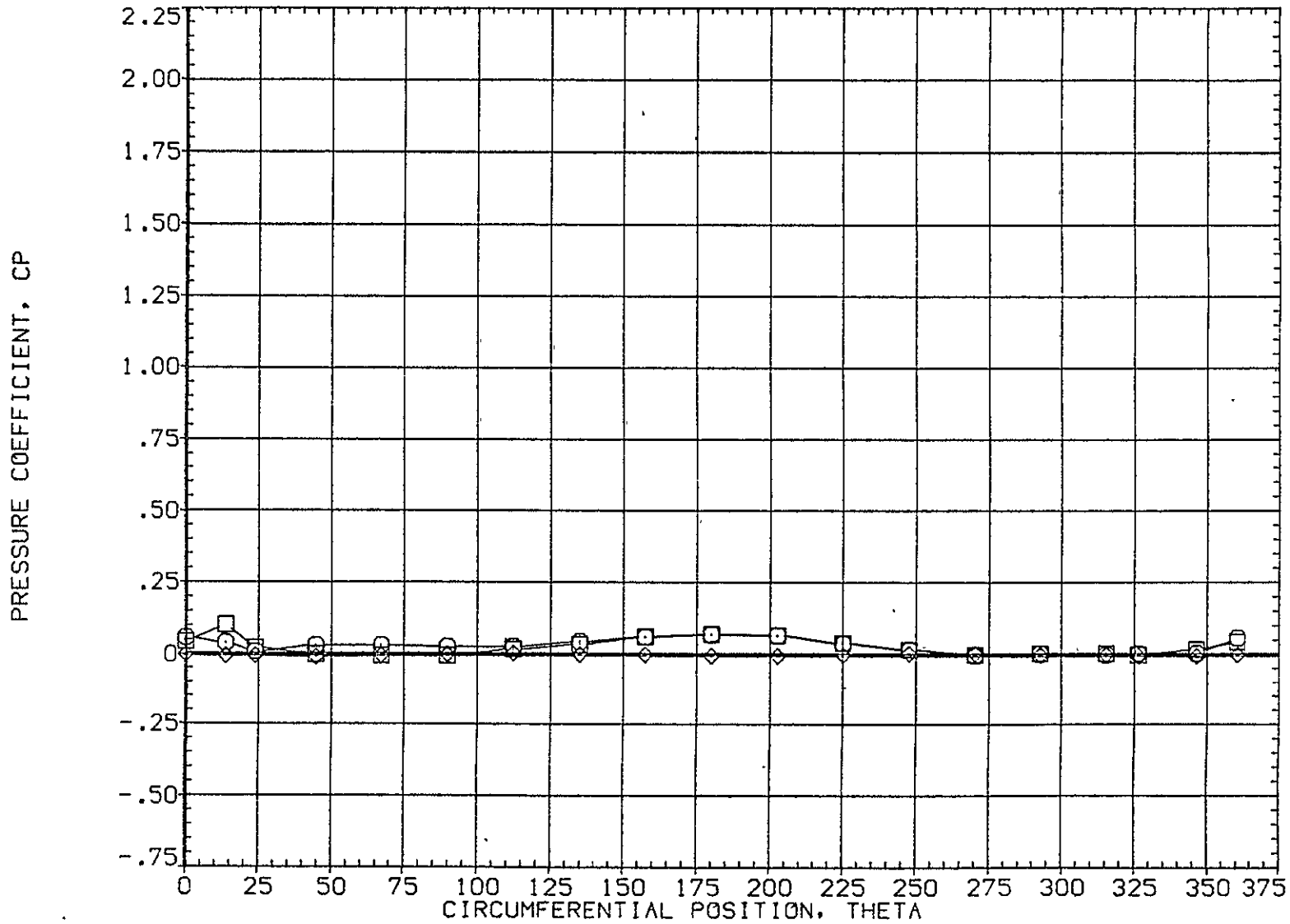

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.470	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

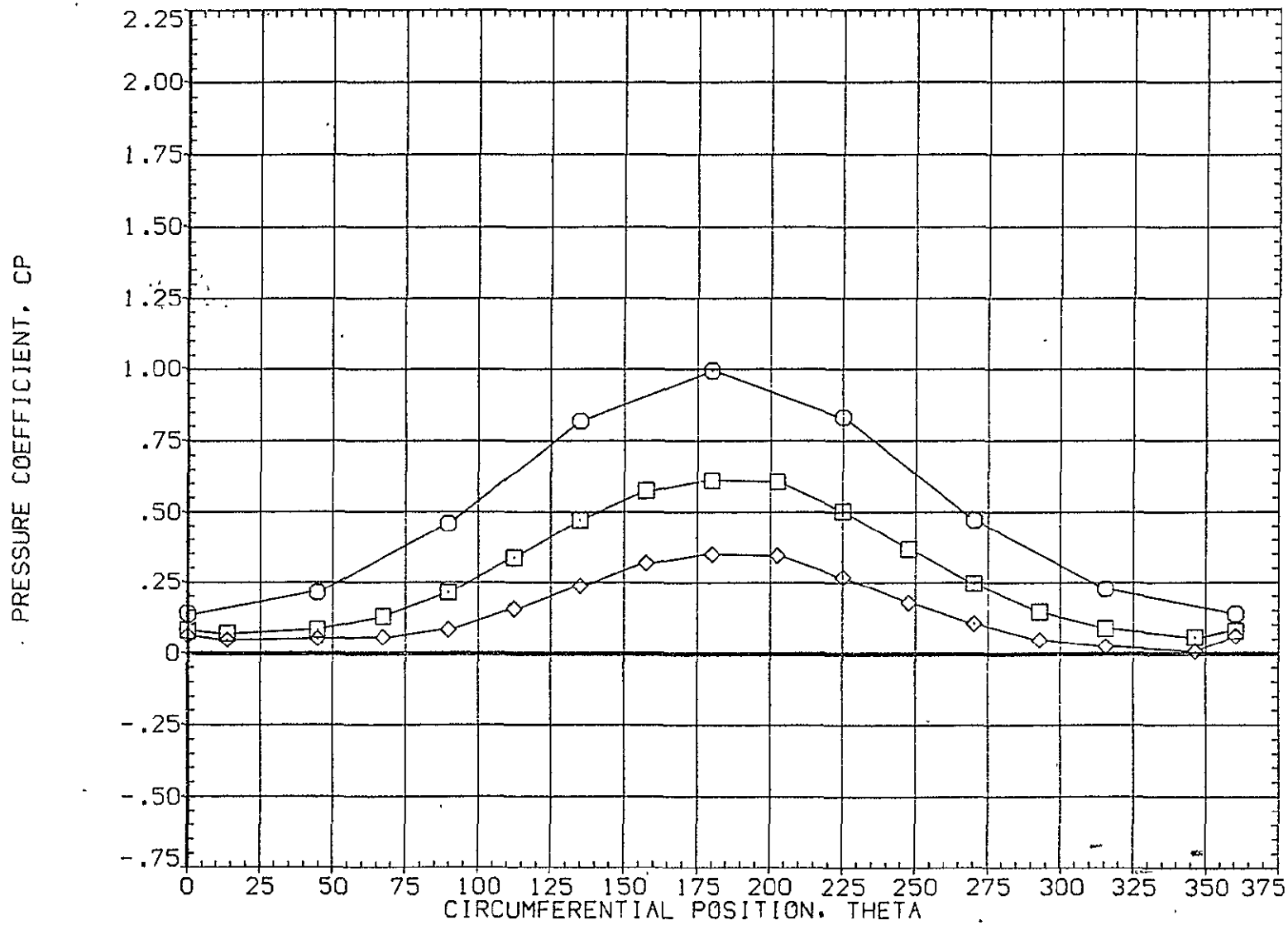

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.470	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

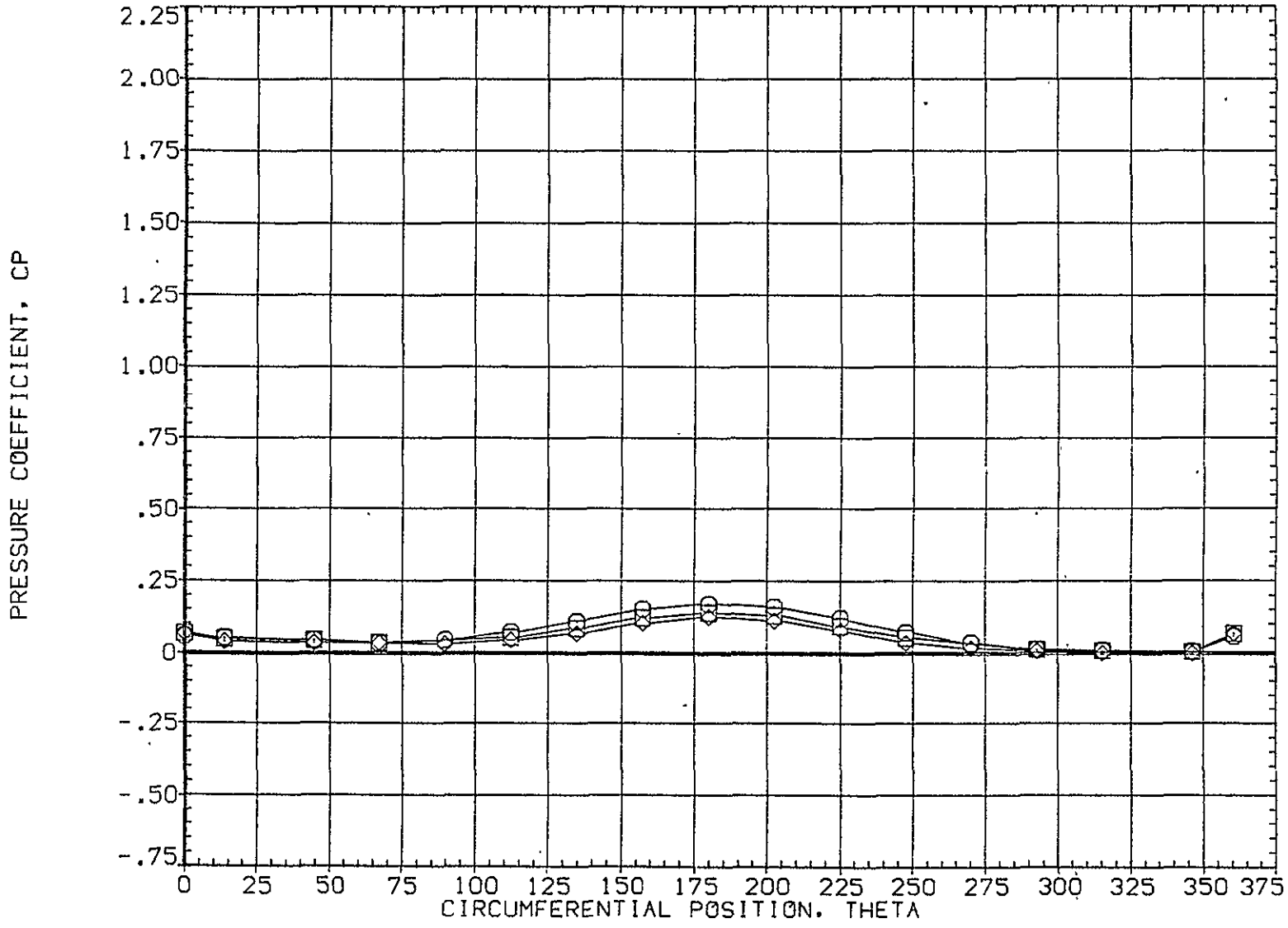

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.470	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

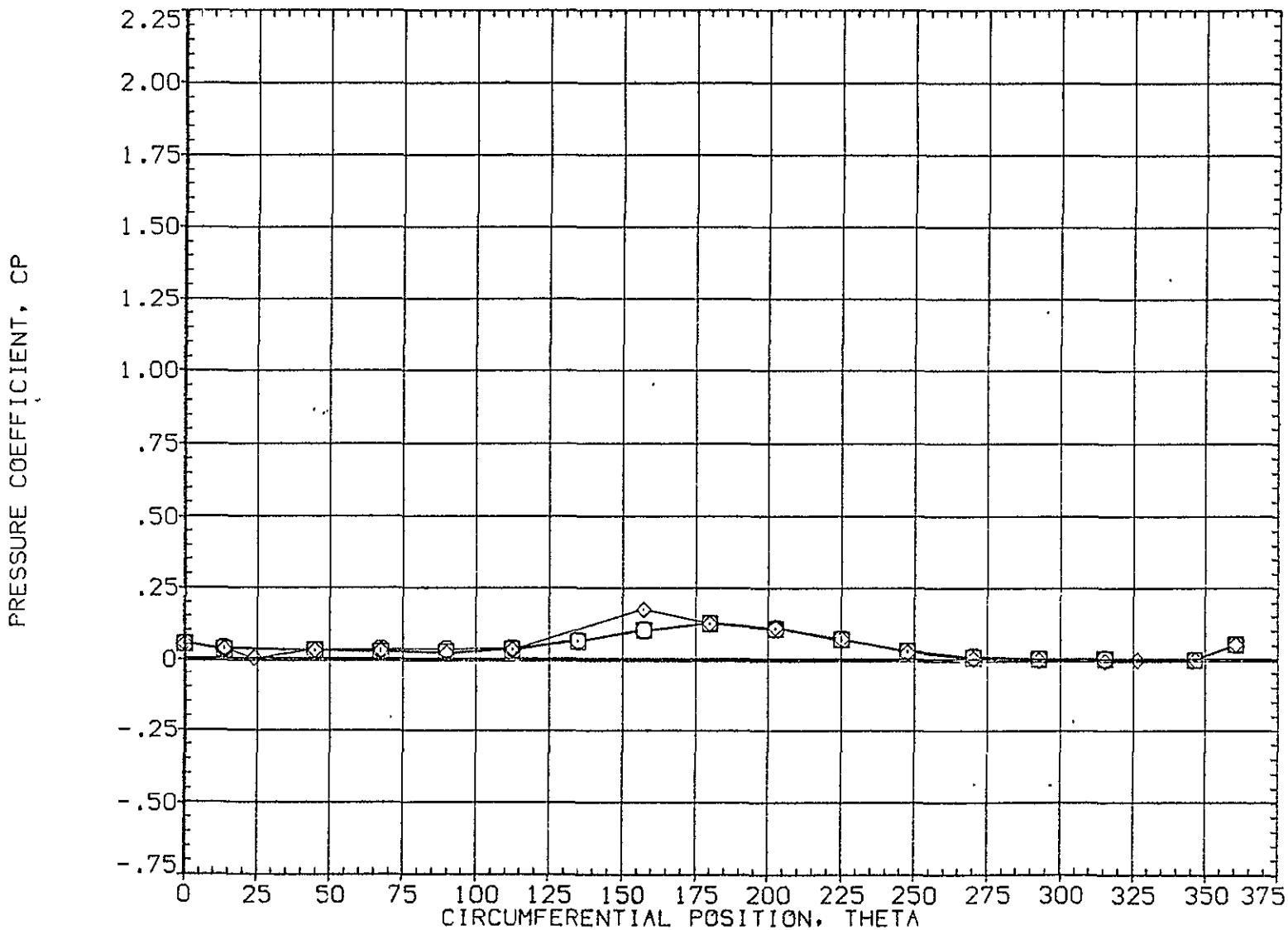

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A007)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.470	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

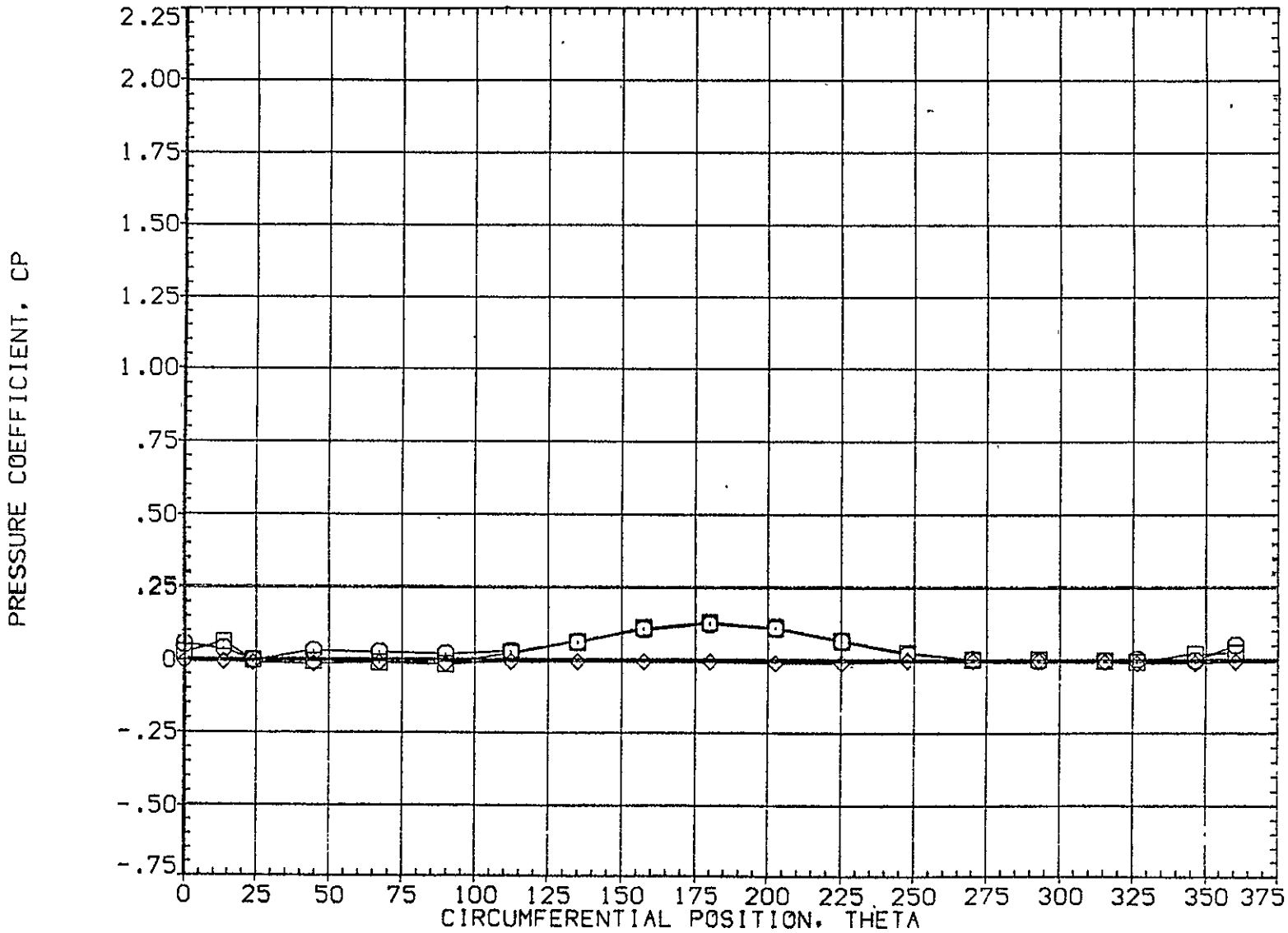

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

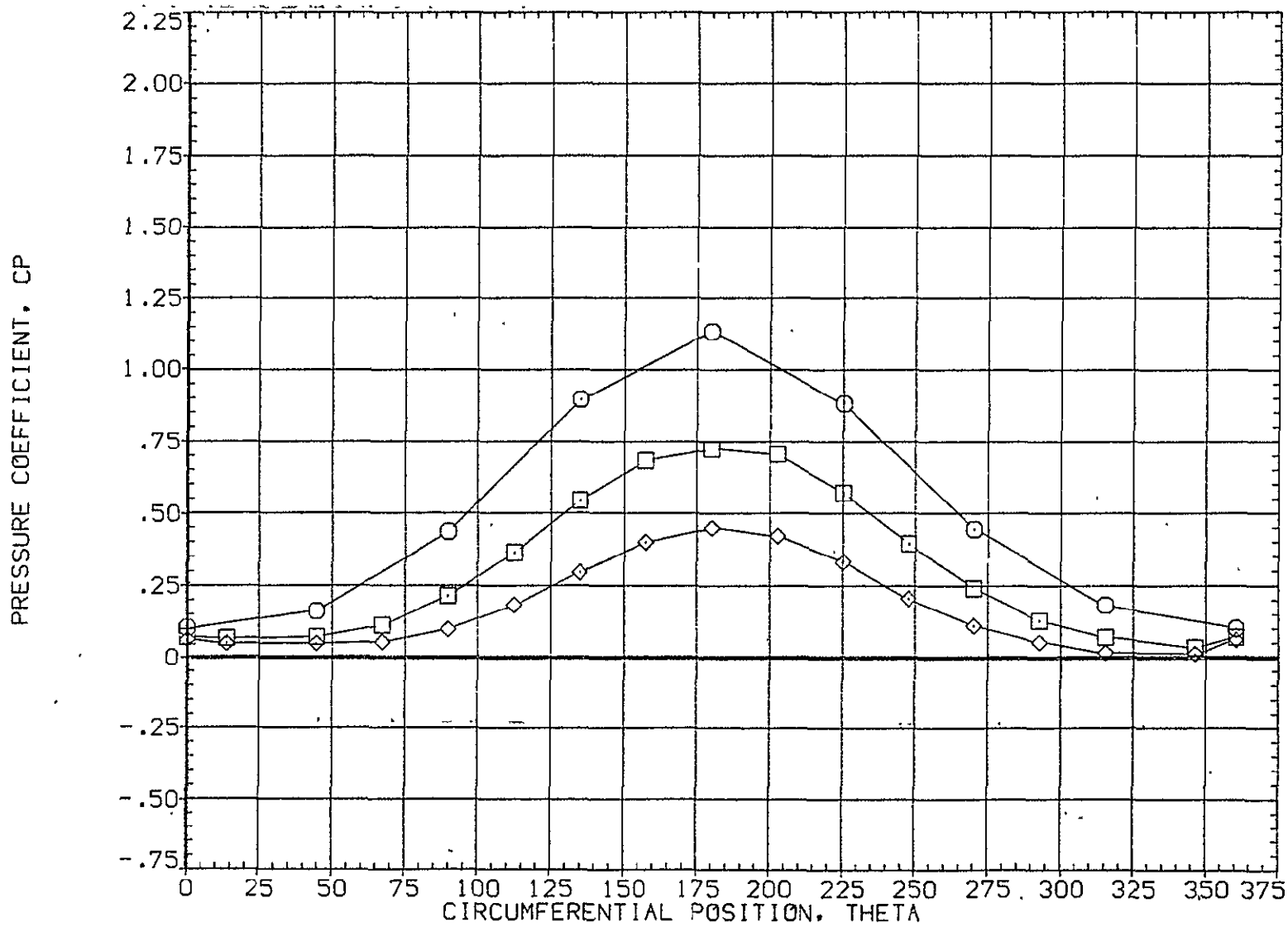

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

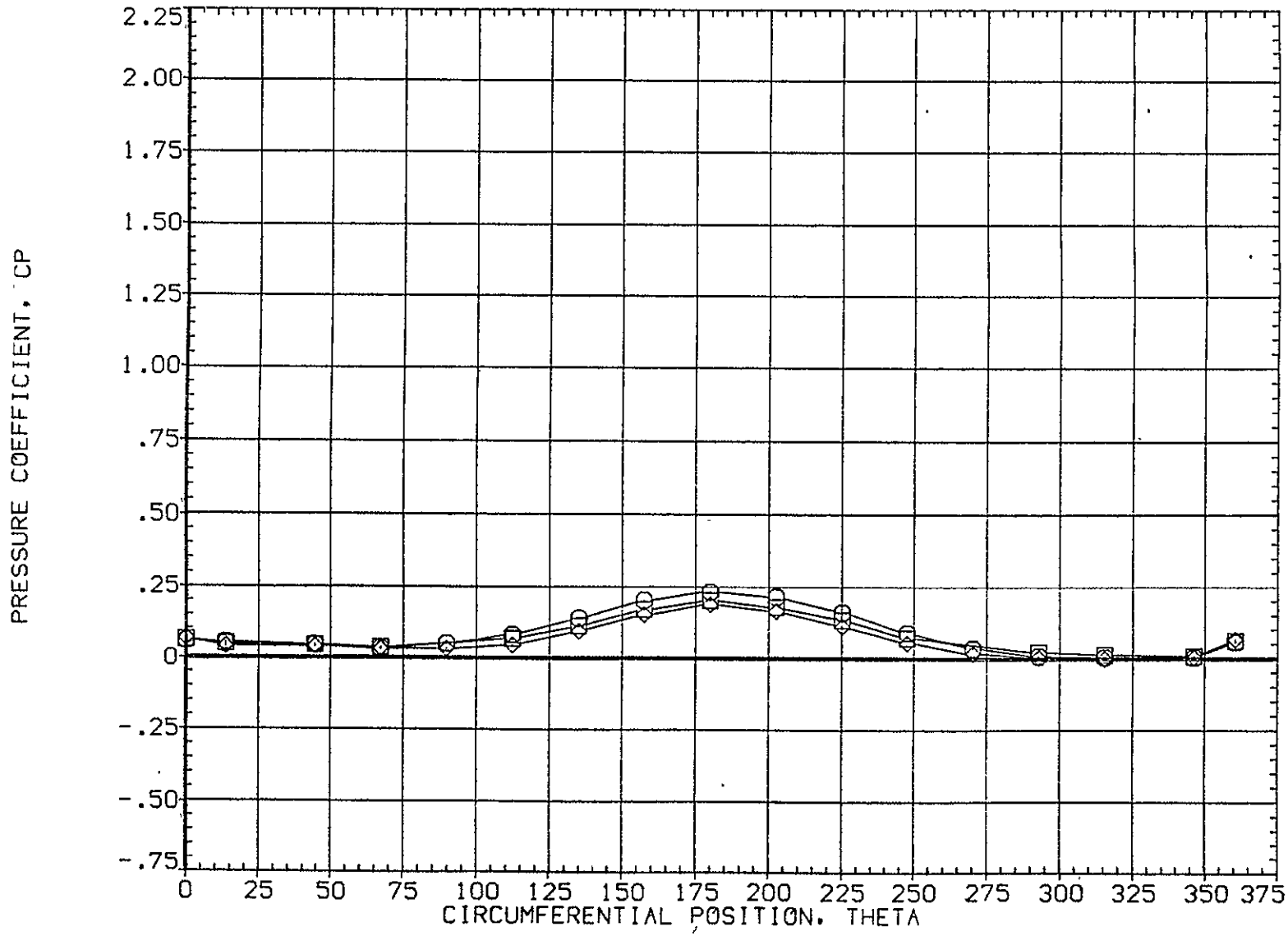

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

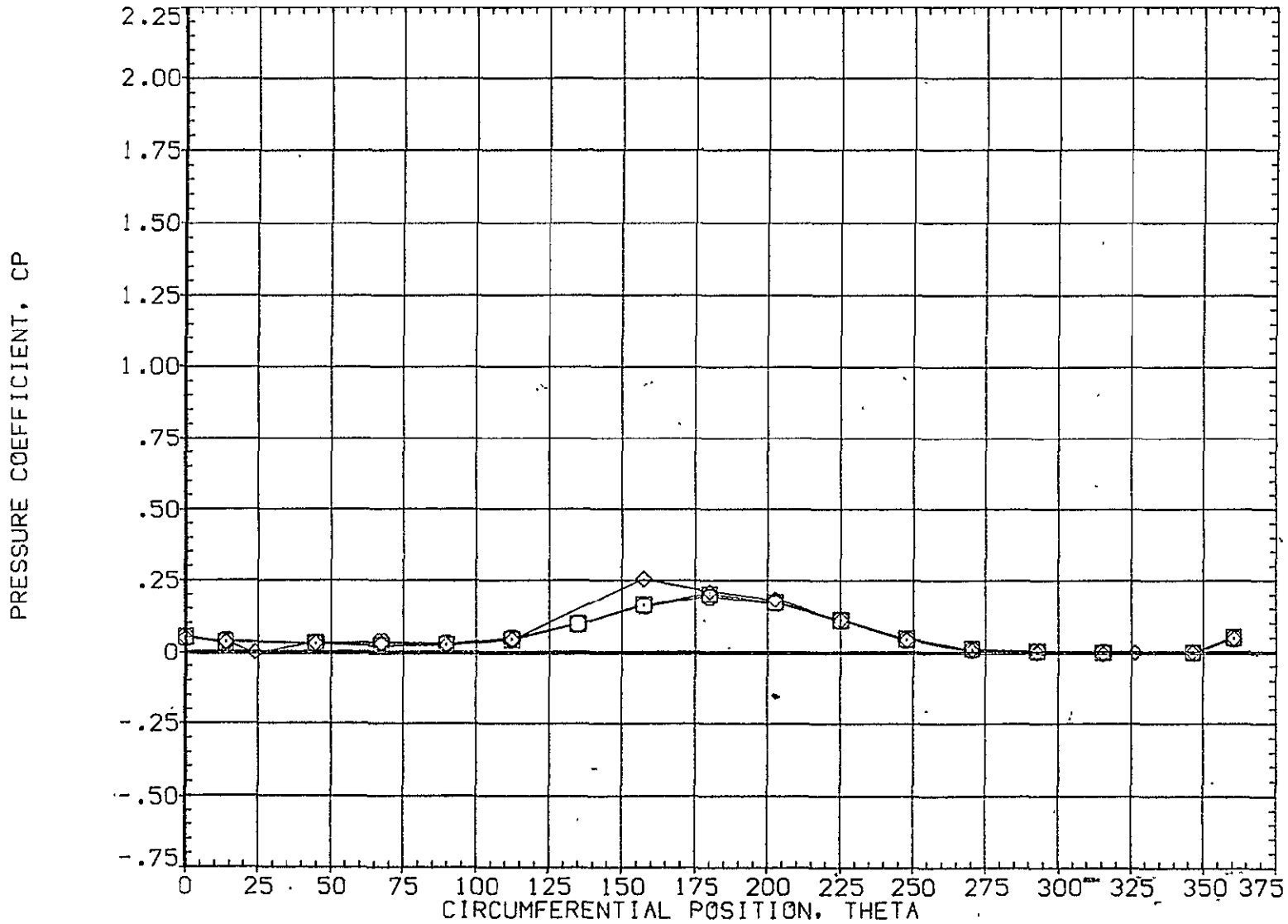

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES.

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A008)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

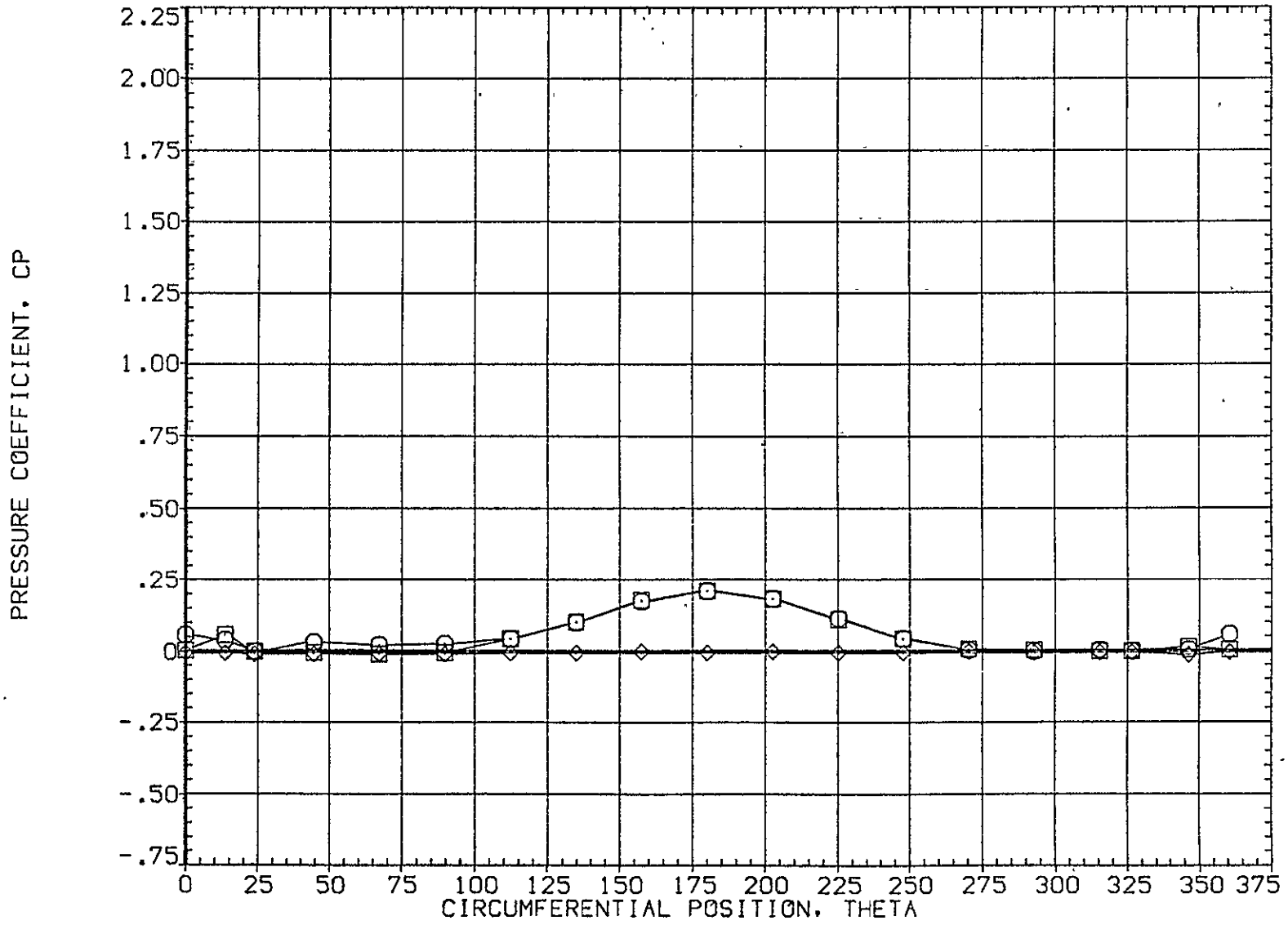

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

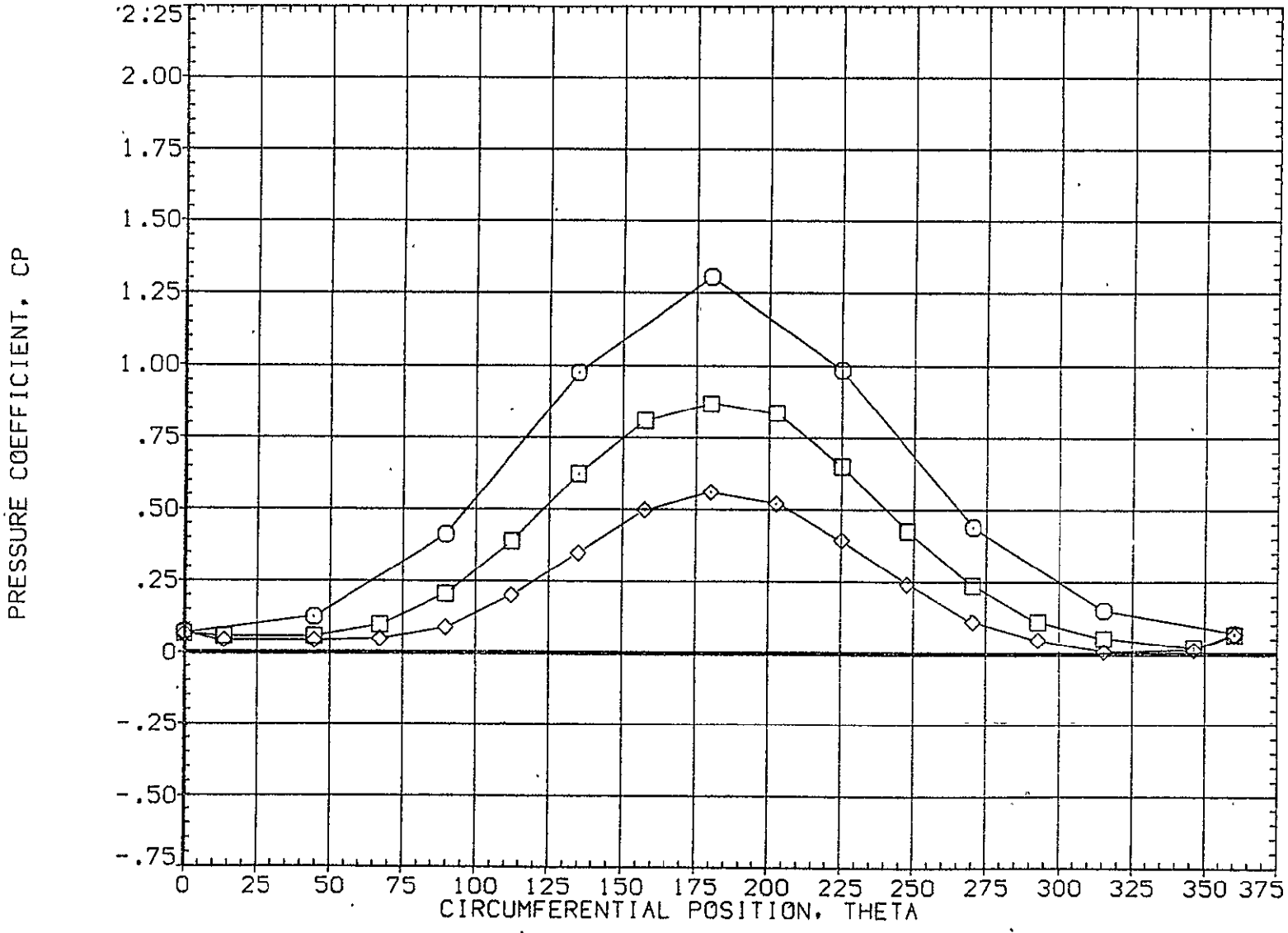

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

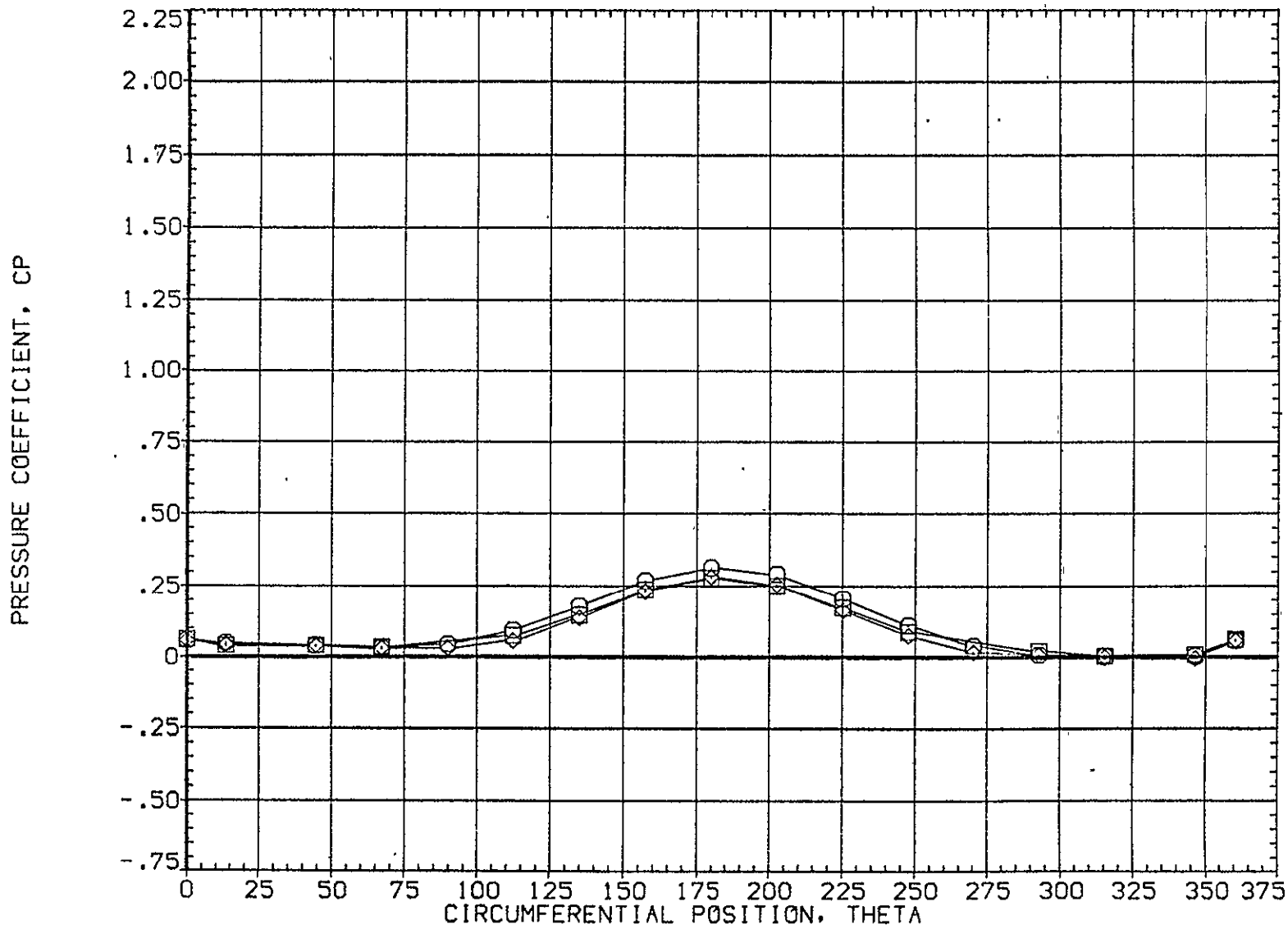

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

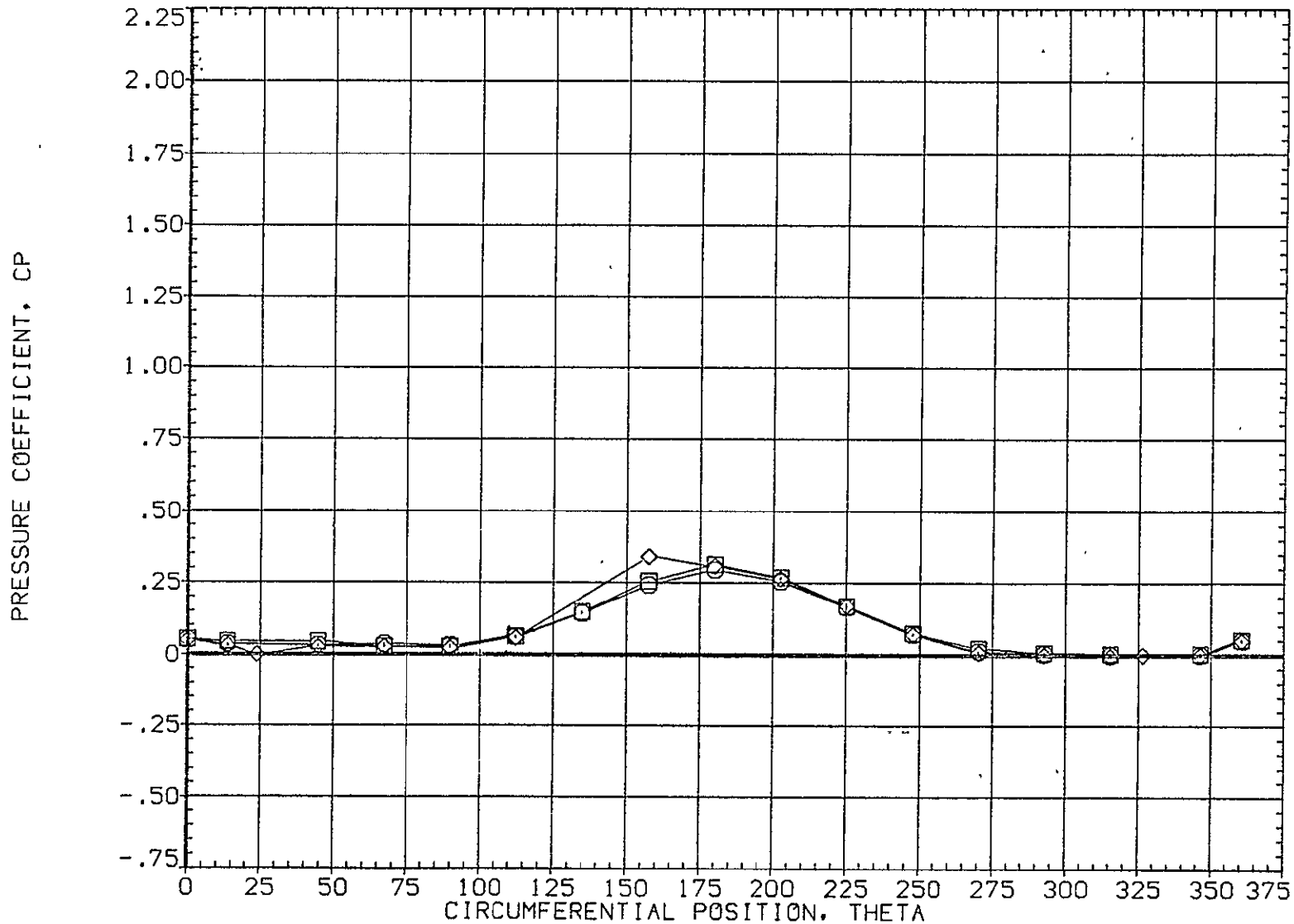

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A009)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

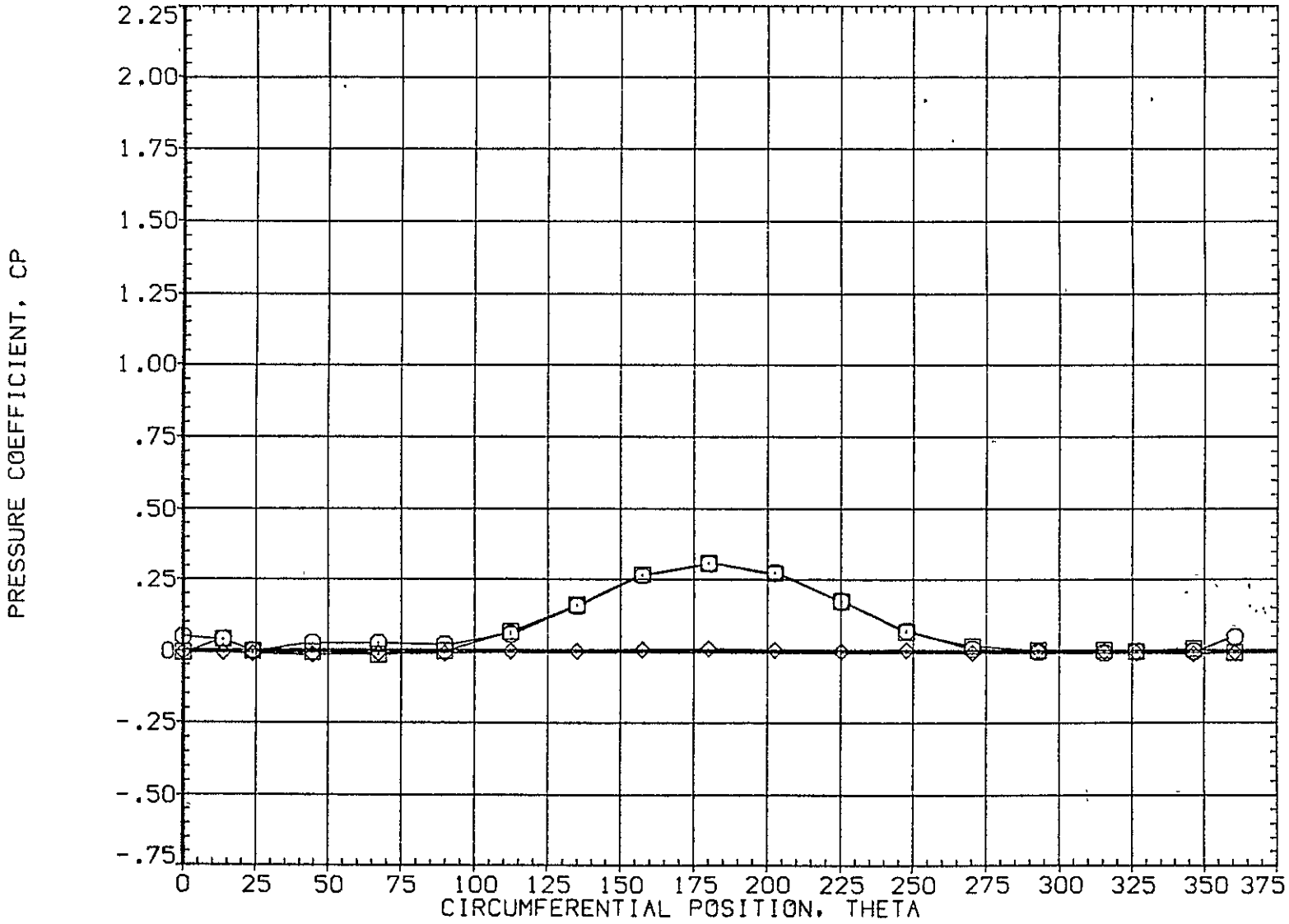

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.540	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

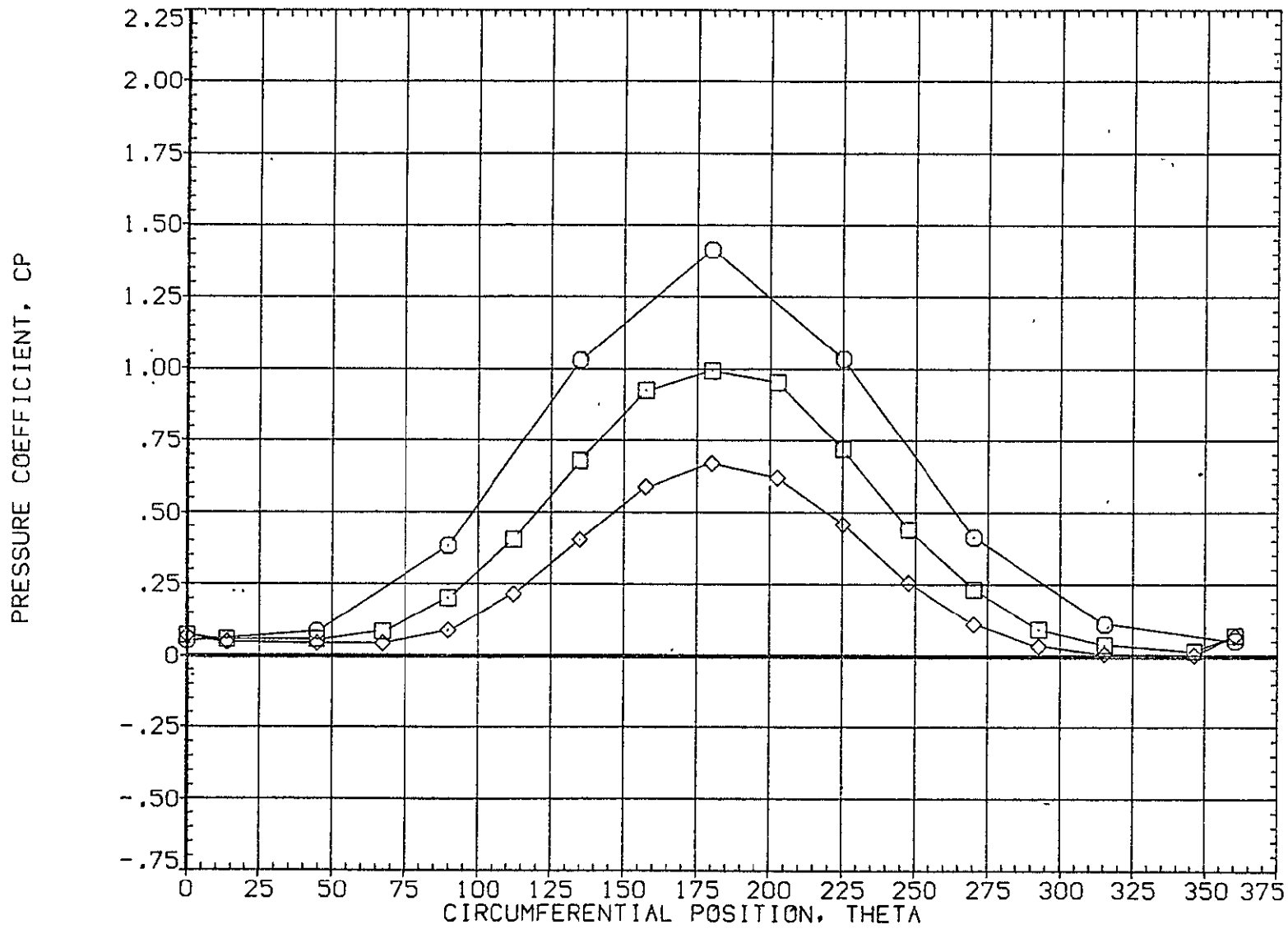

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

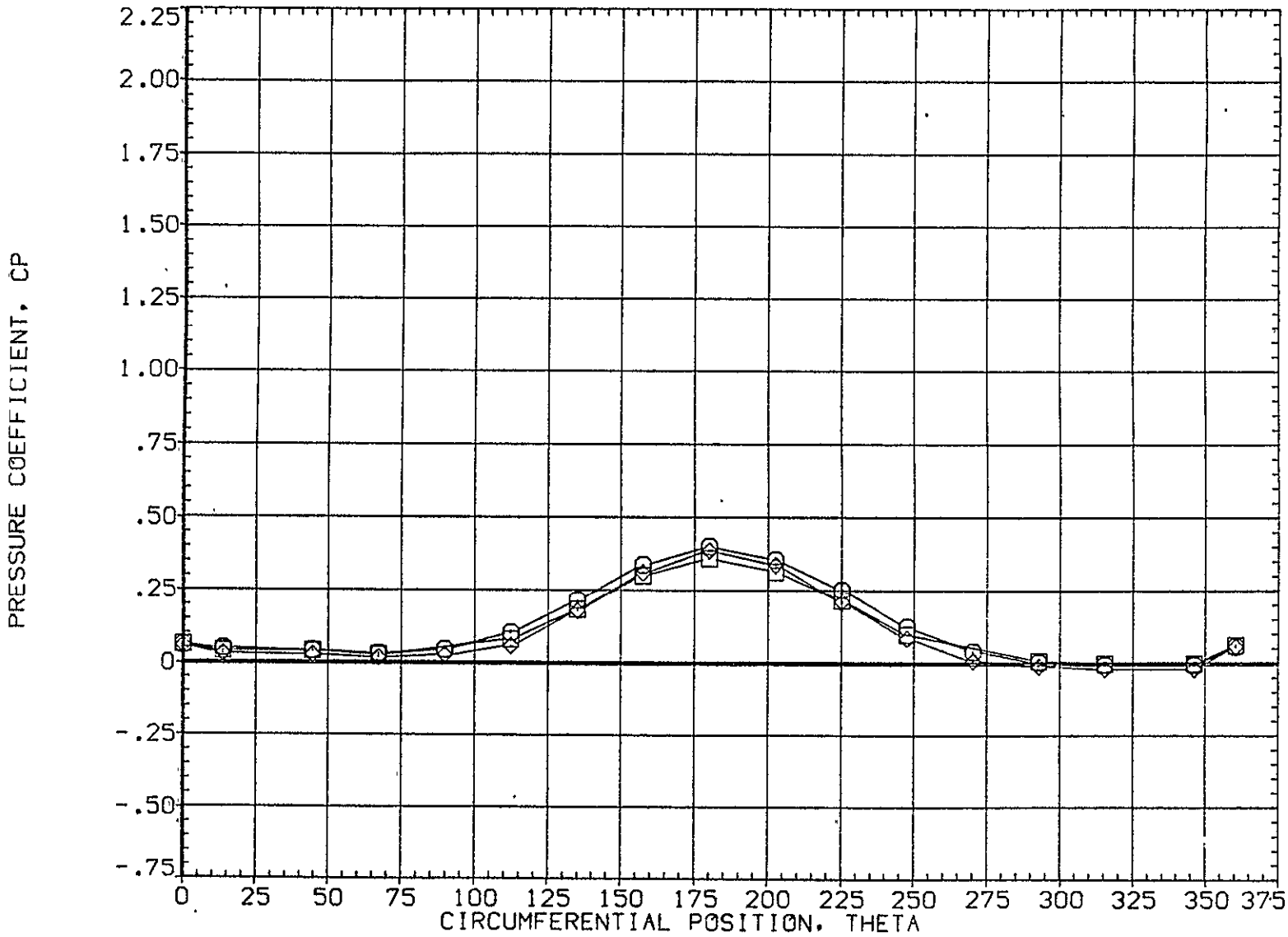

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.540	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

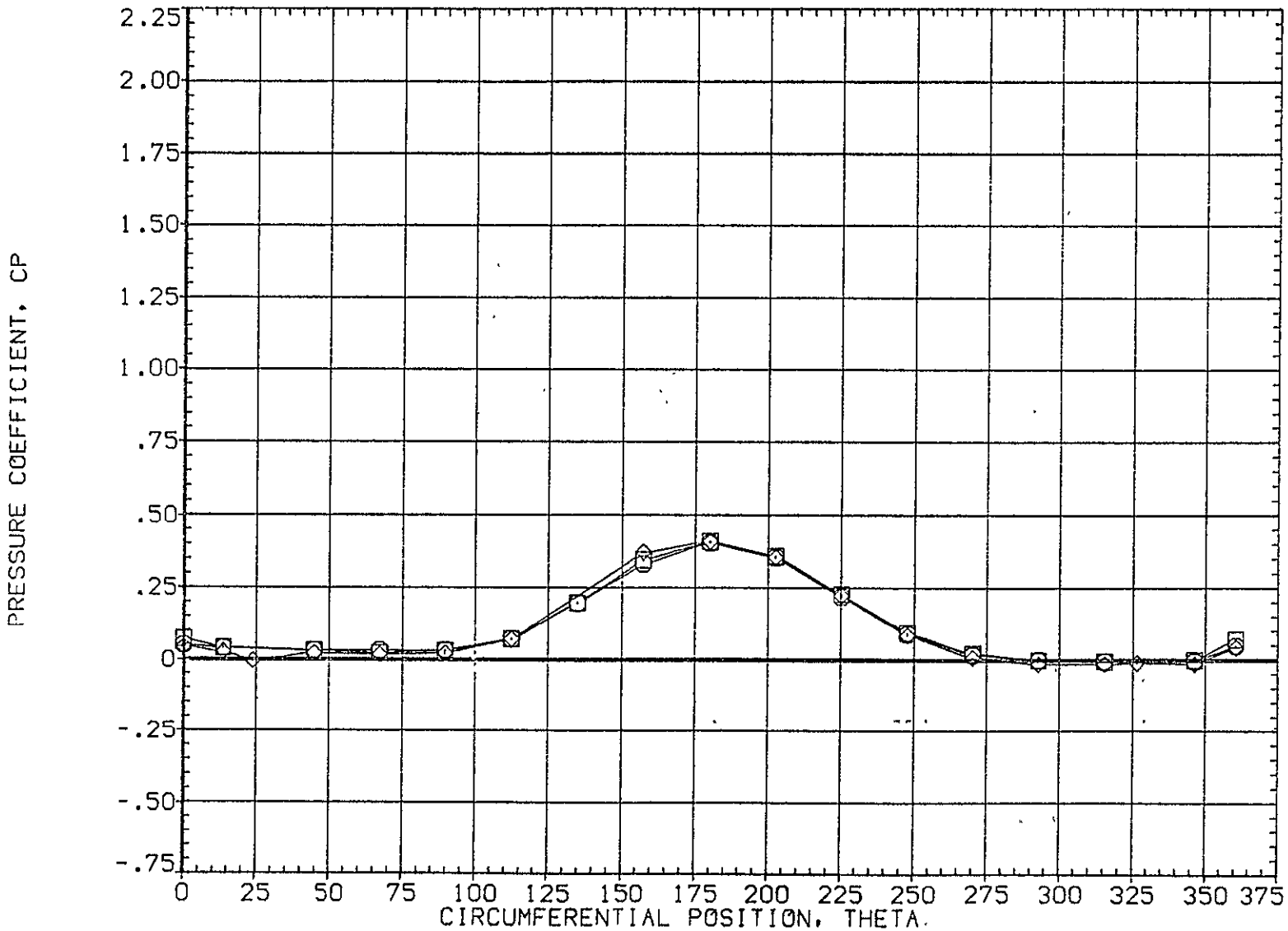

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A010)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	.000

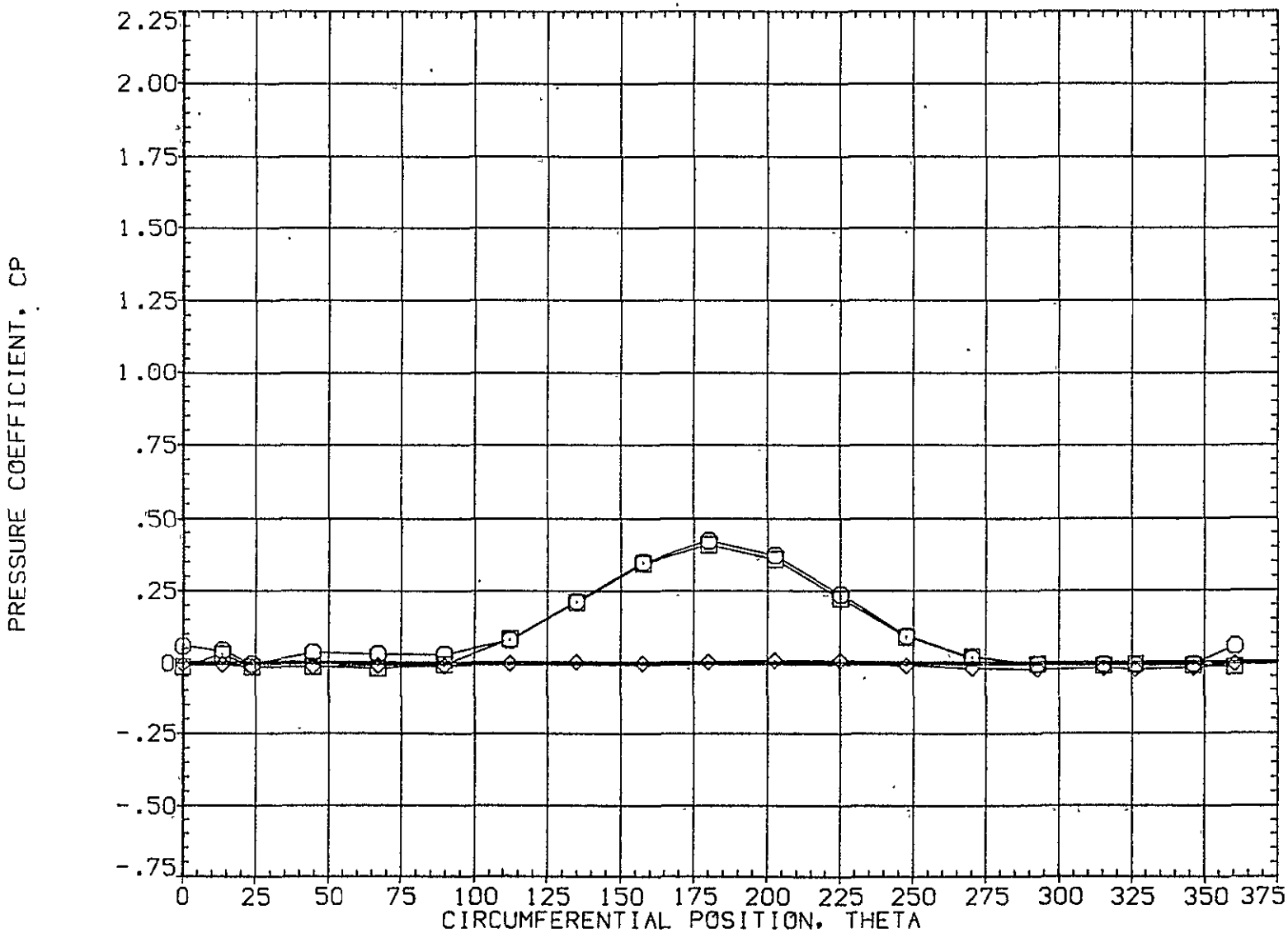

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.330	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

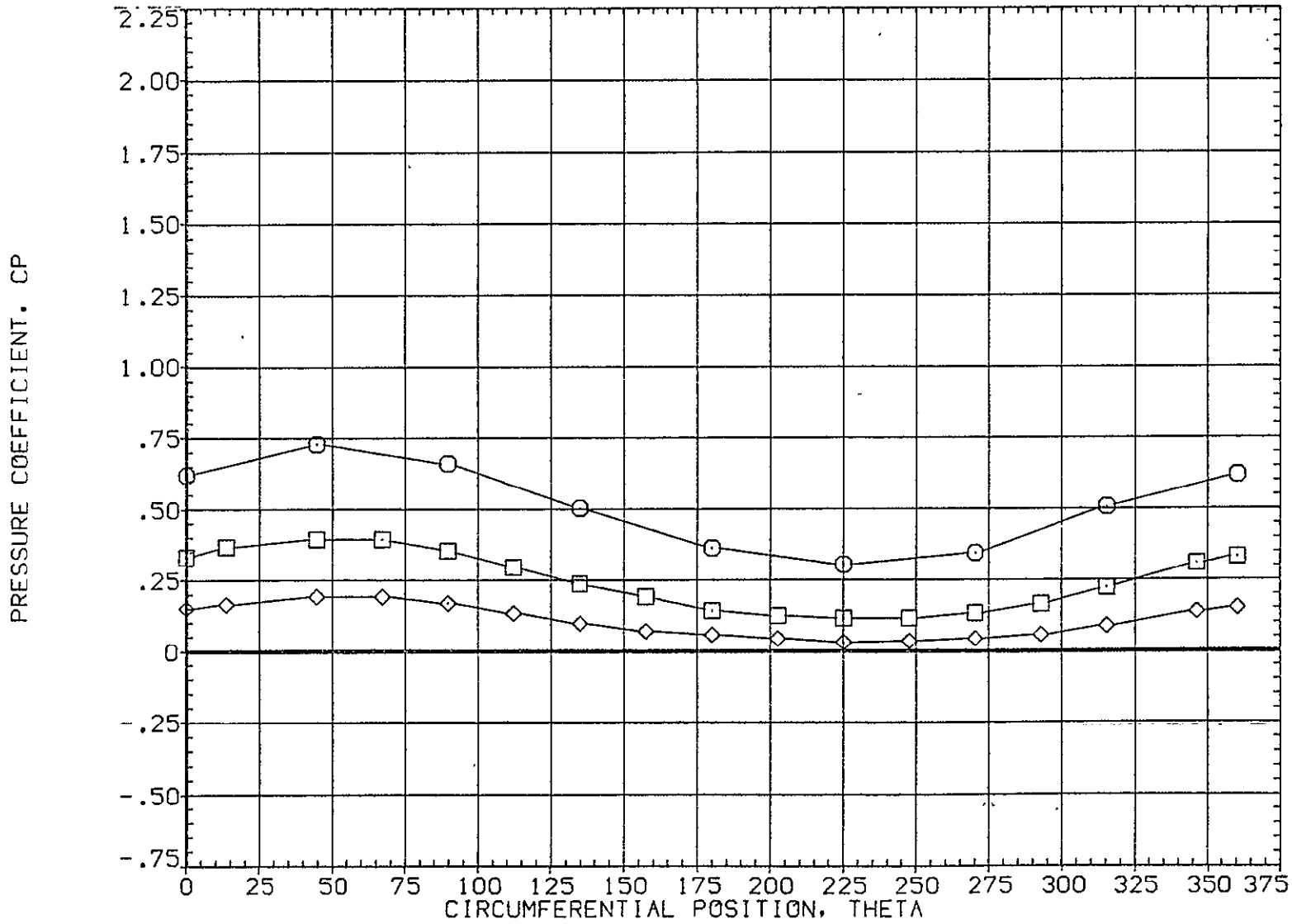

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.330	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

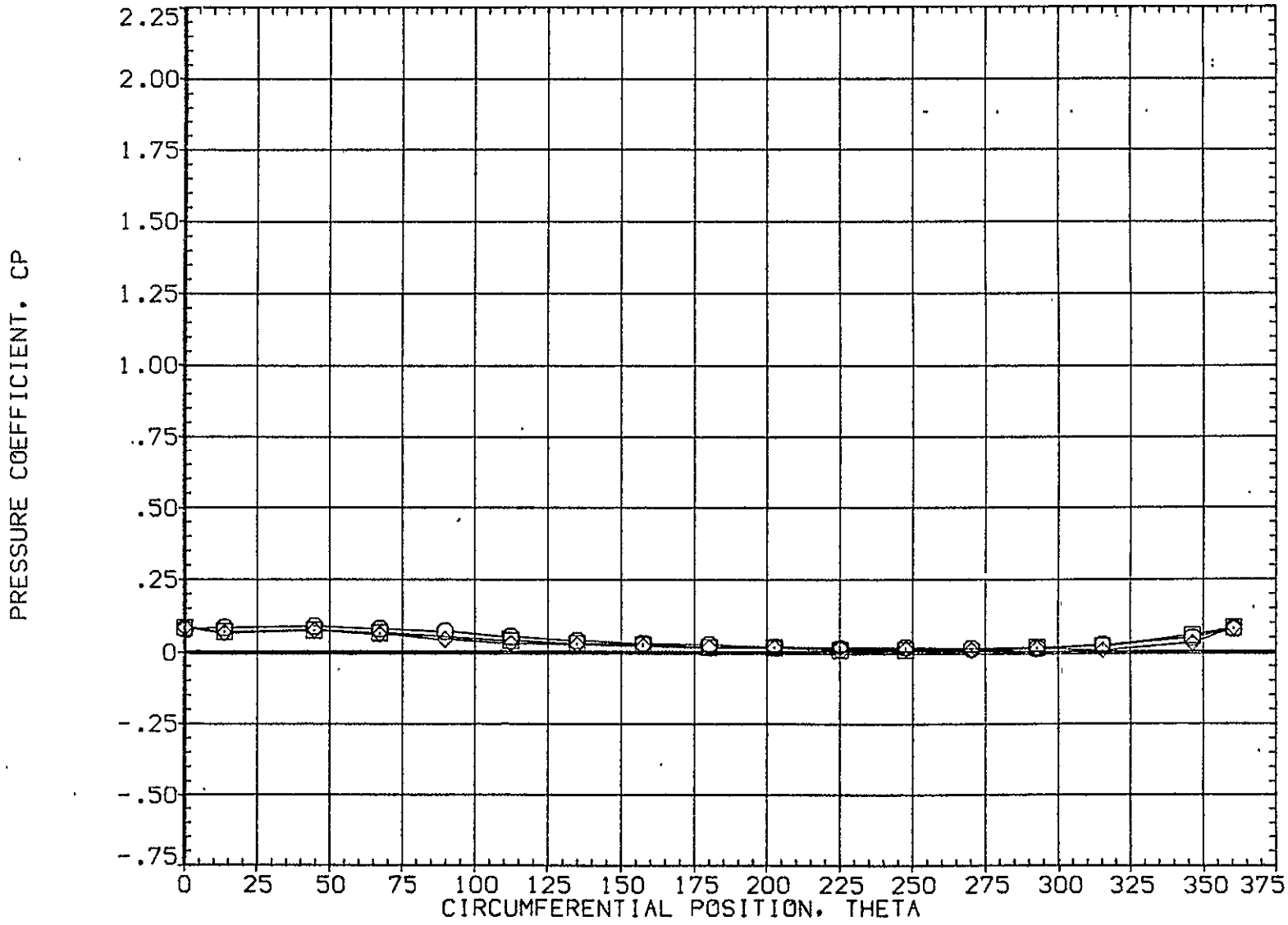

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.330	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

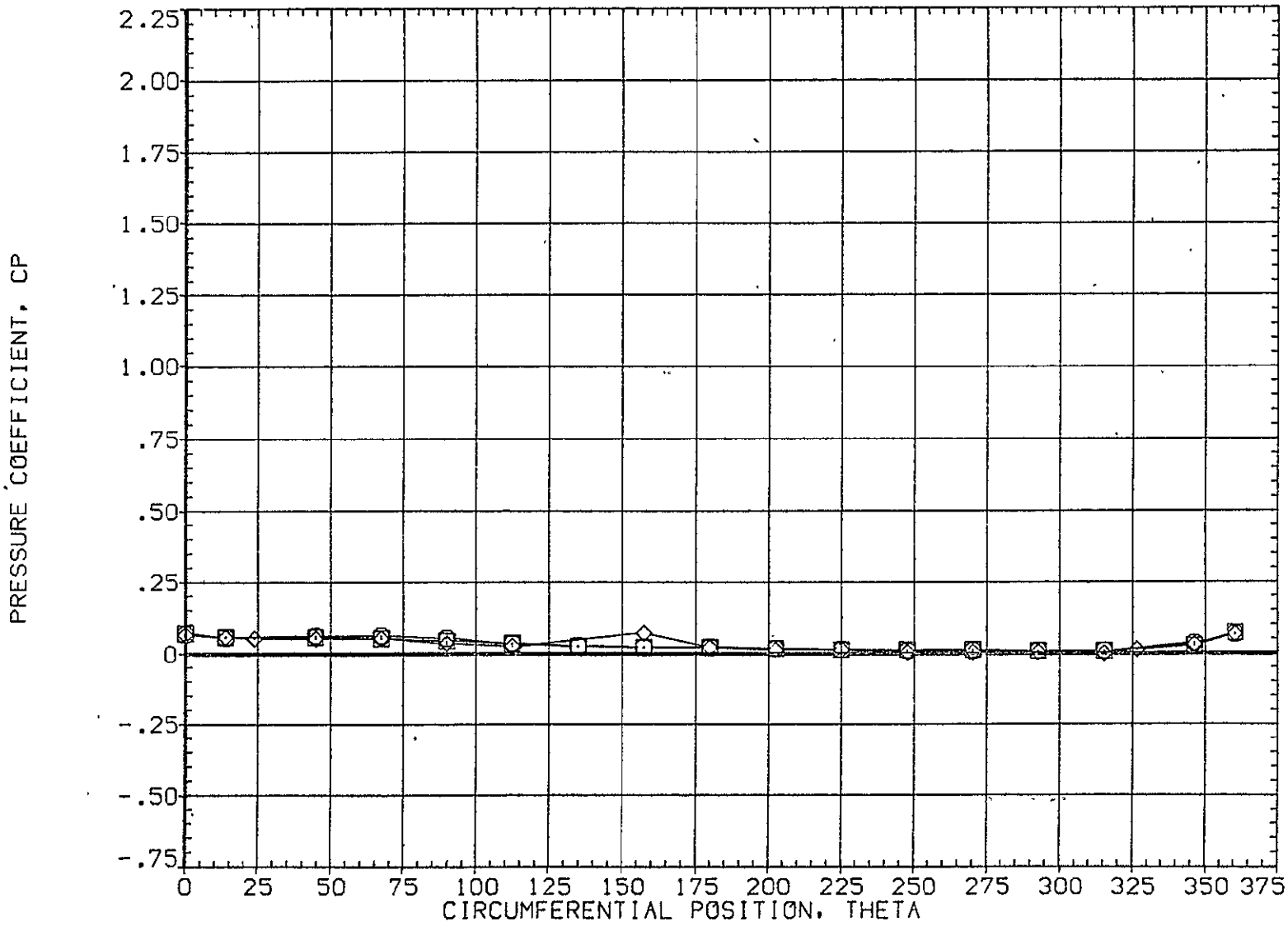

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A081)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.330	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

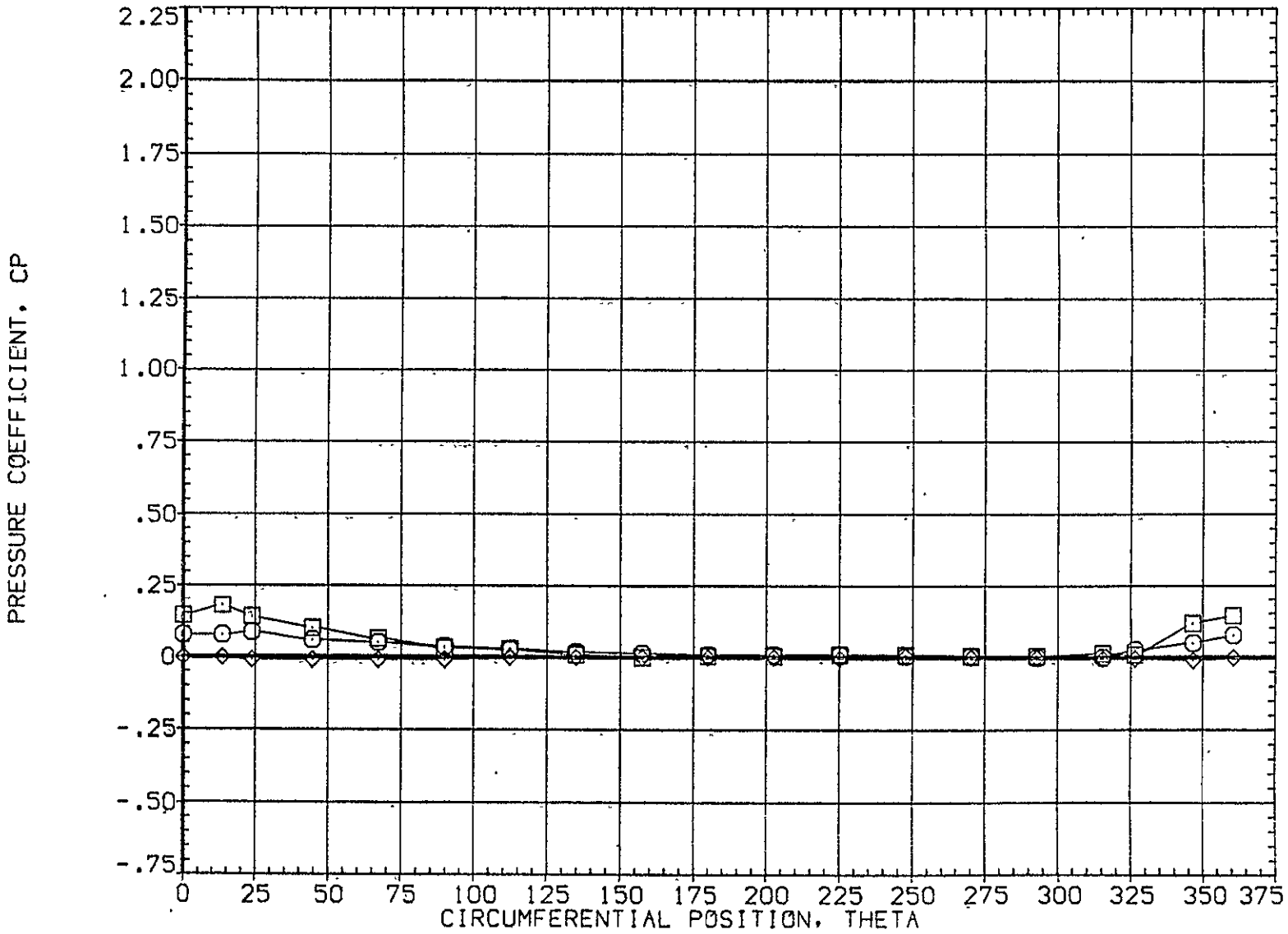

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

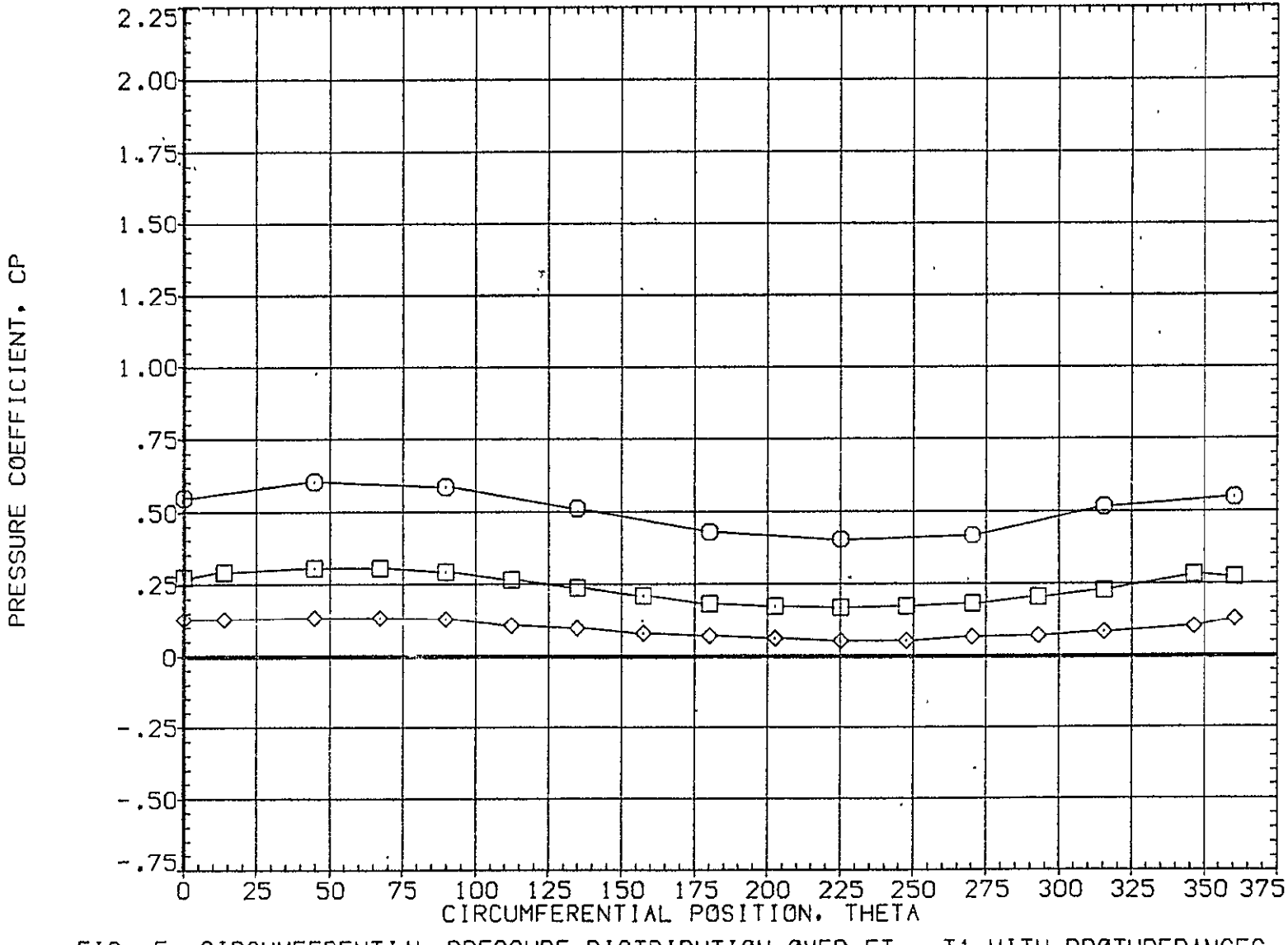

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC-596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

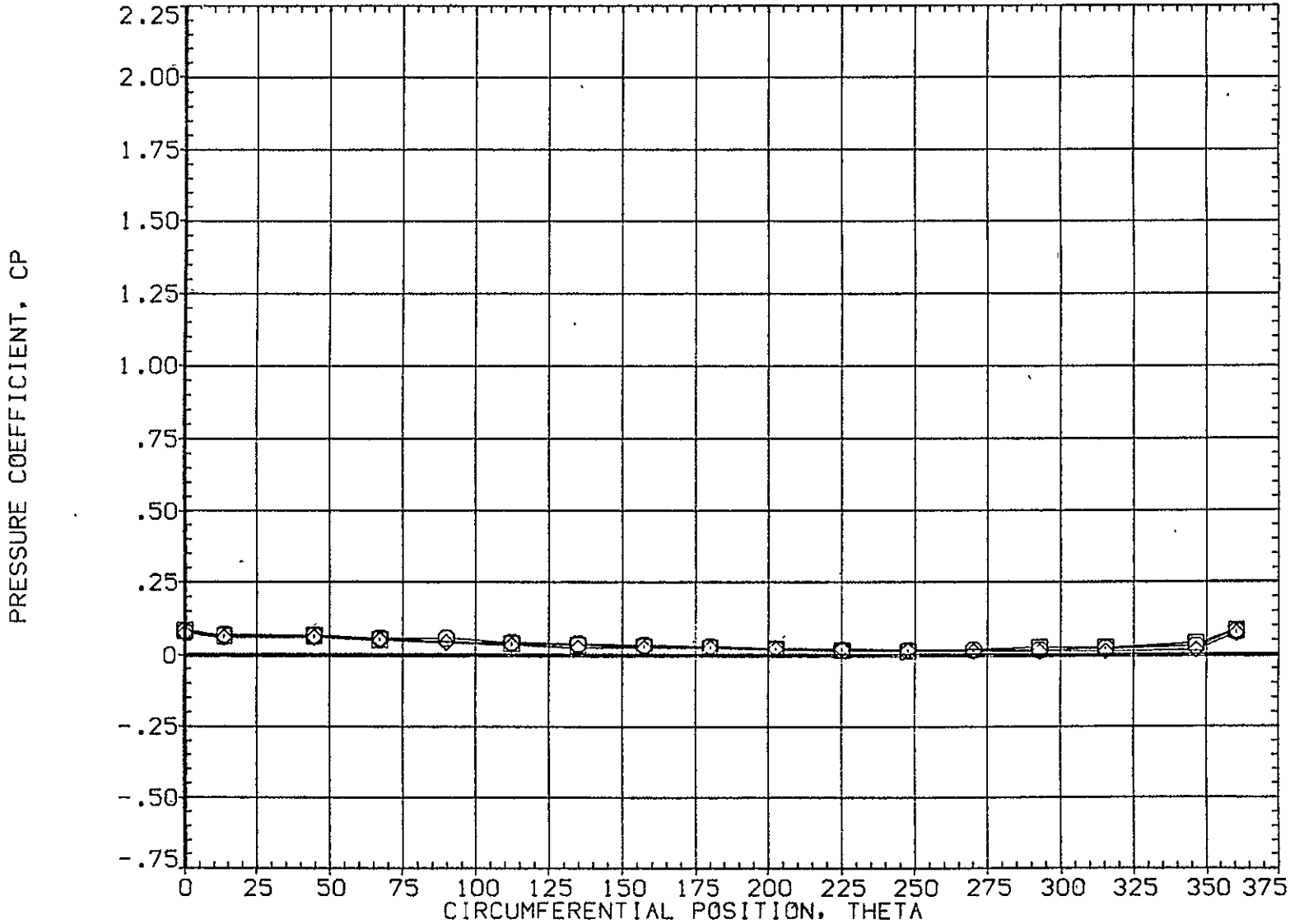

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

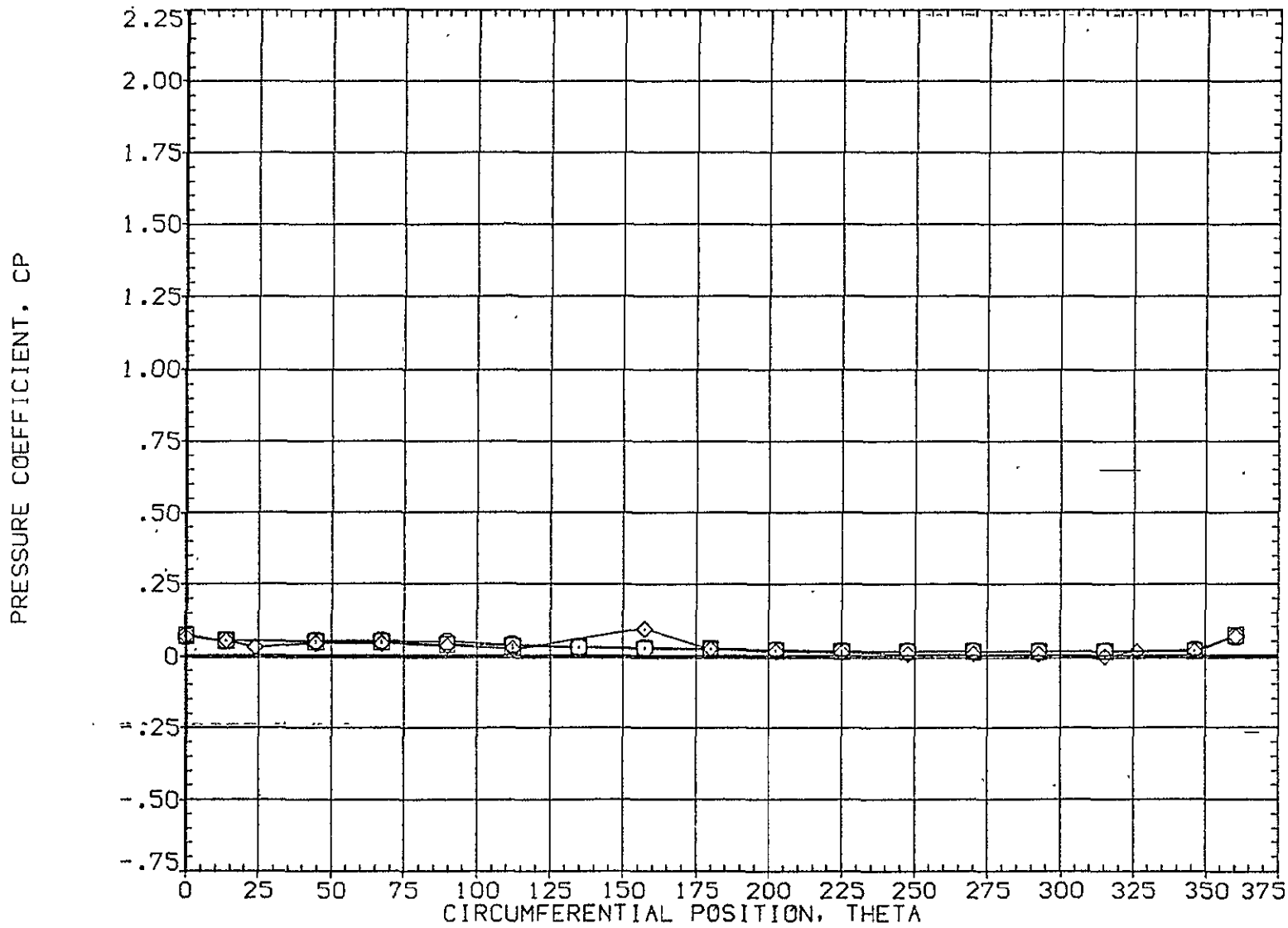

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A082)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

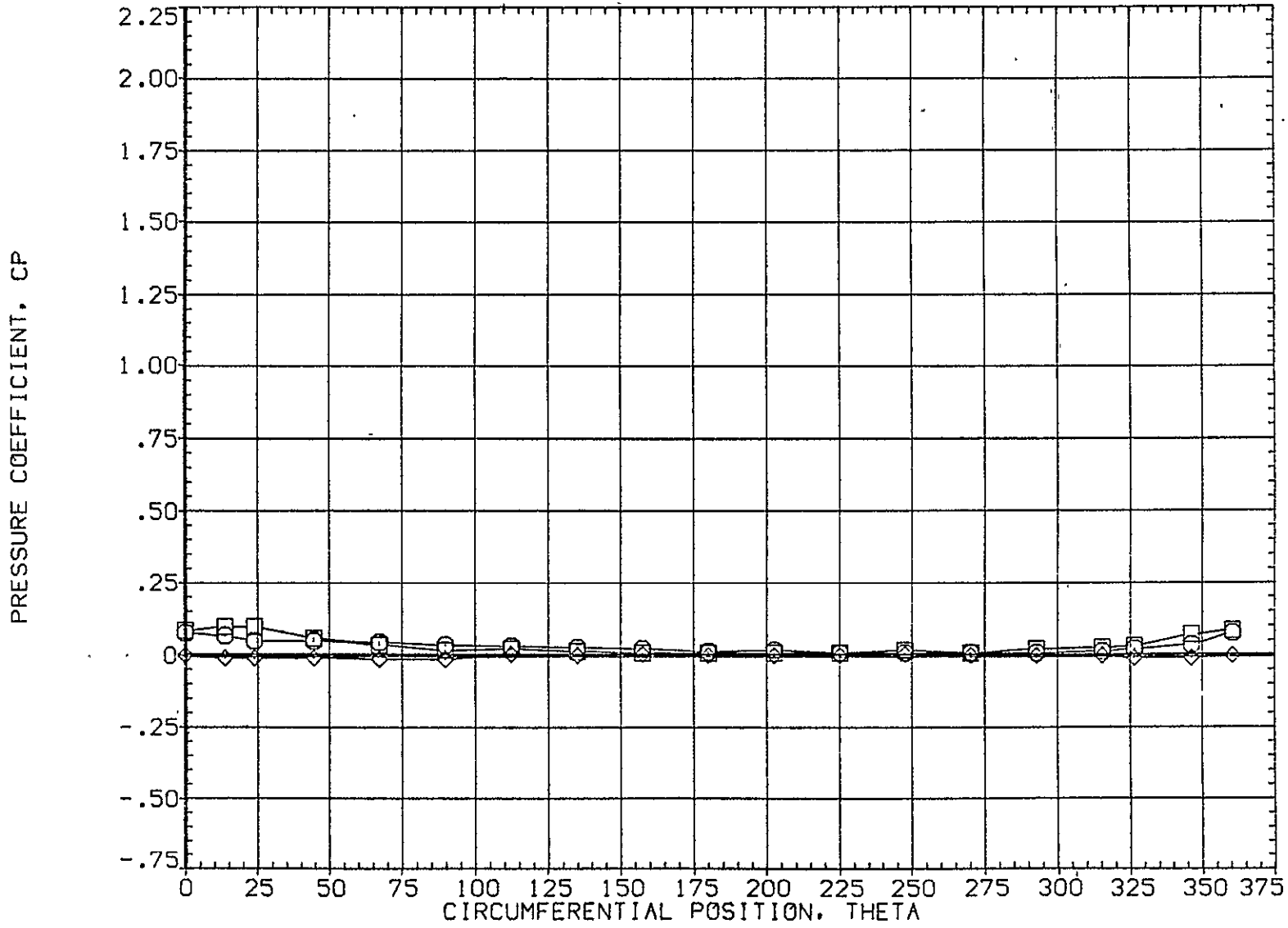

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

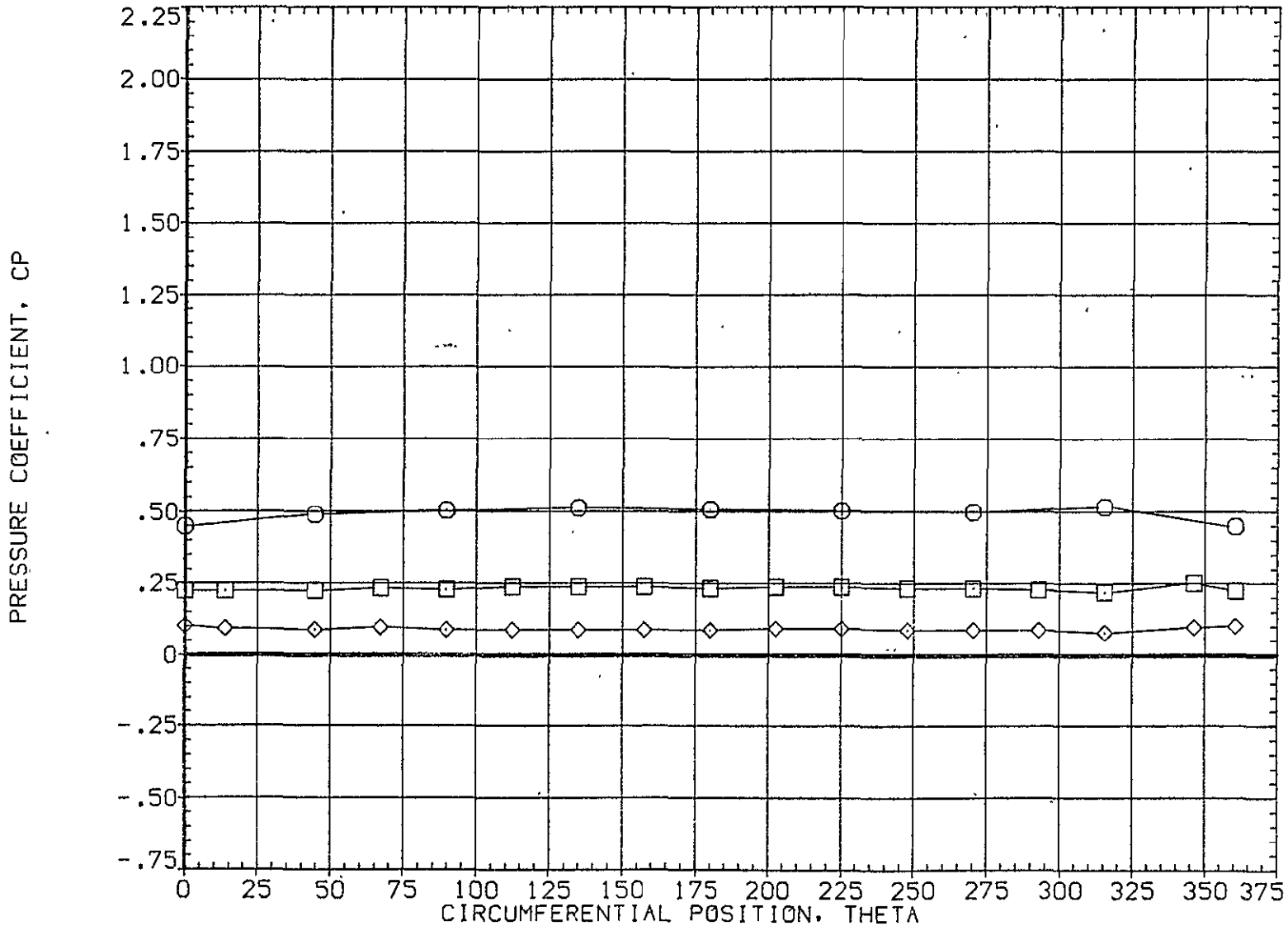

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

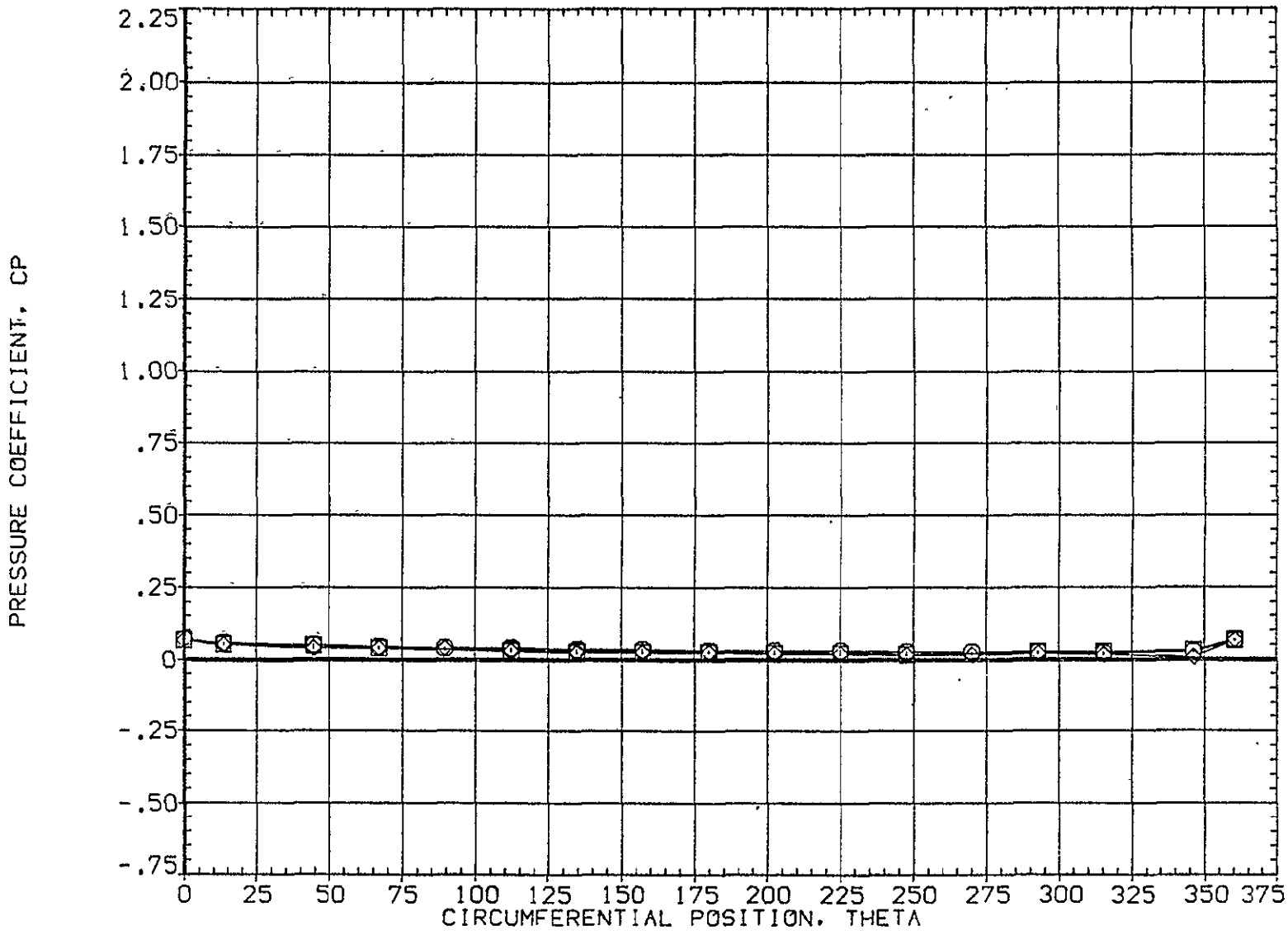

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

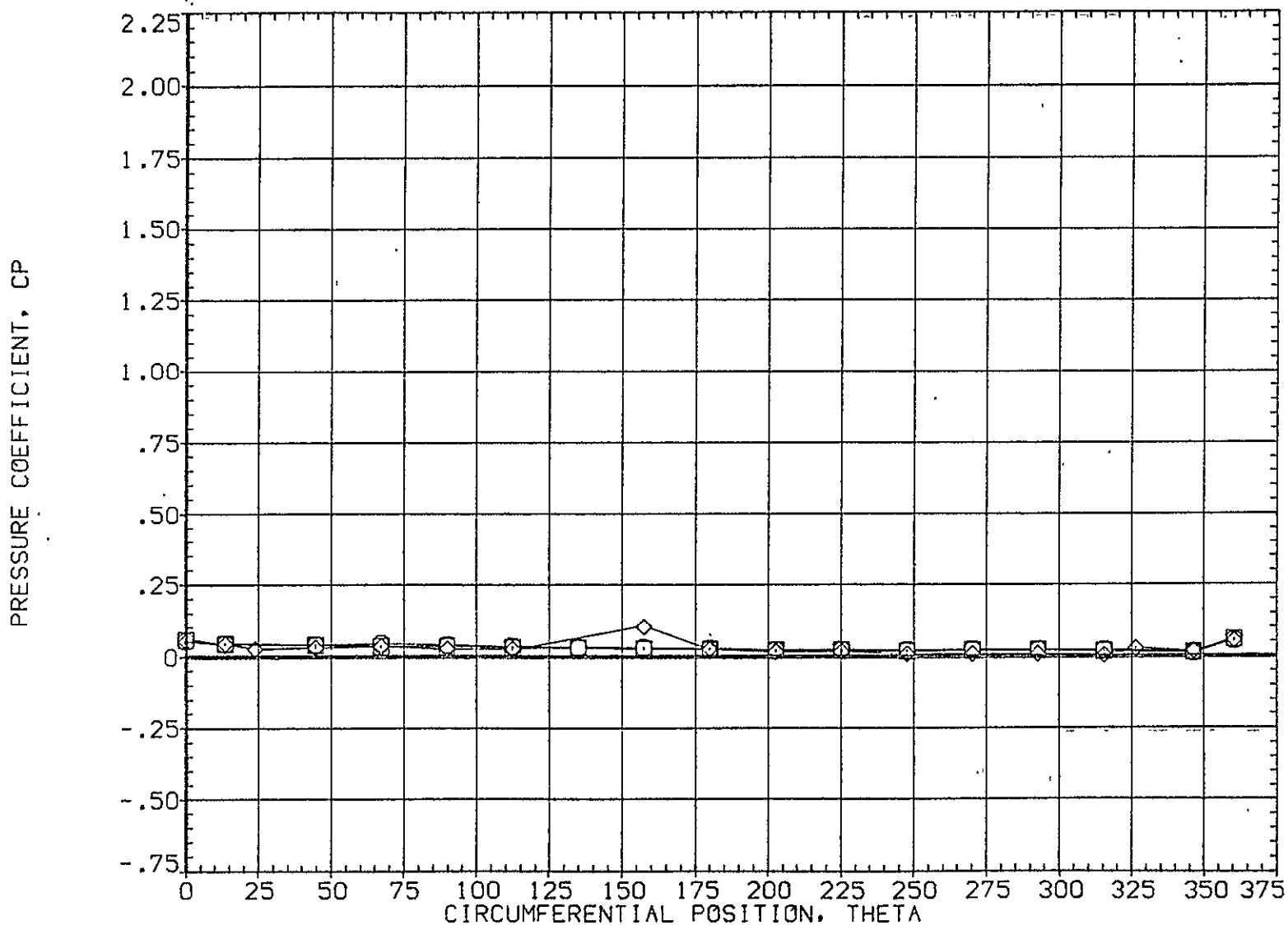

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A083)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

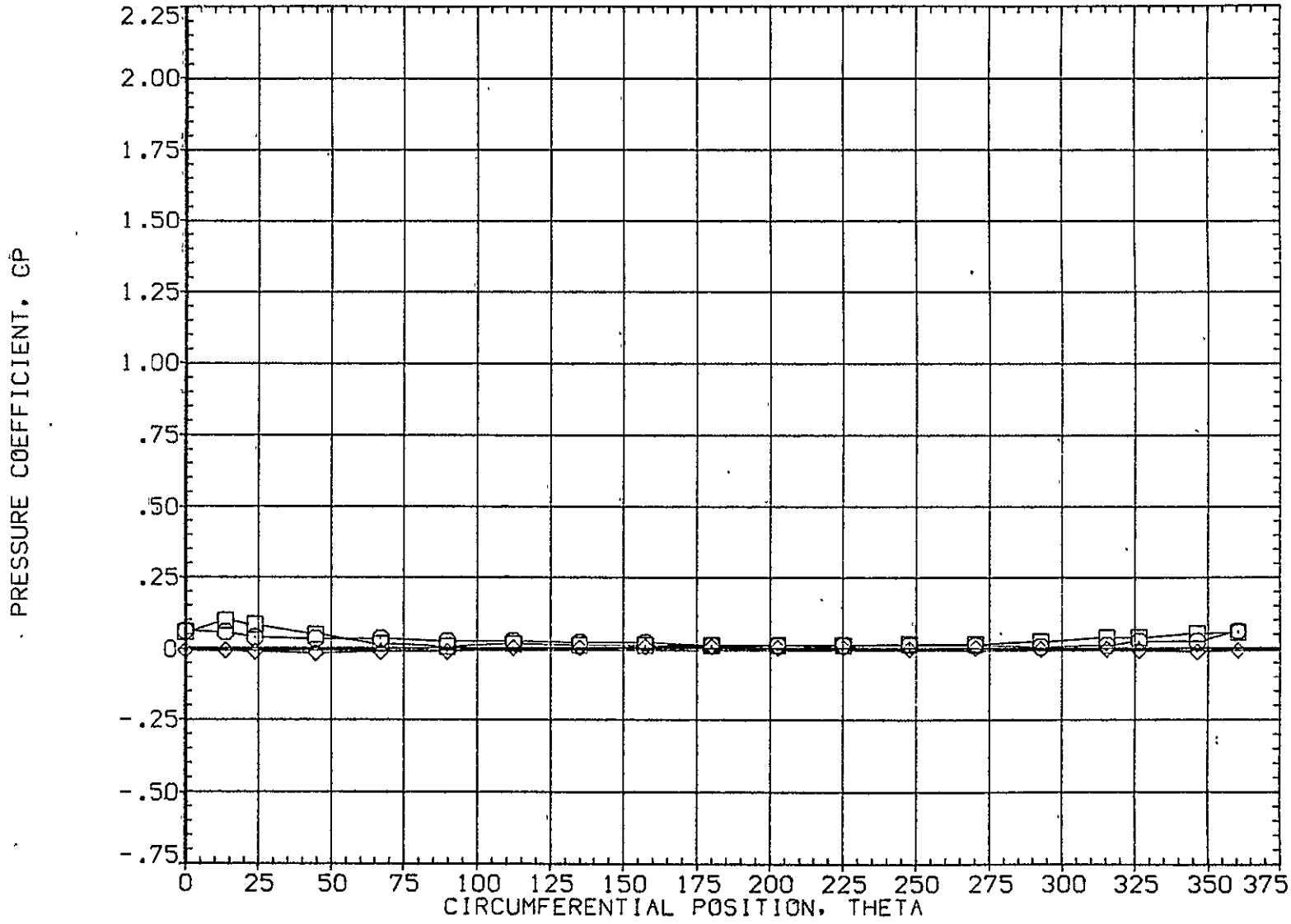

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

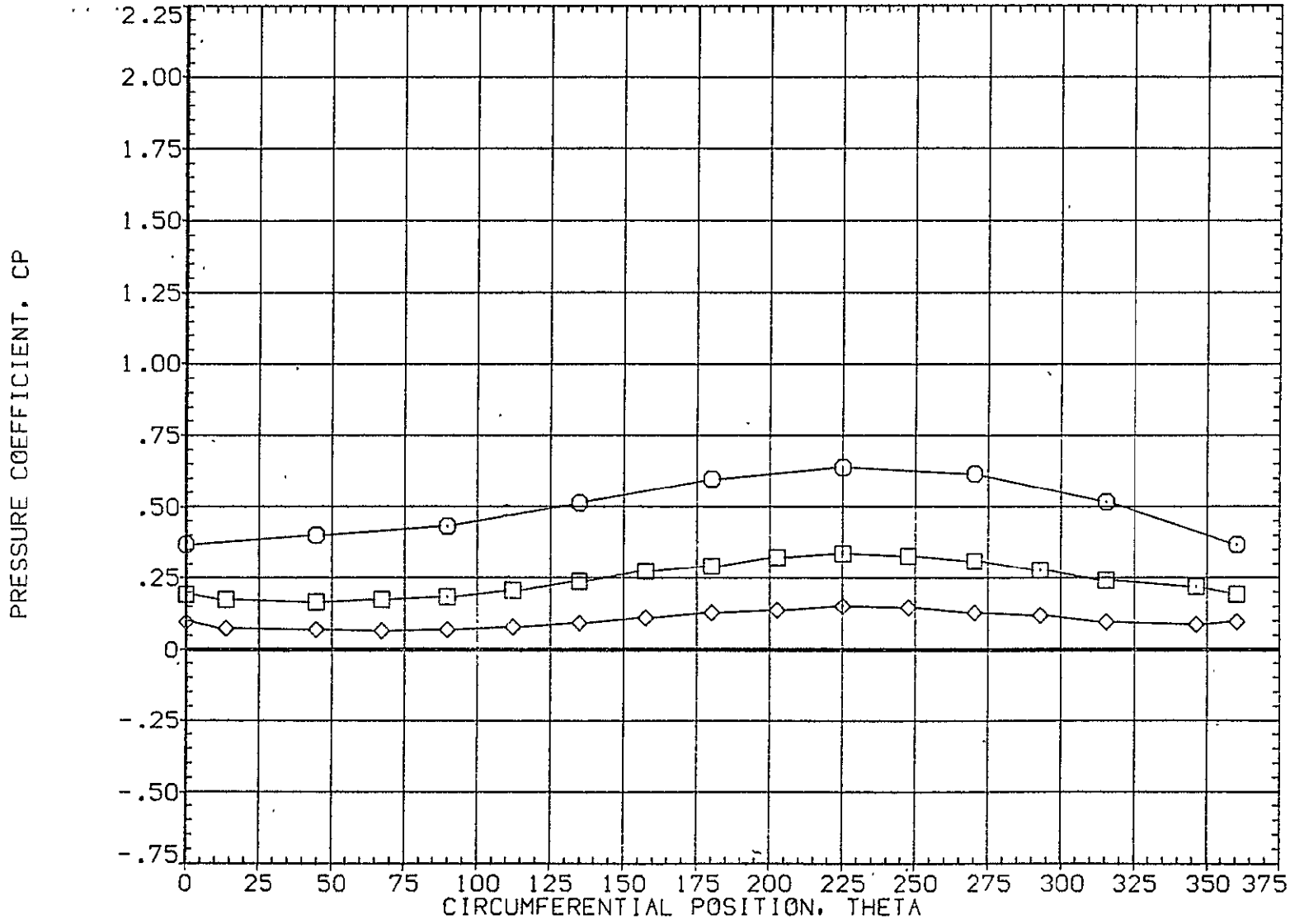

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

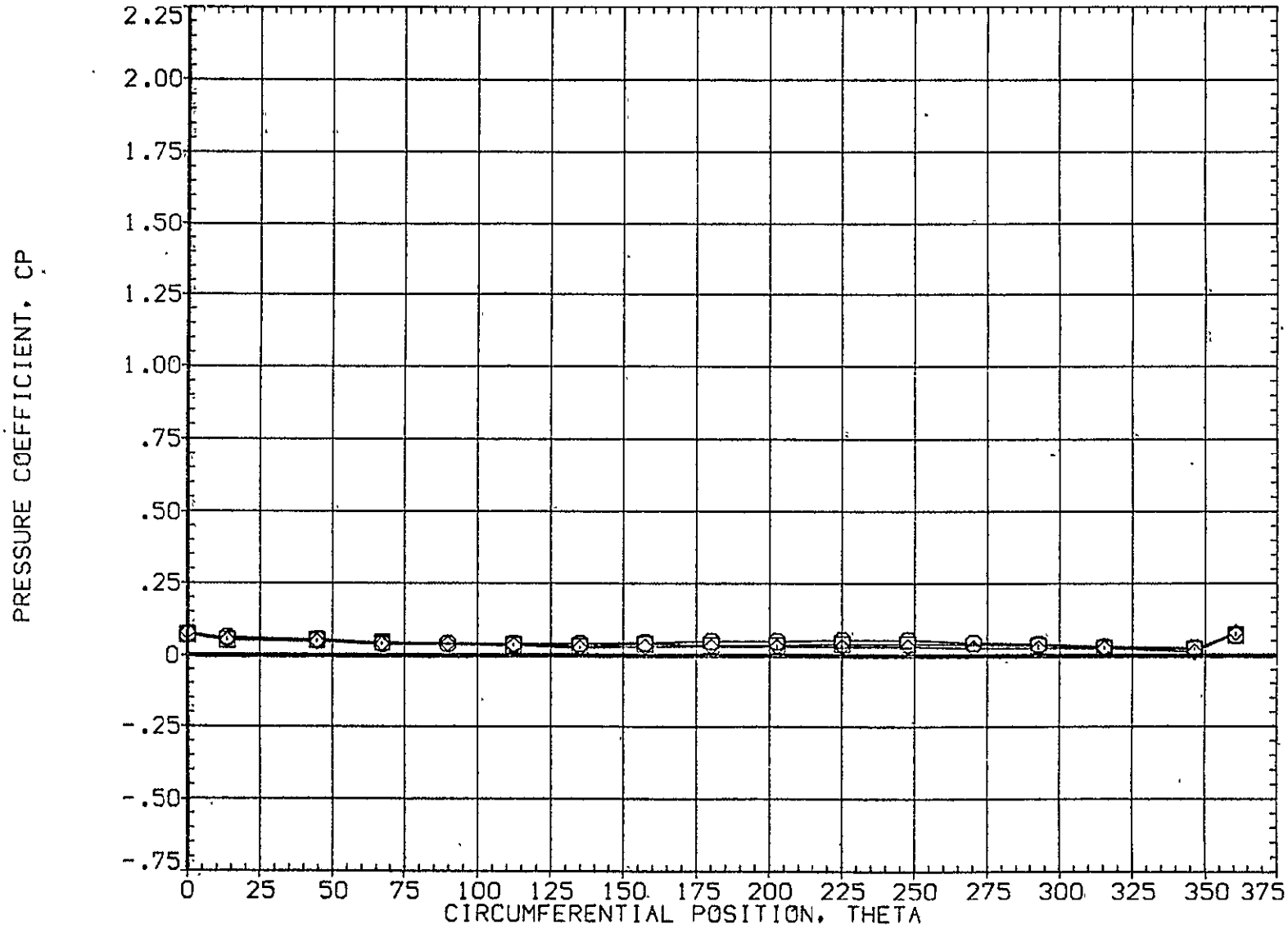

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

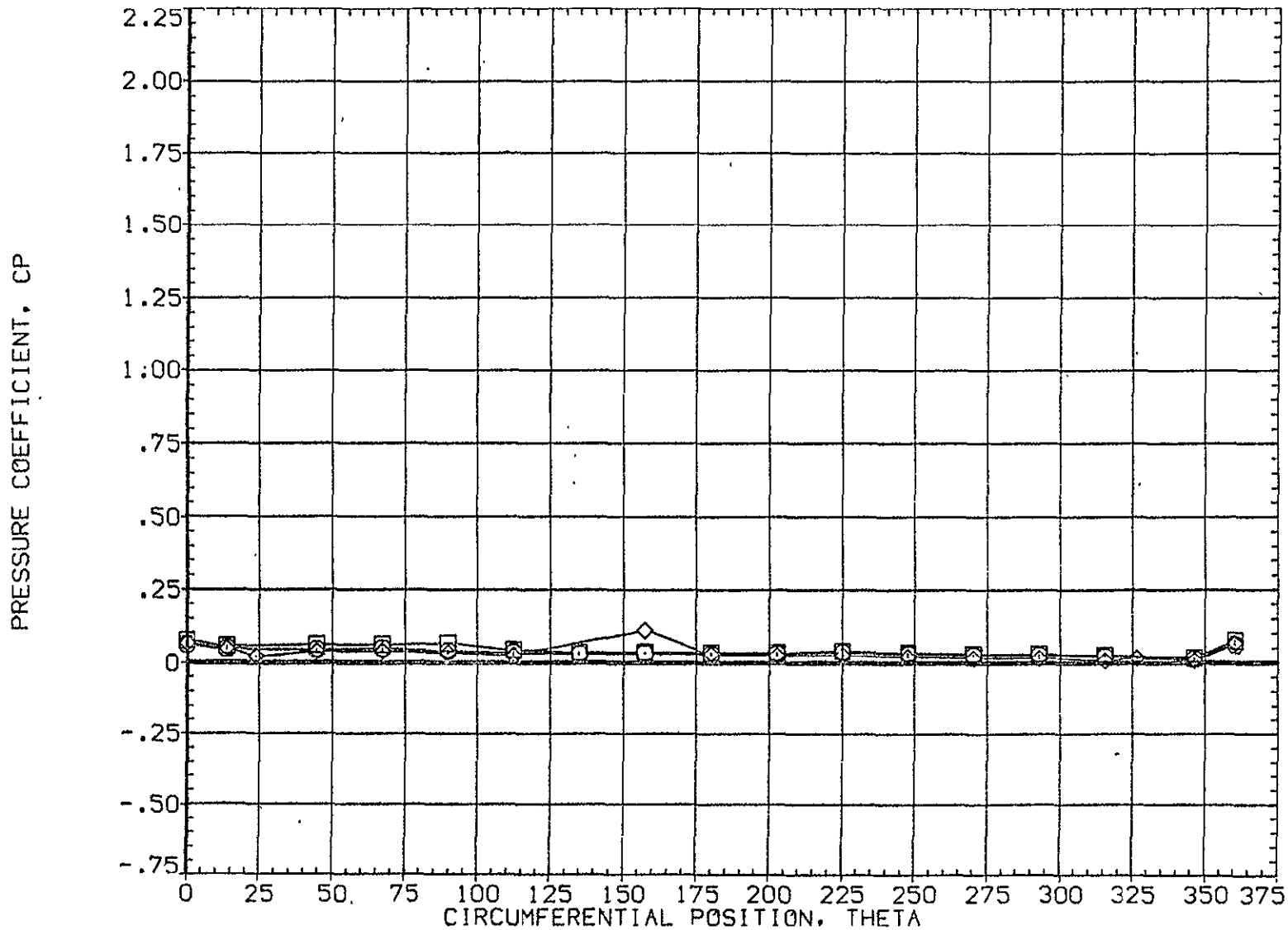

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A084)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

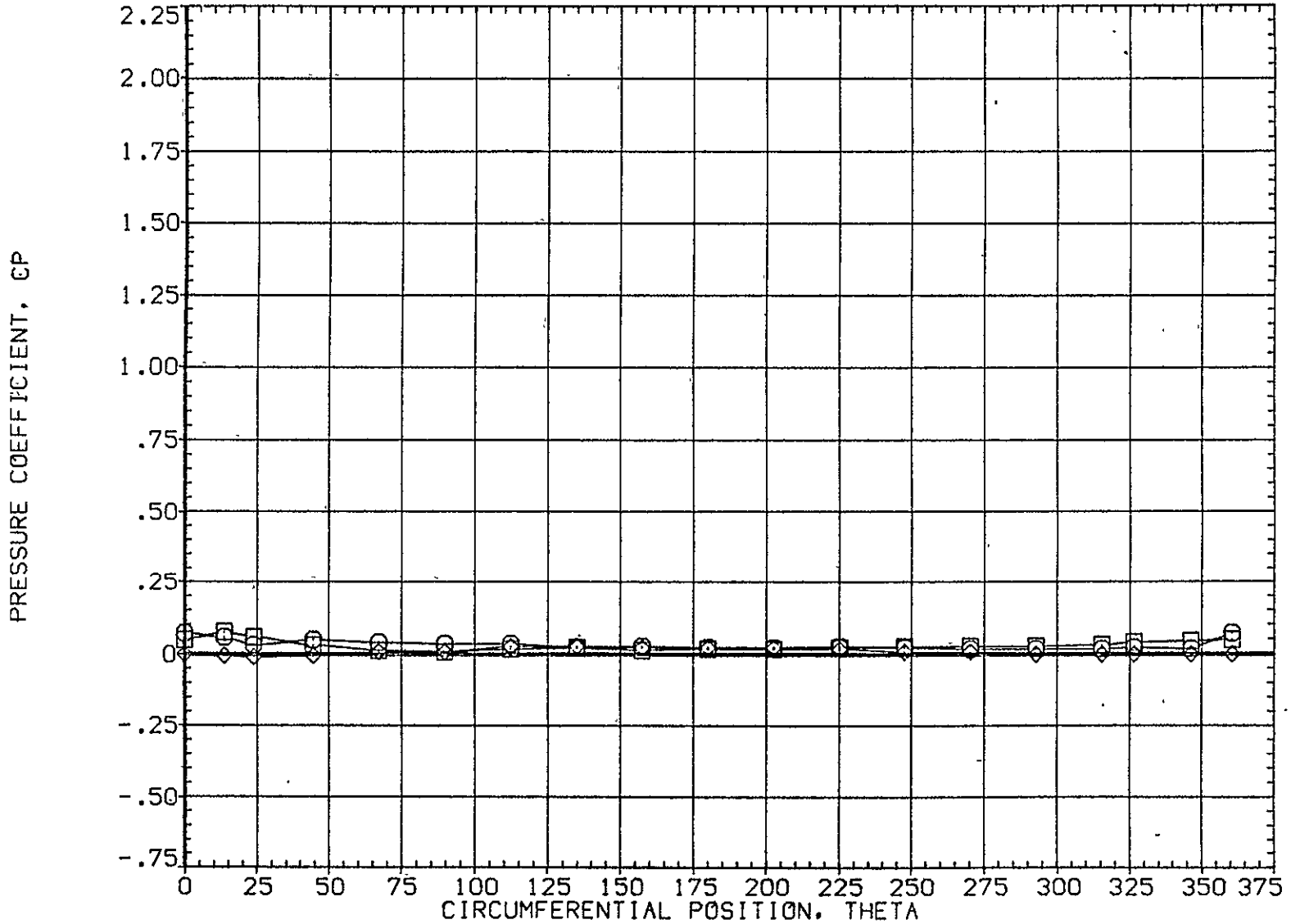

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

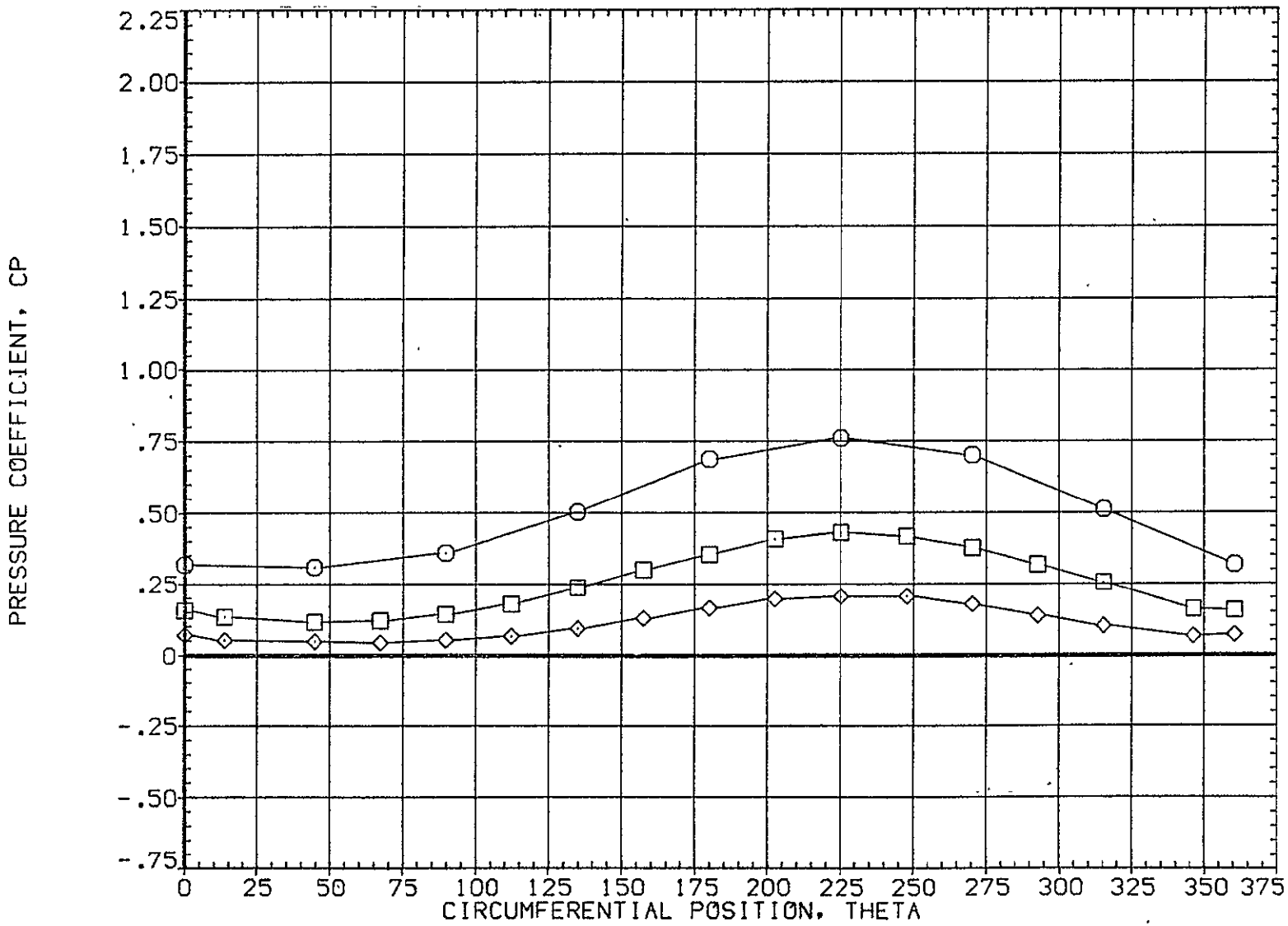

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

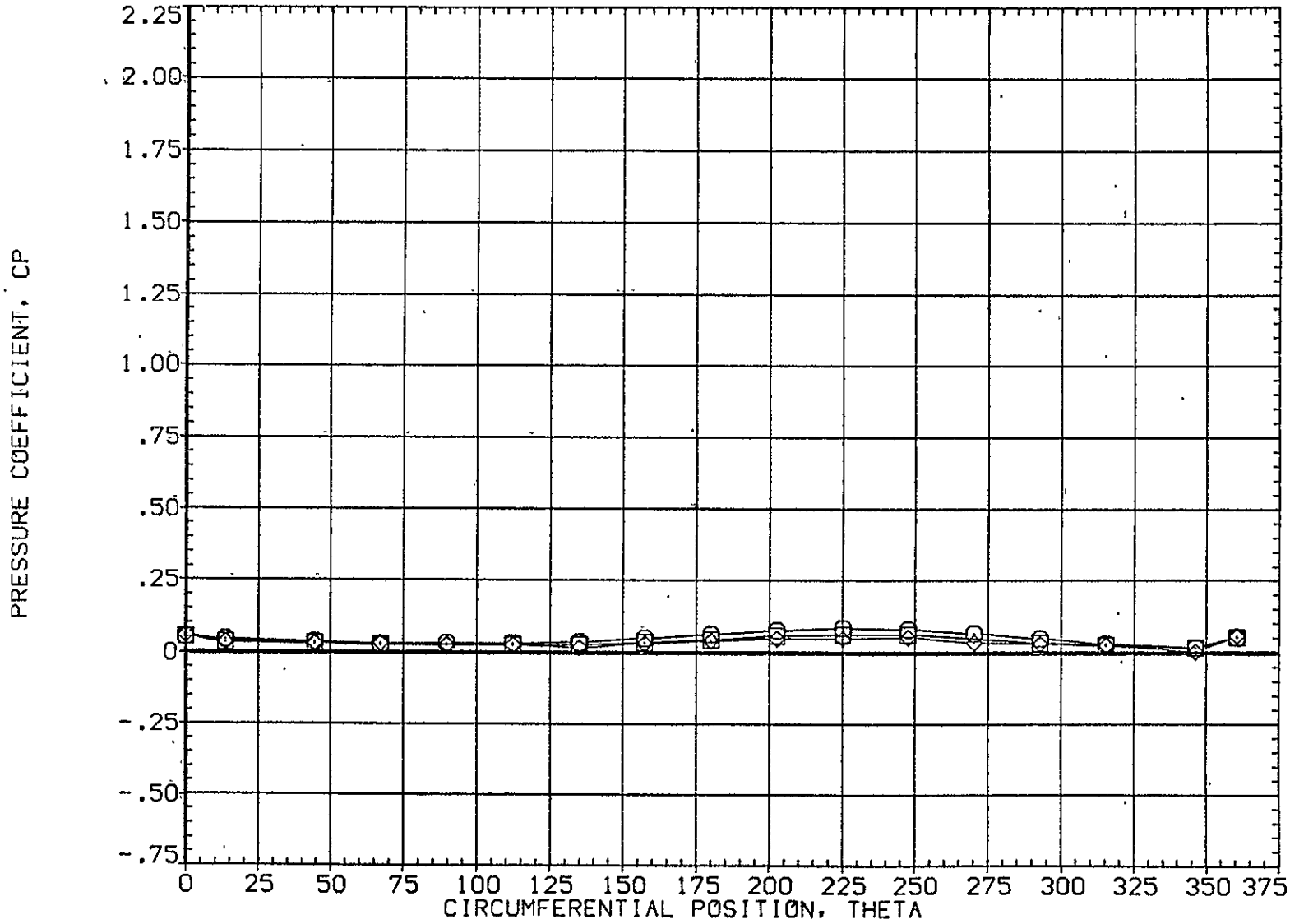

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

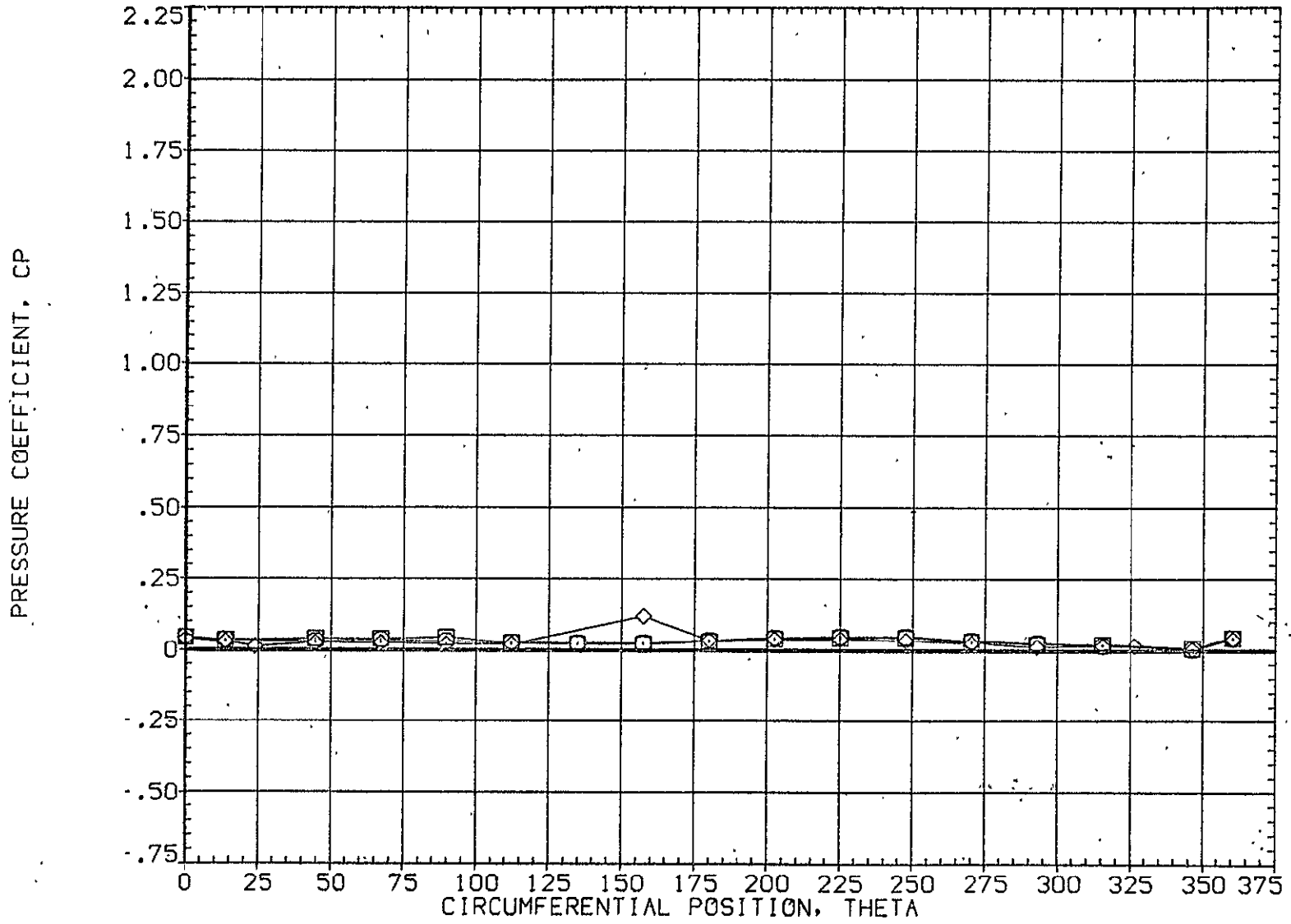

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A085)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	45.000

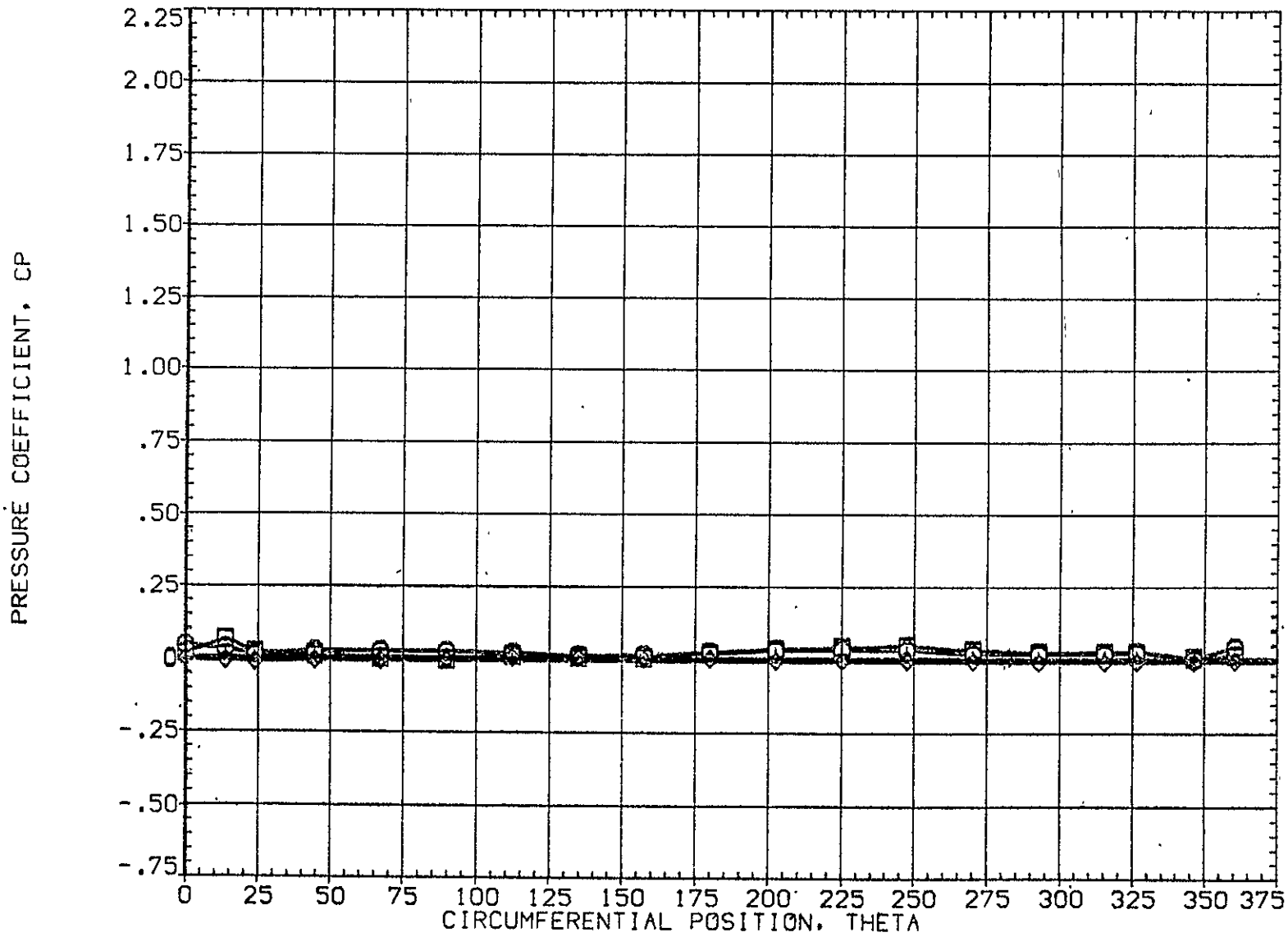

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

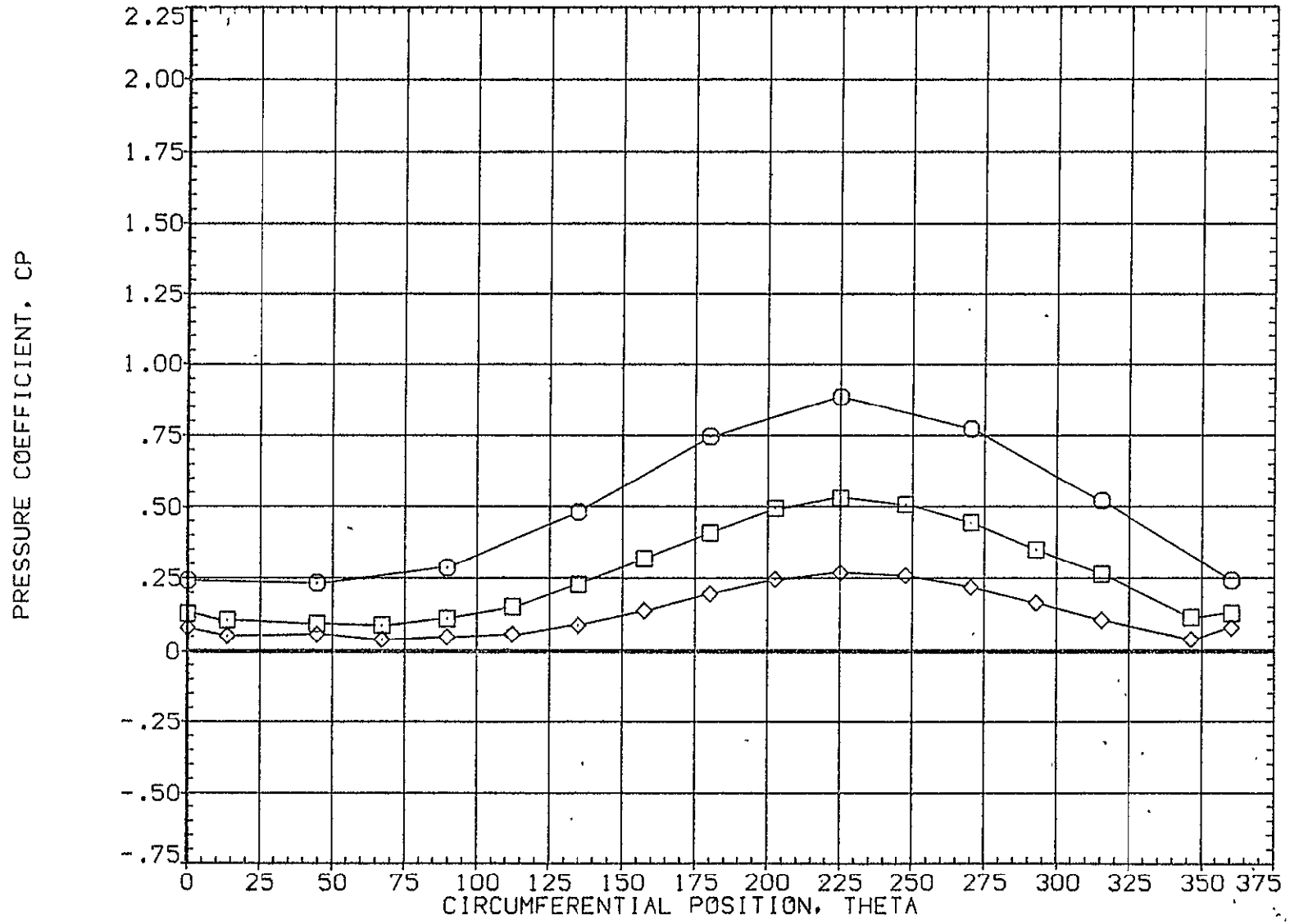

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

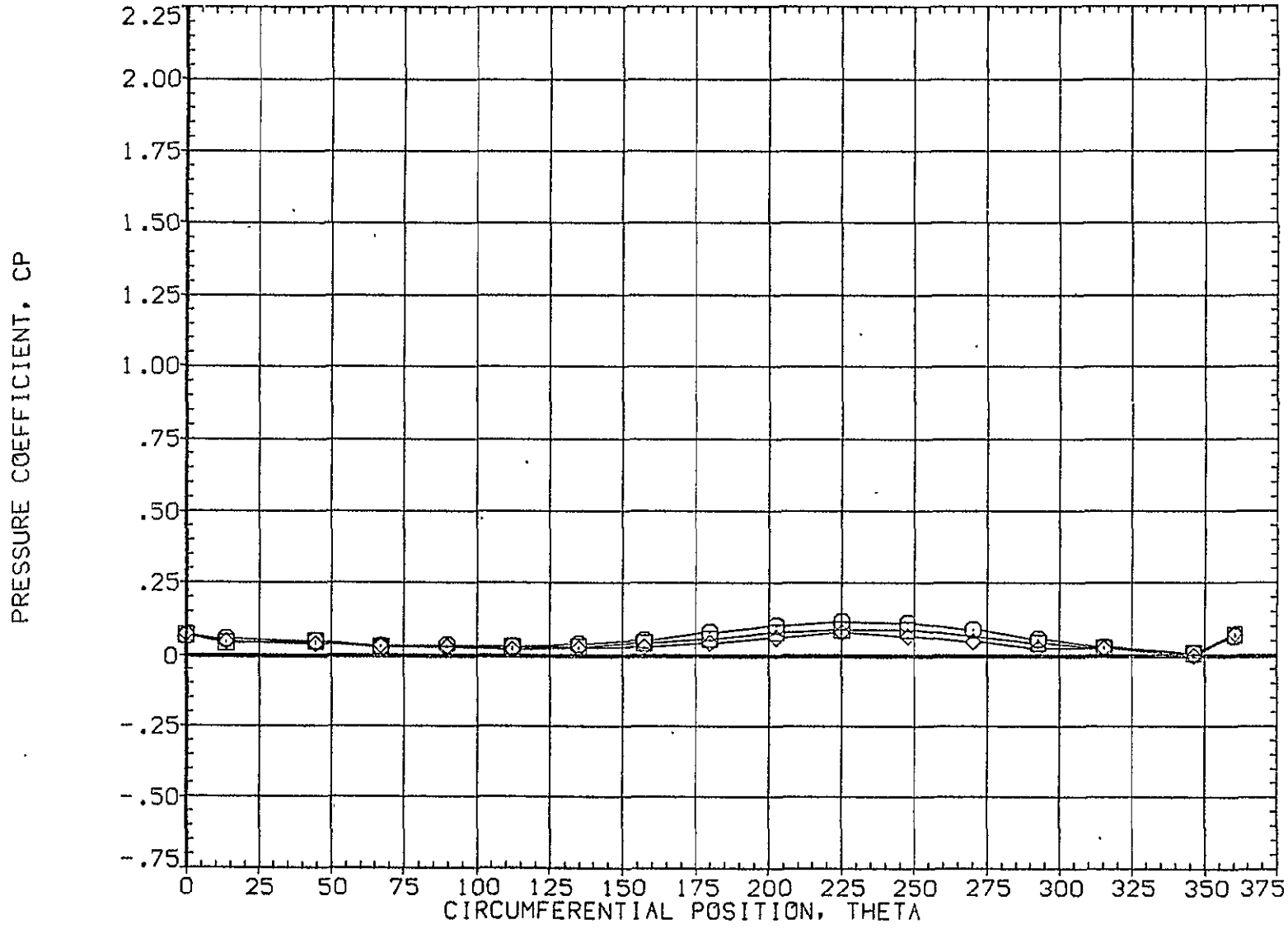

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

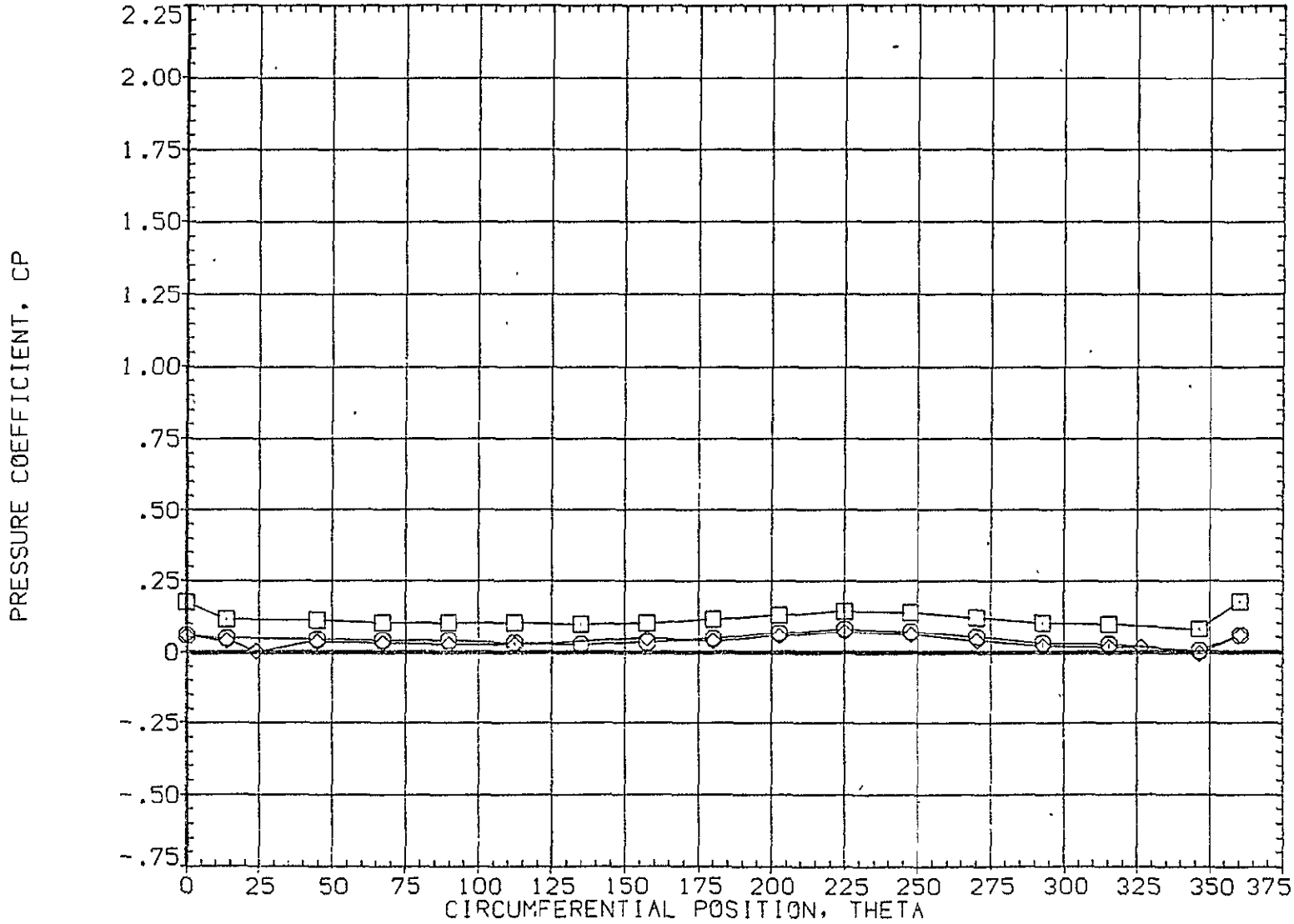

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A086)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

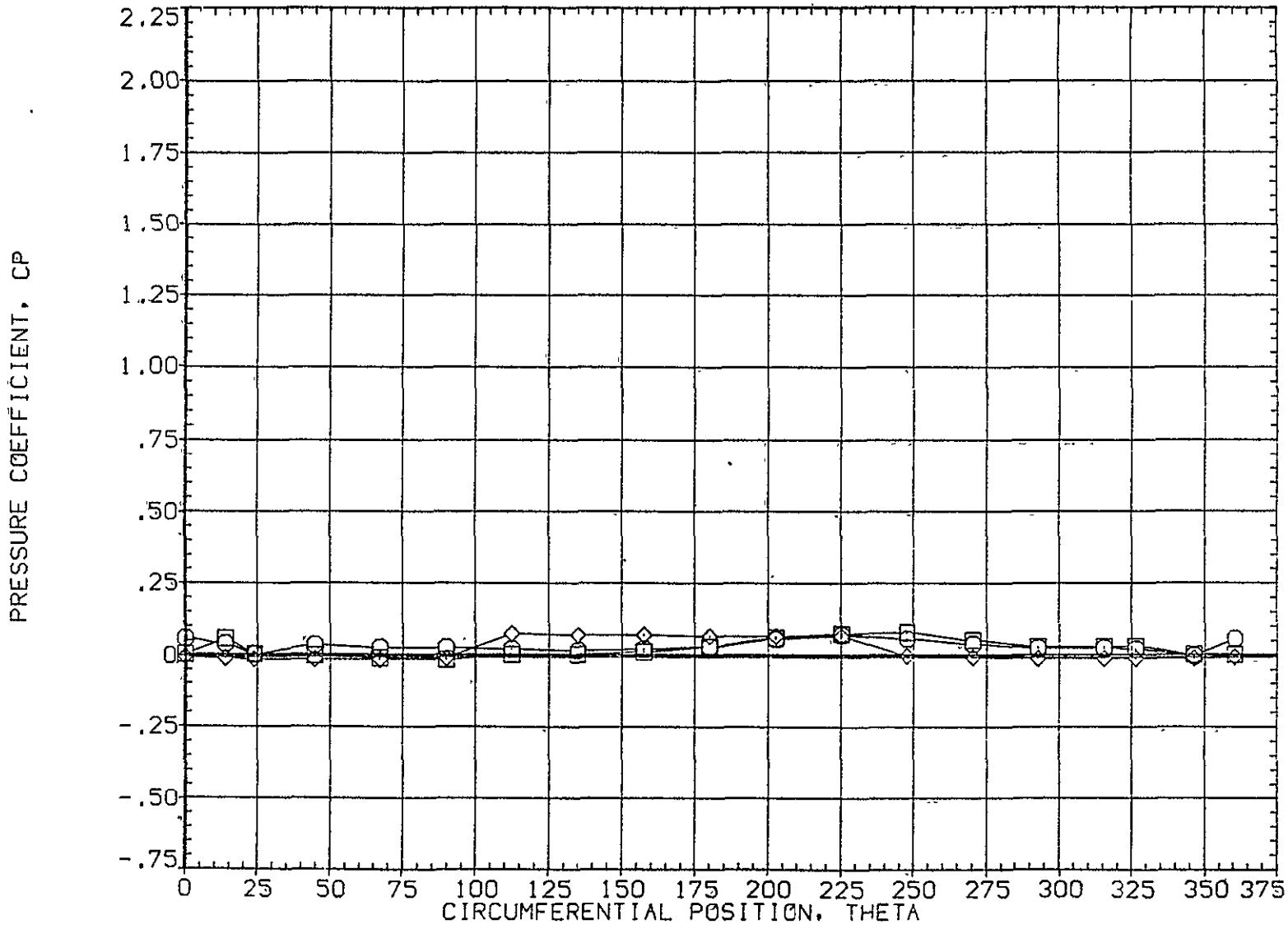

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.470	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

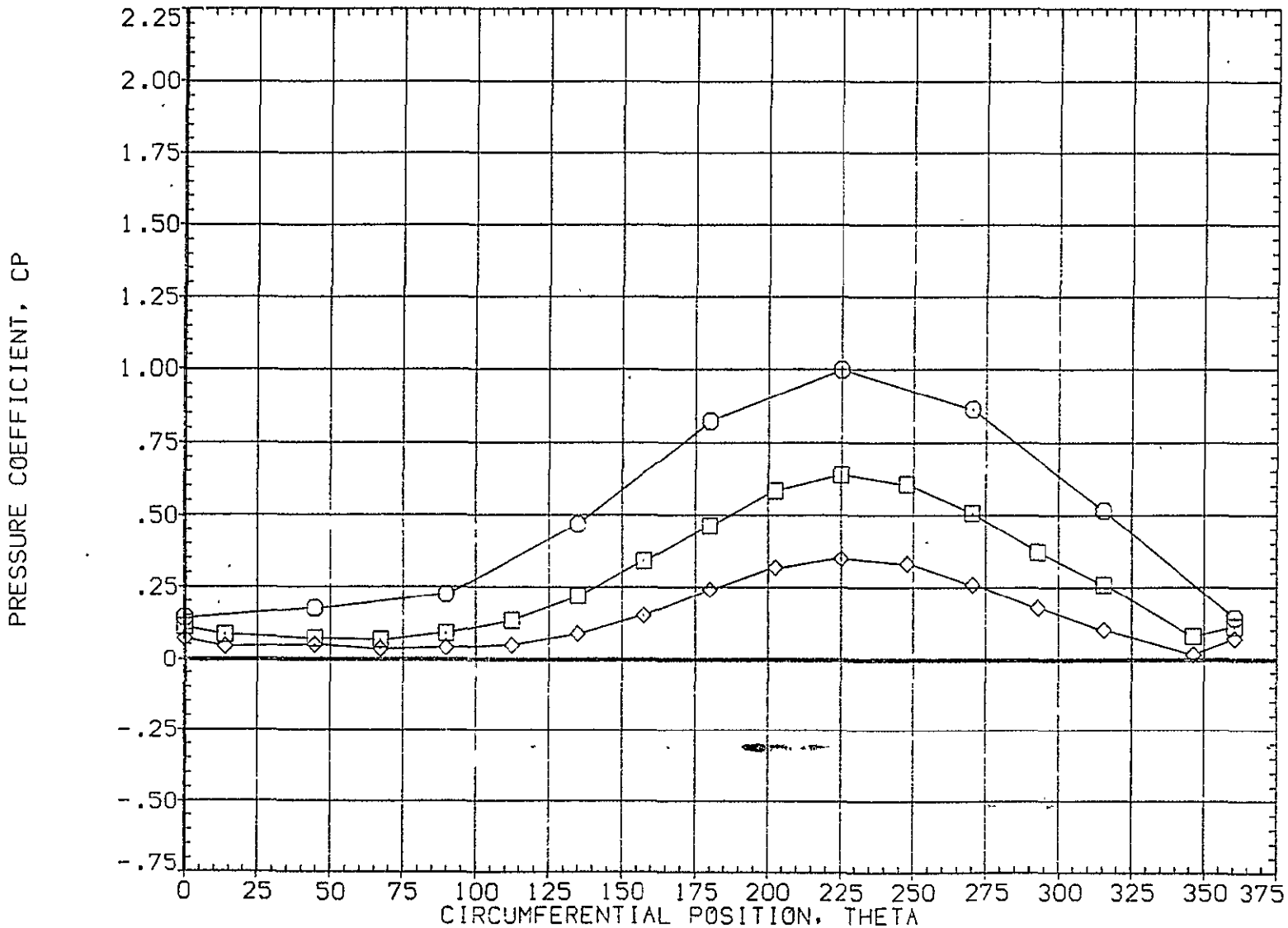

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.470	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

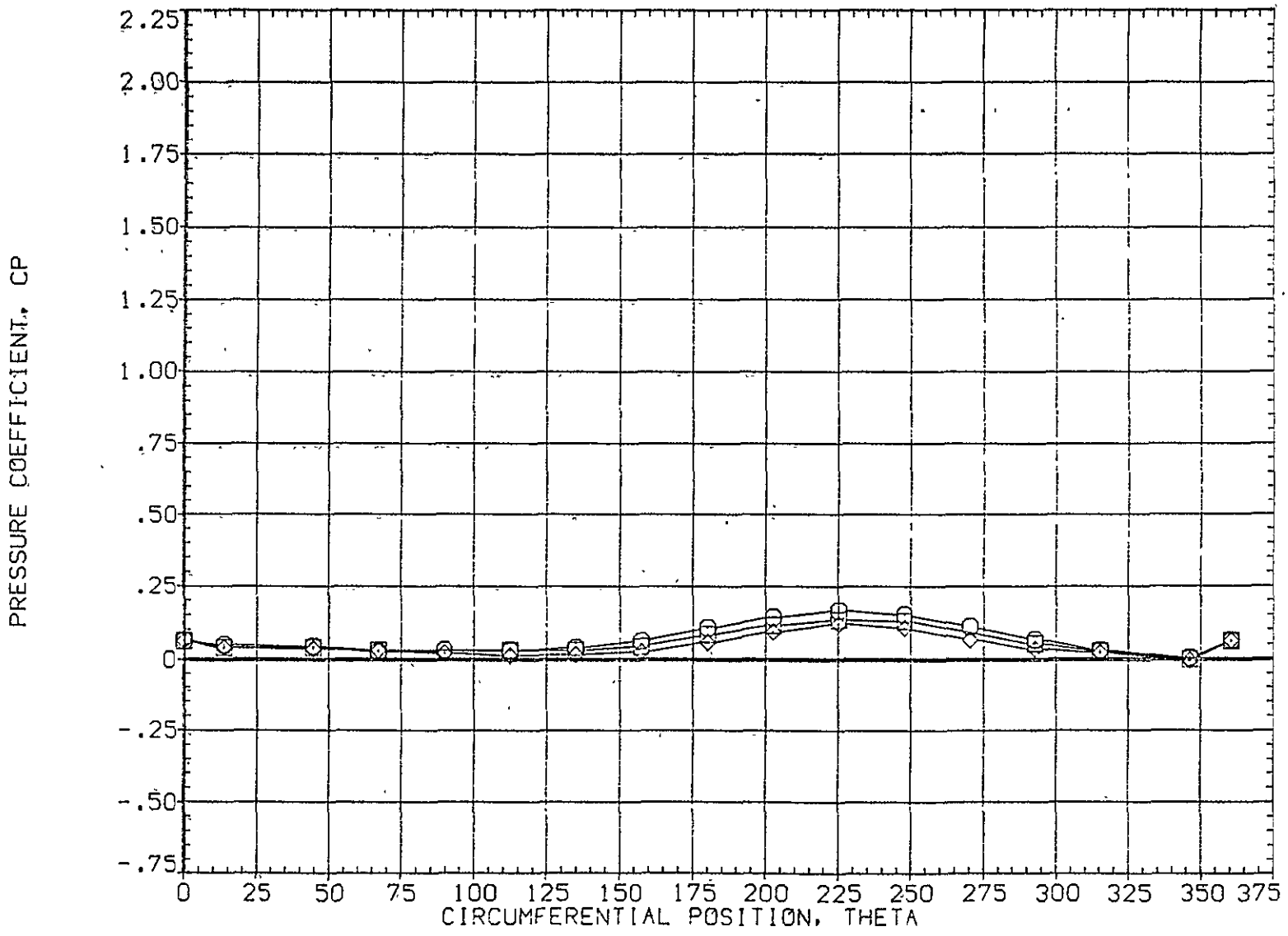

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.470	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

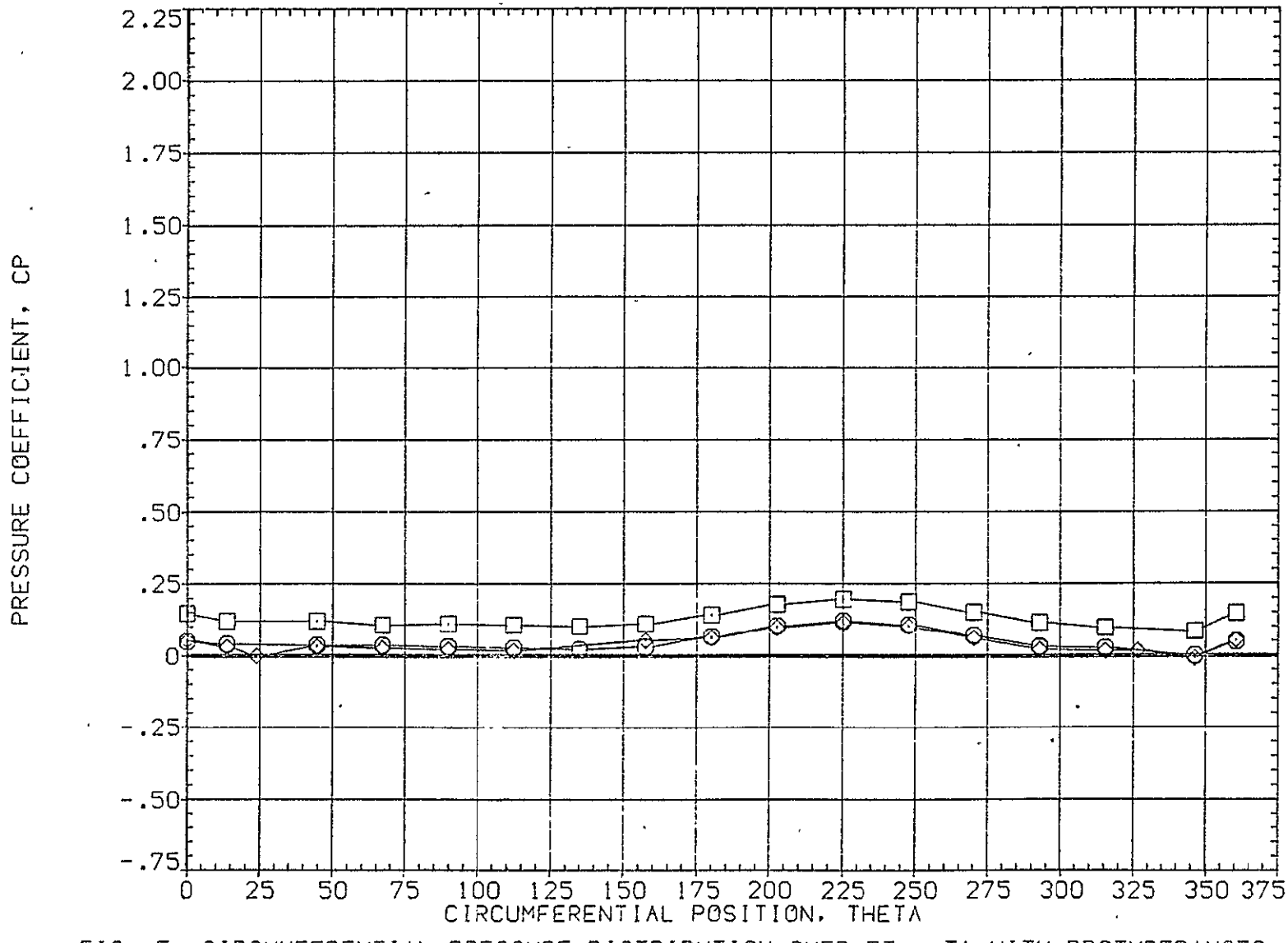

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A087)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.470	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

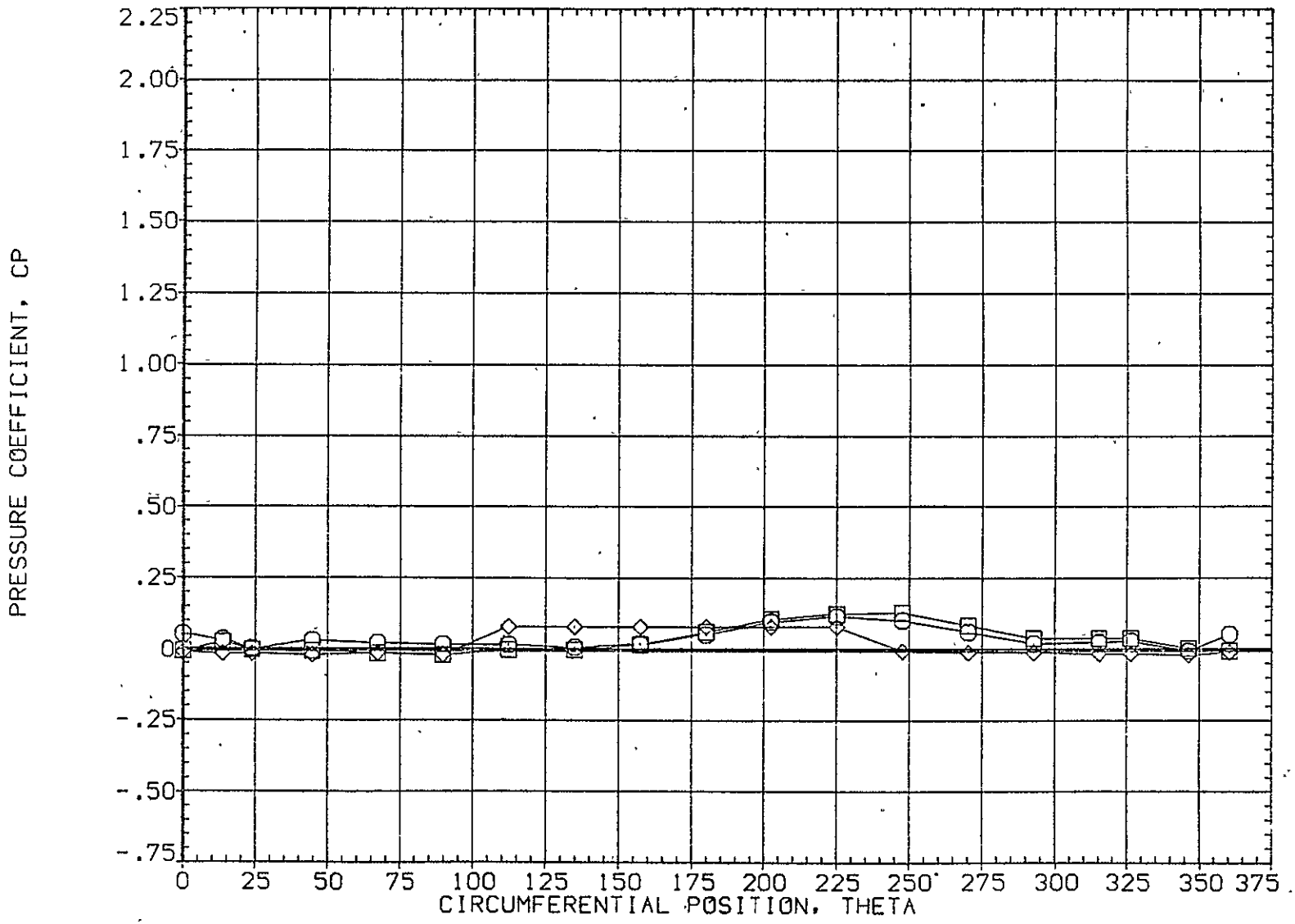

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

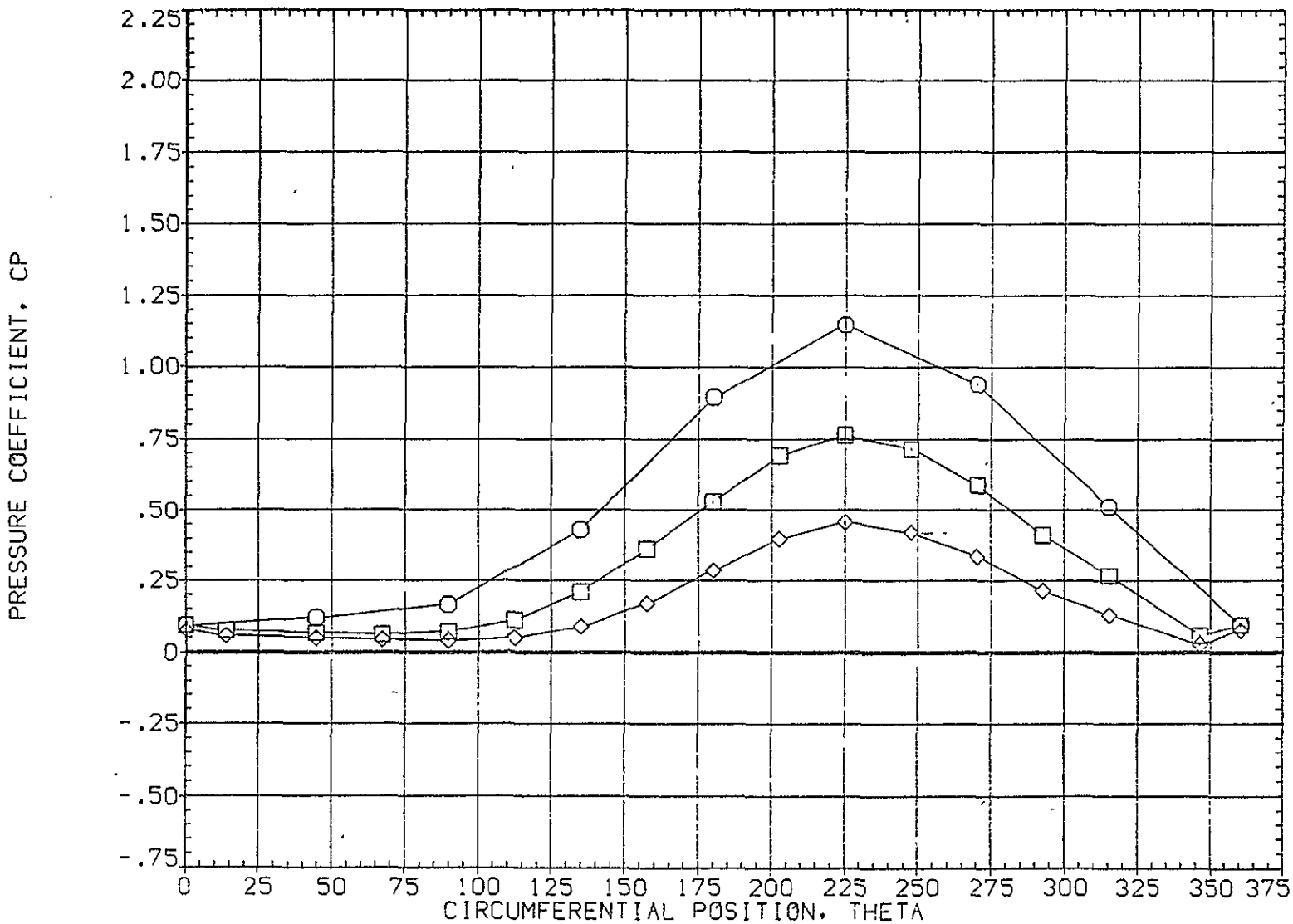

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

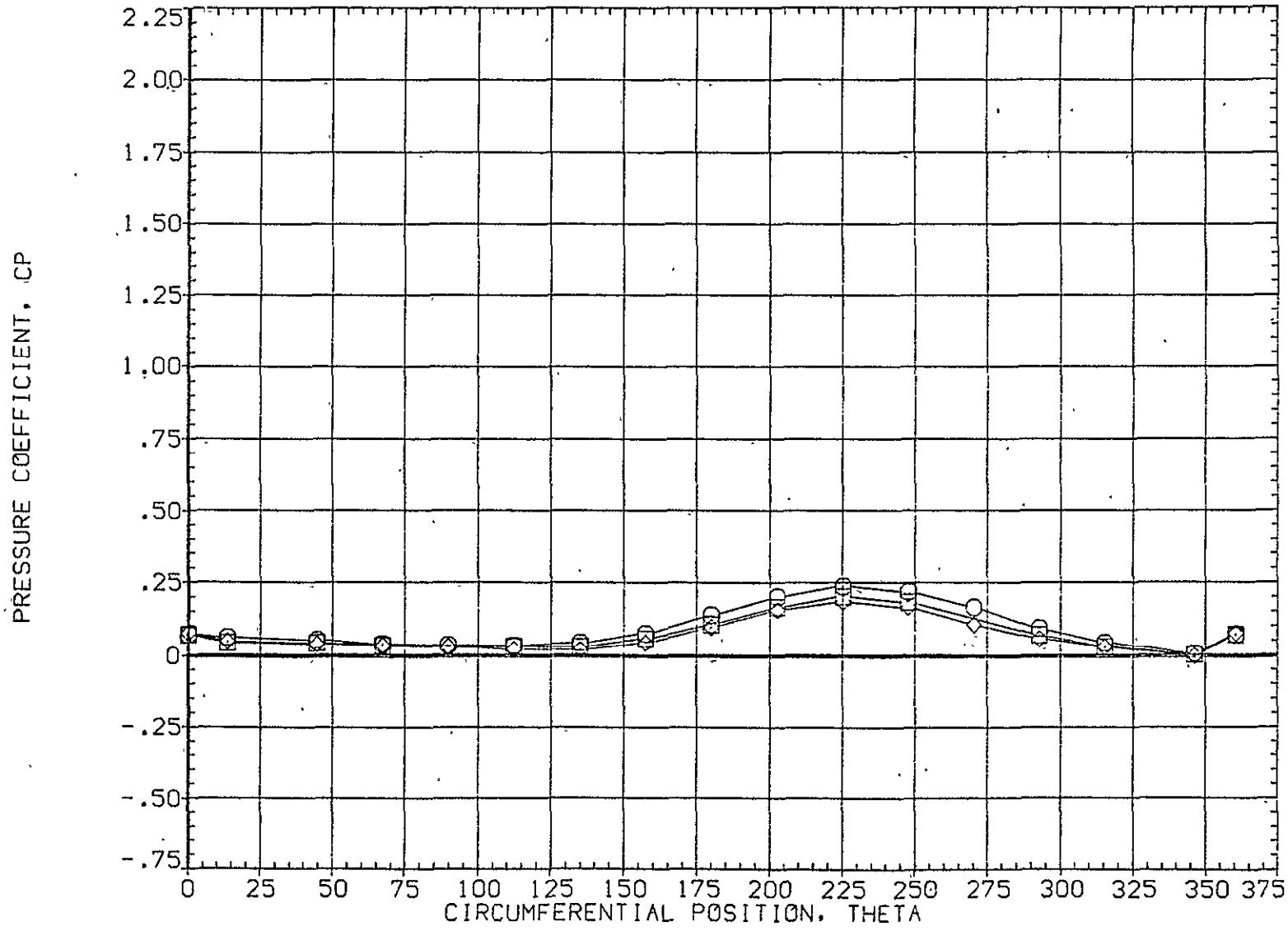

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

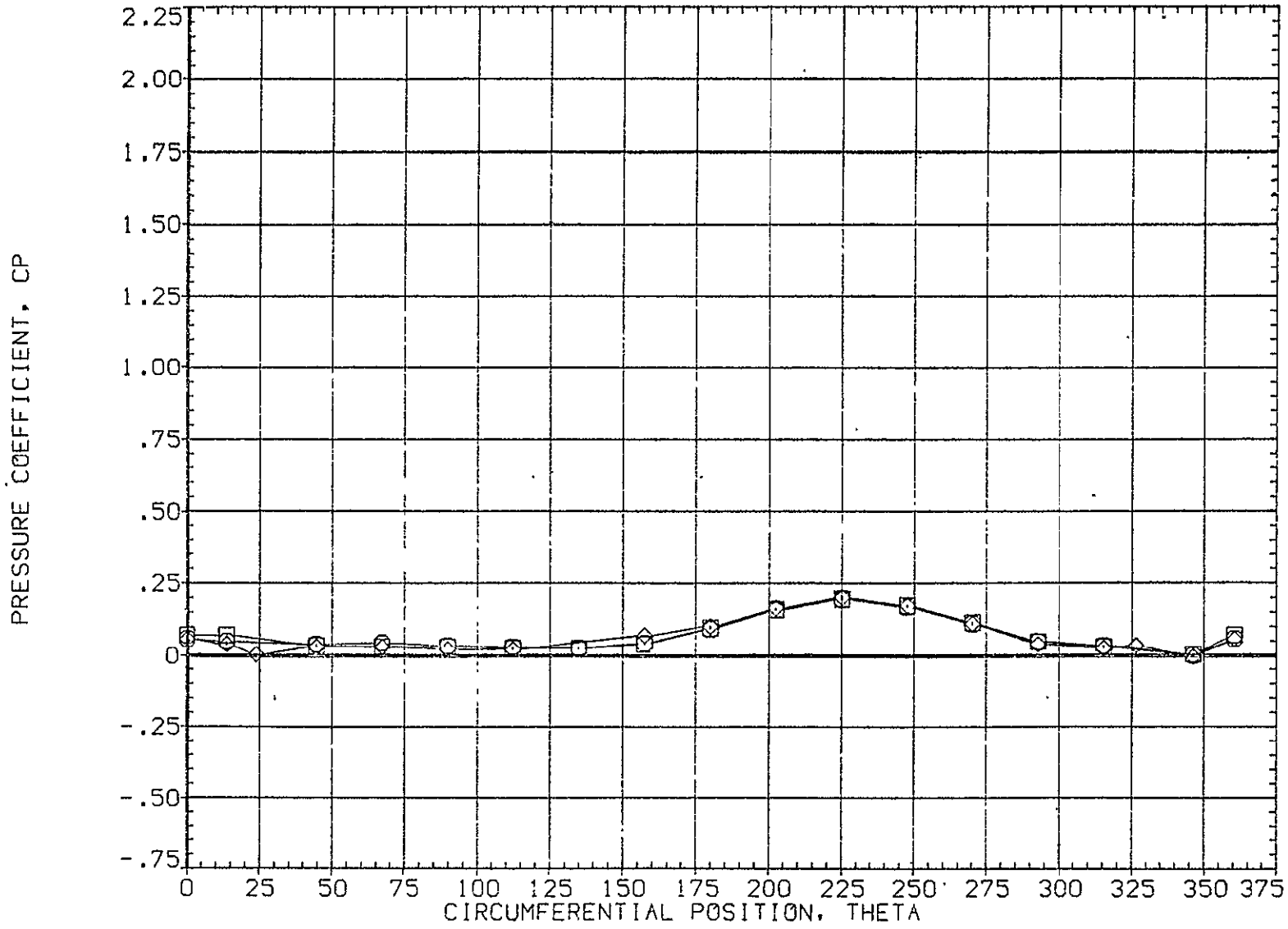

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A088)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

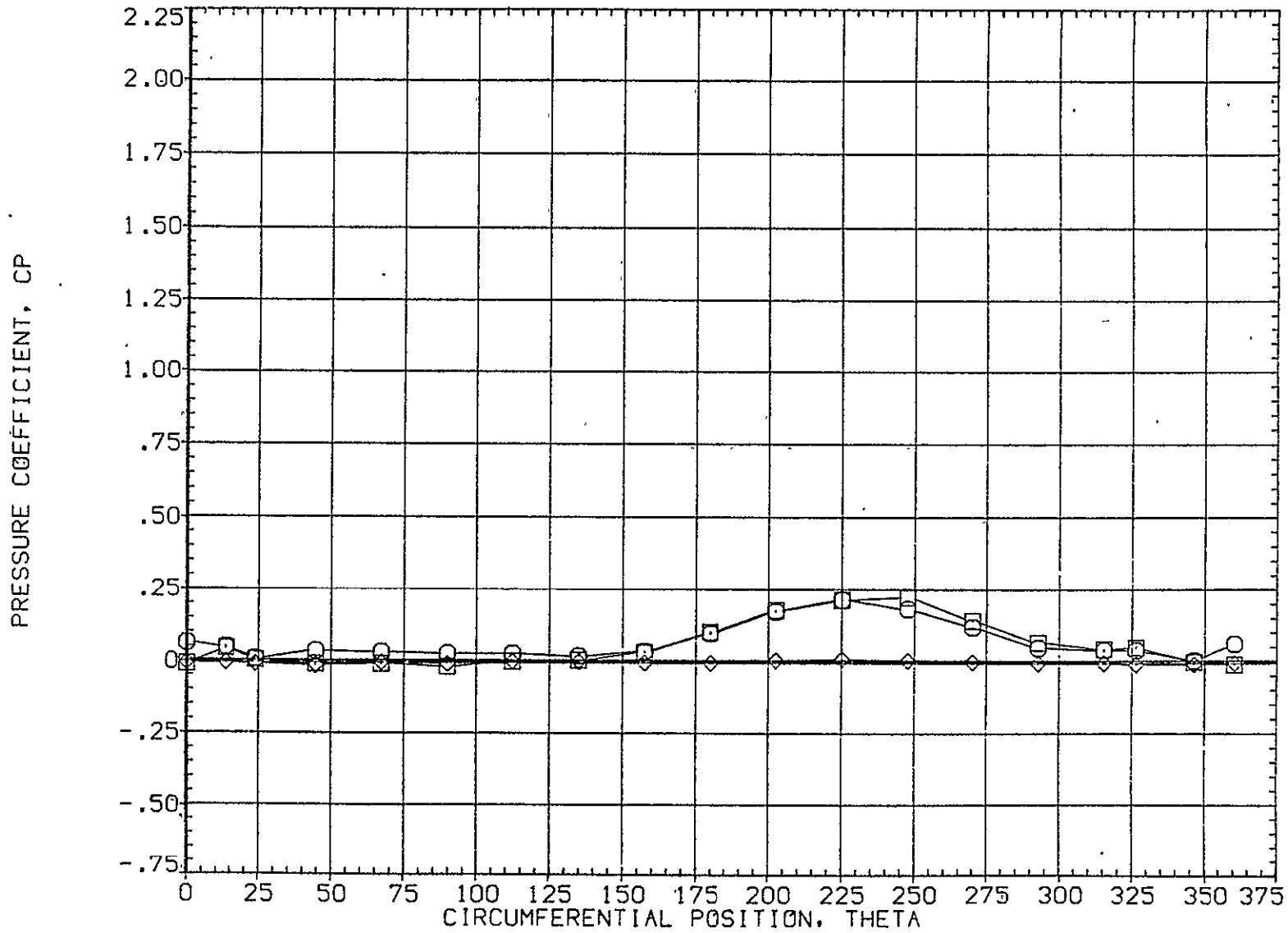

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

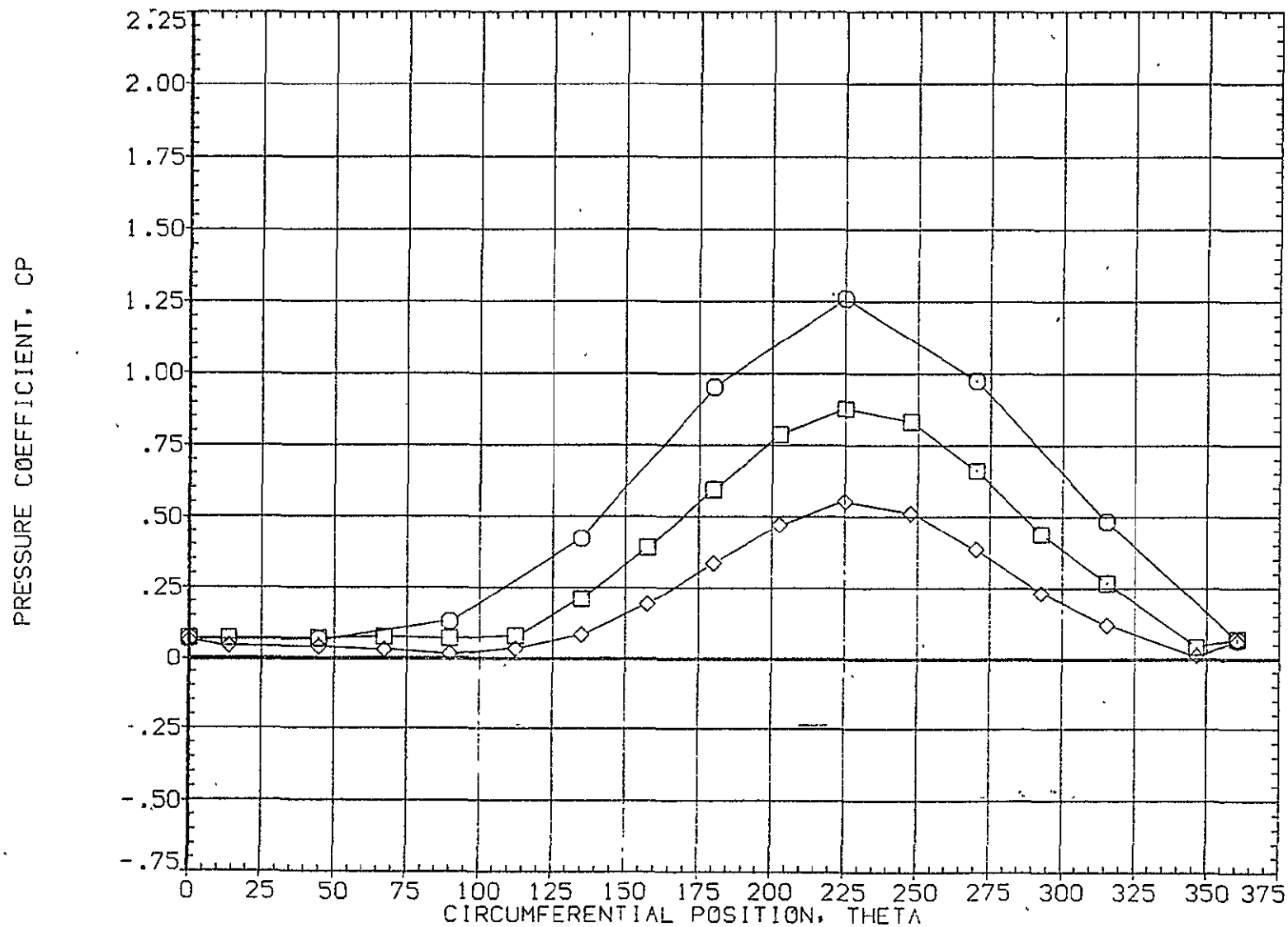

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

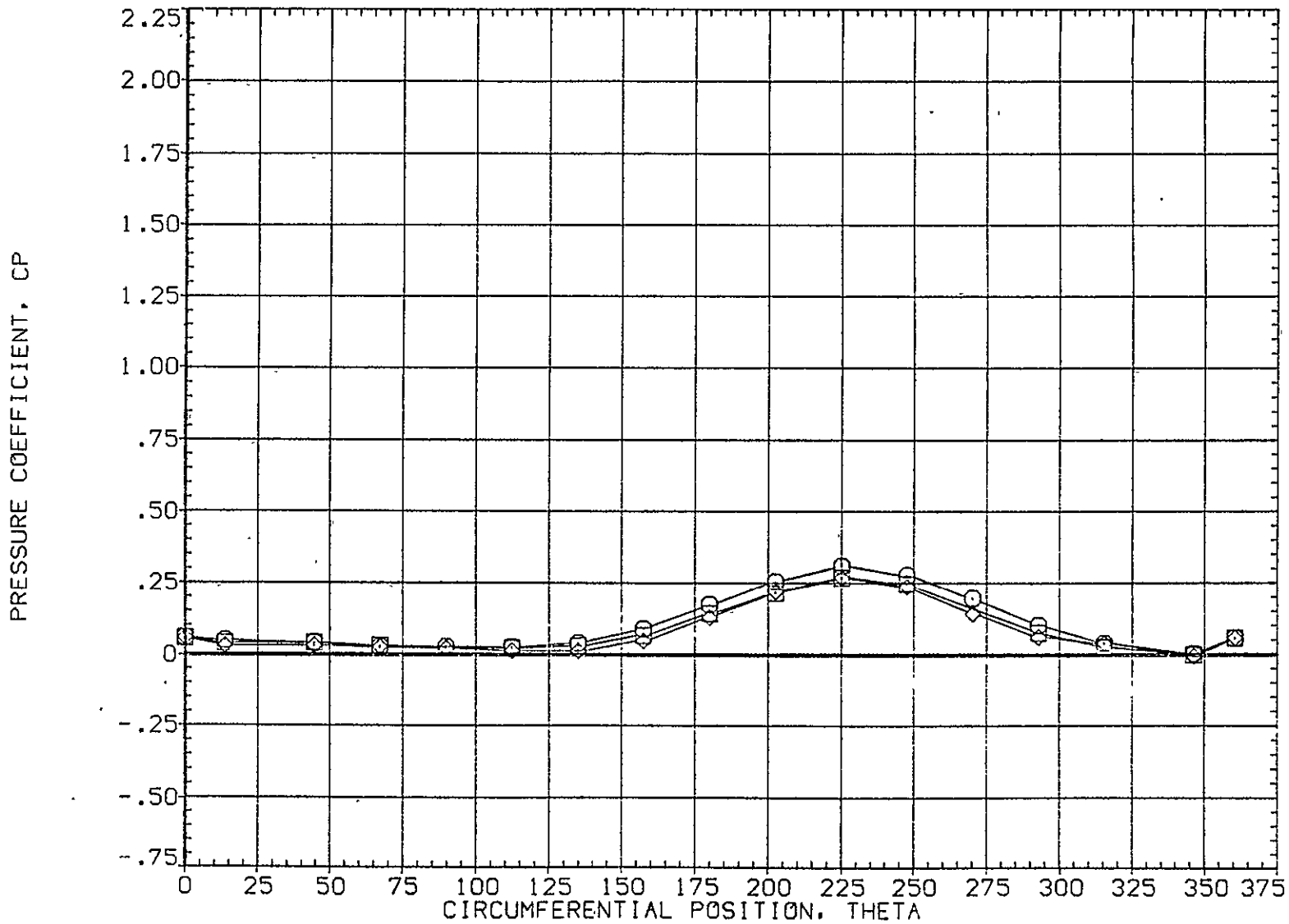

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

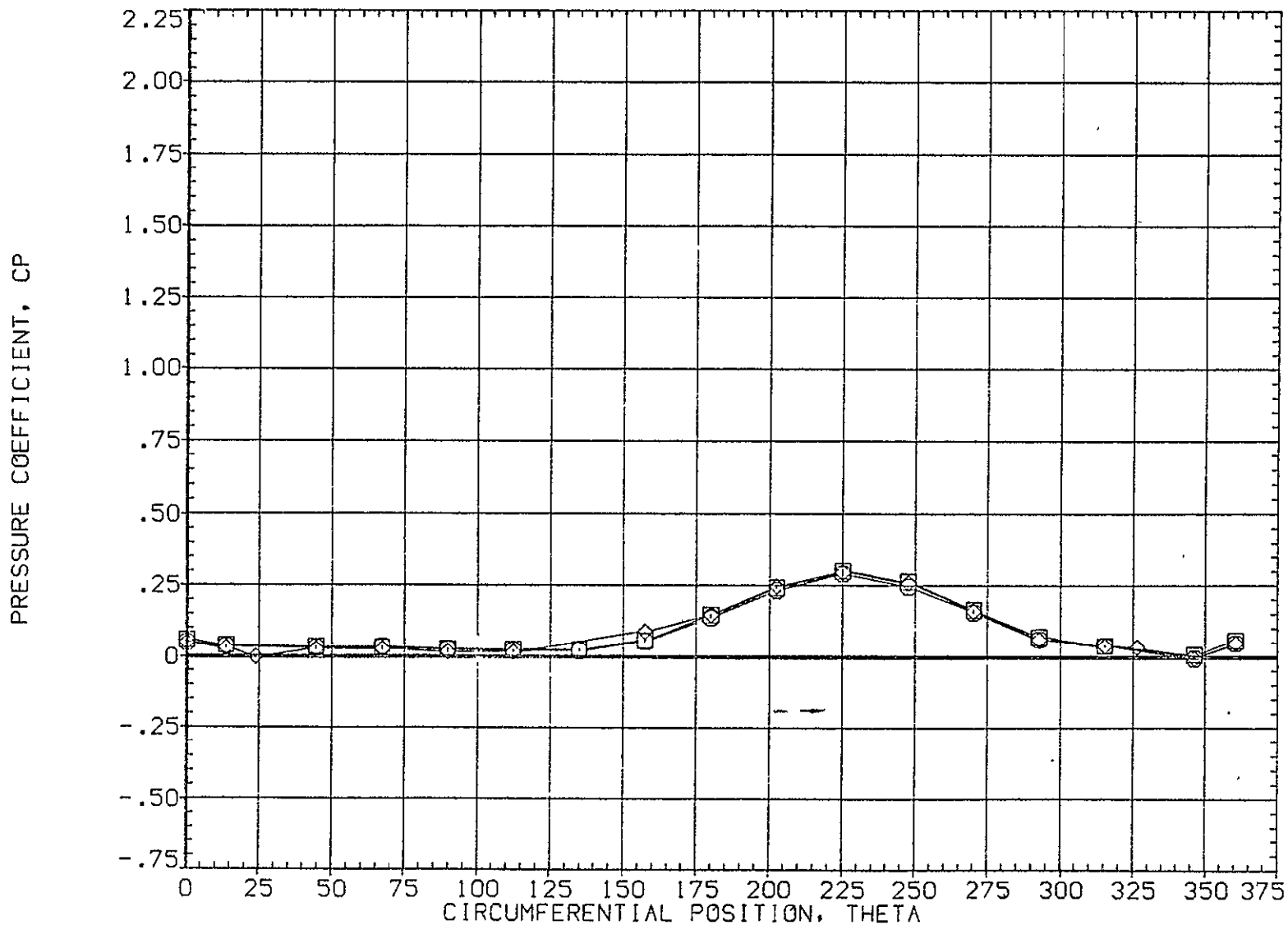

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A089)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

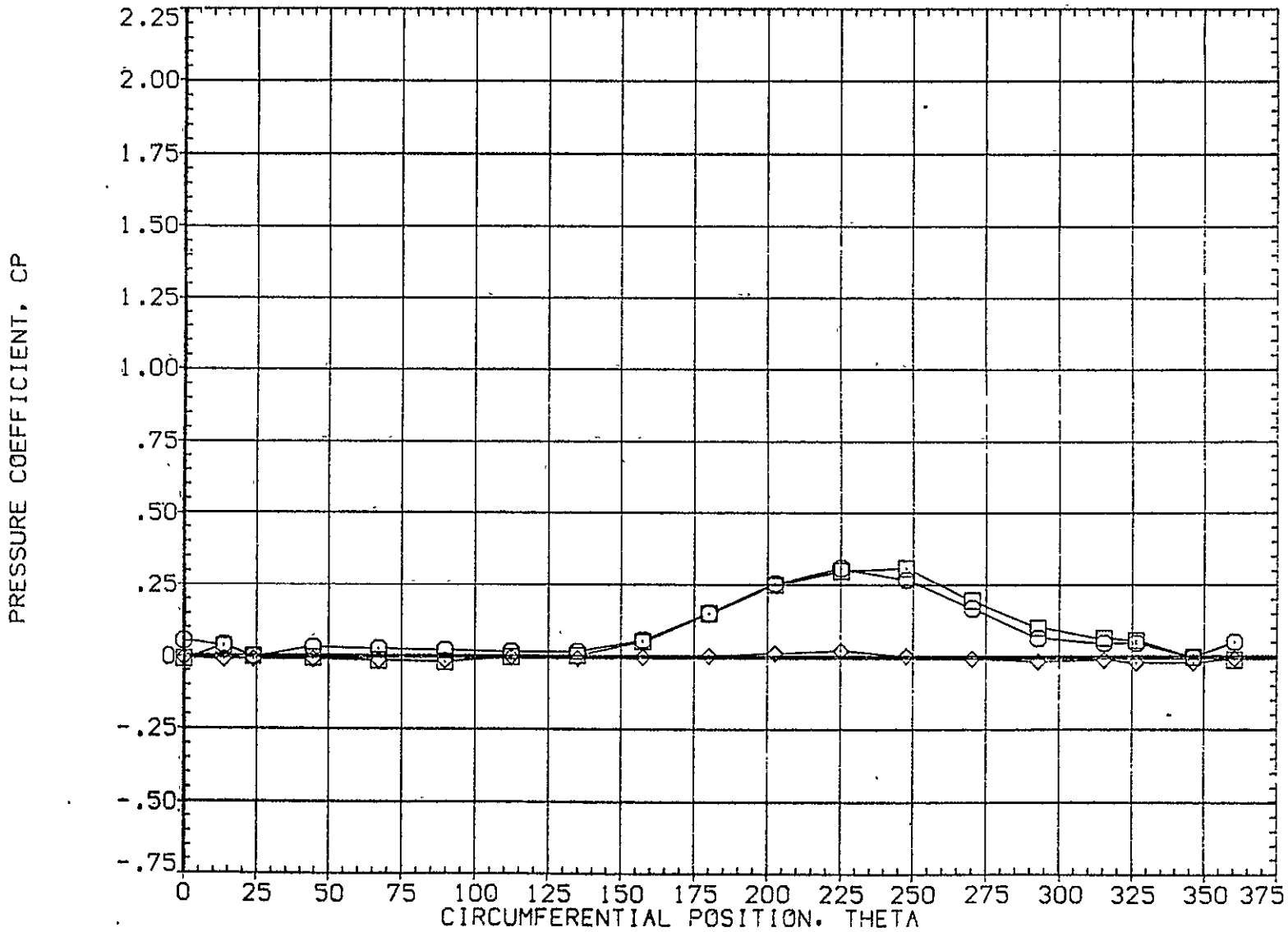

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.540	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

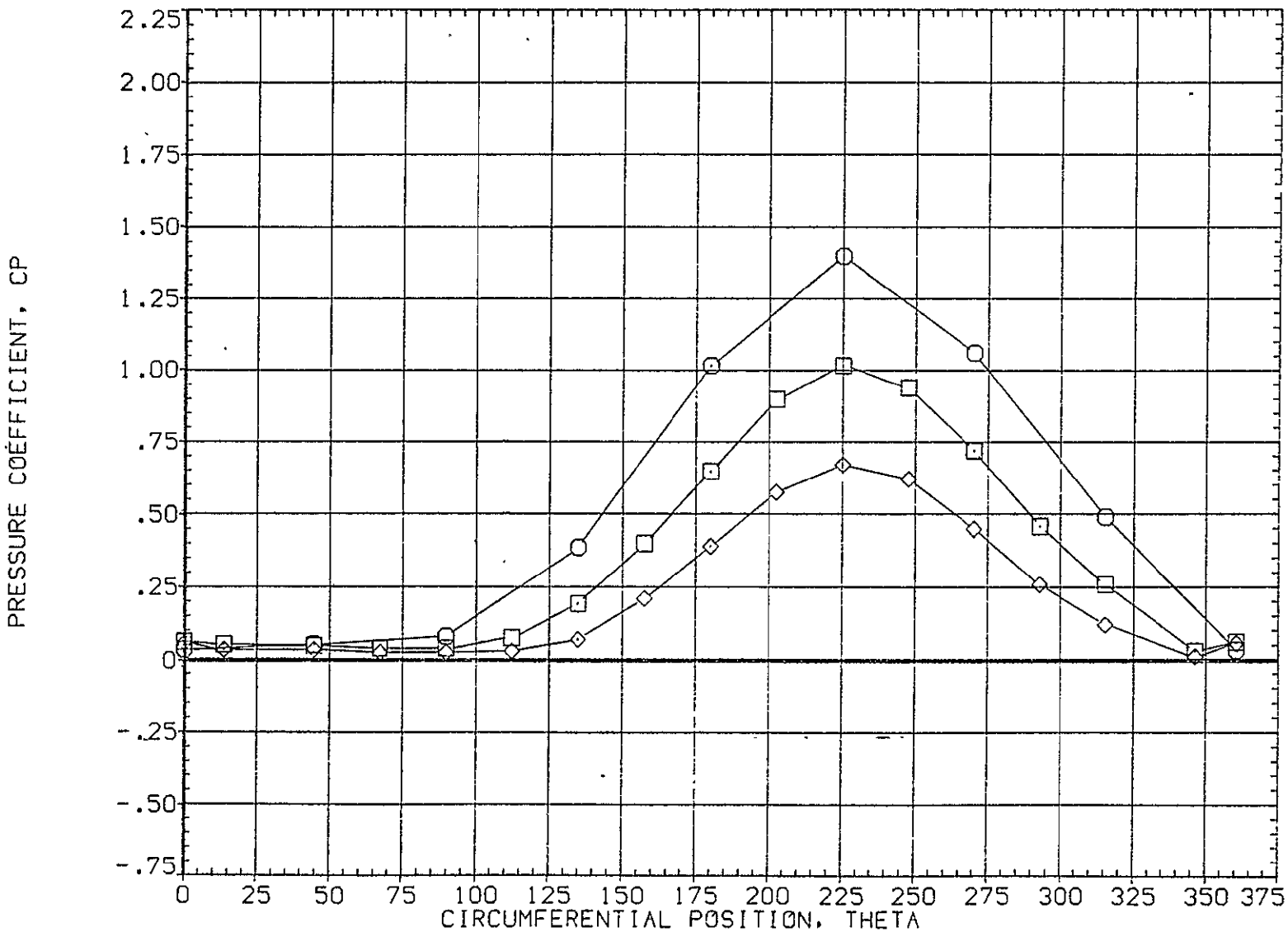

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28:540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

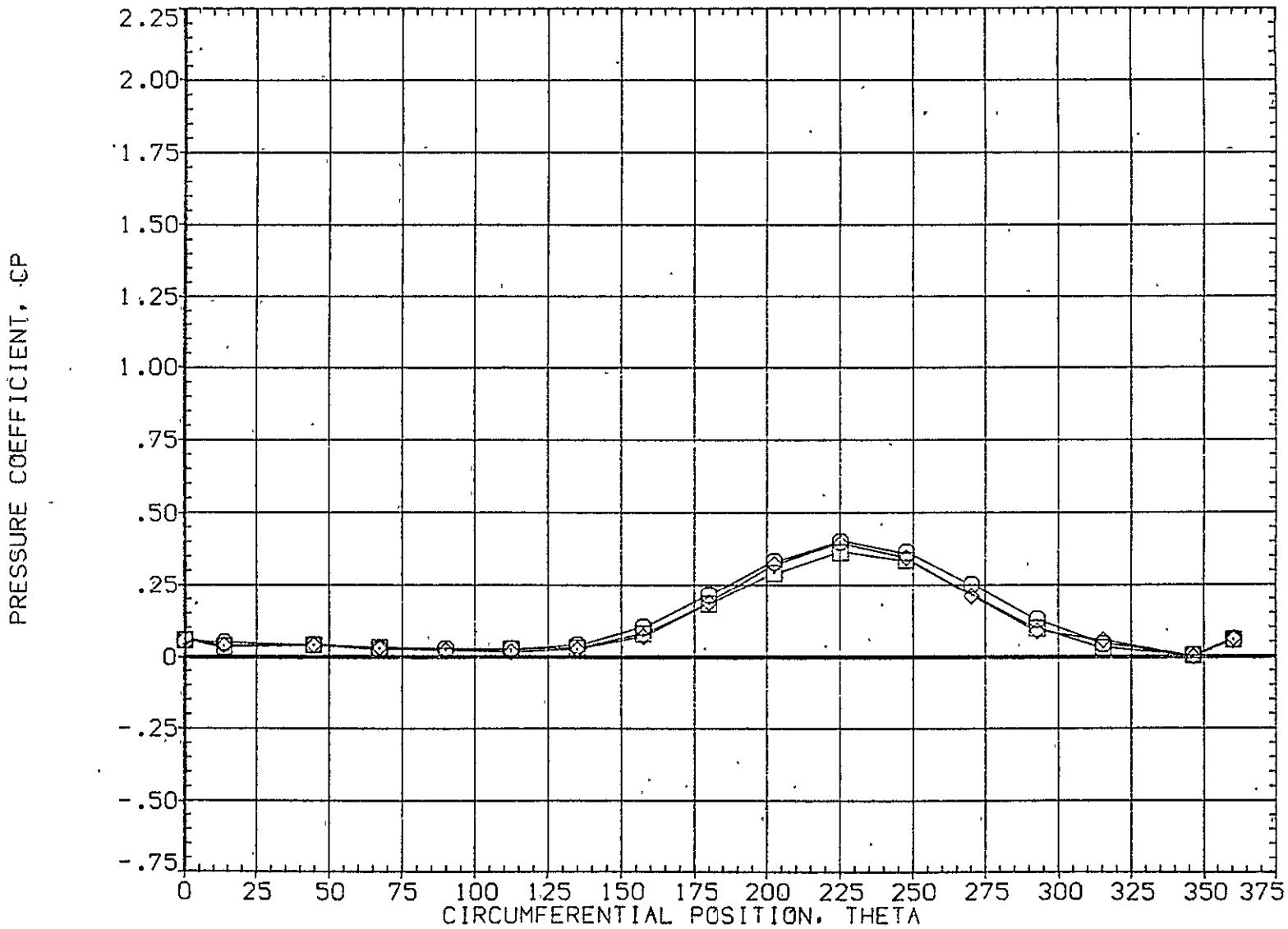

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.540	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

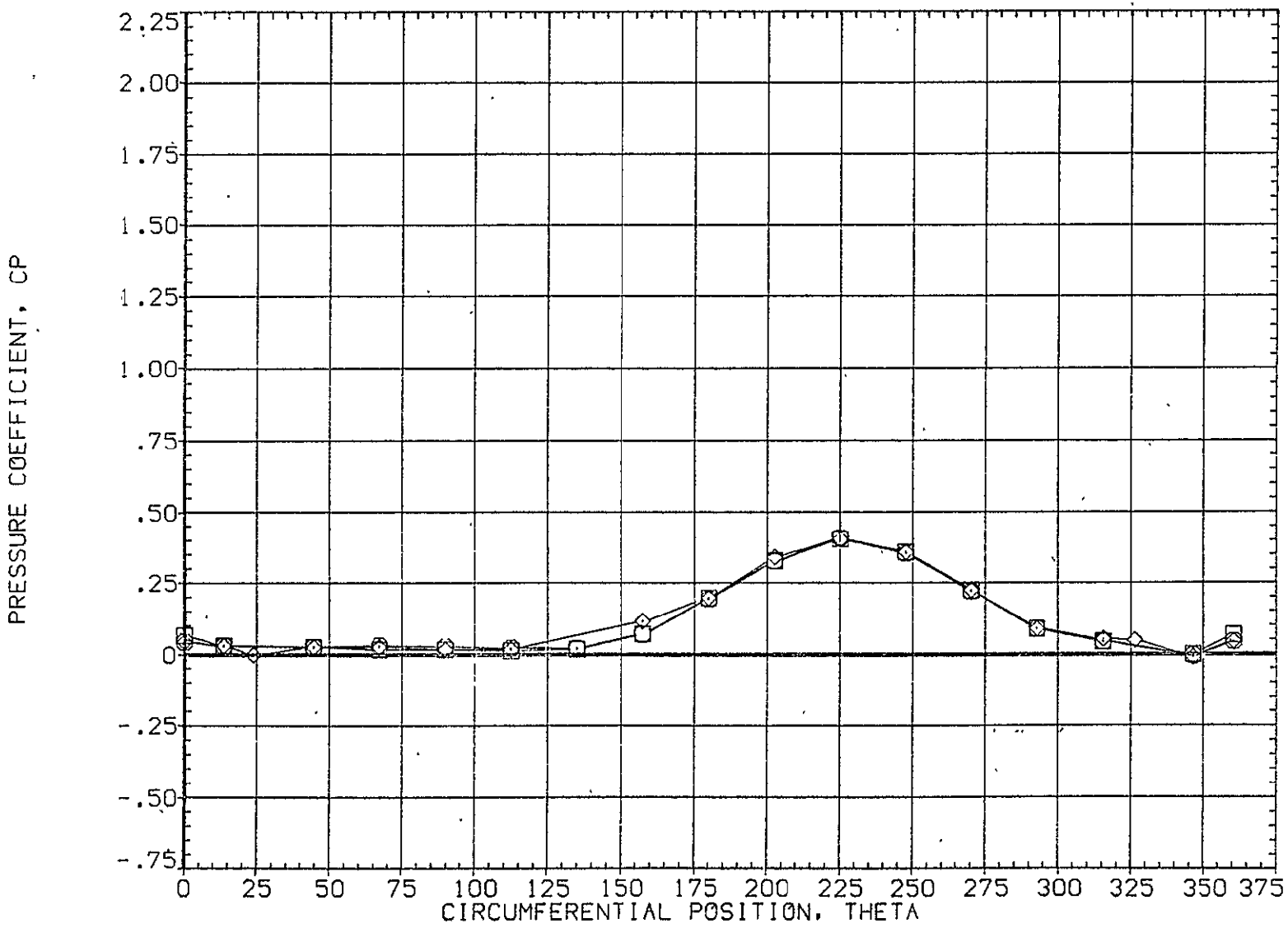

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A090)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	45.000

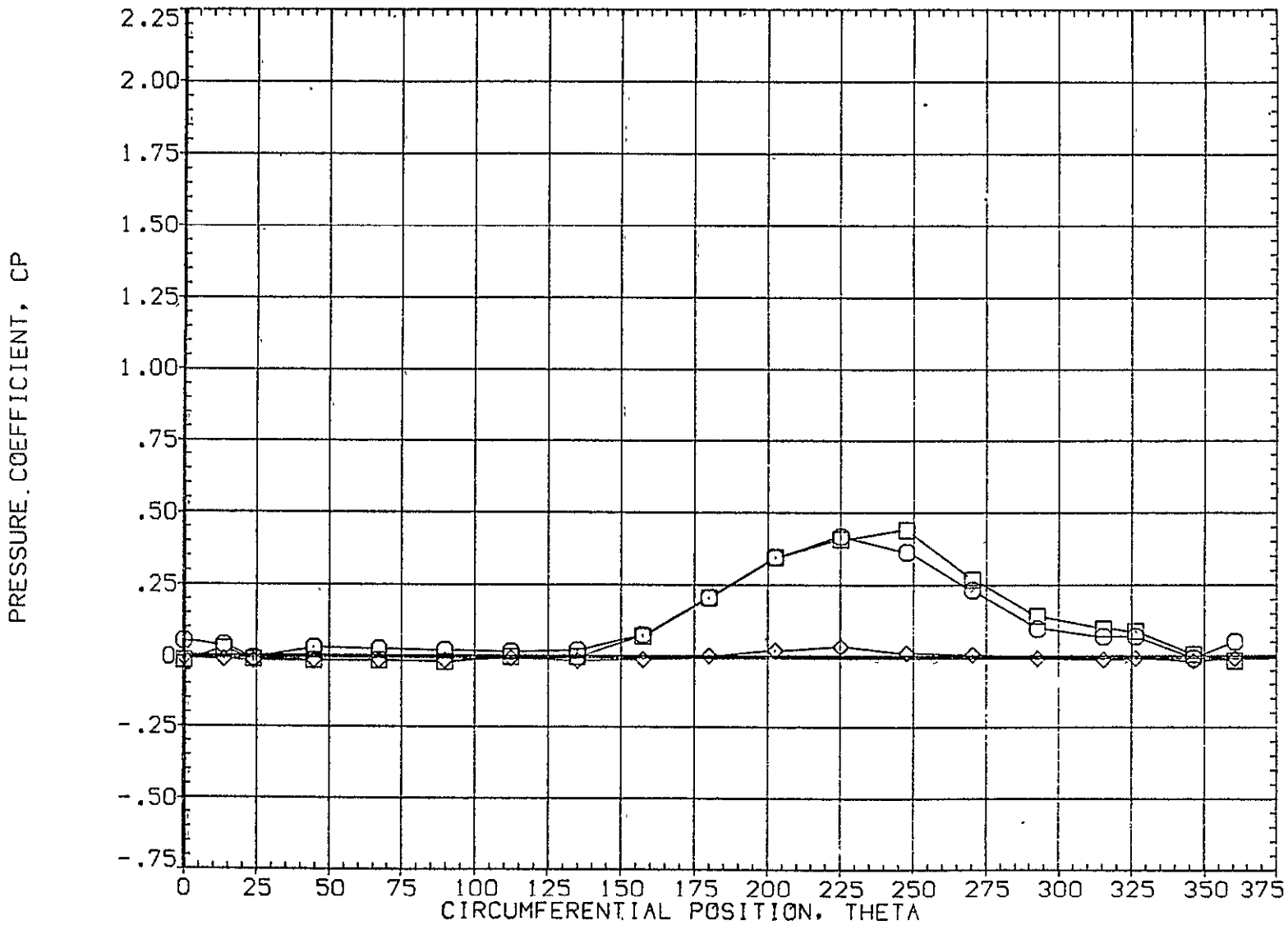

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

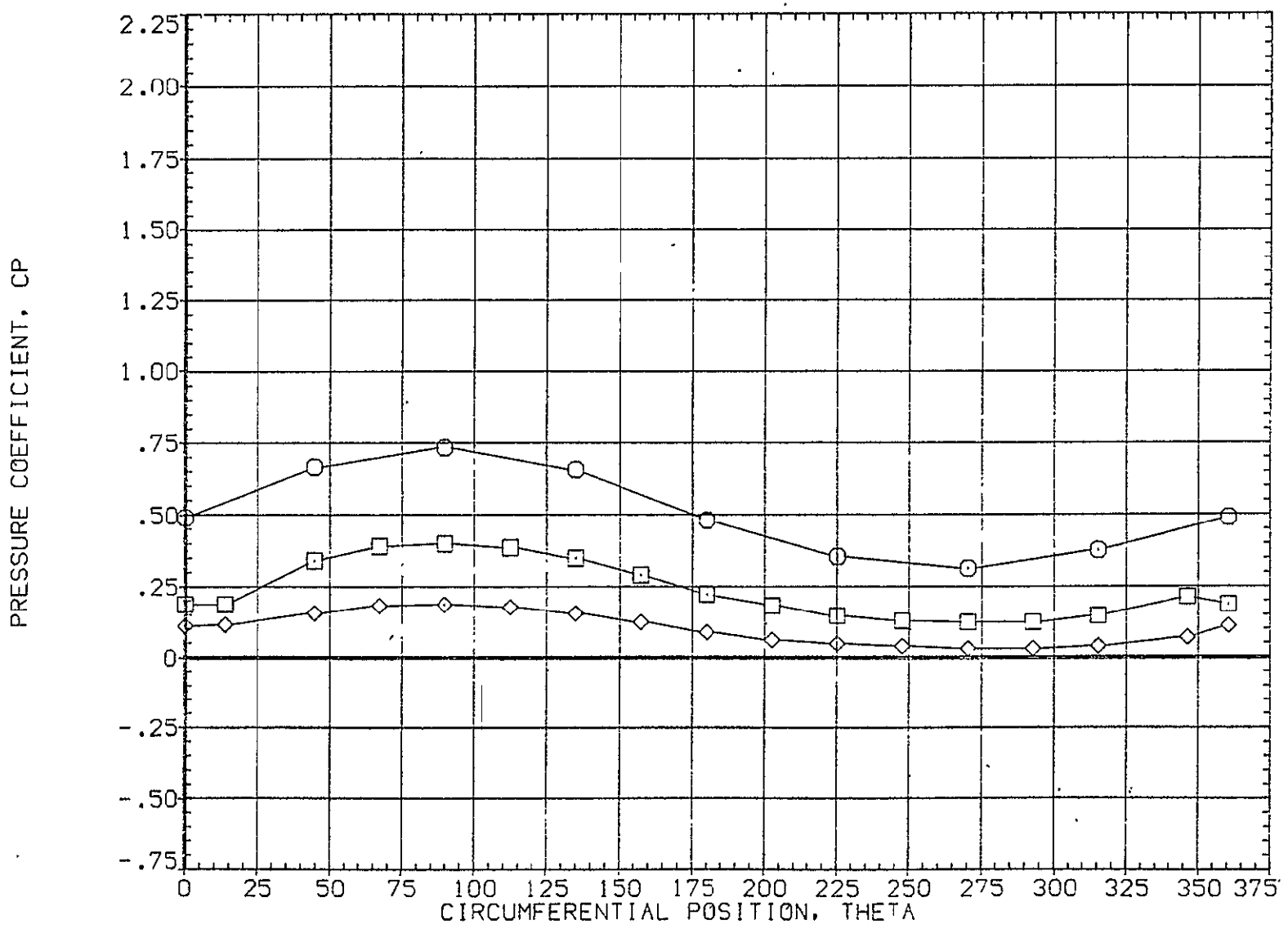

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

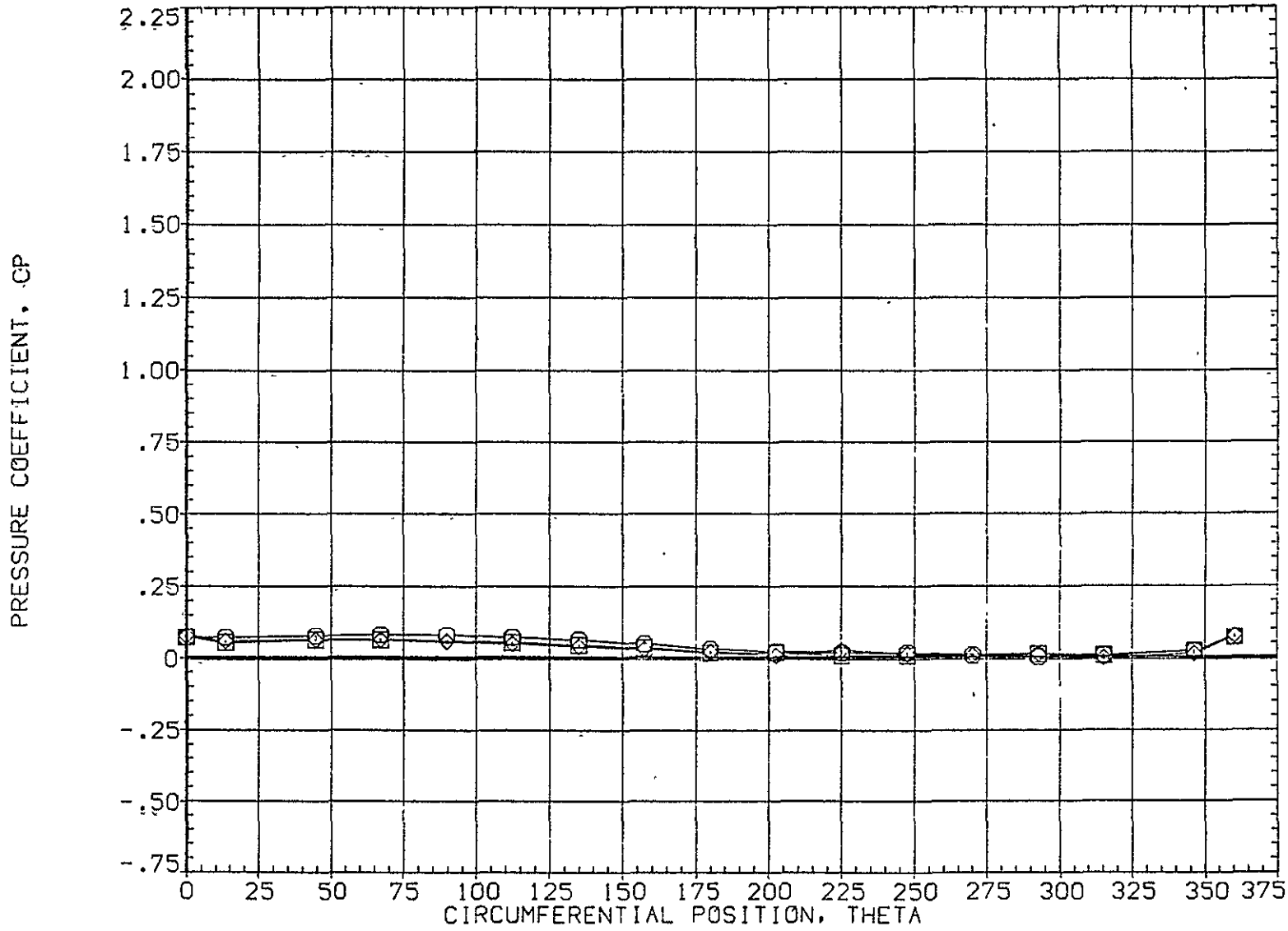

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

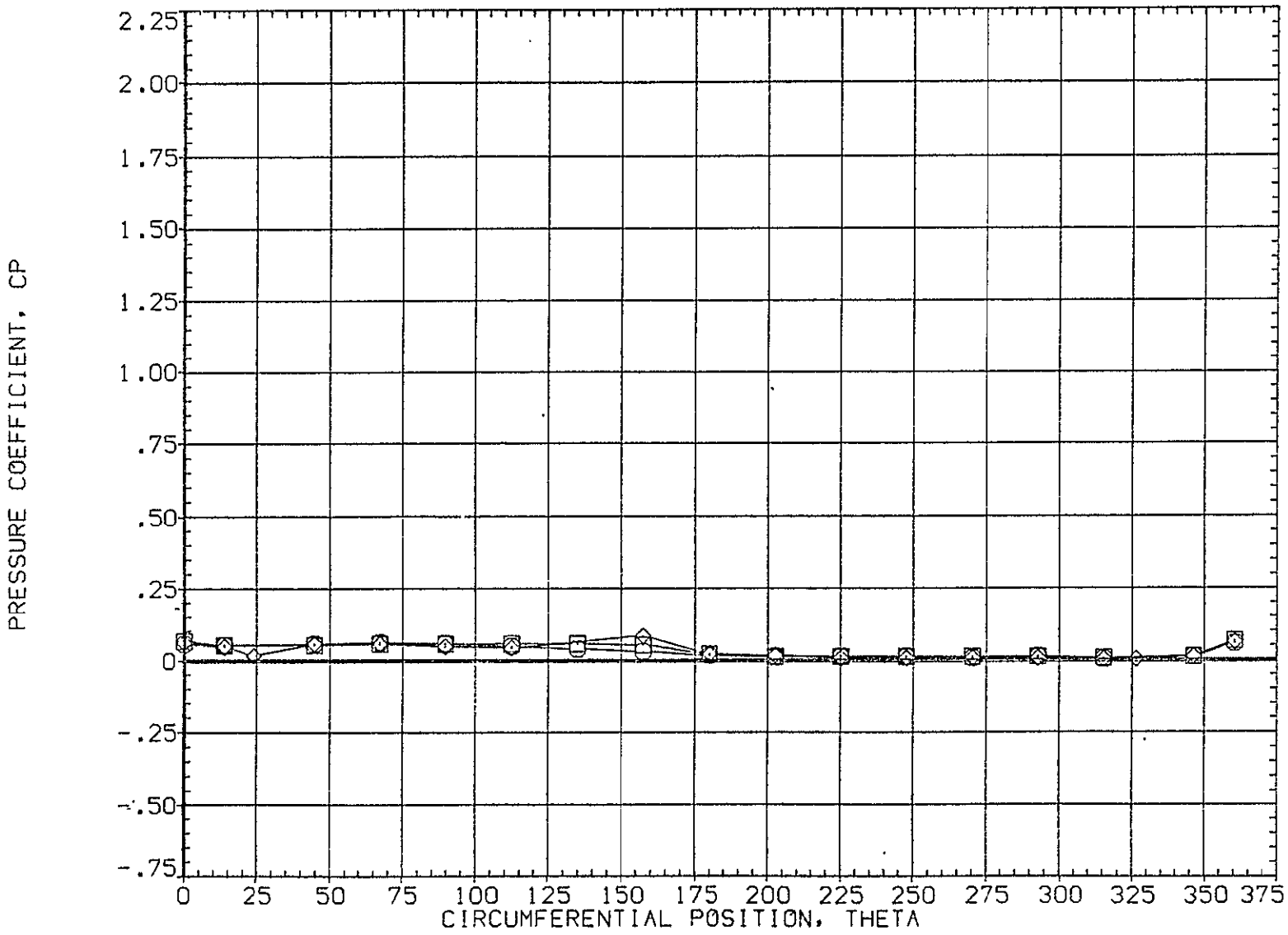

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A011)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

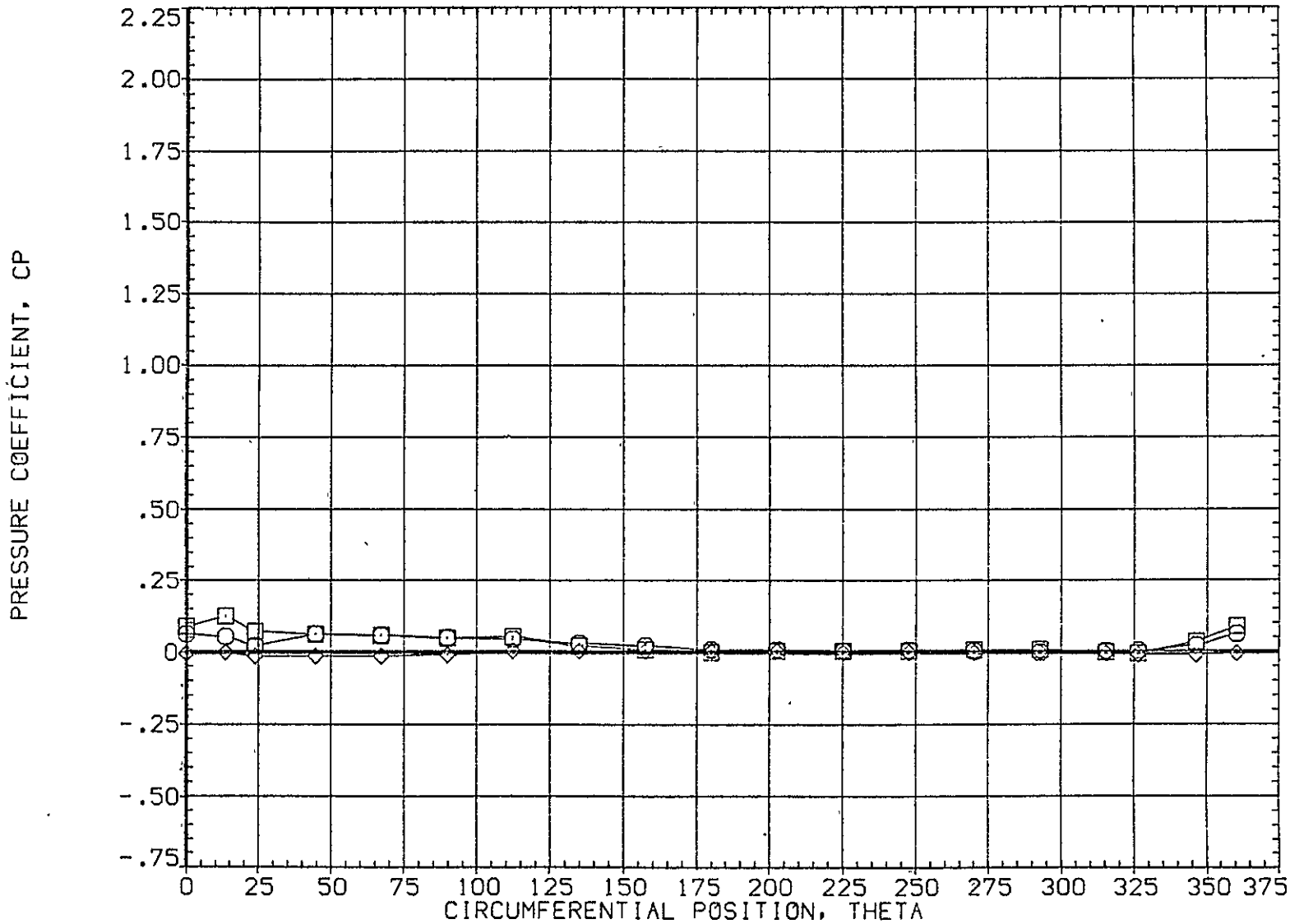

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

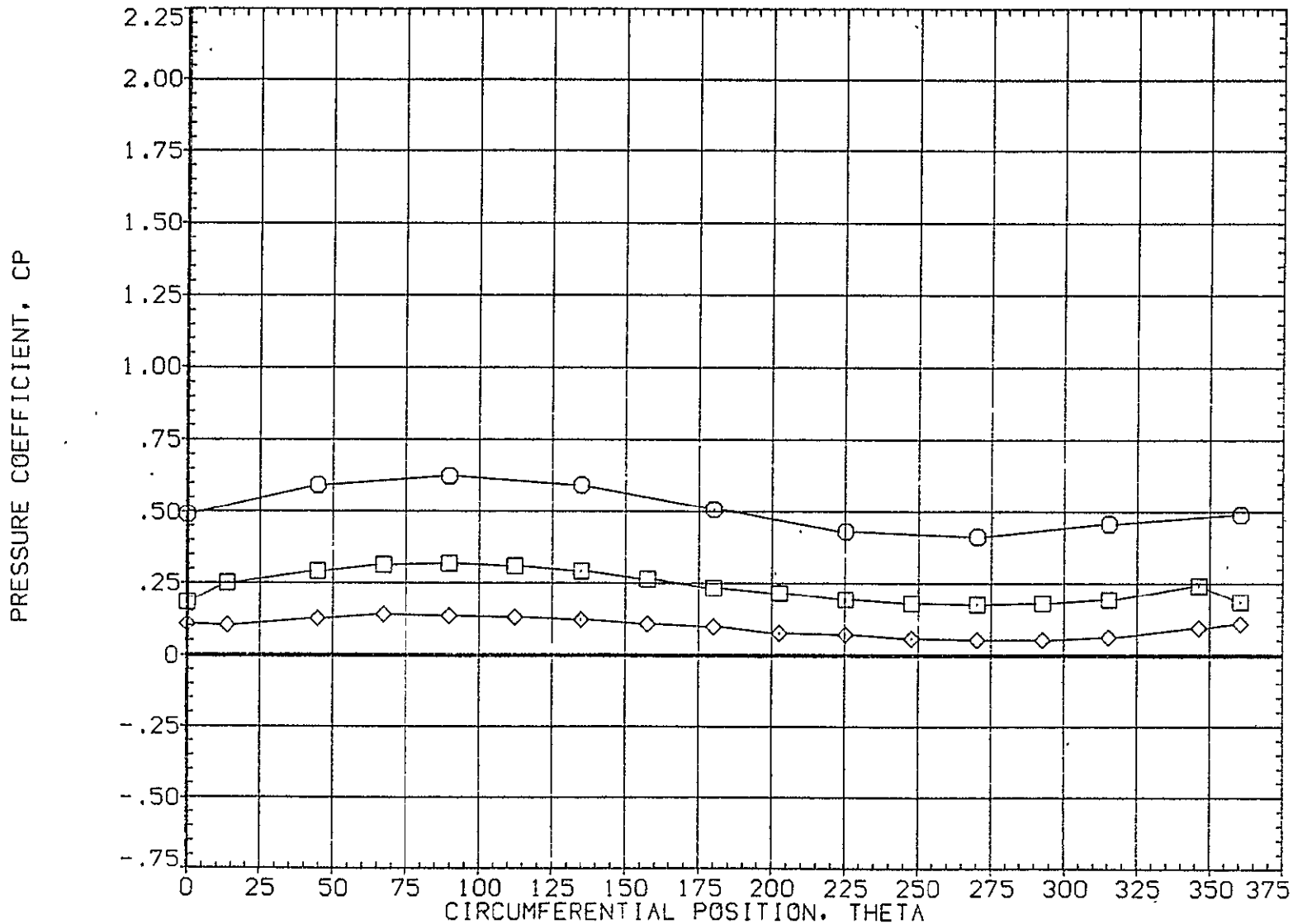

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA'	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

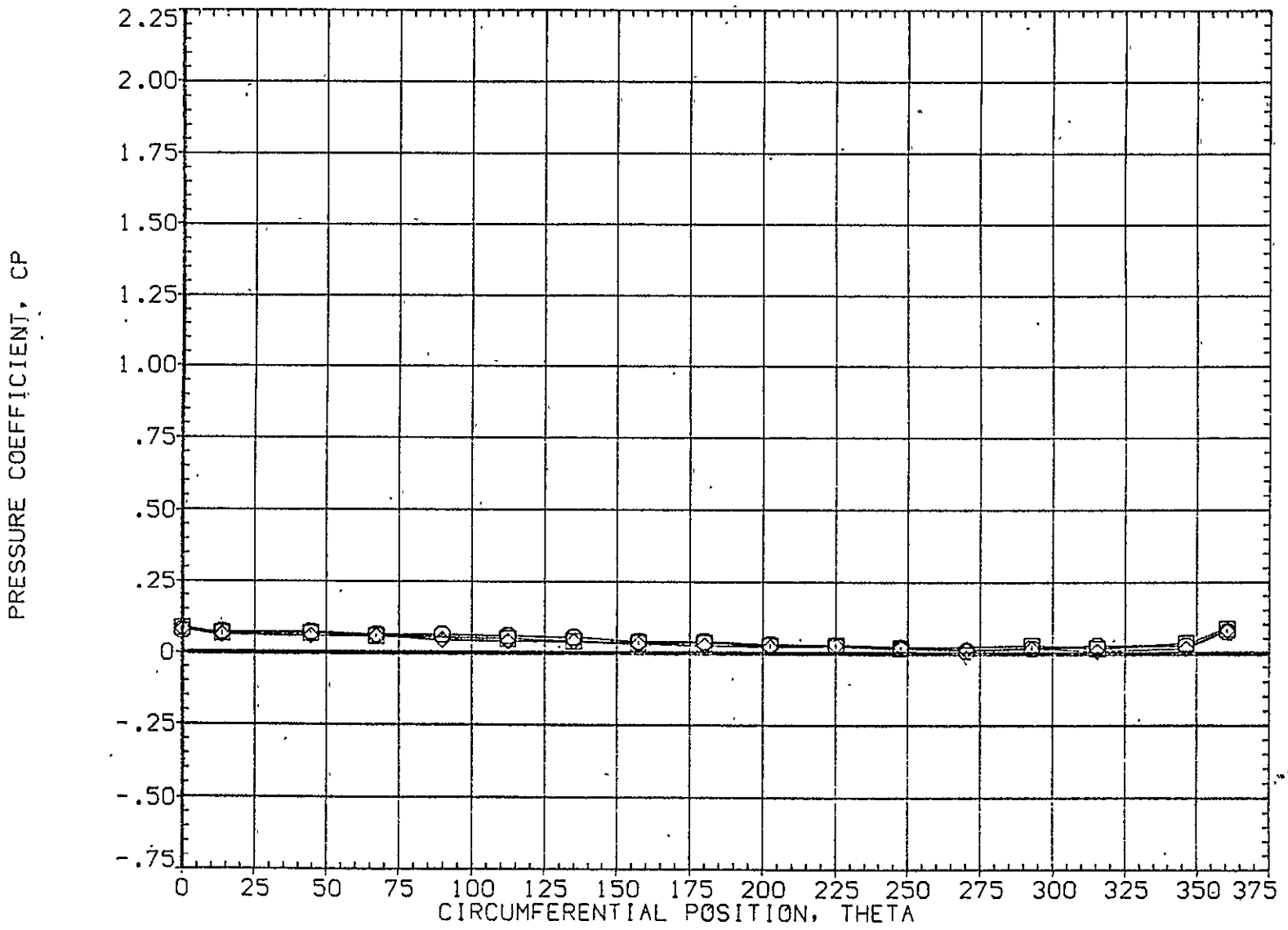

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

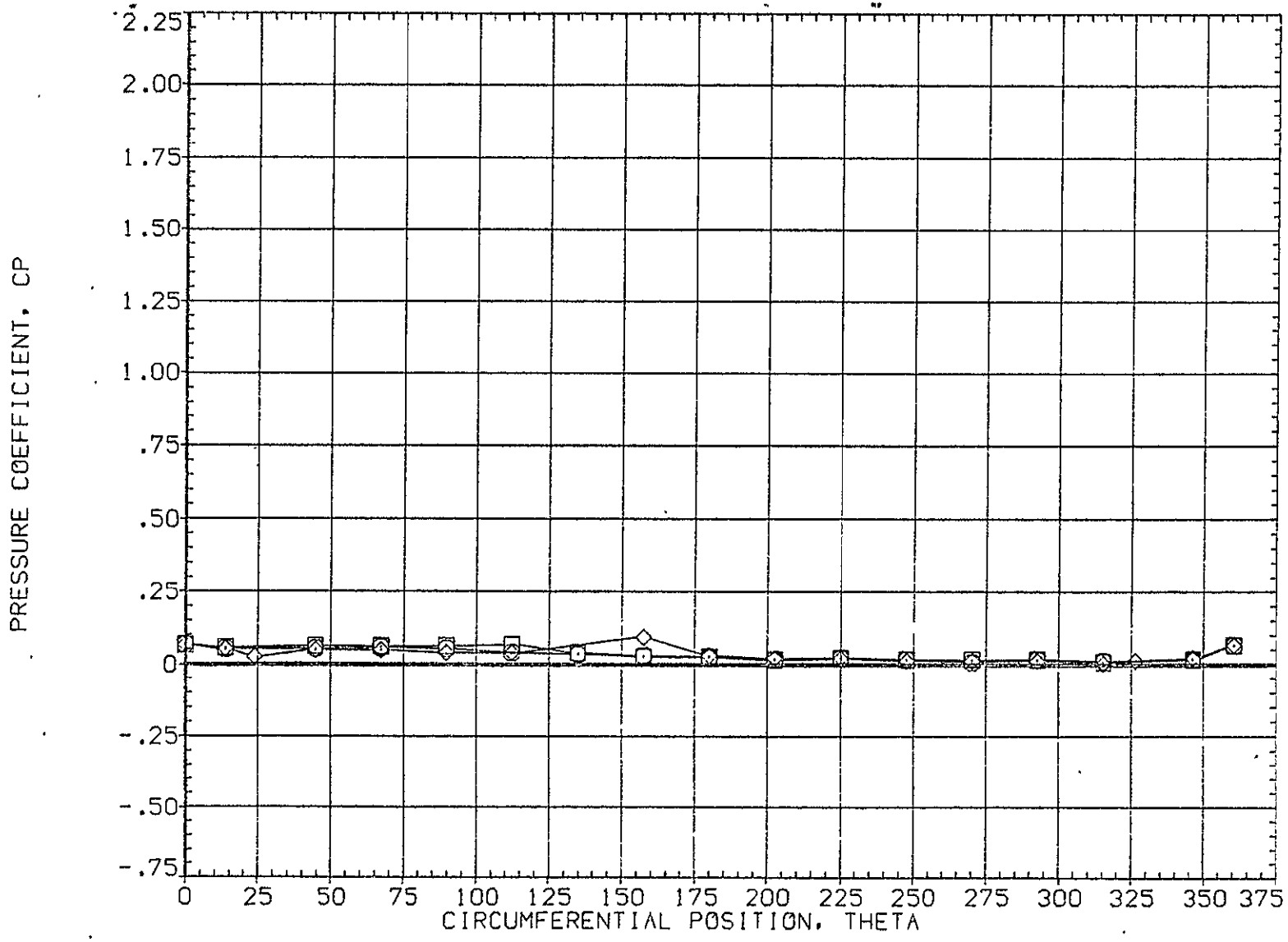

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A012)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

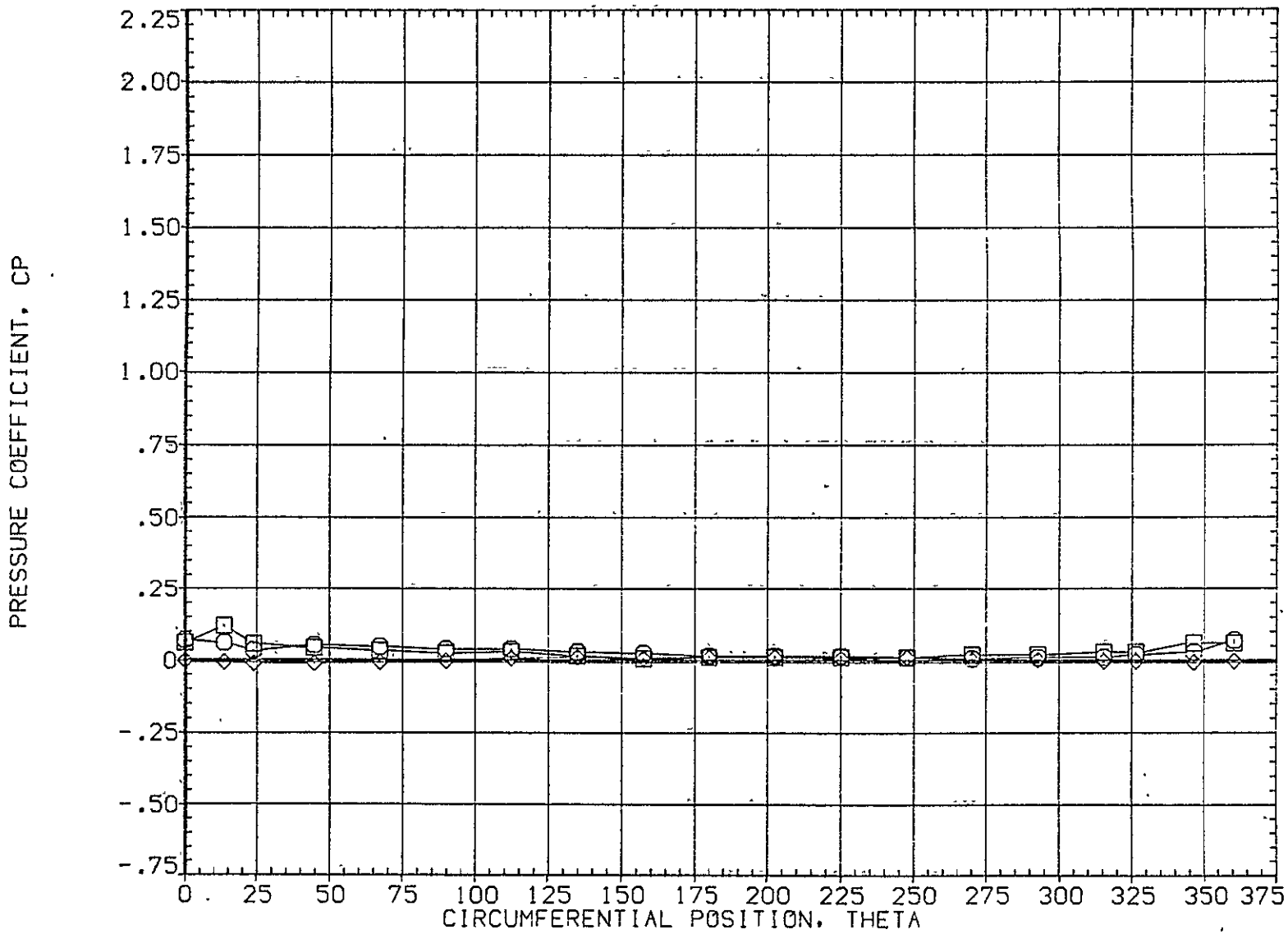

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

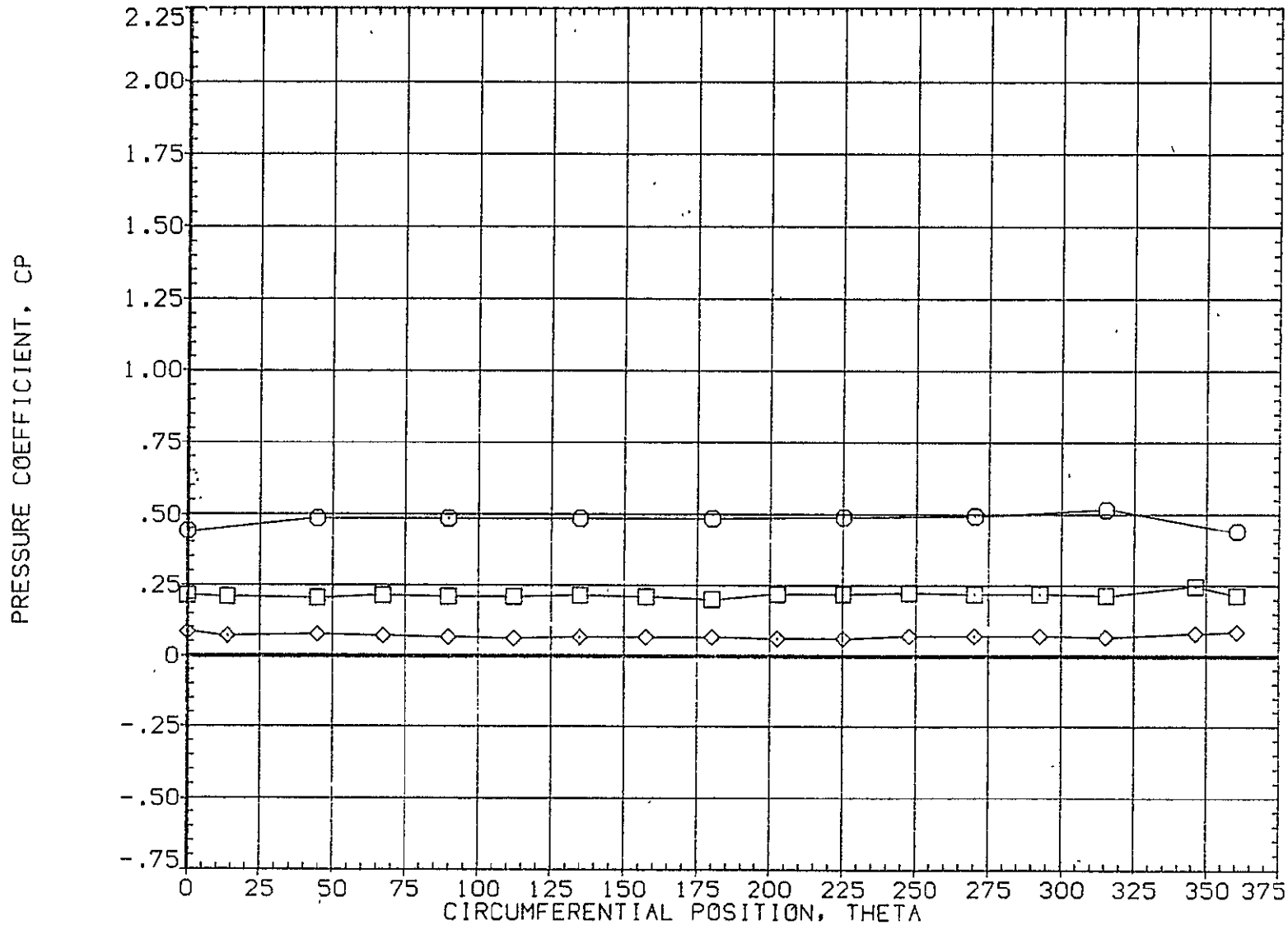

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

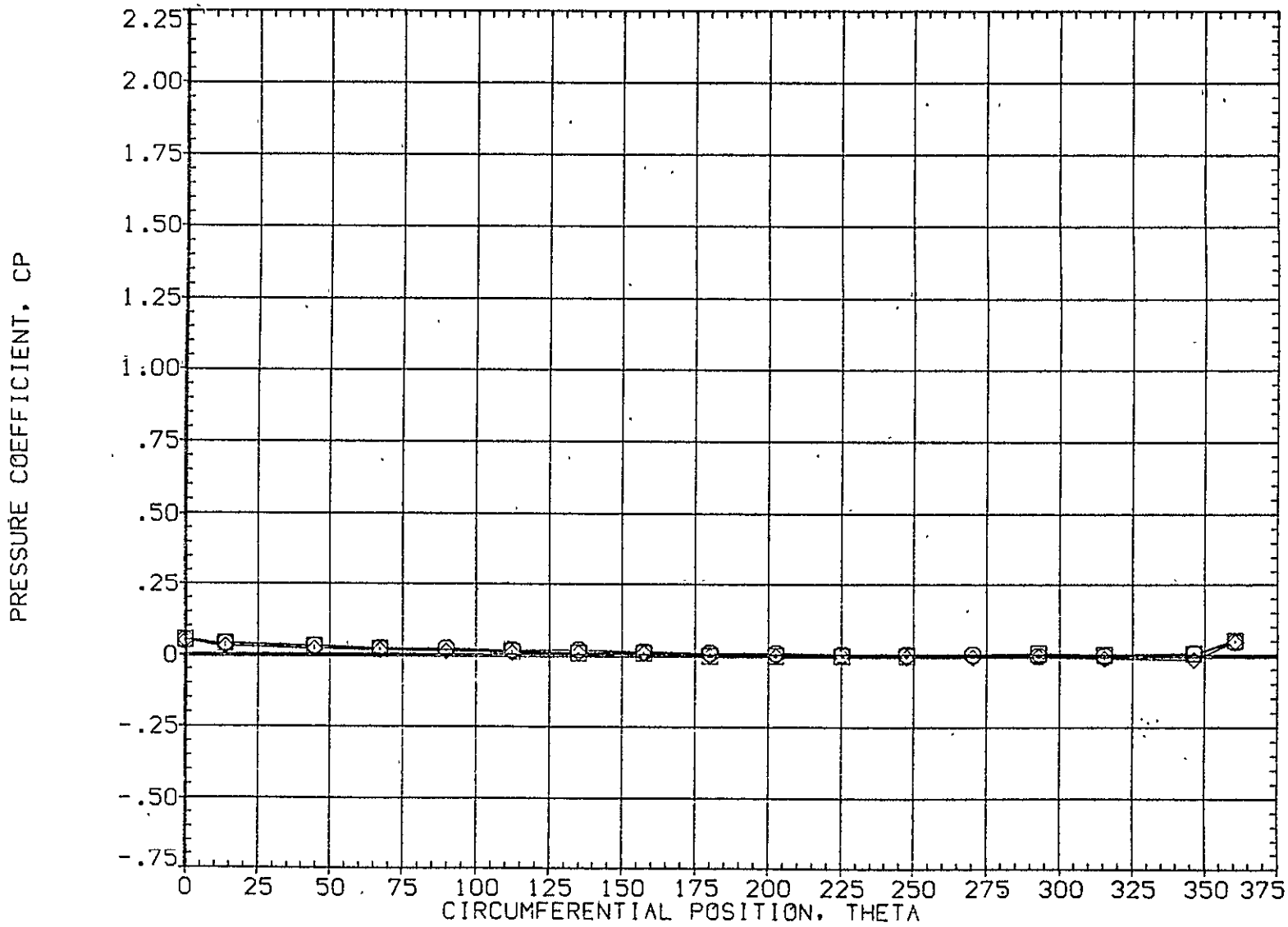

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

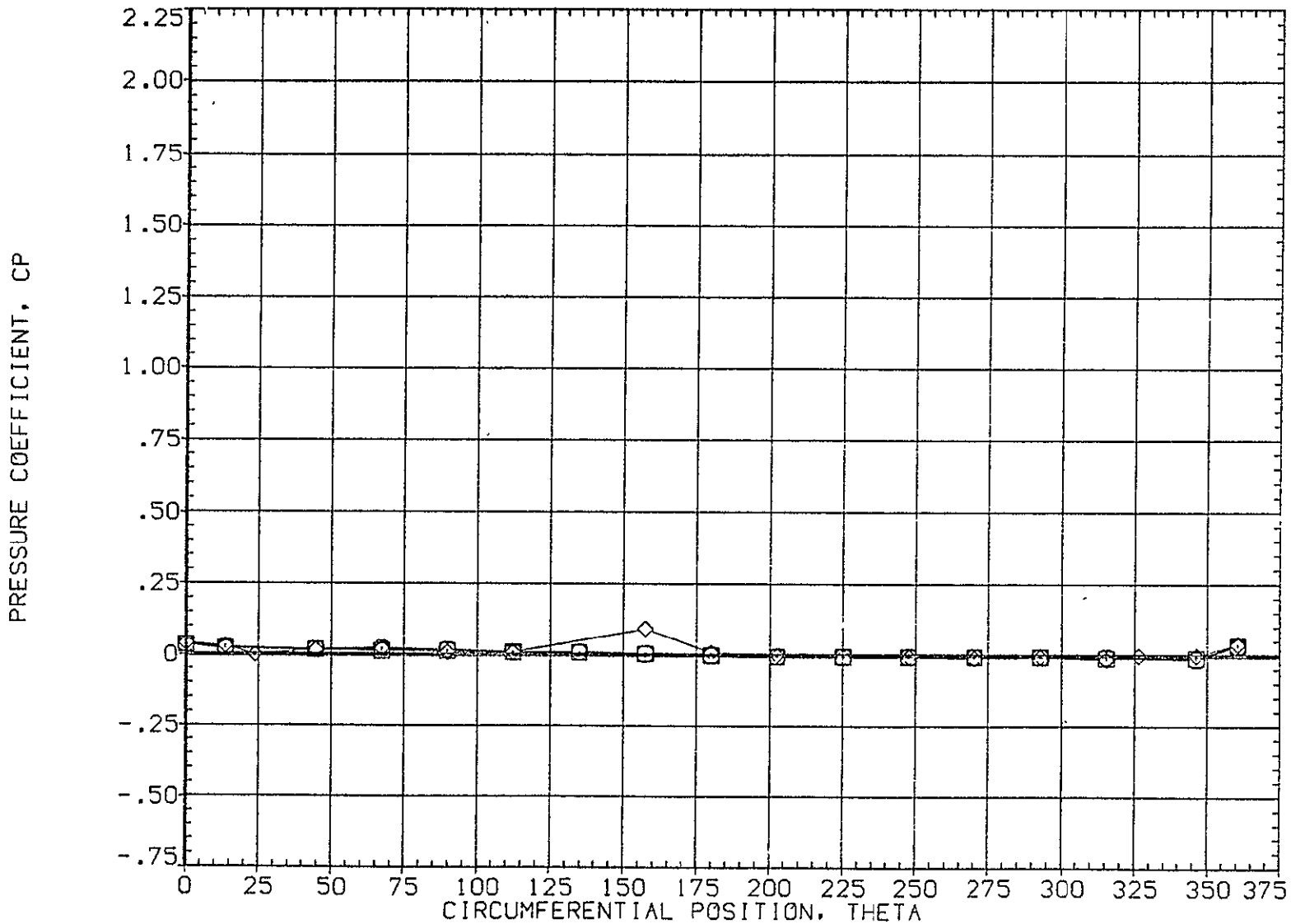

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A013)

SYMBOL	X/LB.	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

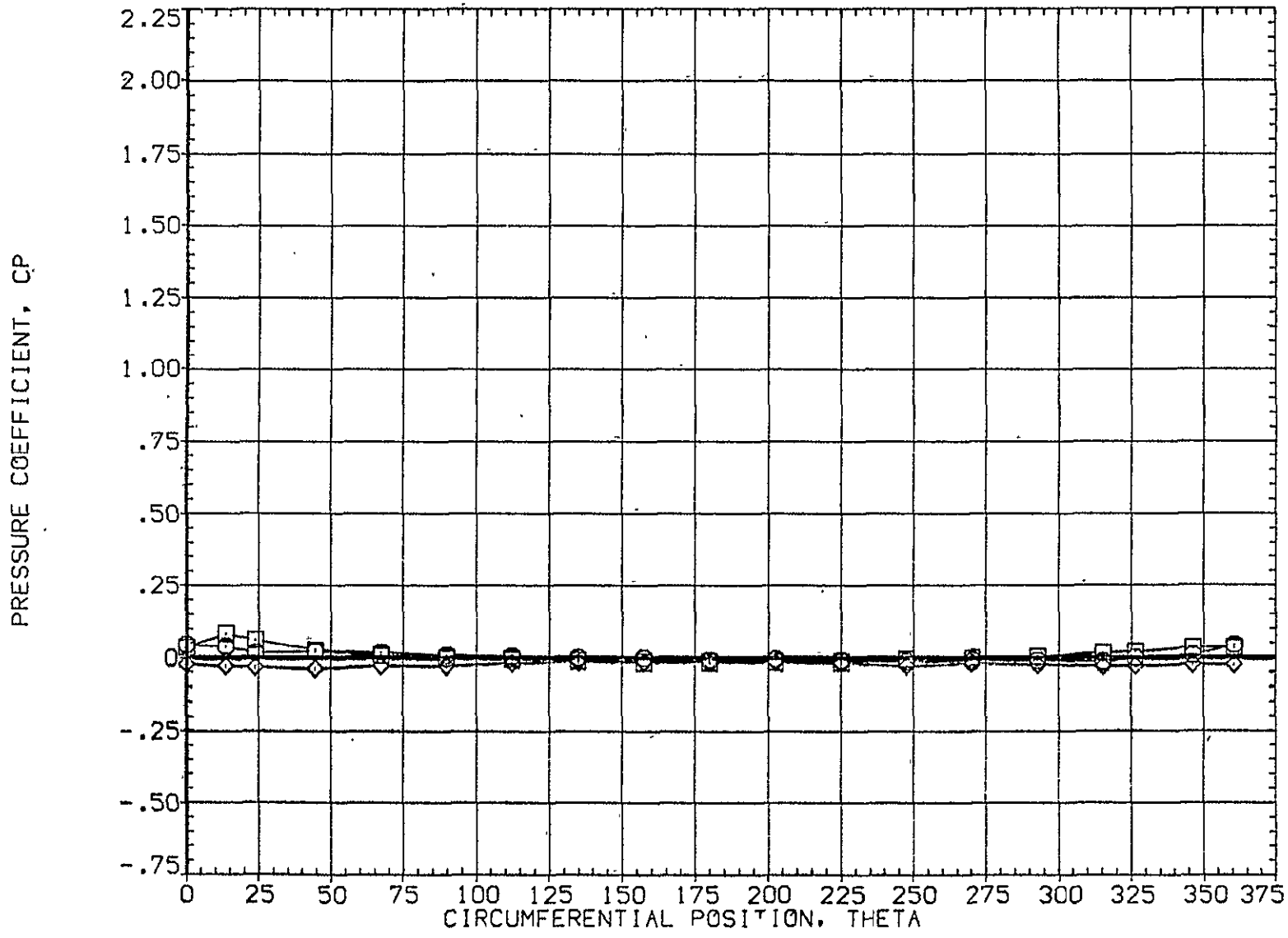

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

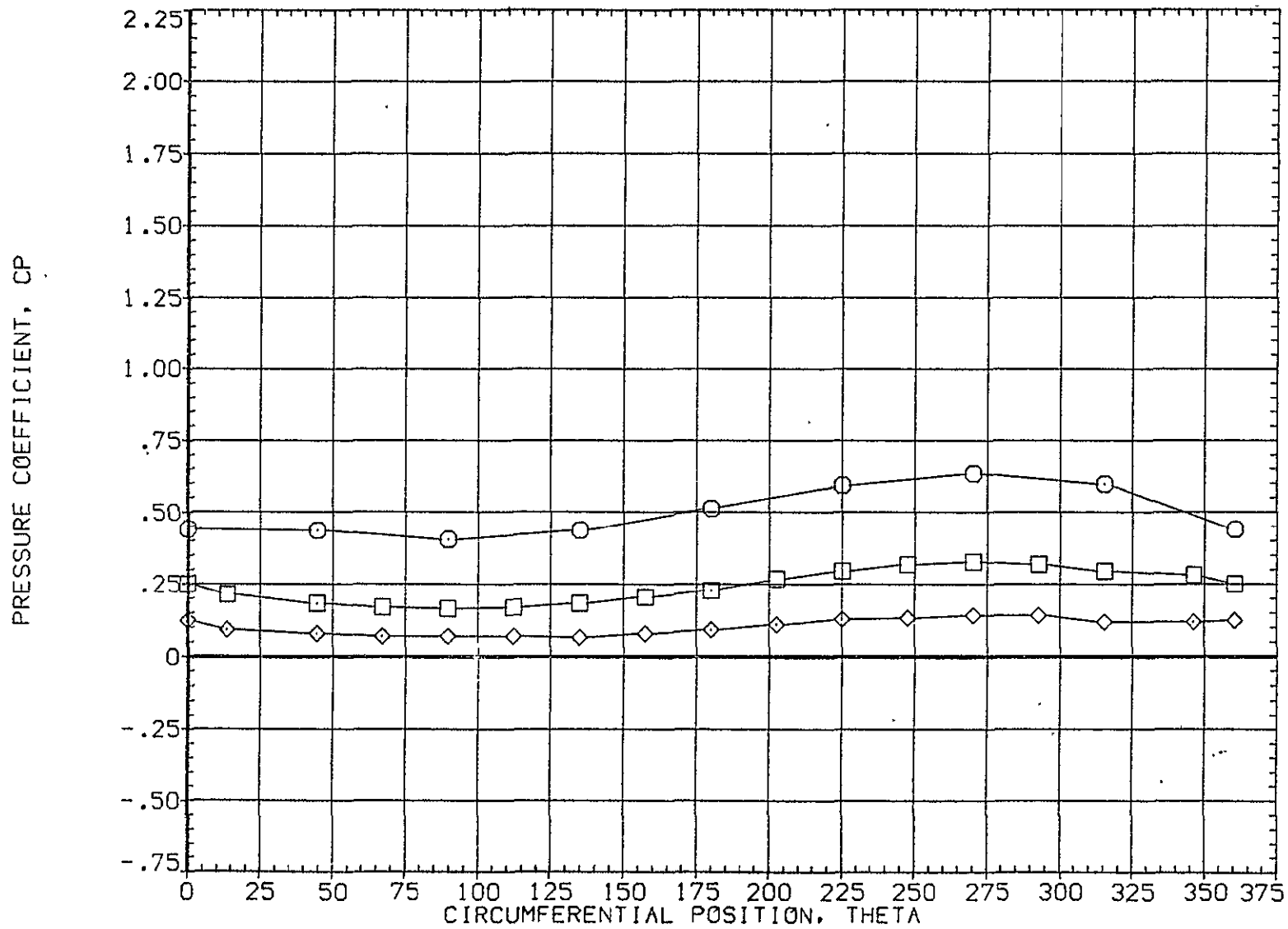

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

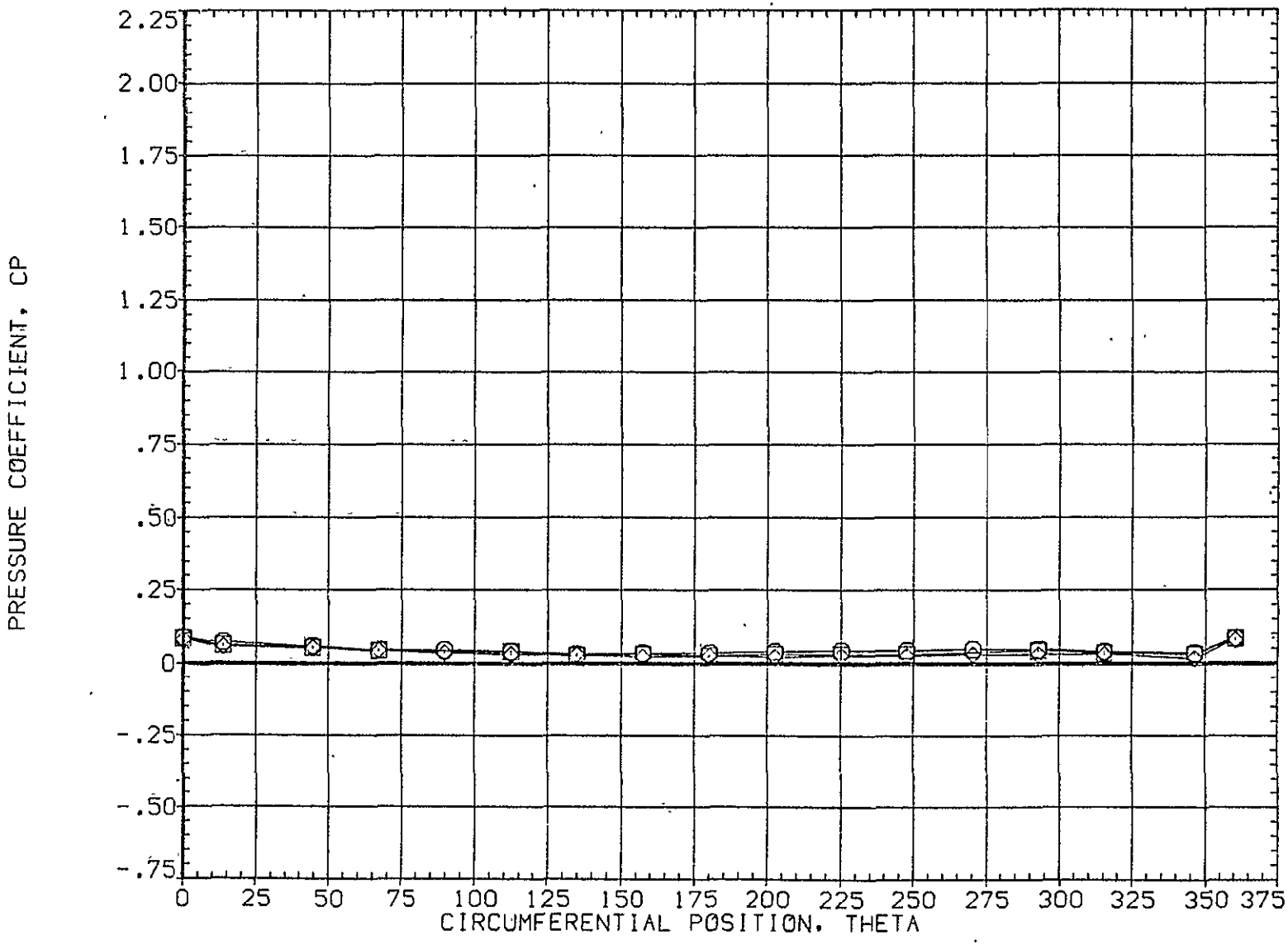

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

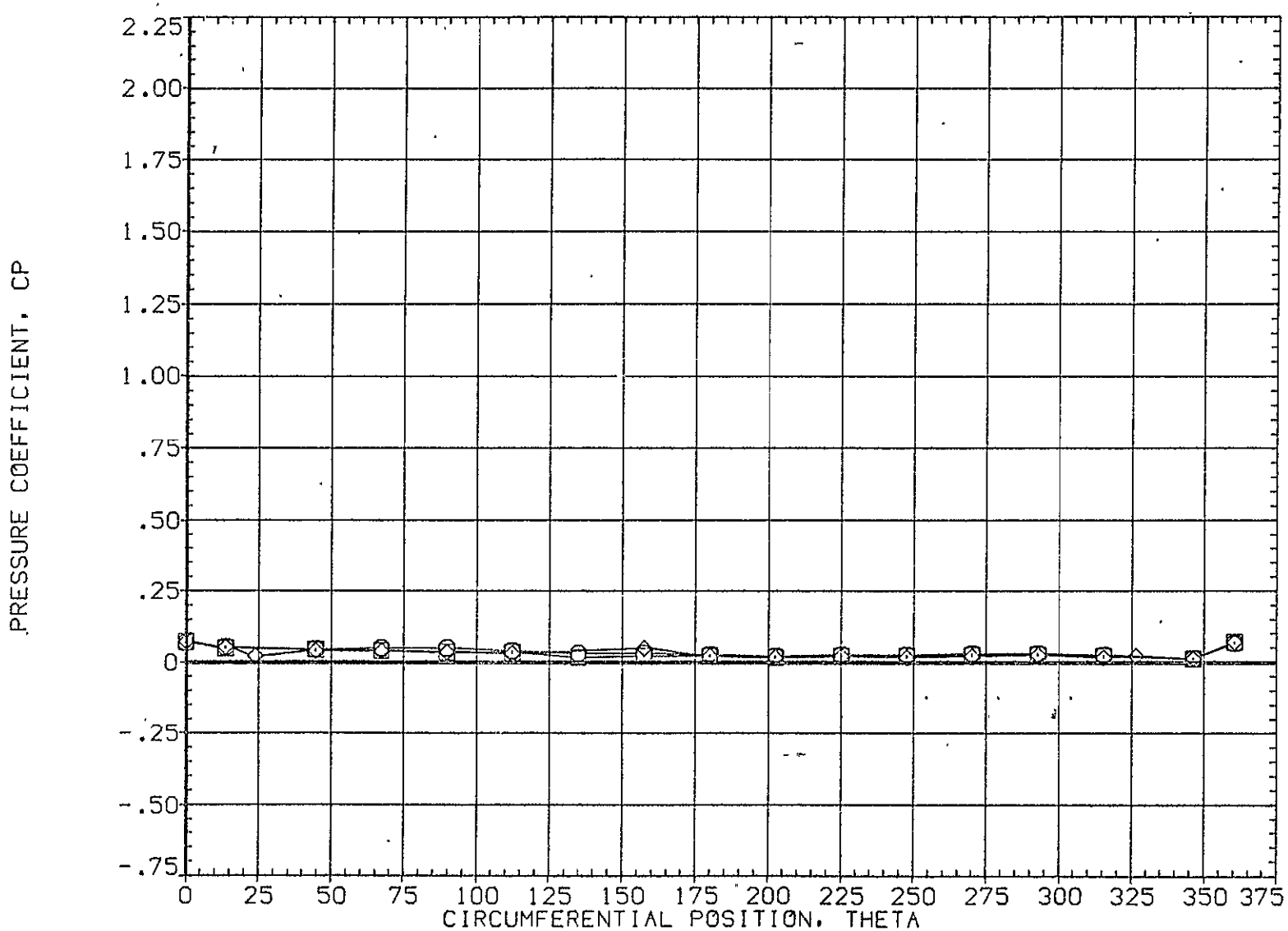

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A014)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

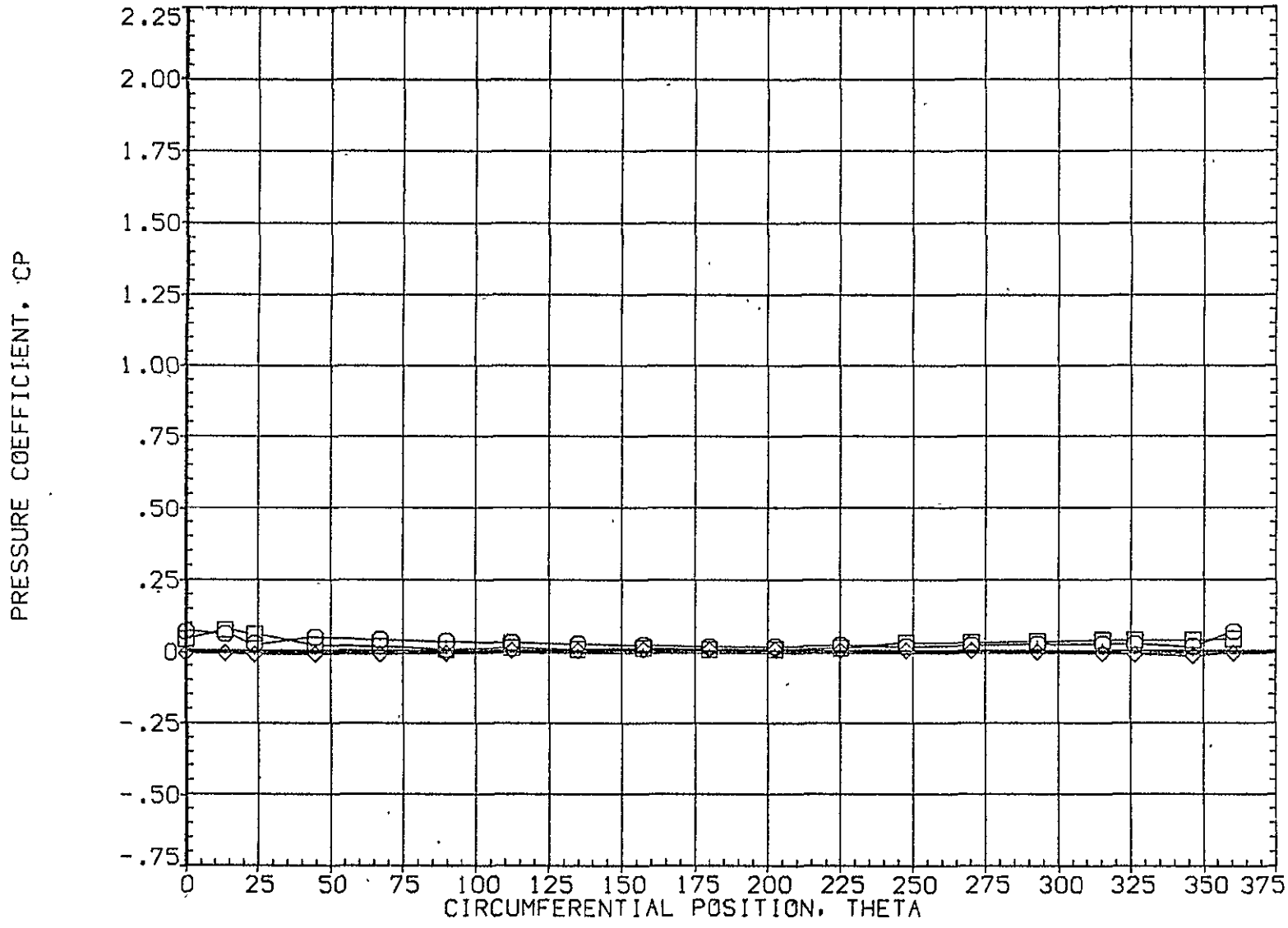

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (PTA015)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

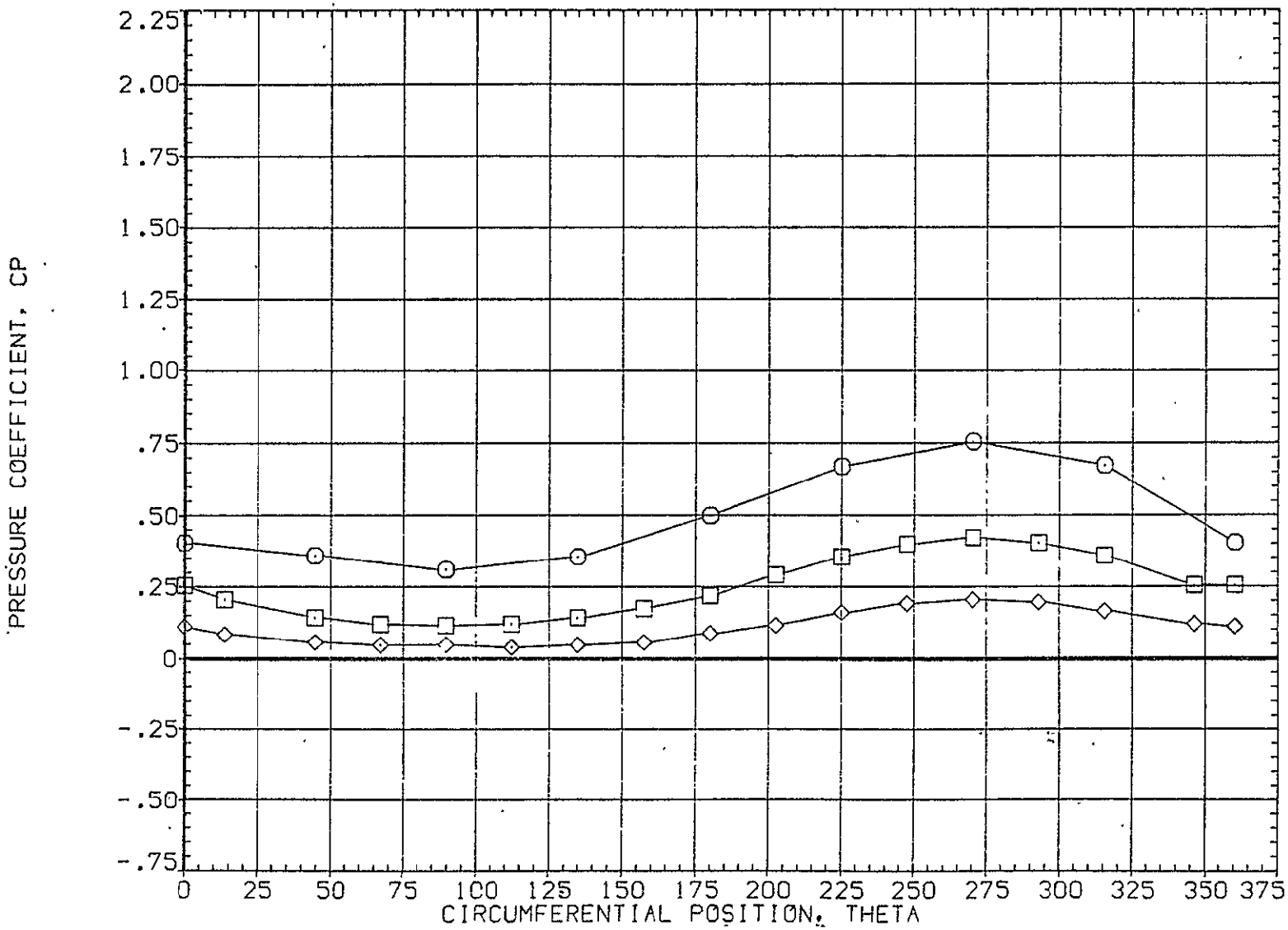

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

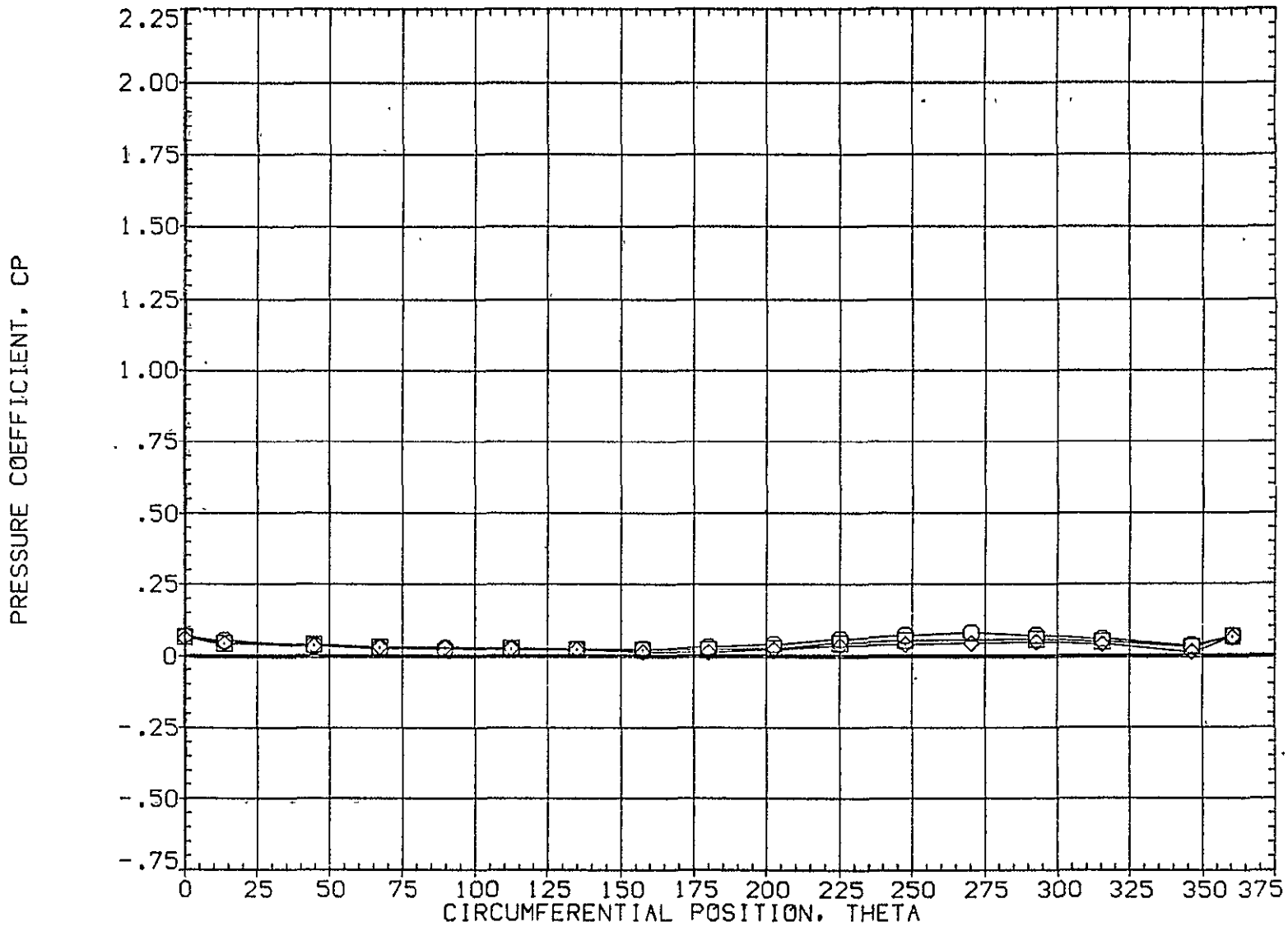

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

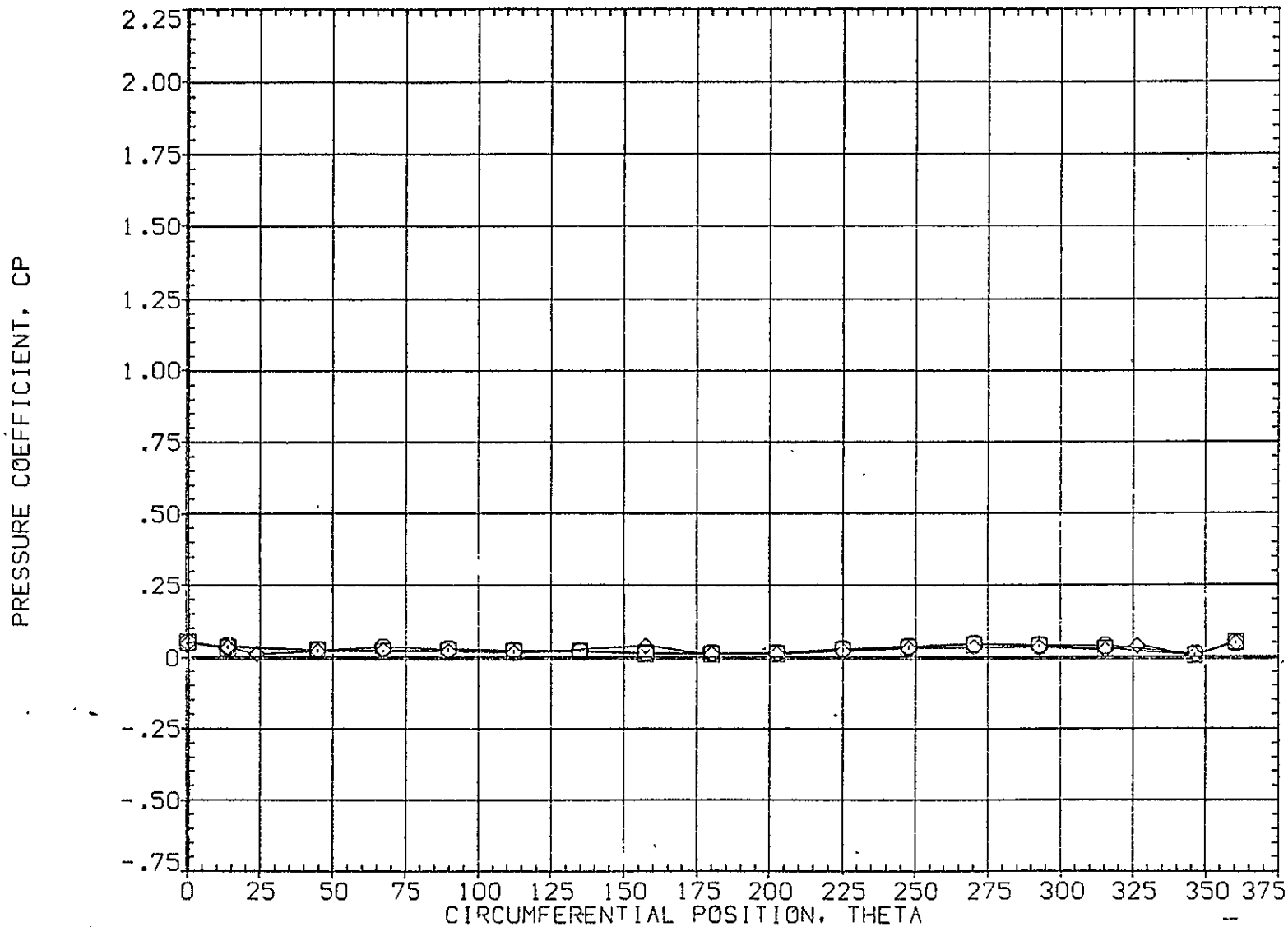

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A015)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	90.000

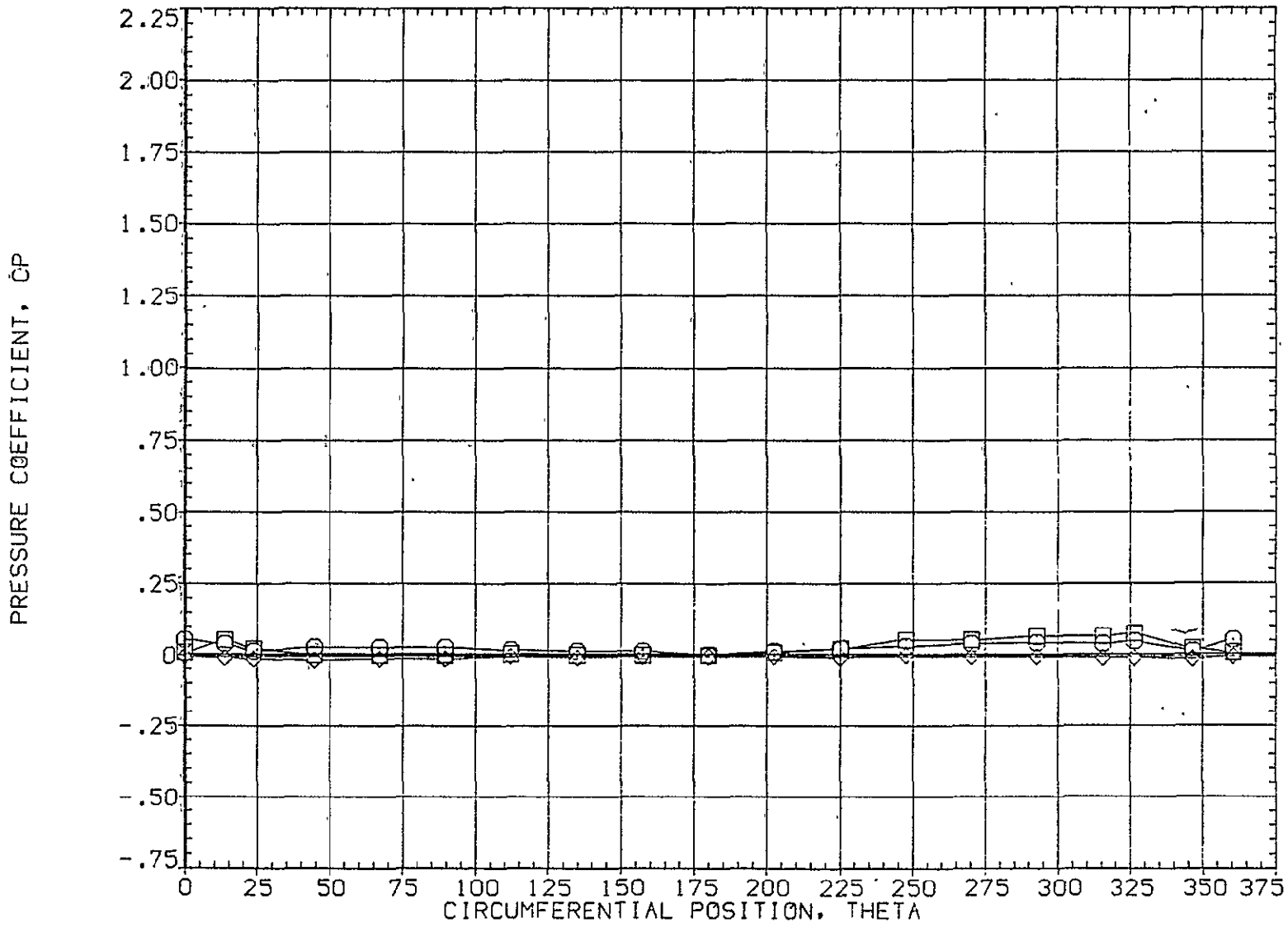

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

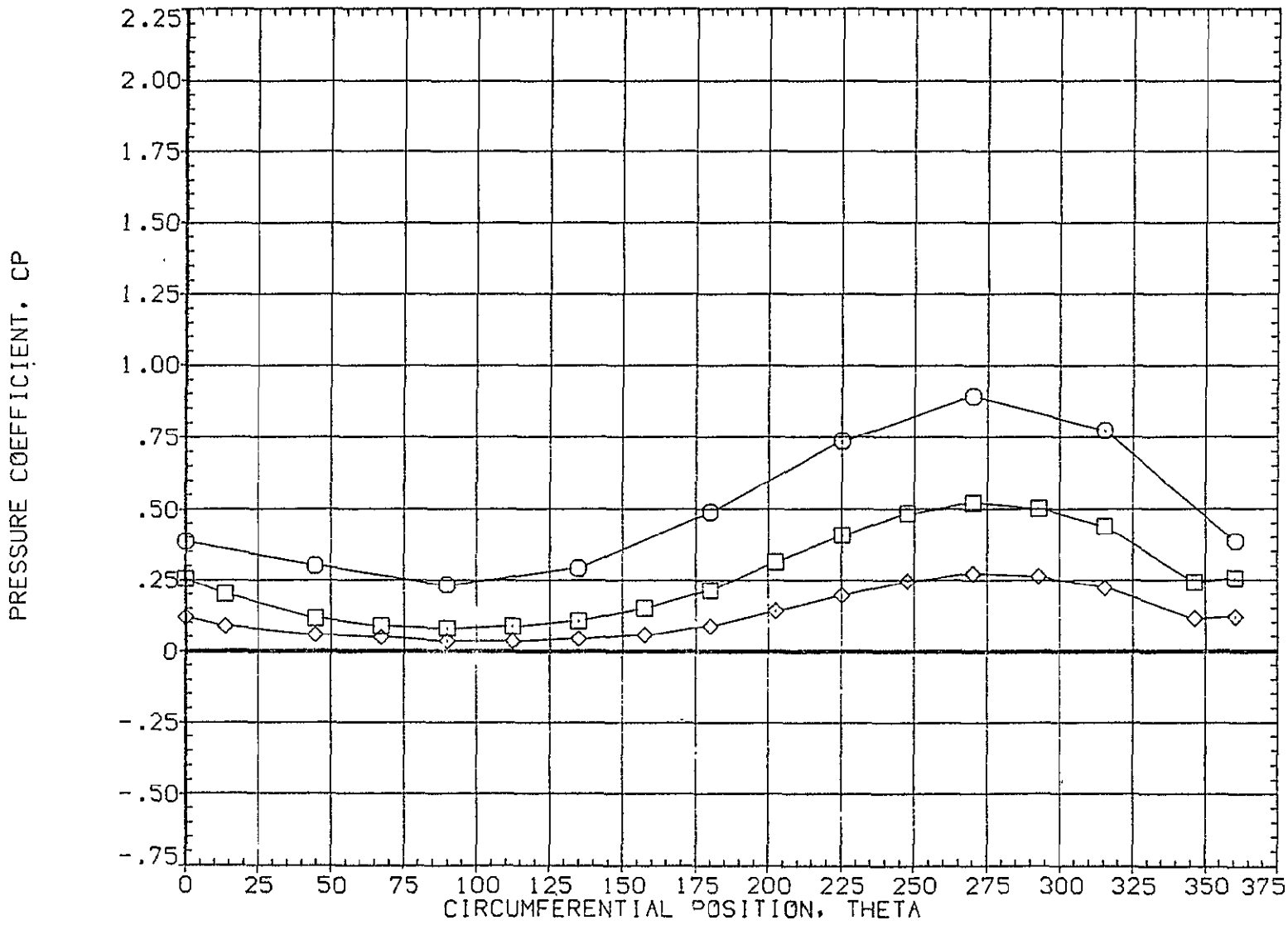

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

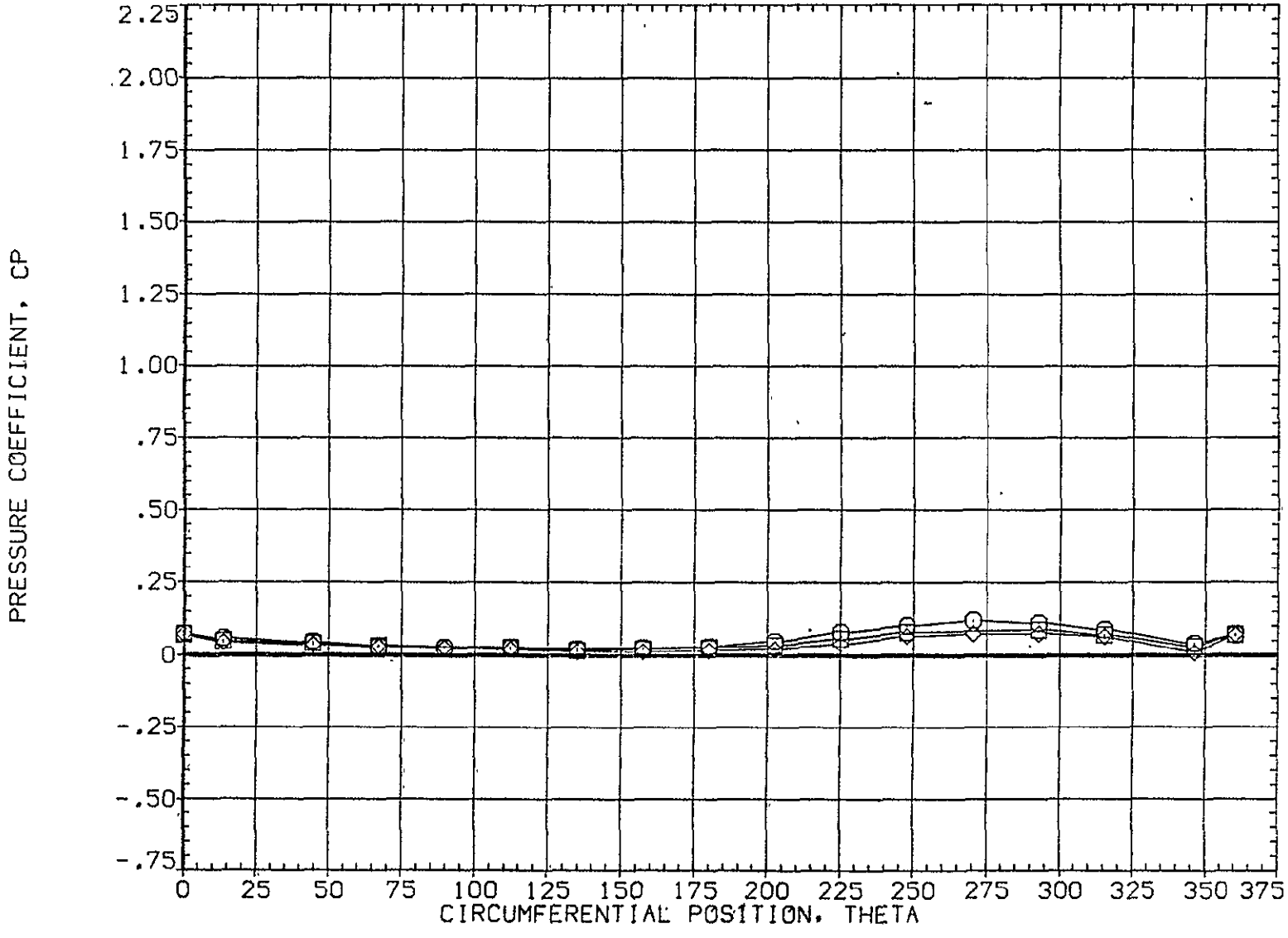

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

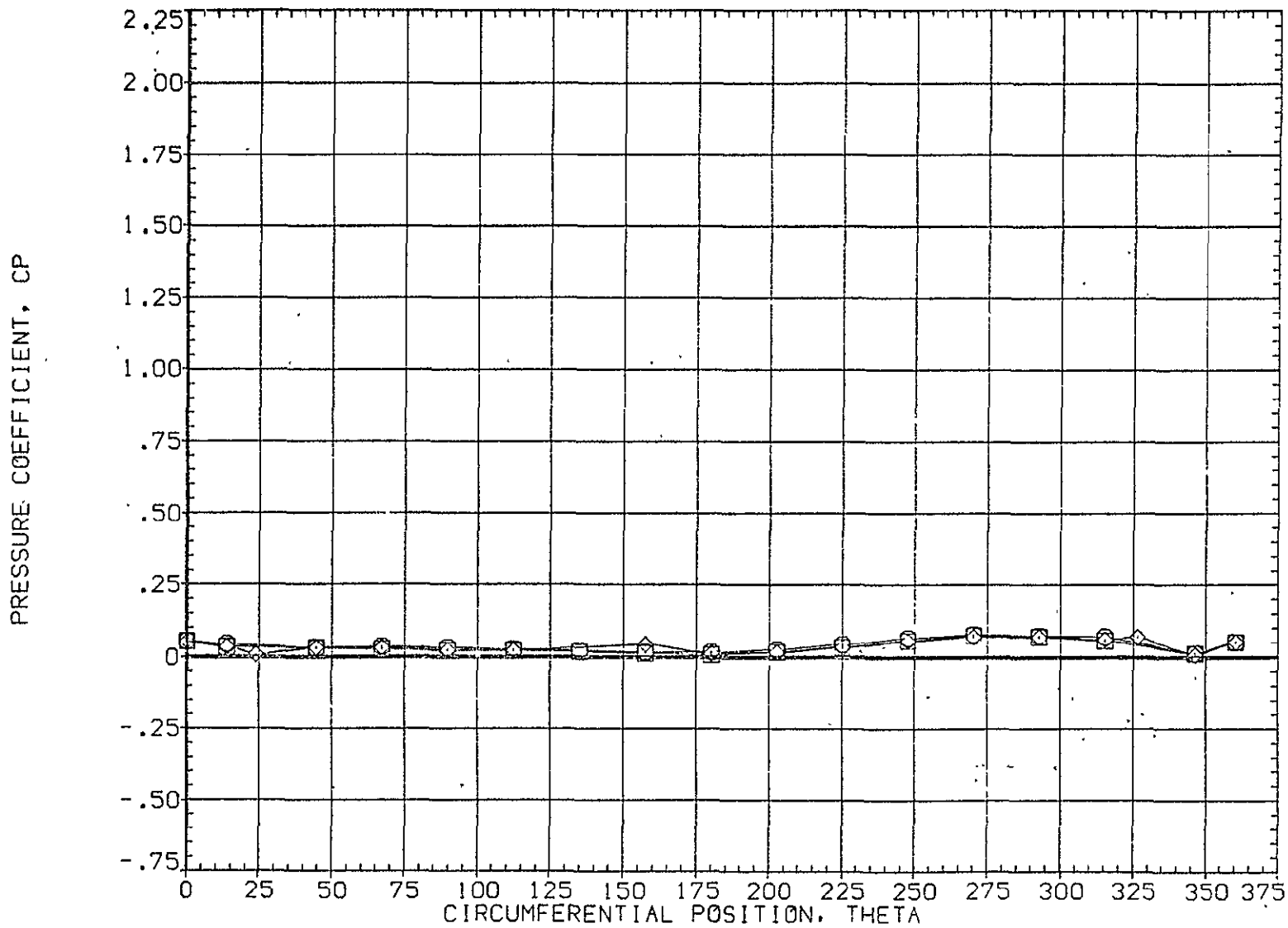

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A016)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

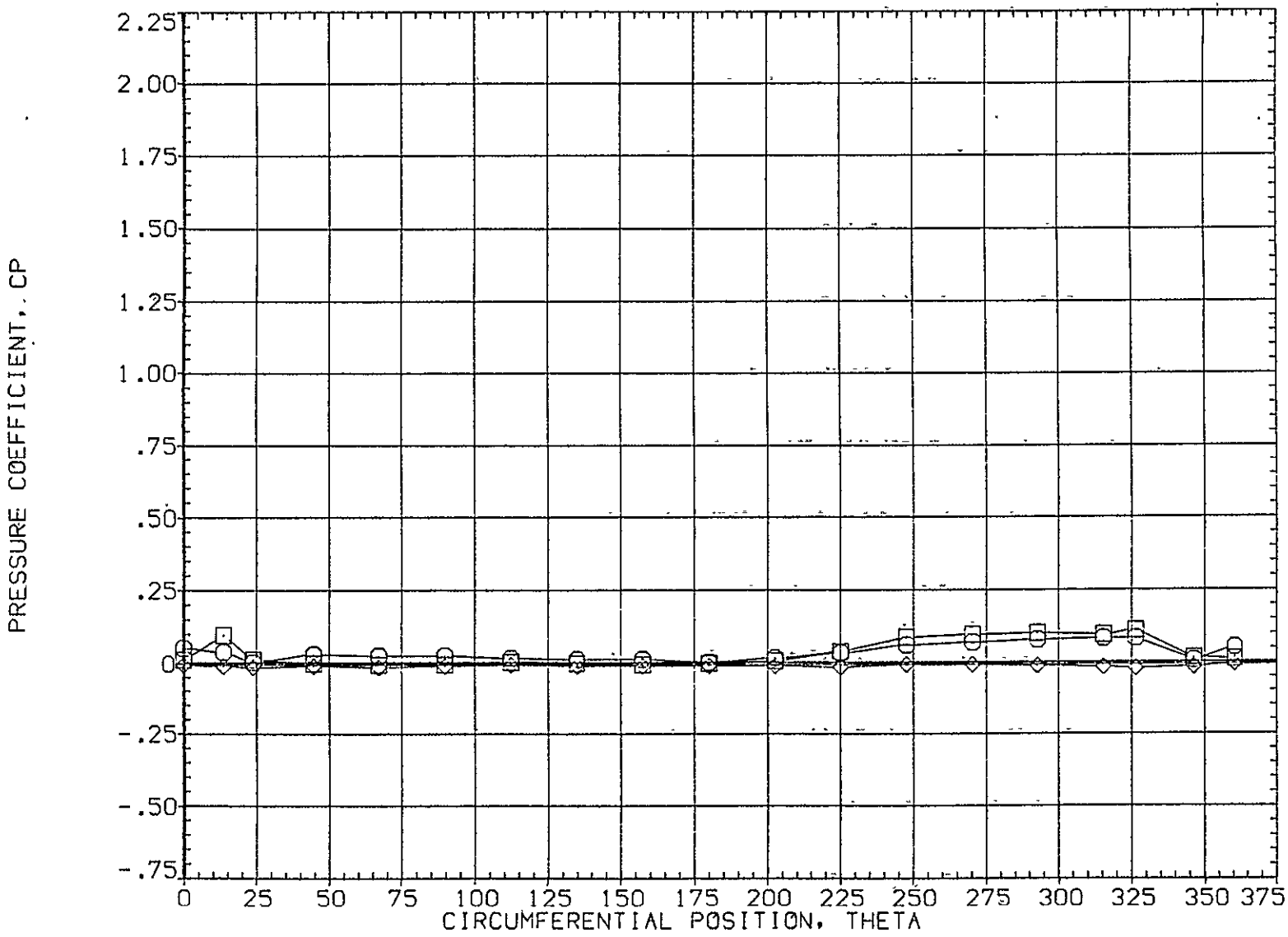

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.470	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

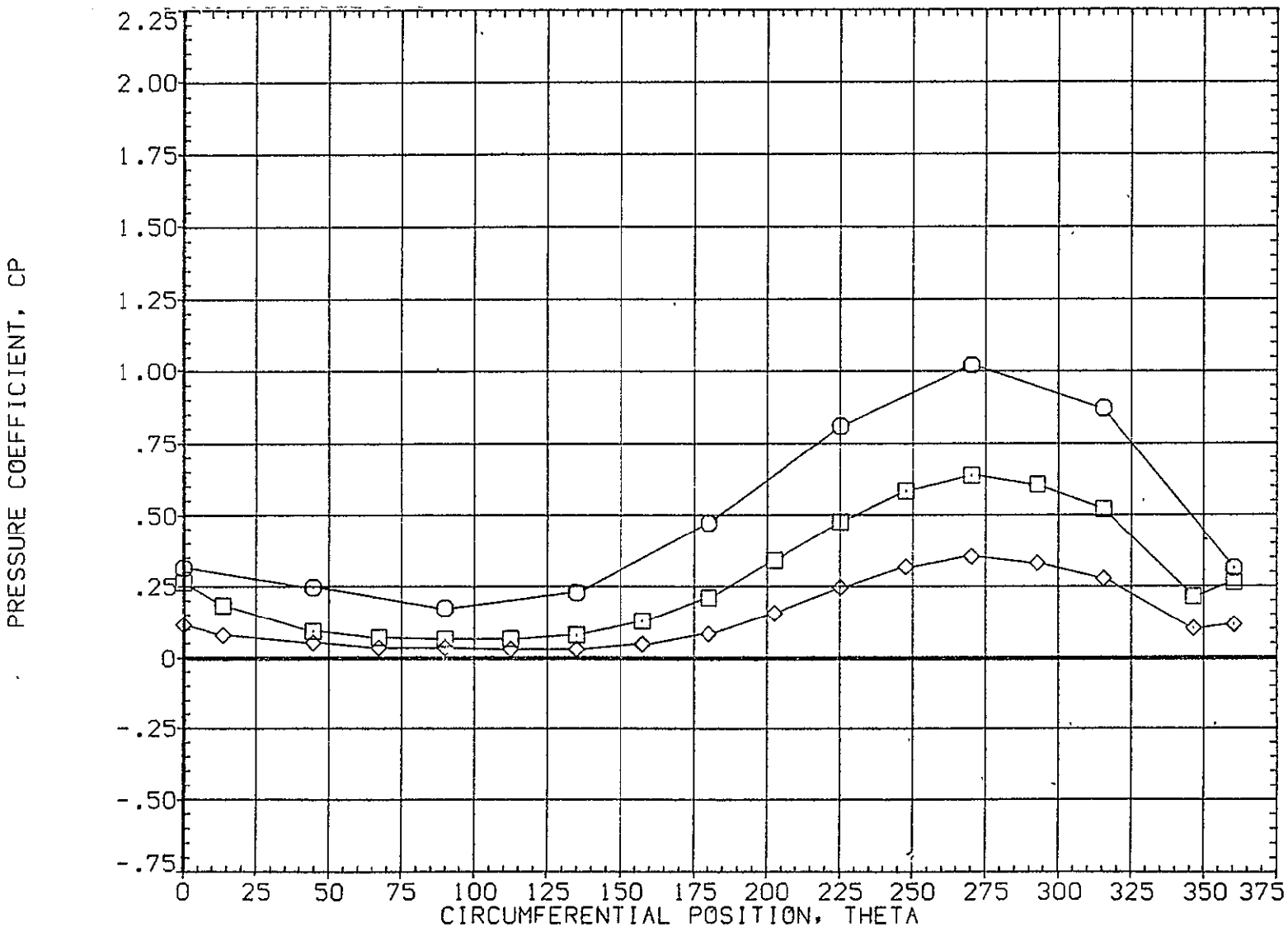

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.470	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

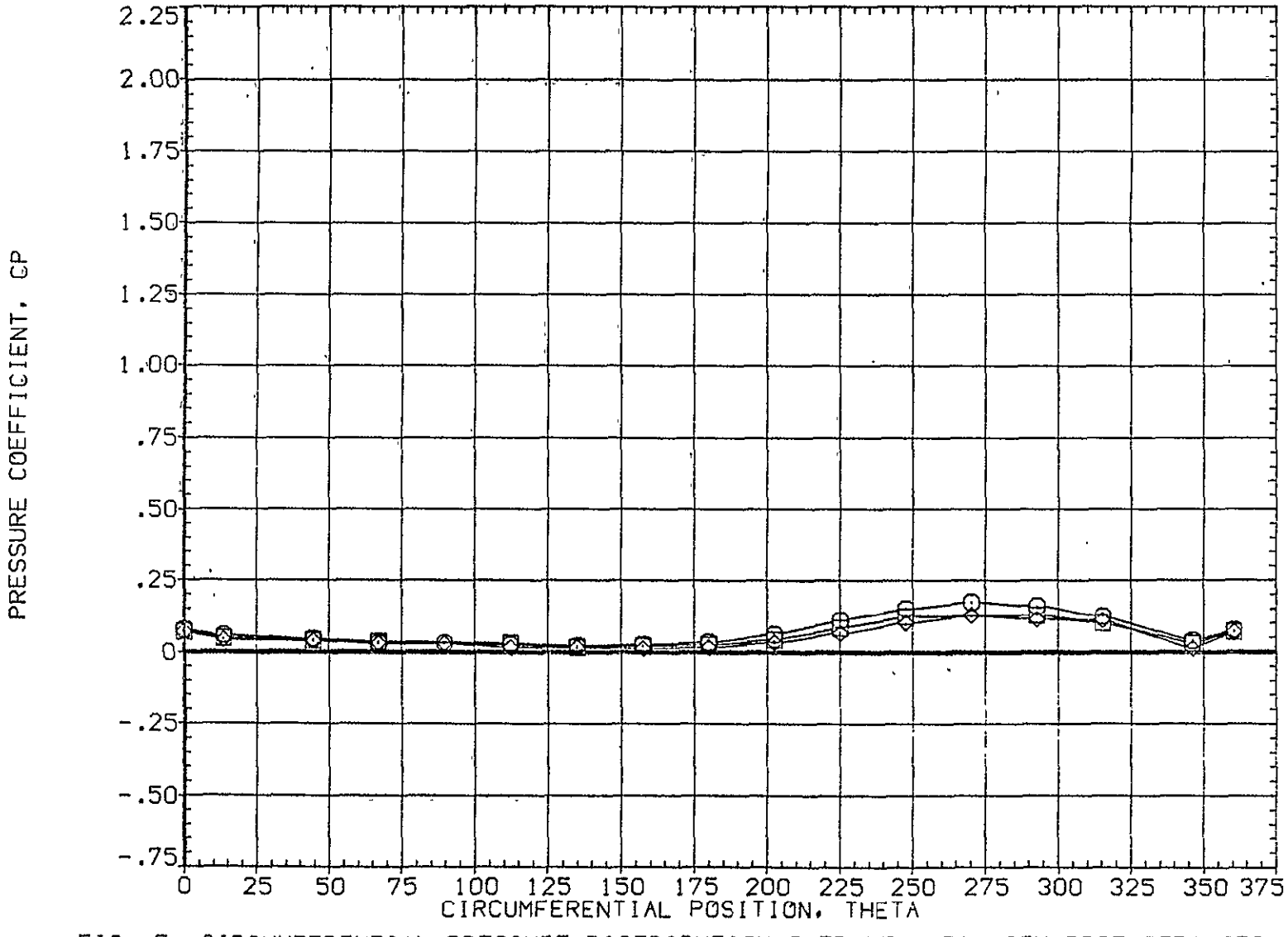

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.470	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

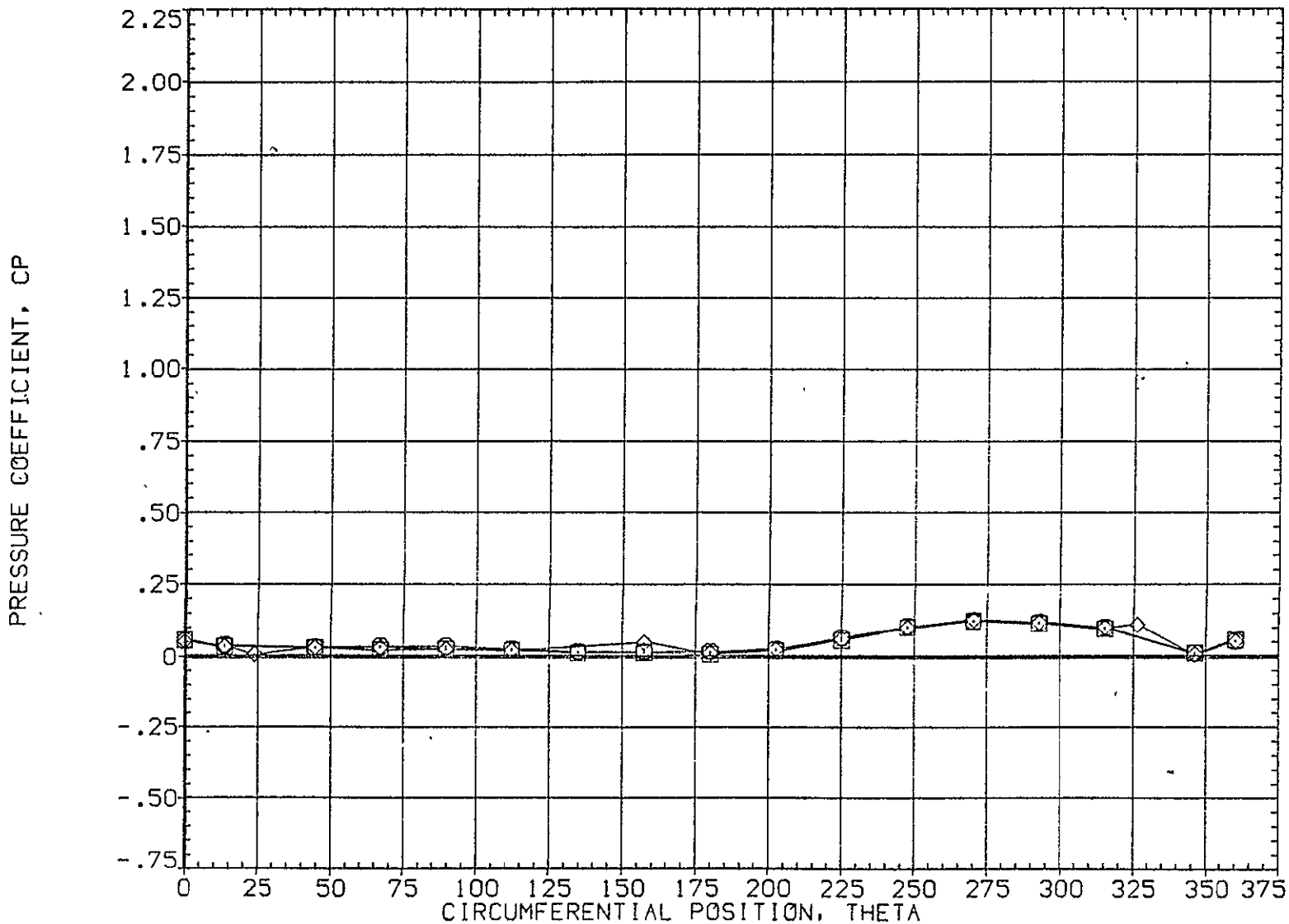

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. (P1A017)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.470	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

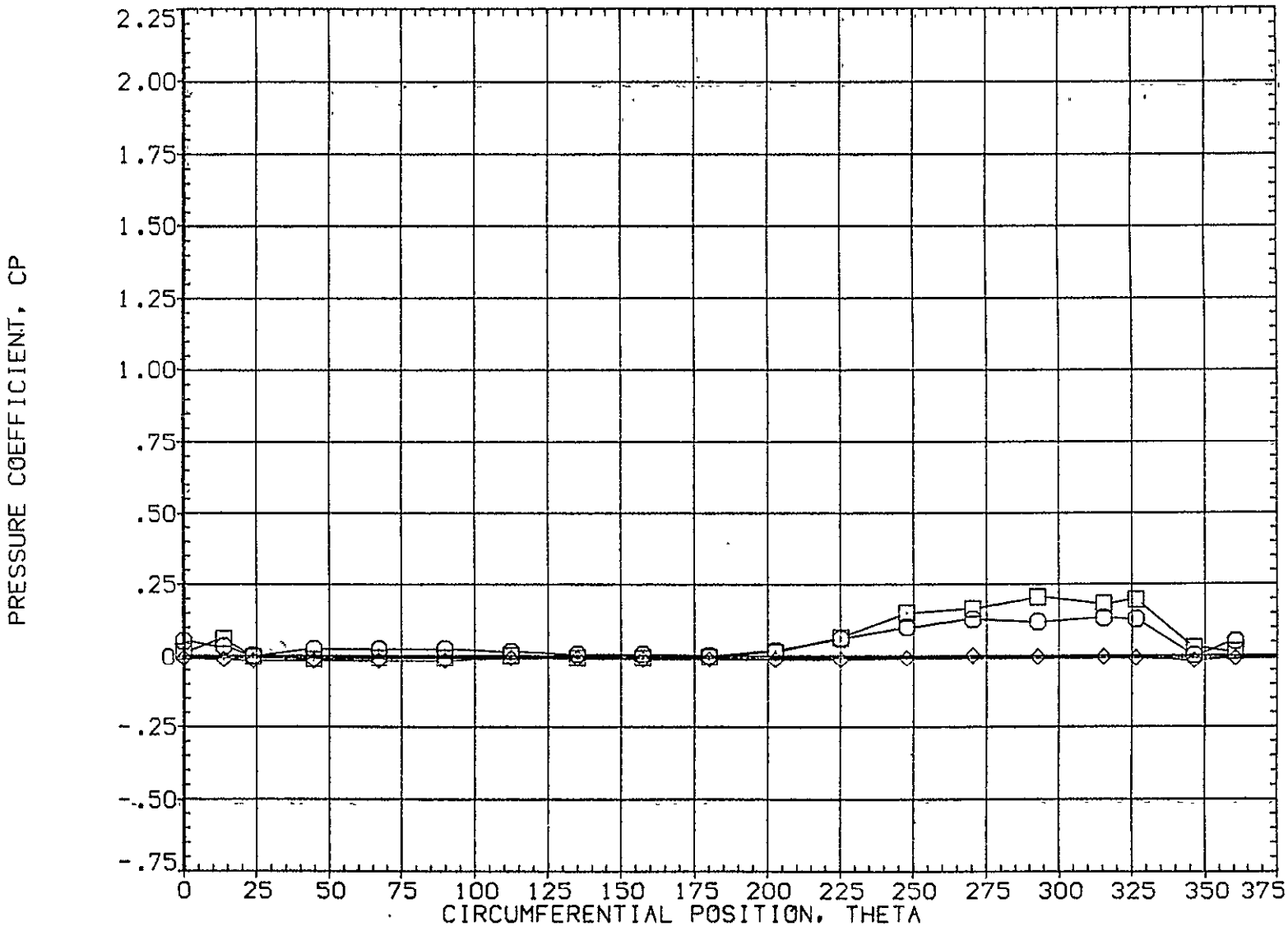

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

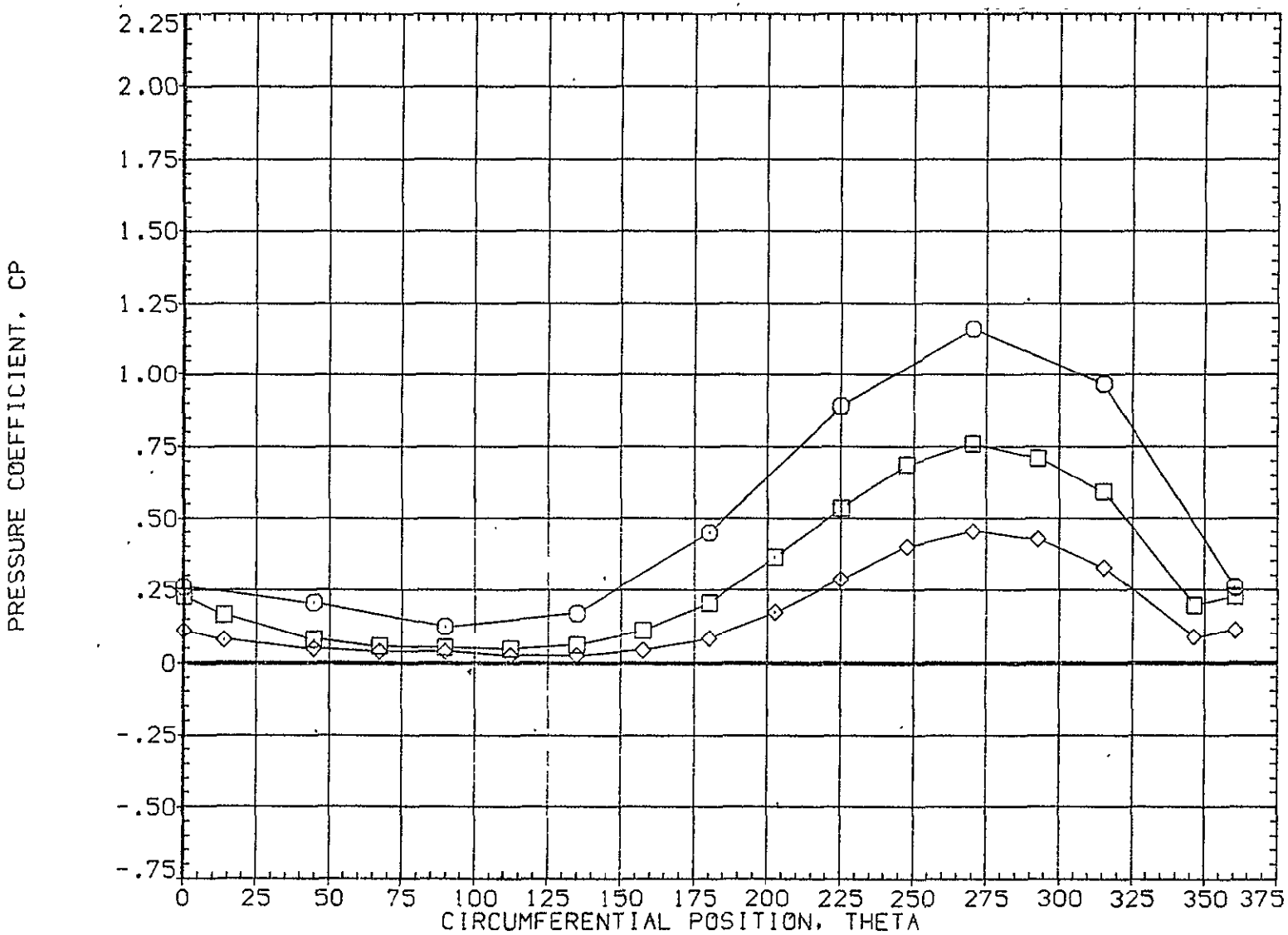

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

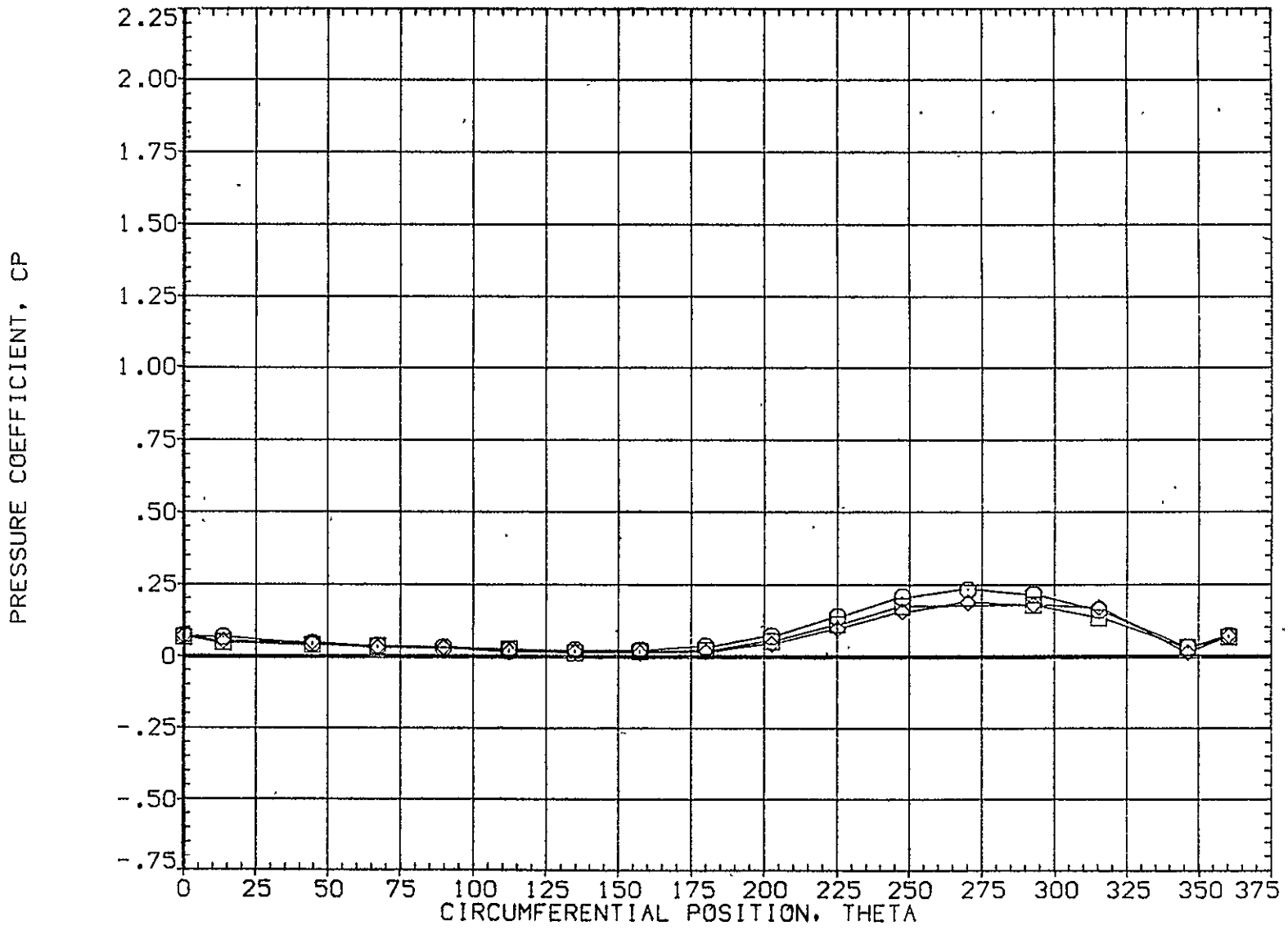

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

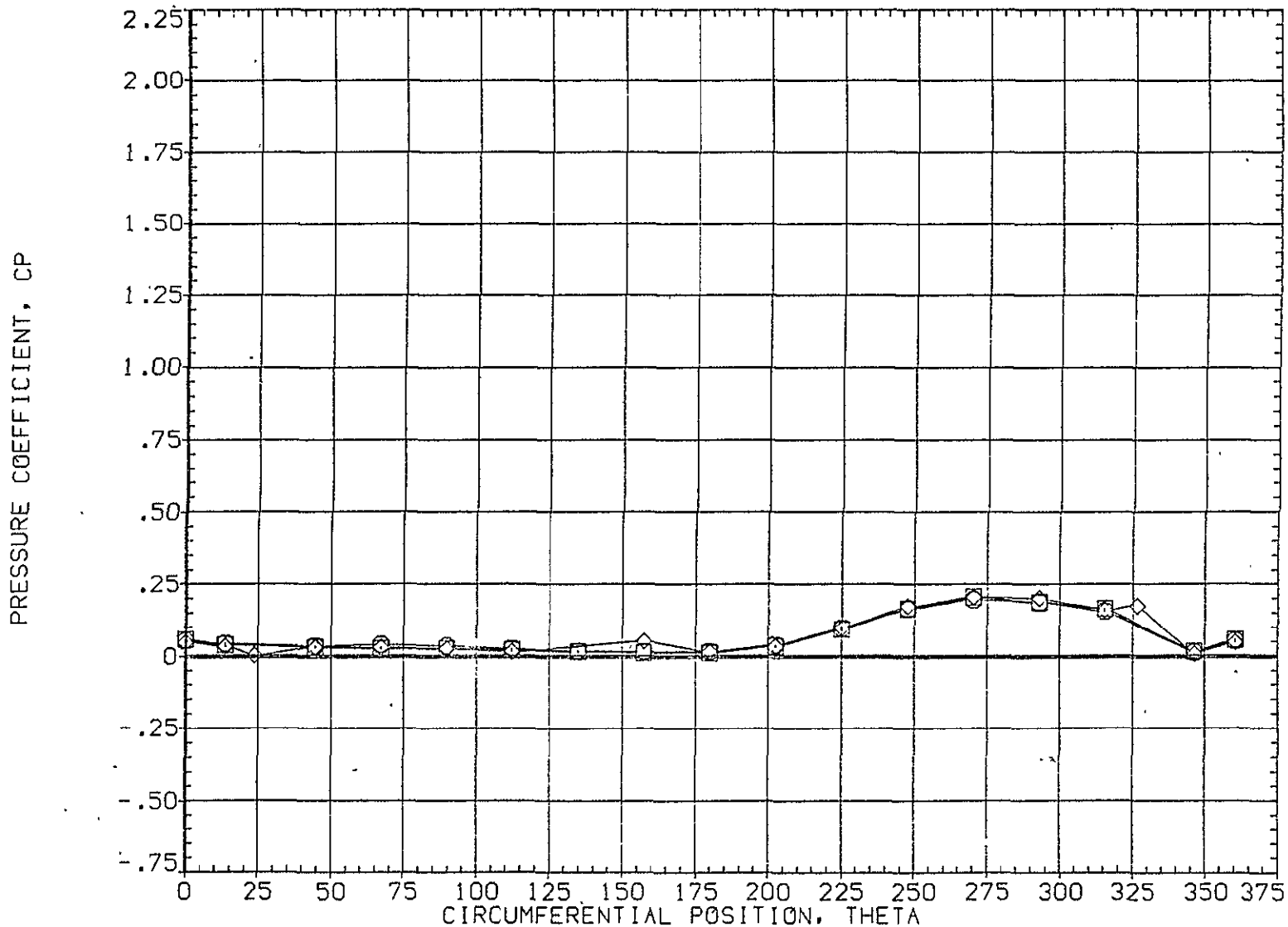

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A018)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

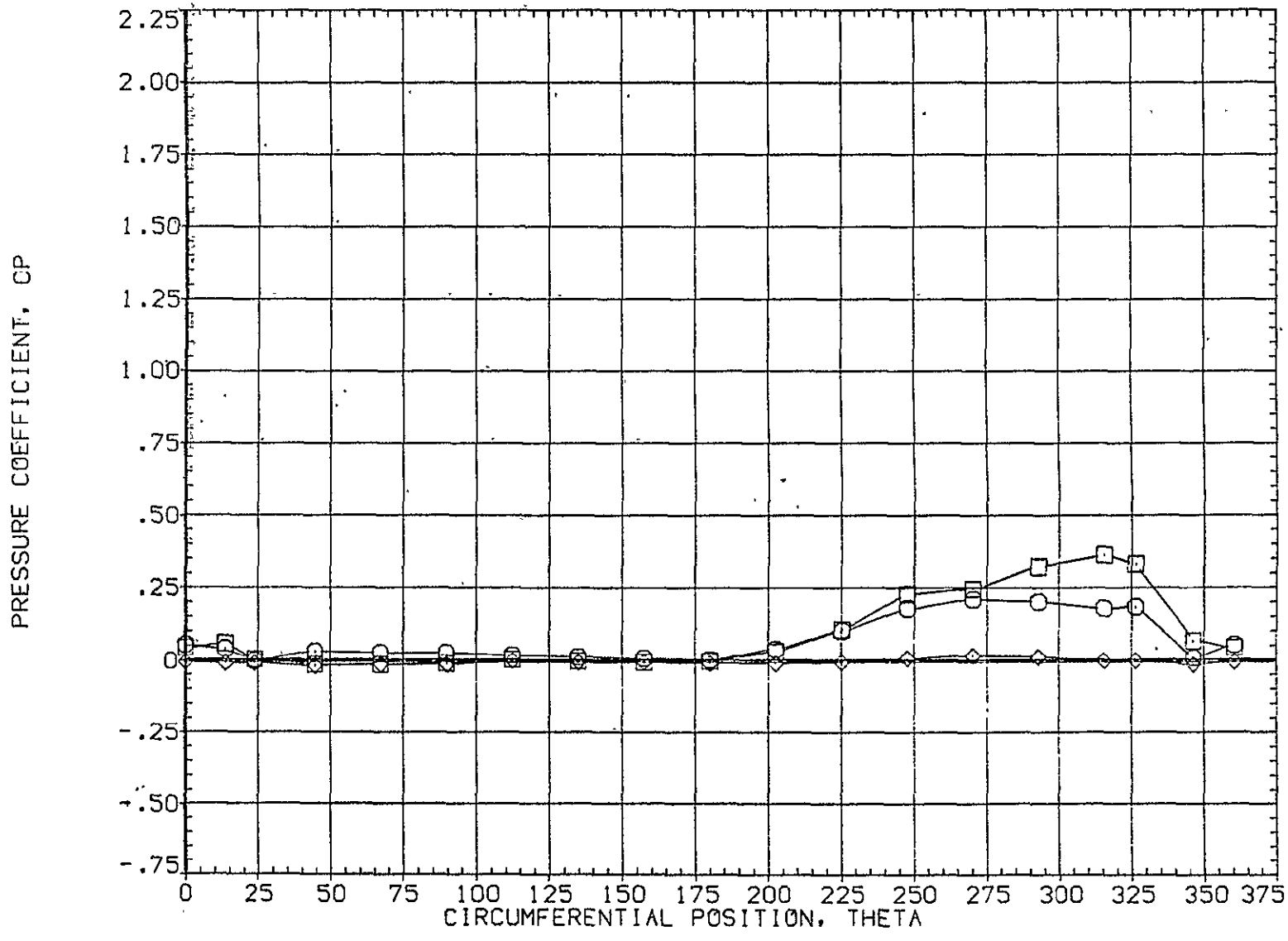

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

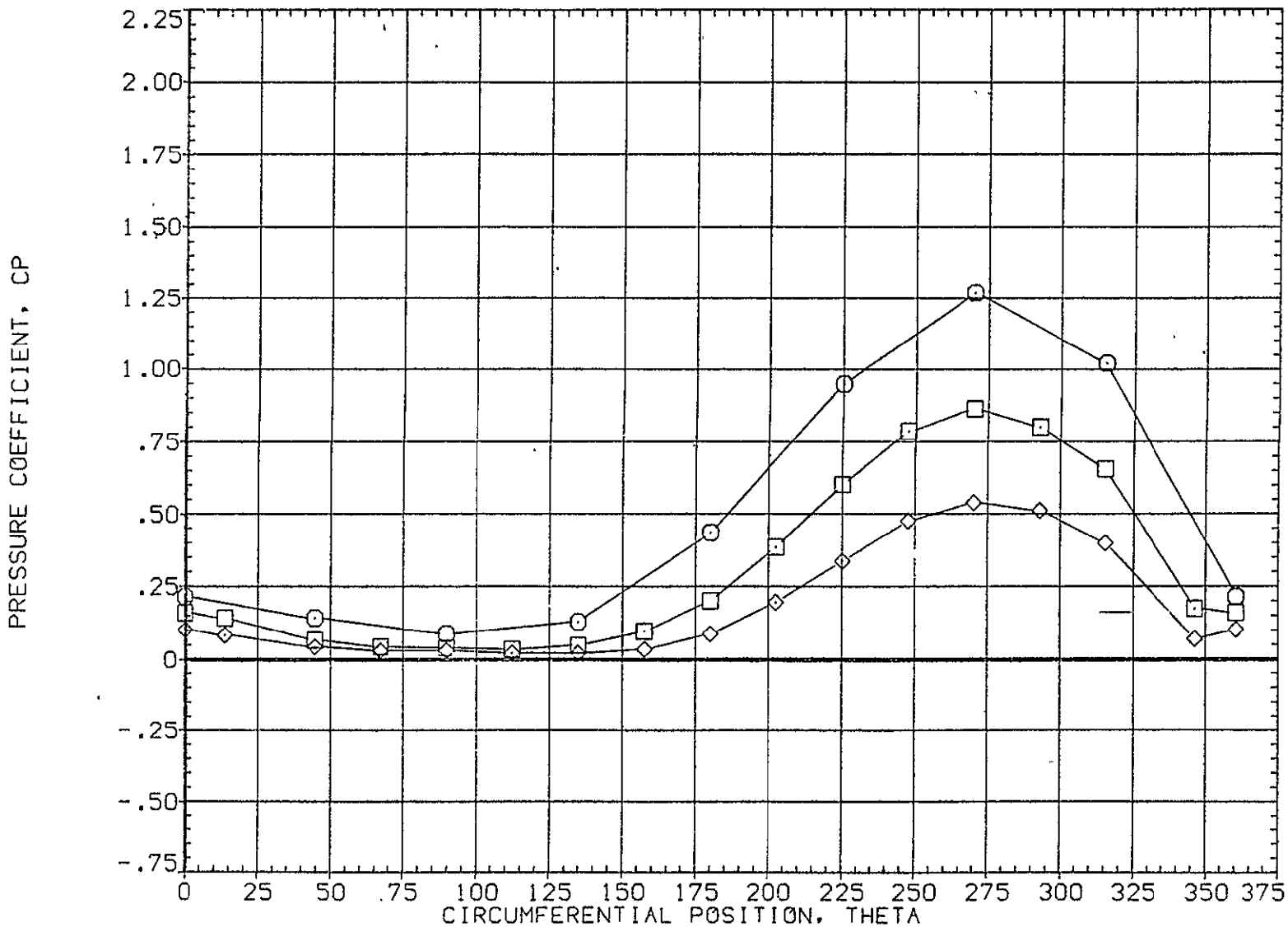

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

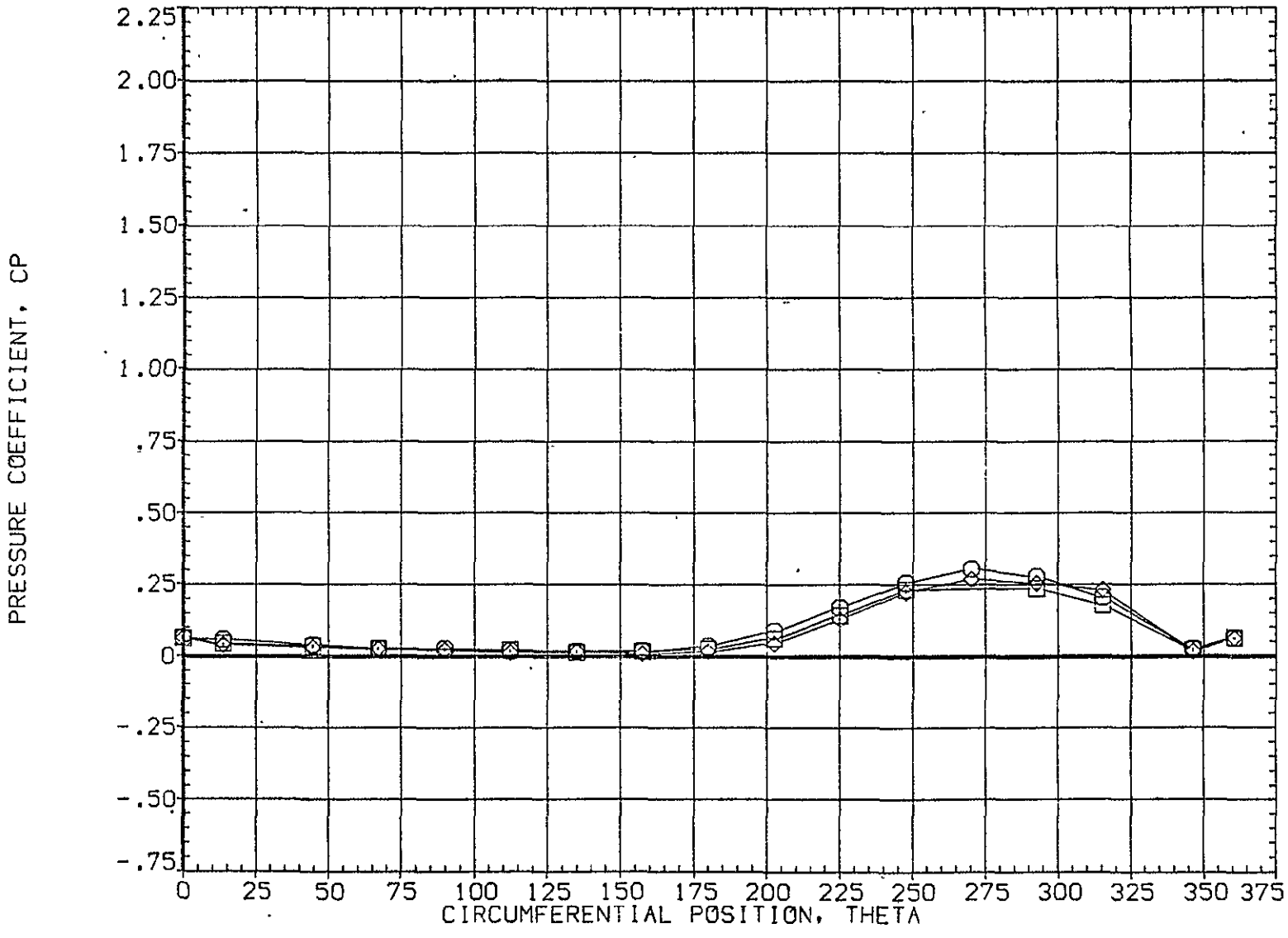

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

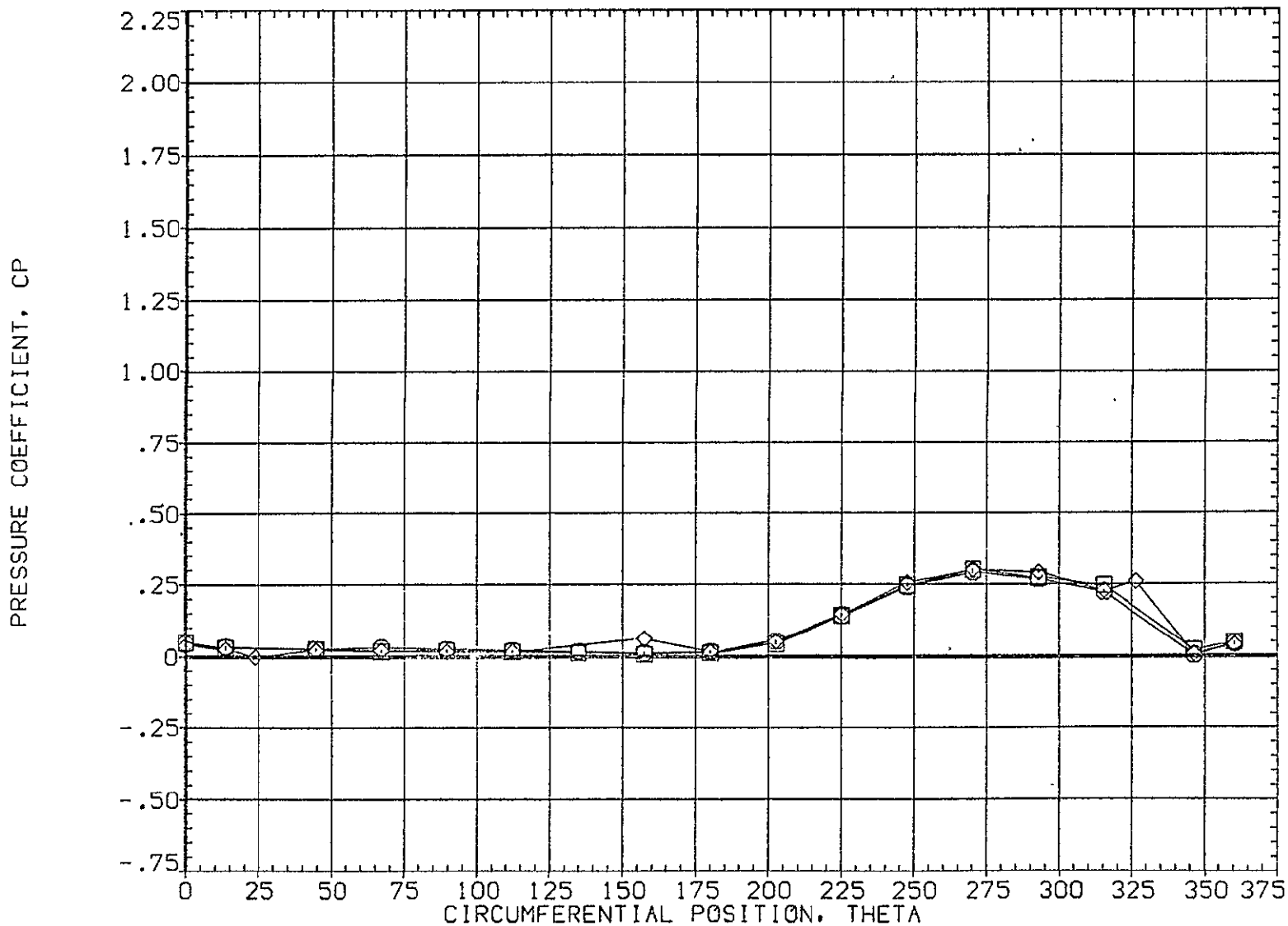

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A019)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

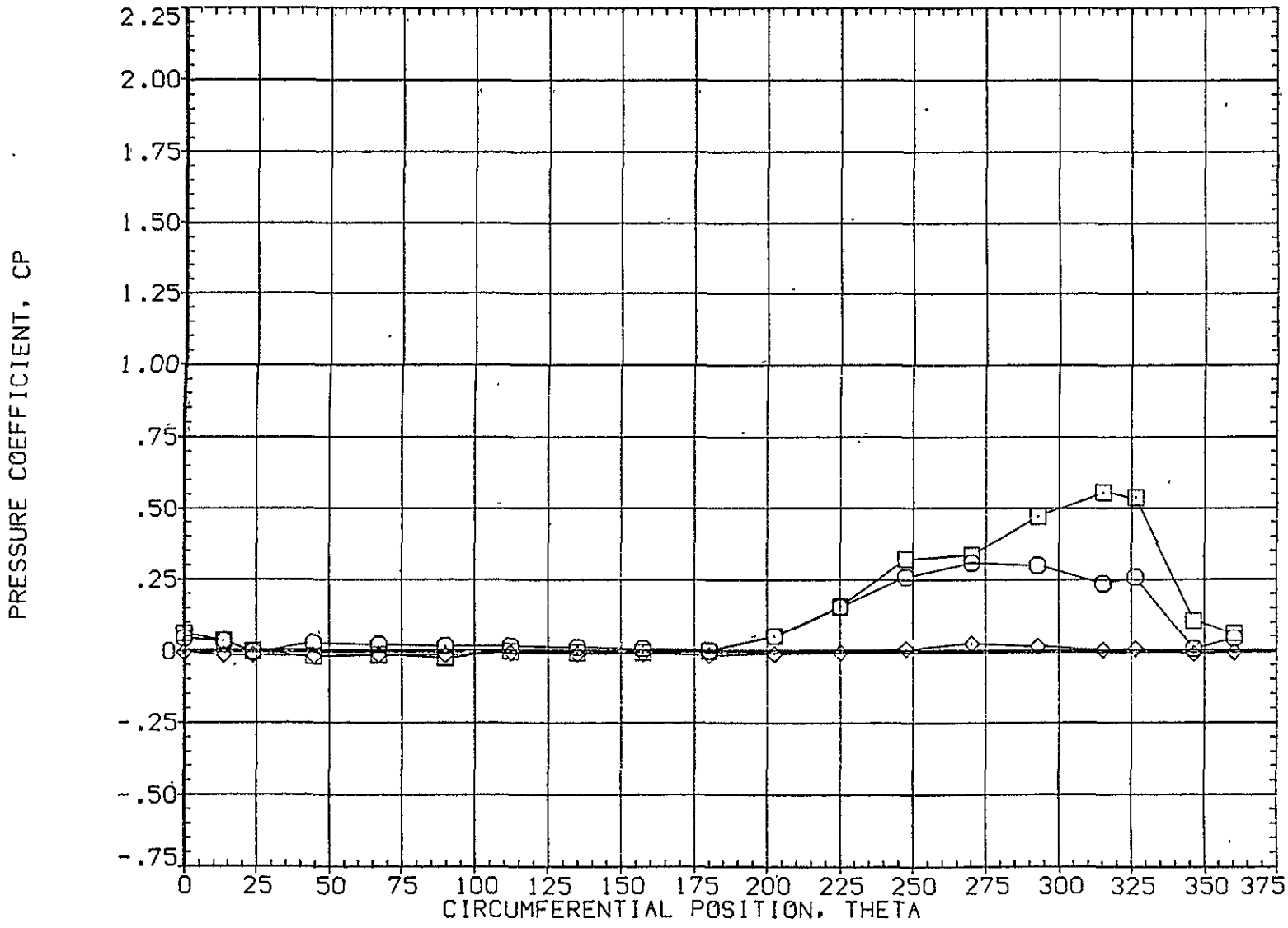

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.540	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

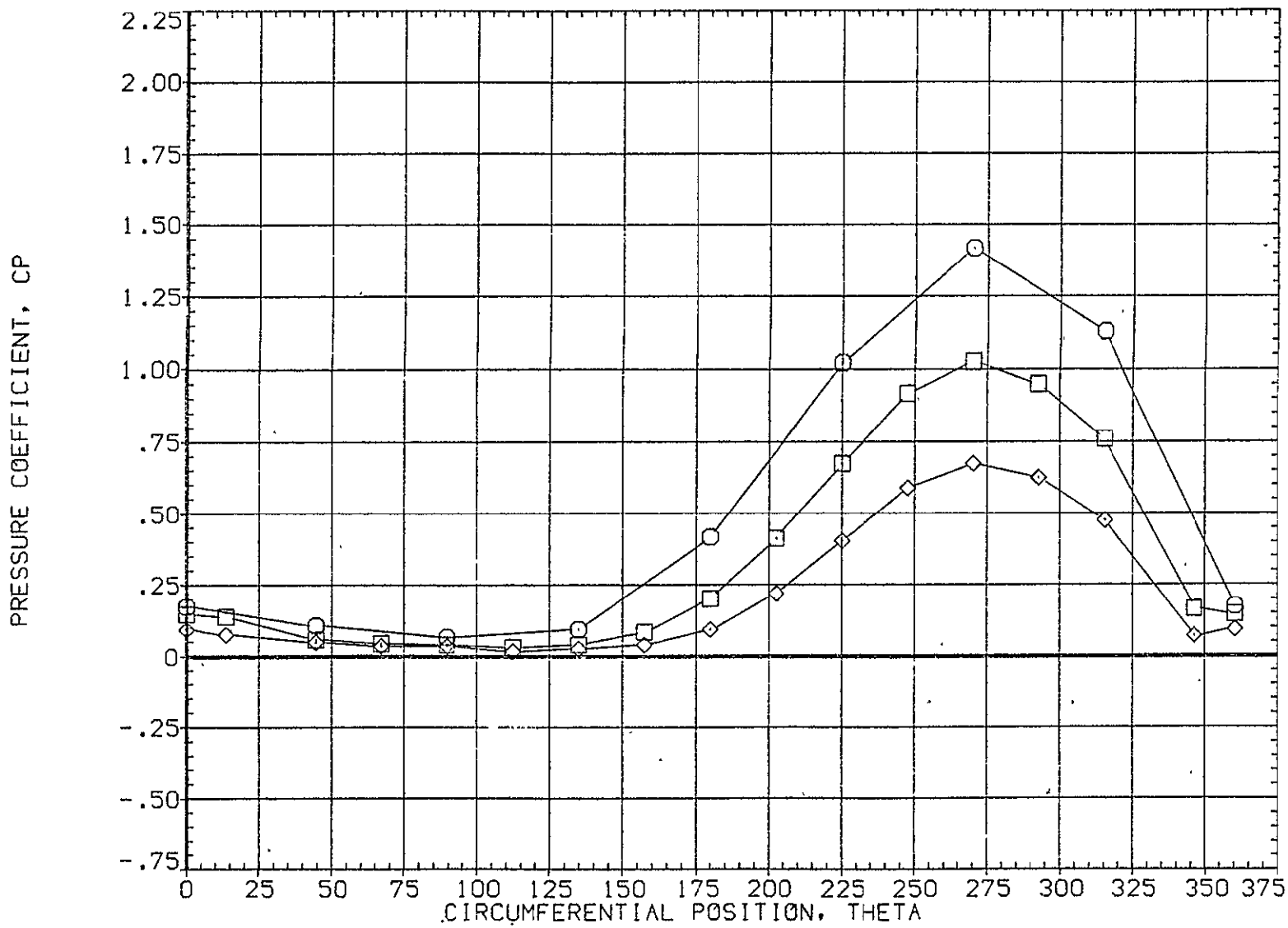

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T-1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

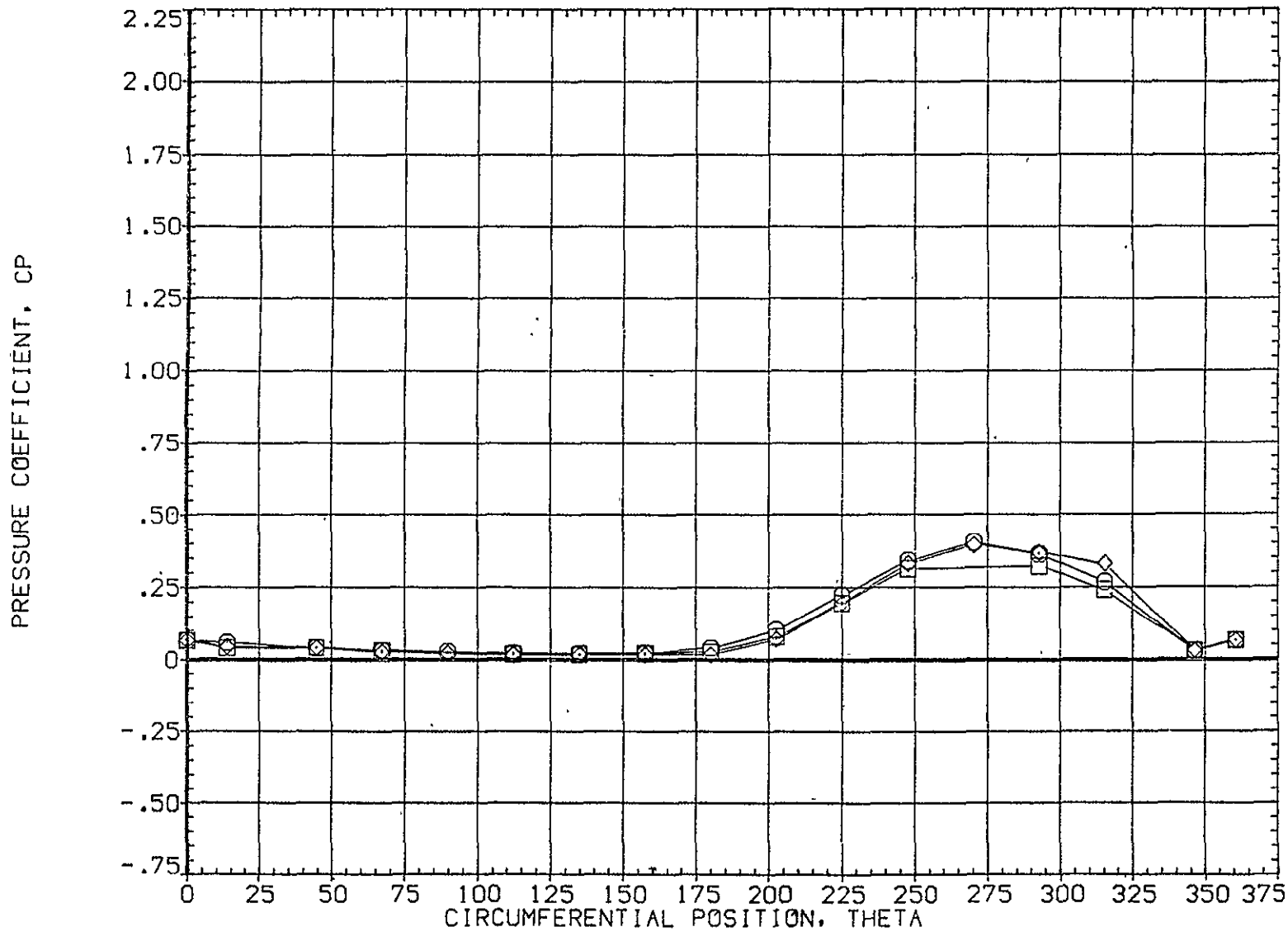

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.540	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

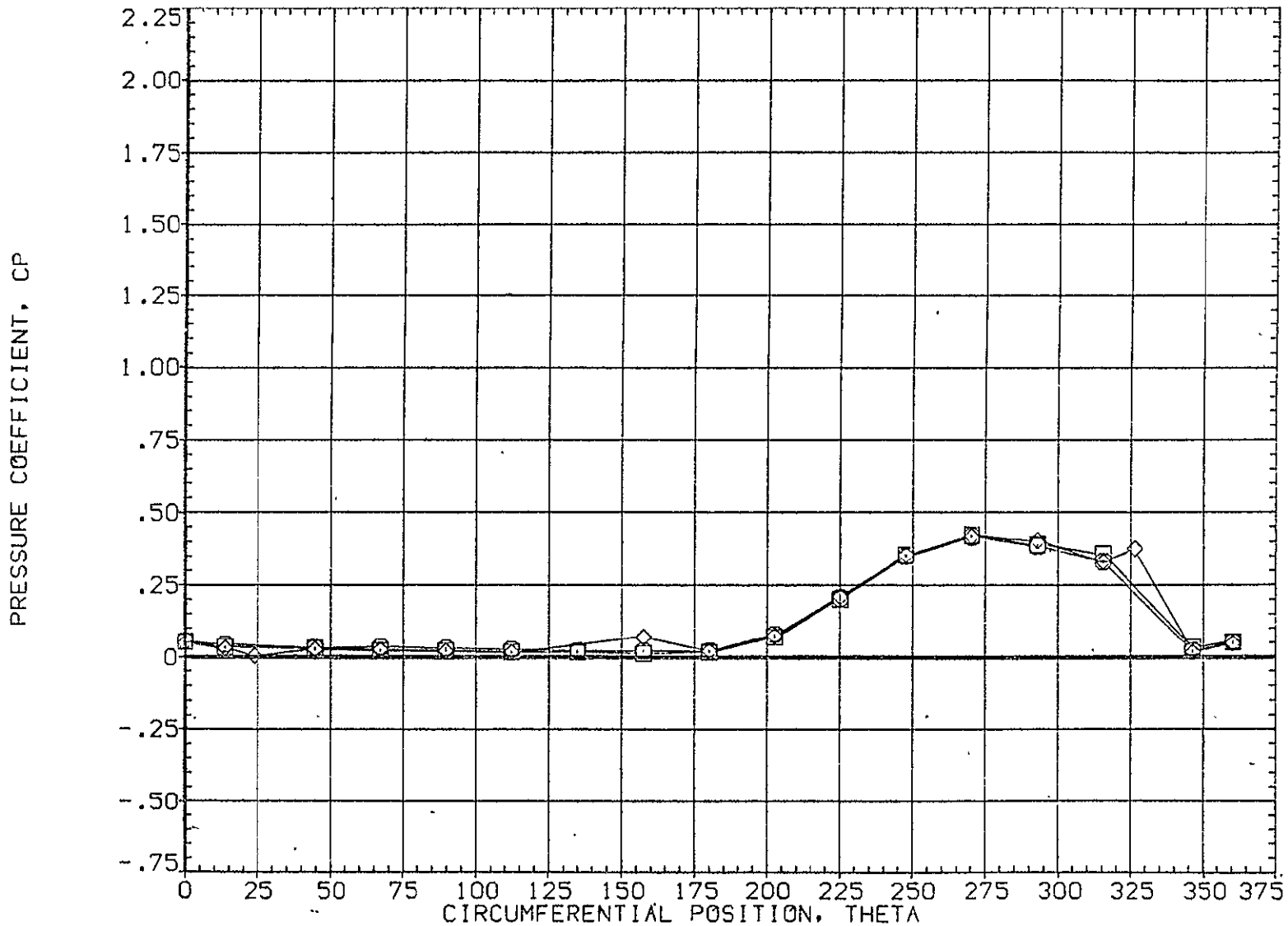

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A020)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	90.000

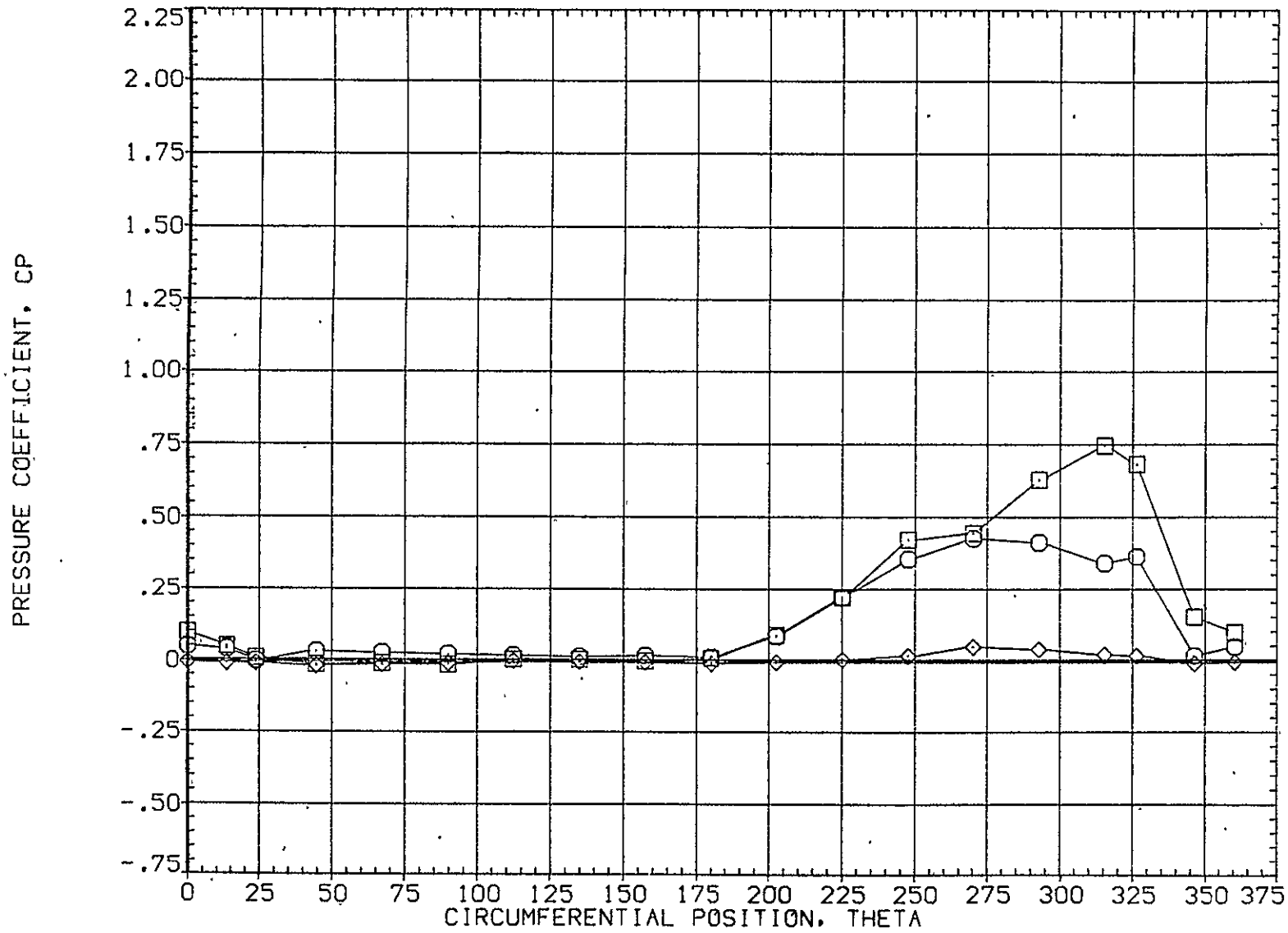

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

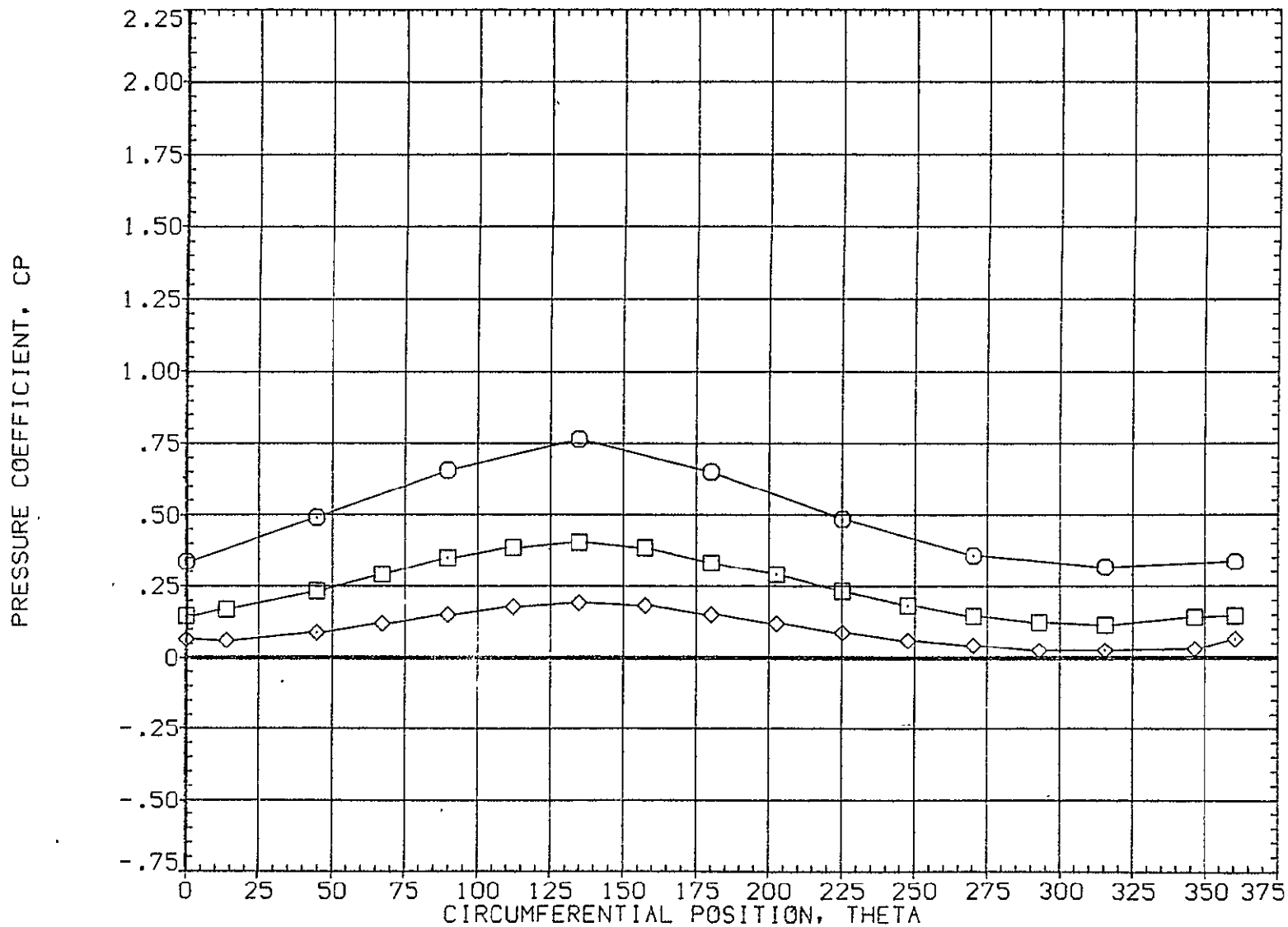

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

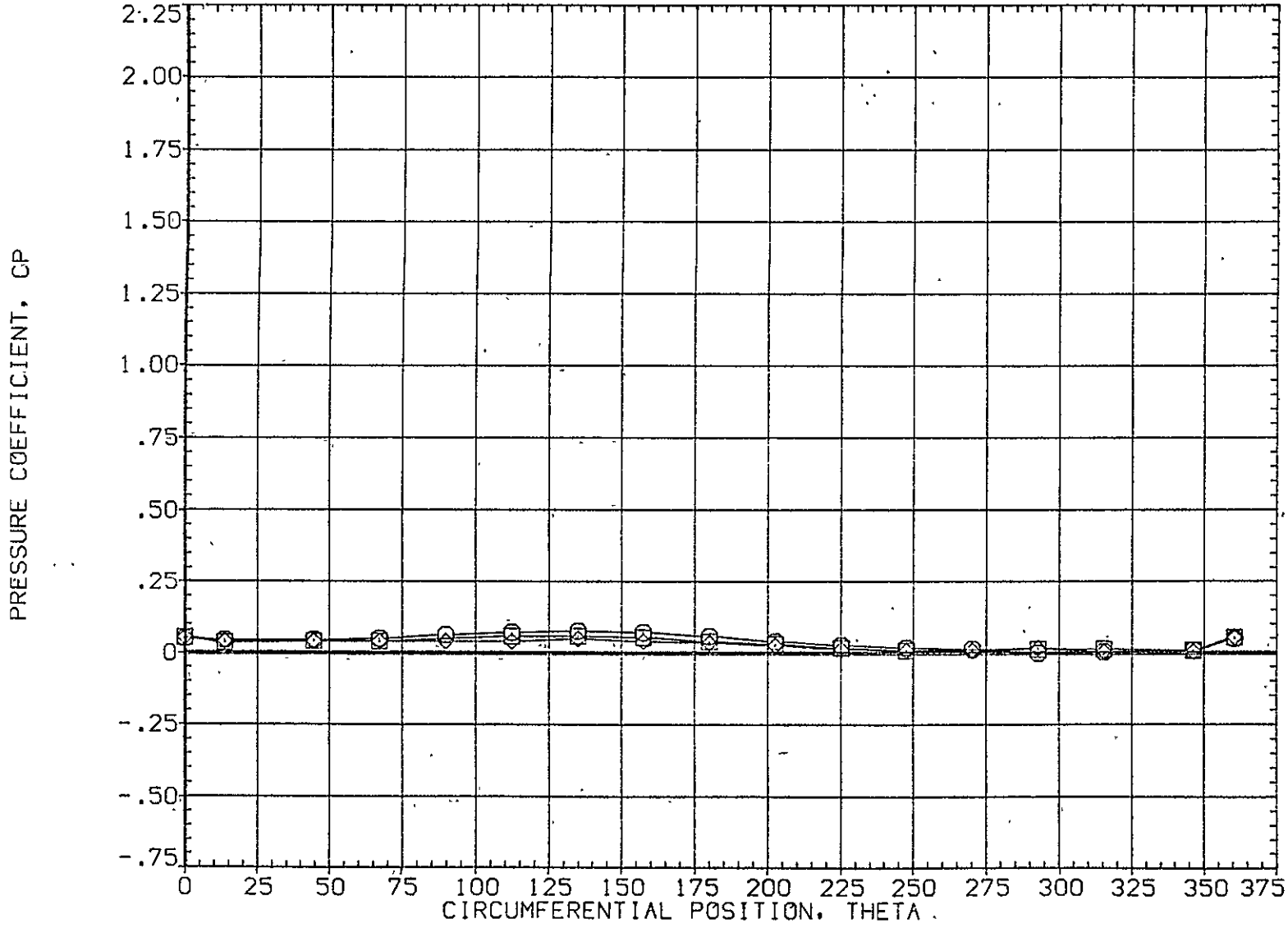

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

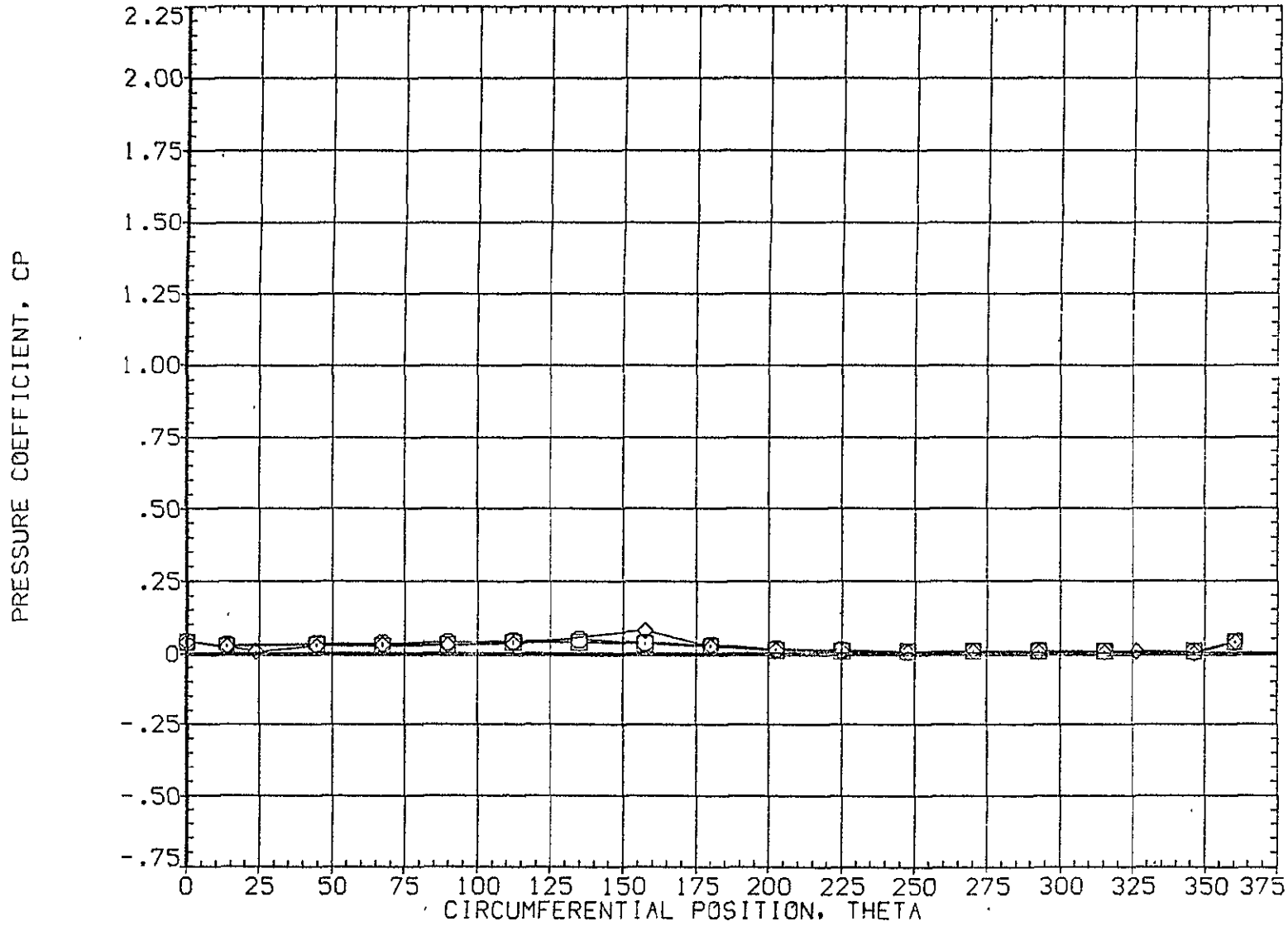

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A021)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

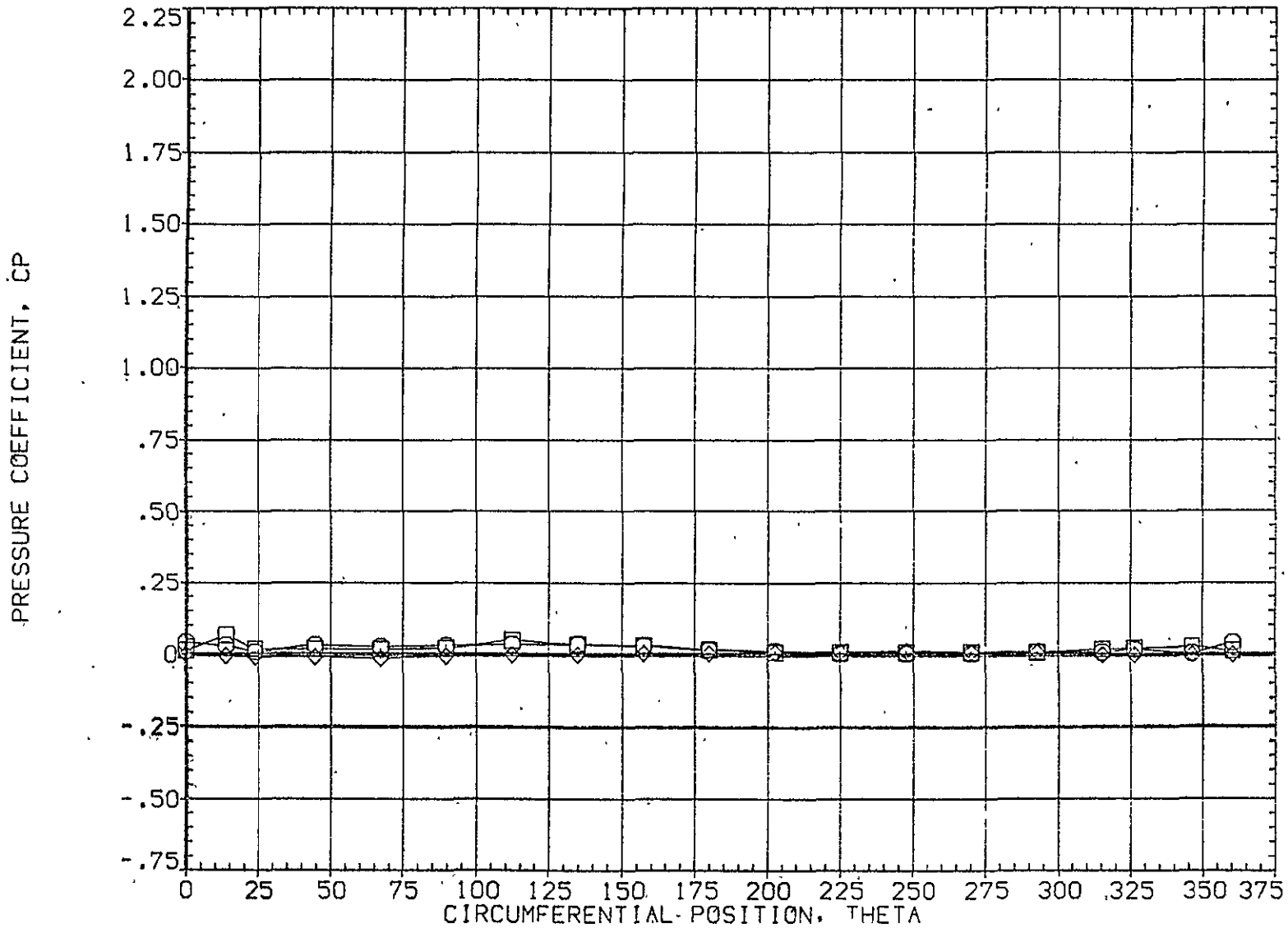

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

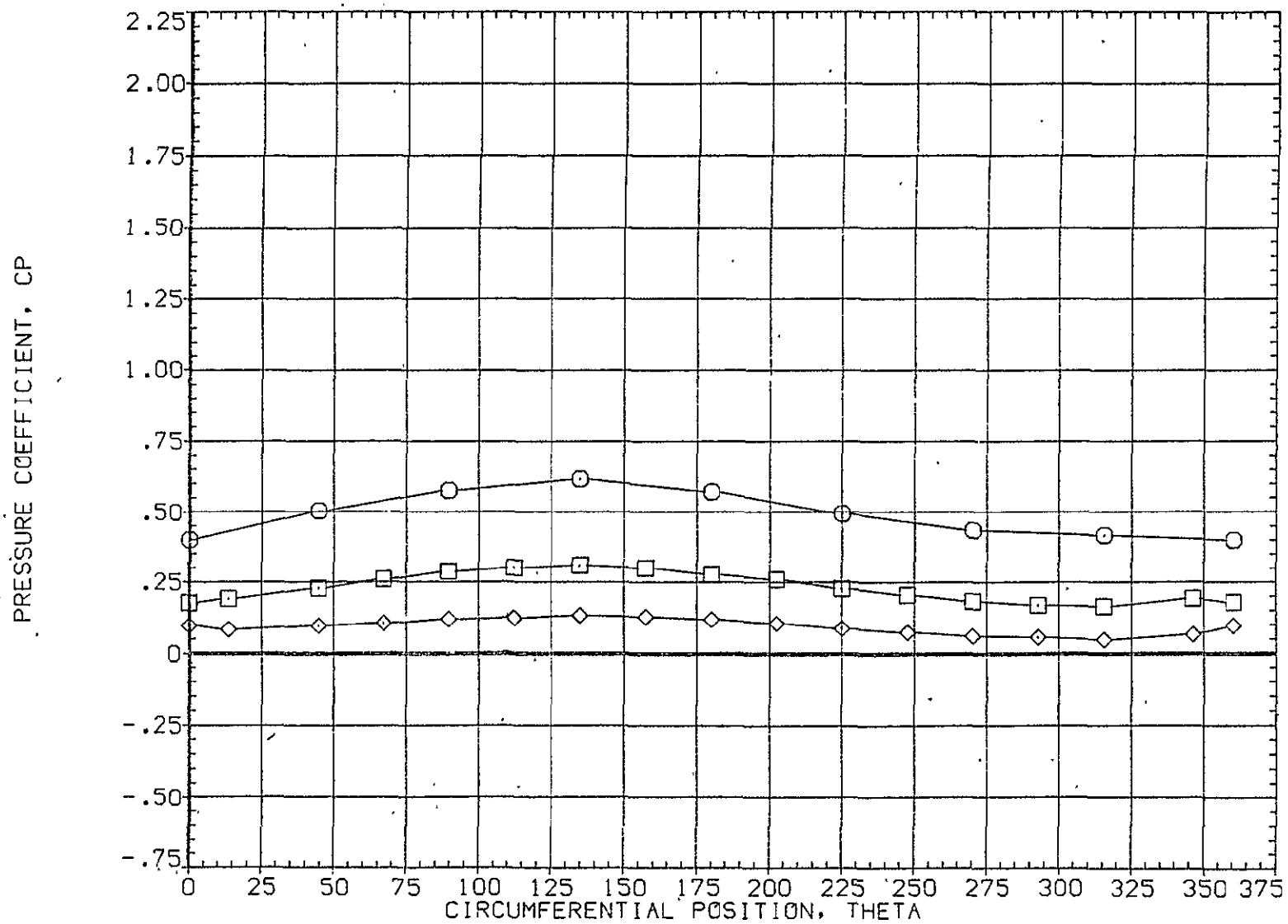

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

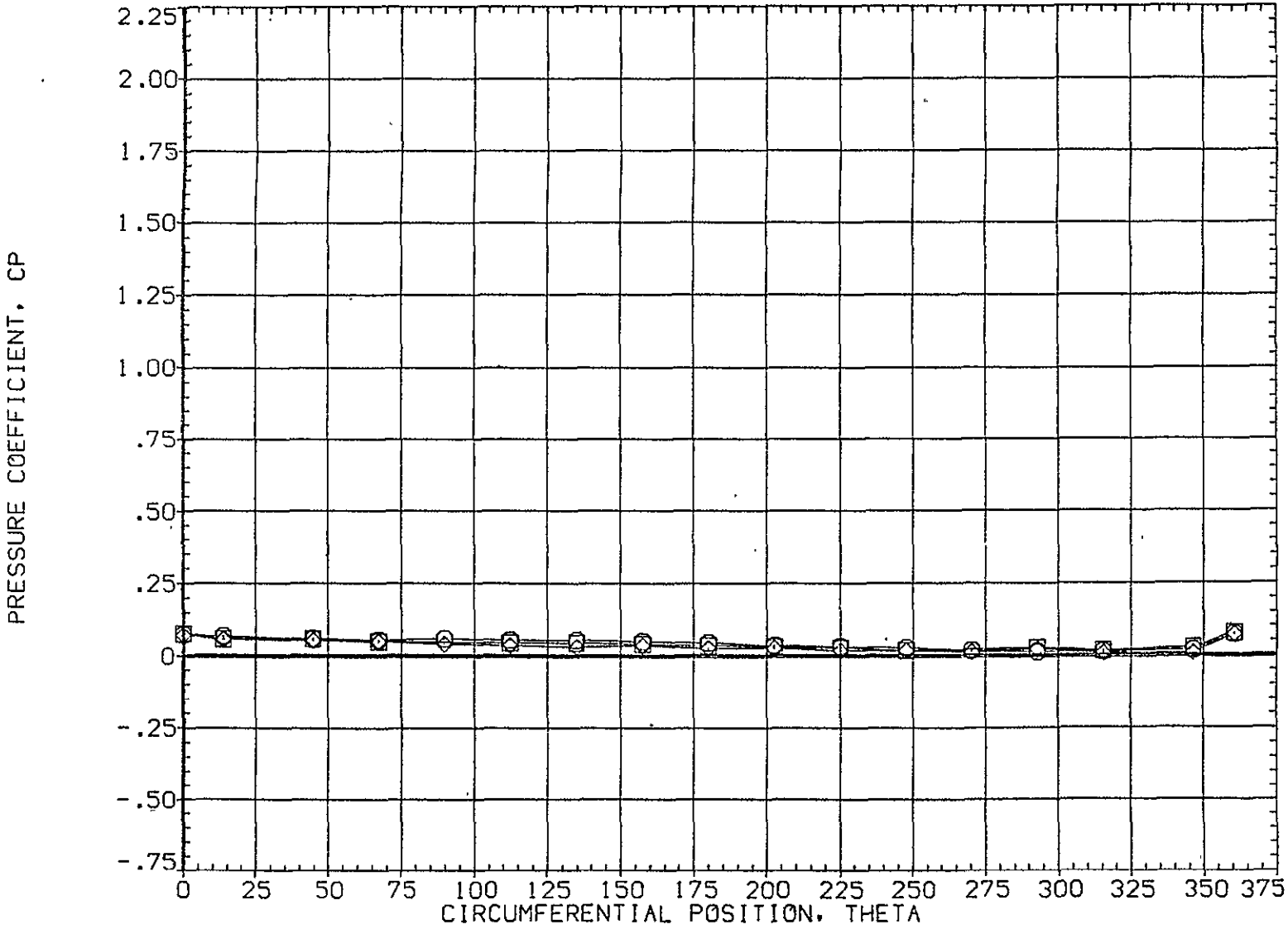

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

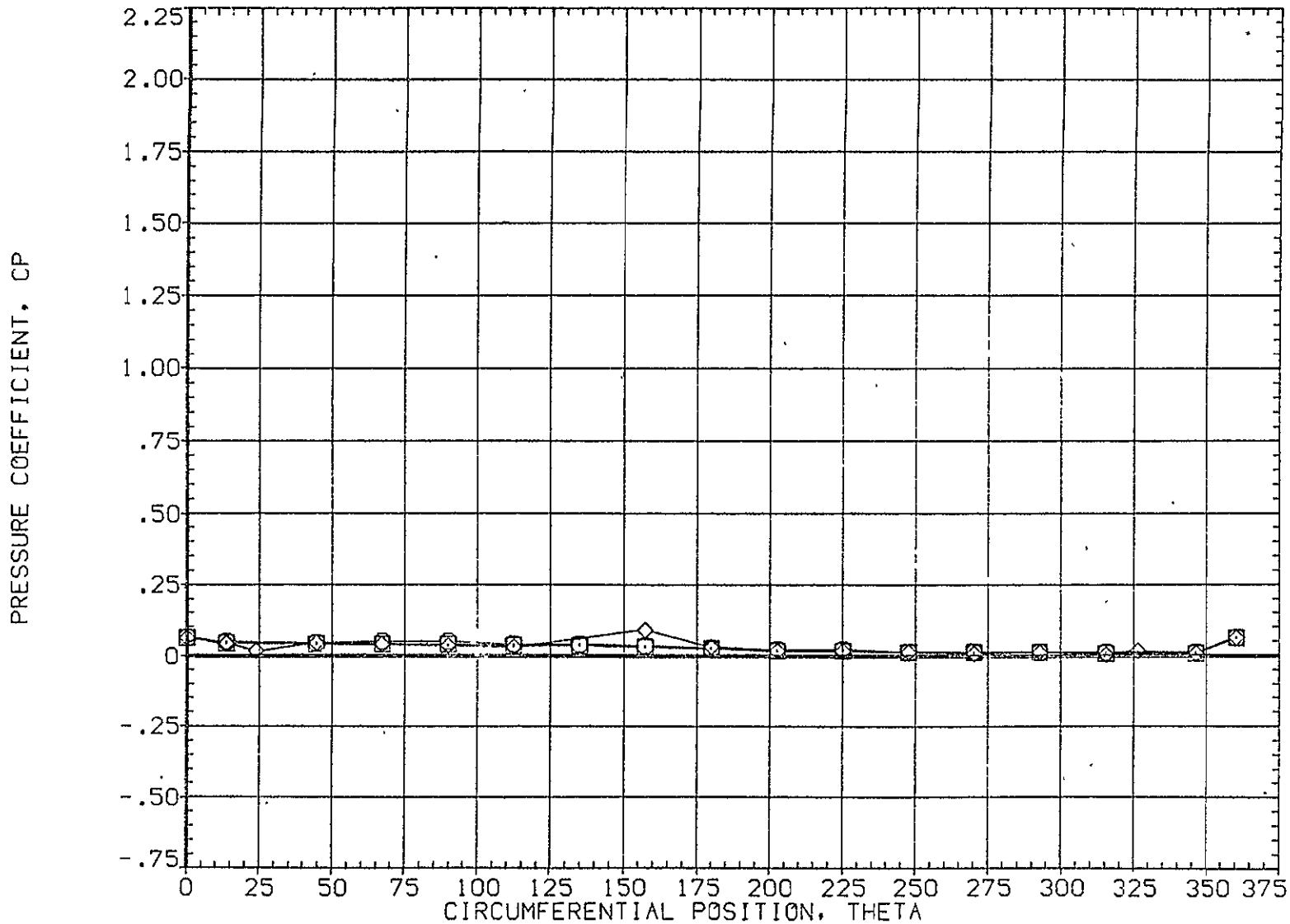

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A022)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

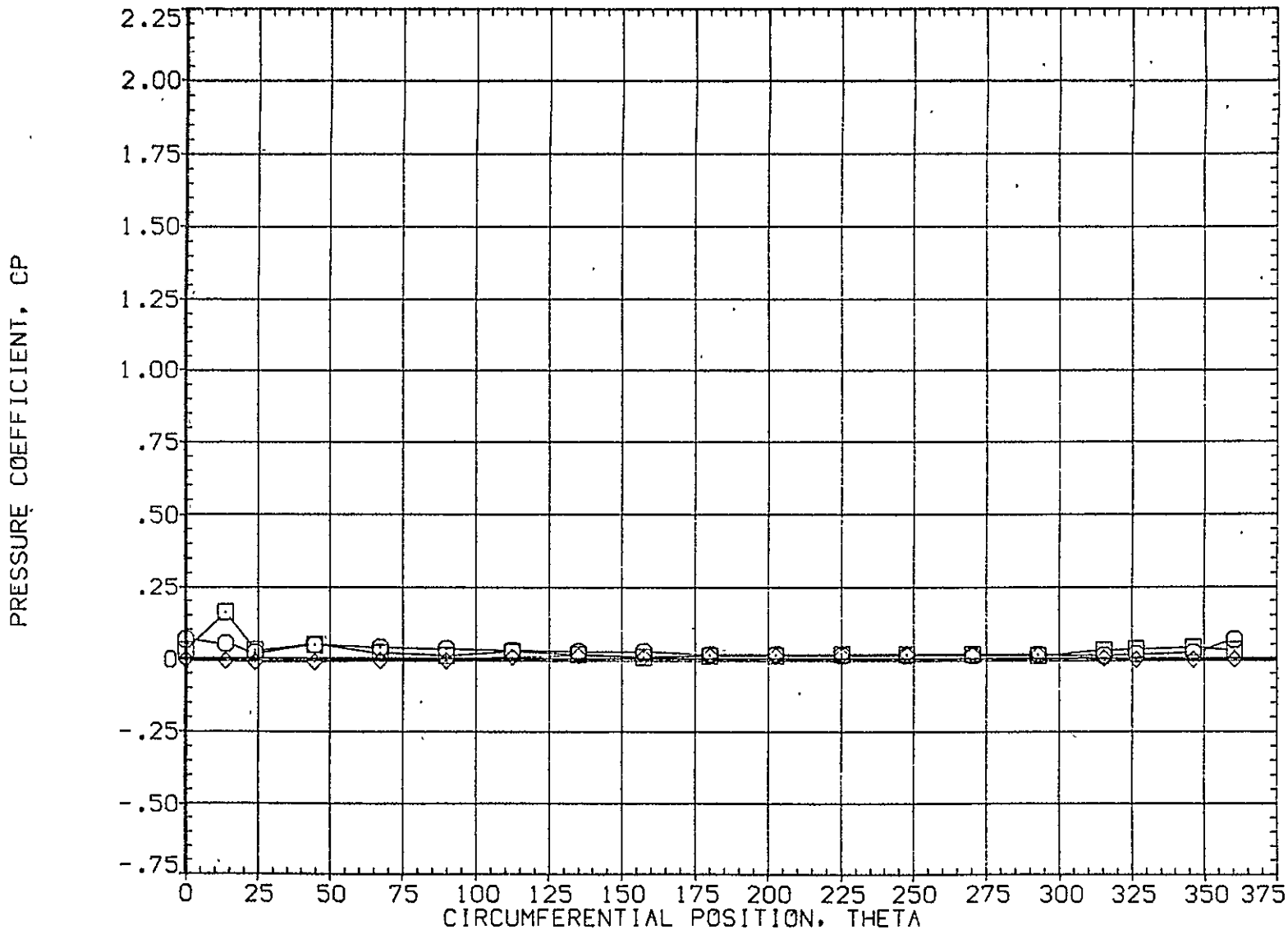

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI .	135.000

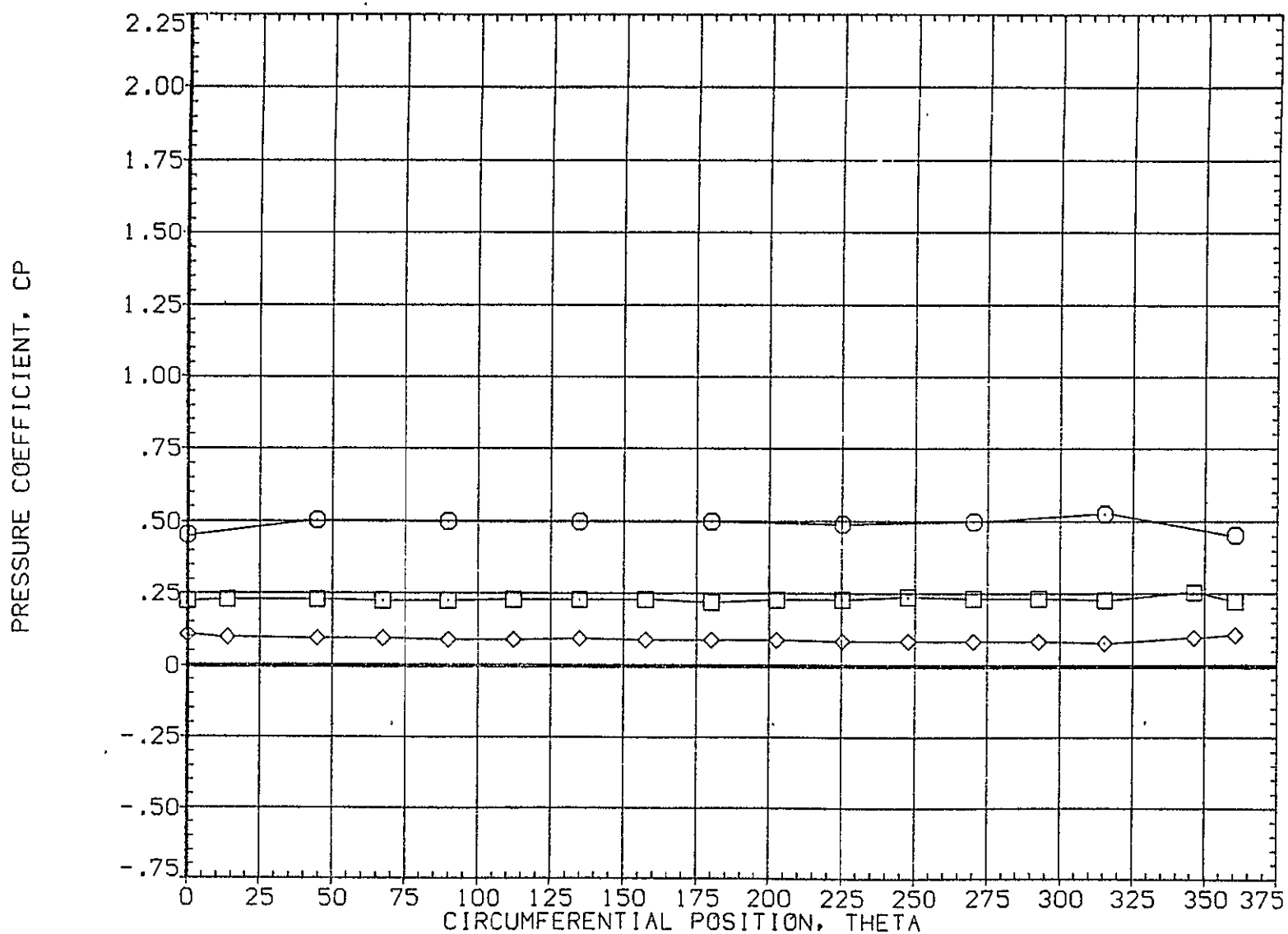

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

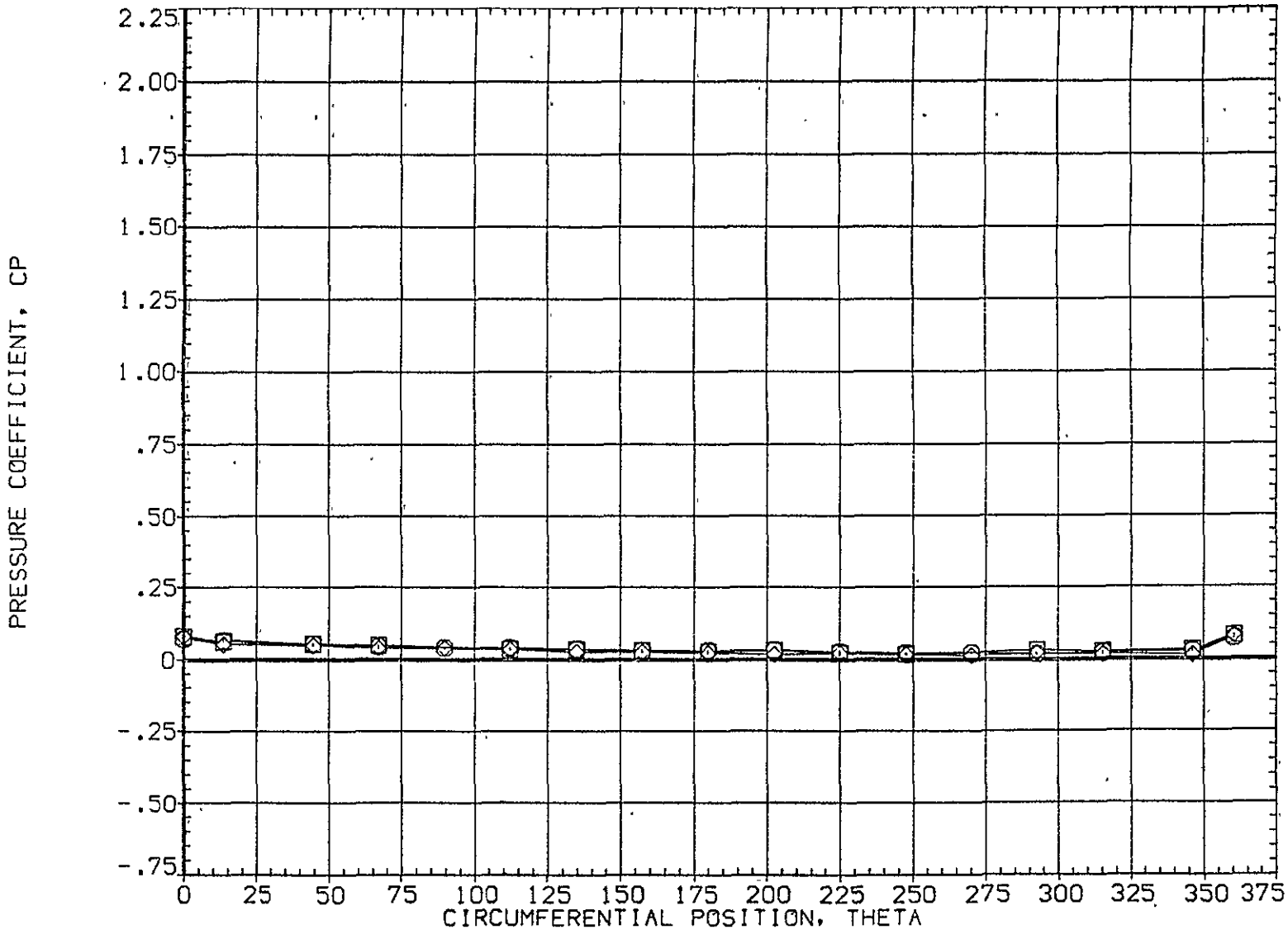

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

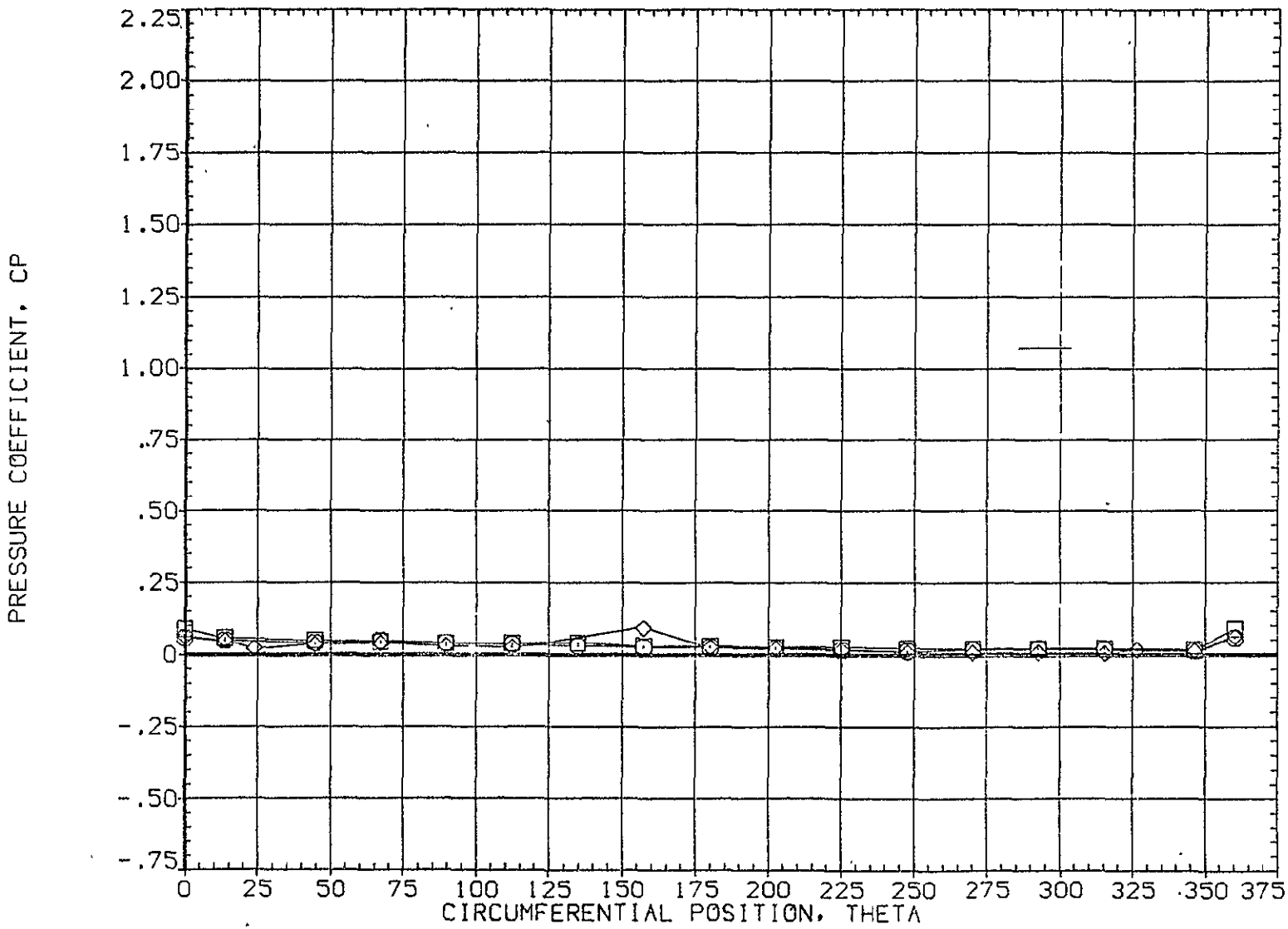

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A023)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

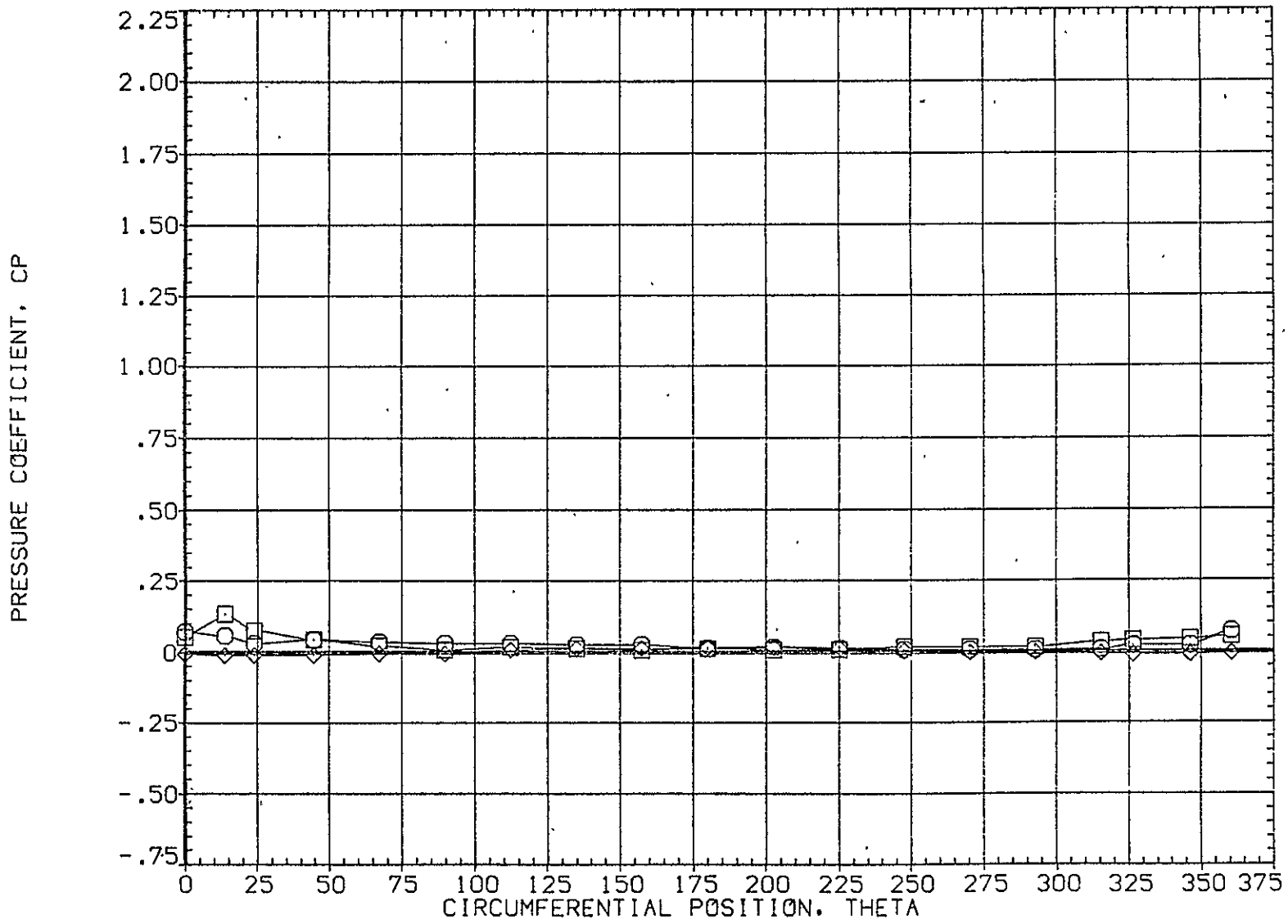

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

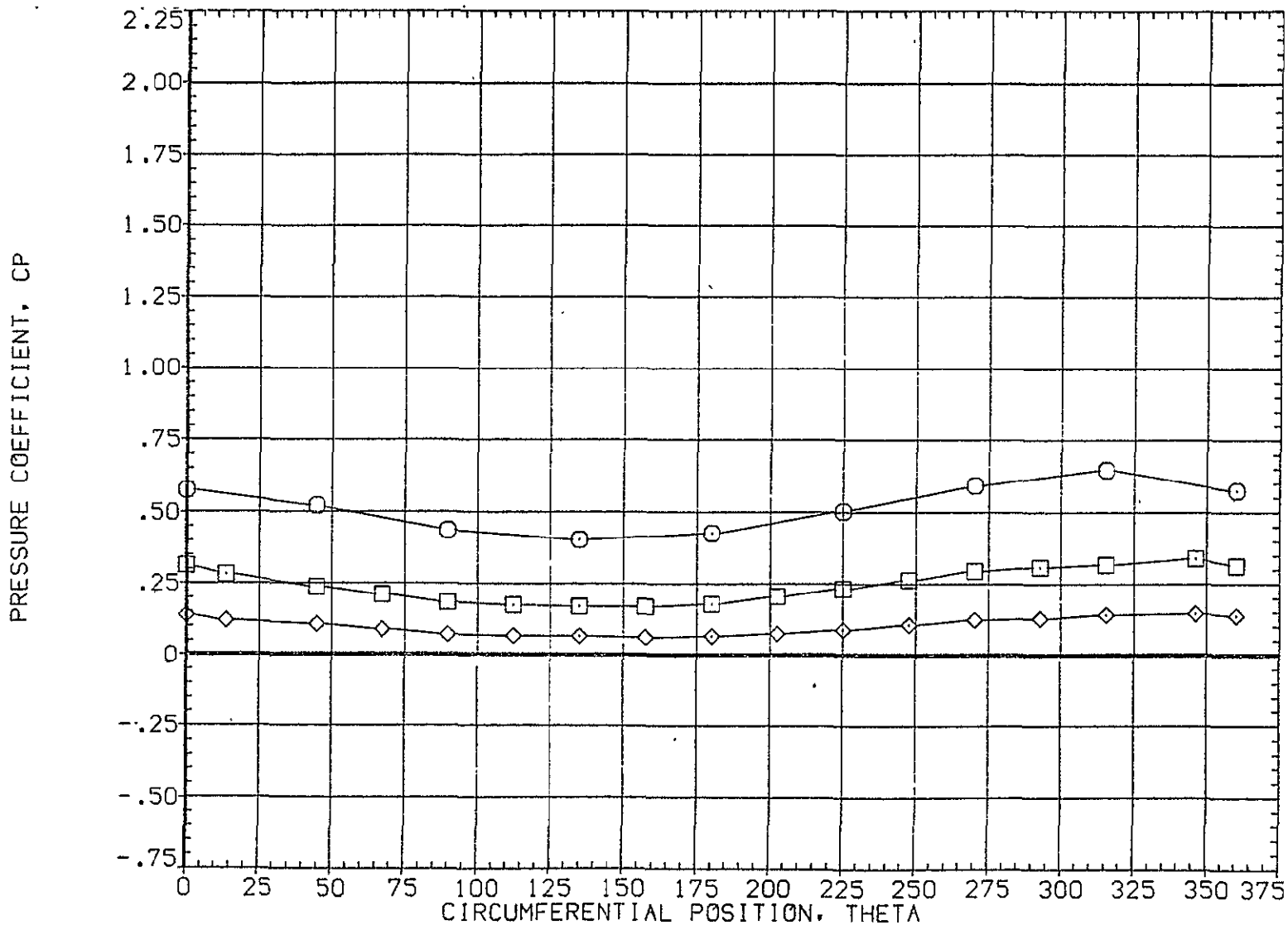

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

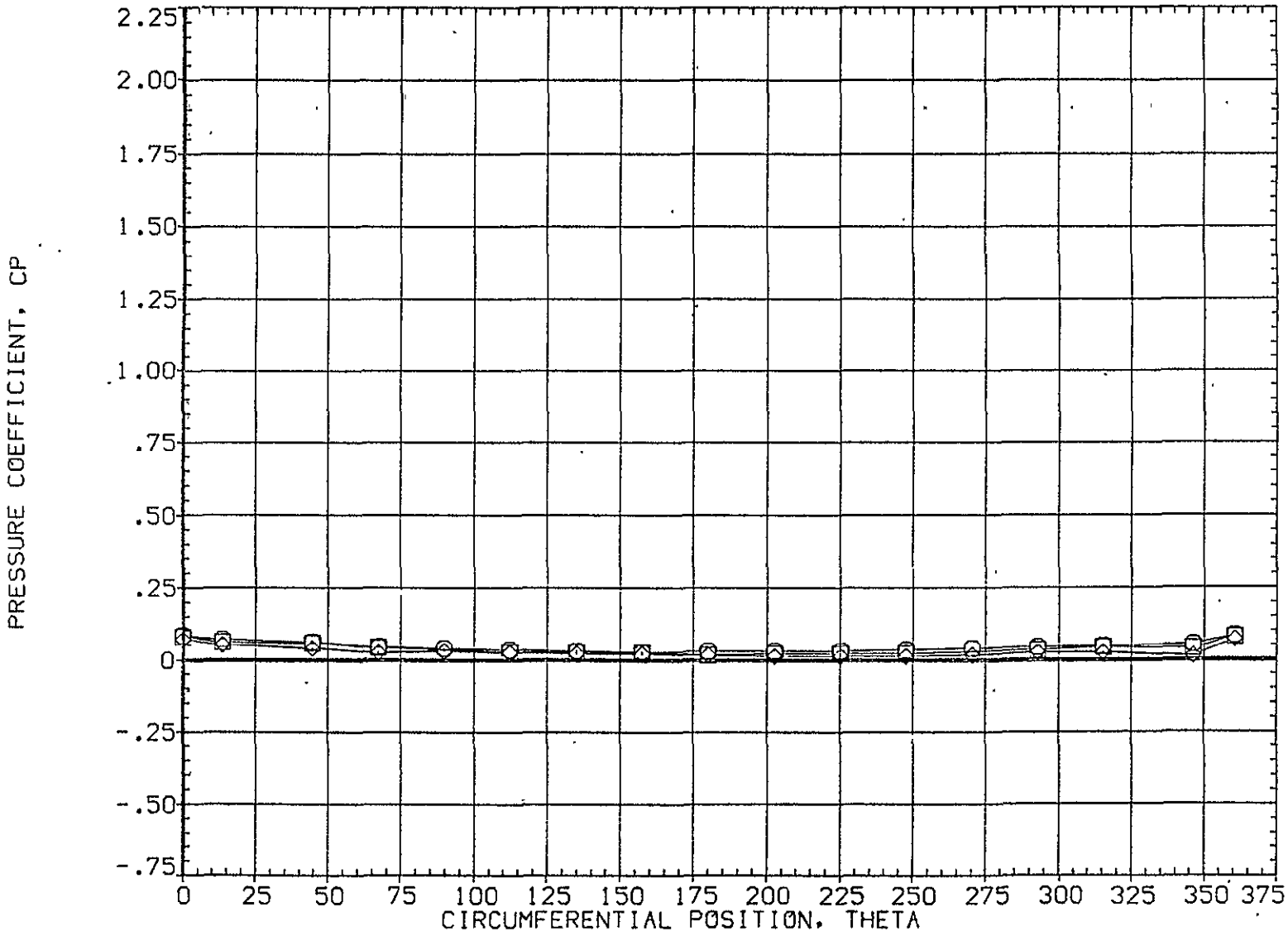

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

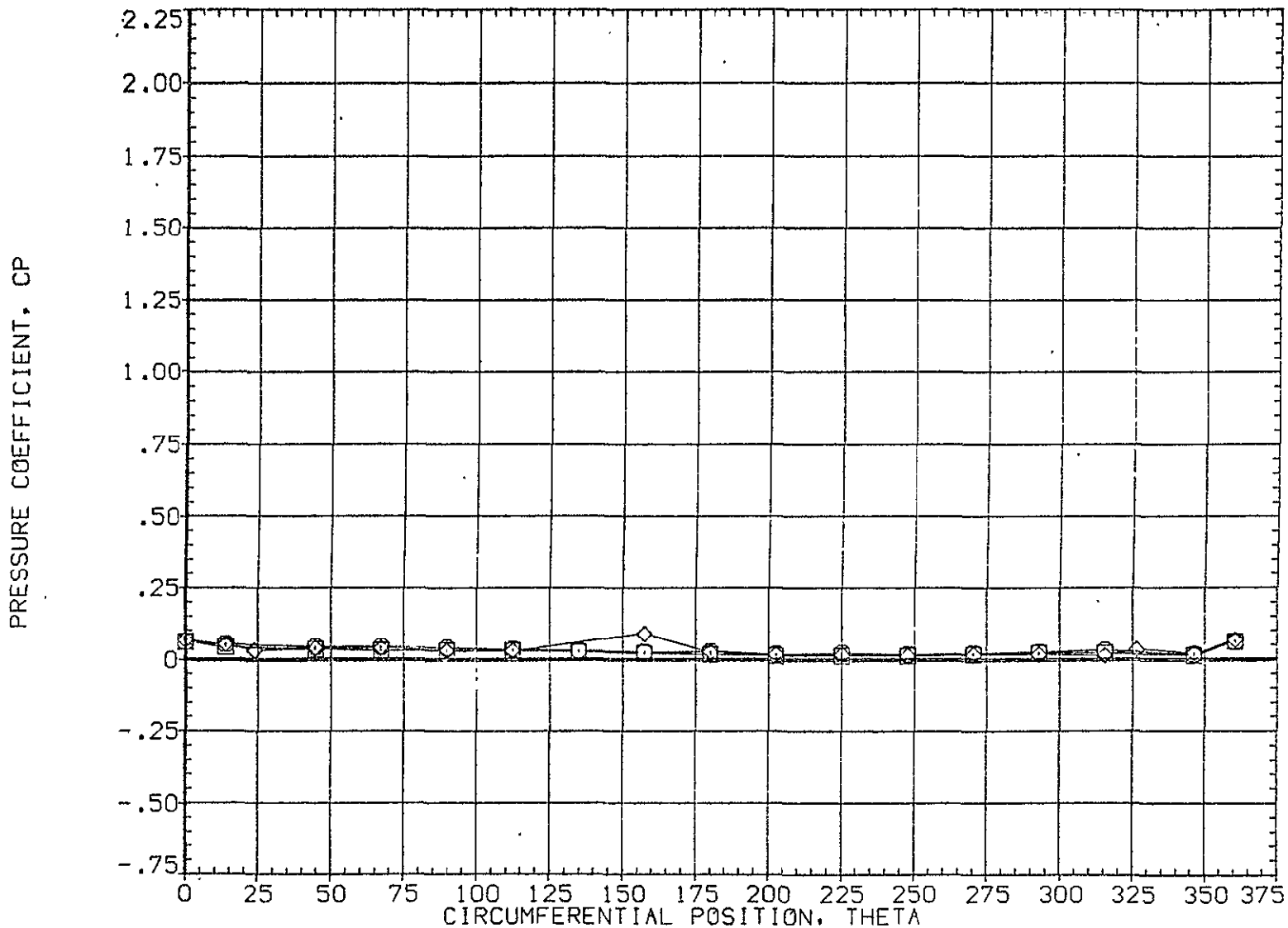

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A024)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

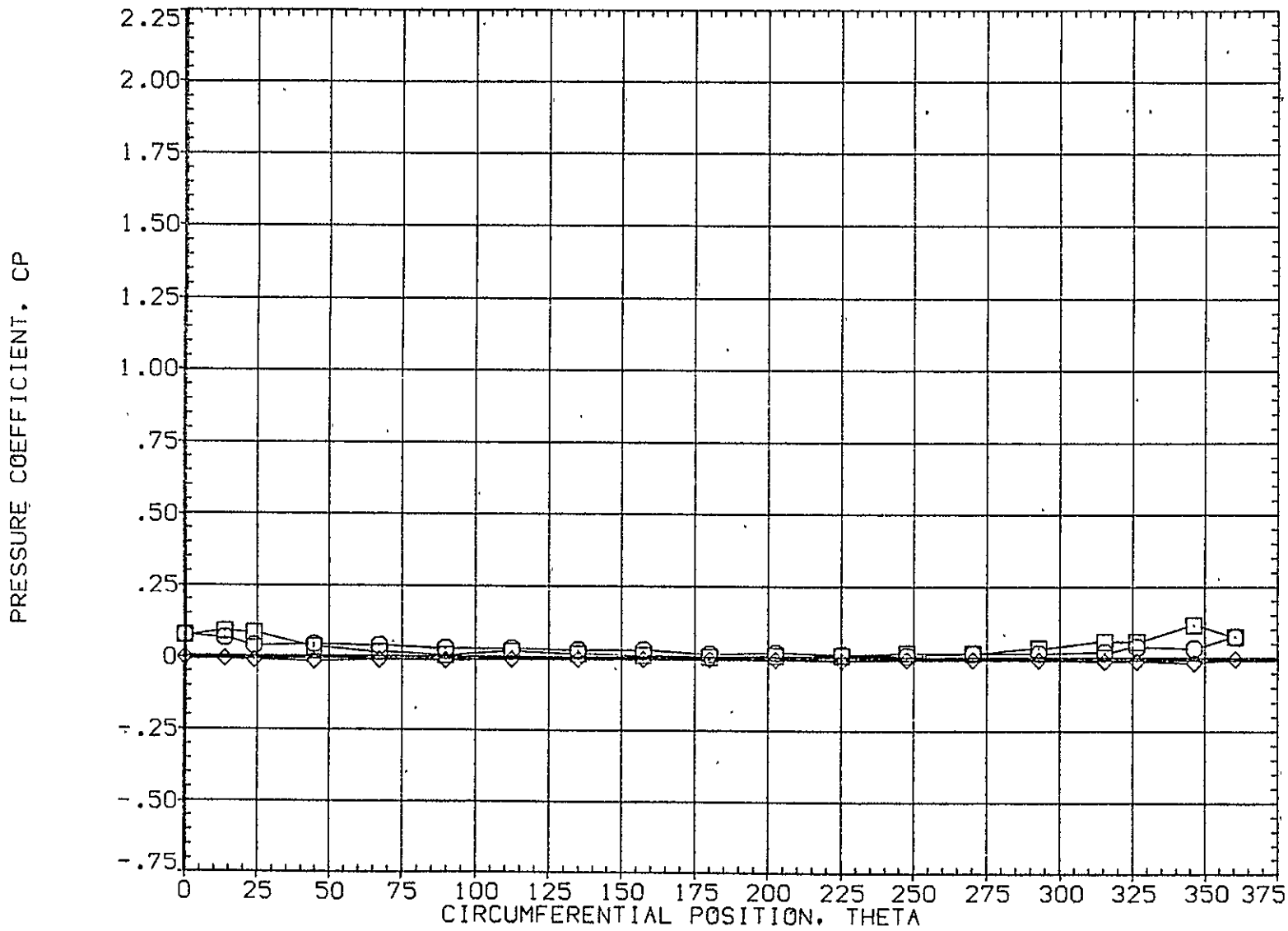

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1. (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

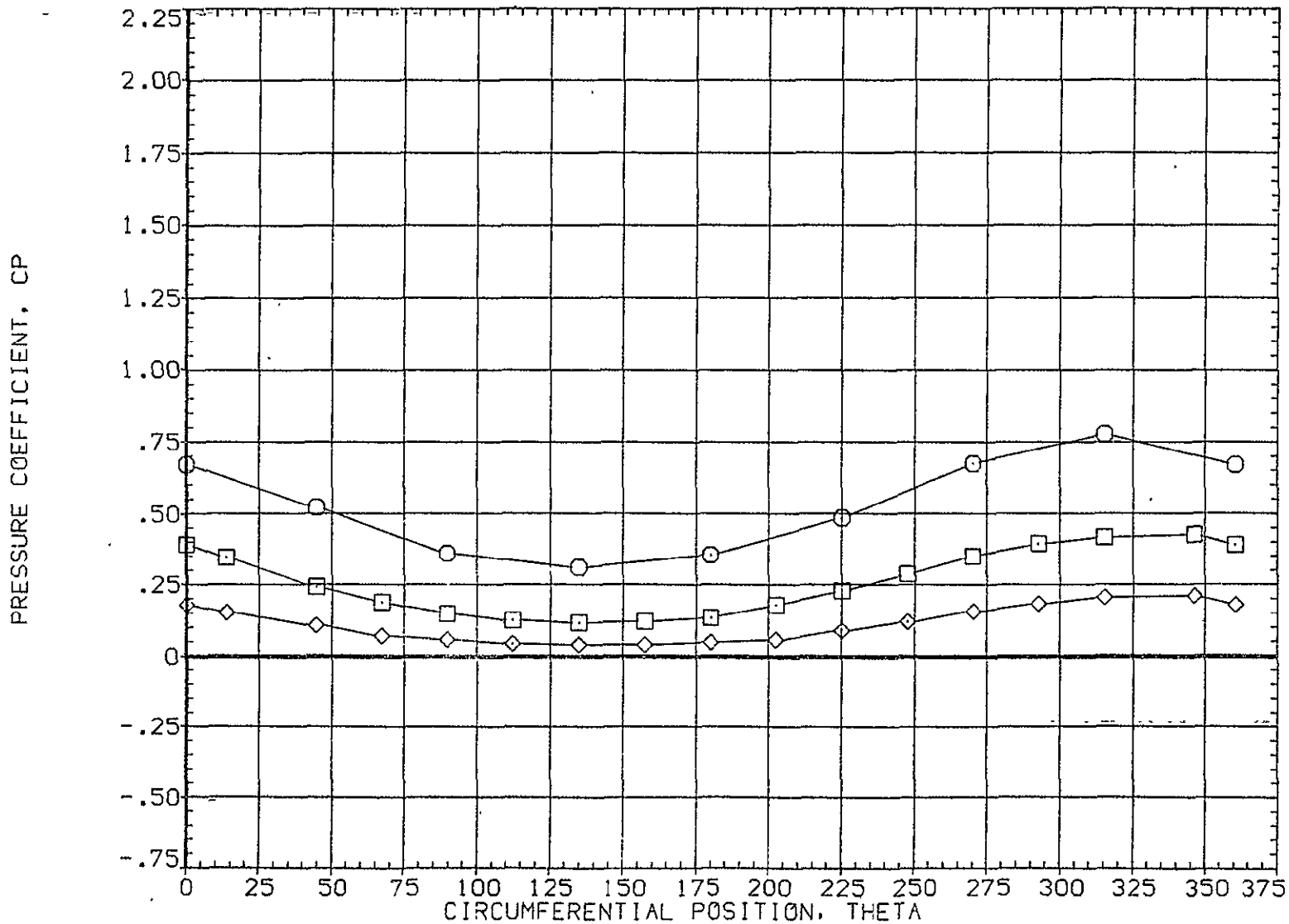

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

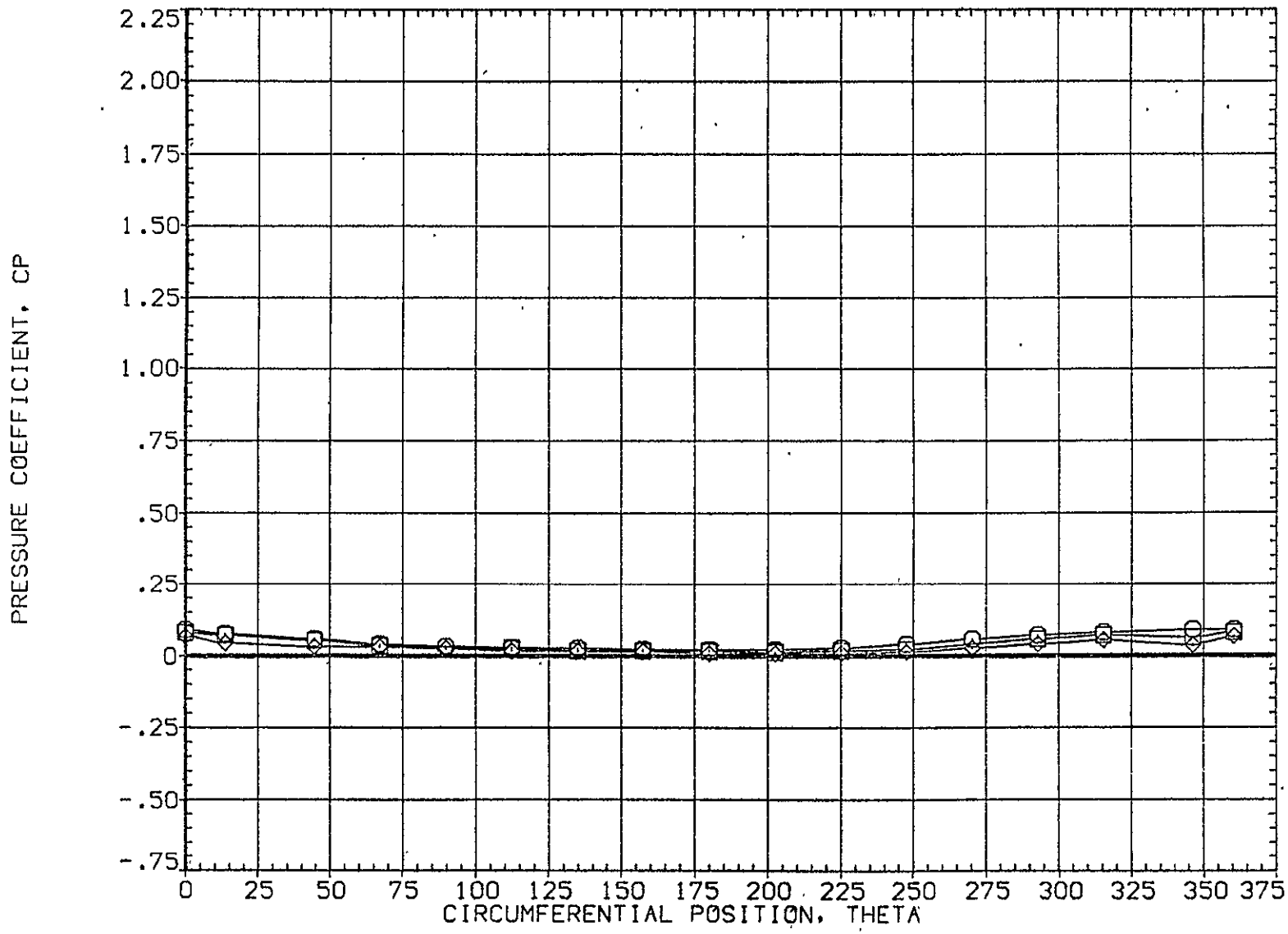

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

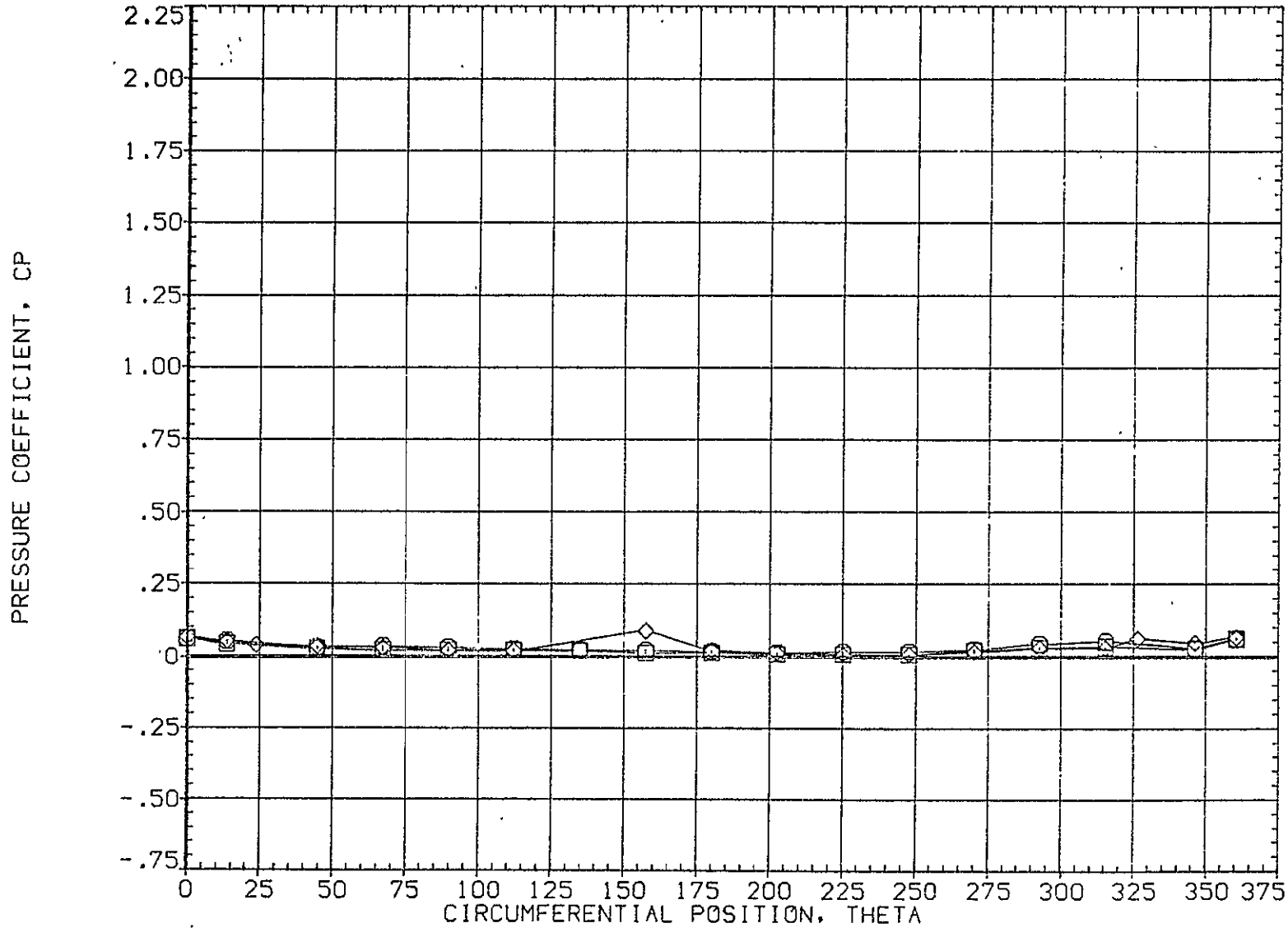

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A025)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	135.000

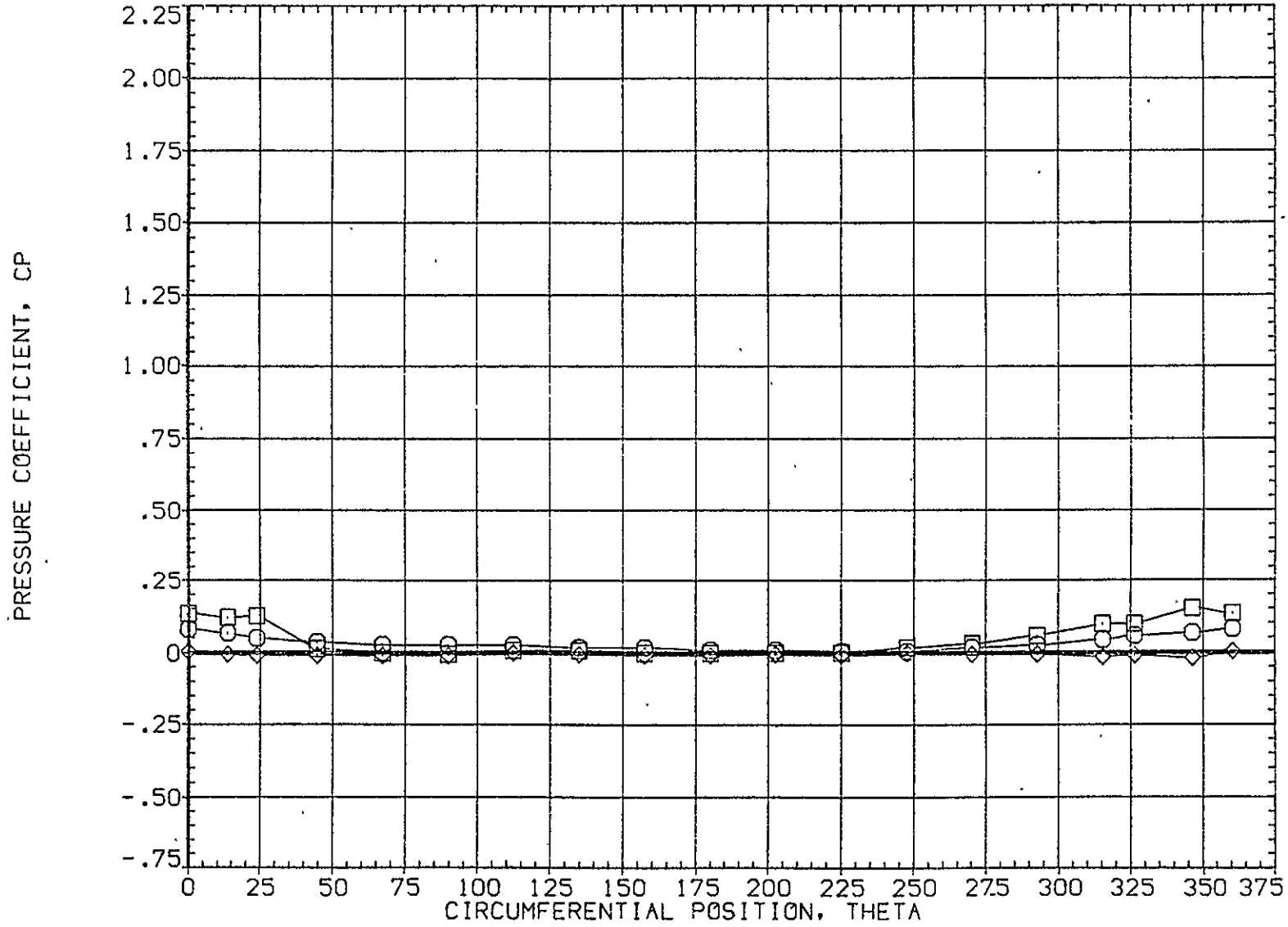

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

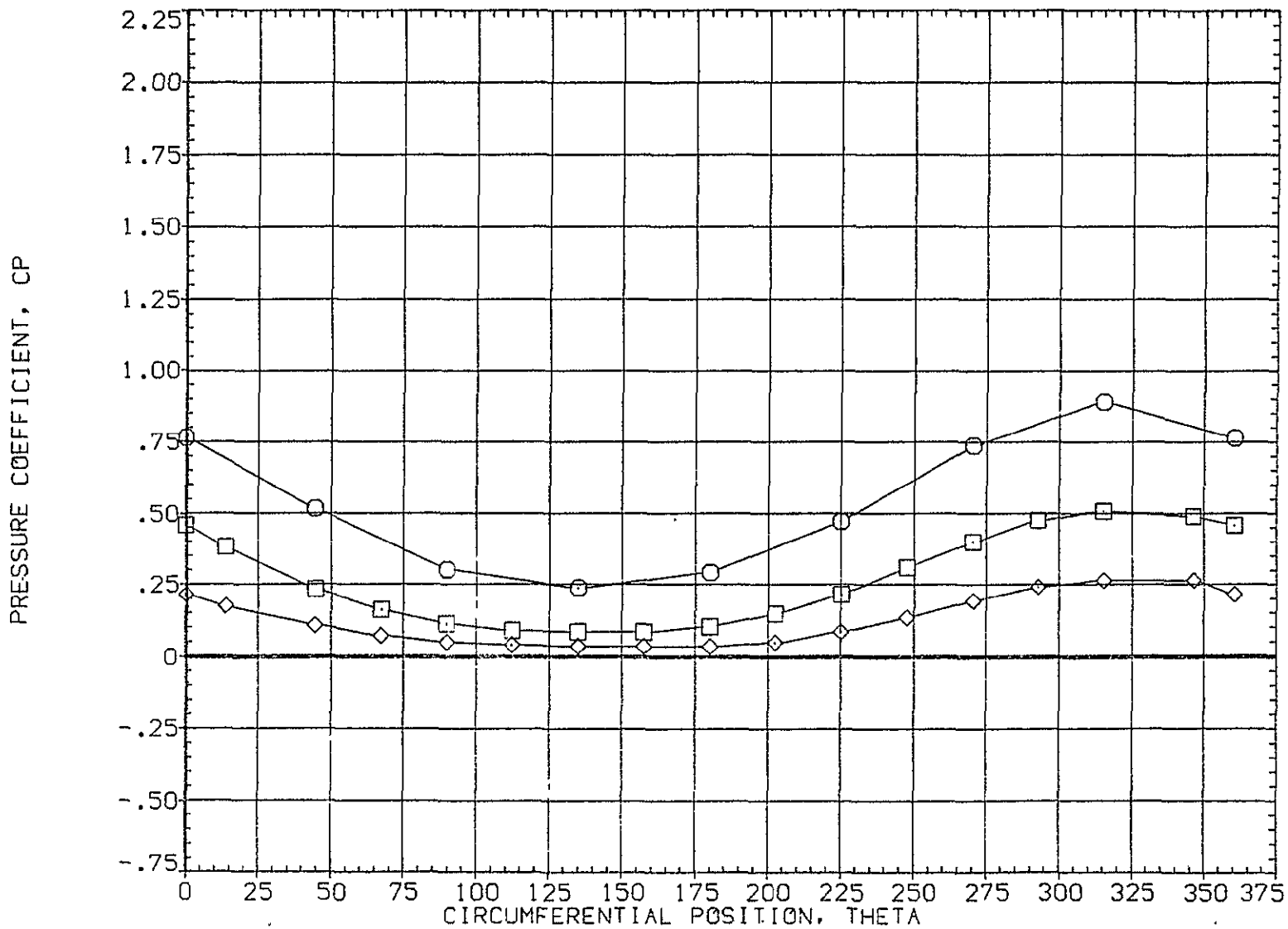

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

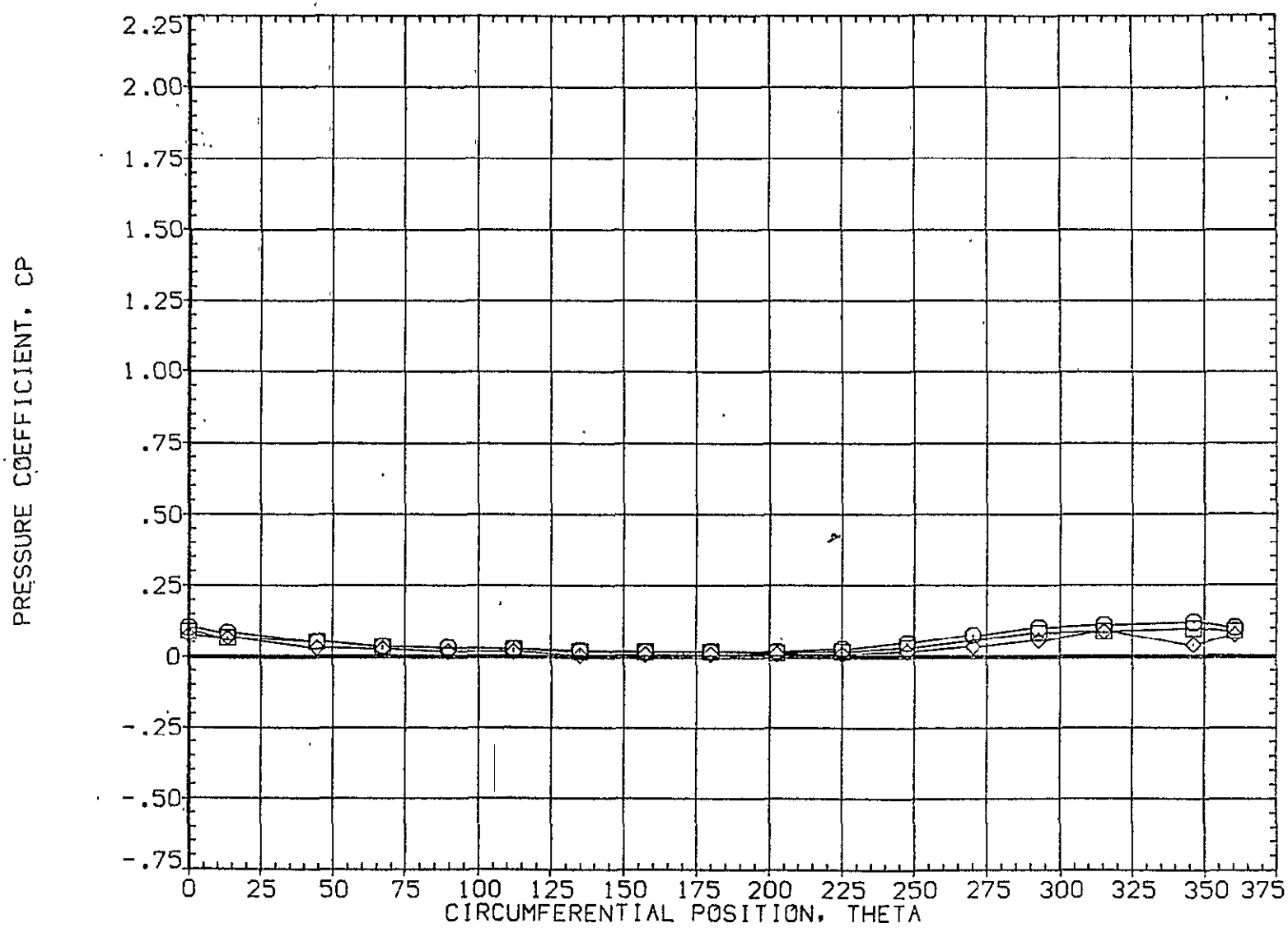

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

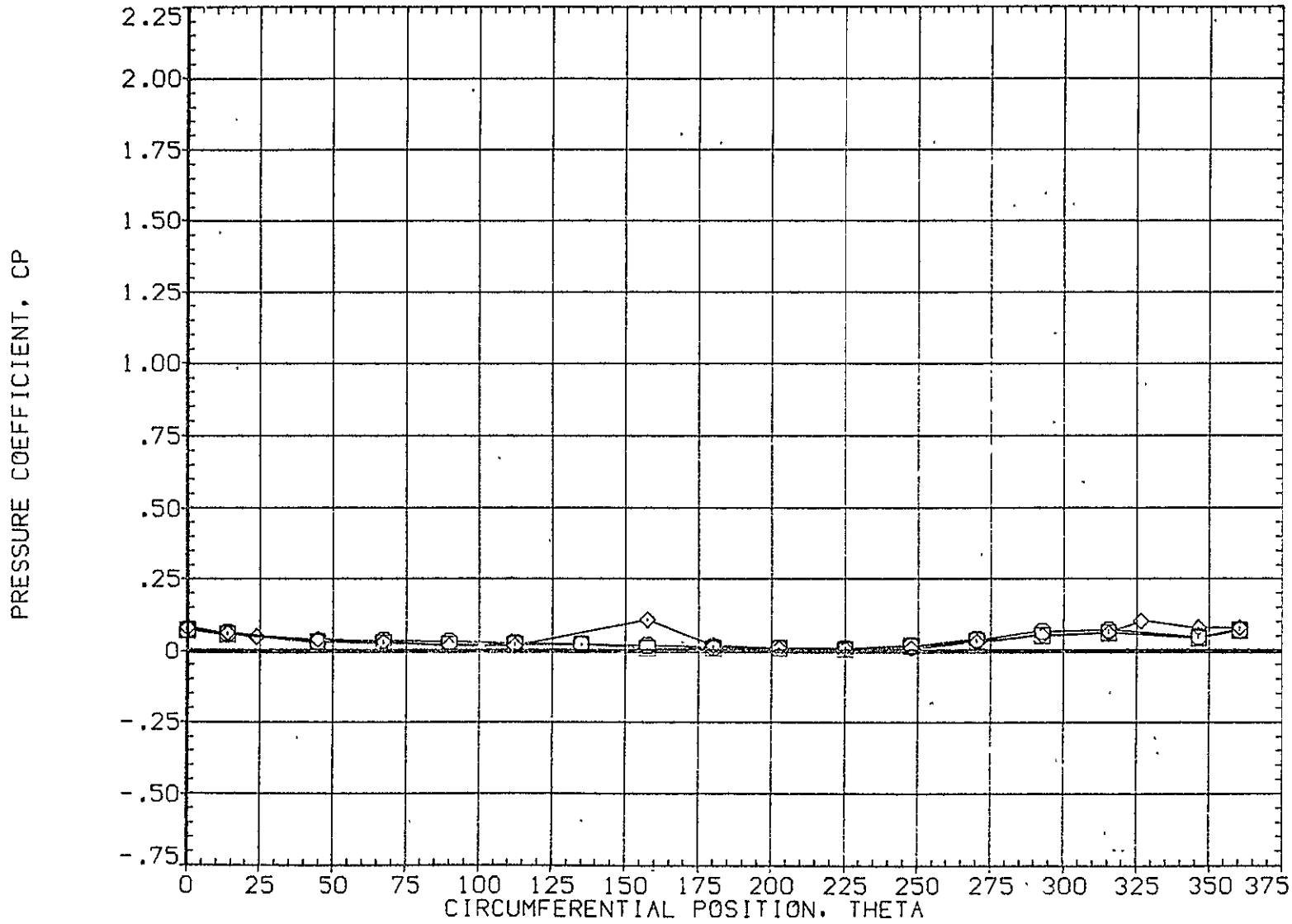

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A026)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

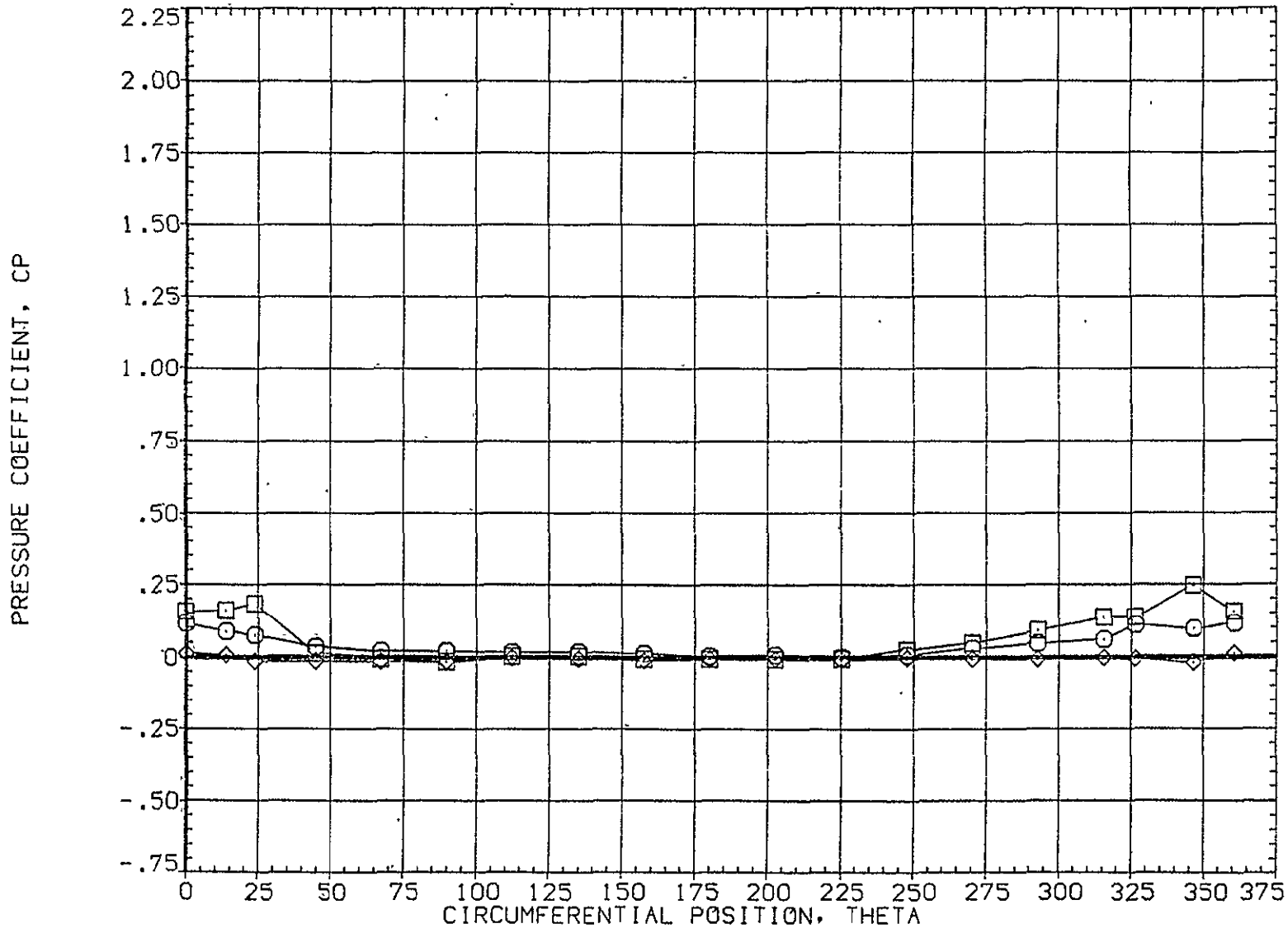

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

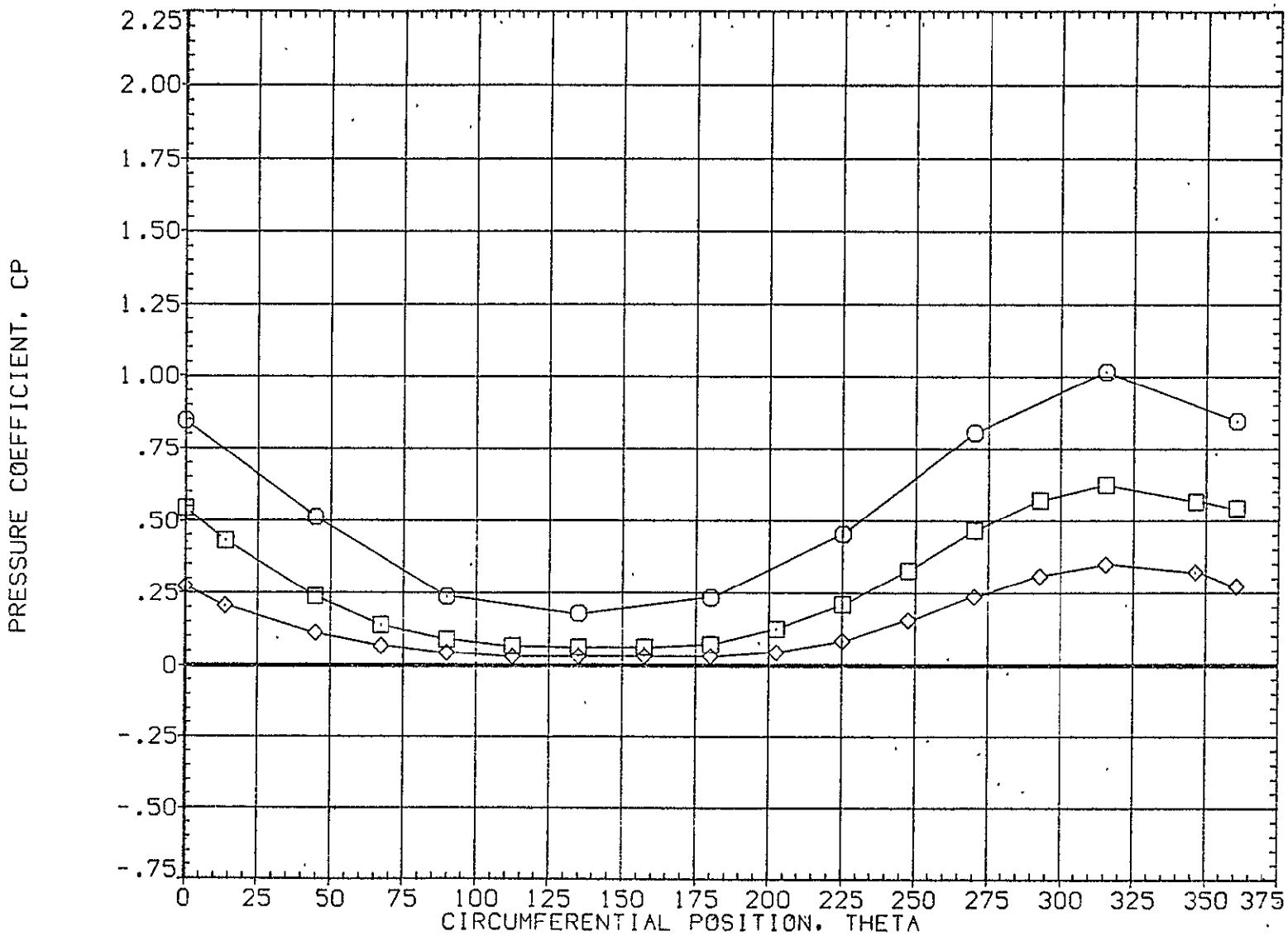

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

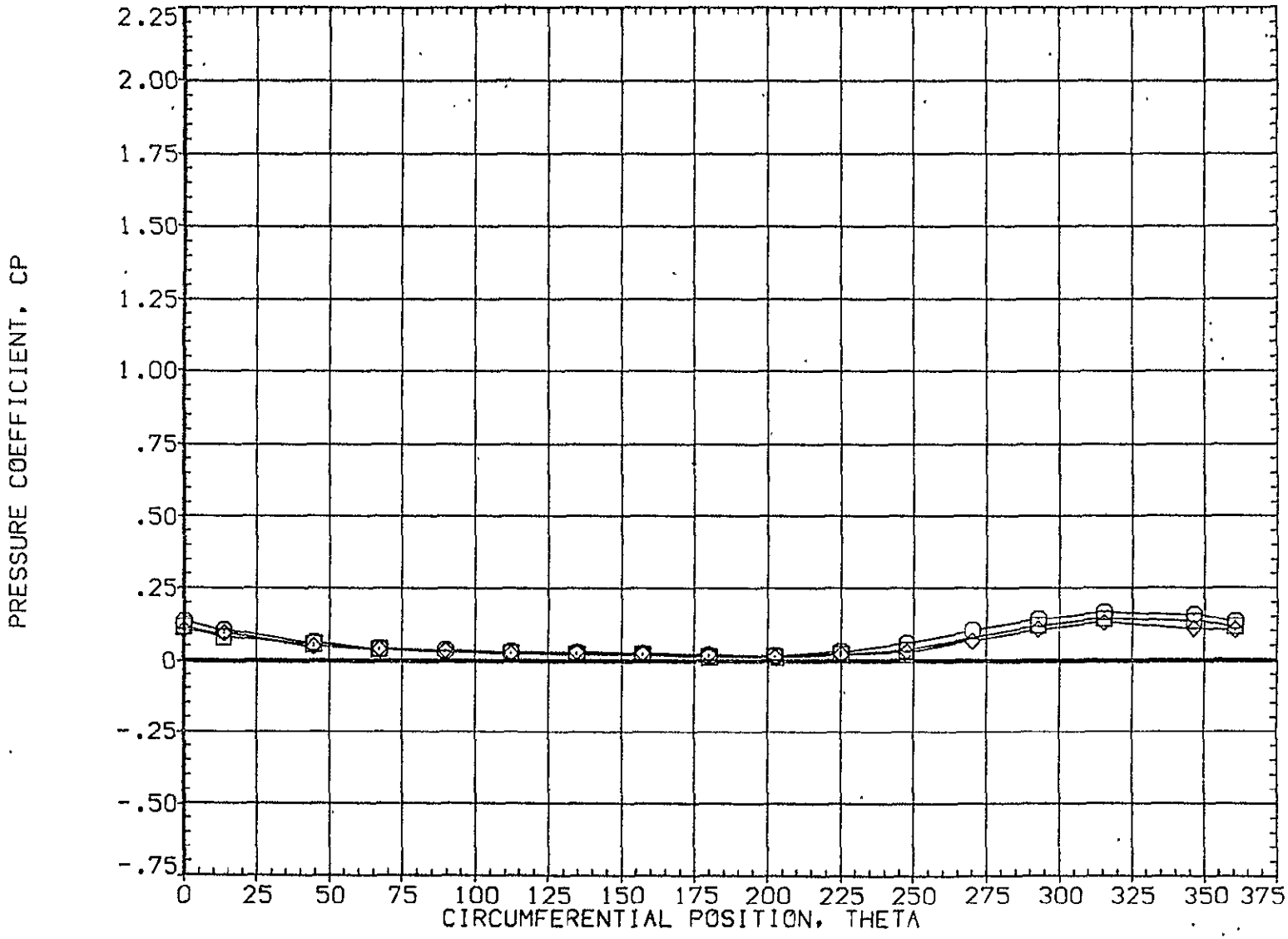

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

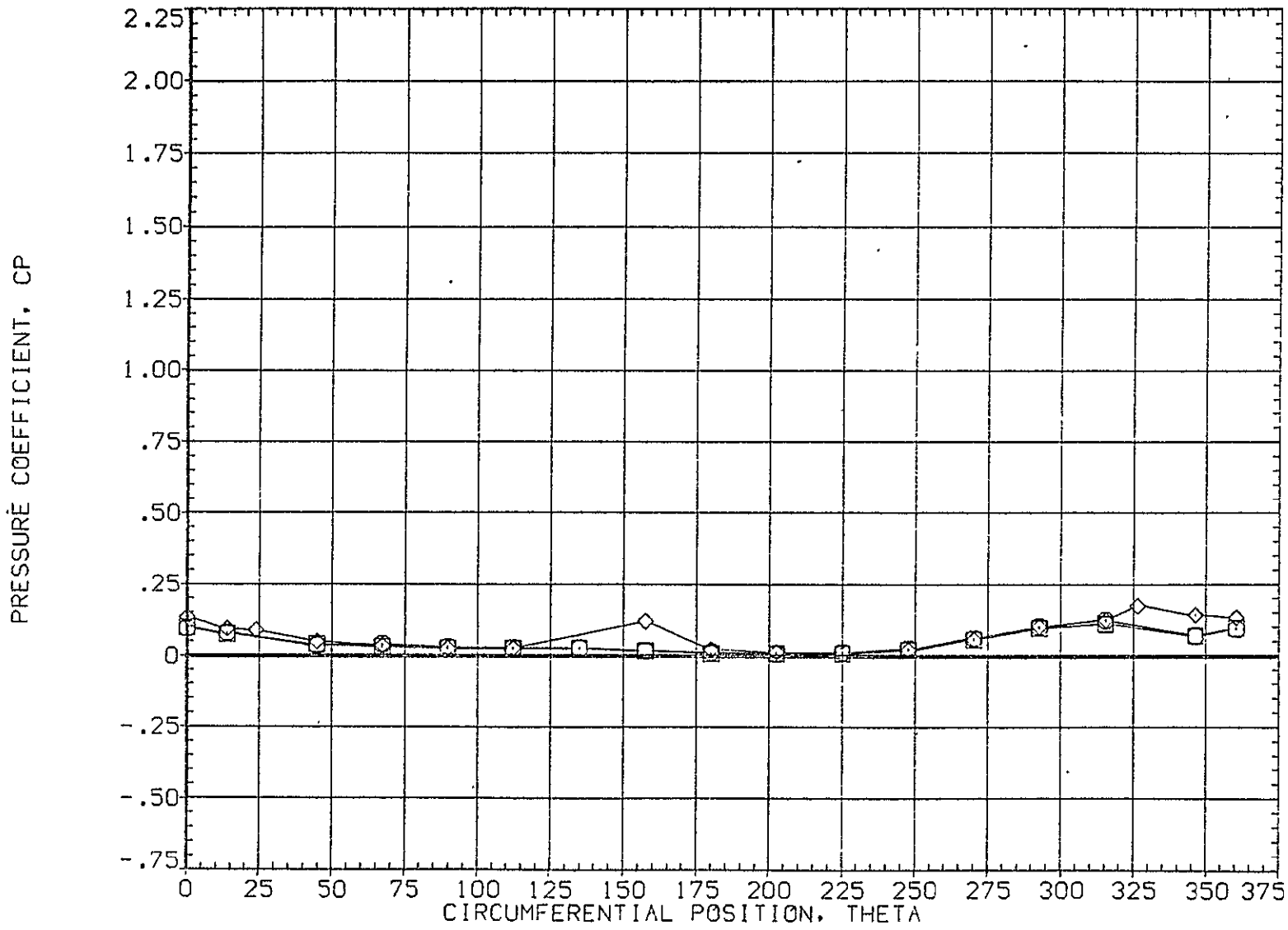

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A027)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

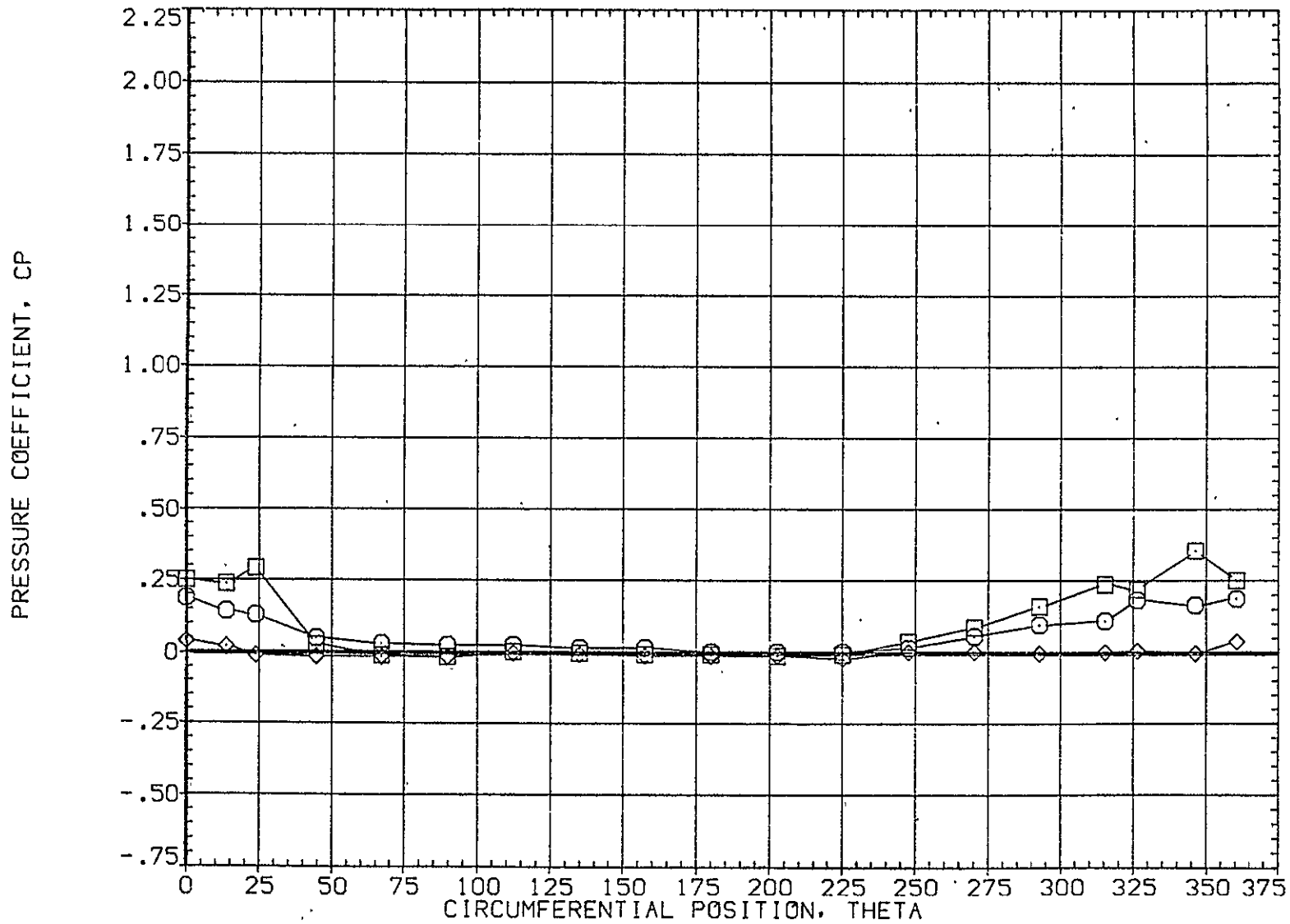

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

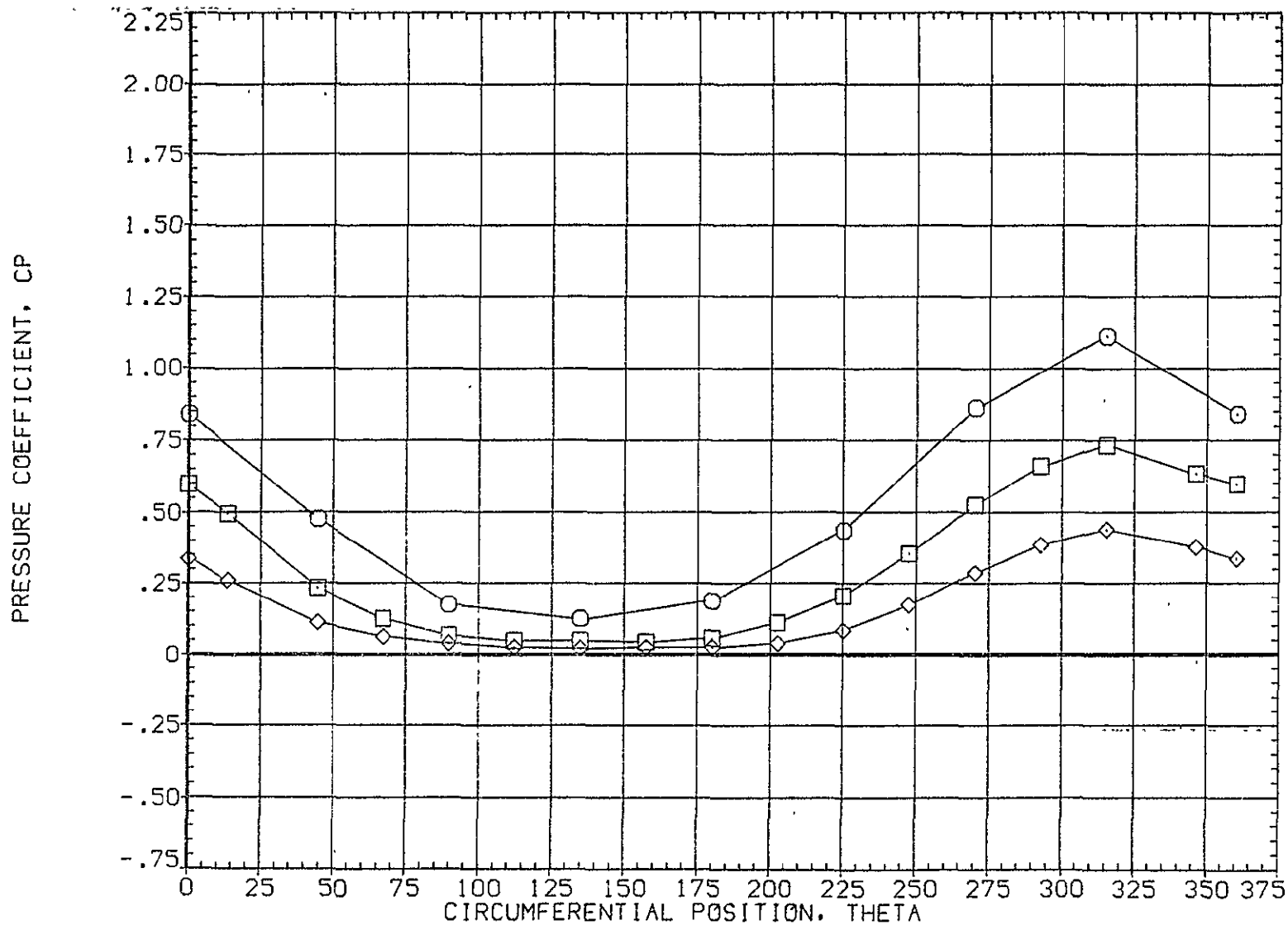

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

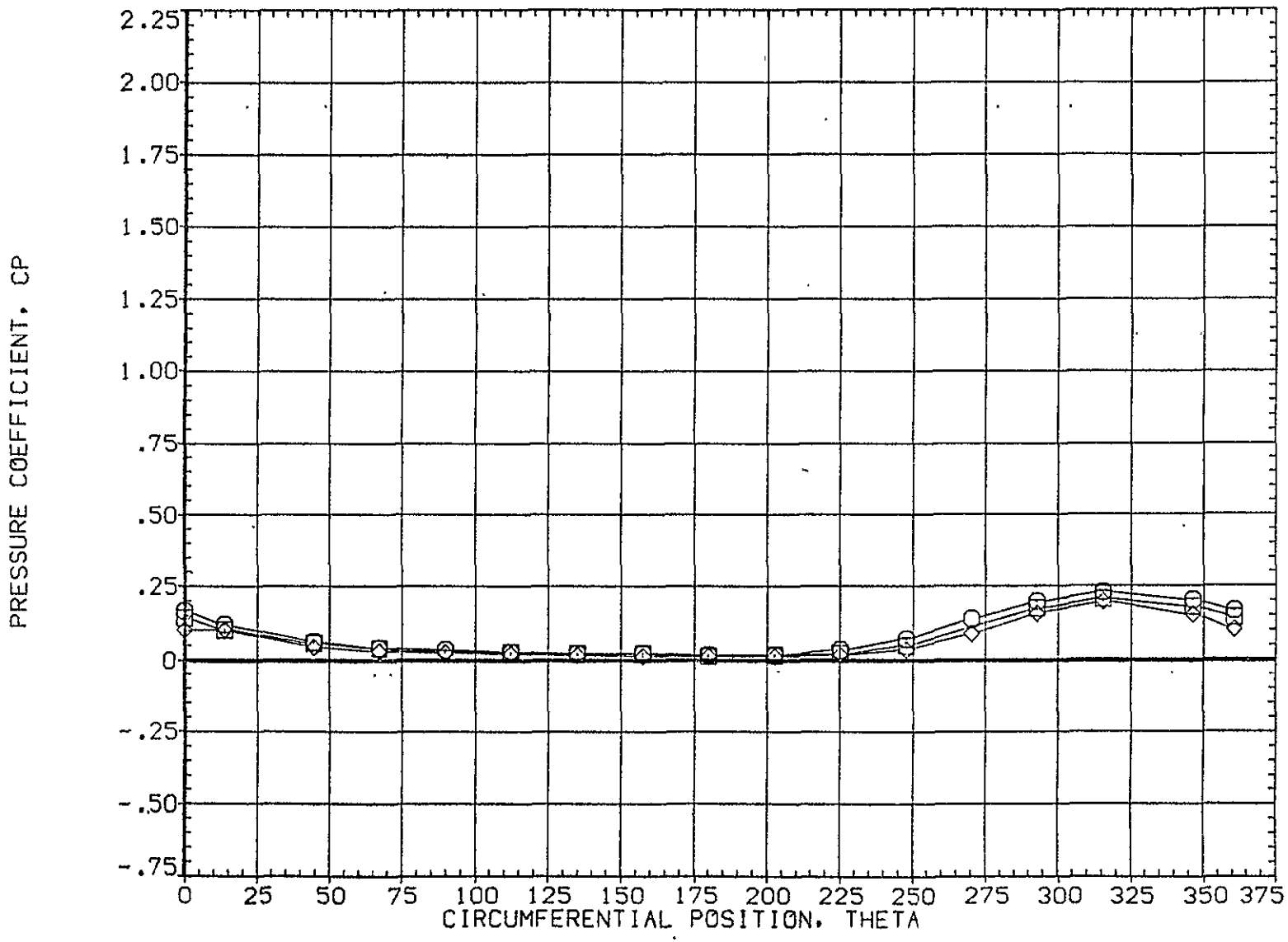

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

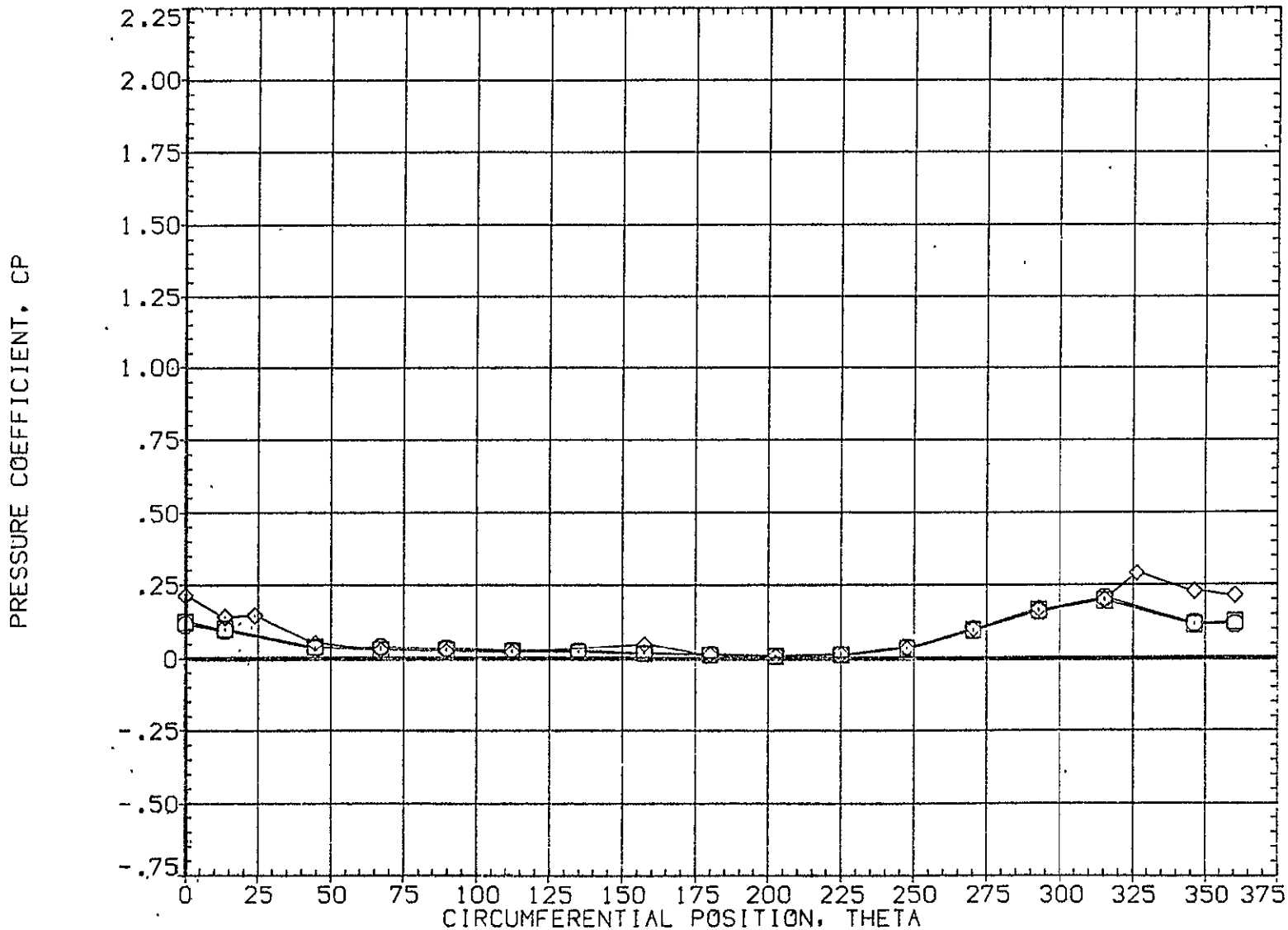

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A028)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

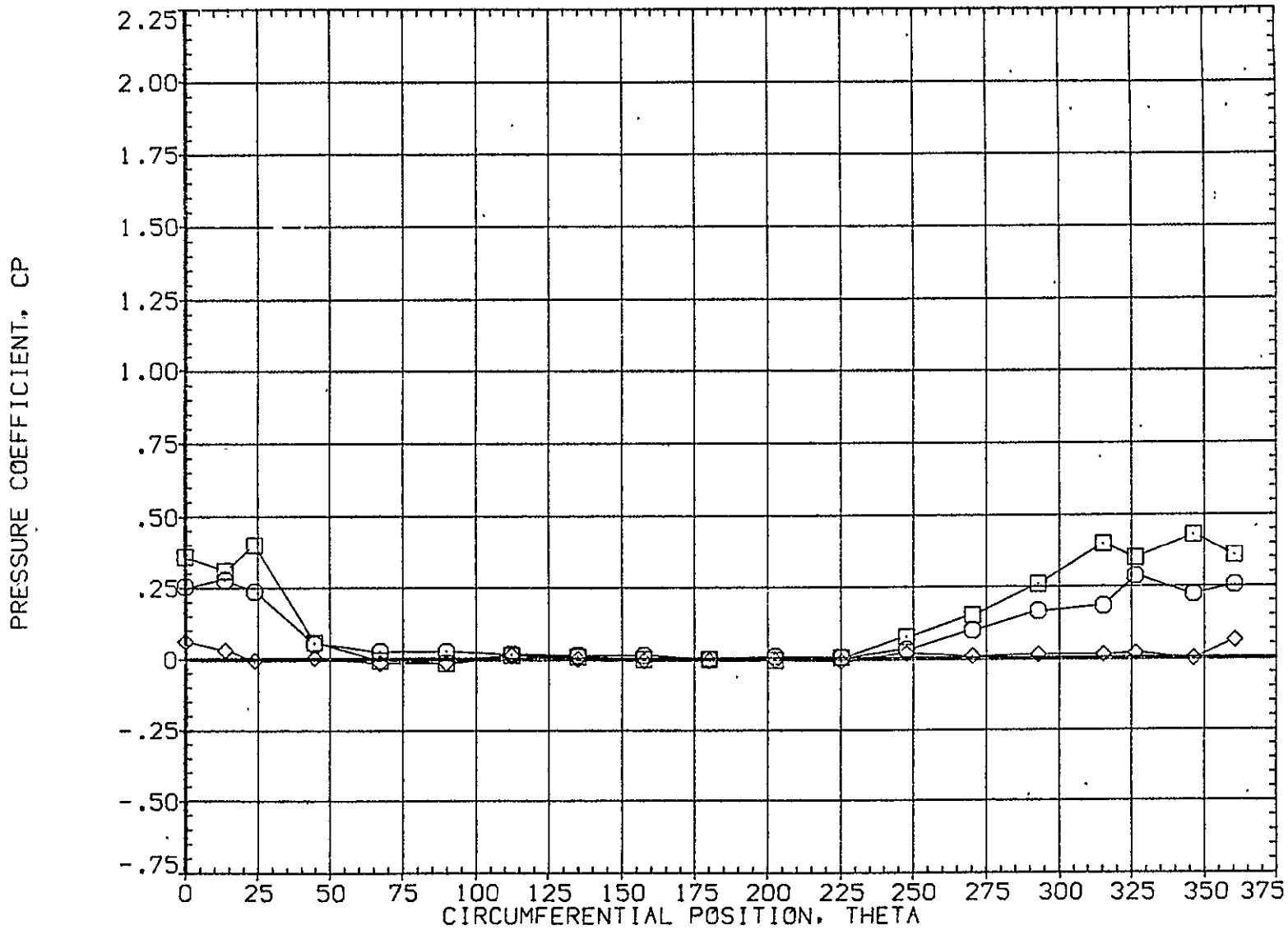

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

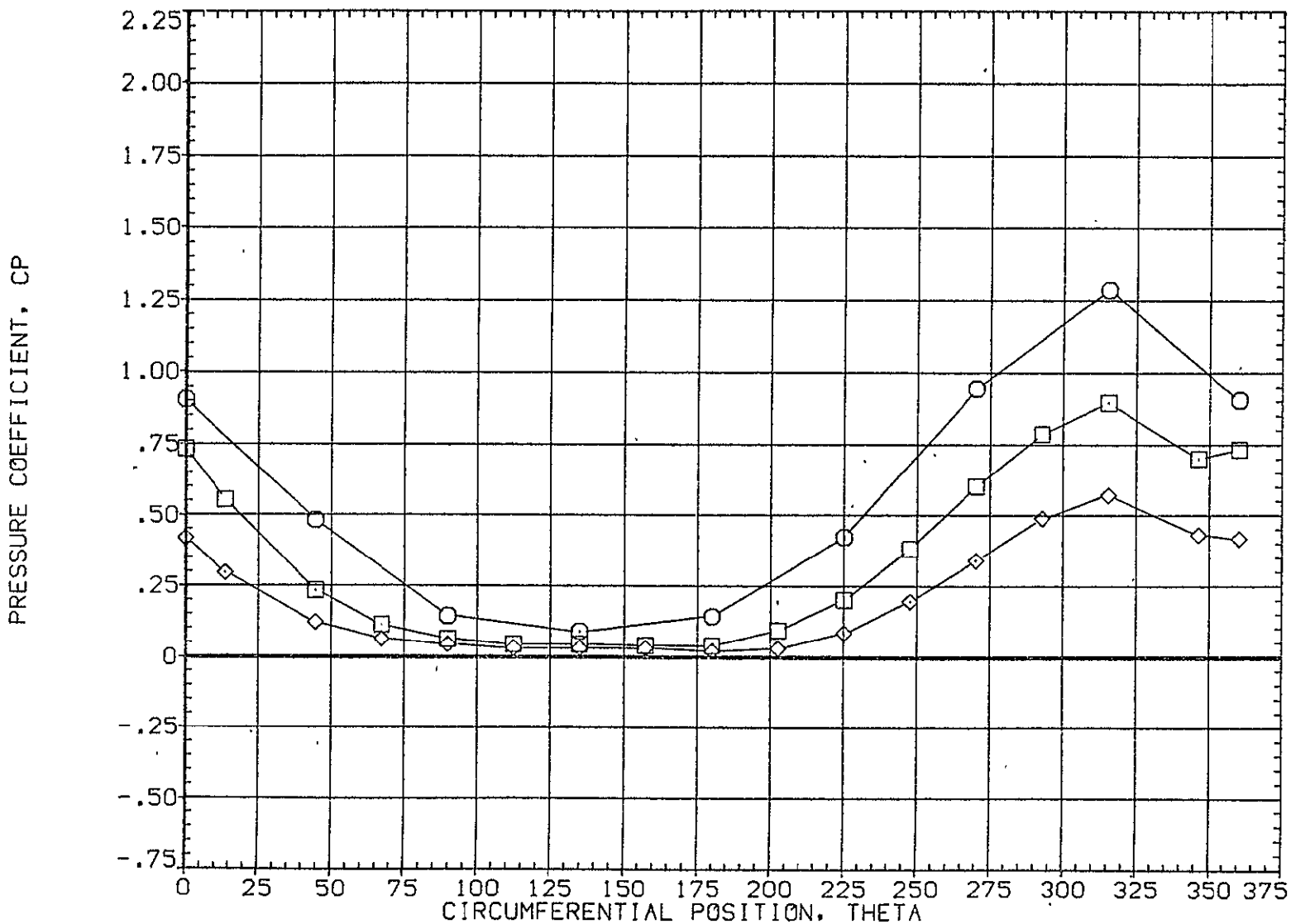

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

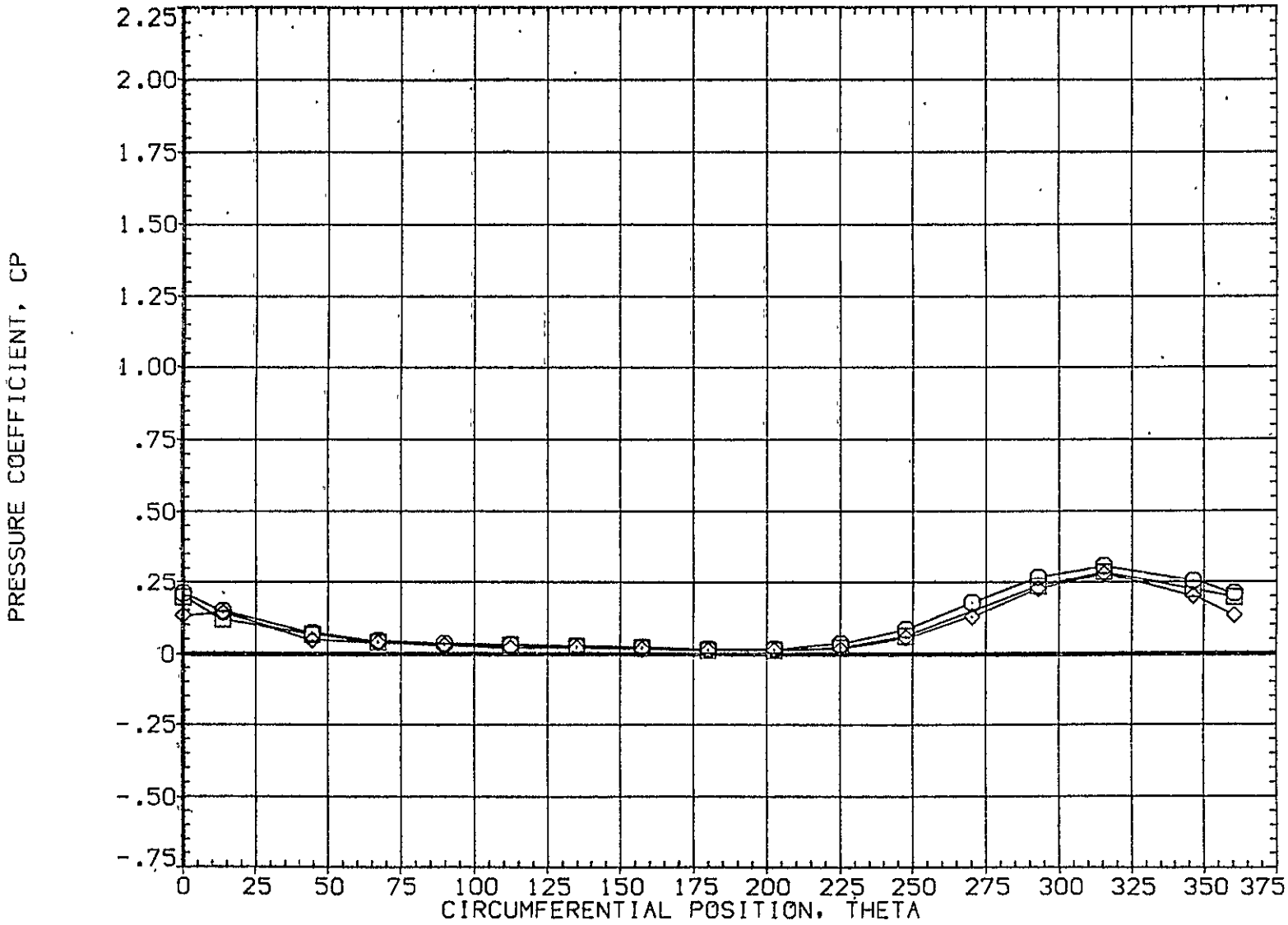

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

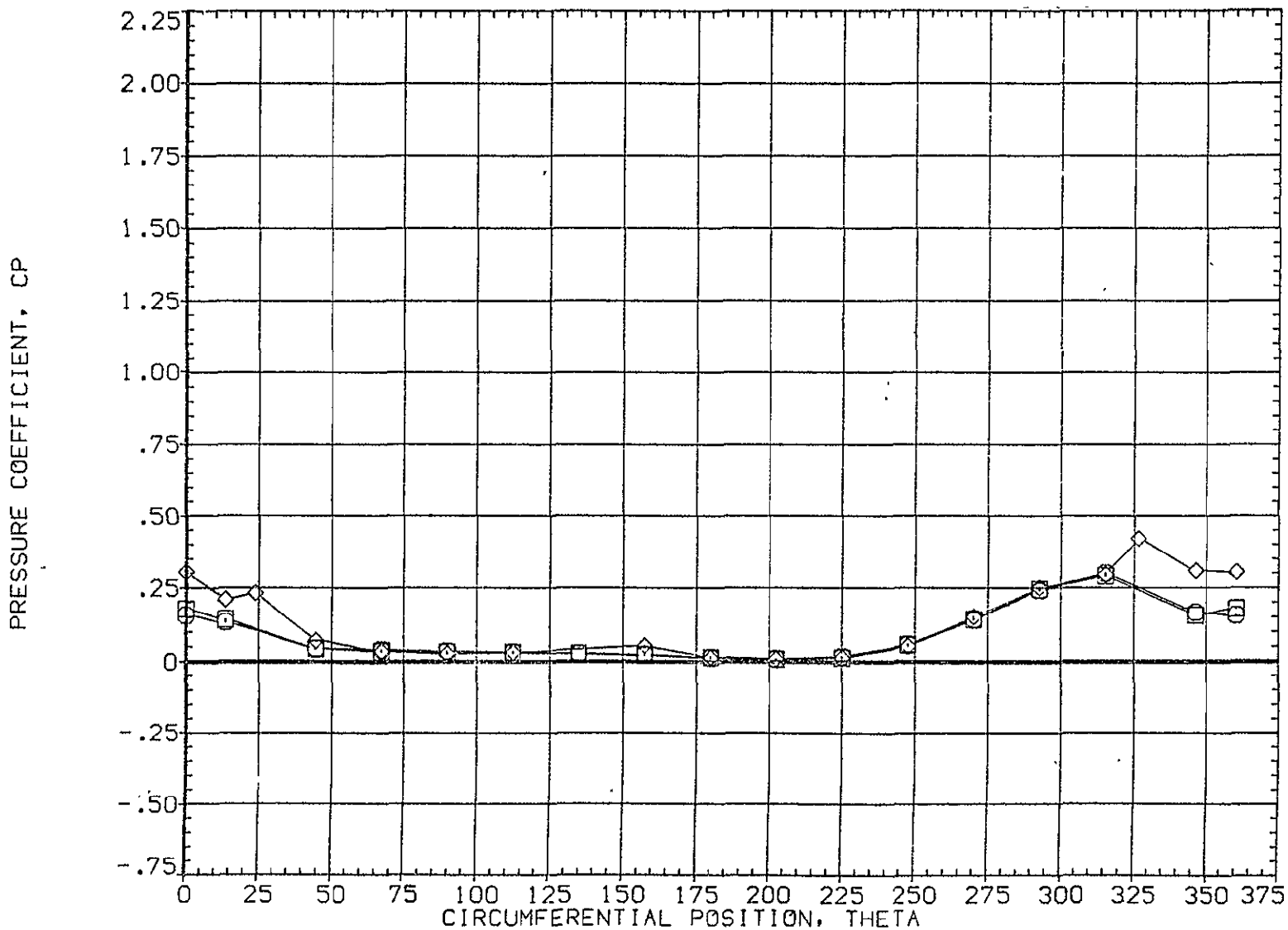

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A029)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

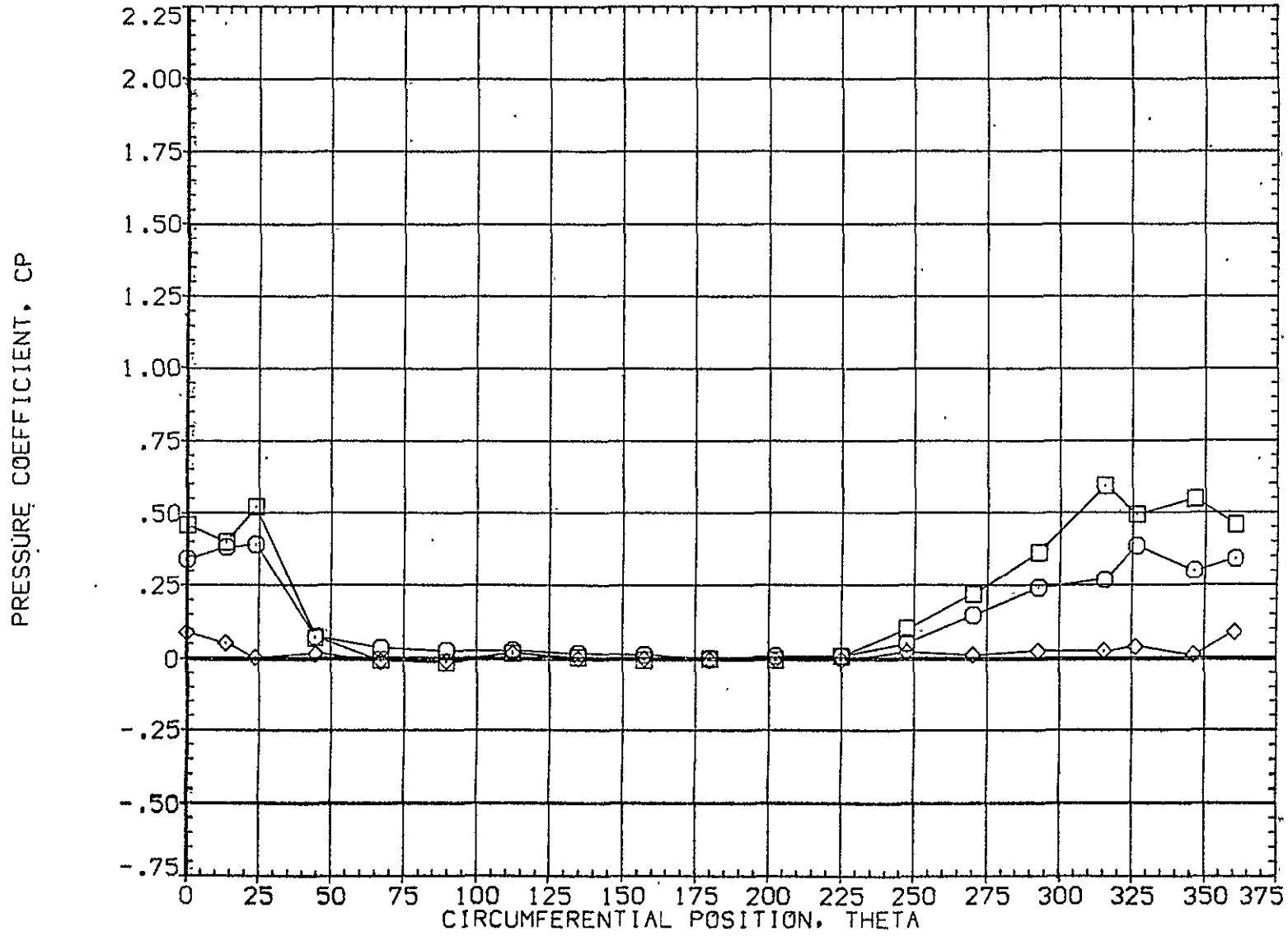

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

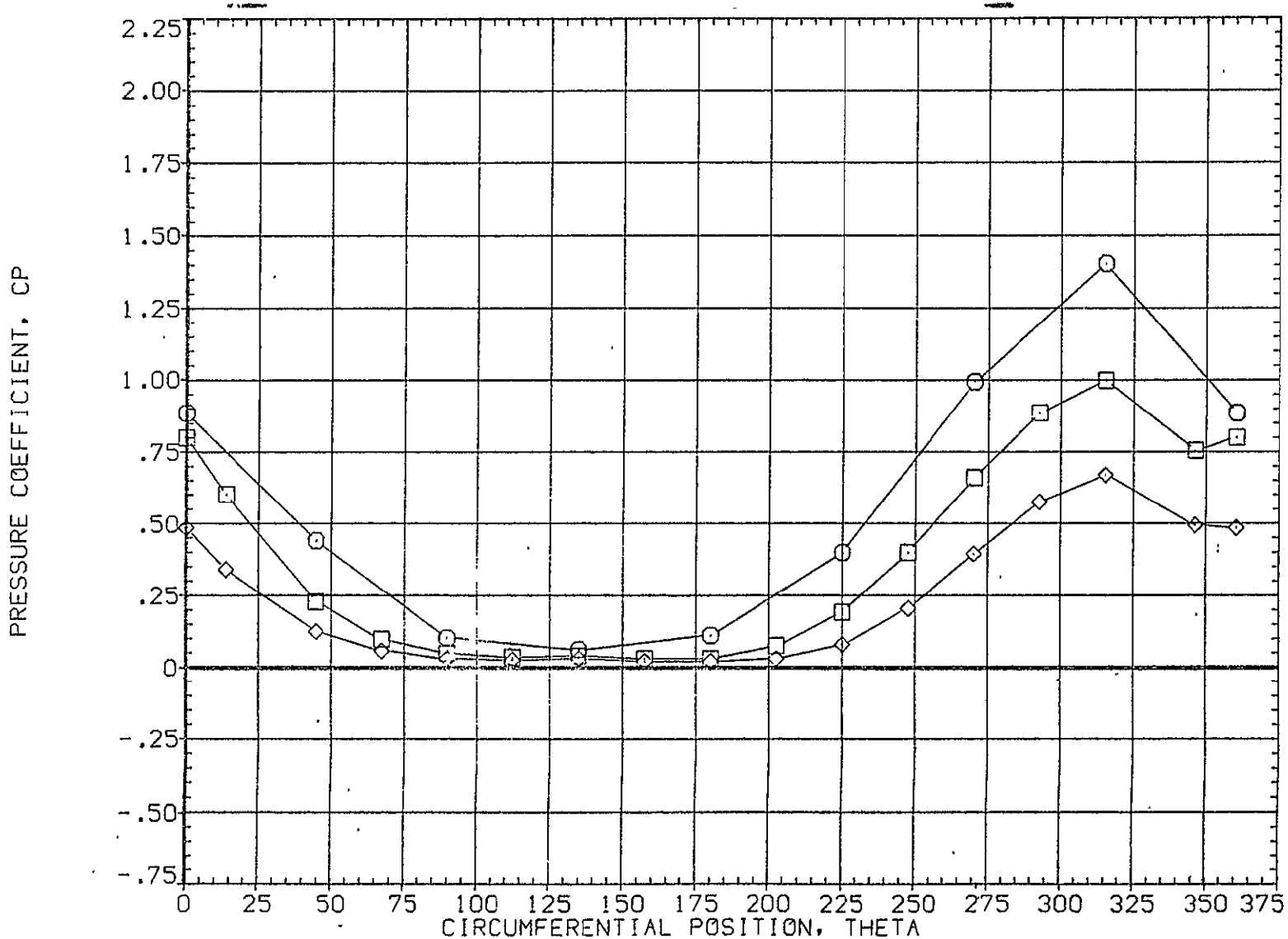

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

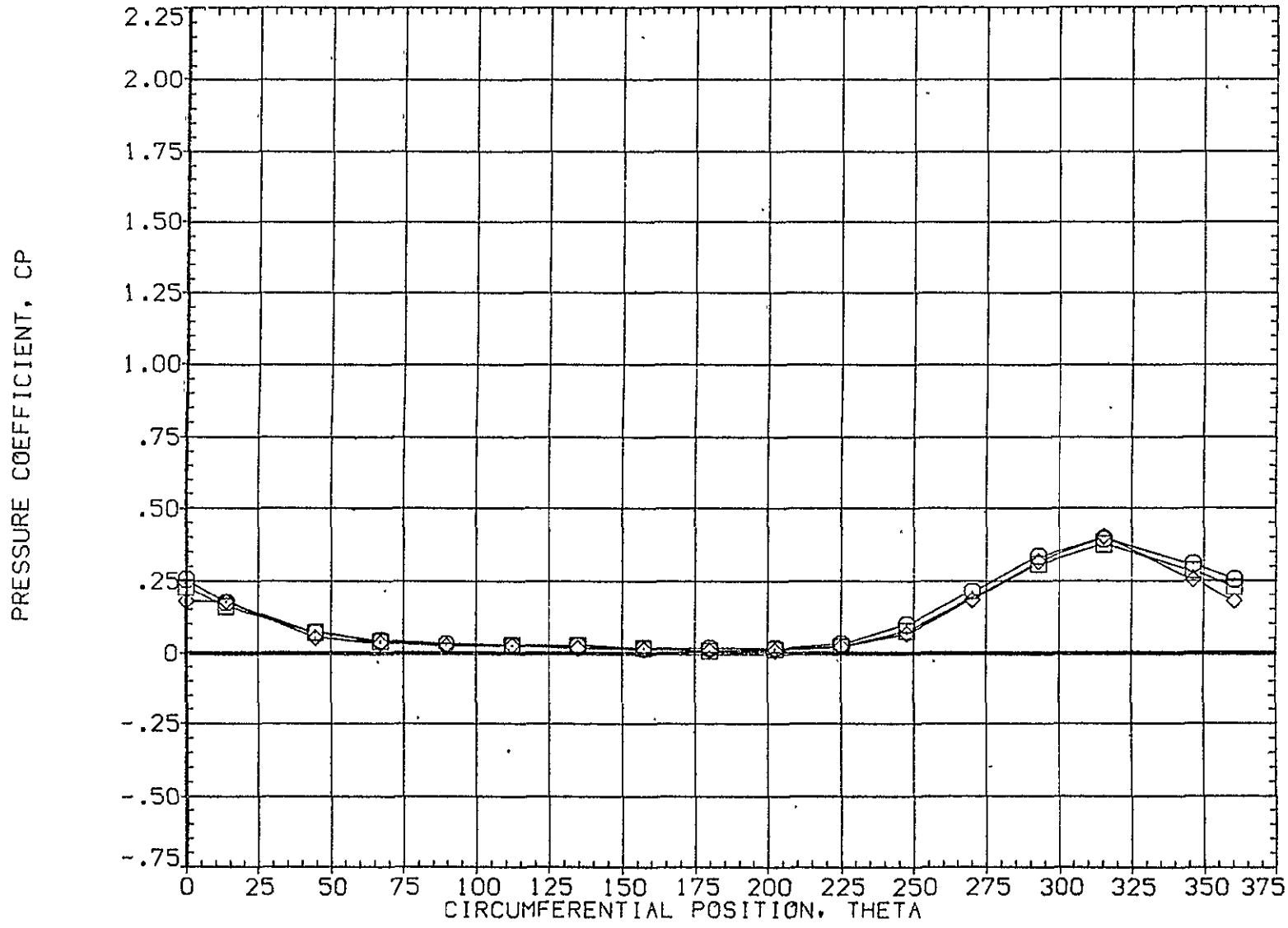

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

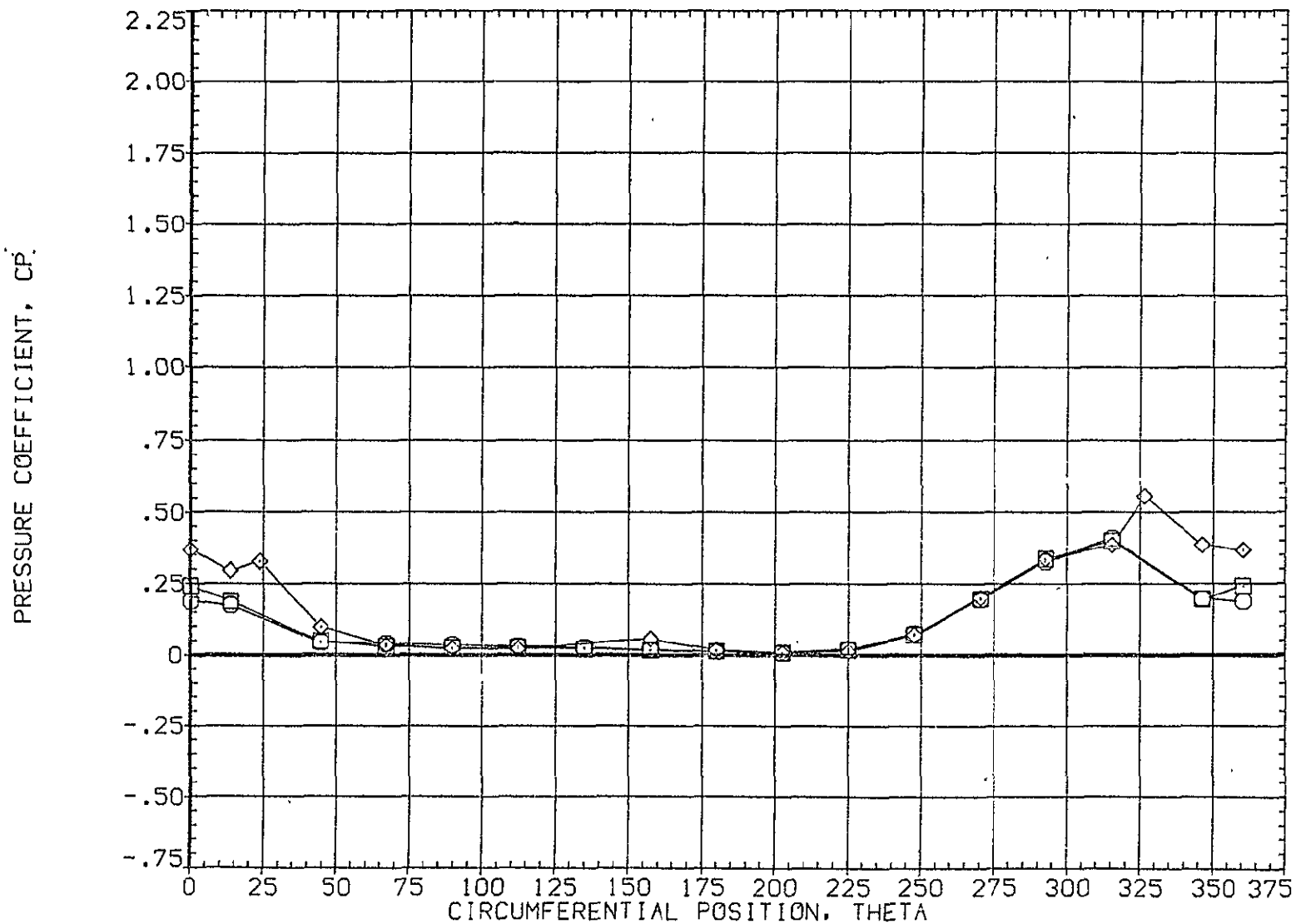

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A030)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	135.000

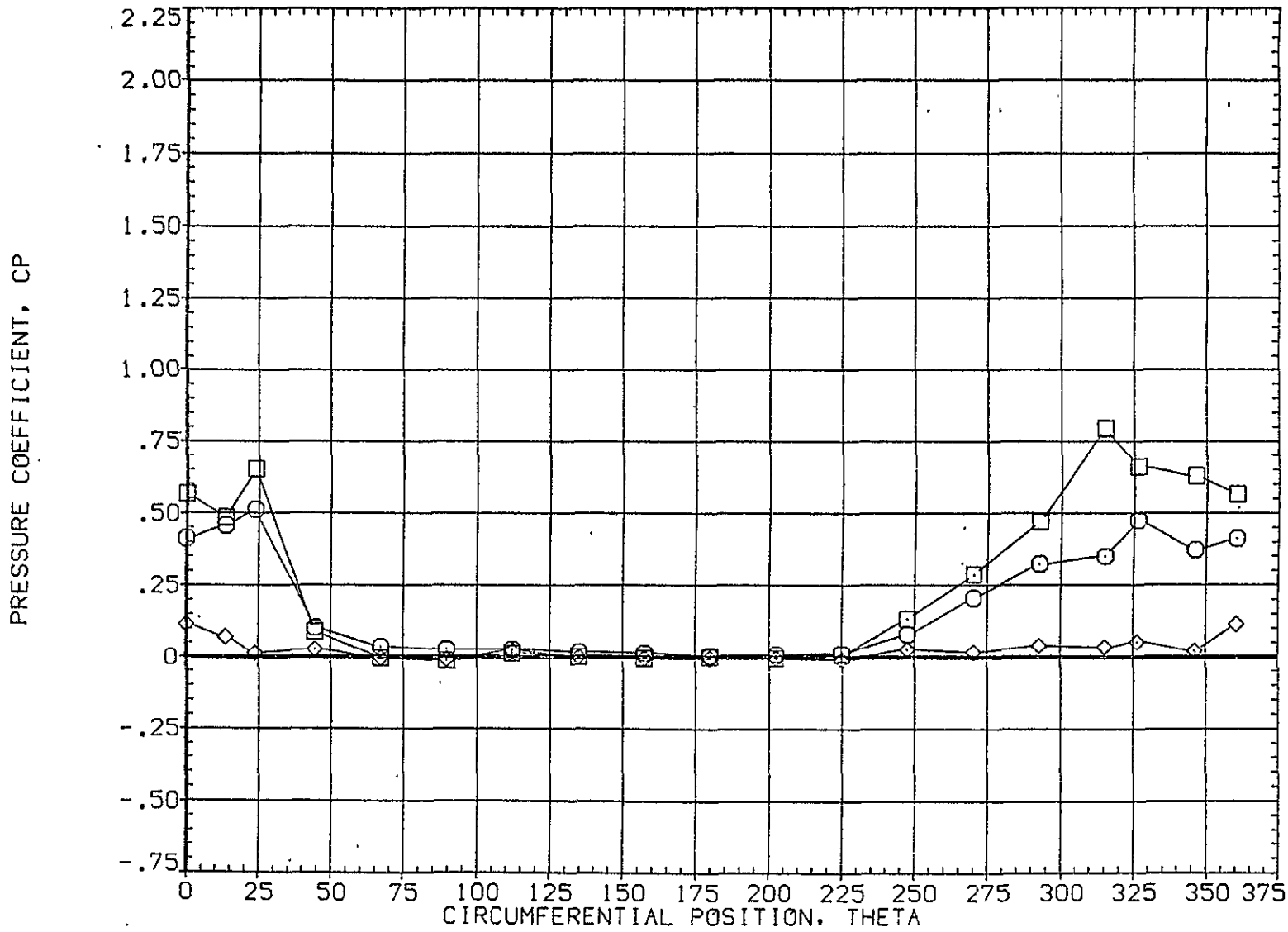

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK. T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

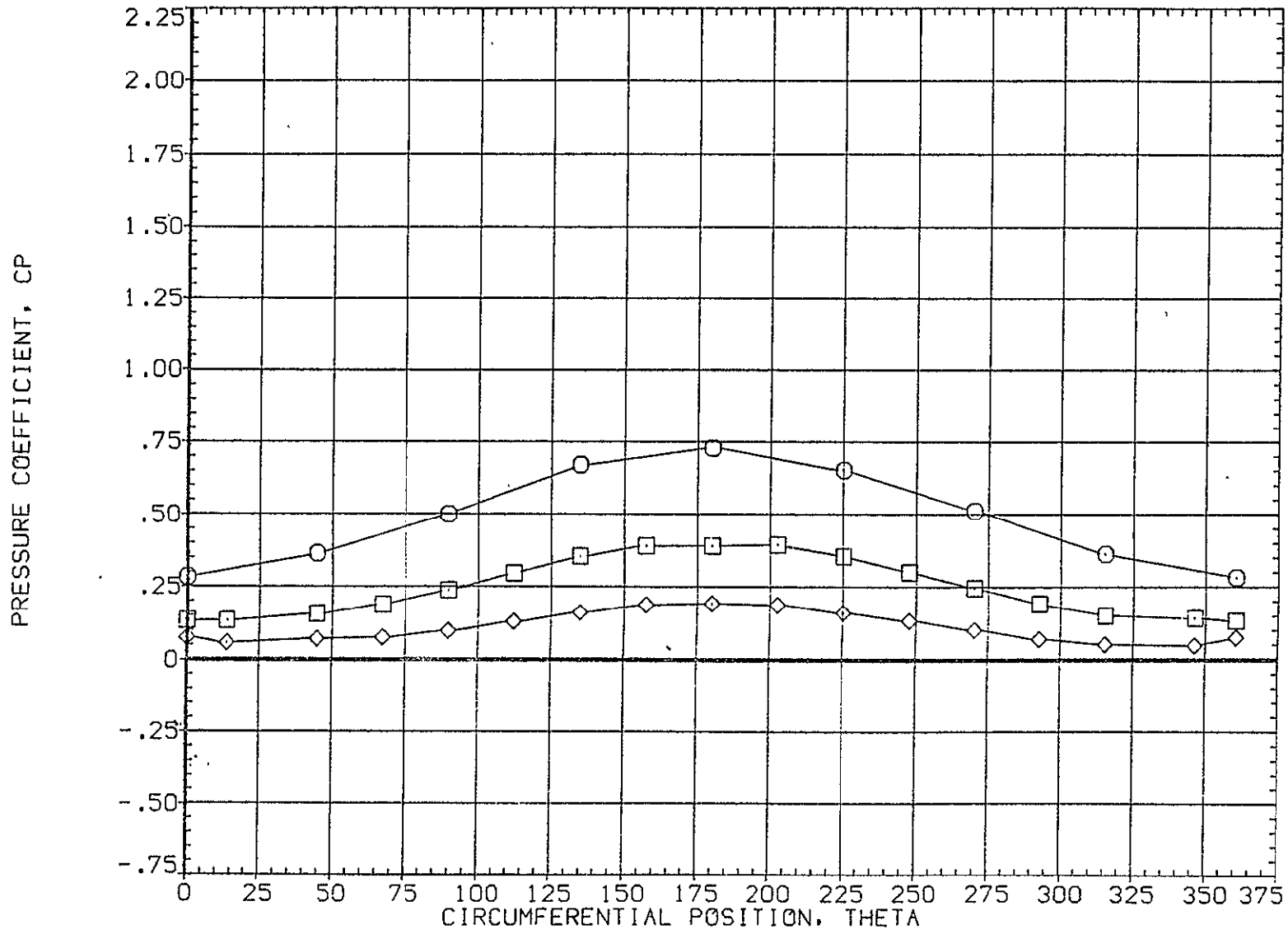

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

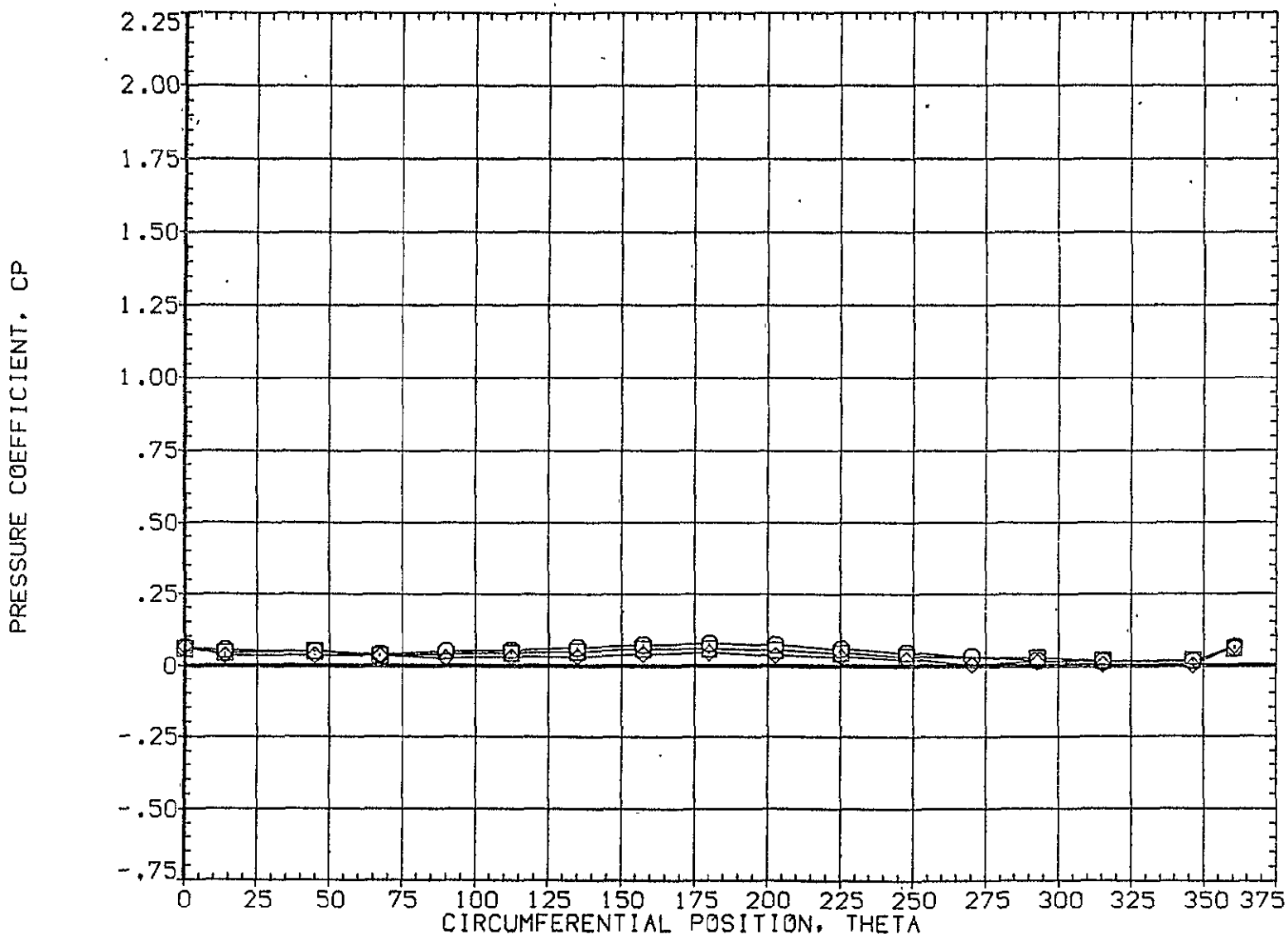

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT.	1.000	PHI	180.000

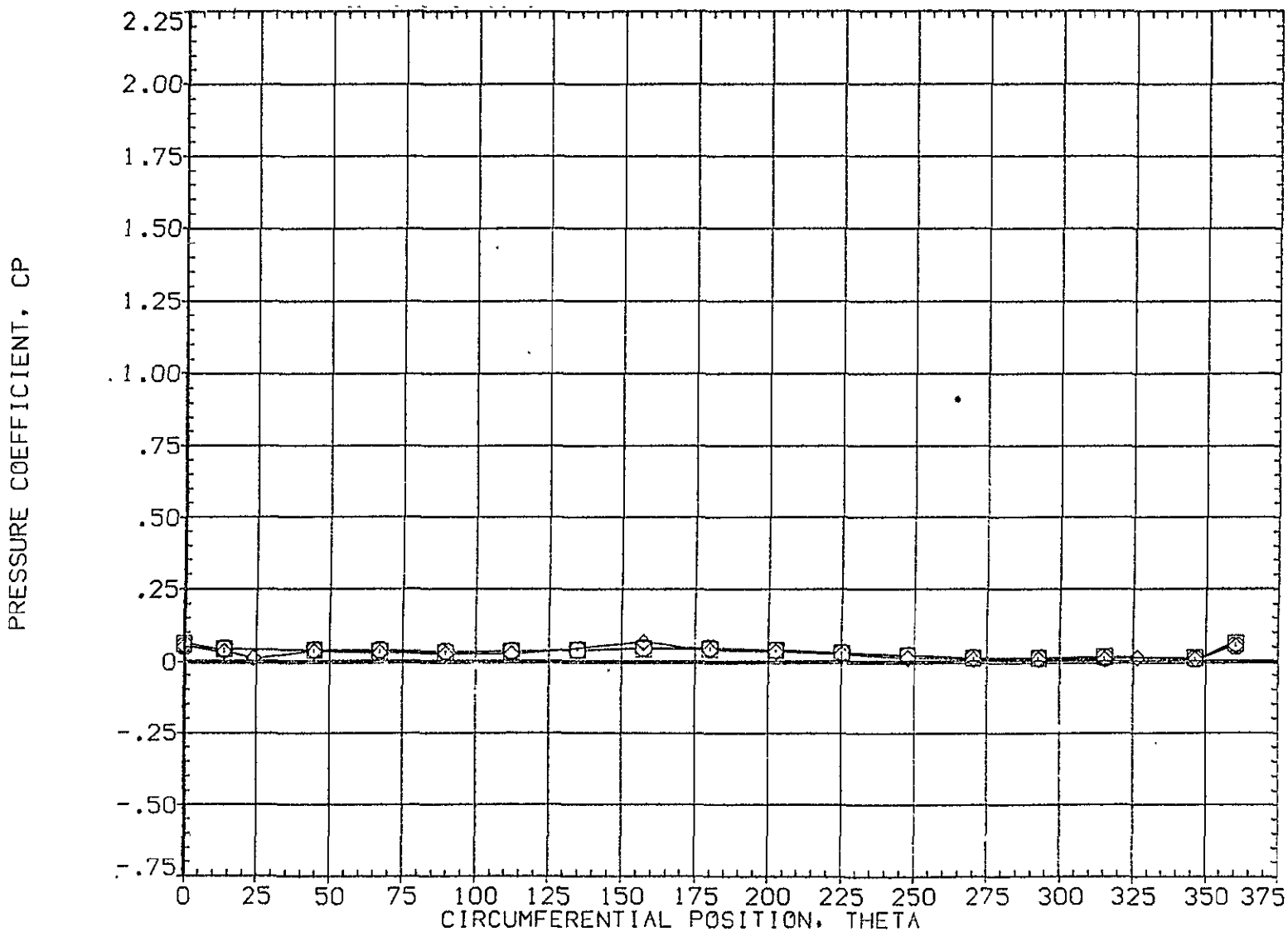

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A031)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

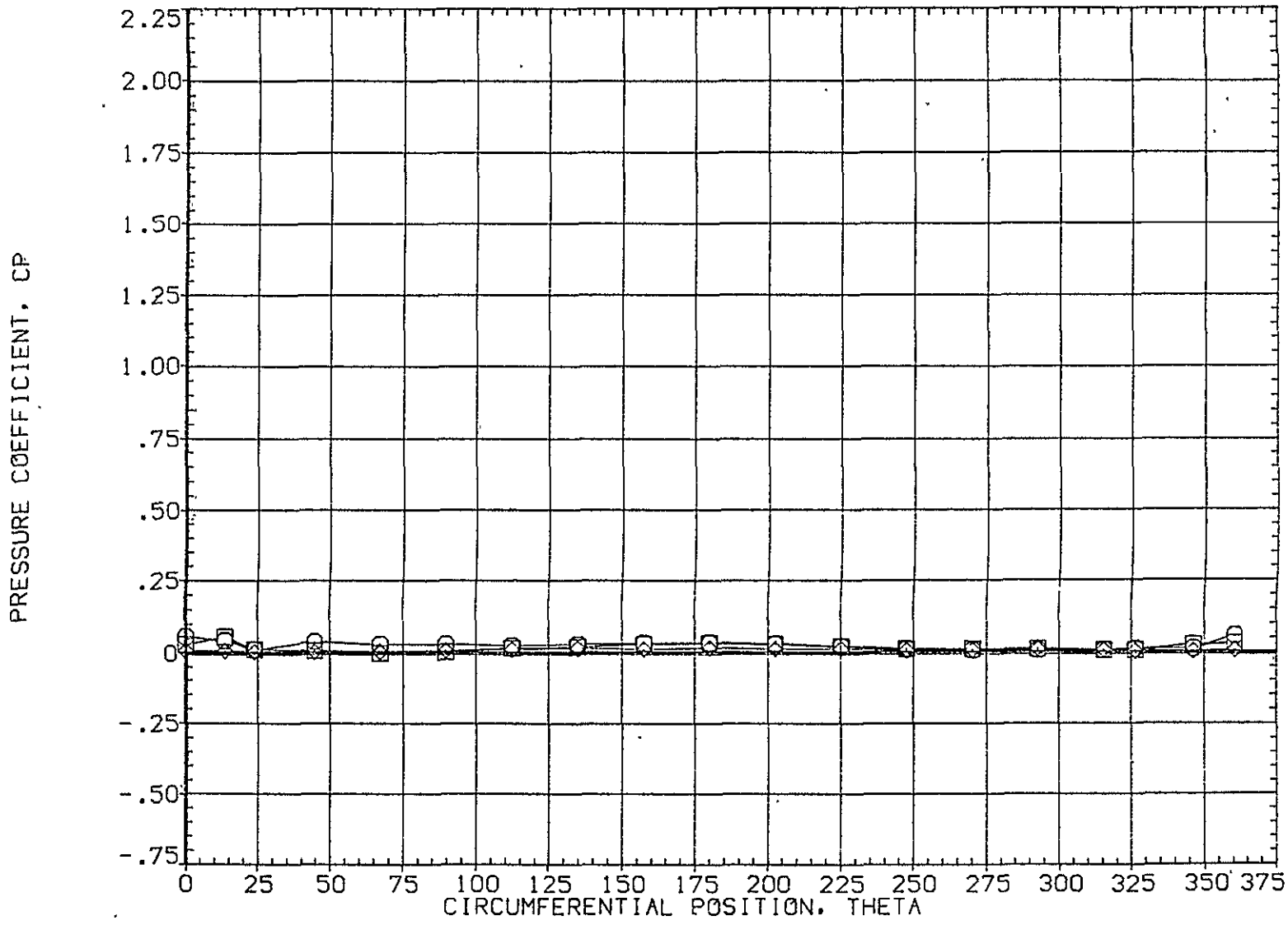

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

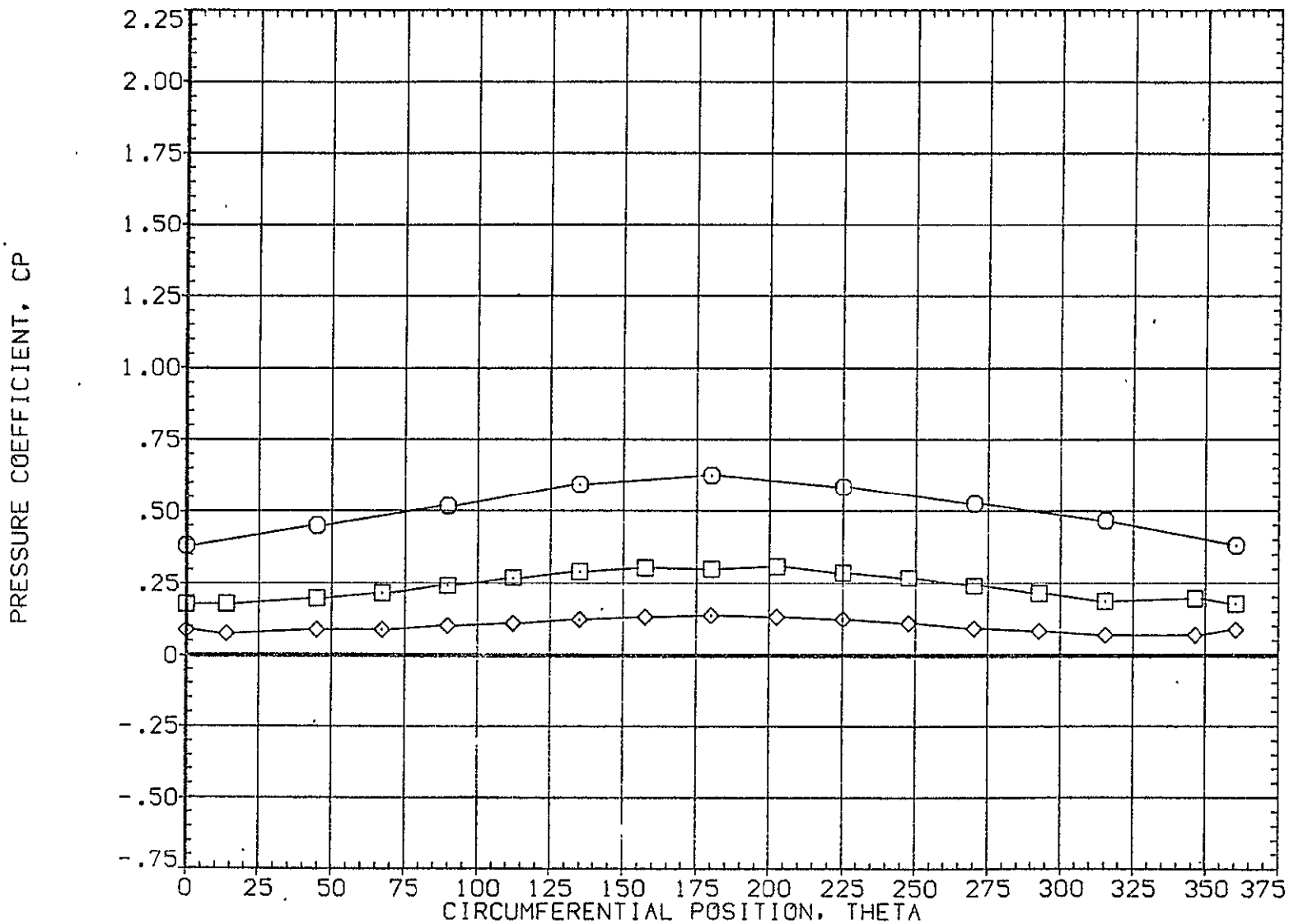

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

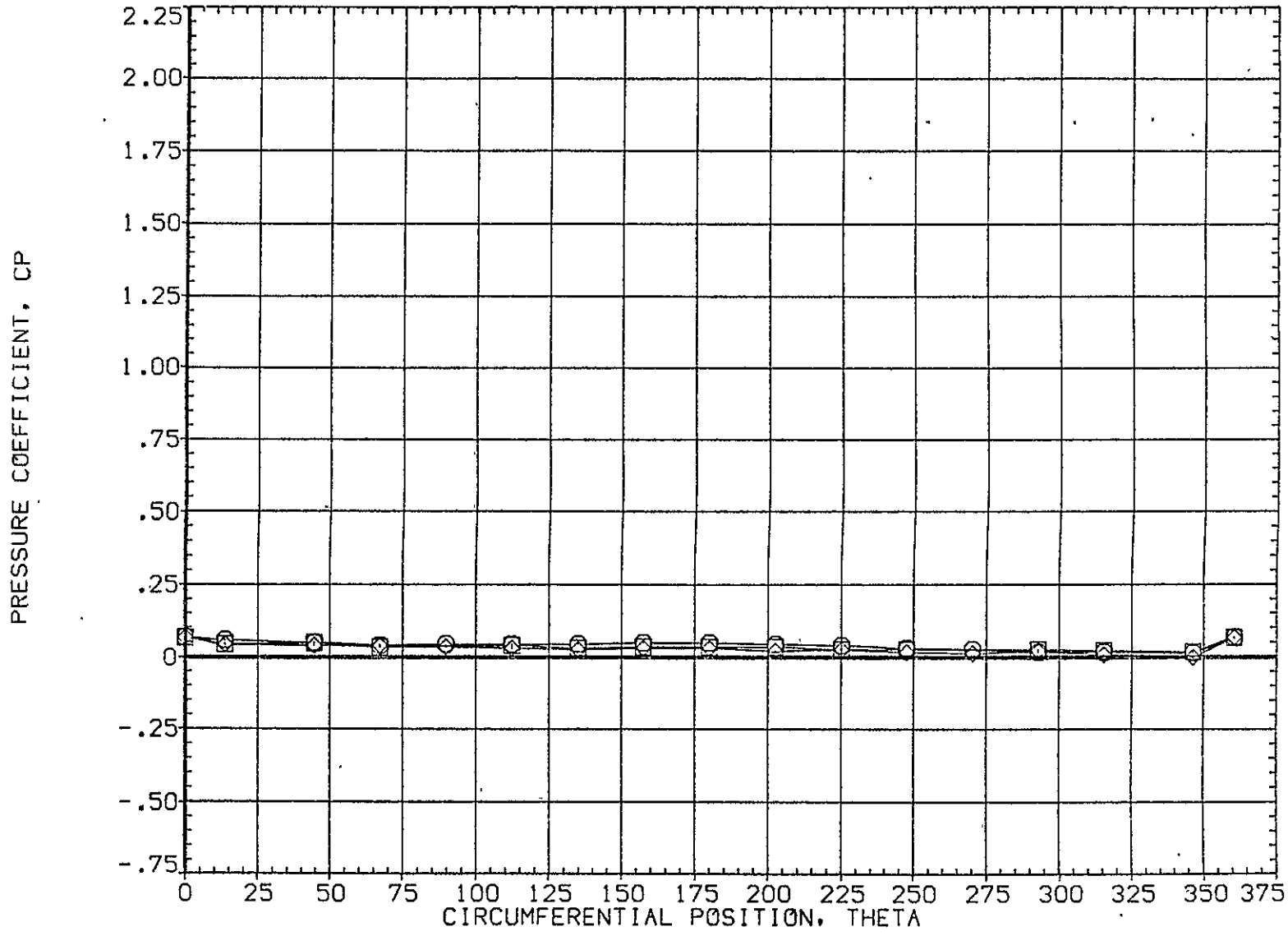

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

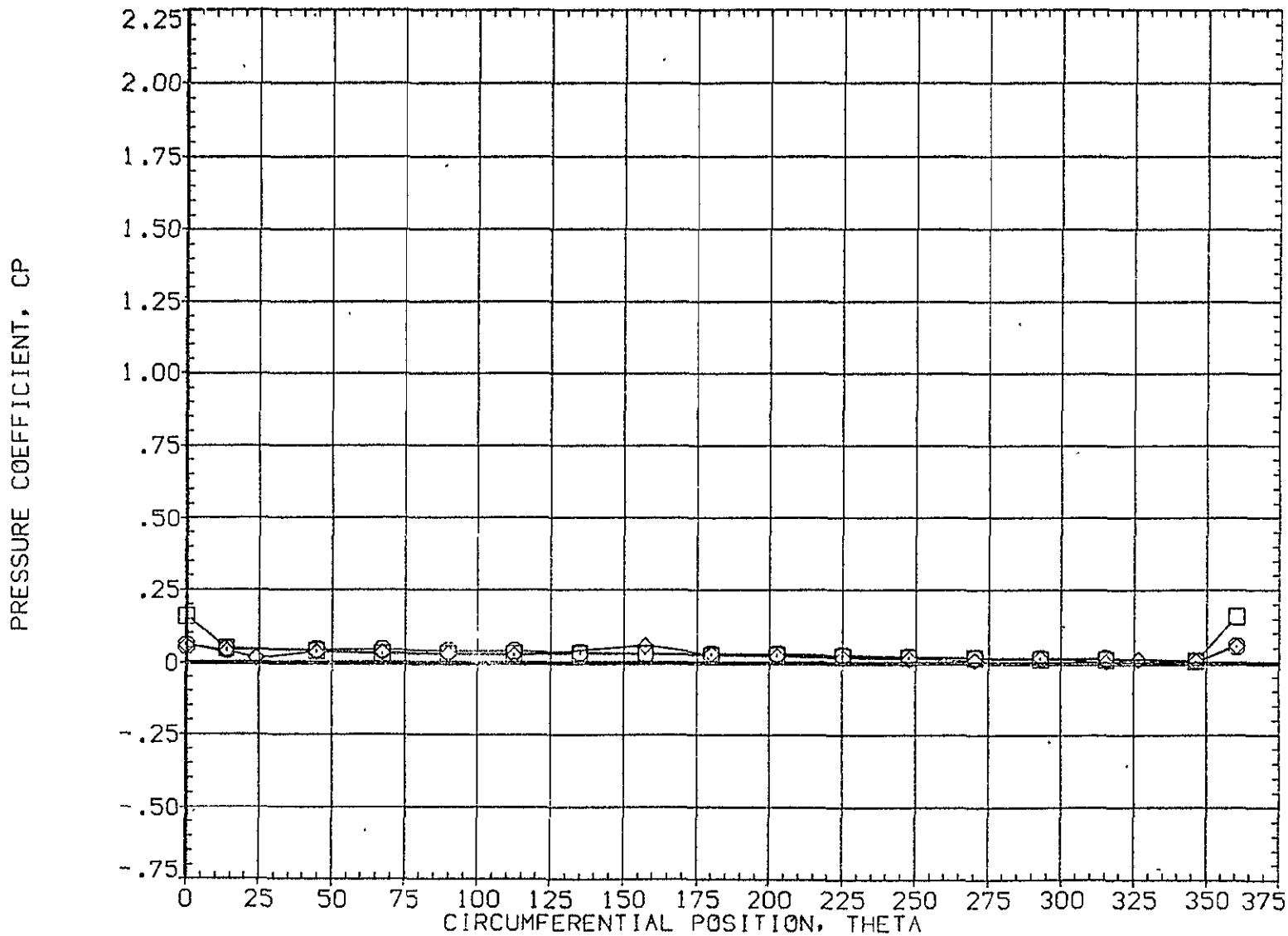

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A032)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

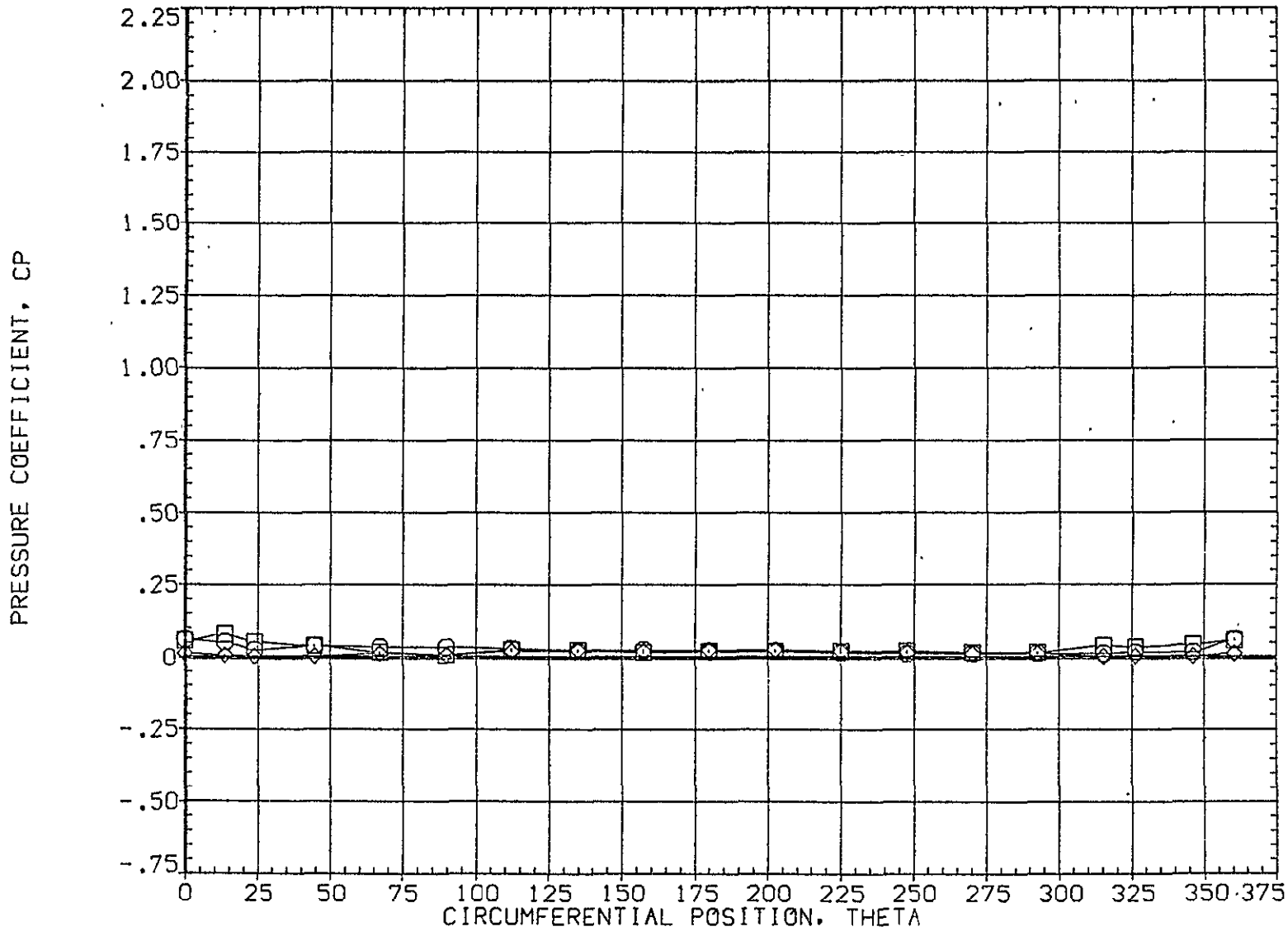

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

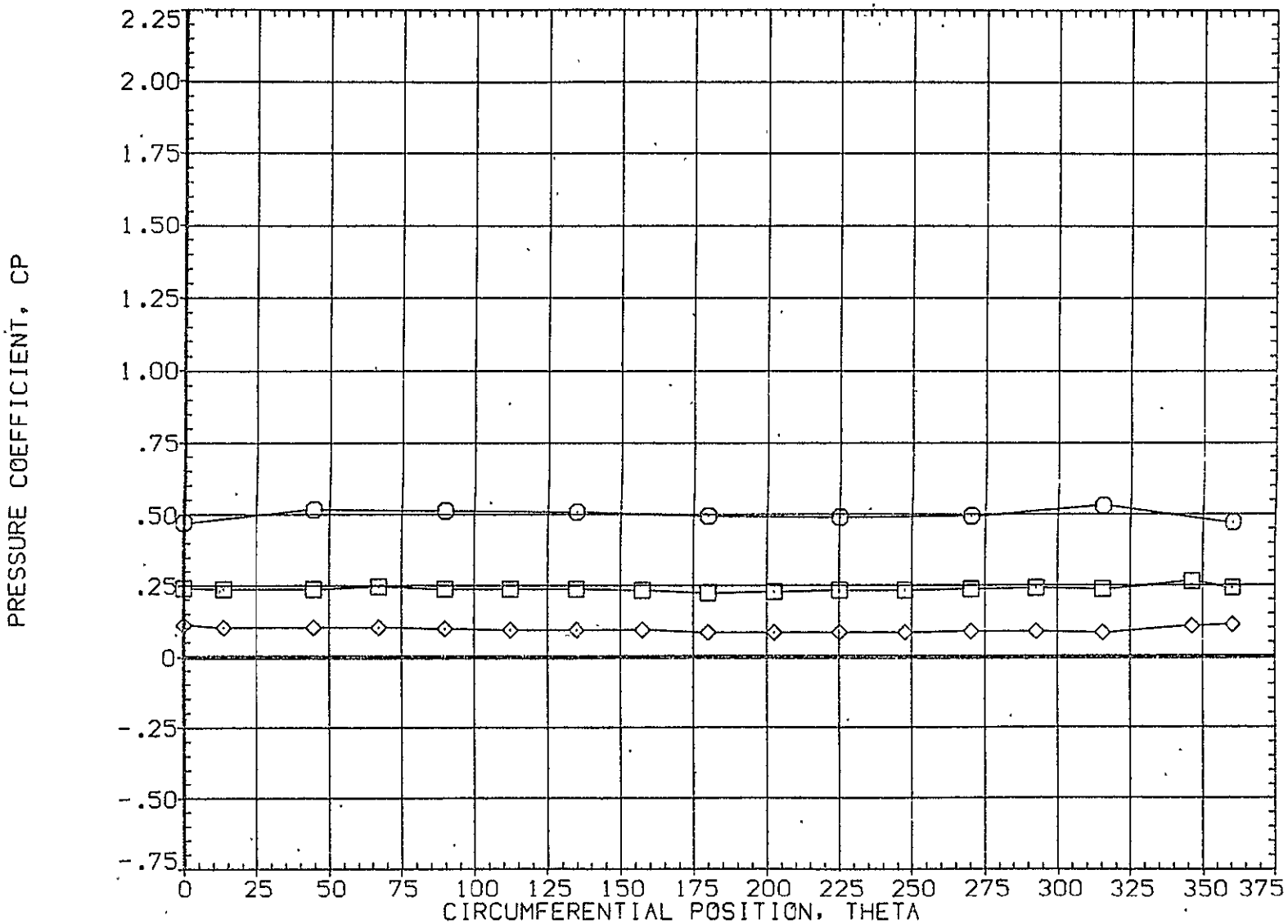

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

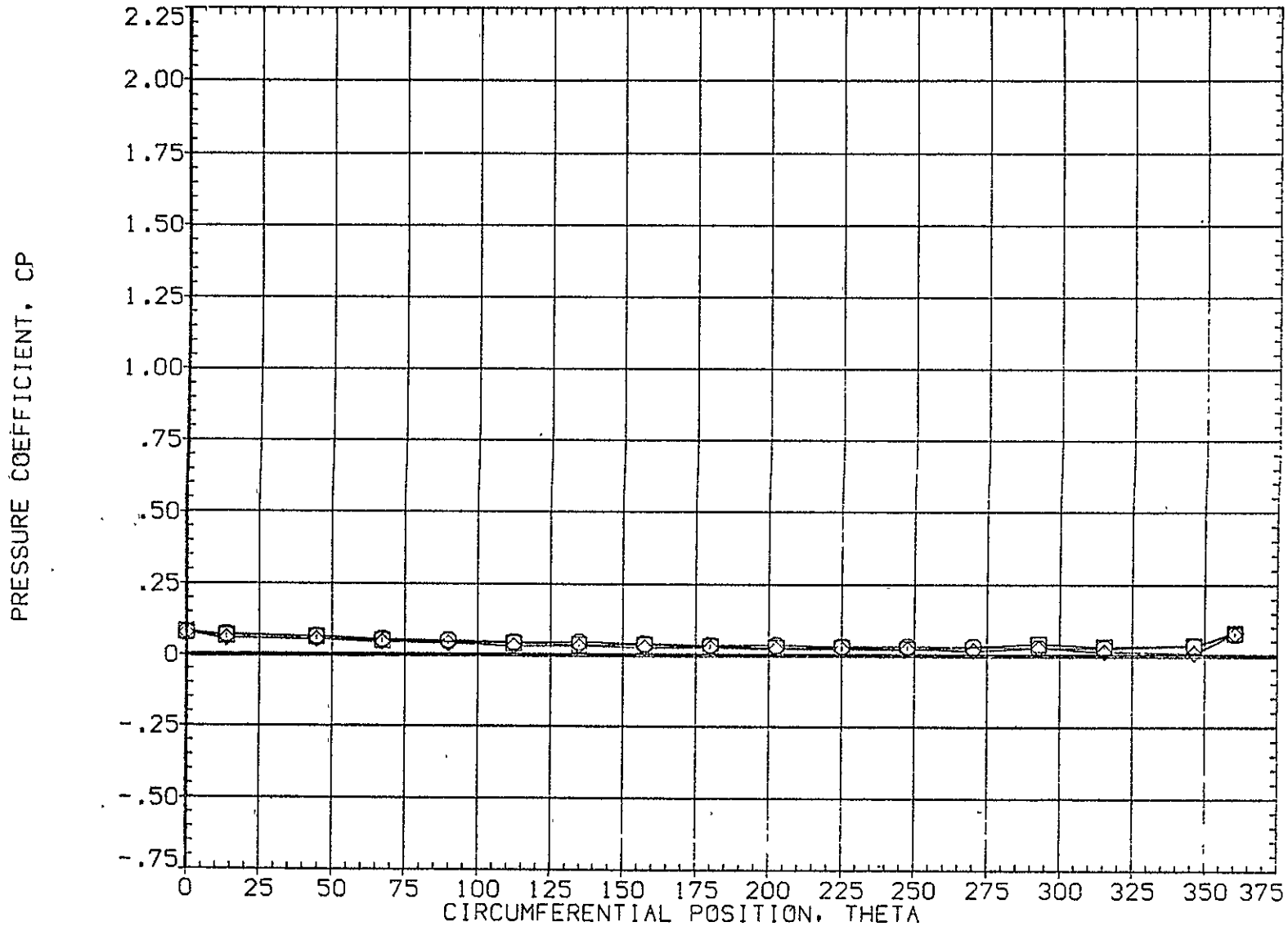

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

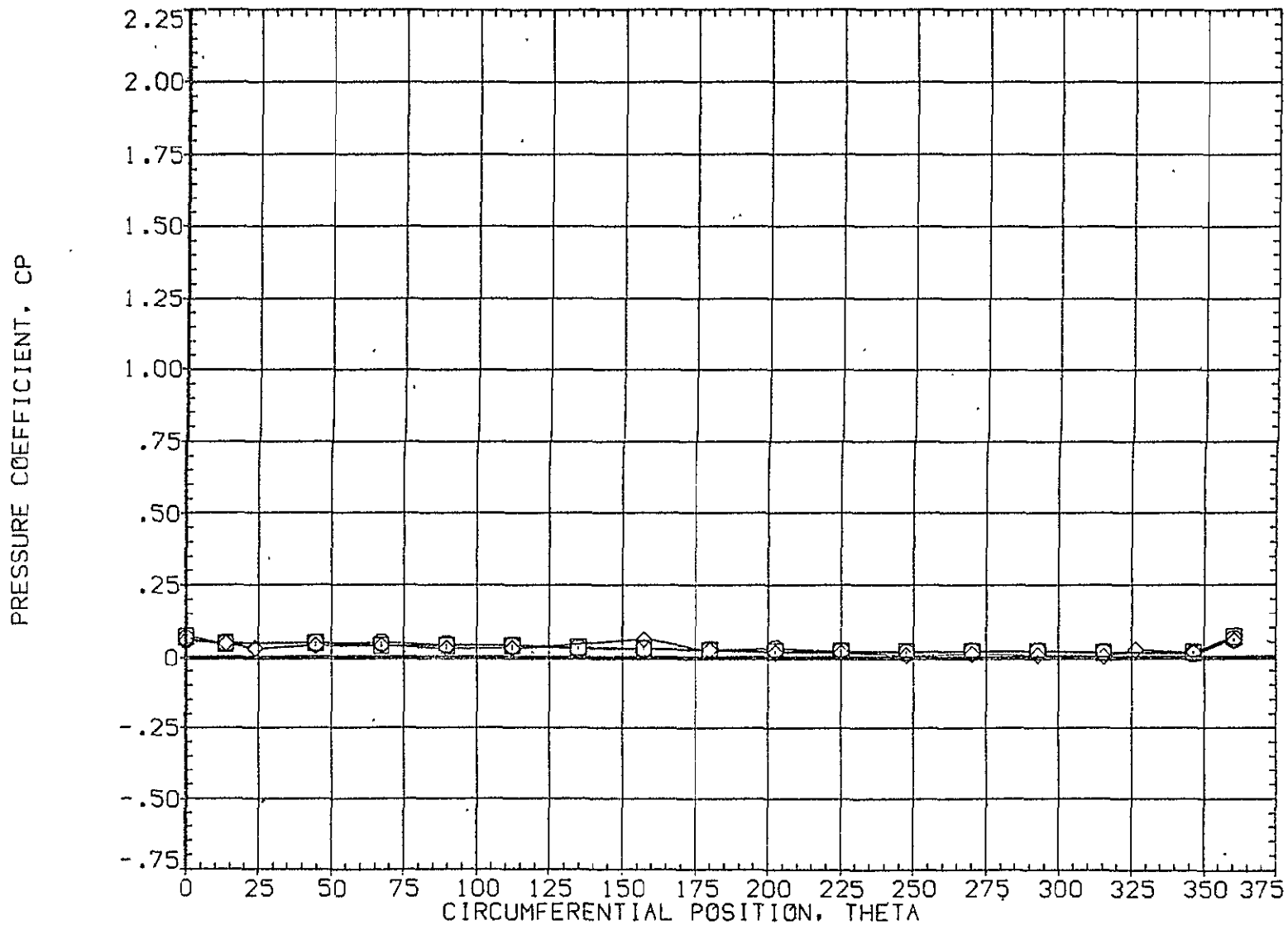

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A033)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.260	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

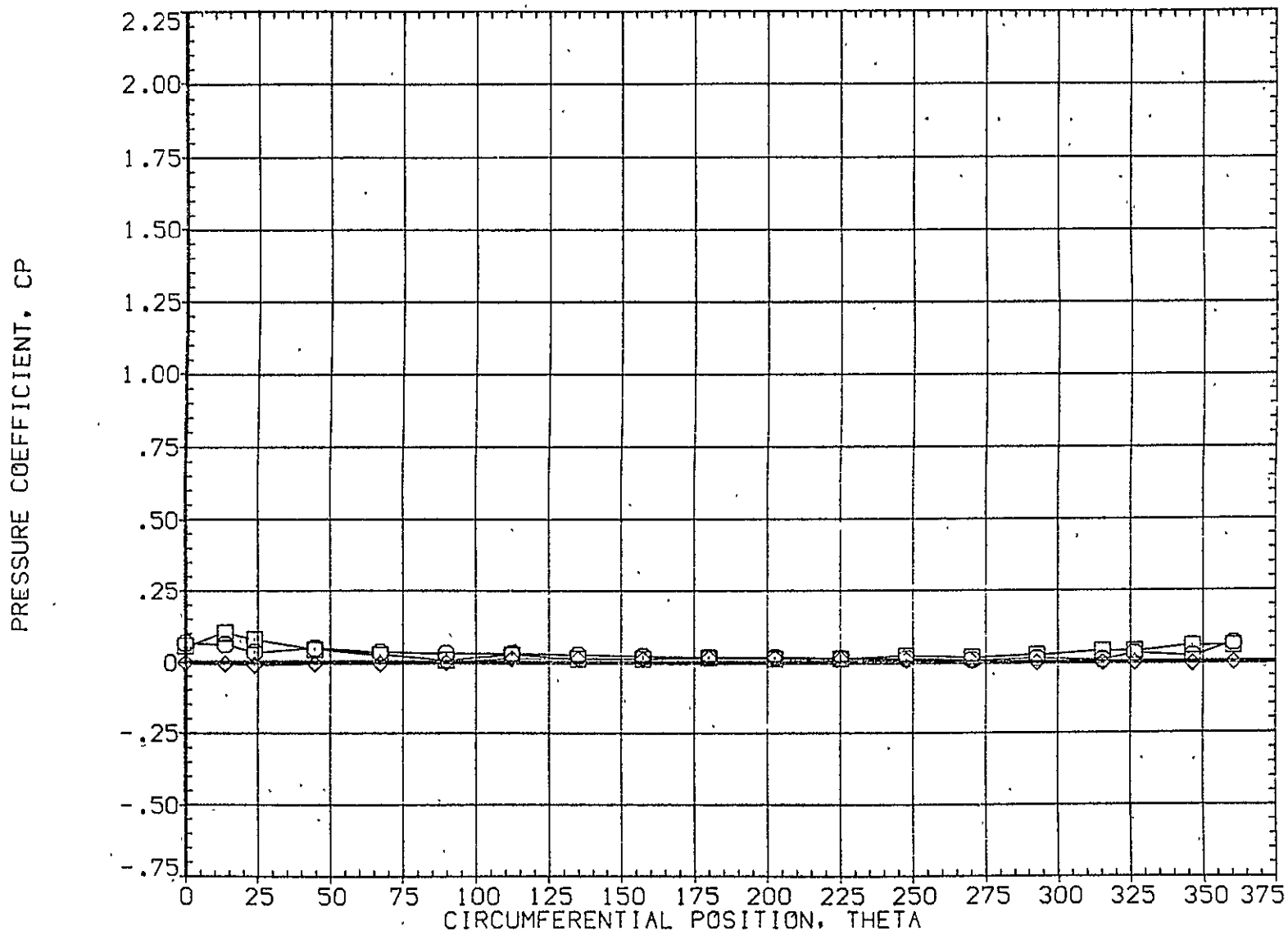

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

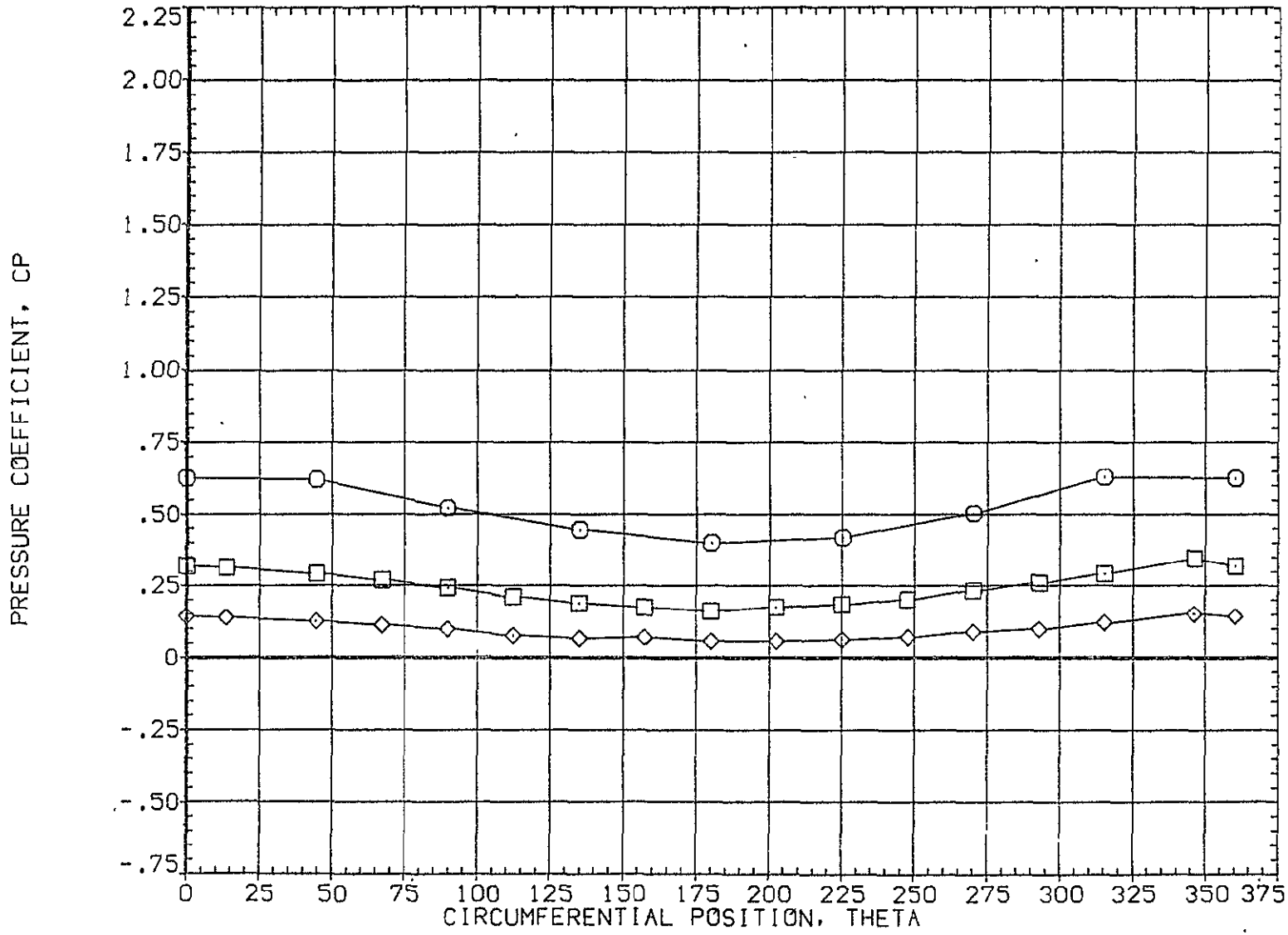

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

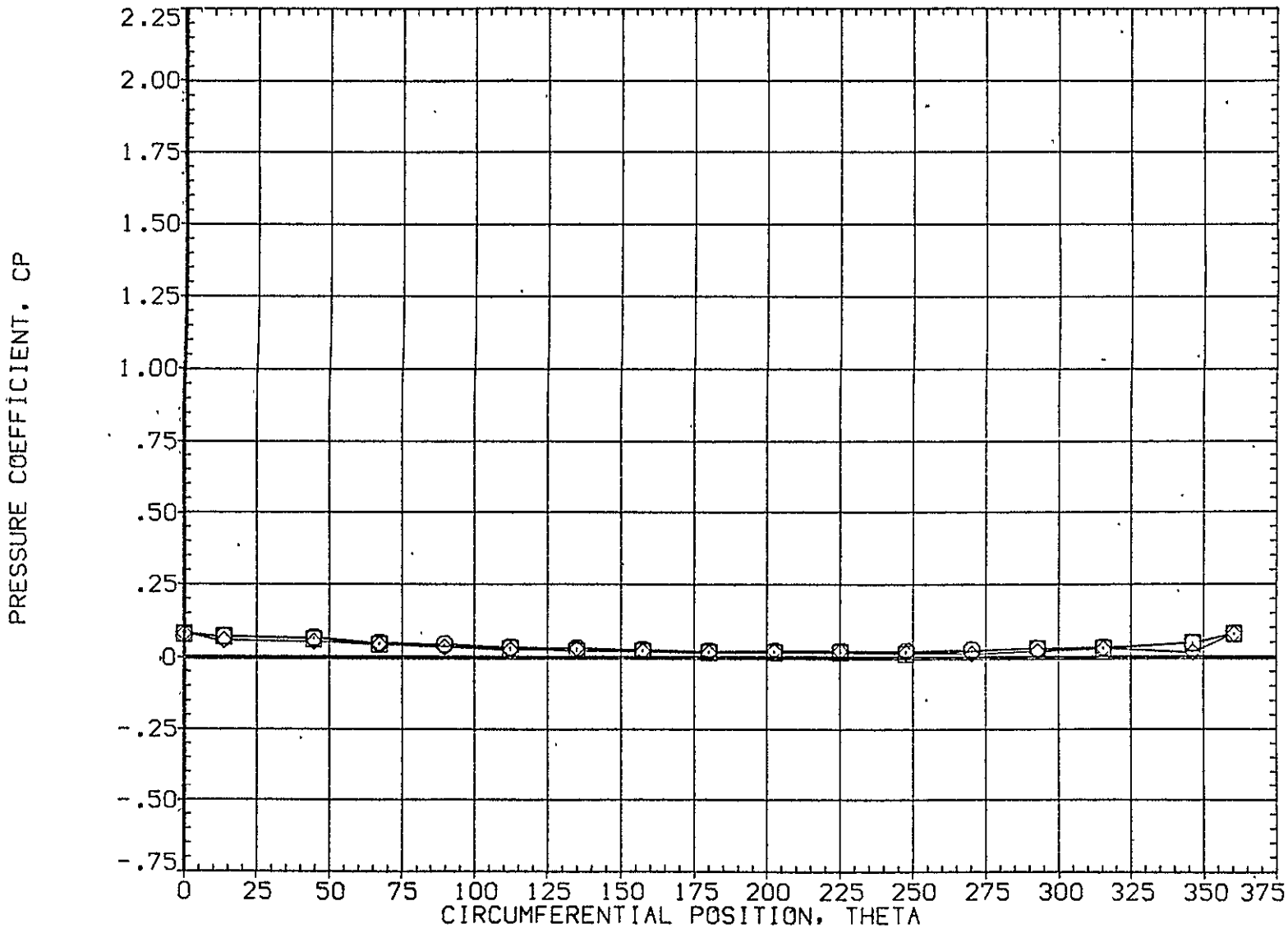

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

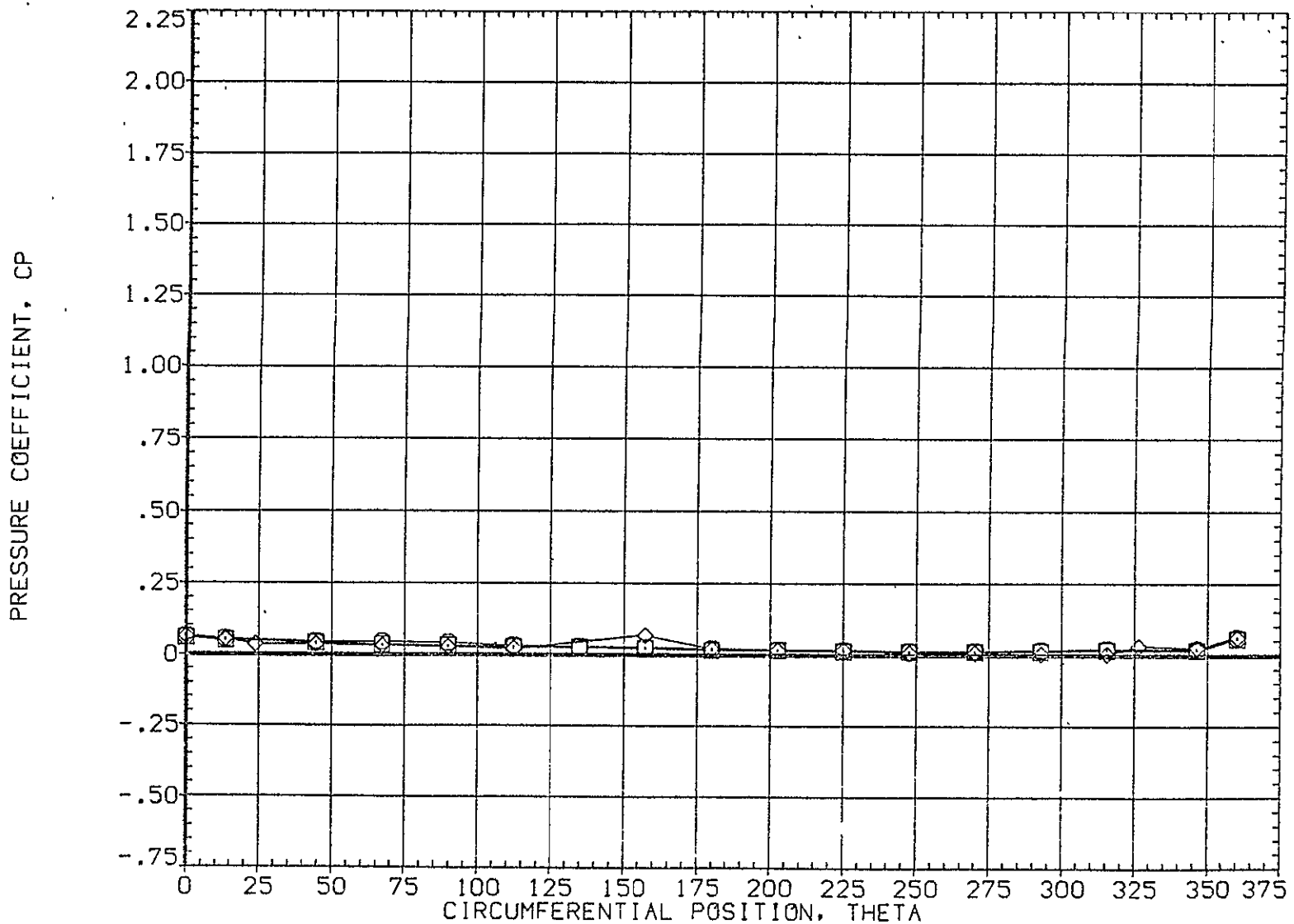

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A034)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

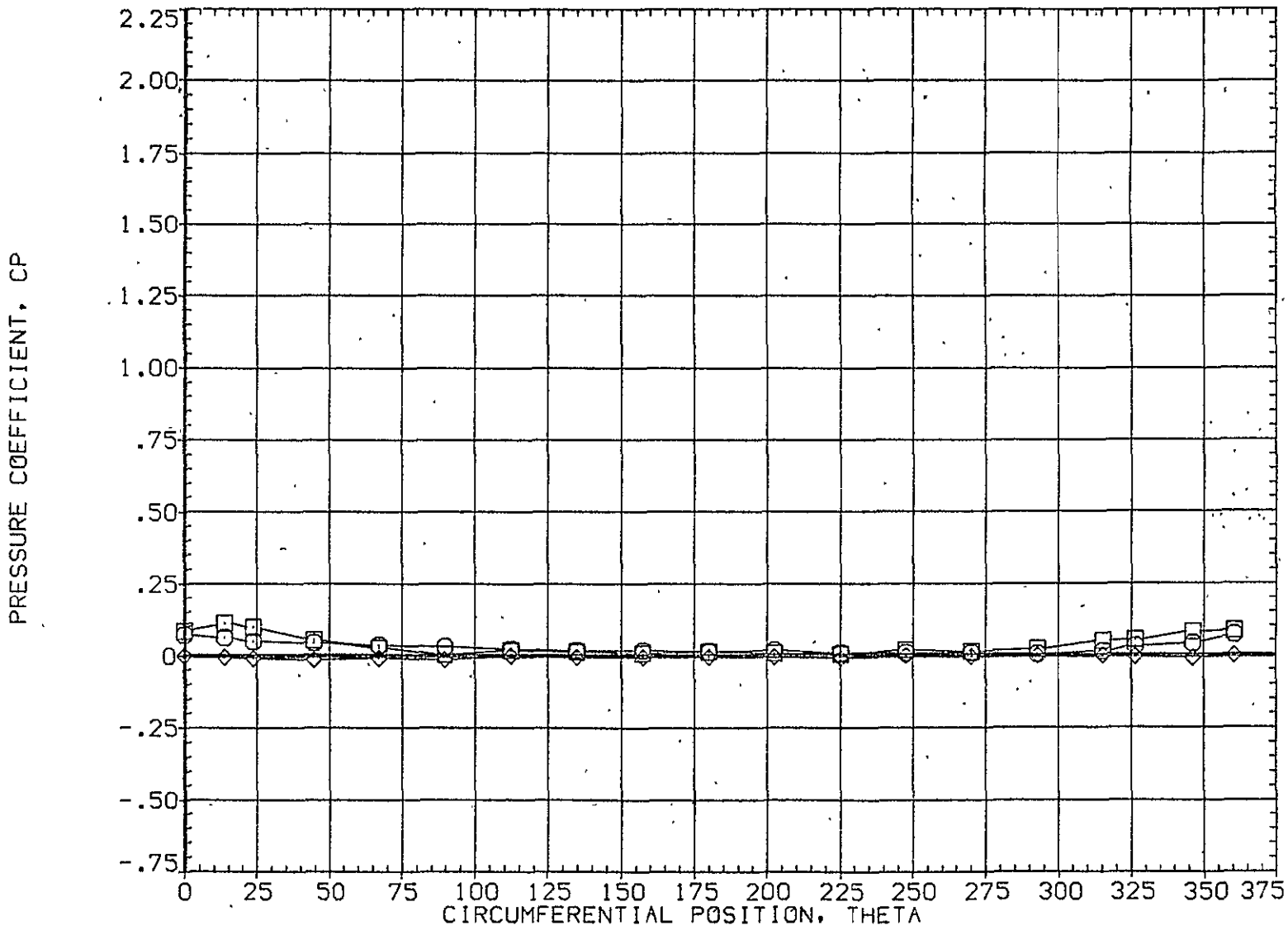

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

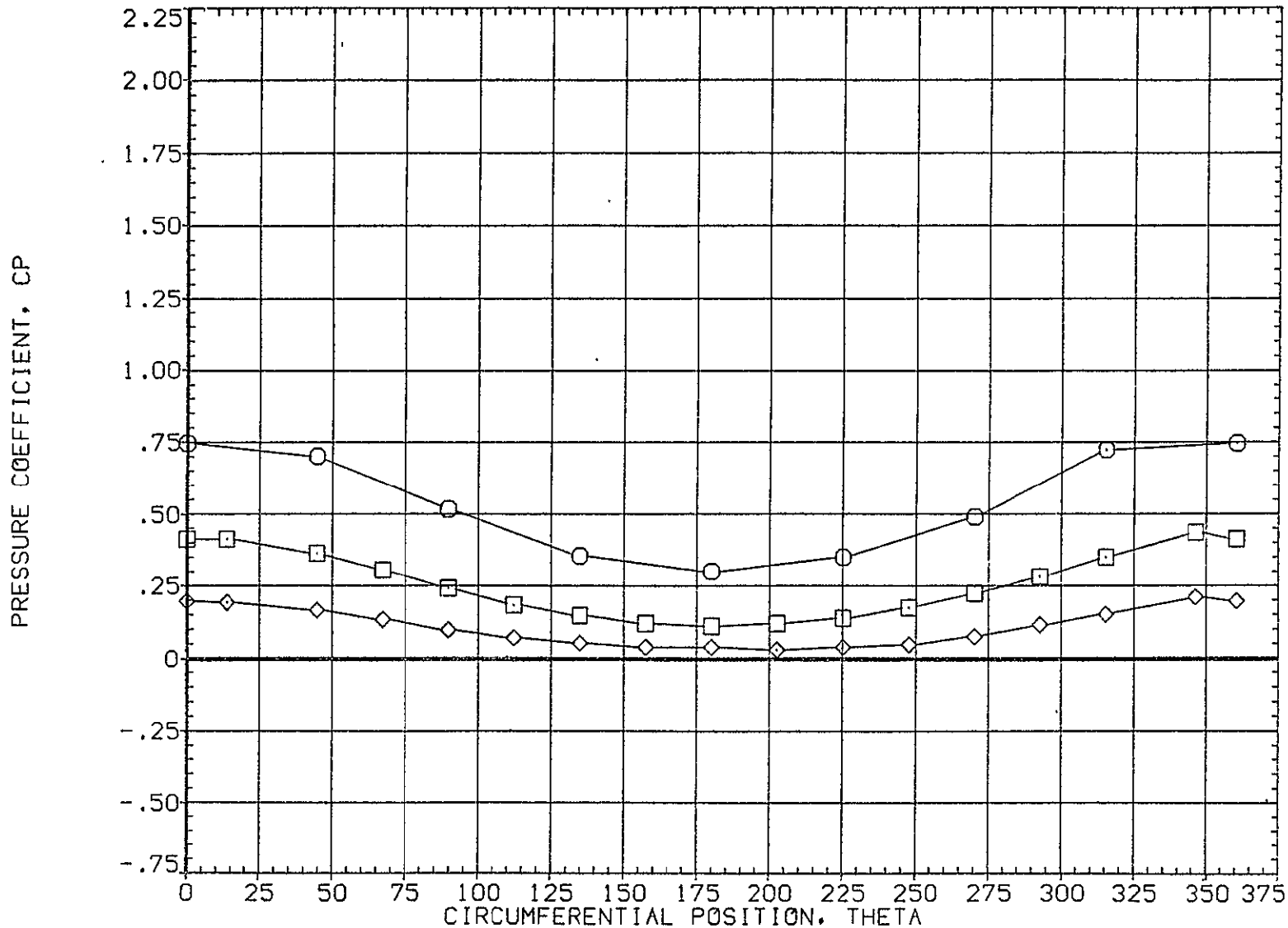

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

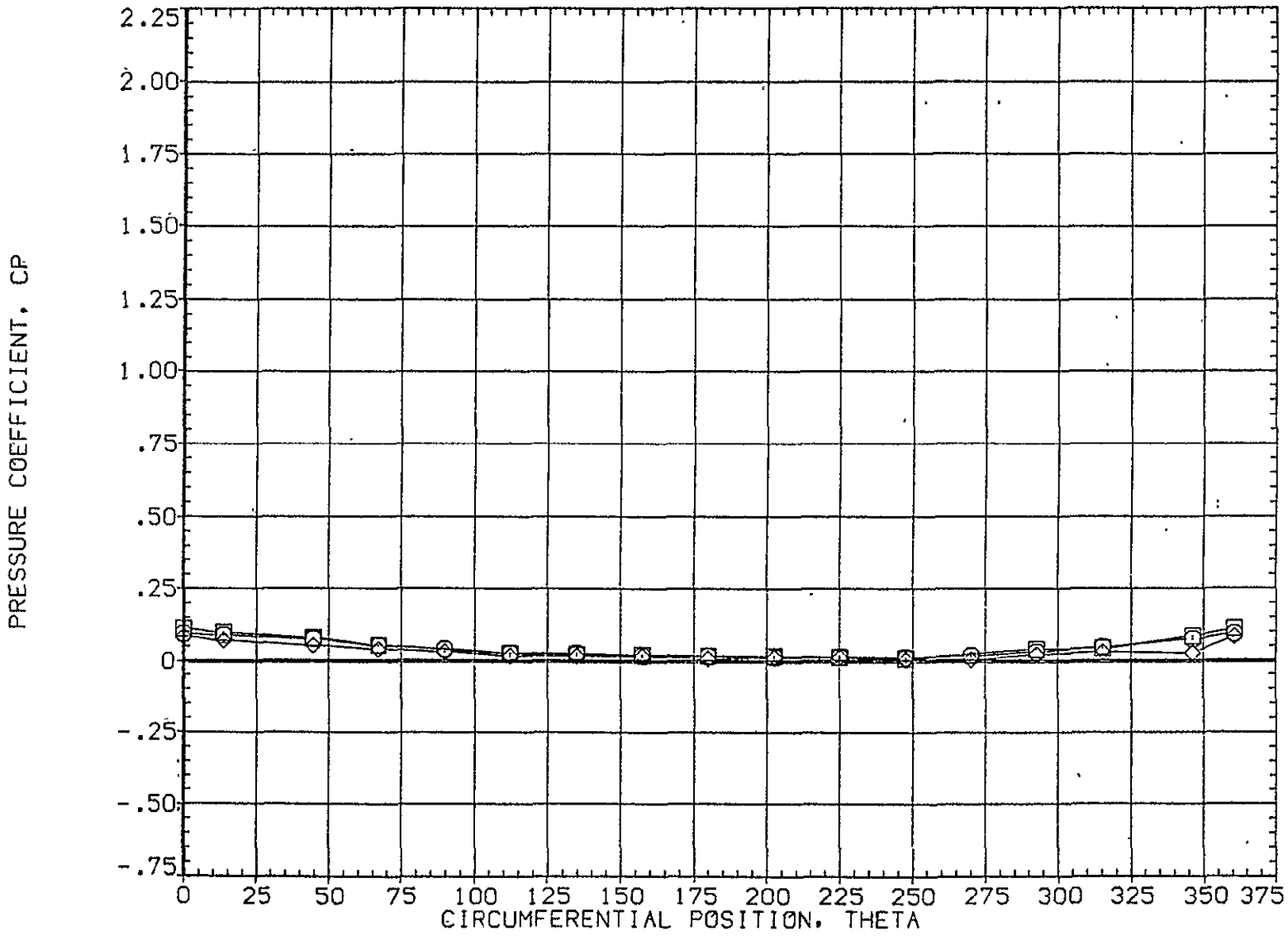

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

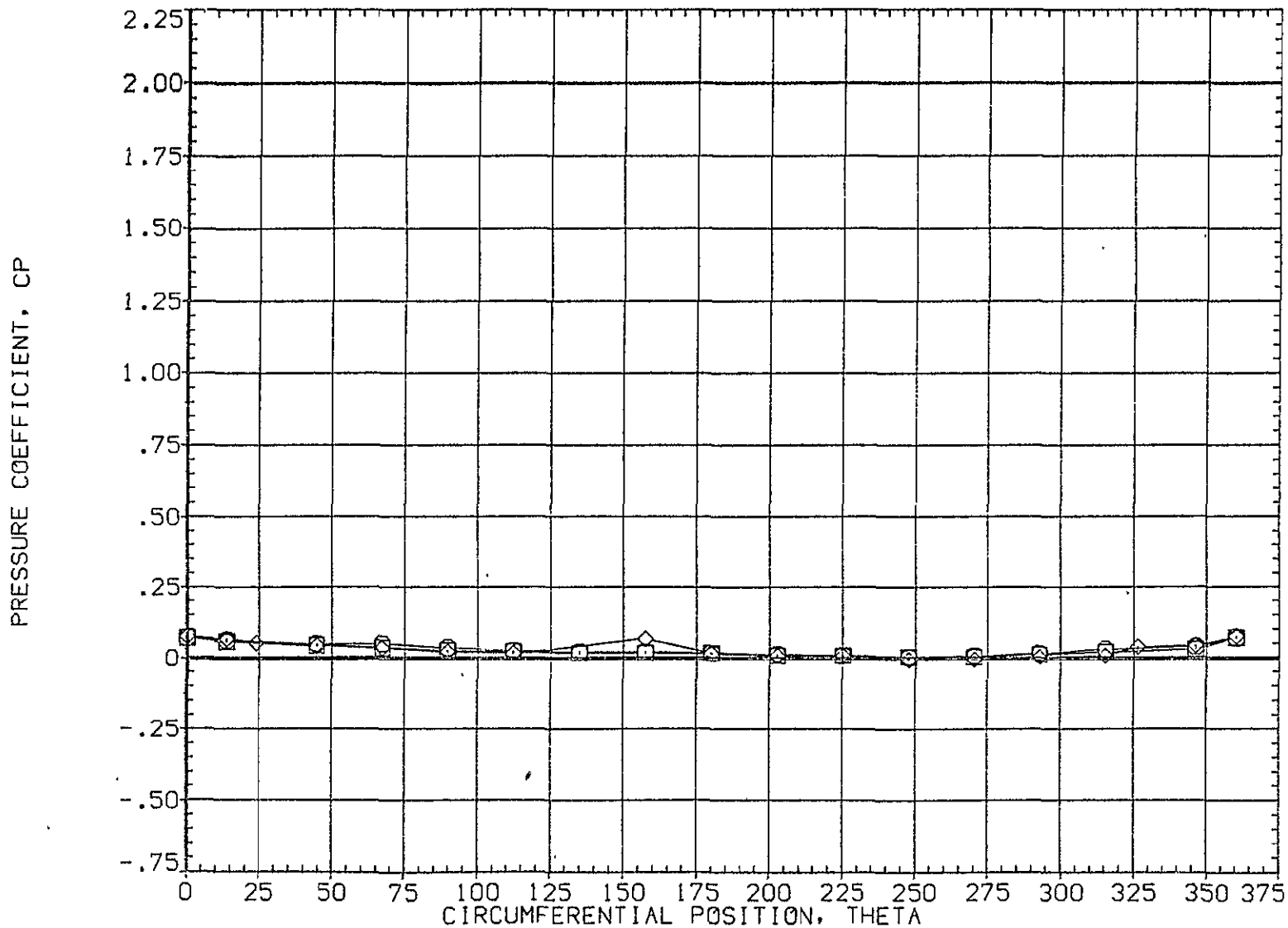

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A035)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	180.000

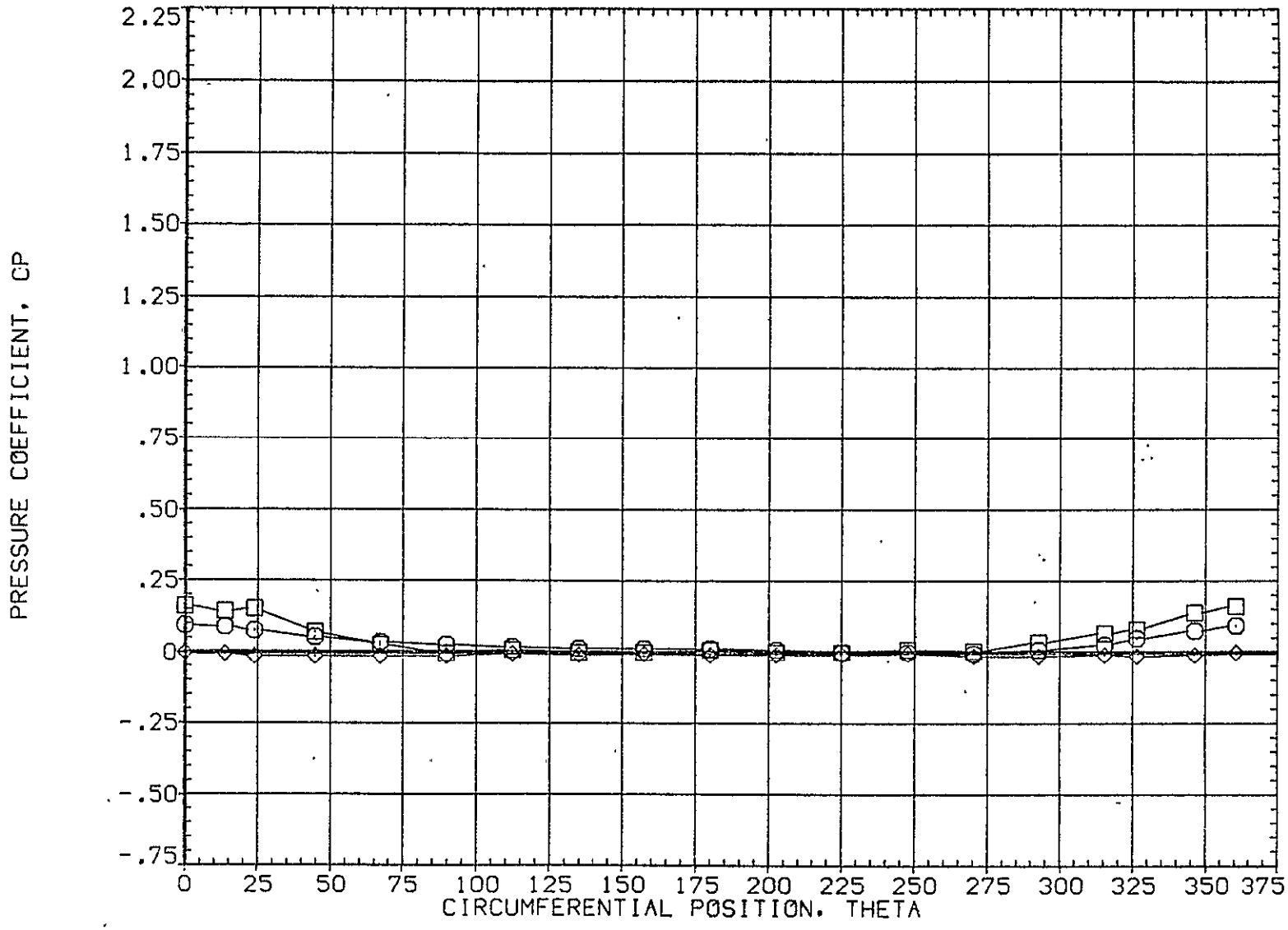

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

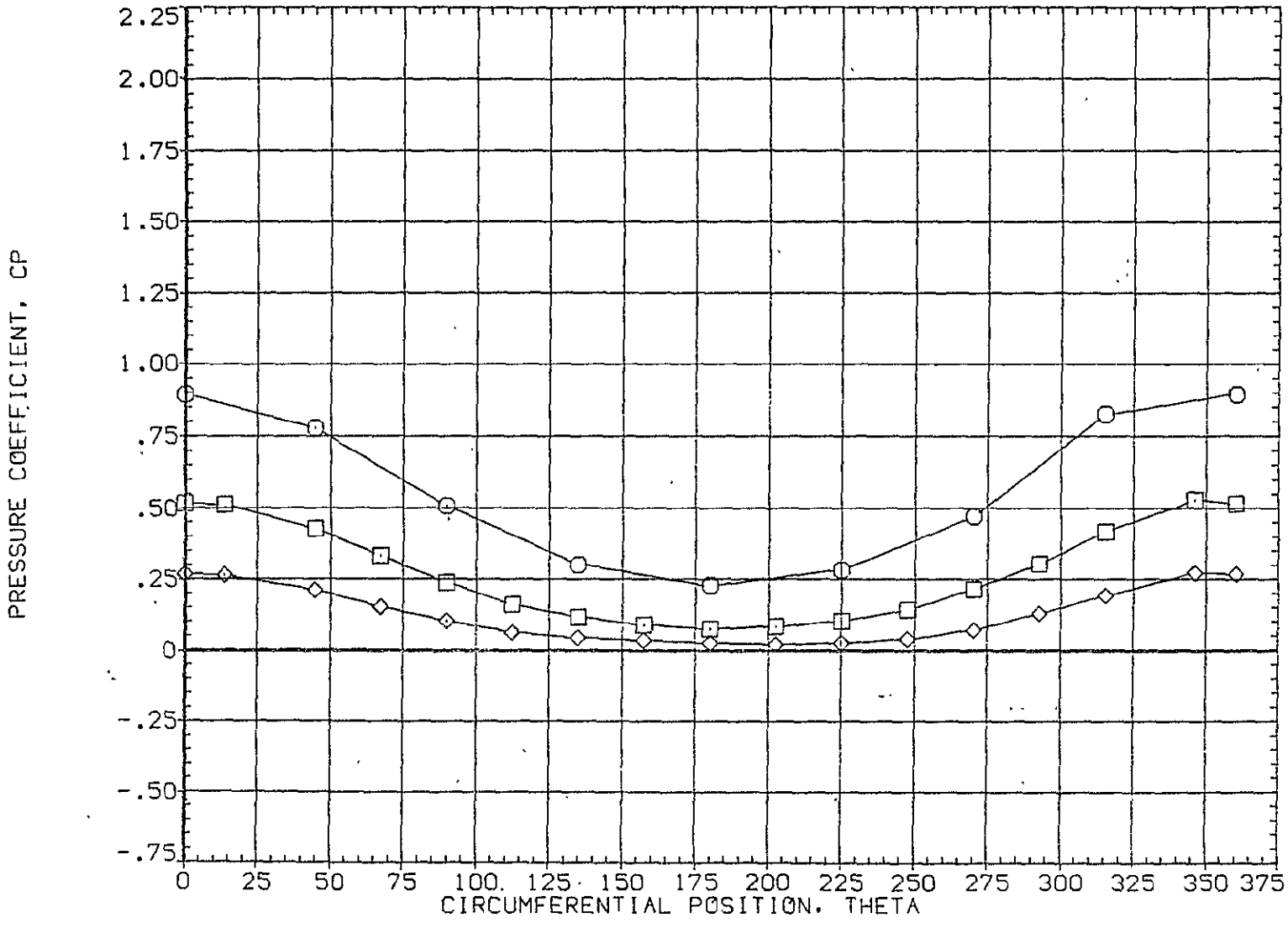

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

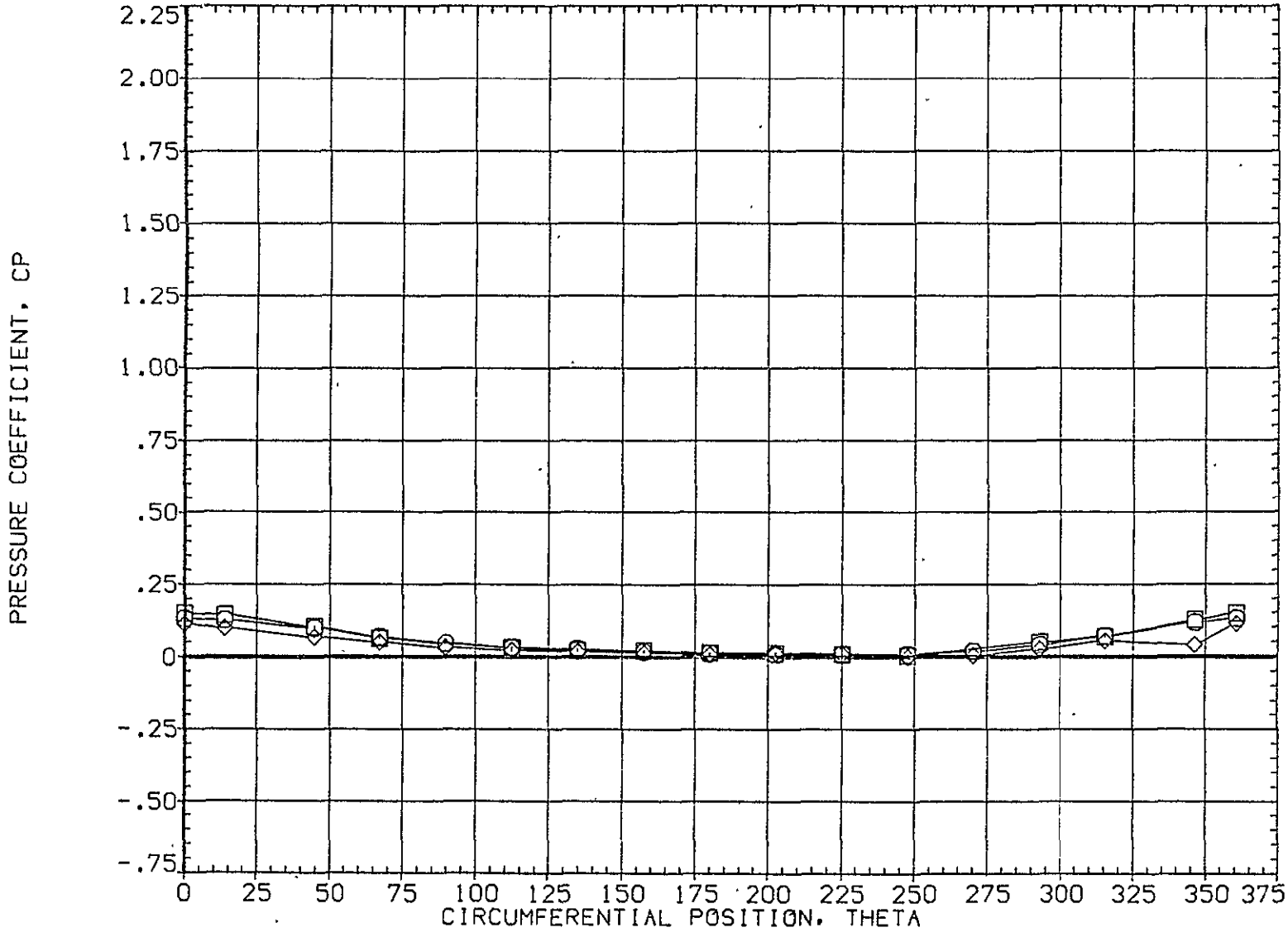

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

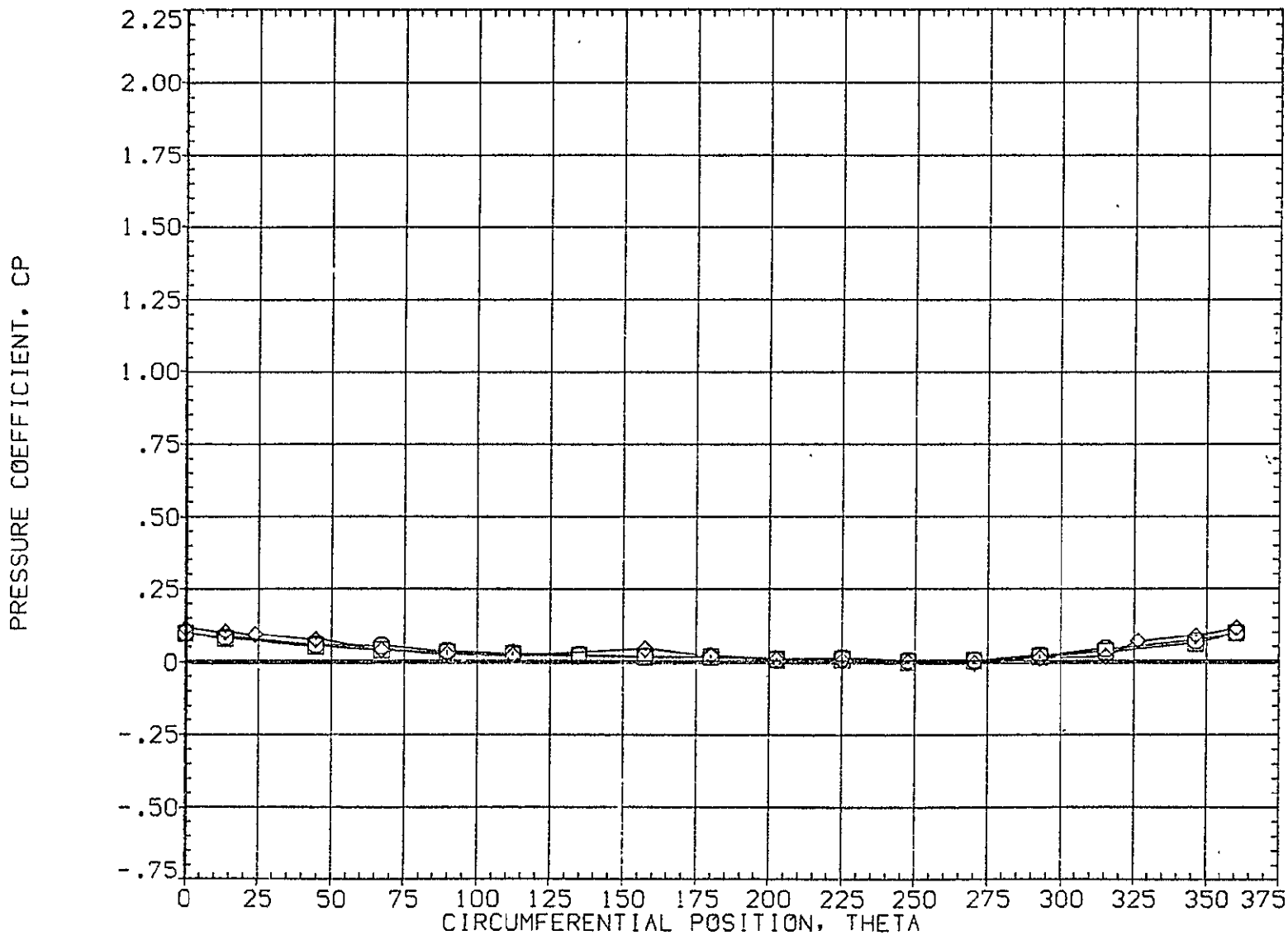

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A036)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

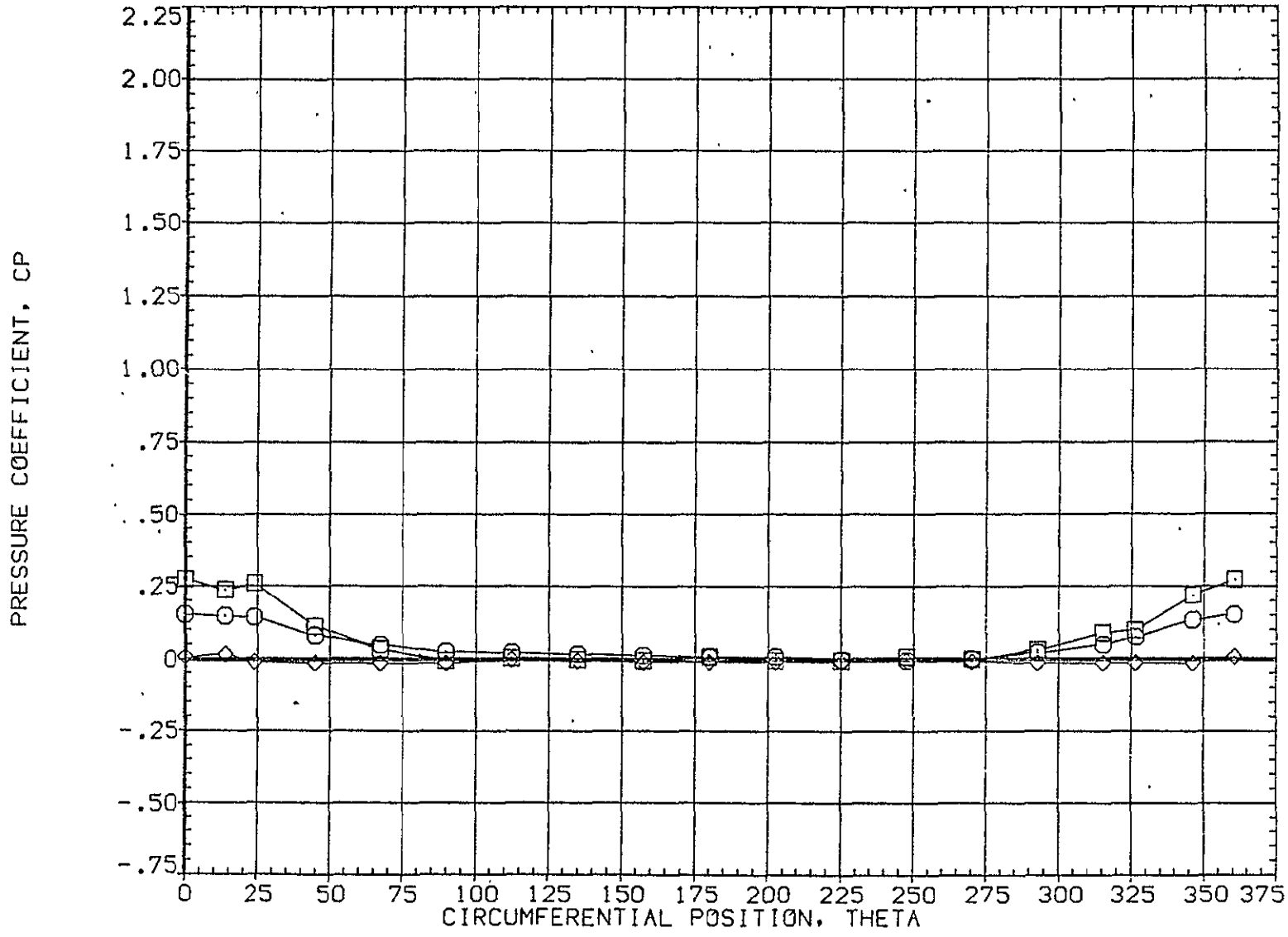

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.470	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

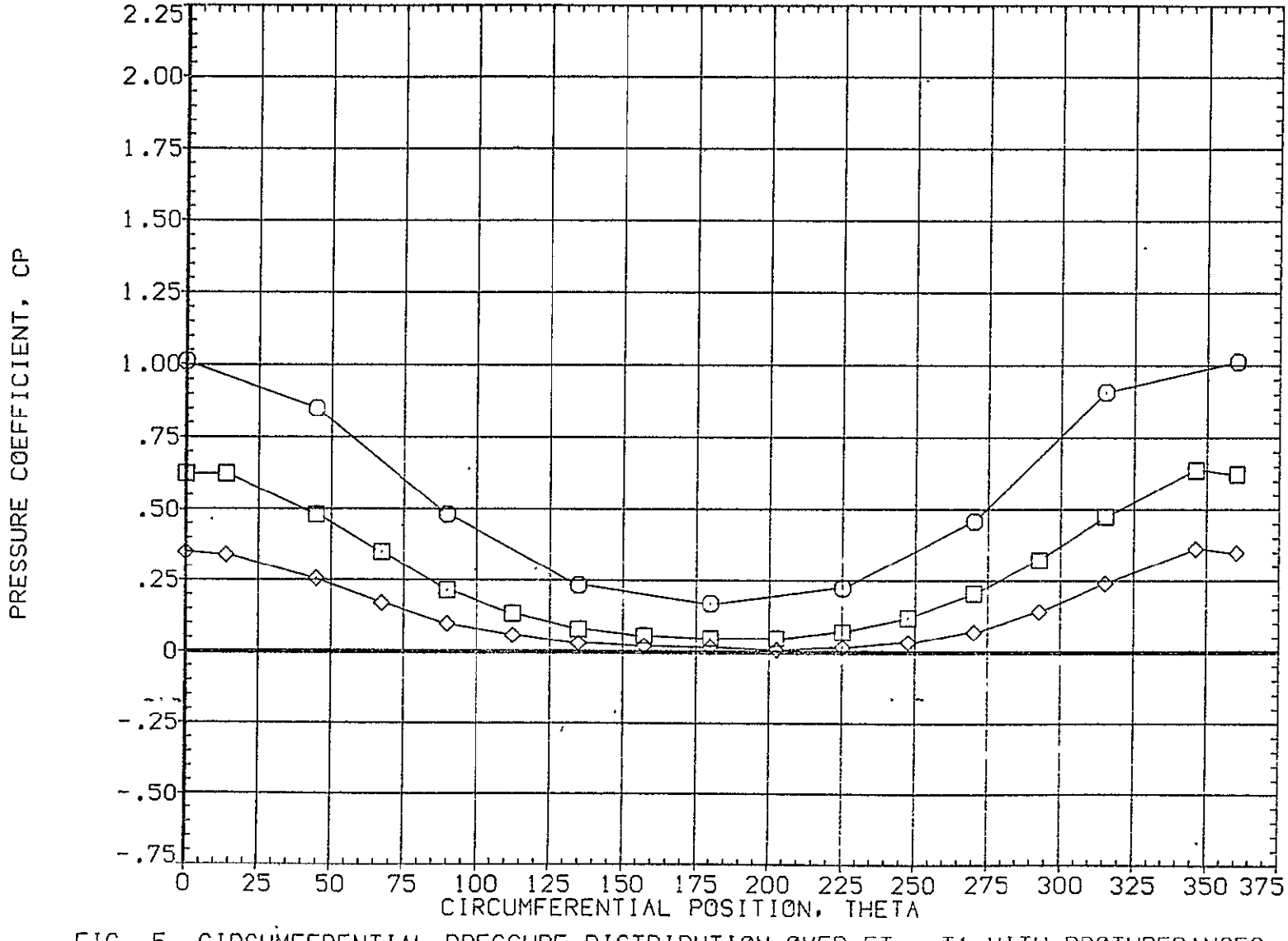

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.470	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

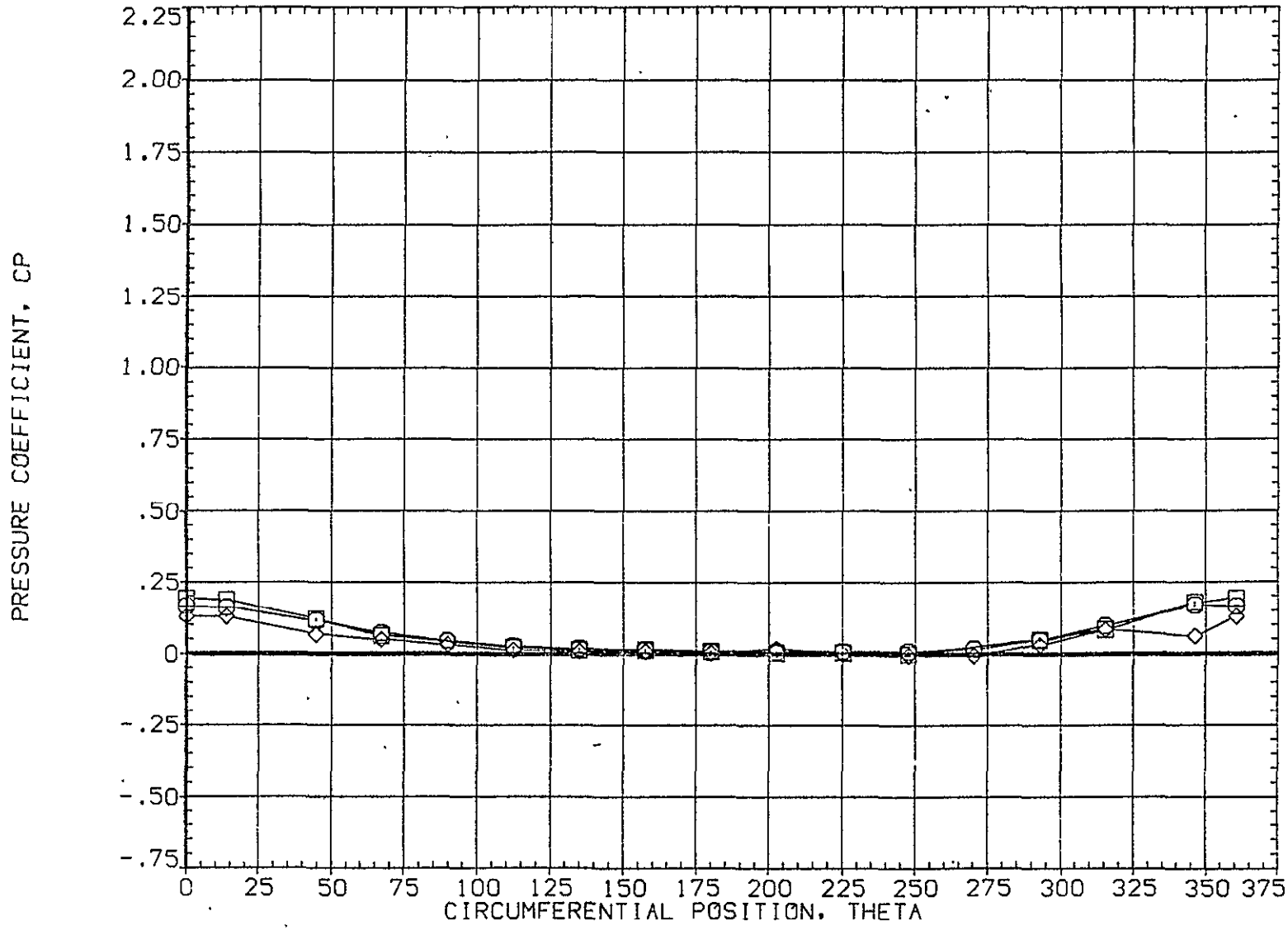

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.470	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

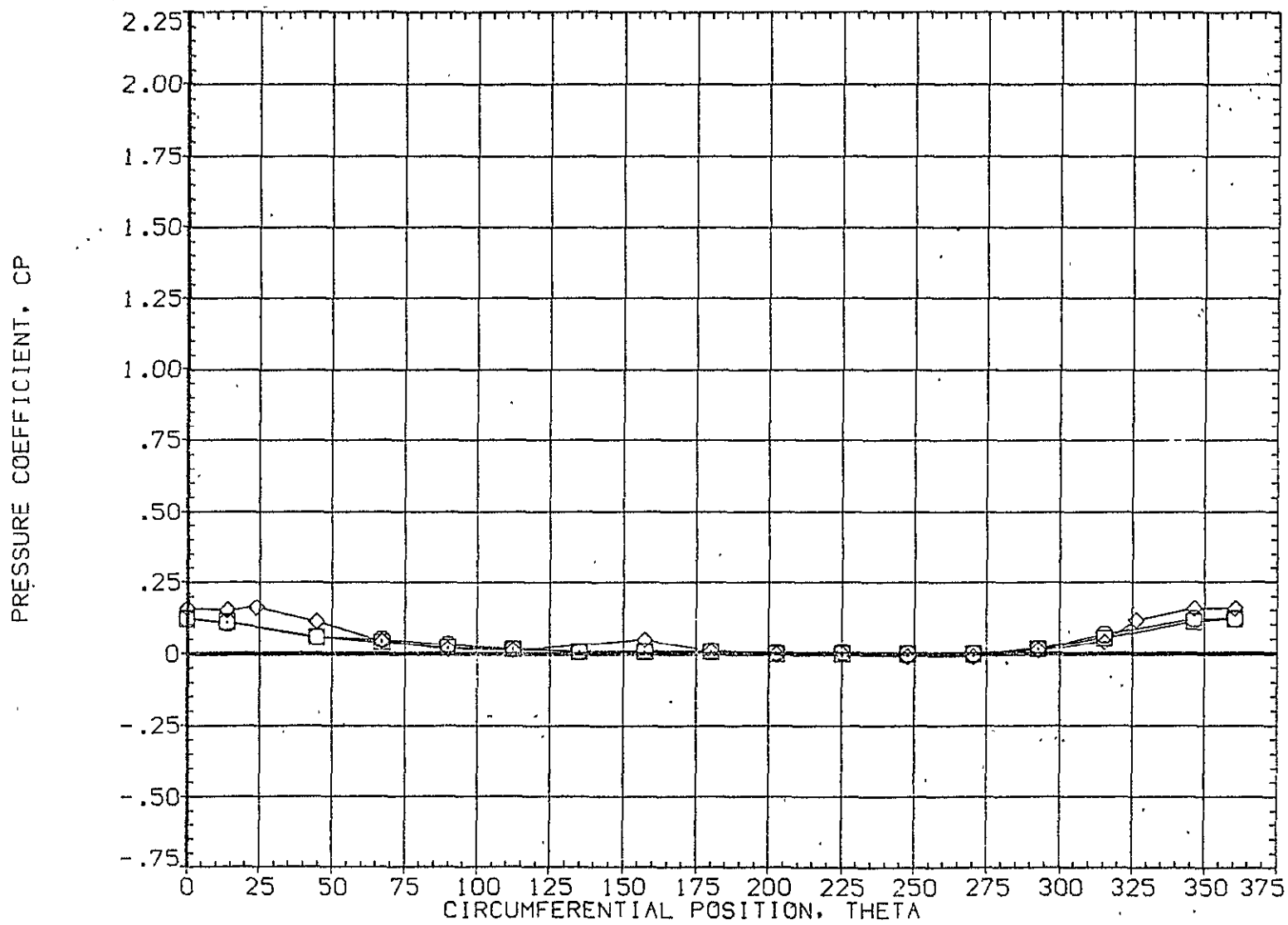

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A037)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.470	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

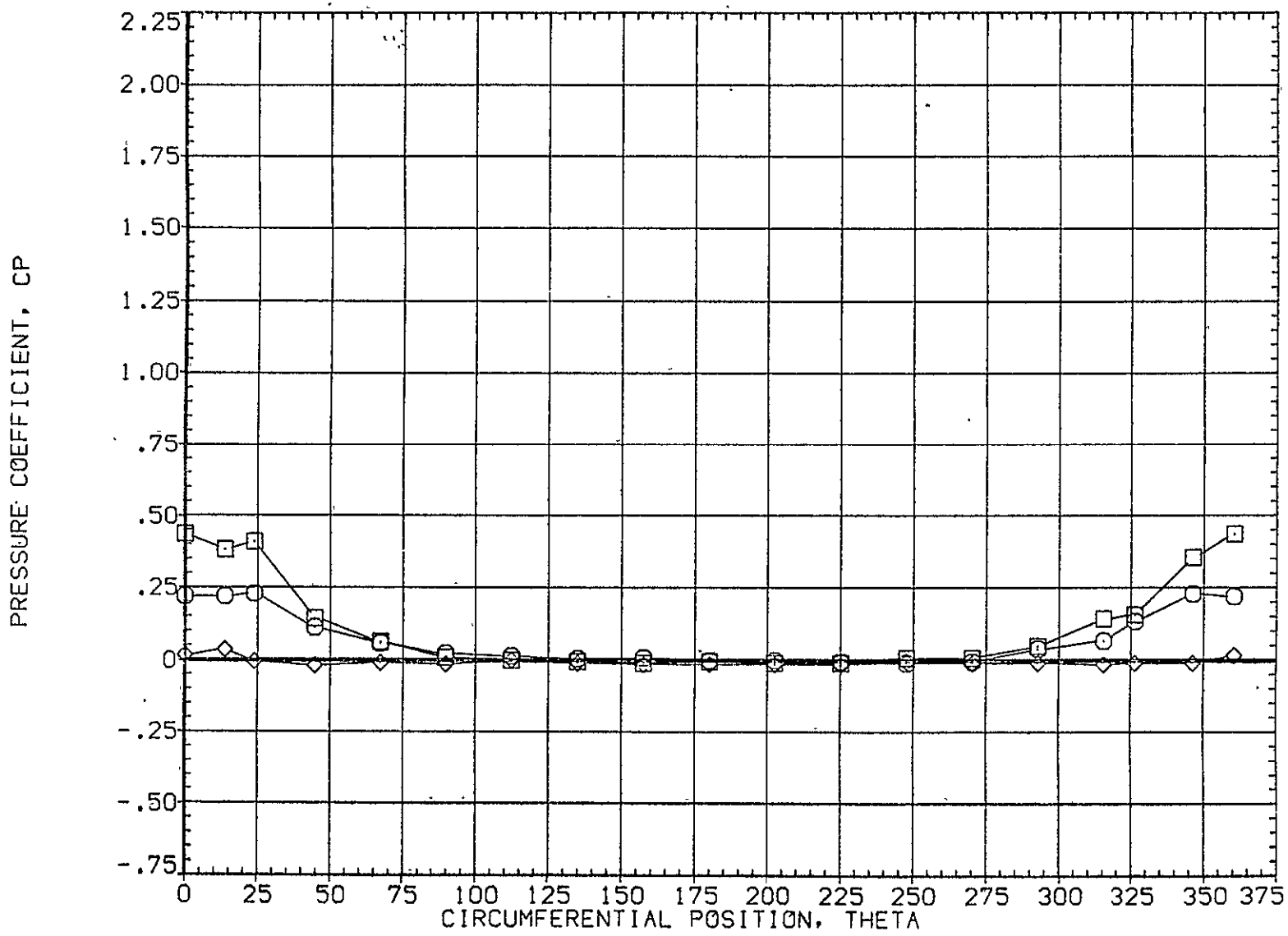

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

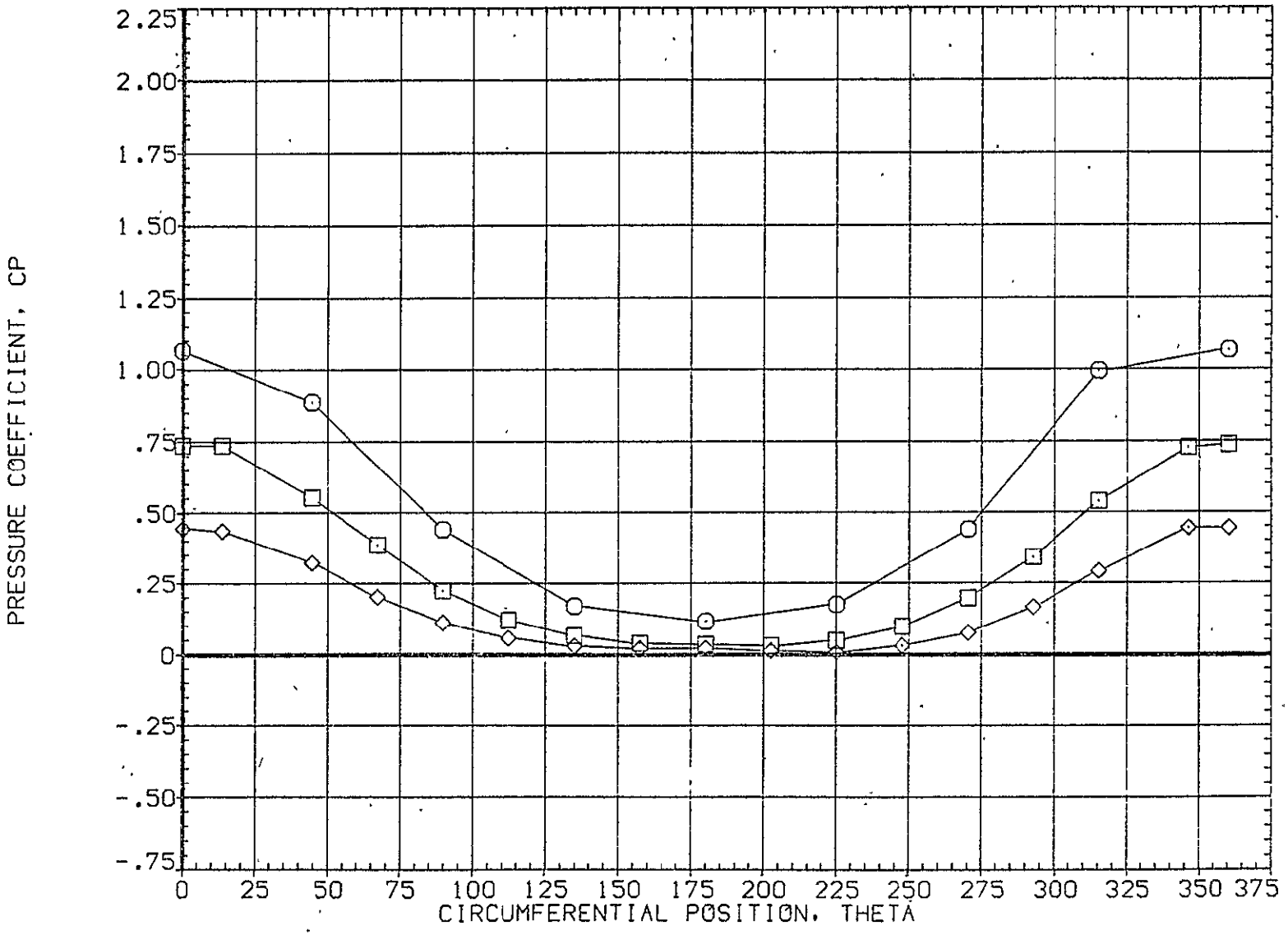

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, 1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

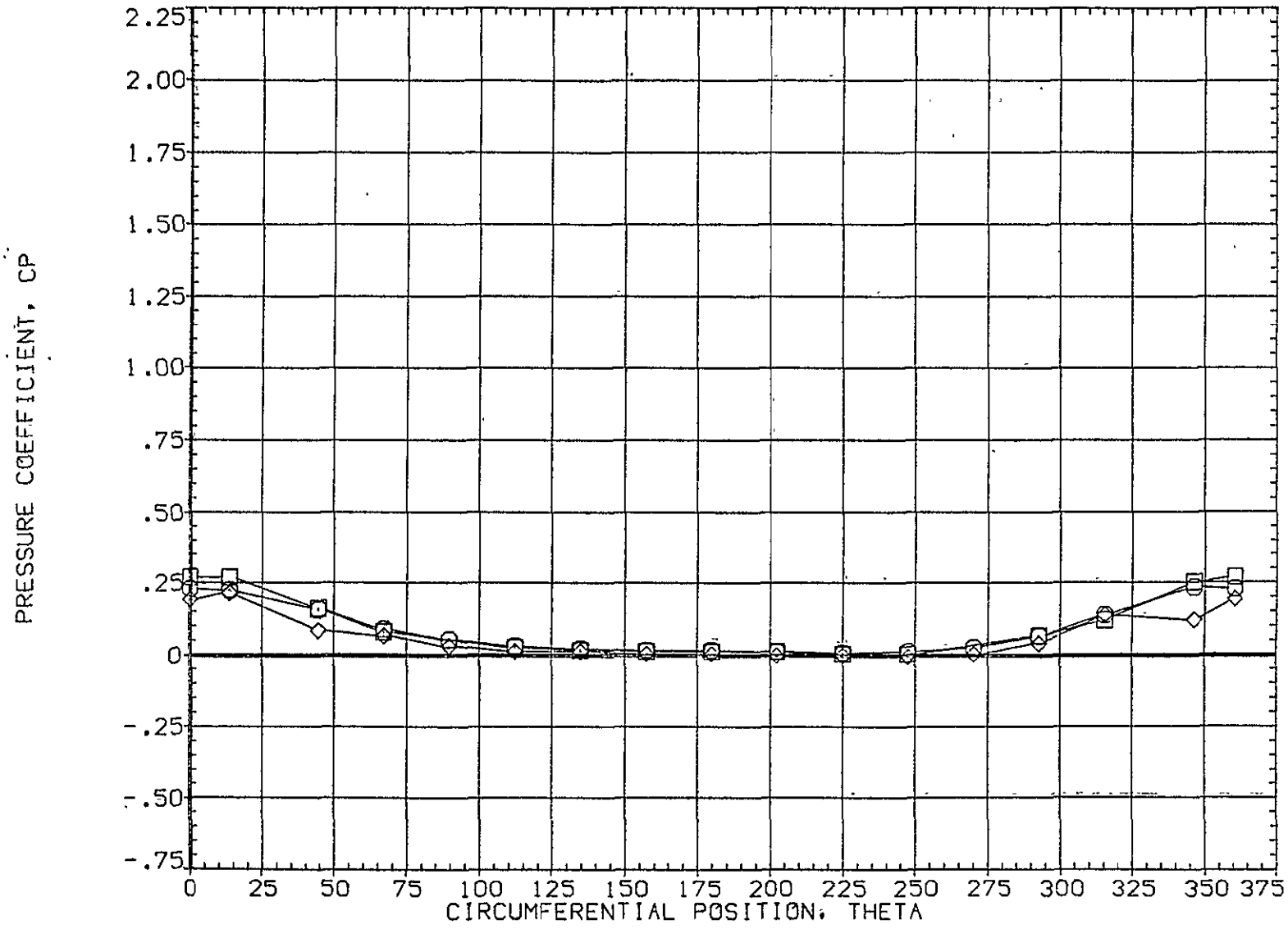

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

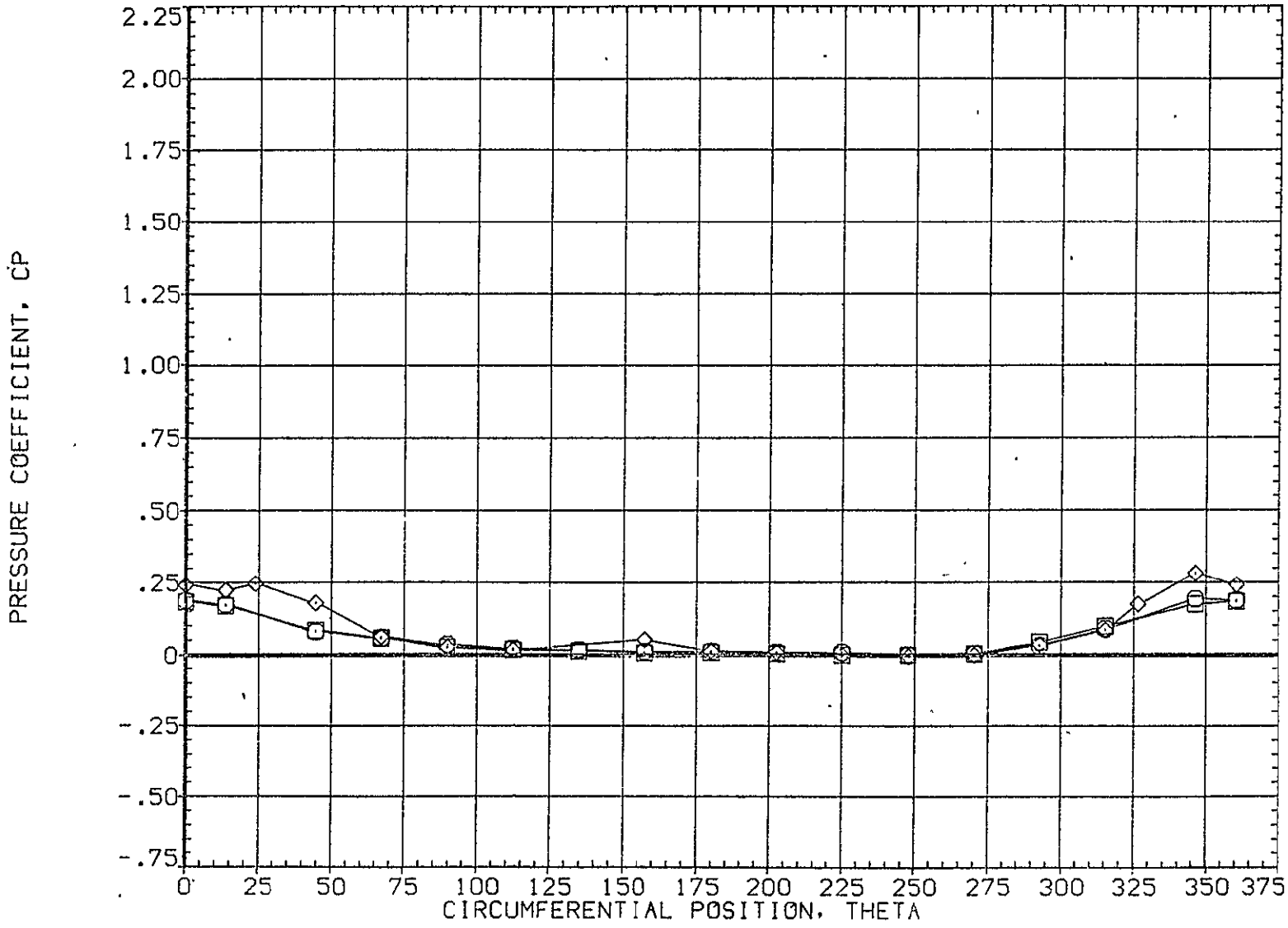

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A038)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

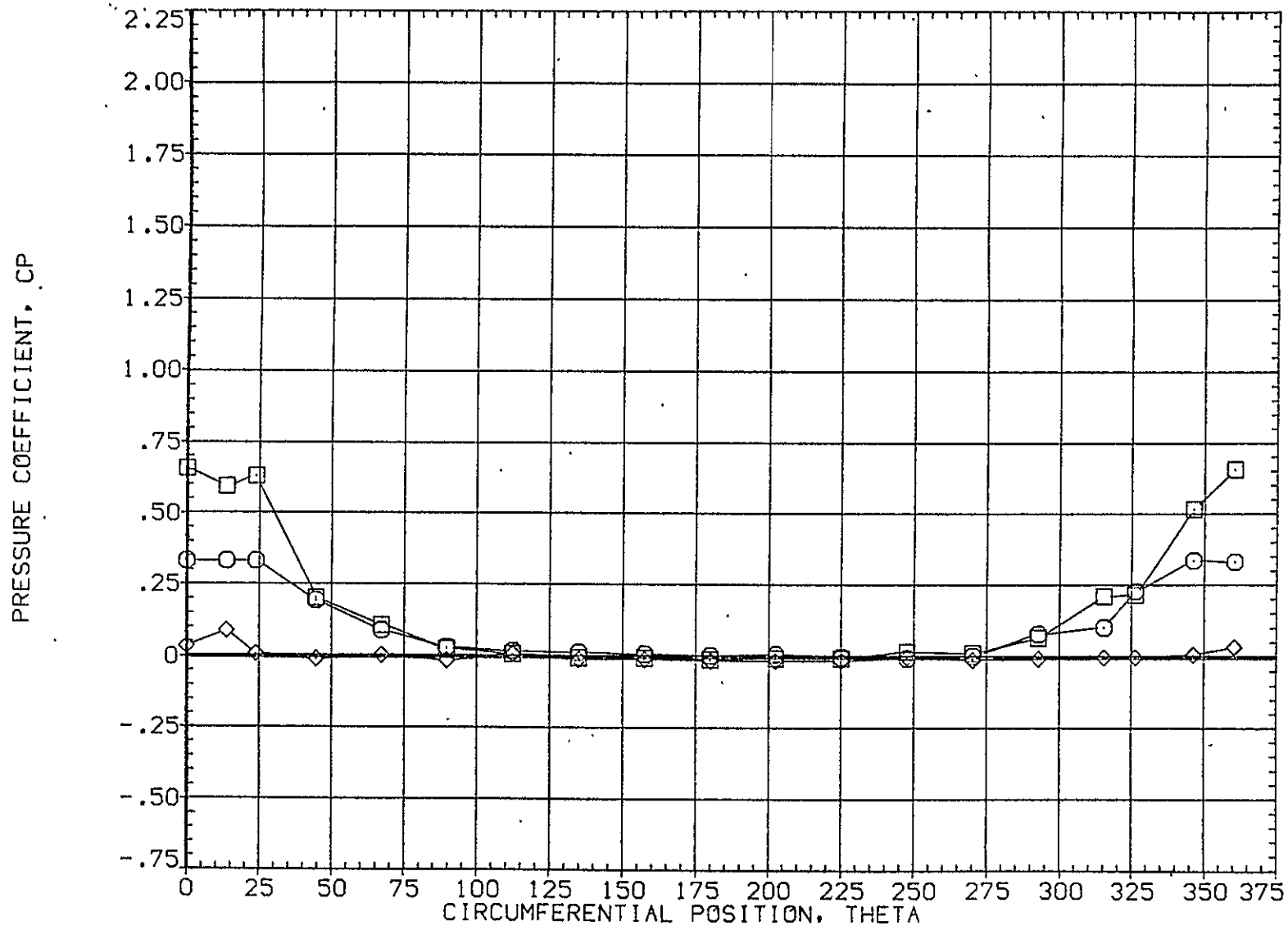

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

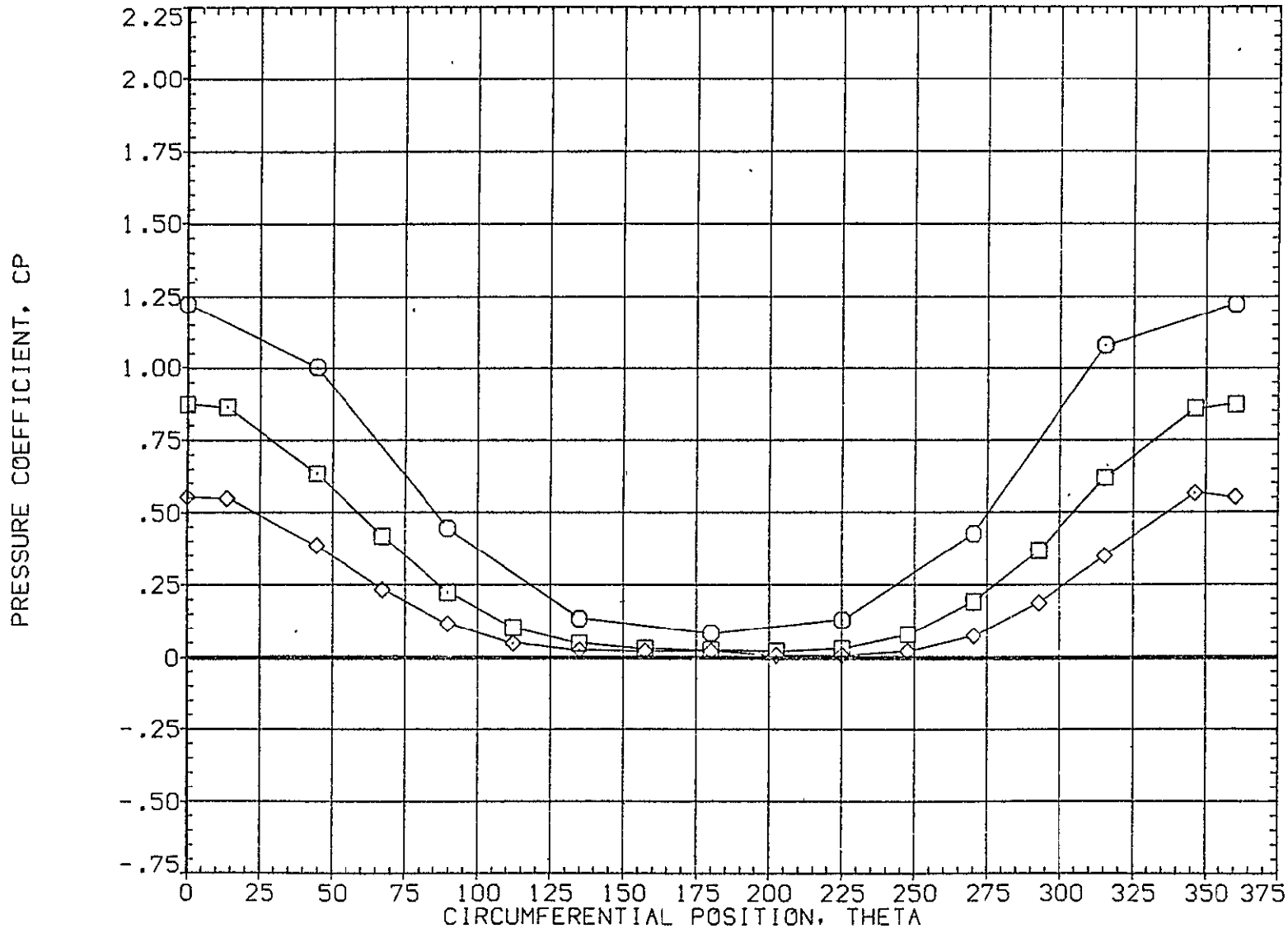

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

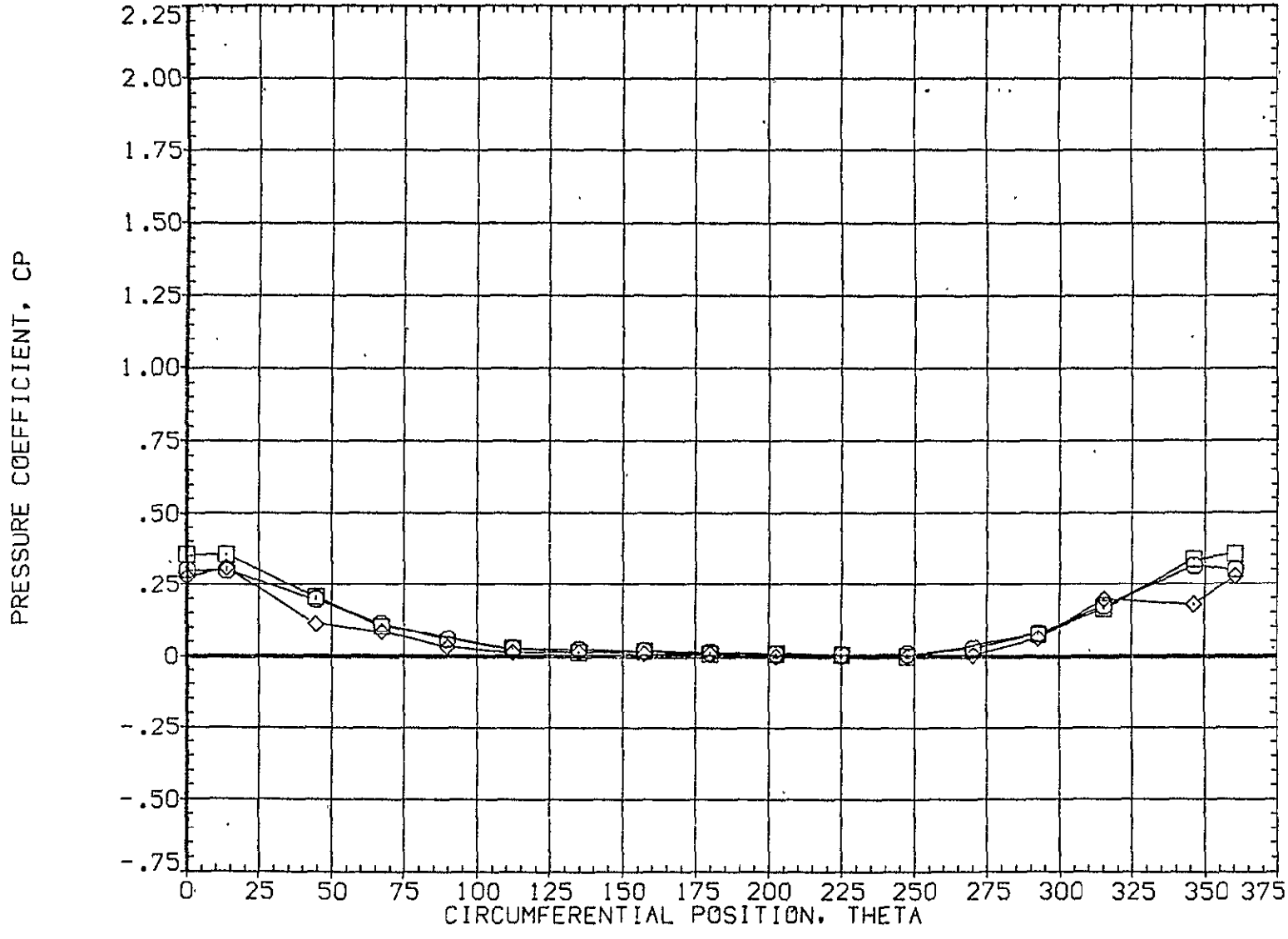

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

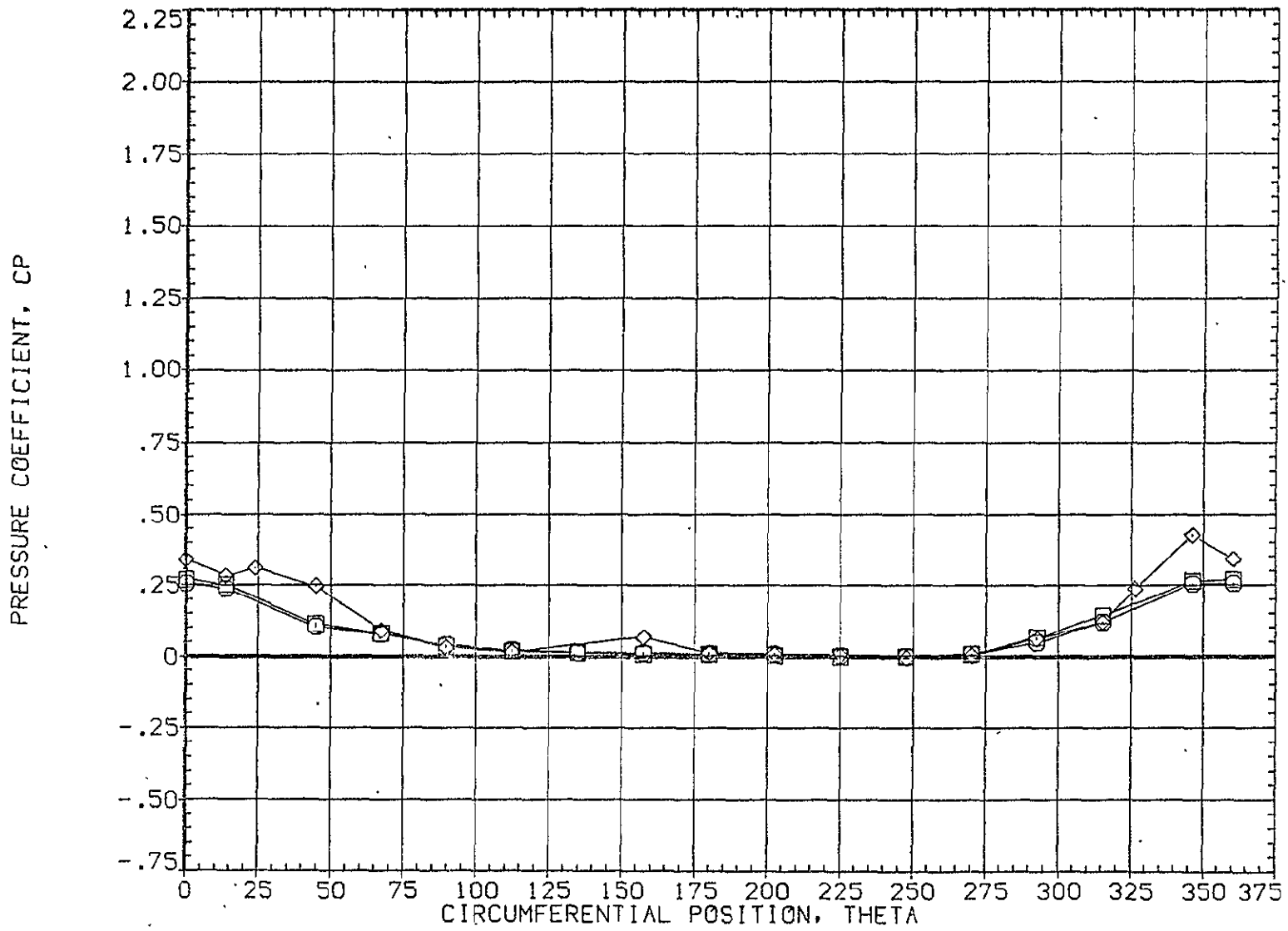

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A039)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

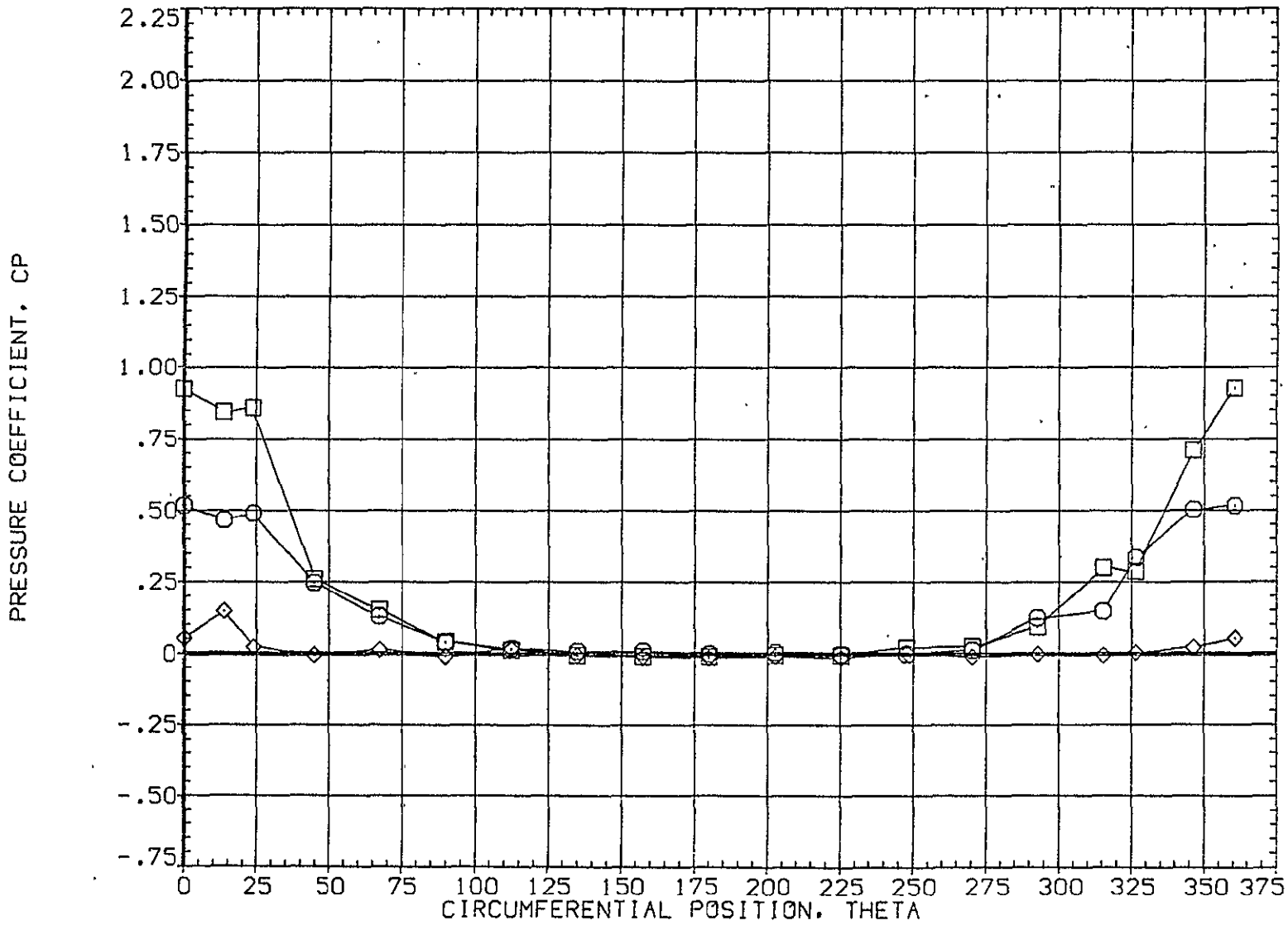

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.560	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

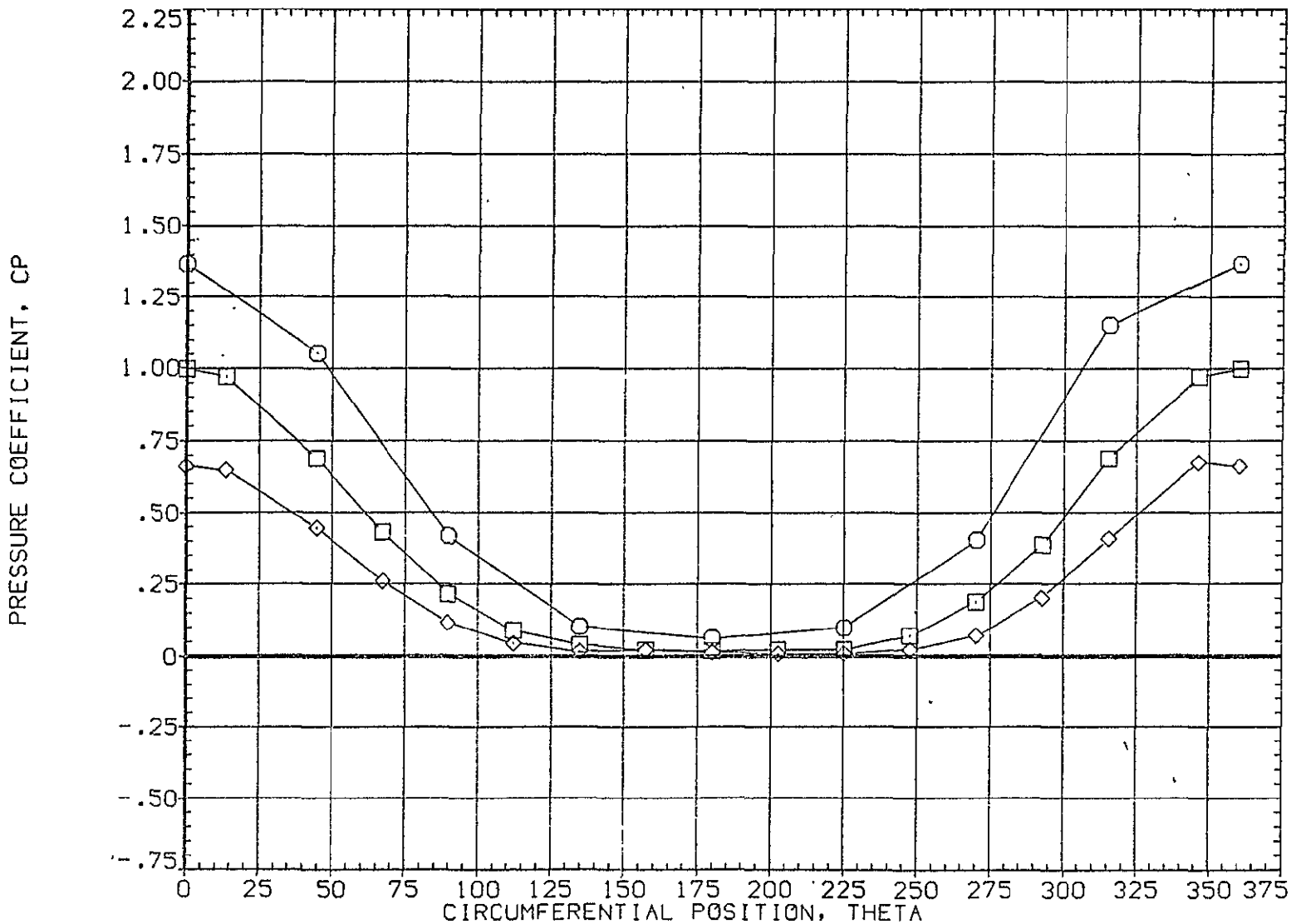

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.560	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

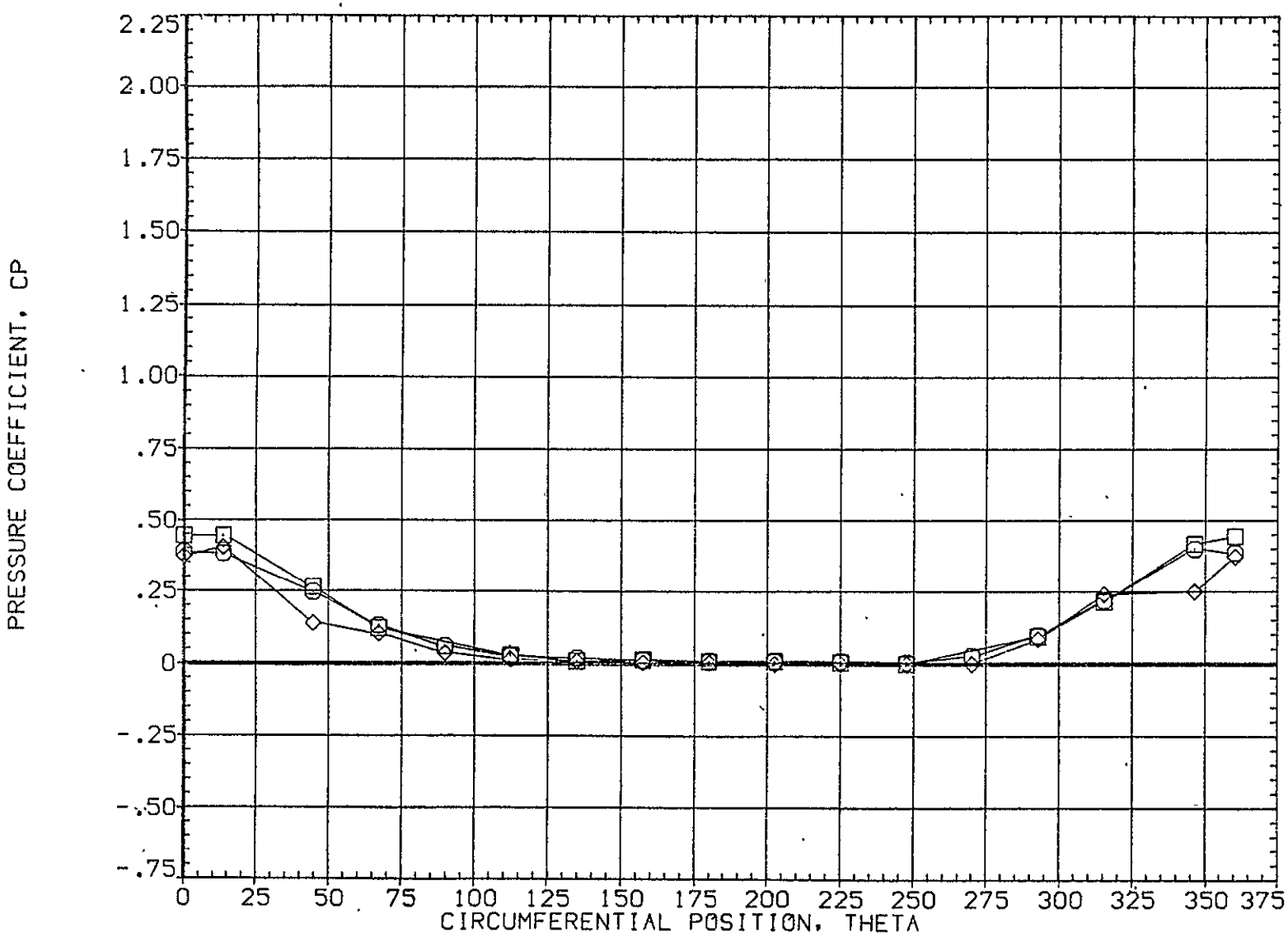

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.560	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

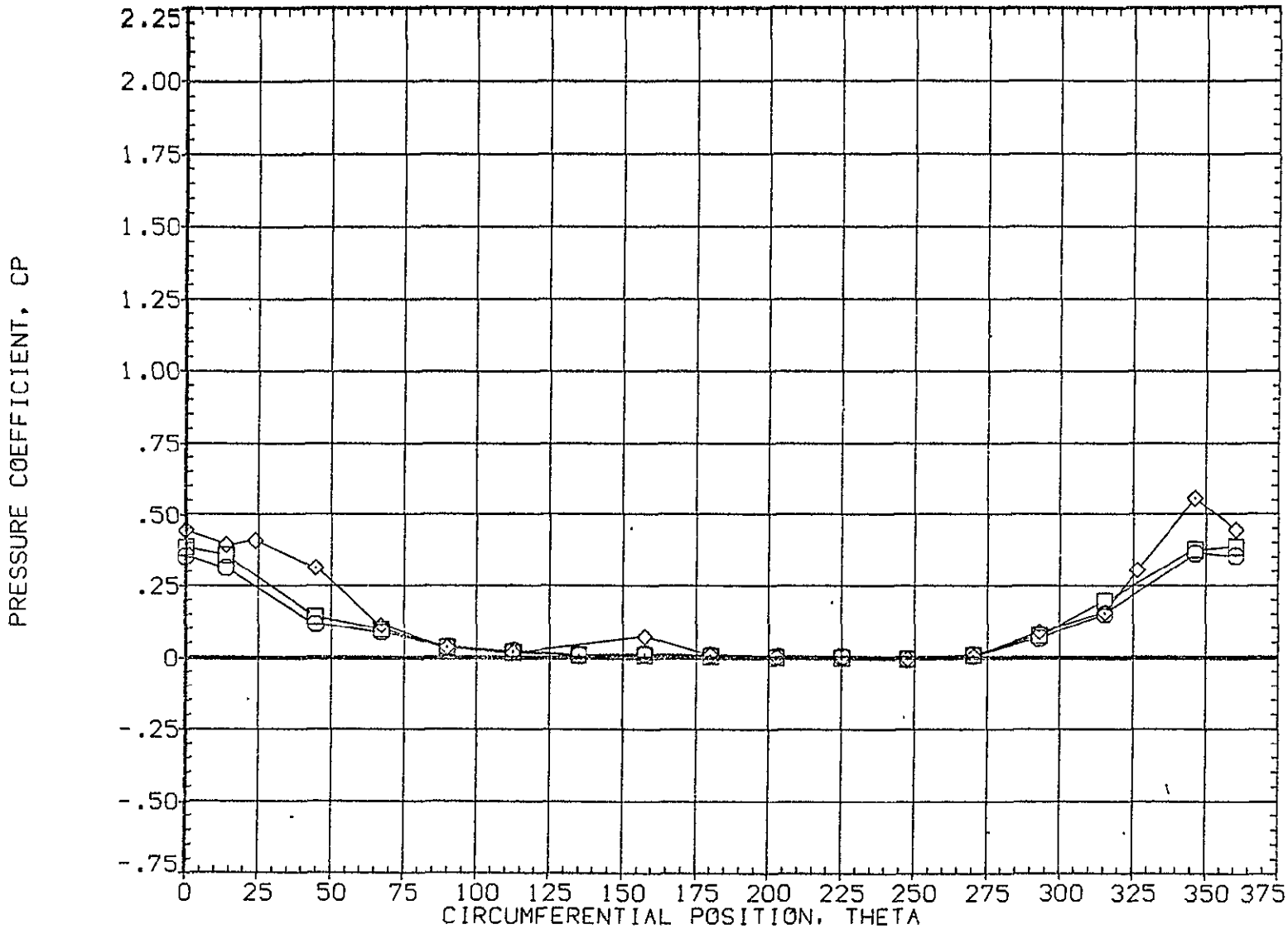

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A040)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.560	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES-

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	180.000

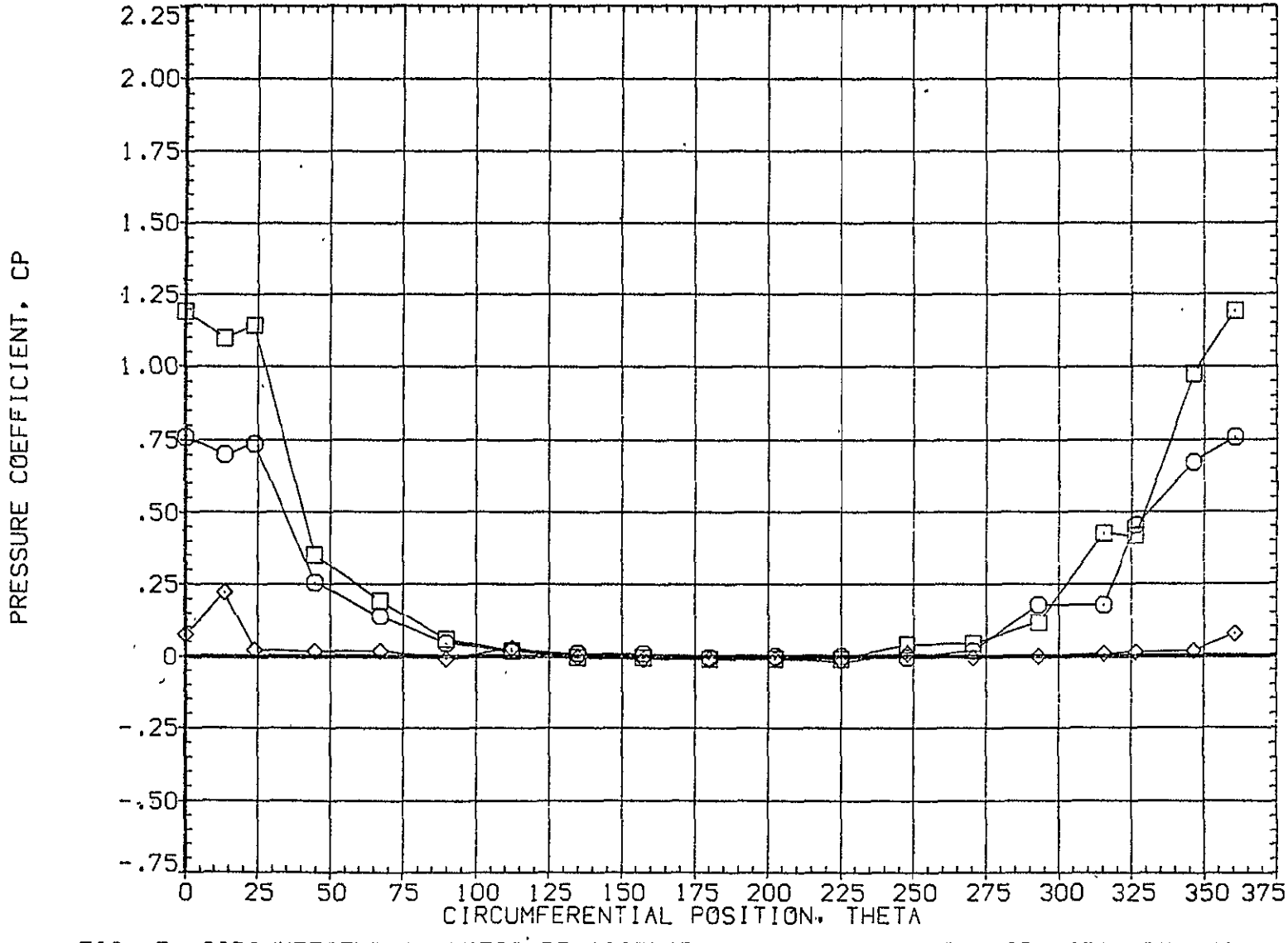

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

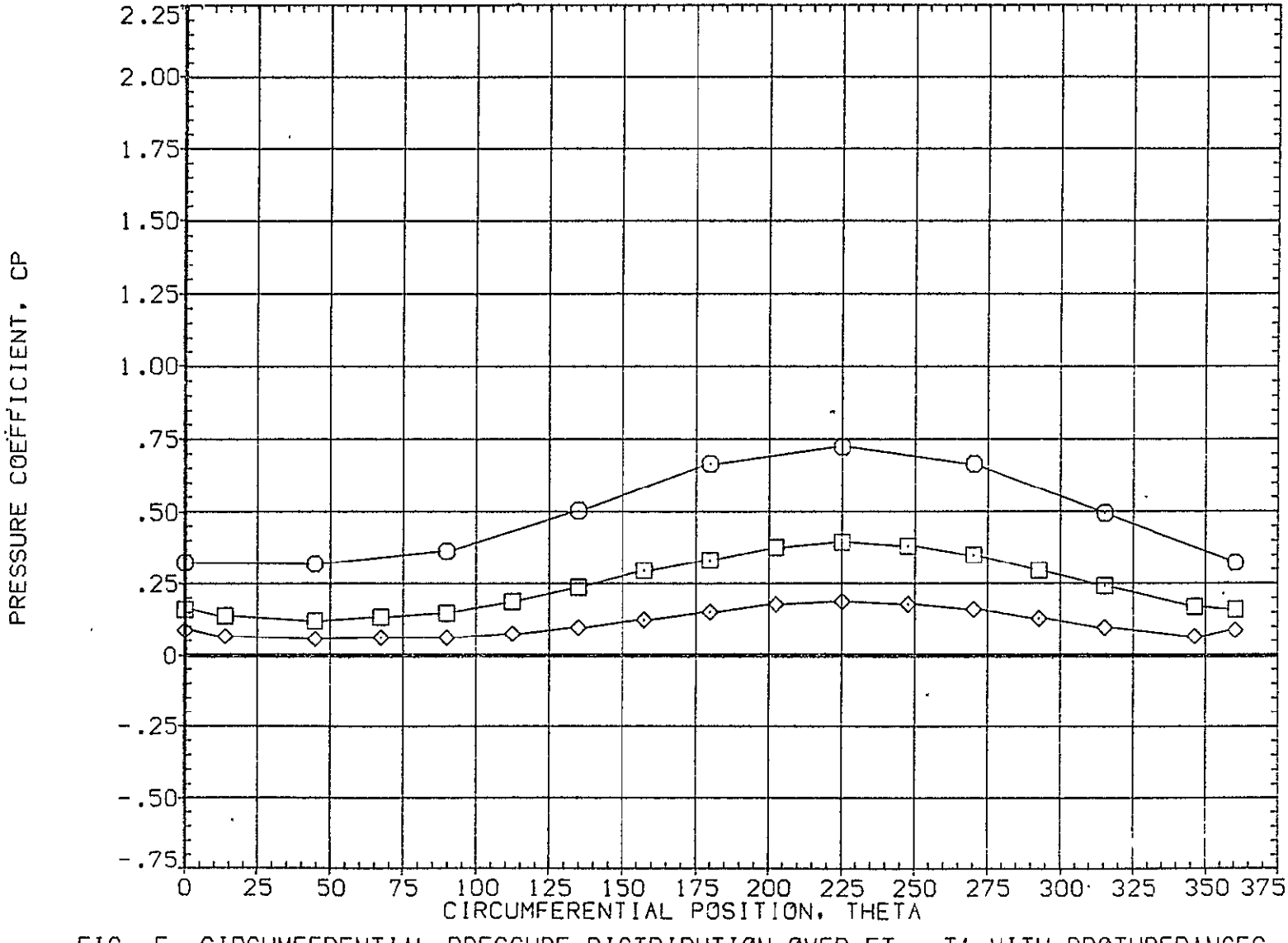

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

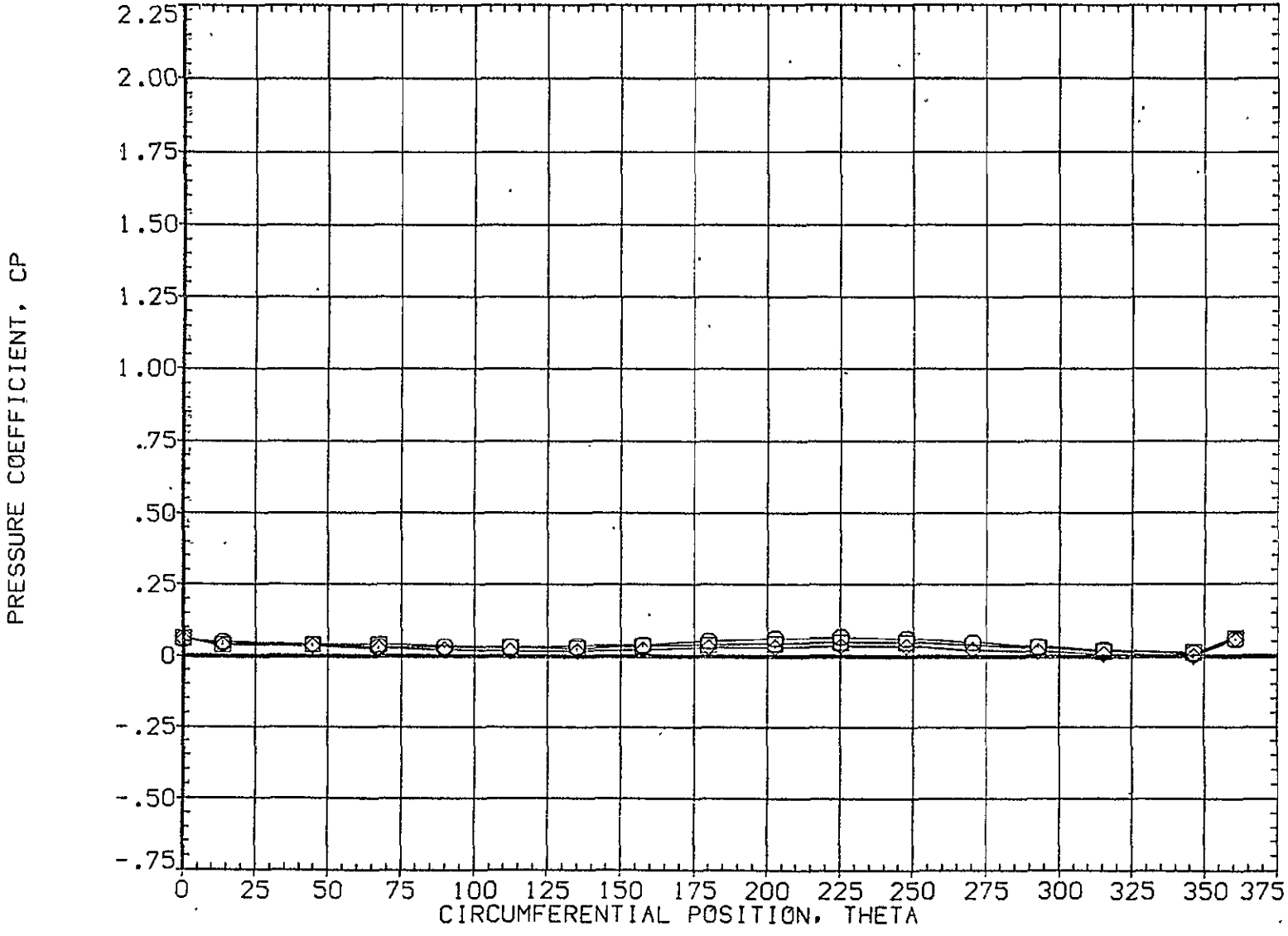

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

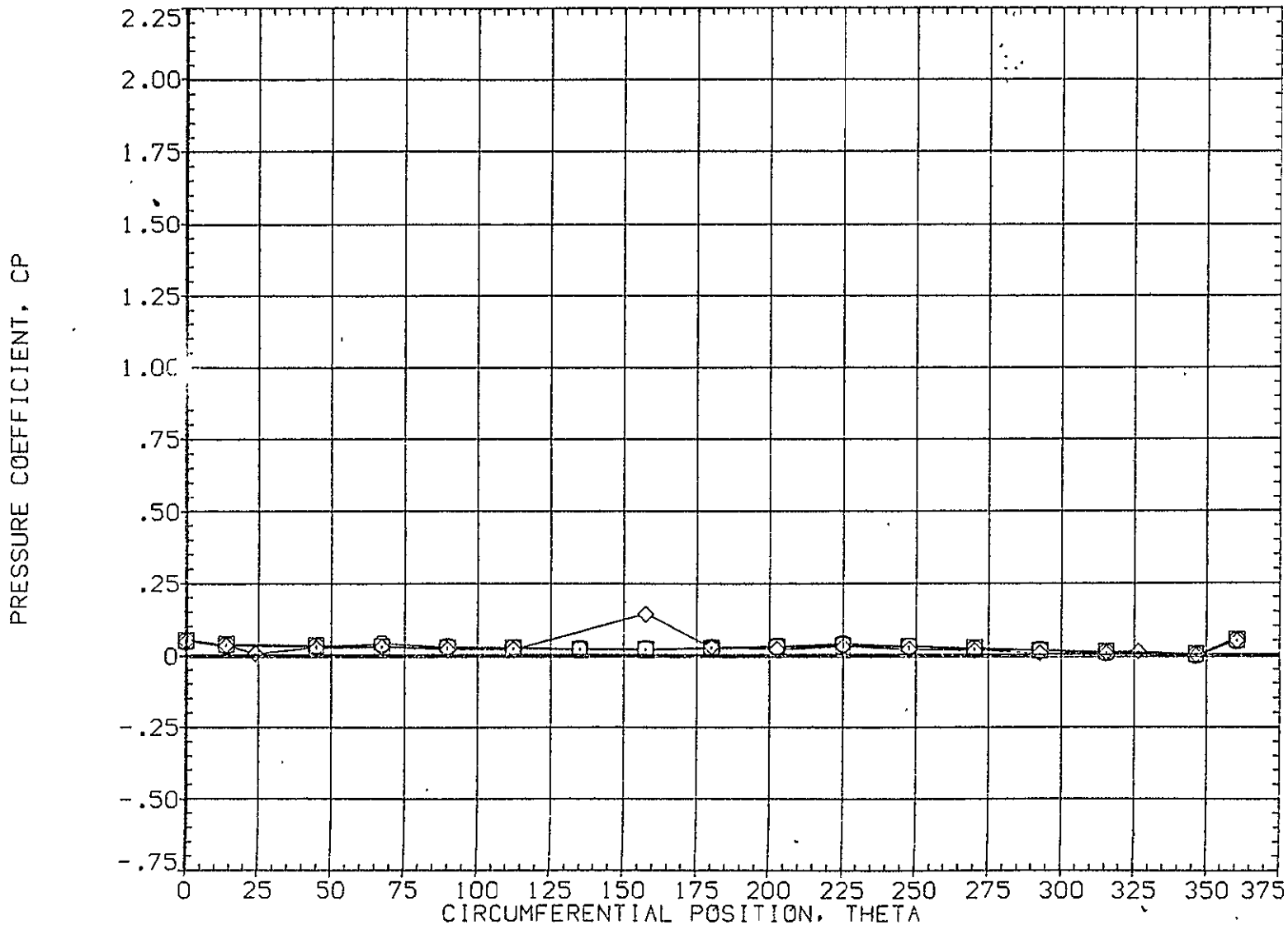

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A041)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310 .	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

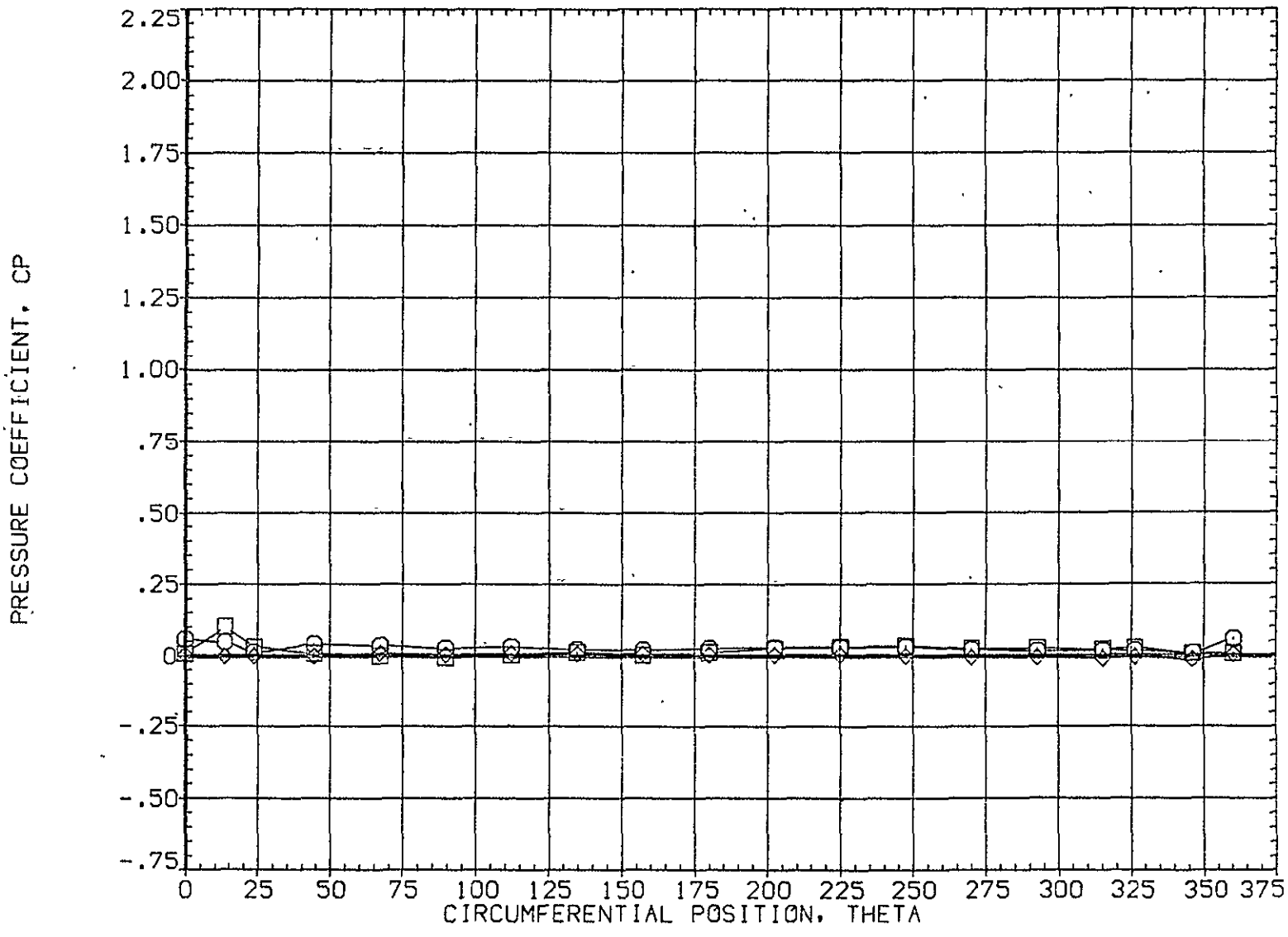

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

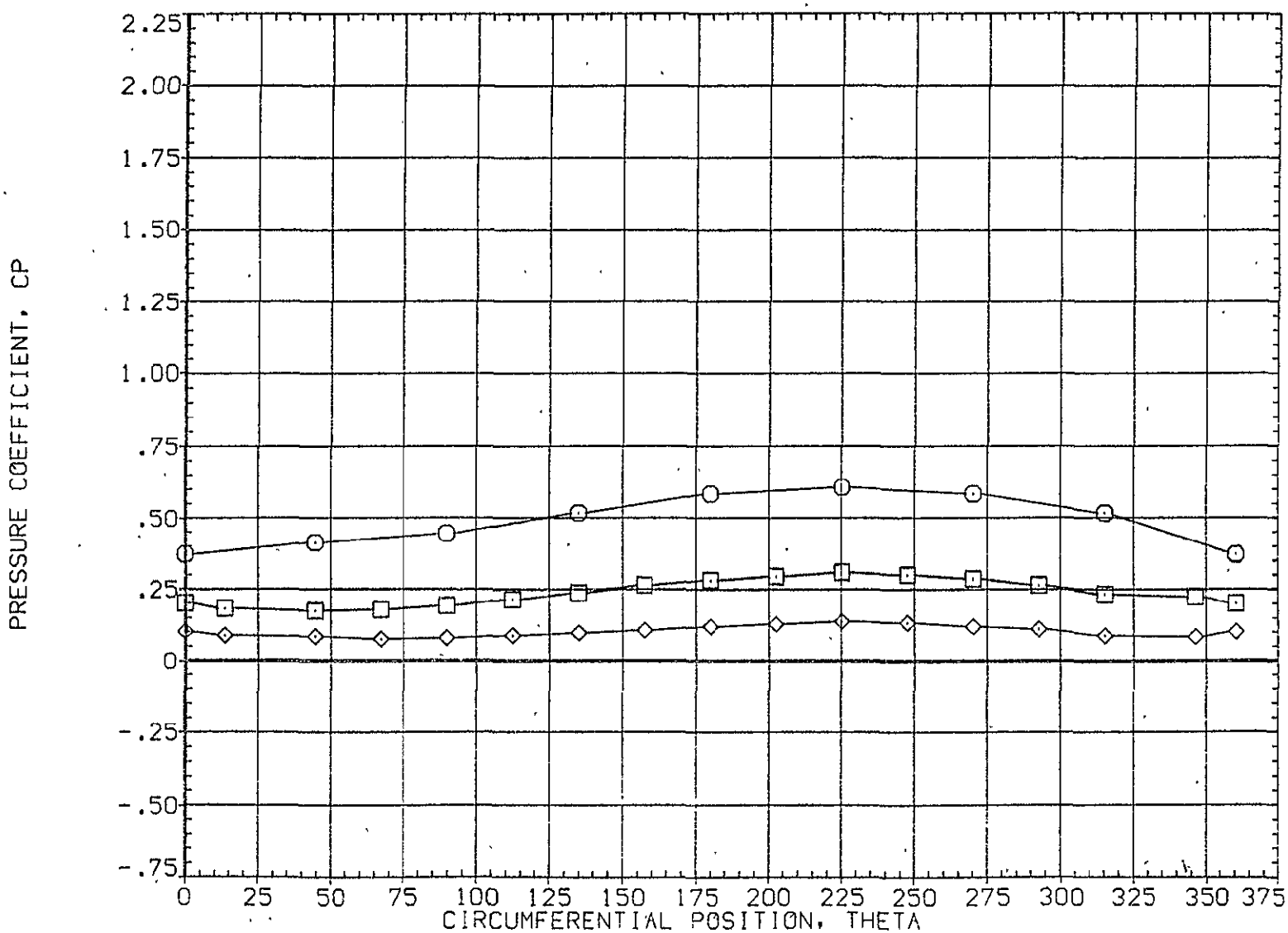

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

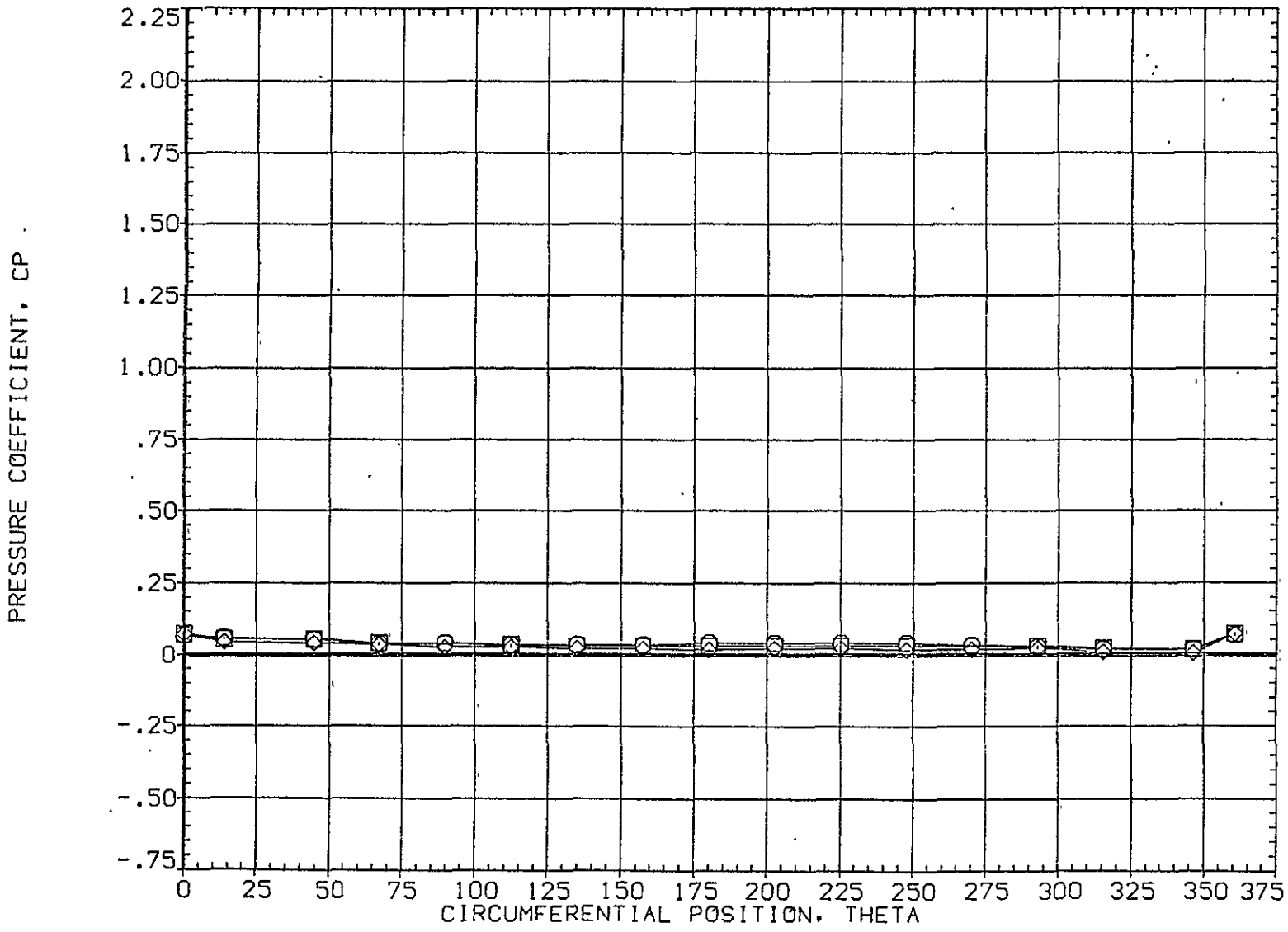

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

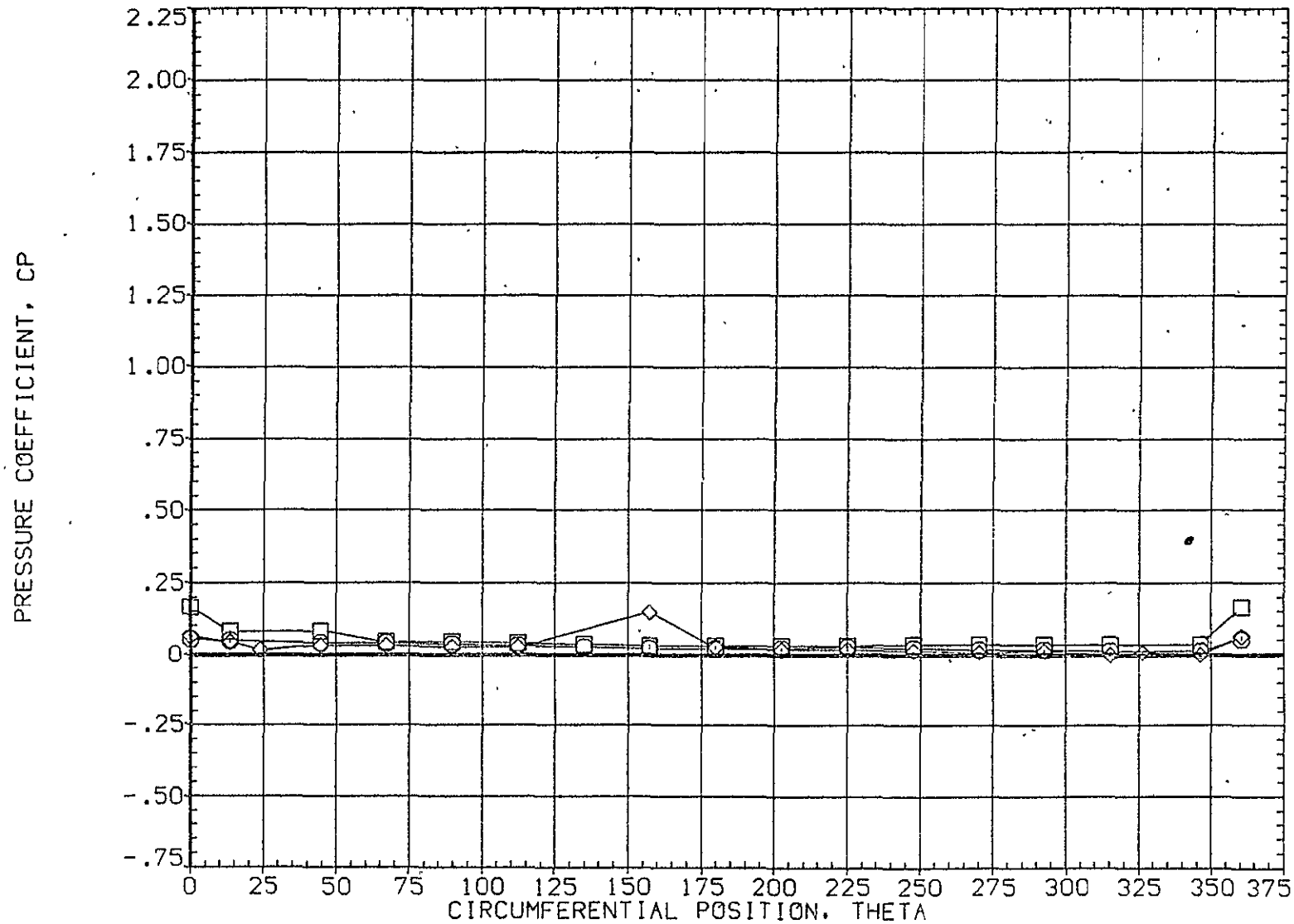

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A042)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

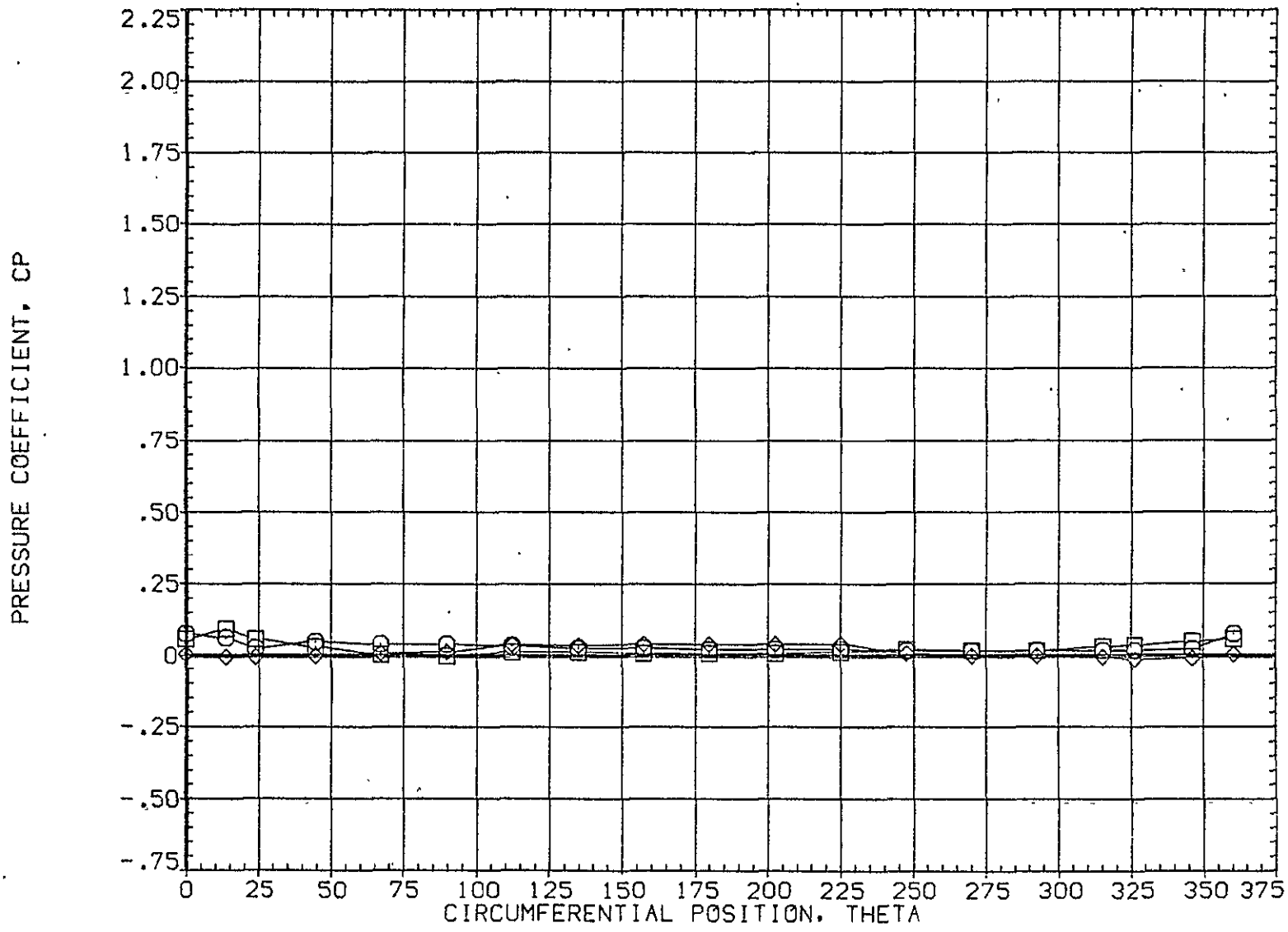

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

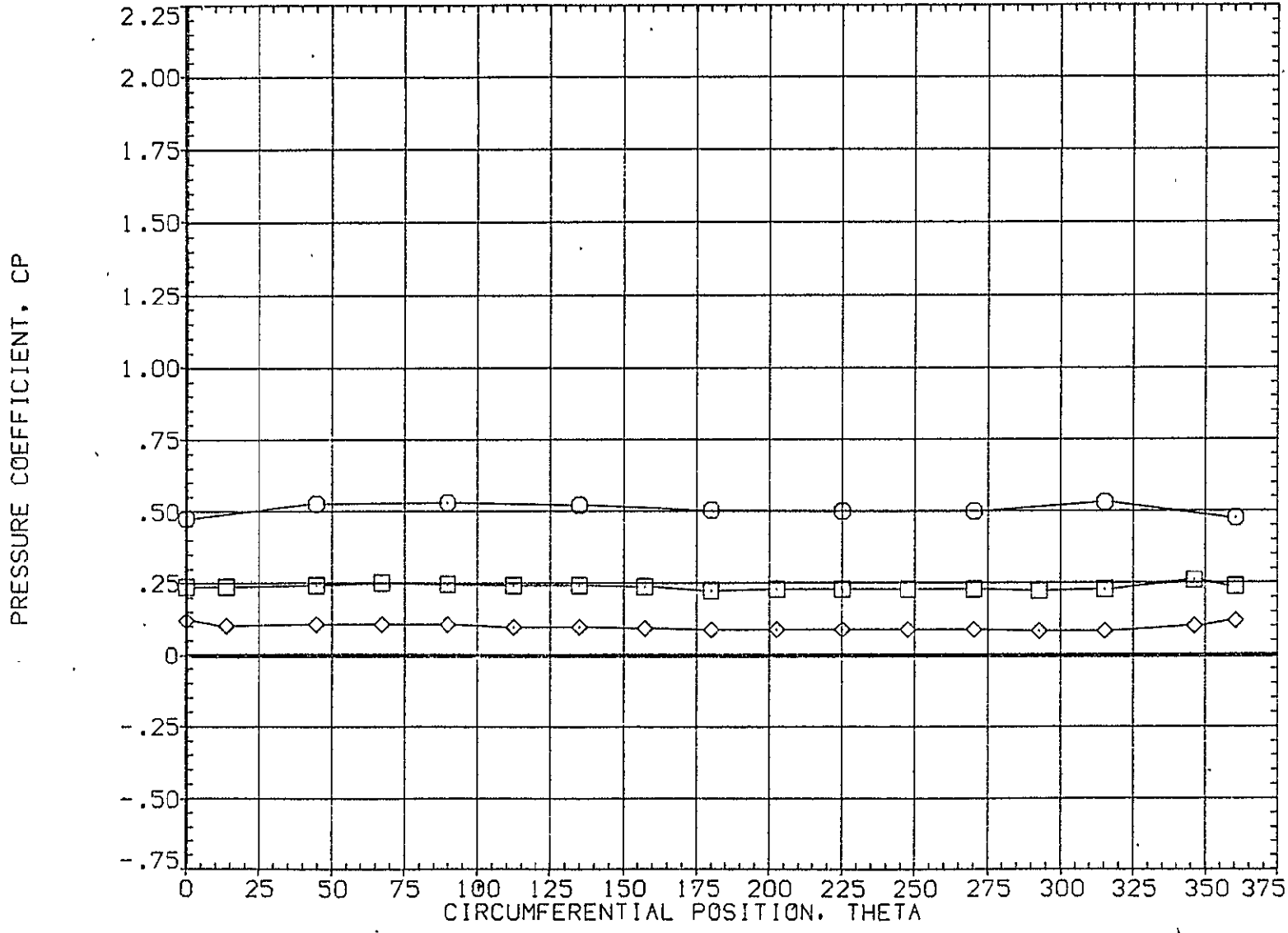

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

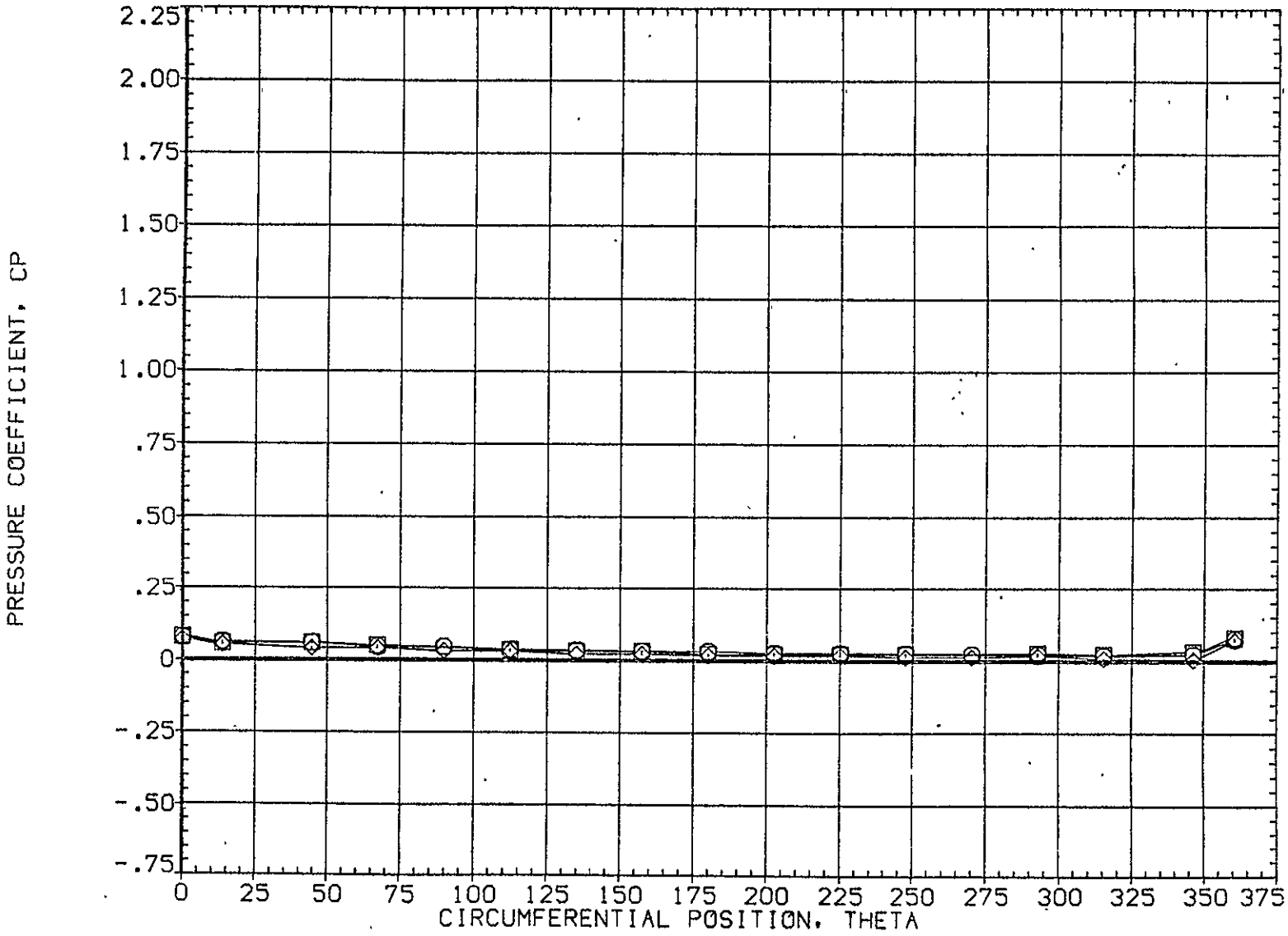

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

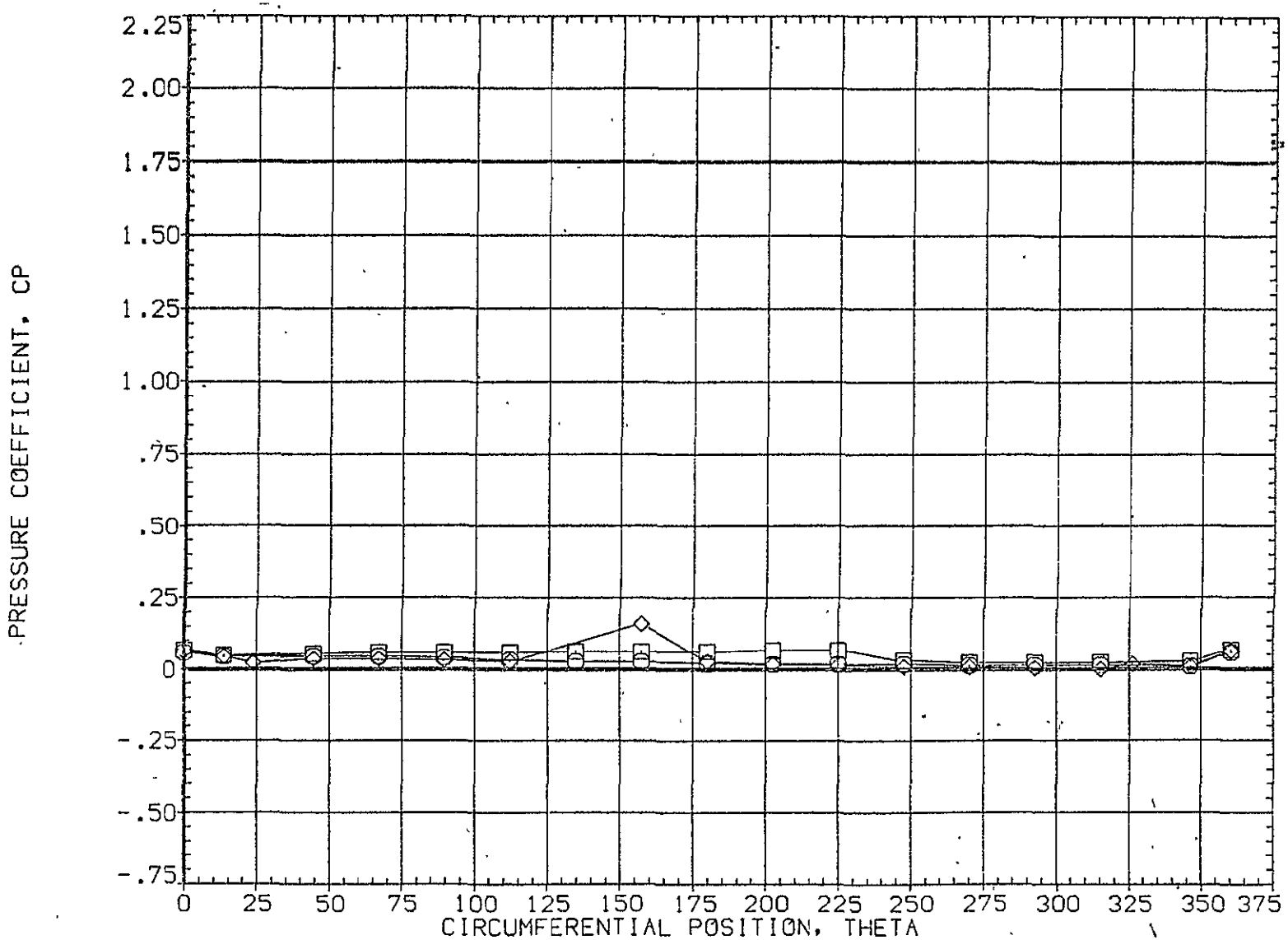

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A043)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

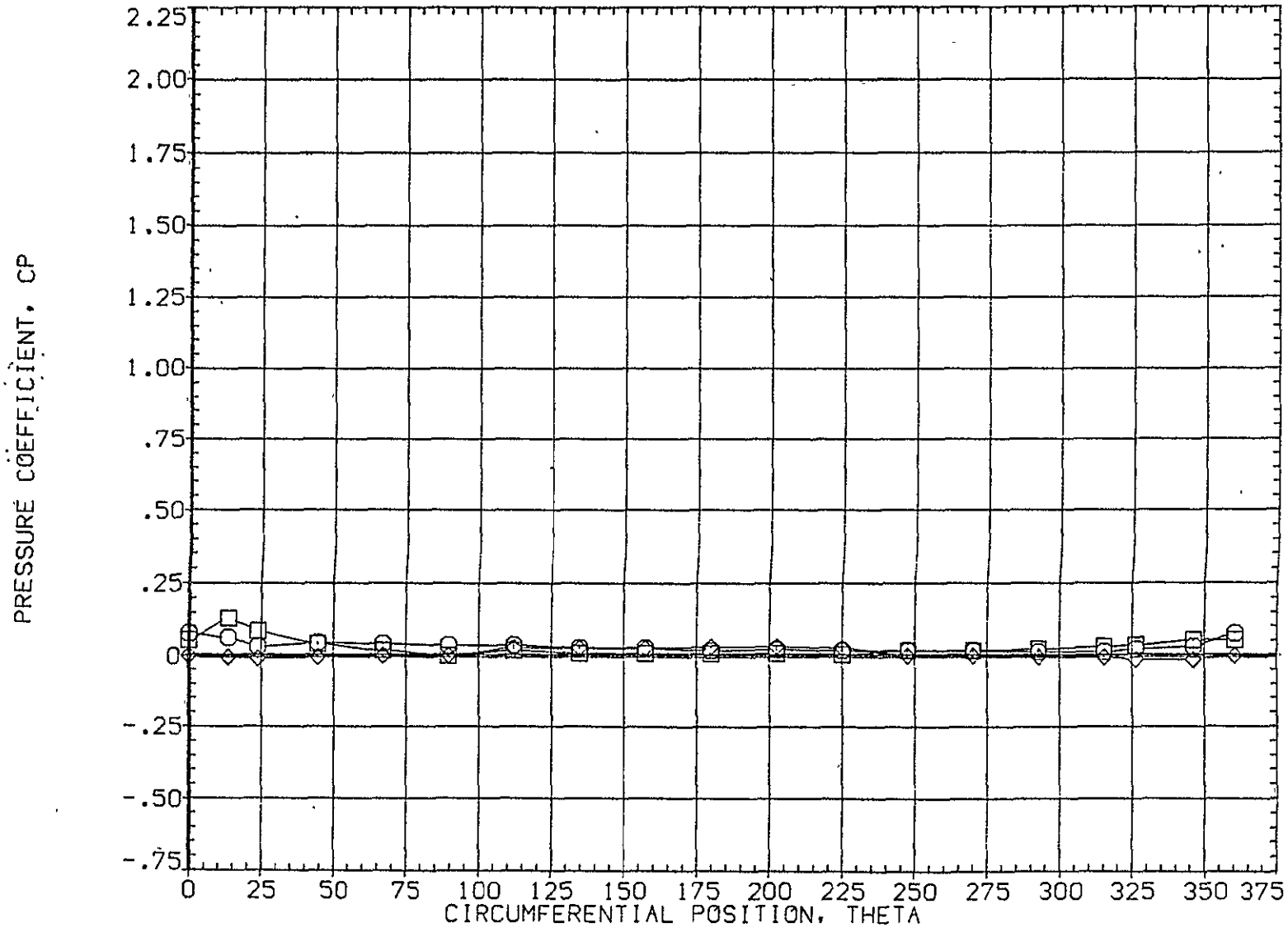

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

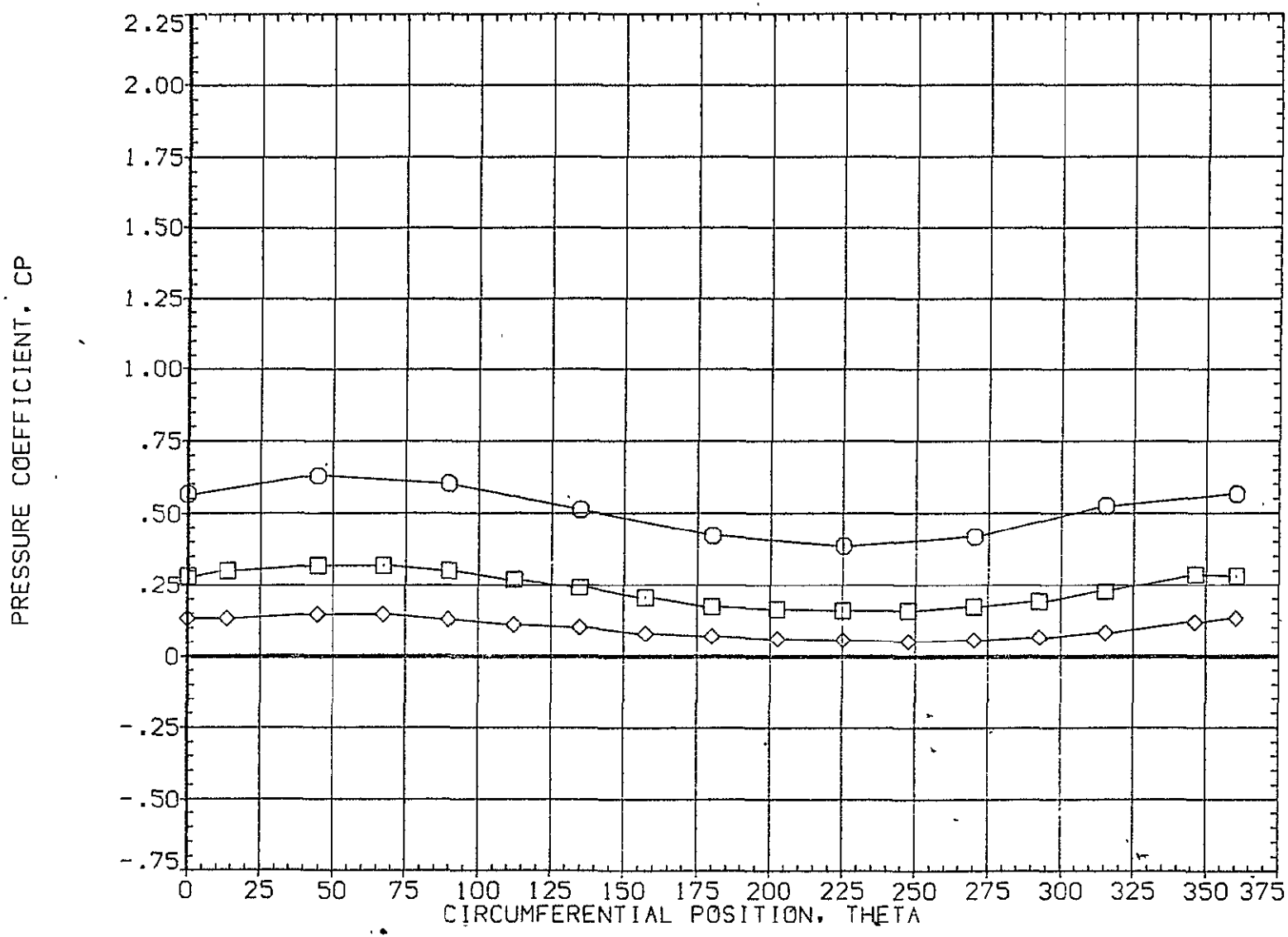

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

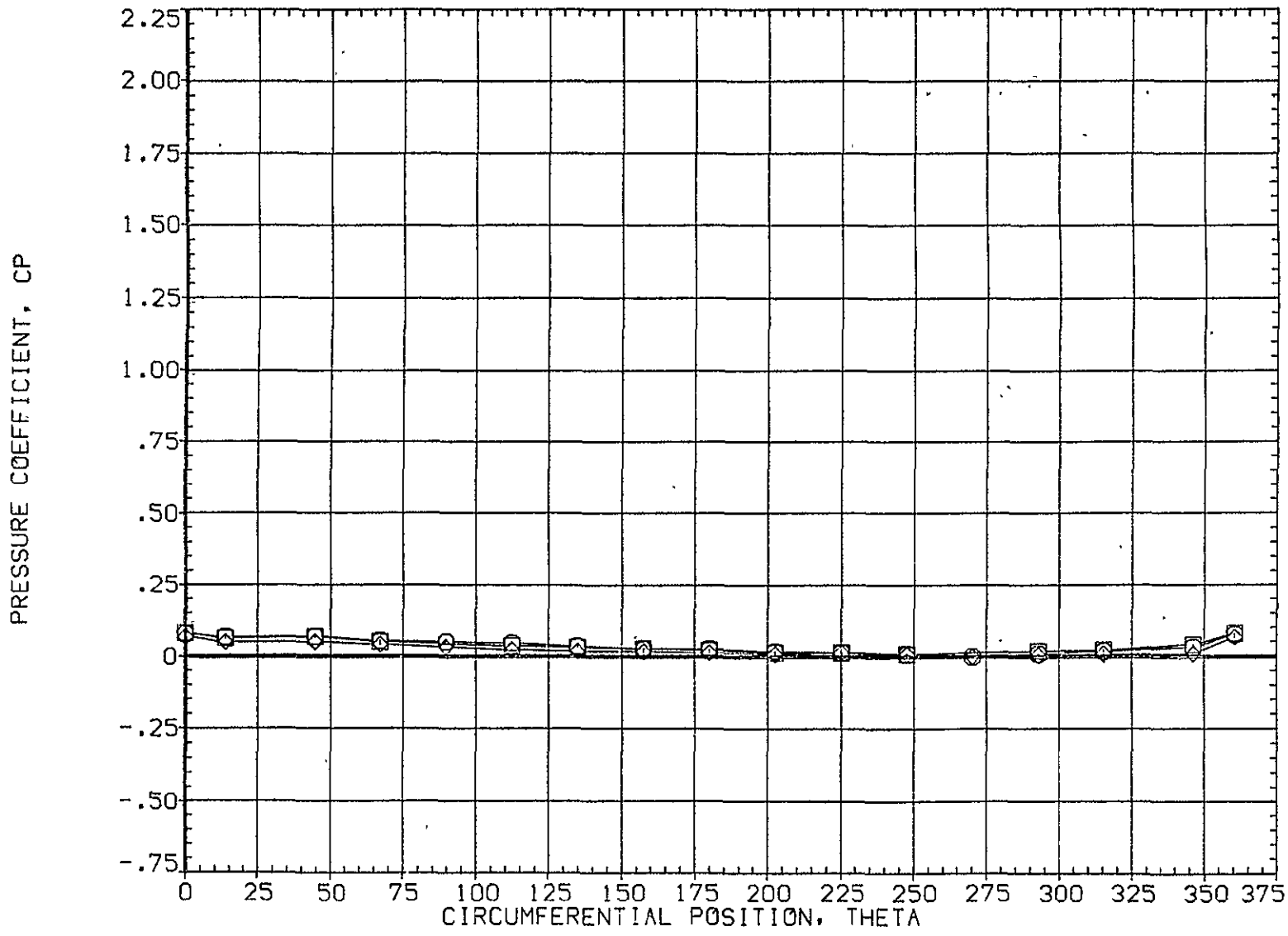

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

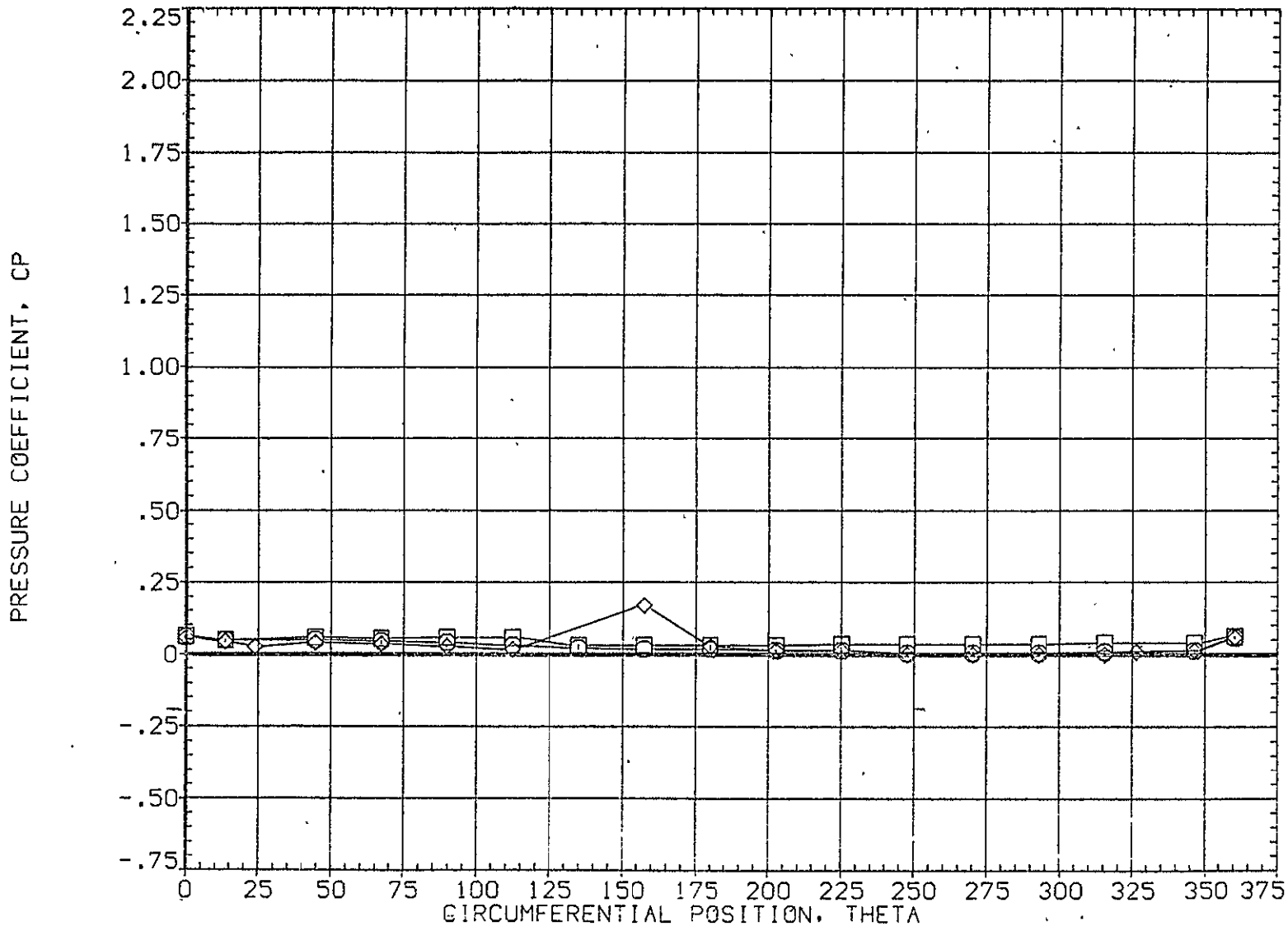

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - TI WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A044)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES.

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

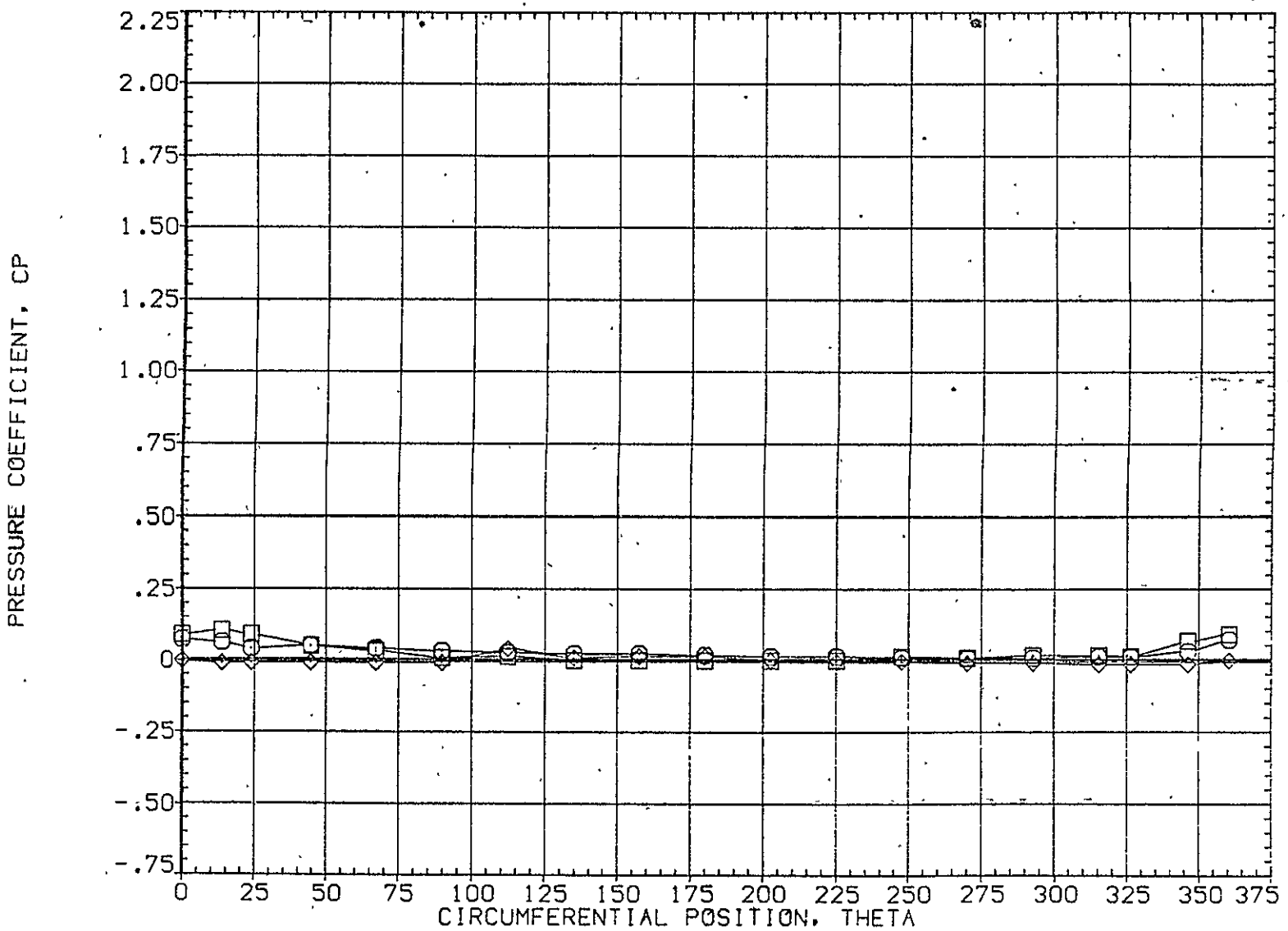

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

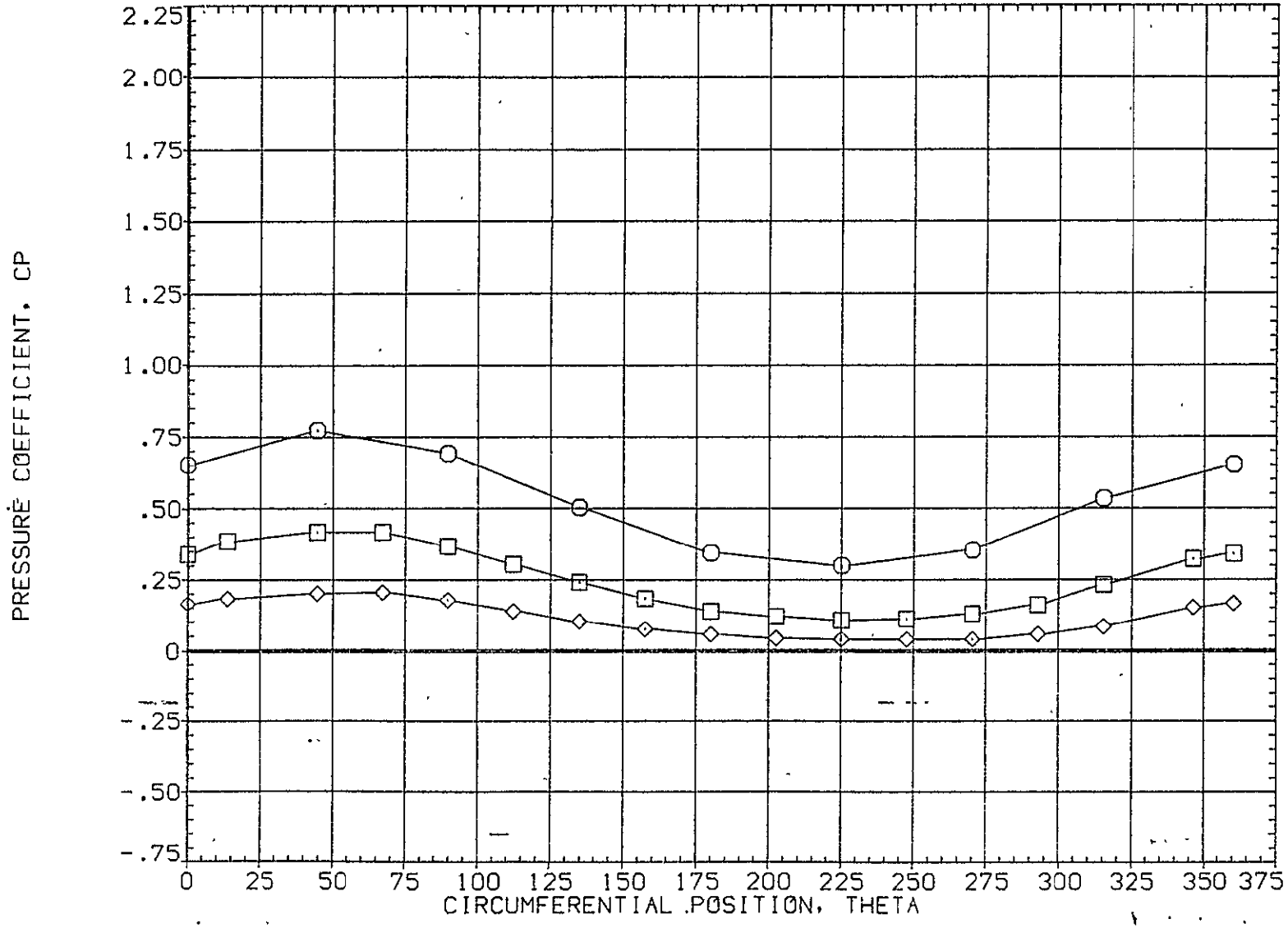

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

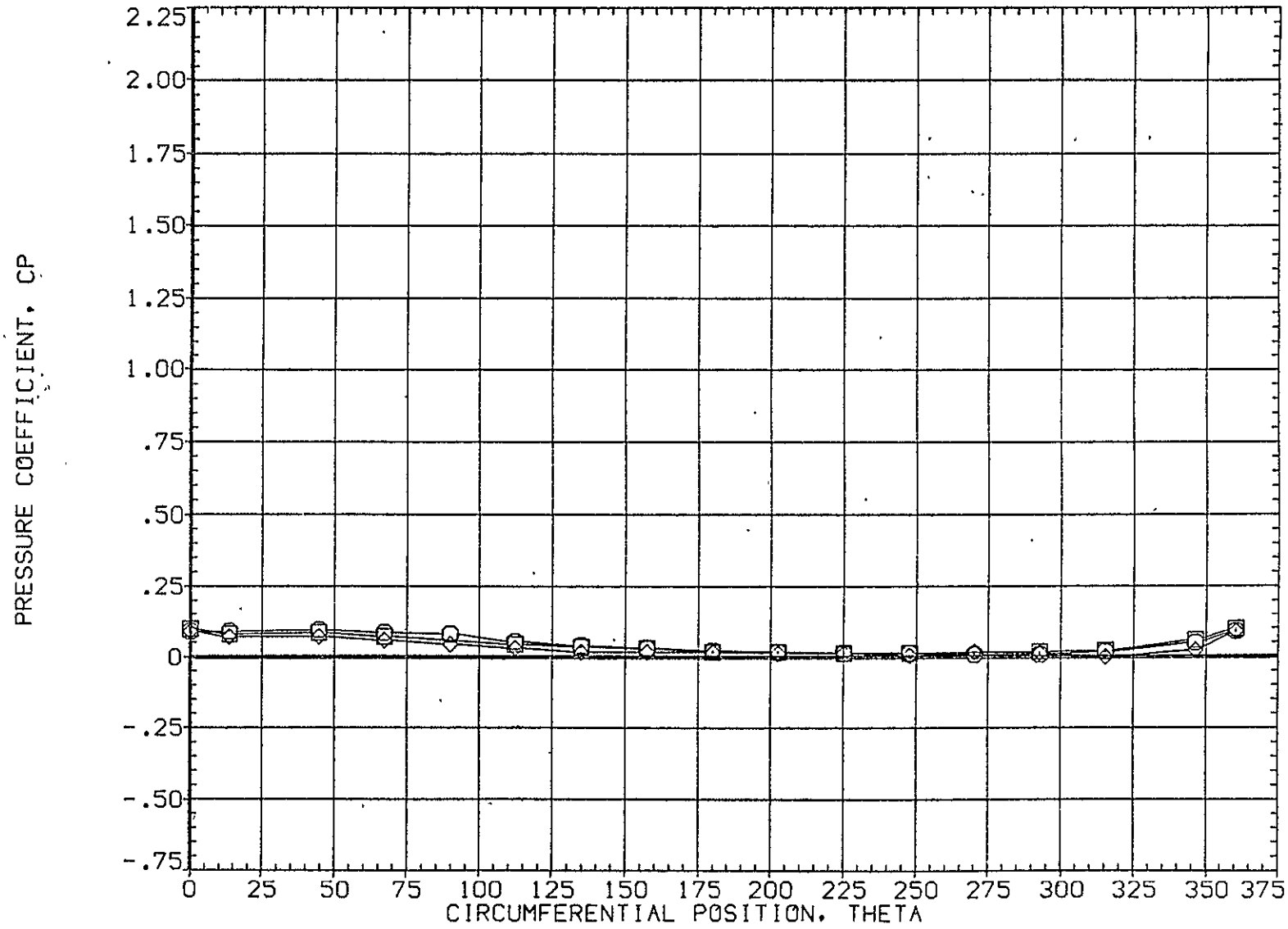

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

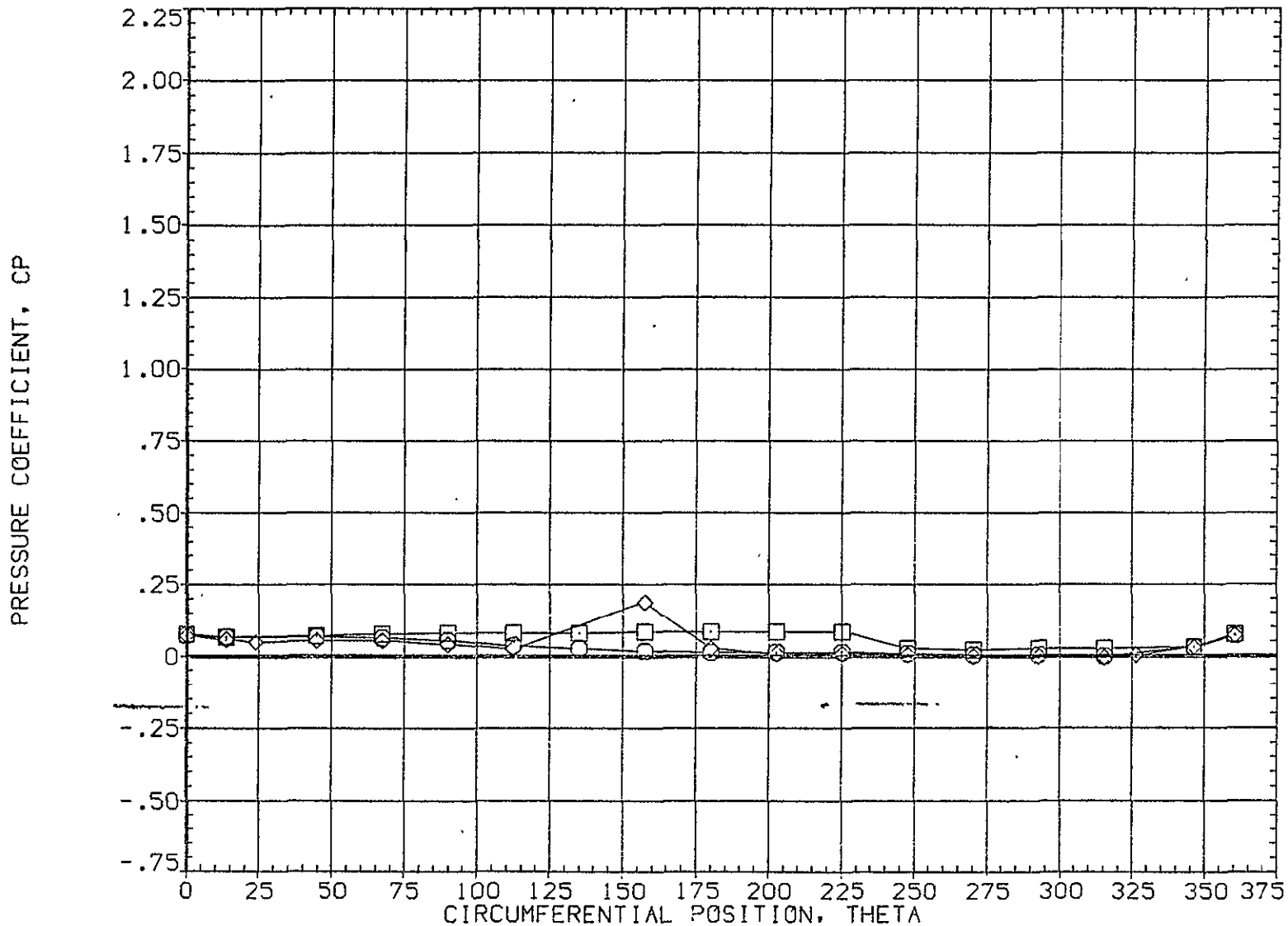

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A045)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	225.000

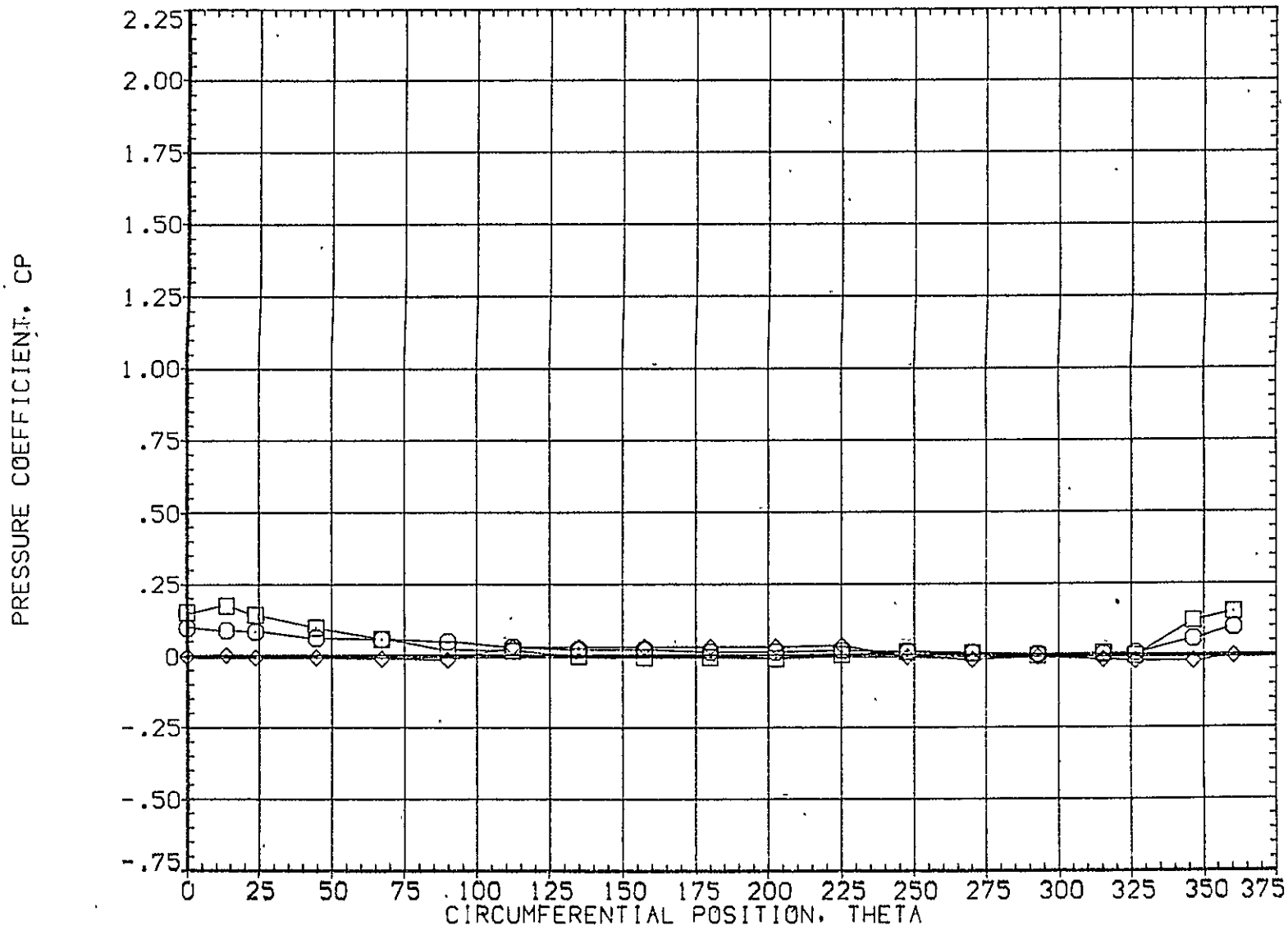

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

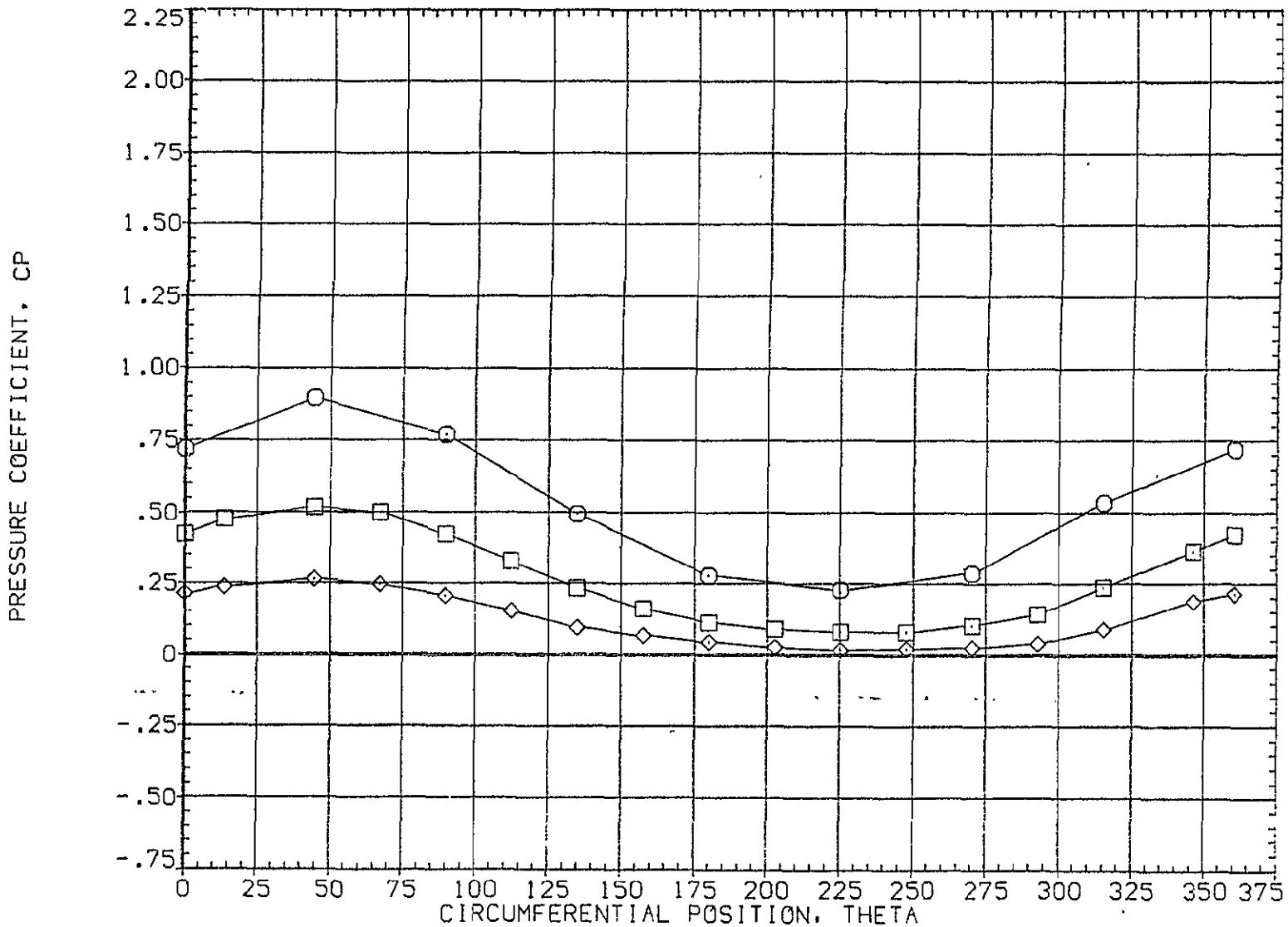

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES.

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

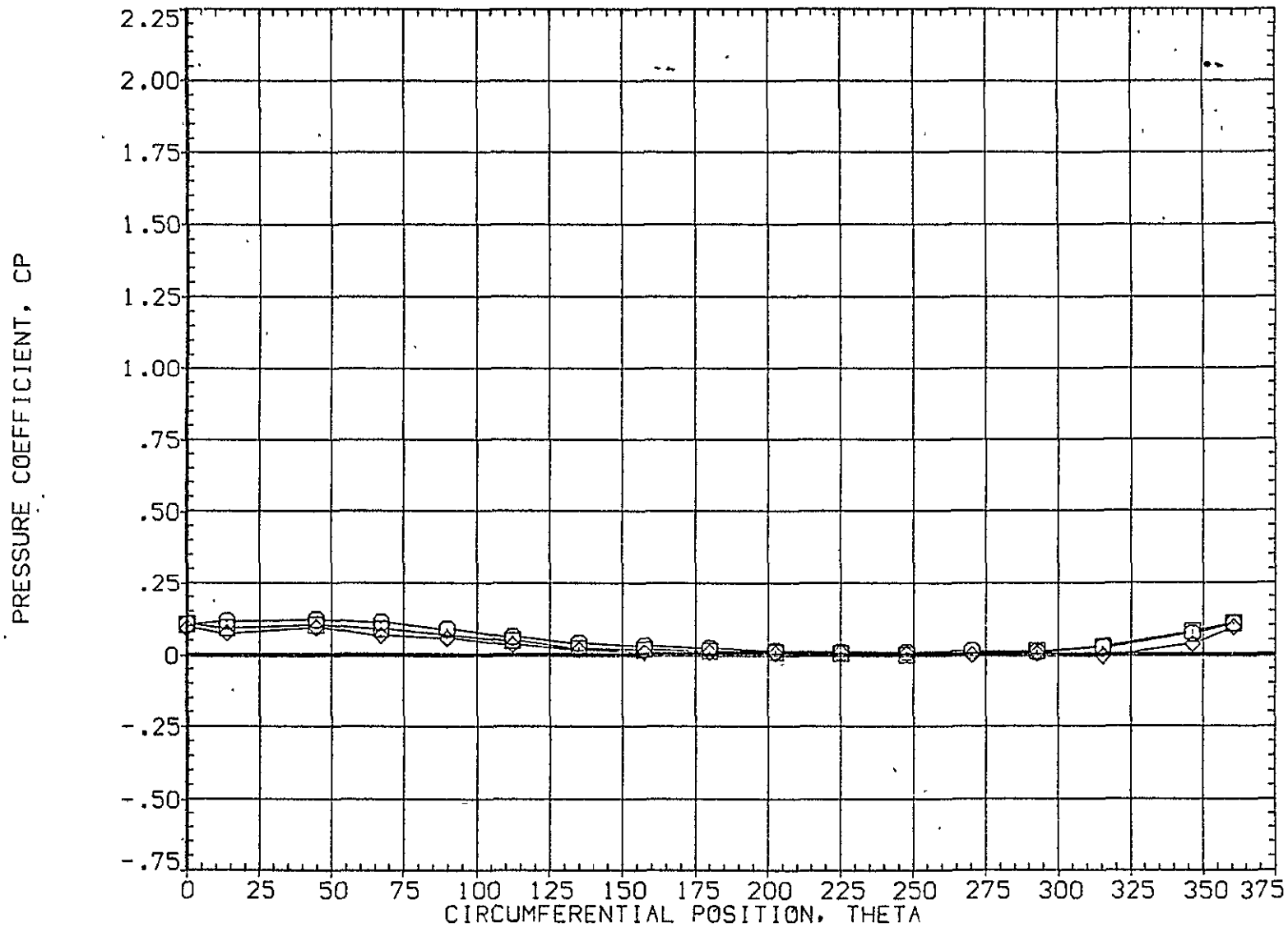

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

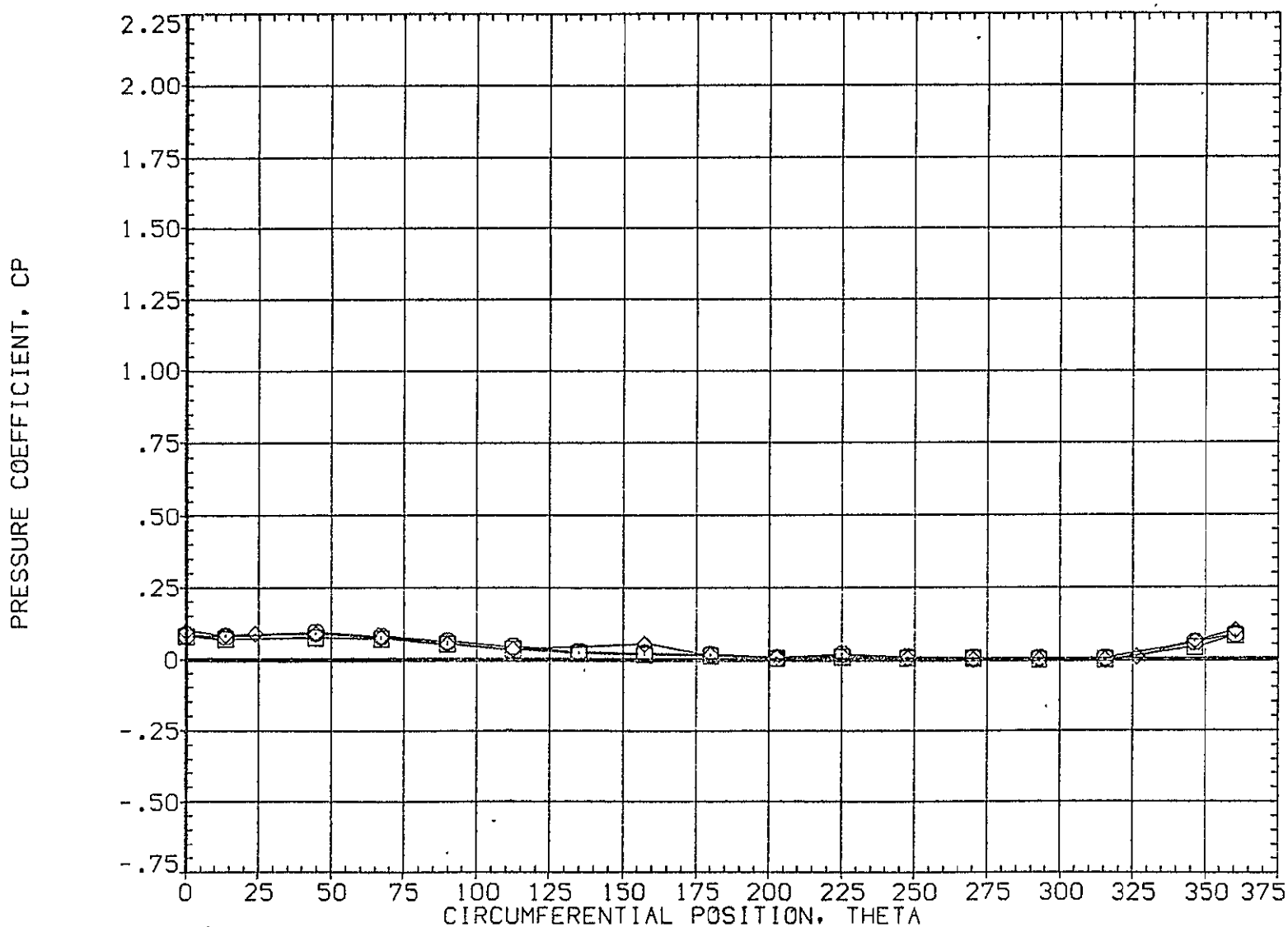

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A046)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

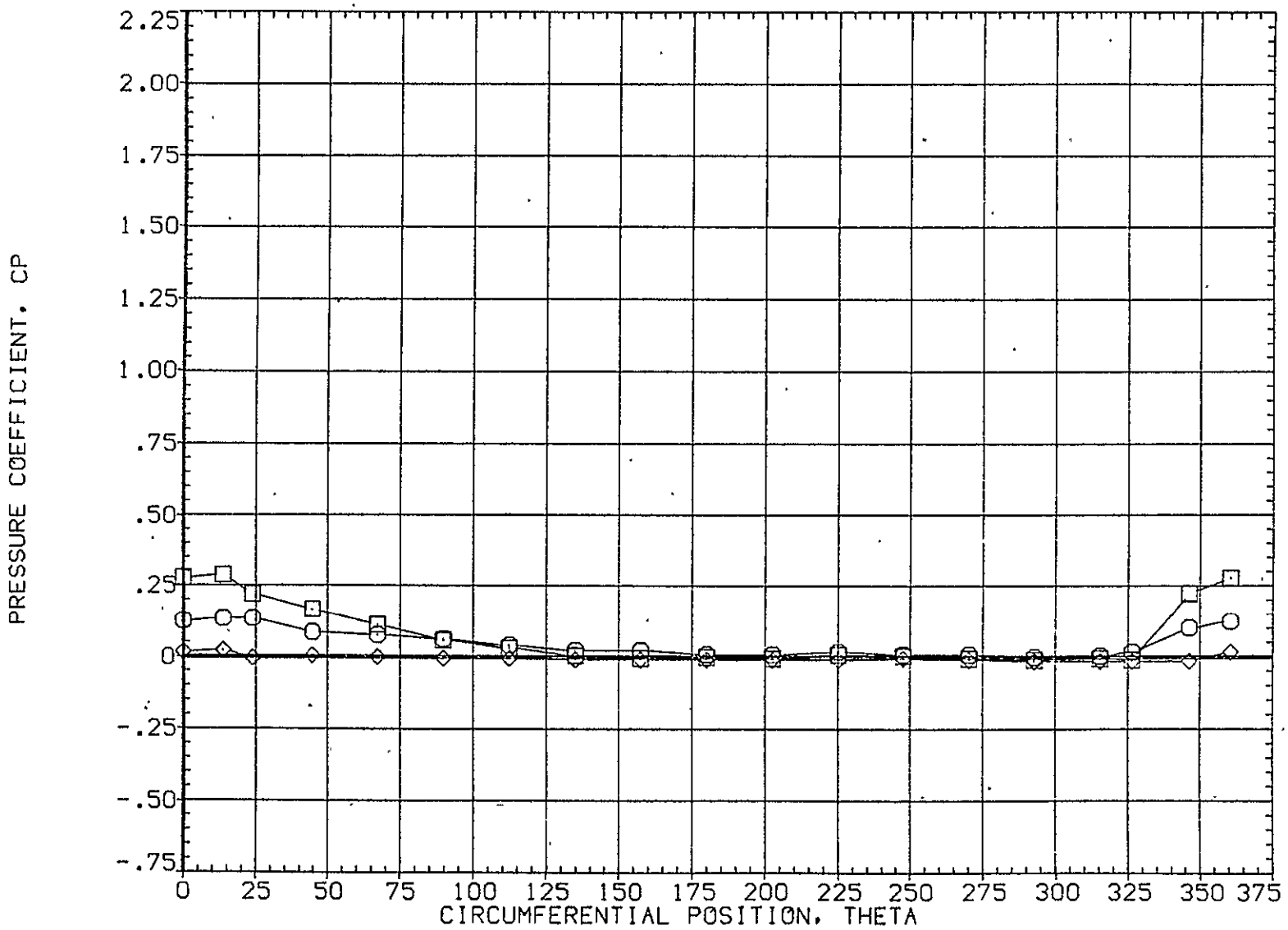

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

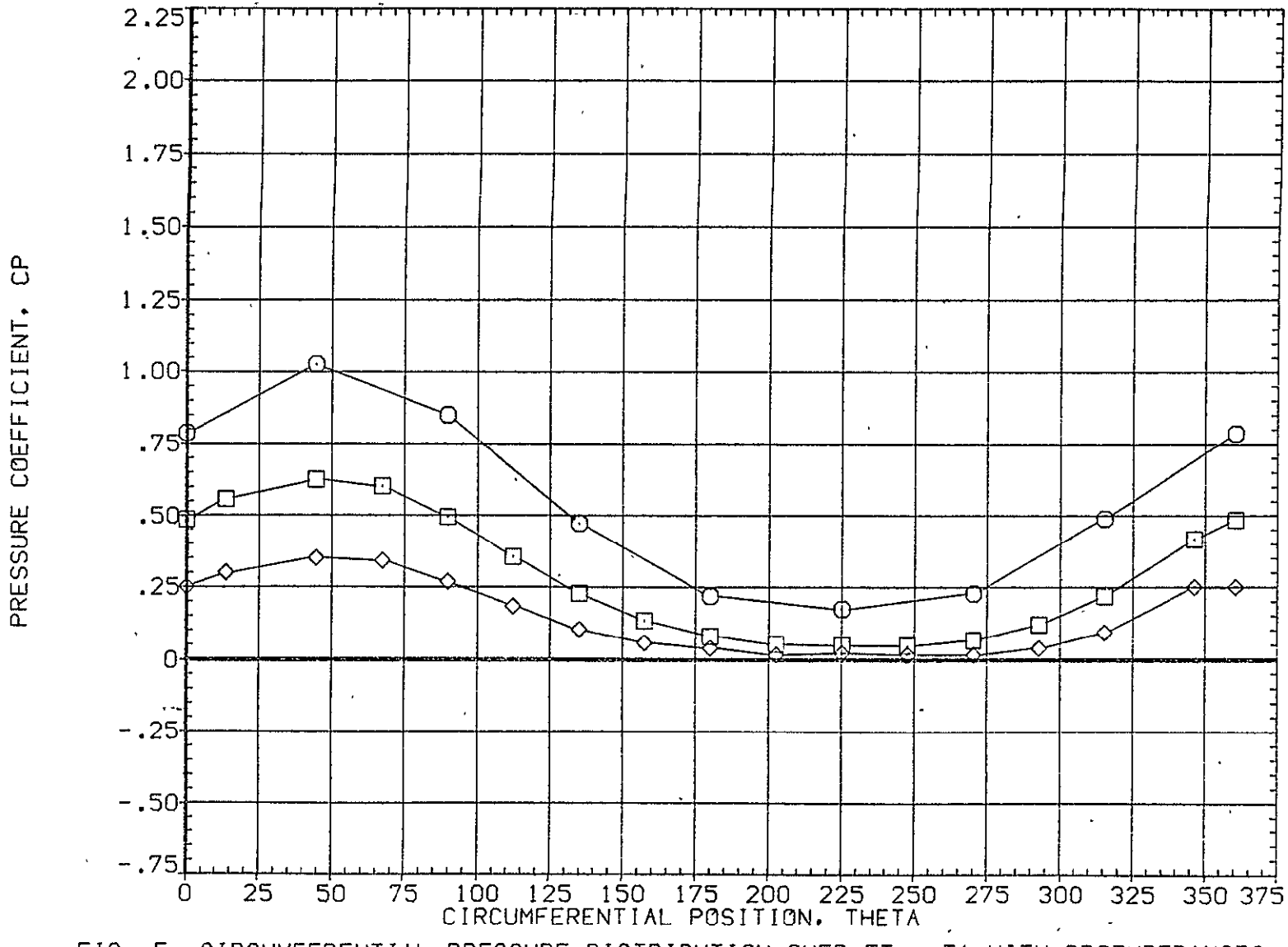

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

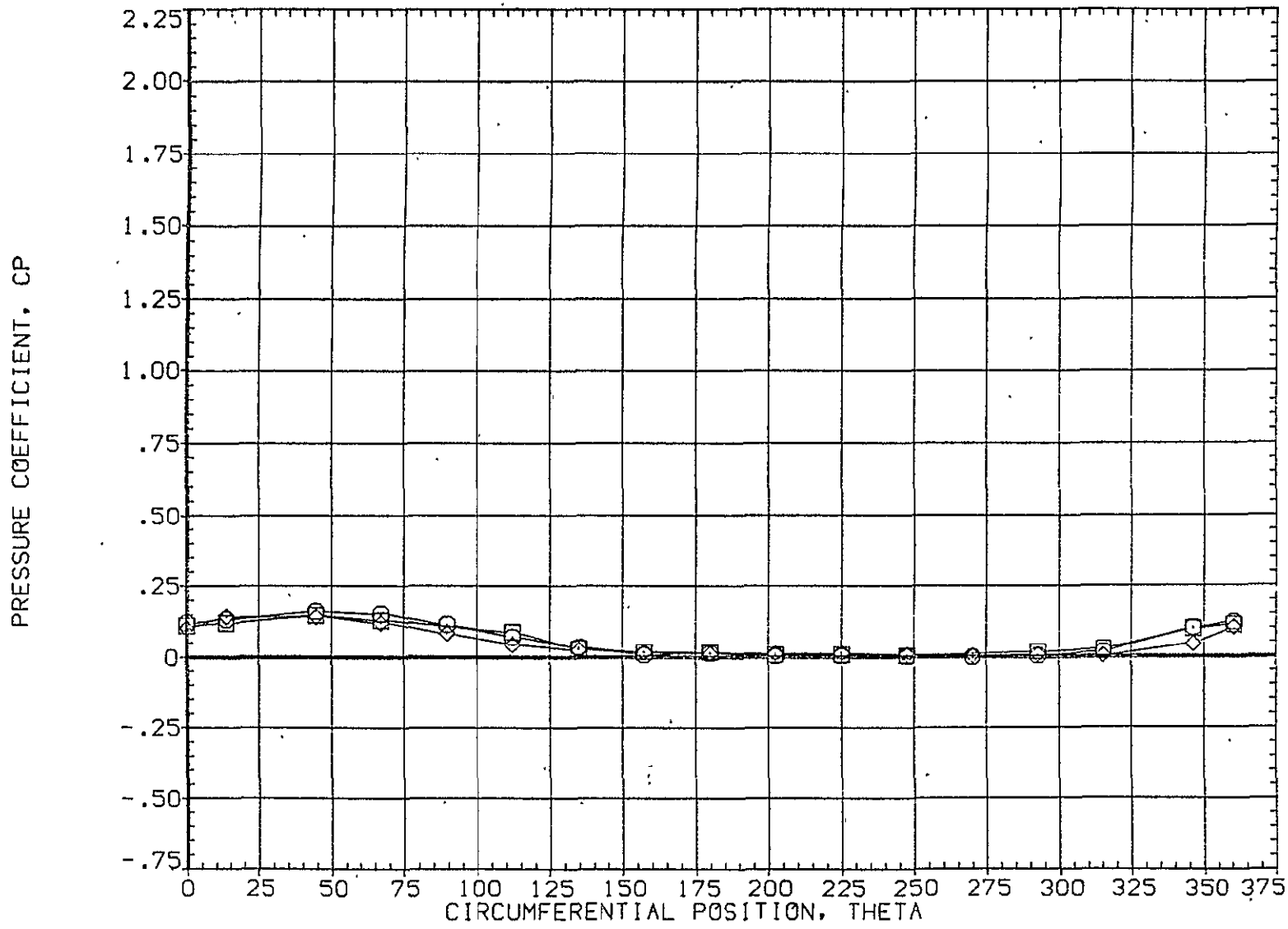

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

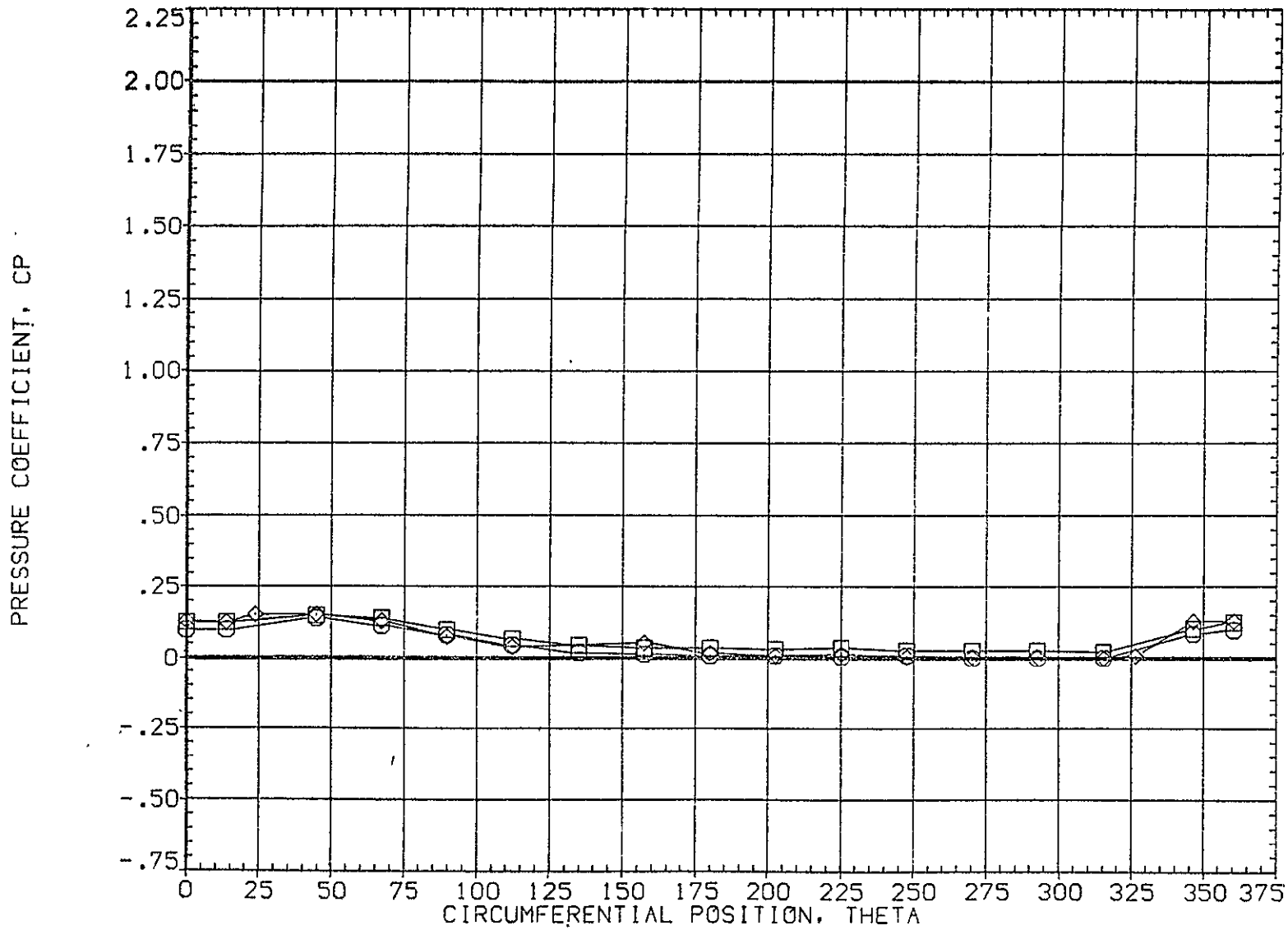

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A047)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	1.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

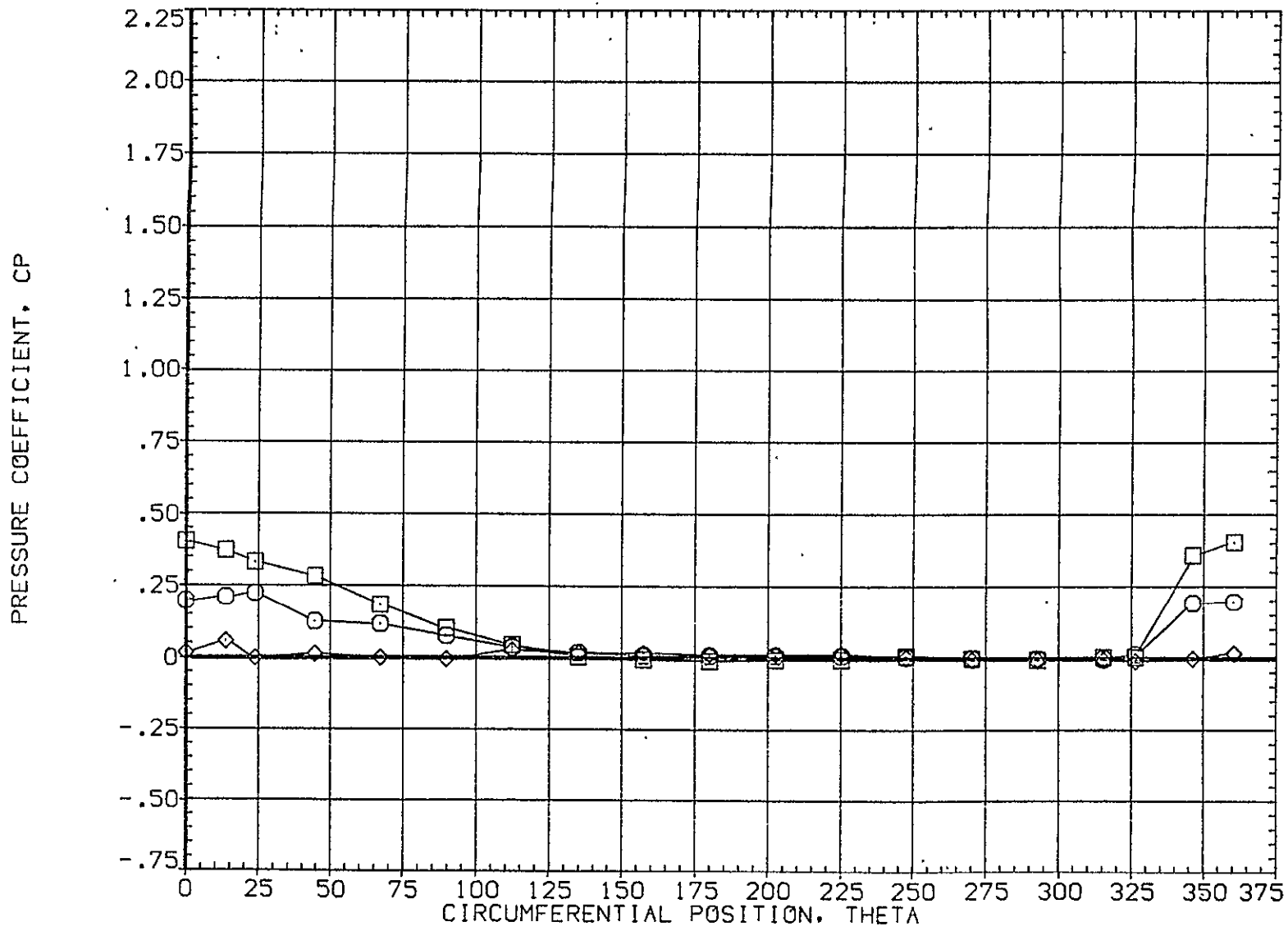

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

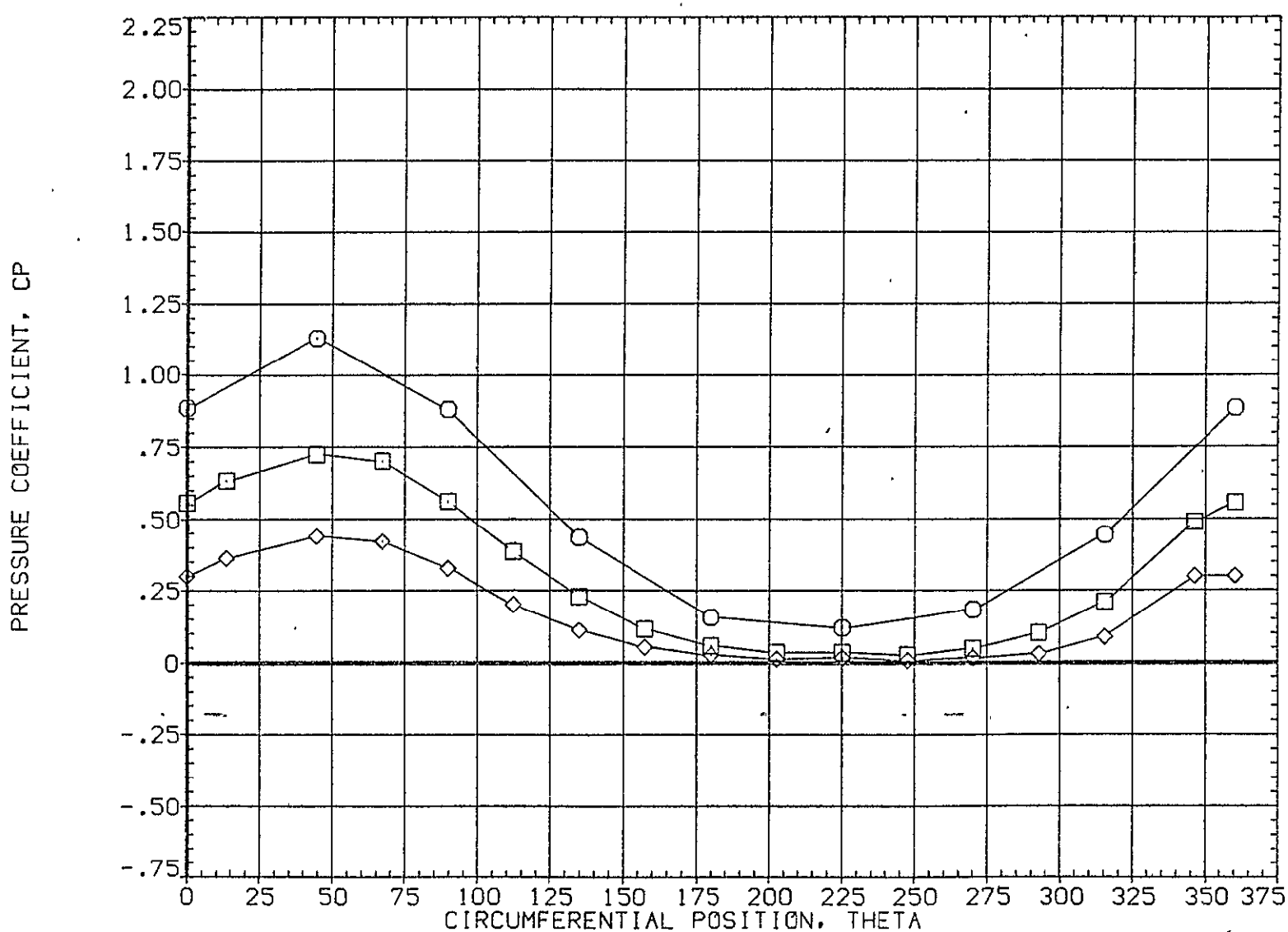

FIG. 5. CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

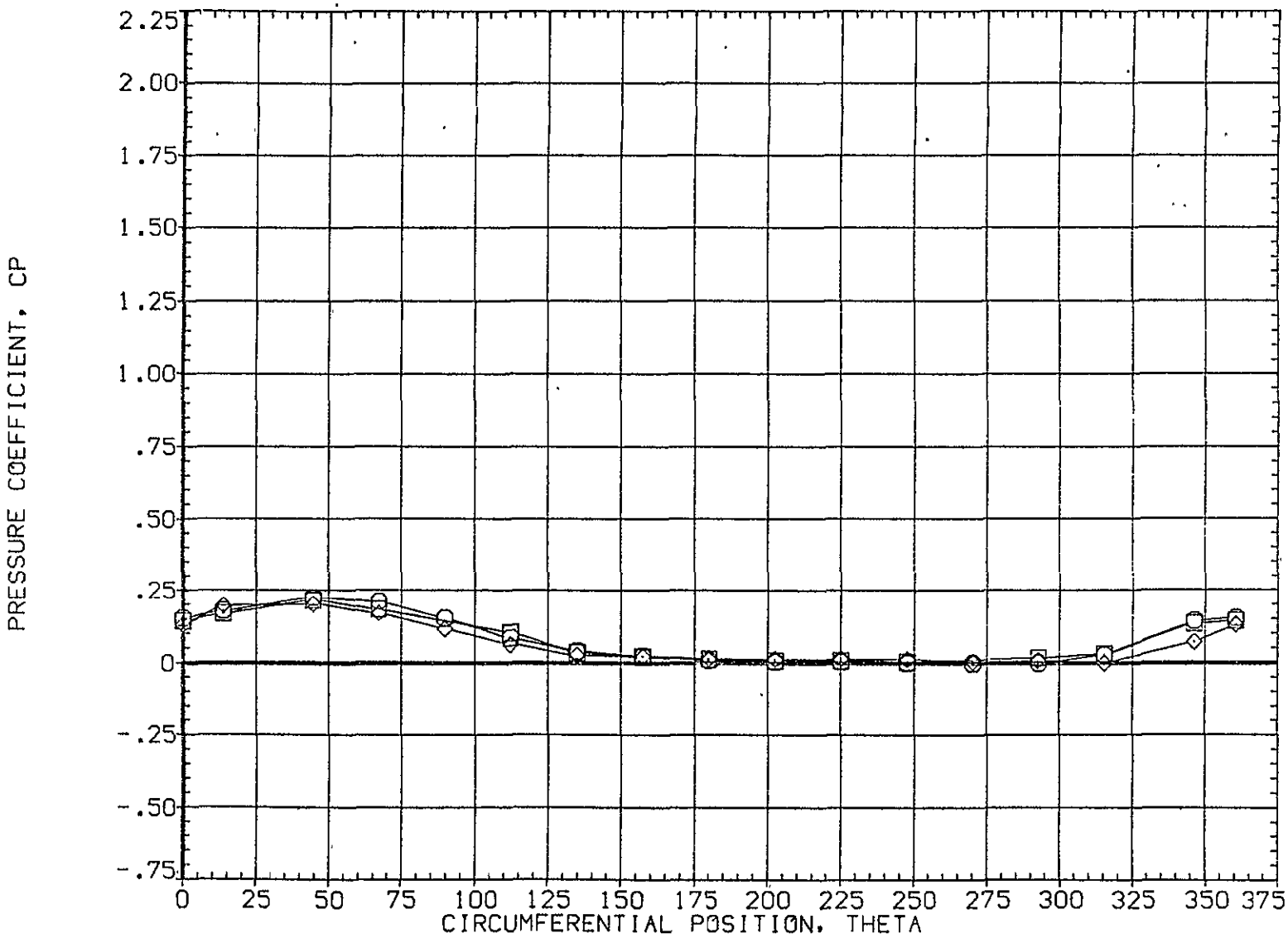

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

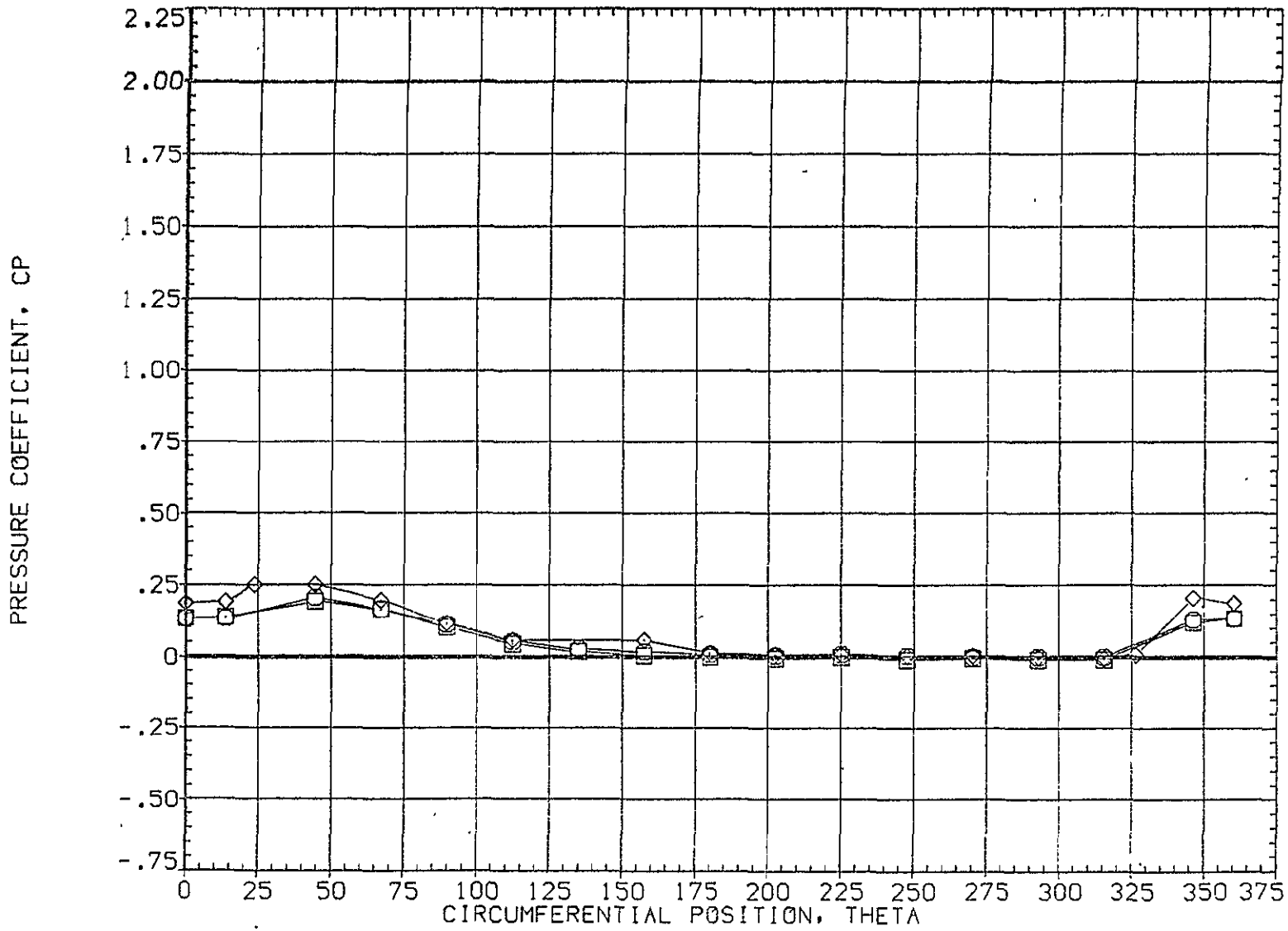

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK; T1 (P1A048)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

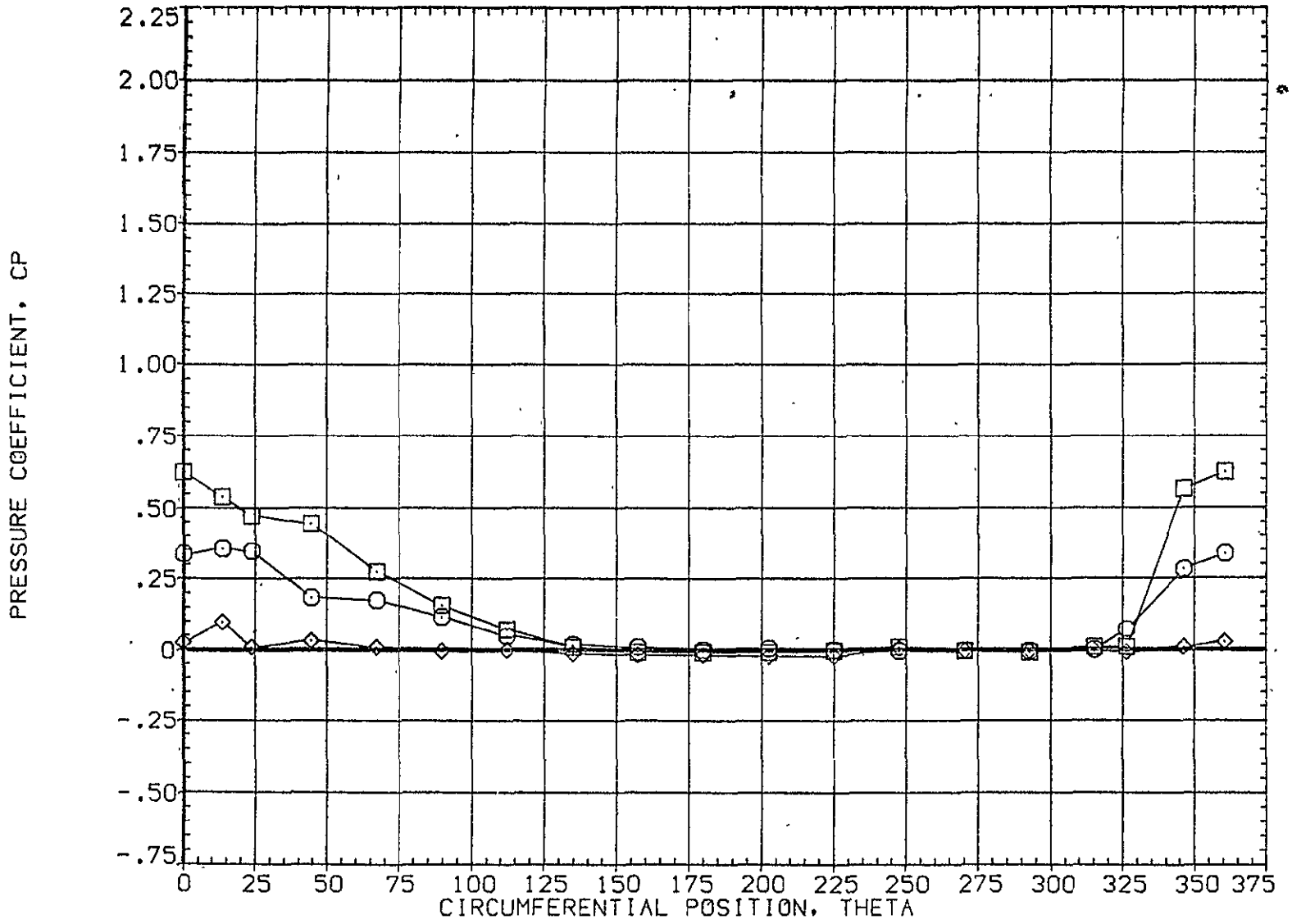

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	-- 20.000
MOUNT	1.000	PHI	225.000

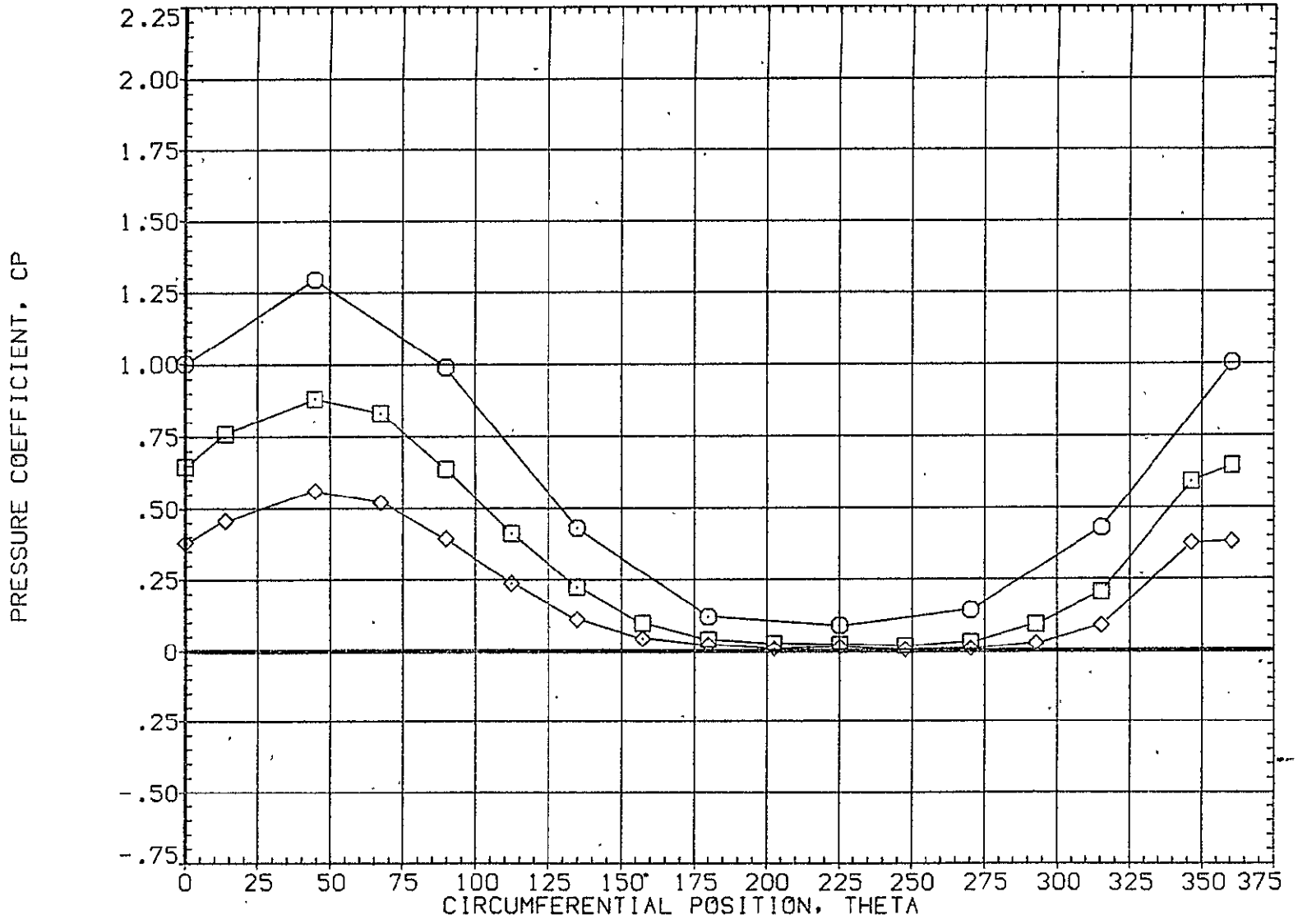

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

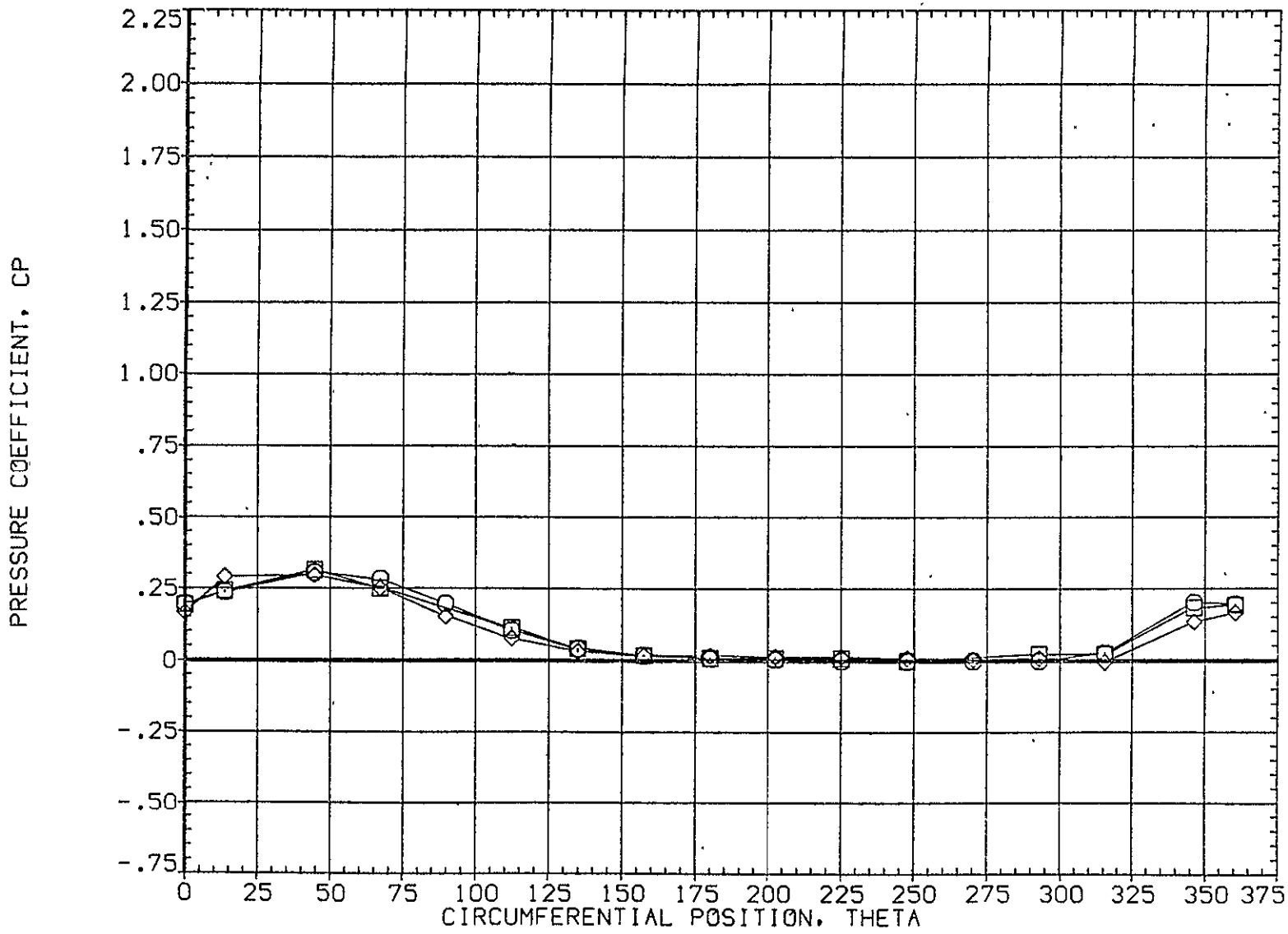

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

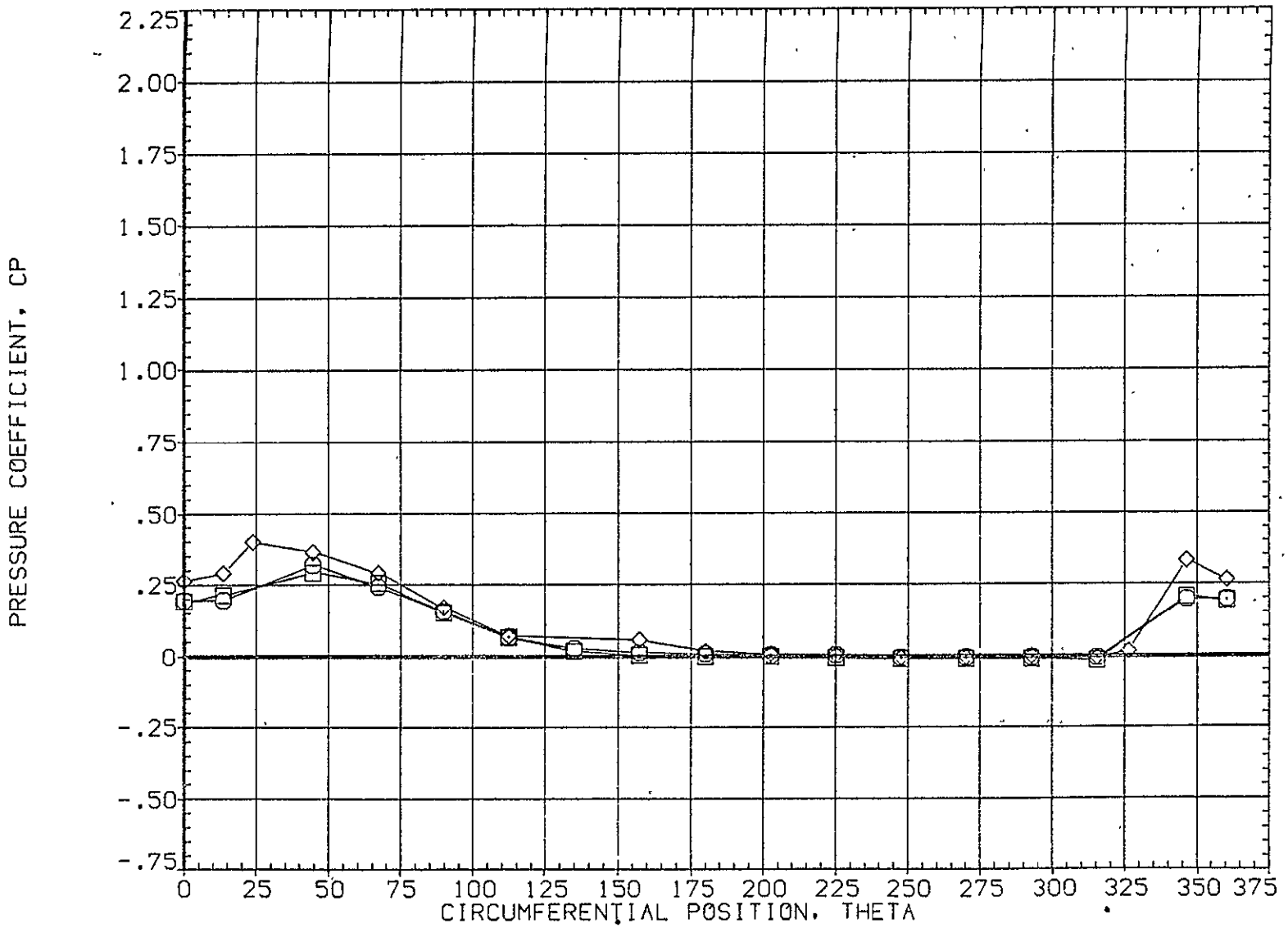

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A049)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

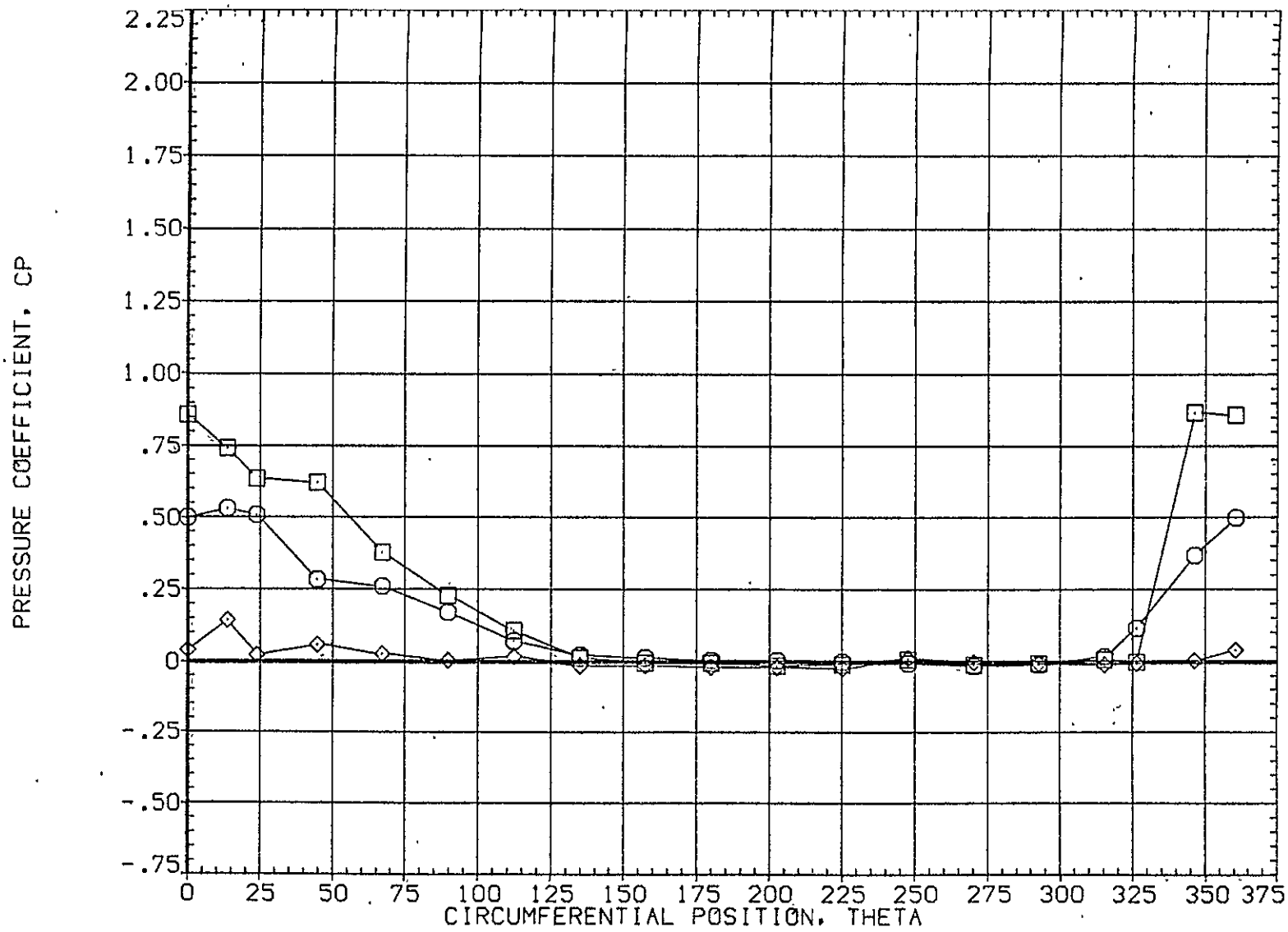

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.540	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

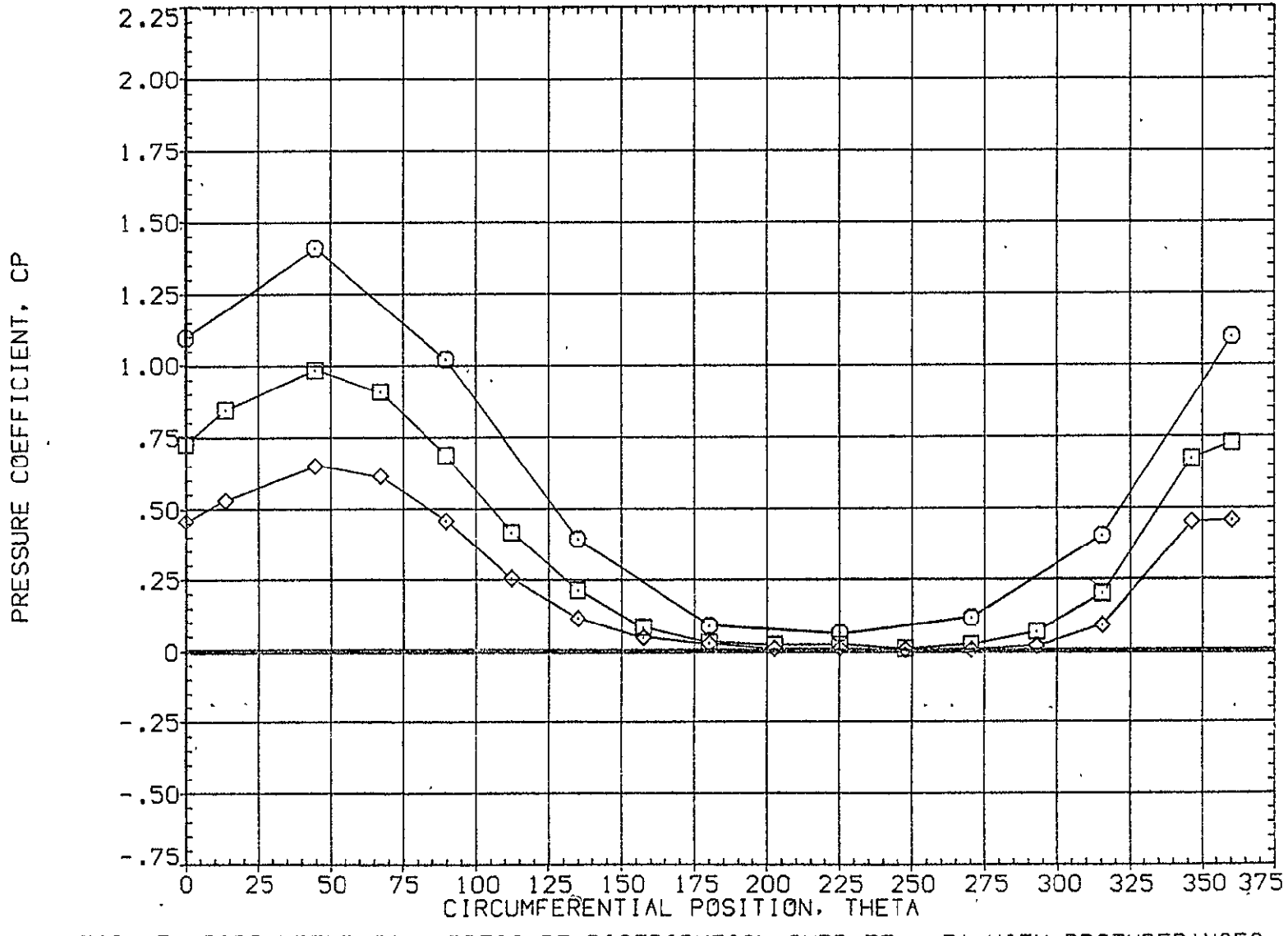

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

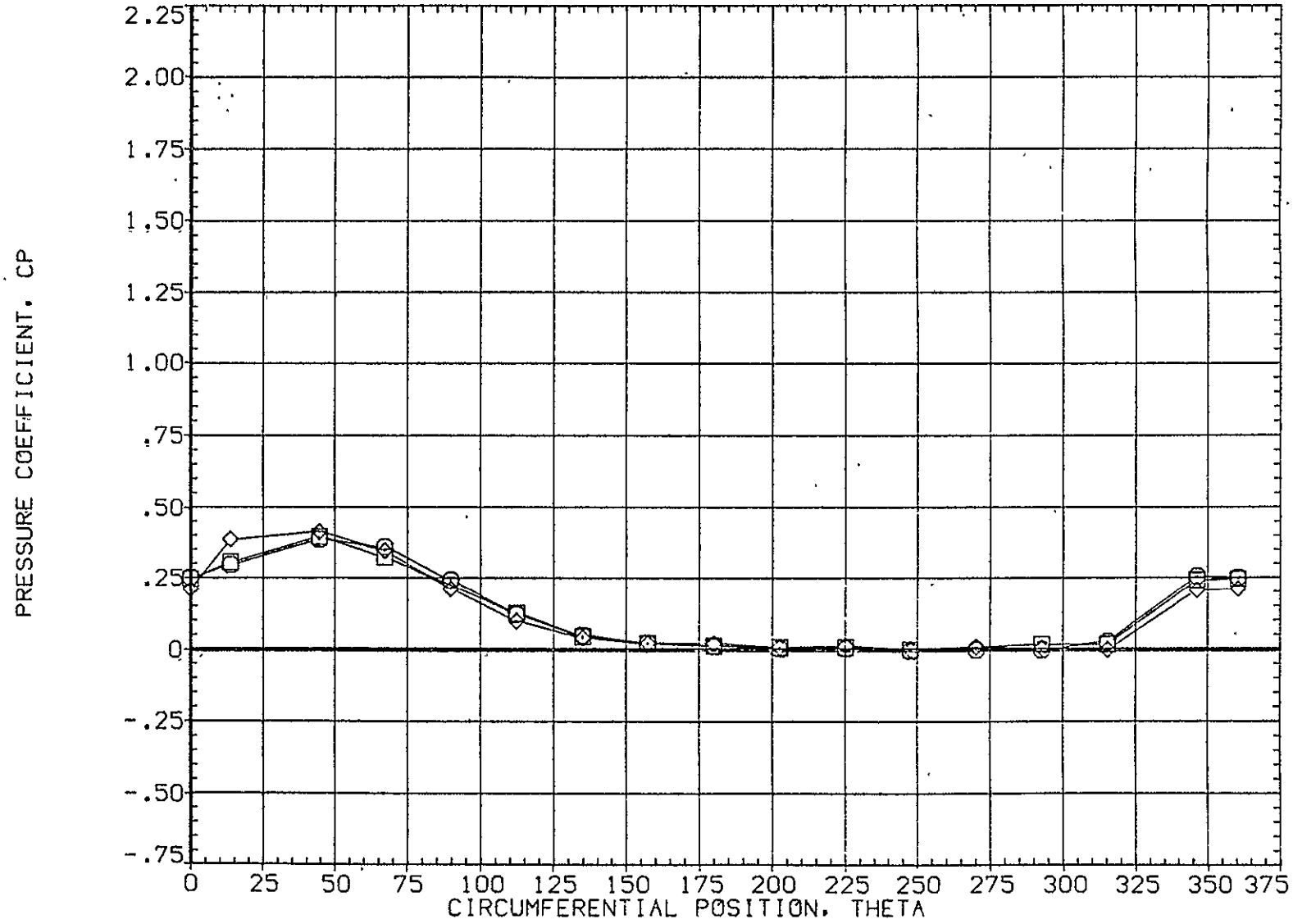

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.540	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

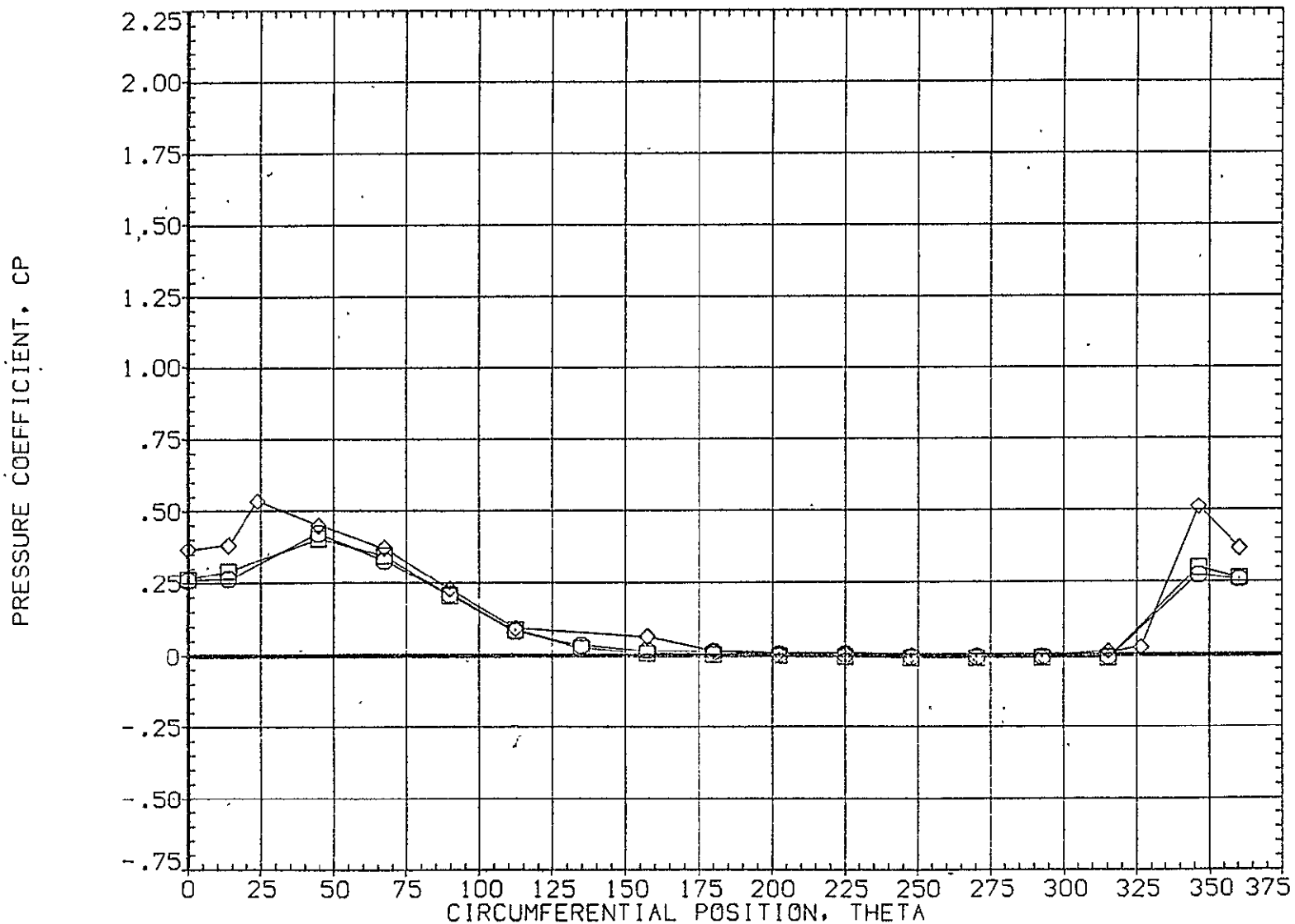

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A050)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	225.000

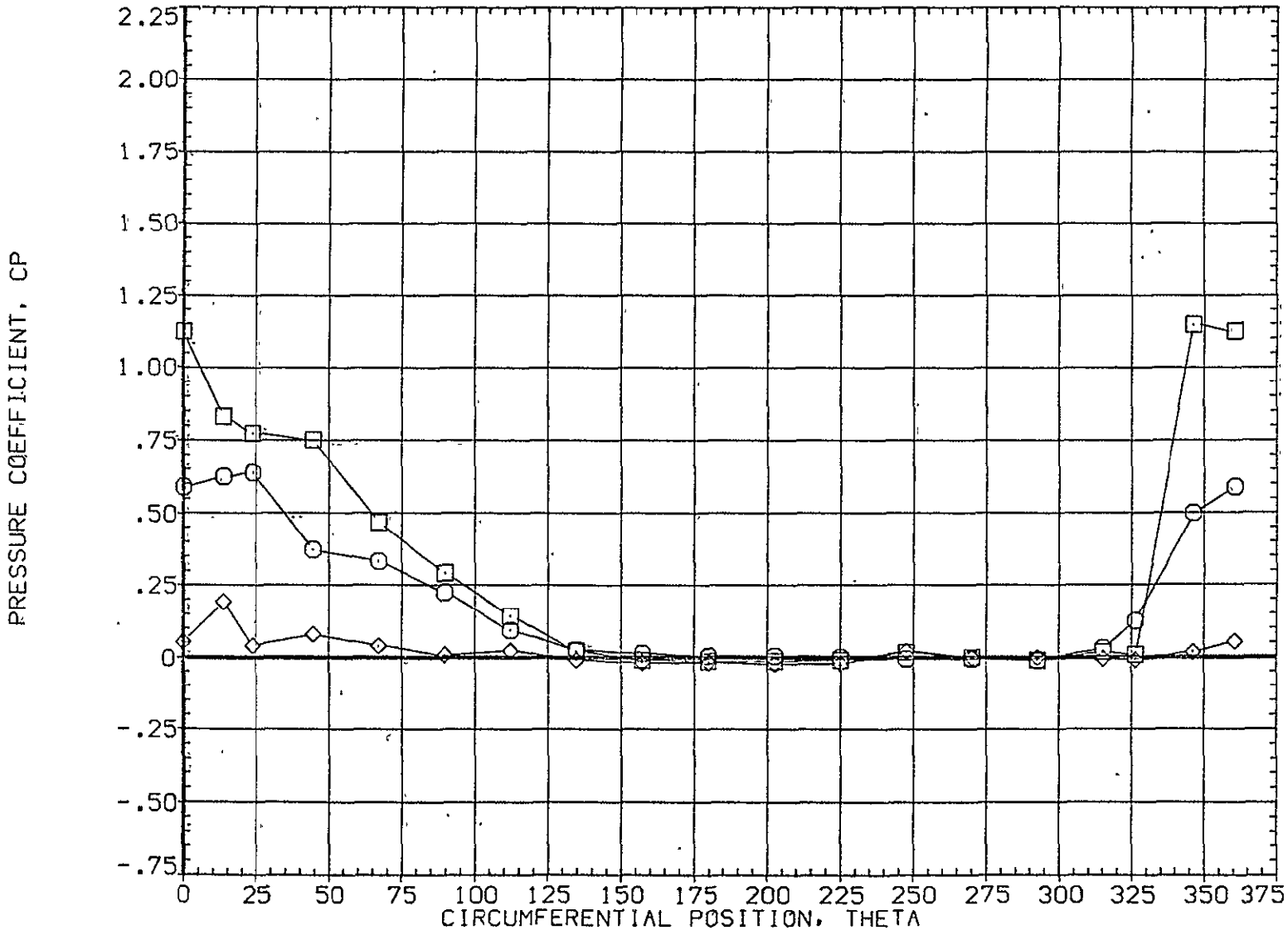

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

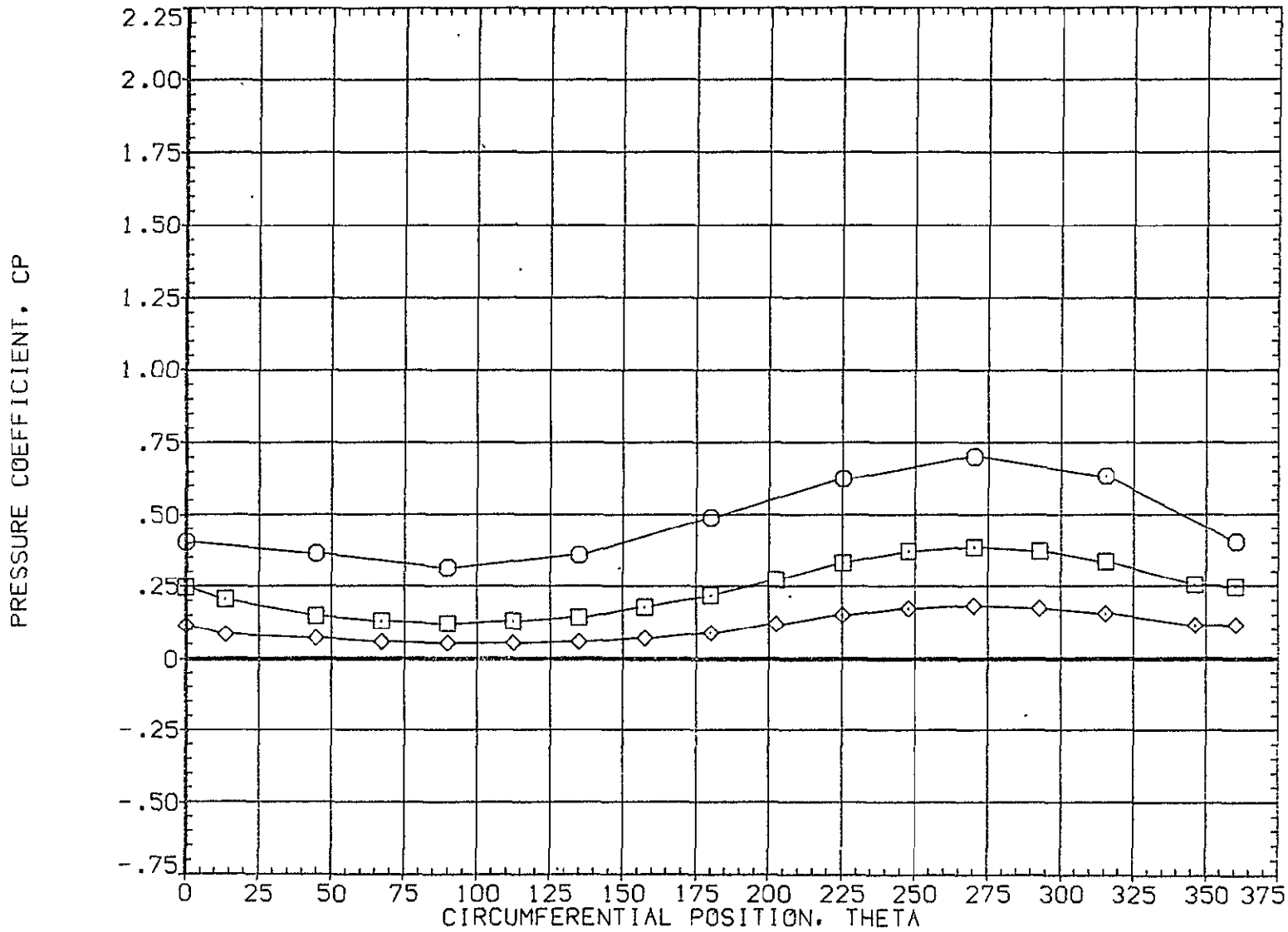

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

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MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.516		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

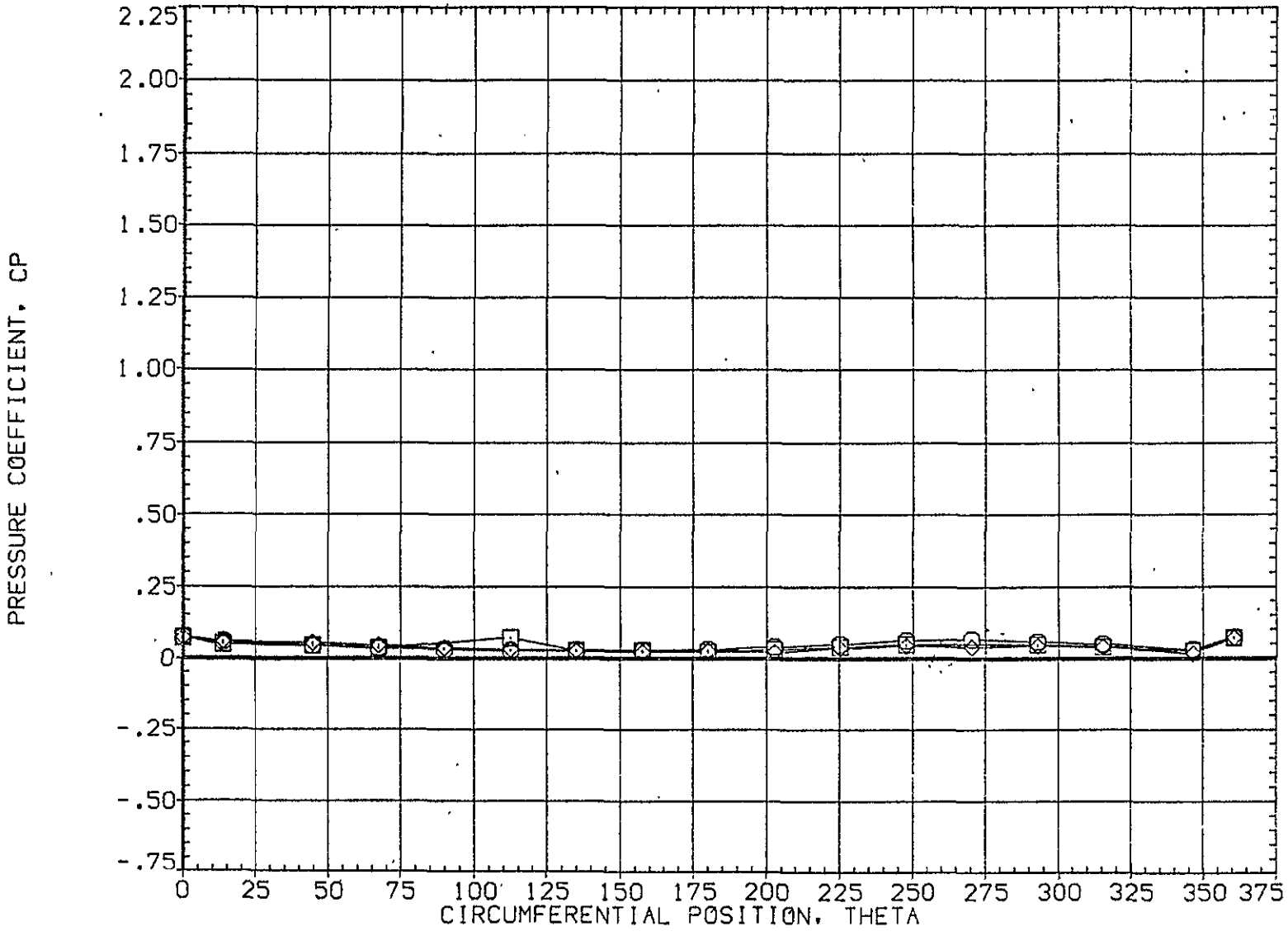


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

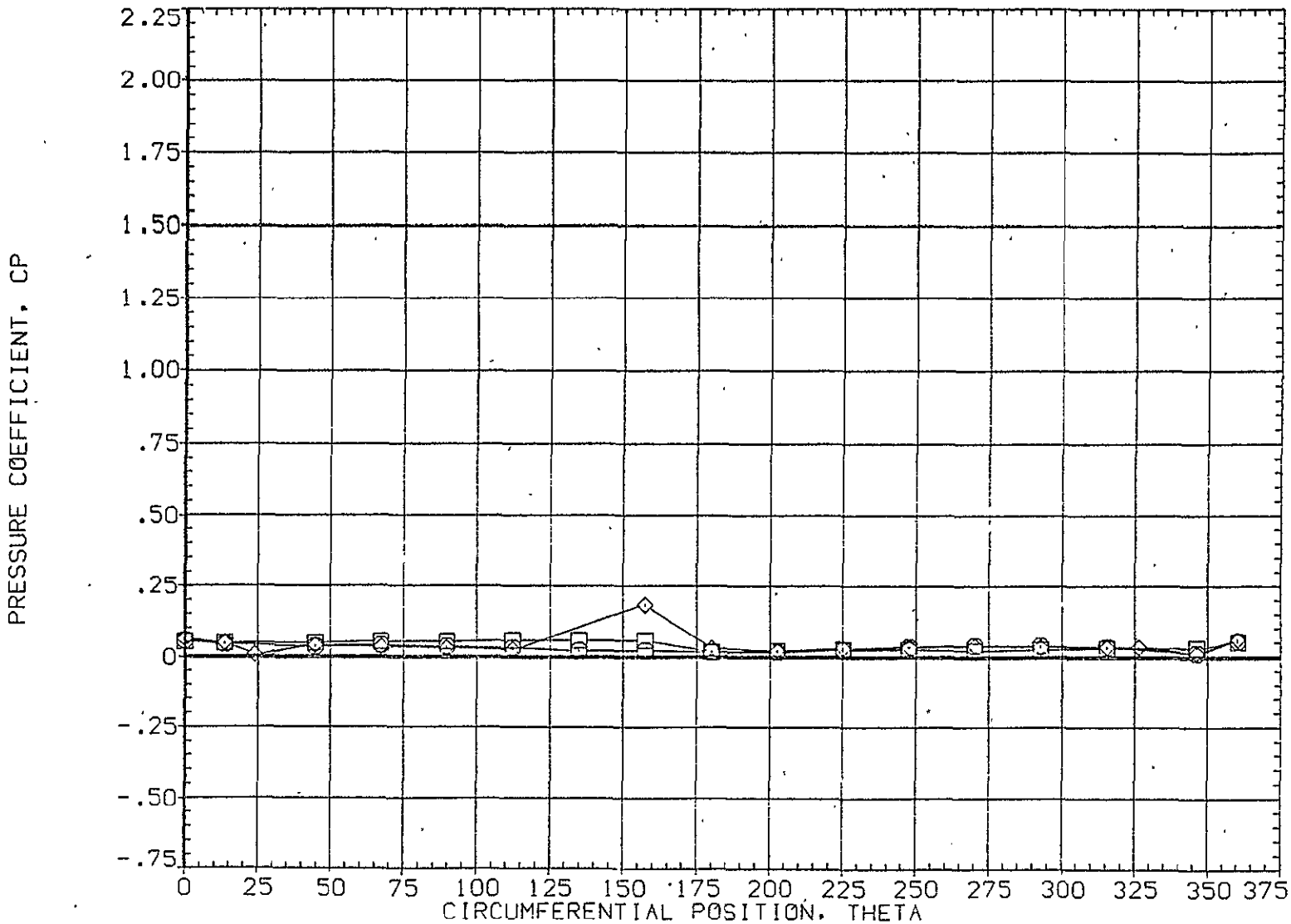


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A051)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

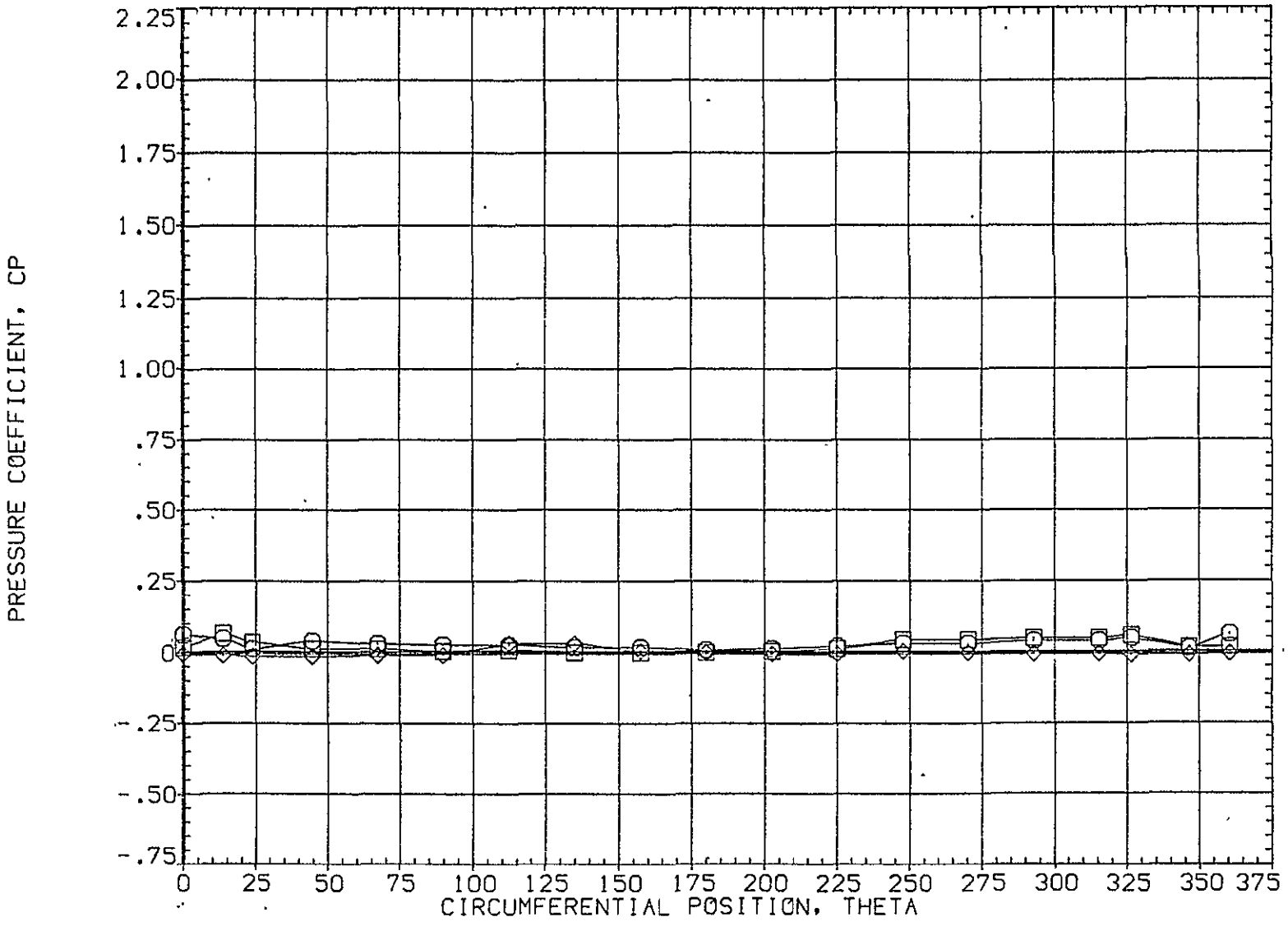


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

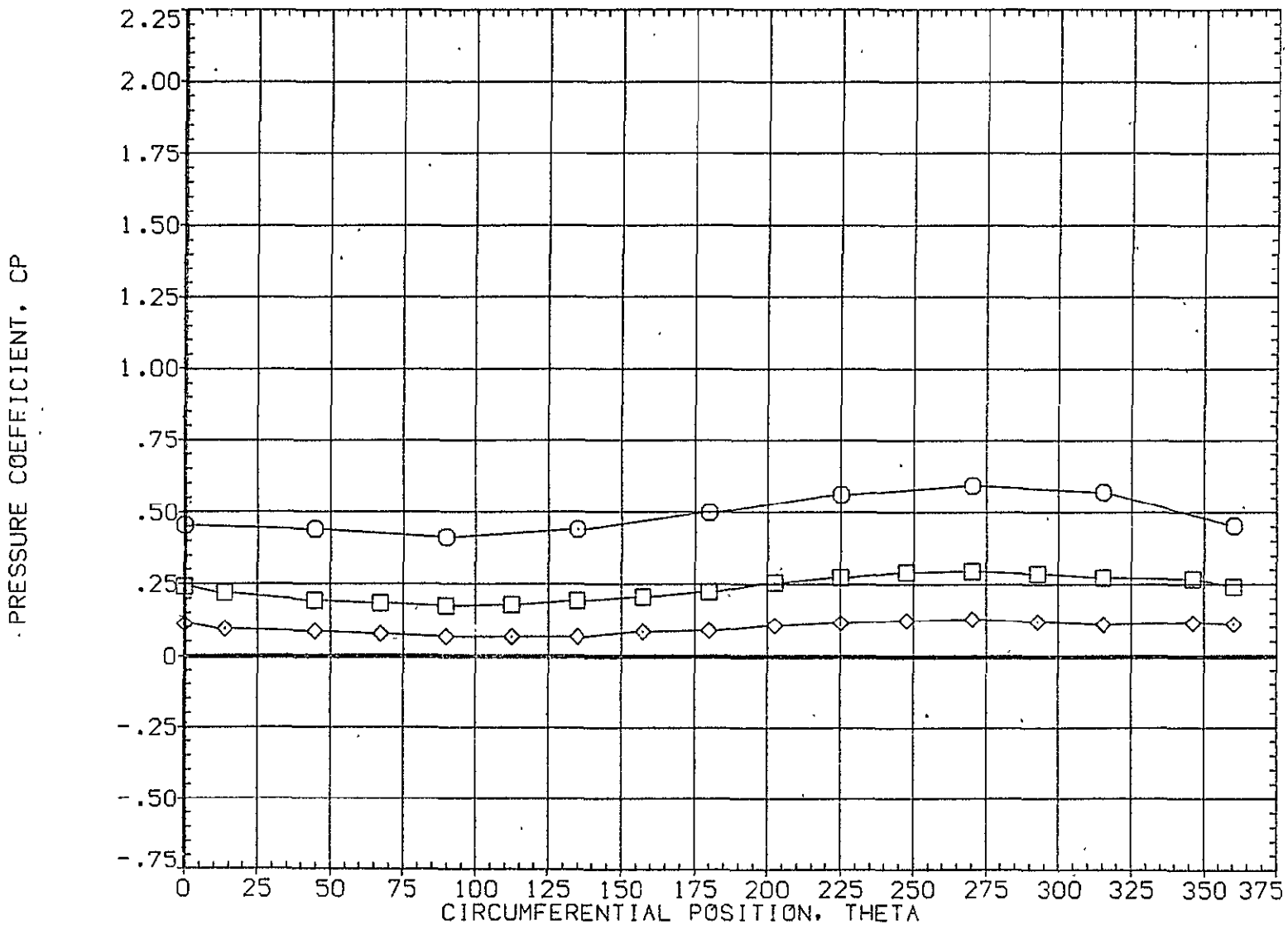


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 . (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

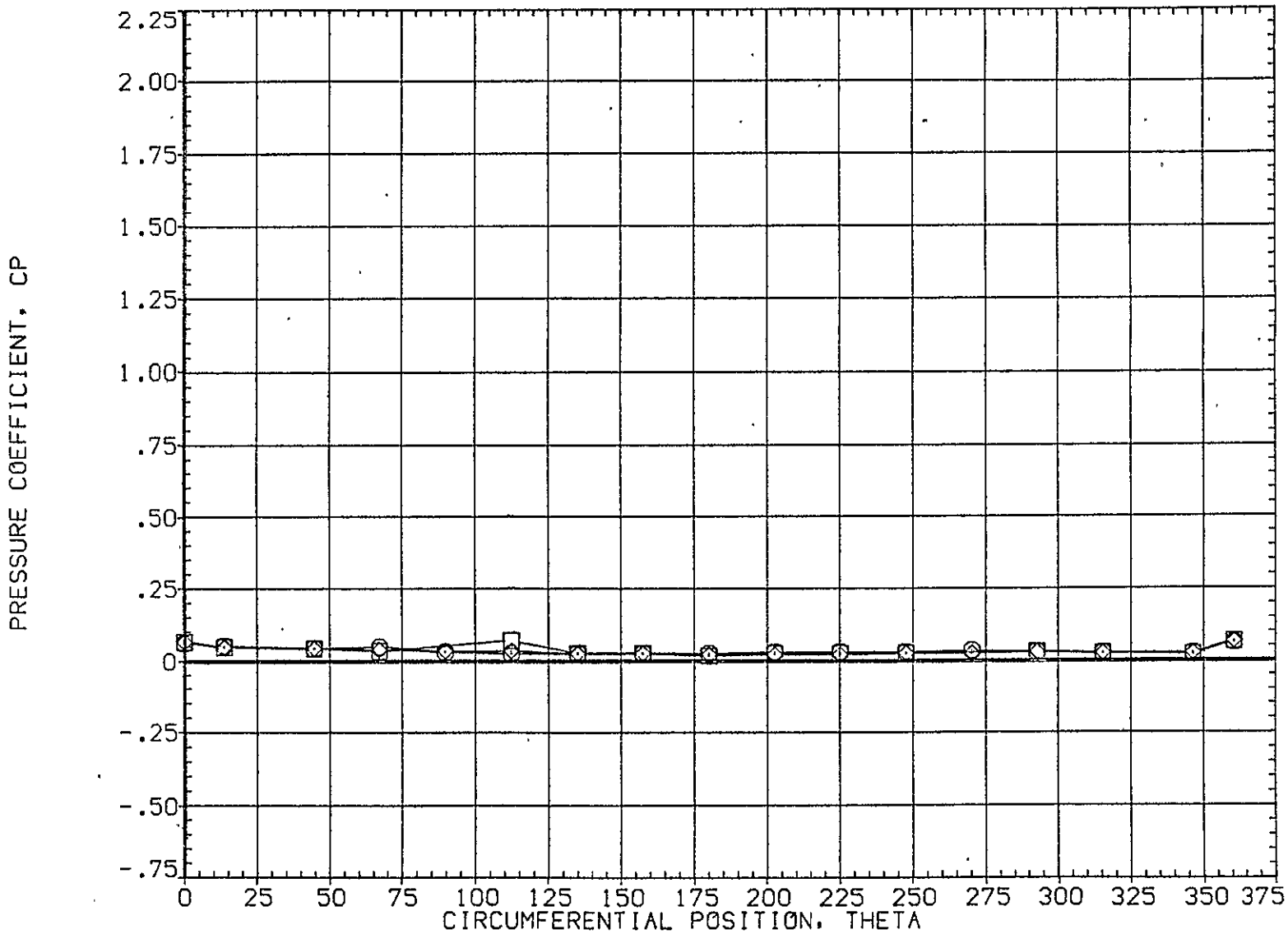


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

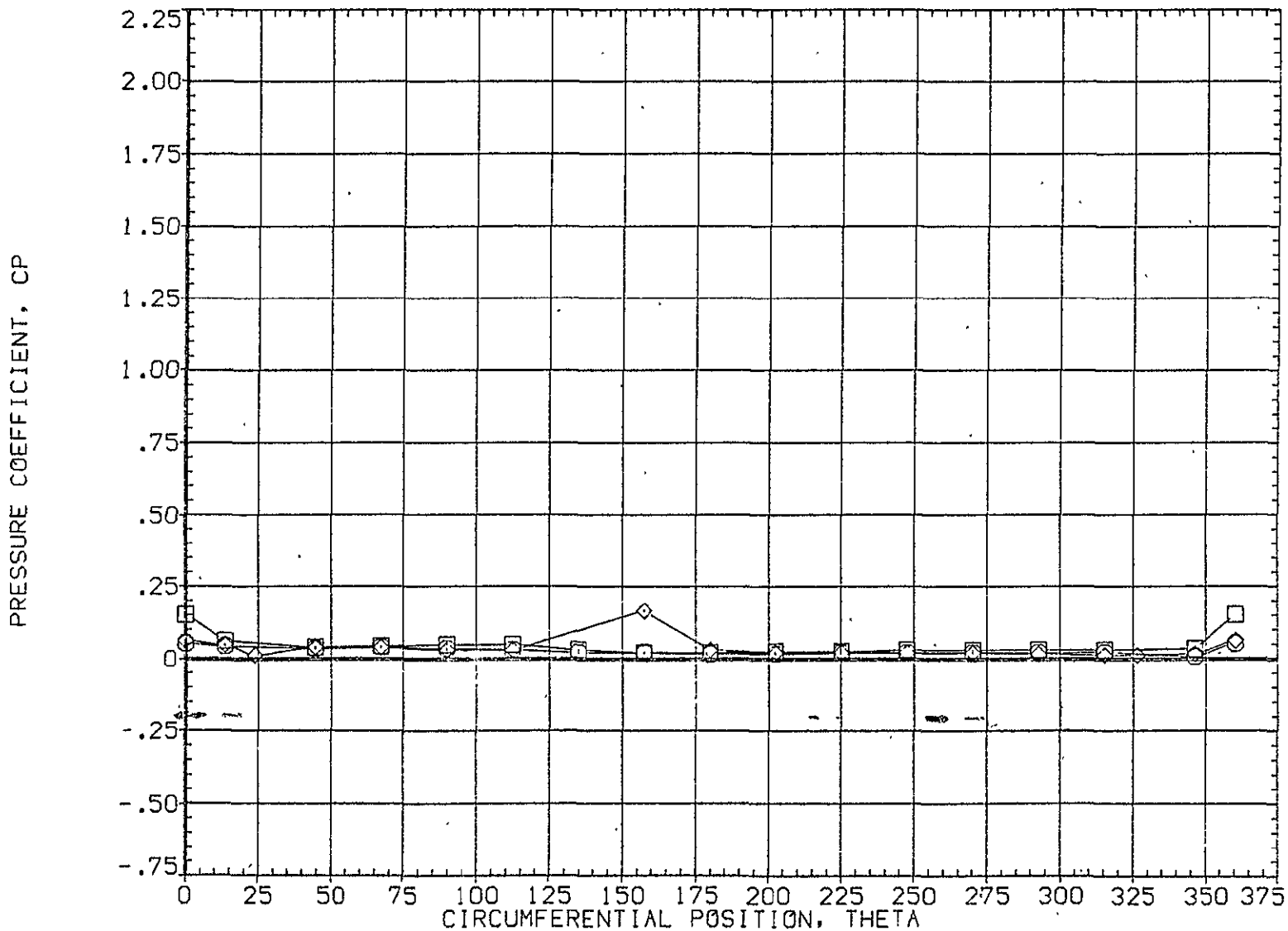


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A052)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290°	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

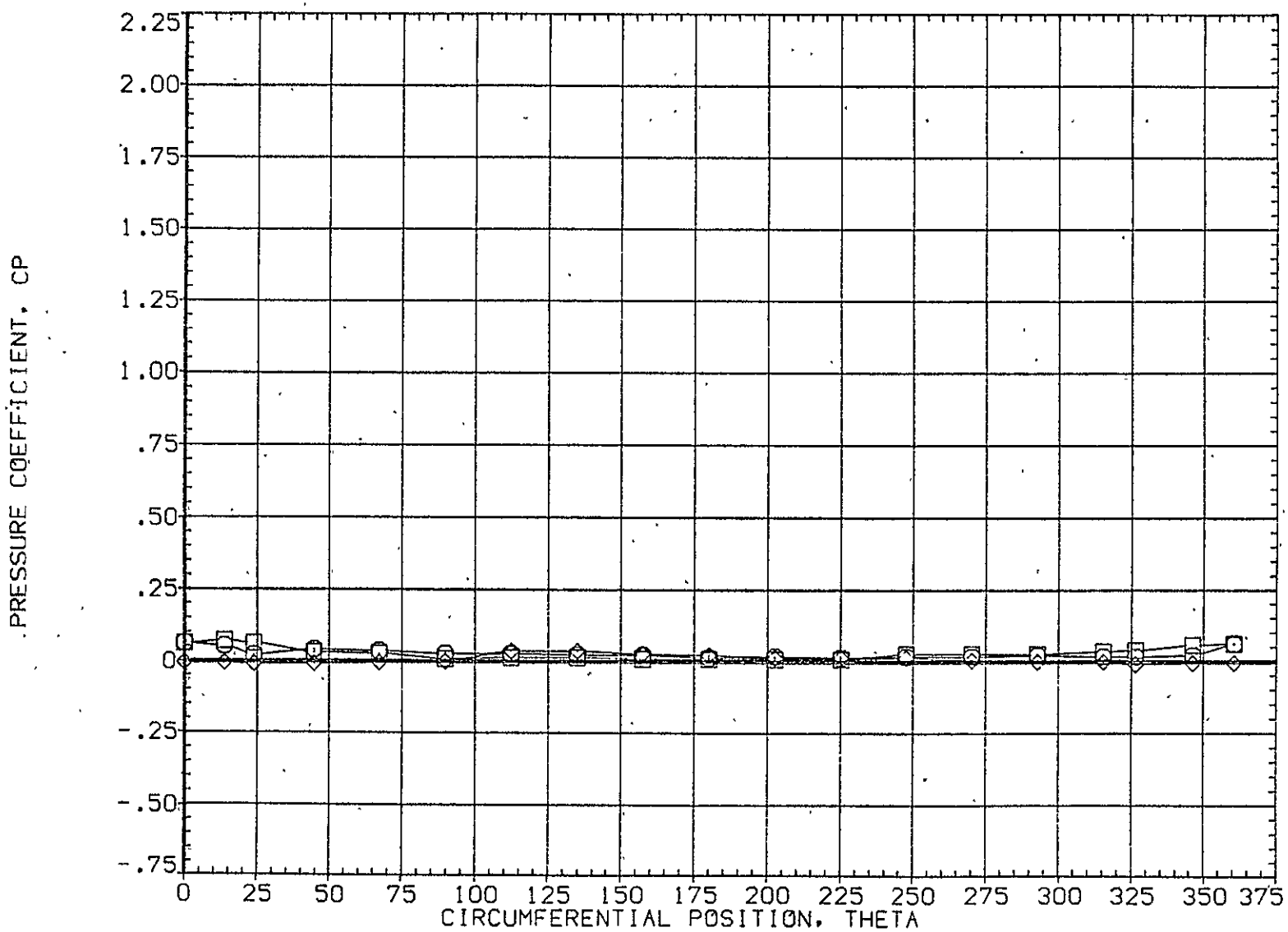


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

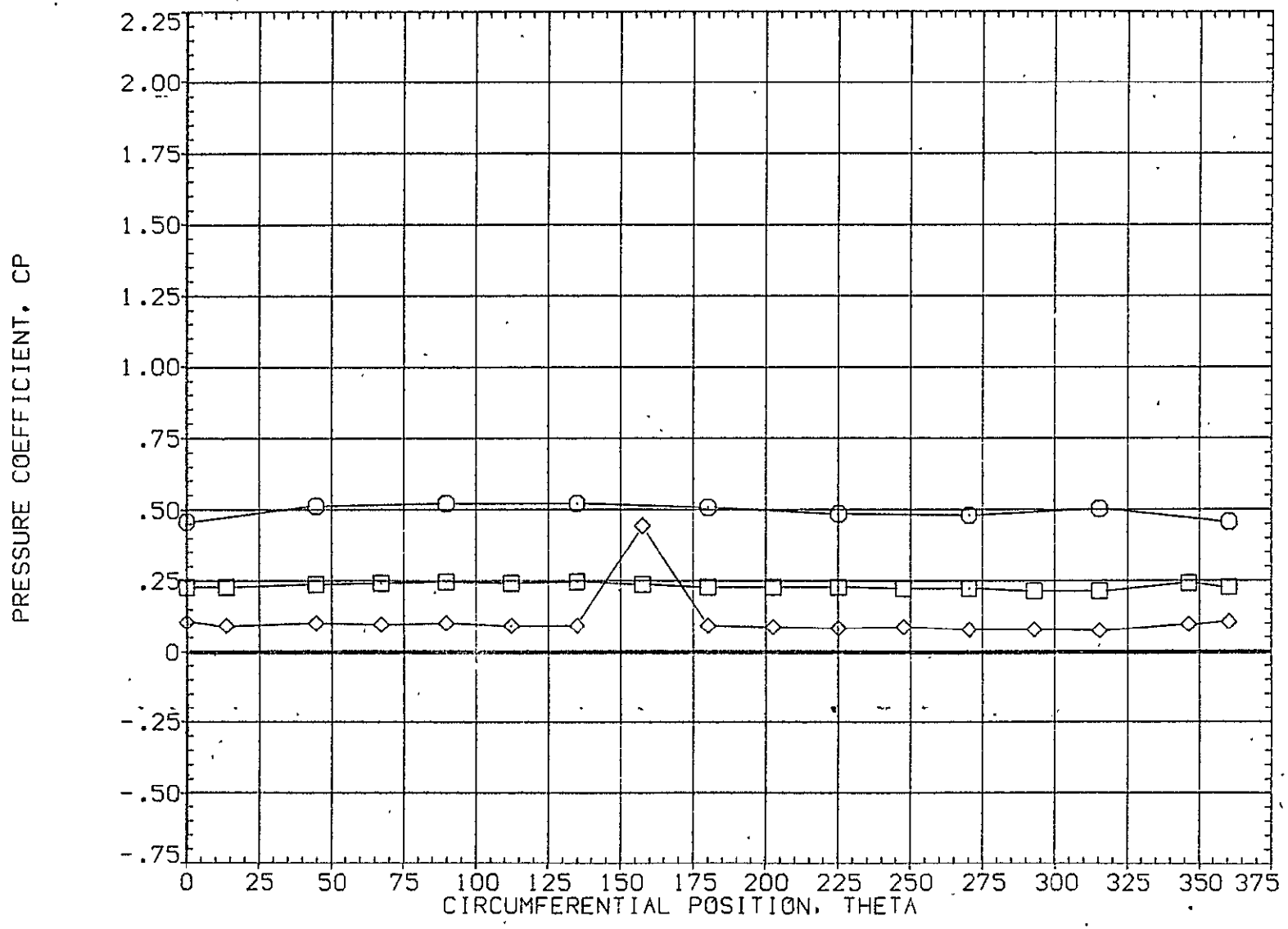


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

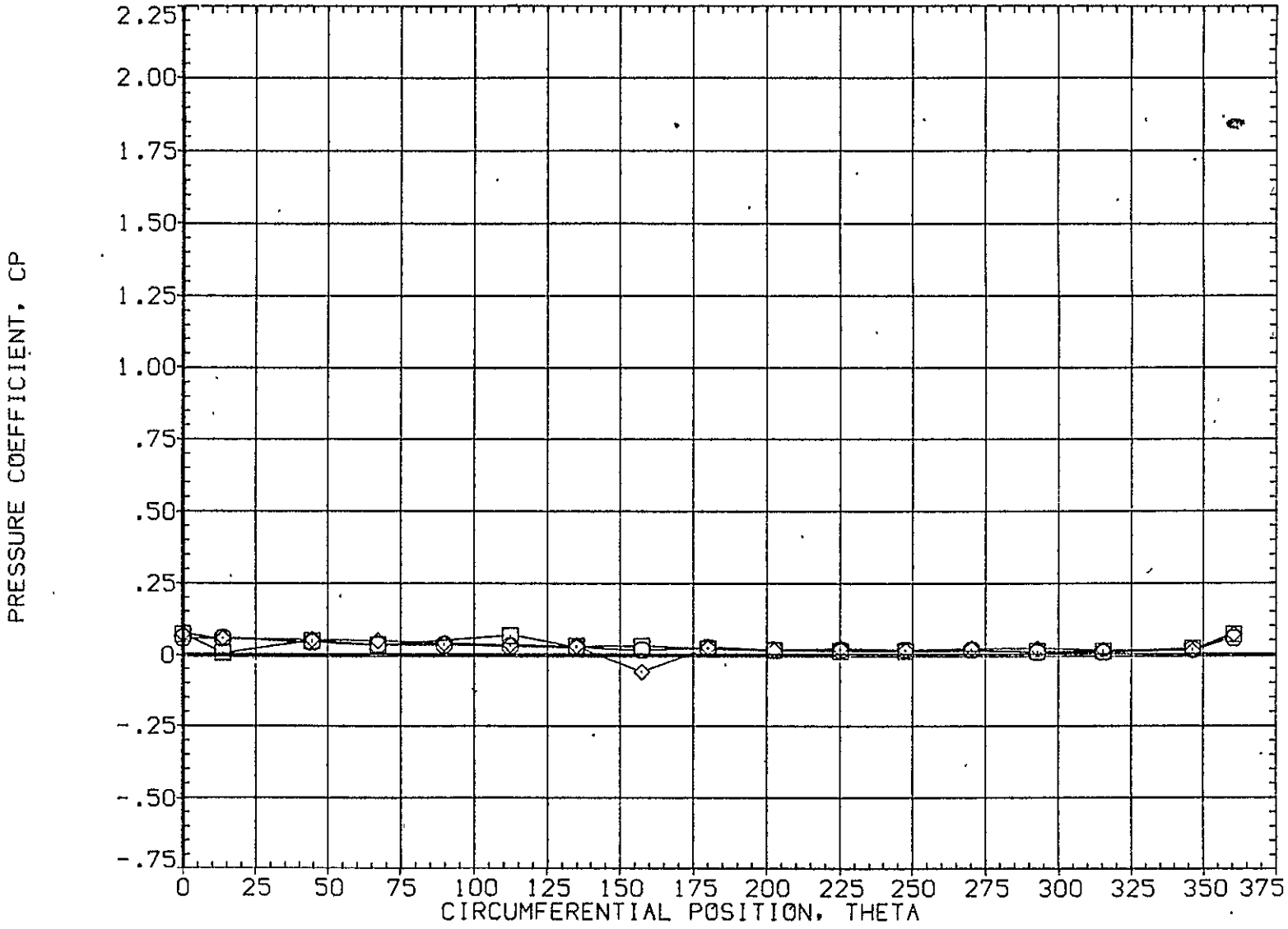


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

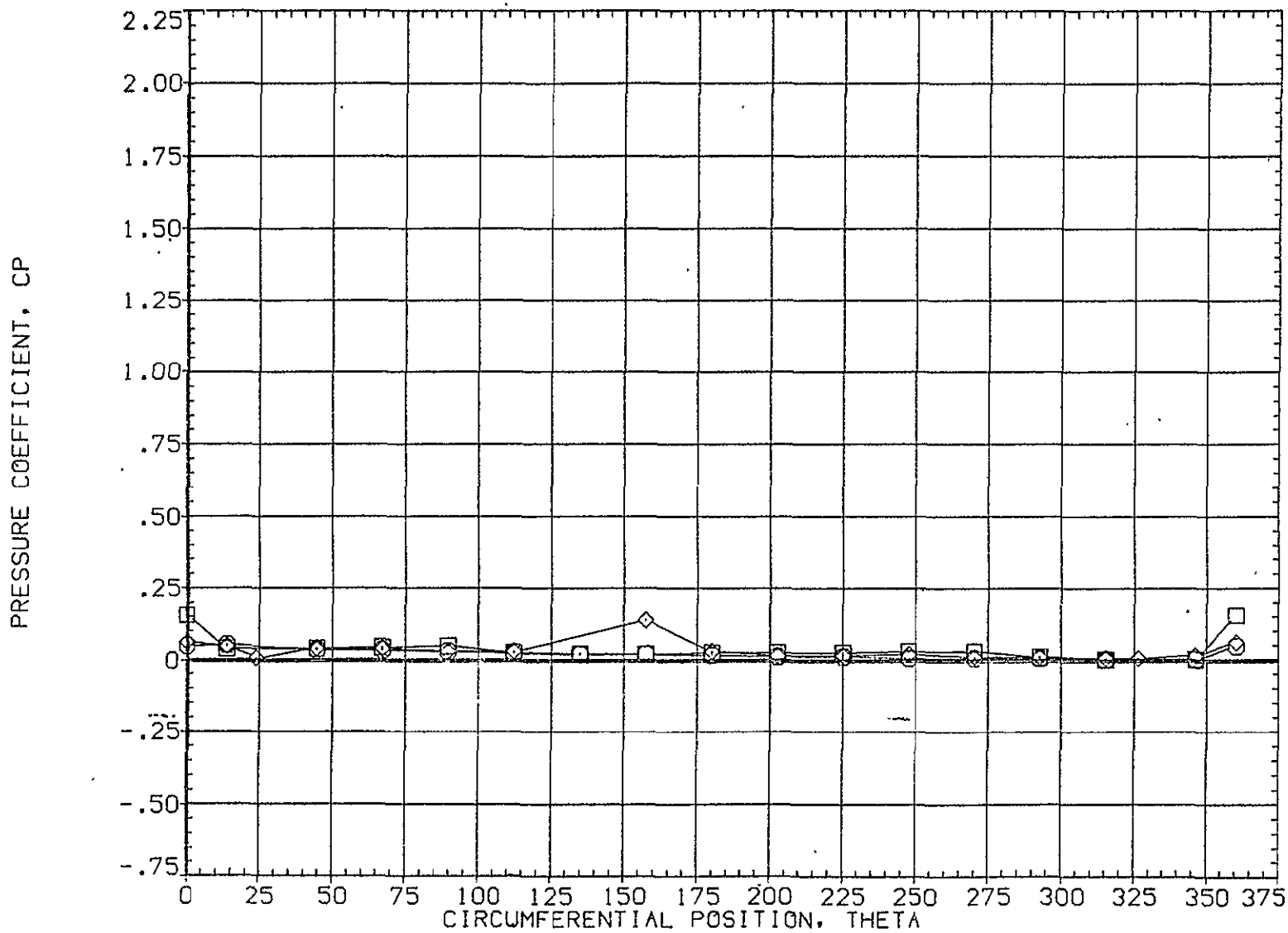


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A053)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

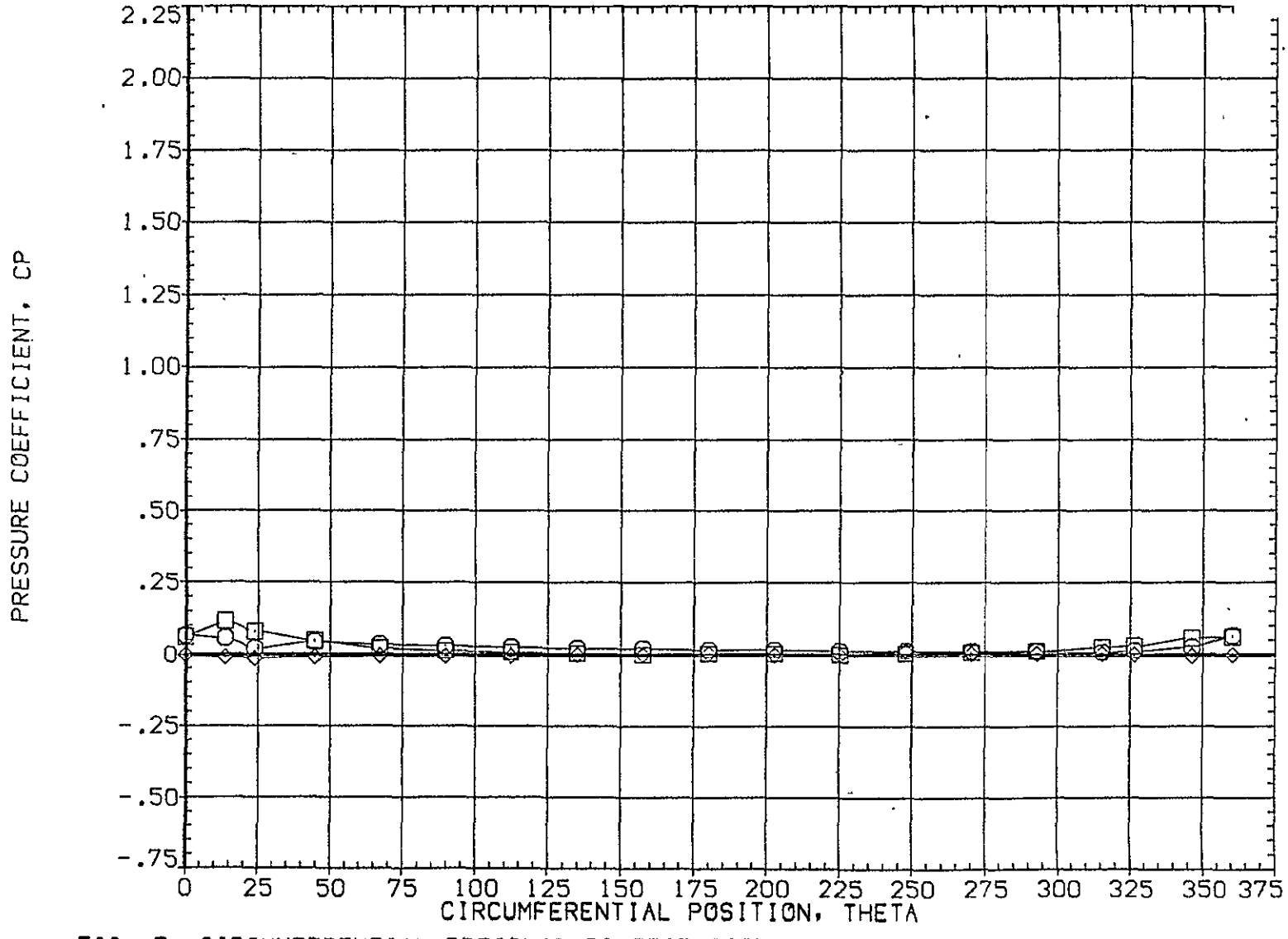


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

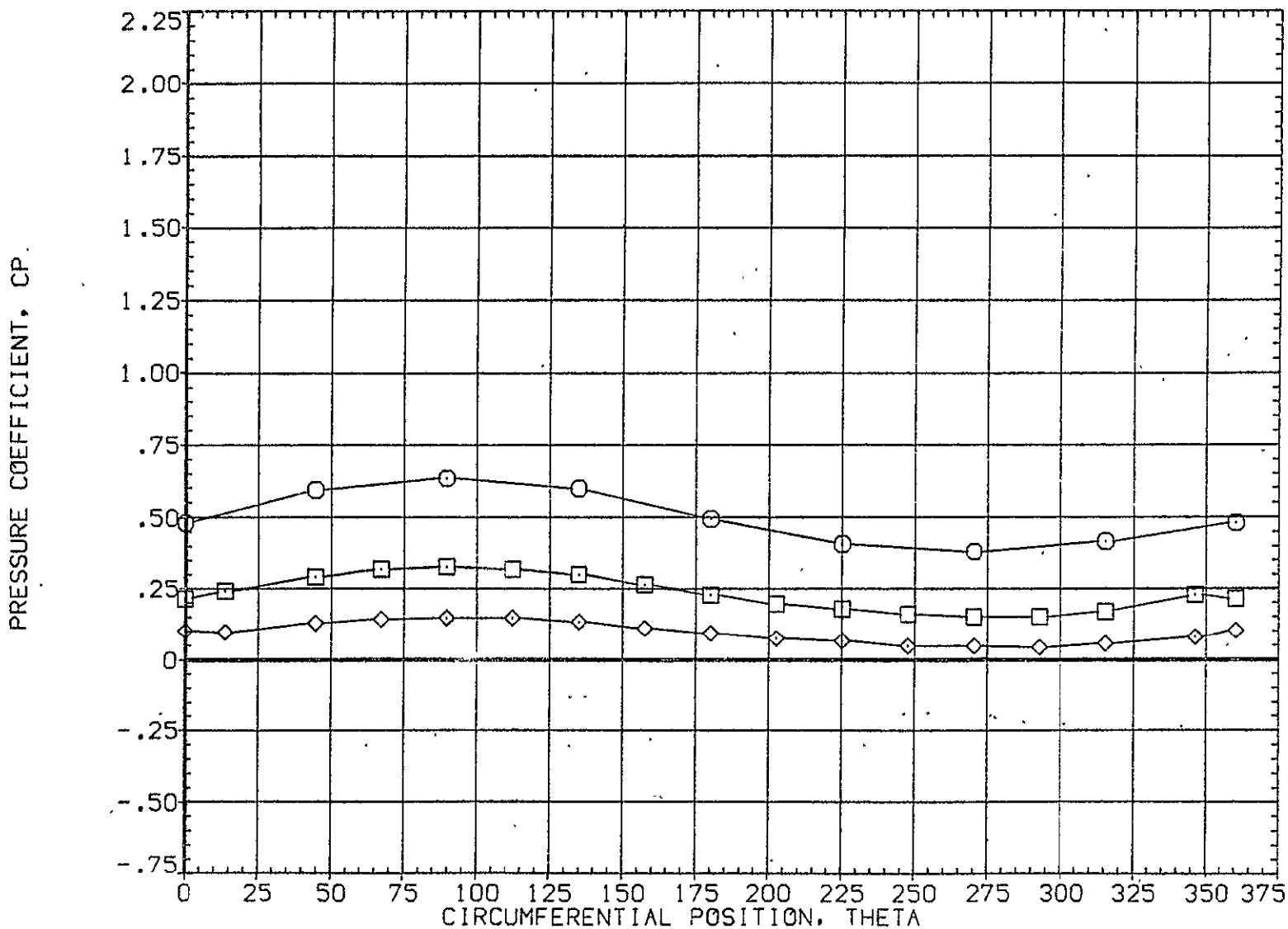


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

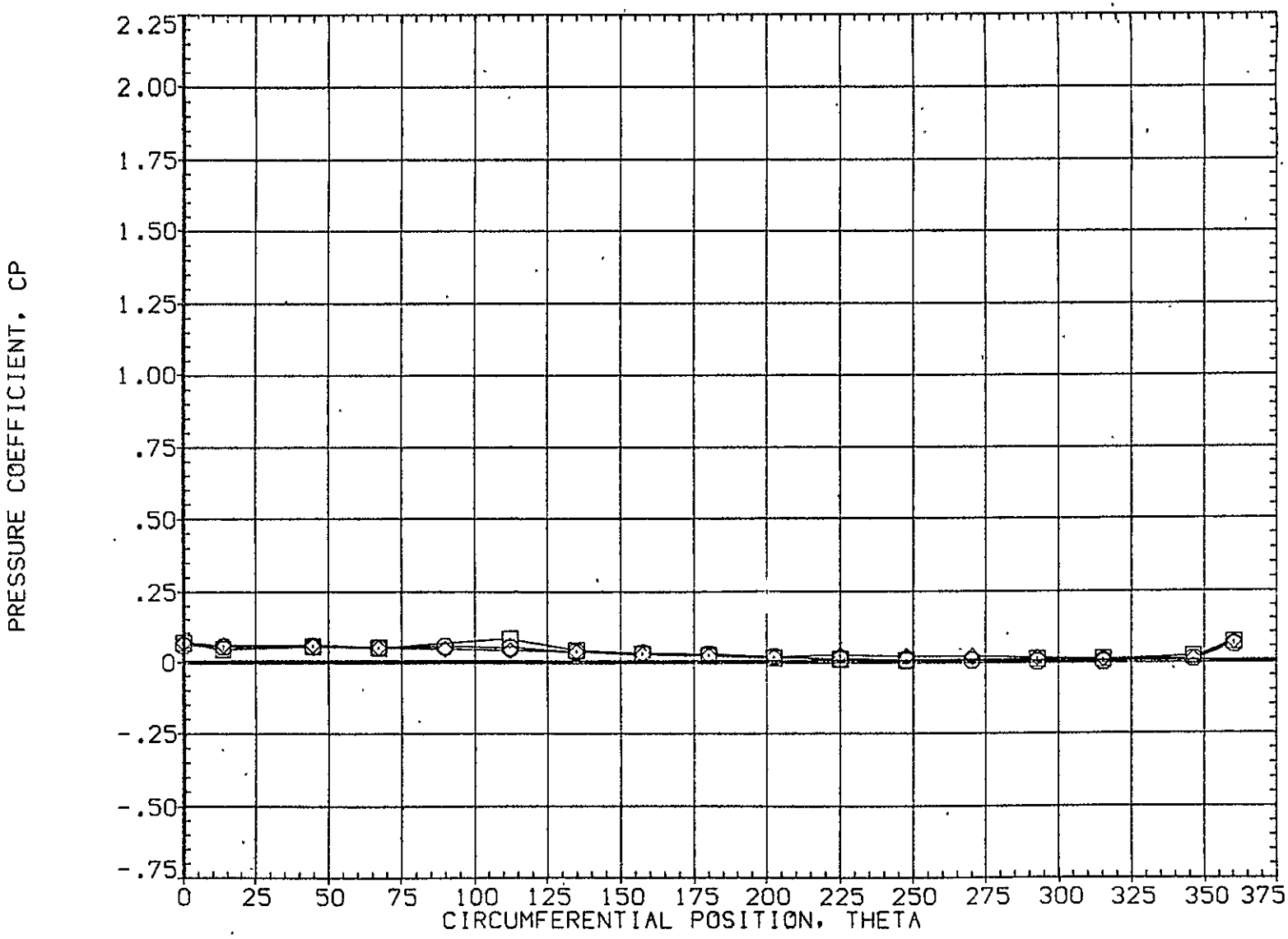


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

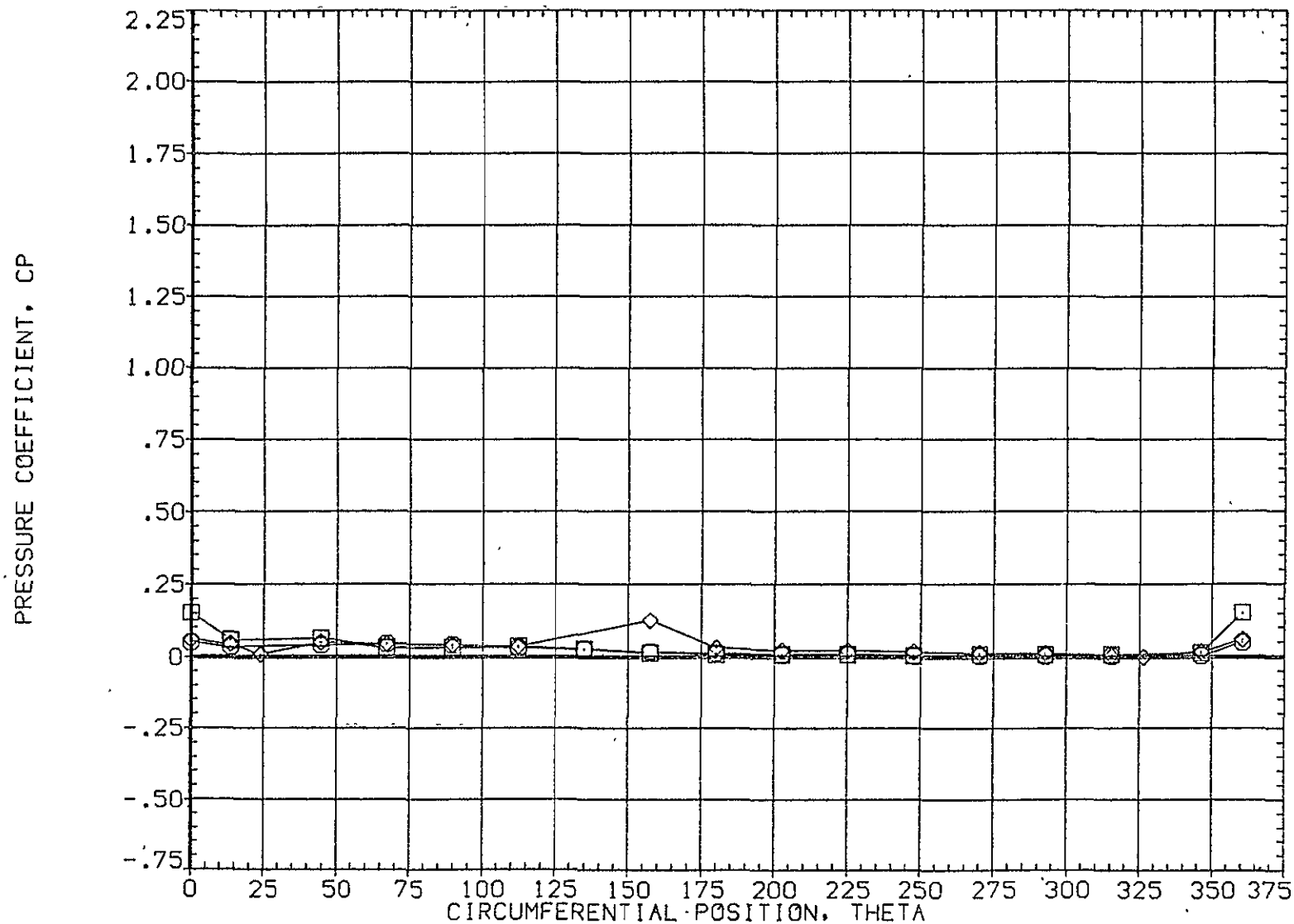


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A054)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

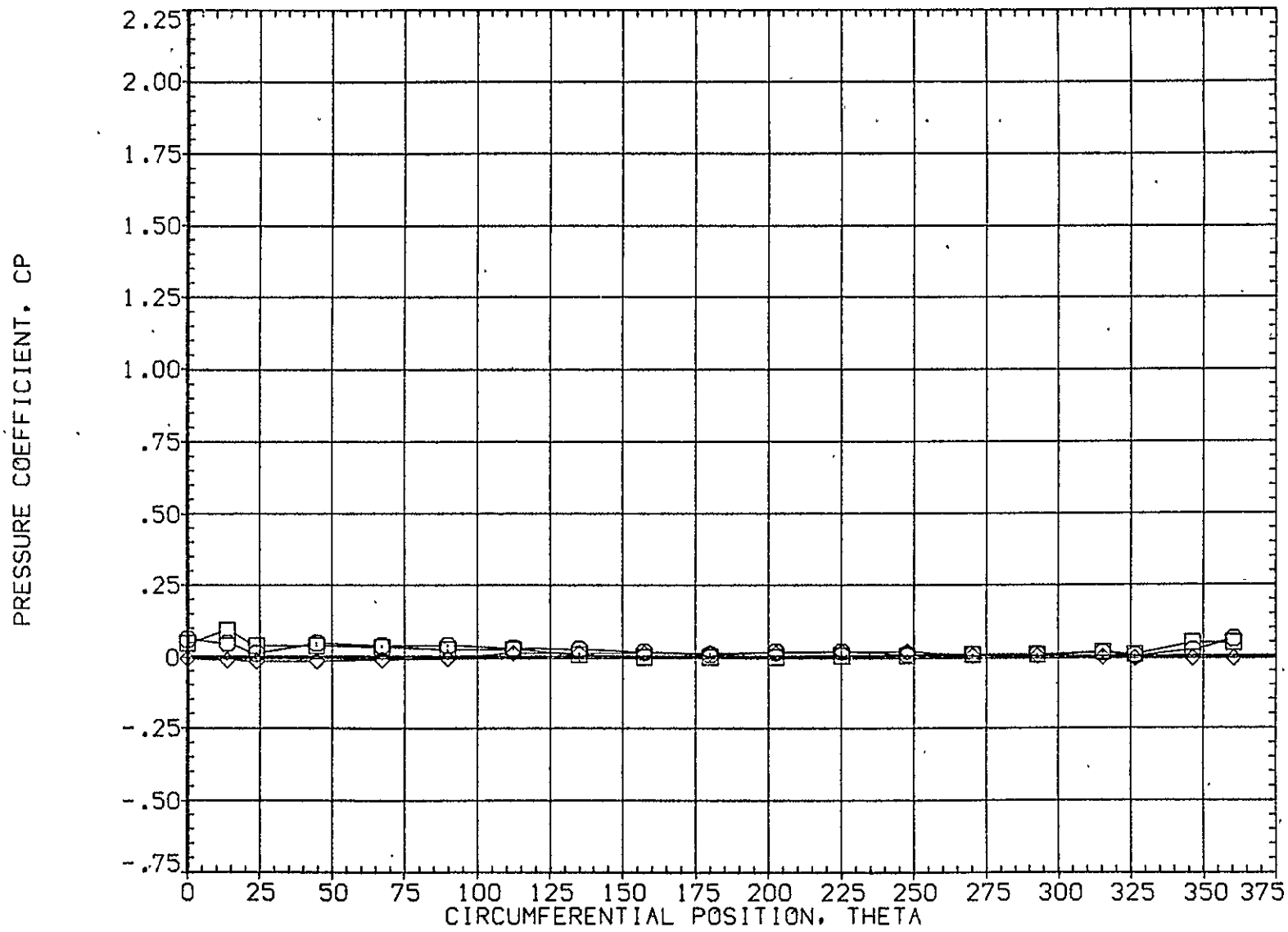


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

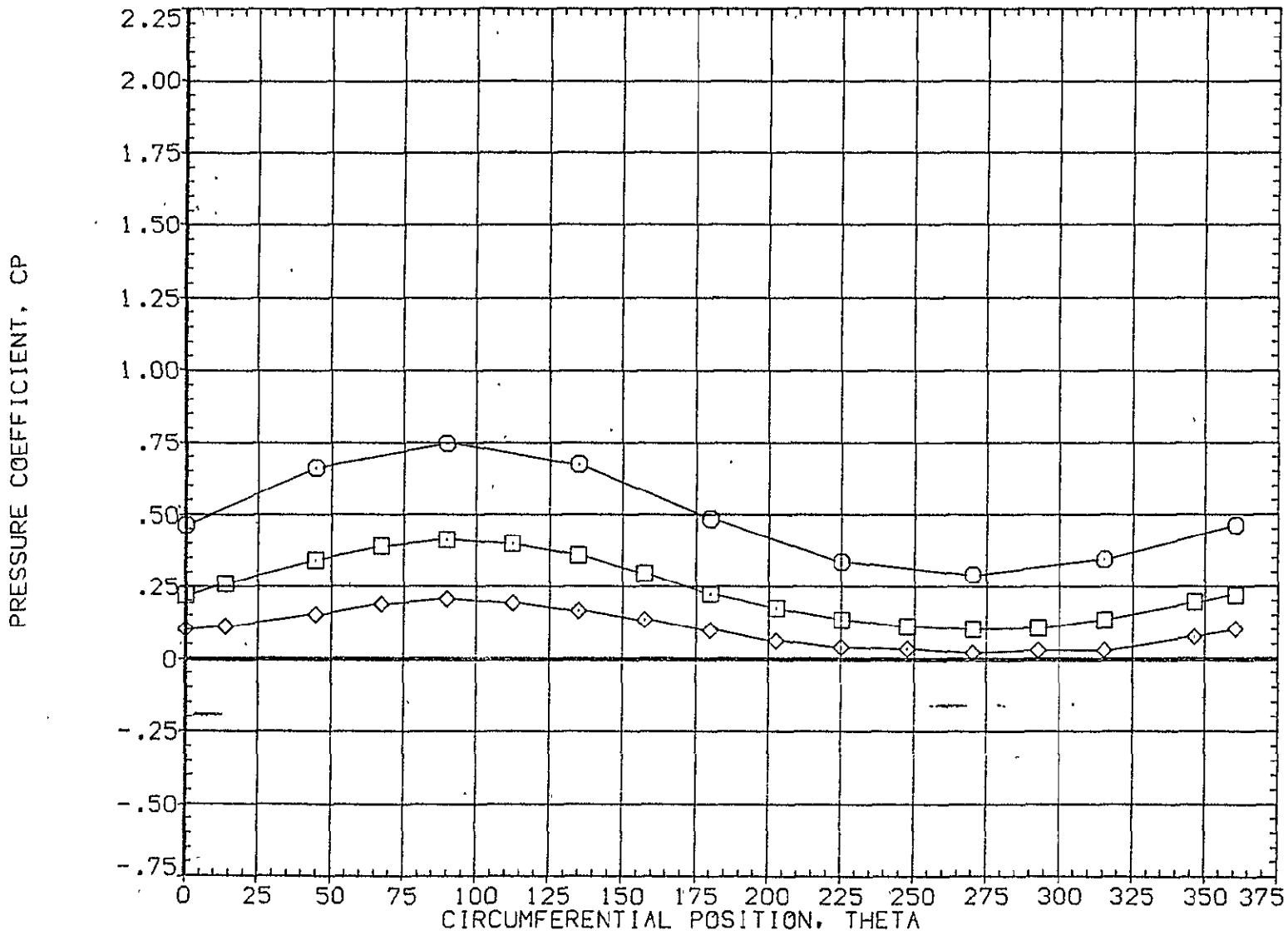


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

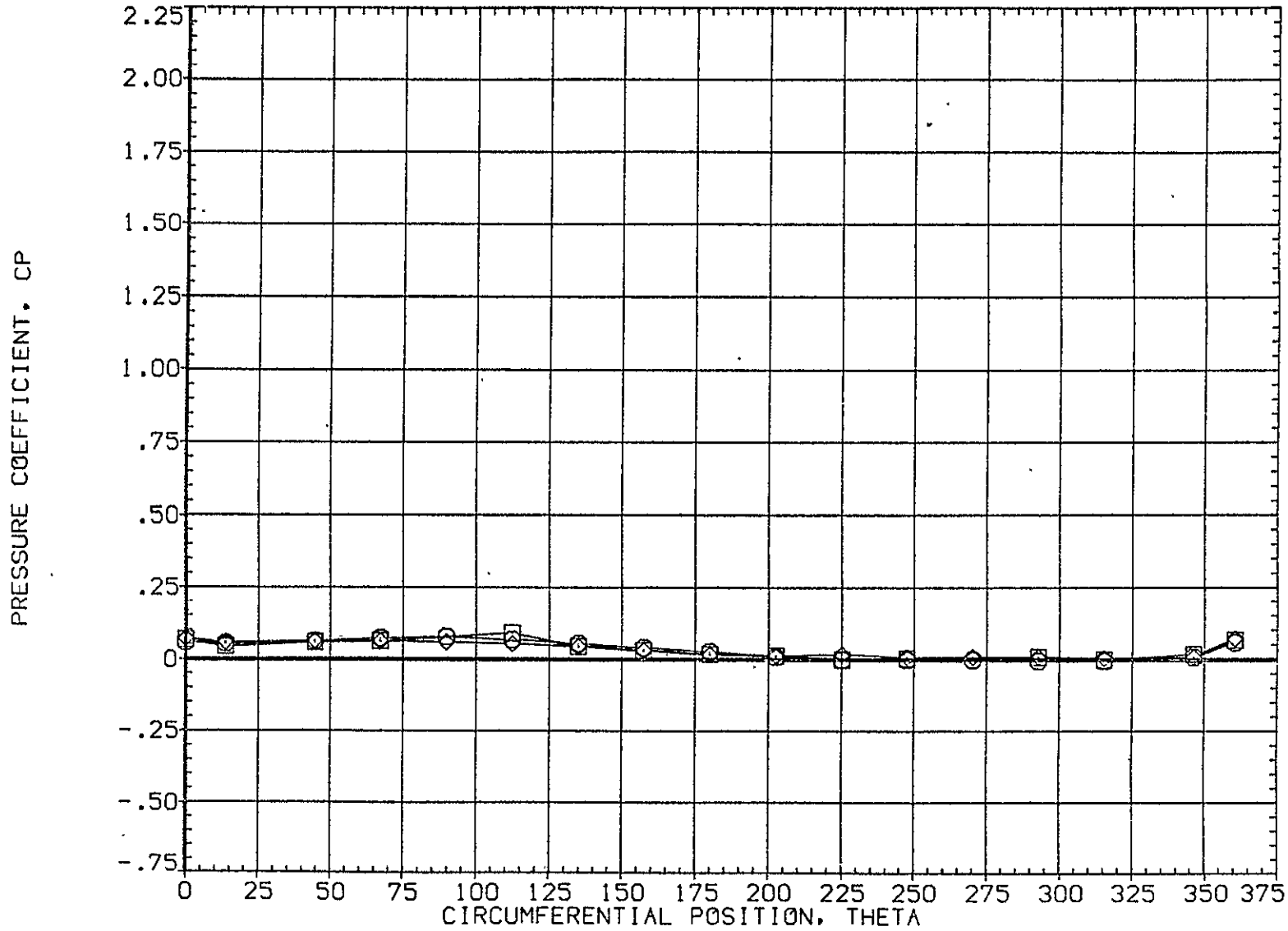


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

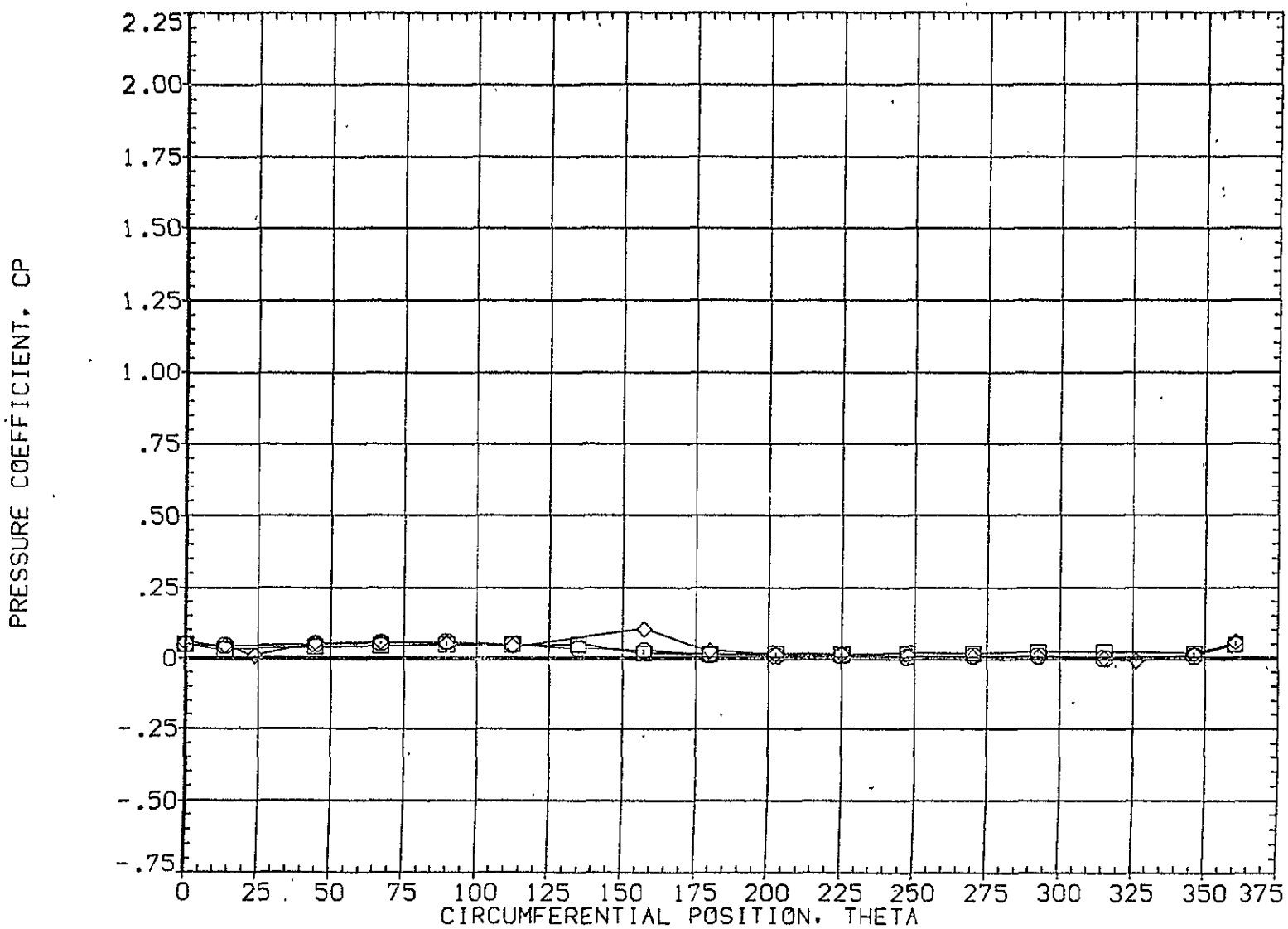


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A055)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	270.000

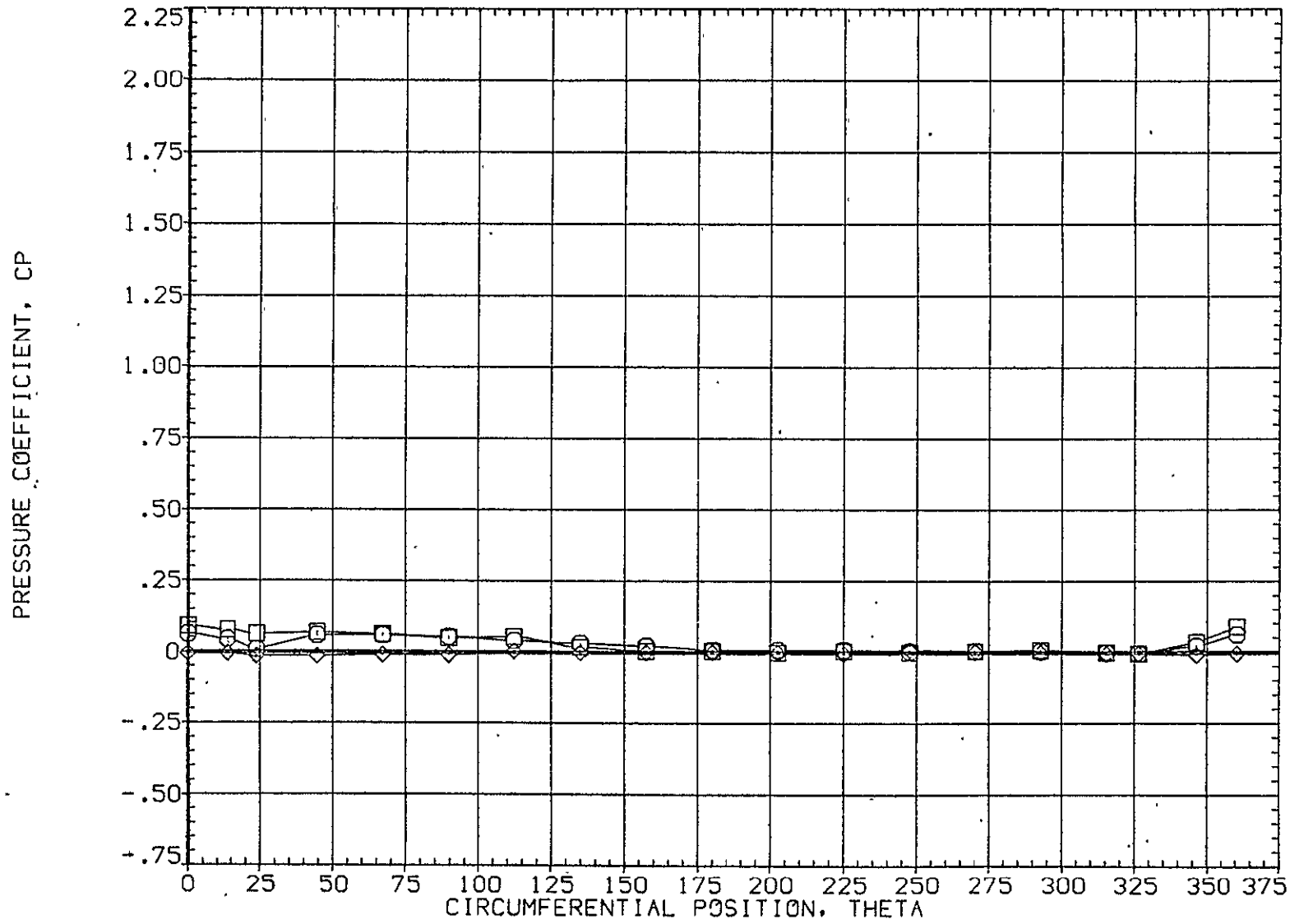


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

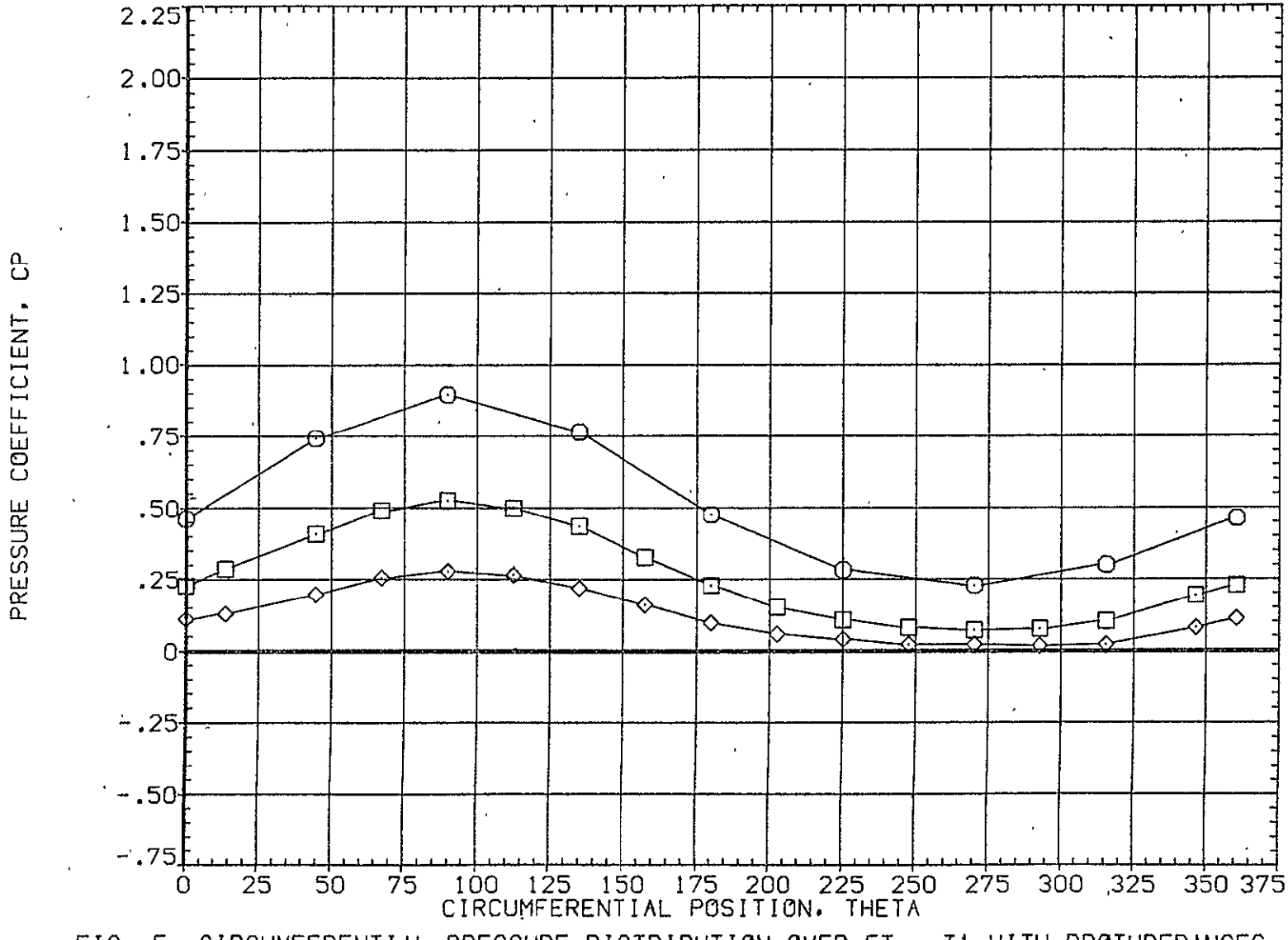


FIG. 5. CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

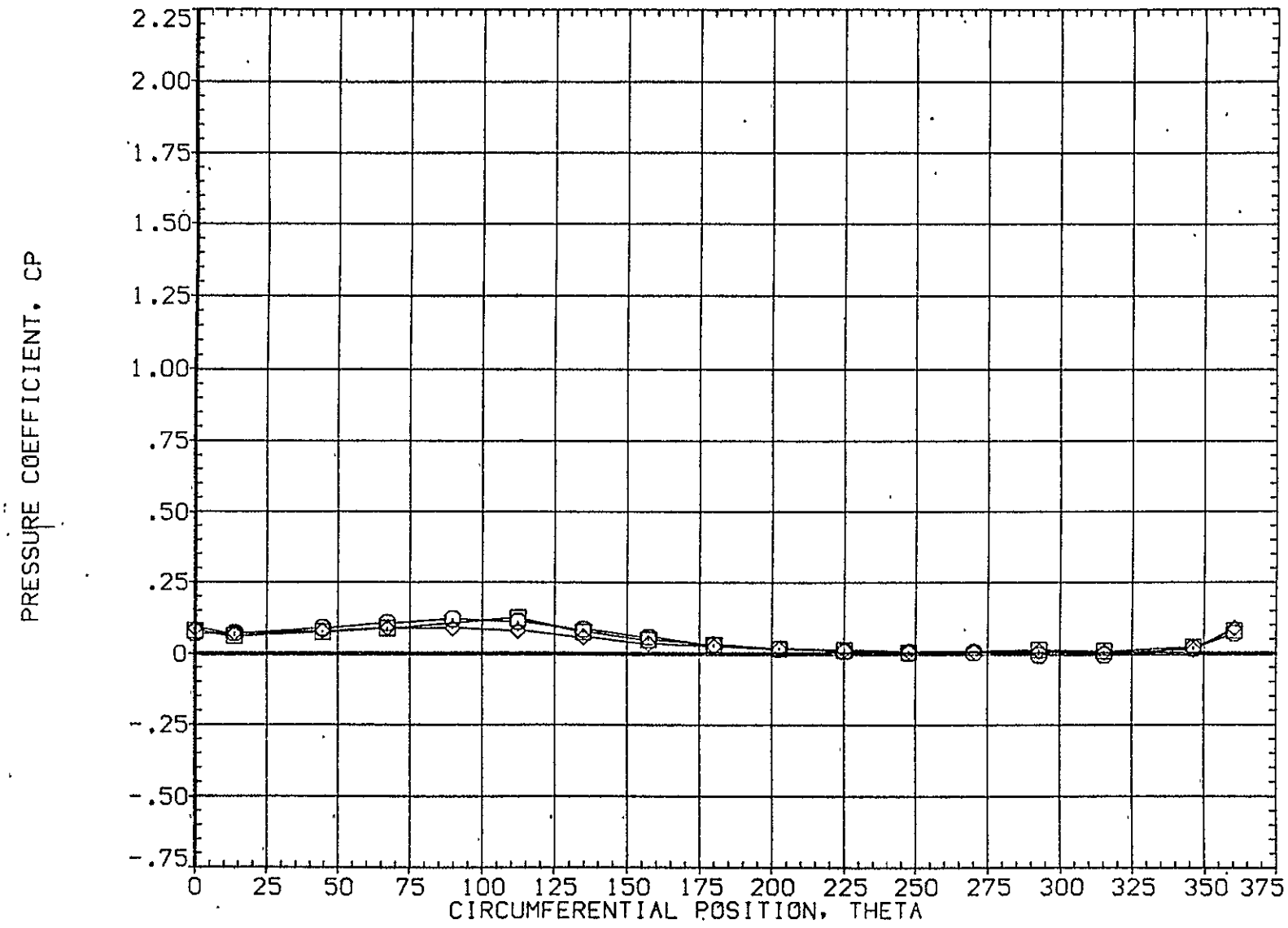


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

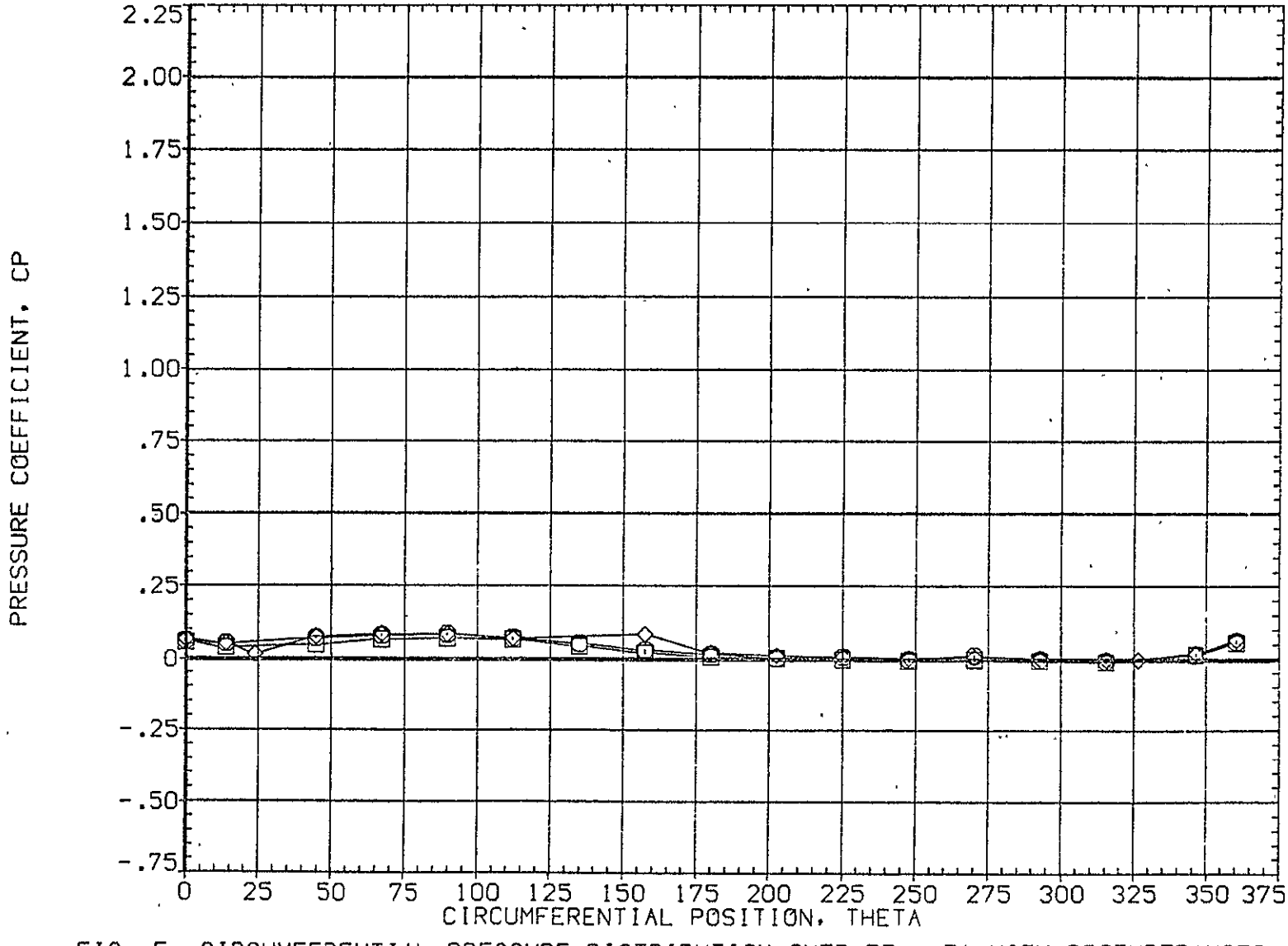


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A056)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

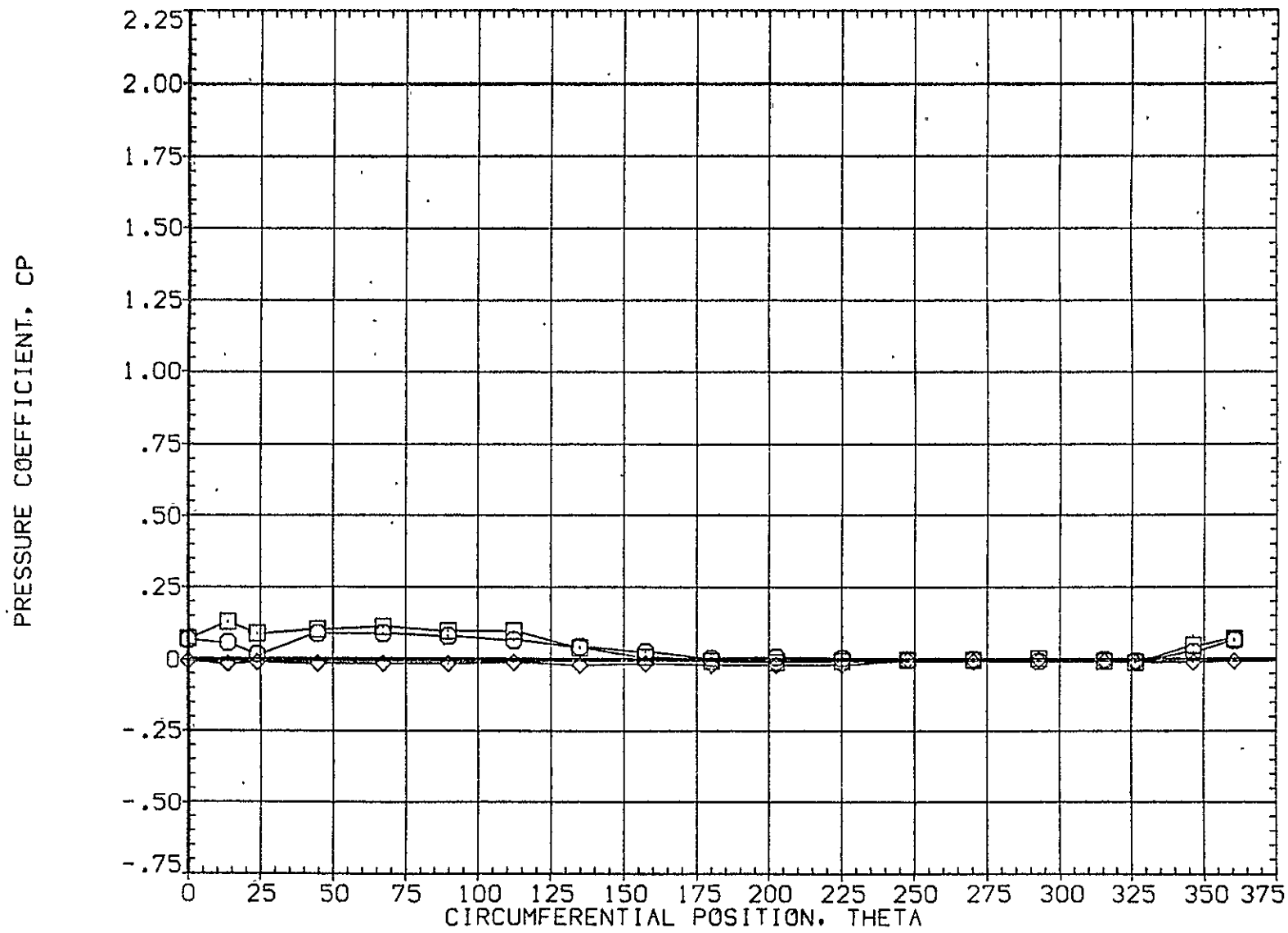


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.450	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

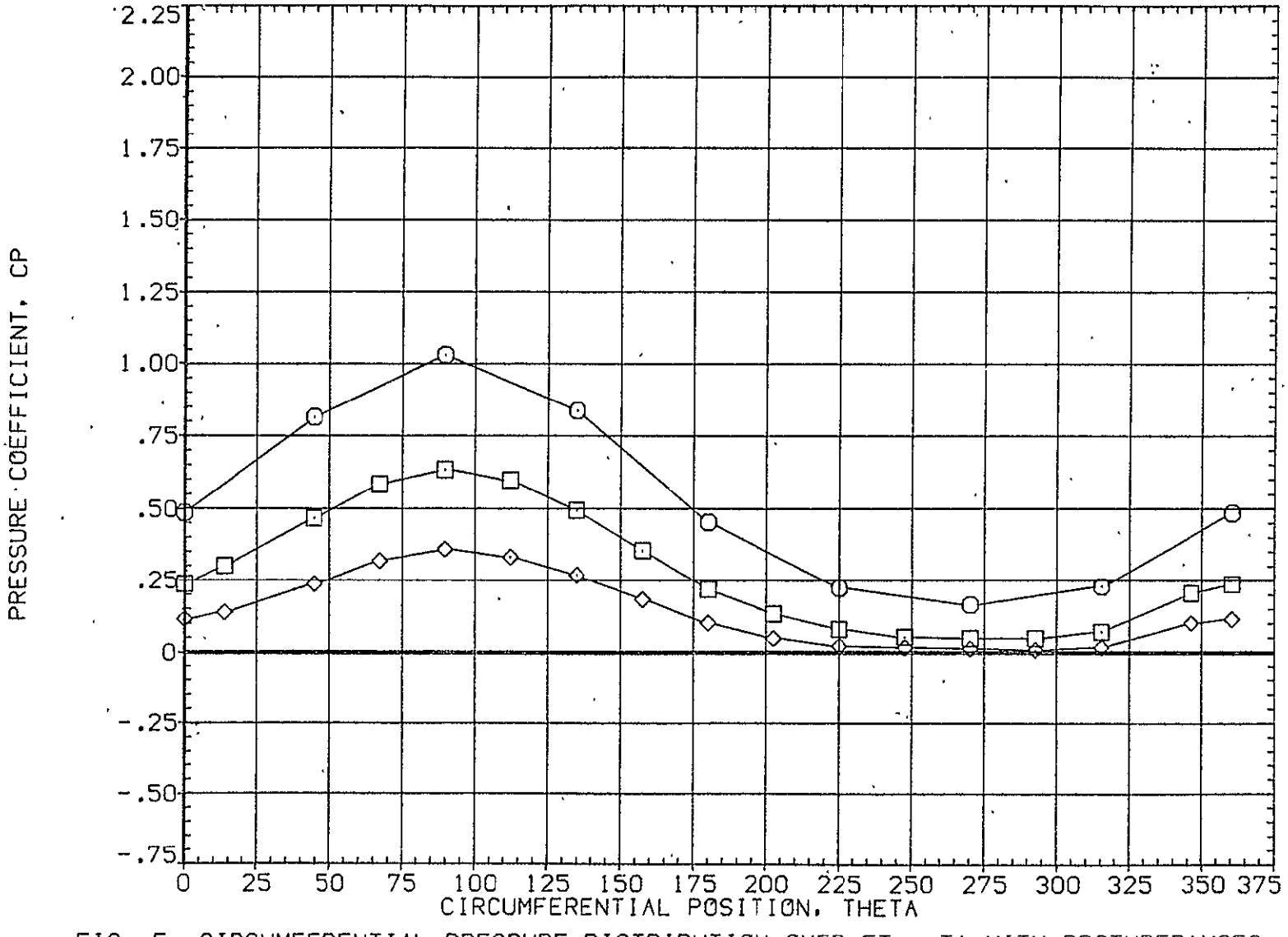


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.450	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

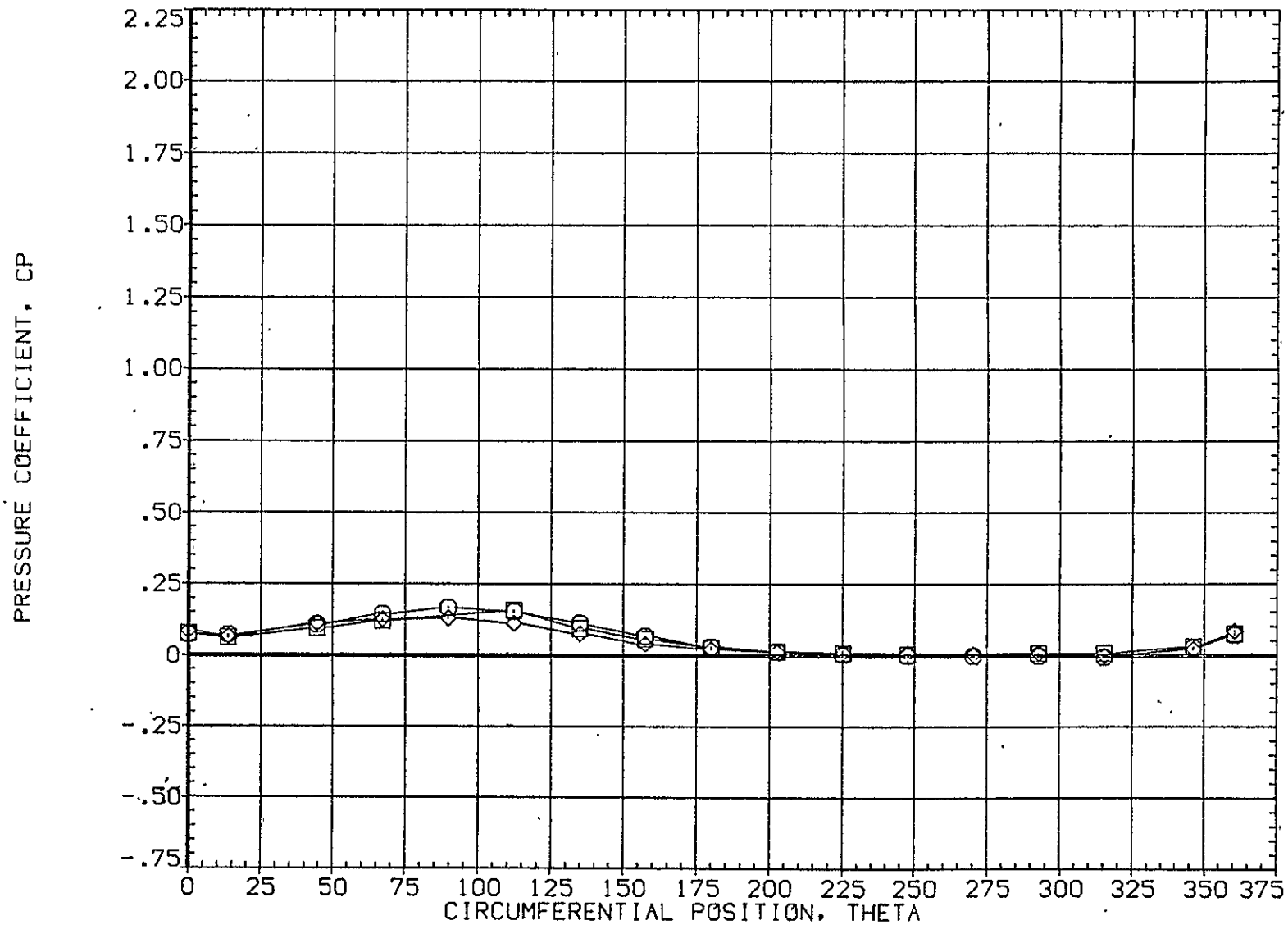


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.450	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.00(
MOUNT	1.000	PHI	270.00(

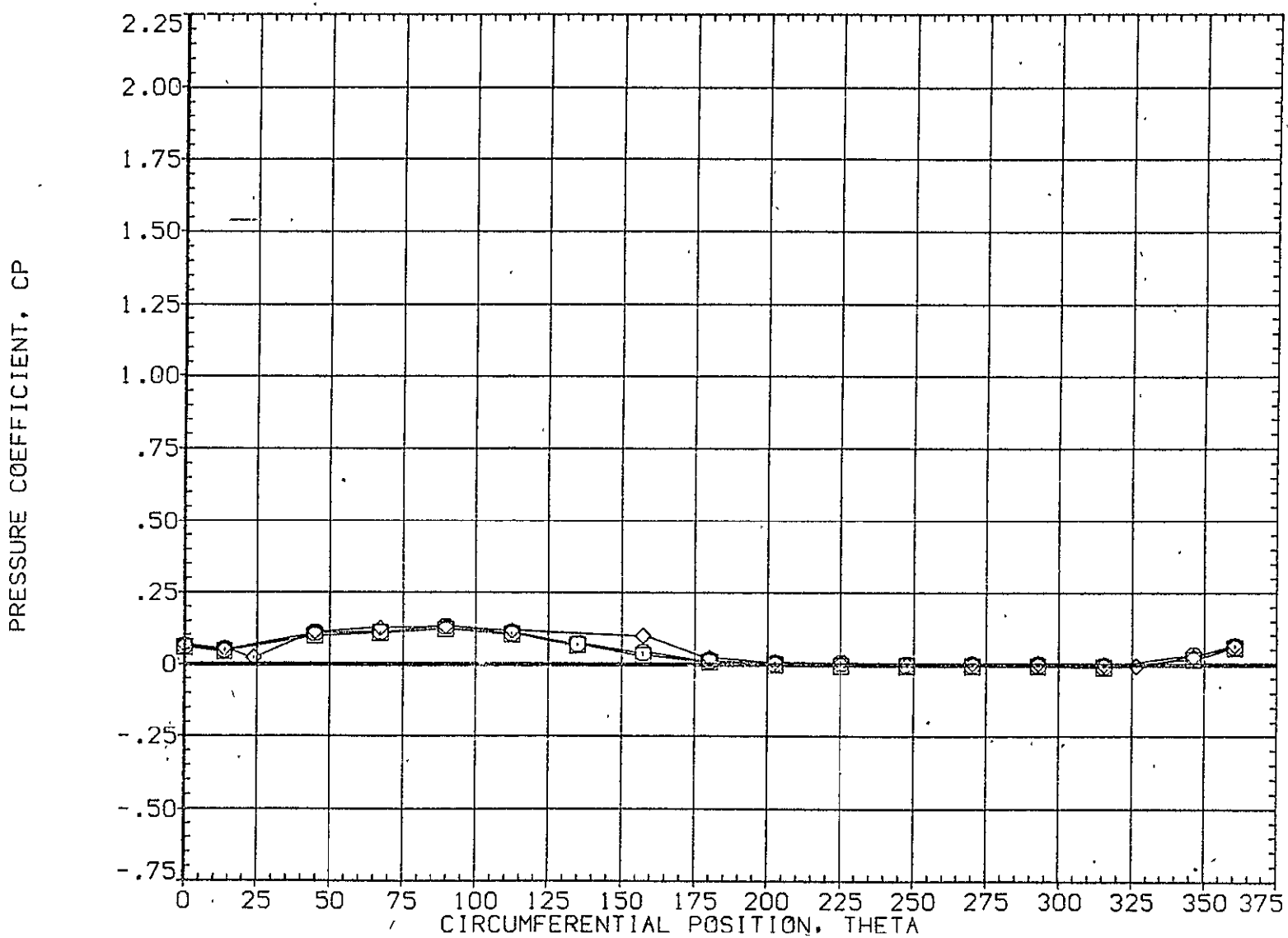


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A057)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.450	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

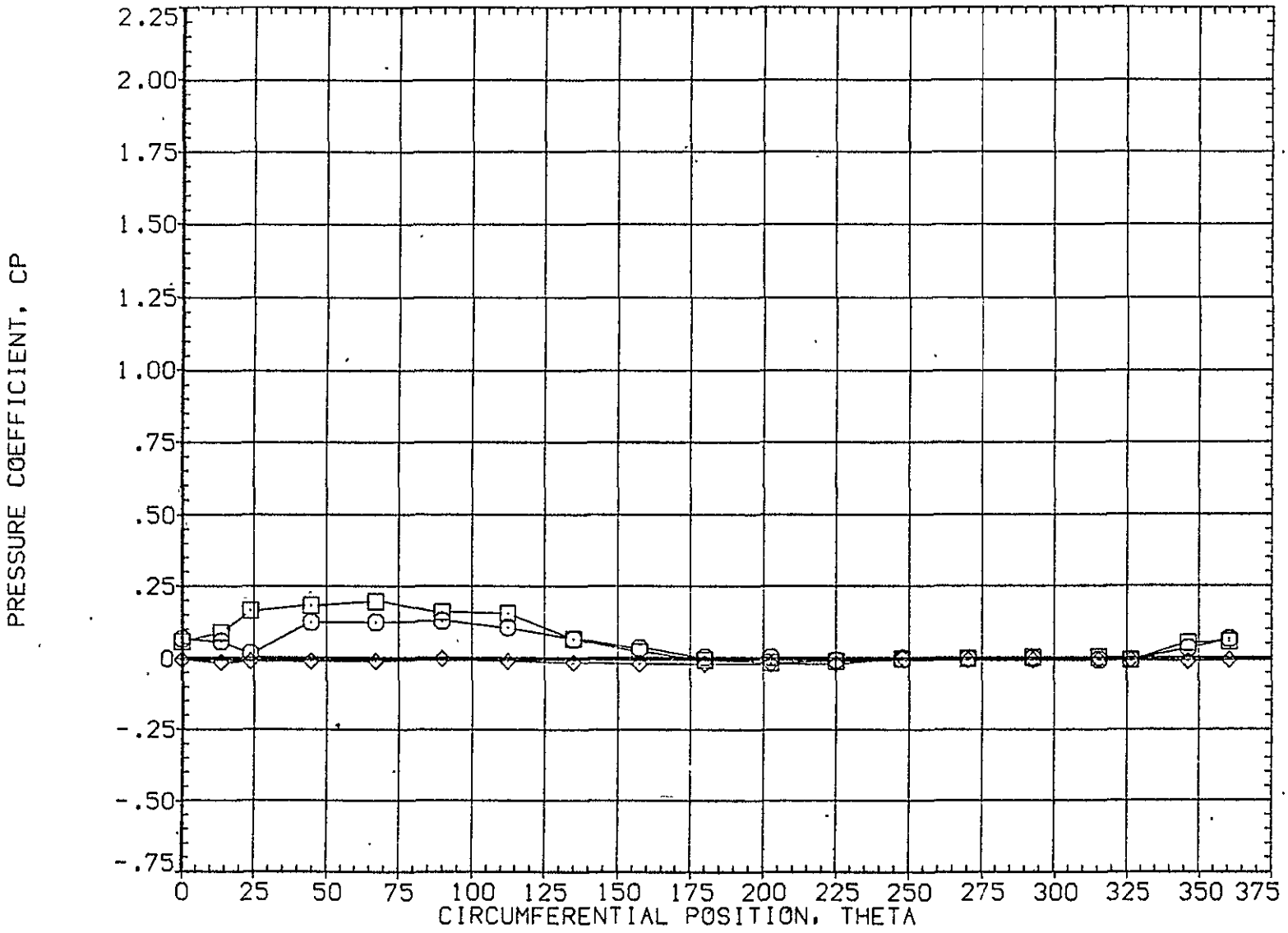


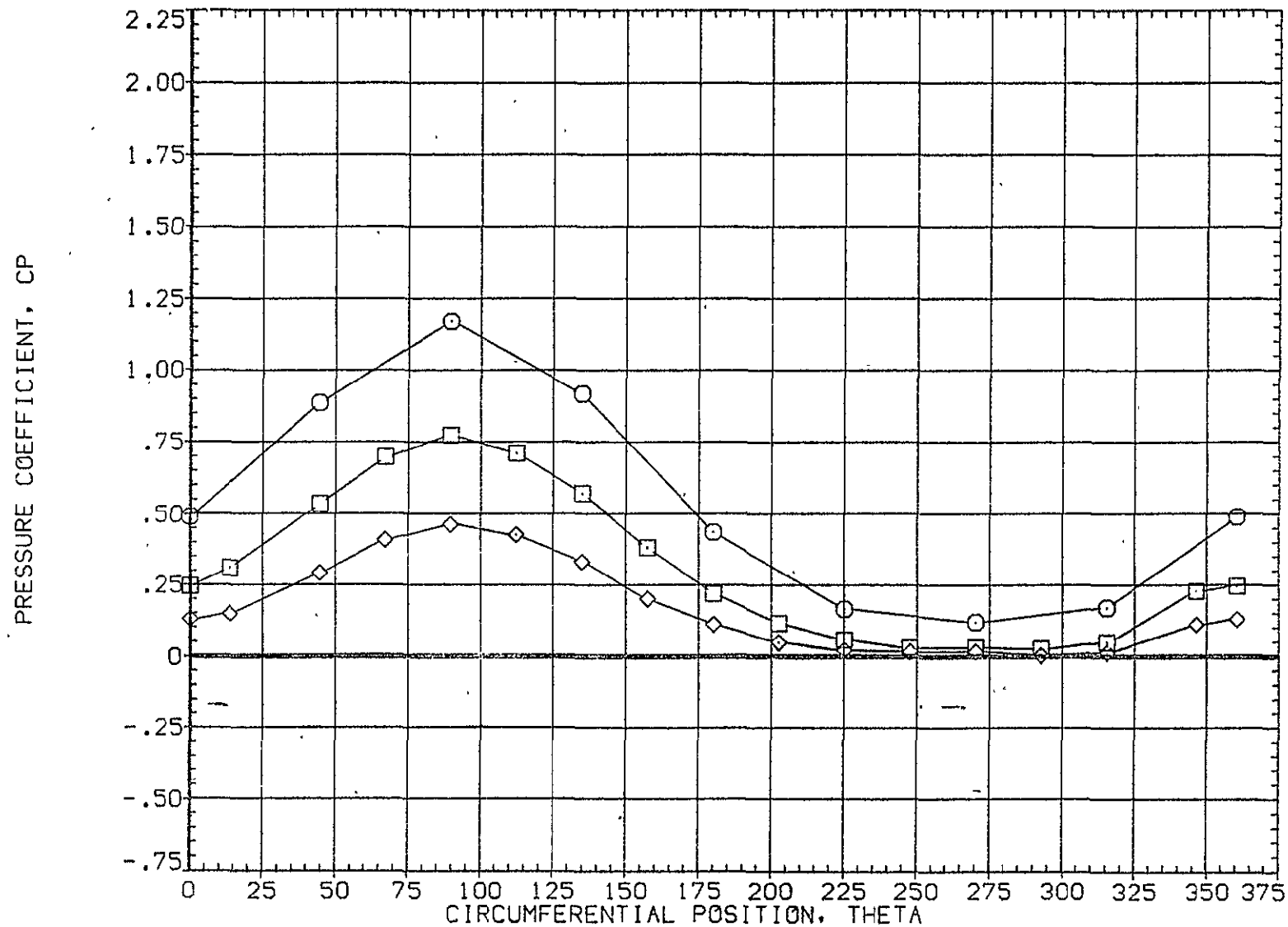
FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000



IG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

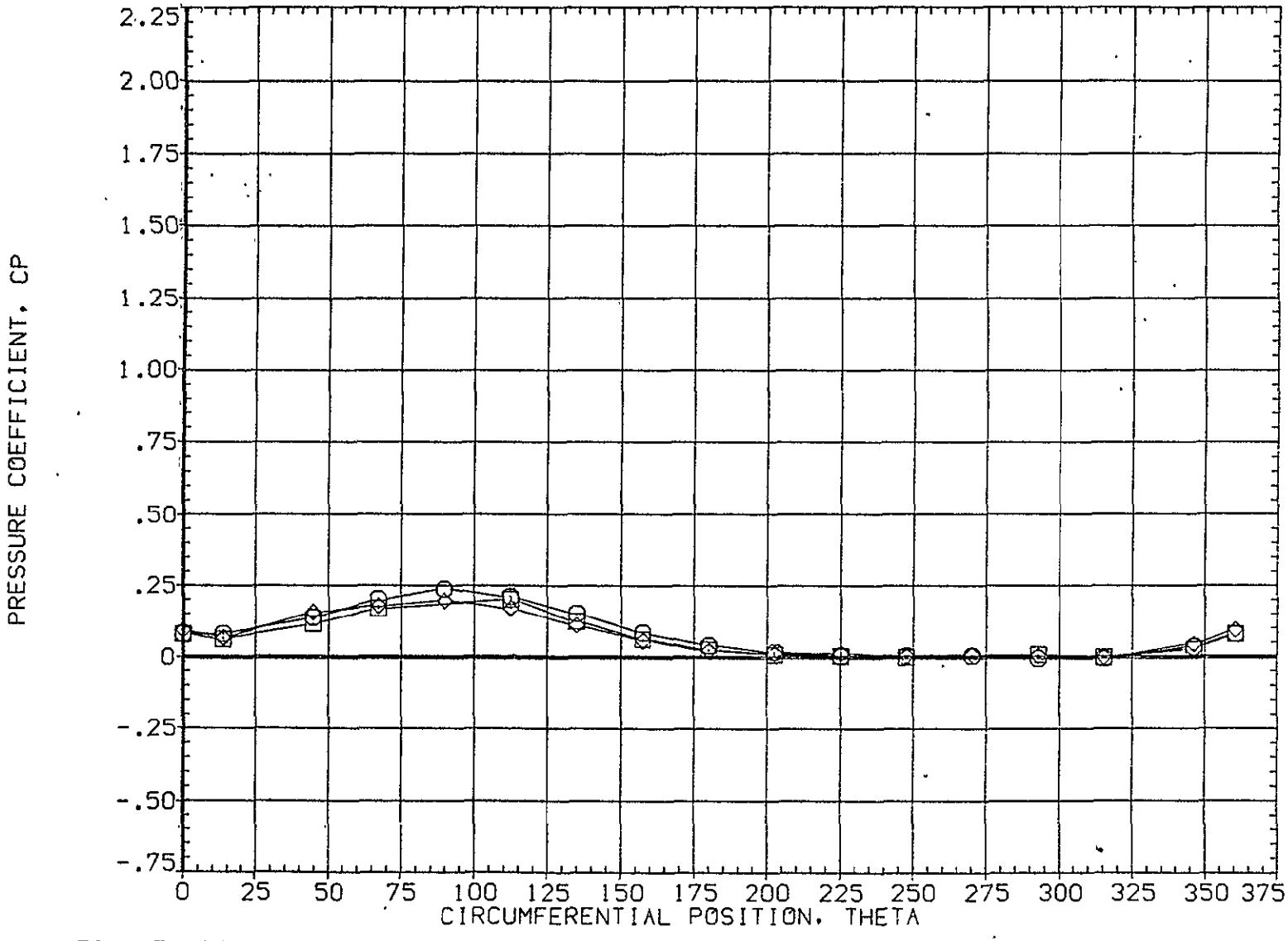


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

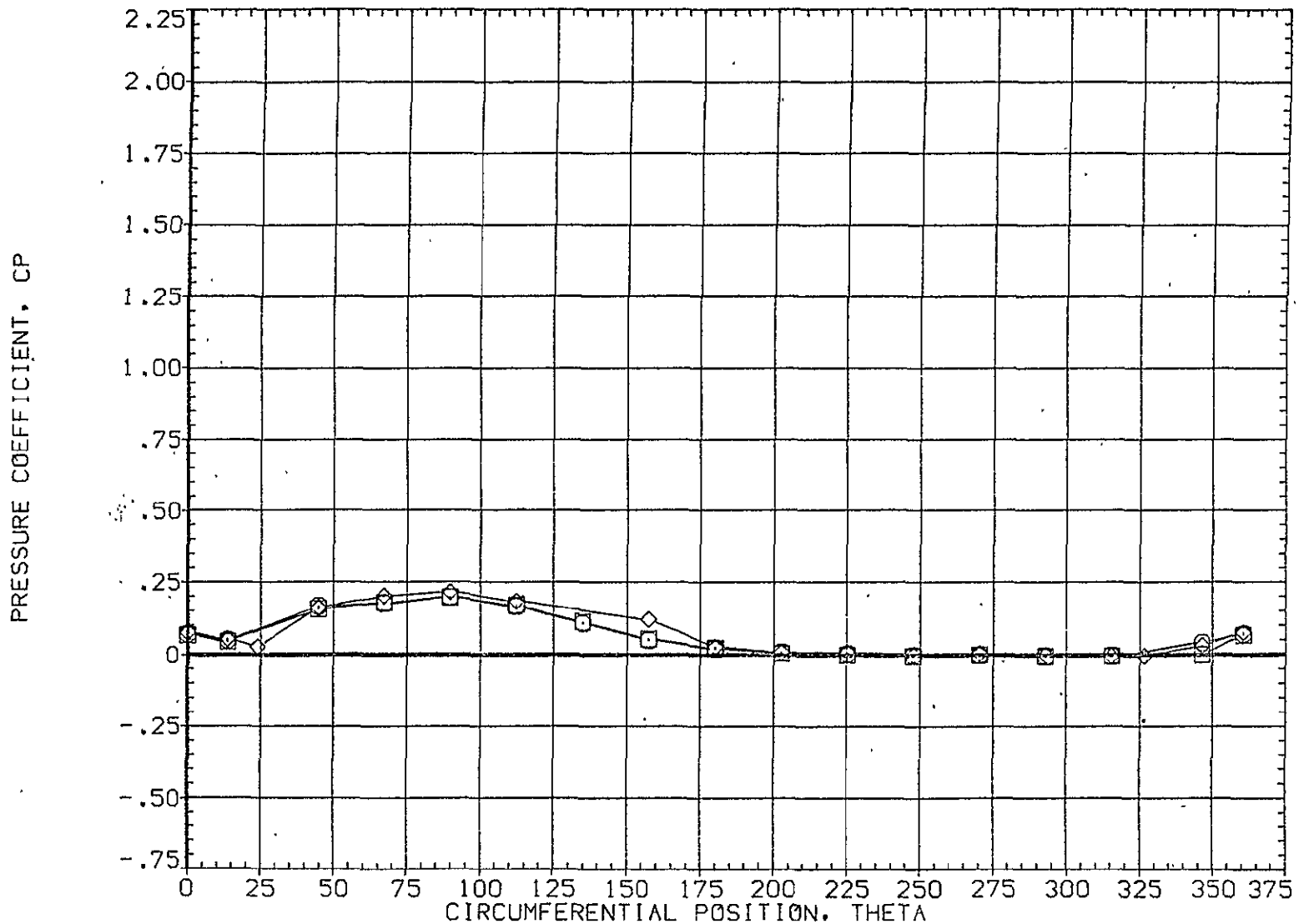


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A058)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

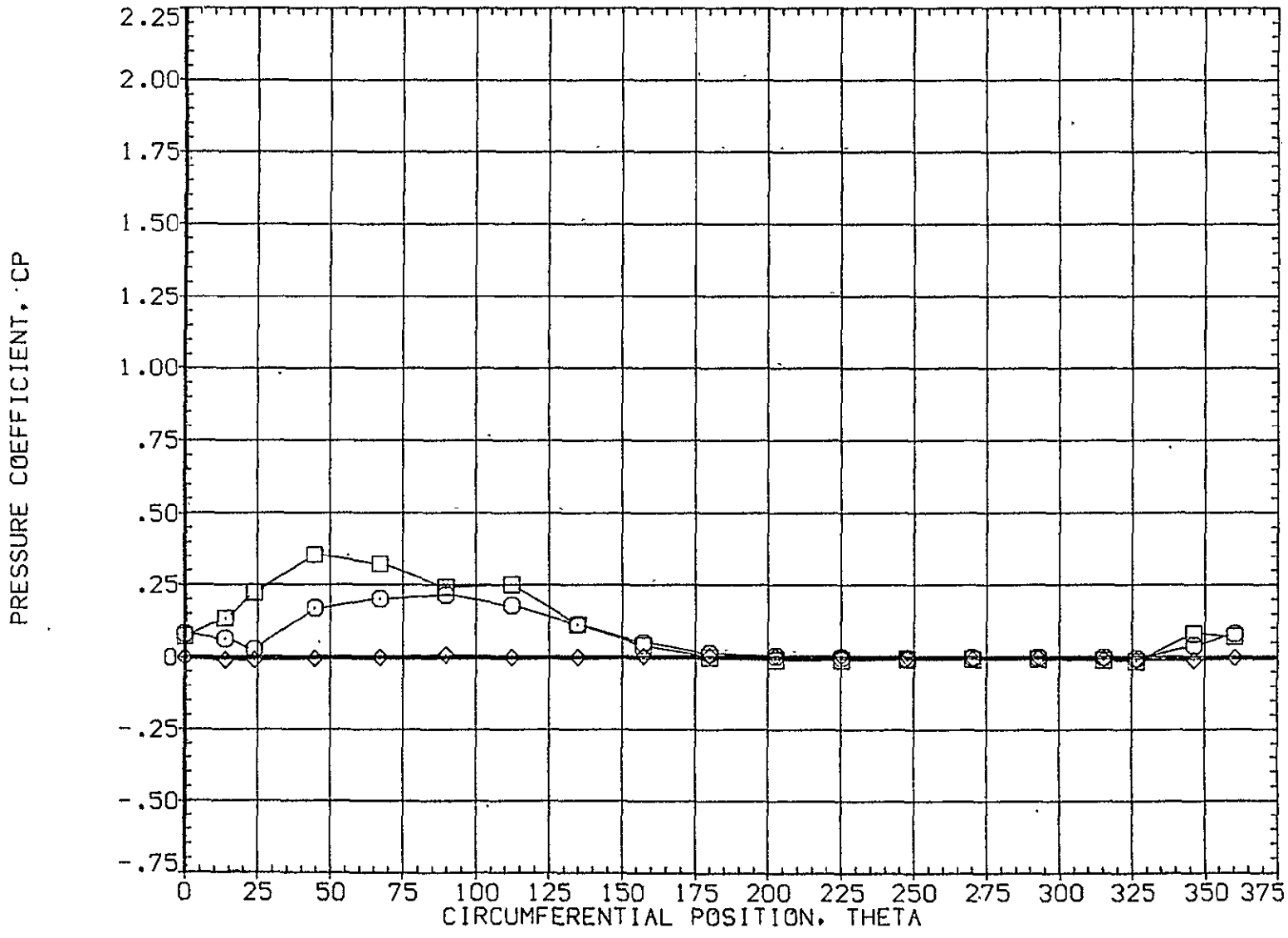


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

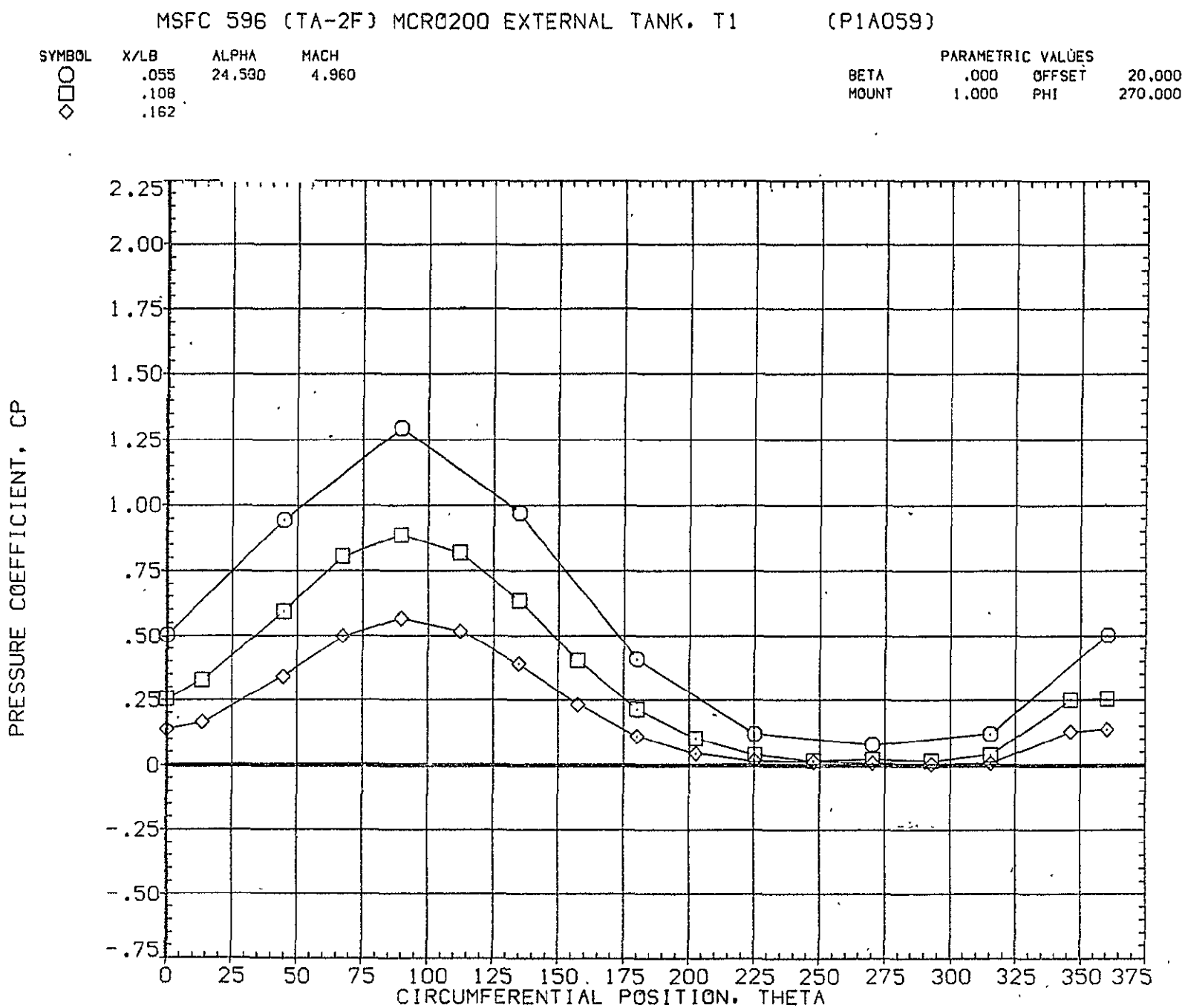


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.530	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

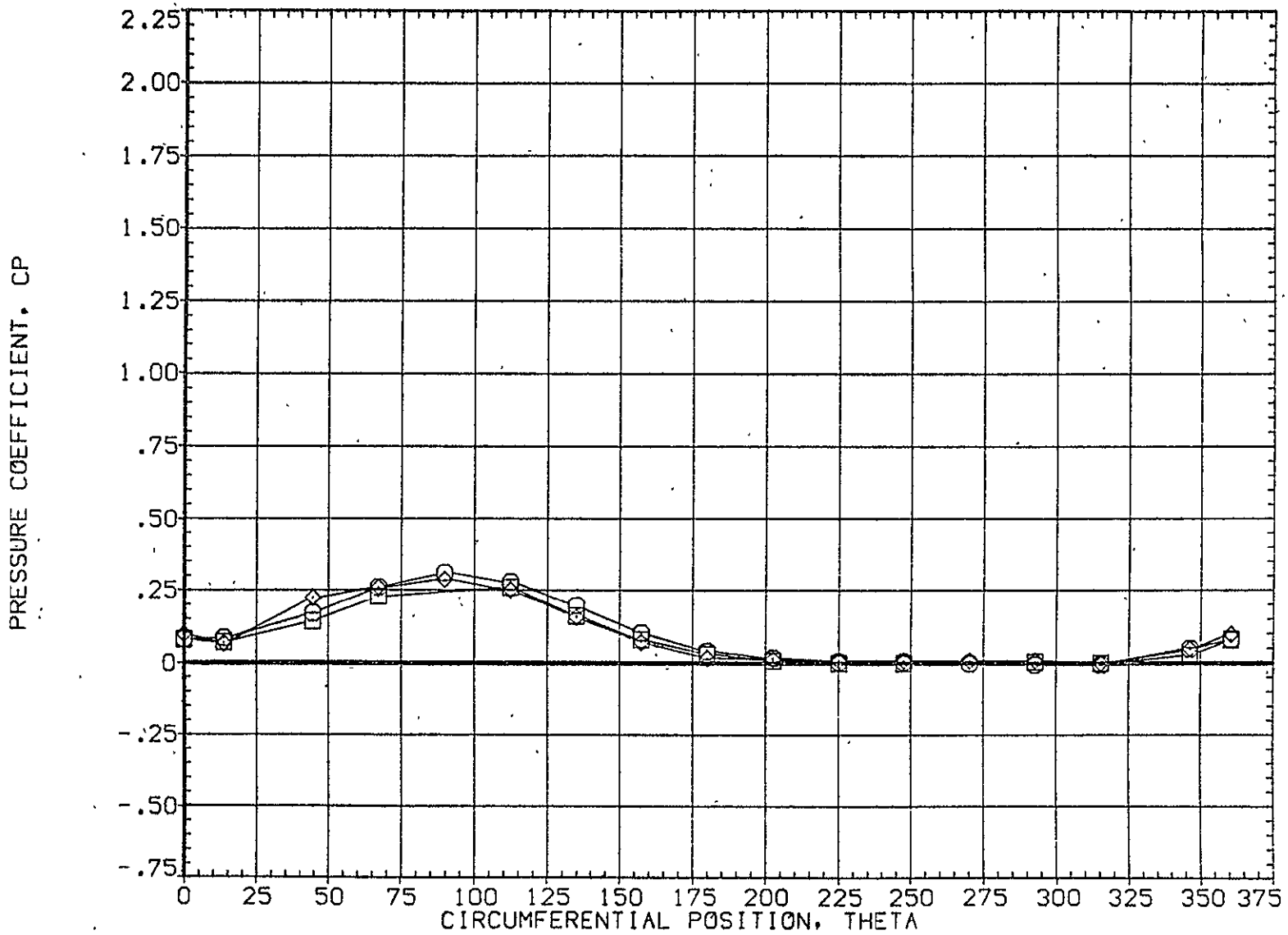


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.530	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

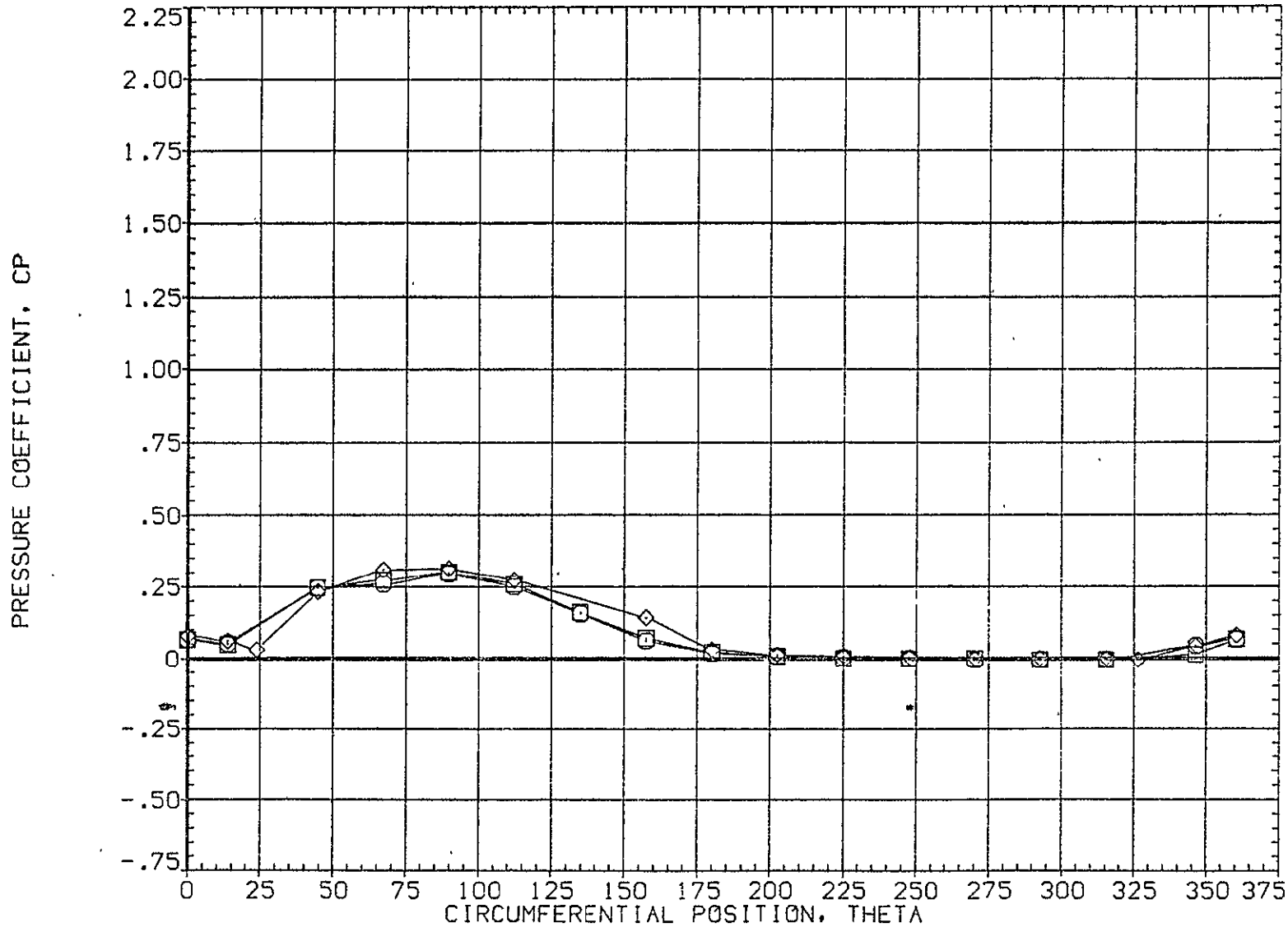


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A059)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.530	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

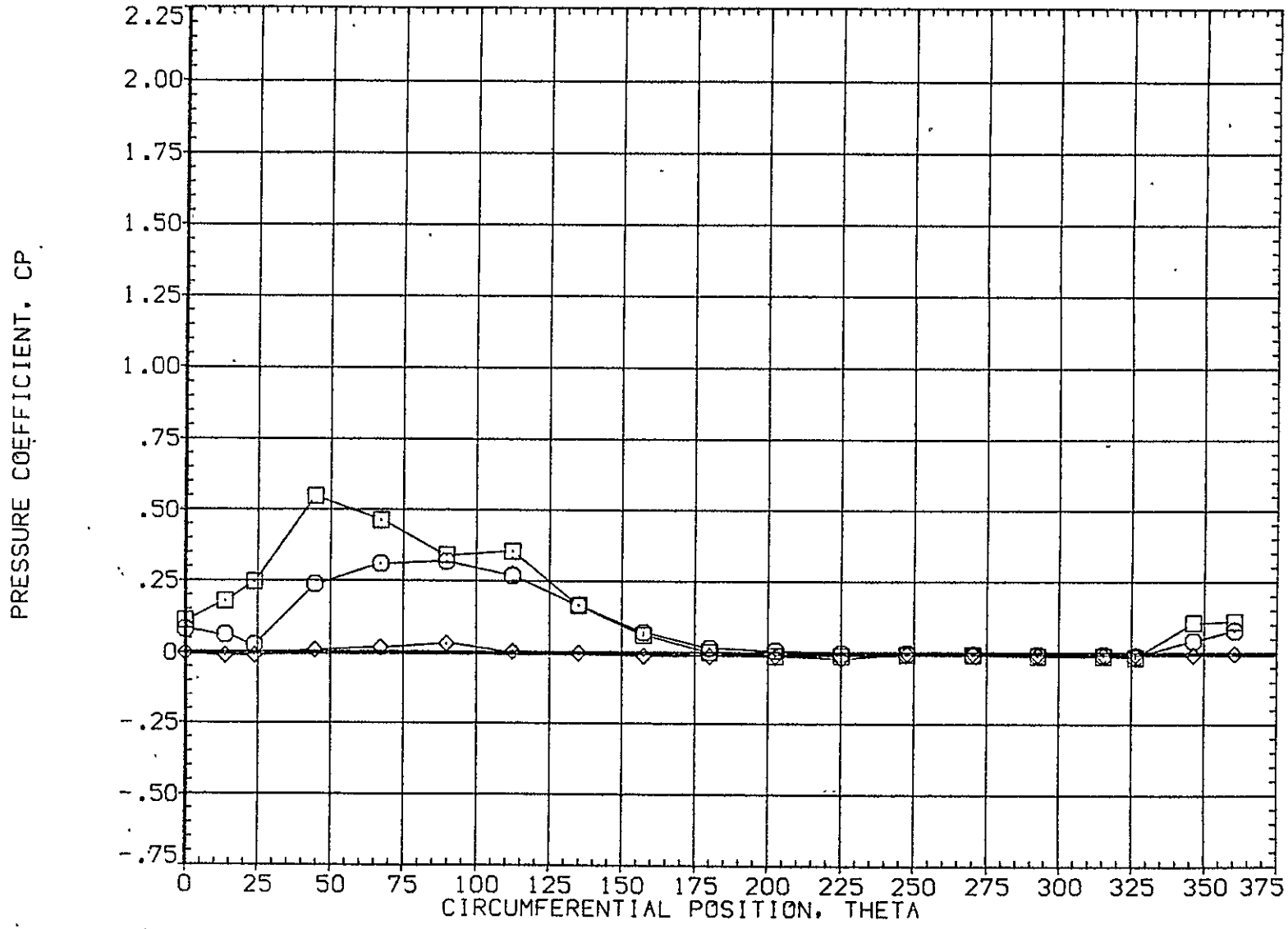


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

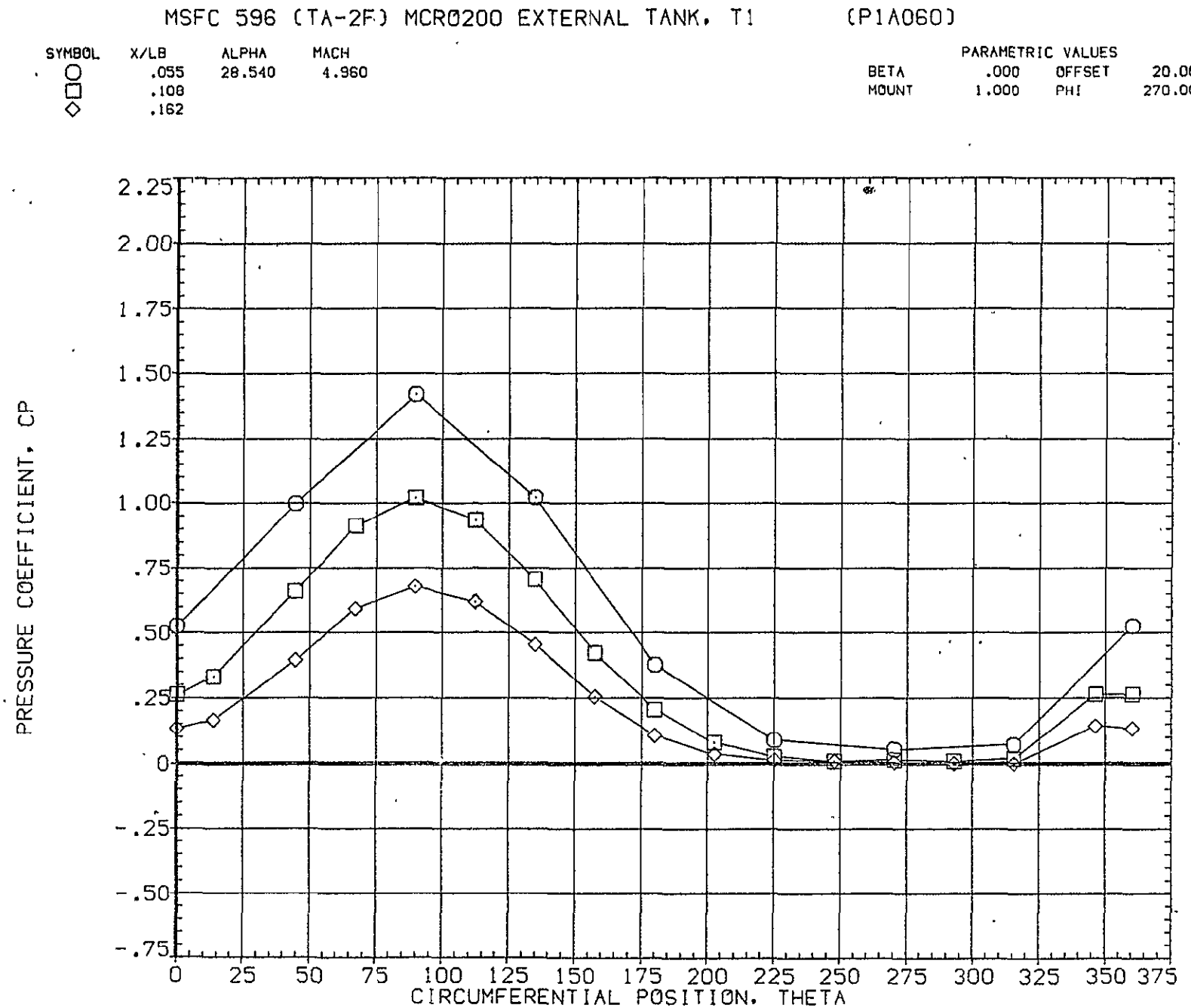


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

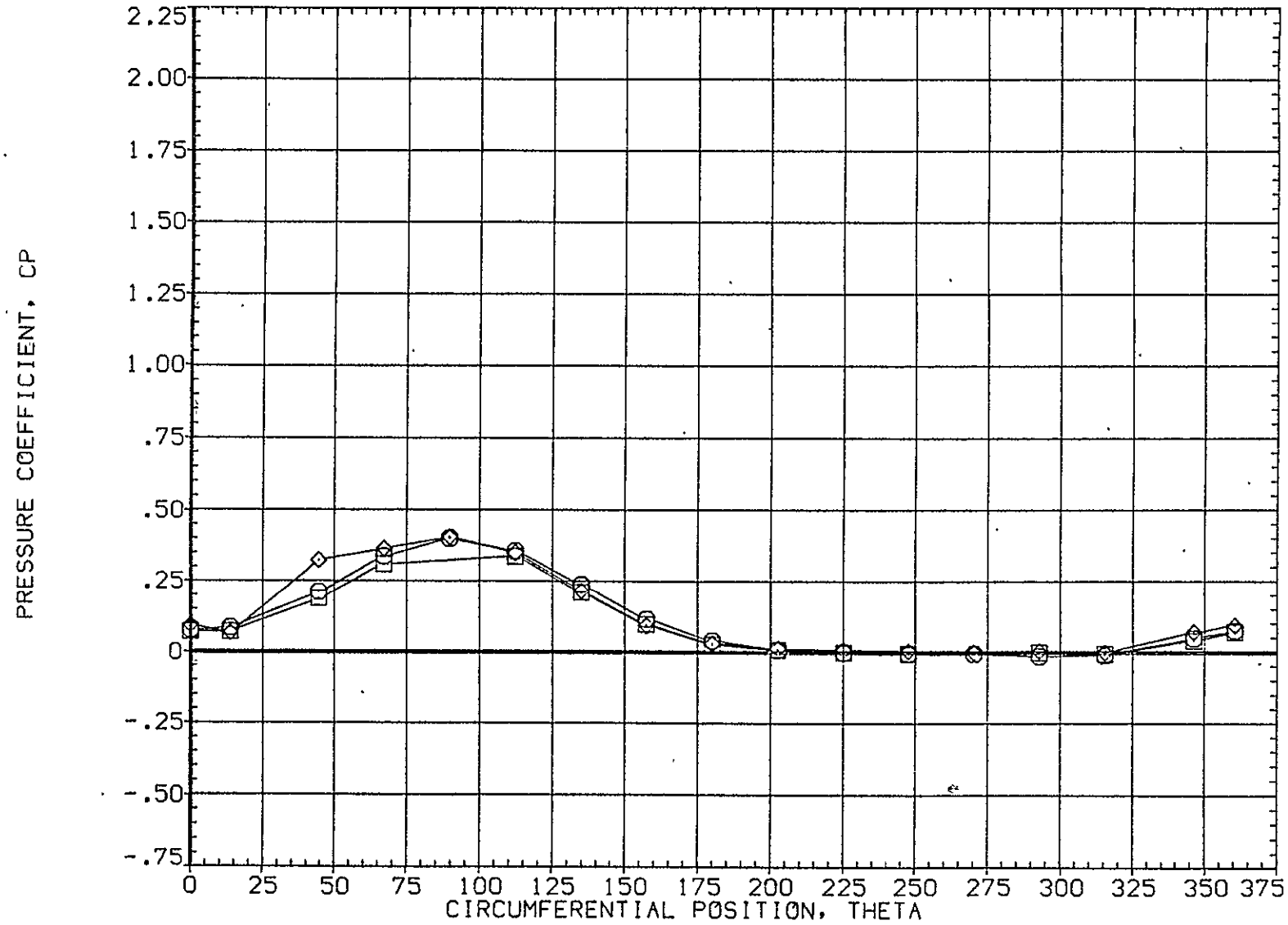


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.610	28.540	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

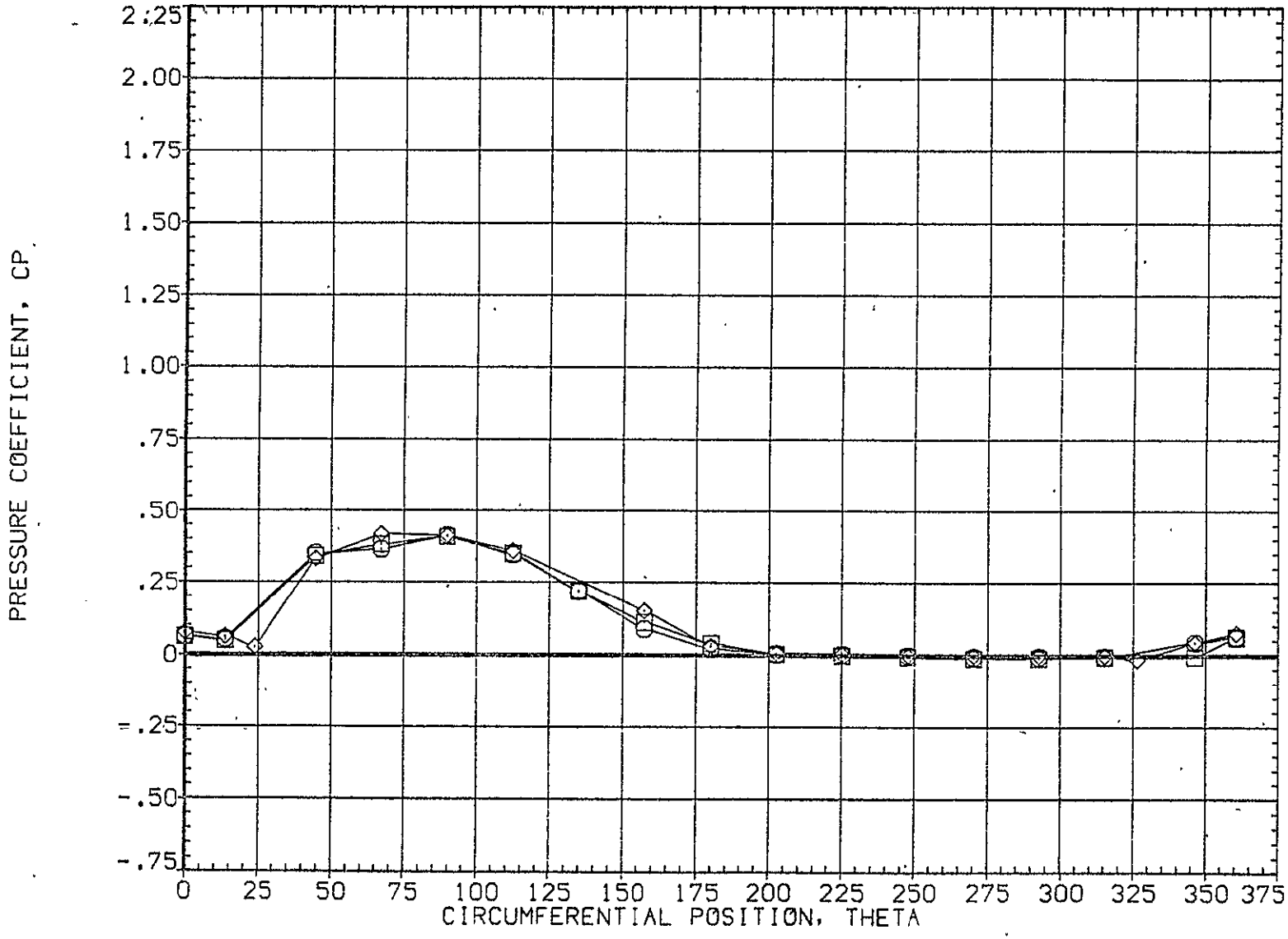


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A060)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	270.000

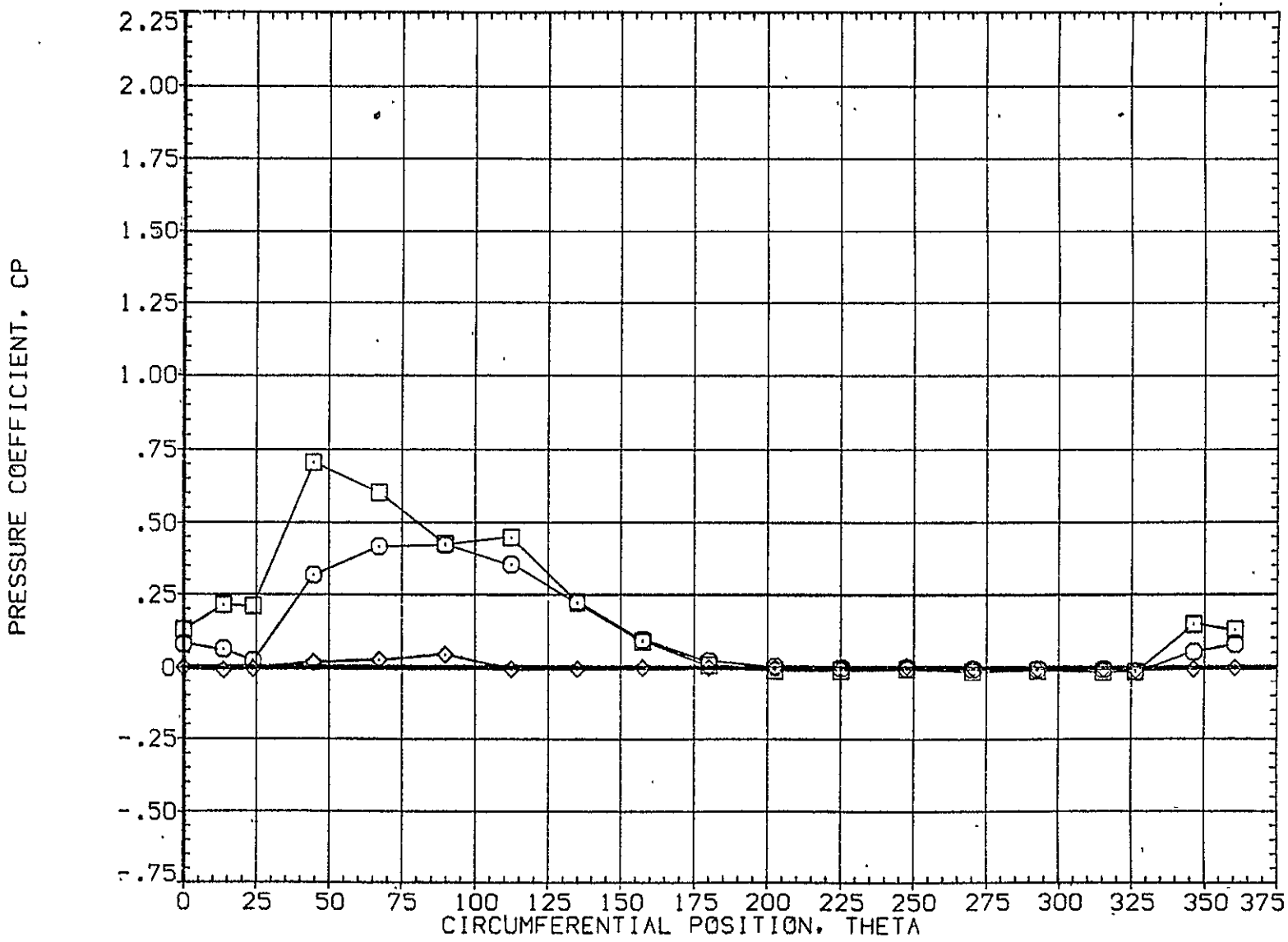


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-8.310	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

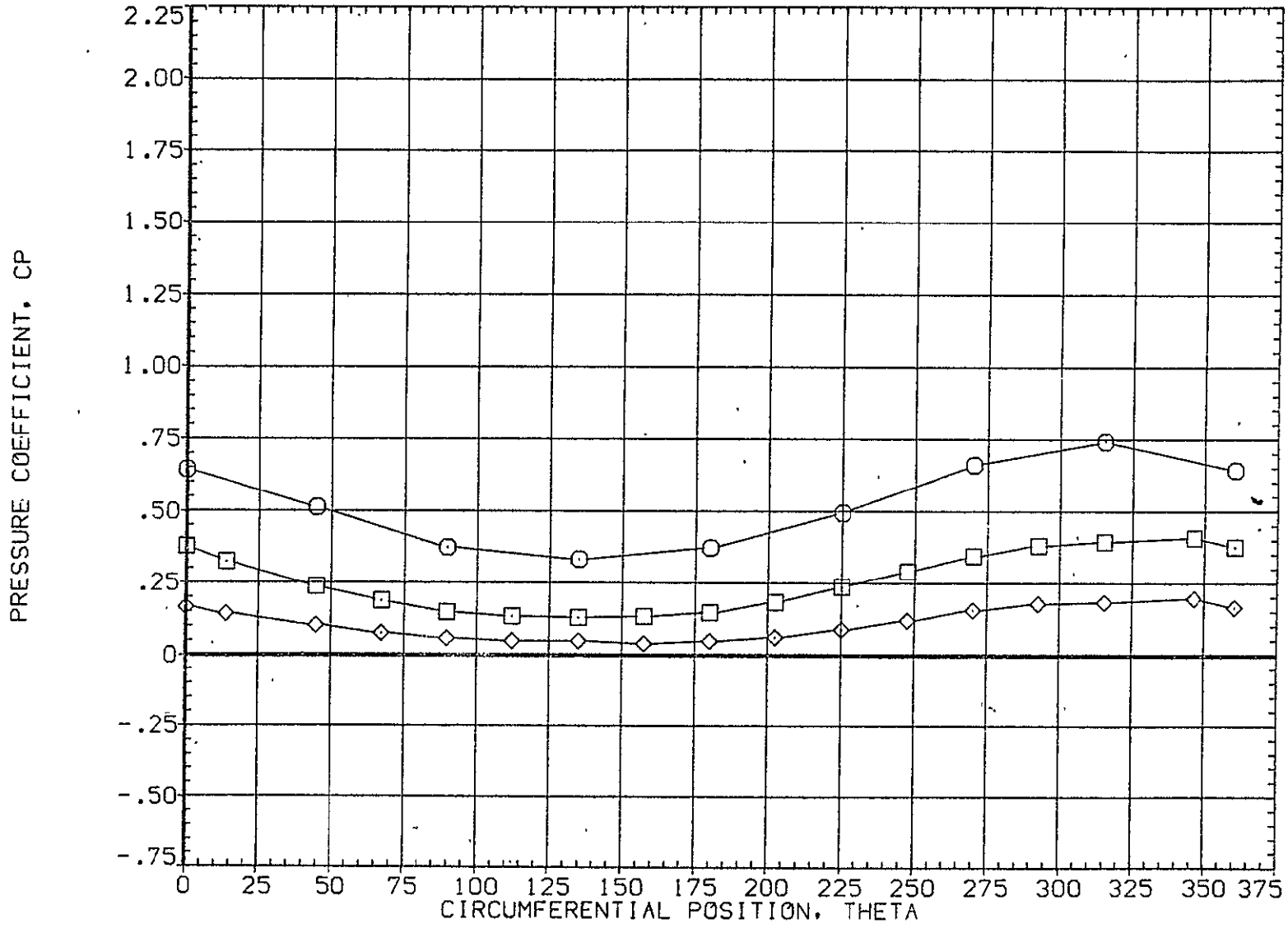


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-8.310	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

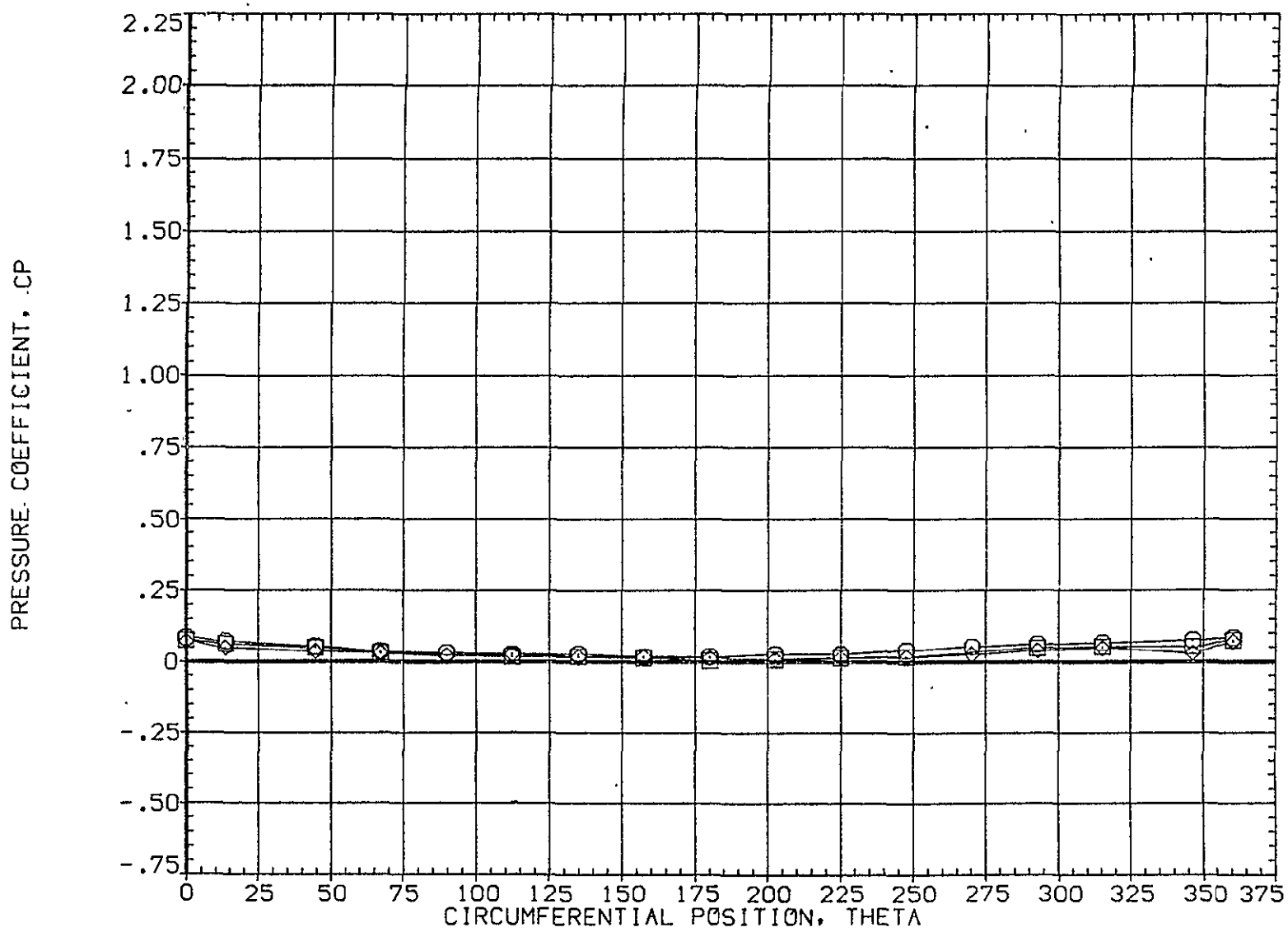


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-8.310	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

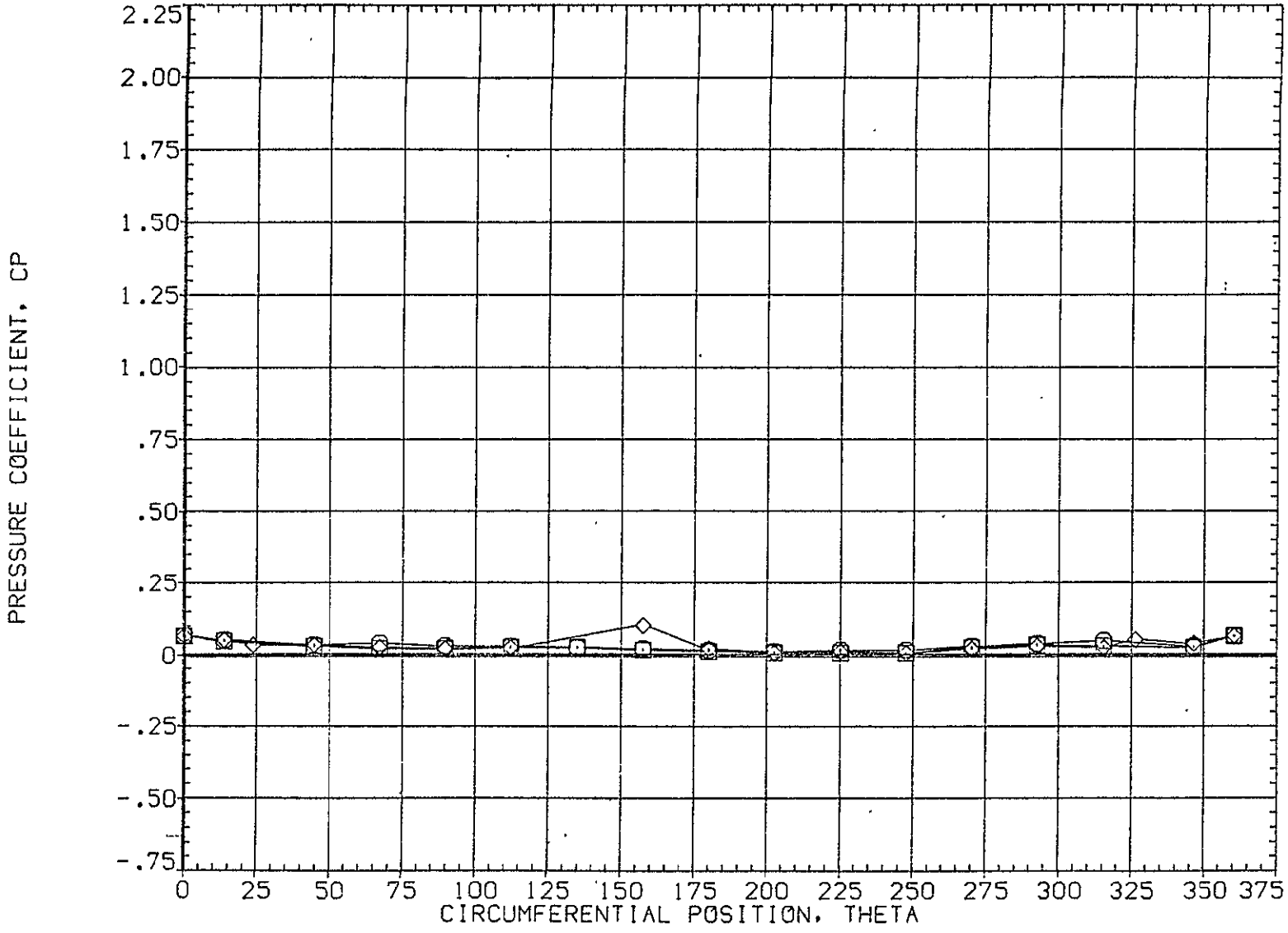


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A091)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-8.310	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

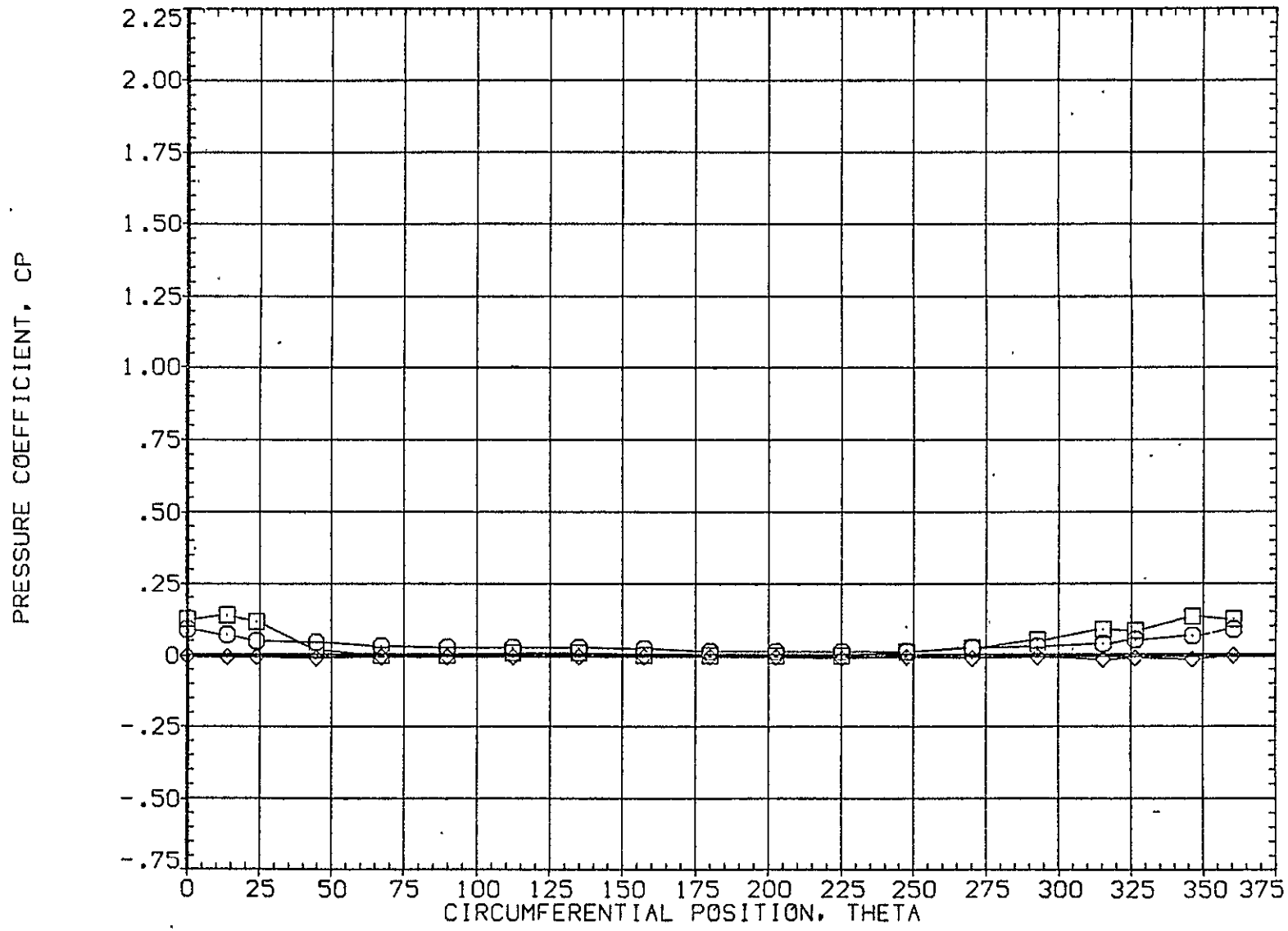


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-4.290	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

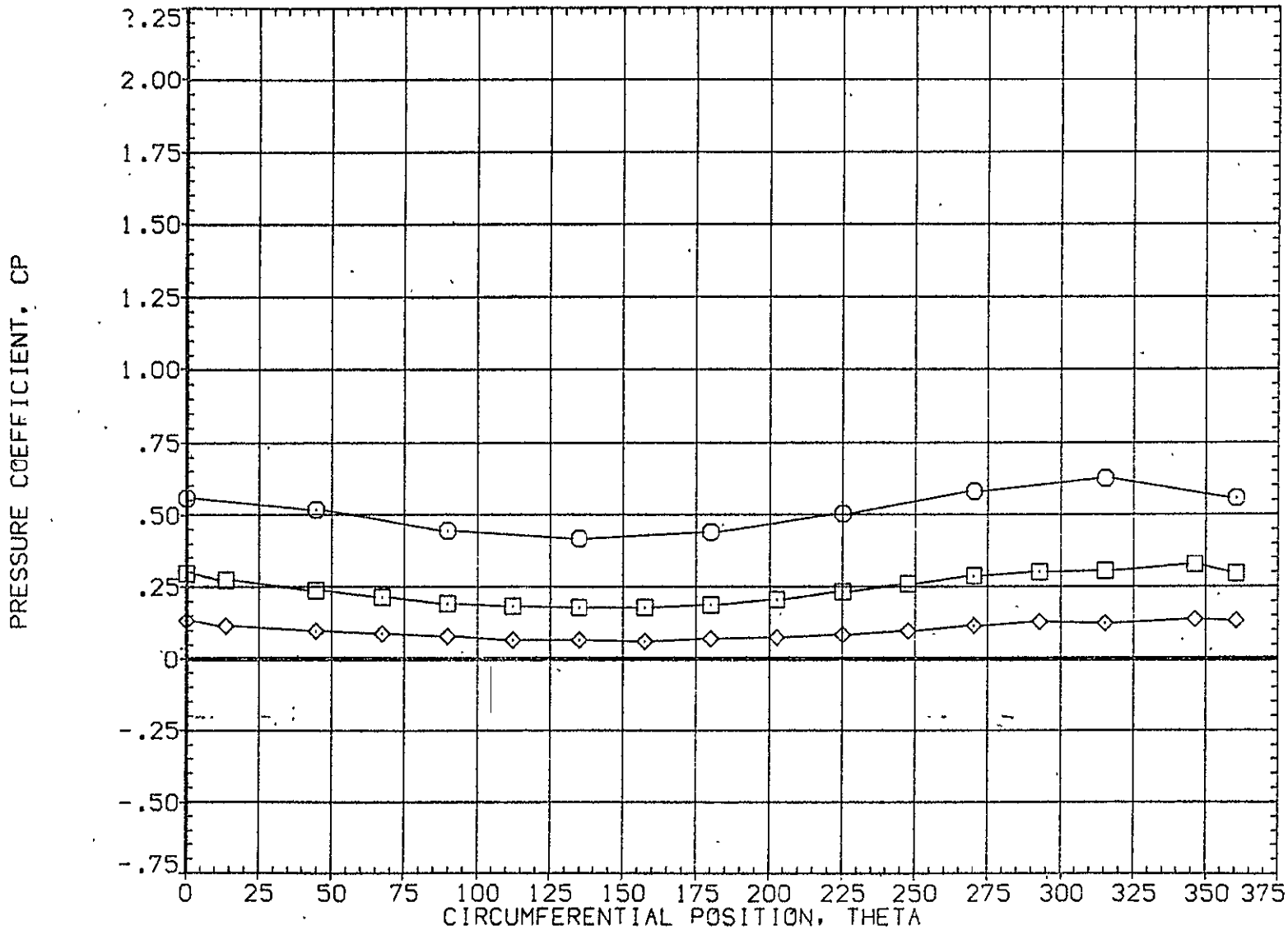


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-4.290	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

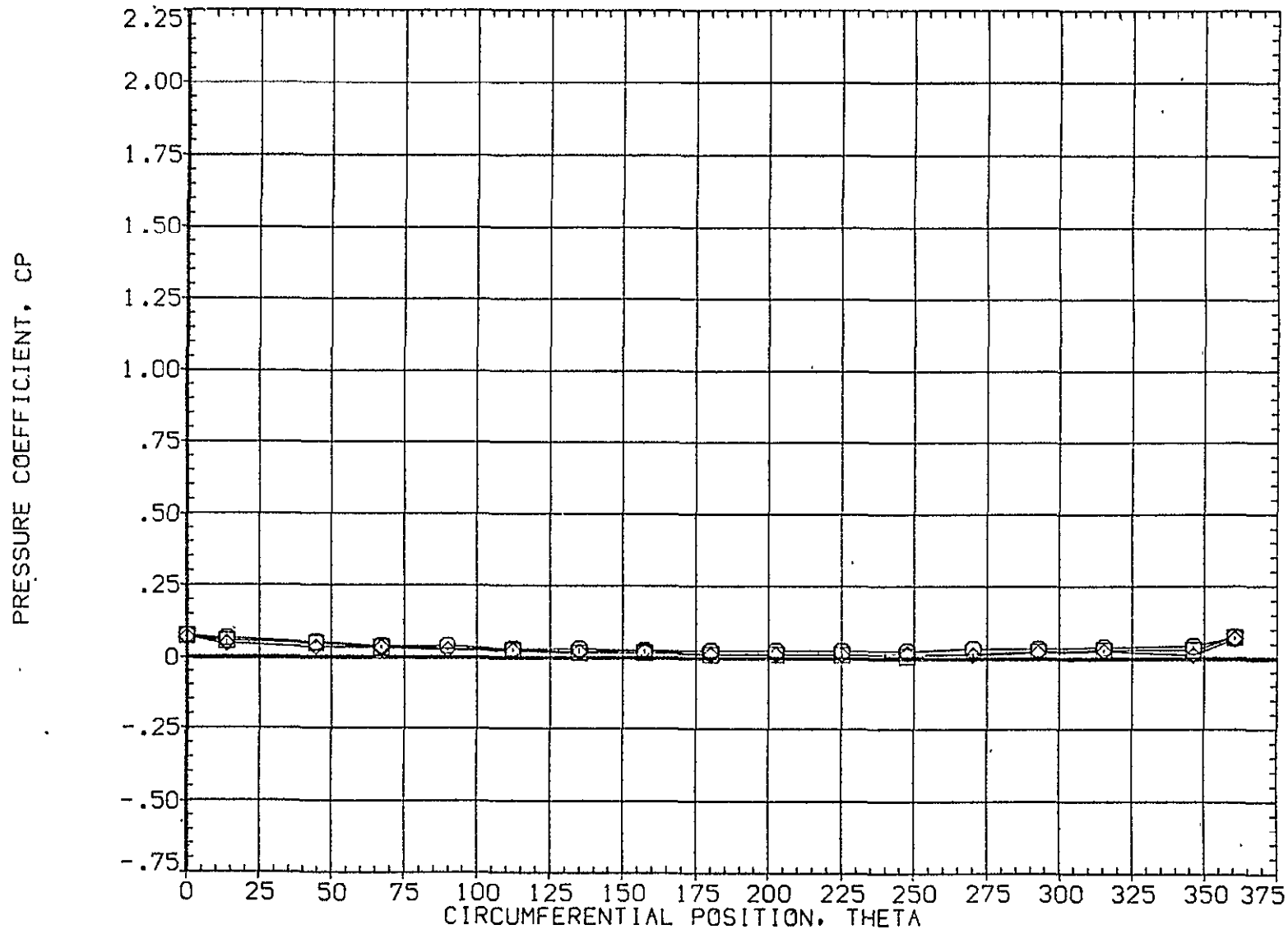


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-4.290	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

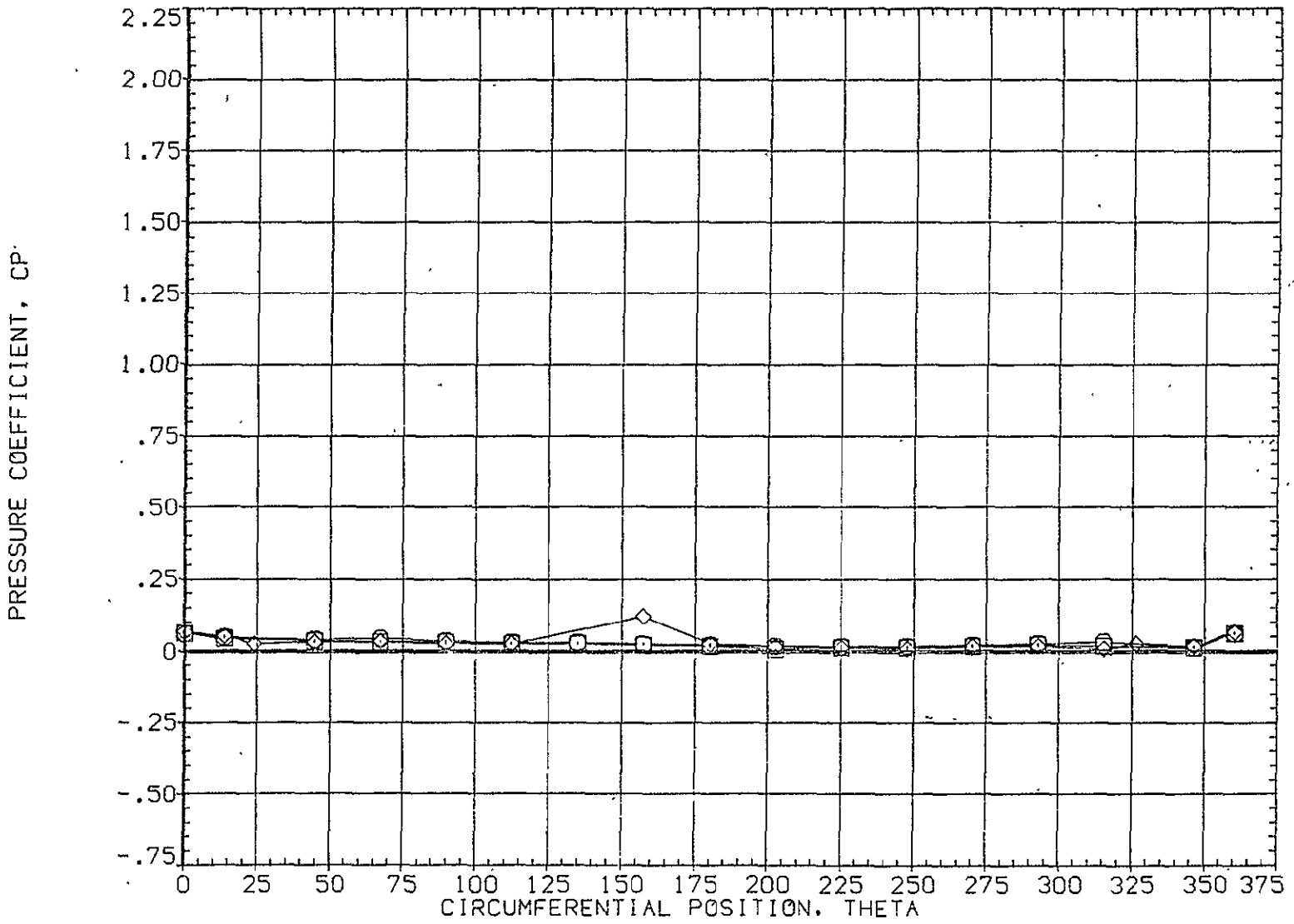


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A092)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-4.290	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

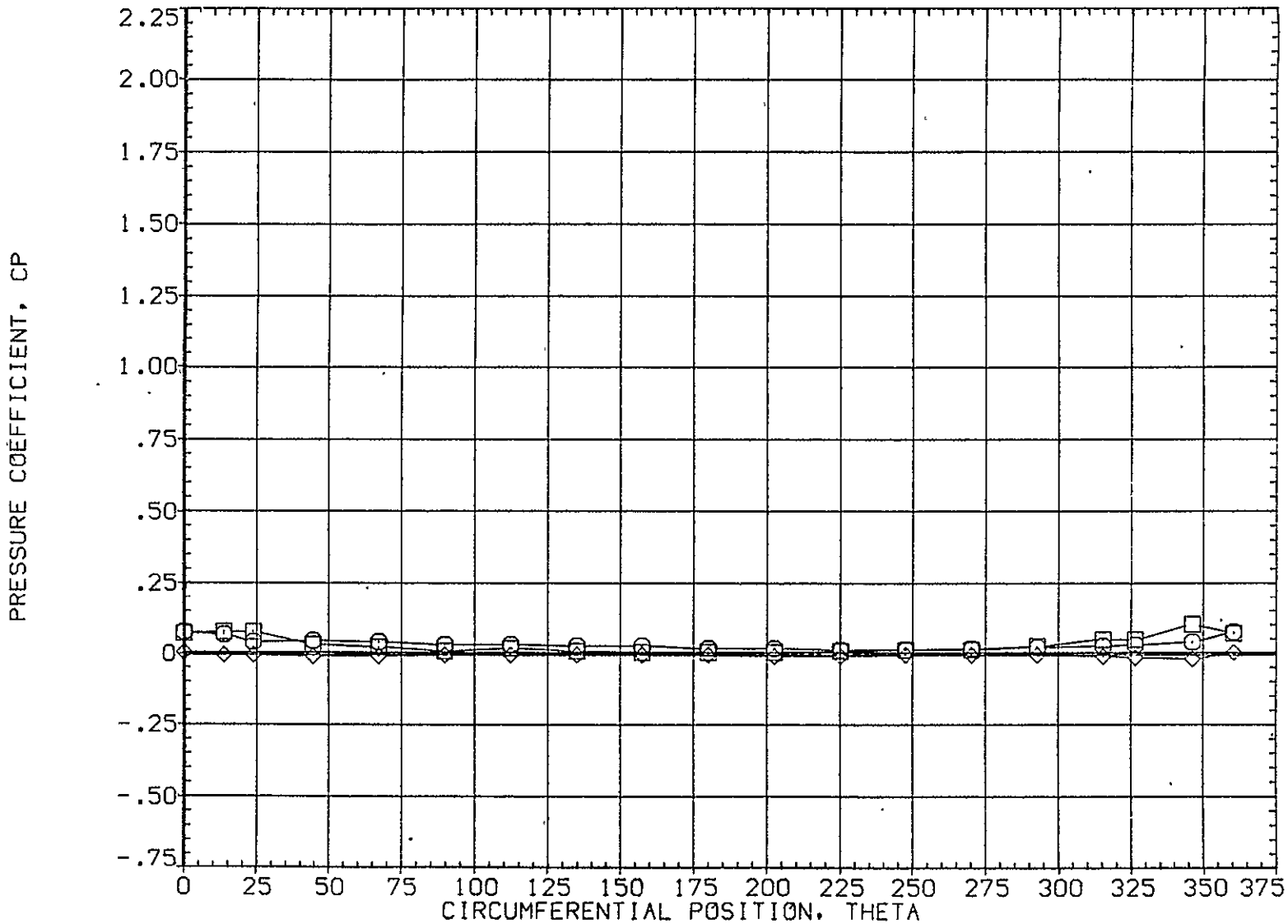


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.055	-.280	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

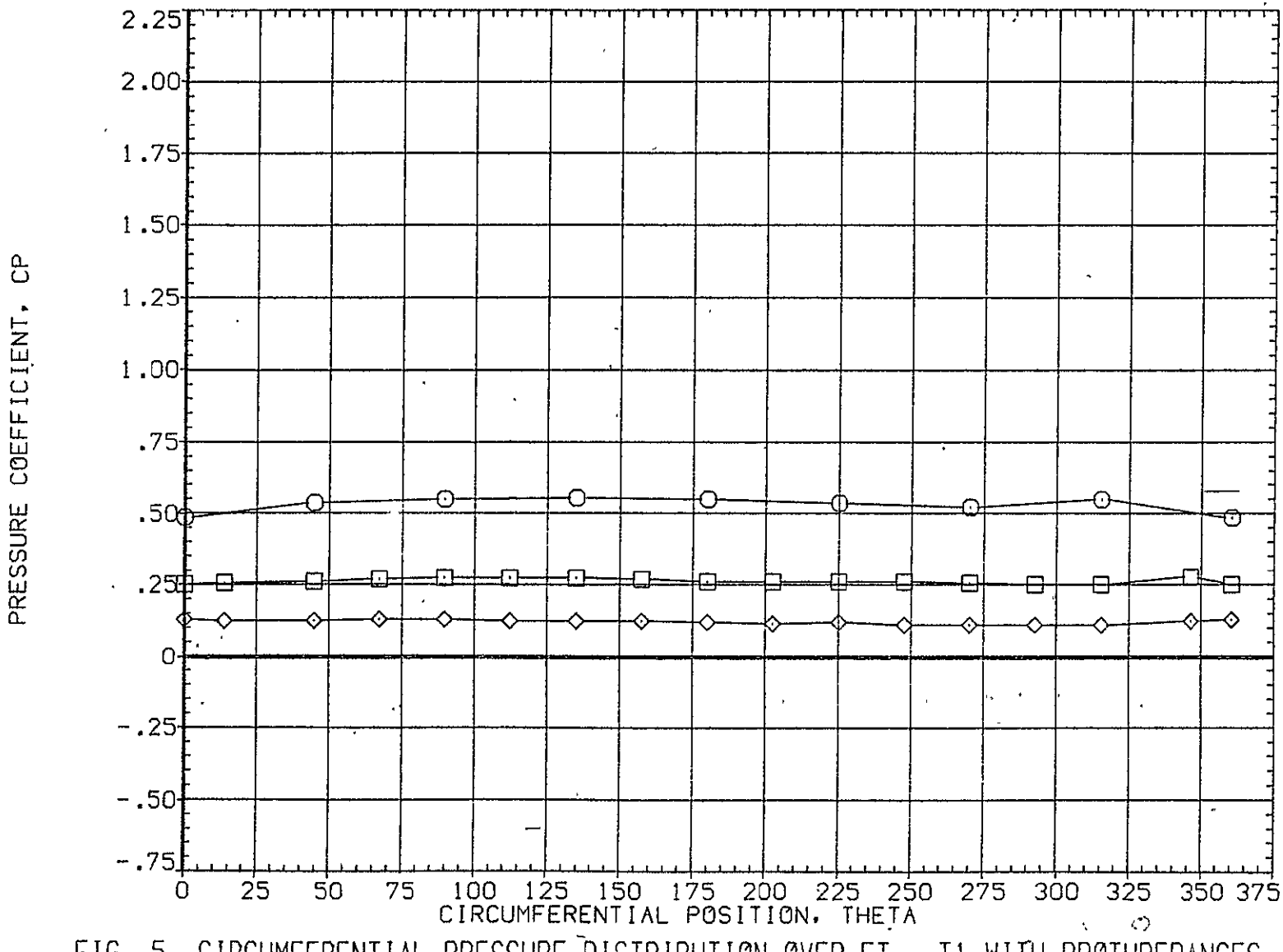


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES.

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.216	-.280	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

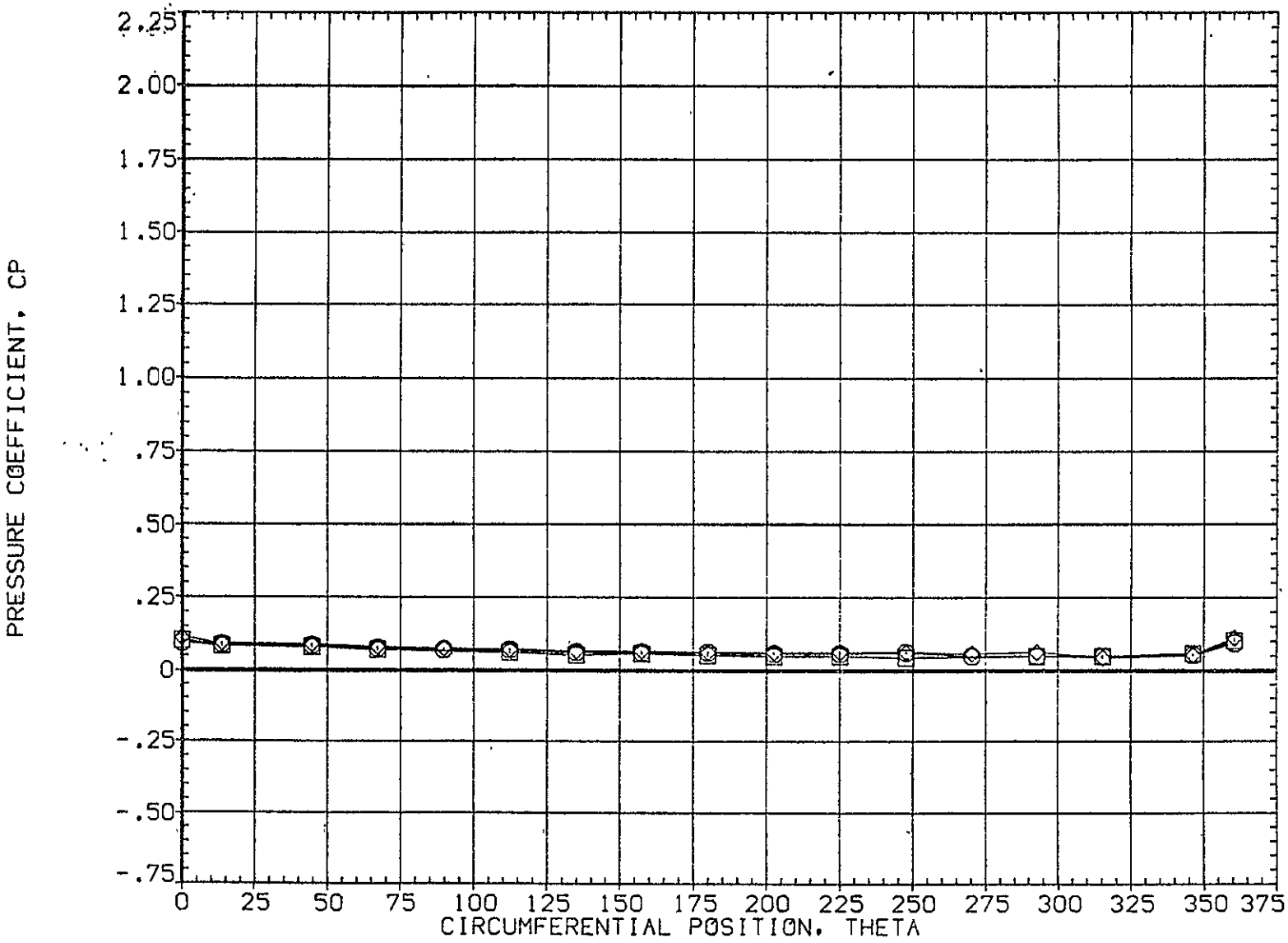


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.610	-.280	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

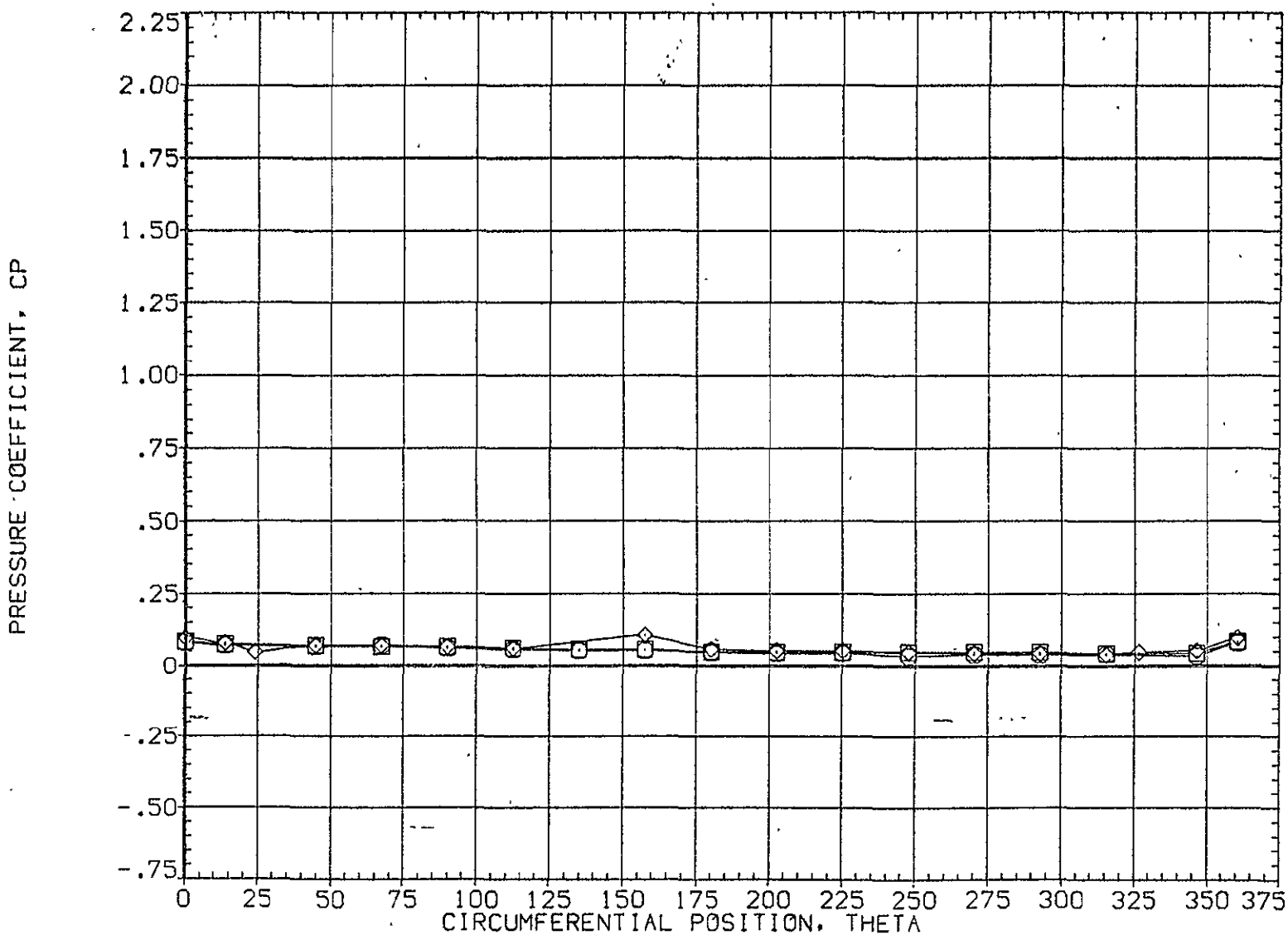


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A093)

SYMBOL	X/LB	ALPHA	MACH
○	.892	-.280	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

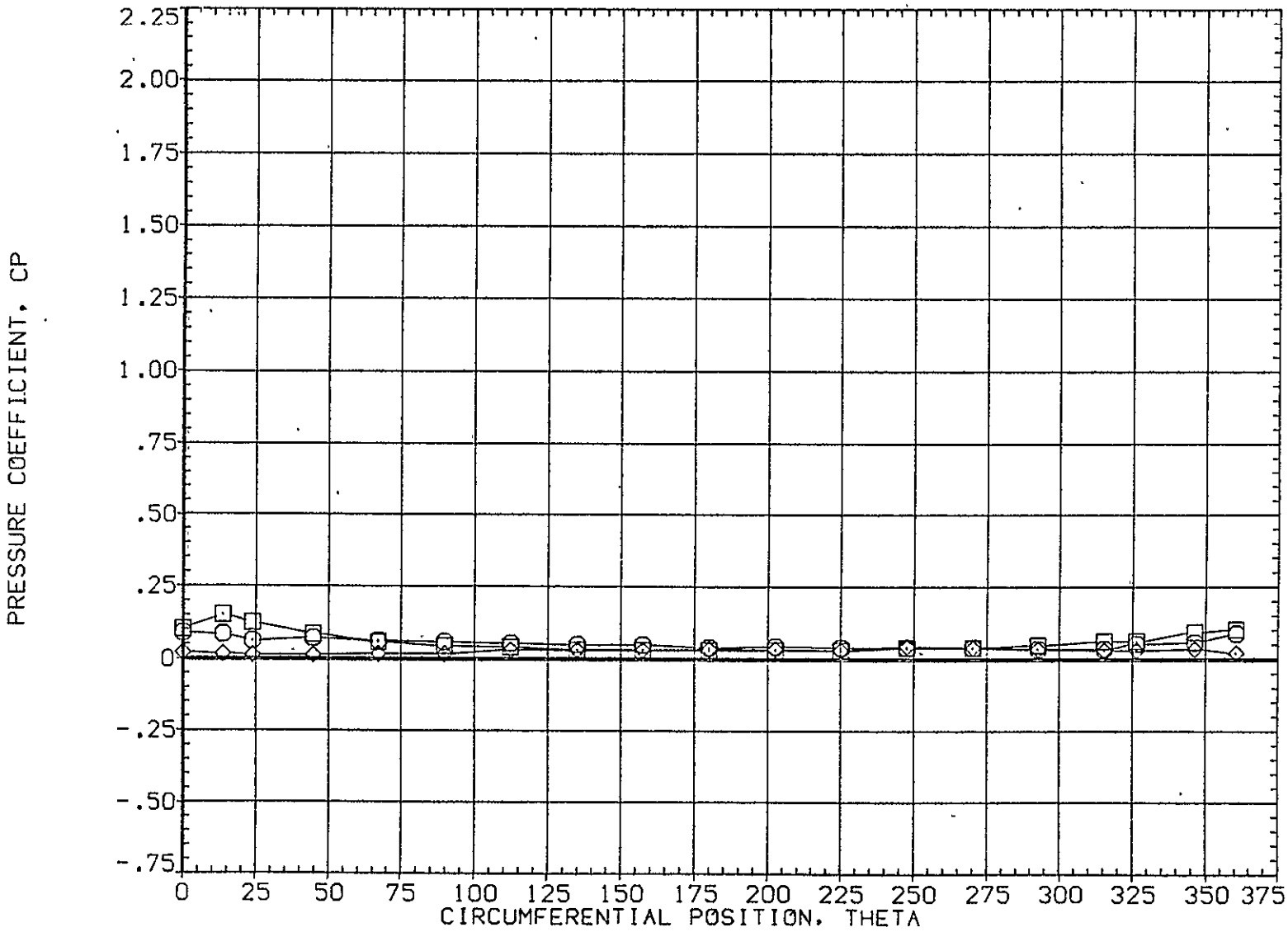


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.055	3.730	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

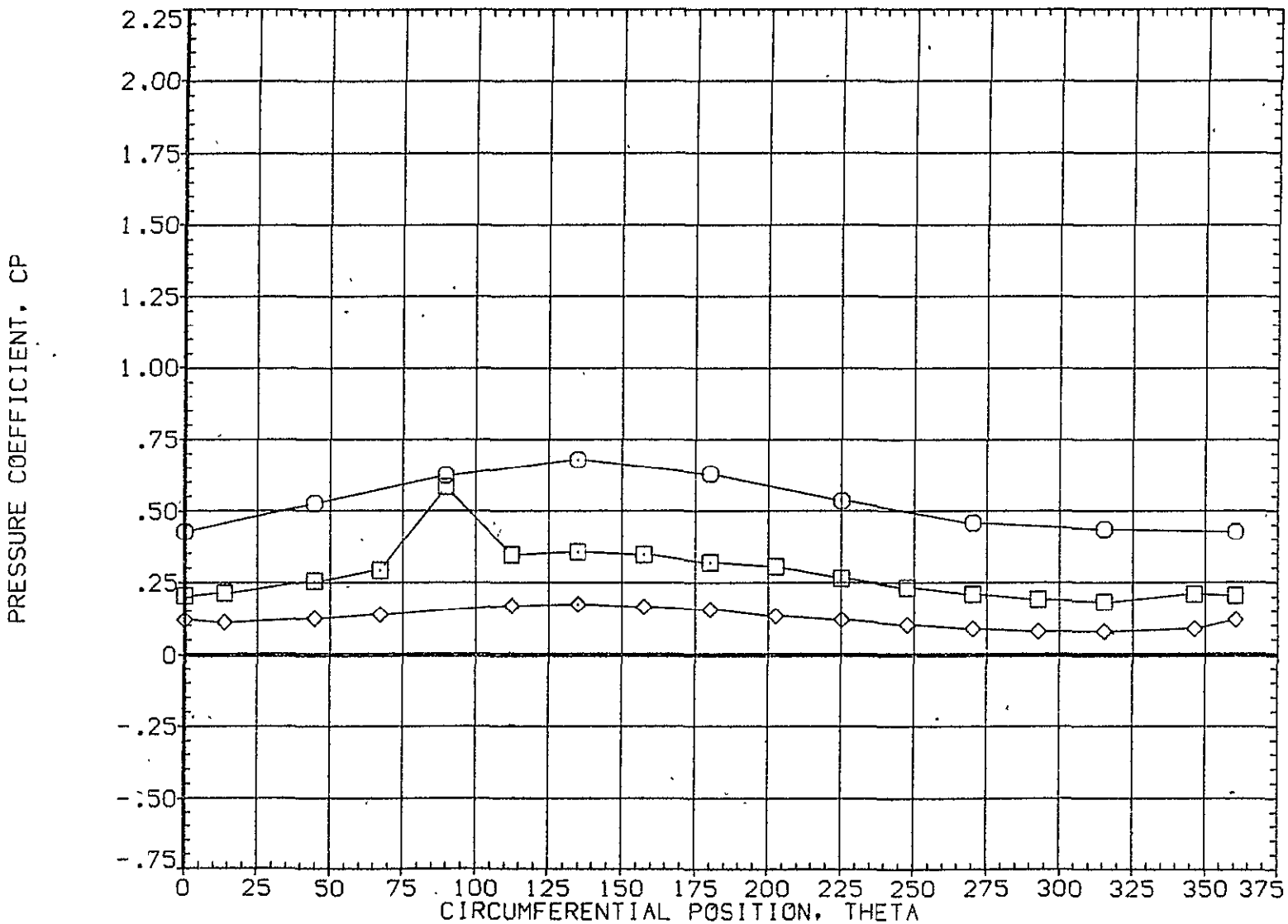


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.216	3.730	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

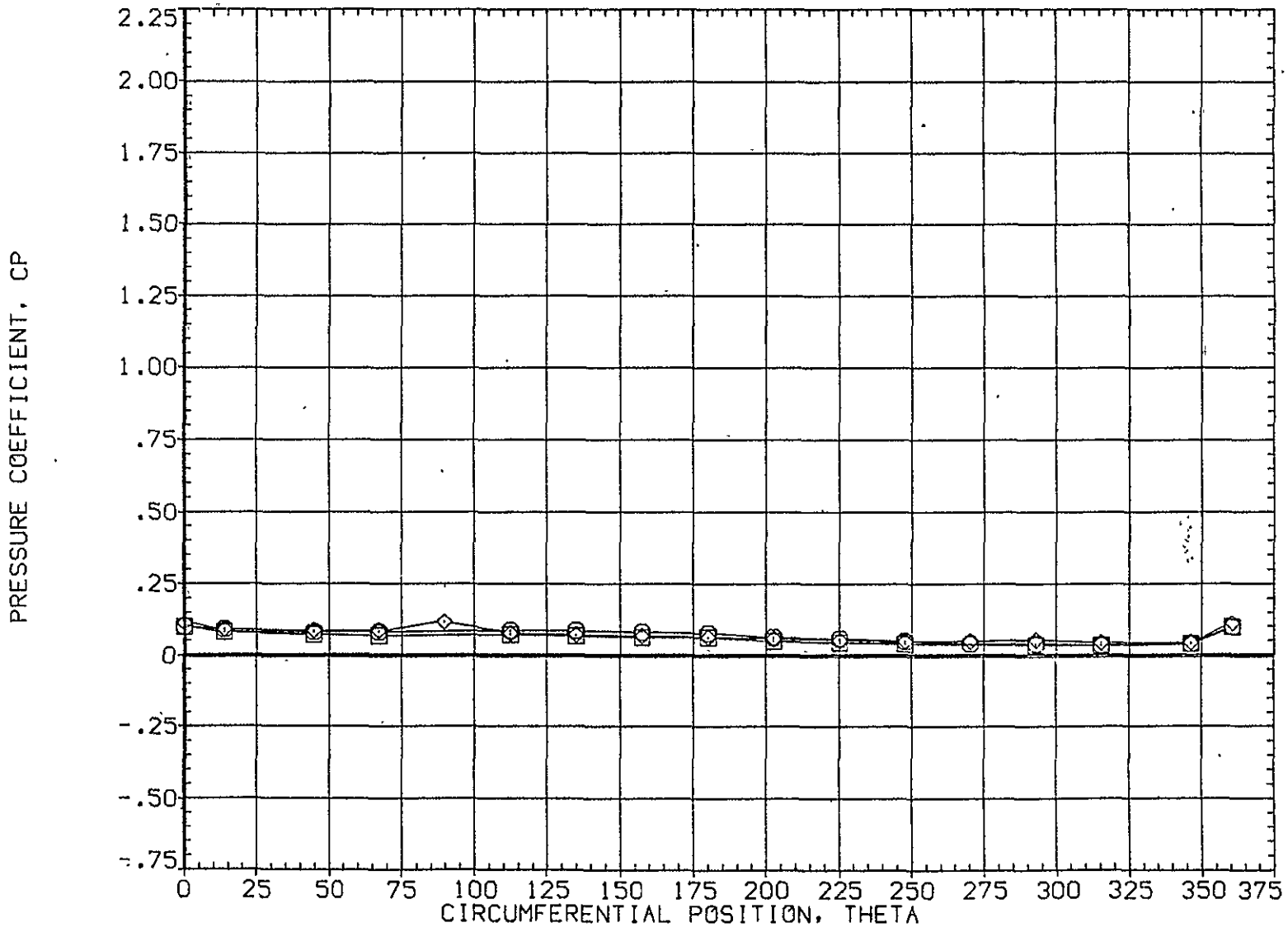


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.610	3.730	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

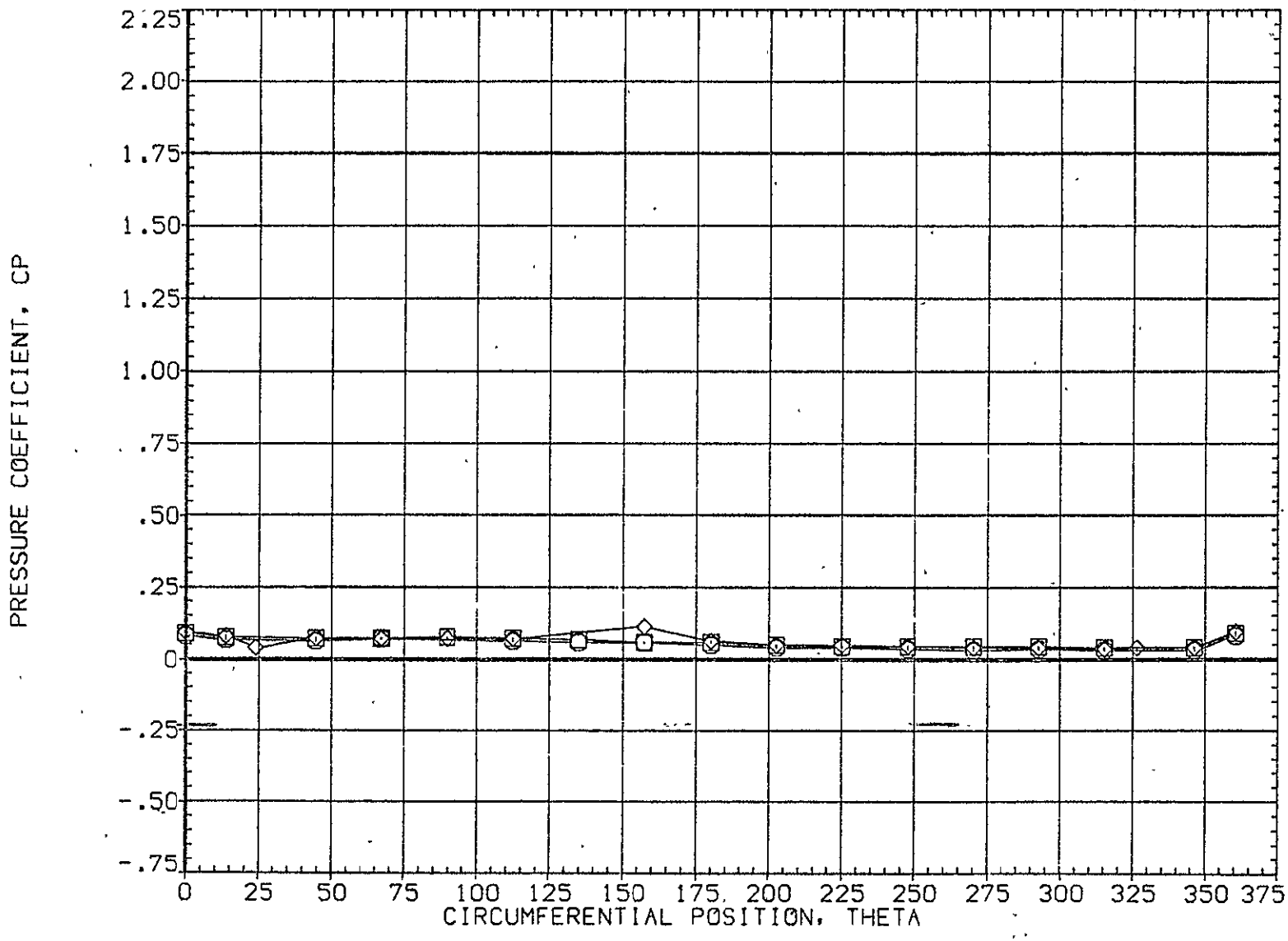


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A094)

SYMBOL	X/LB	ALPHA	MACH
○	.892	3.730	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

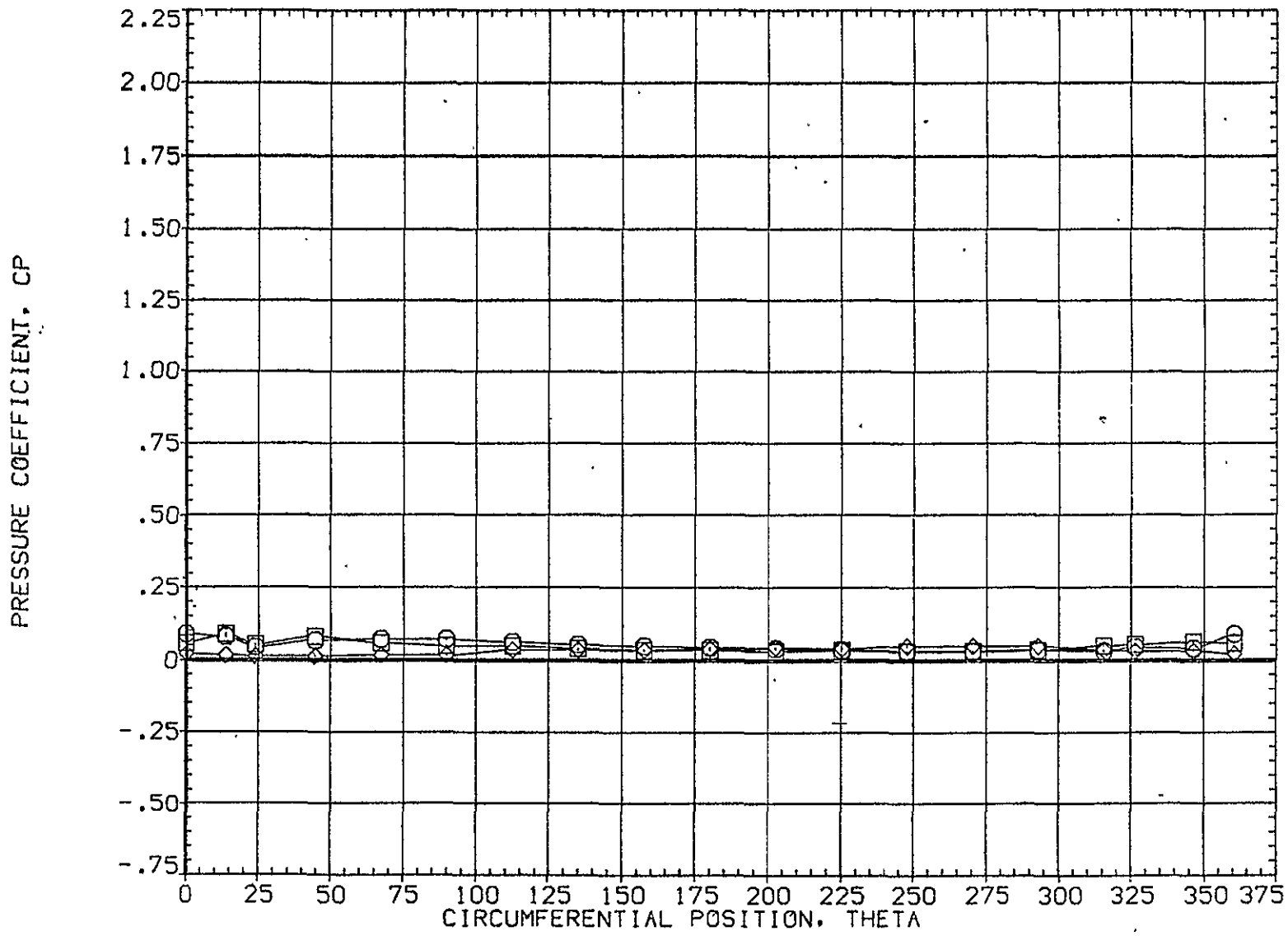


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.055	7.750	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

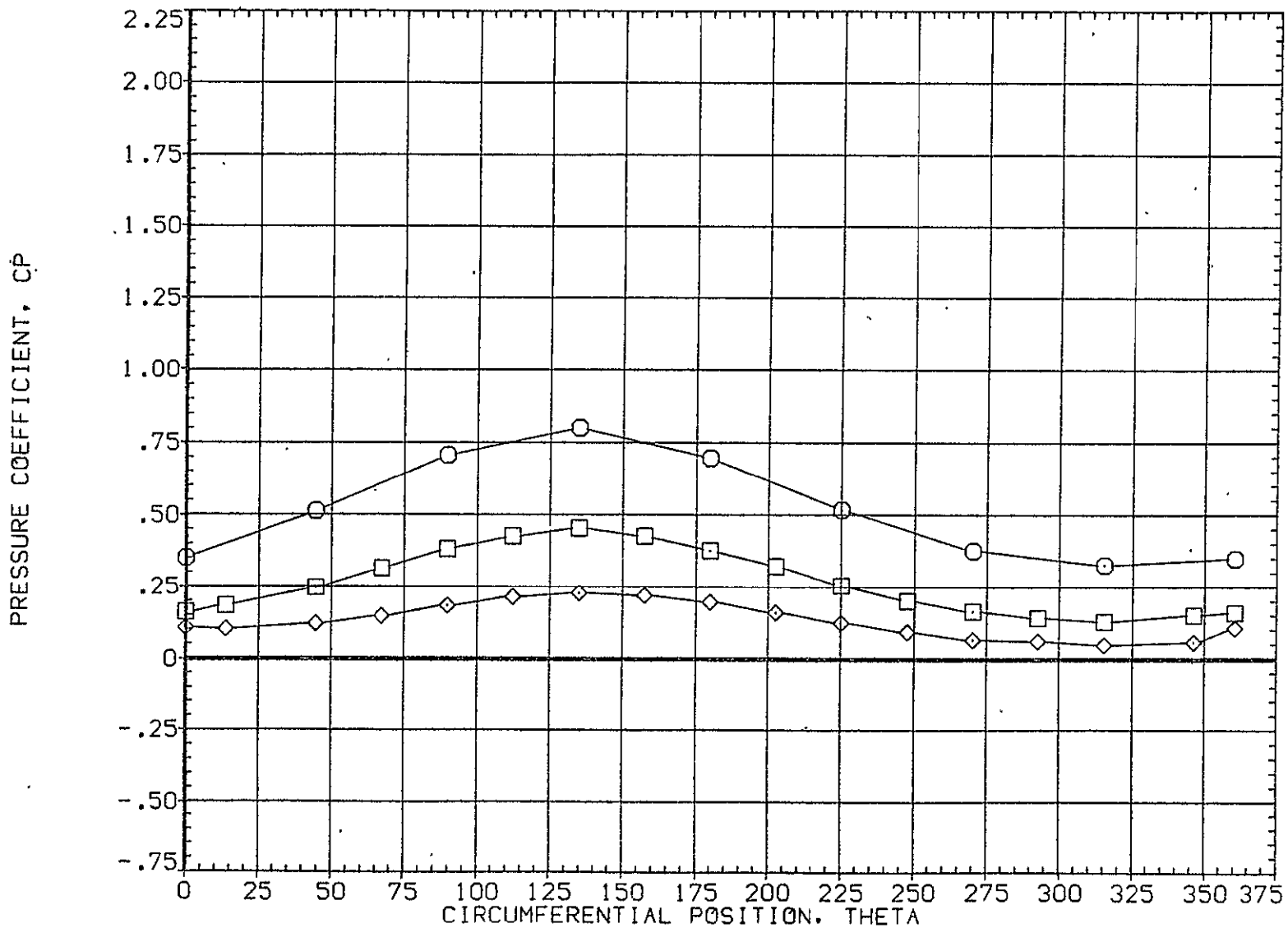


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.216	7.750	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES..

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

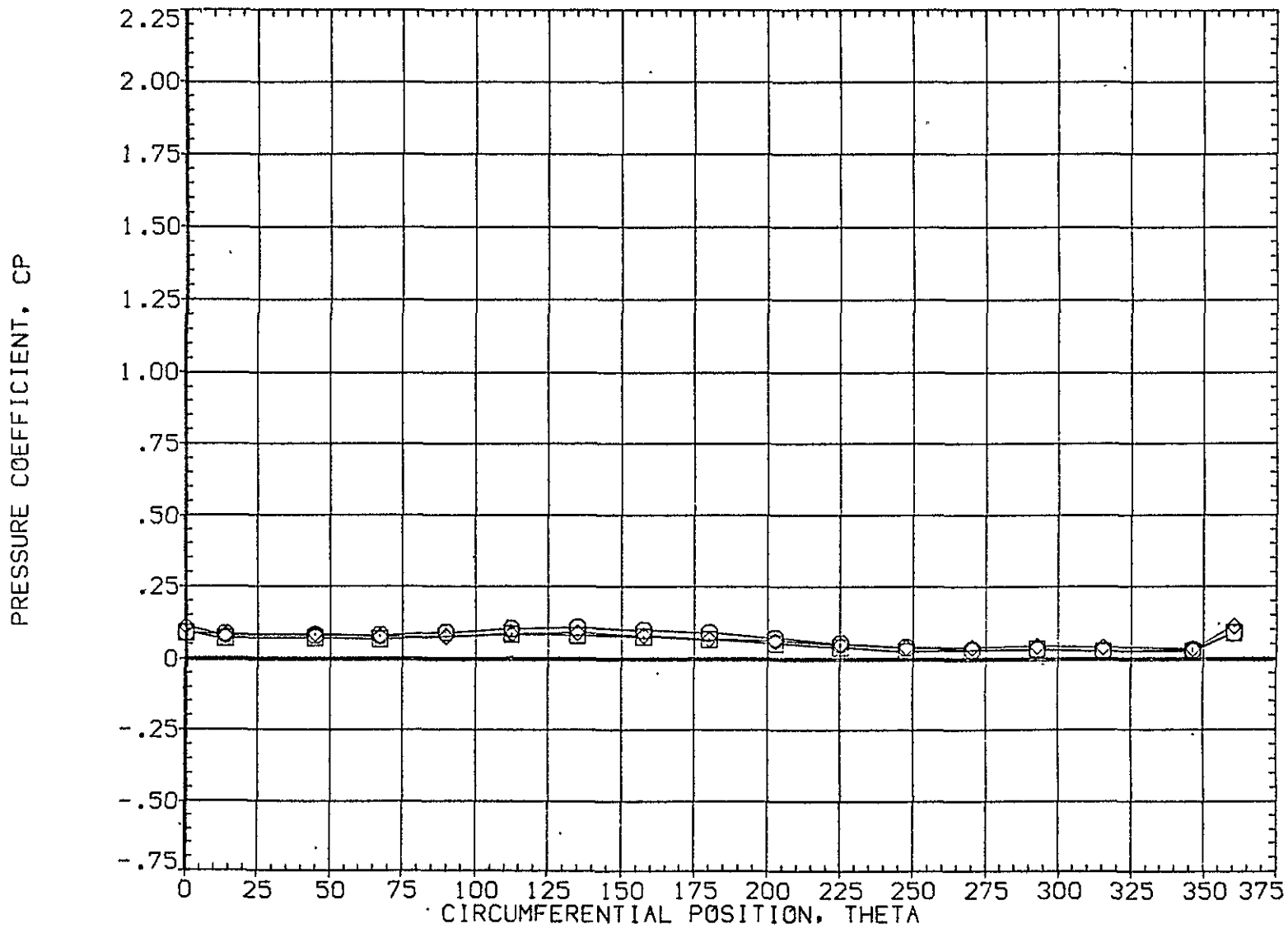


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.610	7.750	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

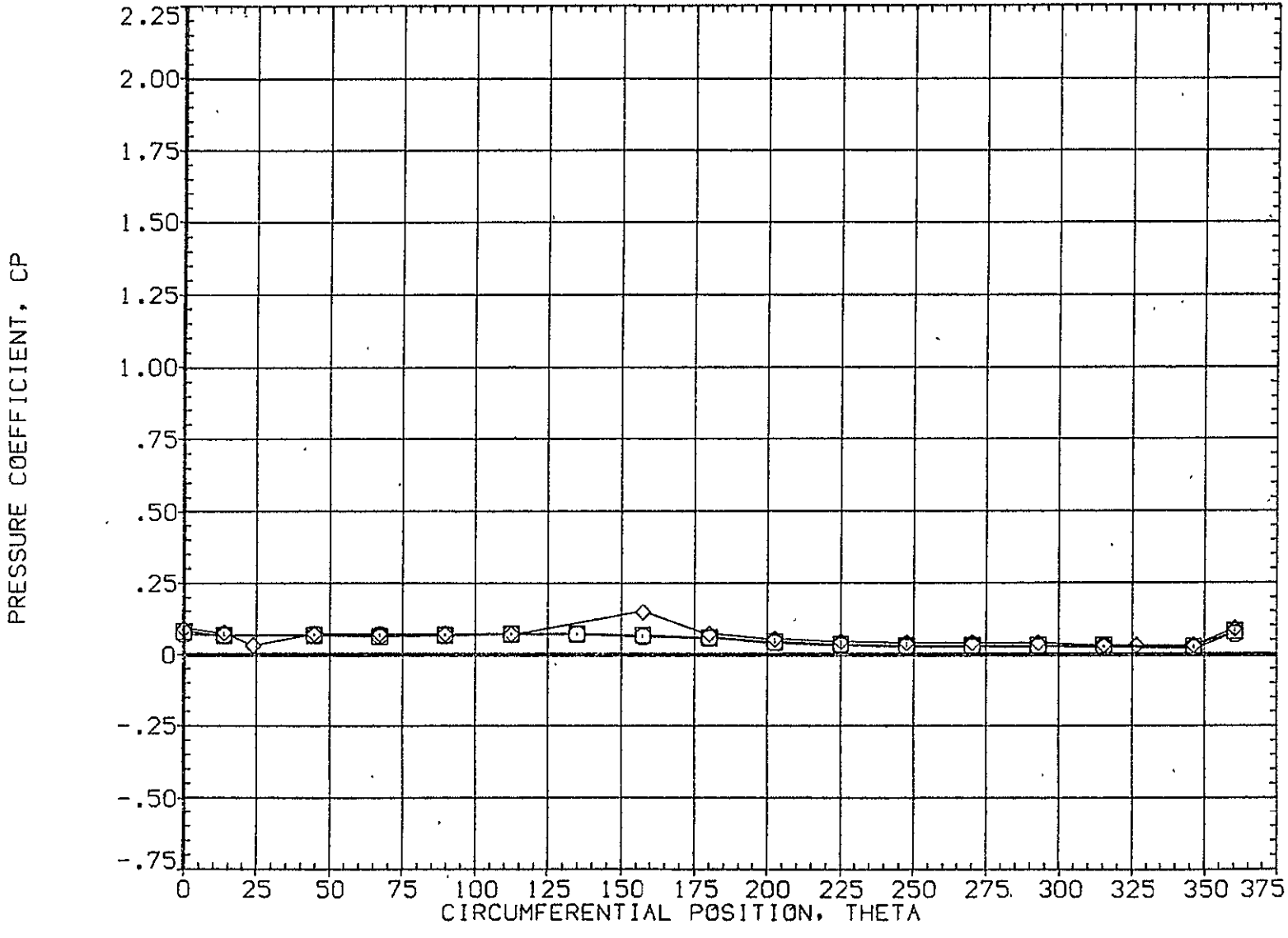


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A095)

SYMBOL	X/LB	ALPHA	MACH
○	.892	7.750	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	.000
MOUNT	1.000	PHI	315.000

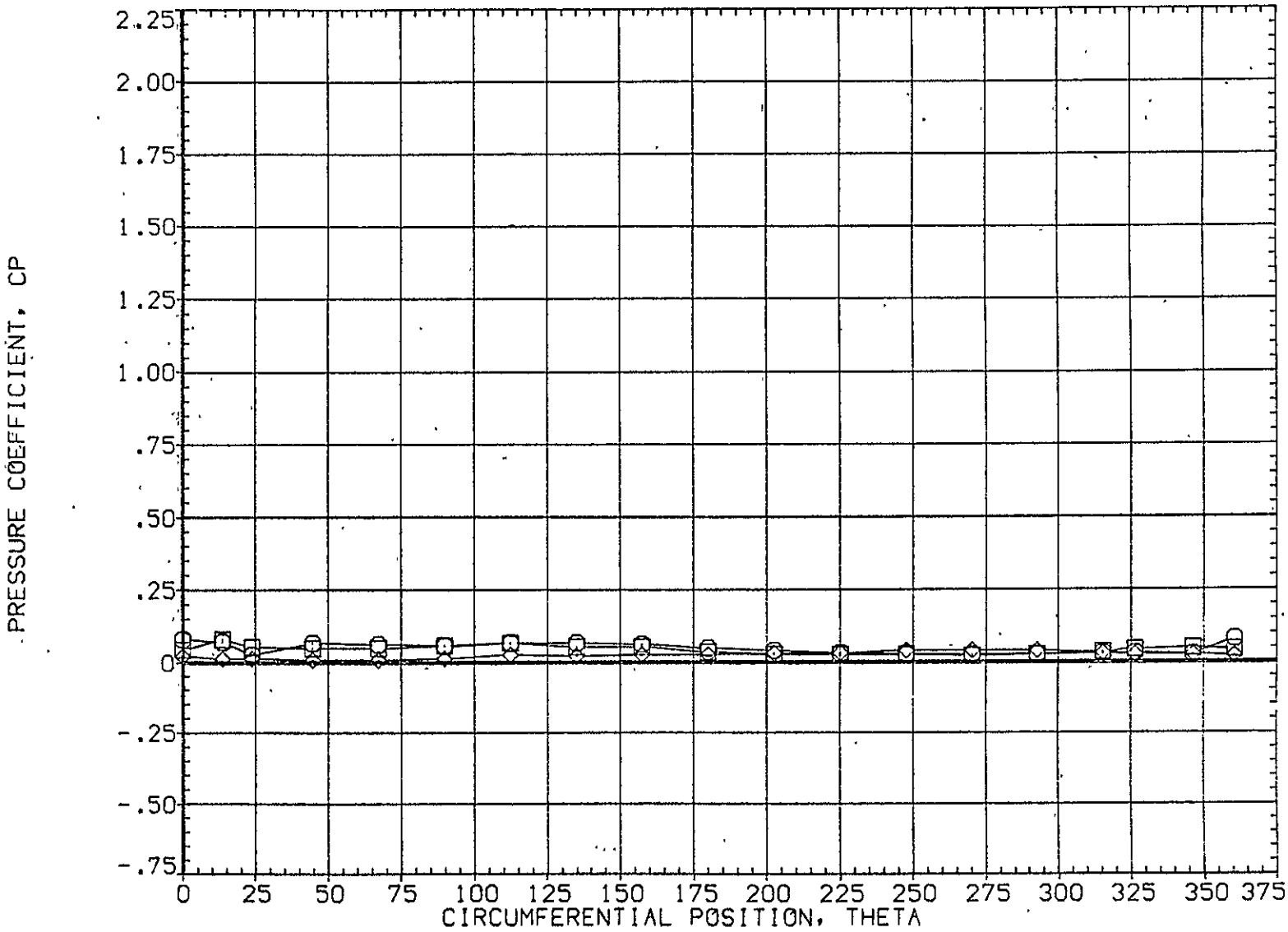


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.055	12.430	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

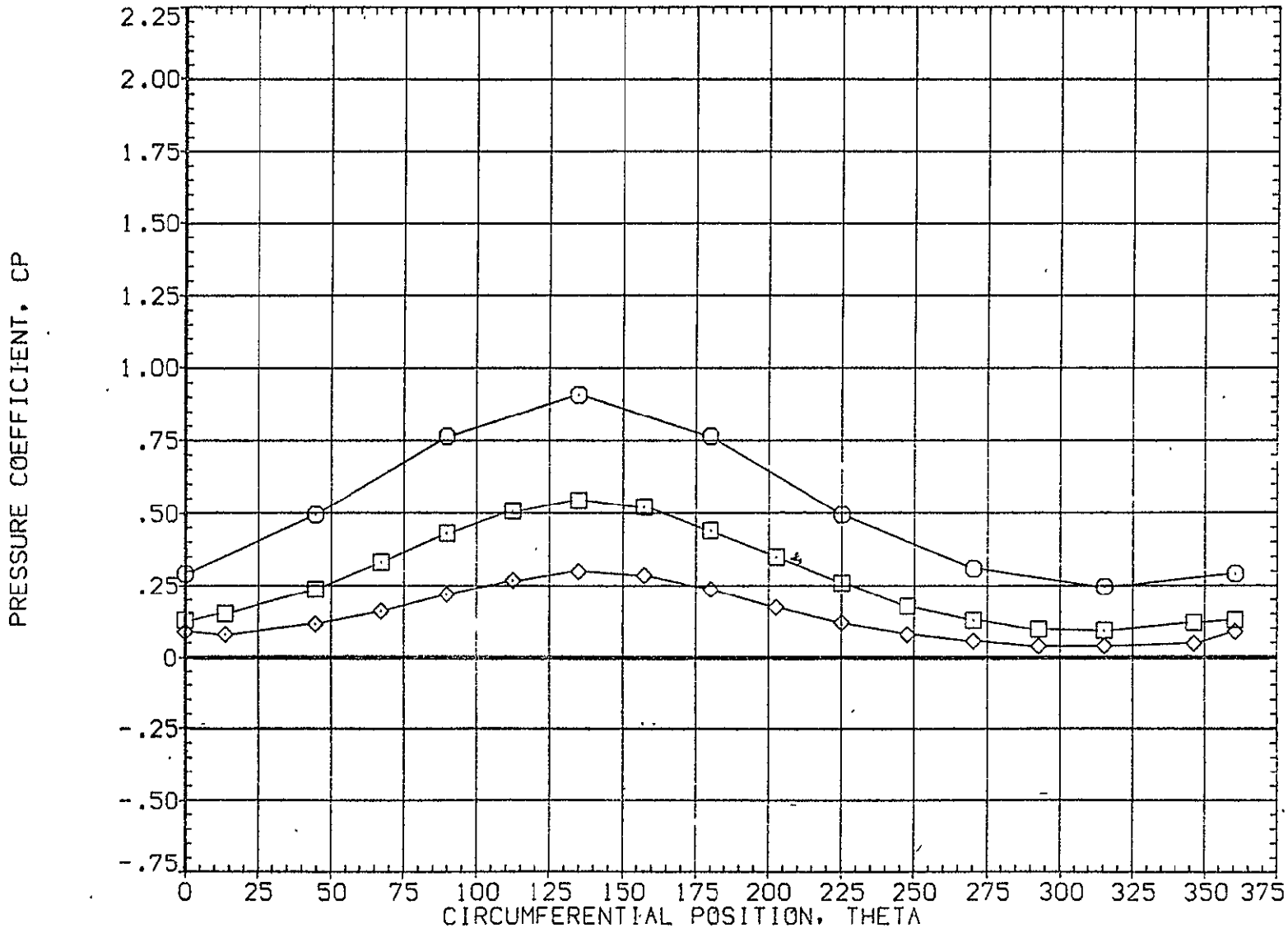


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.216	12.430	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

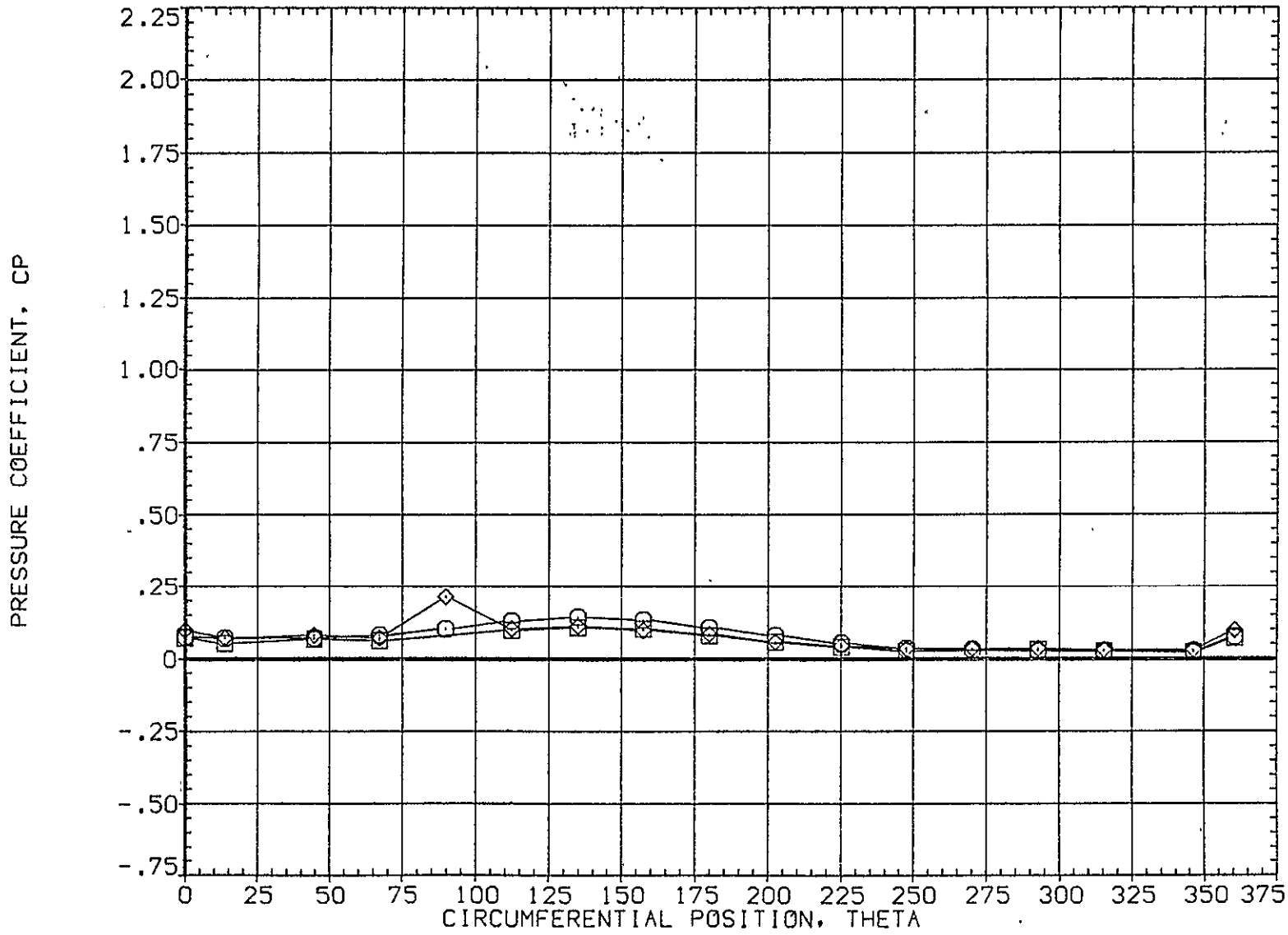


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.610	12.430	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

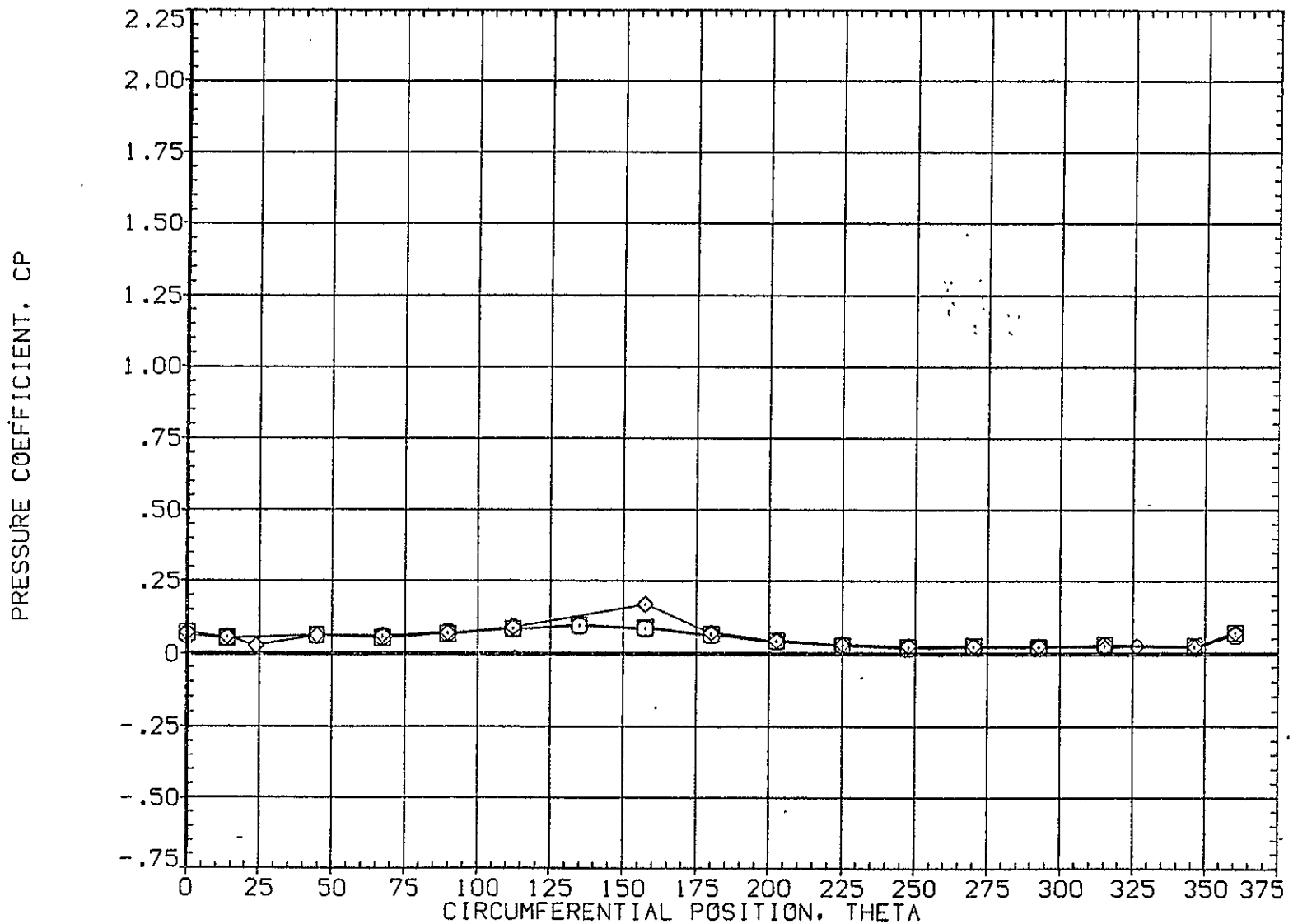


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A096)

SYMBOL	X/LB	ALPHA	MACH
○	.892	12.430	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

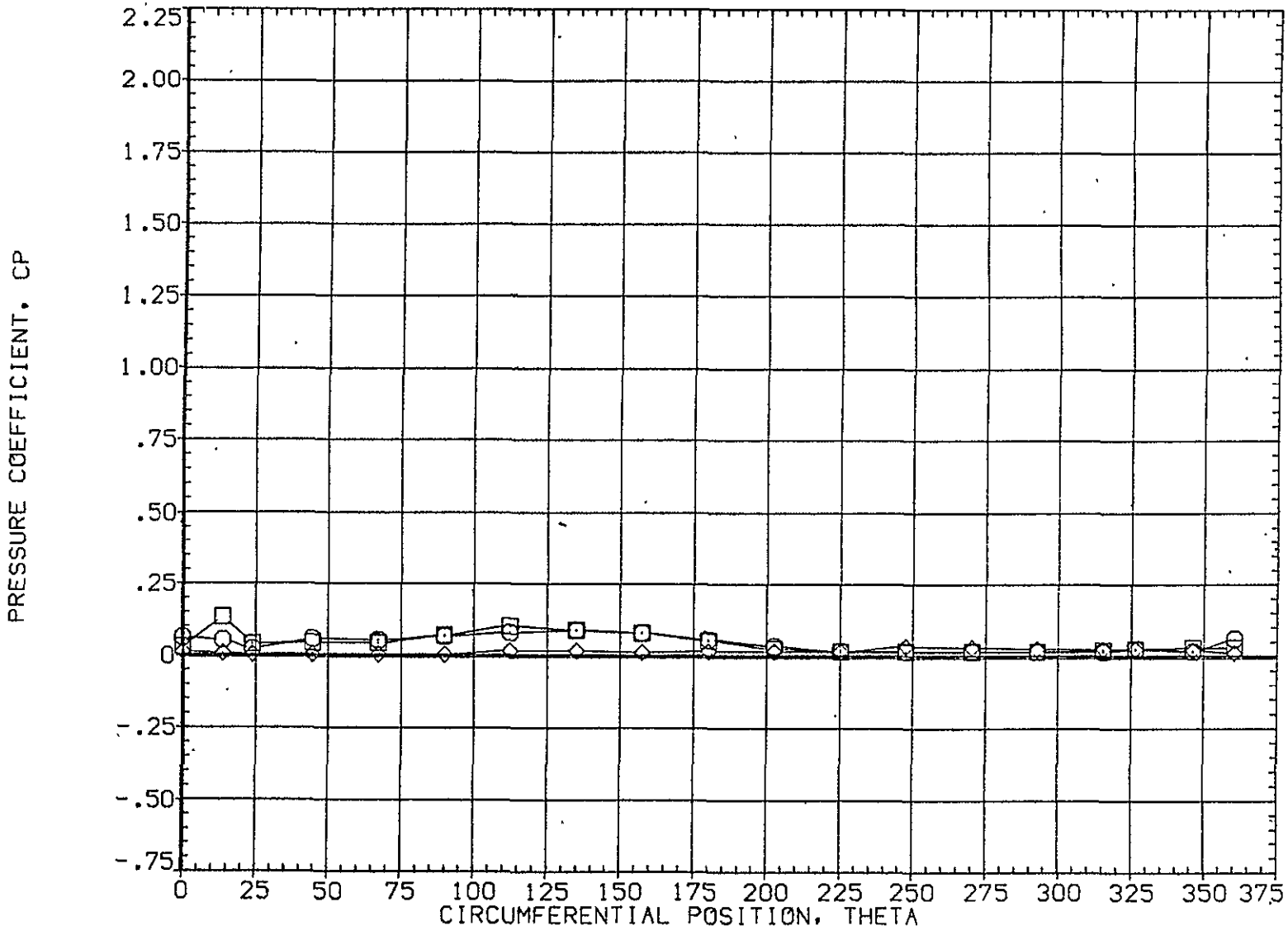


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.055	16.470	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

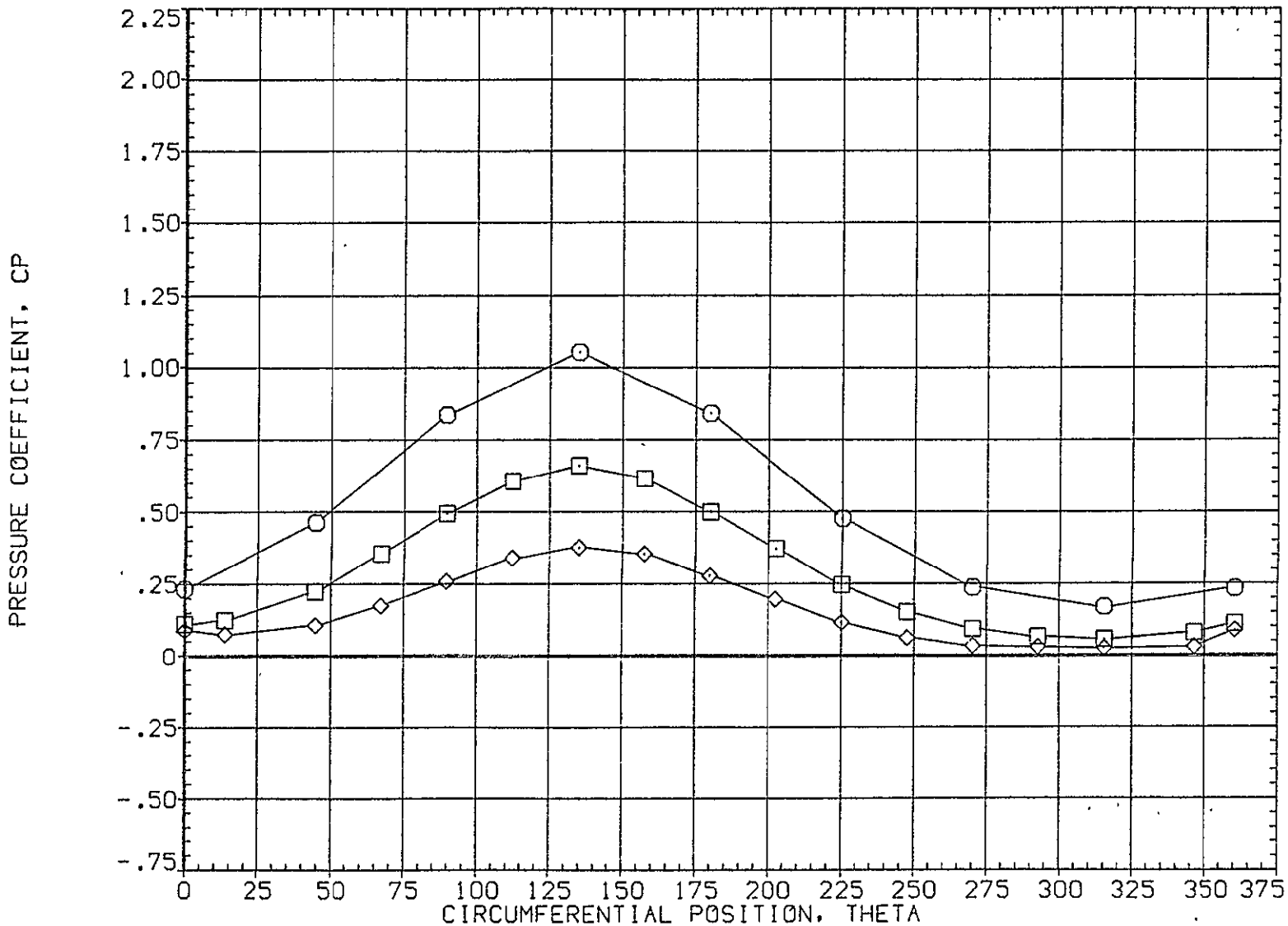


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.216	16.470	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

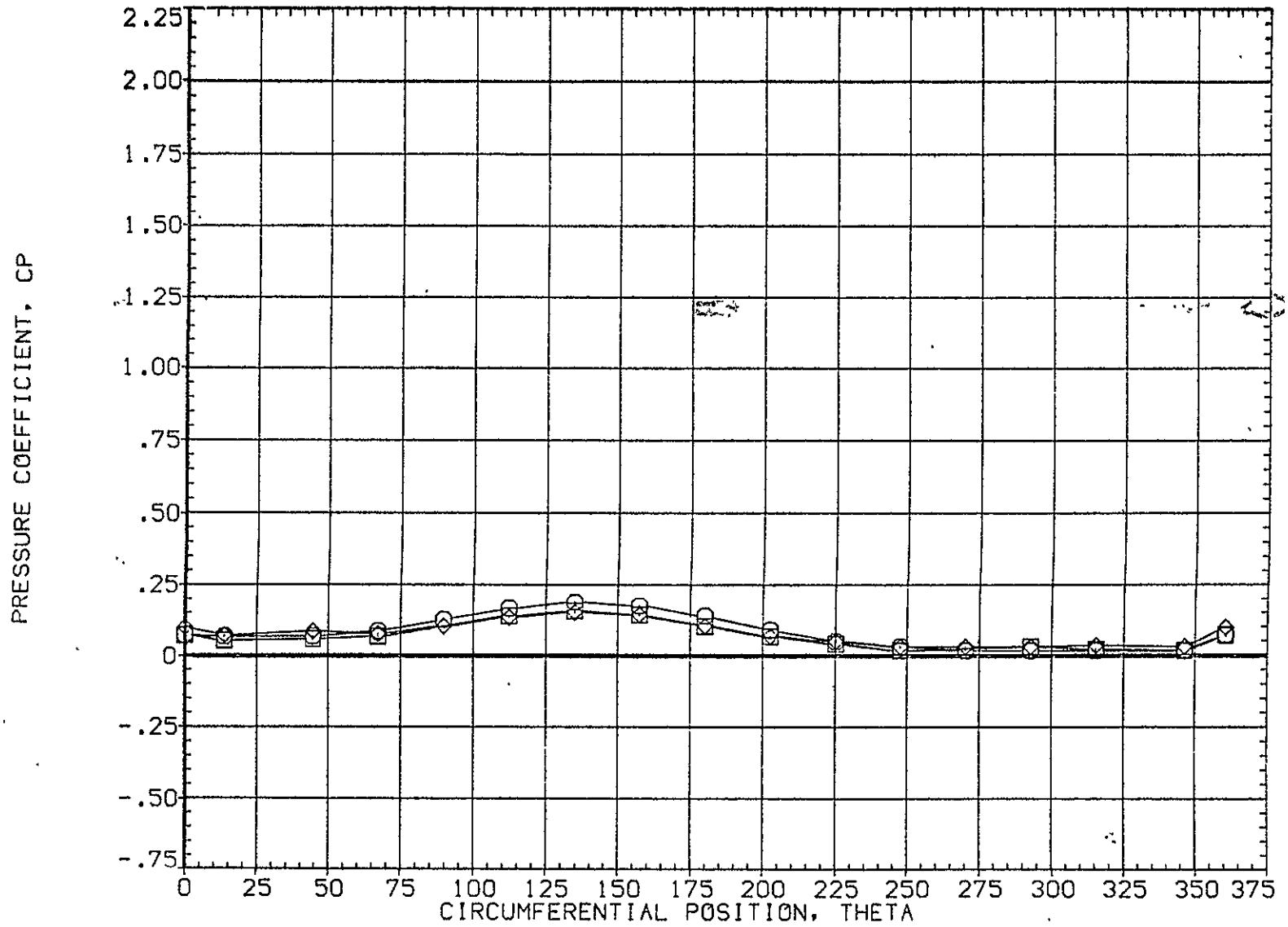


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.610	16.470	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

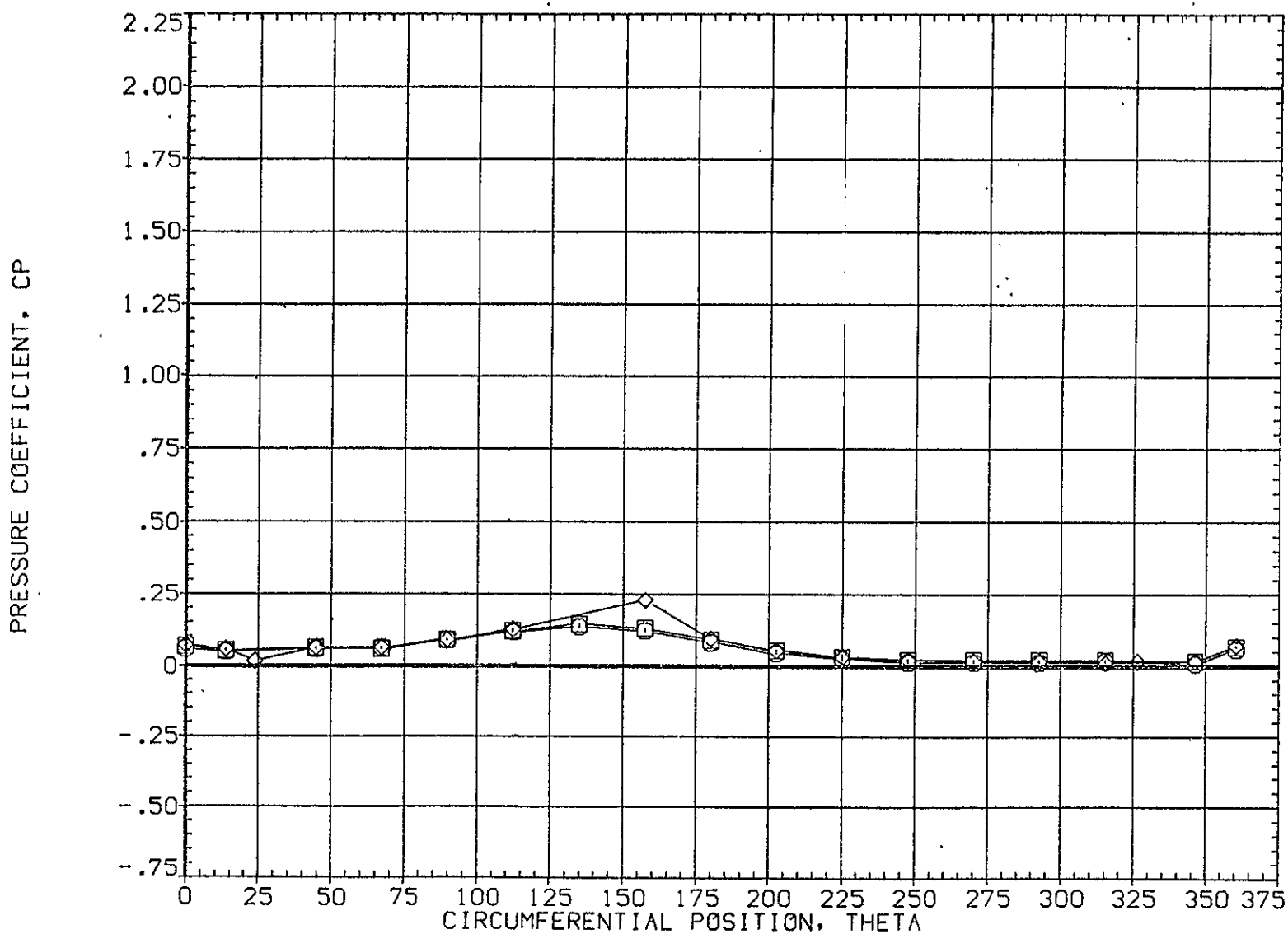


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A097)

SYMBOL	X/LB	ALPHA	MACH
○	.892	16.470	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

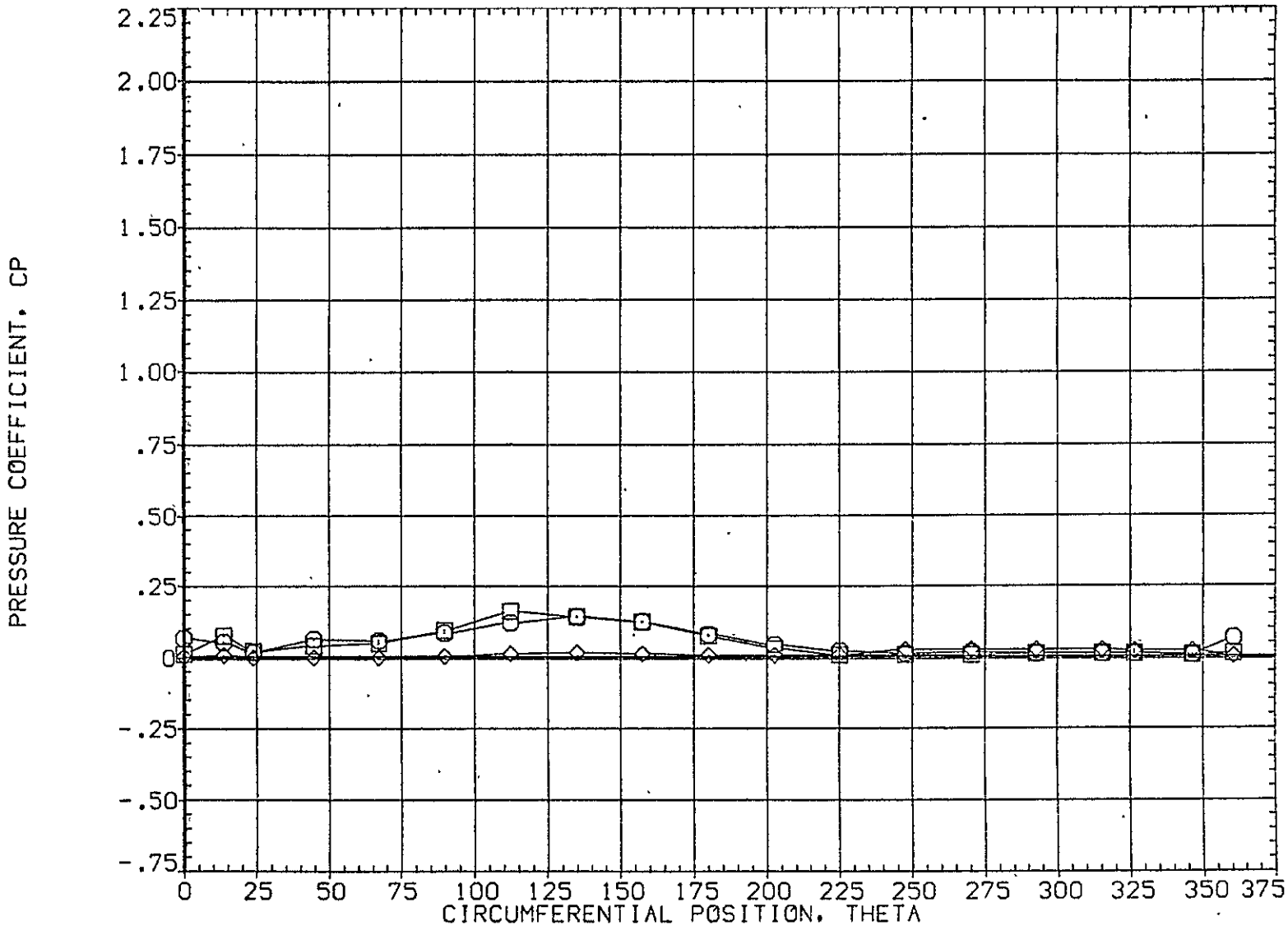


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.055	20.490	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

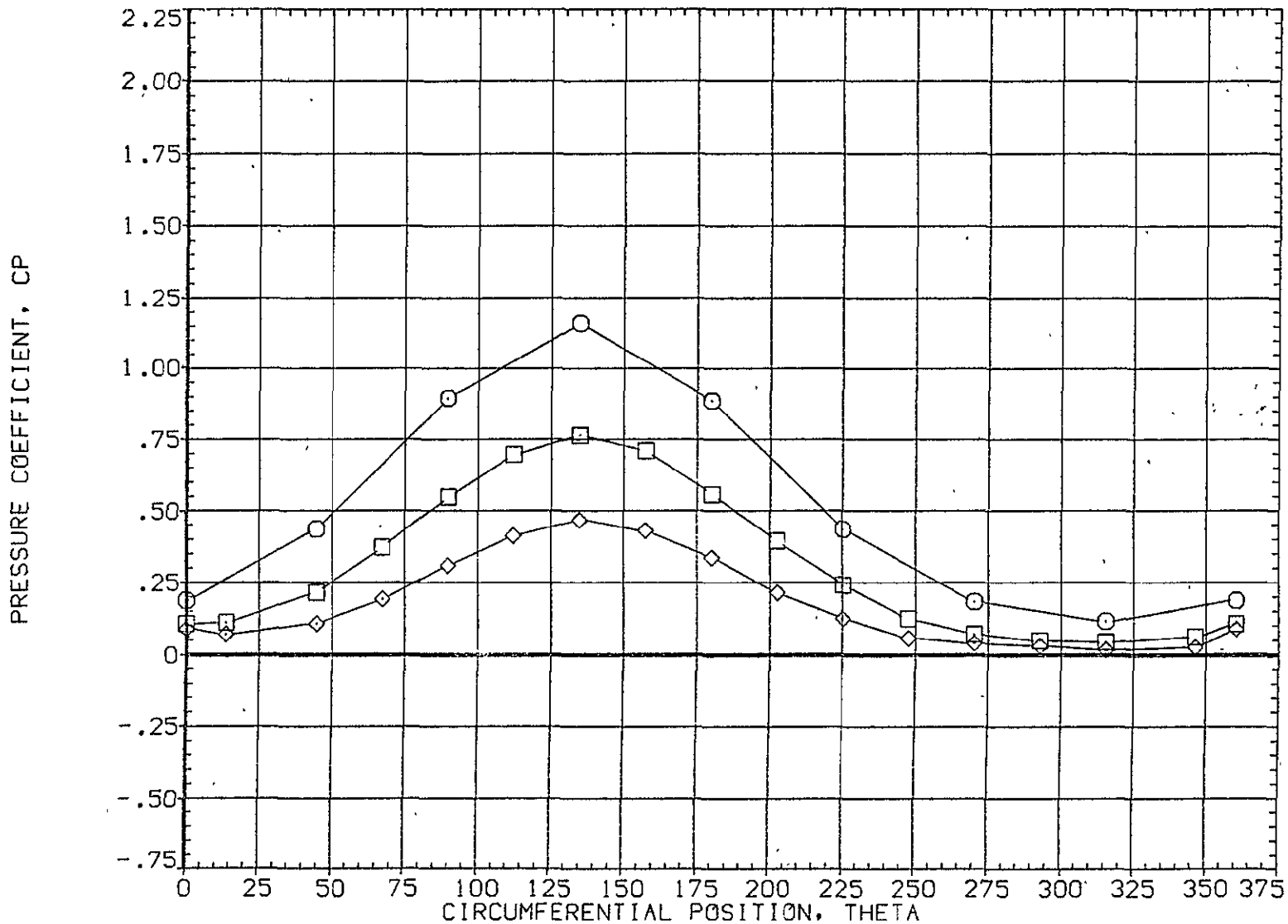


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.216	20.490	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

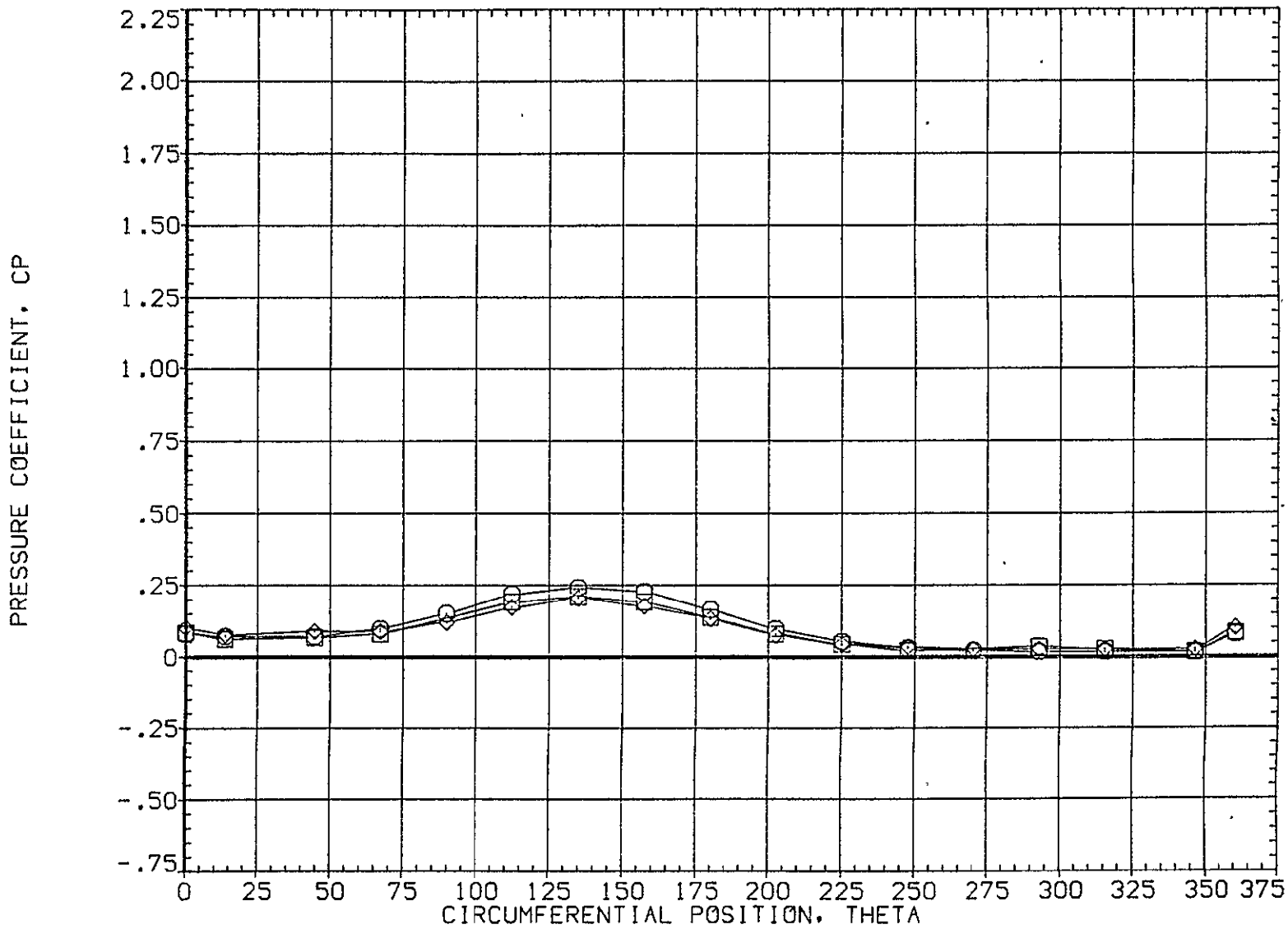


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A098)

SYMBOL	X/LB	ALPHA	MACH
○	.610	20.490	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

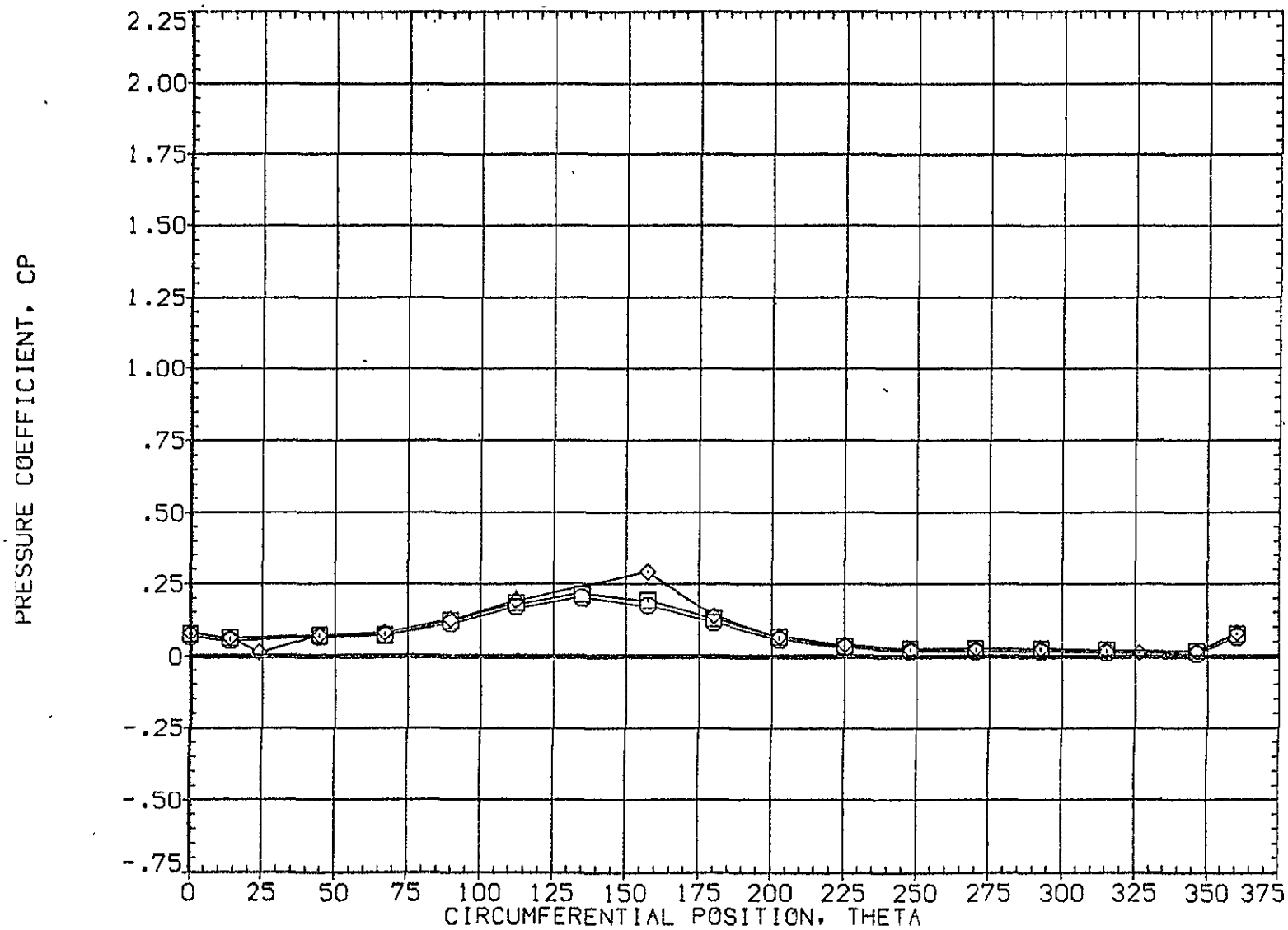


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1AU98)

SYMBOL	X/LB	ALPHA	MACH
○	.892	20.490	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES			
BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

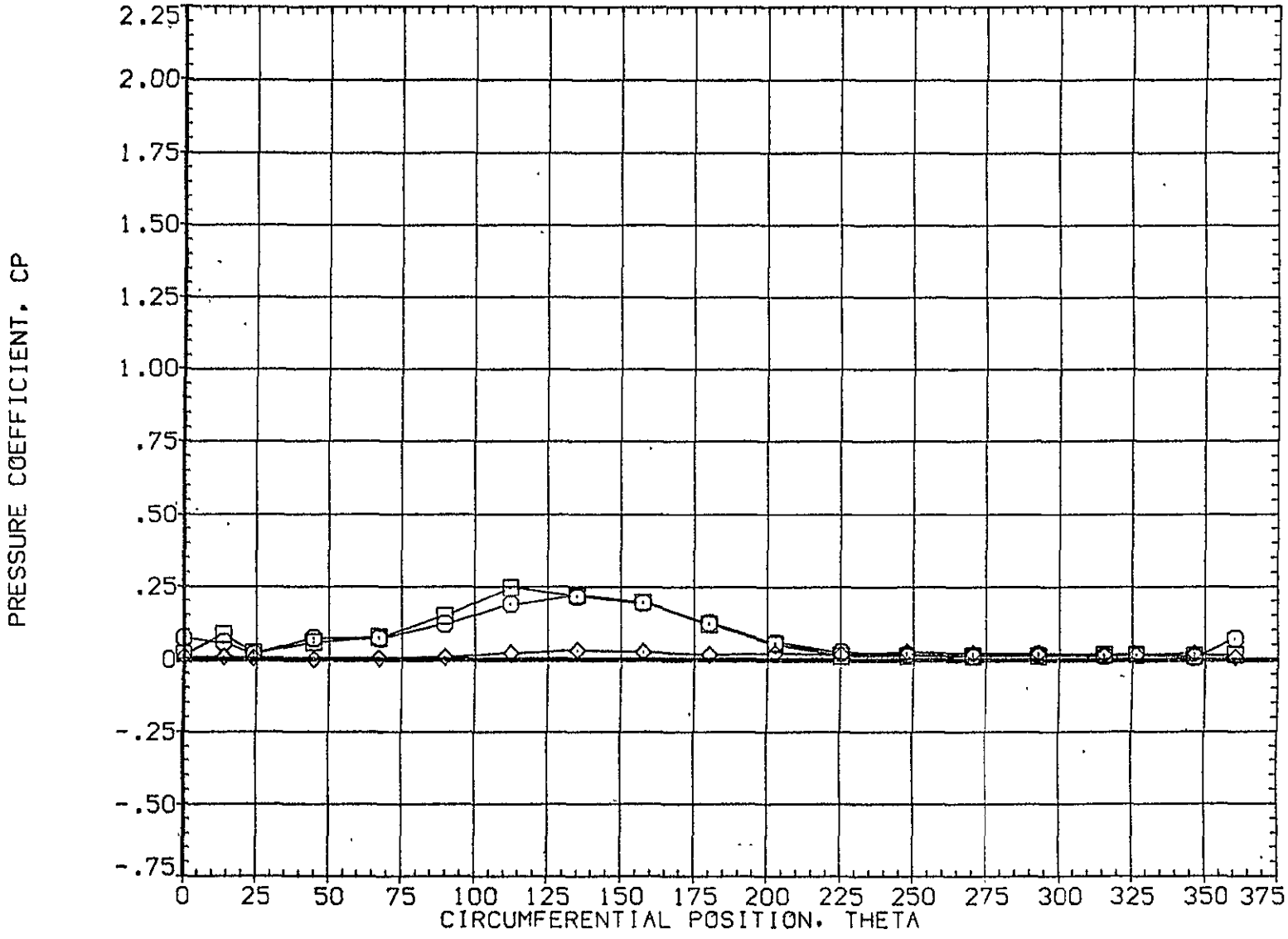


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.055	24.510	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

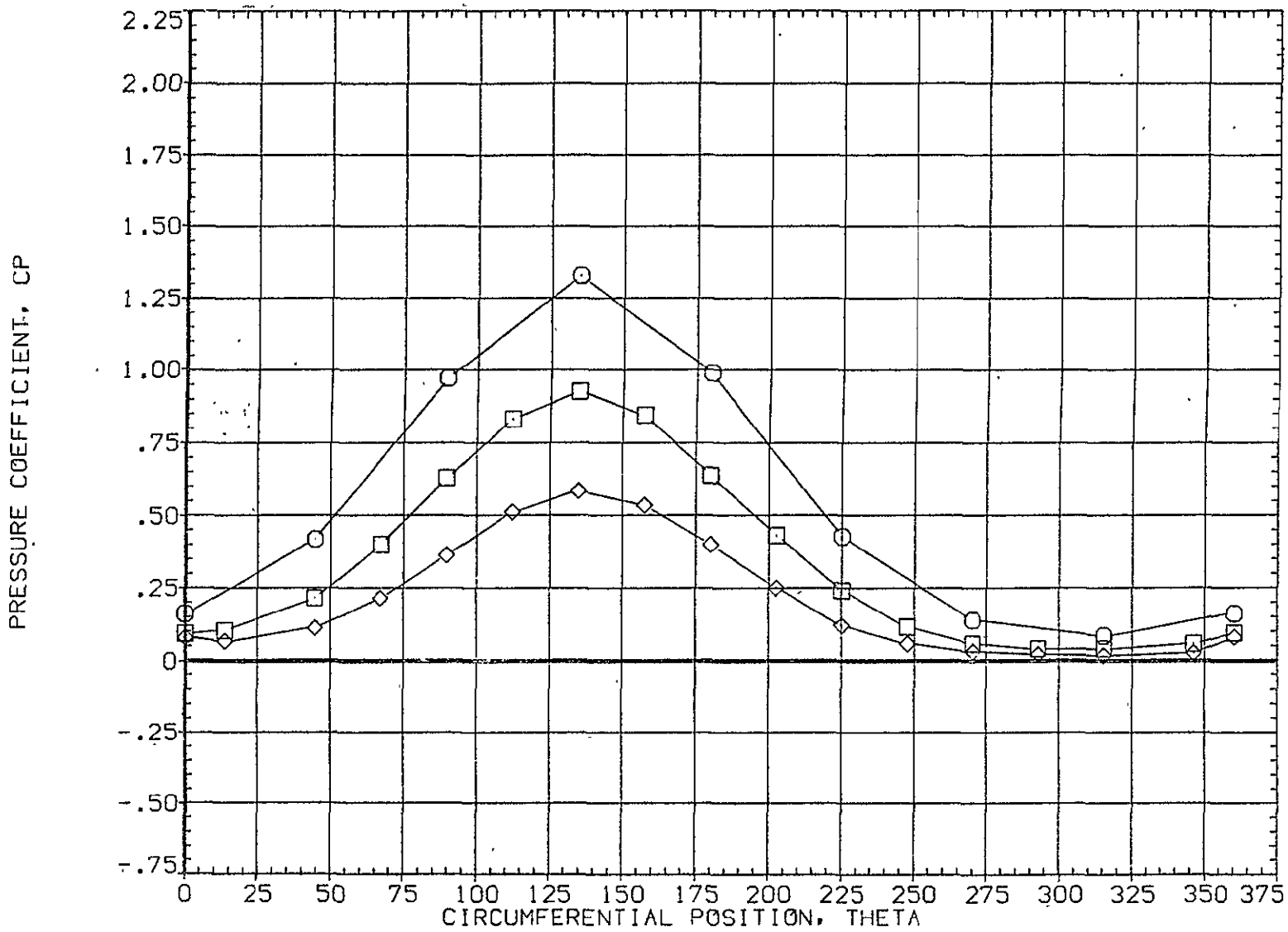


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.216	24.510	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

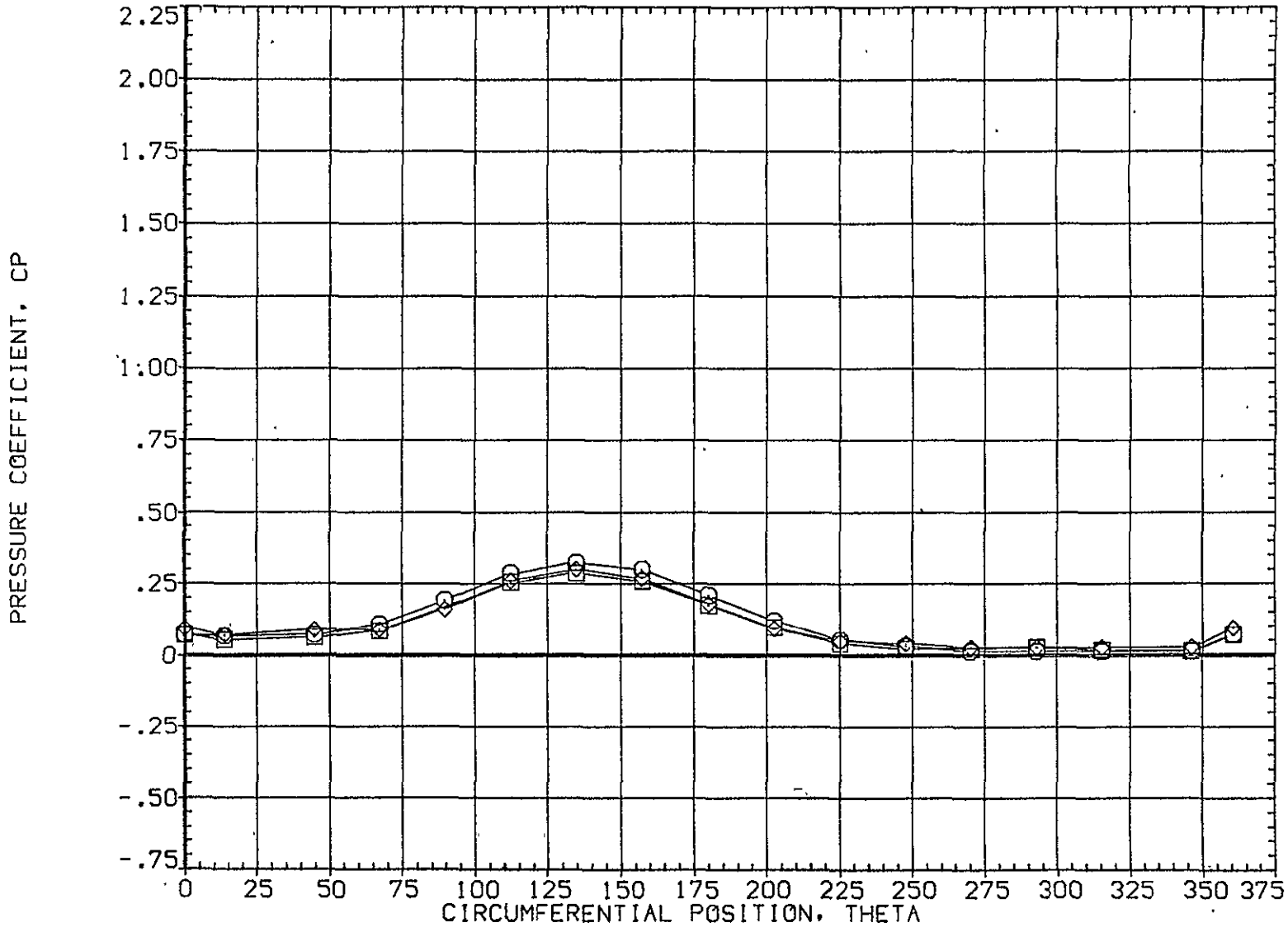


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.610	24.510	4.960
□	.735		
◇	.860		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

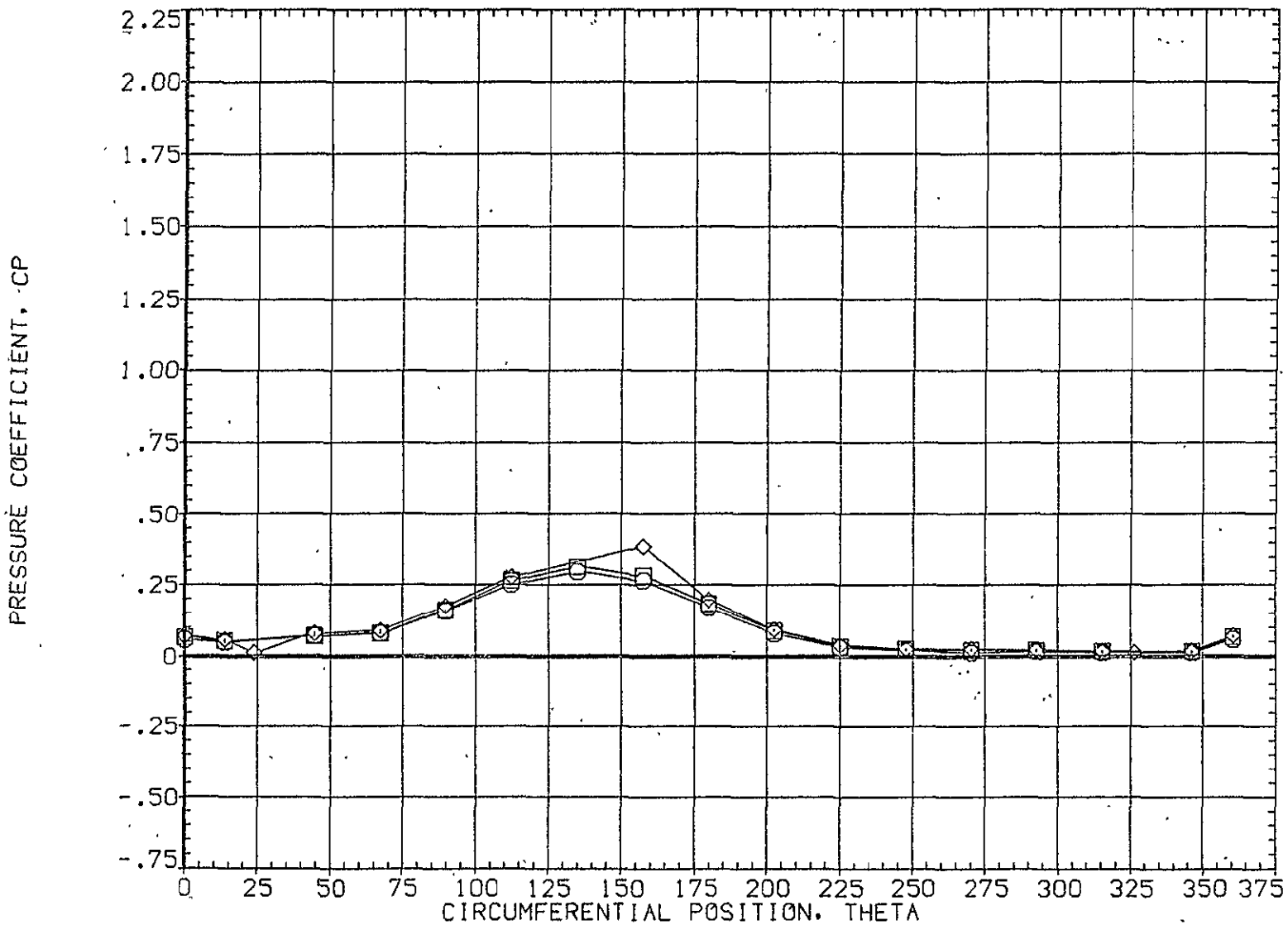


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A099)

SYMBOL	X/LB	ALPHA	MACH
○	.892	24.510	4.960
□	.923		
◇	.954		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

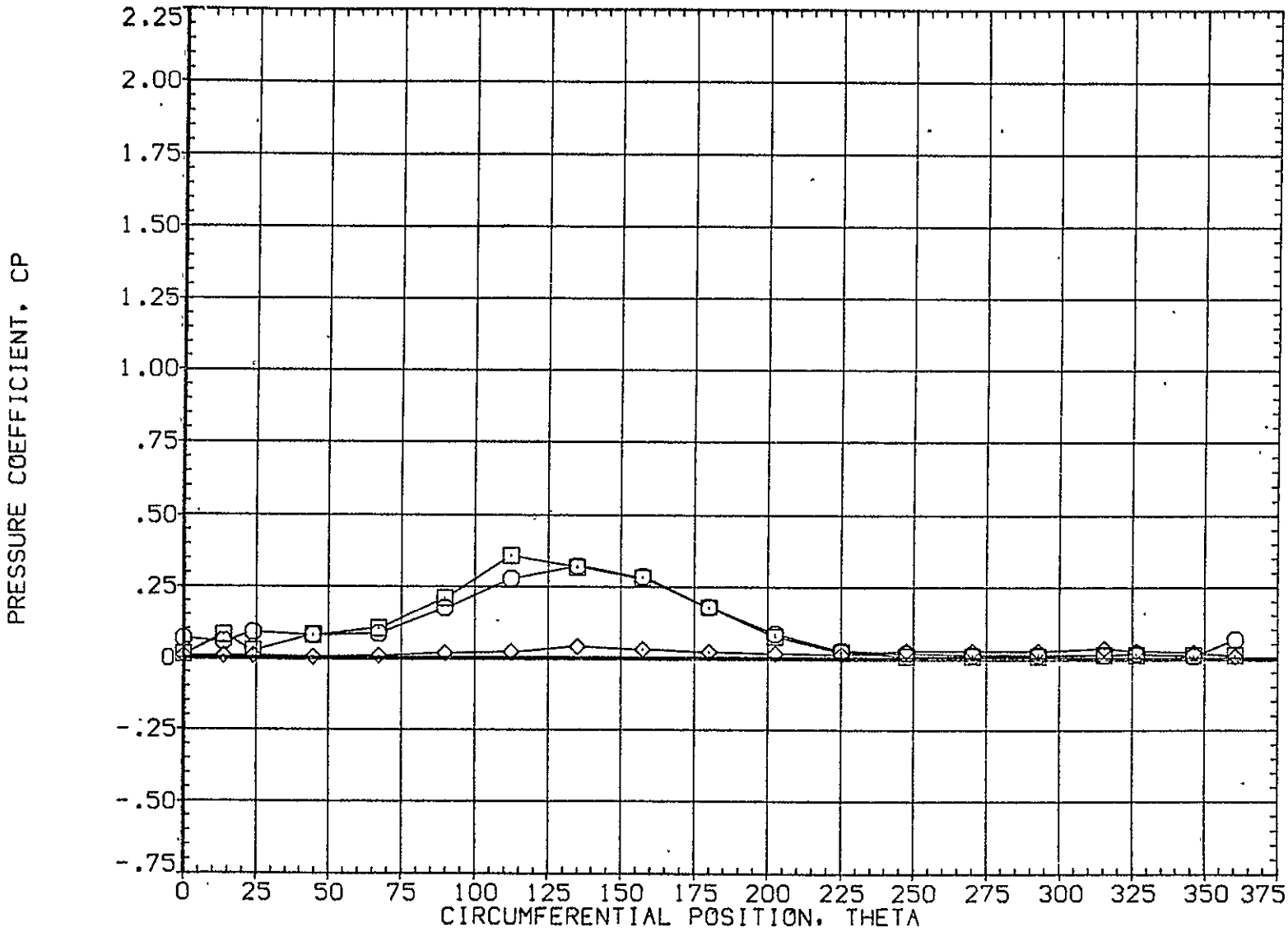


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.055	28.540	4.960
□	.108		
◇	.162		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

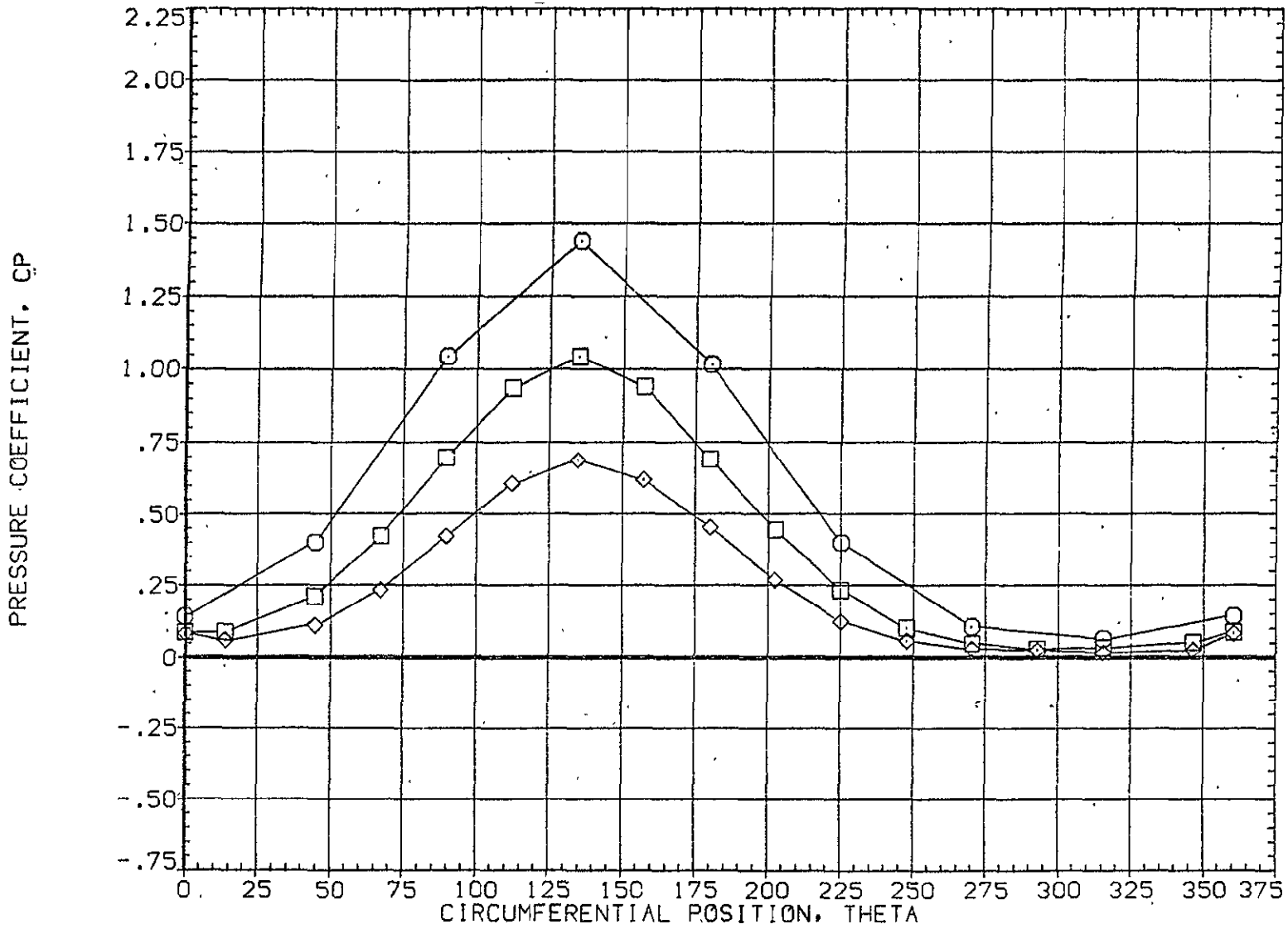


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.216	28.540	4.960
□	.322		
◇	.518		

PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

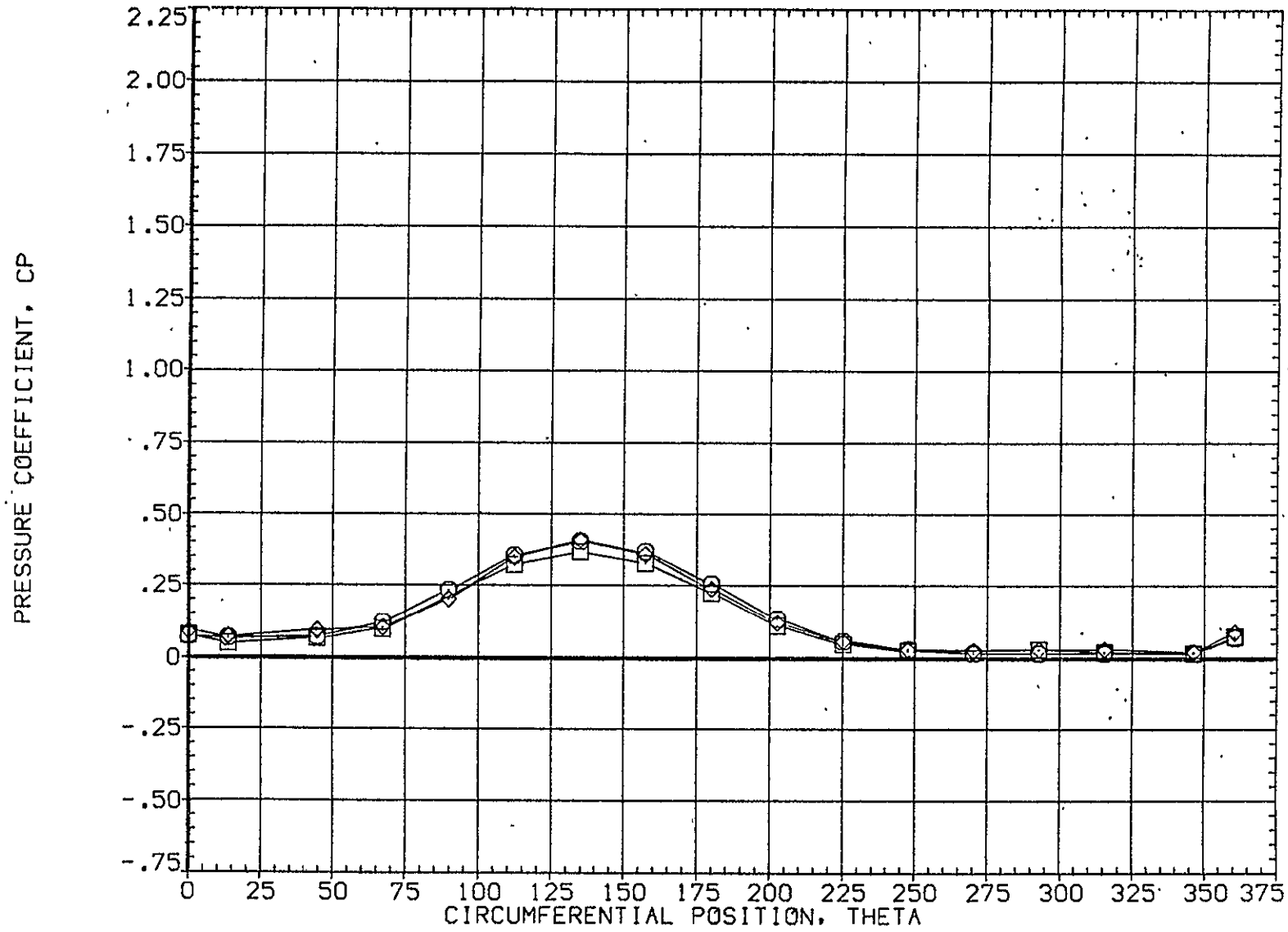


FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

MSFC 596 (TA-2F) MCR0200 EXTERNAL TANK, T1 (P1A100)

SYMBOL	X/LB	ALPHA	MACH
○	.892	28.540	4.960
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PARAMETRIC VALUES

BETA	.000	OFFSET	20.000
MOUNT	1.000	PHI	315.000

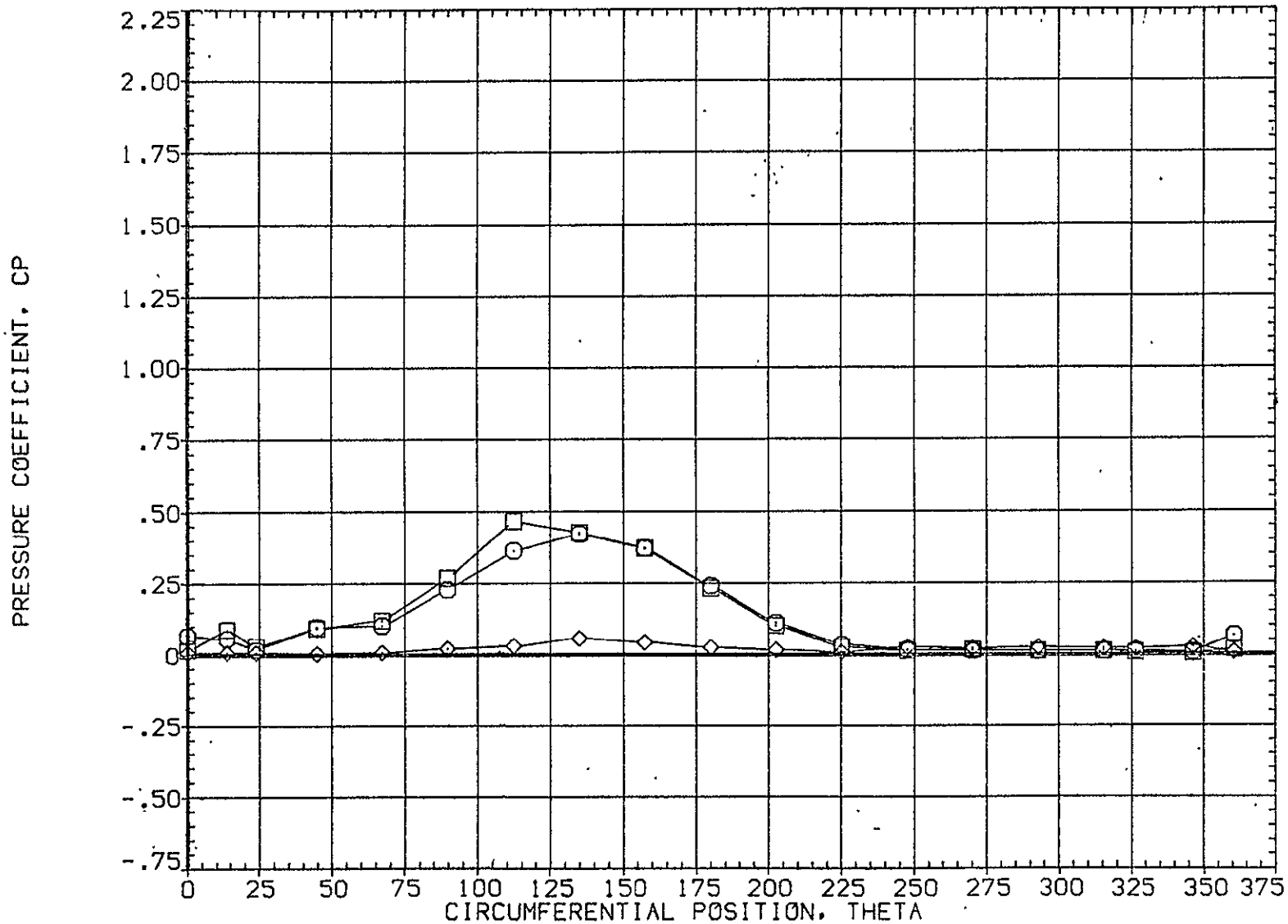

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES

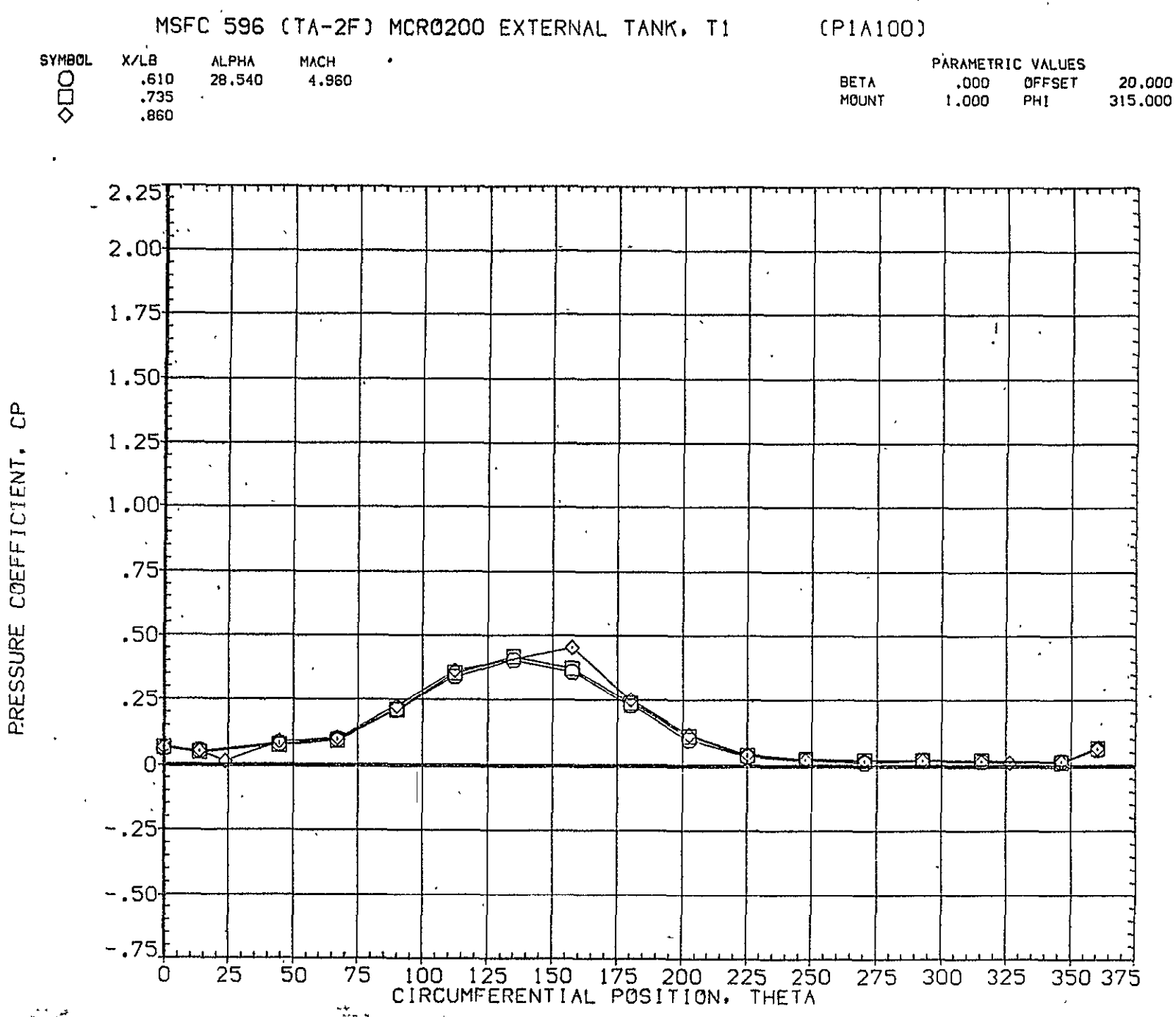

FIG. 5 CIRCUMFERENTIAL PRESSURE DISTRIBUTION OVER ET - T1 WITH PROTUBERANCES